Analytical Resources, LLC
Analytical Chemists and Consultants

19 July 2023

Ali Judkins
Anchor QEA, LLC
1201 3rd Ave, Suite 2600
Seattle, WA 98101

RE: AOC5 MR Phase 1

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
23A0133	N/A

Susan Dunnihoo

Digitally signed by Susan Dunnihoo
Date: 2023.07.20 14:18:25 -07'00'

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclosed Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC

Susan Dunnihoo, Director, Client Services

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

1 of 2 23A0133

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 3377

Project/Client Name: AOC5 MR Phase 1
Project Number: 210075.01.02
Contact Name: Amara Vanderwolf
Sampled By: Windward

Ship to: ARL
Attn: Sue Dunihoo
Shipper: Courier
Form filled out by: AVICC

Shipping Date: 1/6/23
Airbill Number:
Turnaround requested: std

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required) PCBs	SMS SVOCs	SMS Metals	TOC / Total Solids	DIF	Archive		Comments / Instructions [Jar tag number(s)]
1/6/23	0947	~~SC1252~~ LDW23-SC1252	3	Sediment	X			X		X		
	0922	LDW23-SC1261	3		X			X		X		
	1032	LDW23-SC1250	4		X	X	X	X	NA	X		
	1014	LDW23-SC1244	3		X			X		X		
	1014	LDW23-SC1244-FD	3		X			X		X		
	1051	LDW23-SC1241 ~~LDW23-SC1250cc~~	4		X	X	X	X	X	X		
	1114	LDW23-~~SC1217~~ IT1217	4		X	X	X	X	X	X		
	1200	LDW23-SC1185	4		X	X	X	X	NA	X		
	1334	~~SC1234~~ LDW23-SC1234	4		X	X	X	X	NA	X		
	1138	LDW23-SC1215	4		X	X	X	X	X	X		
	1300	LDW23-SC1222	4		X	X	X	X	X	X		
	1318	LDW23-SC1227	4		X	X	X	X	NA	X		
		Total Number of Containers	44	Purchase Order / Statement of Work # APJ-110222-AOC5-ARL								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Amara Vanderwolf	YARED	YARED	Jacob Walter
Signature: Amara Vanderwolf			
Company: Windward	Company: YA VA SAFETY	Company: YA VA SAFETY	Company: AR, LLC
Date/Time: 1/6/23 1703	Date/Time: 01/06/23 4:55PM	Date/Time: 01/06/23 17:26	Date/Time: 01/06/23 1726

* Distribution: White copies accompany shipment; yellow retained by consignor.

Windward environmental LLC
200 1st Ave W, Suite 500
Seattle, WA 98119
206.378.1364

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

23A0133

2 of 2

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 3492

Project/Client Name: AOCS MR Phase 1
Project Number: 210075.01.02
Contact Name: Amara Vandervort
Sampled By: Windward

Ship to: ARL
Attn: Sue Dunnihoo
Shipper: Courier
Form filled out by: K. McPeek

Shipping Date: 1/6/23
Airbill Number: —
Turnaround requested: std

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required) PCBs	SMS SVOCs	SMS metals	TOC/ Total solids	D/F	Archive		Comments / Instructions [Jar tag number(s)]
1/6/23	1400	LDW23-SS1110	4	Sediment	X	X	X	X	NA	X		
	1413	-SS1109			X	X	X	X	NA	X		
	1426	-SS1092			X	X	X	X	NA	X		
	1450	-SS1091			X	X	X	X	NA	X		
		Total Number of Containers	16	Purchase Order / Statement of Work # APJ-110222-AOCS-ARL								

1/6/23

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Amara Vandervort	YARED	YARED	Jacob Hecht
Signature: Amara Vandervort			
Company: Windward	YA YA SAFETY	YA YA SAFETY	ARLLC
Date/Time: 1/6/23 1703	1/6/23 4:55	1/6/23 17:24	1/6/23 1726

* Distribution: White copies accompany shipment; yellow retained by consignor.

Wind Ward environmental LLC

200 1st Ave W, Suite 500
Seattle, WA 98119

206.378.1364

To be completed by Laboratory upon sample receipt:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchor QEA Project Name: AOC 5 MR Phase 1

COC No(s): 3377 & 3492 NA JBm Delivered by: Fed-Ex UPS Courier Hand Delivered Other:_____

Assigned ARI Job No: 23A0133 Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1726 2.4 4.1 2.8 5.4 1.8 C.4

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: TD09708

Cooler Accepted by: JBm Date: 01/06/23 Time: 1726

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not JBm
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		_____

Were the sample(s) split by ARI? NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JBm Date: 01/07/23 Time: 0938 Labels checked by: JBm

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle, WA 98101	Project Manager: Ali Judkins	07/19/2023 17:41

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
23A0133-01	LDW23-SC1252	Solid	01/06/23 09:47	01/06/23 17:26
23A0133-02	LDW23-SC1261	Solid	01/06/23 09:22	01/06/23 17:26
23A0133-03	LDW23-SC1250	Solid	01/06/23 10:32	01/06/23 17:26
23A0133-04	LDW23-SC1244	Solid	01/06/23 10:14	01/06/23 17:26
23A0133-05	LDW23-SC1244-FD	Solid	01/06/23 10:14	01/06/23 17:26
23A0133-06	LDW23-SC1241	Solid	01/06/23 10:51	01/06/23 17:26
23A0133-07	LDW23-IT1217	Solid	01/06/23 11:14	01/06/23 17:26
23A0133-08	LDW23-SC1185	Solid	01/06/23 12:00	01/06/23 17:26
23A0133-09	LDW23-SC1234	Solid	01/06/23 13:34	01/06/23 17:26
23A0133-10	LDW23-SC1215	Solid	01/06/23 11:38	01/06/23 17:26
23A0133-11	LDW23-SC1222	Solid	01/06/23 13:00	01/06/23 17:26
23A0133-12	LDW23-SC1227	Solid	01/06/23 13:18	01/06/23 17:26
23A0133-13	LDW23-SS1110	Solid	01/06/23 14:00	01/06/23 17:26
23A0133-14	LDW23-SS1109	Solid	01/06/23 14:13	01/06/23 17:26
23A0133-15	LDW23-SS1092	Solid	01/06/23 14:26	01/06/23 17:26
23A0133-16	LDW23-SS1091	Solid	01/06/23 14:50	01/06/23 17:26

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	19-Jul-2023 17:41

Case Narrative

Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Work Order: 23A0133

Sample receipt

Samples as listed on the preceding page were received 06-Jan-2023 17:26 under ARI work order 23A0133. For details regarding sample receipt, please refer to the Cooler Receipt Form. Samples were frozen on receipt to preserve holding times.

Semivolatiles - EPA Method SW8270E

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements, with accepted excursions outside the 20% window. Associated positive results have been "Q"-flagged.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were outside advisory control limits where flagged on the summary sheet. No corrective action is required for matrix QC.

The reference material (SRM) percent recoveries were within control limits.

Semivolatiles - EPA Method SW8270E-SIM

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements, with accepted excursions outside the 20% window. Associated positive results have been "Q"-flagged.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries were within control limits. The relative percent difference (RPD) for 2,4-dimethylphenol was high of control limits and flagged on the summary sheet.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits.

The reference material (SRM) percent recoveries were within control limits.

Pesticides - EPA Method SW8081B (Hexachlorobenzene)

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	19-Jul-2023 17:41

Case Narrative

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries for decachlorobiphenyl have been "NRS" flagged, indicating no recovery is calculated due to interference.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits.

PCB Aroclors - EPA Method SW8082A

The sample(s) were extracted and analyzed within the recommended holding times.

SLA0350-ICV2, SLA0350-CCV2, SLB0012-ICV2 and SLB0012-CCV4 failed low for aroclor 1260 on the ZB5 column. SLB0012-CCV5 failed low for aroclor 1254 on the ZB5 column. SLB0012-CCV7 failed low for aroclor 1248 on the ZB5 column. All data is reported from the ZB35 column as primary.

Internal standard areas were within limits.

The surrogate percent recovery for tetrachlorometaxylene (TCMX) was high of control limits in SLB0012-CCV3. TCMX is used as an indicator for blow down efficiency and no corrective action was required .

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

The matrix spike duplicate (MSD) percent recovery for aroclor 1260 was low of advisory control limits, and the relative percent differences (RPD) were within advisory control limits.

The reference material (SRM) percent recoveries were within control limits.

The analyst noted identification was based on the best fit to the aroclor pattern, as there were miscellaneous interfering peaks throughout these samples.

Total Metals - EPA Method 6020B

The sample(s) were digested and analyzed within the recommended holding times.

The analyst noted SLD0005-CAL3 to have selenium slightly noisy, with intercept, R-value and QC passing. Several standards show silver to be low. Affected elements were rerun in sequence SLD0041.

The analyst noted SLD0041-CCV9 was high for lead. Sample LDW23-SC1215 in the sequence showed cadmium to be noisy. Sample LDW23-1227 showed scandium and terbium to be noisy. Sample LDW-SC 110 showed arsenic to be slightly noisy. Multiple samples showed high scandium. SLD0041-IFA showed high chromium-53. SLD0041-HCV2 showed zinc-67

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	19-Jul-2023 17:41

Case Narrative

to be <200.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries were low of advisory limits for silver and relative percent difference (RPD) were within advisory control limits. A post spike had acceptable recovery. The duplicate (DUP) relative percent difference (RPD) were within advisory control limits, with cadmium "L"-flagged, indicating the analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to +/- RL instead of 20% RPD.

The reference material (SRM) percent recoveries were within control limits.

Total Mercury - EPA Method 7471B

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The reference material (SRM) percent recoveries were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits. The duplicate (DUP) relative percent difference (RPD) was flagged as outside advisory control limits, but "L"-flagged, indicating the analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to +/- RL instead of 20% RPD.

Wet Chemistry (Total Organic Carbon and Total Solids)

The sample(s) were prepared and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The reference material (SRM) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

Dioxin/Furans - EPA Method 1613

The sample(s) were extracted and analyzed within the recommended holding times. Analysis was performed using an application specific column developed by Restek. The RTX-DIoxin2 column has unique isomer separation for the 2378-TCDF, eliminating the need for confirmation analysis.

The SLB0345-CCV1 and SLB0345-ICV1 showed surrogates 13C12-1,2,3,7,8-PeCDF and 13C12-2,3,4,7,8-PeCDF low of limits. SLB0345-CCV2 showed 1,2,3,6,7,8-HxCDF, 3C12-1,2,3,7,8-PeCDD, 13C12-1,2,3,7,8-PeCDF, and 13C12-2,3,4,7,8-PeCDF low of limits.

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	19-Jul-2023 17:41

Case Narrative

The labeled internal standard area for 13C12-1,2,3,6,7,8-HxCDD in the OPR was high of control limits. The labeled internal standard areas for 13C12-1,2,3,4,7,8-HxCDD, 13C12-1,2,3,6,7,8-HxCDD, and 13C12-1,2,3,6,7,8-HxCDF in the method blank were high of control limits. As the SRM and samples were in control, no further corrective action was taken.

The cleanup surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits, with response or EMPC response below the reporting limit. Associated positive results have been "B"-flagged.

The OPR (Ongoing Precision and Recovery) standard percent recovery for 1,2,3,6,7,8-HxCDF (83.9%) has been flagged outside of control limits (84-130%).

The batch BLA0261 duplicate (DUP) relative percent difference (RPD) was high of advisory control limits for 2,3,7,8-TCDF, reported under work order 23A0100.

The reference material (SRM) percent recoveries were within control limits.

Revised 05/25/2023 to correctly reference and quantitate SIM-SVOA sequence SLB0351 against calibration GC00009, which was the adjustment to calibration GB00047 for poor response for benzoic acid and pentachlorophenol, and to correct the calibration date listed.

Revised 07/19/2023 to correctly reference and quantitate SIM-SVOA sequence SLB0349 against calibration GC00009, which was the adjustment to calibration GB00047 for poor response for benzoic acid and pentachlorophenol, and to correct the calibration date listed.

QUALIFIERS AND NOTES

Qualifier	Definition
X	Indicates possible CDPE interference.
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
P1	The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
L	Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to +/- RL instead of 20% RPD
J	Estimated concentration value detected below the reporting limit.
EMPC	Estimated Maximum Possible Concentration qualifier for HRGCMS Dioxin
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
D	The reported value is from a dilution
B	This analyte was detected in the method blank.
*	Flagged value is not within established control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

ICP-MS Metals

Analyzed with Secondary Isotopes

ICPMS metals are quantitated with the primary Ion and major wavelength unless interference is noted. When secondary ions are used for quantitation, both ions will be reported for laboratory and matrix QC.

These results were reported from a secondary ion:

Labnumber	SampleName	Analyte
23A0133-16	LDW23-SS1091	Copper-65

LDW23-SC1250

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-03 C	SDG:	23A0133
Sampled:	01/06/23 10:32	Prepared:	01/18/23 15:24	File ID:	NT1423022141.D
% Solids:	51.11	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 13:34
Batch:	BLA0393	Sequence:	SLB0305	Initial/Final:	19.6 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	193		4.4	20.0
106-44-5	4-Methylphenol	1	20.0	U	7.4	20.0
91-20-3	Naphthalene	1	9.9	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	9.2	J	4.5	20.0
208-96-8	Acenaphthylene	1	20.0	U	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	6.9	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.5	20.0
85-01-8	Phenanthrene	1	62.2		8.7	20.0
120-12-7	Anthracene	1	29.1		7.2	20.0
206-44-0	Fluoranthene	1	131		6.1	20.0
129-00-0	Pyrene	1	209		5.7	20.0
85-68-7	Butylbenzylphthalate	1	12.2	J	9.4	20.0
56-55-3	Benzo(a)anthracene	1	88.1		5.9	20.0
218-01-9	Chrysene	1	148		6.0	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	114		5.5	49.9
	Benzofluoranthenes, Total	1	215		10.0	39.9
50-32-8	Benzo(a)pyrene	1	78.3		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	46.8		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	53.9		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.69	454	60.6	27 - 120	
Phenol-d5	748.69	419	56.0	29 - 120	
2-Chlorophenol-d4	748.69	472	63.1	31 - 120	
1,2-Dichlorobenzene-d4	499.12	295	59.0	32 - 120	
Nitrobenzene-d5	499.12	321	64.3	30 - 120	
2-Fluorobiphenyl	499.12	338	67.7	35 - 120	

LDW23-SC1250

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

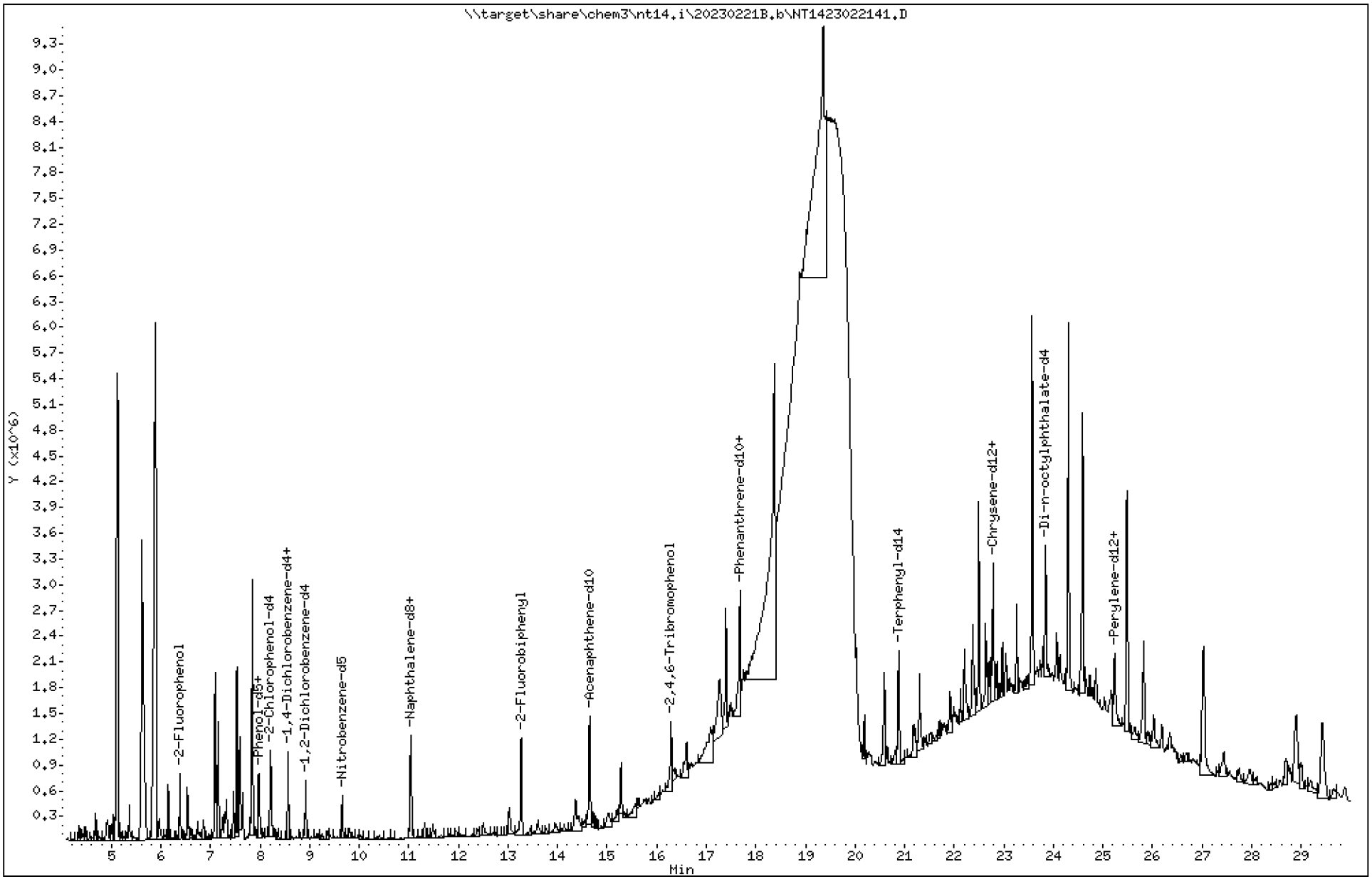
Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-03 C	SDG:	23A0133
Sampled:	01/06/23 10:32	Prepared:	01/18/23 15:24	File ID:	NT1423022141.D
% Solids:	51.11	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 13:34
Batch:	BLA0393	Sequence:	SLB0305	Initial/Final:	19.6 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	748.69	524	69.9	24 - 134	
p-Terphenyl-d14	499.12	352	70.6	37 - 120	

Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022141.D
Date : 22-FEB-2023 13:34
Client ID:
Sample Info: 23A0133-03

Instrument: nt14.i
Operator: DSD
Column diameter: 0.25

Column phase: ZB-5msi



Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022141.D

Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

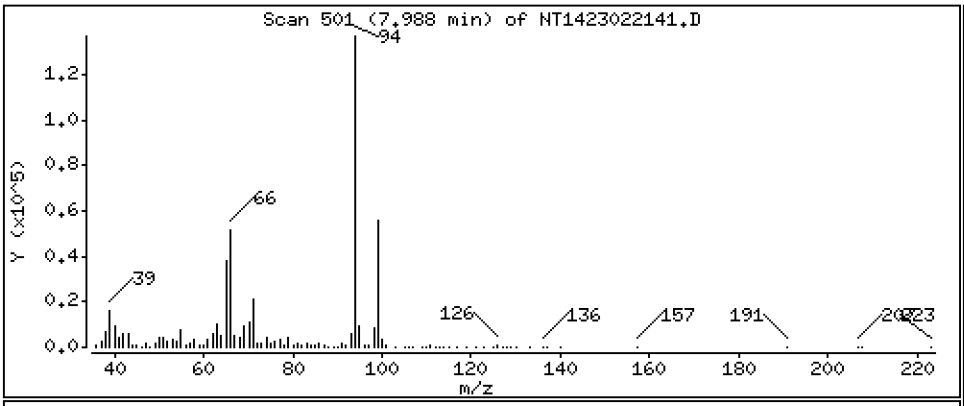
Operator: DSD

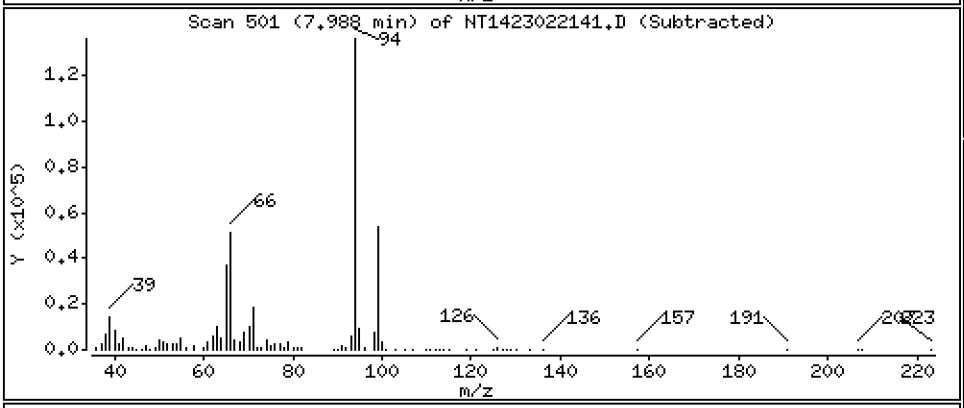
Column phase: ZB-5msi

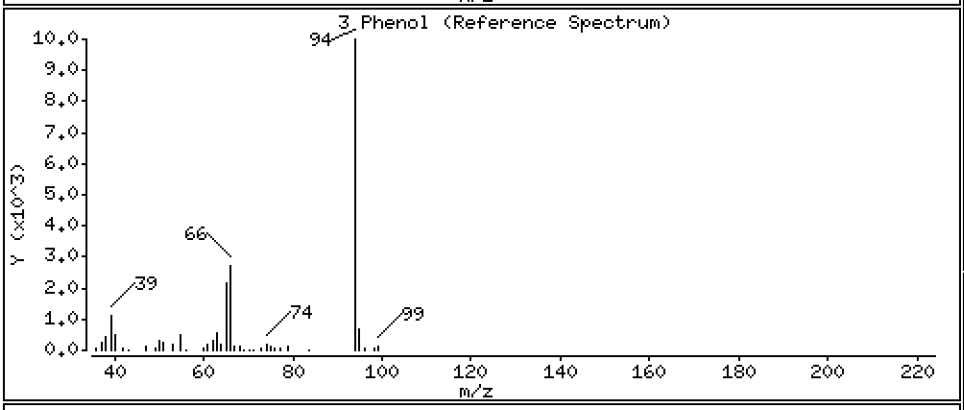
Column diameter: 0.25

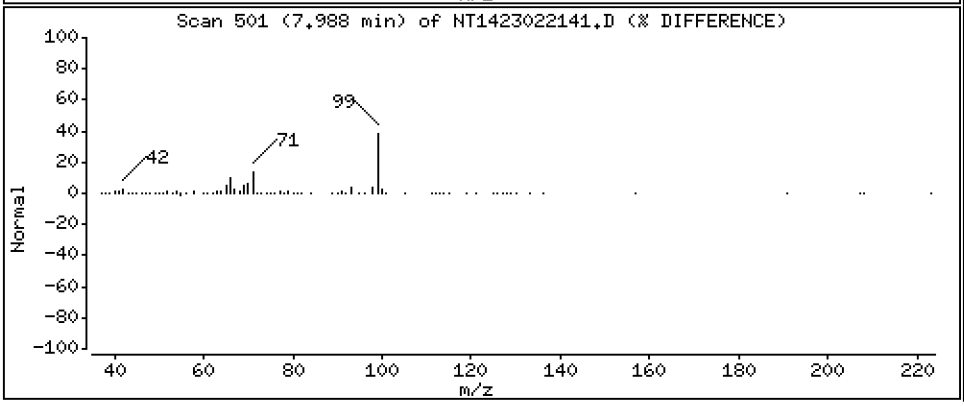
3 Phenol

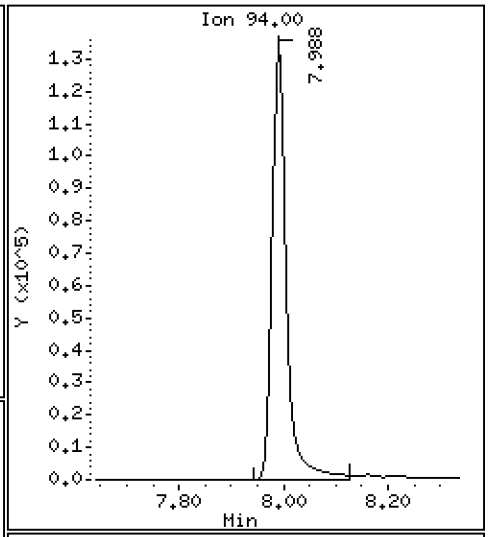
Concentration: 1.937 ug/mL

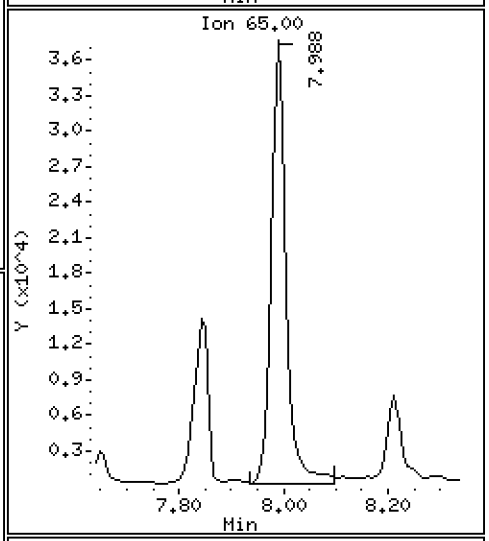


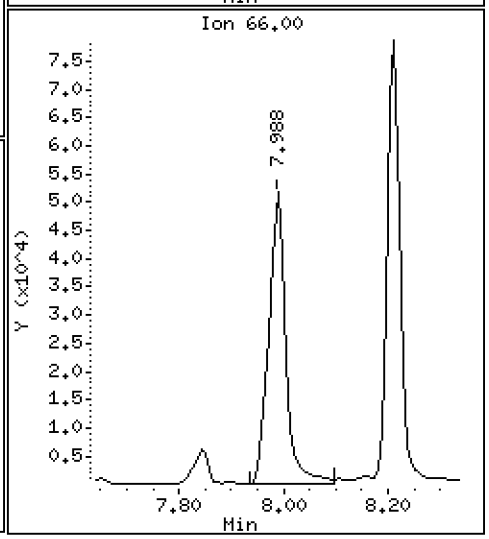












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022141.D

Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

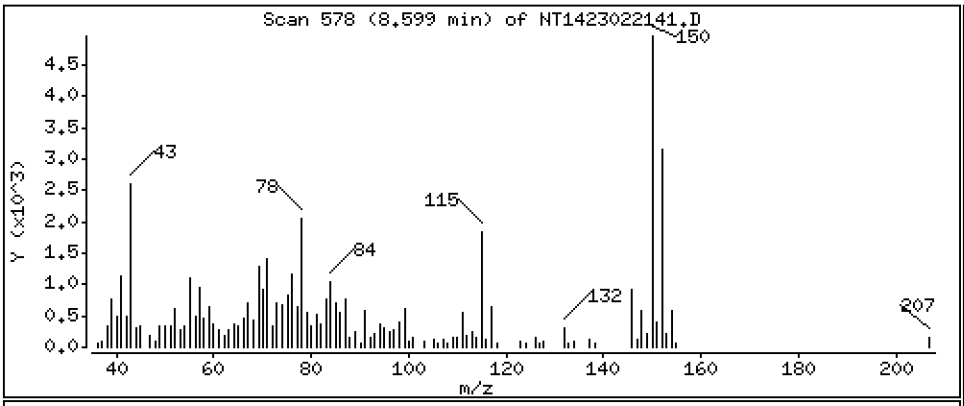
Operator: DSD

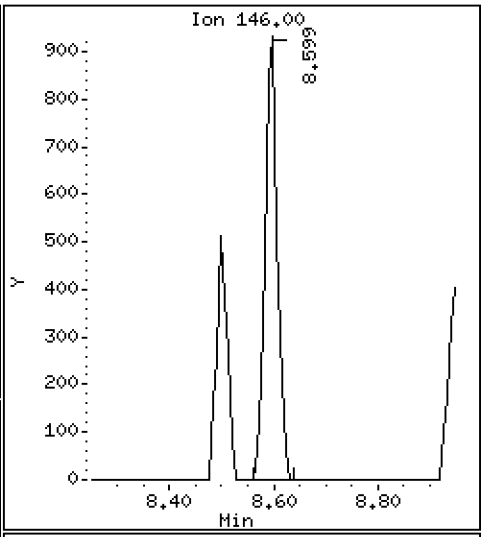
Column phase: ZB-5msi

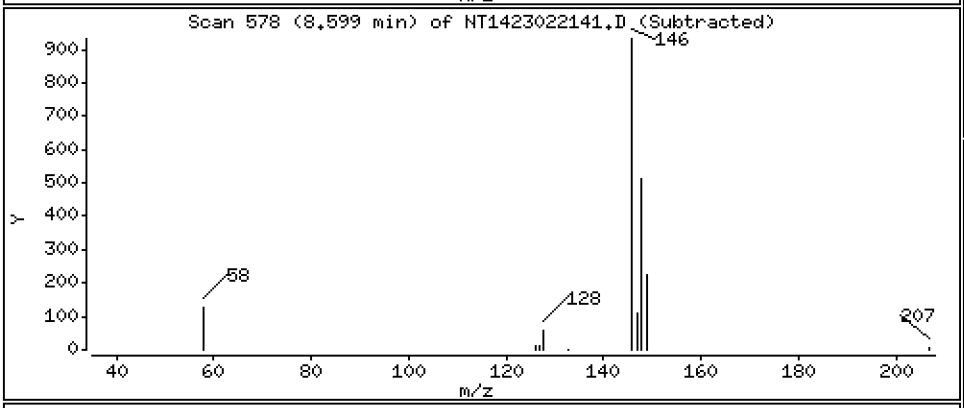
Column diameter: 0.25

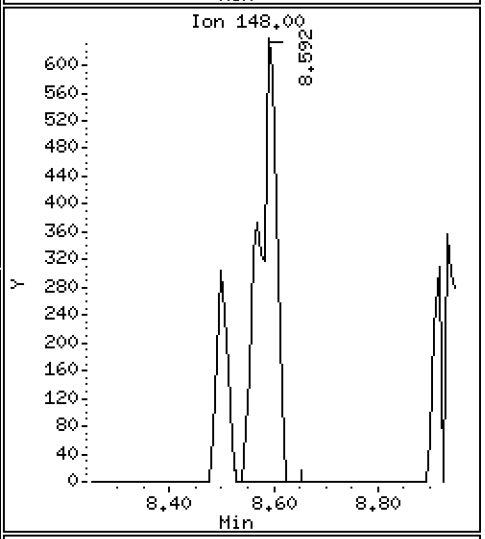
9 1,4-Dichlorobenzene

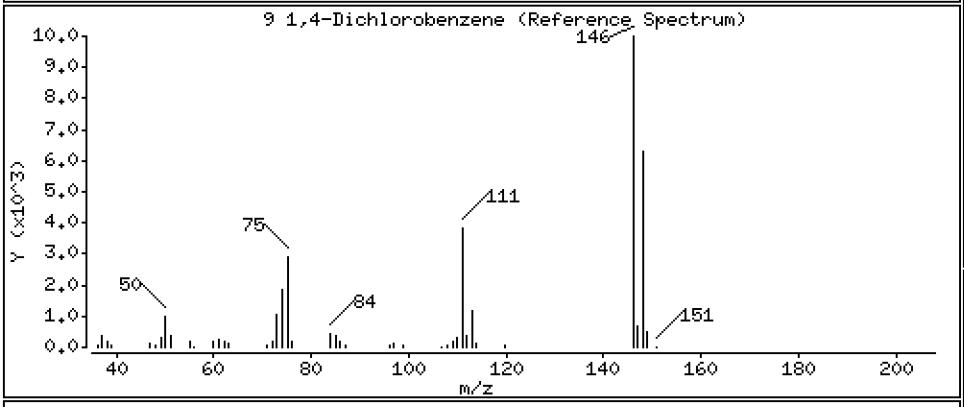
Concentration: 0.01628 ug/mL

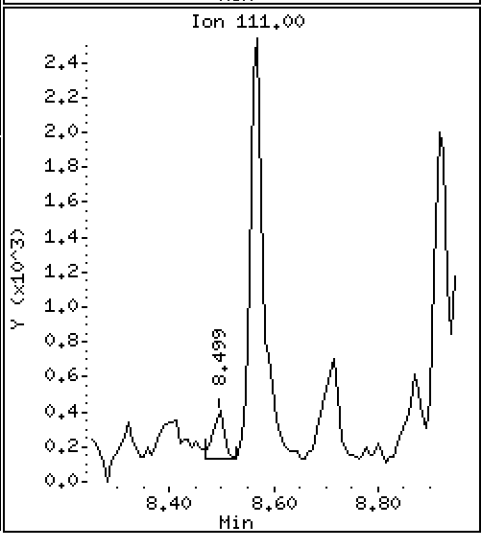


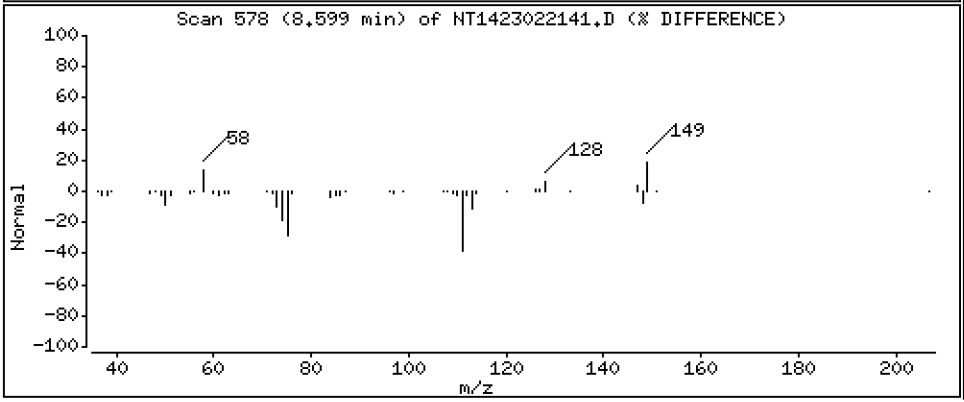












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

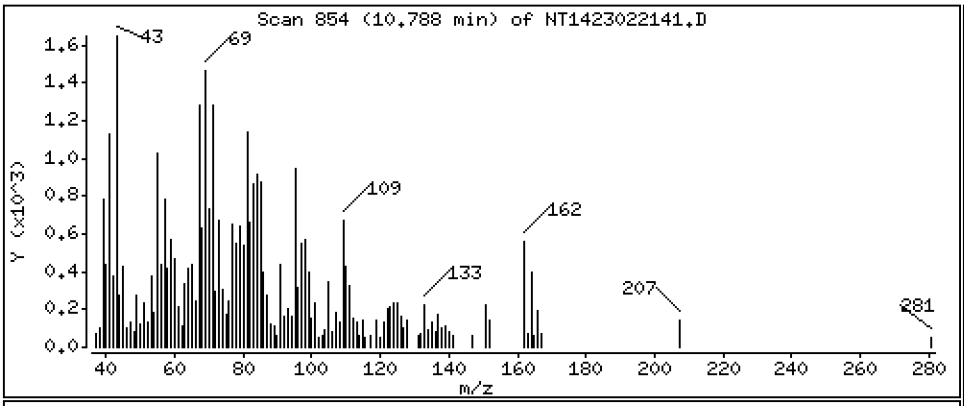
Operator: DSD

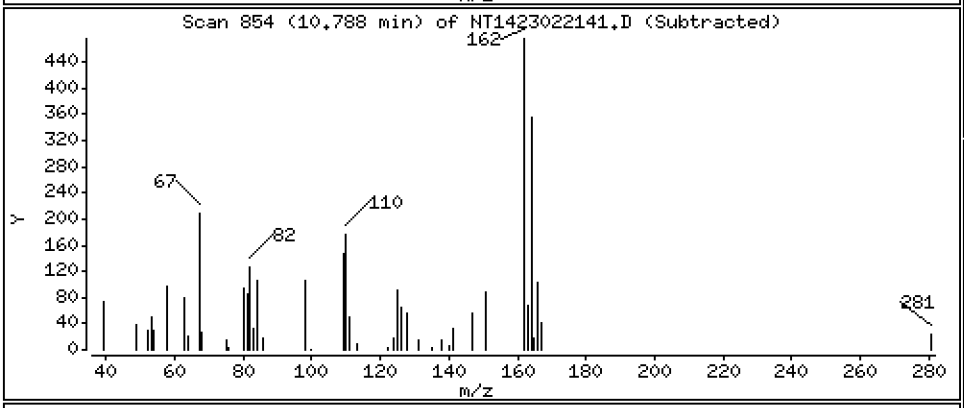
Column phase: ZB-5msi

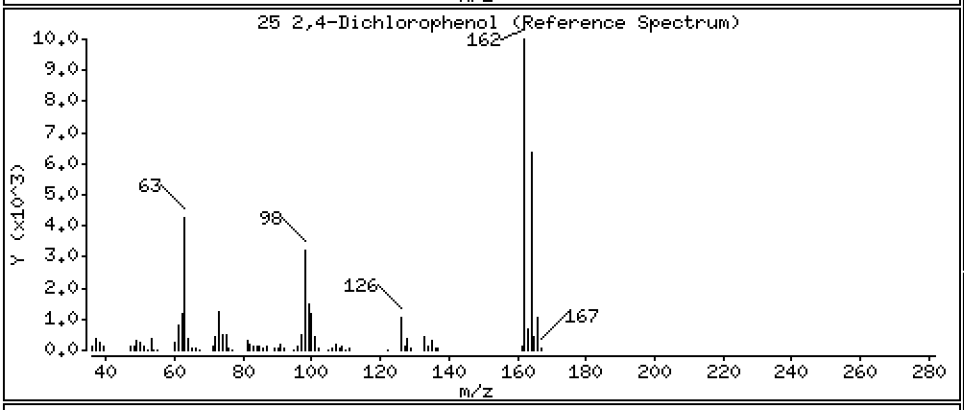
Column diameter: 0.25

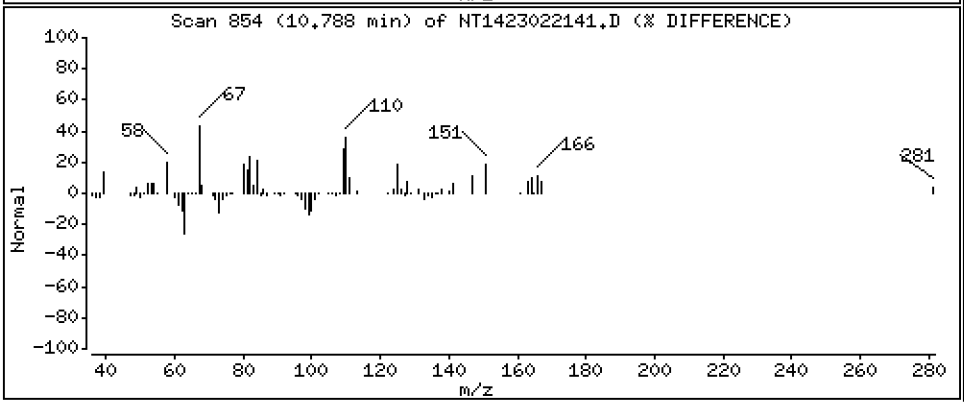
25 2,4-Dichlorophenol

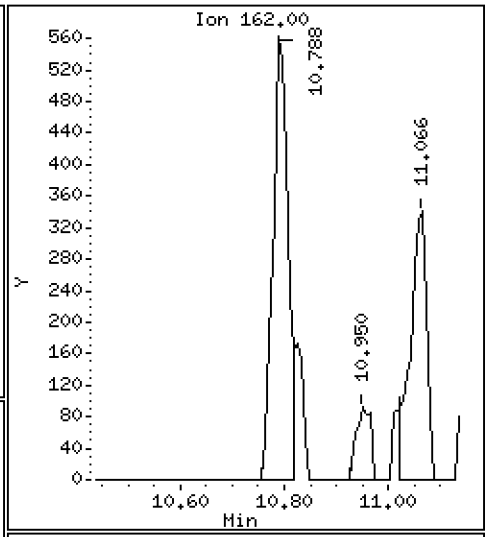
Concentration: 0.01450 ug/mL

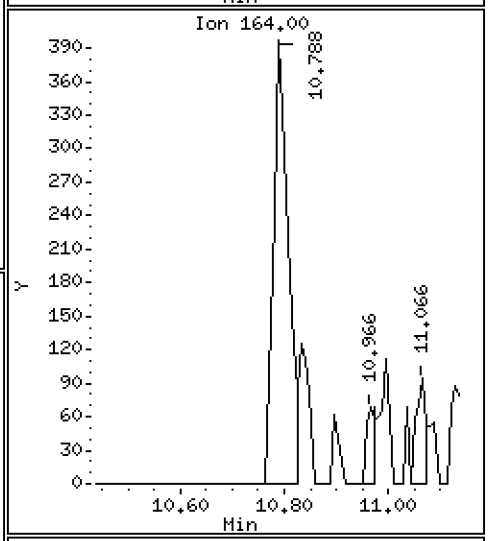


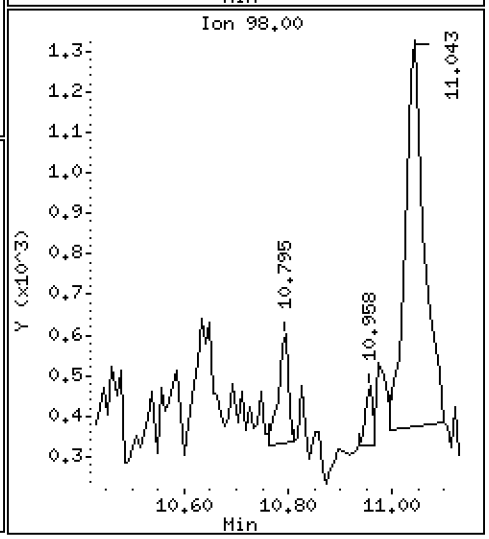












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

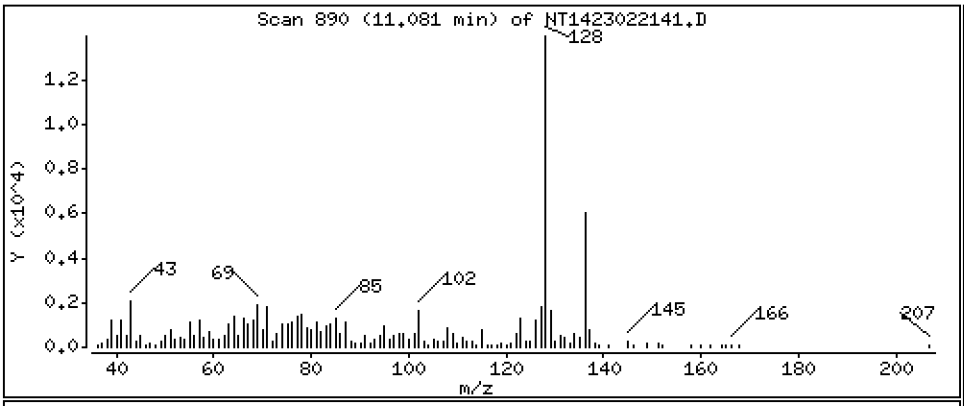
Operator: DSD

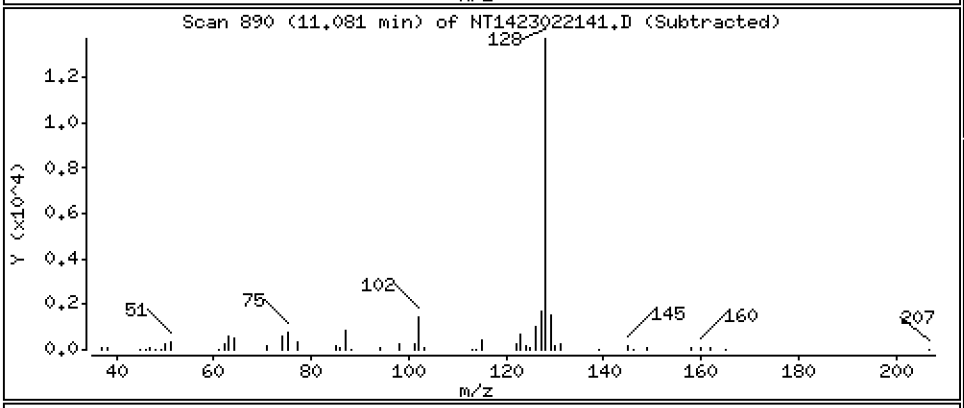
Column phase: ZB-5msi

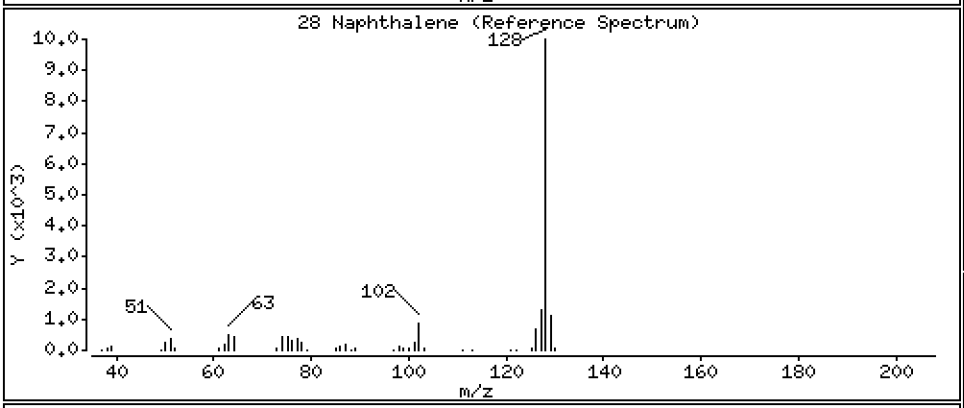
Column diameter: 0.25

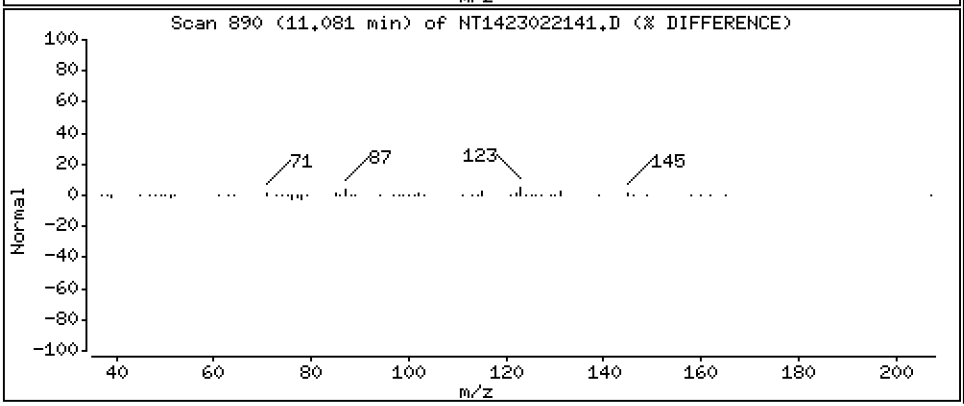
28 Naphthalene

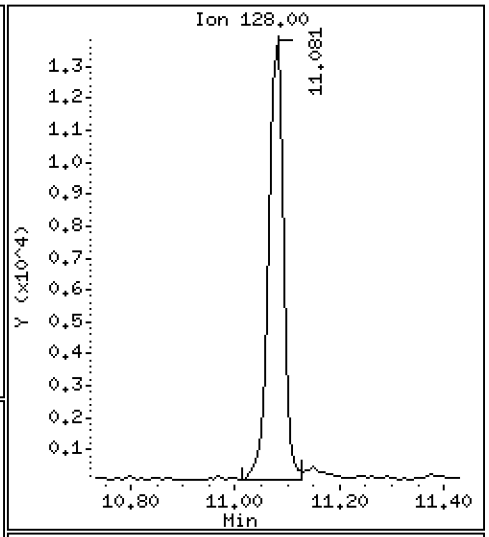
Concentration: 0.09919 ug/mL

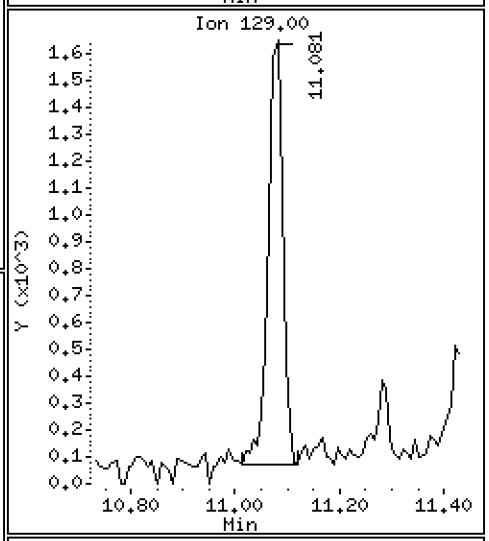


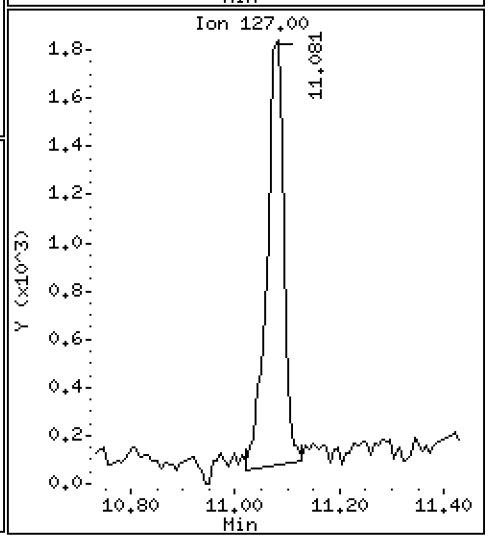












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

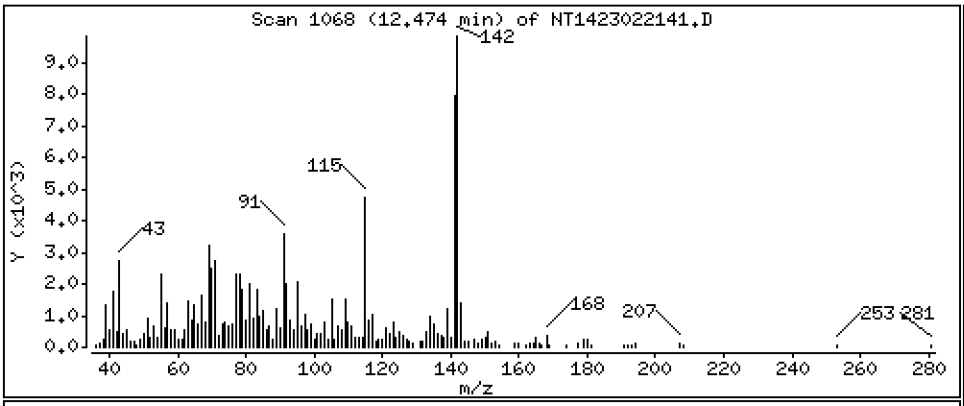
Operator: DSD

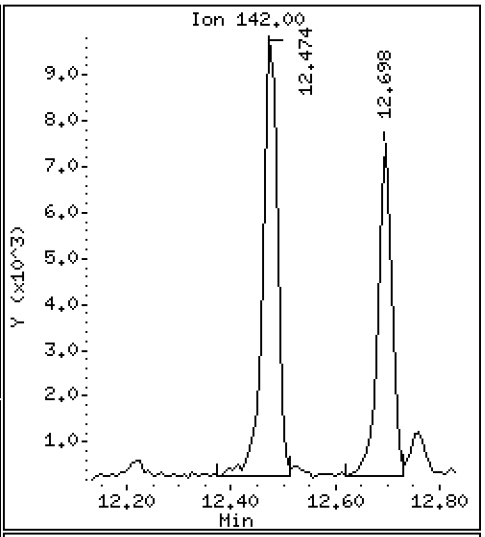
Column phase: ZB-5msi

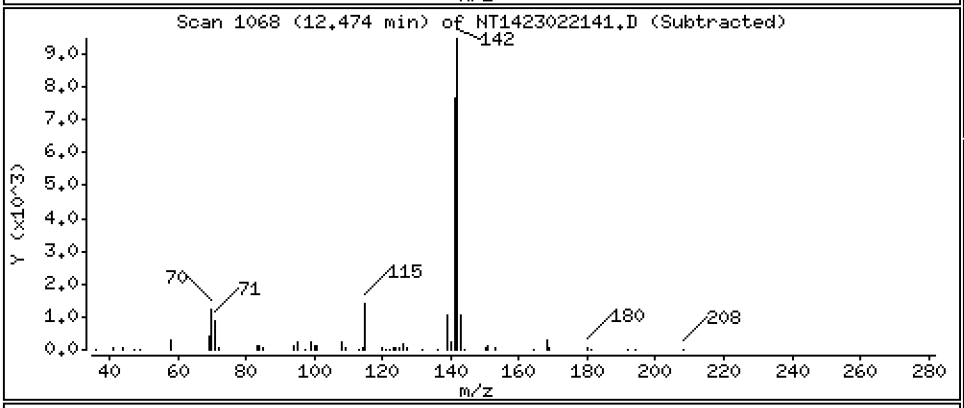
Column diameter: 0.25

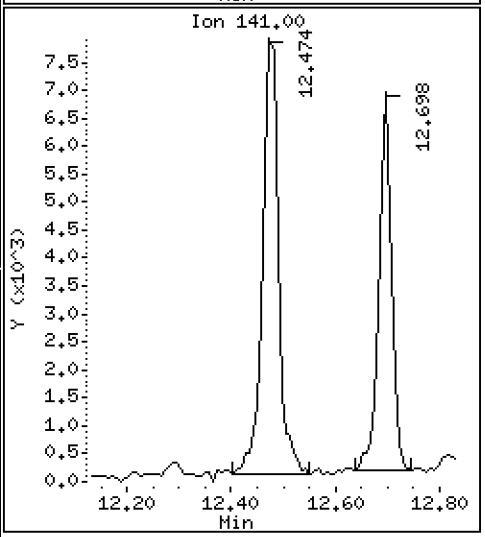
32 2-Methylnaphthalene

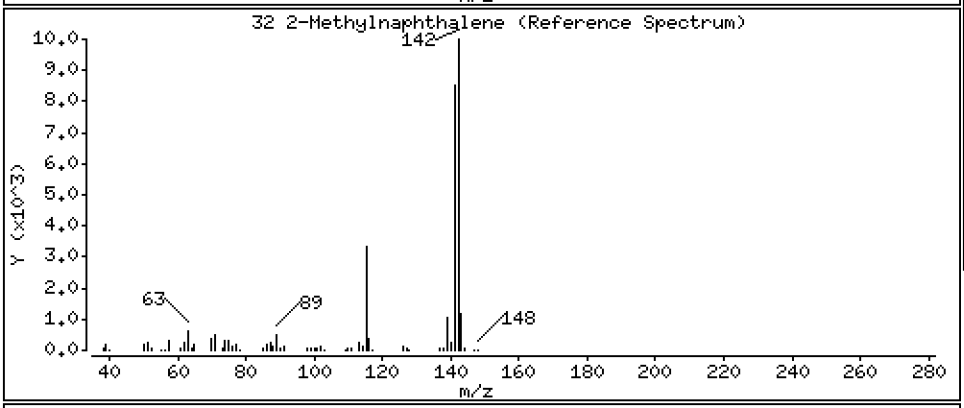
Concentration: 0.09264 ug/mL

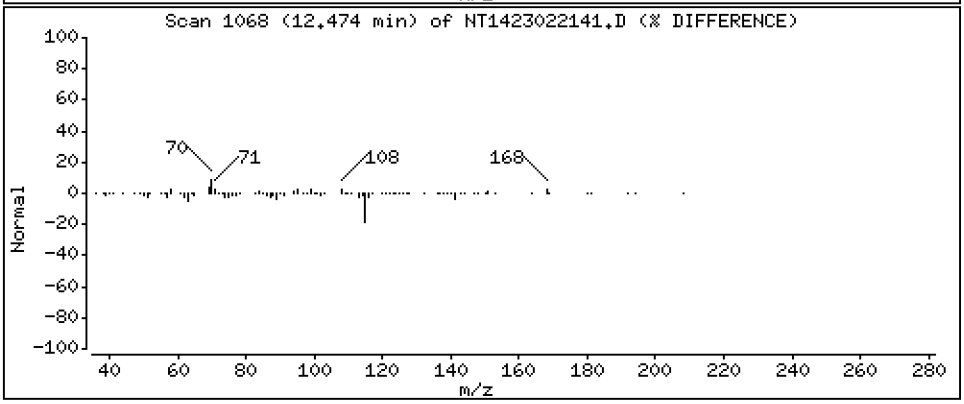












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

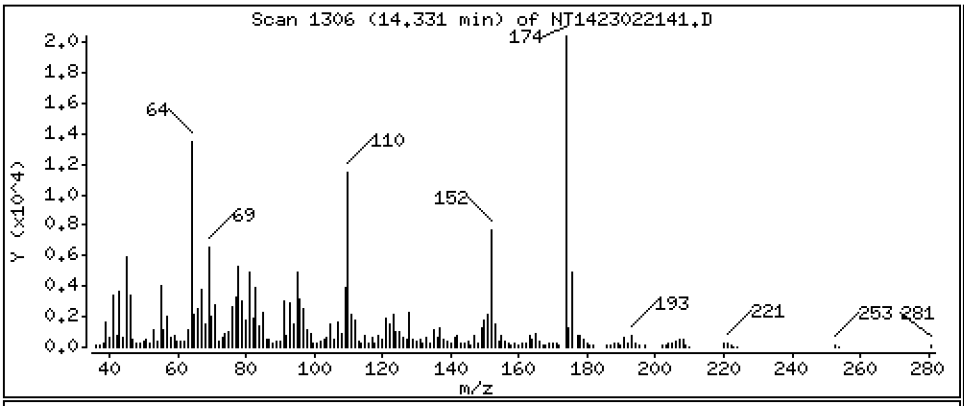
Operator: DSD

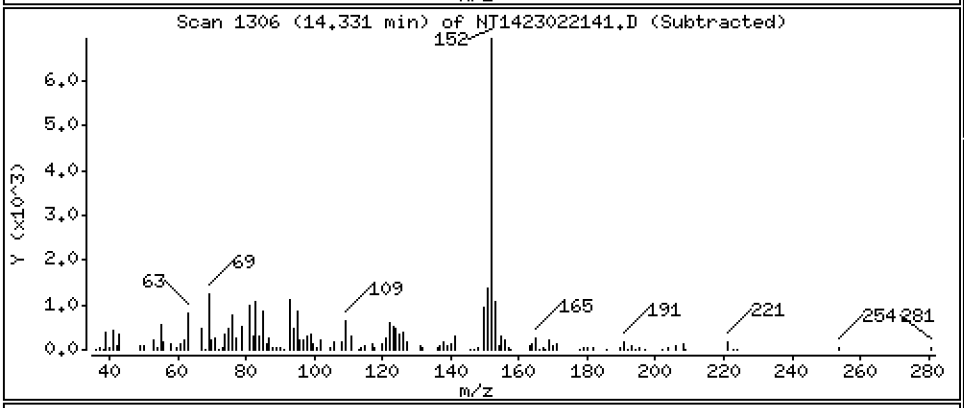
Column phase: ZB-5msi

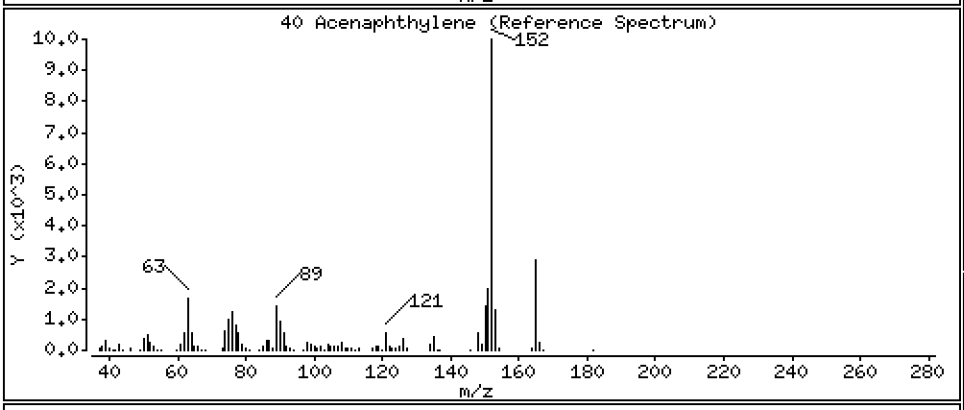
Column diameter: 0.25

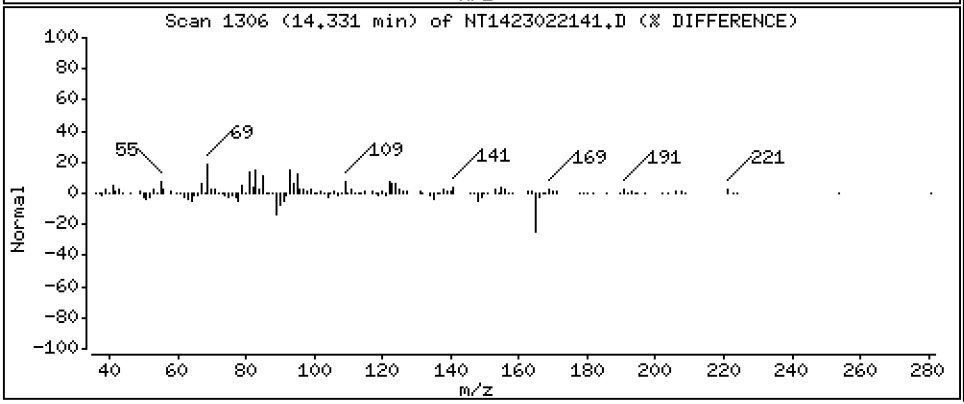
40 Acenaphthylene

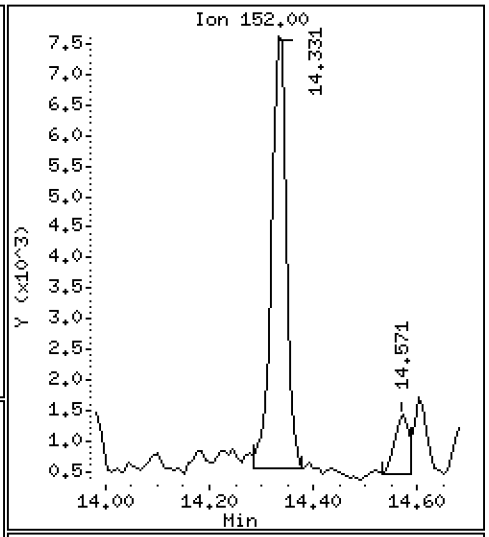
Concentration: 0.04912 ug/mL

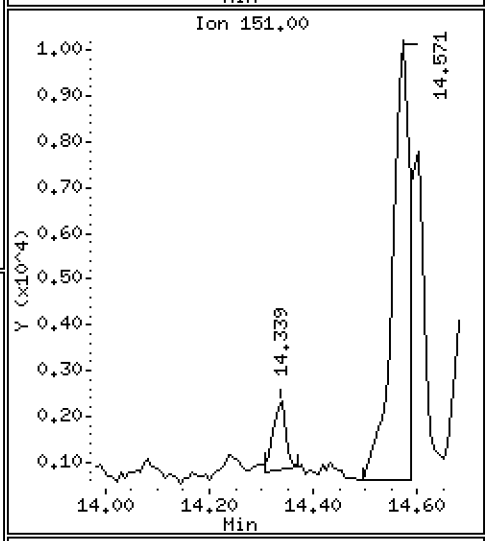


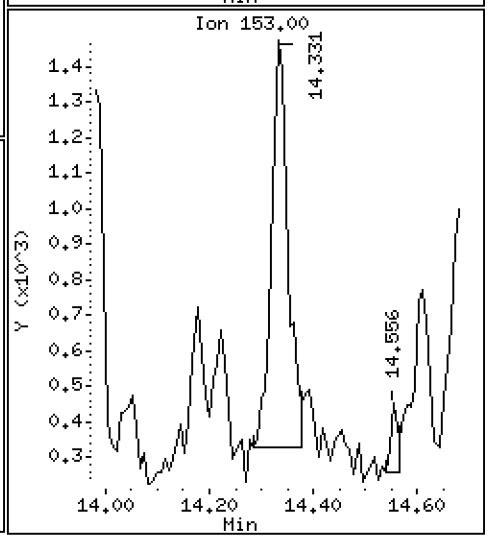












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

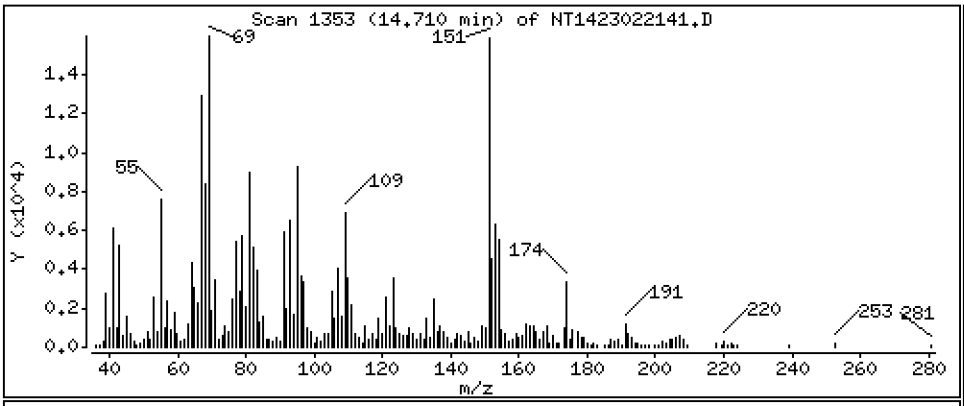
Operator: DSD

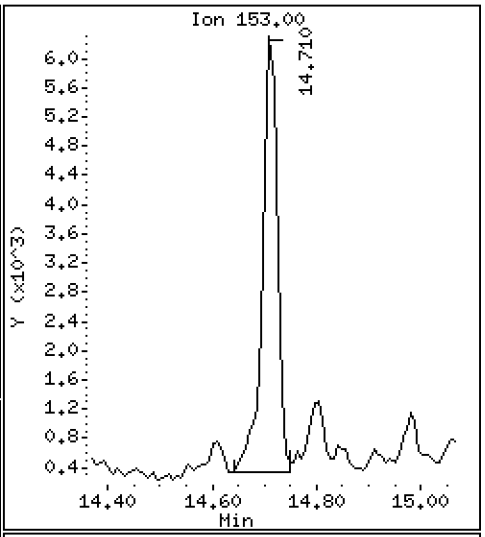
Column phase: ZB-5msi

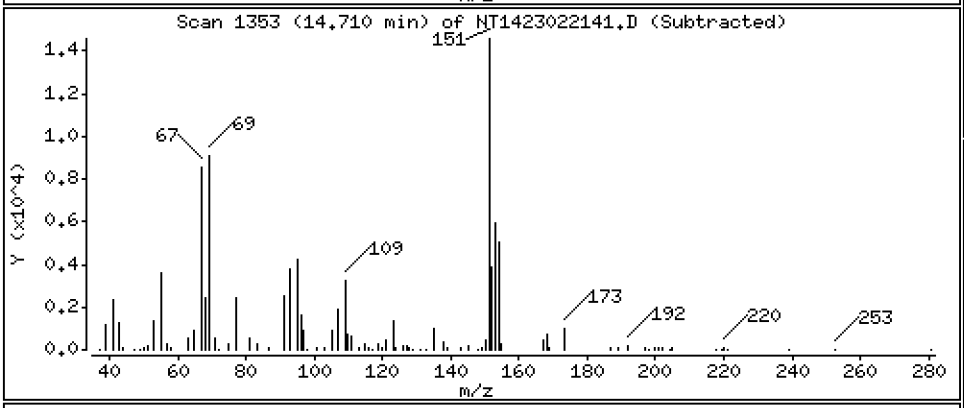
Column diameter: 0.25

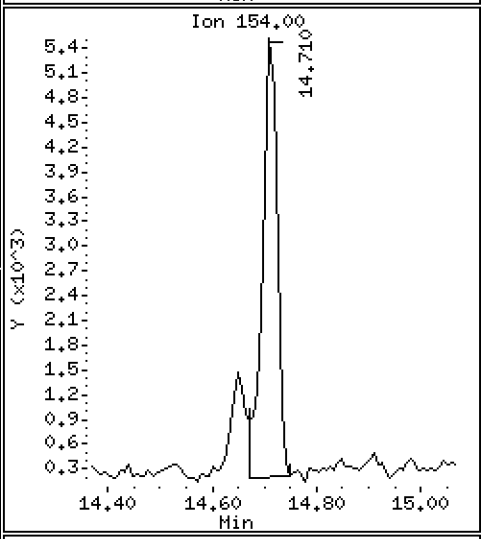
44 Acenaphthene

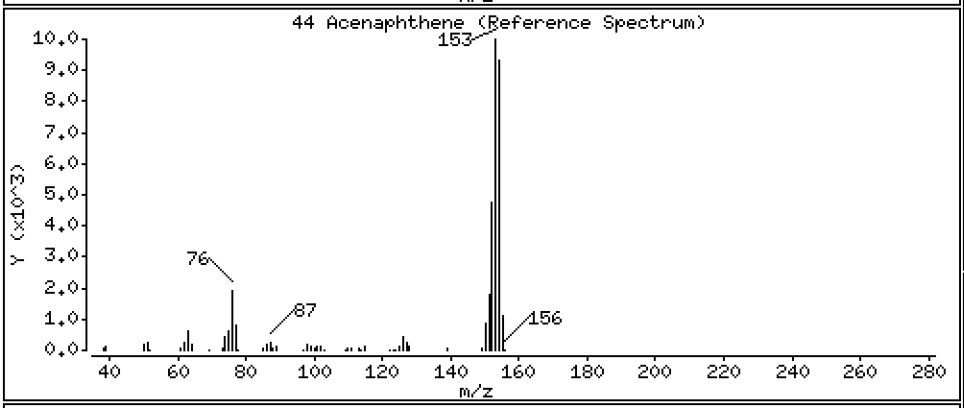
Concentration: 0.06936 ug/mL

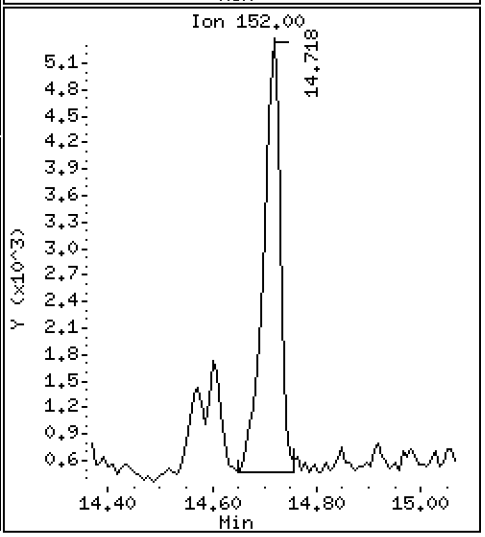


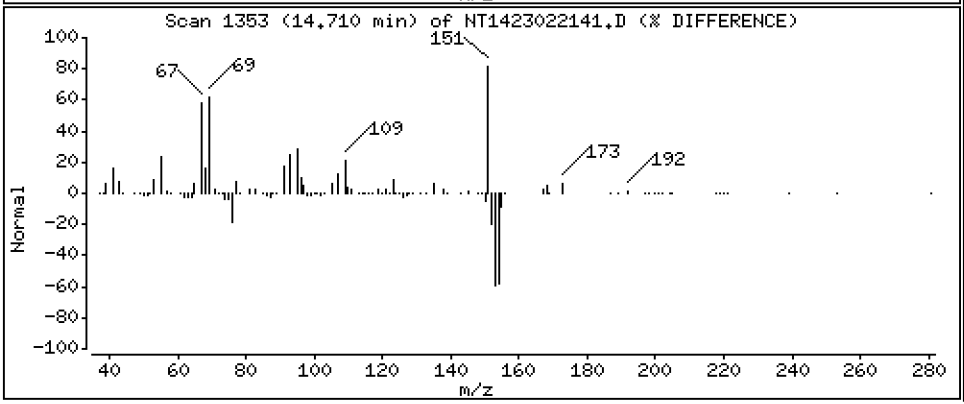












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

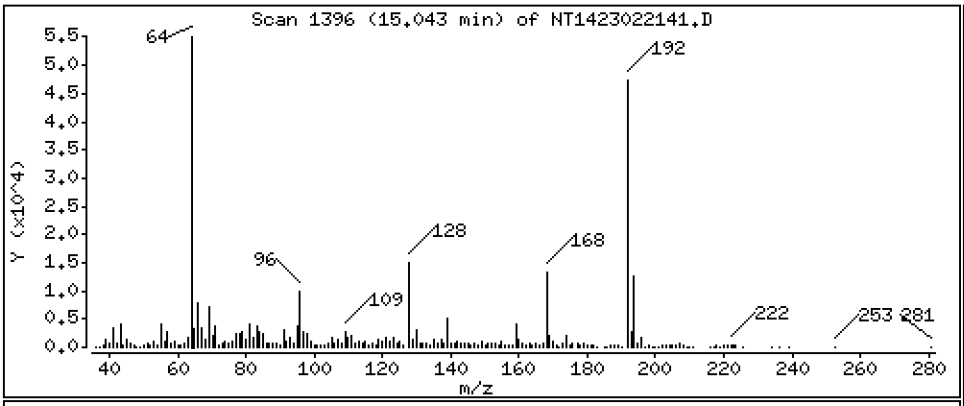
Operator: DSD

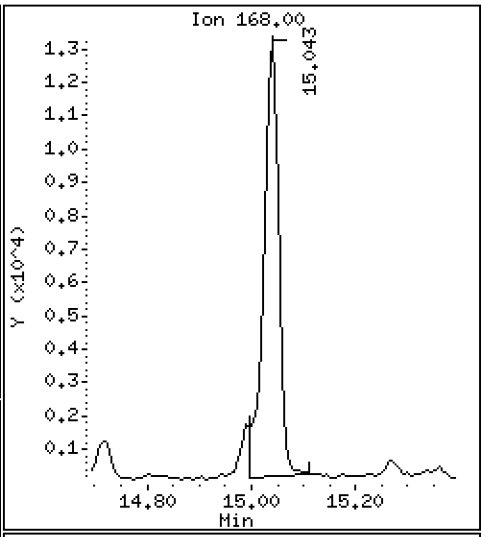
Column phase: ZB-5msi

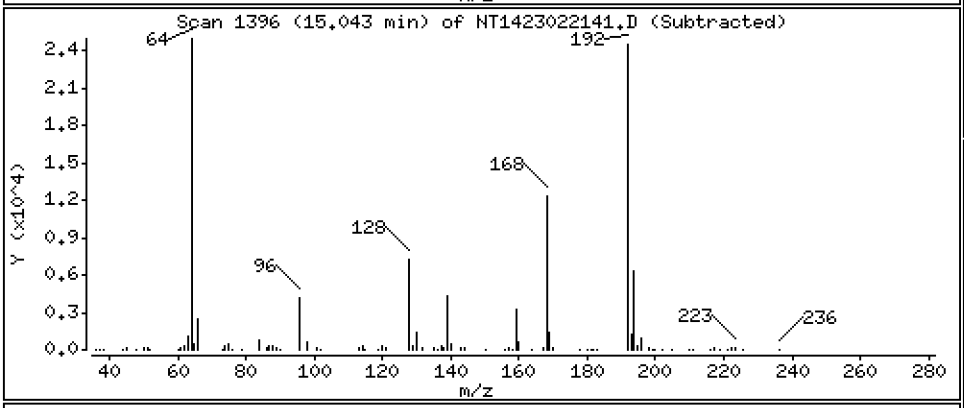
Column diameter: 0.25

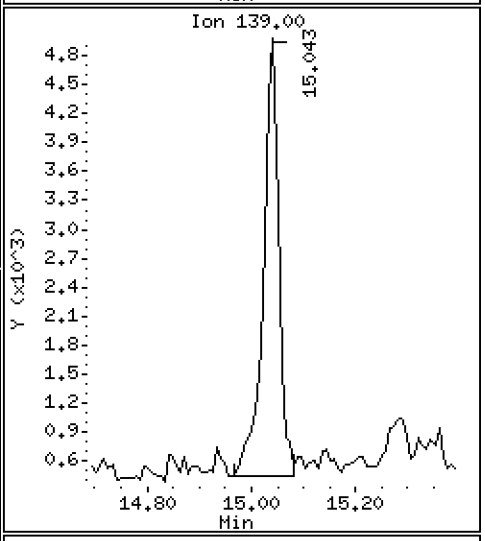
46 Dibenzofuran

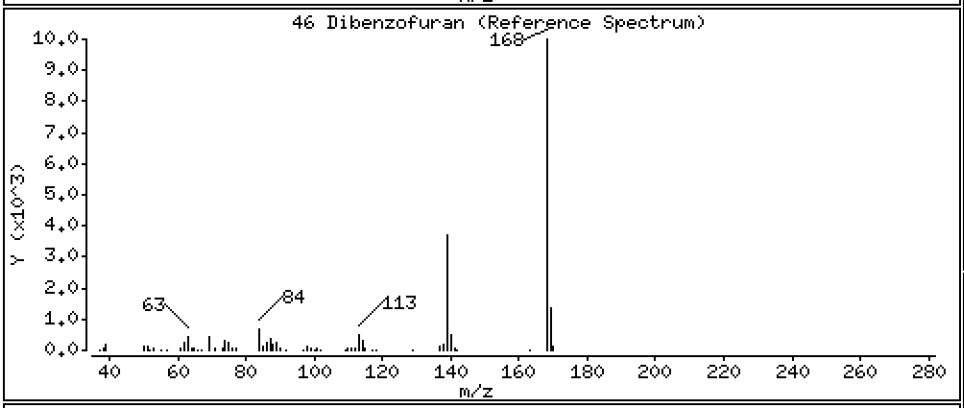
Concentration: 0.09361 ug/mL

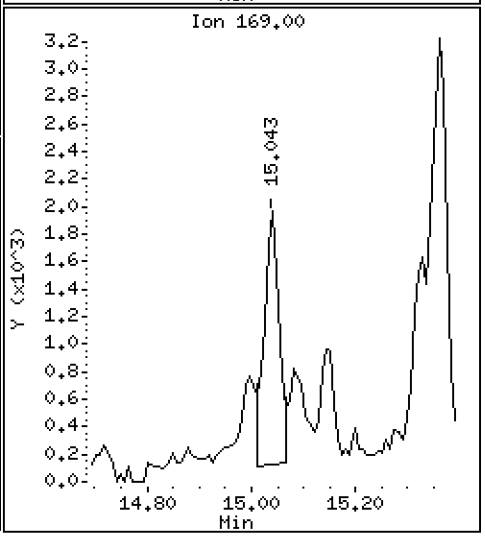


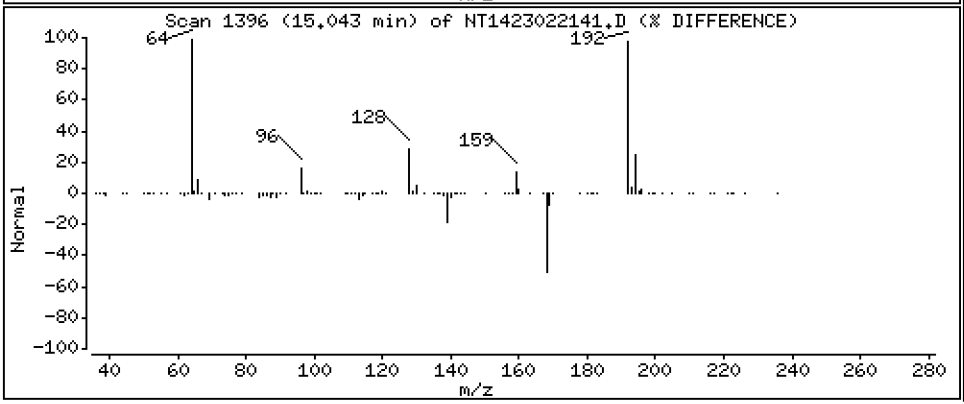












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

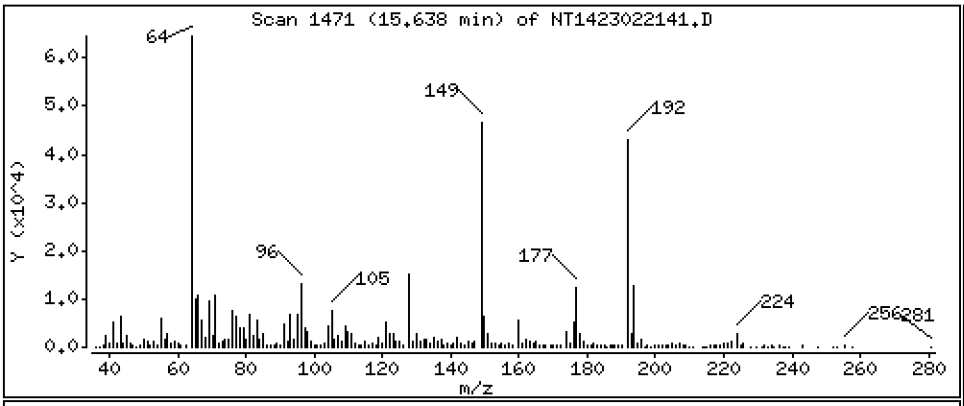
Operator: DSD

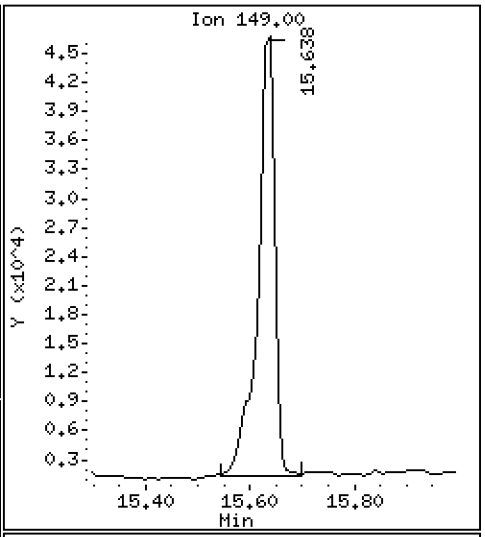
Column phase: ZB-5msi

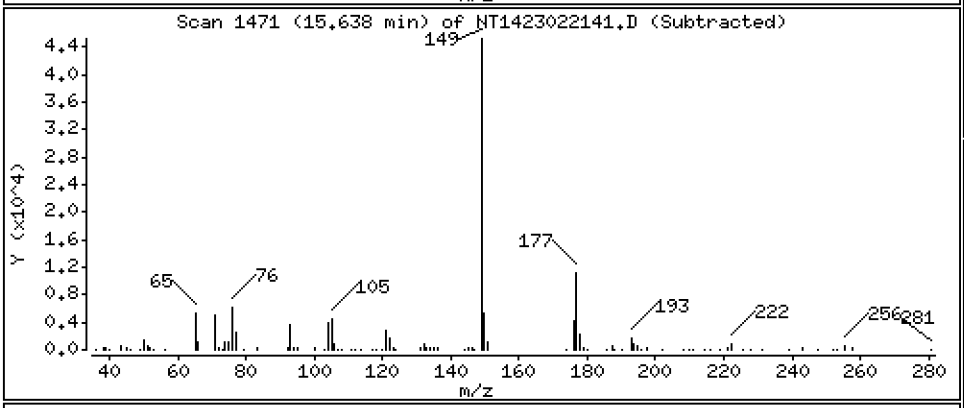
Column diameter: 0.25

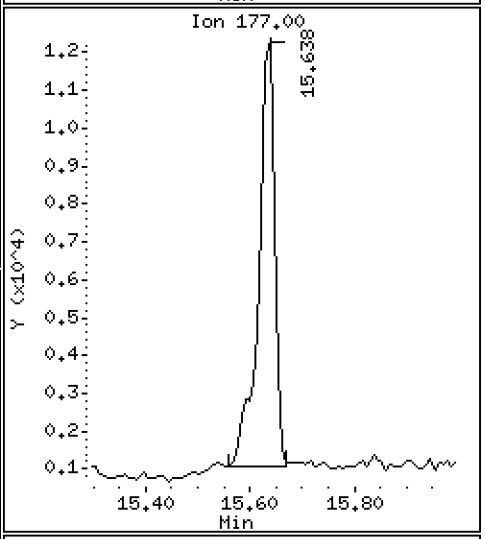
50 Diethylphthalate

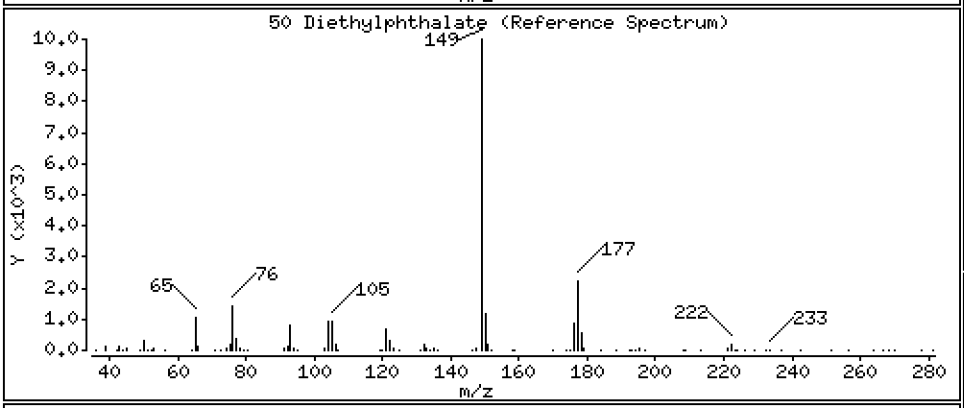
Concentration: 0.4319 ug/mL

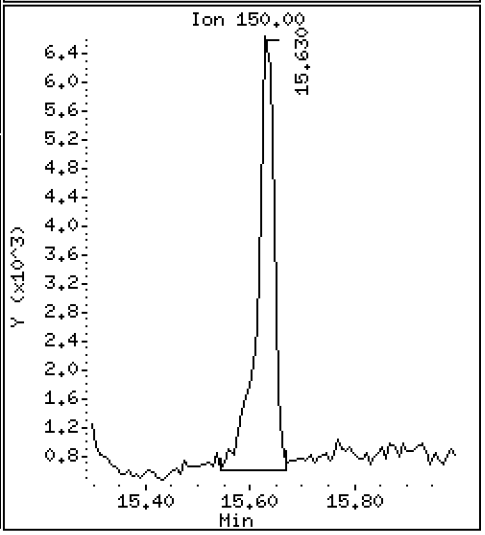


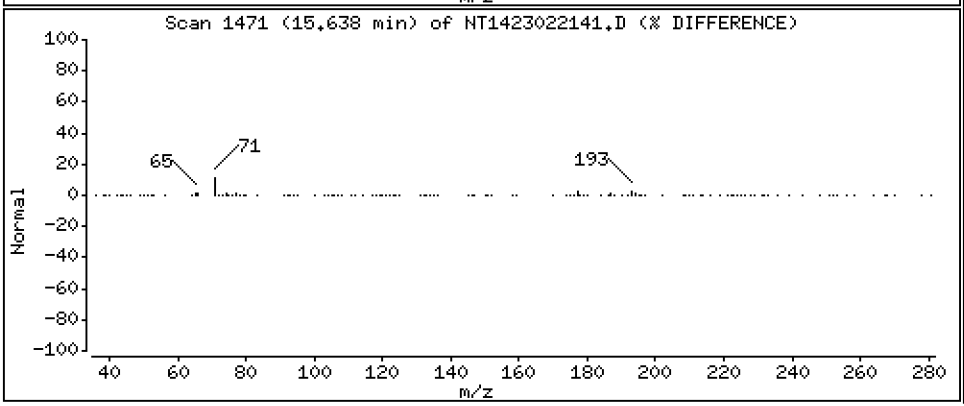












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

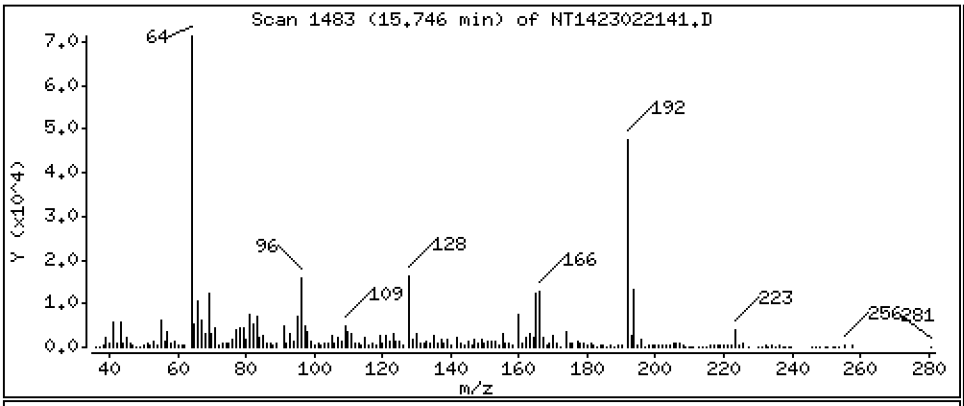
Operator: DSD

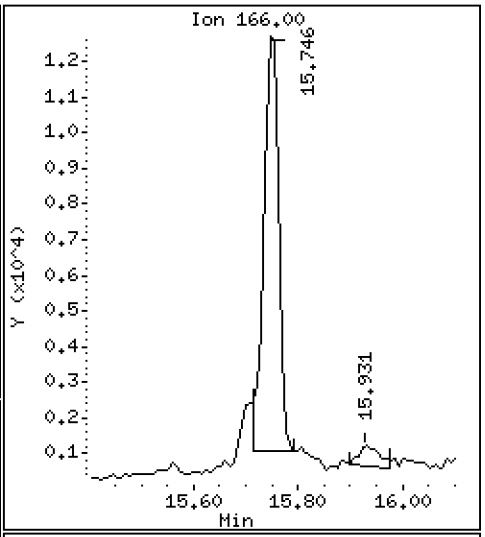
Column phase: ZB-5msi

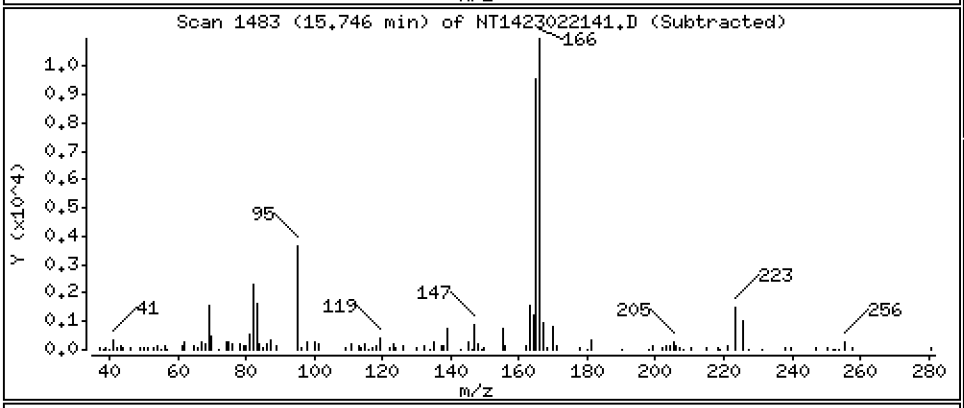
Column diameter: 0.25

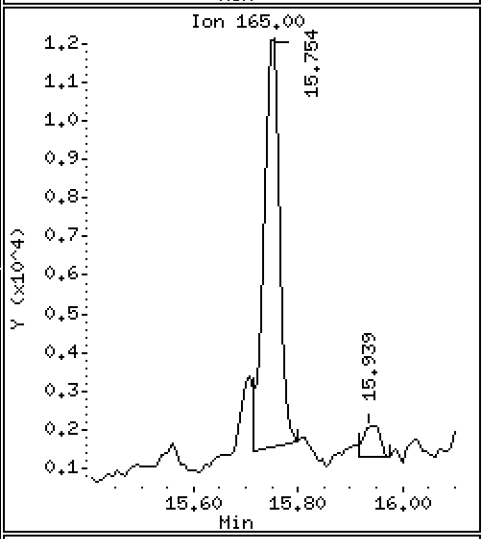
49 Fluorene

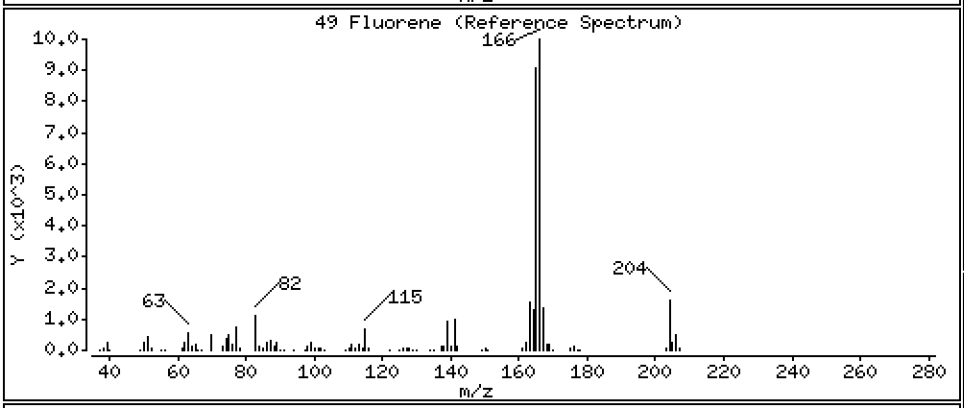
Concentration: 0.07927 ug/mL

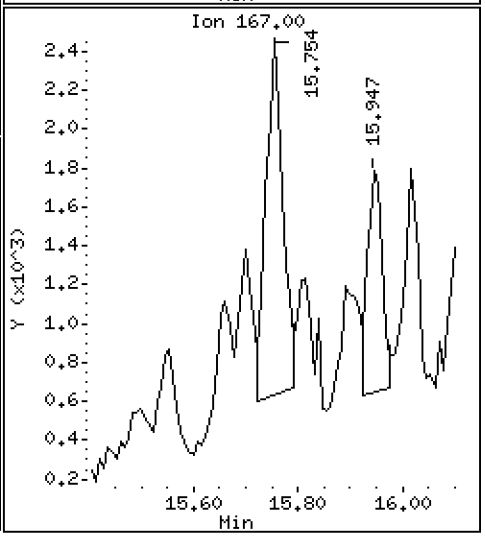


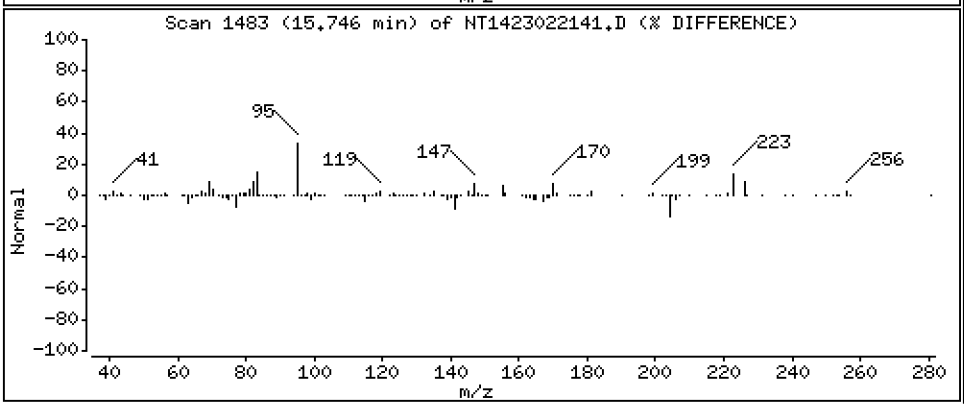












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

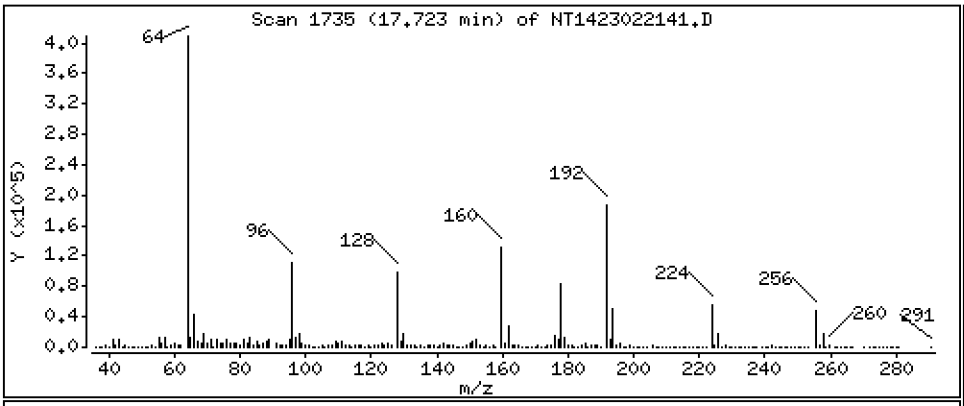
Operator: DSD

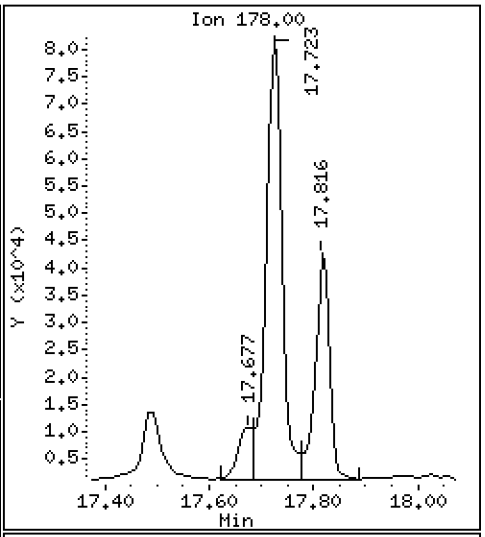
Column phase: ZB-5msi

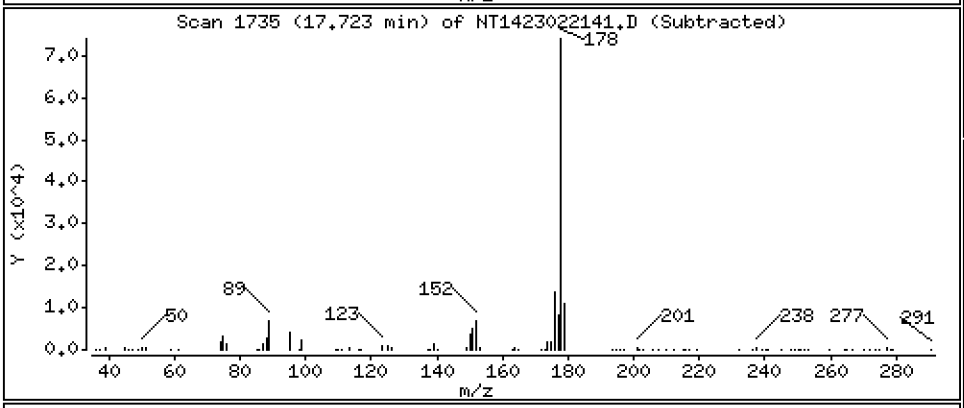
Column diameter: 0.25

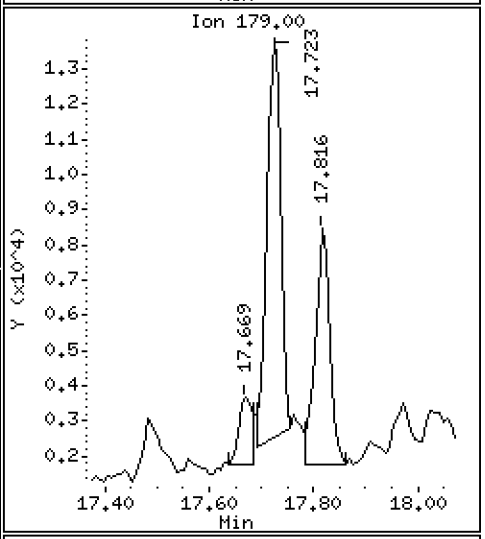
60 Phenanthrene

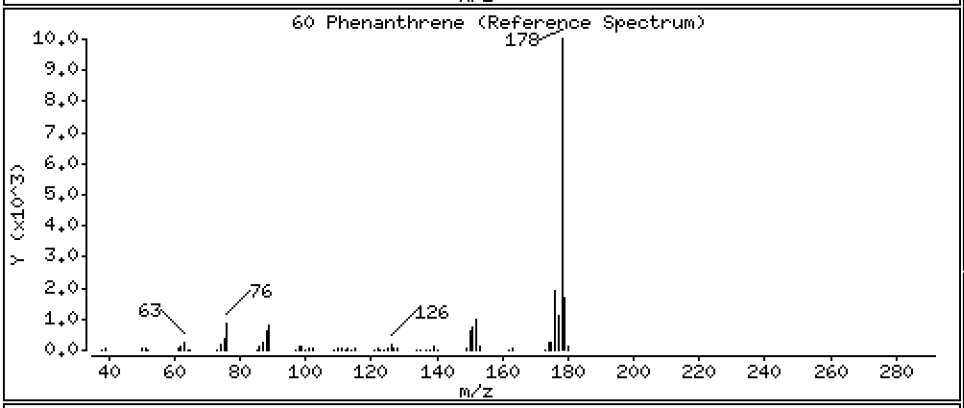
Concentration: 0.6233 ug/mL

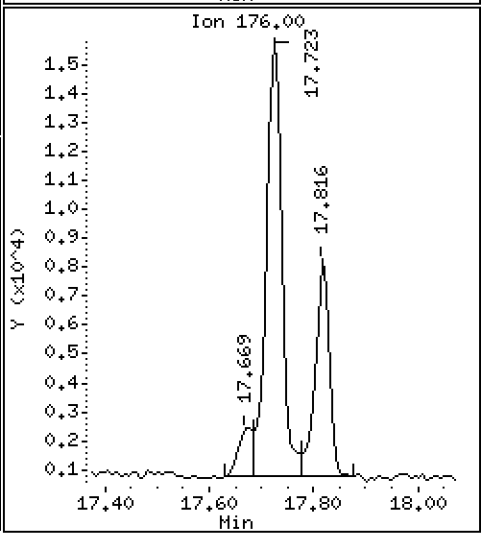


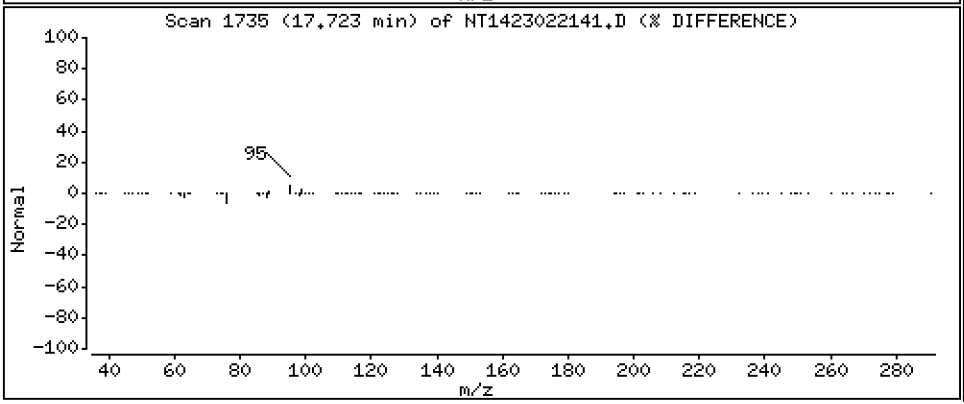












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

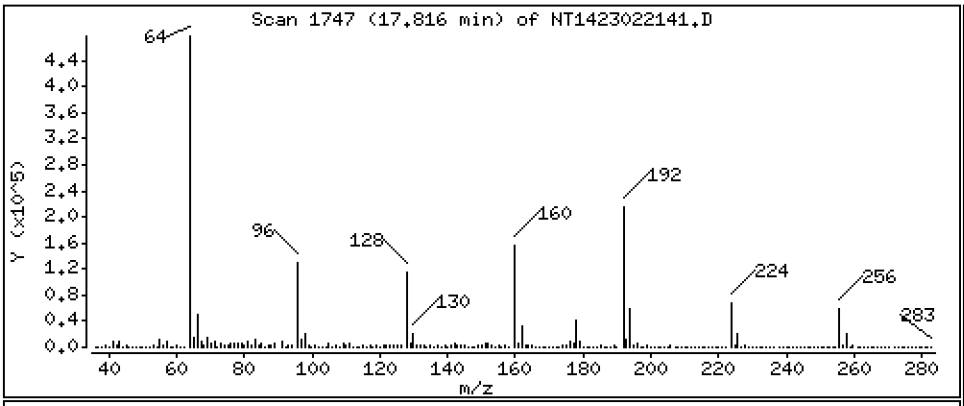
Operator: DSD

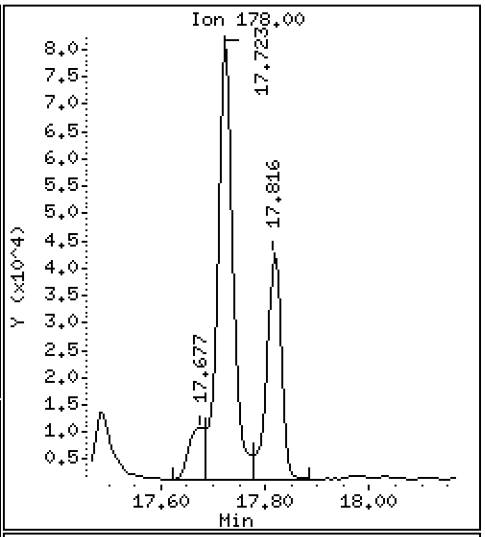
Column phase: ZB-5msi

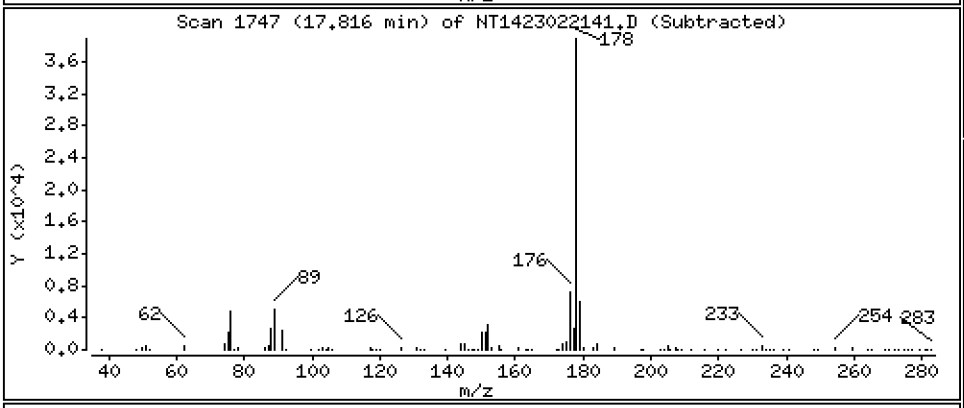
Column diameter: 0.25

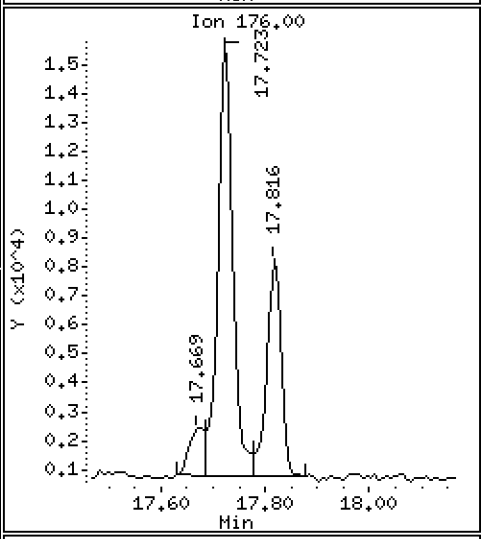
61 Anthracene

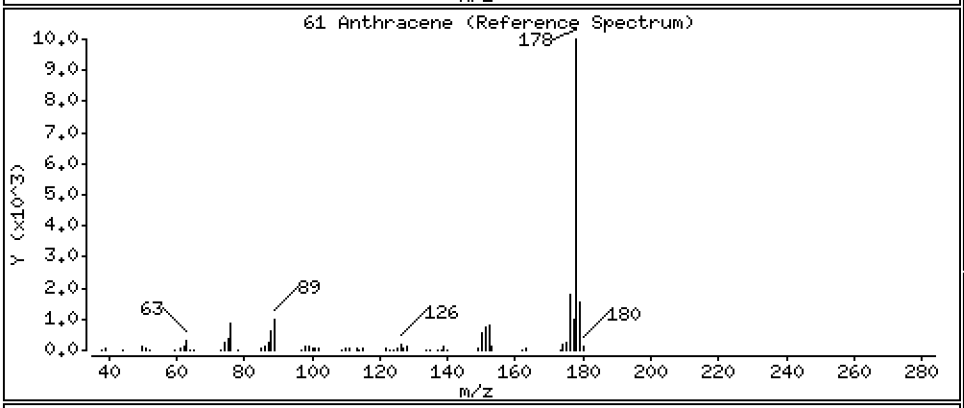
Concentration: 0.2918 ug/mL

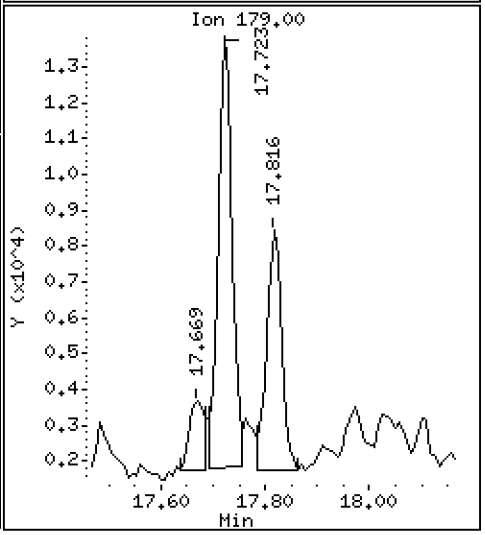


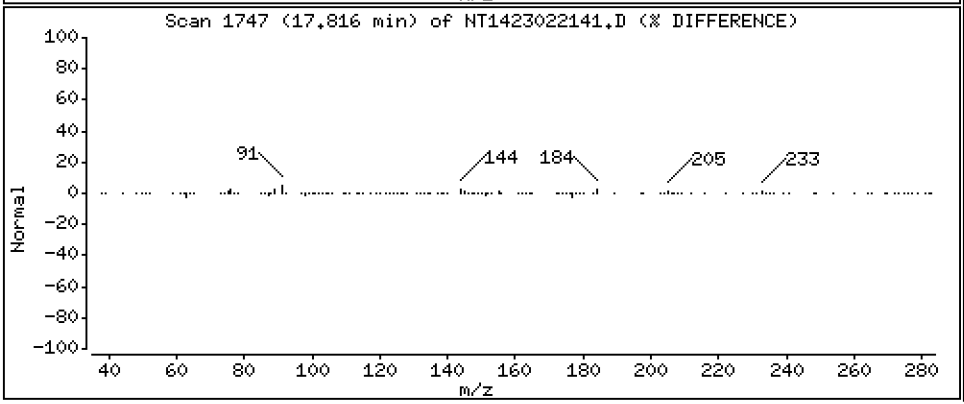












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

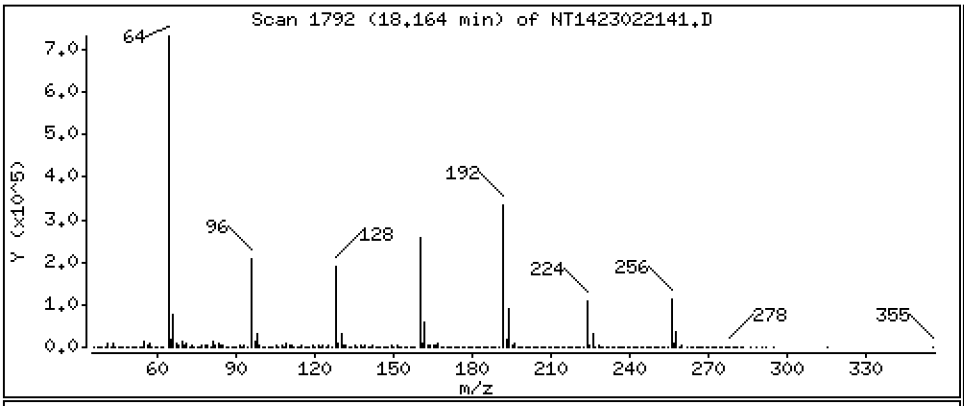
Operator: DSD

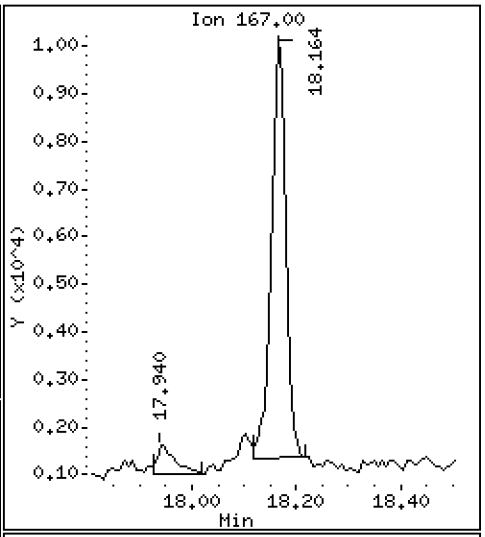
Column phase: ZB-5msi

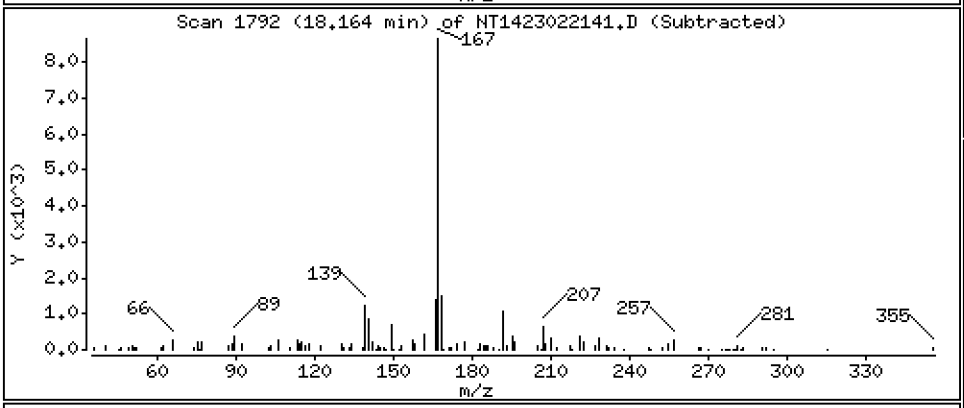
Column diameter: 0.25

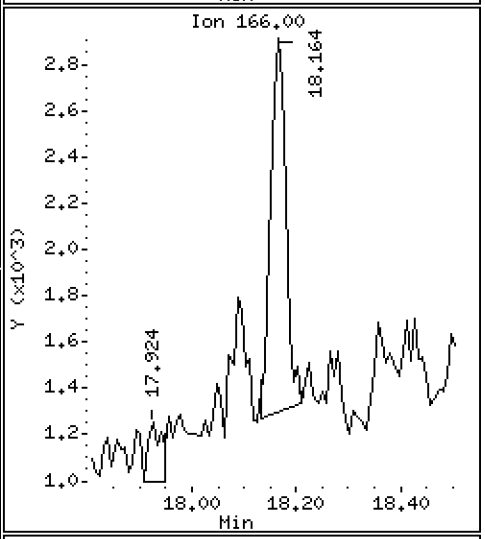
62 Carbazole

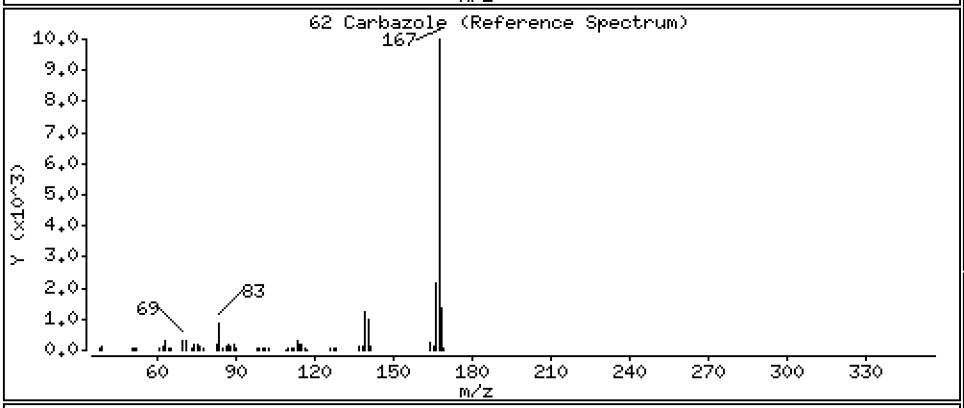
Concentration: 0.06949 ug/mL

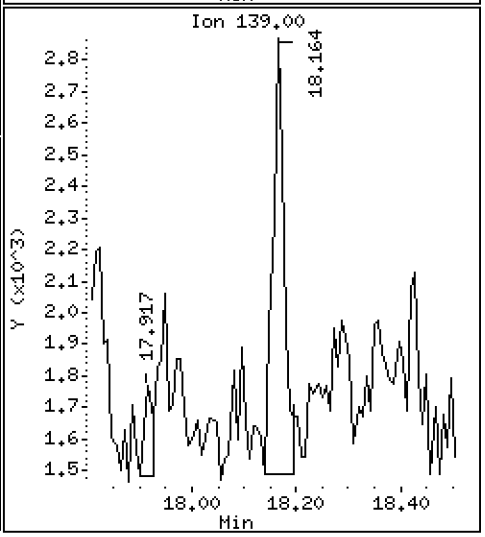


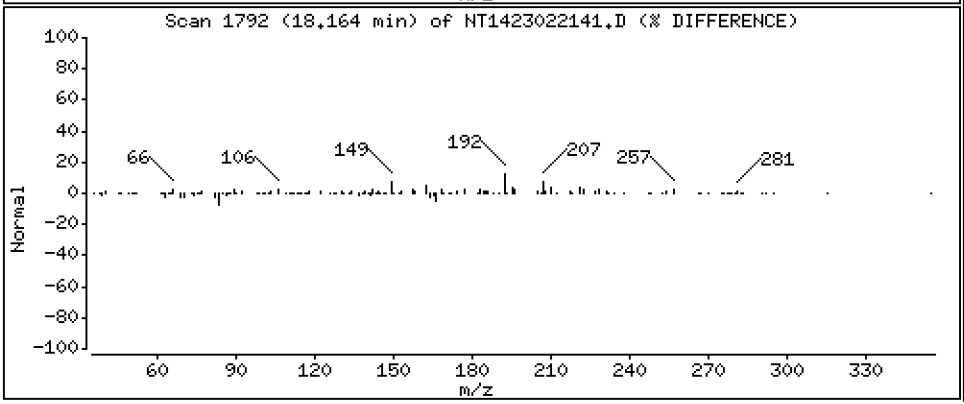












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

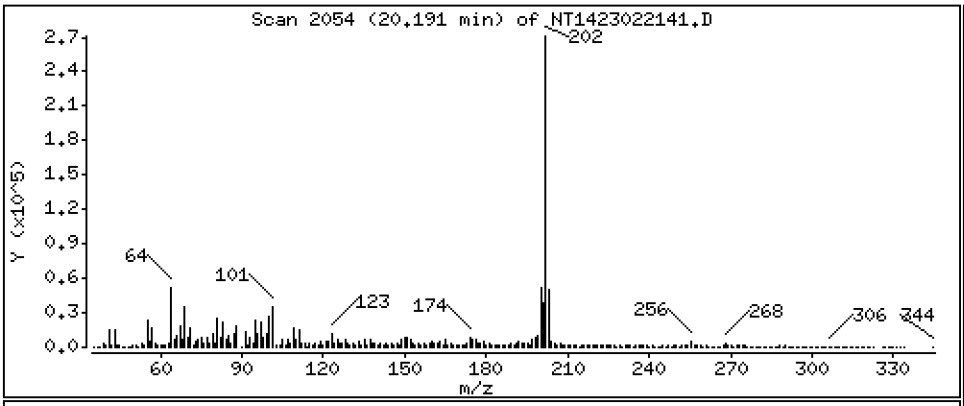
Operator: DSD

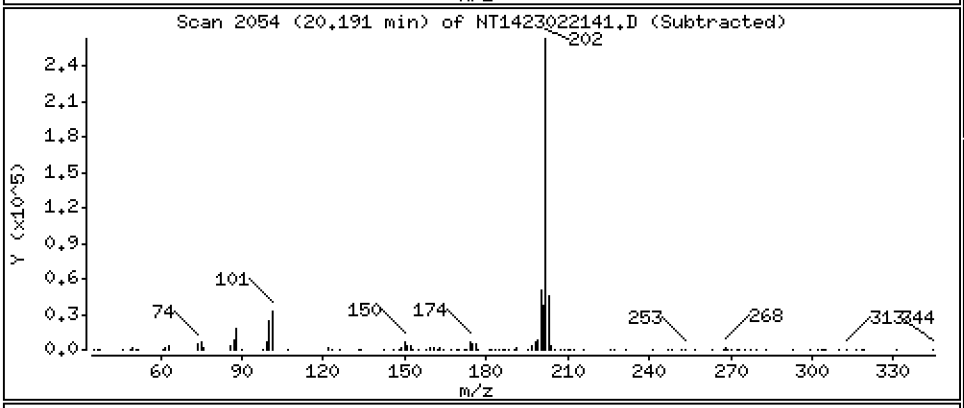
Column phase: ZB-5msi

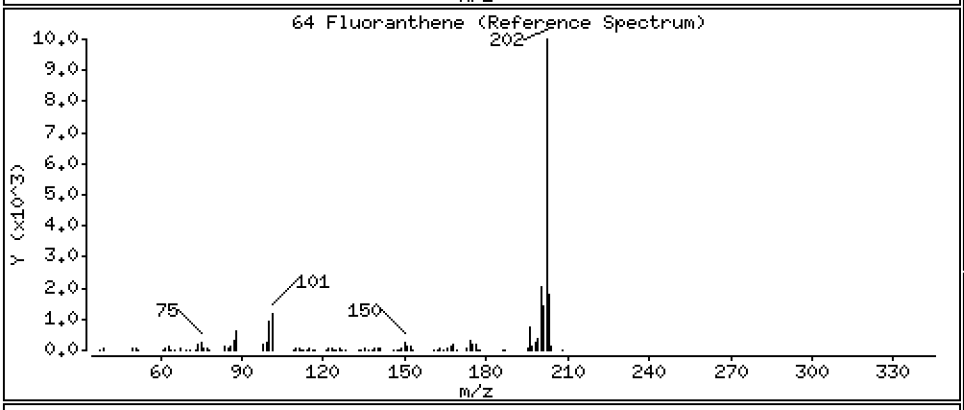
Column diameter: 0.25

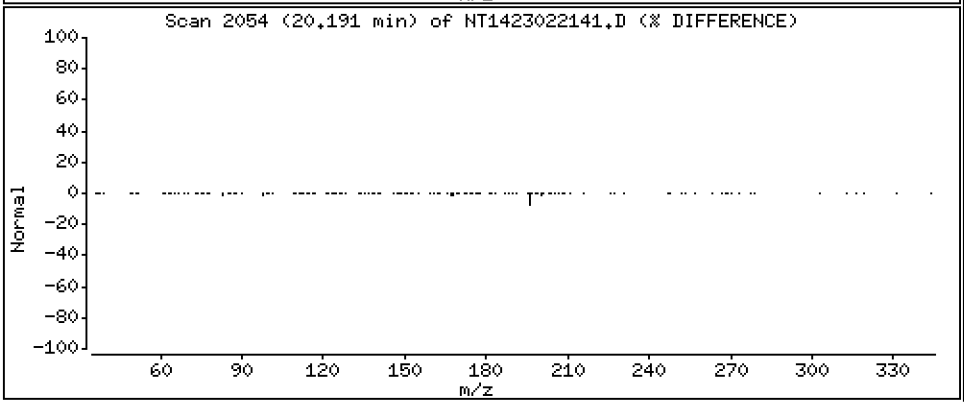
64 Fluoranthene

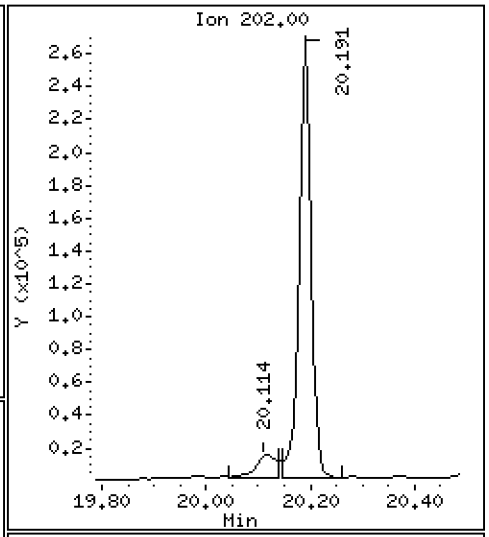
Concentration: 1.317 ug/mL

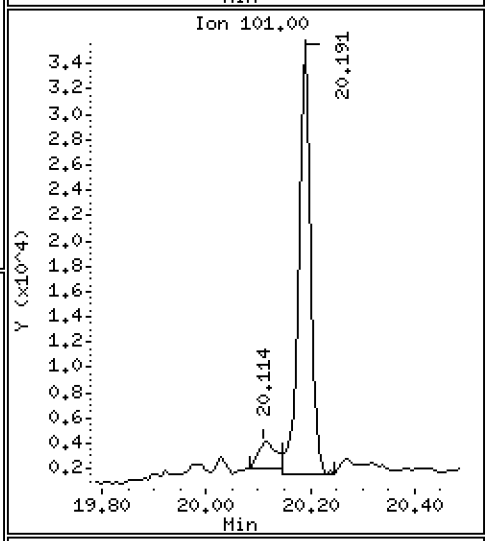


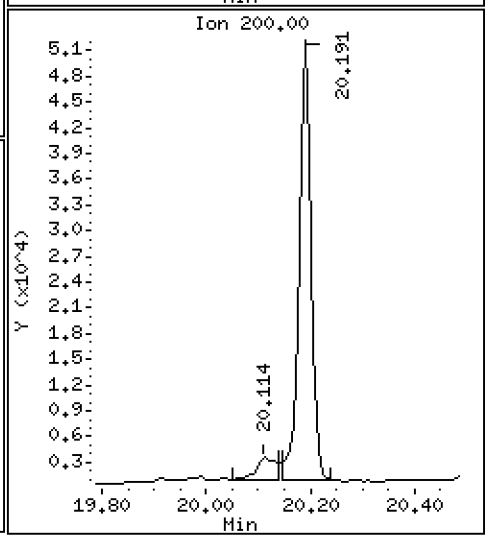












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

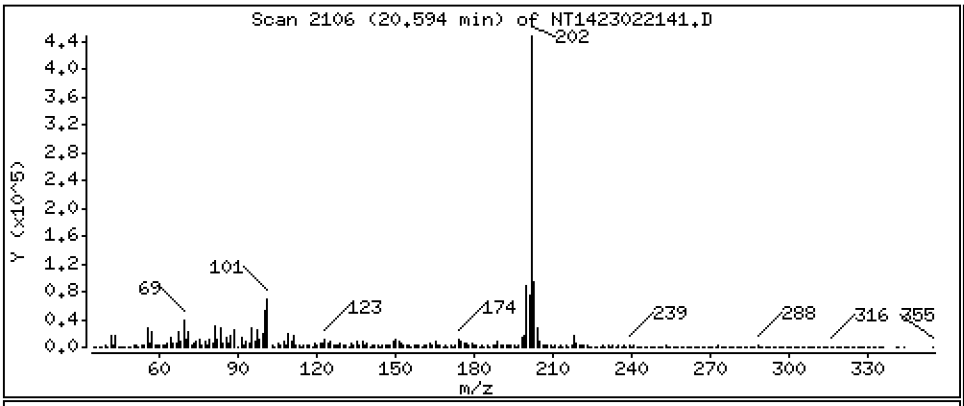
Operator: DSD

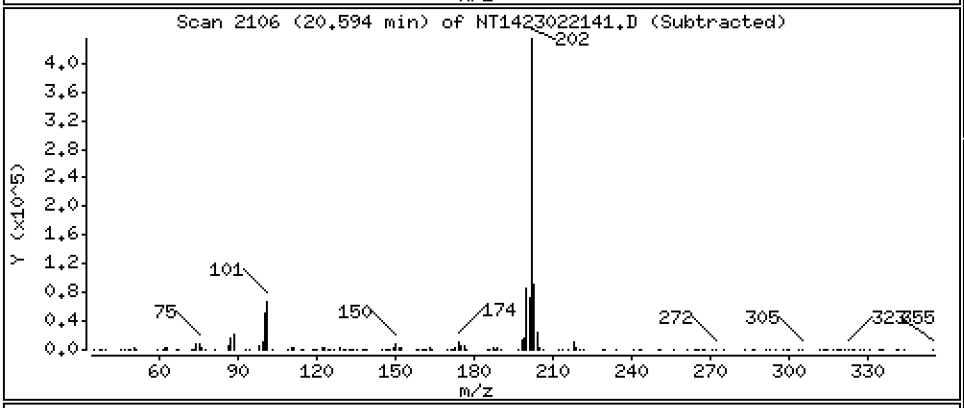
Column phase: ZB-5msi

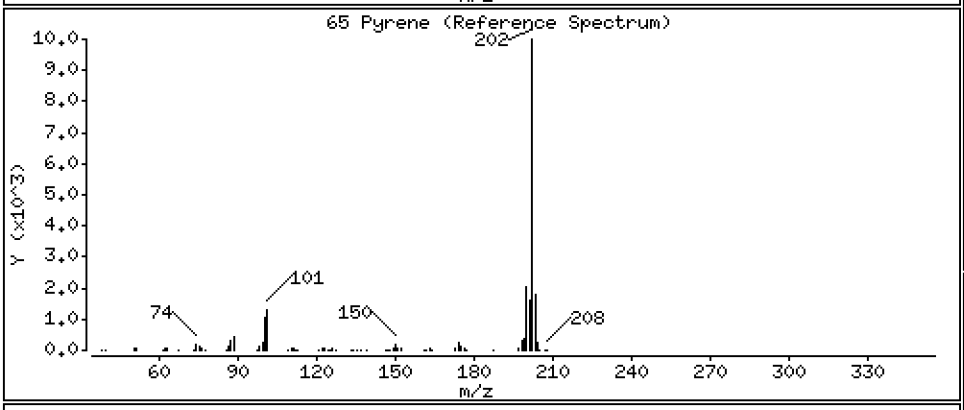
Column diameter: 0.25

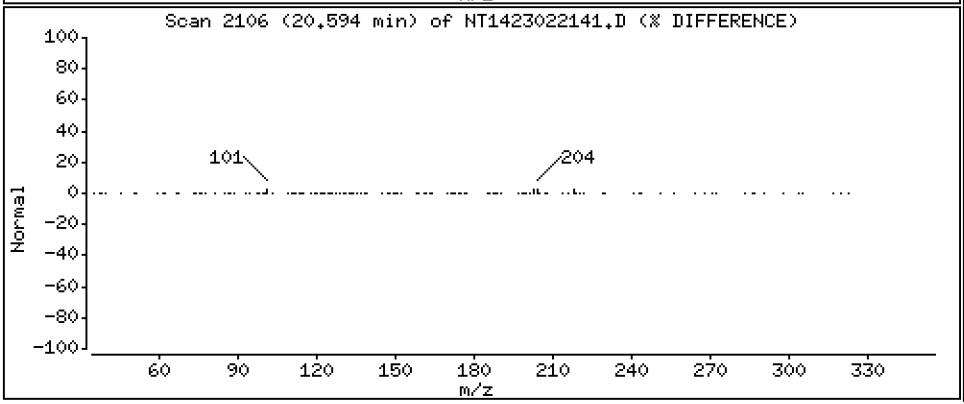
65 Pyrene

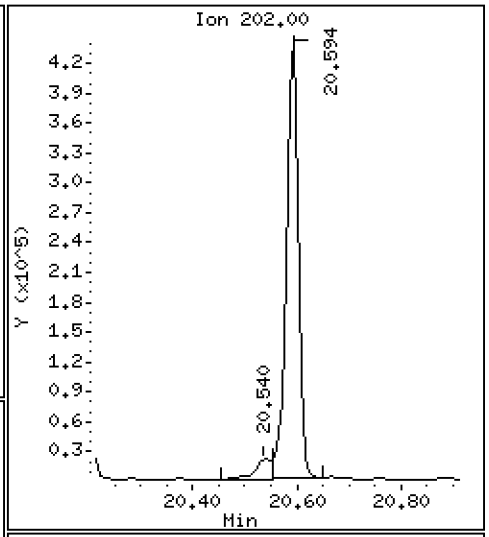
Concentration: 2.093 ug/mL

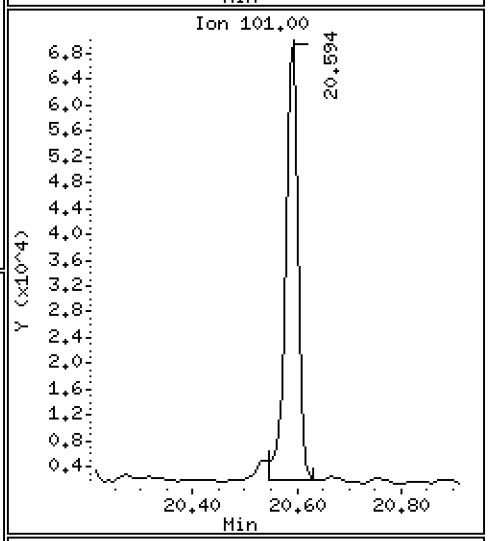


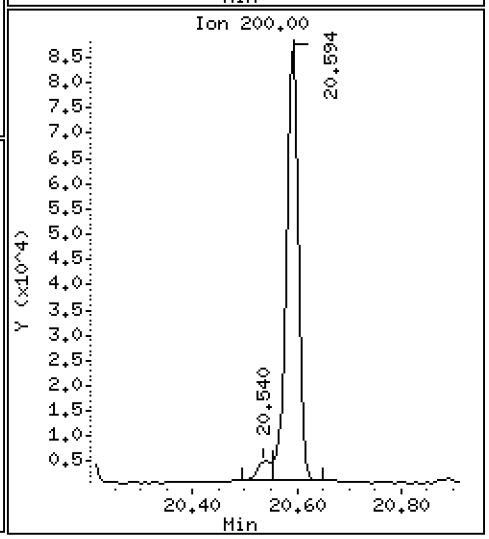












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

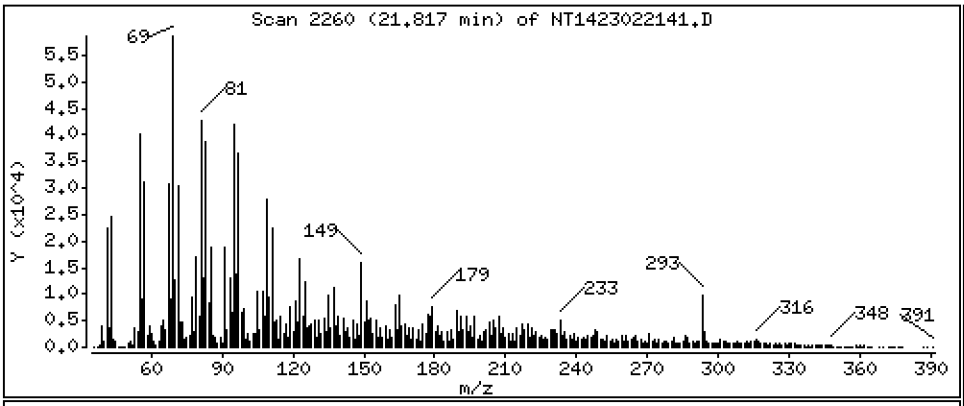
Operator: DSD

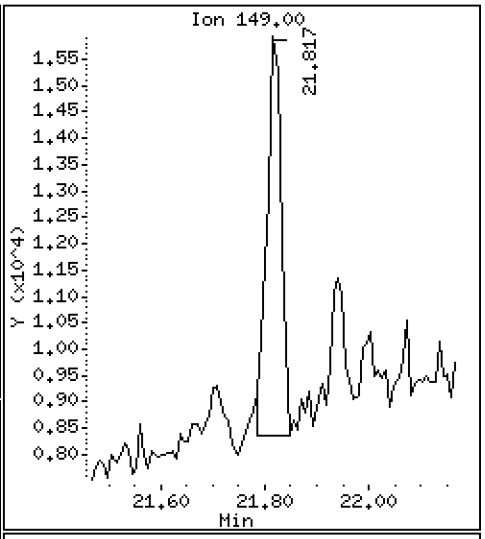
Column phase: ZB-5msi

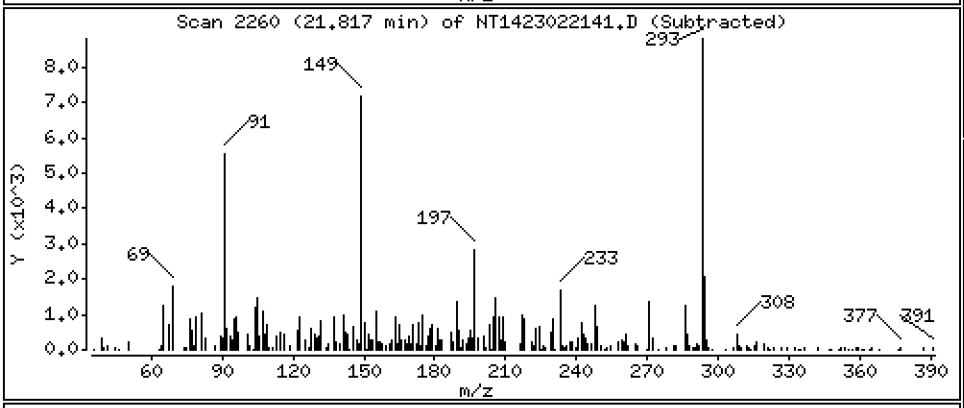
Column diameter: 0.25

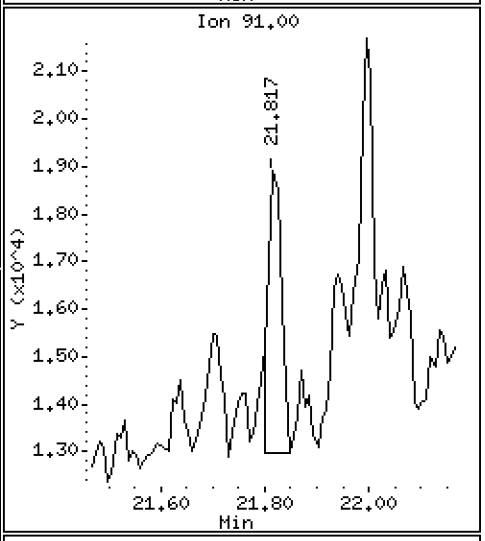
67 Butylbenzylphthalate

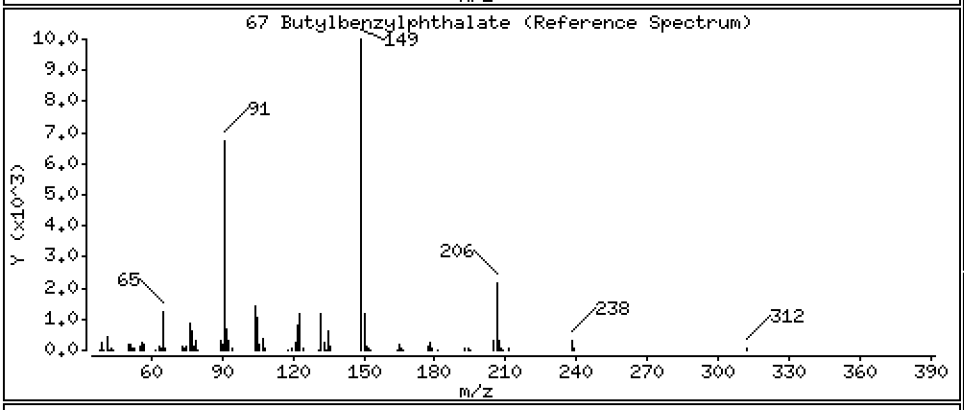
Concentration: 0.1219 ug/mL

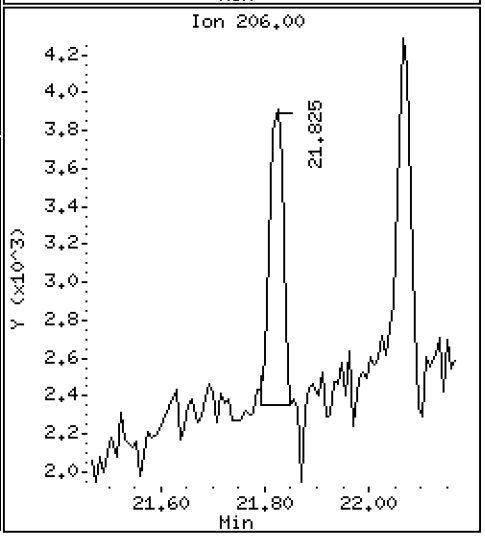


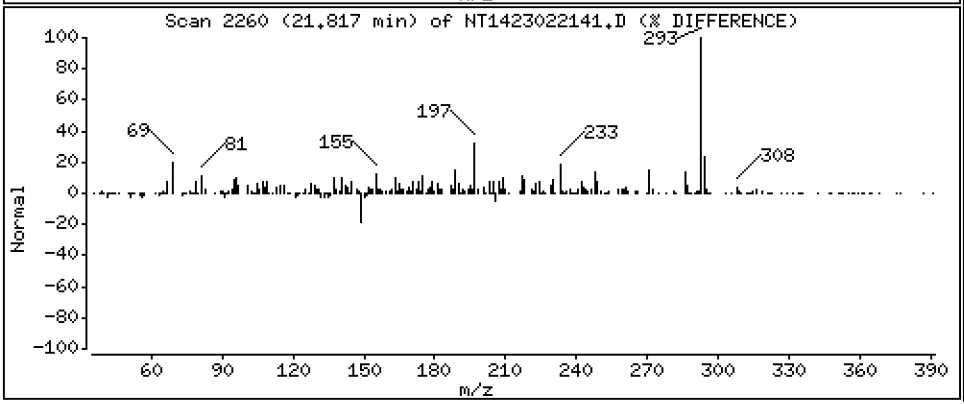












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

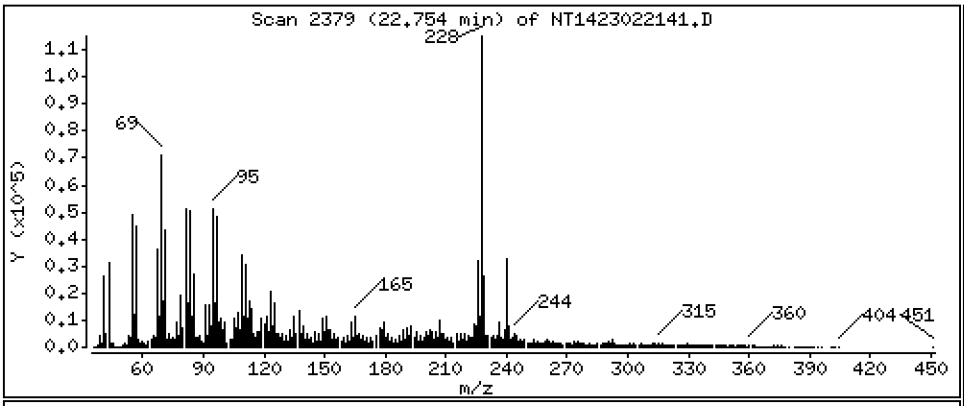
Operator: DSD

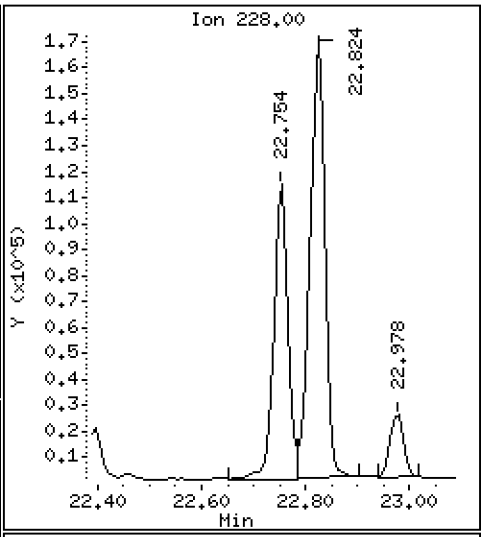
Column phase: ZB-5msi

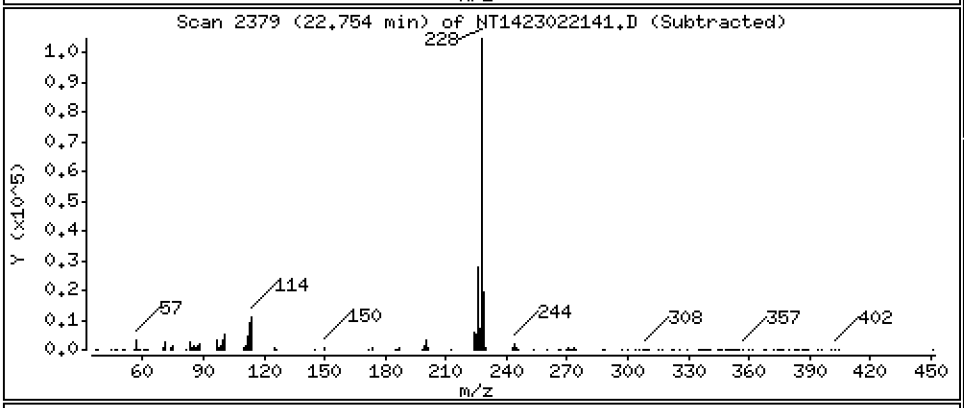
Column diameter: 0.25

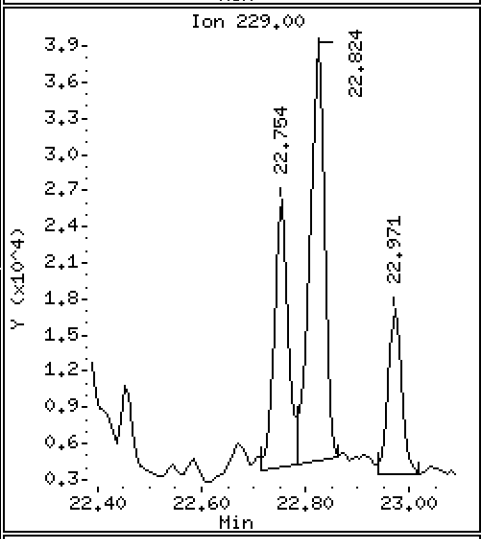
68 Benzo(a)anthracene

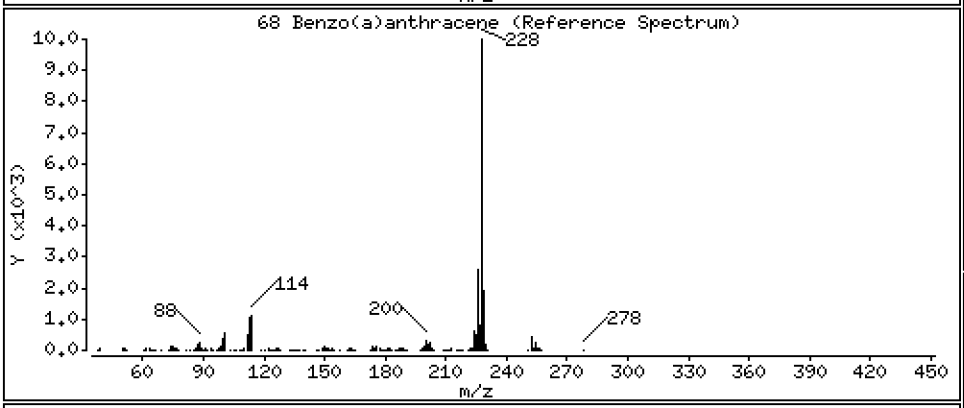
Concentration: 0.8823 ug/mL

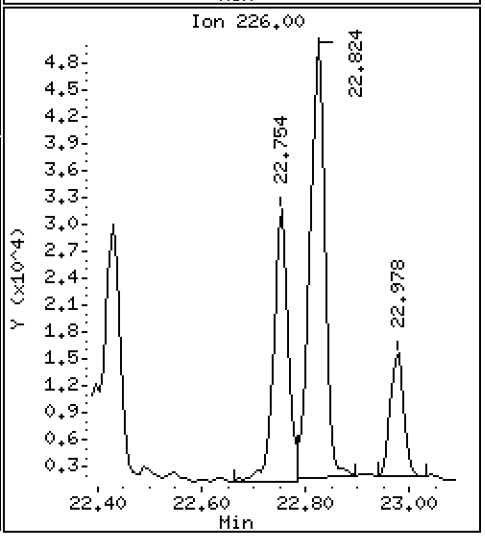


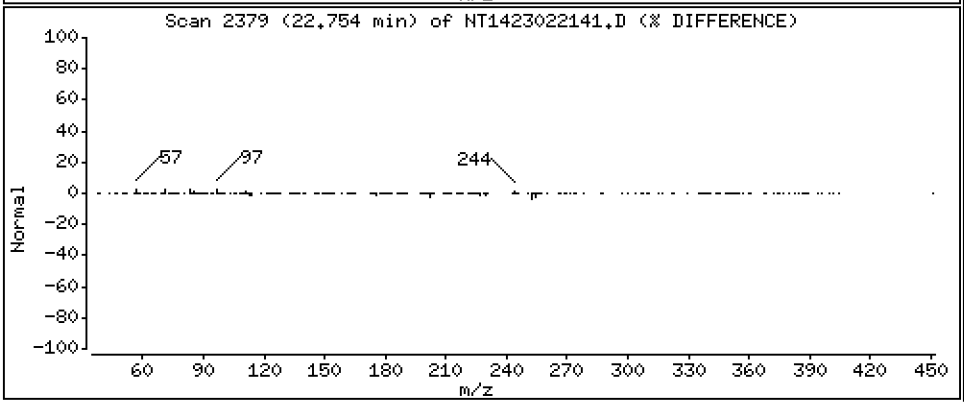












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

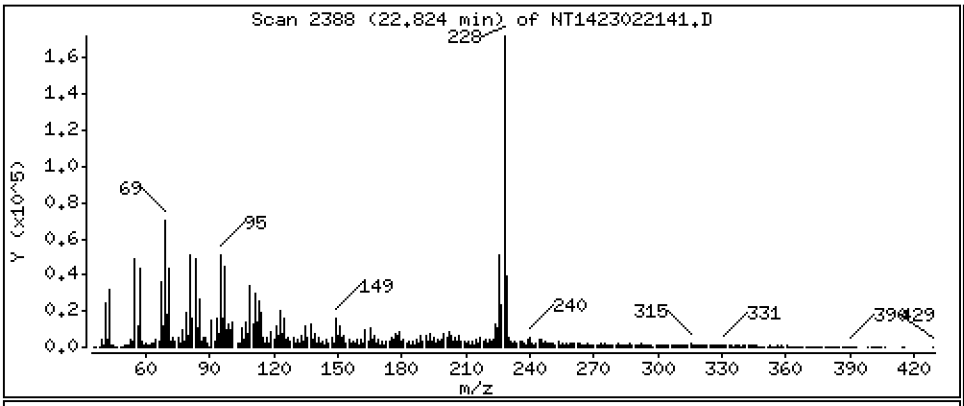
Operator: DSD

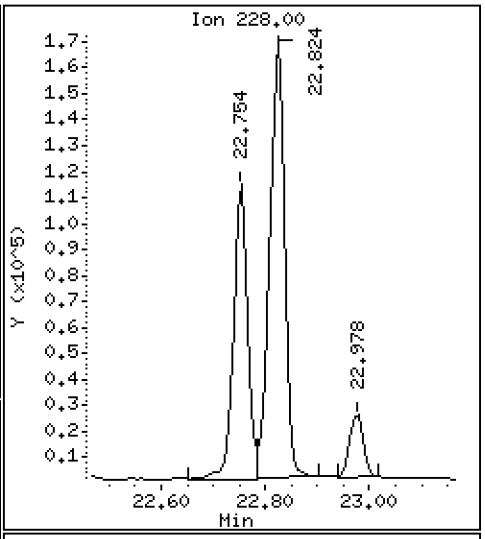
Column phase: ZB-5msi

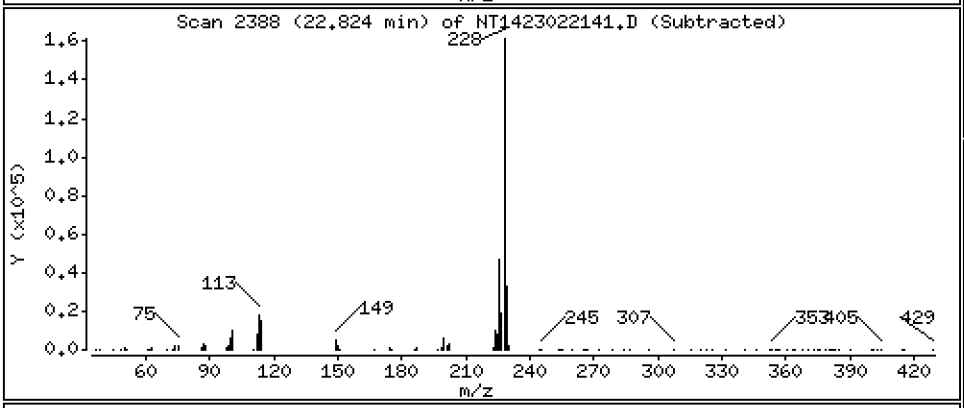
Column diameter: 0.25

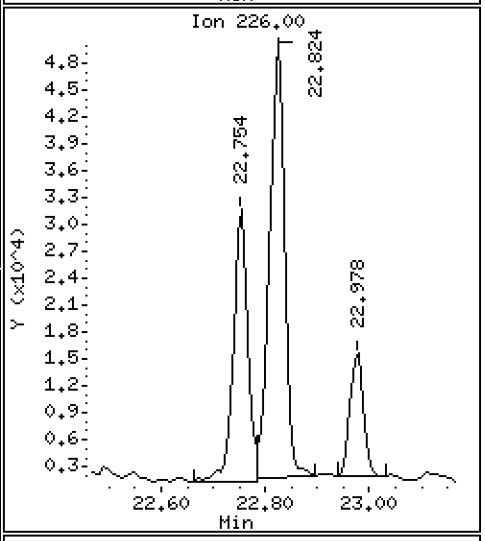
71 Chrysene

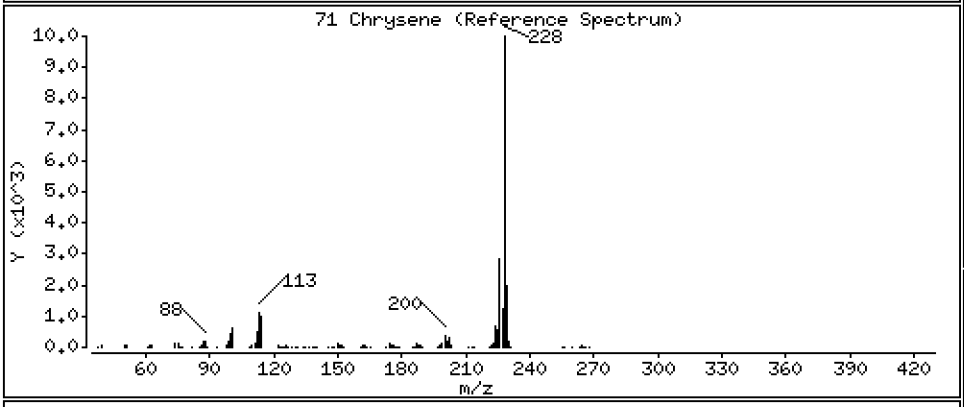
Concentration: 1.485 ug/mL

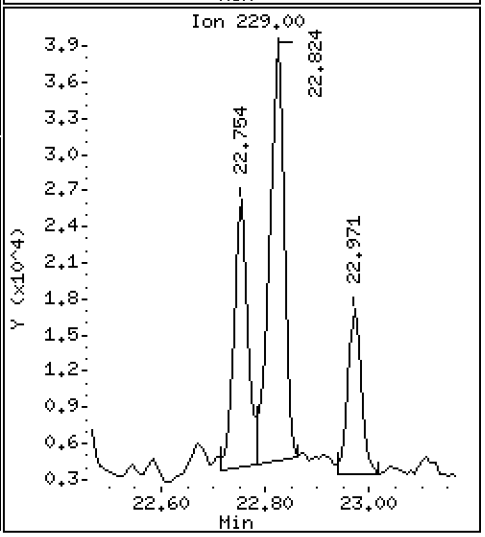


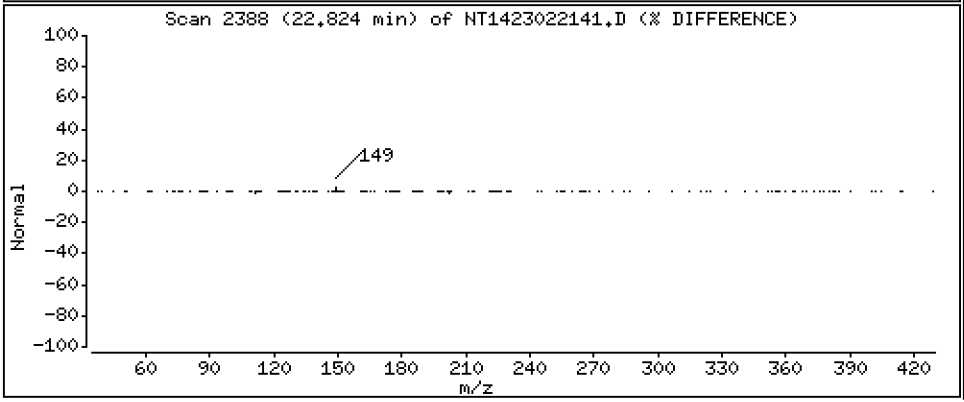












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

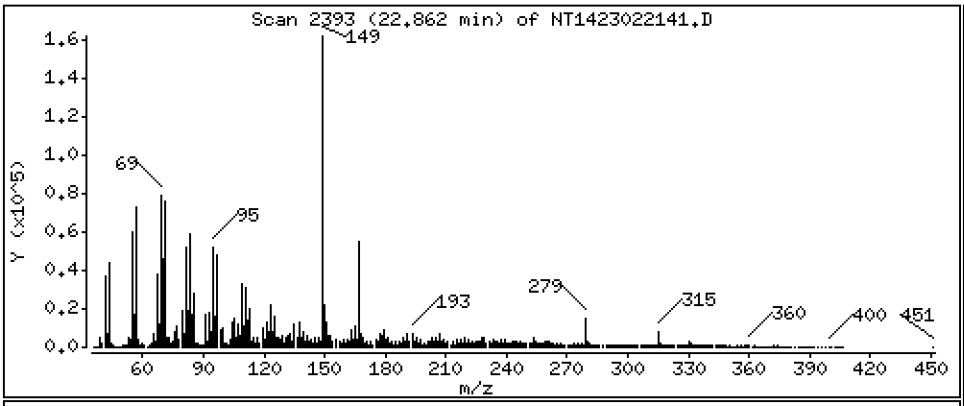
Operator: DSD

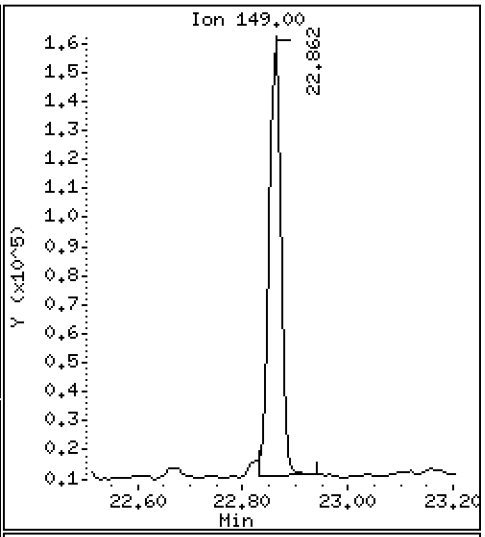
Column phase: ZB-5msi

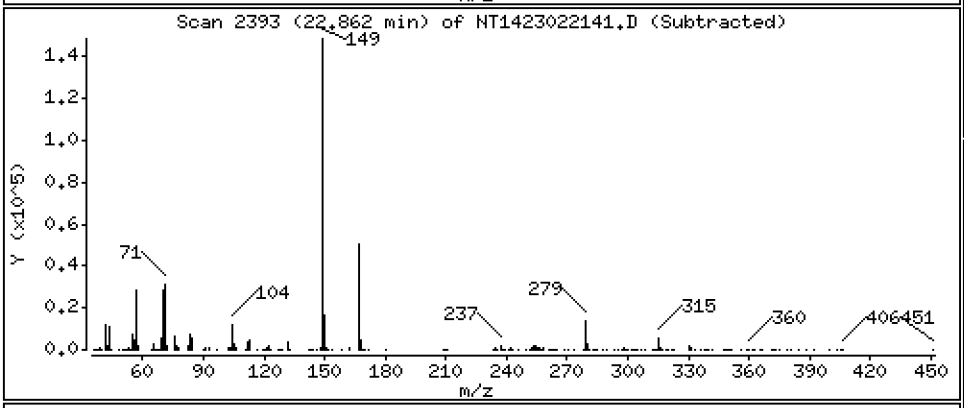
Column diameter: 0.25

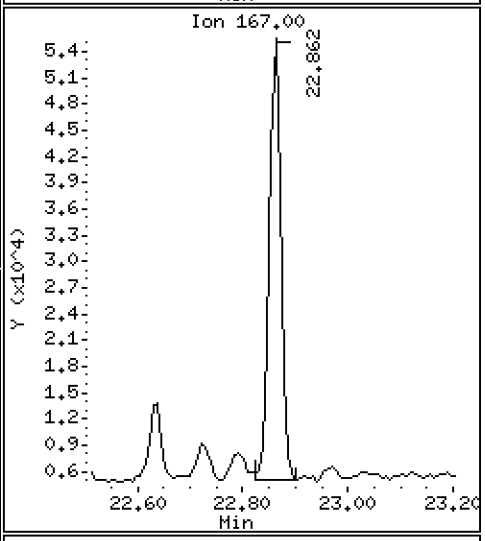
72 bis(2-Ethylhexyl)phthalate

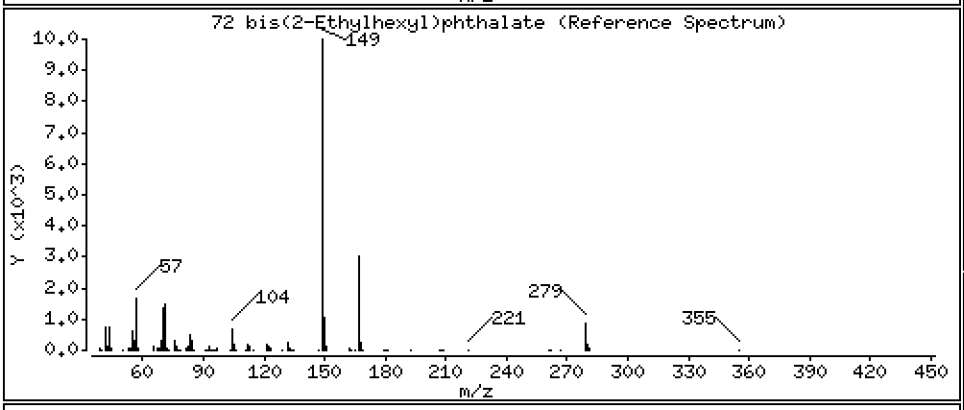
Concentration: 1.143 ug/mL

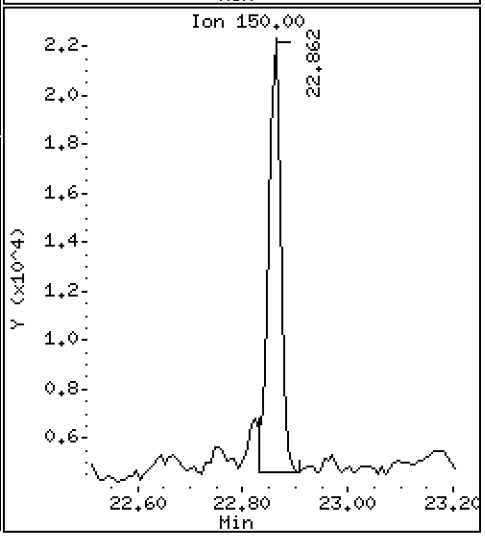


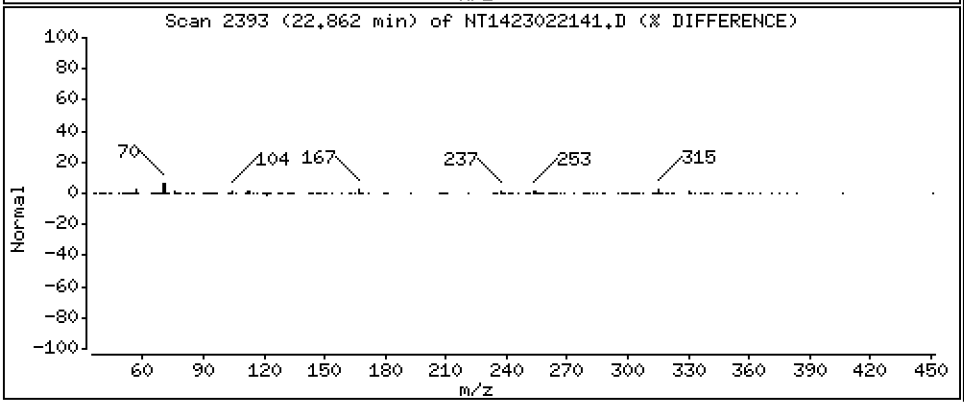












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

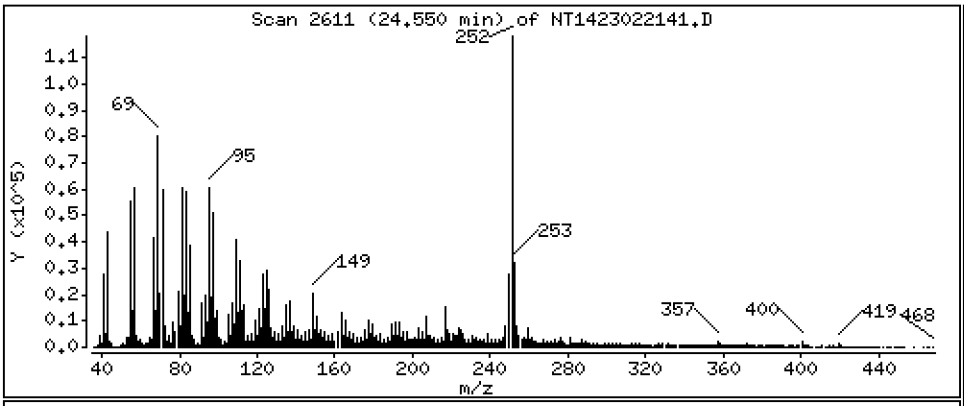
Operator: DSD

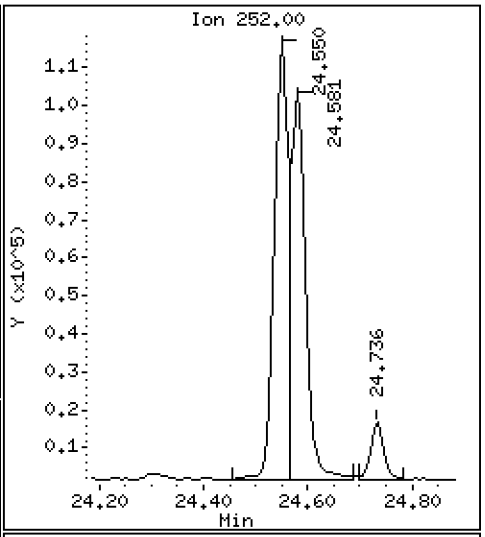
Column phase: ZB-5msi

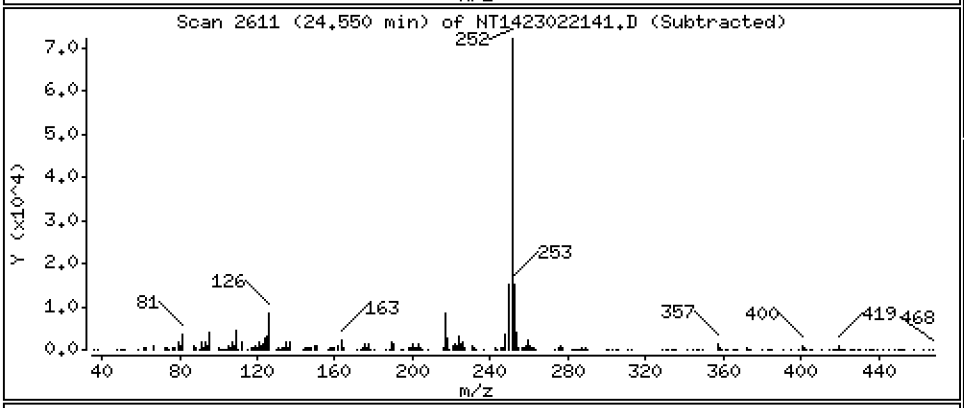
Column diameter: 0.25

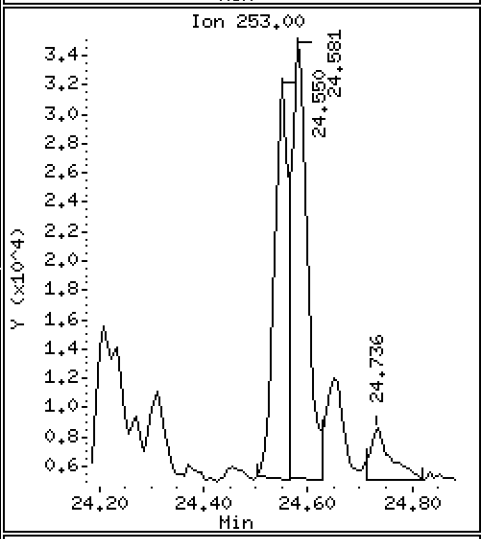
74 Benzo(b)fluoranthene

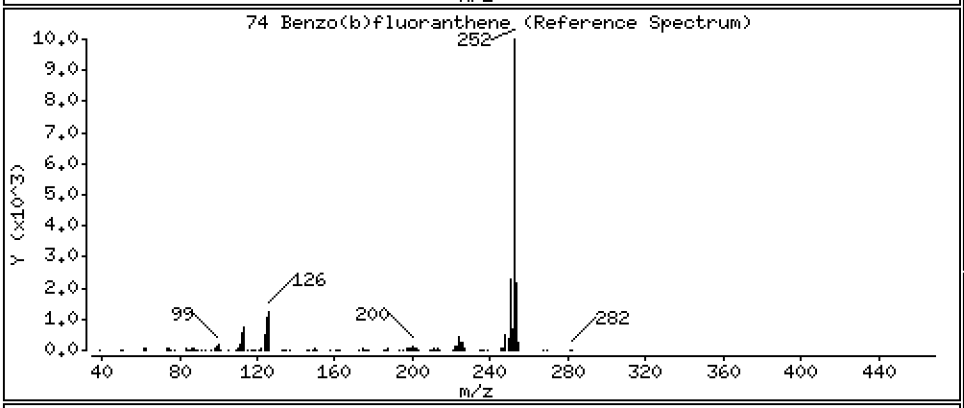
Concentration: 1.166 ug/mL

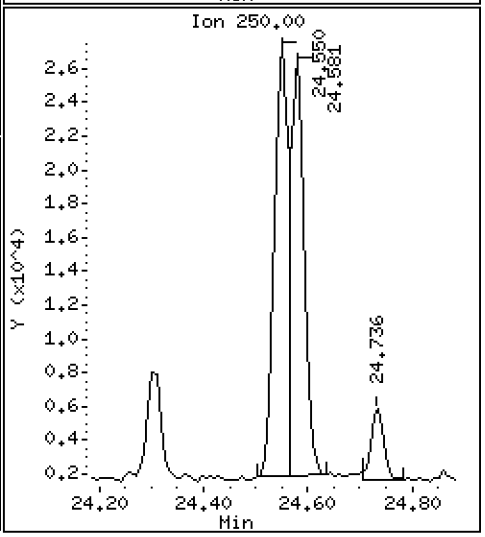


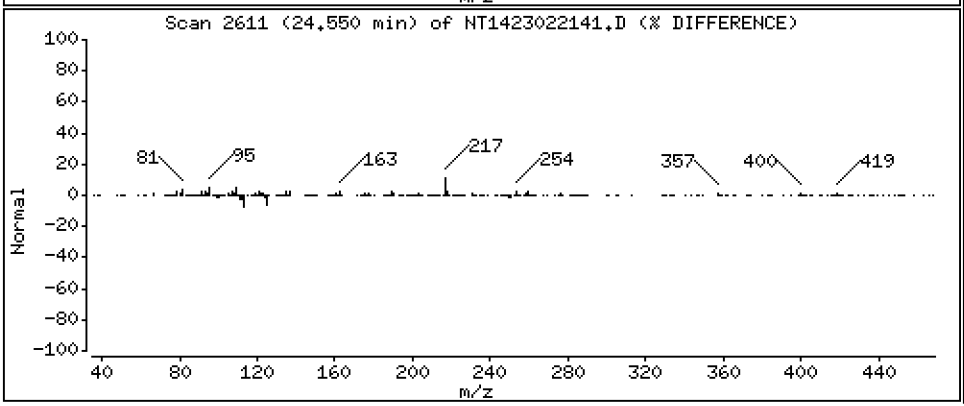












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

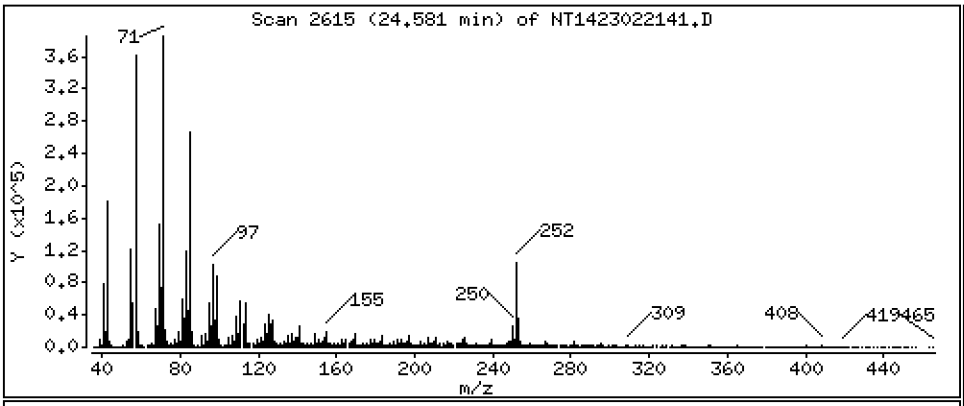
Operator: DSD

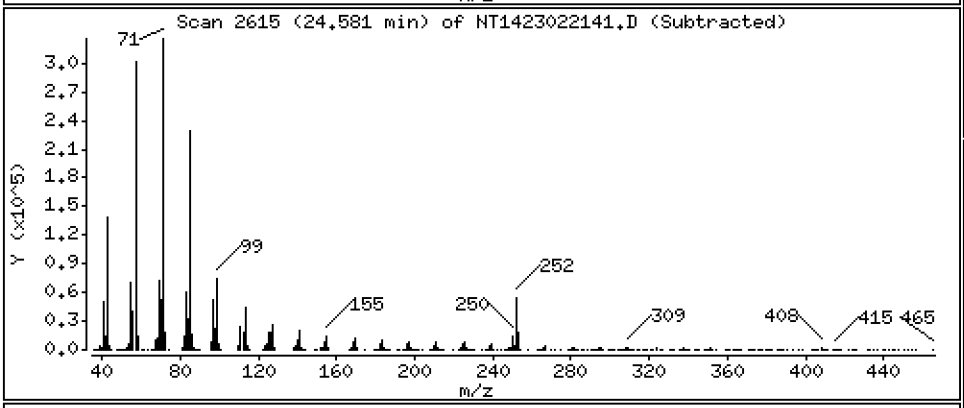
Column phase: ZB-5msi

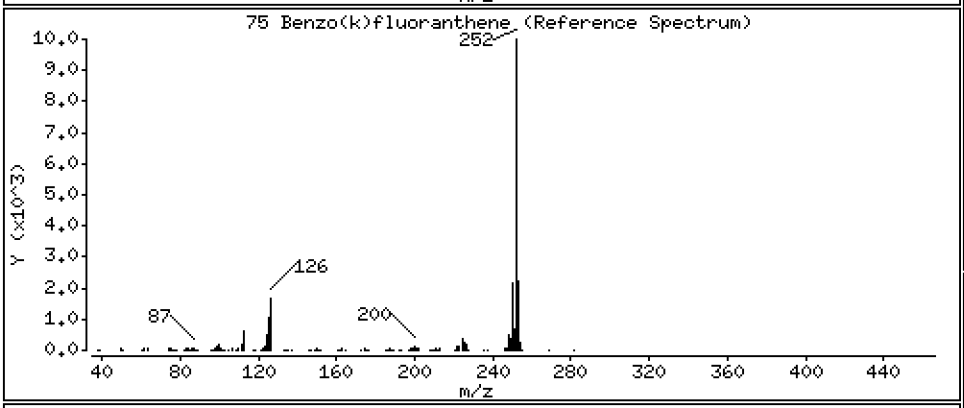
Column diameter: 0.25

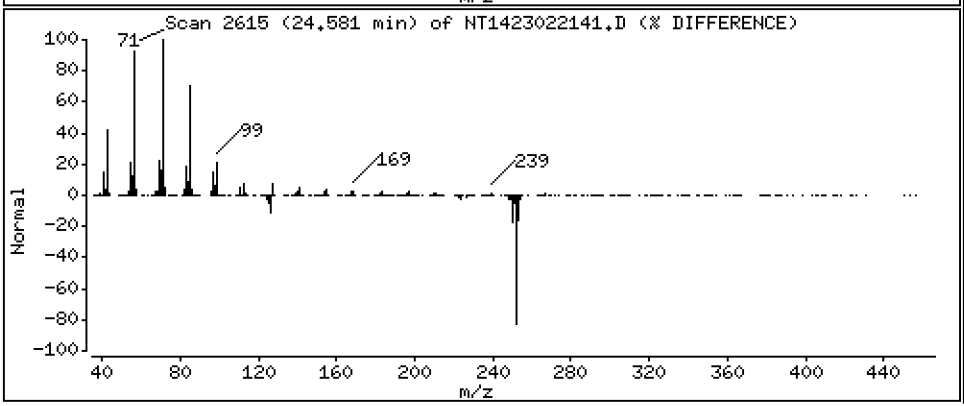
75 Benzo(k)fluoranthene

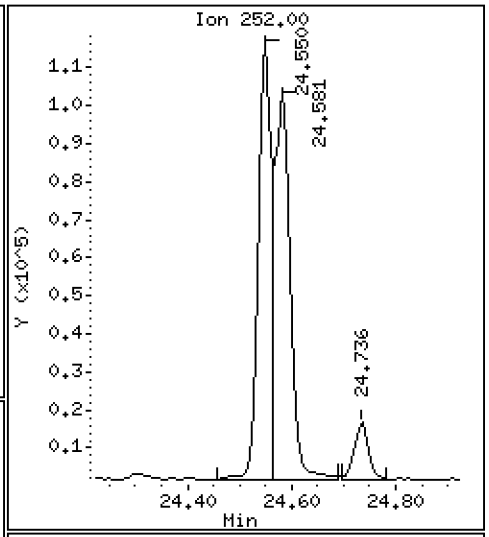
Concentration: 1.097 ug/mL

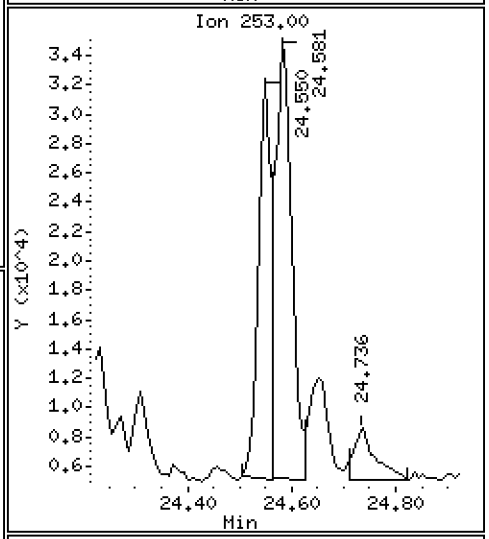


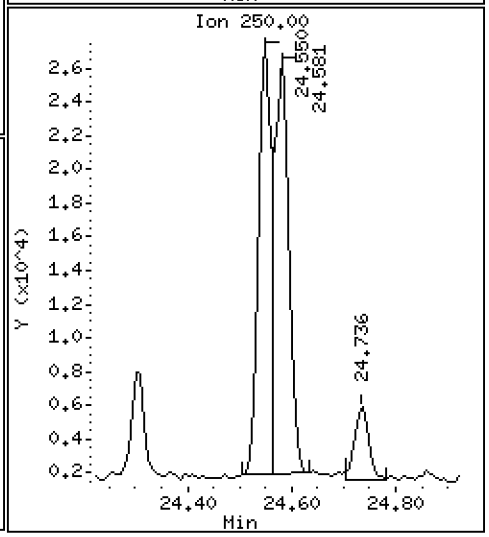












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

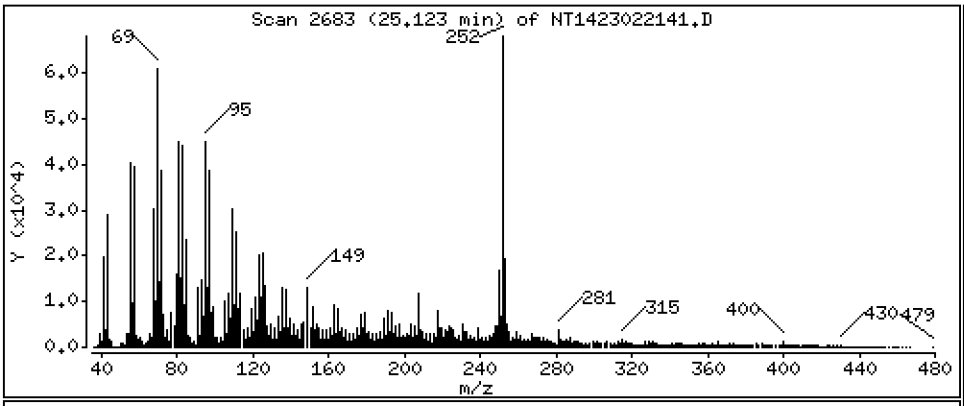
Operator: DSD

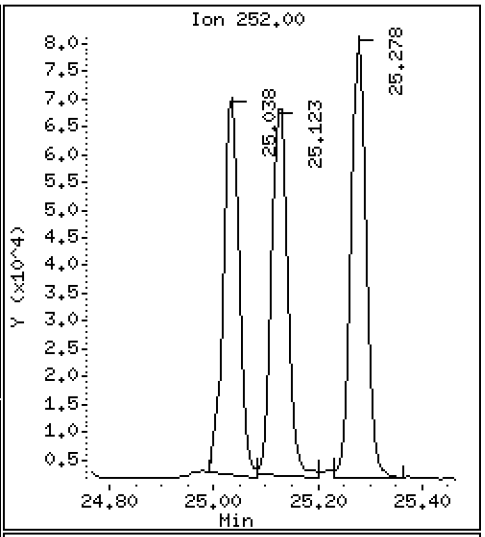
Column phase: ZB-5msi

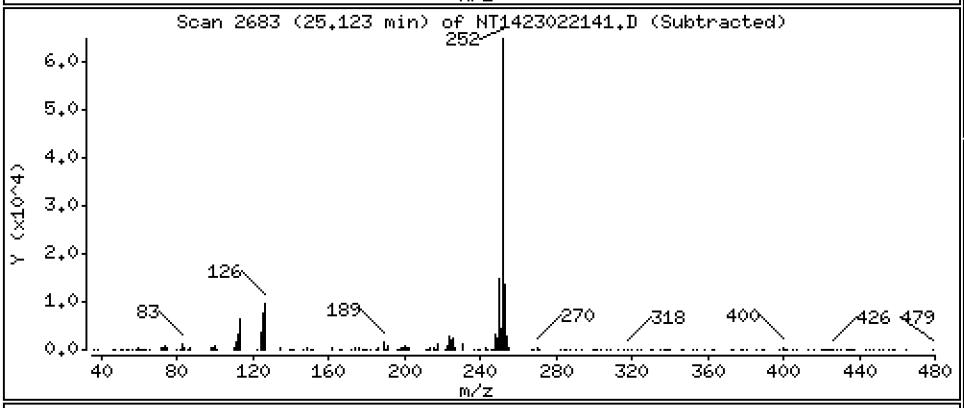
Column diameter: 0.25

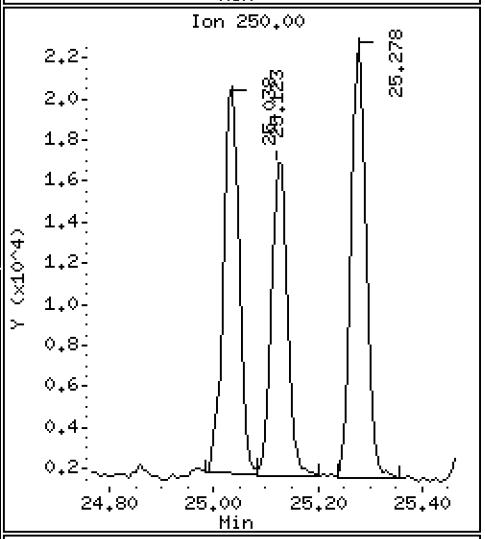
76 Benzo(a)pyrene

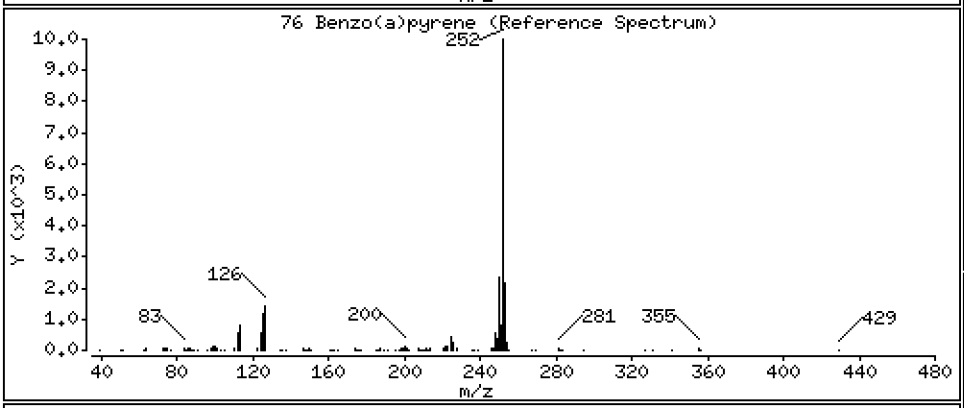
Concentration: 0.7849 ug/mL

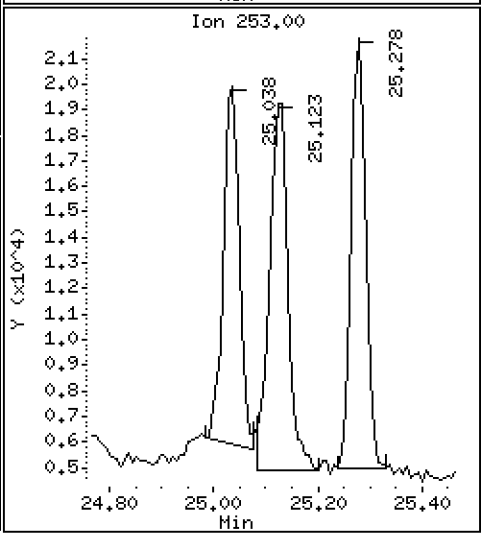


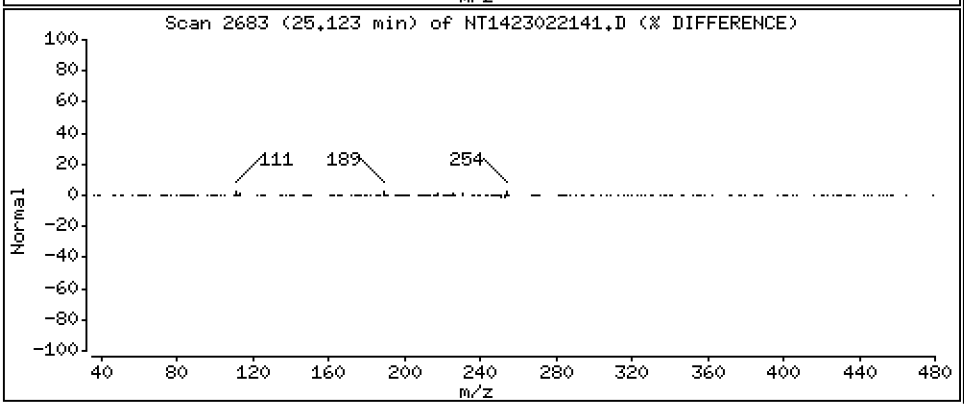












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022141.D

Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

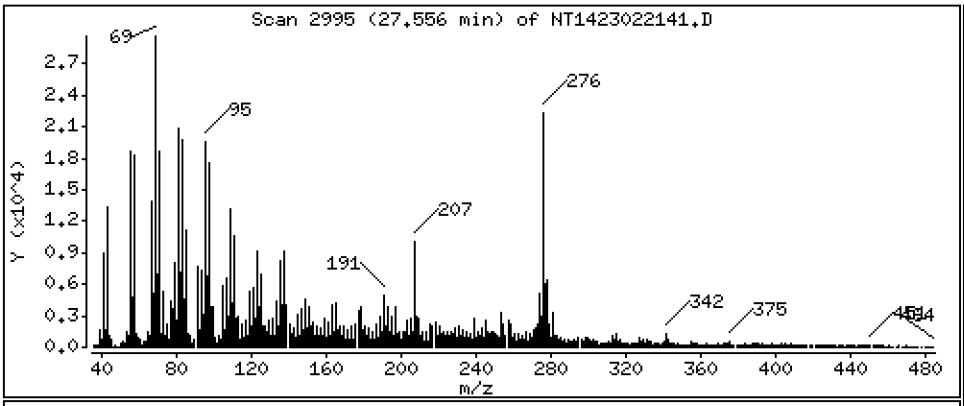
Operator: DSD

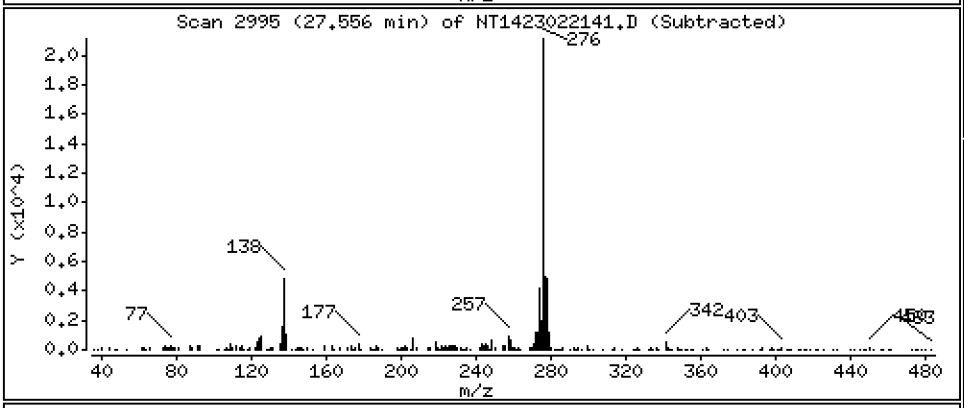
Column phase: ZB-5msi

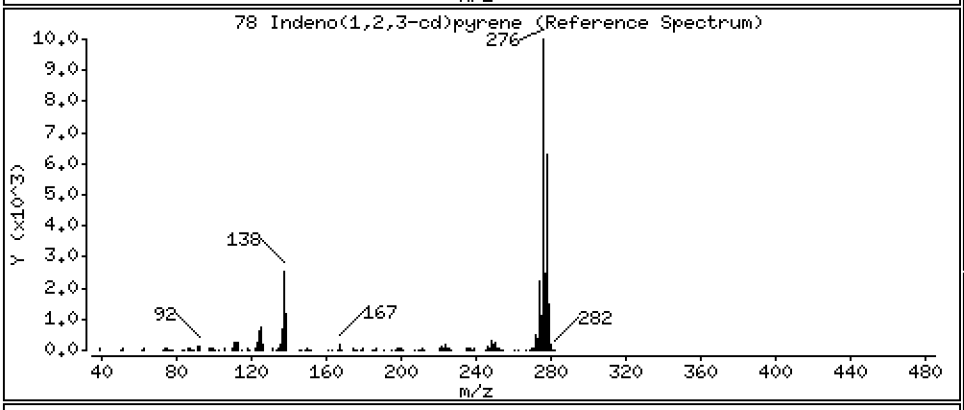
Column diameter: 0.25

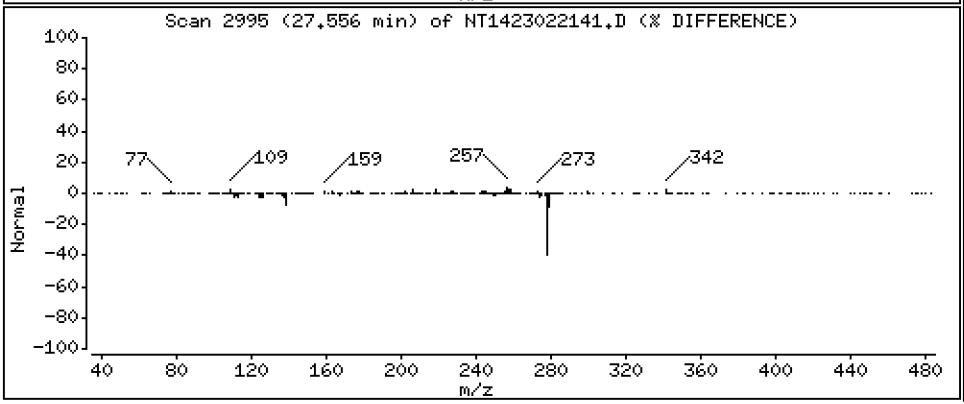
78 Indeno(1,2,3-cd)pyrene

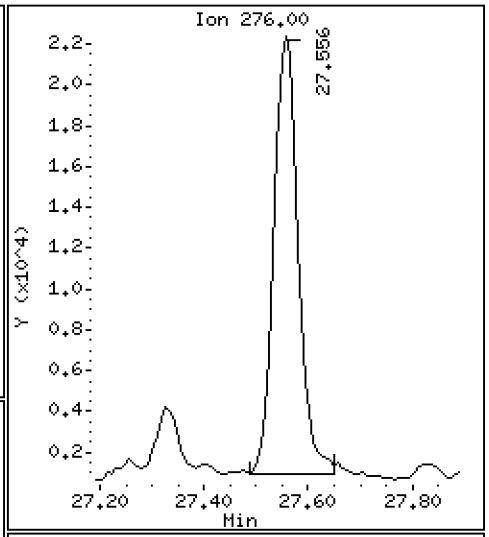
Concentration: 0.4691 ug/mL

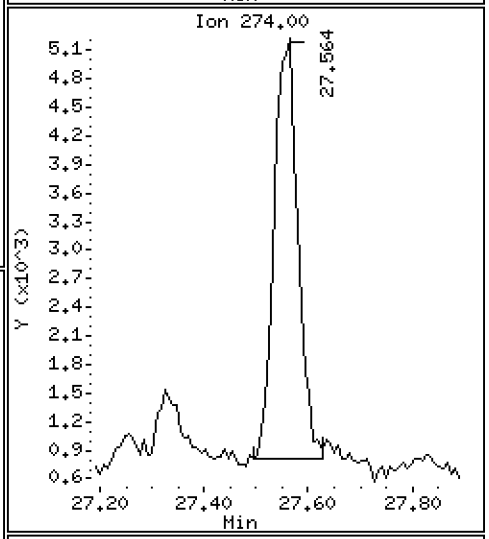


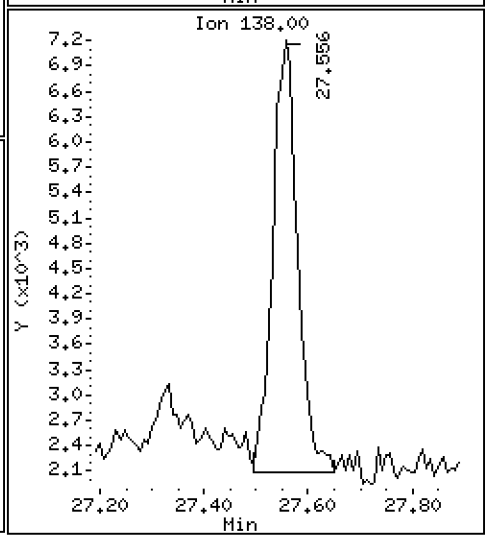












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

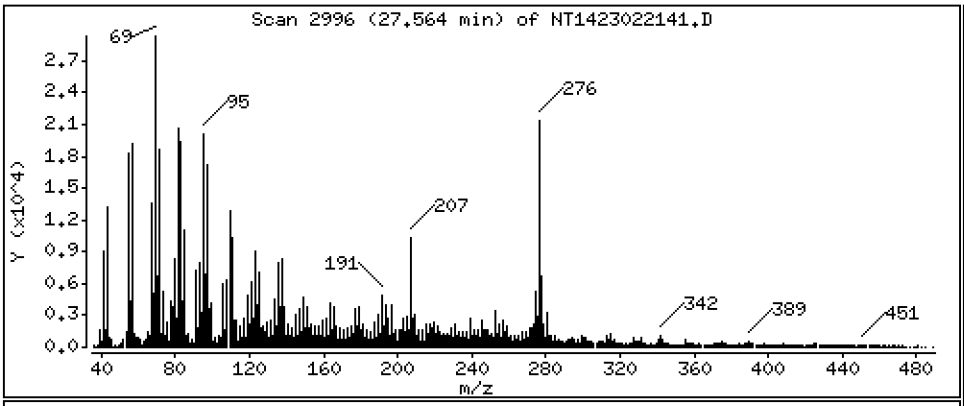
Operator: DSD

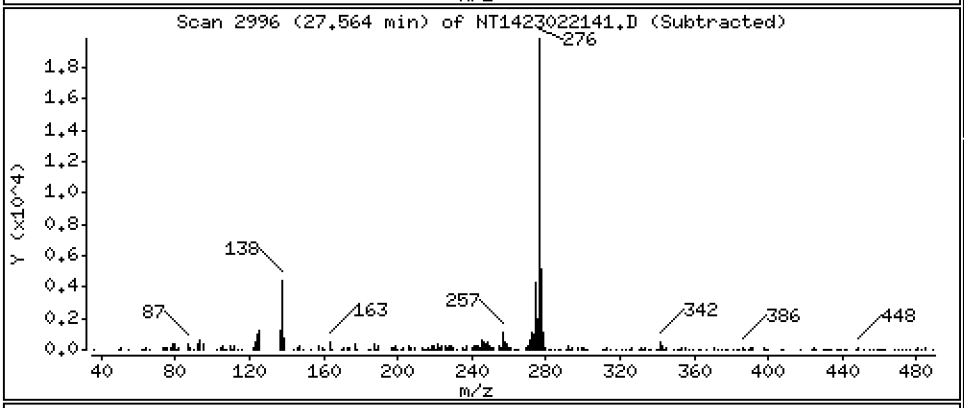
Column phase: ZB-5msi

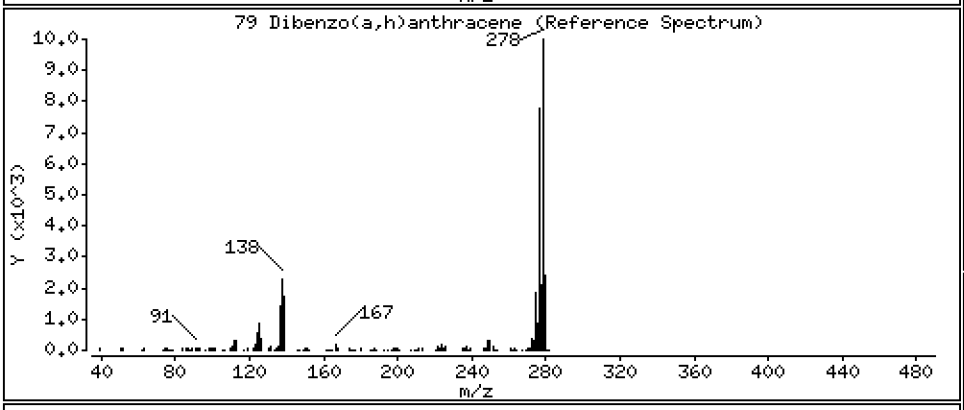
Column diameter: 0.25

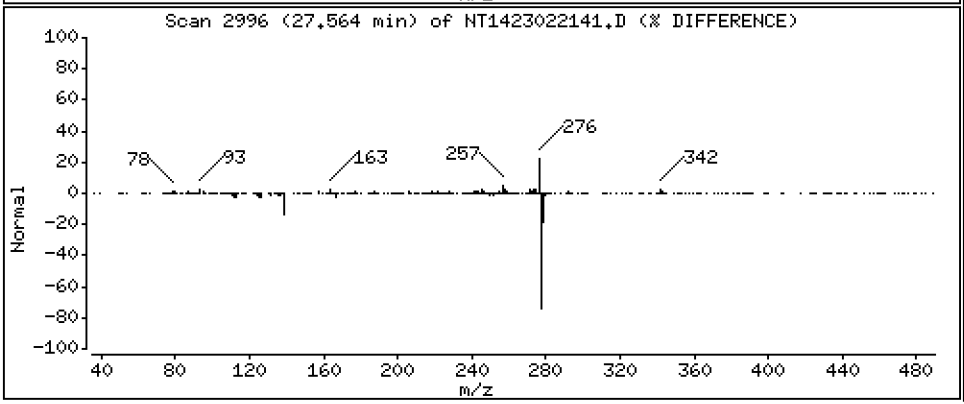
79 Dibenzo(a,h)anthracene

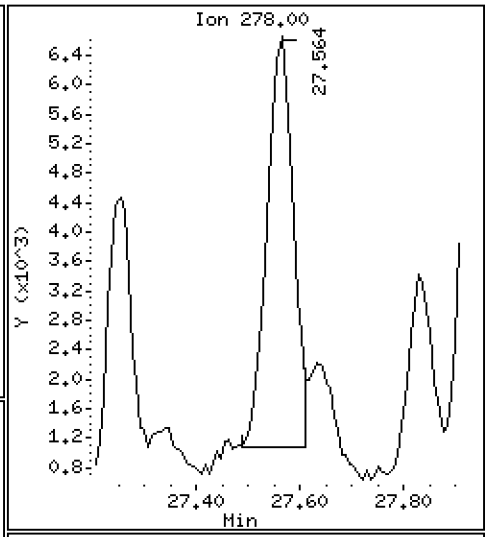
Concentration: 0.1615 ug/mL

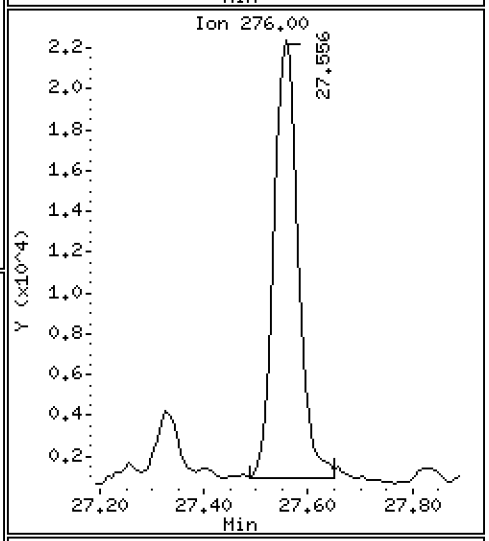


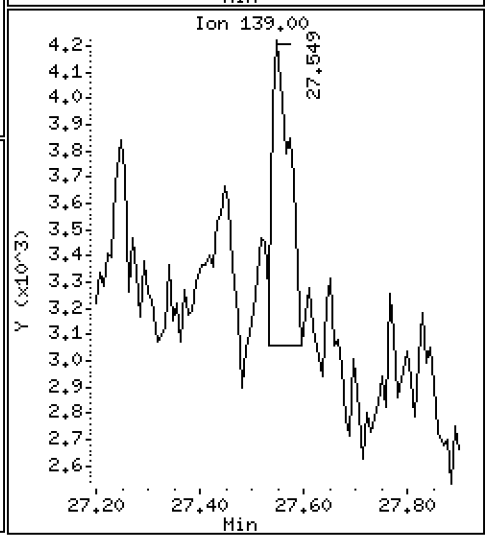












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

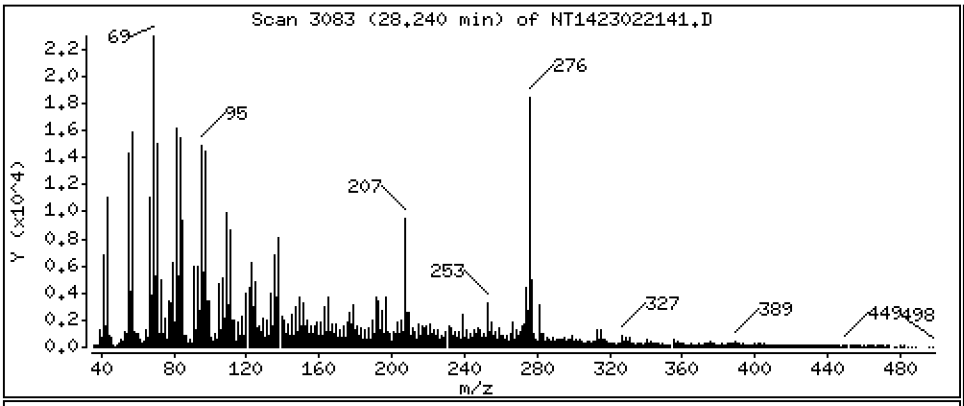
Operator: DSD

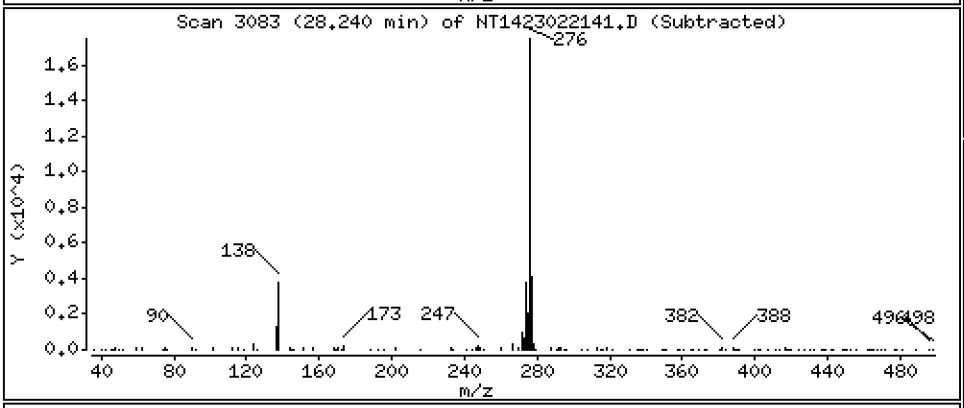
Column phase: ZB-5msi

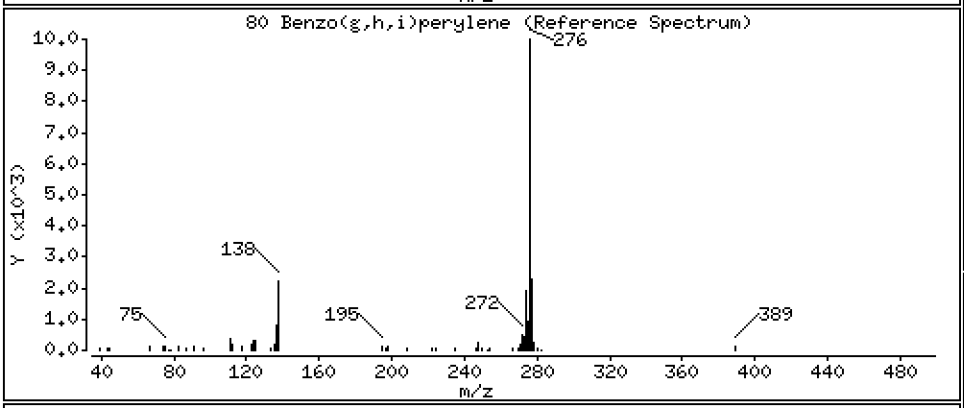
Column diameter: 0.25

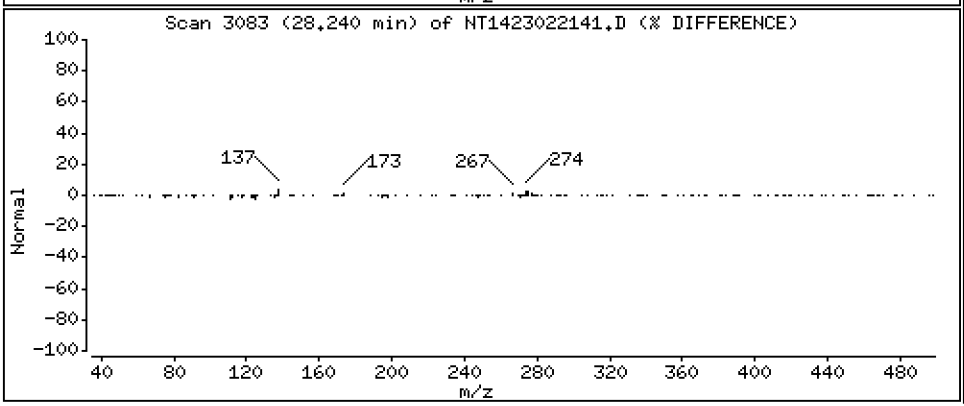
80 Benzo(g,h,i)perylene

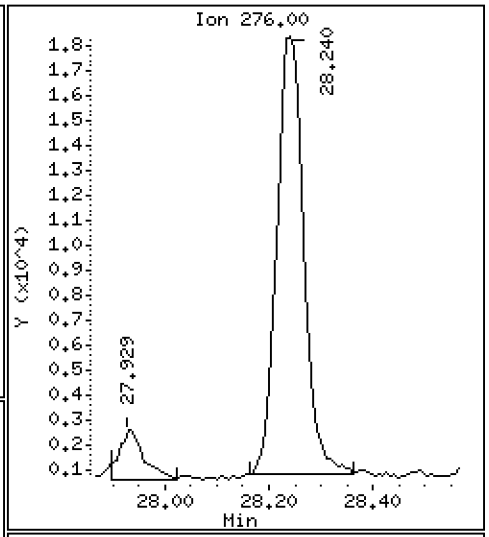
Concentration: 0.5397 ug/mL

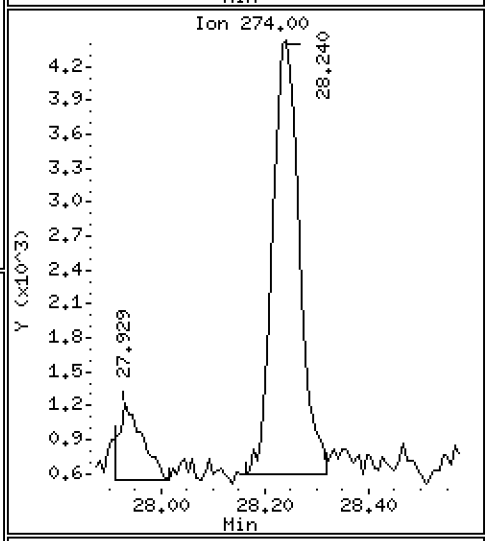


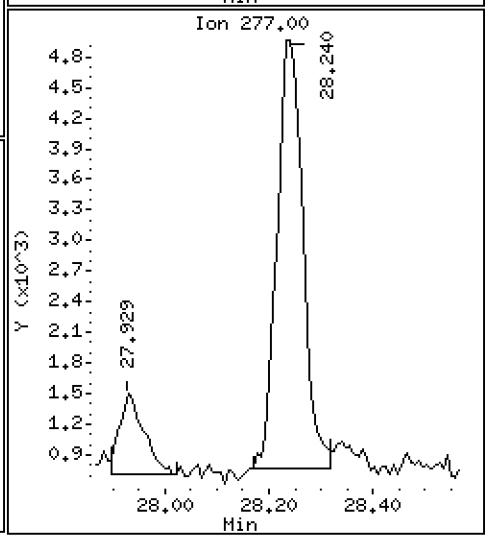












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

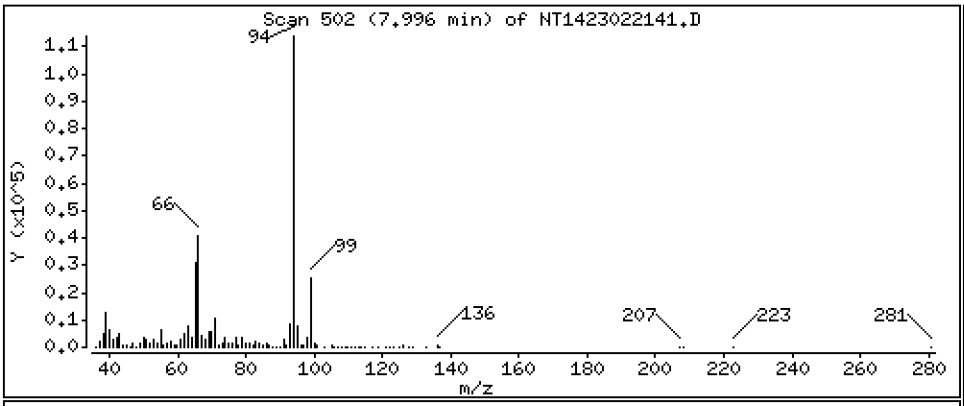
Operator: DSD

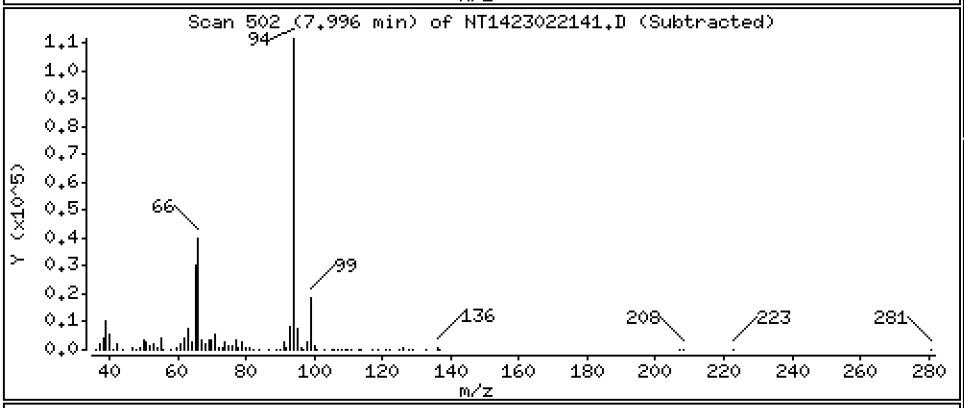
Column phase: ZB-5msi

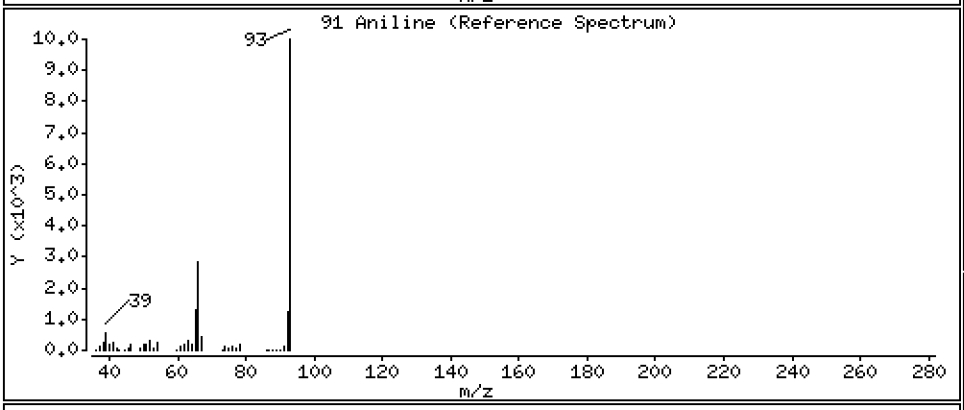
Column diameter: 0.25

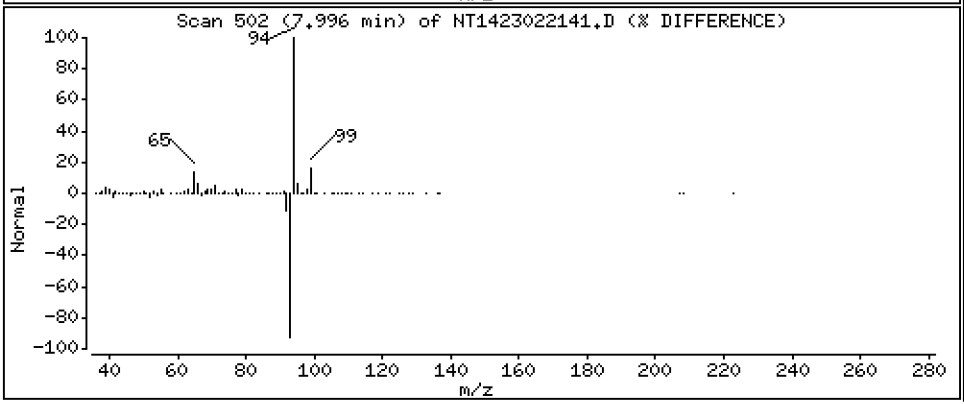
91 Aniline

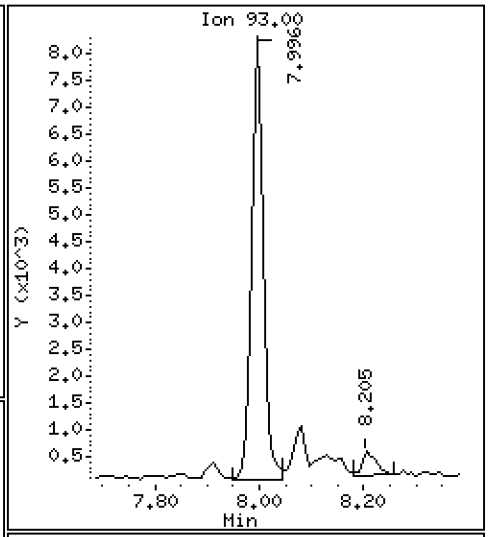
Concentration: 0.09897 ug/mL

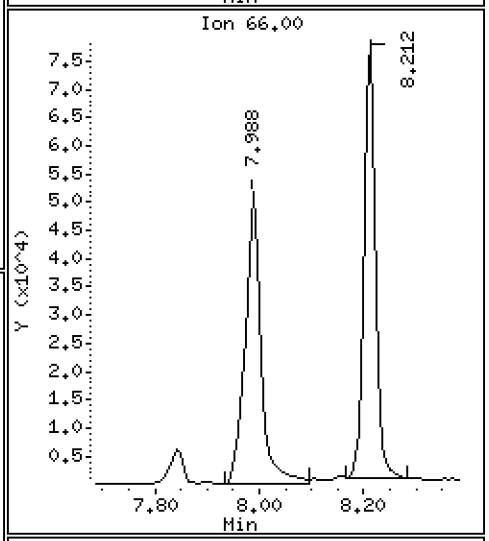


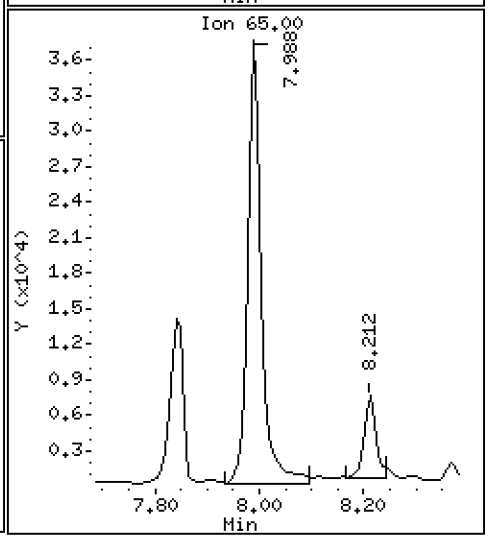












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

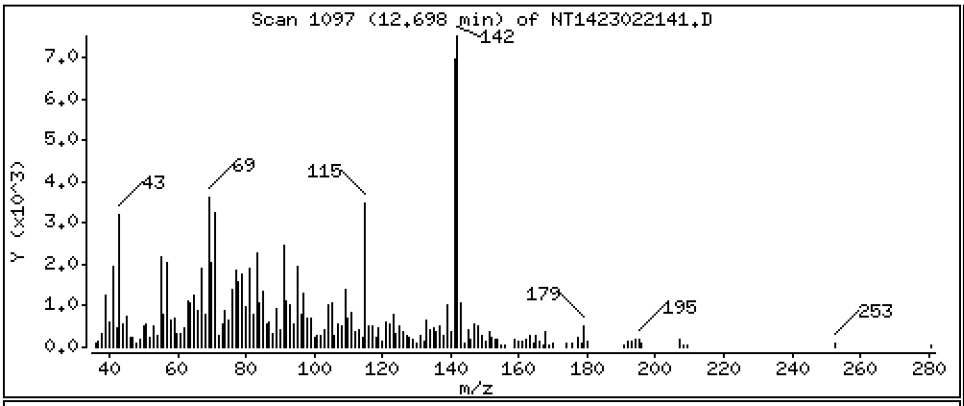
Operator: DSD

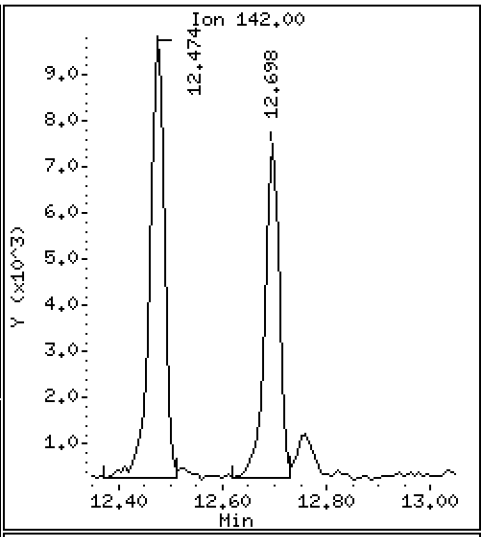
Column phase: ZB-5msi

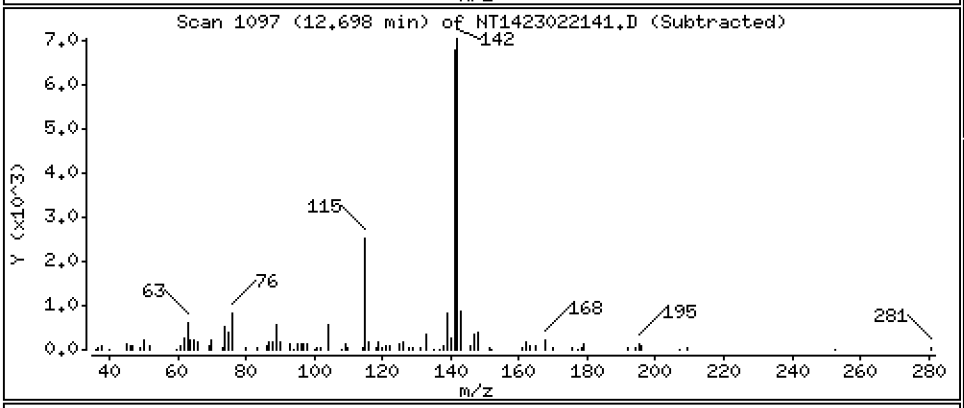
Column diameter: 0.25

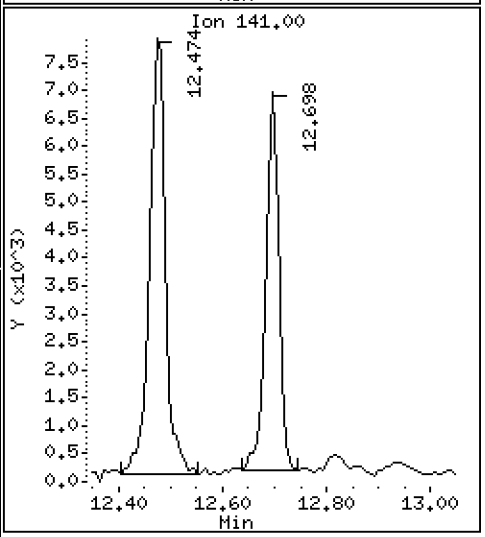
105 1-methylnaphthalene

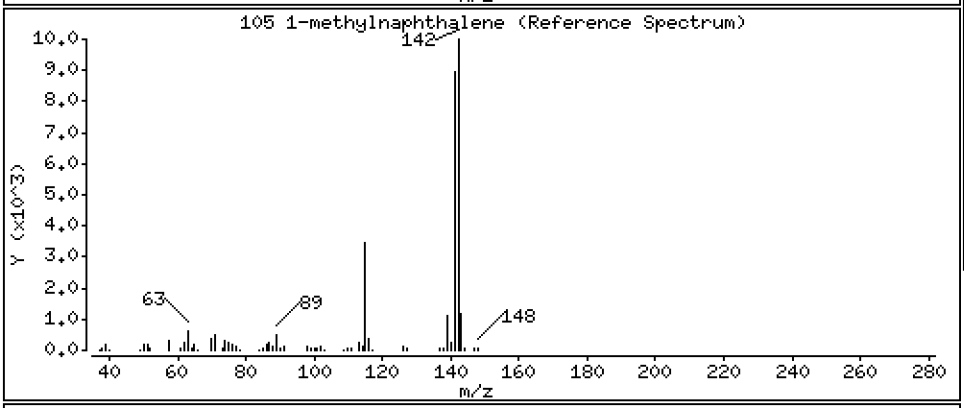
Concentration: 0.07308 ug/mL

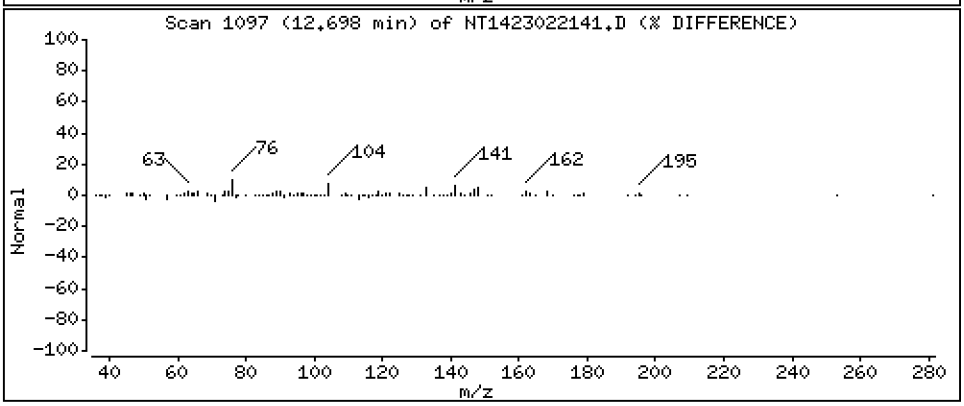












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

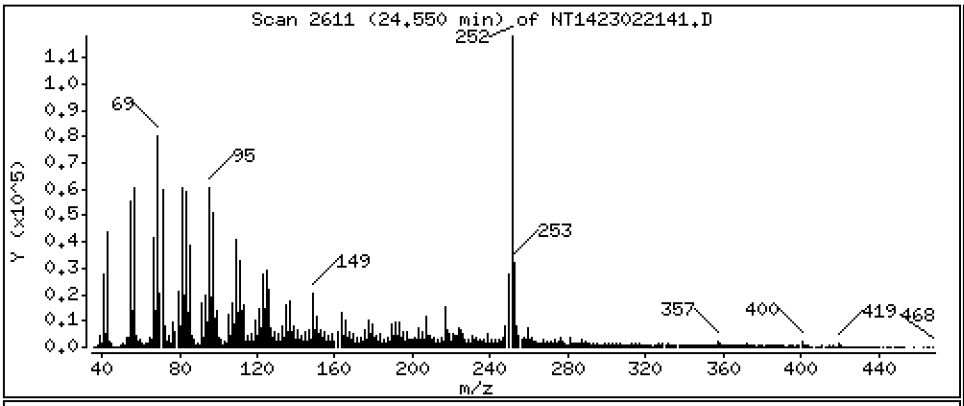
Operator: DSD

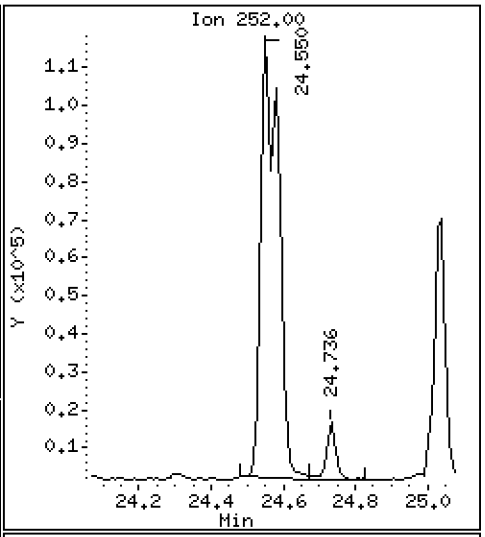
Column phase: ZB-5msi

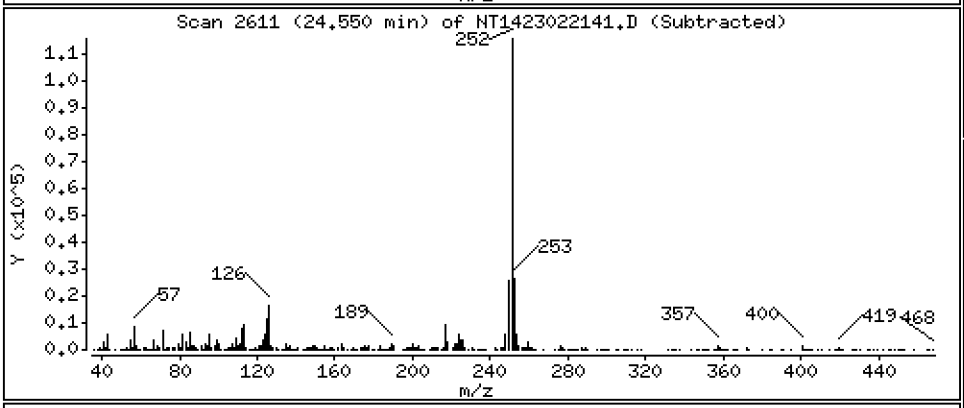
Column diameter: 0.25

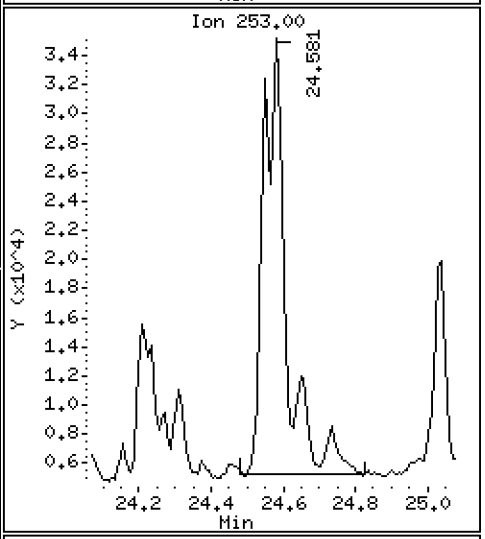
187 Total Benzofluoranthenes

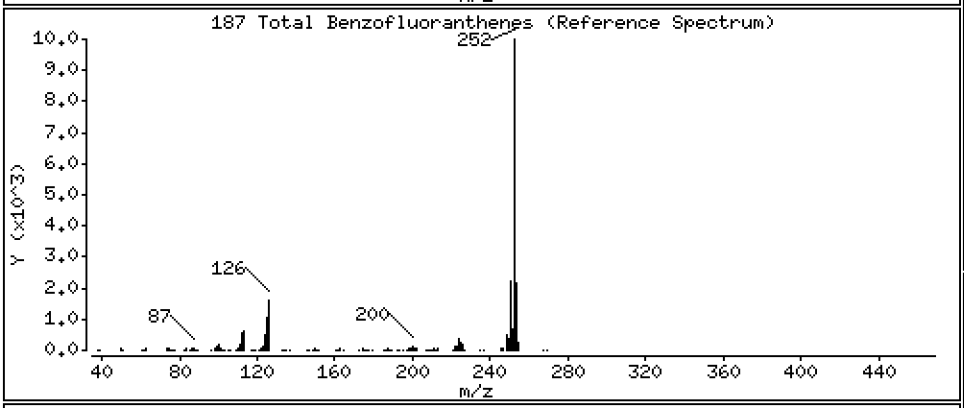
Concentration: 2.158 ug/mL

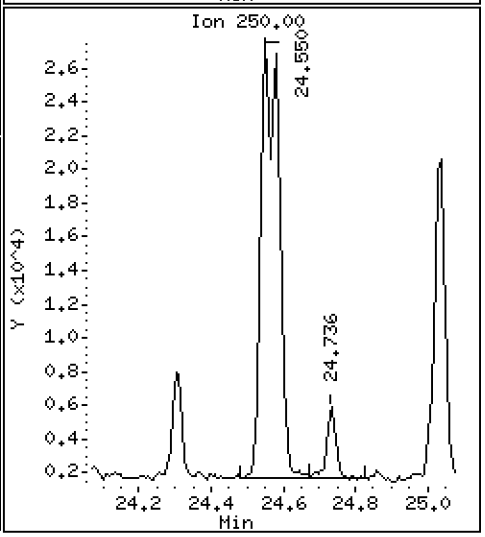


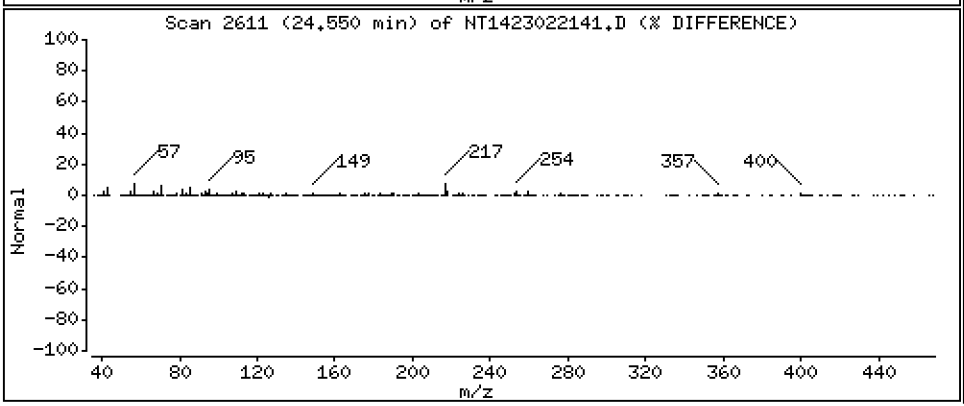












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221B.b\NT1423022141.D
Lab Smp Id: 23A0133-03
Inj Date : 22-FEB-2023 13:34 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-03
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Meth Date : 23-Feb-2023 09:59 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 29
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.381	6.373	(0.745)	341506	4.54854	4.549
$	2 Phenol-d5	99	7.965	7.965	(0.930)	500205	4.19976	4.200
	3 Phenol	94	7.988	7.988	(0.932)	244248	1.93715	1.937
$	5 2-Chlorophenol-d4	132	8.212	8.212	(0.958)	401982	4.73010	4.730
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.568	8.568	(1.000)	280852	4.00000	
	9 1,4-Dichlorobenzene	146	8.599	8.599	(1.004)	1527	0.01628	0.01628(M)
$	10 1,2-Dichlorobenzene-d4	152	8.925	8.925	(1.042)	188019	2.95159	2.952
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	9.662	9.662	(0.875)	392861	3.21723	3.217
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	10.787	10.787	(0.977)	1148	0.01450	0.01450
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.042	11.042	(1.000)	1056982	4.00000	
	28 Naphthalene	128	11.081	11.081	(1.003)	25851	0.09919	0.09919
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	12.473	12.481	(1.130)	18083	0.09264	0.09264
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

		QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	13.270	13.270	(0.906)	749668	3.38479	3.385
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	14.331	14.331	(0.978)	13544	0.04912	0.04912
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.648	14.648	(1.000)	619051	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	14.710	14.717	(1.004)	11450	0.06936	0.06936
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	15.042	15.042	(1.027)	25373	0.09361	0.09361
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	15.637	15.645	(1.068)	108583	0.43195	0.4319
	49 Fluorene	166	15.746	15.753	(1.075)	22468	0.07927	0.07927
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	16.285	16.293	(1.112)	189051	5.24547	5.245
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.676	17.676	(1.000)	1118900	4.00000	
	60 Phenanthrene	178	17.723	17.723	(1.003)	167596	0.62334	0.6233
	61 Anthracene	178	17.816	17.816	(1.008)	77724	0.29178	0.2918
	62 Carbazole	167	18.164	18.156	(1.028)	16798	0.06949	0.06949
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	20.191	20.137	(0.886)	435059	1.31688	1.317(H)
	65 Pyrene	202	20.593	20.562	(0.904)	731134	2.09290	2.093
$	66 Terphenyl-d14	244	20.880	20.872	(0.916)	875396	3.52921	3.529
	67 Butylbenzylphthalate	149	21.816	21.816	(0.958)	14040	0.12193	0.1219
	68 Benzo(a)anthracene	228	22.753	22.738	(0.999)	216216	0.88234	0.8823
*	69 Chrysene-d12	240	22.784	22.769	(1.000)	765759	4.00000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	22.823	22.815	(1.002)	327290	1.48488	1.485
	72 bis(2-Ethylhexyl)phthalate	149	22.862	22.854	(0.959)	222493	1.14283	1.143
*	134 Di-n-octylphthalate-d4	153	23.837	23.837	(1.000)	1139581	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	24.549	24.534	(0.973)	218992	1.16622	1.166
	75 Benzo(k)fluoranthene	252	24.580	24.573	(0.974)	220084	1.09685	1.097
	76 Benzo(a)pyrene	252	25.122	25.115	(0.996)	139761	0.78487	0.7849
*	77 Perylene-d12	264	25.231	25.215	(1.000)	591788	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	27.556	27.540	(1.092)	68756	0.46912	0.4691
	79 Dibenzo(a,h)anthracene	278	27.564	27.556	(1.092)	19475	0.16153	0.1615
	80 Benzo(g,h,i)perylene	276	28.239	28.216	(1.119)	64201	0.53973	0.5397
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	7.996	8.034	(0.933)	13347	0.09897	0.09897
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	142	12.698	12.698	(1.150)	13392	0.07308	0.07308
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.549	24.573	(0.973)	395699	2.15837	2.158
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022141.D
Lab Smp Id: 23A0133-03
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 06:55
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	235125	117563	470250	280852	19.45
27 Naphthalene-d8	883104	441552	1766208	1056982	19.69
42 Acenaphthene-d10	537789	268895	1075578	619051	15.11
59 Phenanthrene-d10	1079531	539766	2159062	1118900	3.65
69 Chrysene-d12	826409	413205	1652818	765759	-7.34
134 Di-n-octylphthala	1339562	669781	2679124	1139581	-14.93
77 Perylene-d12	590325	295163	1180650	591788	0.25

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	0.00
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.07
134 Di-n-octylphthala	23.84	23.34	24.34	23.84	-0.00
77 Perylene-d12	25.22	24.72	25.72	25.23	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022141.D

Lab ID: 23A0133-03
nt14.i, ABN.m, 22-FEB-2023 13:34

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

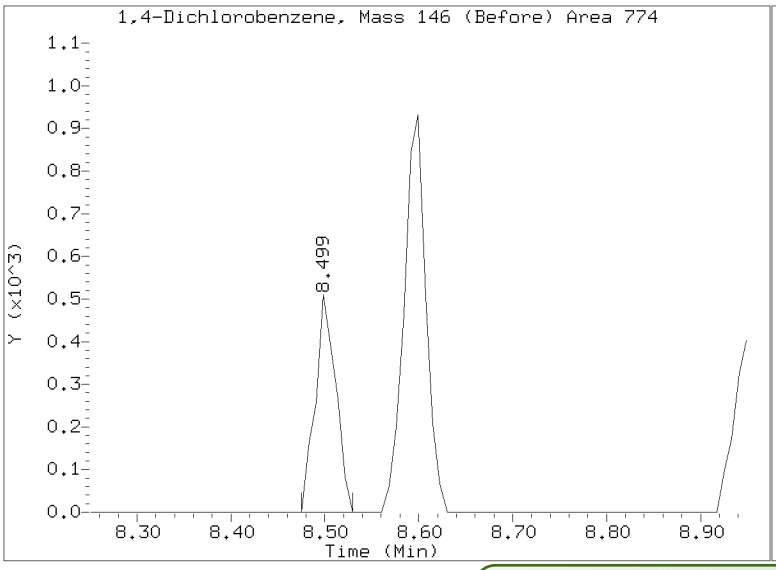
RRT check based on Ccal File: NT1423022130.D

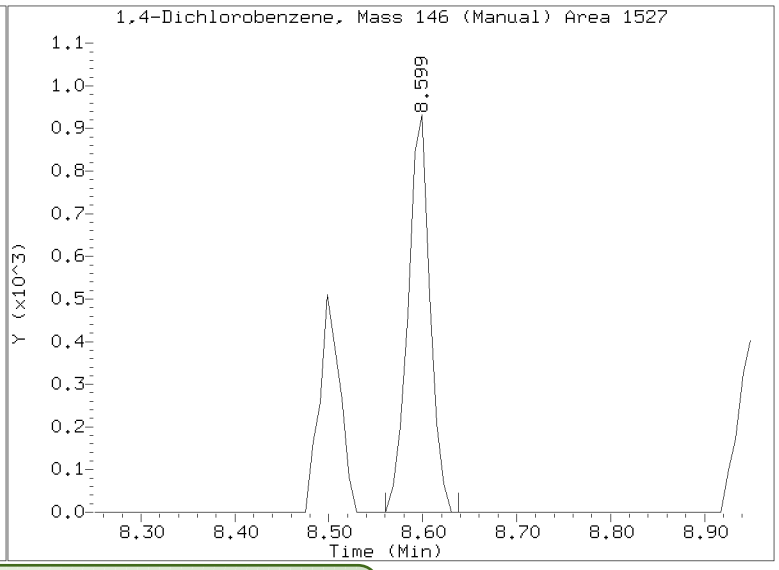
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221B.b/NT1423022141.D
Injection Date: 22-FEB-2023 13:34
Lab ID:23A0133-03 Client ID:
Report Date: 02/23/2023 12:22





APPROVED

By Deenay Dunmore at 12:29 pm, Feb 23, 2023

LDW23-SC1241

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-06 C	SDG:	23A0133
Sampled:	01/06/23 10:51	Prepared:	01/18/23 15:24	File ID:	NT1423022142.D
% Solids:	49.01	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 14:10
Batch:	BLA0393	Sequence:	SLB0305	Initial/Final:	20.4 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	258		4.4	20.0
106-44-5	4-Methylphenol	1	18.2	J	7.4	20.0
91-20-3	Naphthalene	1	12.2	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	13.7	J	4.5	20.0
208-96-8	Acenaphthylene	1	20.0	U	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	8.0	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	66.0		8.7	20.0
120-12-7	Anthracene	1	41.7		7.2	20.0
206-44-0	Fluoranthene	1	150		6.1	20.0
129-00-0	Pyrene	1	193		5.7	20.0
85-68-7	Butylbenzylphthalate	1	59.9		9.4	20.0
56-55-3	Benzo(a)anthracene	1	85.2		6.0	20.0
218-01-9	Chrysene	1	137		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	117		5.5	50.0
	Benzofluoranthenes, Total	1	221		10.0	40.0
50-32-8	Benzo(a)pyrene	1	83.4		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	52.9		14.7	20.0
53-70-3	Dibenzo(a,h)anthracene	1	18.0	J	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	56.8		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	750.15	555	74.0	27 - 120	
Phenol-d5	750.15	522	69.6	29 - 120	
2-Chlorophenol-d4	750.15	533	71.0	31 - 120	
1,2-Dichlorobenzene-d4	500.10	331	66.2	32 - 120	
Nitrobenzene-d5	500.10	360	72.0	30 - 120	
2-Fluorobiphenyl	500.10	371	74.2	35 - 120	

LDW23-SC1241

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-06 C	SDG:	23A0133
Sampled:	01/06/23 10:51	Prepared:	01/18/23 15:24	File ID:	NT1423022142.D
% Solids:	49.01	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 14:10
Batch:	BLA0393	Sequence:	SLB0305	Initial/Final:	20.4 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	750.15	503	67.1	24 - 134	
p-Terphenyl-d14	500.10	439	87.7	37 - 120	

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Date : 22-FEB-2023 14:10

Client ID:

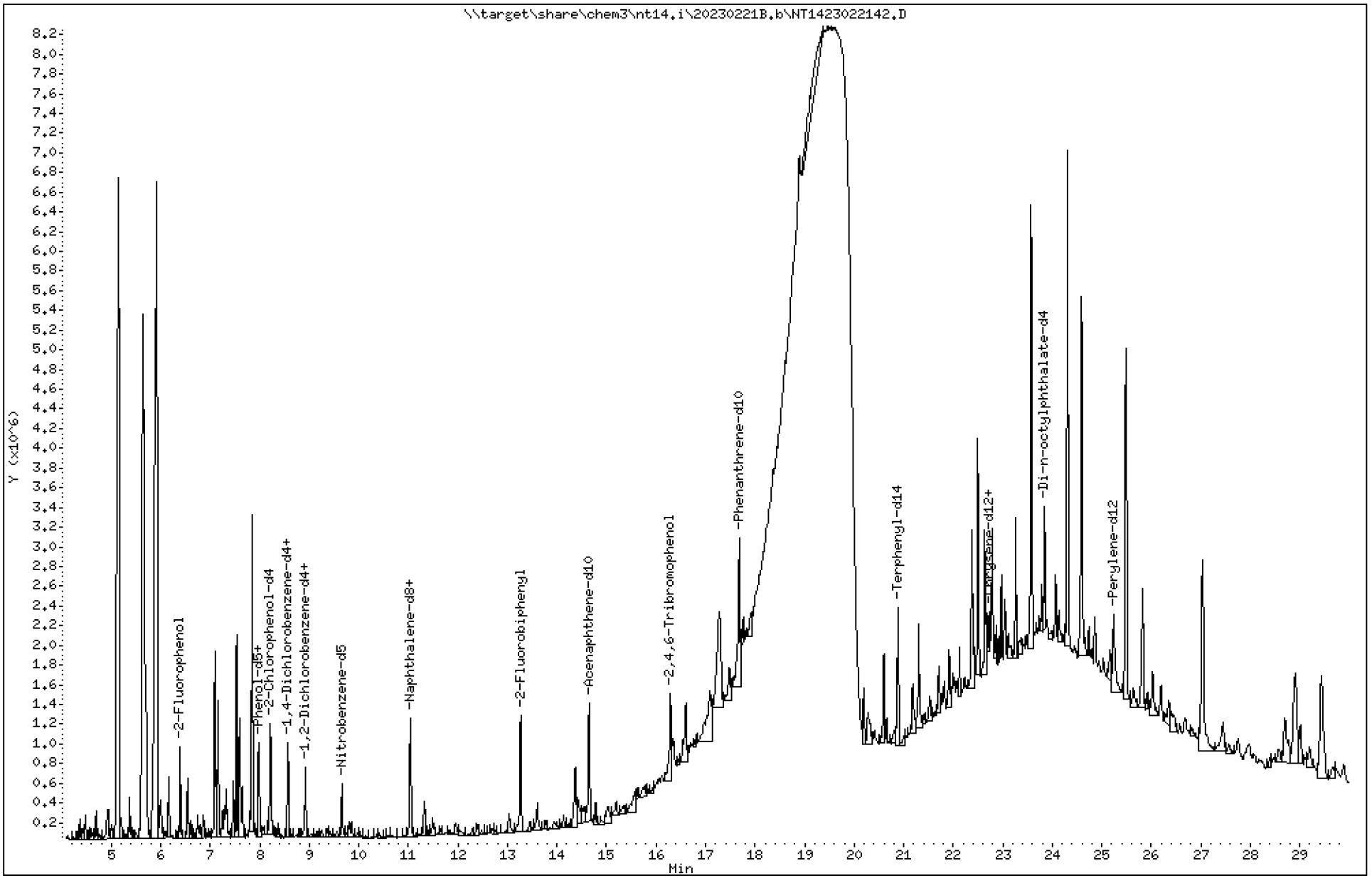
Instrument: nt14.i

Sample Info: 23A0133-06

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

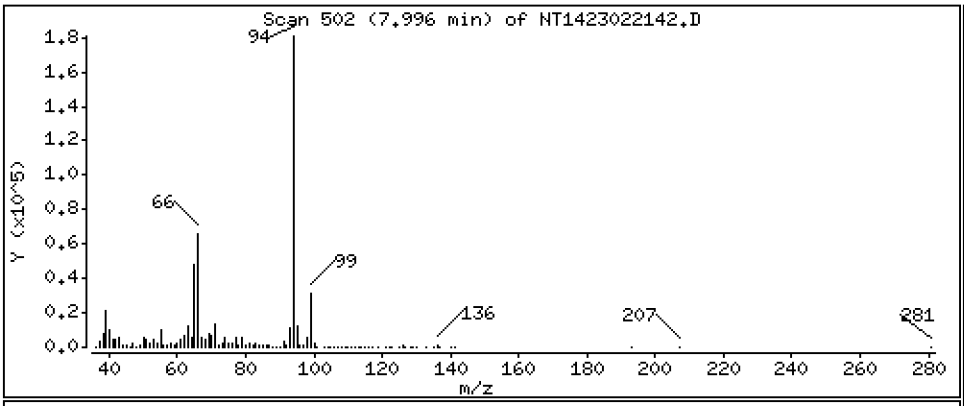
Operator: DSD

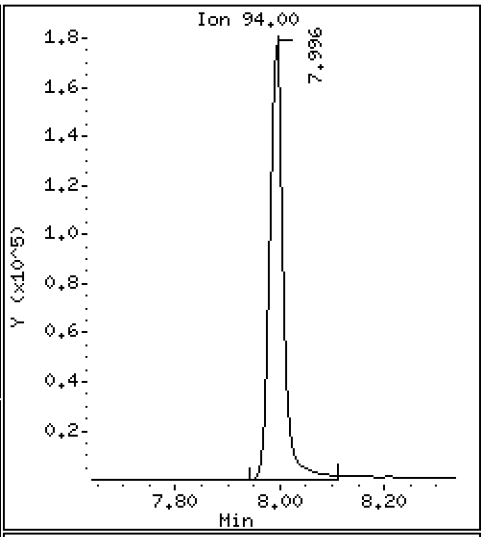
Column phase: ZB-5msi

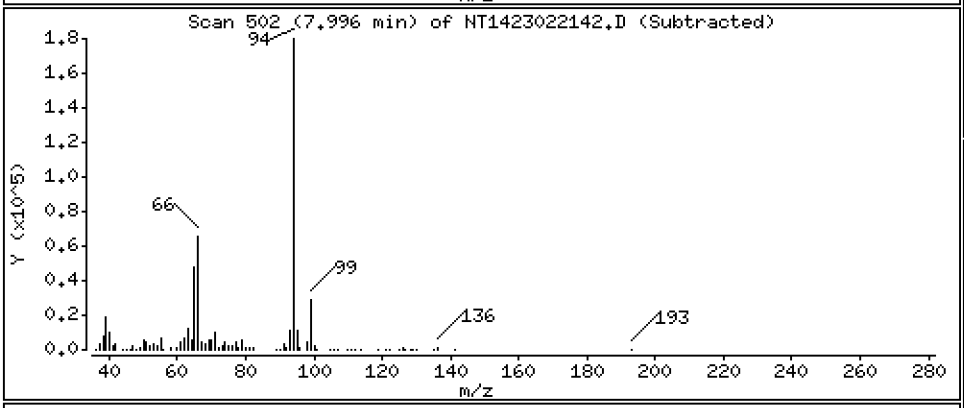
Column diameter: 0.25

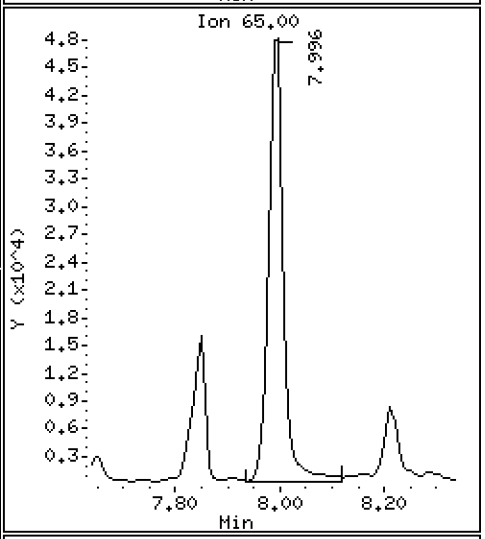
3 Phenol

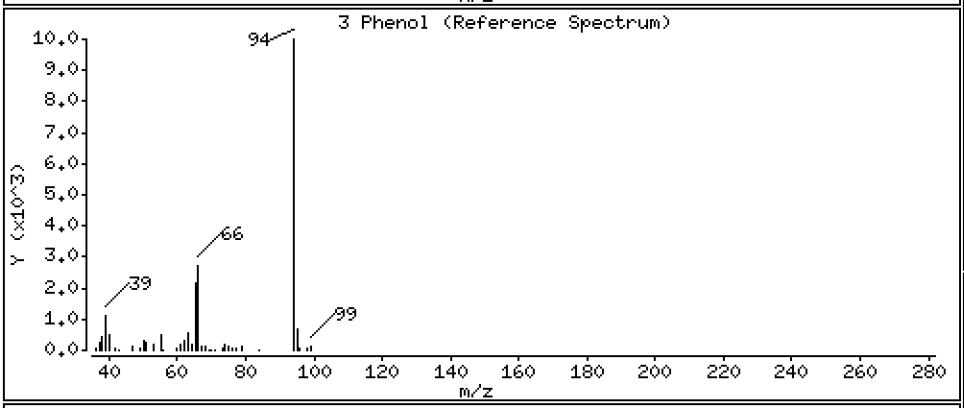
Concentration: 2.579 ug/mL

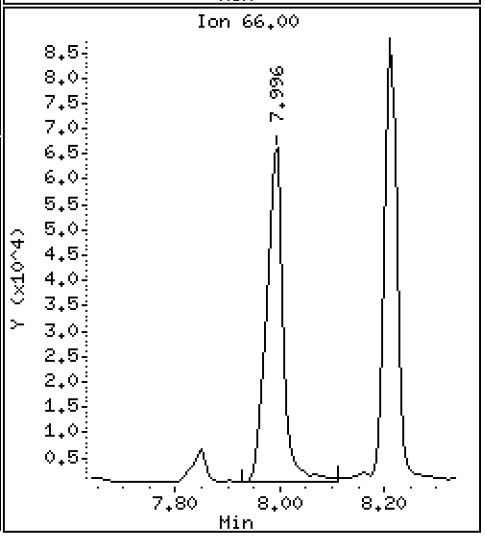


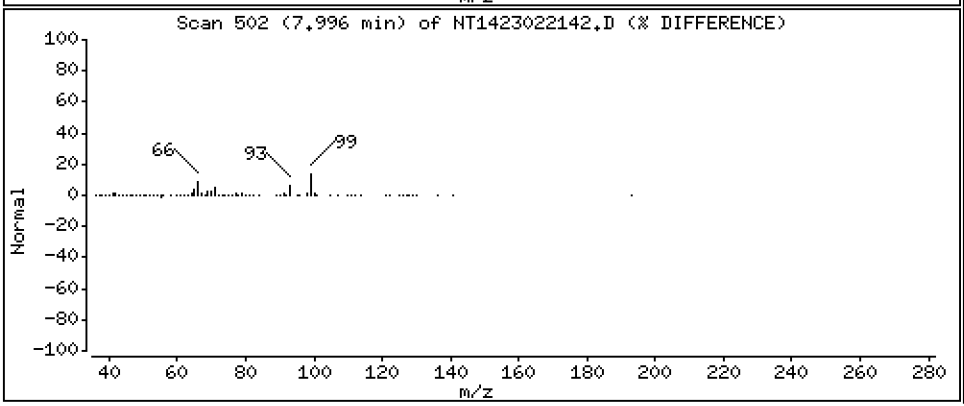












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

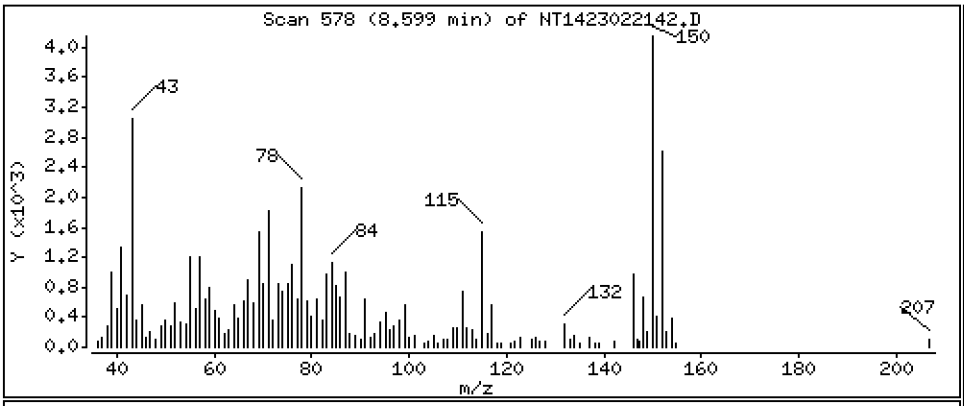
Operator: DSD

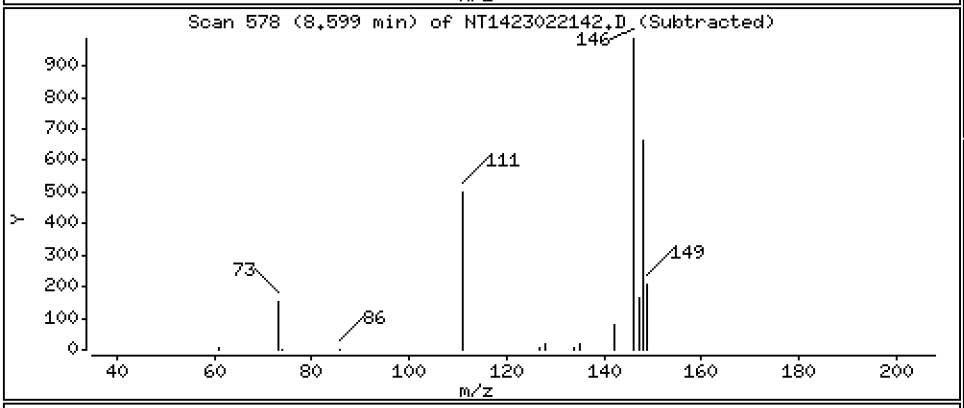
Column phase: ZB-5msi

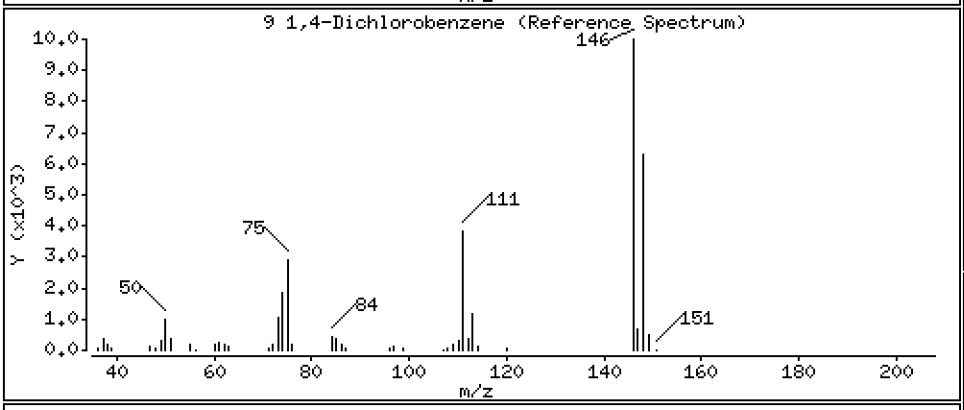
Column diameter: 0.25

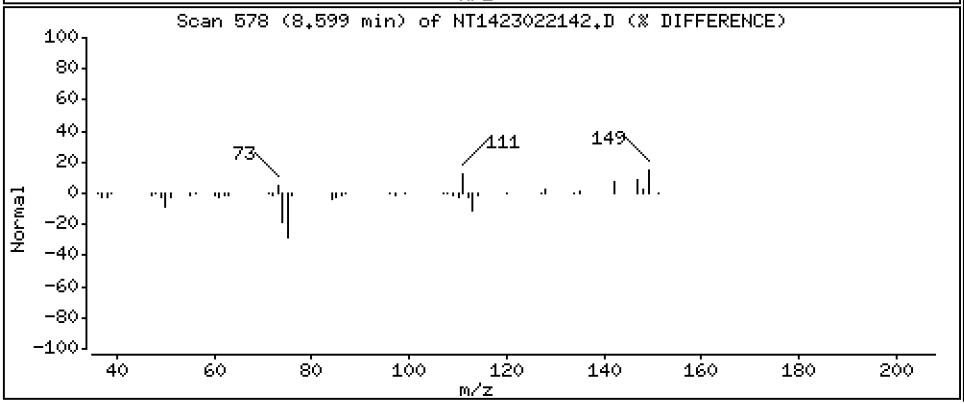
9 1,4-Dichlorobenzene

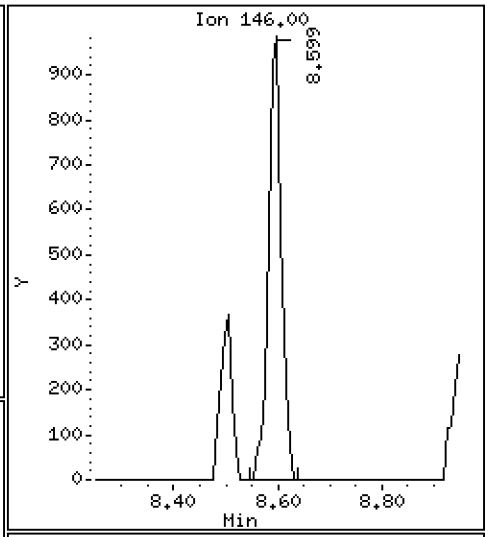
Concentration: 0.01887 ug/mL

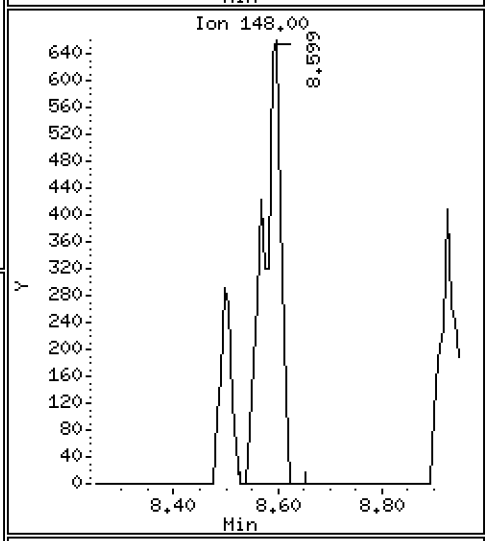


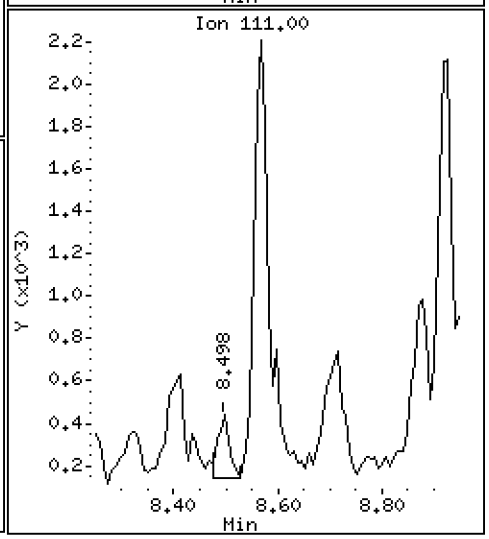












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

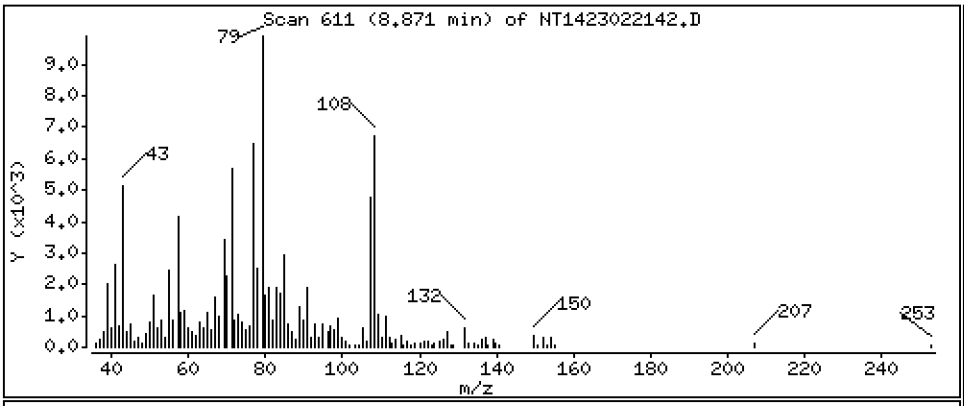
Operator: DSD

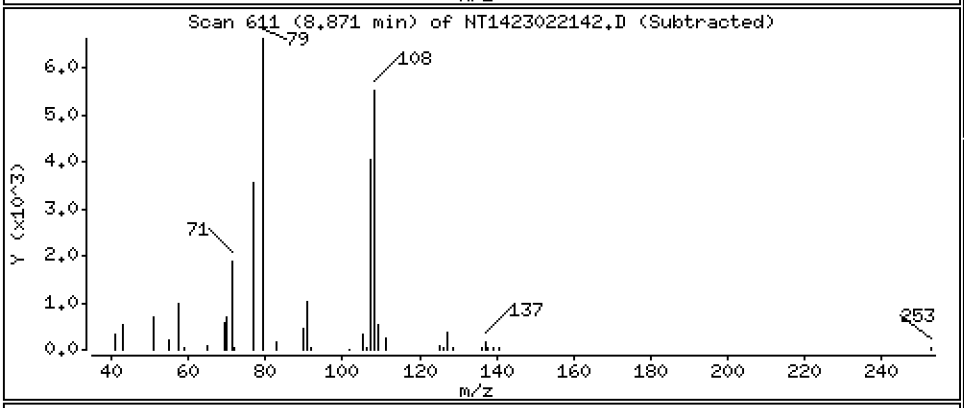
Column phase: ZB-5msi

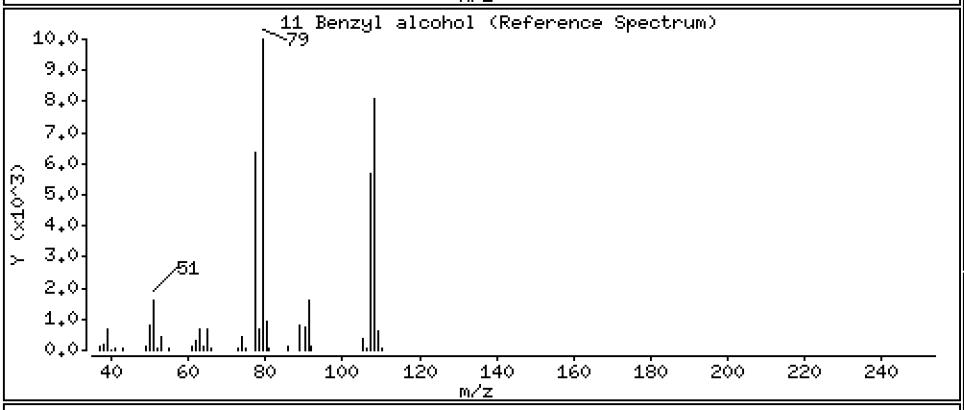
Column diameter: 0.25

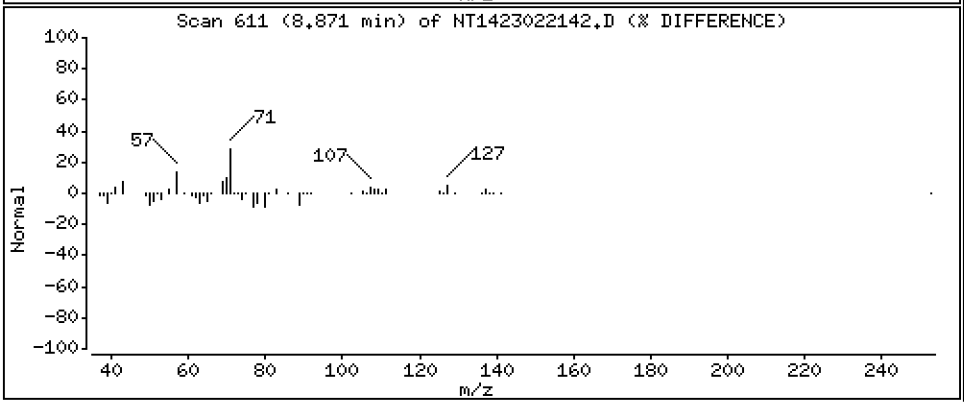
11 Benzyl alcohol

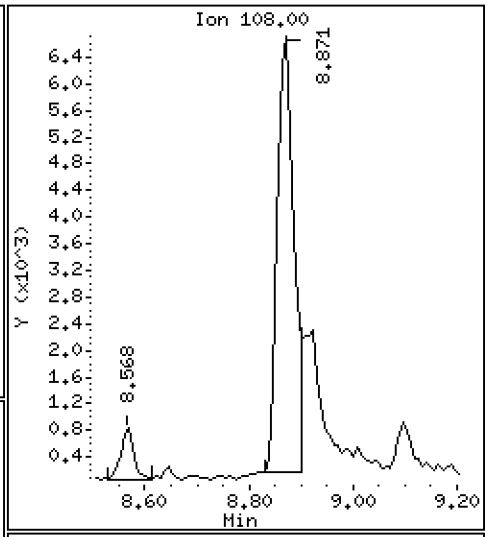
Concentration: 0.2135 ug/mL

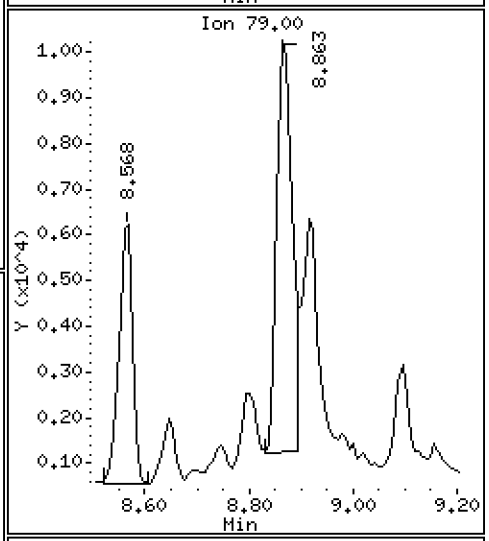


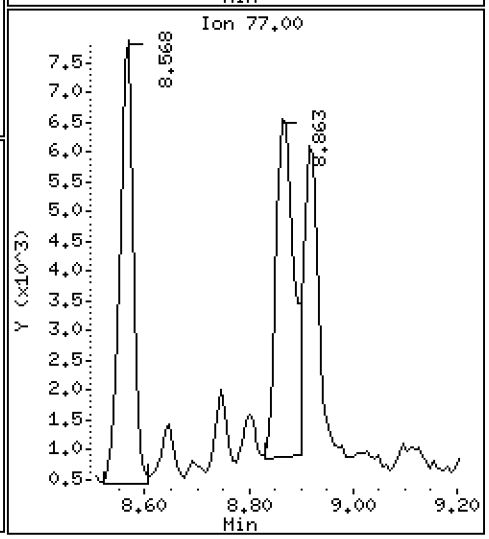












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

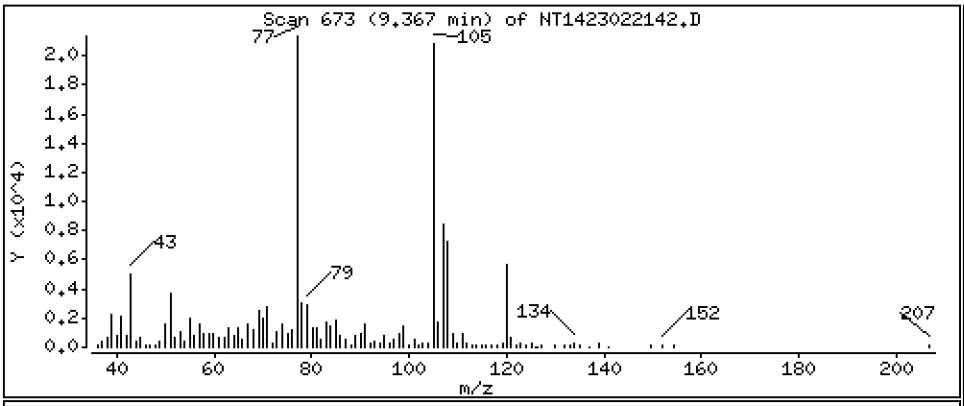
Operator: DSD

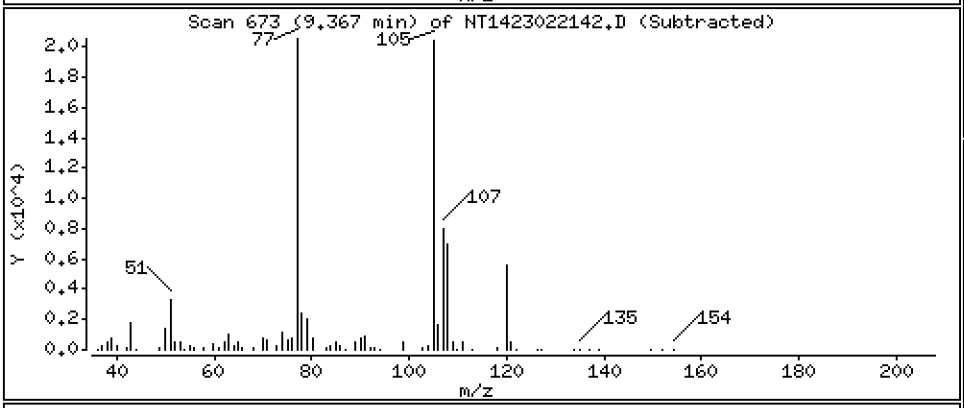
Column phase: ZB-5msi

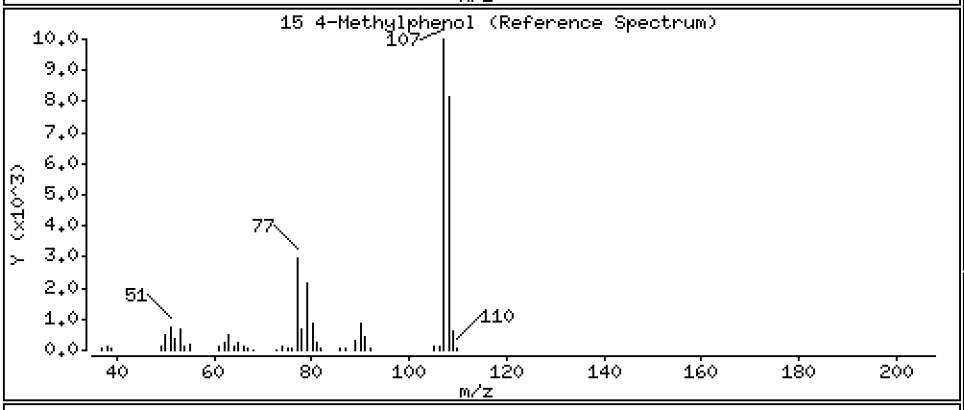
Column diameter: 0.25

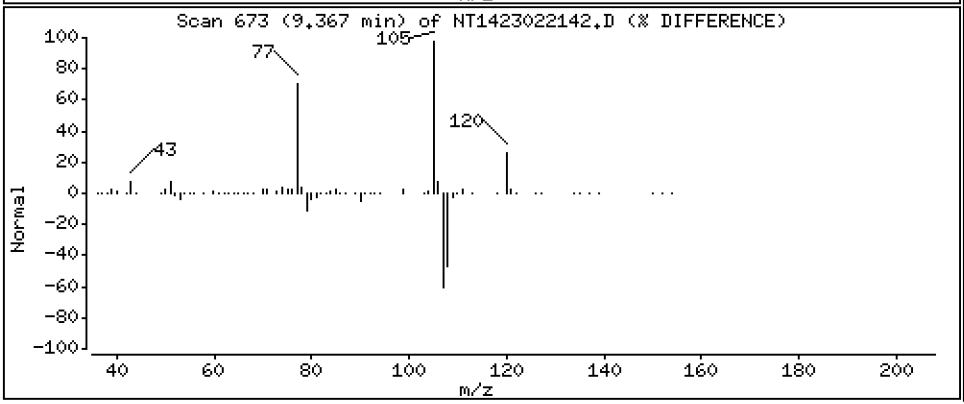
15 4-Methylphenol

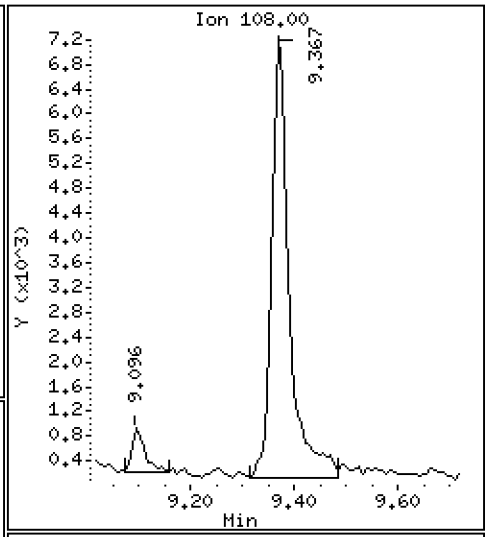
Concentration: 0.1823 ug/mL

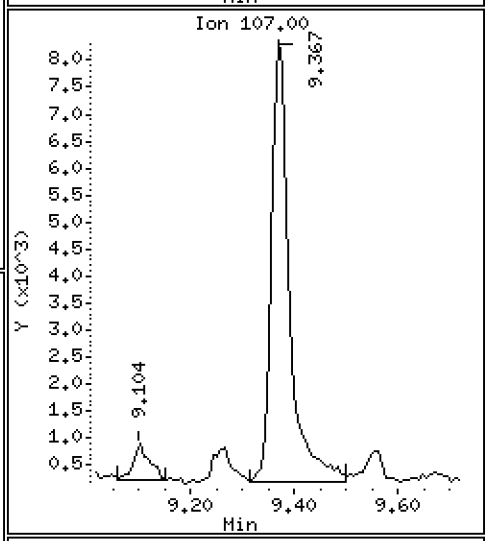


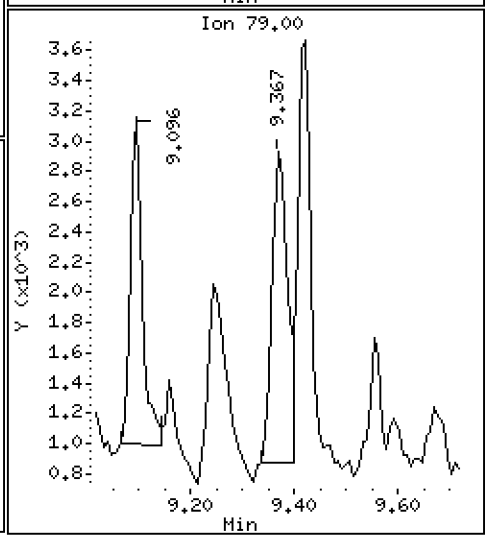












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

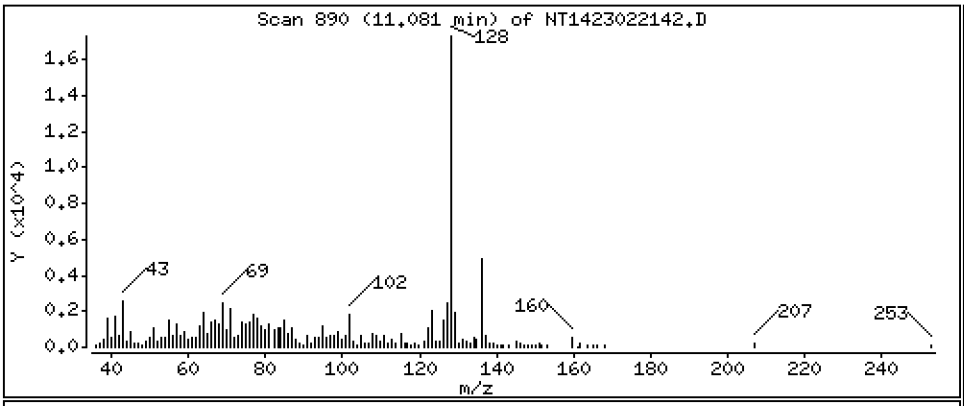
Operator: DSD

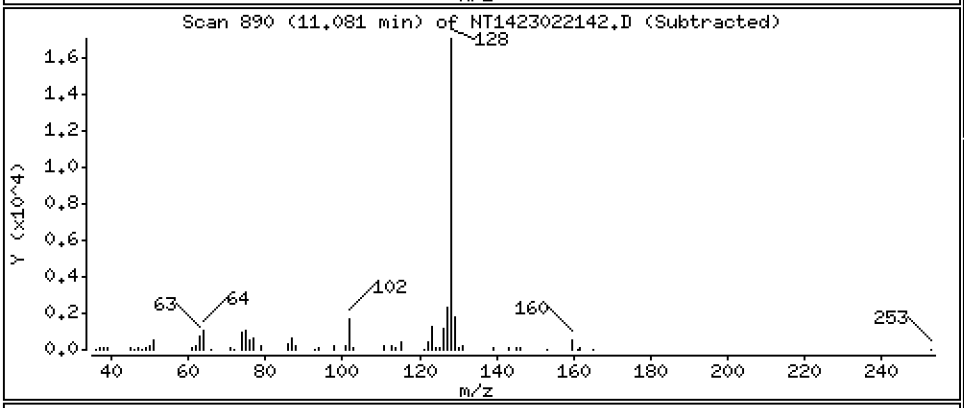
Column phase: ZB-5msi

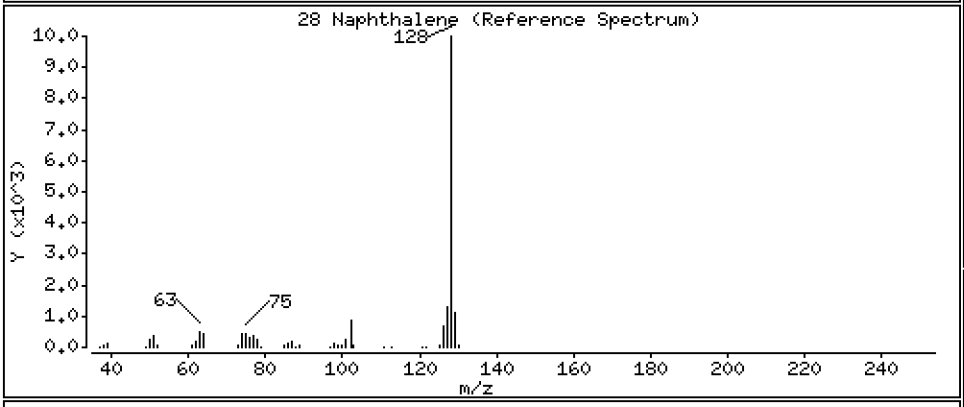
Column diameter: 0.25

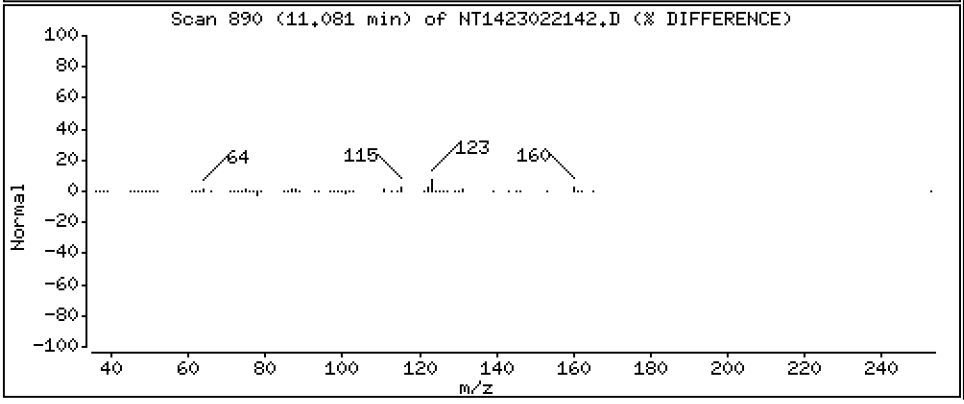
28 Naphthalene

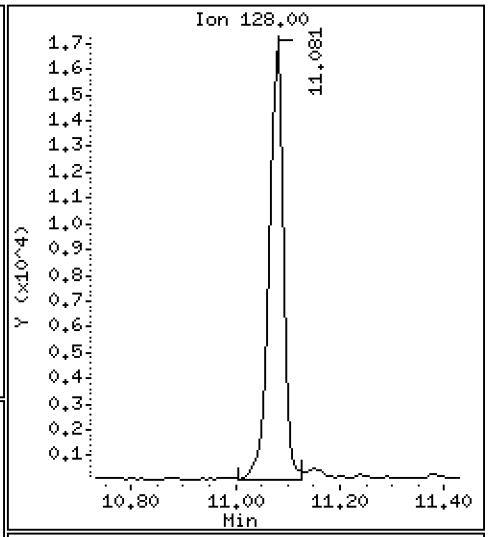
Concentration: 0.1225 ug/mL

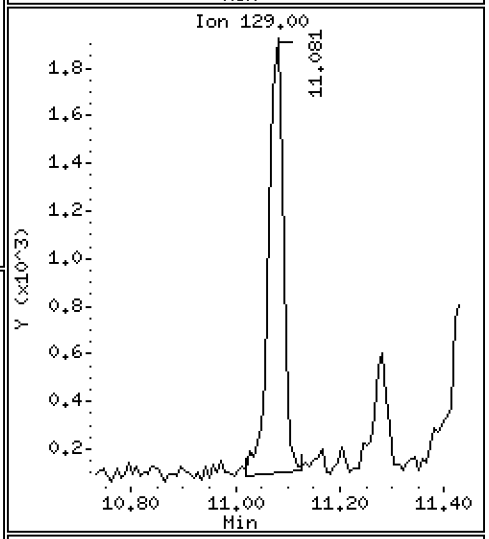


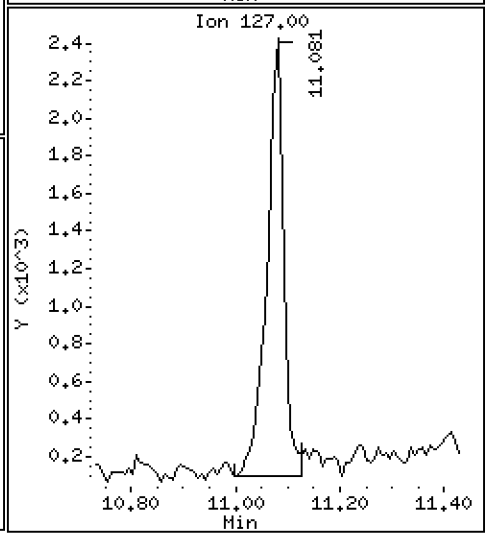












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

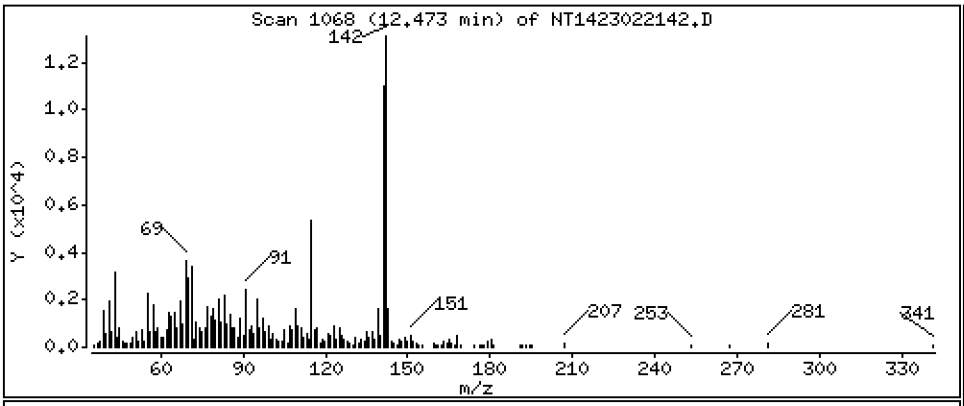
Operator: DSD

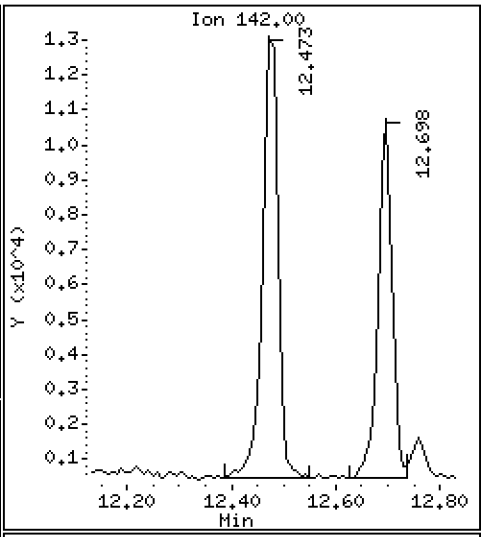
Column phase: ZB-5msi

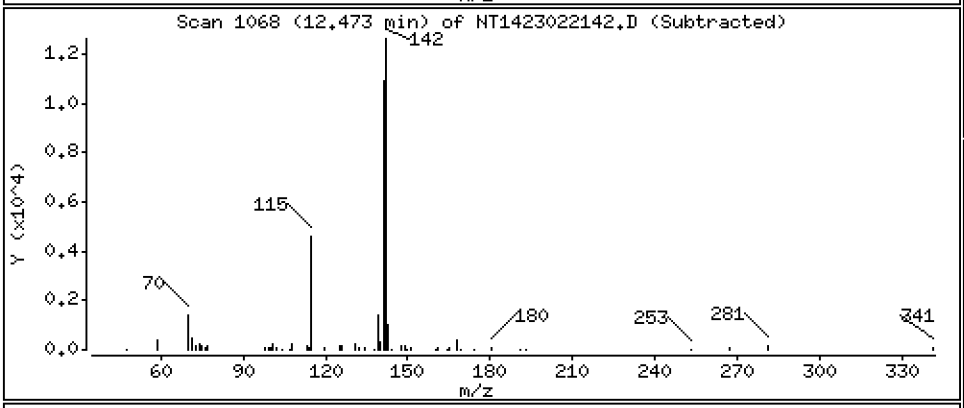
Column diameter: 0.25

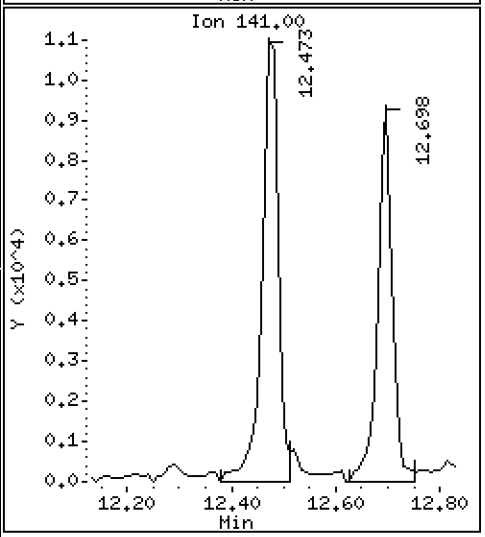
32 2-Methylnaphthalene

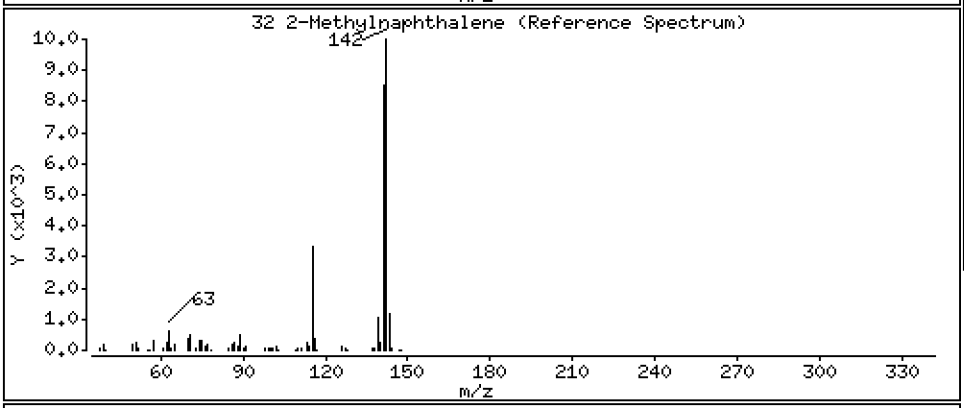
Concentration: 0.1365 ug/mL

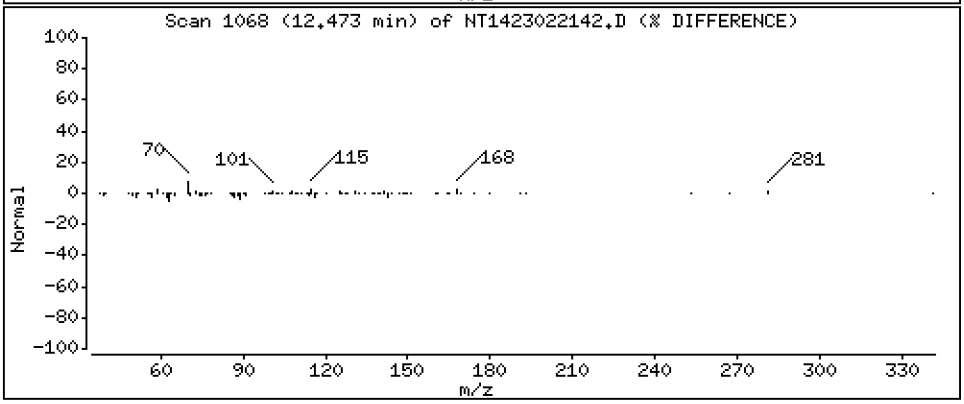












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

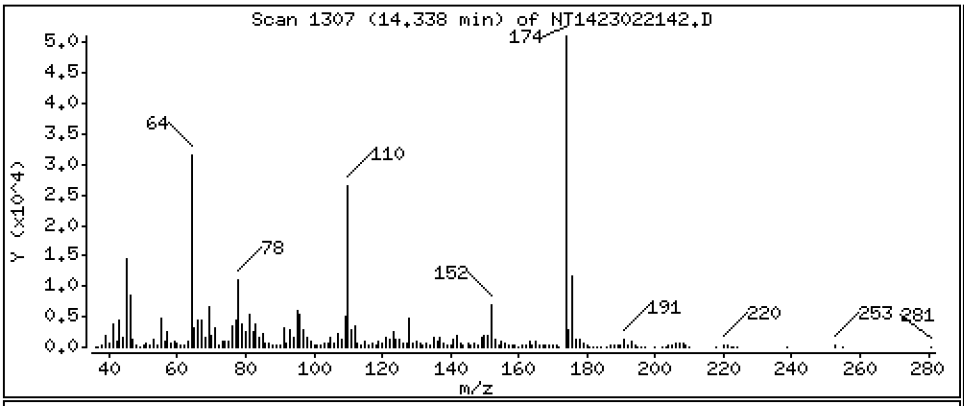
Operator: DSD

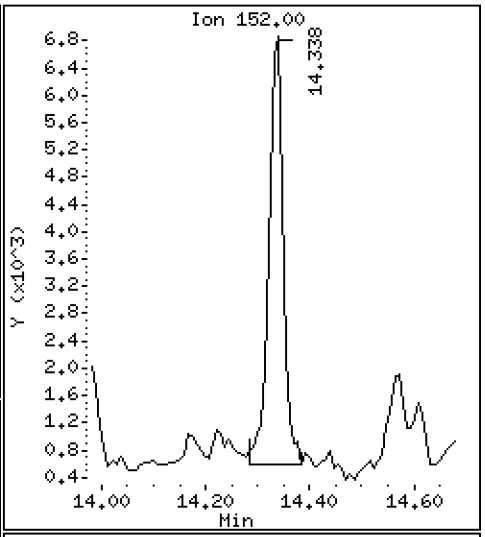
Column phase: ZB-5msi

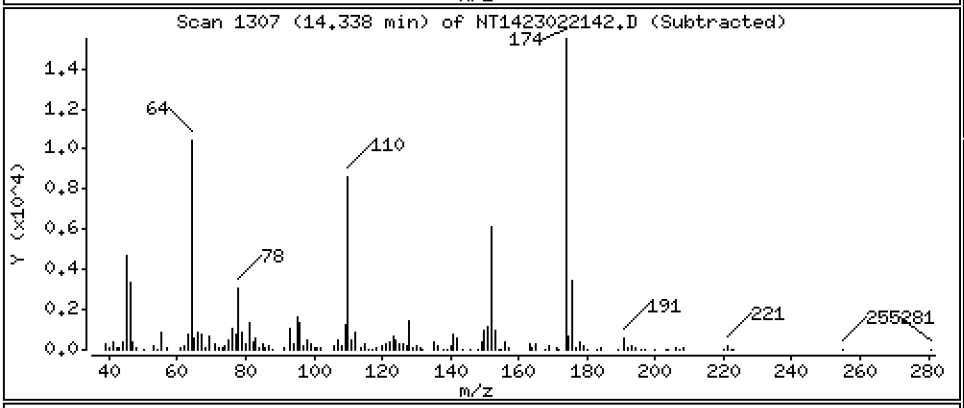
Column diameter: 0.25

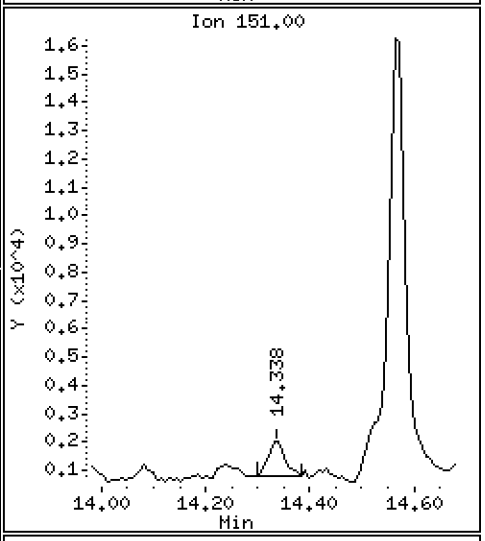
40 Acenaphthylene

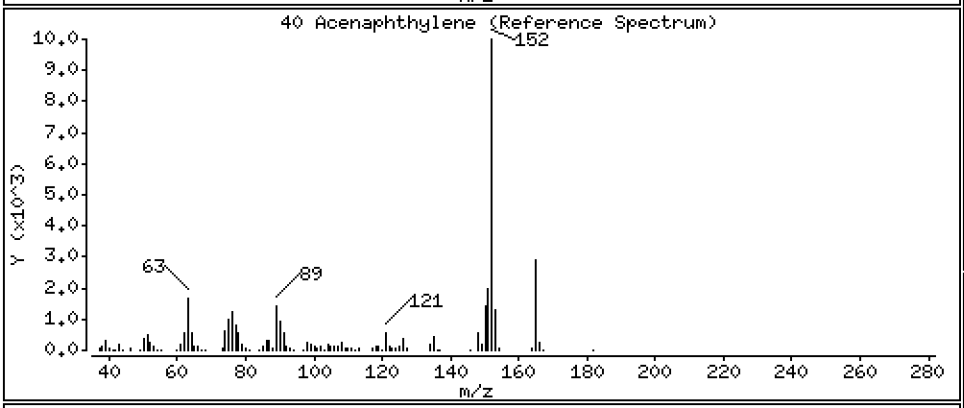
Concentration: 0.04442 ug/mL

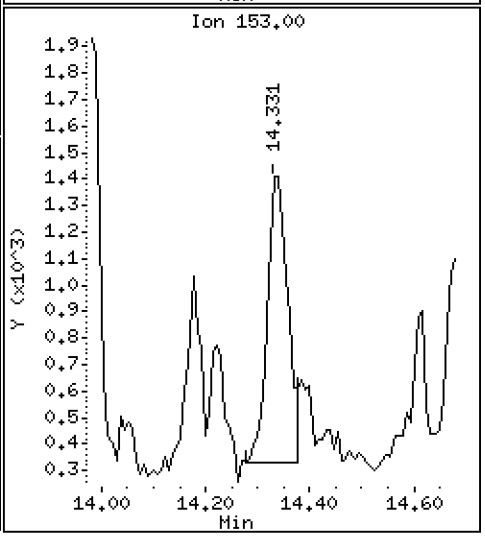


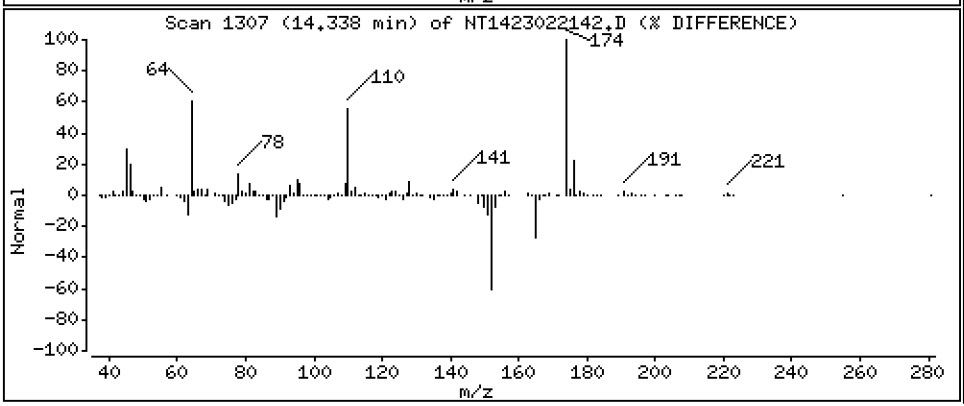












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

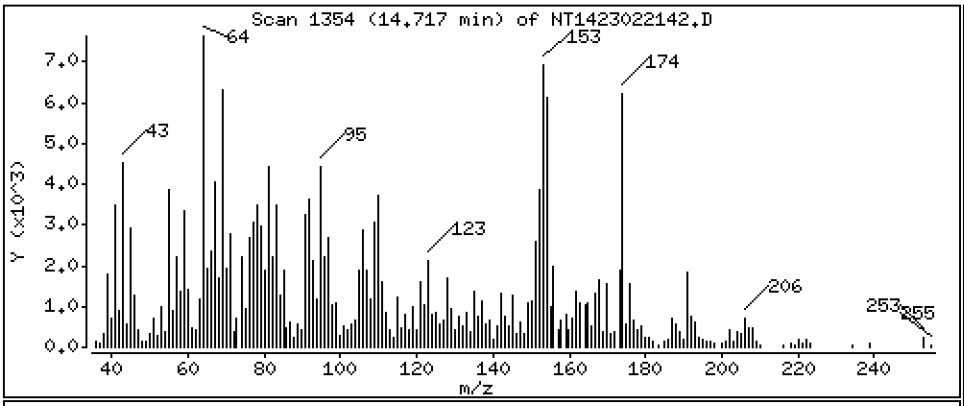
Operator: DSD

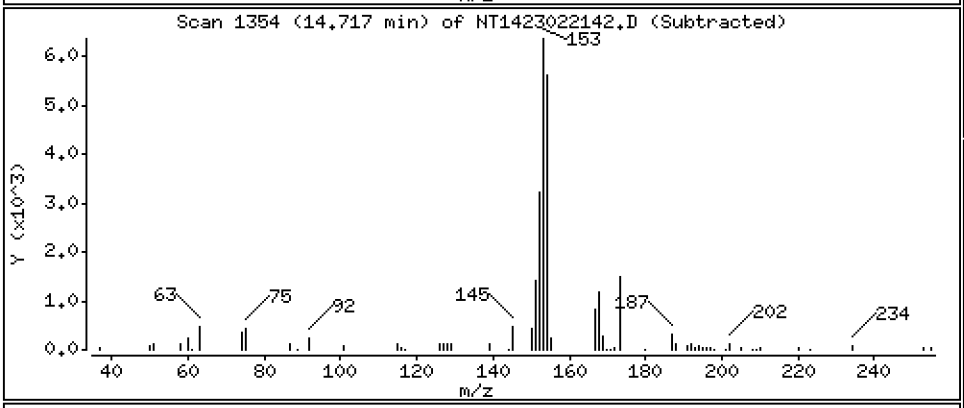
Column phase: ZB-5msi

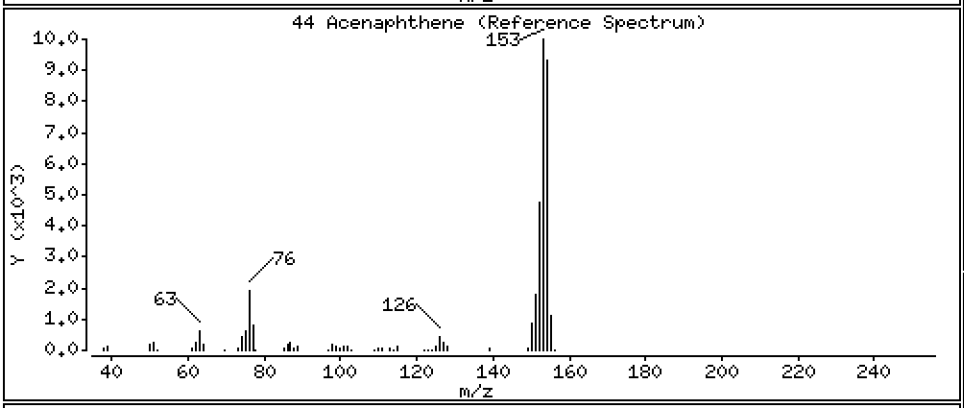
Column diameter: 0.25

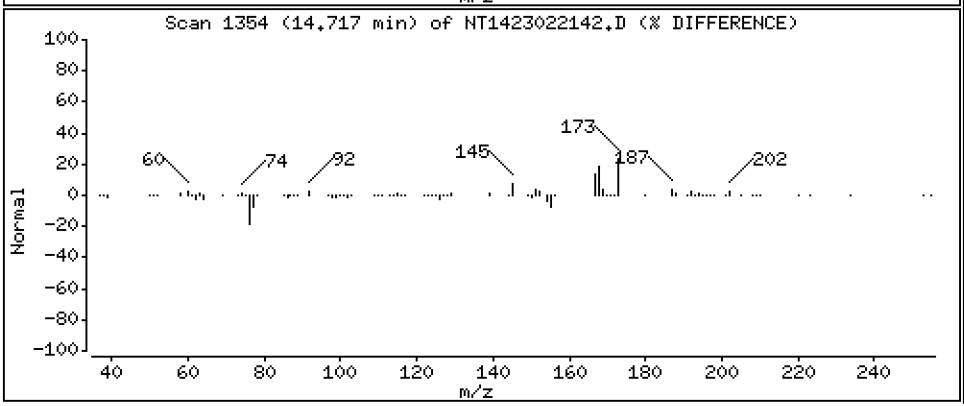
44 Acenaphthene

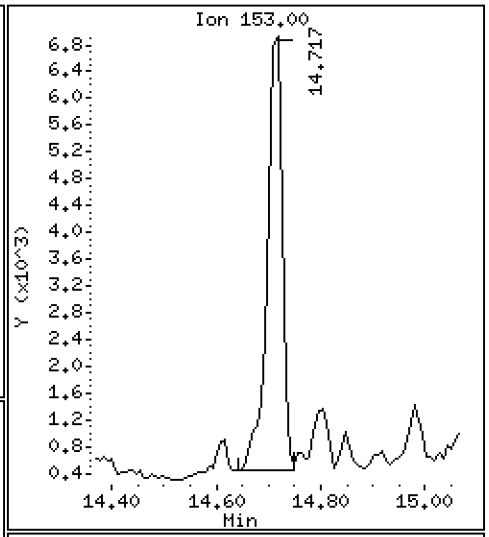
Concentration: 0.07987 ug/mL

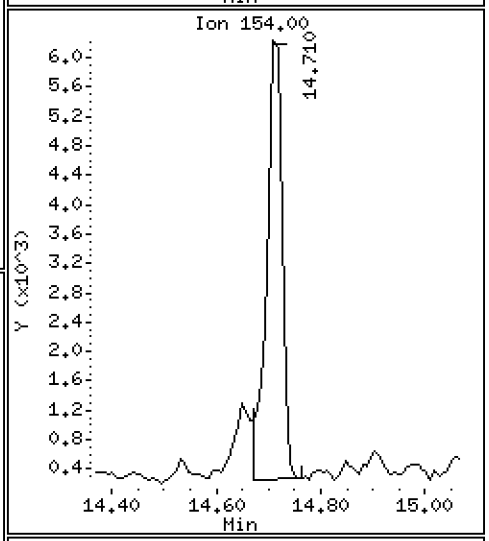


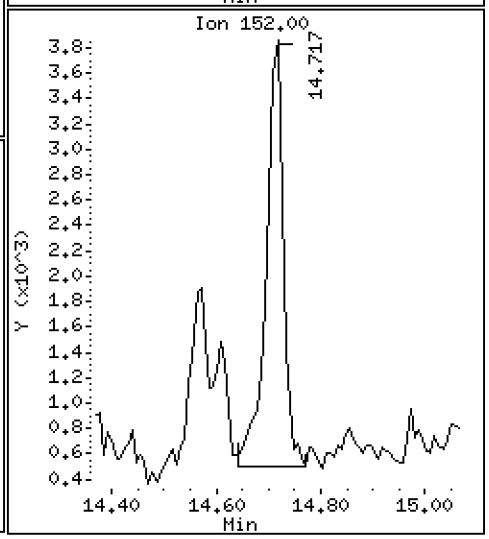












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

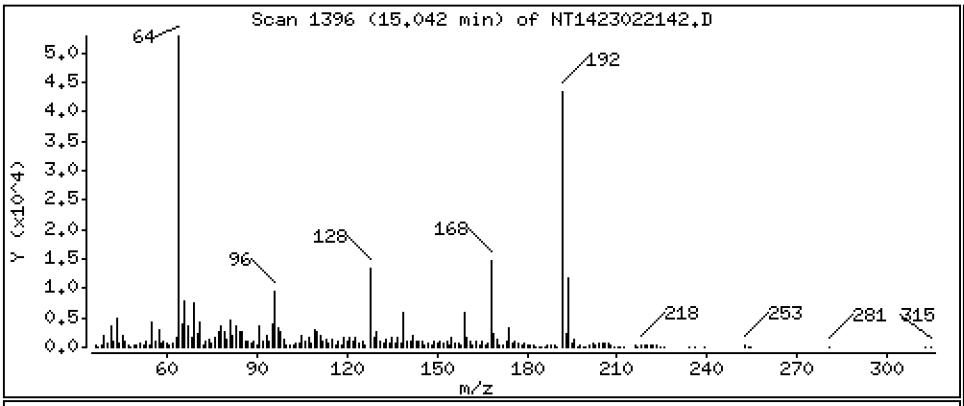
Operator: DSD

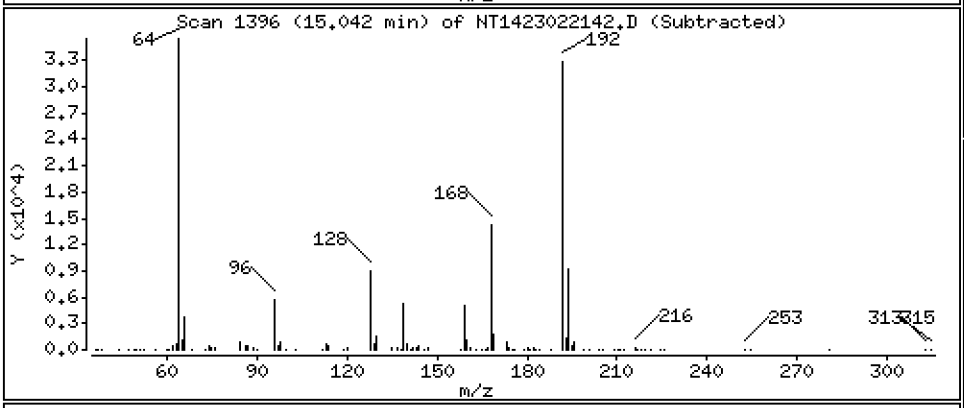
Column phase: ZB-5msi

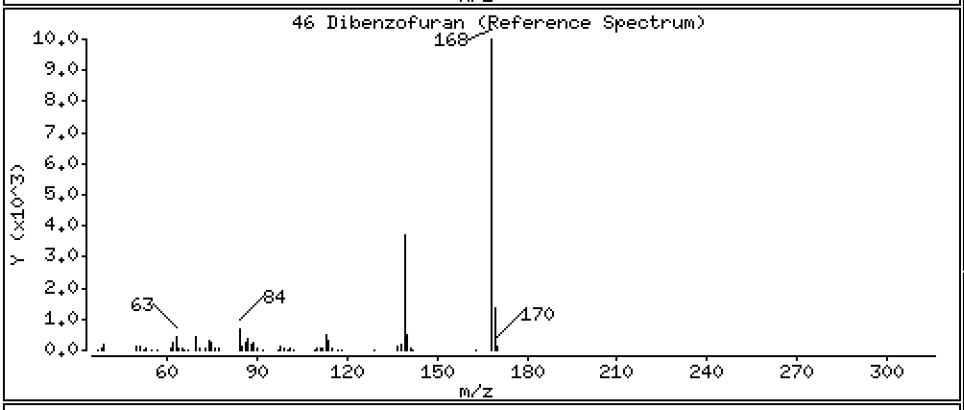
Column diameter: 0.25

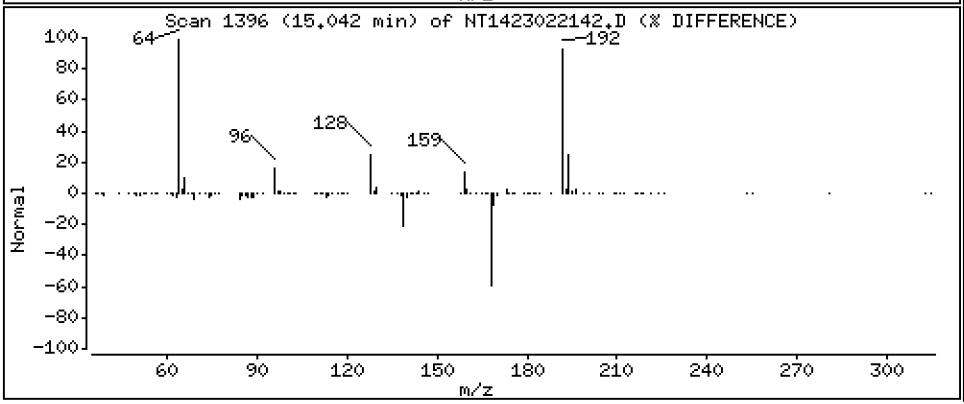
46 Dibenzofuran

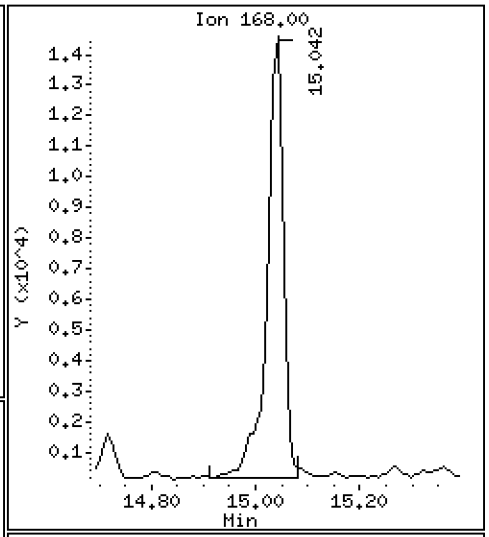
Concentration: 0.1173 ug/mL

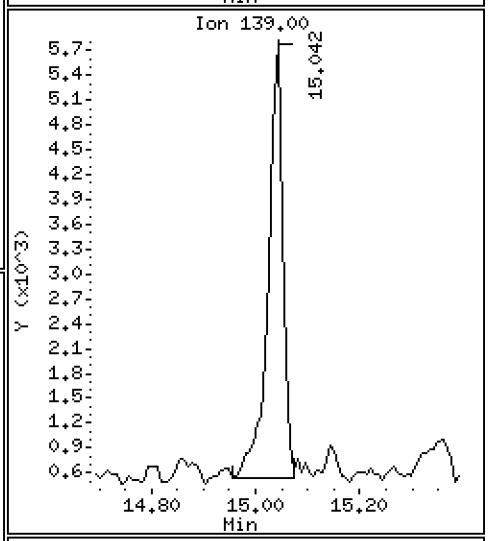


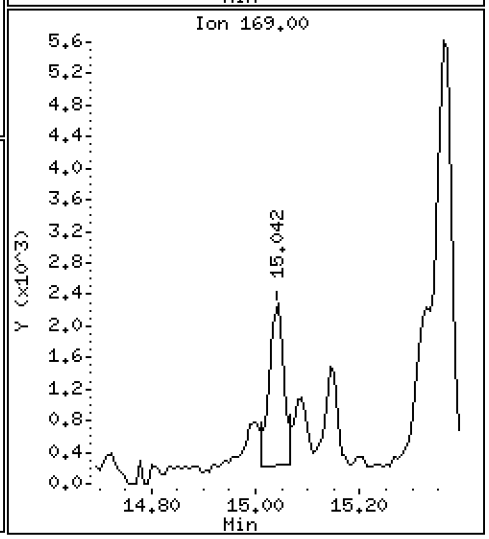












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022142.D

Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

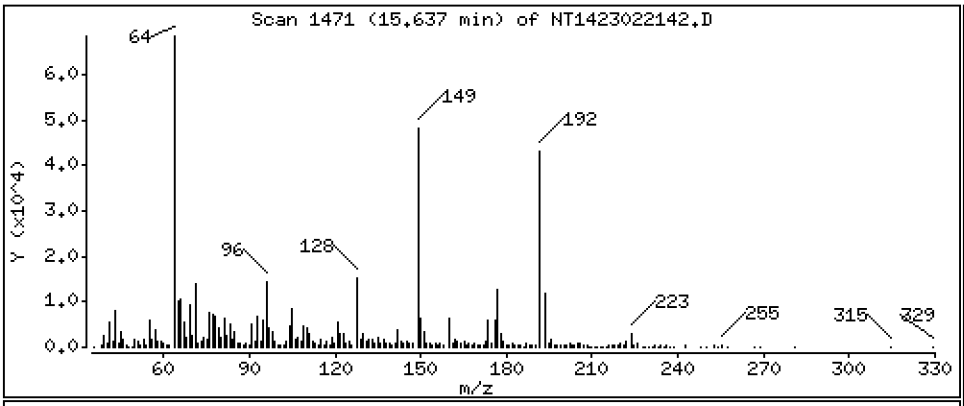
Operator: DSD

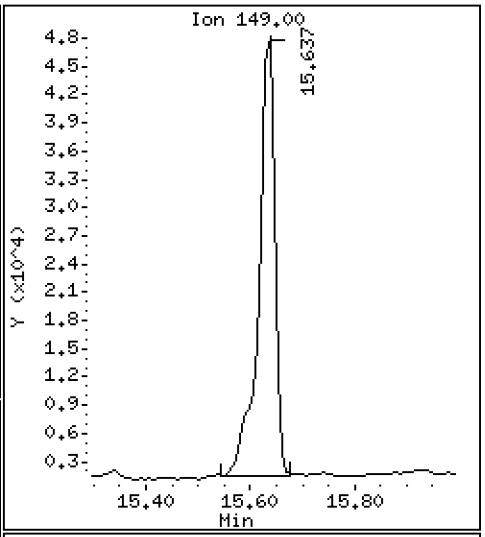
Column phase: ZB-5msi

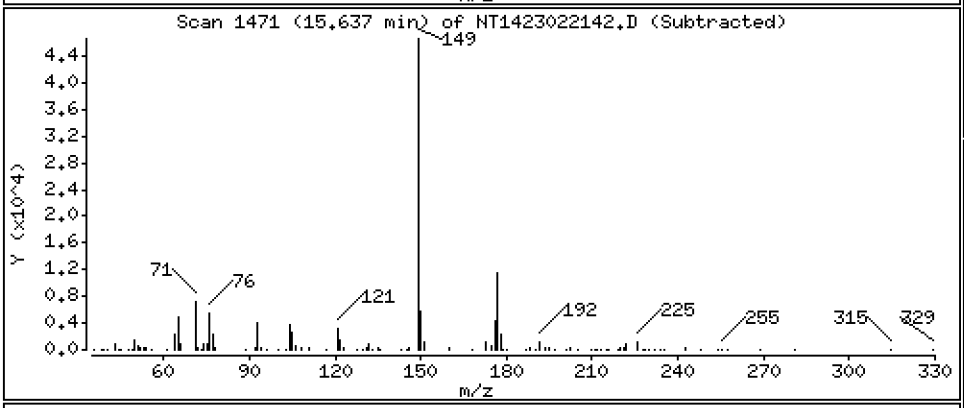
Column diameter: 0.25

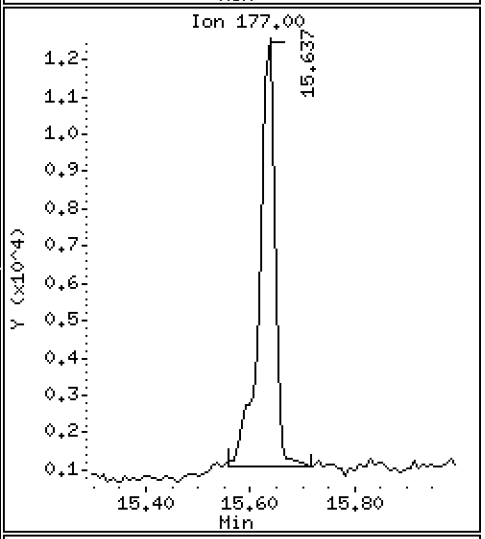
50 Diethylphthalate

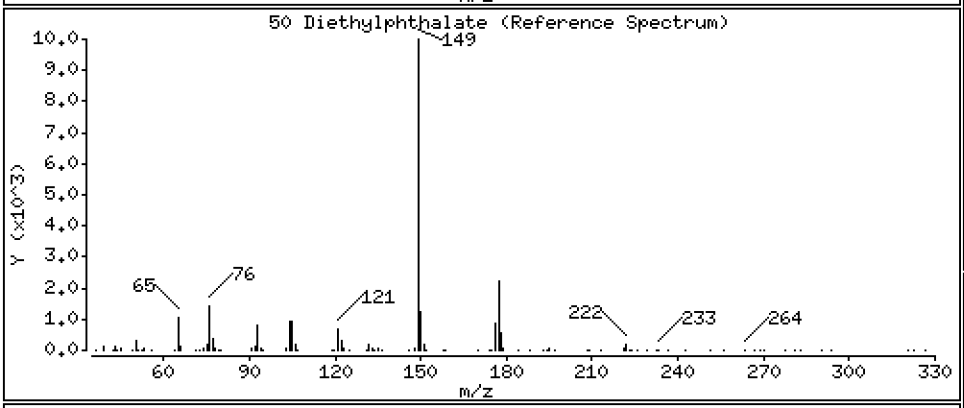
Concentration: 0.3967 ug/mL

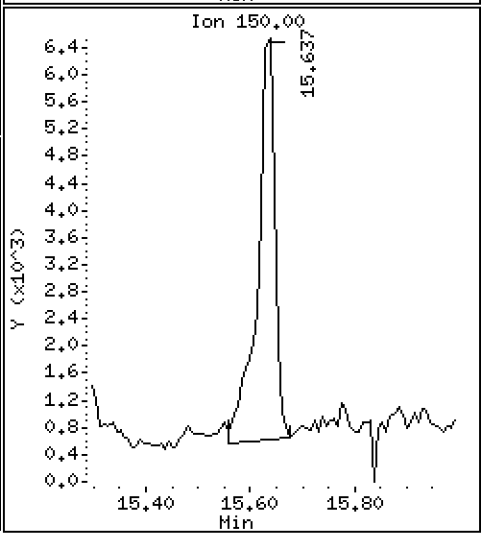


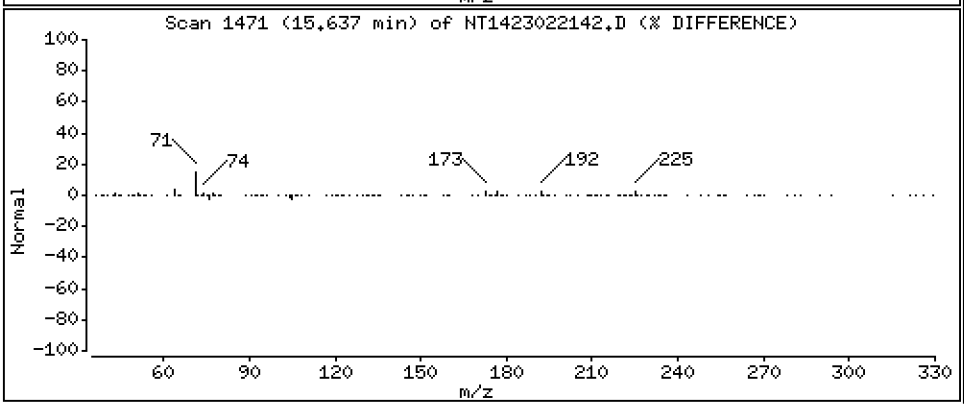












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022142.D

Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

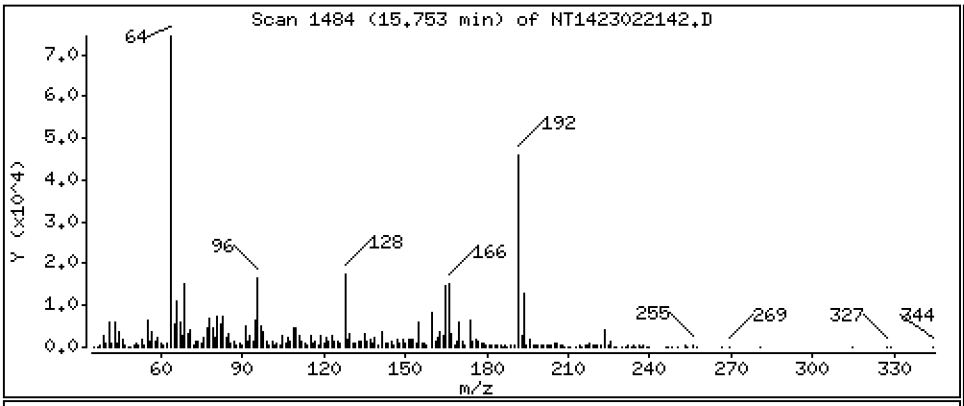
Operator: DSD

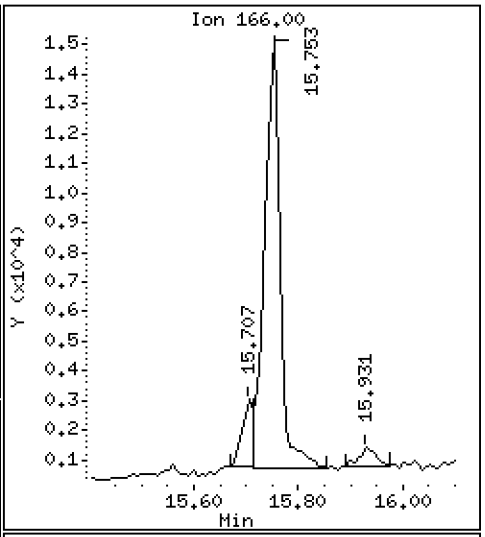
Column phase: ZB-5msi

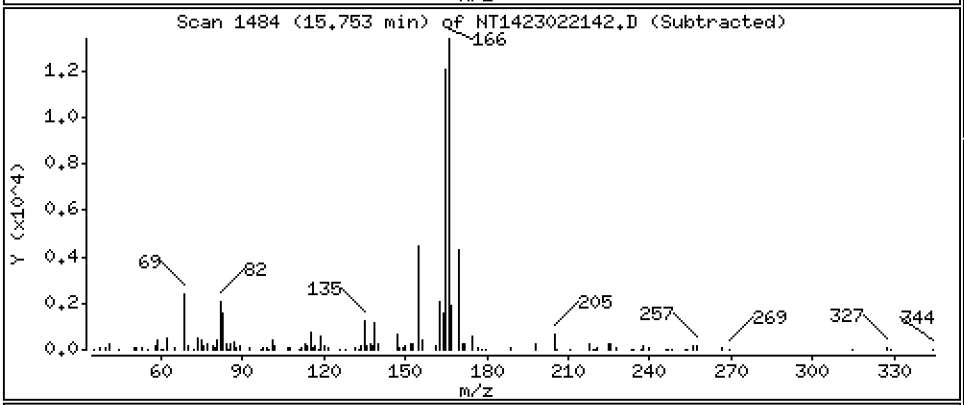
Column diameter: 0.25

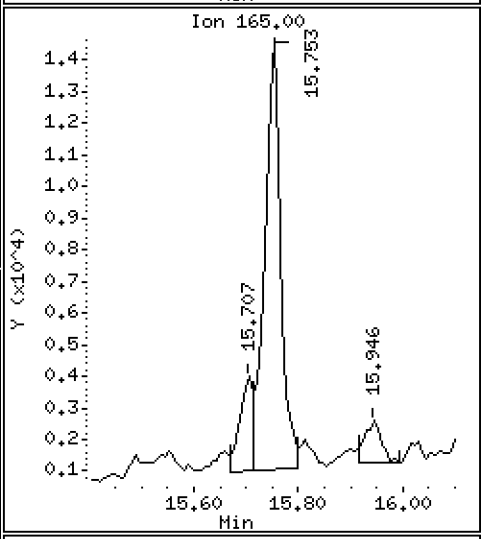
49 Fluorene

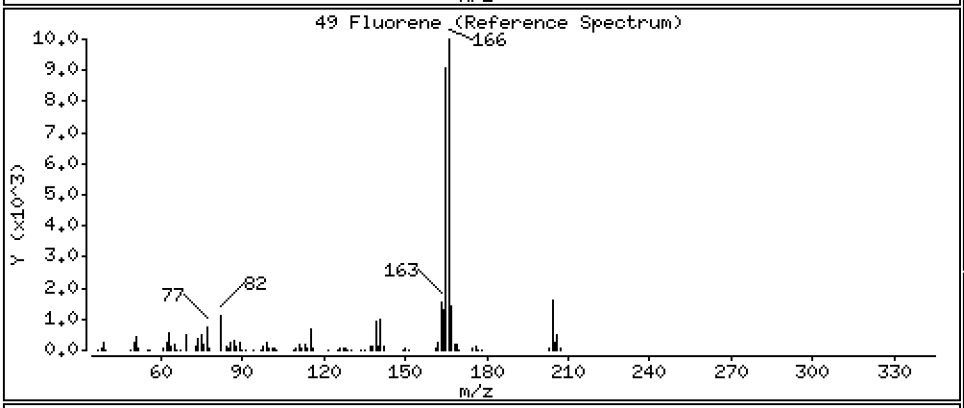
Concentration: 0.1084 ug/mL

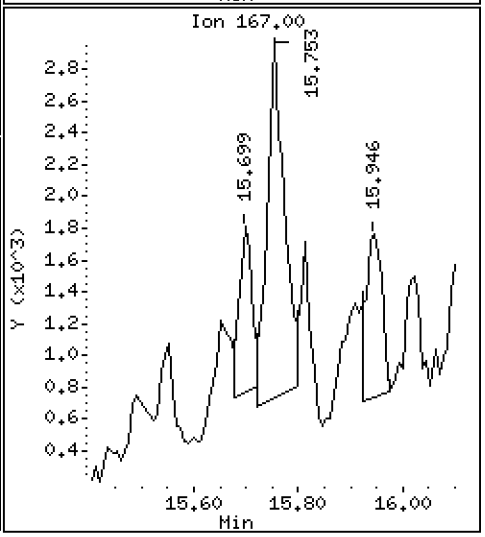


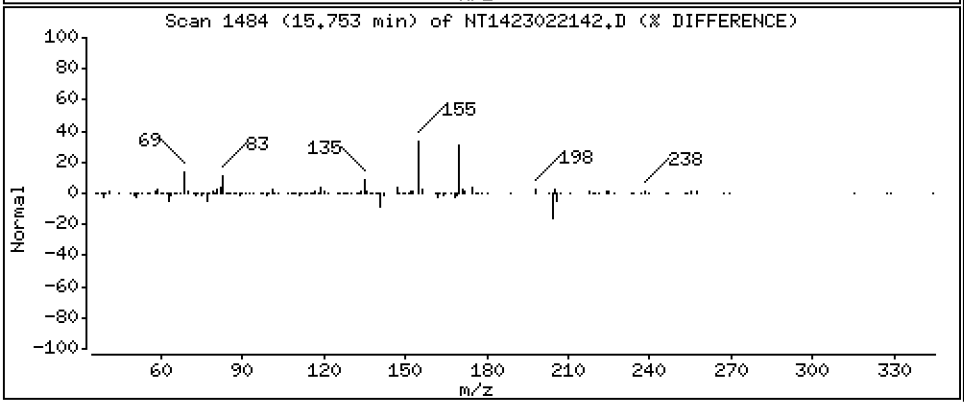












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

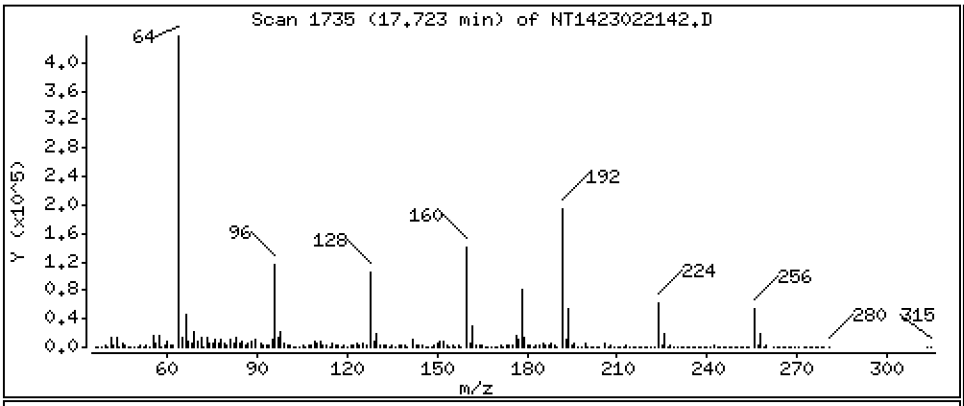
Operator: DSD

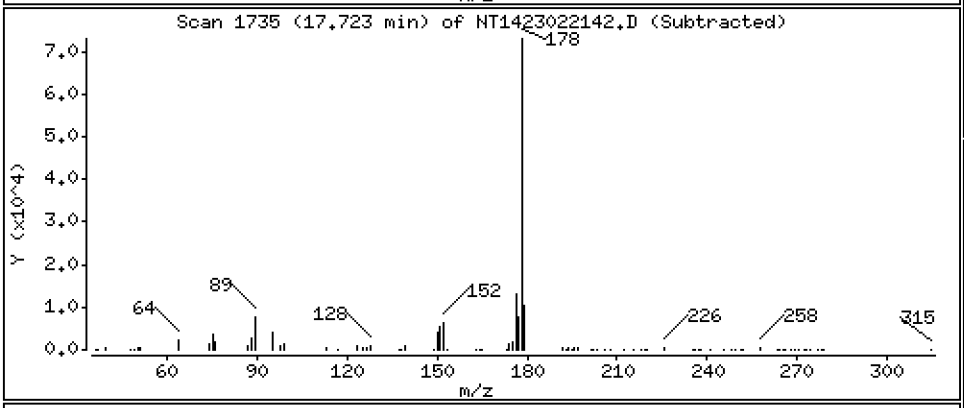
Column phase: ZB-5msi

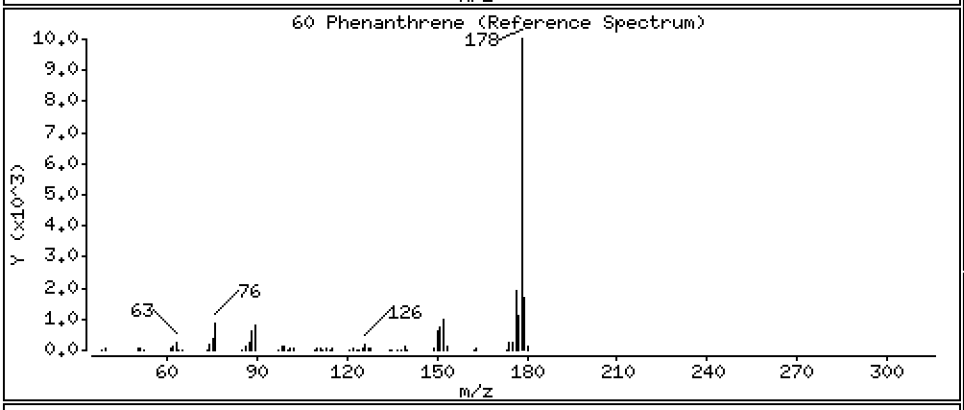
Column diameter: 0.25

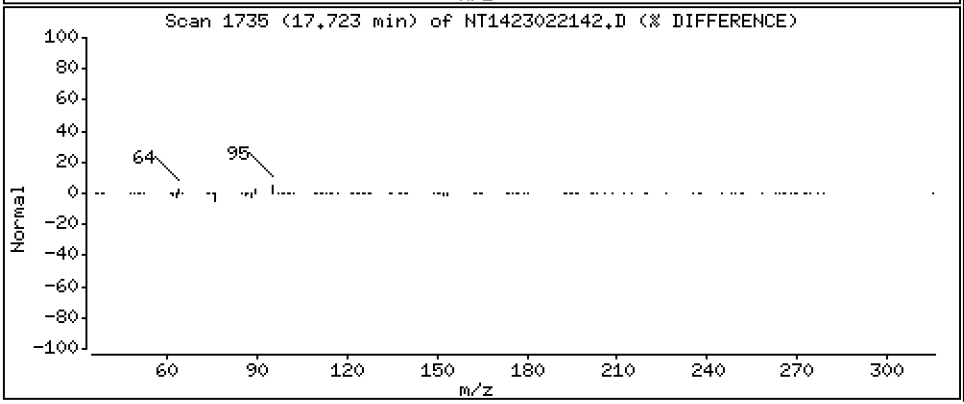
60 Phenanthrene

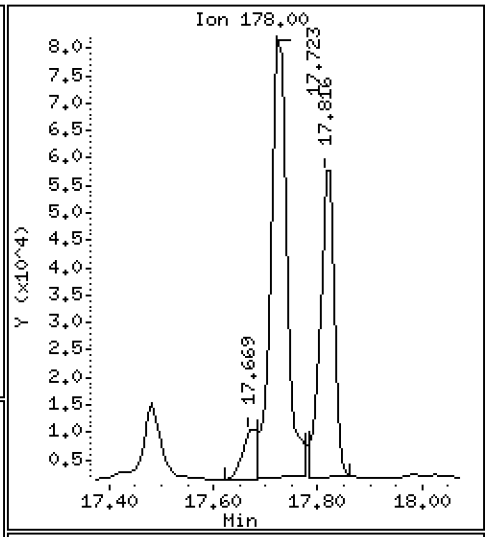
Concentration: 0.6602 ug/mL

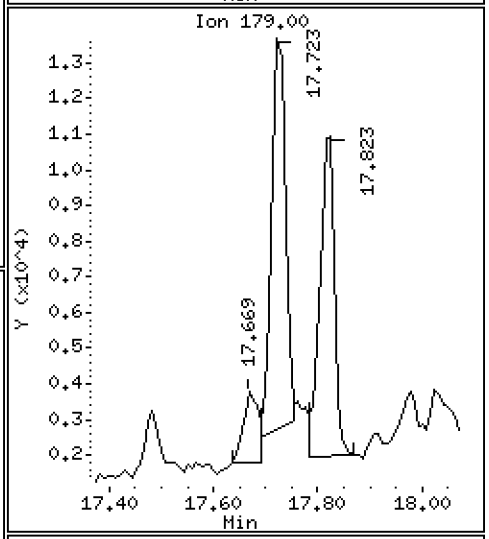


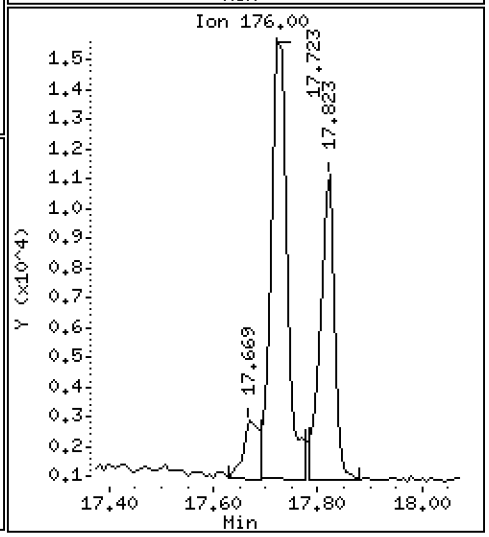












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

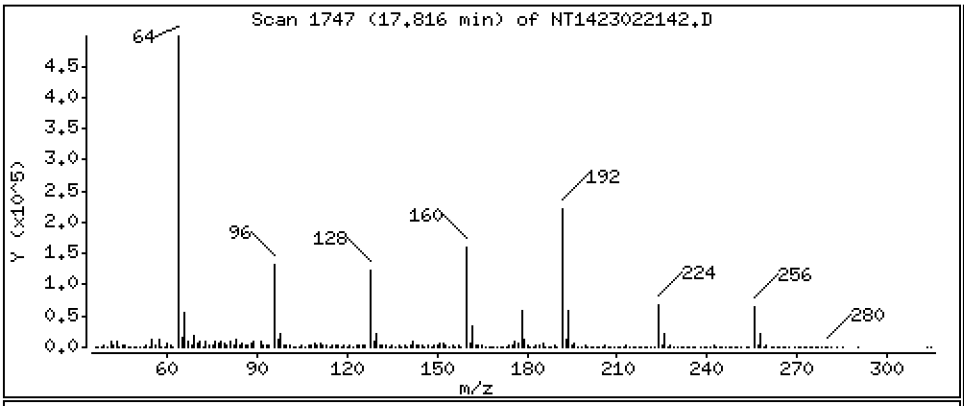
Operator: DSD

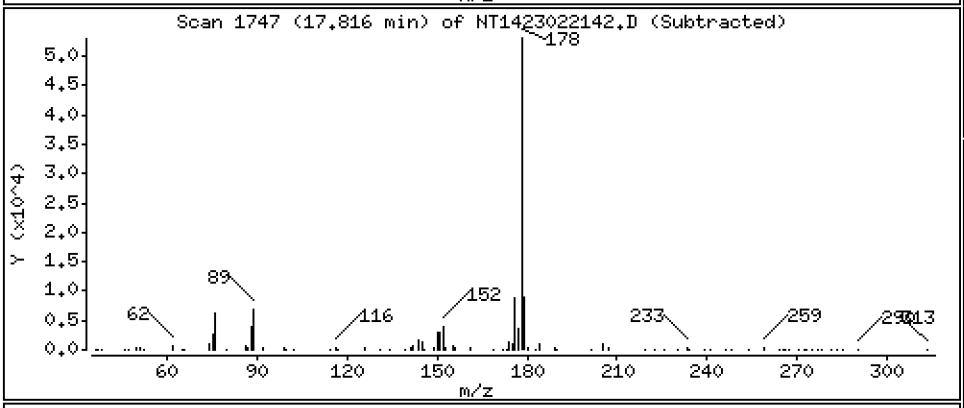
Column phase: ZB-5msi

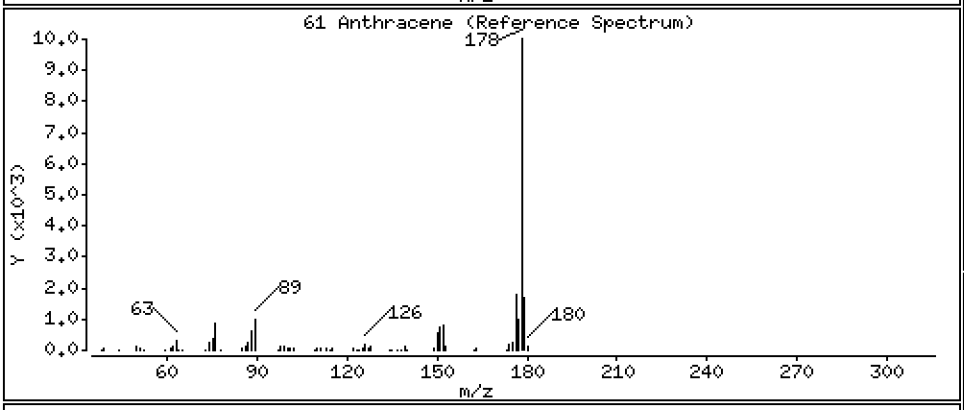
Column diameter: 0.25

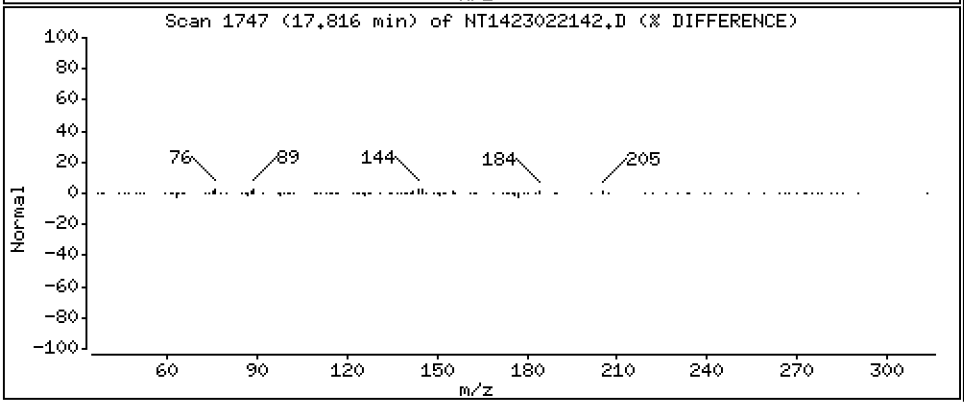
61 Anthracene

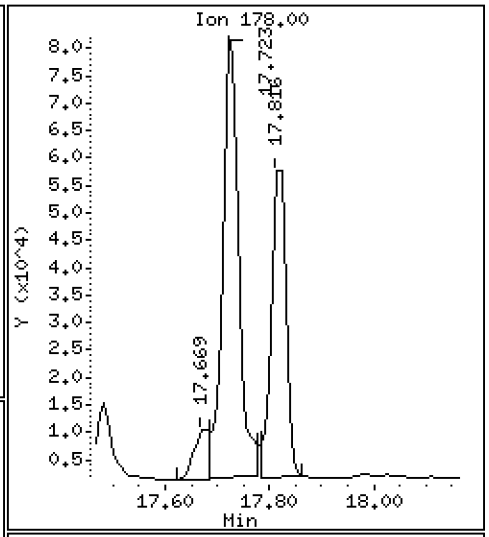
Concentration: 0.4172 ug/mL

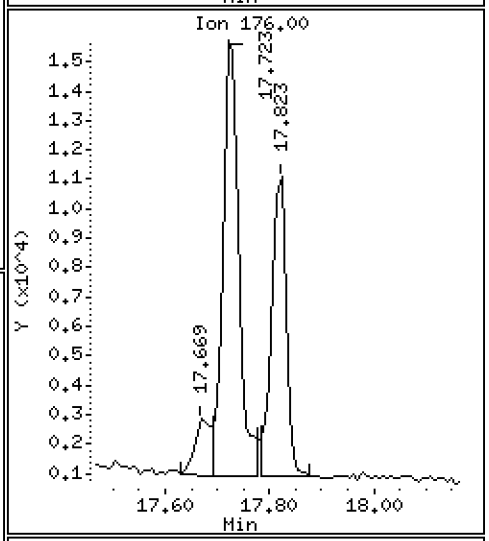


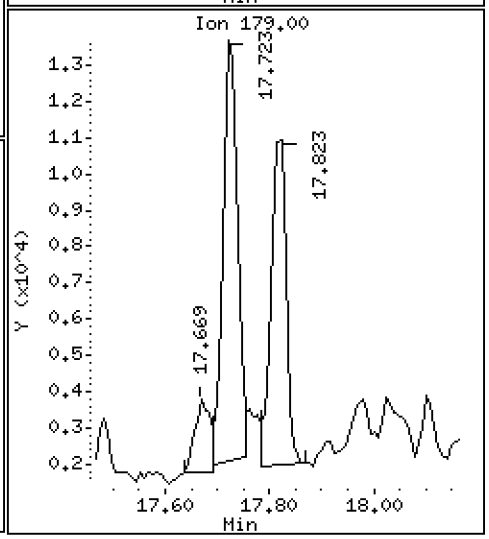












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

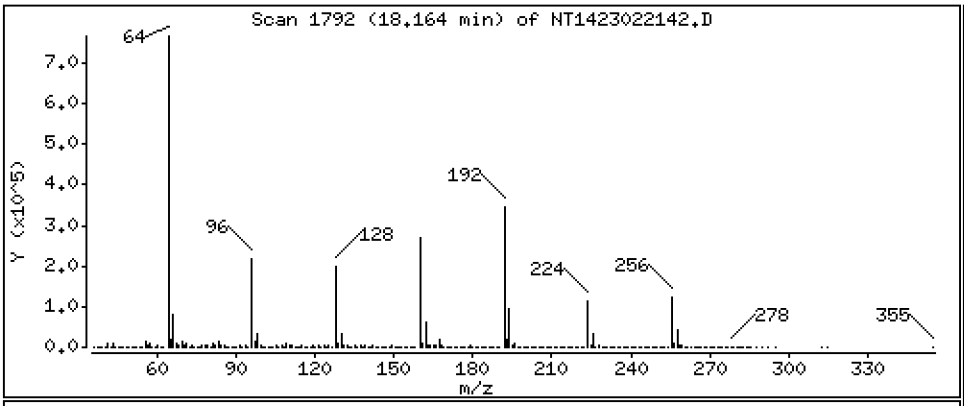
Operator: DSD

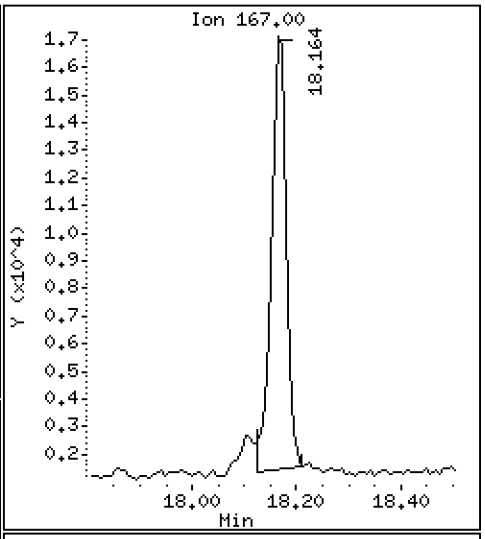
Column phase: ZB-5msi

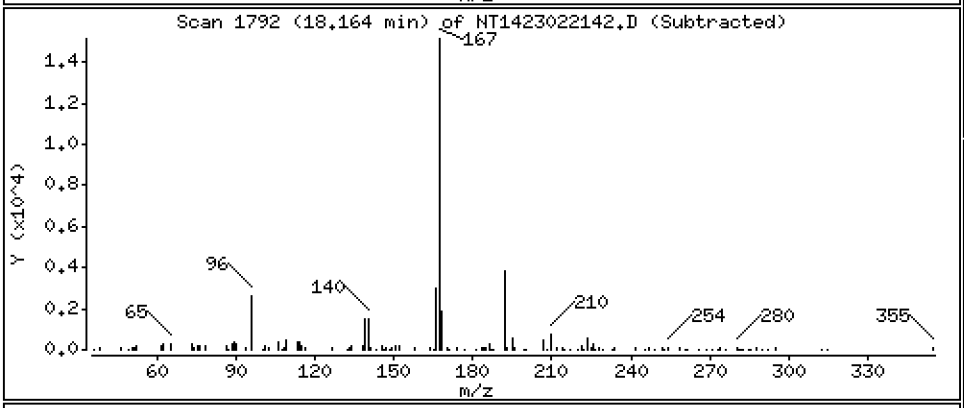
Column diameter: 0.25

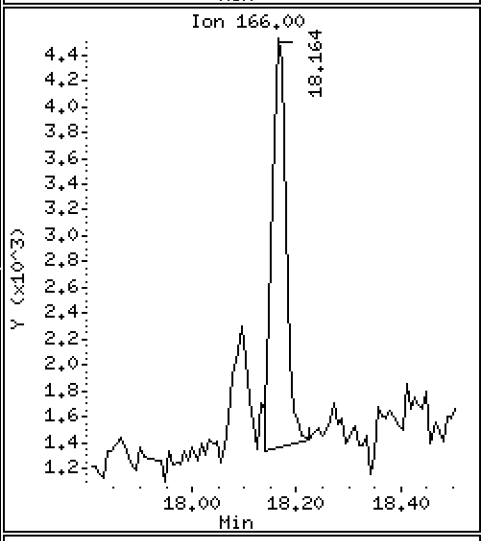
62 Carbazole

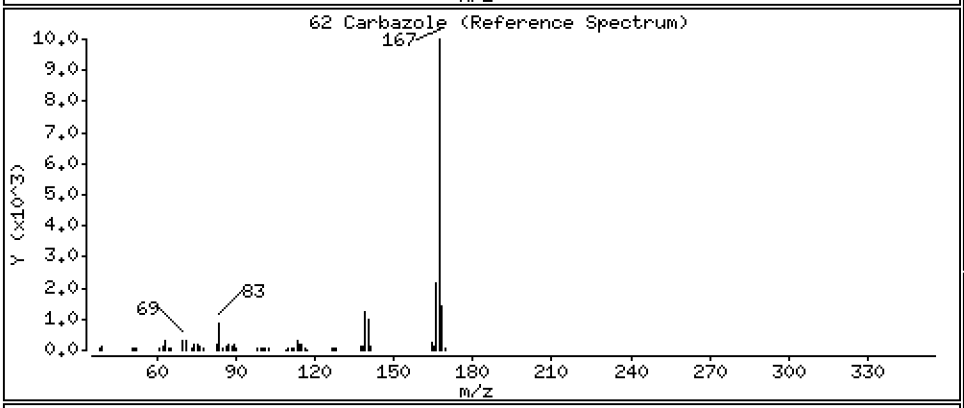
Concentration: 0.1300 ug/mL

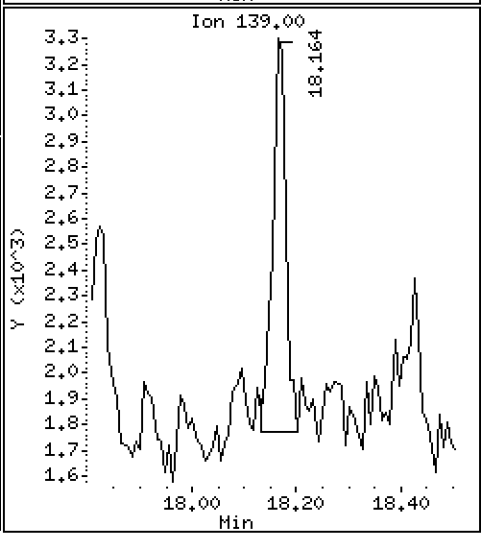


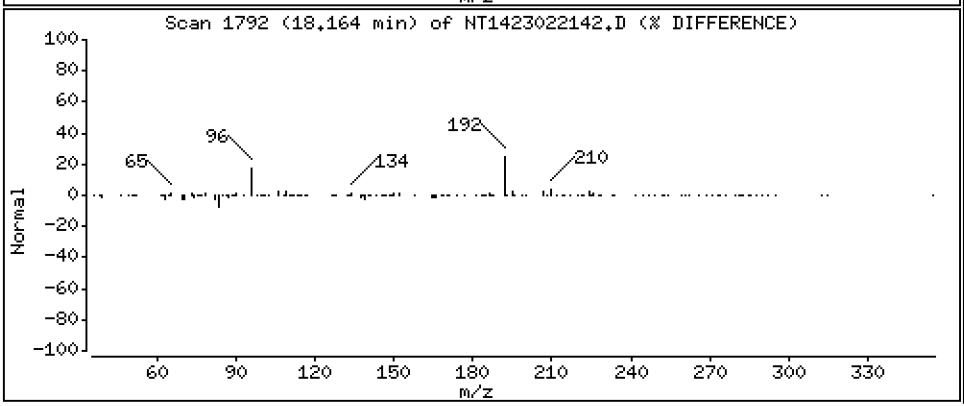












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

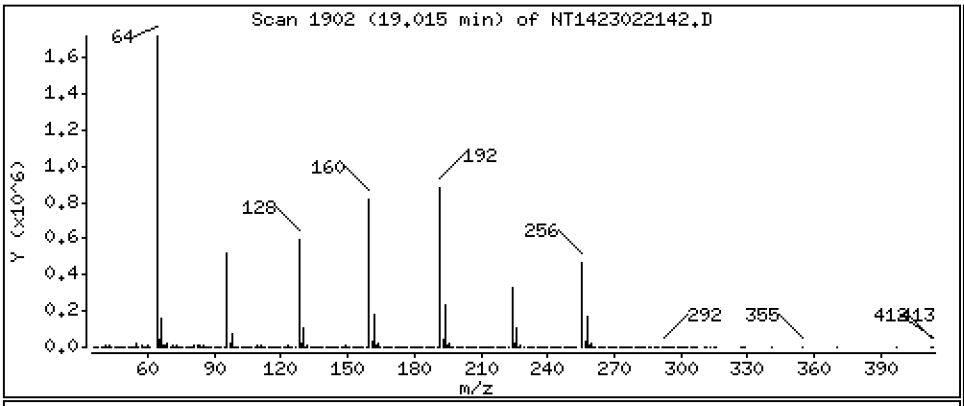
Operator: DSD

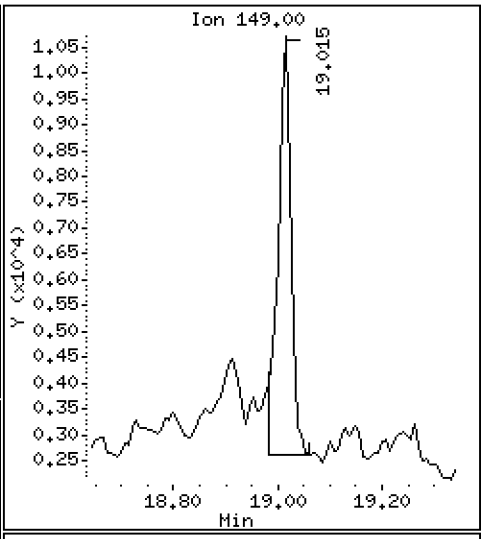
Column phase: ZB-5msi

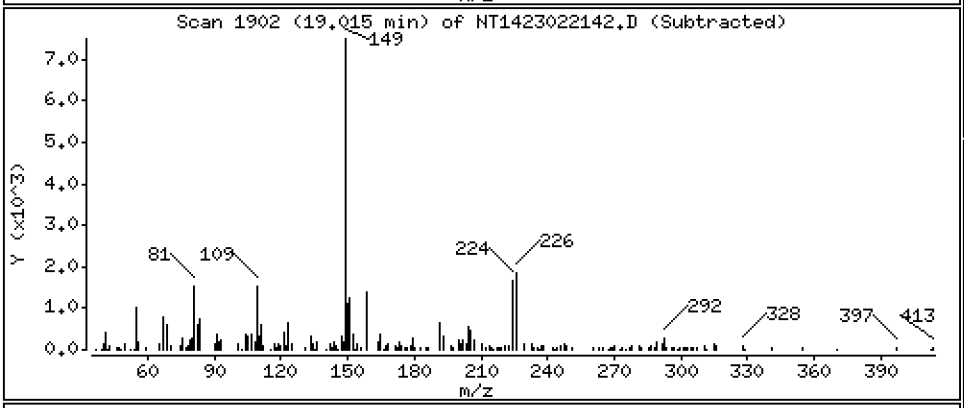
Column diameter: 0.25

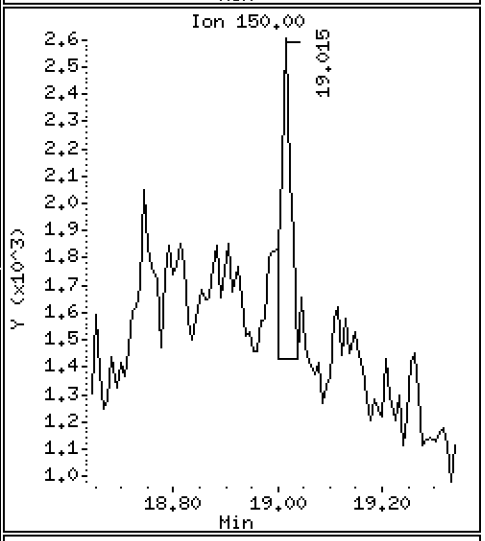
63 Di-n-butylphthalate

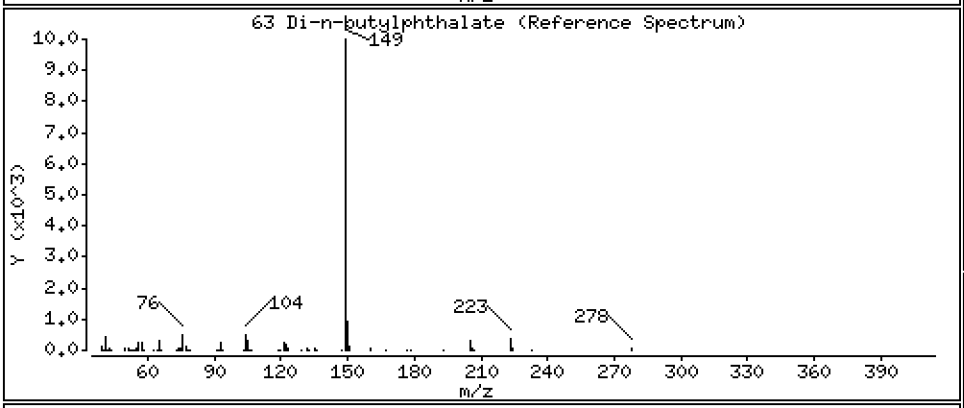
Concentration: 0.05499 ug/mL

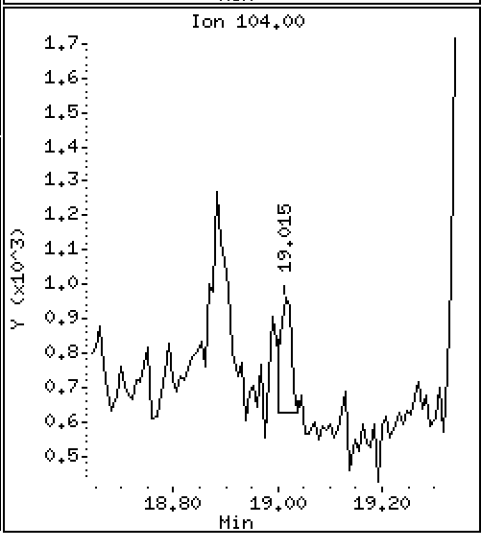


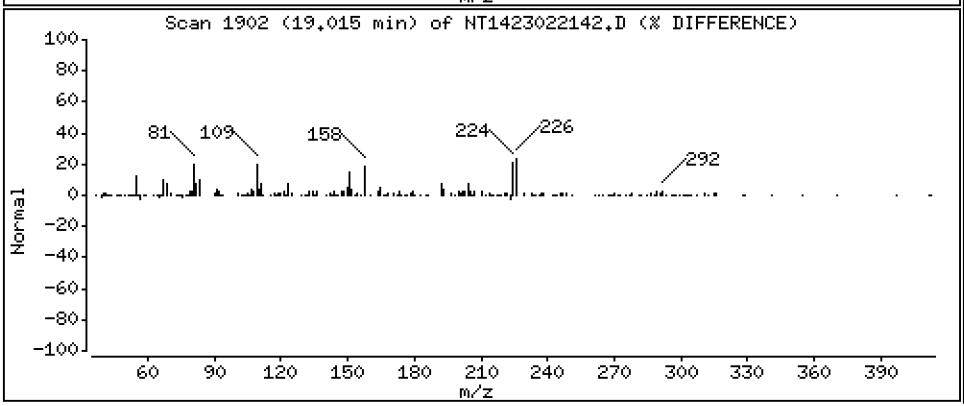












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

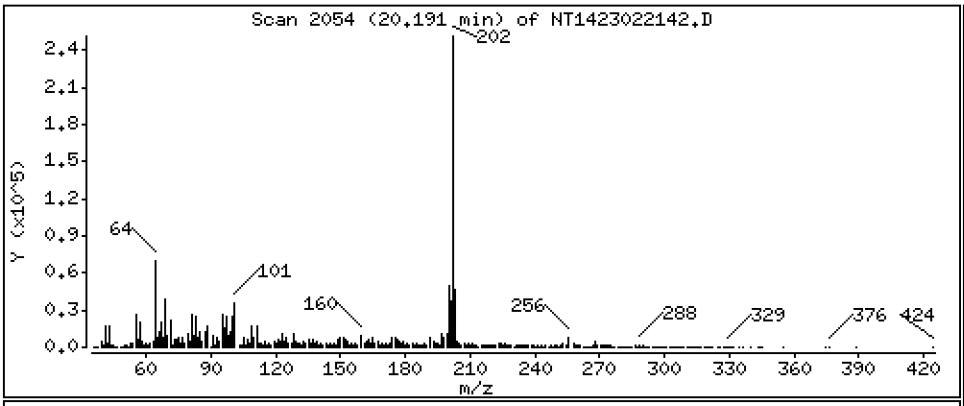
Operator: DSD

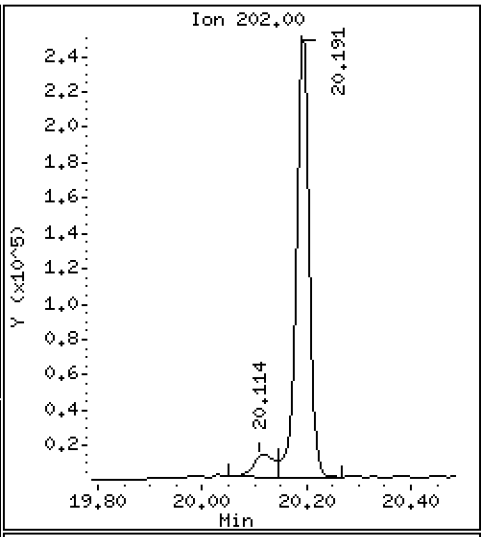
Column phase: ZB-5msi

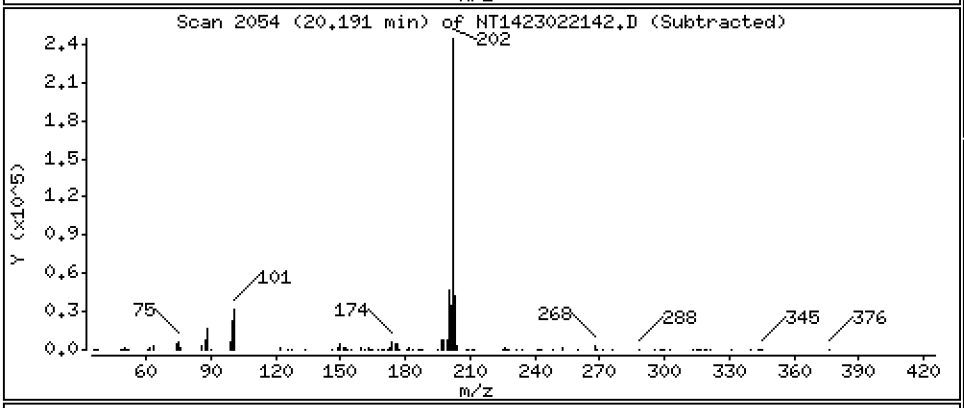
Column diameter: 0.25

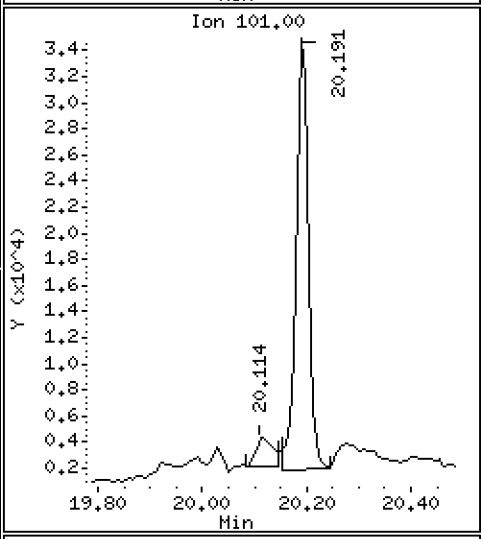
64 Fluoranthene

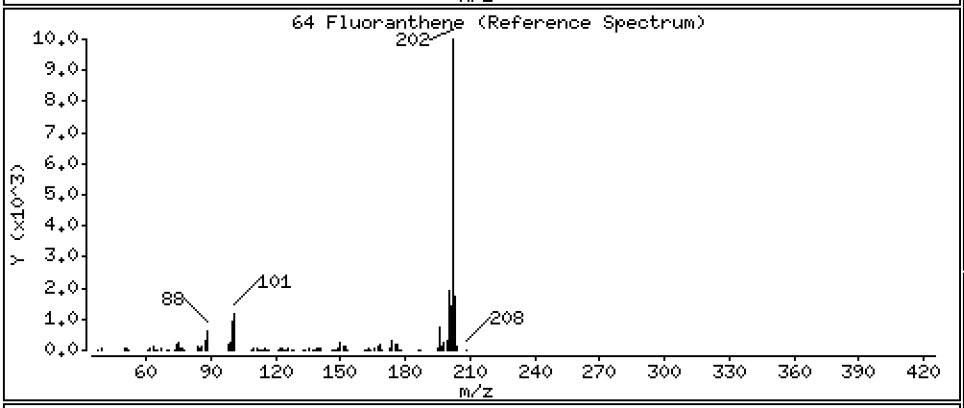
Concentration: 1.496 ug/mL

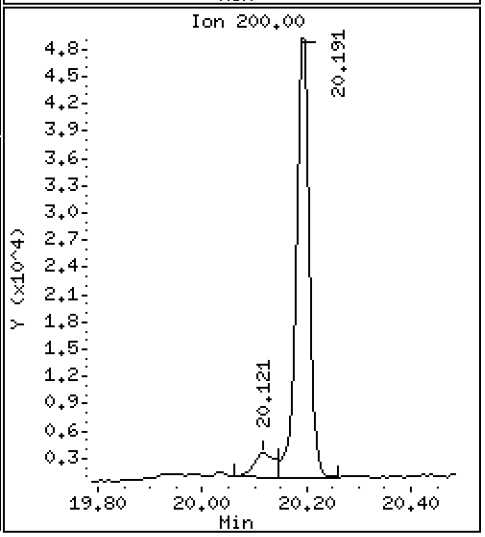


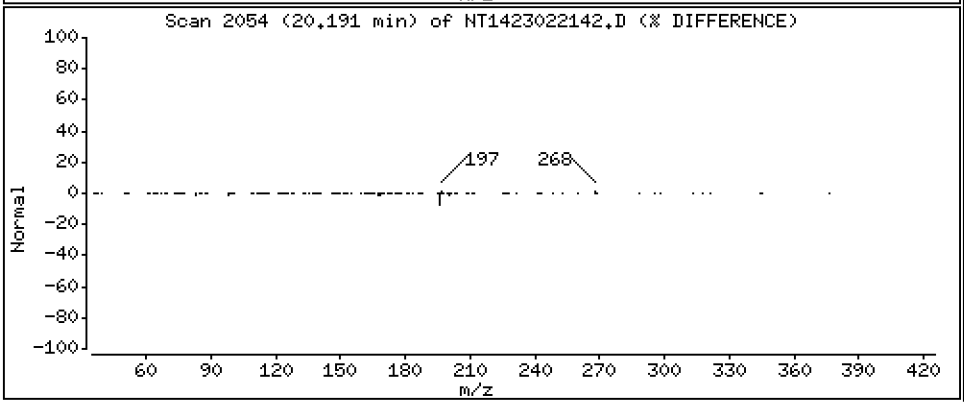












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

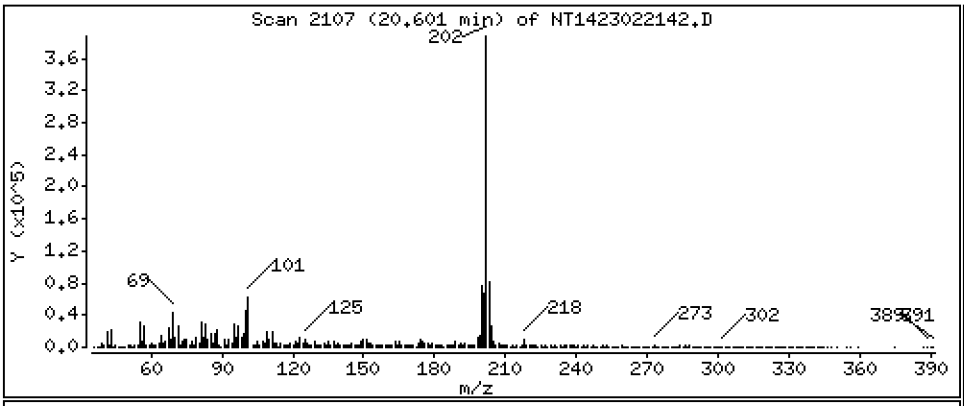
Operator: DSD

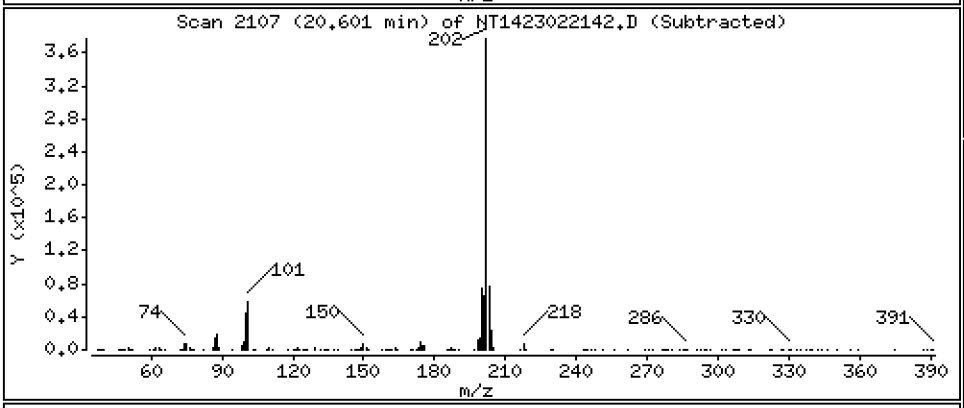
Column phase: ZB-5msi

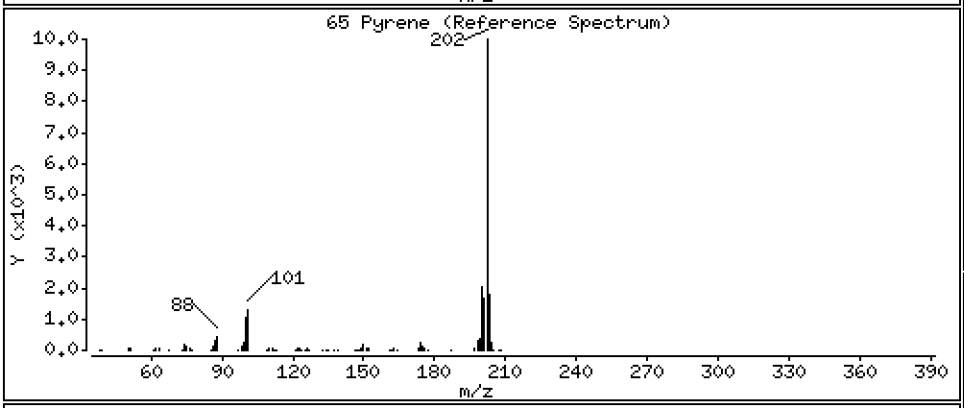
Column diameter: 0.25

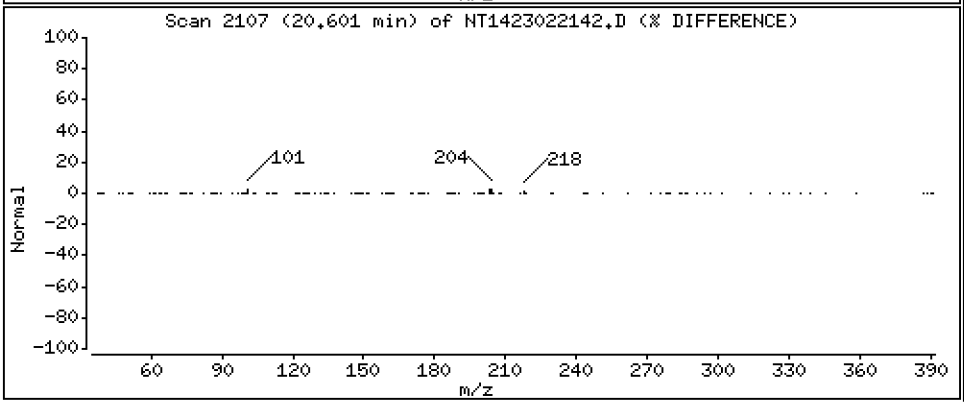
65 Pyrene

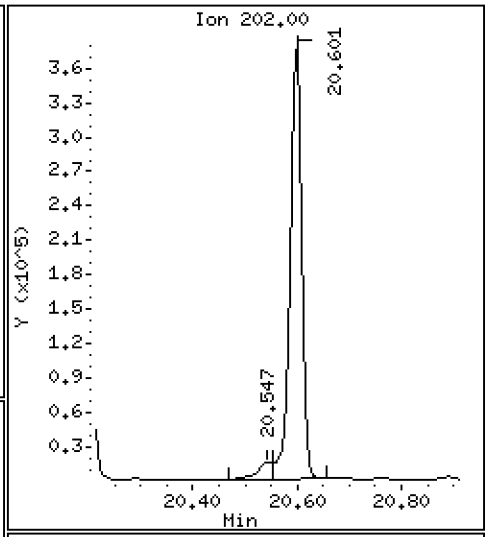
Concentration: 1.930 ug/mL

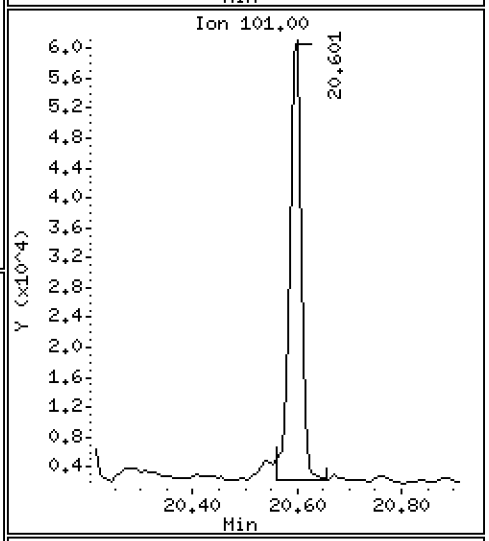


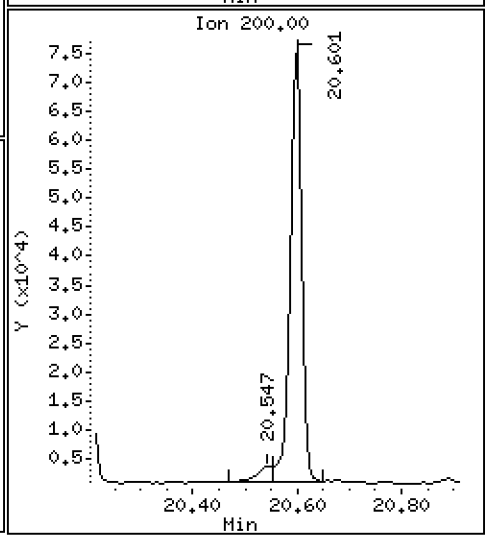












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

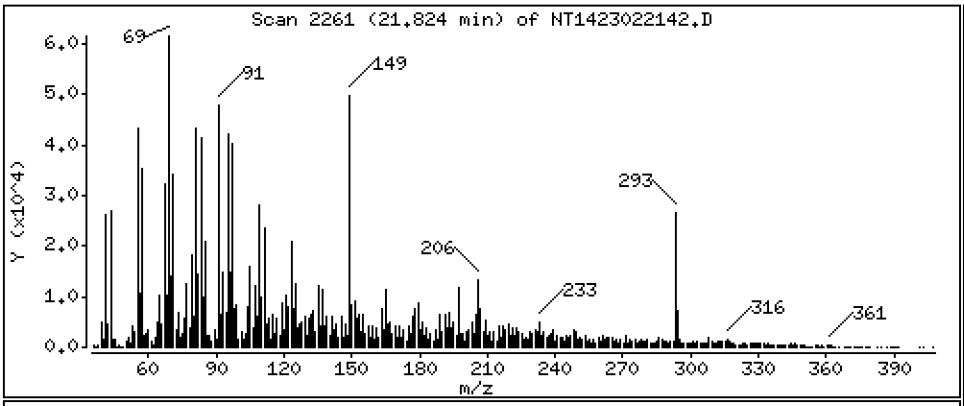
Operator: DSD

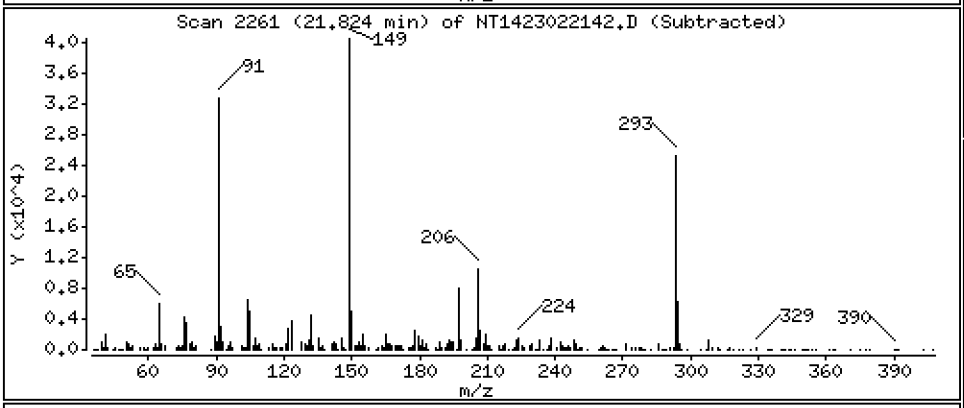
Column phase: ZB-5msi

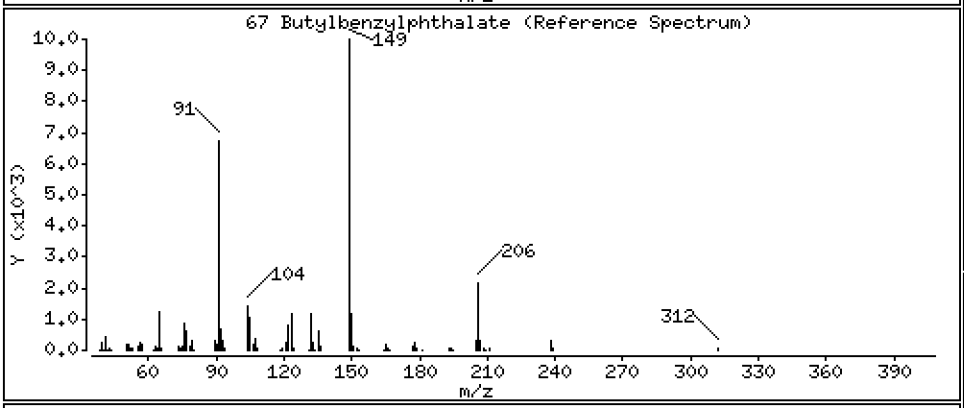
Column diameter: 0.25

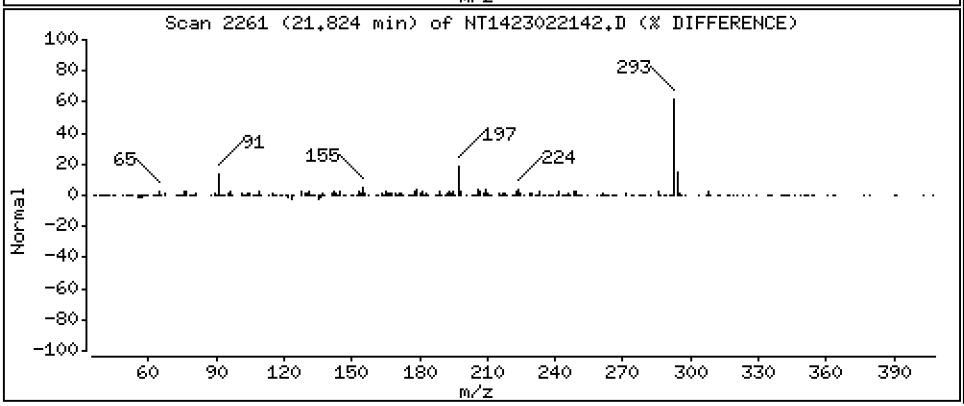
67 Butylbenzylphthalate

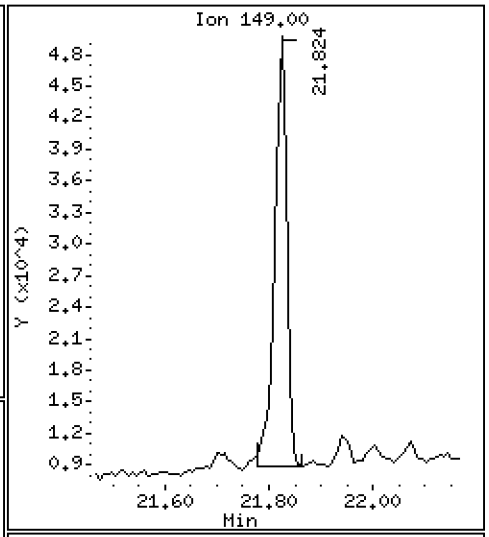
Concentration: 0.5984 ug/mL

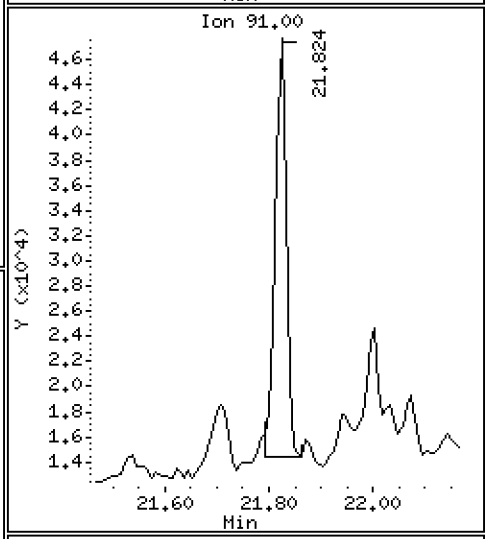


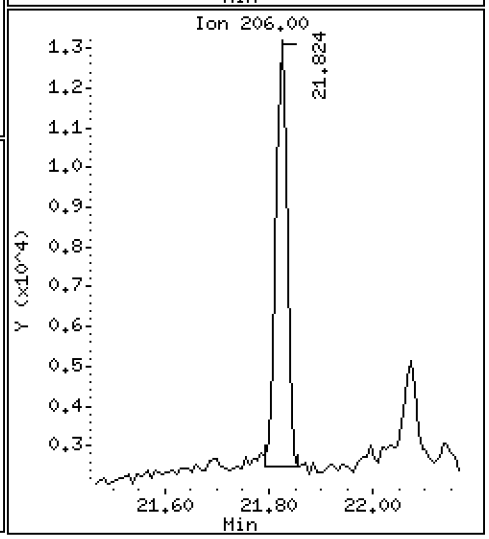












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

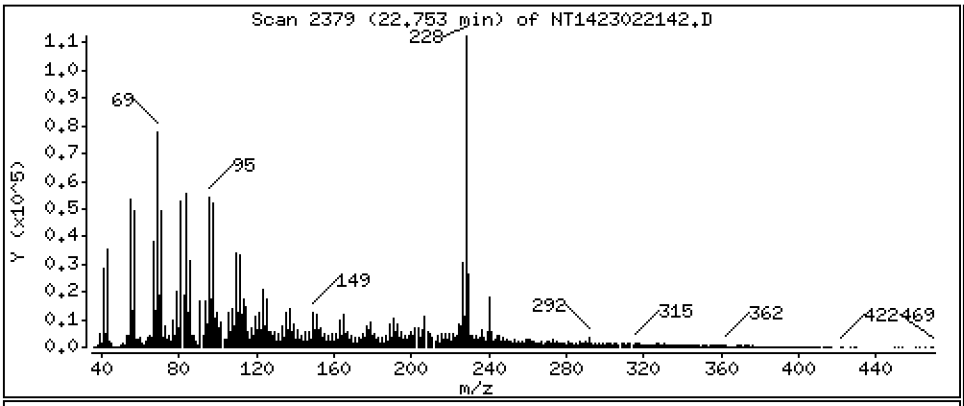
Operator: DSD

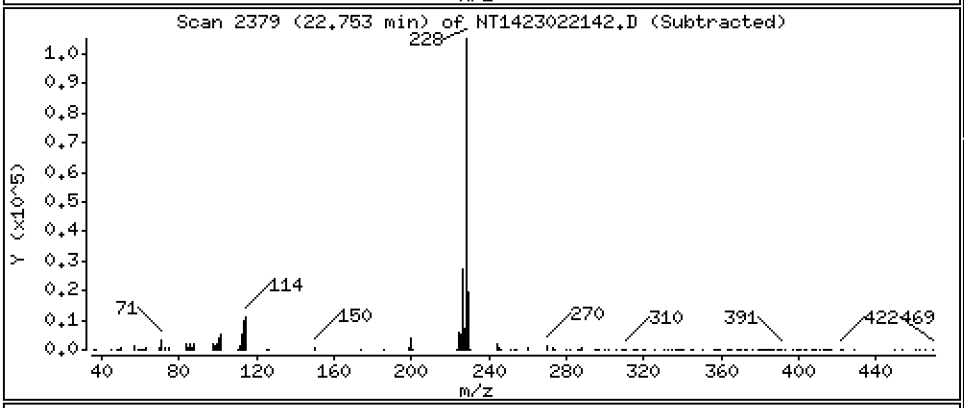
Column phase: ZB-5msi

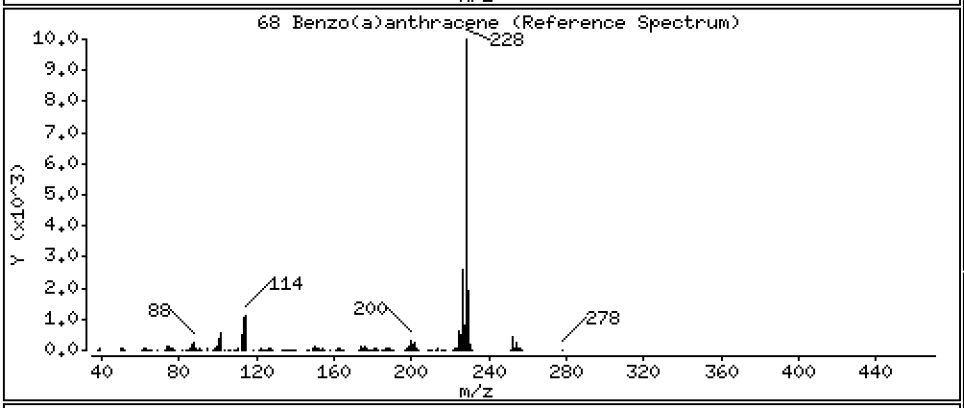
Column diameter: 0.25

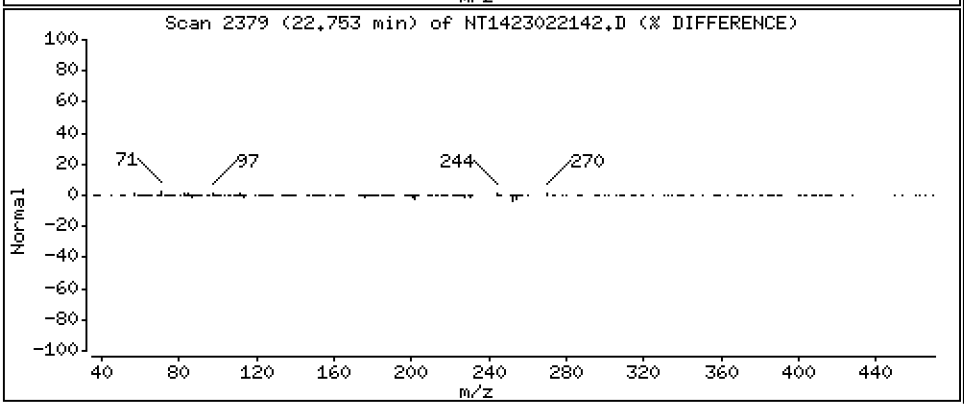
68 Benzo(a)anthracene

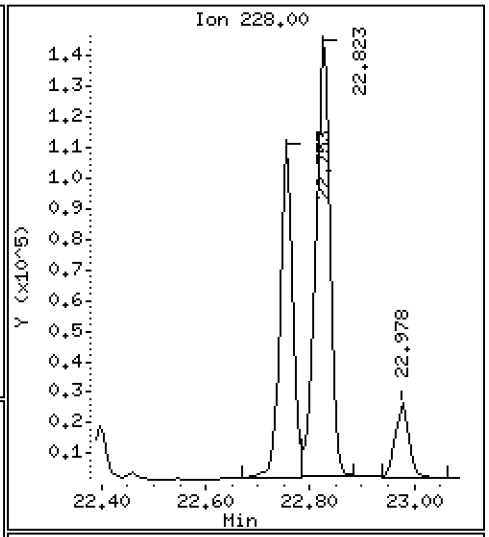
Concentration: 0.8522 ug/mL

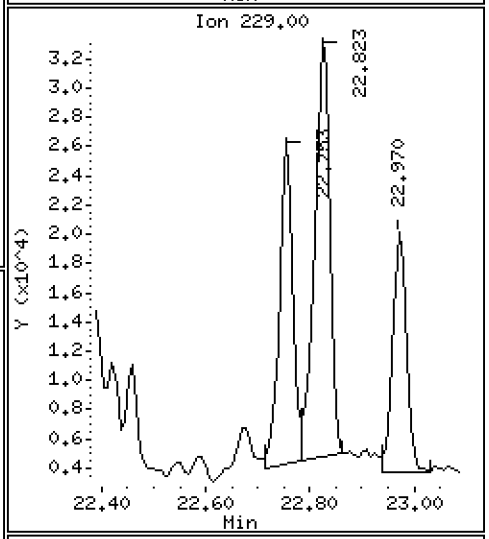


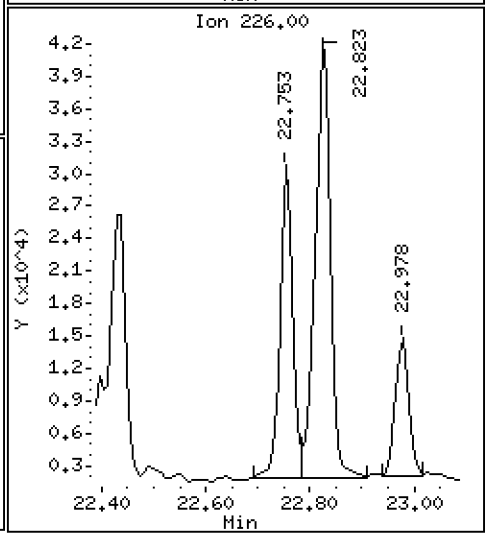












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

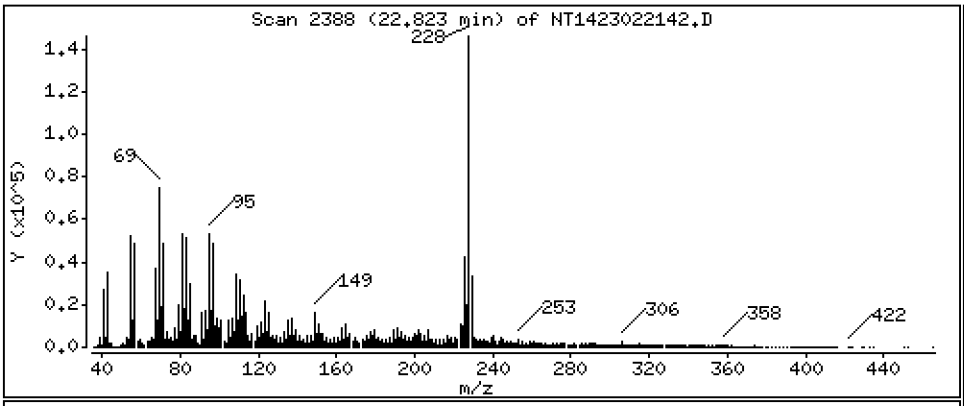
Operator: DSD

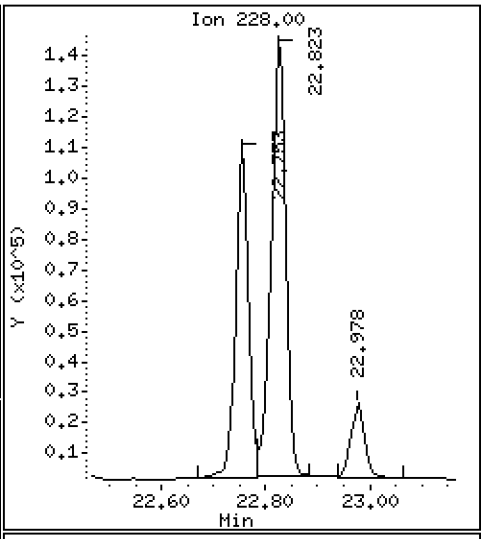
Column phase: ZB-5msi

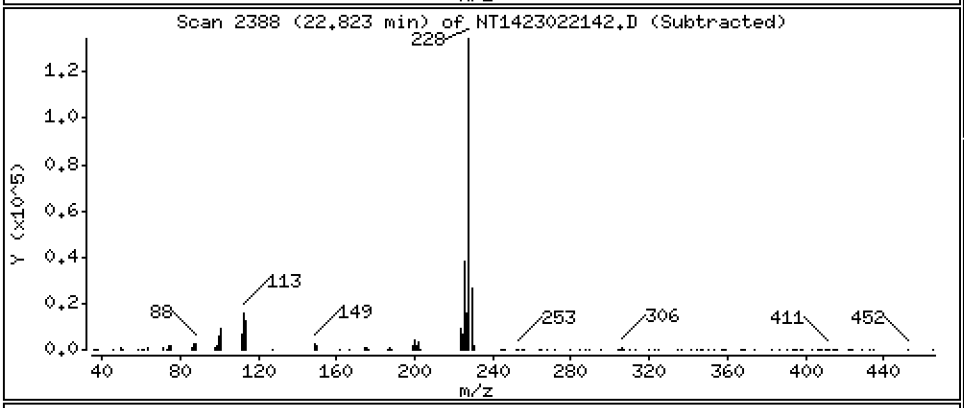
Column diameter: 0.25

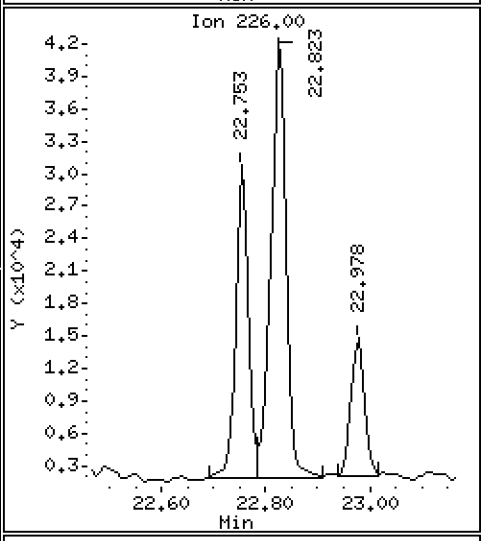
71 Chrysene

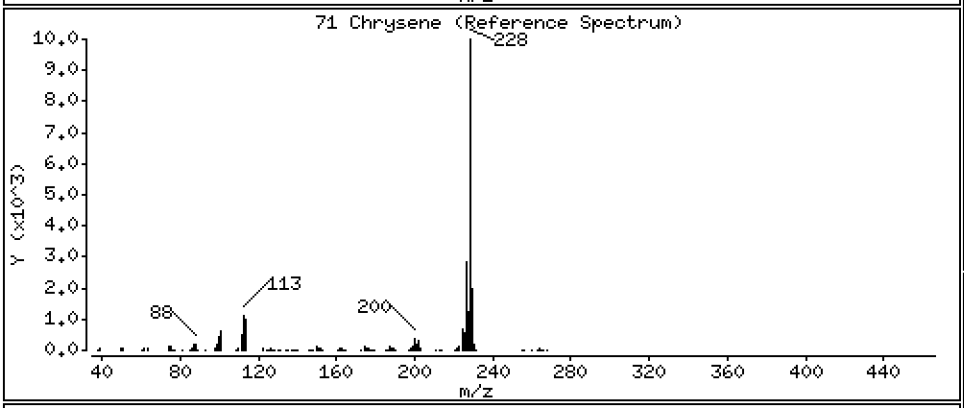
Concentration: 1.365 ug/mL

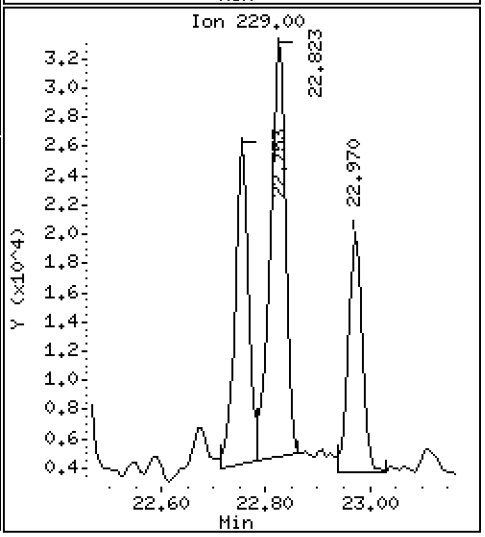


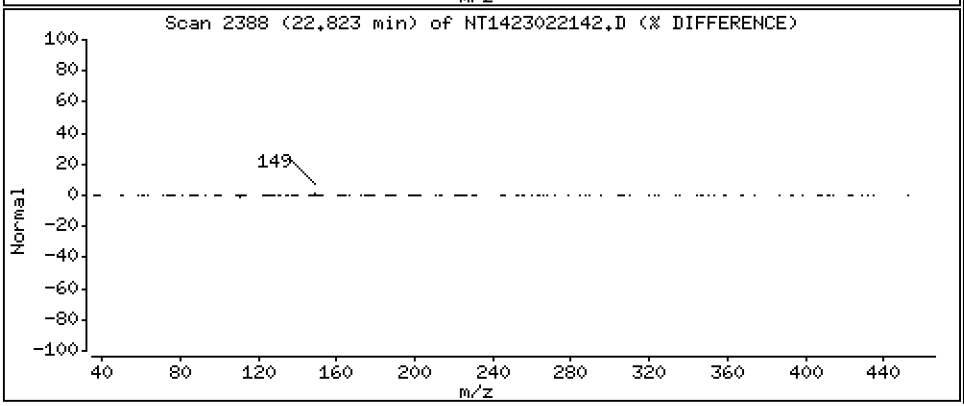












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

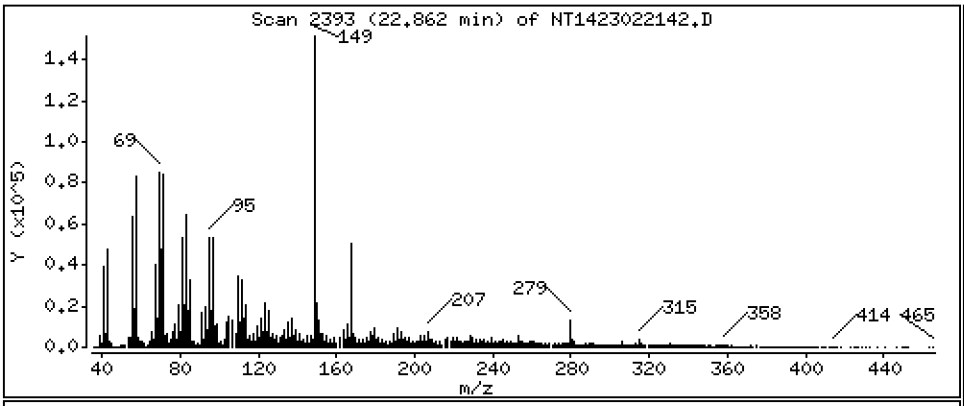
Operator: DSD

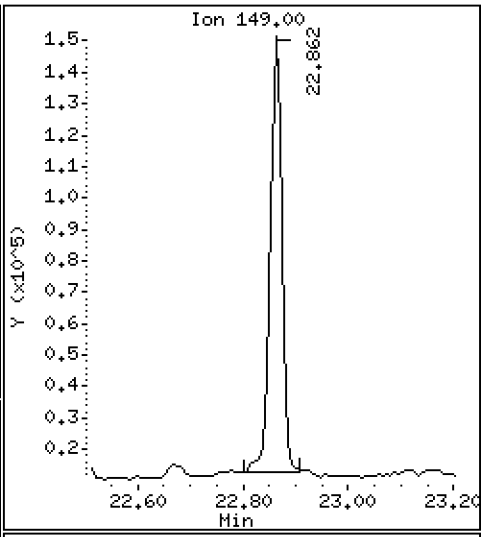
Column phase: ZB-5msi

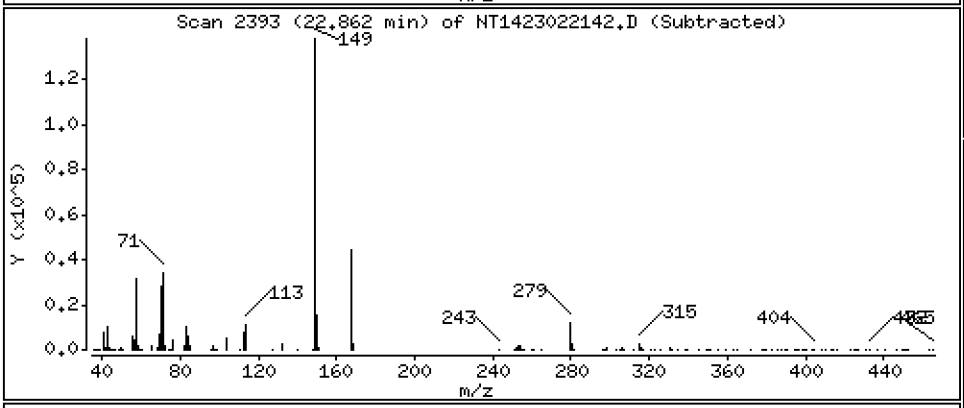
Column diameter: 0.25

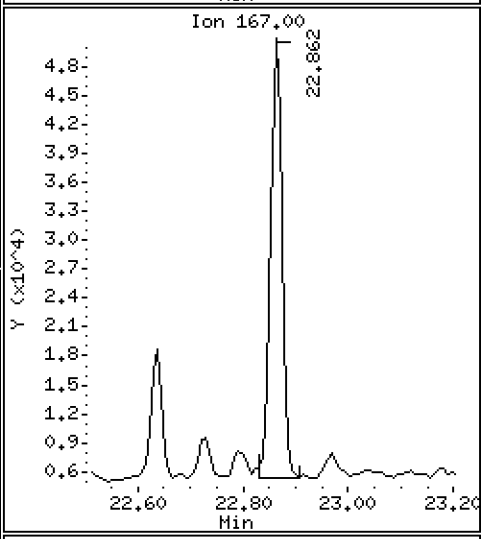
72 bis(2-Ethylhexyl)phthalate

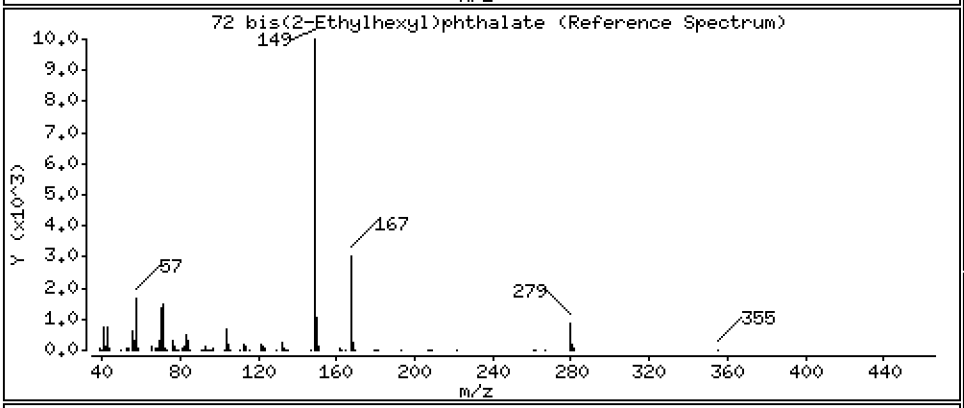
Concentration: 1.166 ug/mL

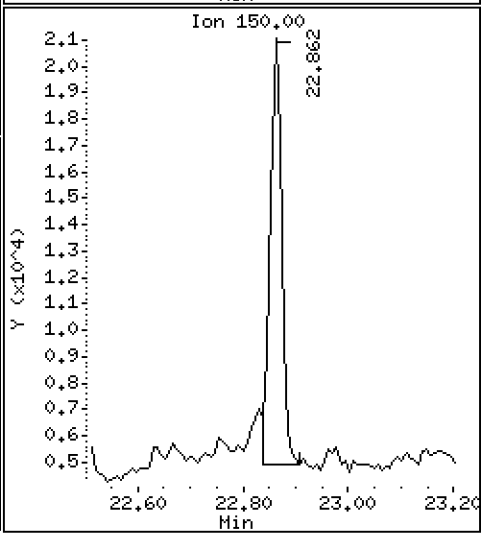


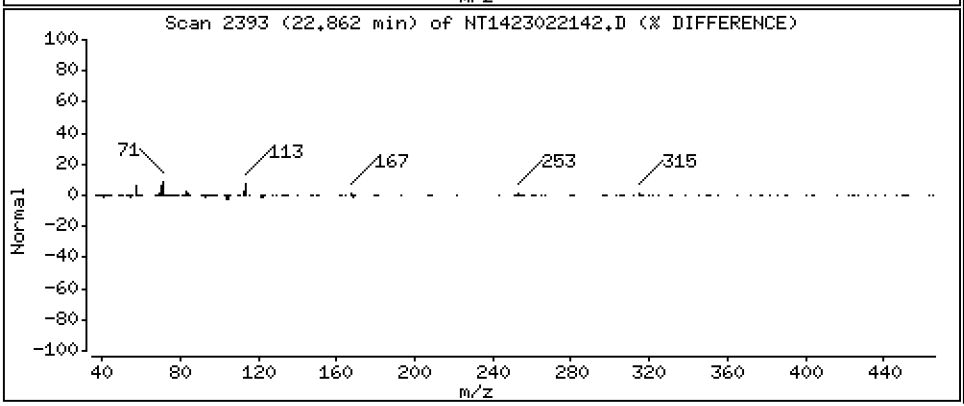












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

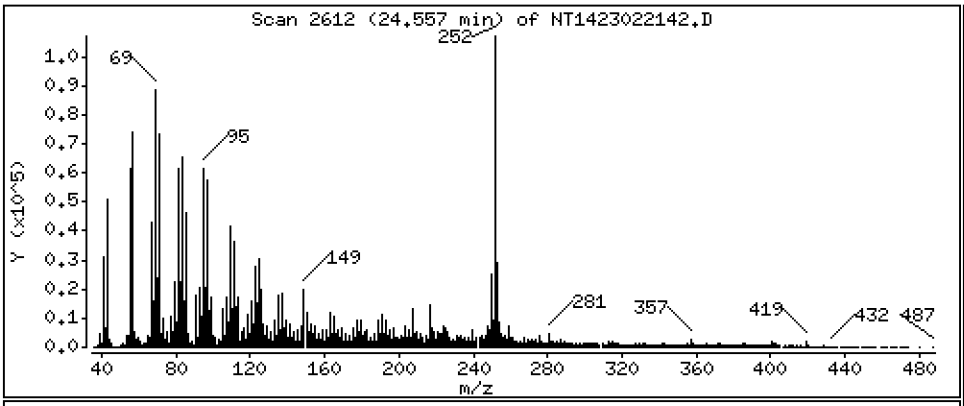
Operator: DSD

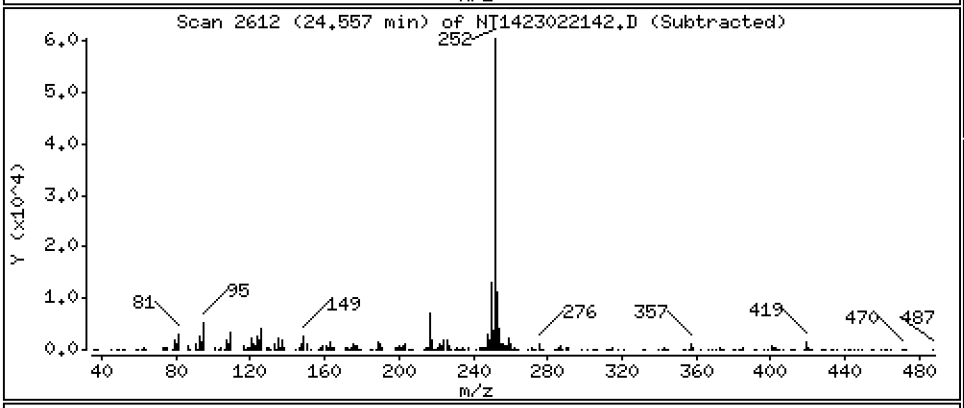
Column phase: ZB-5msi

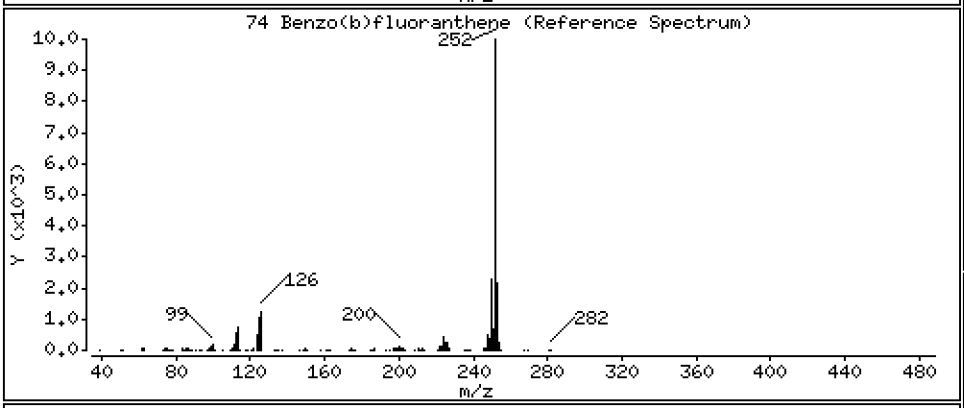
Column diameter: 0.25

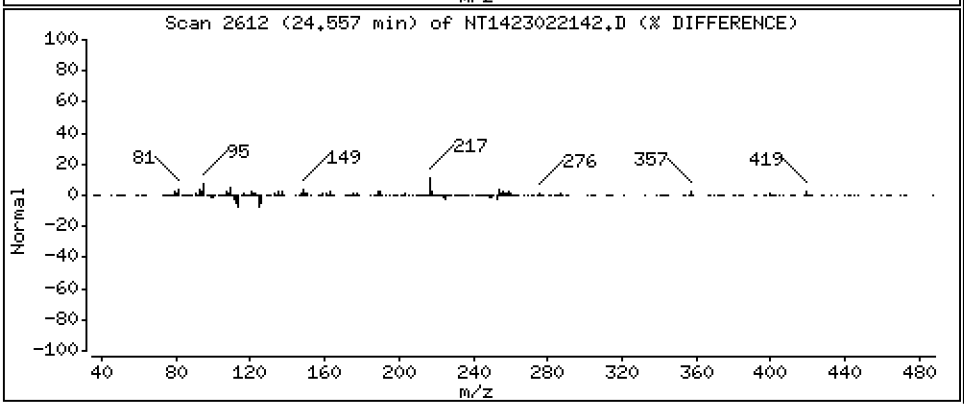
74 Benzo(b)fluoranthene

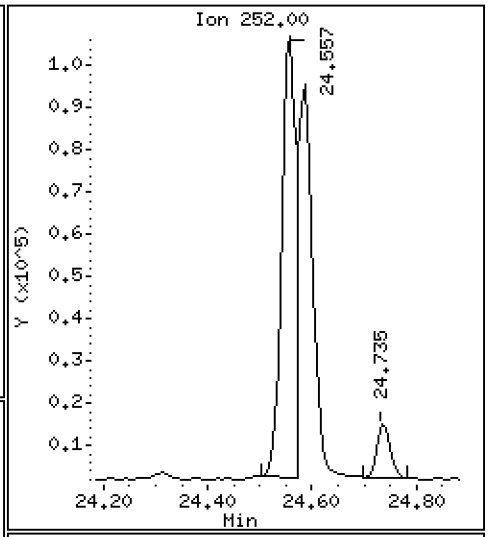
Concentration: 1.250 ug/mL

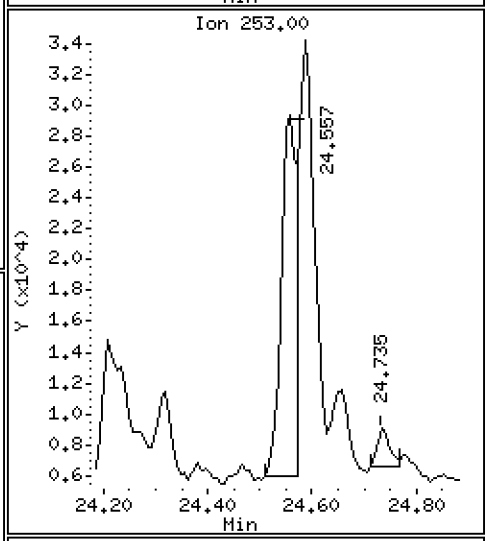


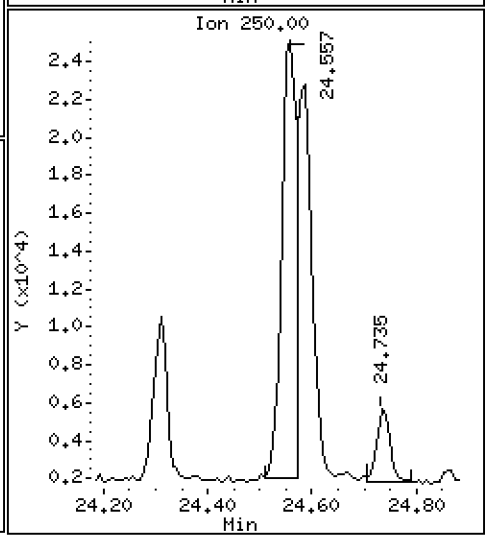












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

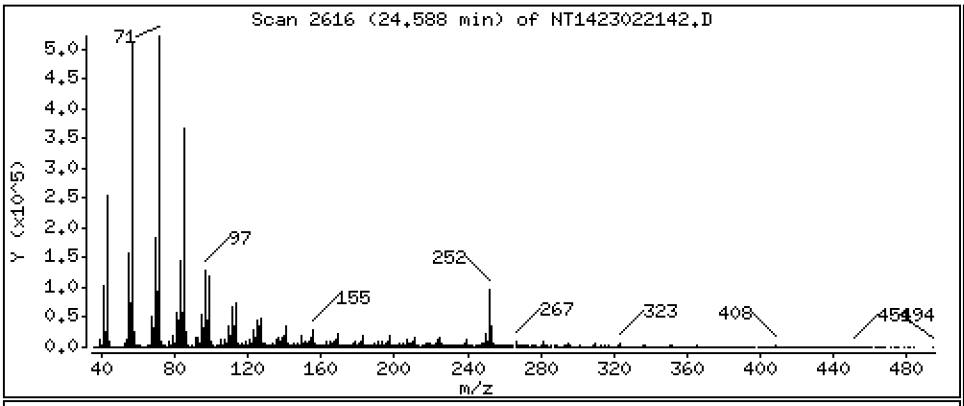
Operator: DSD

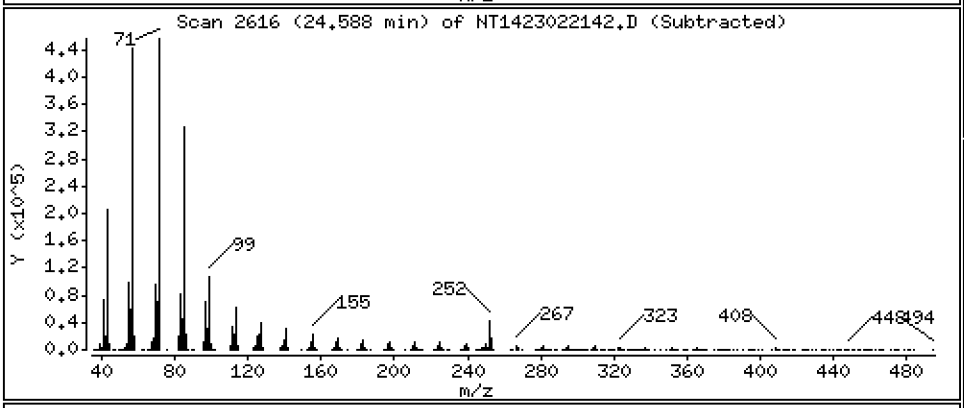
Column phase: ZB-5msi

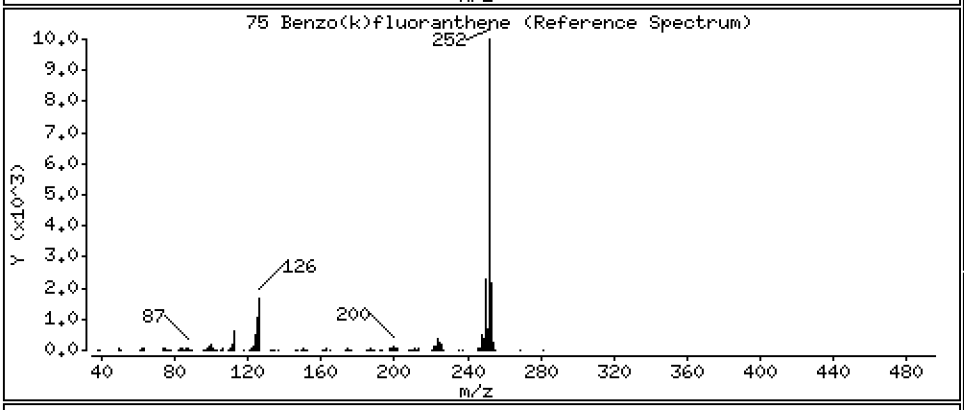
Column diameter: 0.25

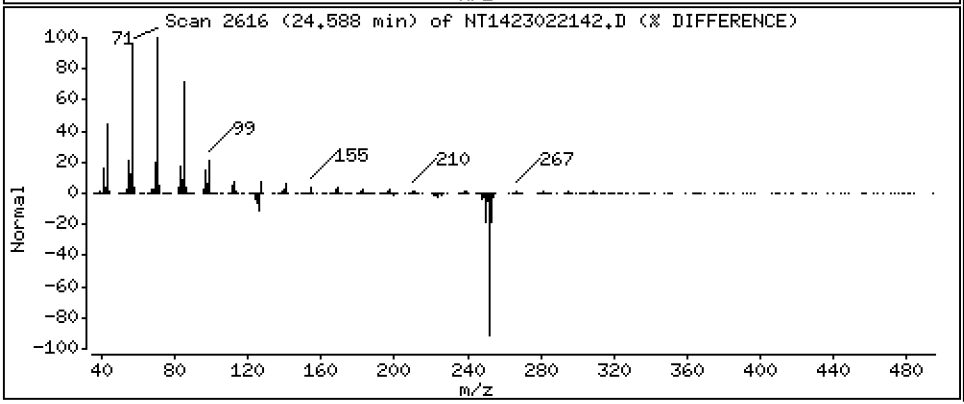
75 Benzo(k)fluoranthene

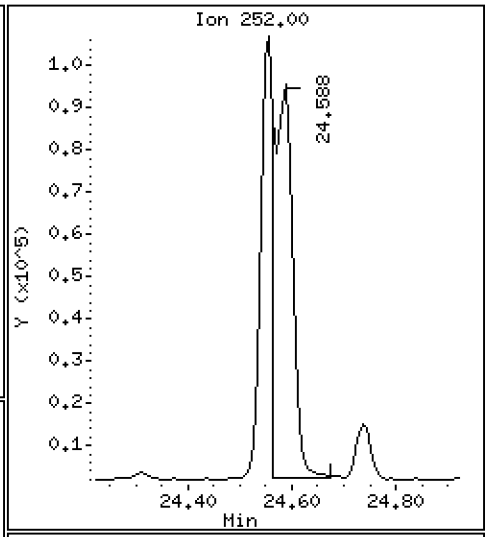
Concentration: 1.253 ug/mL

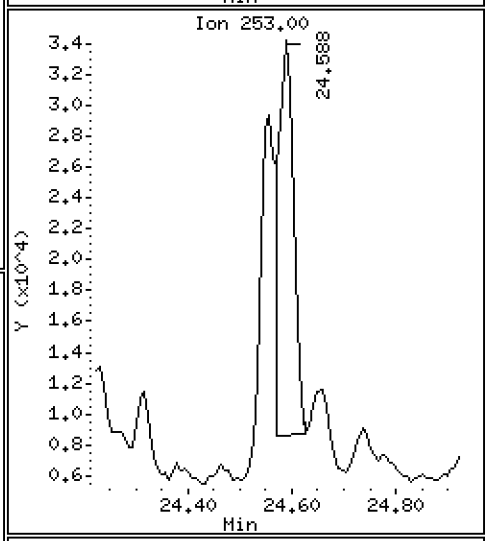


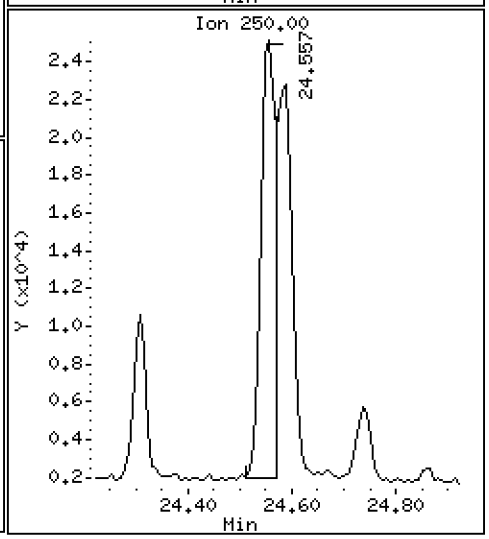












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

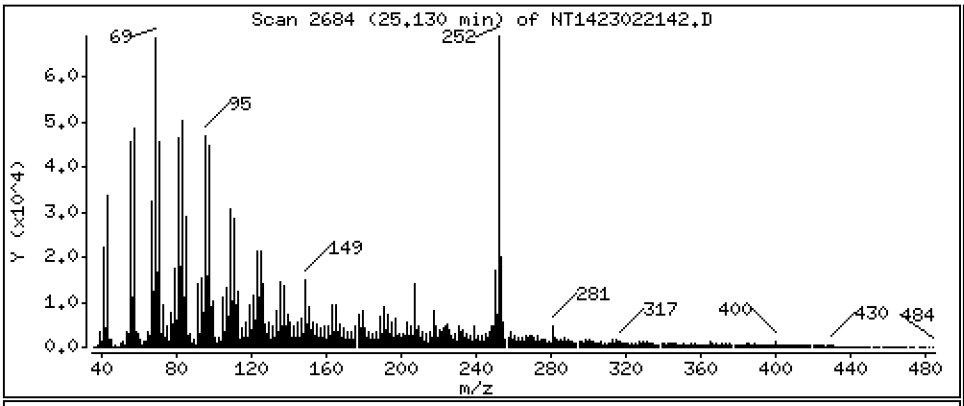
Operator: DSD

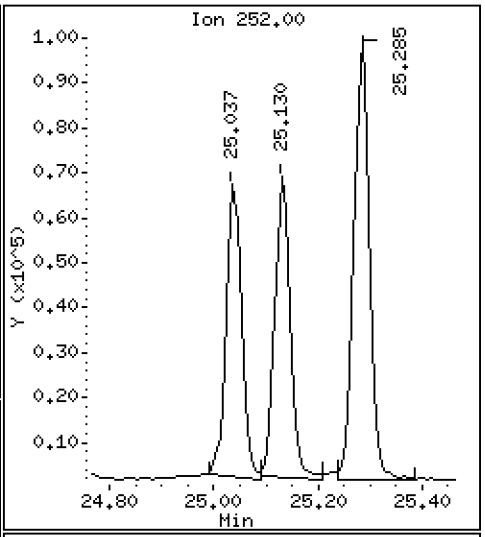
Column phase: ZB-5msi

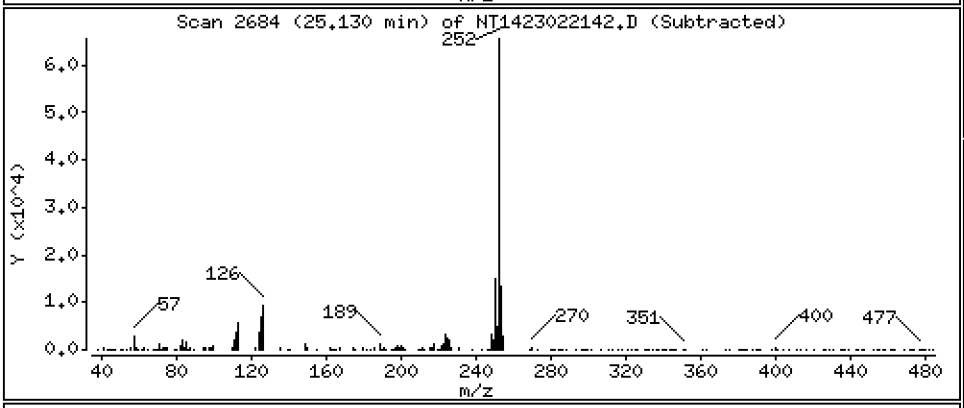
Column diameter: 0.25

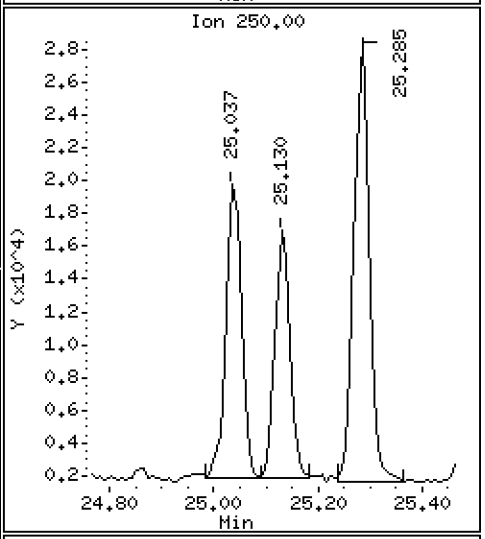
76 Benzo(a)pyrene

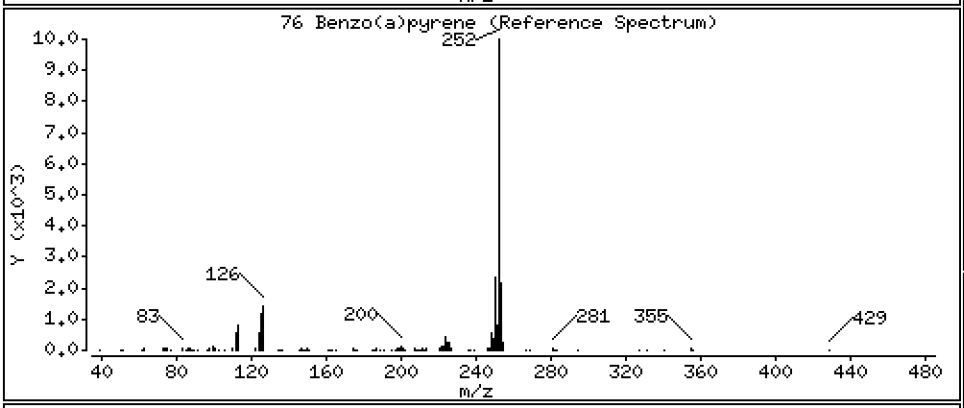
Concentration: 0.8336 ug/mL

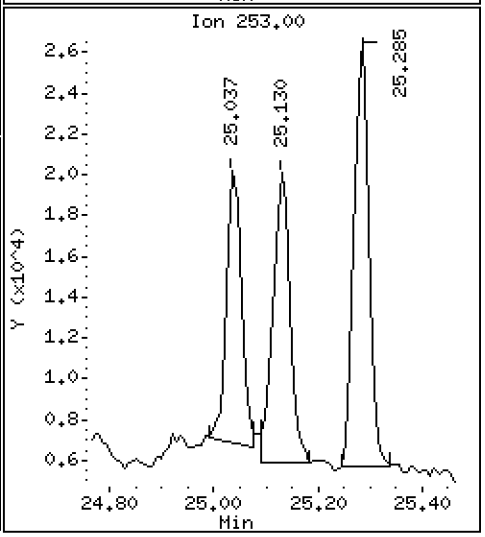


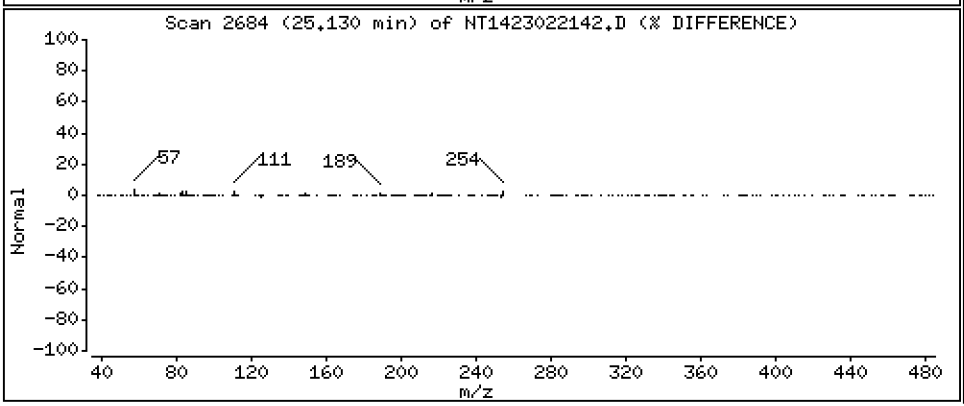












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022142.D

Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

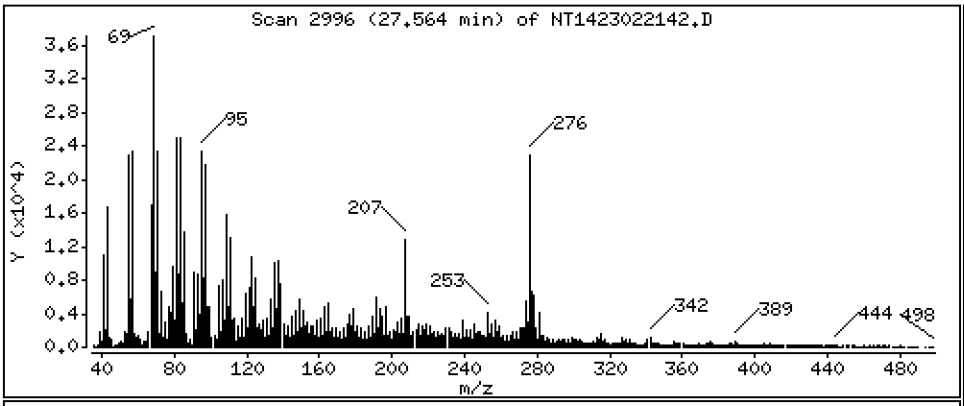
Operator: DSD

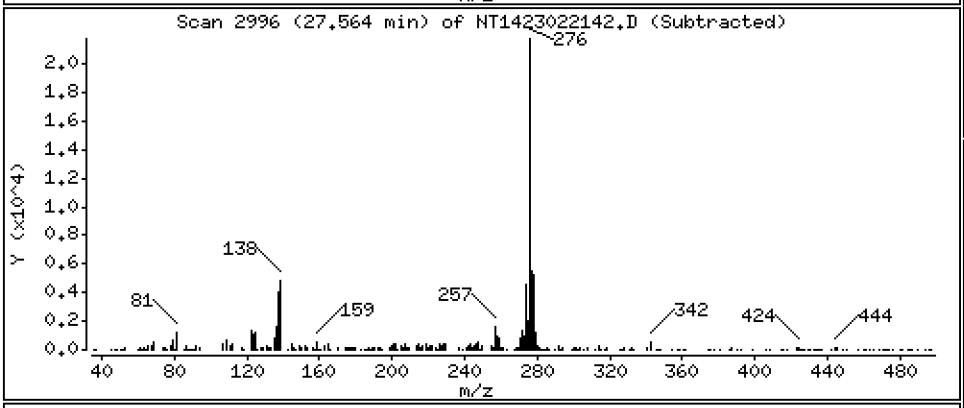
Column phase: ZB-5msi

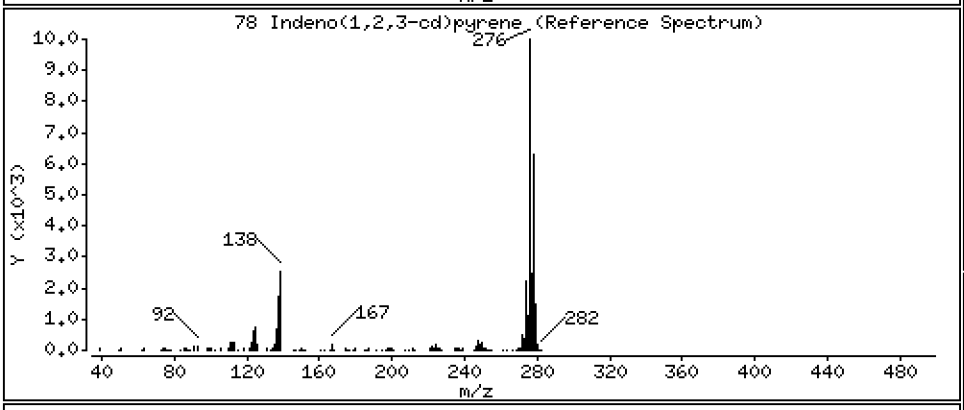
Column diameter: 0.25

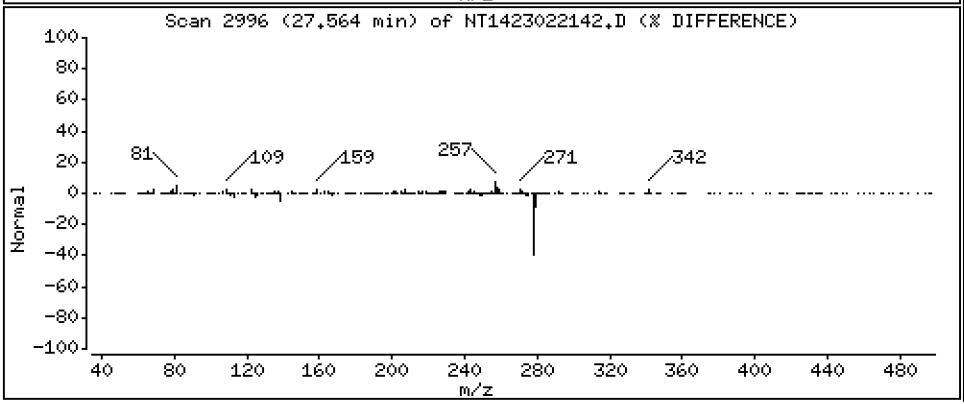
78 Indeno(1,2,3-cd)pyrene

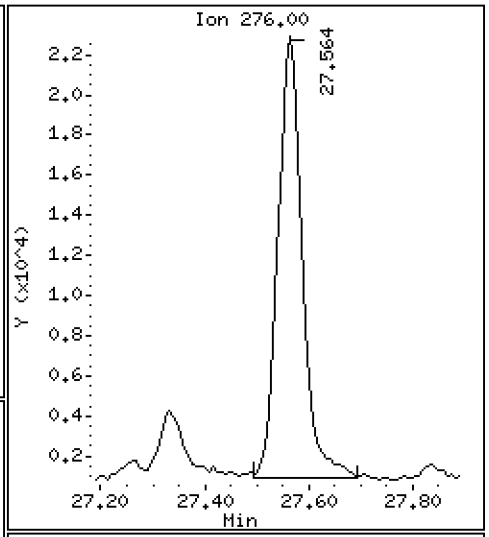
Concentration: 0.5287 ug/mL

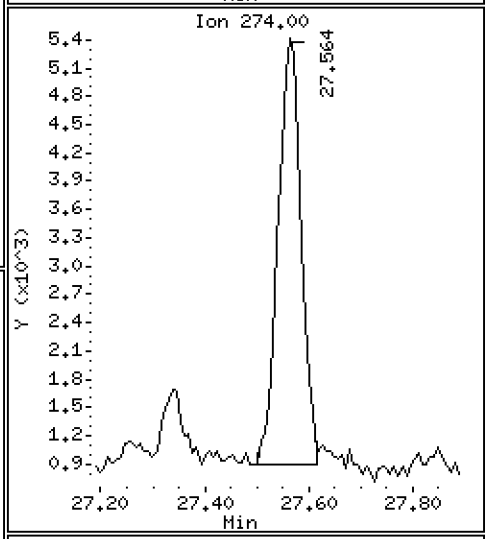


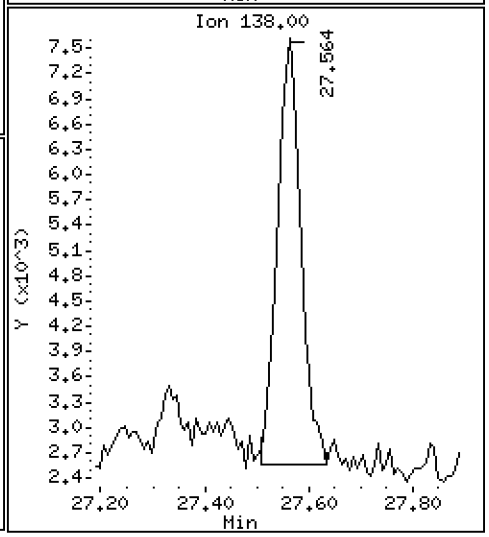












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

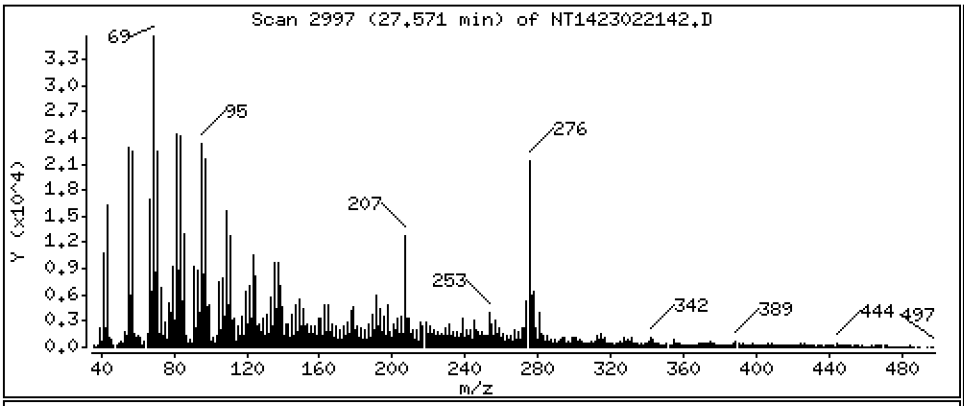
Operator: DSD

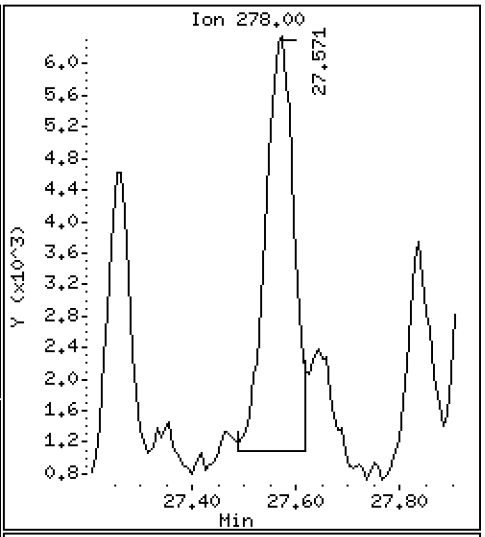
Column phase: ZB-5msi

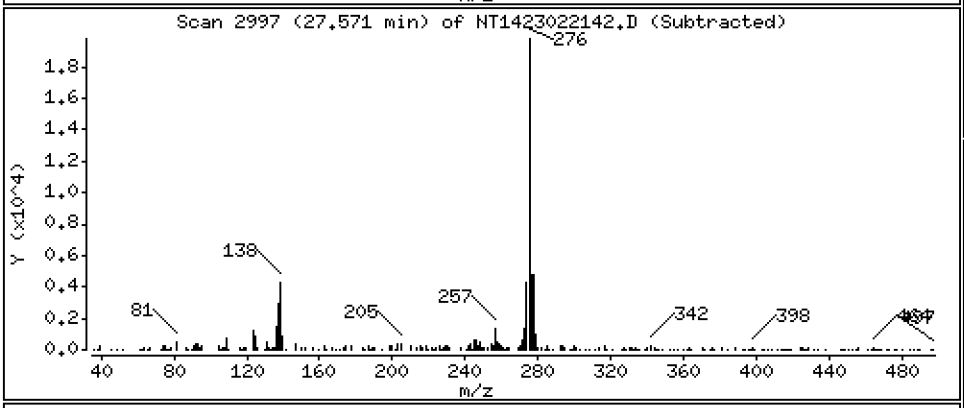
Column diameter: 0.25

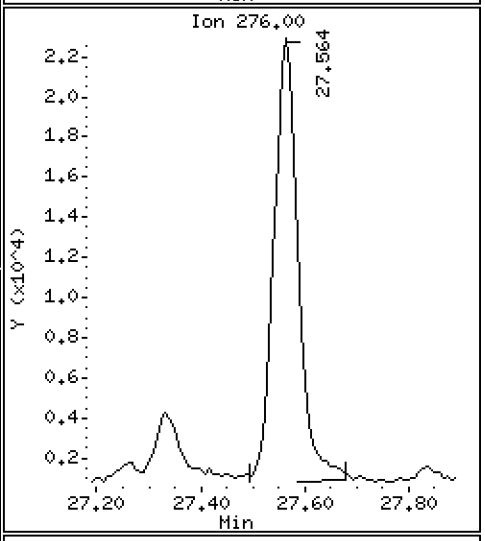
79 Dibenzo(a,h)anthracene

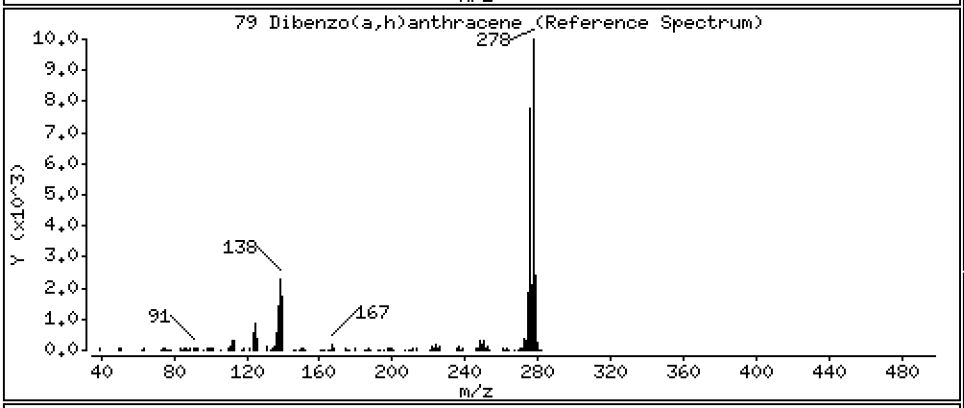
Concentration: 0.1800 ug/mL

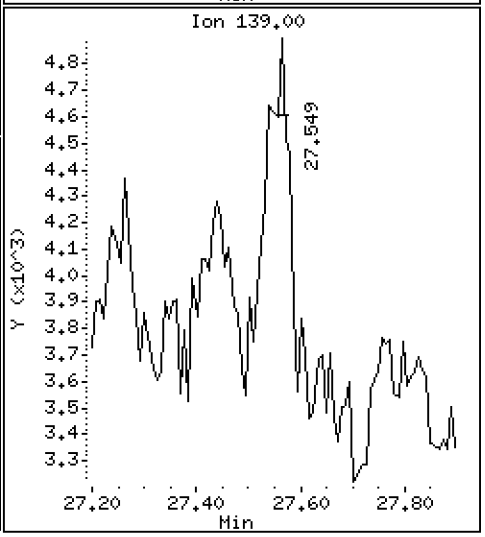


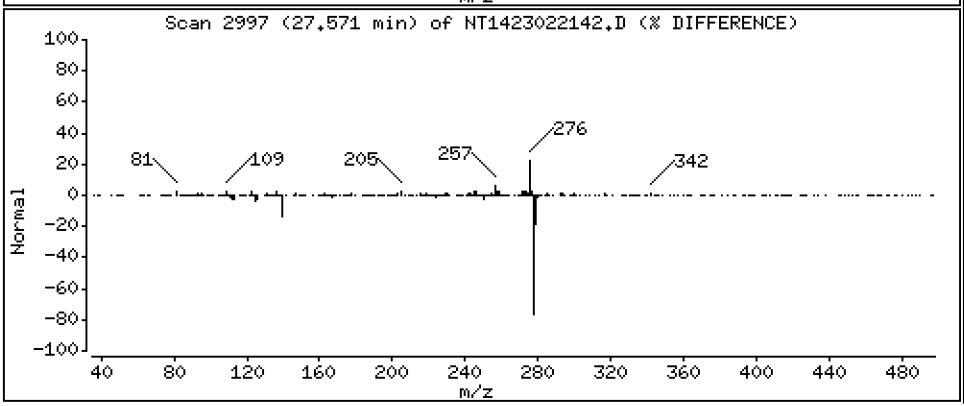












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

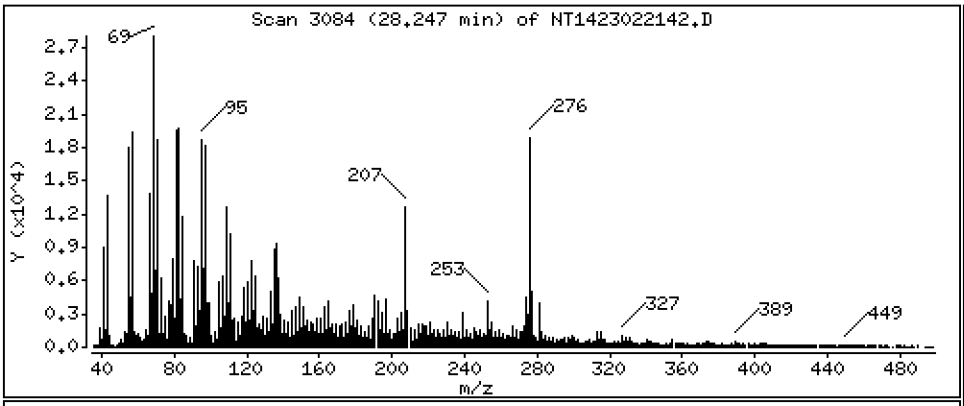
Operator: DSD

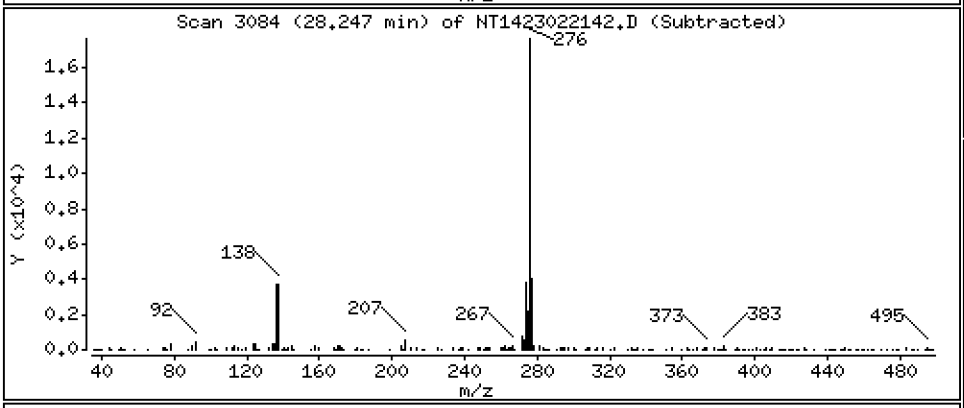
Column phase: ZB-5msi

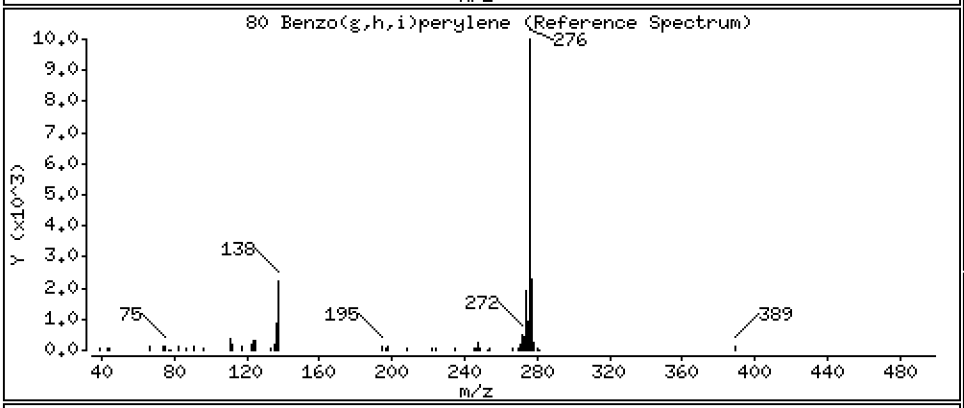
Column diameter: 0.25

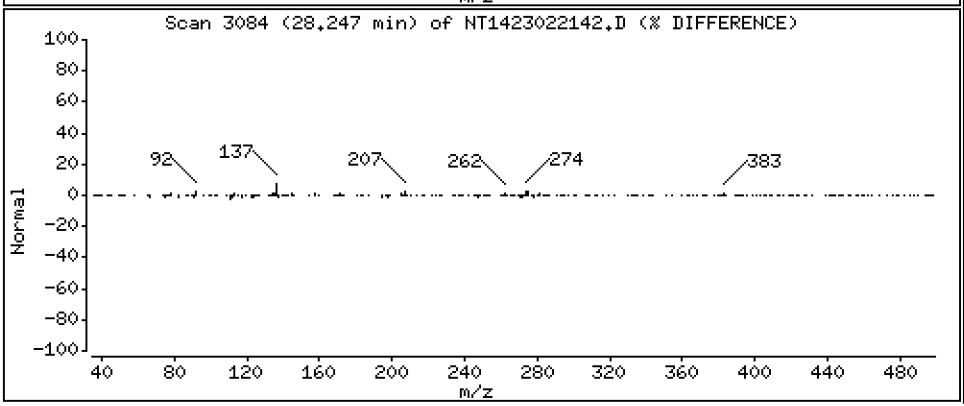
80 Benzo(g,h,i)perylene

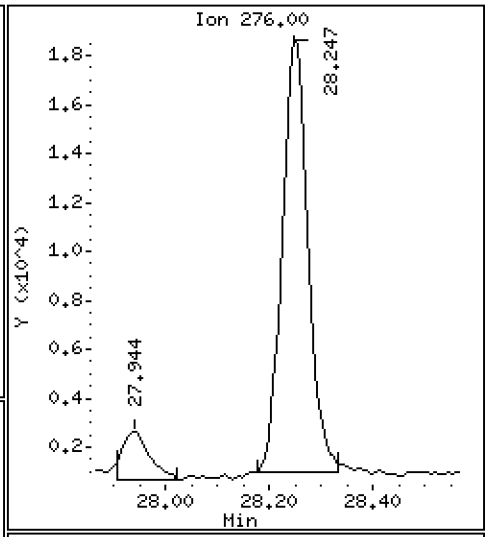
Concentration: 0.5682 ug/mL

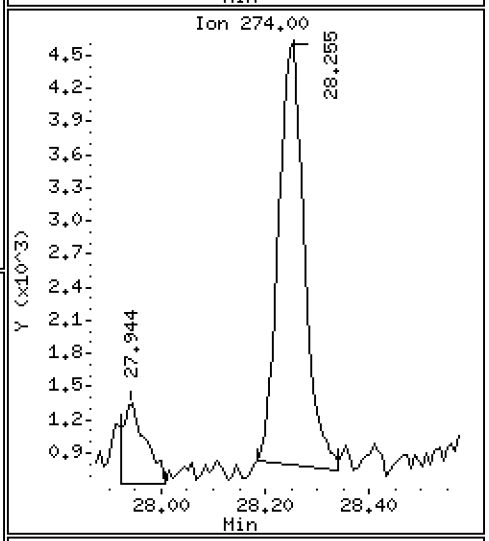


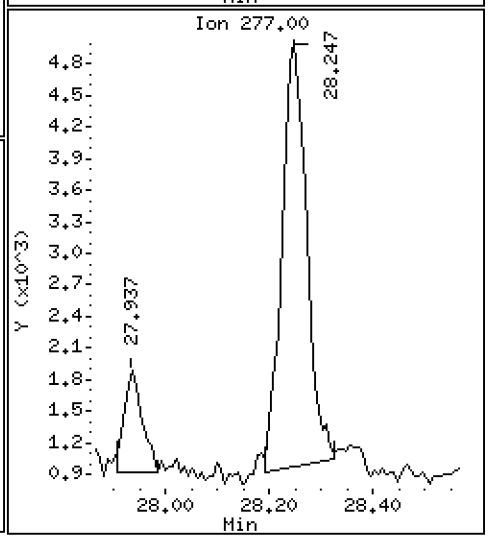












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

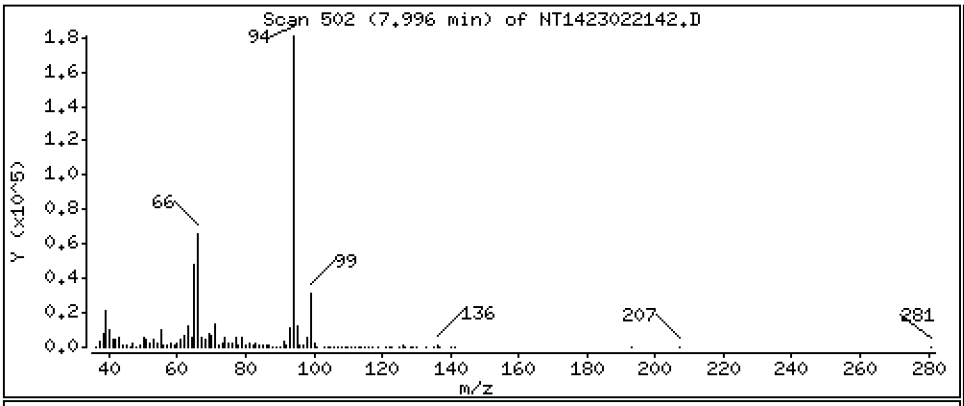
Operator: DSD

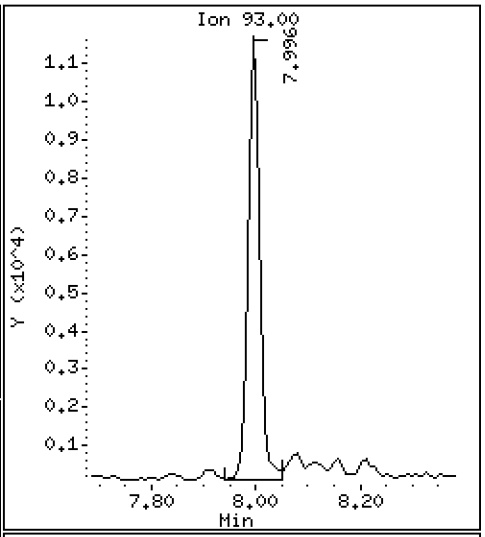
Column phase: ZB-5msi

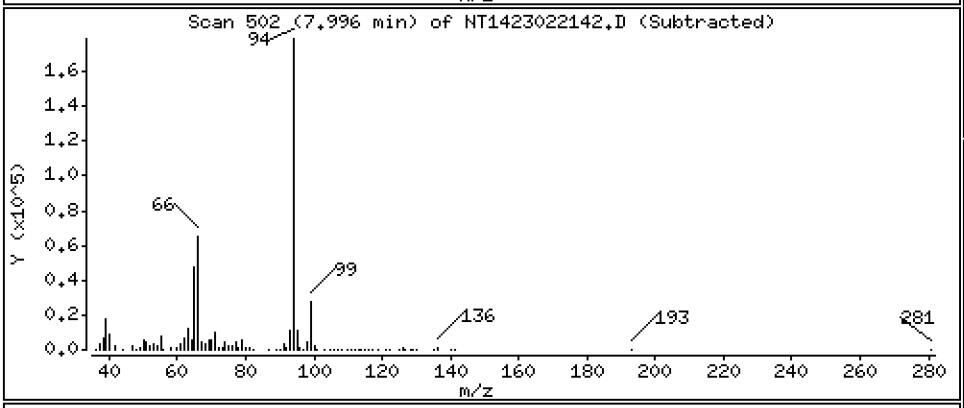
Column diameter: 0.25

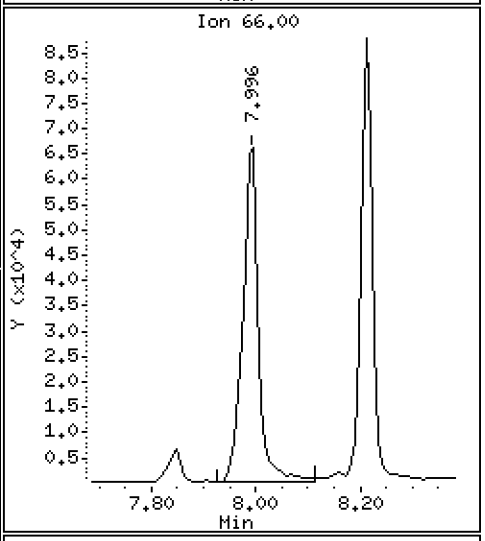
91 Aniline

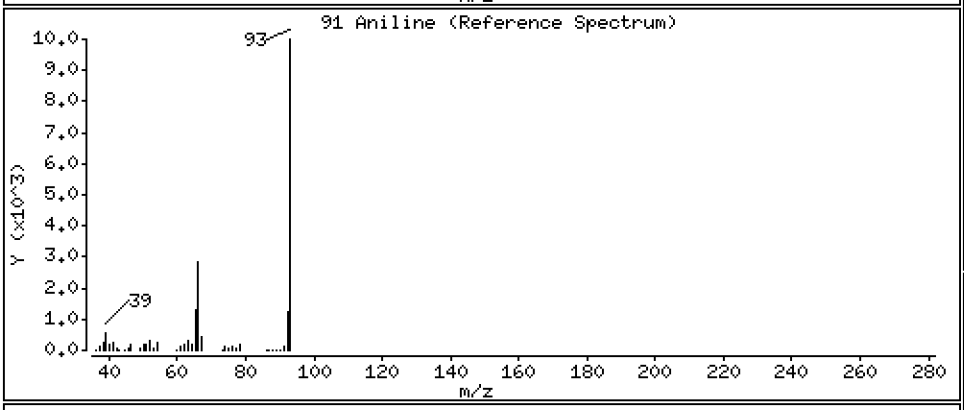
Concentration: 0.1449 ug/mL

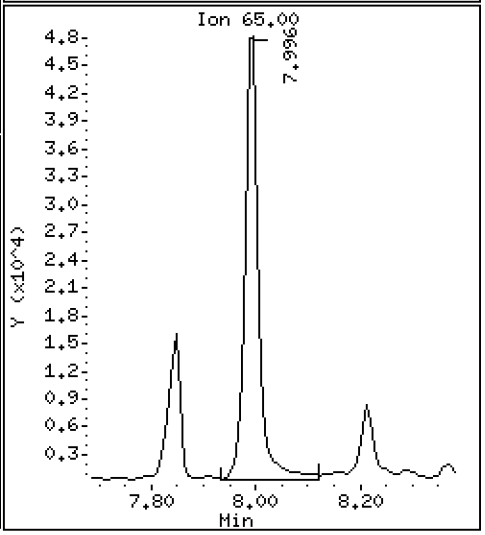


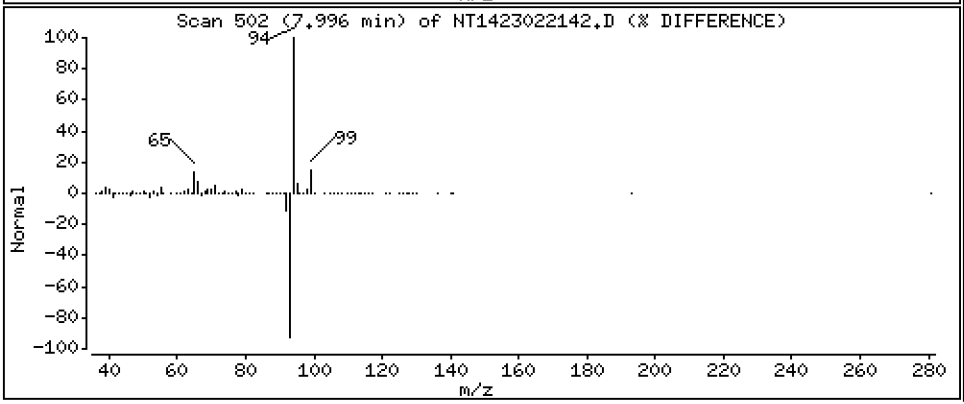












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

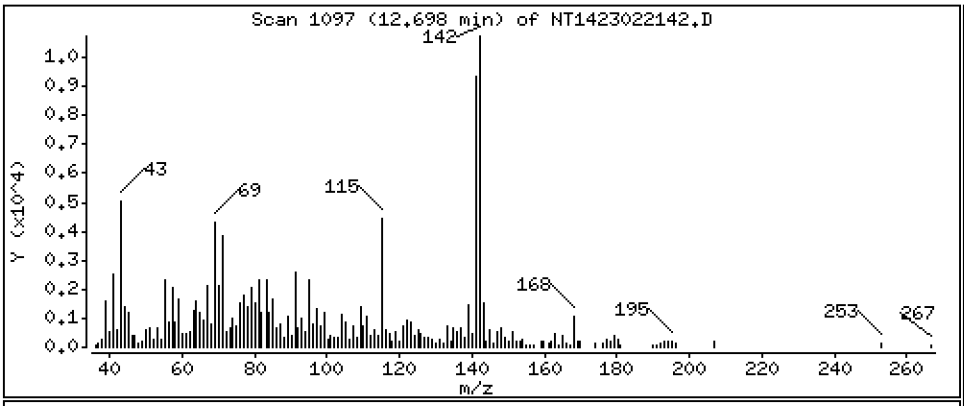
Operator: DSD

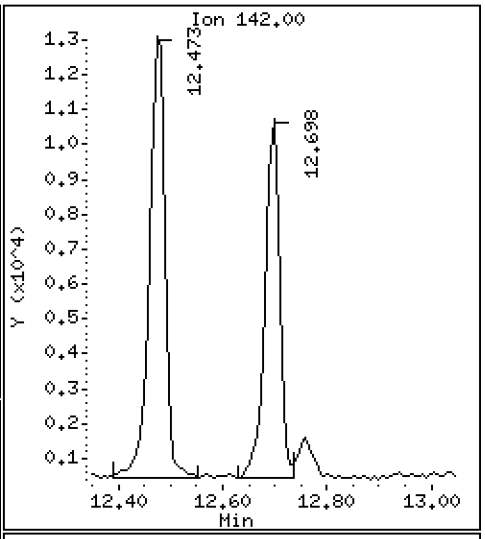
Column phase: ZB-5msi

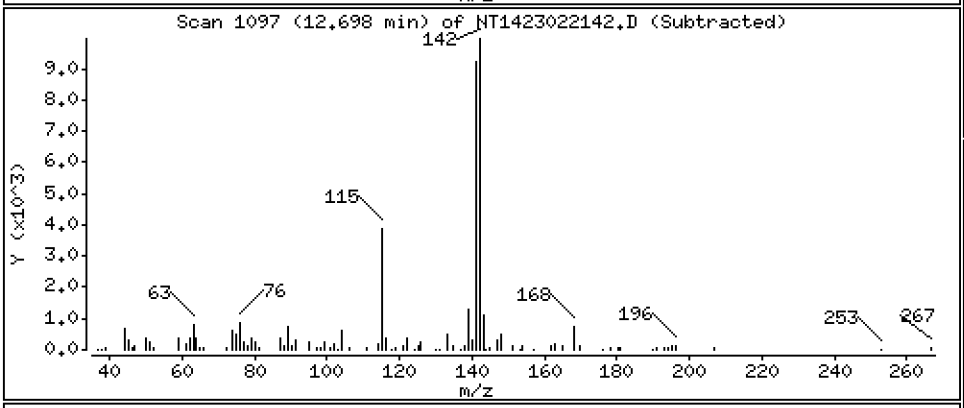
Column diameter: 0.25

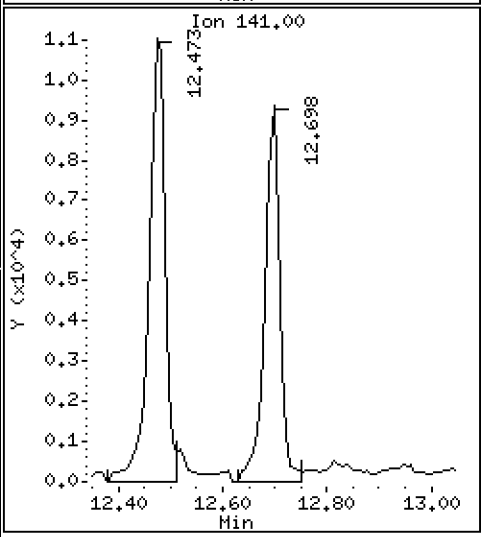
105 1-methylnaphthalene

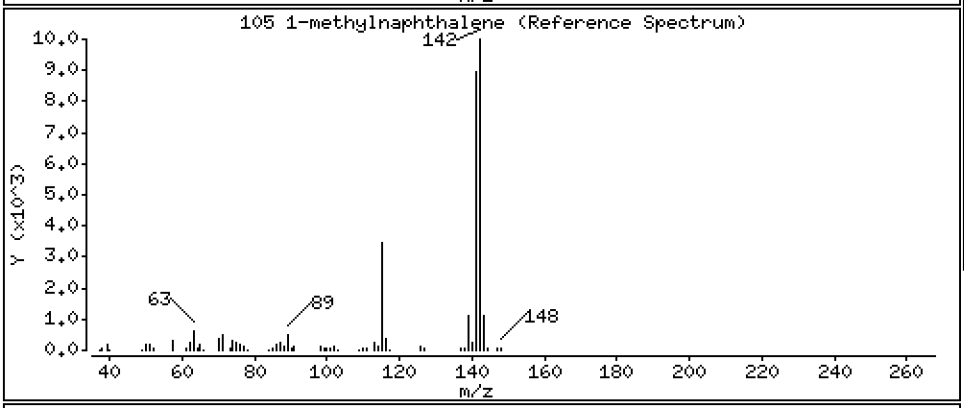
Concentration: 0.1103 ug/mL

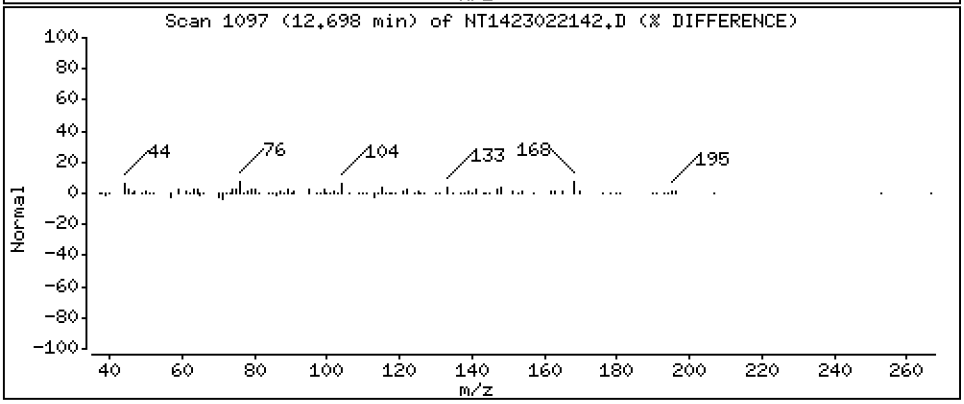












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

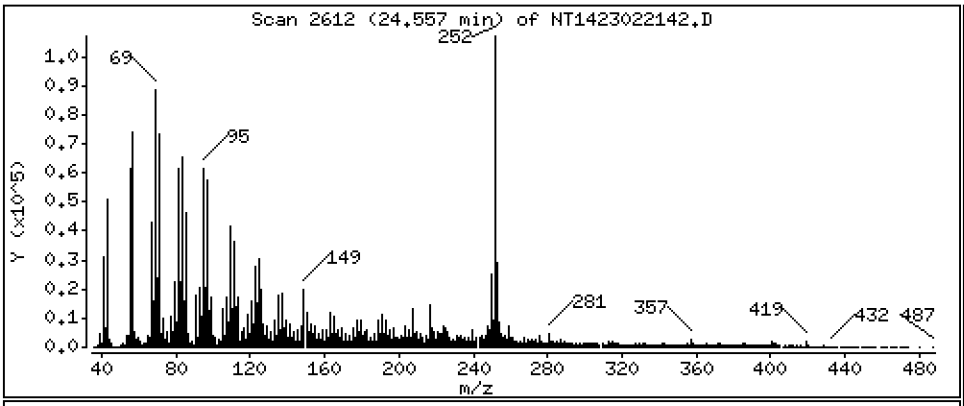
Operator: DSD

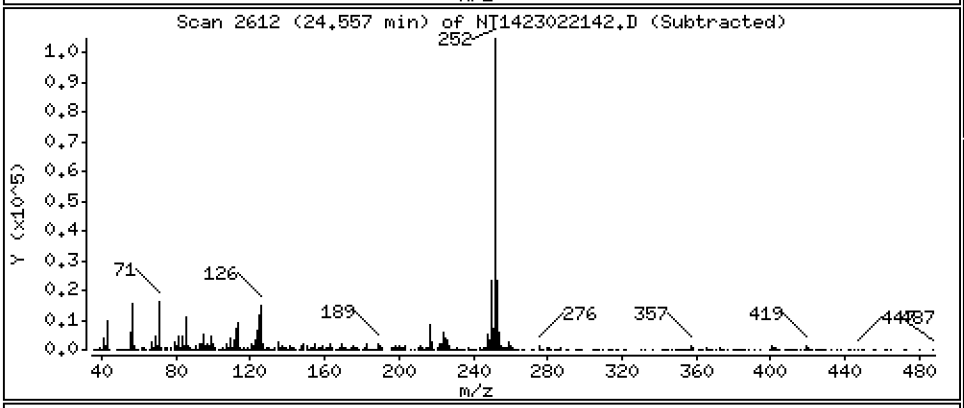
Column phase: ZB-5msi

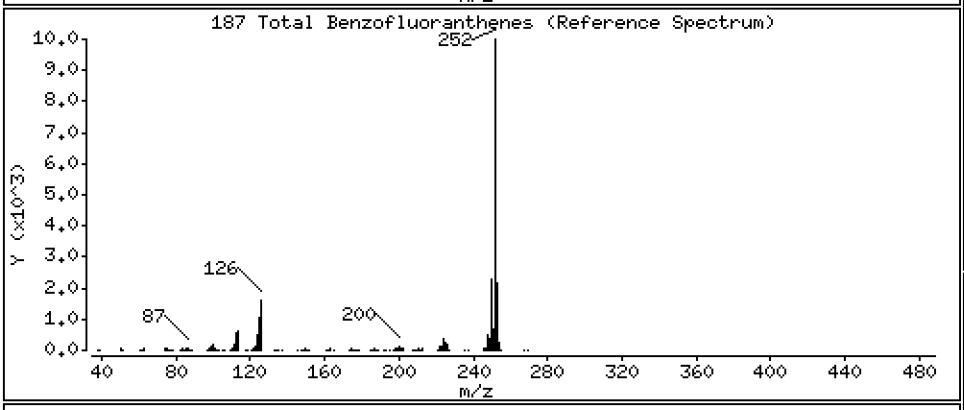
Column diameter: 0.25

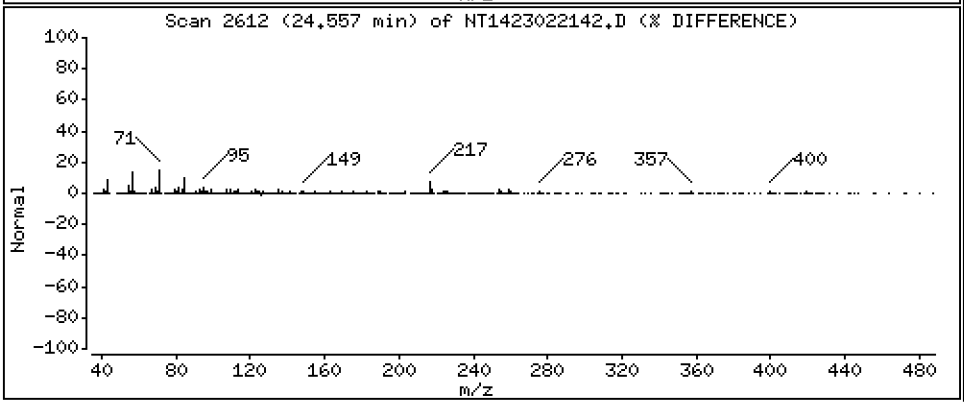
187 Total Benzofluoranthenes

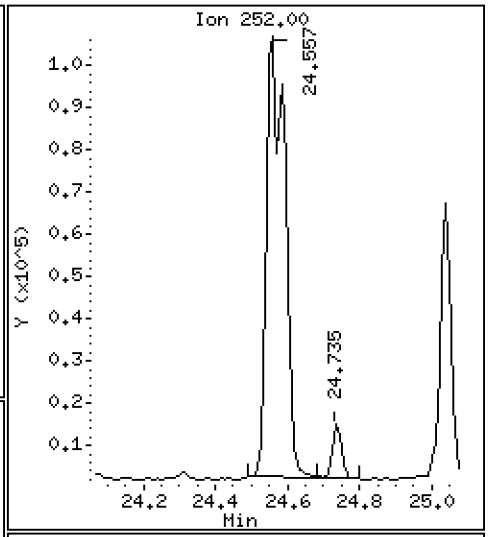
Concentration: 2.209 ug/mL

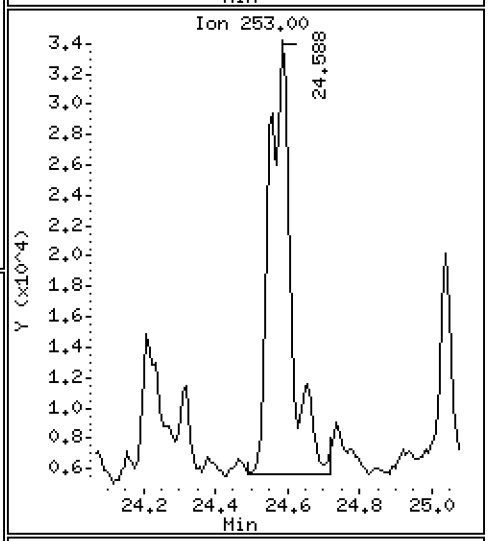


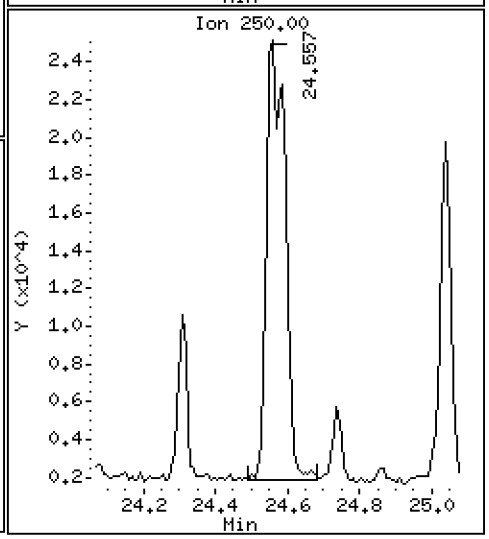












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221B.b\NT1423022142.D
Lab Smp Id: 23A0133-06
Inj Date : 22-FEB-2023 14:10 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-06
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Meth Date : 23-Feb-2023 09:59 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 30
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.388	6.373	(0.746)	400587	5.55155	5.552
$	2 Phenol-d5	99	7.972	7.965	(0.930)	597920	5.22352	5.224
	3 Phenol	94	7.995	7.988	(0.933)	312518	2.57900	2.579
$	5 2-Chlorophenol-d4	132	8.211	8.212	(0.958)	435086	5.32701	5.327
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.567	8.568	(1.000)	269919	4.00000	
	9 1,4-Dichlorobenzene	146	8.598	8.599	(1.004)	1701	0.01887	0.01887(M)
$	10 1,2-Dichlorobenzene-d4	152	8.924	8.925	(1.042)	202708	3.31108	3.311
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	8.870	8.855	(1.035)	14525	0.21345	0.2135
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.367	9.367	(1.093)	16287	0.18229	0.1823
$	18 Nitrobenzene-d5	82	9.662	9.662	(0.875)	419091	3.59763	3.598
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.042	11.042	(1.000)	1008331	4.00000	
	28 Naphthalene	128	11.080	11.081	(1.003)	30444	0.12245	0.1225
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	12.473	12.481	(1.130)	25425	0.13654	0.1365
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.270	13.270	(0.906)	783187	3.70857	3.709
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	14.338	14.331	(0.979)	11678	0.04442	0.04442
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	14.647	14.648	(1.000)	590268	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	14.717	14.717	(1.005)	12572	0.07987	0.07987
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.042	15.042	(1.027)	30323	0.11733	0.1173
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	15.637	15.645	(1.068)	95091	0.39672	0.3967
	49	Fluorene	166	15.753	15.753	(1.075)	29306	0.10844	0.1084
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.293	16.293	(1.112)	172798	5.03139	5.031
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	17.676	17.676	(1.000)	1069248	4.00000	
	60	Phenanthrene	178	17.722	17.723	(1.003)	169628	0.66019	0.6602
	61	Anthracene	178	17.815	17.816	(1.008)	106188	0.41715	0.4172
	62	Carbazole	167	18.163	18.156	(1.028)	30027	0.12999	0.1300
	63	Di-n-butylphthalate	149	19.014	18.992	(1.076)	14189	0.05499	0.05499
	64	Fluoranthene	202	20.190	20.137	(0.886)	448410	1.49564	1.496(H)
	65	Pyrene	202	20.600	20.562	(0.904)	611955	1.93030	1.930(H)
$	66	Terphenyl-d14	244	20.887	20.872	(0.917)	986976	4.38464	4.385
	67	Butylbenzylphthalate	149	21.824	21.816	(0.958)	62592	0.59839	0.5984
	68	Benzo(a)anthracene	228	22.753	22.738	(0.999)	189522	0.85224	0.8522
*	69	Chrysene-d12	240	22.784	22.769	(1.000)	694925	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	22.823	22.815	(1.002)	273014	1.36489	1.365
	72	bis(2-Ethylhexyl)phthalate	149	22.861	22.854	(0.959)	204725	1.16598	1.166
*	134	Di-n-octylphthalate-d4	153	23.844	23.837	(1.000)	1027928	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	24.557	24.534	(0.973)	216159	1.24976	1.250
	75	Benzo(k)fluoranthene	252	24.588	24.573	(0.974)	231667	1.25350	1.253(M)
	76	Benzo(a)pyrene	252	25.130	25.115	(0.996)	136742	0.83363	0.8336
*	77	Perylene-d12	264	25.238	25.215	(1.000)	545086	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.563	27.540	(1.092)	71396	0.52869	0.5287
	79	Dibenzo(a,h)anthracene	278	27.571	27.556	(1.092)	19989	0.17998	0.1800(M)
	80	Benzo(g,h,i)perylene	276	28.247	28.216	(1.119)	62268	0.56822	0.5682
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	7.995	8.034	(0.933)	18778	0.14488	0.1449
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	12.697	12.698	(1.150)	19274	0.11025	0.1103
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.557	24.573	(0.973)	373084	2.20938	2.209
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022142.D
Lab Smp Id: 23A0133-06
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 06:55
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	235125	117563	470250	269919	14.80
27 Naphthalene-d8	883104	441552	1766208	1008331	14.18
42 Acenaphthene-d10	537789	268895	1075578	590268	9.76
59 Phenanthrene-d10	1079531	539766	2159062	1069248	-0.95
69 Chrysene-d12	826409	413205	1652818	694925	-15.91
134 Di-n-octylphthala	1339562	669781	2679124	1027928	-23.26
77 Perylene-d12	590325	295163	1180650	545086	-7.66

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.01
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	-0.00
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.07
134 Di-n-octylphthala	23.84	23.34	24.34	23.84	0.03
77 Perylene-d12	25.22	24.72	25.72	25.24	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022142.D

Lab ID: 23A0133-06
nt14.i, ABN.m, 22-FEB-2023 14:10

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

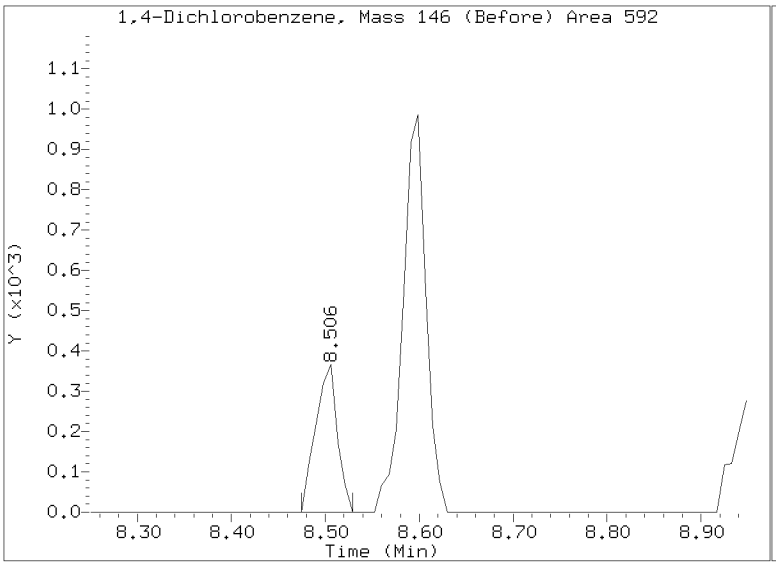
RRT check based on Ccal File: NT1423022130.D

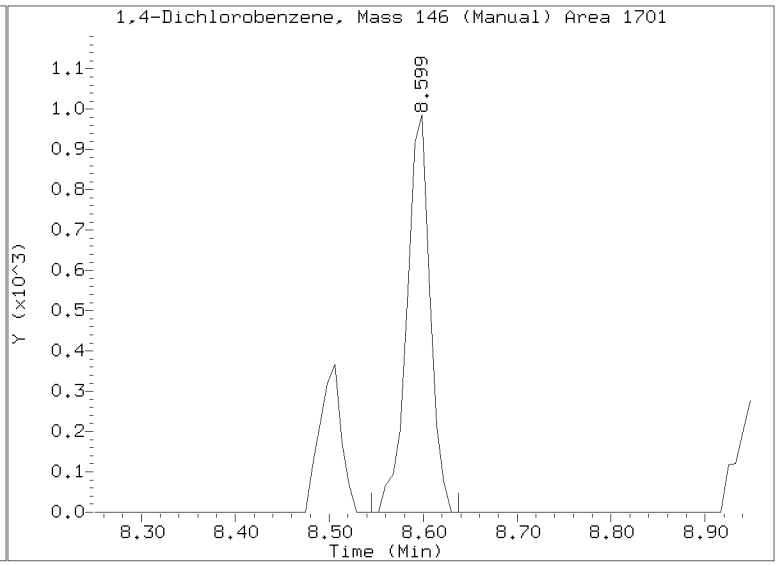
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

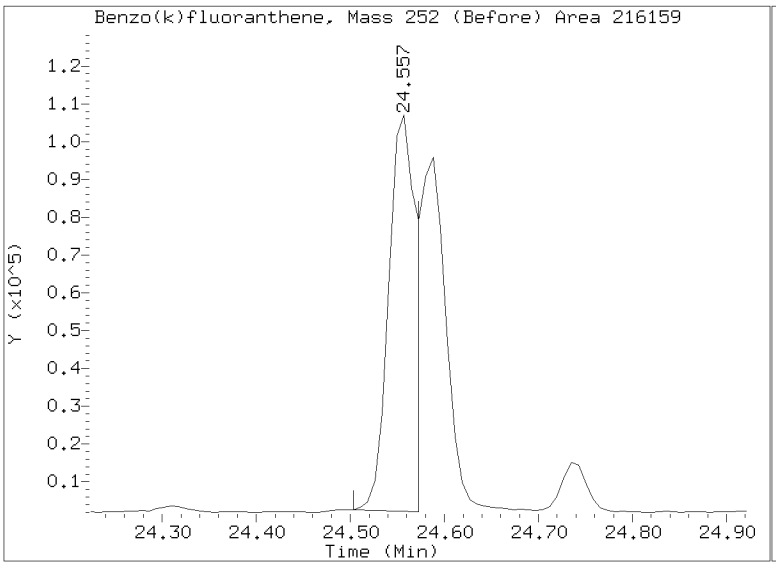
* Only compounds listed in the work order have been verified by the analyst *

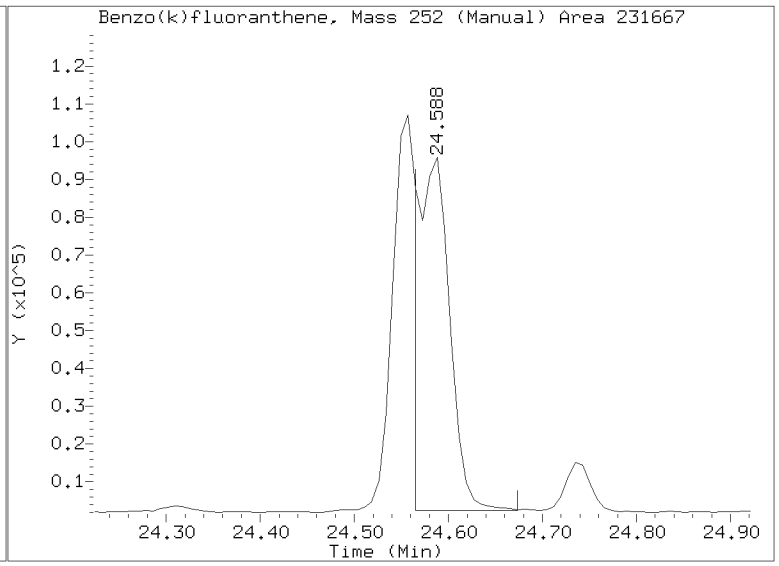
Quant Ion Manual Peak Adjustment Report

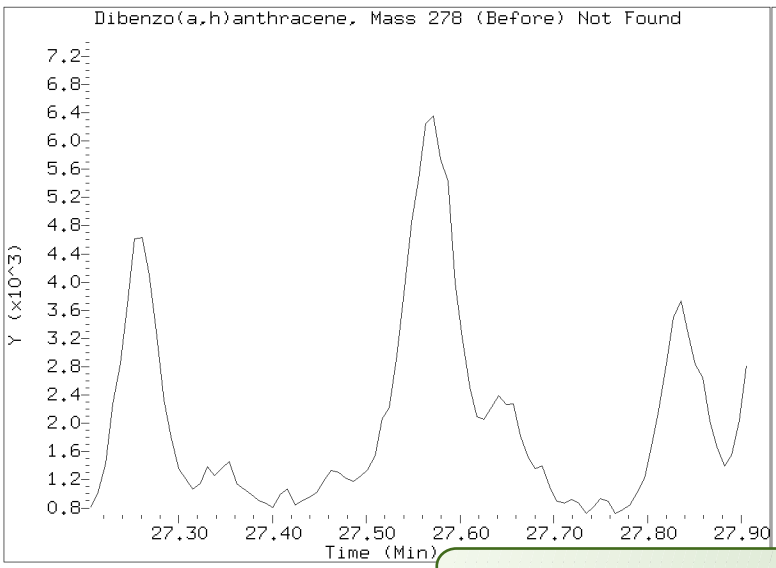
Datafile: //target/share/chem3/nt14.i/20230221B.b/NT1423022142.D
Injection Date: 22-FEB-2023 14:10
Lab ID:23A0133-06 Client ID:
Report Date: 02/23/2023 12:22

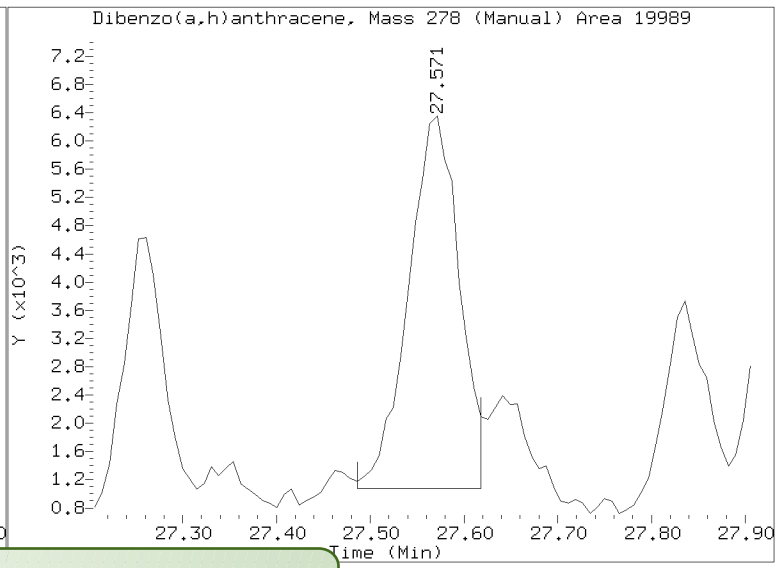












APPROVED
By Deenay Dunmore at 12:28 pm, Feb 23, 2023

LDW23-IT1217

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-07 C	SDG:	23A0133
Sampled:	01/06/23 11:14	Prepared:	01/18/23 15:24	File ID:	NT1423022143.D
% Solids:	59.50	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 14:46
Batch:	BLA0393	Sequence:	SLB0305	Initial/Final:	16.88 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	19.1	J	4.4	19.9
106-44-5	4-Methylphenol	1	54.2		7.4	19.9
91-20-3	Naphthalene	1	110		4.2	19.9
91-57-6	2-Methylnaphthalene	1	32.9		4.5	19.9
208-96-8	Acenaphthylene	1	55.3		6.2	19.9
131-11-3	Dimethylphthalate	1	19.9	U	4.4	19.9
83-32-9	Acenaphthene	1	31.7		5.2	19.9
132-64-9	Dibenzofuran	1	31.6		14.1	19.9
86-73-7	Fluorene	1	29.8		14.5	19.9
85-01-8	Phenanthrene	1	147		8.7	19.9
120-12-7	Anthracene	1	44.4		7.2	19.9
206-44-0	Fluoranthene	1	206		6.1	19.9
129-00-0	Pyrene	1	231		5.7	19.9
85-68-7	Butylbenzylphthalate	1	19.9	U	9.4	19.9
56-55-3	Benzo(a)anthracene	1	81.2		5.9	19.9
218-01-9	Chrysene	1	98.7		6.0	19.9
117-81-7	bis(2-Ethylhexyl)phthalate	1	14.8	J	5.4	49.8
	Benzofluoranthenes, Total	1	137		10.0	39.8
50-32-8	Benzo(a)pyrene	1	54.4		4.2	19.9
193-39-5	Indeno(1,2,3-cd)pyrene	1	35.4		14.6	19.9
53-70-3	Dibenzo(a,h)anthracene	1	19.9	U	17.2	19.9
191-24-2	Benzo(g,h,i)perylene	1	41.0		13.5	19.9

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	746.74	546	73.2	27 - 120	
Phenol-d5	746.74	509	68.2	29 - 120	
2-Chlorophenol-d4	746.74	526	70.4	31 - 120	
1,2-Dichlorobenzene-d4	497.83	323	65.0	32 - 120	
Nitrobenzene-d5	497.83	346	69.5	30 - 120	
2-Fluorobiphenyl	497.83	355	71.2	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1217

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

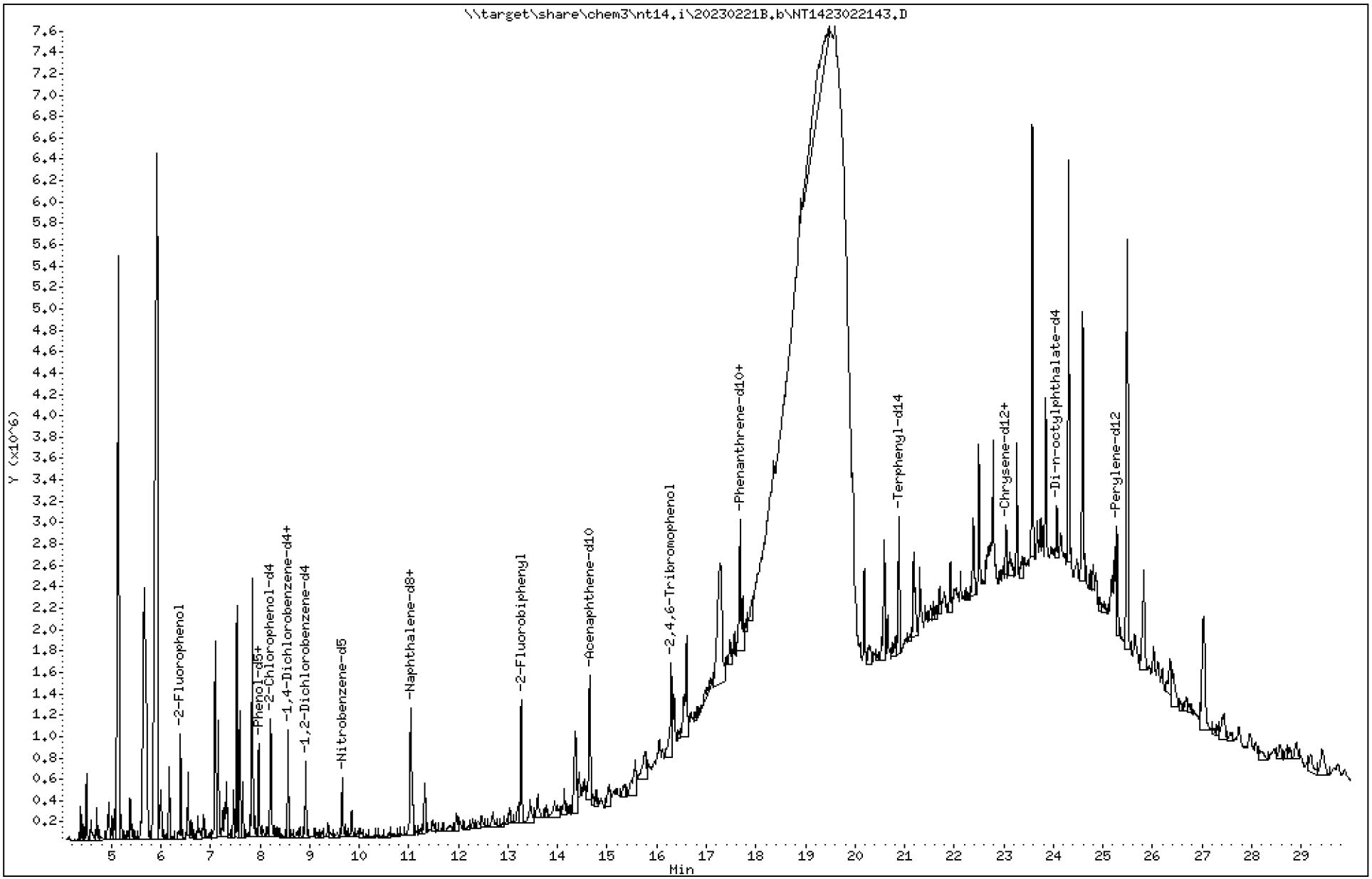
Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-07 C	SDG:	23A0133
Sampled:	01/06/23 11:14	Prepared:	01/18/23 15:24	File ID:	NT1423022143.D
% Solids:	59.50	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 14:46
Batch:	BLA0393	Sequence:	SLB0305	Initial/Final:	16.88 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	746.74	486	65.1	24 - 134	
p-Terphenyl-d14	497.83	363	72.9	37 - 120	

Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022143.D
Date : 22-FEB-2023 14:46
Client ID:
Sample Info: 23A0133-07

Instrument: nt14.i
Operator: DSD
Column diameter: 0.25

Column phase: ZB-5msi



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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

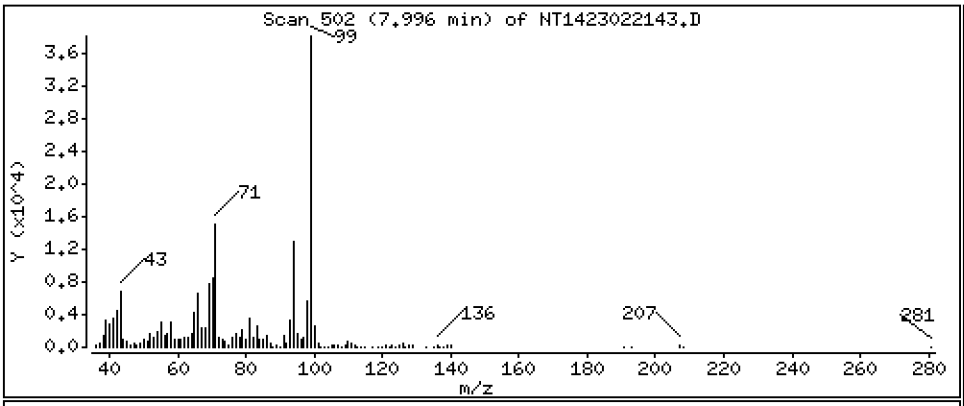
Operator: DSD

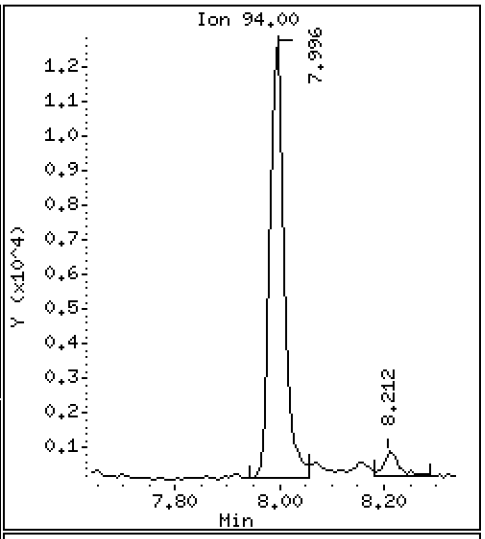
Column phase: ZB-5msi

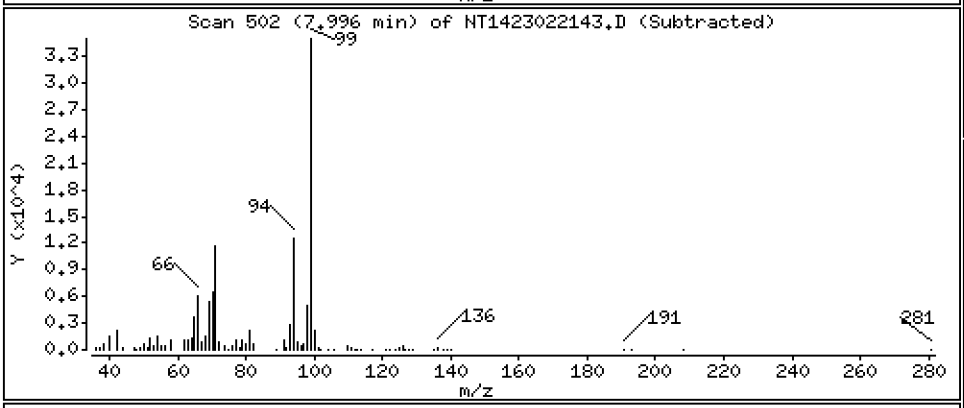
Column diameter: 0.25

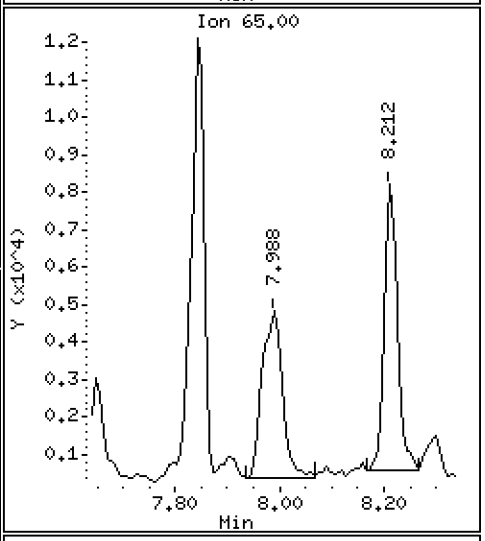
3 Phenol

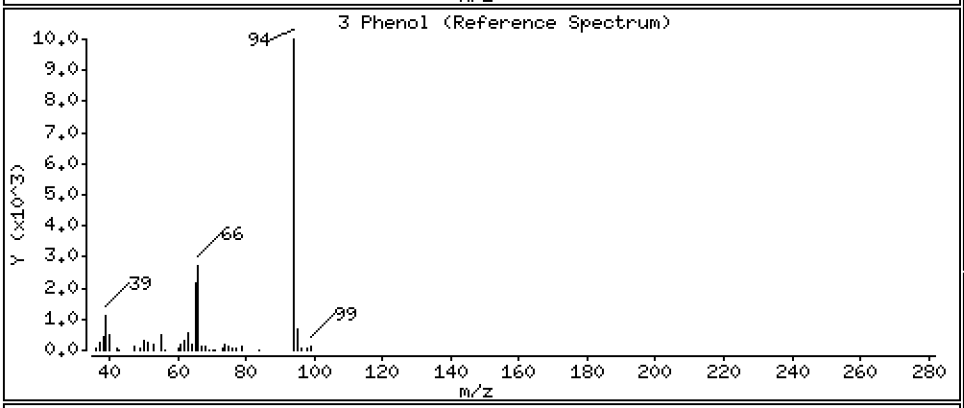
Concentration: 0.1923 ug/mL

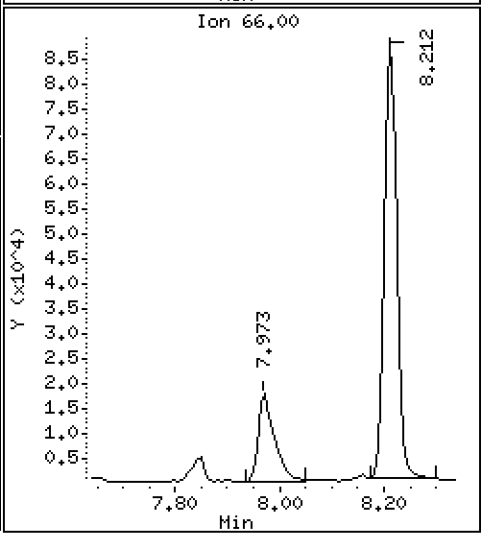


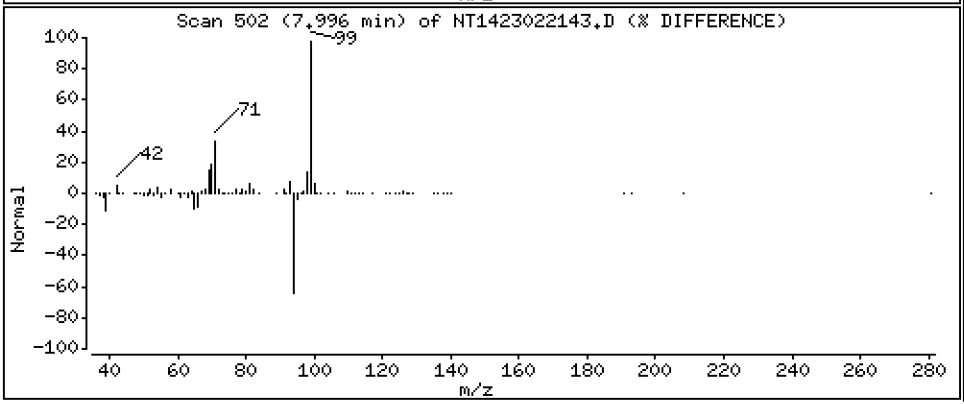












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

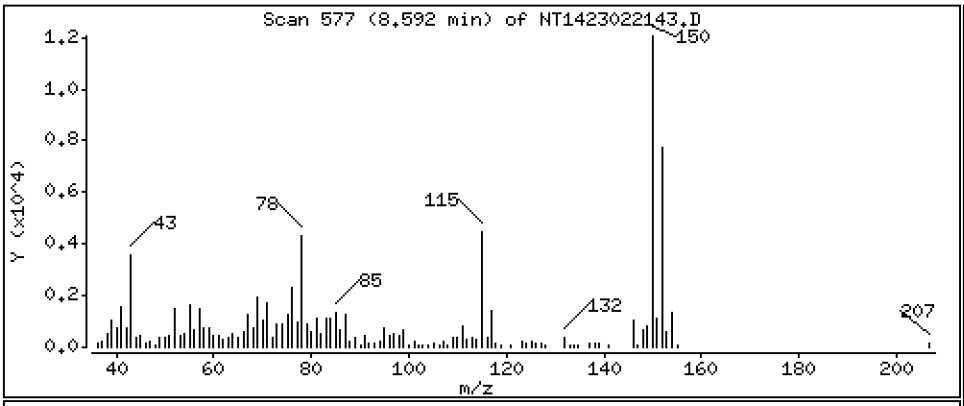
Operator: DSD

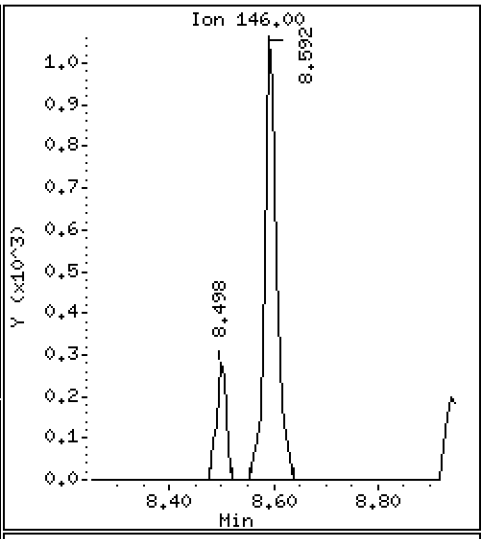
Column phase: ZB-5msi

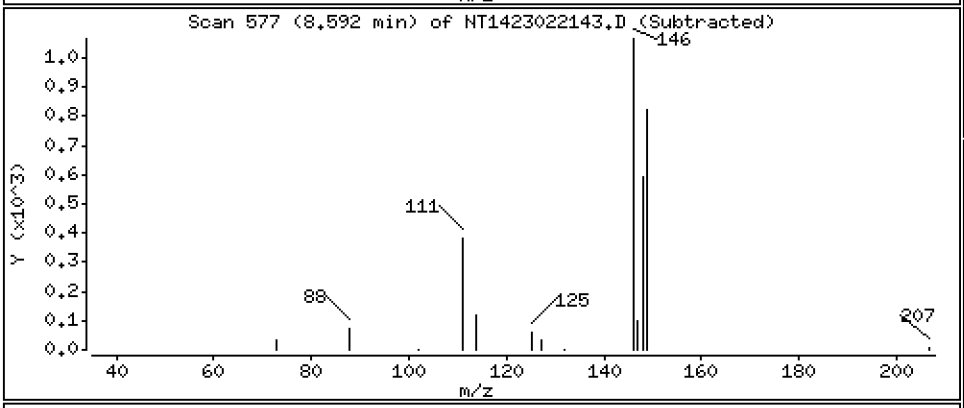
Column diameter: 0.25

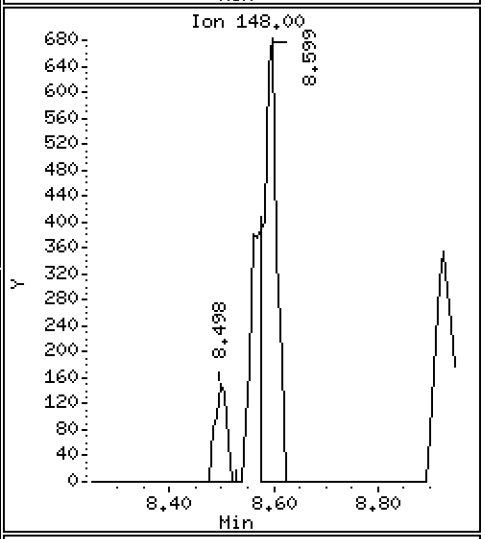
9 1,4-Dichlorobenzene

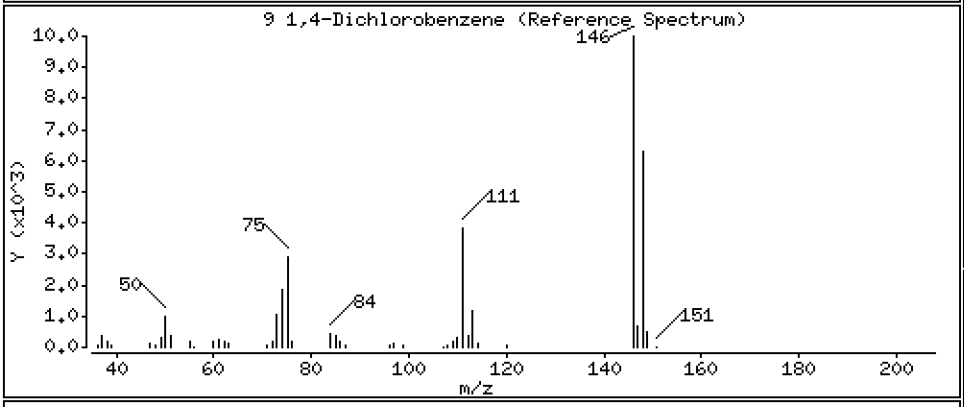
Concentration: 0.01879 ug/mL

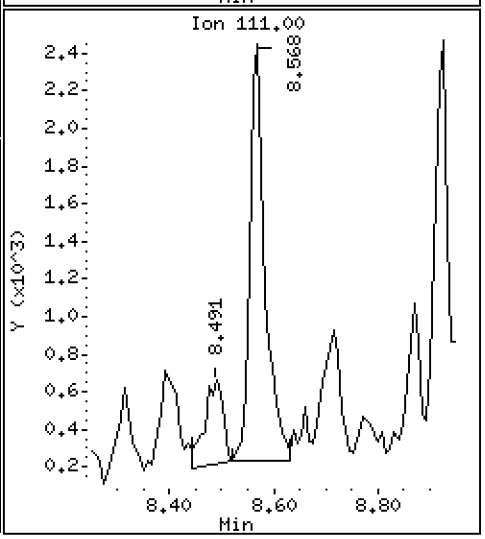


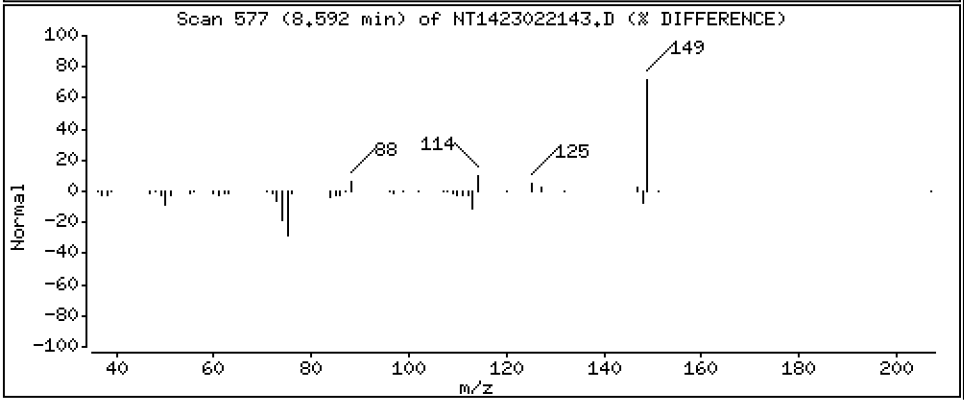












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

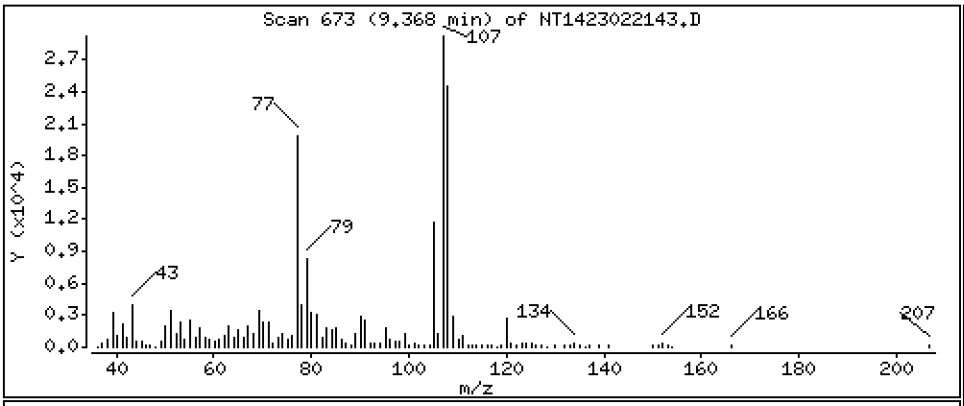
Operator: DSD

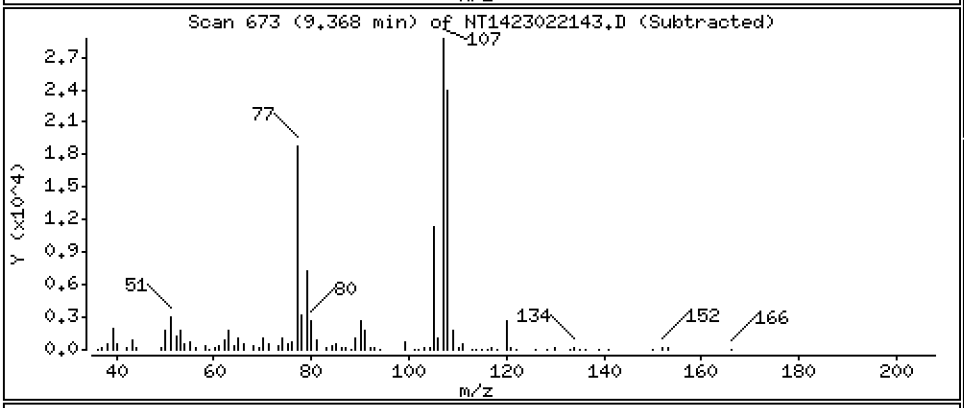
Column phase: ZB-5msi

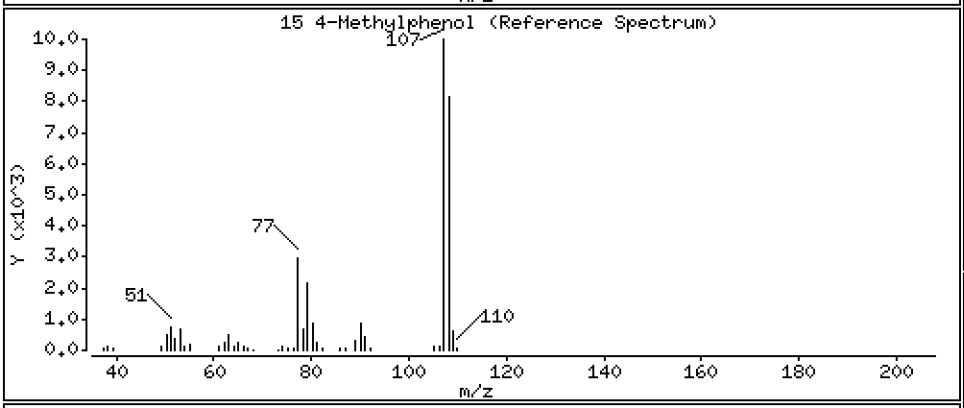
Column diameter: 0.25

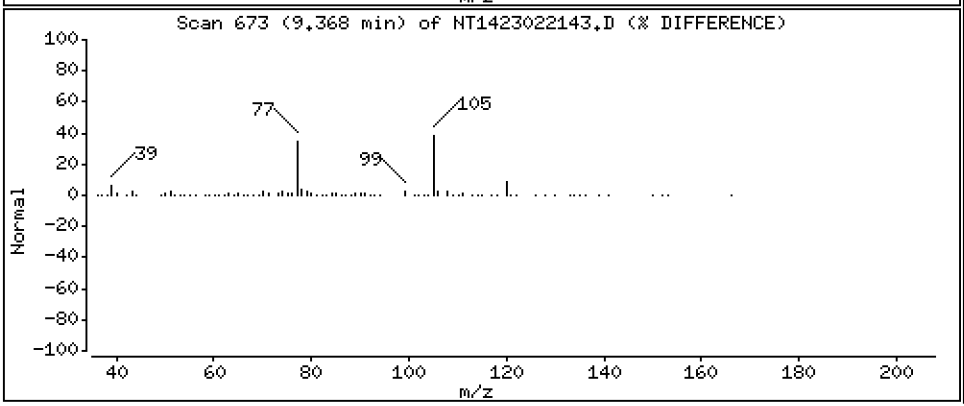
15 4-Methylphenol

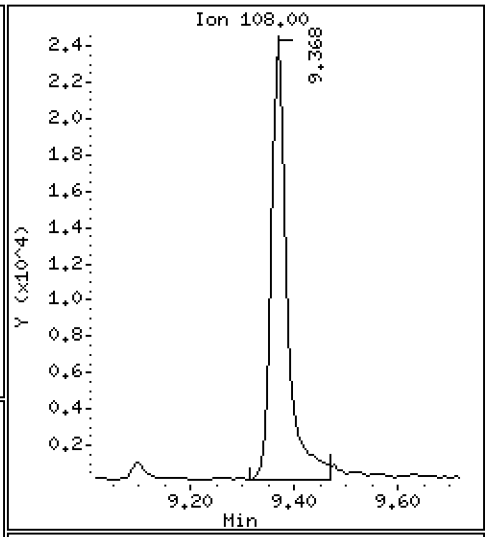
Concentration: 0.5442 ug/mL

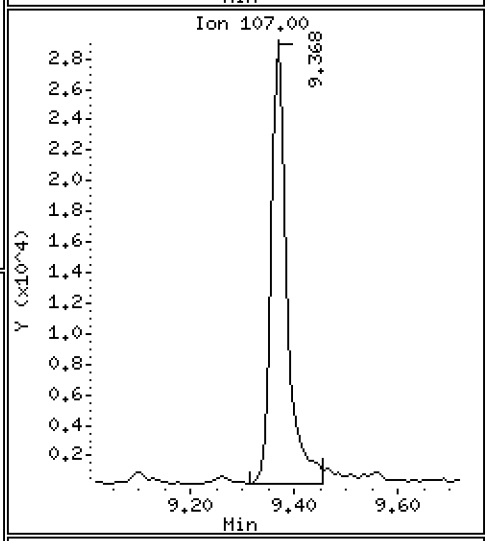


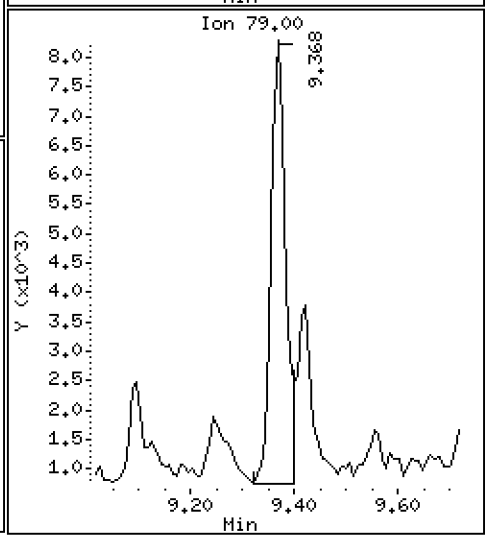












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

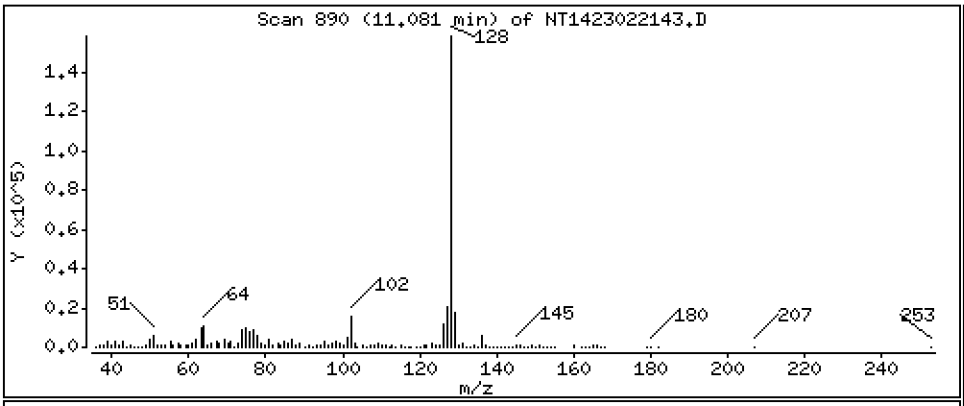
Operator: DSD

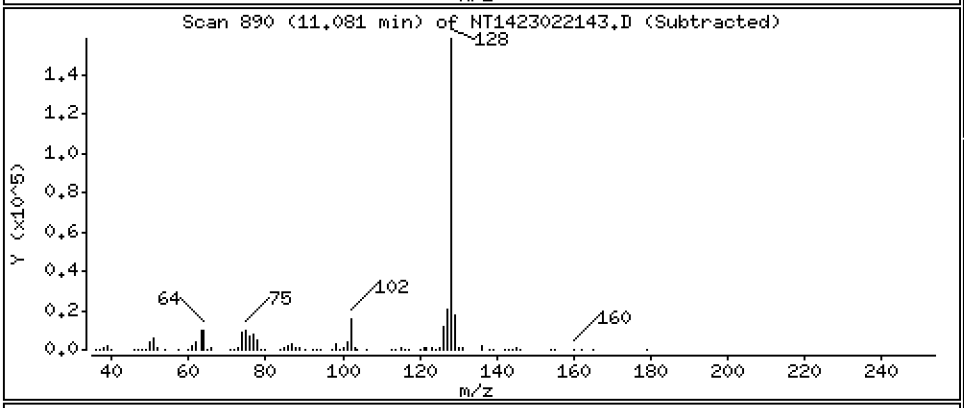
Column phase: ZB-5msi

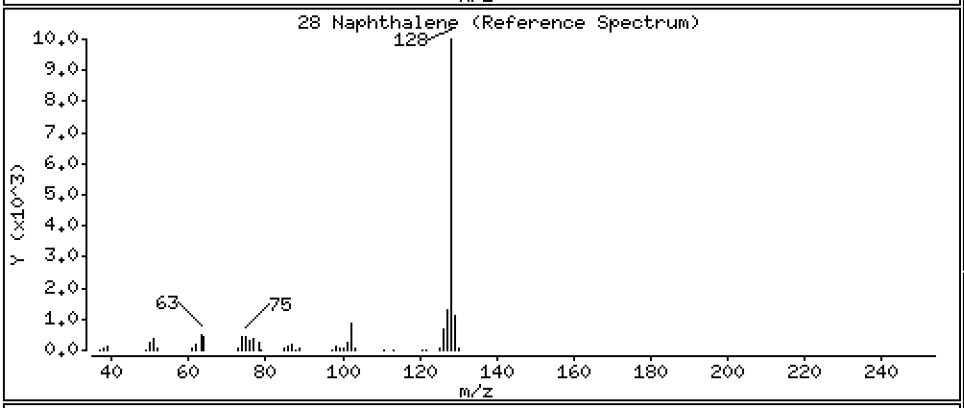
Column diameter: 0.25

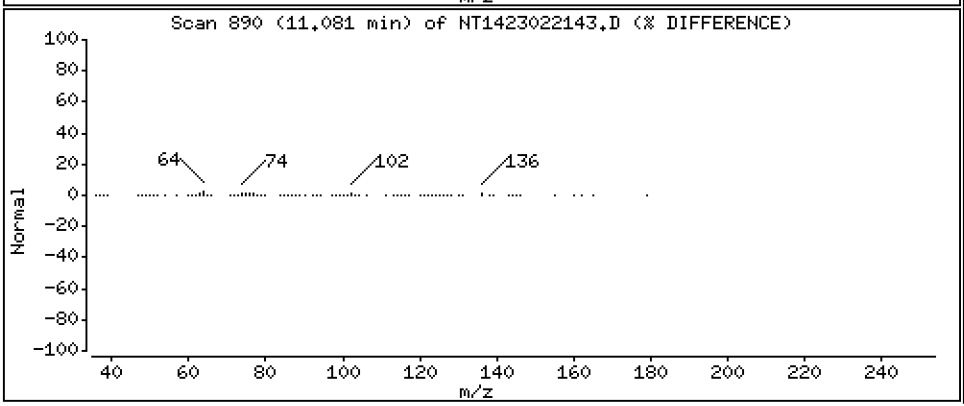
28 Naphthalene

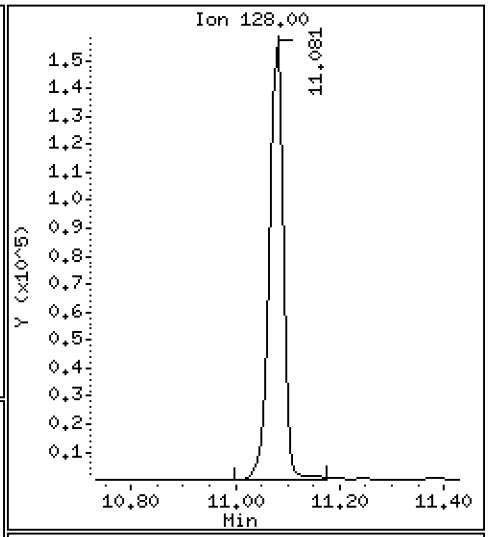
Concentration: 1.110 ug/mL

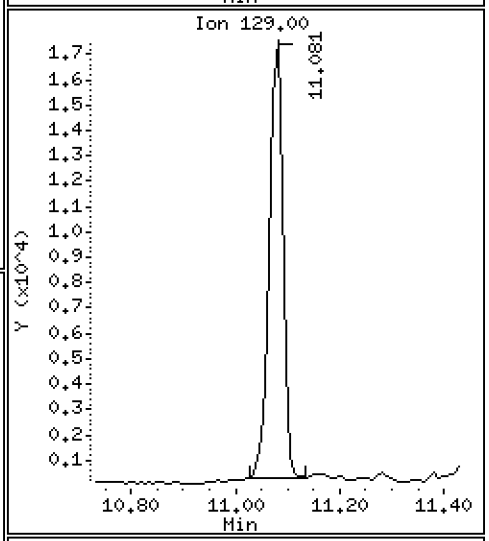


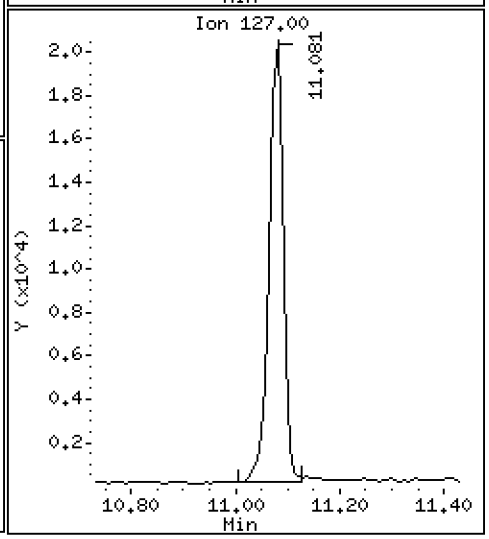












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

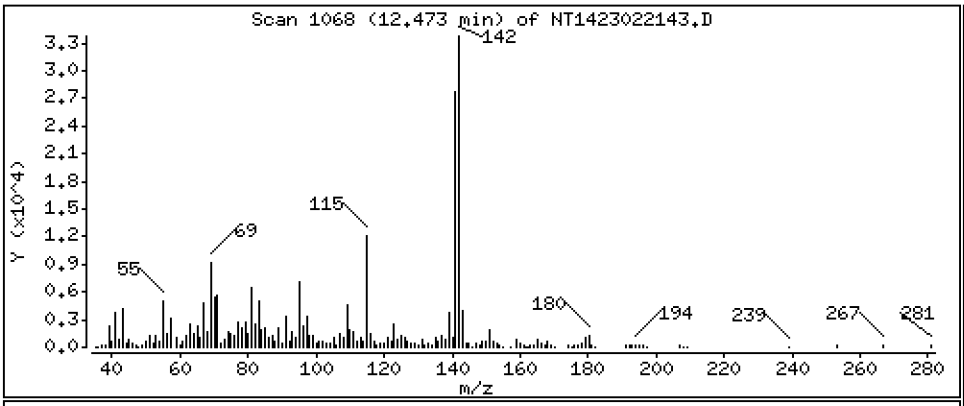
Operator: DSD

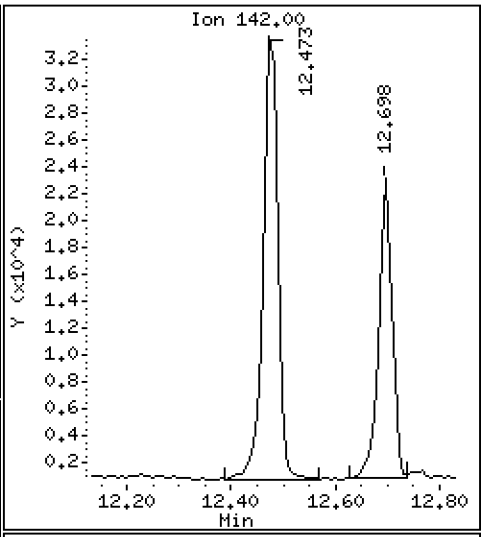
Column phase: ZB-5msi

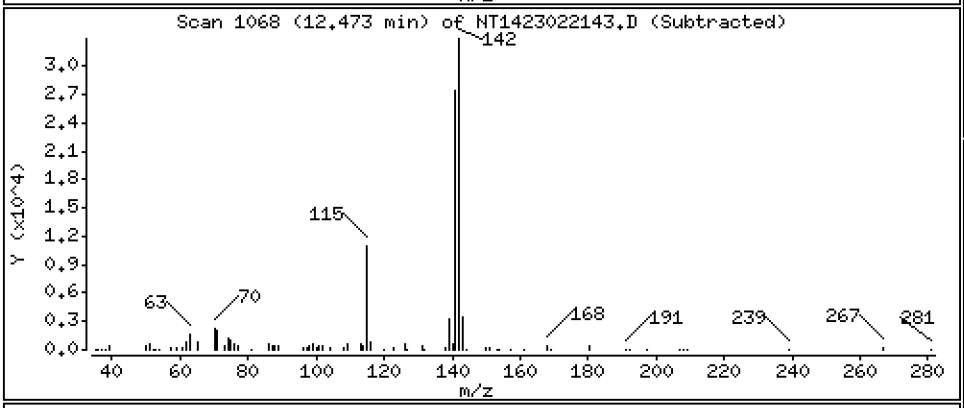
Column diameter: 0.25

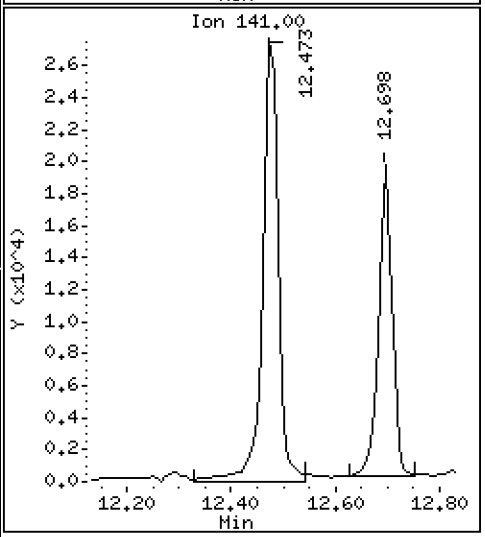
32 2-Methylnaphthalene

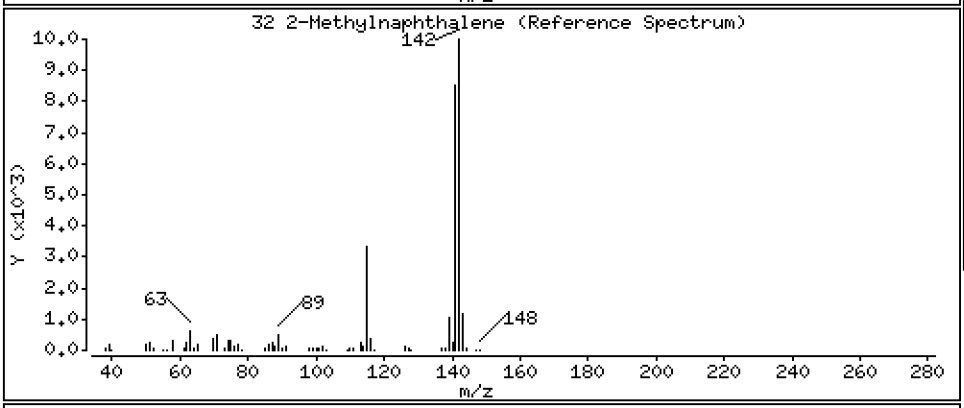
Concentration: 0.3303 ug/mL

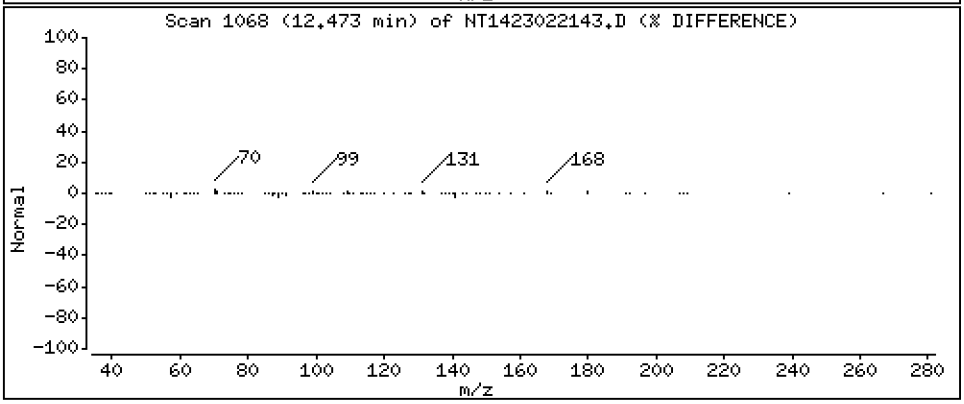












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

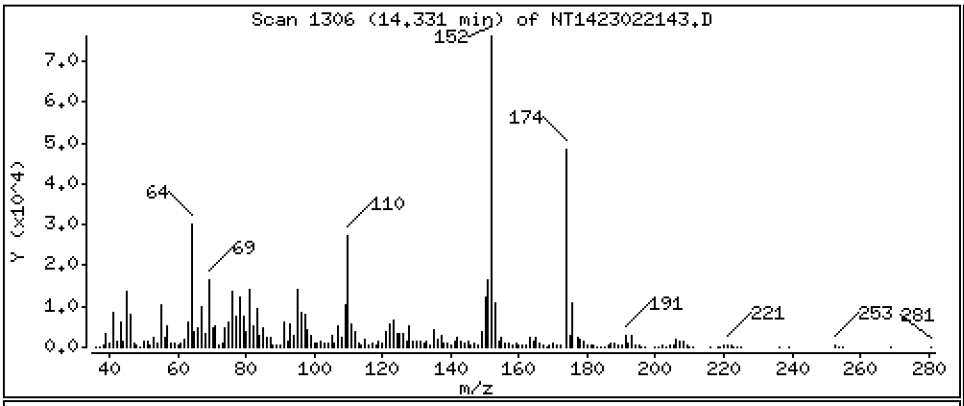
Operator: DSD

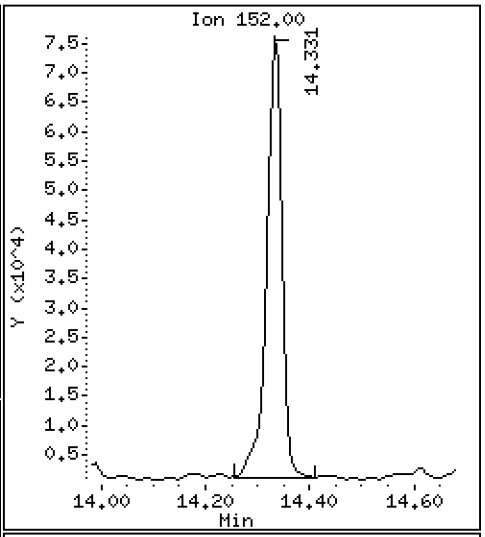
Column phase: ZB-5msi

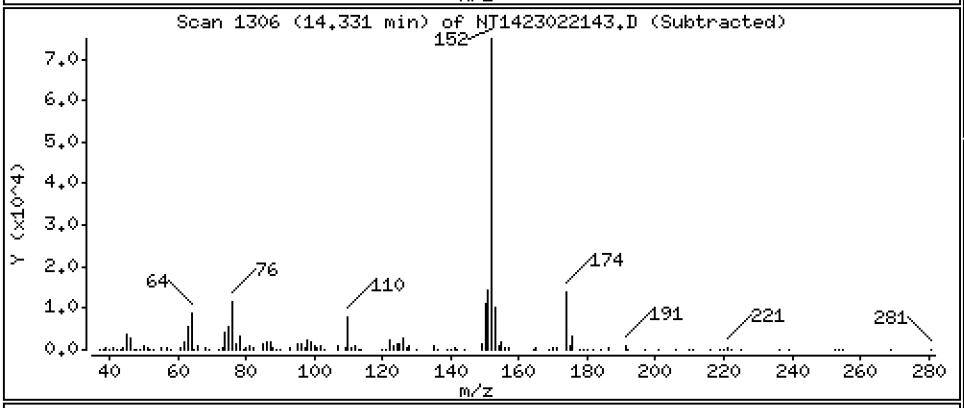
Column diameter: 0.25

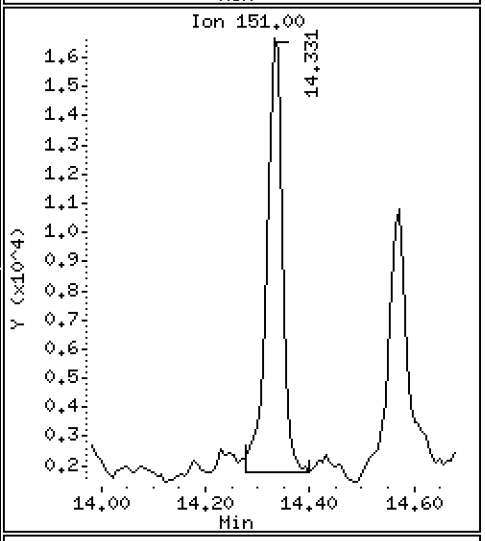
40 Acenaphthylene

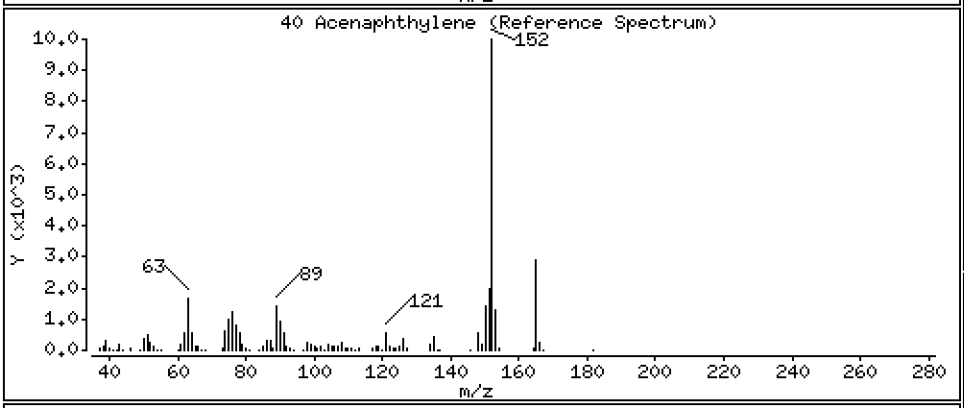
Concentration: 0.5556 ug/mL

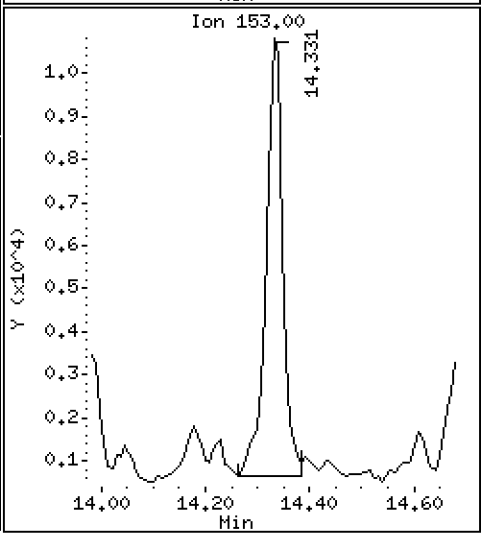


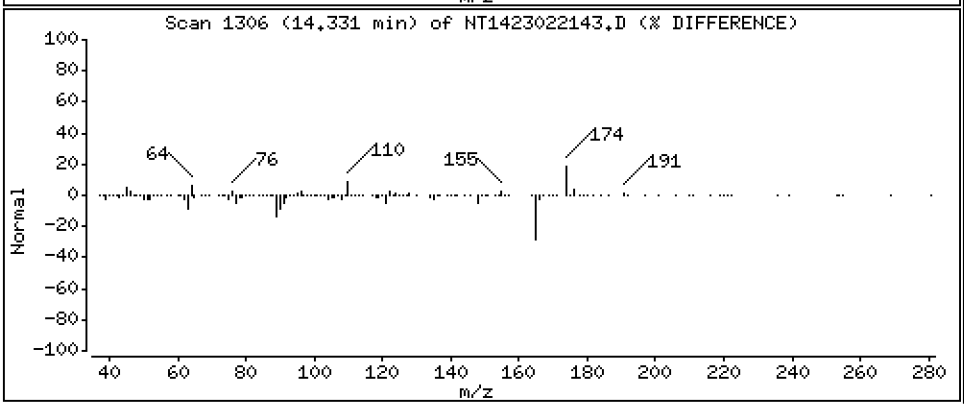












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

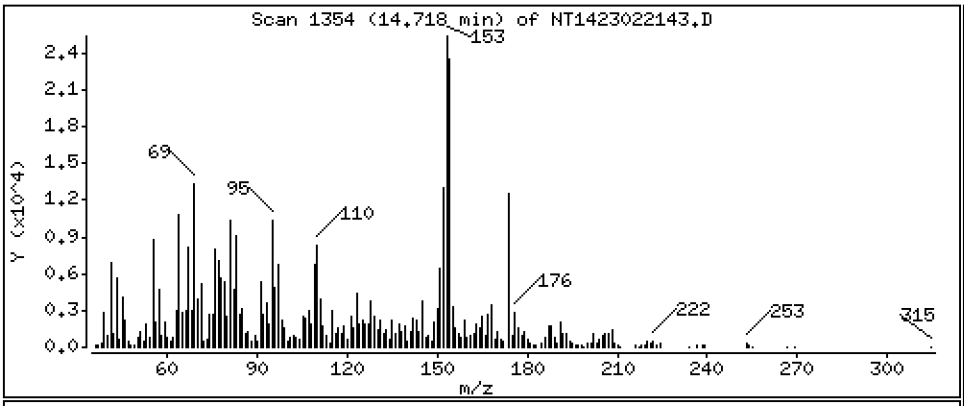
Operator: DSD

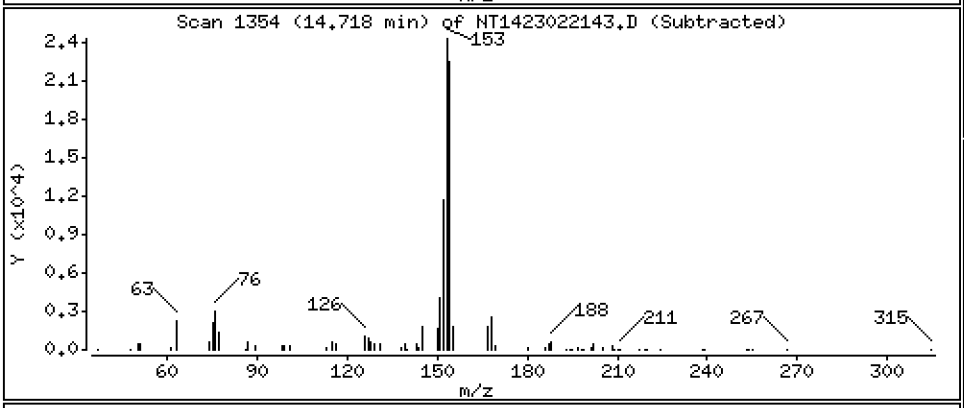
Column phase: ZB-5msi

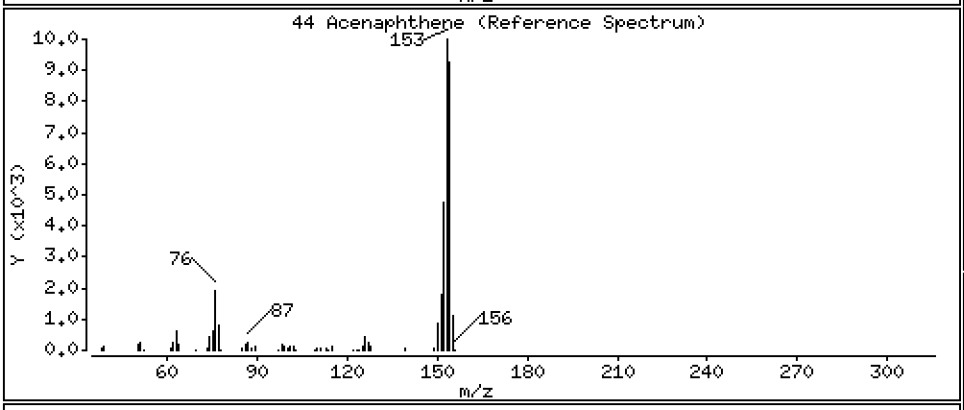
Column diameter: 0.25

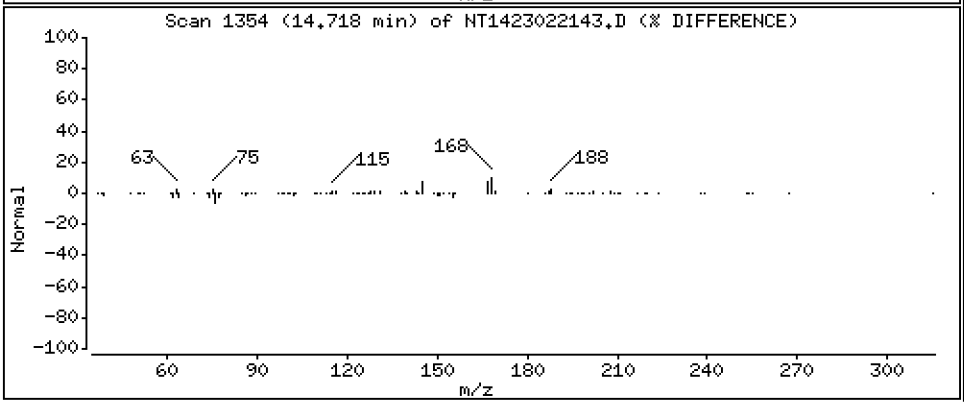
44 Acenaphthene

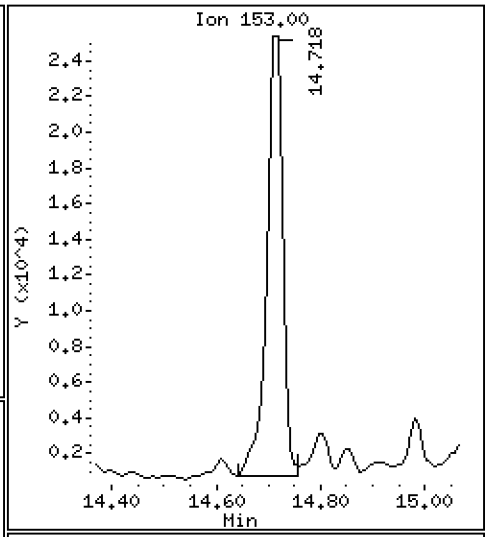
Concentration: 0.3185 ug/mL

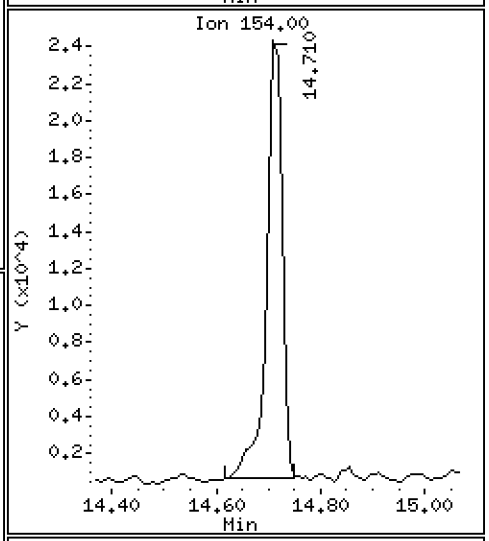


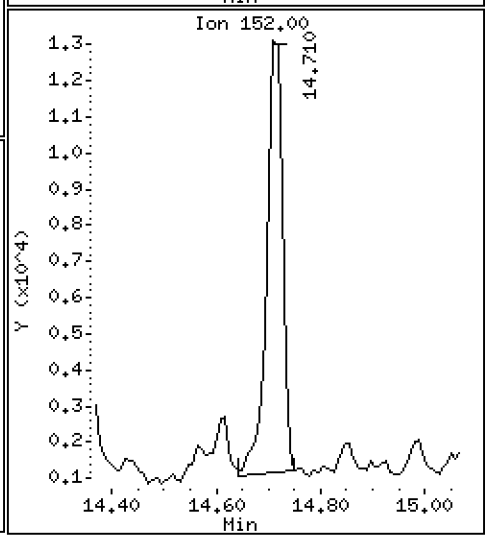












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

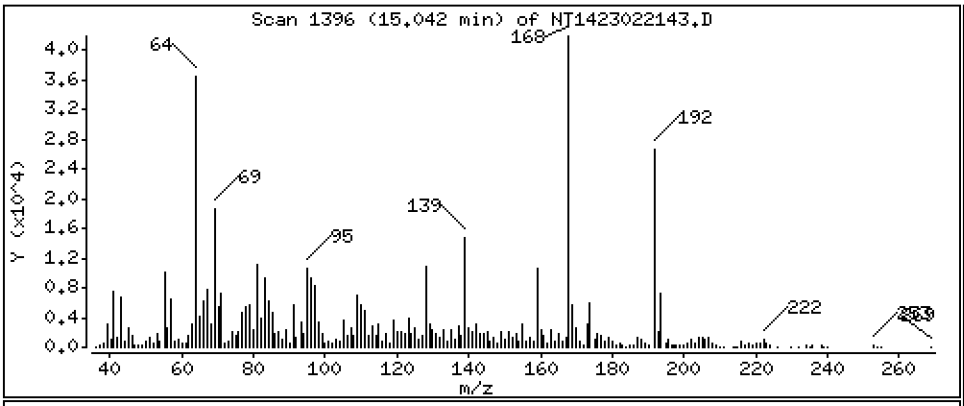
Operator: DSD

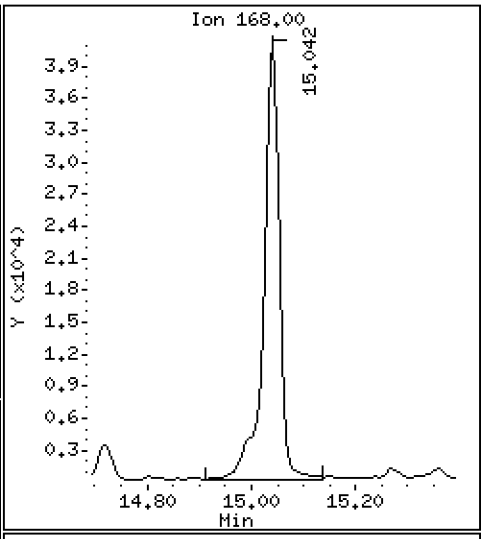
Column phase: ZB-5msi

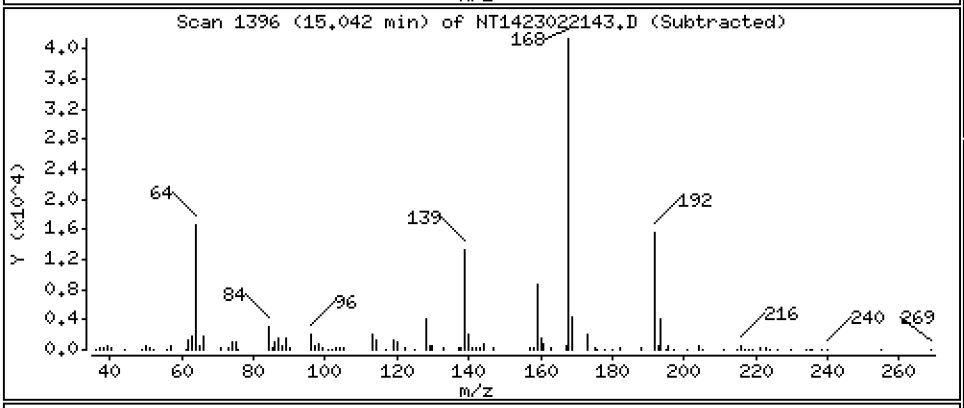
Column diameter: 0.25

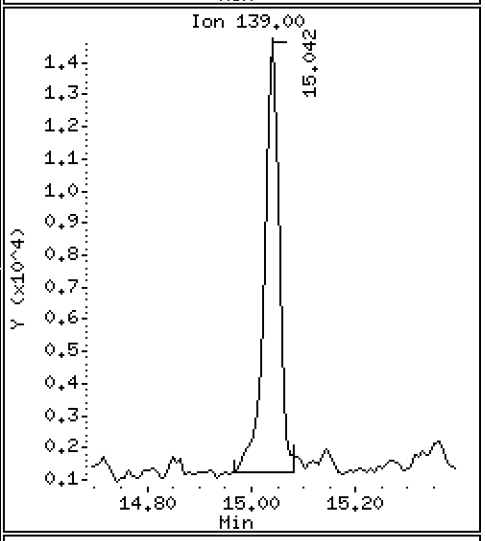
46 Dibenzofuran

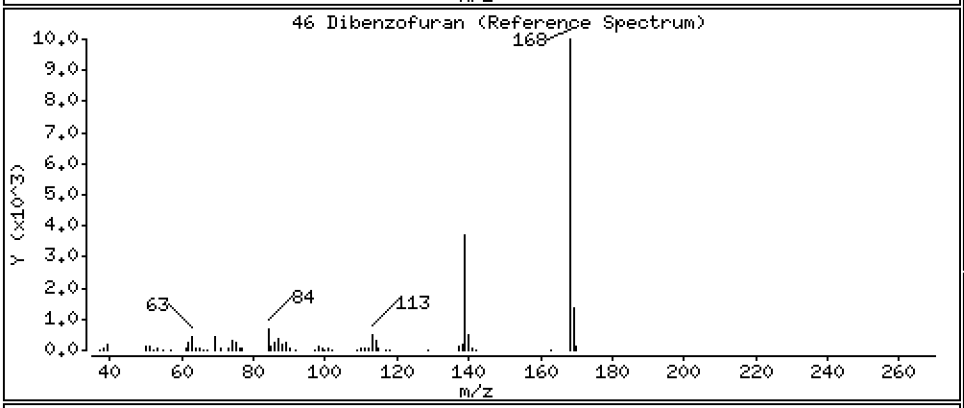
Concentration: 0.3170 ug/mL

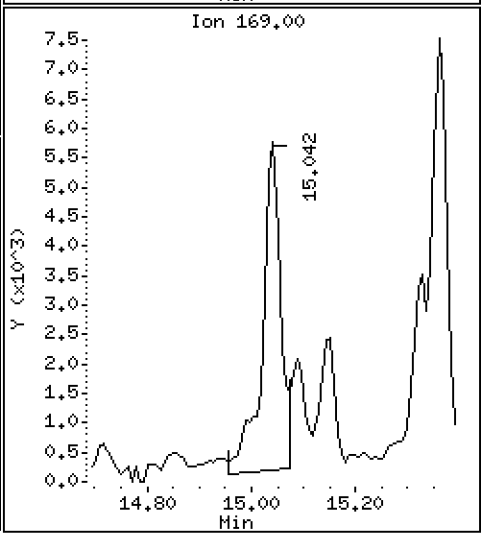


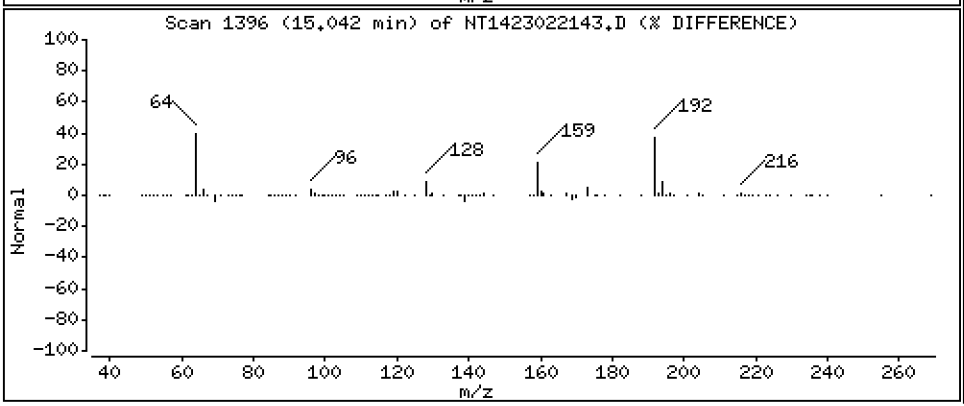












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

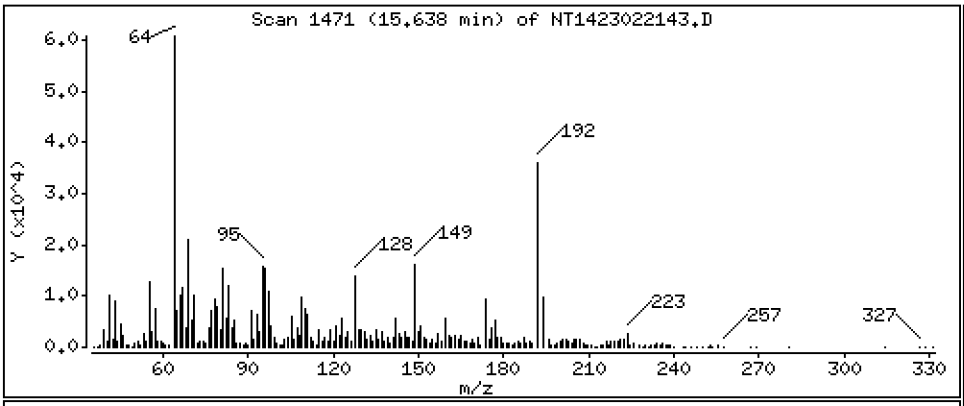
Operator: DSD

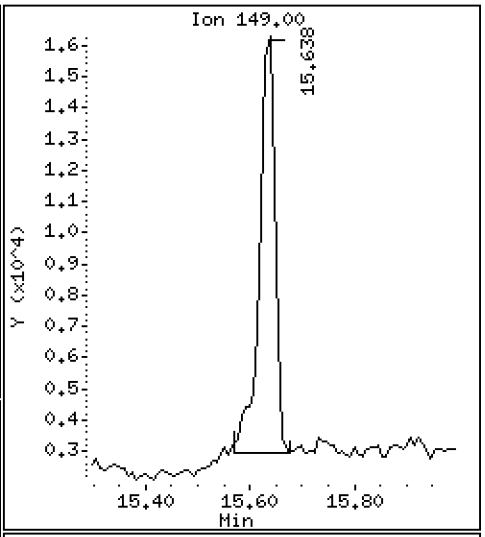
Column phase: ZB-5msi

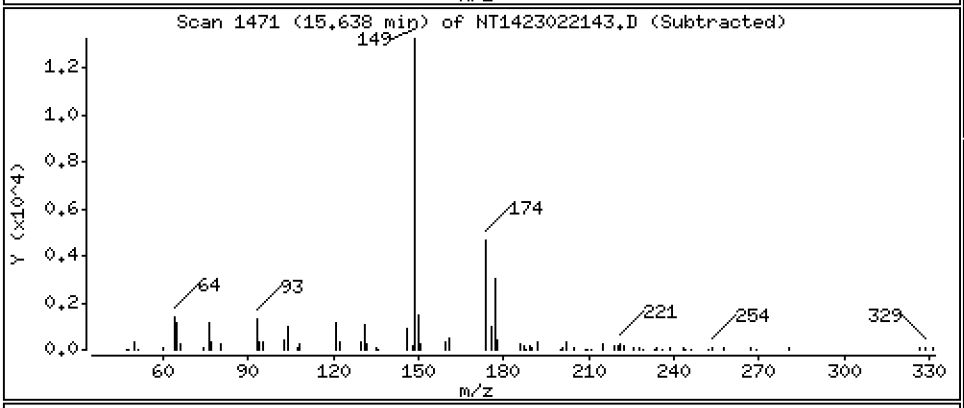
Column diameter: 0.25

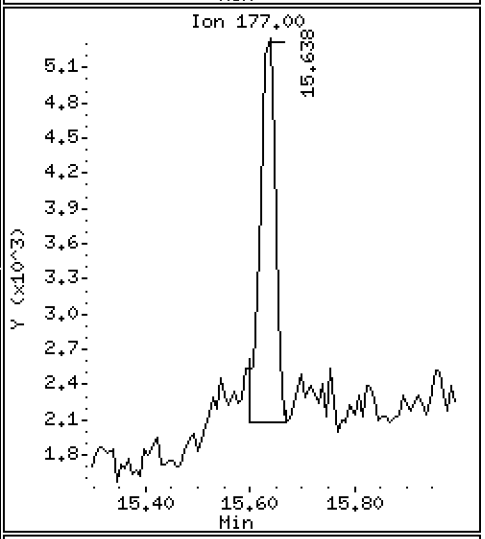
50 Diethylphthalate

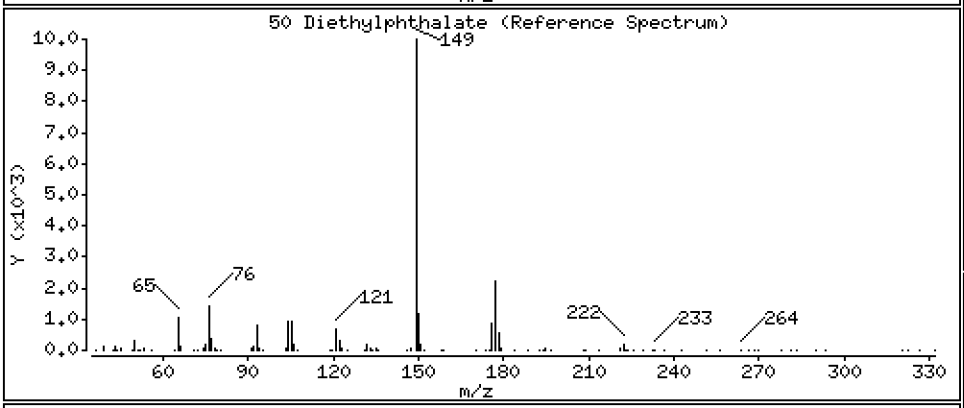
Concentration: 0.1105 ug/mL

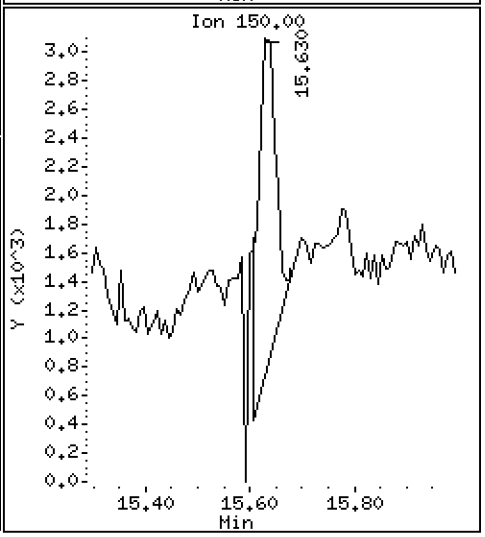


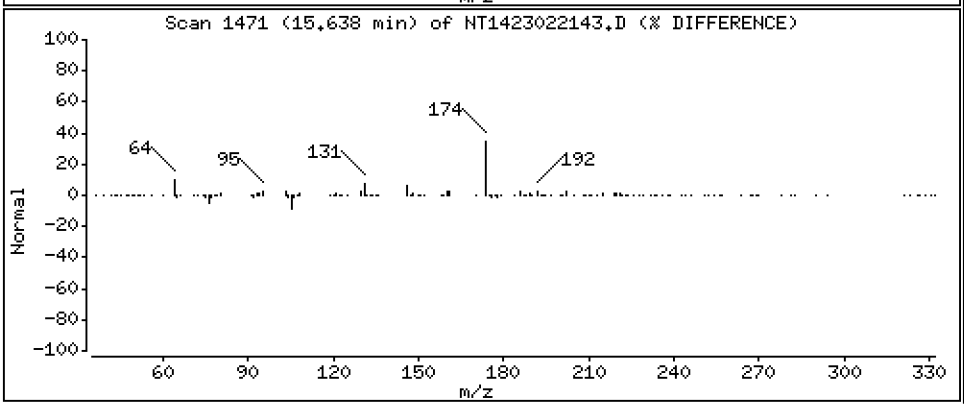












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022143.D

Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

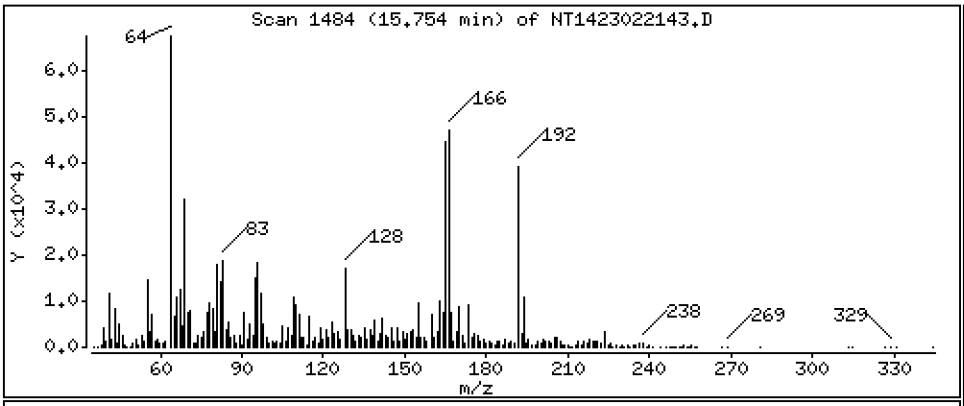
Operator: DSD

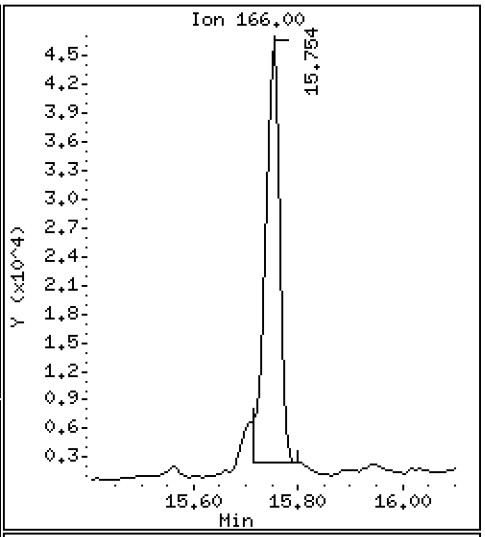
Column phase: ZB-5msi

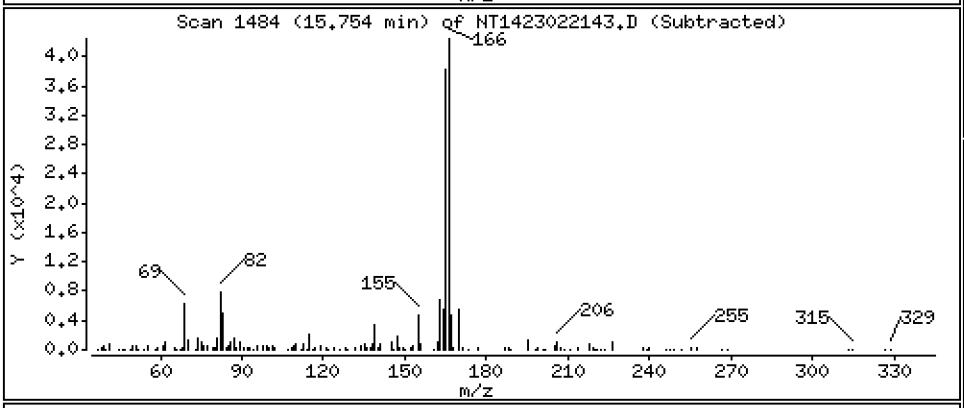
Column diameter: 0.25

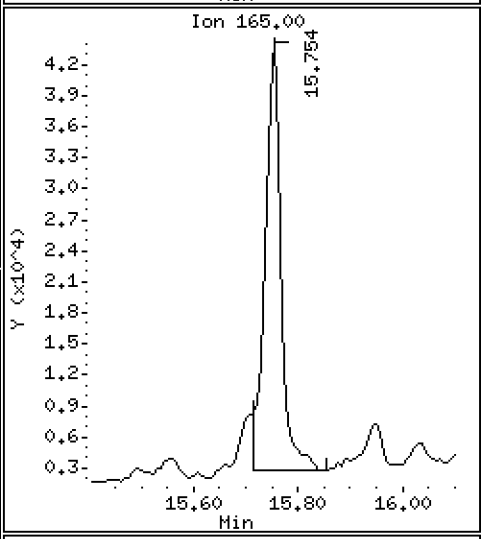
49 Fluorene

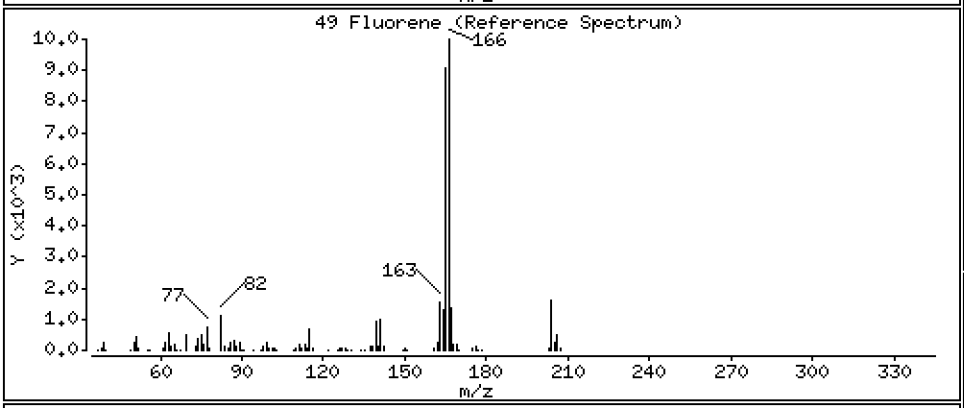
Concentration: 0.2996 ug/mL

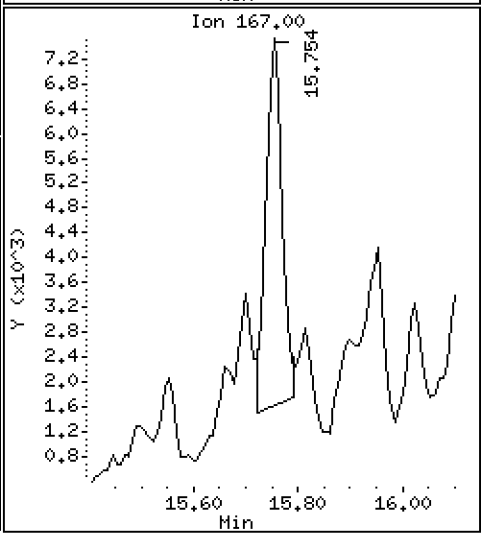


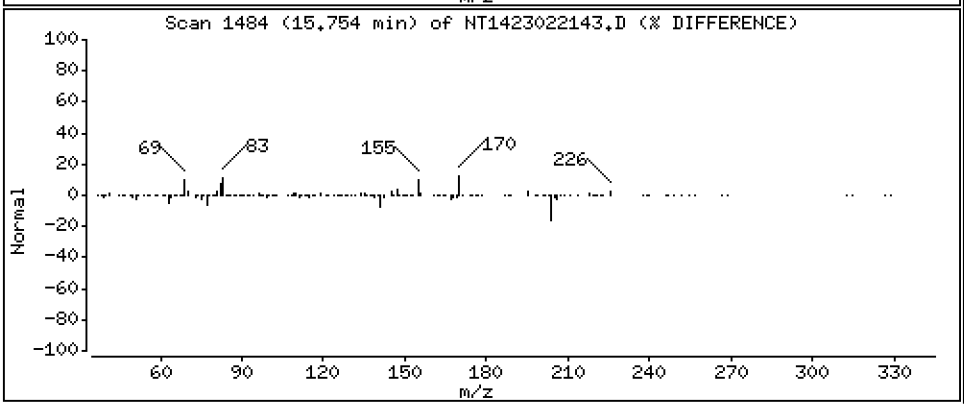












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

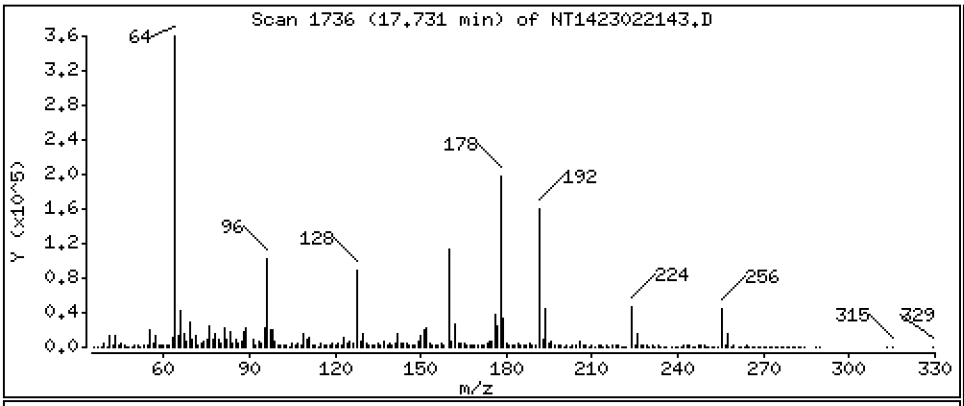
Operator: DSD

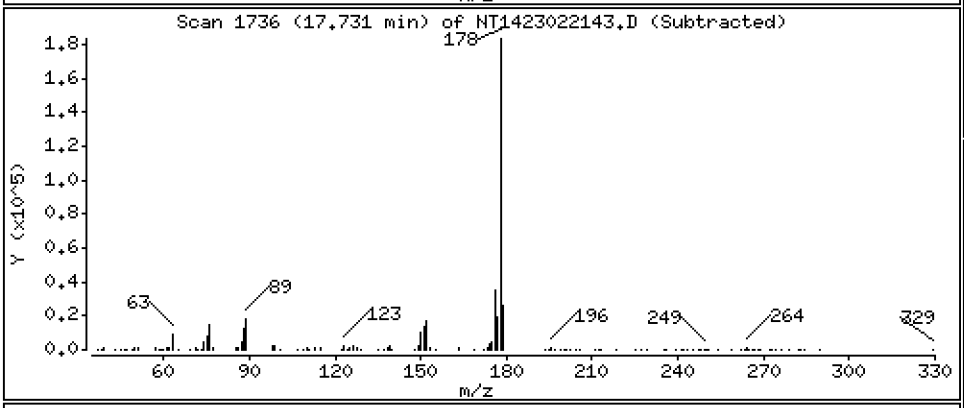
Column phase: ZB-5msi

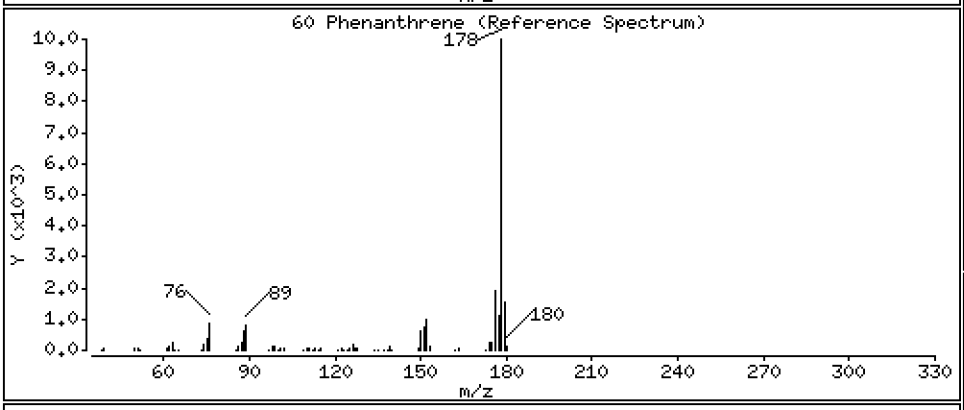
Column diameter: 0.25

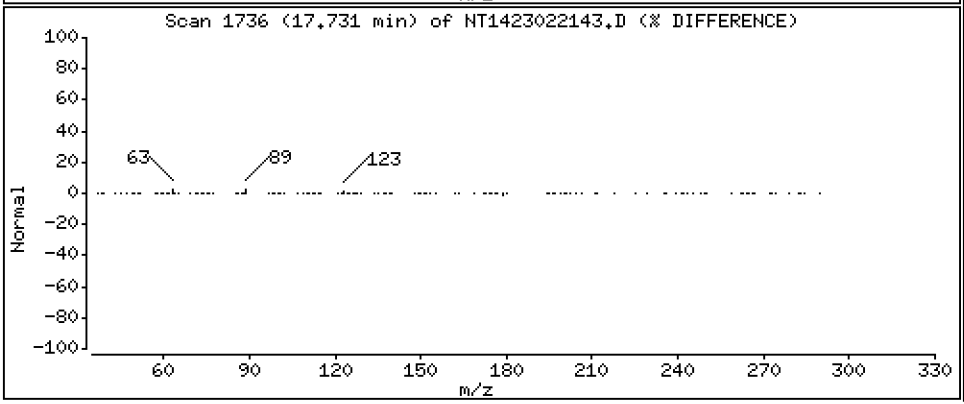
60 Phenanthrene

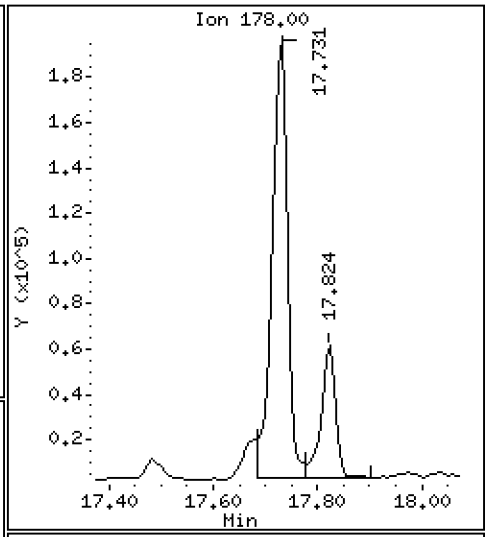
Concentration: 1.474 ug/mL

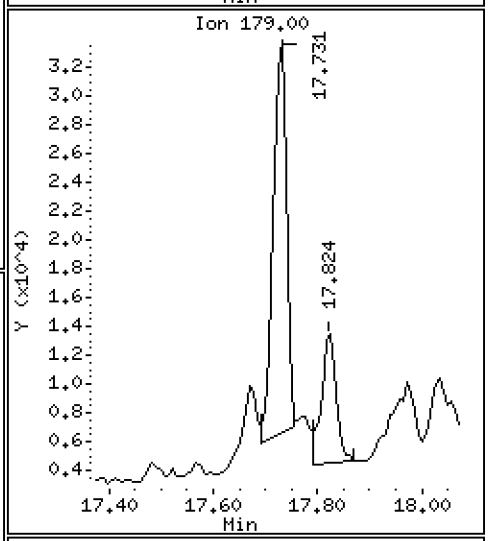


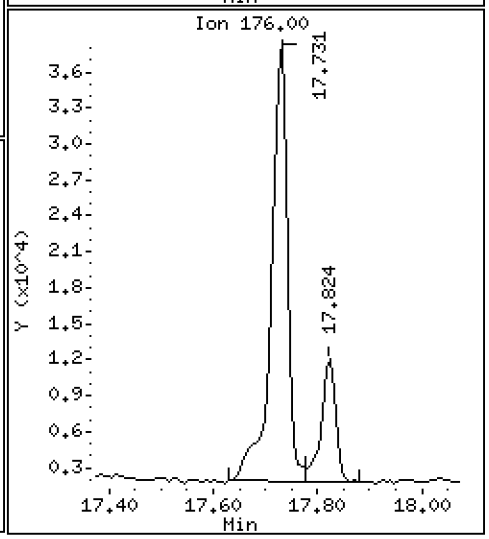












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022143.D

Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

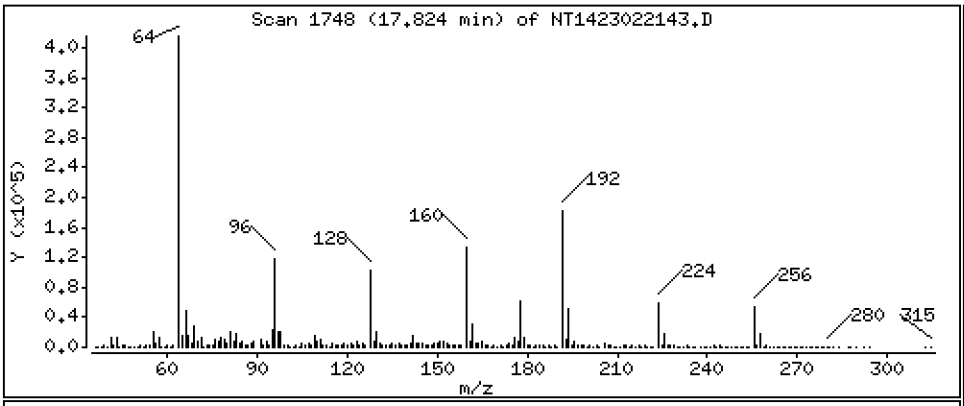
Operator: DSD

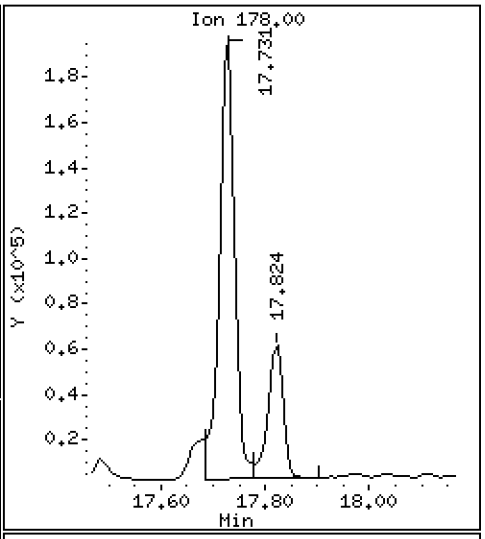
Column phase: ZB-5msi

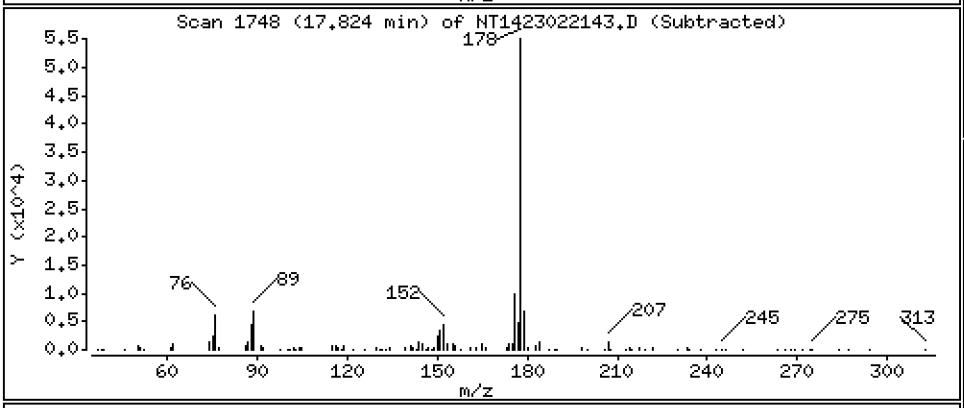
Column diameter: 0.25

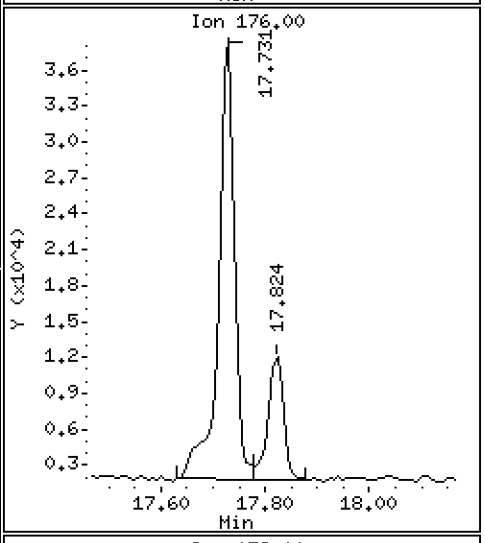
61 Anthracene

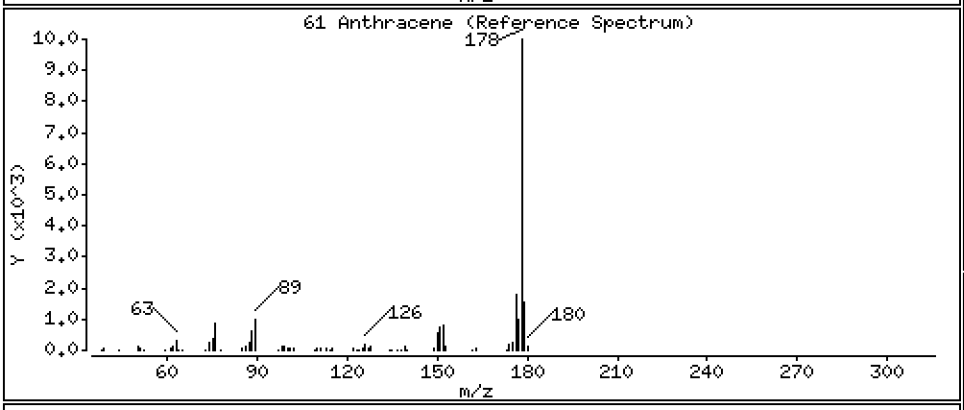
Concentration: 0.4459 ug/mL

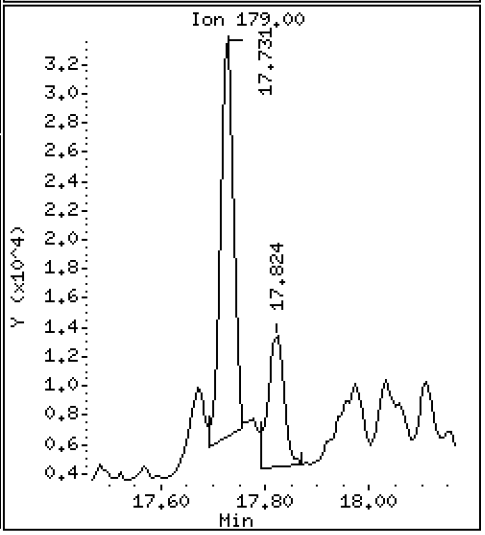


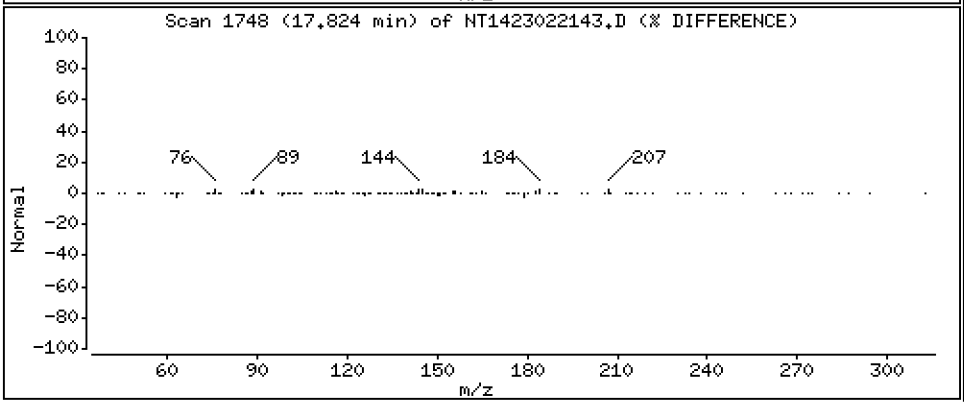












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

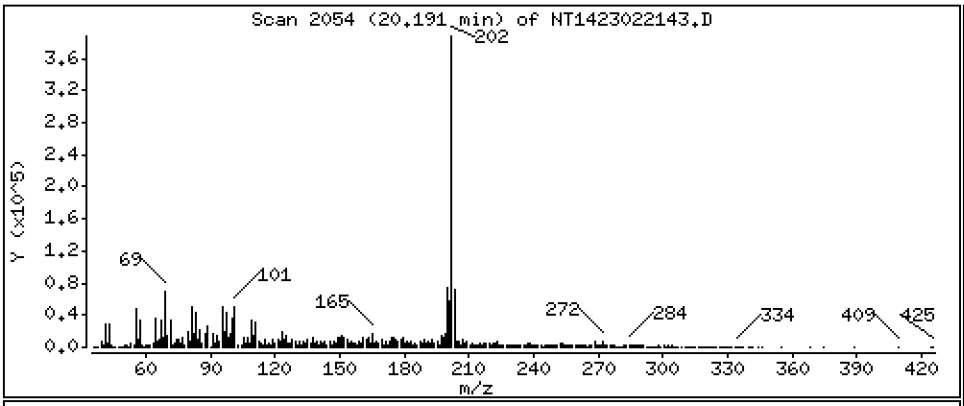
Operator: DSD

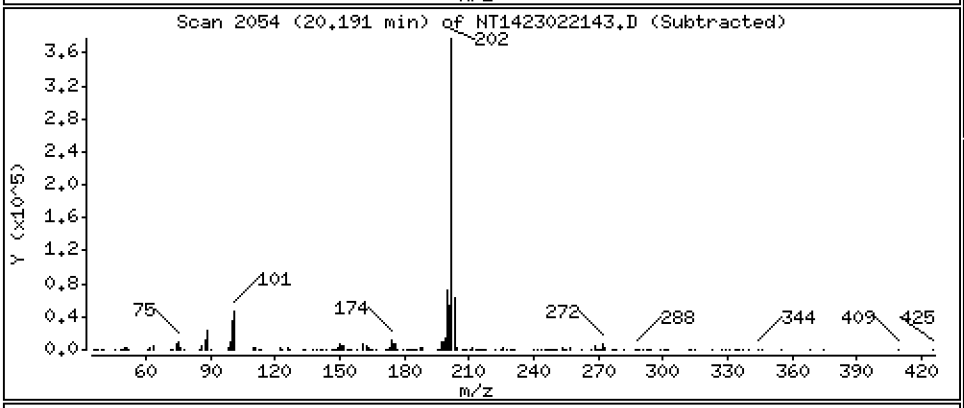
Column phase: ZB-5msi

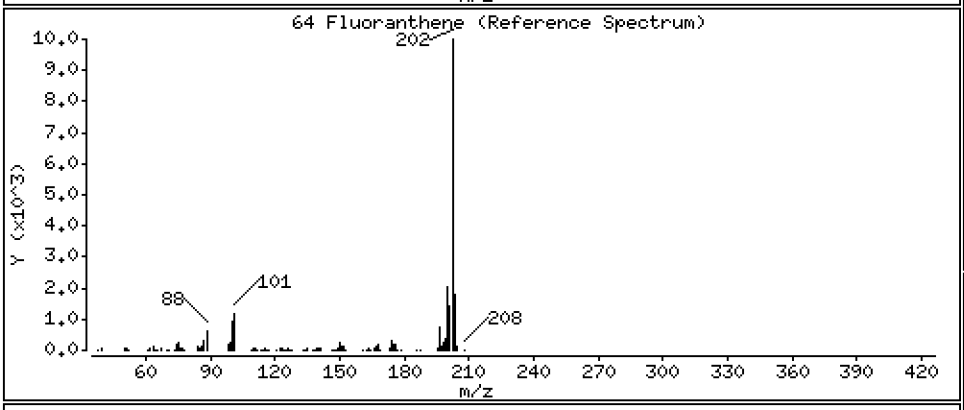
Column diameter: 0.25

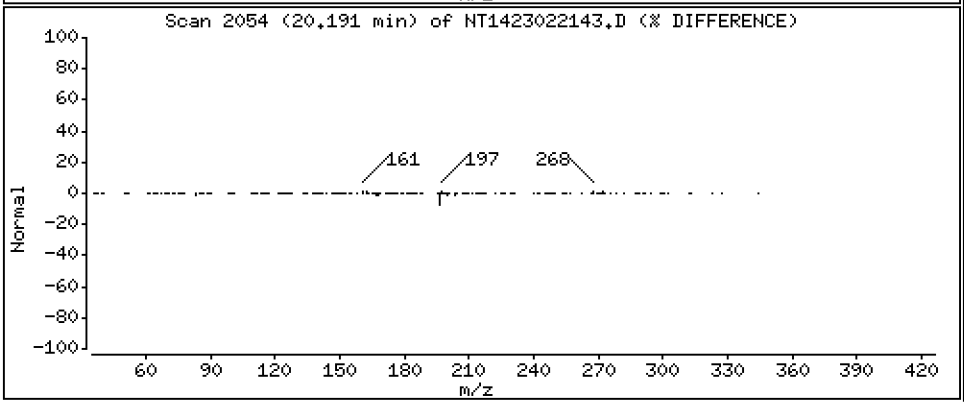
64 Fluoranthene

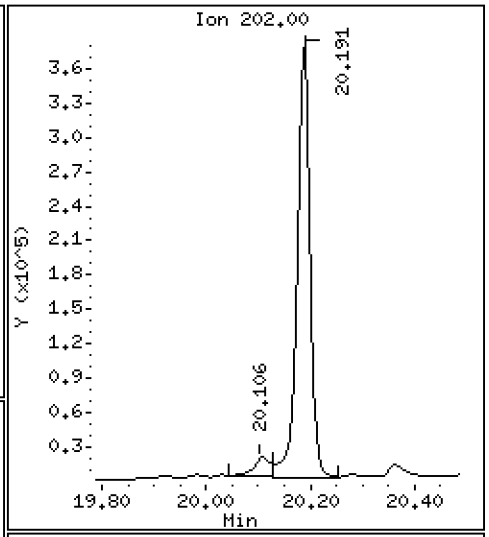
Concentration: 2.069 ug/mL

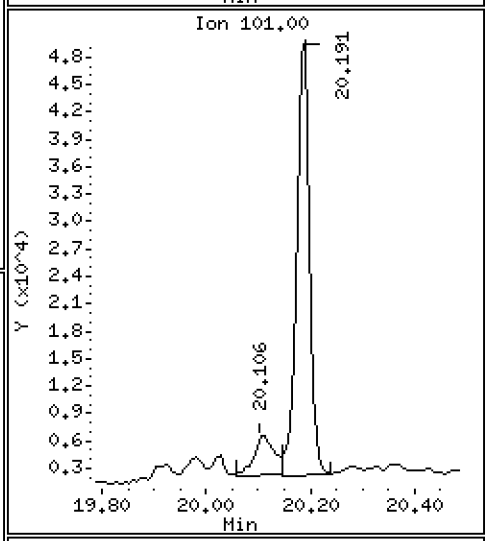


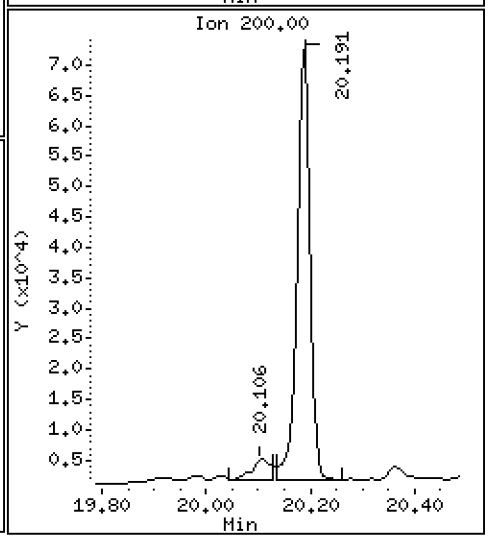












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

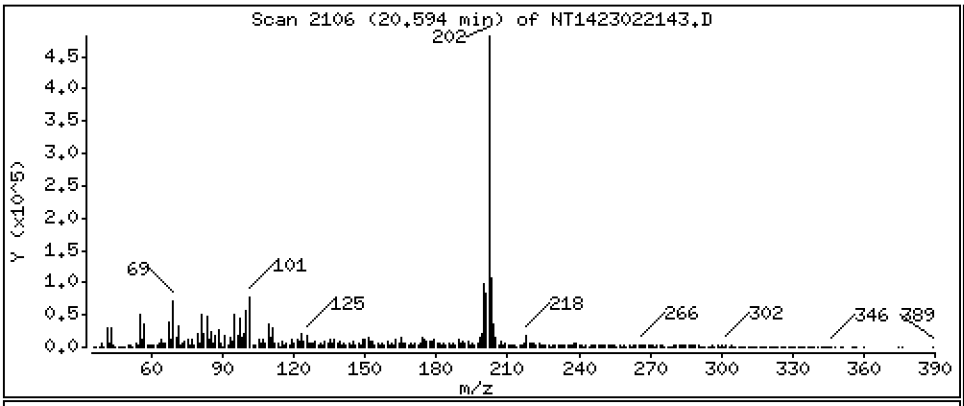
Operator: DSD

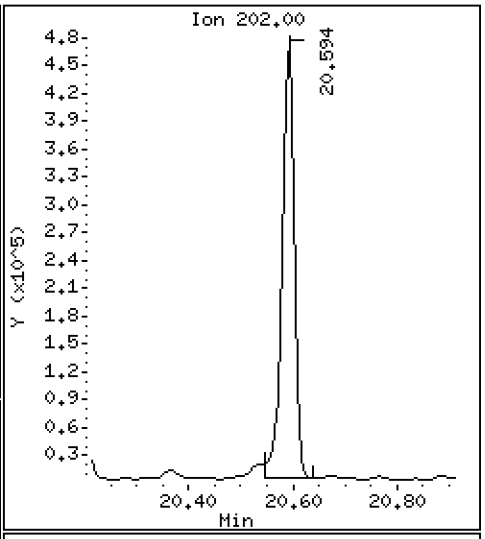
Column phase: ZB-5msi

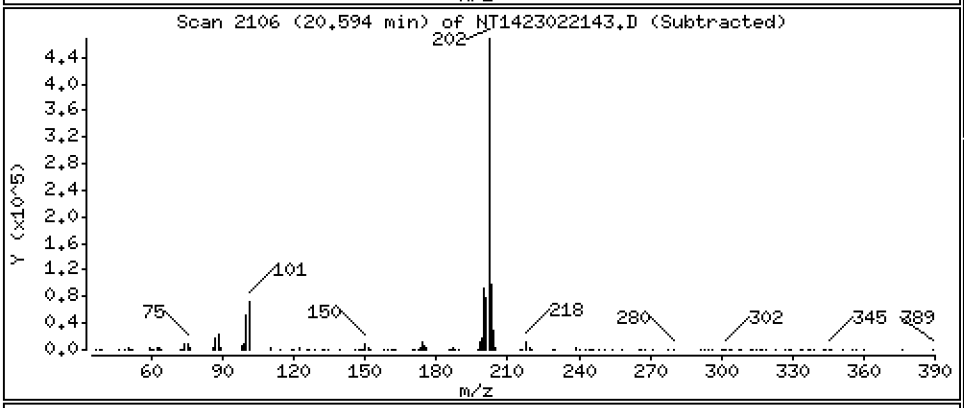
Column diameter: 0.25

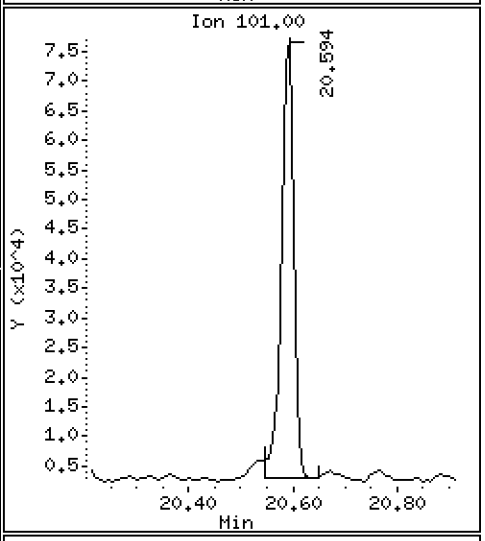
65 Pyrene

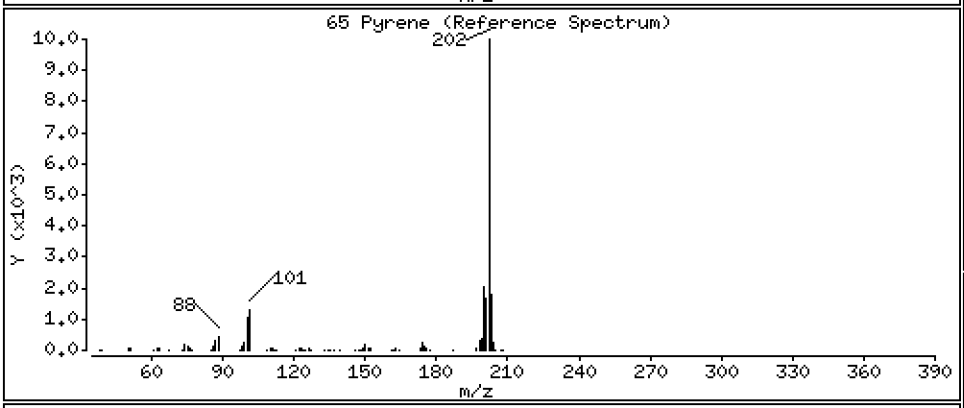
Concentration: 2.322 ug/mL

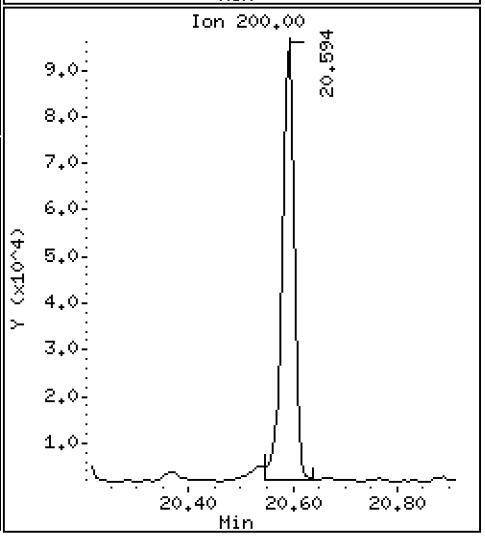


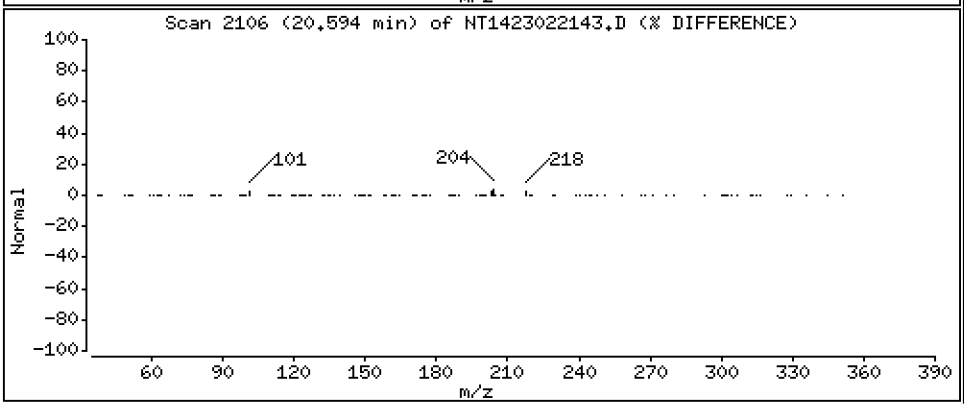












Date : 22-FEB-2023 14:46

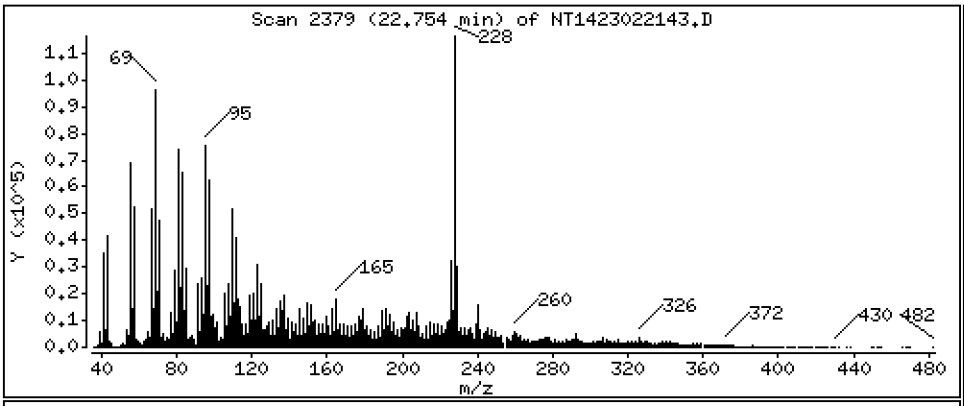
Client ID: Instrument: nt14.i

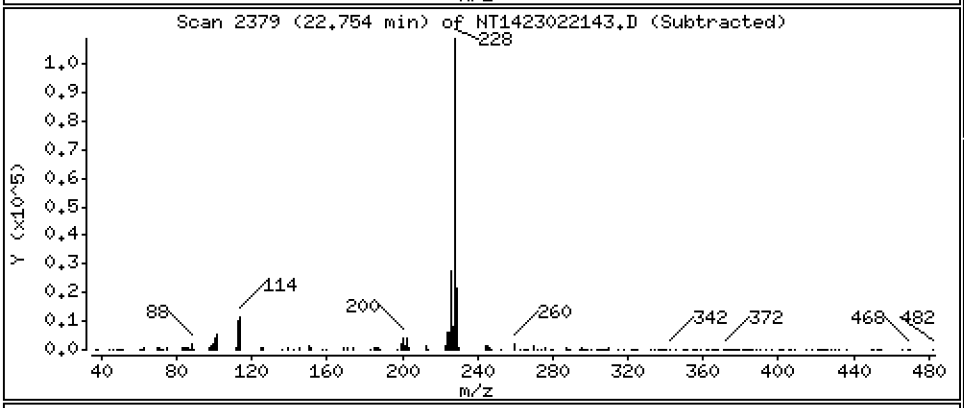
Sample Info: 23A0133-07

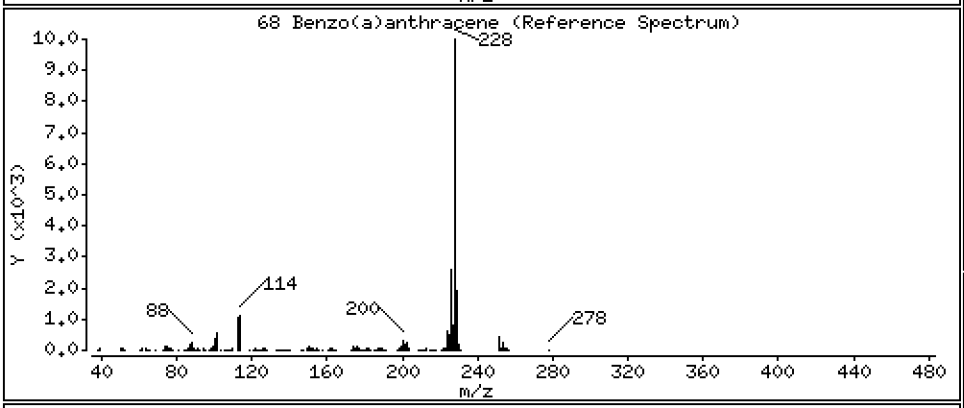
Operator: DSD

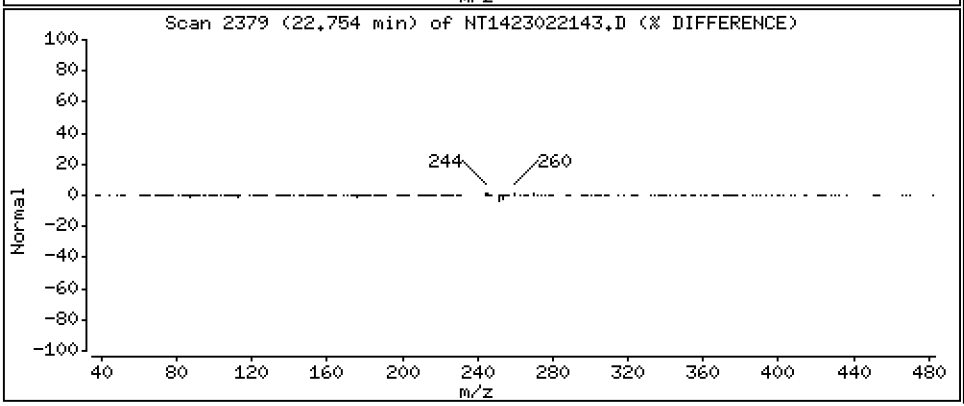
Column phase: ZB-5msi Column diameter: 0.25

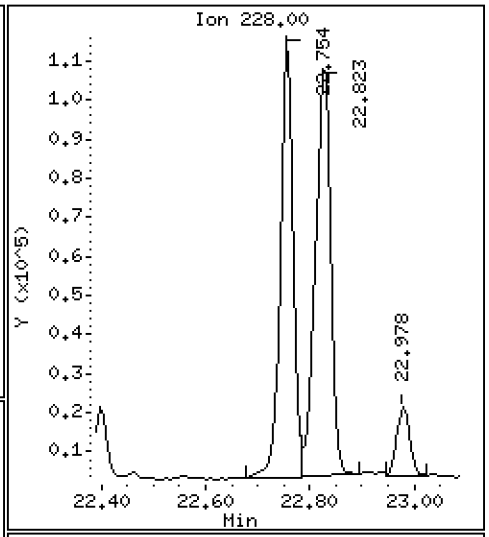
68 Benzo(a)anthracene Concentration: 0.8157 ug/mL

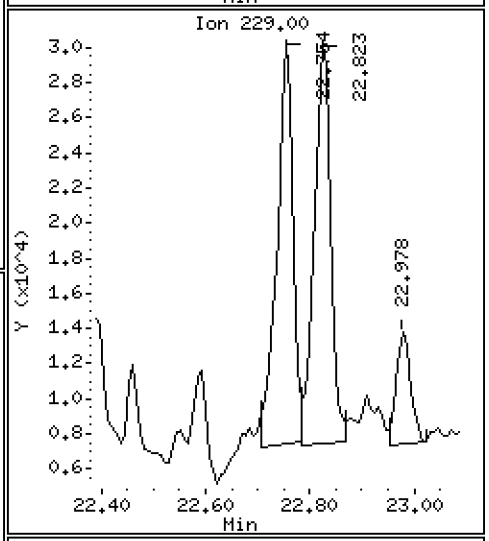


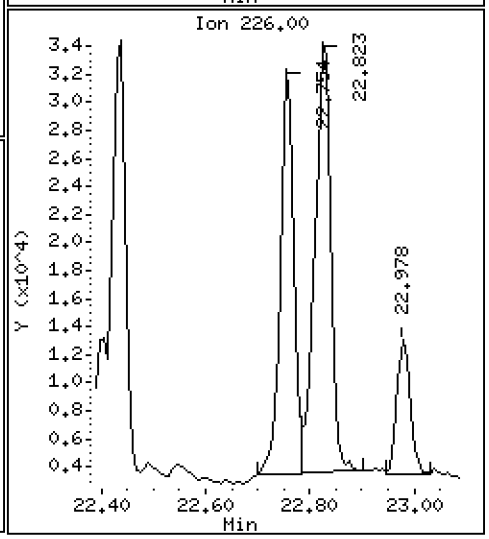












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022143.D

Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

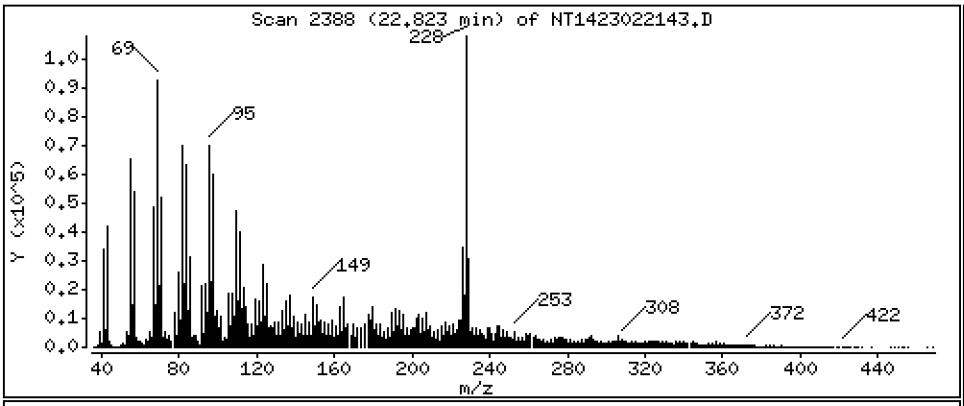
Operator: DSD

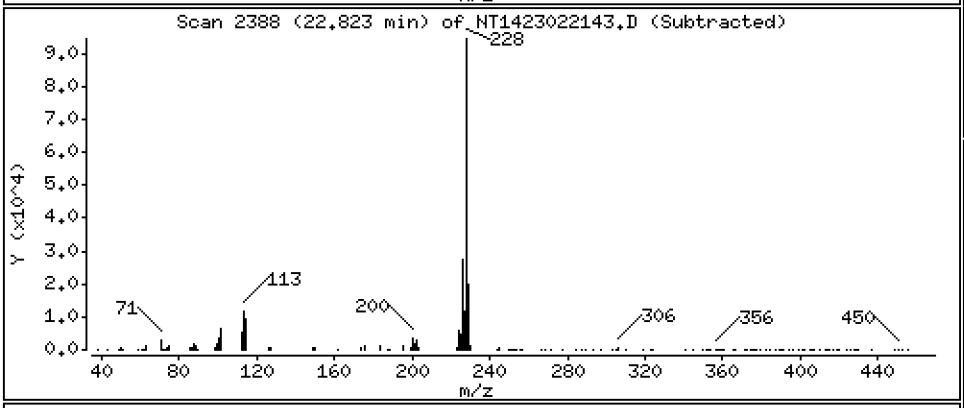
Column phase: ZB-5msi

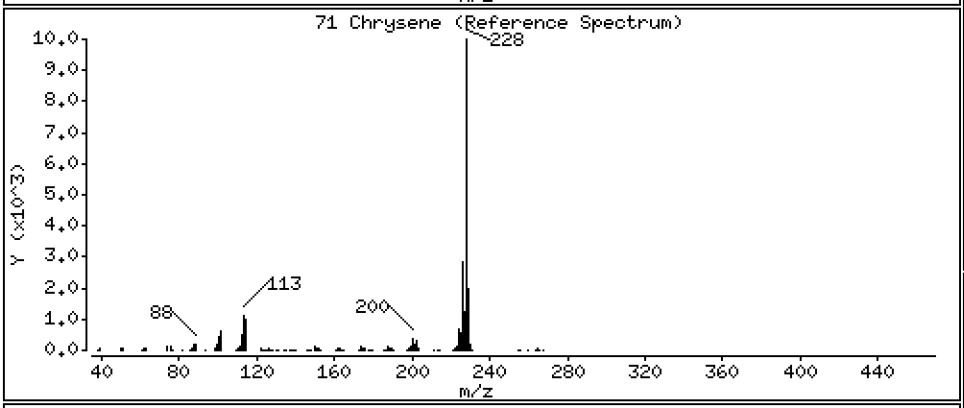
Column diameter: 0.25

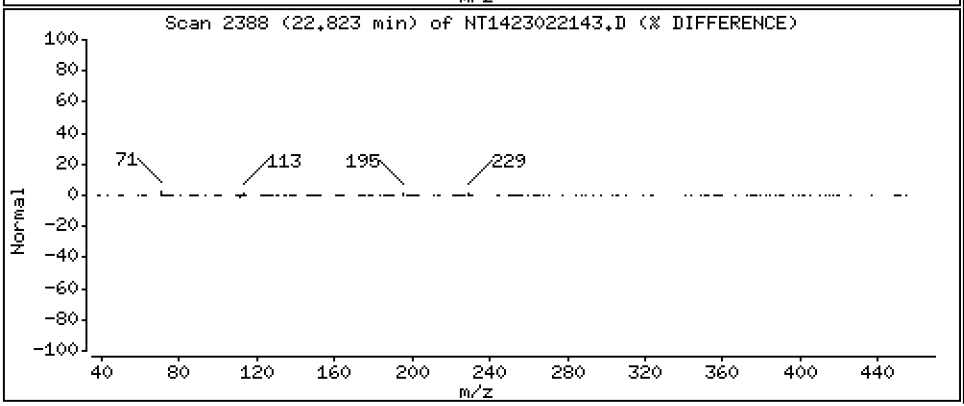
71 Chrysene

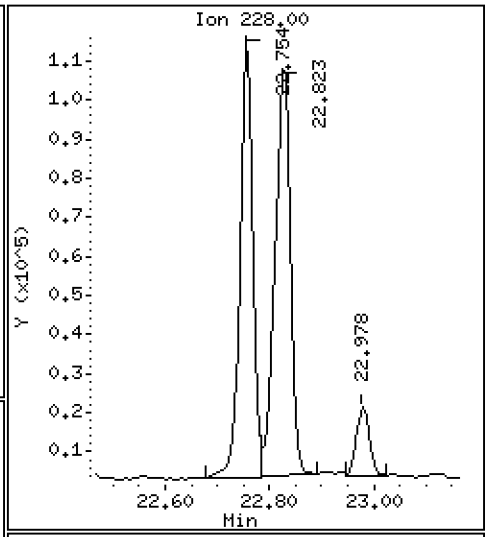
Concentration: 0.9914 ug/mL

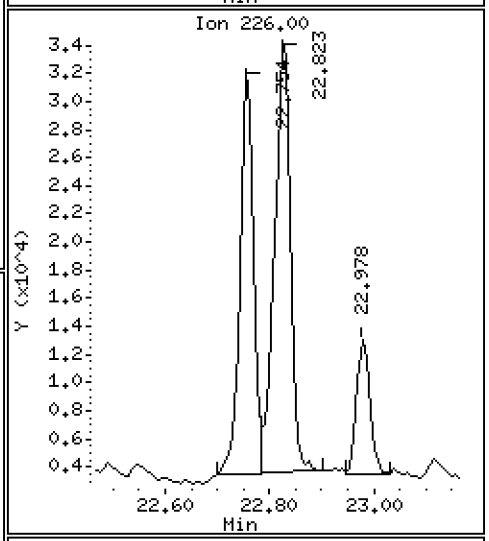


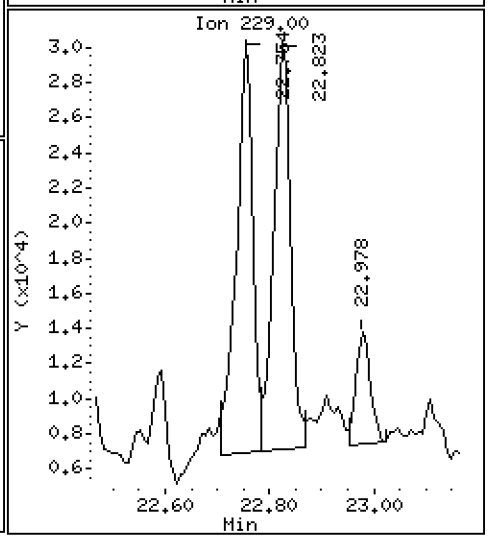












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022143.D

Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

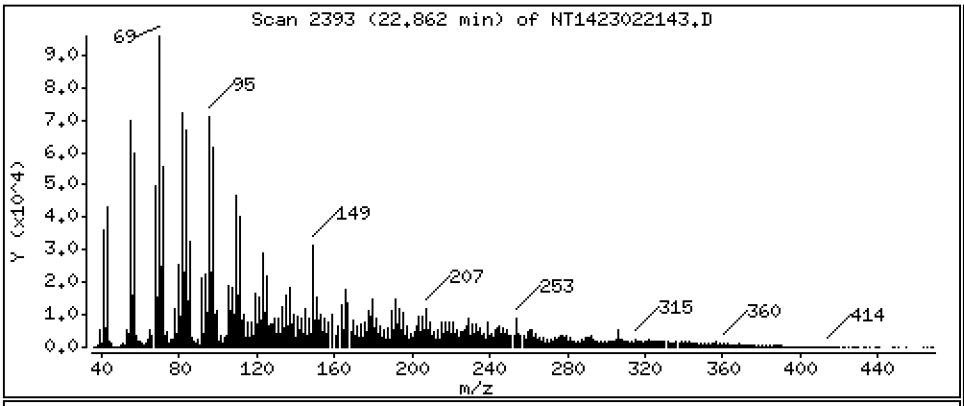
Operator: DSD

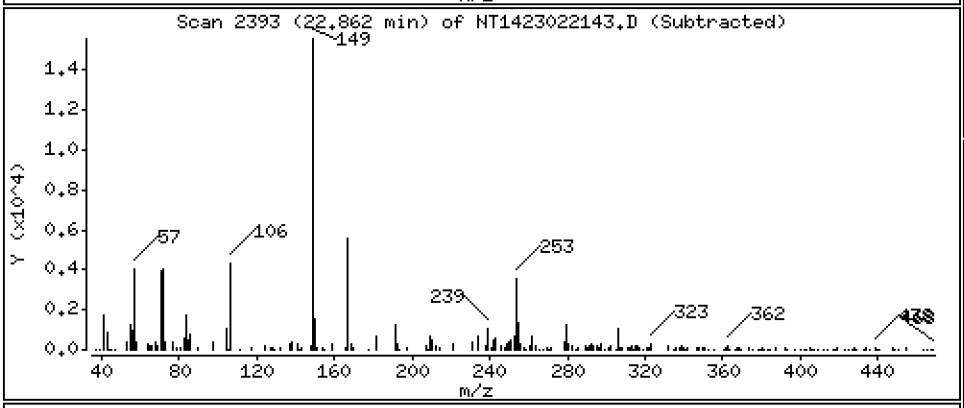
Column phase: ZB-5msi

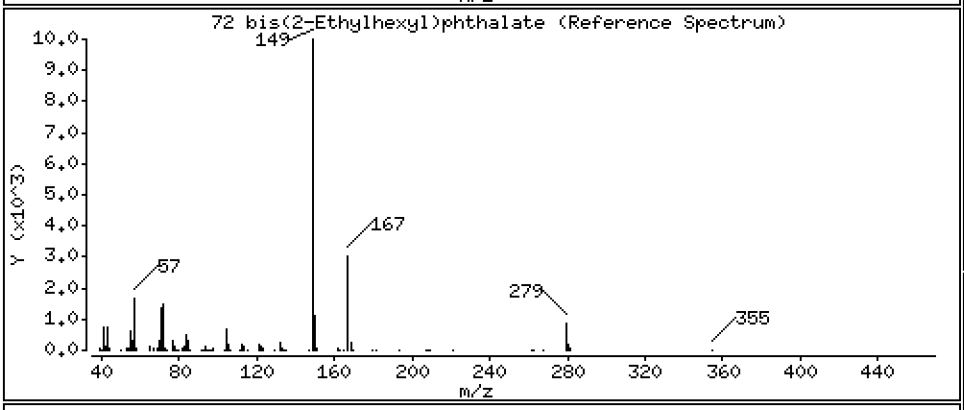
Column diameter: 0.25

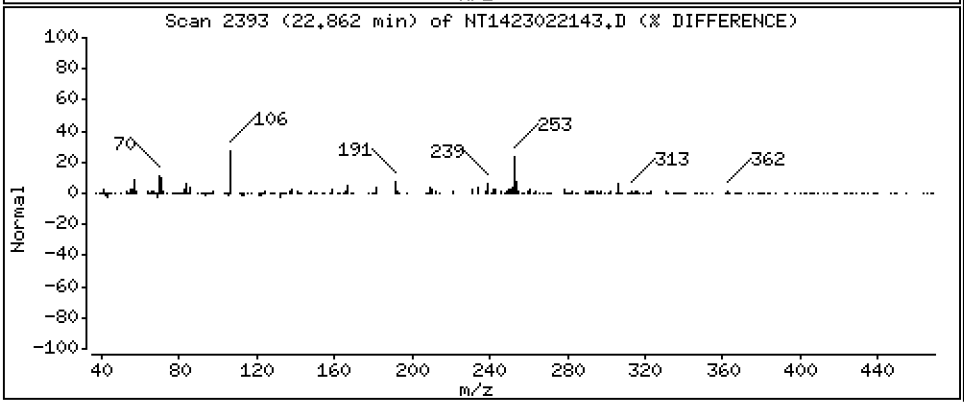
72 bis(2-Ethylhexyl)phthalate

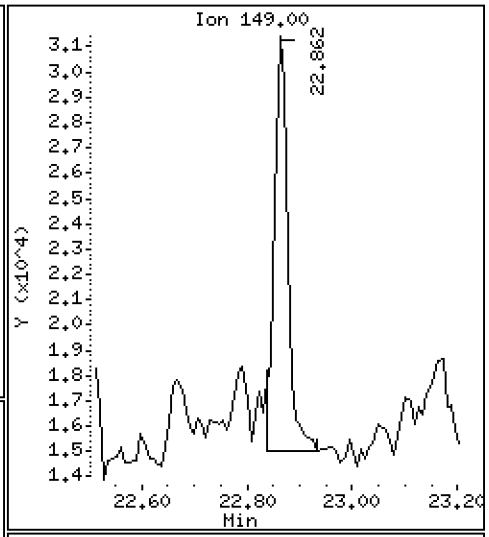
Concentration: 0.1482 ug/mL

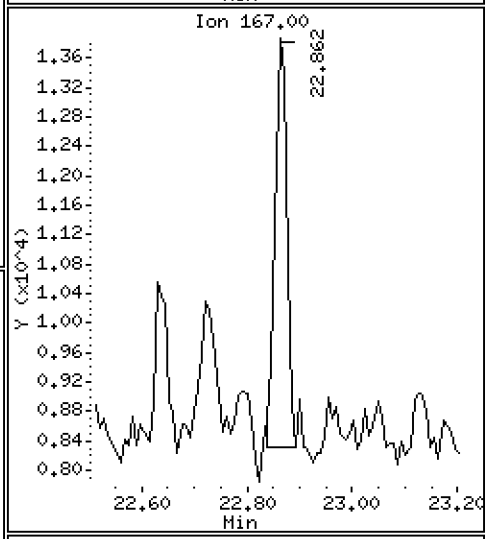


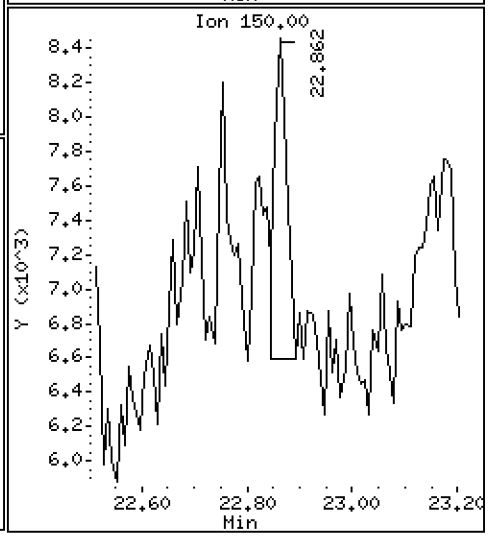












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

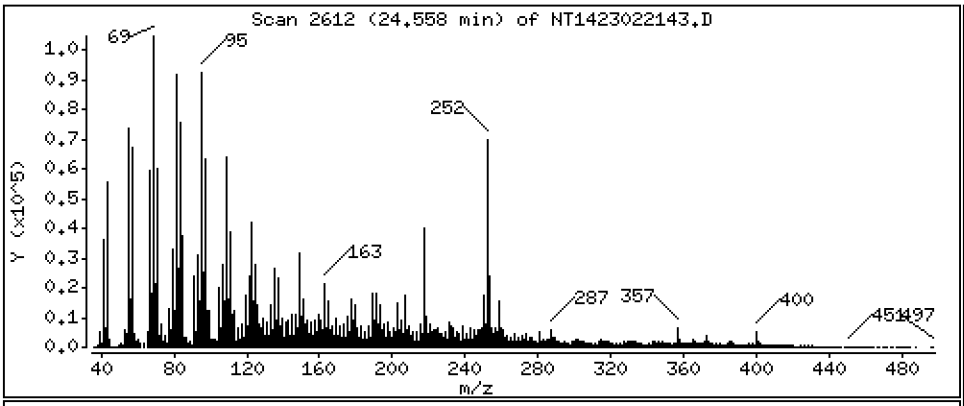
Operator: DSD

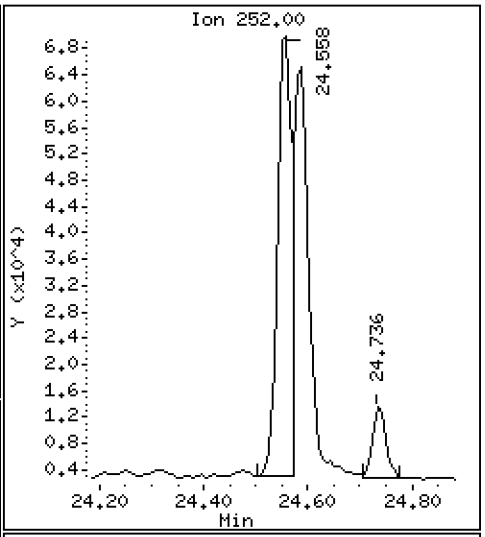
Column phase: ZB-5msi

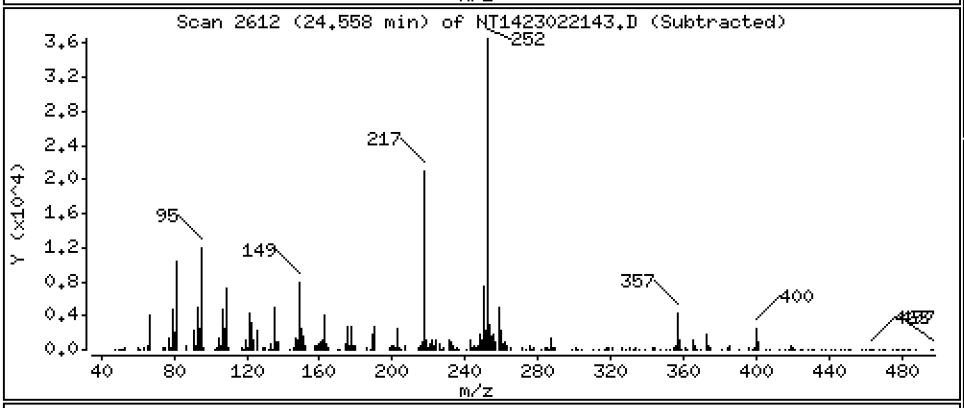
Column diameter: 0.25

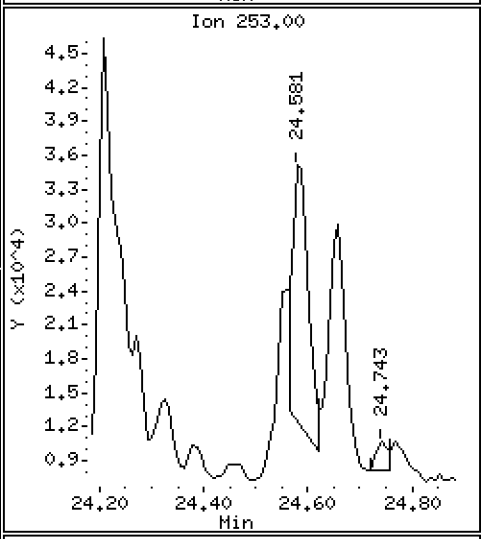
74 Benzo(b)fluoranthene

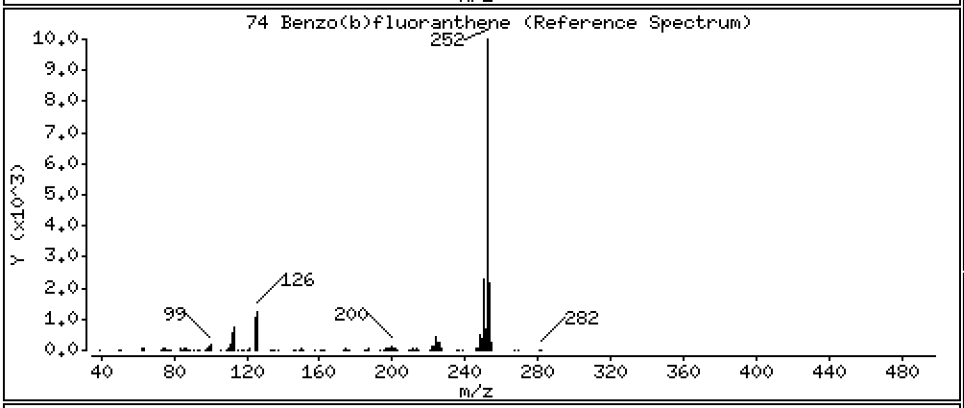
Concentration: 0.7595 ug/mL

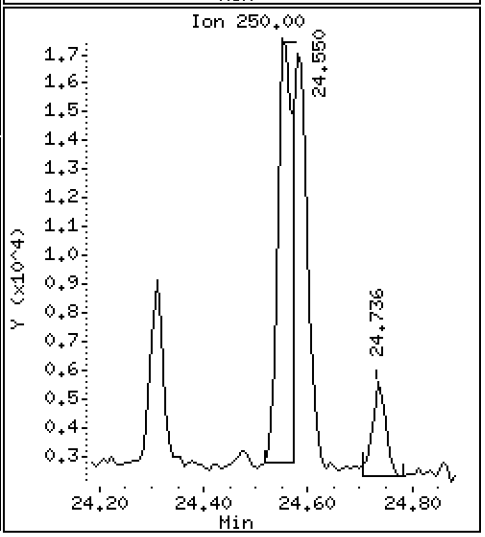


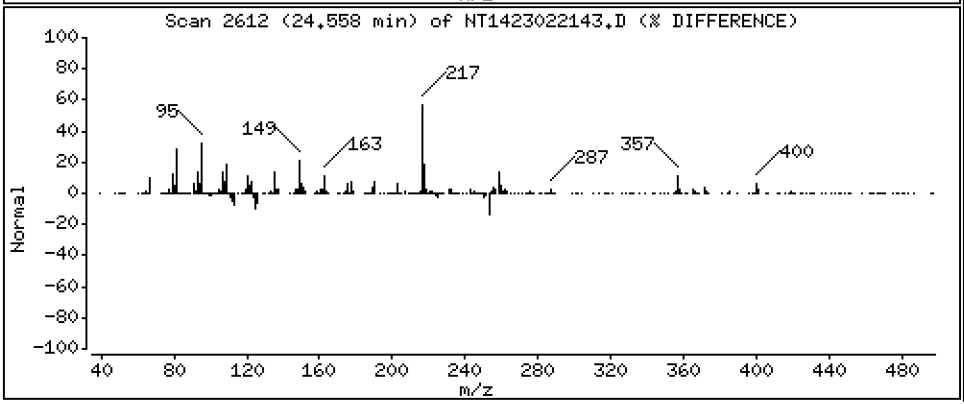












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

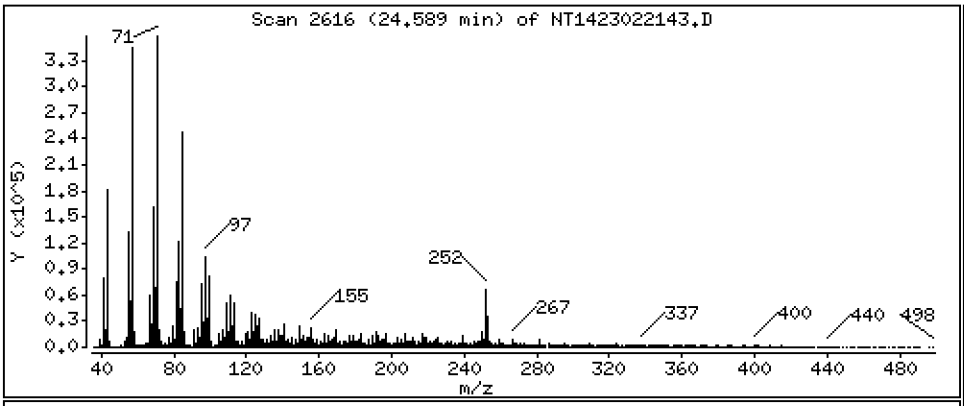
Operator: DSD

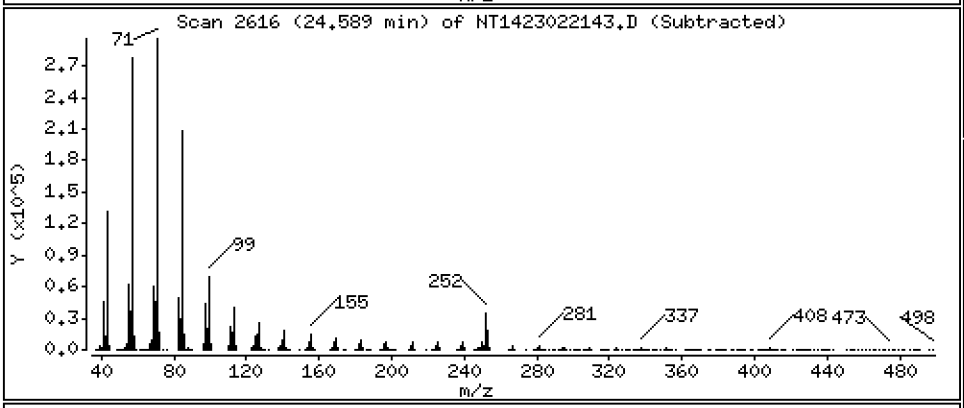
Column phase: ZB-5msi

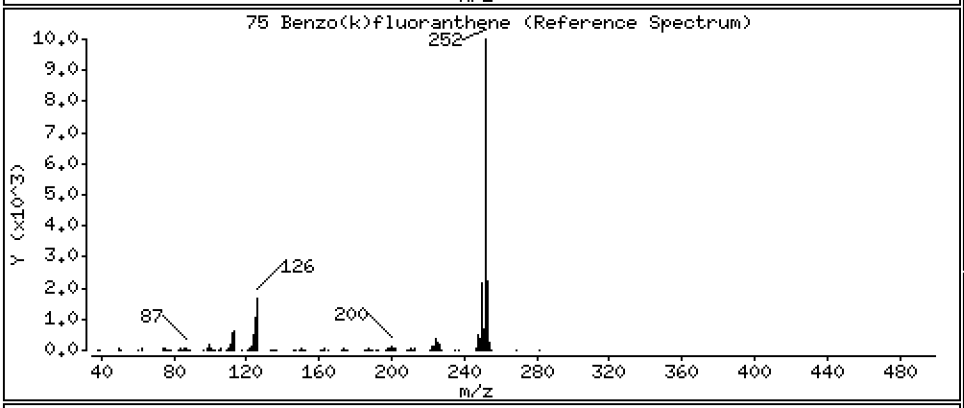
Column diameter: 0.25

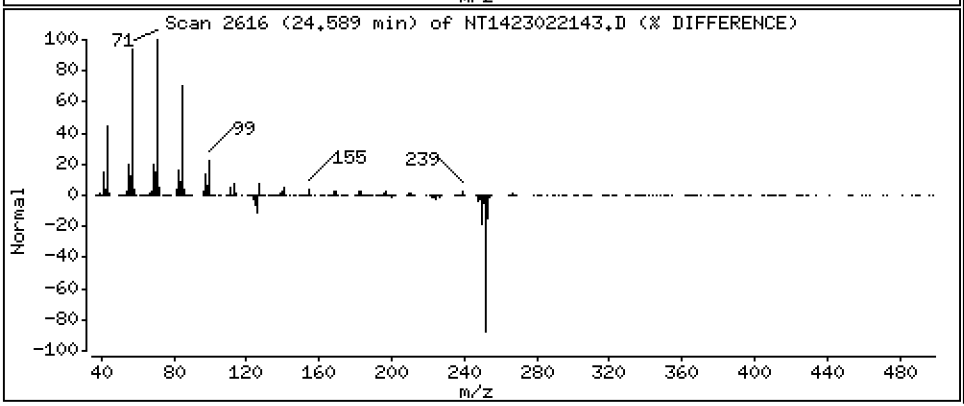
75 Benzo(k)fluoranthene

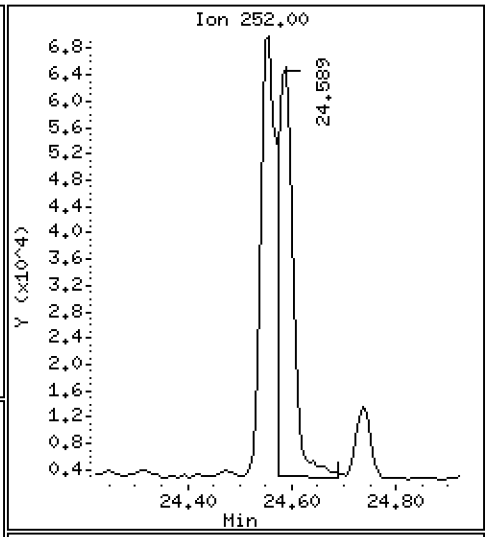
Concentration: 0.6698 ug/mL

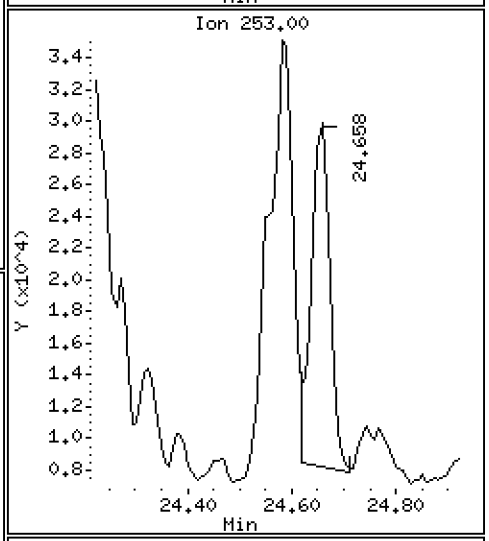


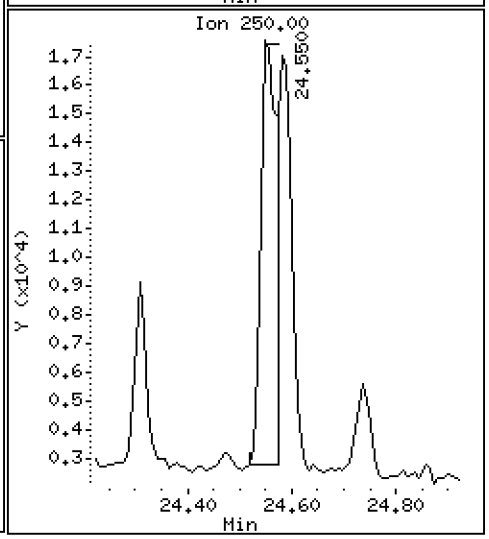












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

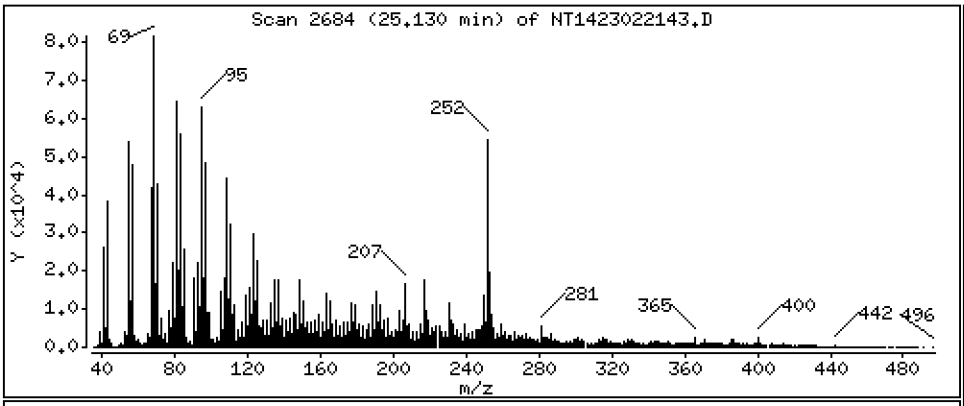
Operator: DSD

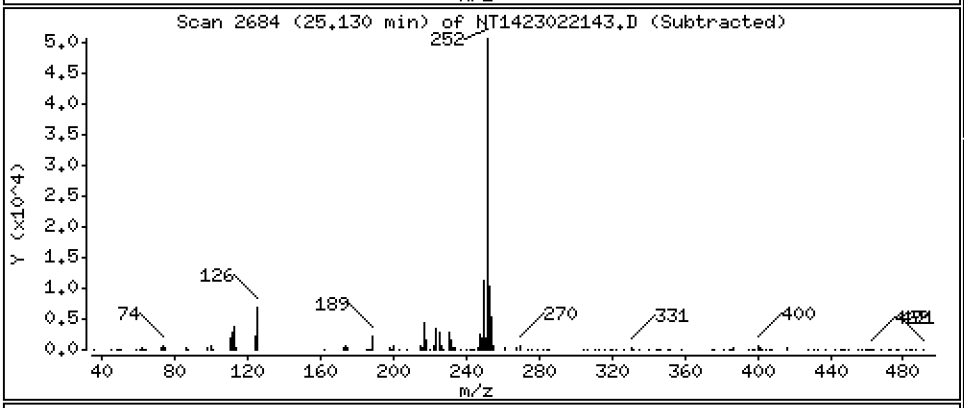
Column phase: ZB-5msi

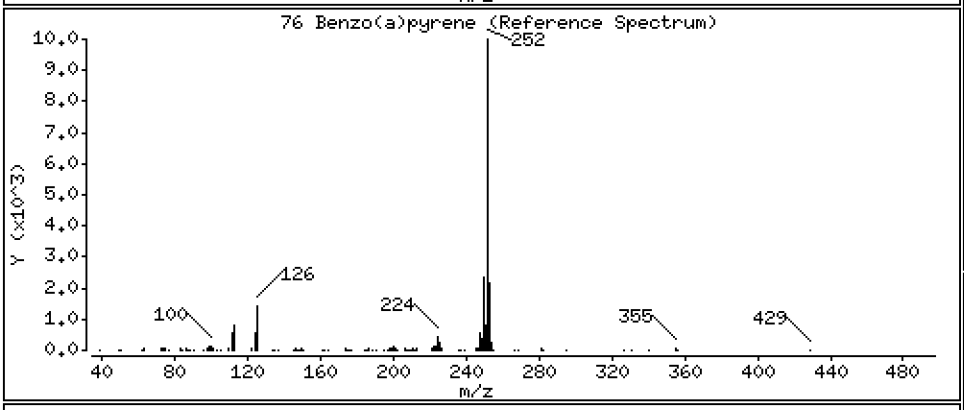
Column diameter: 0.25

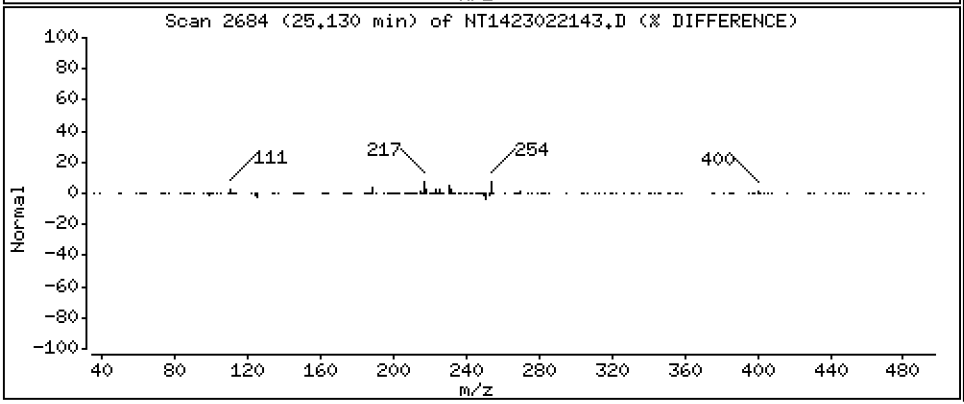
76 Benzo(a)pyrene

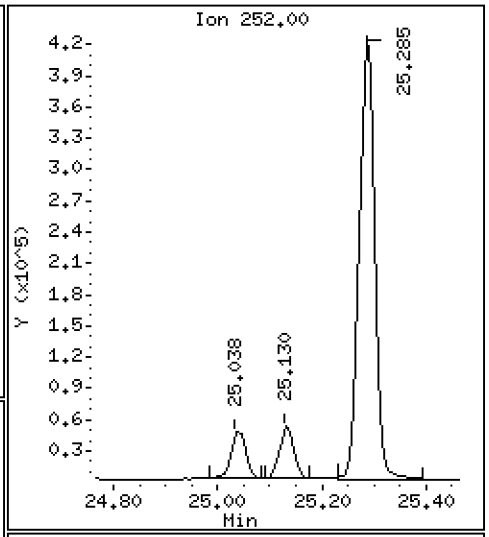
Concentration: 0.5468 ug/mL

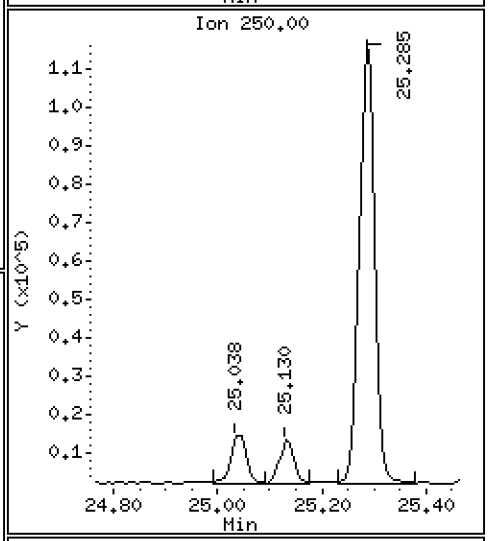


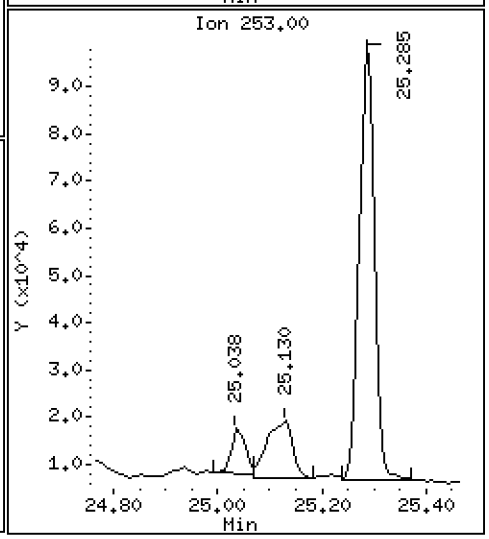












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

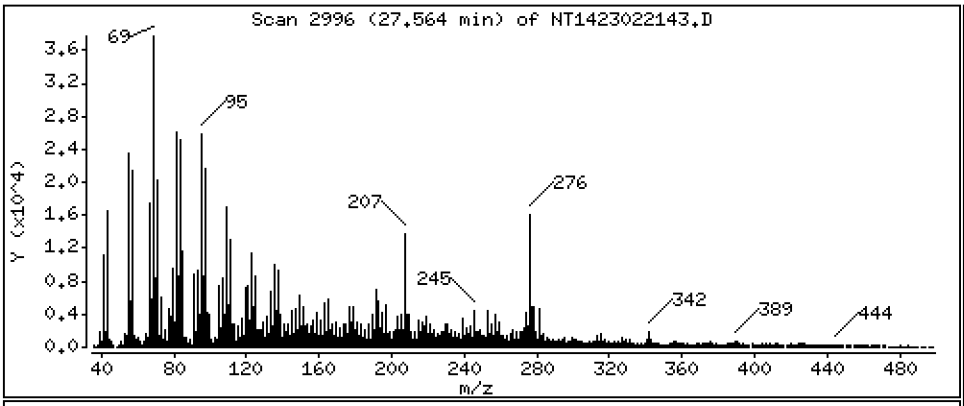
Operator: DSD

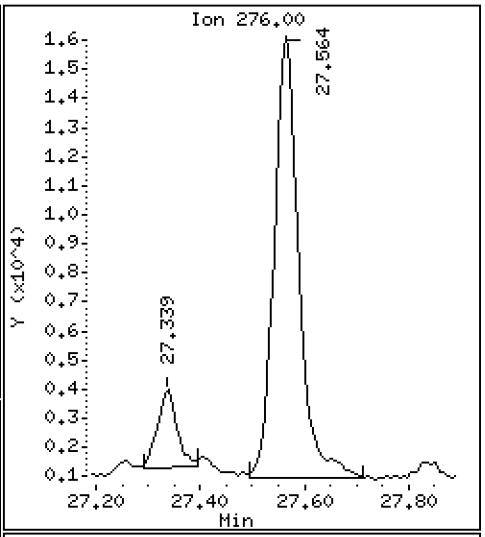
Column phase: ZB-5msi

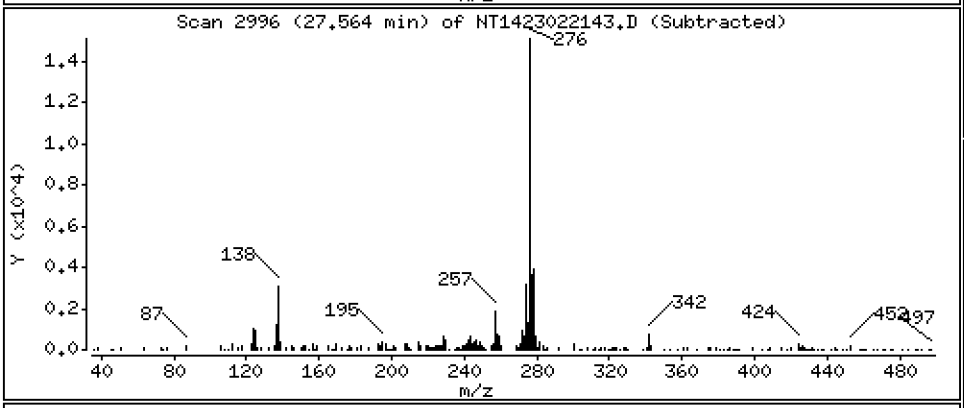
Column diameter: 0.25

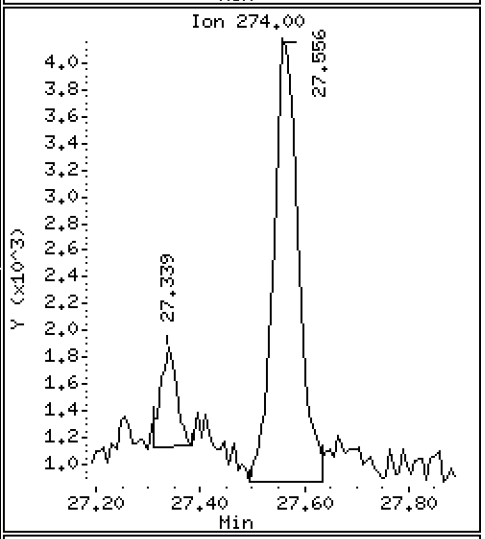
78 Indeno(1,2,3-cd)pyrene

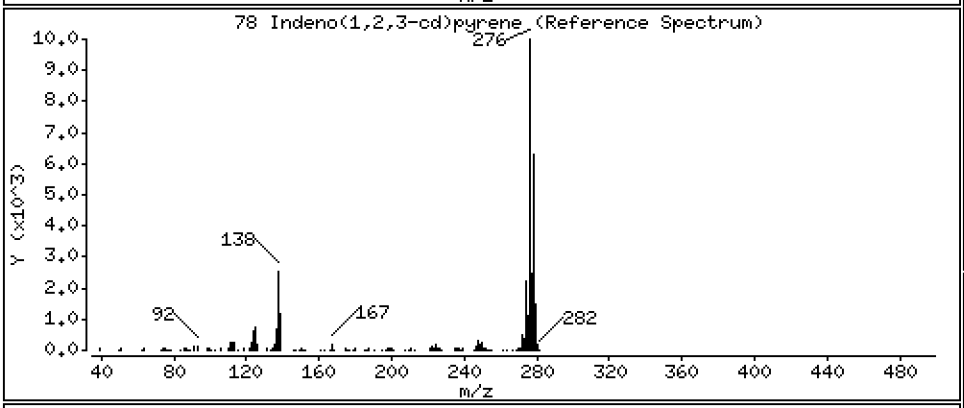
Concentration: 0.3552 ug/mL

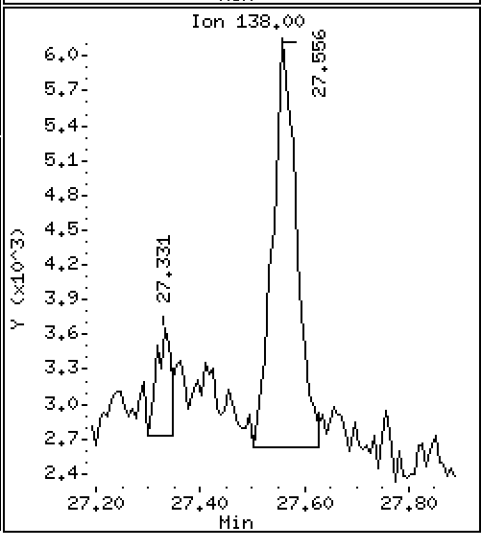


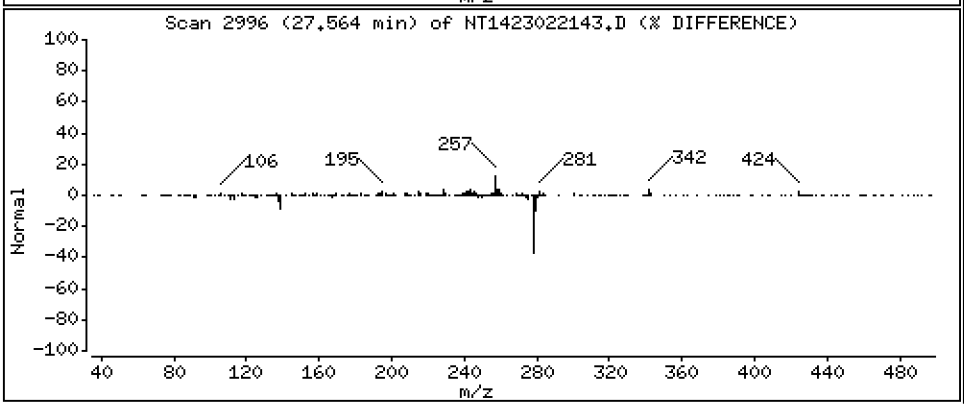












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

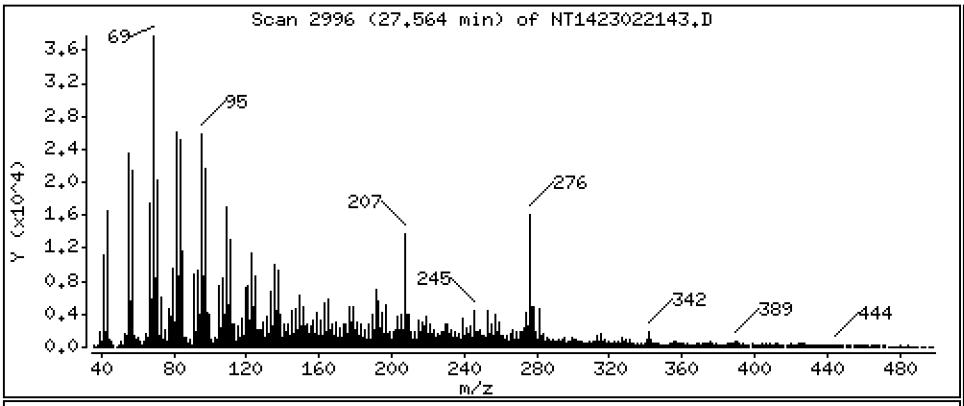
Operator: DSD

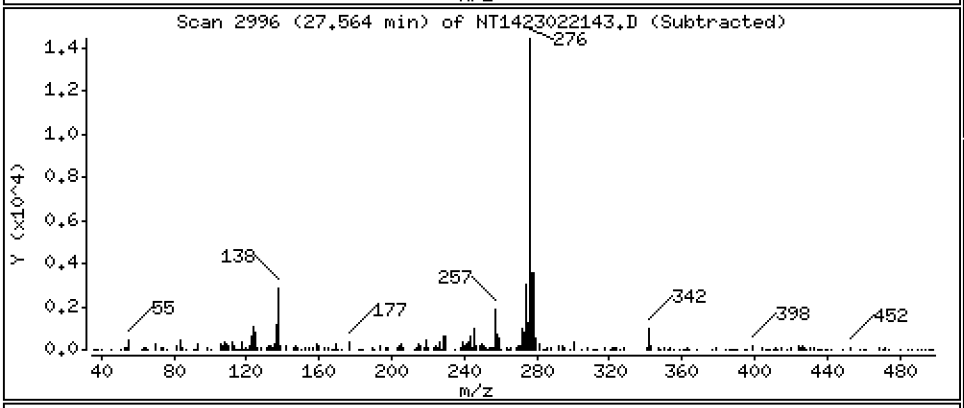
Column phase: ZB-5msi

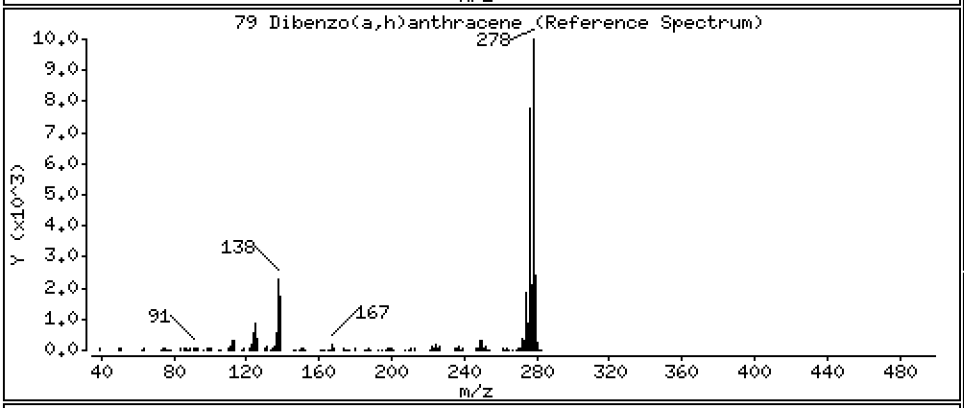
Column diameter: 0.25

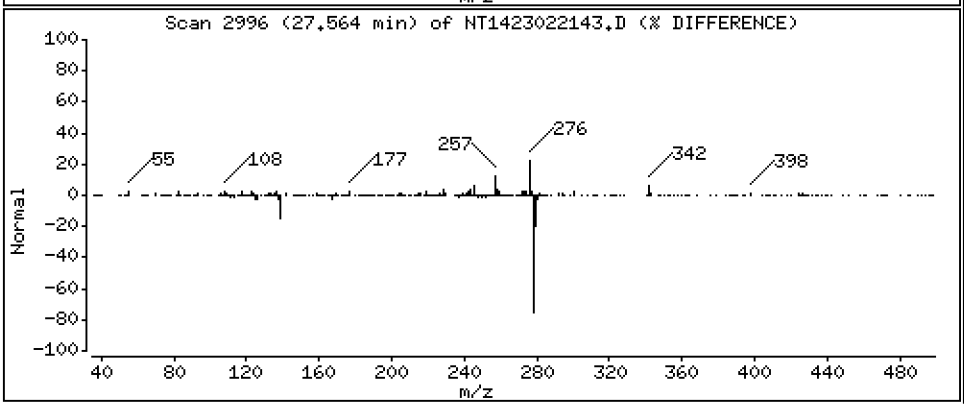
79 Dibenzo(a,h)anthracene

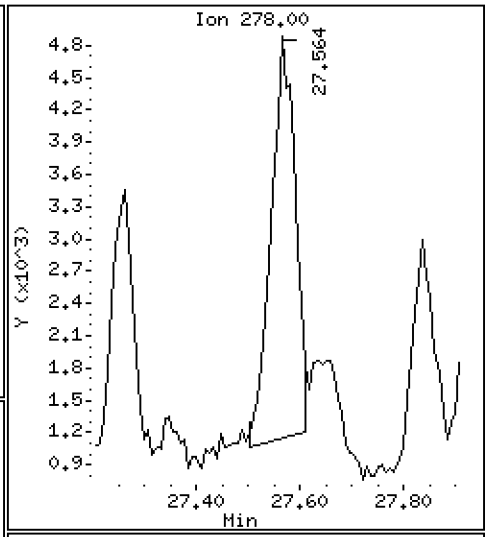
Concentration: 0.1040 ug/mL

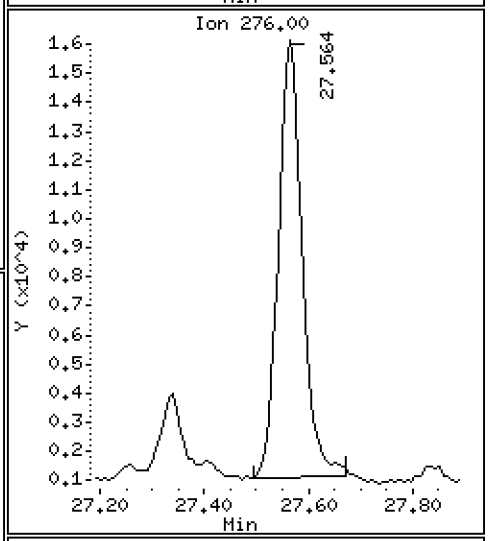


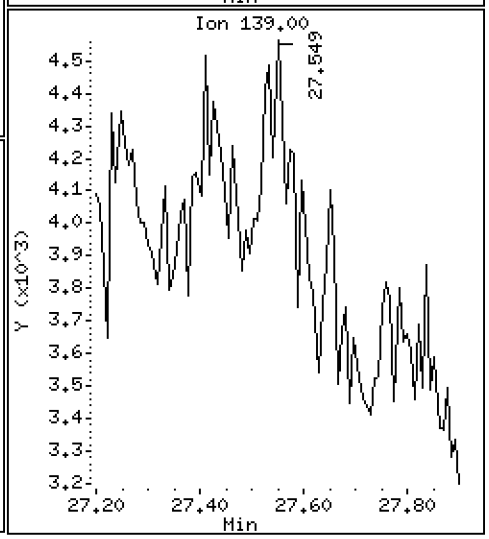












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

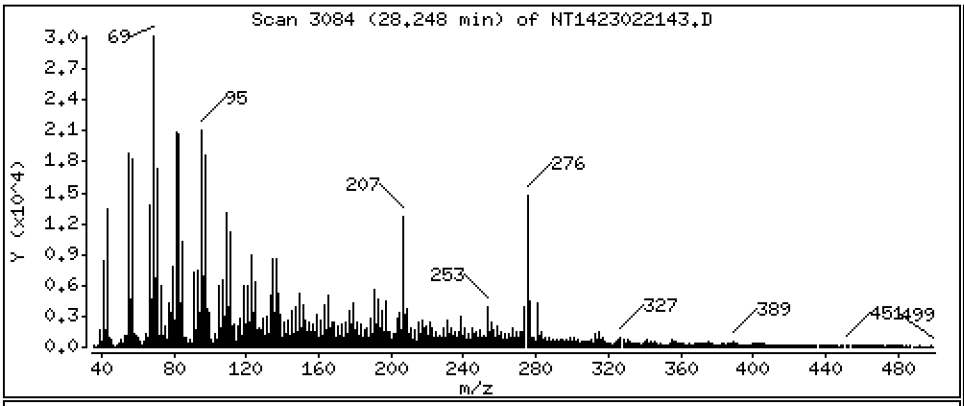
Operator: DSD

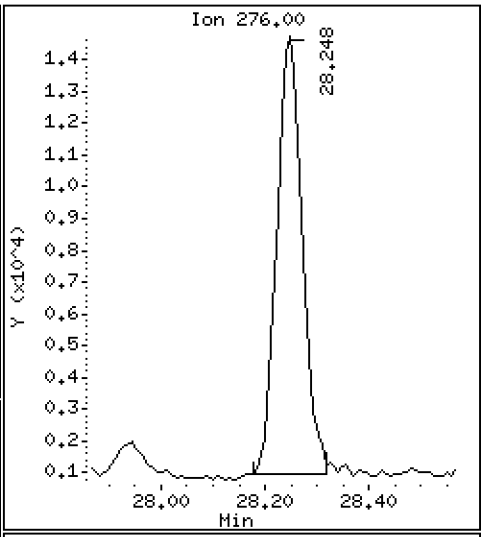
Column phase: ZB-5msi

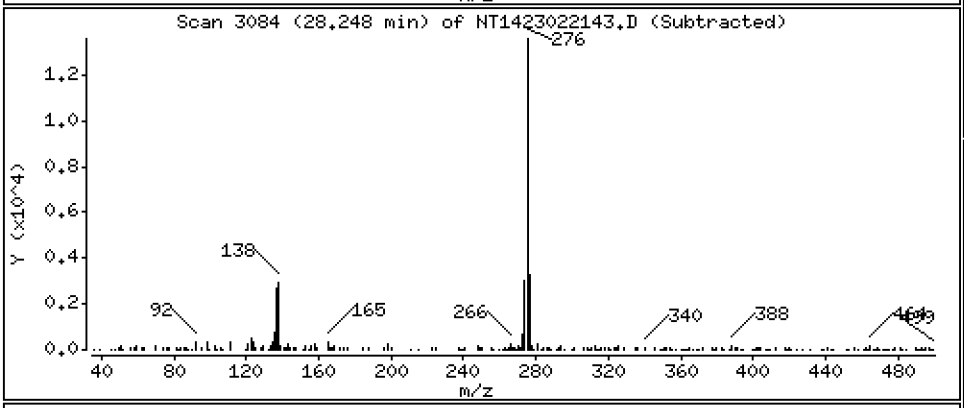
Column diameter: 0.25

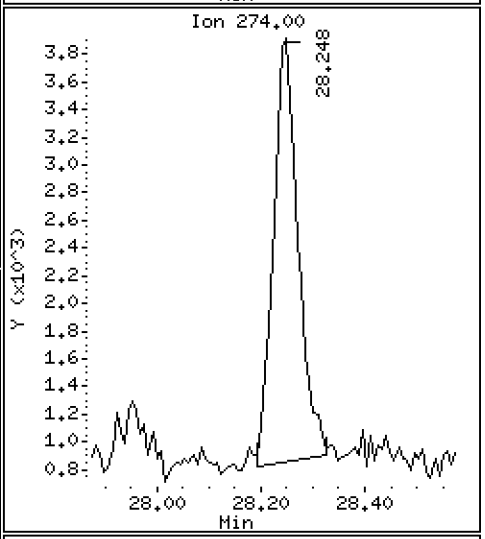
80 Benzo(g,h,i)perylene

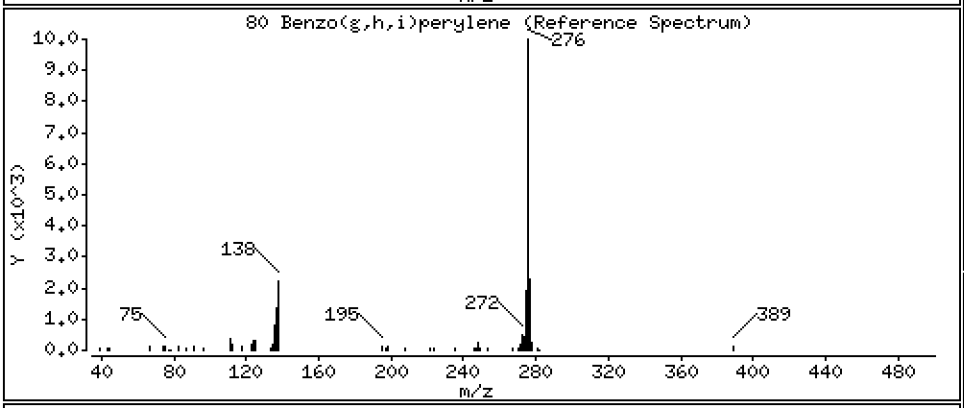
Concentration: 0.4119 ug/mL

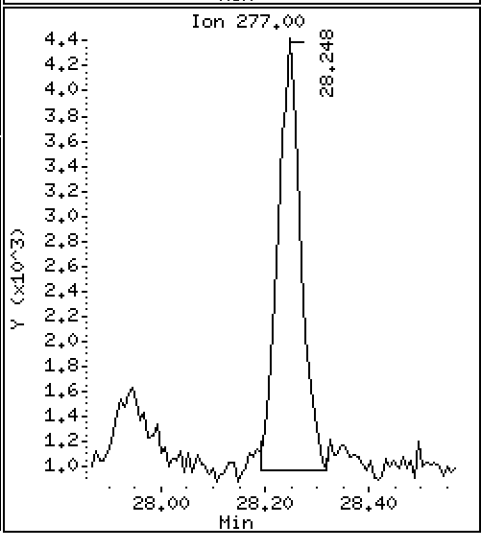


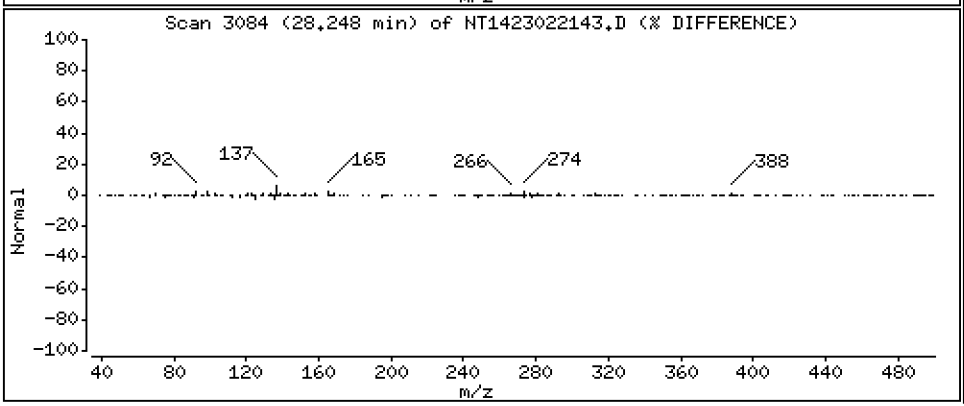












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

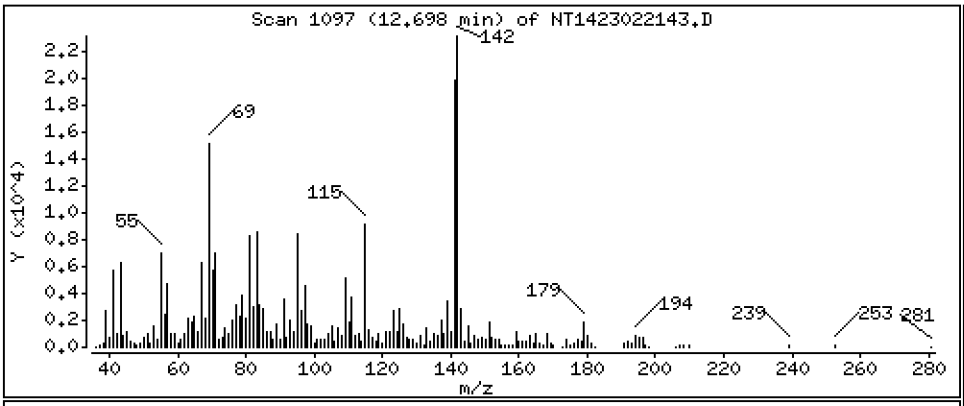
Operator: DSD

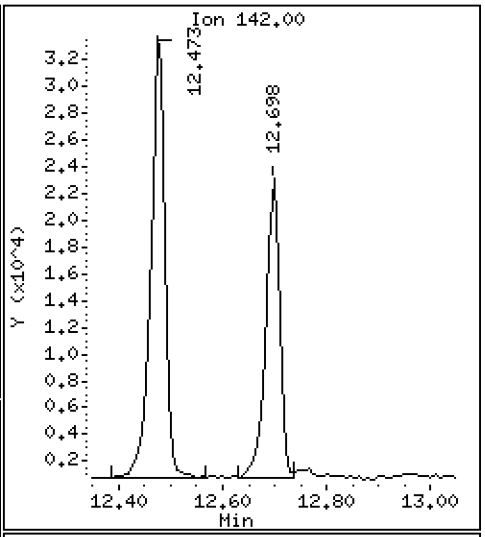
Column phase: ZB-5msi

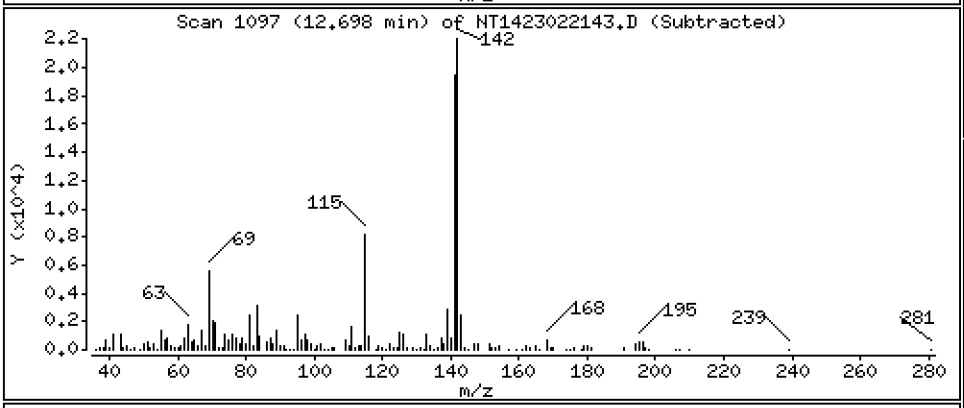
Column diameter: 0.25

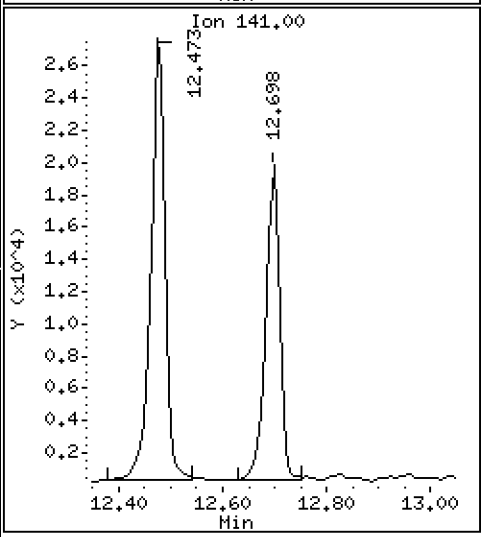
105 1-methylnaphthalene

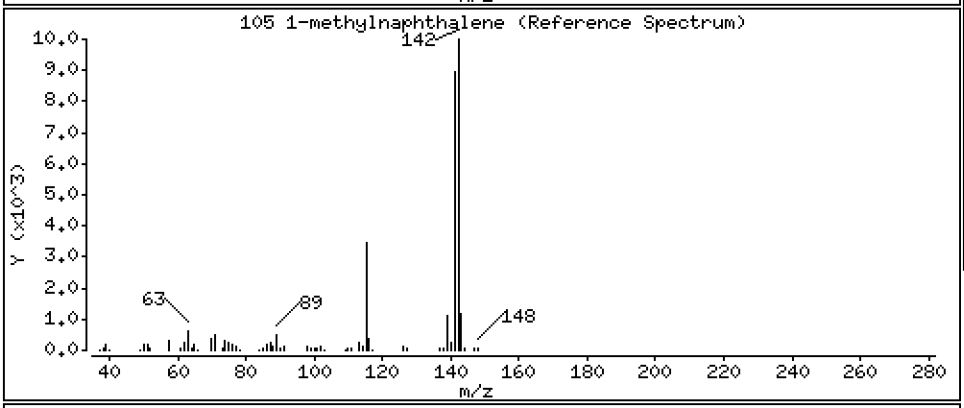
Concentration: 0.2228 ug/mL

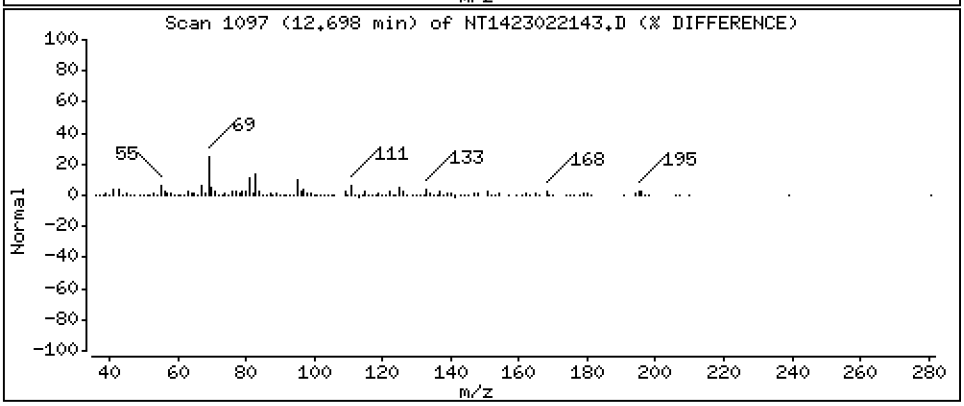












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

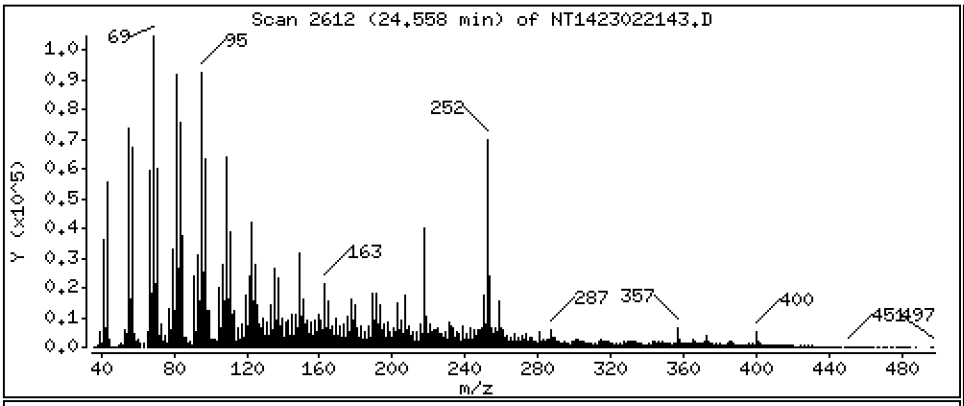
Operator: DSD

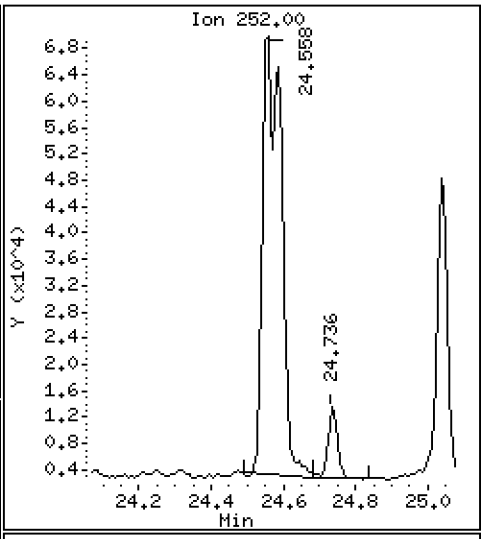
Column phase: ZB-5msi

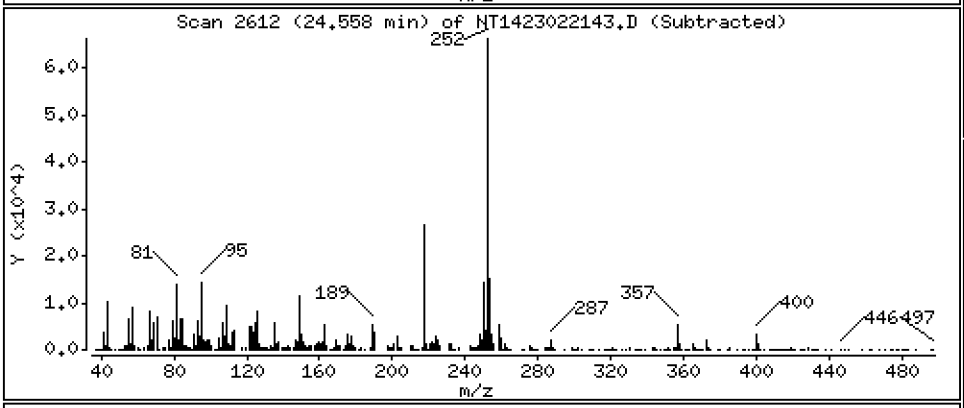
Column diameter: 0.25

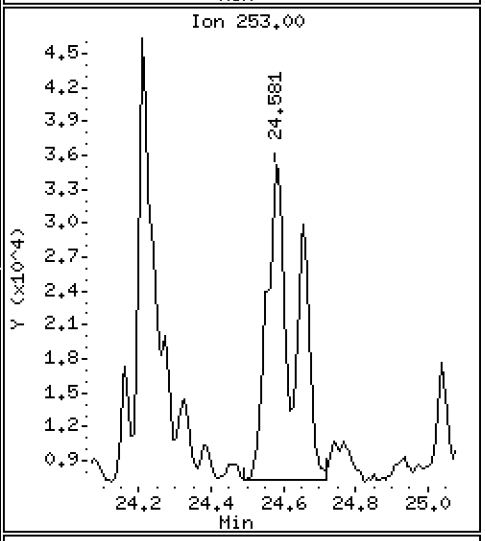
187 Total Benzofluoranthenes

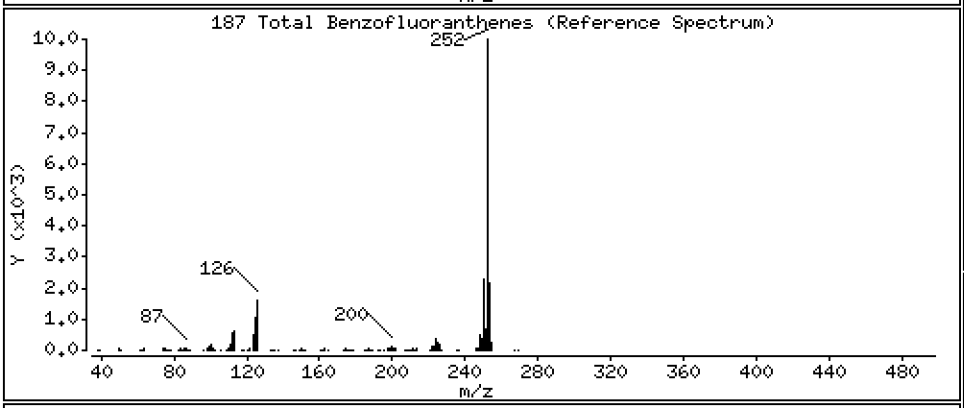
Concentration: 1.373 ug/mL

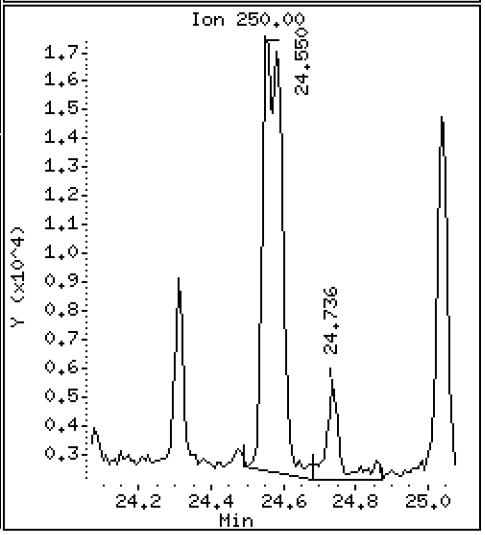


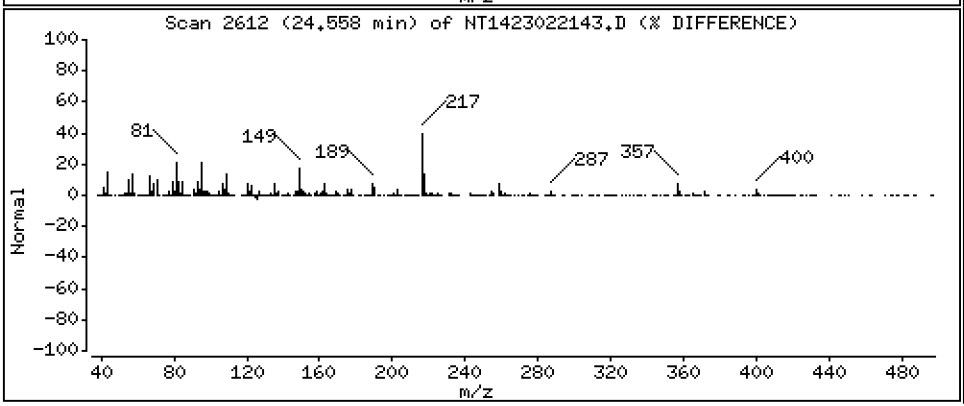












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221B.b\NT1423022143.D
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Inj Date : 22-FEB-2023 14:46 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-07
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Meth Date : 23-Feb-2023 09:59 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 31
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	6.396	6.373	(0.747)	400015	5.48876	5.489
$ 2	Phenol-d5	99	7.972	7.965	(0.930)	591217	5.11385	5.114
3	Phenol	94	7.996	7.988	(0.933)	23532	0.19227	0.1923(H)
$ 5	2-Chlorophenol-d4	132	8.212	8.212	(0.958)	435849	5.28354	5.284
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	8.568	8.568	(1.000)	272617	4.00000	
9	1,4-Dichlorobenzene	146	8.591	8.599	(1.003)	1711	0.01879	0.01879
$ 10	1,2-Dichlorobenzene-d4	152	8.925	8.925	(1.042)	200835	3.24802	3.248
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
17	Hexachloroethane	117	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
15	4-Methylphenol	108	9.367	9.367	(1.093)	49106	0.54416	0.5442
$ 18	Nitrobenzene-d5	82	9.662	9.662	(0.875)	407462	3.47612	3.476
19	Nitrobenzene	77	Compound Not Detected.					
20	Isophorone	82	Compound Not Detected.					
21	2-Nitrophenol	139	Compound Not Detected.					
22	2,4-Dimethylphenol	107	Compound Not Detected.					
23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
24	Benzoic acid	105	Compound Not Detected.					
25	2,4-Dichlorophenol	162	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.042	11.042	(1.000)	1014620	4.00000	
28	Naphthalene	128	11.081	11.081	(1.003)	277622	1.10972	1.110
29	4-Chloroaniline	127	Compound Not Detected.					
30	Hexachlorobutadiene	225	Compound Not Detected.					
31	4-Chloro-3-methylphenol	107	Compound Not Detected.					
32	2-Methylnaphthalene	142	12.473	12.481	(1.130)	61881	0.33027	0.3303
33	Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.270	13.270	(0.906)	755207	3.56245	3.562
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	14.331	14.331	(0.978)	146636	0.55562	0.5556
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	14.648	14.648	(1.000)	592525	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	14.717	14.717	(1.005)	50330	0.31853	0.3185
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.042	15.042	(1.027)	82227	0.31695	0.3170
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	15.637	15.645	(1.068)	26598	0.11054	0.1105
	49	Fluorene	166	15.753	15.753	(1.075)	81281	0.29960	0.2996
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.293	16.293	(1.112)	168225	4.88167	4.882
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	17.684	17.676	(1.000)	1105020	4.00000	
	60	Phenanthrene	178	17.730	17.723	(1.003)	391333	1.47376	1.474
	61	Anthracene	178	17.823	17.816	(1.008)	117300	0.44589	0.4459
	62	Carbazole	167	Compound Not Detected.					
	63	Di-n-butylphthalate	149	Compound Not Detected.					
	64	Fluoranthene	202	20.191	20.137	(0.886)	668488	2.06950	2.069(H)
	65	Pyrene	202	20.593	20.562	(0.904)	792955	2.32153	2.322
$	66	Terphenyl-d14	244	20.887	20.872	(0.917)	883600	3.64337	3.643
	67	Butylbenzylphthalate	149	Compound Not Detected.					
	68	Benzo(a)anthracene	228	22.753	22.738	(0.999)	195430	0.81566	0.8157
*	69	Chrysene-d12	240	22.784	22.769	(1.000)	748718	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	22.823	22.815	(1.002)	213658	0.99141	0.9914(H)
	72	bis(2-Ethylhexyl)phthalate	149	22.862	22.854	(0.959)	28456	0.14822	0.1482
*	134	Di-n-octylphthalate-d4	153	23.845	23.837	(1.000)	1115939	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	24.557	24.534	(0.973)	138593	0.75947	0.7595
	75	Benzo(k)fluoranthene	252	24.588	24.573	(0.974)	130607	0.66980	0.6698(M)
	76	Benzo(a)pyrene	252	25.130	25.115	(0.996)	94575	0.54677	0.5468
*	77	Perylene-d12	264	25.238	25.215	(1.000)	575105	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.564	27.540	(1.092)	50566	0.35524	0.3552
	79	Dibenzo(a,h)anthracene	278	27.564	27.556	(1.092)	12178	0.10397	0.1040(M)
	80	Benzo(g,h,i)perylene	276	28.247	28.216	(1.119)	47568	0.41187	0.4119
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	12.697	12.698	(1.150)	39188	0.22278	0.2228
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.557	24.573	(0.973)	244674	1.37331	1.373
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022143.D
Lab Smp Id: 23A0133-07
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 06:55
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	235125	117563	470250	272617	15.95
27 Naphthalene-d8	883104	441552	1766208	1014620	14.89
42 Acenaphthene-d10	537789	268895	1075578	592525	10.18
59 Phenanthrene-d10	1079531	539766	2159062	1105020	2.36
69 Chrysene-d12	826409	413205	1652818	748718	-9.40
134 Di-n-octylphthala	1339562	669781	2679124	1115939	-16.69
77 Perylene-d12	590325	295163	1180650	575105	-2.58

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.07
134 Di-n-octylphthala	23.84	23.34	24.34	23.85	0.03
77 Perylene-d12	25.22	24.72	25.72	25.24	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022143.D

Lab ID: 23A0133-07
nt14.i, ABN.m, 22-FEB-2023 14:46

RT	CO-ELUTION COMPOUNDS
27.564	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
27.564	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

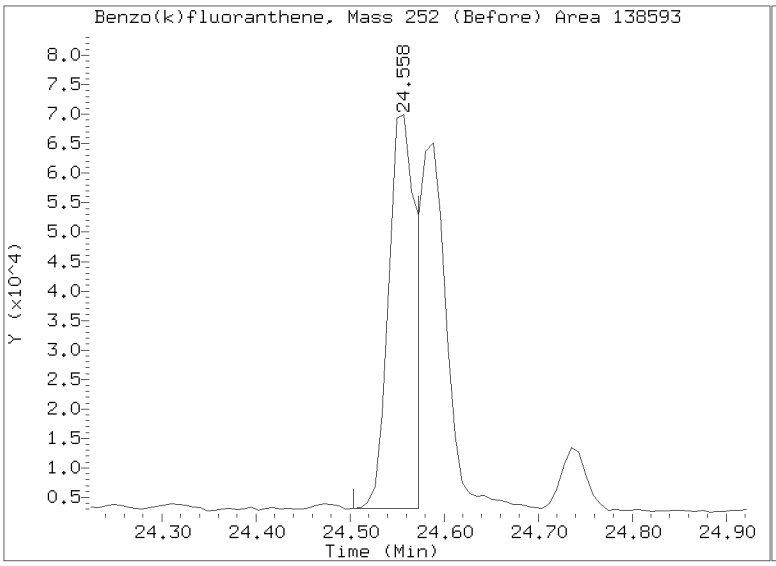
RRT check based on Ccal File: NT1423022130.D

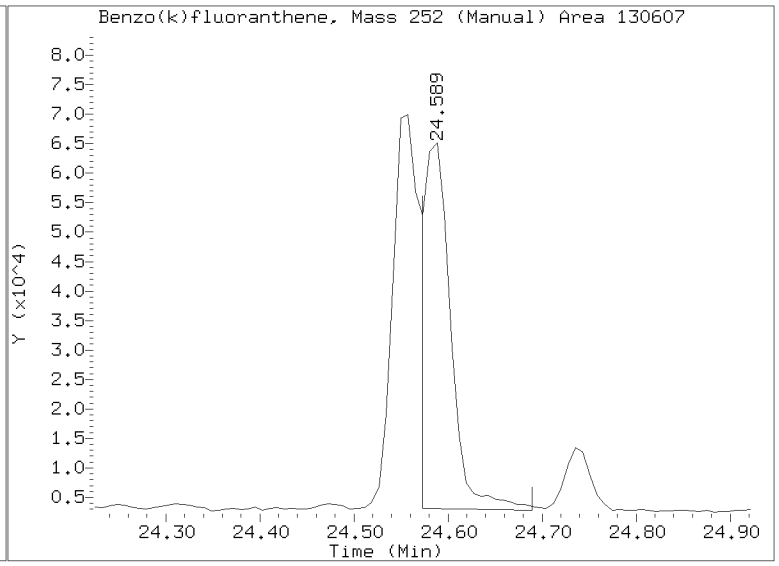
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

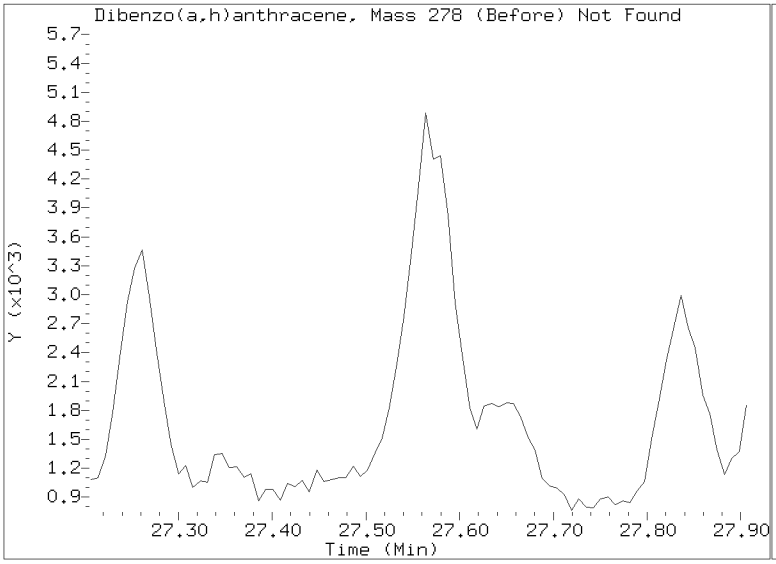
* Only compounds listed in the work order have been verified by the analyst *

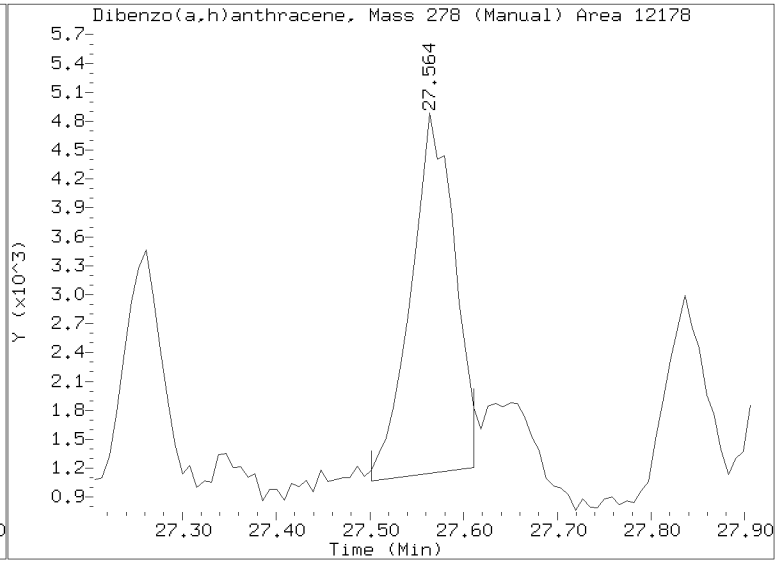
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221B.b/NT1423022143.D
Injection Date: 22-FEB-2023 14:46
Lab ID:23A0133-07 Client ID:
Report Date: 02/23/2023 12:22









APPROVED

By Deenay Dunmore at 12:28 pm, Feb 23, 2023

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1185

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-08 C	SDG:	23A0133
Sampled:	01/06/23 12:00	Prepared:	01/18/23 15:24	File ID:	NT1423022151.D
% Solids:	58.60	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 19:36
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	17.09 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	113		4.4	20.0
106-44-5	4-Methylphenol	1	29.3		7.4	20.0
91-20-3	Naphthalene	1	14.2	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	10.4	J	4.5	20.0
208-96-8	Acenaphthylene	1	20.0	U	6.2	20.0
131-11-3	Dimethylphthalate	1	6.8	J	4.4	20.0
83-32-9	Acenaphthene	1	6.6	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.5	20.0
85-01-8	Phenanthrene	1	78.5		8.7	20.0
120-12-7	Anthracene	1	22.6		7.2	20.0
206-44-0	Fluoranthene	1	168		6.1	20.0
129-00-0	Pyrene	1	304		5.7	20.0
85-68-7	Butylbenzylphthalate	1	20.0	U	9.4	20.0
56-55-3	Benzo(a)anthracene	1	86.7		6.0	20.0
218-01-9	Chrysene	1	139		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	121		5.5	49.9
	Benzofluoranthenes, Total	1	321		10.0	39.9
50-32-8	Benzo(a)pyrene	1	114		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	73.4		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	28.8		17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	80.4		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.90	516	68.9	27 - 120	
Phenol-d5	748.90	468	62.5	29 - 120	
2-Chlorophenol-d4	748.90	535	71.5	31 - 120	
1,2-Dichlorobenzene-d4	499.26	299	59.9	32 - 120	
Nitrobenzene-d5	499.26	327	65.5	30 - 120	
2-Fluorobiphenyl	499.26	347	69.6	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1185

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

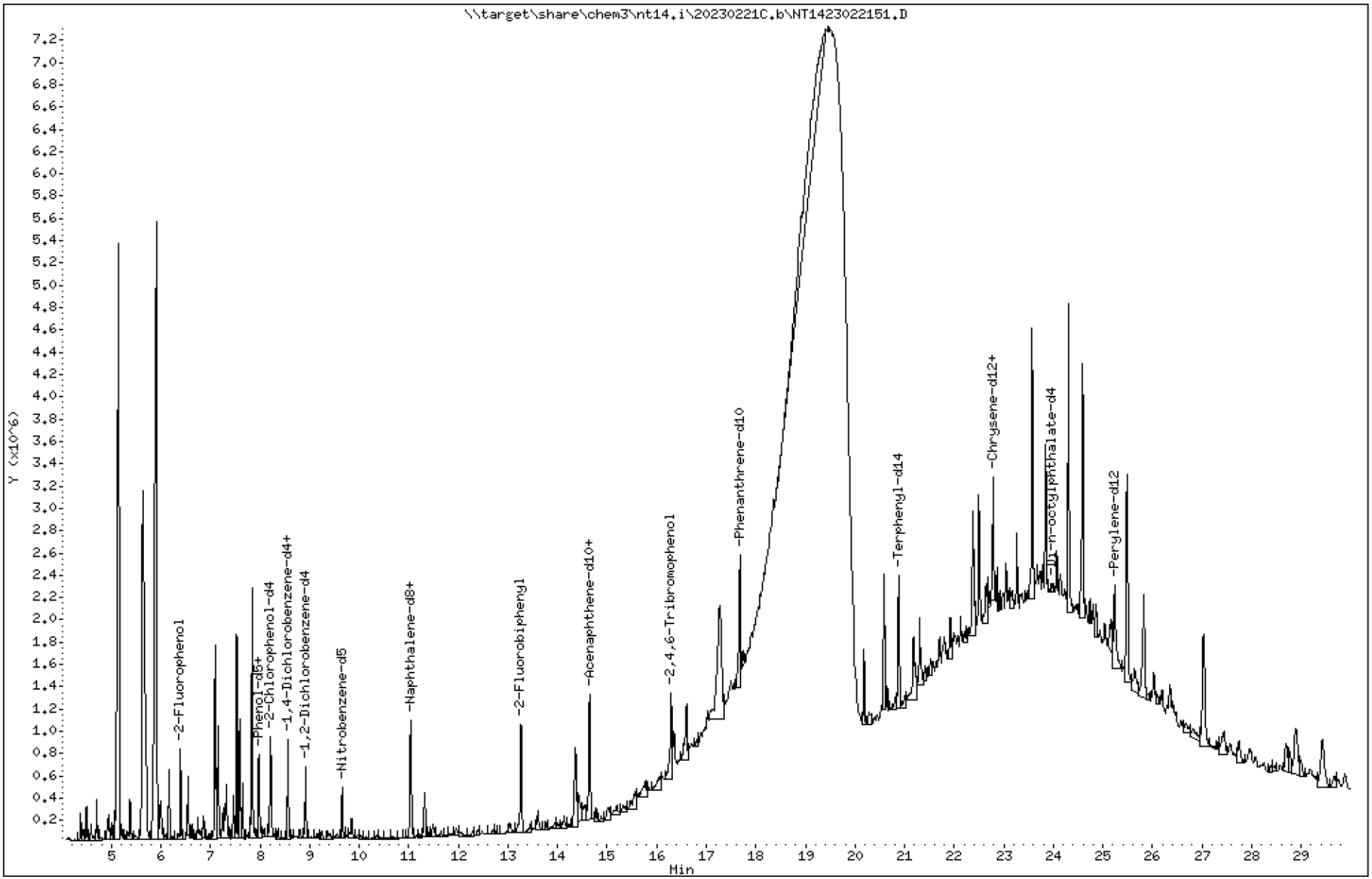
Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-08 C	SDG:	23A0133
Sampled:	01/06/23 12:00	Prepared:	01/18/23 15:24	File ID:	NT1423022151.D
% Solids:	58.60	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 19:36
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	17.09 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	748.90	518	69.2	24 - 134	
p-Terphenyl-d14	499.26	428	85.7	37 - 120	

Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022151.D
Date : 22-FEB-2023 19:36
Client ID:
Sample Info: 23A0133-08

Instrument: nt14.i
Operator: DSD
Column diameter: 0.25

Column phase: ZB-5msi



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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

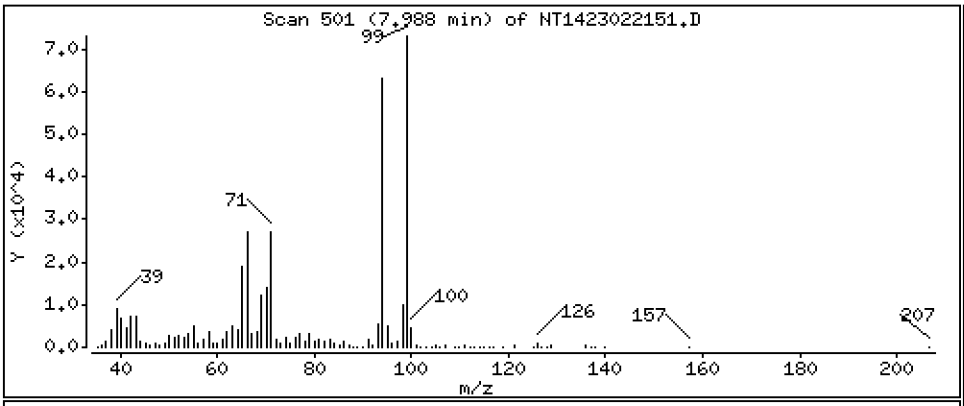
Operator: DSD

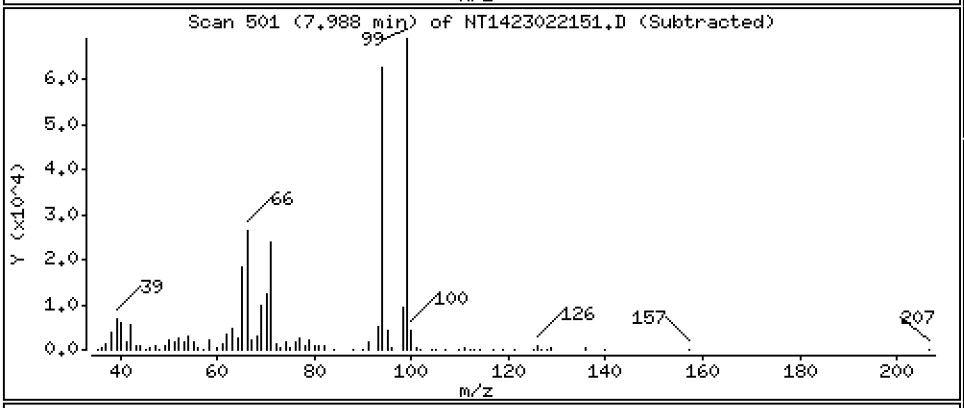
Column phase: ZB-5msi

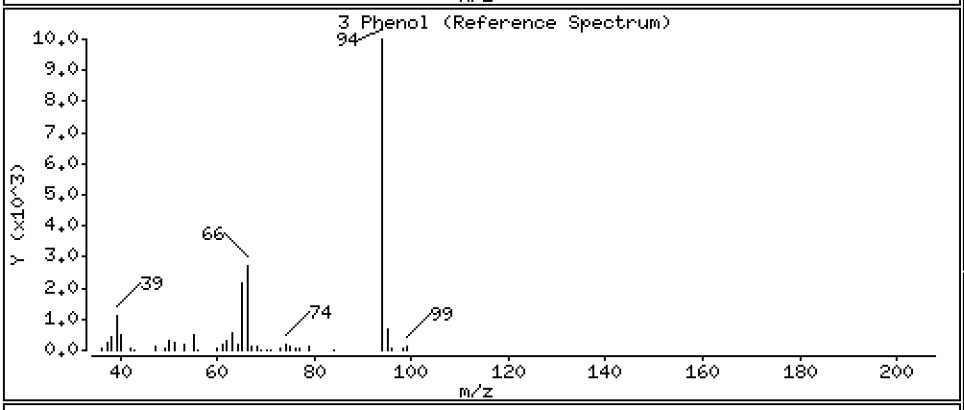
Column diameter: 0.25

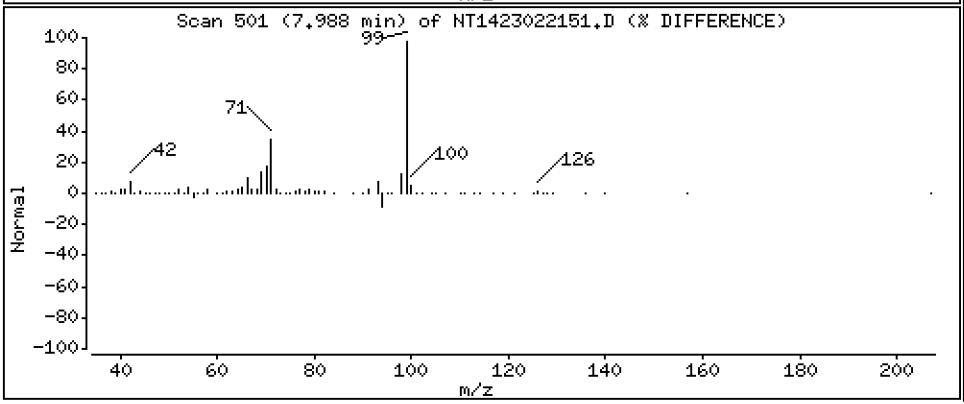
3 Phenol

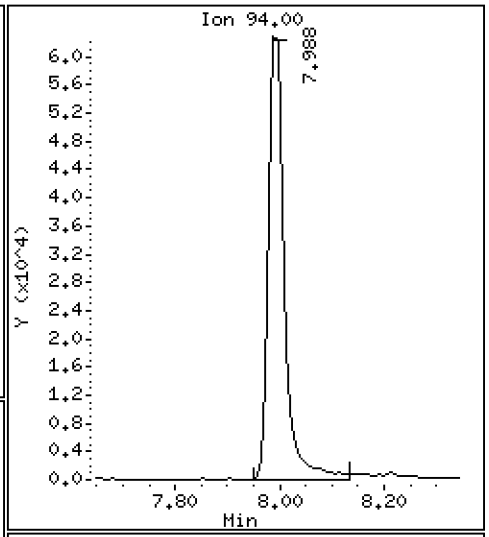
Concentration: 1.134 ug/mL

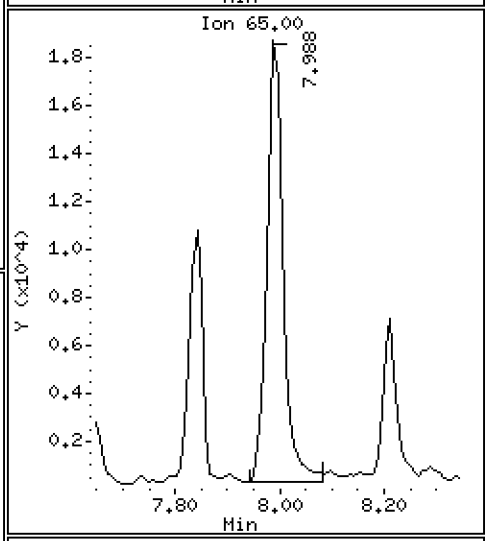


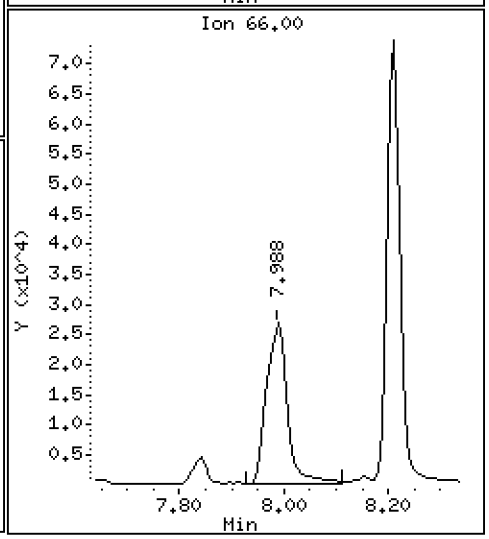












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

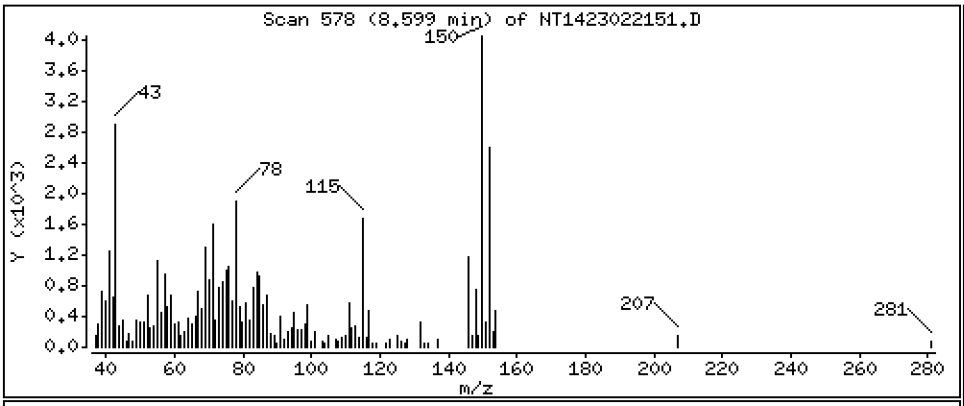
Operator: DSD

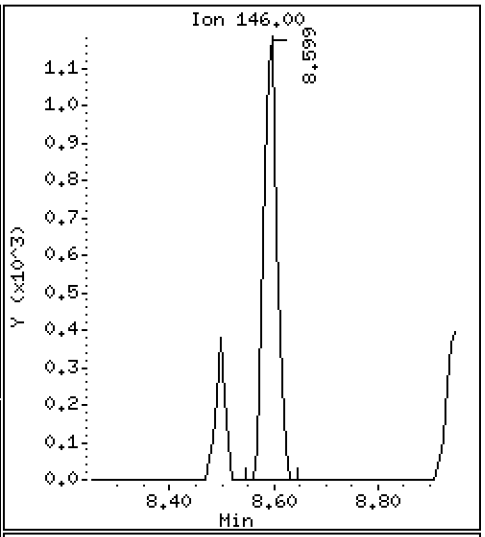
Column phase: ZB-5msi

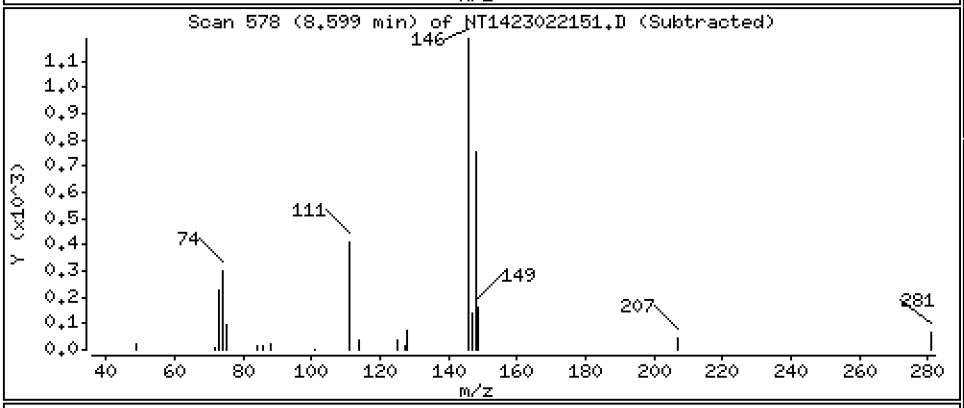
Column diameter: 0.25

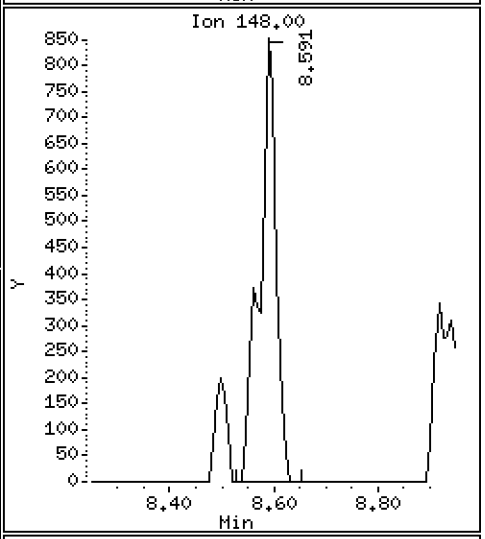
9 1,4-Dichlorobenzene

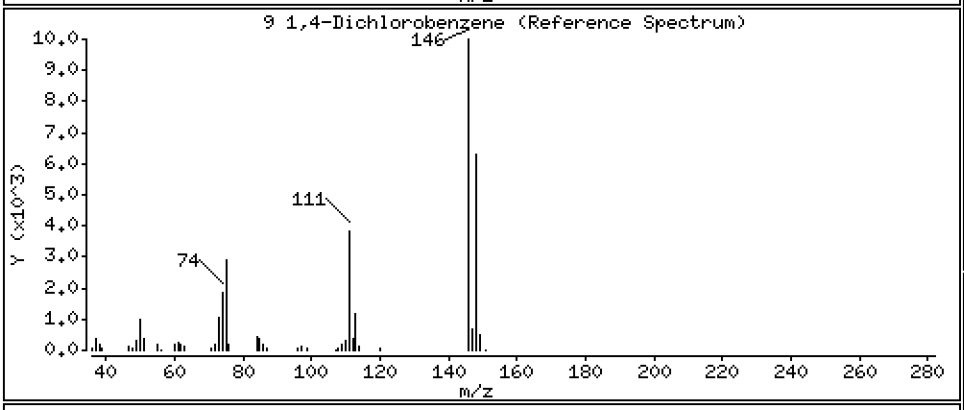
Concentration: 0.02575 ug/mL

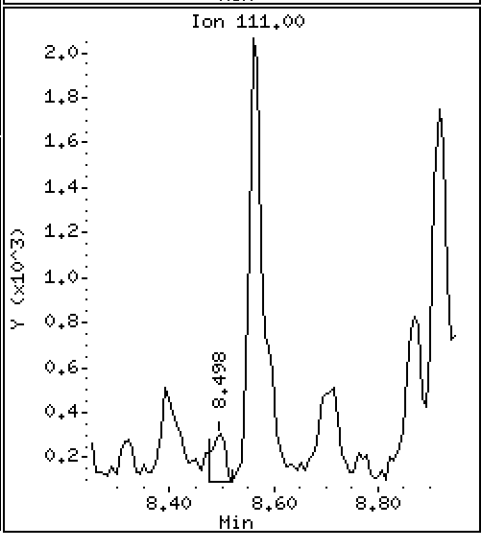


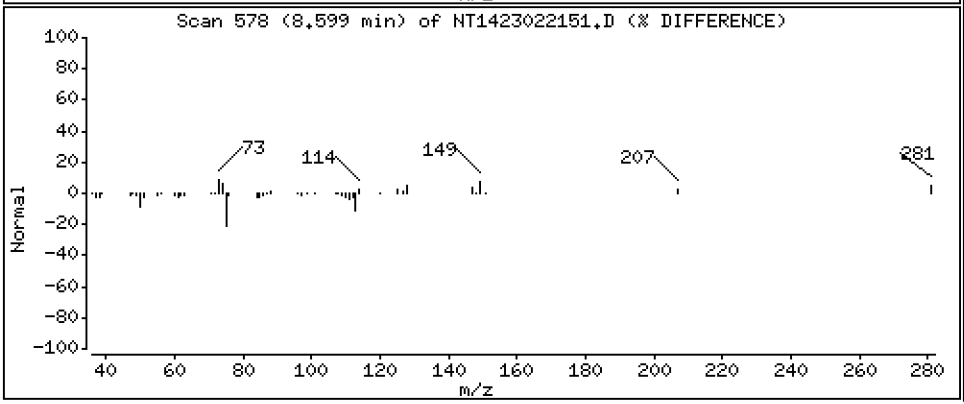












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

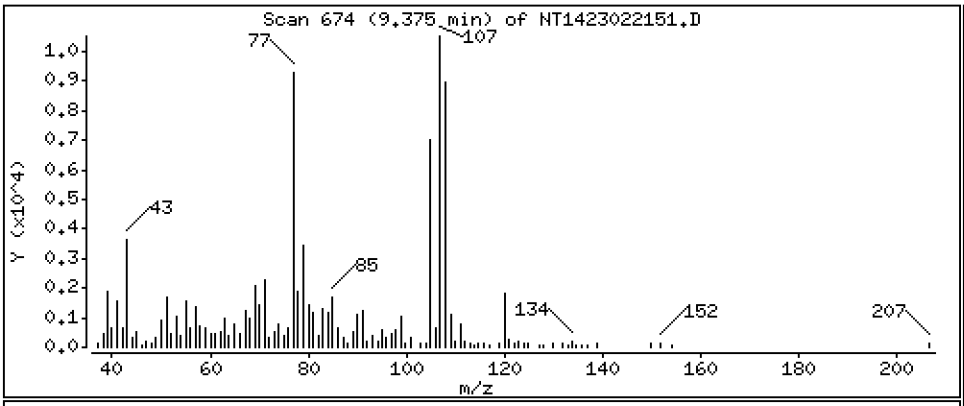
Operator: DSD

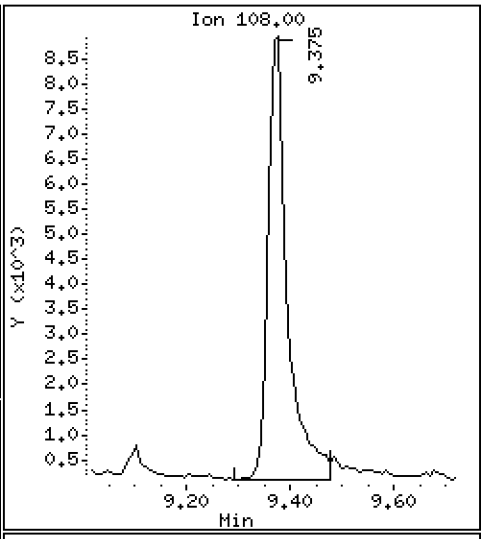
Column phase: ZB-5msi

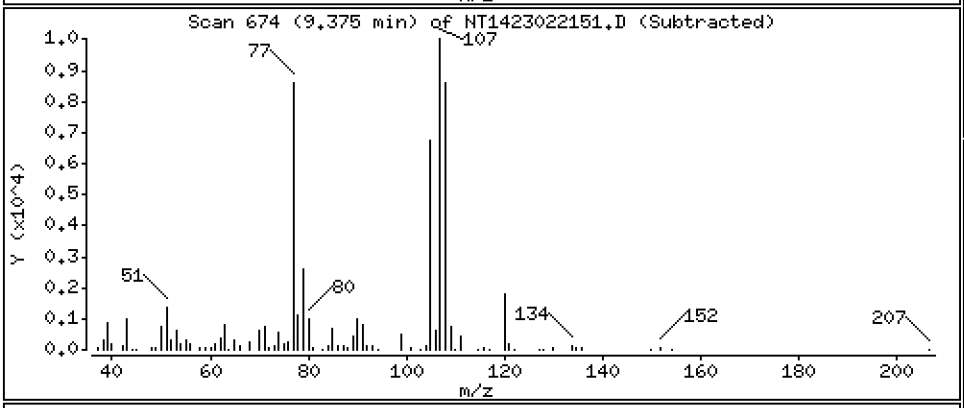
Column diameter: 0.25

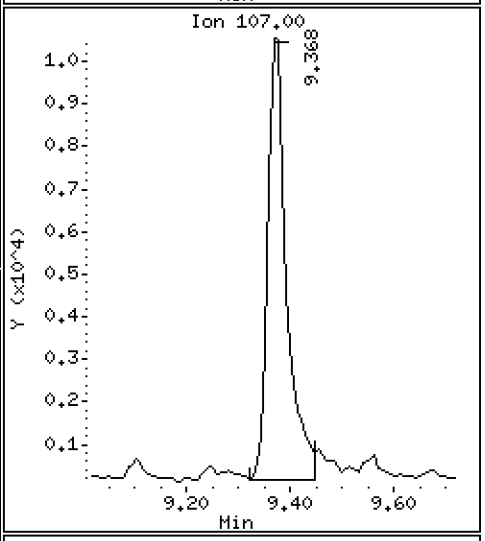
15 4-Methylphenol

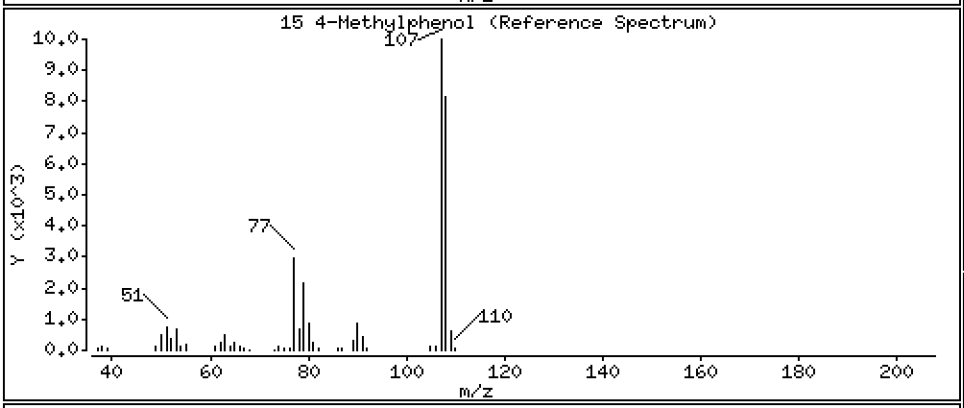
Concentration: 0.2937 ug/mL

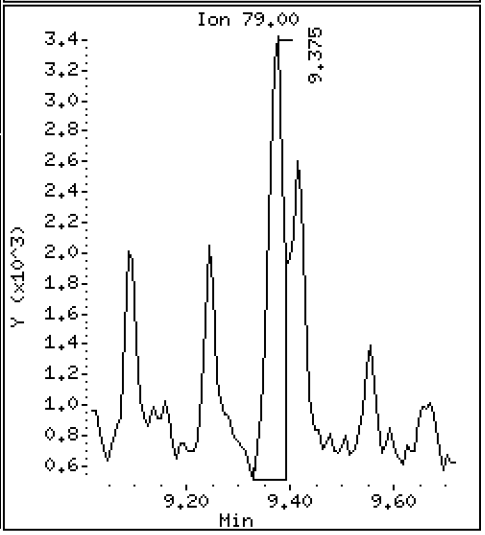


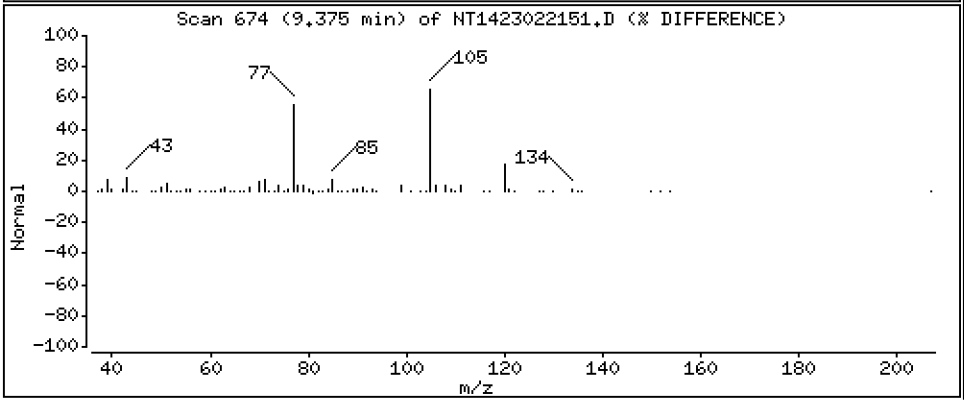












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

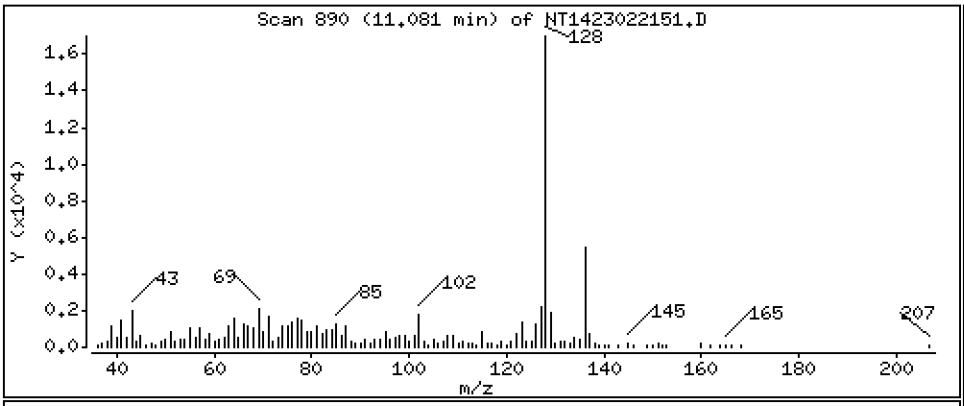
Operator: DSD

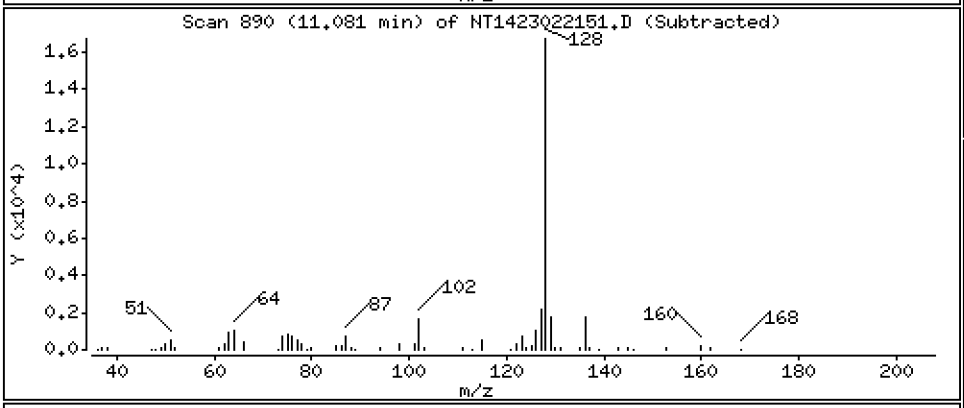
Column phase: ZB-5msi

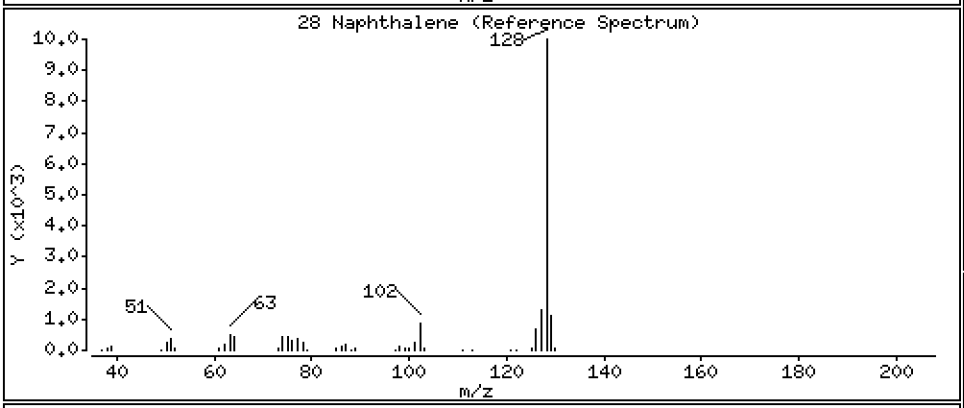
Column diameter: 0.25

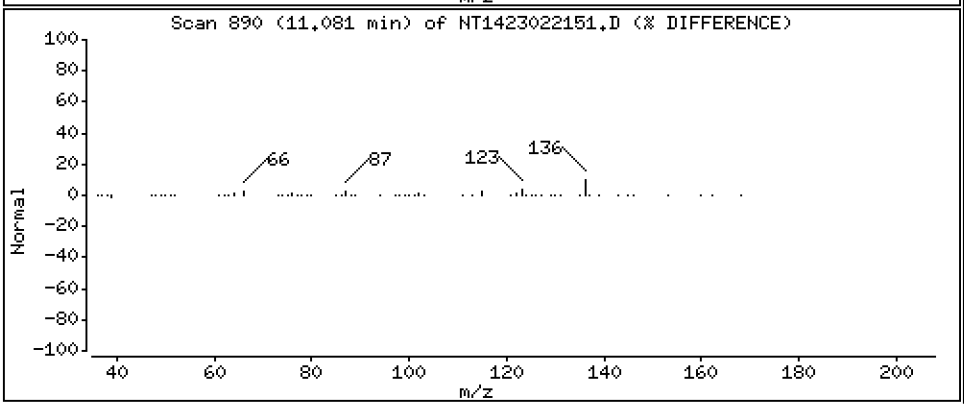
28 Naphthalene

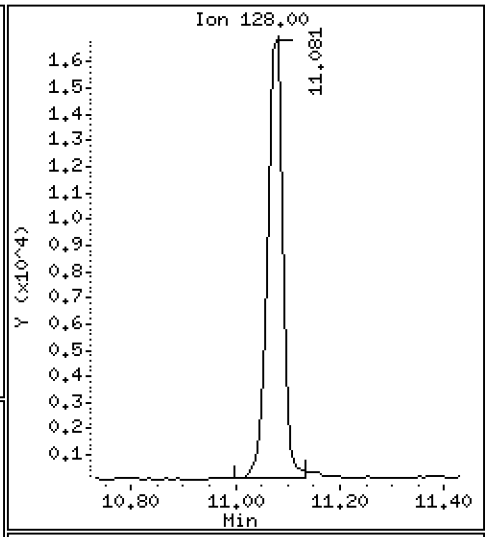
Concentration: 0.1427 ug/mL

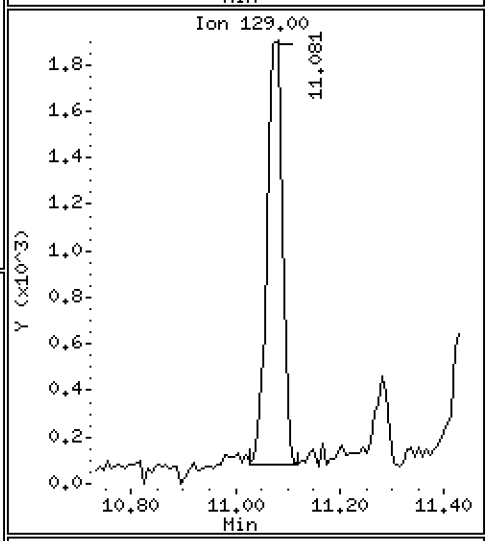


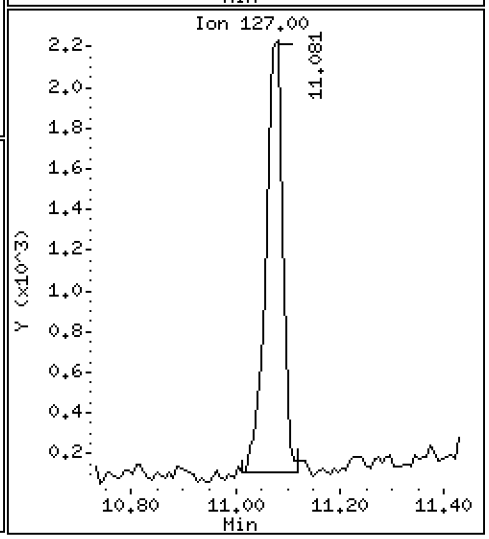












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

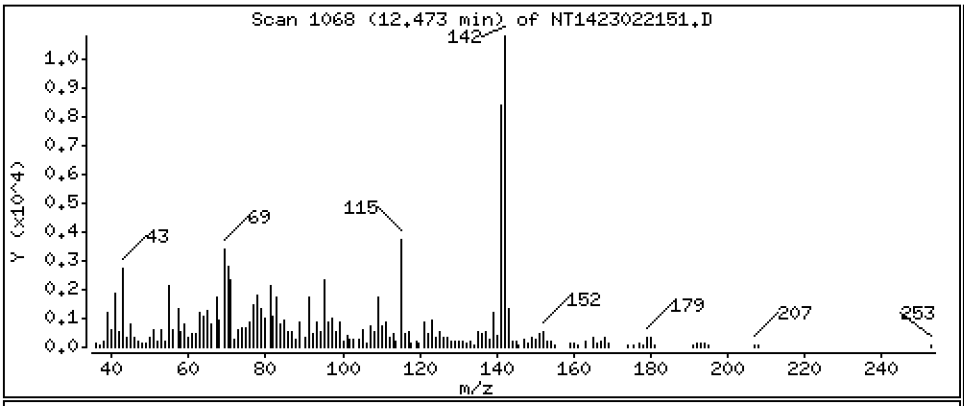
Operator: DSD

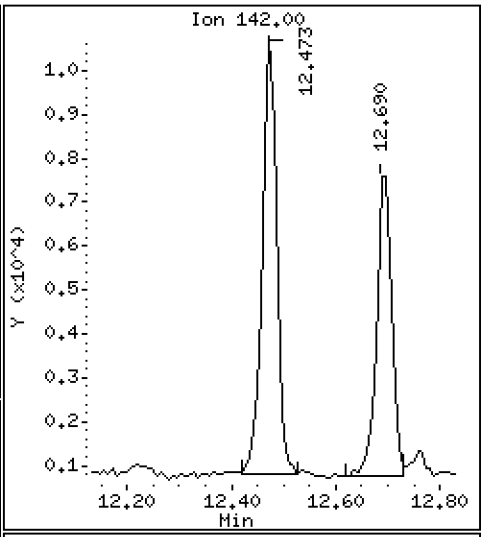
Column phase: ZB-5msi

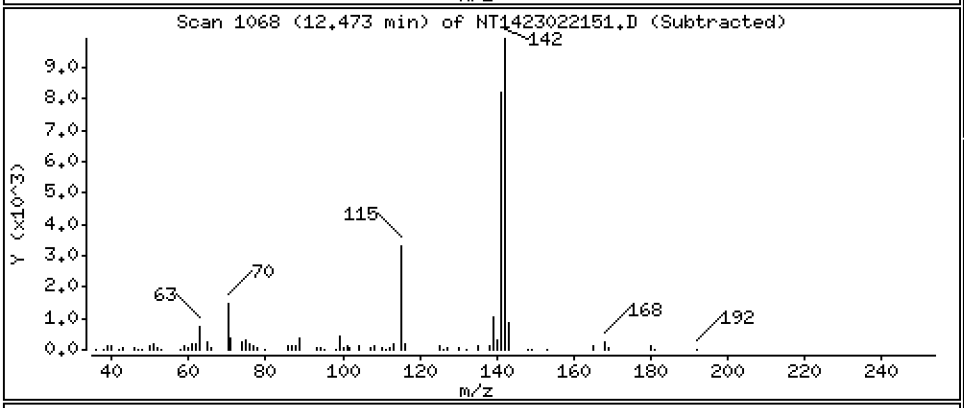
Column diameter: 0.25

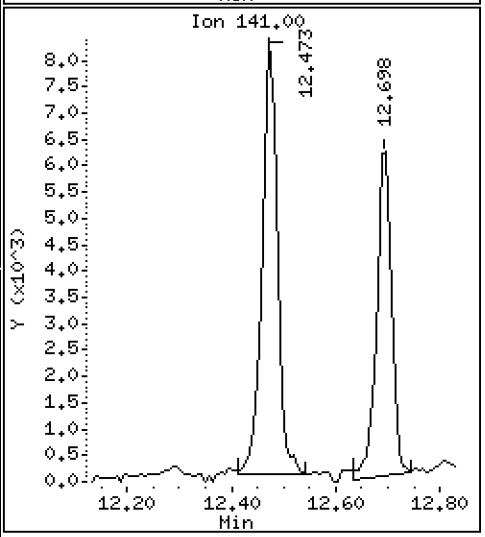
32 2-Methylnaphthalene

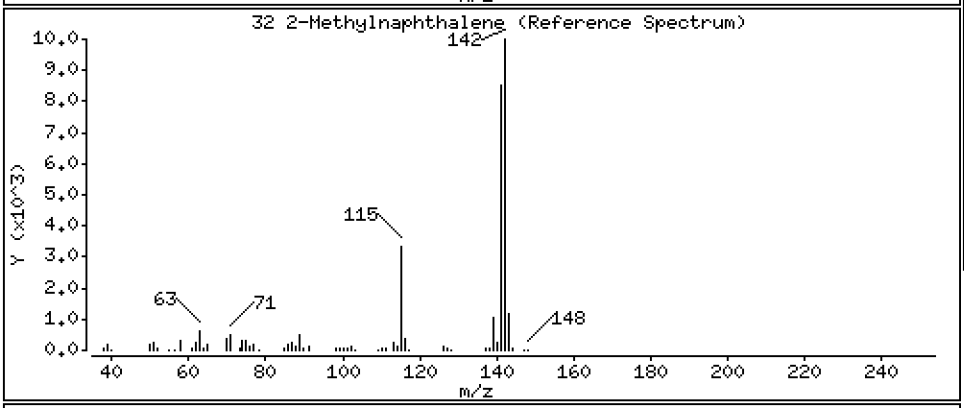
Concentration: 0.1046 ug/mL

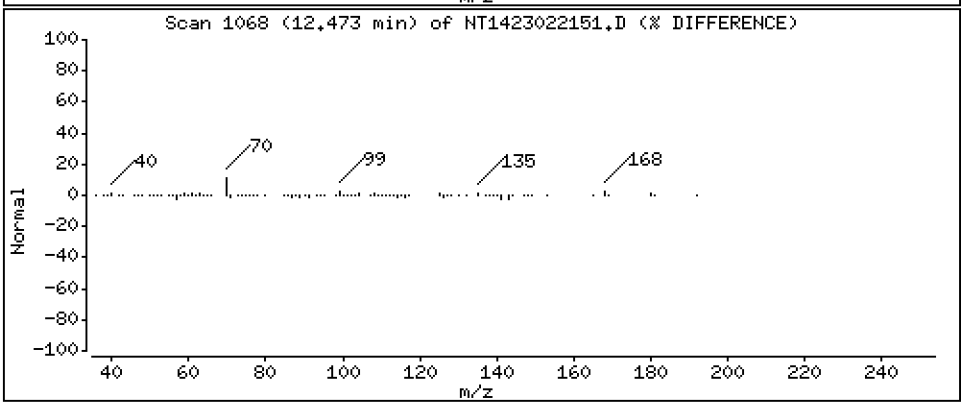












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022151.D

Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

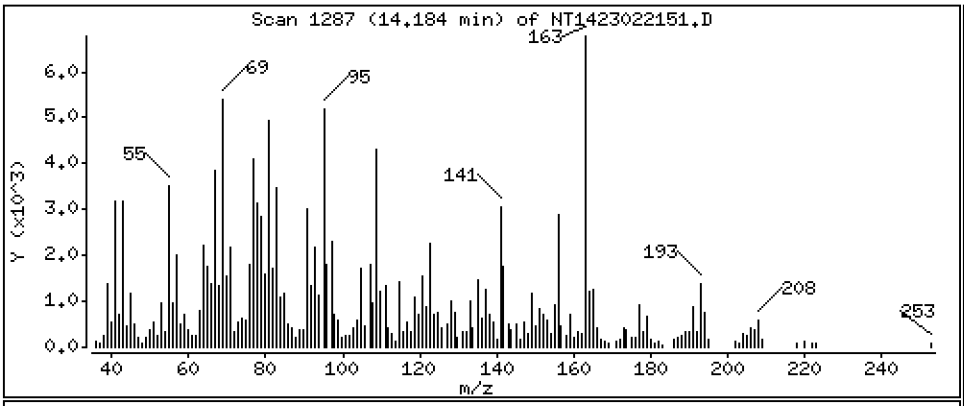
Operator: DSD

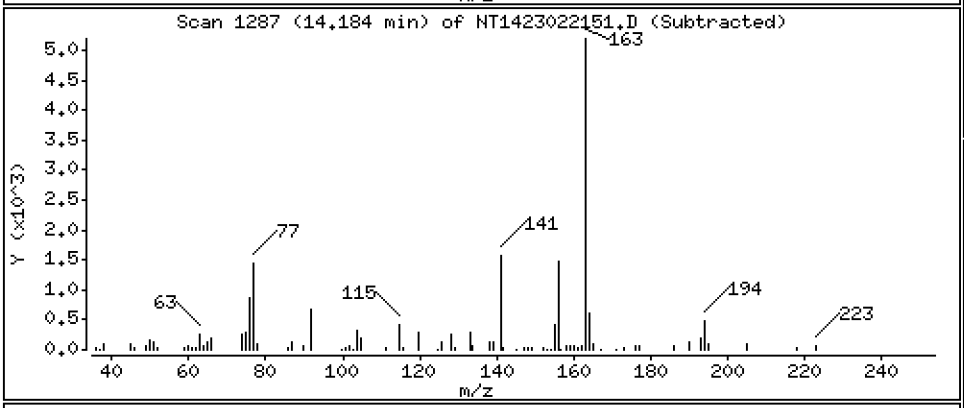
Column phase: ZB-5msi

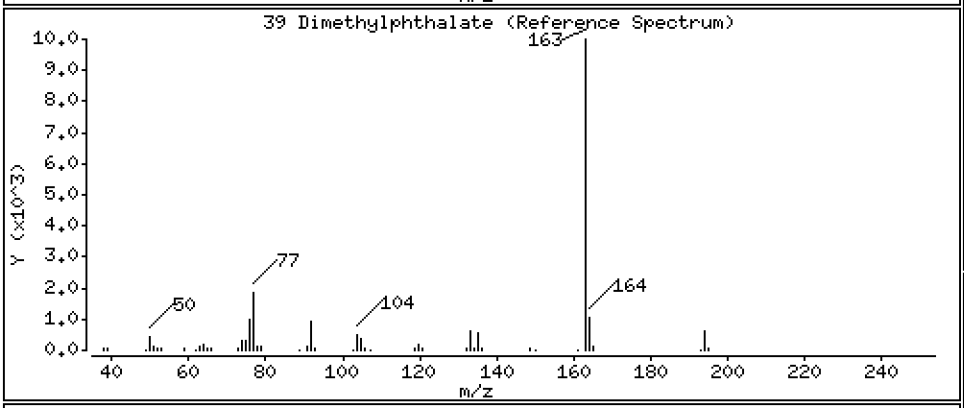
Column diameter: 0.25

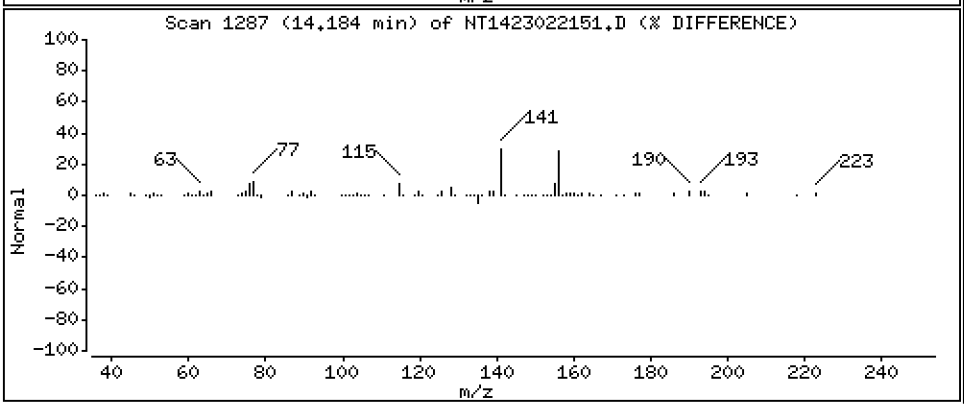
39 Dimethylphthalate

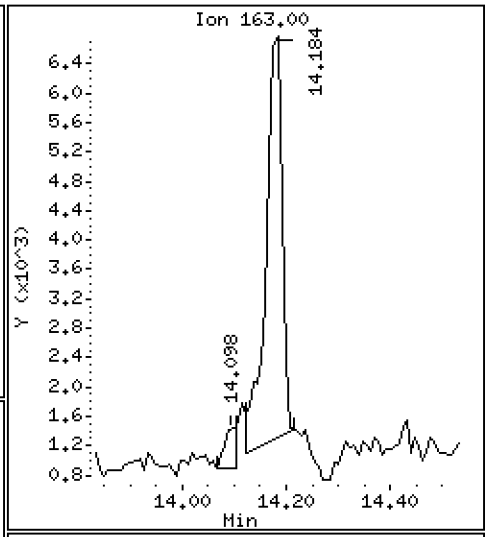
Concentration: 0.06845 ug/mL

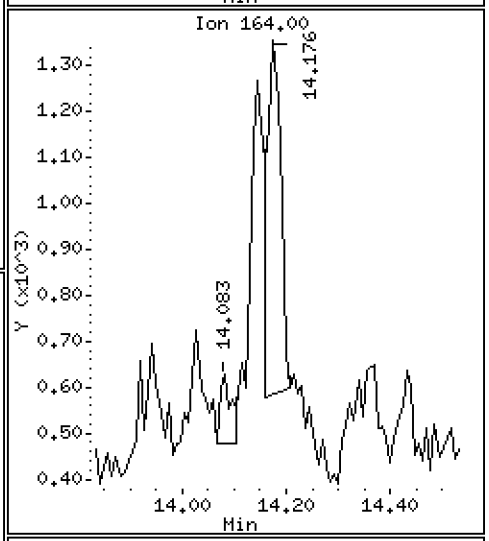


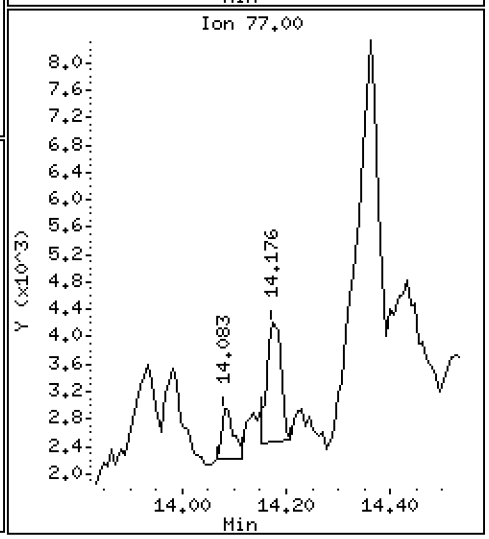












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022151.D

Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

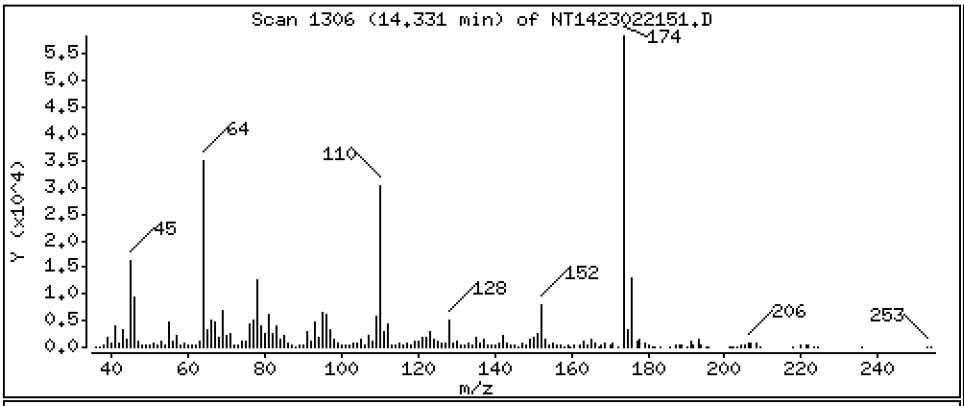
Operator: DSD

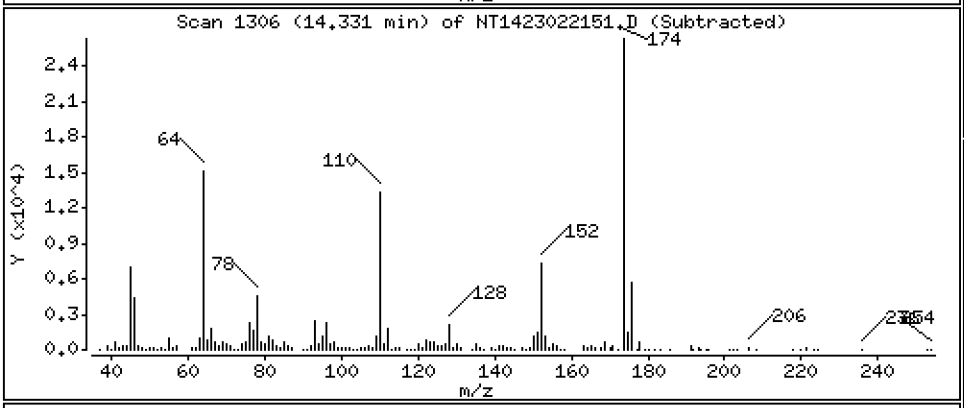
Column phase: ZB-5msi

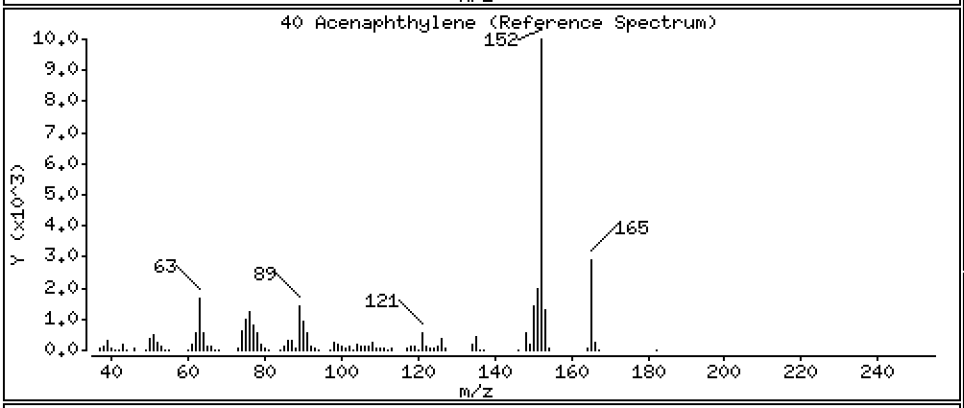
Column diameter: 0.25

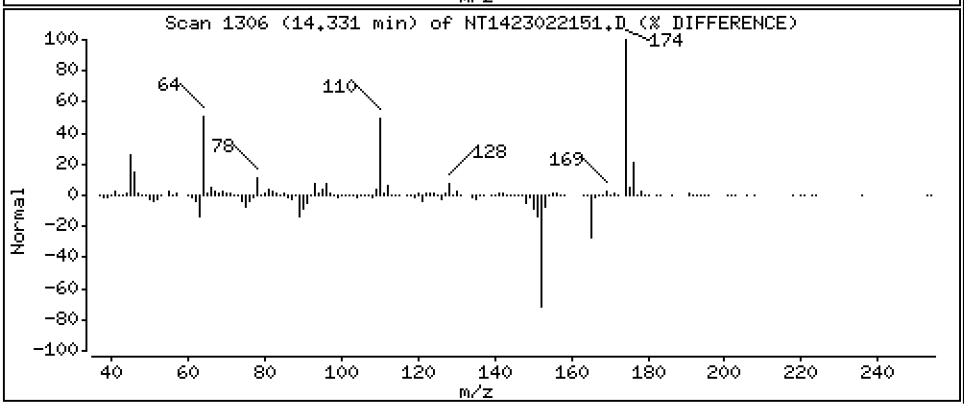
40 Acenaphthylene

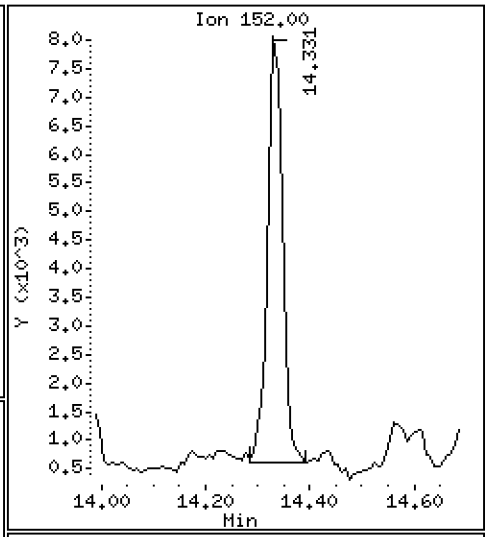
Concentration: 0.05803 ug/mL

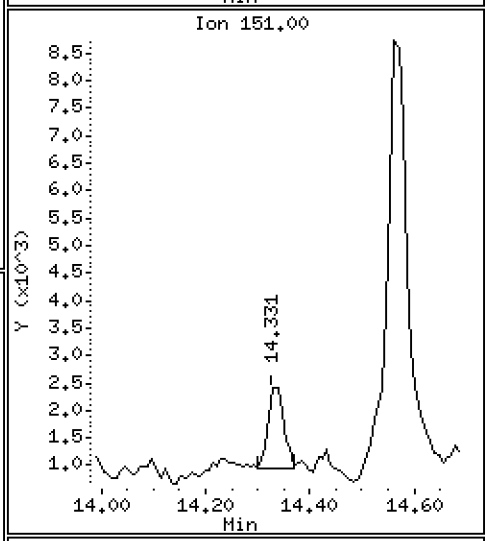


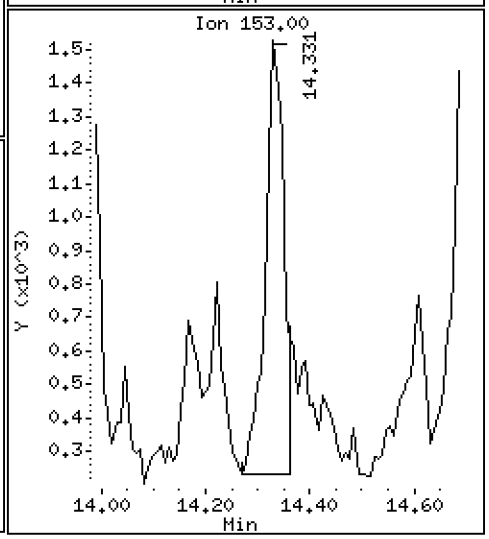












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

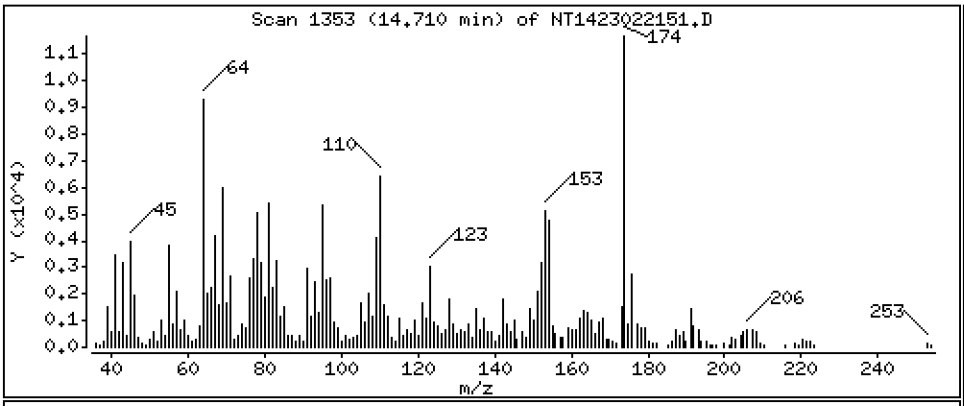
Operator: DSD

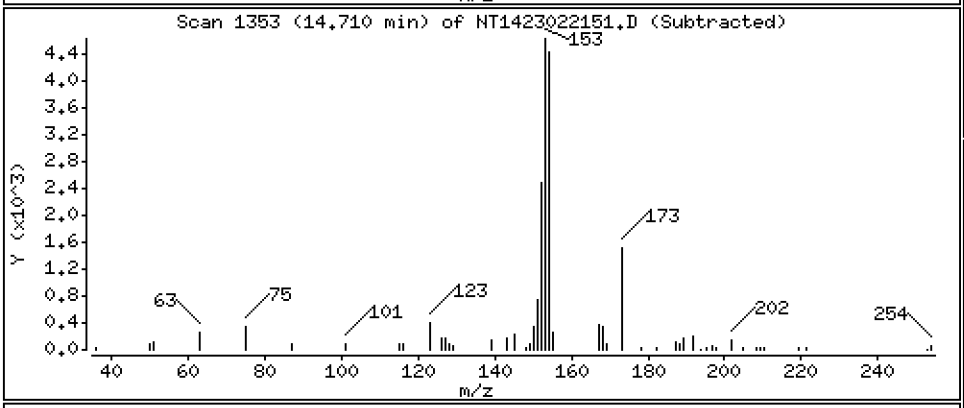
Column phase: ZB-5msi

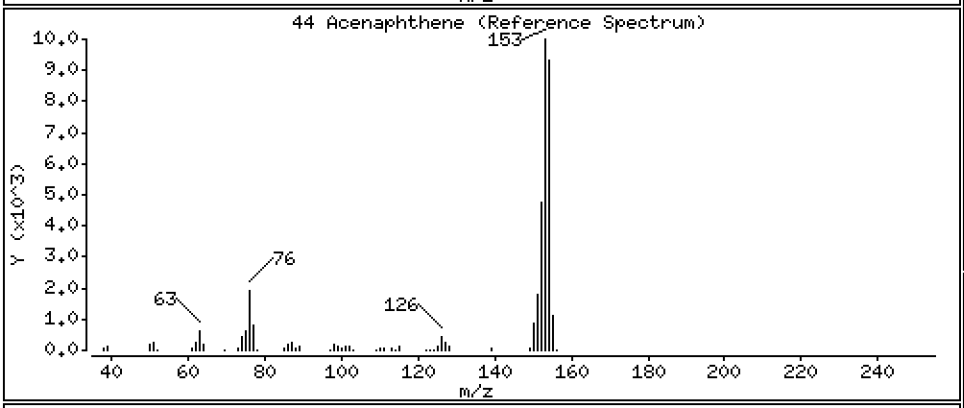
Column diameter: 0.25

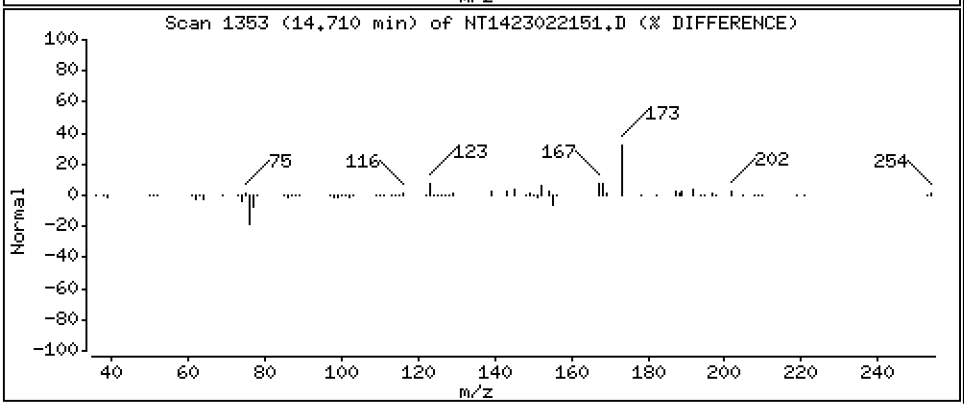
44 Acenaphthene

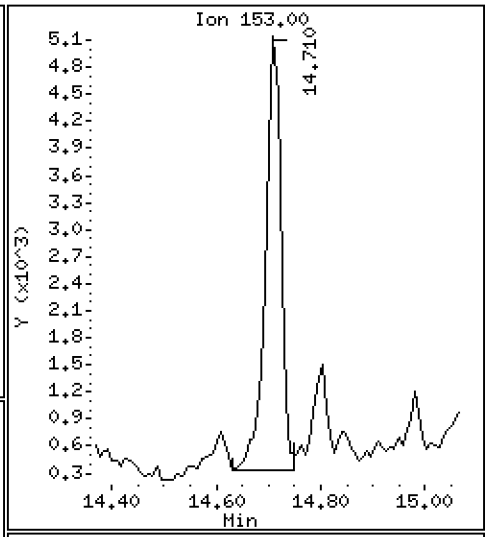
Concentration: 0.06589 ug/mL

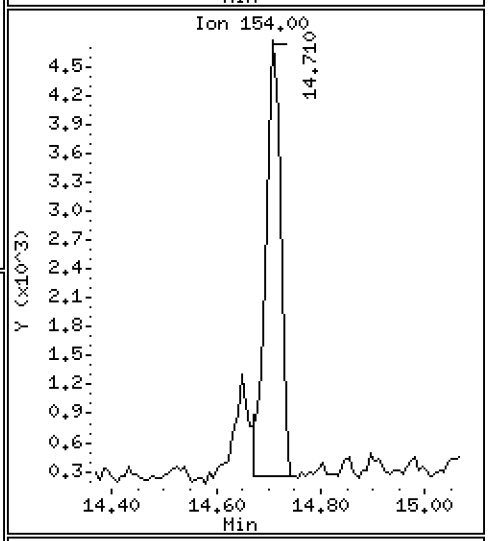


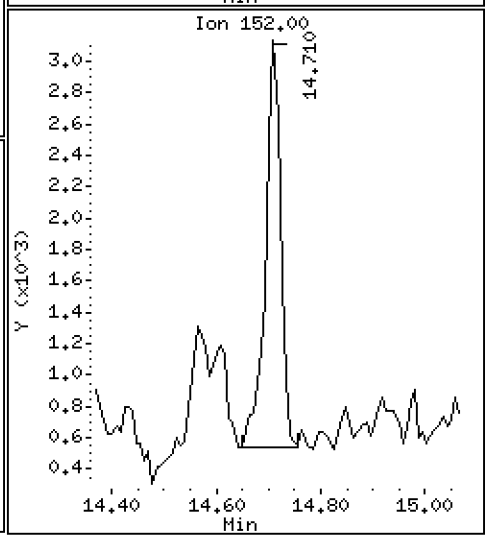












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

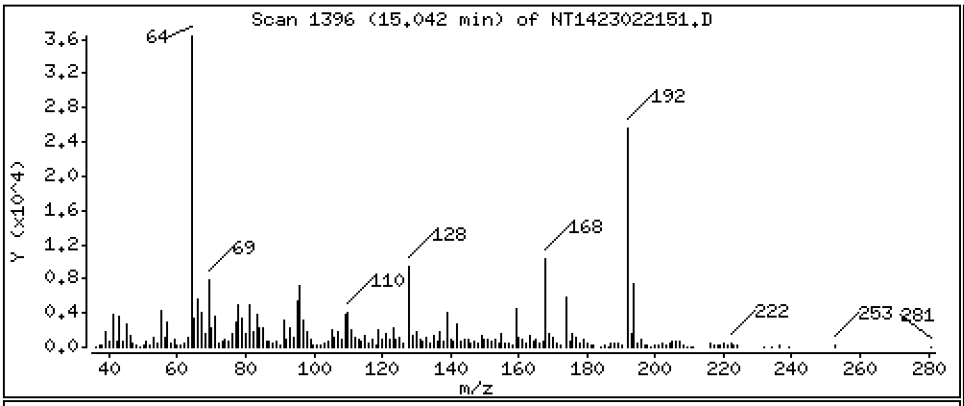
Operator: DSD

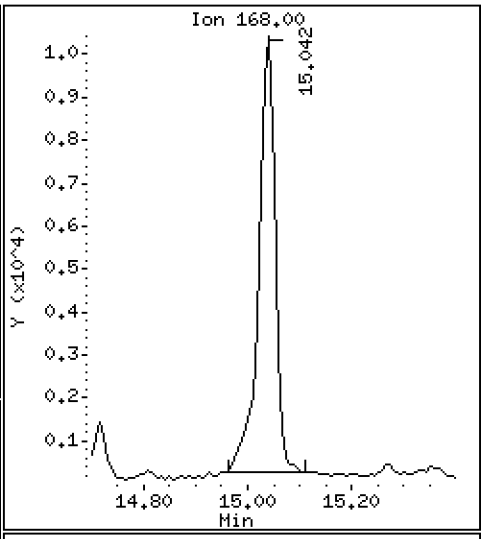
Column phase: ZB-5msi

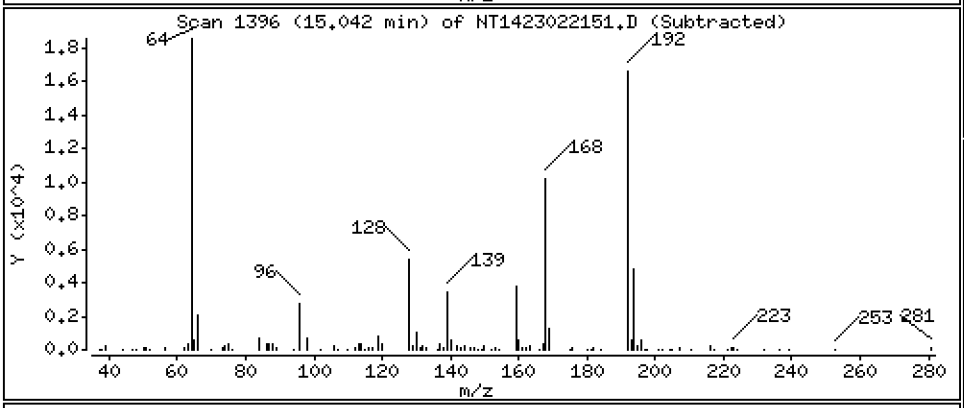
Column diameter: 0.25

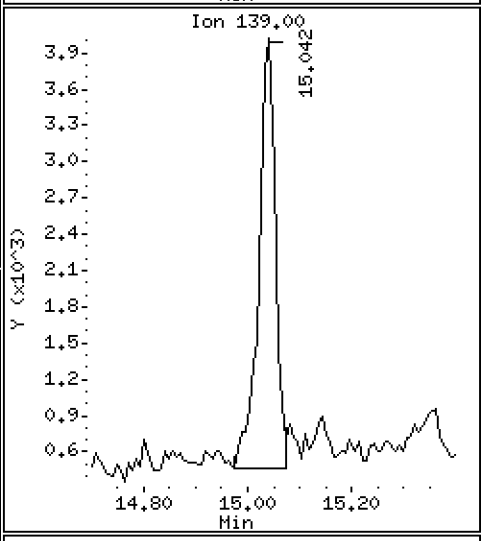
46 Dibenzofuran

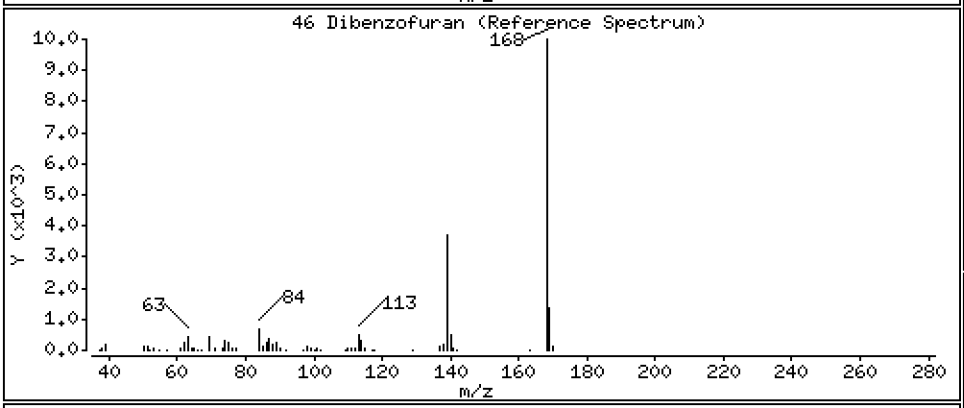
Concentration: 0.09063 ug/mL

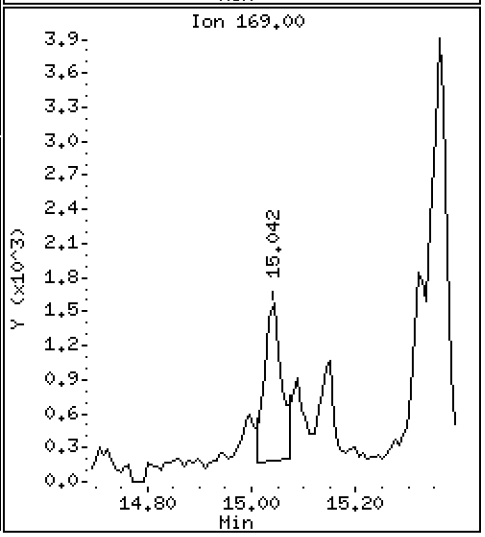


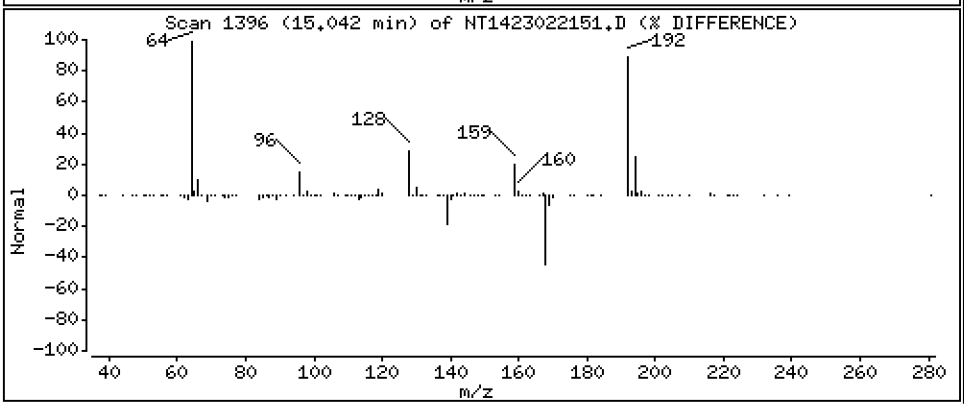












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

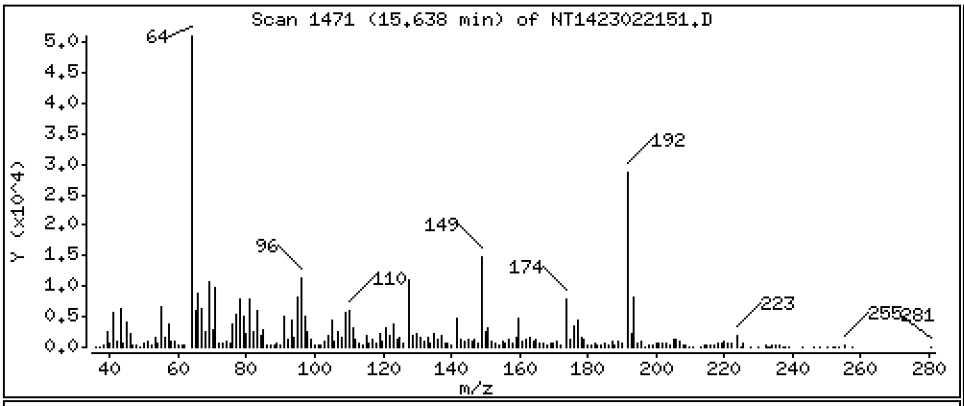
Operator: DSD

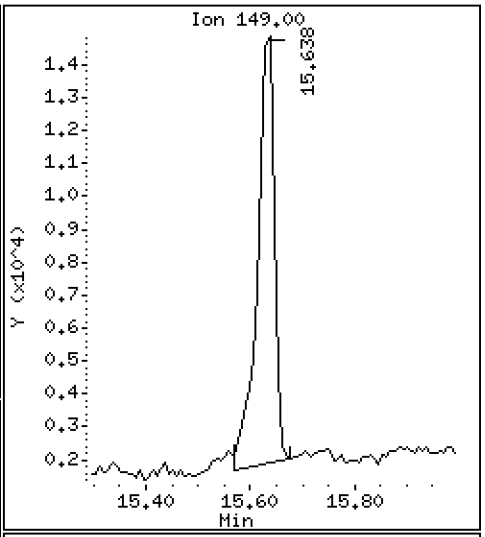
Column phase: ZB-5msi

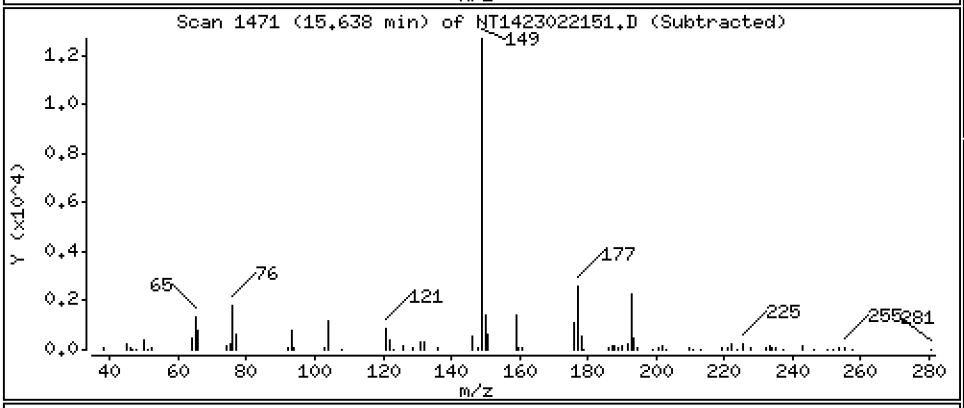
Column diameter: 0.25

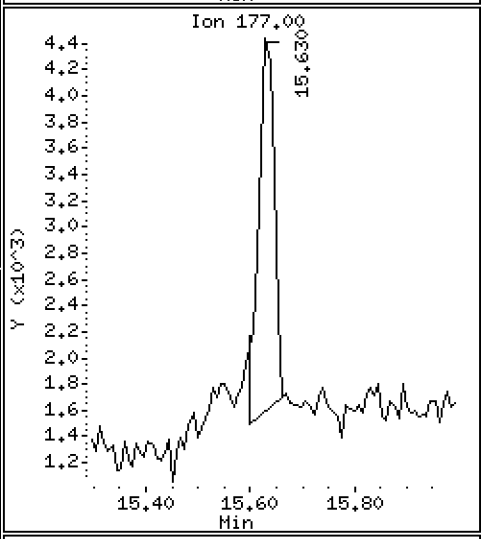
50 Diethylphthalate

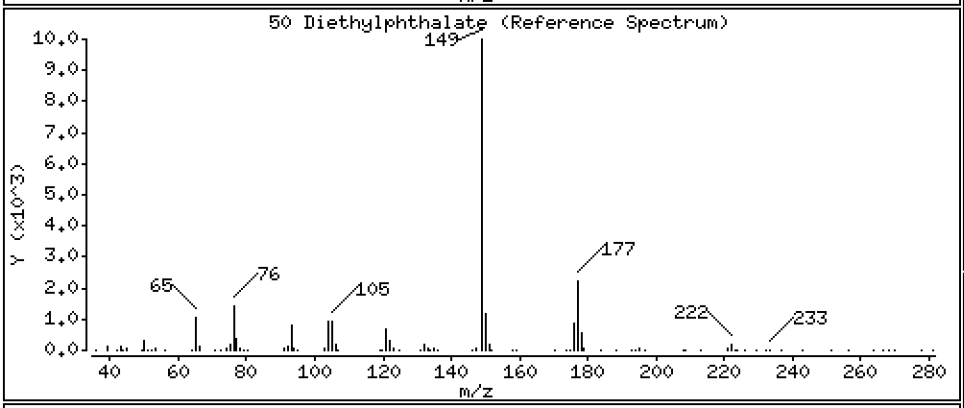
Concentration: 0.1262 ug/mL

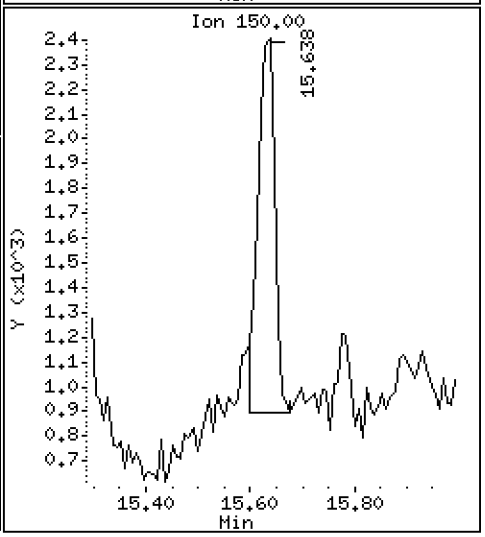


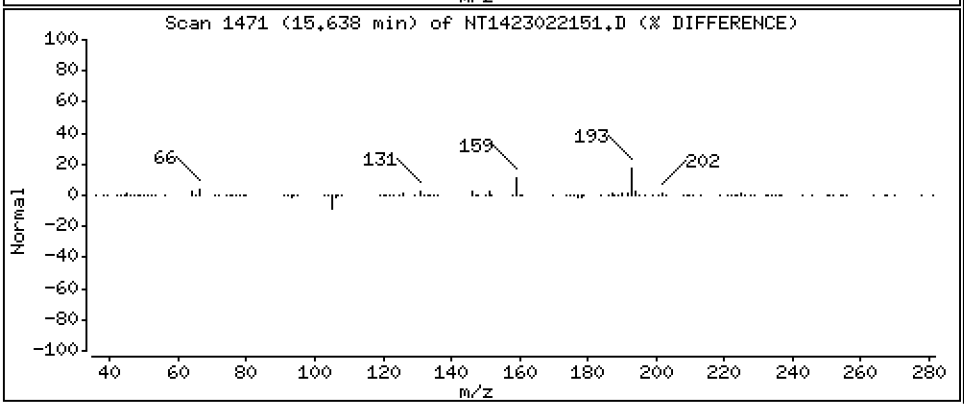












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

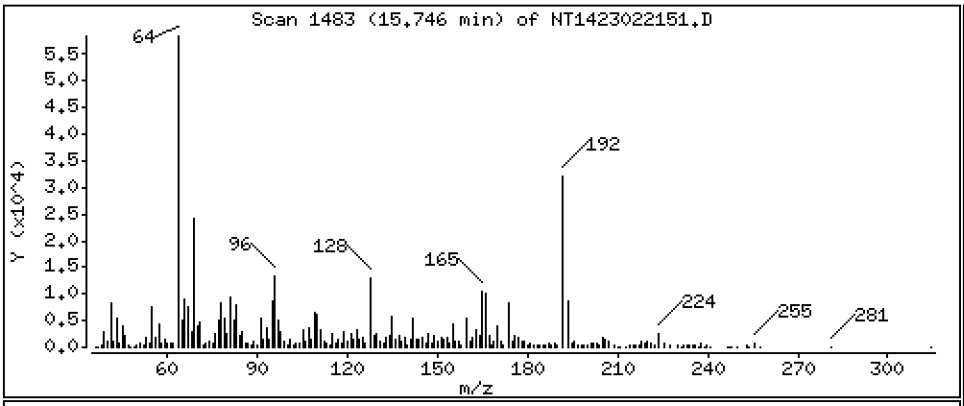
Operator: DSD

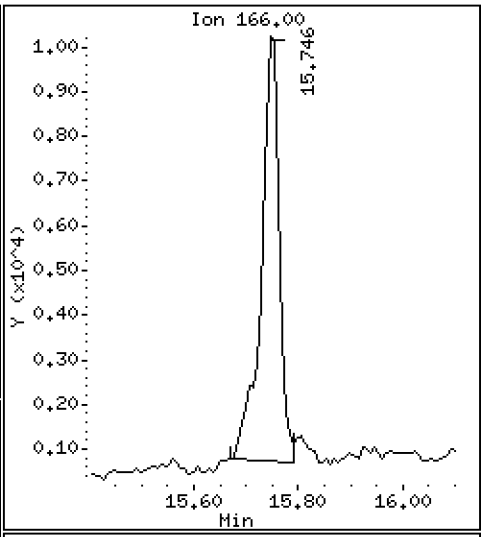
Column phase: ZB-5msi

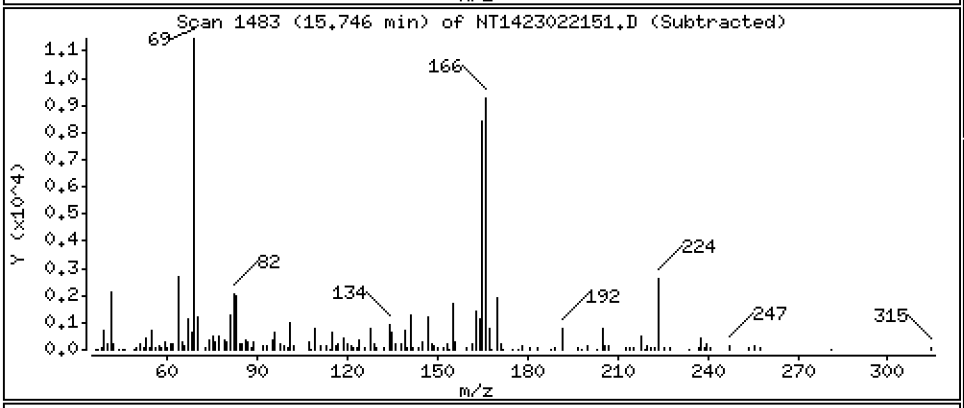
Column diameter: 0.25

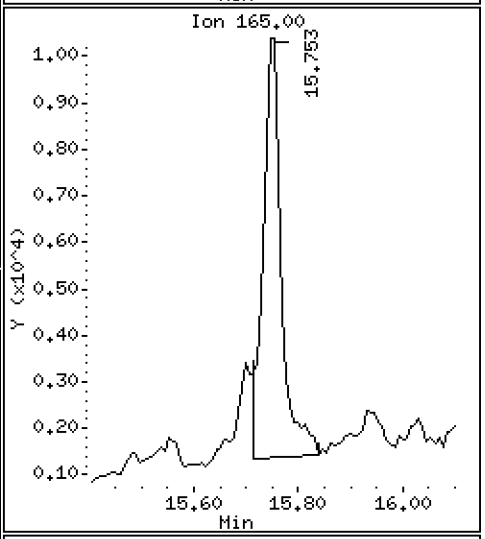
49 Fluorene

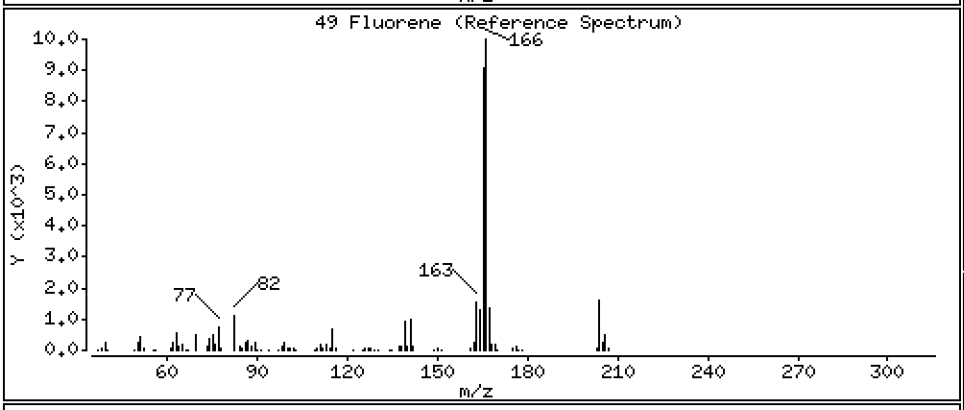
Concentration: 0.09808 ug/mL

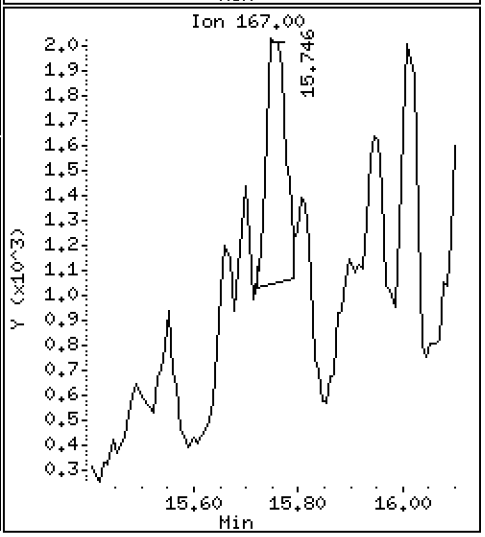


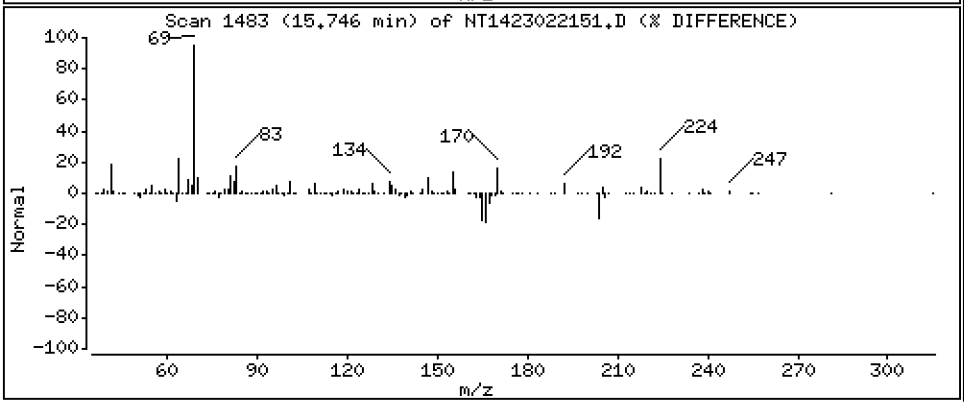












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

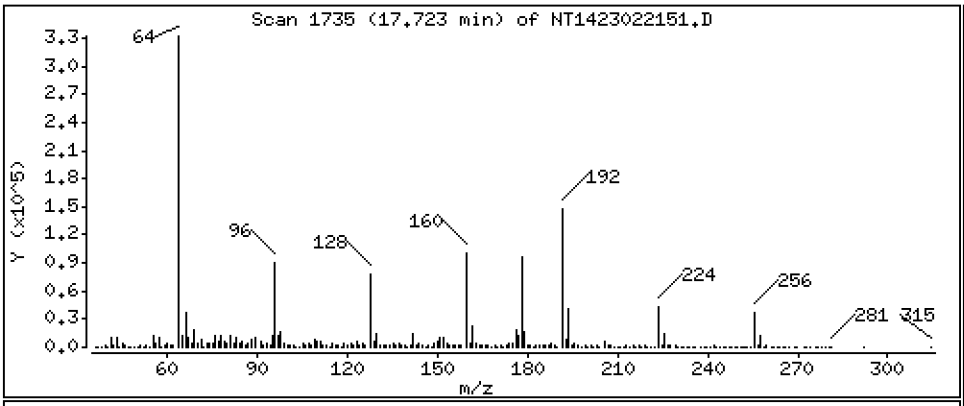
Operator: DSD

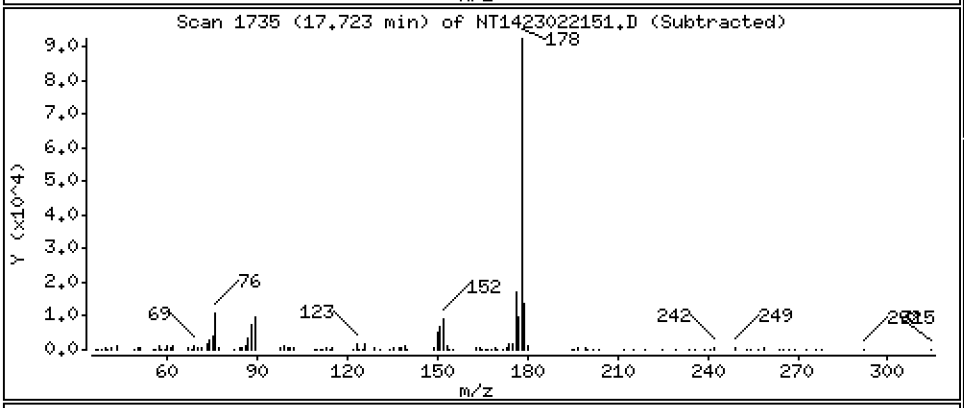
Column phase: ZB-5msi

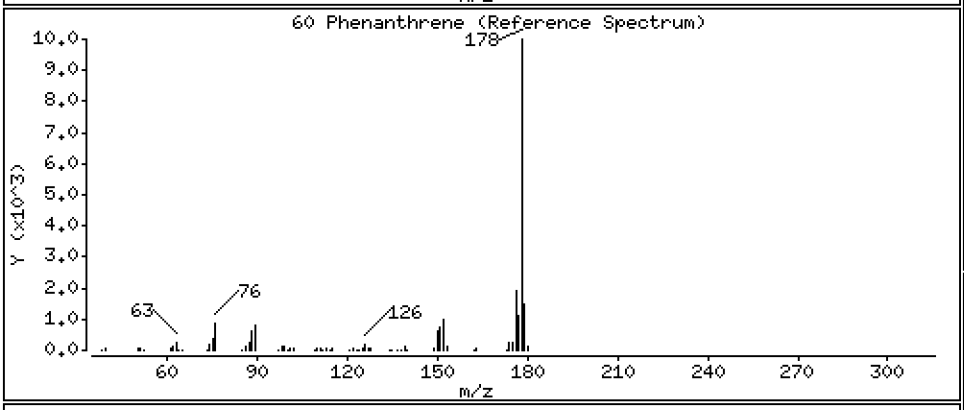
Column diameter: 0.25

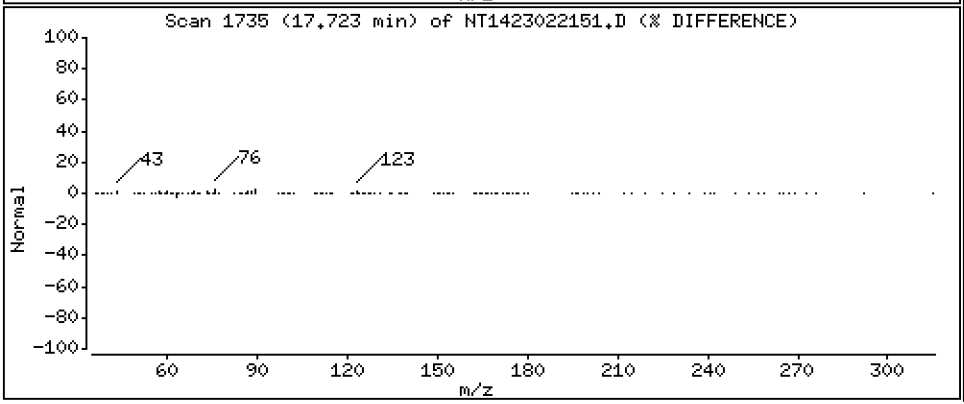
60 Phenanthrene

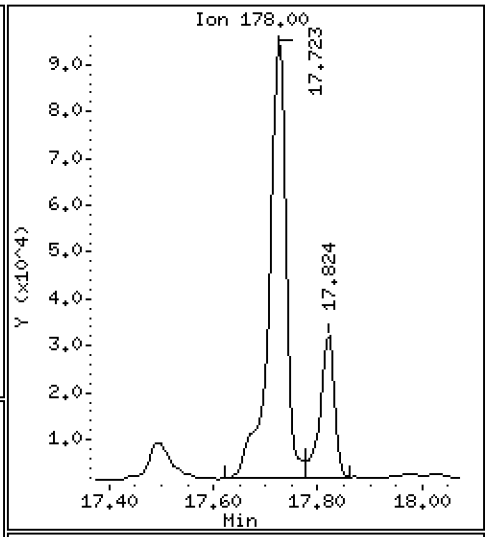
Concentration: 0.7864 ug/mL

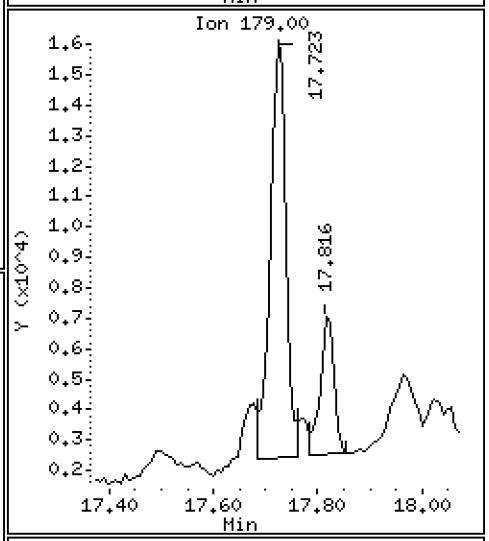


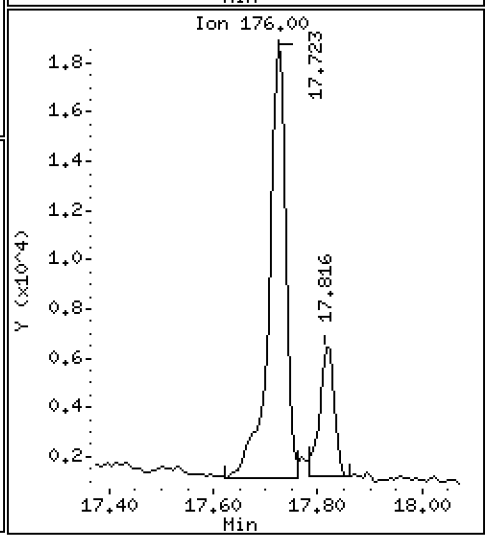












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

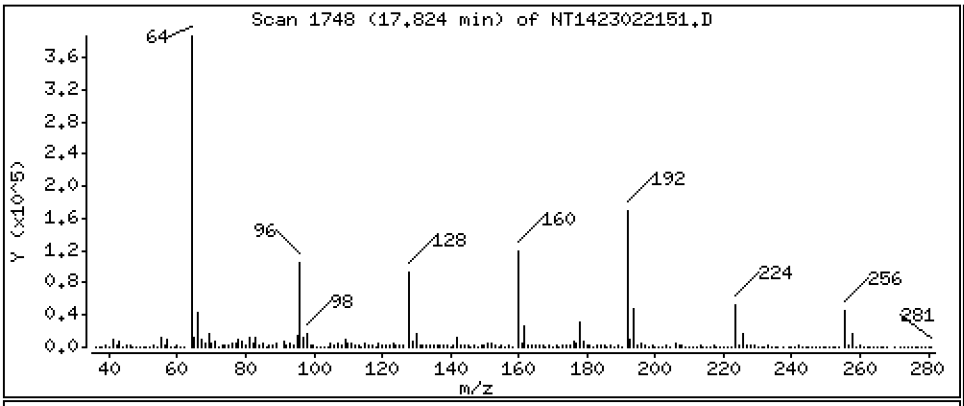
Operator: DSD

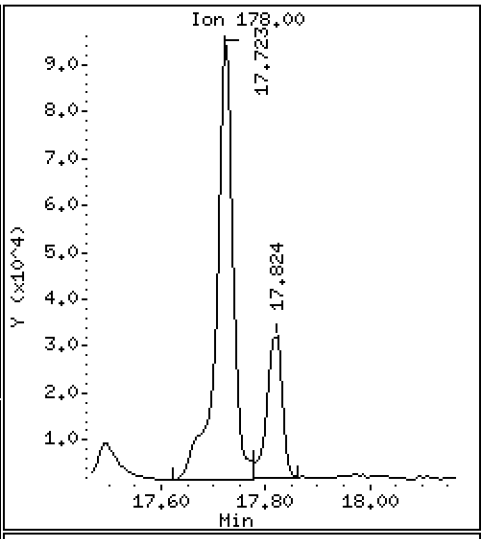
Column phase: ZB-5msi

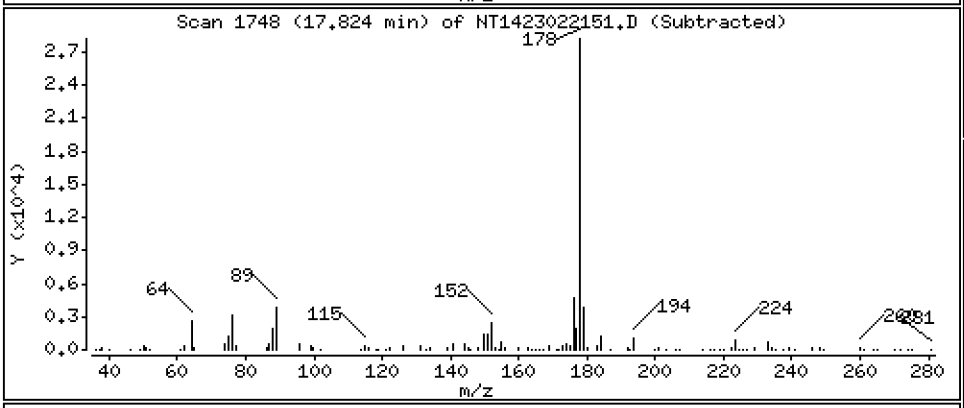
Column diameter: 0.25

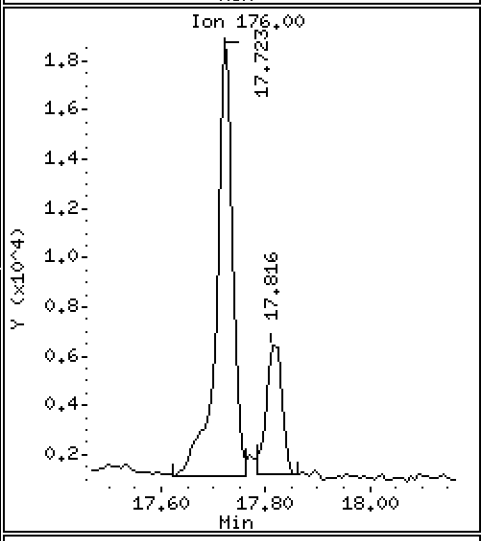
61 Anthracene

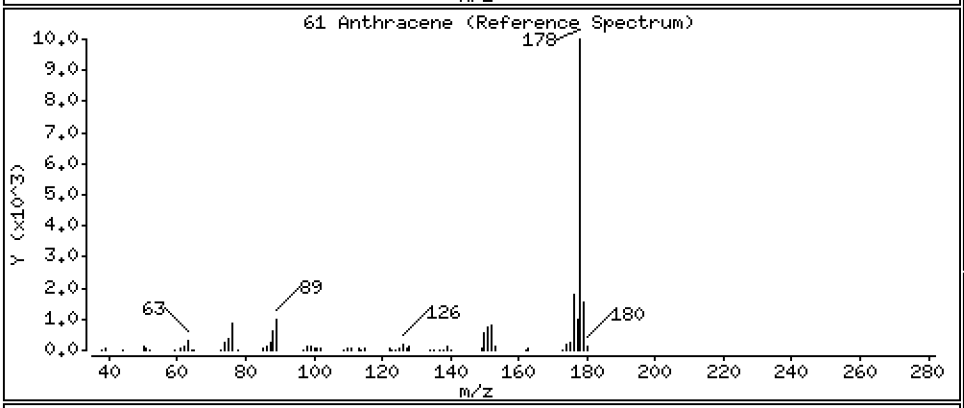
Concentration: 0.2263 ug/mL

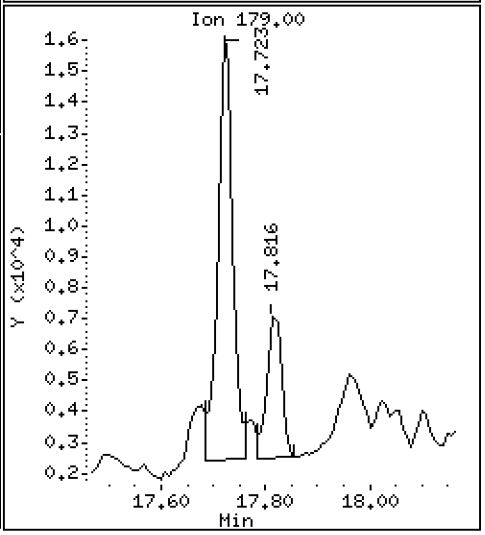


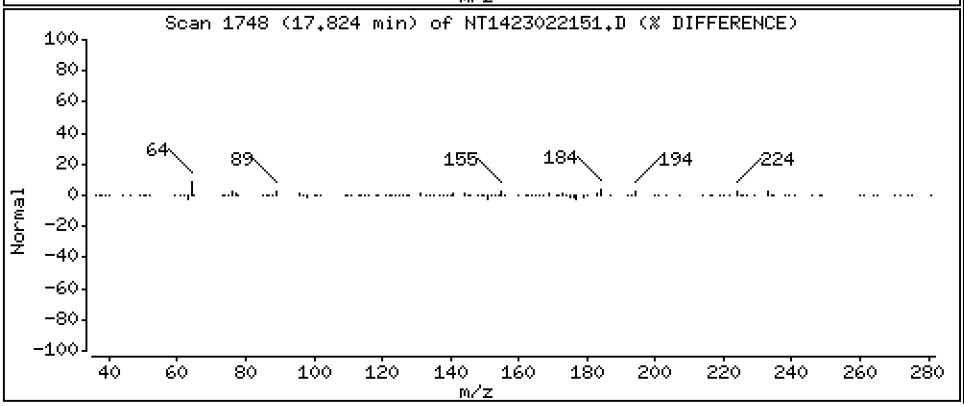












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

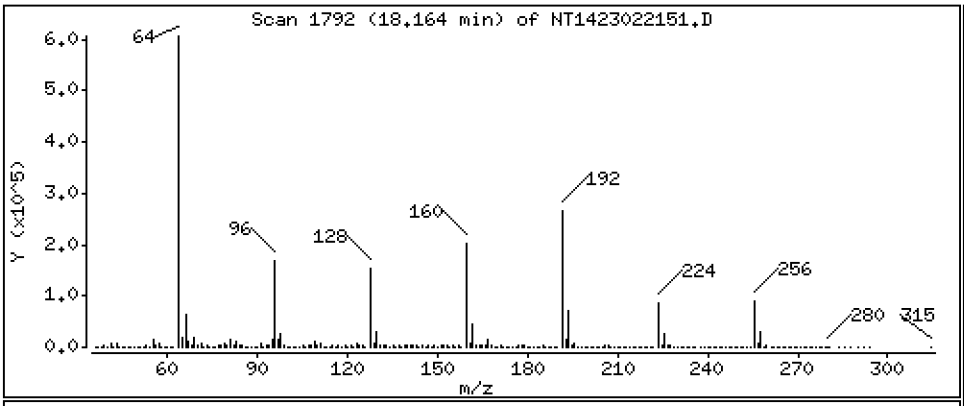
Operator: DSD

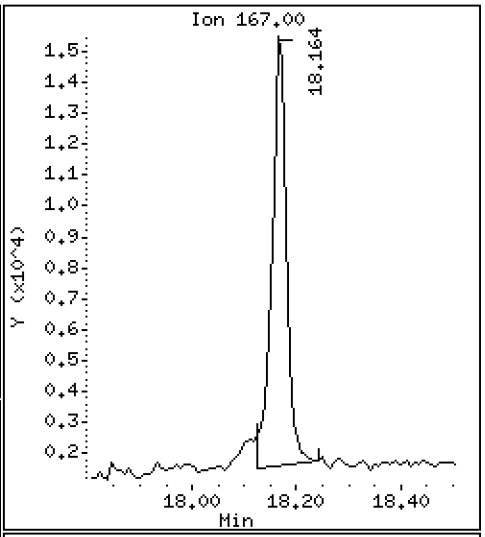
Column phase: ZB-5msi

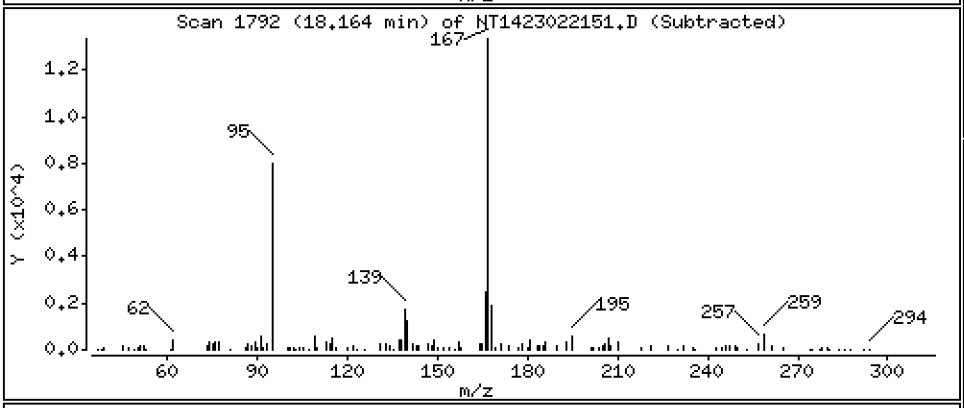
Column diameter: 0.25

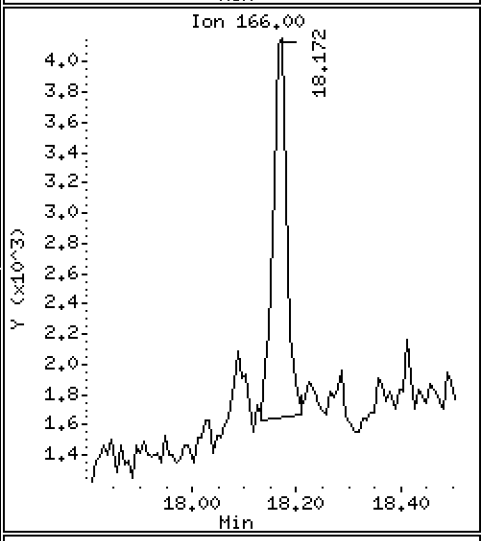
62 Carbazole

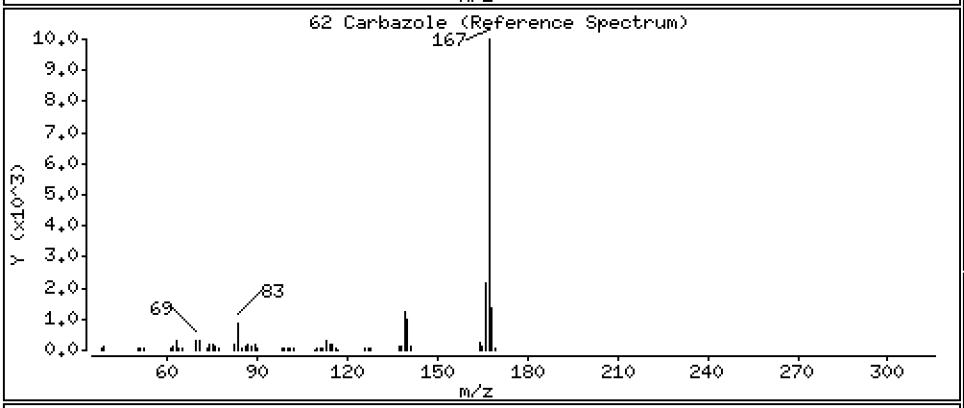
Concentration: 0.1129 ug/mL

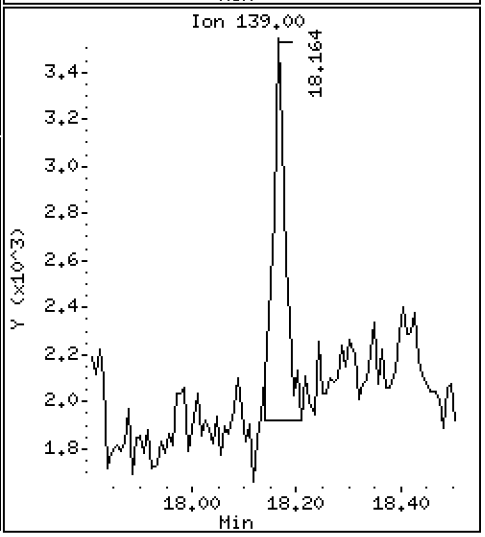


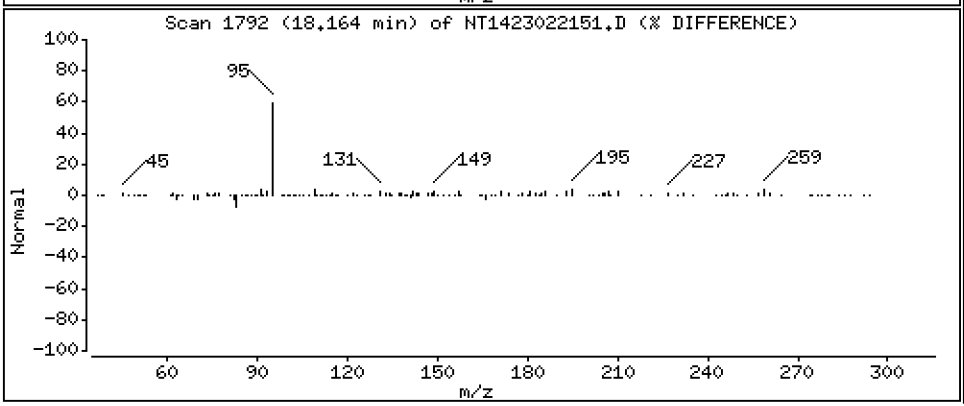












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

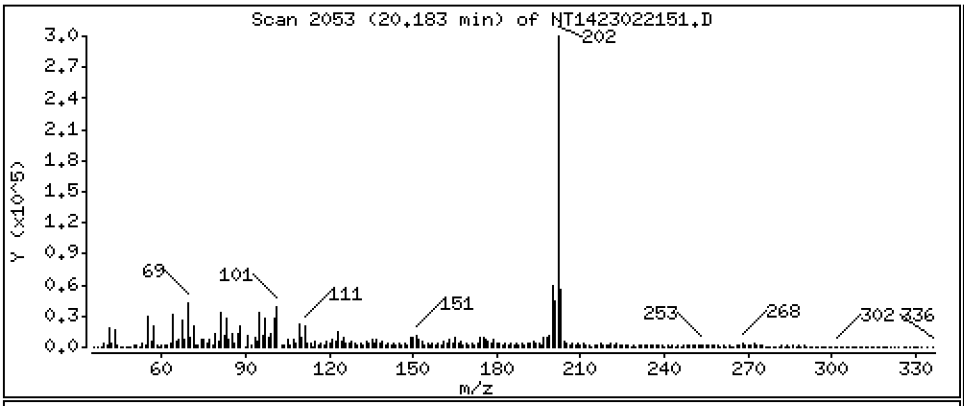
Operator: DSD

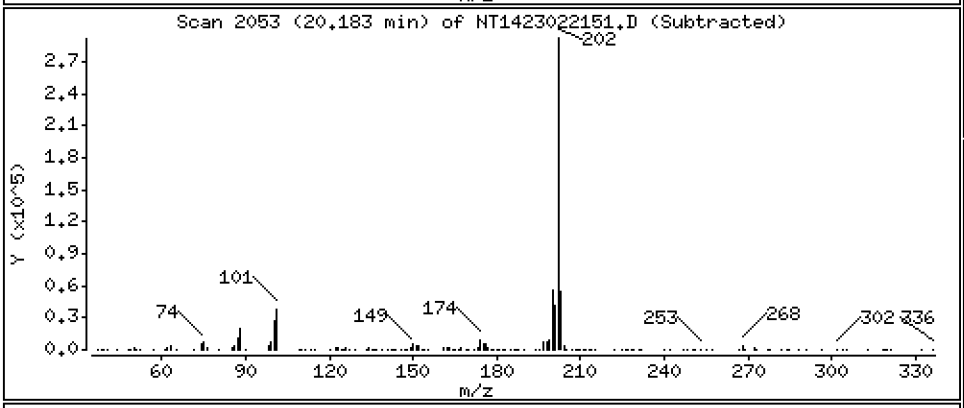
Column phase: ZB-5msi

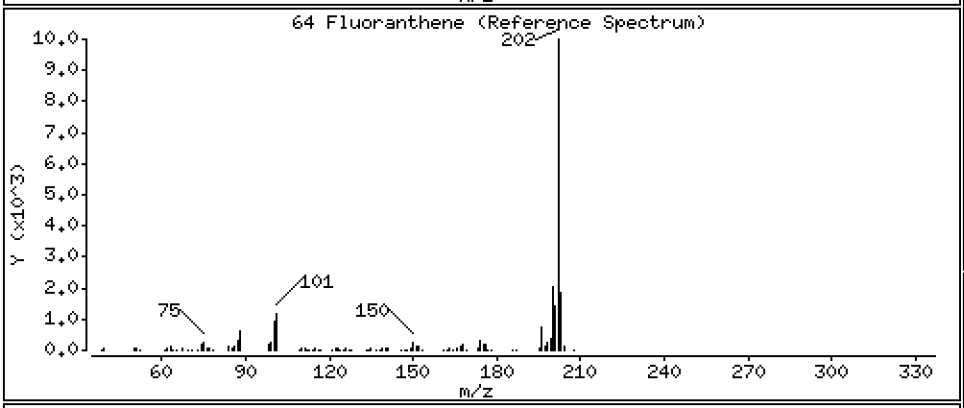
Column diameter: 0.25

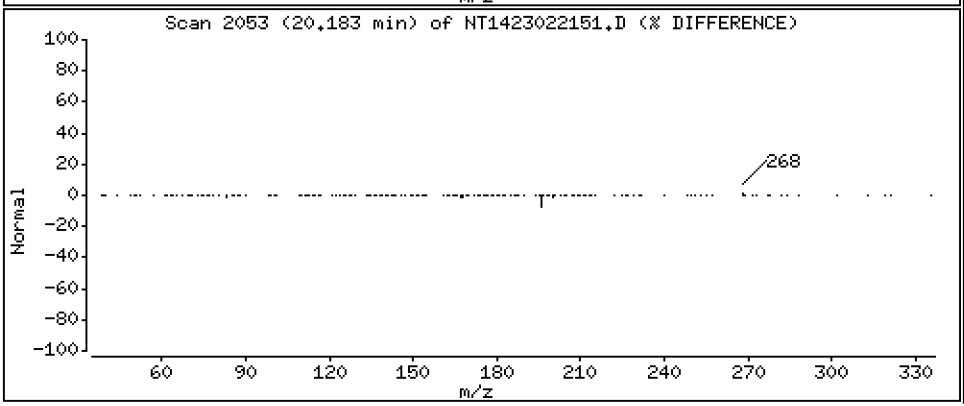
64 Fluoranthene

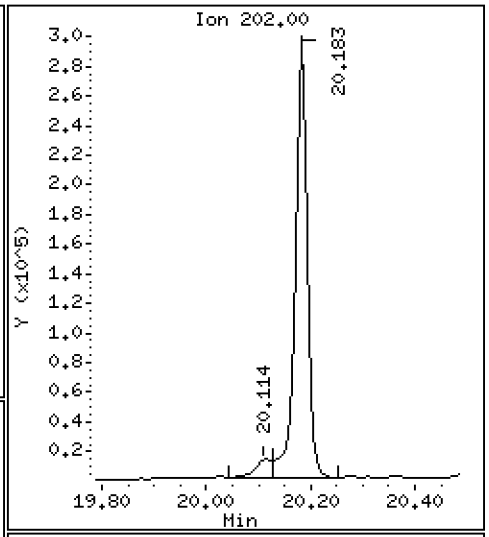
Concentration: 1.687 ug/mL

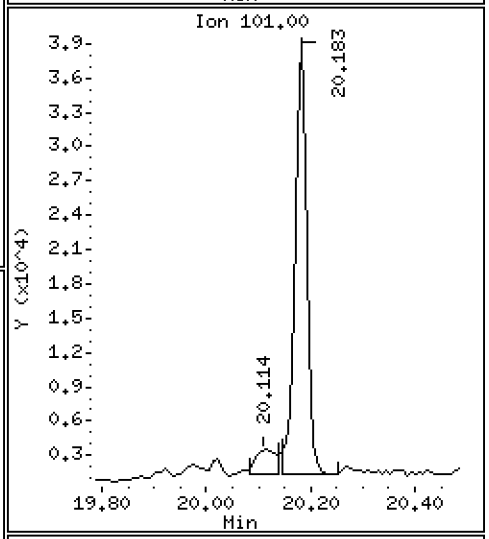


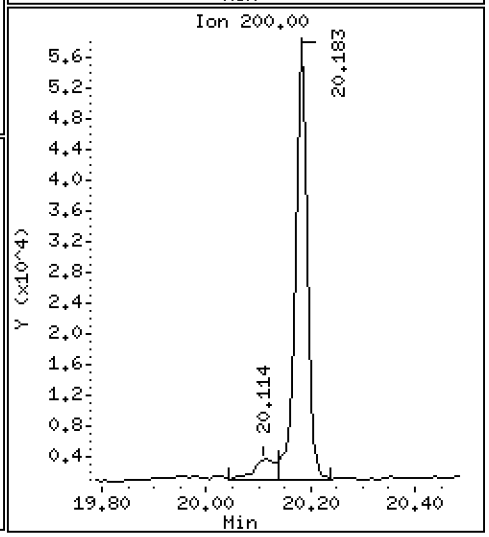












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

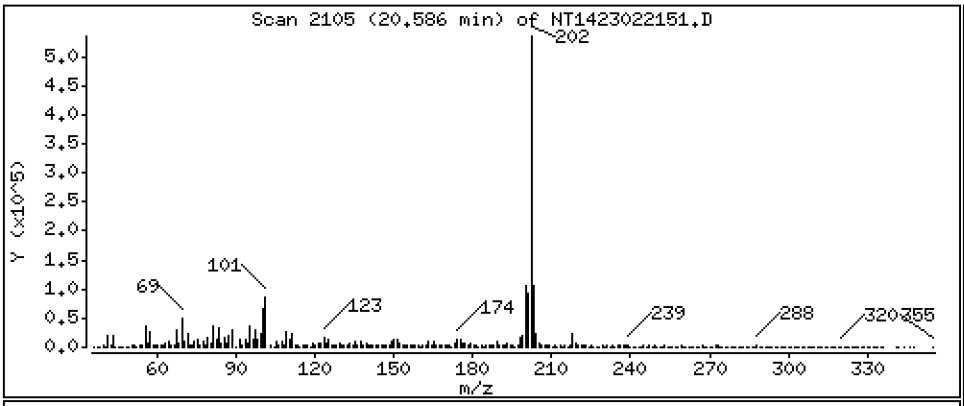
Operator: DSD

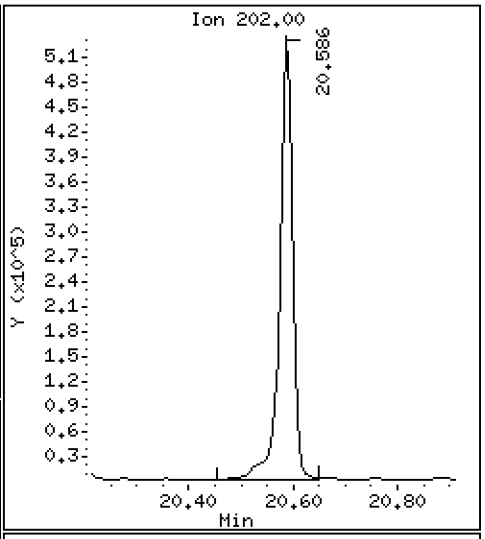
Column phase: ZB-5msi

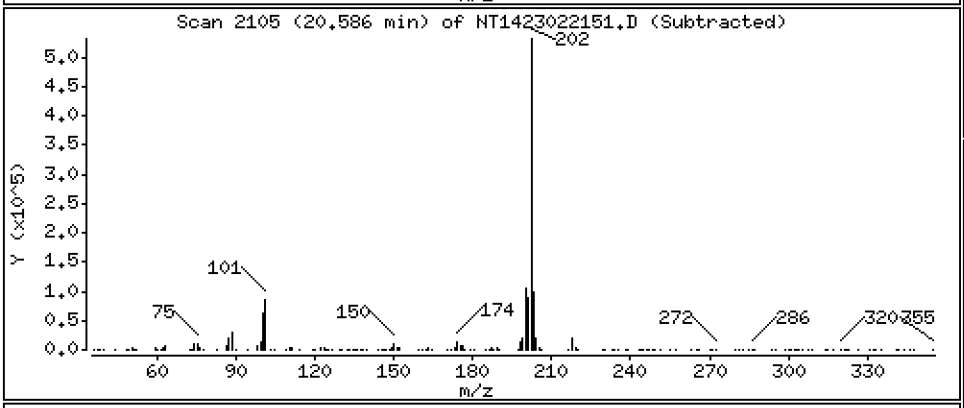
Column diameter: 0.25

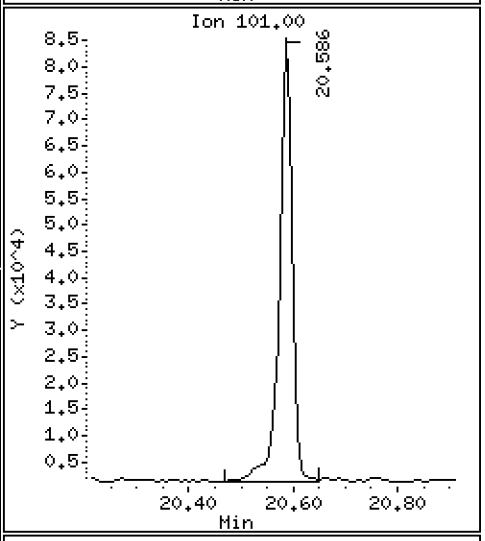
65 Pyrene

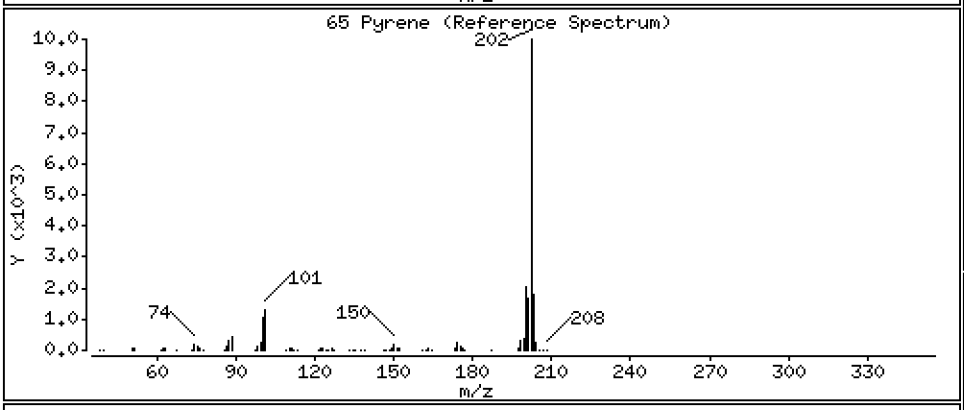
Concentration: 3.041 ug/mL

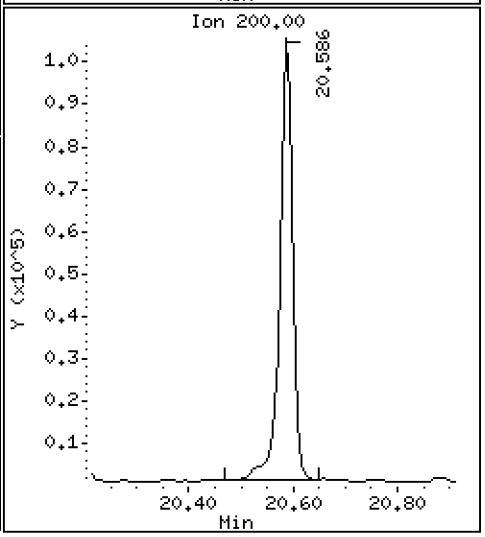


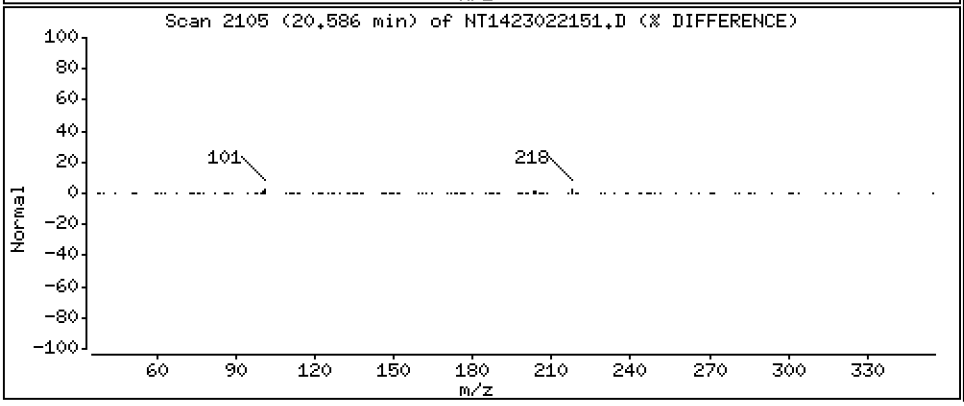












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

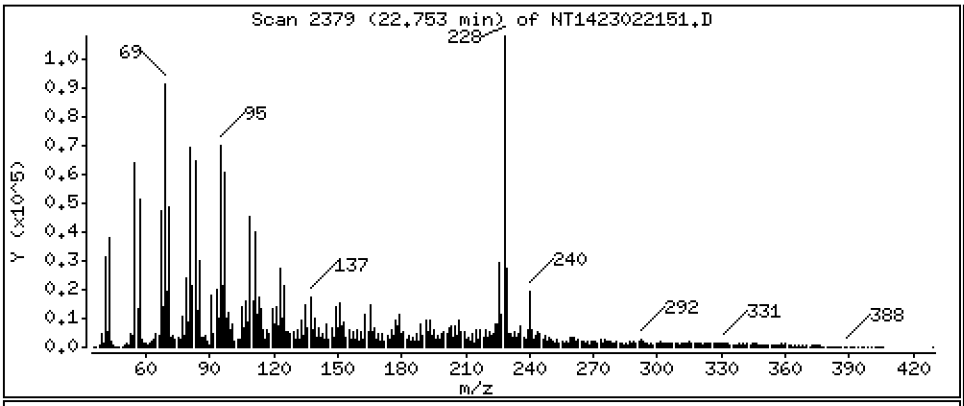
Operator: DSD

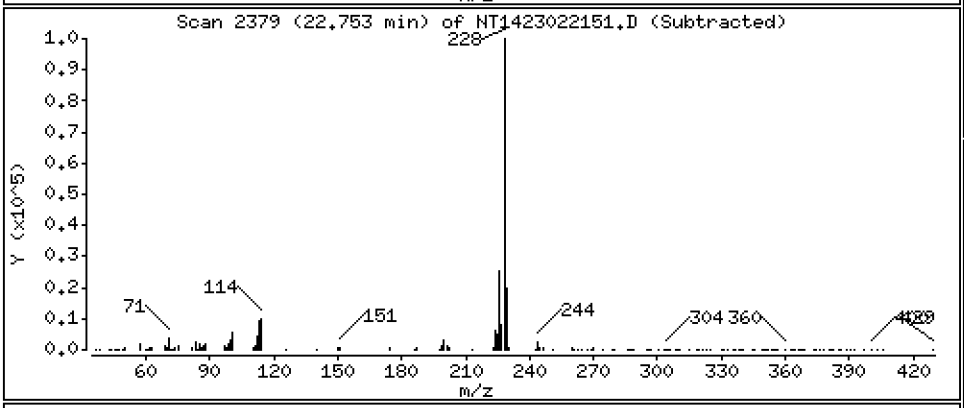
Column phase: ZB-5msi

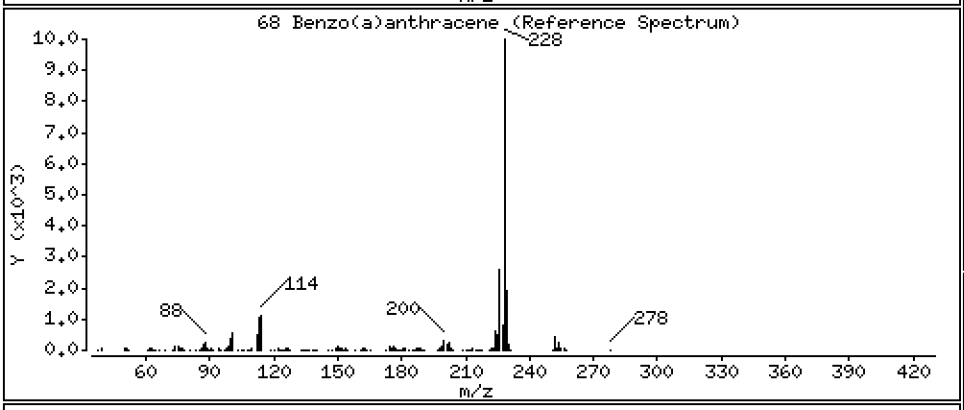
Column diameter: 0.25

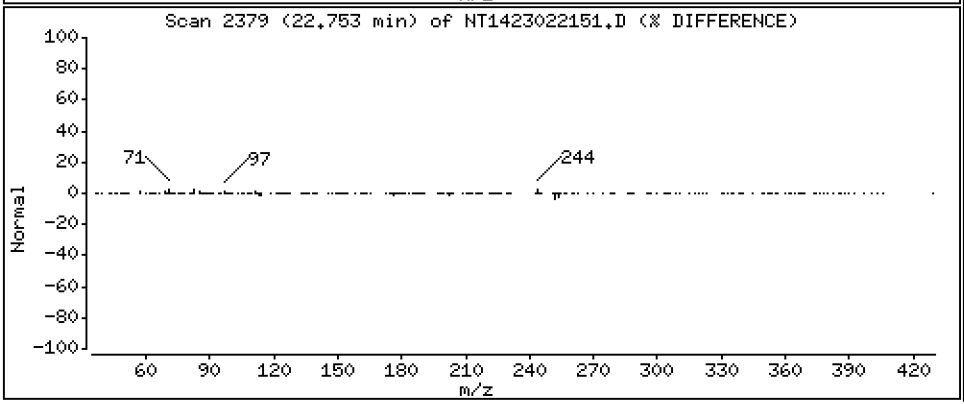
68 Benzo(a)anthracene

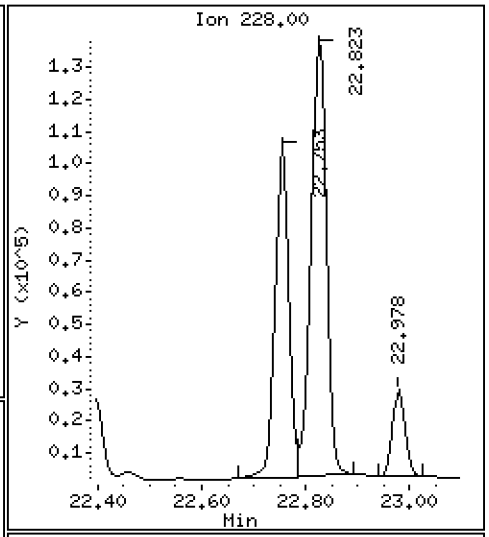
Concentration: 0.8686 ug/mL

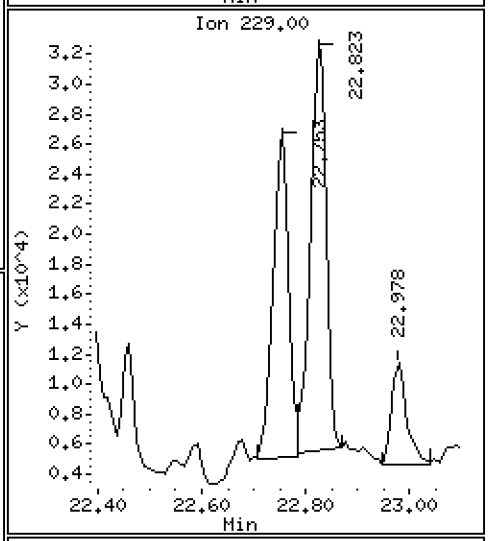


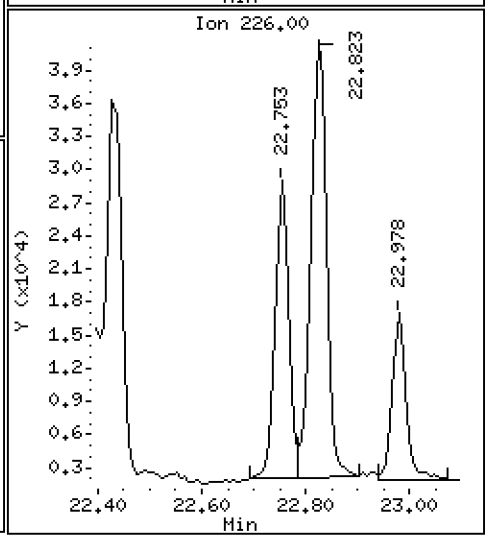












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

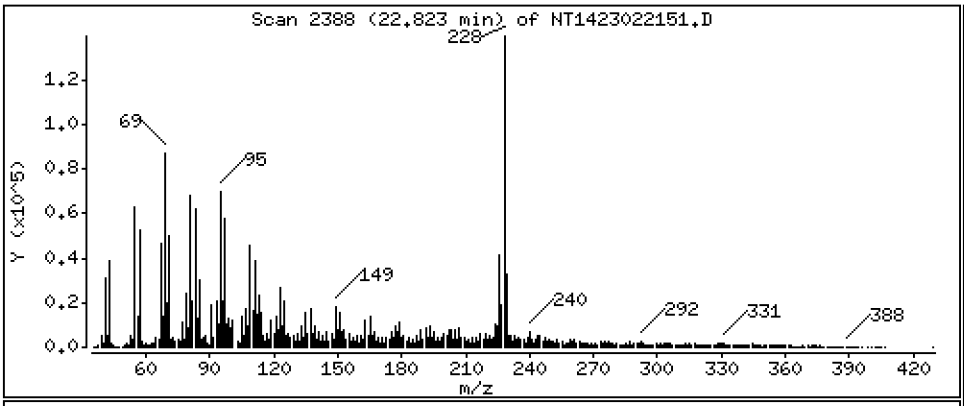
Operator: DSD

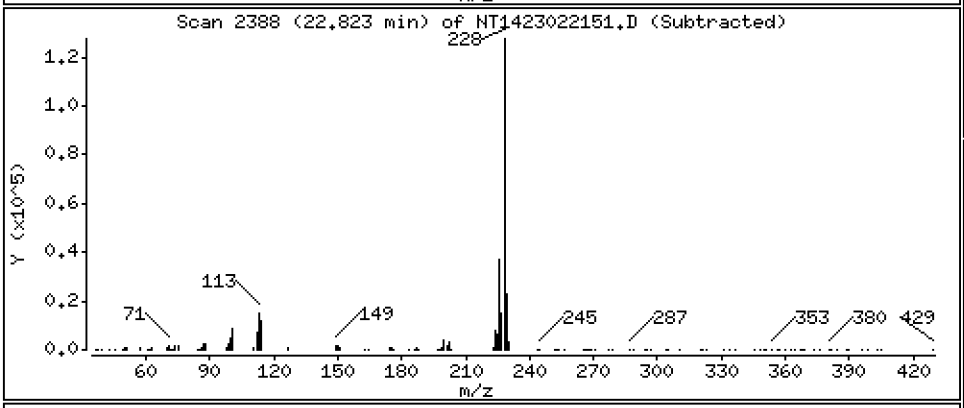
Column phase: ZB-5msi

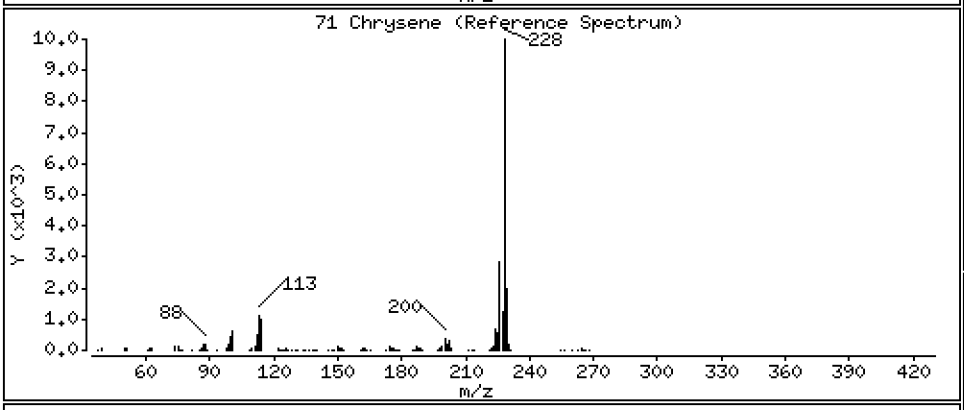
Column diameter: 0.25

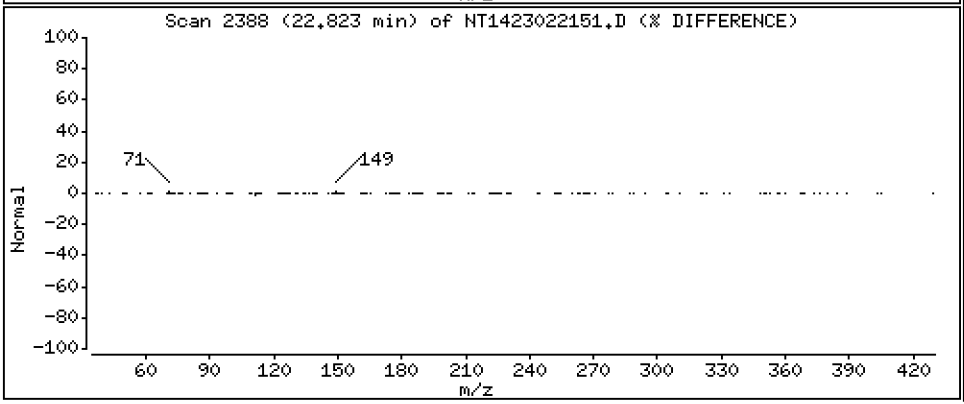
71 Chrysene

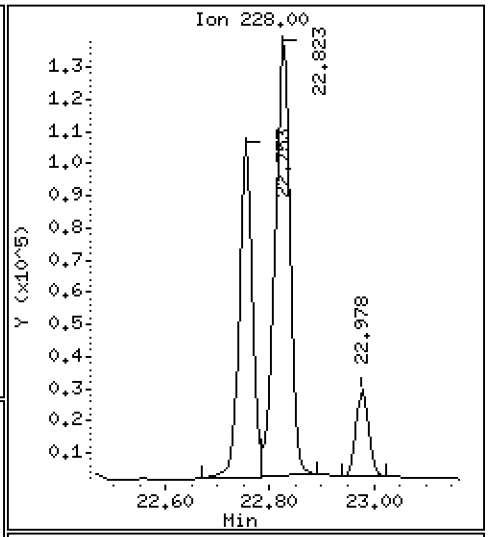
Concentration: 1.393 ug/mL

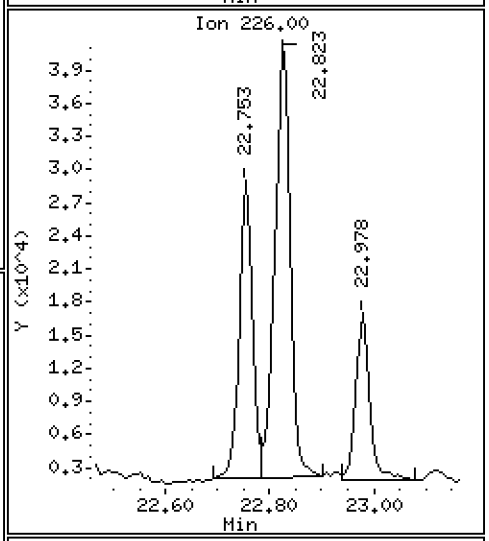


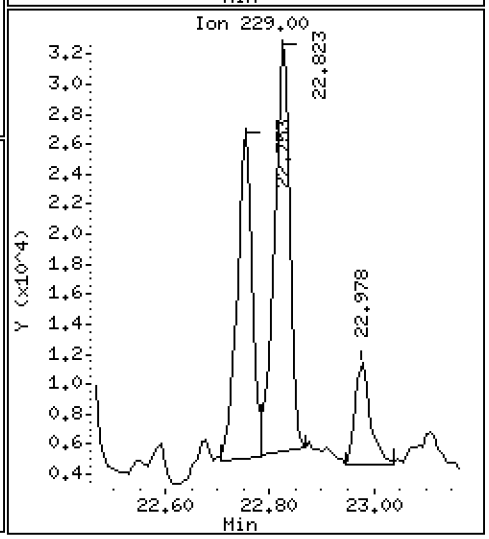












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

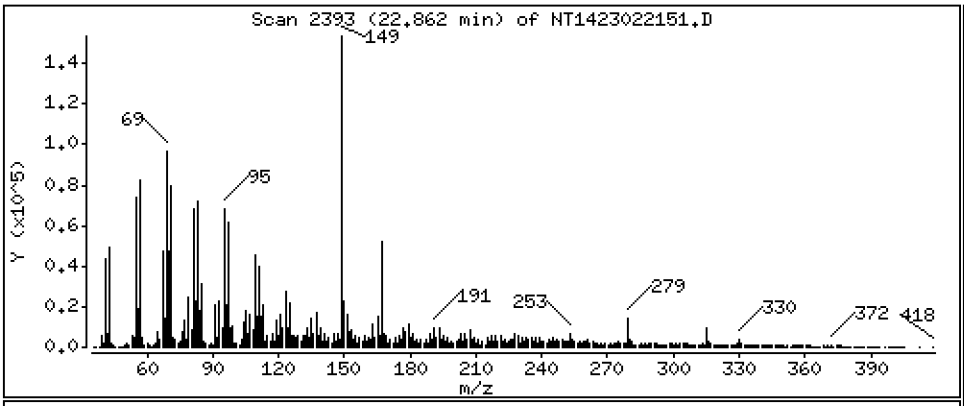
Operator: DSD

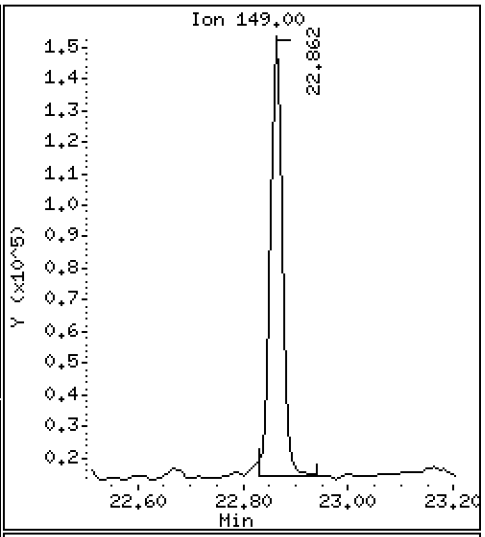
Column phase: ZB-5msi

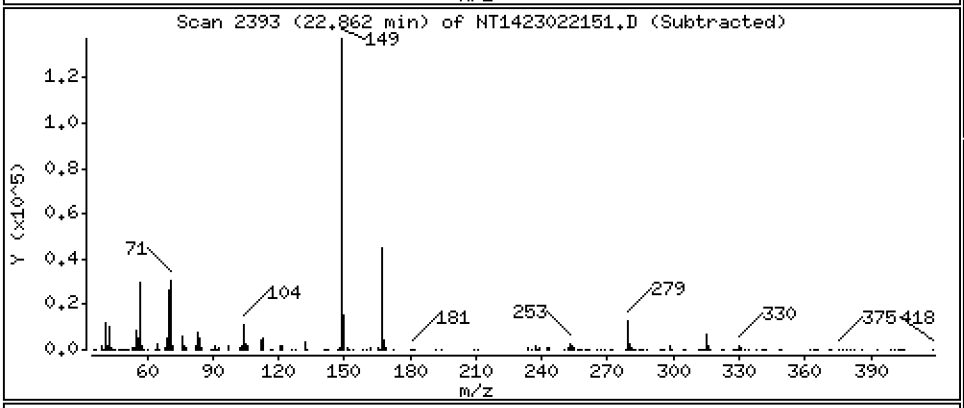
Column diameter: 0.25

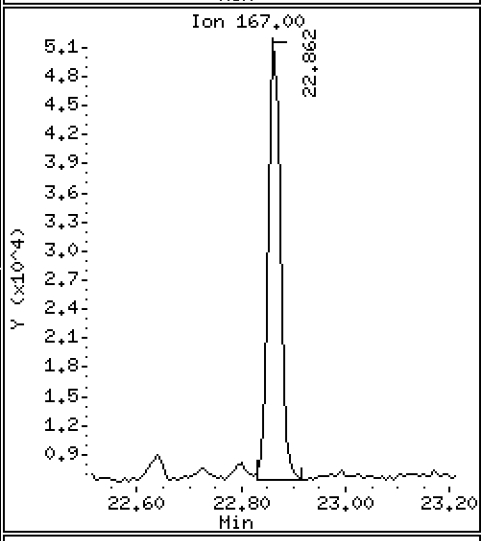
72 bis(2-Ethylhexyl)phthalate

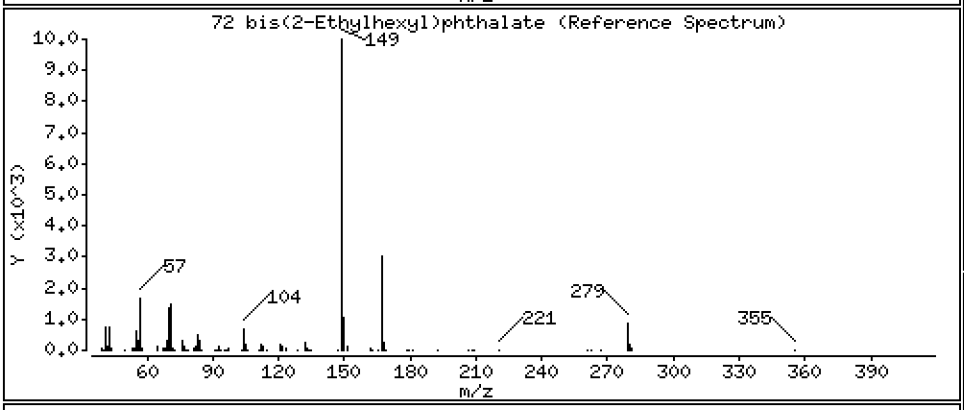
Concentration: 1.209 ug/mL

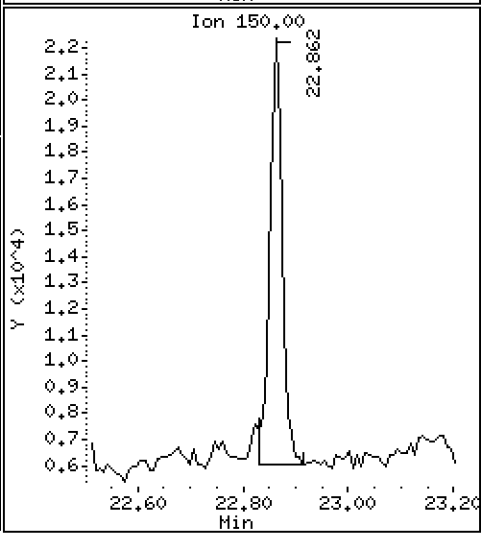


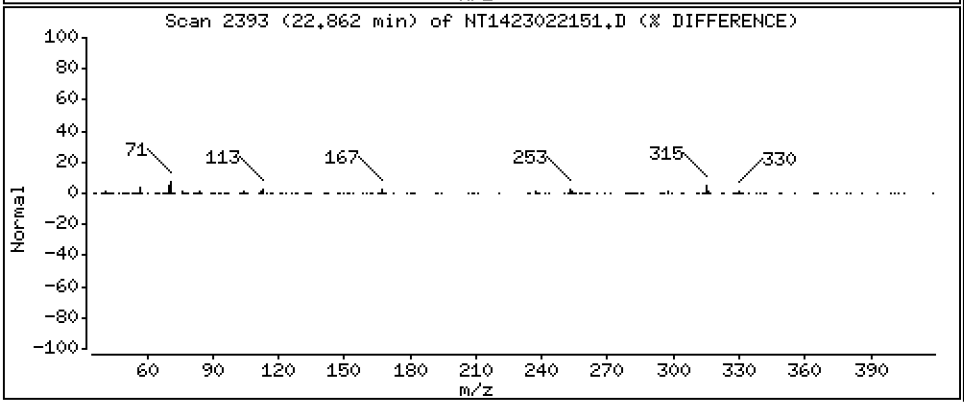












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

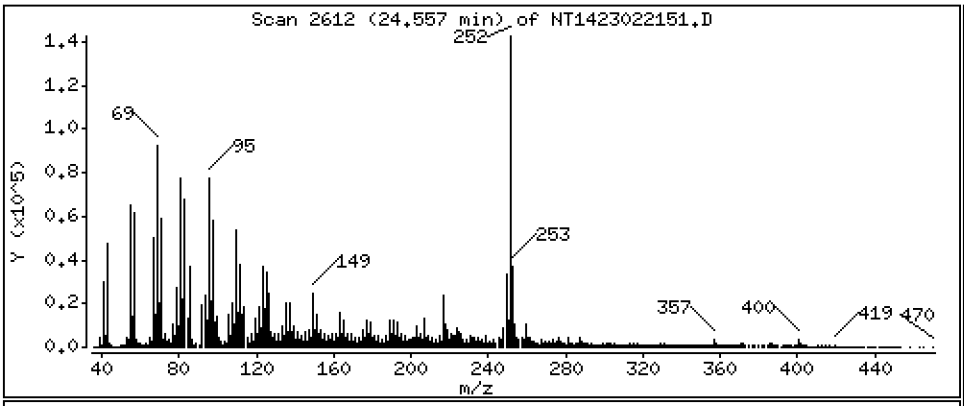
Operator: DSD

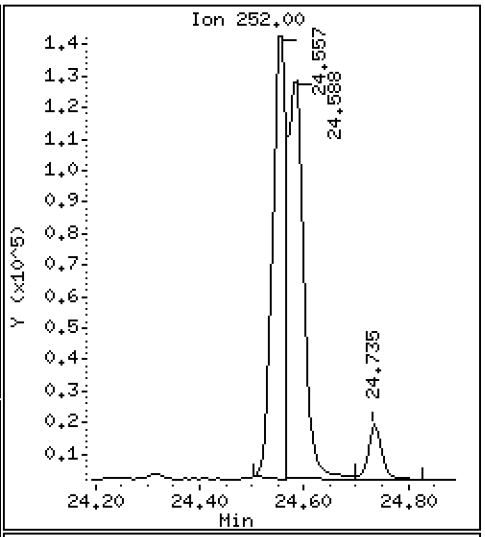
Column phase: ZB-5msi

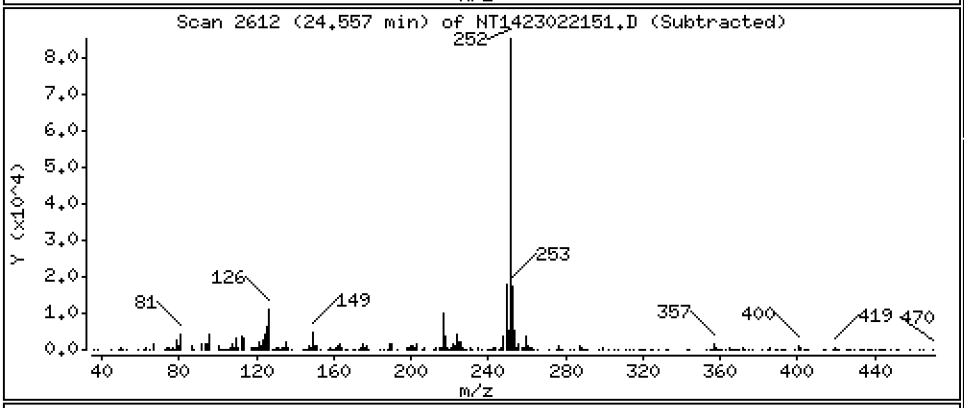
Column diameter: 0.25

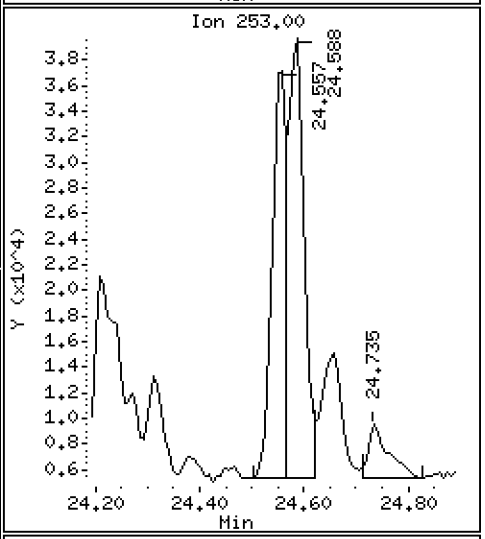
74 Benzo(b)fluoranthene

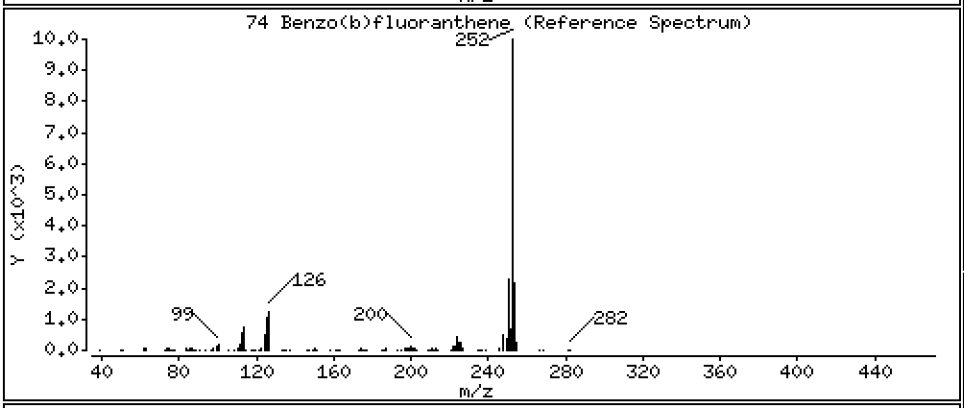
Concentration: 1.548 ug/mL

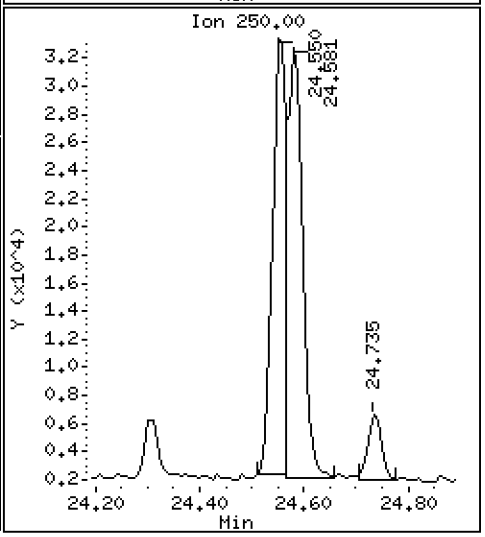


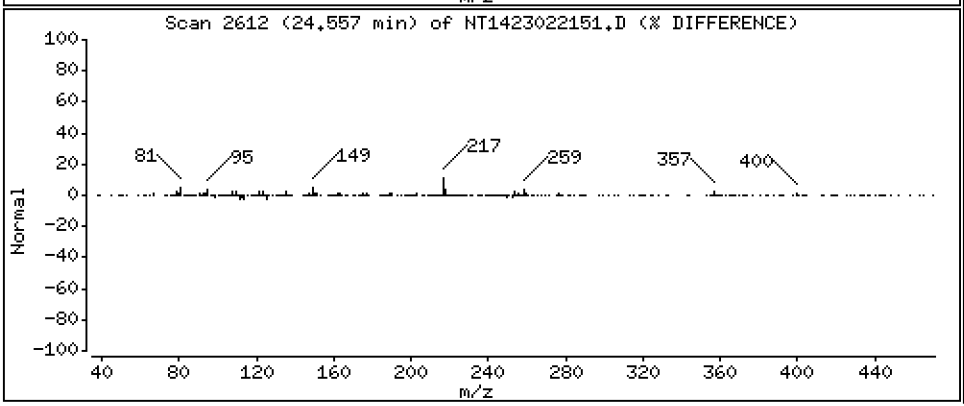












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022151.D

Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

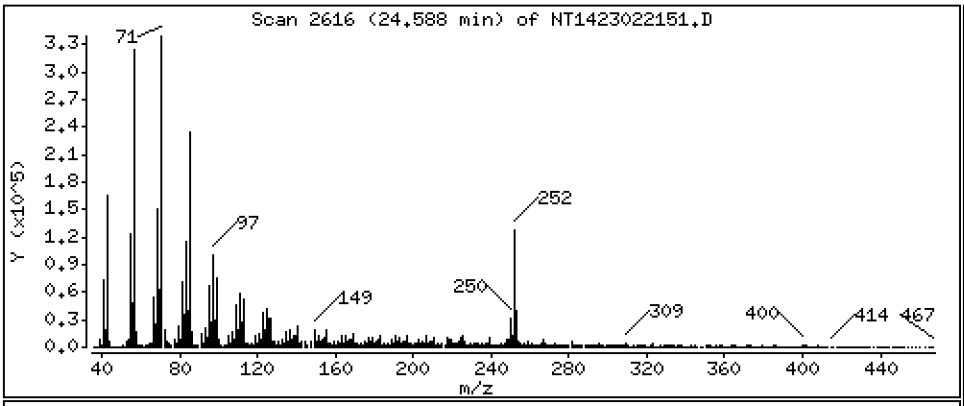
Operator: DSD

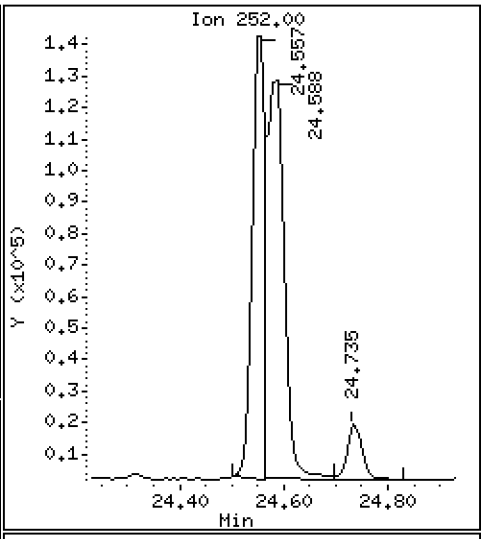
Column phase: ZB-5msi

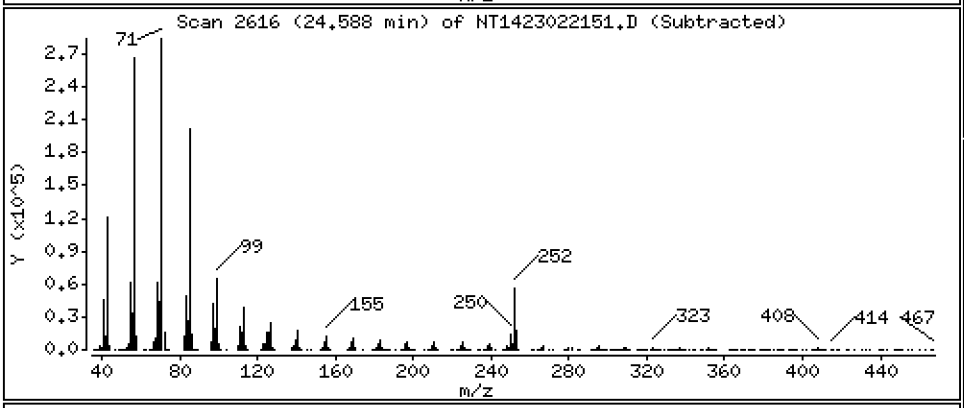
Column diameter: 0.25

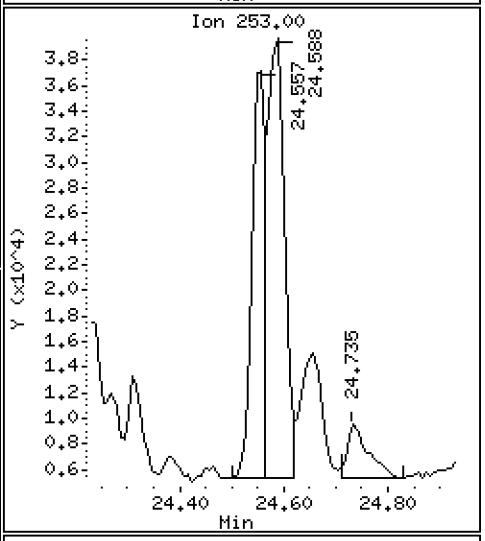
75 Benzo(k)fluoranthene

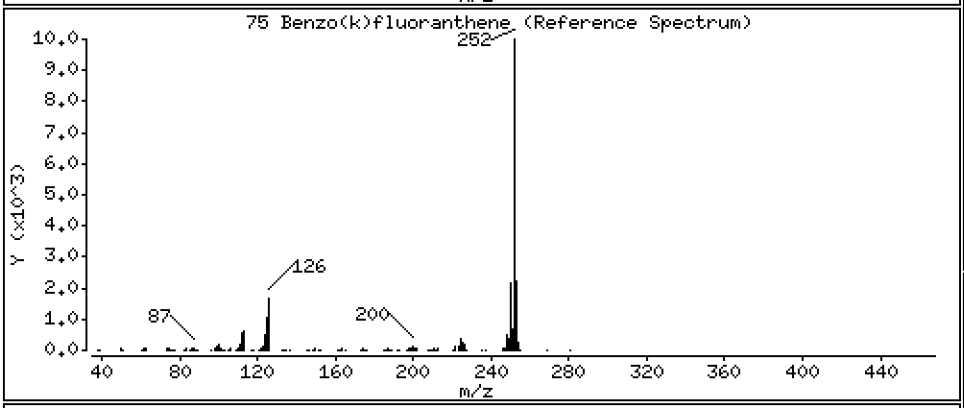
Concentration: 1.765 ug/mL

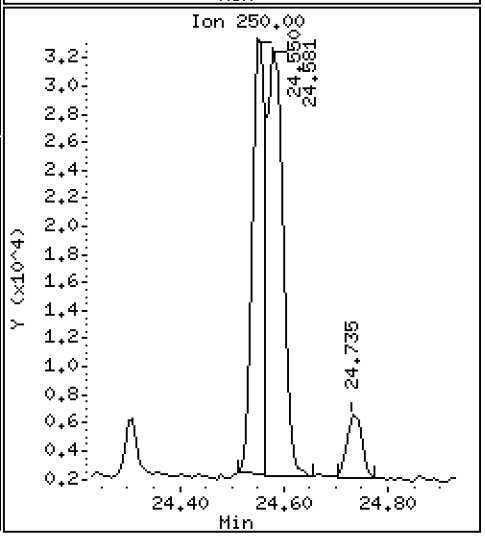


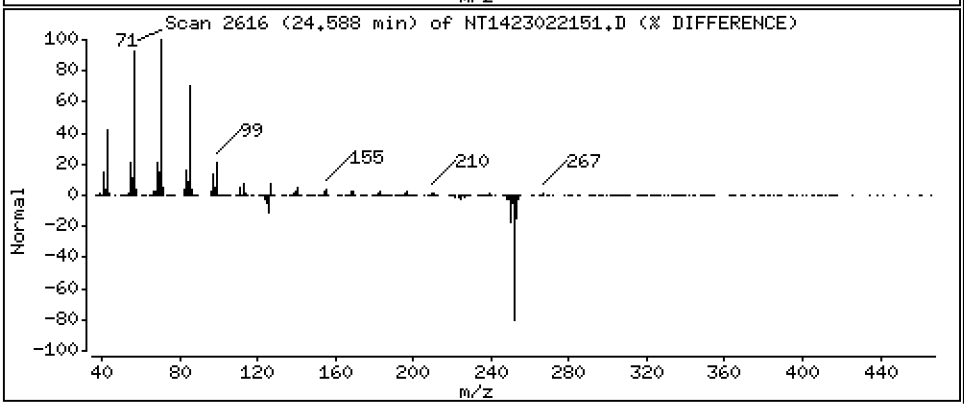












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

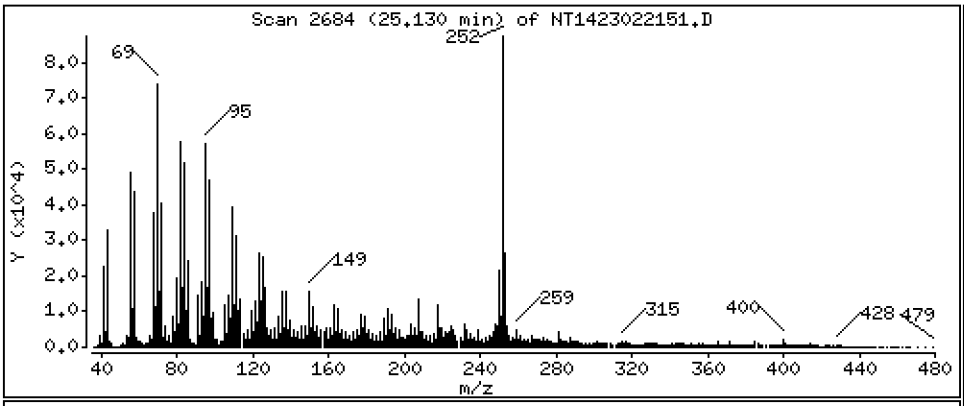
Operator: DSD

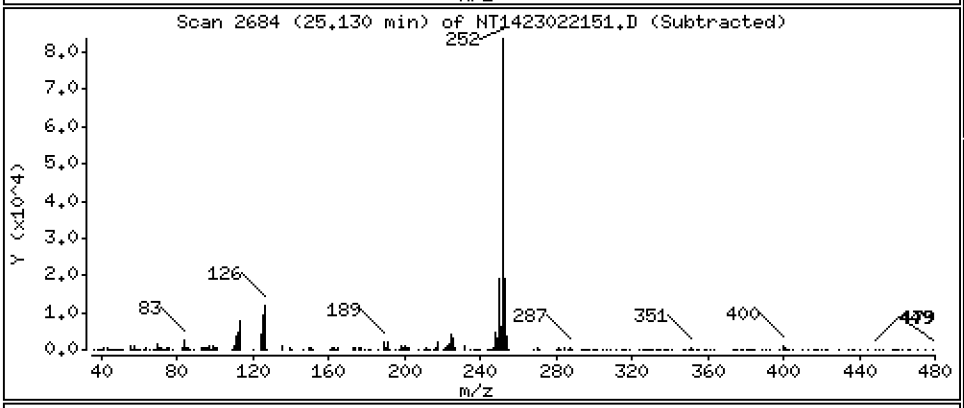
Column phase: ZB-5msi

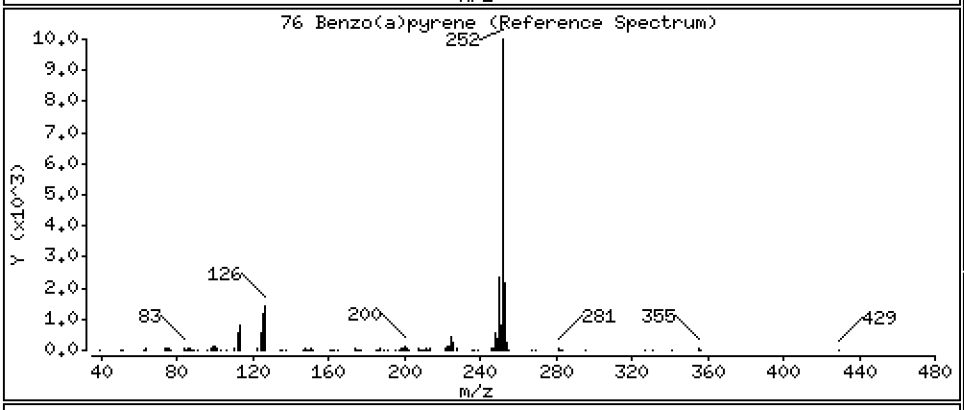
Column diameter: 0.25

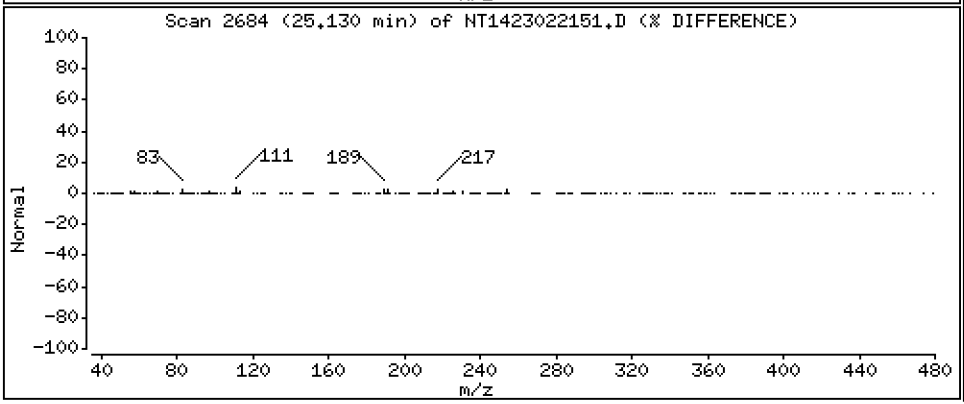
76 Benzo(a)pyrene

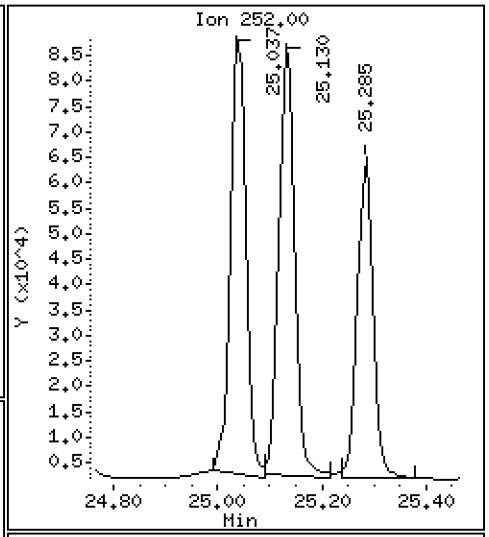
Concentration: 1.146 ug/mL

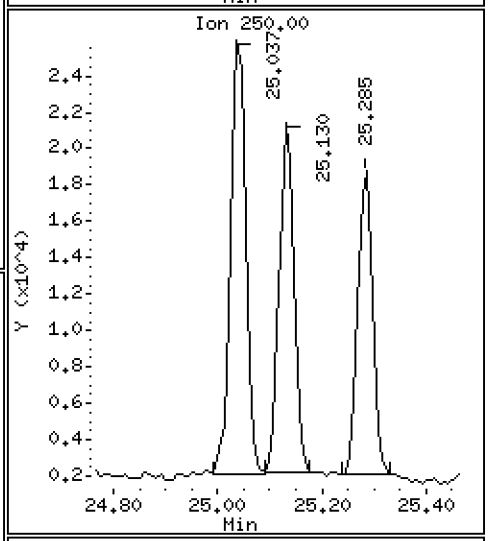


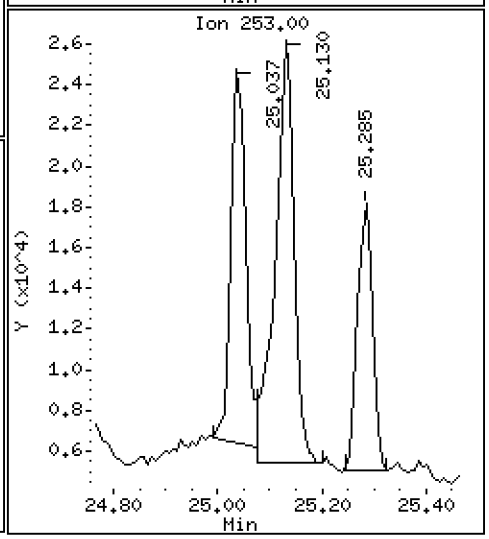












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

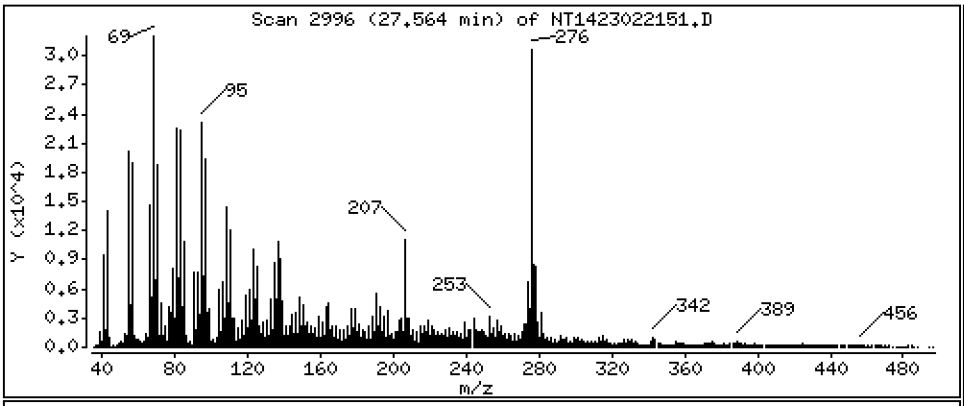
Operator: DSD

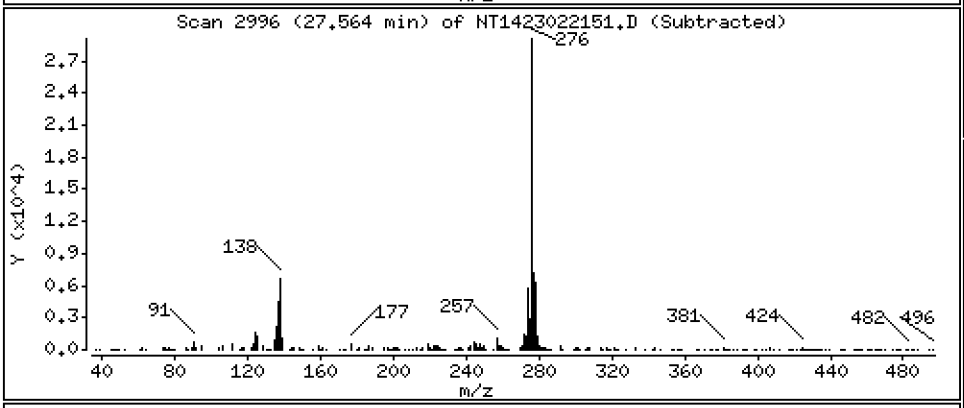
Column phase: ZB-5msi

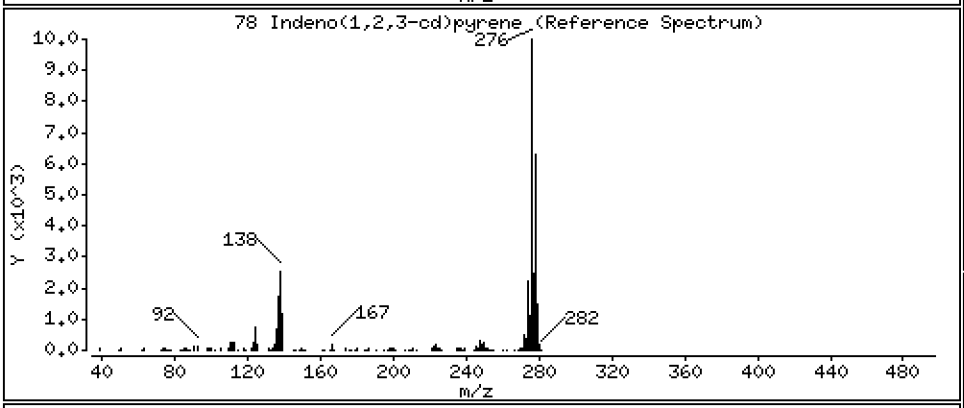
Column diameter: 0.25

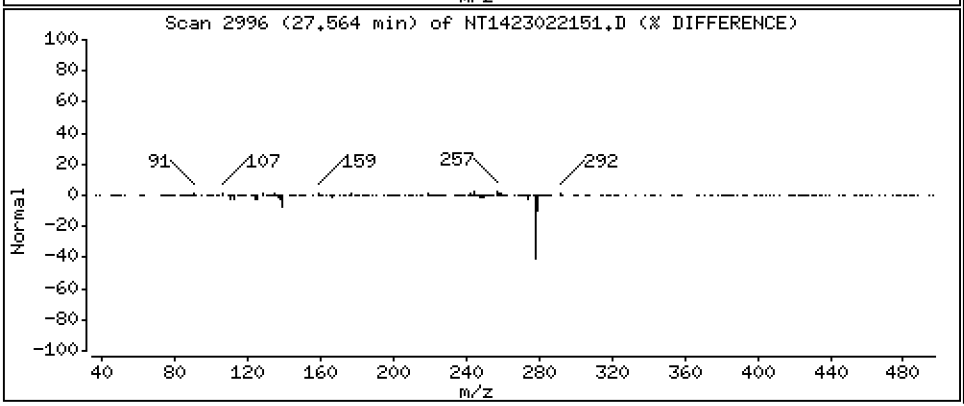
78 Indeno(1,2,3-cd)pyrene

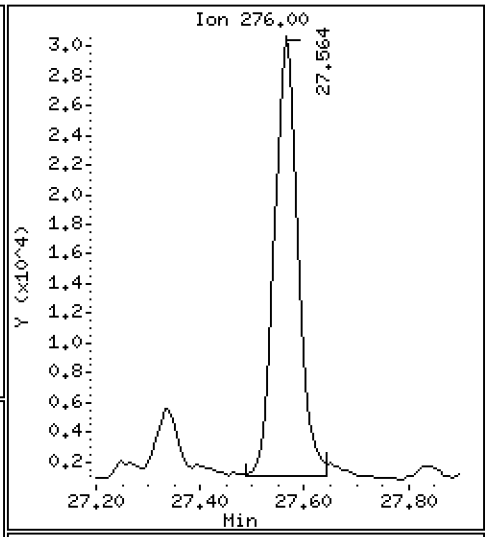
Concentration: 0.7352 ug/mL

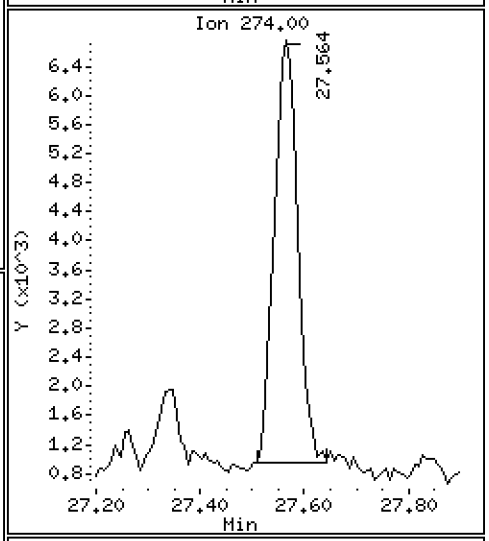


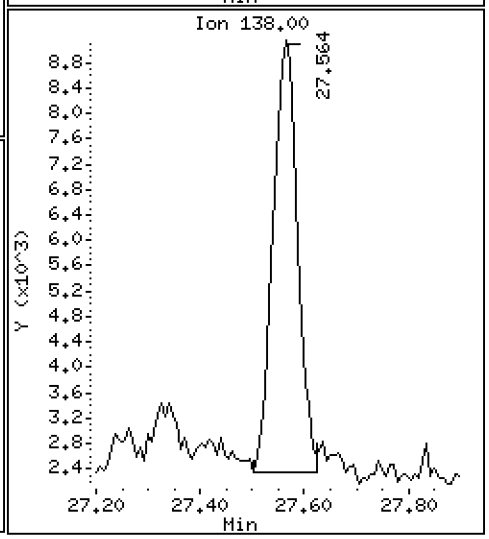












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

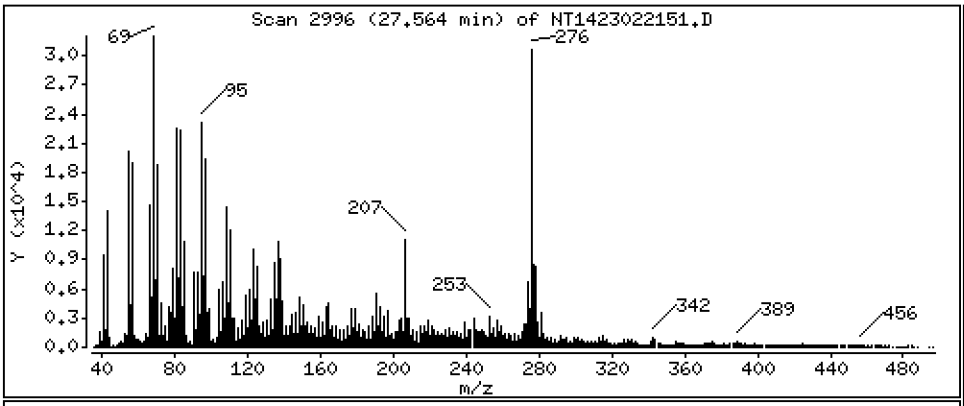
Operator: DSD

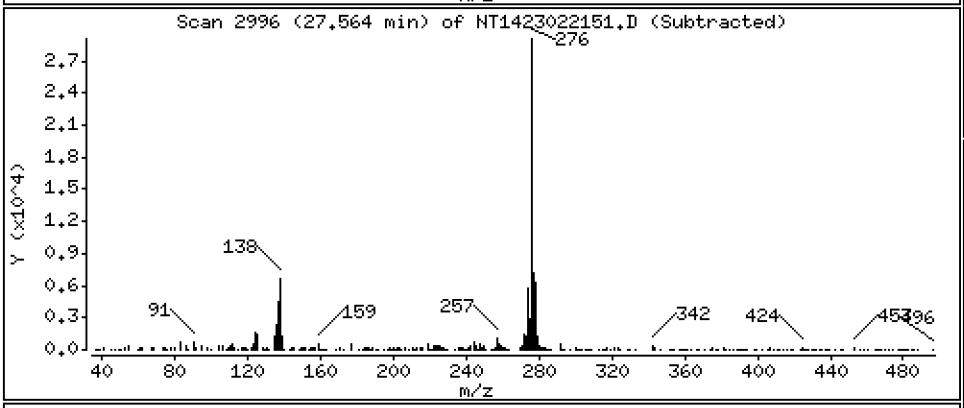
Column phase: ZB-5msi

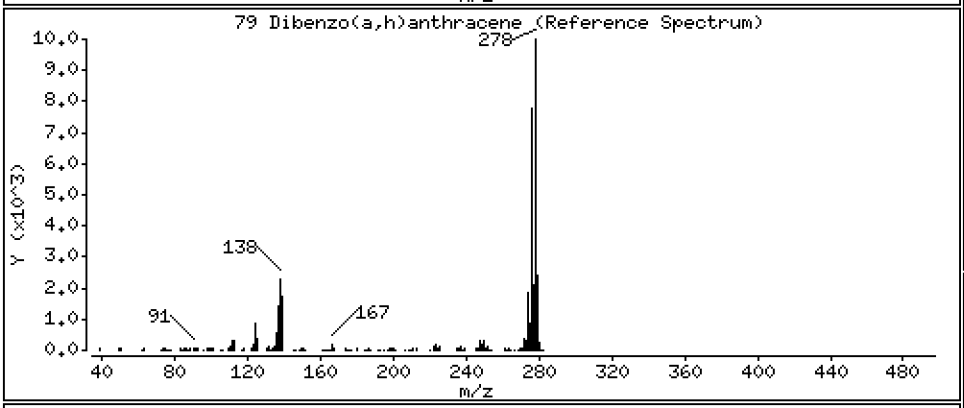
Column diameter: 0.25

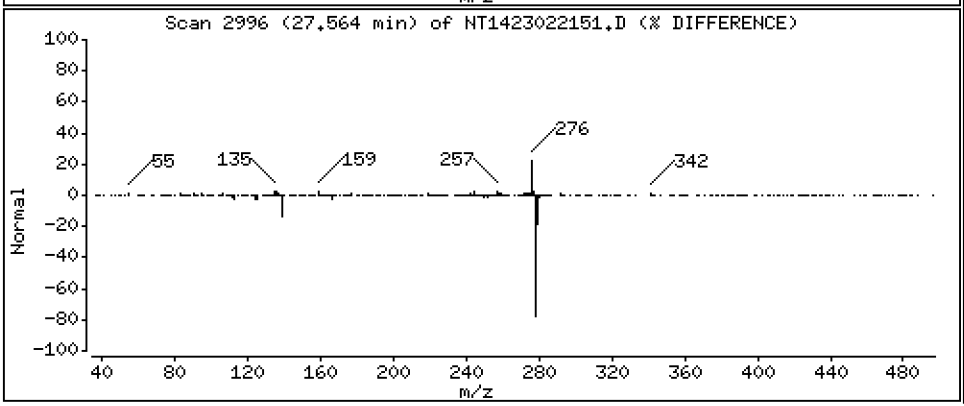
79 Dibenzo(a,h)anthracene

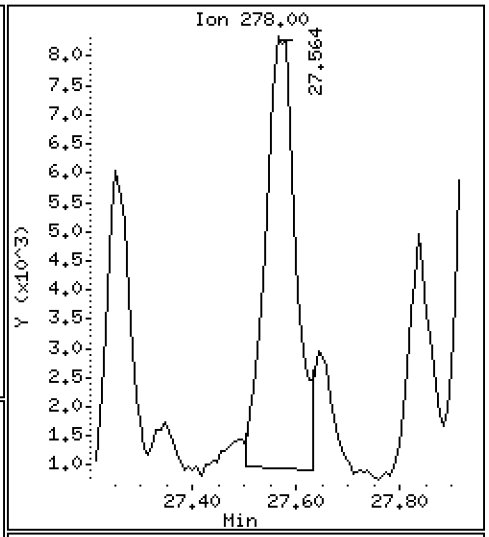
Concentration: 0.2887 ug/mL

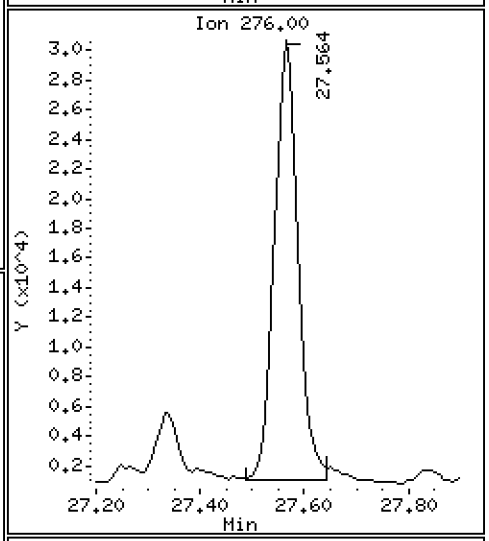


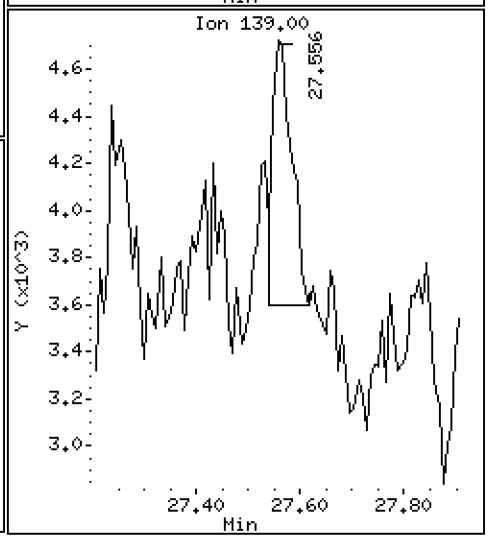












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

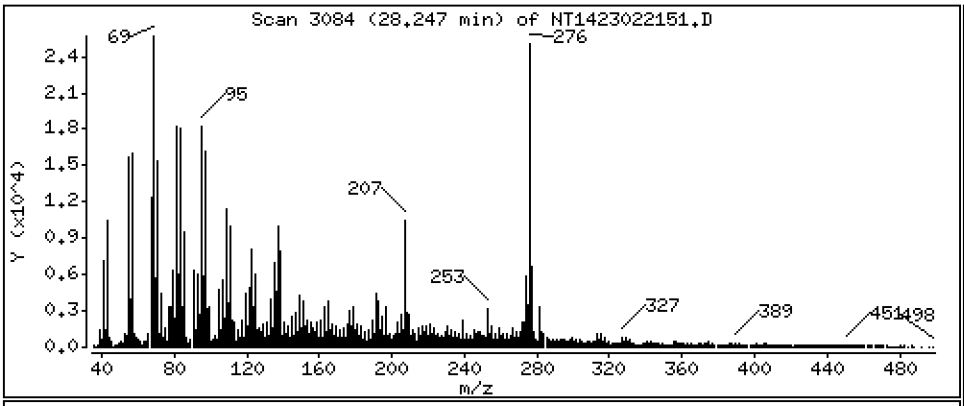
Operator: DSD

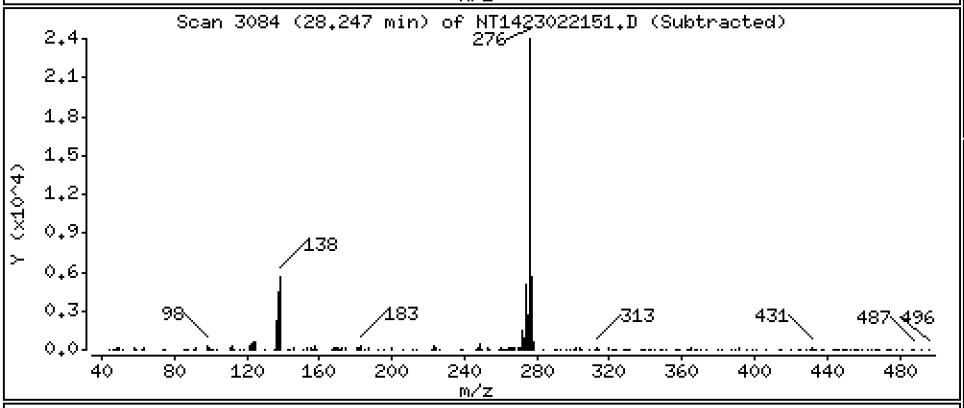
Column phase: ZB-5msi

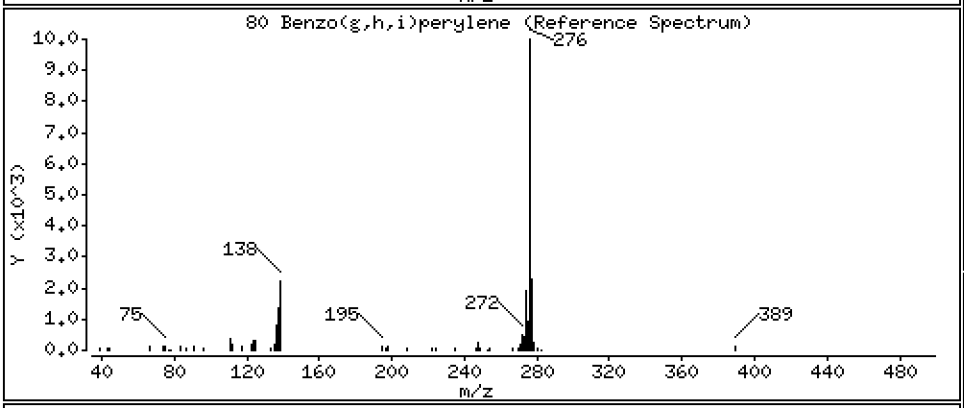
Column diameter: 0.25

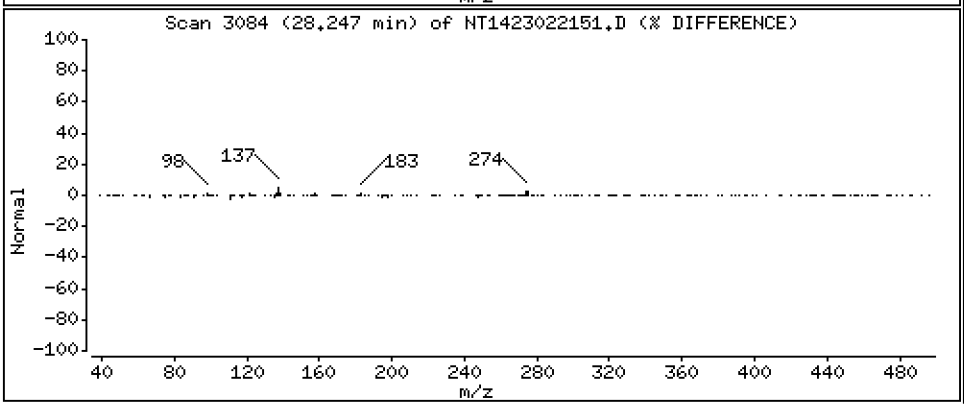
80 Benzo(g,h,i)perylene

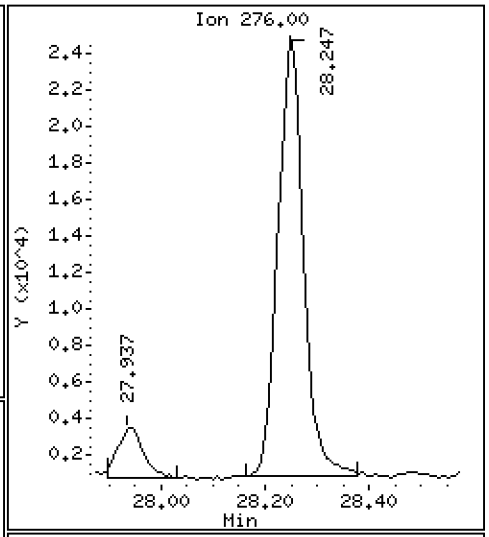
Concentration: 0.8048 ug/mL

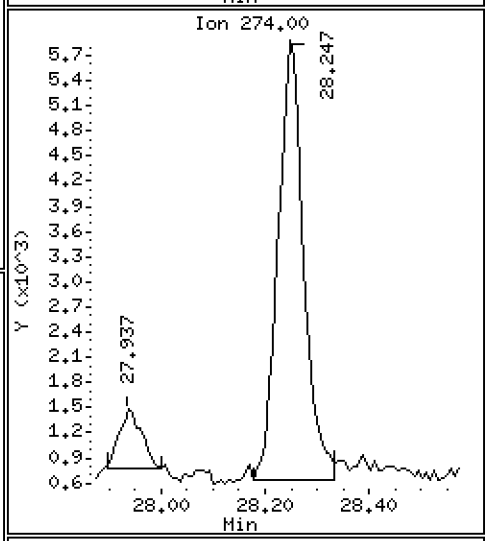


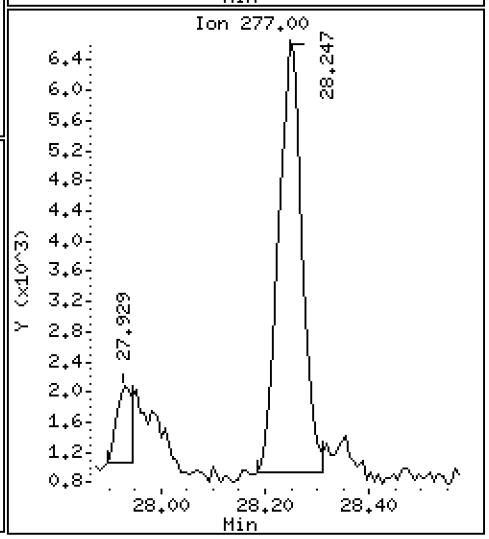












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

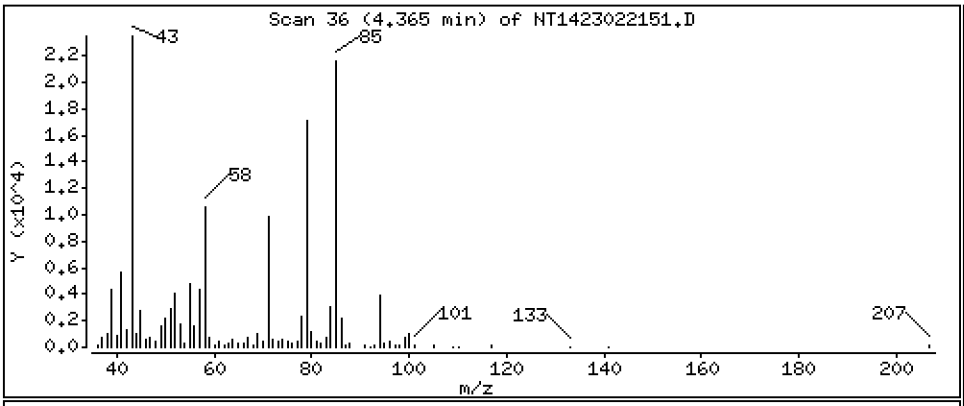
Operator: DSD

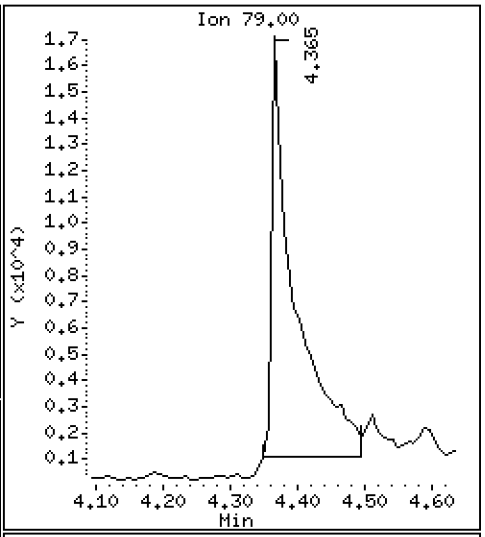
Column phase: ZB-5msi

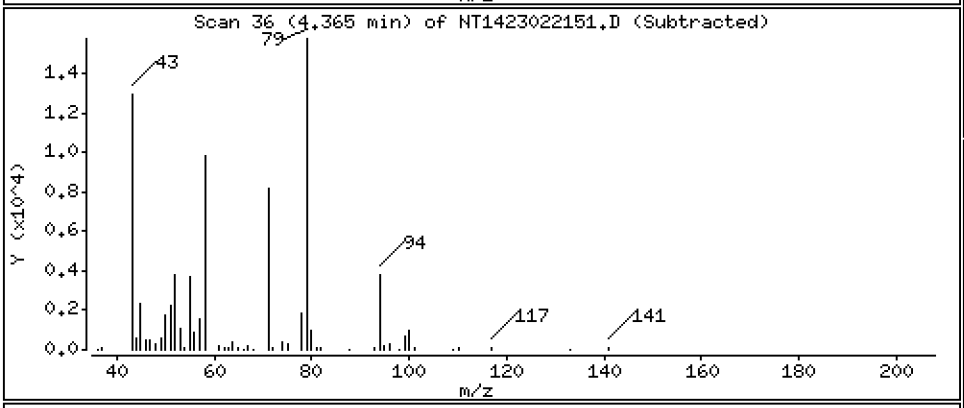
Column diameter: 0.25

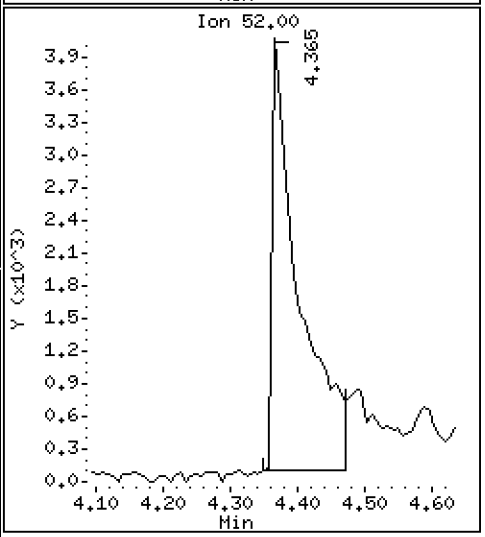
103 Pyridine

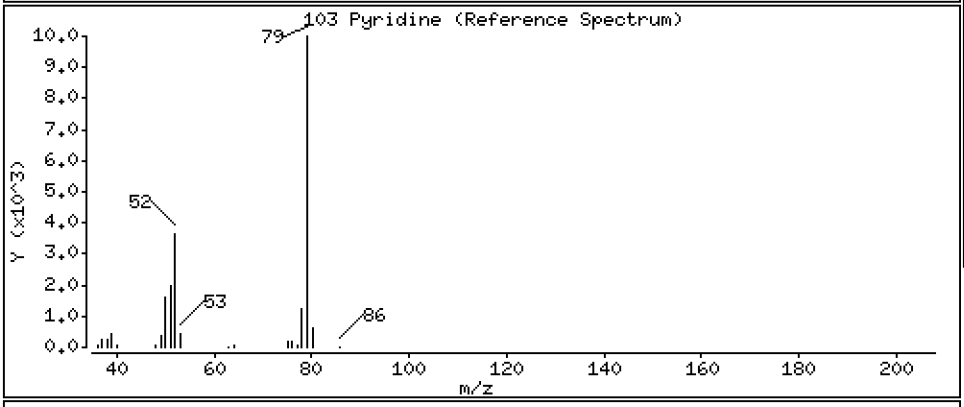
Concentration: 0.4729 ug/mL

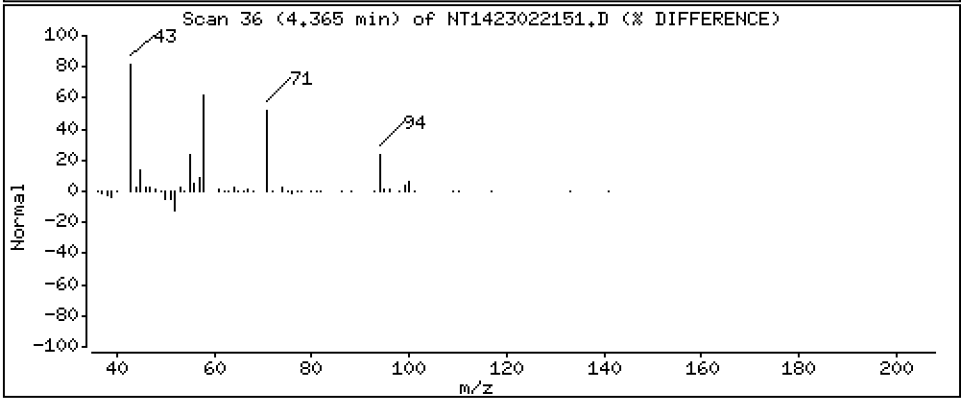












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

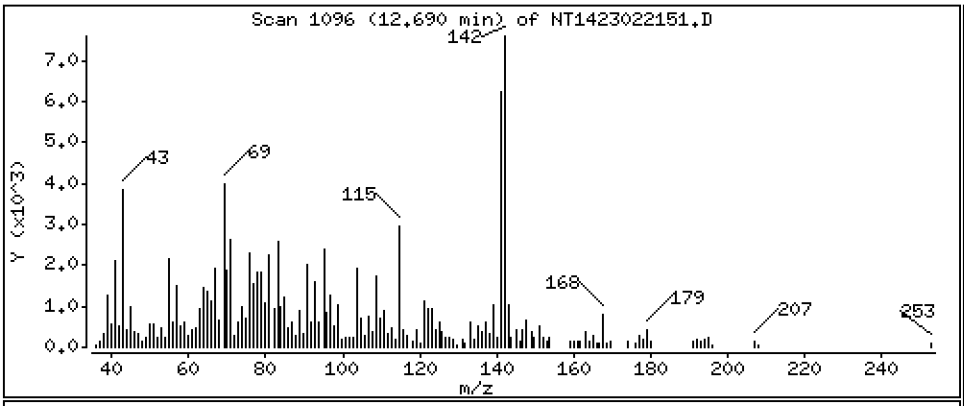
Operator: DSD

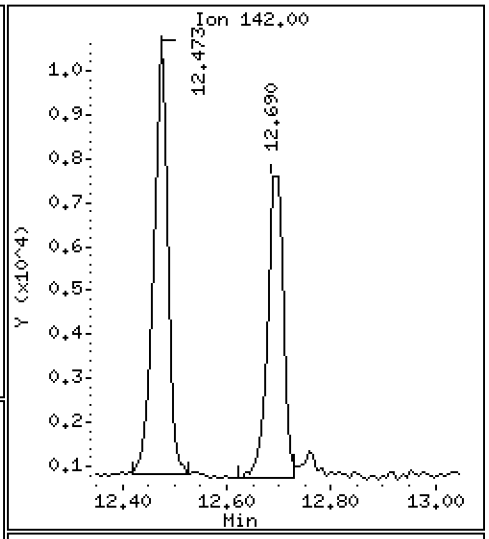
Column phase: ZB-5msi

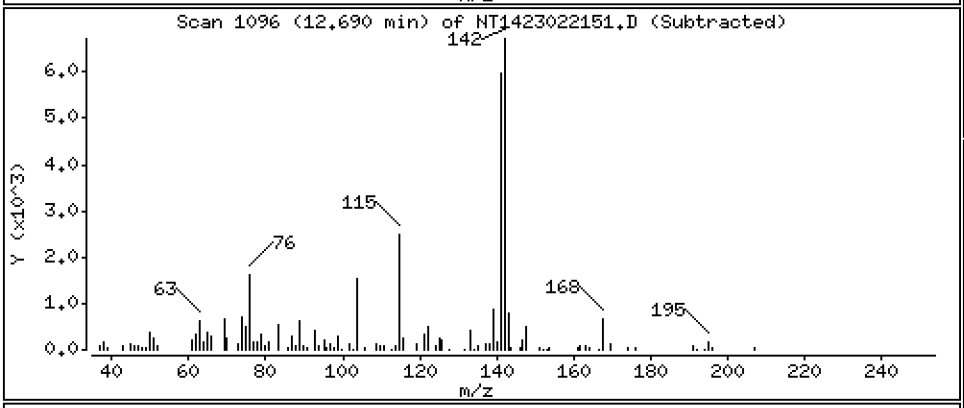
Column diameter: 0.25

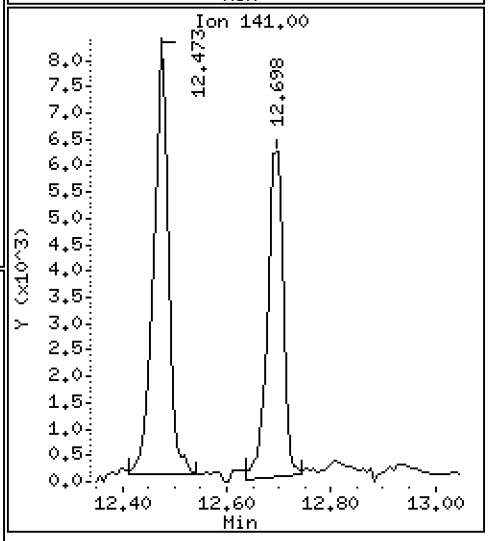
105 1-methylnaphthalene

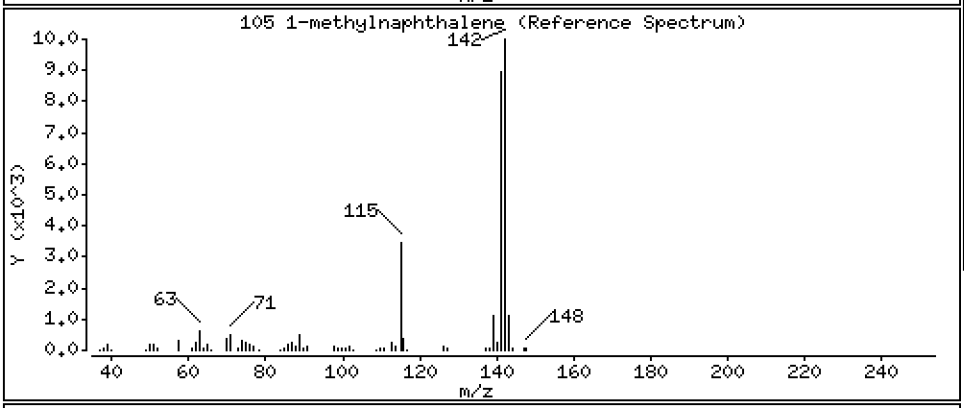
Concentration: 0.08553 ug/mL

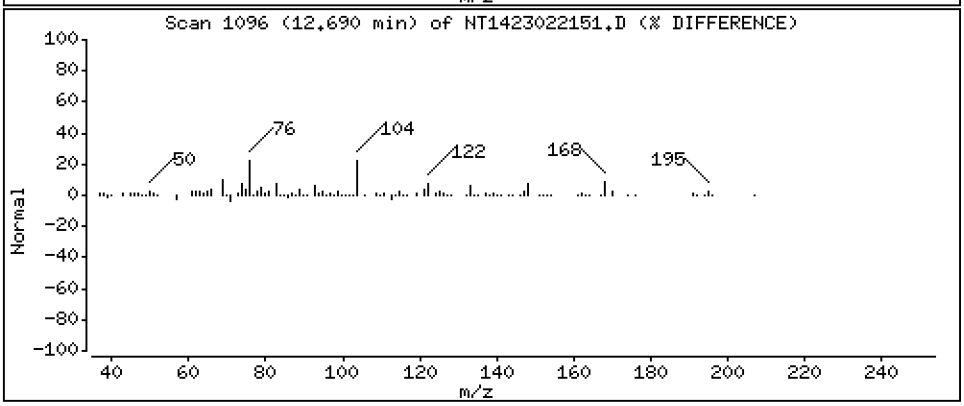












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

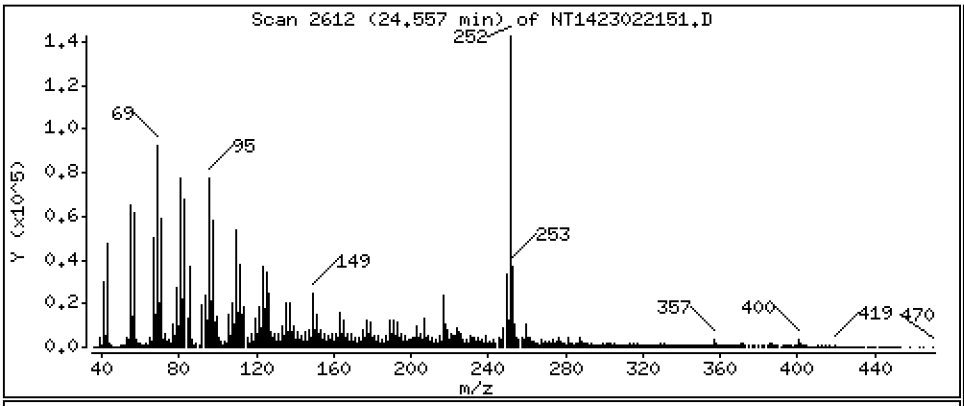
Operator: DSD

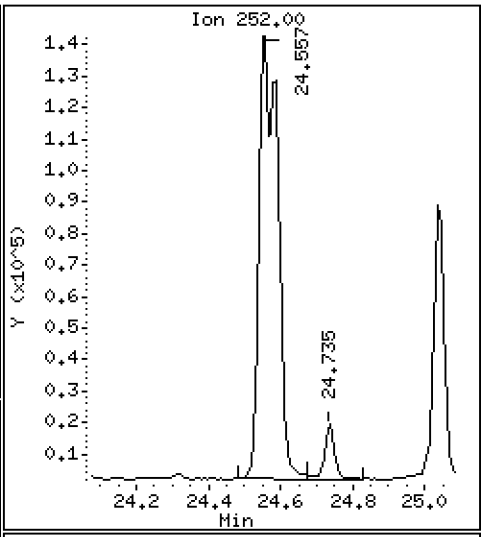
Column phase: ZB-5msi

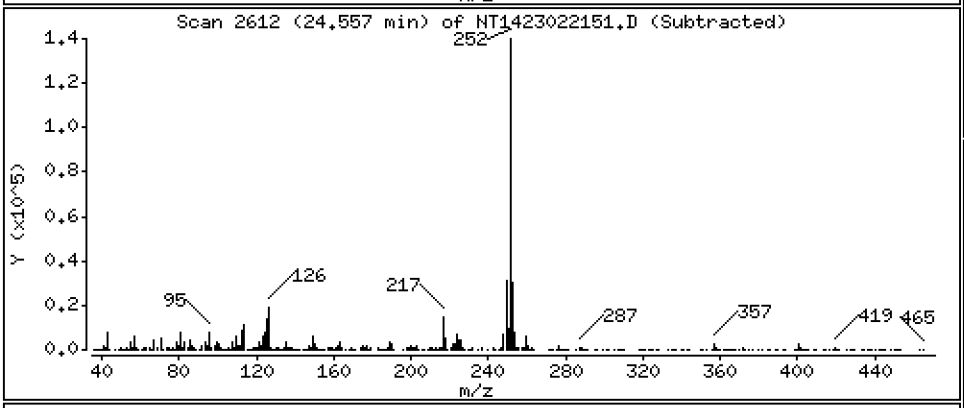
Column diameter: 0.25

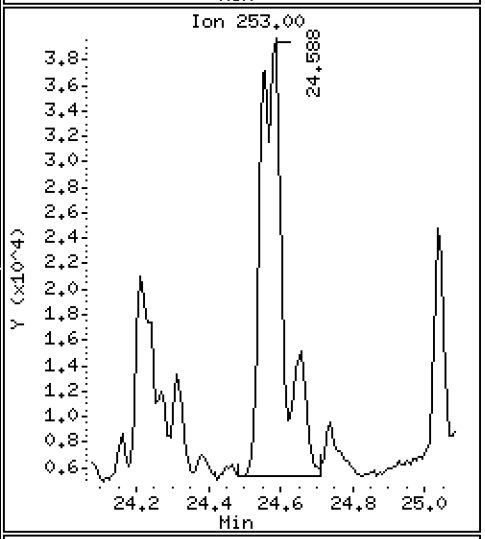
187 Total Benzofluoranthenes

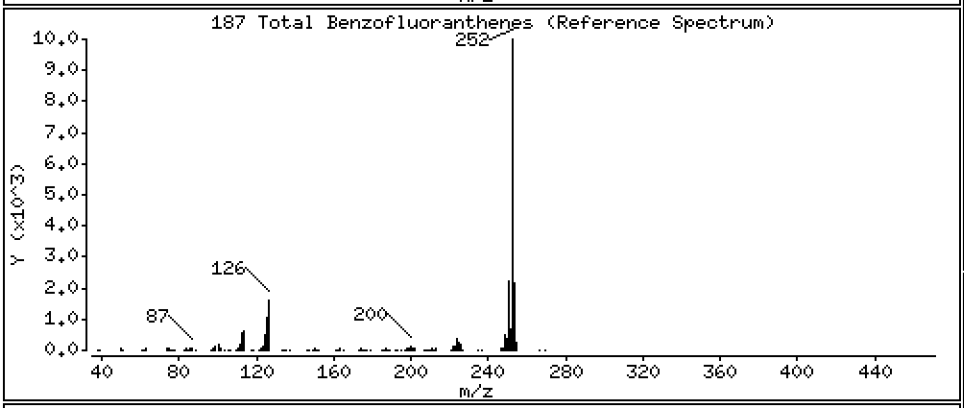
Concentration: 3.212 ug/mL

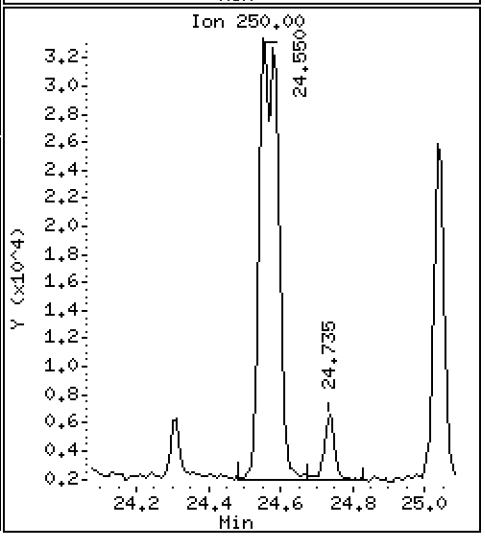


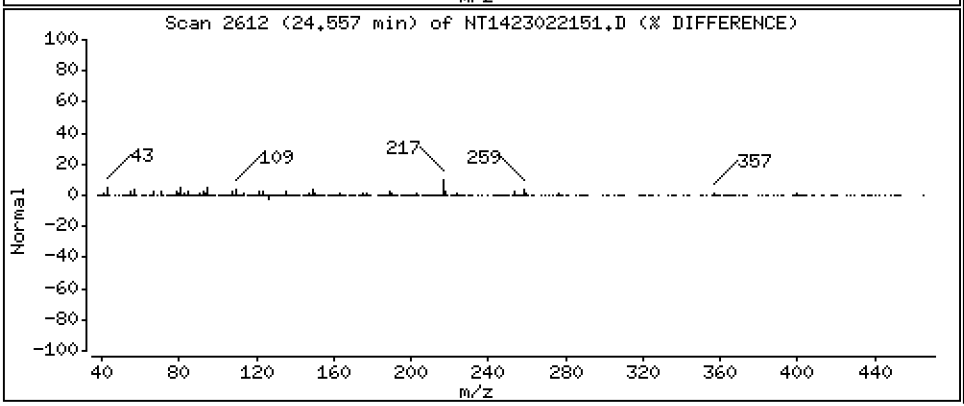












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221C.b\NT1423022151.D
Lab Smp Id: 23A0133-08
Inj Date : 22-FEB-2023 19:36 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-08
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Meth Date : 03-Mar-2023 06:54 van Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 34
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.396	6.380	(0.747)	346186	5.16714	5.167
$	2 Phenol-d5	99	7.972	7.972	(0.931)	497910	4.68483	4.685
	3 Phenol	94	7.988	7.996	(0.933)	127584	1.13396	1.134
$	5 2-Chlorophenol-d4	132	8.212	8.212	(0.959)	406580	5.36139	5.361
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.560	8.568	(1.000)	250617	4.00000	
	9 1,4-Dichlorobenzene	146	8.599	8.599	(1.005)	2156	0.02575	0.02575(M)
$	10 1,2-Dichlorobenzene-d4	152	8.917	8.925	(1.042)	170275	2.99552	2.996
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.375	9.367	(1.095)	24368	0.29373	0.2937
$	18 Nitrobenzene-d5	82	9.654	9.662	(0.875)	353295	3.27510	3.275
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.034	11.042	(1.000)	933737	4.00000	
	28 Naphthalene	128	11.081	11.081	(1.004)	32849	0.14268	0.1427
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	12.473	12.481	(1.130)	18043	0.10464	0.1046
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.262	13.270	(0.905)	683161	3.47946	3.479
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	14.183	14.183	(0.968)	11474	0.06845	0.06845(H)
	40	Acenaphthylene	152	14.330	14.338	(0.978)	14184	0.05803	0.05803
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	14.647	14.648	(1.000)	548784	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	14.709	14.717	(1.004)	9642	0.06589	0.06589
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.042	15.050	(1.027)	21776	0.09063	0.09063
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	15.637	15.645	(1.068)	28114	0.12616	0.1262
	49	Fluorene	166	15.745	15.753	(1.075)	24644	0.09808	0.09808
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.293	16.293	(1.112)	165795	5.19004	5.190
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	17.676	17.676	(1.000)	1107865	4.00000	
	60	Phenanthrene	178	17.722	17.723	(1.003)	209343	0.78636	0.7864
	61	Anthracene	178	17.823	17.816	(1.008)	59684	0.22629	0.2263
	62	Carbazole	167	18.163	18.156	(1.028)	27012	0.11286	0.1129
	63	Di-n-butylphthalate	149	Compound Not Detected.					
	64	Fluoranthene	202	20.183	20.137	(0.886)	492676	1.68673	1.687(H)
	65	Pyrene	202	20.585	20.562	(0.903)	939316	3.04123	3.041
$	66	Terphenyl-d14	244	20.879	20.872	(0.916)	939325	4.28327	4.283
	67	Butylbenzylphthalate	149	Compound Not Detected.					
	68	Benzo(a)anthracene	228	22.753	22.745	(0.999)	188188	0.86861	0.8686
*	69	Chrysene-d12	240	22.784	22.769	(1.000)	677026	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	22.823	22.815	(1.002)	271454	1.39297	1.393
	72	bis(2-Ethylhexyl)phthalate	149	22.861	22.854	(0.959)	209520	1.20917	1.209
*	134	Di-n-octylphthalate-d4	153	23.845	23.837	(1.000)	1014732	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	24.557	24.542	(0.973)	251972	1.54841	1.548
	75	Benzo(k)fluoranthene	252	24.588	24.580	(0.975)	306894	1.76493	1.765
	76	Benzo(a)pyrene	252	25.130	25.114	(0.996)	177042	1.14649	1.146
*	77	Perylene-d12	264	25.230	25.223	(1.000)	512843	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.563	27.548	(1.092)	93519	0.73520	0.7352
	79	Dibenzo(a,h)anthracene	278	27.563	27.564	(1.092)	30185	0.28870	0.2887
	80	Benzo(g,h,i)perylene	276	28.247	28.224	(1.120)	83115	0.80480	0.8048
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	4.365	4.288	(0.510)	38816	0.47291	0.4729
	105	1-methylnaphthalene	142	12.689	12.697	(1.150)	13845	0.08553	0.08553
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.557	24.580	(0.973)	510355	3.21230	3.212
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022151.D
Lab Smp Id: 23A0133-08
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 16:35
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	232195	116098	464390	250617	7.93
27 Naphthalene-d8	800631	400316	1601262	933737	16.63
42 Acenaphthene-d10	488064	244032	976128	548784	12.44
59 Phenanthrene-d10	971279	485640	1942558	1107865	14.06
69 Chrysene-d12	687083	343542	1374166	677026	-1.46
134 Di-n-octylphthala	1174636	587318	2349272	1014732	-13.61
77 Perylene-d12	491790	245895	983580	512843	4.28

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.56	-0.09
27 Naphthalene-d8	11.04	10.54	11.54	11.03	-0.07
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	-0.00
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.07
134 Di-n-octylphthala	23.84	23.34	24.34	23.85	0.03
77 Perylene-d12	25.22	24.72	25.72	25.23	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022151.D

Lab ID: 23A0133-08
nt14.i, ABN.m, 22-FEB-2023 19:36

RT	CO-ELUTION COMPOUNDS
27.564	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
27.564	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.510	0.500	0.0095	Pyridine

RRT check based on Ccal File: NT1423022146.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Quant Ion Manual Peak Adjustment Report

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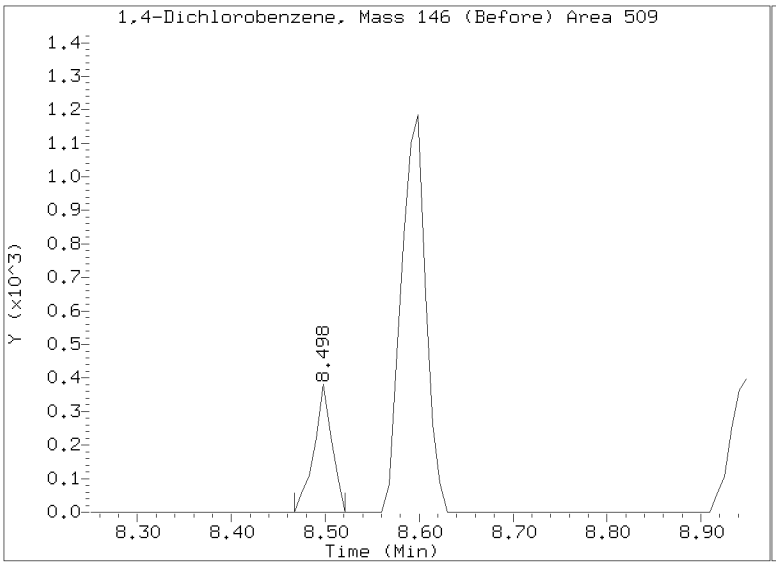
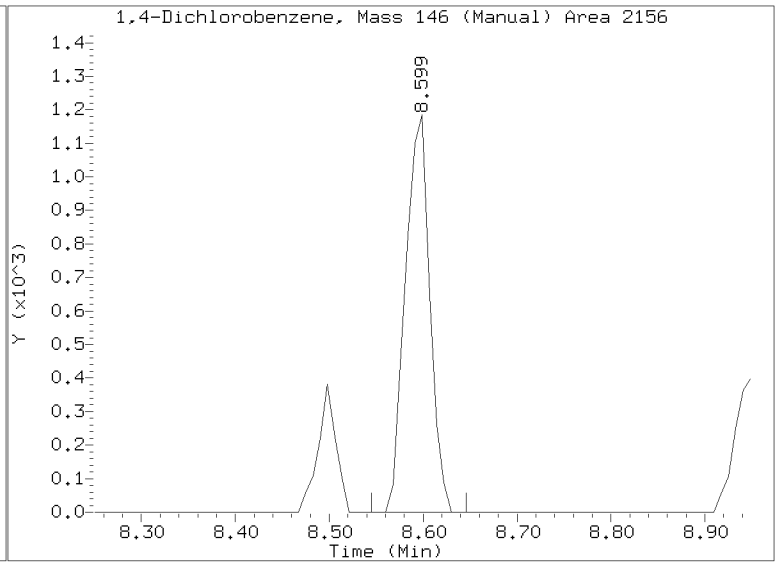
Injection Date: 22-FEB-2023 19:36
Lab ID:23A0133-08 Client ID:
Report Date: 03/03/2023 07:05





Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1234

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-09 C	SDG:	23A0133
Sampled:	01/06/23 13:34	Prepared:	01/18/23 15:24	File ID:	NT1423022152.D
% Solids:	53.74	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 20:12
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	18.61 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	111		4.4	20.0
106-44-5	4-Methylphenol	1	10.5	J	7.4	20.0
91-20-3	Naphthalene	1	7.1	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	6.7	J	4.5	20.0
208-96-8	Acenaphthylene	1	20.0	U	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	20.0	U	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	42.9		8.7	20.0
120-12-7	Anthracene	1	12.1	J	7.2	20.0
206-44-0	Fluoranthene	1	93.7		6.1	20.0
129-00-0	Pyrene	1	172		5.7	20.0
85-68-7	Butylbenzylphthalate	1	20.0	U	9.4	20.0
56-55-3	Benzo(a)anthracene	1	52.4		6.0	20.0
218-01-9	Chrysene	1	79.8		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	49.6	J	5.5	50.0
	Benzofluoranthenes, Total	1	164		10.0	40.0
50-32-8	Benzo(a)pyrene	1	54.9		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	33.2		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	35.6		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.92	353	47.1	27 - 120	
Phenol-d5	749.92	321	42.9	29 - 120	
2-Chlorophenol-d4	749.92	344	45.9	31 - 120	
1,2-Dichlorobenzene-d4	499.95	214	42.8	32 - 120	
Nitrobenzene-d5	499.95	229	45.7	30 - 120	
2-Fluorobiphenyl	499.95	237	47.3	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1234

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

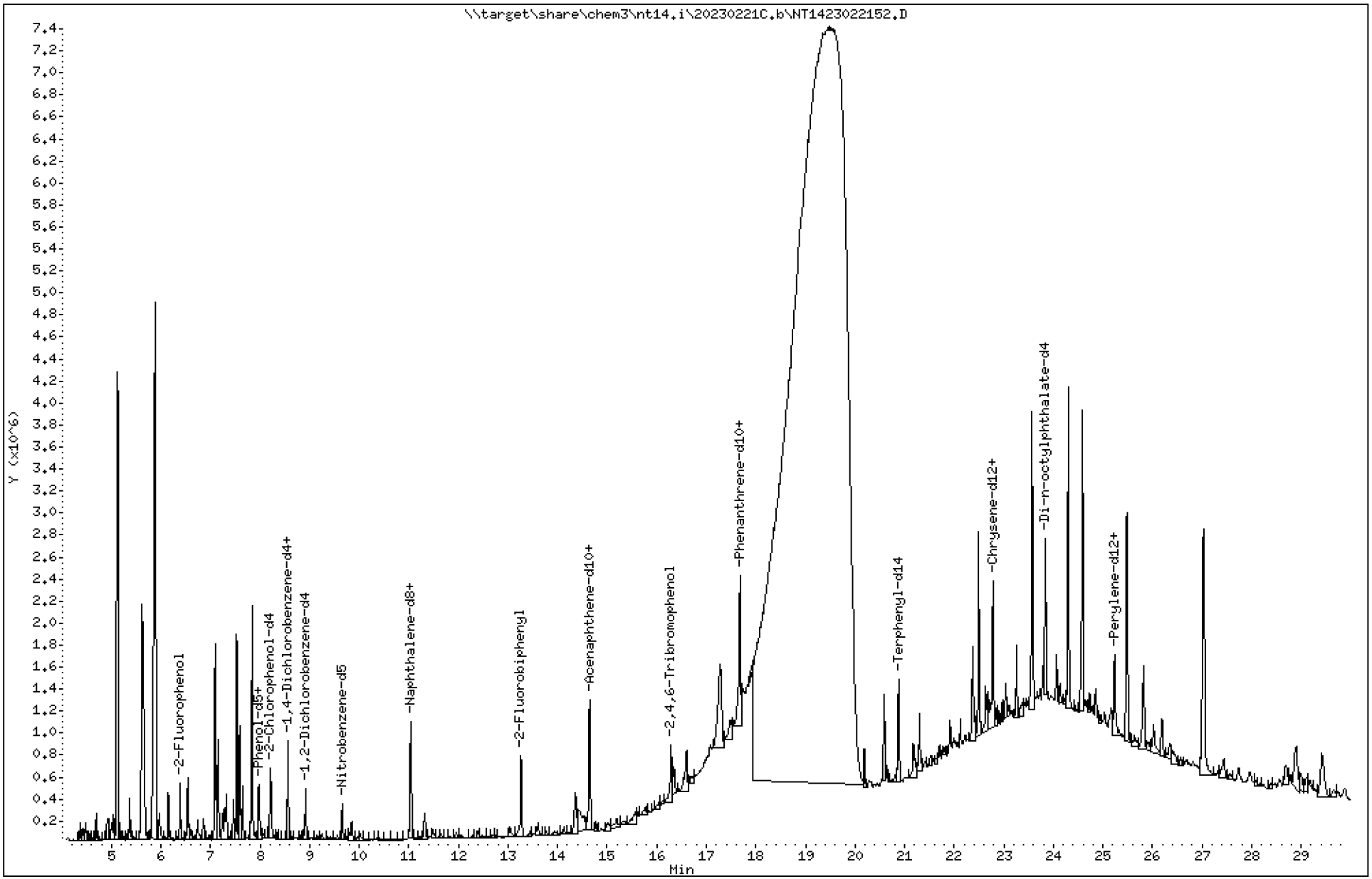
Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-09 C	SDG:	23A0133
Sampled:	01/06/23 13:34	Prepared:	01/18/23 15:24	File ID:	NT1423022152.D
% Solids:	53.74	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 20:12
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	18.61 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	749.92	296	39.4	24 - 134	
p-Terphenyl-d14	499.95	271	54.1	37 - 120	

Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022152.D
Date : 22-FEB-2023 20:12
Client ID:
Sample Info: 23A0133-09

Instrument: nt14.i
Operator: DSD
Column diameter: 0.25

Column phase: ZB-5msi



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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

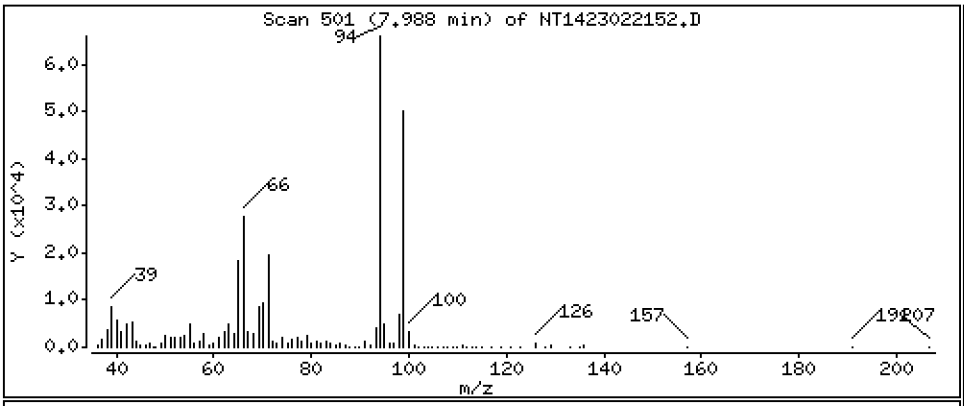
Operator: DSD

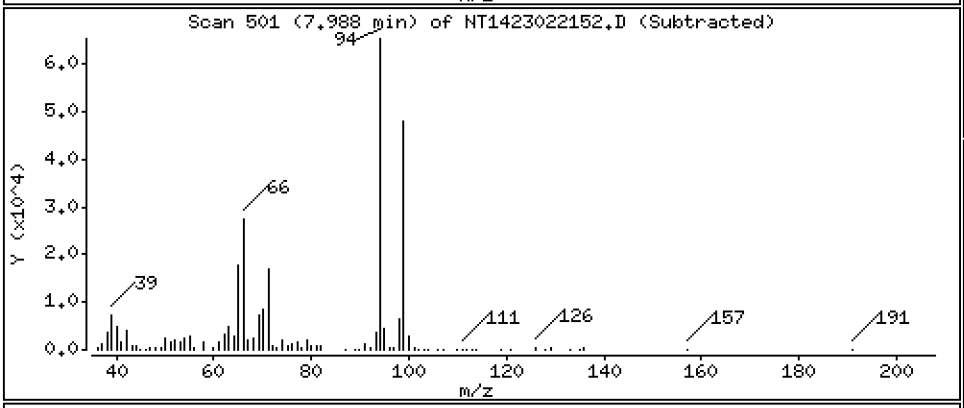
Column phase: ZB-5msi

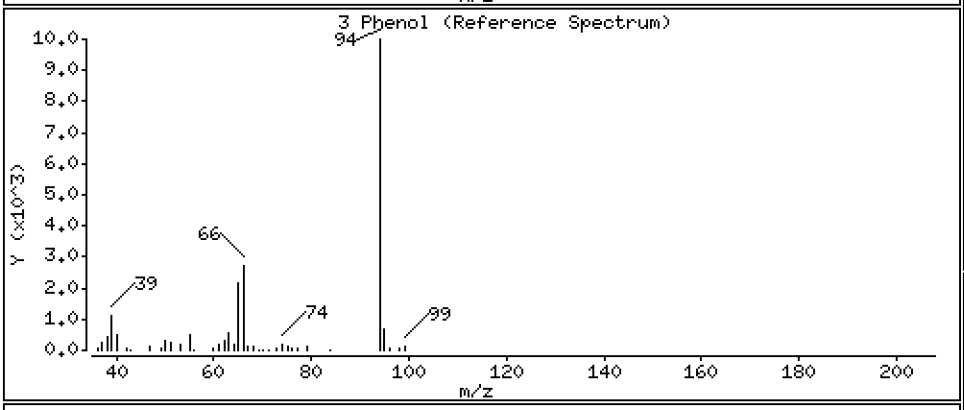
Column diameter: 0.25

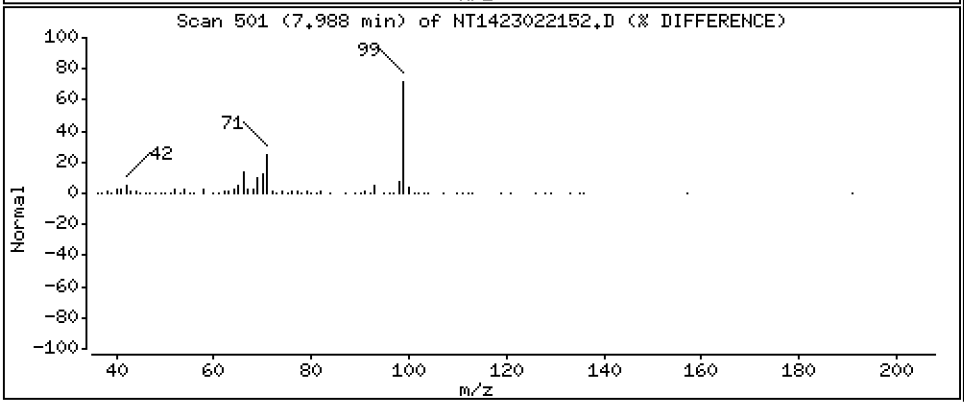
3 Phenol

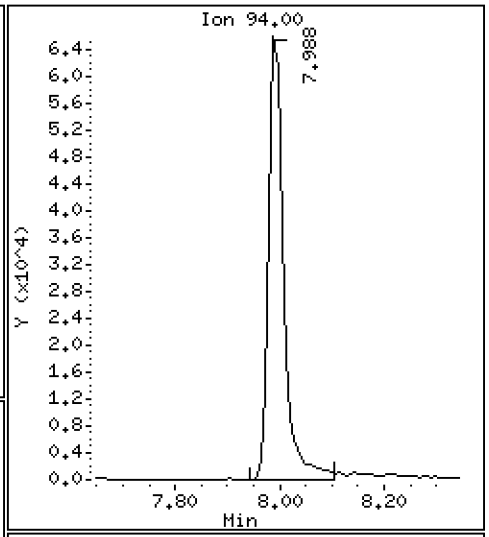
Concentration: 1.115 ug/mL

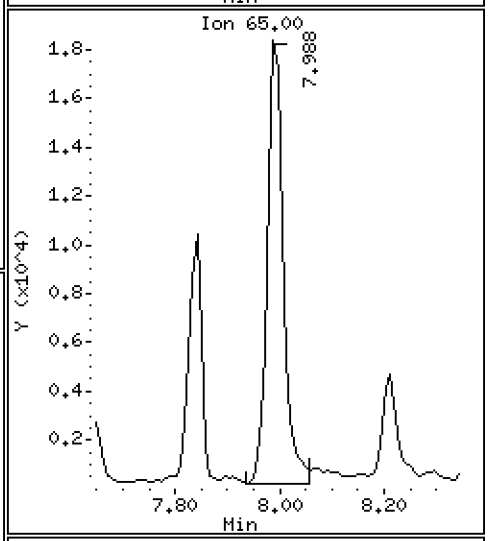


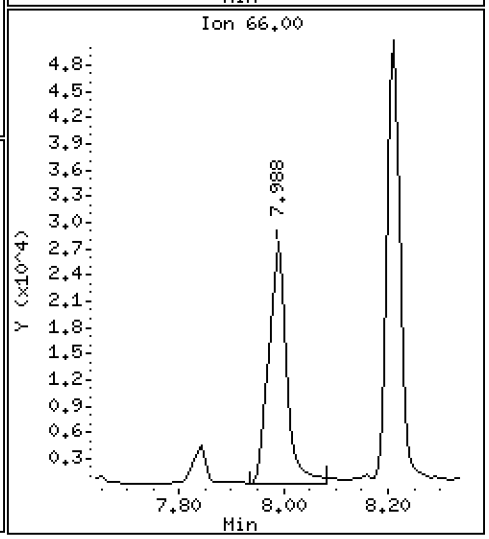












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022152.D

Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

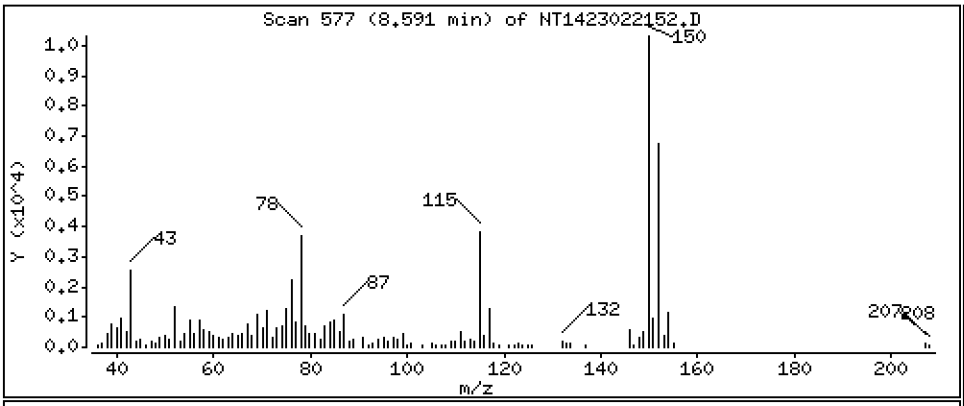
Operator: DSD

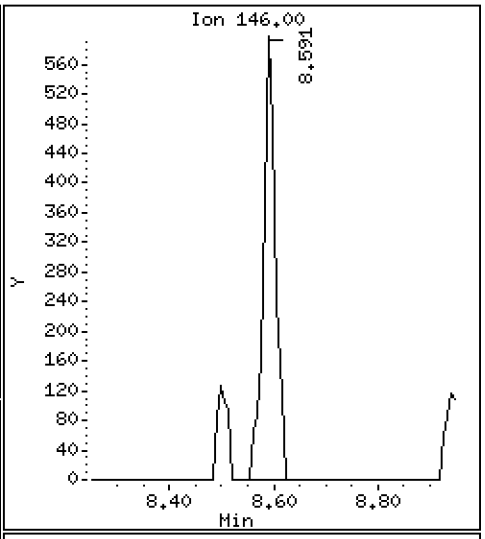
Column phase: ZB-5msi

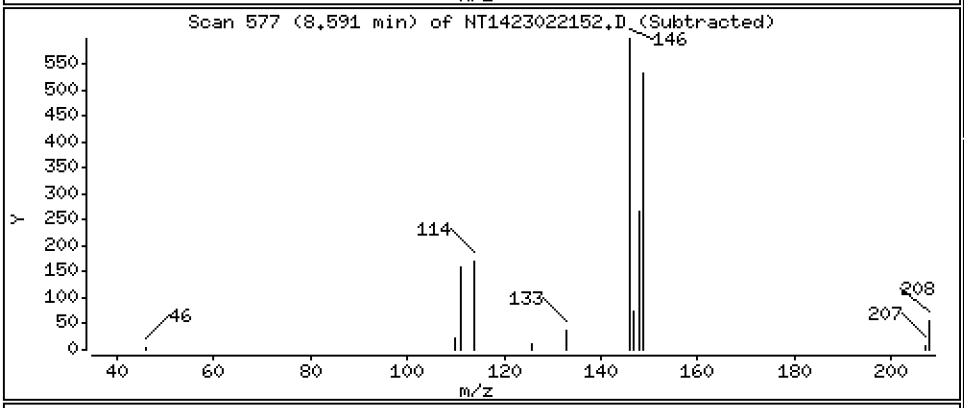
Column diameter: 0.25

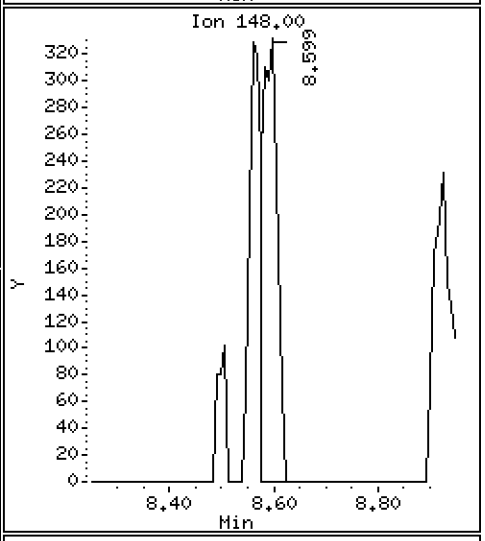
9 1,4-Dichlorobenzene

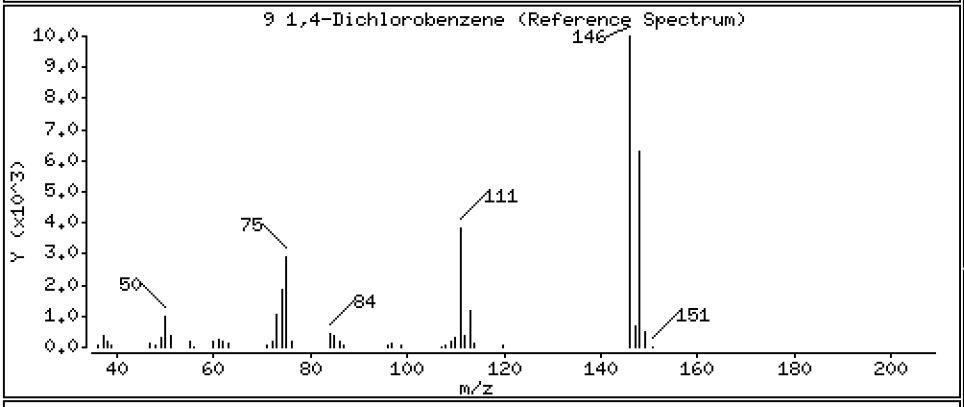
Concentration: 0.01168 ug/mL

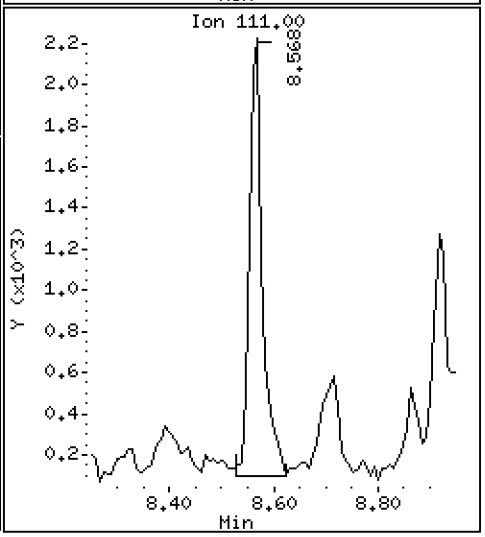


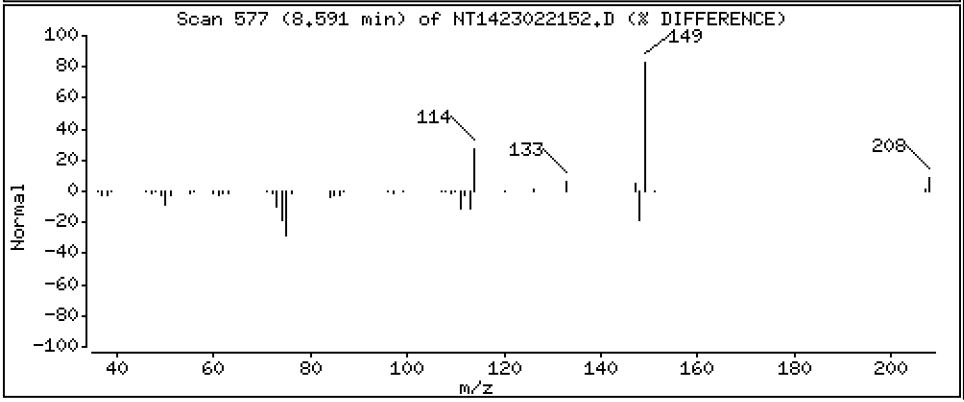












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

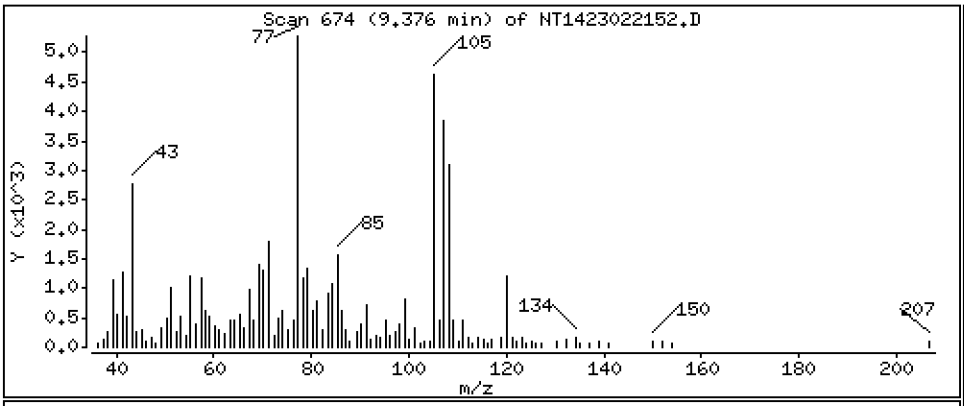
Operator: DSD

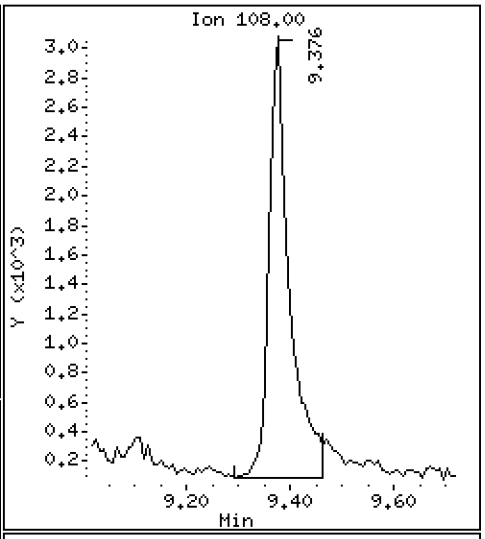
Column phase: ZB-5msi

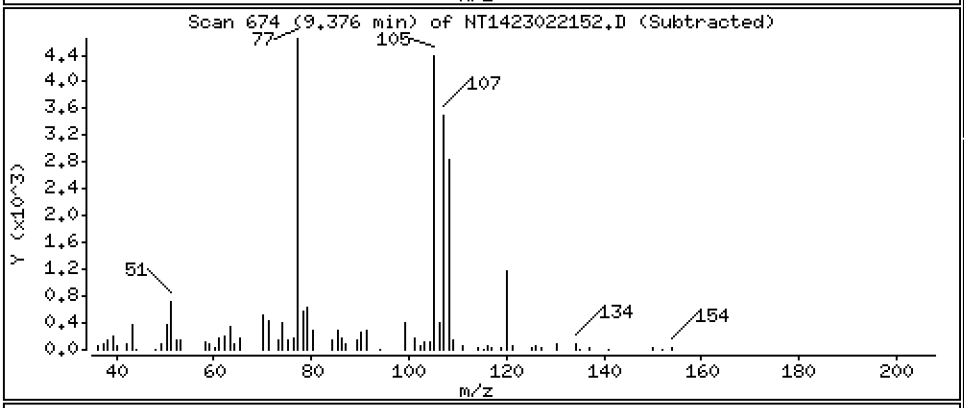
Column diameter: 0.25

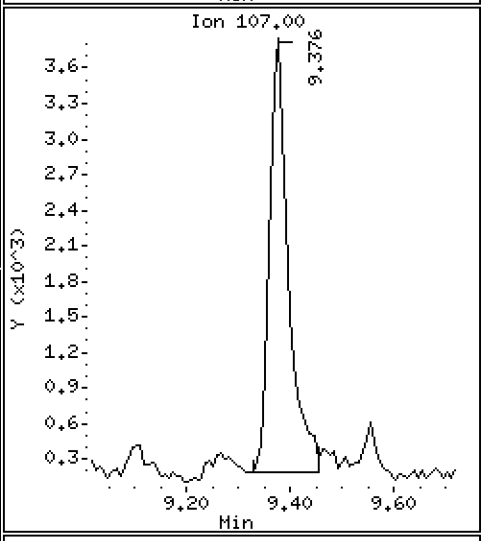
15 4-Methylphenol

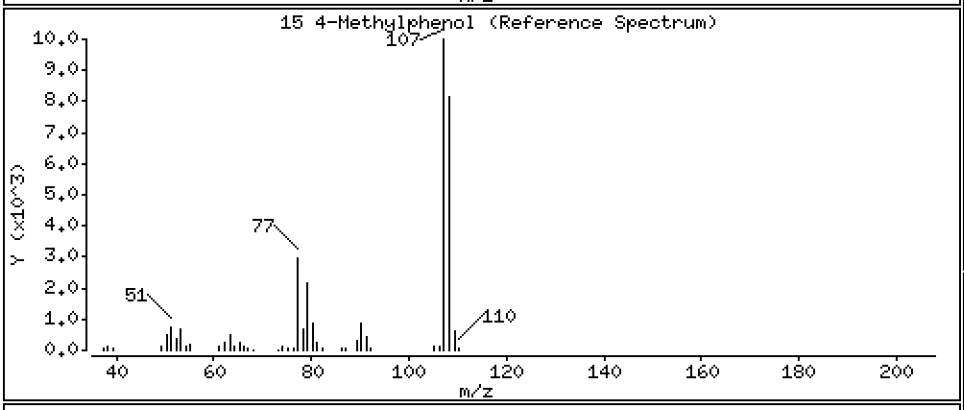
Concentration: 0.1055 ug/mL

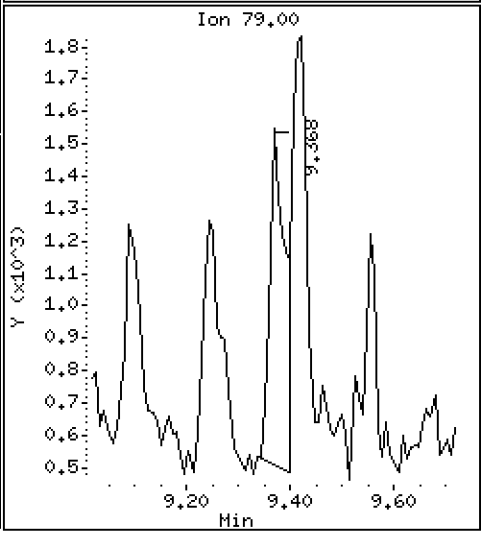


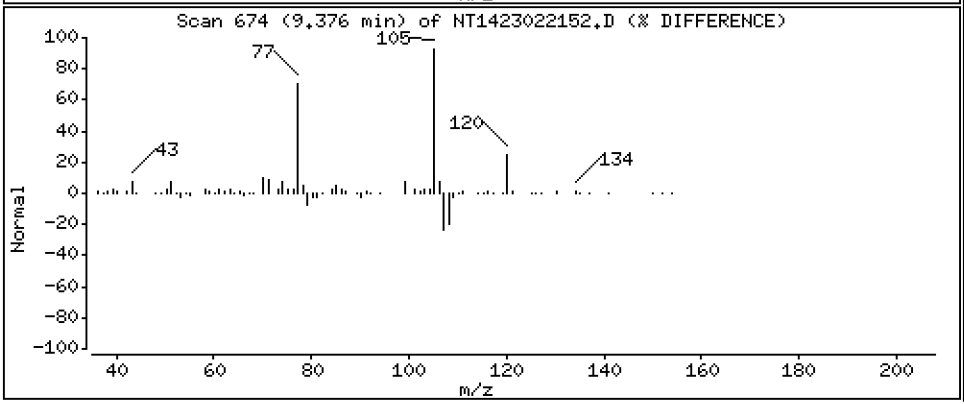












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

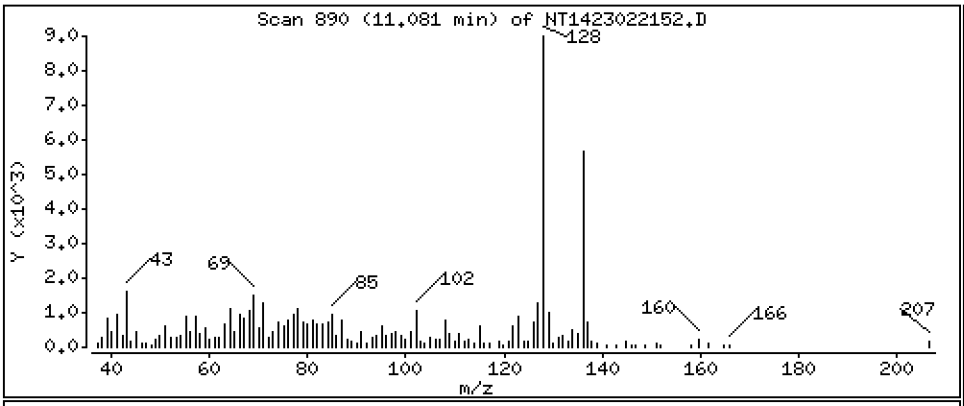
Operator: DSD

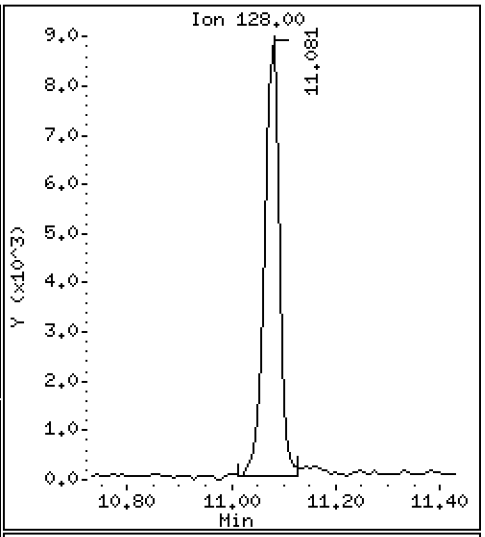
Column phase: ZB-5msi

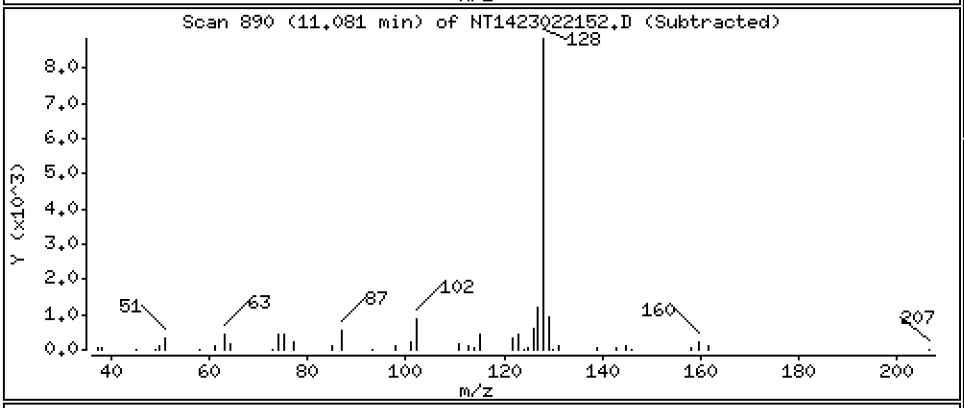
Column diameter: 0.25

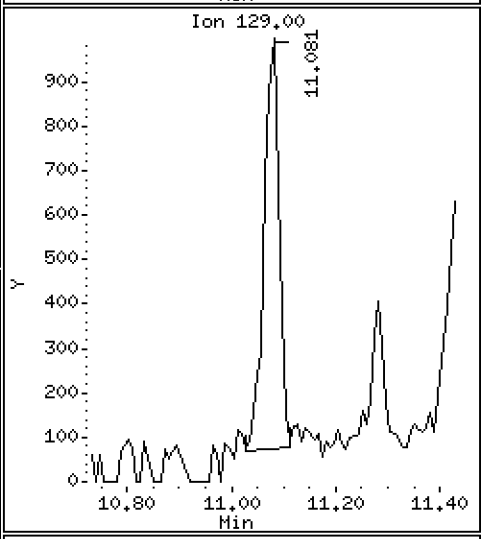
28 Naphthalene

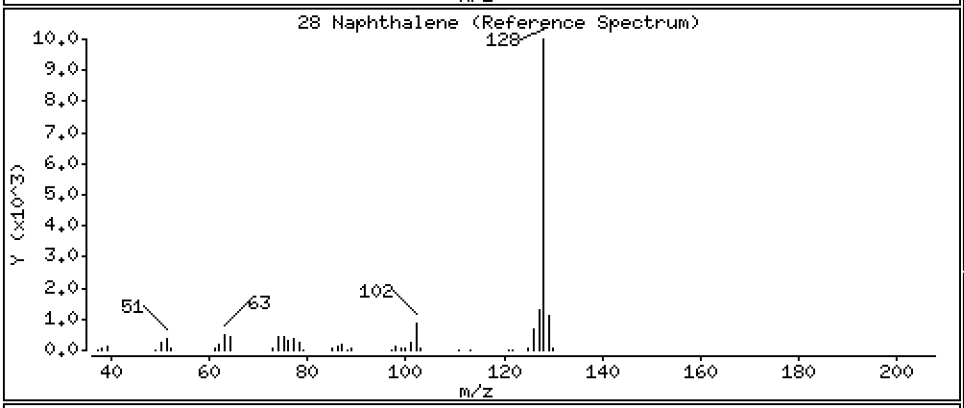
Concentration: 0.07139 ug/mL

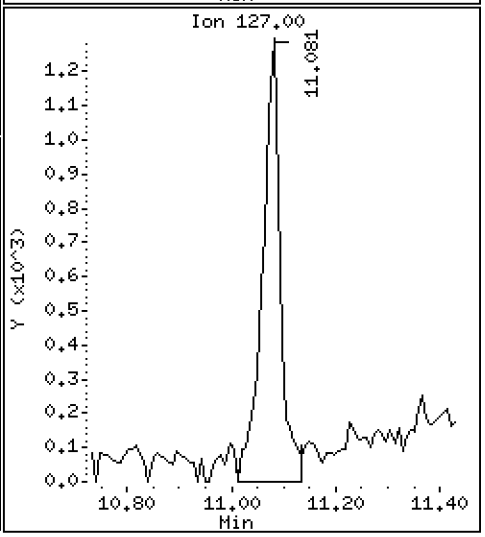


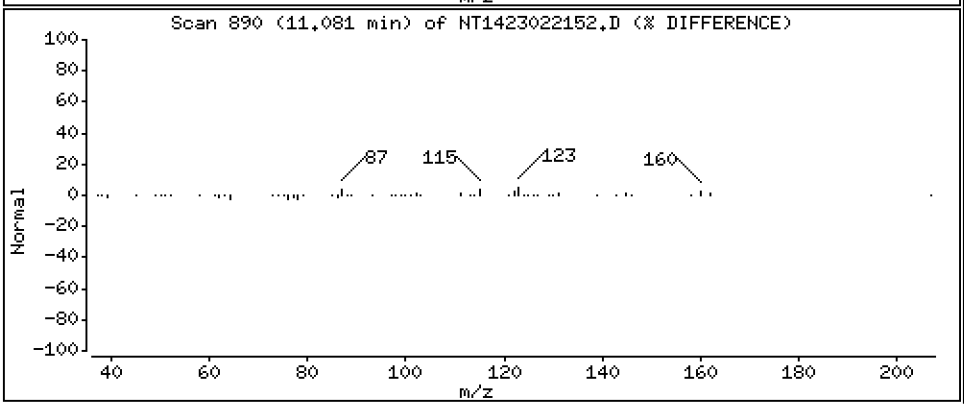












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

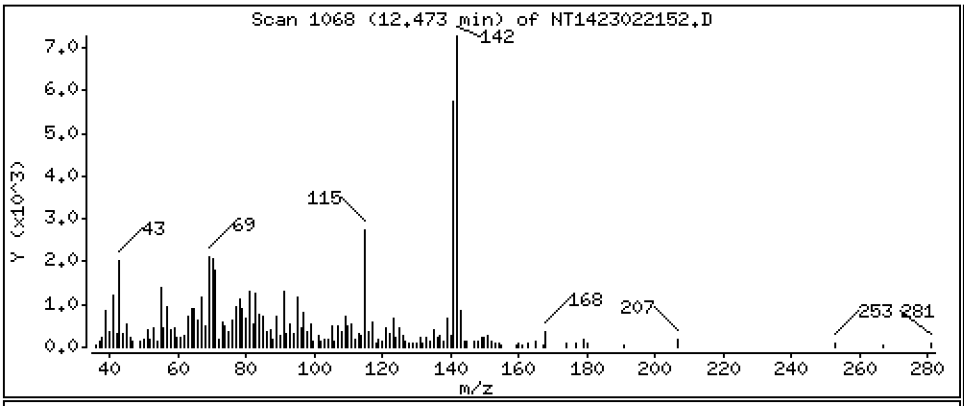
Operator: DSD

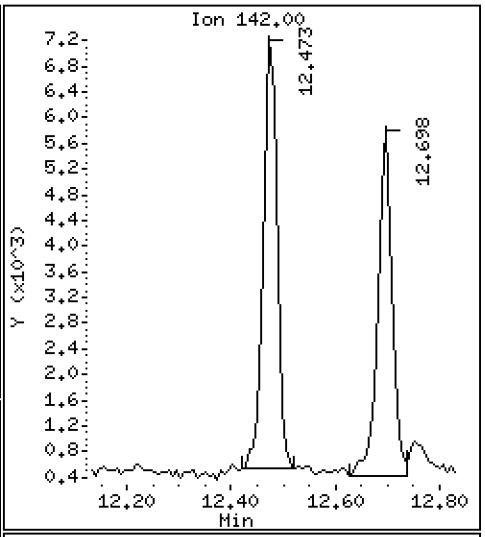
Column phase: ZB-5msi

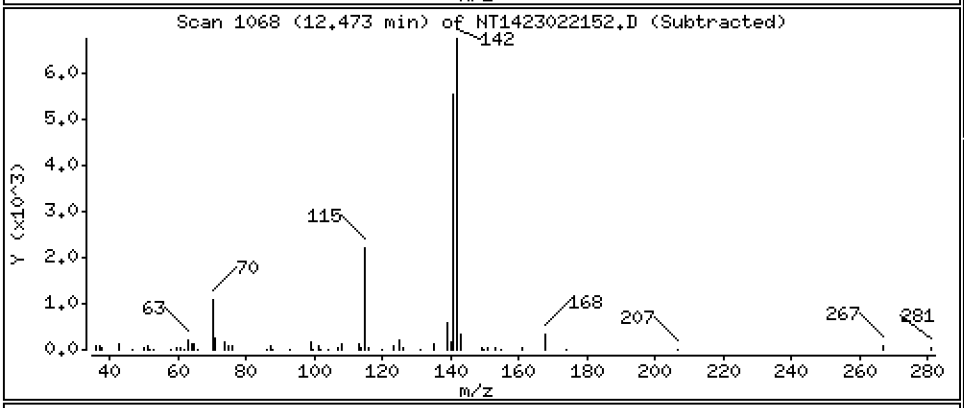
Column diameter: 0.25

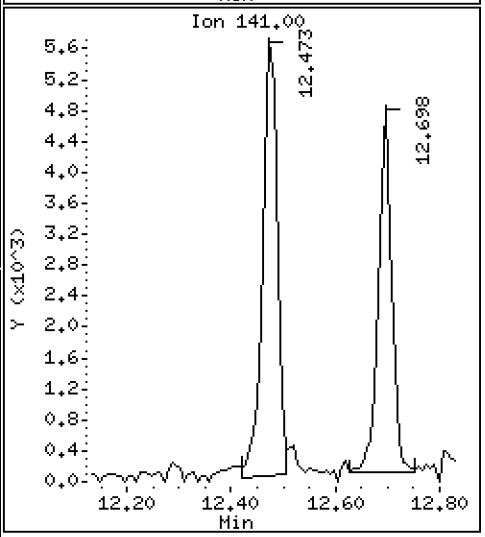
32 2-Methylnaphthalene

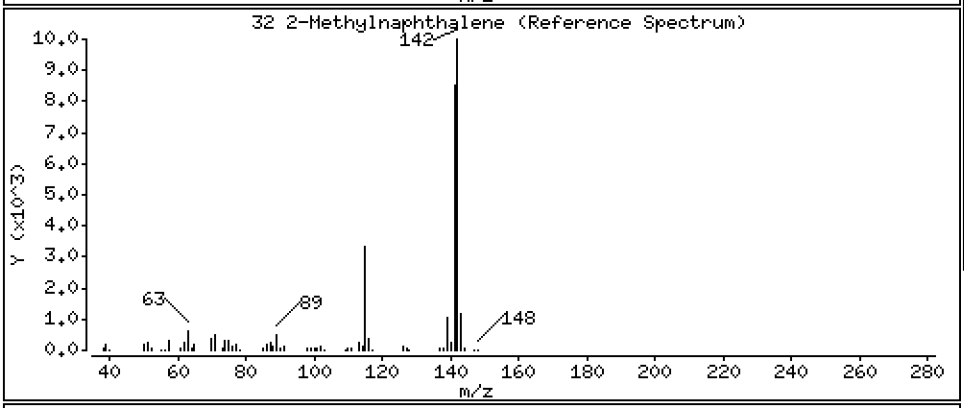
Concentration: 0.06685 ug/mL

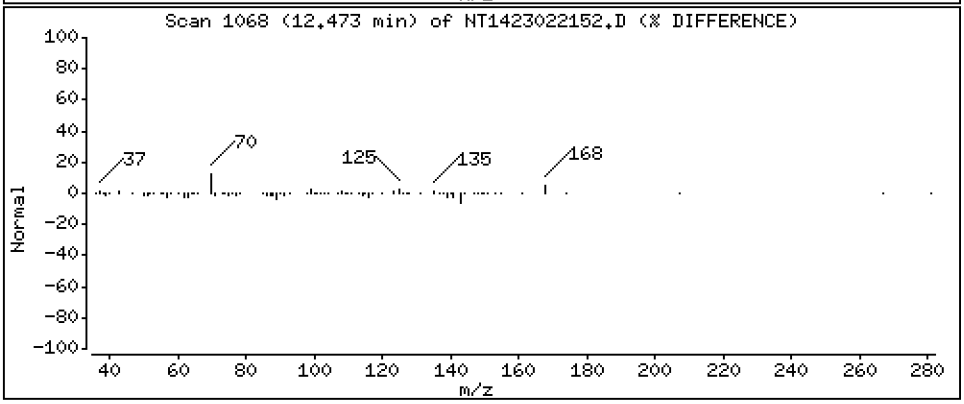












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

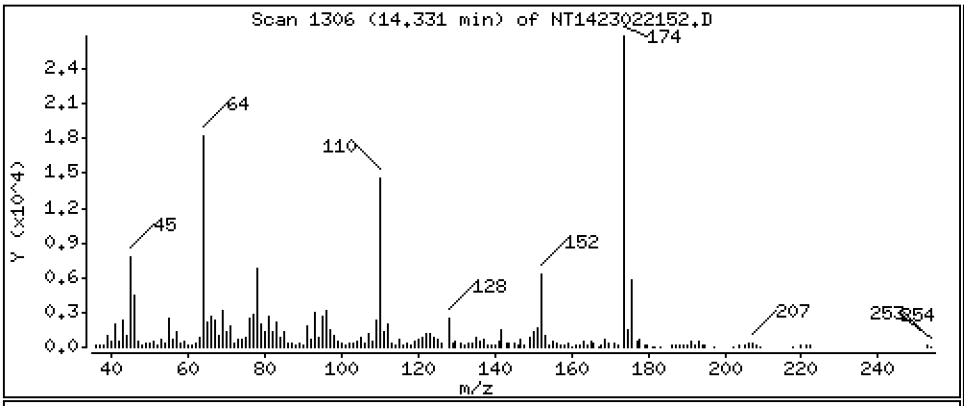
Operator: DSD

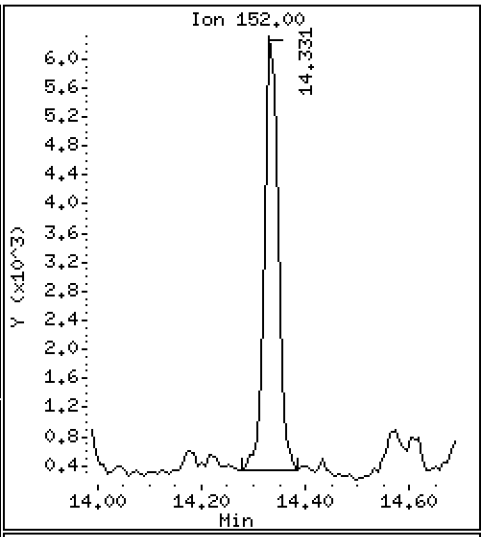
Column phase: ZB-5msi

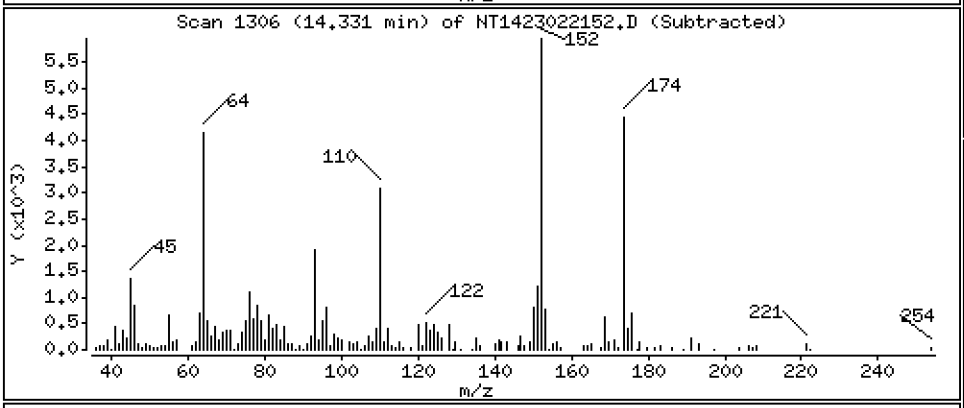
Column diameter: 0.25

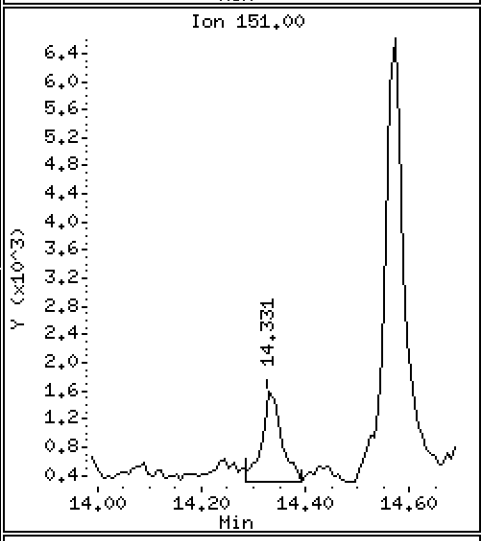
40 Acenaphthylene

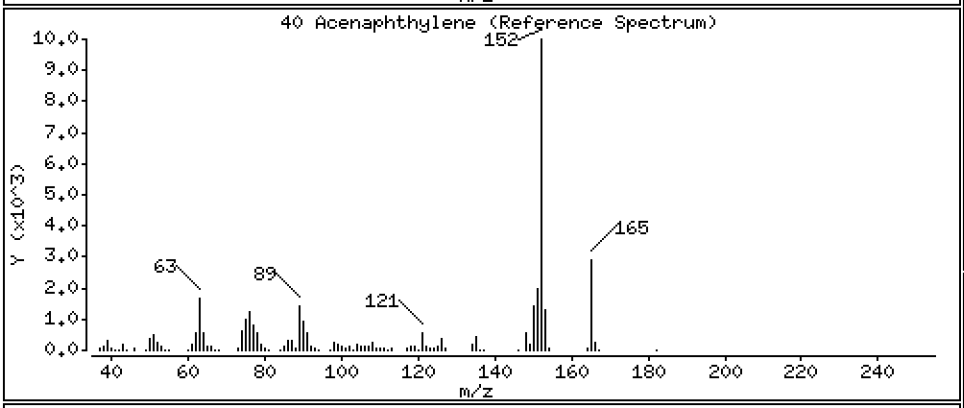
Concentration: 0.04191 ug/mL

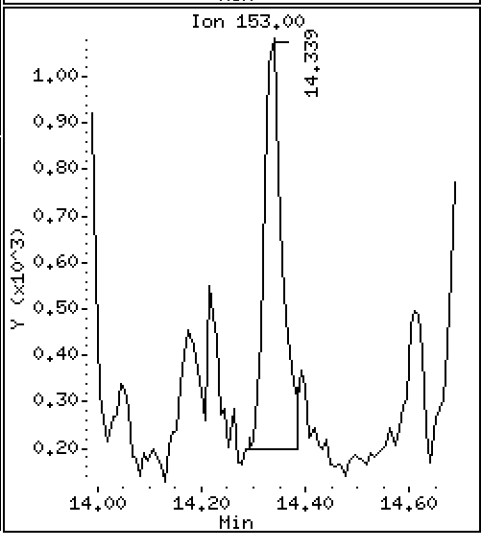


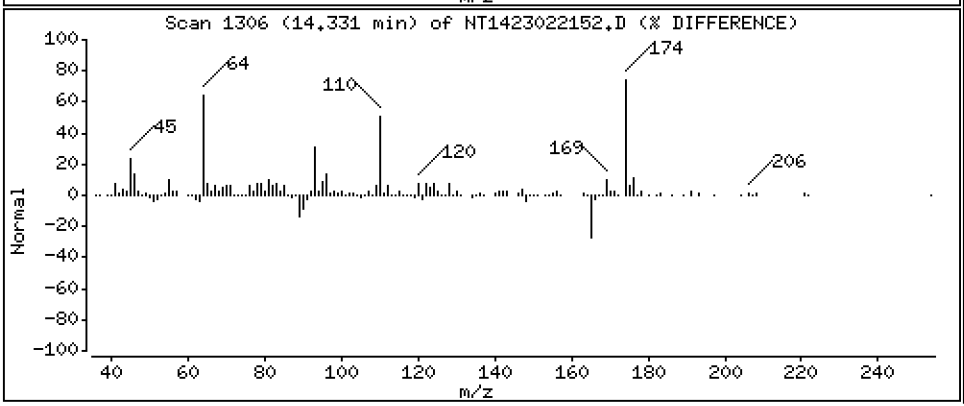












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

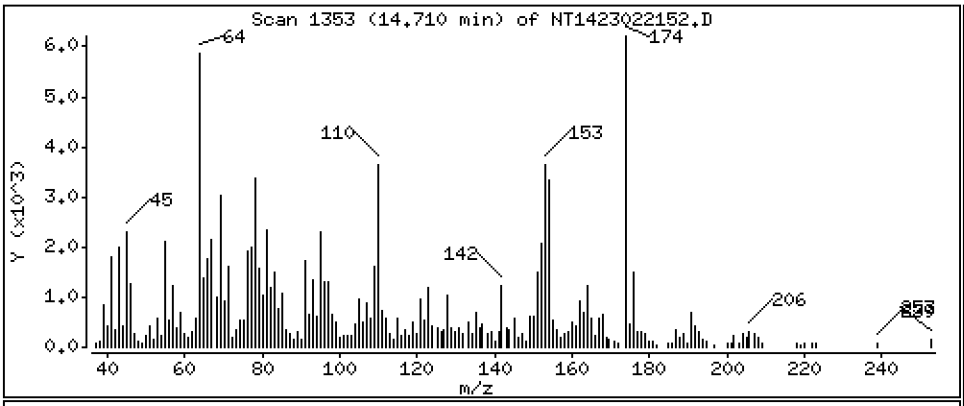
Operator: DSD

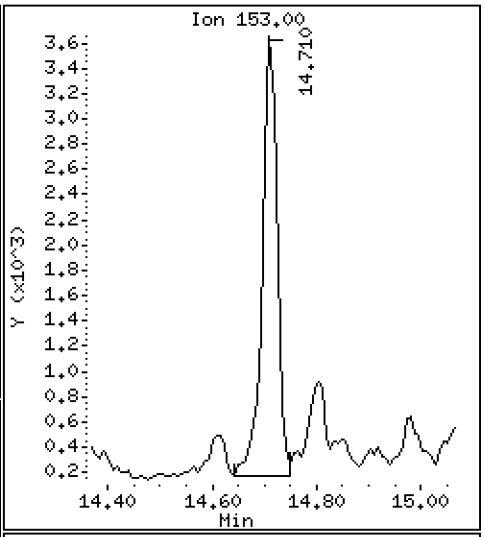
Column phase: ZB-5msi

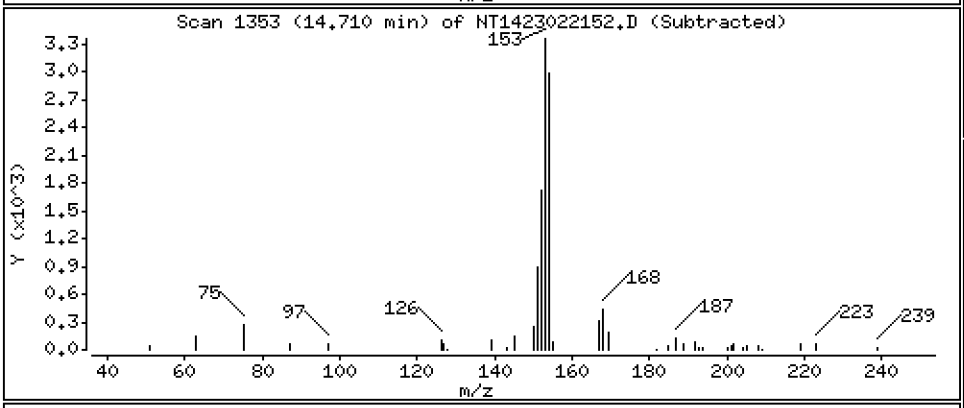
Column diameter: 0.25

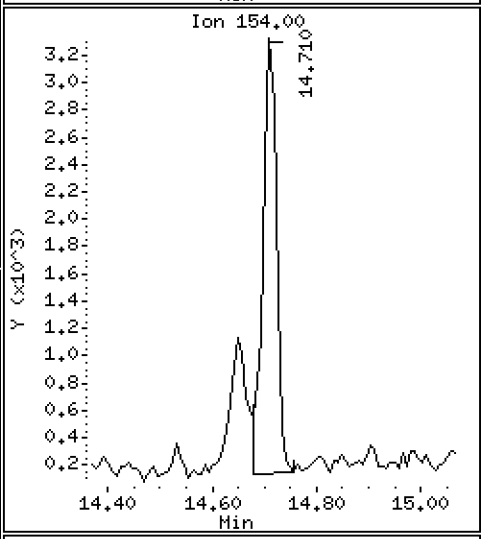
44 Acenaphthene

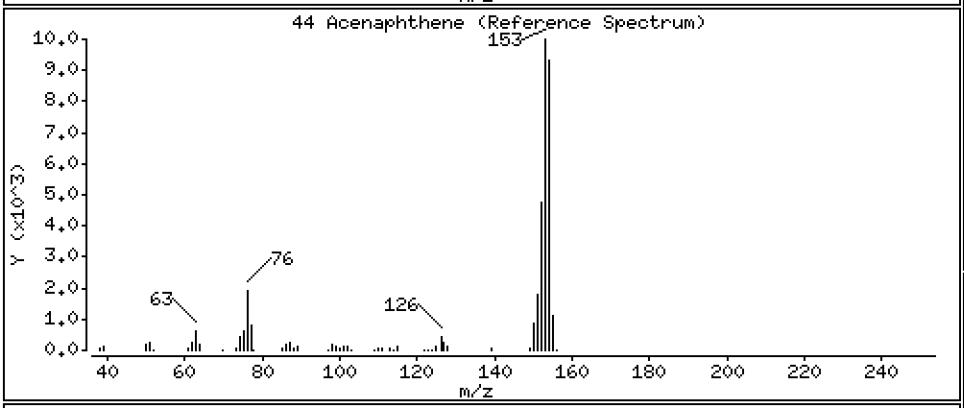
Concentration: 0.04460 ug/mL

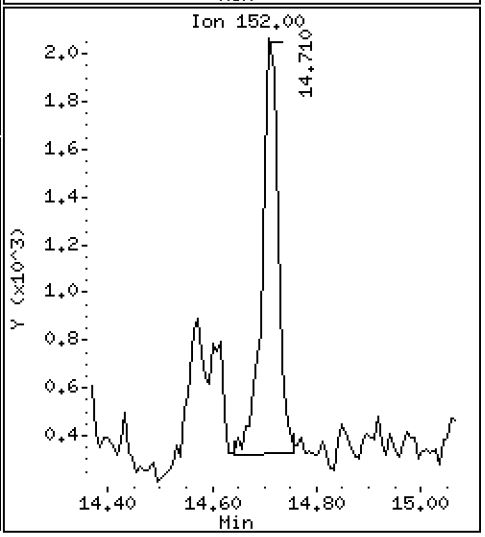


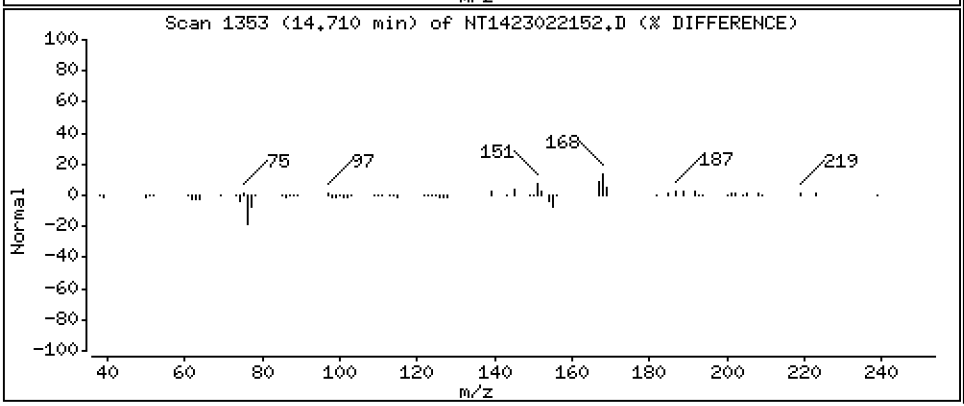












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022152.D

Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

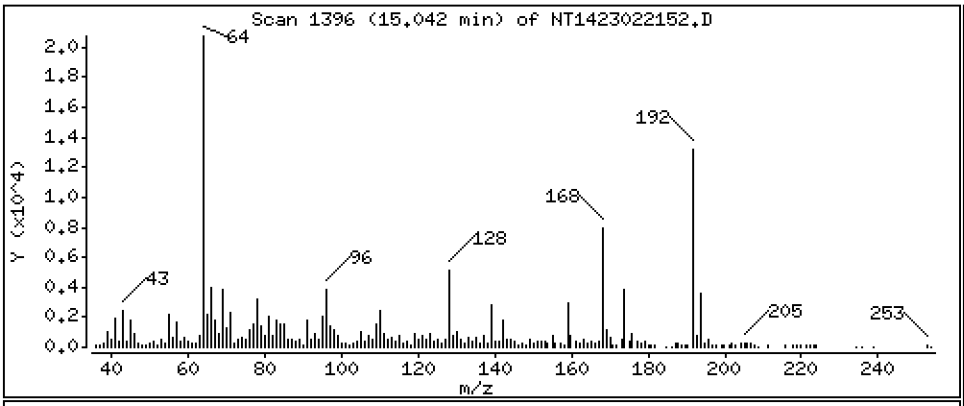
Operator: DSD

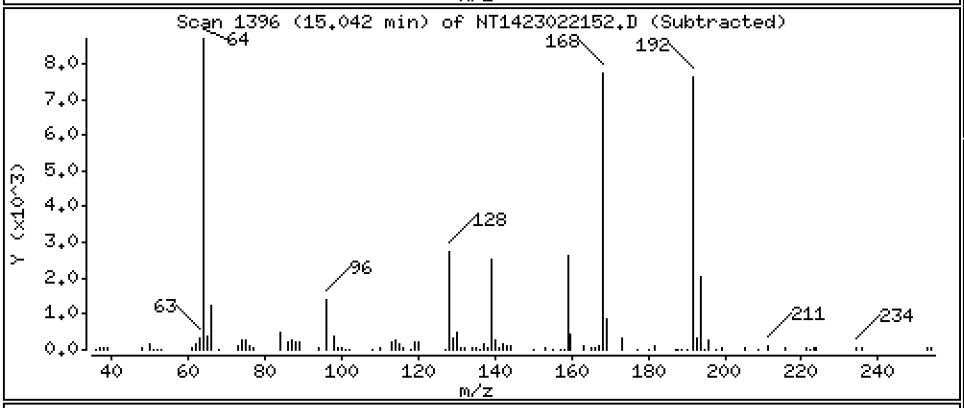
Column phase: ZB-5msi

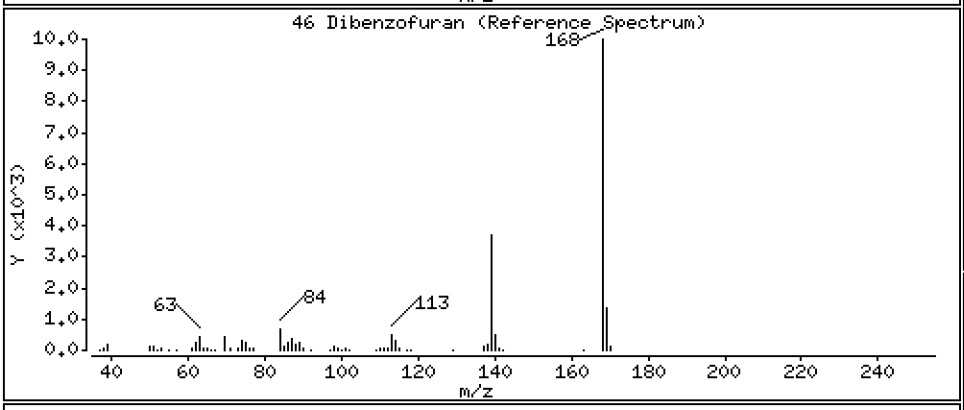
Column diameter: 0.25

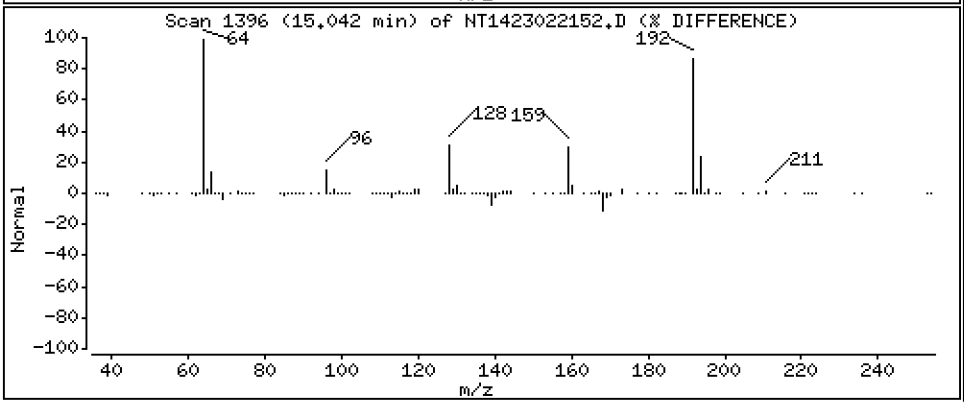
46 Dibenzofuran

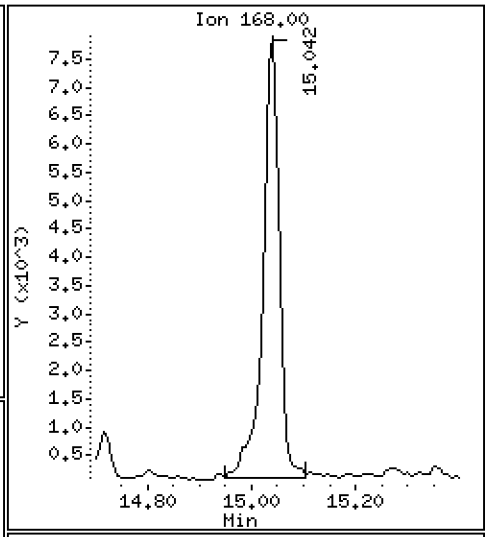
Concentration: 0.06697 ug/mL

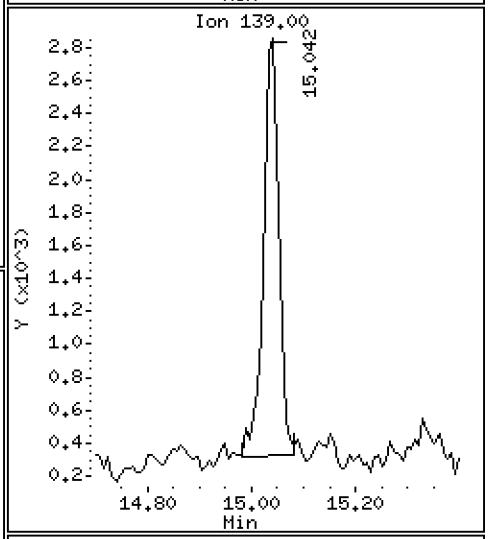


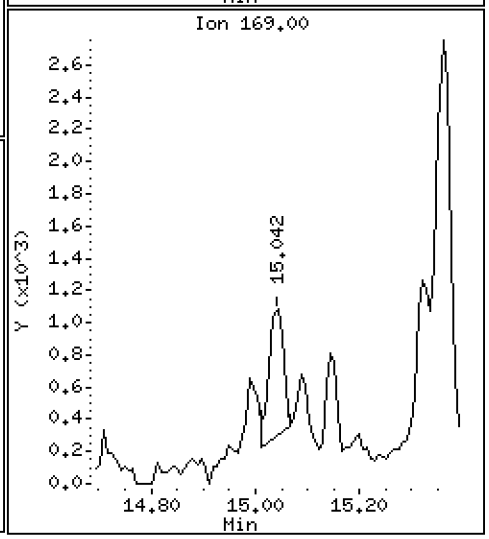












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

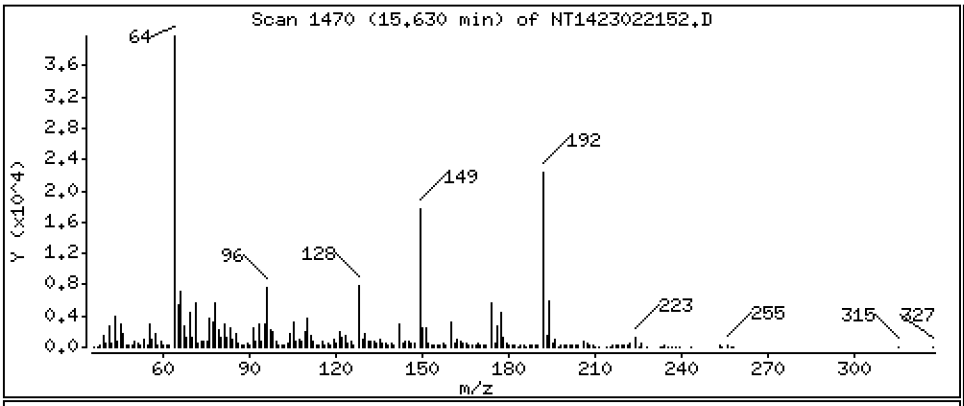
Operator: DSD

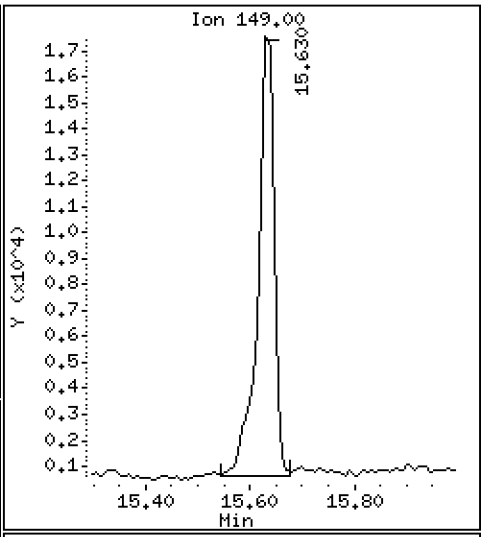
Column phase: ZB-5msi

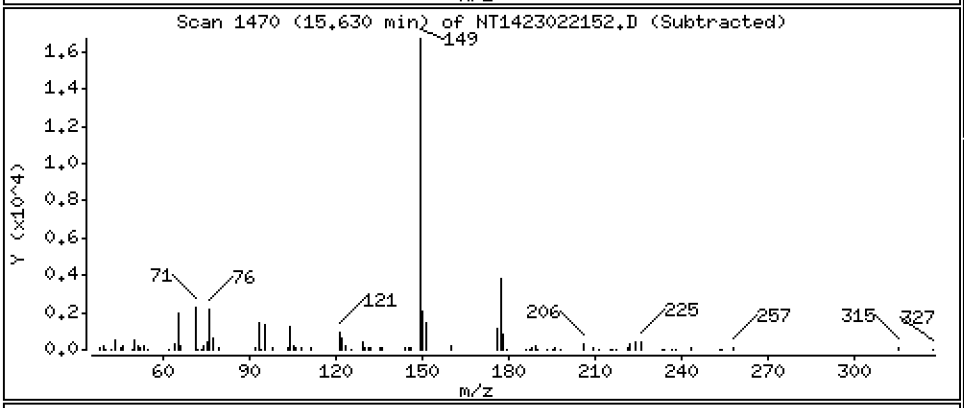
Column diameter: 0.25

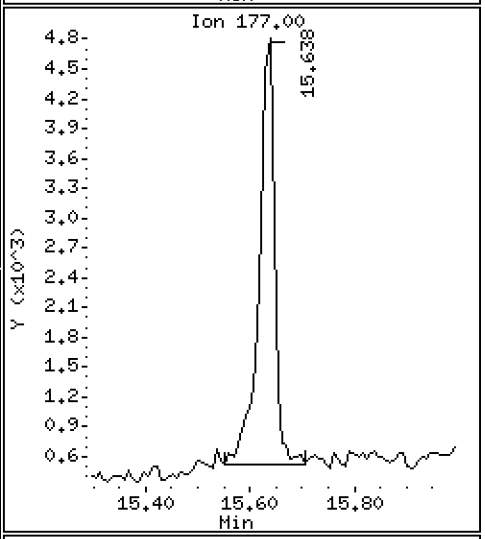
50 Diethylphthalate

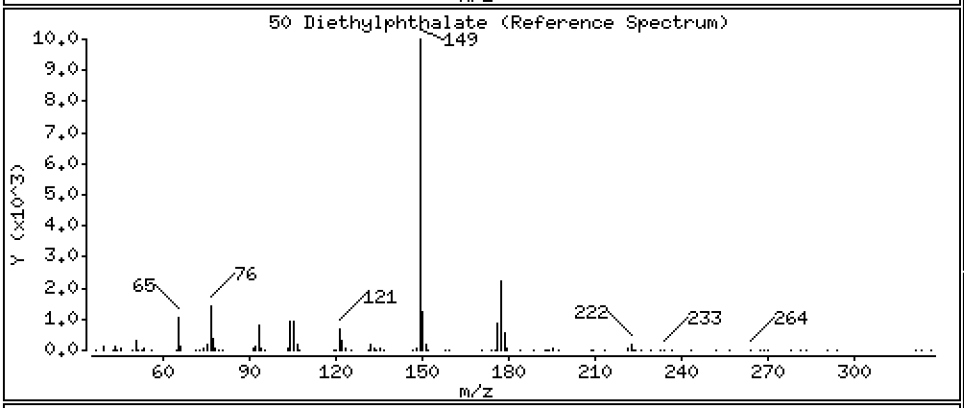
Concentration: 0.1542 ug/mL

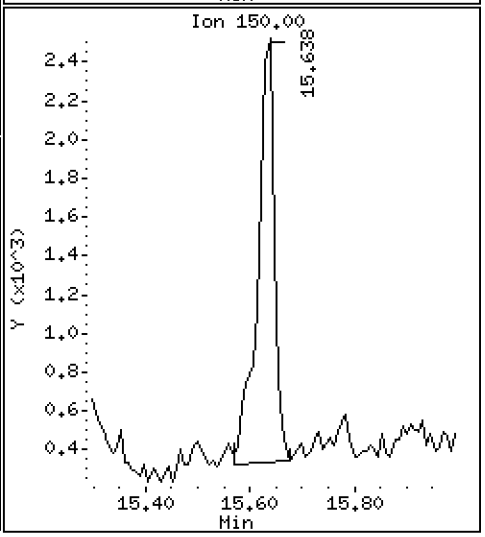


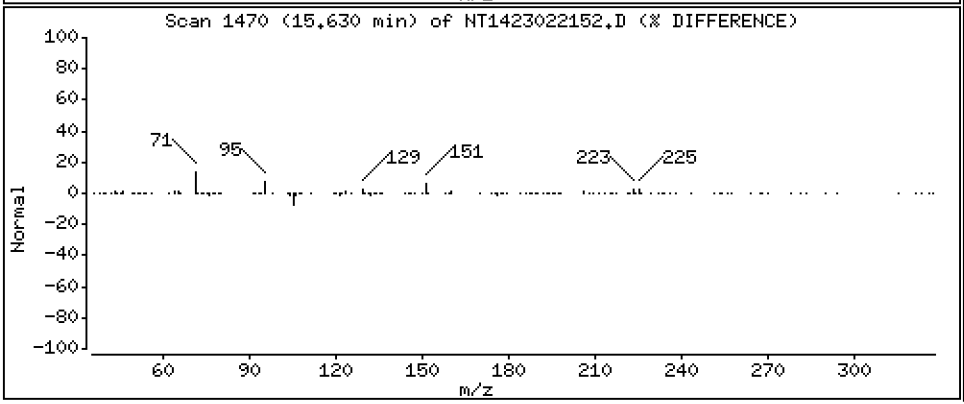












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

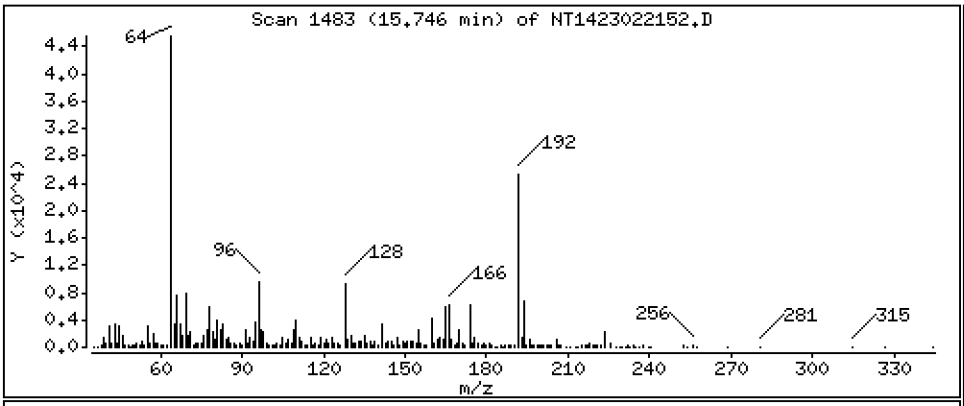
Operator: DSD

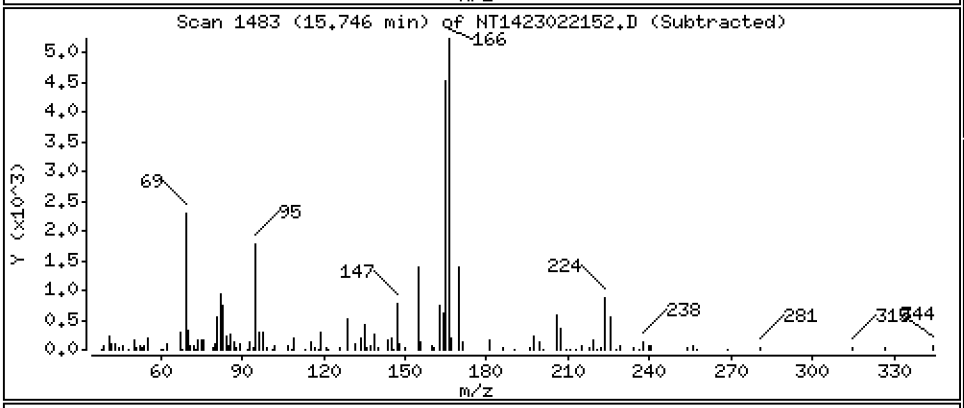
Column phase: ZB-5msi

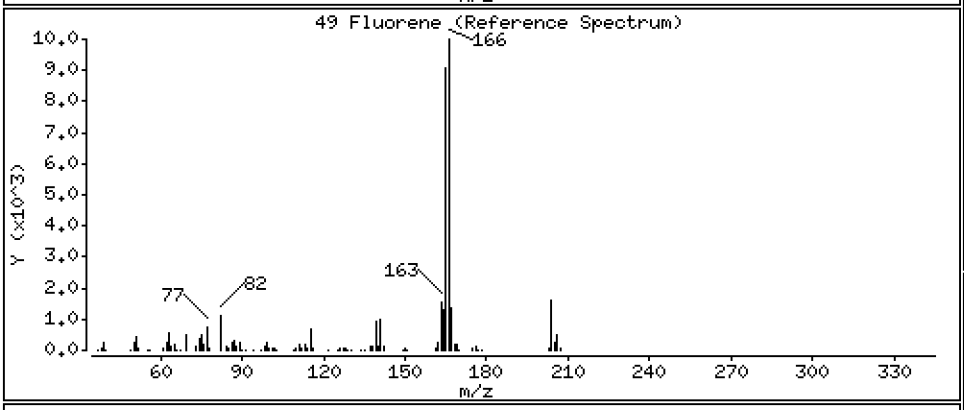
Column diameter: 0.25

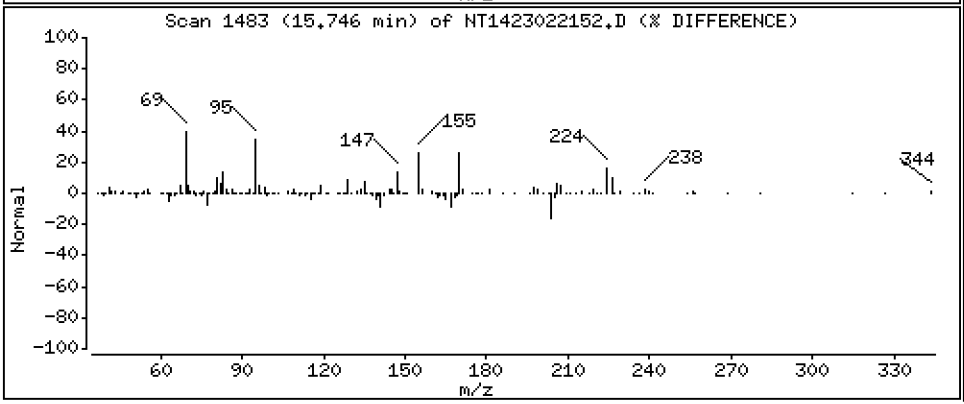
49 Fluorene

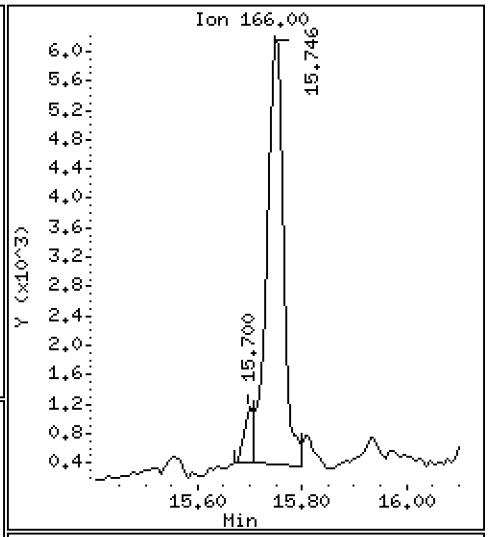
Concentration: 0.04922 ug/mL

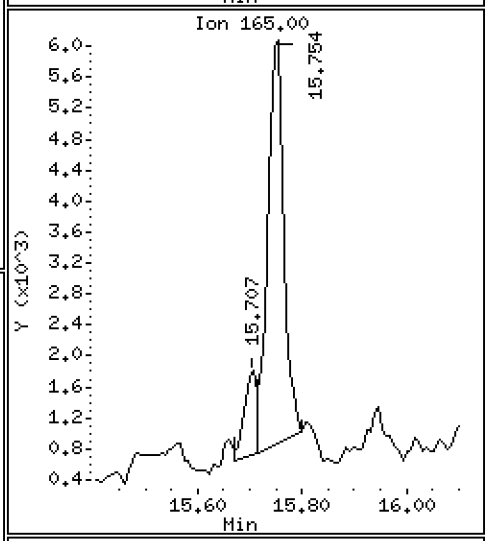


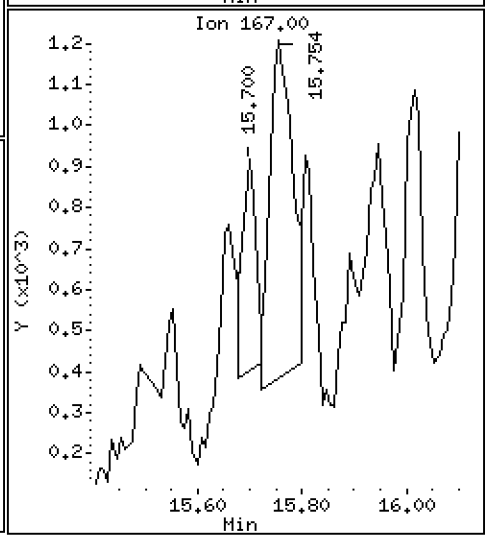












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

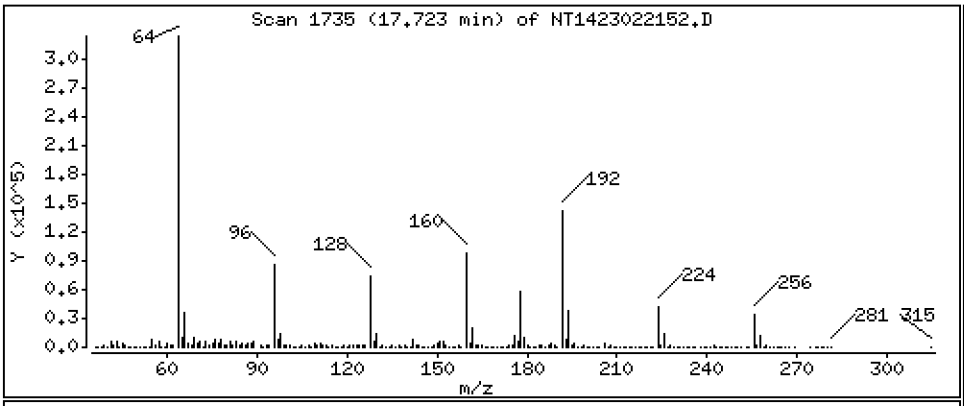
Operator: DSD

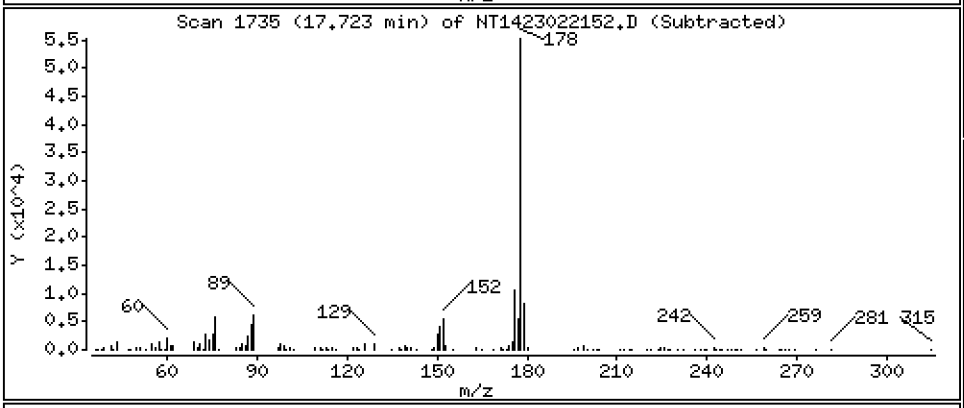
Column phase: ZB-5msi

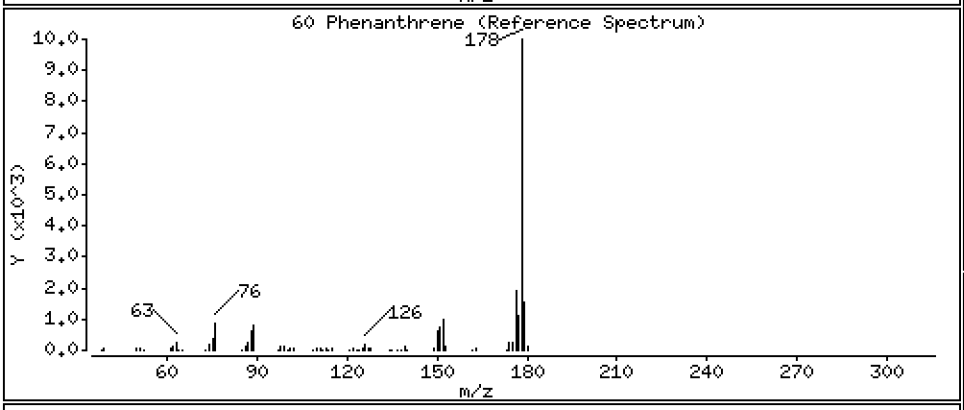
Column diameter: 0.25

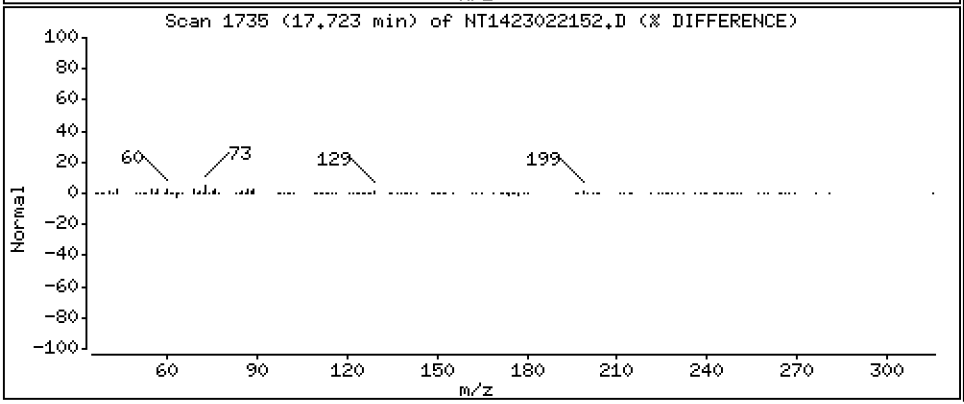
60 Phenanthrene

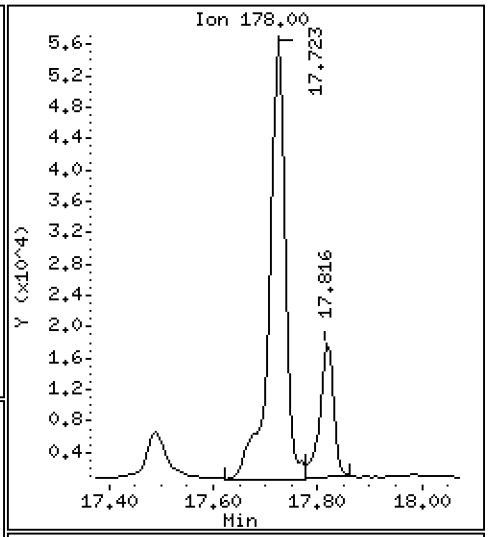
Concentration: 0.4292 ug/mL

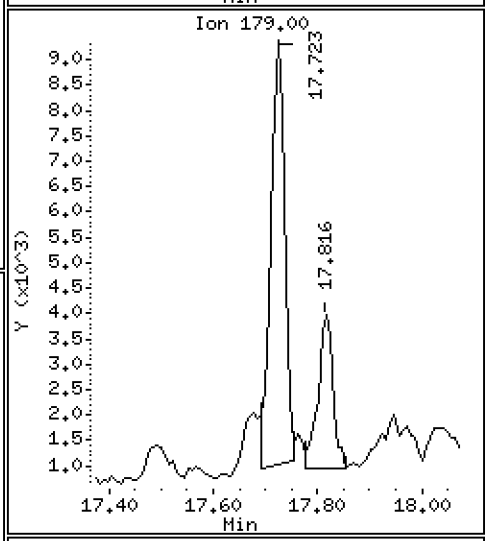


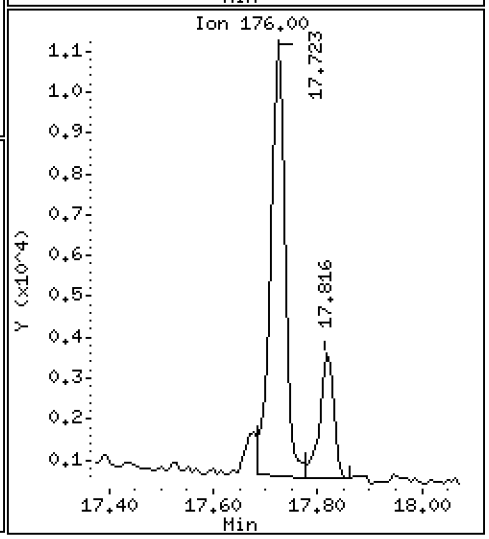












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

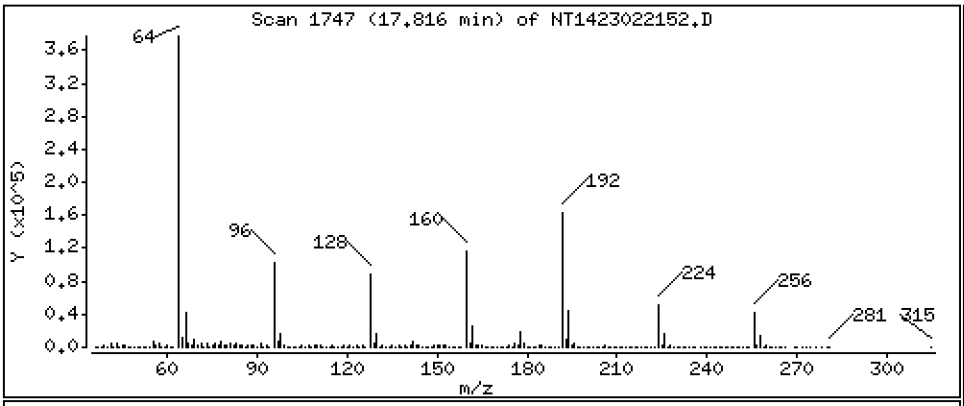
Operator: DSD

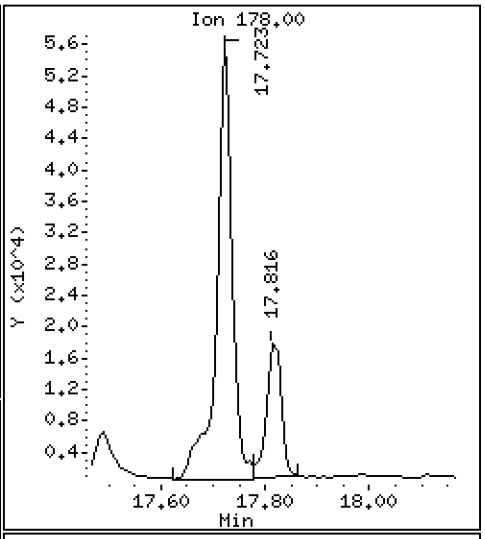
Column phase: ZB-5msi

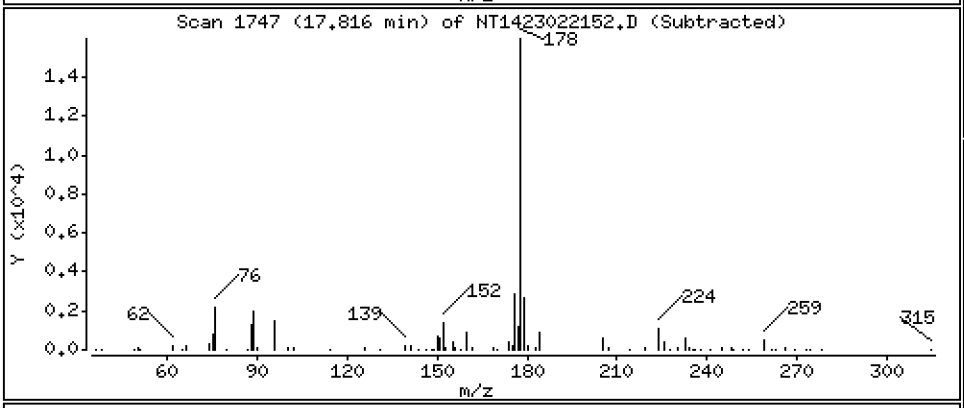
Column diameter: 0.25

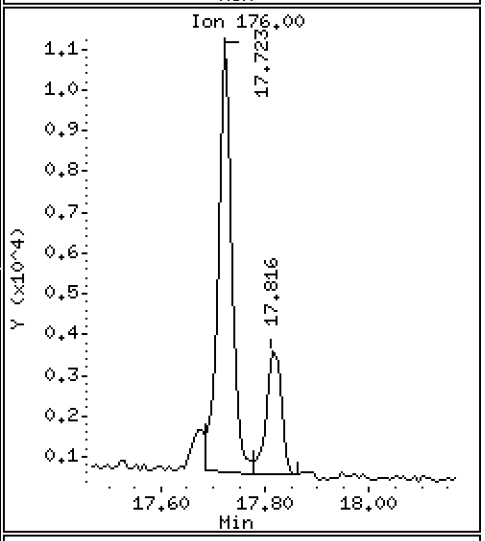
61 Anthracene

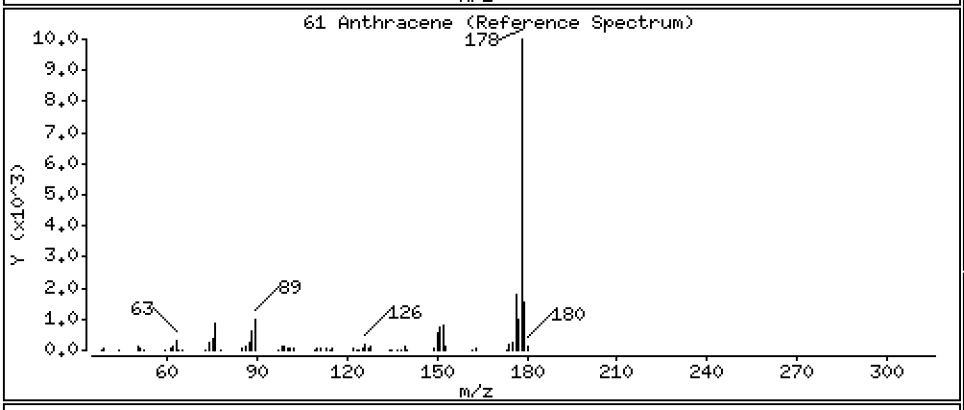
Concentration: 0.1207 ug/mL

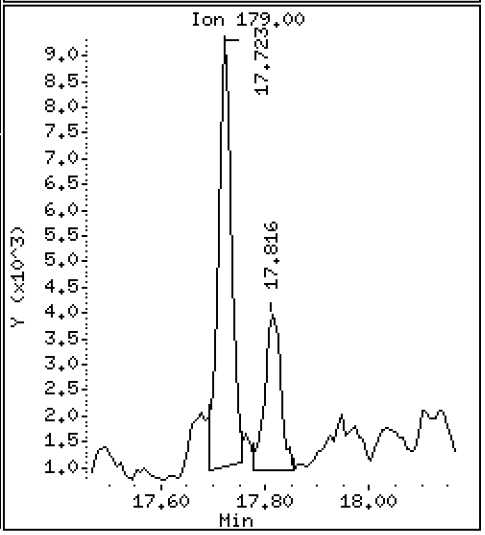


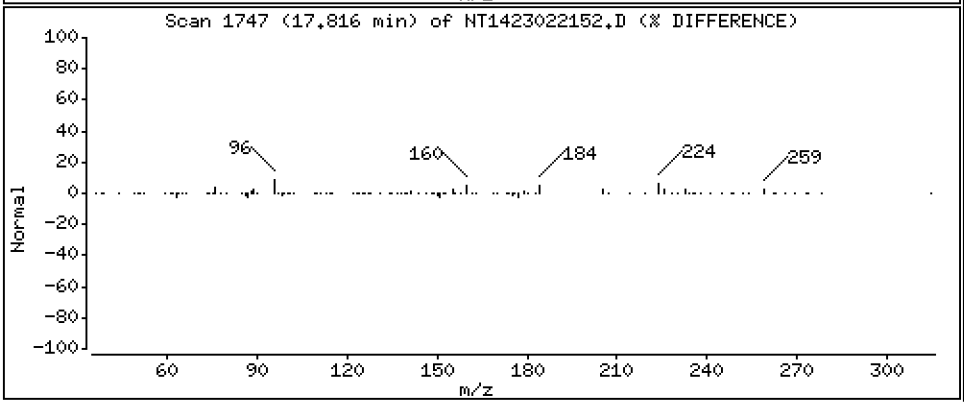












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

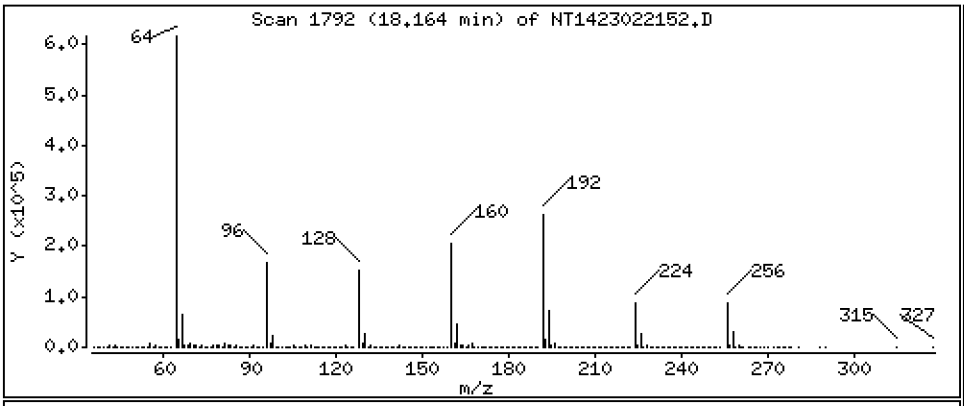
Operator: DSD

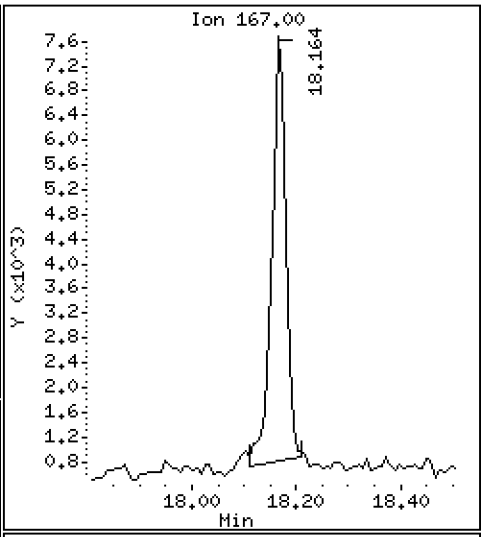
Column phase: ZB-5msi

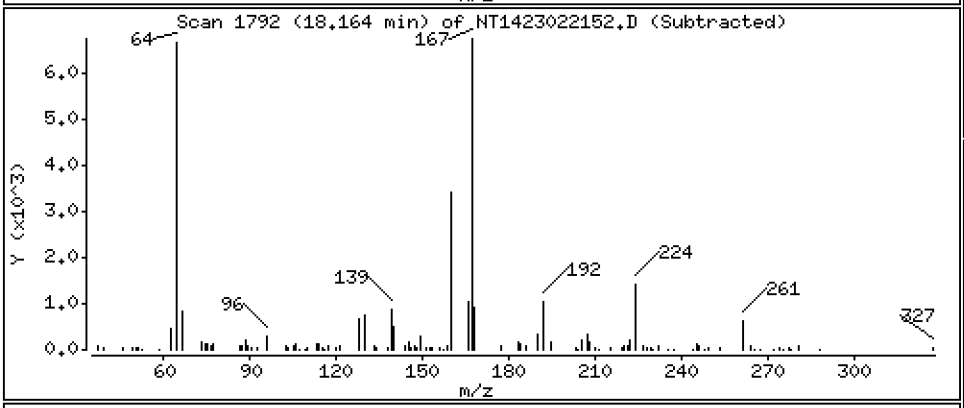
Column diameter: 0.25

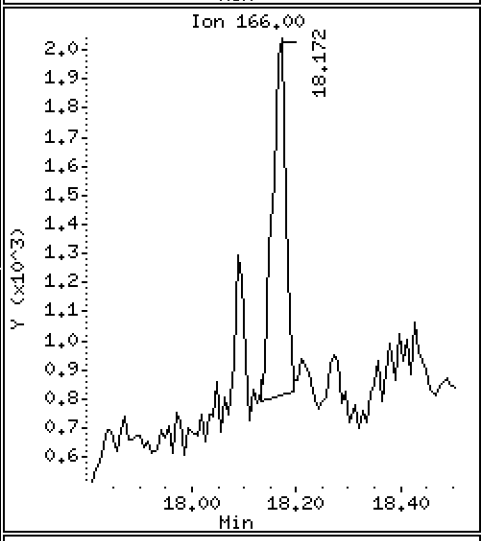
62 Carbazole

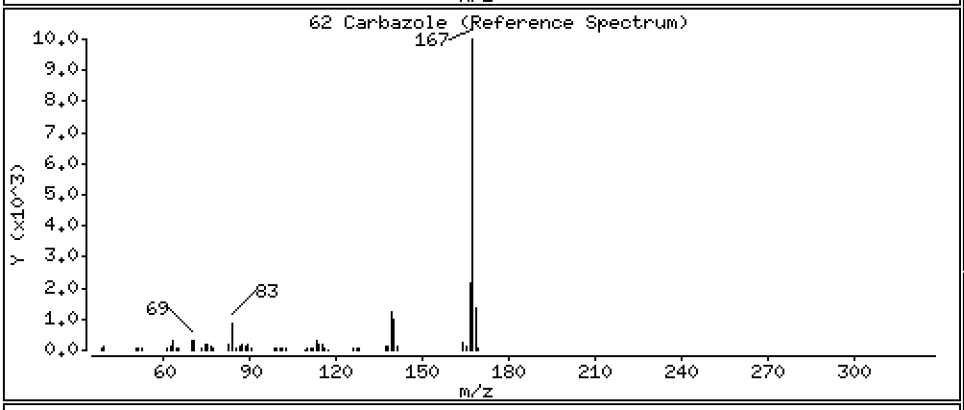
Concentration: 0.05274 ug/mL

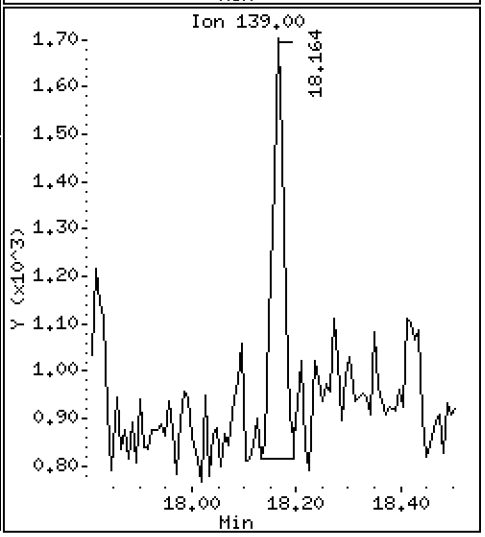


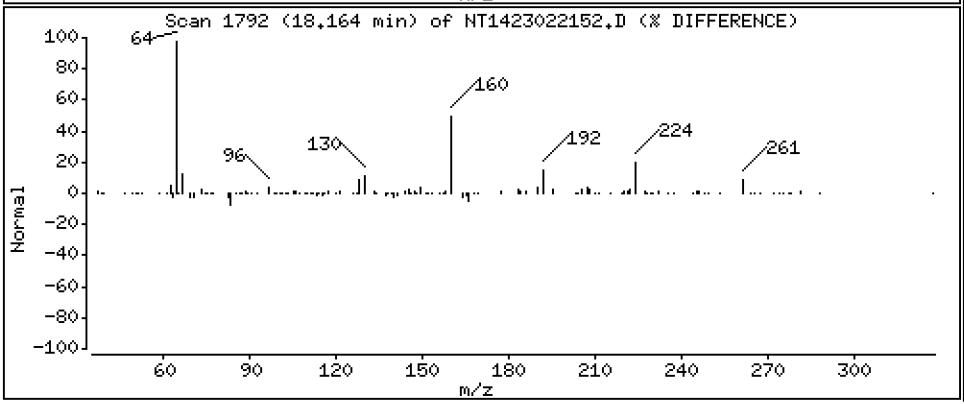












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

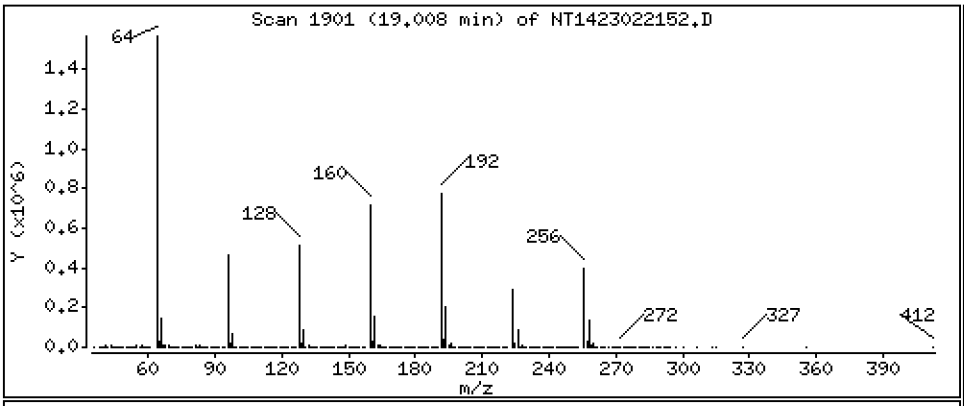
Operator: DSD

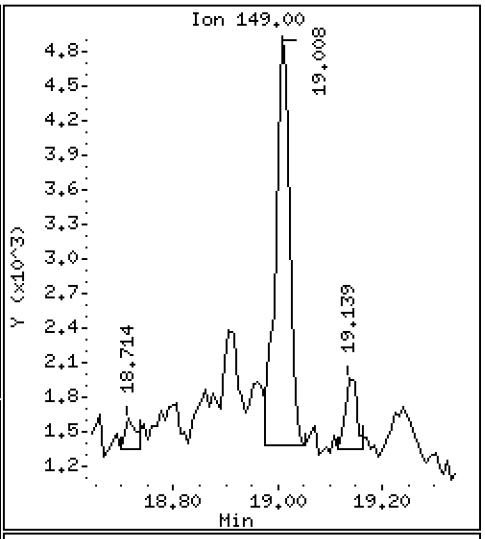
Column phase: ZB-5msi

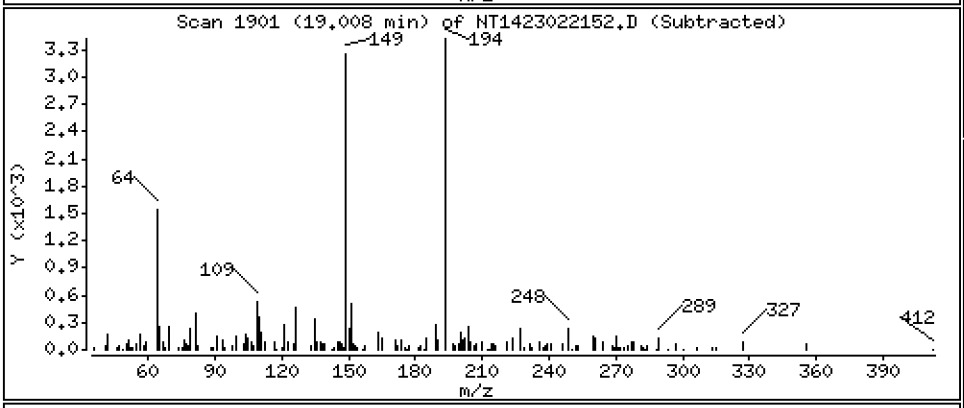
Column diameter: 0.25

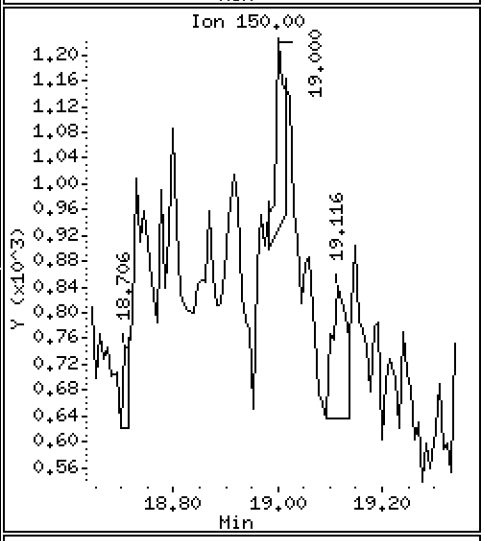
63 Di-n-butylphthalate

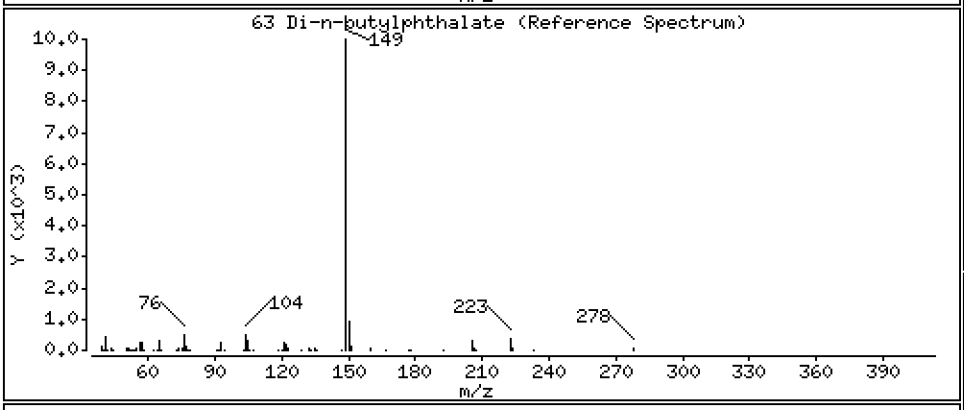
Concentration: 0.02461 ug/mL

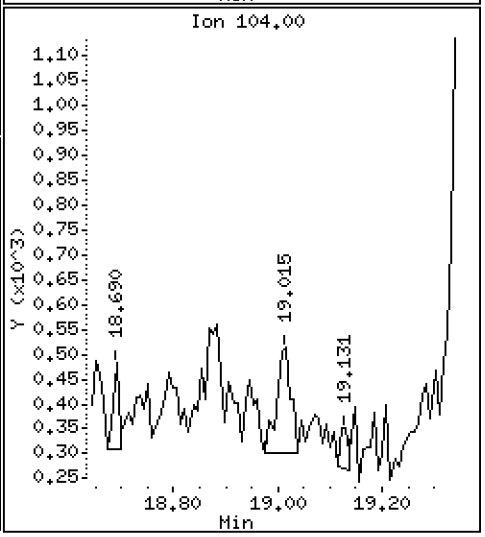


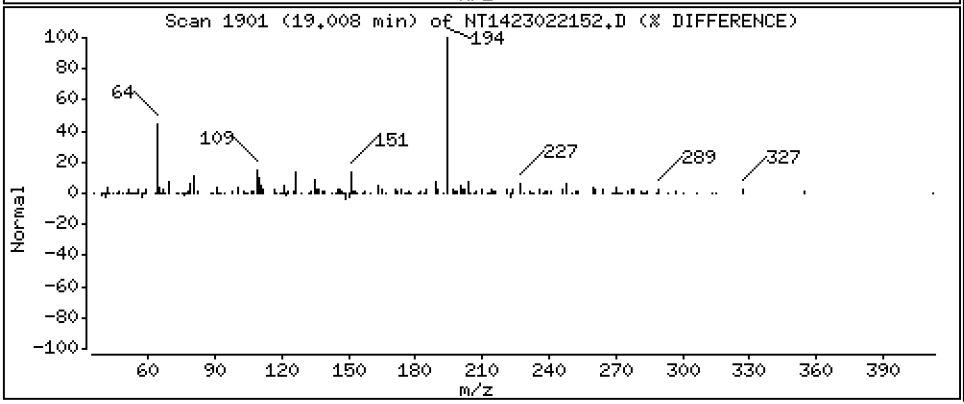












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

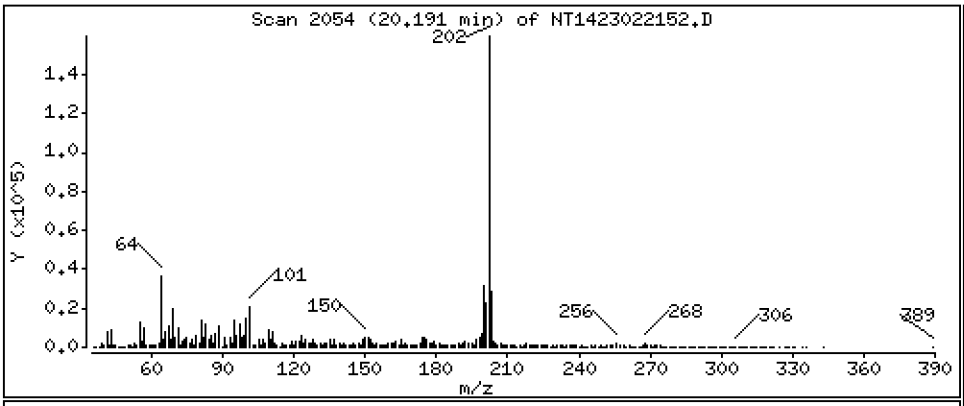
Operator: DSD

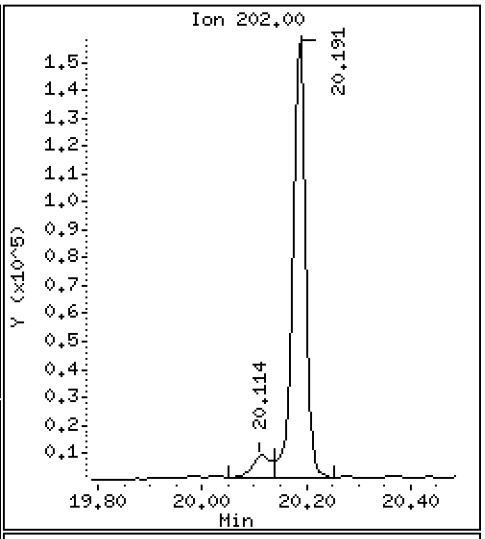
Column phase: ZB-5msi

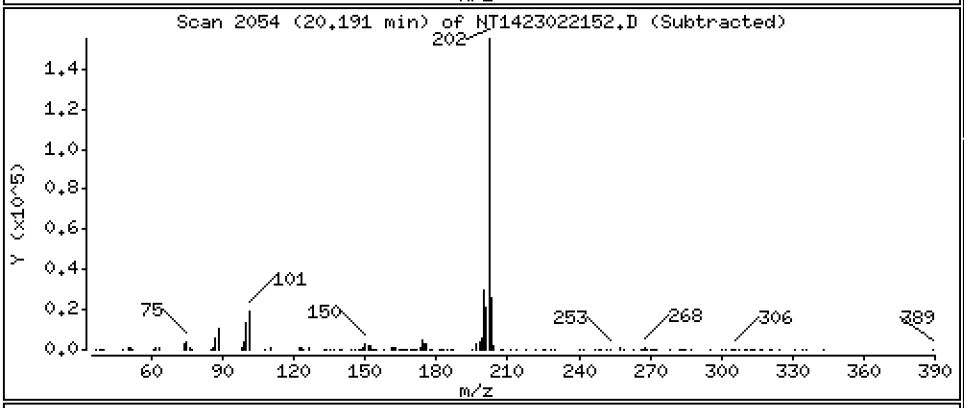
Column diameter: 0.25

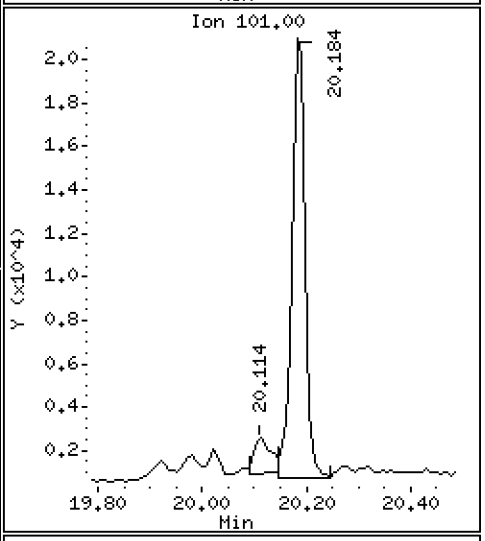
64 Fluoranthene

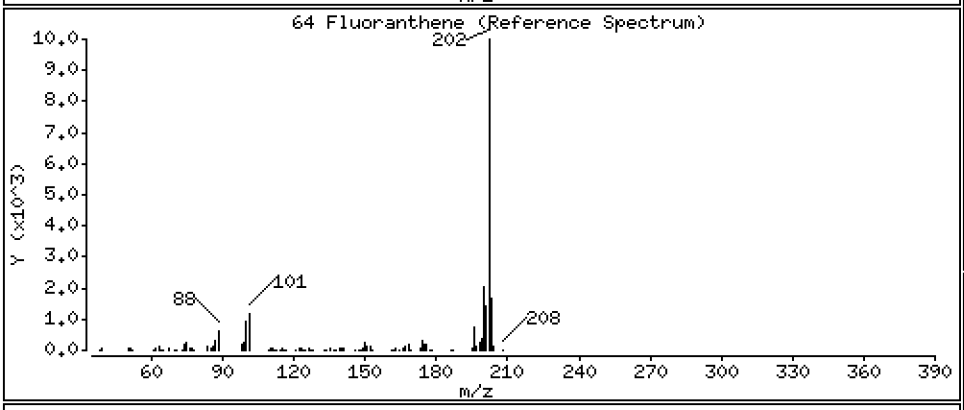
Concentration: 0.9376 ug/mL

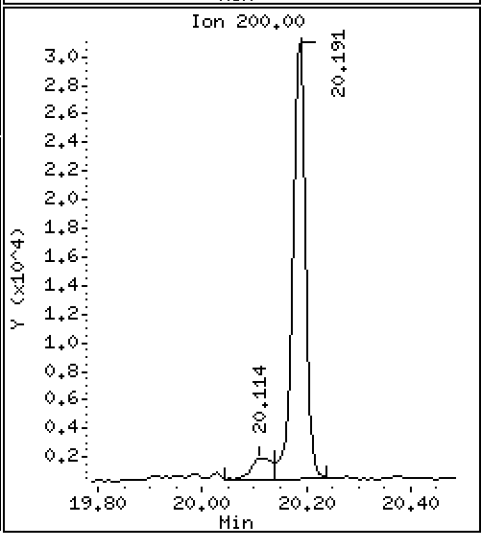


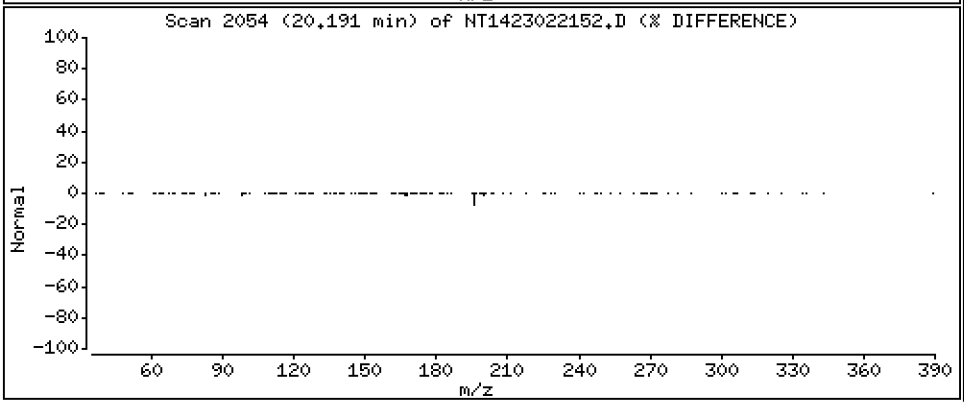












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

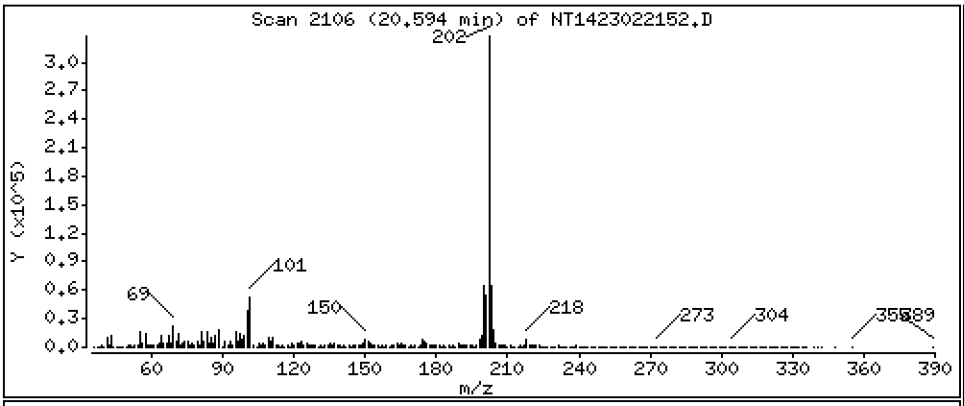
Operator: DSD

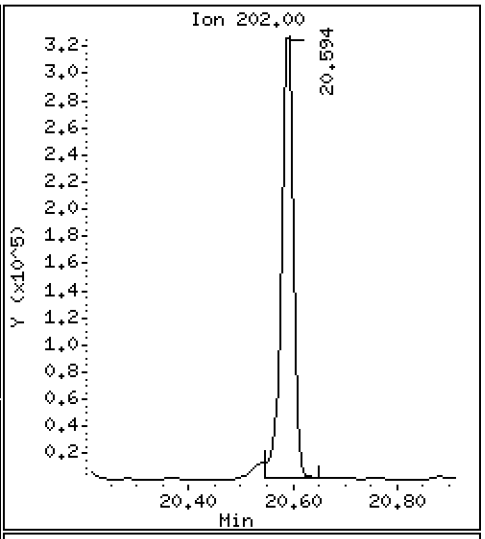
Column phase: ZB-5msi

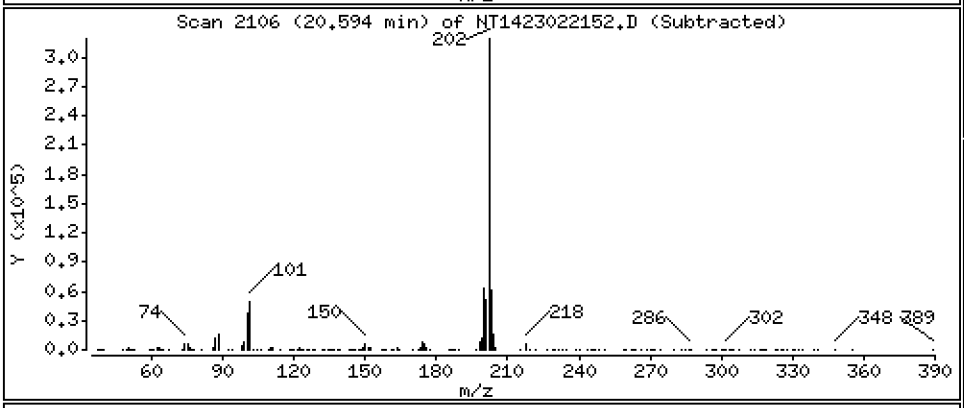
Column diameter: 0.25

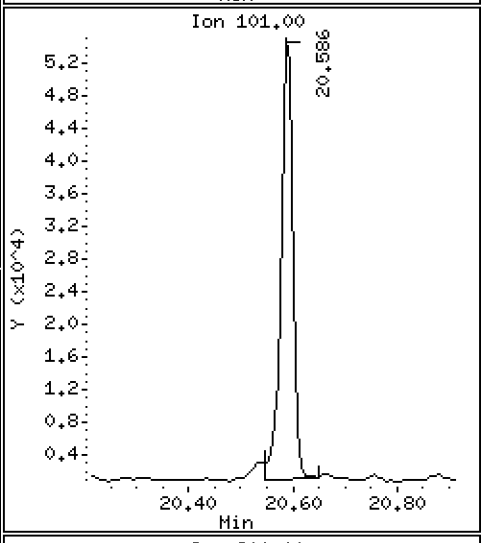
65 Pyrene

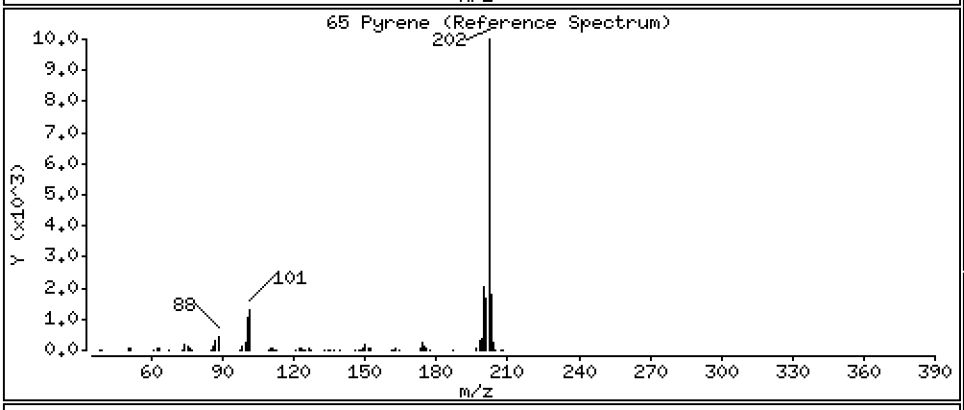
Concentration: 1.719 ug/mL

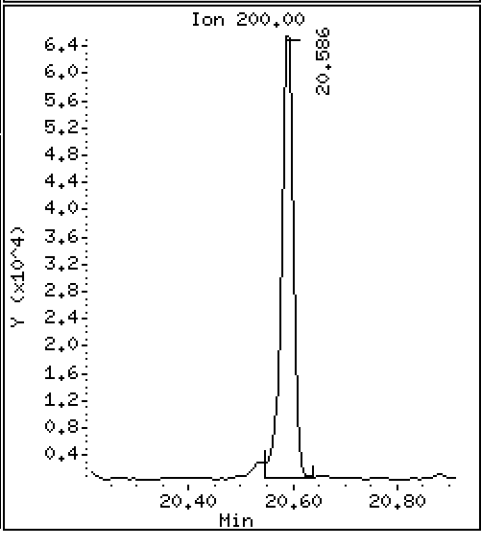


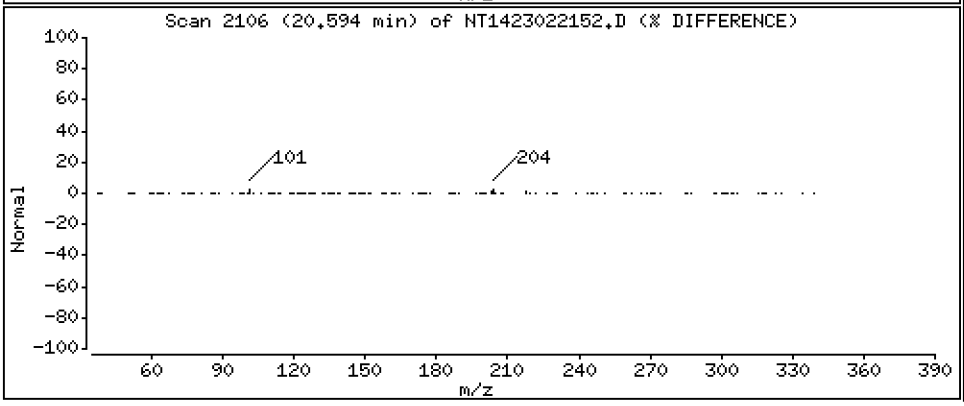












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

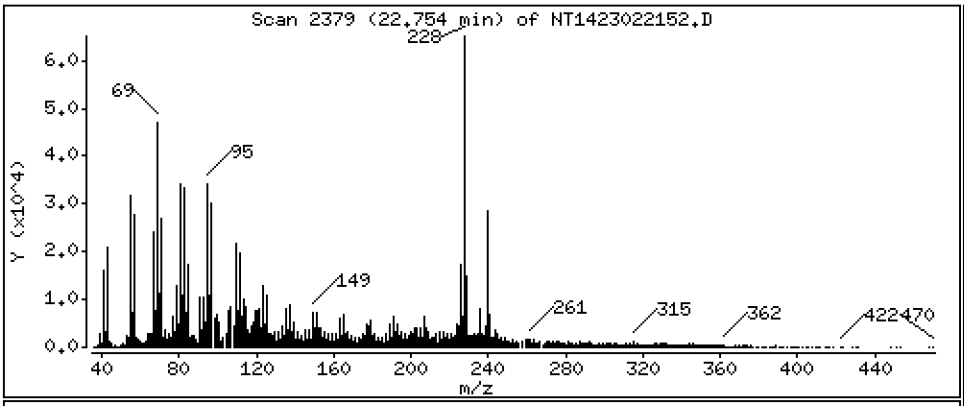
Operator: DSD

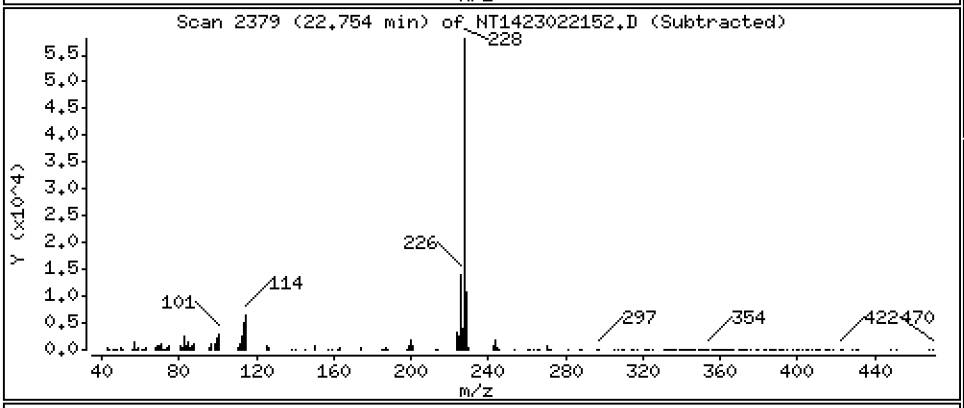
Column phase: ZB-5msi

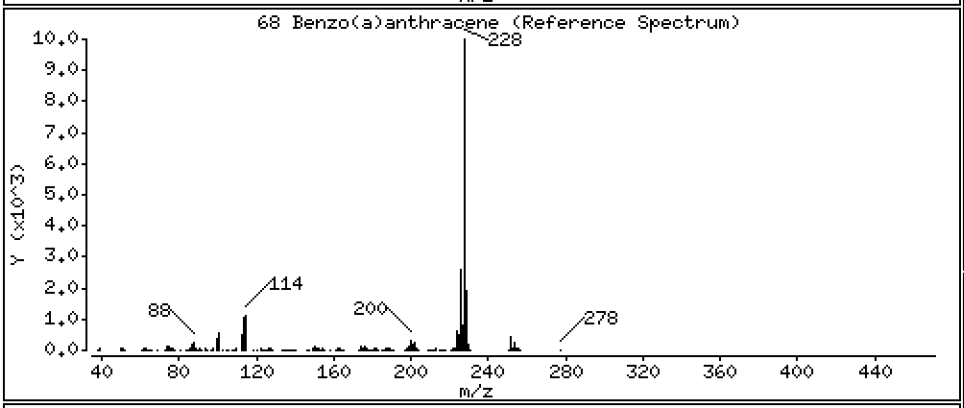
Column diameter: 0.25

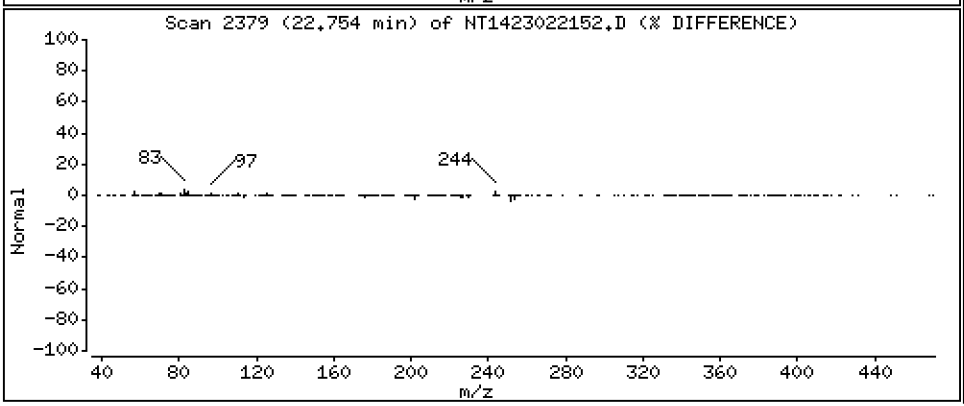
68 Benzo(a)anthracene

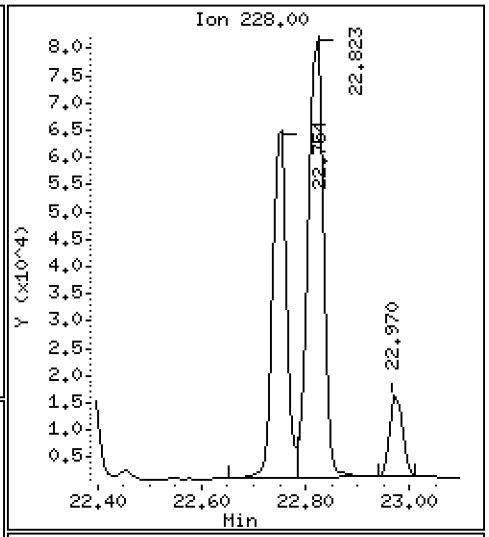
Concentration: 0.5242 ug/mL

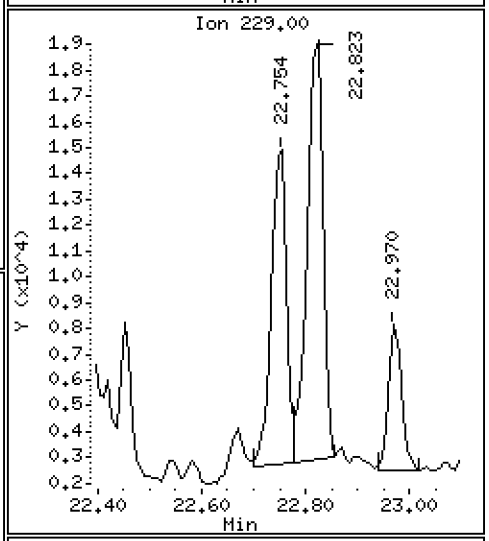


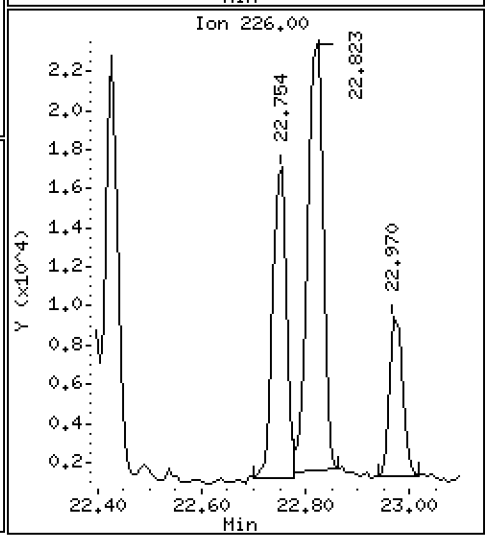












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

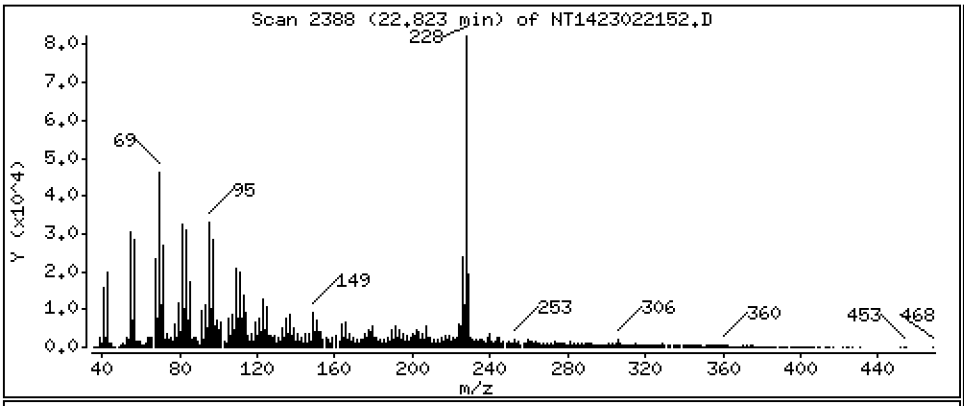
Operator: DSD

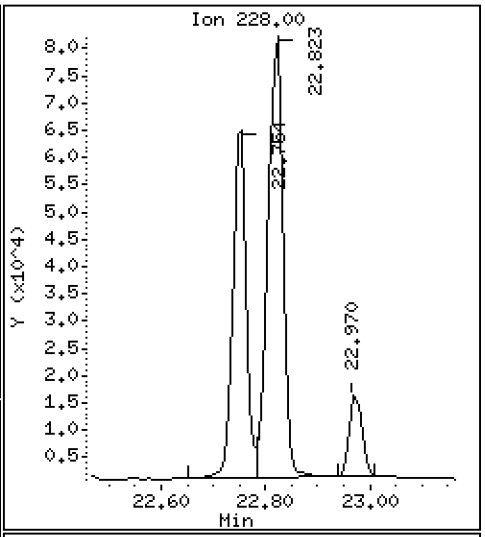
Column phase: ZB-5msi

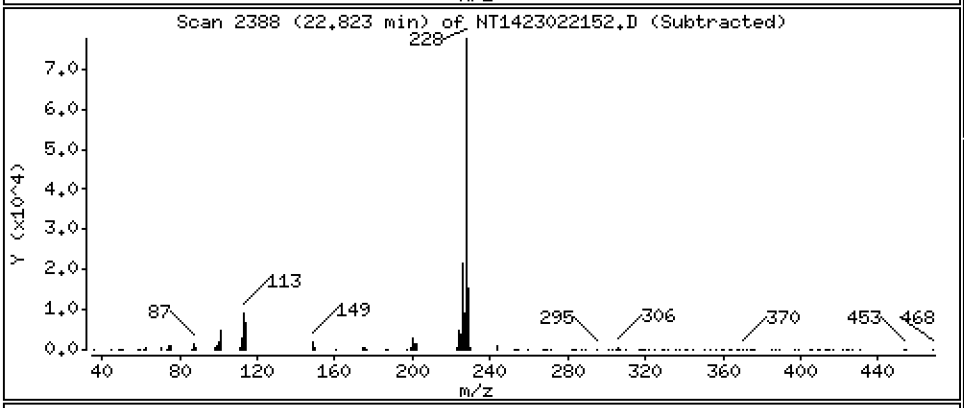
Column diameter: 0.25

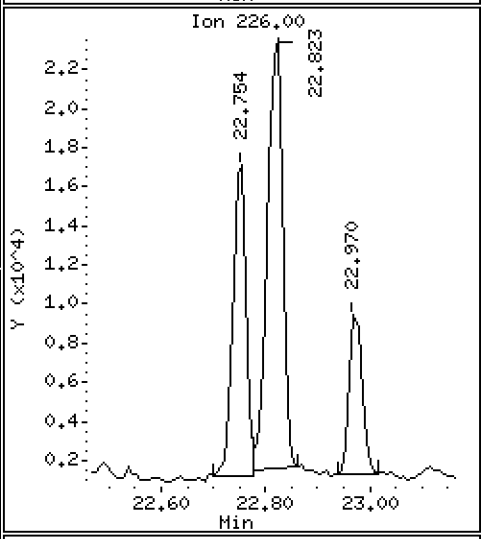
71 Chrysene

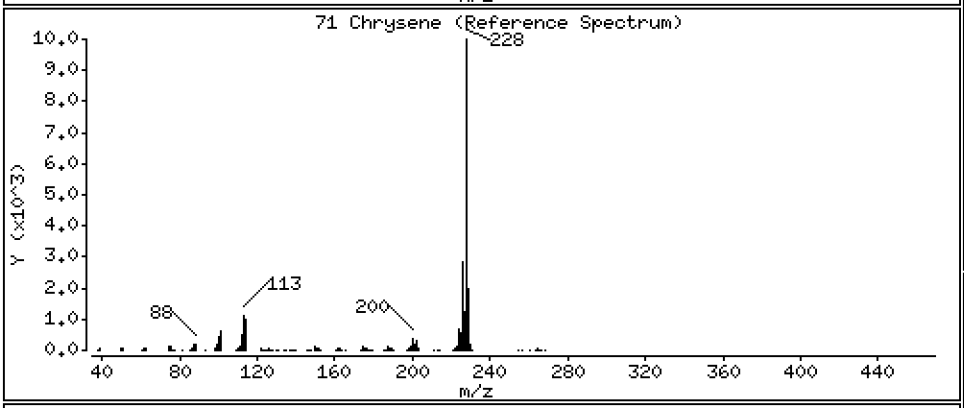
Concentration: 0.7983 ug/mL

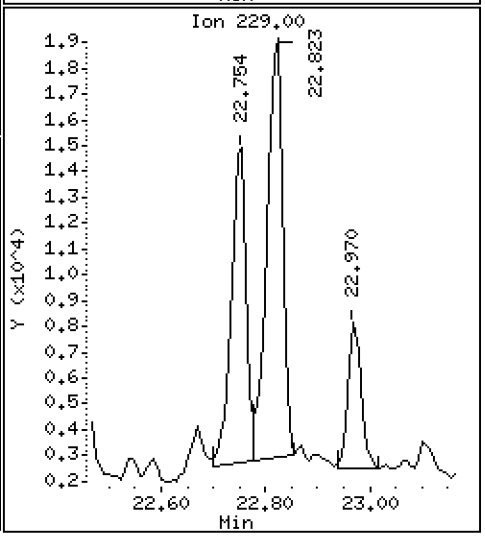


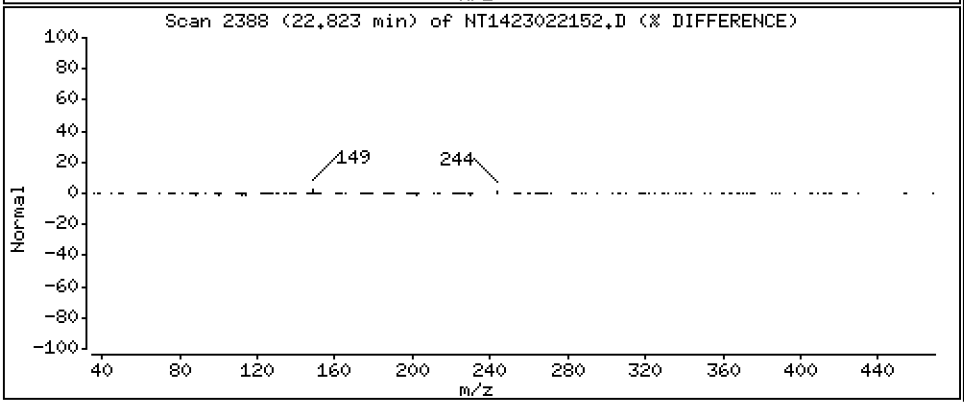












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

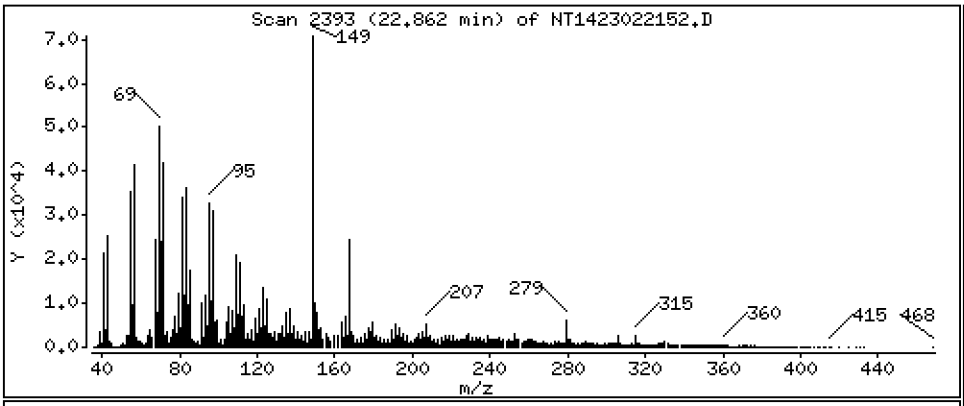
Operator: DSD

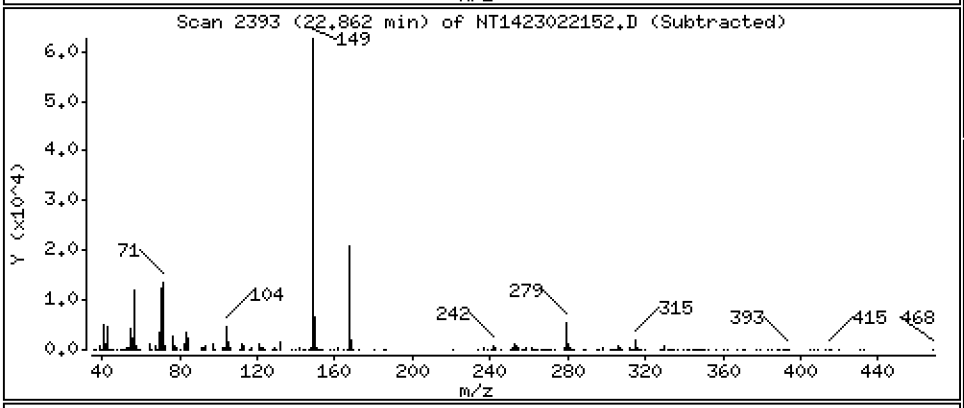
Column phase: ZB-5msi

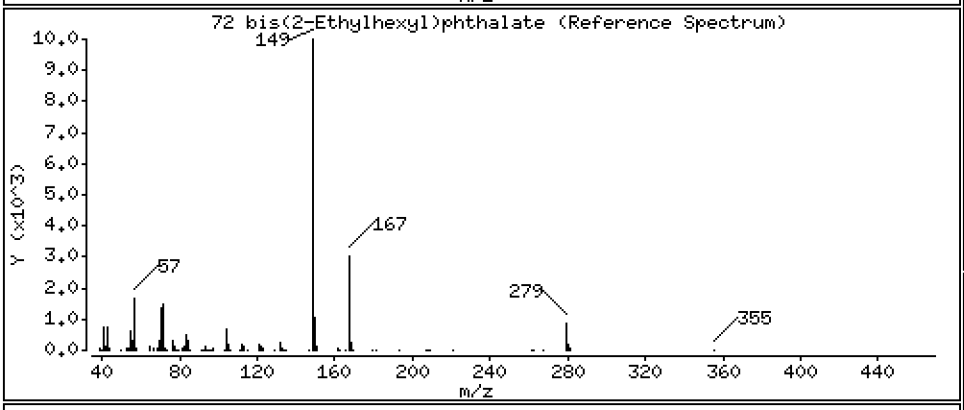
Column diameter: 0.25

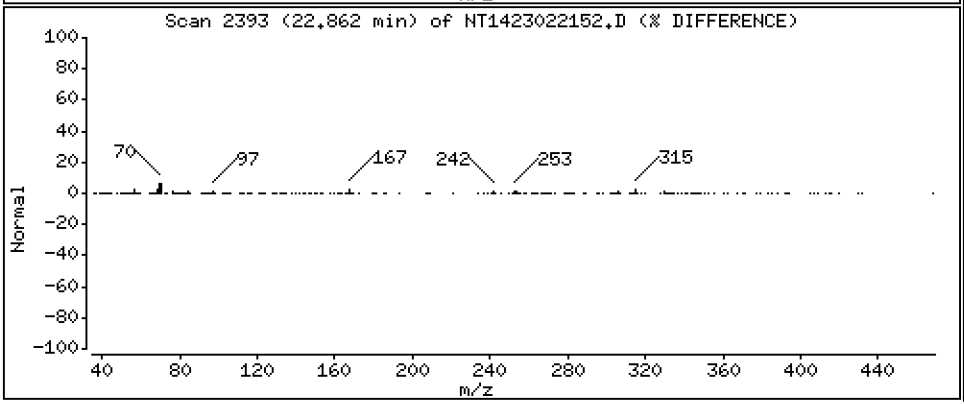
72 bis(2-Ethylhexyl)phthalate

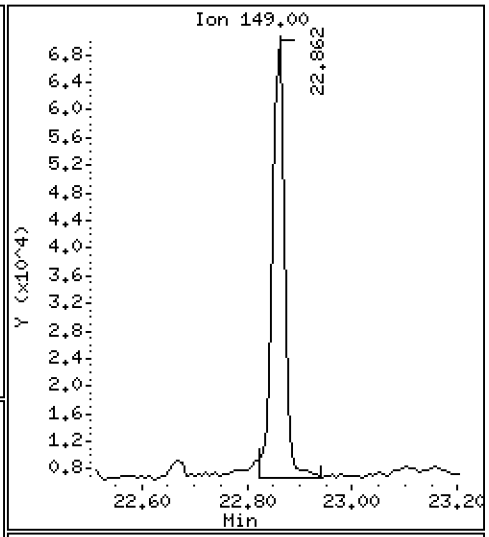
Concentration: 0.4964 ug/mL

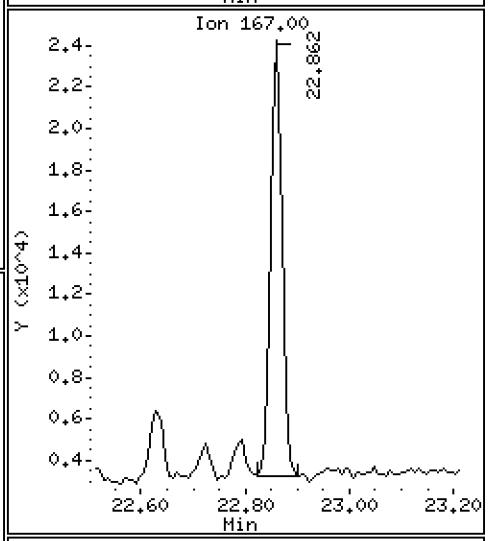


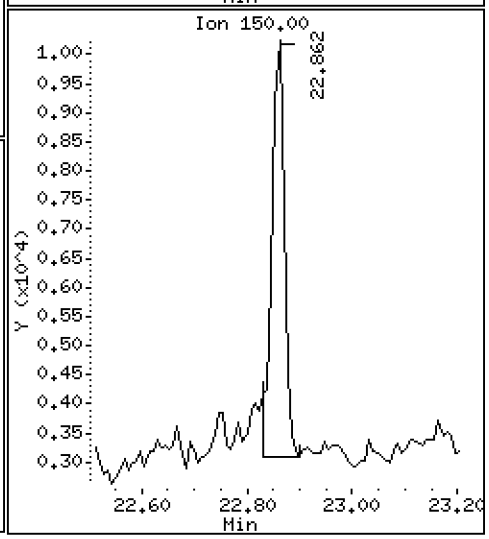












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

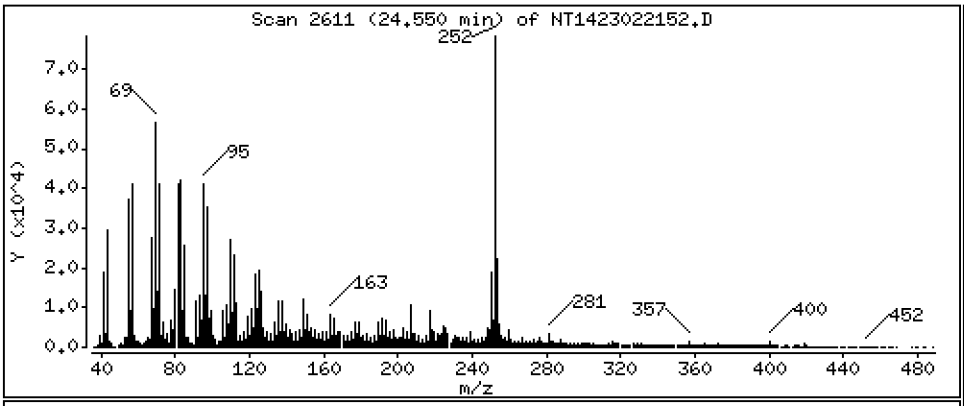
Operator: DSD

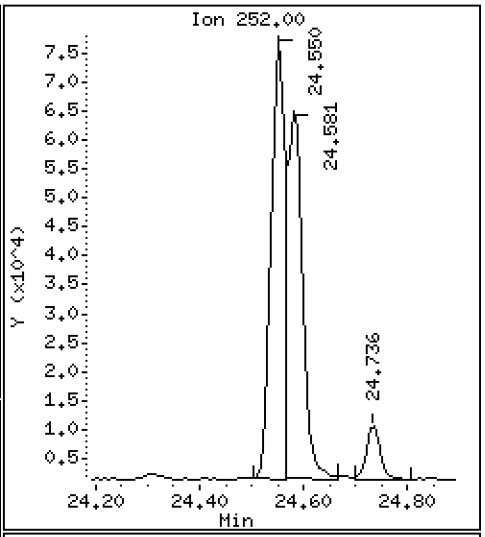
Column phase: ZB-5msi

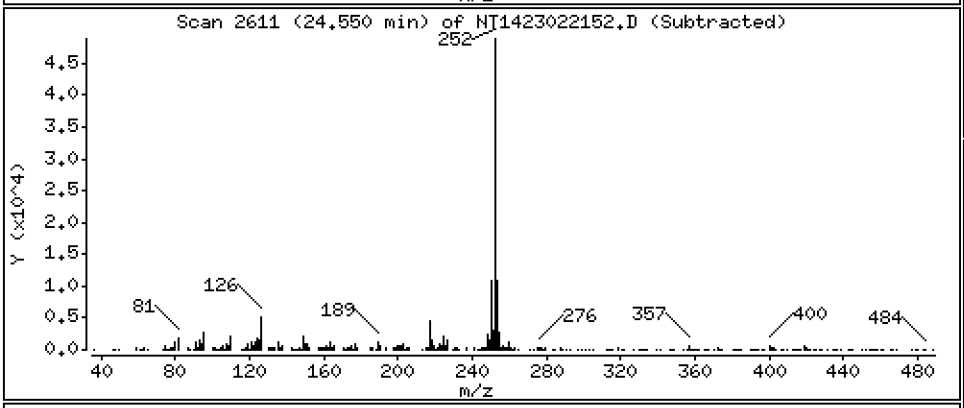
Column diameter: 0.25

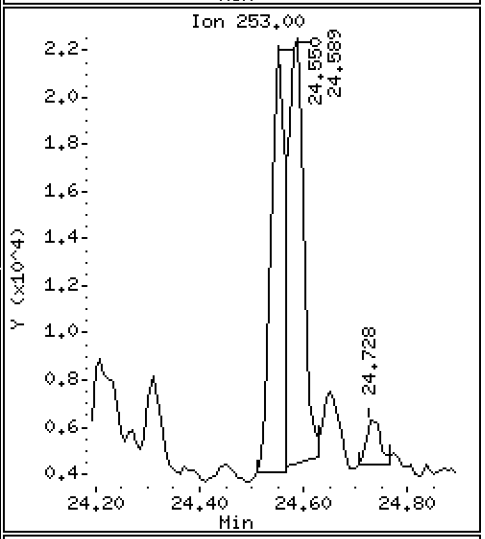
74 Benzo(b)fluoranthene

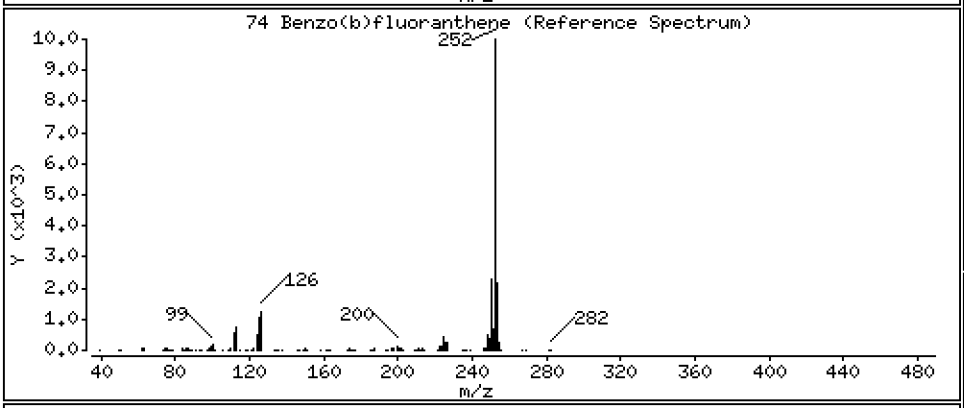
Concentration: 0.8584 ug/mL

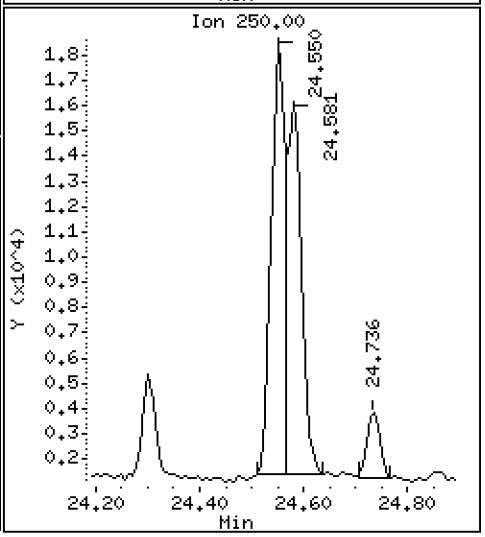


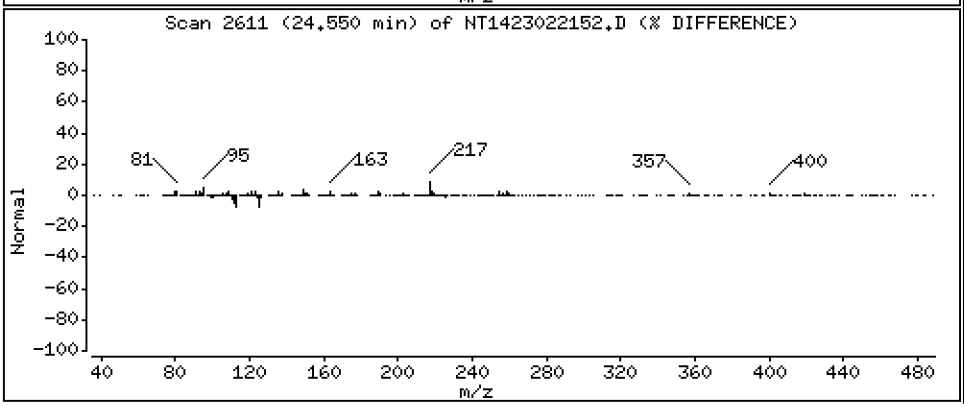












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

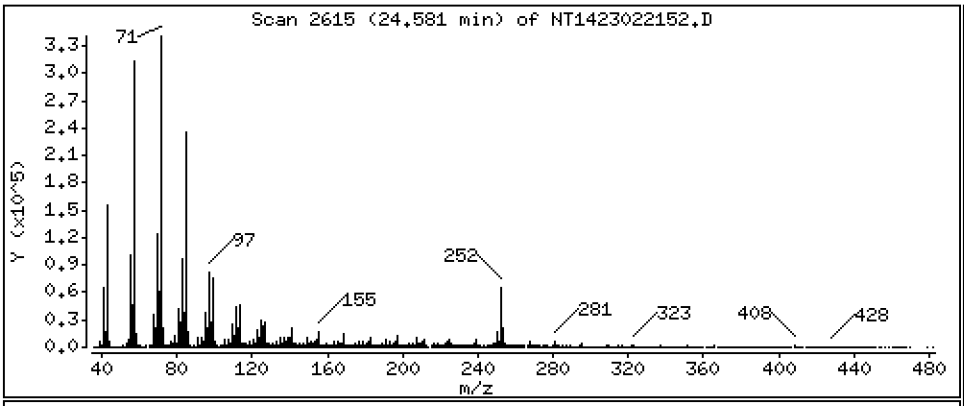
Operator: DSD

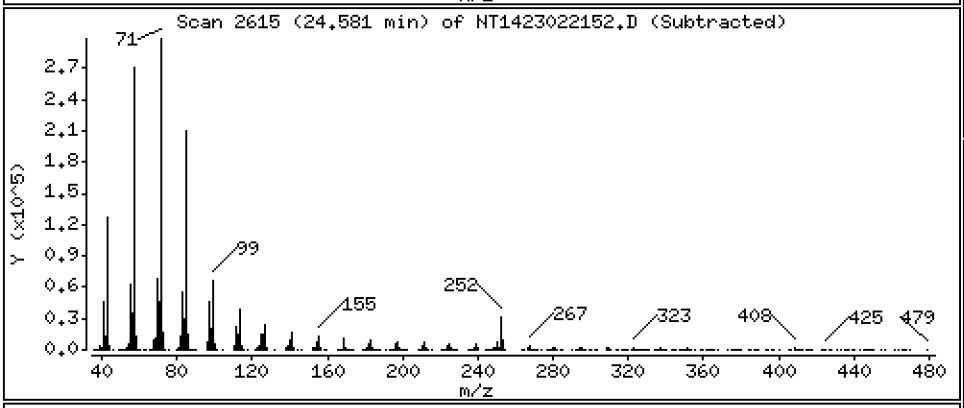
Column phase: ZB-5msi

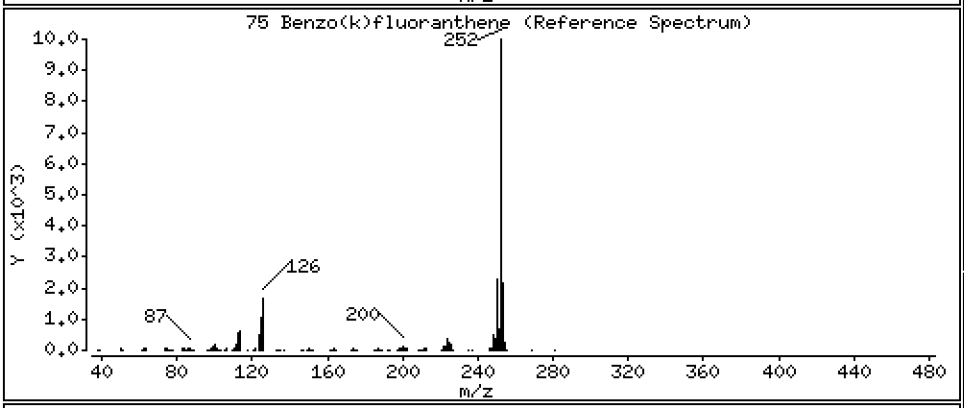
Column diameter: 0.25

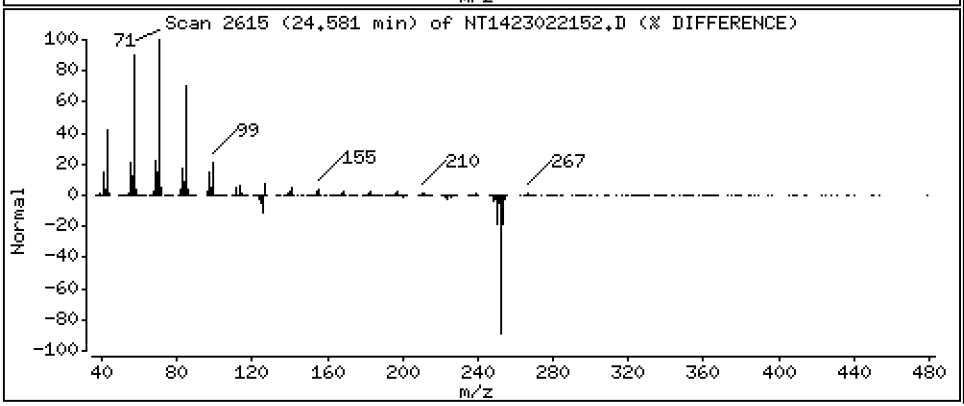
75 Benzo(k)fluoranthene

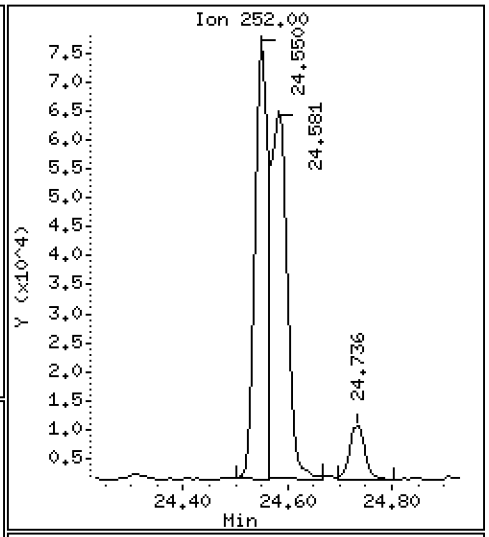
Concentration: 0.8349 ug/mL

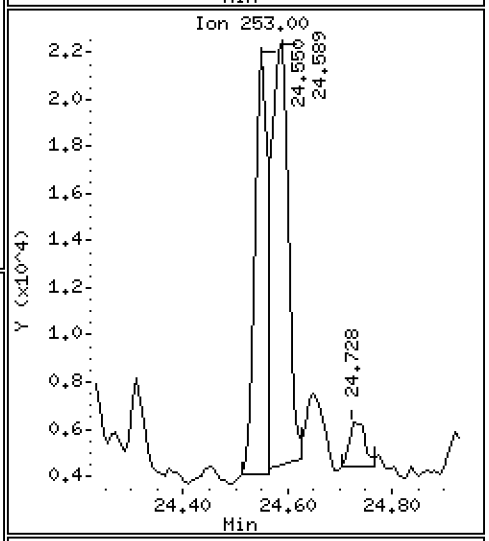


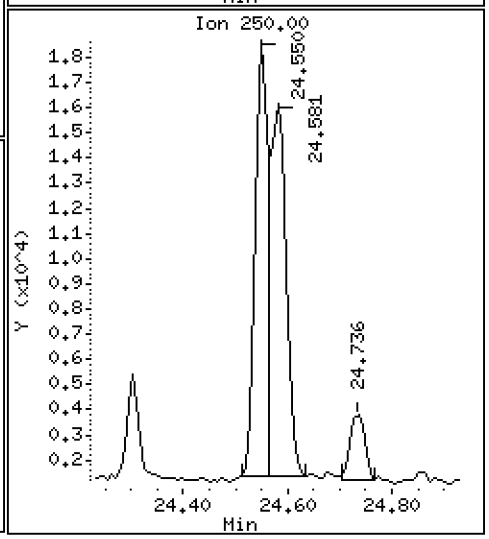












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

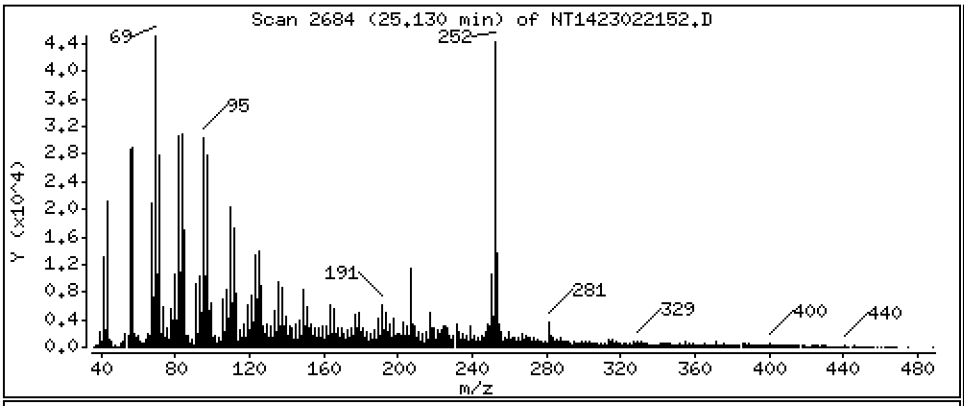
Operator: DSD

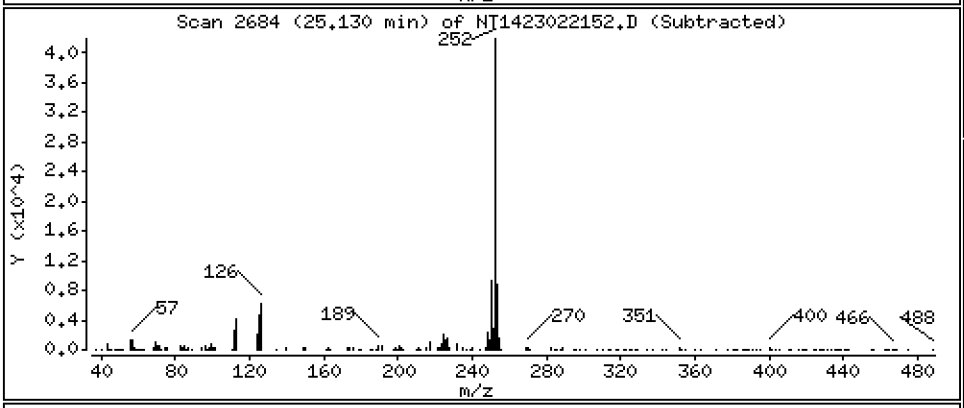
Column phase: ZB-5msi

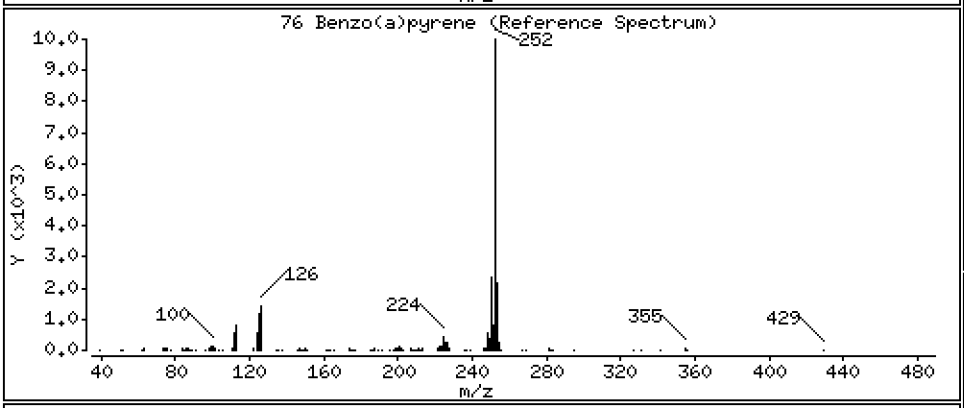
Column diameter: 0.25

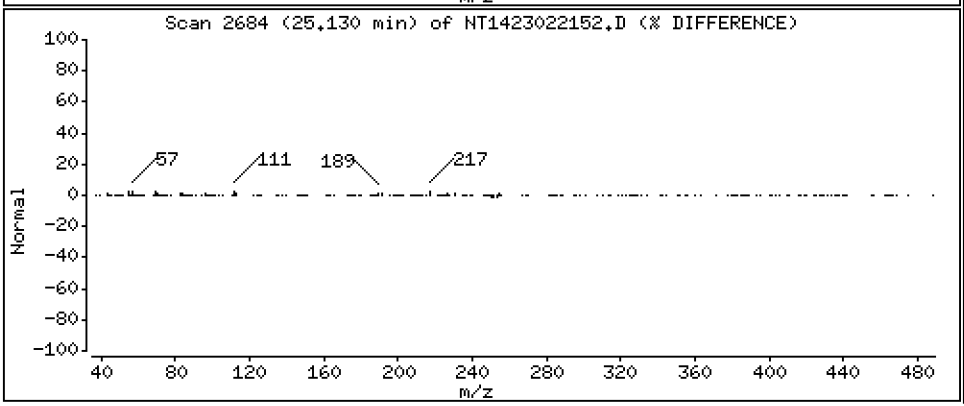
76 Benzo(a)pyrene

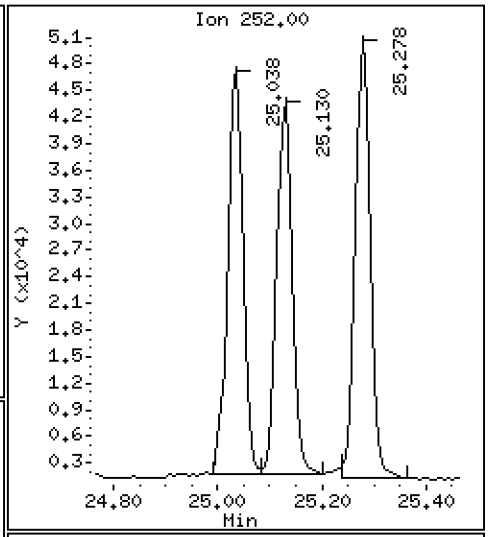
Concentration: 0.5495 ug/mL

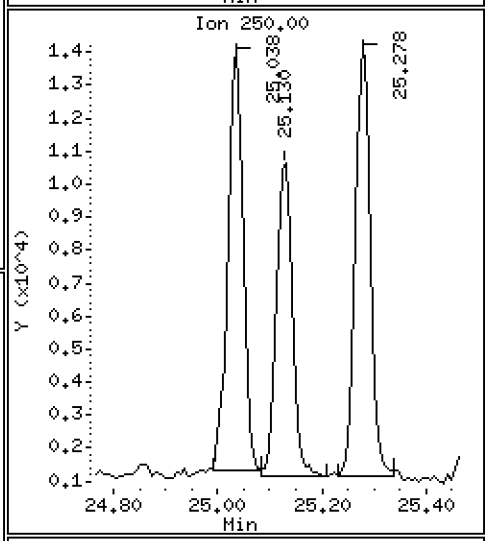


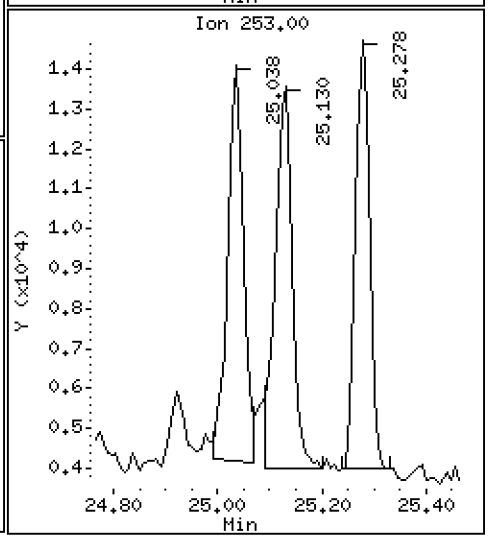












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

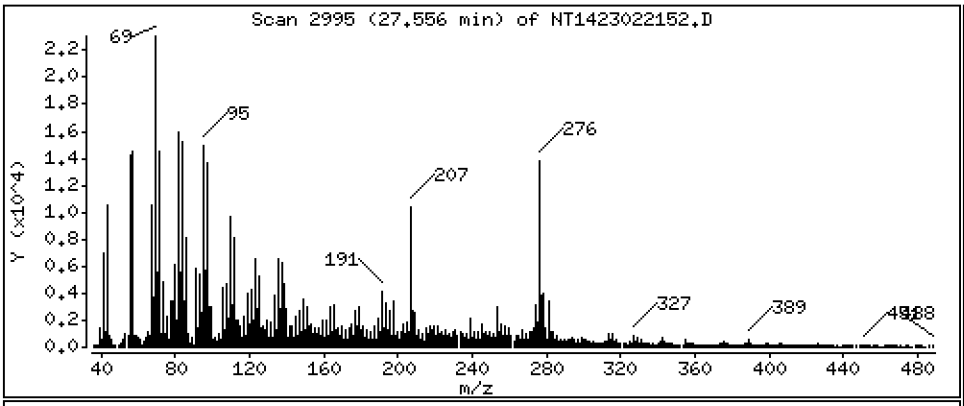
Operator: DSD

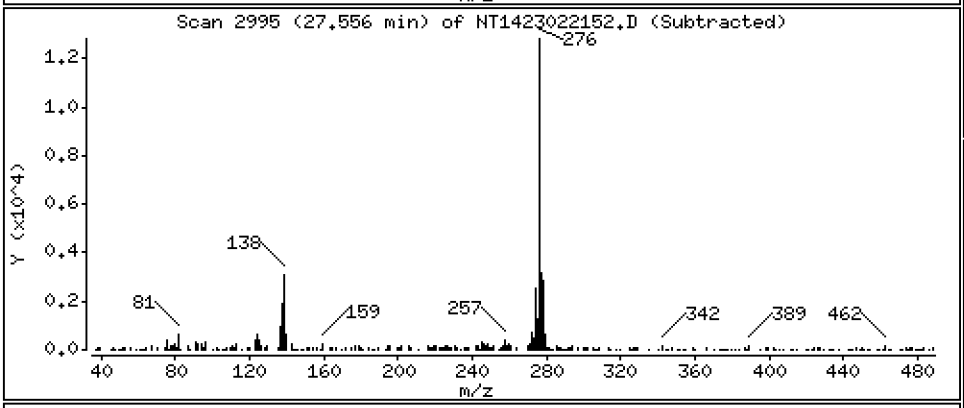
Column phase: ZB-5msi

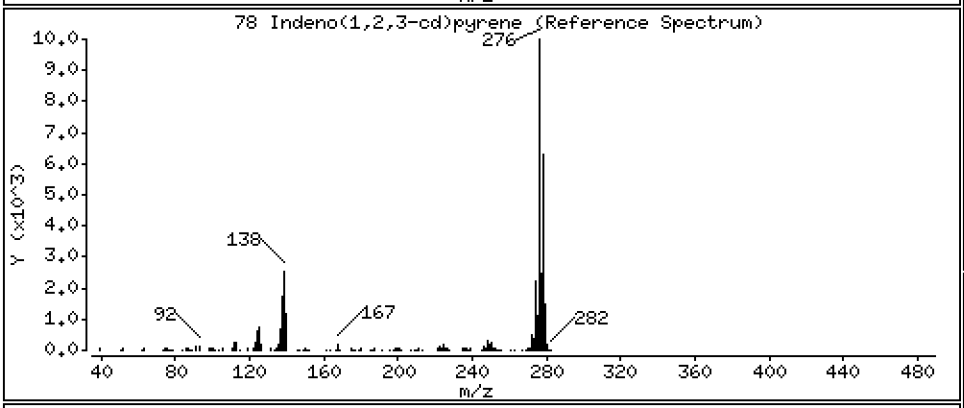
Column diameter: 0.25

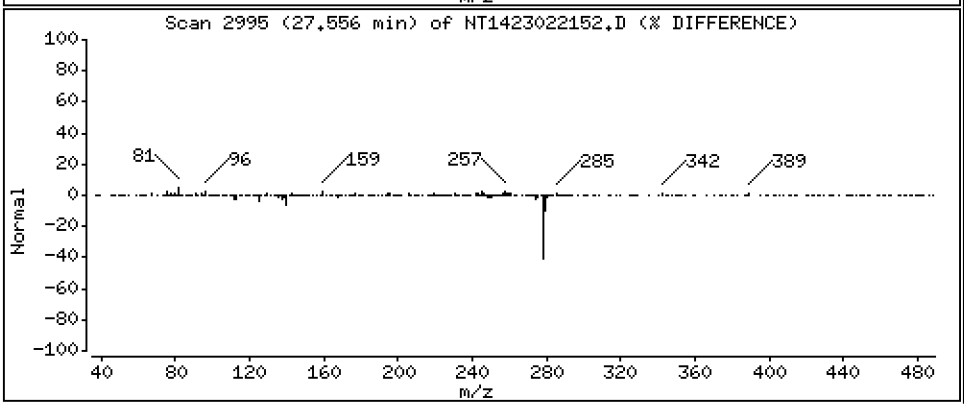
78 Indeno(1,2,3-cd)pyrene

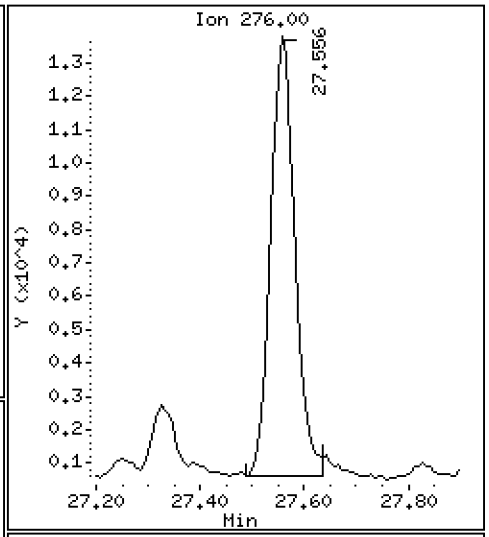
Concentration: 0.3316 ug/mL

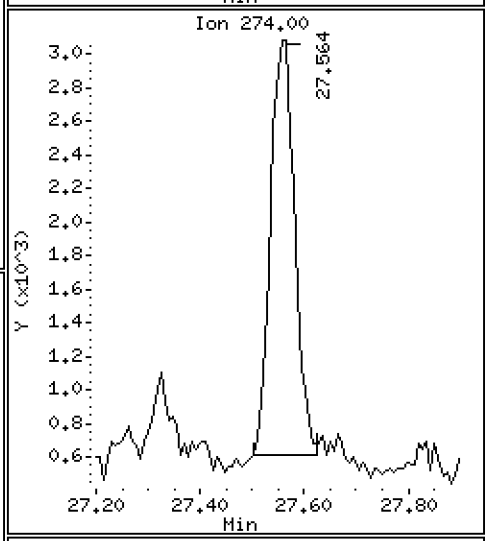


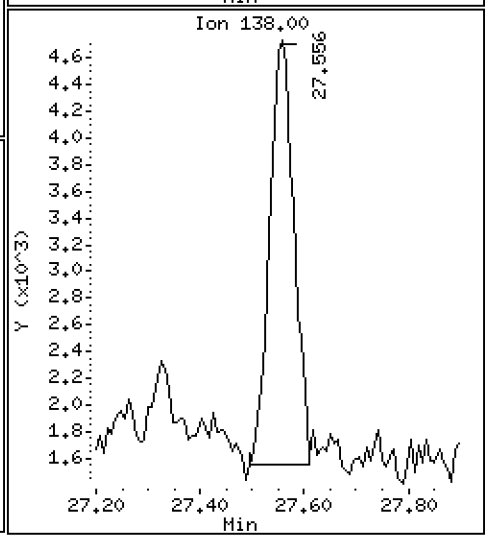












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

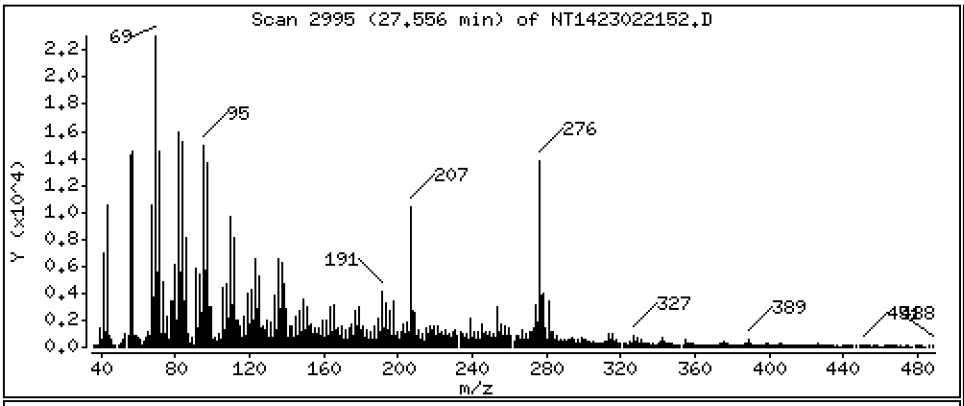
Operator: DSD

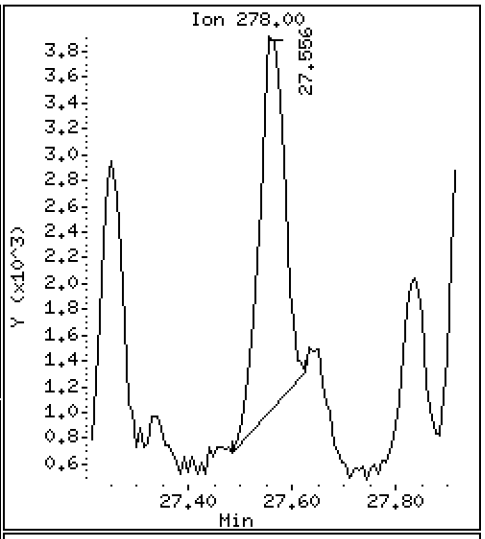
Column phase: ZB-5msi

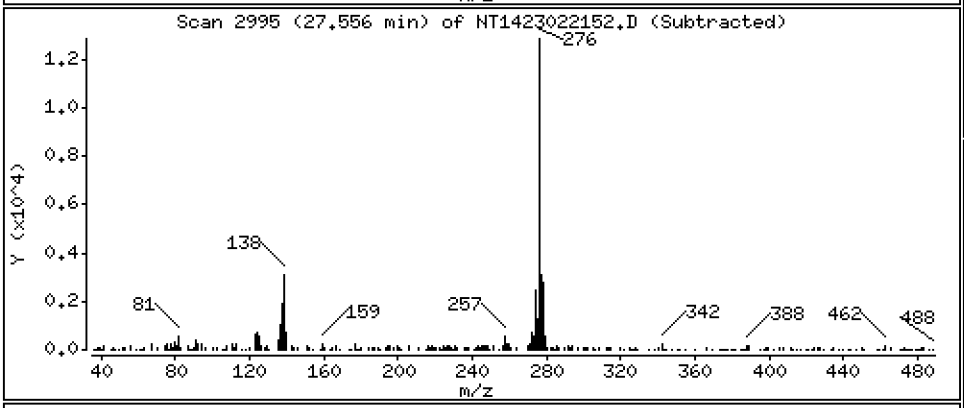
Column diameter: 0.25

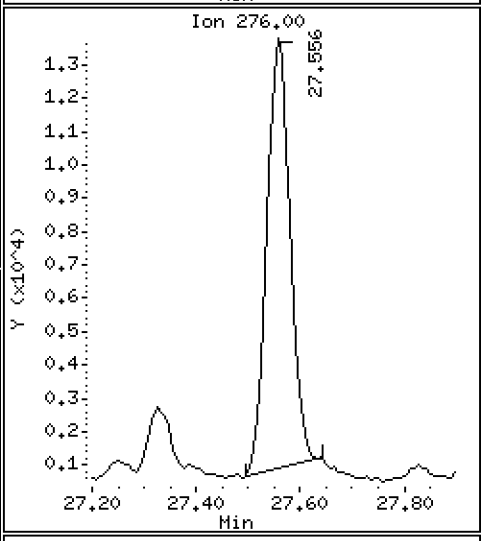
79 Dibenzo(a,h)anthracene

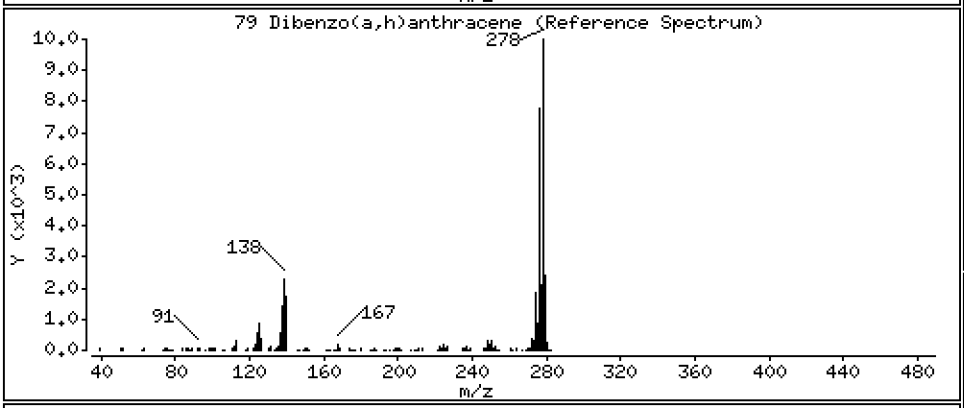
Concentration: 0.09274 ug/mL

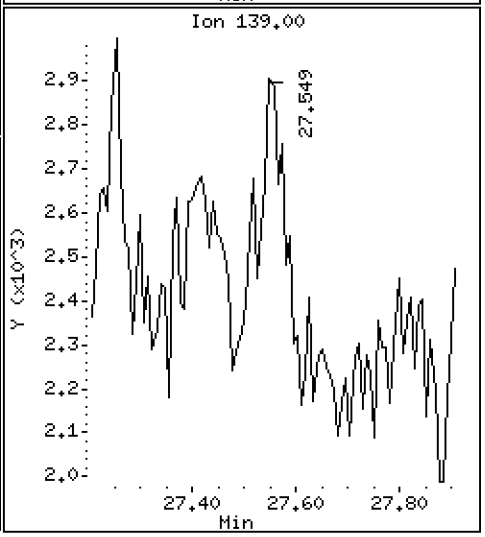


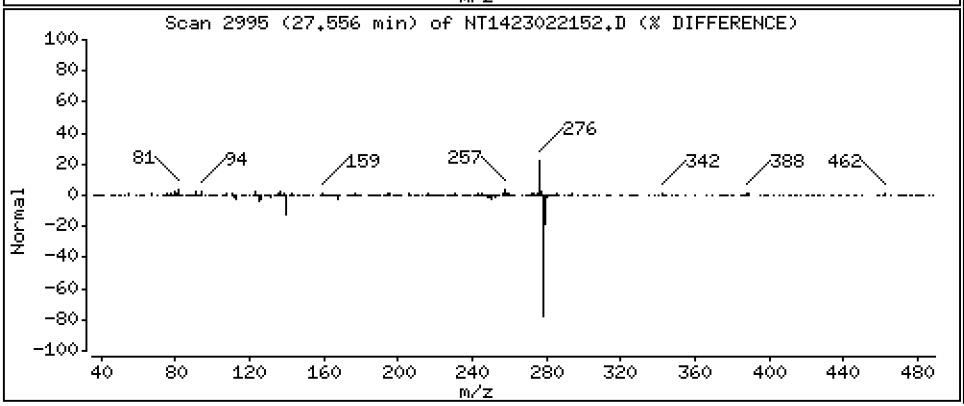












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022152.D

Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

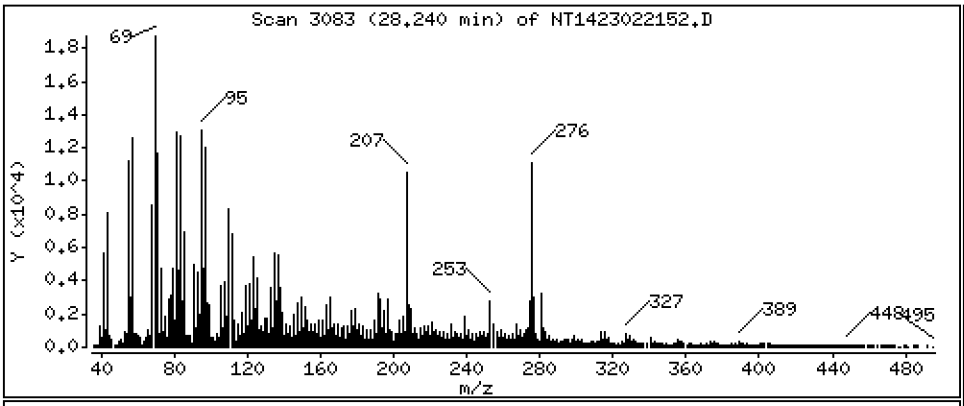
Operator: DSD

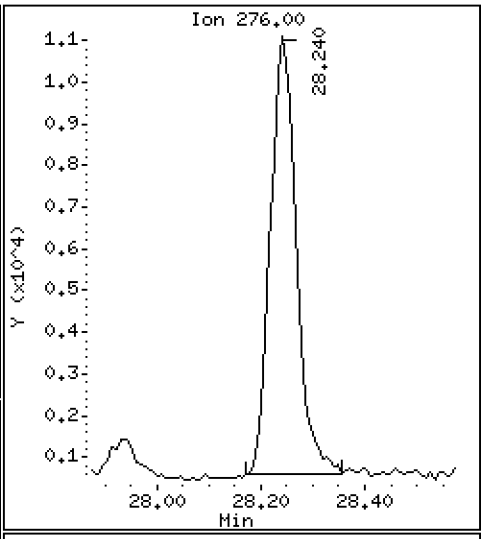
Column phase: ZB-5msi

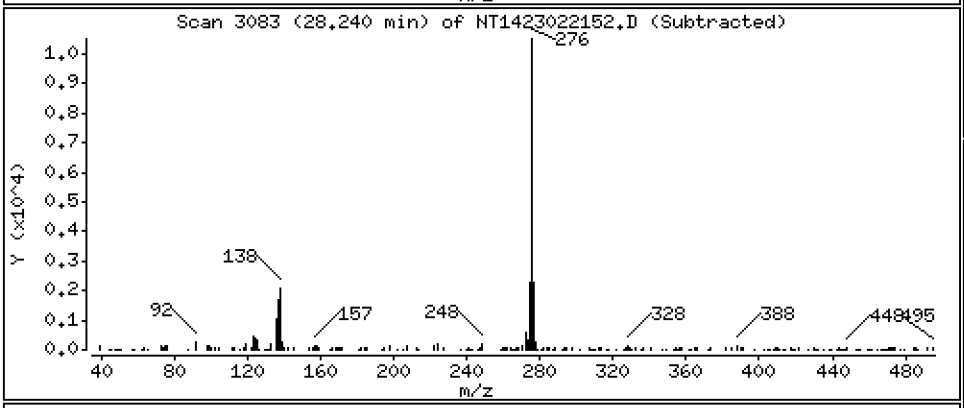
Column diameter: 0.25

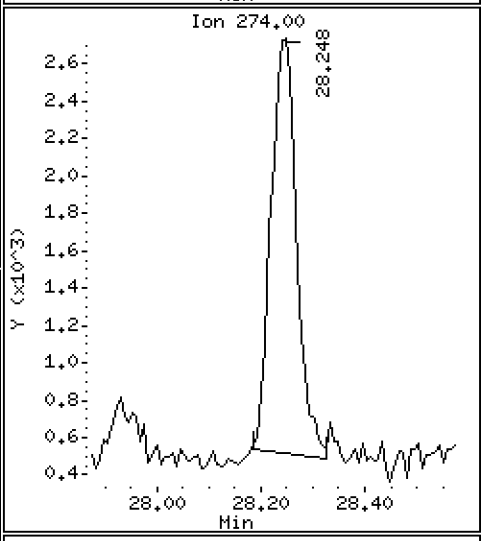
80 Benzo(g,h,i)perylene

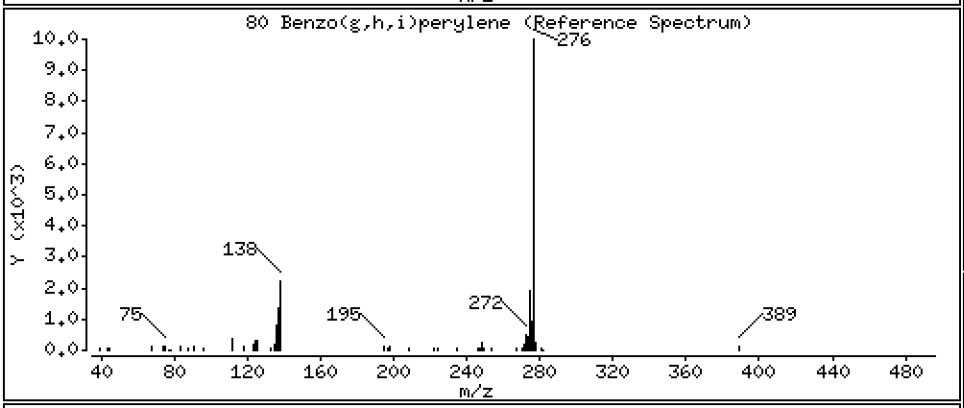
Concentration: 0.3564 ug/mL

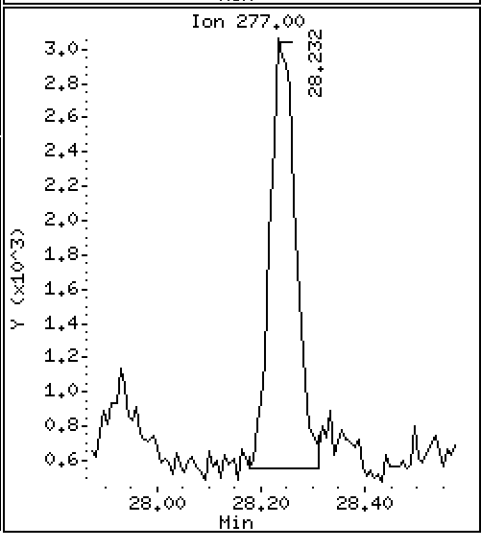


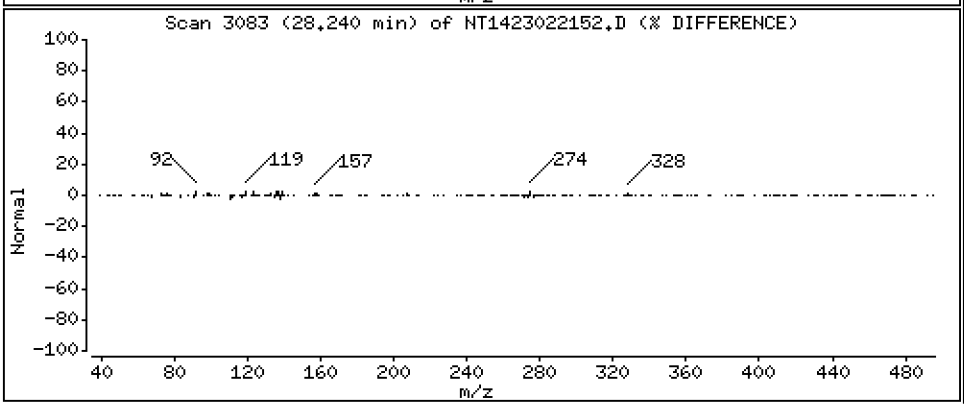












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

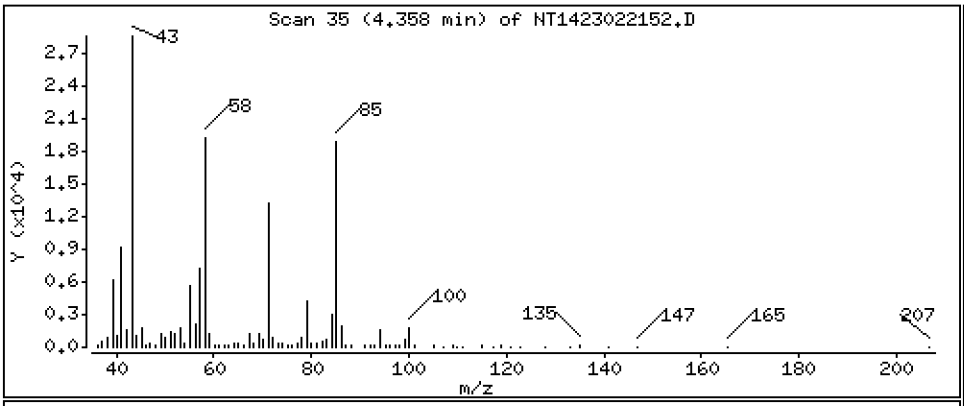
Operator: DSD

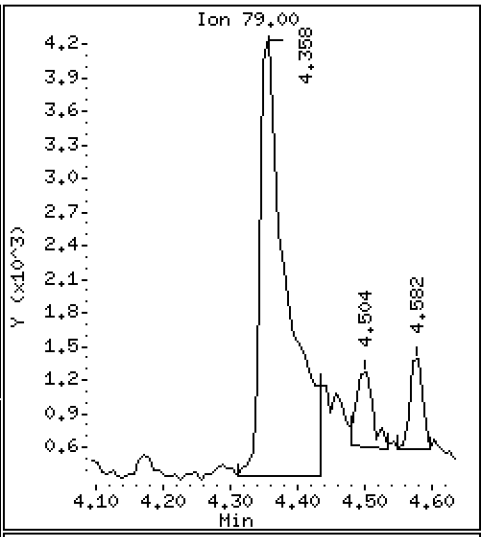
Column phase: ZB-5msi

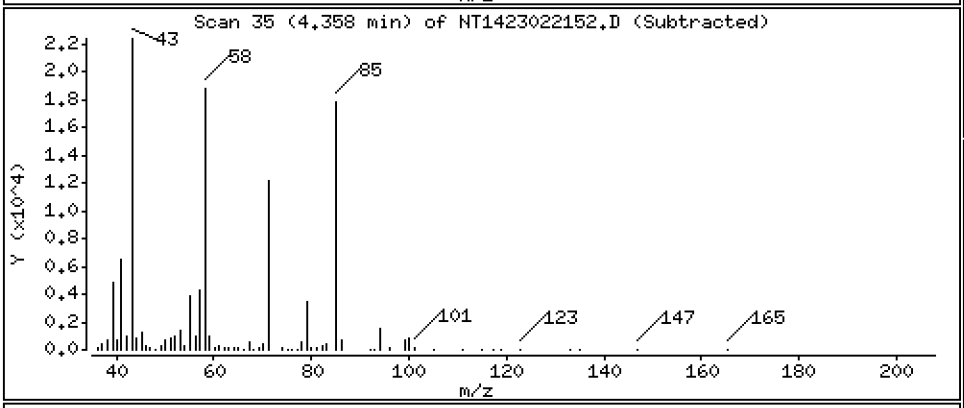
Column diameter: 0.25

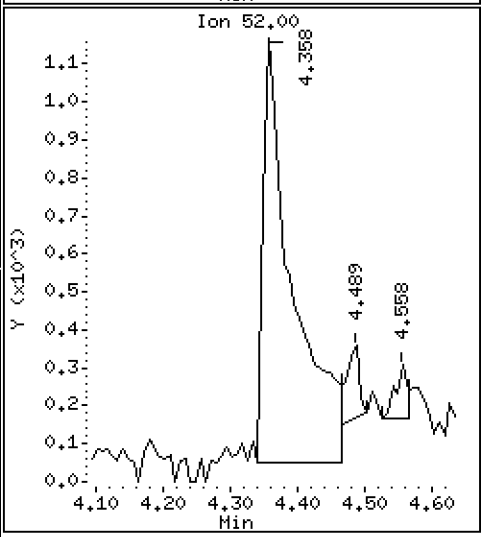
103 Pyridine

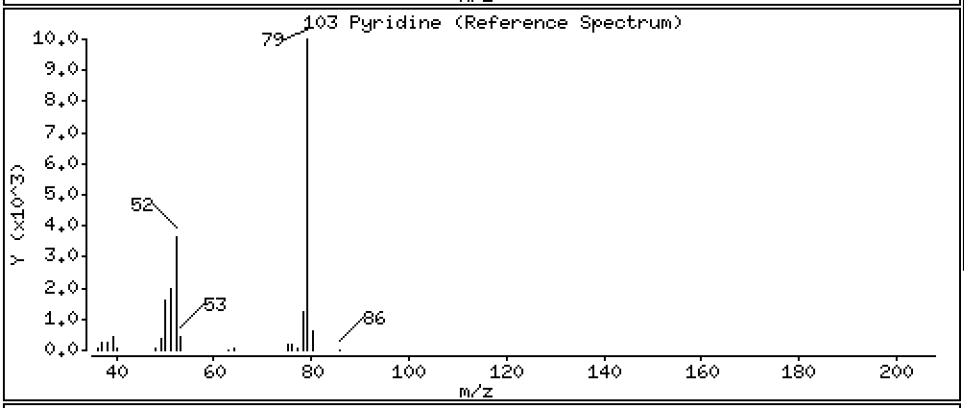
Concentration: 0.1307 ug/mL

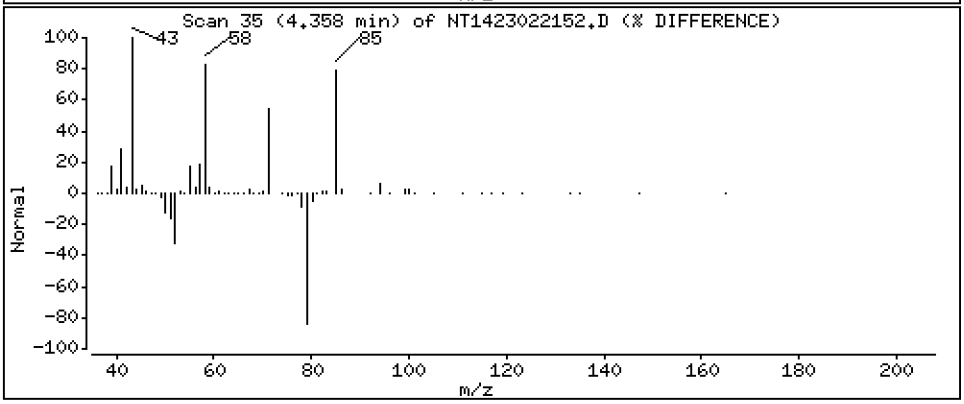












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

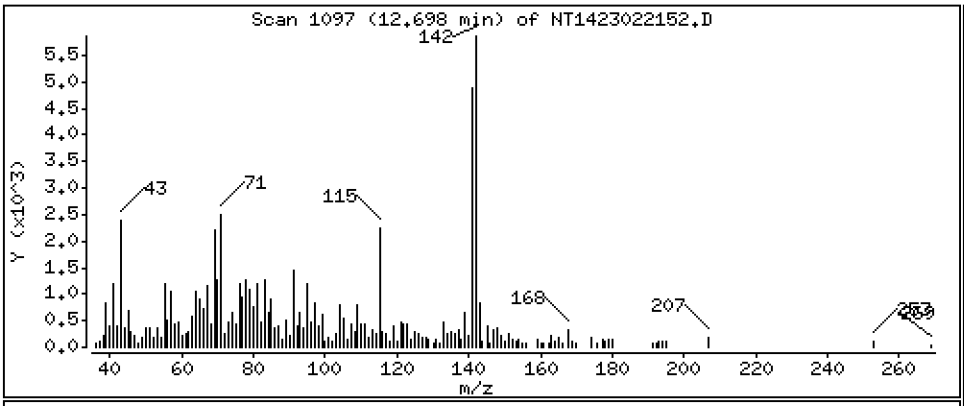
Operator: DSD

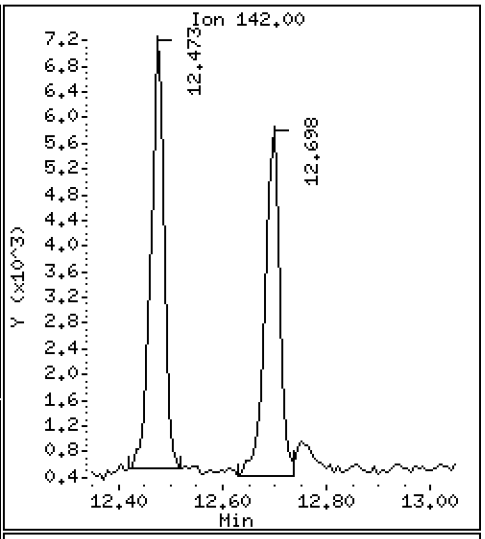
Column phase: ZB-5msi

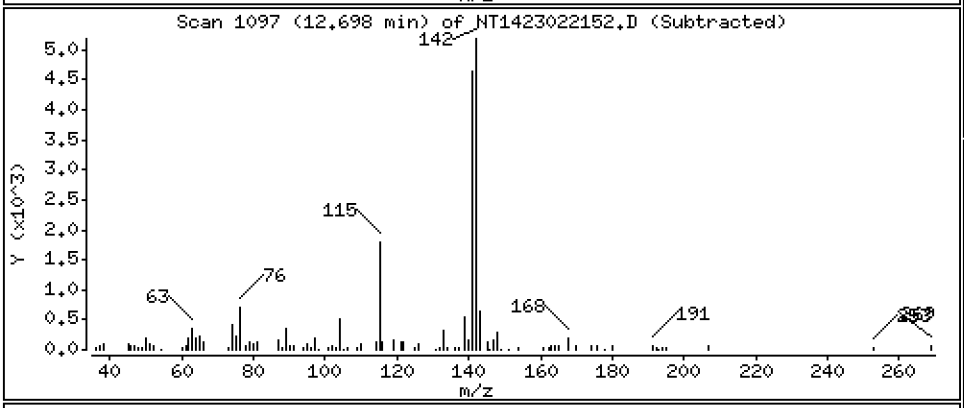
Column diameter: 0.25

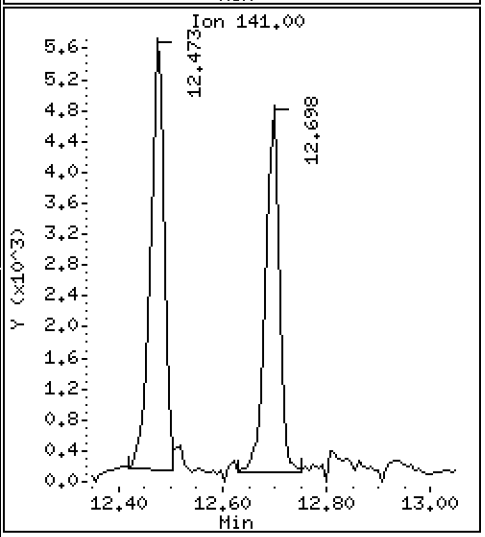
105 1-methylnaphthalene

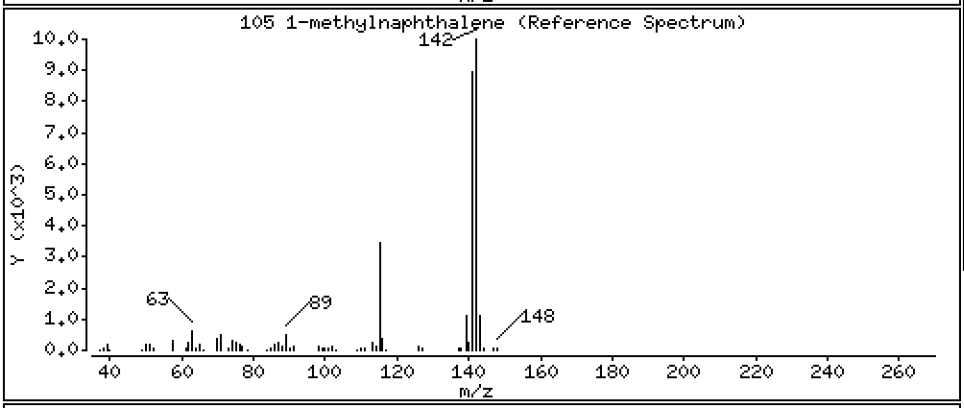
Concentration: 0.06215 ug/mL

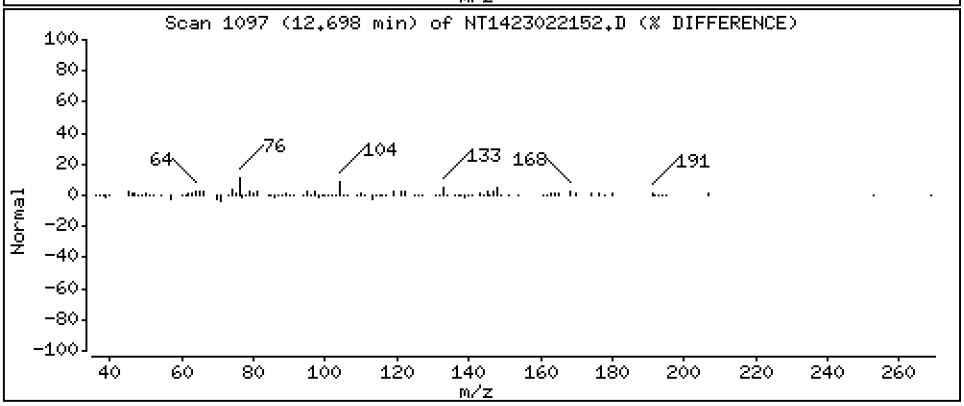












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

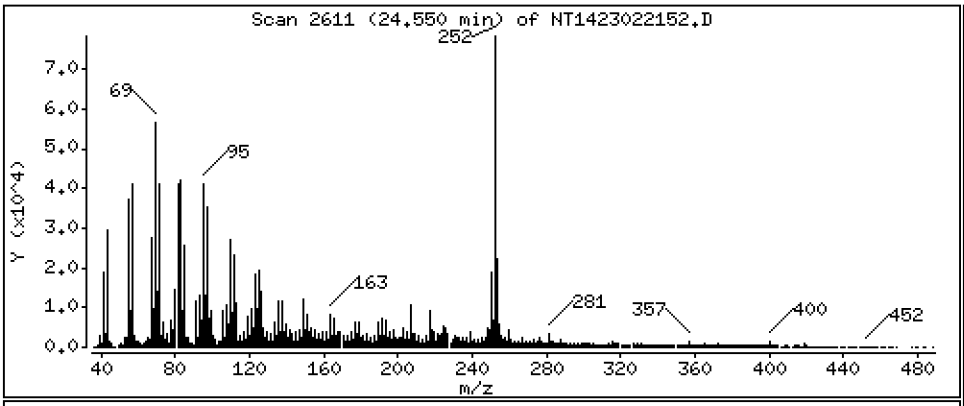
Operator: DSD

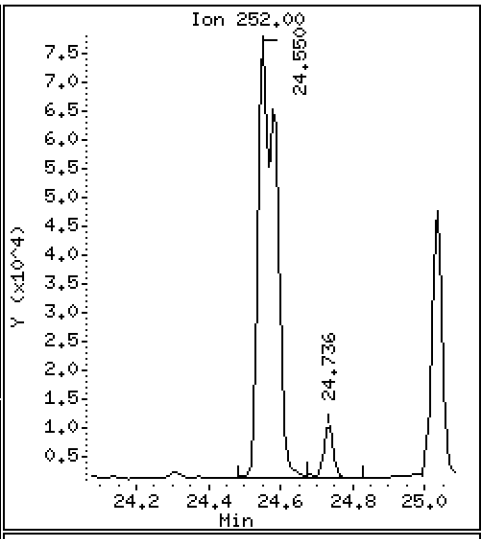
Column phase: ZB-5msi

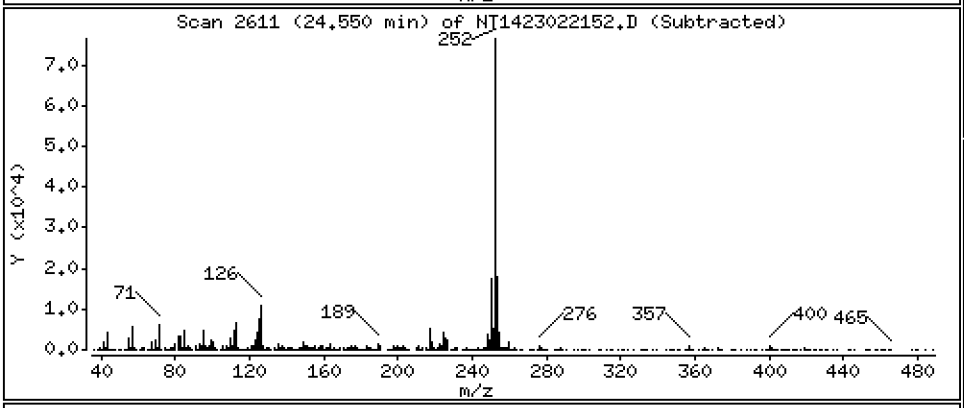
Column diameter: 0.25

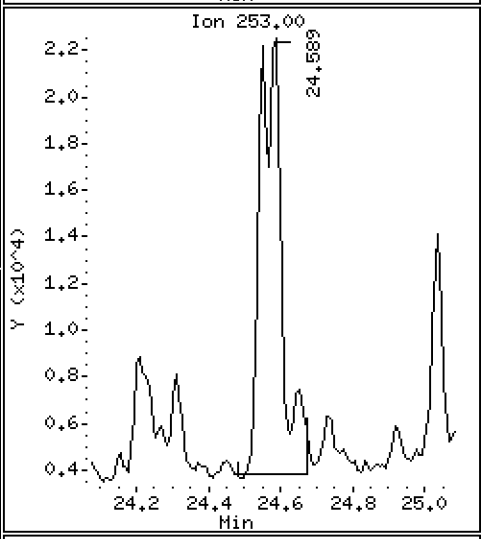
187 Total Benzofluoranthenes

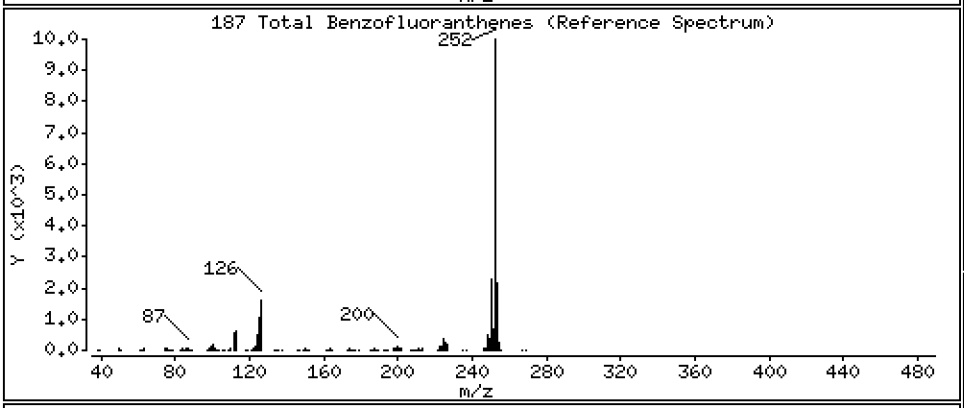
Concentration: 1.644 ug/mL

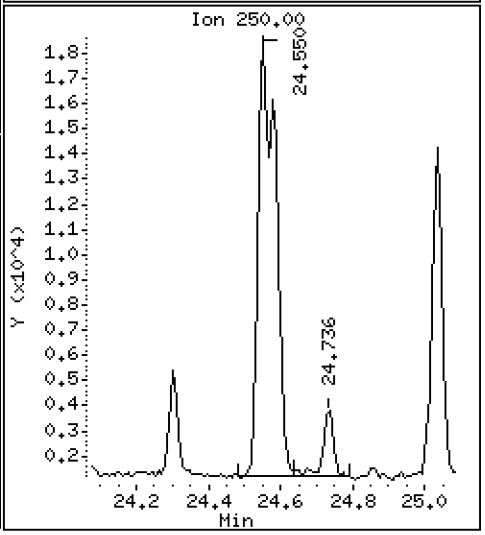


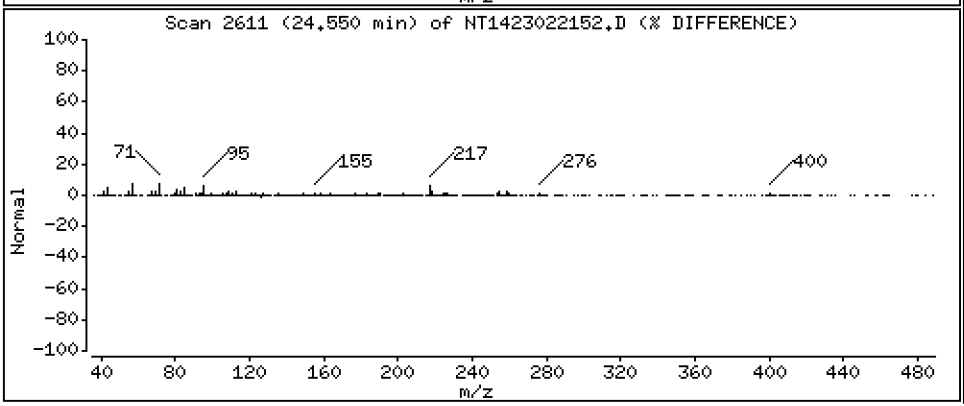












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221C.b\NT1423022152.D
Lab Smp Id: 23A0133-09
Inj Date : 22-FEB-2023 20:12 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-09
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Meth Date : 03-Mar-2023 06:54 van Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 35
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.388	6.380	(0.746)	238505	3.53031	3.530
$	2 Phenol-d5	99	7.972	7.972	(0.931)	344592	3.21531	3.215
	3 Phenol	94	7.988	7.996	(0.933)	126458	1.11460	1.115
$	5 2-Chlorophenol-d4	132	8.212	8.212	(0.959)	263320	3.44341	3.443
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.560	8.568	(1.000)	252718	4.00000	
	9 1,4-Dichlorobenzene	146	8.591	8.599	(1.004)	986	0.01168	0.01168
$	10 1,2-Dichlorobenzene-d4	152	8.917	8.925	(1.042)	122574	2.13843	2.138
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.375	9.367	(1.095)	8825	0.10549	0.1055
$	18 Nitrobenzene-d5	82	9.654	9.662	(0.874)	250026	2.28697	2.287
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.042	11.042	(1.000)	946317	4.00000	
	28 Naphthalene	128	11.081	11.081	(1.003)	16657	0.07139	0.07139
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	12.473	12.481	(1.130)	11683	0.06685	0.06685
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.262	13.270	(0.905)	472335	2.36663	2.367
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	14.330	14.338	(0.978)	10412	0.04191	0.04191
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	14.648	14.648	(1.000)	557839	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	14.710	14.717	(1.004)	6635	0.04460	0.04460
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.042	15.050	(1.027)	16356	0.06697	0.06697
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	15.630	15.645	(1.067)	34928	0.15419	0.1542
	49	Fluorene	166	15.745	15.753	(1.075)	12571	0.04922	0.04922
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.293	16.293	(1.112)	95401	2.95665	2.957
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	17.676	17.676	(1.000)	1132840	4.00000	
	60	Phenanthrene	178	17.723	17.723	(1.003)	116833	0.42919	0.4292
	61	Anthracene	178	17.816	17.816	(1.008)	32563	0.12074	0.1207
	62	Carbazole	167	18.164	18.156	(1.028)	12908	0.05274	0.05274
	63	Di-n-butylphthalate	149	19.007	18.992	(1.075)	6728	0.02461	0.02461
	64	Fluoranthene	202	20.191	20.137	(0.886)	279466	0.93758	0.9376(H)
	65	Pyrene	202	20.593	20.562	(0.904)	541728	1.71875	1.719
$	66	Terphenyl-d14	244	20.879	20.872	(0.917)	605714	2.70658	2.707
	67	Butylbenzylphthalate	149	Compound Not Detected.					
	68	Benzo(a)anthracene	228	22.753	22.745	(0.999)	115891	0.52417	0.5242
*	69	Chrysene-d12	240	22.776	22.769	(1.000)	690894	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	22.823	22.815	(1.002)	158762	0.79834	0.7983
	72	bis(2-Ethylhexyl)phthalate	149	22.862	22.854	(0.959)	97746	0.49641	0.4964
*	134	Di-n-octylphthalate-d4	153	23.837	23.837	(1.000)	1147377	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	24.549	24.542	(0.973)	140727	0.85841	0.8584
	75	Benzo(k)fluoranthene	252	24.580	24.580	(0.974)	146247	0.83486	0.8349
	76	Benzo(a)pyrene	252	25.130	25.114	(0.996)	85386	0.54949	0.5495
*	77	Perylene-d12	264	25.231	25.223	(1.000)	516651	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.556	27.548	(1.092)	42393	0.33156	0.3316
	79	Dibenzo(a,h)anthracene	278	27.556	27.564	(1.092)	9758	0.09274	0.09274(M)
	80	Benzo(g,h,i)perylene	276	28.239	28.224	(1.119)	36965	0.35641	0.3564
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	4.357	4.288	(0.509)	10814	0.13065	0.1307
	105	1-methylnaphthalene	142	12.697	12.697	(1.150)	10196	0.06215	0.06215
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.549	24.580	(0.973)	263207	1.64448	1.644
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022152.D
Lab Smp Id: 23A0133-09
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 16:35
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	232195	116098	464390	252718	8.84
27 Naphthalene-d8	800631	400316	1601262	946317	18.20
42 Acenaphthene-d10	488064	244032	976128	557839	14.30
59 Phenanthrene-d10	971279	485640	1942558	1132840	16.63
69 Chrysene-d12	687083	343542	1374166	690894	0.55
134 Di-n-octylphthala	1174636	587318	2349272	1147377	-2.32
77 Perylene-d12	491790	245895	983580	516651	5.06

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.56	-0.09
27 Naphthalene-d8	11.04	10.54	11.54	11.04	0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	0.00
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.03
134 Di-n-octylphthala	23.84	23.34	24.34	23.84	0.00
77 Perylene-d12	25.22	24.72	25.72	25.23	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022152.D

Lab ID: 23A0133-09
nt14.i, ABN.m, 22-FEB-2023 20:12

RT	CO-ELUTION COMPOUNDS
27.556	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
27.556	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.509	0.500	0.0086	Pyridine

RRT check based on Ccal File: NT1423022146.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Quant Ion Manual Peak Adjustment Report

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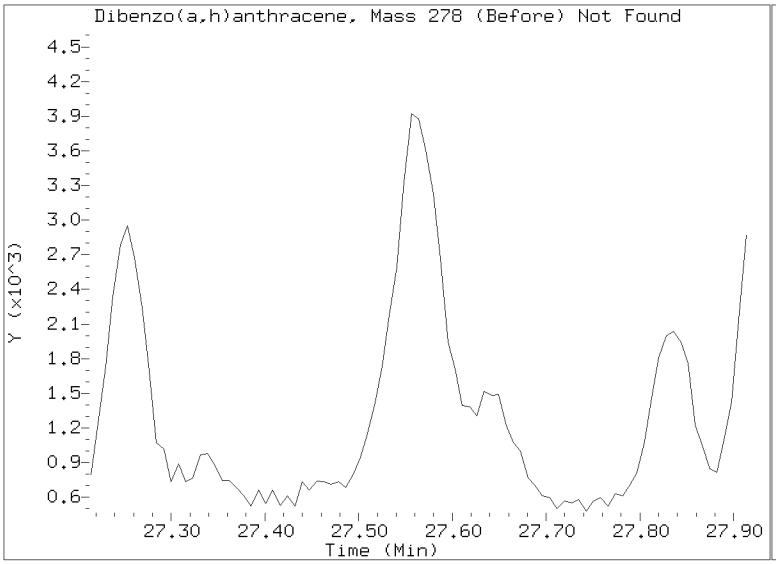
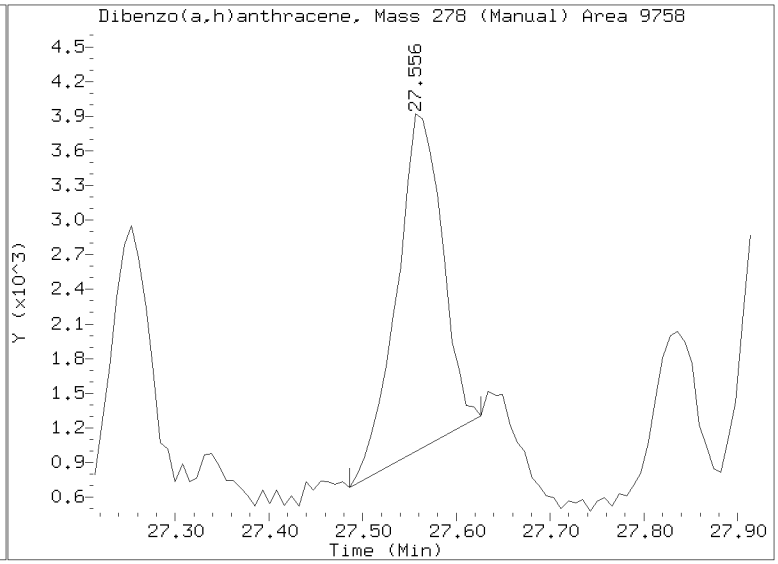
Injection Date: 22-FEB-2023 20:12
Lab ID:23A0133-09 Client ID:
Report Date: 03/03/2023 07:05





Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1215

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-10 C	SDG:	23A0133
Sampled:	01/06/23 11:38	Prepared:	01/18/23 15:24	File ID:	NT1423022153.D
% Solids:	53.49	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 20:48
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	18.72 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	21.4		4.4	20.0
106-44-5	4-Methylphenol	1	23.2		7.4	20.0
91-20-3	Naphthalene	1	96.0		4.2	20.0
91-57-6	2-Methylnaphthalene	1	41.9		4.5	20.0
208-96-8	Acenaphthylene	1	30.5		6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	27.4		5.2	20.0
132-64-9	Dibenzofuran	1	30.7		14.1	20.0
86-73-7	Fluorene	1	24.8		14.6	20.0
85-01-8	Phenanthrene	1	125		8.7	20.0
120-12-7	Anthracene	1	52.3		7.2	20.0
206-44-0	Fluoranthene	1	168		6.1	20.0
129-00-0	Pyrene	1	283		5.7	20.0
85-68-7	Butylbenzylphthalate	1	20.0	U	9.4	20.0
56-55-3	Benzo(a)anthracene	1	70.8		6.0	20.0
218-01-9	Chrysene	1	110		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	49.9	U	5.5	49.9
	Benzofluoranthenes, Total	1	39.9	U	10.0	39.9
50-32-8	Benzo(a)pyrene	1	58.4		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	36.7		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	48.7		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.00	533	71.1	27 - 120	
Phenol-d5	749.00	498	66.5	29 - 120	
2-Chlorophenol-d4	749.00	522	69.7	31 - 120	
1,2-Dichlorobenzene-d4	499.33	317	63.5	32 - 120	
Nitrobenzene-d5	499.33	345	69.0	30 - 120	
2-Fluorobiphenyl	499.33	344	69.0	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1215

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-10 C	SDG:	23A0133
Sampled:	01/06/23 11:38	Prepared:	01/18/23 15:24	File ID:	NT1423022153.D
% Solids:	53.49	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 20:48
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	18.72 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	749.00	439	58.6	24 - 134	
p-Terphenyl-d14	499.33	370	74.1	37 - 120	

Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022153.D

Date : 22-FEB-2023 20:48

Client ID:

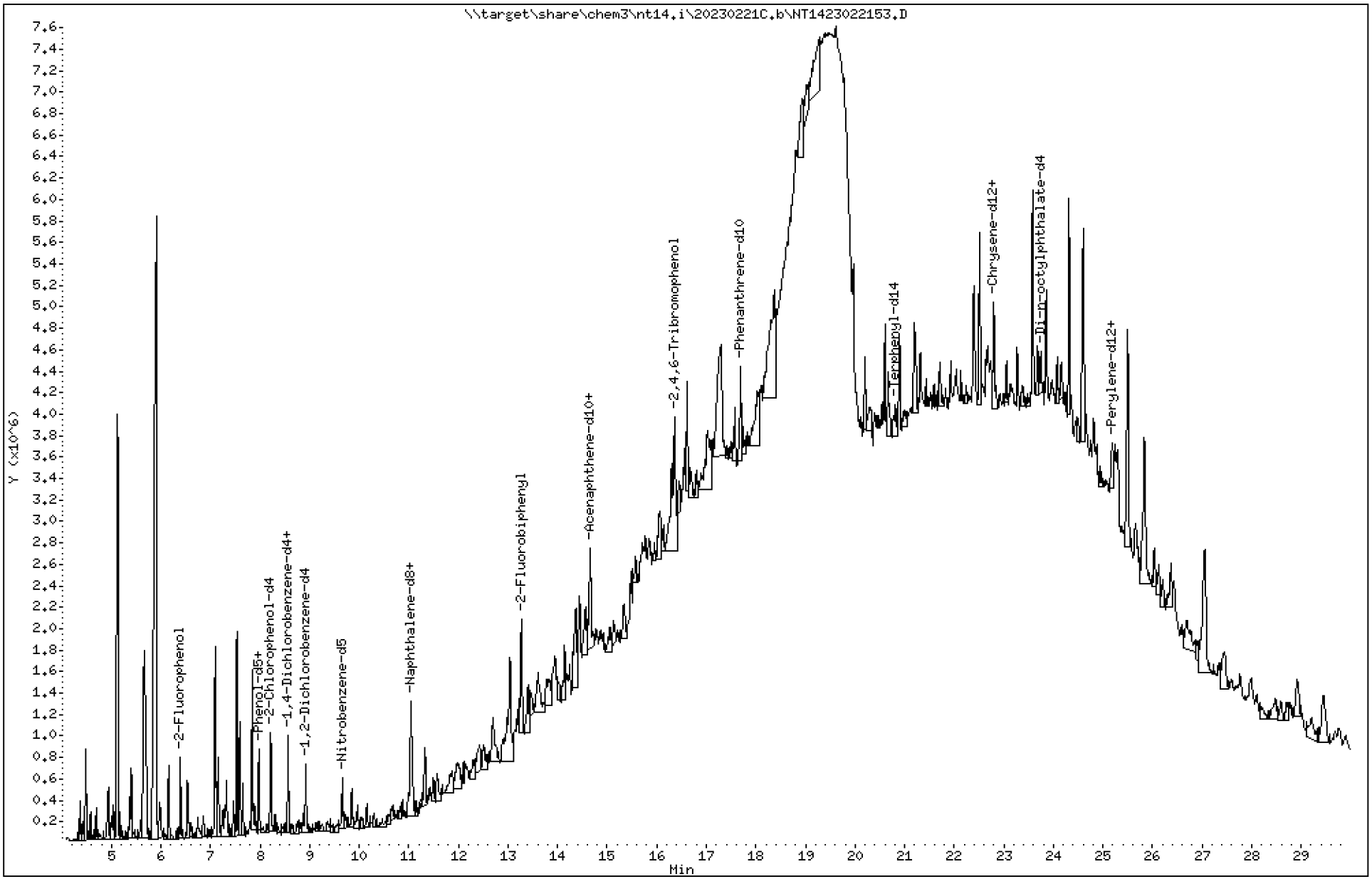
Instrument: nt14.i

Sample Info: 23A0133-10

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

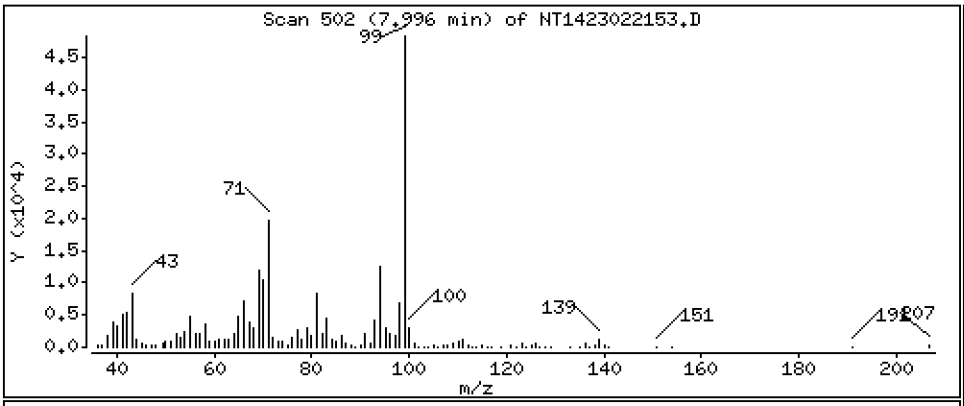
Operator: DSD

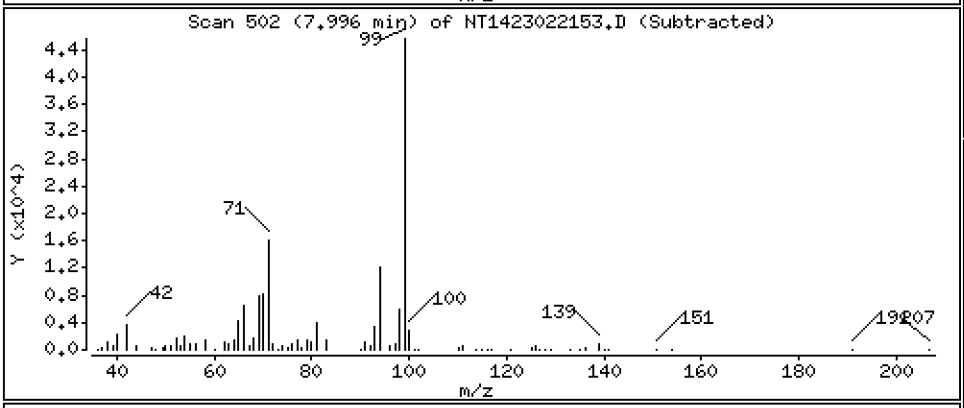
Column phase: ZB-5msi

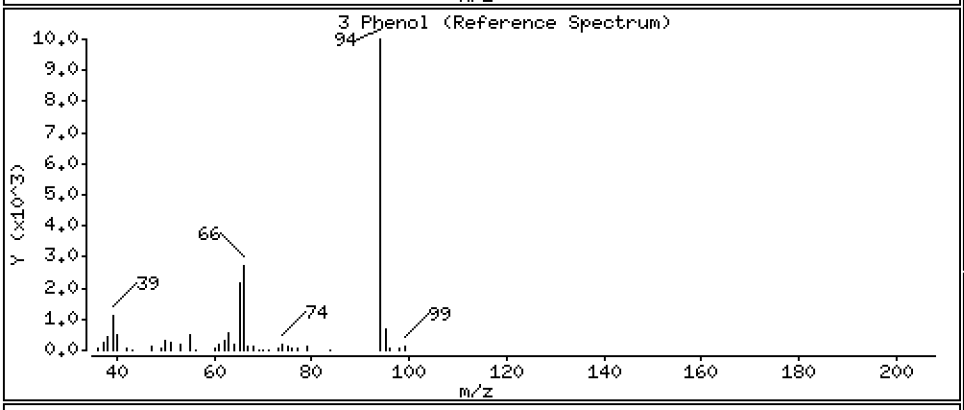
Column diameter: 0.25

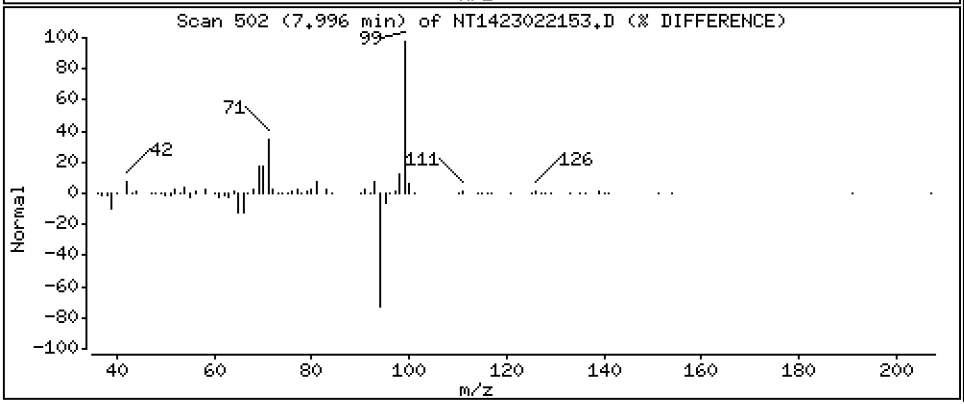
3 Phenol

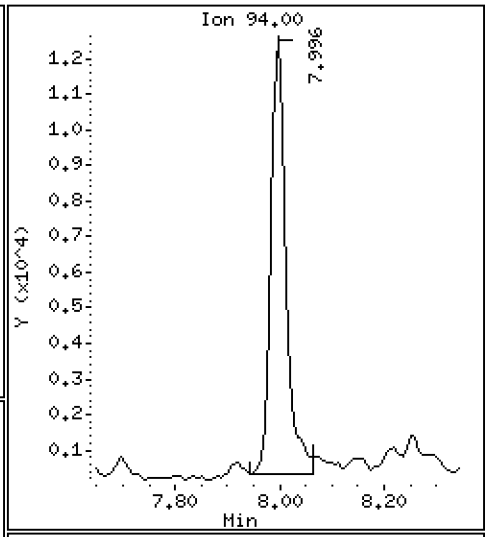
Concentration: 0.2148 ug/mL

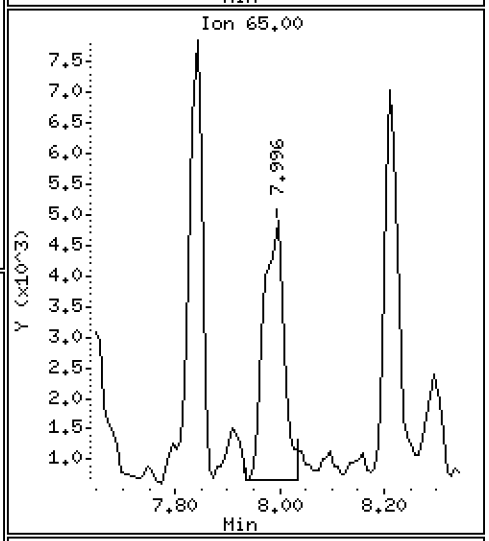


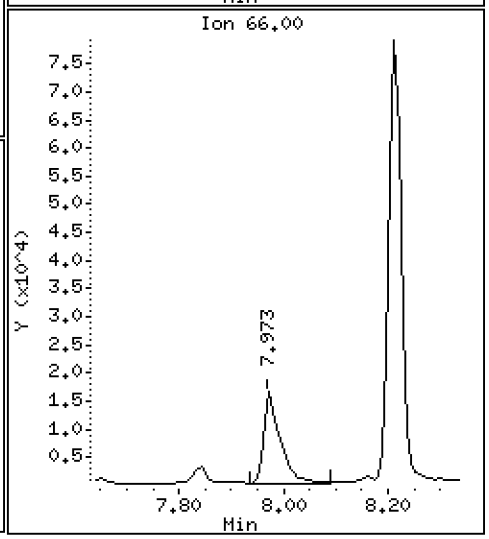












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

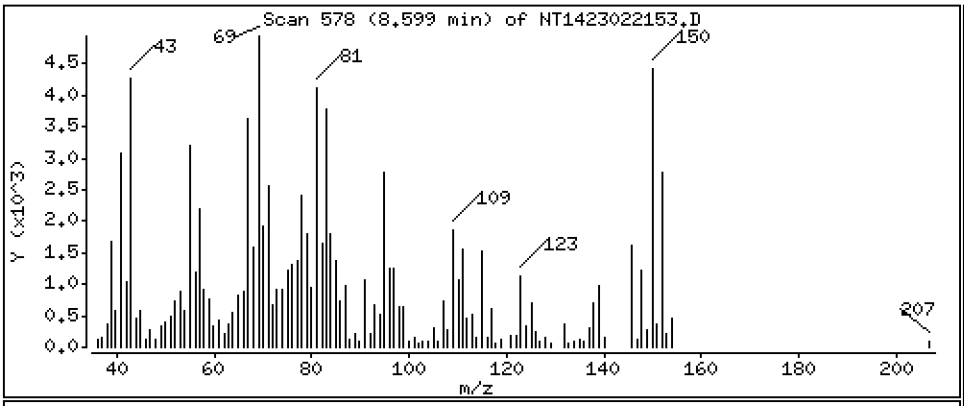
Operator: DSD

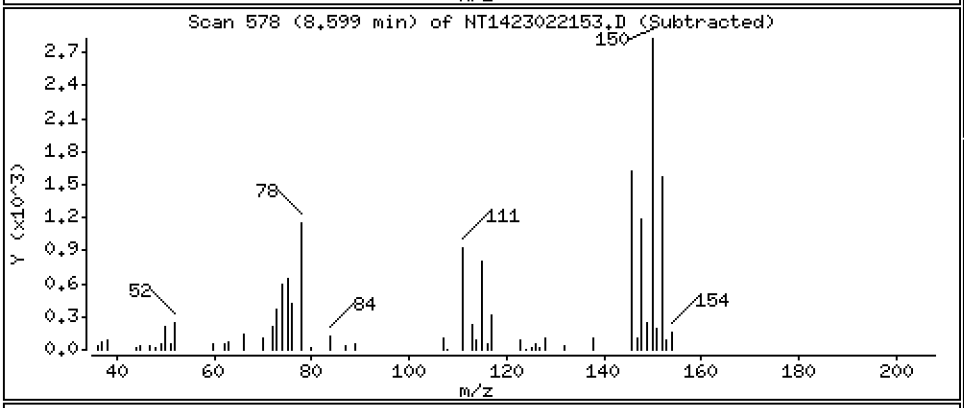
Column phase: ZB-5msi

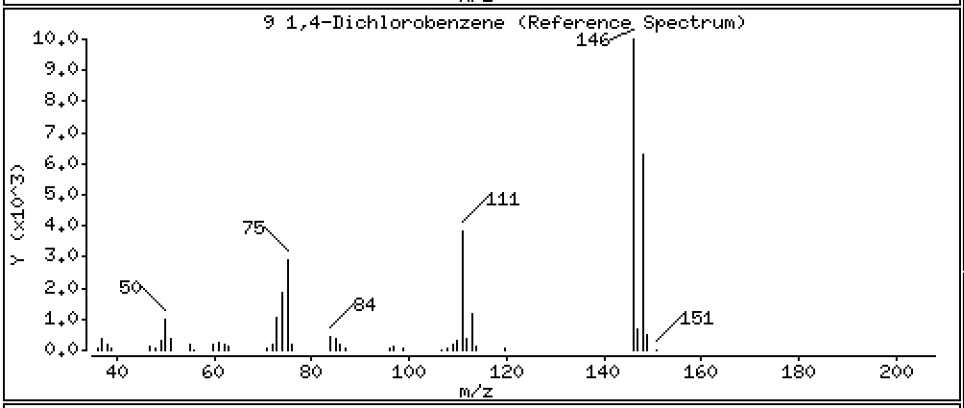
Column diameter: 0.25

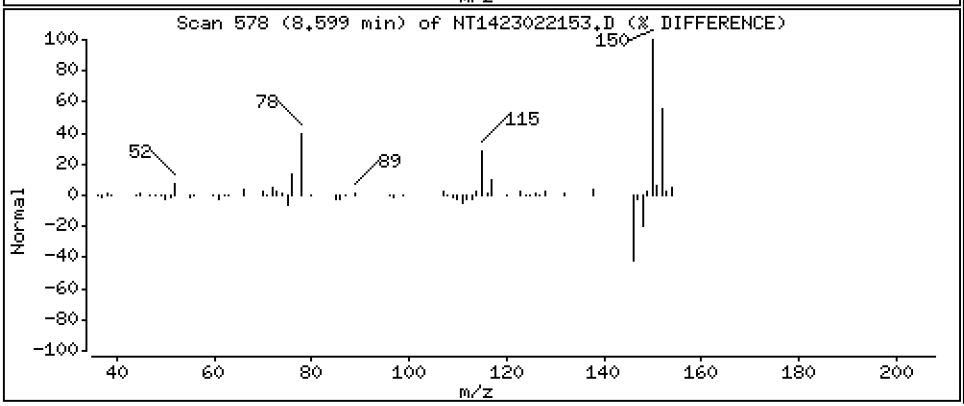
9 1,4-Dichlorobenzene

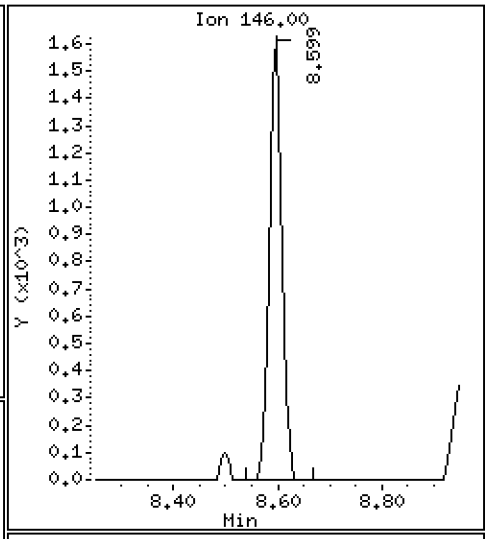
Concentration: 0.03270 ug/mL

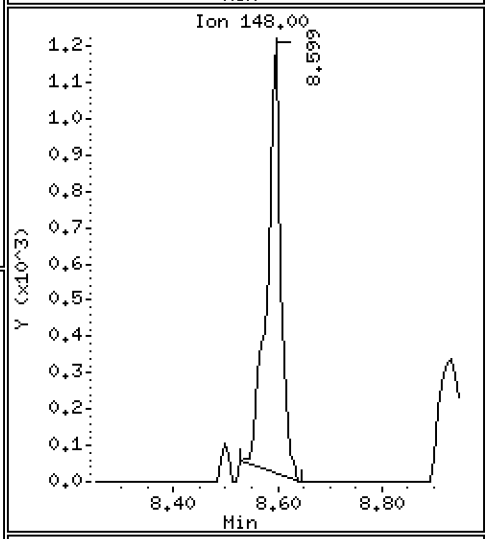


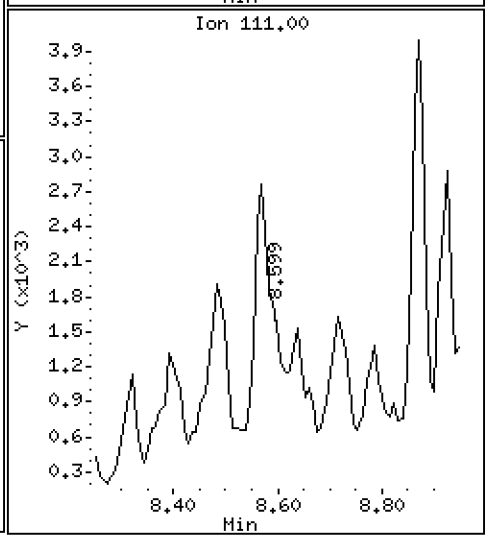












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

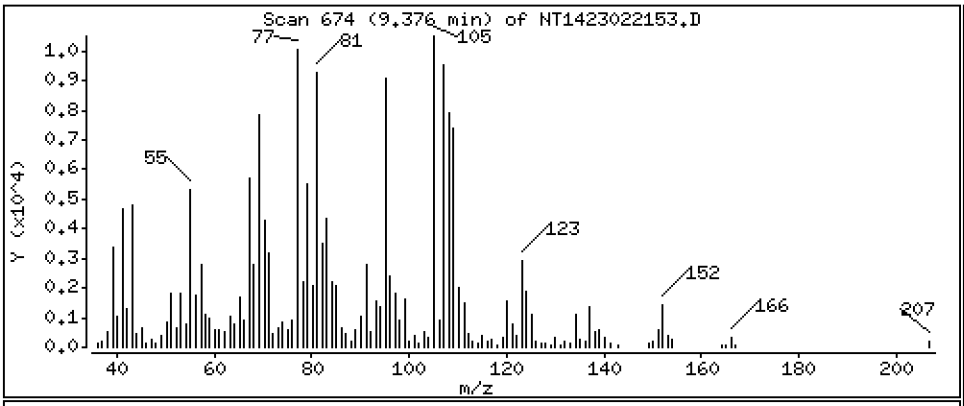
Operator: DSD

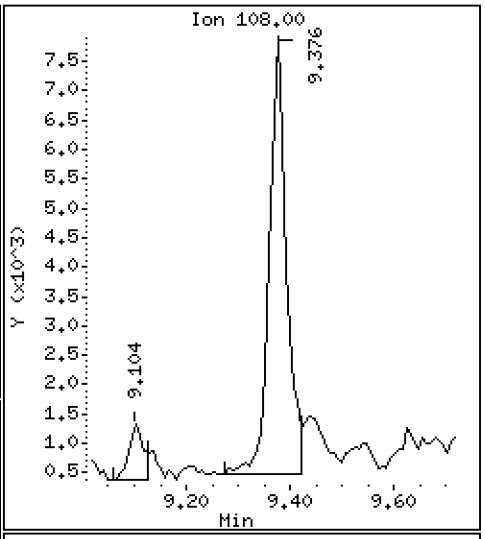
Column phase: ZB-5msi

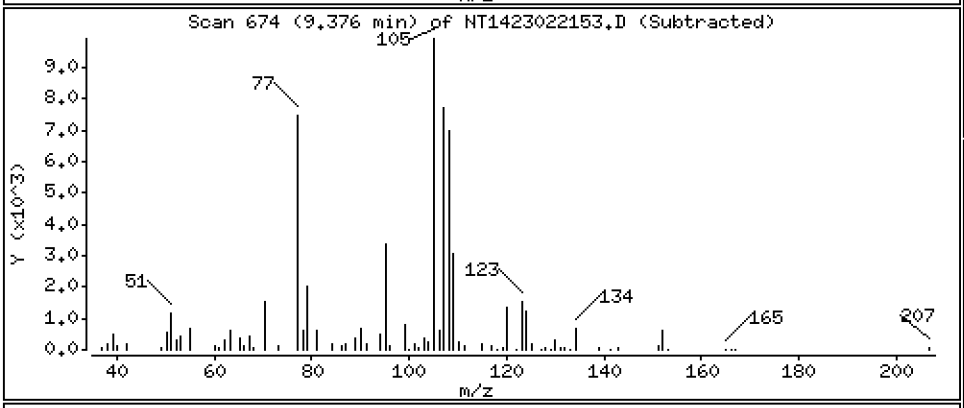
Column diameter: 0.25

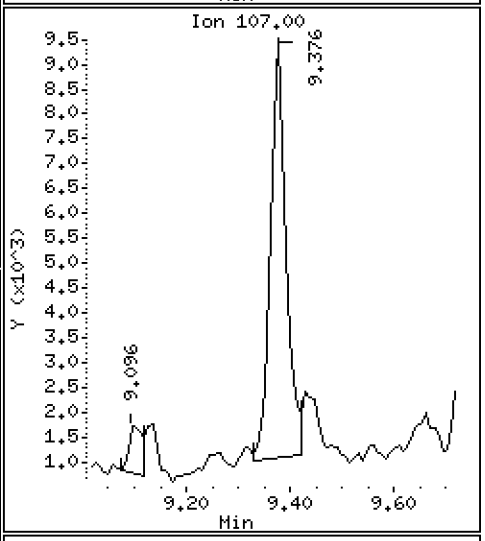
15 4-Methylphenol

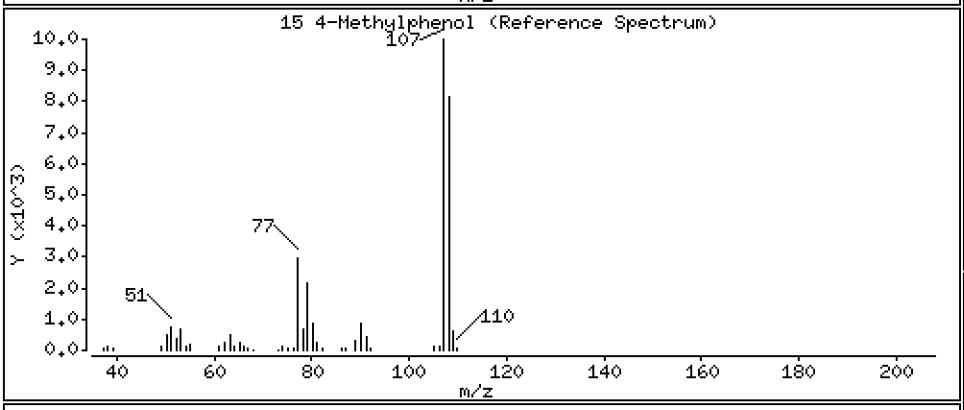
Concentration: 0.2328 ug/mL

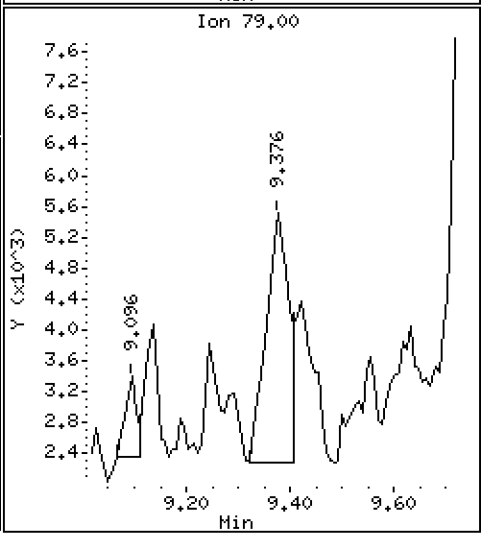


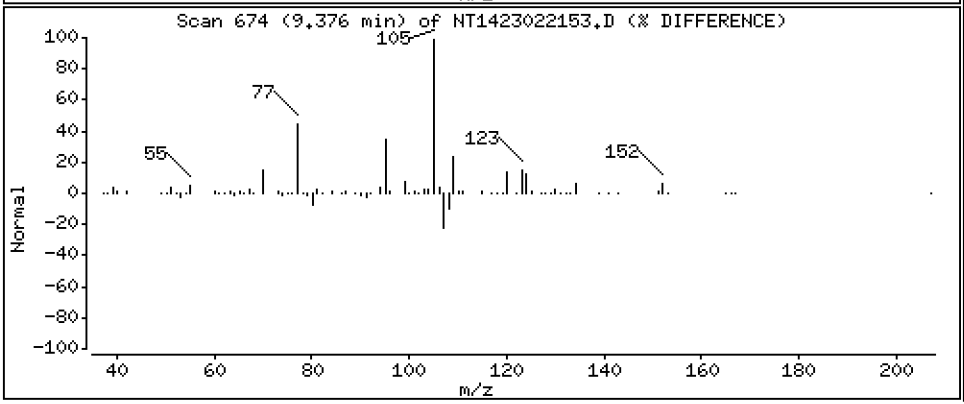












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022153.D

Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

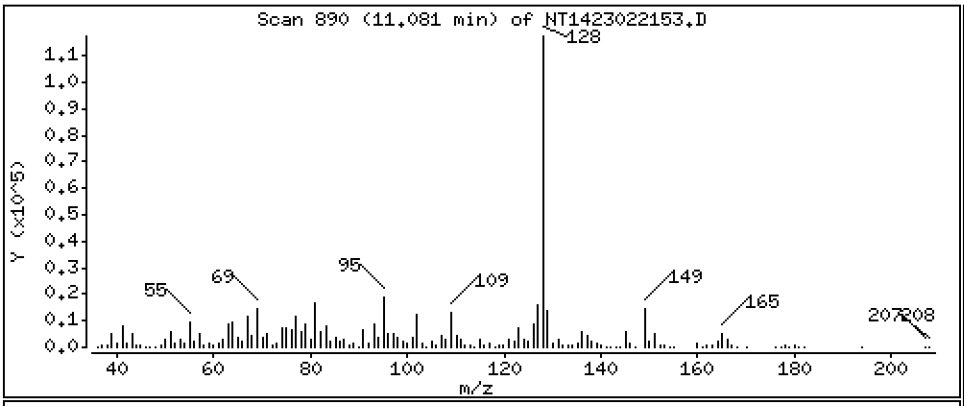
Operator: DSD

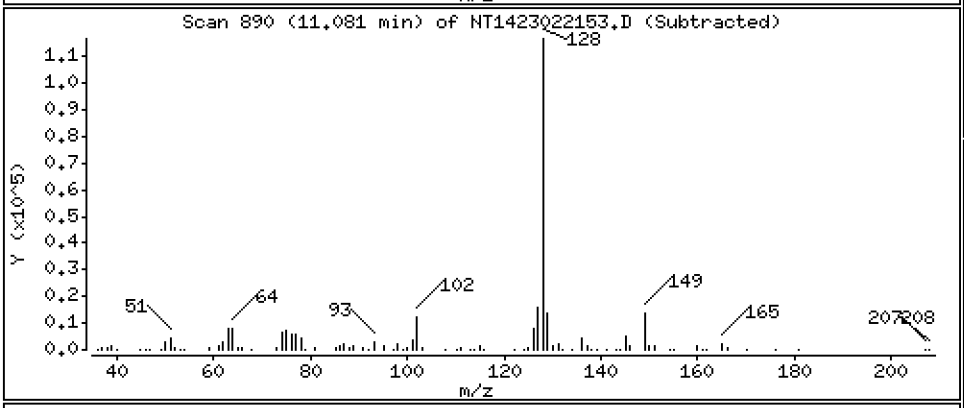
Column phase: ZB-5msi

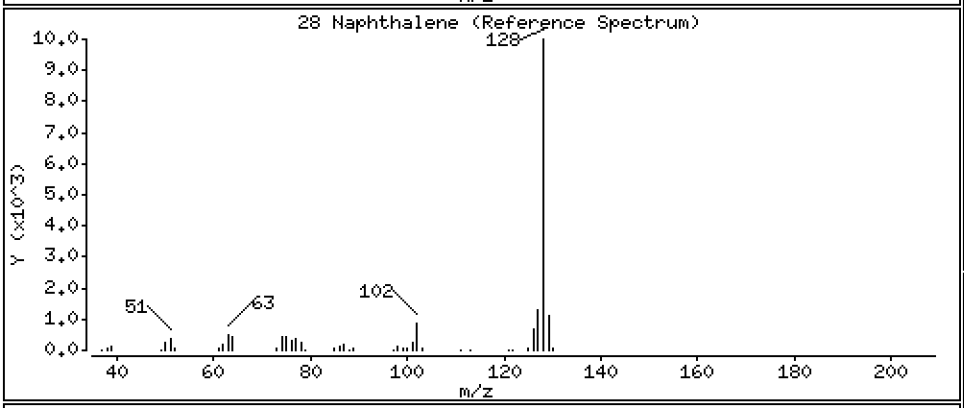
Column diameter: 0.25

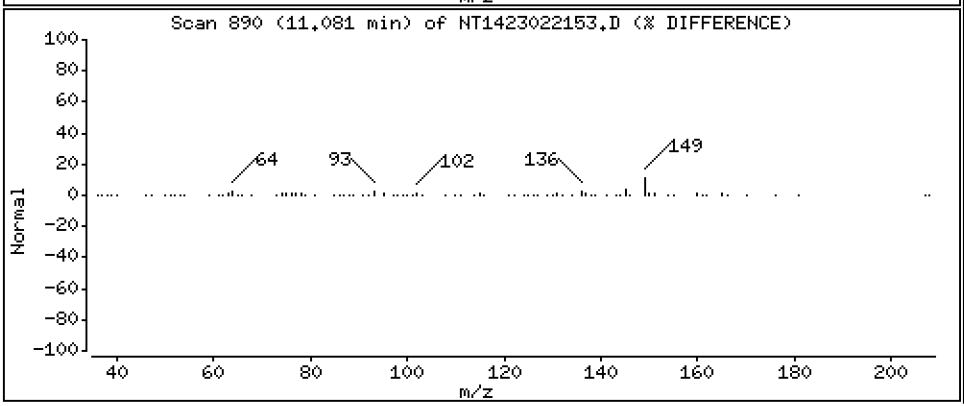
28 Naphthalene

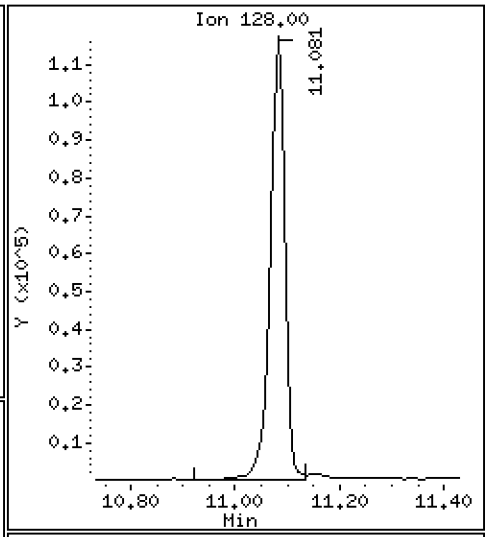
Concentration: 0.9617 ug/mL

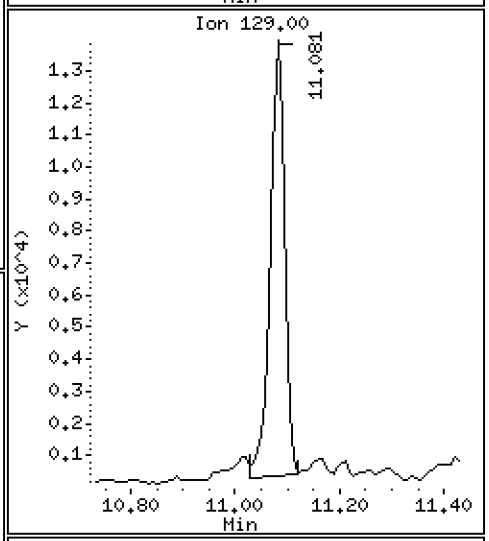


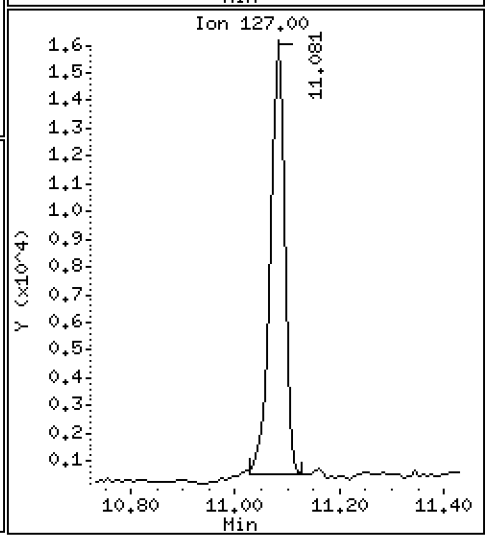












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

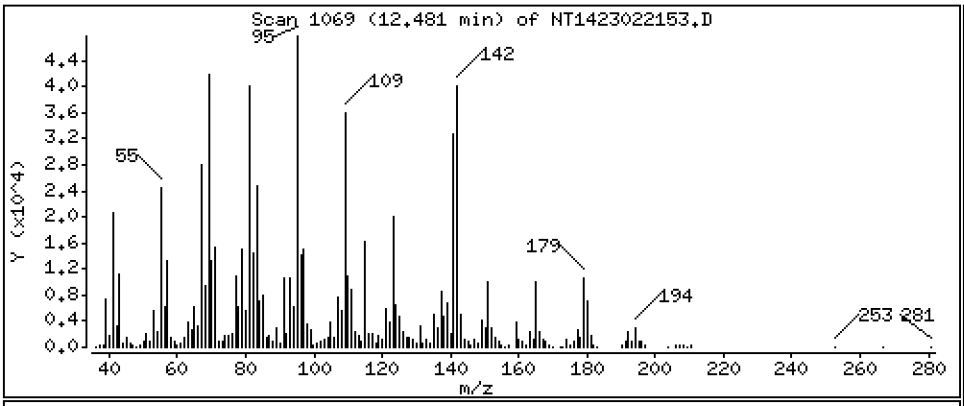
Operator: DSD

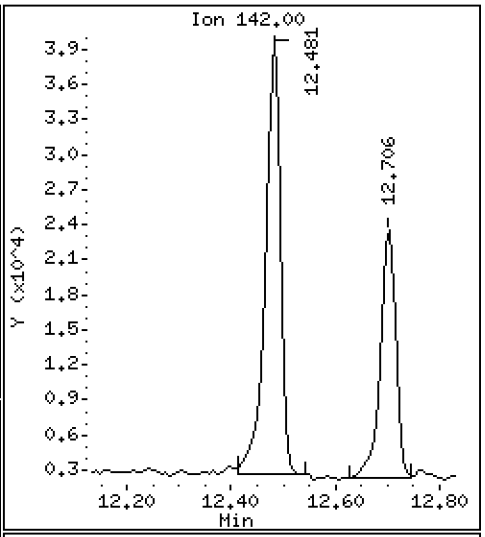
Column phase: ZB-5msi

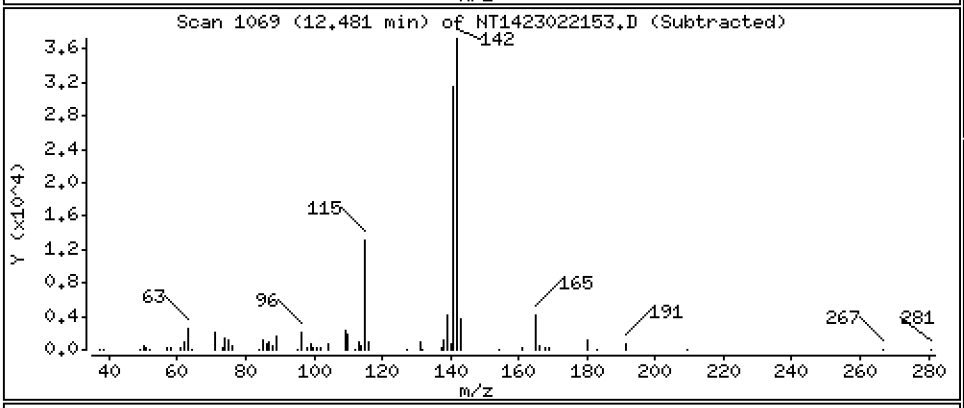
Column diameter: 0.25

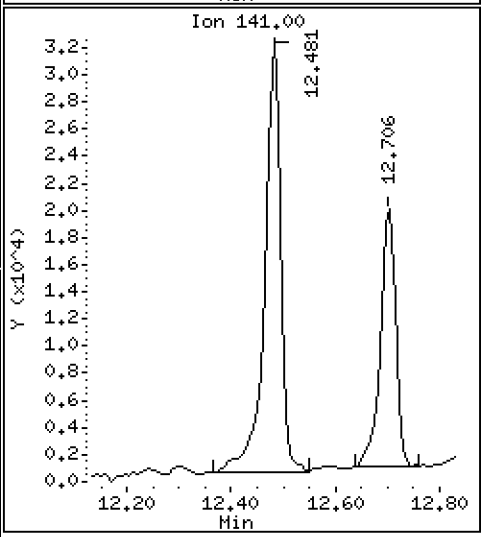
32 2-Methylnaphthalene

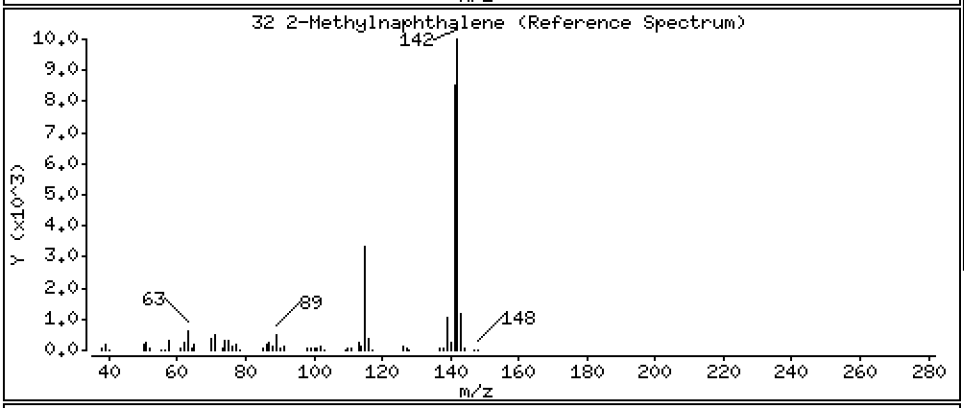
Concentration: 0.4192 ug/mL

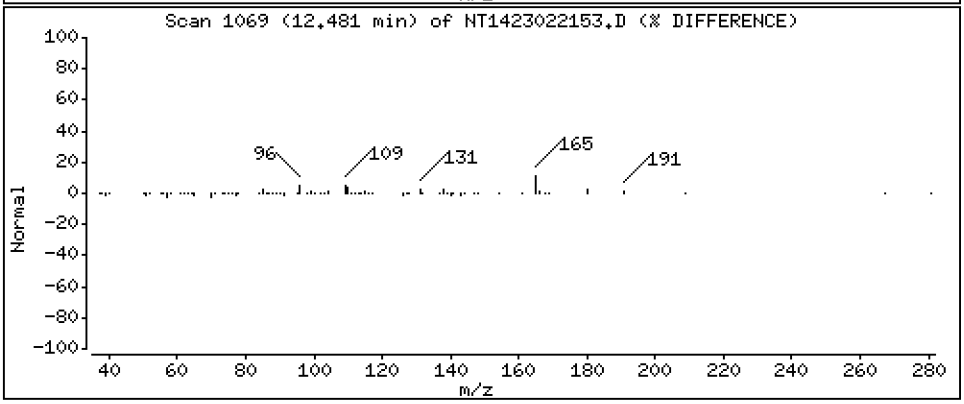












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022153.D

Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

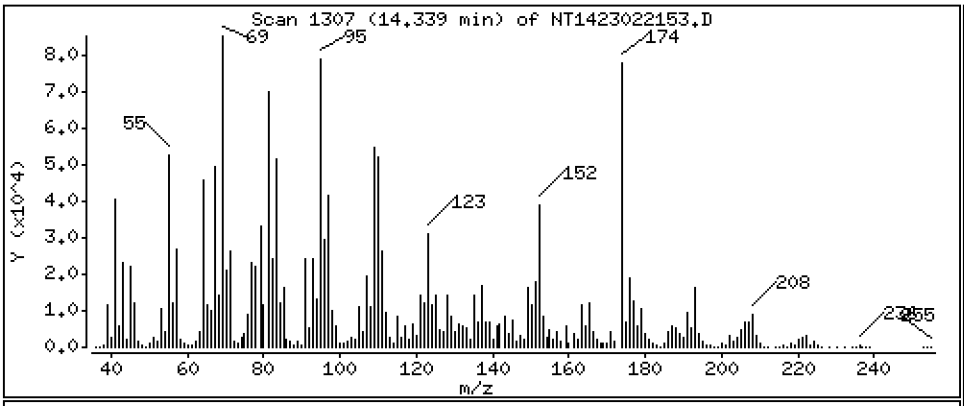
Operator: DSD

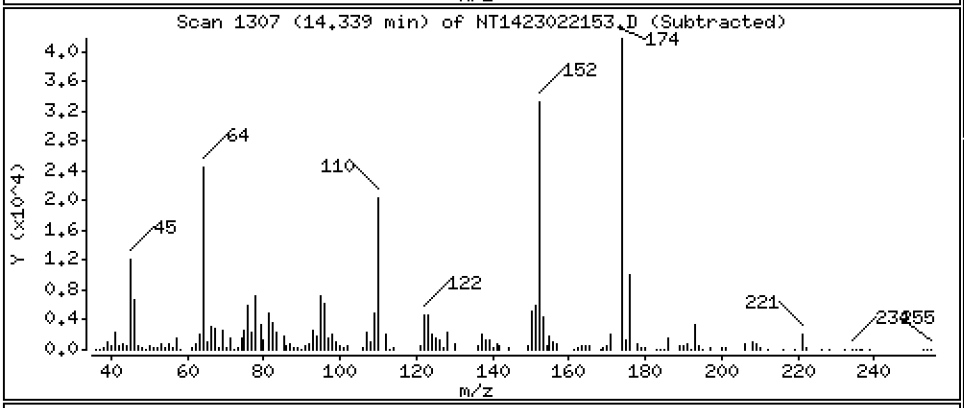
Column phase: ZB-5msi

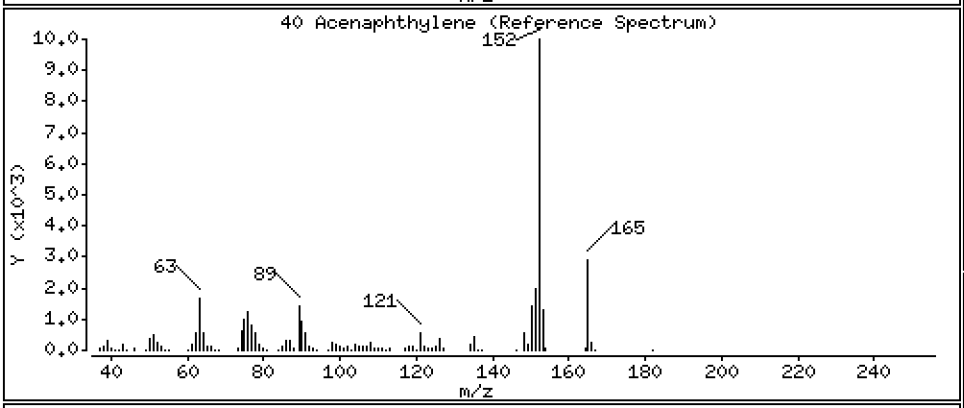
Column diameter: 0.25

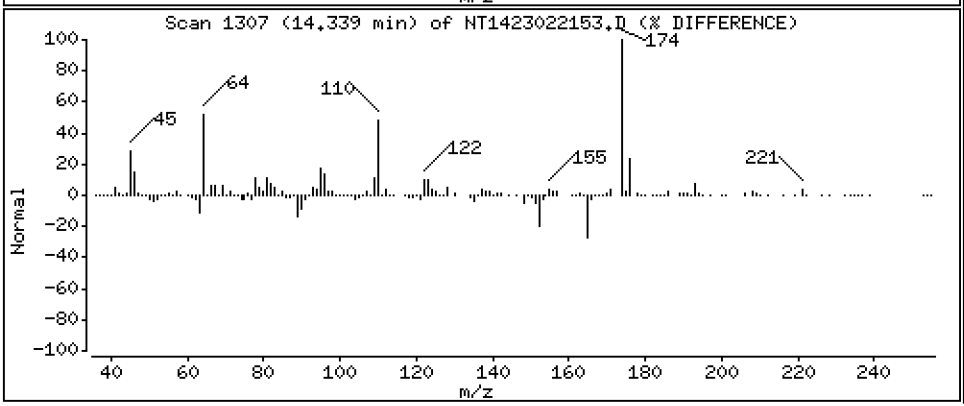
40 Acenaphthylene

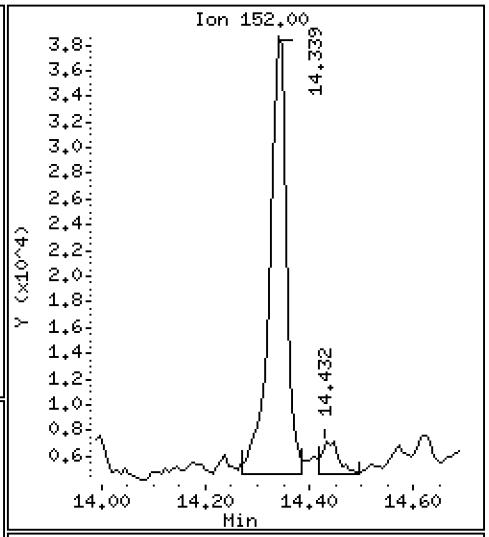
Concentration: 0.3050 ug/mL

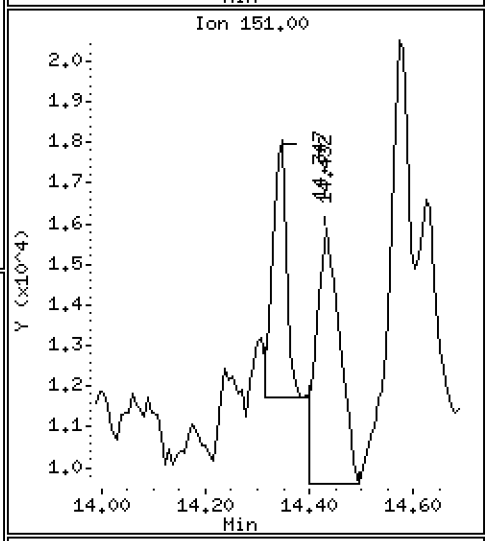


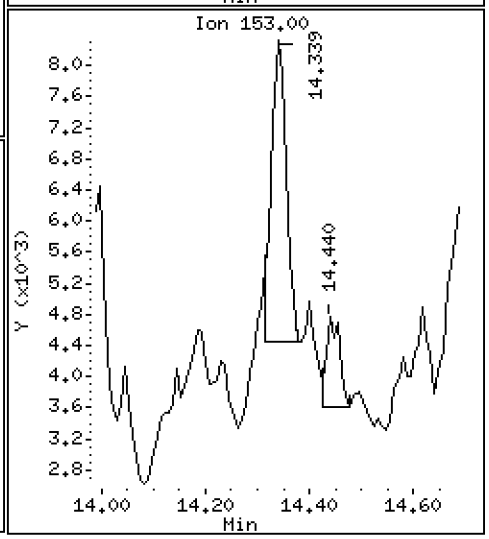












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

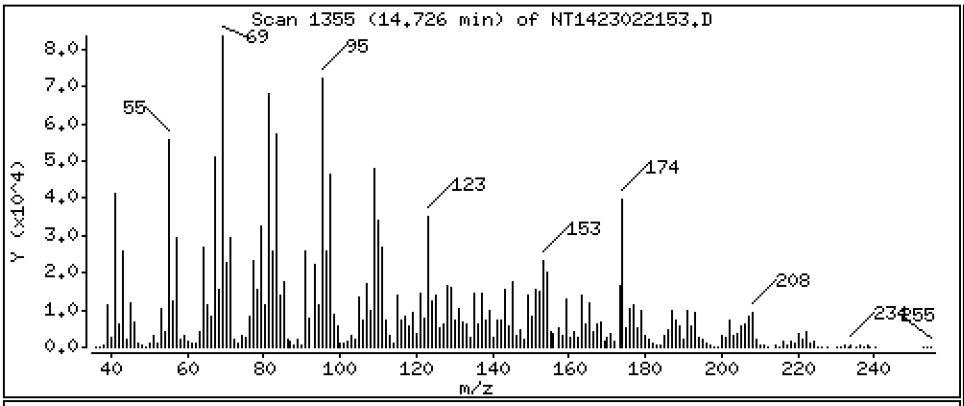
Operator: DSD

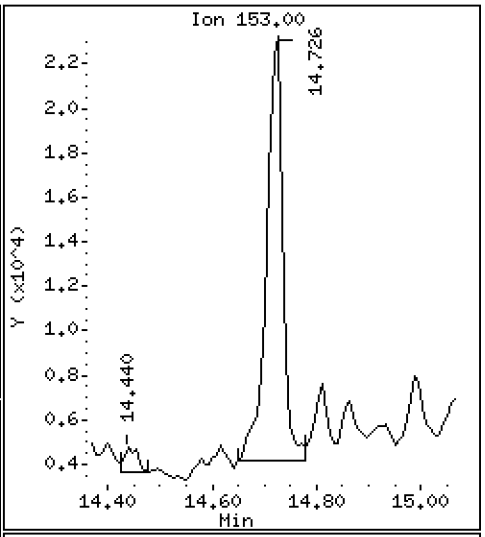
Column phase: ZB-5msi

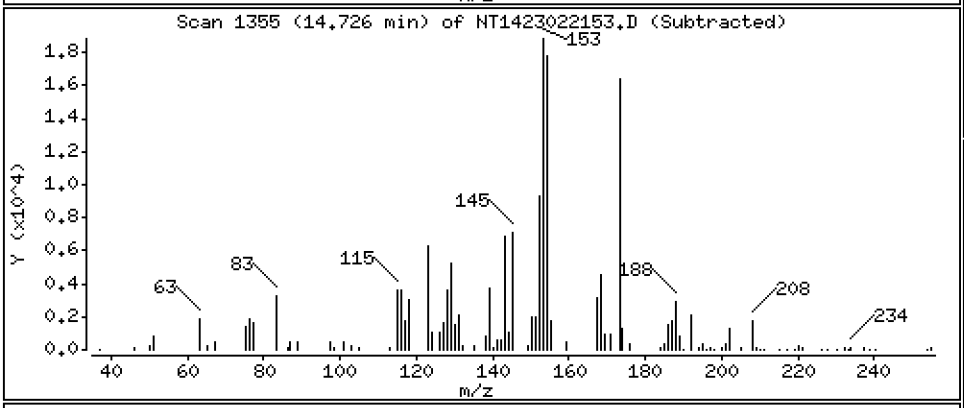
Column diameter: 0.25

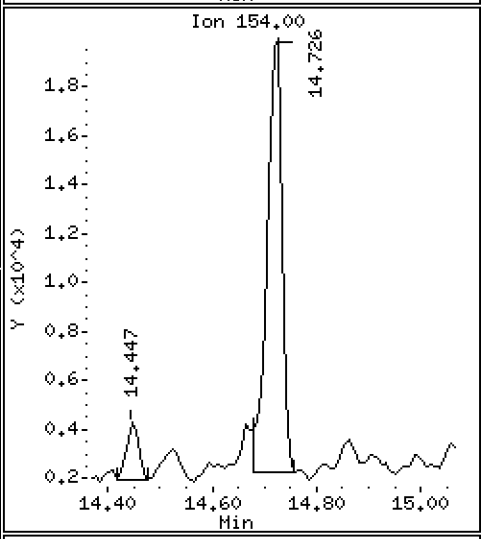
44 Acenaphthene

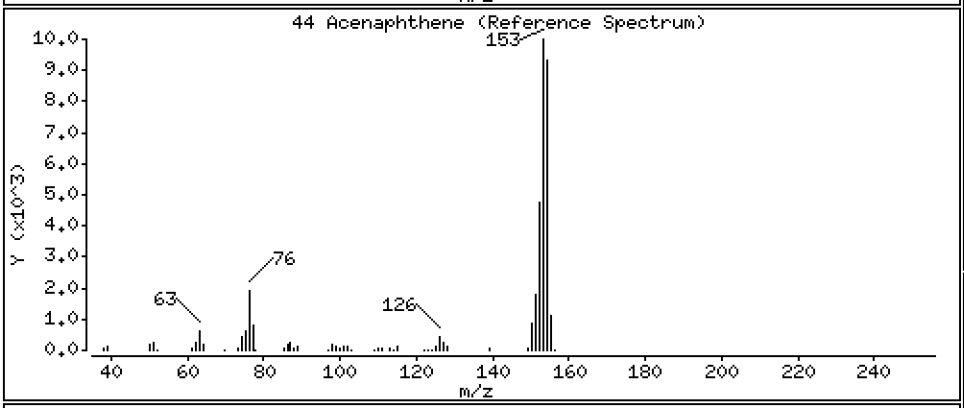
Concentration: 0.2744 ug/mL

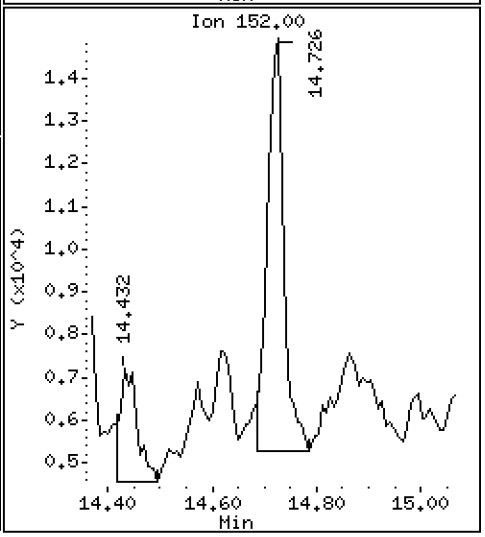


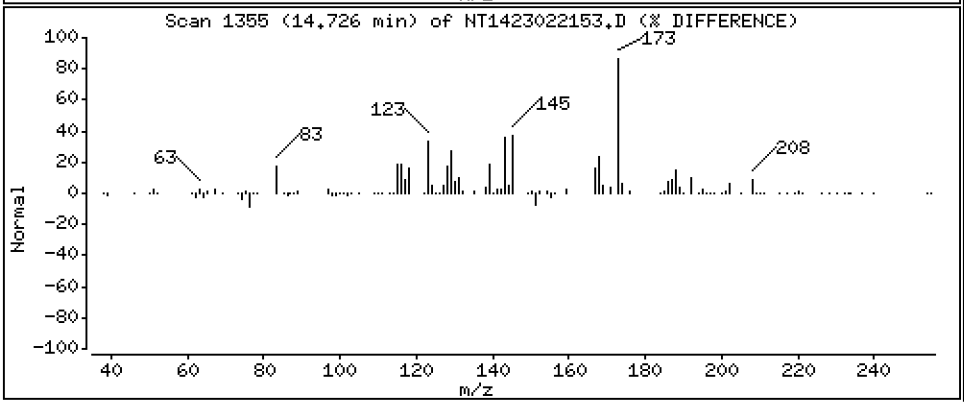












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

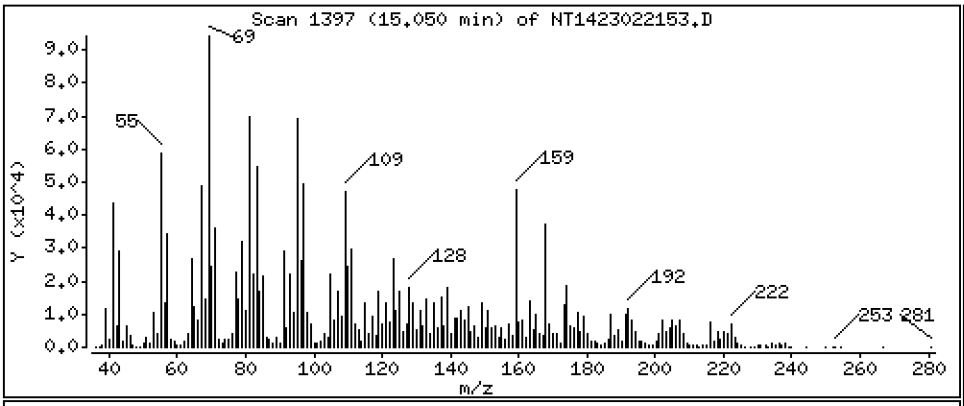
Operator: DSD

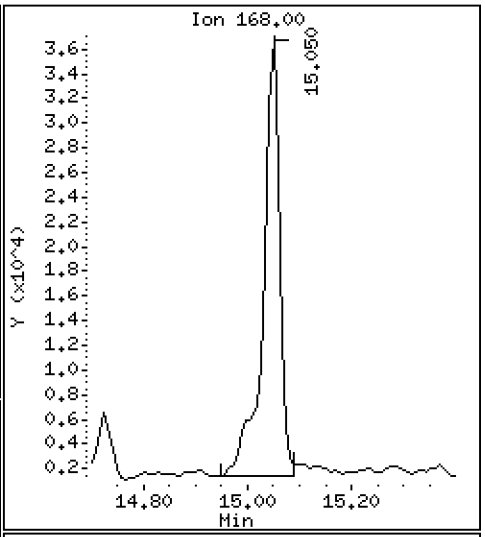
Column phase: ZB-5msi

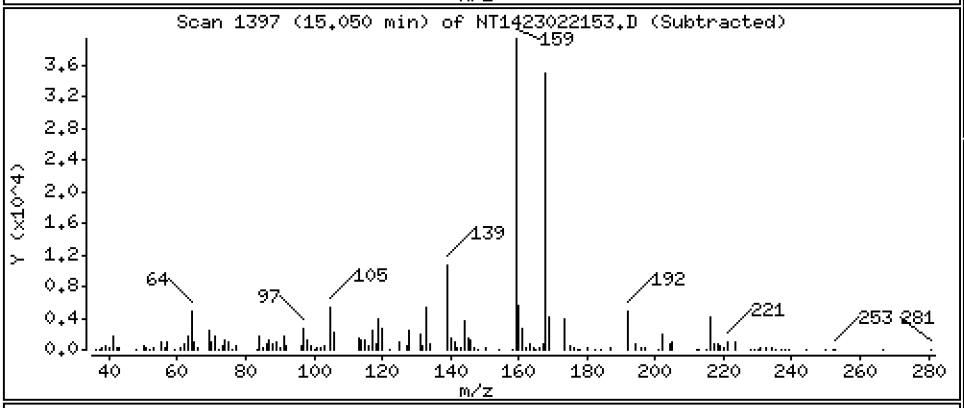
Column diameter: 0.25

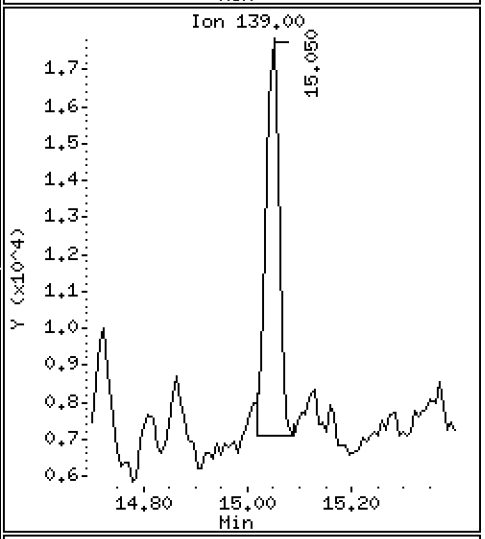
46 Dibenzofuran

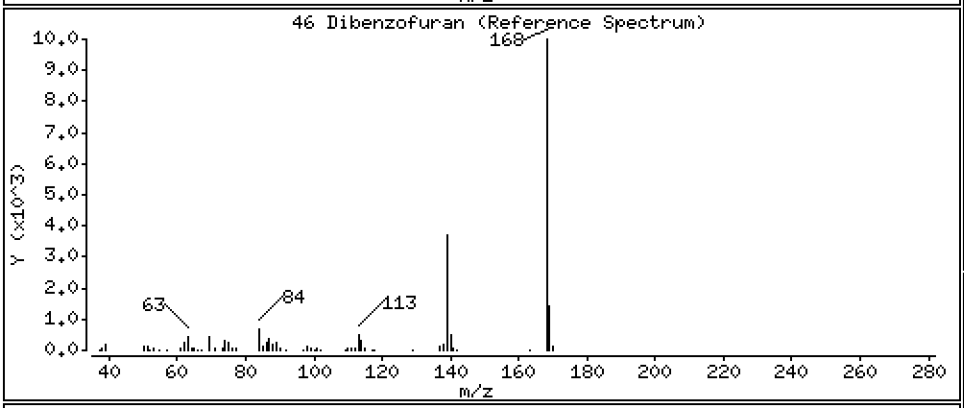
Concentration: 0.3072 ug/mL

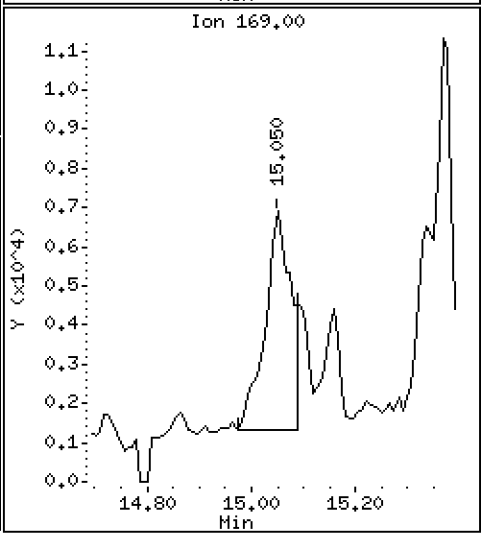


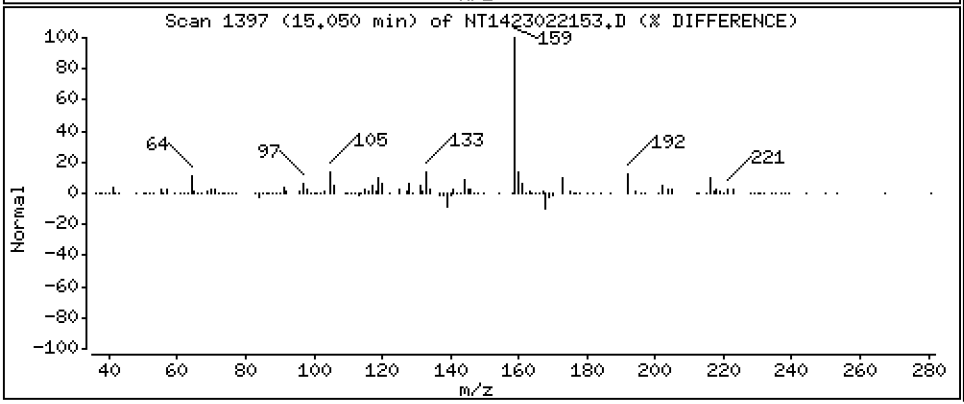












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

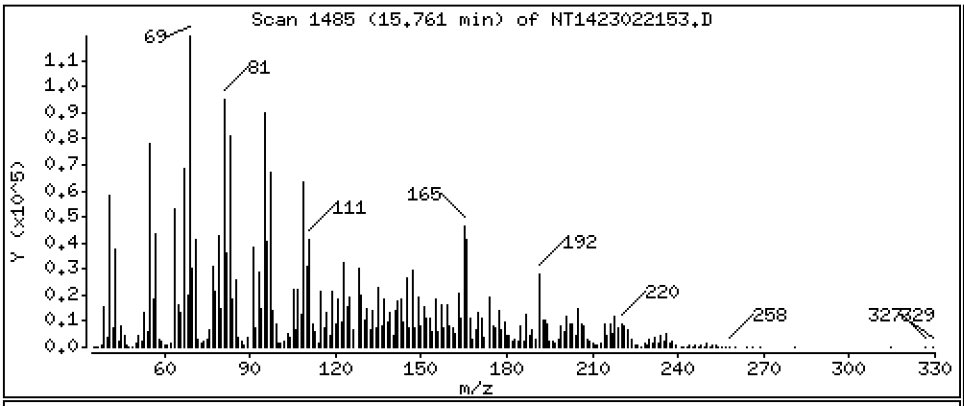
Operator: DSD

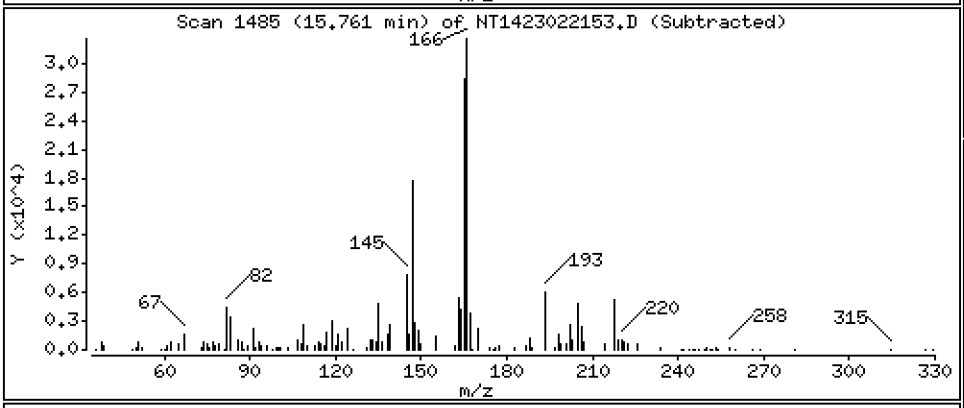
Column phase: ZB-5msi

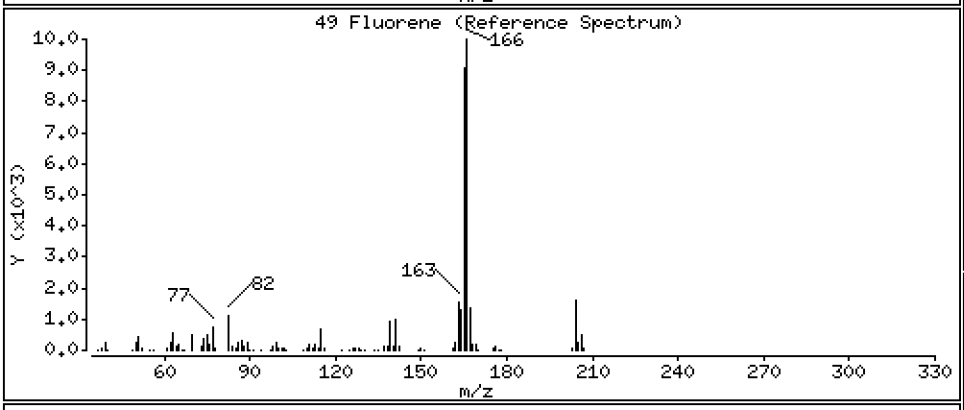
Column diameter: 0.25

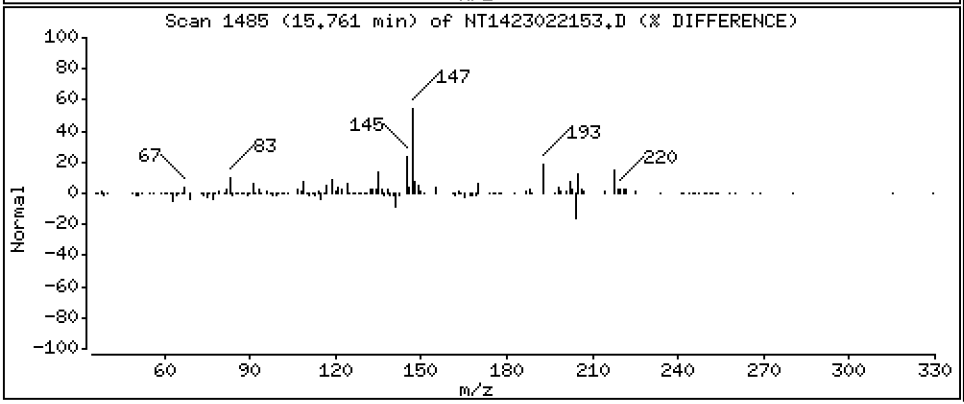
49 Fluorene

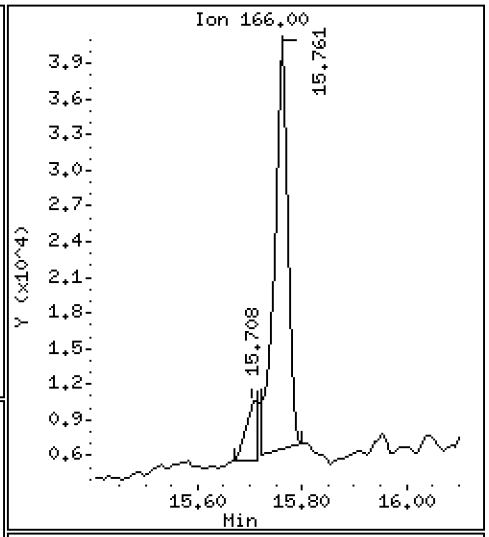
Concentration: 0.2480 ug/mL

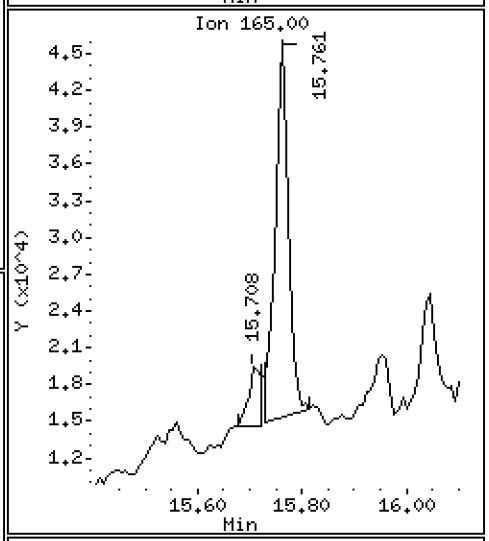


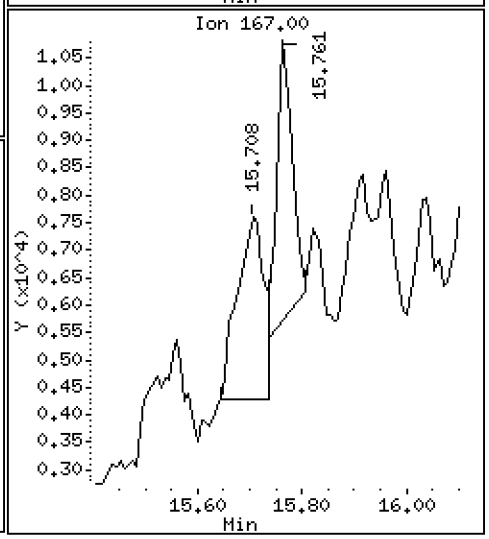












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

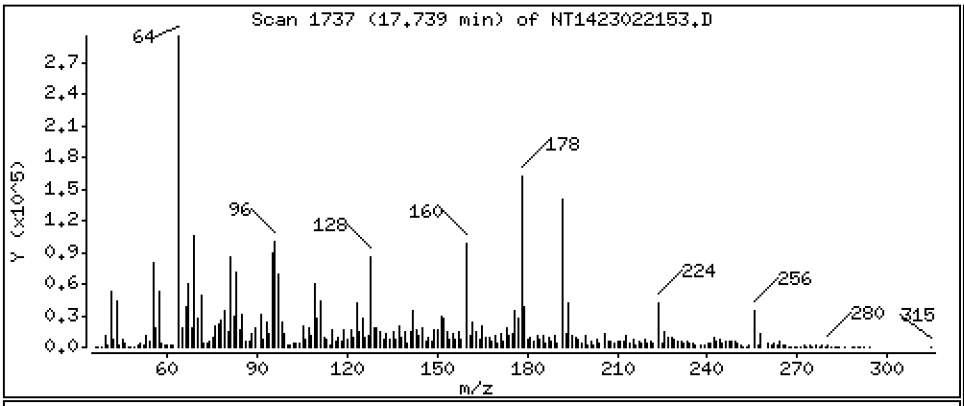
Operator: DSD

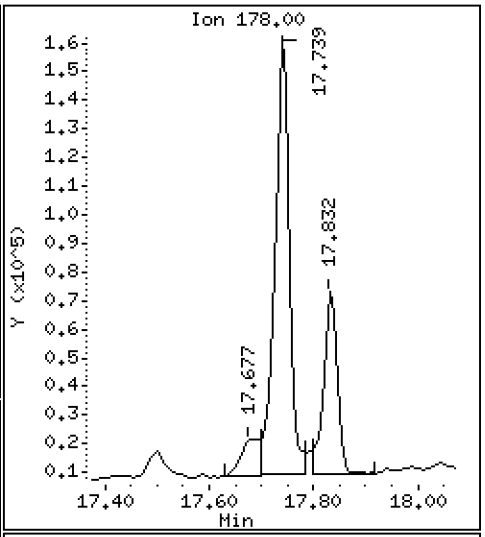
Column phase: ZB-5msi

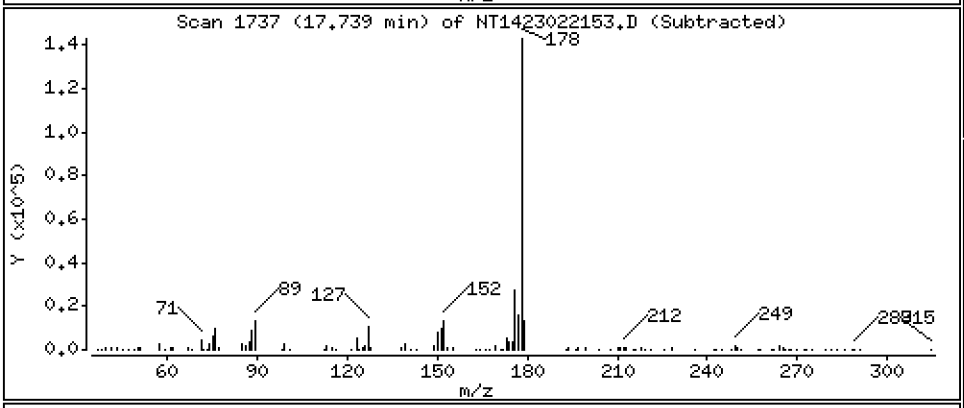
Column diameter: 0.25

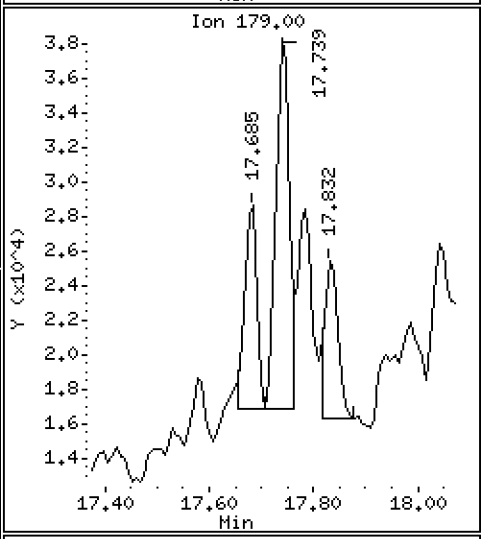
60 Phenanthrene

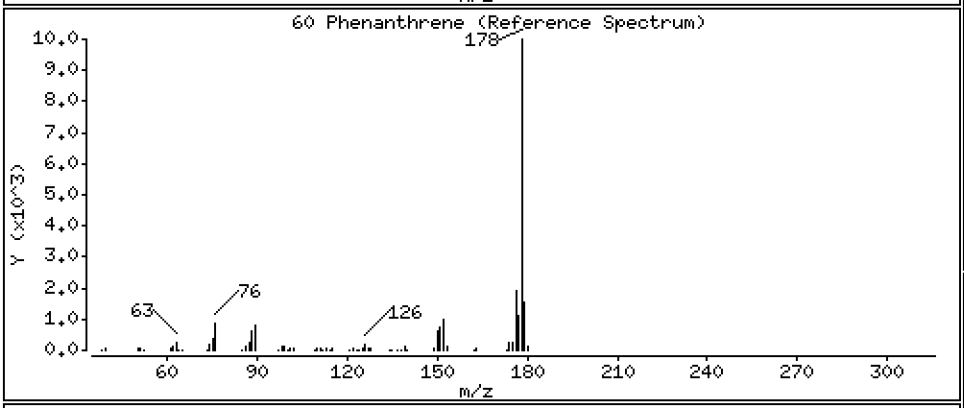
Concentration: 1.250 ug/mL

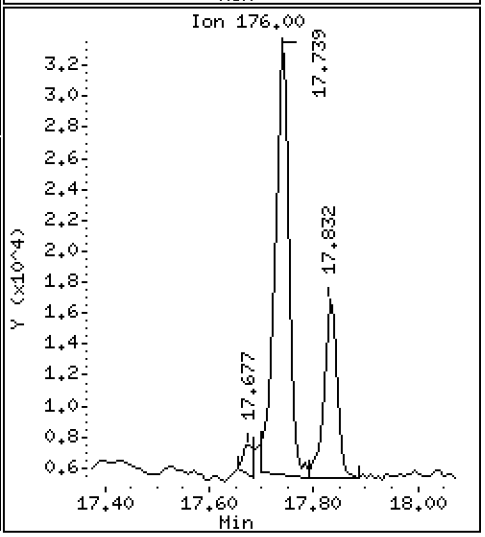


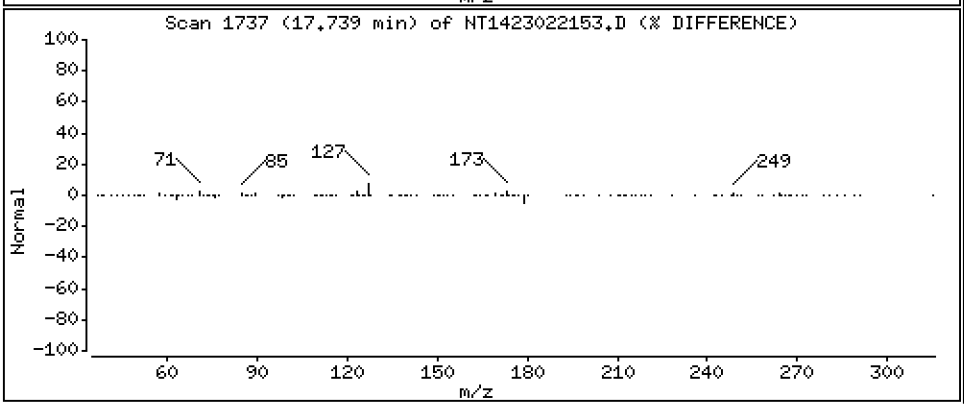












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022153.D

Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

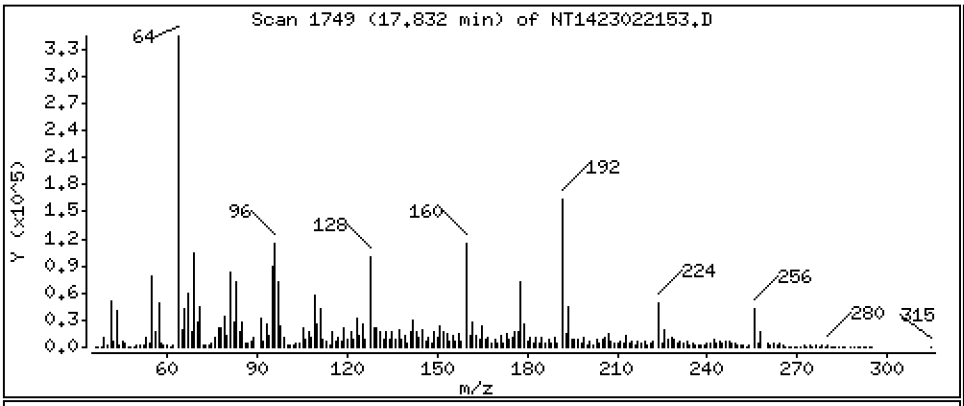
Operator: DSD

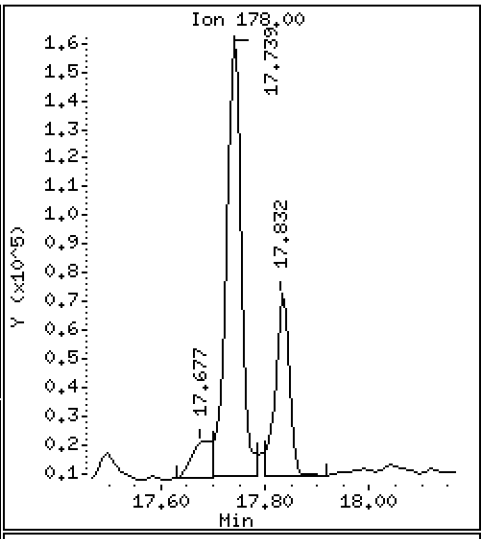
Column phase: ZB-5msi

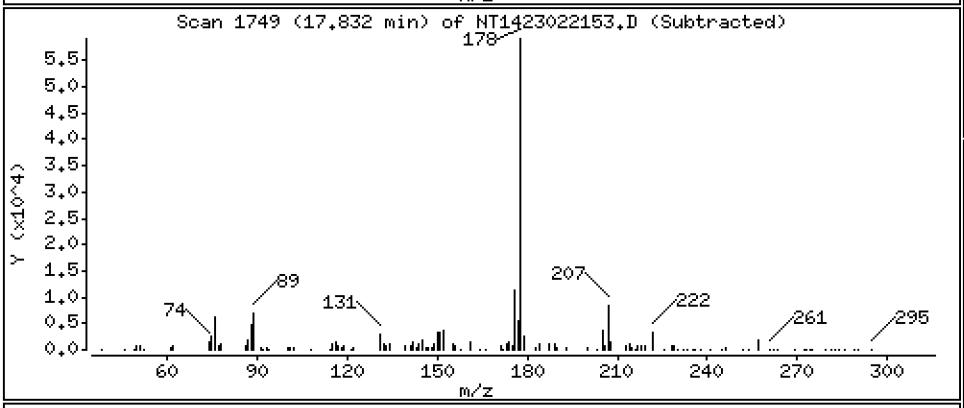
Column diameter: 0.25

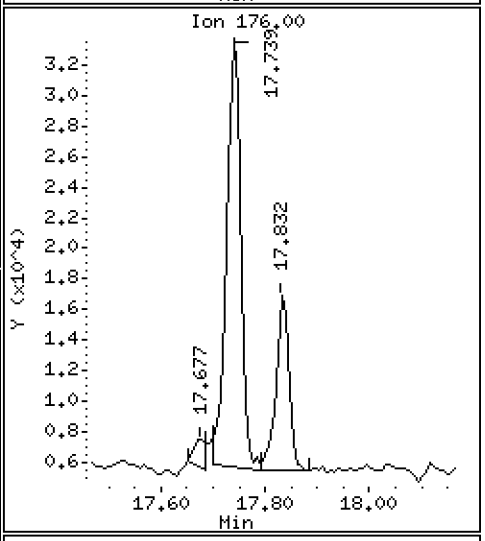
61 Anthracene

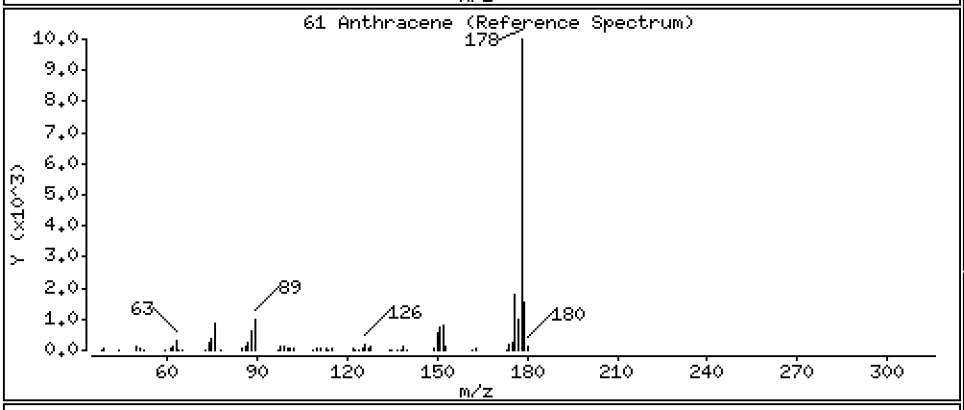
Concentration: 0.5235 ug/mL

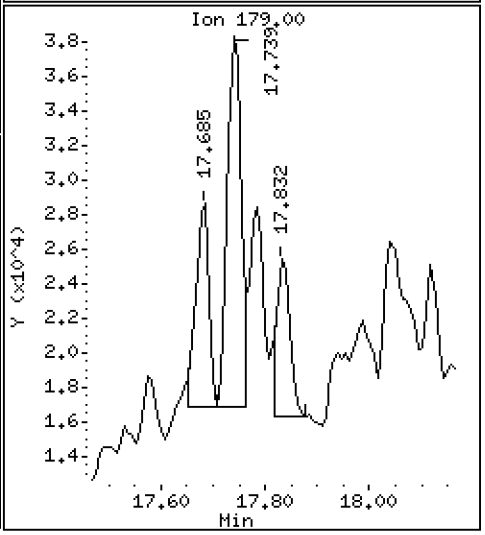


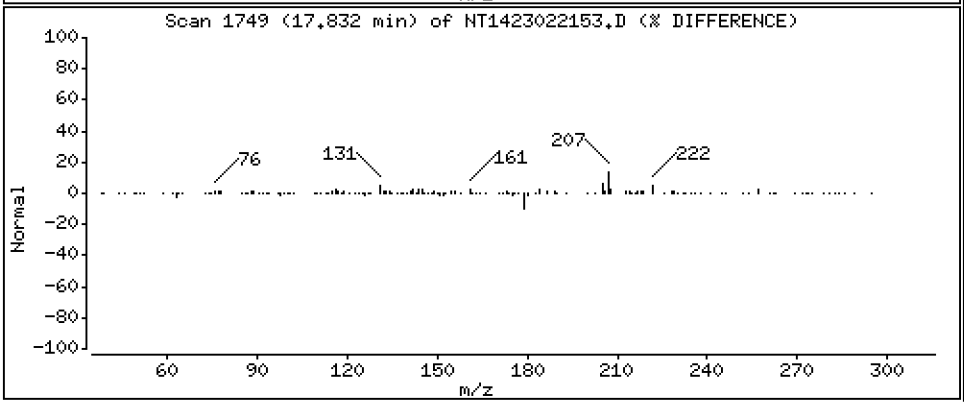












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

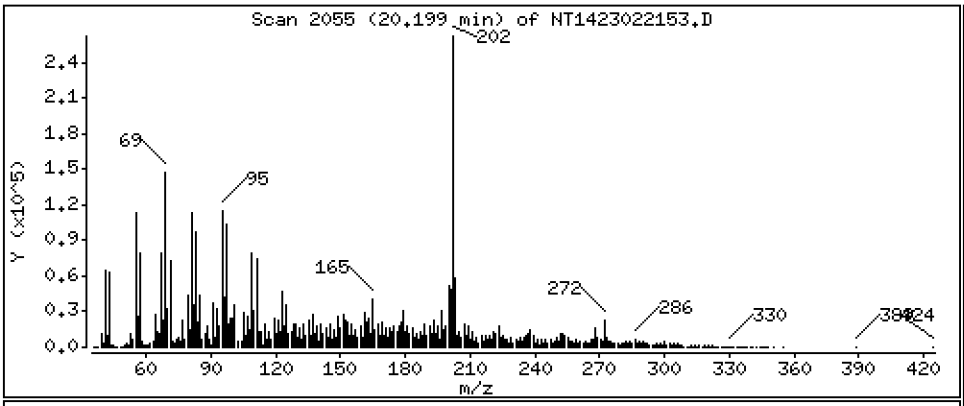
Operator: DSD

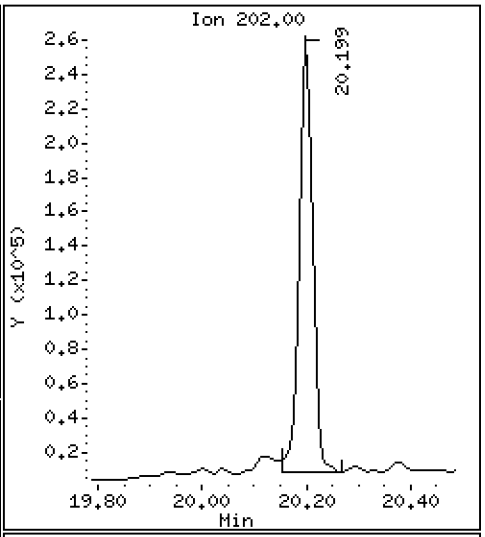
Column phase: ZB-5msi

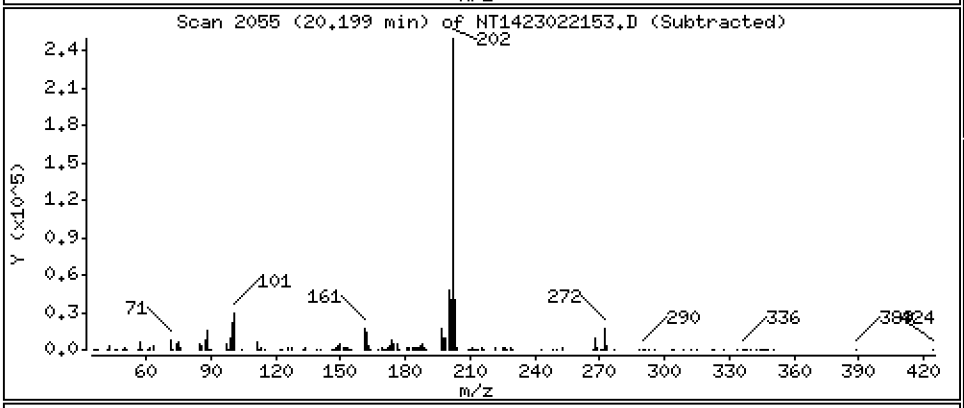
Column diameter: 0.25

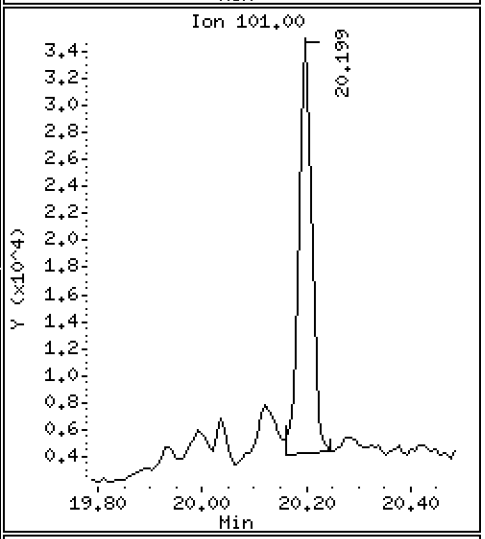
64 Fluoranthene

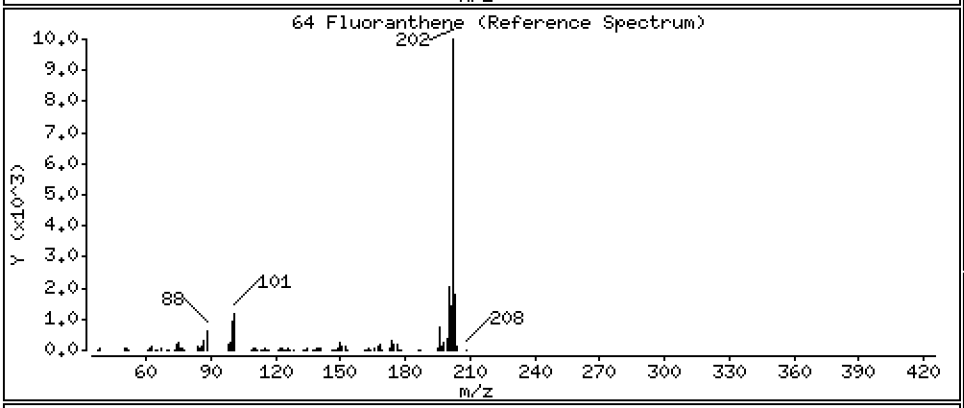
Concentration: 1.684 ug/mL

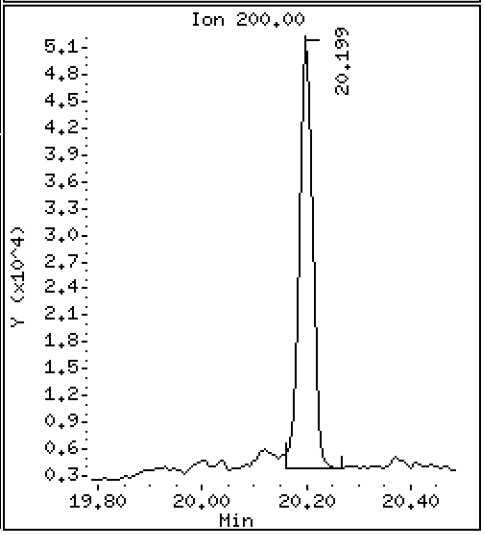


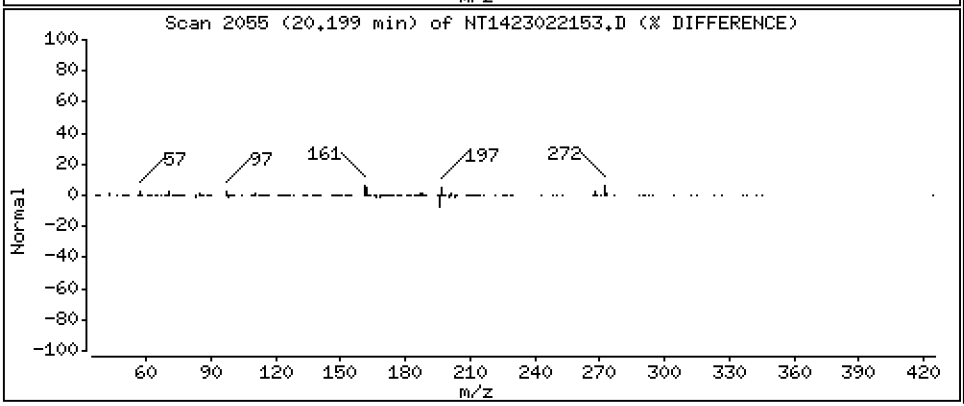












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

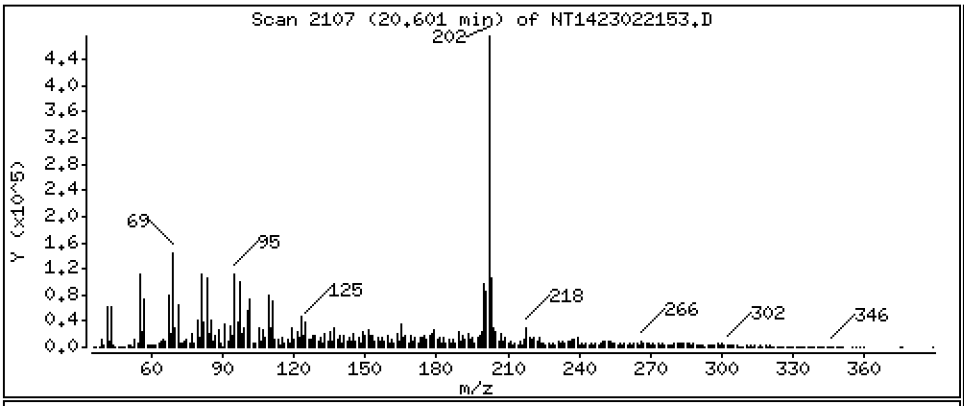
Operator: DSD

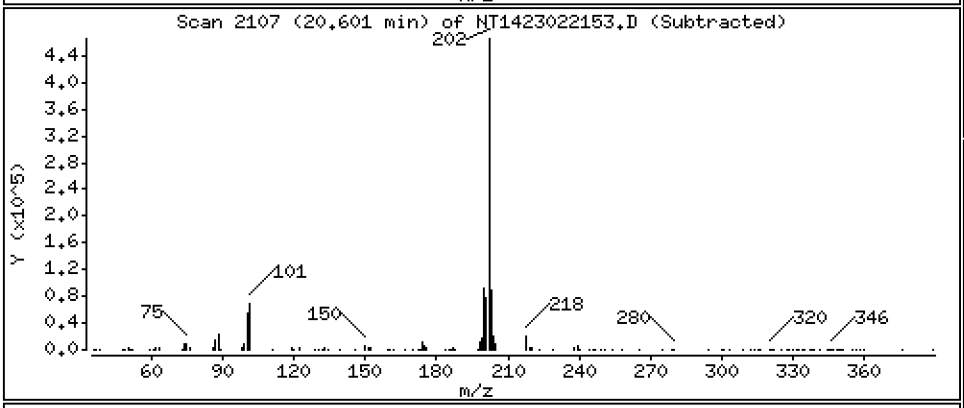
Column phase: ZB-5msi

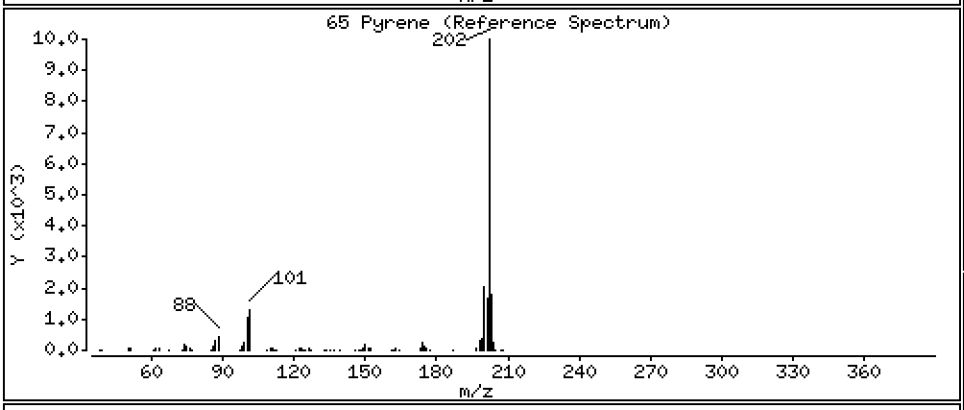
Column diameter: 0.25

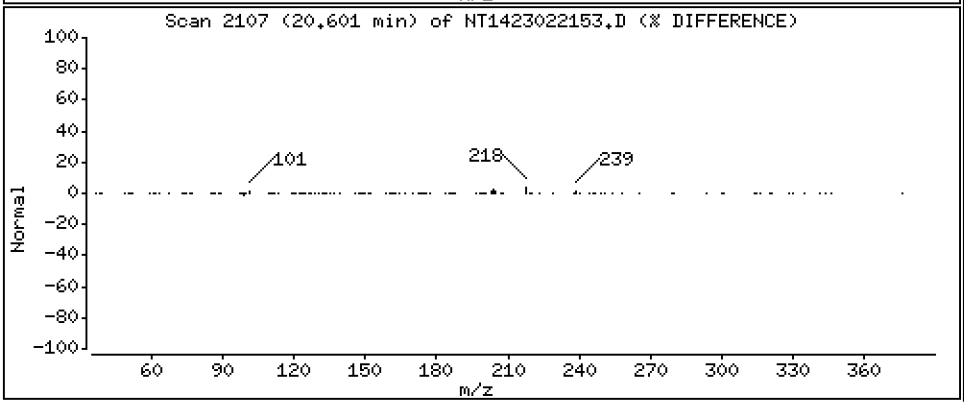
65 Pyrene

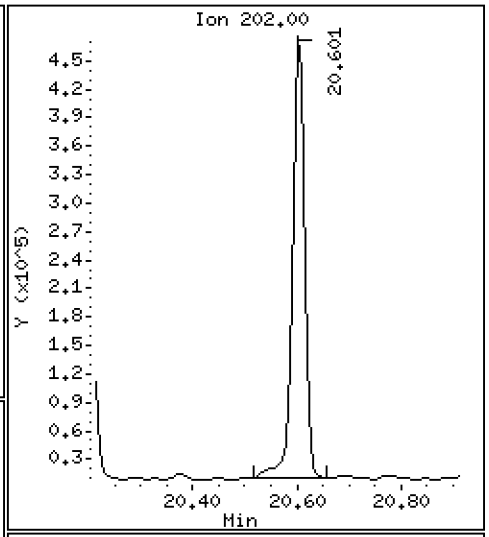
Concentration: 2.836 ug/mL

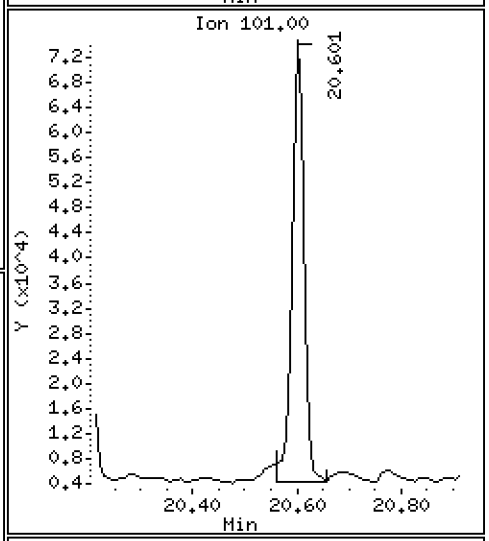


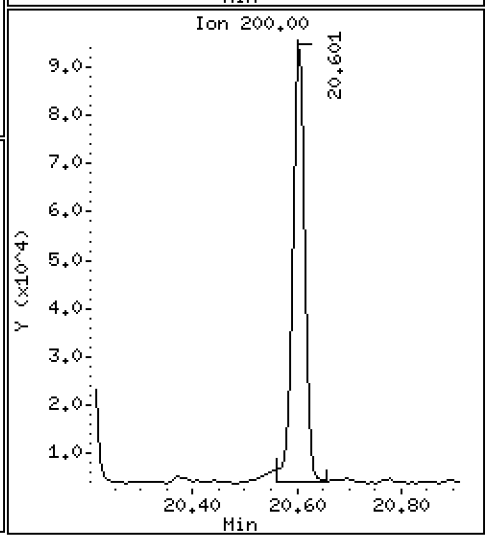












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

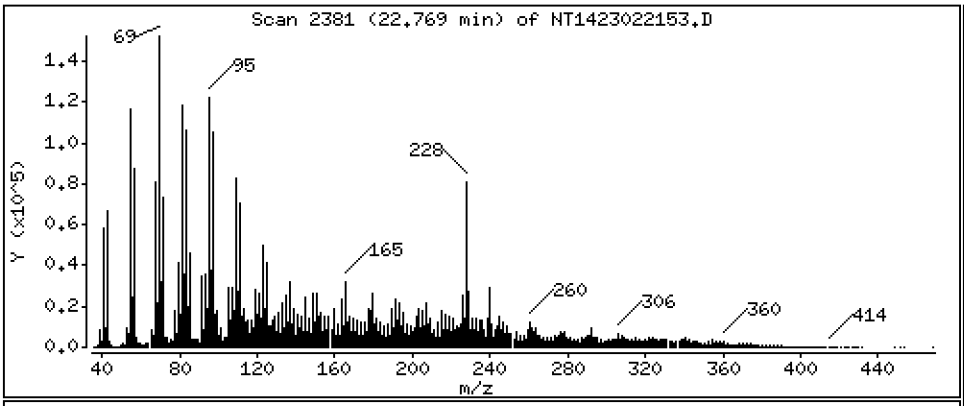
Operator: DSD

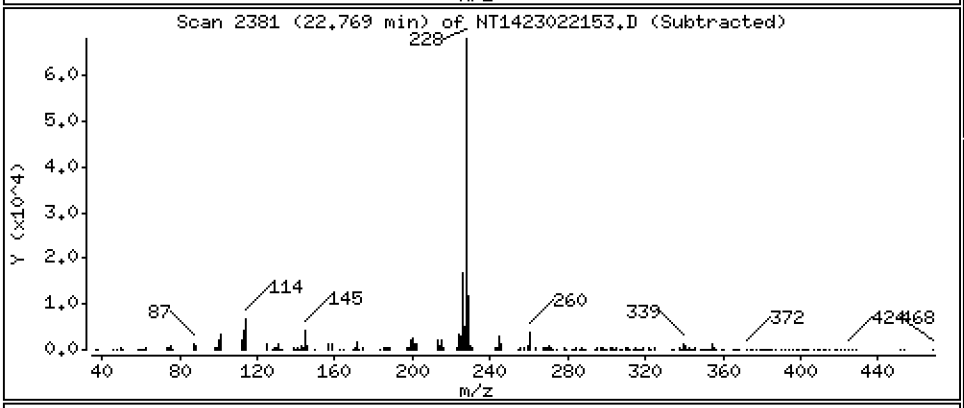
Column phase: ZB-5msi

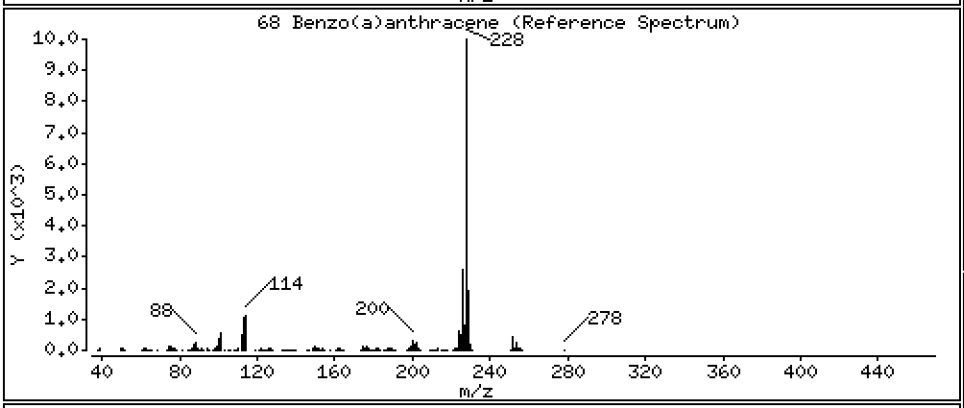
Column diameter: 0.25

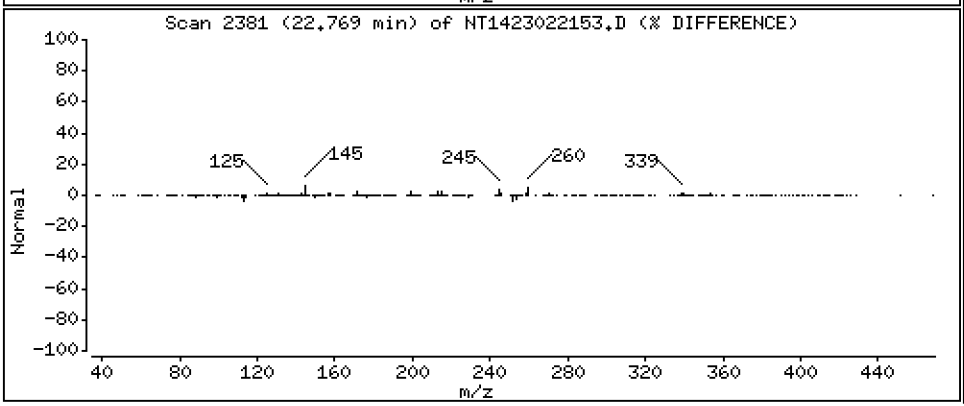
68 Benzo(a)anthracene

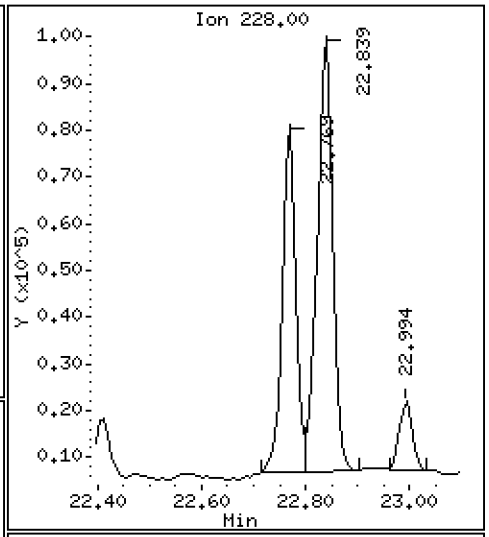
Concentration: 0.7089 ug/mL

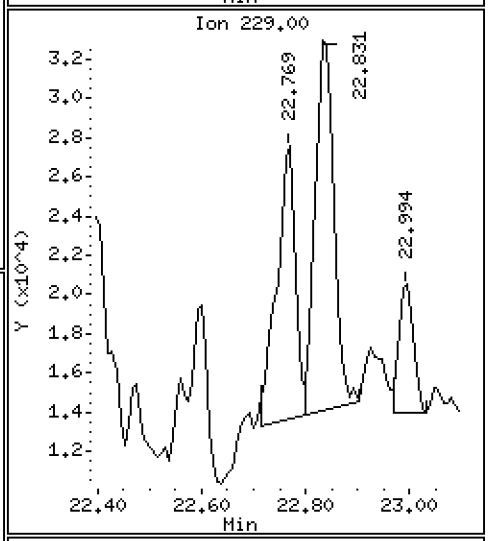


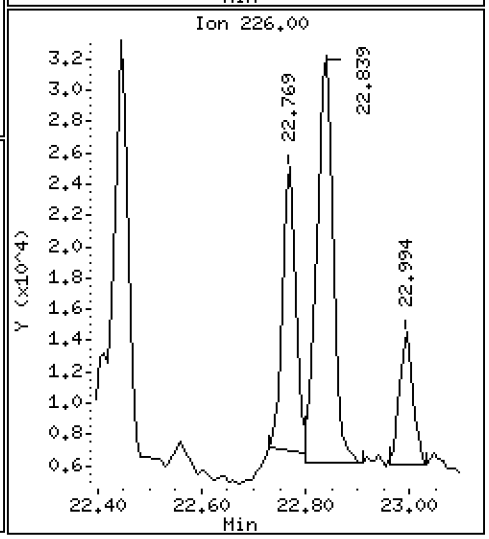












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

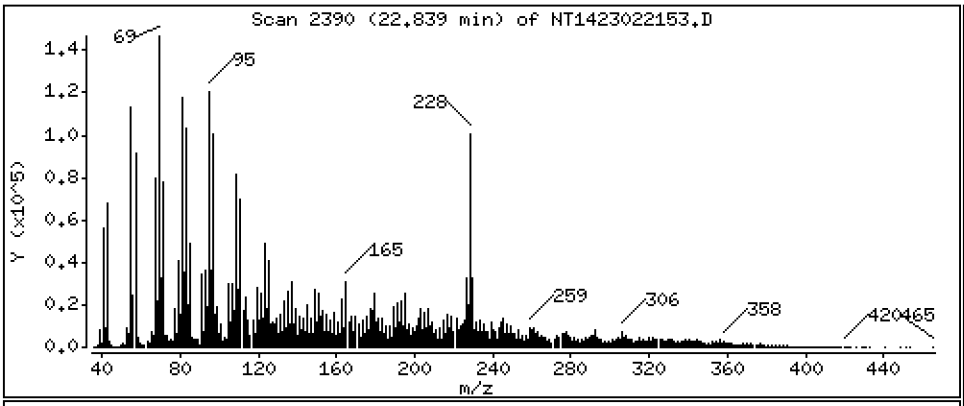
Operator: DSD

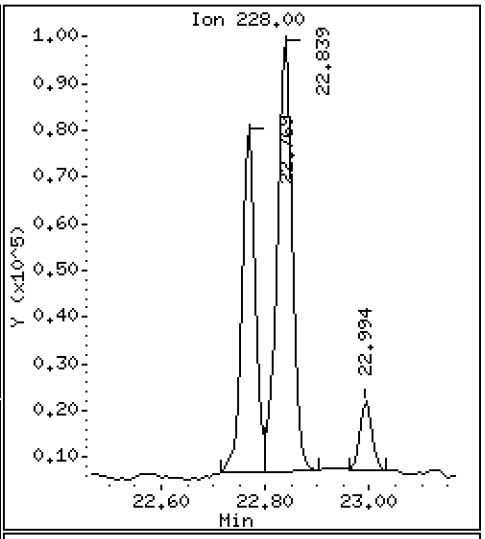
Column phase: ZB-5msi

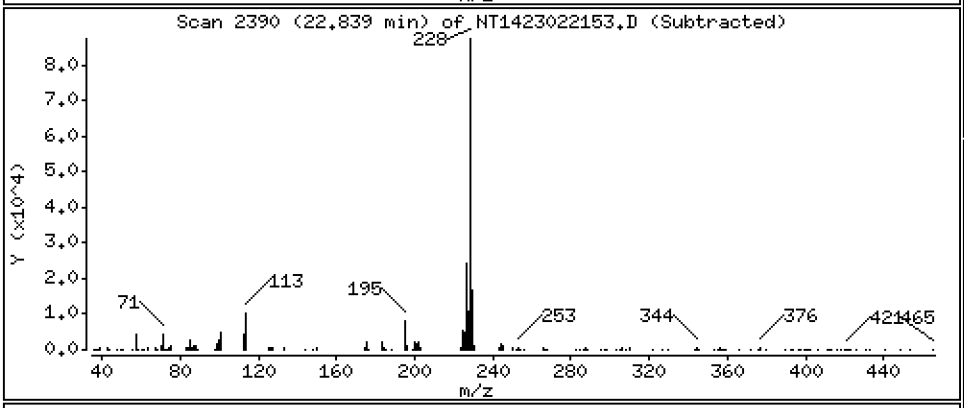
Column diameter: 0.25

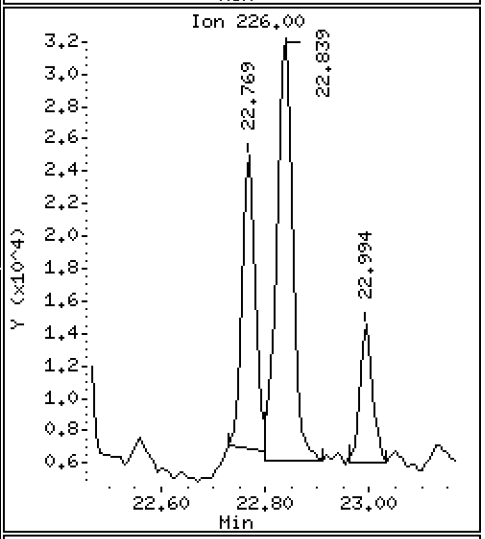
71 Chrysene

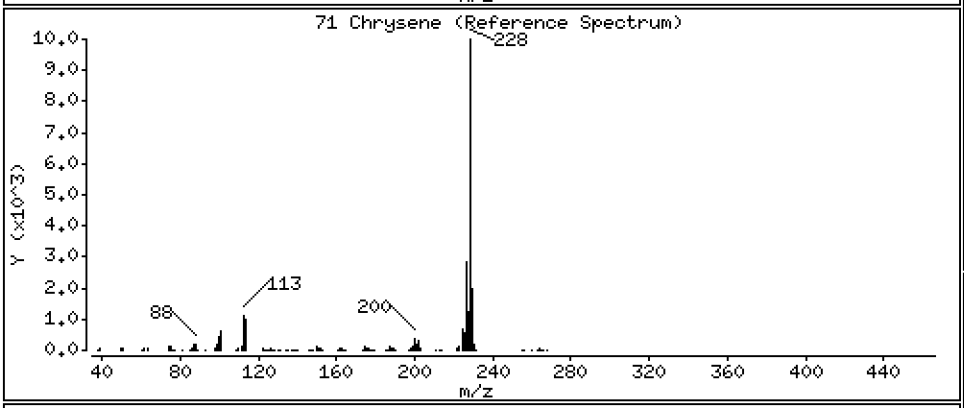
Concentration: 1.100 ug/mL

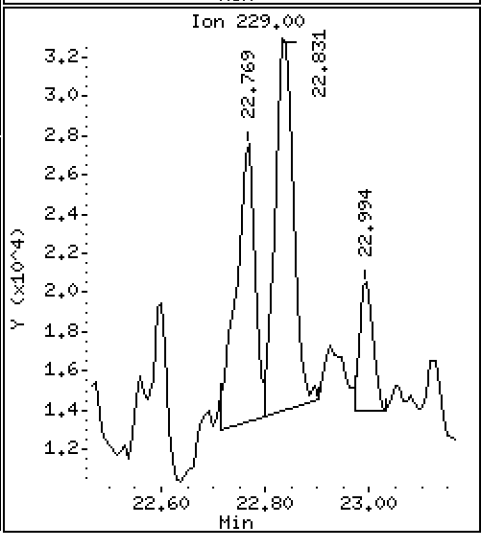


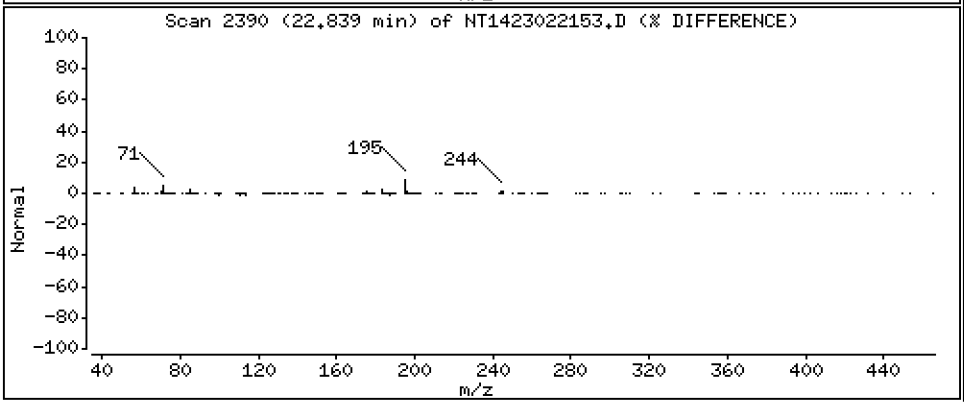












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

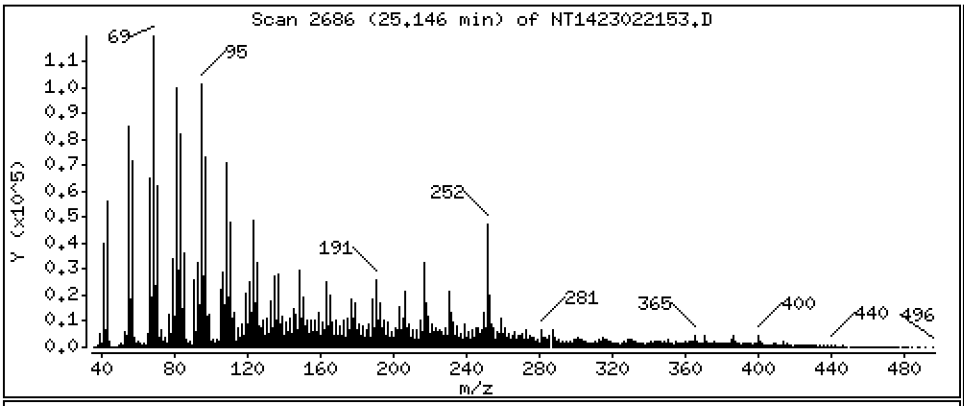
Operator: DSD

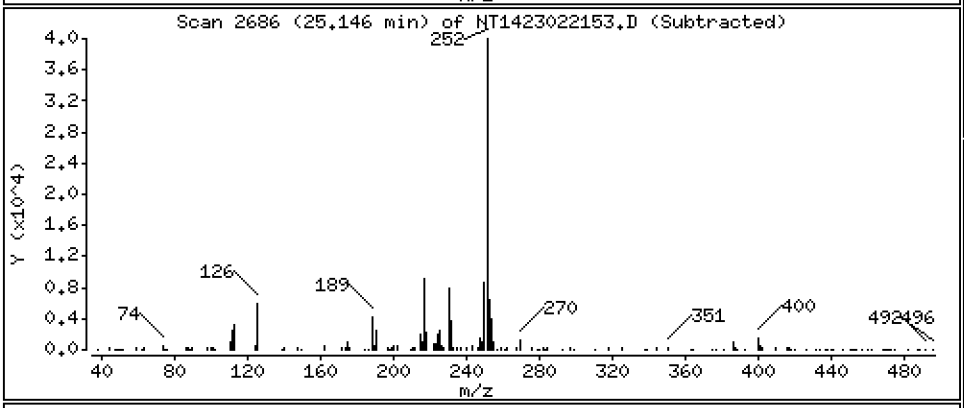
Column phase: ZB-5msi

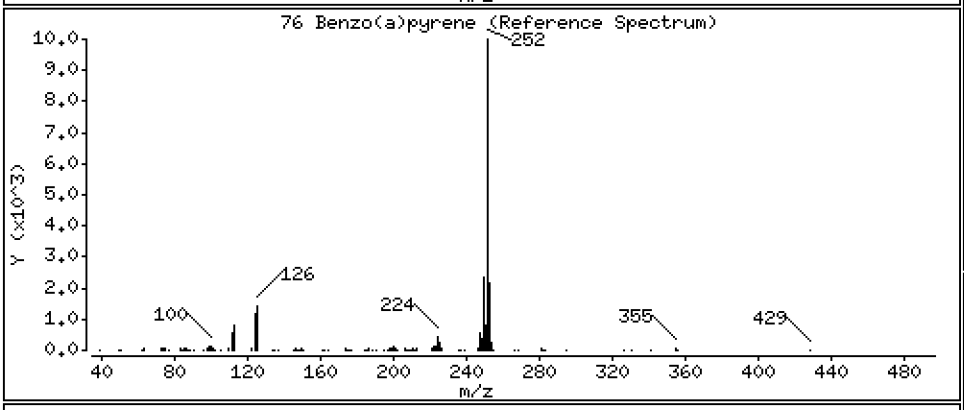
Column diameter: 0.25

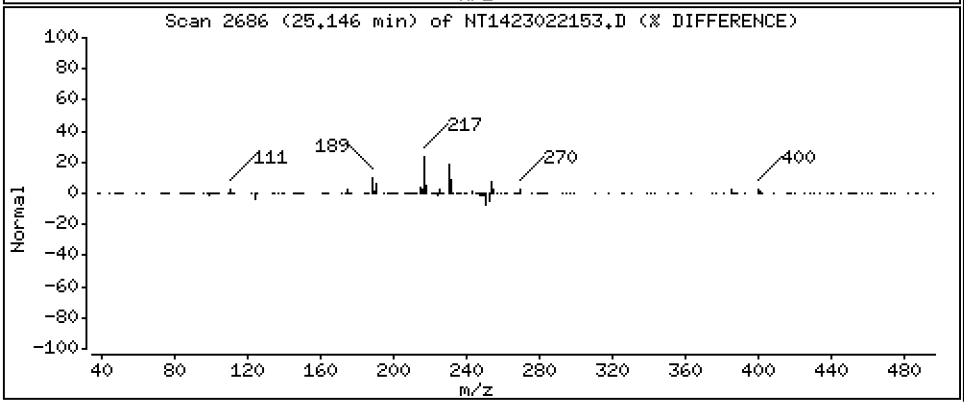
76 Benzo(a)pyrene

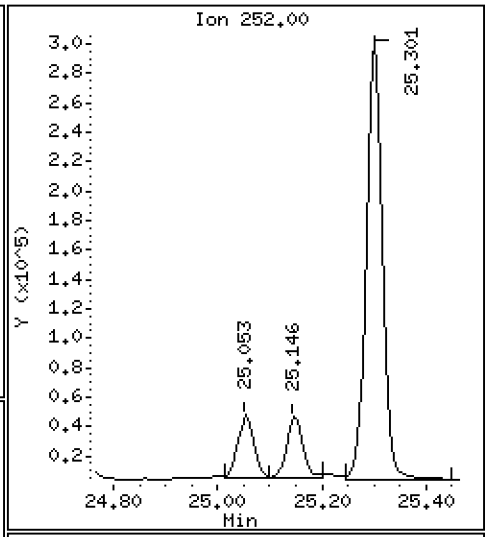
Concentration: 0.5847 ug/mL

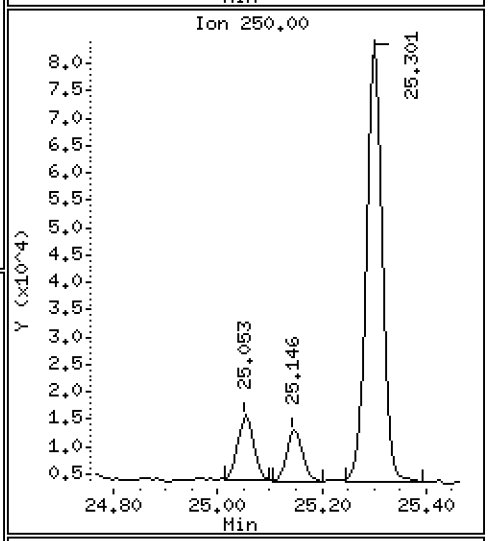


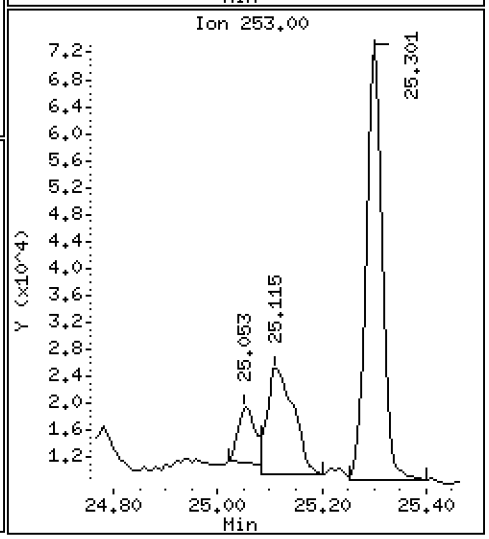












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

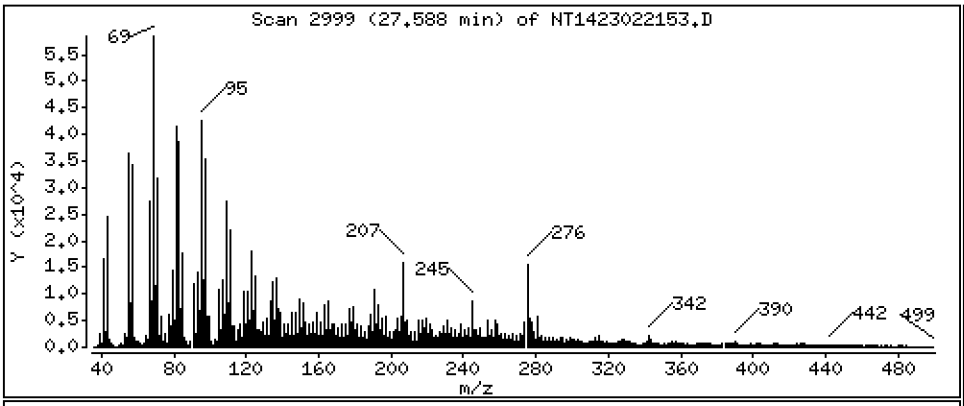
Operator: DSD

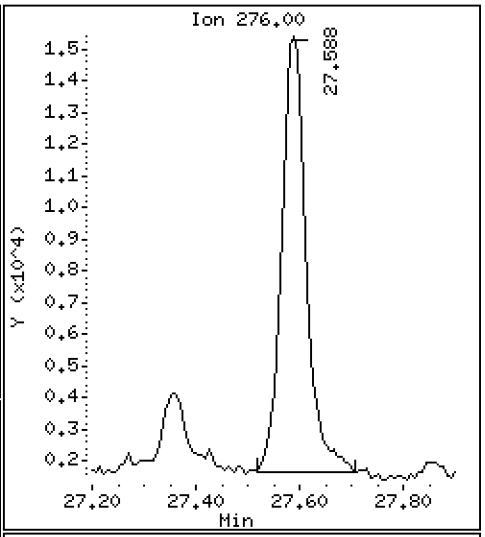
Column phase: ZB-5msi

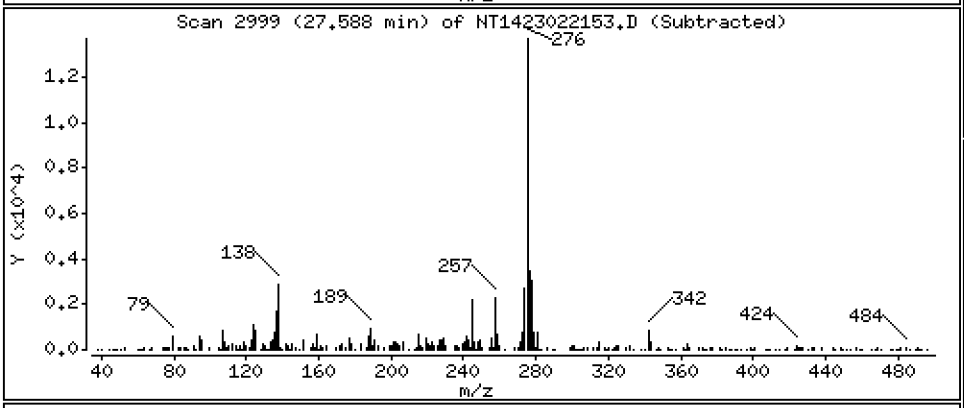
Column diameter: 0.25

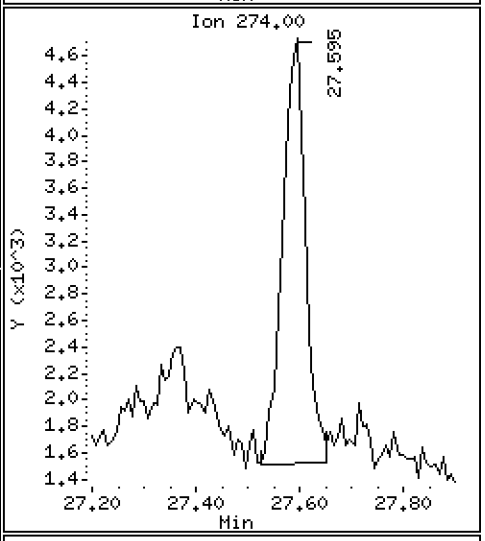
78 Indeno(1,2,3-cd)pyrene

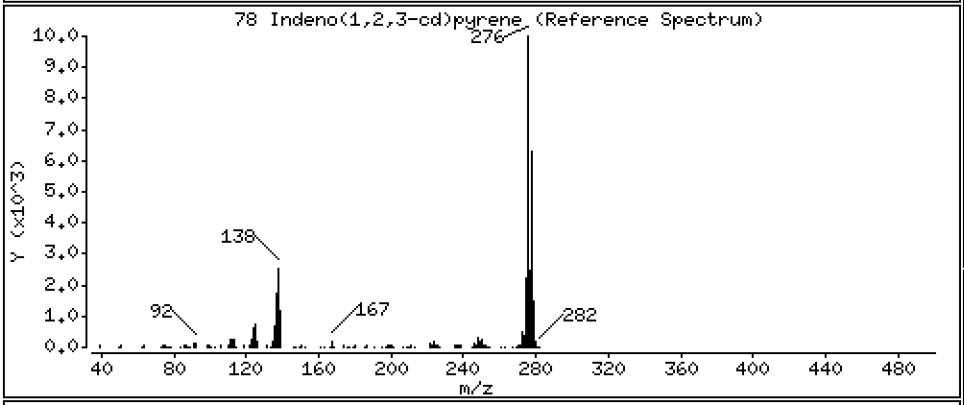
Concentration: 0.3671 ug/mL

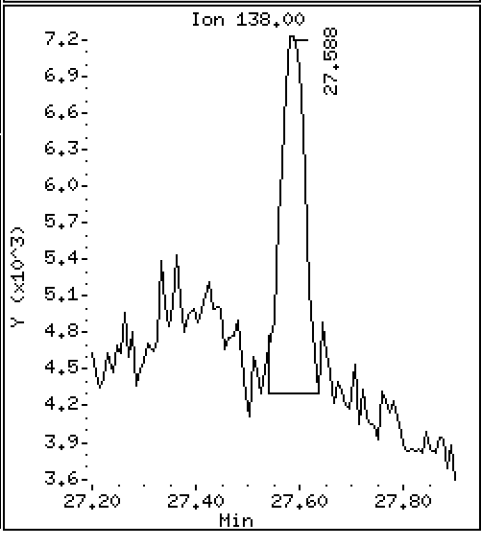


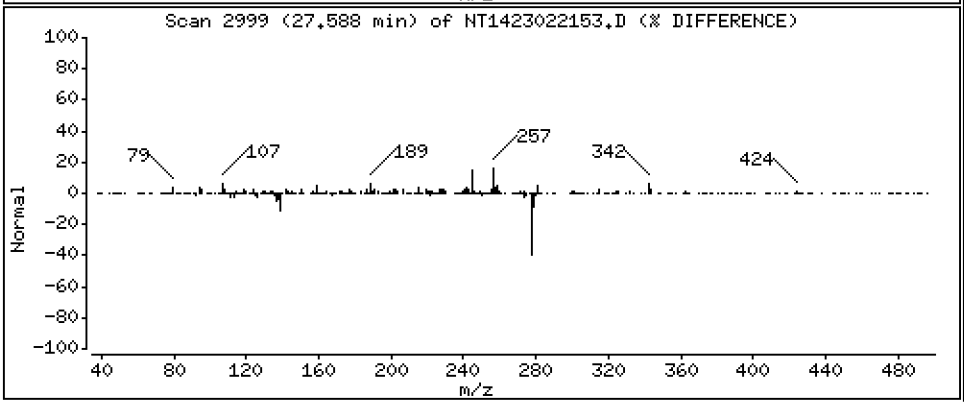












Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

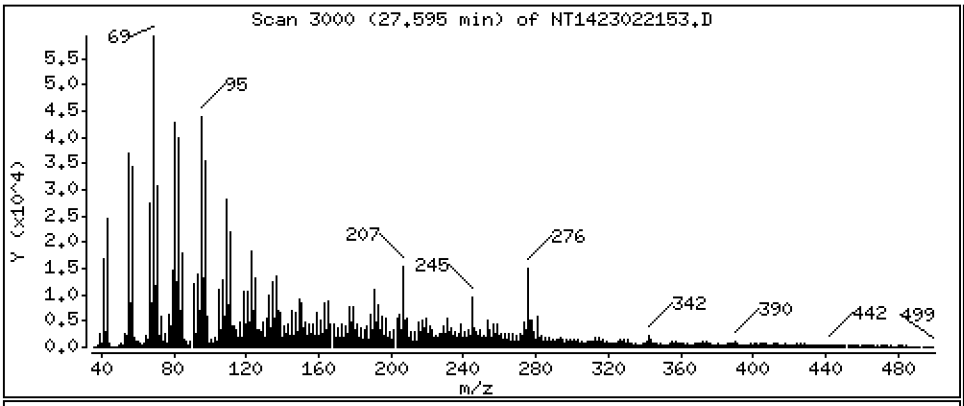
Operator: DSD

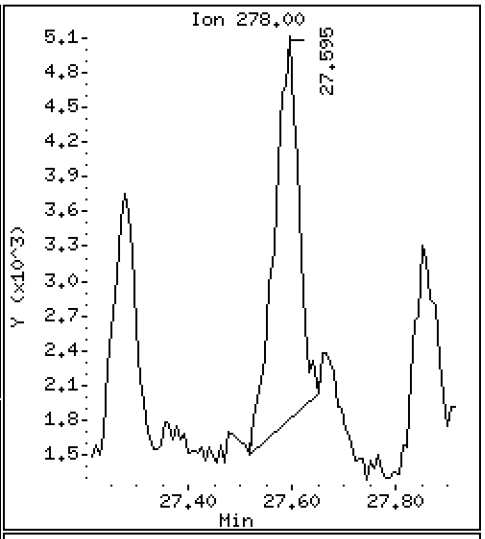
Column phase: ZB-5msi

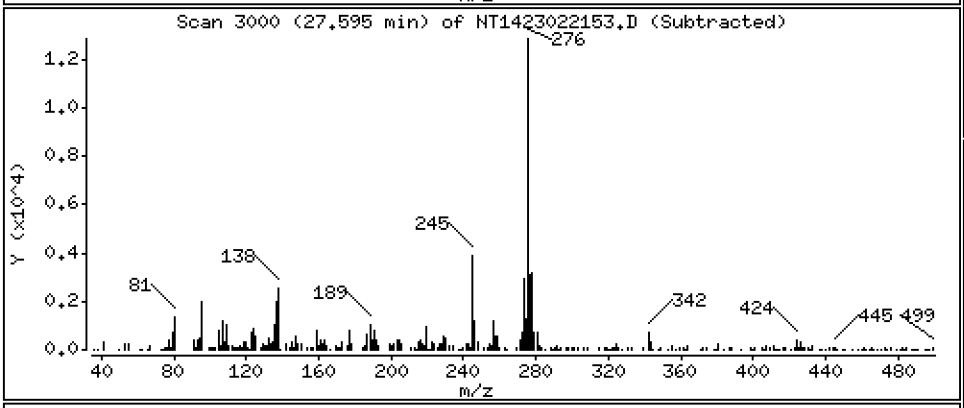
Column diameter: 0.25

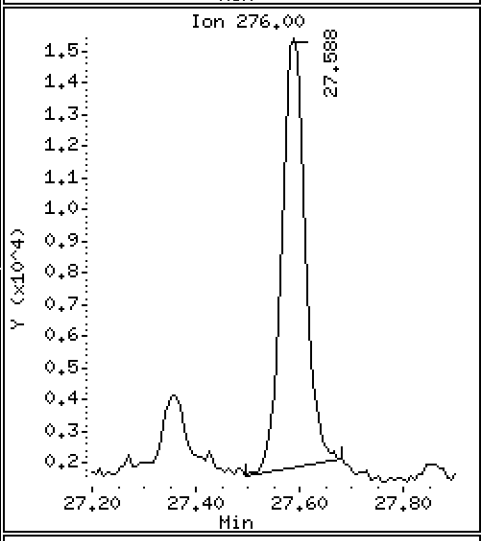
79 Dibenzo(a,h)anthracene

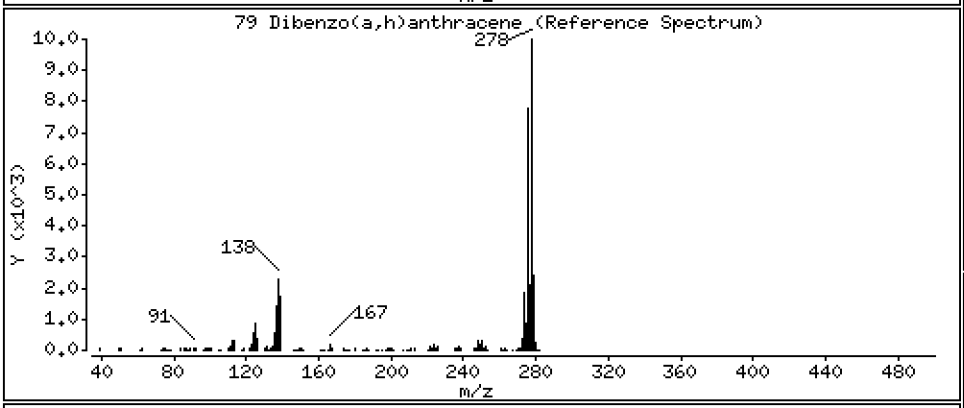
Concentration: 0.1054 ug/mL

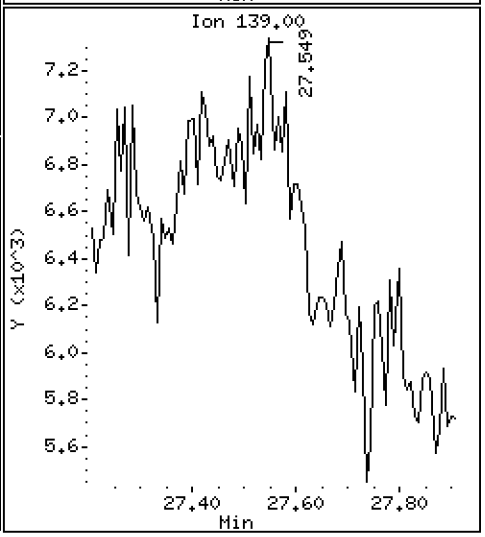


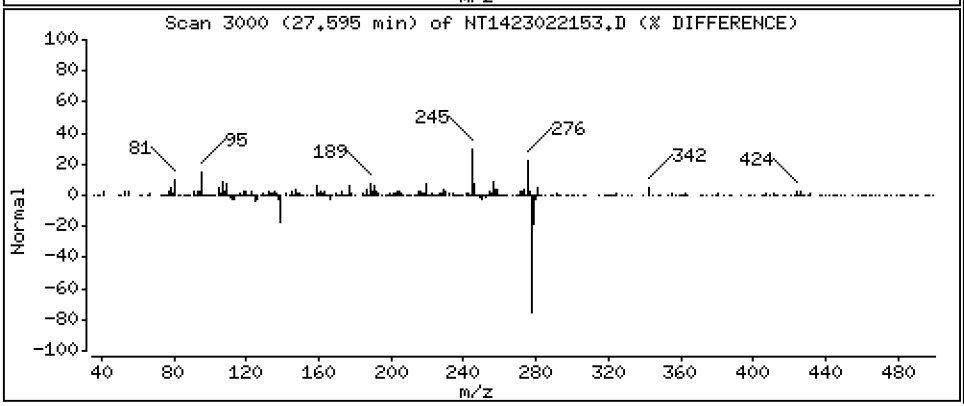












Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

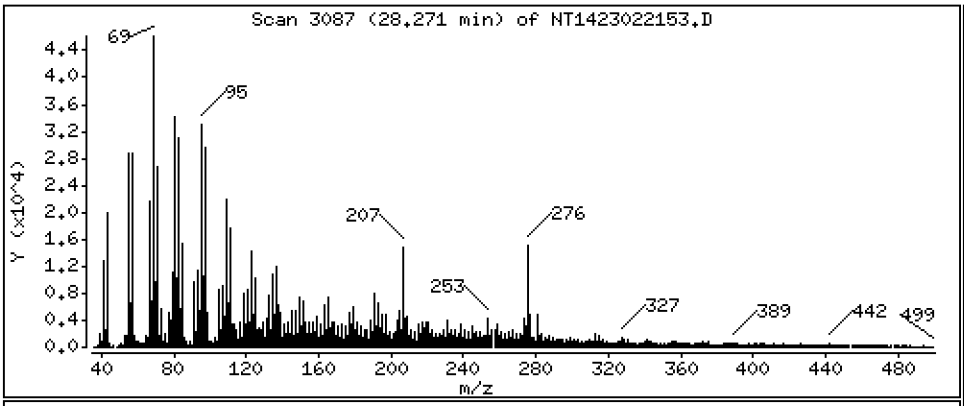
Operator: DSD

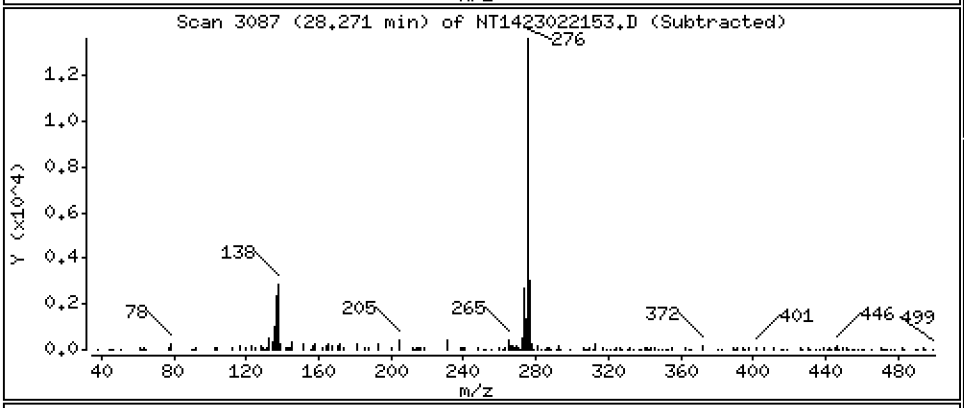
Column phase: ZB-5msi

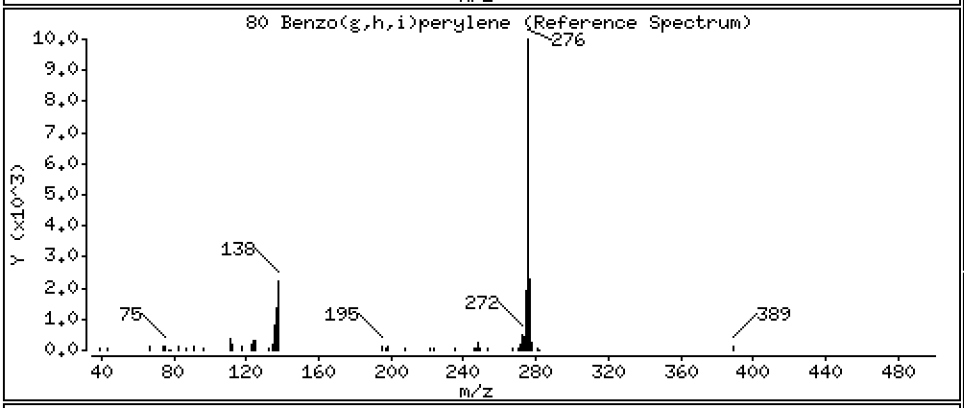
Column diameter: 0.25

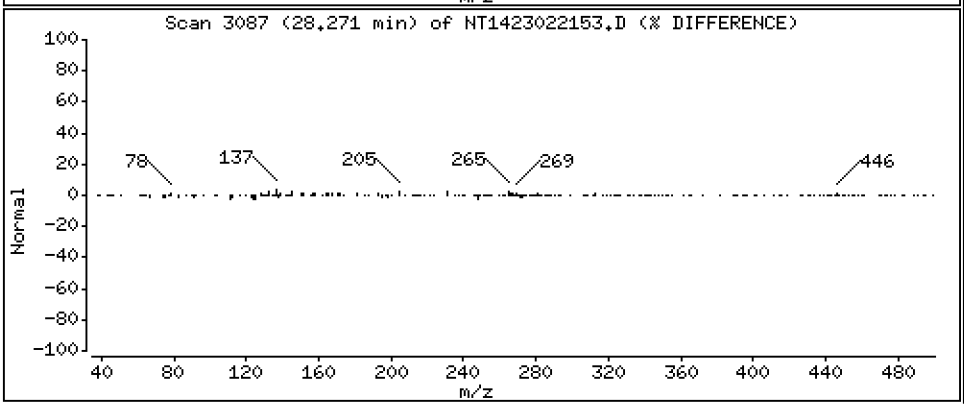
80 Benzo(g,h,i)perylene

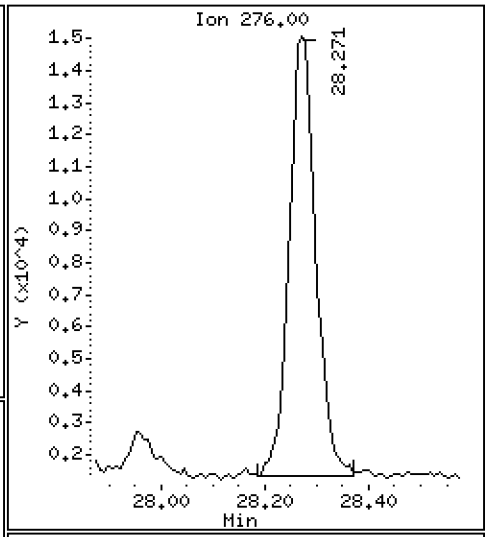
Concentration: 0.4875 ug/mL

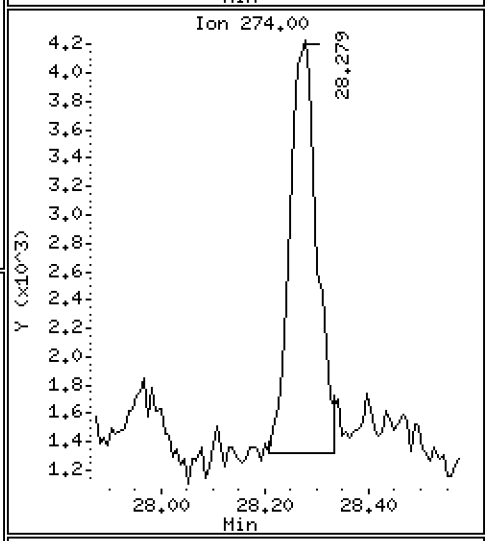


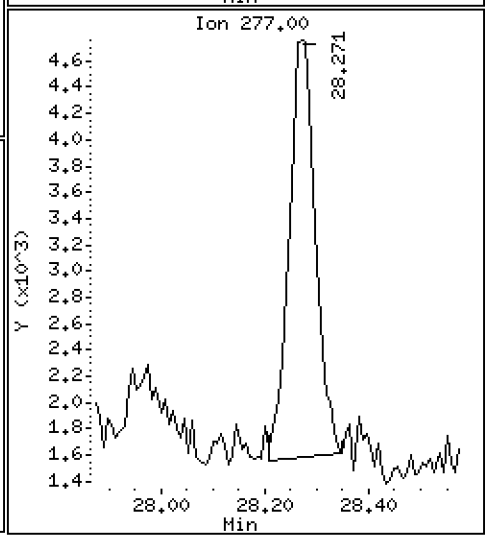












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022153.D

Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

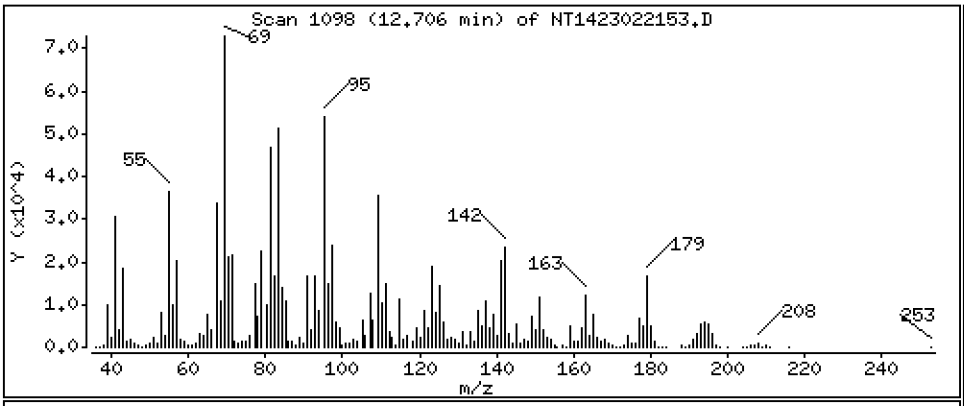
Operator: DSD

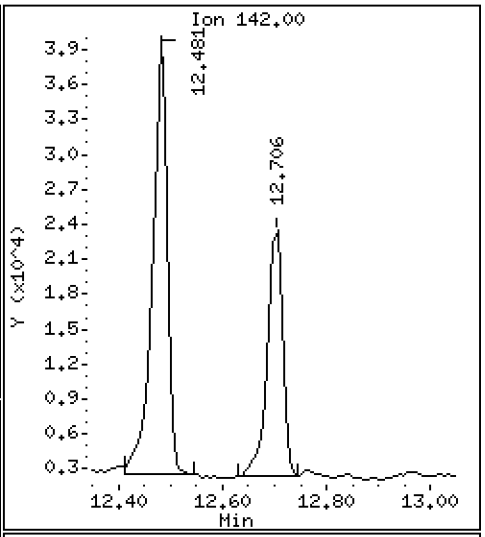
Column phase: ZB-5msi

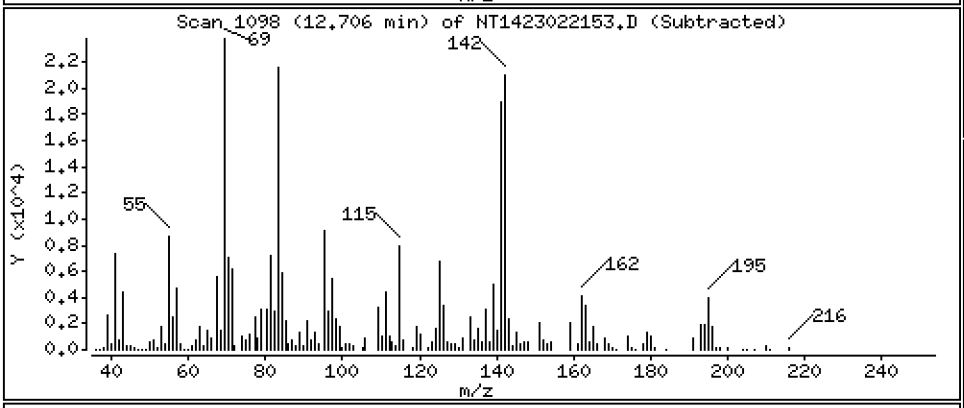
Column diameter: 0.25

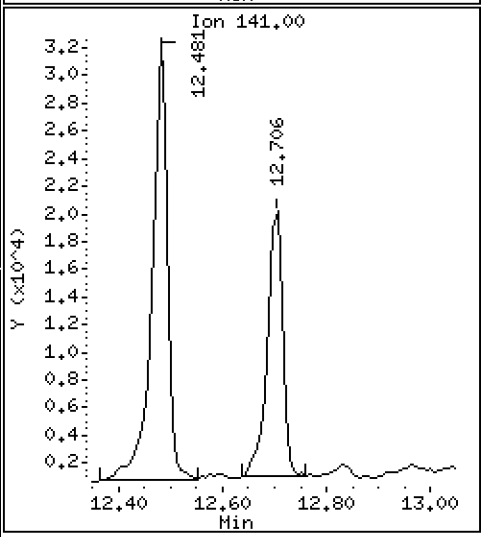
105 1-methylnaphthalene

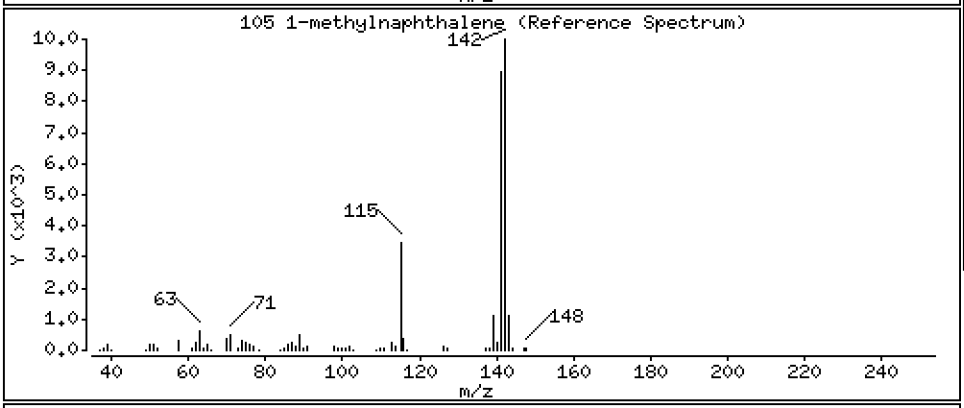
Concentration: 0.2623 ug/mL

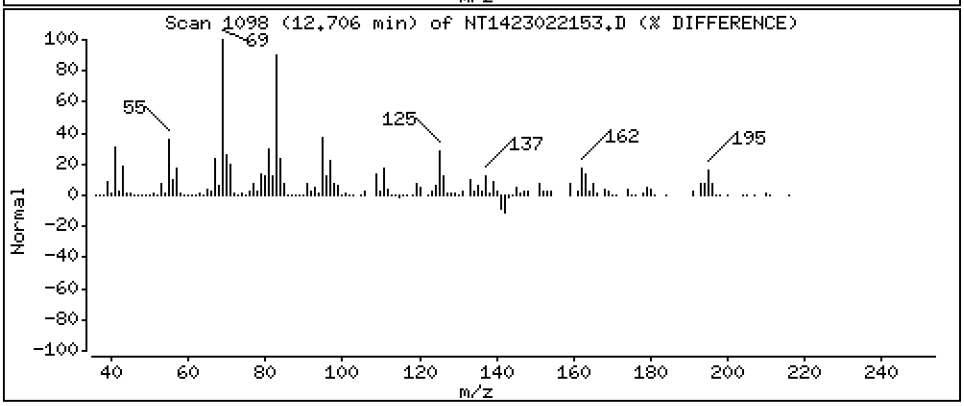












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221C.b\NT1423022153.D
Lab Smp Id: 23A0133-10
Inj Date : 22-FEB-2023 20:48 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-10
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Meth Date : 03-Mar-2023 06:54 van Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 36
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	6.388	6.380	(0.746)	348730	5.33474	5.335
$ 2	Phenol-d5	99	7.973	7.972	(0.930)	517281	4.98831	4.988
3	Phenol	94	7.996	7.996	(0.933)	23578	0.21478	0.2148
$ 5	2-Chlorophenol-d4	132	8.212	8.212	(0.958)	386846	5.22821	5.228
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	8.568	8.568	(1.000)	244527	4.00000	
9	1,4-Dichlorobenzene	146	8.599	8.599	(1.004)	2671	0.03270	0.03270(M)
$ 10	1,2-Dichlorobenzene-d4	152	8.925	8.925	(1.042)	176204	3.17703	3.177
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
17	Hexachloroethane	117	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
15	4-Methylphenol	108	9.375	9.367	(1.094)	18843	0.23279	0.2328
$ 18	Nitrobenzene-d5	82	9.662	9.662	(0.875)	368805	3.45005	3.450
19	Nitrobenzene	77	Compound Not Detected.					
20	Isophorone	82	Compound Not Detected.					
21	2-Nitrophenol	139	Compound Not Detected.					
22	2,4-Dimethylphenol	107	Compound Not Detected.					
23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
24	Benzoic acid	105	Compound Not Detected.					
25	2,4-Dichlorophenol	162	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.042	11.042	(1.000)	925301	4.00000	
28	Naphthalene	128	11.081	11.081	(1.003)	219403	0.96166	0.9617
29	4-Chloroaniline	127	Compound Not Detected.					
30	Hexachlorobutadiene	225	Compound Not Detected.					
31	4-Chloro-3-methylphenol	107	Compound Not Detected.					
32	2-Methylnaphthalene	142	12.481	12.481	(1.130)	71632	0.41921	0.4192
33	Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.270	13.270	(0.905)	680768	3.44763	3.448
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	14.338	14.338	(0.978)	74985	0.30504	0.3050
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	14.656	14.648	(1.000)	551910	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	14.725	14.717	(1.005)	40381	0.27437	0.2744
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.050	15.050	(1.027)	74223	0.30715	0.3072
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	Compound Not Detected.					
	49	Fluorene	166	15.761	15.753	(1.075)	62671	0.24801	0.2480
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.301	16.293	(1.112)	140974	4.39800	4.398
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	17.692	17.676	(1.000)	969354	4.00000	
	60	Phenanthrene	178	17.738	17.723	(1.003)	291106	1.24974	1.250
	61	Anthracene	178	17.831	17.816	(1.008)	120819	0.52354	0.5235
	62	Carbazole	167	Compound Not Detected.					
	63	Di-n-butylphthalate	149	Compound Not Detected.					
	64	Fluoranthene	202	20.199	20.137	(0.886)	442272	1.68352	1.684
	65	Pyrene	202	20.601	20.562	(0.904)	787920	2.83639	2.836
$	66	Terphenyl-d14	244	20.895	20.872	(0.917)	730749	3.70488	3.705
	67	Butylbenzylphthalate	149	Compound Not Detected.					
	68	Benzo(a)anthracene	228	22.769	22.745	(0.999)	138127	0.70885	0.7089
*	69	Chrysene-d12	240	22.792	22.769	(1.000)	608919	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	22.839	22.815	(1.002)	192735	1.09964	1.100
	72	bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
*	134	Di-n-octylphthalate-d4	153	23.853	23.837	(1.000)	812974	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	Compound Not Detected.					
	75	Benzo(k)fluoranthene	252	Compound Not Detected.					
	76	Benzo(a)pyrene	252	25.146	25.114	(0.996)	90195	0.58471	0.5847
*	77	Perylene-d12	264	25.246	25.223	(1.000)	512839	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.587	27.548	(1.093)	46597	0.36708	0.3671
	79	Dibenzo(a,h)anthracene	278	27.595	27.564	(1.093)	11008	0.10539	0.1054(M)
	80	Benzo(g,h,i)perylene	276	28.271	28.224	(1.120)	50237	0.48753	0.4875
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	12.705	12.697	(1.151)	42070	0.26225	0.2623
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

						CONCENTRATIONS	
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	Compound Not Detected.					
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022153.D
Lab Smp Id: 23A0133-10
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 16:35
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	232195	116098	464390	244527	5.31
27 Naphthalene-d8	800631	400316	1601262	925301	15.57
42 Acenaphthene-d10	488064	244032	976128	551910	13.08
59 Phenanthrene-d10	971279	485640	1942558	969354	-0.20
69 Chrysene-d12	687083	343542	1374166	608919	-11.38
134 Di-n-octylphthala	1174636	587318	2349272	812974	-30.79
77 Perylene-d12	491790	245895	983580	512839	4.28

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.66	0.05
59 Phenanthrene-d10	17.68	17.18	18.18	17.69	0.09
69 Chrysene-d12	22.77	22.27	23.27	22.79	0.10
134 Di-n-octylphthala	23.84	23.34	24.34	23.85	0.07
77 Perylene-d12	25.22	24.72	25.72	25.25	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022153.D

Lab ID: 23A0133-10
nt14.i, ABN.m, 22-FEB-2023 20:48

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

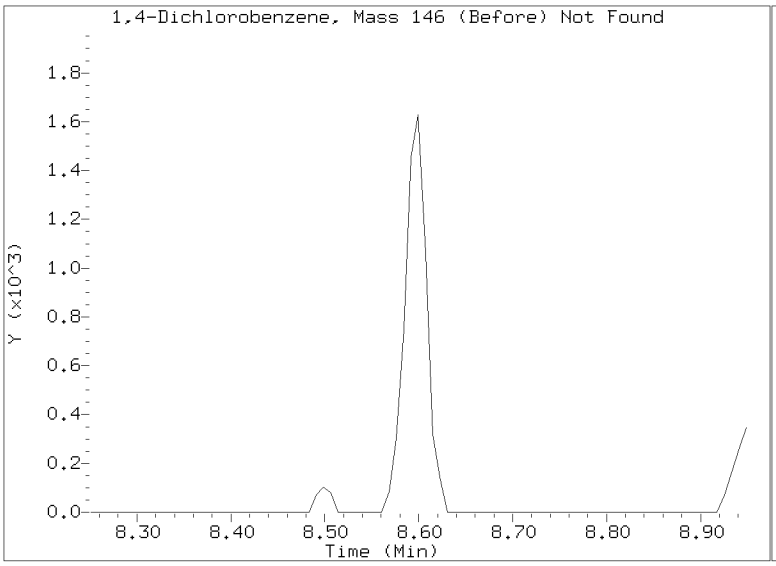
RRT check based on Ccal File: NT1423022146.D

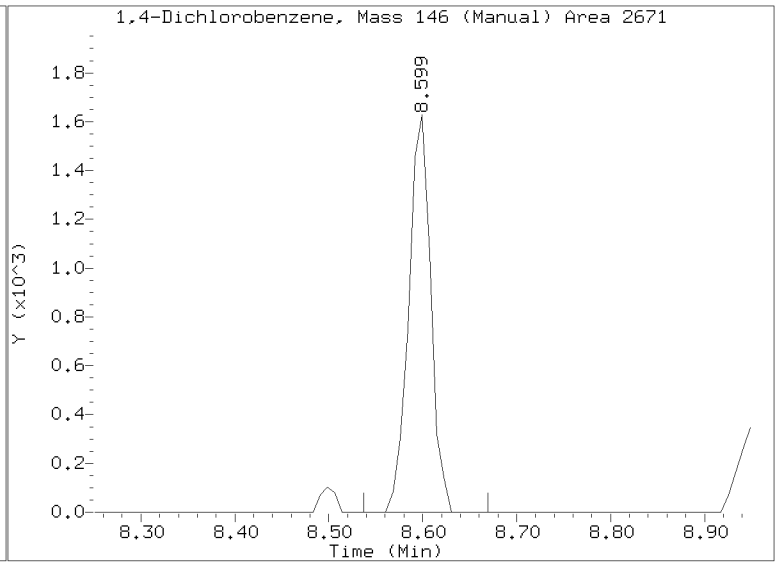
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

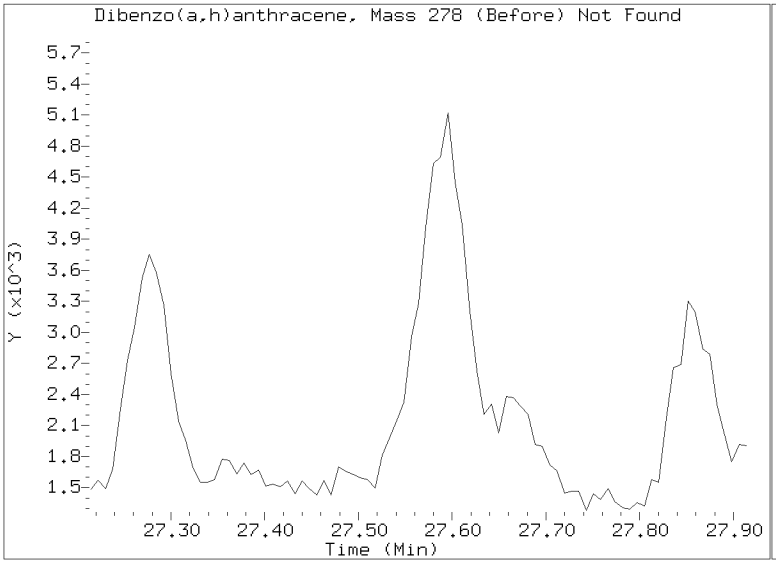
* Only compounds listed in the work order have been verified by the analyst *

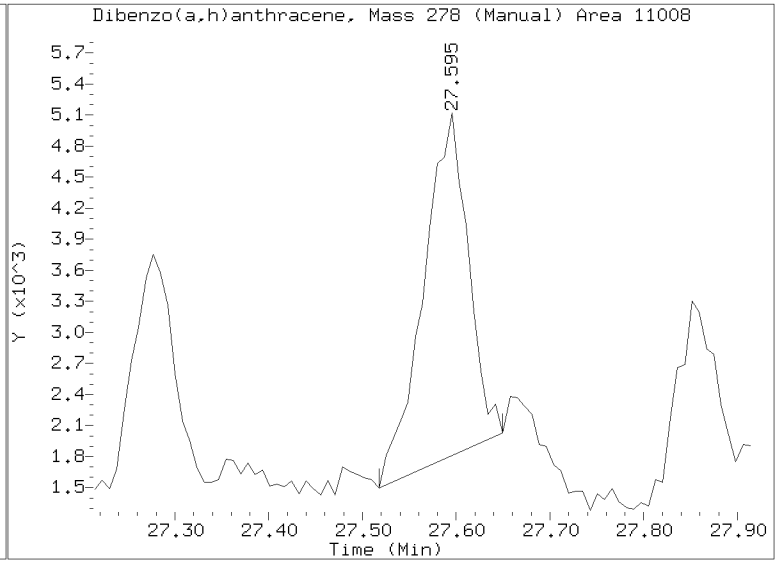
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221C.b/NT1423022153.D
Injection Date: 22-FEB-2023 20:48
Lab ID:23A0133-10 Client ID:
Report Date: 03/03/2023 07:05









Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1222

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-11 C	SDG:	23A0133
Sampled:	01/06/23 13:00	Prepared:	01/18/23 15:24	File ID:	NT1423022154.D
% Solids:	52.13	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 21:24
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	19.2 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	26.2		4.4	20.0
106-44-5	4-Methylphenol	1	20.4		7.4	20.0
91-20-3	Naphthalene	1	22.2		4.2	20.0
91-57-6	2-Methylnaphthalene	1	19.6	J	4.5	20.0
208-96-8	Acenaphthylene	1	20.0	U	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	7.5	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	56.0		8.7	20.0
120-12-7	Anthracene	1	20.7		7.2	20.0
206-44-0	Fluoranthene	1	107		6.1	20.0
129-00-0	Pyrene	1	232		5.7	20.0
85-68-7	Butylbenzylphthalate	1	15.7	J	9.4	20.0
56-55-3	Benzo(a)anthracene	1	60.8		6.0	20.0
218-01-9	Chrysene	1	68.1		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	36.2	J	5.5	50.0
	Benzofluoranthenes, Total	1	155		10.0	40.0
50-32-8	Benzo(a)pyrene	1	67.7		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	32.9		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	36.0		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.33	531	70.8	27 - 120	
Phenol-d5	749.33	501	66.8	29 - 120	
2-Chlorophenol-d4	749.33	517	69.0	31 - 120	
1,2-Dichlorobenzene-d4	499.55	313	62.7	32 - 120	
Nitrobenzene-d5	499.55	348	69.6	30 - 120	
2-Fluorobiphenyl	499.55	347	69.5	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1222

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

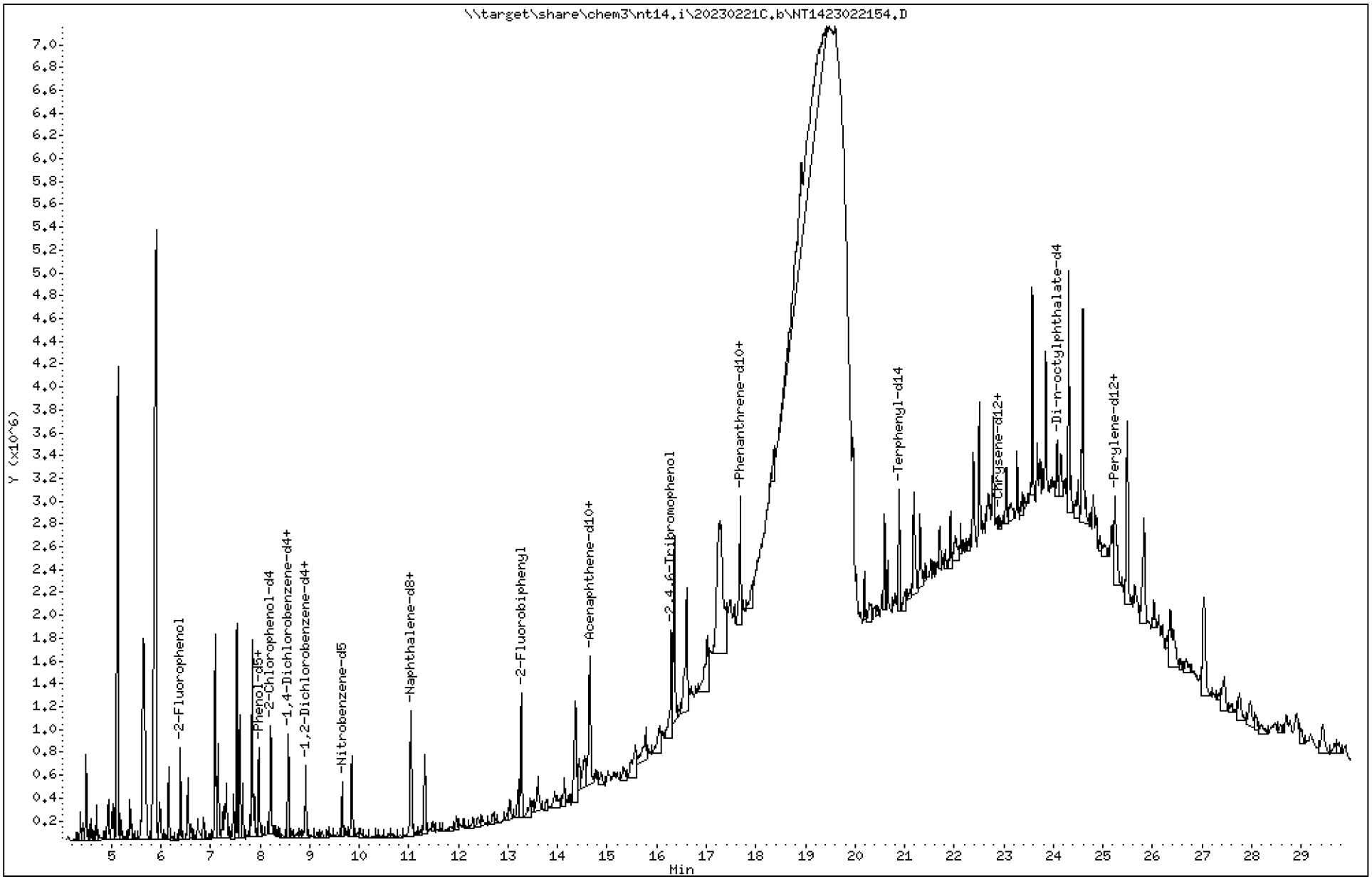
Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-11 C	SDG:	23A0133
Sampled:	01/06/23 13:00	Prepared:	01/18/23 15:24	File ID:	NT1423022154.D
% Solids:	52.13	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 21:24
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	19.2 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	749.33	365	48.7	24 - 134	
p-Terphenyl-d14	499.55	395	79.1	37 - 120	

Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022154.D
Date : 22-FEB-2023 21:24
Client ID:
Sample Info: 23A0133-11

Instrument: nt14.i
Operator: DSD
Column diameter: 0.25

Column phase: ZB-5msi



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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

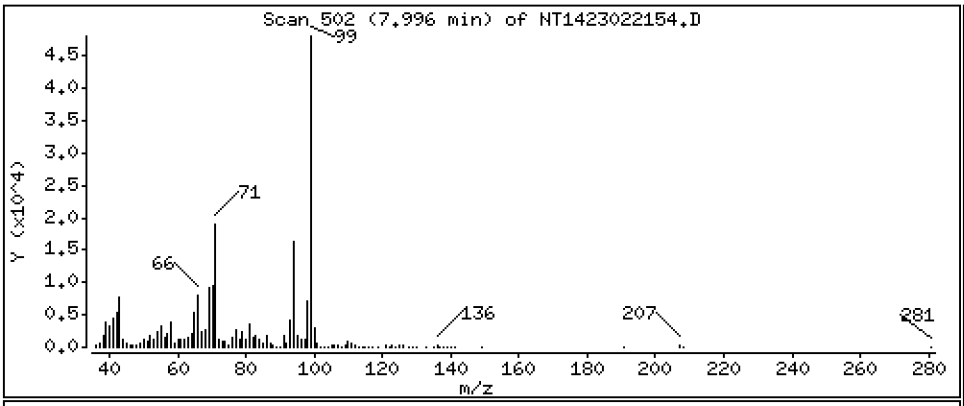
Operator: DSD

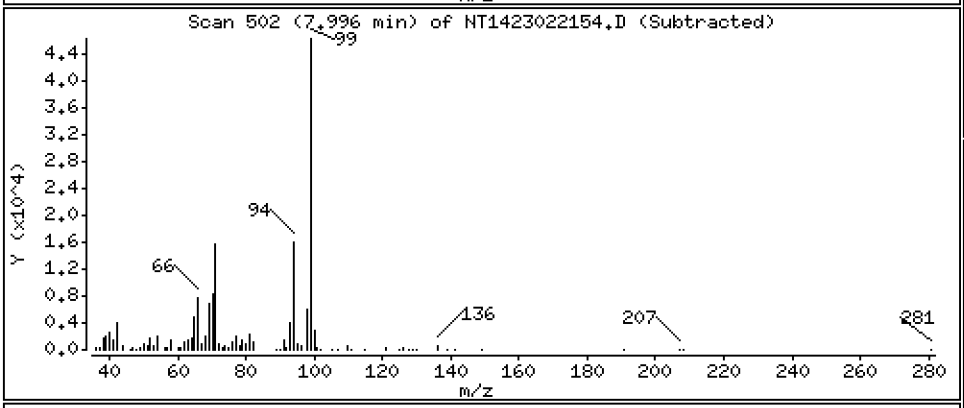
Column phase: ZB-5msi

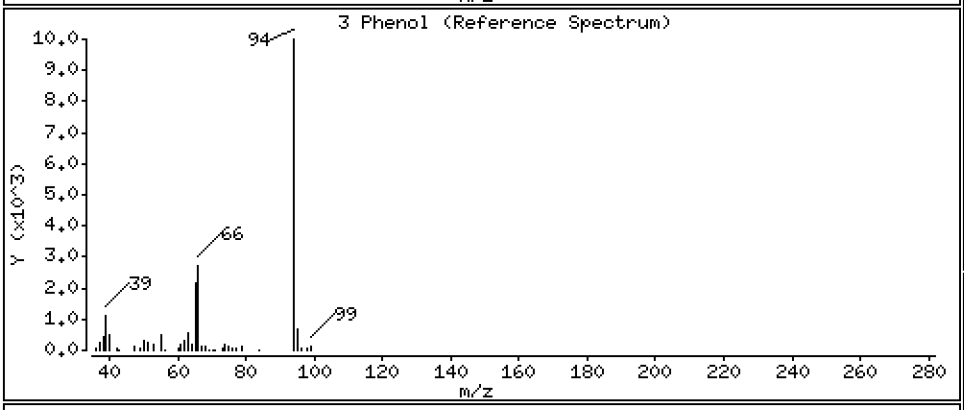
Column diameter: 0.25

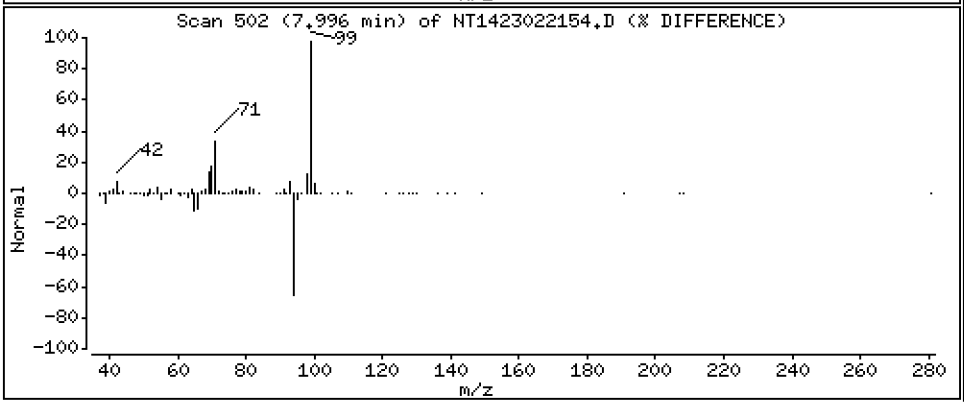
3 Phenol

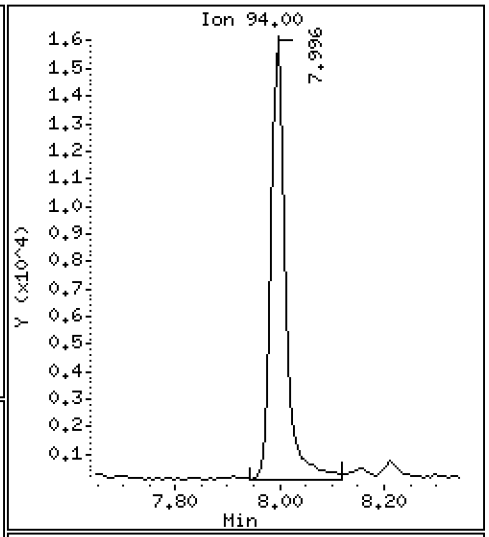
Concentration: 0.2621 ug/mL

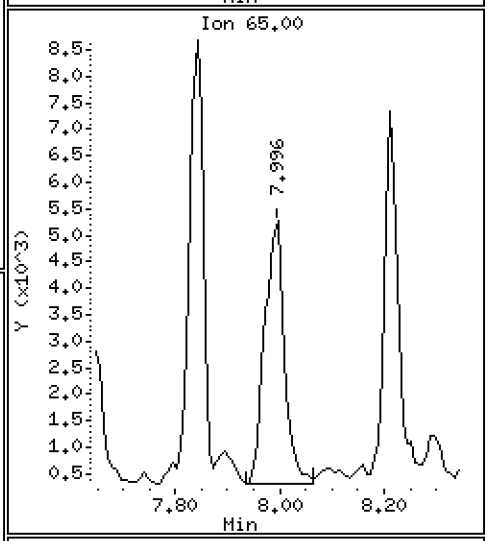


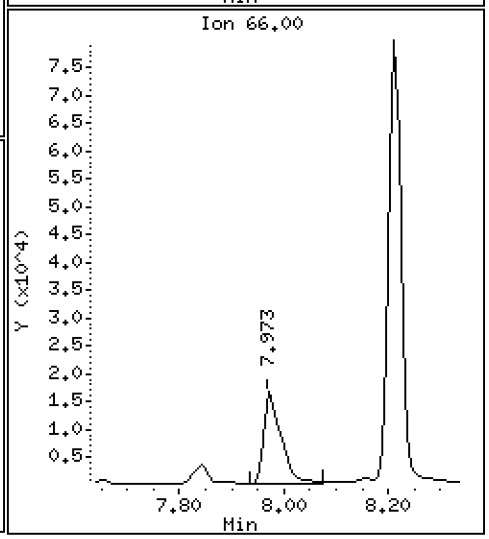












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

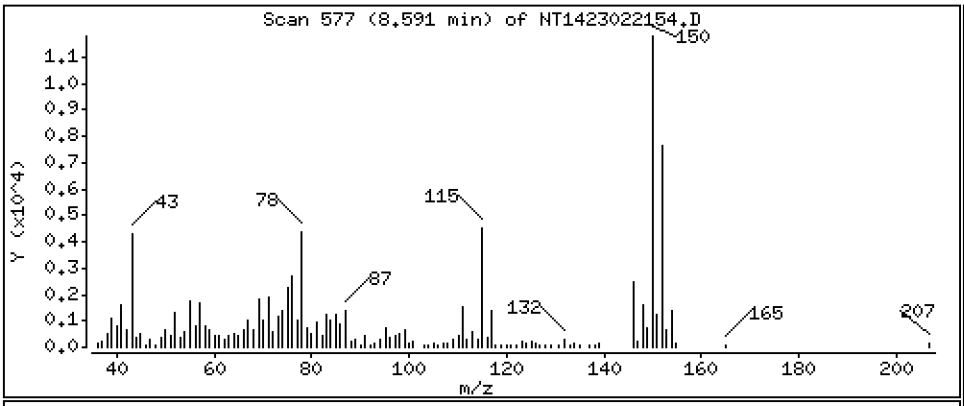
Operator: DSD

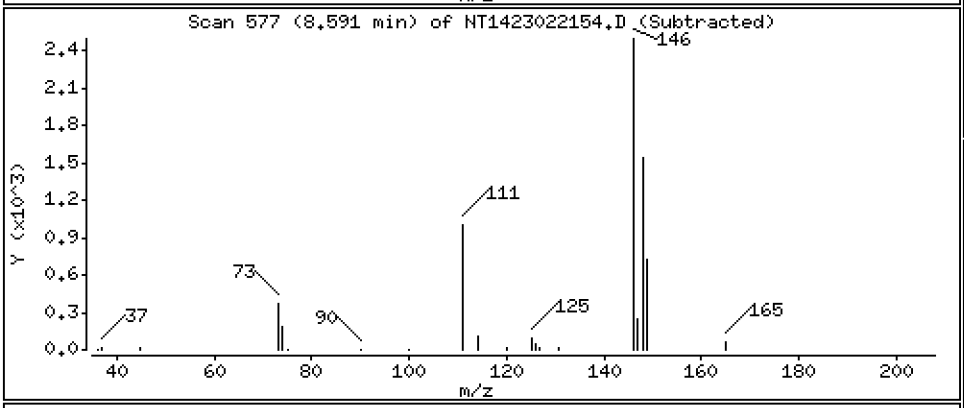
Column phase: ZB-5msi

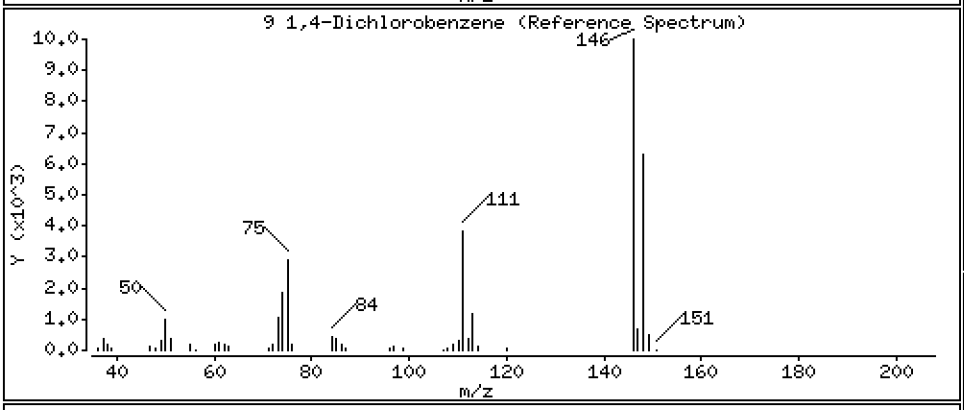
Column diameter: 0.25

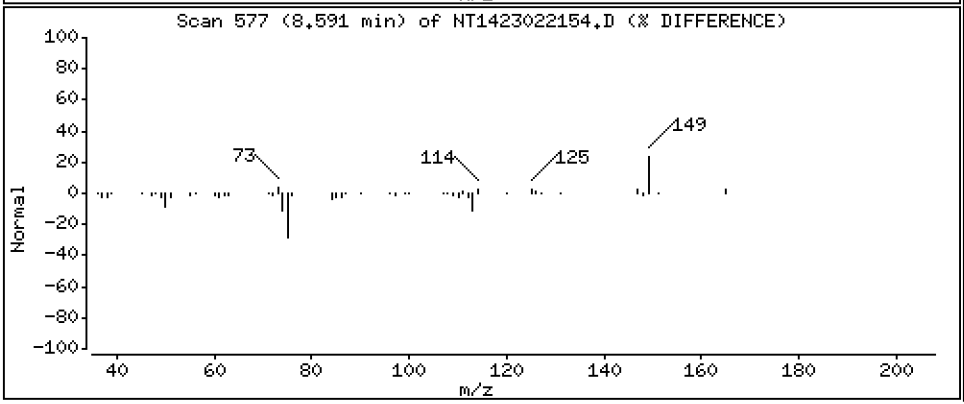
9 1,4-Dichlorobenzene

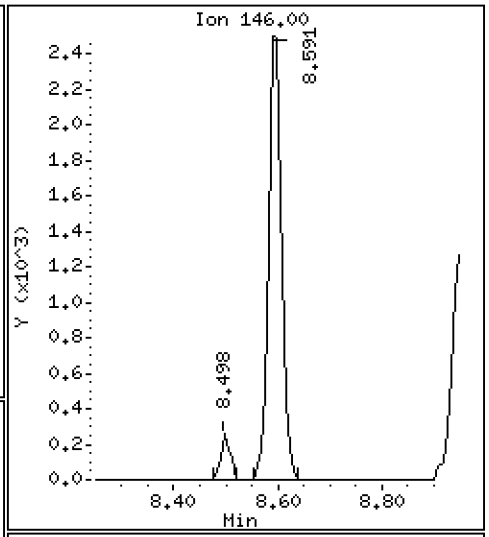
Concentration: 0.05129 ug/mL

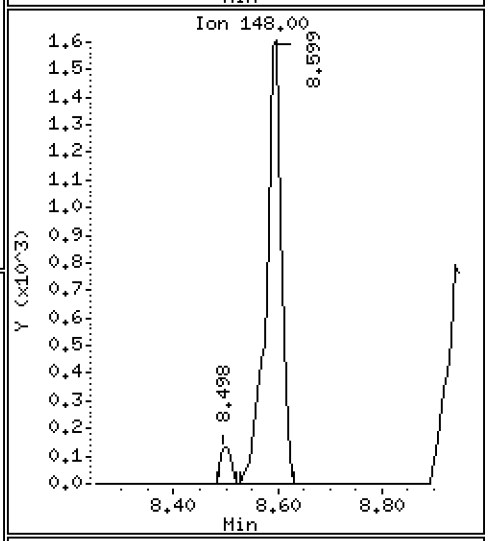


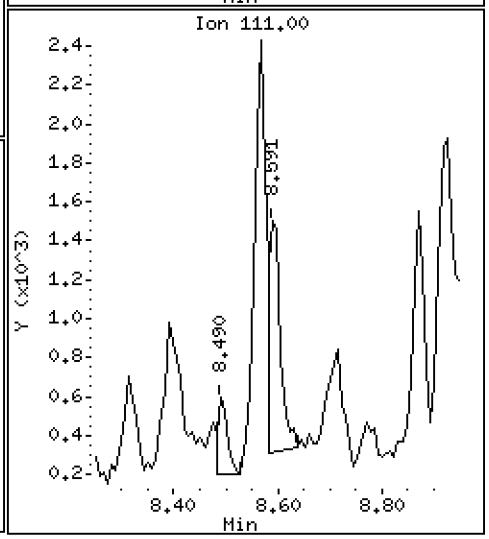












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

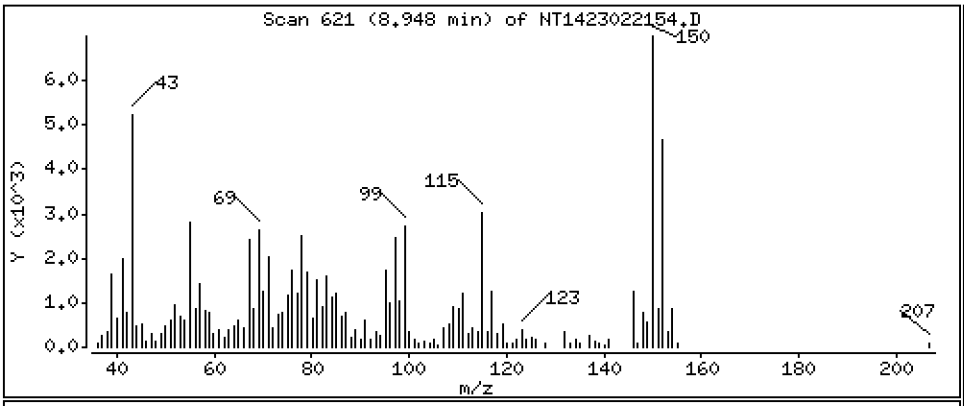
Operator: DSD

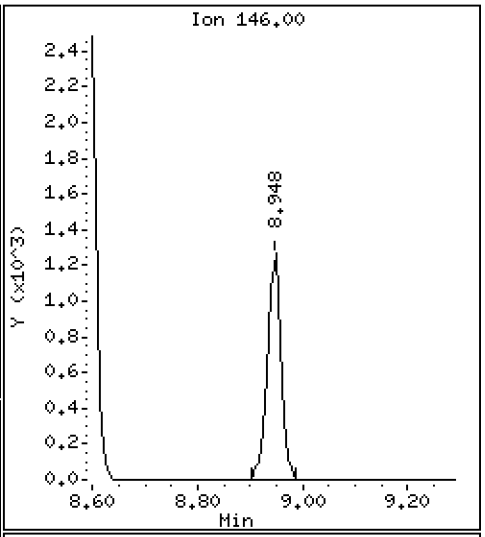
Column phase: ZB-5msi

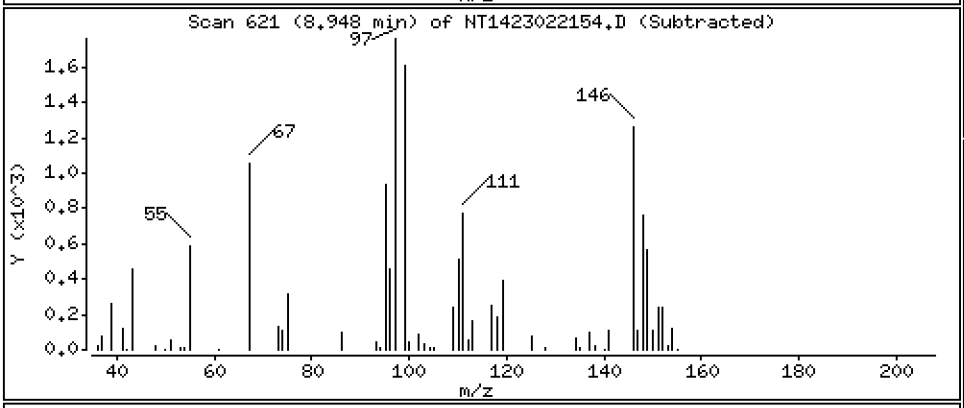
Column diameter: 0.25

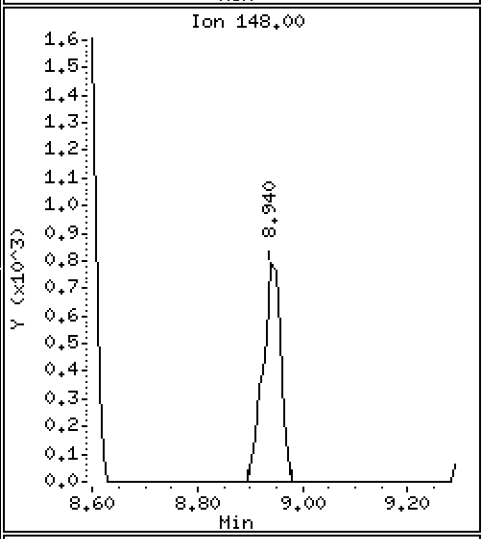
12 1,2-Dichlorobenzene

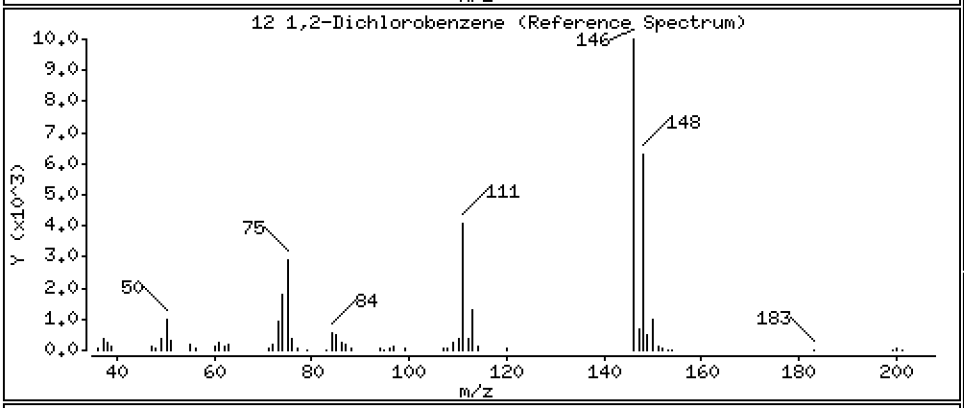
Concentration: 0.02570 ug/mL

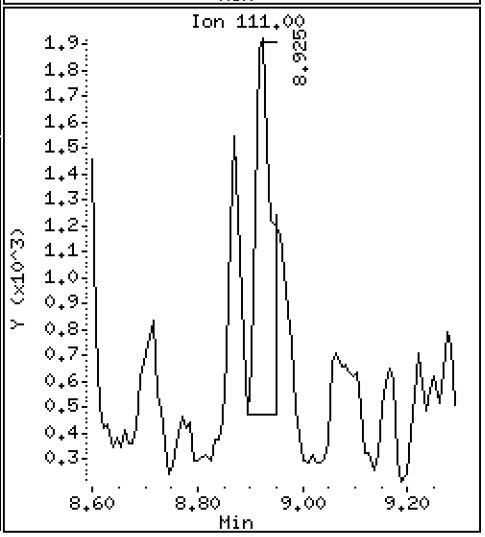


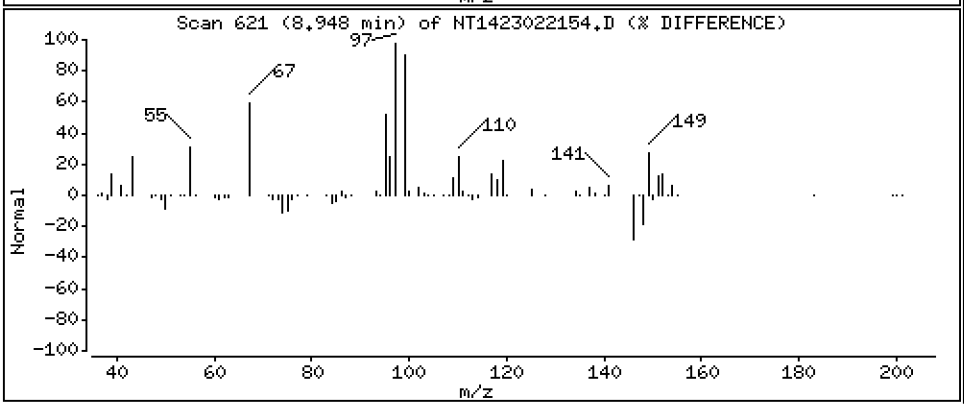












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

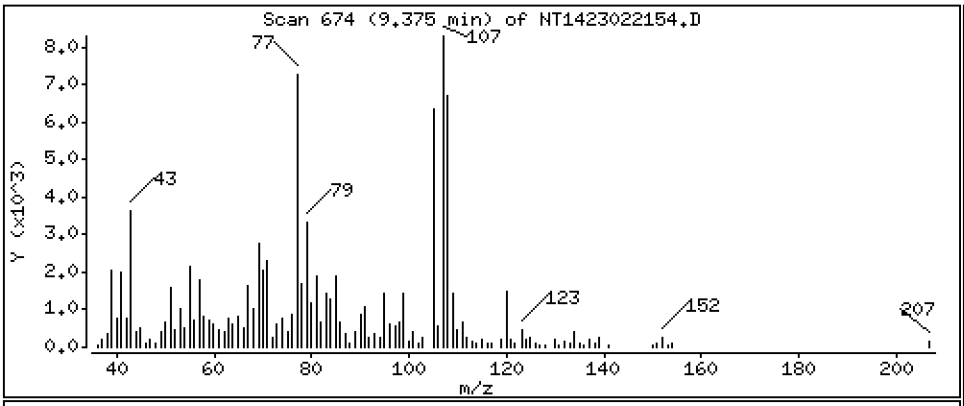
Operator: DSD

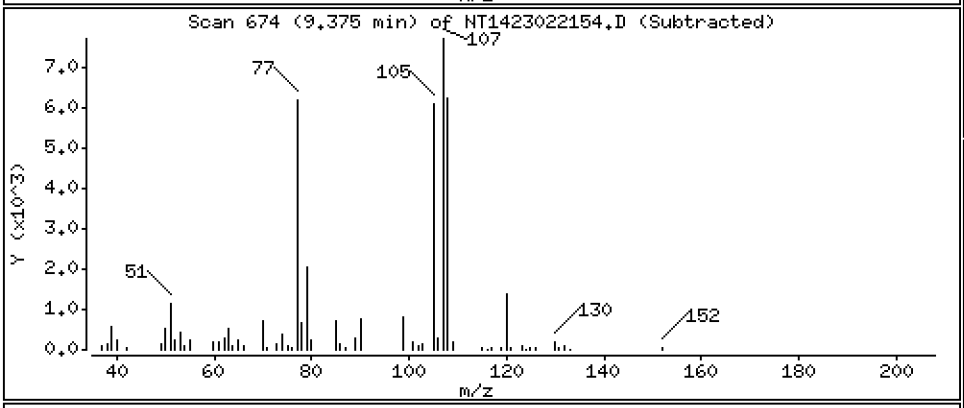
Column phase: ZB-5msi

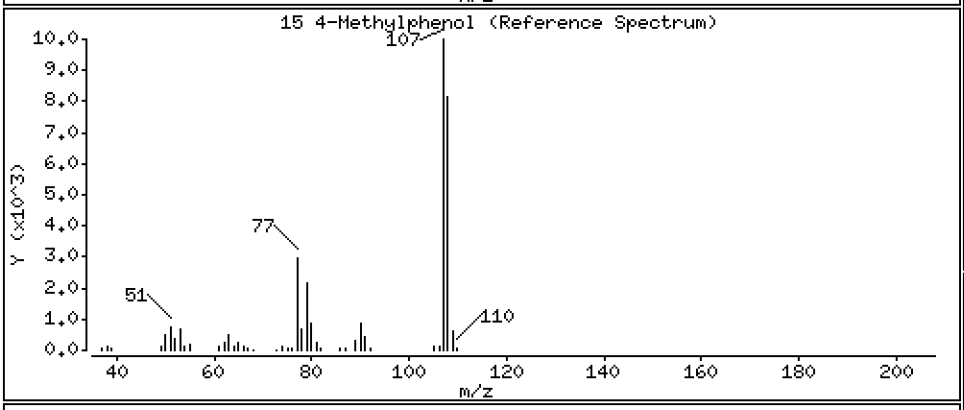
Column diameter: 0.25

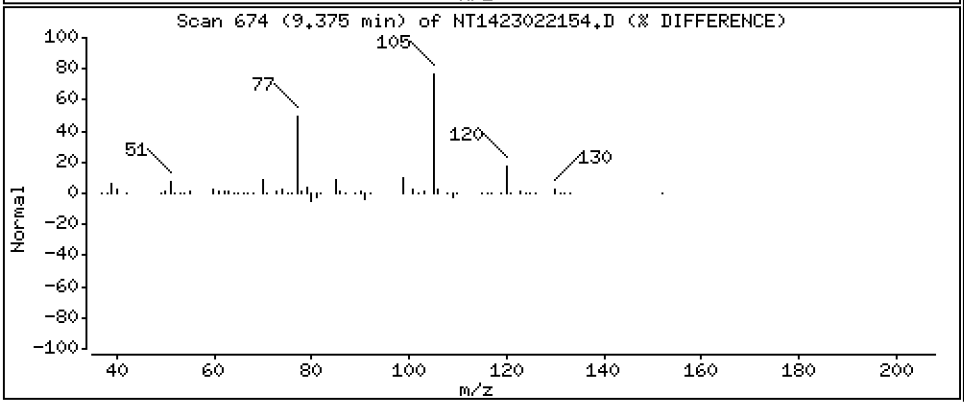
15 4-Methylphenol

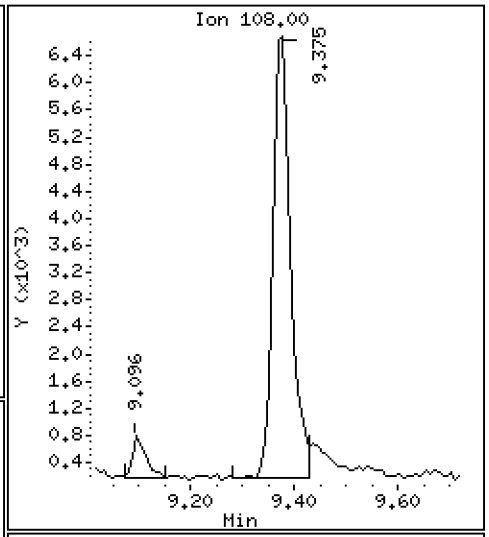
Concentration: 0.2040 ug/mL

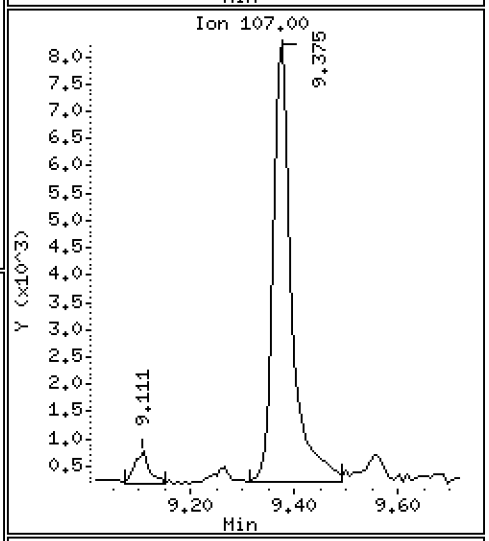


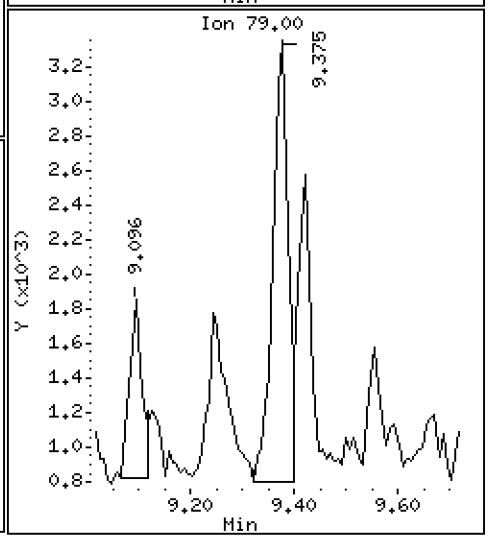












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022154.D

Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

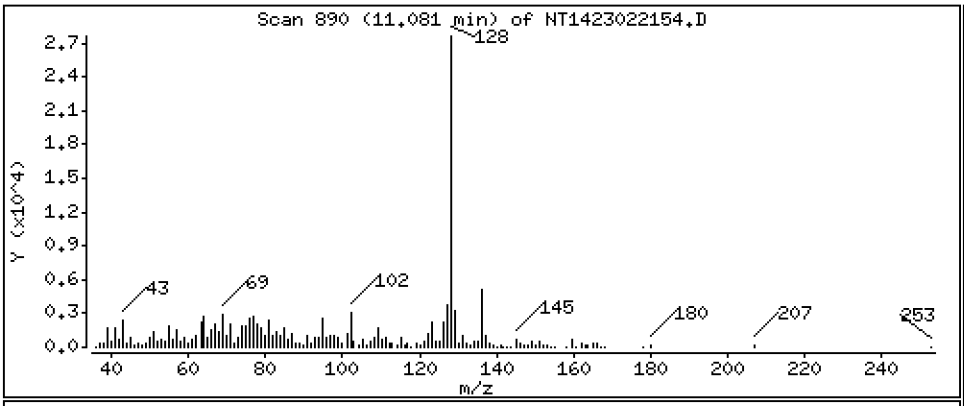
Operator: DSD

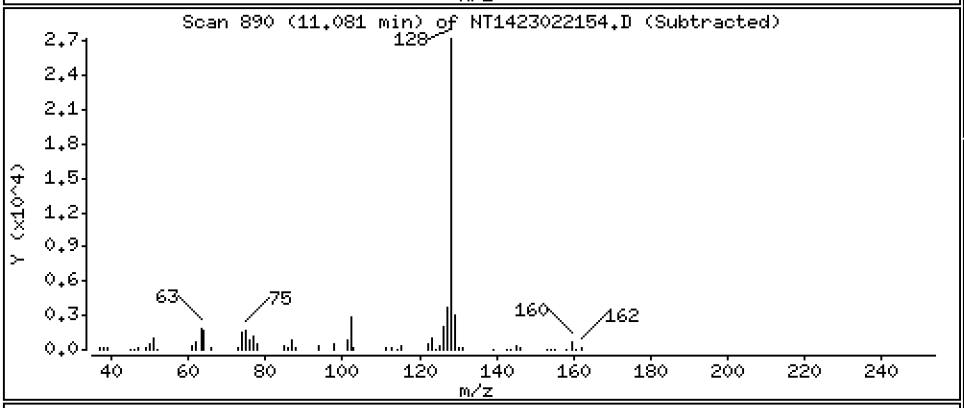
Column phase: ZB-5msi

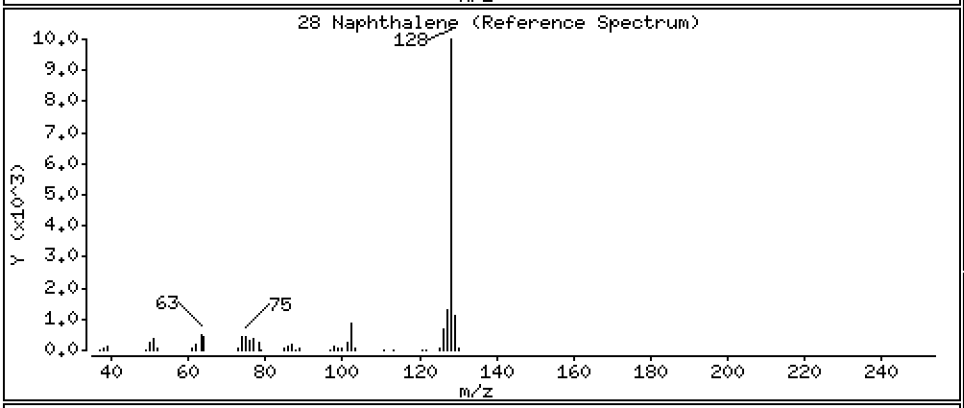
Column diameter: 0.25

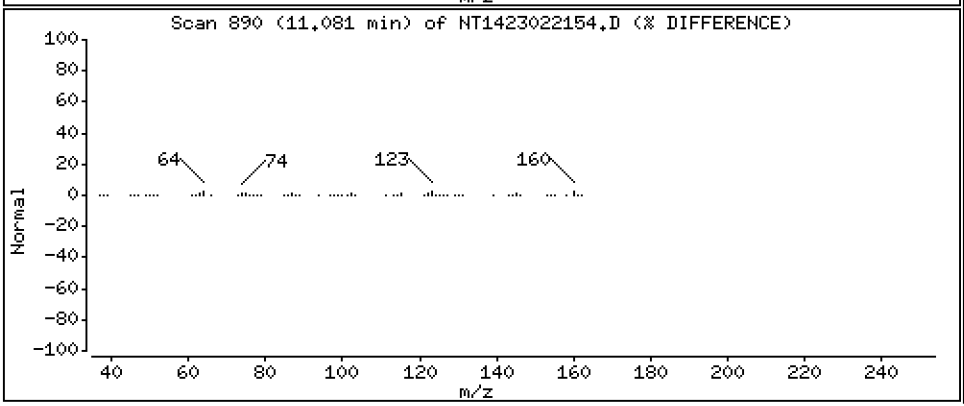
28 Naphthalene

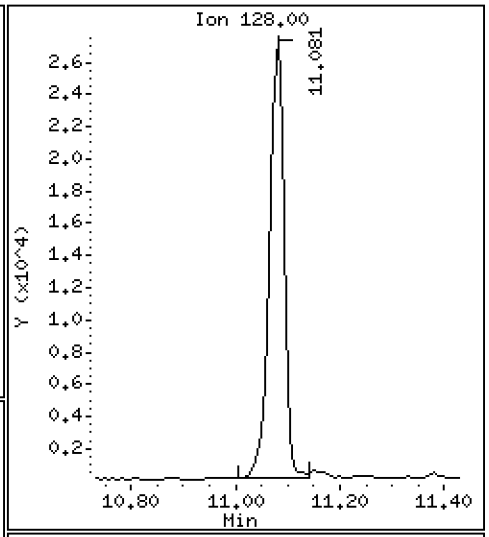
Concentration: 0.2219 ug/mL

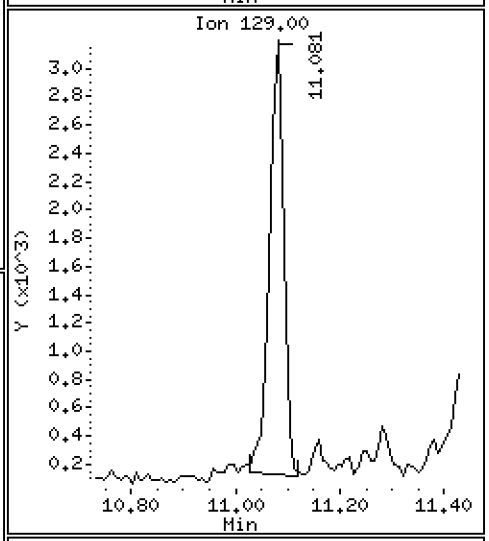


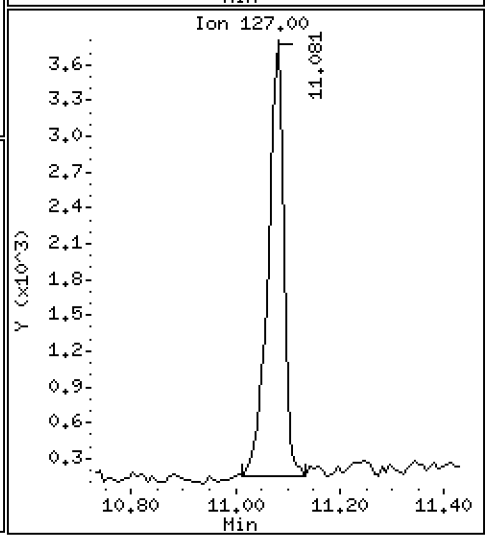












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022154.D

Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

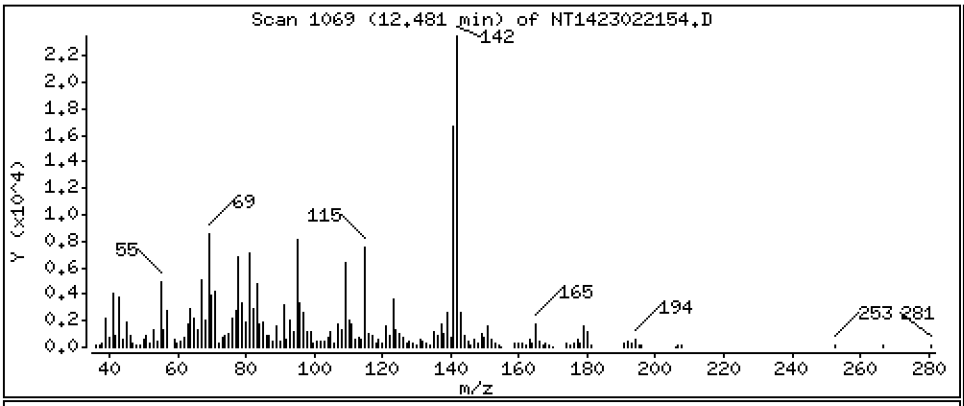
Operator: DSD

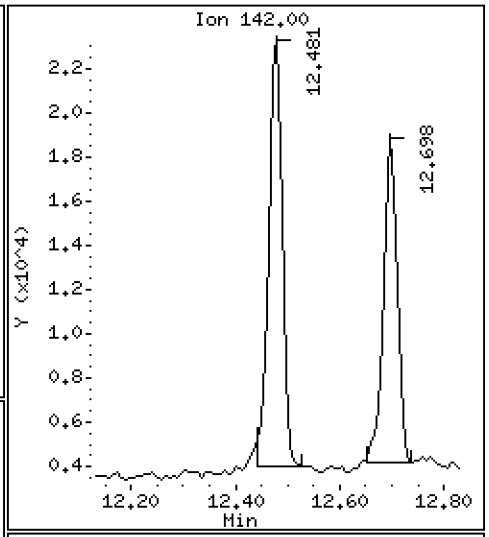
Column phase: ZB-5msi

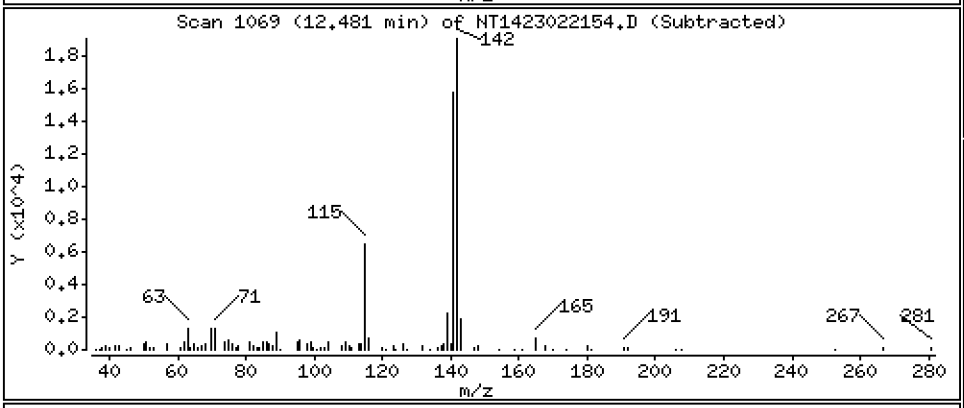
Column diameter: 0.25

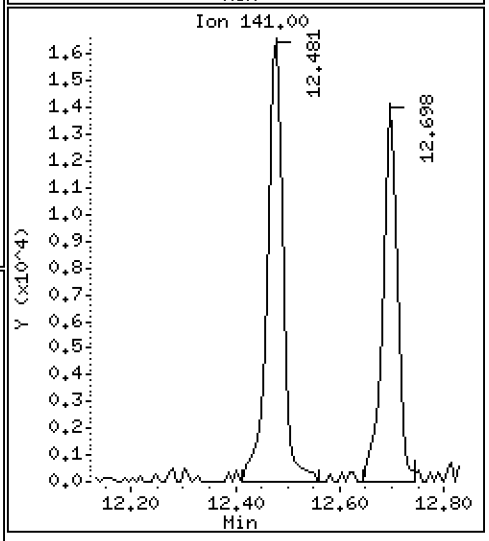
32 2-Methylnaphthalene

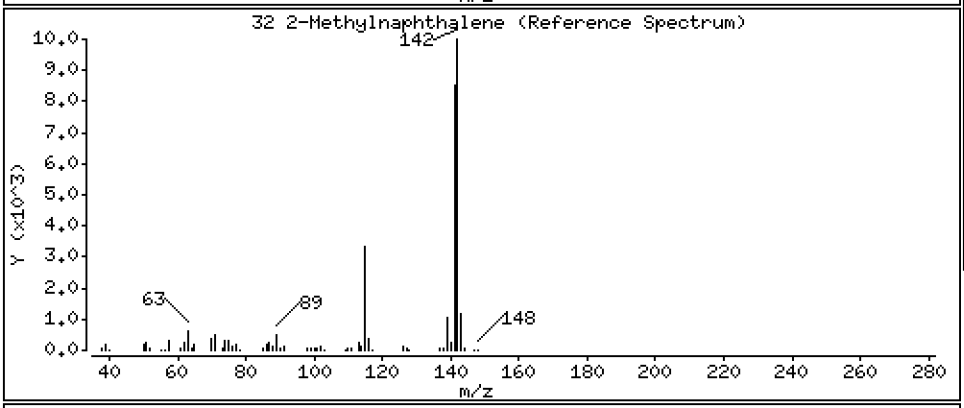
Concentration: 0.1962 ug/mL

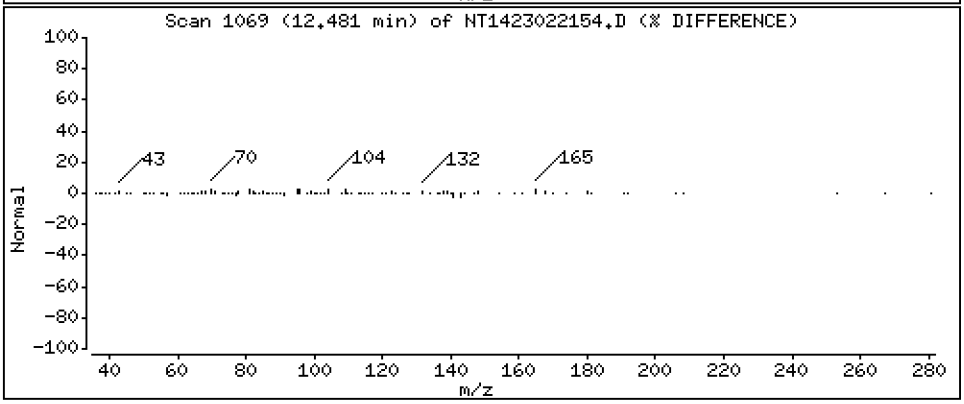












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022154.D

Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

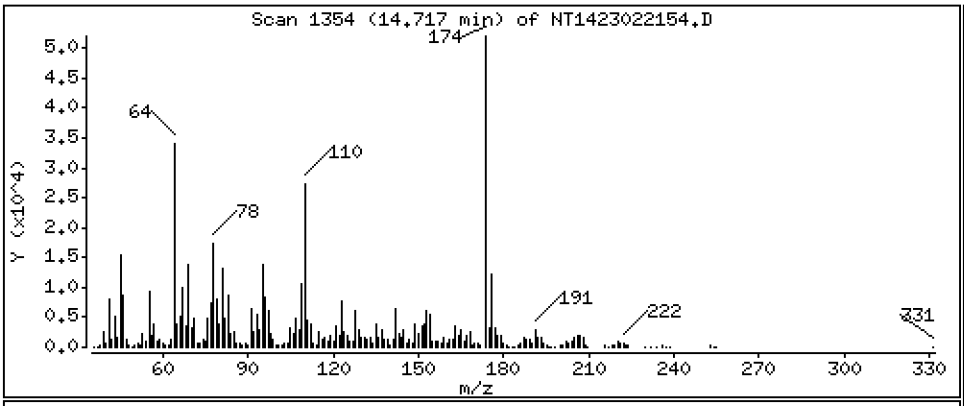
Operator: DSD

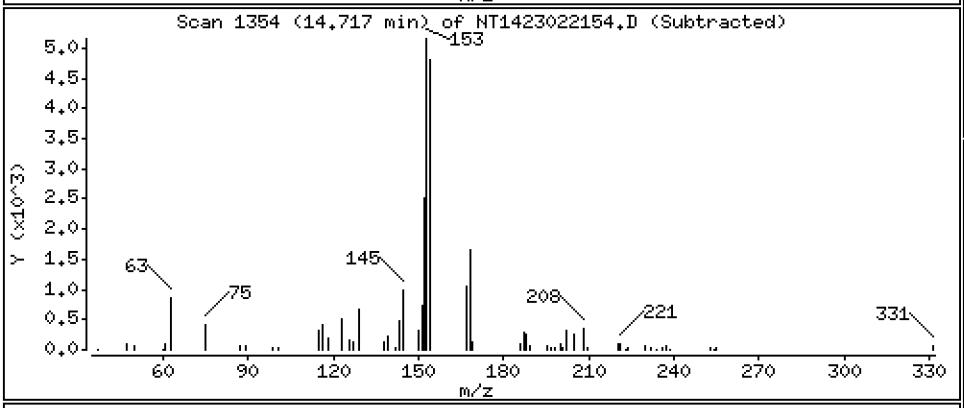
Column phase: ZB-5msi

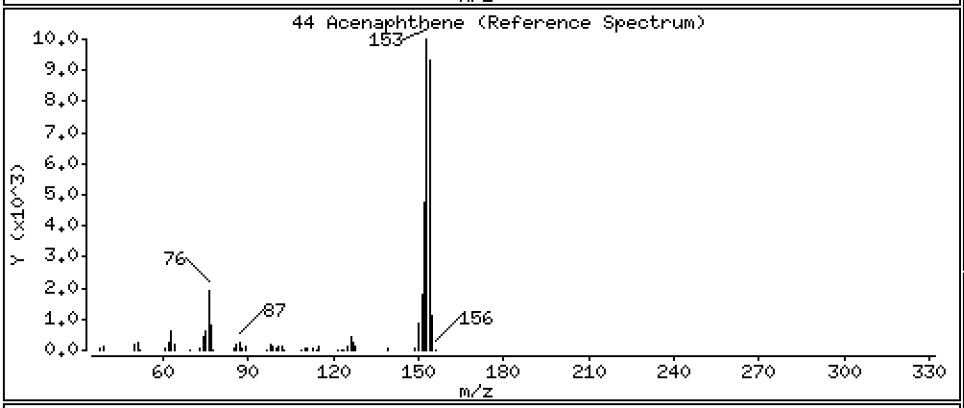
Column diameter: 0.25

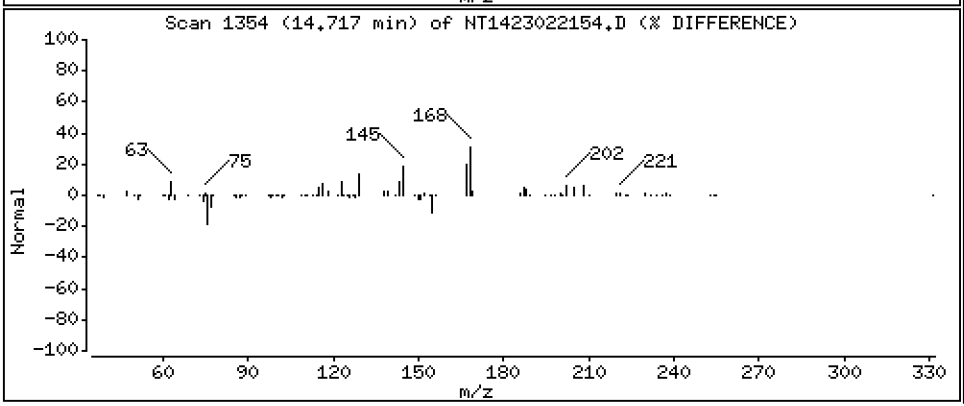
44 Acenaphthene

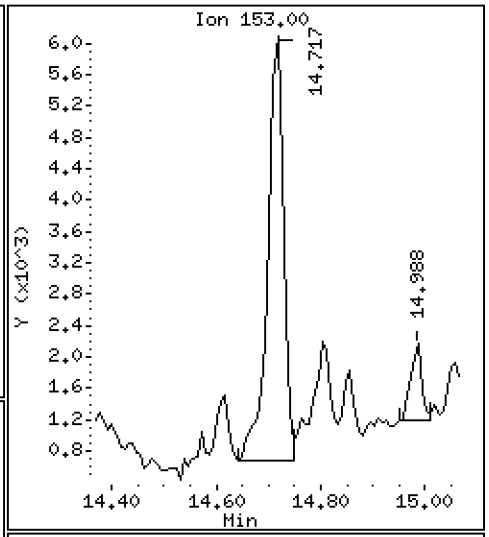
Concentration: 0.07512 ug/mL

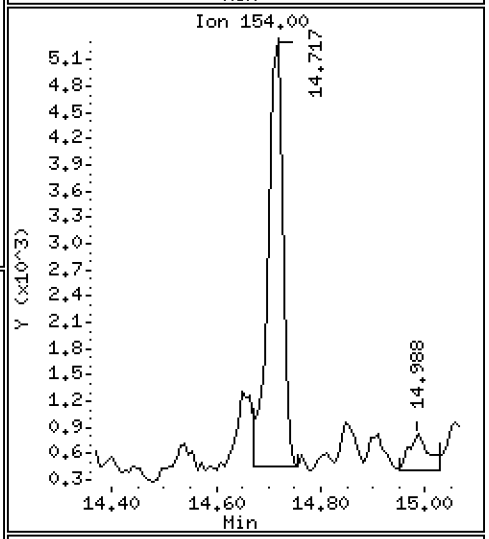


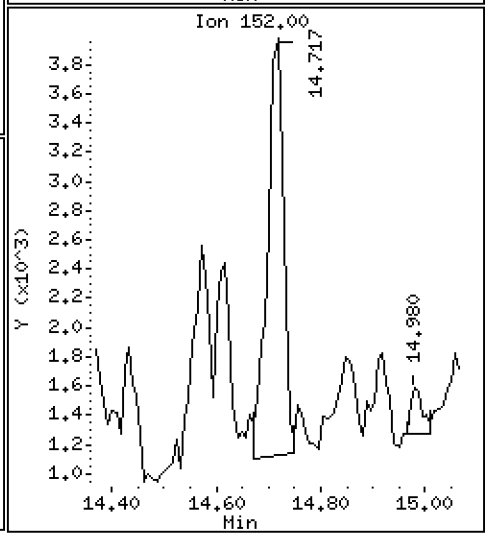












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022154.D

Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

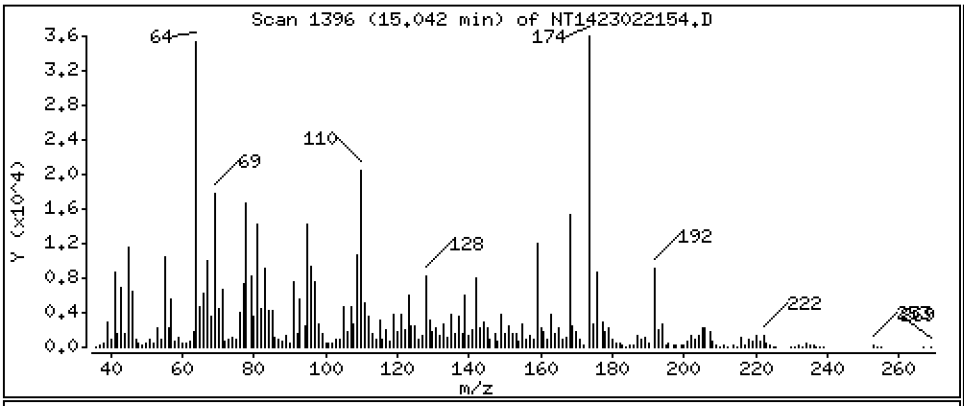
Operator: DSD

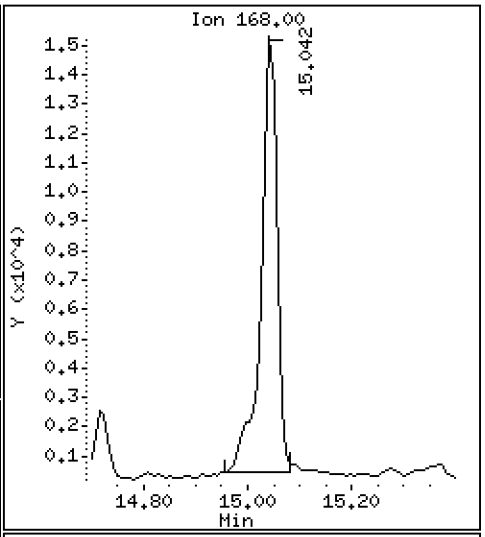
Column phase: ZB-5msi

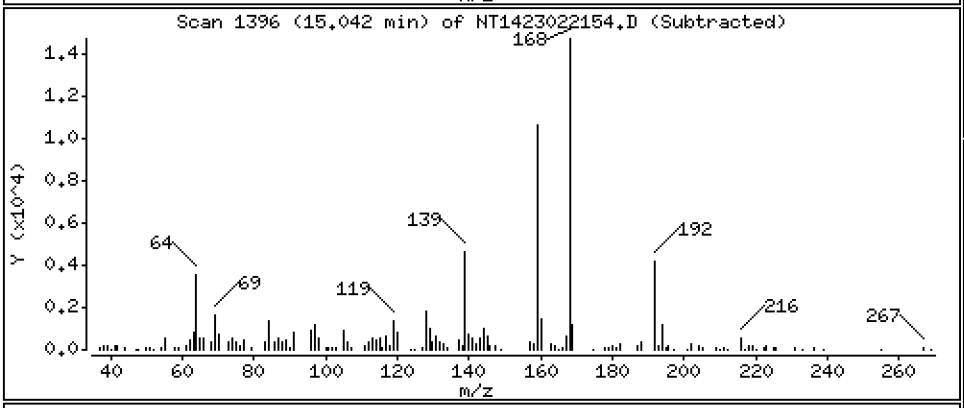
Column diameter: 0.25

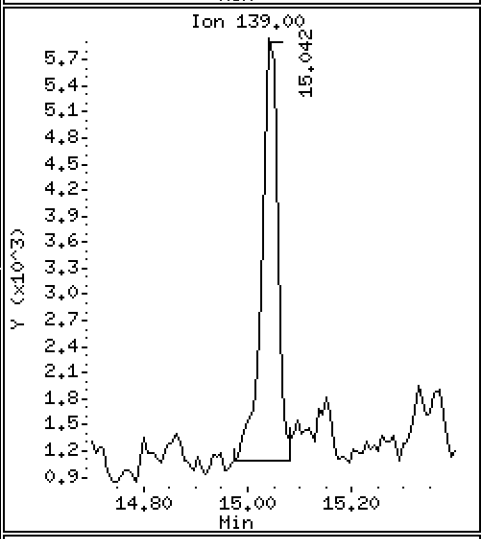
46 Dibenzofuran

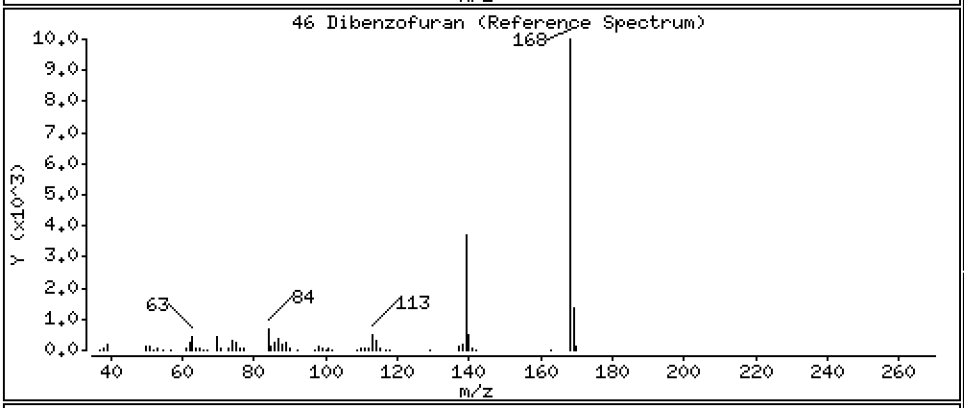
Concentration: 0.1266 ug/mL

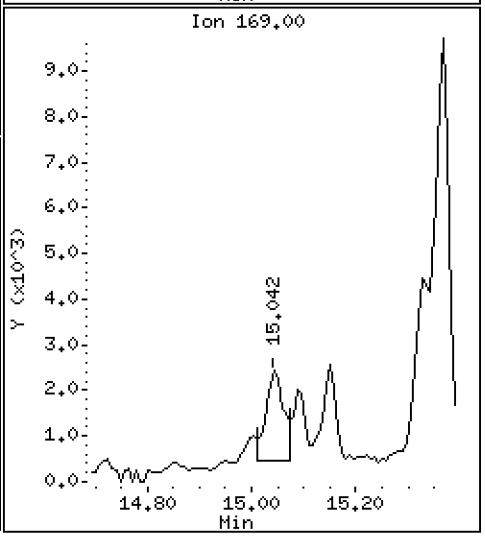


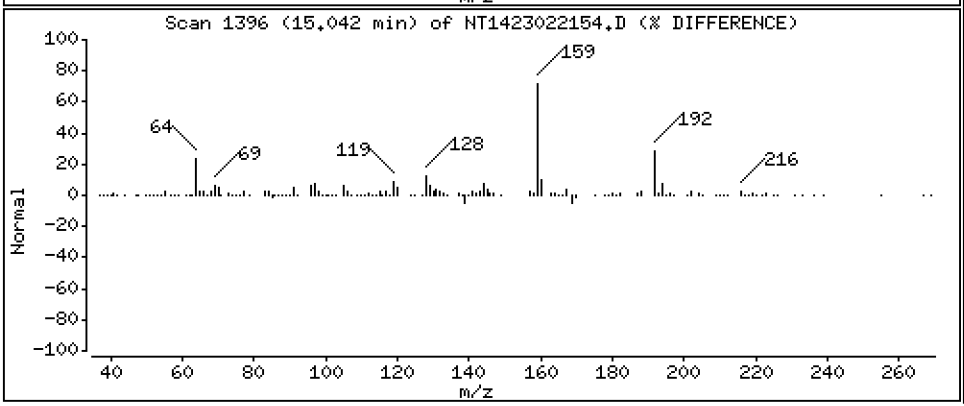












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022154.D

Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

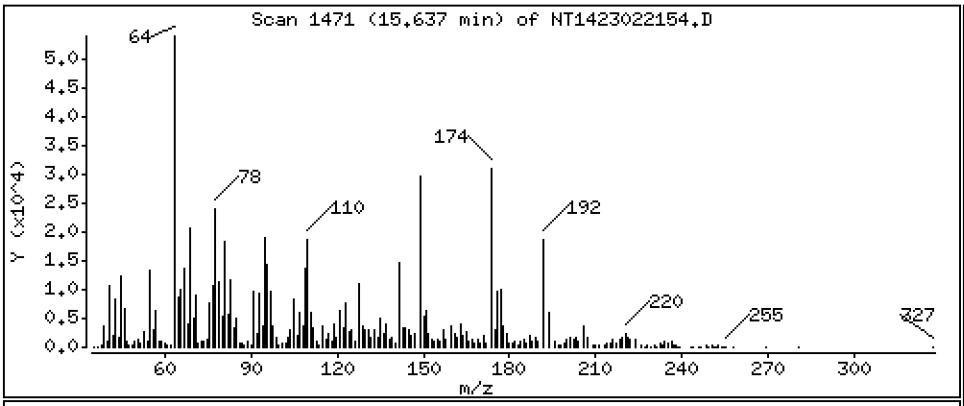
Operator: DSD

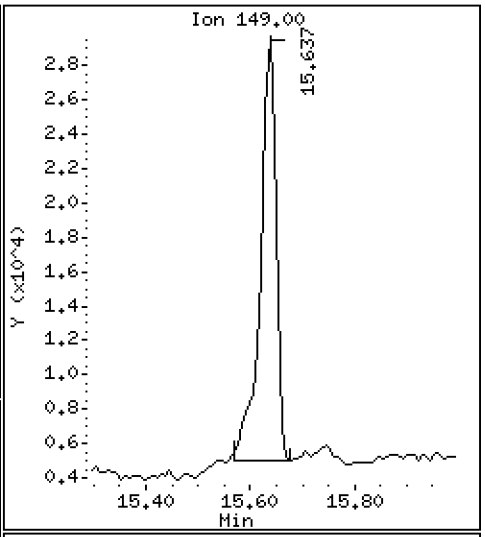
Column phase: ZB-5msi

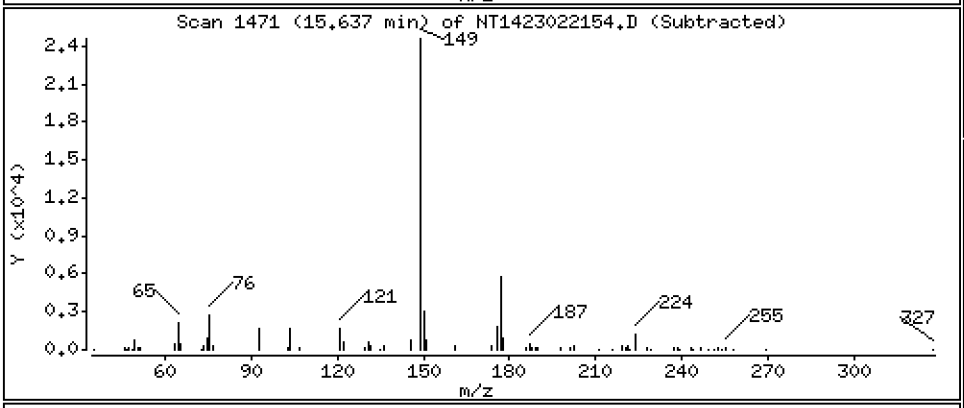
Column diameter: 0.25

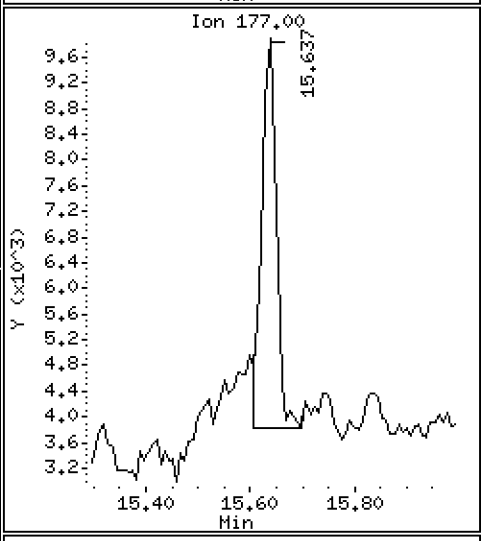
50 Diethylphthalate

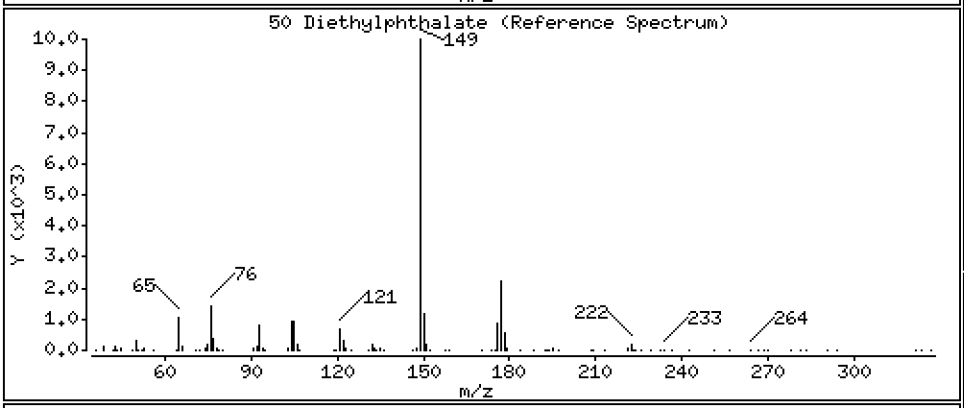
Concentration: 0.2222 ug/mL

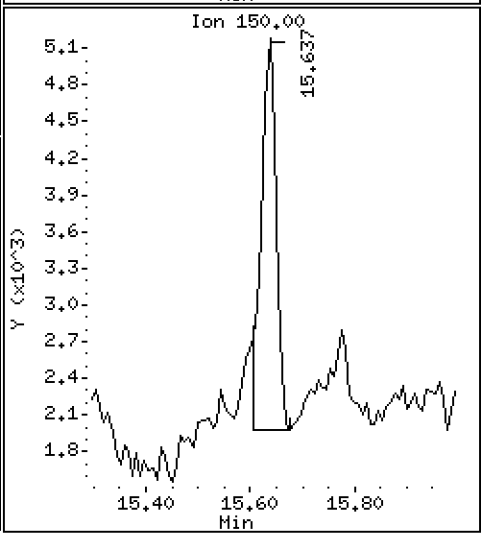


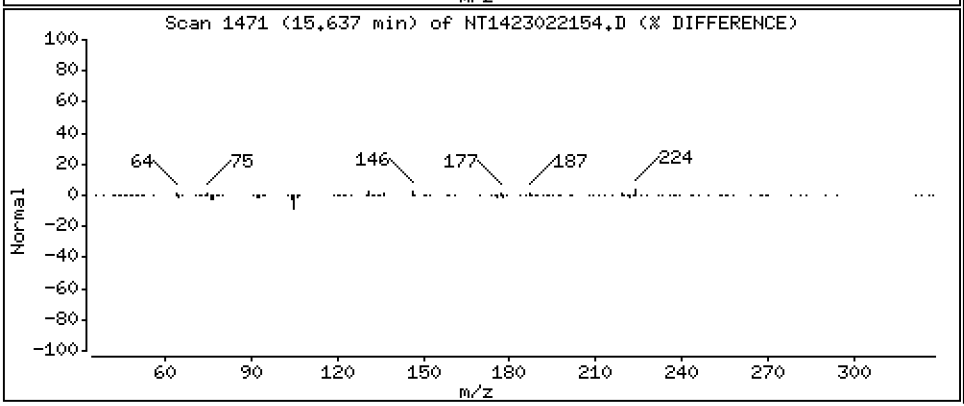












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

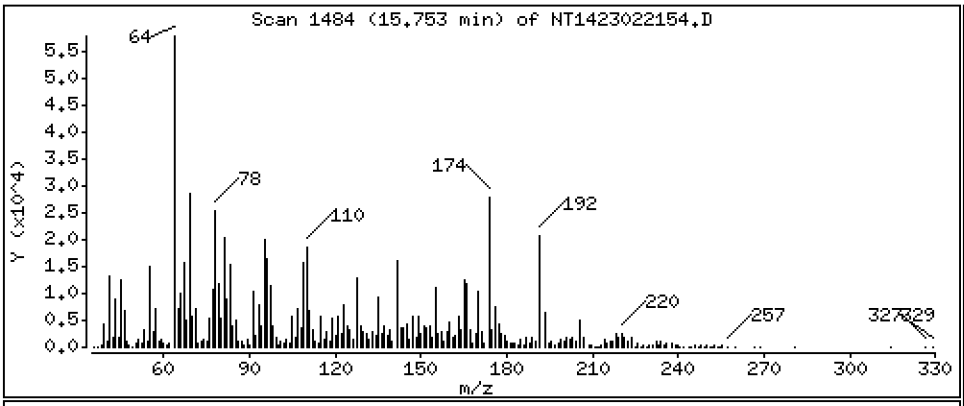
Operator: DSD

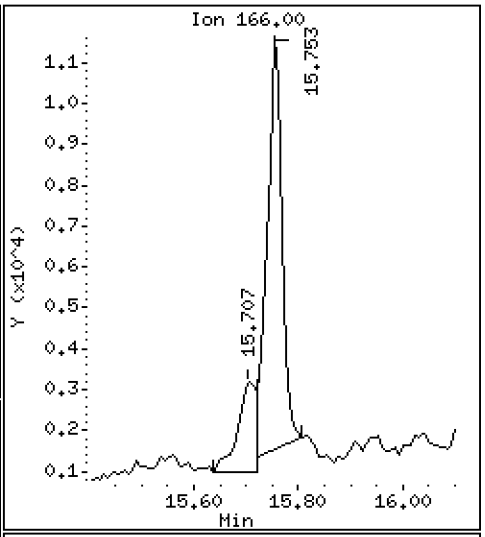
Column phase: ZB-5msi

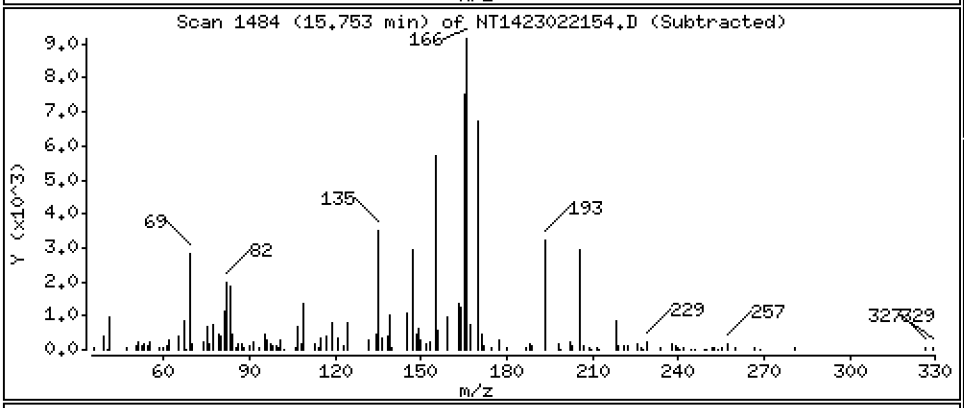
Column diameter: 0.25

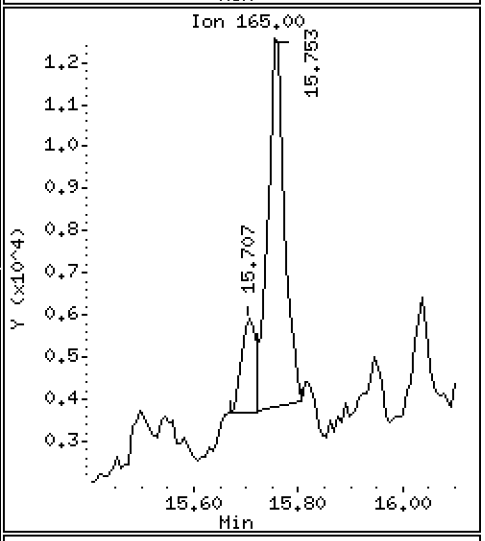
49 Fluorene

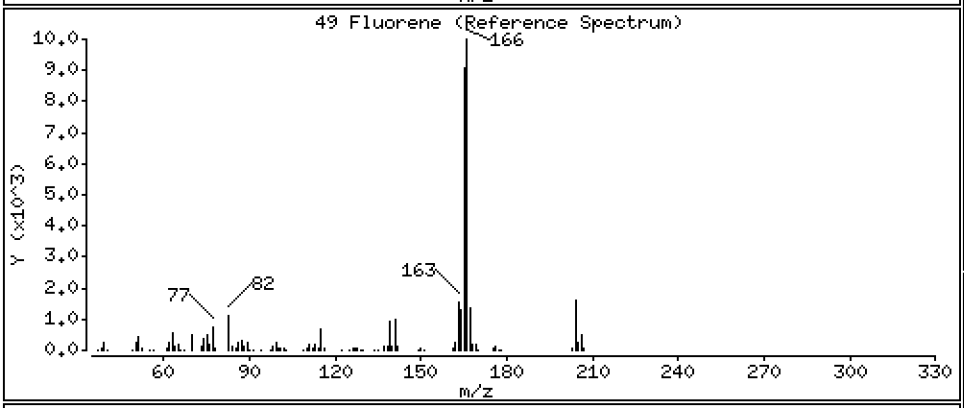
Concentration: 0.07947 ug/mL

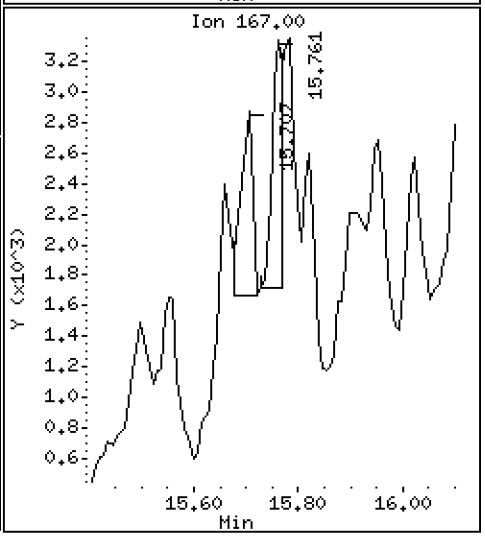


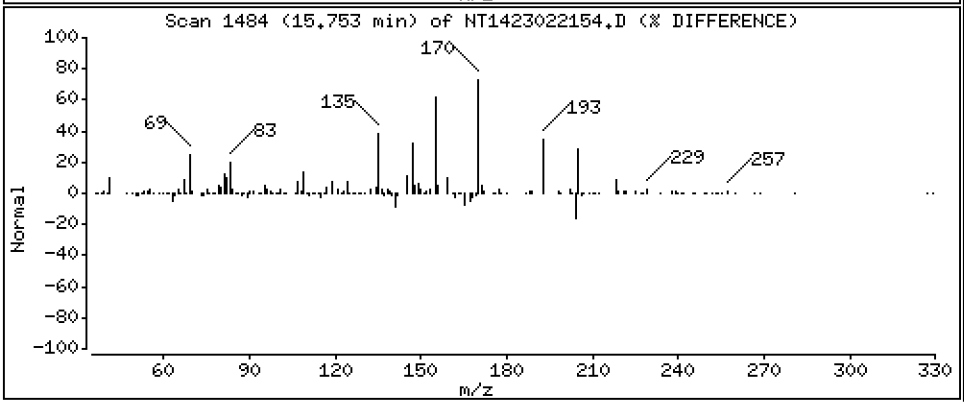












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

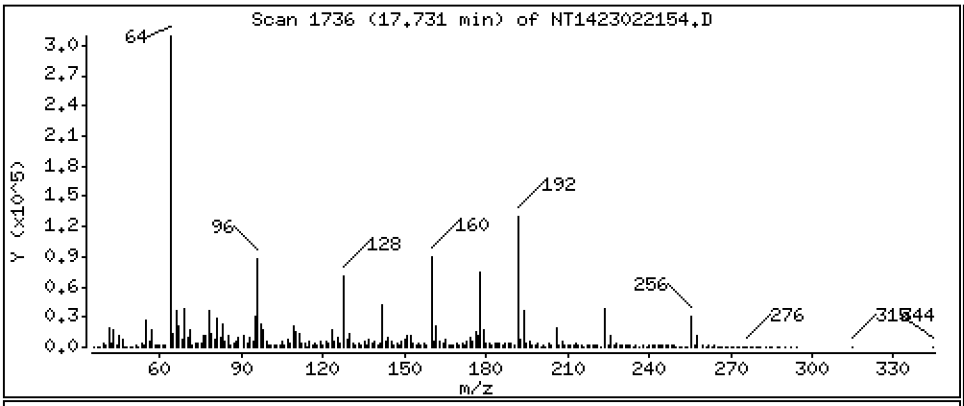
Operator: DSD

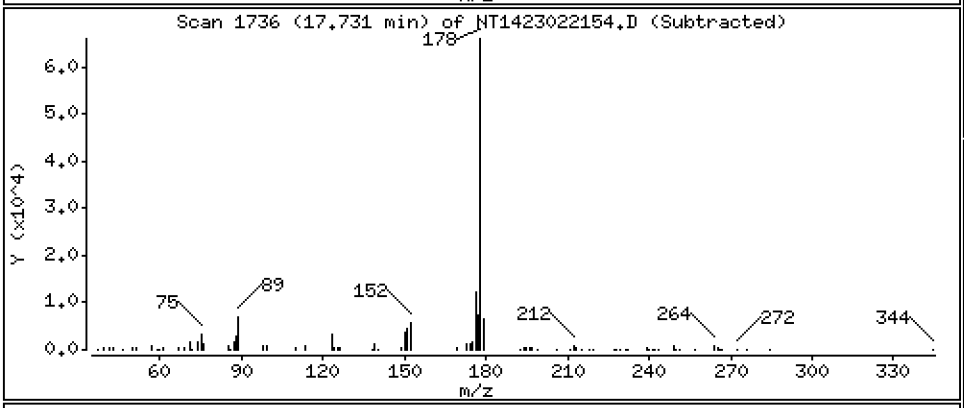
Column phase: ZB-5msi

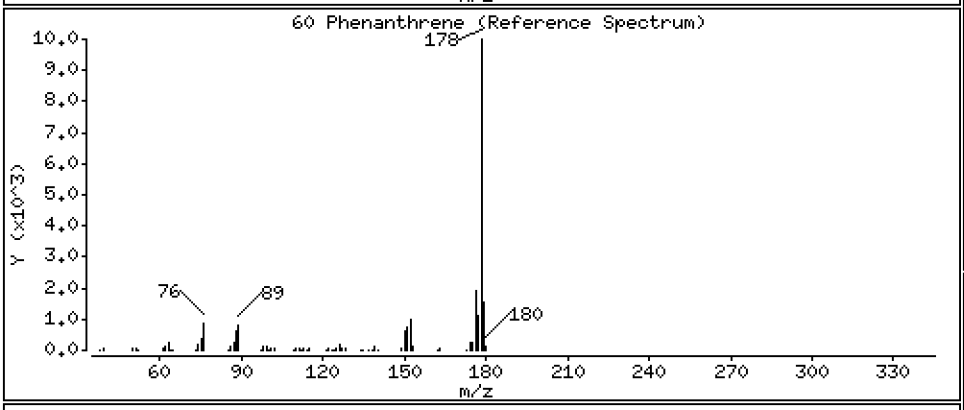
Column diameter: 0.25

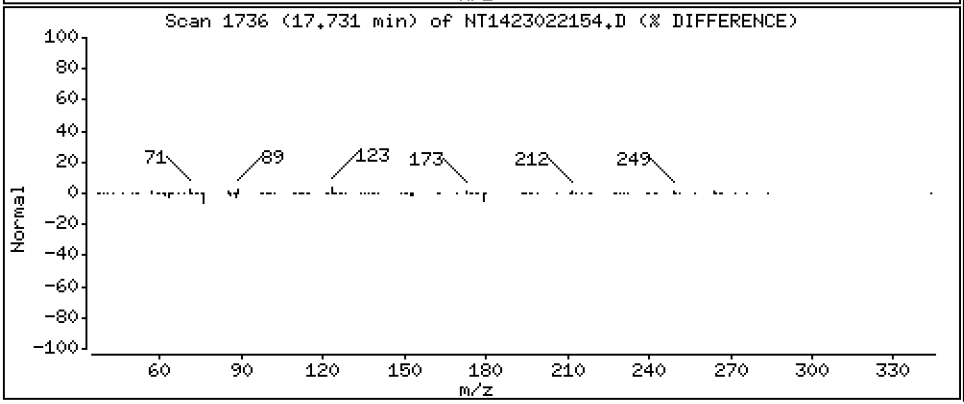
60 Phenanthrene

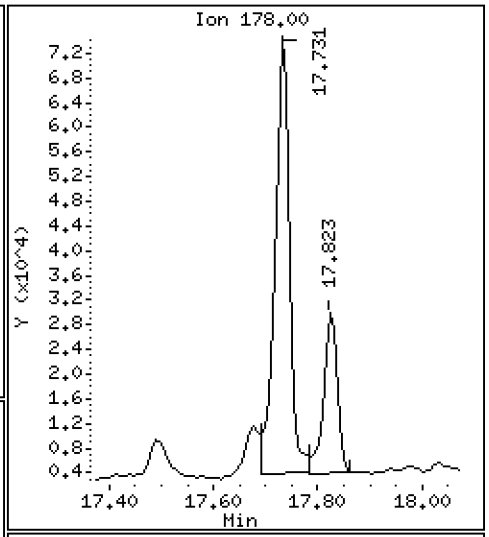
Concentration: 0.5608 ug/mL

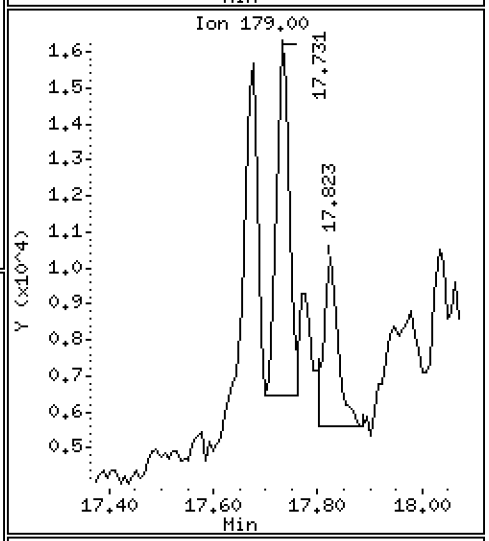


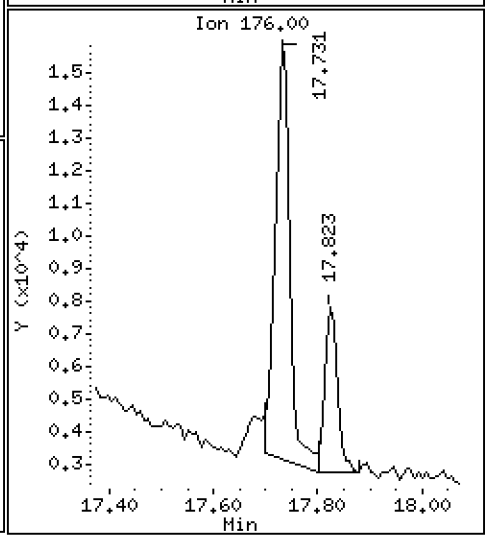












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022154.D

Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

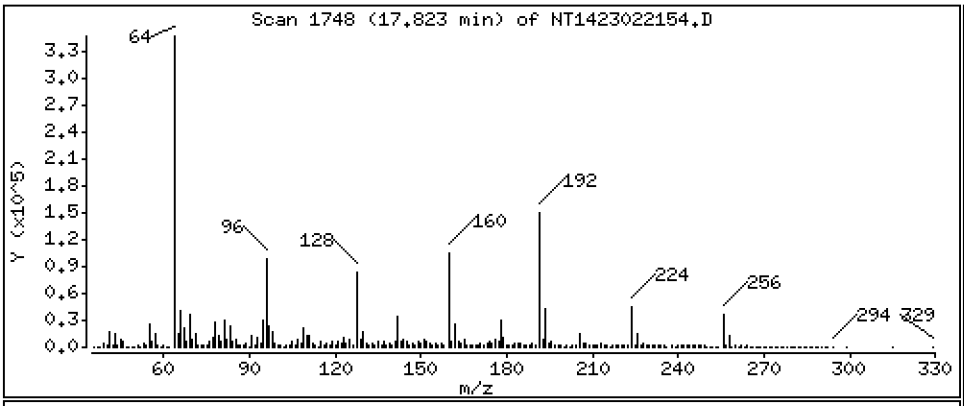
Operator: DSD

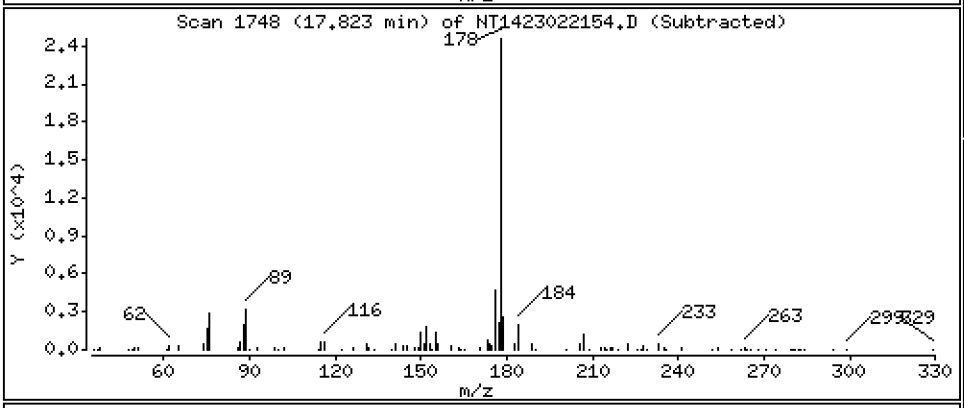
Column phase: ZB-5msi

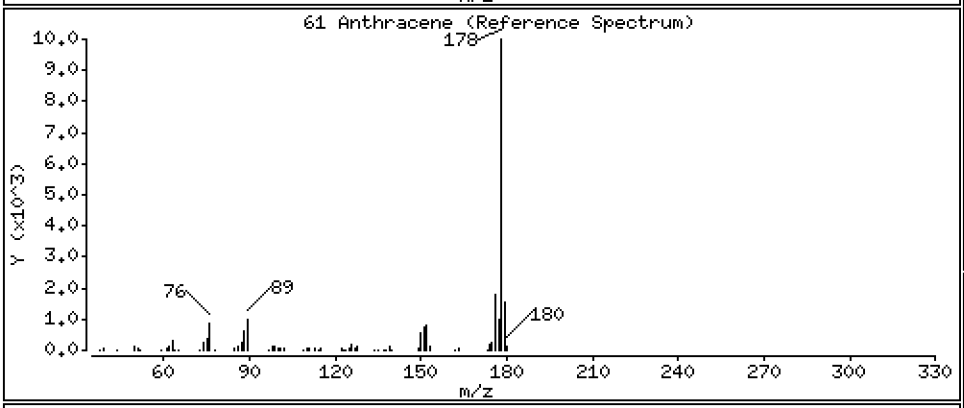
Column diameter: 0.25

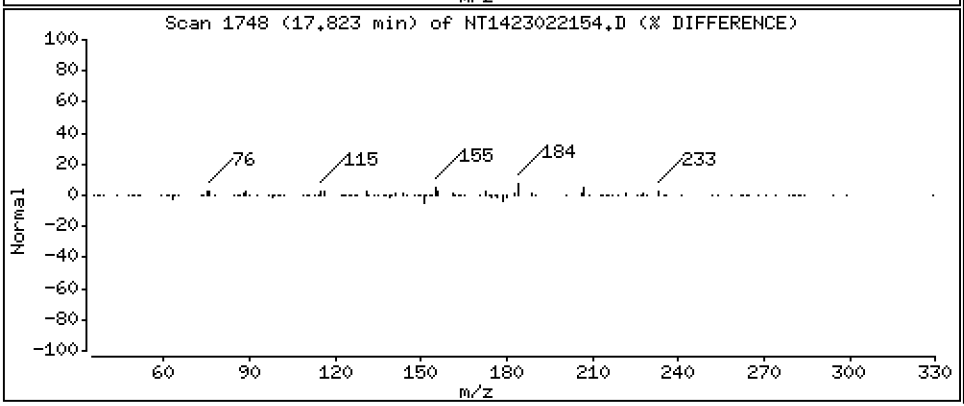
61 Anthracene

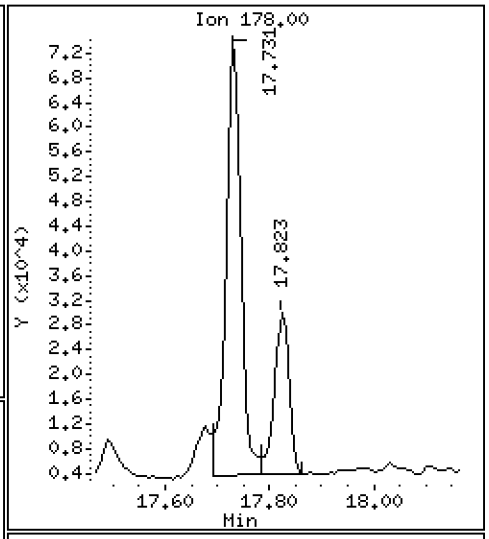
Concentration: 0.2069 ug/mL

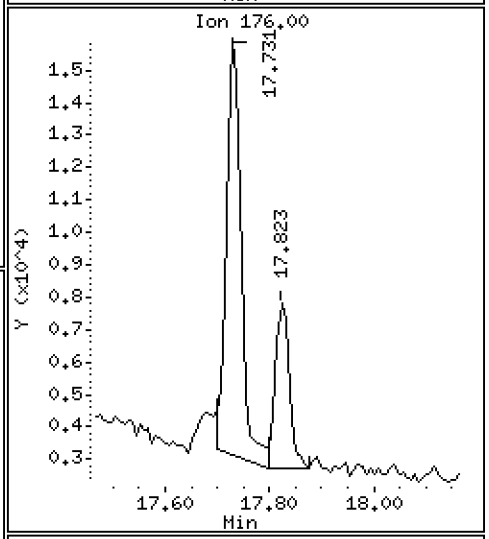


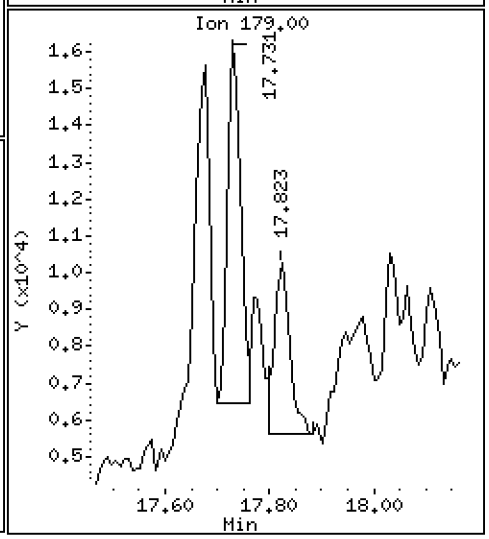












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022154.D

Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

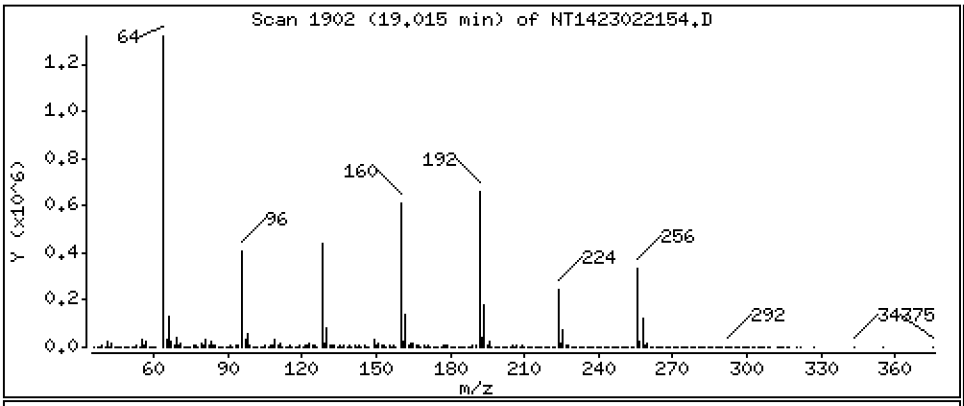
Operator: DSD

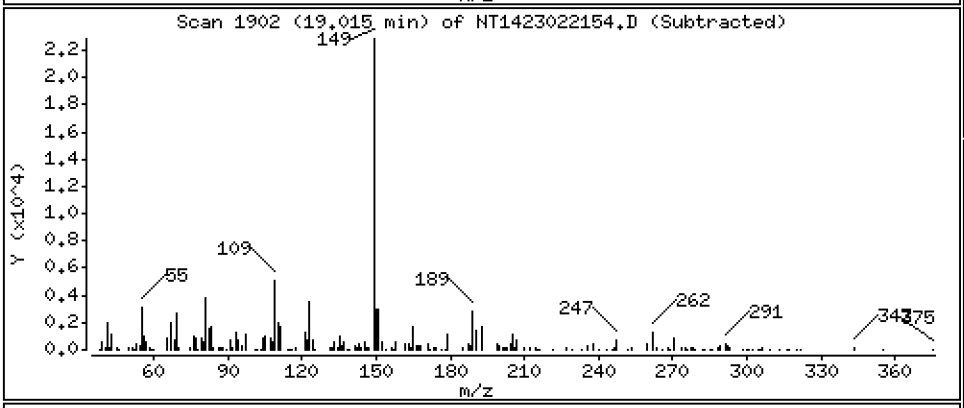
Column phase: ZB-5msi

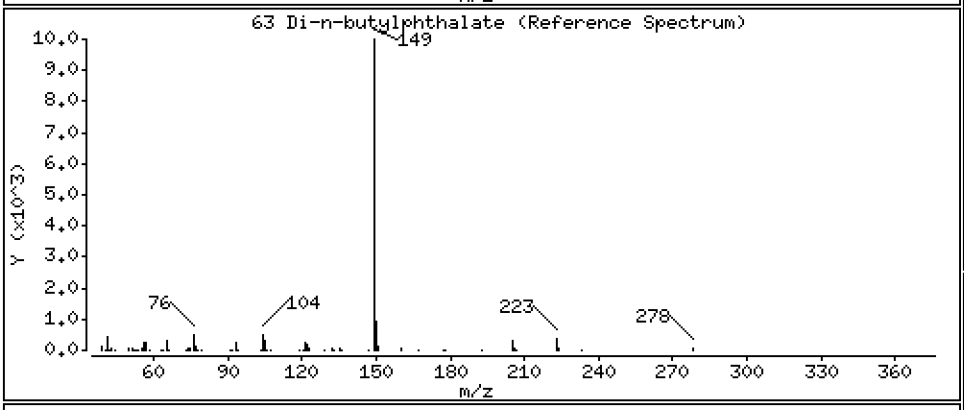
Column diameter: 0.25

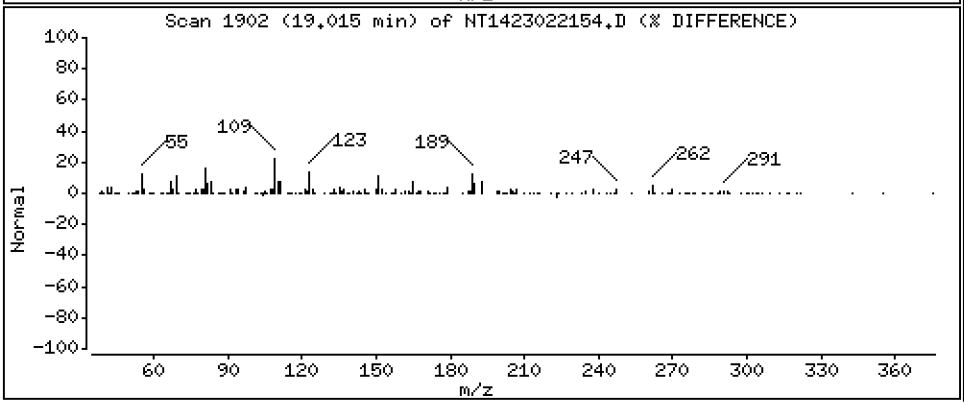
63 Di-n-butylphthalate

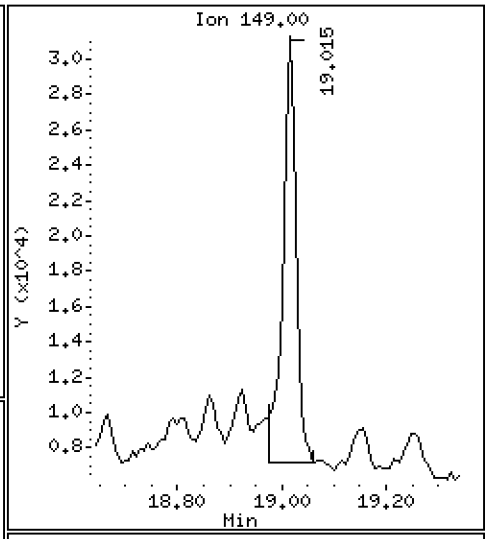
Concentration: 0.1804 ug/mL

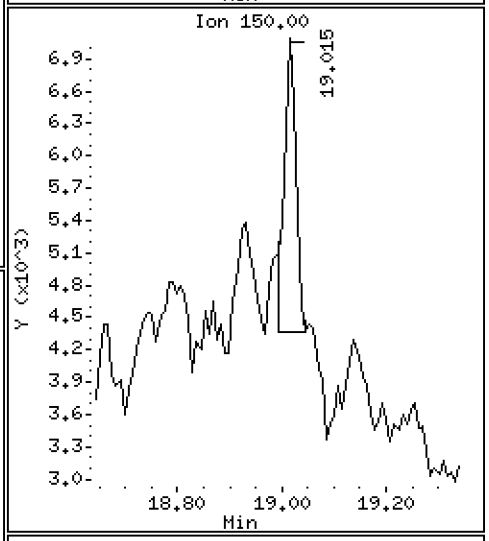


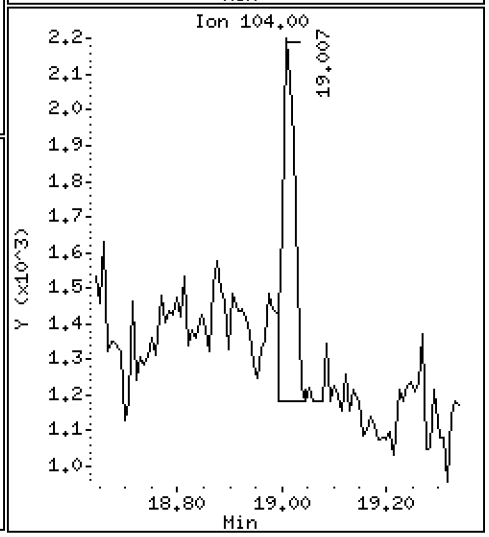












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022154.D

Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

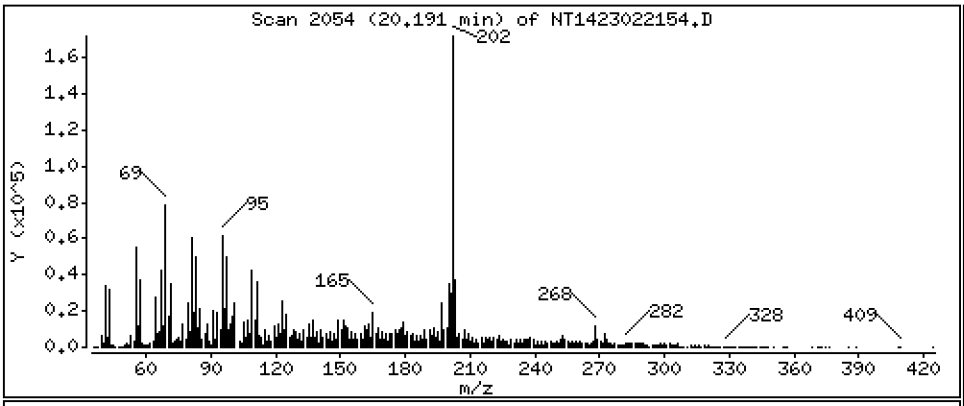
Operator: DSD

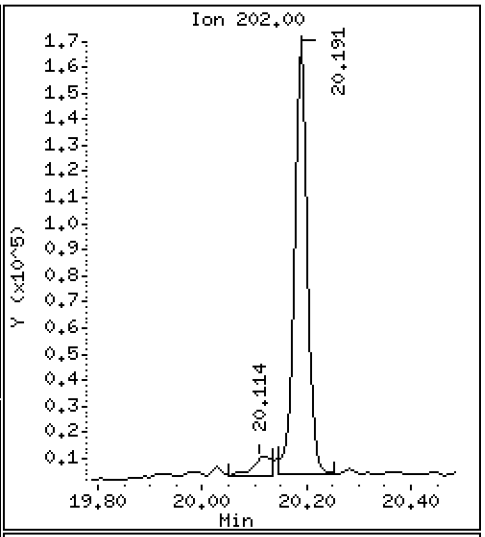
Column phase: ZB-5msi

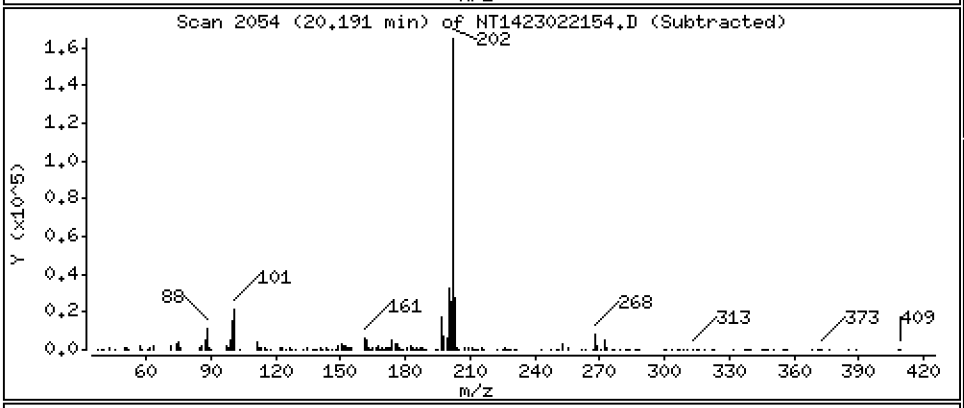
Column diameter: 0.25

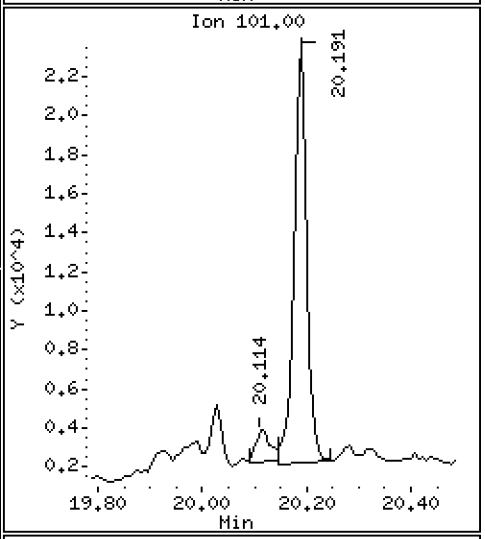
64 Fluoranthene

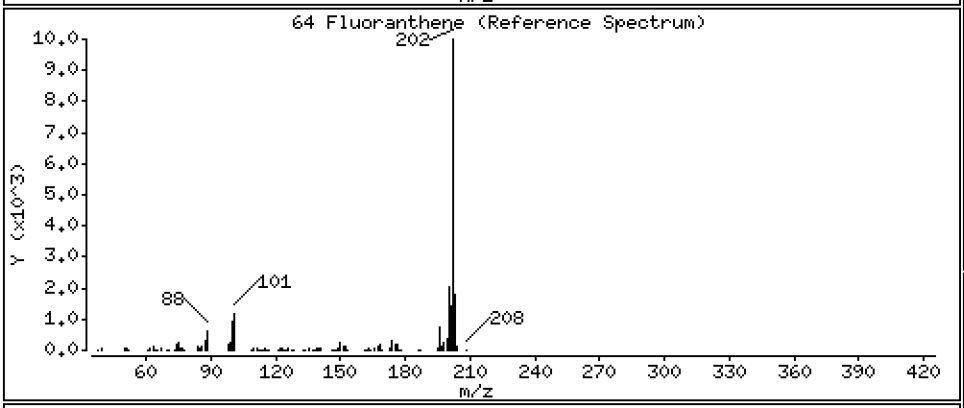
Concentration: 1.070 ug/mL

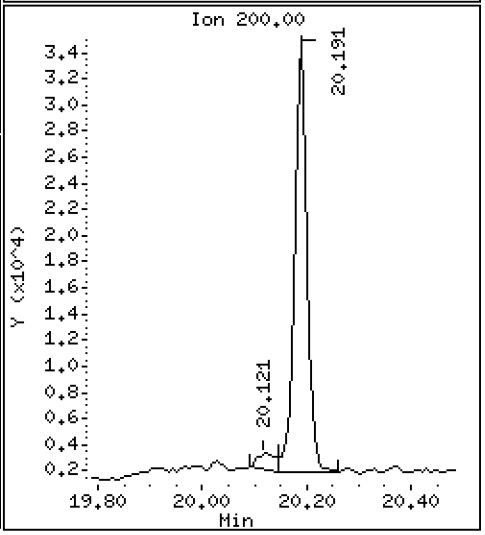


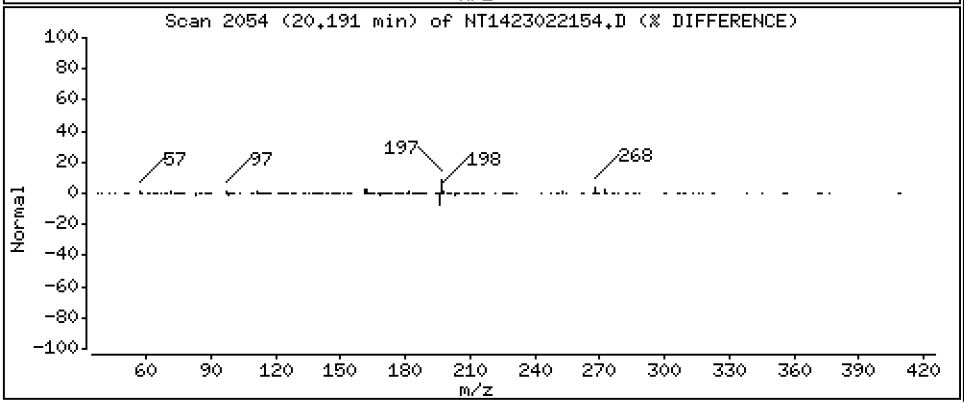












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

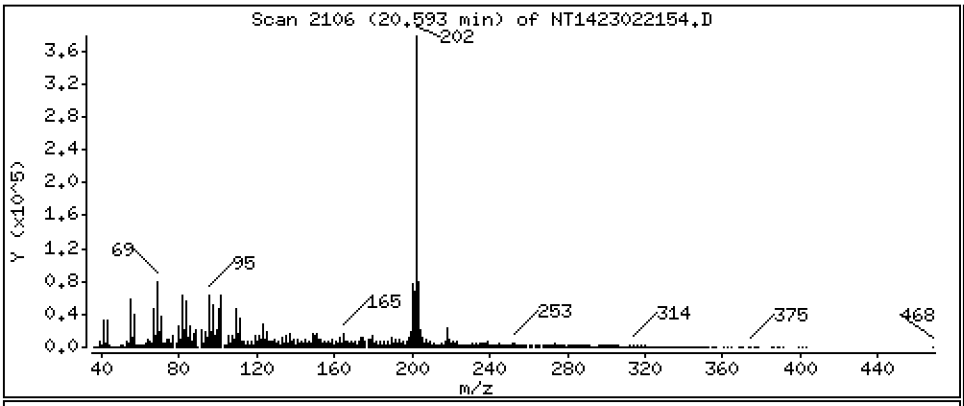
Operator: DSD

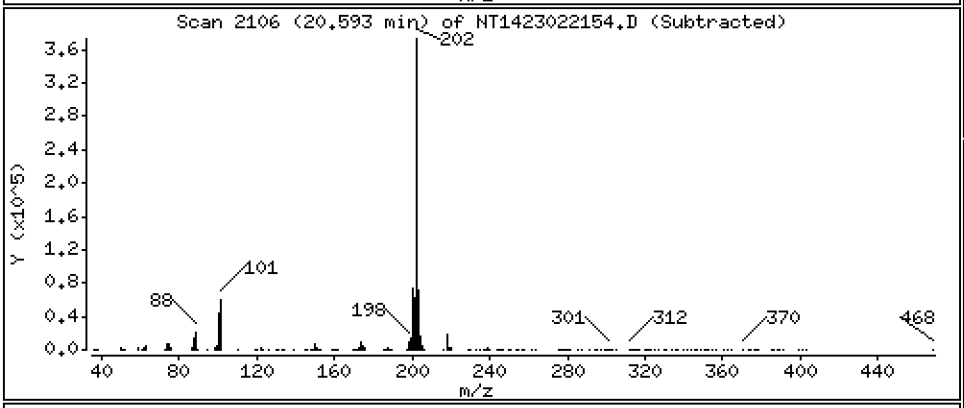
Column phase: ZB-5msi

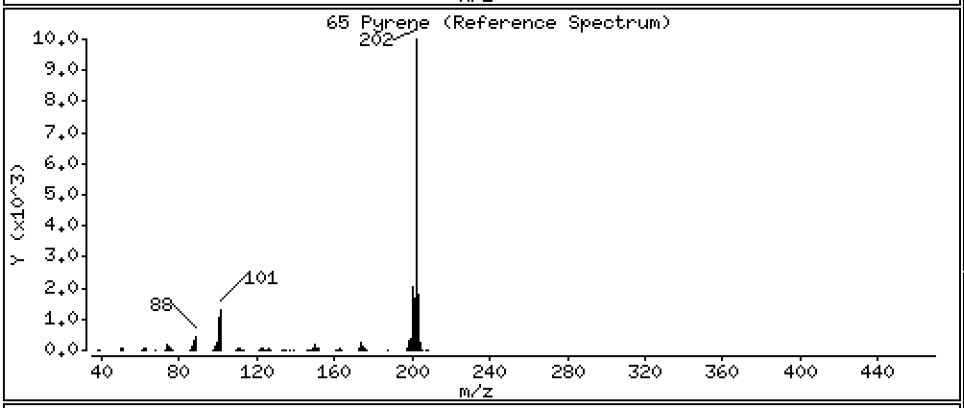
Column diameter: 0.25

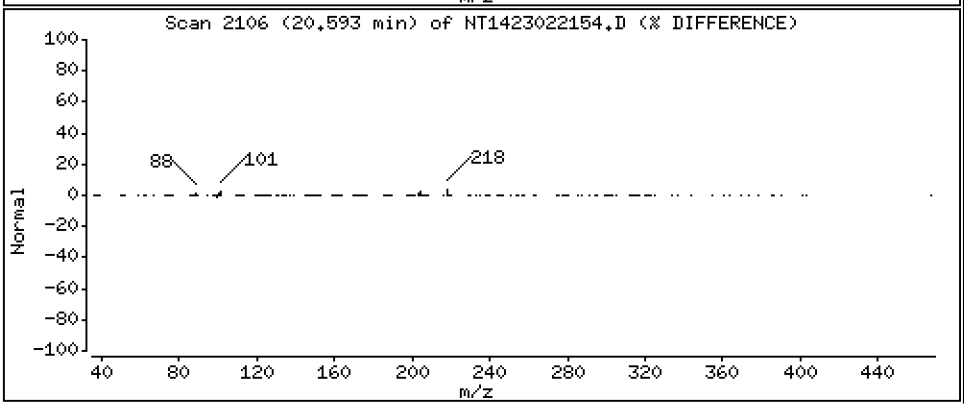
65 Pyrene

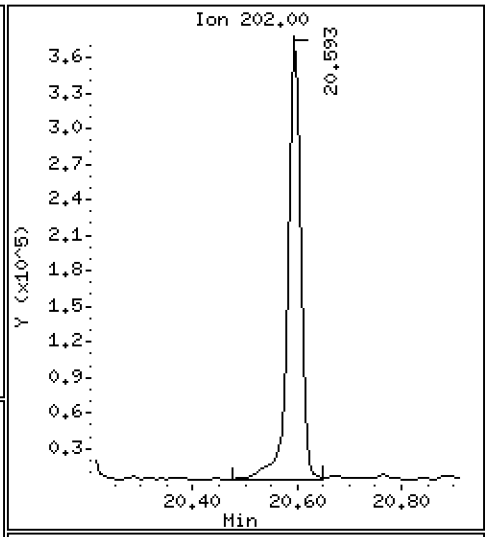
Concentration: 2.320 ug/mL

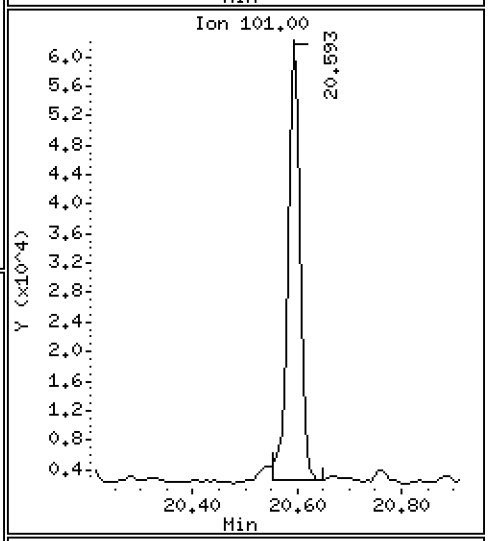


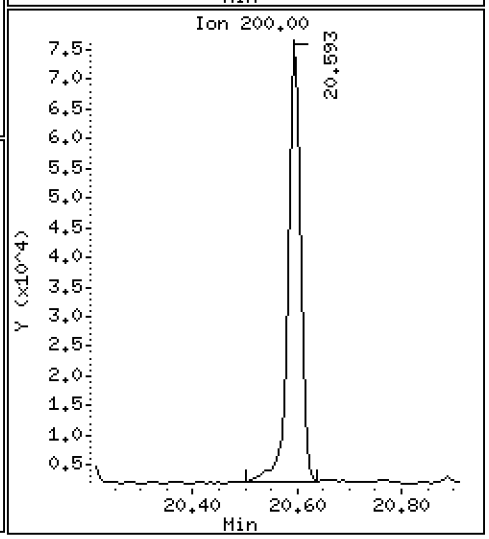












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

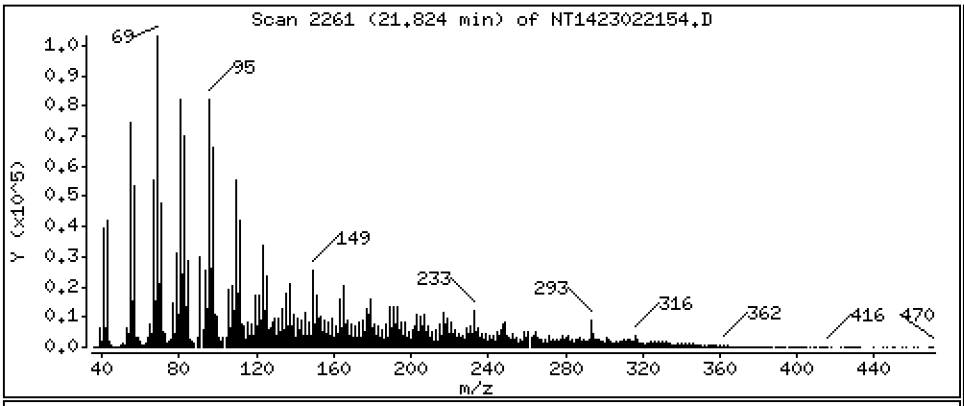
Operator: DSD

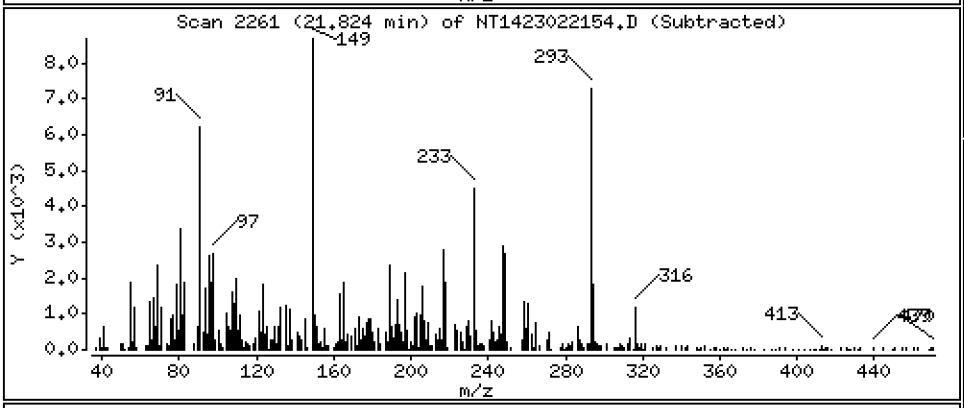
Column phase: ZB-5msi

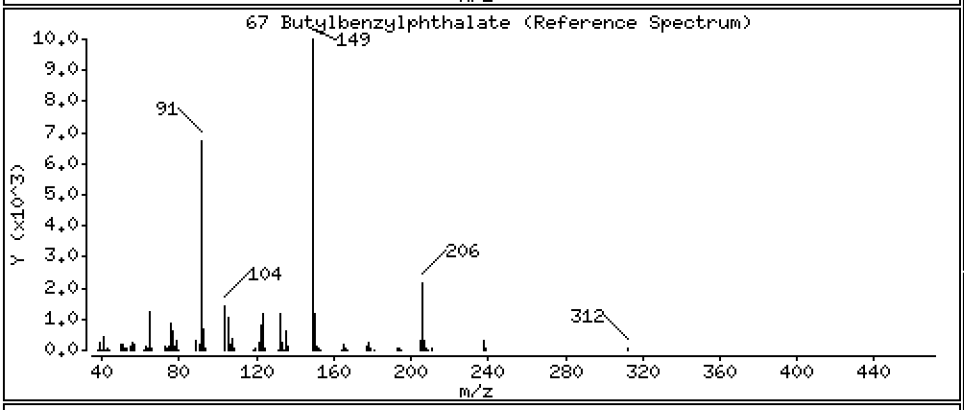
Column diameter: 0.25

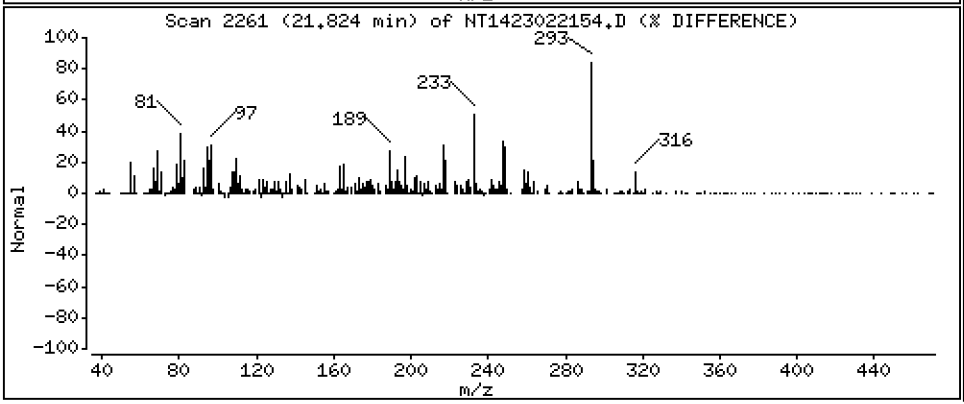
67 Butylbenzylphthalate

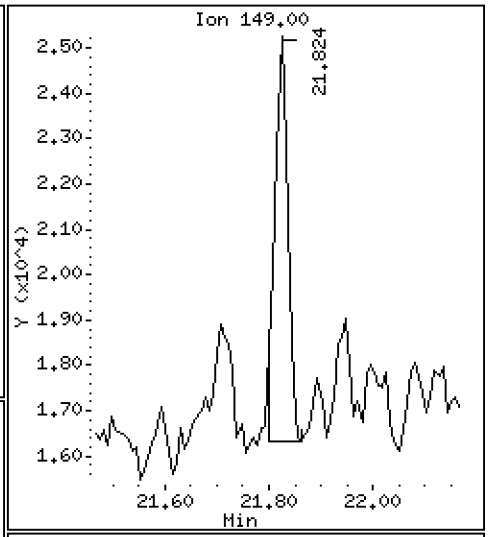
Concentration: 0.1573 ug/mL

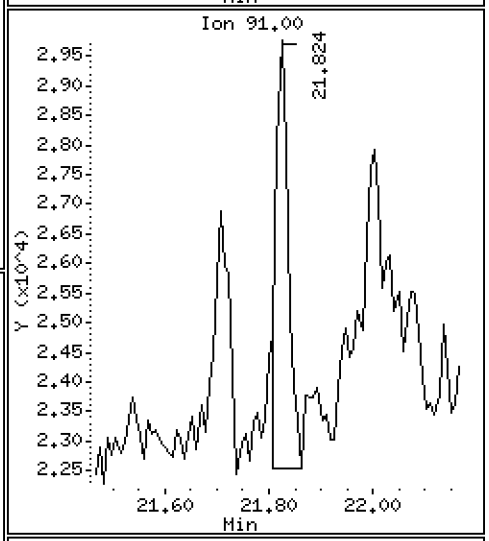


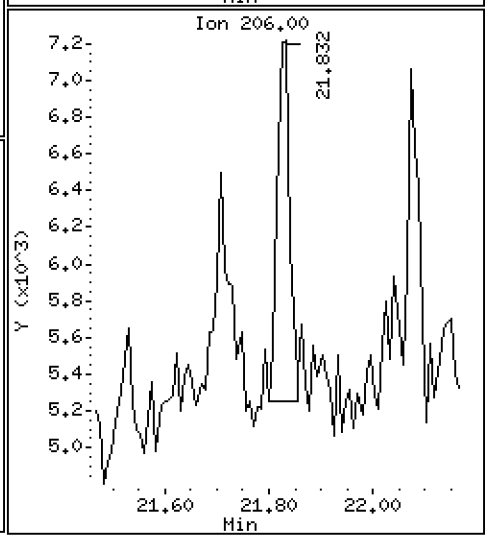












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

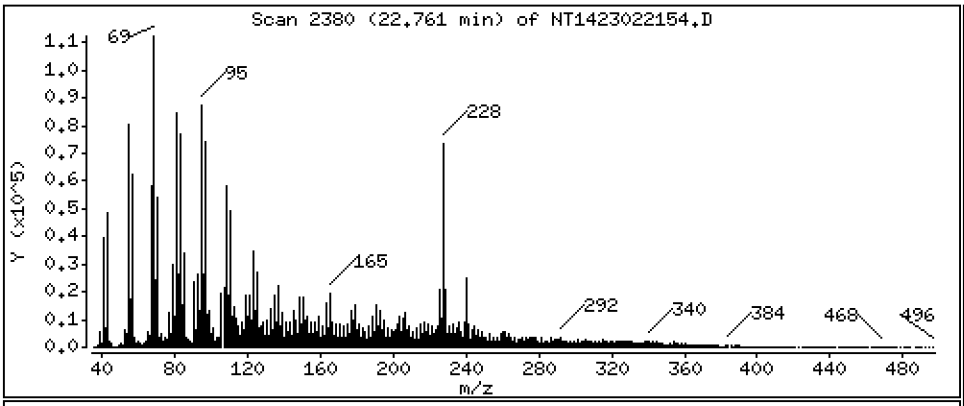
Operator: DSD

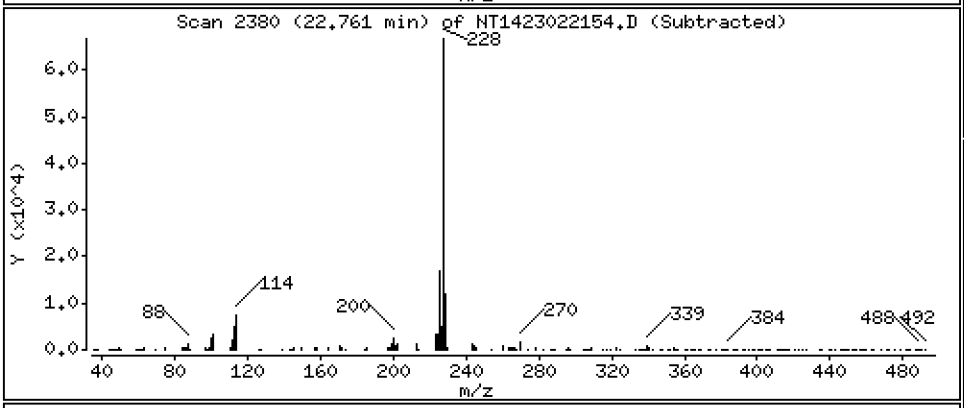
Column phase: ZB-5msi

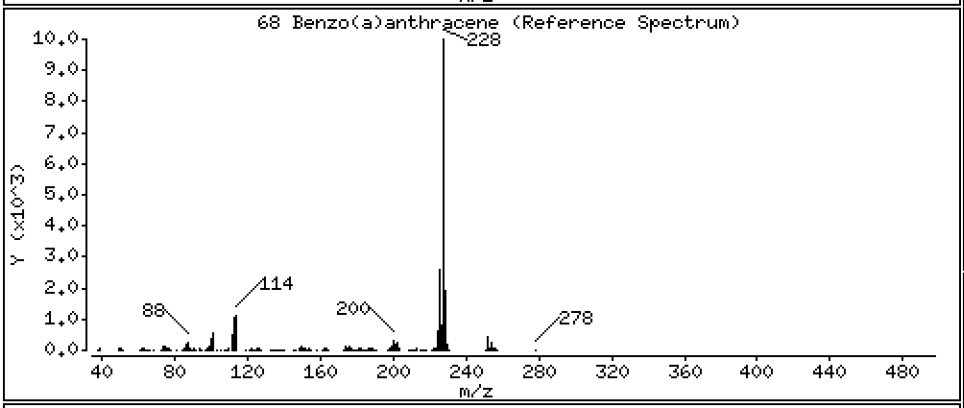
Column diameter: 0.25

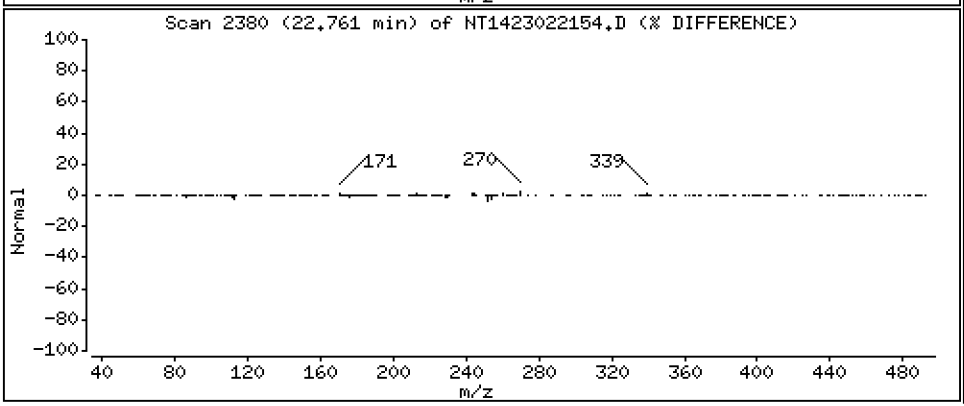
68 Benzo(a)anthracene

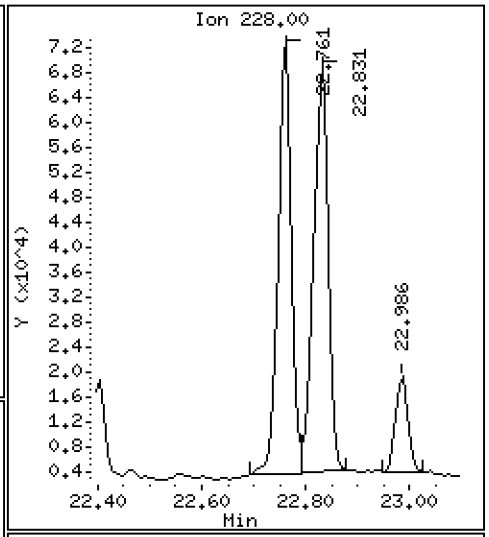
Concentration: 0.6083 ug/mL

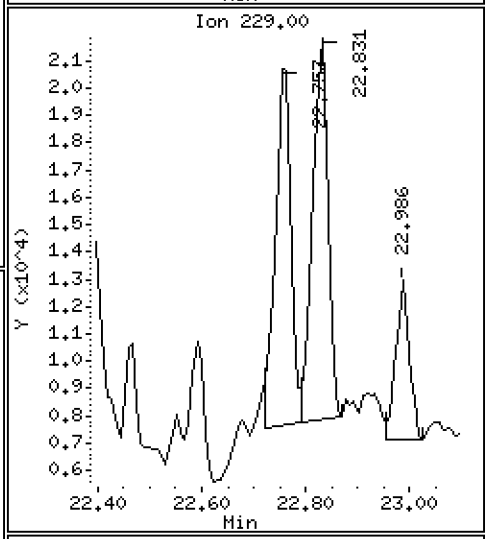


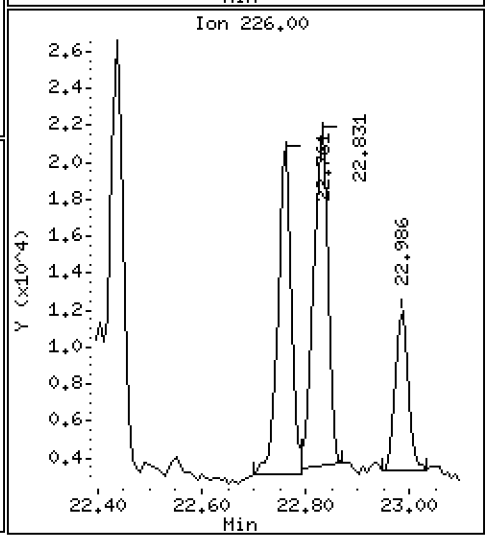












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

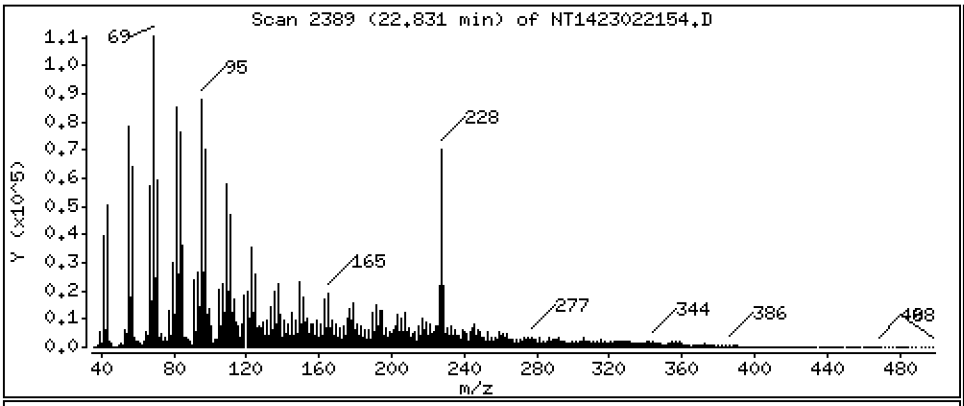
Operator: DSD

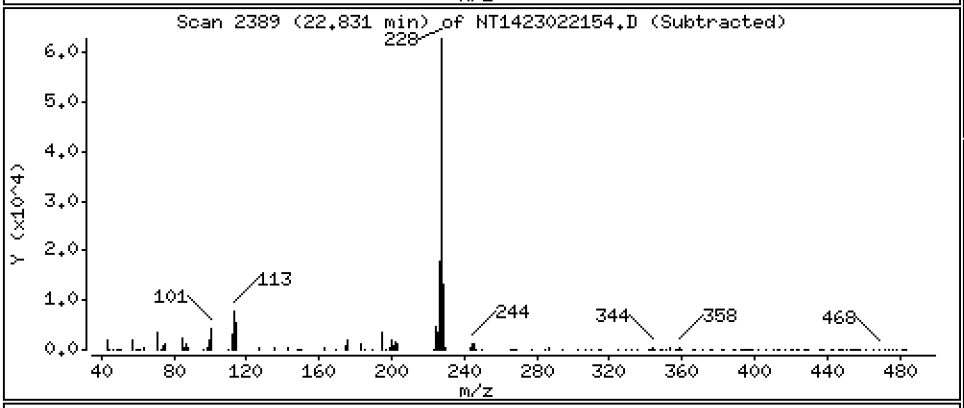
Column phase: ZB-5msi

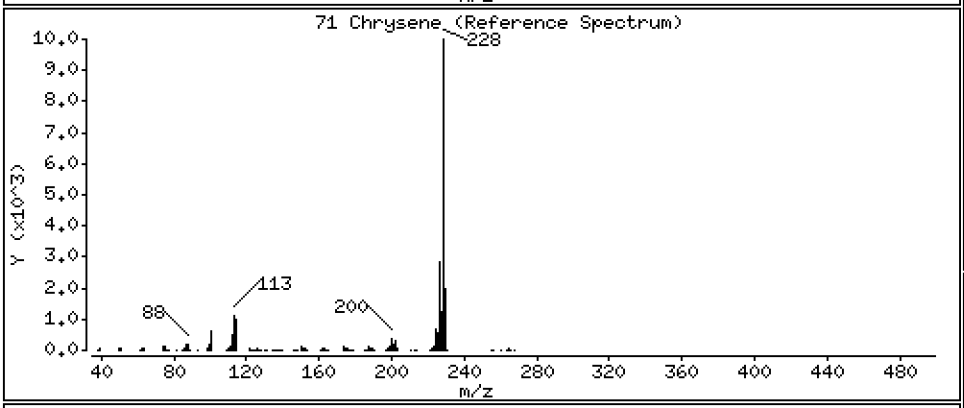
Column diameter: 0.25

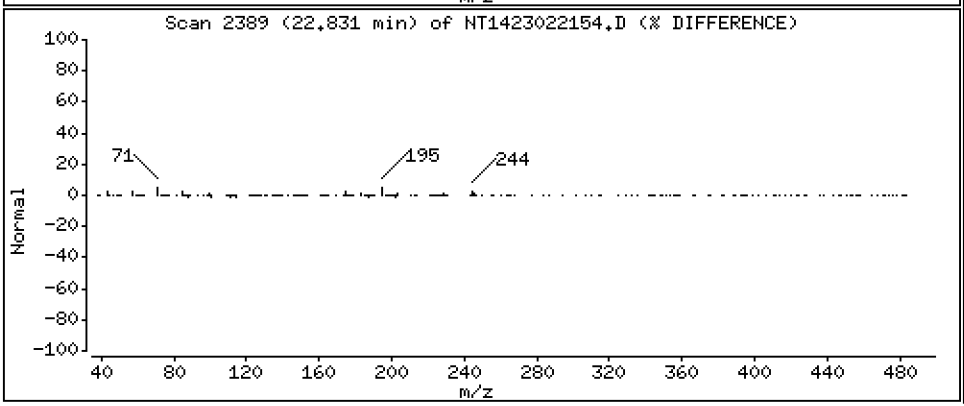
71 Chrysene

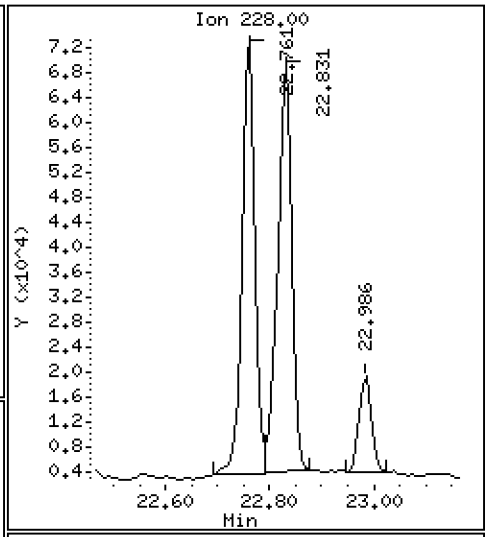
Concentration: 0.6815 ug/mL

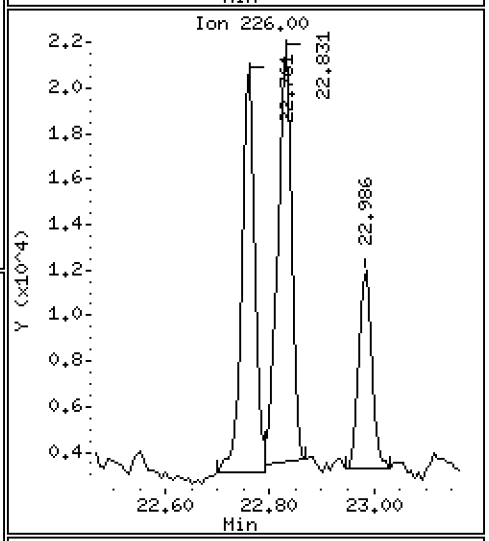


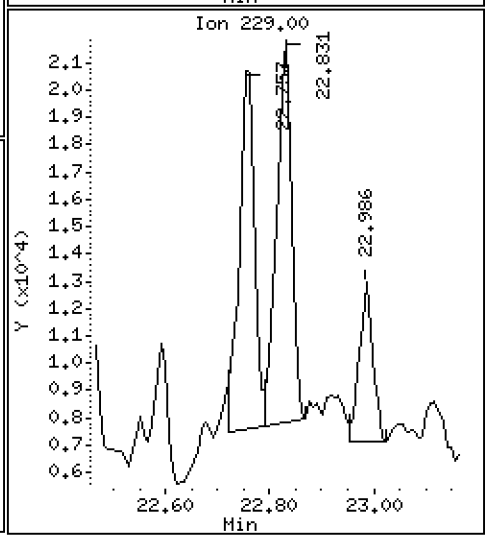












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

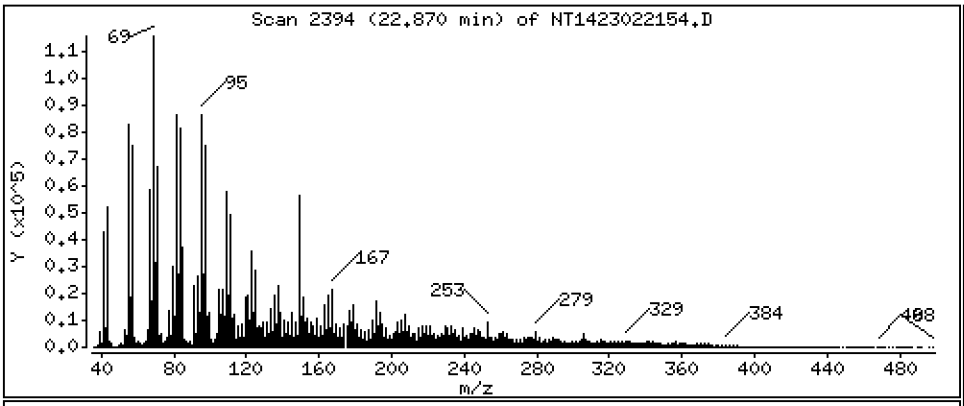
Operator: DSD

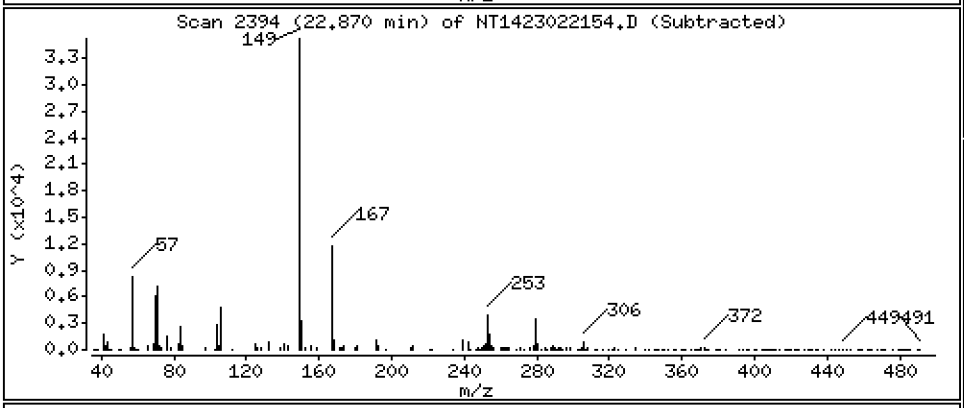
Column phase: ZB-5msi

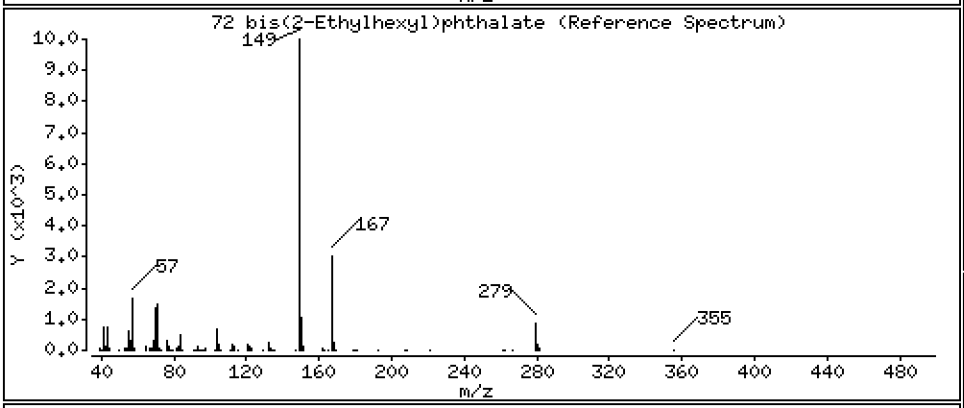
Column diameter: 0.25

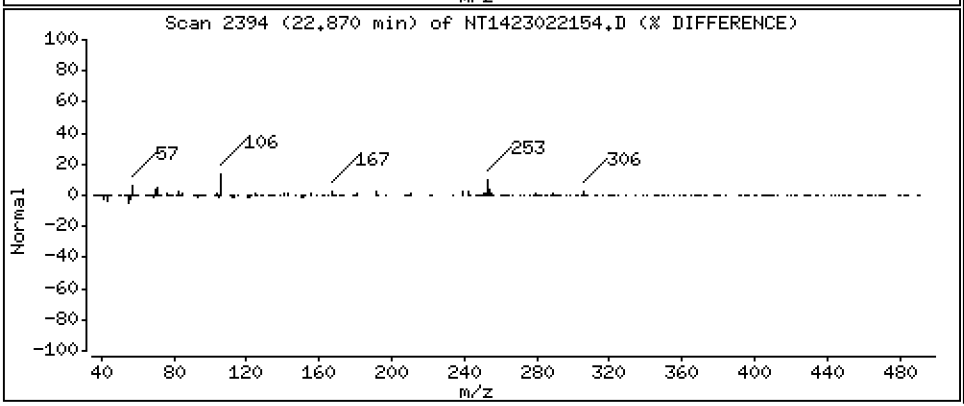
72 bis(2-Ethylhexyl)phthalate

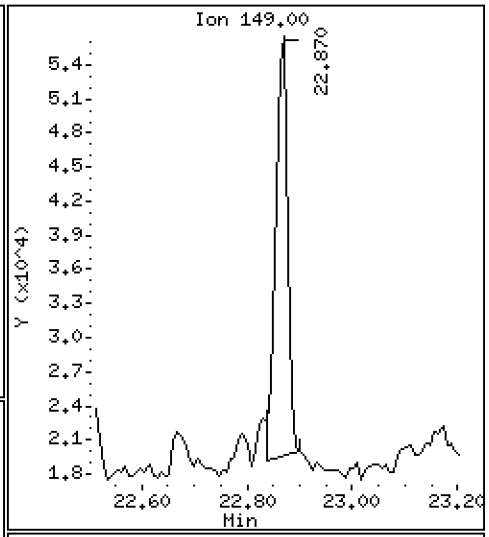
Concentration: 0.3625 ug/mL

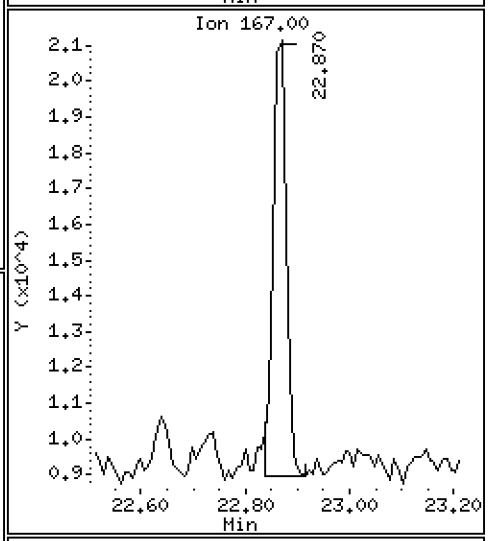


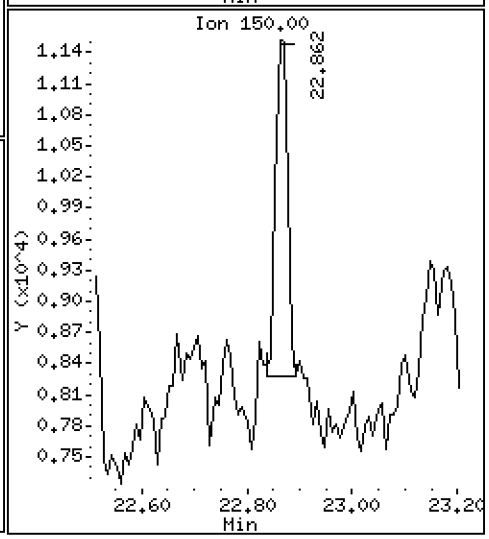












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

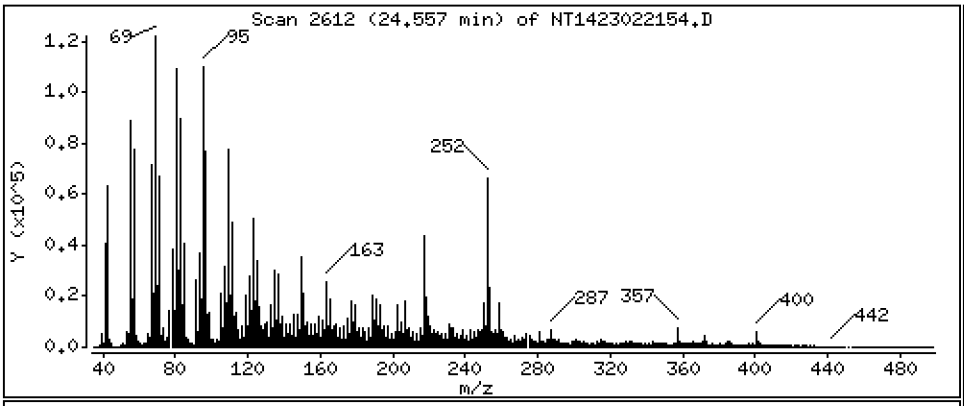
Operator: DSD

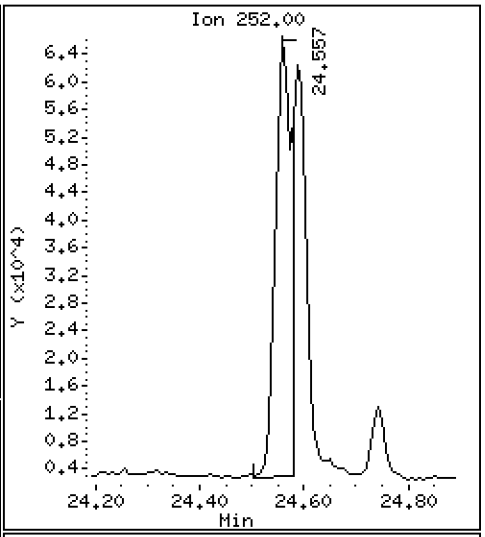
Column phase: ZB-5msi

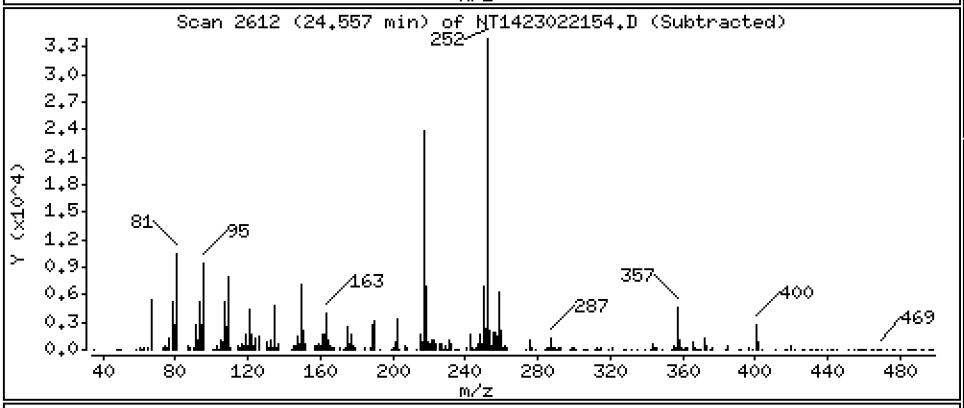
Column diameter: 0.25

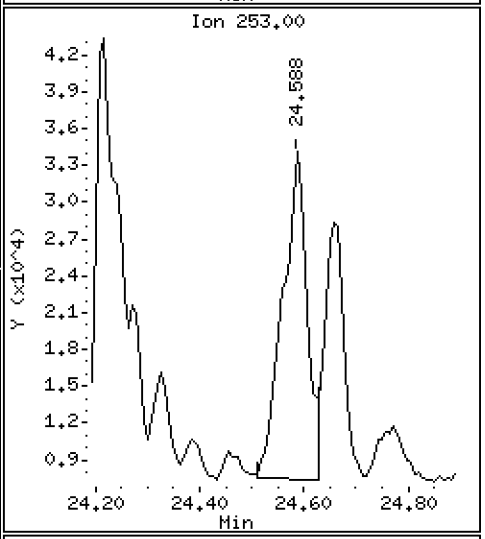
74 Benzo(b)fluoranthene

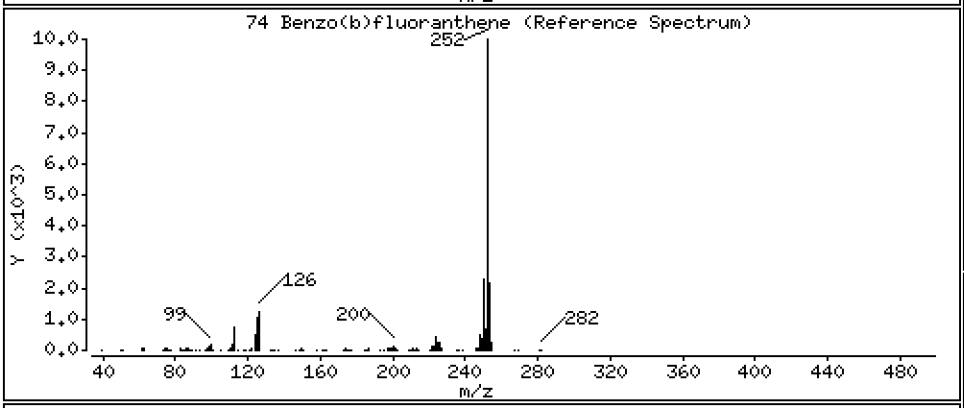
Concentration: 0.9076 ug/mL

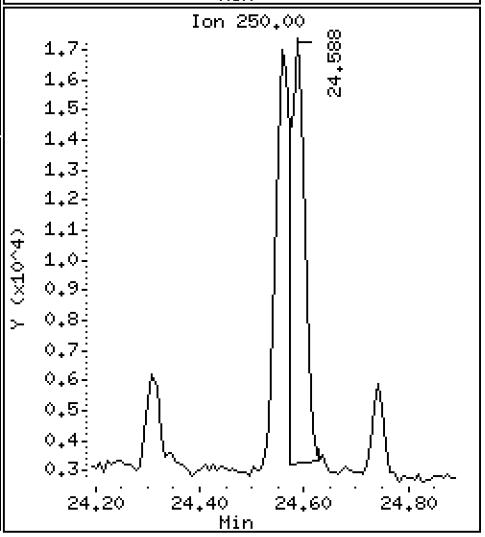


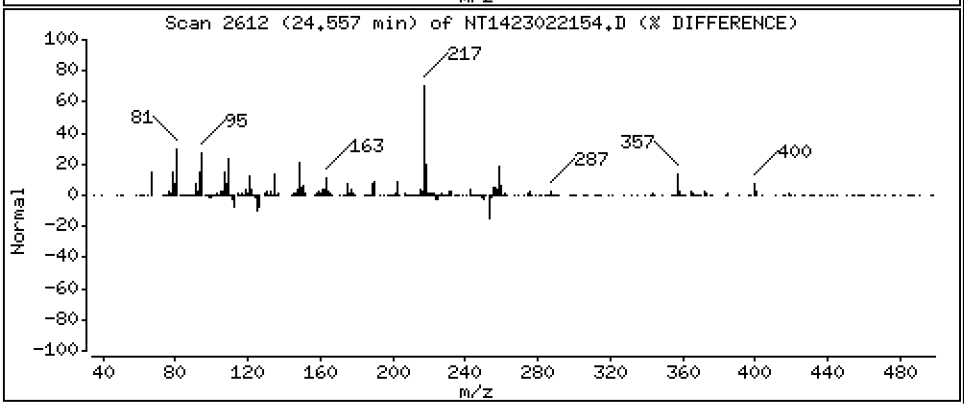












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022154.D

Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

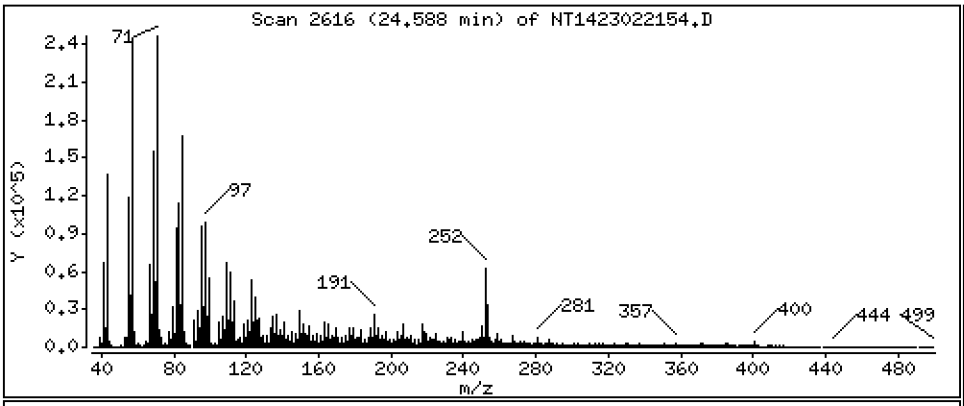
Operator: DSD

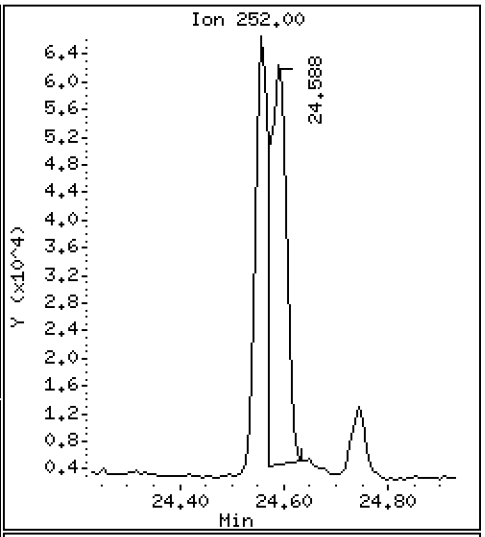
Column phase: ZB-5msi

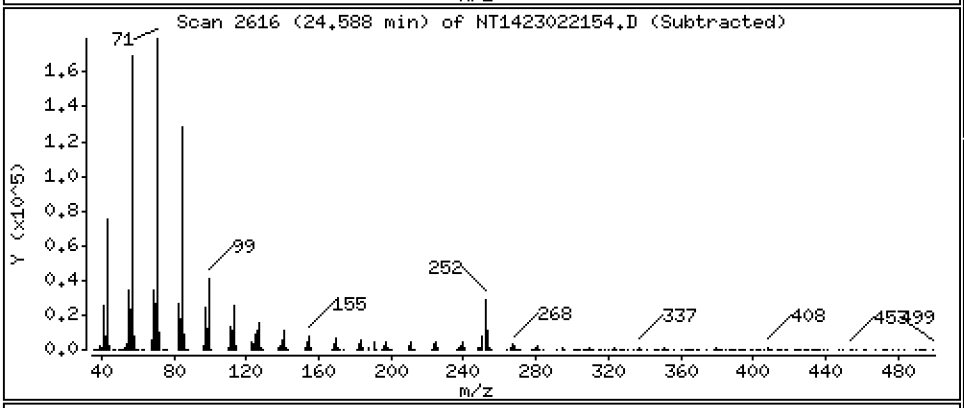
Column diameter: 0.25

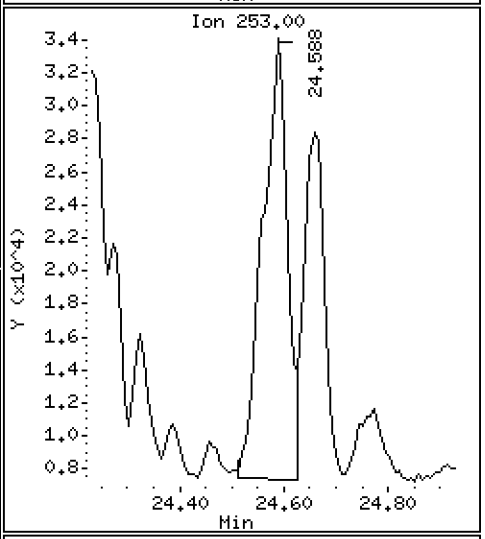
75 Benzo(k)fluoranthene

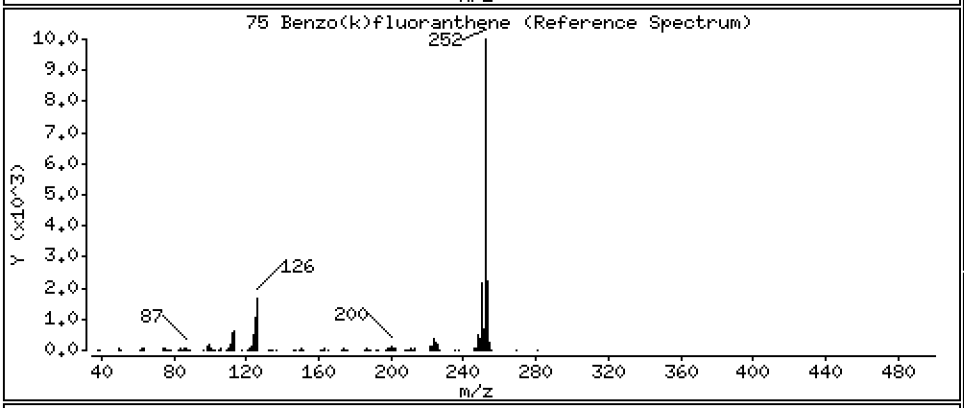
Concentration: 0.7581 ug/mL

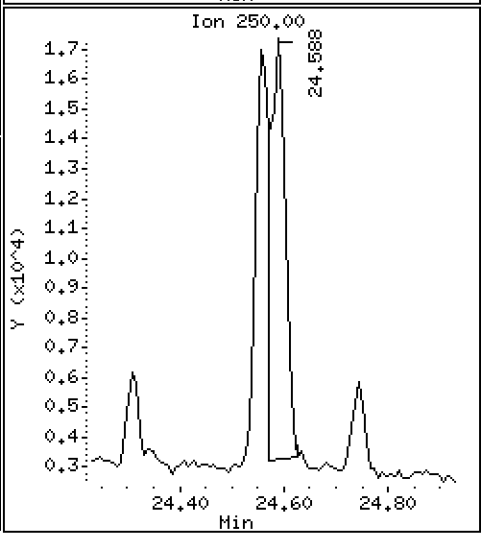


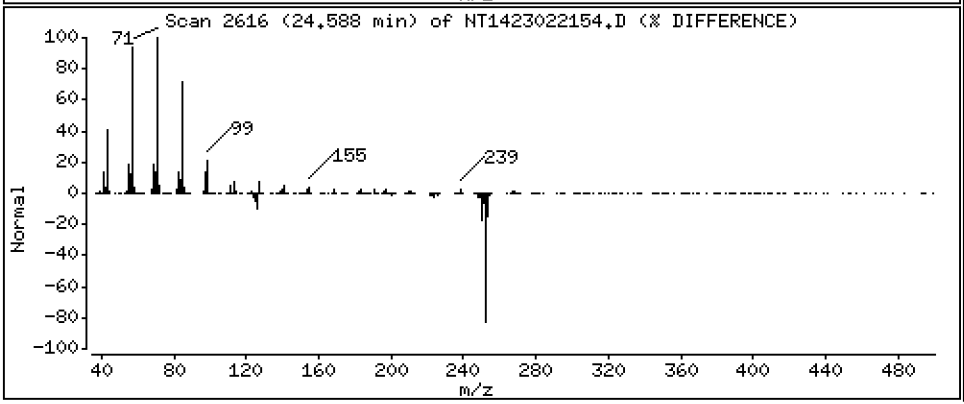












Date : 22-FEB-2023 21:24

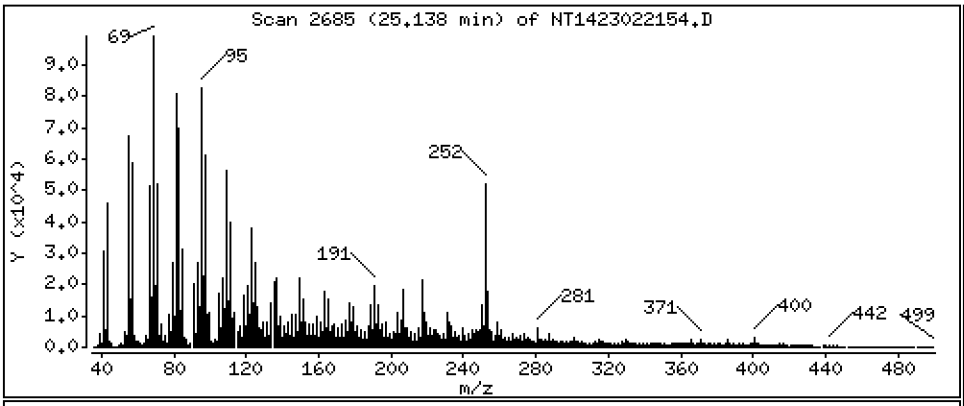
Client ID: Instrument: nt14.i

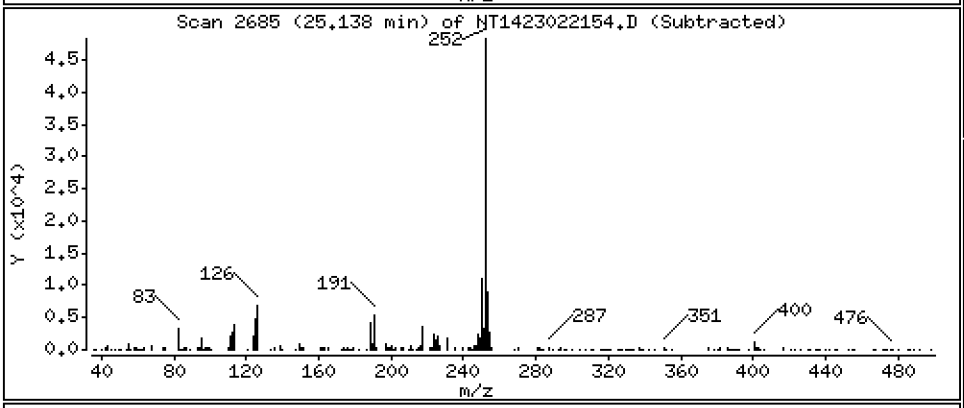
Sample Info: 23A0133-11

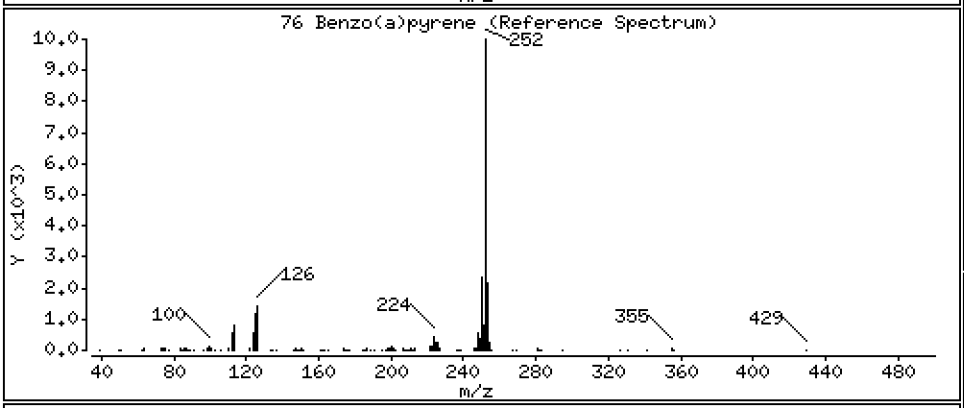
Operator: DSD

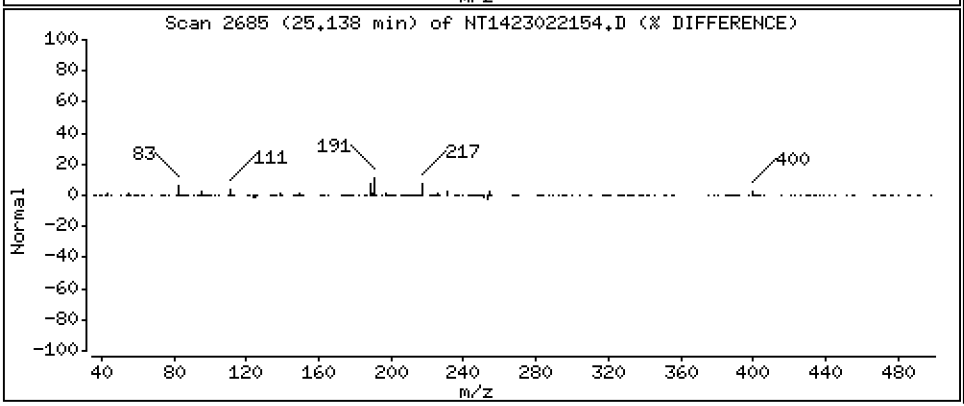
Column phase: ZB-5msi Column diameter: 0.25

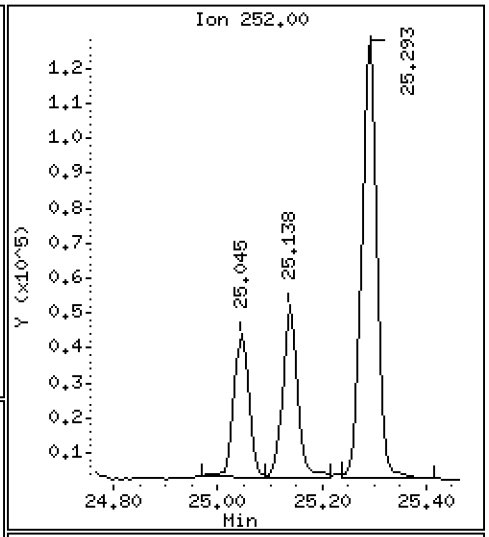
76 Benzo(a)pyrene Concentration: 0.6772 ug/mL

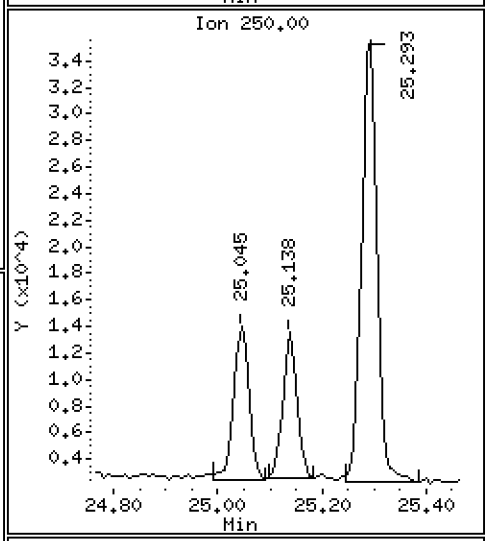


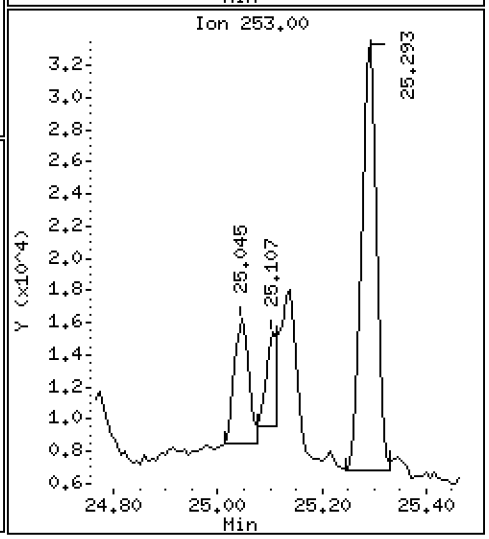












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

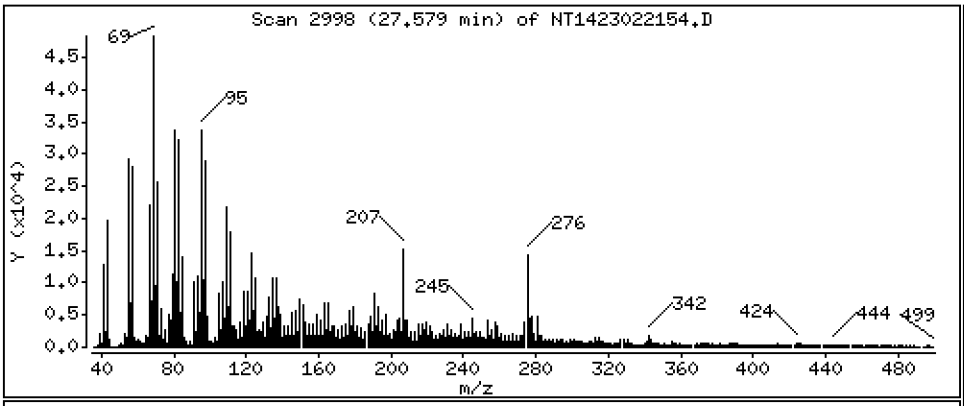
Operator: DSD

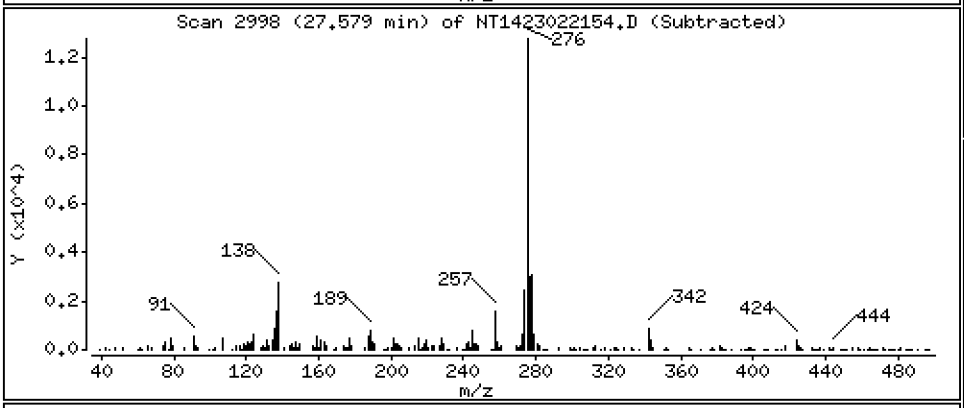
Column phase: ZB-5msi

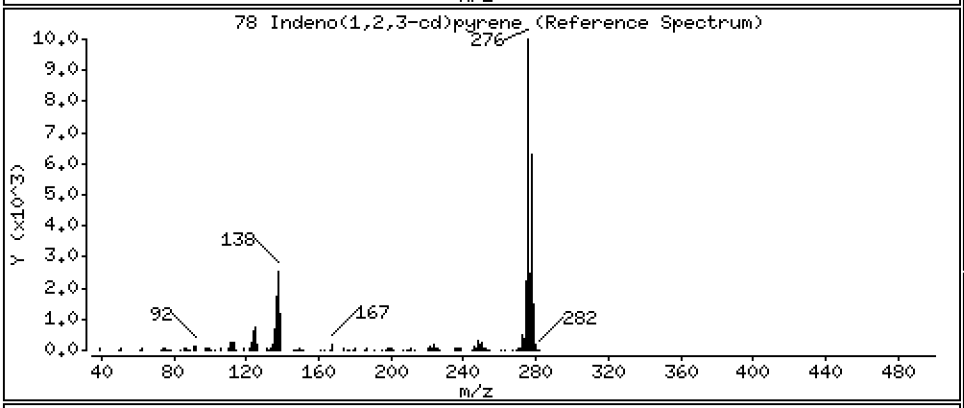
Column diameter: 0.25

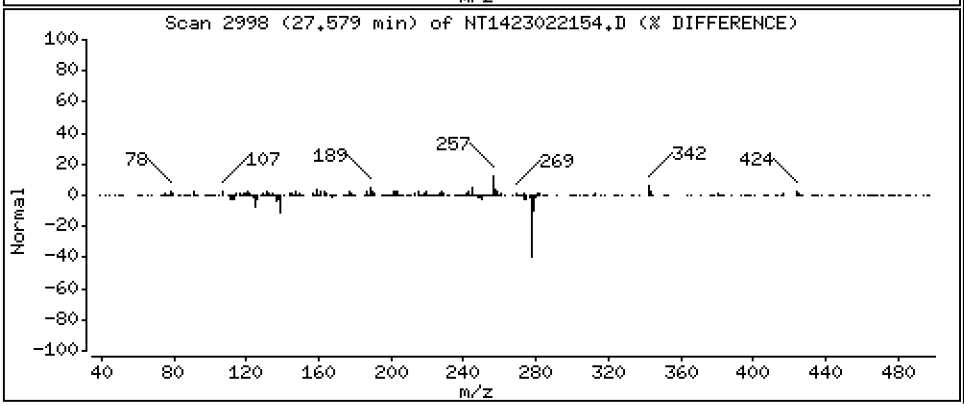
78 Indeno(1,2,3-cd)pyrene

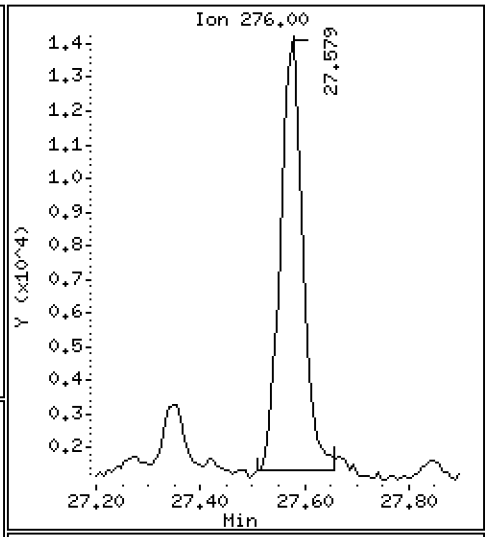
Concentration: 0.3289 ug/mL

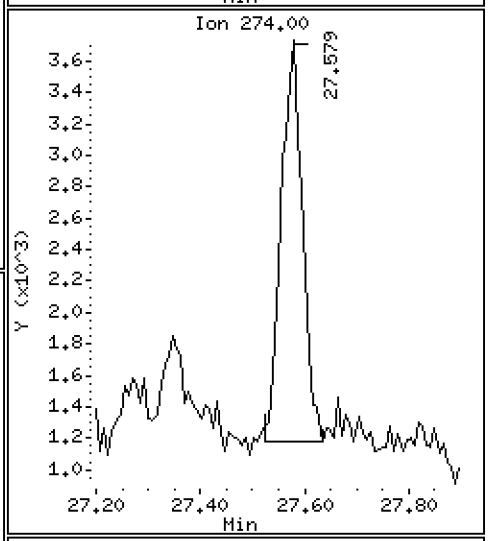


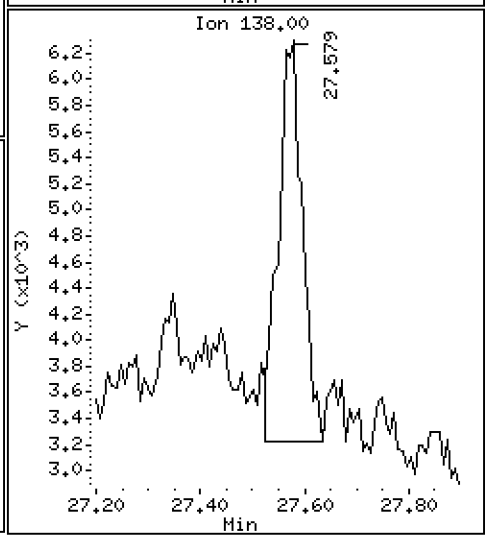












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

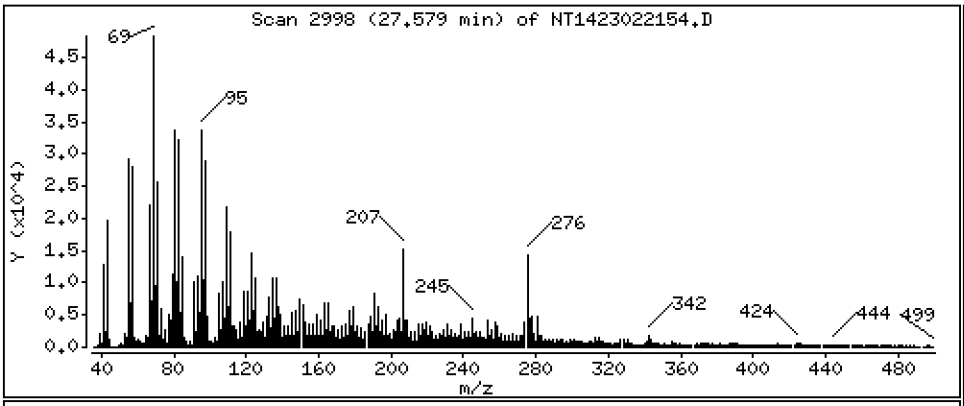
Operator: DSD

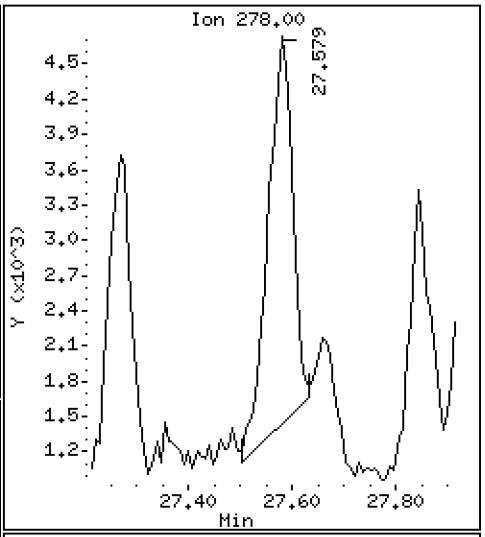
Column phase: ZB-5msi

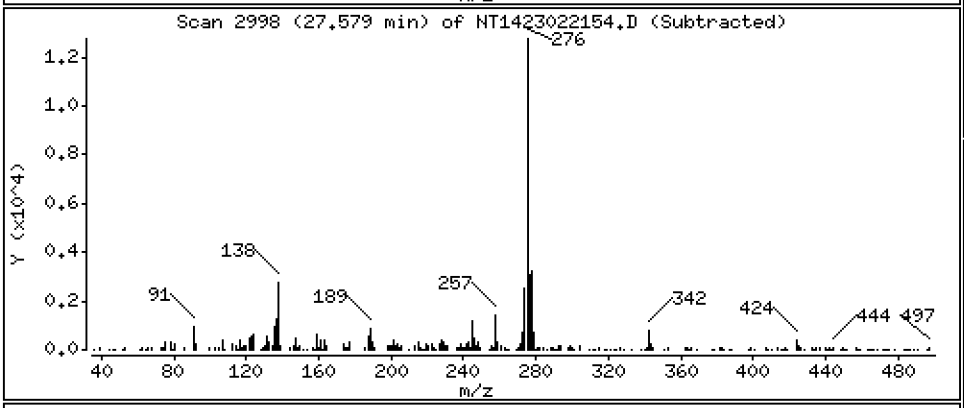
Column diameter: 0.25

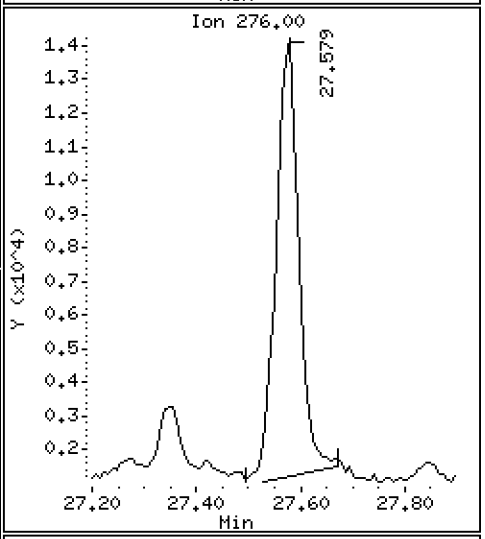
79 Dibenzo(a,h)anthracene

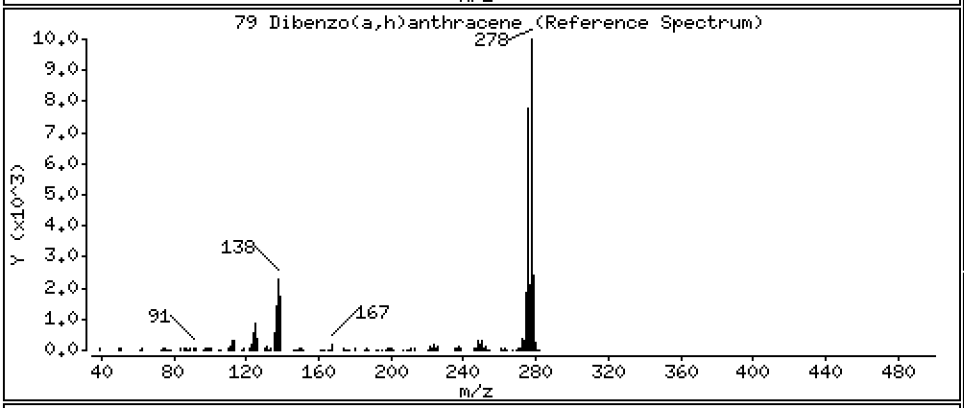
Concentration: 0.1107 ug/mL

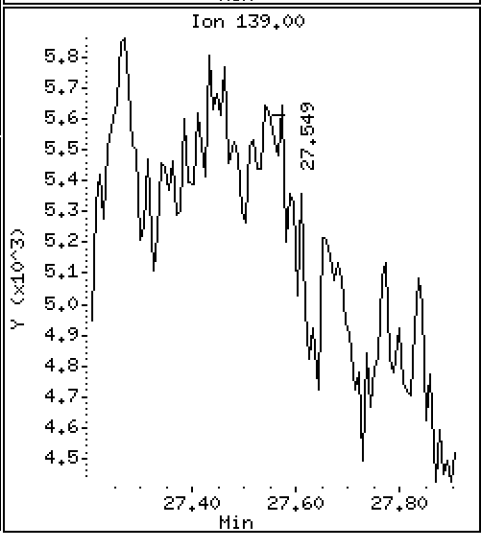


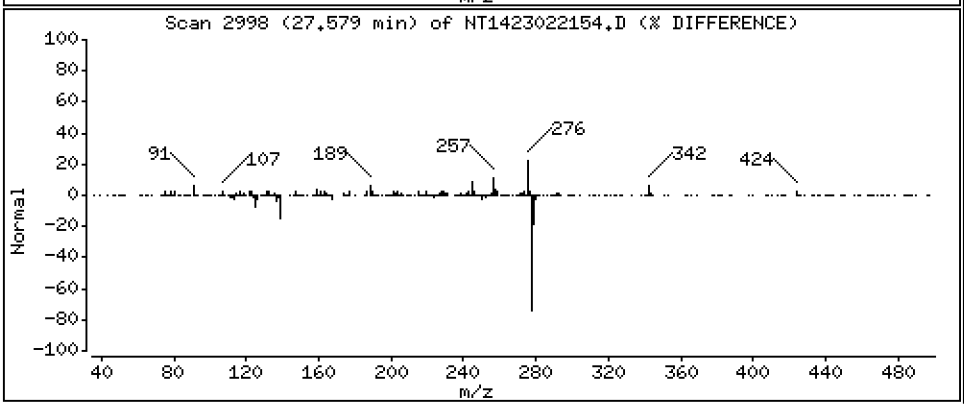












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

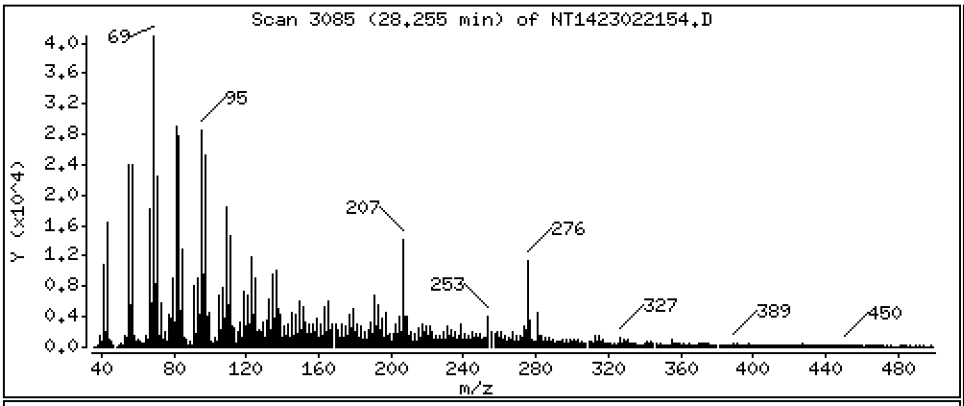
Operator: DSD

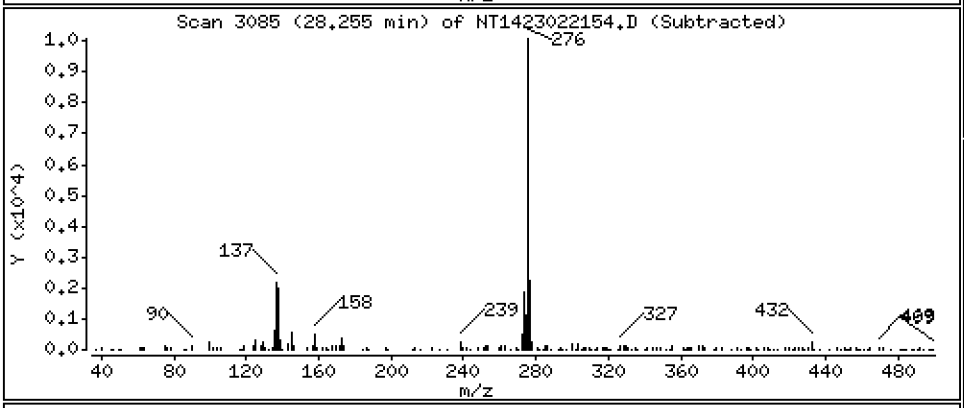
Column phase: ZB-5msi

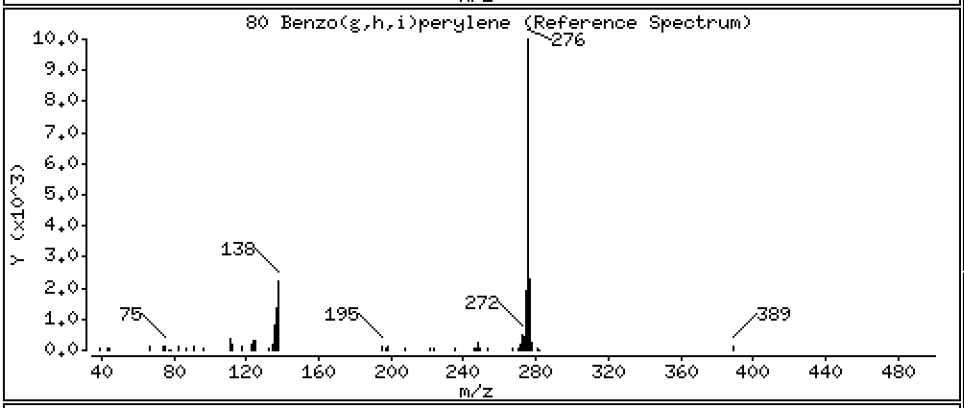
Column diameter: 0.25

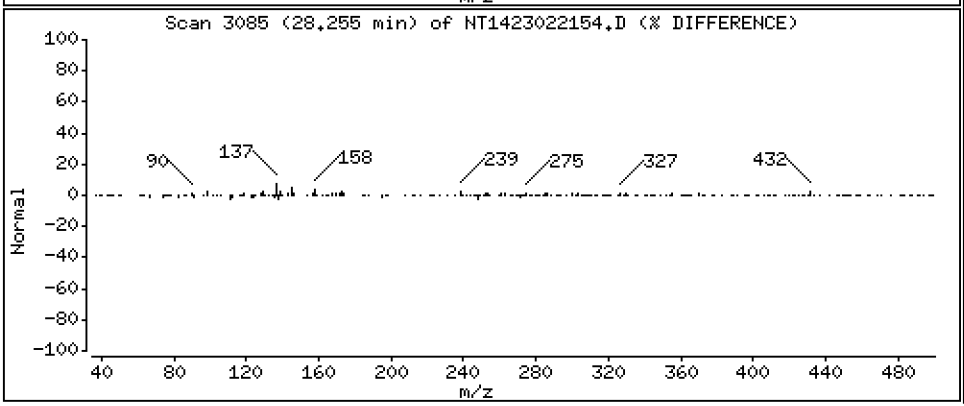
80 Benzo(g,h,i)perylene

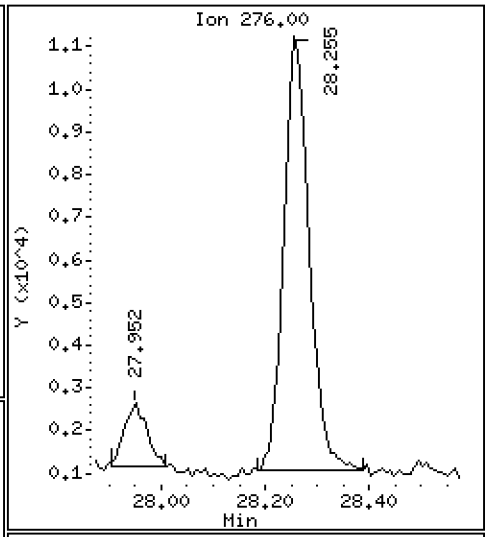
Concentration: 0.3602 ug/mL

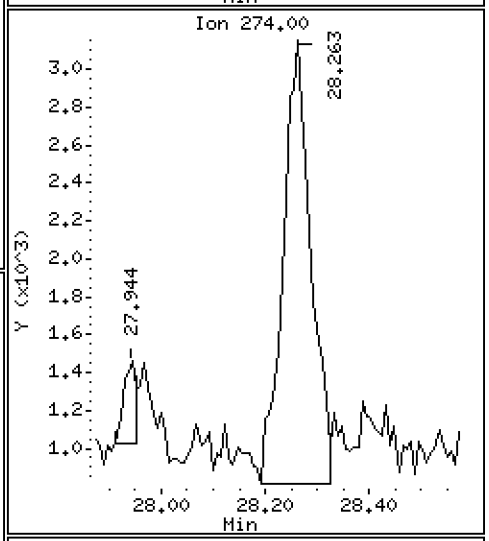


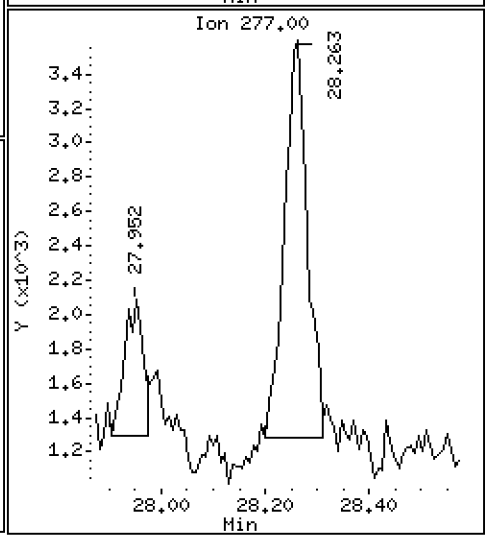












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

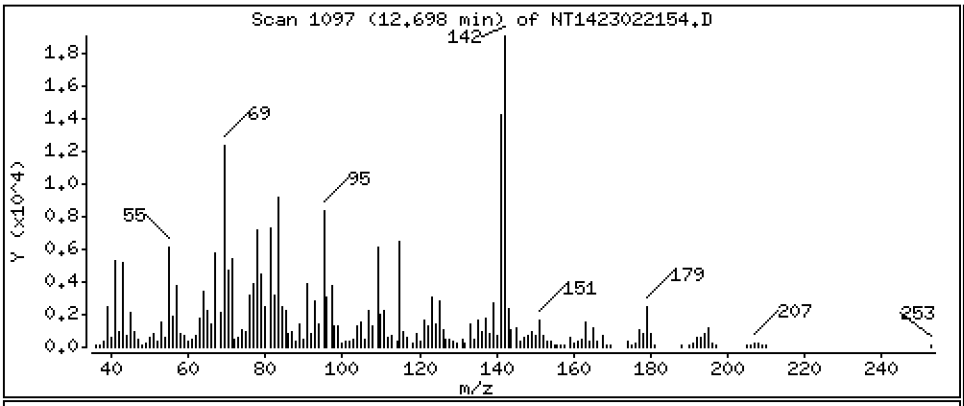
Operator: DSD

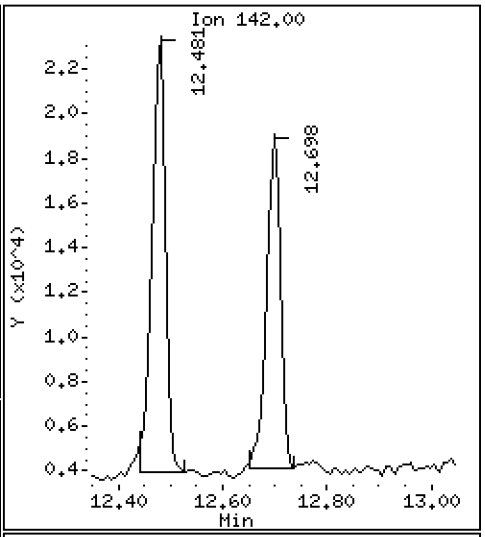
Column phase: ZB-5msi

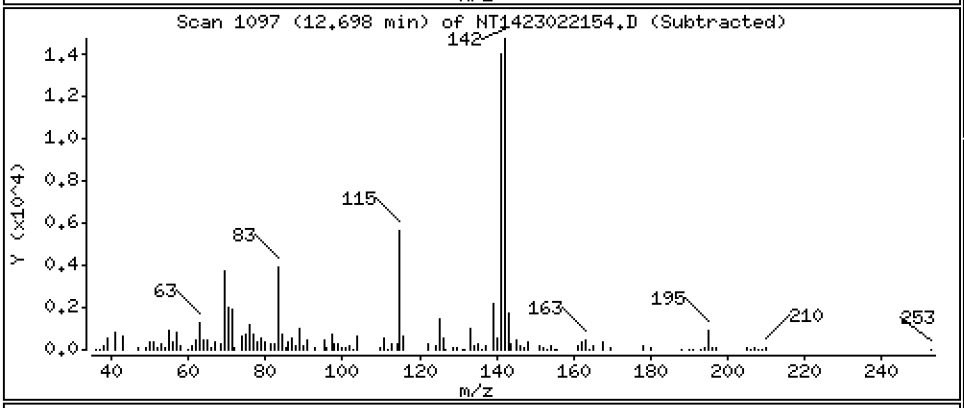
Column diameter: 0.25

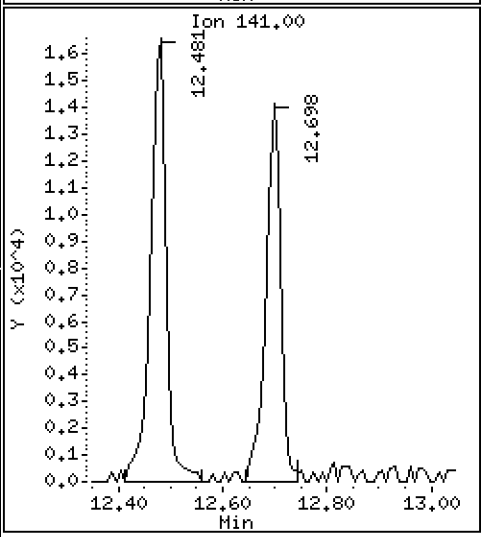
105 1-methylnaphthalene

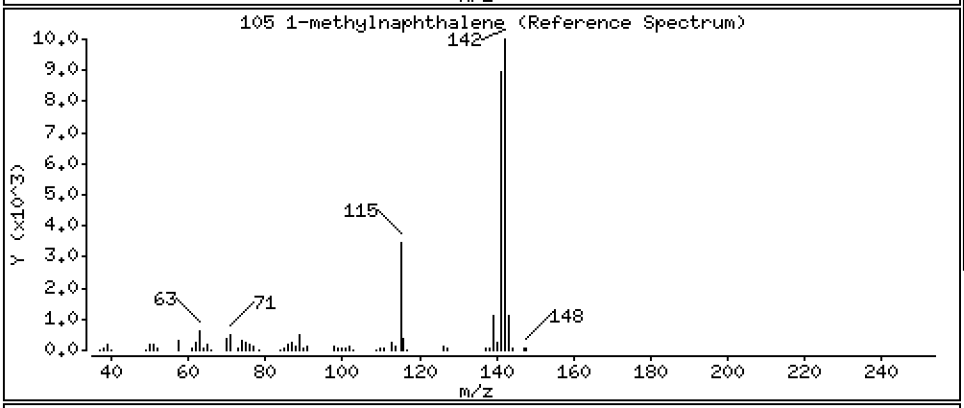
Concentration: 0.1625 ug/mL

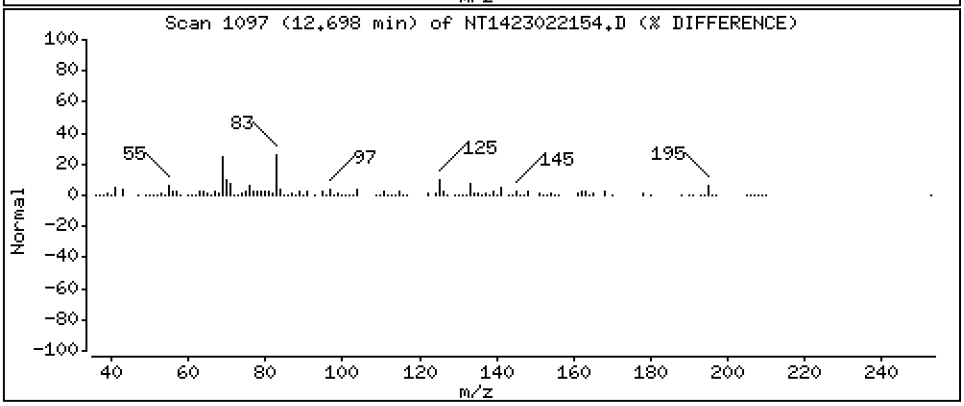












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

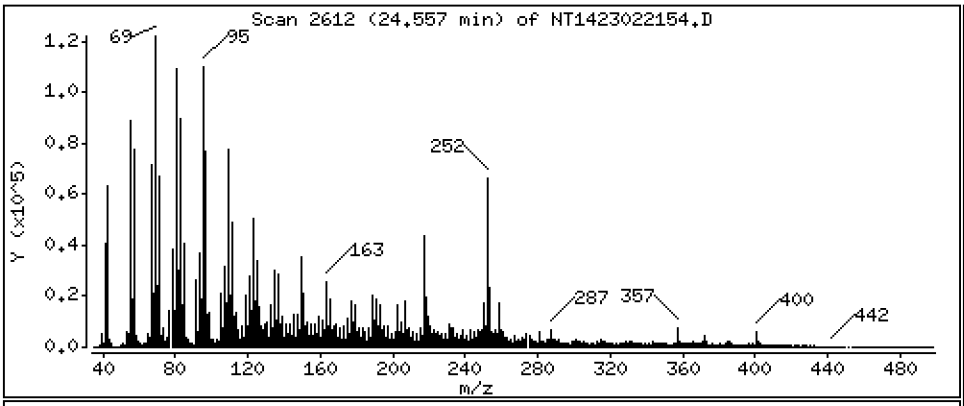
Operator: DSD

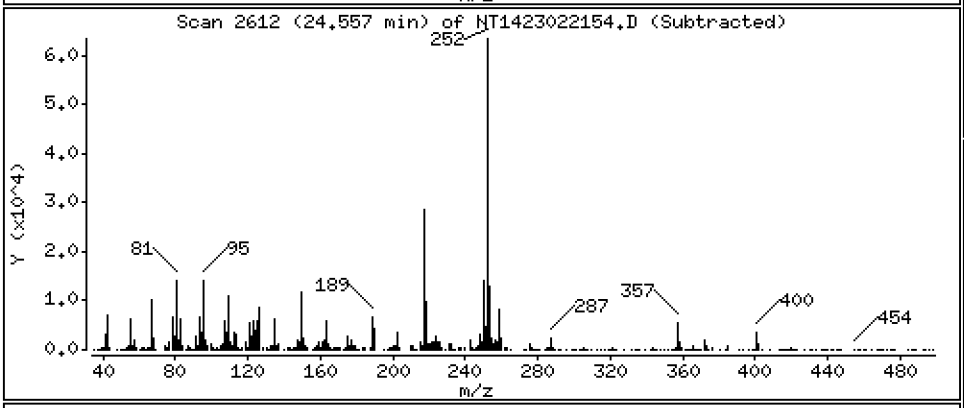
Column phase: ZB-5msi

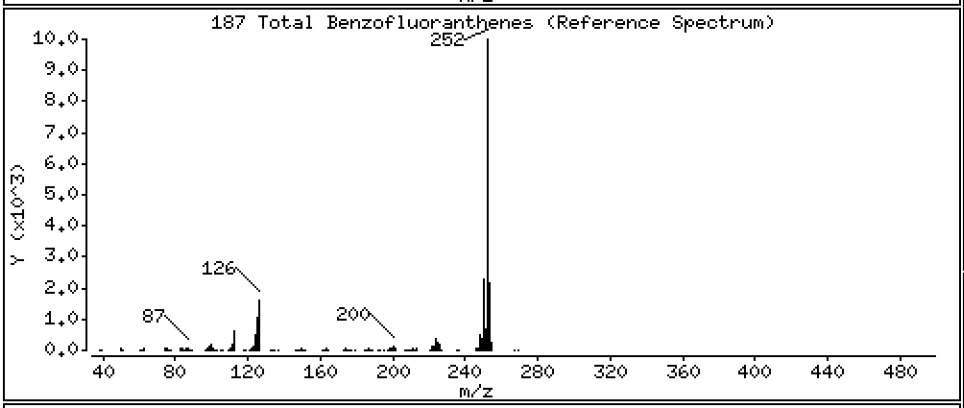
Column diameter: 0.25

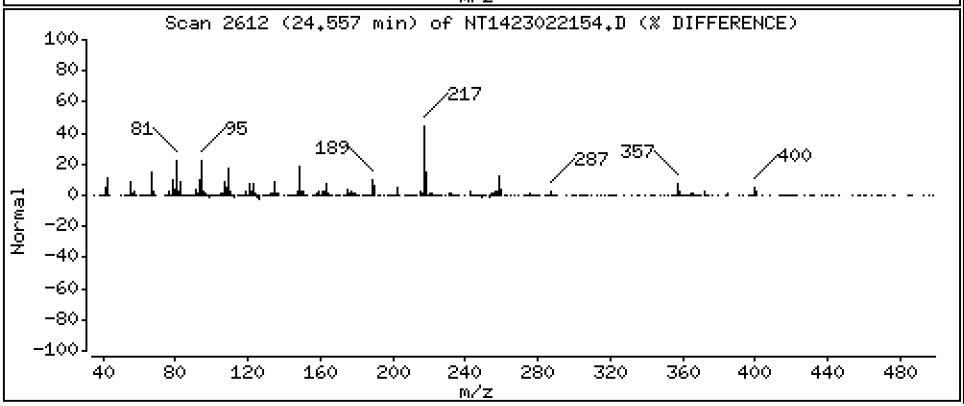
187 Total Benzofluoranthenes

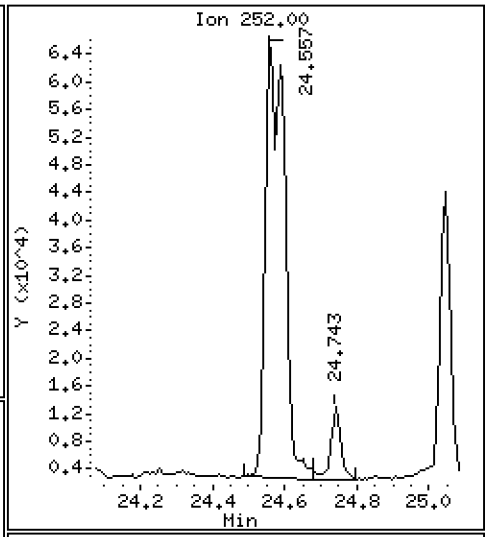
Concentration: 1.547 ug/mL

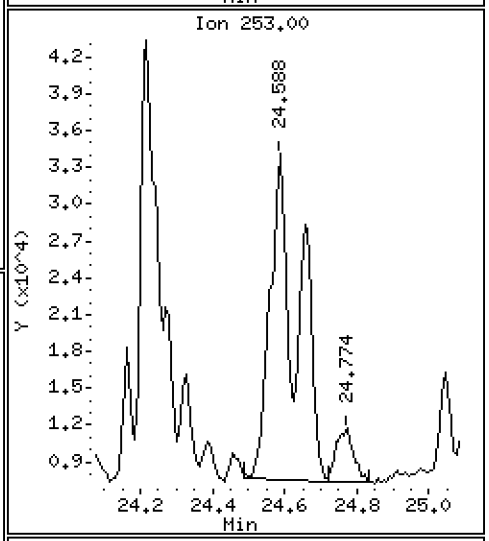


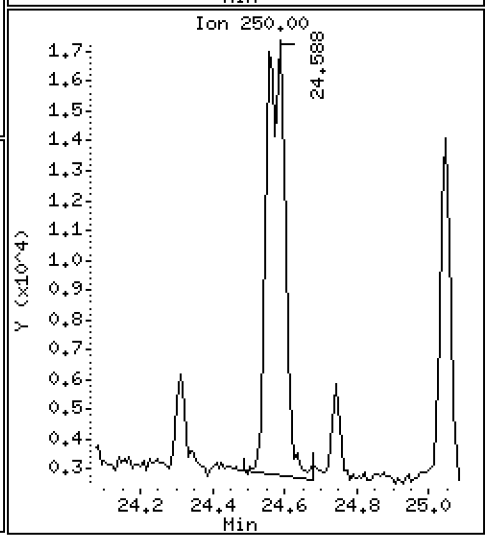












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221C.b\NT1423022154.D
Lab Smp Id: 23A0133-11
Inj Date : 22-FEB-2023 21:24 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-11
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Meth Date : 03-Mar-2023 06:54 van Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 37
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	6.388	6.380	(0.746)	358950	5.31219	5.312
$ 2	Phenol-d5	99	7.972	7.972	(0.930)	537197	5.01159	5.012
3	Phenol	94	7.995	7.996	(0.933)	29744	0.26212	0.2621(H)
$ 5	2-Chlorophenol-d4	132	8.211	8.212	(0.958)	395548	5.17165	5.172
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	8.567	8.568	(1.000)	252762	4.00000	
9	1,4-Dichlorobenzene	146	8.591	8.599	(1.003)	4330	0.05129	0.05129
$ 10	1,2-Dichlorobenzene-d4	152	8.924	8.925	(1.042)	179687	3.13428	3.134
12	1,2-Dichlorobenzene	146	8.948	8.948	(1.044)	2169	0.02570	0.02570
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
17	Hexachloroethane	117	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
15	4-Methylphenol	108	9.375	9.367	(1.094)	17071	0.20403	0.2040
$ 18	Nitrobenzene-d5	82	9.662	9.662	(0.875)	373297	3.47881	3.479
19	Nitrobenzene	77	Compound Not Detected.					
20	Isophorone	82	Compound Not Detected.					
21	2-Nitrophenol	139	Compound Not Detected.					
22	2,4-Dimethylphenol	107	Compound Not Detected.					
23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
24	Benzoic acid	105	Compound Not Detected.					
25	2,4-Dichlorophenol	162	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.042	11.042	(1.000)	928827	4.00000	
28	Naphthalene	128	11.080	11.081	(1.003)	50826	0.22193	0.2219
29	4-Chloroaniline	127	Compound Not Detected.					
30	Hexachlorobutadiene	225	Compound Not Detected.					
31	4-Chloro-3-methylphenol	107	Compound Not Detected.					
32	2-Methylnaphthalene	142	12.480	12.481	(1.130)	33656	0.19622	0.1962
33	Hexachlorocyclopentadiene	237	Compound Not Detected.					

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	13.270	13.270	(0.906)	681931	3.47696	3.477
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.647	14.648	(1.000)	548189	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	14.717	14.717	(1.005)	10981	0.07512	0.07512
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	15.042	15.050	(1.027)	30394	0.12663	0.1266
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	15.637	15.645	(1.068)	49455	0.22216	0.2222
	49 Fluorene	166	15.753	15.753	(1.075)	19946	0.07947	0.07947
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	16.293	16.293	(1.111)	116049	3.65270	3.653(MH)
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.684	17.676	(1.000)	1013650	4.00000	(H)
	60 Phenanthrene	178	17.730	17.723	(1.003)	136598	0.56080	0.5608
	61 Anthracene	178	17.823	17.816	(1.008)	49917	0.20685	0.2069
	62 Carbazole	167	Compound Not Detected.					
	63 Di-n-butylphthalate	149	19.014	18.992	(1.075)	44137	0.18044	0.1804
	64 Fluoranthene	202	20.190	20.137	(0.886)	291313	1.07010	1.070(H)
	65 Pyrene	202	20.593	20.562	(0.904)	667822	2.31994	2.320
$	66 Terphenyl-d14	244	20.887	20.872	(0.917)	808776	3.95701	3.957
	67 Butylbenzylphthalate	149	21.824	21.816	(0.958)	14931	0.15735	0.1573
	68 Benzo(a)anthracene	228	22.761	22.745	(0.999)	122832	0.60831	0.6083
*	69 Chrysene-d12	240	22.784	22.769	(1.000)	630996	4.00000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	22.830	22.815	(1.002)	123782	0.68153	0.6815
	72 bis(2-Ethylhexyl)phthalate	149	22.869	22.854	(0.959)	56763	0.36249	0.3625
*	134 Di-n-octylphthalate-d4	153	23.844	23.837	(1.000)	911596	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	24.557	24.542	(0.973)	140611	0.90759	0.9076(M)
	75 Benzo(k)fluoranthene	252	24.588	24.580	(0.974)	125505	0.75812	0.7581
	76 Benzo(a)pyrene	252	25.137	25.114	(0.996)	99471	0.67720	0.6772
*	77 Perylene-d12	264	25.238	25.223	(1.000)	488257	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	27.579	27.548	(1.093)	39738	0.32887	0.3289
	79 Dibenzo(a,h)anthracene	278	27.579	27.564	(1.093)	11007	0.11069	0.1107(M)
	80 Benzo(g,h,i)perylene	276	28.254	28.224	(1.120)	35305	0.36019	0.3602
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	142	12.697	12.697	(1.150)	26169	0.16251	0.1625
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.557	24.580	(0.973)	233973	1.54684	1.547
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022154.D
Lab Smp Id: 23A0133-11
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 16:35
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	232195	116098	464390	252762	8.86
27 Naphthalene-d8	800631	400316	1601262	928827	16.01
42 Acenaphthene-d10	488064	244032	976128	548189	12.32
59 Phenanthrene-d10	971279	485640	1942558	1013650	4.36
69 Chrysene-d12	687083	343542	1374166	630996	-8.16
134 Di-n-octylphthala	1174636	587318	2349272	911596	-22.39
77 Perylene-d12	491790	245895	983580	488257	-0.72

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.07
134 Di-n-octylphthala	23.84	23.34	24.34	23.84	0.03
77 Perylene-d12	25.22	24.72	25.72	25.24	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022154.D

Lab ID: 23A0133-11
nt14.i, ABN.m, 22-FEB-2023 21:24

RT	CO-ELUTION COMPOUNDS
27.579	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
27.579	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

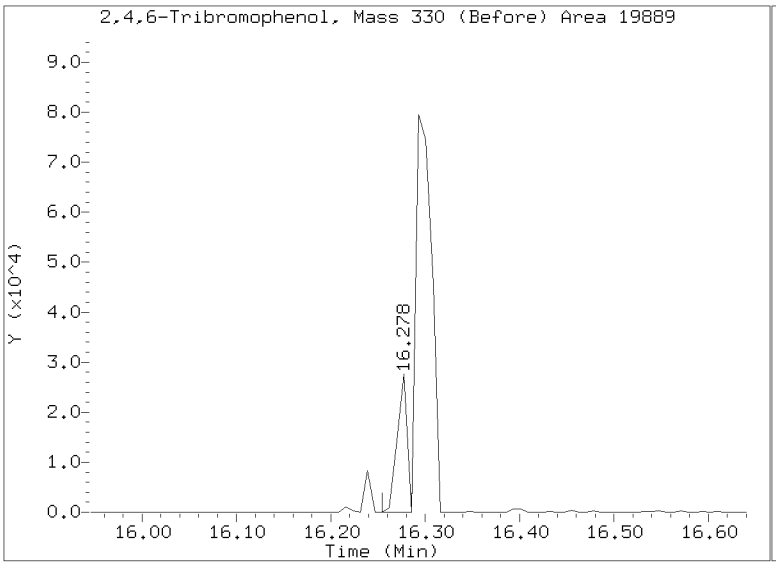
RRT check based on Ccal File: NT1423022146.D

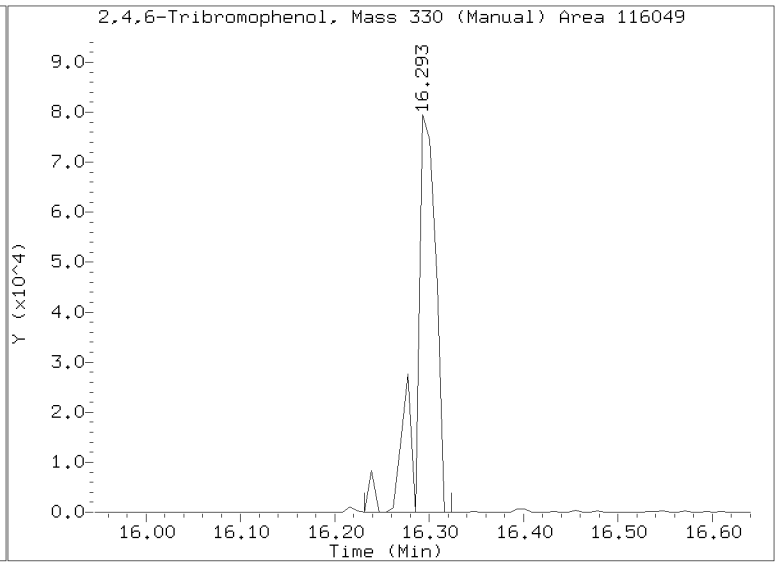
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

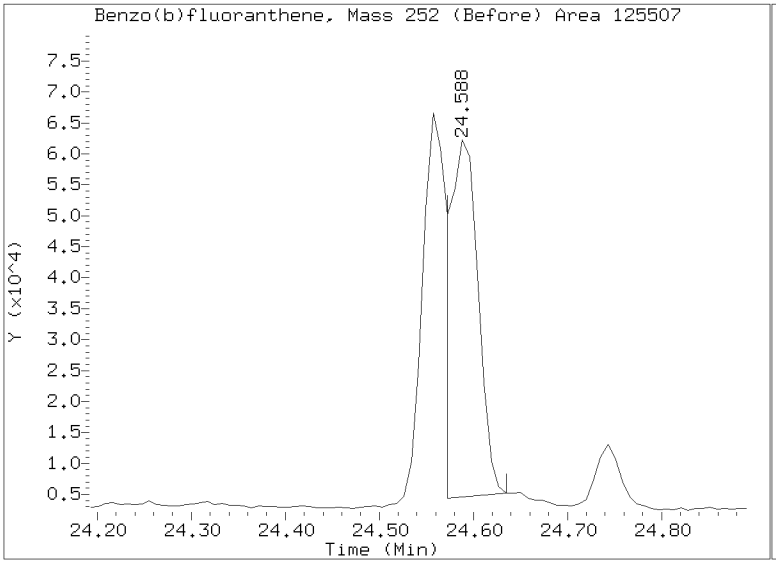
* Only compounds listed in the work order have been verified by the analyst *

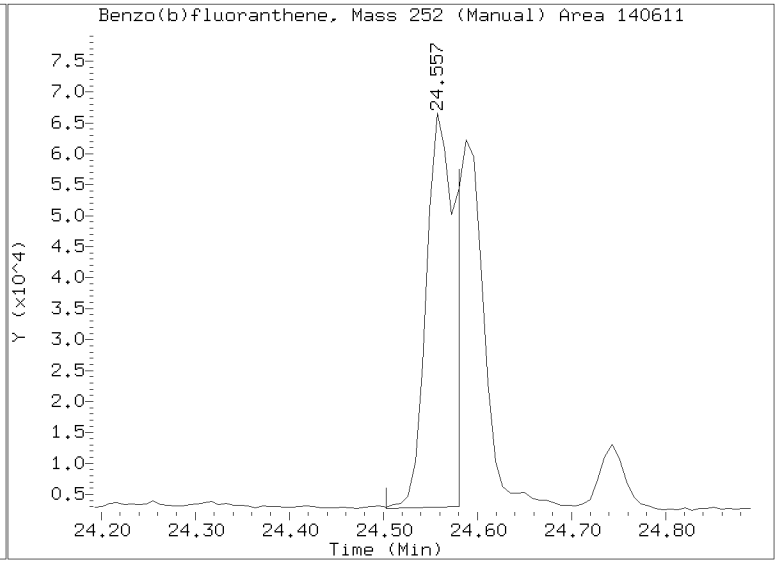
Quant Ion Manual Peak Adjustment Report

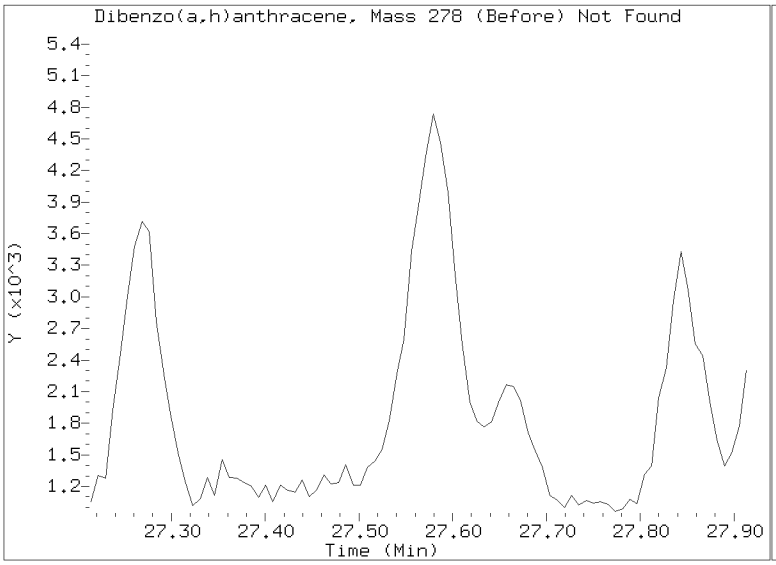
Datafile: //target/share/chem3/nt14.i/20230221C.b/NT1423022154.D
Injection Date: 22-FEB-2023 21:24
Lab ID:23A0133-11 Client ID:
Report Date: 03/03/2023 07:39

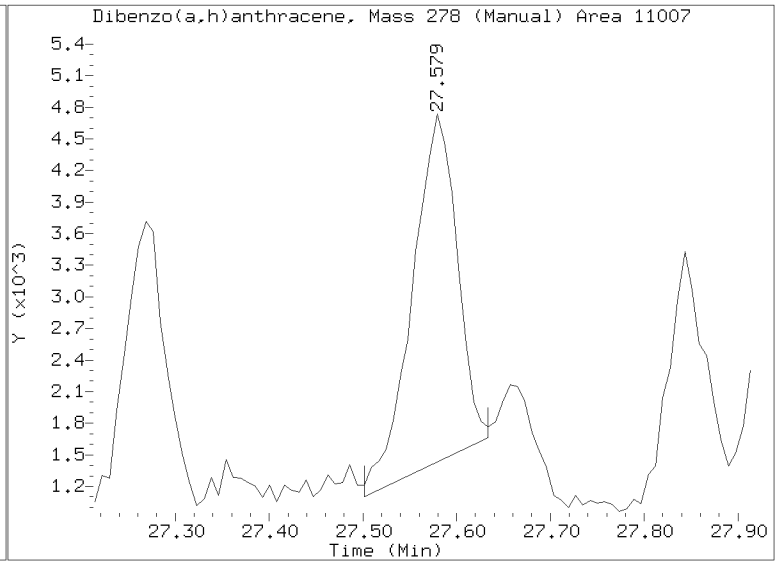












LDW23-SC1227

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-12 C	SDG:	23A0133
Sampled:	01/06/23 13:18	Prepared:	01/18/23 15:24	File ID:	NT1423022155.D
% Solids:	55.76	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 22:01
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	17.96 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	45.3		4.4	20.0
106-44-5	4-Methylphenol	1	13.6	J	7.4	20.0
91-20-3	Naphthalene	1	23.8		4.2	20.0
91-57-6	2-Methylnaphthalene	1	24.5		4.5	20.0
208-96-8	Acenaphthylene	1	20.0	U	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	5.6	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.5	20.0
85-01-8	Phenanthrene	1	50.4		8.7	20.0
120-12-7	Anthracene	1	10.3	J	7.2	20.0
206-44-0	Fluoranthene	1	38.6		6.1	20.0
129-00-0	Pyrene	1	59.5		5.7	20.0
85-68-7	Butylbenzylphthalate	1	23.4		9.4	20.0
56-55-3	Benzo(a)anthracene	1	17.2	J	6.0	20.0
218-01-9	Chrysene	1	21.7		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	23.1	J	5.5	49.9
	Benzofluoranthenes, Total	1	45.5		10.0	39.9
50-32-8	Benzo(a)pyrene	1	14.2	J	4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	20.0	U	14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	20.0	U	13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.91	314	41.9	27 - 120	
Phenol-d5	748.91	327	43.6	29 - 120	
2-Chlorophenol-d4	748.91	381	50.8	31 - 120	
1,2-Dichlorobenzene-d4	499.28	236	47.2	32 - 120	
Nitrobenzene-d5	499.28	285	57.1	30 - 120	
2-Fluorobiphenyl	499.28	286	57.4	35 - 120	

LDW23-SC1227

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

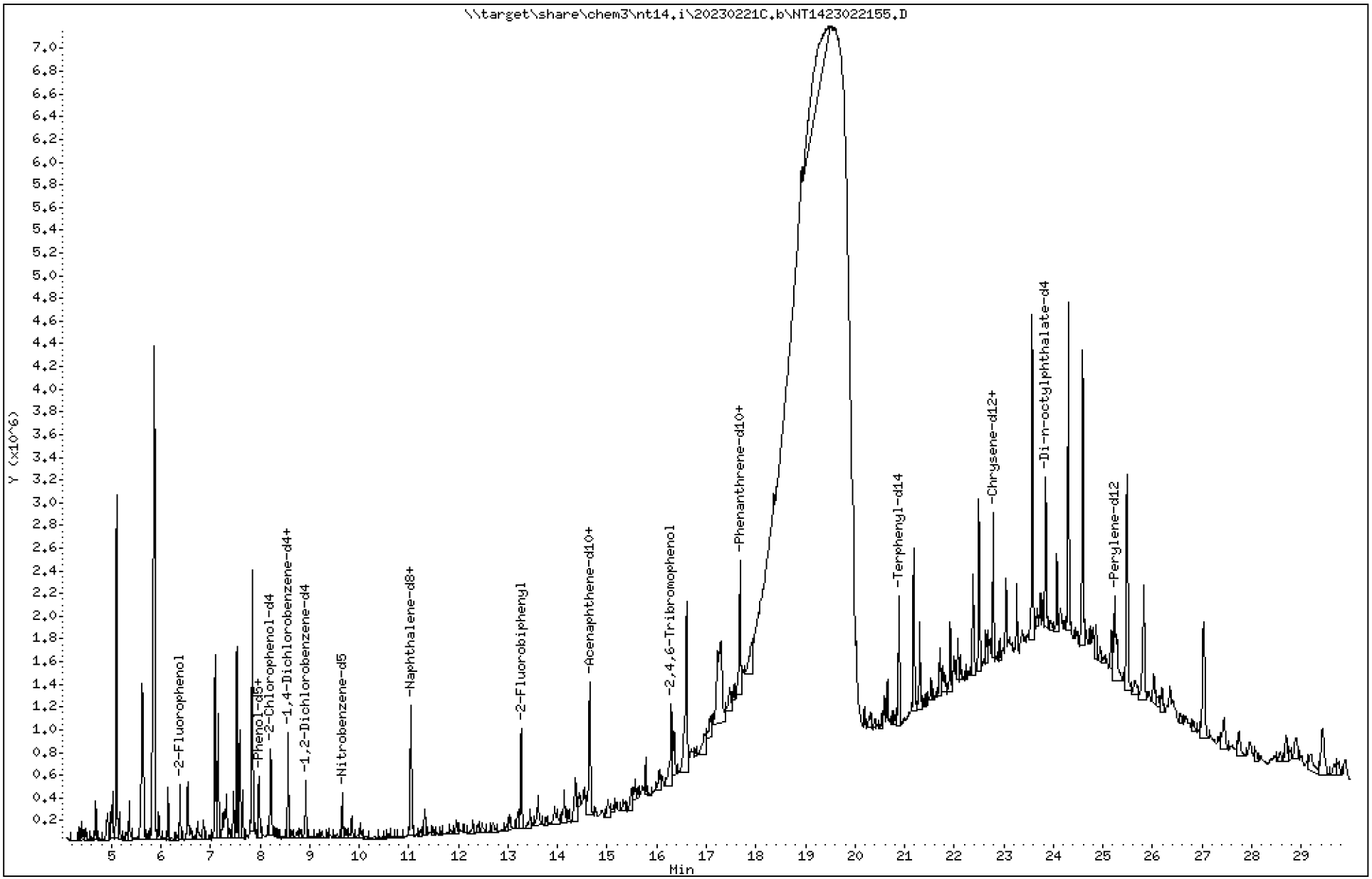
Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-12 C	SDG:	23A0133
Sampled:	01/06/23 13:18	Prepared:	01/18/23 15:24	File ID:	NT1423022155.D
% Solids:	55.76	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 22:01
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	17.96 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	748.91	231	30.8	24 - 134	
p-Terphenyl-d14	499.28	322	64.5	37 - 120	

Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022155.D
Date : 22-FEB-2023 22:01
Client ID:
Sample Info: 23A0133-12

Instrument: nt14.i
Operator: DSD
Column diameter: 0.25

Column phase: ZB-5msi



Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022155.D

Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

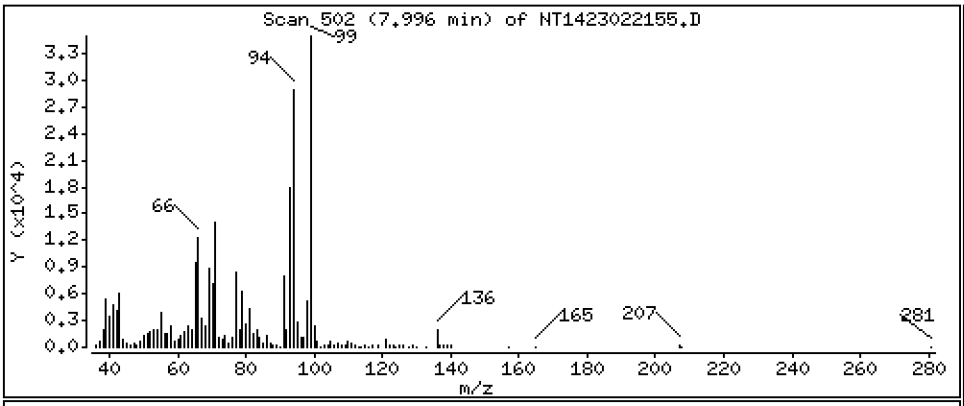
Operator: DSD

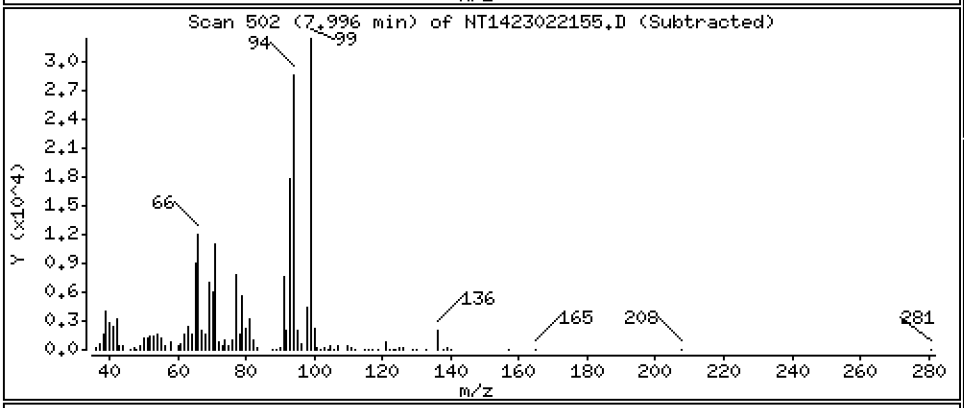
Column phase: ZB-5msi

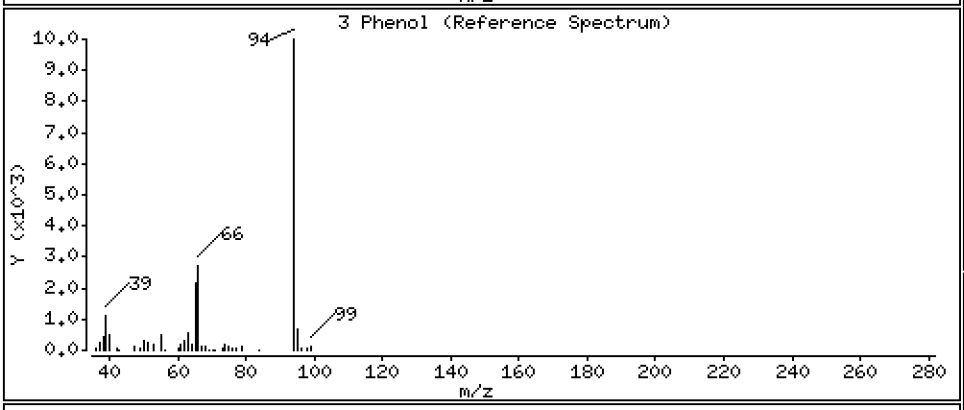
Column diameter: 0.25

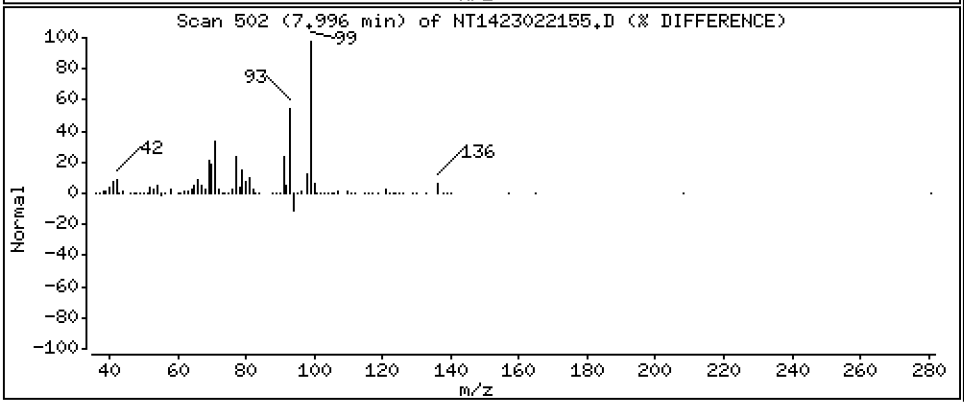
3 Phenol

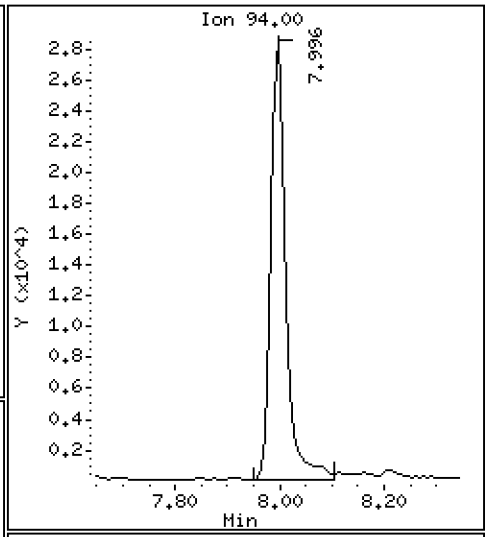
Concentration: 0.4534 ug/mL

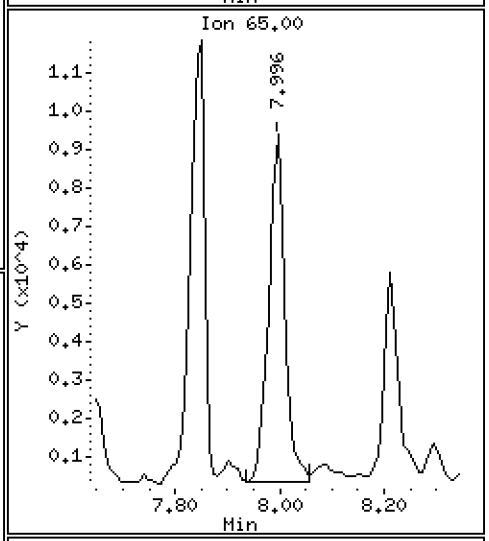


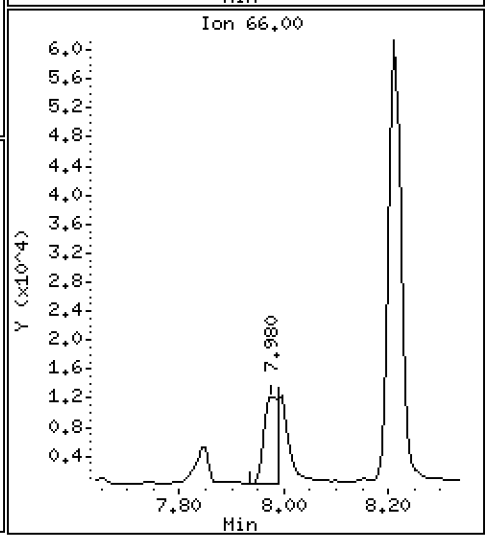












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022155.D

Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

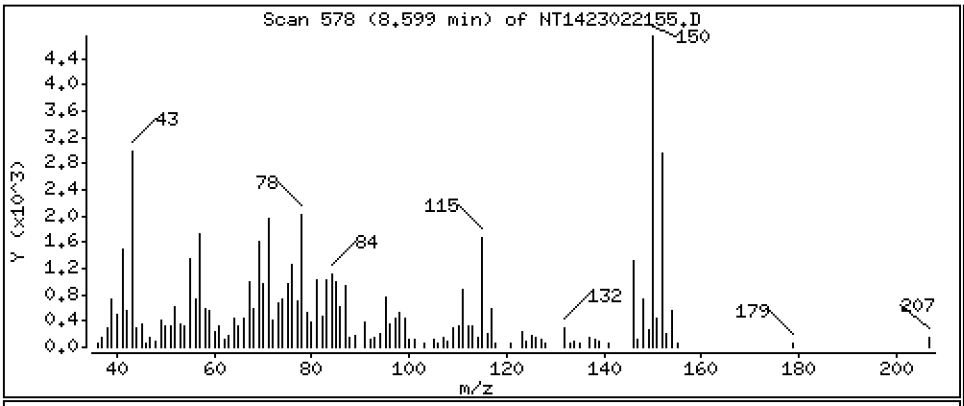
Operator: DSD

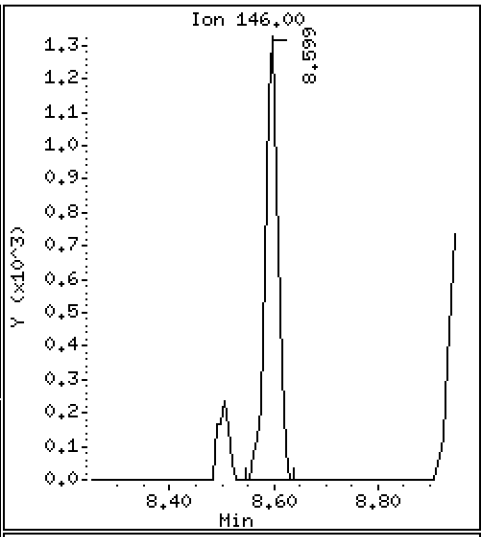
Column phase: ZB-5msi

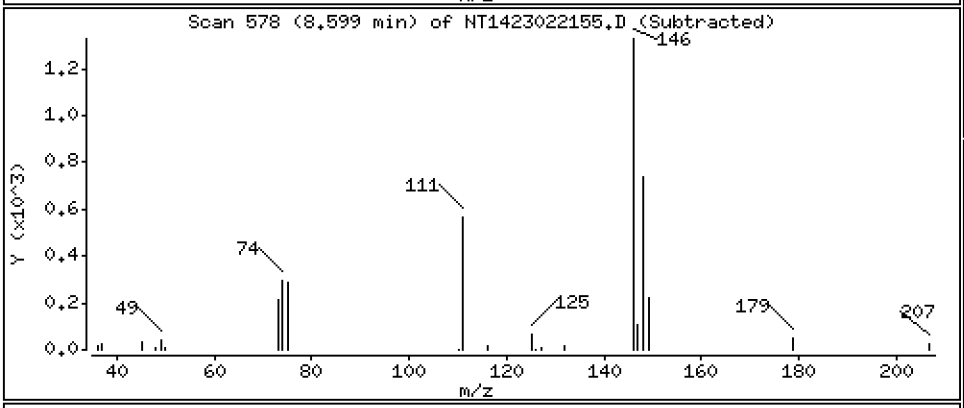
Column diameter: 0.25

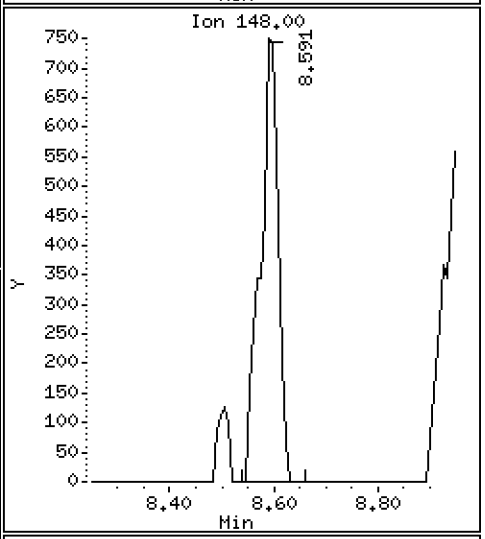
9 1,4-Dichlorobenzene

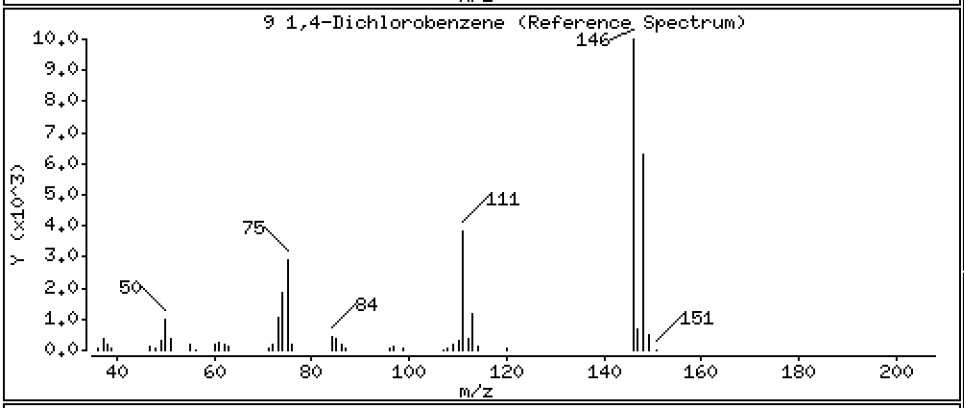
Concentration: 0.02545 ug/mL

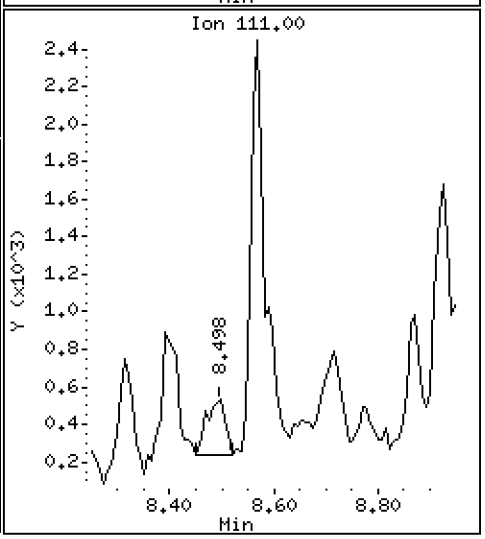


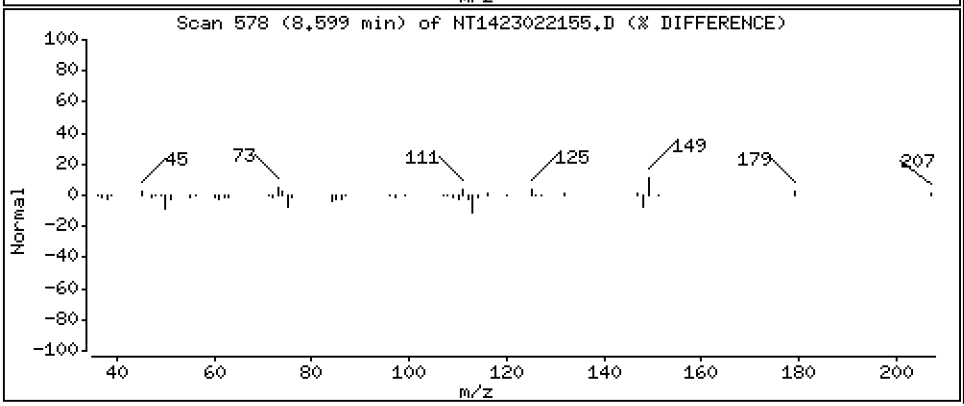












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

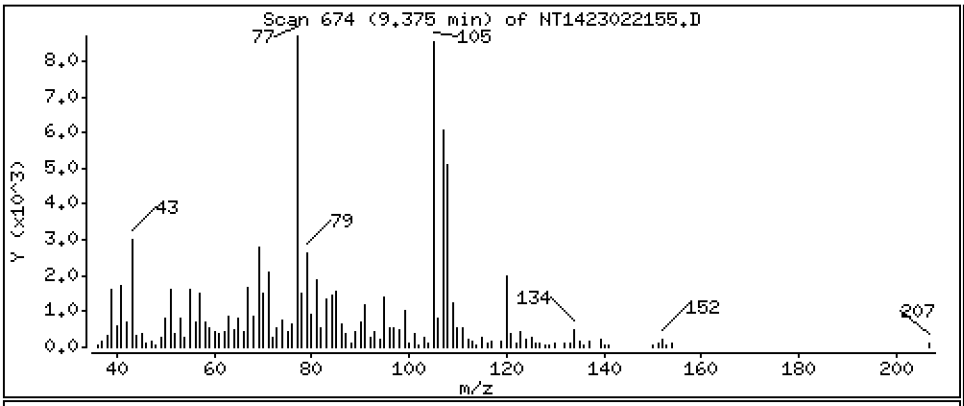
Operator: DSD

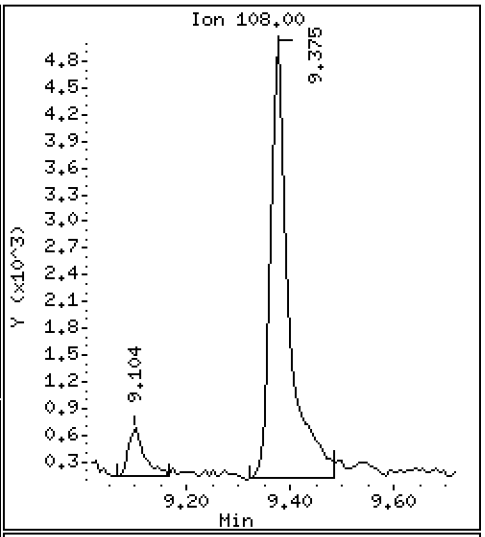
Column phase: ZB-5msi

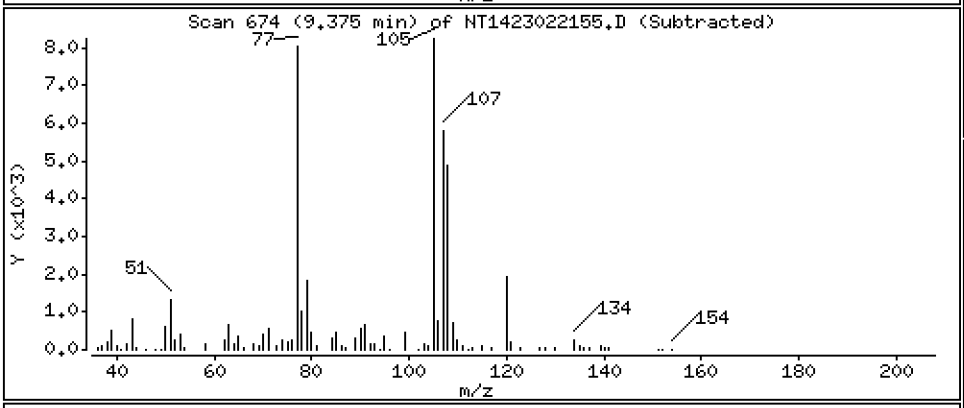
Column diameter: 0.25

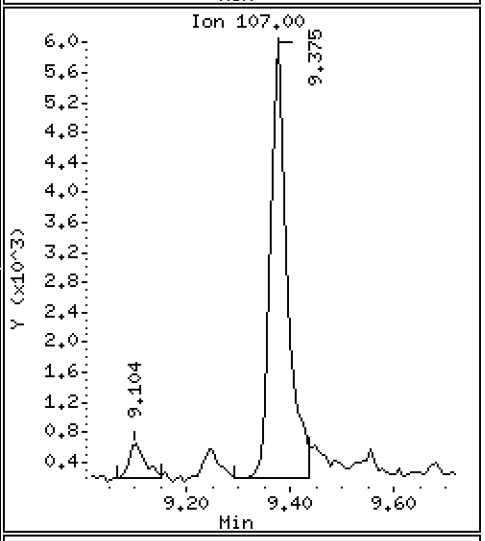
15 4-Methylphenol

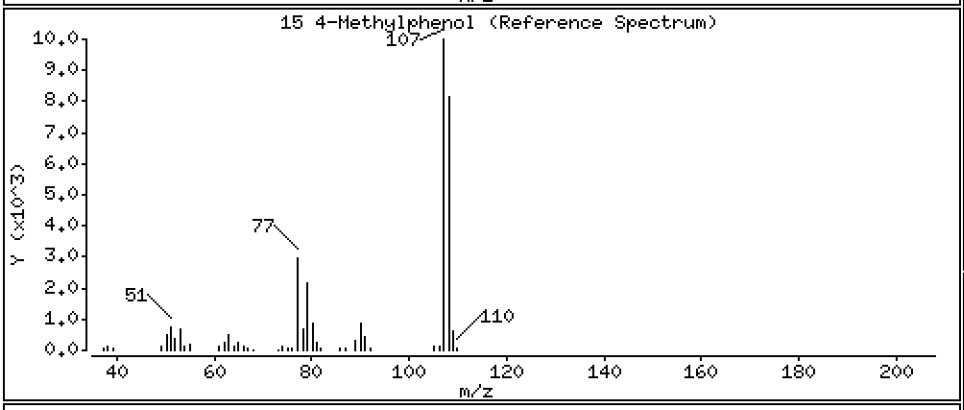
Concentration: 0.1363 ug/mL

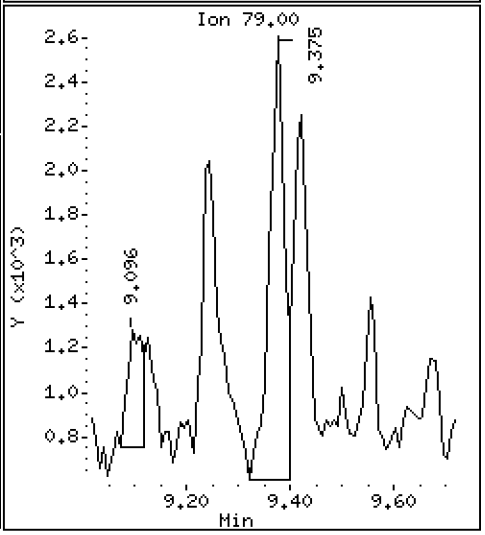


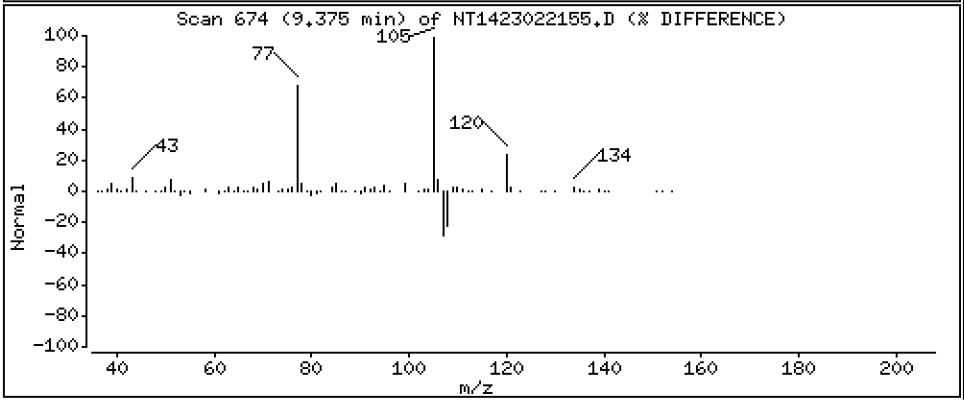












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

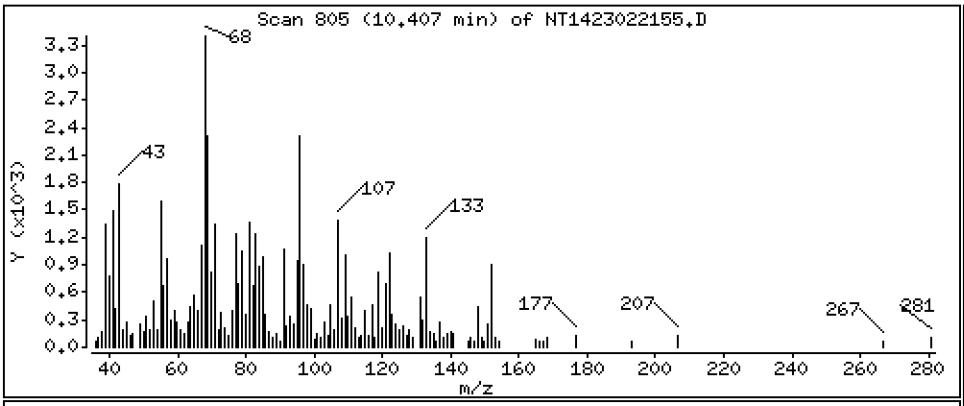
Operator: DSD

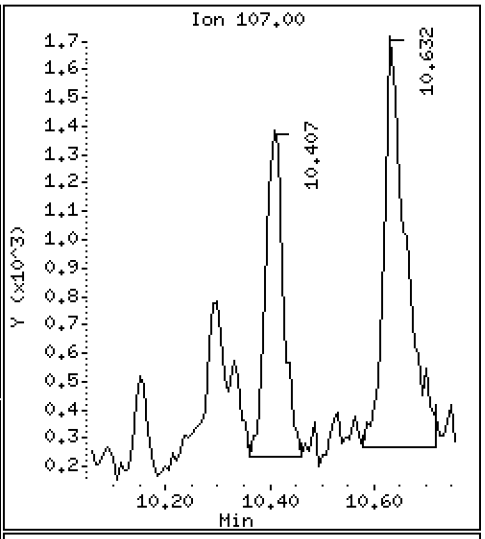
Column phase: ZB-5msi

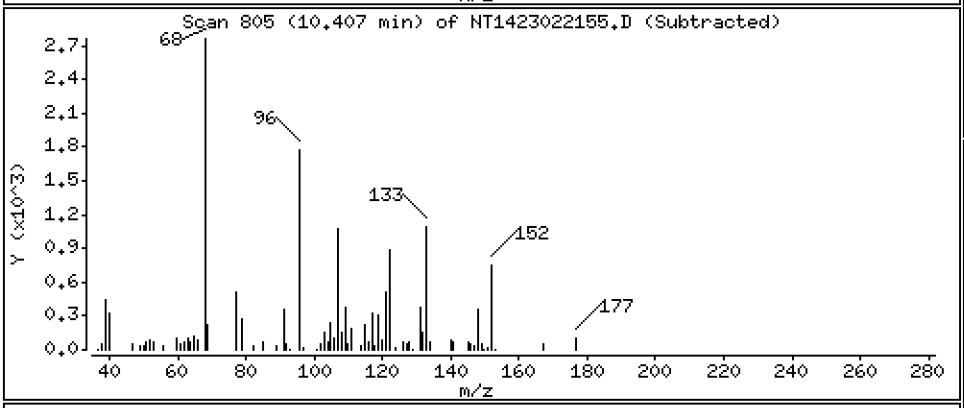
Column diameter: 0.25

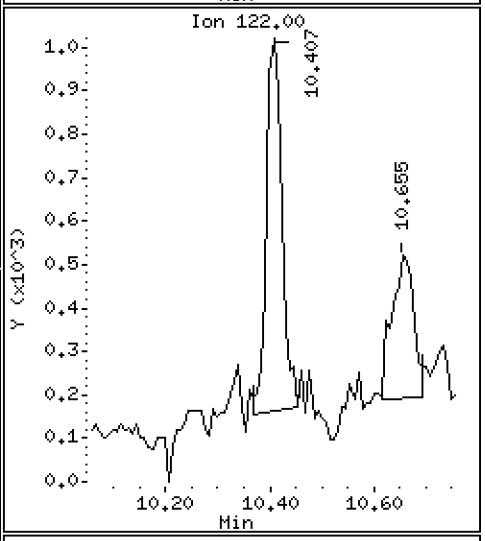
22 2,4-Dimethylphenol

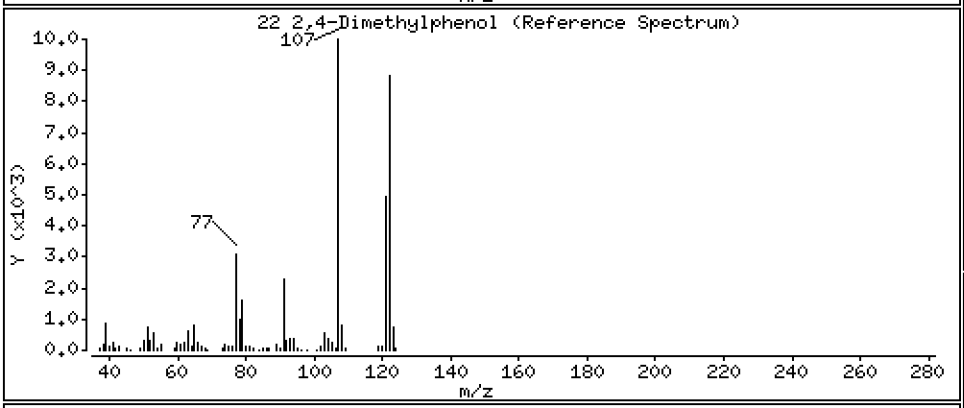
Concentration: 0.03361 ug/mL

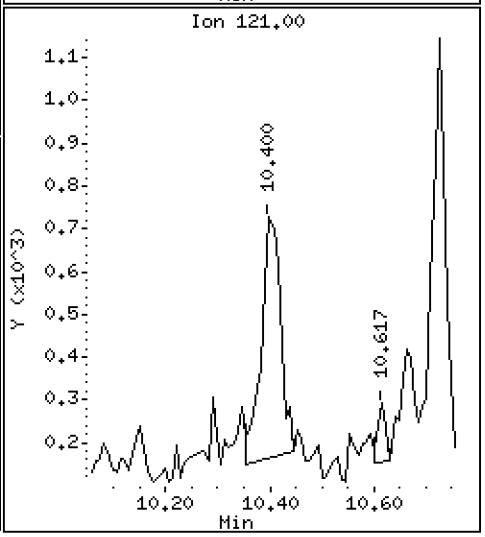


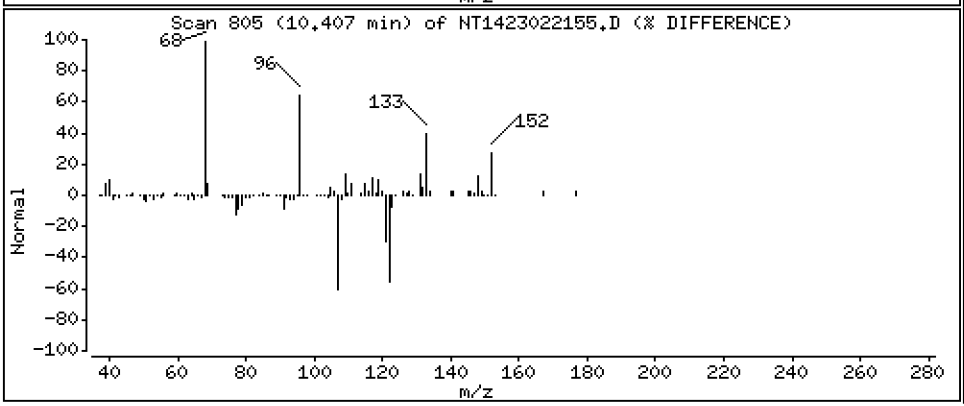












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

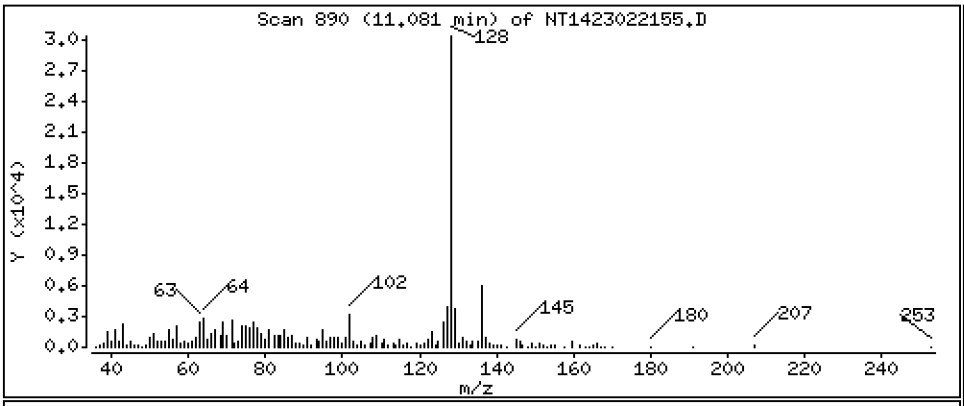
Operator: DSD

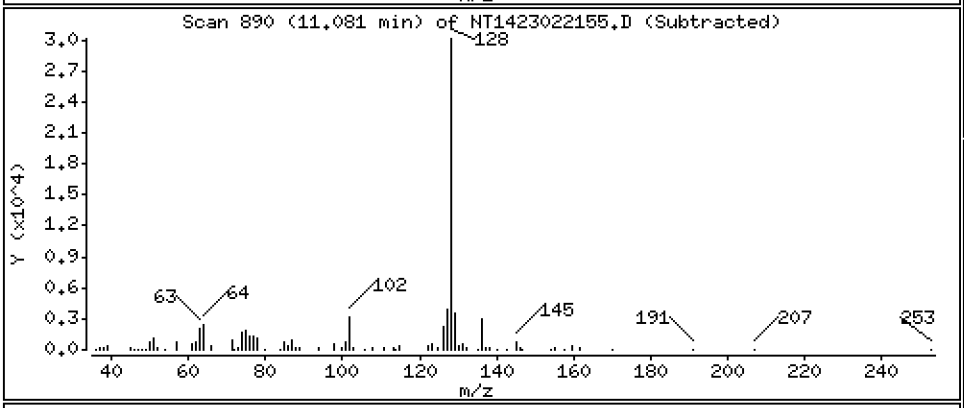
Column phase: ZB-5msi

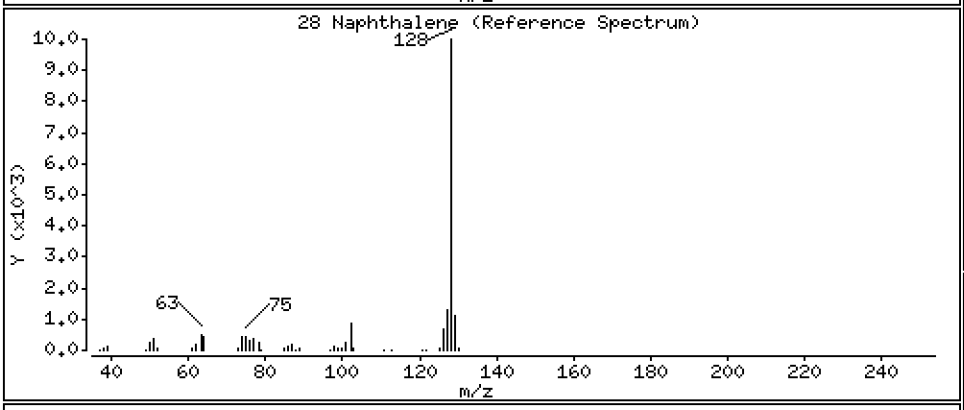
Column diameter: 0.25

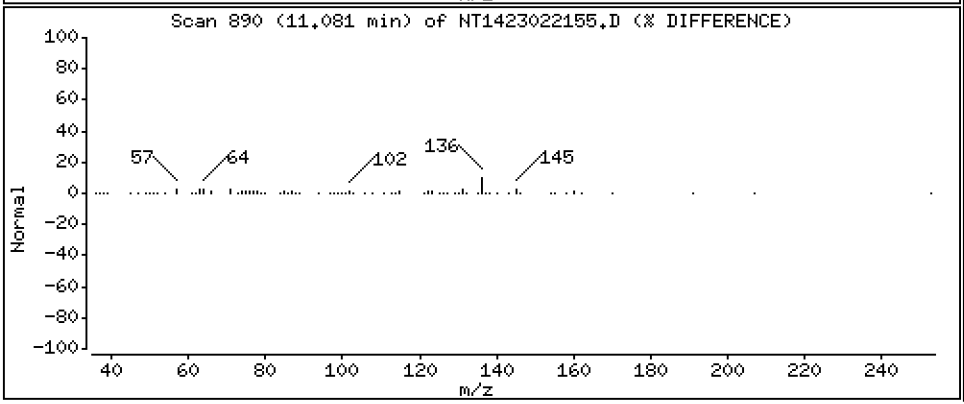
28 Naphthalene

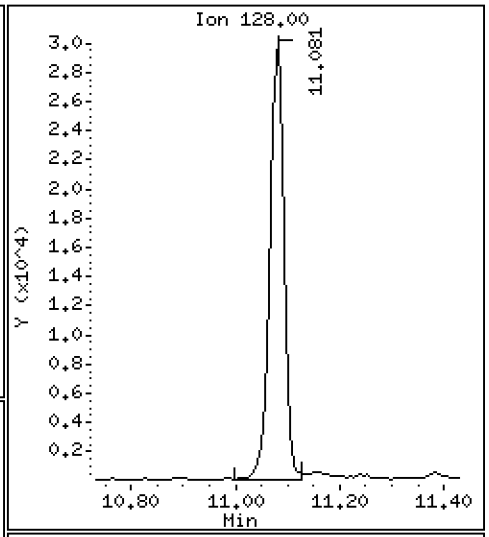
Concentration: 0.2383 ug/mL

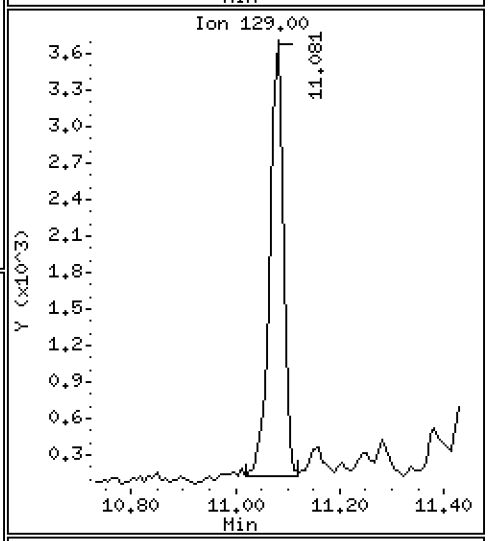


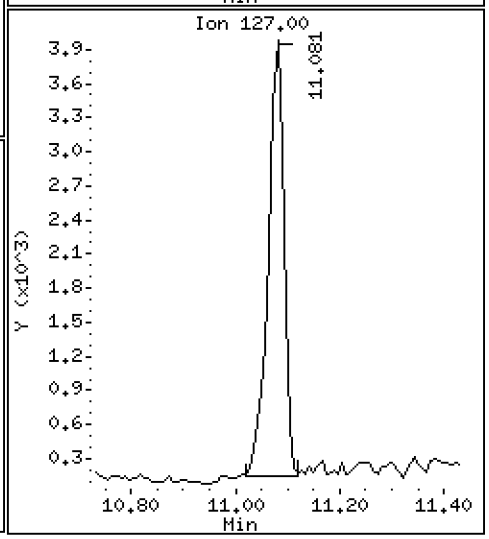












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

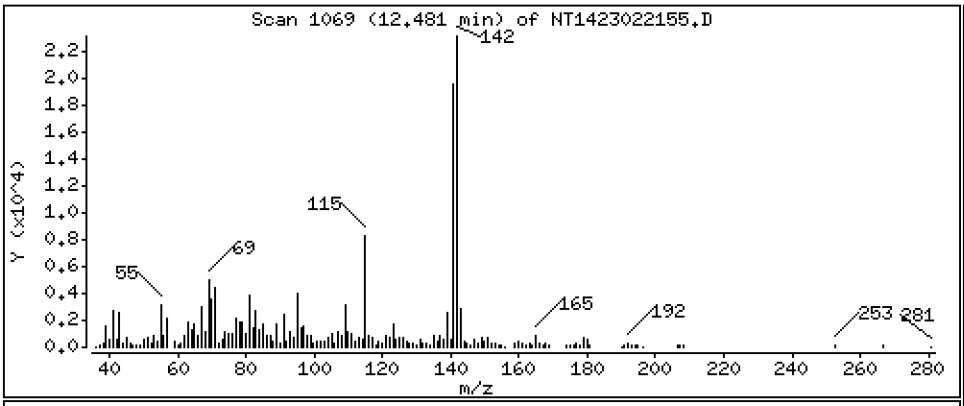
Operator: DSD

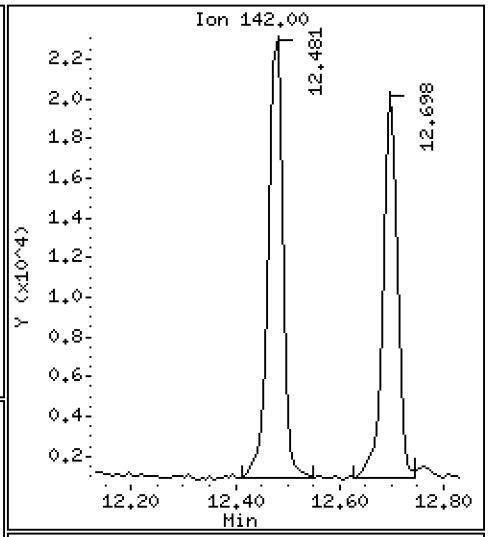
Column phase: ZB-5msi

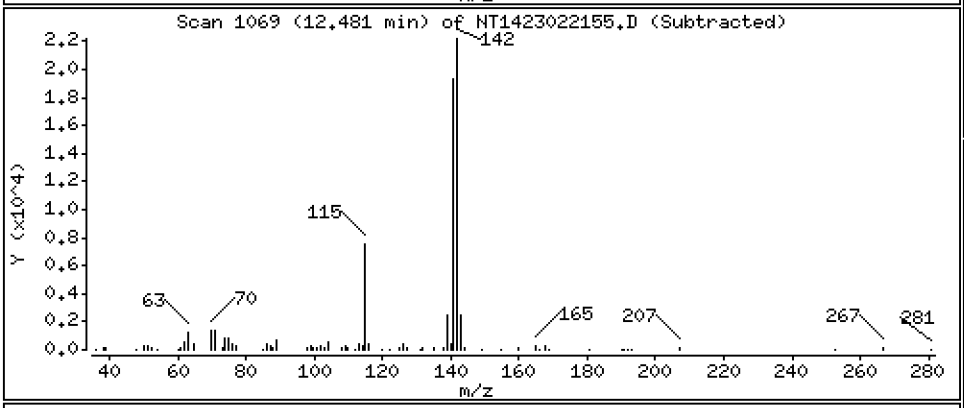
Column diameter: 0.25

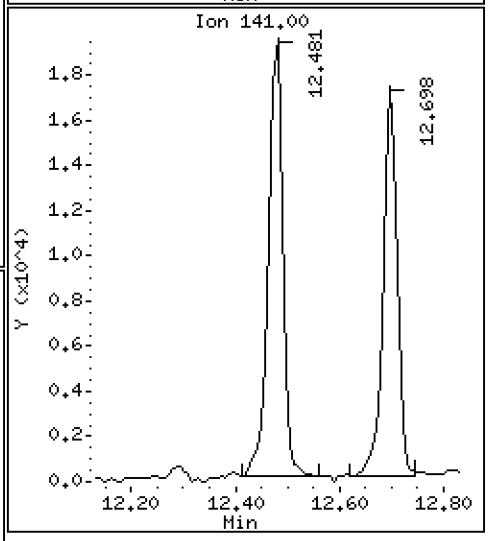
32 2-Methylnaphthalene

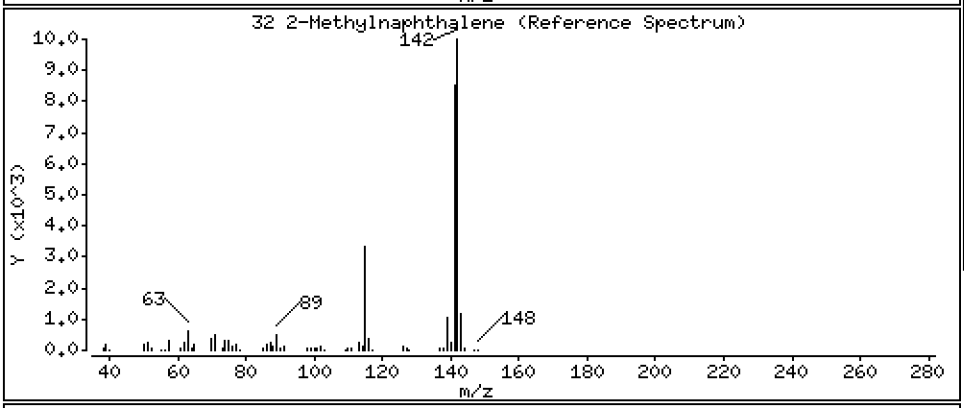
Concentration: 0.2456 ug/mL

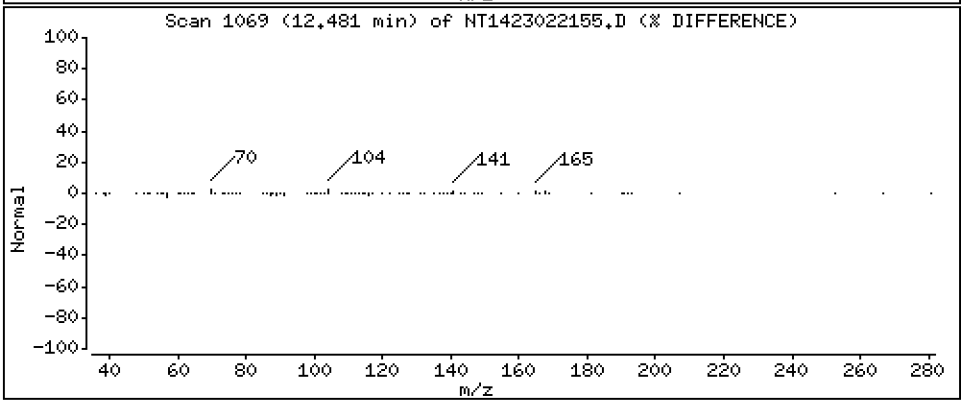












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

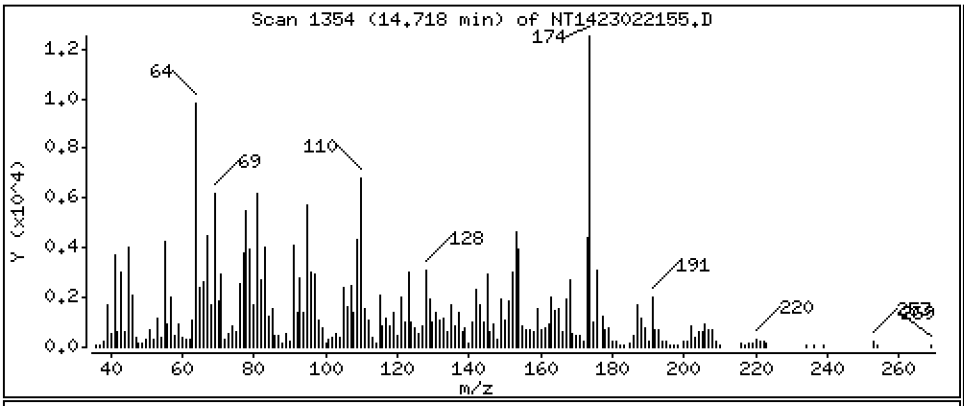
Operator: DSD

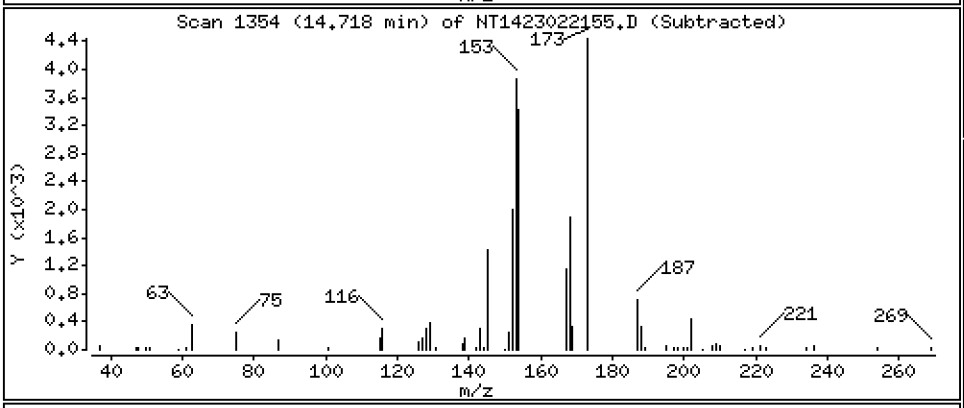
Column phase: ZB-5msi

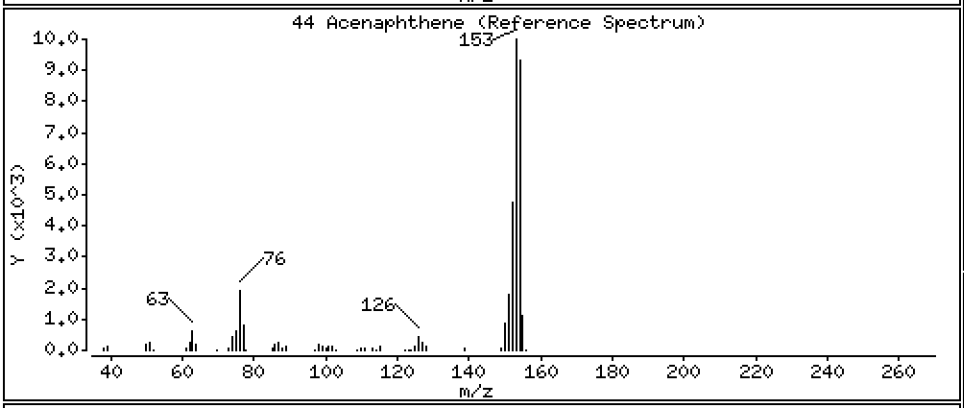
Column diameter: 0.25

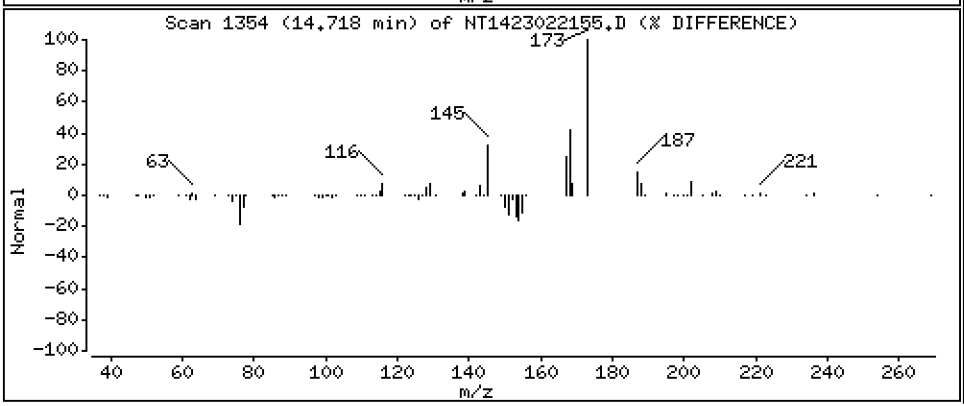
44 Acenaphthene

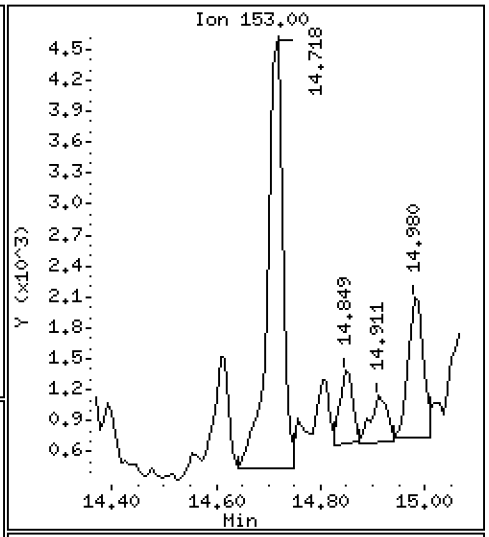
Concentration: 0.05653 ug/mL

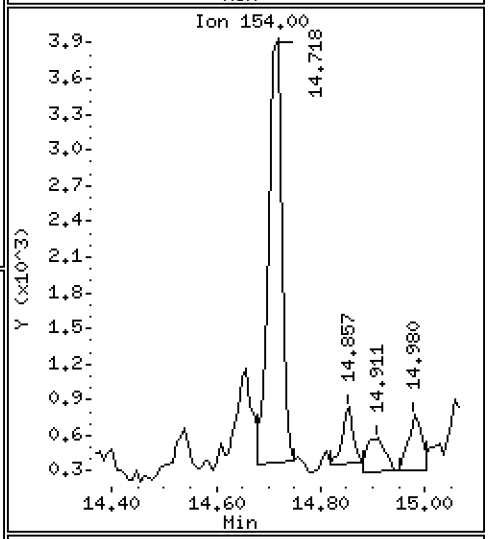


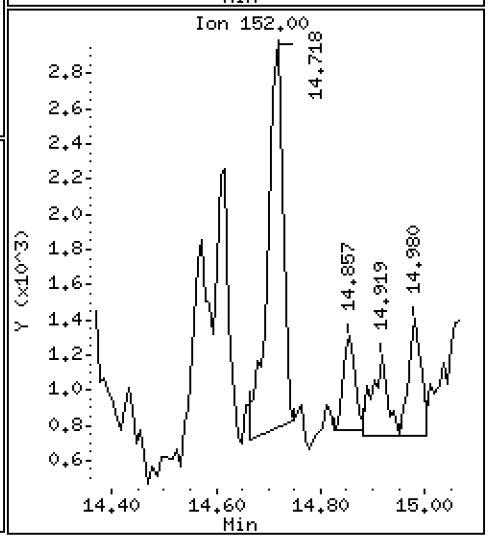












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

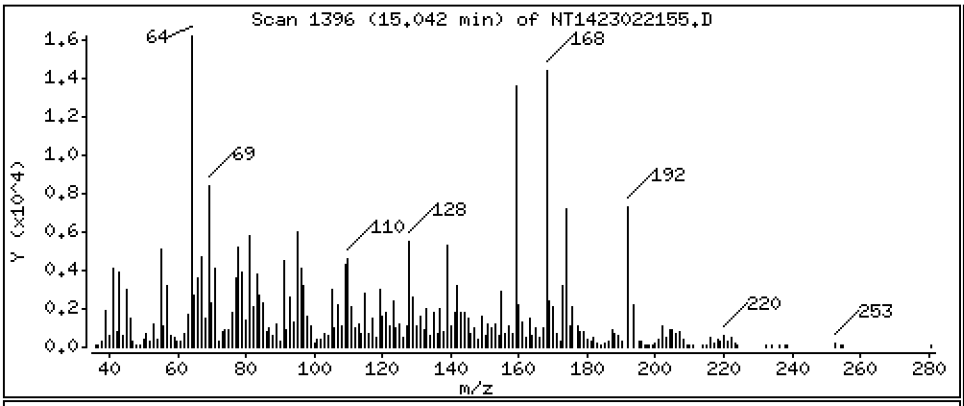
Operator: DSD

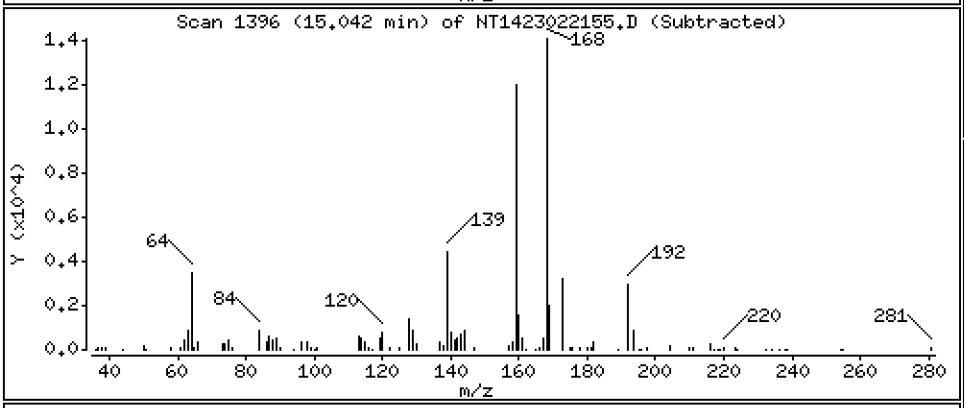
Column phase: ZB-5msi

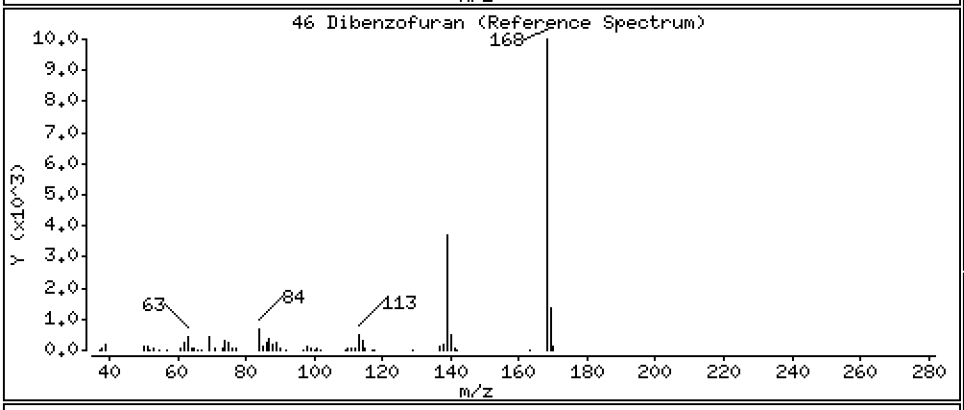
Column diameter: 0.25

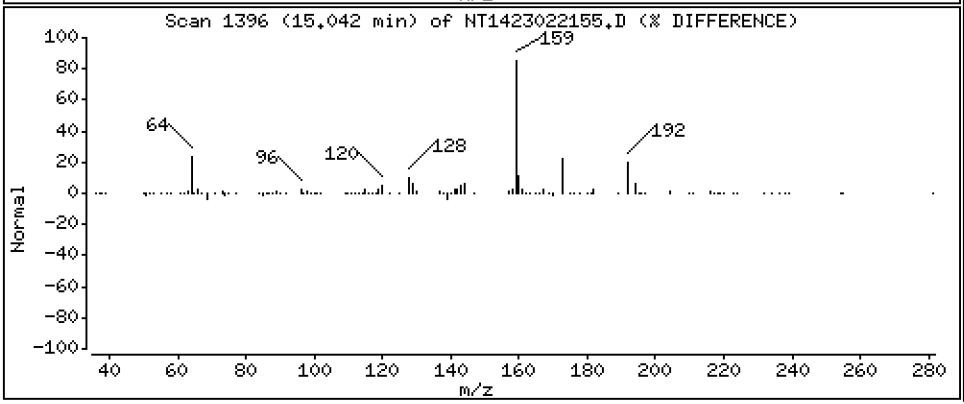
46 Dibenzofuran

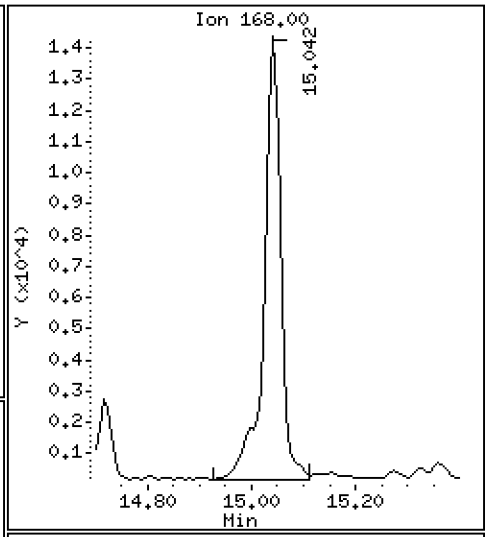
Concentration: 0.1288 ug/mL

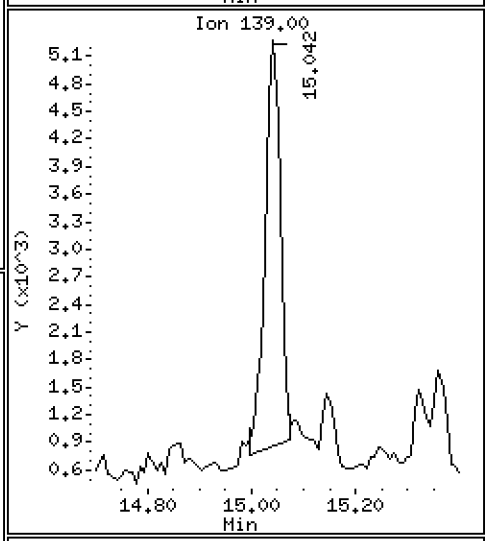


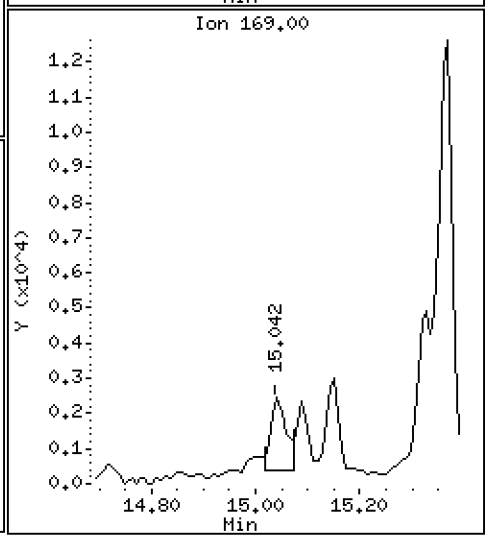












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

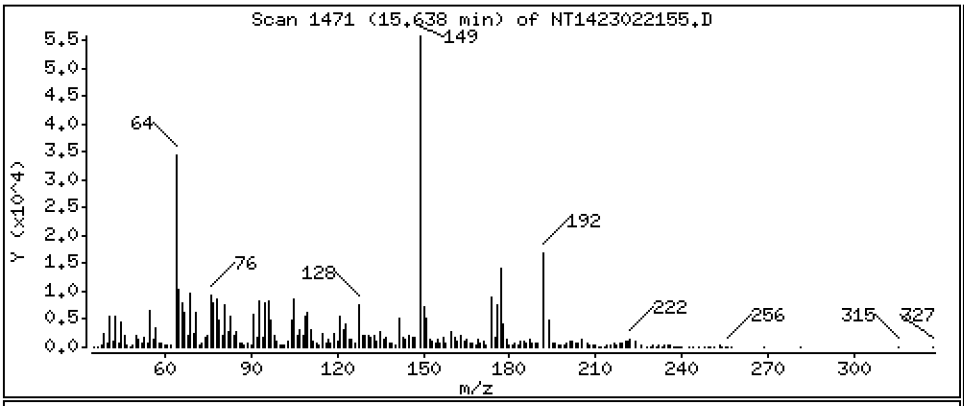
Operator: DSD

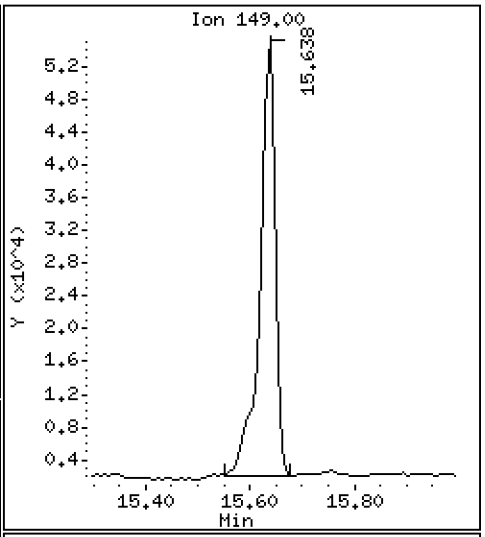
Column phase: ZB-5msi

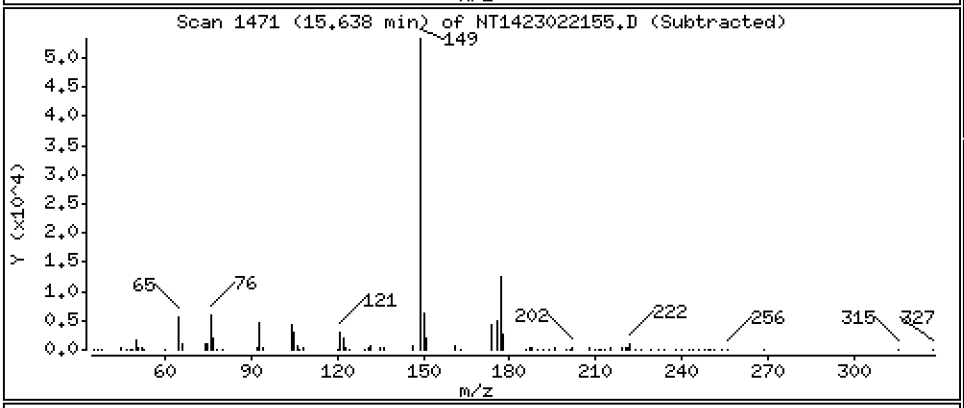
Column diameter: 0.25

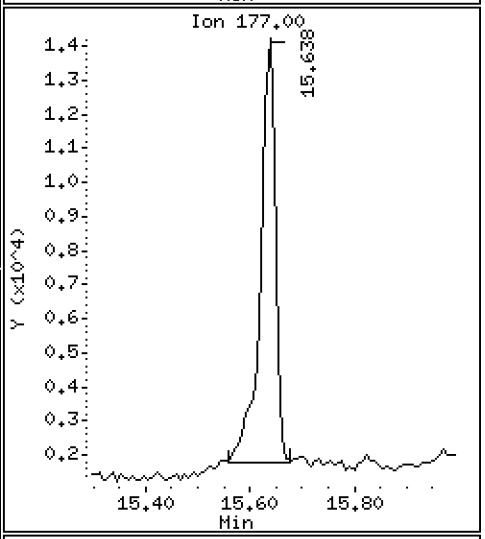
50 Diethylphthalate

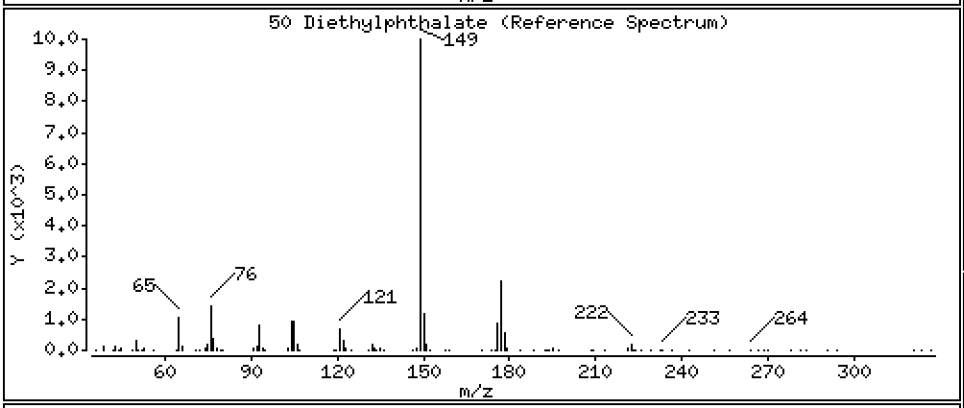
Concentration: 0.4677 ug/mL

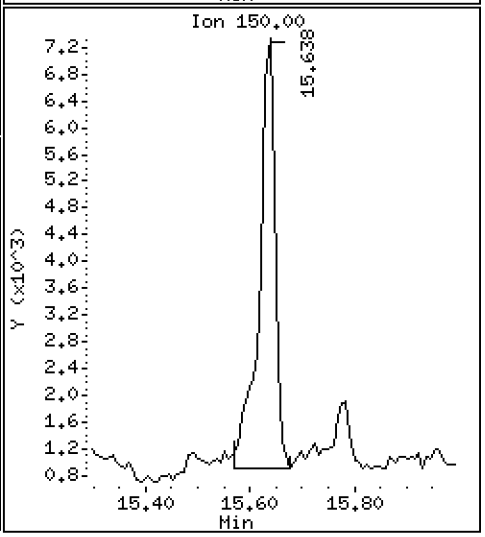


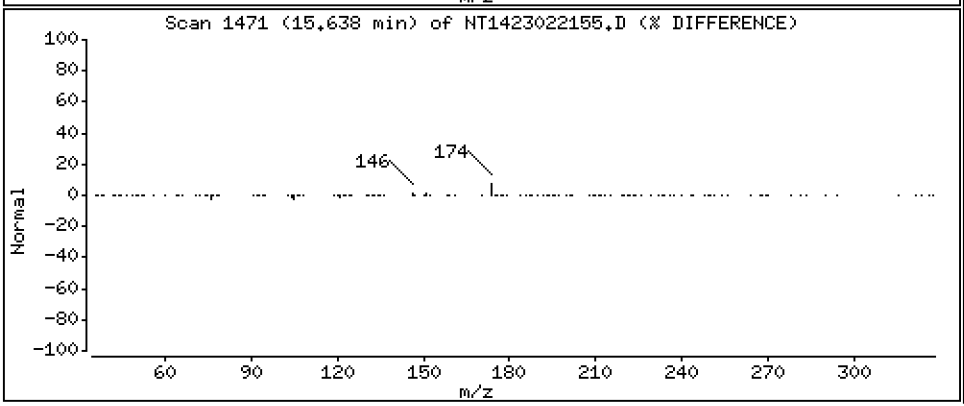












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

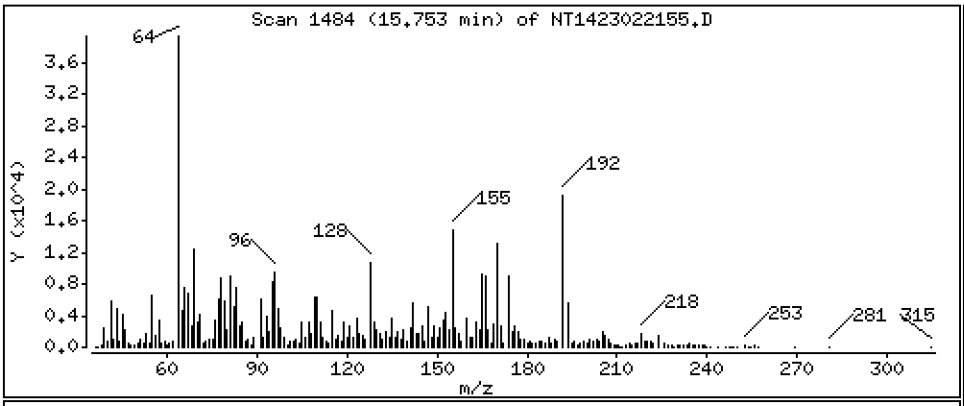
Operator: DSD

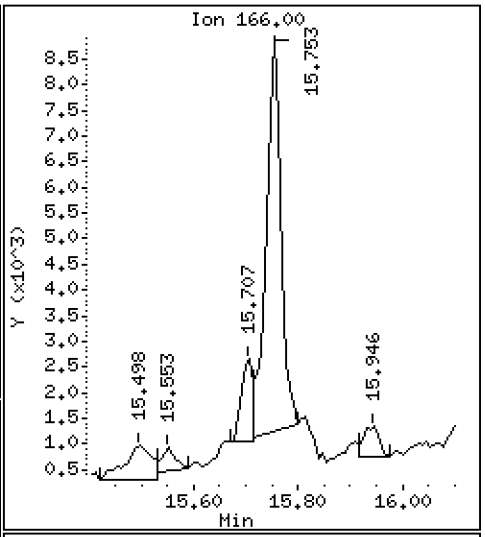
Column phase: ZB-5msi

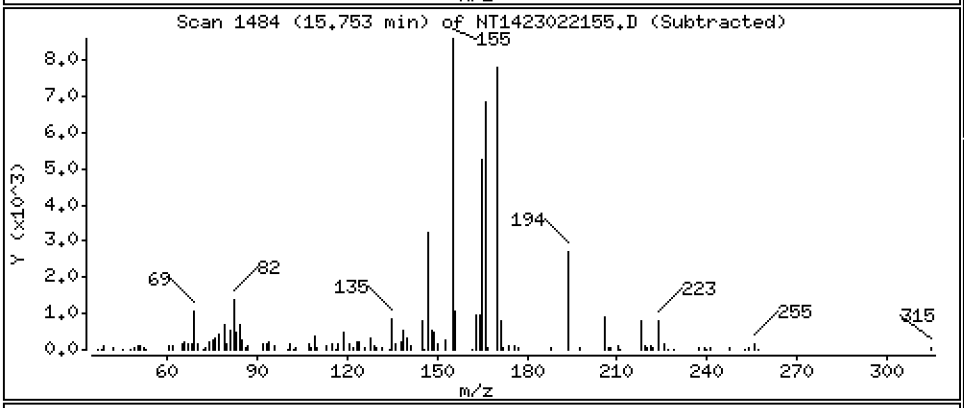
Column diameter: 0.25

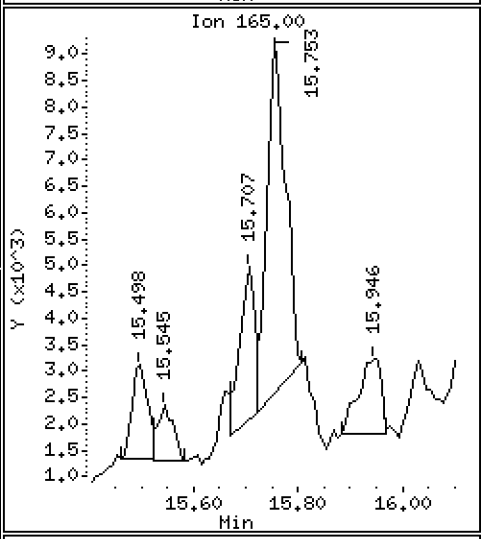
49 Fluorene

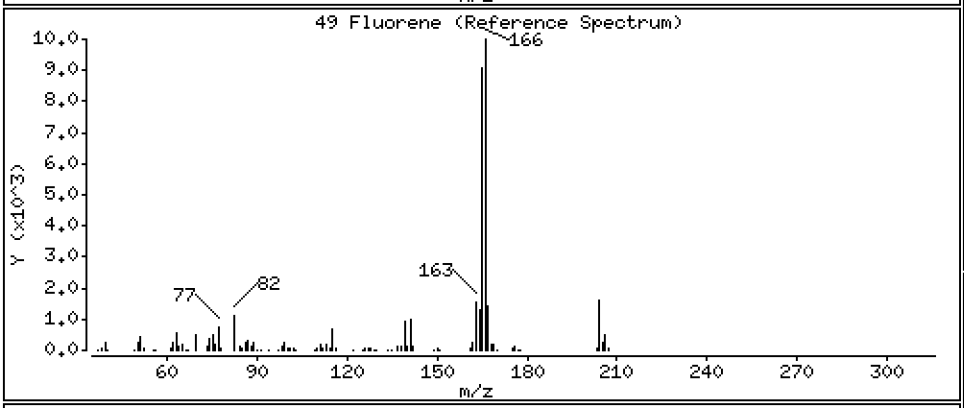
Concentration: 0.06068 ug/mL

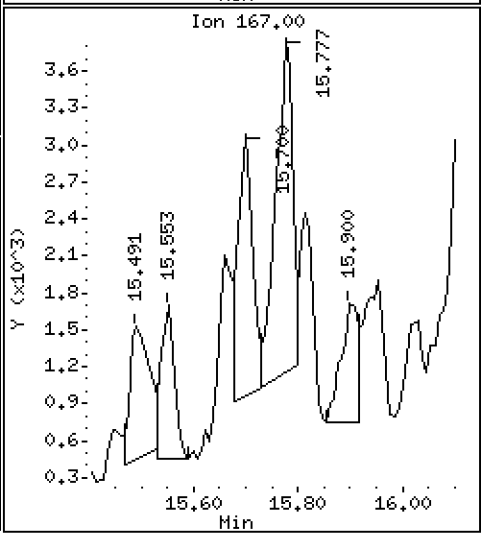


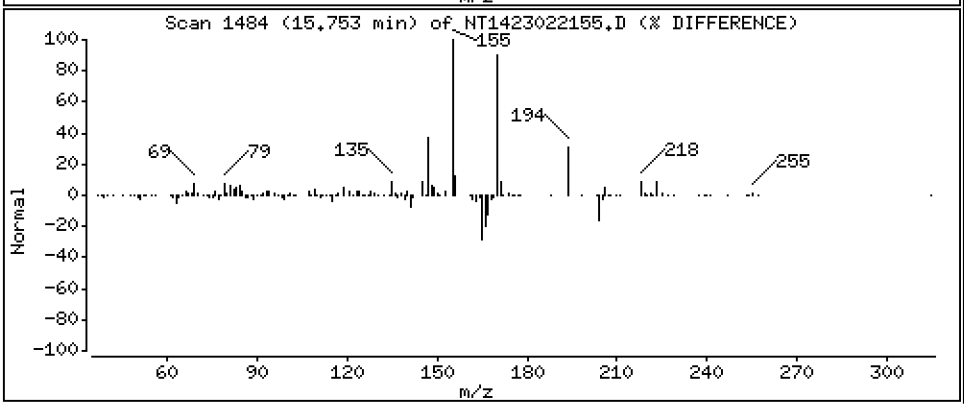












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

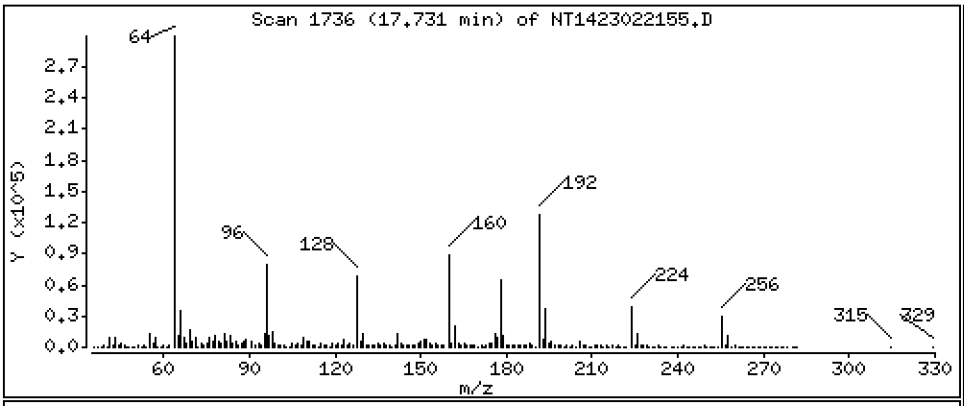
Operator: DSD

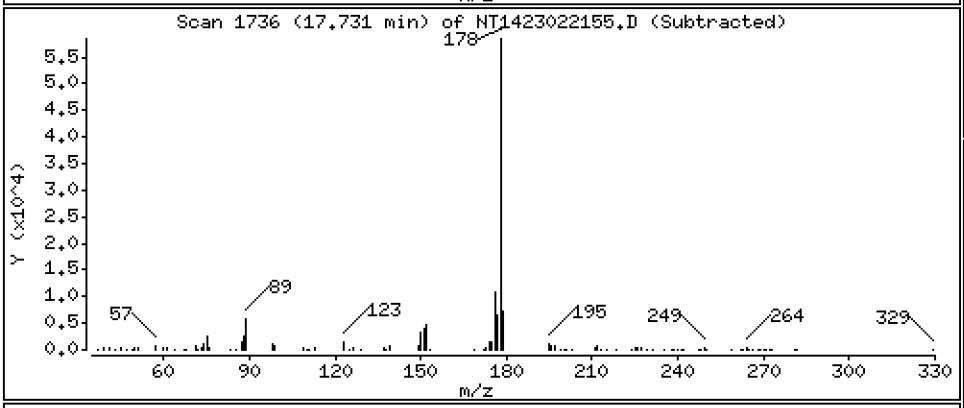
Column phase: ZB-5msi

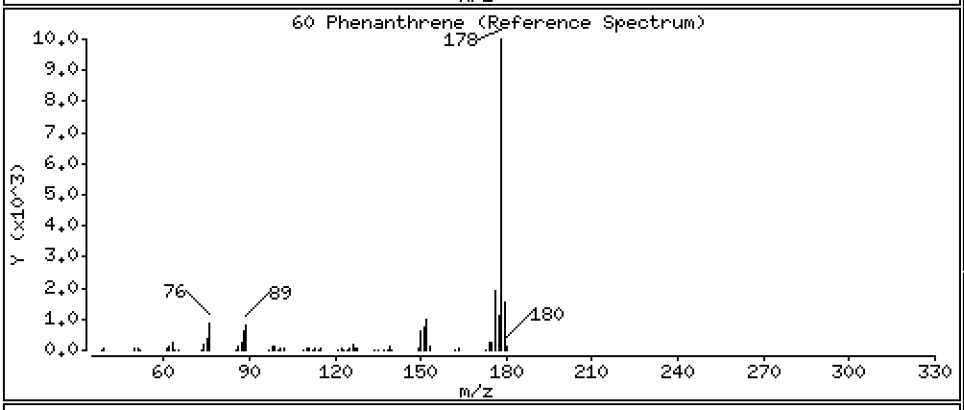
Column diameter: 0.25

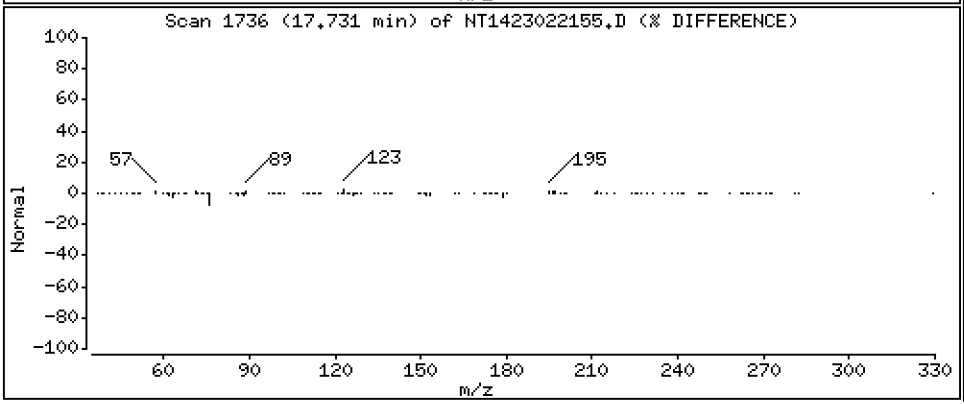
60 Phenanthrene

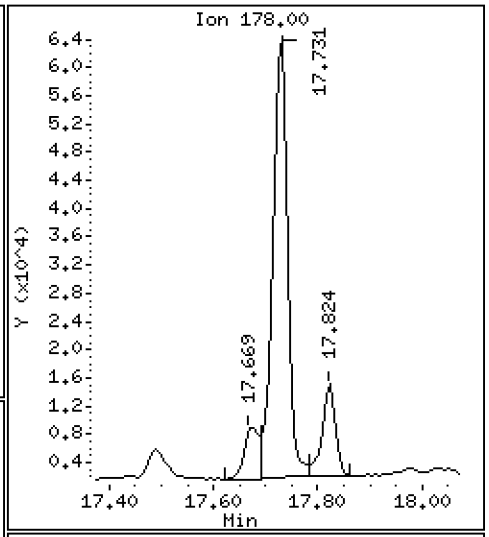
Concentration: 0.5045 ug/mL

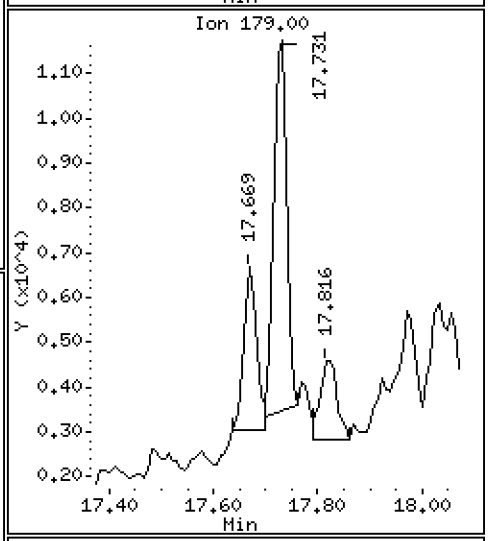


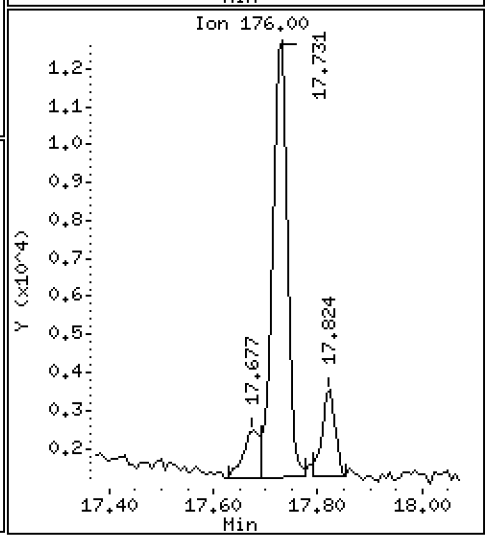












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

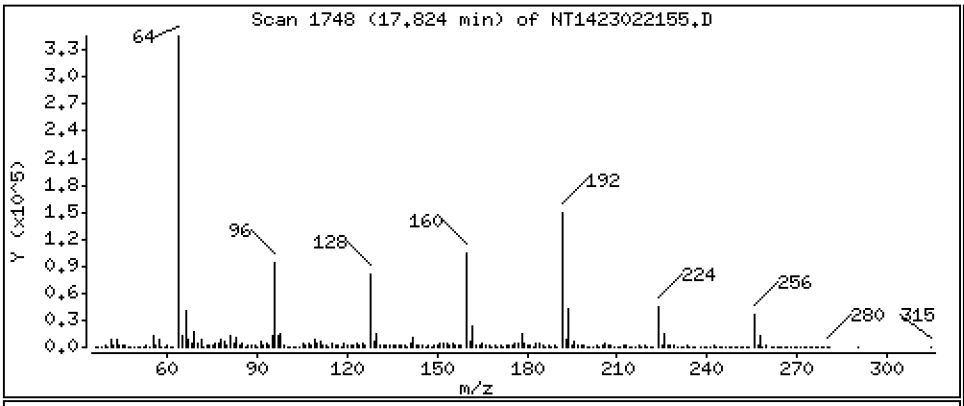
Operator: DSD

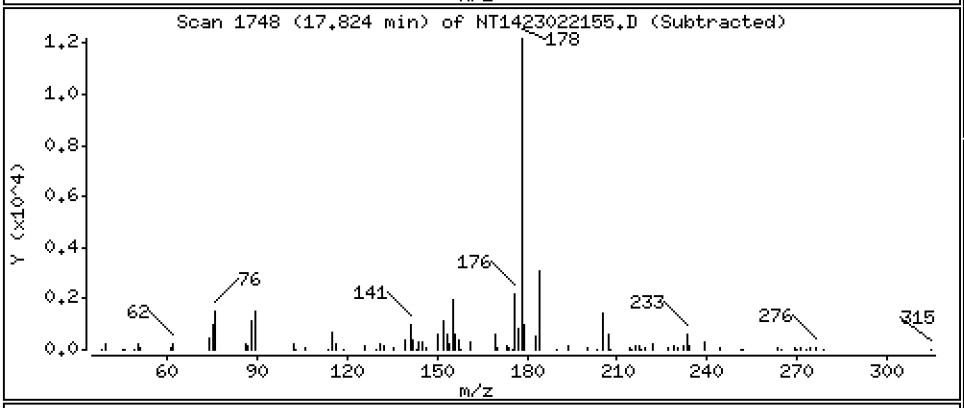
Column phase: ZB-5msi

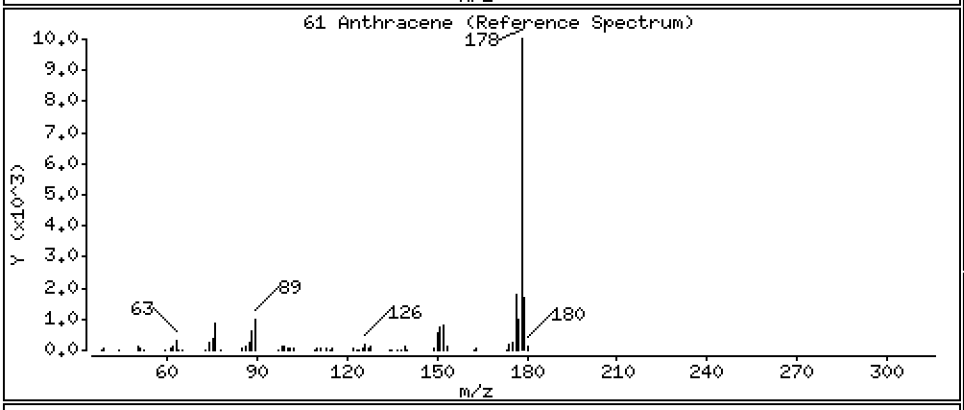
Column diameter: 0.25

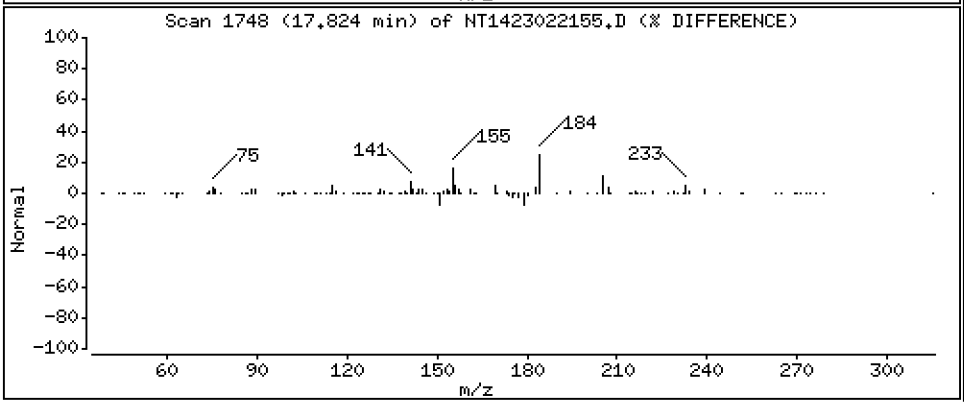
61 Anthracene

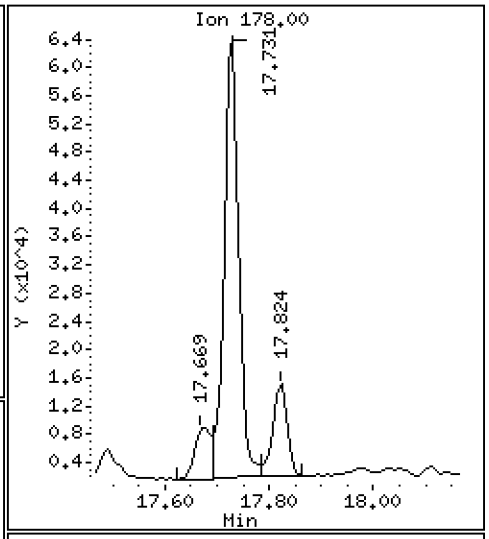
Concentration: 0.1027 ug/mL

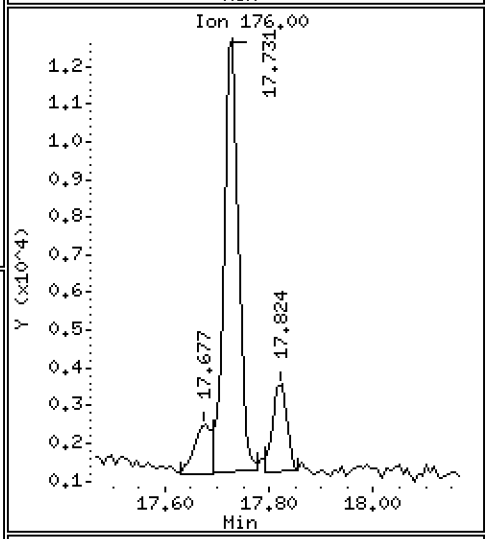


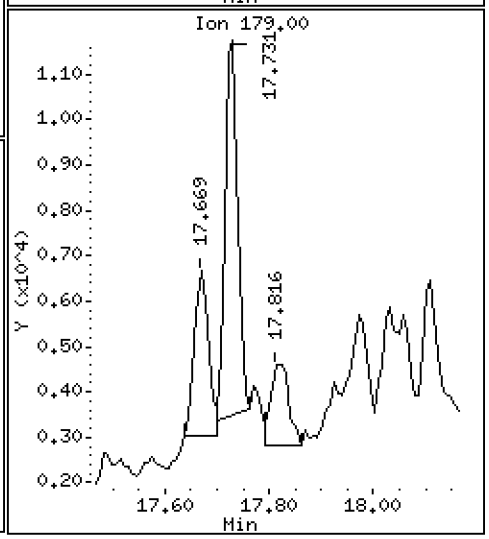












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

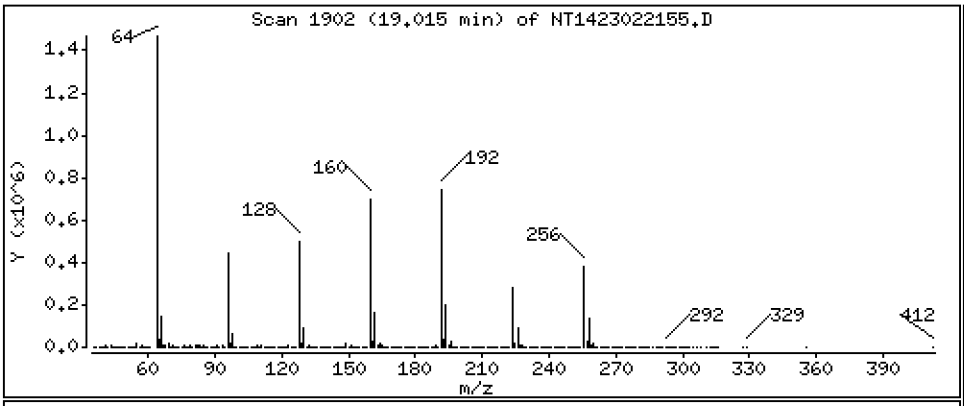
Operator: DSD

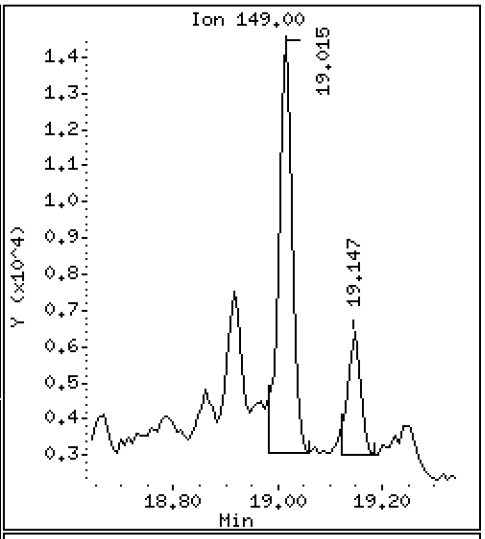
Column phase: ZB-5msi

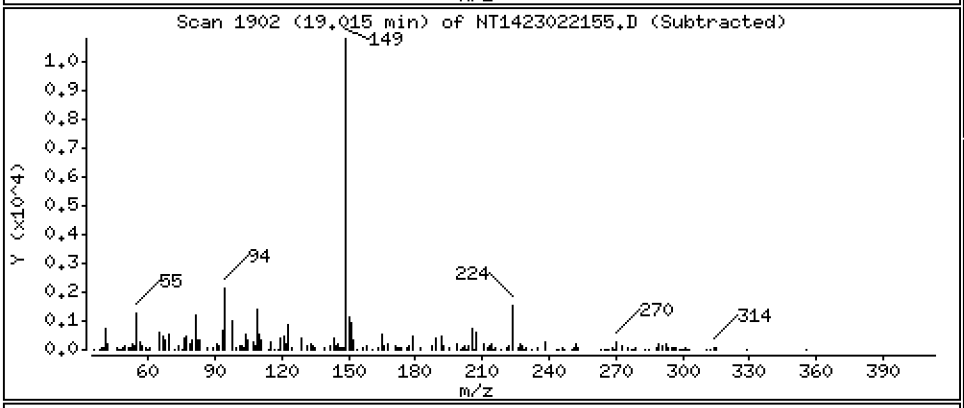
Column diameter: 0.25

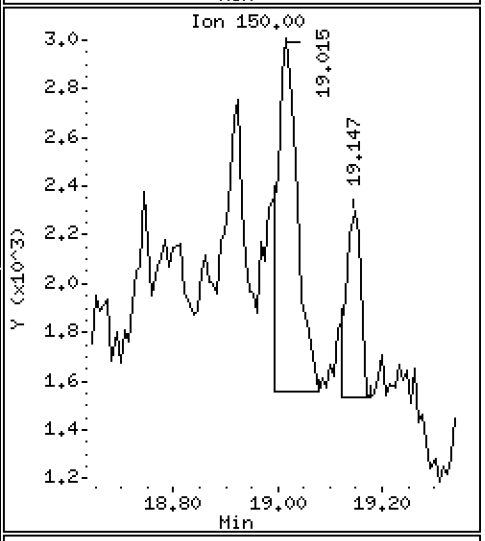
63 Di-n-butylphthalate

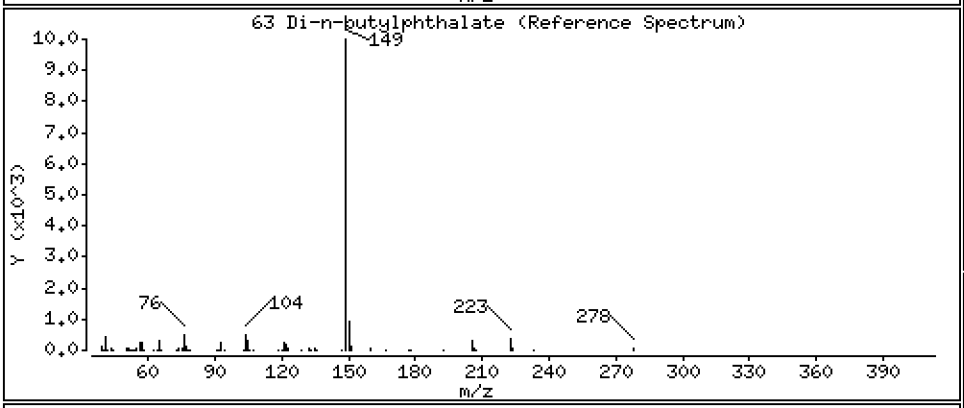
Concentration: 0.08776 ug/mL

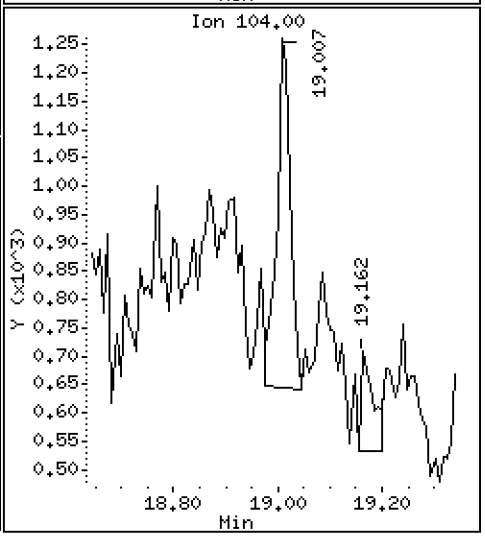


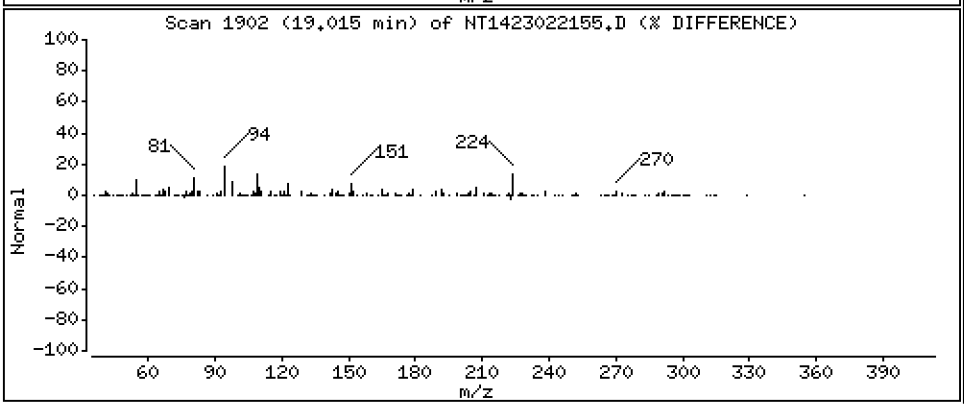












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

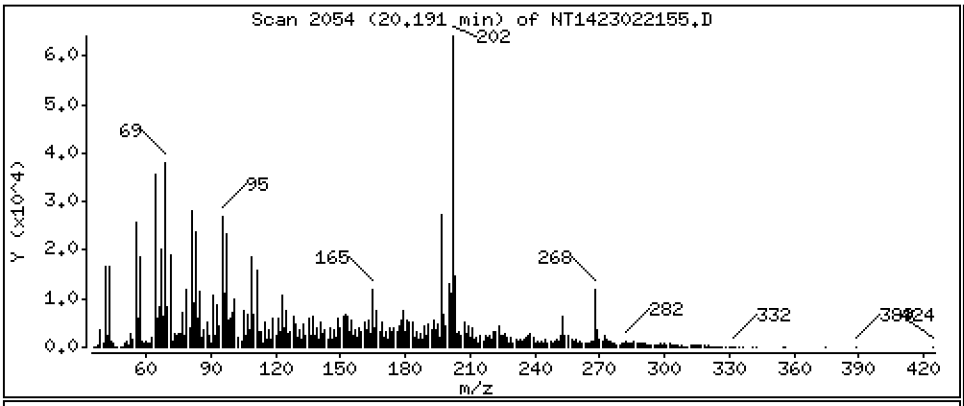
Operator: DSD

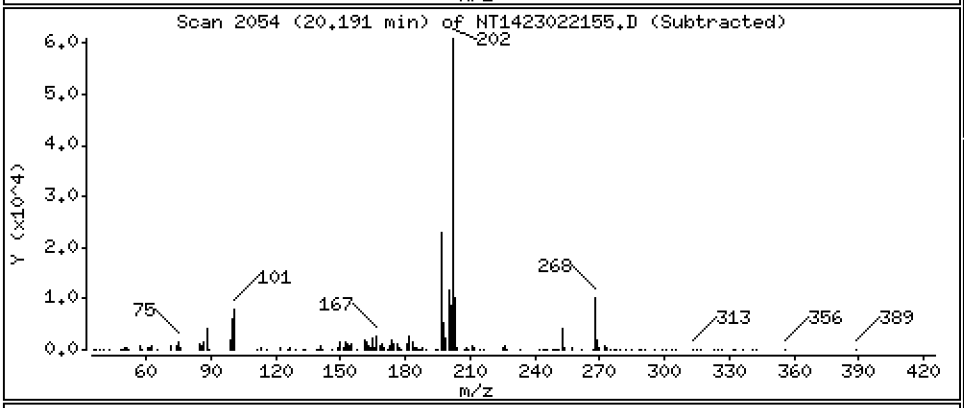
Column phase: ZB-5msi

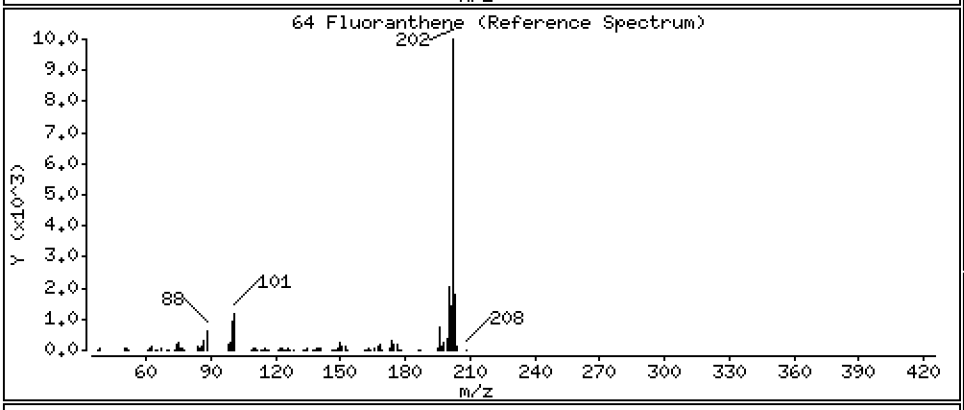
Column diameter: 0.25

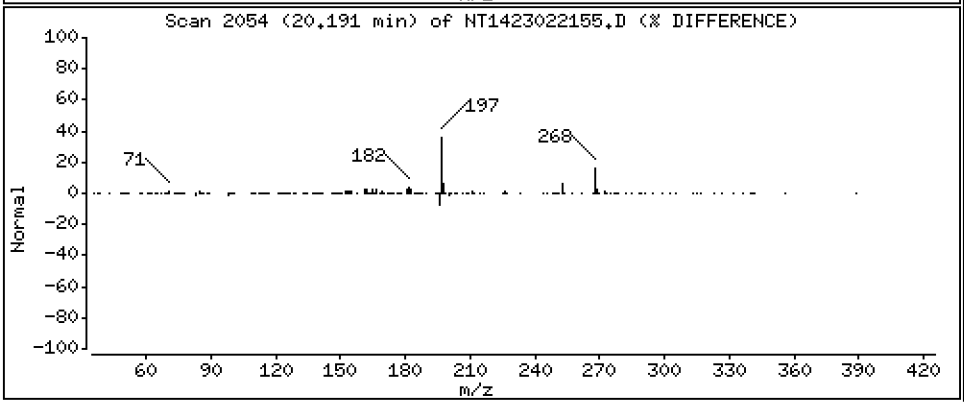
64 Fluoranthene

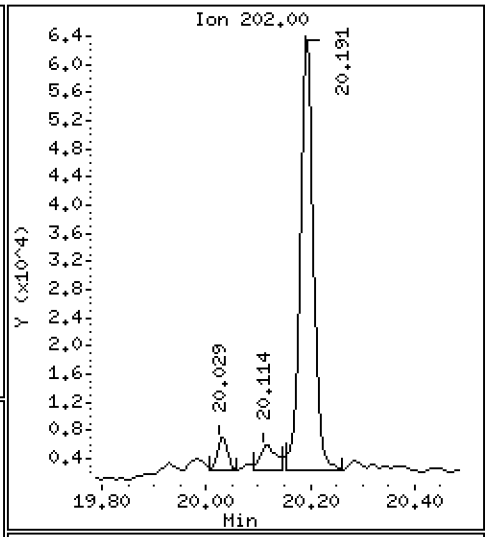
Concentration: 0.3864 ug/mL

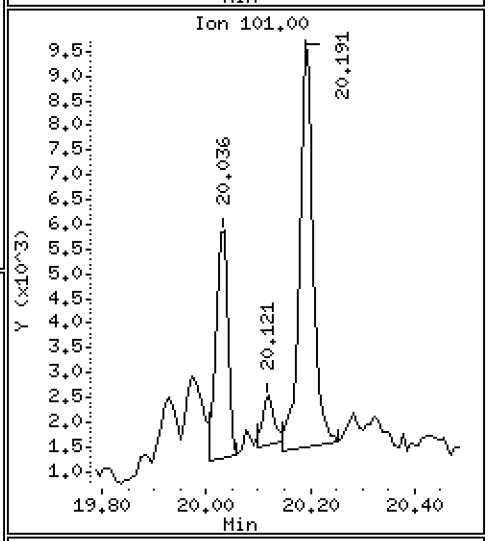


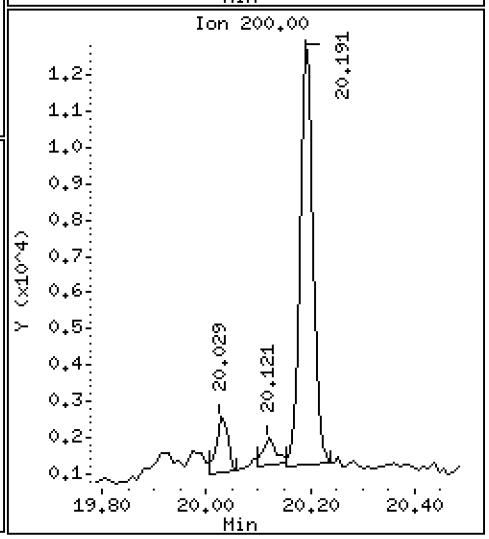












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

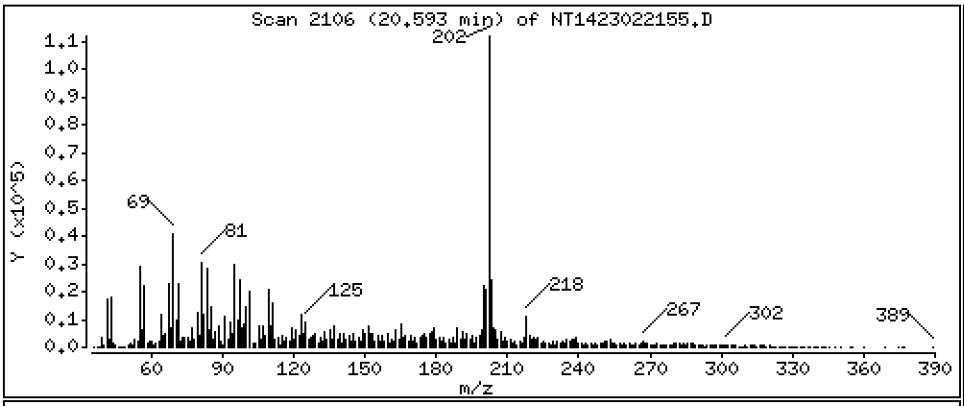
Operator: DSD

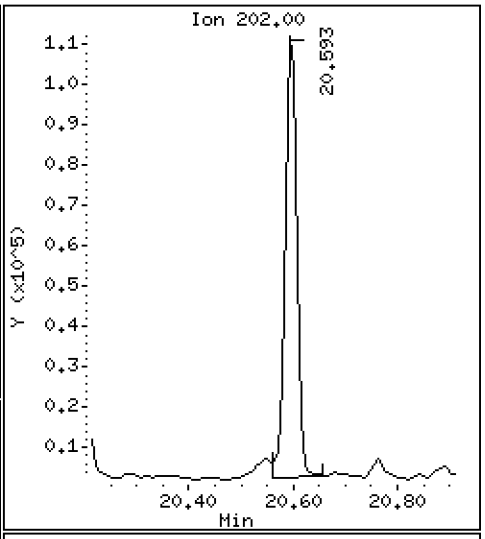
Column phase: ZB-5msi

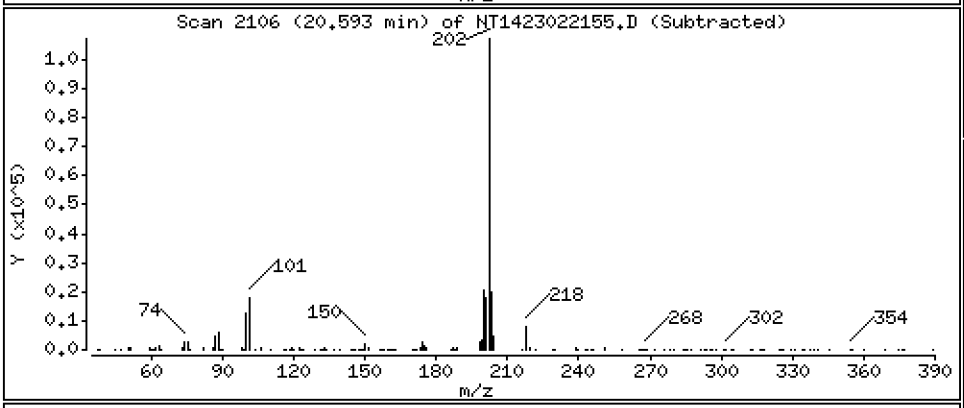
Column diameter: 0.25

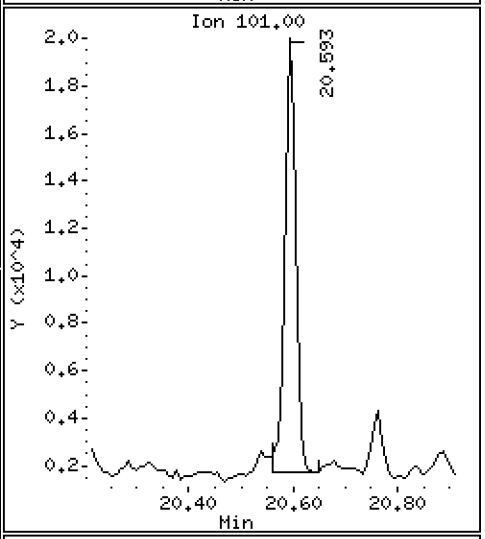
65 Pyrene

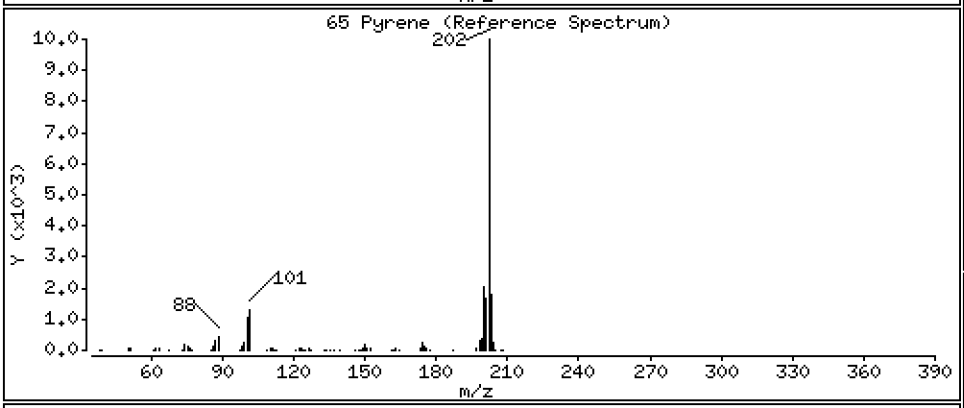
Concentration: 0.5957 ug/mL

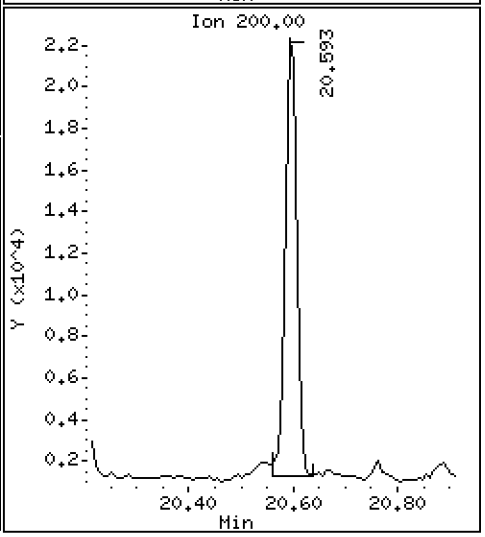


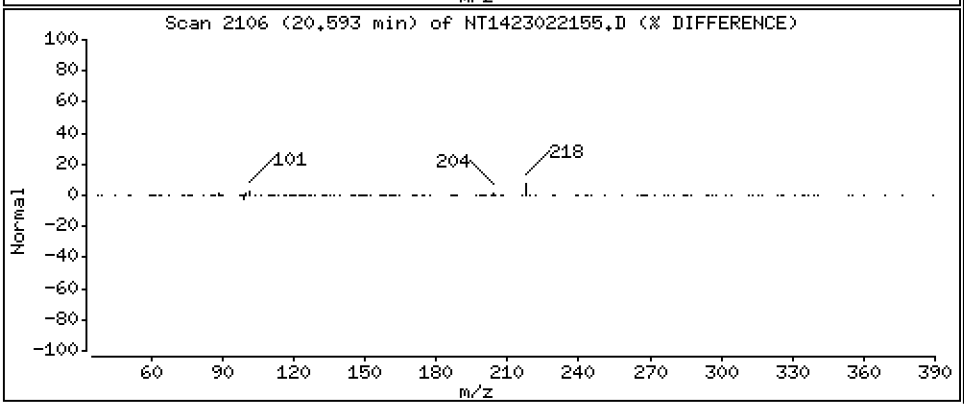












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022155.D

Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

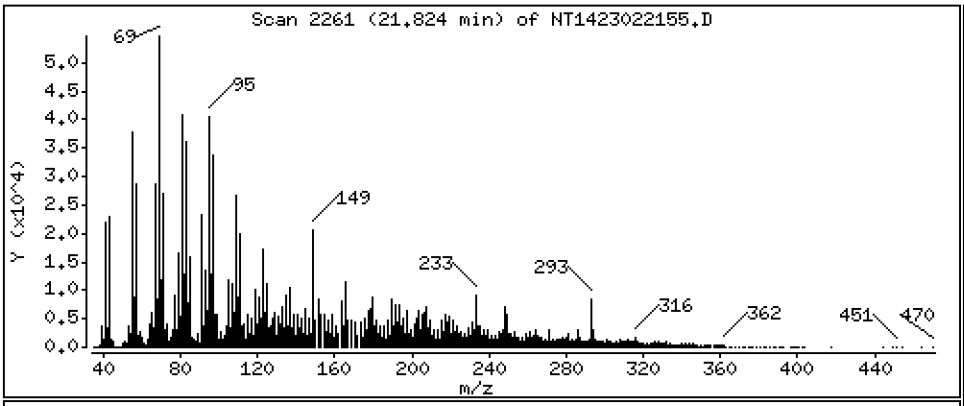
Operator: DSD

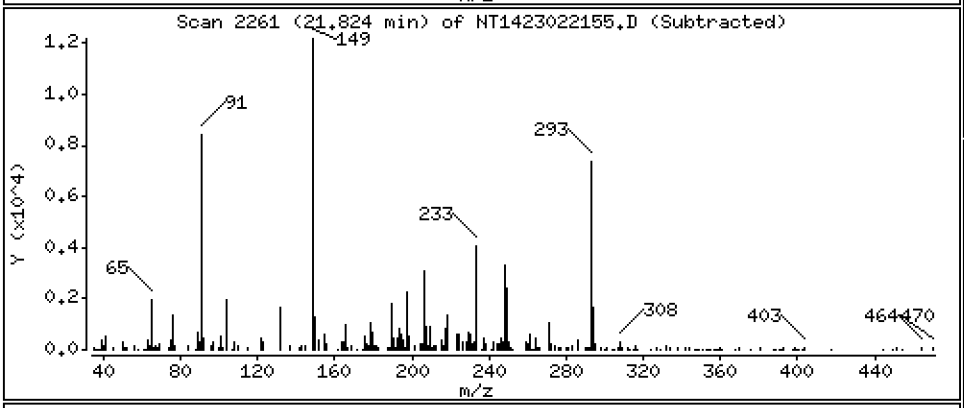
Column phase: ZB-5msi

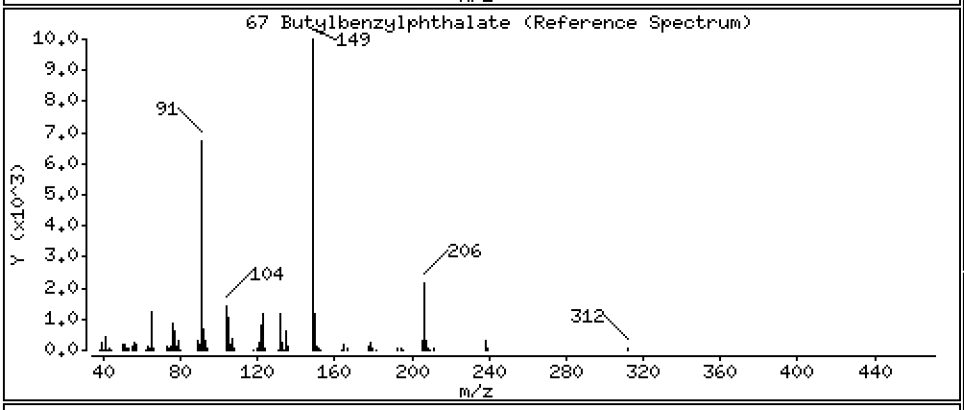
Column diameter: 0.25

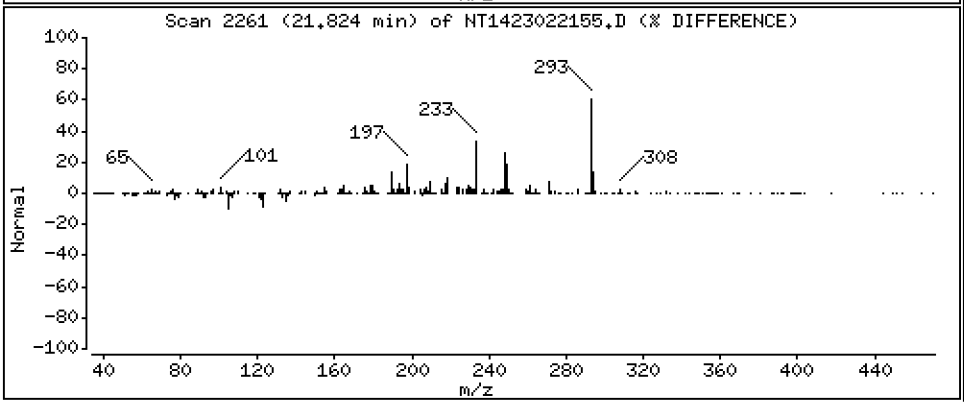
67 Butylbenzylphthalate

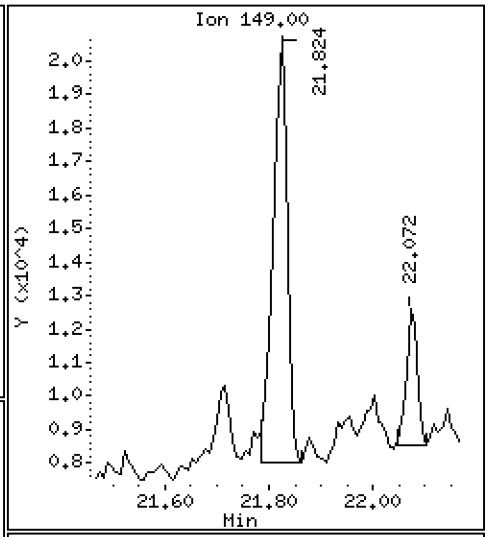
Concentration: 0.2346 ug/mL

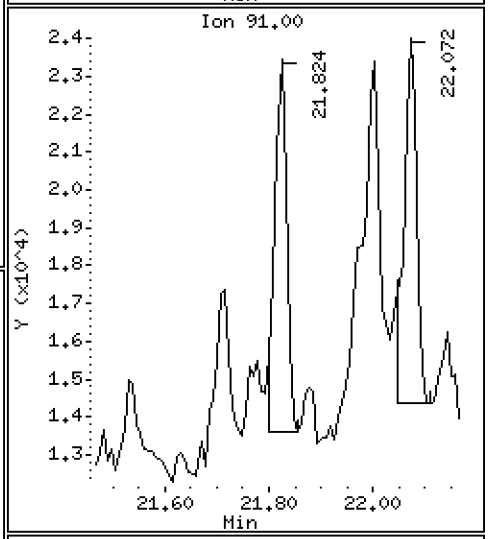


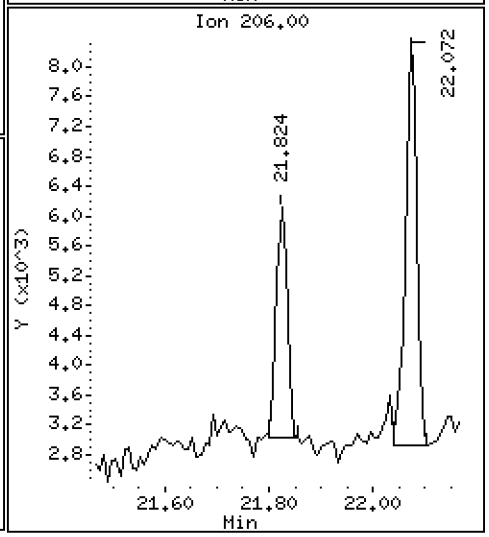












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

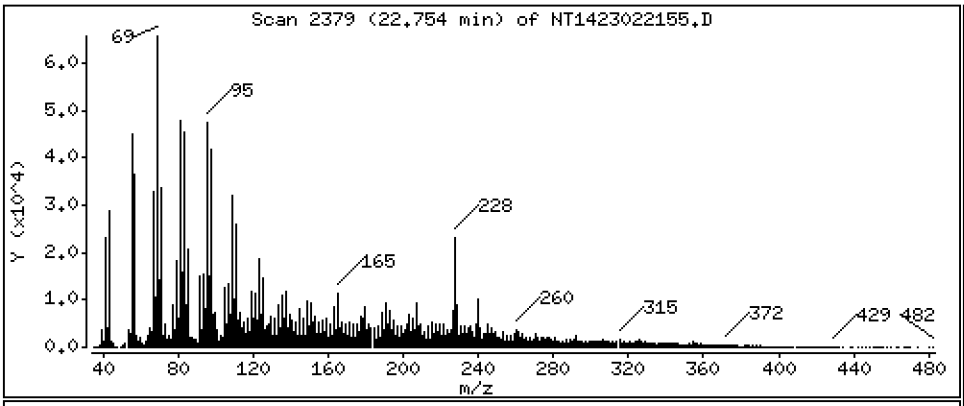
Operator: DSD

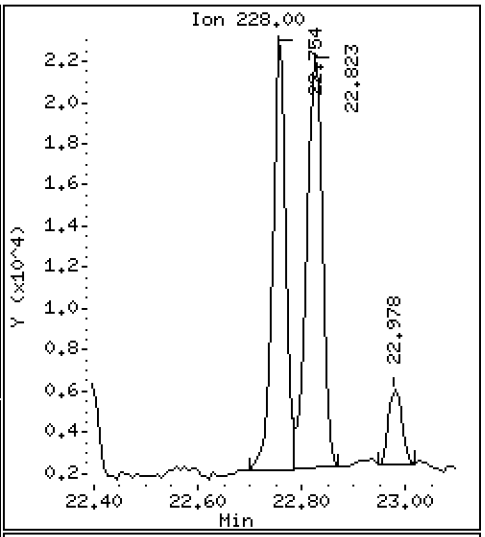
Column phase: ZB-5msi

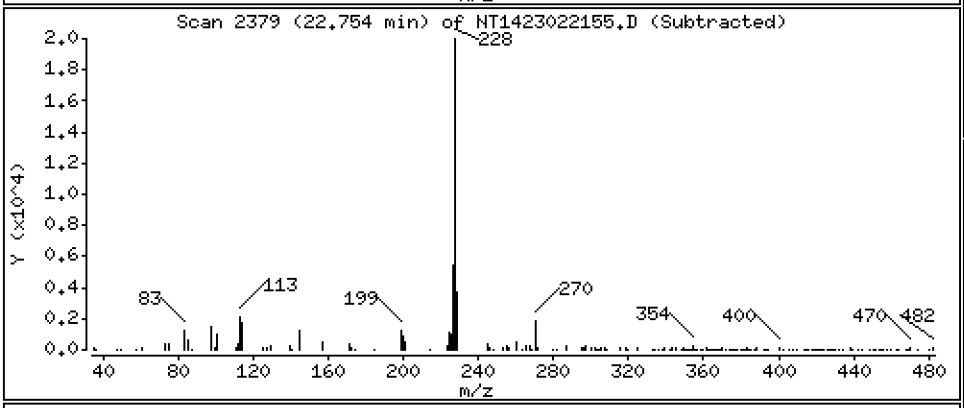
Column diameter: 0.25

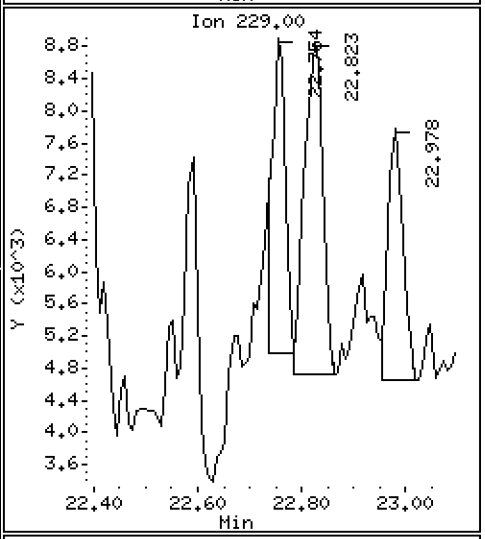
68 Benzo(a)anthracene

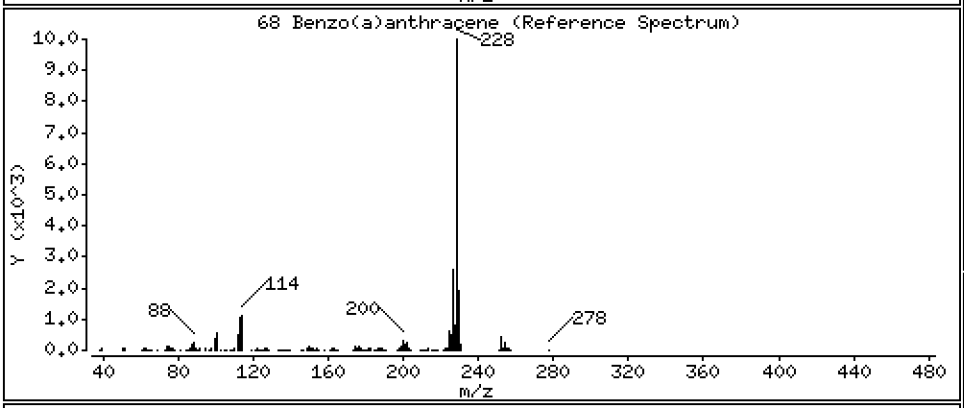
Concentration: 0.1726 ug/mL

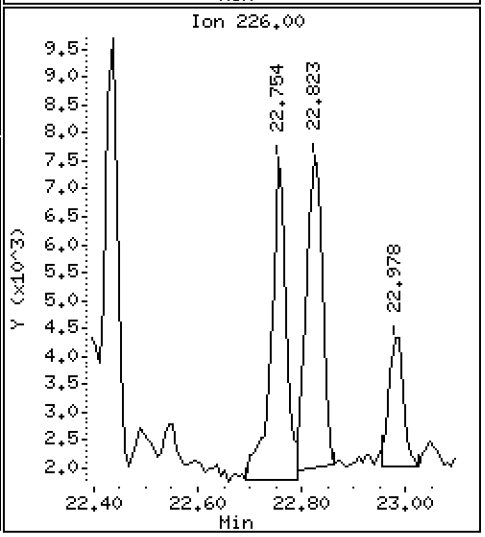


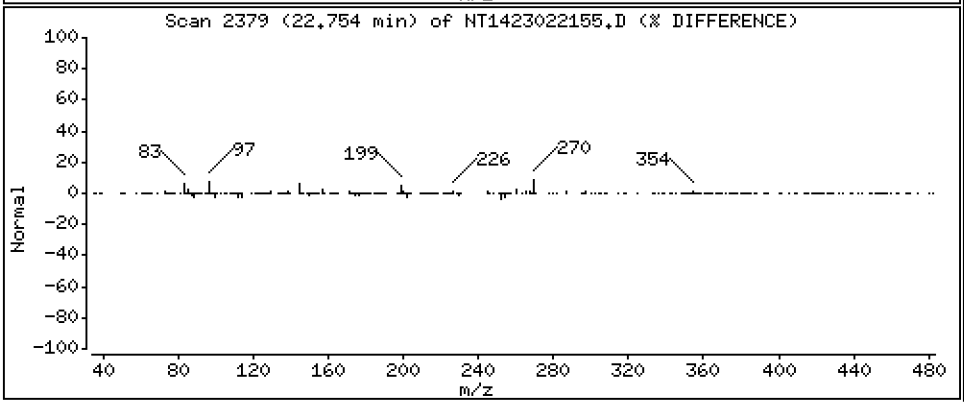












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

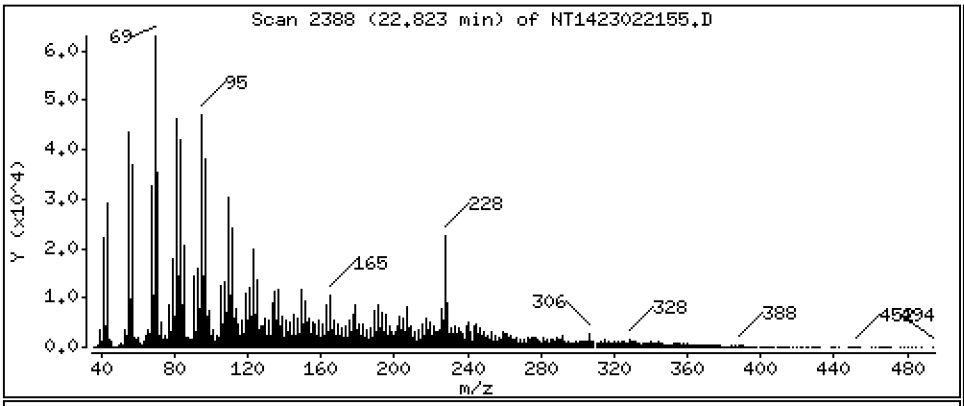
Operator: DSD

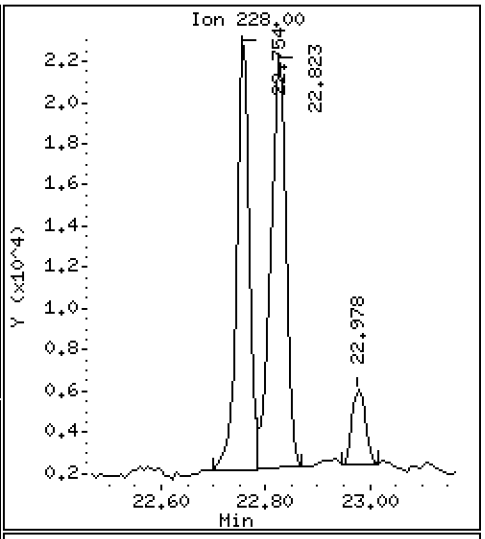
Column phase: ZB-5msi

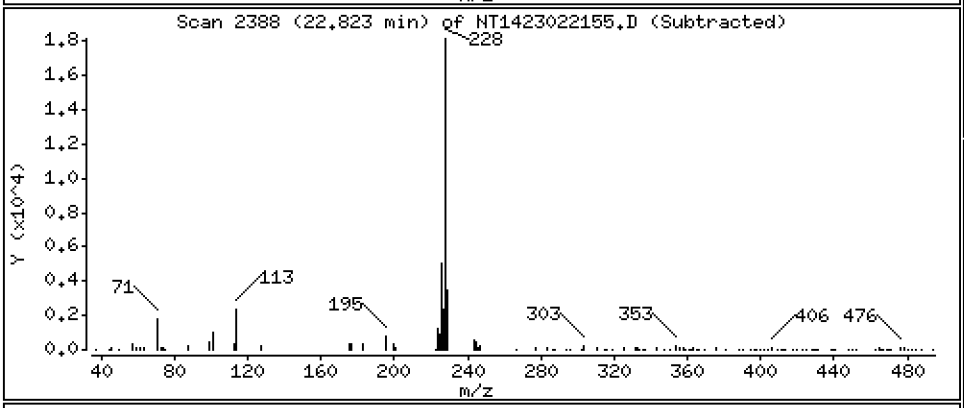
Column diameter: 0.25

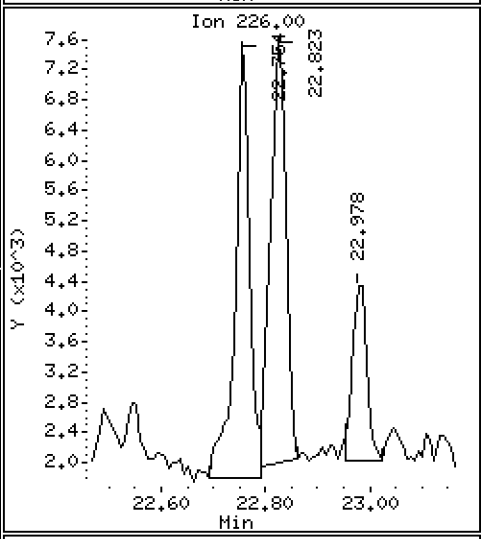
71 Chrysene

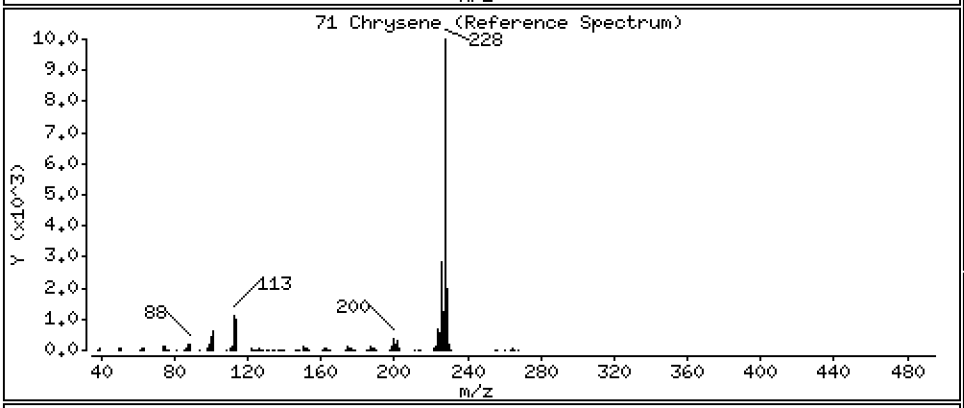
Concentration: 0.2170 ug/mL

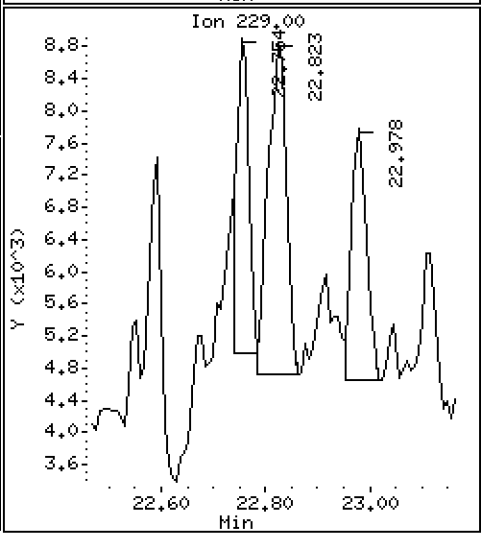


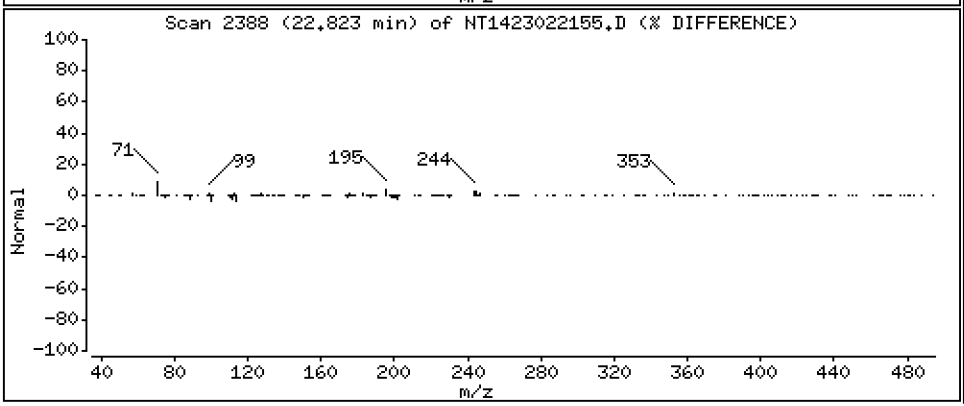












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

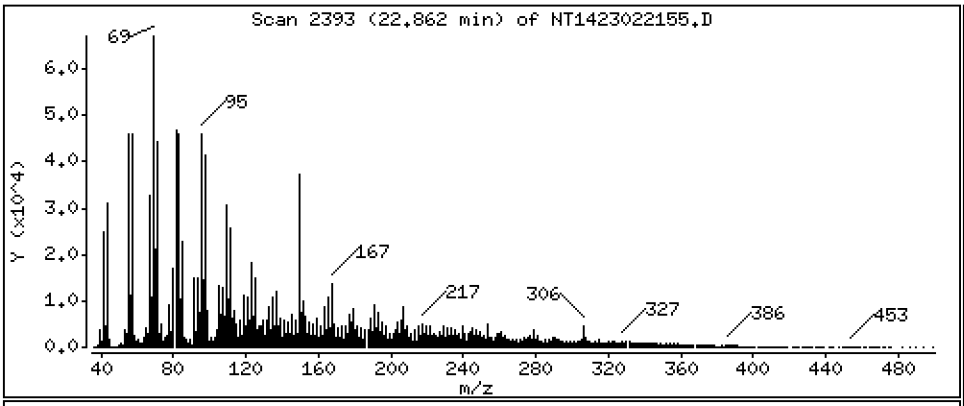
Operator: DSD

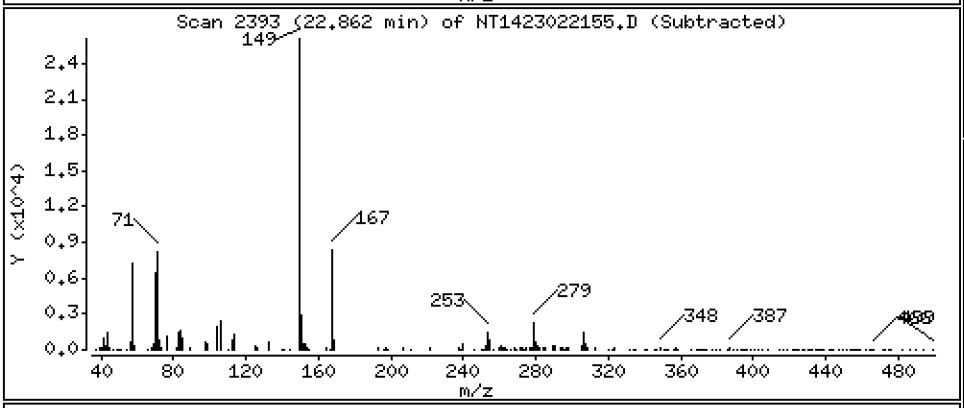
Column phase: ZB-5msi

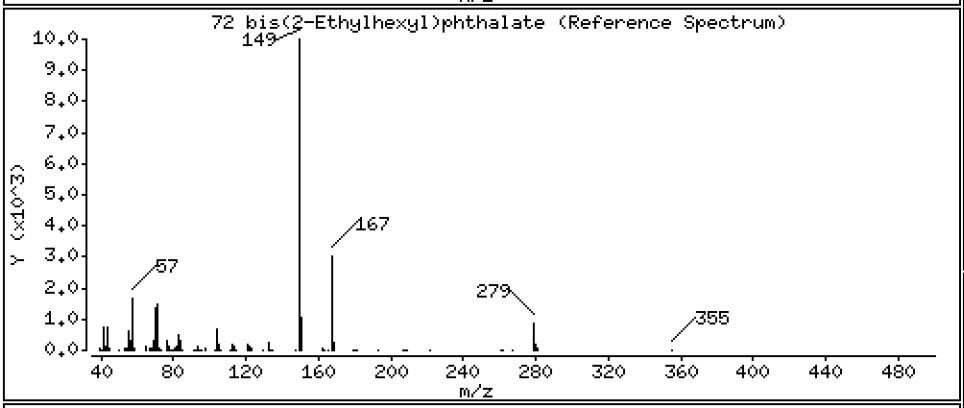
Column diameter: 0.25

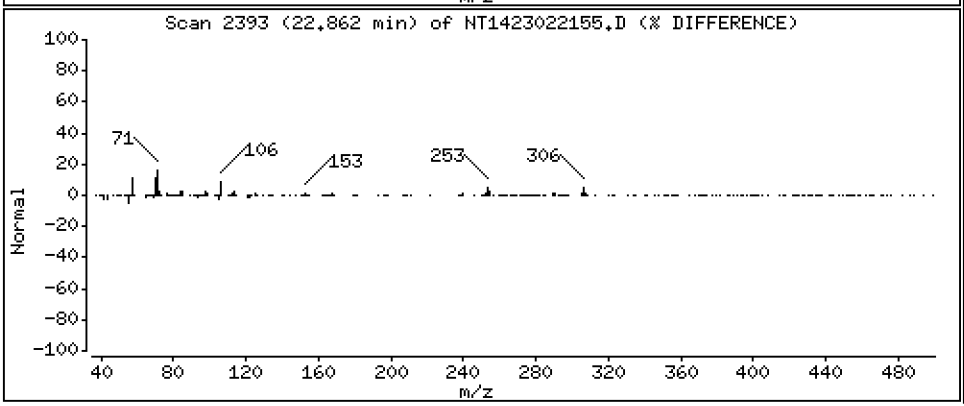
72 bis(2-Ethylhexyl)phthalate

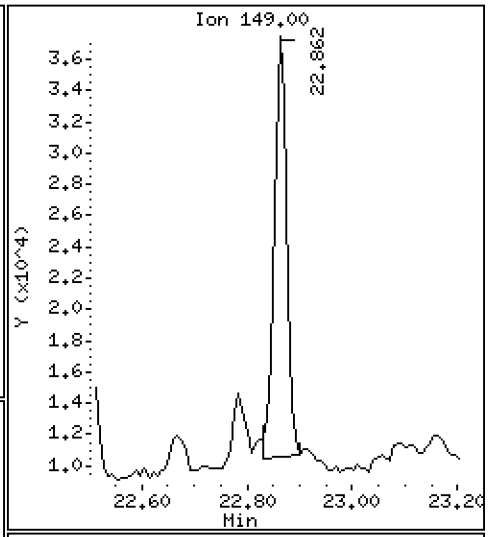
Concentration: 0.2312 ug/mL

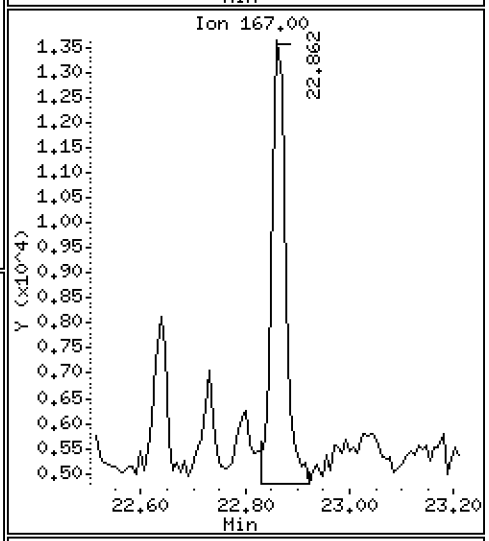


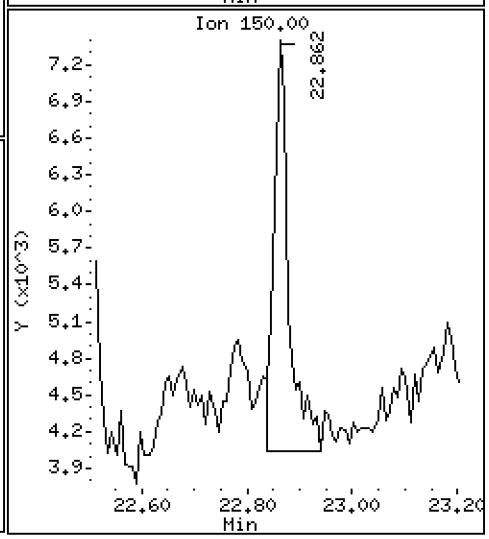












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

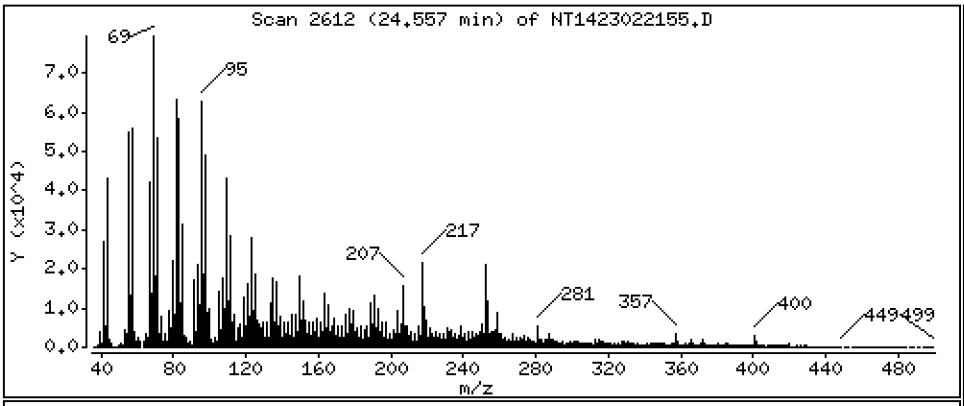
Operator: DSD

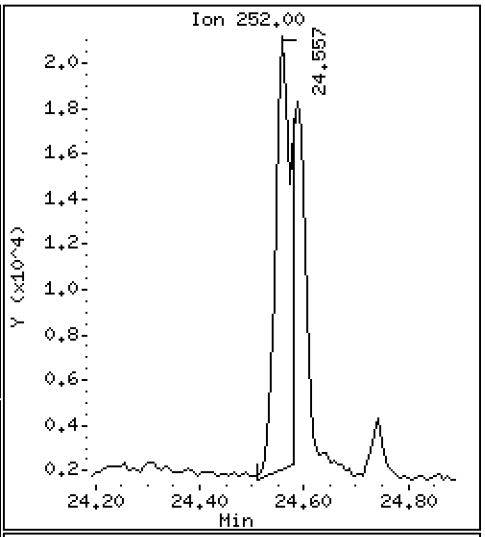
Column phase: ZB-5msi

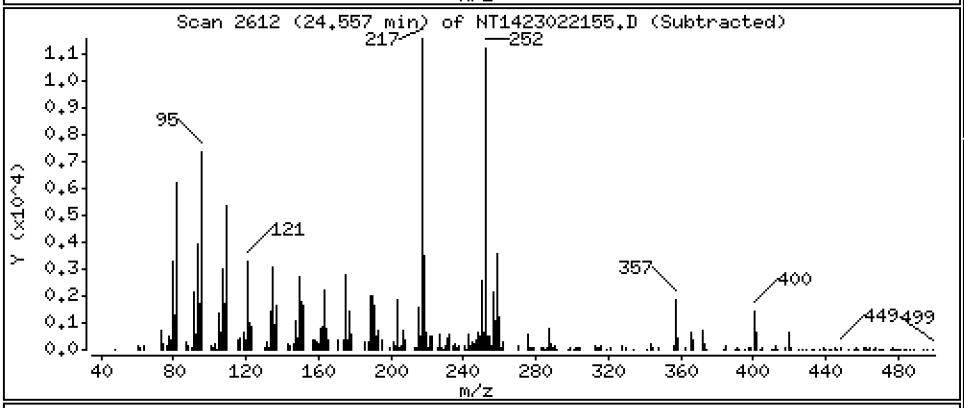
Column diameter: 0.25

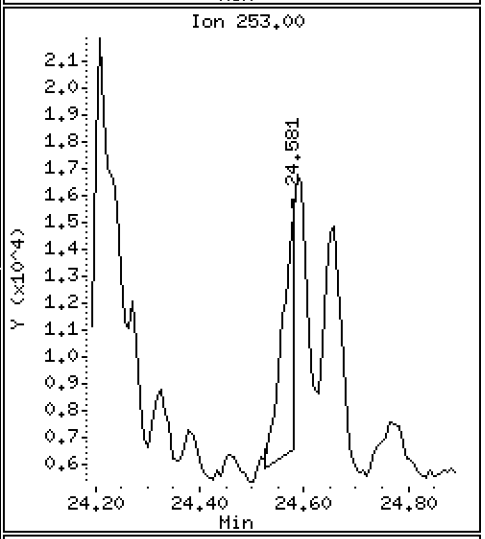
74 Benzo(b)fluoranthene

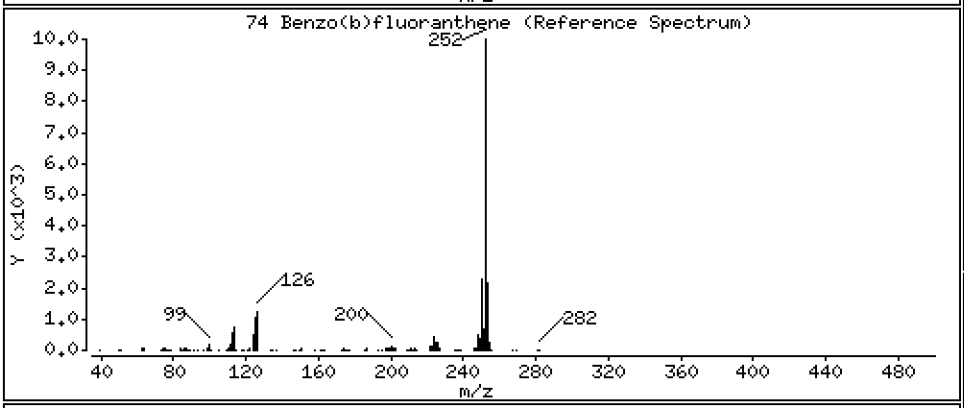
Concentration: 0.2693 ug/mL

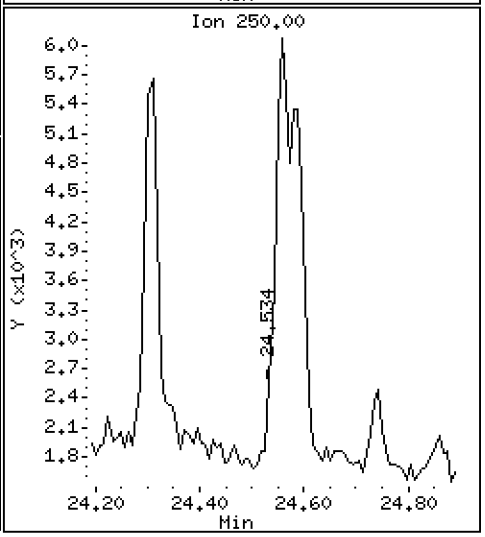


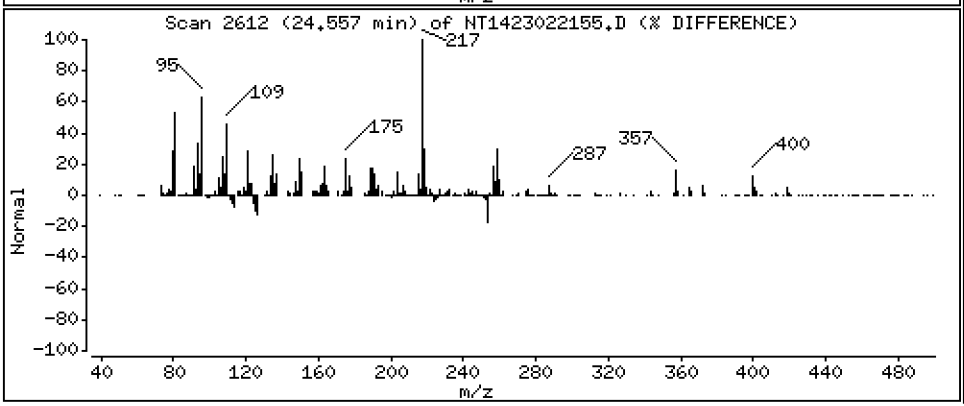












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

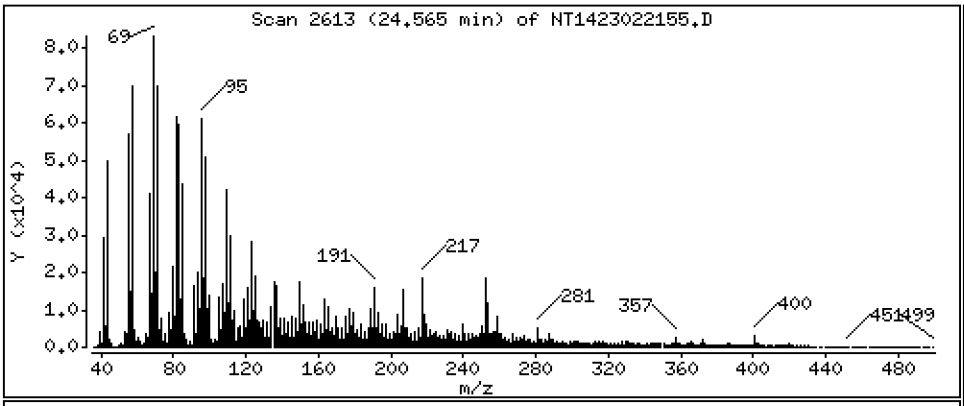
Operator: DSD

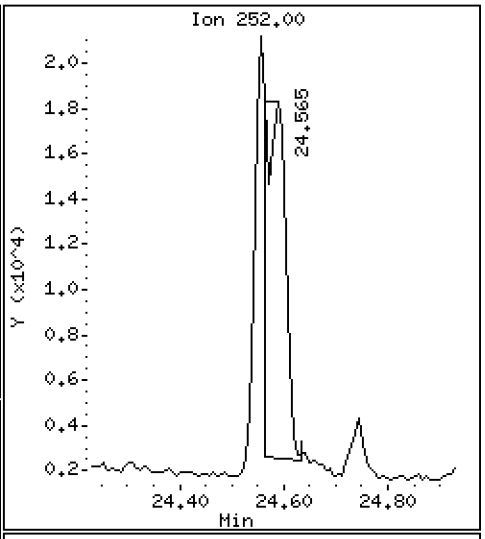
Column phase: ZB-5msi

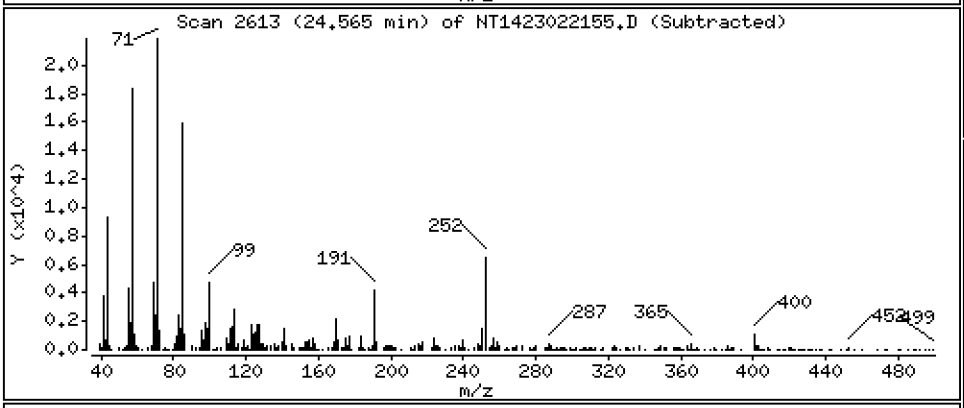
Column diameter: 0.25

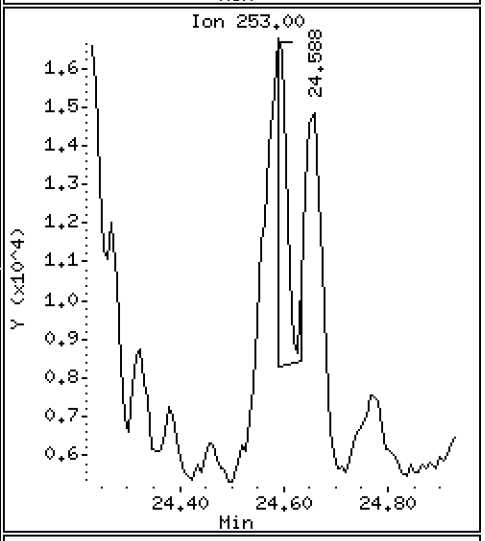
75 Benzo(k)fluoranthene

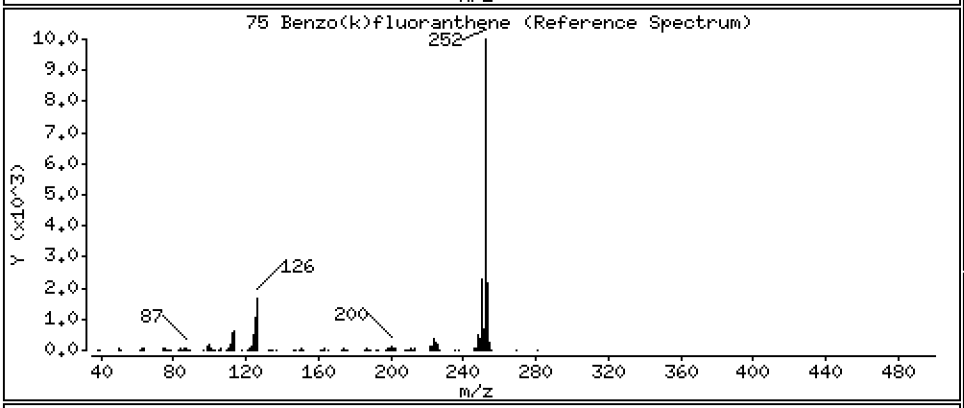
Concentration: 0.2460 ug/mL

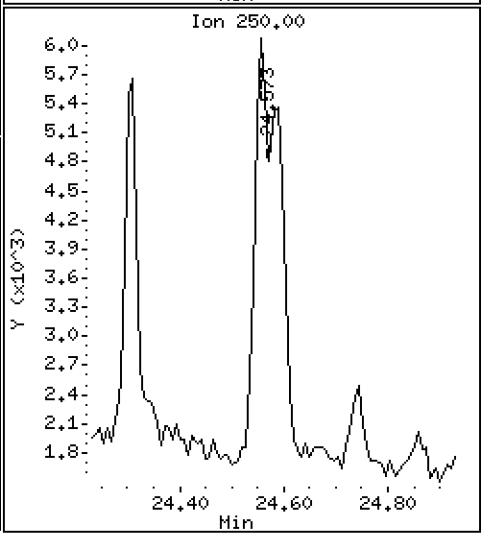


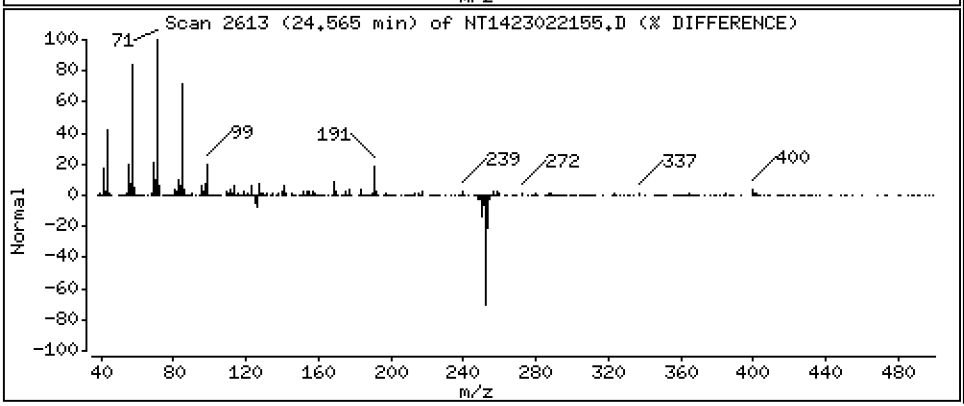












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

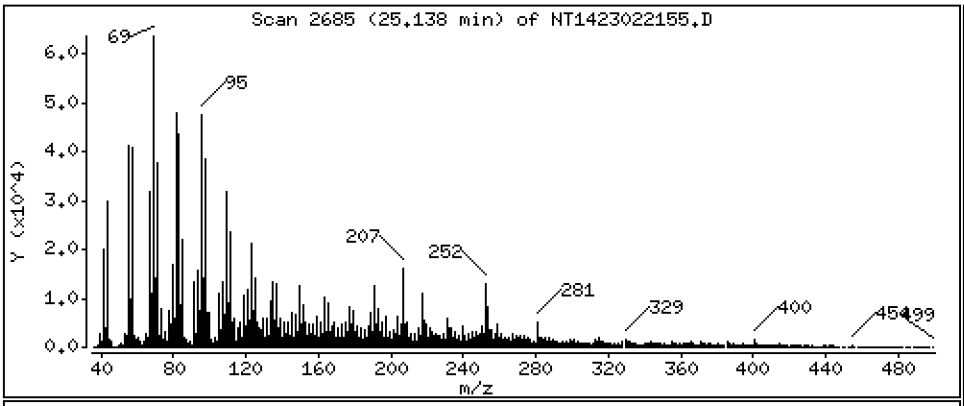
Operator: DSD

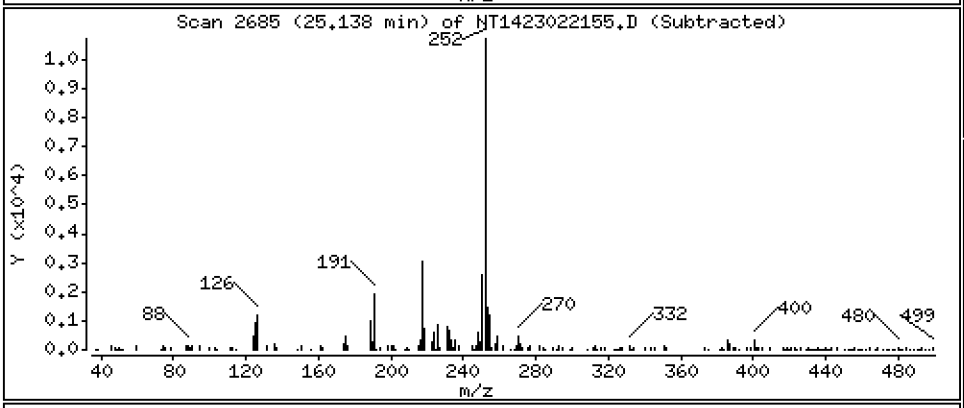
Column phase: ZB-5msi

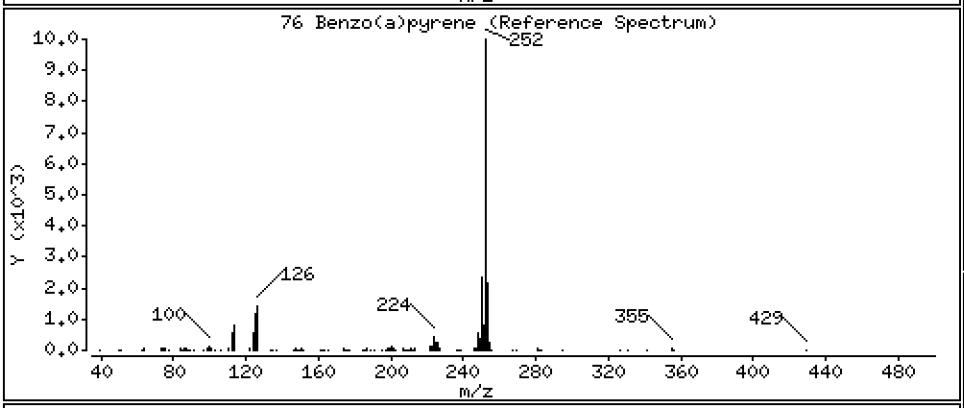
Column diameter: 0.25

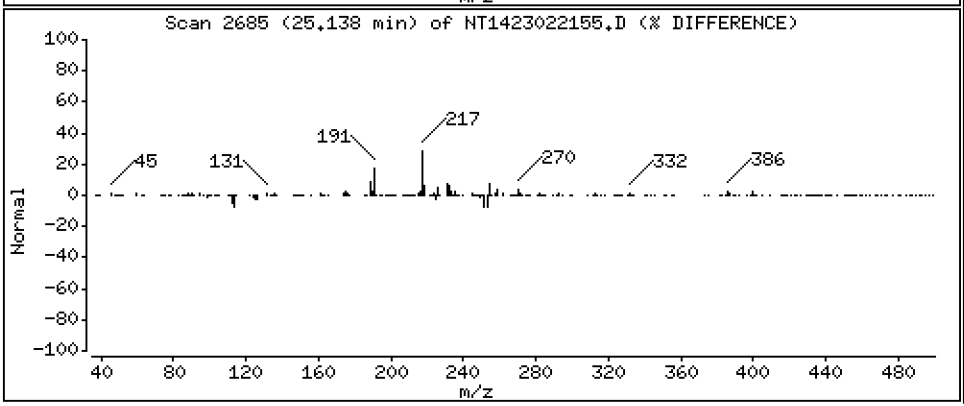
76 Benzo(a)pyrene

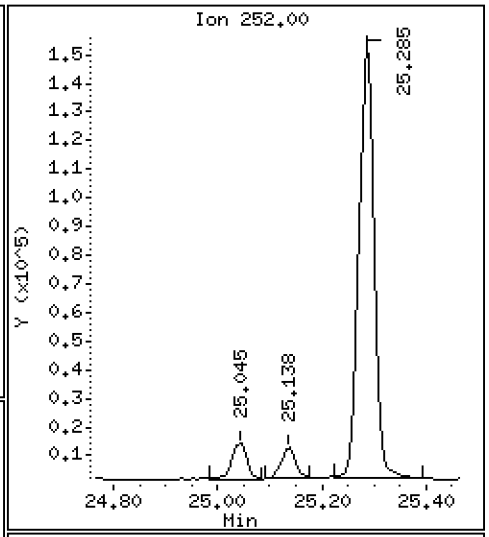
Concentration: 0.1417 ug/mL

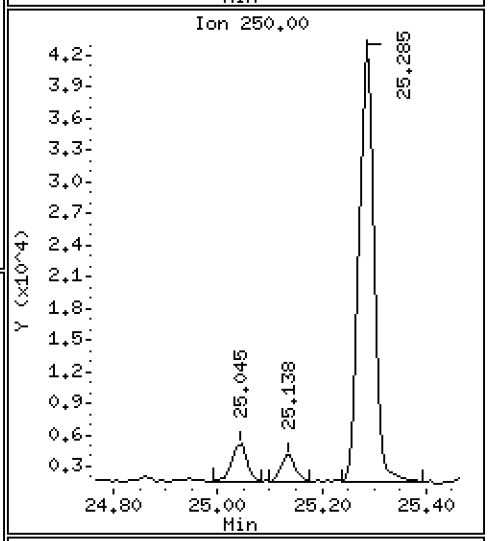


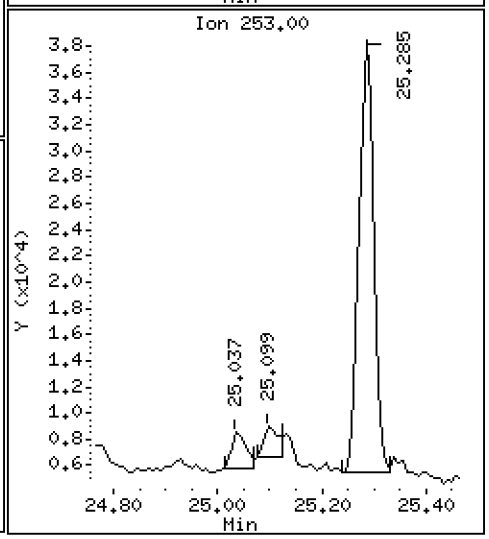












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

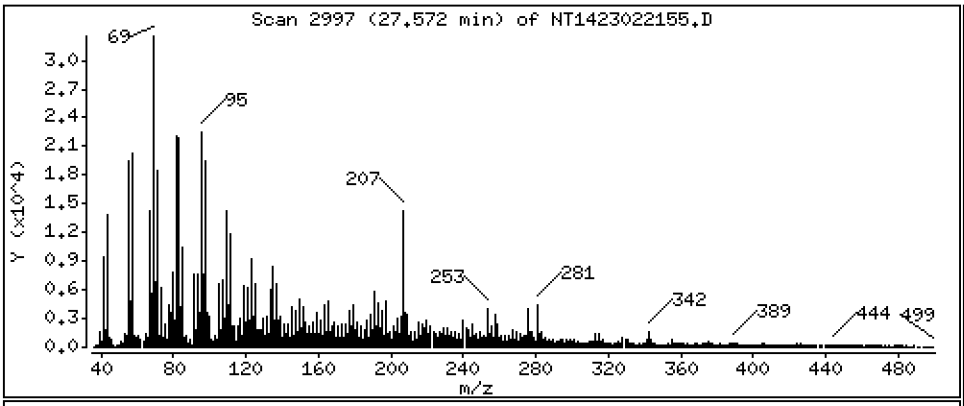
Operator: DSD

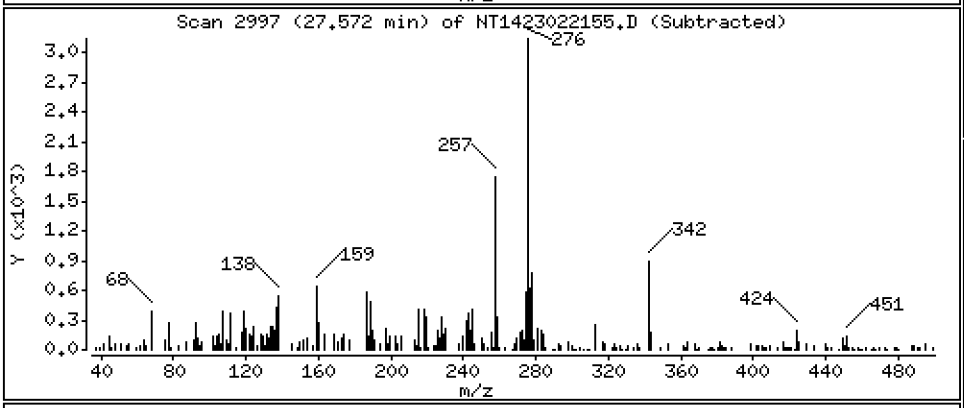
Column phase: ZB-5msi

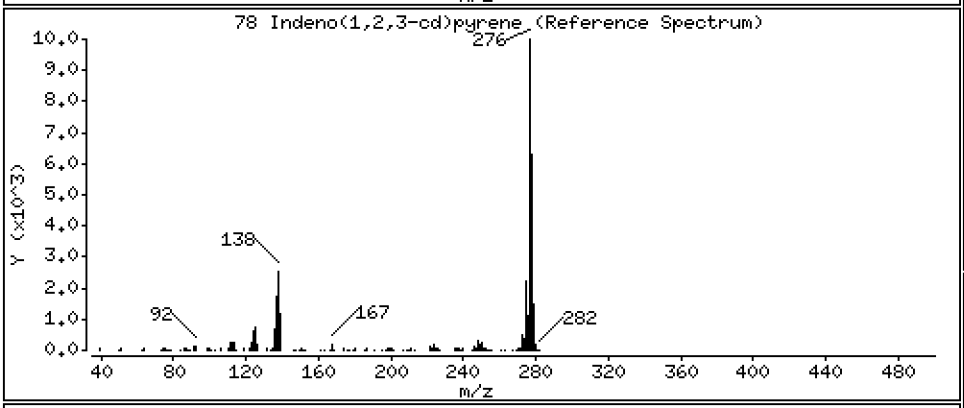
Column diameter: 0.25

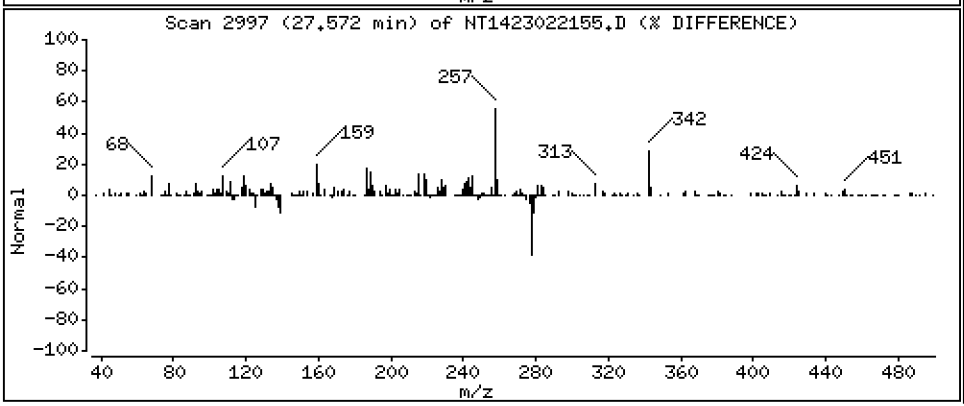
78 Indeno(1,2,3-cd)pyrene

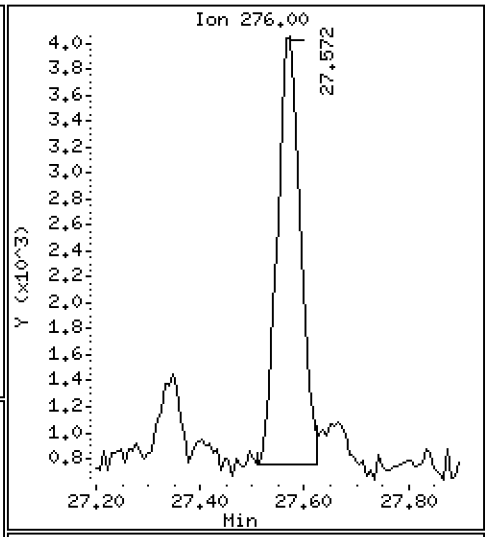
Concentration: 0.08549 ug/mL

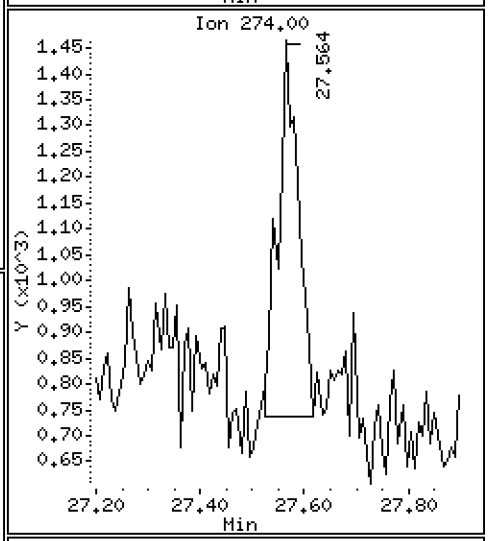


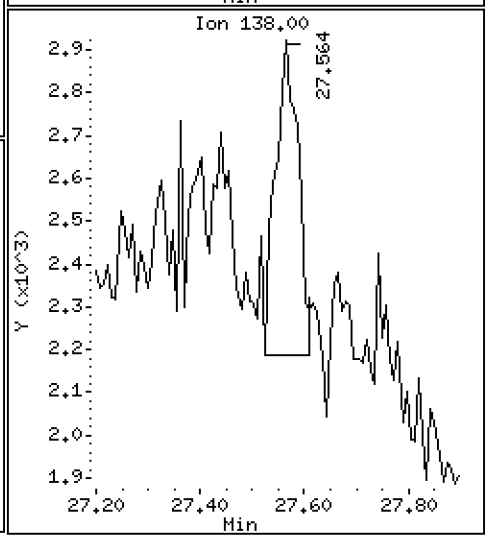












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

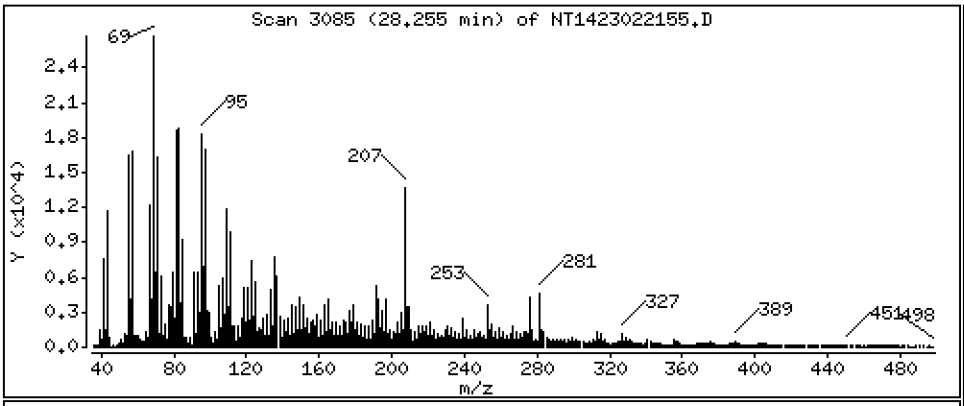
Operator: DSD

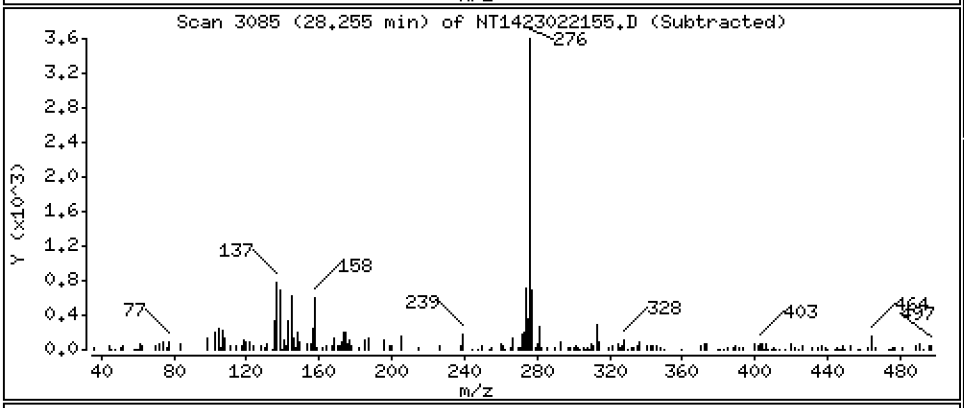
Column phase: ZB-5msi

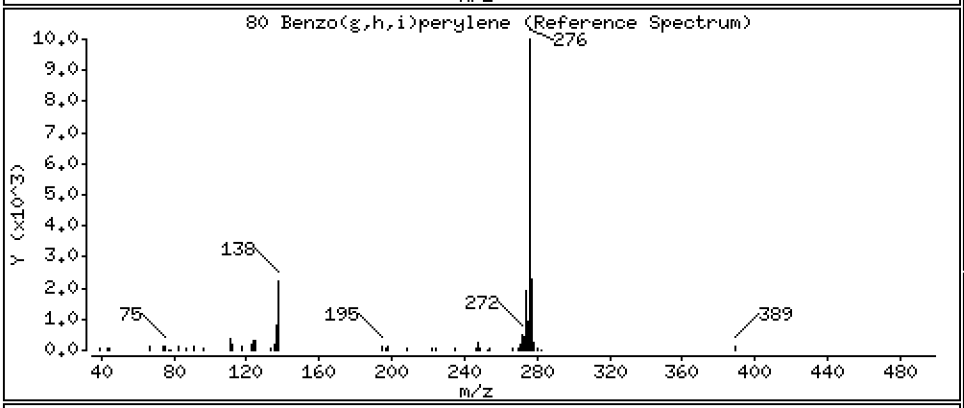
Column diameter: 0.25

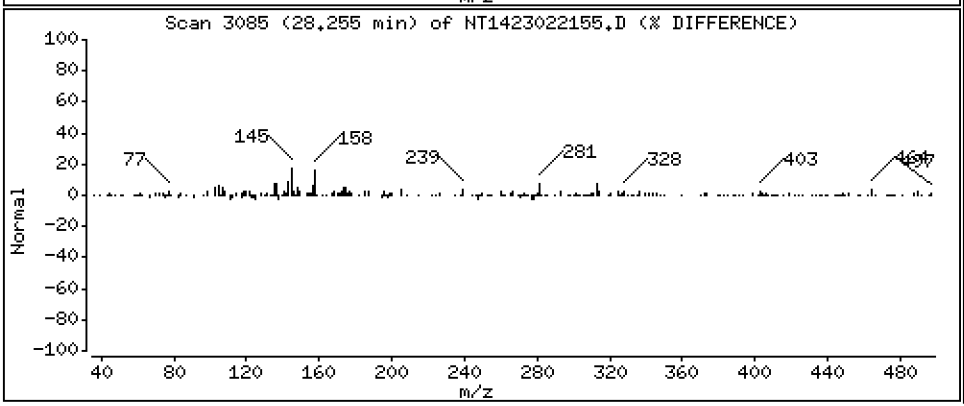
80 Benzo(g,h,i)perylene

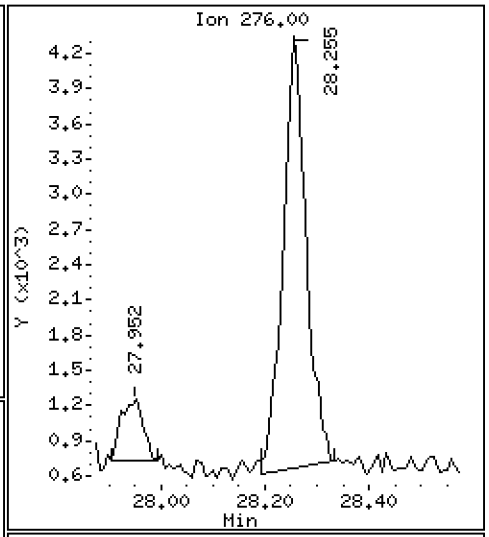
Concentration: 0.1179 ug/mL

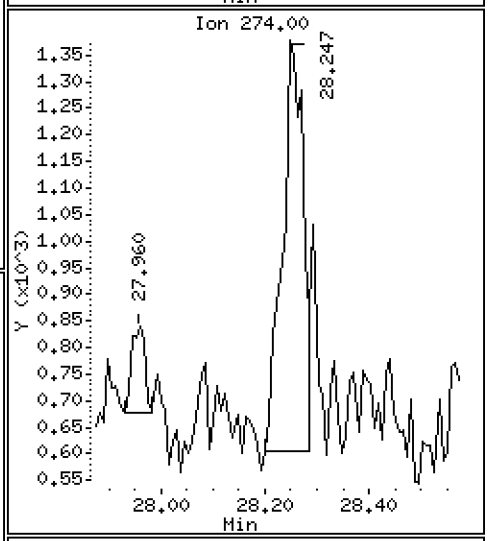


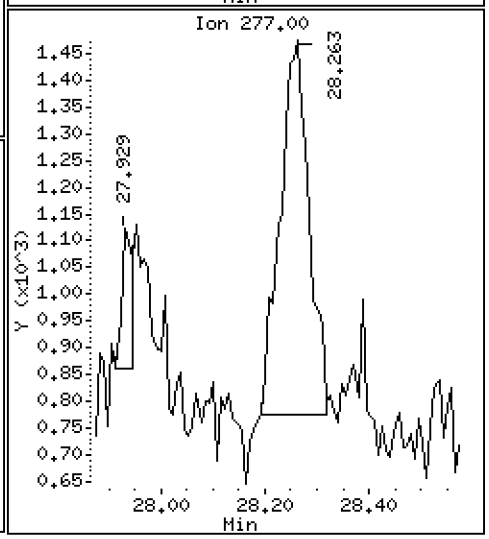












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

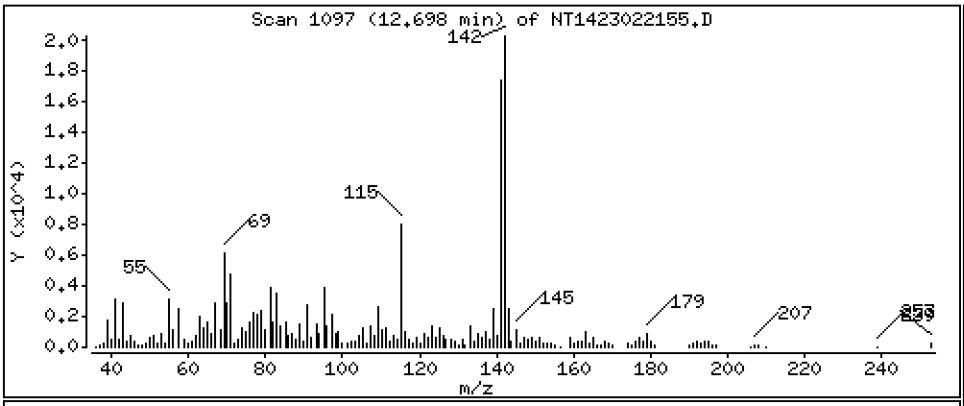
Operator: DSD

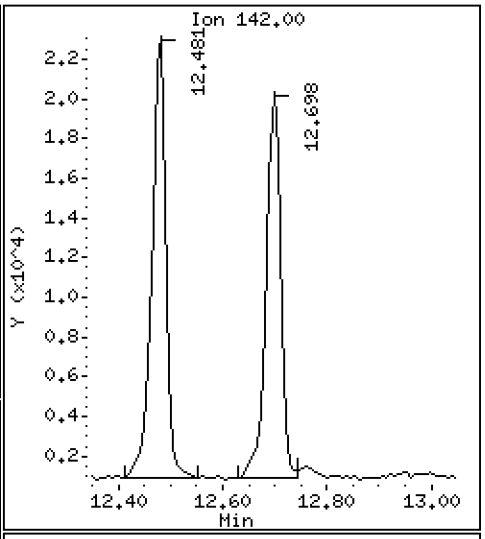
Column phase: ZB-5msi

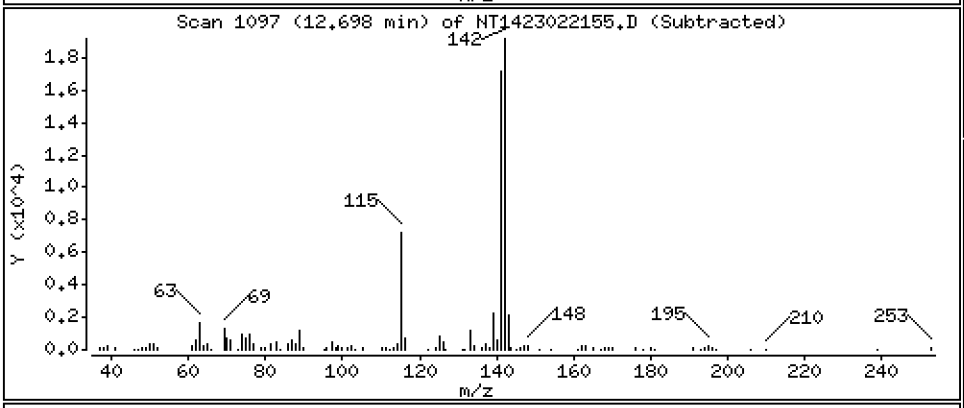
Column diameter: 0.25

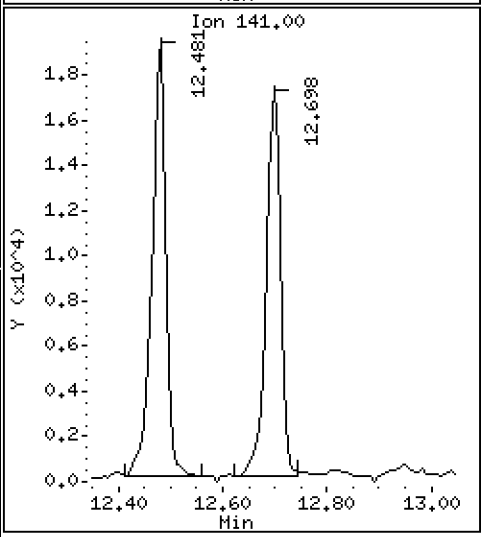
105 1-methylnaphthalene

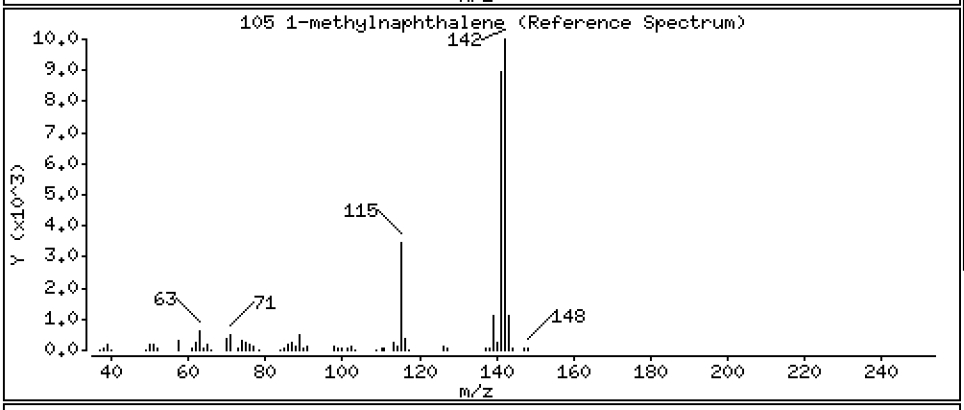
Concentration: 0.2298 ug/mL

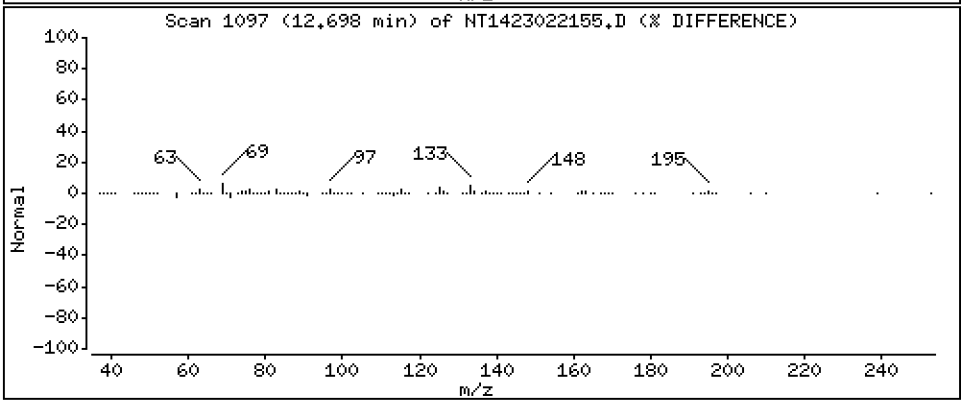












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

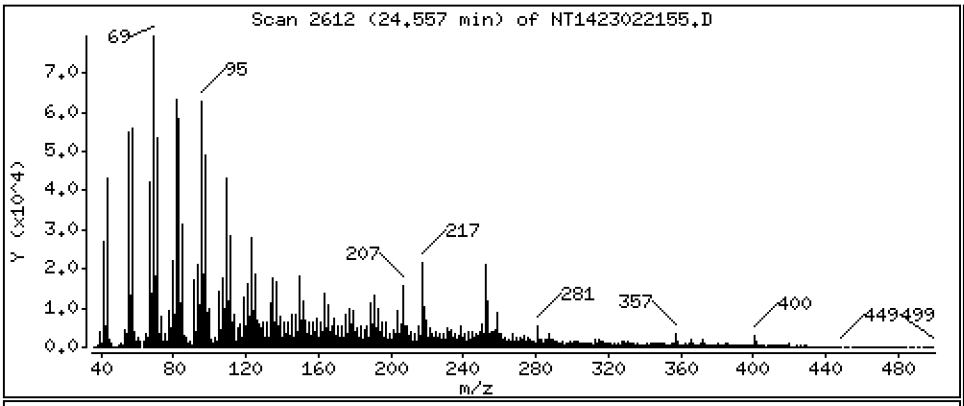
Operator: DSD

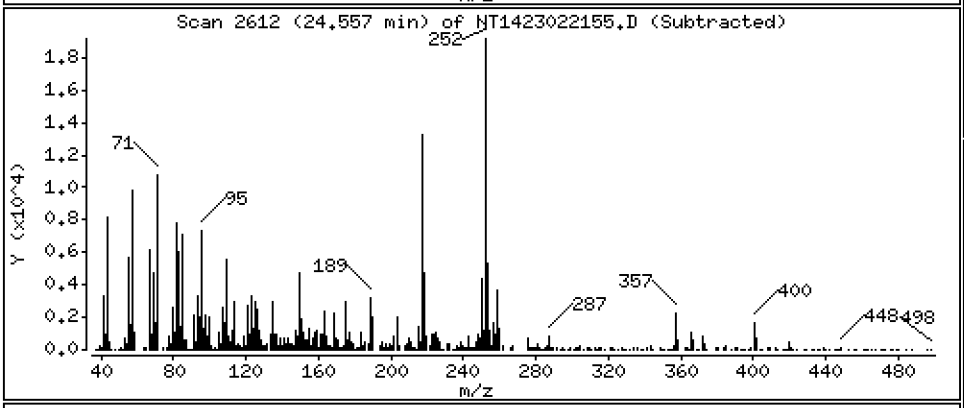
Column phase: ZB-5msi

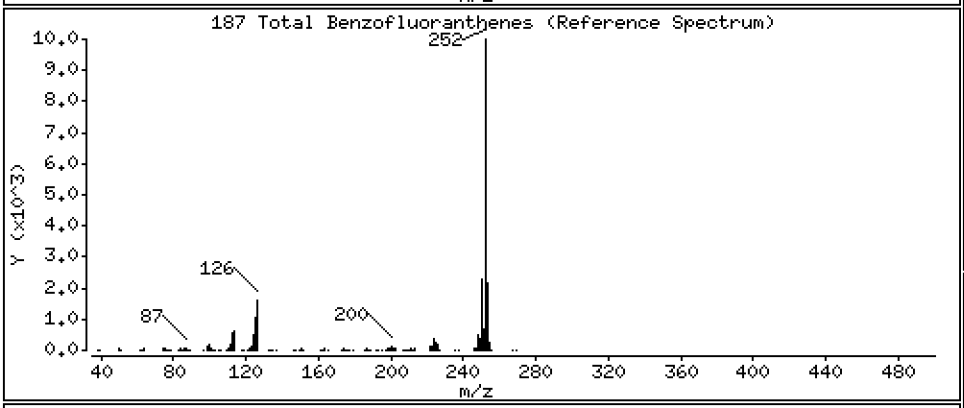
Column diameter: 0.25

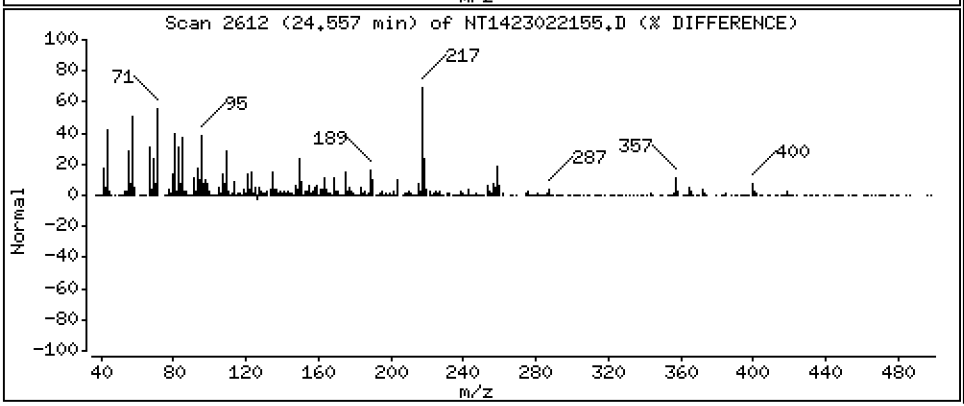
187 Total Benzofluoranthenes

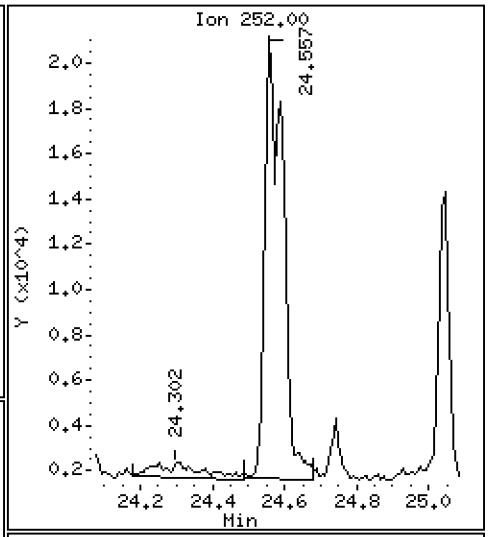
Concentration: 0.4552 ug/mL

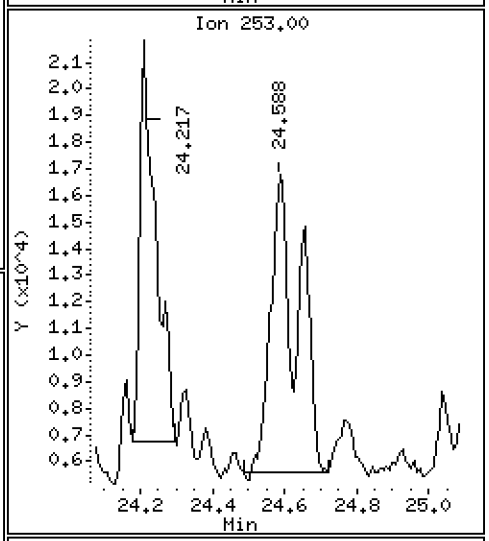


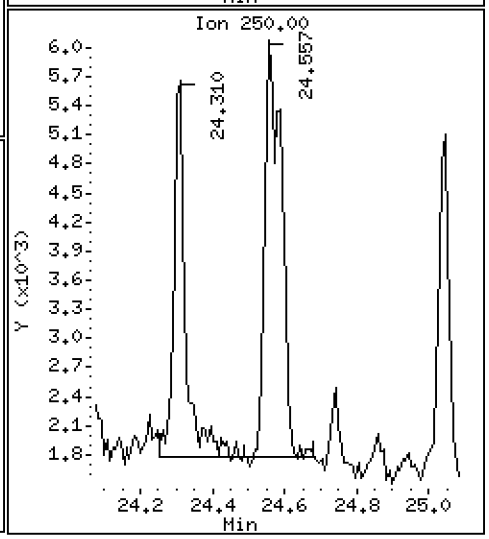












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221C.b\NT1423022155.D
Lab Smp Id: 23A0133-12
Inj Date : 22-FEB-2023 22:01 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-12
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Meth Date : 03-Mar-2023 06:54 van Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 38
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	6.380	6.380	(0.745)	222025	3.14260	3.143
$ 2	Phenol-d5	99	7.972	7.972	(0.930)	366507	3.27018	3.270
3	Phenol	94	7.995	7.996	(0.933)	53791	0.45337	0.4534
$ 5	2-Chlorophenol-d4	132	8.212	8.212	(0.958)	304863	3.81226	3.812
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	8.568	8.568	(1.000)	264280	4.00000	
9	1,4-Dichlorobenzene	146	8.599	8.599	(1.004)	2247	0.02545	0.02545(MH)
$ 10	1,2-Dichlorobenzene-d4	152	8.925	8.925	(1.042)	141406	2.35904	2.359
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
17	Hexachloroethane	117	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
15	4-Methylphenol	108	9.375	9.367	(1.094)	11926	0.13632	0.1363
$ 18	Nitrobenzene-d5	82	9.662	9.662	(0.875)	299482	2.85426	2.854
19	Nitrobenzene	77	Compound Not Detected.					
20	Isophorone	82	Compound Not Detected.					
21	2-Nitrophenol	139	Compound Not Detected.					
22	2,4-Dimethylphenol	107	10.407	10.407	(0.942)	2672	0.03361	0.03361
23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
24	Benzoic acid	105	Compound Not Detected.					
25	2,4-Dichlorophenol	162	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.042	11.042	(1.000)	908214	4.00000	
28	Naphthalene	128	11.081	11.081	(1.003)	53354	0.23825	0.2383
29	4-Chloroaniline	127	Compound Not Detected.					
30	Hexachlorobutadiene	225	Compound Not Detected.					
31	4-Chloro-3-methylphenol	107	Compound Not Detected.					
32	2-Methylnaphthalene	142	12.481	12.481	(1.130)	41184	0.24556	0.2456
33	Hexachlorocyclopentadiene	237	Compound Not Detected.					

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	13.270	13.270	(0.906)	553335	2.86906	2.869
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.648	14.648	(1.000)	539062	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	14.717	14.717	(1.005)	8127	0.05653	0.05653
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	15.042	15.050	(1.027)	30395	0.12878	0.1288
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	15.637	15.645	(1.068)	102381	0.46771	0.4677
	49 Fluorene	166	15.753	15.753	(1.075)	14976	0.06068	0.06068
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	16.293	16.293	(1.110)	71960	2.31203	2.312(MH)
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.684	17.676	(1.000)	989773	4.00000	
	60 Phenanthrene	178	17.730	17.723	(1.003)	119994	0.50452	0.5045
	61 Anthracene	178	17.823	17.816	(1.008)	24188	0.10265	0.1027
	62 Carbazole	167	Compound Not Detected.					
	63 Di-n-butylphthalate	149	19.015	18.992	(1.075)	20960	0.08776	0.08776
	64 Fluoranthene	202	20.191	20.137	(0.886)	109238	0.38637	0.3864(H)
	65 Pyrene	202	20.593	20.562	(0.904)	178095	0.59571	0.5957
$	66 Terphenyl-d14	244	20.887	20.872	(0.917)	684247	3.22341	3.223
	67 Butylbenzylphthalate	149	21.824	21.816	(0.958)	23129	0.23465	0.2346
	68 Benzo(a)anthracene	228	22.753	22.745	(0.999)	36202	0.17263	0.1726
*	69 Chrysene-d12	240	22.784	22.769	(1.000)	655335	4.00000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	22.823	22.815	(1.002)	40932	0.21700	0.2170
	72 bis(2-Ethylhexyl)phthalate	149	22.861	22.854	(0.959)	41884	0.23124	0.2312
*	134 Di-n-octylphthalate-d4	153	23.845	23.837	(1.000)	1053482	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	24.557	24.542	(0.973)	41895	0.26930	0.2693(M)
	75 Benzo(k)fluoranthene	252	24.565	24.580	(0.973)	40888	0.24597	0.2460(M)
	76 Benzo(a)pyrene	252	25.138	25.114	(0.996)	20880	0.14171	0.1417
*	77 Perylene-d12	264	25.238	25.223	(1.000)	490273	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	27.571	27.548	(1.092)	10359	0.08549	0.08549
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	28.255	28.224	(1.120)	11582	0.11788	0.1179
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	142	12.697	12.697	(1.150)	36180	0.22978	0.2298
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.557	24.580	(0.973)	69142	0.45523	0.4552
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022155.D
Lab Smp Id: 23A0133-12
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 16:35
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	232195	116098	464390	264280	13.82
27 Naphthalene-d8	800631	400316	1601262	908214	13.44
42 Acenaphthene-d10	488064	244032	976128	539062	10.45
59 Phenanthrene-d10	971279	485640	1942558	989773	1.90
69 Chrysene-d12	687083	343542	1374166	655335	-4.62
134 Di-n-octylphthala	1174636	587318	2349272	1053482	-10.31
77 Perylene-d12	491790	245895	983580	490273	-0.31

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.07
134 Di-n-octylphthala	23.84	23.34	24.34	23.85	0.03
77 Perylene-d12	25.22	24.72	25.72	25.24	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022155.D

Lab ID: 23A0133-12
nt14.i, ABN.m, 22-FEB-2023 22:01

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

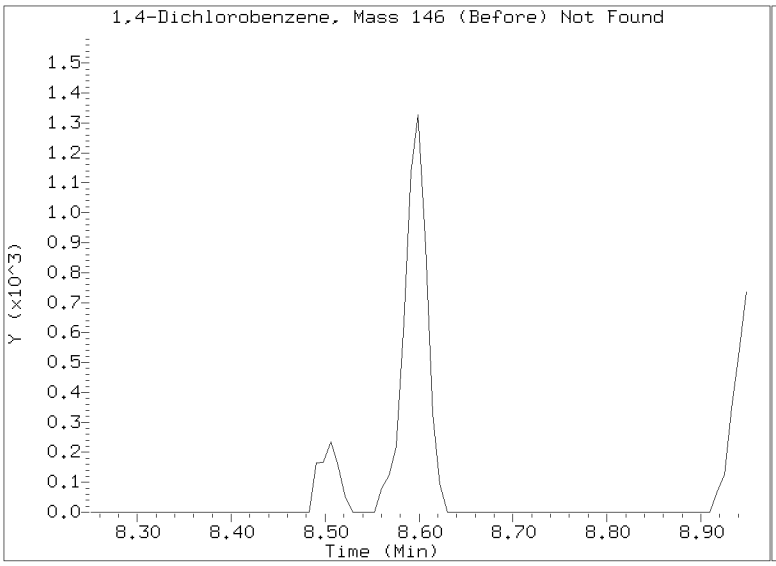
RRT check based on Ccal File: NT1423022146.D

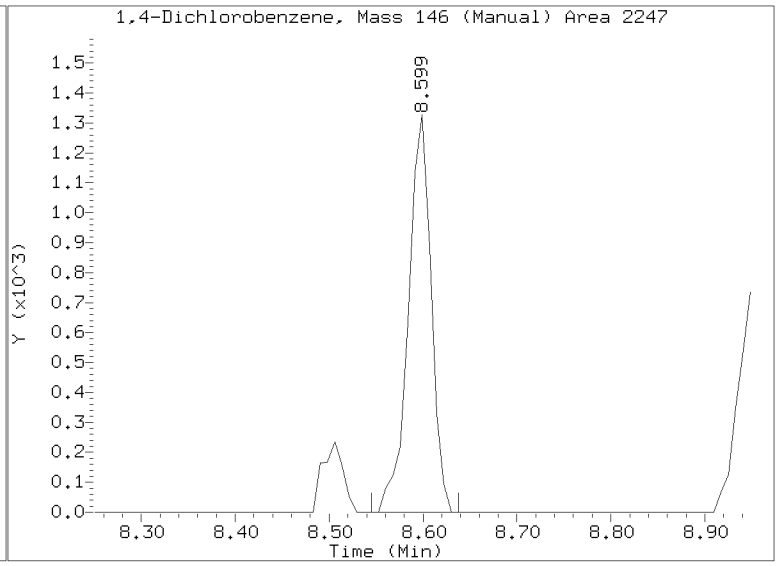
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

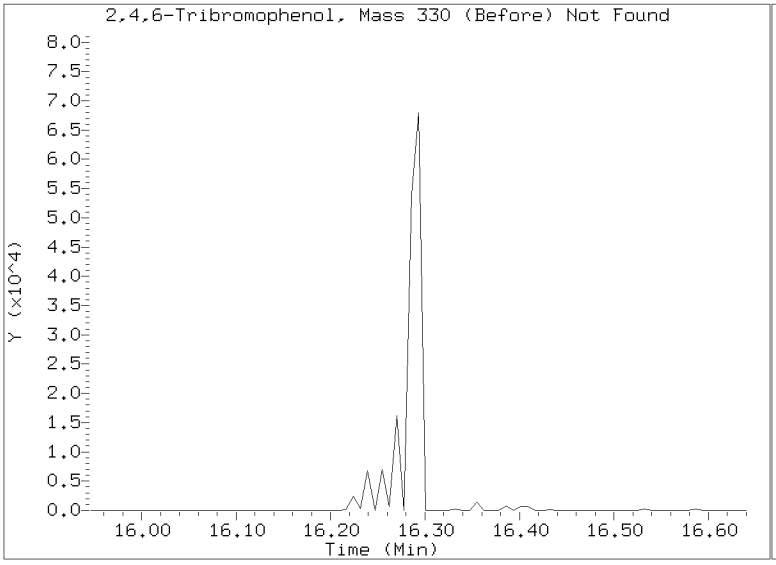
* Only compounds listed in the work order have been verified by the analyst *

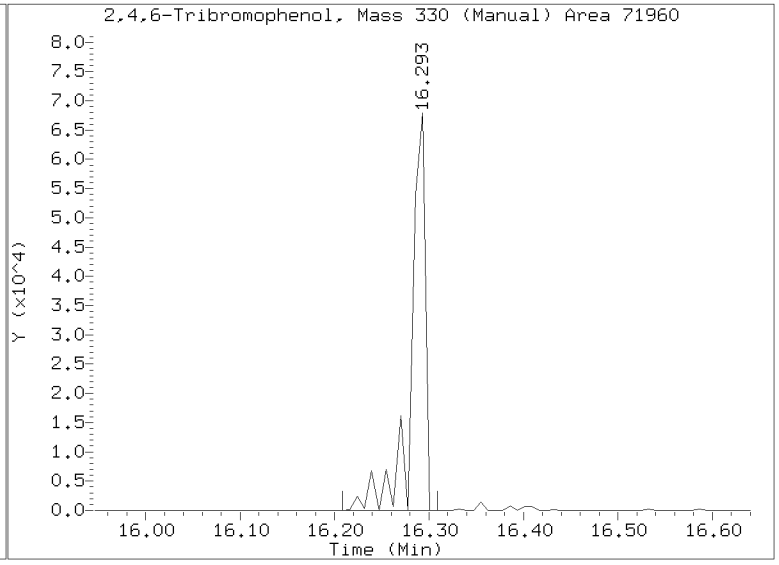
Quant Ion Manual Peak Adjustment Report

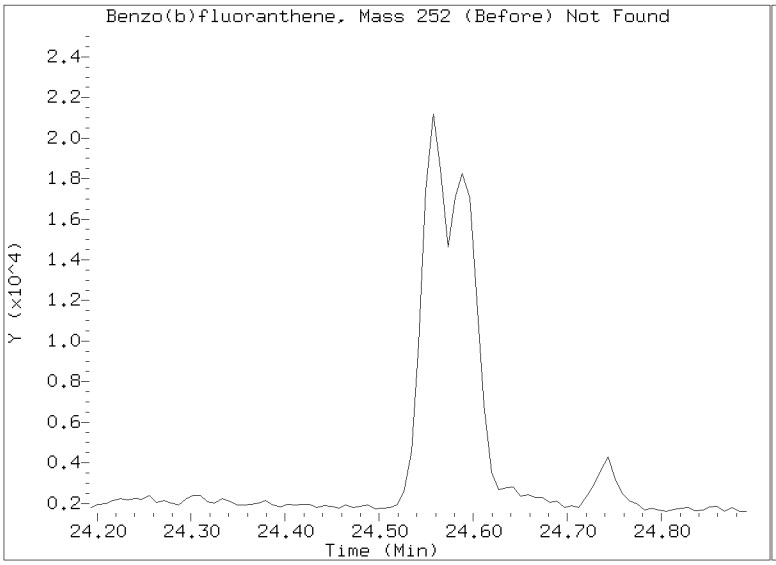
Datafile: //target/share/chem3/nt14.i/20230221C.b/NT1423022155.D
Injection Date: 22-FEB-2023 22:01
Lab ID:23A0133-12 Client ID:
Report Date: 03/03/2023 09:36

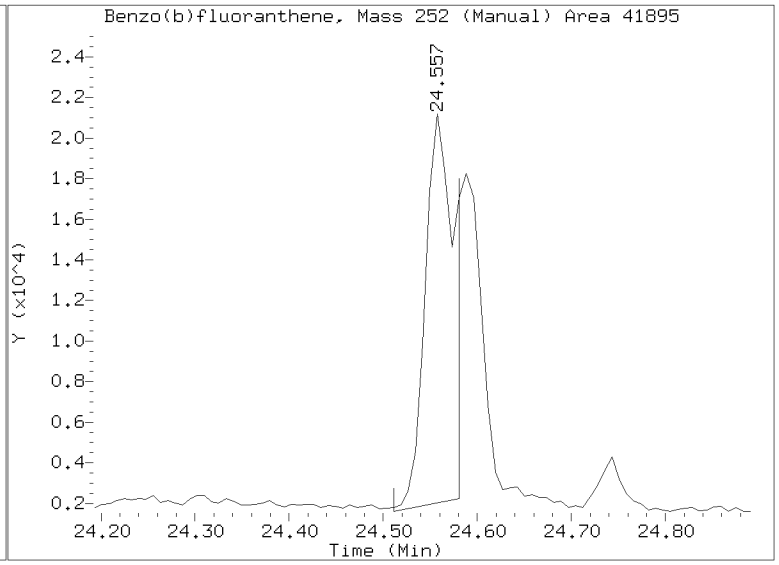






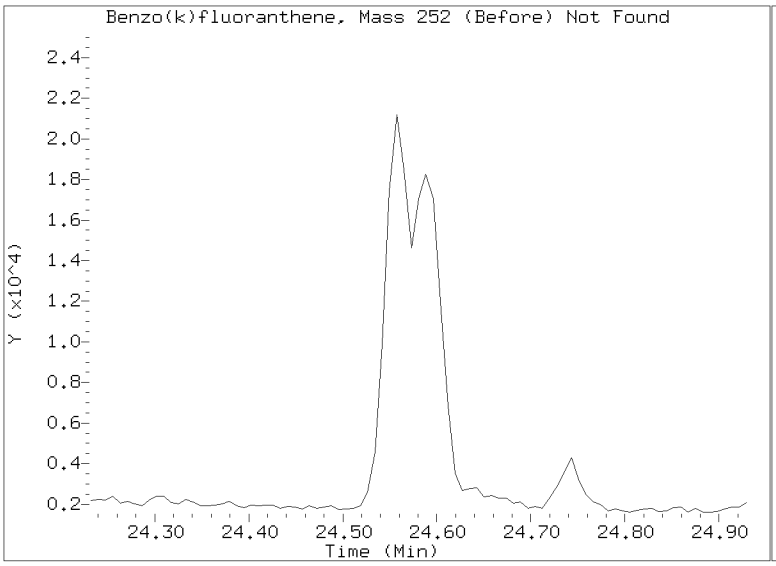


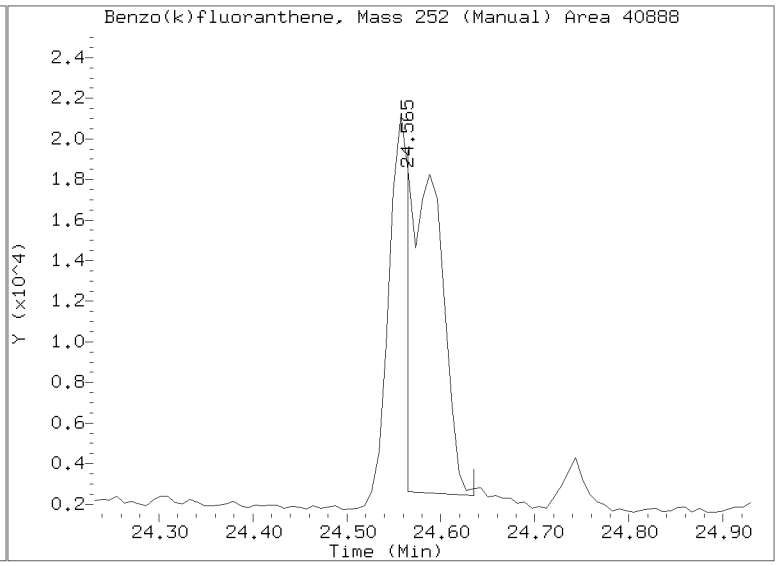




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221C.b/NT1423022155.D
Injection Date: 22-FEB-2023 22:01
Lab ID:23A0133-12 Client ID:
Report Date: 03/03/2023 09:36





Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1110

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-13 C	SDG:	23A0133
Sampled:	01/06/23 14:00	Prepared:	01/18/23 15:24	File ID:	NT1423022156.D
% Solids:	59.32	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 22:37
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	16.87 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	90.8		4.4	20.0
106-44-5	4-Methylphenol	1	20.2		7.4	20.0
91-20-3	Naphthalene	1	9.6	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	10.7	J	4.5	20.0
208-96-8	Acenaphthylene	1	20.0	U	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	20.0	U	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	55.8		8.7	20.0
120-12-7	Anthracene	1	20.3		7.2	20.0
206-44-0	Fluoranthene	1	102		6.1	20.0
129-00-0	Pyrene	1	101		5.7	20.0
85-68-7	Butylbenzylphthalate	1	20.0	U	9.4	20.0
56-55-3	Benzo(a)anthracene	1	48.9		6.0	20.0
218-01-9	Chrysene	1	77.1		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	57.0		5.5	50.0
	Benzofluoranthenes, Total	1	117		10.0	40.0
50-32-8	Benzo(a)pyrene	1	41.0		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	24.2		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	26.6		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.45	557	74.3	27 - 120	
Phenol-d5	749.45	523	69.8	29 - 120	
2-Chlorophenol-d4	749.45	536	71.6	31 - 120	
1,2-Dichlorobenzene-d4	499.64	322	64.5	32 - 120	
Nitrobenzene-d5	499.64	358	71.6	30 - 120	
2-Fluorobiphenyl	499.64	360	72.1	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1110

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

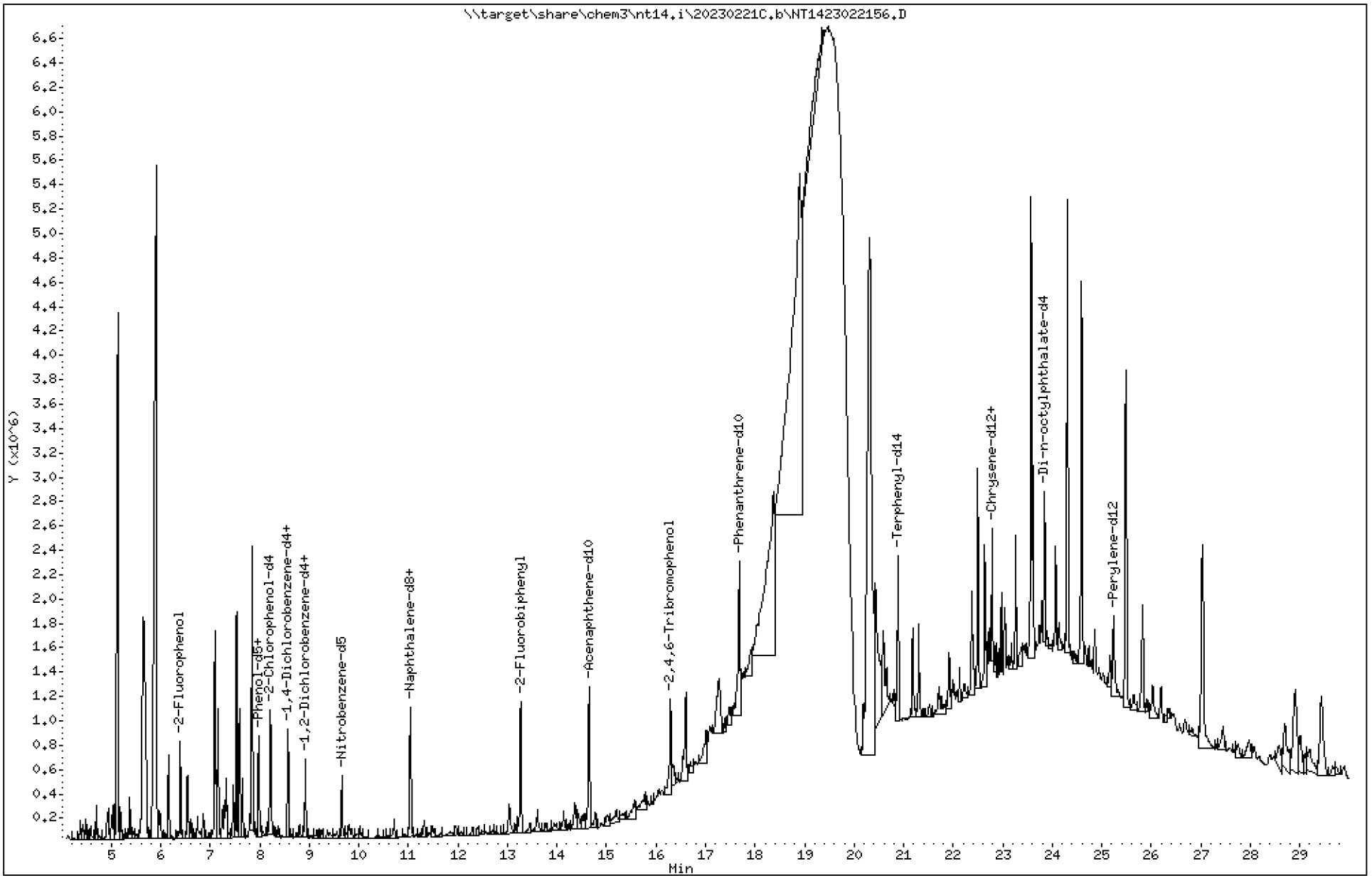
Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-13 C	SDG:	23A0133
Sampled:	01/06/23 14:00	Prepared:	01/18/23 15:24	File ID:	NT1423022156.D
% Solids:	59.32	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 22:37
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	16.87 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	749.45	534	71.2	24 - 134	
p-Terphenyl-d14	499.64	400	80.1	37 - 120	

Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022156.D
Date : 22-FEB-2023 22:37
Client ID:
Sample Info: 23A0133-13

Instrument: nt14.i
Operator: DSD
Column diameter: 0.25

Column phase: ZB-5msi



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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

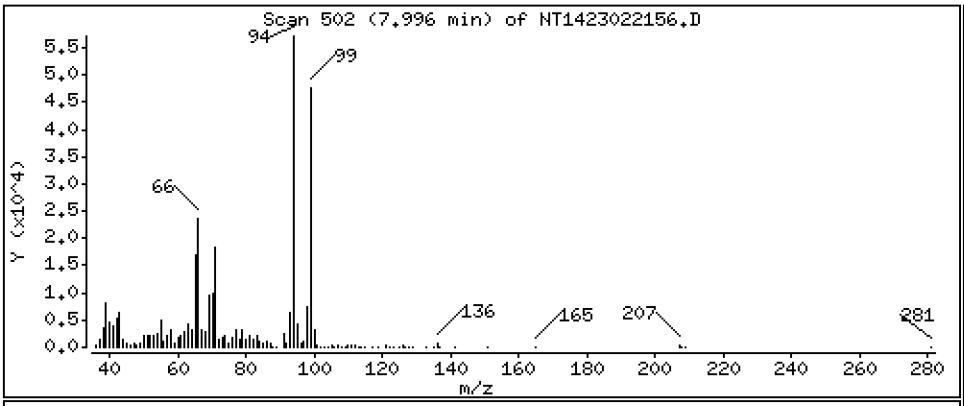
Operator: DSD

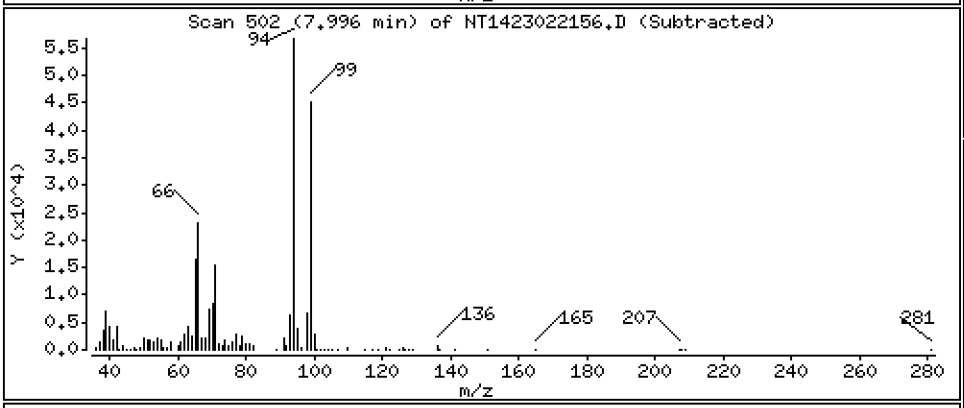
Column phase: ZB-5msi

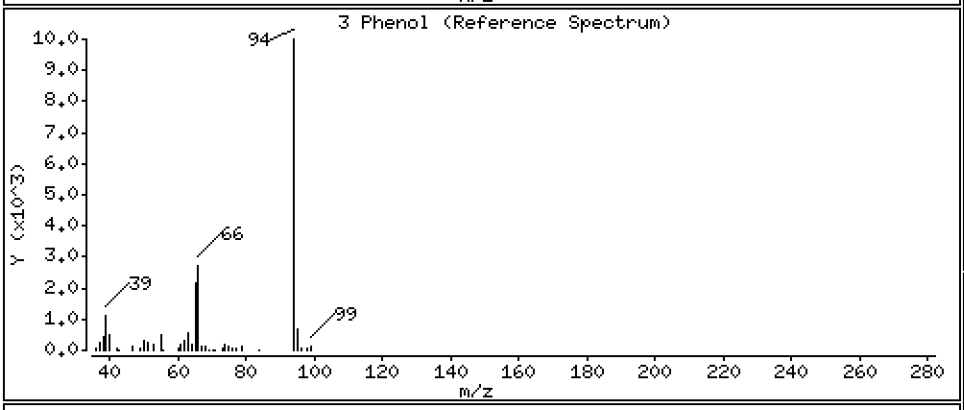
Column diameter: 0.25

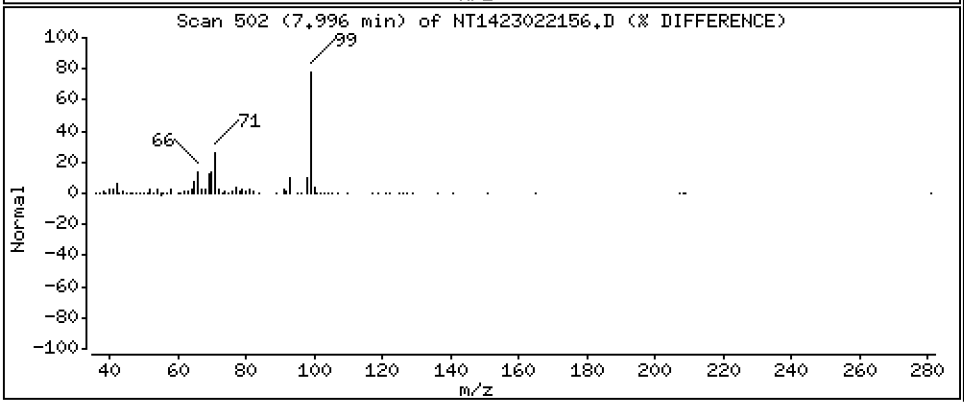
3 Phenol

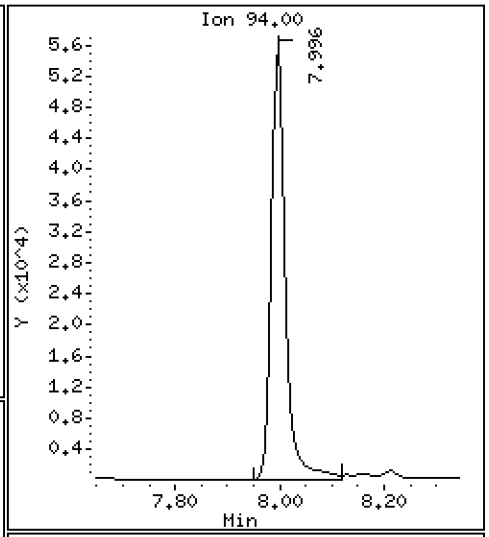
Concentration: 0.9083 ug/mL

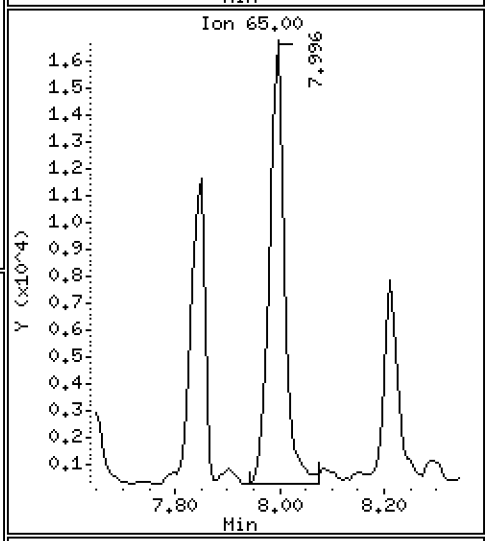


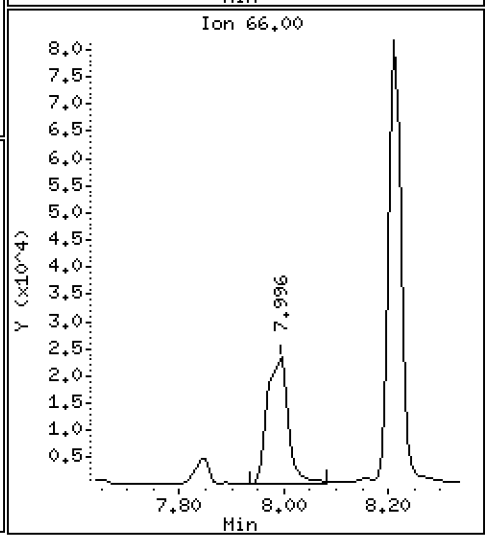












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

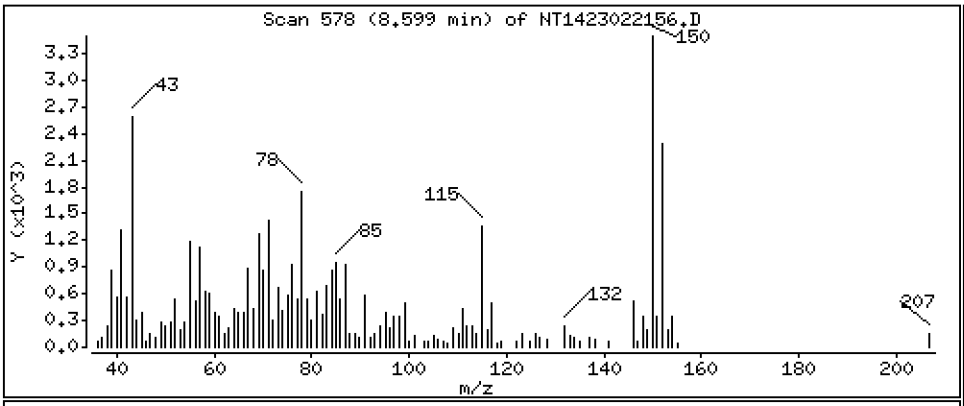
Operator: DSD

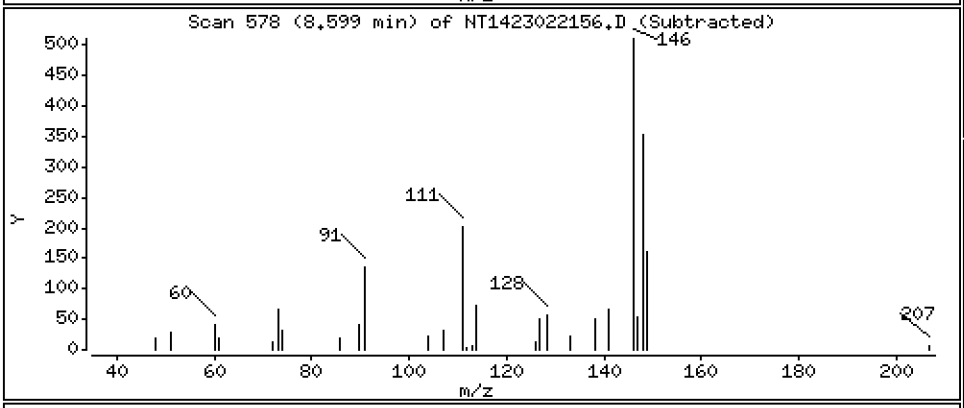
Column phase: ZB-5msi

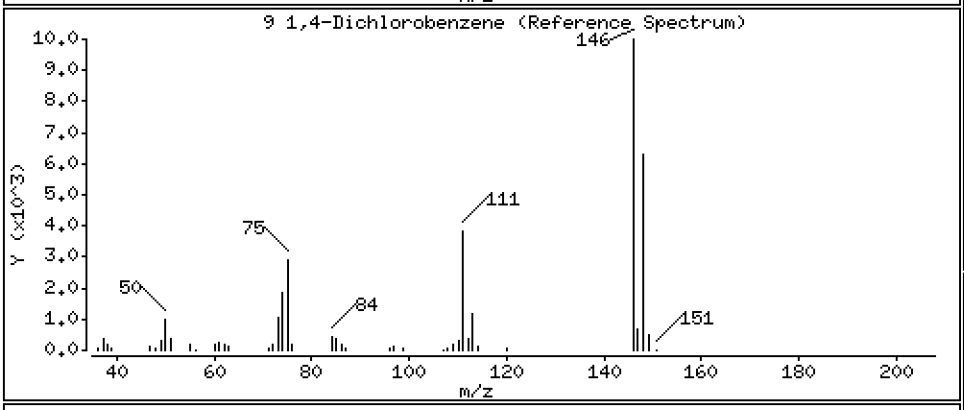
Column diameter: 0.25

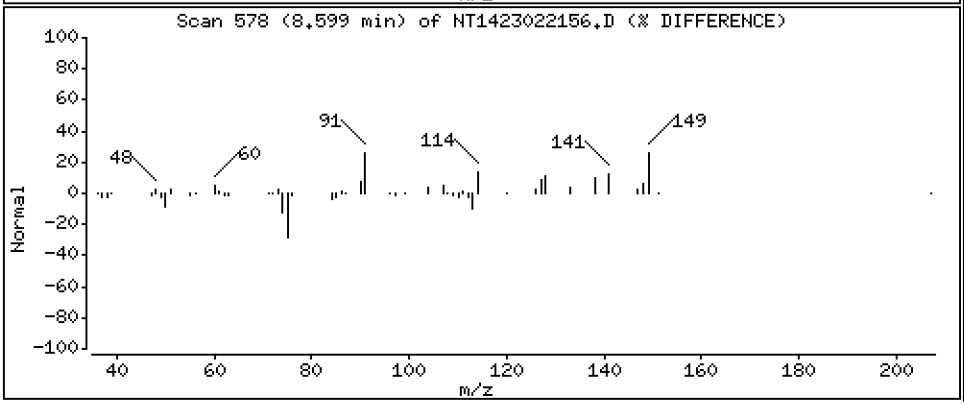
9 1,4-Dichlorobenzene

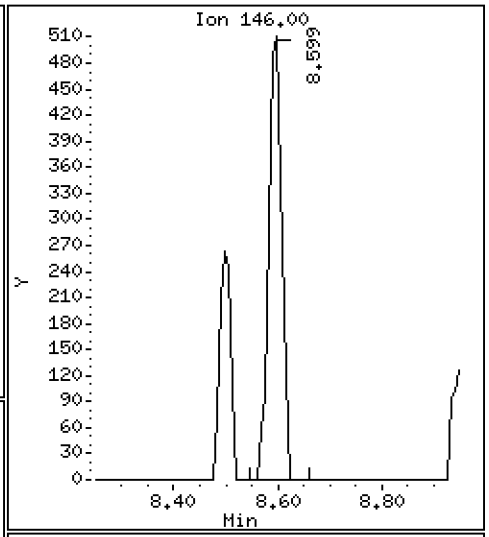
Concentration: 0.01099 ug/mL

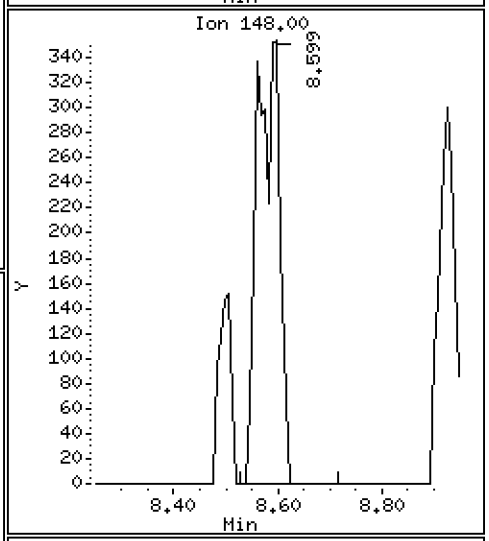


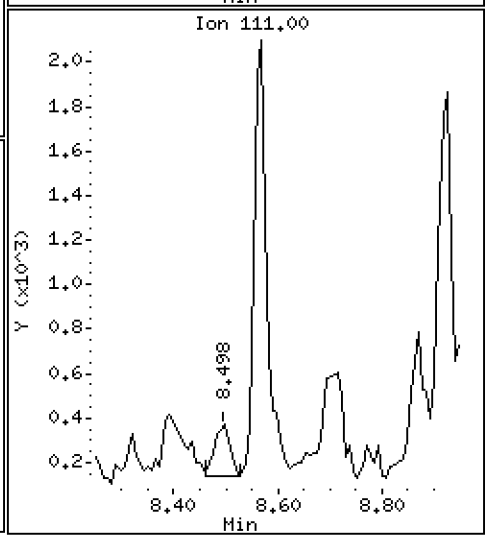












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

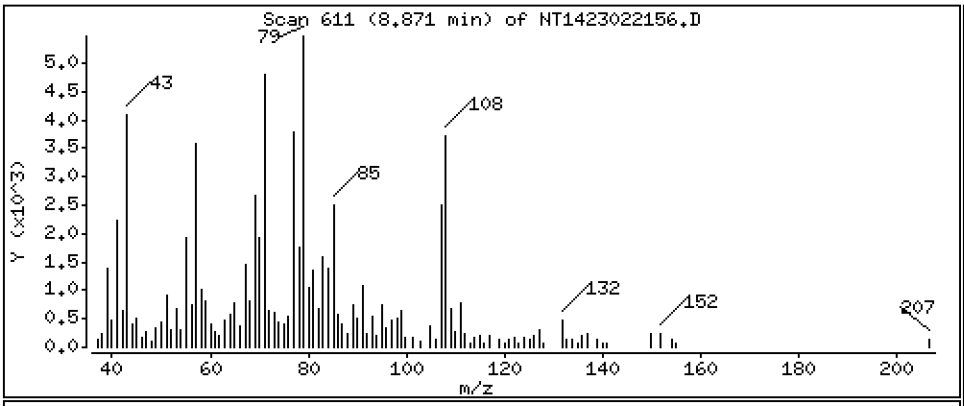
Operator: DSD

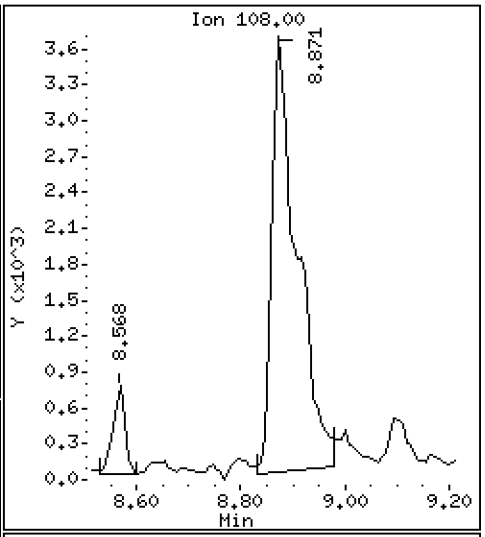
Column phase: ZB-5msi

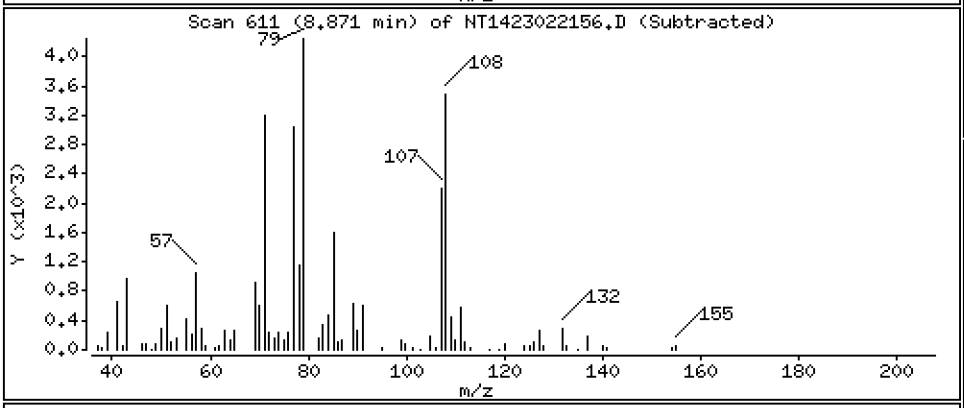
Column diameter: 0.25

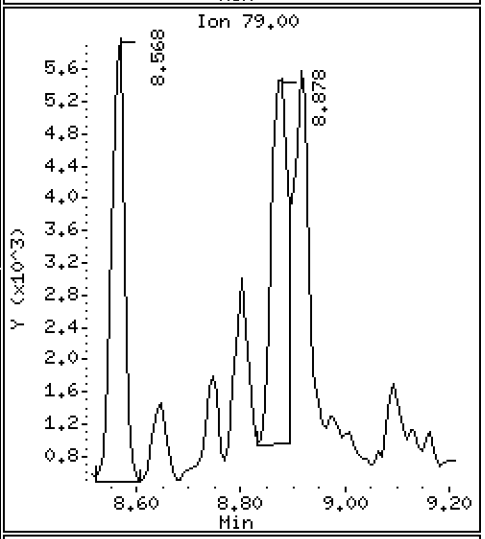
11 Benzyl alcohol

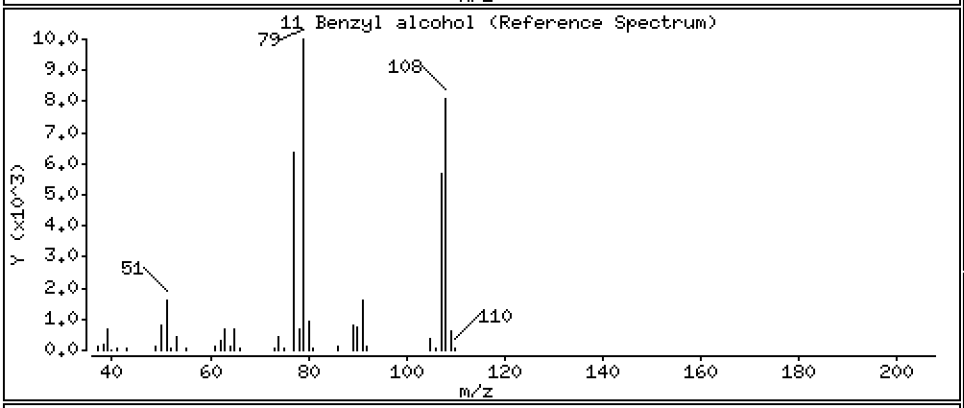
Concentration: 0.1988 ug/mL

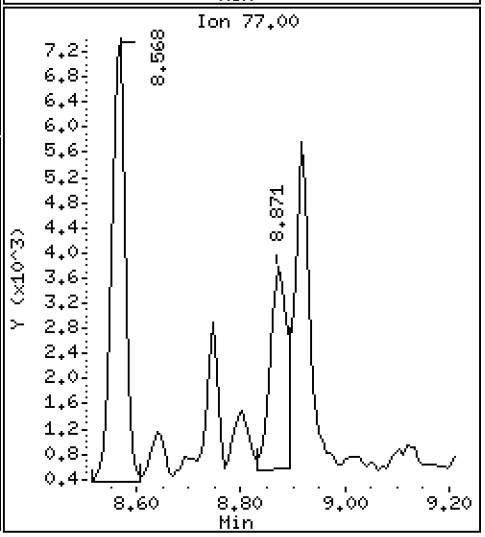


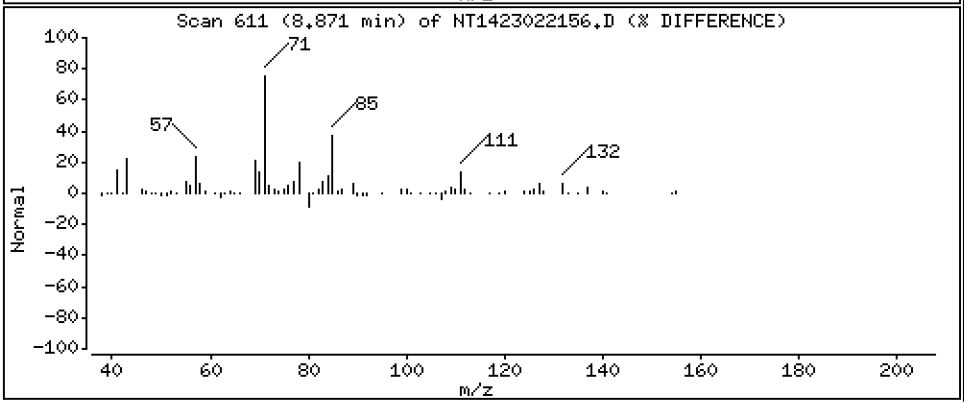












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022156.D

Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

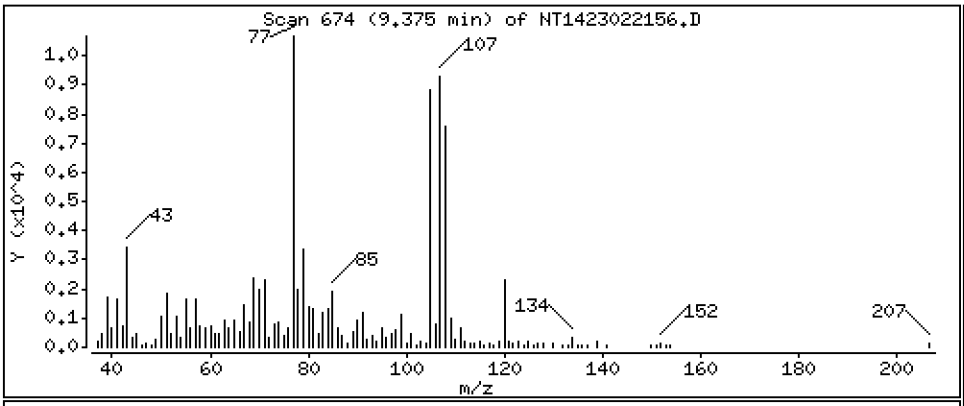
Operator: DSD

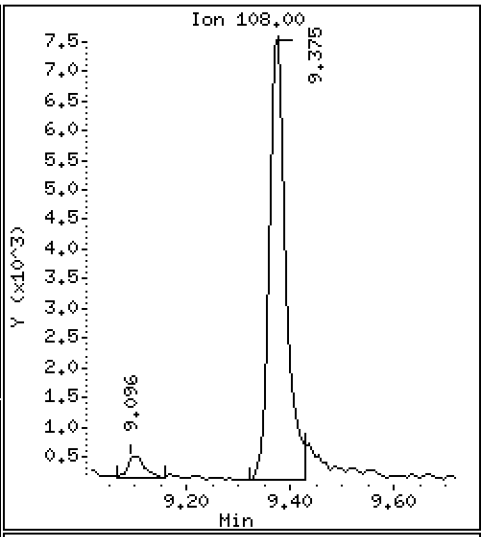
Column phase: ZB-5msi

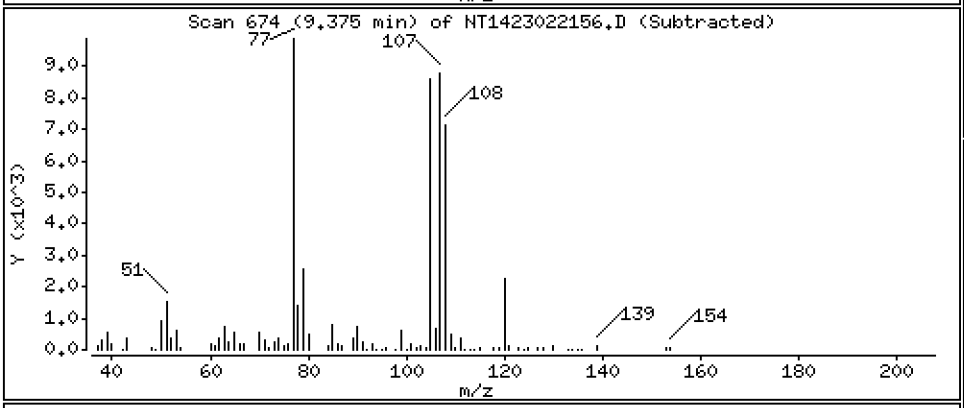
Column diameter: 0.25

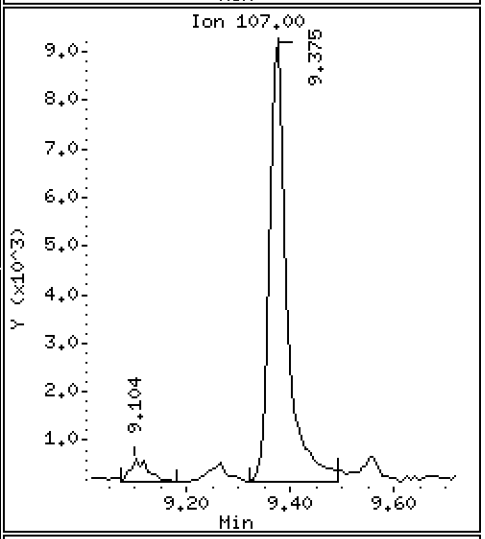
15 4-Methylphenol

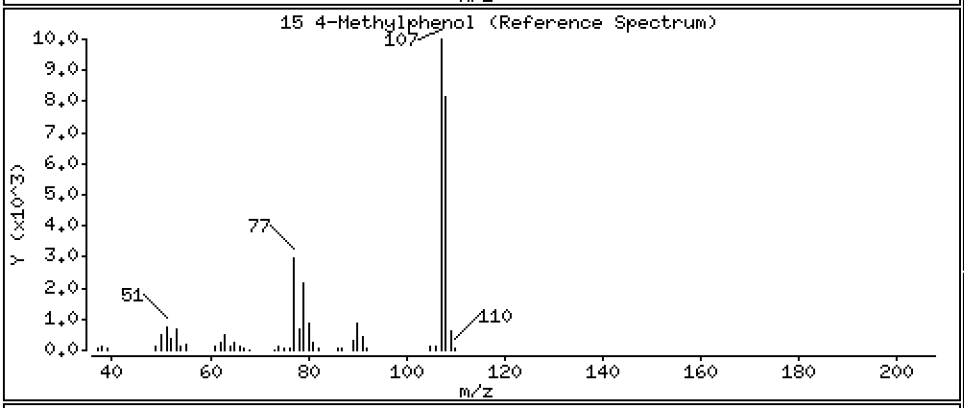
Concentration: 0.2025 ug/mL

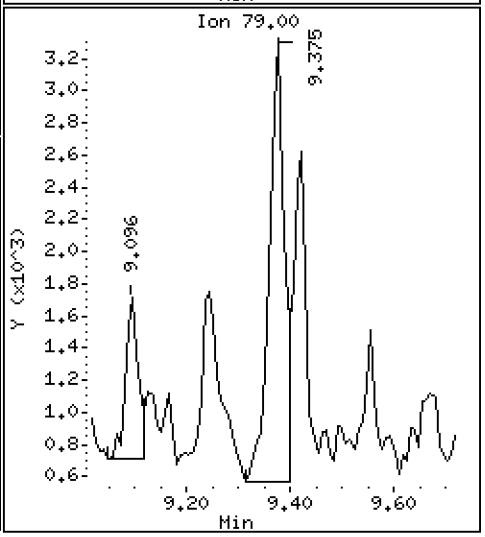


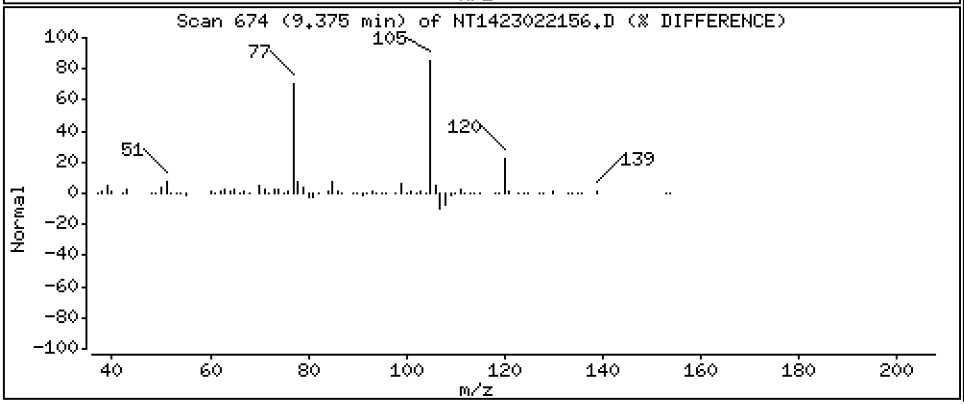












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022156.D

Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

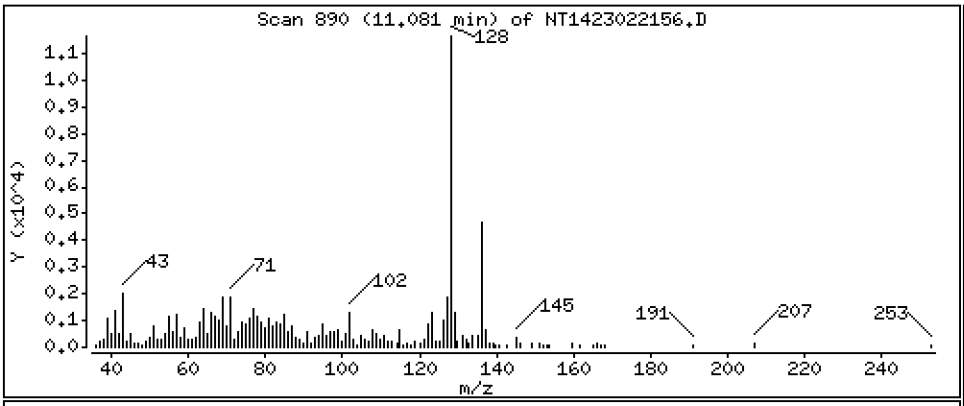
Operator: DSD

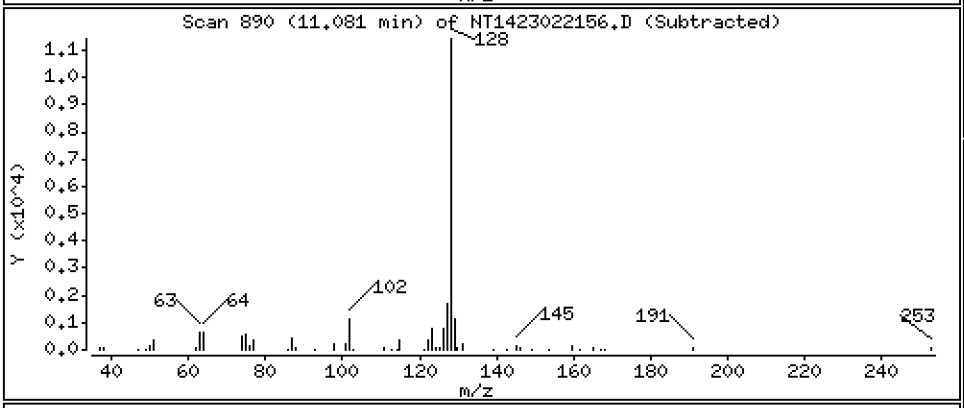
Column phase: ZB-5msi

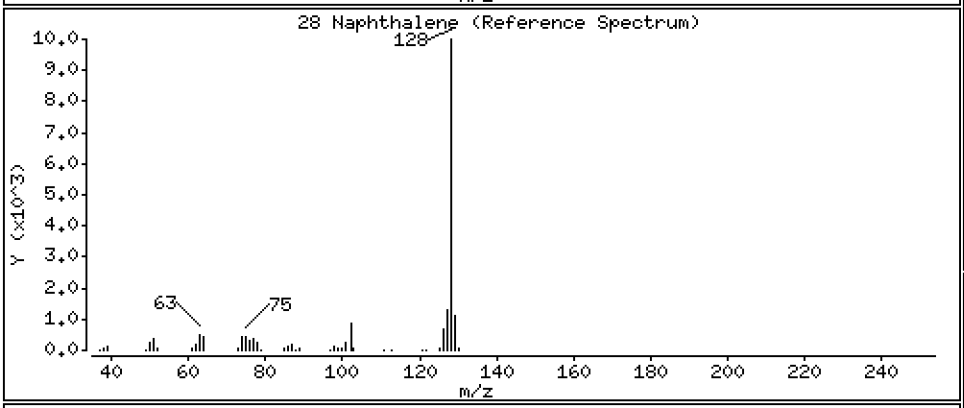
Column diameter: 0.25

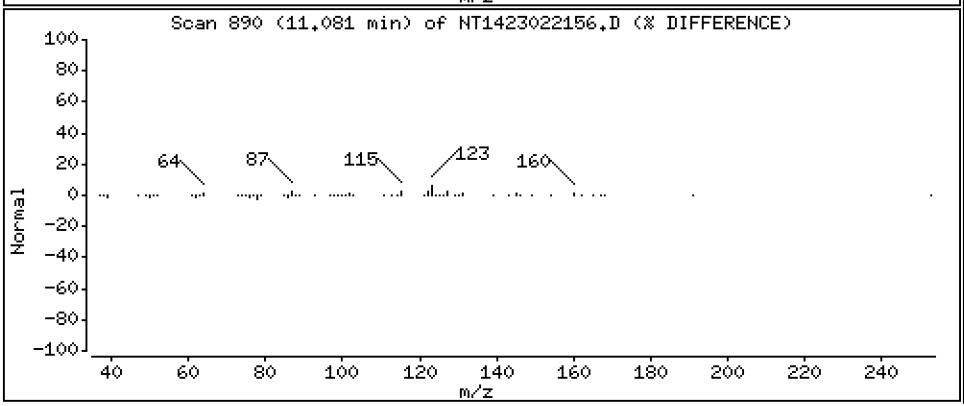
28 Naphthalene

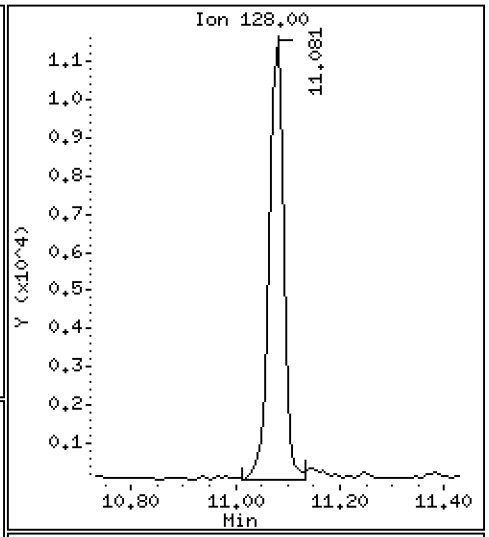
Concentration: 0.09570 ug/mL

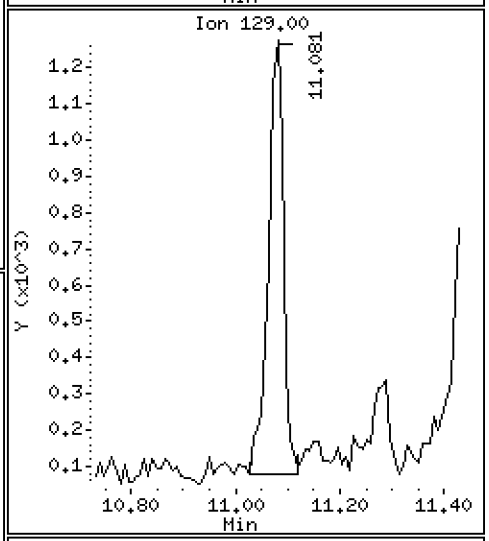


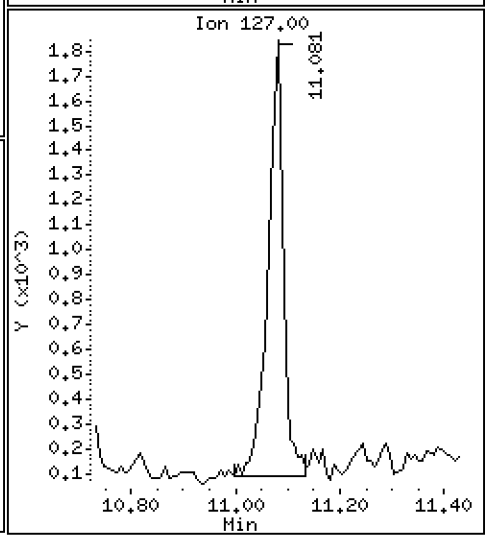












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

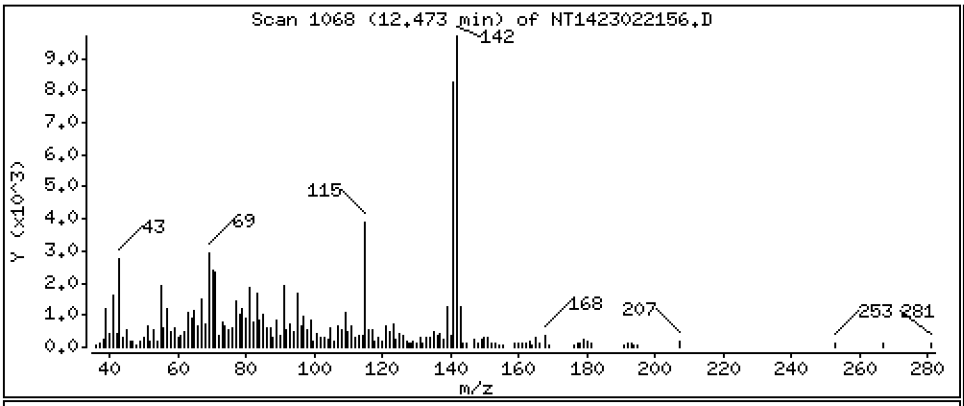
Operator: DSD

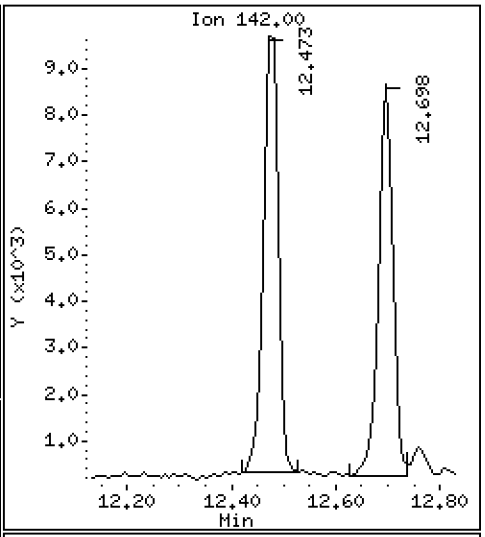
Column phase: ZB-5msi

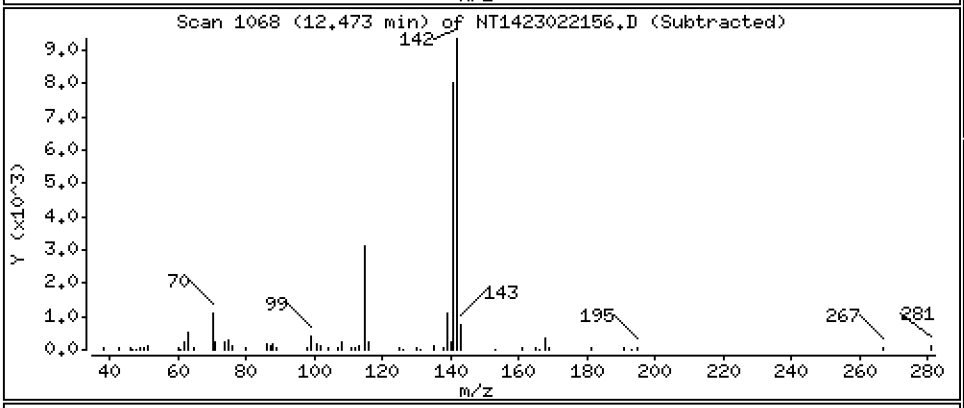
Column diameter: 0.25

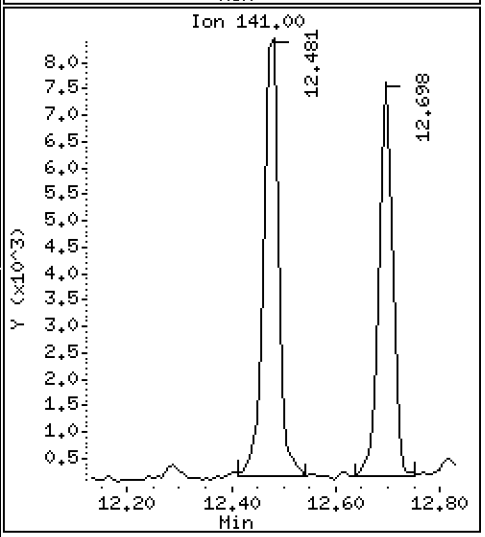
32 2-Methylnaphthalene

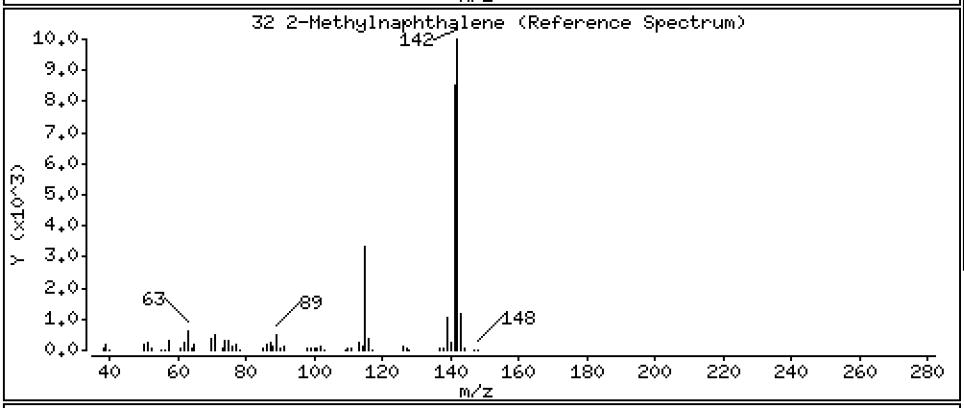
Concentration: 0.1067 ug/mL

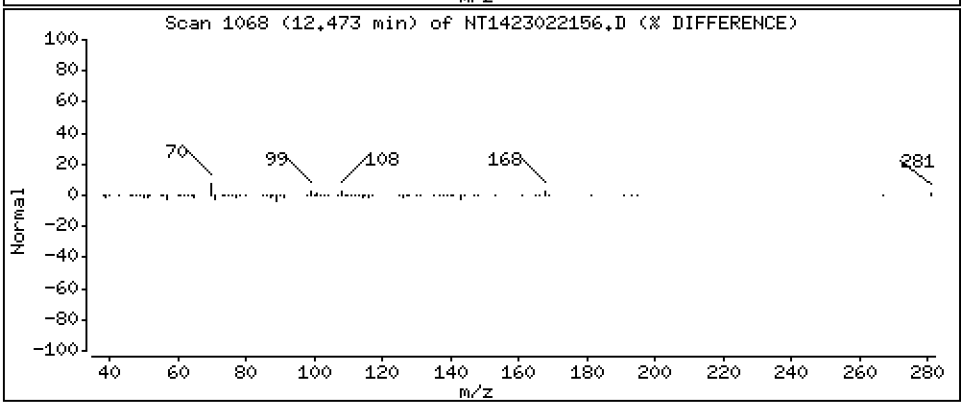












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022156.D

Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

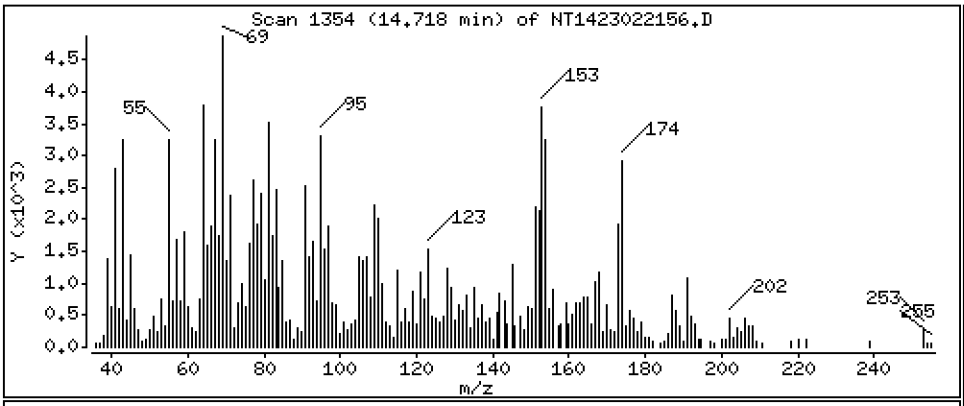
Operator: DSD

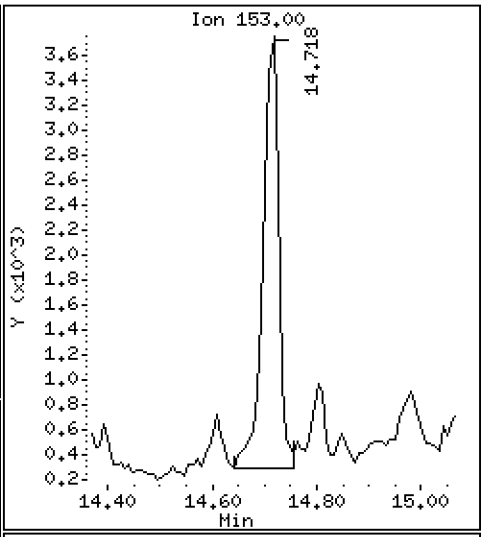
Column phase: ZB-5msi

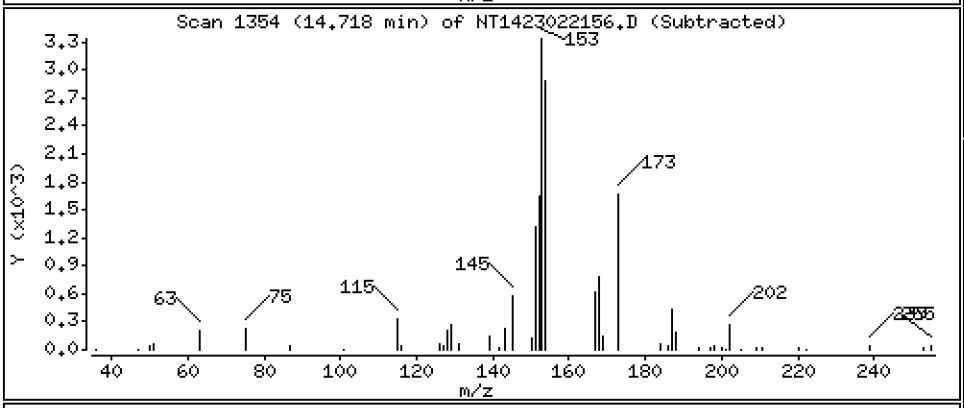
Column diameter: 0.25

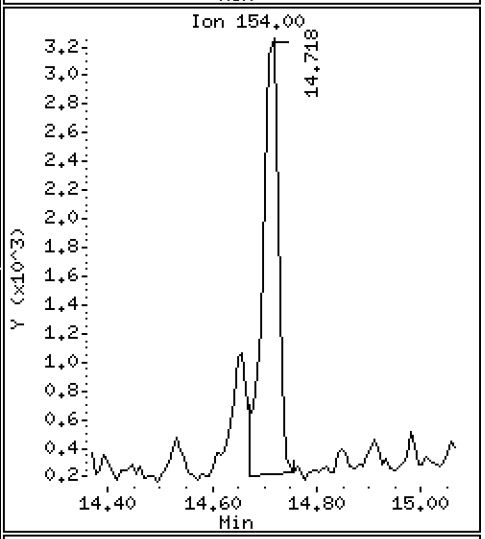
44 Acenaphthene

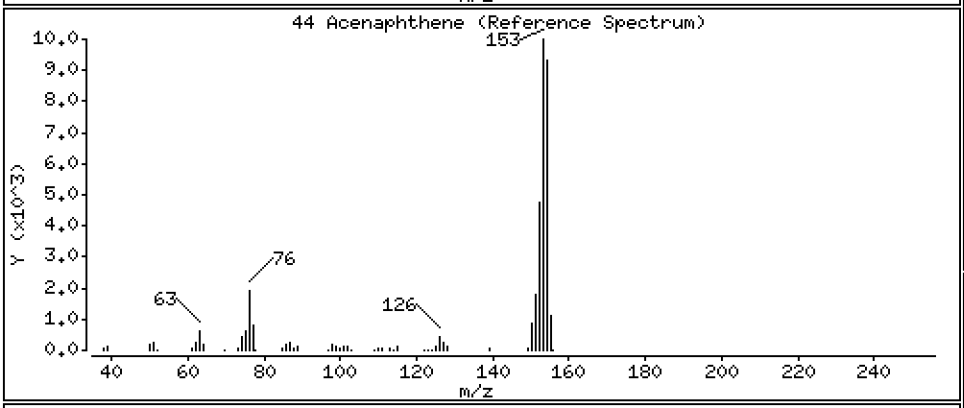
Concentration: 0.05031 ug/mL

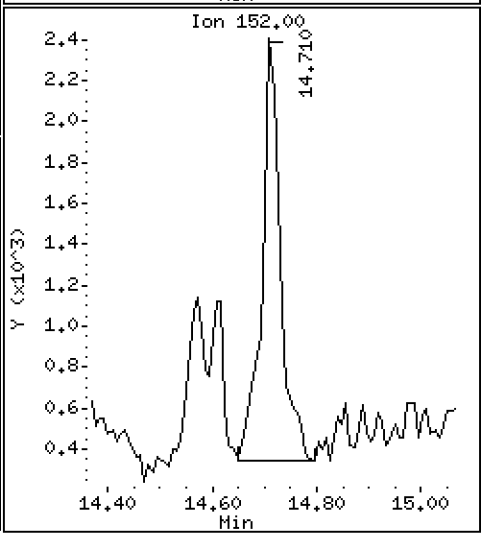


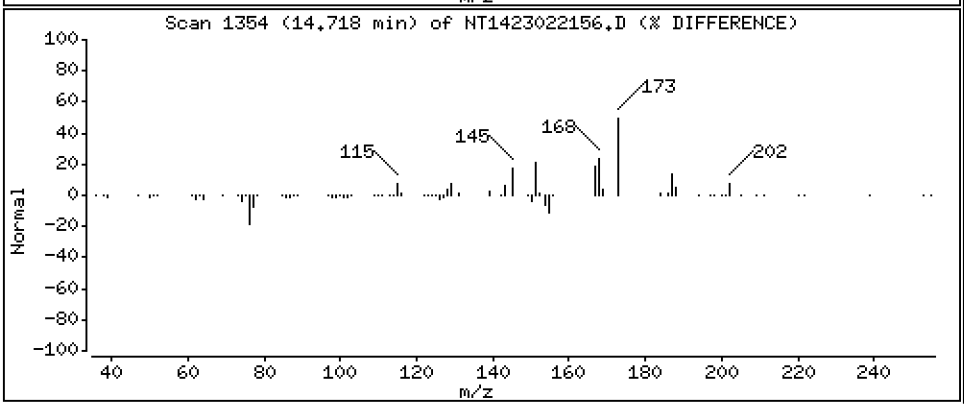












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

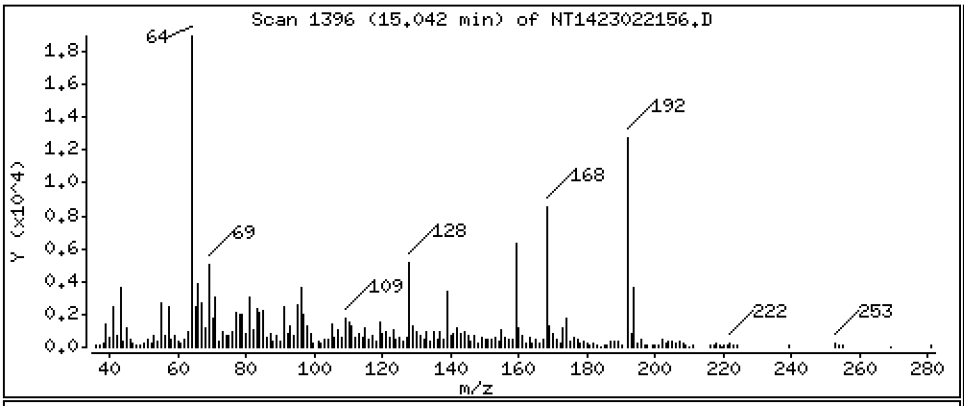
Operator: DSD

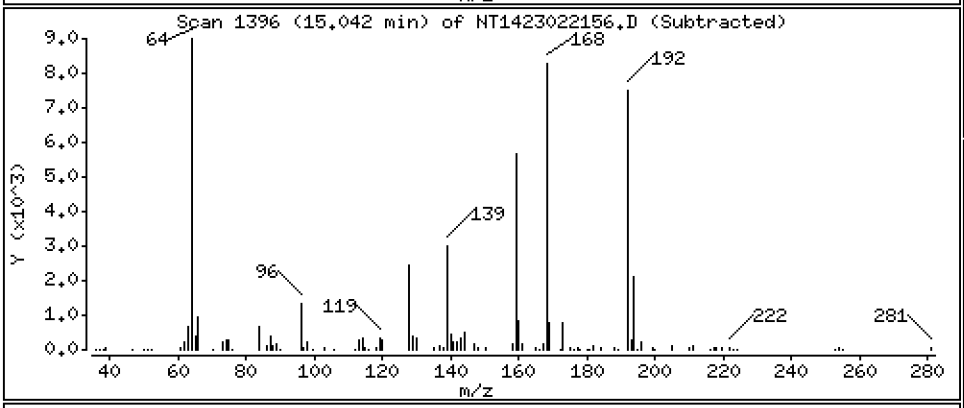
Column phase: ZB-5msi

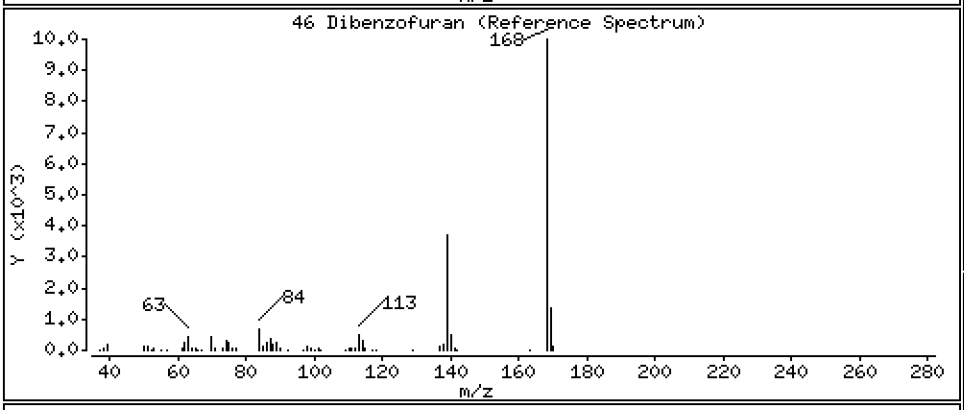
Column diameter: 0.25

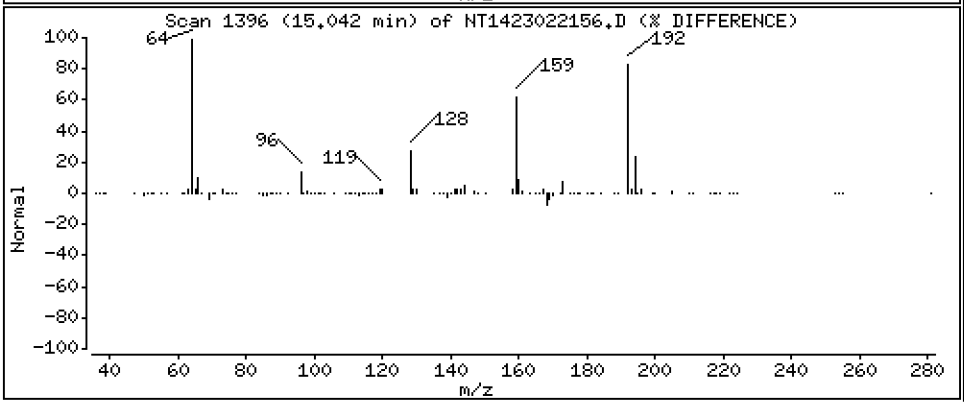
46 Dibenzofuran

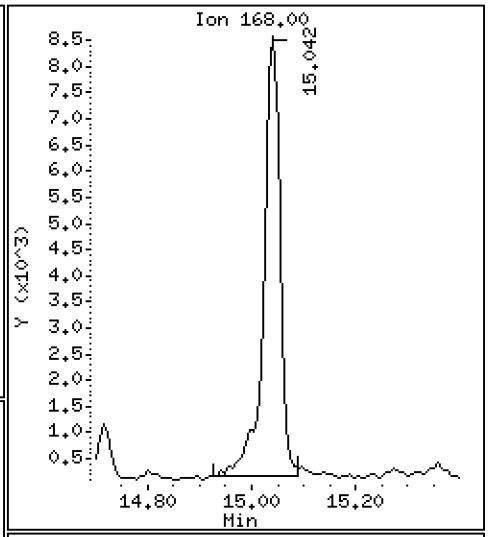
Concentration: 0.07682 ug/mL

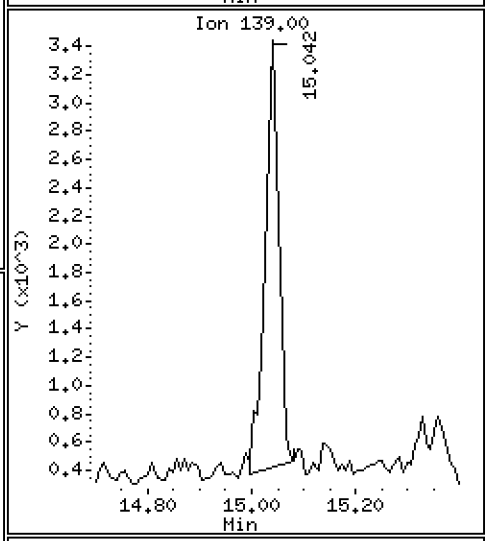


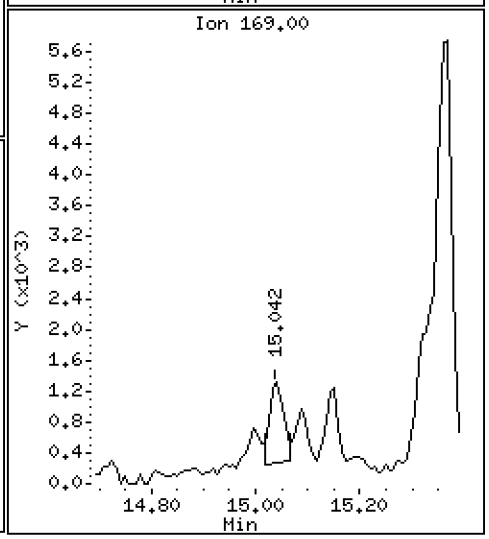












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

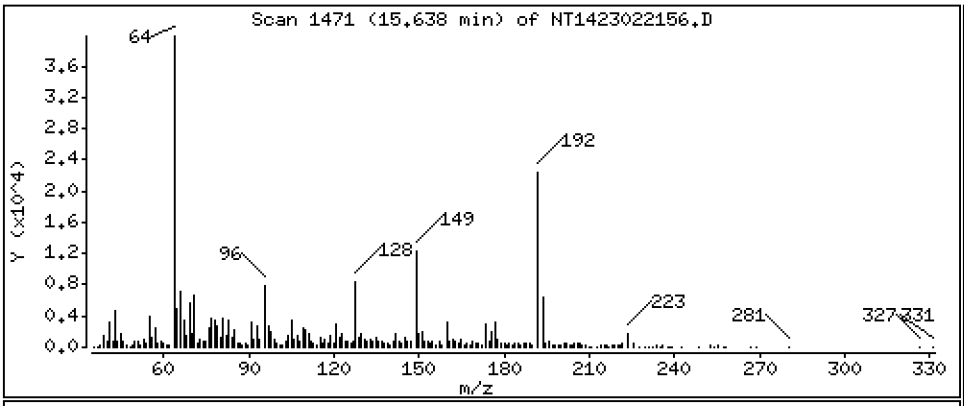
Operator: DSD

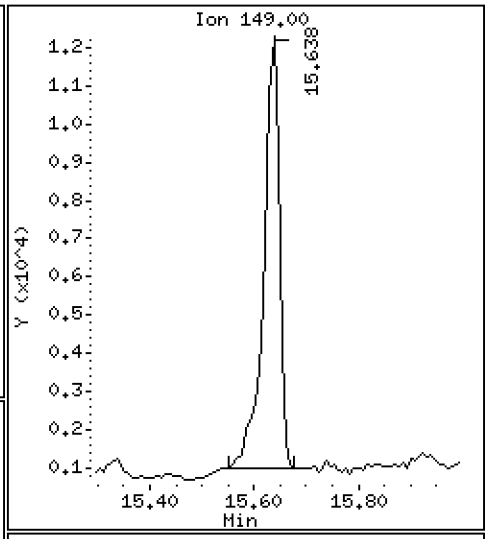
Column phase: ZB-5msi

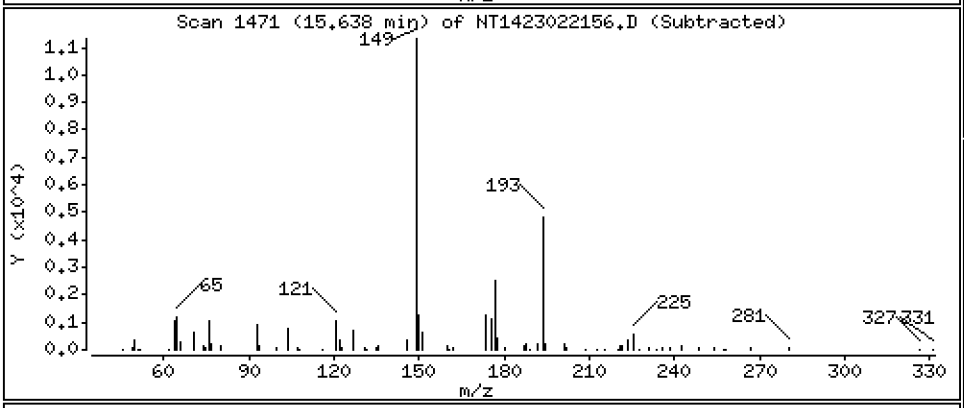
Column diameter: 0.25

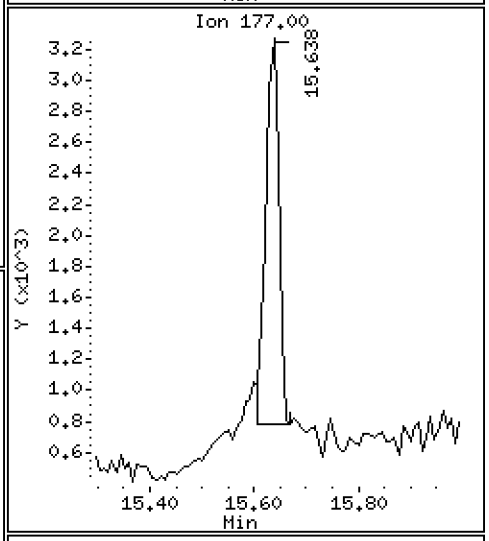
50 Diethylphthalate

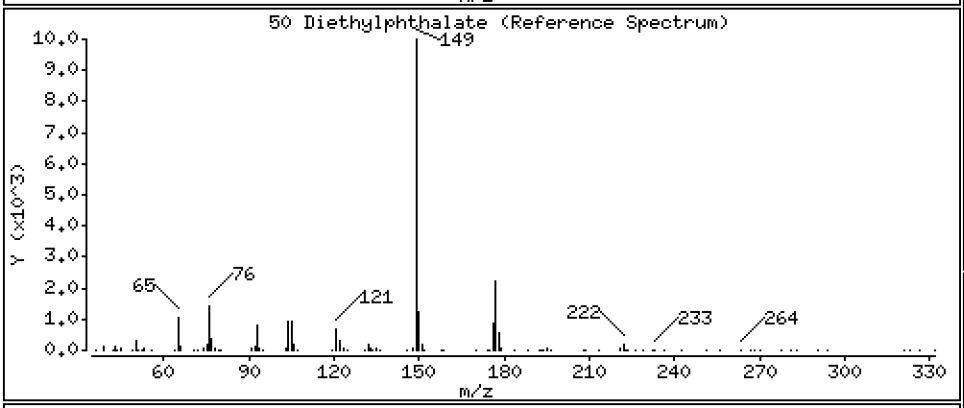
Concentration: 0.1069 ug/mL

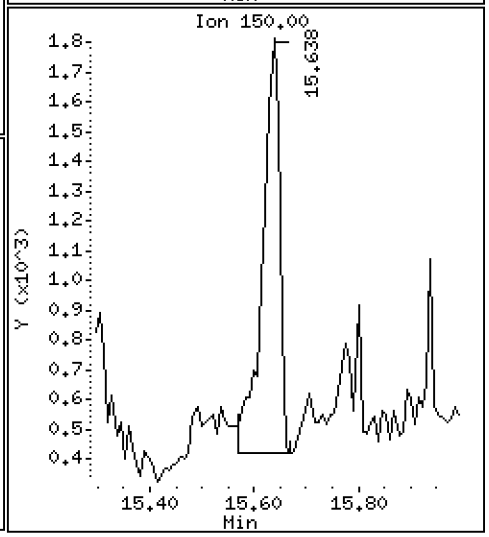


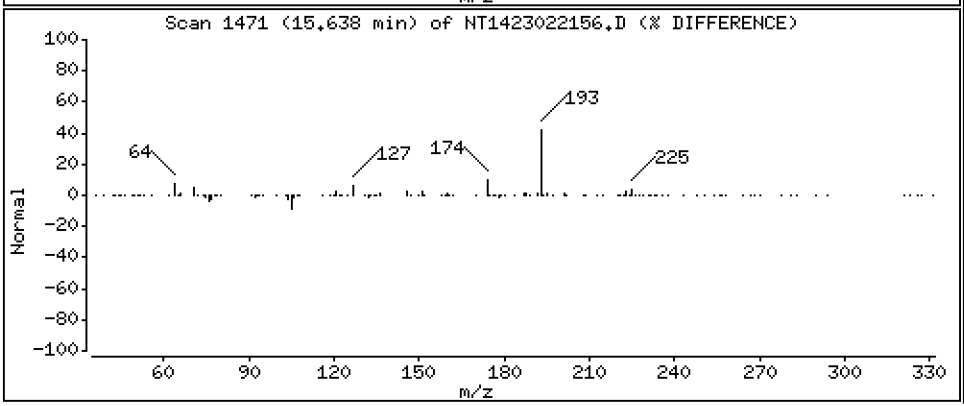












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

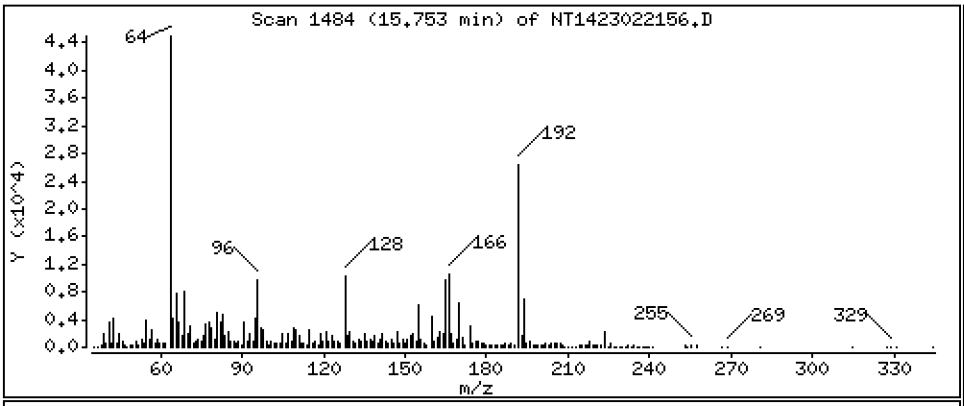
Operator: DSD

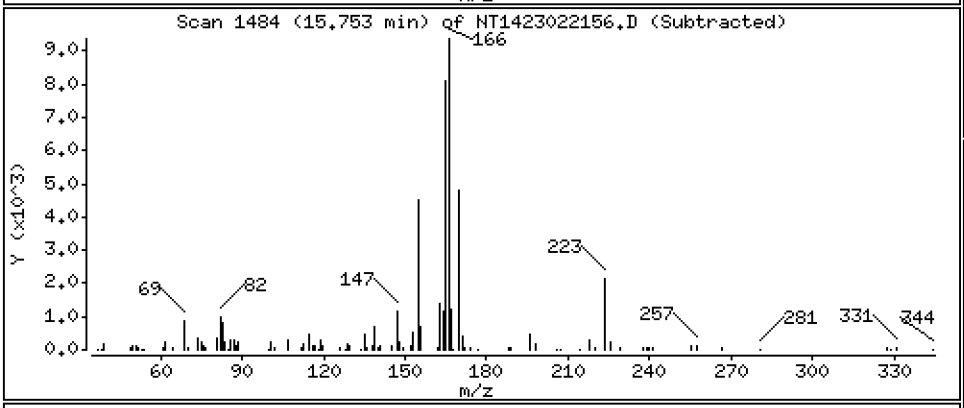
Column phase: ZB-5msi

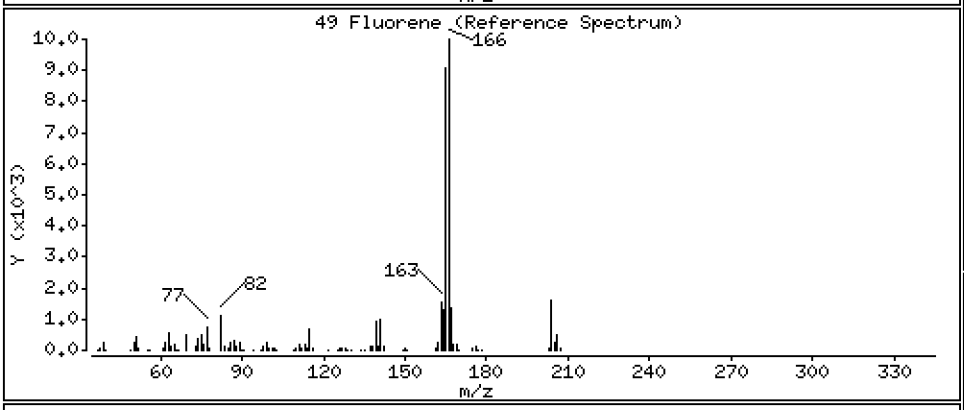
Column diameter: 0.25

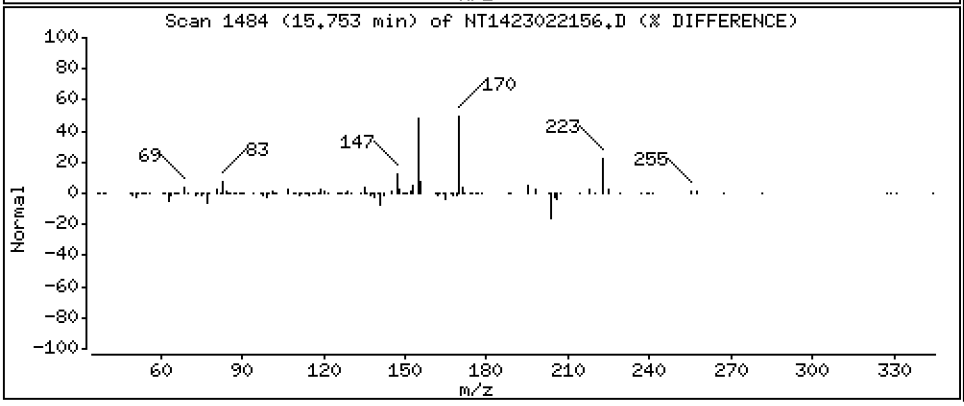
49 Fluorene

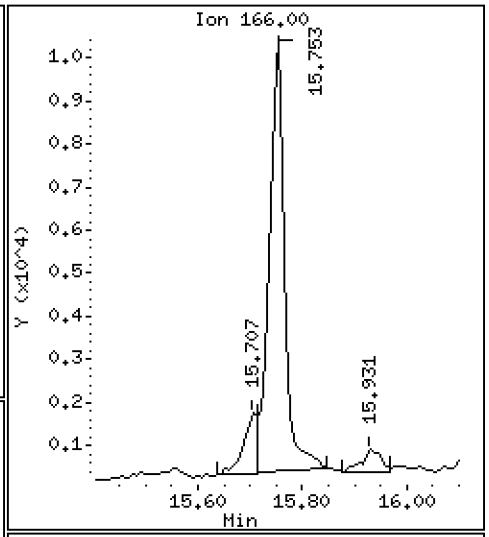
Concentration: 0.08312 ug/mL

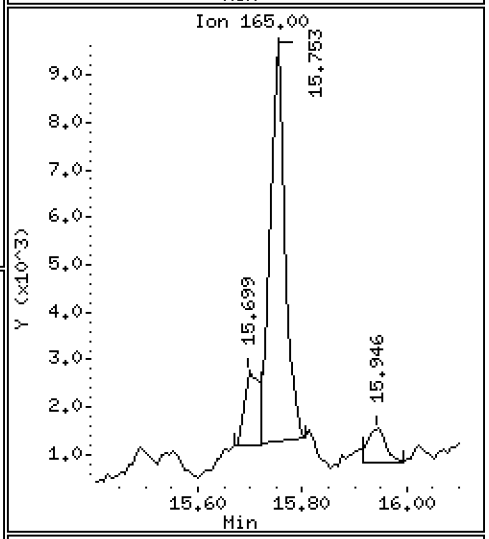


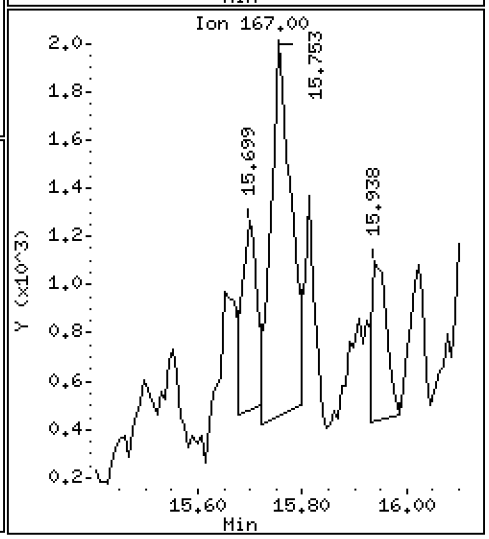












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

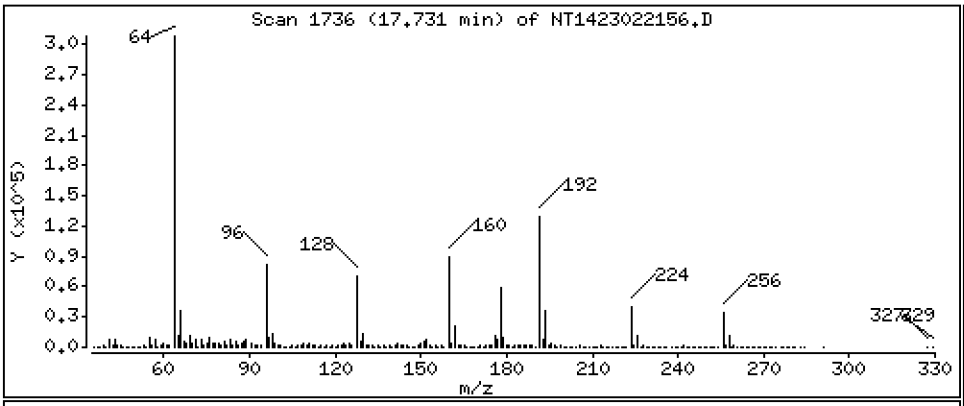
Operator: DSD

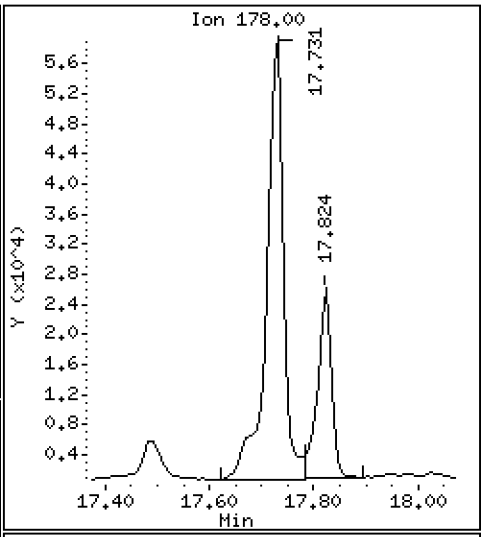
Column phase: ZB-5msi

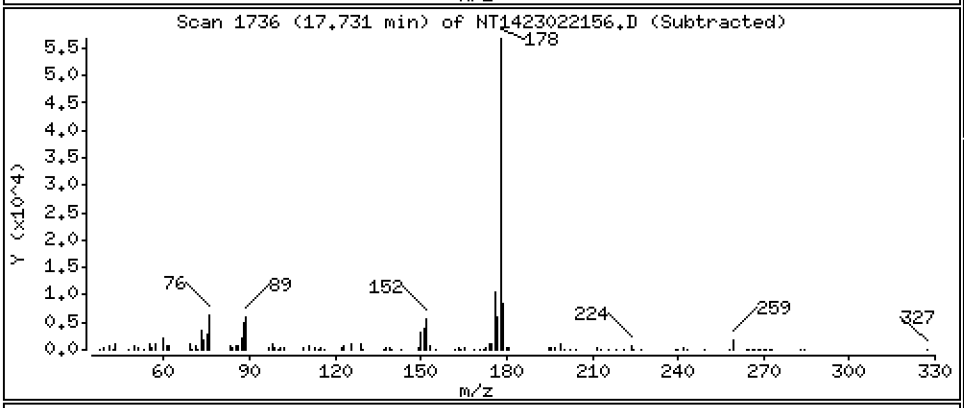
Column diameter: 0.25

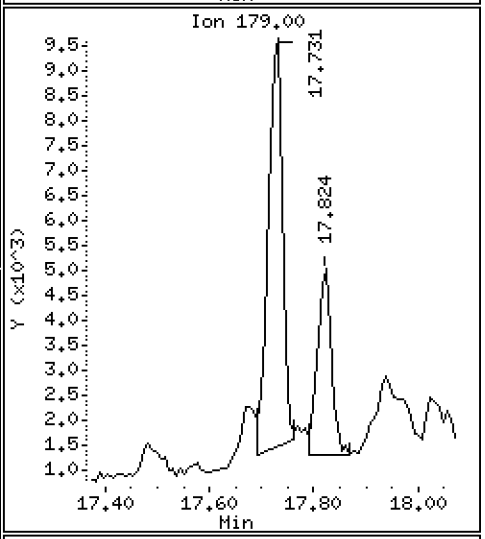
60 Phenanthrene

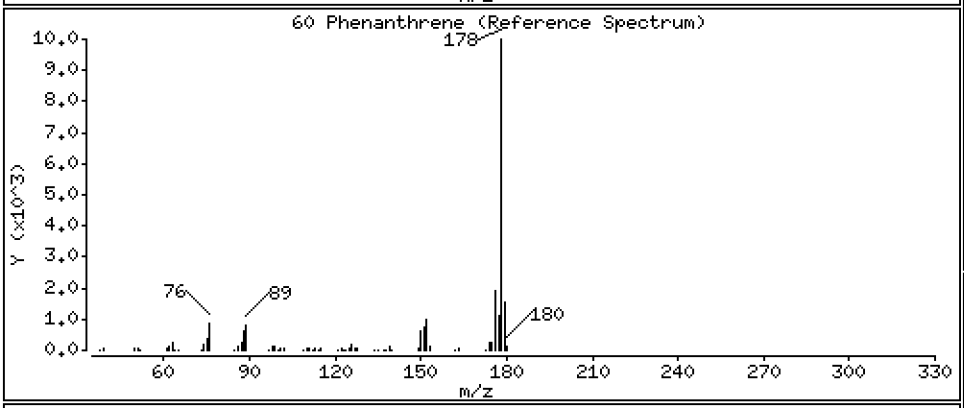
Concentration: 0.5586 ug/mL

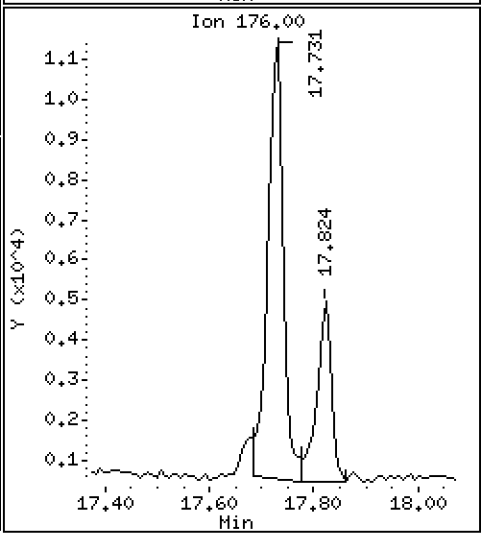


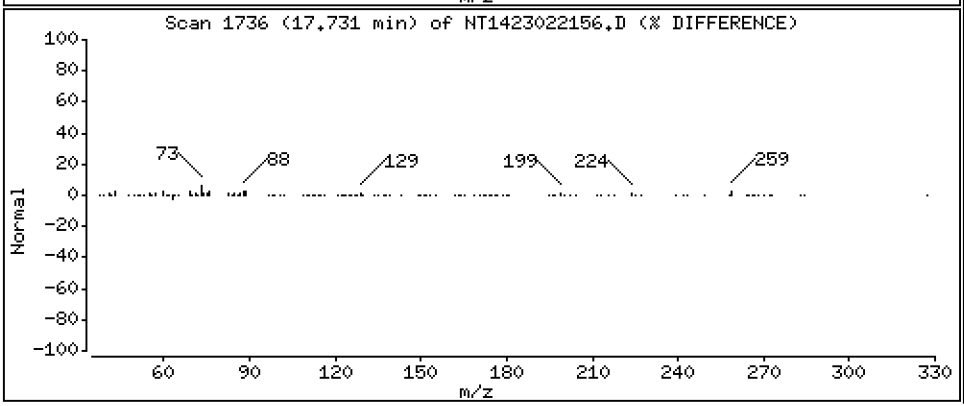












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

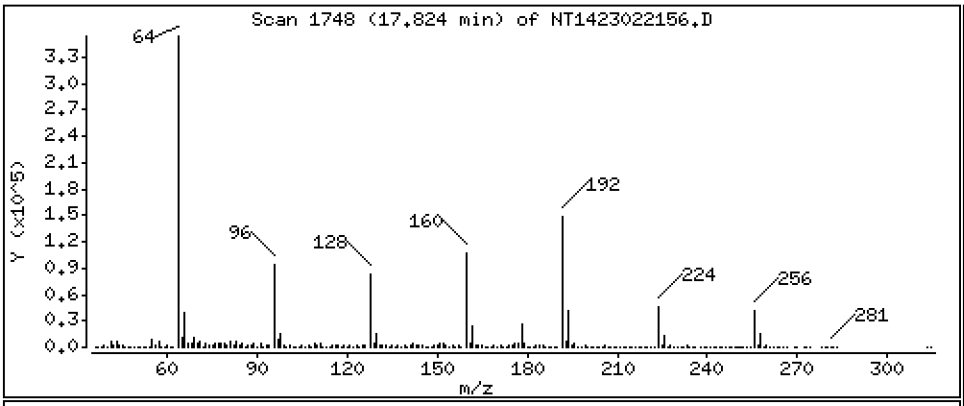
Operator: DSD

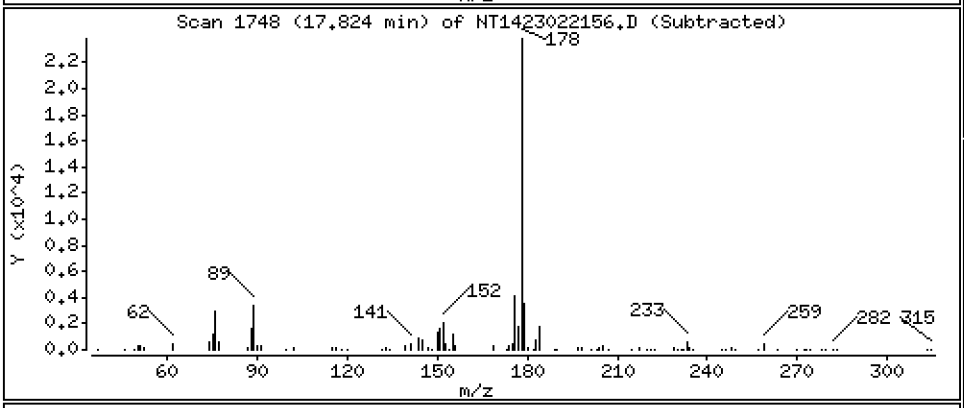
Column phase: ZB-5msi

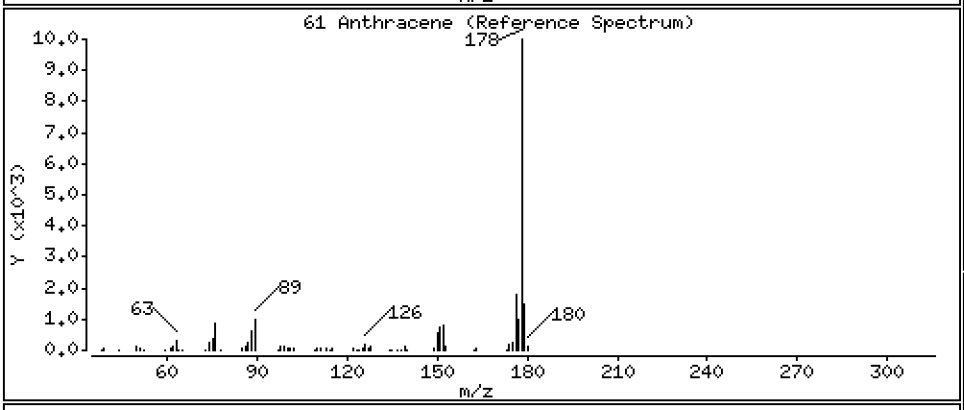
Column diameter: 0.25

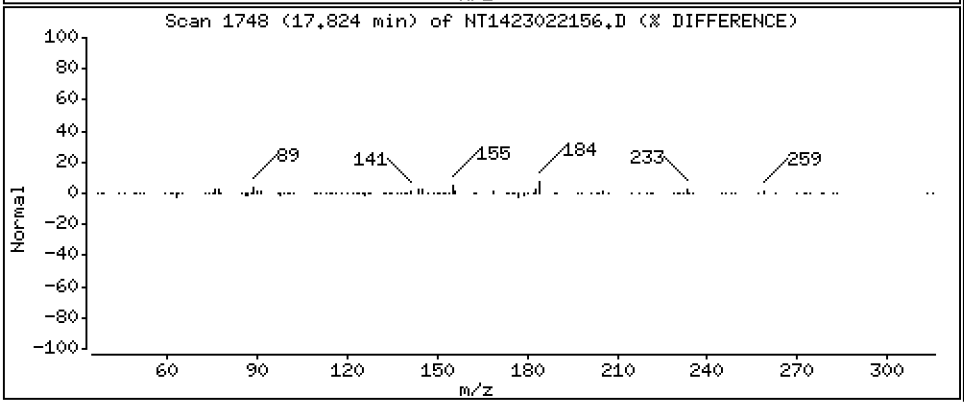
61 Anthracene

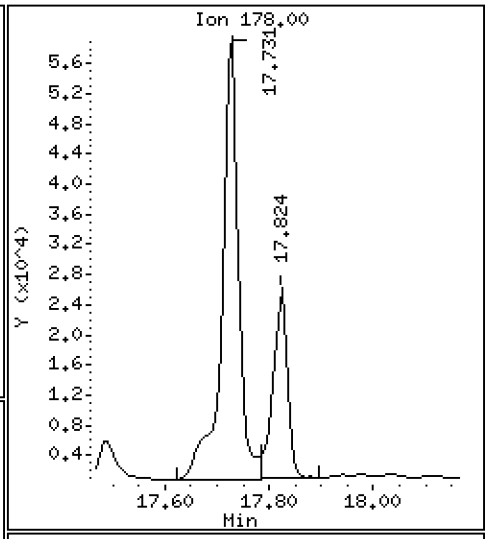
Concentration: 0.2033 ug/mL

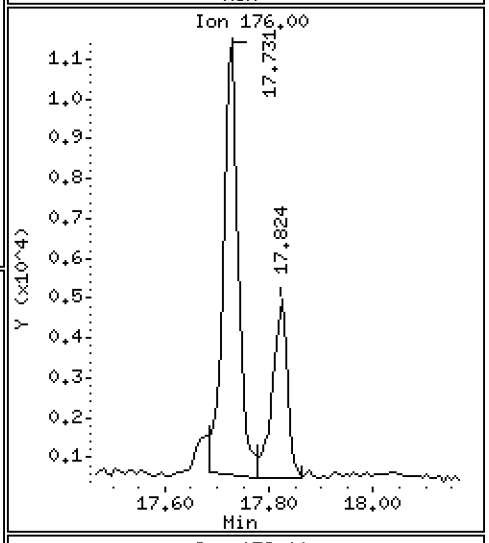


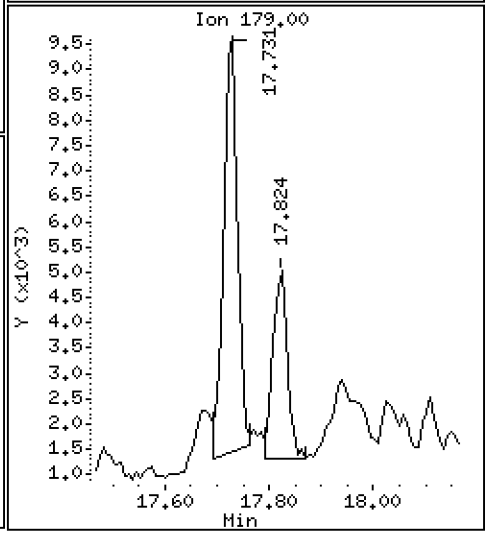












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

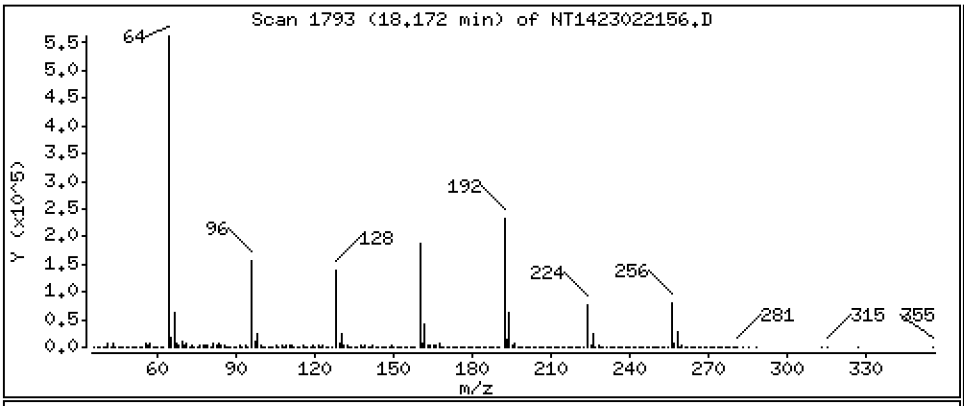
Operator: DSD

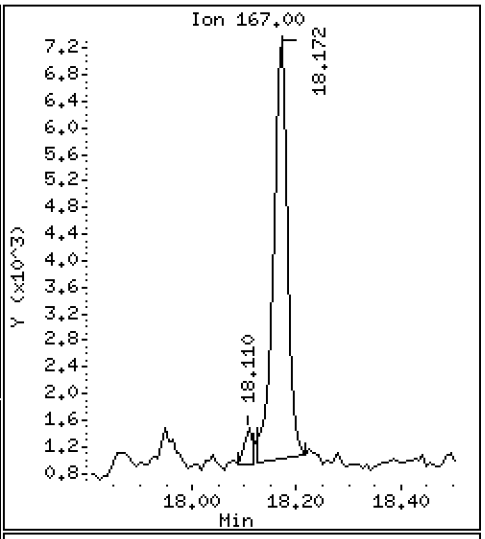
Column phase: ZB-5msi

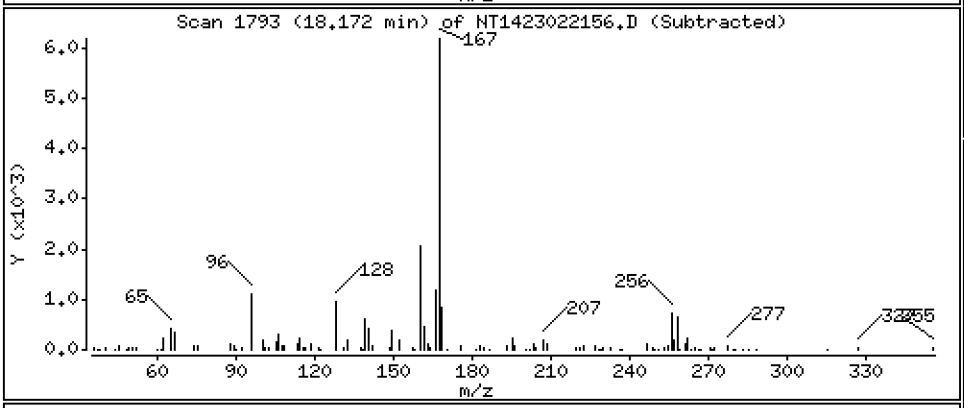
Column diameter: 0.25

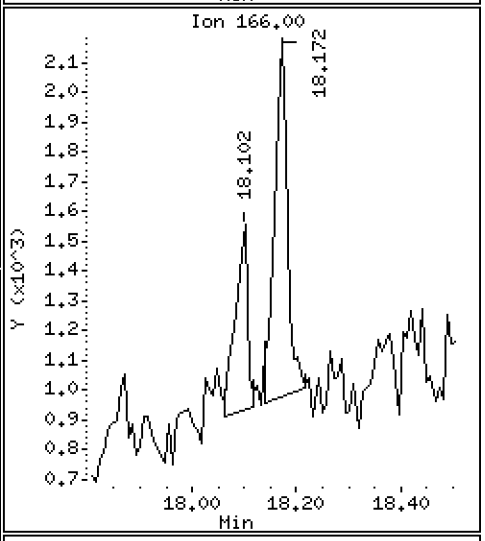
62 Carbazole

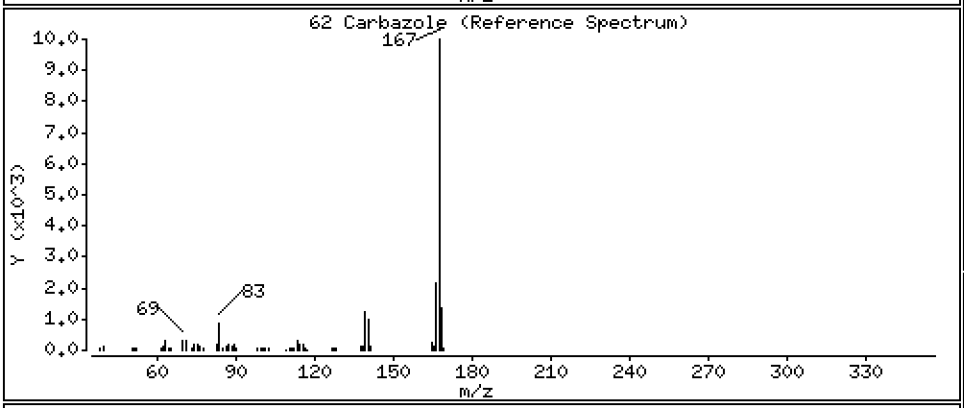
Concentration: 0.05718 ug/mL

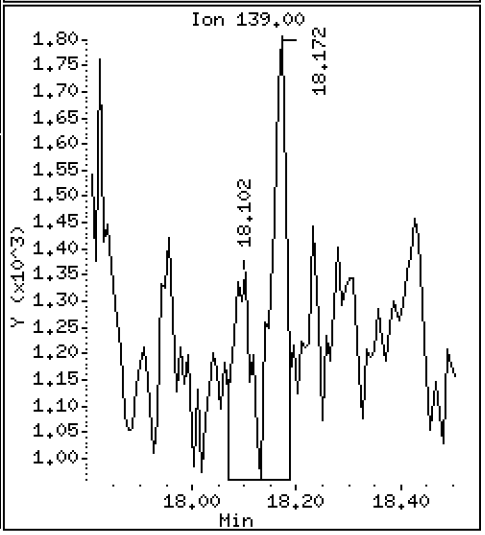


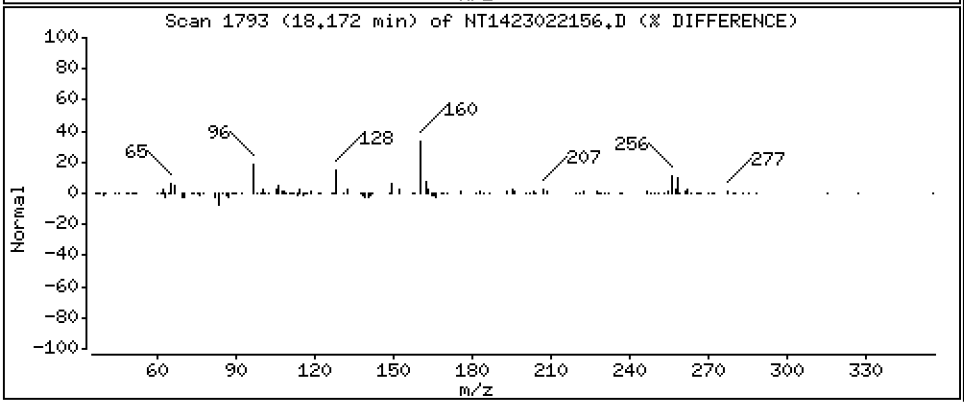












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

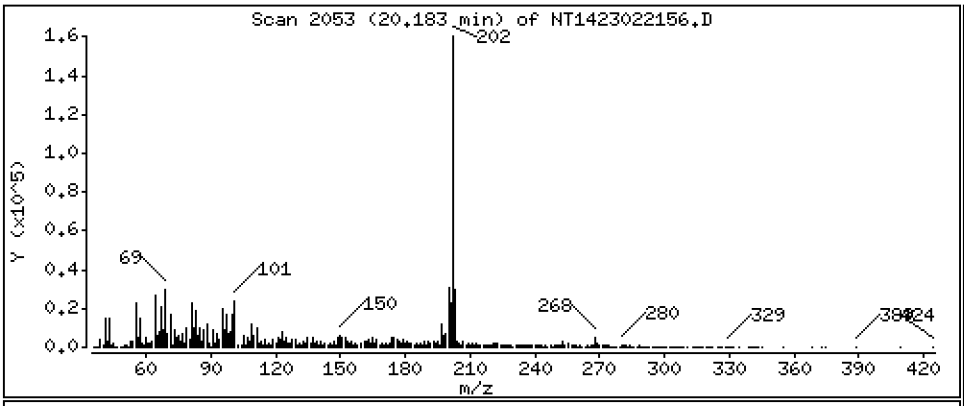
Operator: DSD

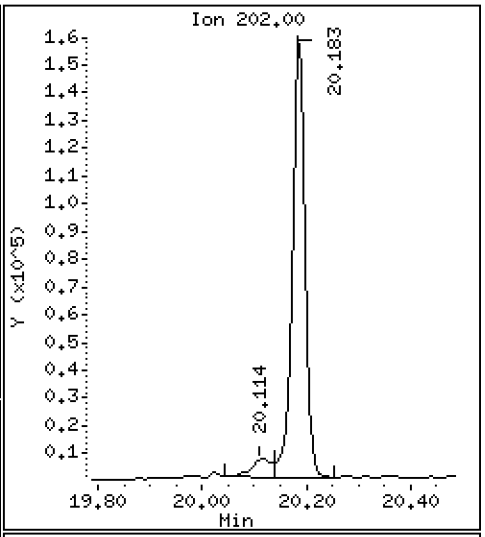
Column phase: ZB-5msi

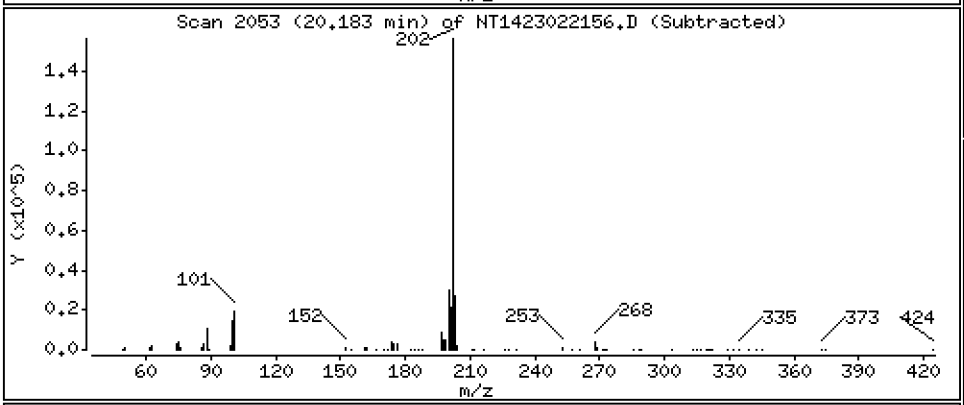
Column diameter: 0.25

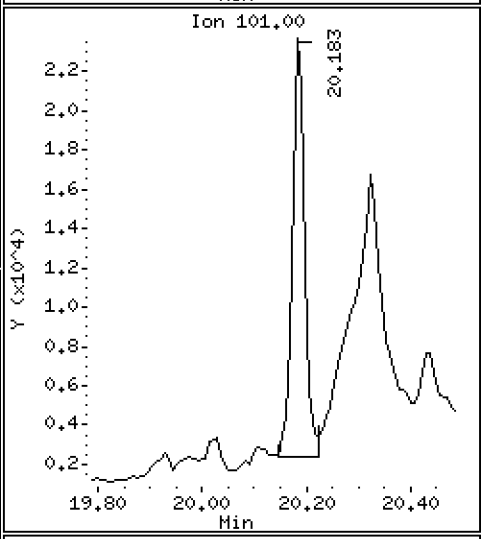
64 Fluoranthene

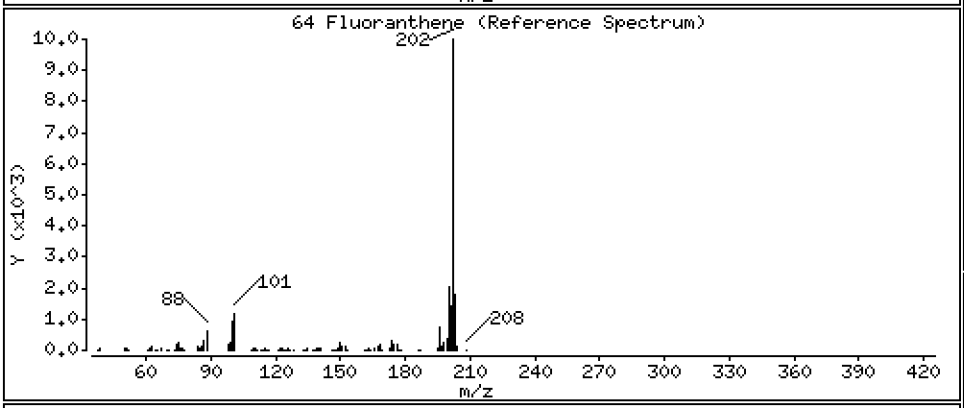
Concentration: 1.023 ug/mL

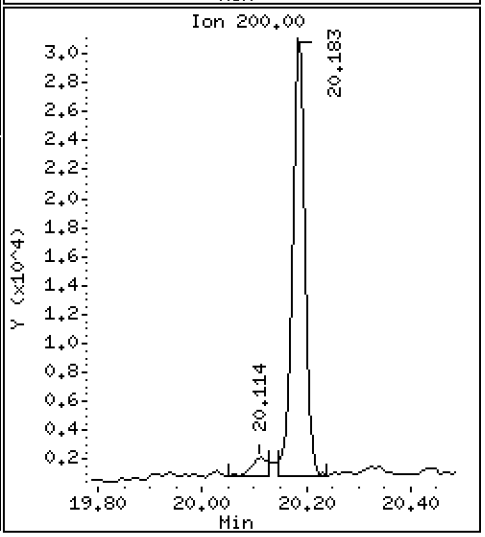


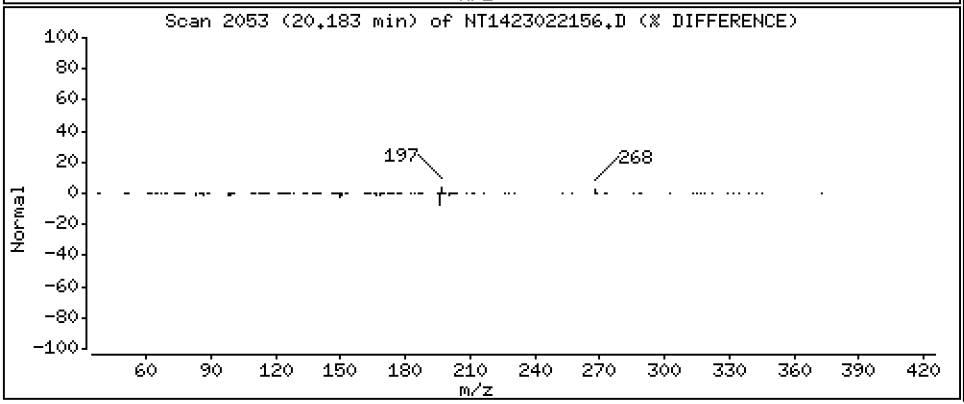












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

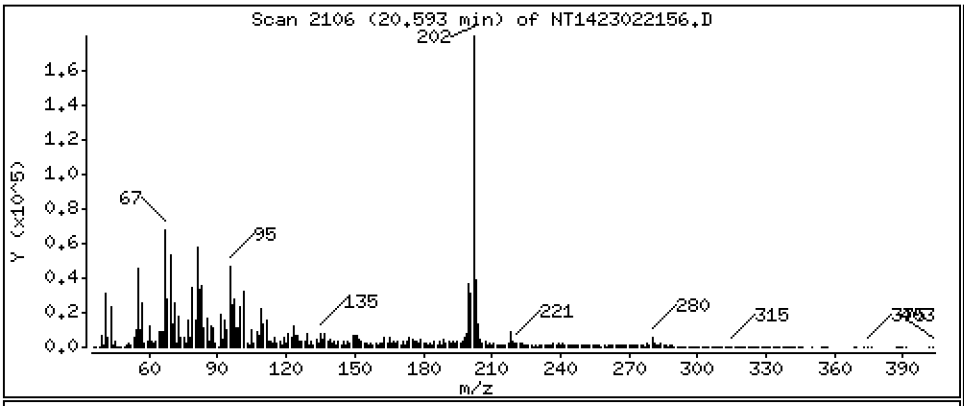
Operator: DSD

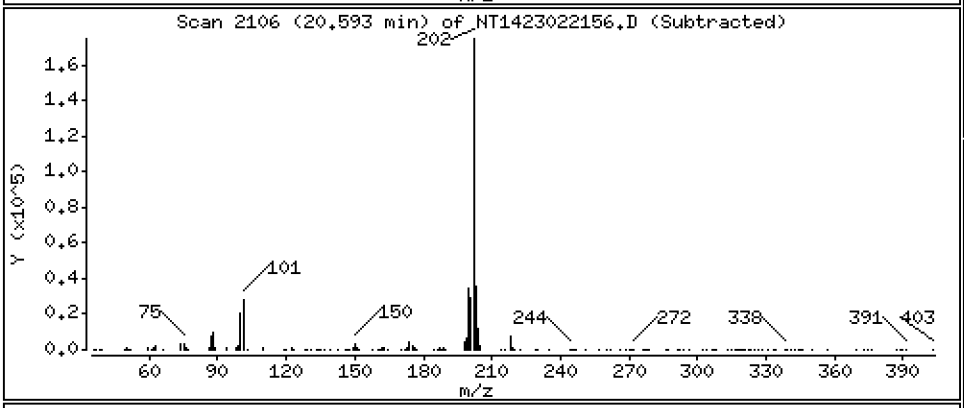
Column phase: ZB-5msi

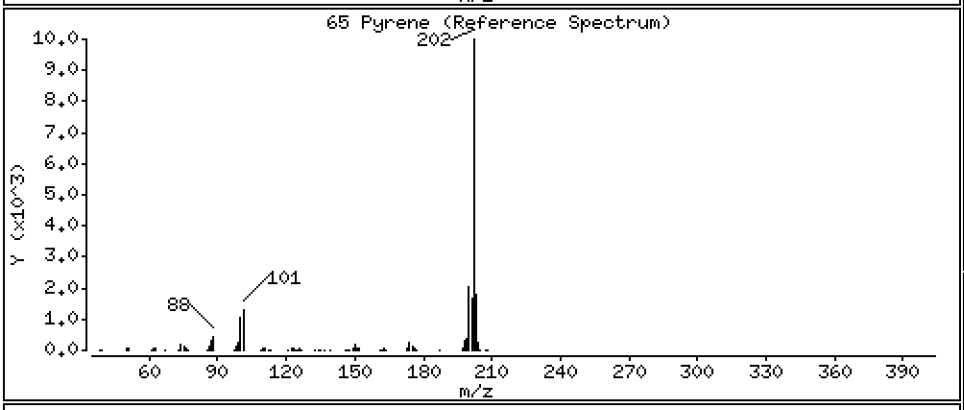
Column diameter: 0.25

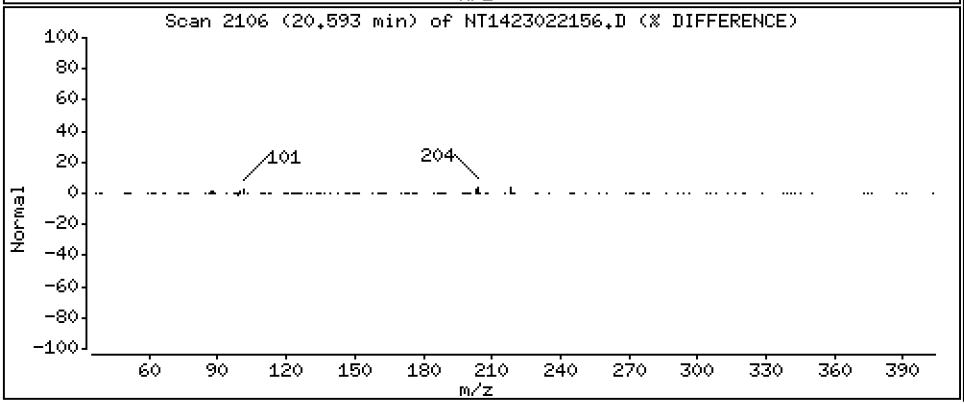
65 Pyrene

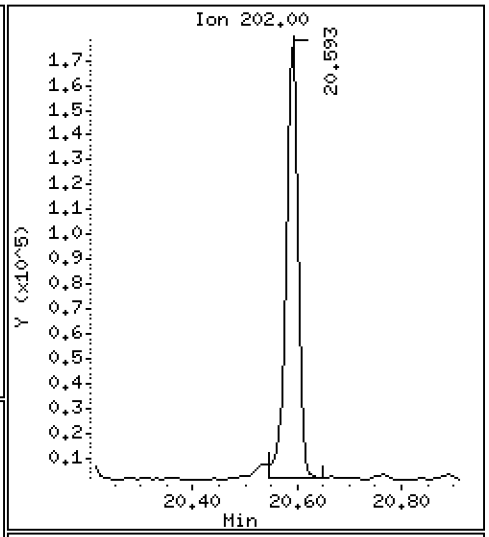
Concentration: 1.015 ug/mL

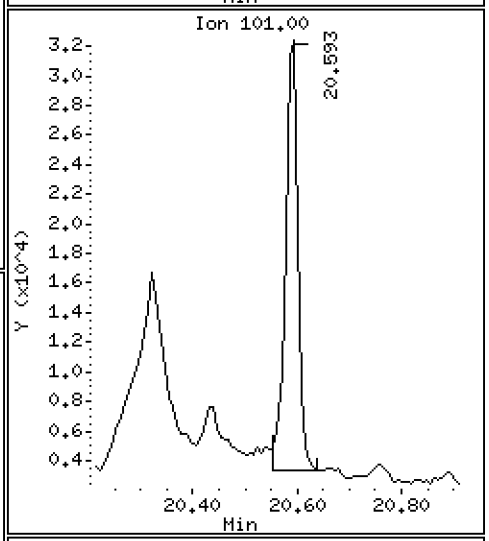


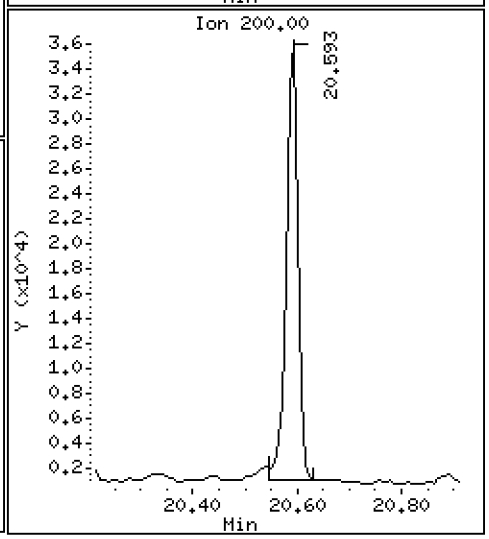












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

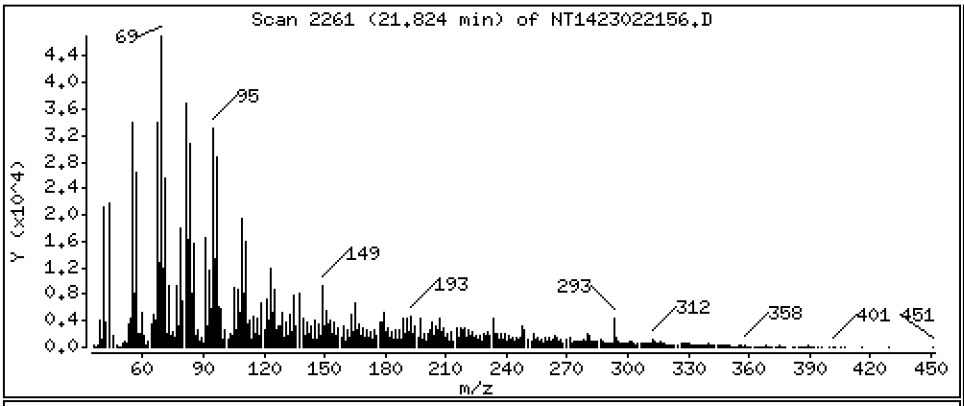
Operator: DSD

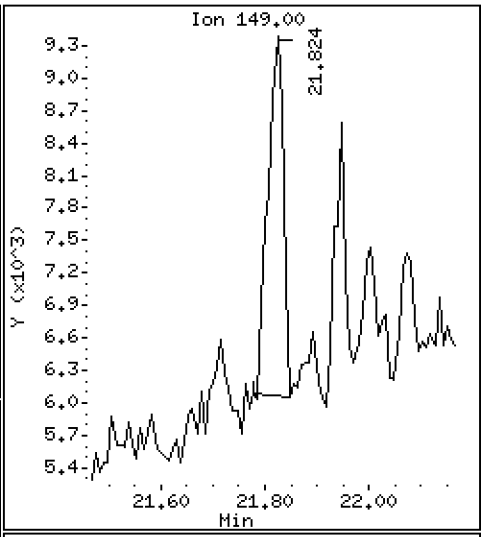
Column phase: ZB-5msi

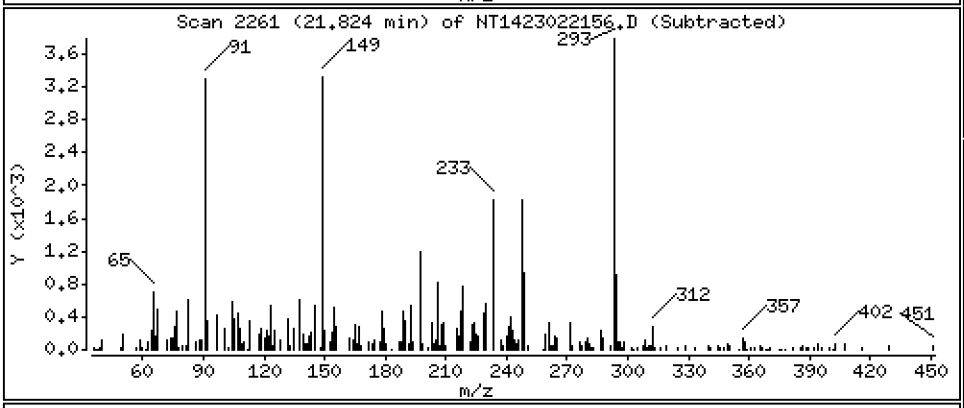
Column diameter: 0.25

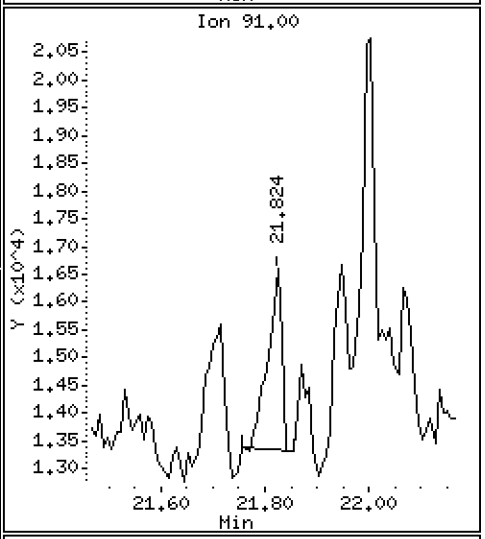
67 Butylbenzylphthalate

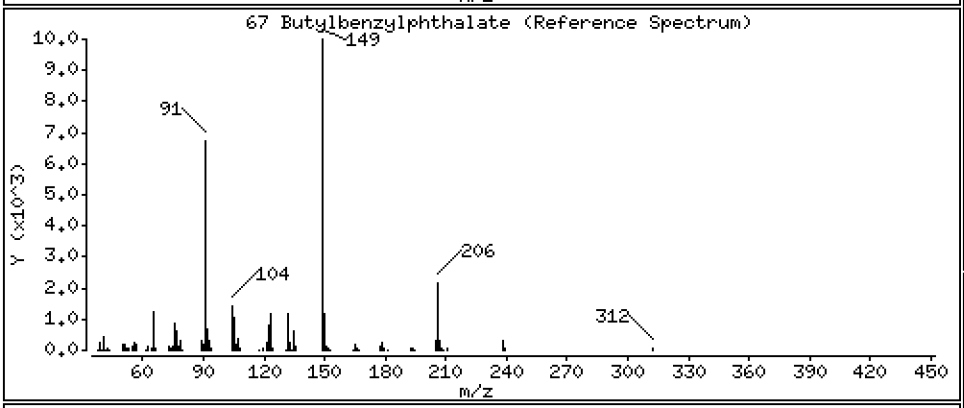
Concentration: 0.06909 ug/mL

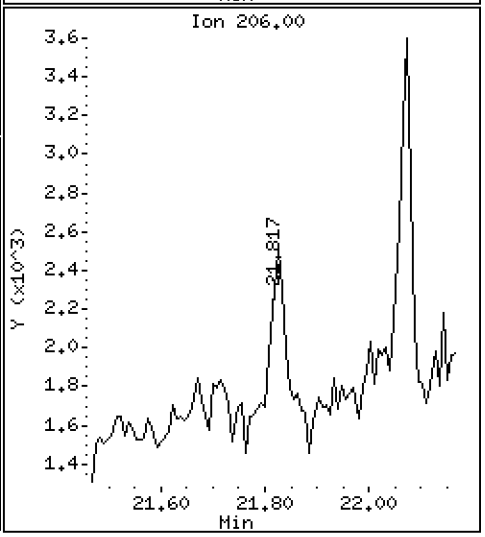


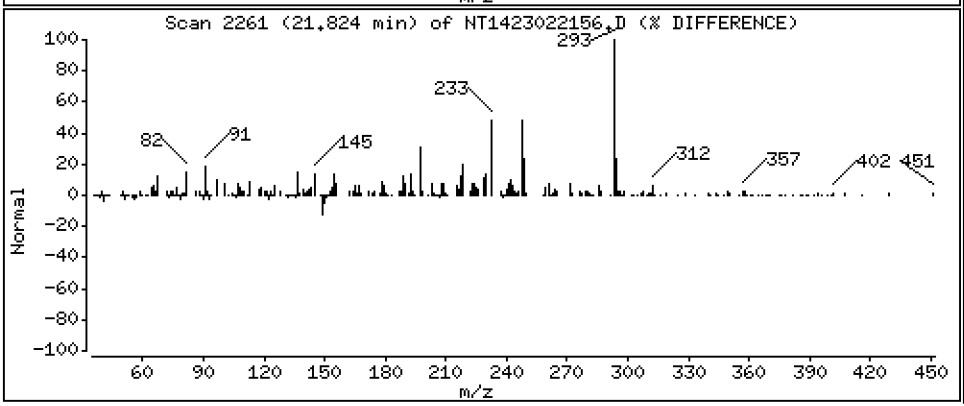












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

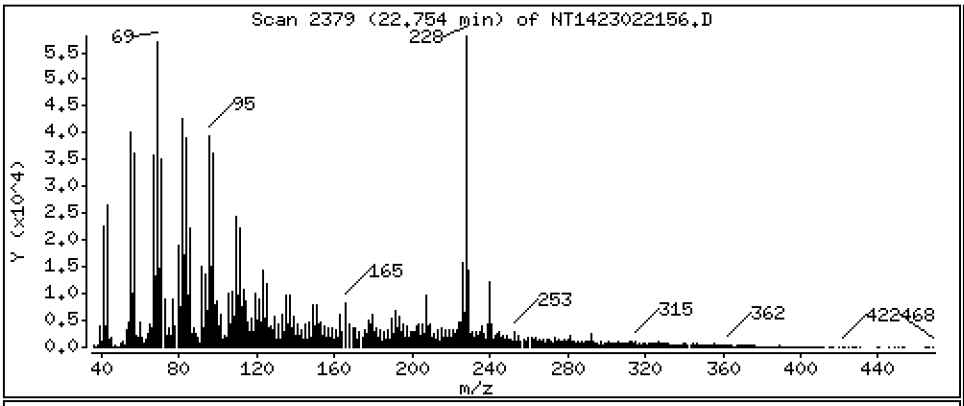
Operator: DSD

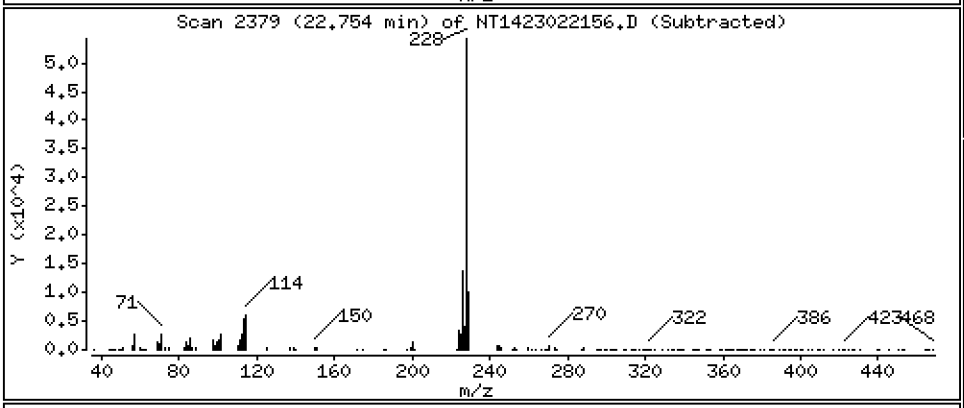
Column phase: ZB-5msi

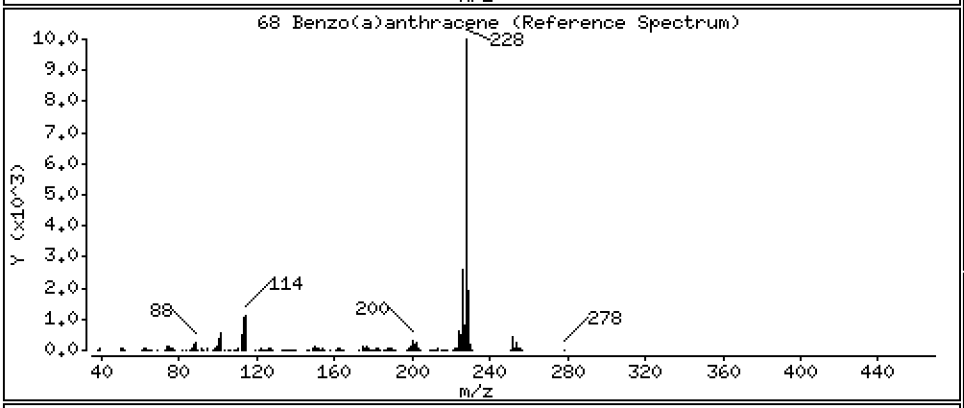
Column diameter: 0.25

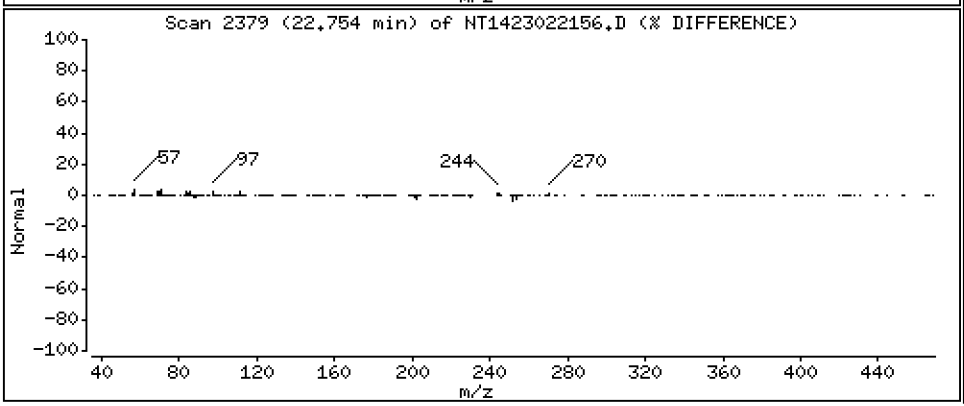
68 Benzo(a)anthracene

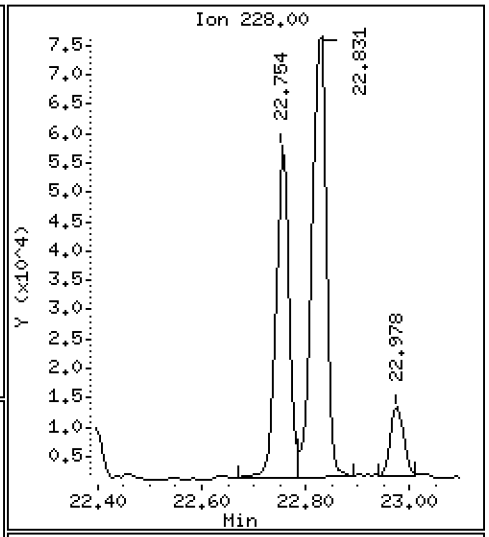
Concentration: 0.4891 ug/mL

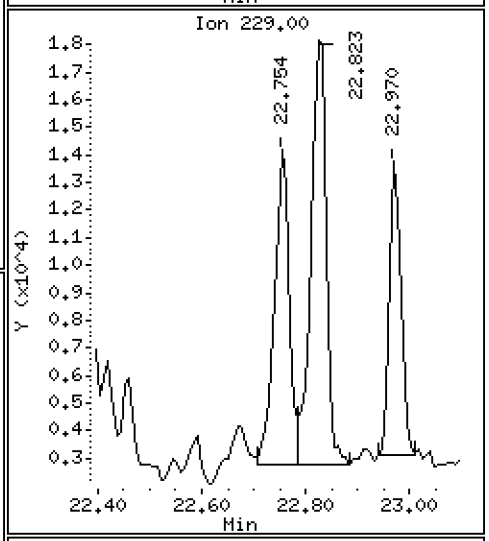


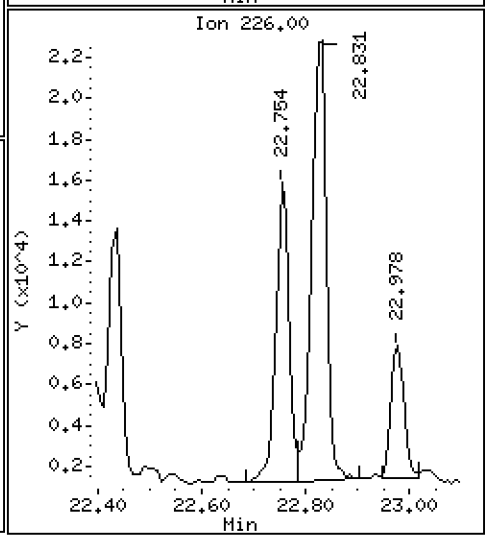












Date : 22-FEB-2023 22:37

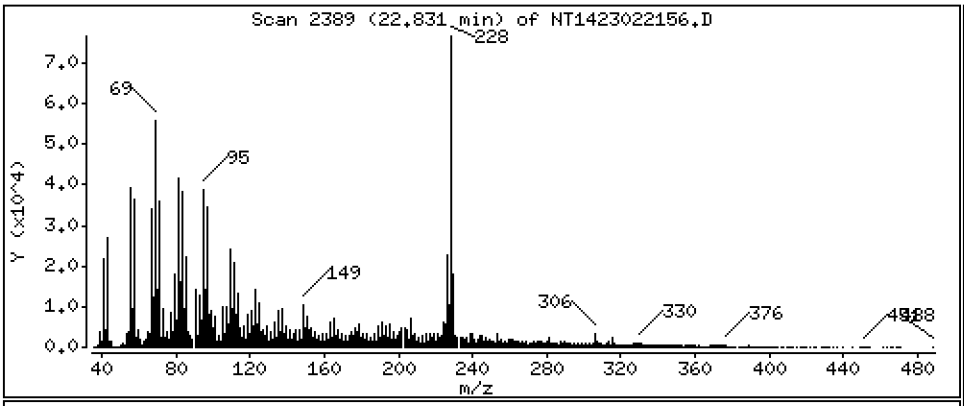
Client ID: Instrument: nt14.i

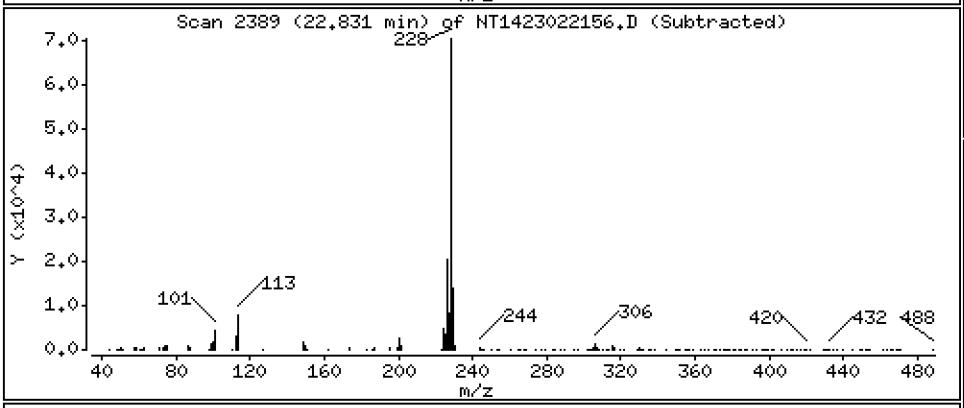
Sample Info: 23A0133-13

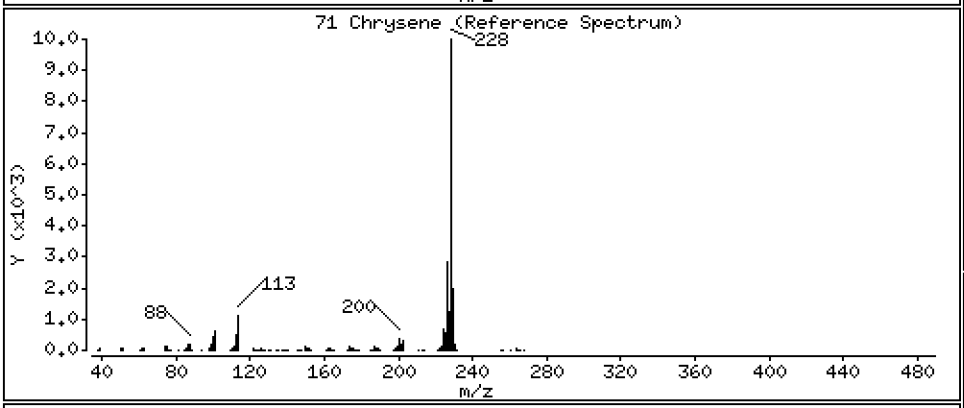
Operator: DSD

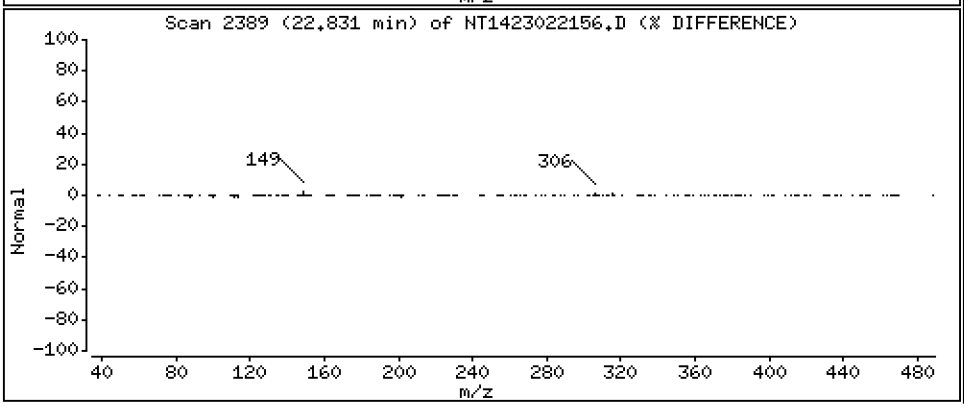
Column phase: ZB-5msi Column diameter: 0.25

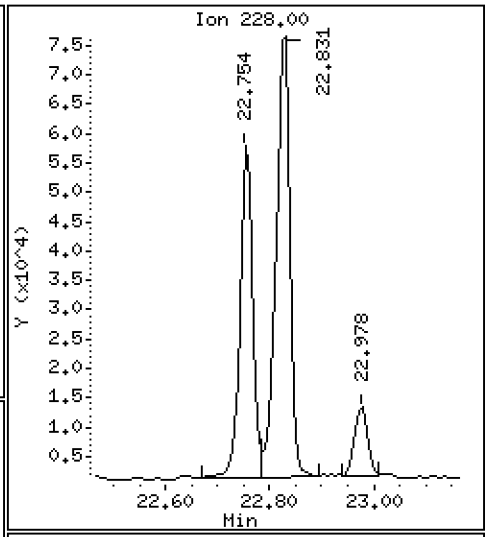
71 Chrysene Concentration: 0.7712 ug/mL

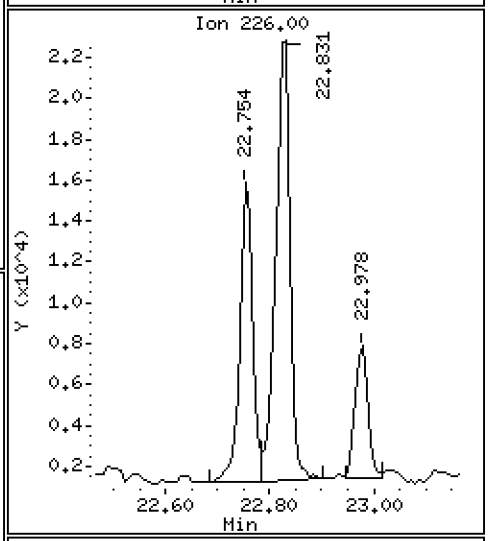


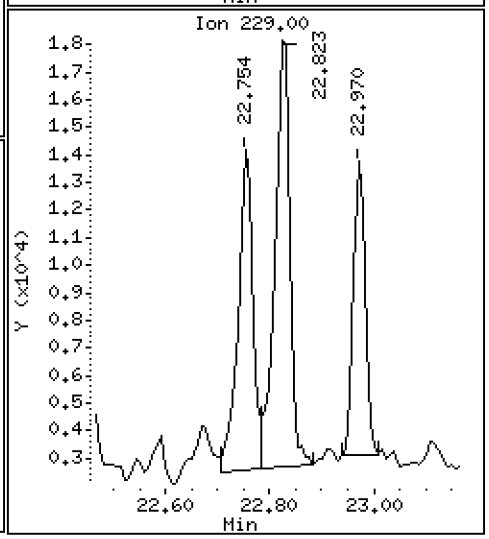












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

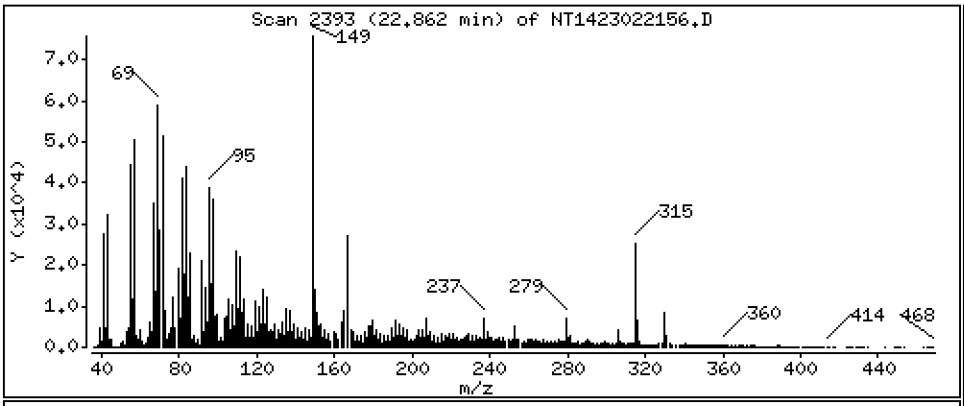
Operator: DSD

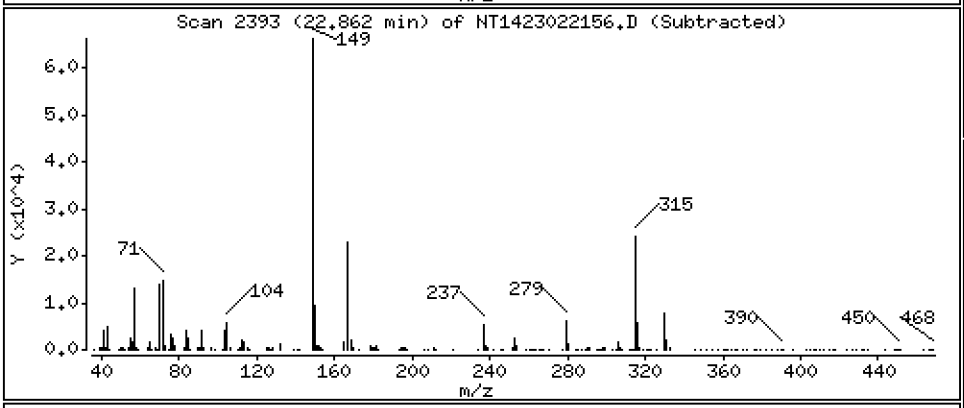
Column phase: ZB-5msi

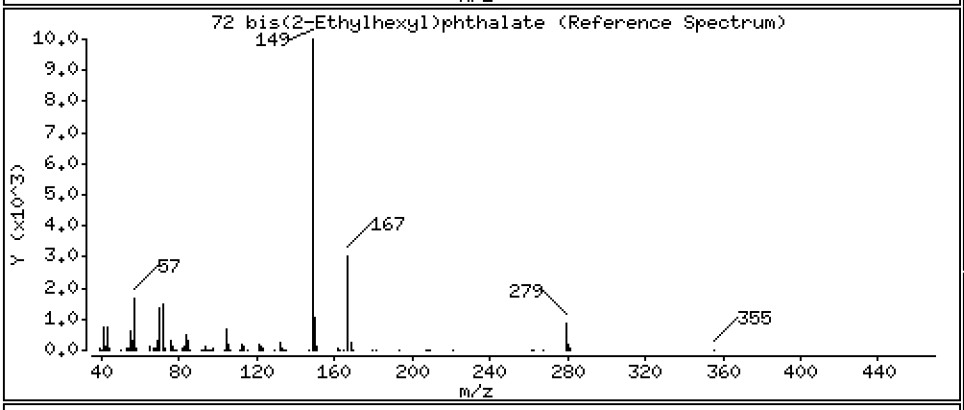
Column diameter: 0.25

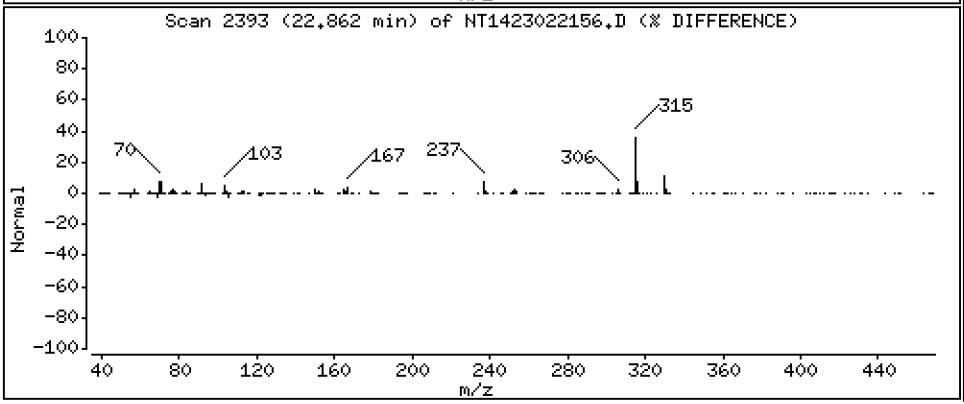
72 bis(2-Ethylhexyl)phthalate

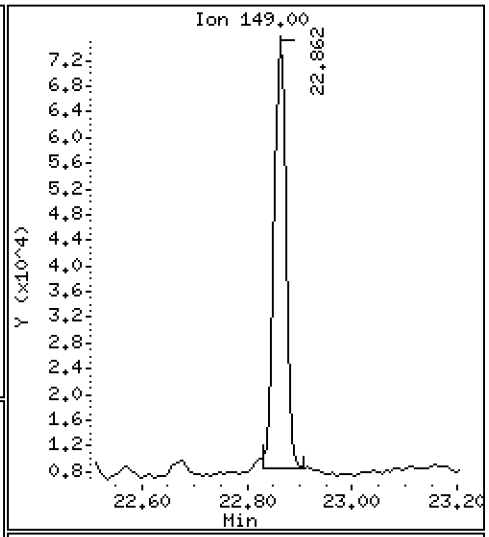
Concentration: 0.5708 ug/mL

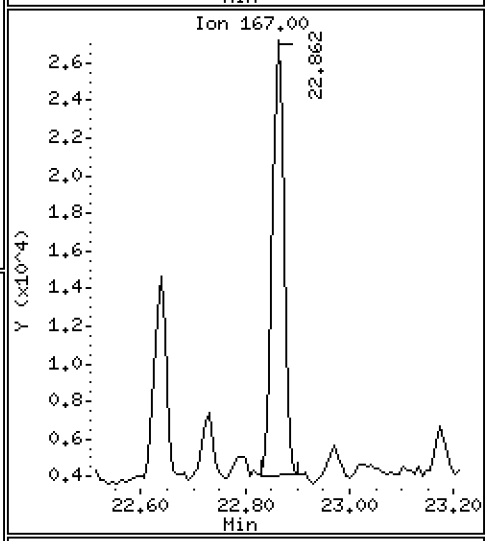


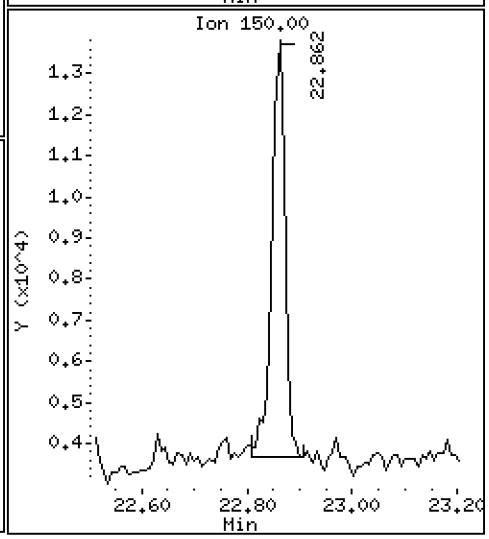












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

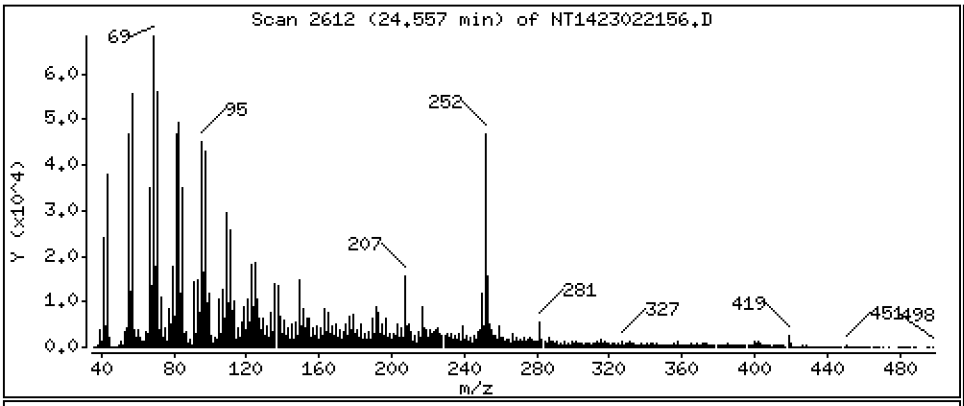
Operator: DSD

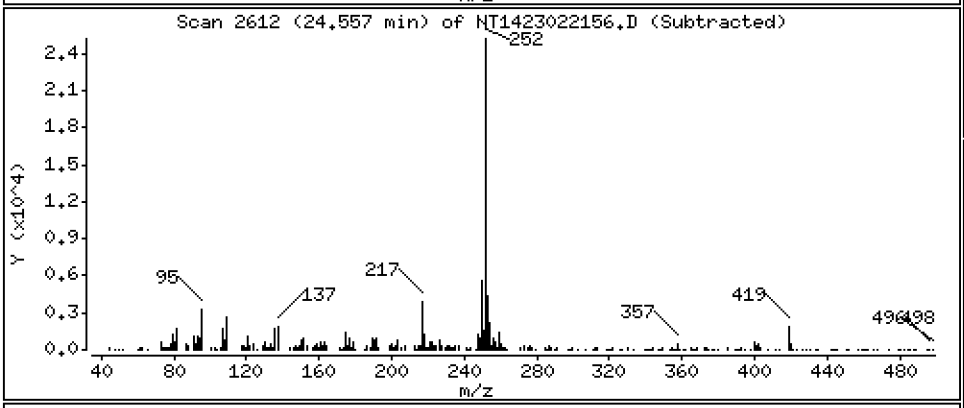
Column phase: ZB-5msi

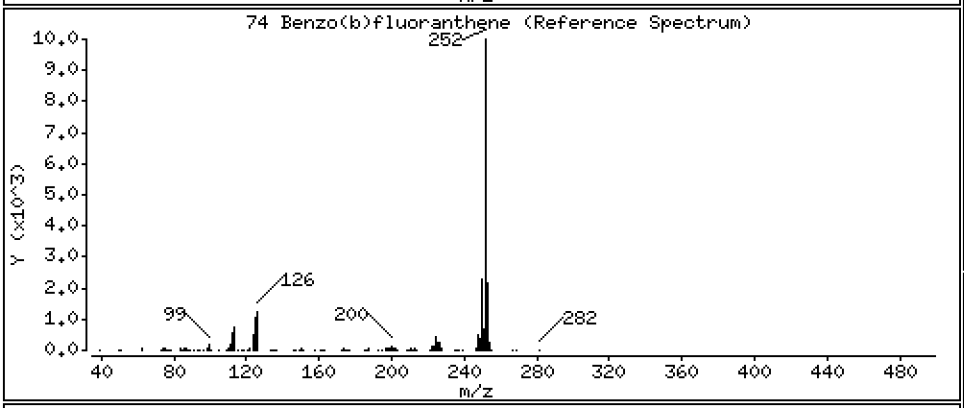
Column diameter: 0.25

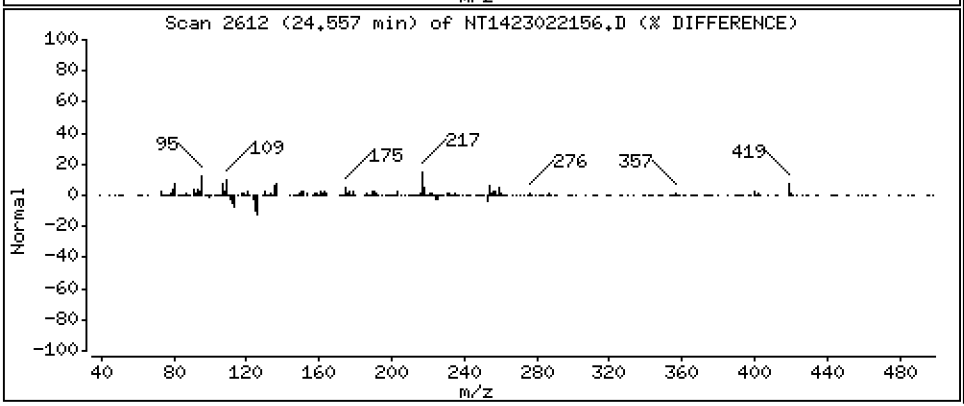
74 Benzo(b)fluoranthene

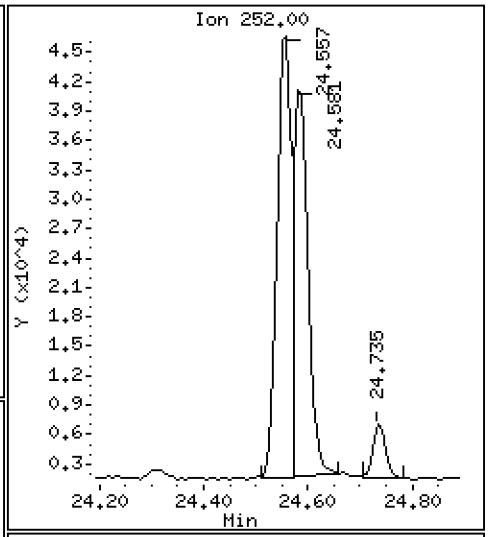
Concentration: 0.6619 ug/mL

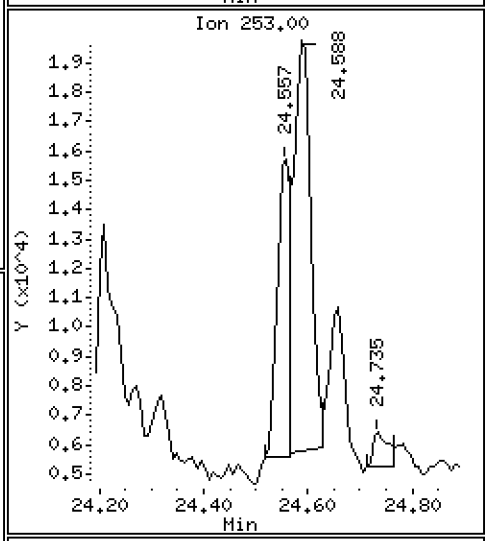


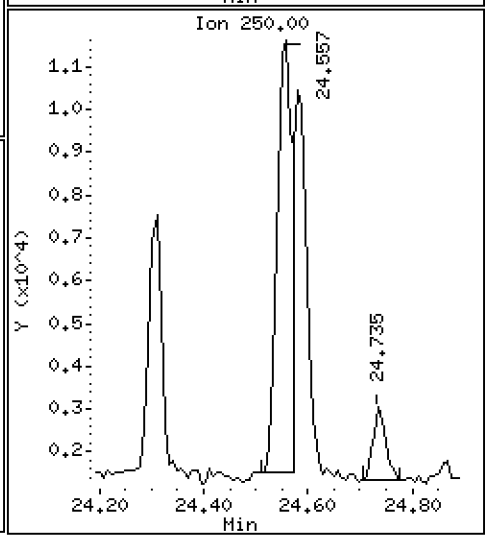












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

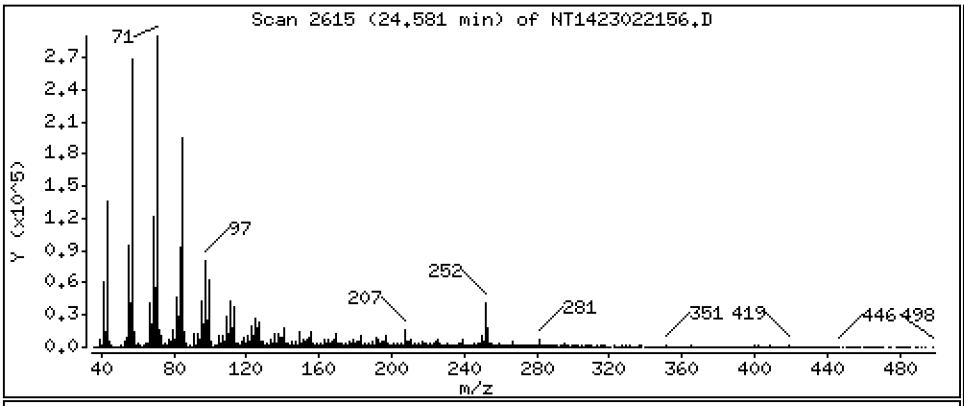
Operator: DSD

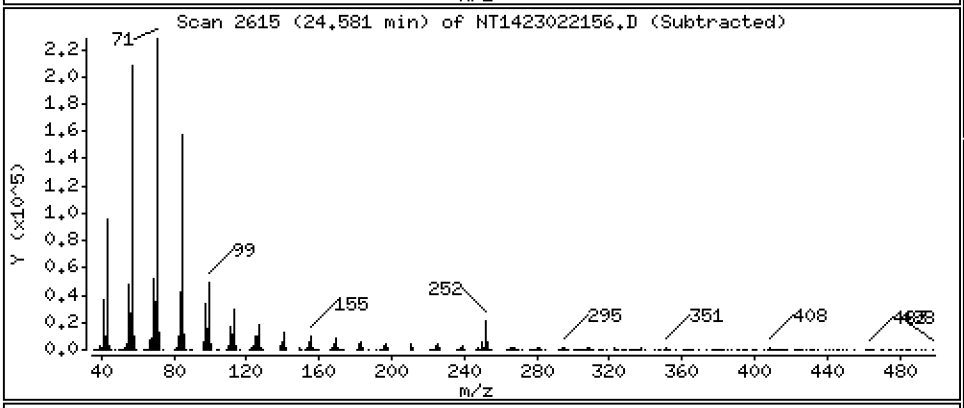
Column phase: ZB-5msi

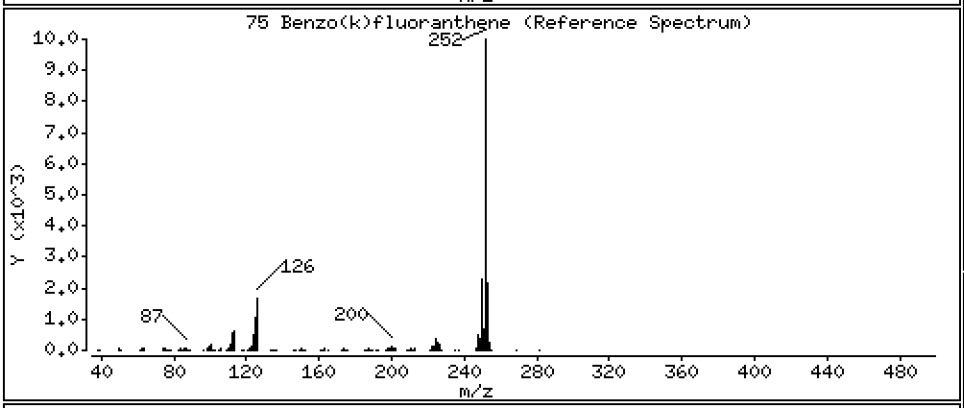
Column diameter: 0.25

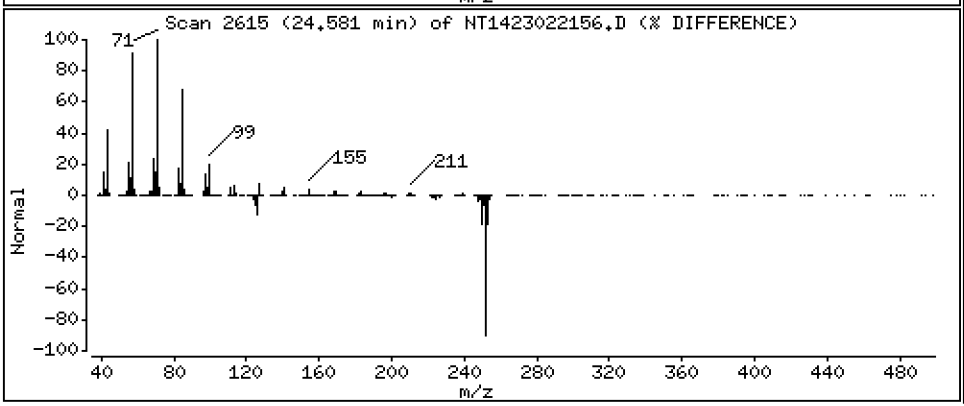
75 Benzo(k)fluoranthene

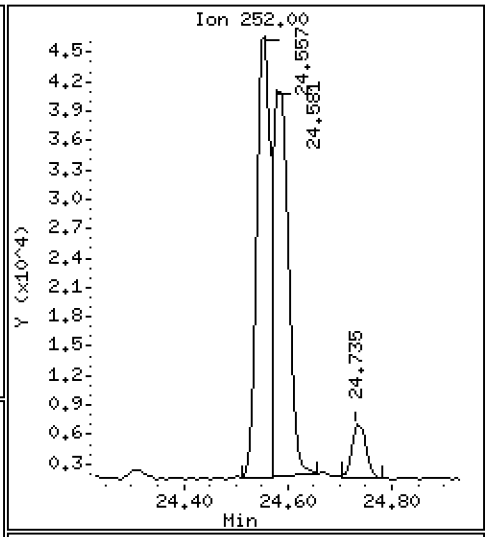
Concentration: 0.5280 ug/mL

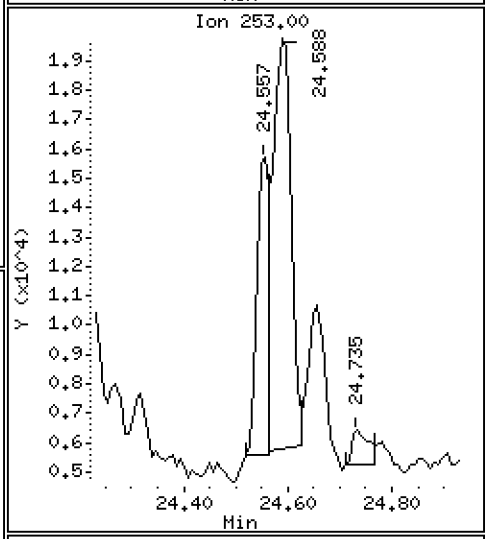


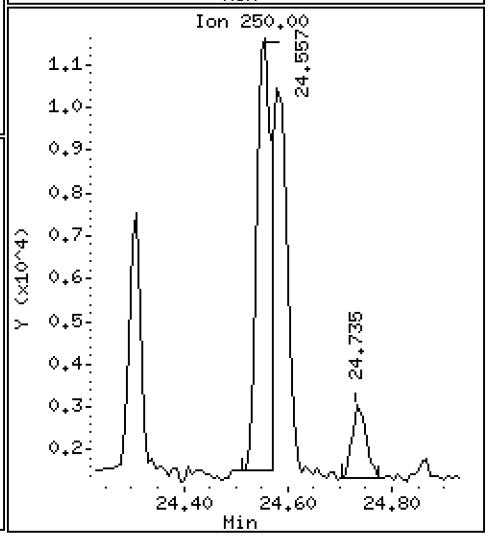












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

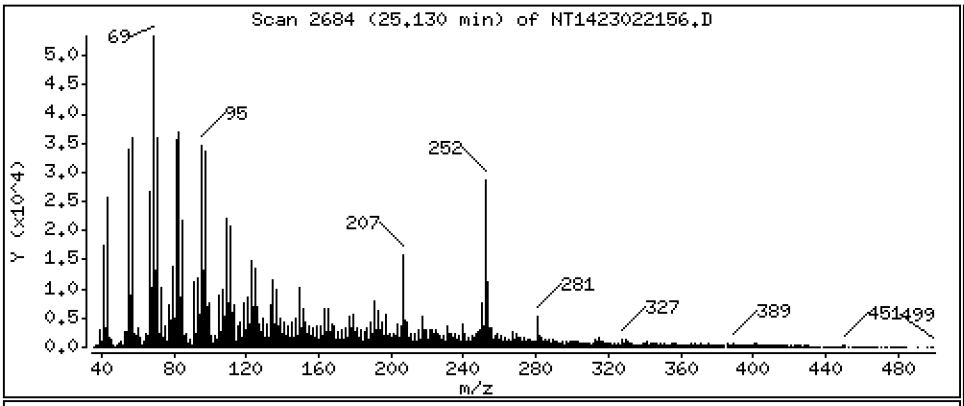
Operator: DSD

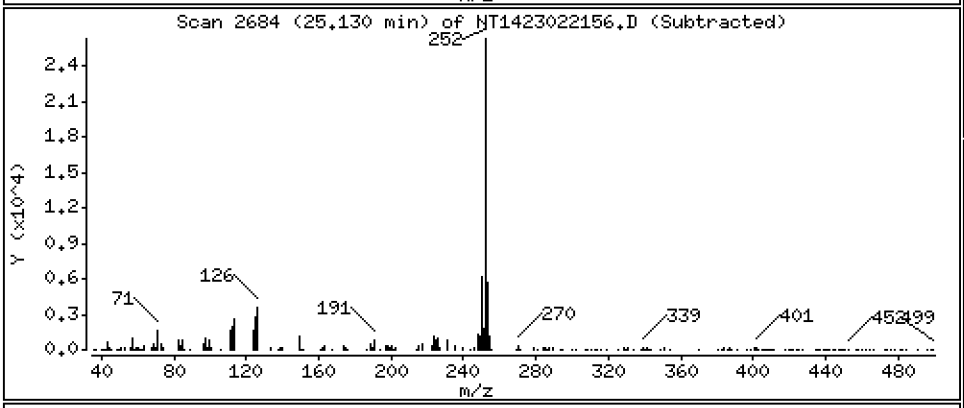
Column phase: ZB-5msi

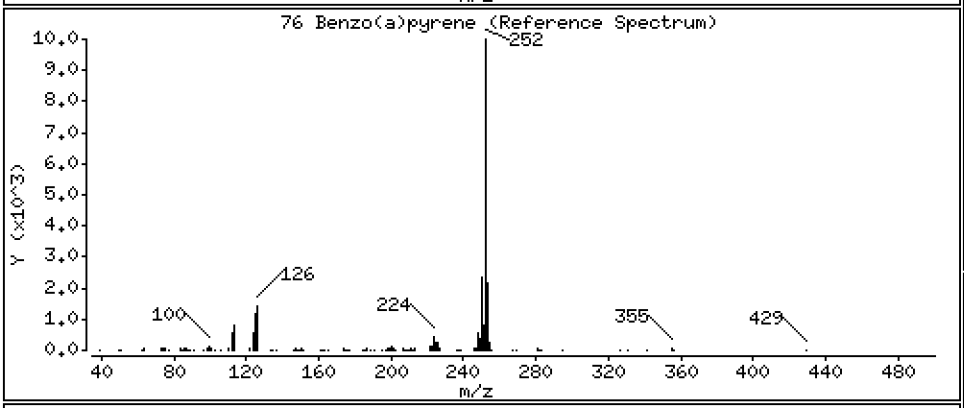
Column diameter: 0.25

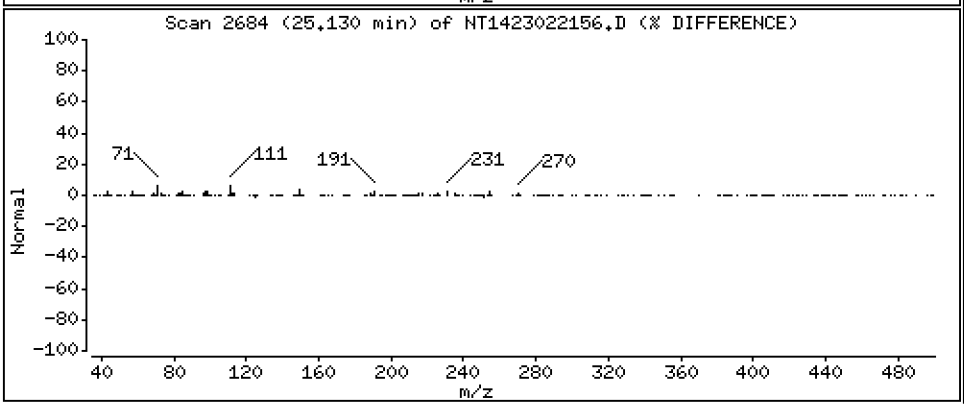
76 Benzo(a)pyrene

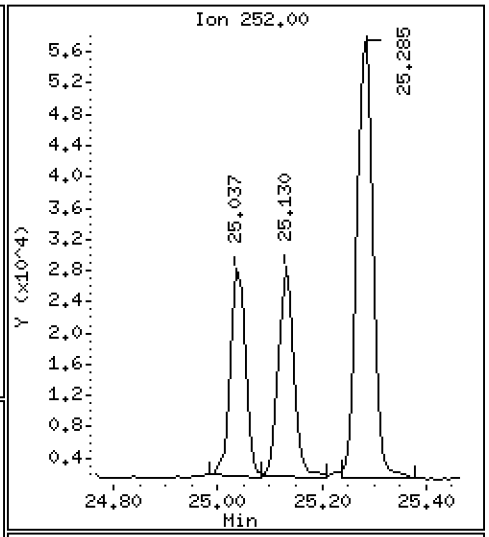
Concentration: 0.4102 ug/mL

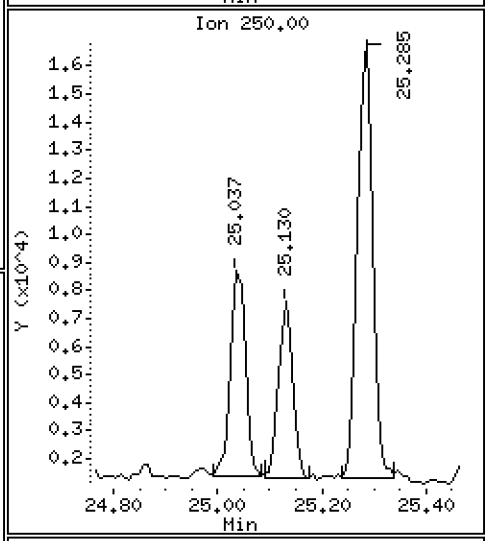


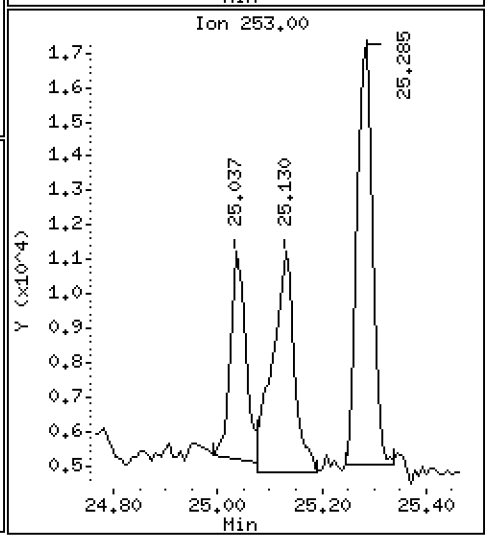












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

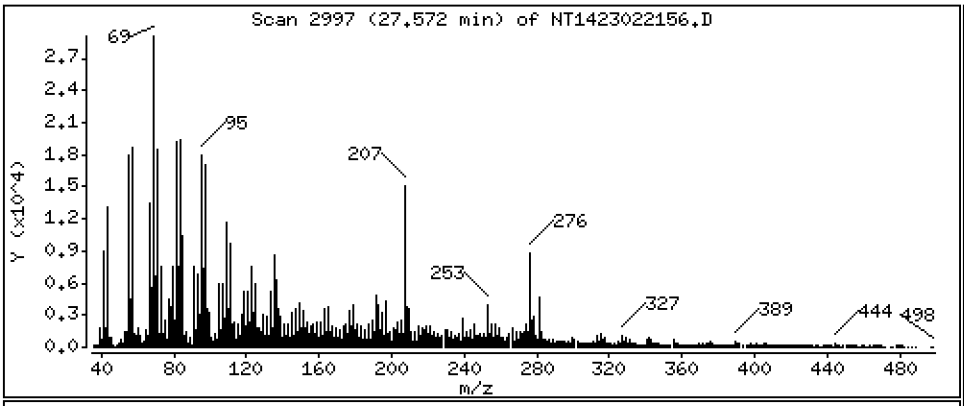
Operator: DSD

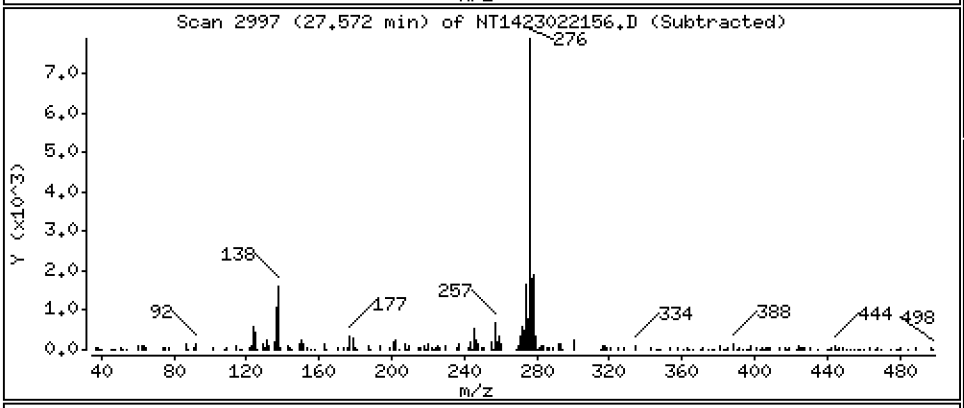
Column phase: ZB-5msi

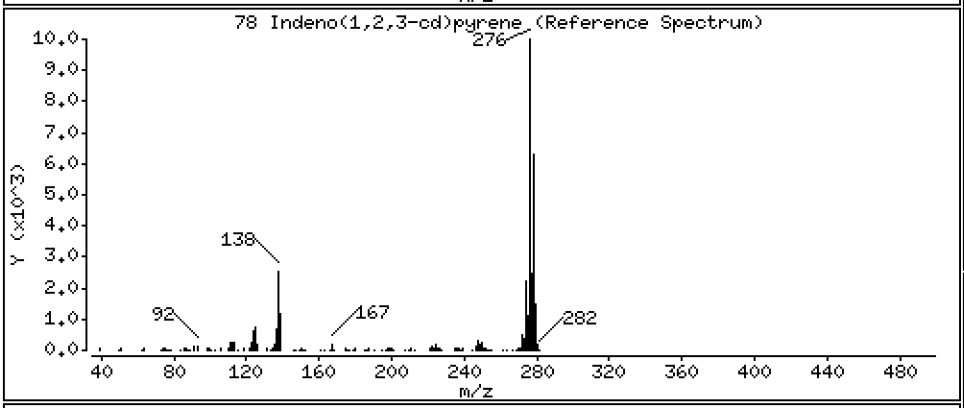
Column diameter: 0.25

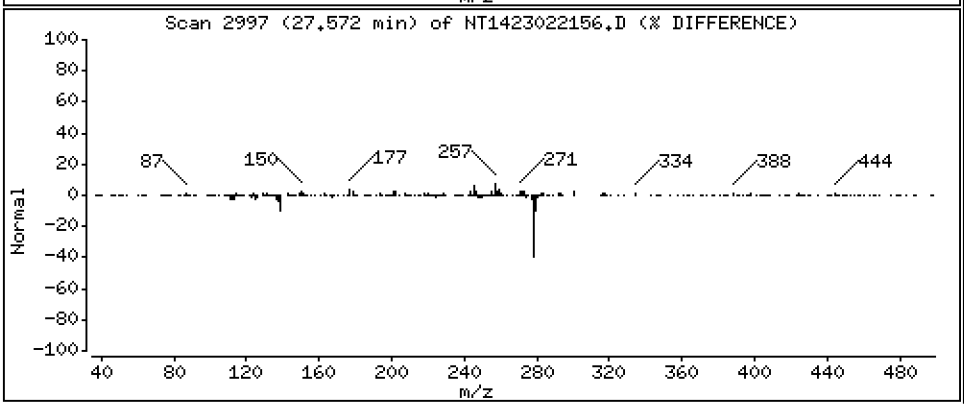
78 Indeno(1,2,3-cd)pyrene

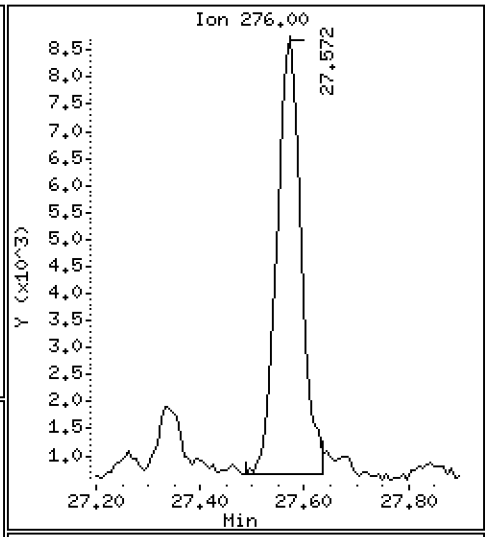
Concentration: 0.2417 ug/mL

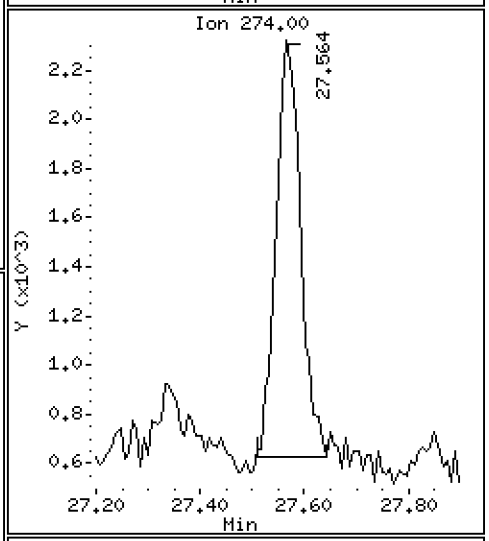


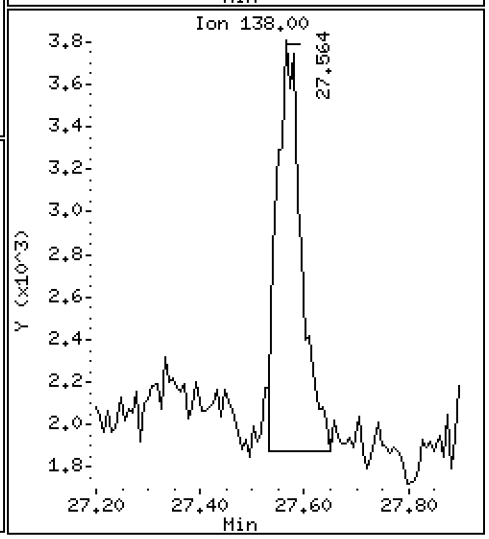












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

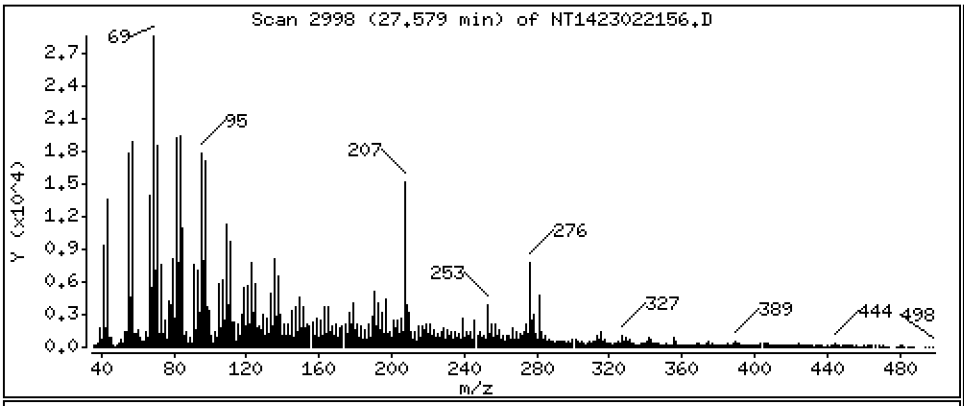
Operator: DSD

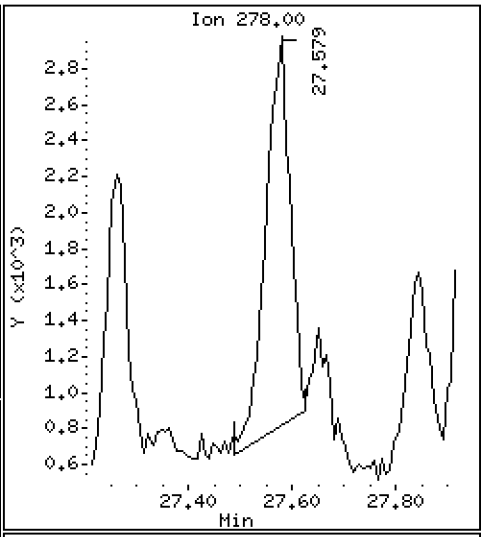
Column phase: ZB-5msi

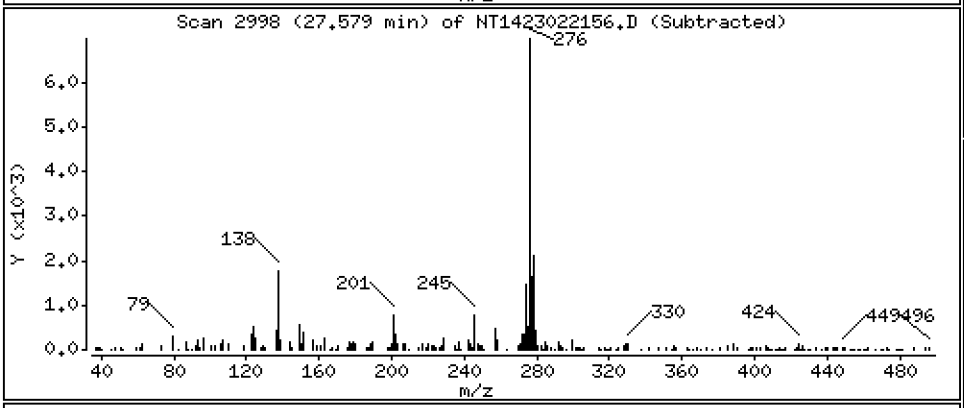
Column diameter: 0.25

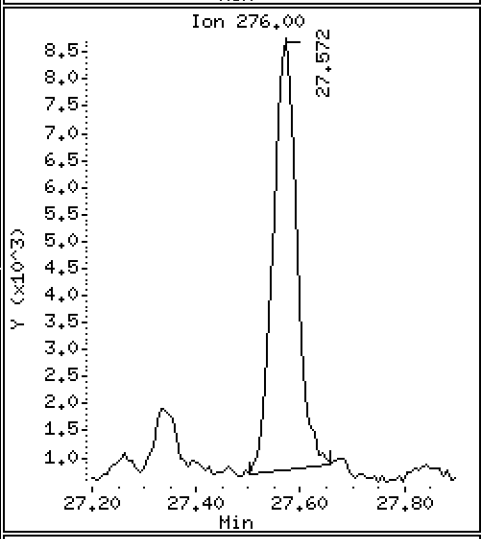
79 Dibenzo(a,h)anthracene

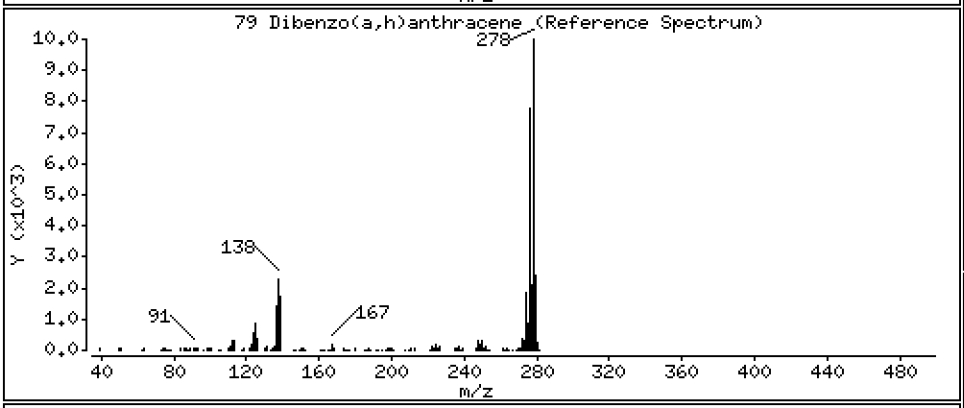
Concentration: 0.07831 ug/mL

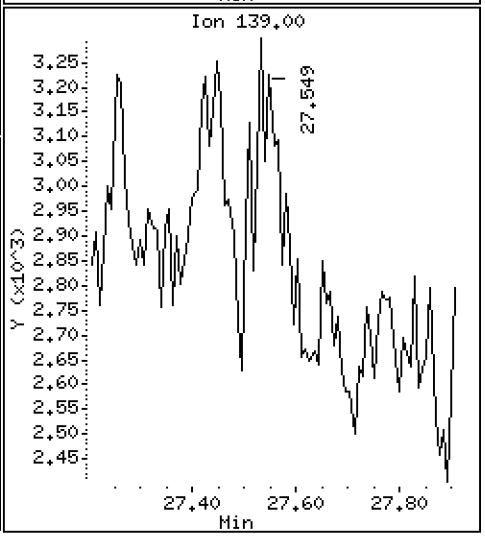


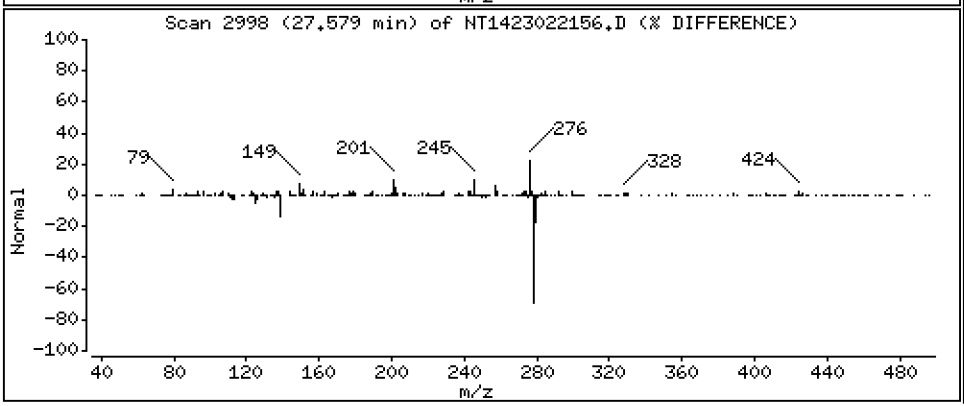












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

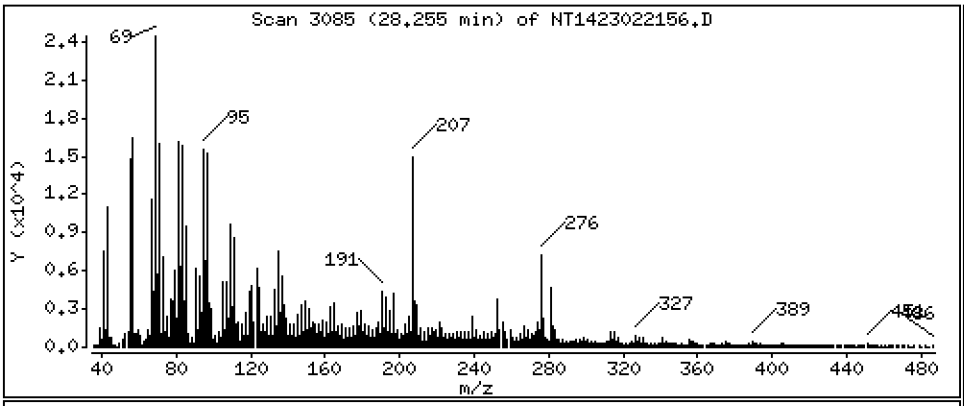
Operator: DSD

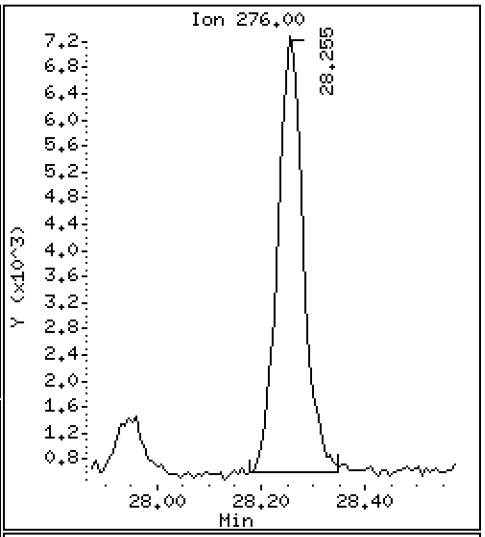
Column phase: ZB-5msi

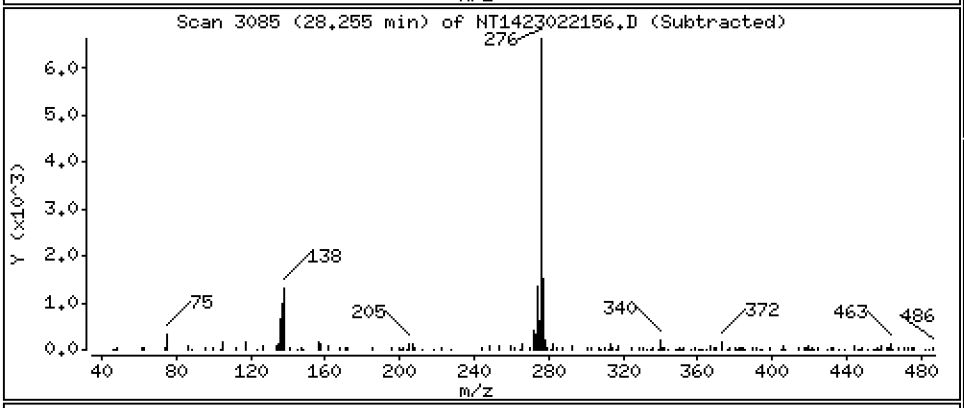
Column diameter: 0.25

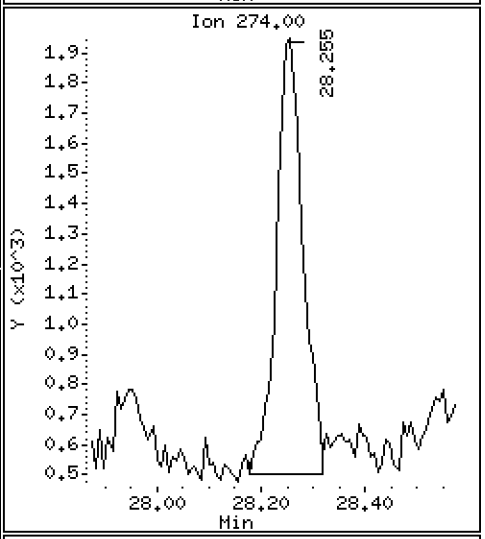
80 Benzo(g,h,i)perylene

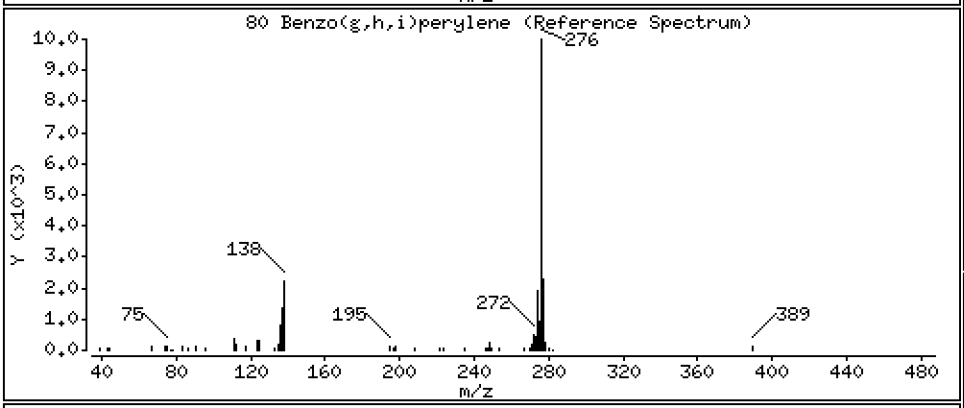
Concentration: 0.2663 ug/mL

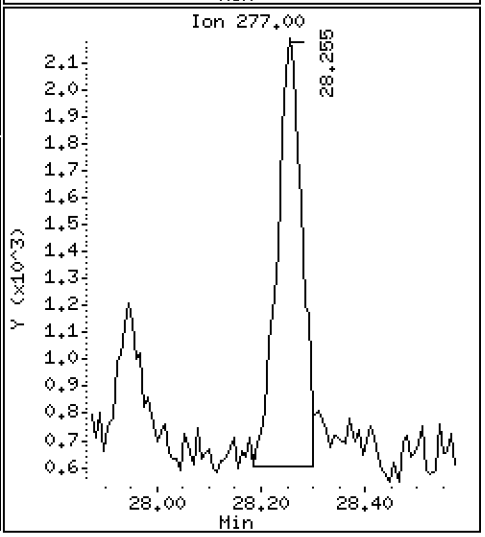


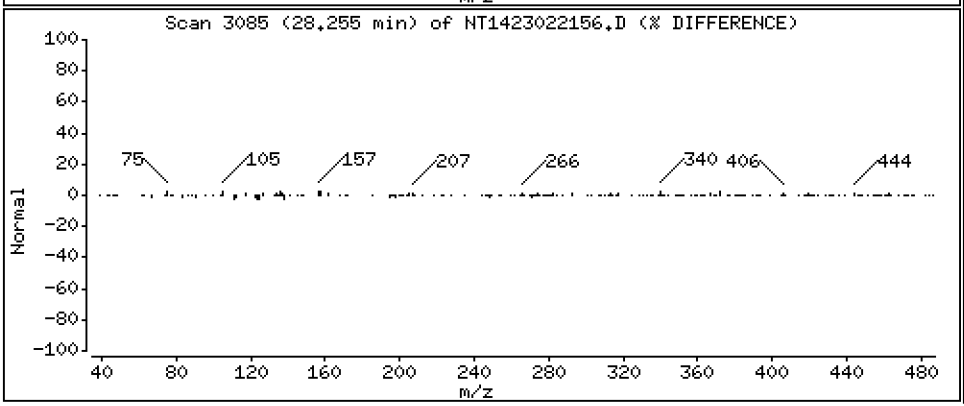












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022156.D

Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

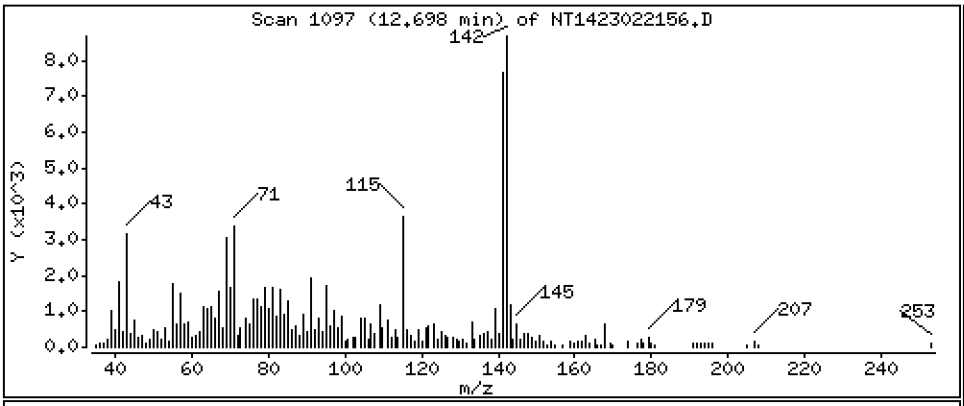
Operator: DSD

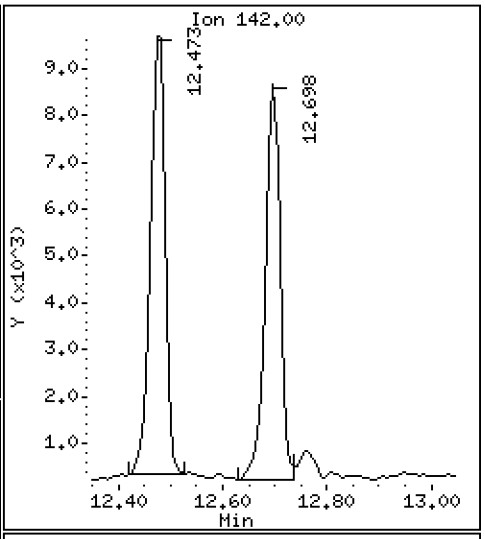
Column phase: ZB-5msi

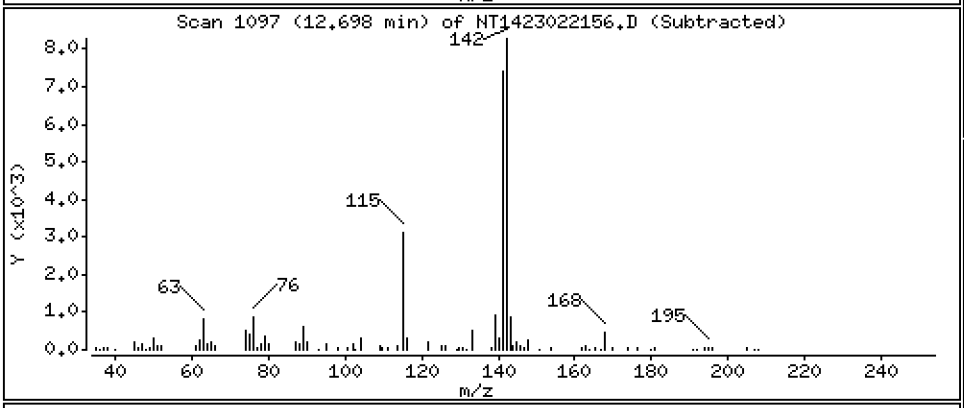
Column diameter: 0.25

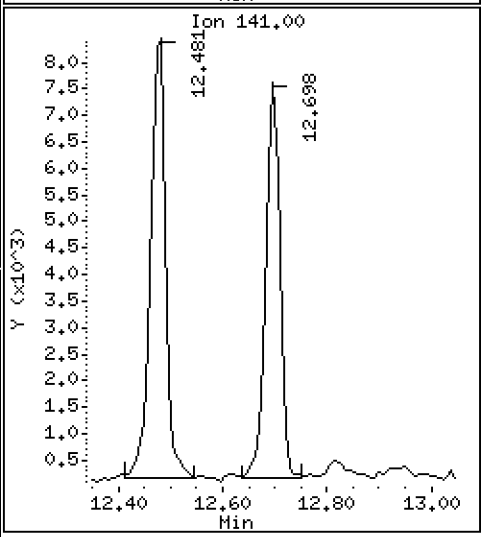
105 1-methylnaphthalene

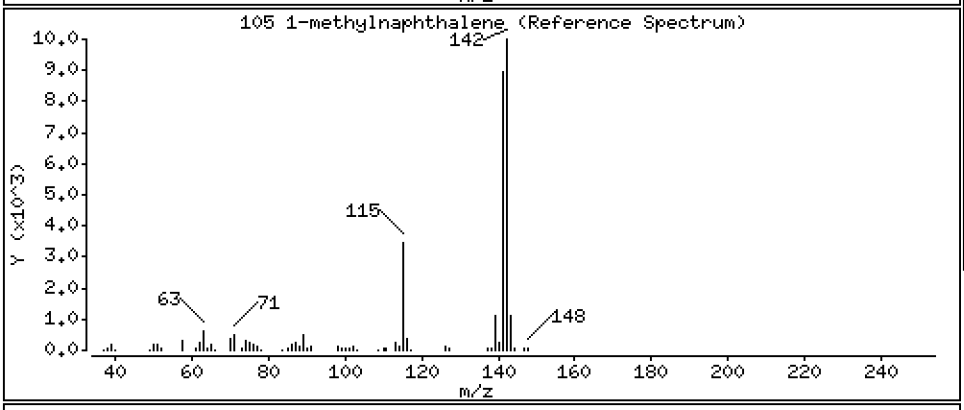
Concentration: 0.1027 ug/mL

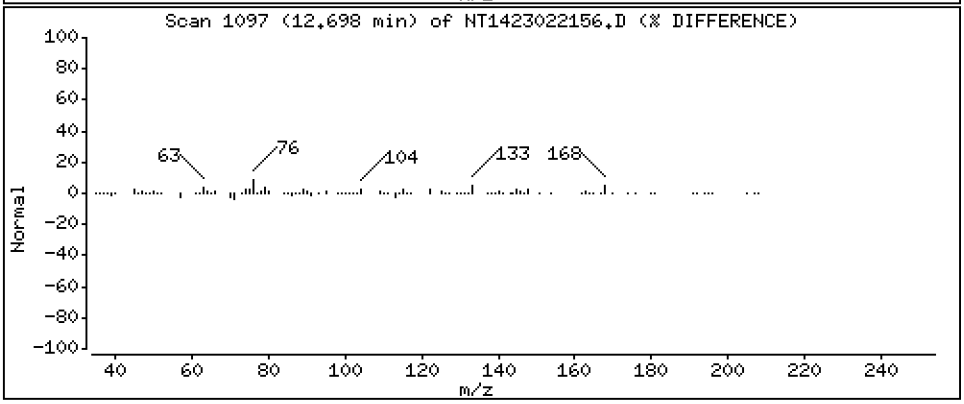












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

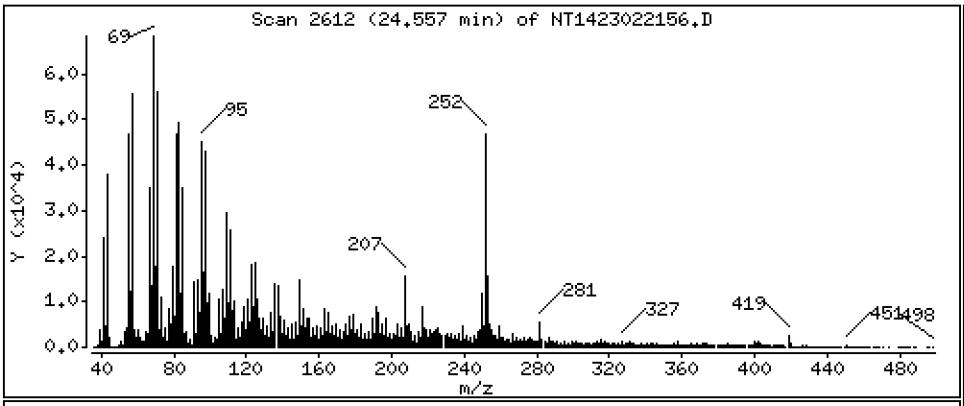
Operator: DSD

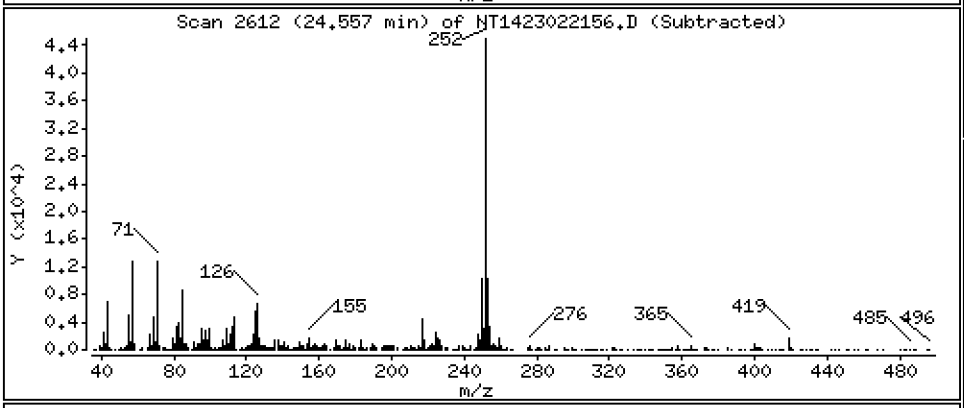
Column phase: ZB-5msi

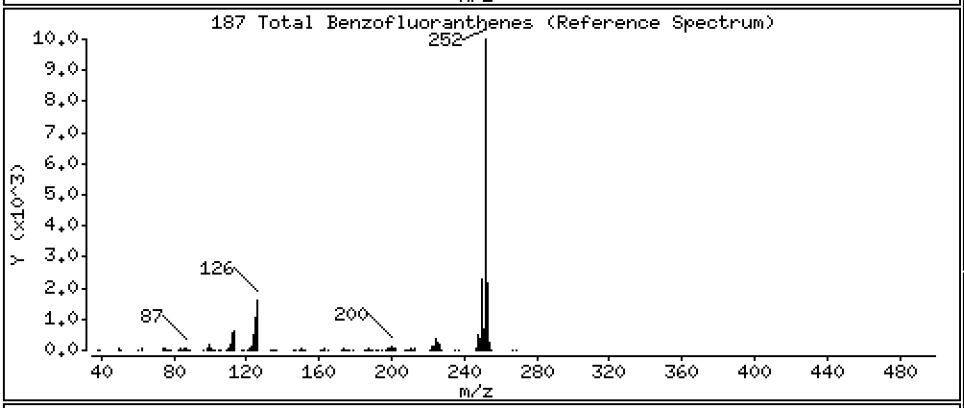
Column diameter: 0.25

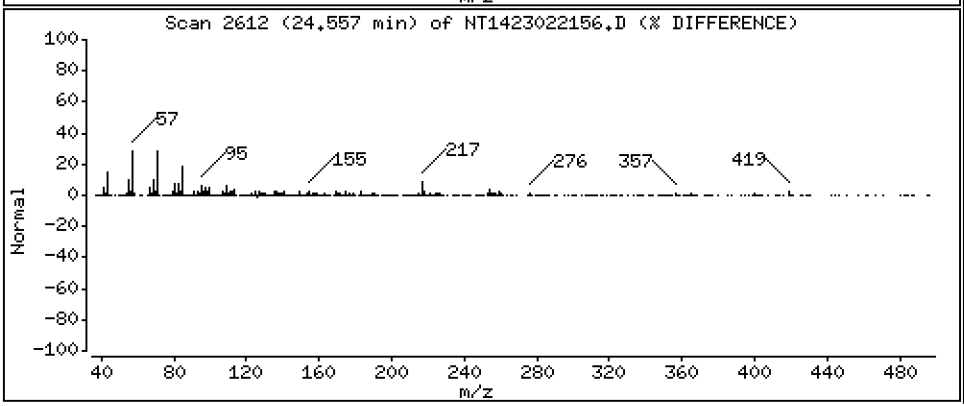
187 Total Benzofluoranthenes

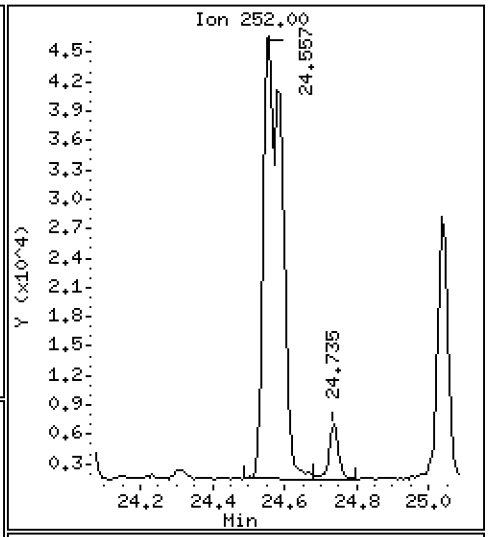
Concentration: 1.173 ug/mL

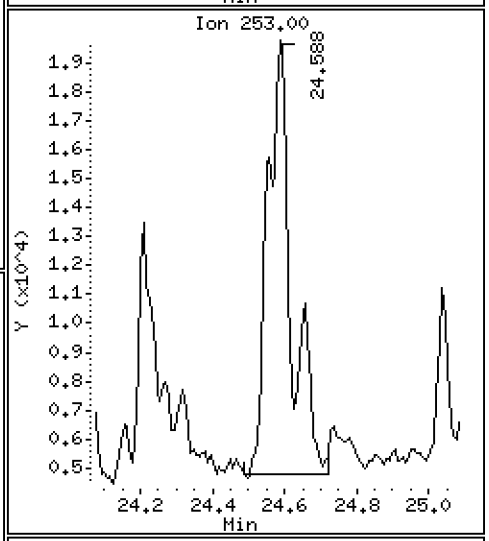


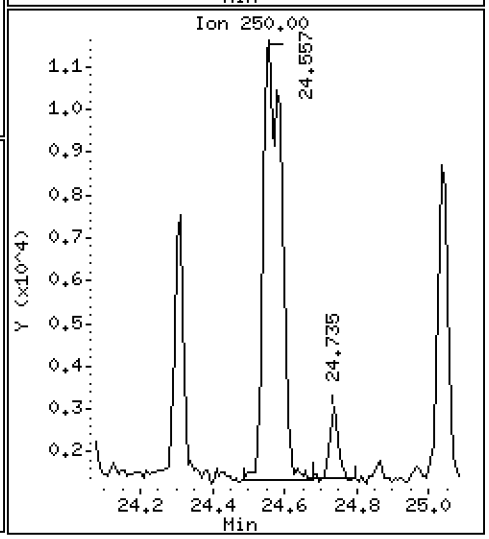












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221C.b\NT1423022156.D
Lab Smp Id: 23A0133-13
Inj Date : 22-FEB-2023 22:37 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-13
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Meth Date : 03-Mar-2023 06:54 van Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 39
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	6.396	6.380	(0.747)	361088	5.57613	5.576
$ 2	Phenol-d5	99	7.972	7.972	(0.930)	538143	5.23866	5.239
3	Phenol	94	7.995	7.996	(0.933)	98773	0.90827	0.9083
$ 5	2-Chlorophenol-d4	132	8.212	8.212	(0.958)	393362	5.36664	5.367
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	8.568	8.568	(1.000)	242232	4.00000	
9	1,4-Dichlorobenzene	146	8.599	8.599	(1.004)	889	0.01099	0.01099(MH)
$ 10	1,2-Dichlorobenzene-d4	152	8.917	8.925	(1.041)	177307	3.22721	3.227
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	8.870	8.863	(1.035)	12141	0.19881	0.1988
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
17	Hexachloroethane	117	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
15	4-Methylphenol	108	9.375	9.367	(1.094)	16236	0.20248	0.2025
$ 18	Nitrobenzene-d5	82	9.662	9.662	(0.875)	371594	3.57881	3.579
19	Nitrobenzene	77	Compound Not Detected.					
20	Isophorone	82	Compound Not Detected.					
21	2-Nitrophenol	139	Compound Not Detected.					
22	2,4-Dimethylphenol	107	Compound Not Detected.					
23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
24	Benzoic acid	105	Compound Not Detected.					
25	2,4-Dichlorophenol	162	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.042	11.042	(1.000)	898755	4.00000	
28	Naphthalene	128	11.081	11.081	(1.003)	21207	0.09570	0.09570
29	4-Chloroaniline	127	Compound Not Detected.					
30	Hexachlorobutadiene	225	Compound Not Detected.					
31	4-Chloro-3-methylphenol	107	Compound Not Detected.					
32	2-Methylnaphthalene	142	12.473	12.481	(1.130)	17713	0.10672	0.1067(H)
33	Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.270	13.270	(0.906)	677515	3.60507	3.605
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	Compound Not Detected.					
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	14.647	14.648	(1.000)	525285	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	14.717	14.717	(1.005)	7048	0.05031	0.05031
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.042	15.050	(1.027)	17667	0.07682	0.07682
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	15.637	15.645	(1.068)	22808	0.10693	0.1069
	49	Fluorene	166	15.753	15.753	(1.075)	19991	0.08312	0.08312
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.293	16.293	(1.112)	163438	5.34280	5.343
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	17.684	17.676	(1.000)	967087	4.00000	
	60	Phenanthrene	178	17.730	17.723	(1.003)	129804	0.55856	0.5586
	61	Anthracene	178	17.823	17.816	(1.008)	46797	0.20326	0.2033
	62	Carbazole	167	18.171	18.156	(1.028)	11947	0.05718	0.05718
	63	Di-n-butylphthalate	149	Compound Not Detected.					
	64	Fluoranthene	202	20.183	20.137	(0.886)	277577	1.02328	1.023(H)
	65	Pyrene	202	20.593	20.562	(0.904)	291063	1.01473	1.015
$	66	Terphenyl-d14	244	20.887	20.872	(0.917)	816175	4.00745	4.007
	67	Butylbenzylphthalate	149	21.824	21.816	(0.958)	6532	0.06909	0.06909(M)
	68	Benzo(a)anthracene	228	22.753	22.745	(0.999)	98414	0.48912	0.4891
*	69	Chrysene-d12	240	22.784	22.769	(1.000)	628753	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	22.830	22.815	(1.002)	139576	0.77123	0.7712
	72	bis(2-Ethylhexyl)phthalate	149	22.861	22.854	(0.959)	100456	0.57081	0.5708
*	134	Di-n-octylphthalate-d4	153	23.845	23.837	(1.000)	1026024	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	24.557	24.542	(0.973)	93122	0.66187	0.6619
	75	Benzo(k)fluoranthene	252	24.580	24.580	(0.974)	79383	0.52802	0.5280
	76	Benzo(a)pyrene	252	25.130	25.114	(0.996)	54689	0.41019	0.4102
*	77	Perylene-d12	264	25.238	25.223	(1.000)	443402	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.571	27.548	(1.092)	26508	0.24169	0.2417
	79	Dibenzo(a,h)anthracene	278	27.579	27.564	(1.093)	7071	0.07831	0.07831(MH)
	80	Benzo(g,h,i)perylene	276	28.255	28.224	(1.120)	23685	0.26626	0.2663
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	12.697	12.697	(1.150)	16004	0.10271	0.1027
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.557	24.580	(0.973)	161180	1.17339	1.173
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022156.D
Lab Smp Id: 23A0133-13
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 16:35
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	232195	116098	464390	242232	4.32
27 Naphthalene-d8	800631	400316	1601262	898755	12.26
42 Acenaphthene-d10	488064	244032	976128	525285	7.63
59 Phenanthrene-d10	971279	485640	1942558	967087	-0.43
69 Chrysene-d12	687083	343542	1374166	628753	-8.49
134 Di-n-octylphthala	1174636	587318	2349272	1026024	-12.65
77 Perylene-d12	491790	245895	983580	443402	-9.84

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.07
134 Di-n-octylphthala	23.84	23.34	24.34	23.85	0.03
77 Perylene-d12	25.22	24.72	25.72	25.24	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022156.D

Lab ID: 23A0133-13
nt14.i, ABN.m, 22-FEB-2023 22:37

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

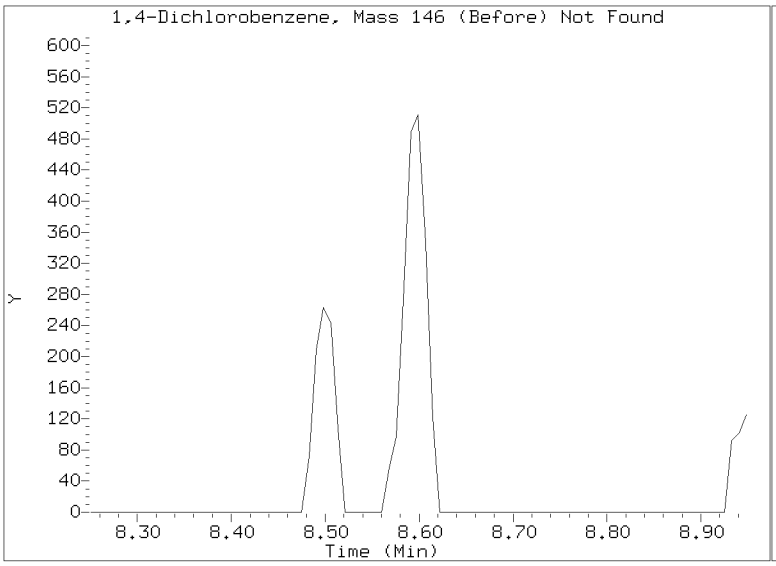
RRT check based on Ccal File: NT1423022146.D

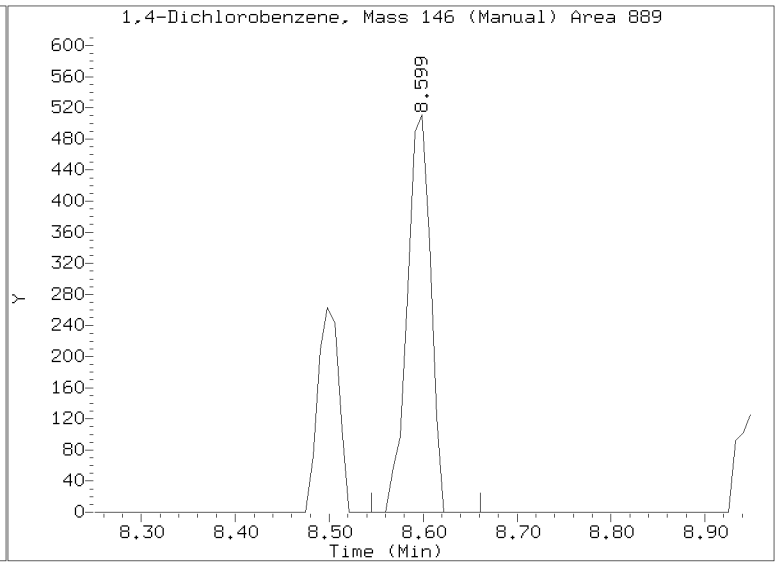
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

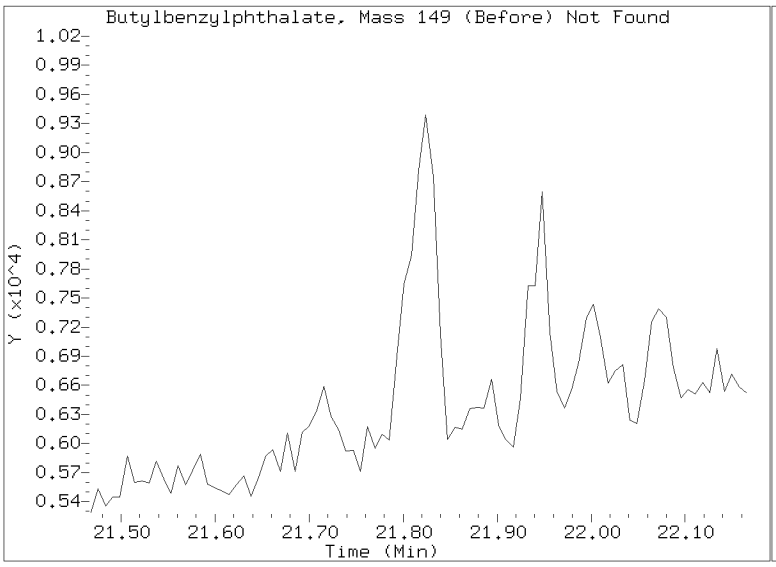
* Only compounds listed in the work order have been verified by the analyst *

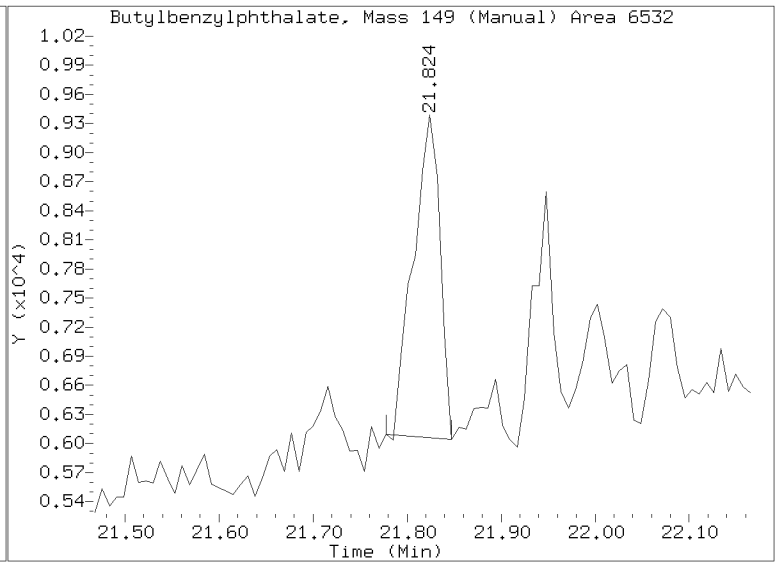
Quant Ion Manual Peak Adjustment Report

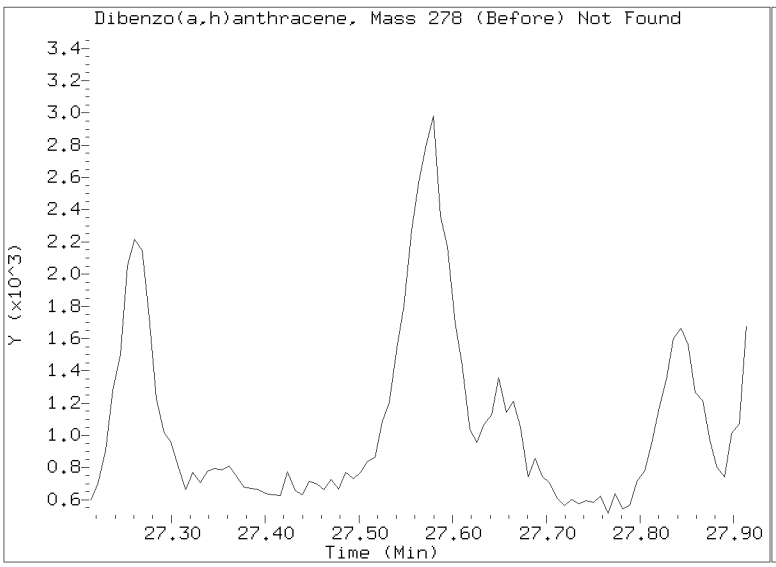
Datafile: //target/share/chem3/nt14.i/20230221C.b/NT1423022156.D
Injection Date: 22-FEB-2023 22:37
Lab ID:23A0133-13 Client ID:
Report Date: 03/03/2023 07:06

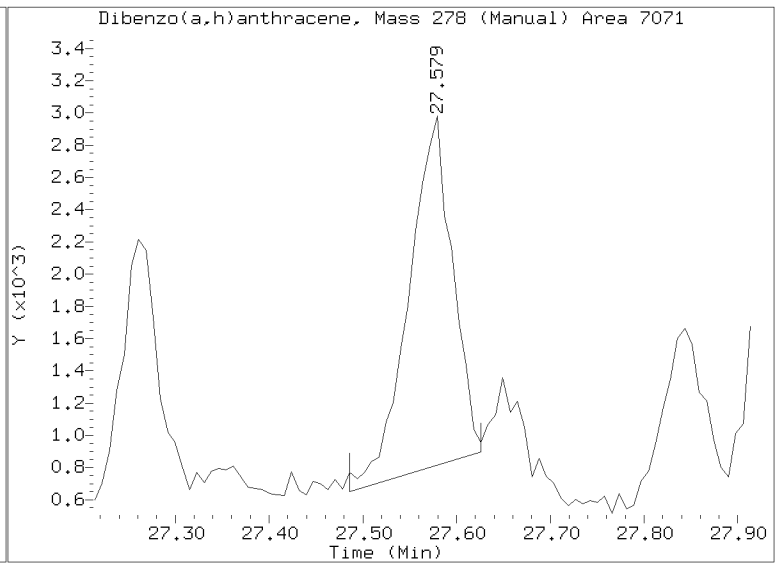












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1109

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-14 C	SDG:	23A0133
Sampled:	01/06/23 14:13	Prepared:	01/18/23 15:24	File ID:	NT1423022157.D
% Solids:	45.19	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 23:14
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	22.15 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	369		4.4	20.0
106-44-5	4-Methylphenol	1	35.6		7.4	20.0
91-20-3	Naphthalene	1	9.8	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	10.6	J	4.5	20.0
208-96-8	Acenaphthylene	1	20.0	U	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	7.1	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	64.8		8.7	20.0
120-12-7	Anthracene	1	21.6		7.2	20.0
206-44-0	Fluoranthene	1	167		6.1	20.0
129-00-0	Pyrene	1	156		5.7	20.0
85-68-7	Butylbenzylphthalate	1	11.6	J	9.4	20.0
56-55-3	Benzo(a)anthracene	1	57.8		6.0	20.0
218-01-9	Chrysene	1	113		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	103		5.5	50.0
	Benzofluoranthenes, Total	1	158		10.0	40.0
50-32-8	Benzo(a)pyrene	1	55.5		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	31.6		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	36.4		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.28	549	73.3	27 - 120	
Phenol-d5	749.28	512	68.4	29 - 120	
2-Chlorophenol-d4	749.28	523	69.8	31 - 120	
1,2-Dichlorobenzene-d4	499.52	322	64.5	32 - 120	
Nitrobenzene-d5	499.52	352	70.5	30 - 120	
2-Fluorobiphenyl	499.52	351	70.2	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1109

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

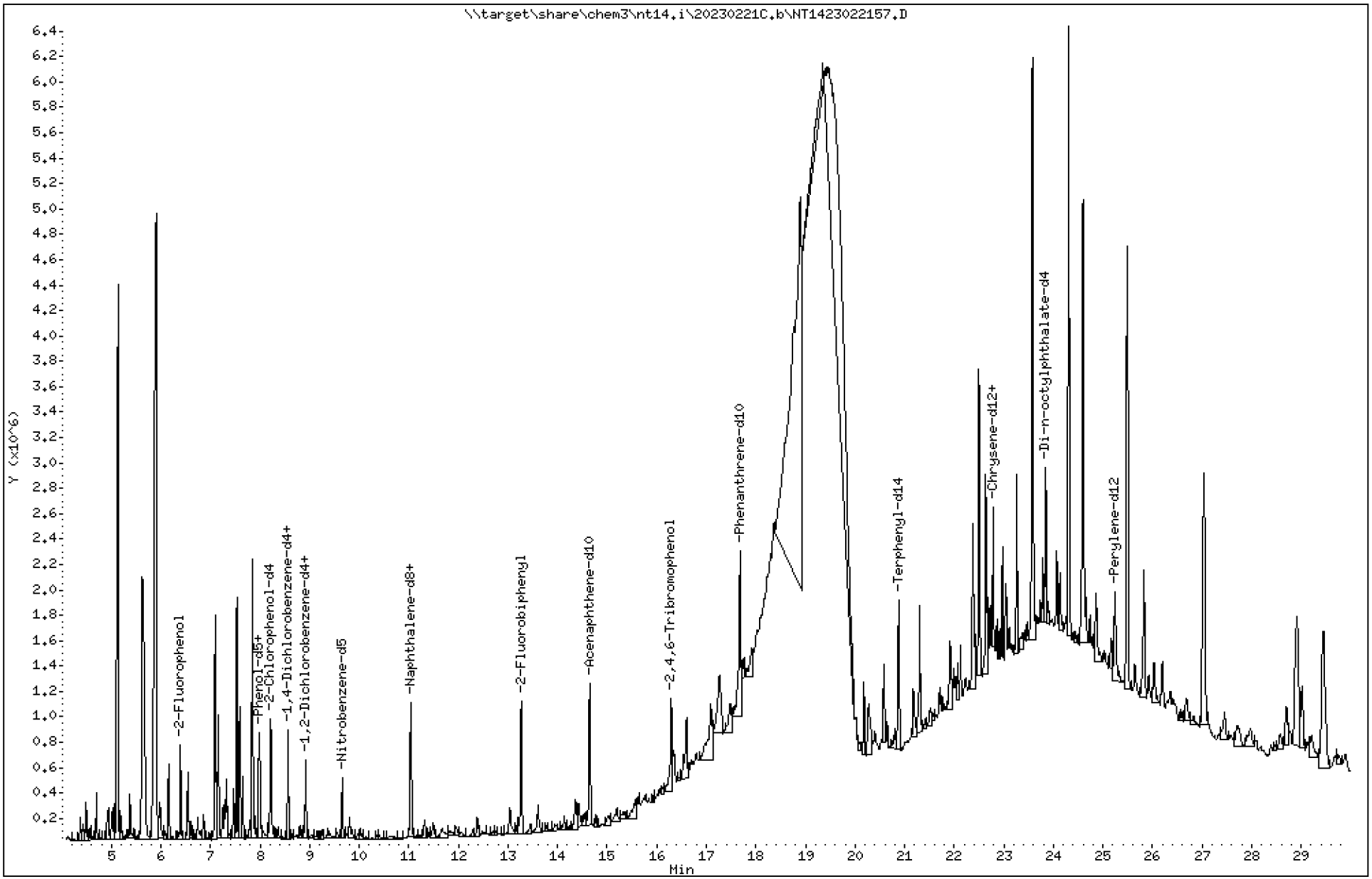
Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-14 C	SDG:	23A0133
Sampled:	01/06/23 14:13	Prepared:	01/18/23 15:24	File ID:	NT1423022157.D
% Solids:	45.19	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 23:14
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	22.15 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	749.28	538	71.8	24 - 134	
p-Terphenyl-d14	499.52	441	88.2	37 - 120	

Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022157.D
Date : 22-FEB-2023 23:14
Client ID:
Sample Info: 23A0133-14

Instrument: nt14.i
Operator: DSD
Column diameter: 0.25

Column phase: ZB-5msi



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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

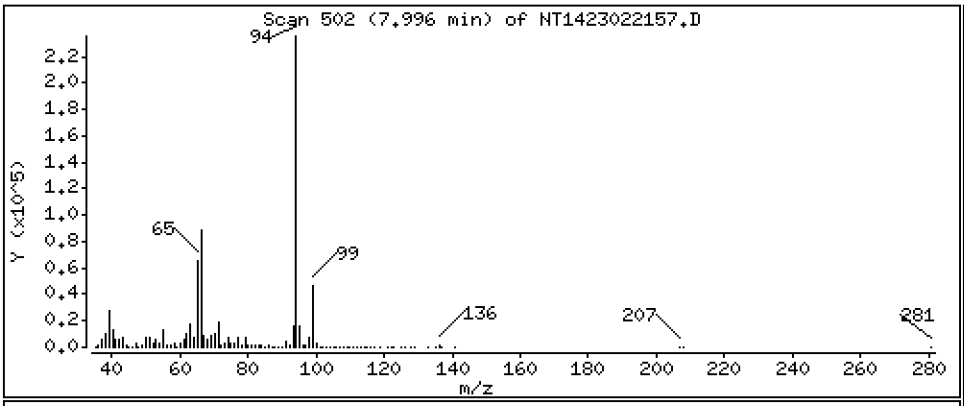
Operator: DSD

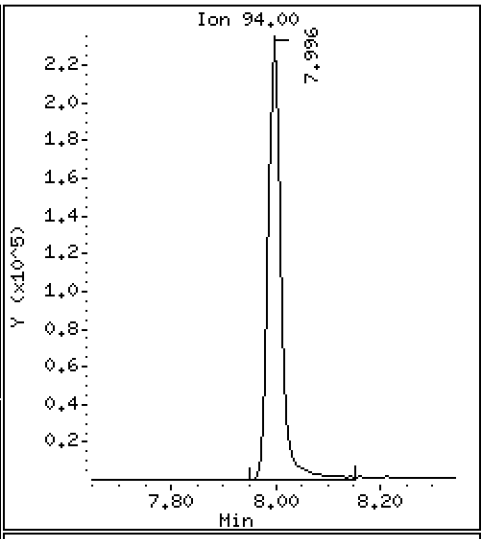
Column phase: ZB-5msi

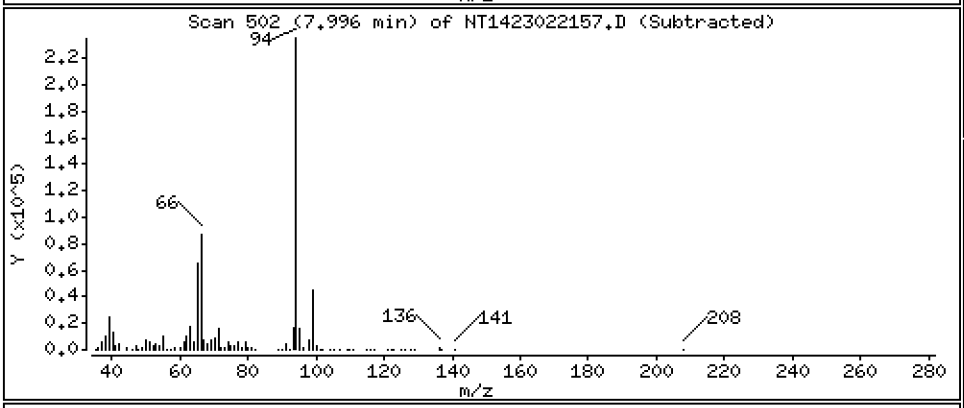
Column diameter: 0.25

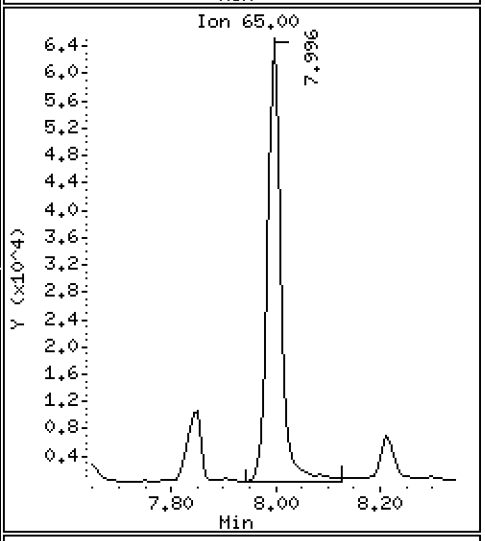
3 Phenol

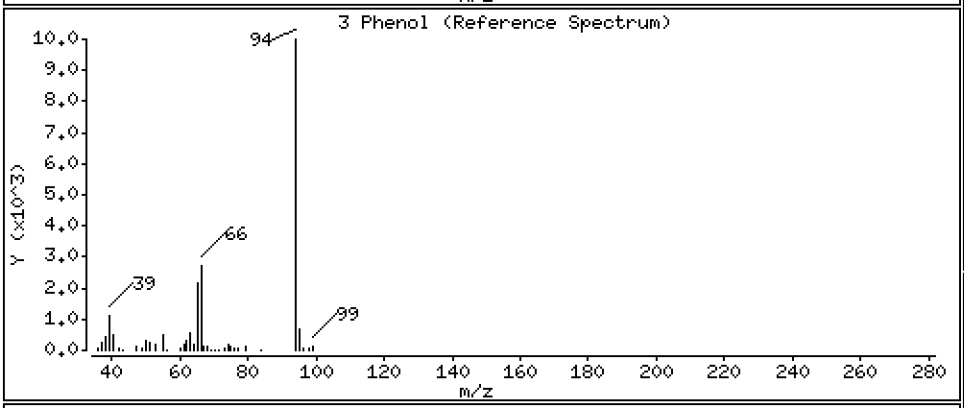
Concentration: 3.692 ug/mL

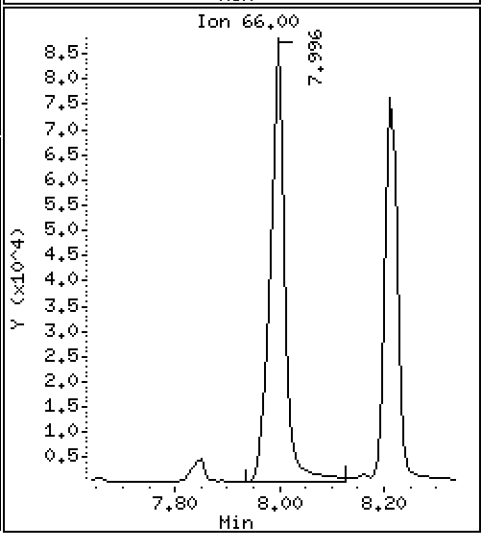


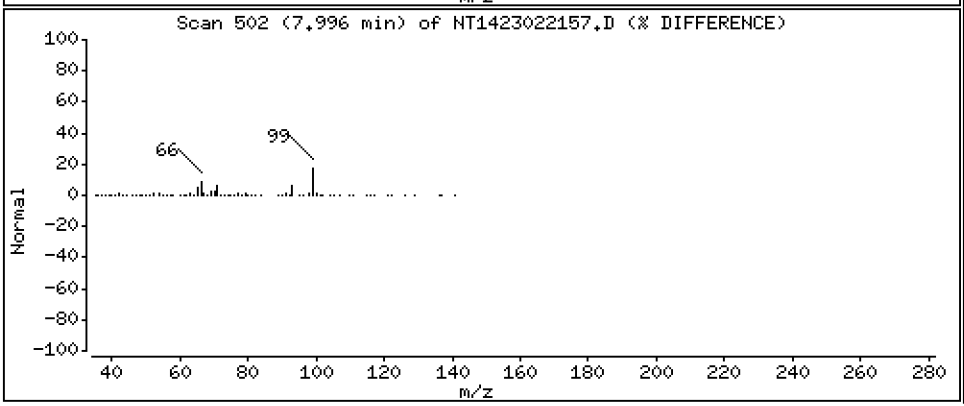












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

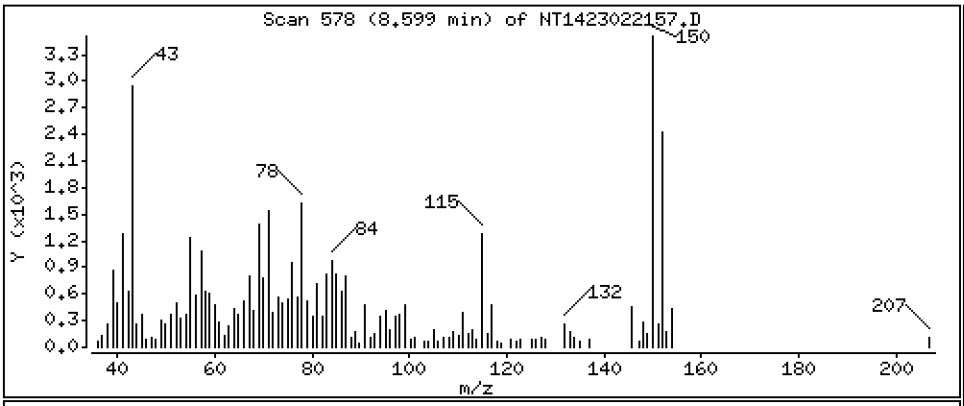
Operator: DSD

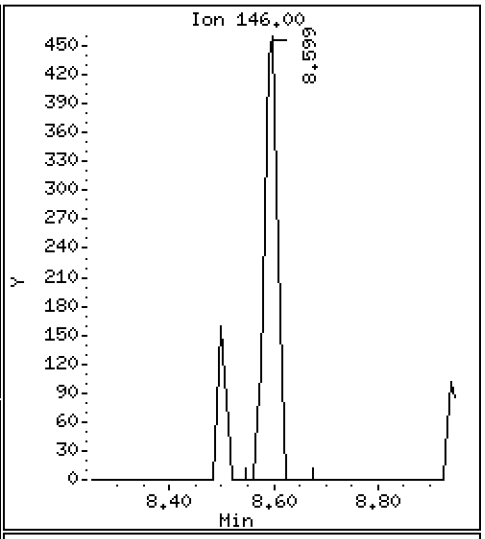
Column phase: ZB-5msi

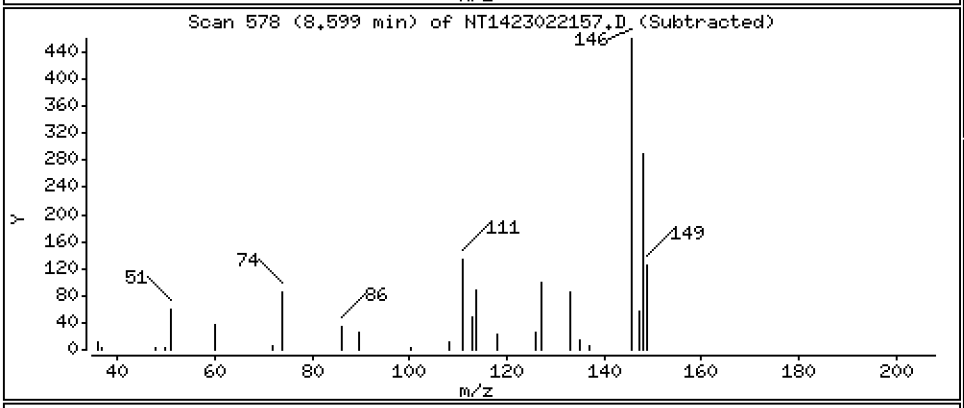
Column diameter: 0.25

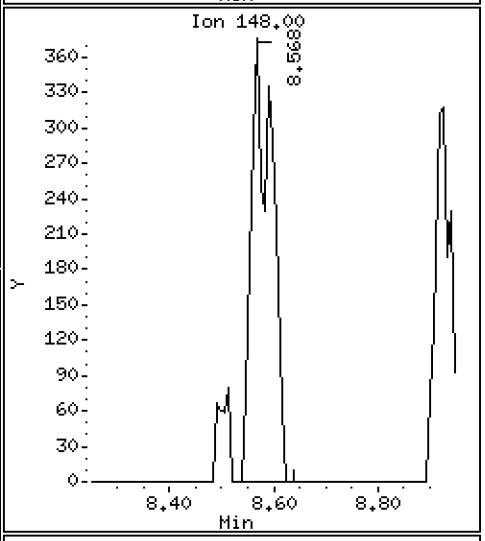
9 1,4-Dichlorobenzene

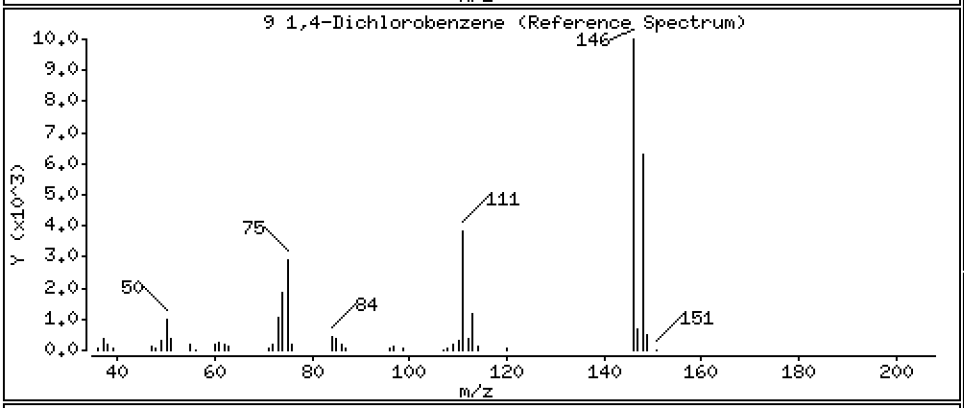
Concentration: 0.01054 ug/mL

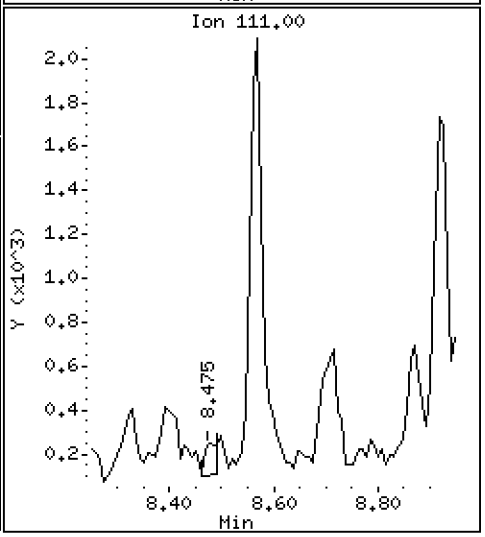


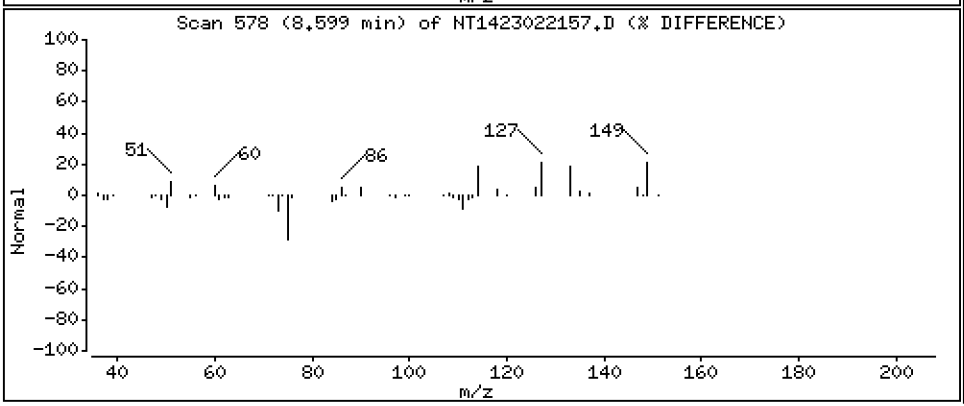












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

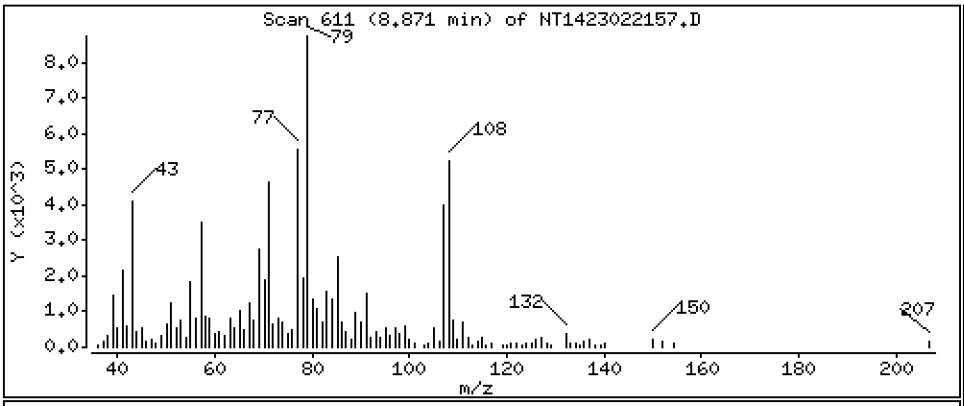
Operator: DSD

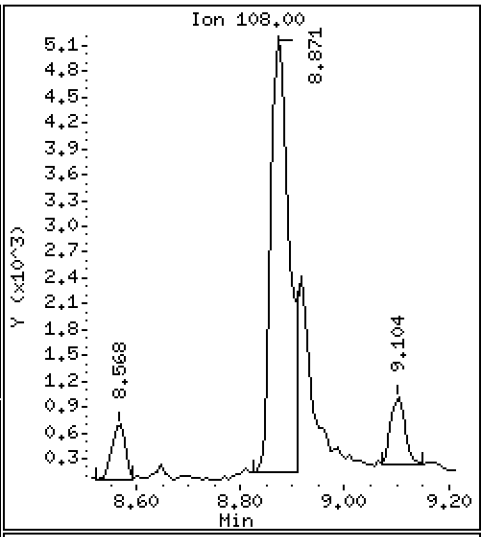
Column phase: ZB-5msi

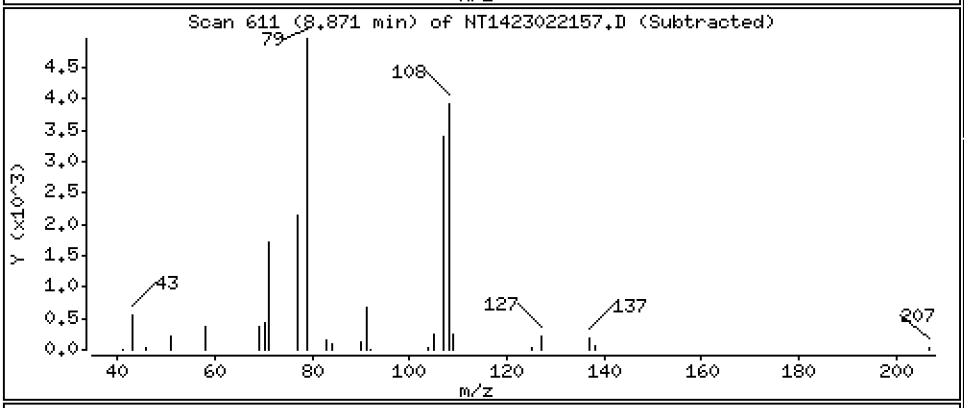
Column diameter: 0.25

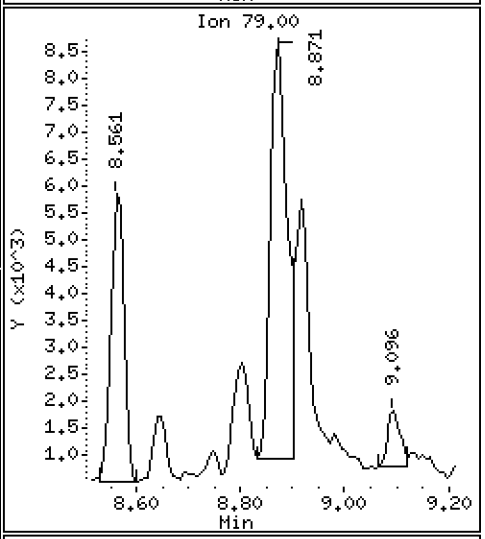
11 Benzyl alcohol

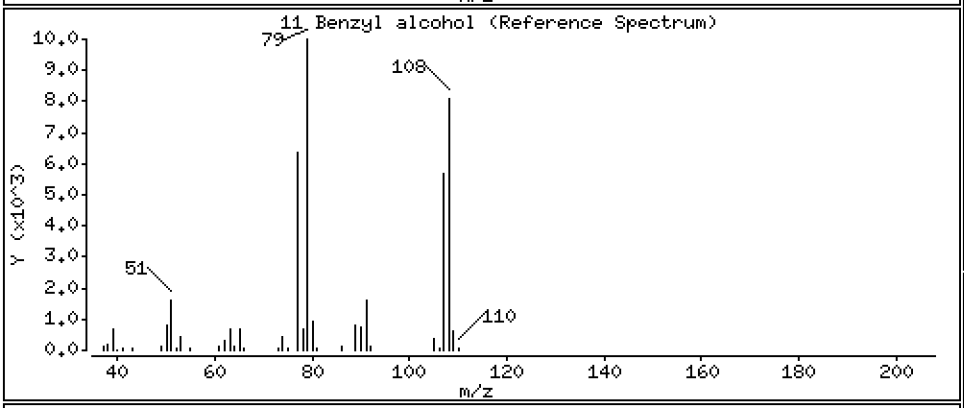
Concentration: 0.2107 ug/mL

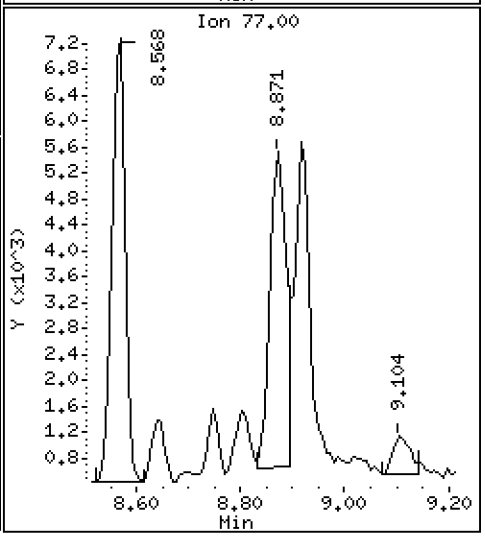


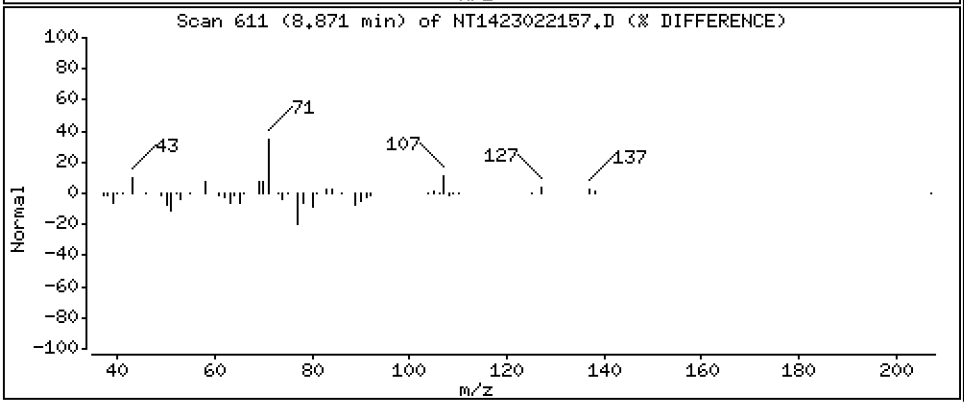












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

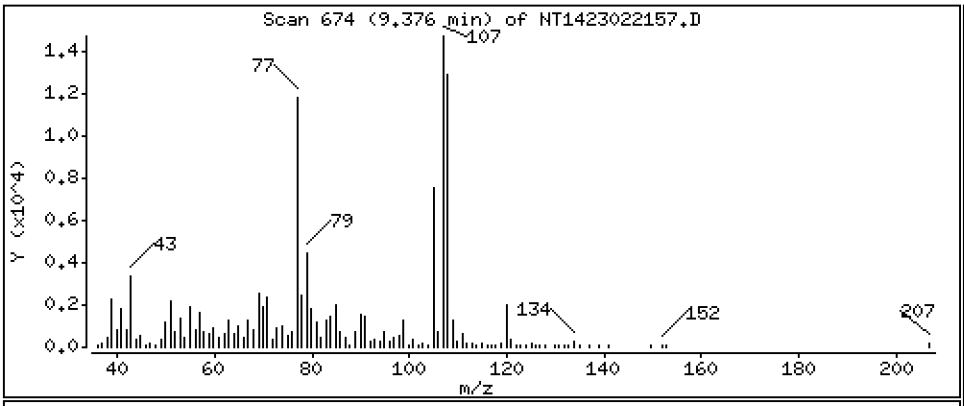
Operator: DSD

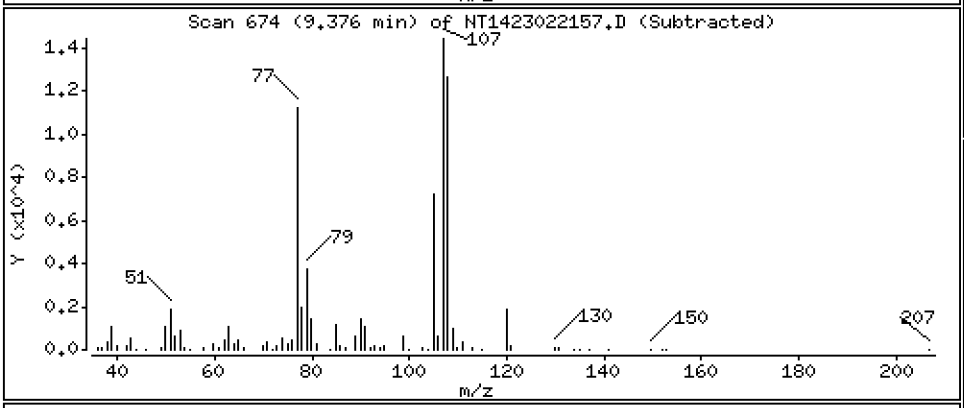
Column phase: ZB-5msi

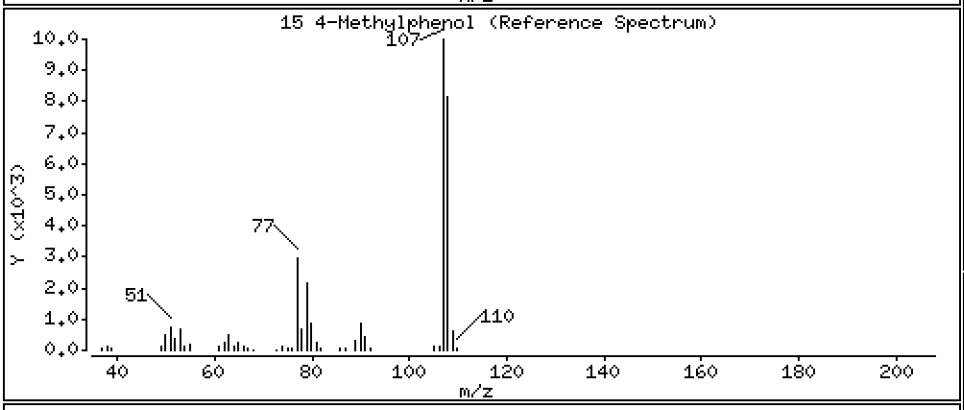
Column diameter: 0.25

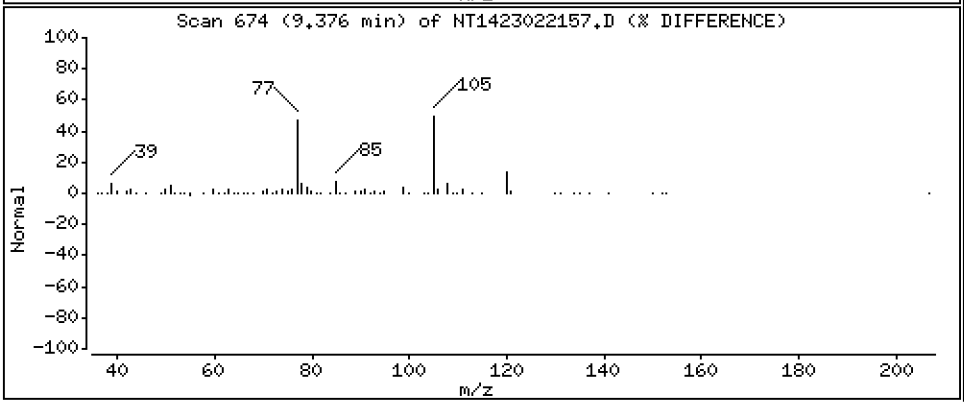
15 4-Methylphenol

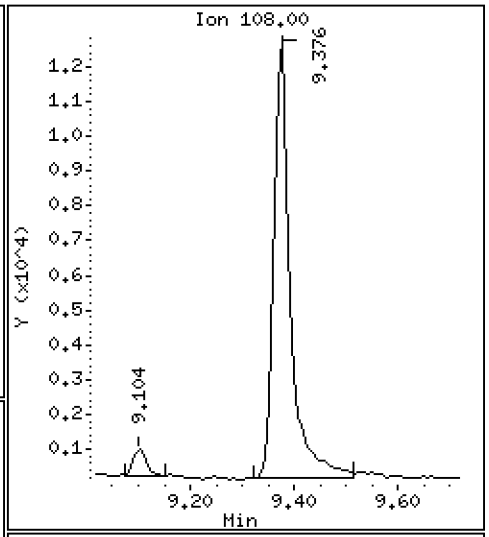
Concentration: 0.3562 ug/mL

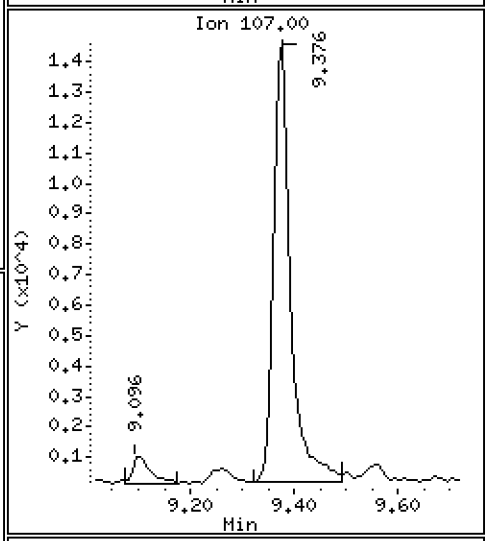


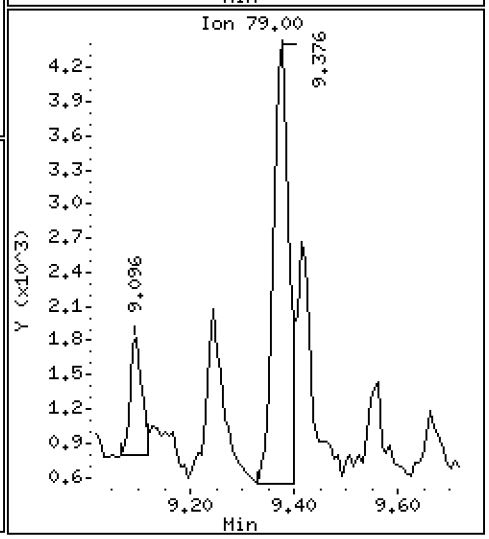












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

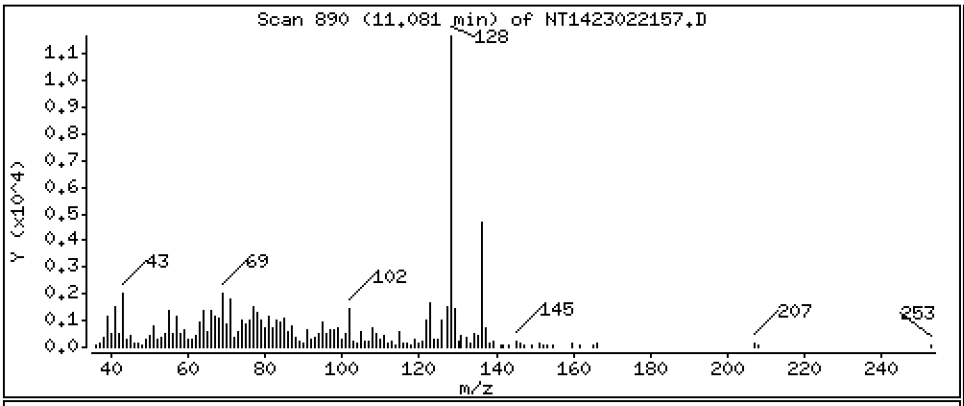
Operator: DSD

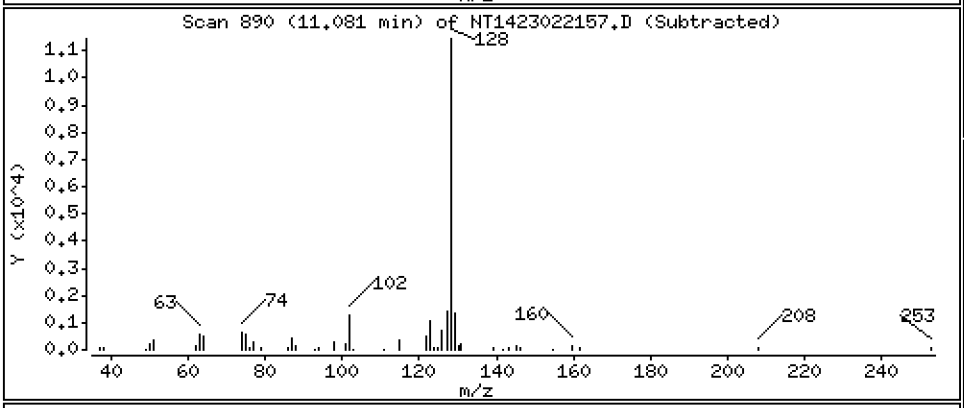
Column phase: ZB-5msi

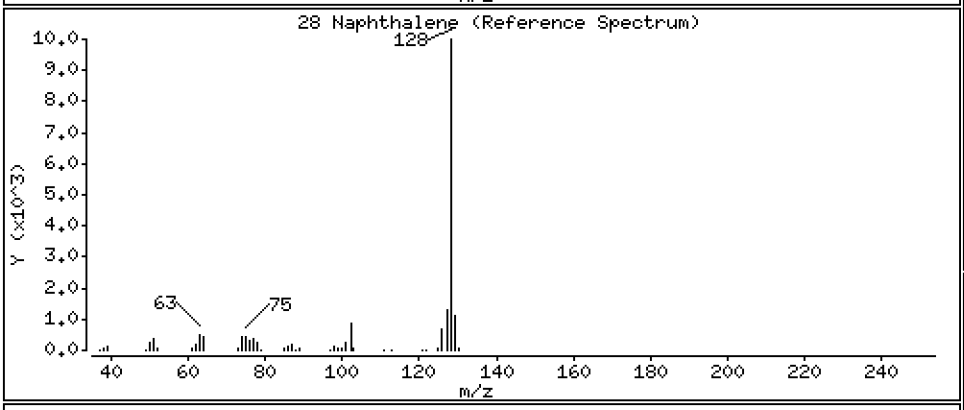
Column diameter: 0.25

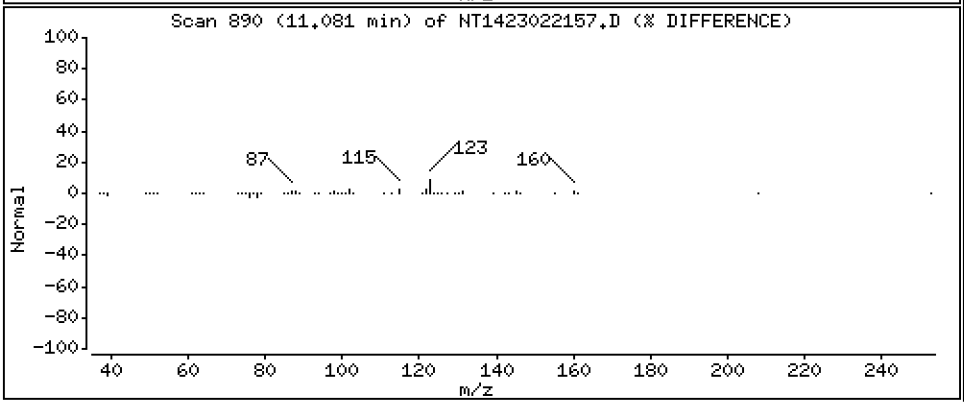
28 Naphthalene

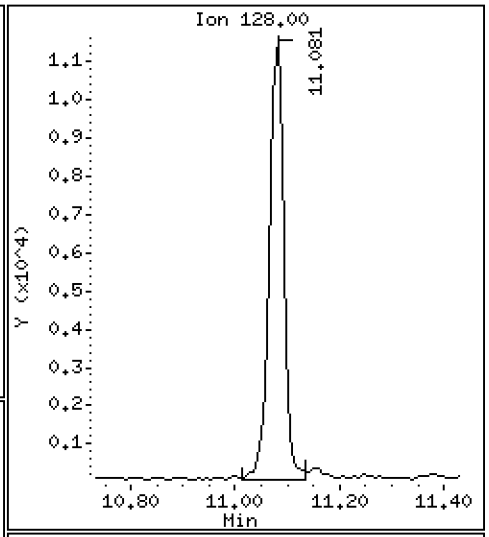
Concentration: 0.09792 ug/mL

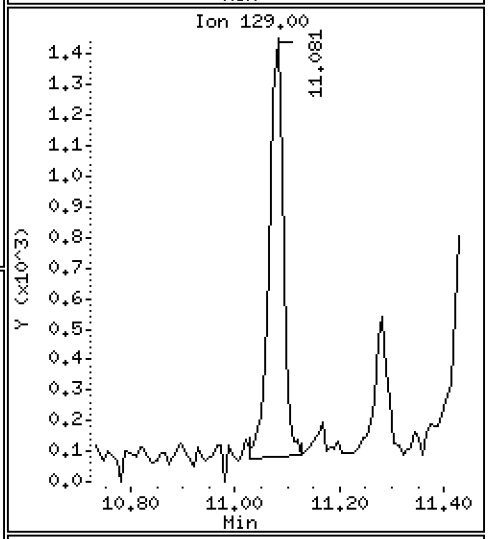


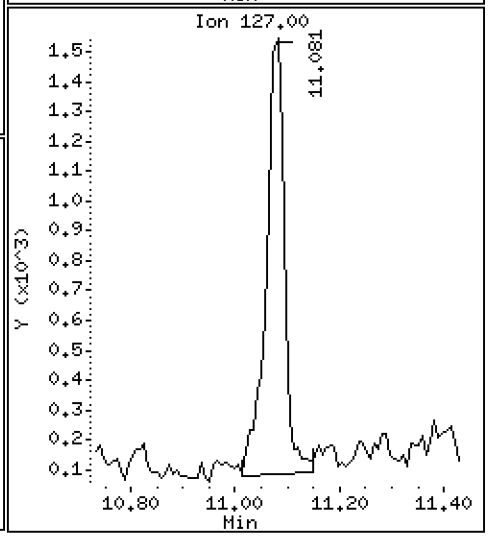












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022157.D

Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

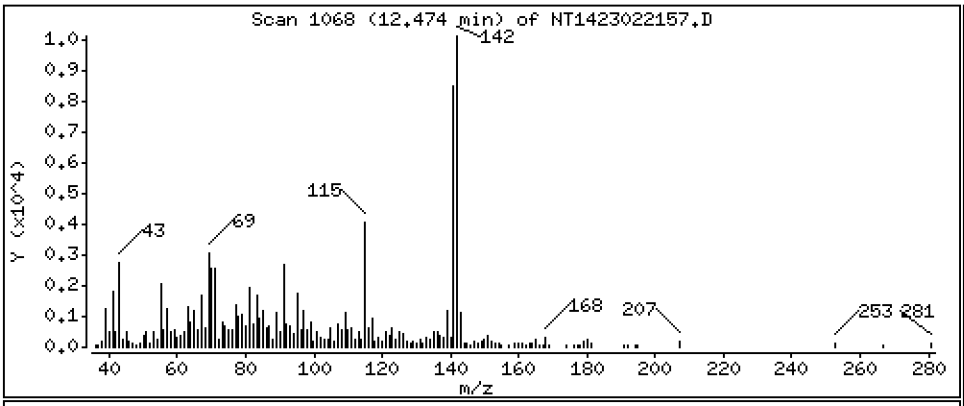
Operator: DSD

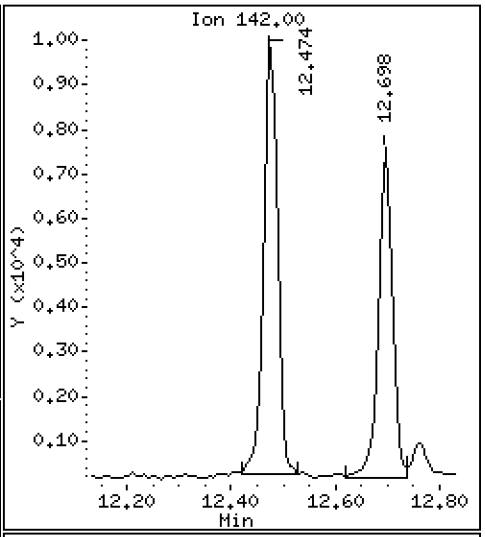
Column phase: ZB-5msi

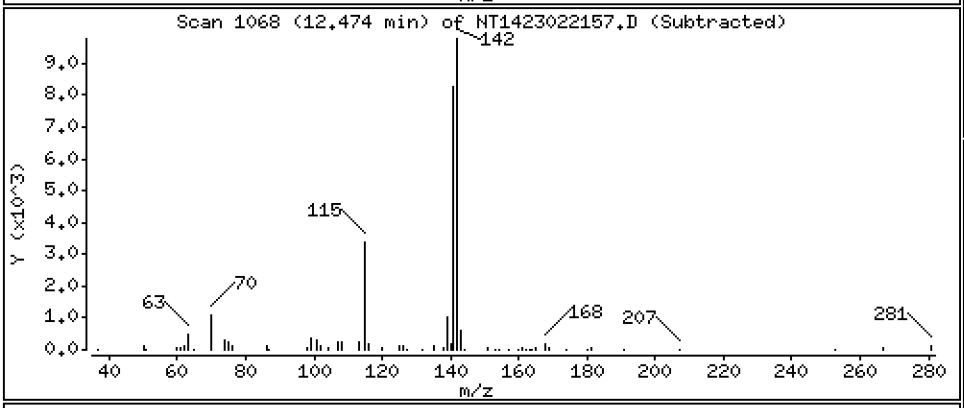
Column diameter: 0.25

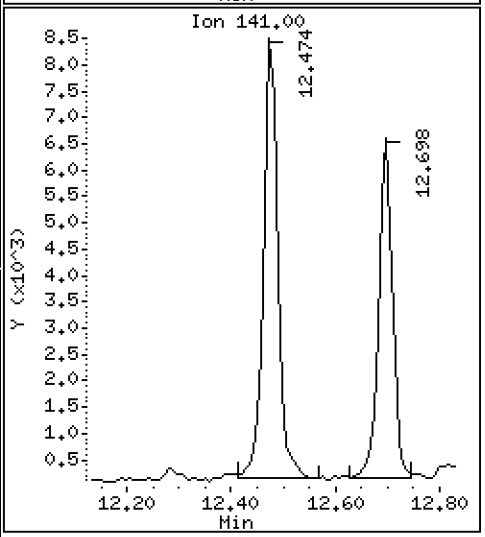
32 2-Methylnaphthalene

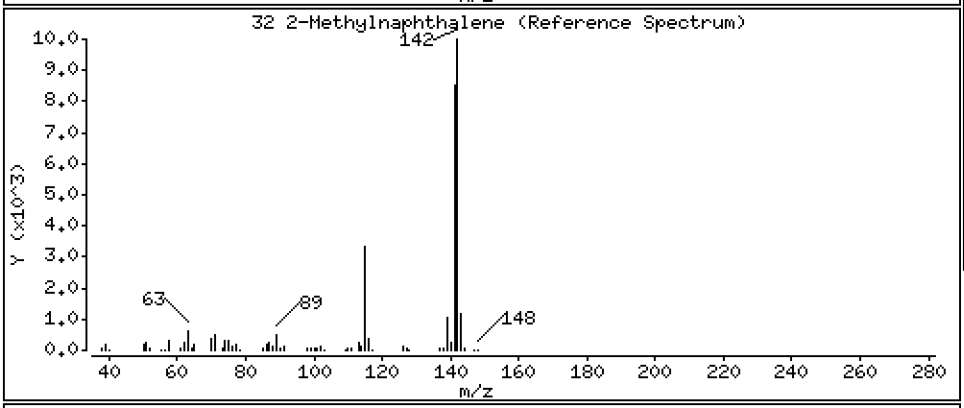
Concentration: 0.1060 ug/mL

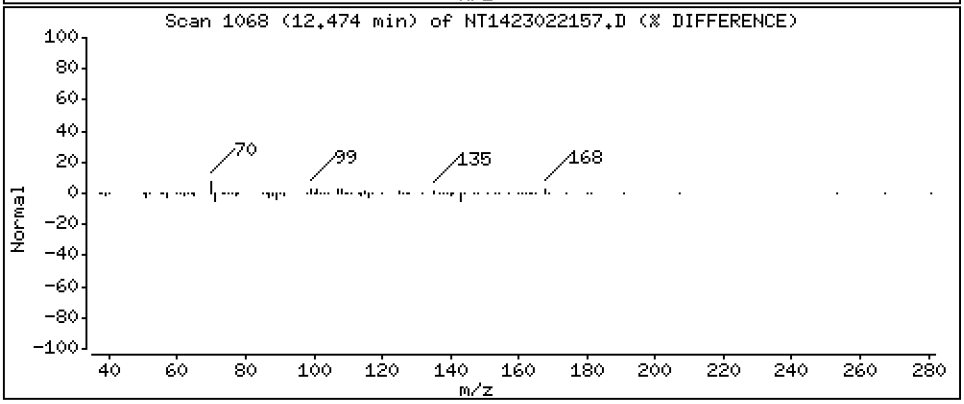












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022157.D

Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

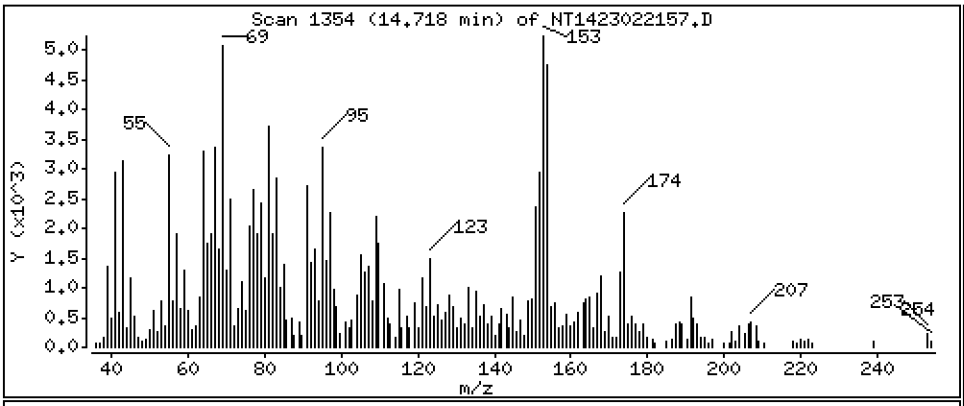
Operator: DSD

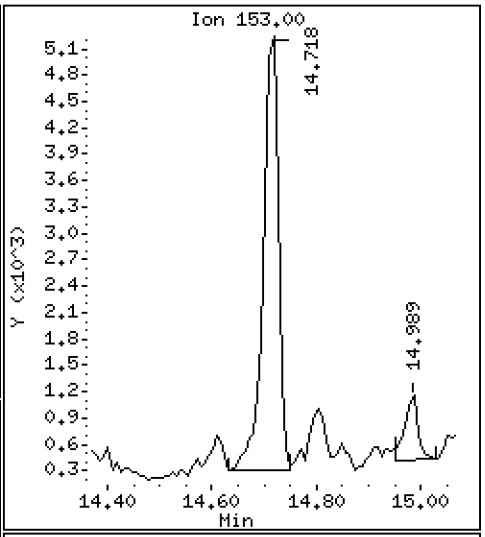
Column phase: ZB-5msi

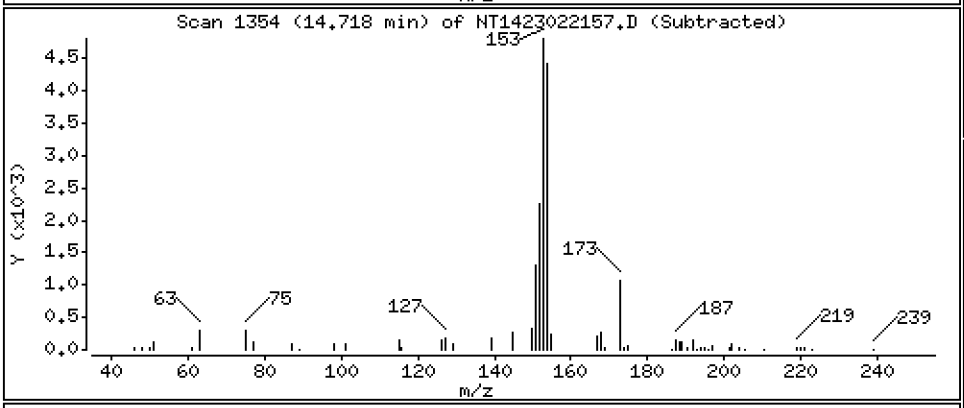
Column diameter: 0.25

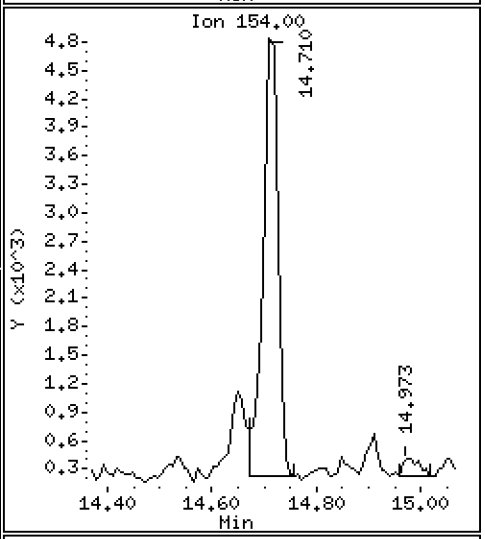
44 Acenaphthene

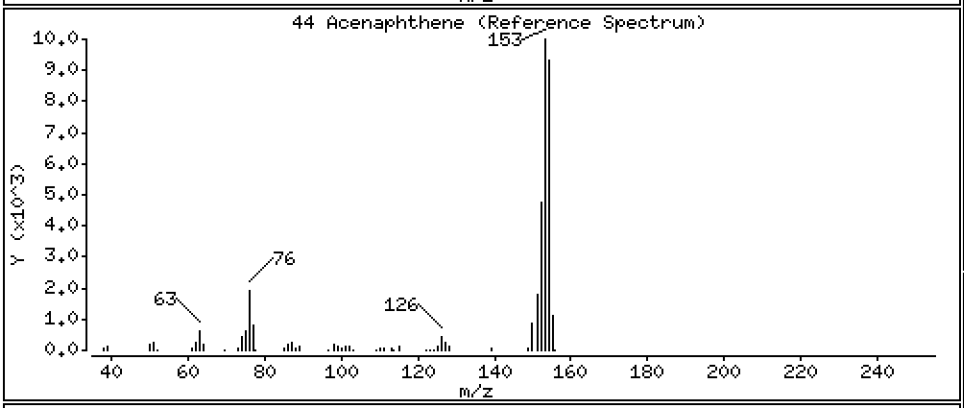
Concentration: 0.07060 ug/mL

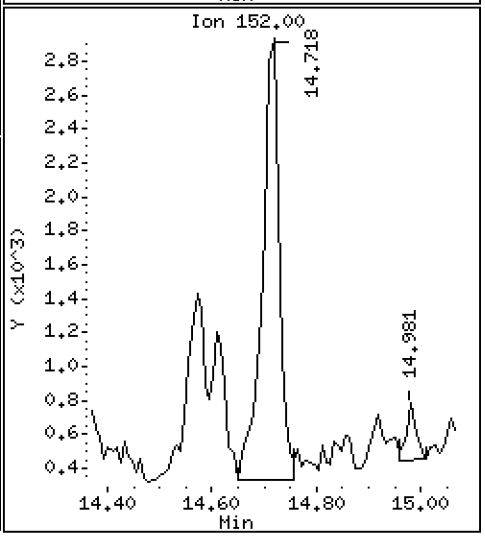


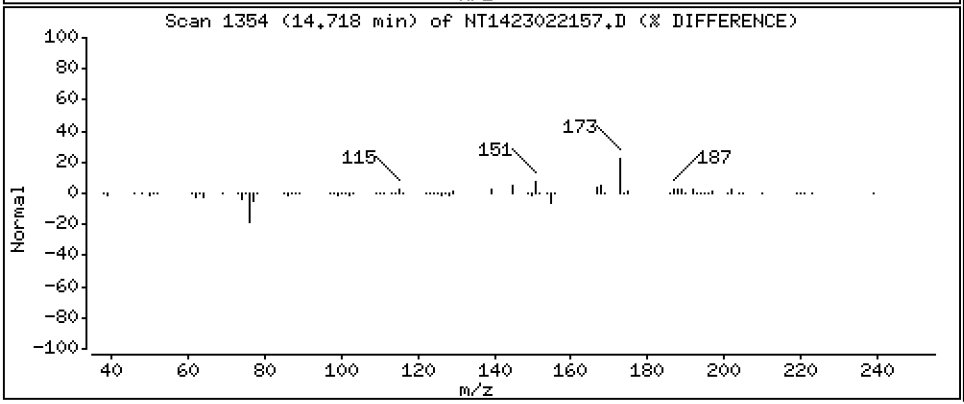












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

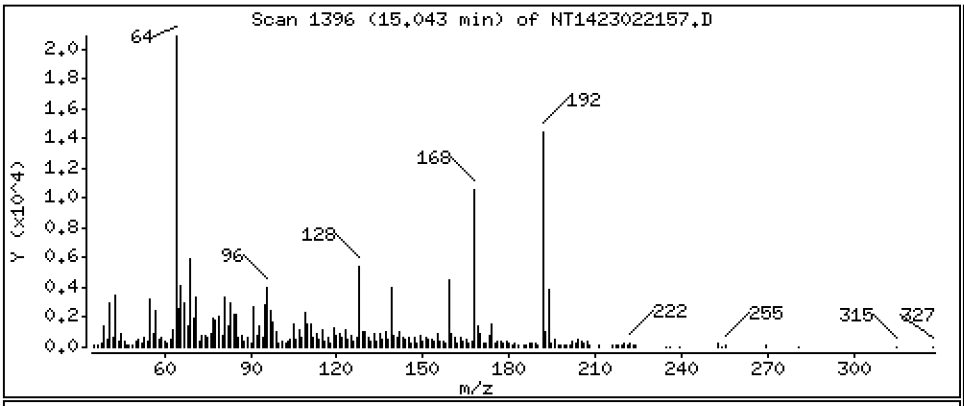
Operator: DSD

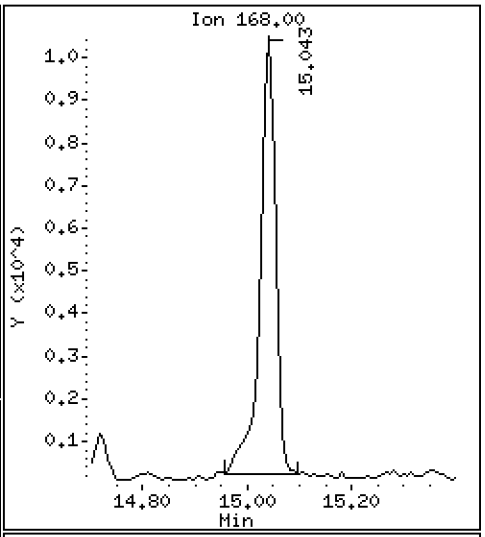
Column phase: ZB-5msi

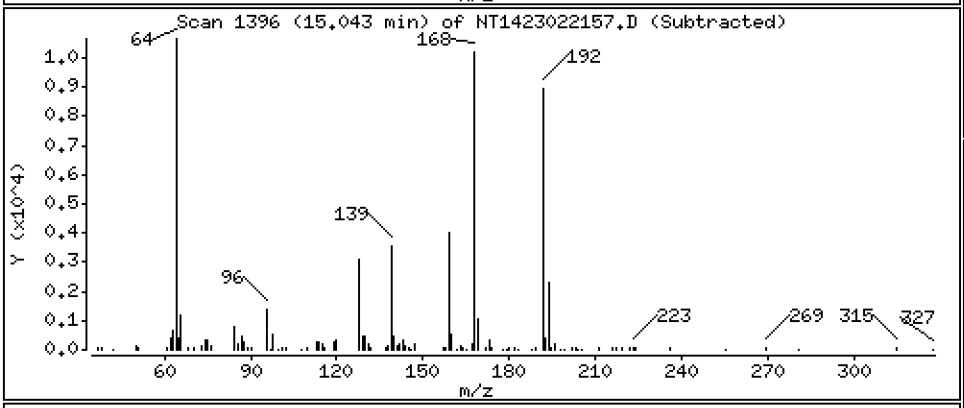
Column diameter: 0.25

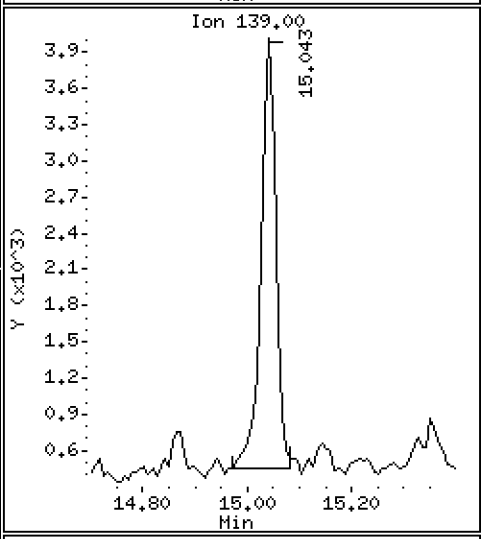
46 Dibenzofuran

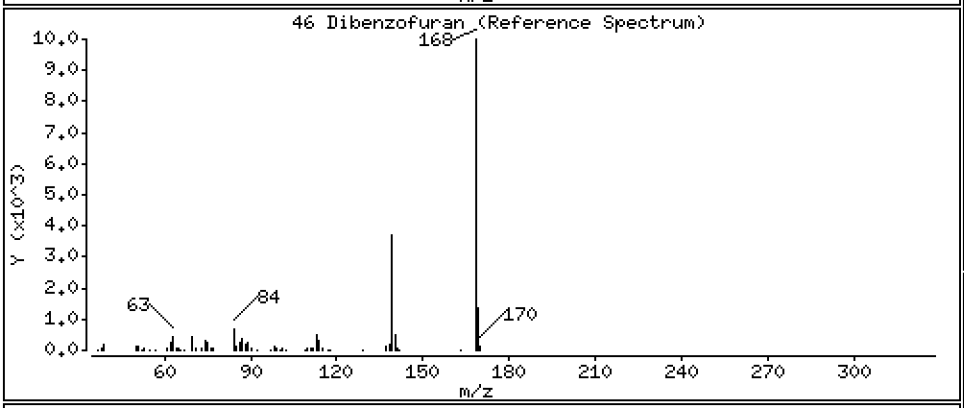
Concentration: 0.09088 ug/mL

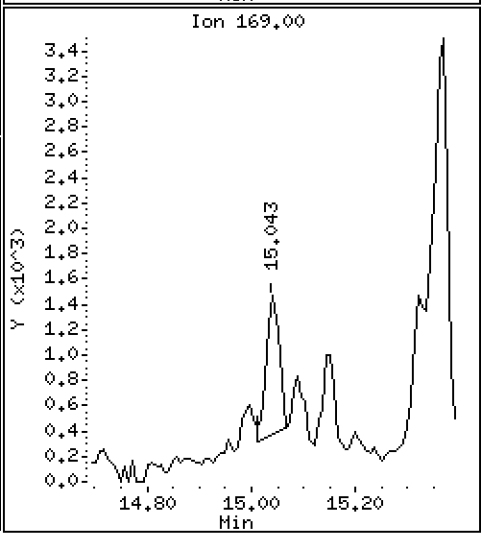


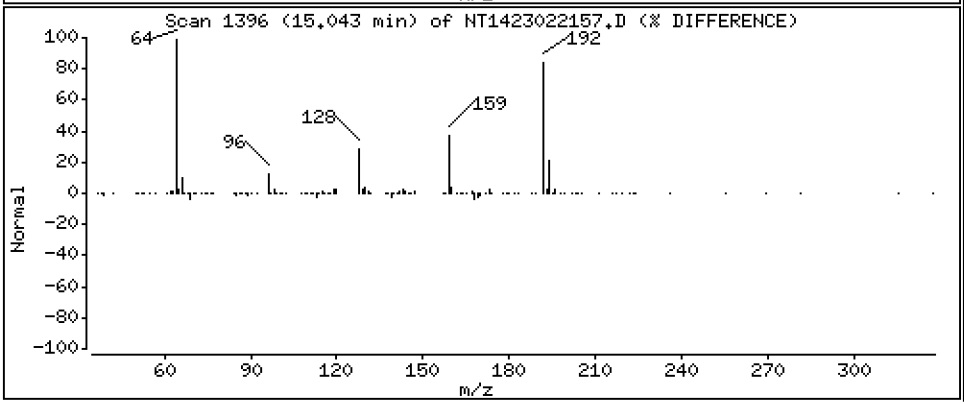












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

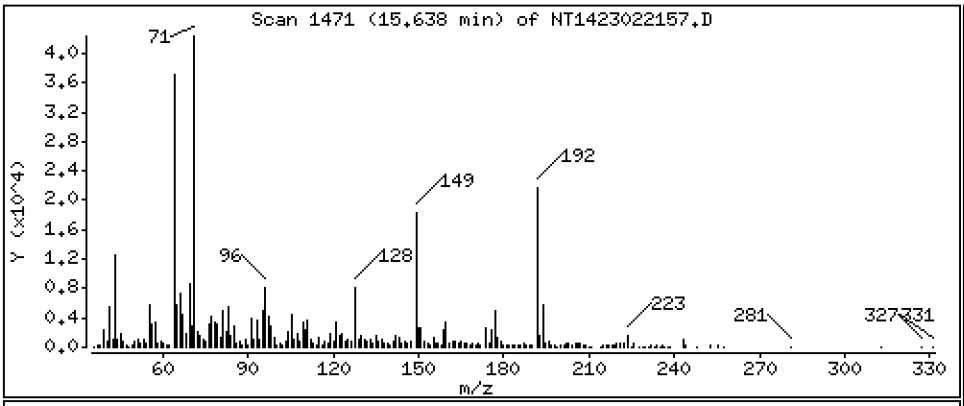
Operator: DSD

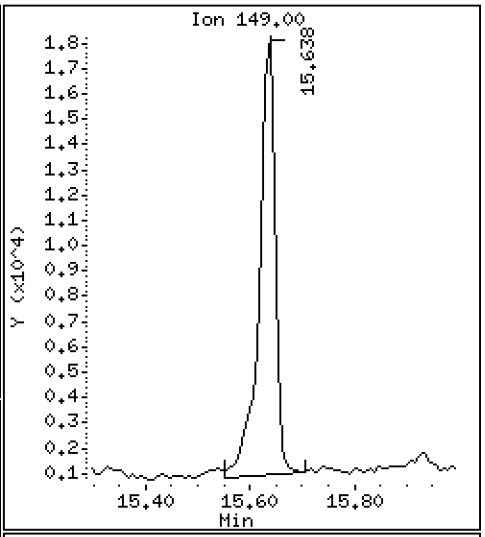
Column phase: ZB-5msi

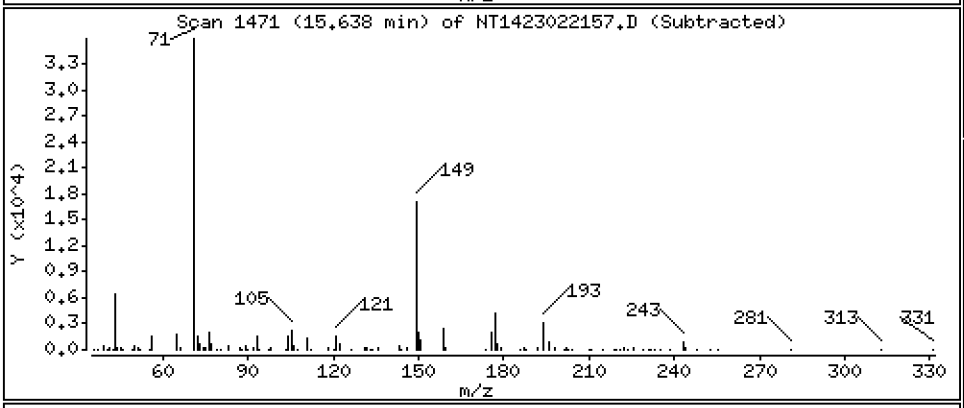
Column diameter: 0.25

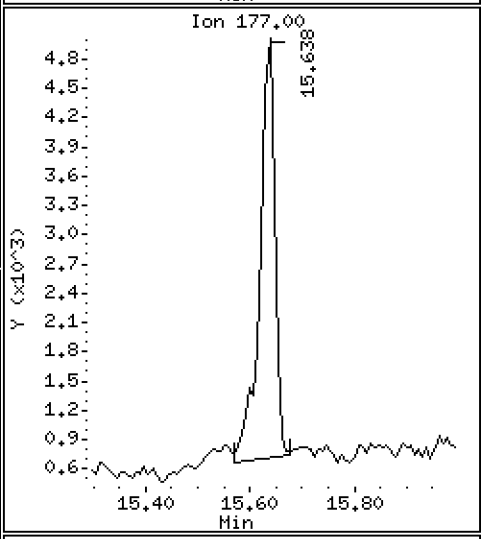
50 Diethylphthalate

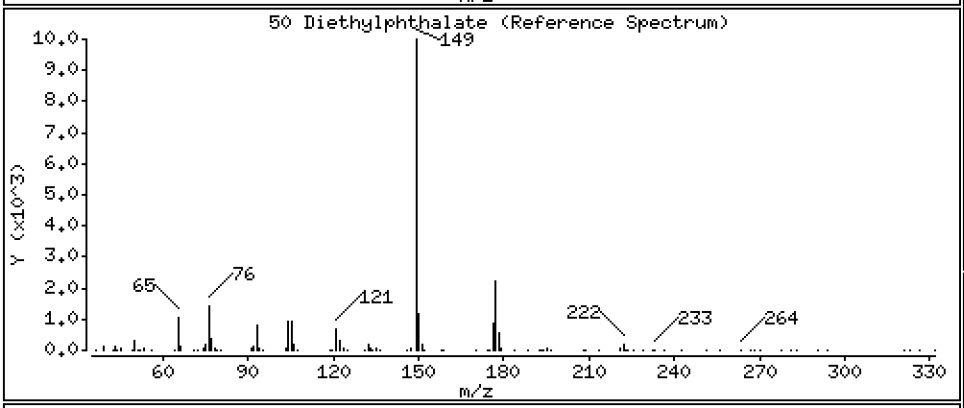
Concentration: 0.1859 ug/mL

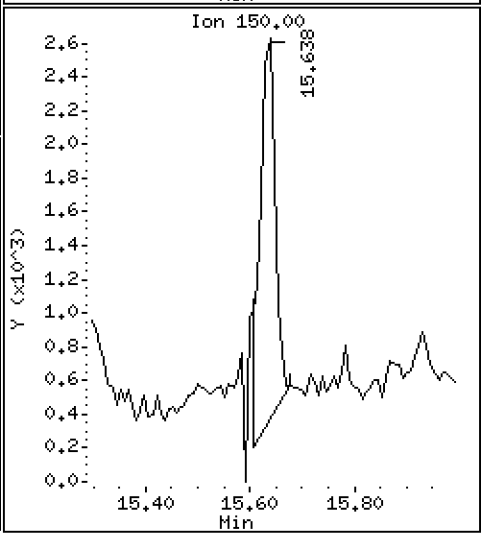


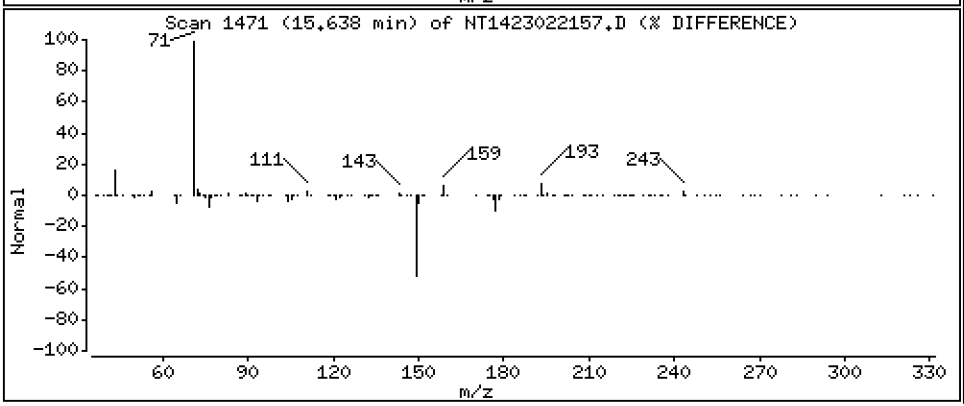












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

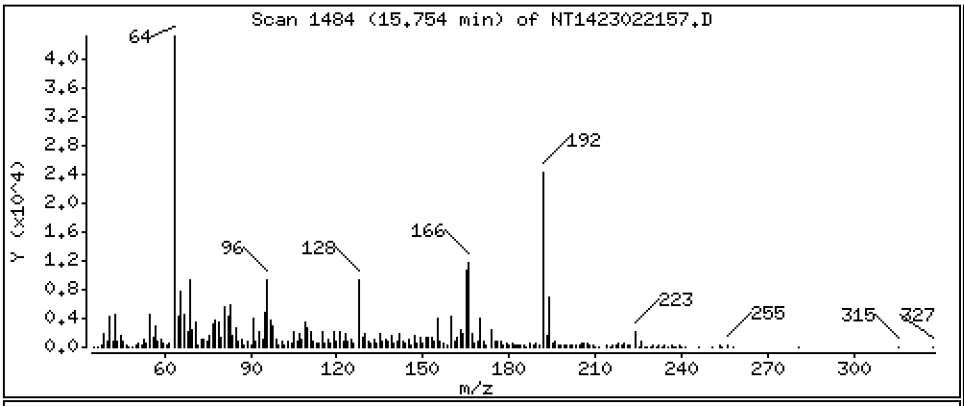
Operator: DSD

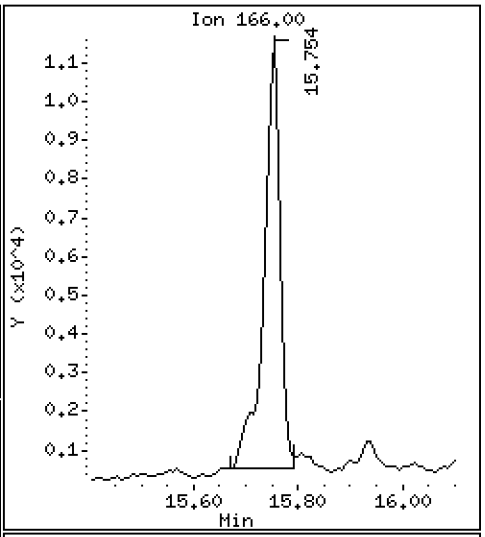
Column phase: ZB-5msi

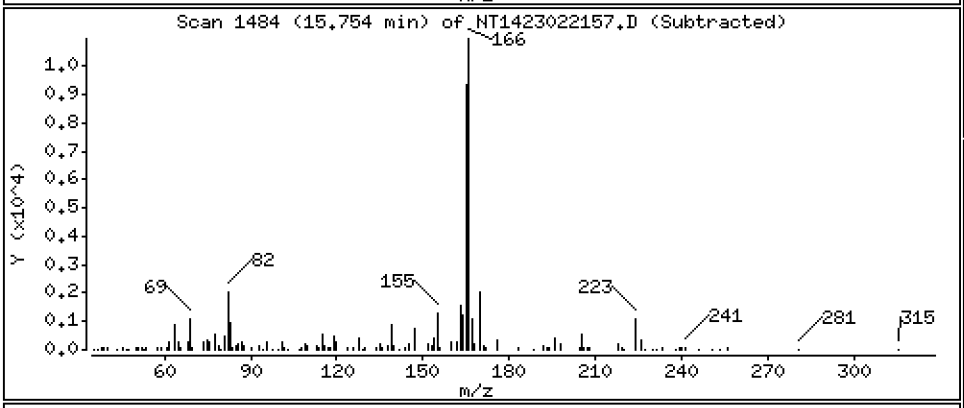
Column diameter: 0.25

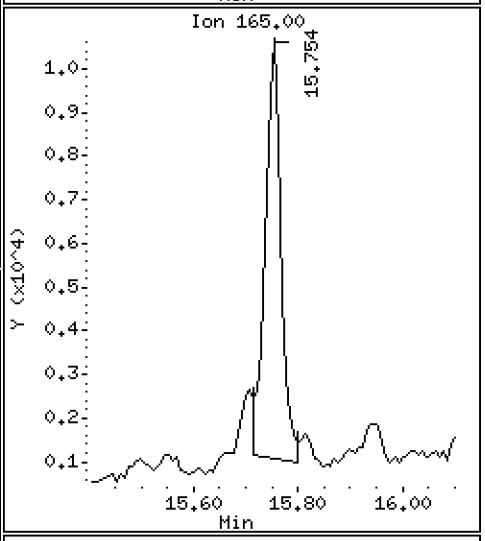
49 Fluorene

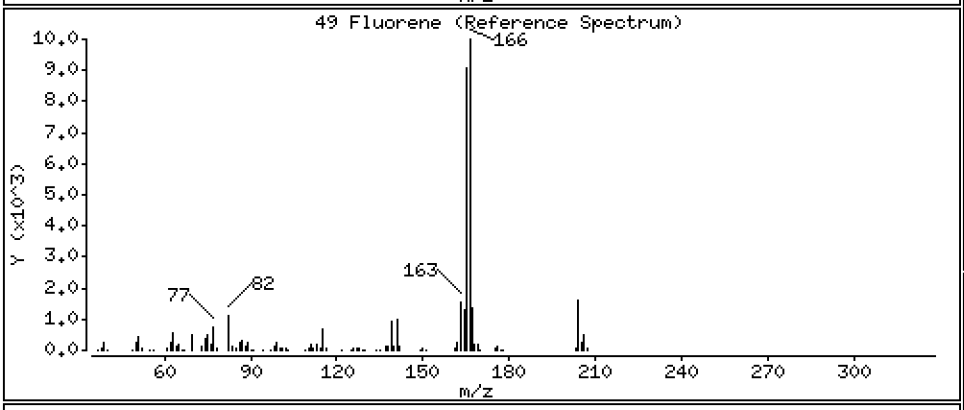
Concentration: 0.1103 ug/mL

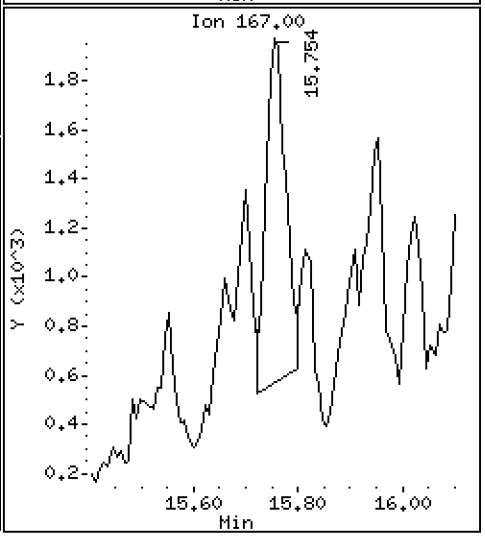


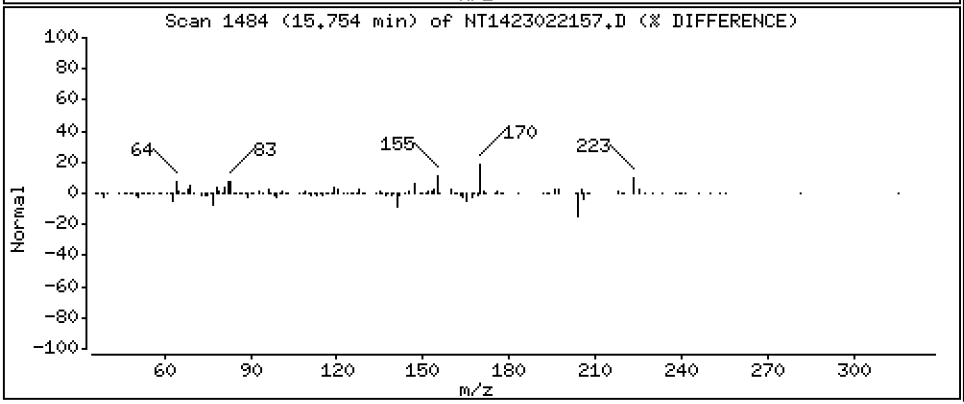












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

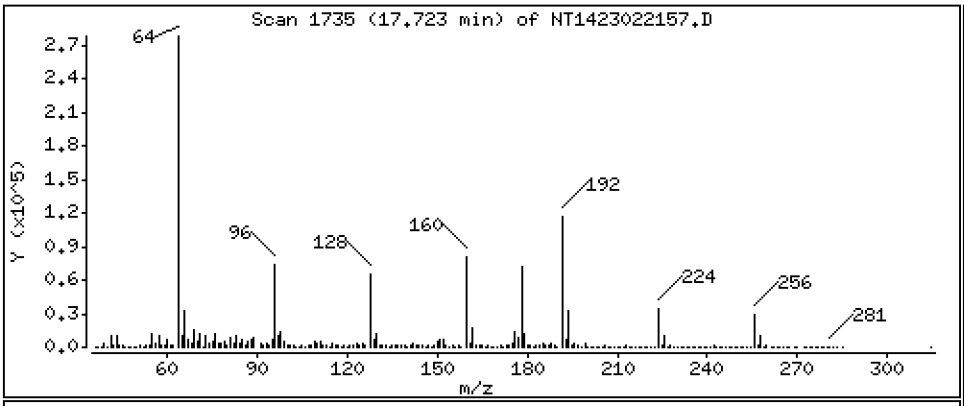
Operator: DSD

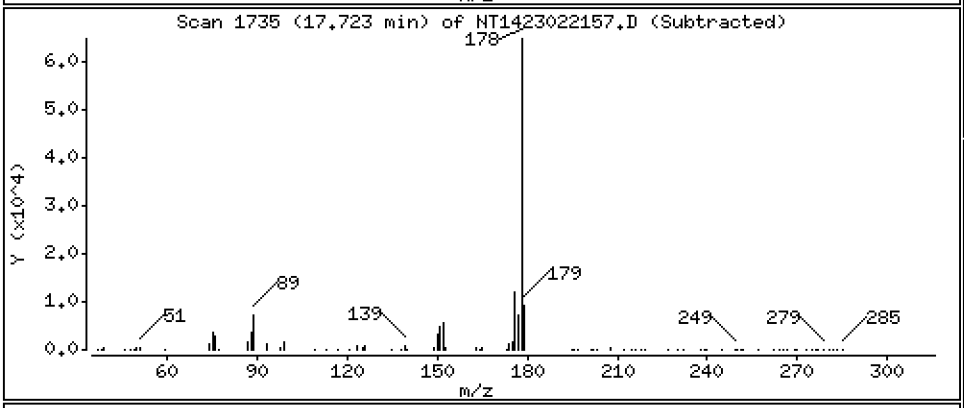
Column phase: ZB-5msi

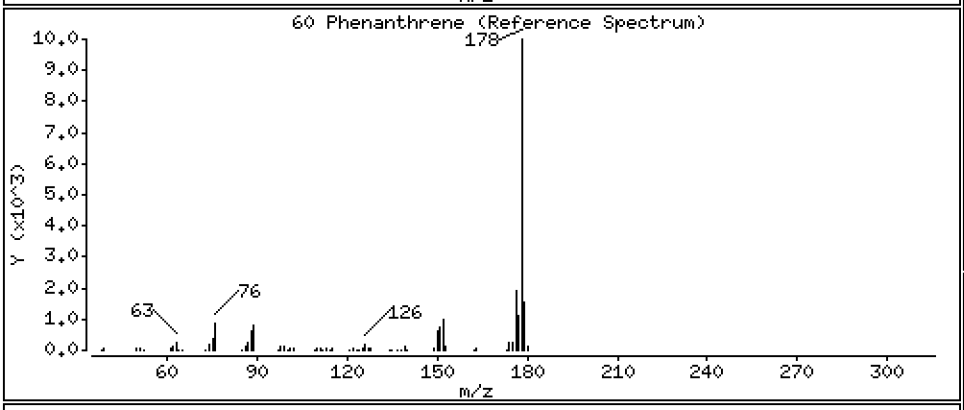
Column diameter: 0.25

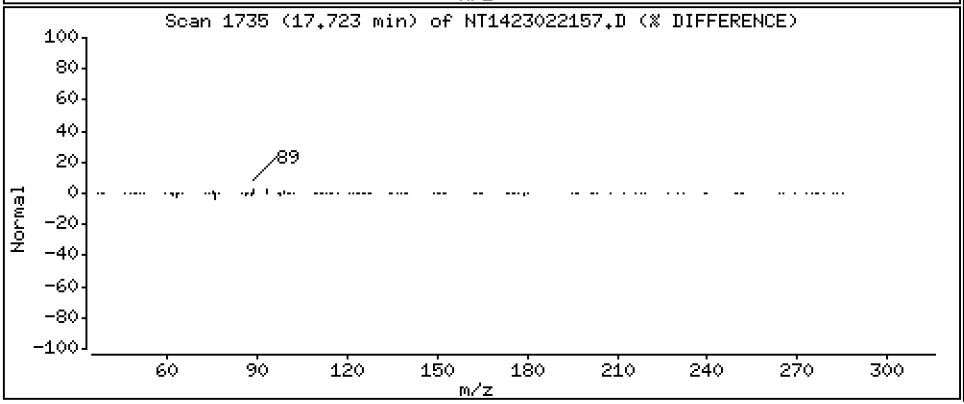
60 Phenanthrene

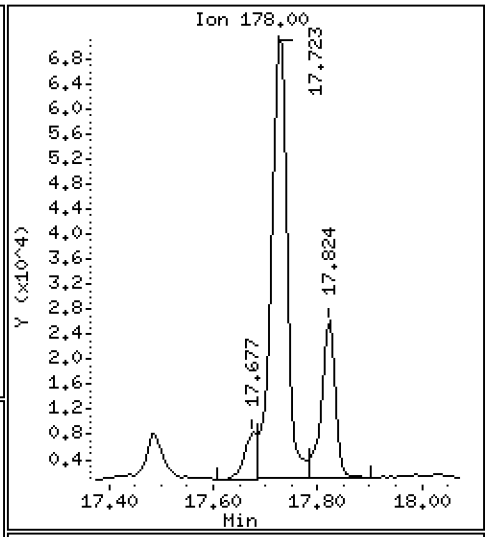
Concentration: 0.6482 ug/mL

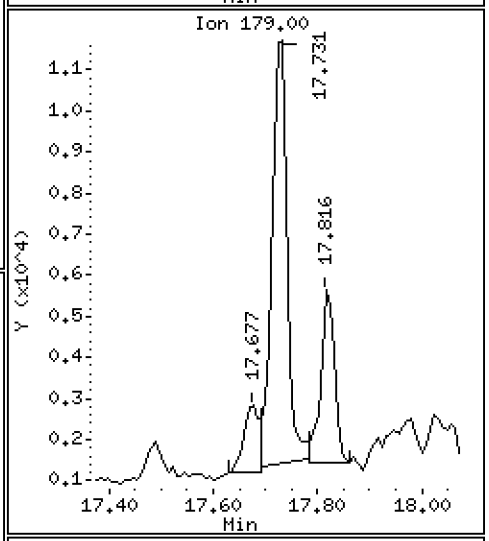


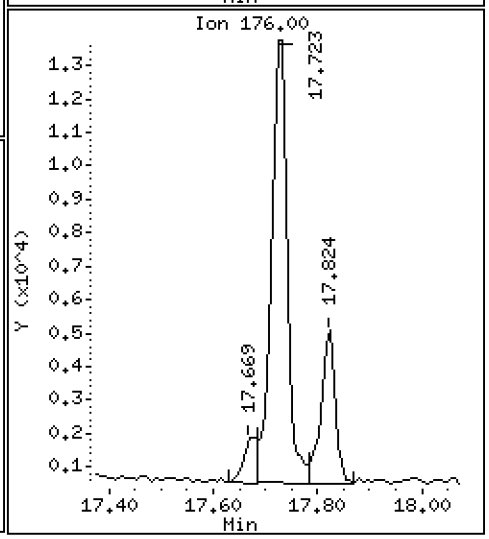












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

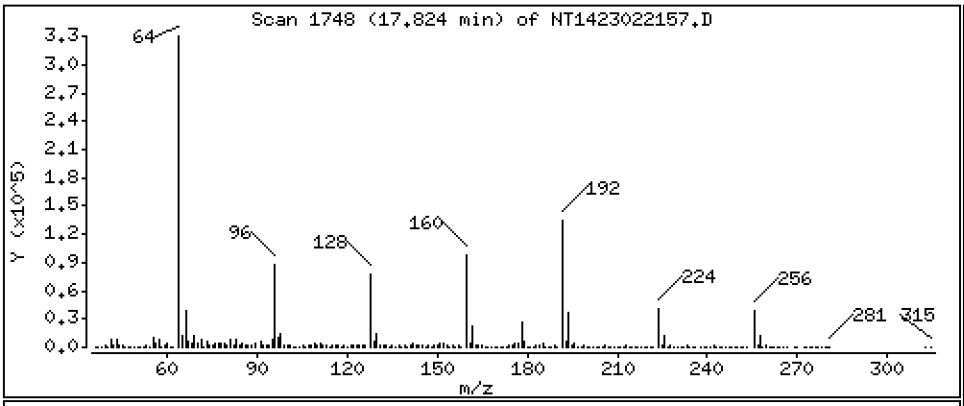
Operator: DSD

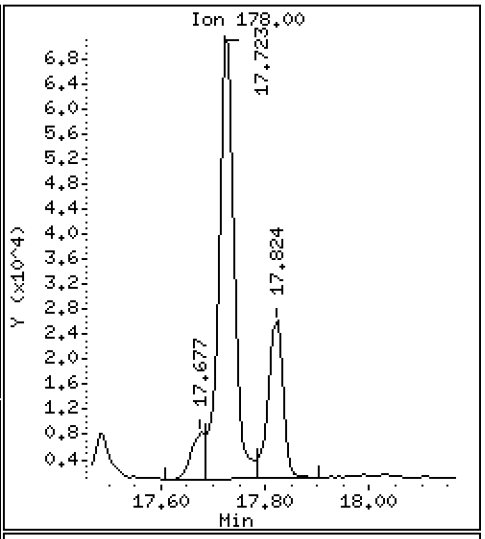
Column phase: ZB-5msi

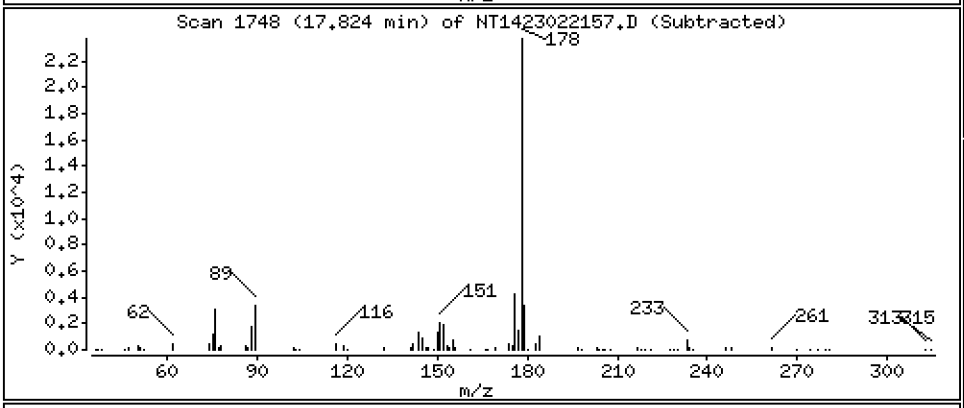
Column diameter: 0.25

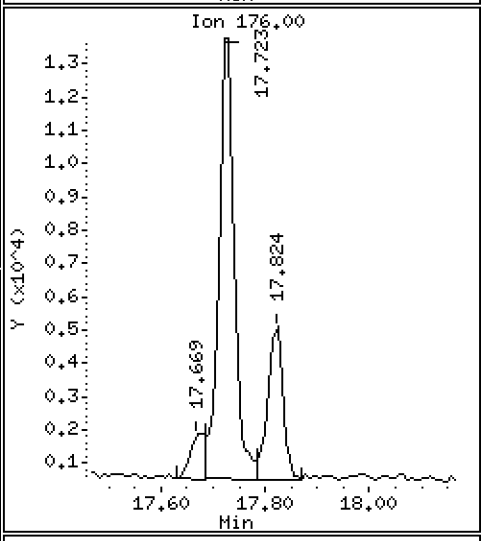
61 Anthracene

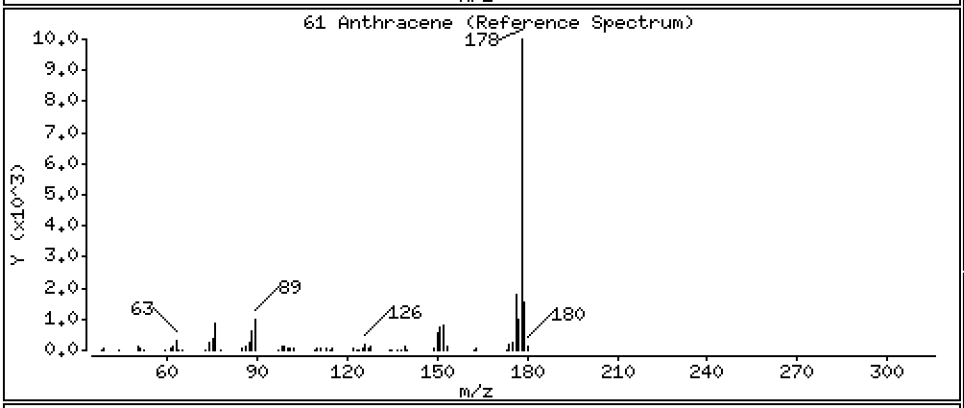
Concentration: 0.2163 ug/mL

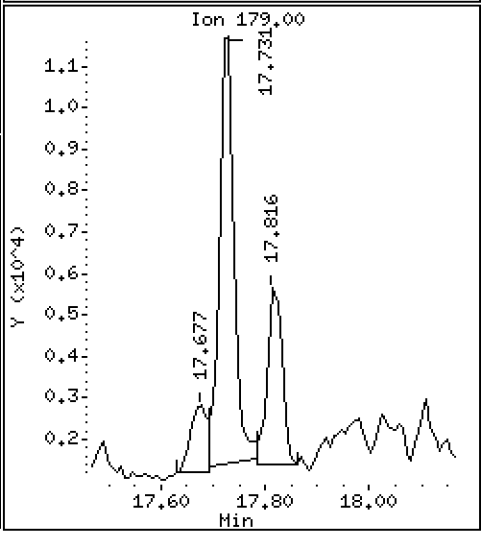


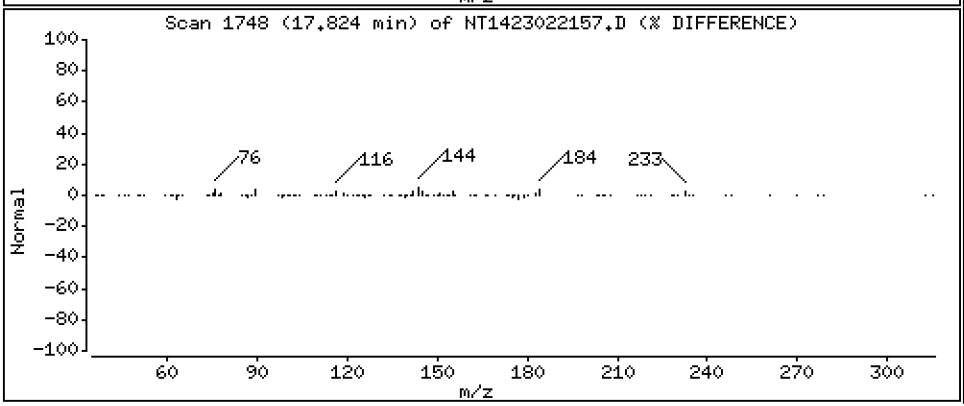












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

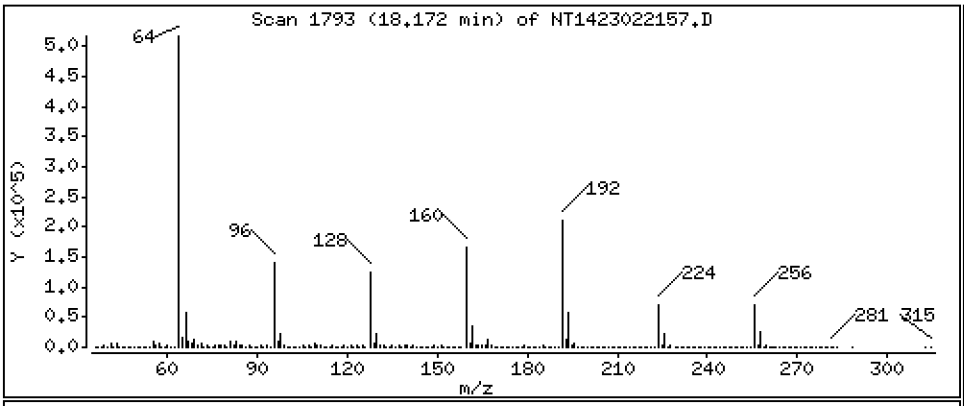
Operator: DSD

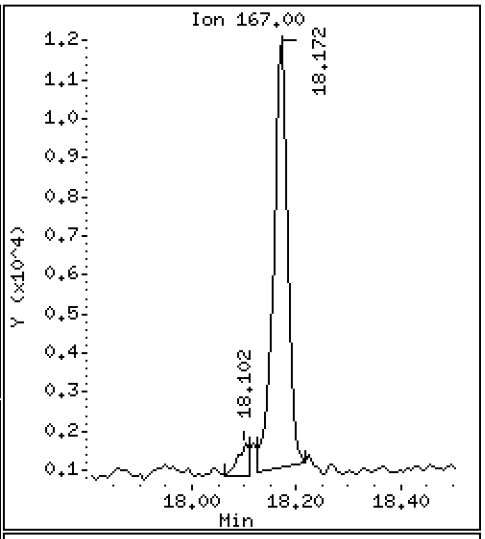
Column phase: ZB-5msi

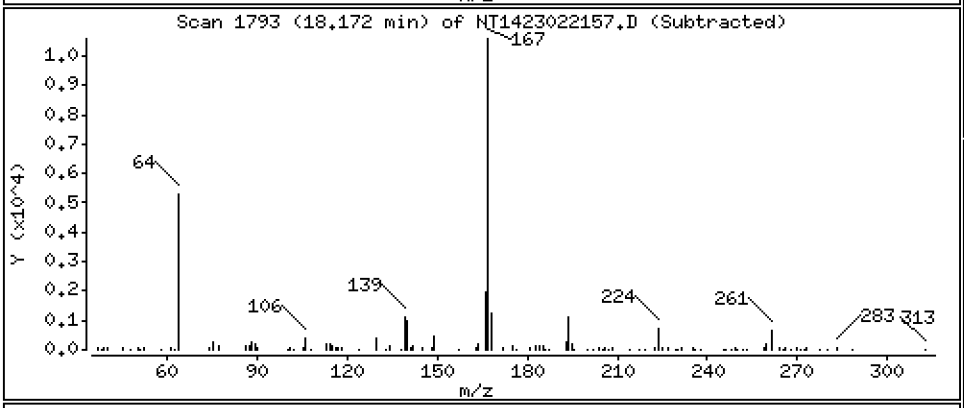
Column diameter: 0.25

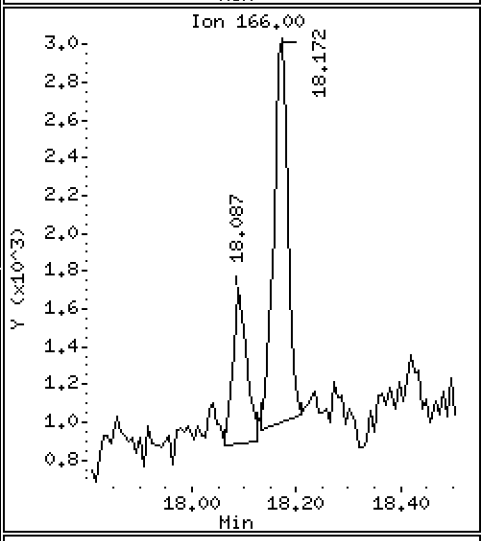
62 Carbazole

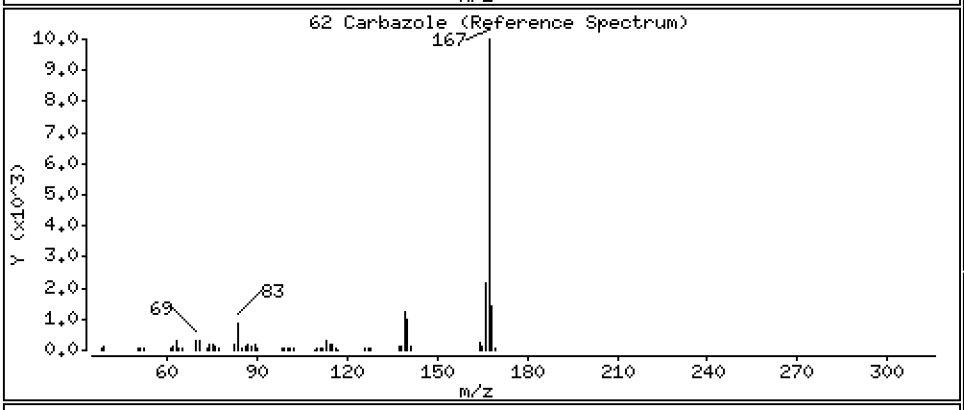
Concentration: 0.1025 ug/mL

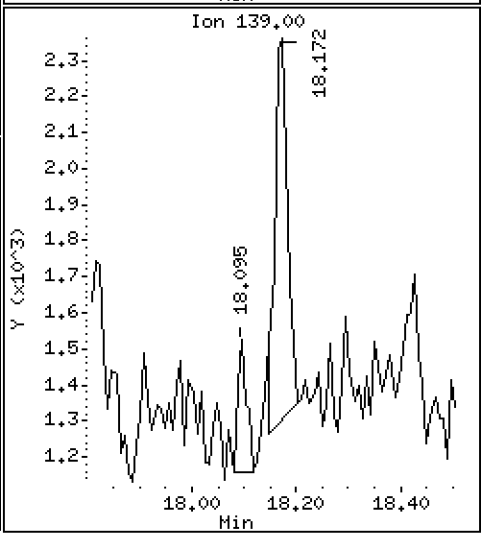


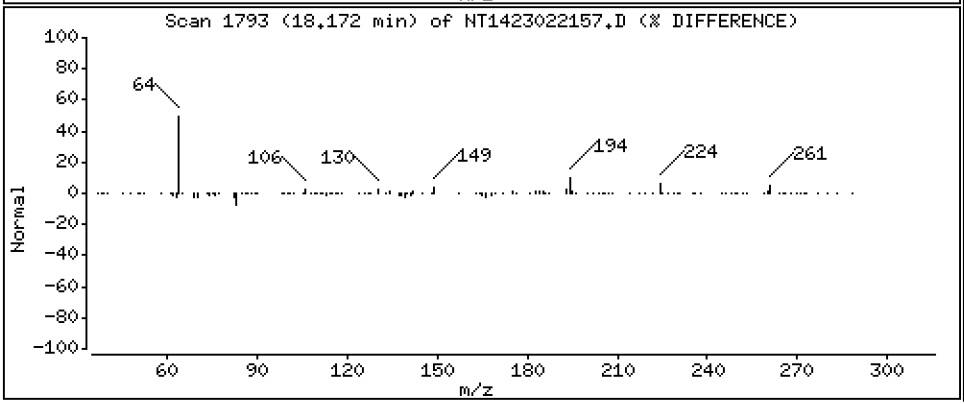












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022157.D

Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

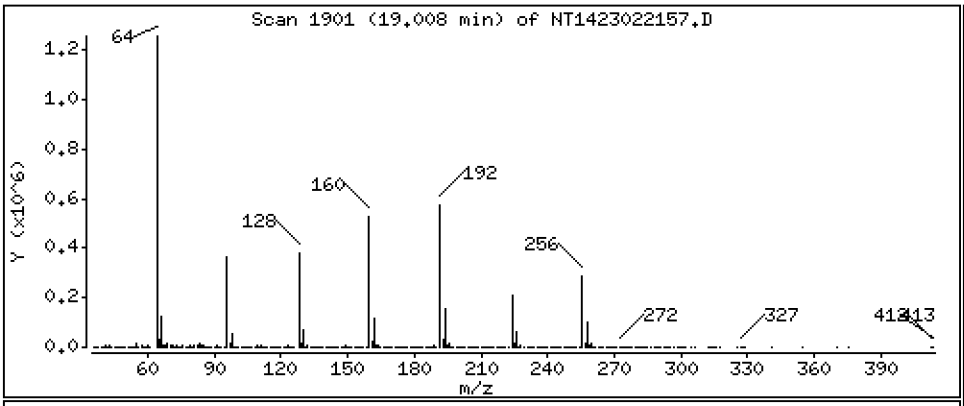
Operator: DSD

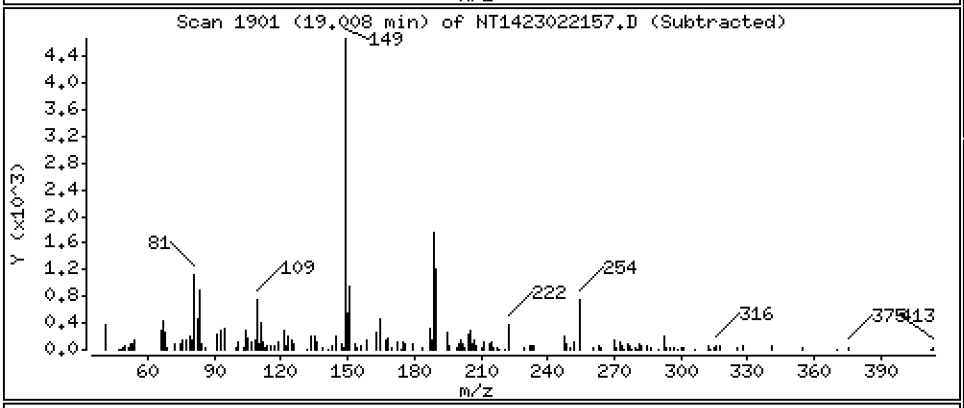
Column phase: ZB-5msi

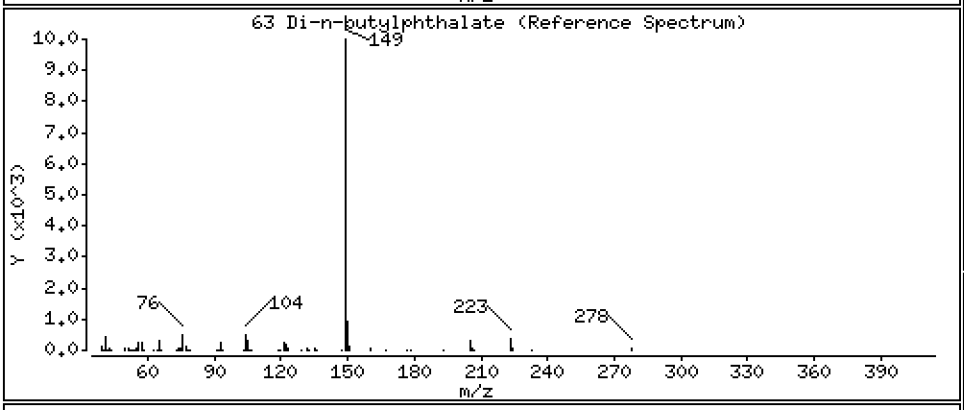
Column diameter: 0.25

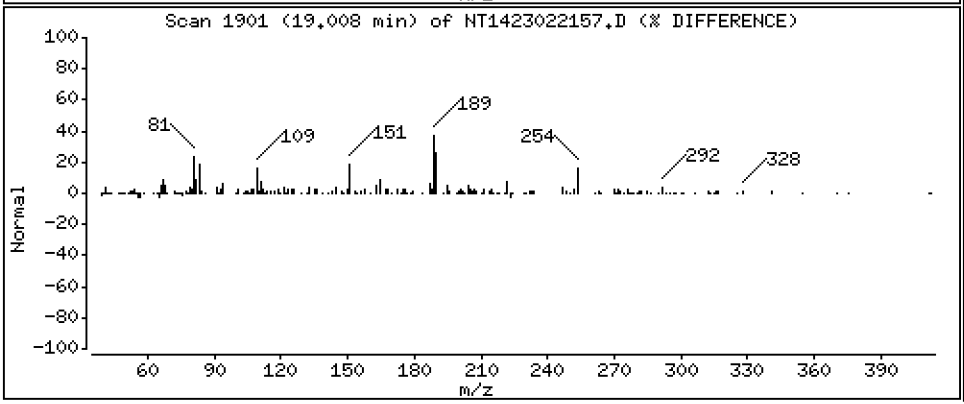
63 Di-n-butylphthalate

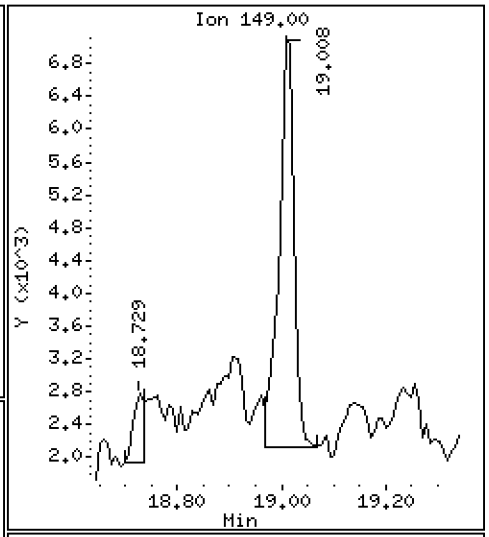
Concentration: 0.04488 ug/mL

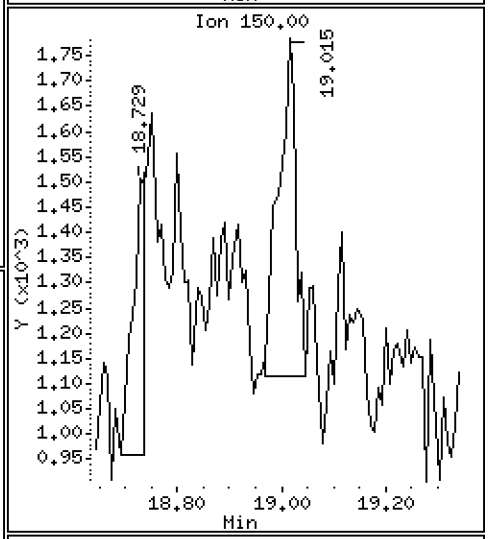


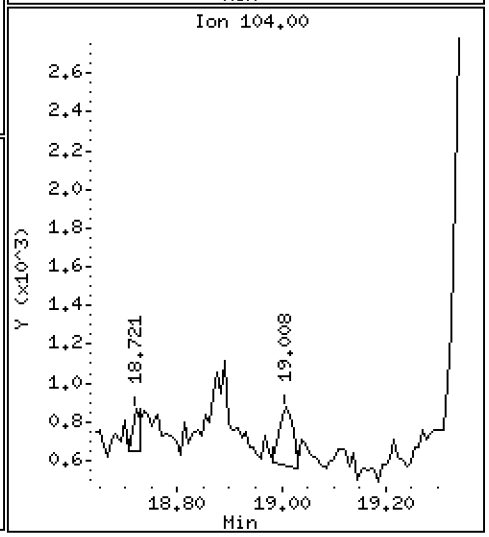












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

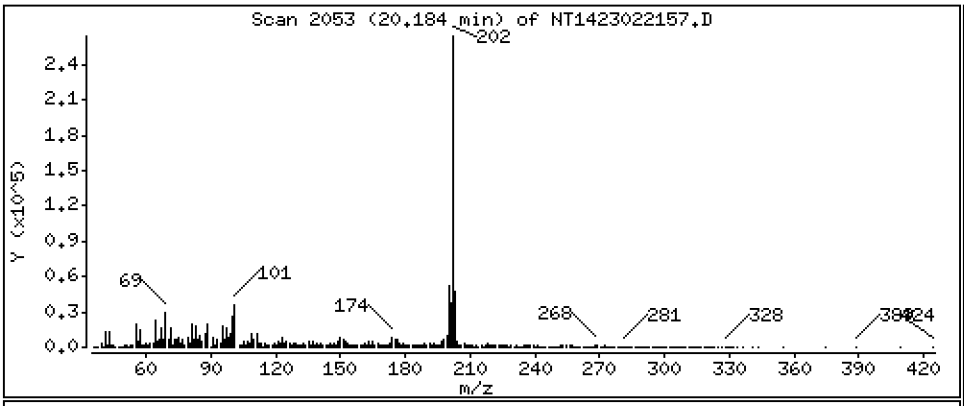
Operator: DSD

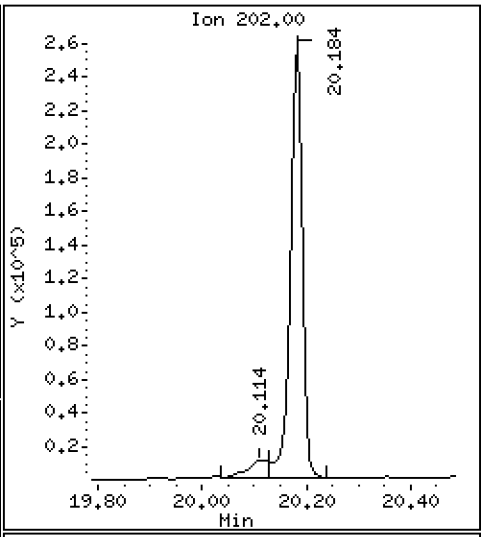
Column phase: ZB-5msi

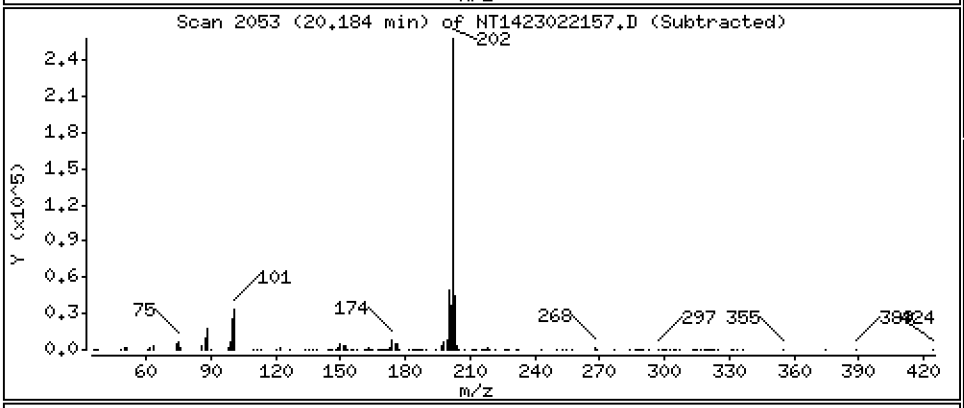
Column diameter: 0.25

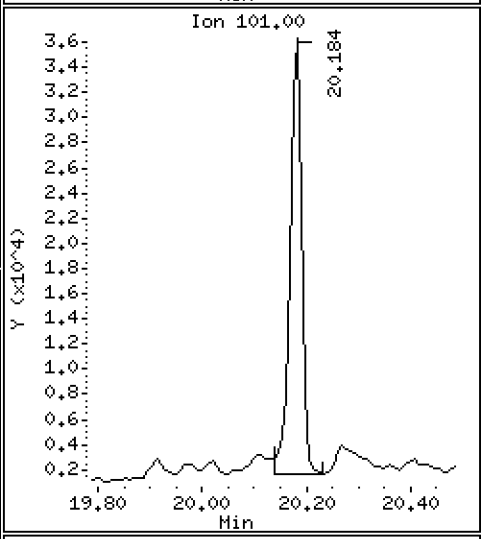
64 Fluoranthene

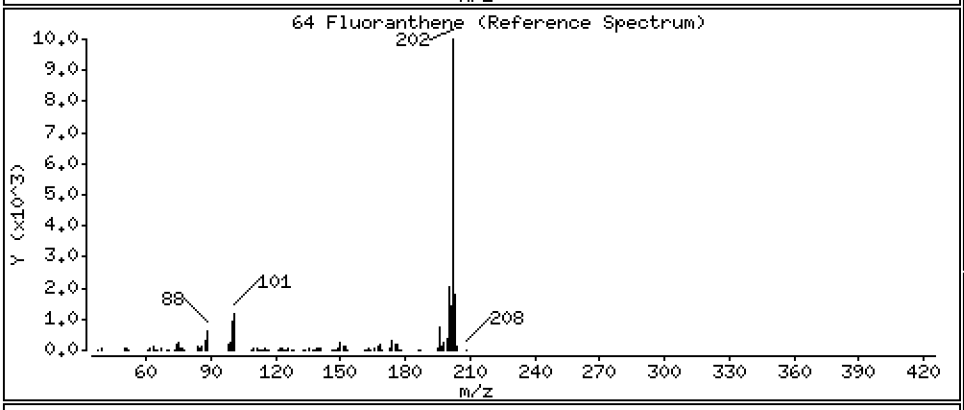
Concentration: 1.669 ug/mL

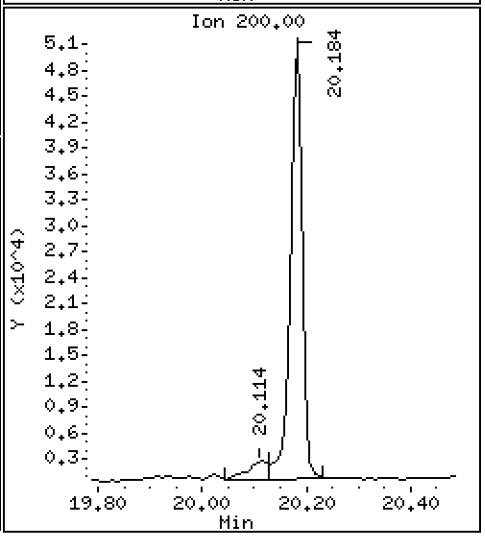


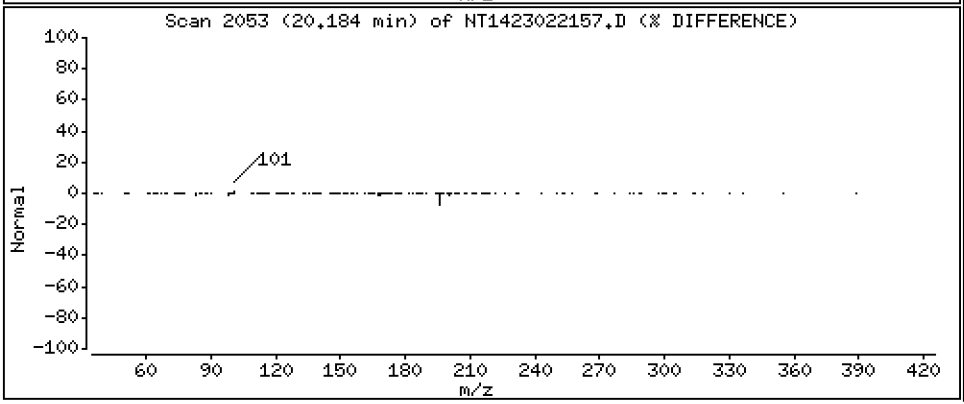












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

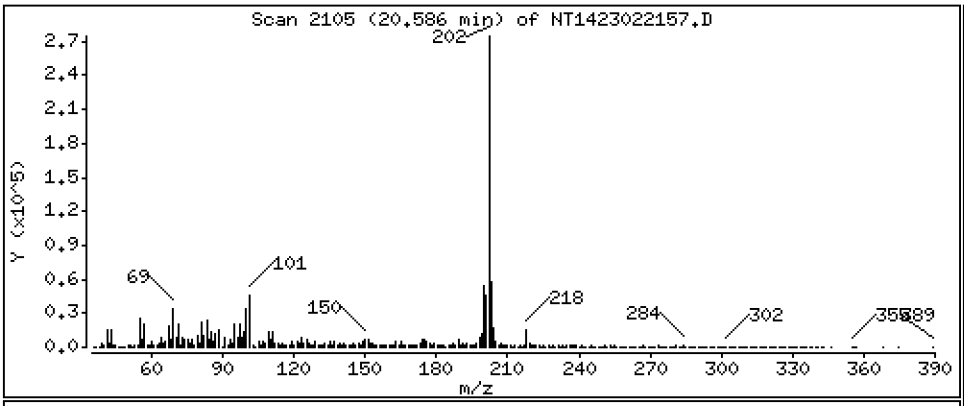
Operator: DSD

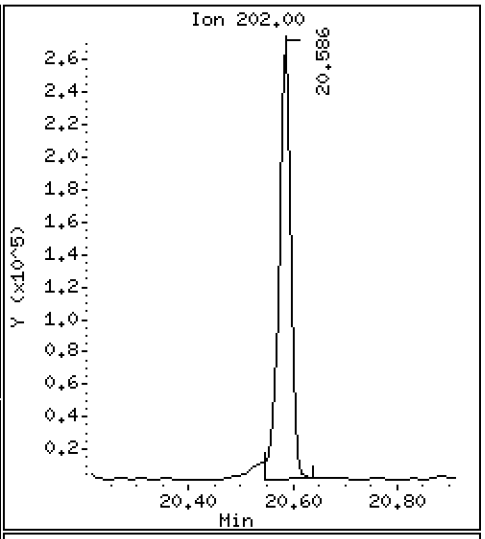
Column phase: ZB-5msi

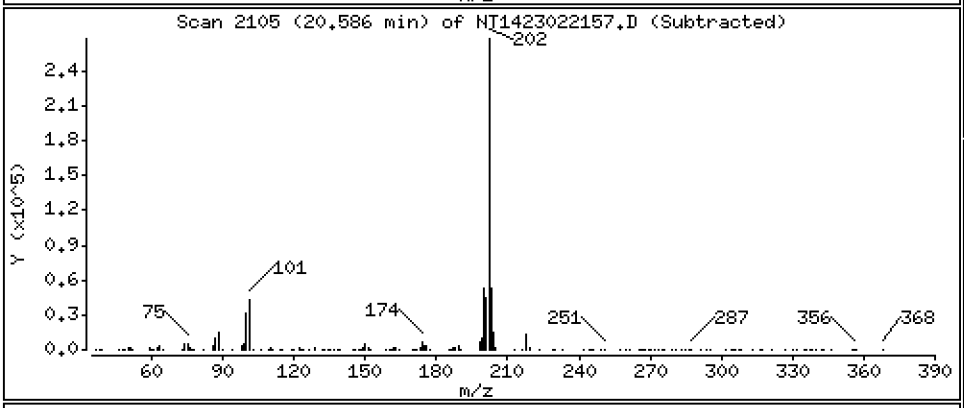
Column diameter: 0.25

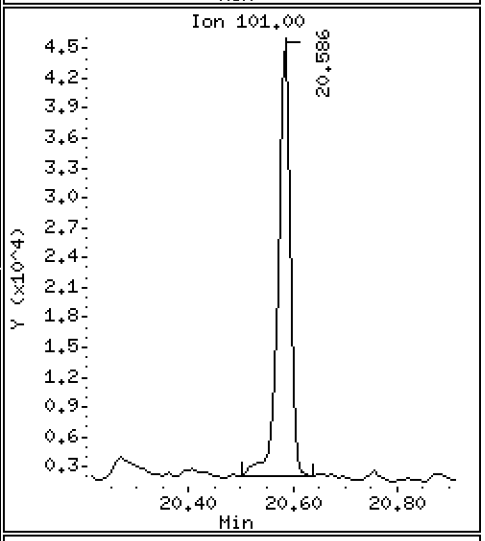
65 Pyrene

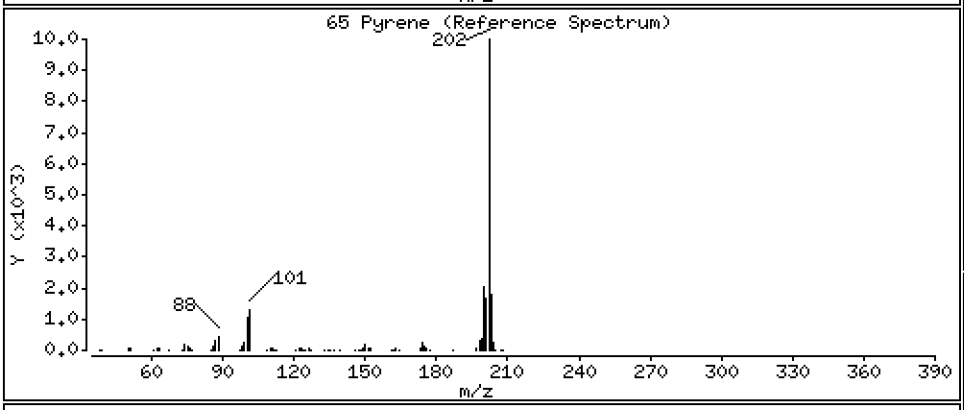
Concentration: 1.558 ug/mL

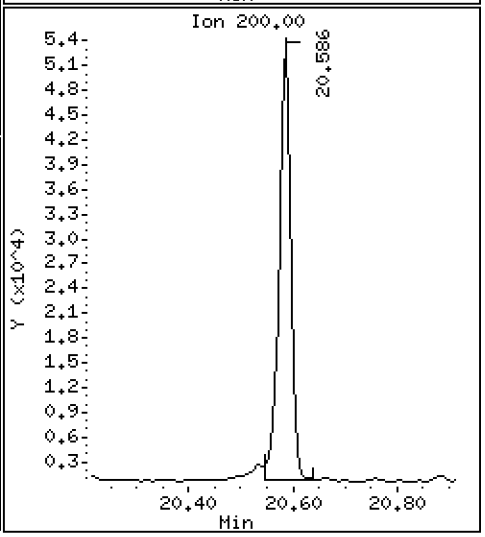


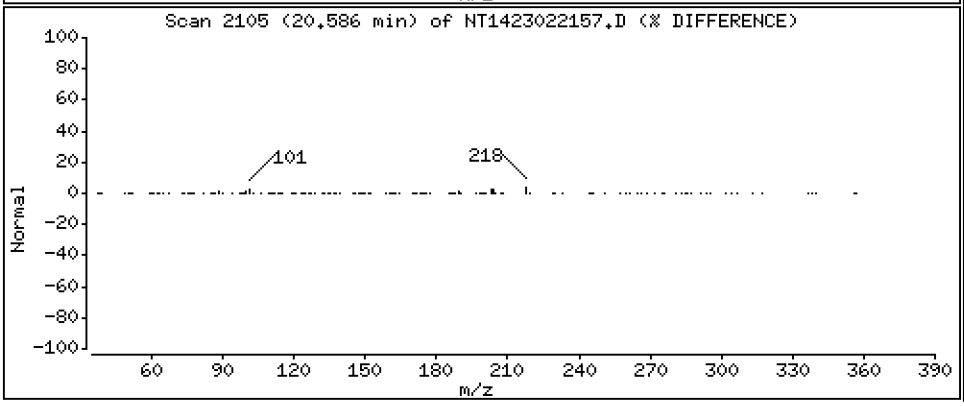












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

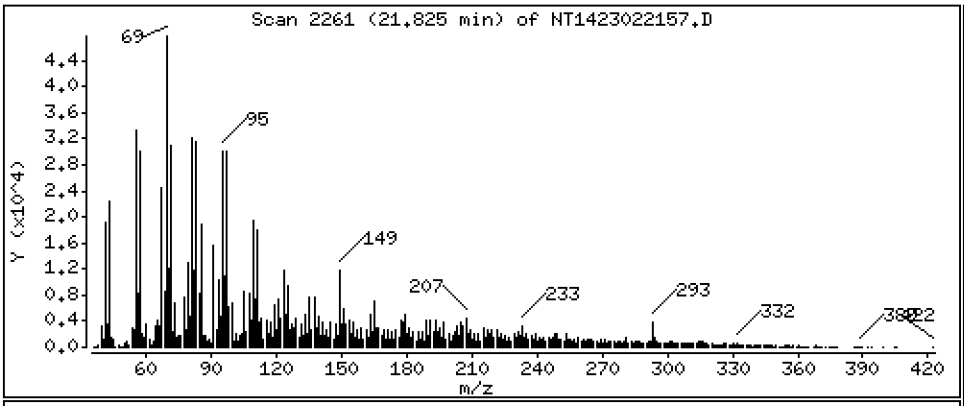
Operator: DSD

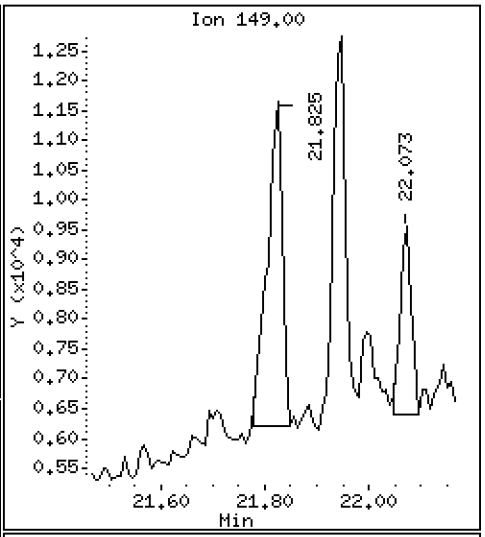
Column phase: ZB-5msi

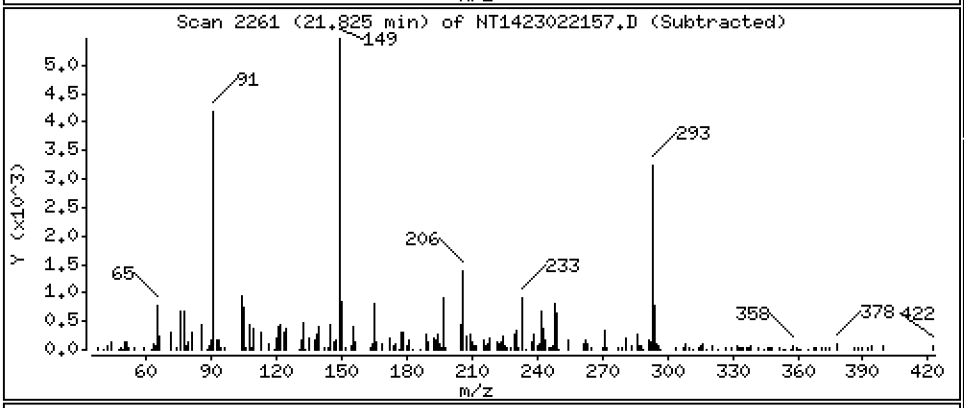
Column diameter: 0.25

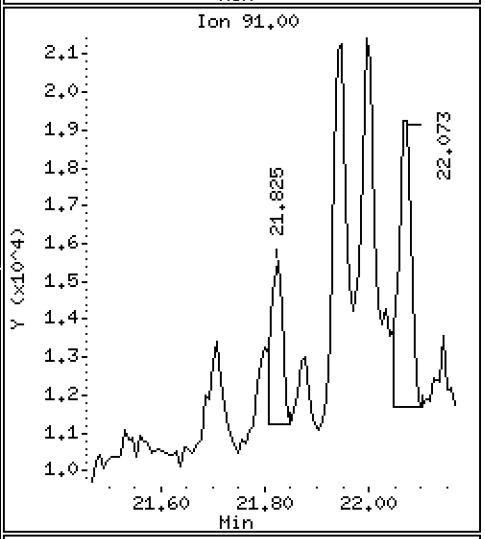
67 Butylbenzylphthalate

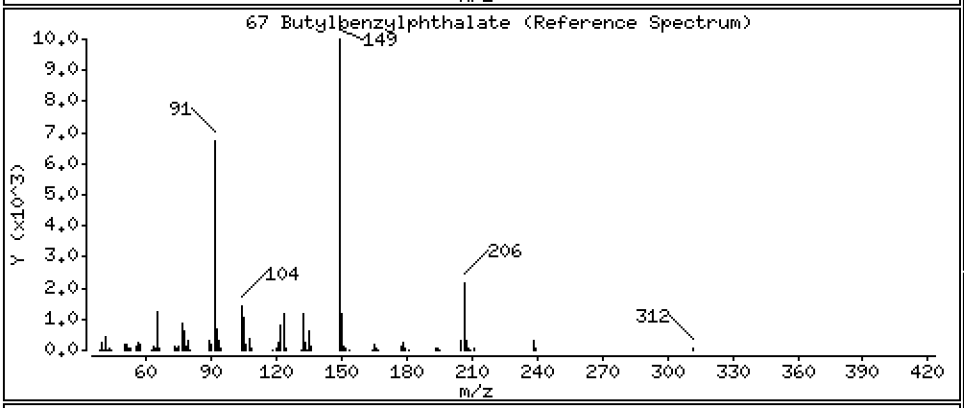
Concentration: 0.1164 ug/mL

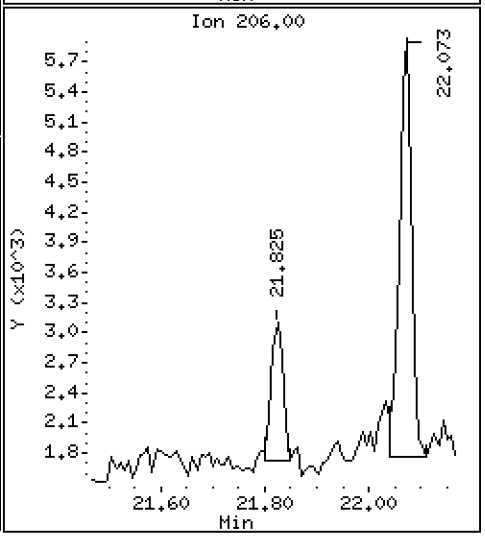


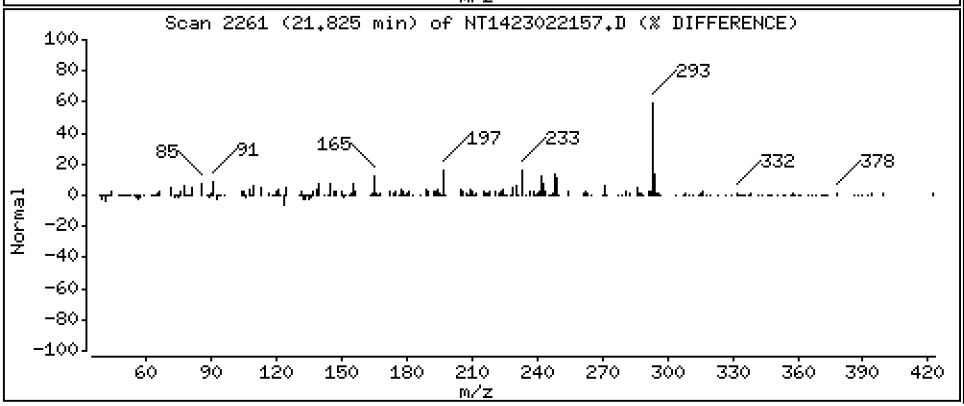












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

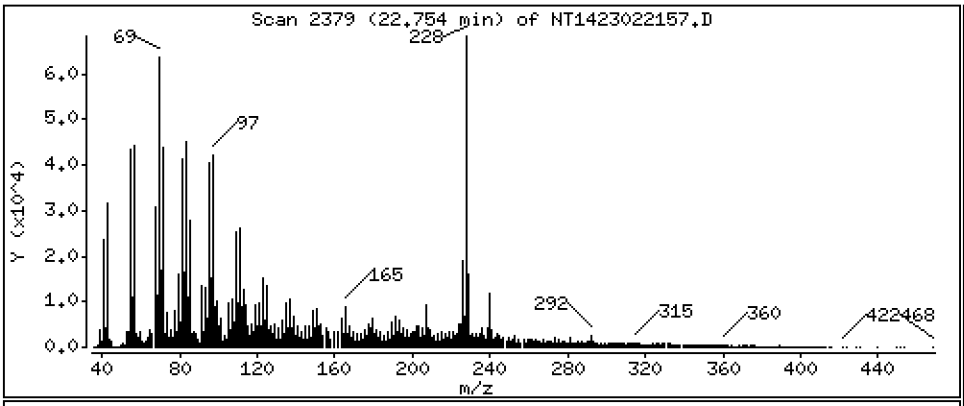
Operator: DSD

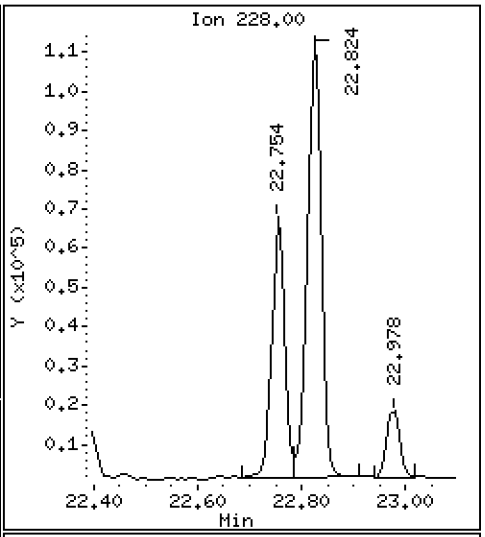
Column phase: ZB-5msi

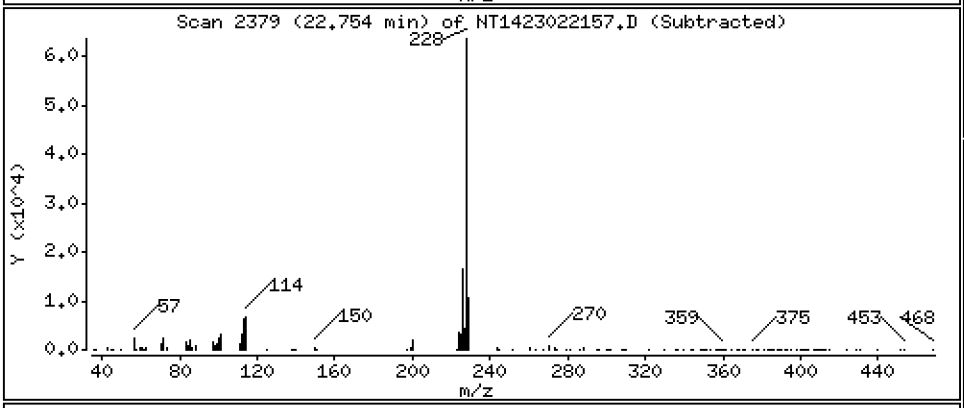
Column diameter: 0.25

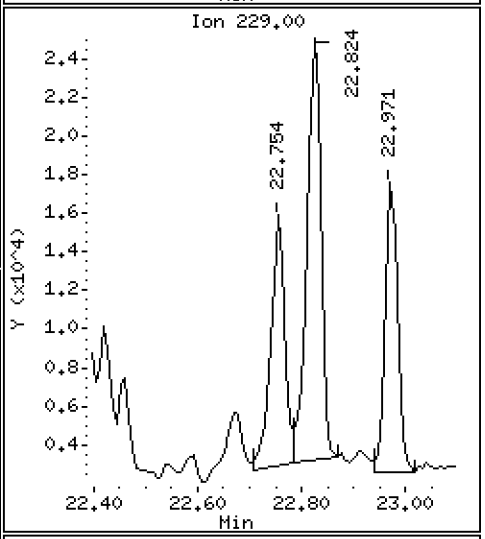
68 Benzo(a)anthracene

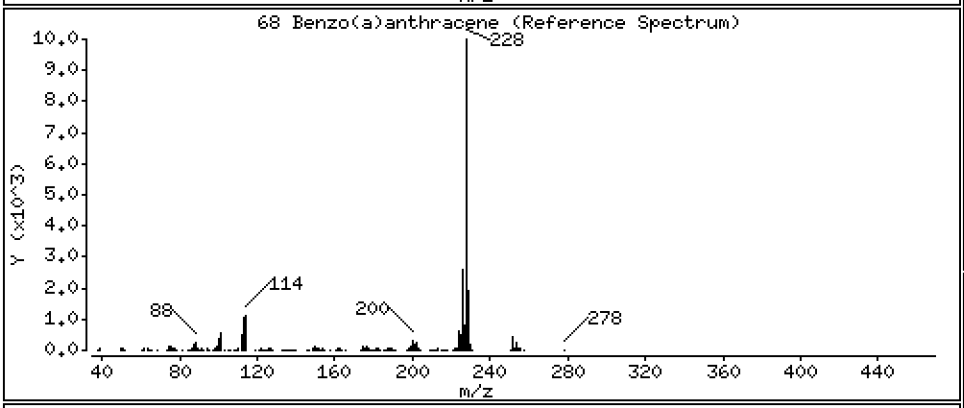
Concentration: 0.5786 ug/mL

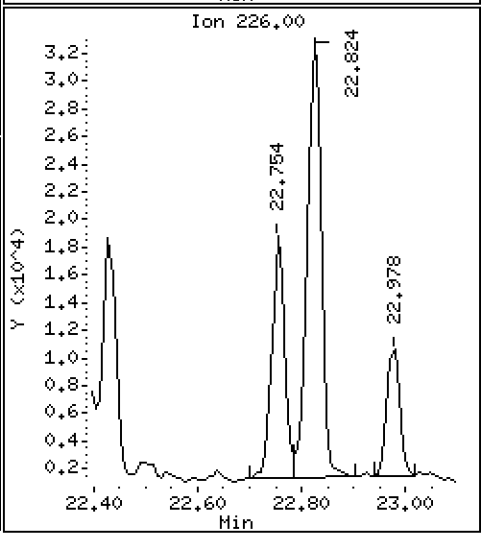


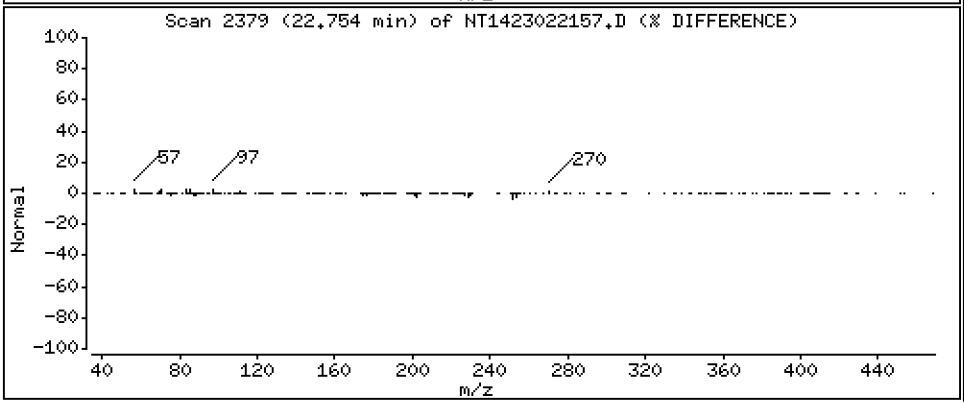












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

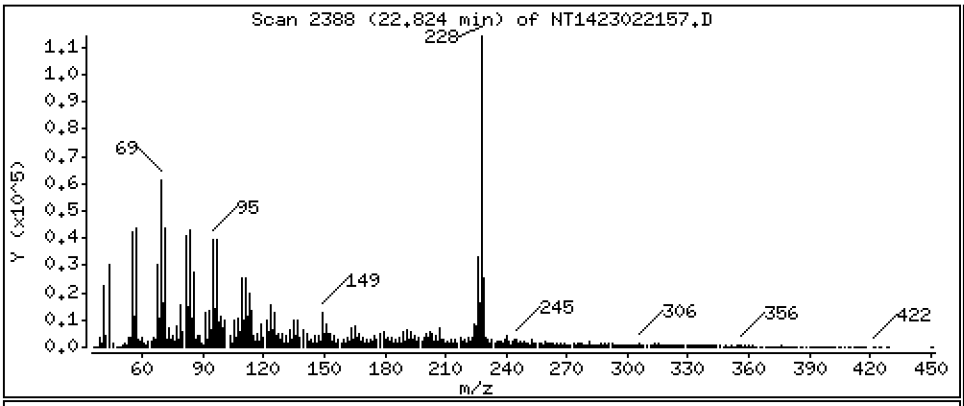
Operator: DSD

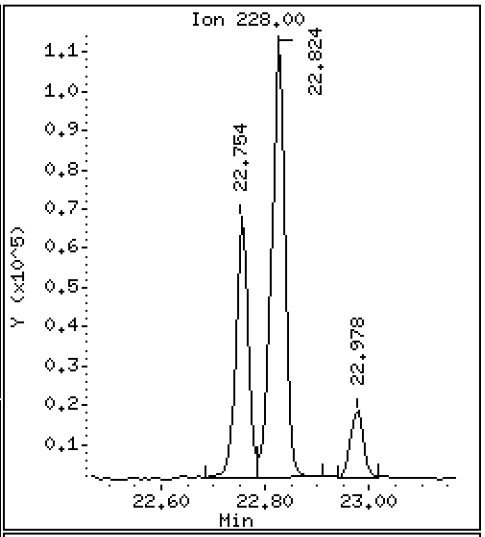
Column phase: ZB-5msi

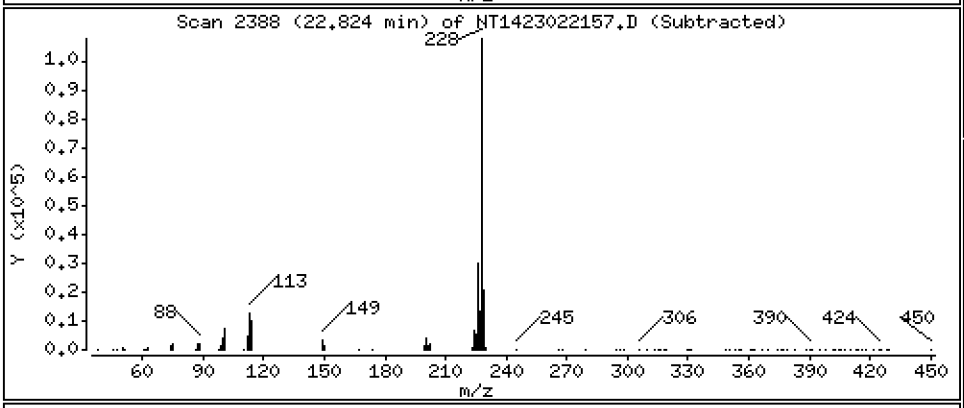
Column diameter: 0.25

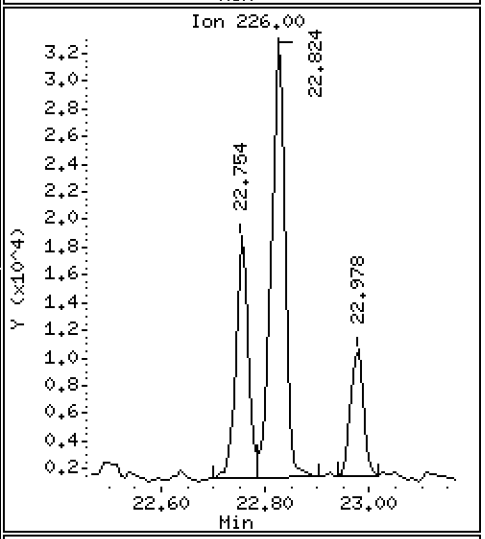
71 Chrysene

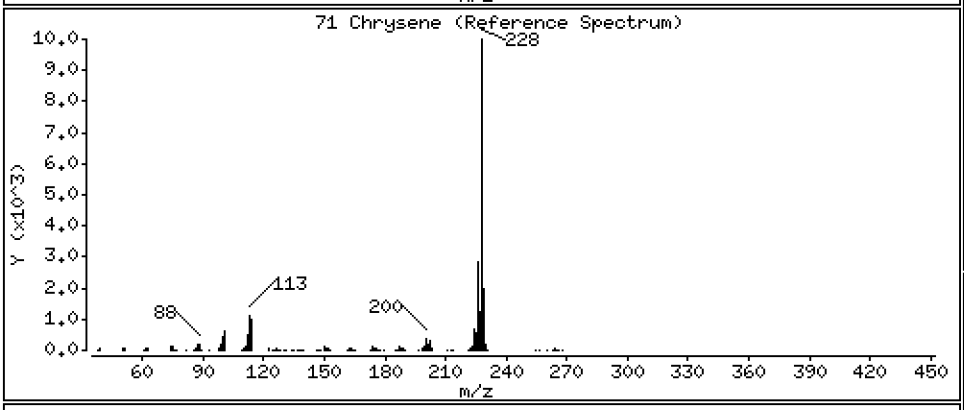
Concentration: 1.133 ug/mL

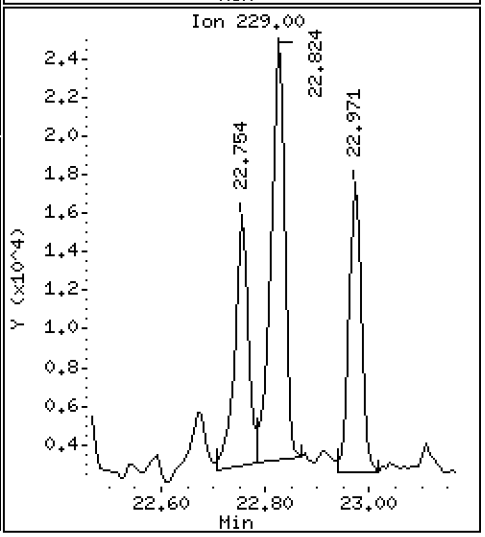


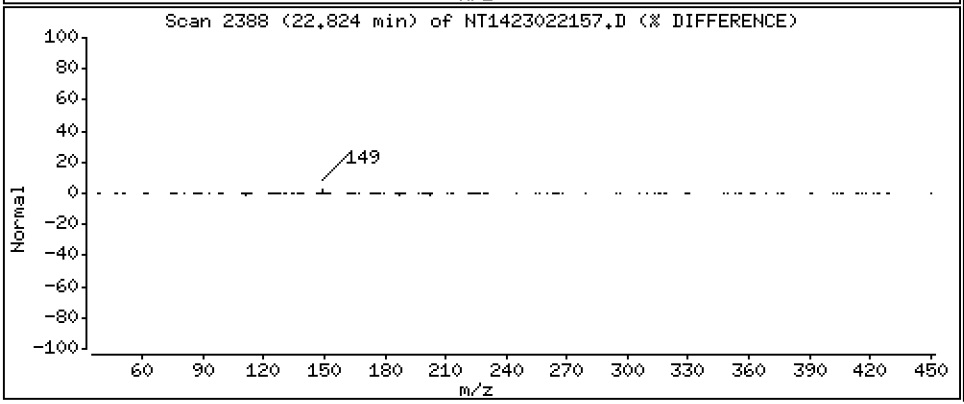












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

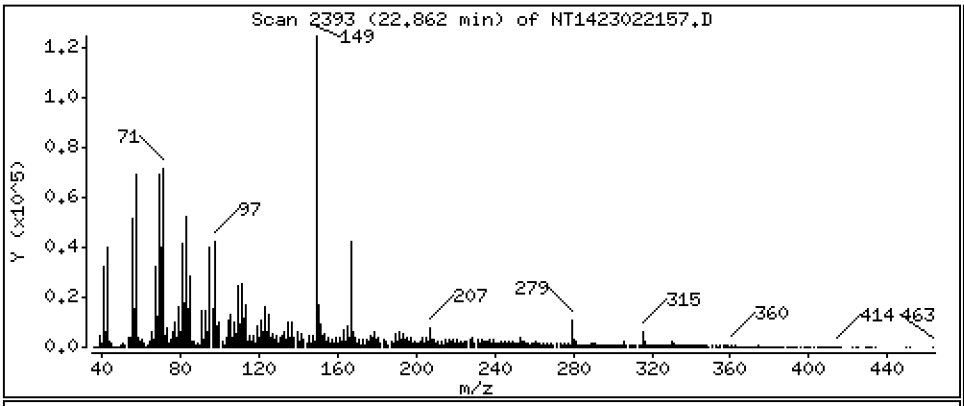
Operator: DSD

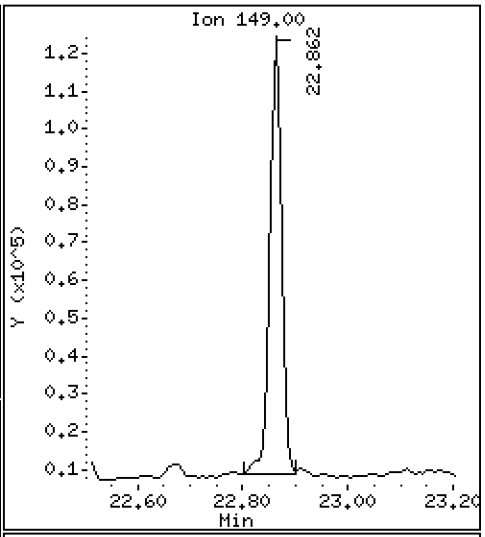
Column phase: ZB-5msi

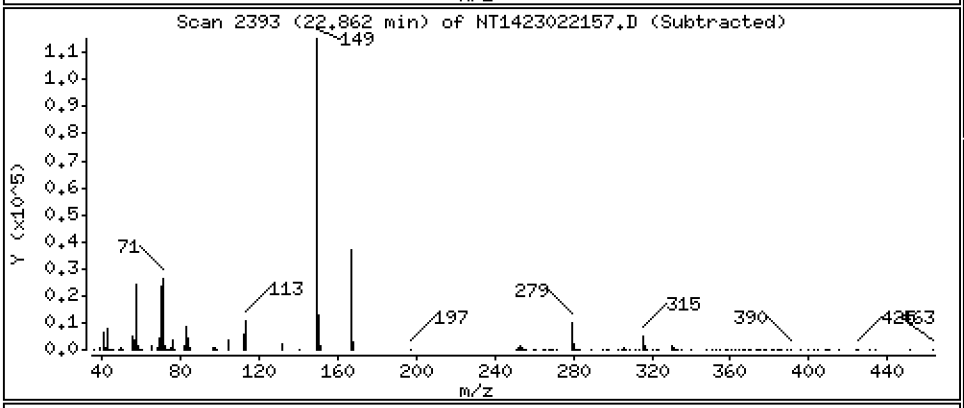
Column diameter: 0.25

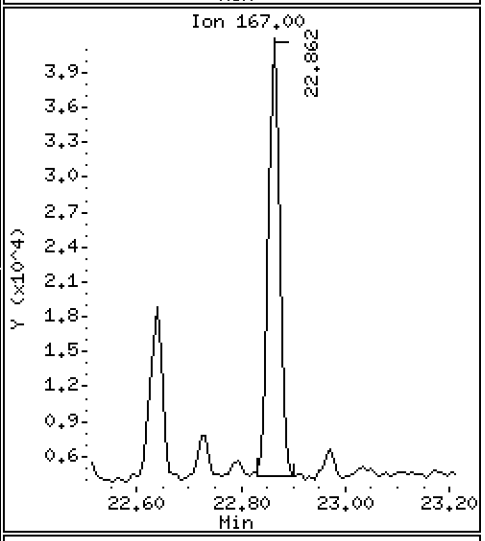
72 bis(2-Ethylhexyl)phthalate

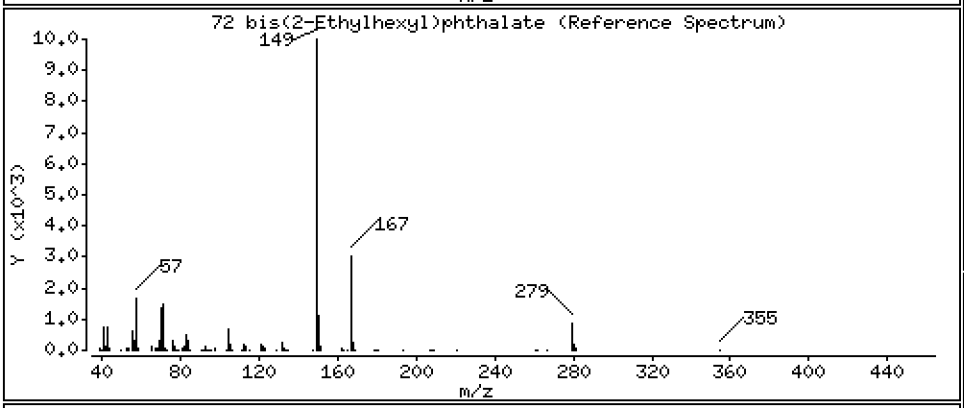
Concentration: 1.031 ug/mL

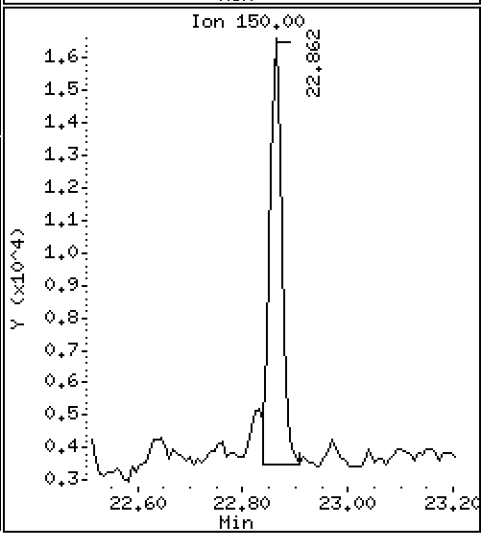


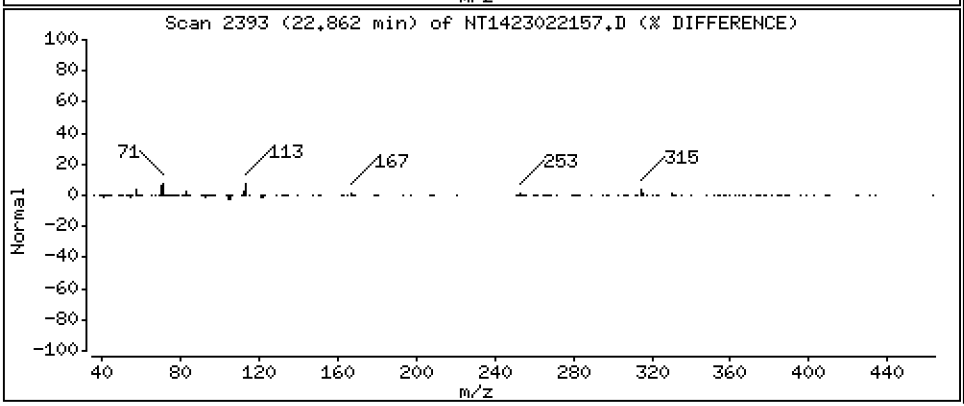












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022157.D

Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

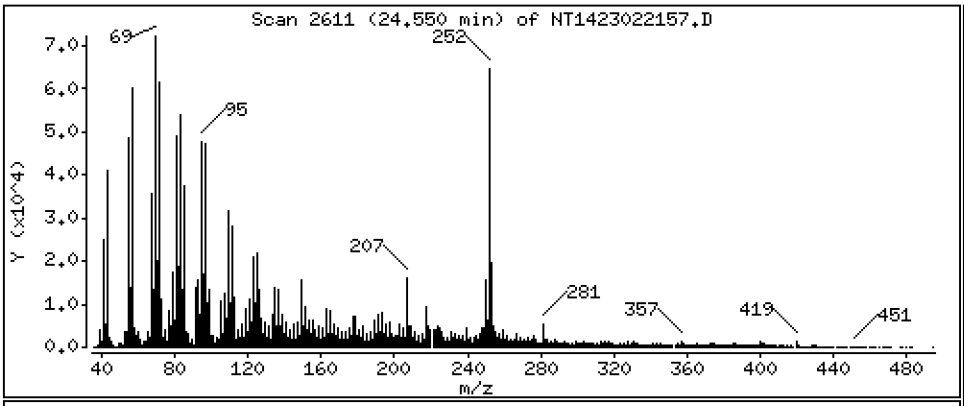
Operator: DSD

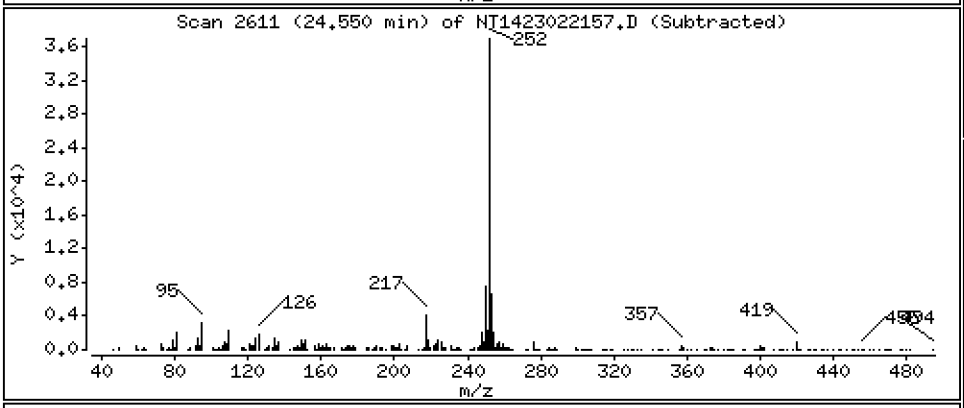
Column phase: ZB-5msi

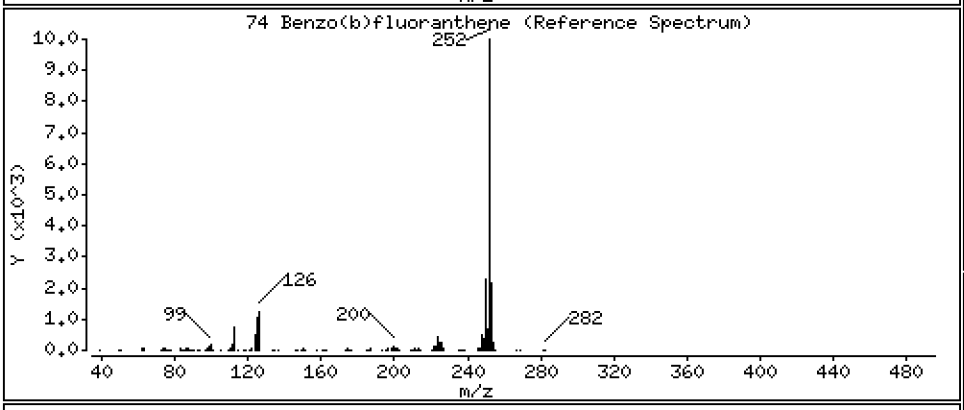
Column diameter: 0.25

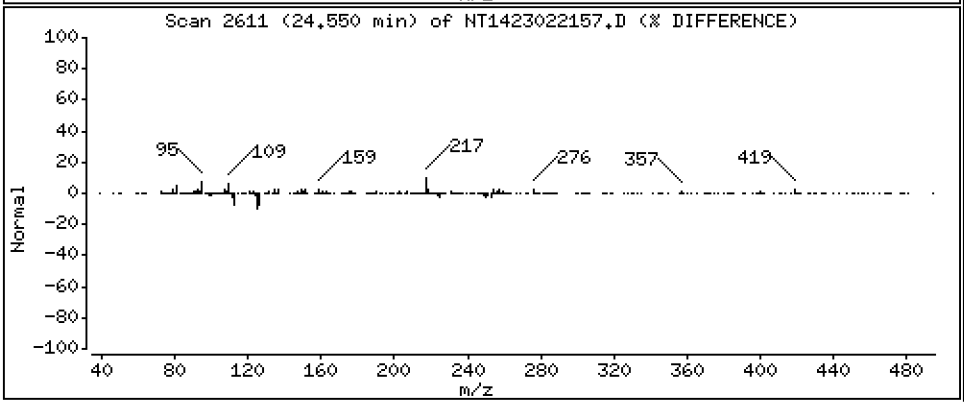
74 Benzo(b)fluoranthene

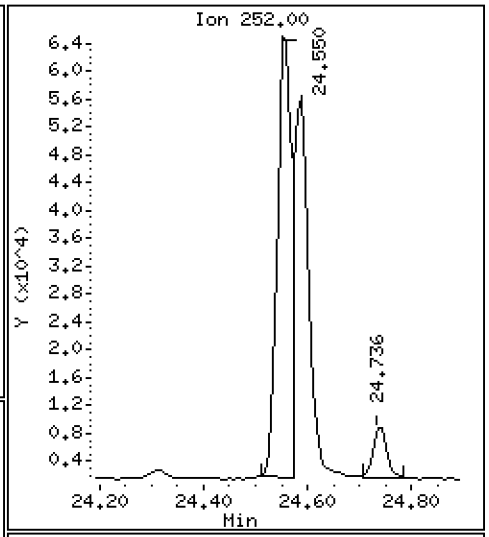
Concentration: 0.8870 ug/mL

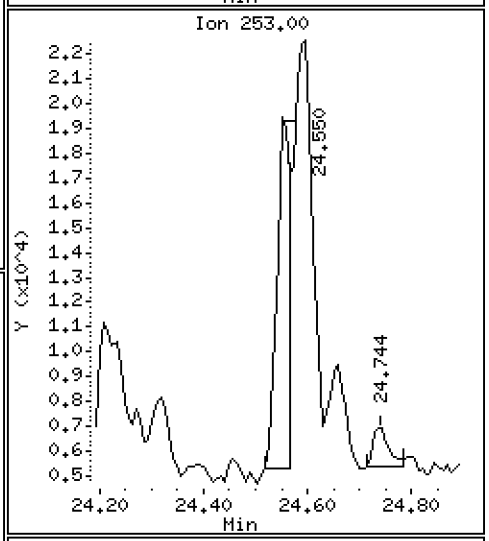


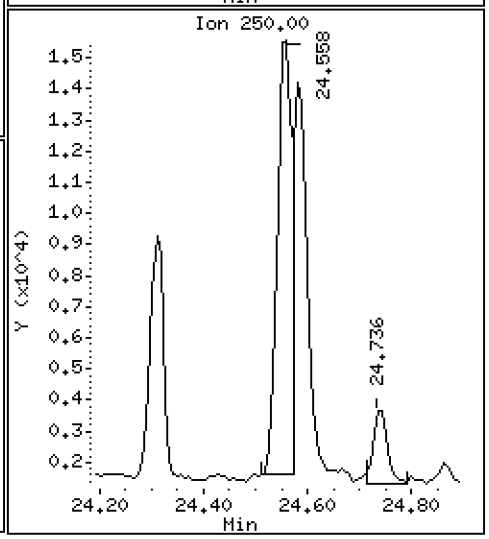












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

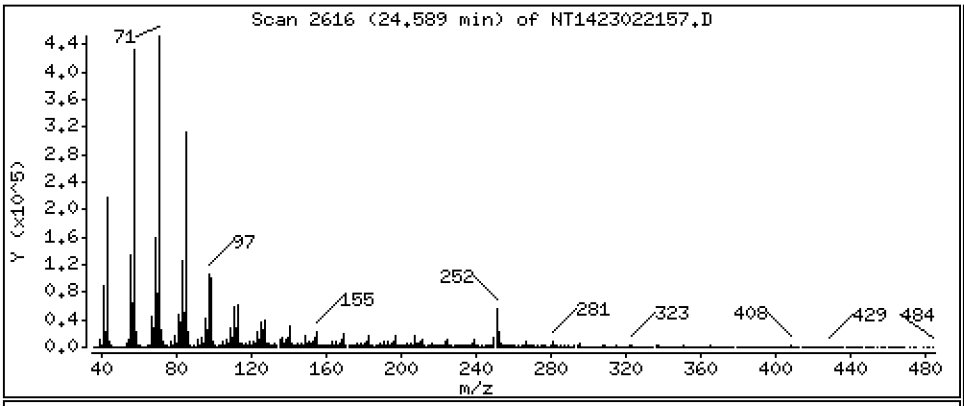
Operator: DSD

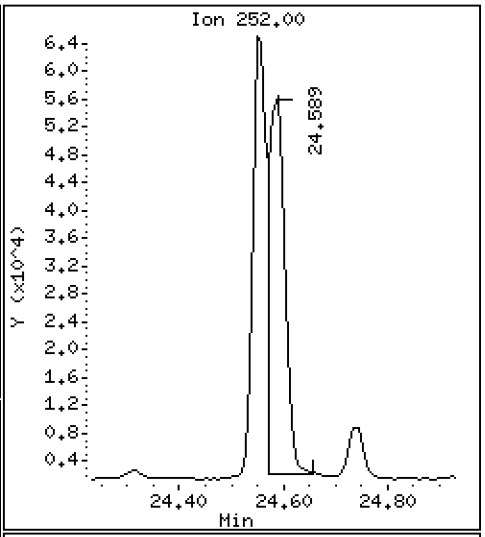
Column phase: ZB-5msi

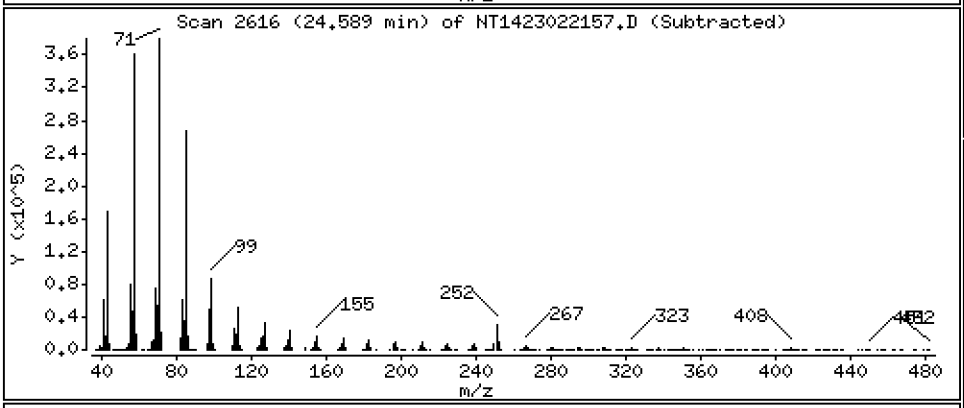
Column diameter: 0.25

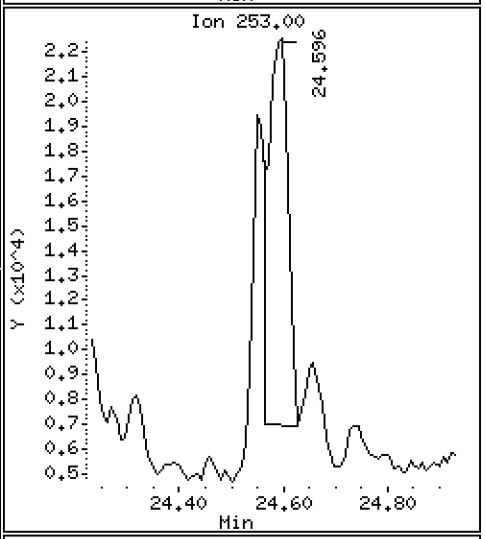
75 Benzo(k)fluoranthene

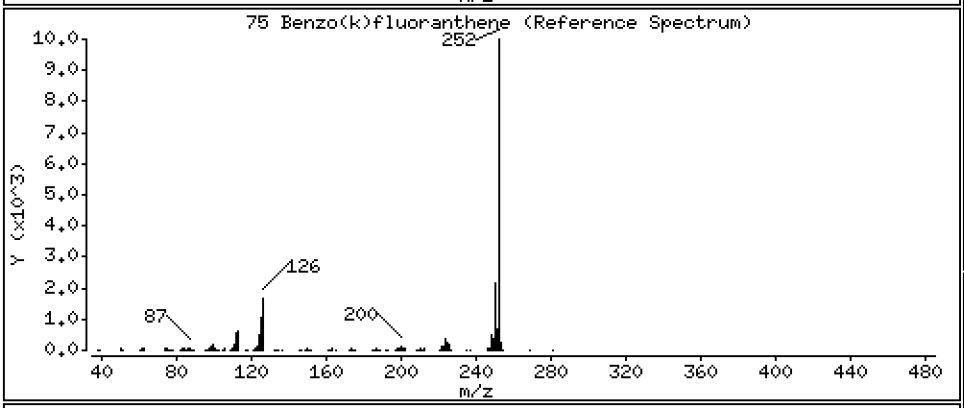
Concentration: 0.7095 ug/mL

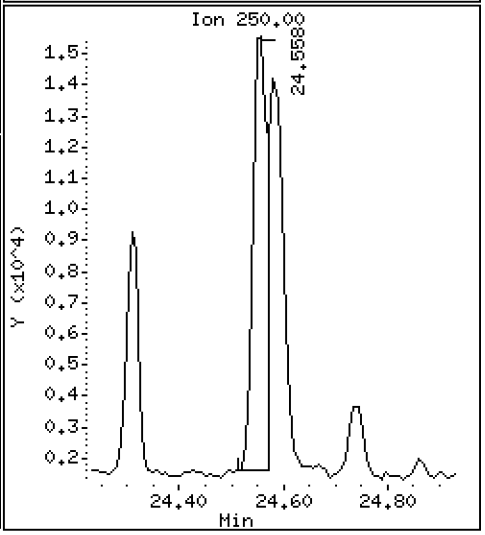


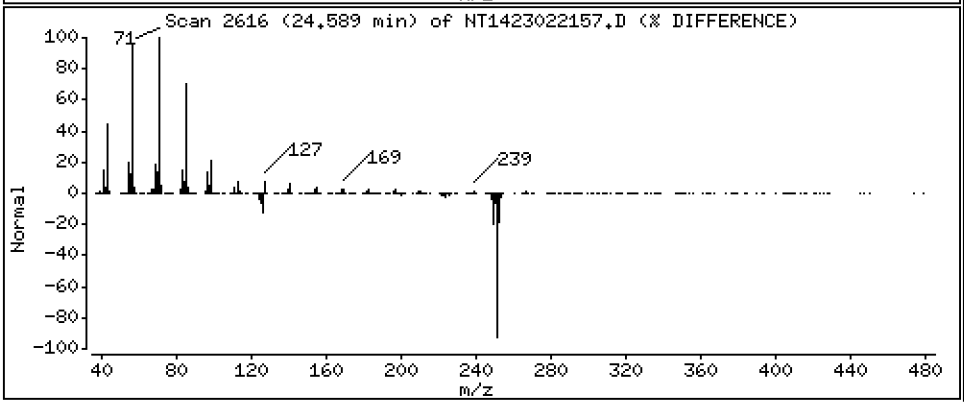












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

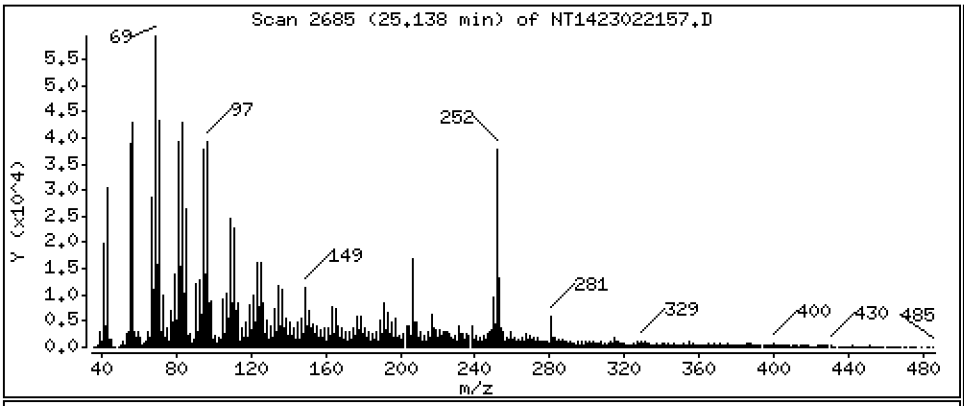
Operator: DSD

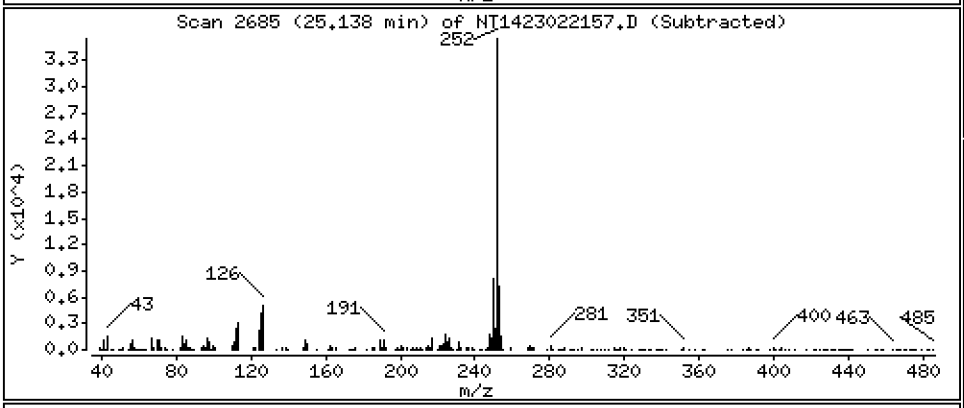
Column phase: ZB-5msi

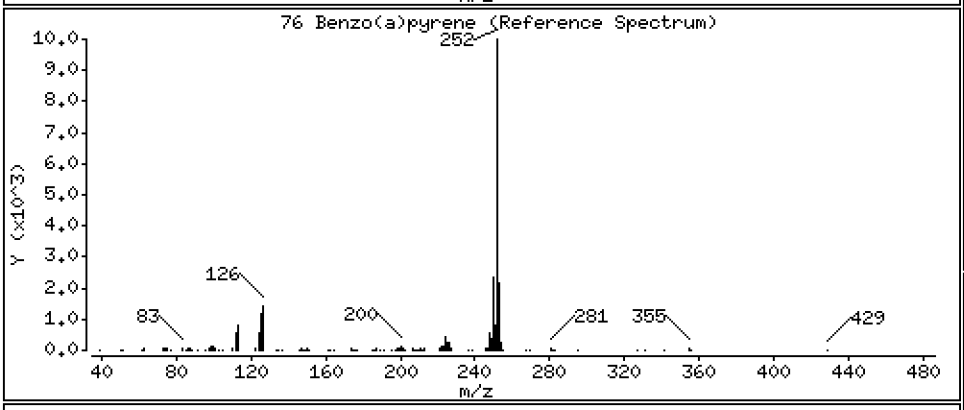
Column diameter: 0.25

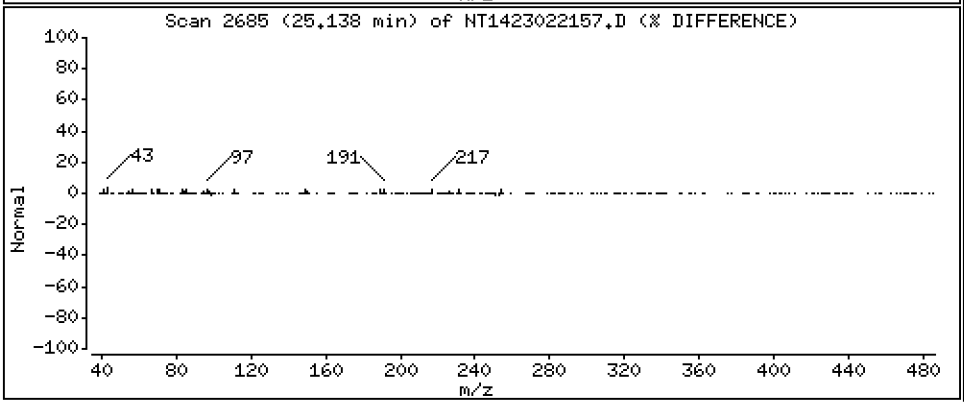
76 Benzo(a)pyrene

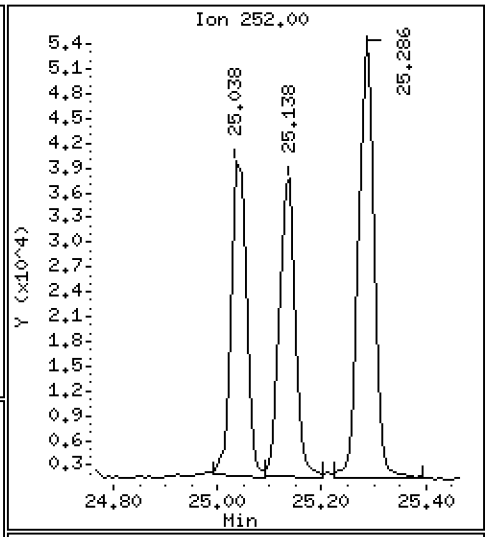
Concentration: 0.5559 ug/mL

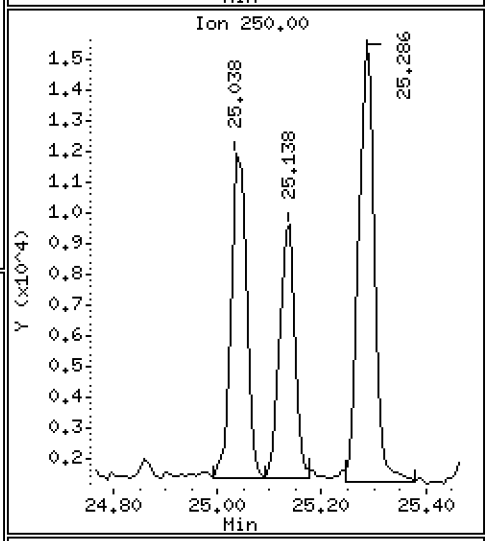


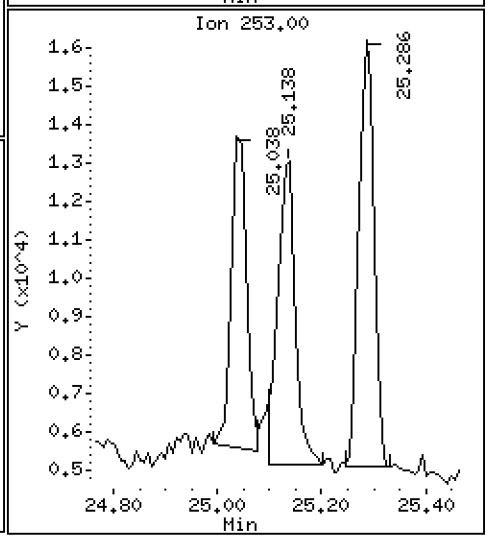












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

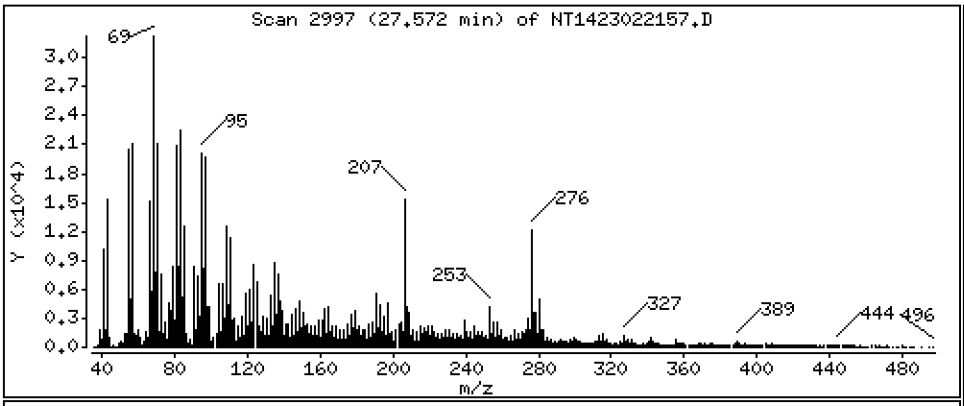
Operator: DSD

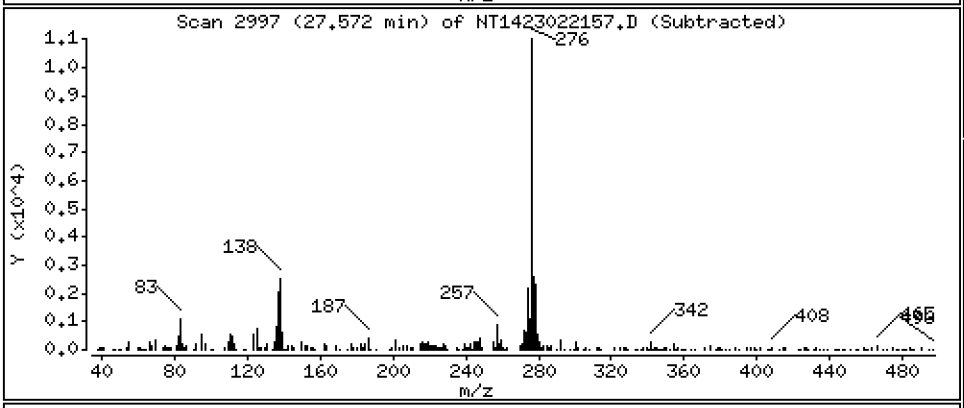
Column phase: ZB-5msi

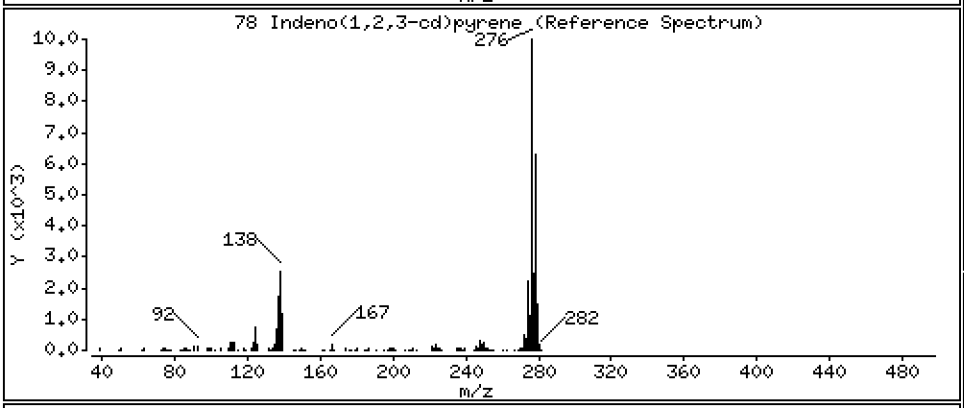
Column diameter: 0.25

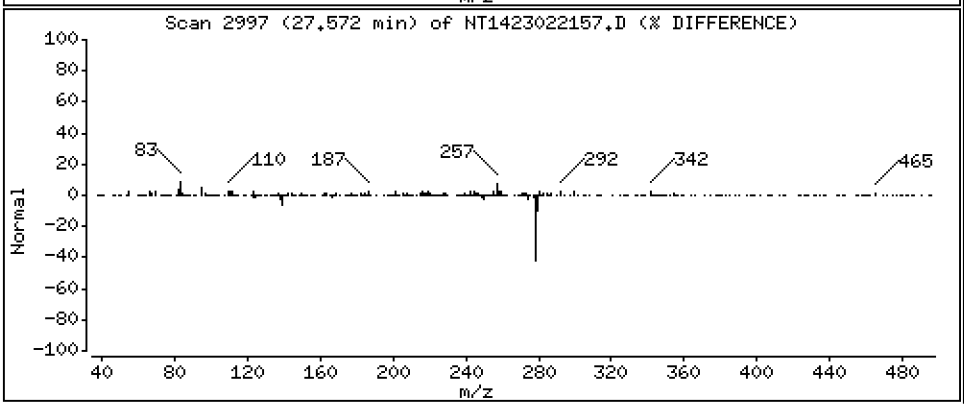
78 Indeno(1,2,3-cd)pyrene

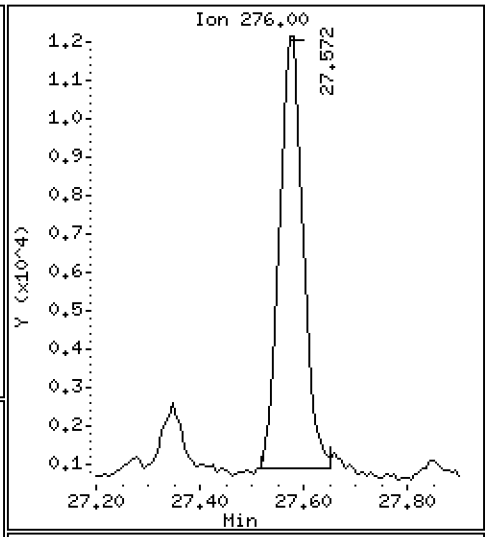
Concentration: 0.3168 ug/mL

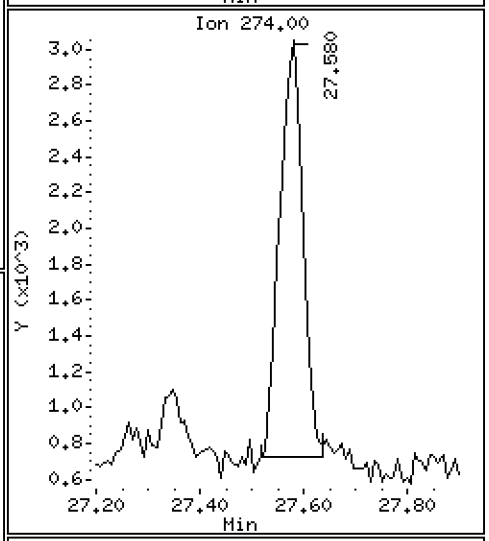


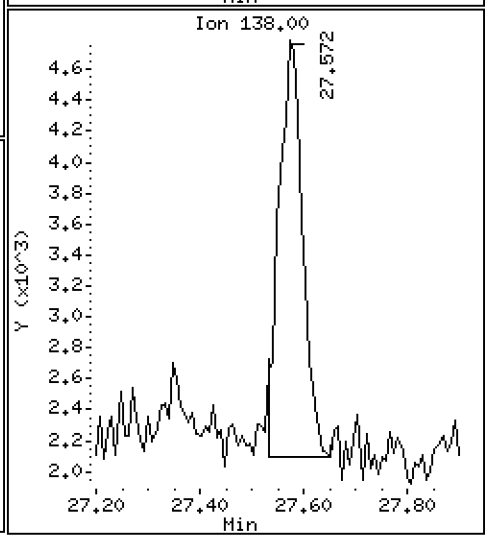












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

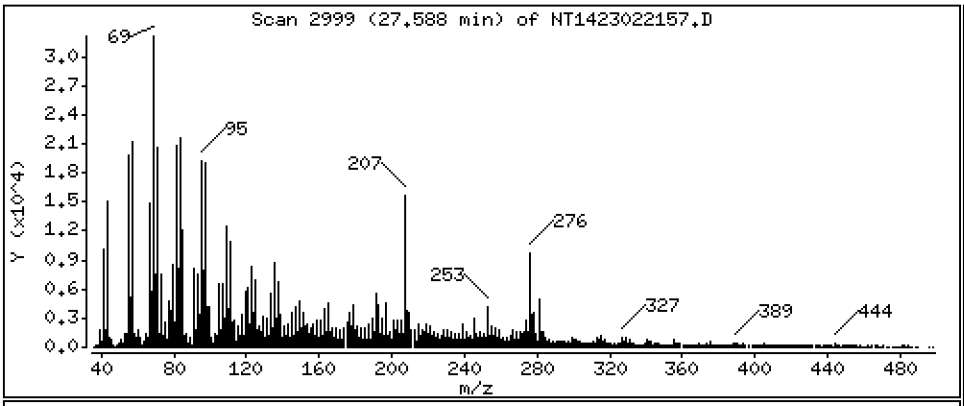
Operator: DSD

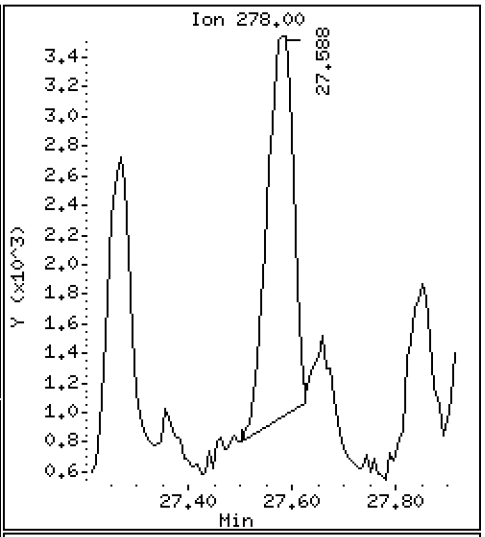
Column phase: ZB-5msi

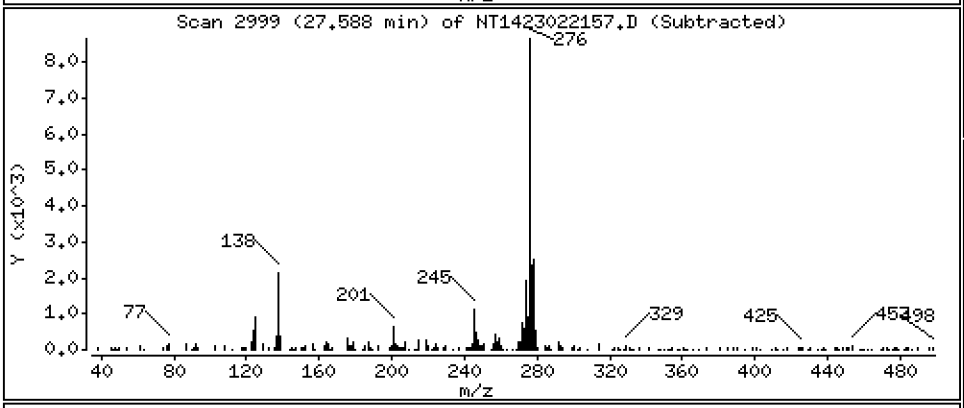
Column diameter: 0.25

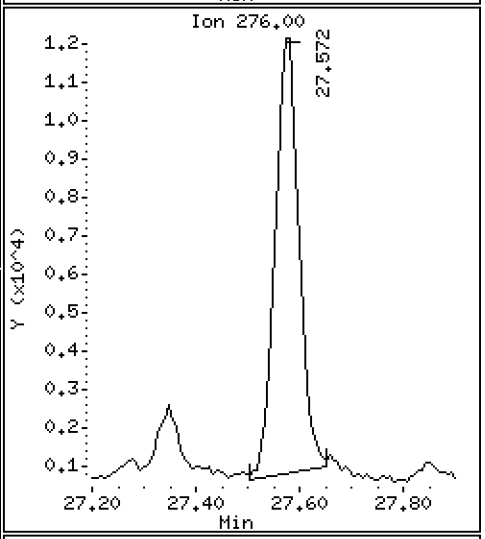
79 Dibenzo(a,h)anthracene

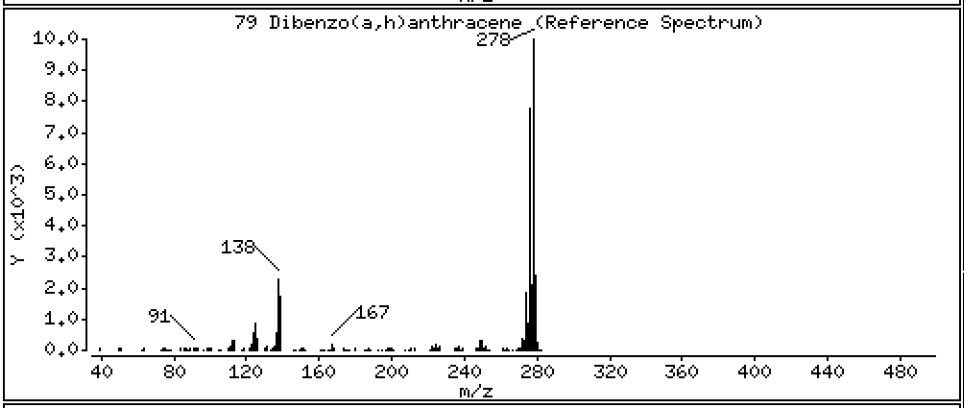
Concentration: 0.09742 ug/mL

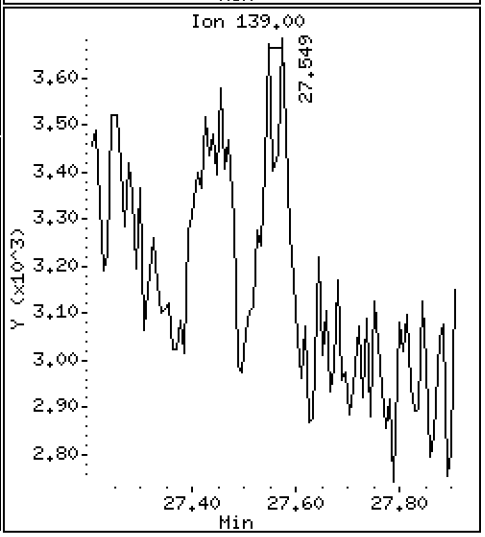


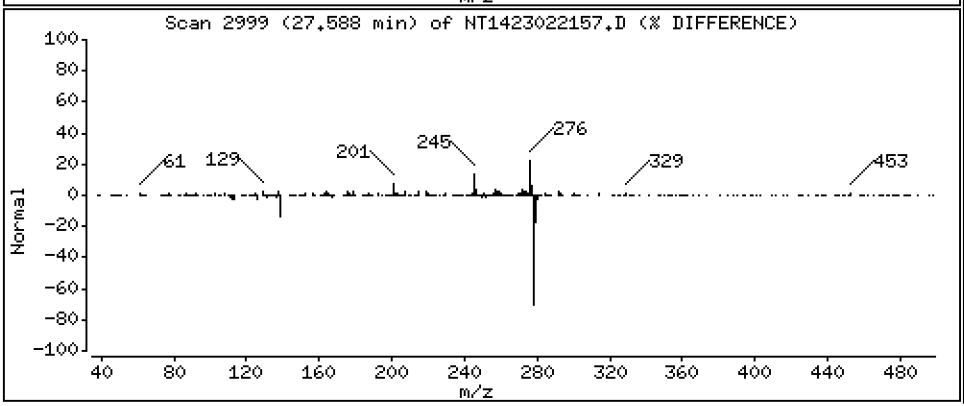












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

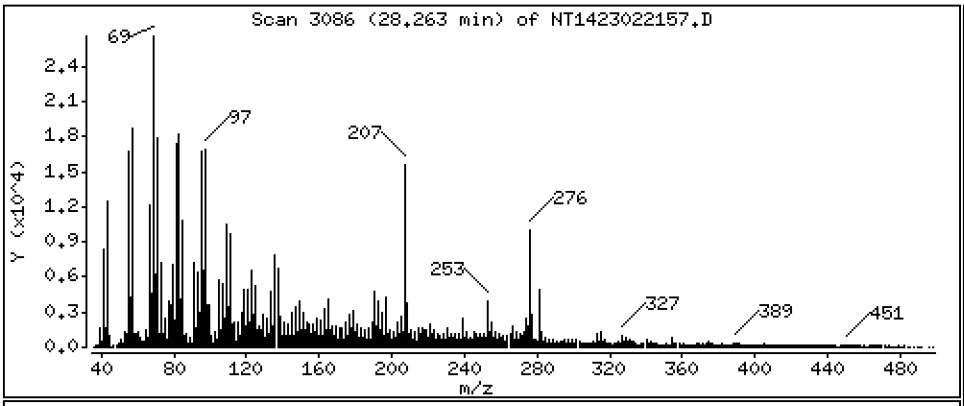
Operator: DSD

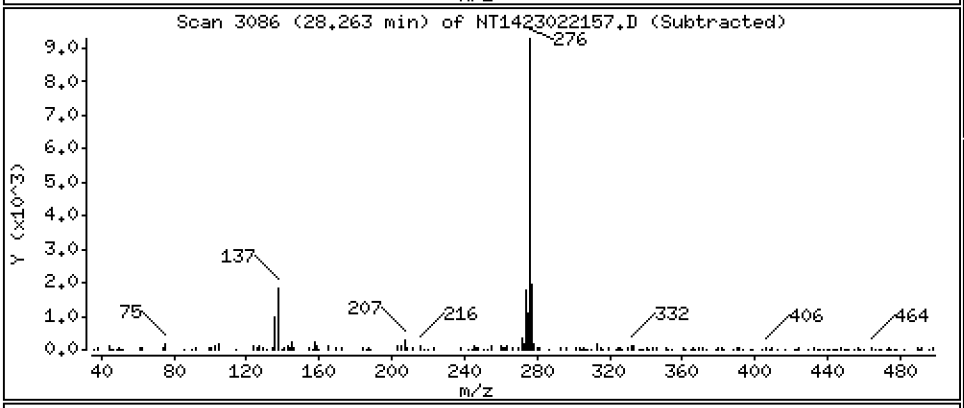
Column phase: ZB-5msi

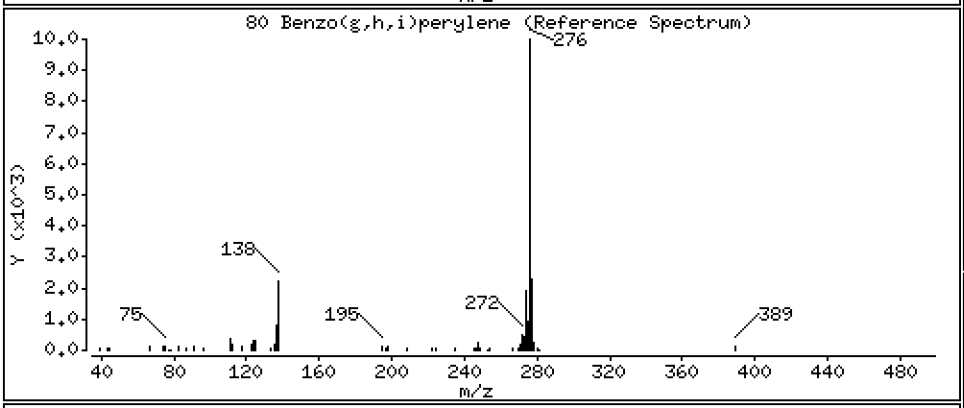
Column diameter: 0.25

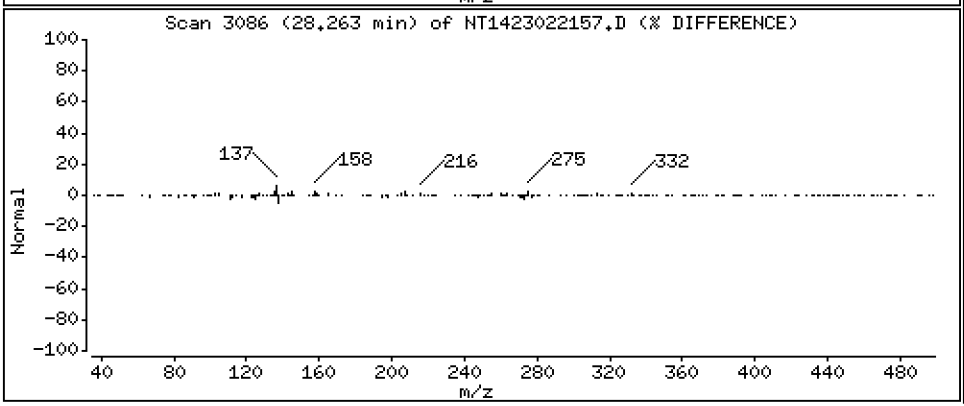
80 Benzo(g,h,i)perylene

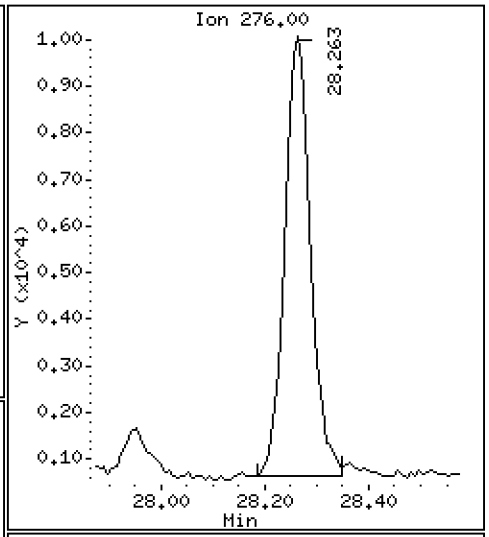
Concentration: 0.3644 ug/mL

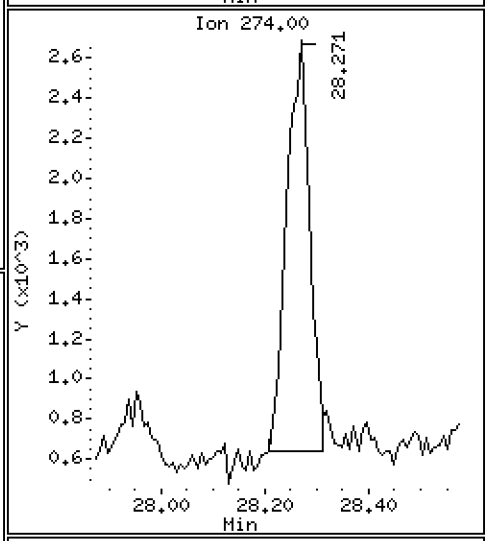


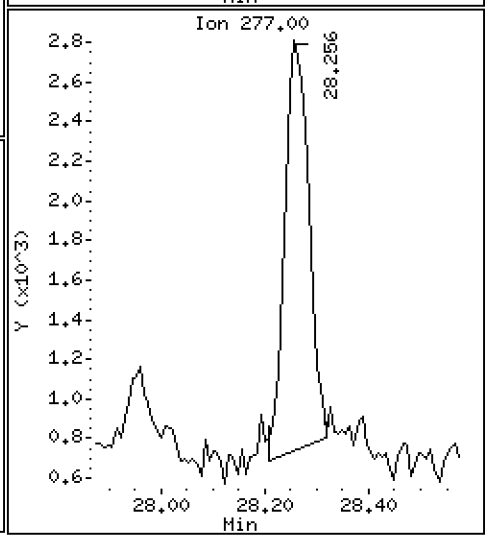












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

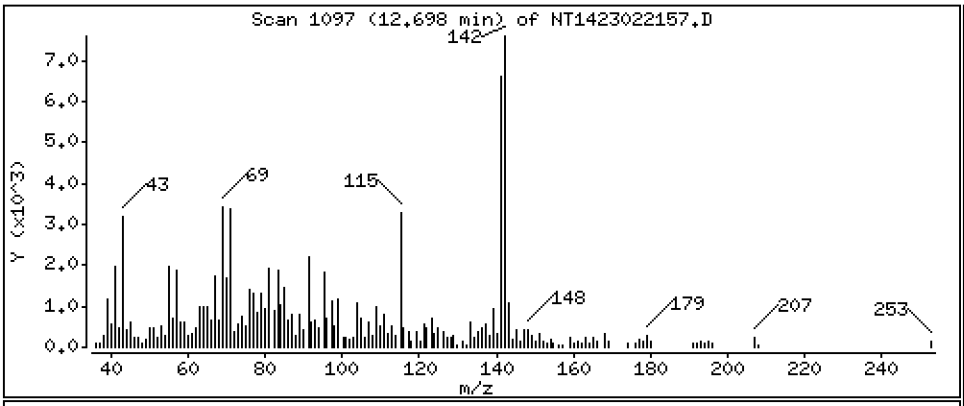
Operator: DSD

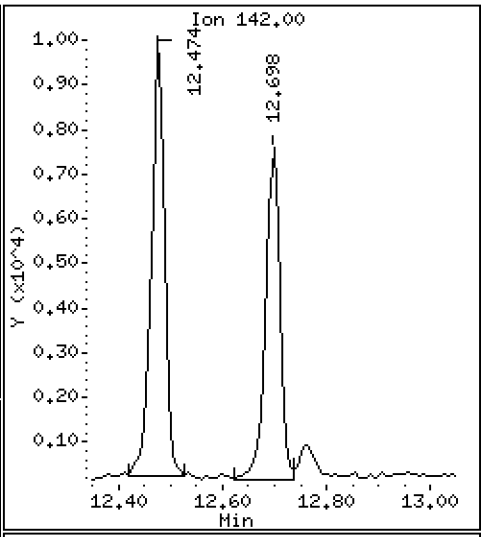
Column phase: ZB-5msi

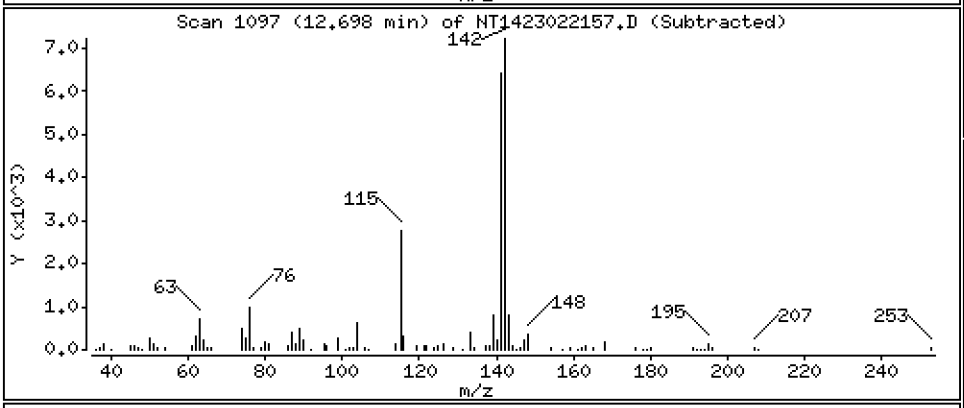
Column diameter: 0.25

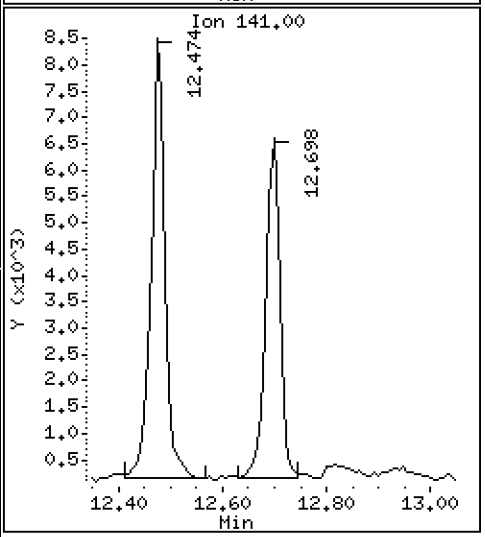
105 1-methylnaphthalene

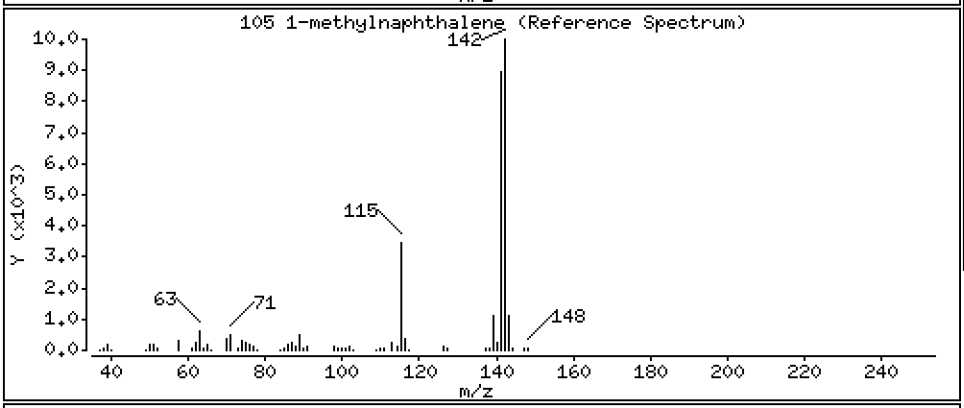
Concentration: 0.09057 ug/mL

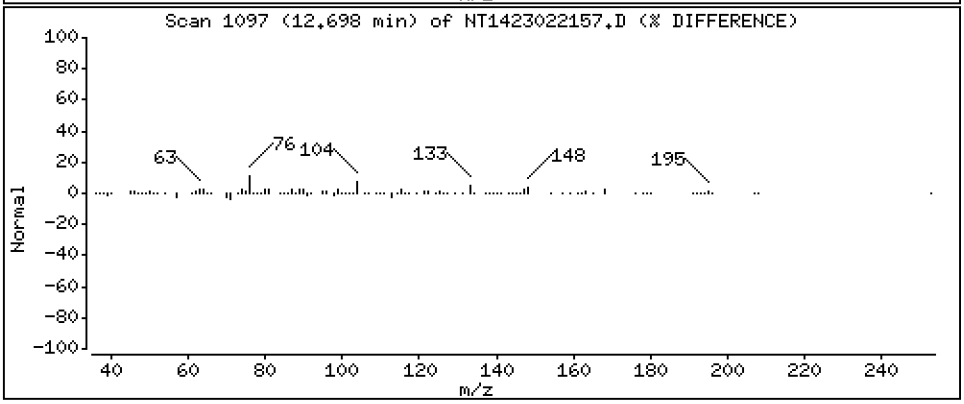












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022157.D

Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

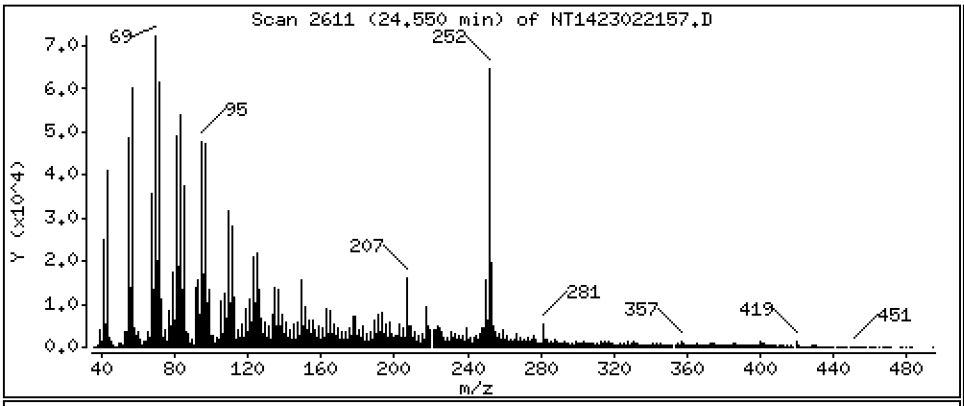
Operator: DSD

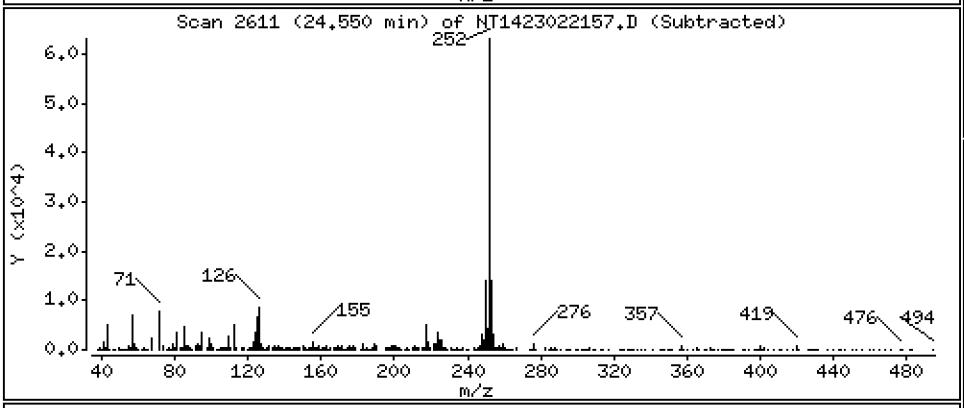
Column phase: ZB-5msi

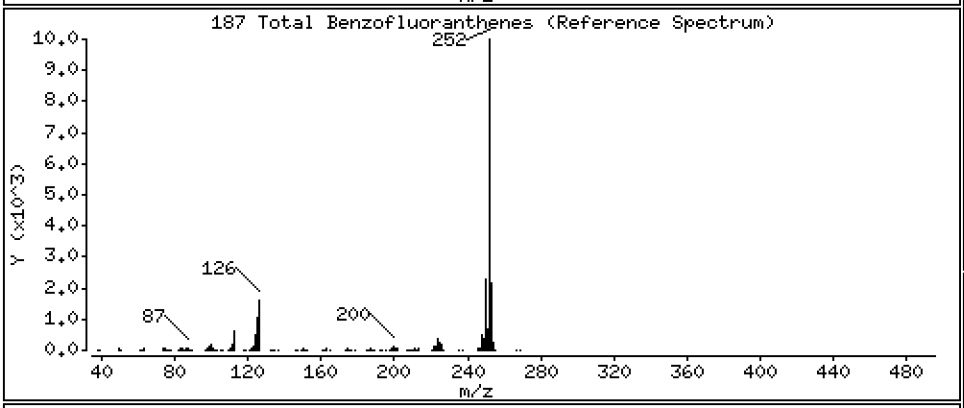
Column diameter: 0.25

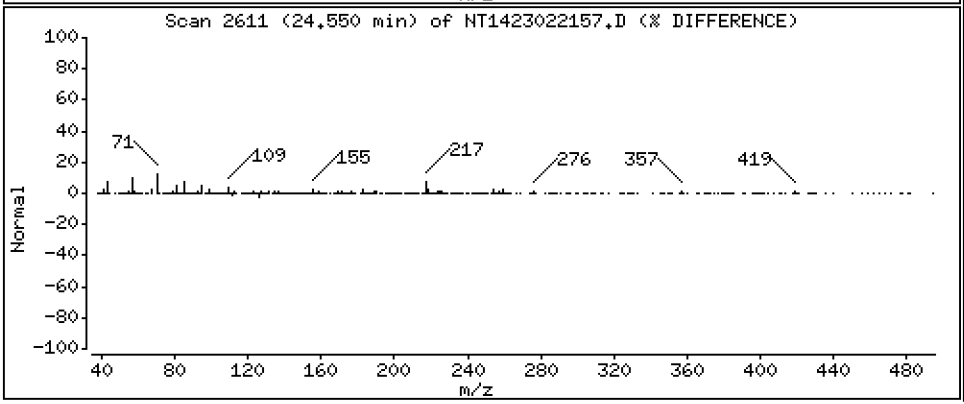
187 Total Benzofluoranthenes

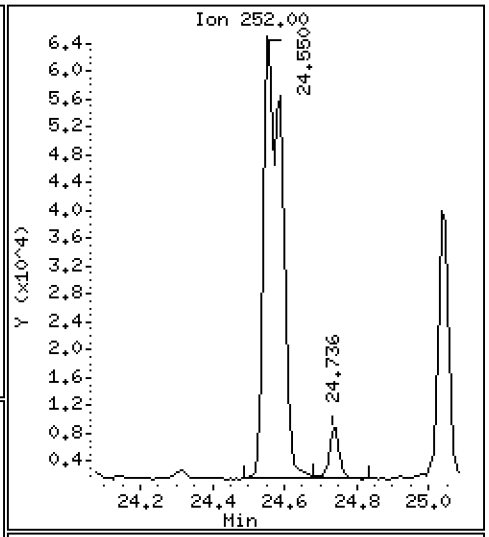
Concentration: 1.578 ug/mL

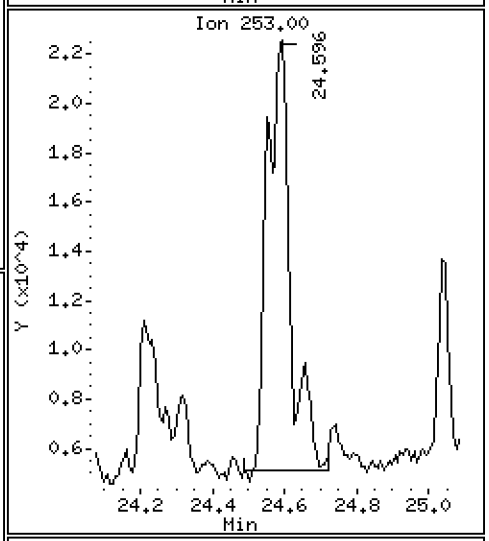


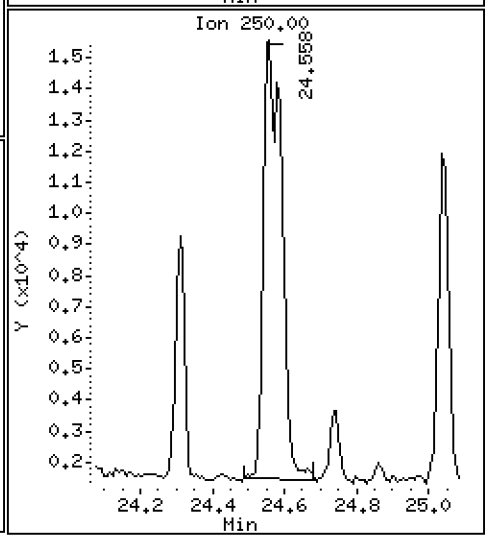












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221C.b\NT1423022157.D
Lab Smp Id: 23A0133-14
Inj Date : 22-FEB-2023 23:14 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-14
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Meth Date : 03-Mar-2023 06:54 van Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 40
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	6.396	6.380	(0.747)	341004	5.49607	5.496
$ 2	Phenol-d5	99	7.973	7.972	(0.930)	504712	5.12789	5.128
3	Phenol	94	7.996	7.996	(0.933)	384725	3.69234	3.692
$ 5	2-Chlorophenol-d4	132	8.212	8.212	(0.958)	367467	5.23241	5.232
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	8.568	8.568	(1.000)	232091	4.00000	
9	1,4-Dichlorobenzene	146	8.599	8.599	(0.992)	817	0.01054	0.01054(MH)
$ 10	1,2-Dichlorobenzene-d4	152	8.925	8.925	(1.042)	169682	3.22337	3.223
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	8.871	8.863	(1.035)	12330	0.21073	0.2107
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
17	Hexachloroethane	117	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
15	4-Methylphenol	108	9.375	9.367	(1.094)	27365	0.35619	0.3562
$ 18	Nitrobenzene-d5	82	9.662	9.662	(0.875)	356403	3.52519	3.525
19	Nitrobenzene	77	Compound Not Detected.					
20	Isophorone	82	Compound Not Detected.					
21	2-Nitrophenol	139	Compound Not Detected.					
22	2,4-Dimethylphenol	107	Compound Not Detected.					
23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
24	Benzoic acid	105	Compound Not Detected.					
25	2,4-Dichlorophenol	162	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.042	11.042	(1.000)	875125	4.00000	
28	Naphthalene	128	11.081	11.081	(1.003)	21129	0.09792	0.09792
29	4-Chloroaniline	127	Compound Not Detected.					
30	Hexachlorobutadiene	225	Compound Not Detected.					
31	4-Chloro-3-methylphenol	107	Compound Not Detected.					
32	2-Methylnaphthalene	142	12.473	12.481	(1.130)	17136	0.10604	0.1060
33	Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.270	13.270	(0.906)	642299	3.51066	3.511
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	Compound Not Detected.					
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	14.648	14.648	(1.000)	511374	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	14.717	14.717	(1.005)	9627	0.07060	0.07060
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.042	15.050	(1.027)	20347	0.09088	0.09088
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	15.637	15.645	(1.068)	38604	0.18590	0.1859
	49	Fluorene	166	15.753	15.753	(1.075)	25830	0.11032	0.1103
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.293	16.293	(1.112)	160412	5.38586	5.386
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	17.684	17.676	(1.000)	940136	4.00000	
	60	Phenanthrene	178	17.723	17.723	(1.002)	146445	0.64824	0.6482
	61	Anthracene	178	17.823	17.816	(1.008)	48411	0.21630	0.2163
	62	Carbazole	167	18.172	18.156	(1.028)	20821	0.10251	0.1025
	63	Di-n-butylphthalate	149	19.007	18.992	(1.075)	10182	0.04488	0.04488
	64	Fluoranthene	202	20.183	20.137	(0.886)	434113	1.66922	1.669(H)
	65	Pyrene	202	20.586	20.562	(0.903)	428556	1.55838	1.558
$	66	Terphenyl-d14	244	20.880	20.872	(0.916)	861261	4.41085	4.411
	67	Butylbenzylphthalate	149	21.824	21.816	(0.958)	10550	0.11639	0.1164
	68	Benzo(a)anthracene	228	22.753	22.745	(0.999)	111606	0.57856	0.5786
*	69	Chrysene-d12	240	22.784	22.769	(1.000)	602807	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	22.823	22.815	(1.002)	196613	1.13314	1.133
	72	bis(2-Ethylhexyl)phthalate	149	22.862	22.854	(0.959)	169383	1.03088	1.031
*	134	Di-n-octylphthalate-d4	153	23.845	23.837	(1.000)	961022	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	24.549	24.542	(0.973)	128747	0.88696	0.8870
	75	Benzo(k)fluoranthene	252	24.588	24.580	(0.974)	110047	0.70950	0.7095(M)
	76	Benzo(a)pyrene	252	25.138	25.114	(0.996)	76491	0.55594	0.5559
*	77	Perylene-d12	264	25.239	25.223	(1.000)	457458	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.571	27.548	(1.092)	35861	0.31679	0.3168
	79	Dibenzo(a,h)anthracene	278	27.587	27.564	(1.093)	9076	0.09742	0.09742(M)
	80	Benzo(g,h,i)perylene	276	28.263	28.224	(1.120)	33465	0.36440	0.3644
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	12.698	12.697	(1.150)	13741	0.09057	0.09057
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.549	24.580	(0.973)	223577	1.57763	1.578
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022157.D
Lab Smp Id: 23A0133-14
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 16:35
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	232195	116098	464390	232091	-0.04
27 Naphthalene-d8	800631	400316	1601262	875125	9.30
42 Acenaphthene-d10	488064	244032	976128	511374	4.78
59 Phenanthrene-d10	971279	485640	1942558	940136	-3.21
69 Chrysene-d12	687083	343542	1374166	602807	-12.27
134 Di-n-octylphthala	1174636	587318	2349272	961022	-18.19
77 Perylene-d12	491790	245895	983580	457458	-6.98

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.07
134 Di-n-octylphthala	23.84	23.34	24.34	23.85	0.03
77 Perylene-d12	25.22	24.72	25.72	25.24	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022157.D

Lab ID: 23A0133-14
nt14.i, ABN.m, 22-FEB-2023 23:14

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.992	1.004	-0.0118	1,4-Dichlorobenzene

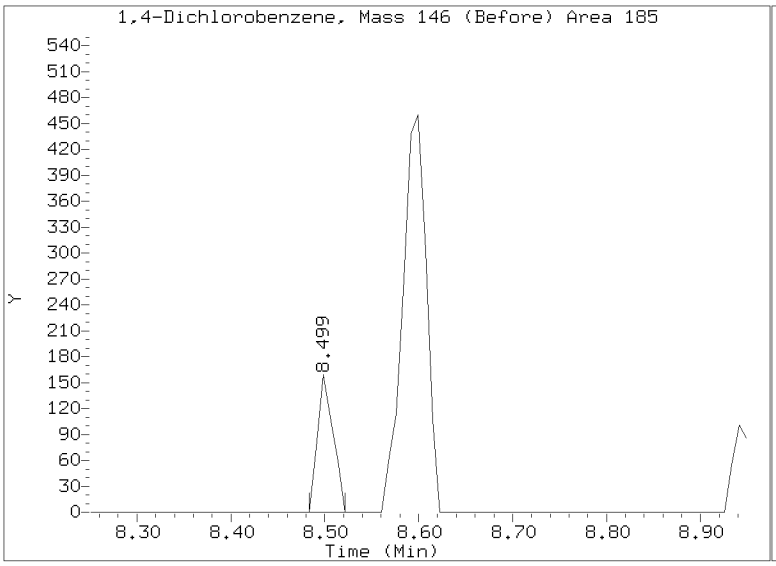
RRT check based on Ccal File: NT1423022146.D

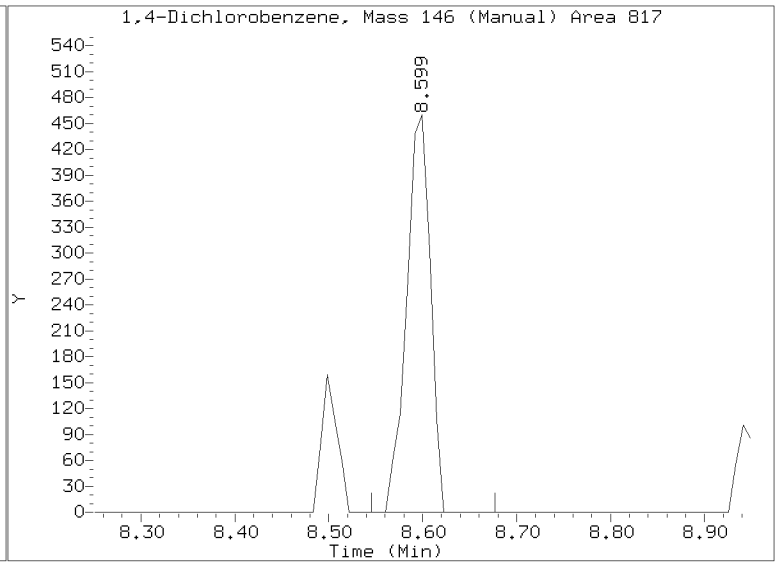
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

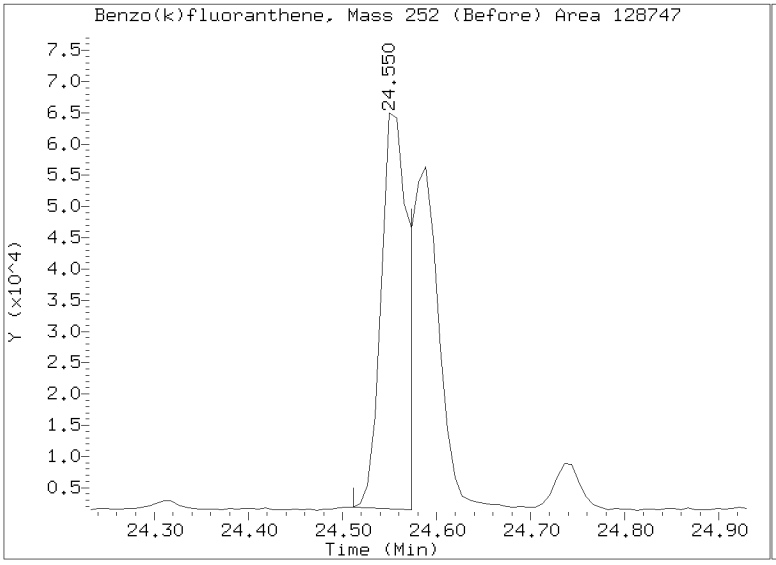
* Only compounds listed in the work order have been verified by the analyst *

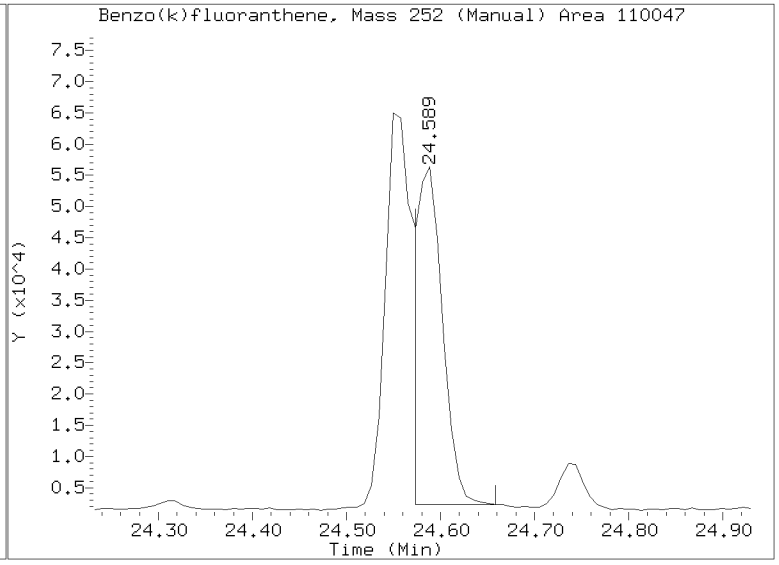
Quant Ion Manual Peak Adjustment Report

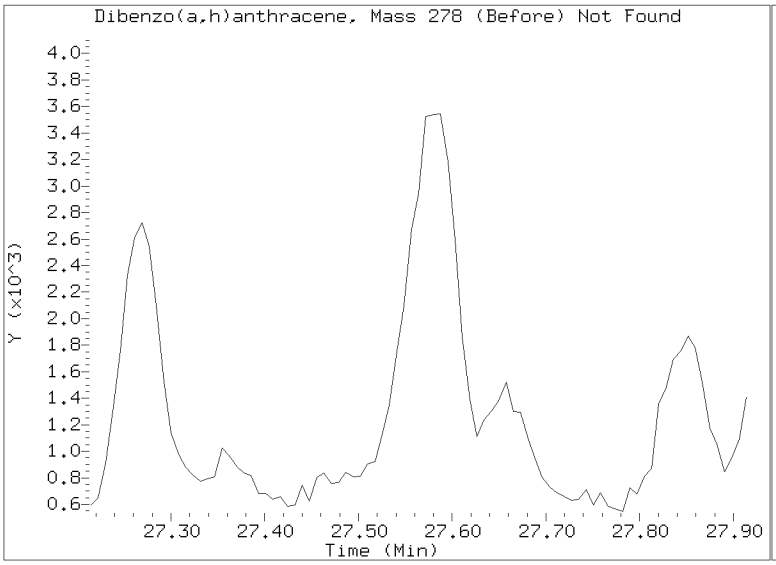
Datafile: //target/share/chem3/nt14.i/20230221C.b/NT1423022157.D
Injection Date: 22-FEB-2023 23:14
Lab ID:23A0133-14 Client ID:
Report Date: 03/03/2023 07:06

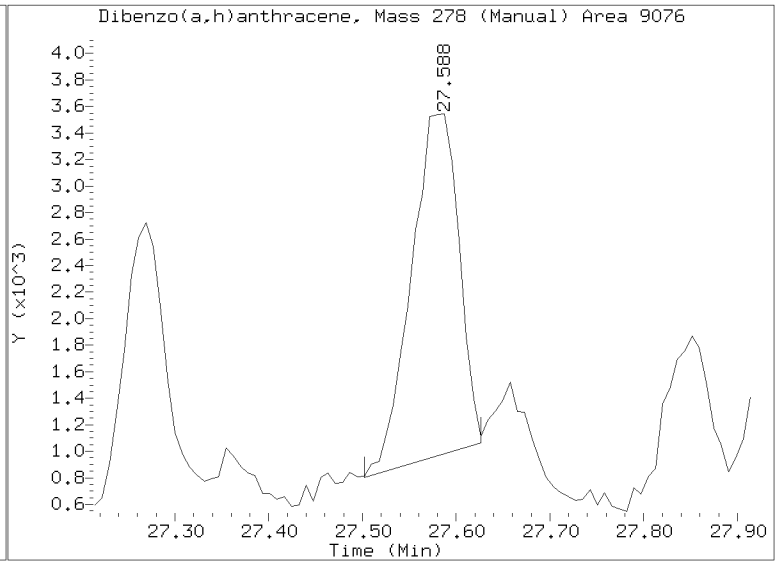












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1092

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-15 C	SDG:	23A0133
Sampled:	01/06/23 14:26	Prepared:	01/18/23 15:24	File ID:	NT1423022158.D
% Solids:	52.30	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 23:50
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	19.14 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	382		4.4	20.0
106-44-5	4-Methylphenol	1	86.0		7.4	20.0
91-20-3	Naphthalene	1	12.5	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	10.6	J	4.5	20.0
208-96-8	Acenaphthylene	1	20.0	U	6.2	20.0
131-11-3	Dimethylphthalate	1	23.7		4.4	20.0
83-32-9	Acenaphthene	1	8.8	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	75.4		8.7	20.0
120-12-7	Anthracene	1	31.2		7.2	20.0
206-44-0	Fluoranthene	1	170		6.1	20.0
129-00-0	Pyrene	1	153		5.7	20.0
85-68-7	Butylbenzylphthalate	1	20.0	U	9.4	20.0
56-55-3	Benzo(a)anthracene	1	73.4		6.0	20.0
218-01-9	Chrysene	1	114		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	103		5.5	49.9
	Benzofluoranthenes, Total	1	180		10.0	40.0
50-32-8	Benzo(a)pyrene	1	66.7		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	41.1		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	42.5		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.23	510	68.0	27 - 120	
Phenol-d5	749.23	479	63.9	29 - 120	
2-Chlorophenol-d4	749.23	495	66.0	31 - 120	
1,2-Dichlorobenzene-d4	499.49	301	60.3	32 - 120	
Nitrobenzene-d5	499.49	331	66.4	30 - 120	
2-Fluorobiphenyl	499.49	332	66.4	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1092

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

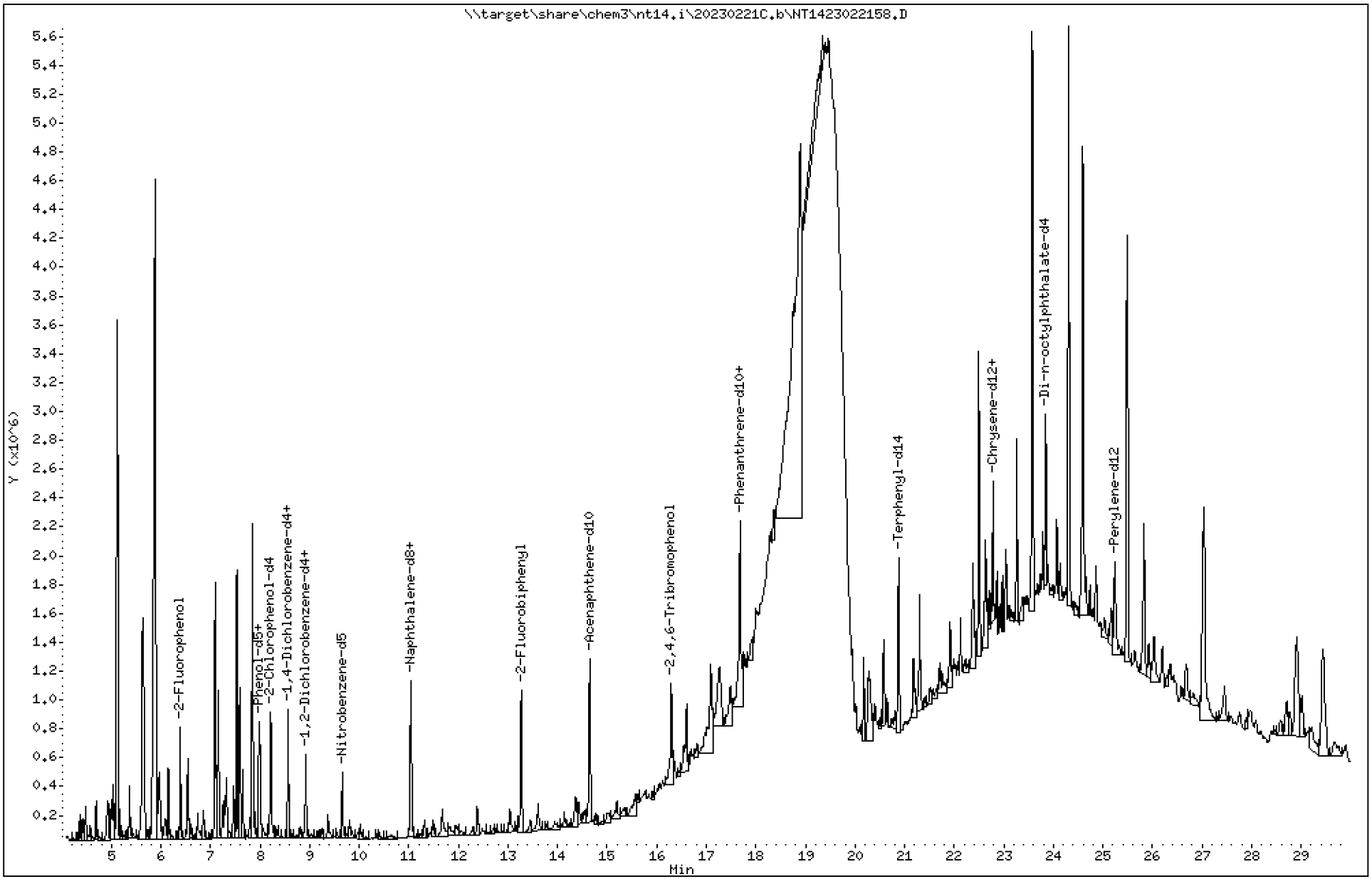
Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-15 C	SDG:	23A0133
Sampled:	01/06/23 14:26	Prepared:	01/18/23 15:24	File ID:	NT1423022158.D
% Solids:	52.30	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 23:50
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	19.14 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	749.23	354	47.3	24 - 134	
p-Terphenyl-d14	499.49	426	85.2	37 - 120	

Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022158.D
Date : 22-FEB-2023 23:50
Client ID:
Sample Info: 23A0133-15

Instrument: nt14.i
Operator: DSD
Column diameter: 0.25

Column phase: ZB-5msi



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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

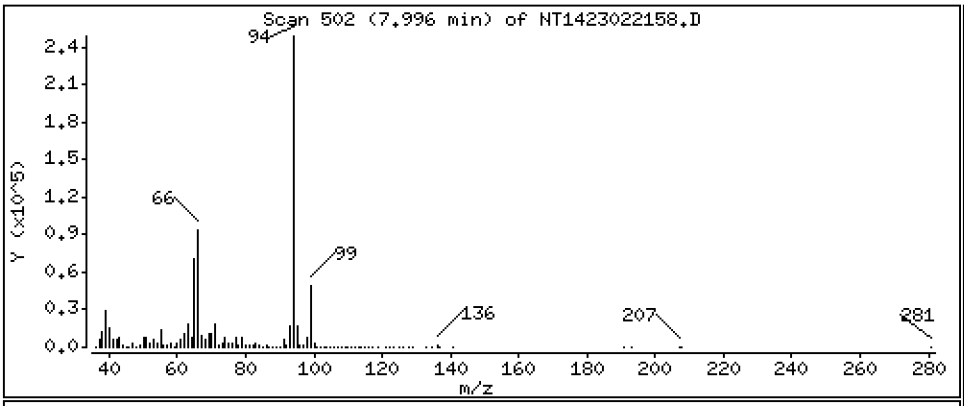
Operator: DSD

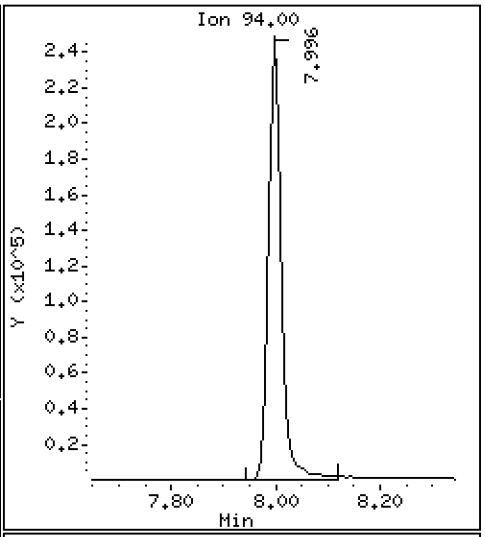
Column phase: ZB-5msi

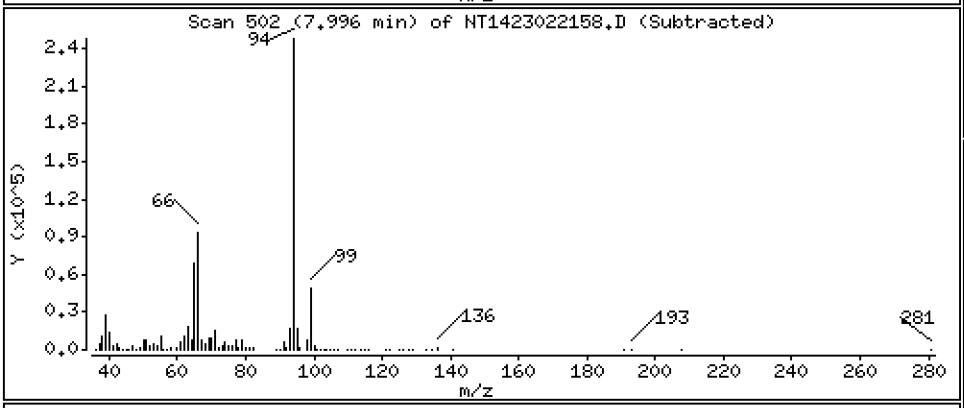
Column diameter: 0.25

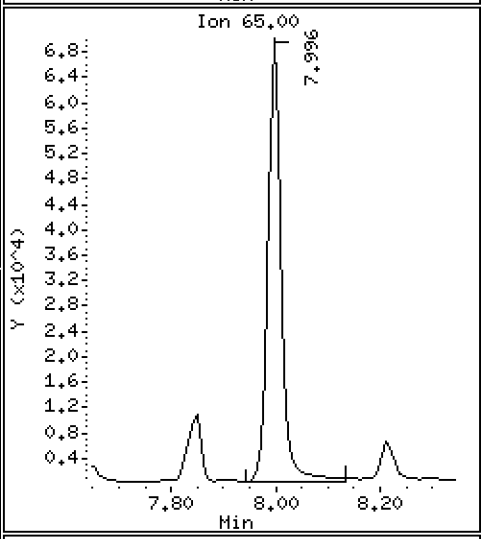
3 Phenol

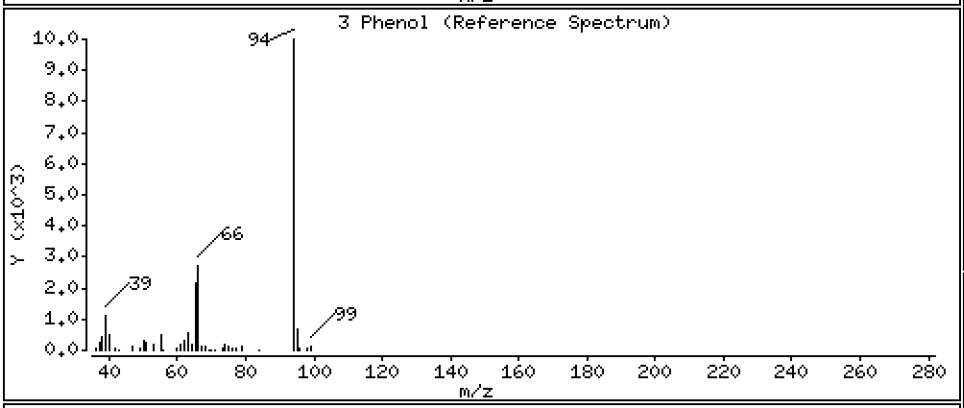
Concentration: 3.823 ug/mL

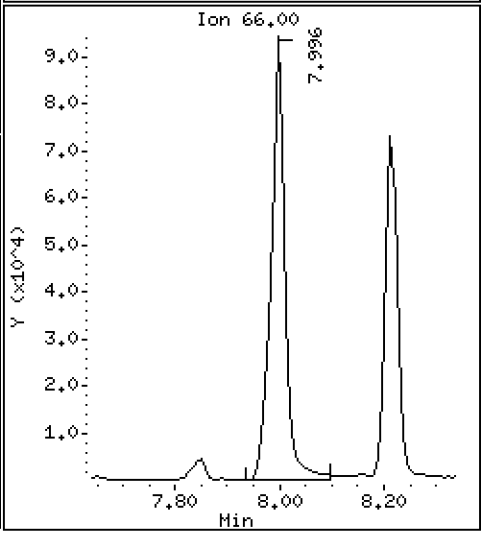


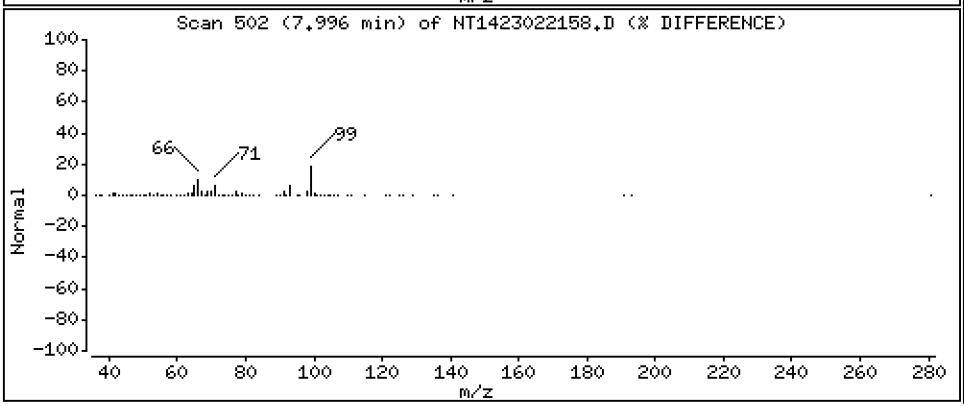












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

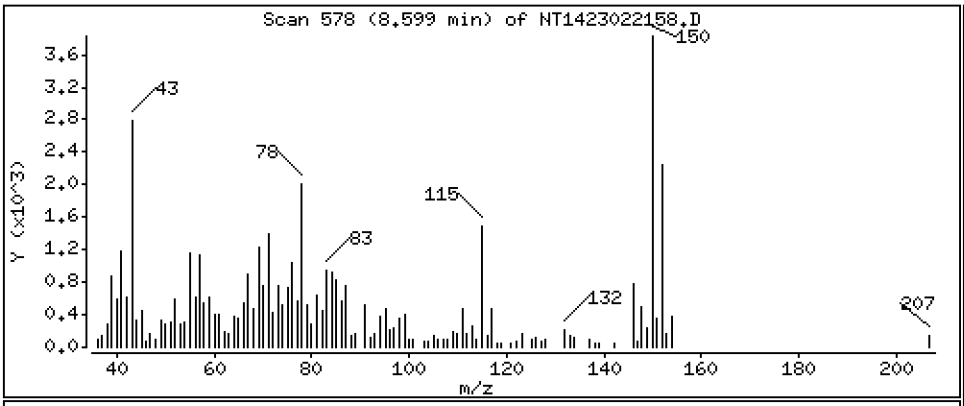
Operator: DSD

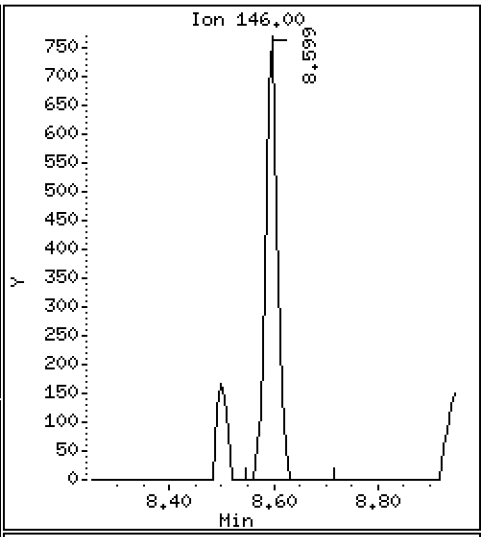
Column phase: ZB-5msi

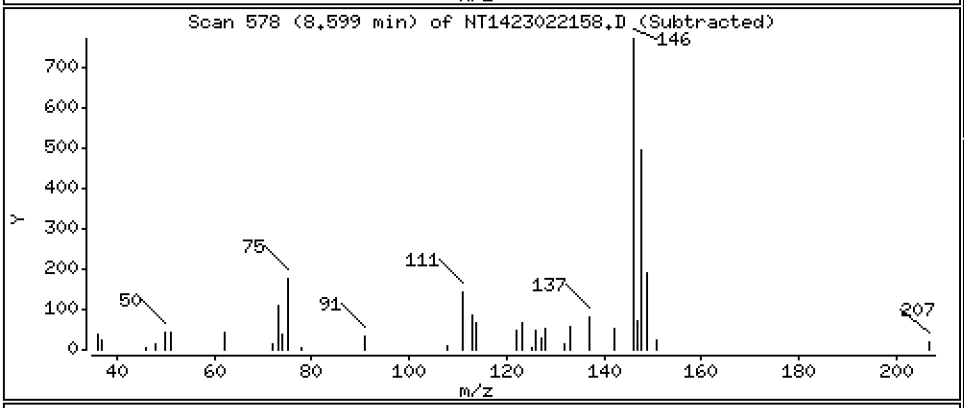
Column diameter: 0.25

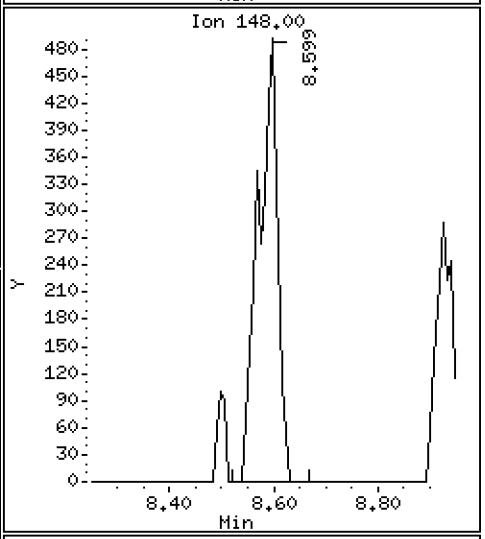
9 1,4-Dichlorobenzene

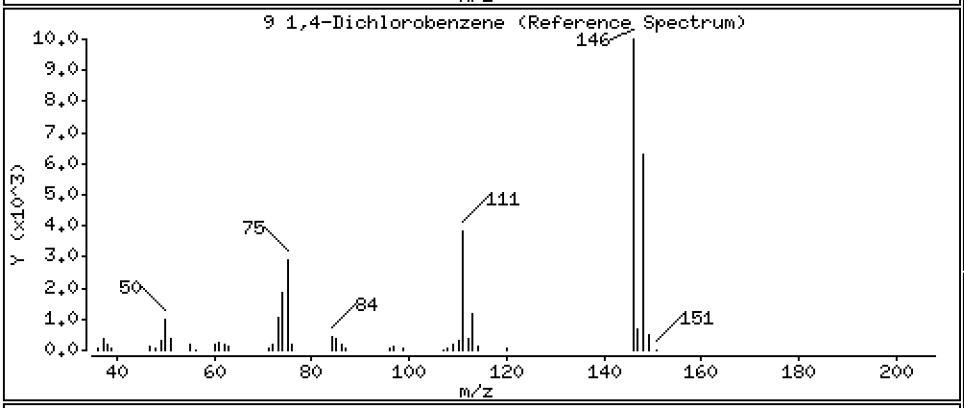
Concentration: 0.01706 ug/mL

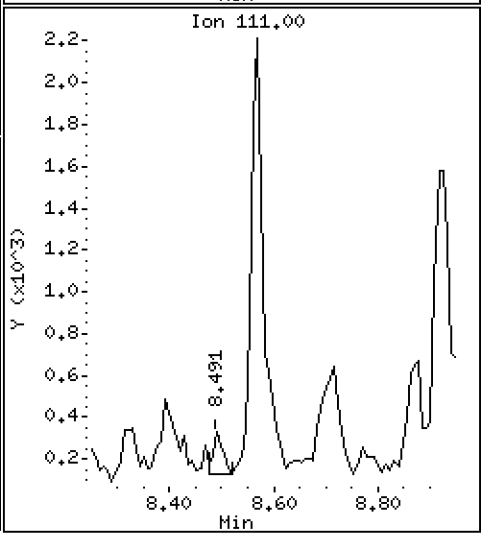


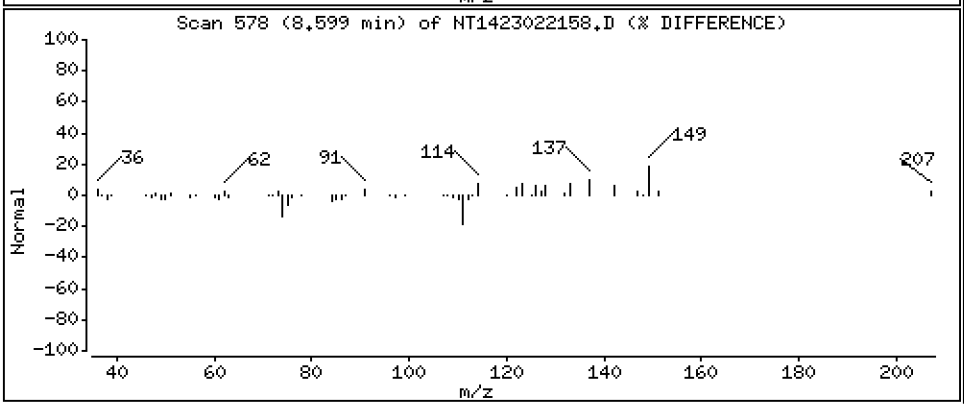












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

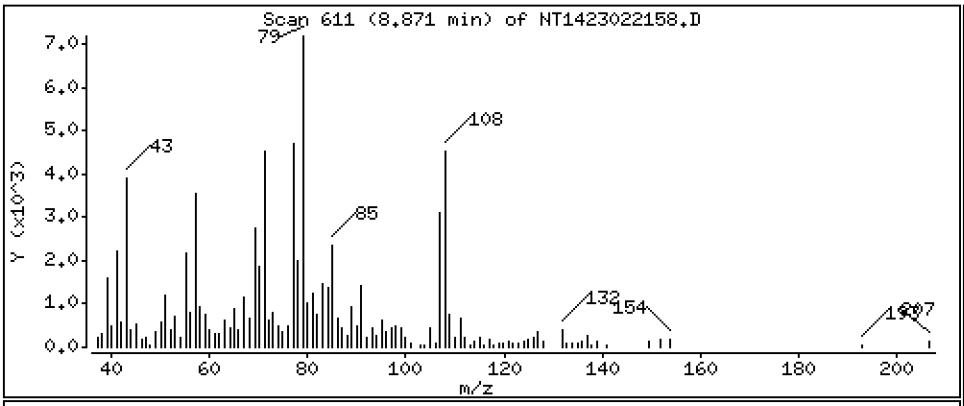
Operator: DSD

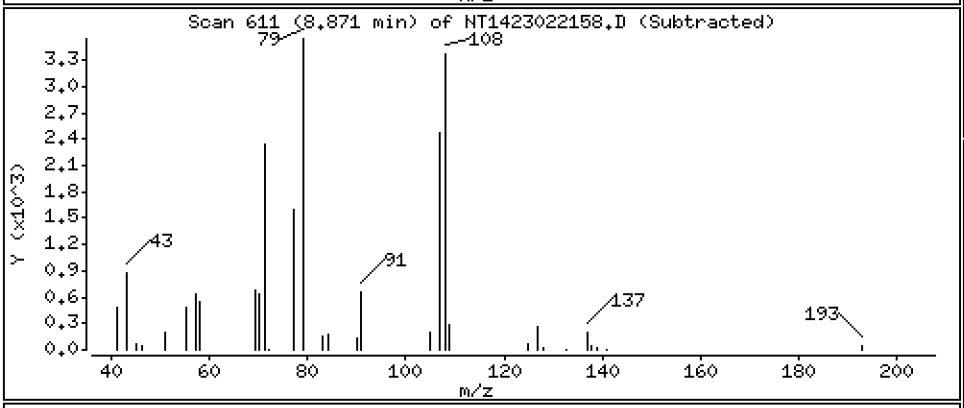
Column phase: ZB-5msi

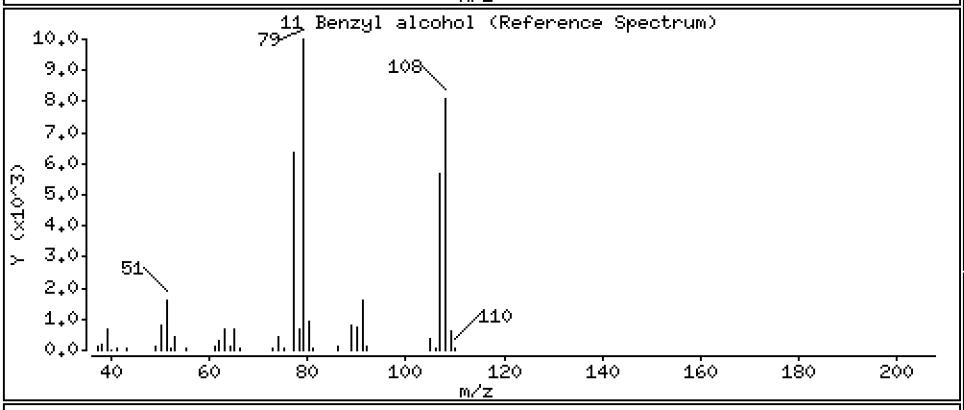
Column diameter: 0.25

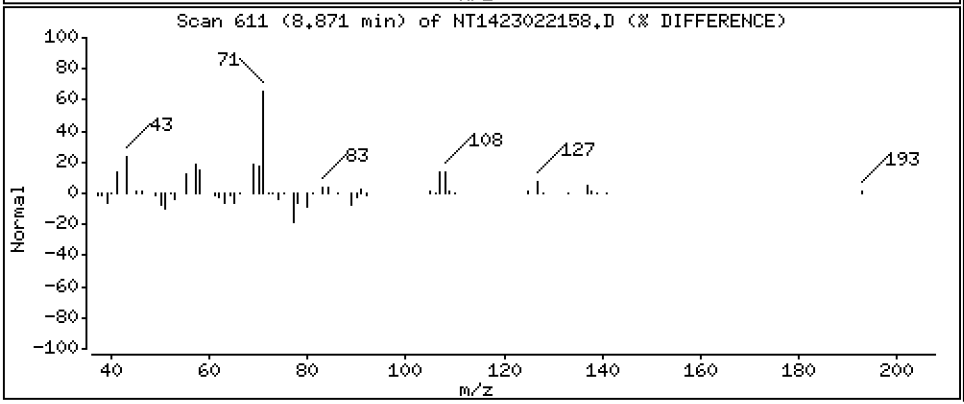
11 Benzyl alcohol

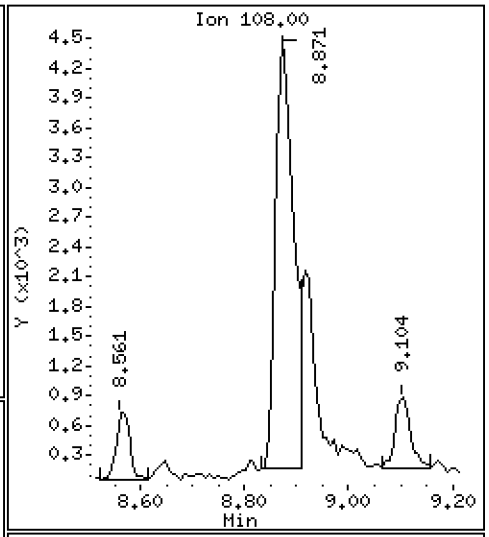
Concentration: 0.1770 ug/mL

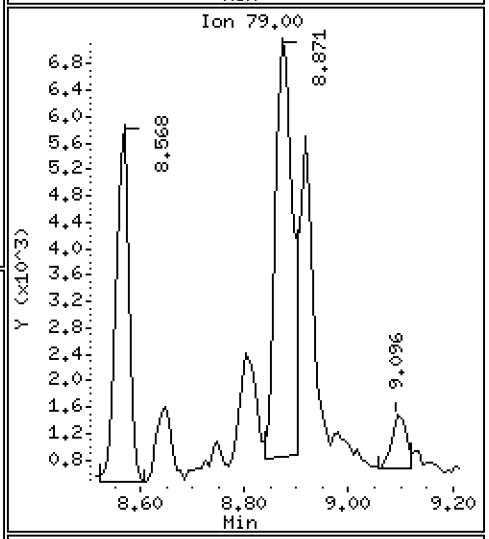


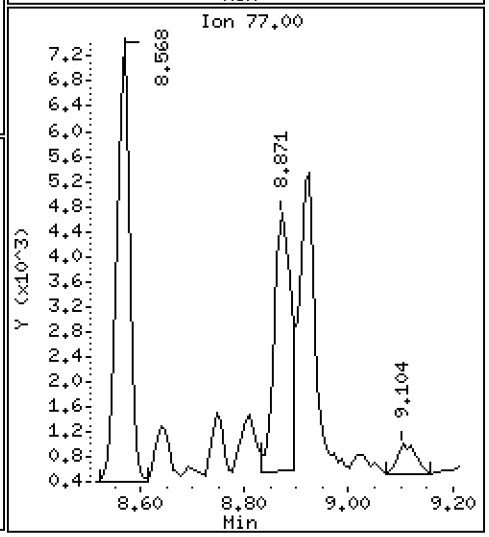












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

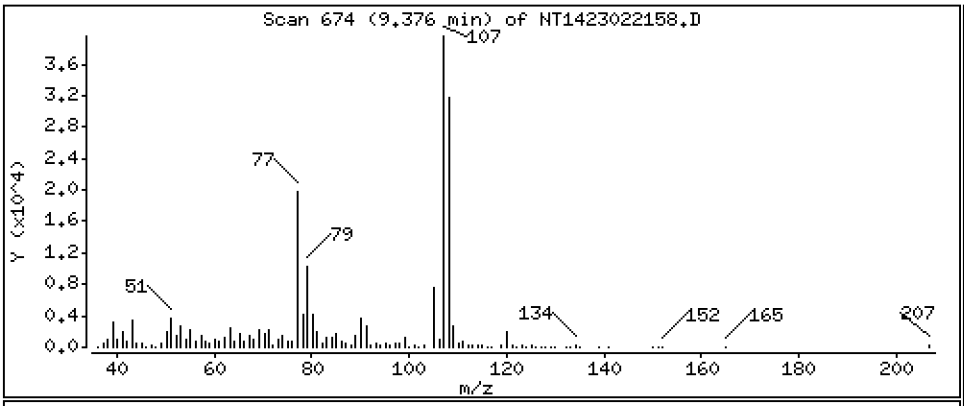
Operator: DSD

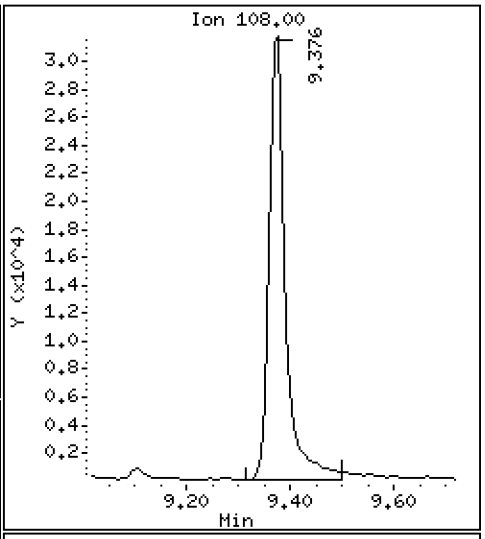
Column phase: ZB-5msi

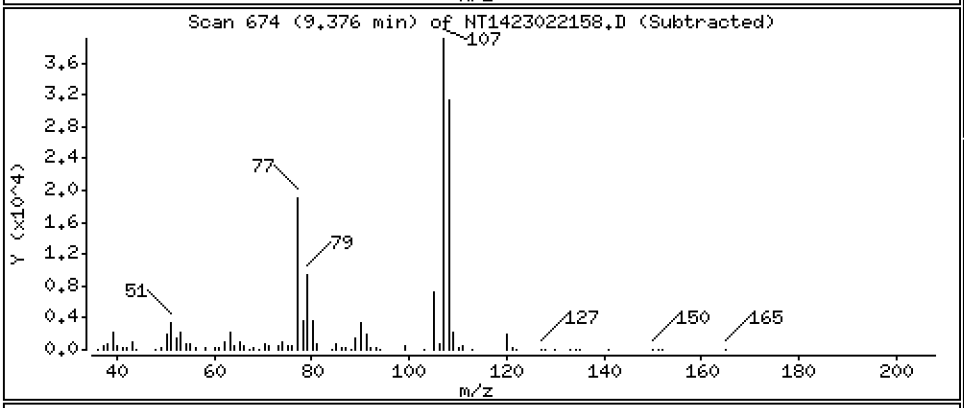
Column diameter: 0.25

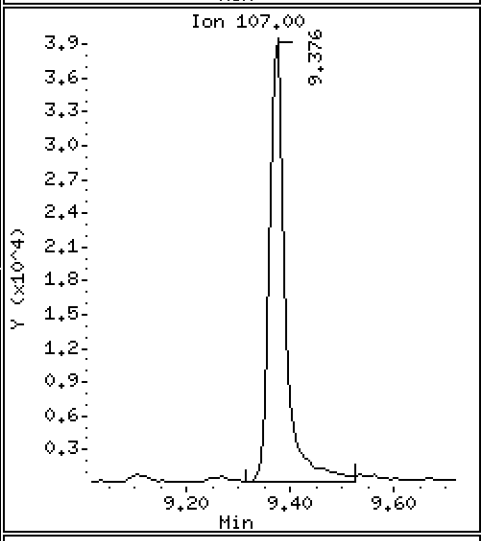
15 4-Methylphenol

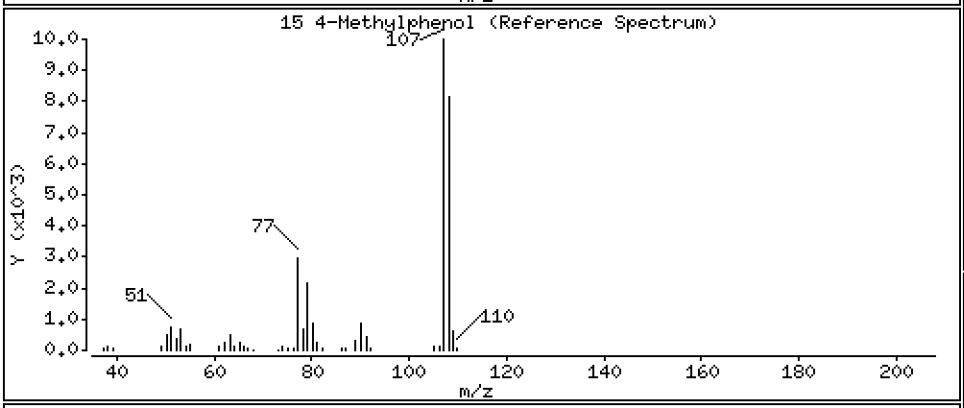
Concentration: 0.8610 ug/mL

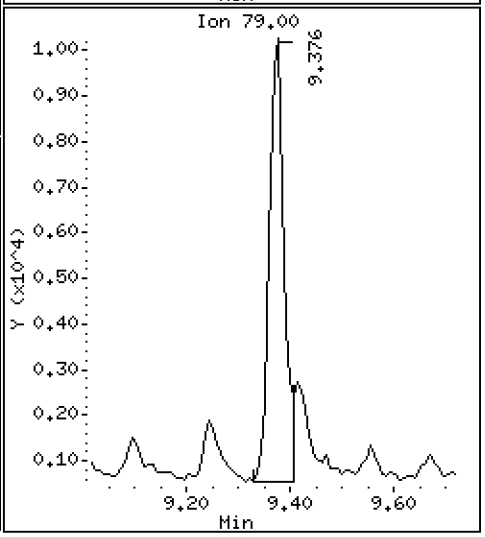


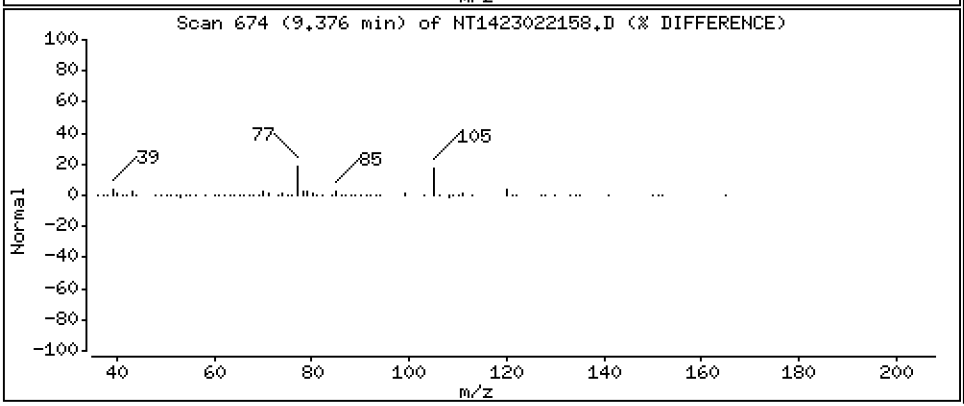












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

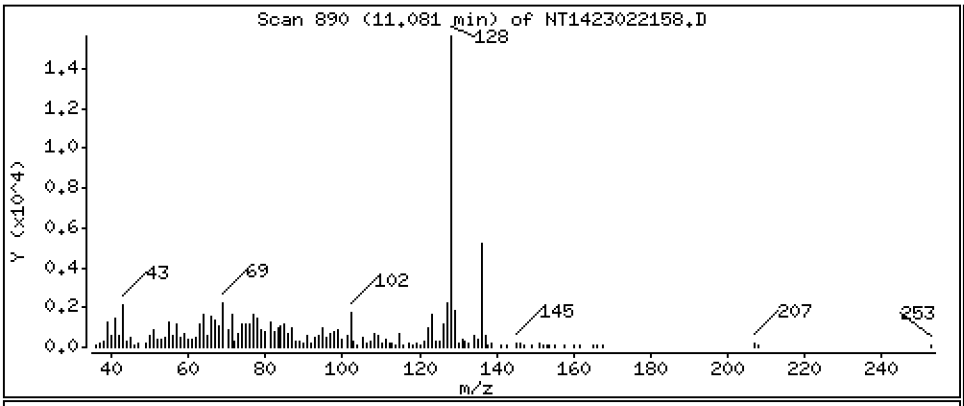
Operator: DSD

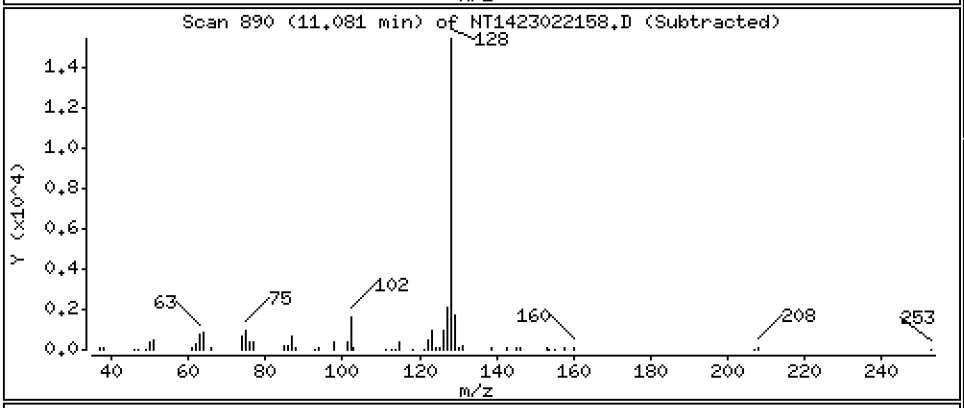
Column phase: ZB-5msi

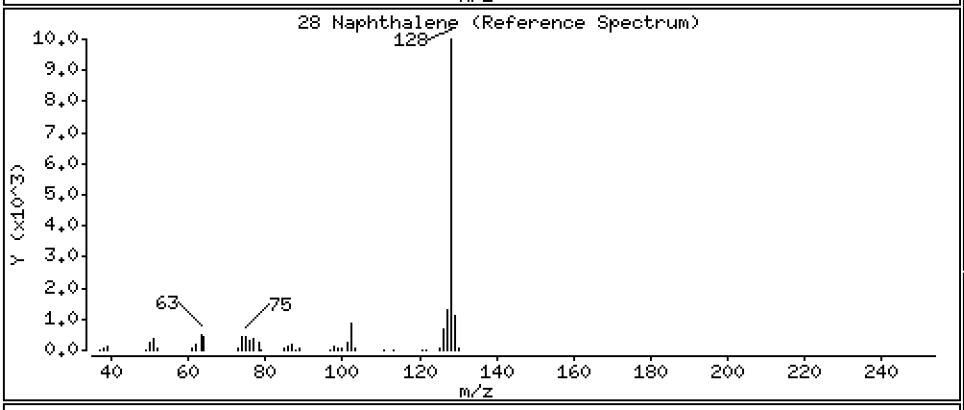
Column diameter: 0.25

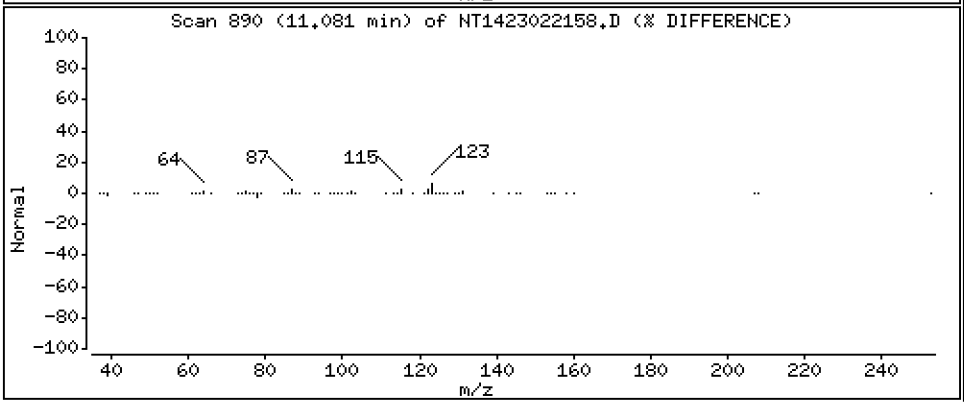
28 Naphthalene

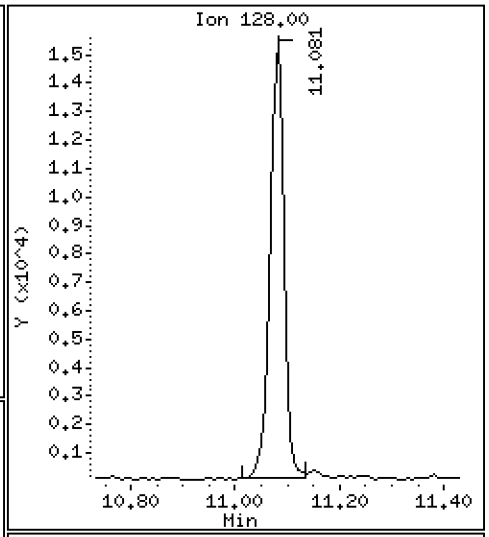
Concentration: 0.1246 ug/mL

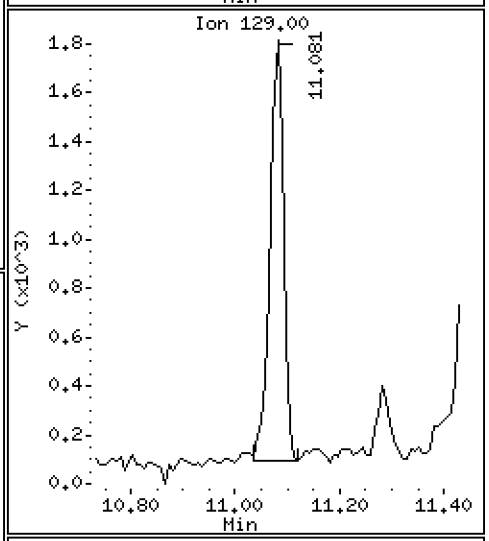


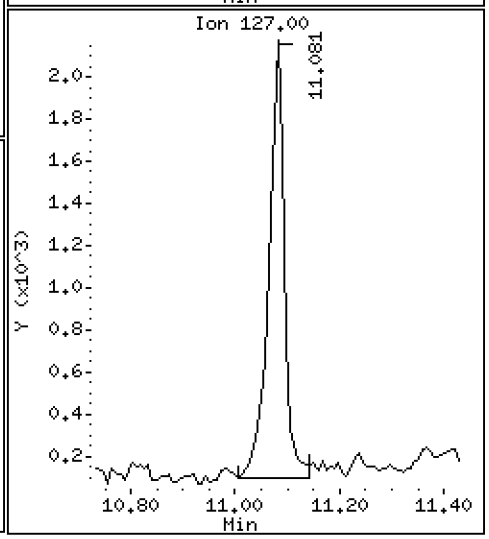












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

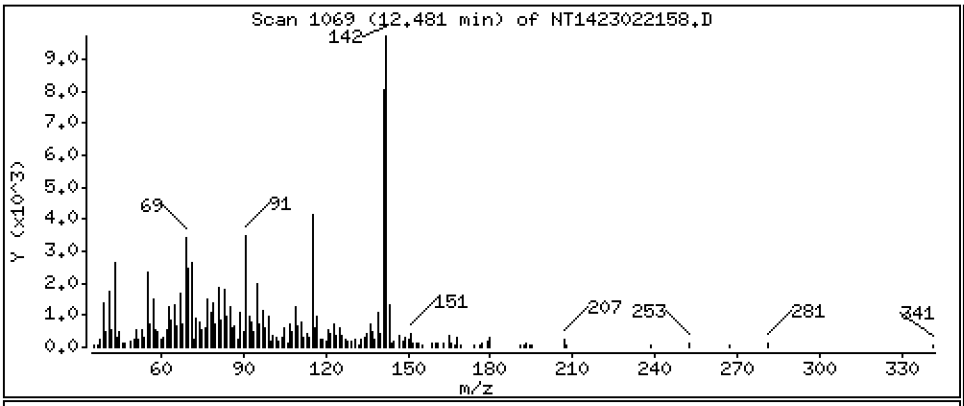
Operator: DSD

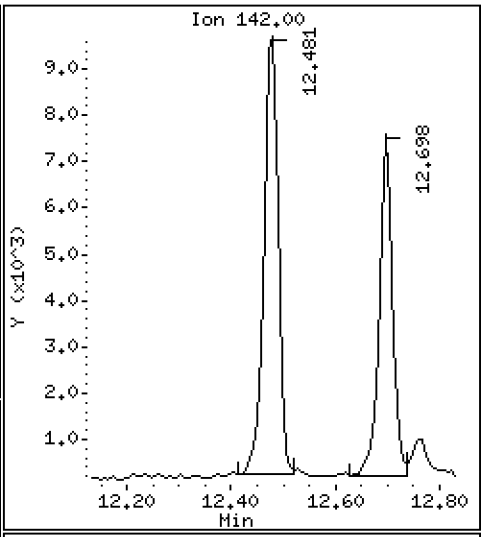
Column phase: ZB-5msi

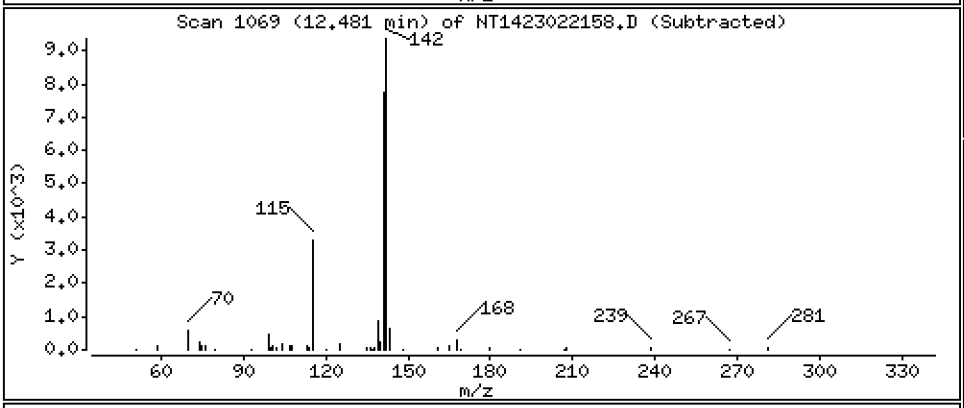
Column diameter: 0.25

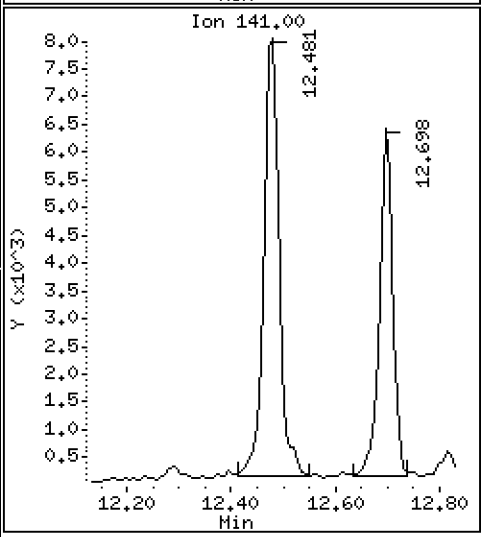
32 2-Methylnaphthalene

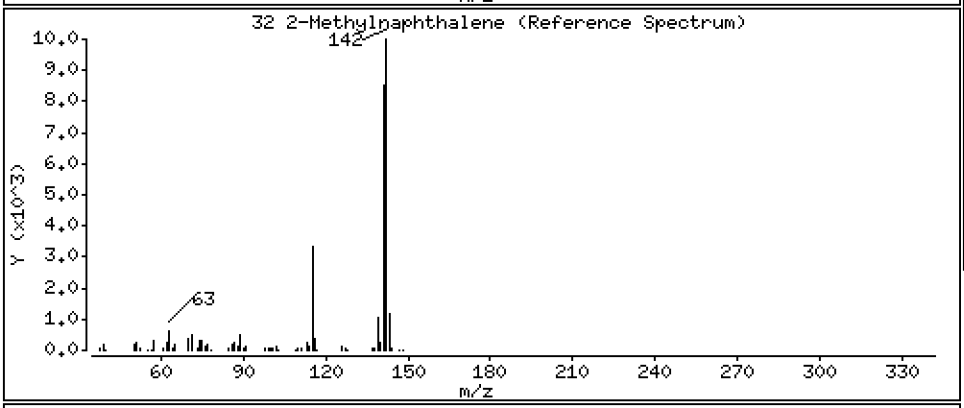
Concentration: 0.1064 ug/mL

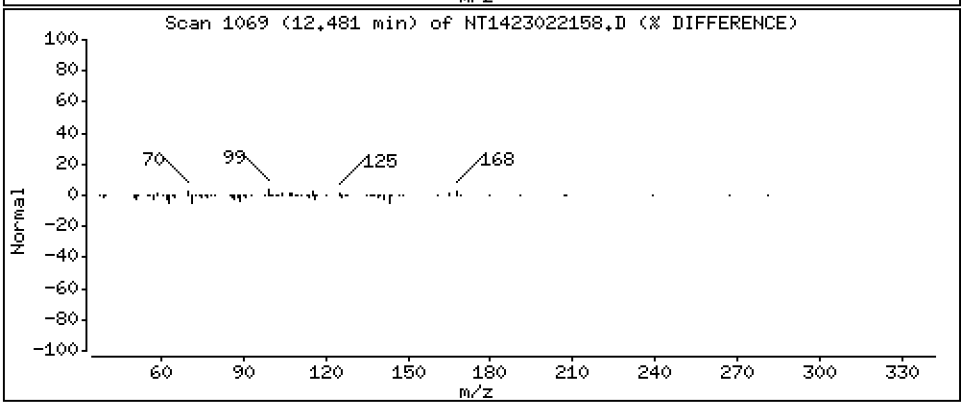












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022158.D

Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

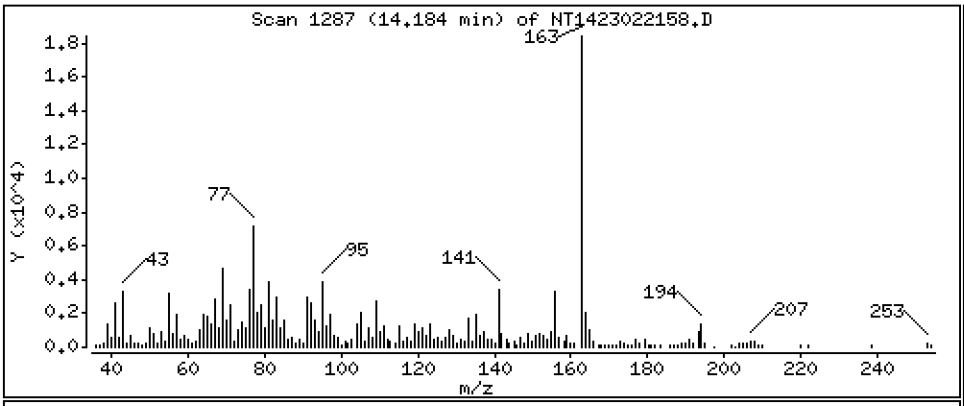
Operator: DSD

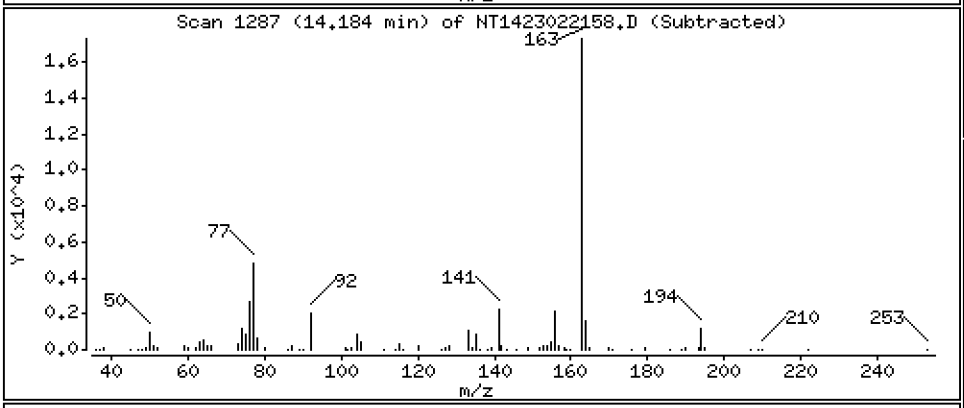
Column phase: ZB-5msi

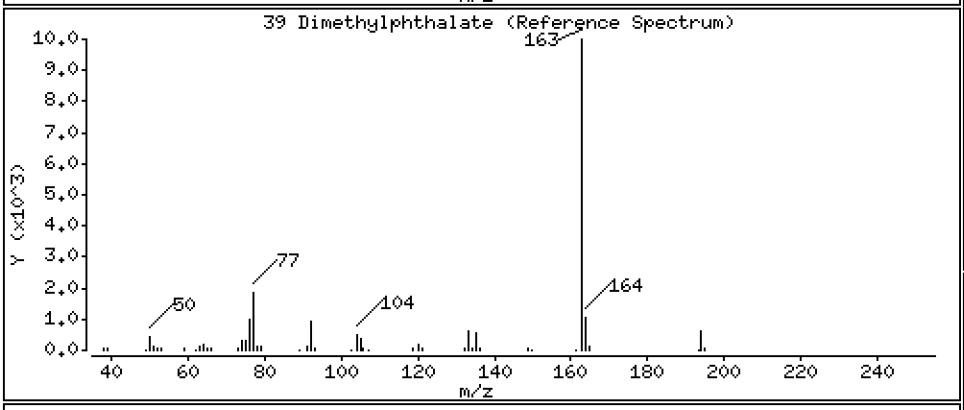
Column diameter: 0.25

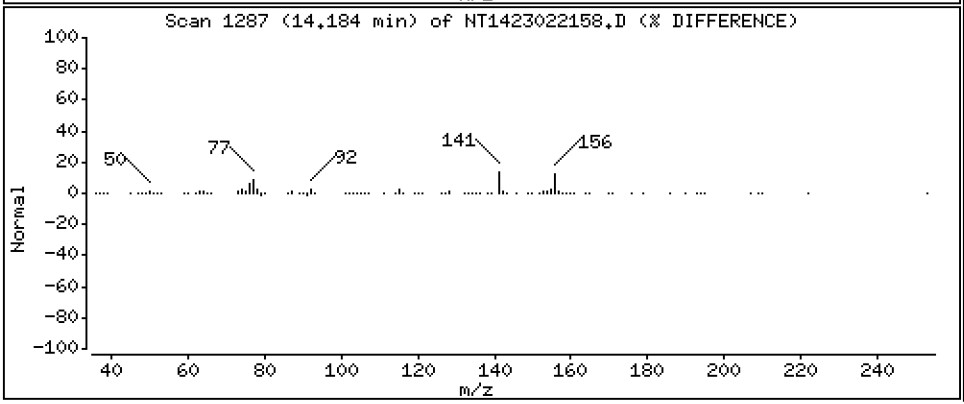
39 Dimethylphthalate

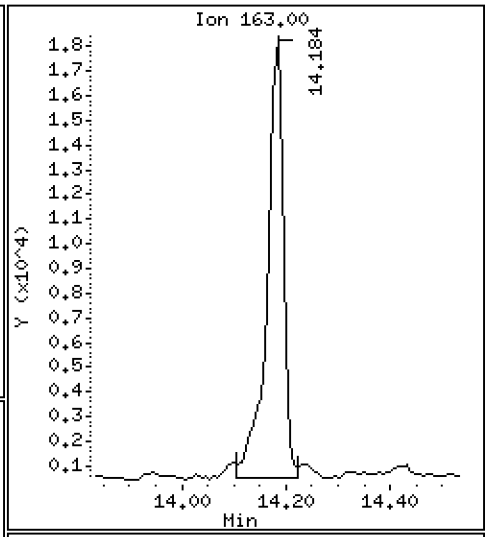
Concentration: 0.2370 ug/mL

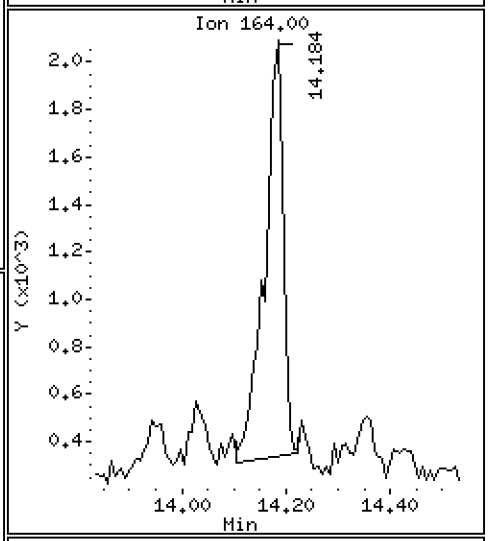


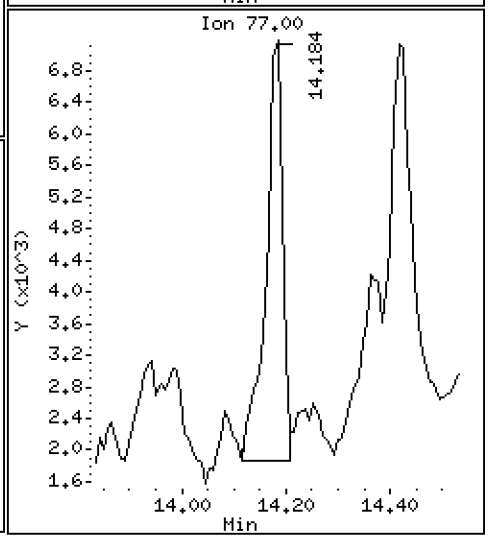












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

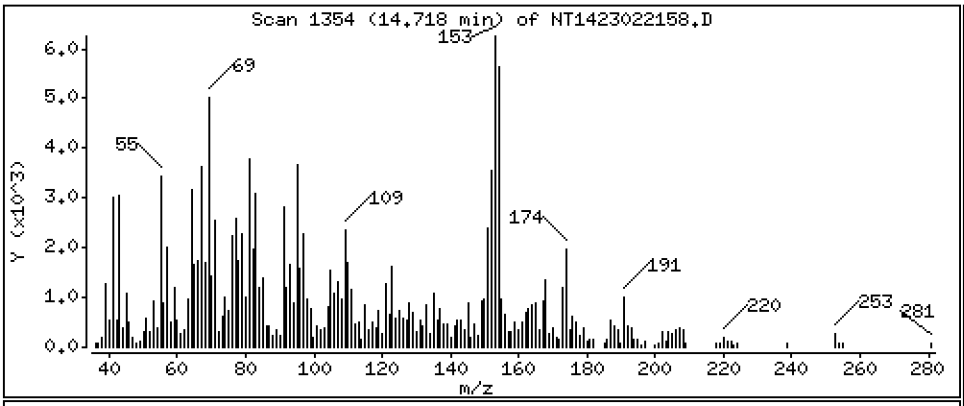
Operator: DSD

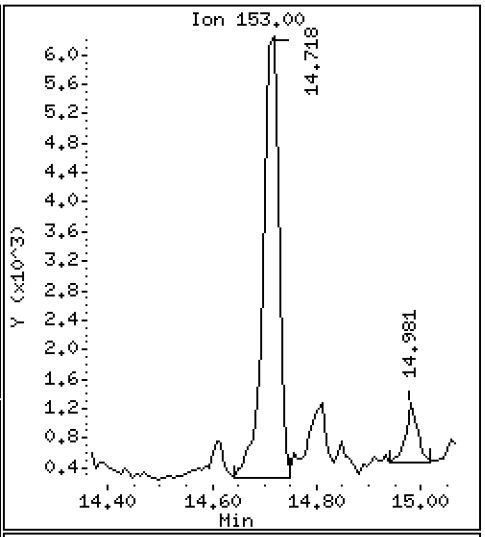
Column phase: ZB-5msi

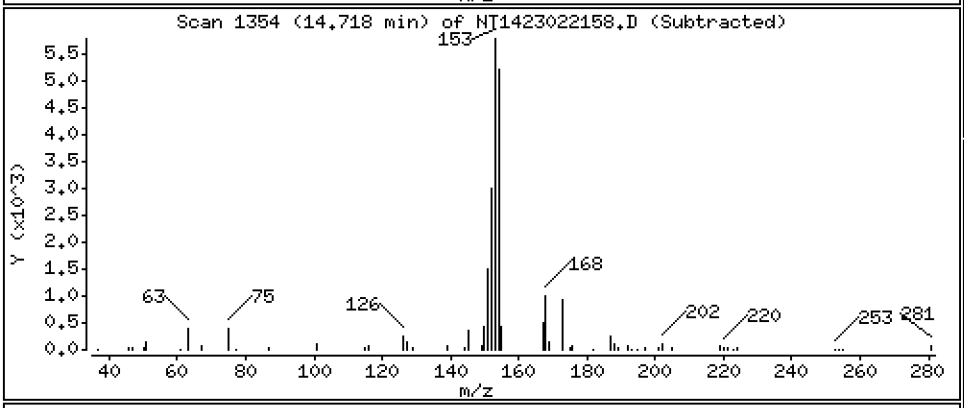
Column diameter: 0.25

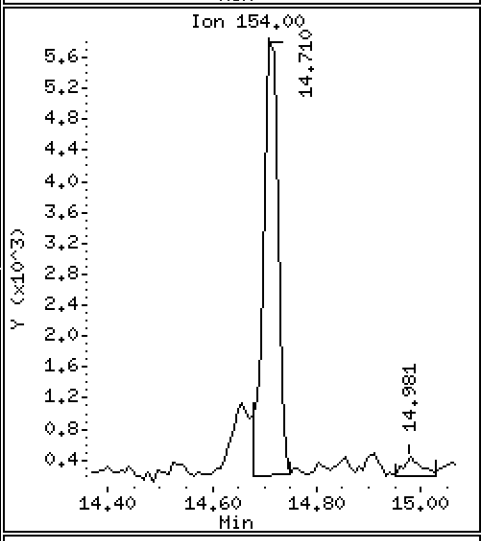
44 Acenaphthene

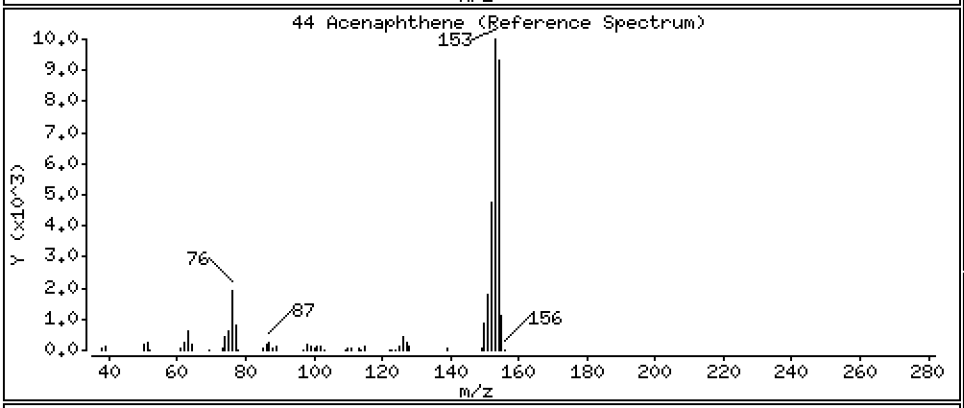
Concentration: 0.08817 ug/mL

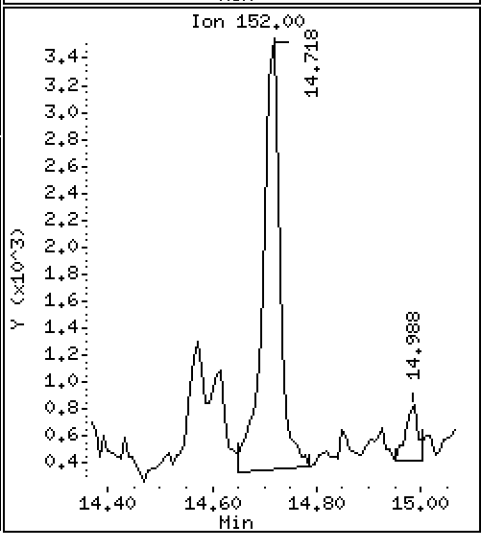


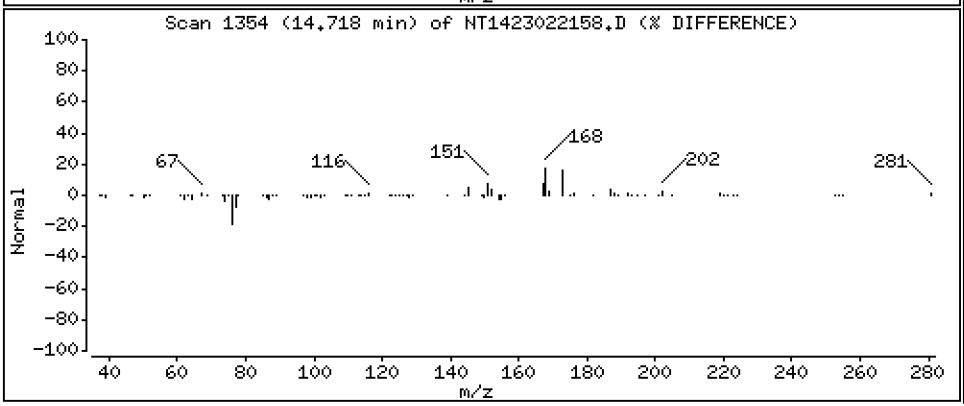












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

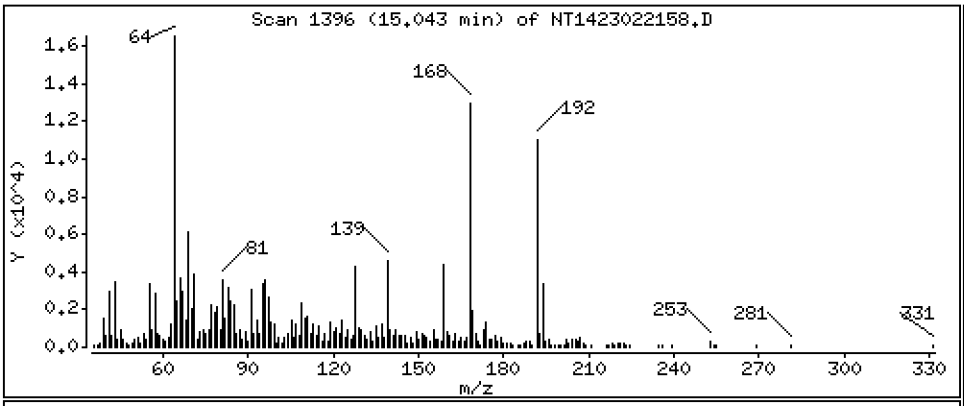
Operator: DSD

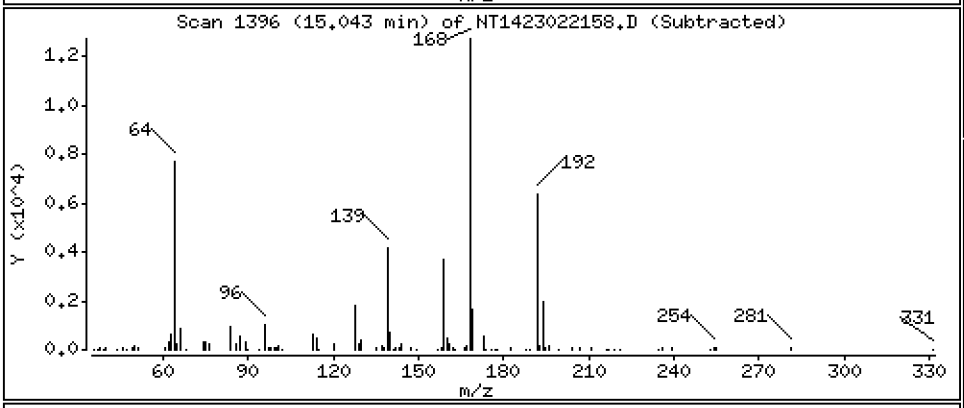
Column phase: ZB-5msi

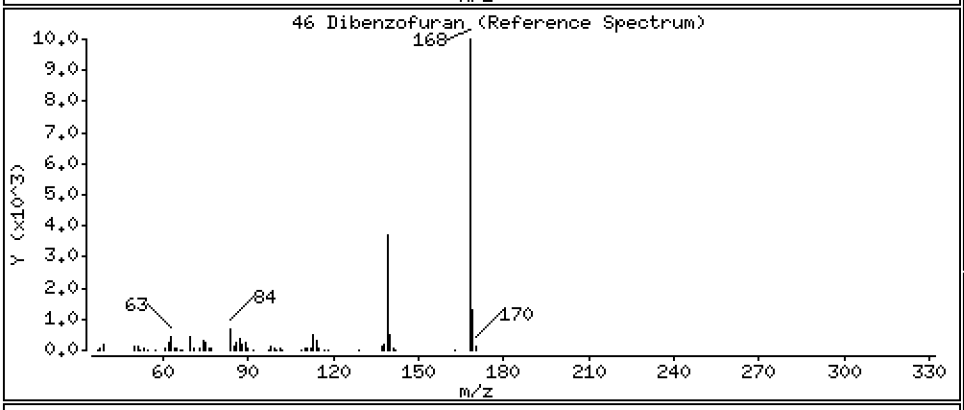
Column diameter: 0.25

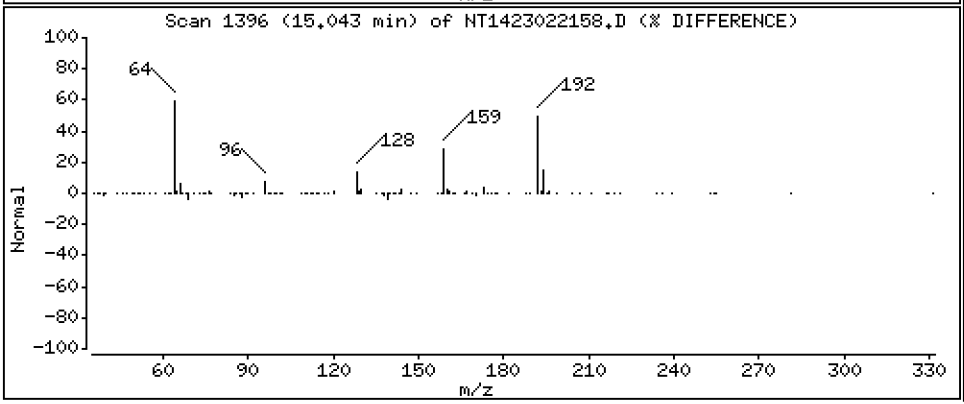
46 Dibenzofuran

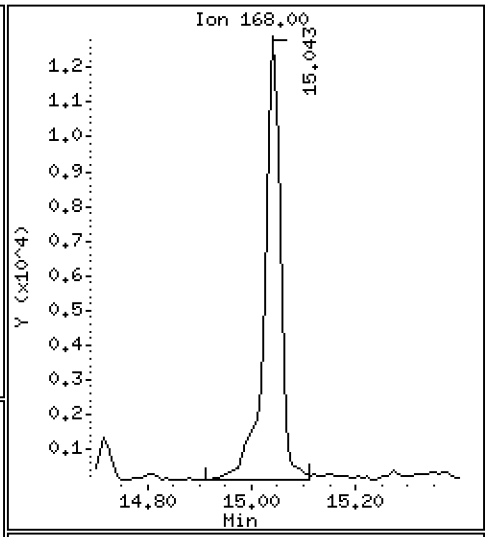
Concentration: 0.1160 ug/mL

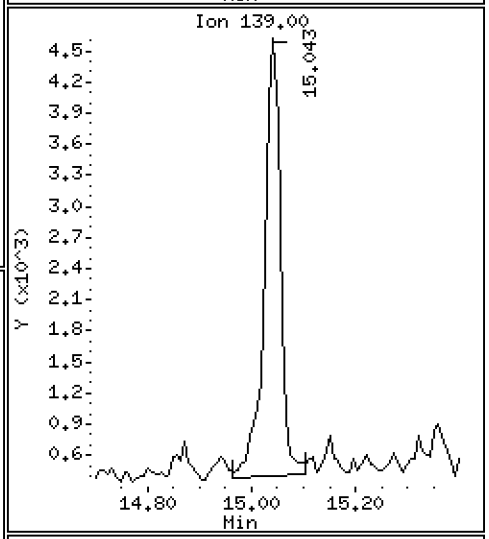


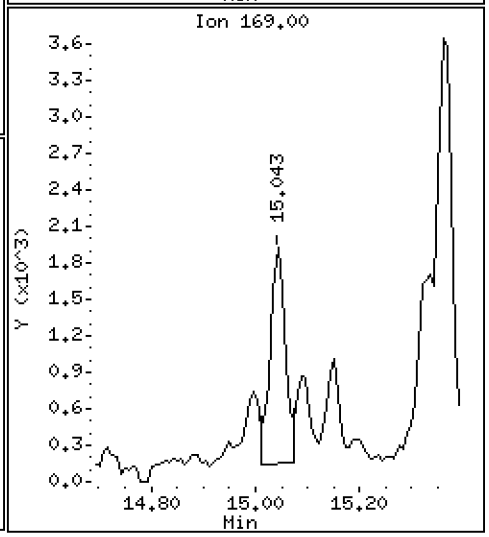












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

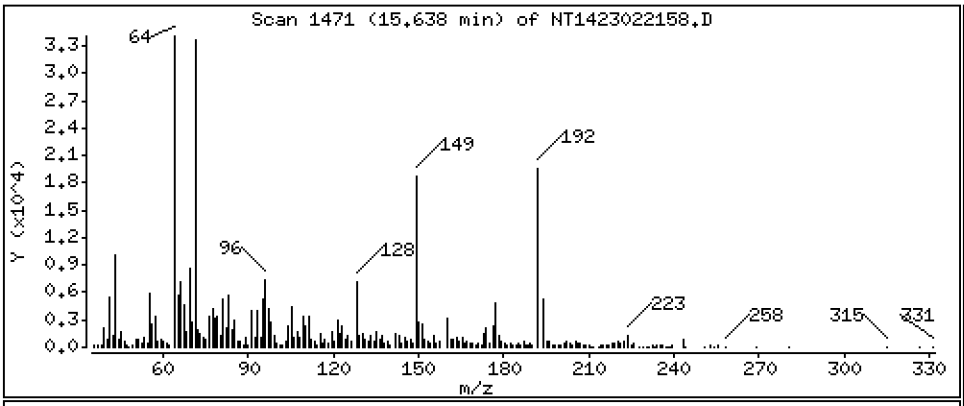
Operator: DSD

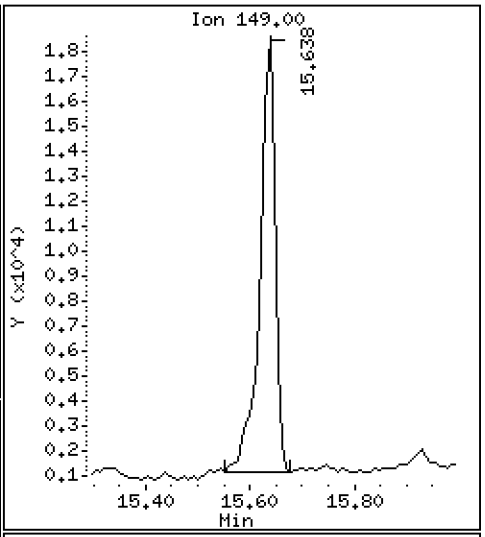
Column phase: ZB-5msi

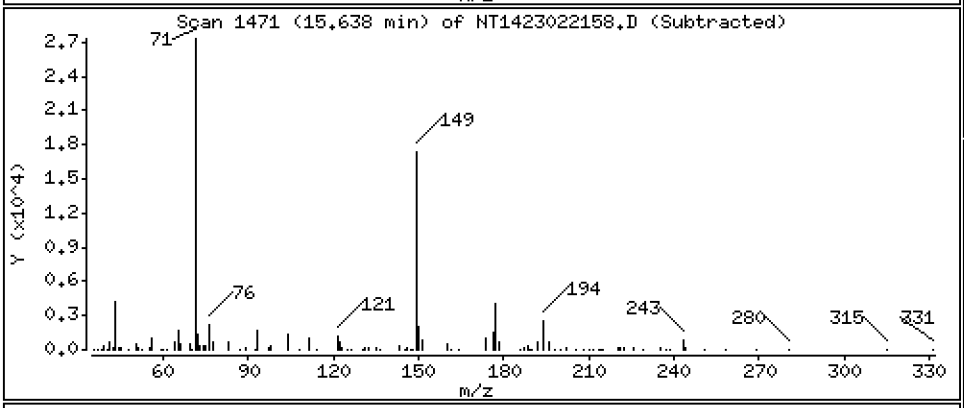
Column diameter: 0.25

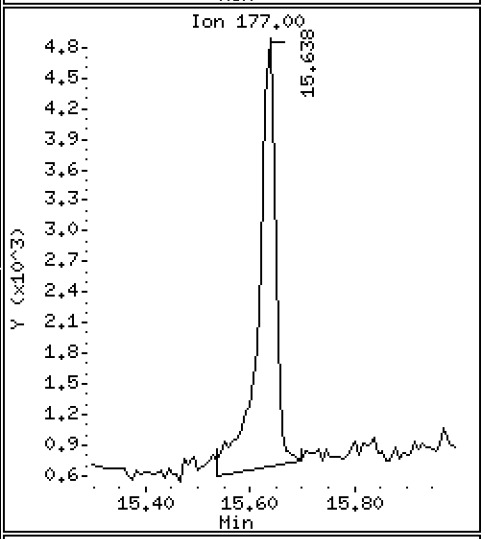
50 Diethylphthalate

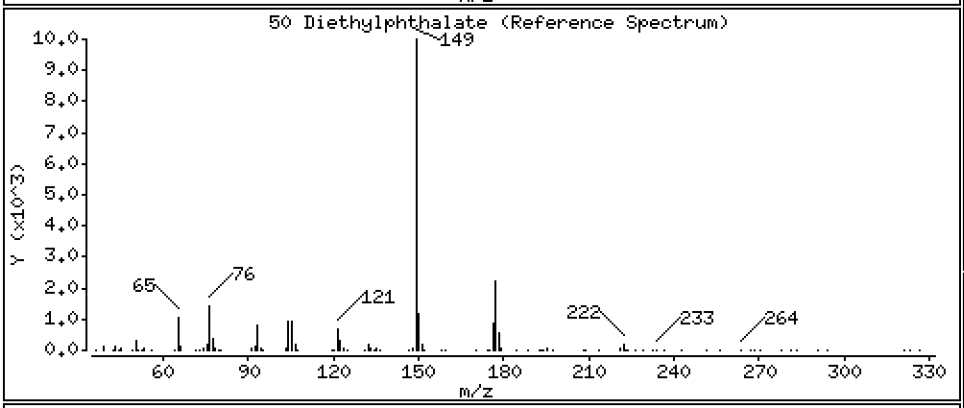
Concentration: 0.1621 ug/mL

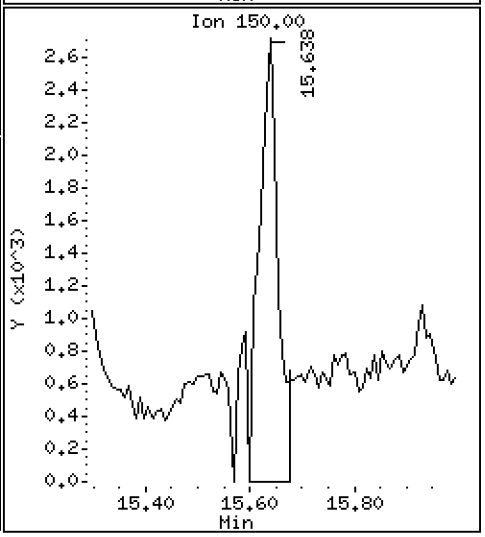


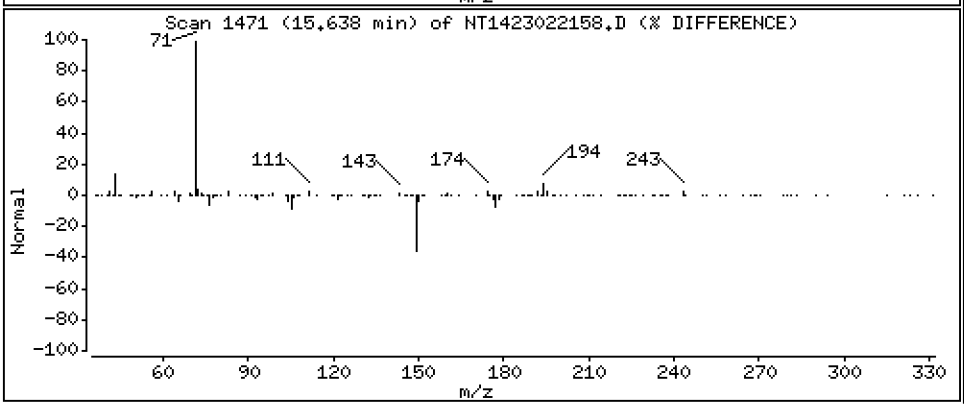












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

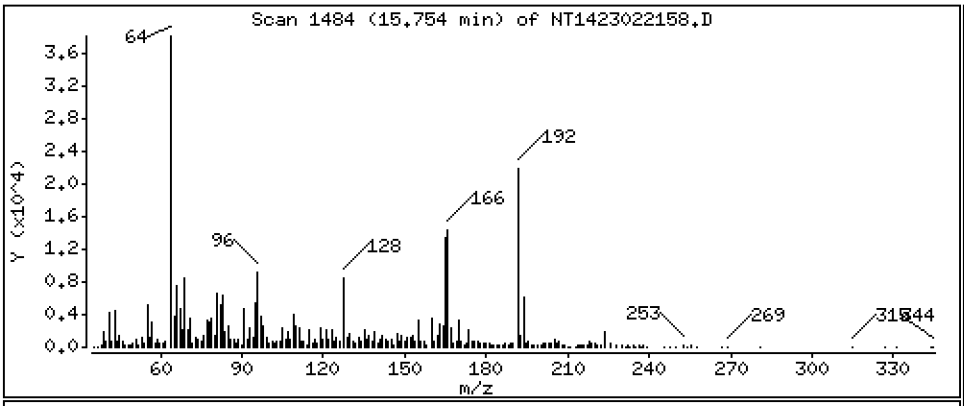
Operator: DSD

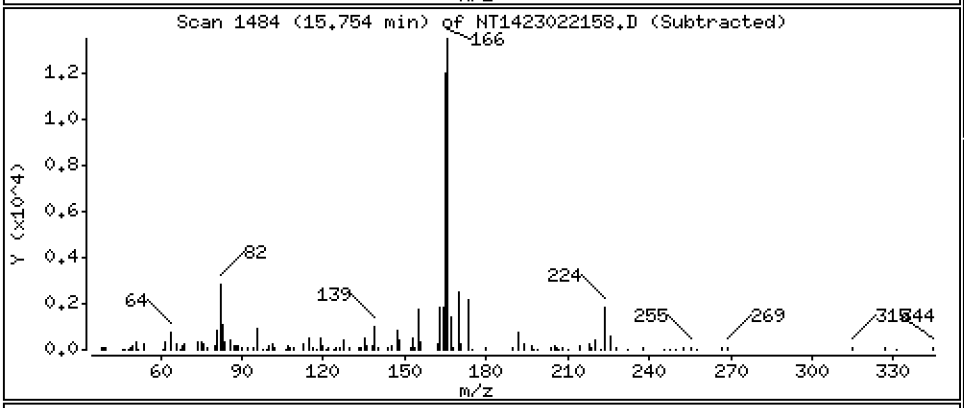
Column phase: ZB-5msi

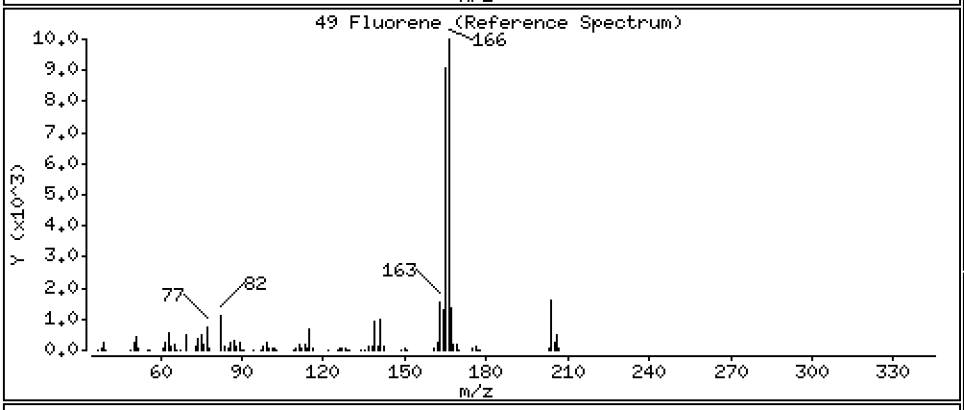
Column diameter: 0.25

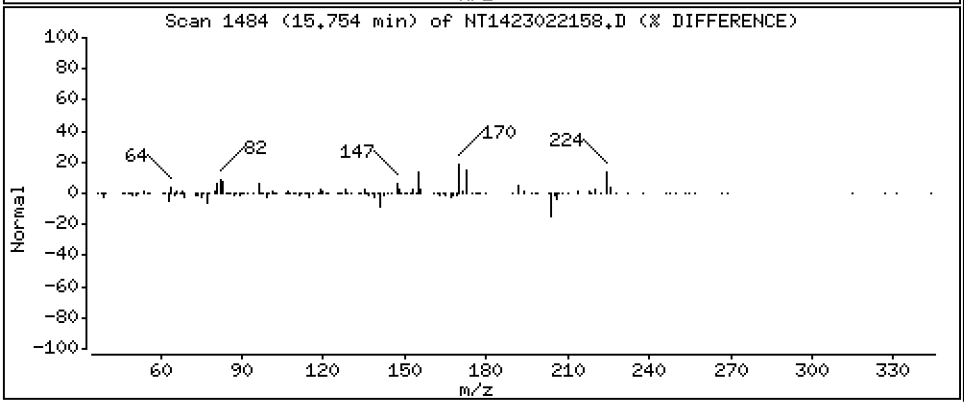
49 Fluorene

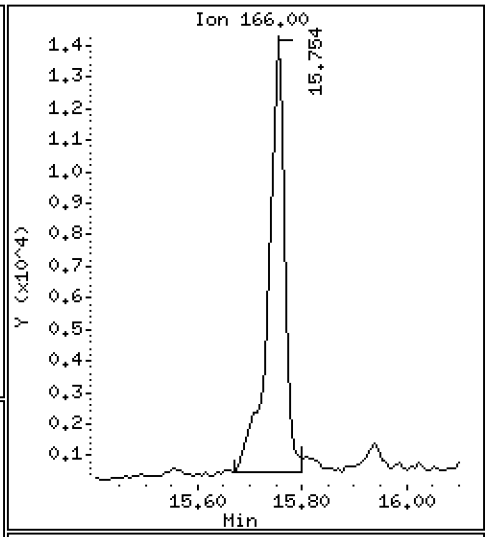
Concentration: 0.1393 ug/mL

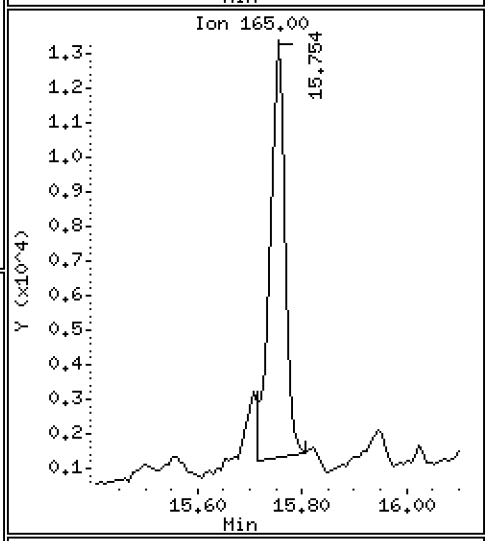


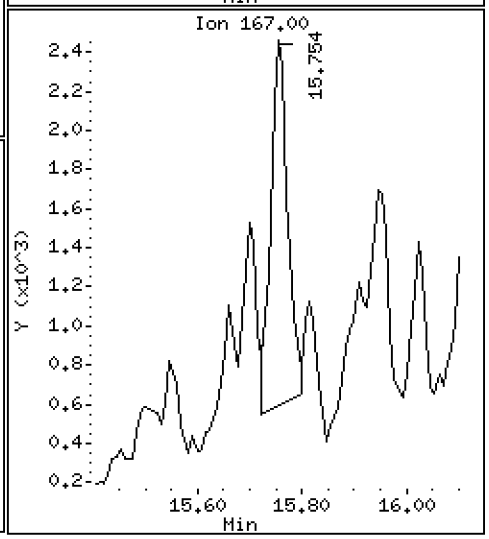












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

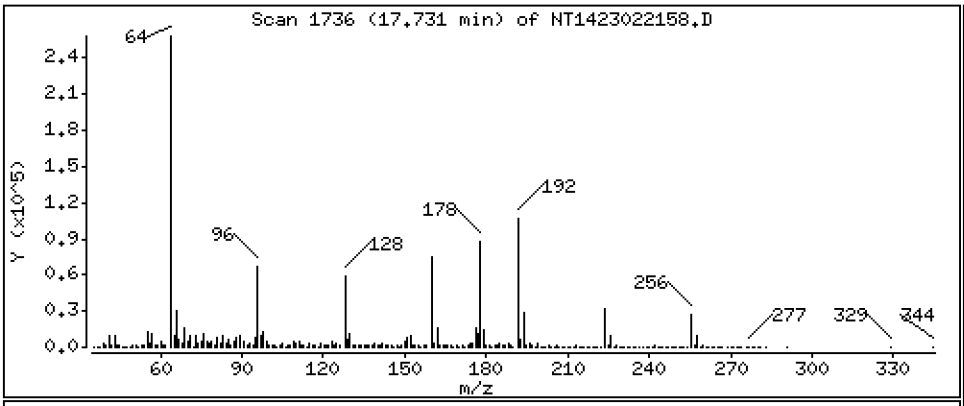
Operator: DSD

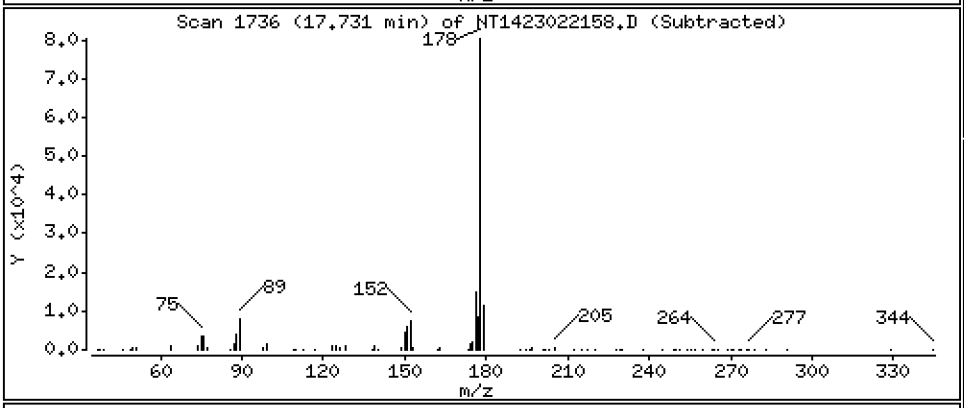
Column phase: ZB-5msi

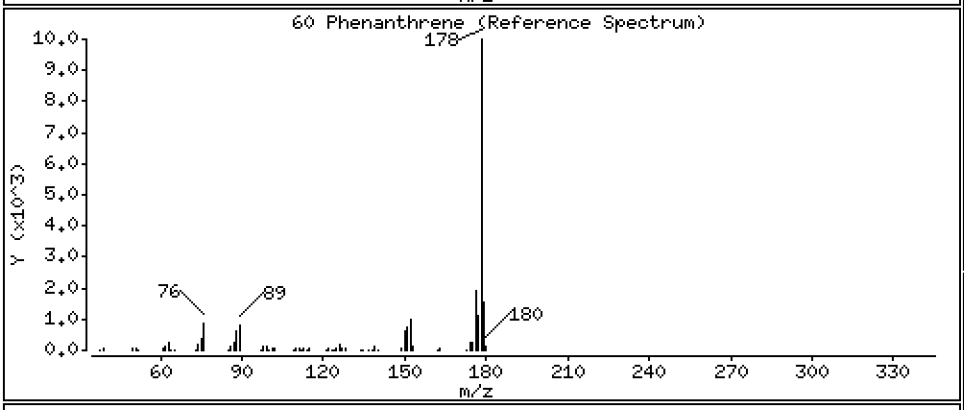
Column diameter: 0.25

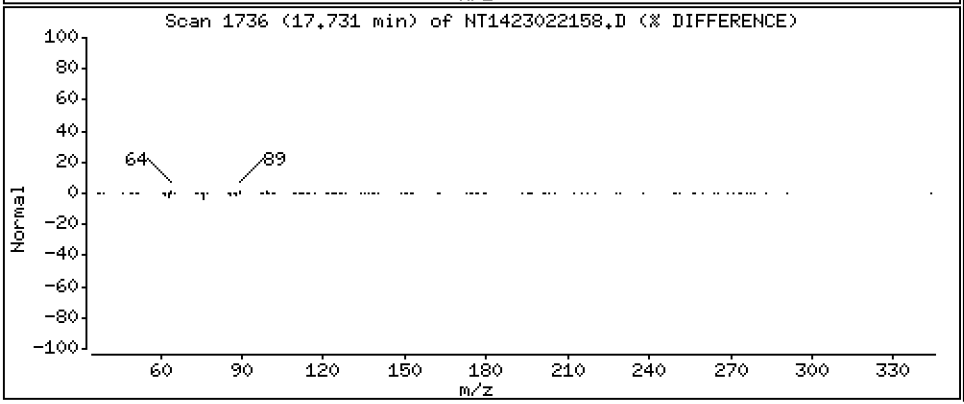
60 Phenanthrene

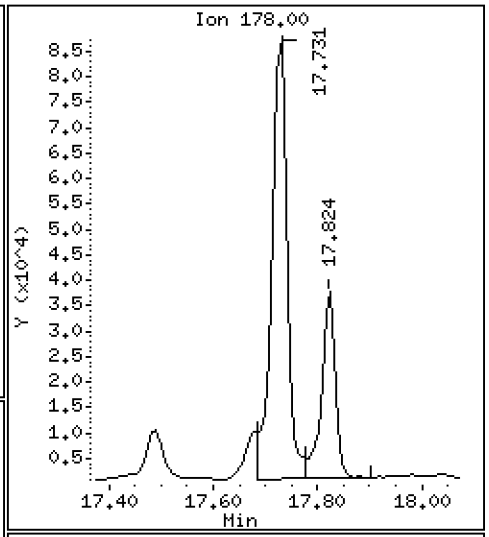
Concentration: 0.7548 ug/mL

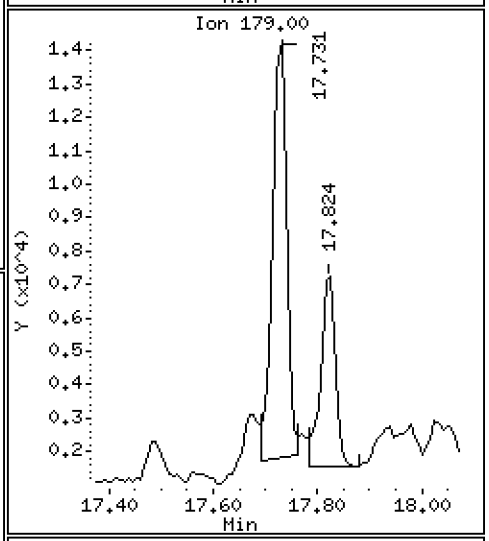


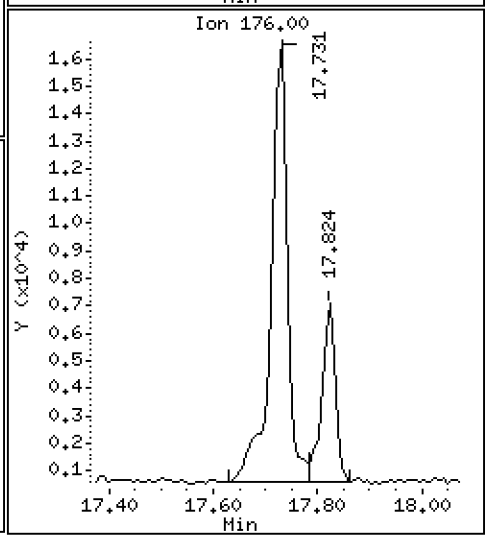












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

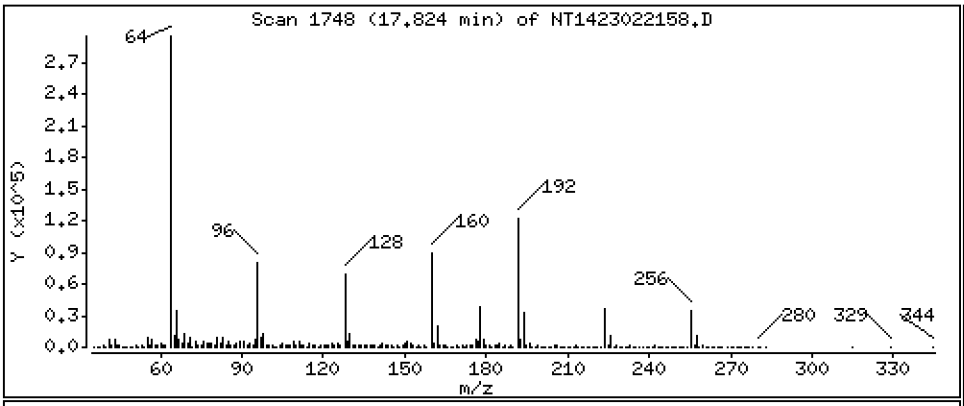
Operator: DSD

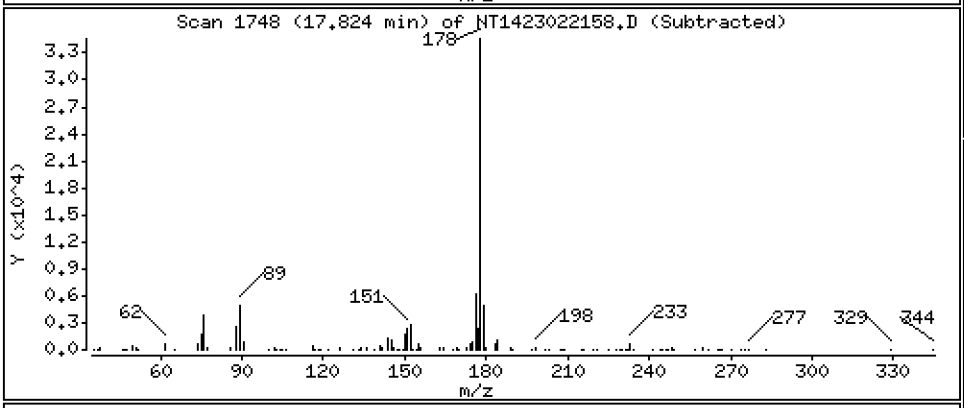
Column phase: ZB-5msi

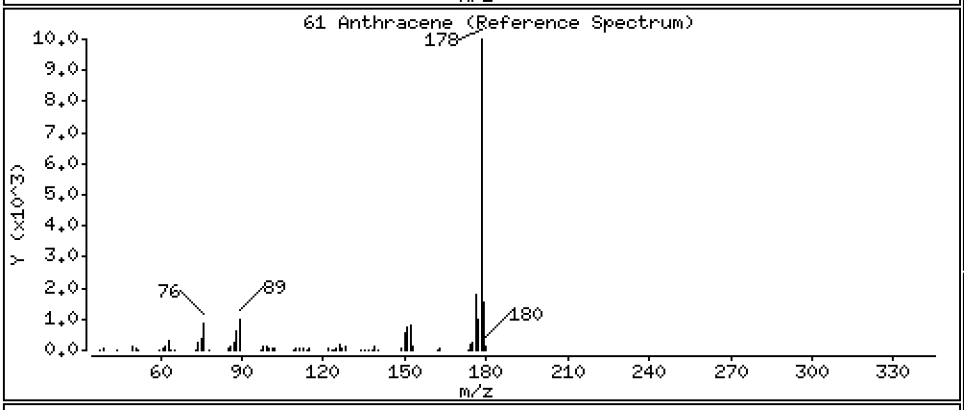
Column diameter: 0.25

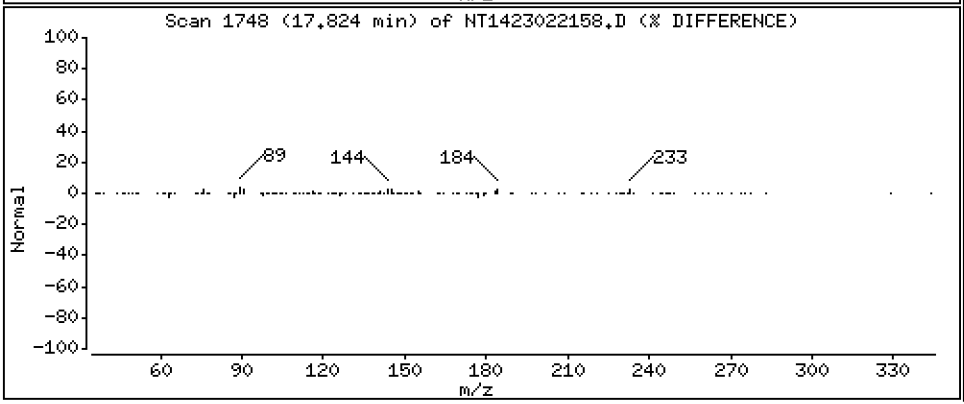
61 Anthracene

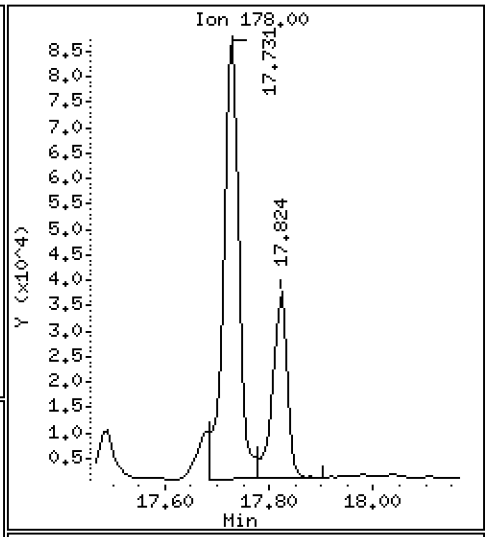
Concentration: 0.3124 ug/mL

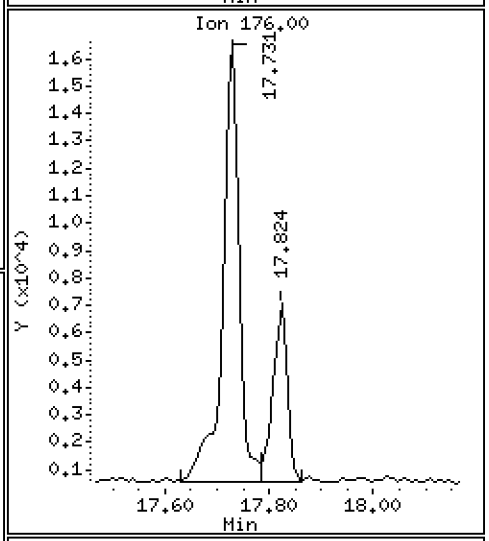


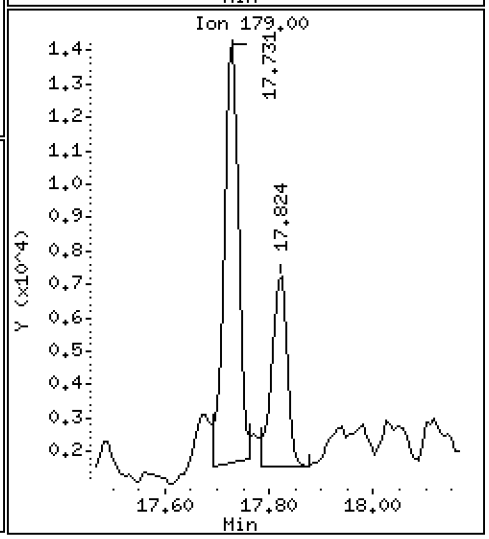












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

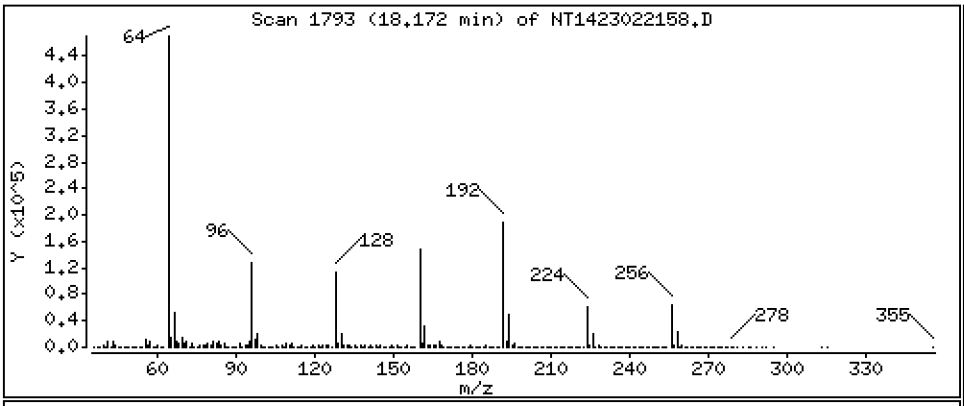
Operator: DSD

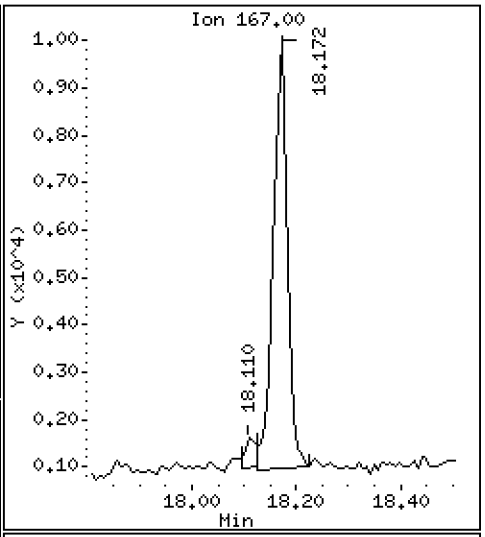
Column phase: ZB-5msi

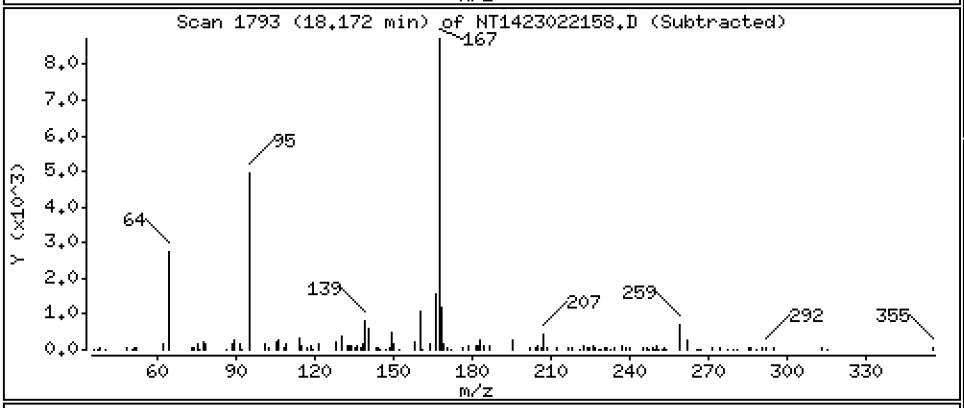
Column diameter: 0.25

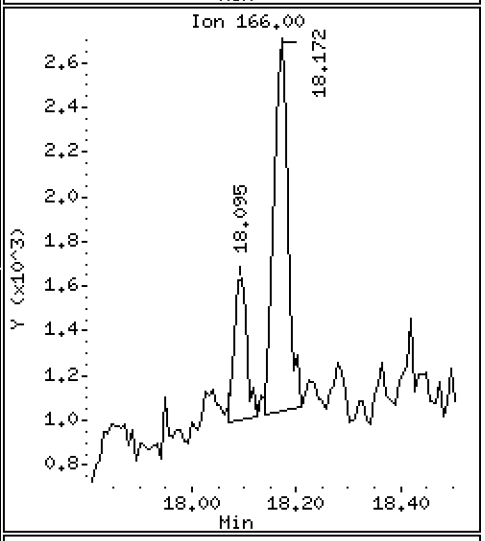
62 Carbazole

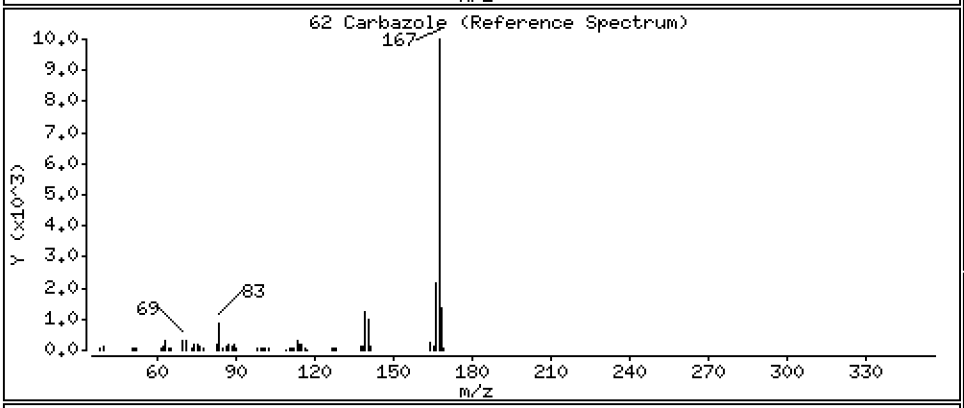
Concentration: 0.08124 ug/mL

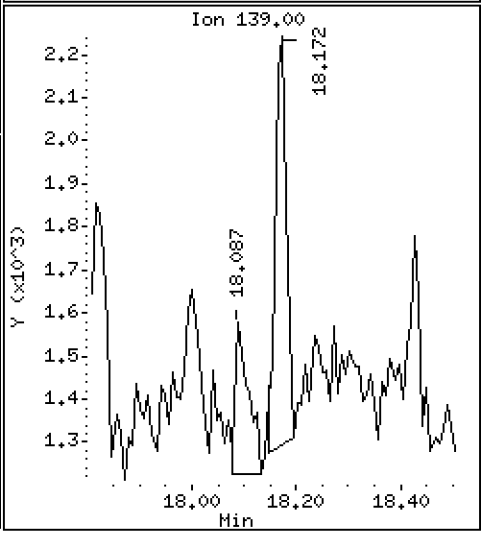


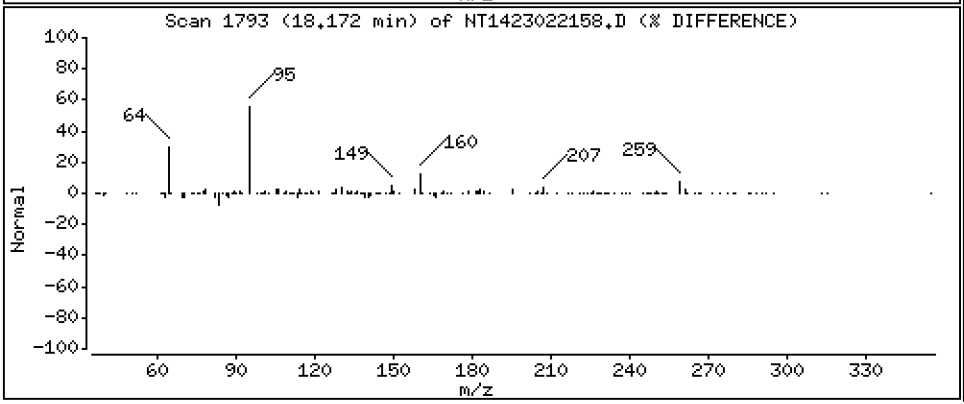












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022158.D

Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

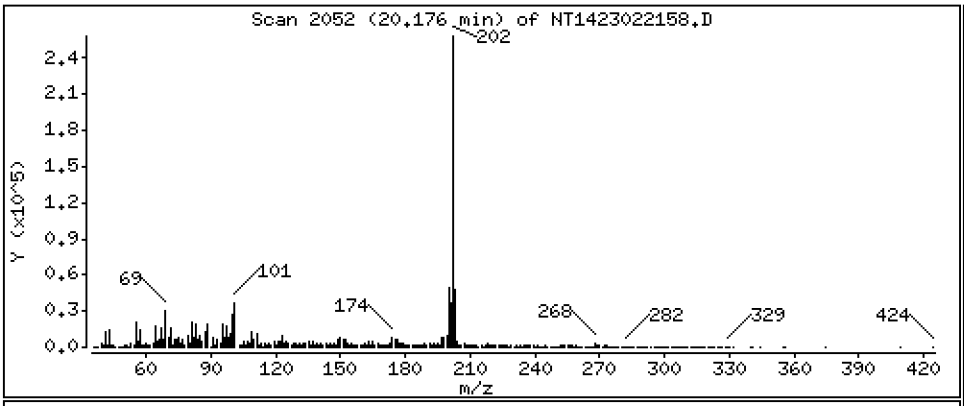
Operator: DSD

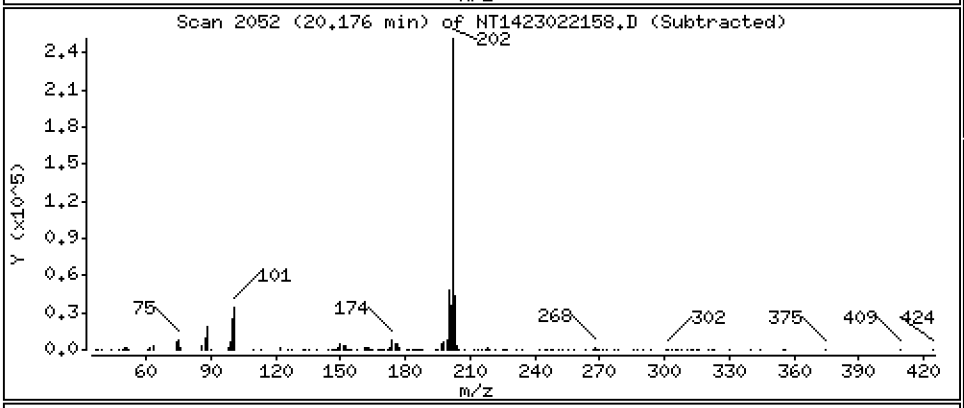
Column phase: ZB-5msi

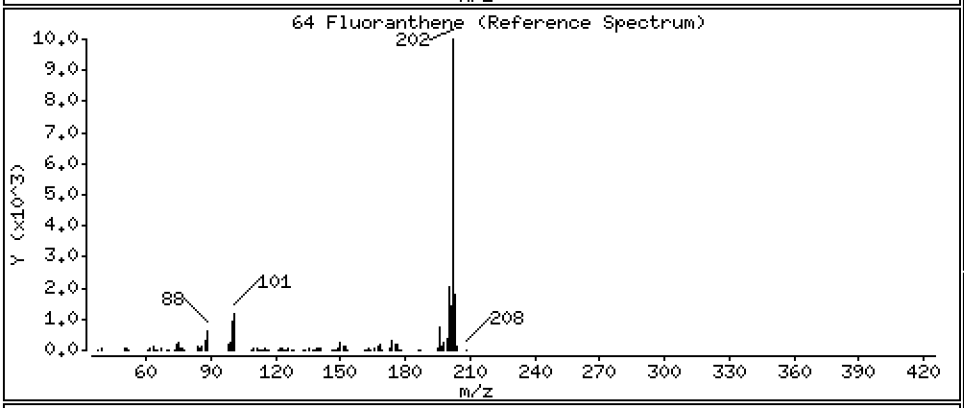
Column diameter: 0.25

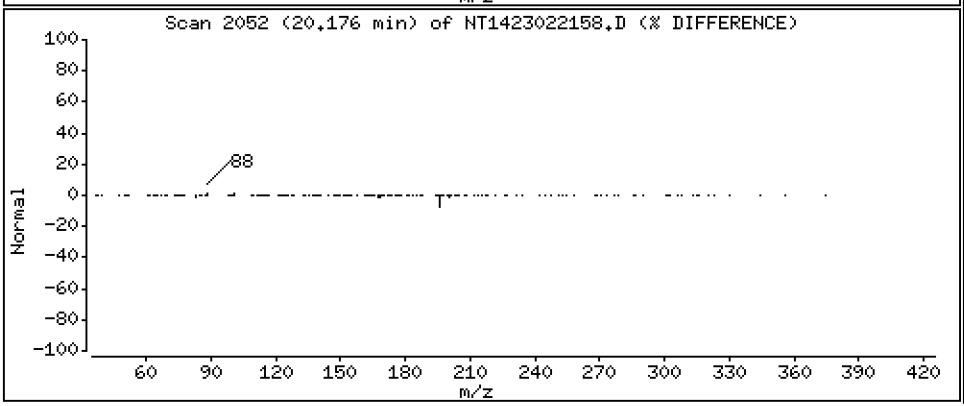
64 Fluoranthene

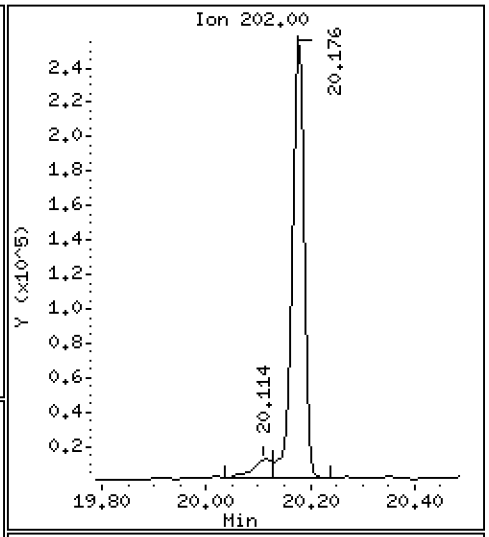
Concentration: 1.707 ug/mL

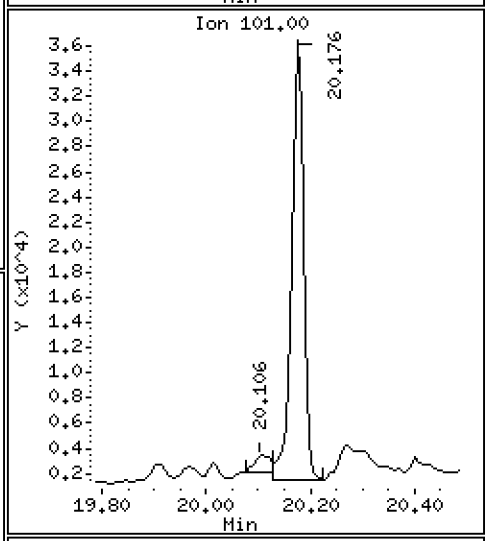


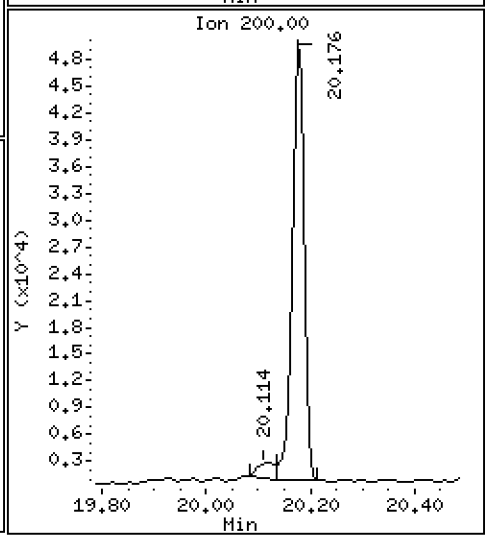












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

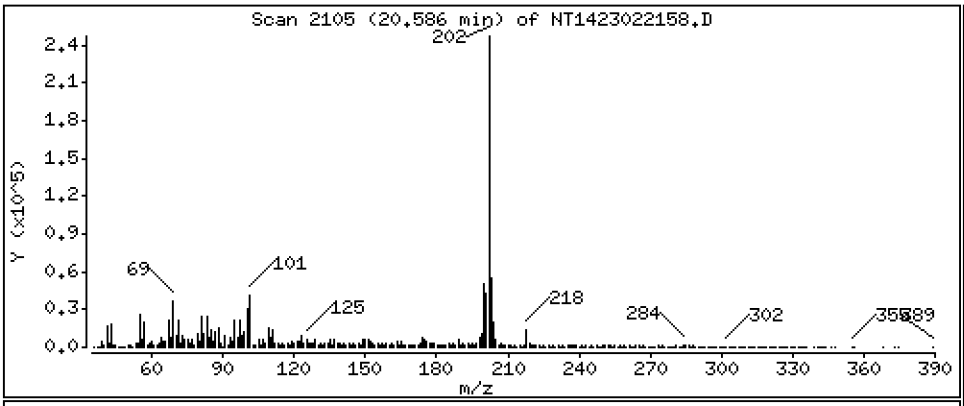
Operator: DSD

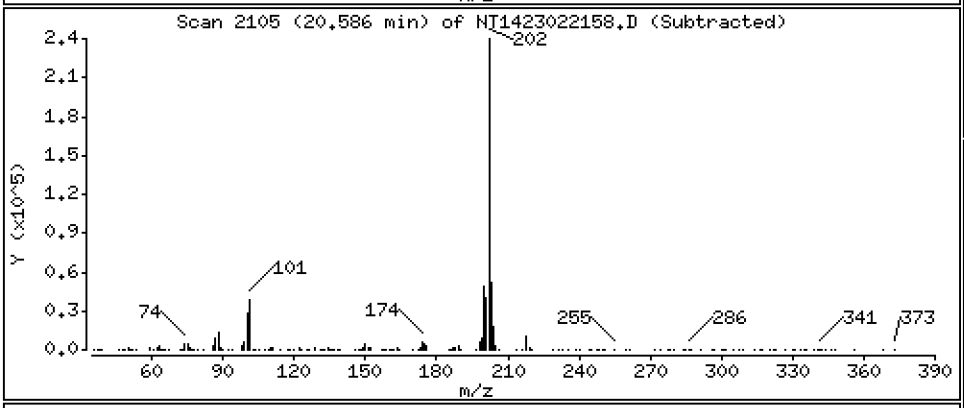
Column phase: ZB-5msi

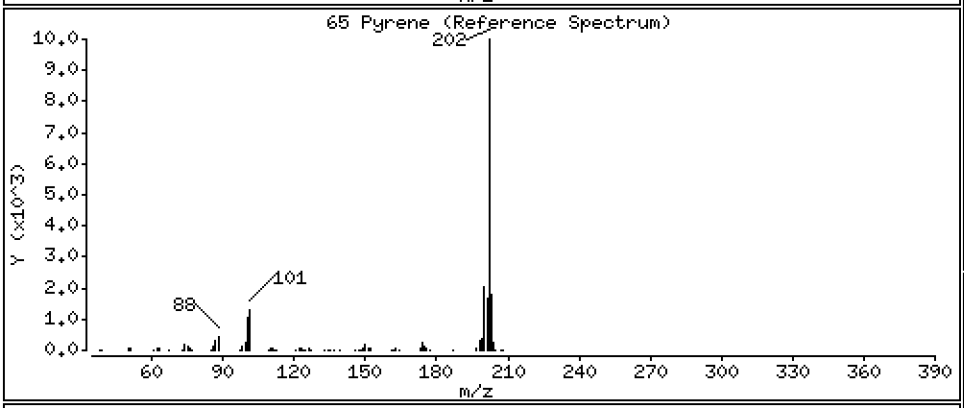
Column diameter: 0.25

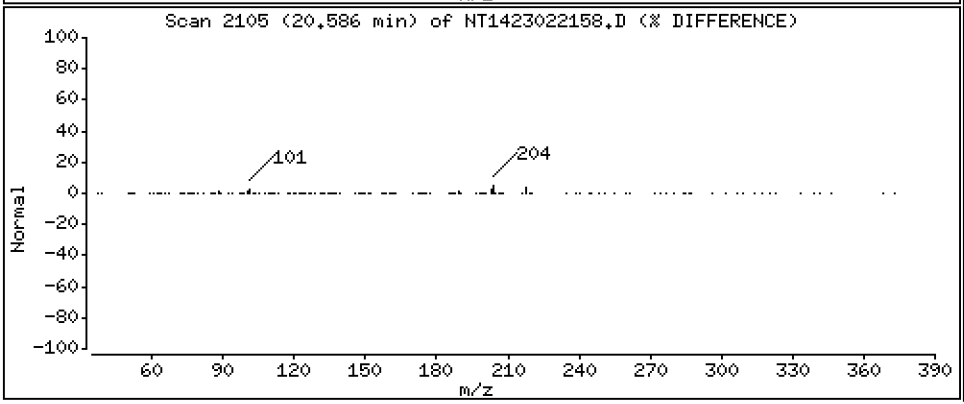
65 Pyrene

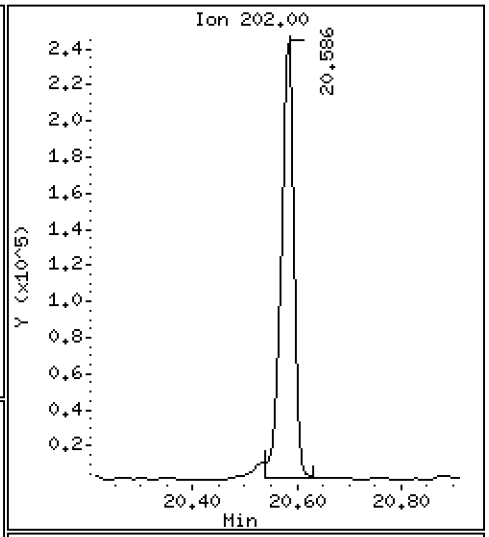
Concentration: 1.535 ug/mL

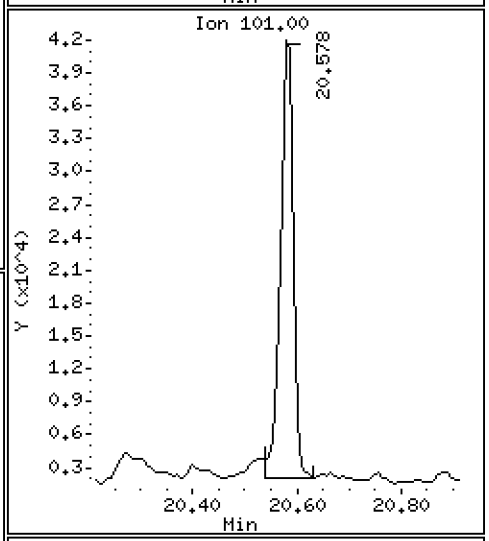


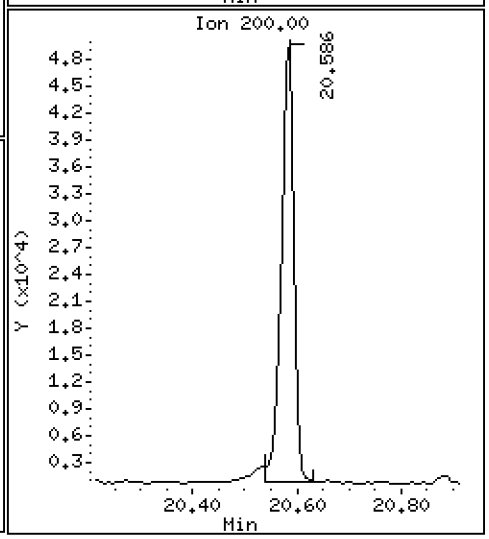












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

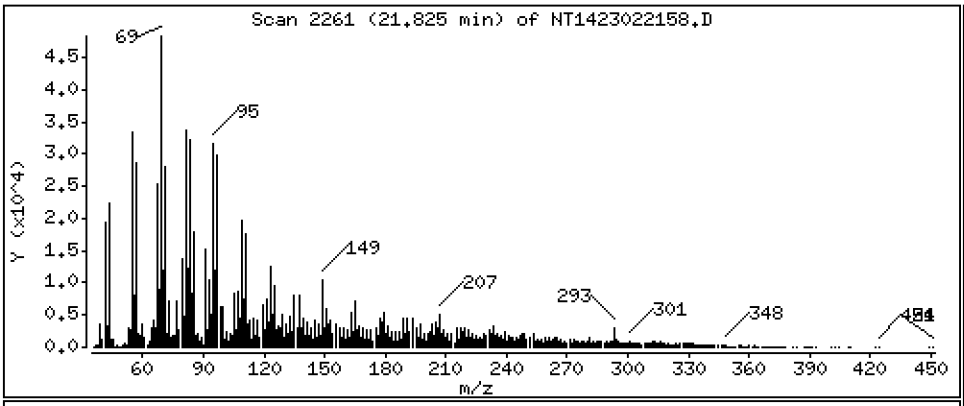
Operator: DSD

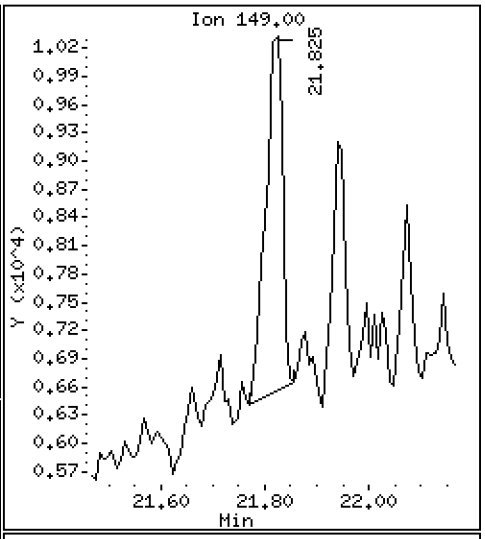
Column phase: ZB-5msi

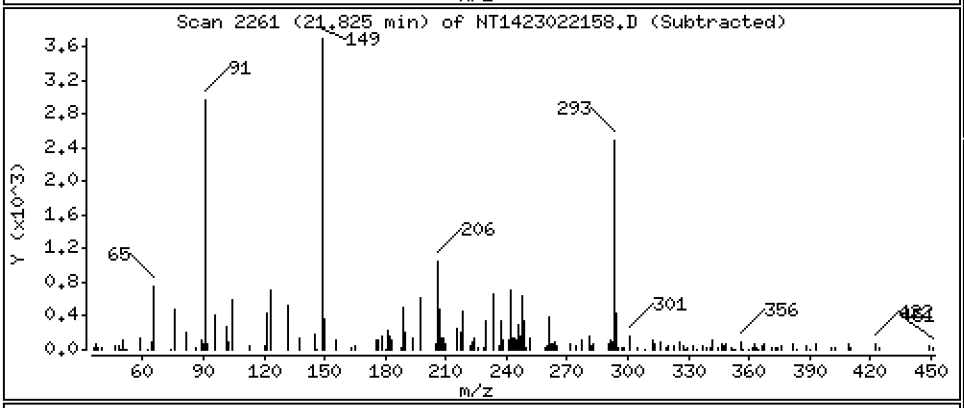
Column diameter: 0.25

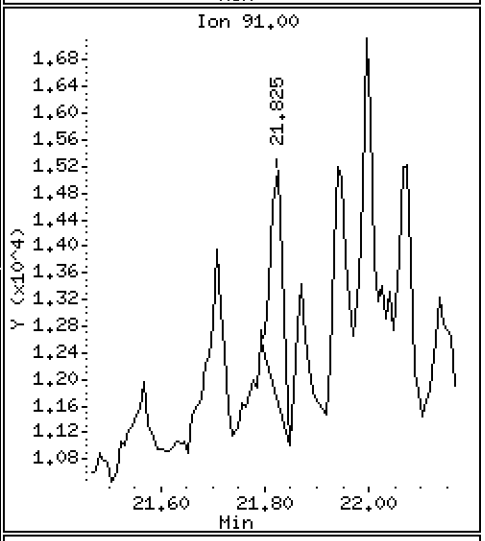
67 Butylbenzylphthalate

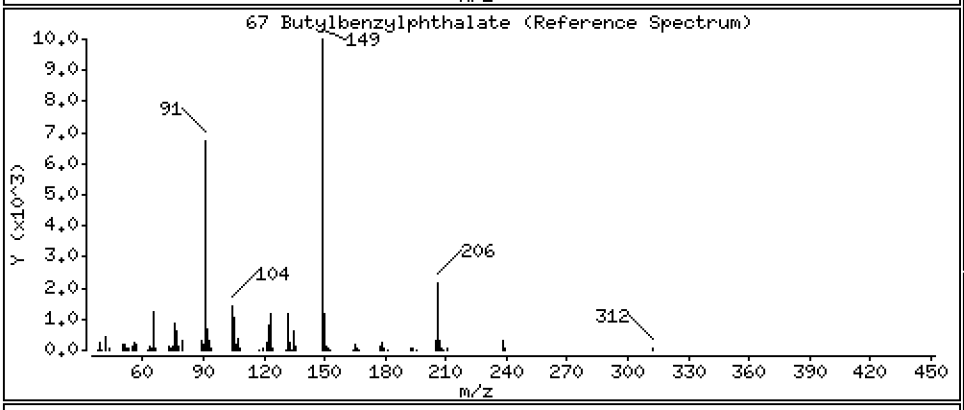
Concentration: 0.09354 ug/mL

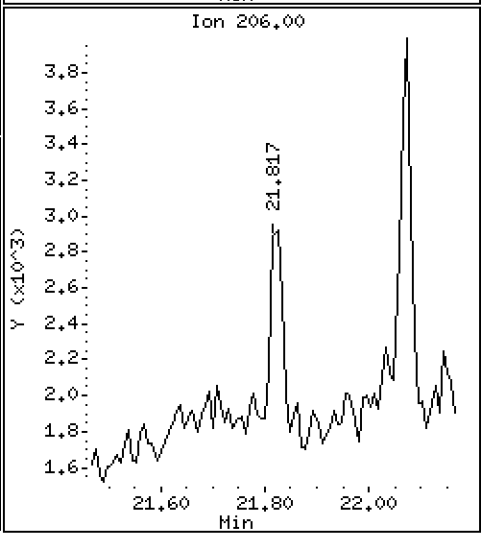


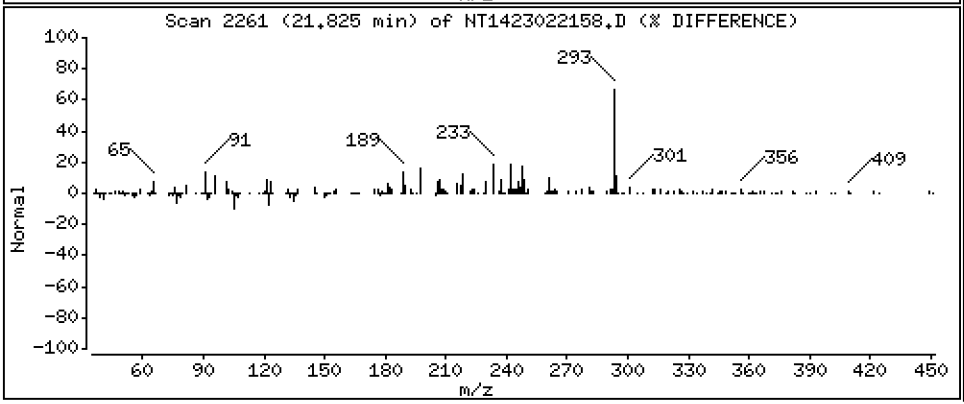












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

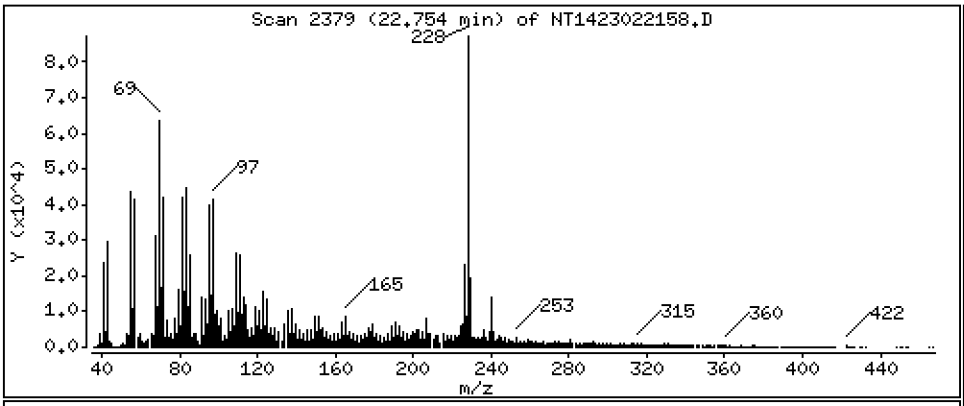
Operator: DSD

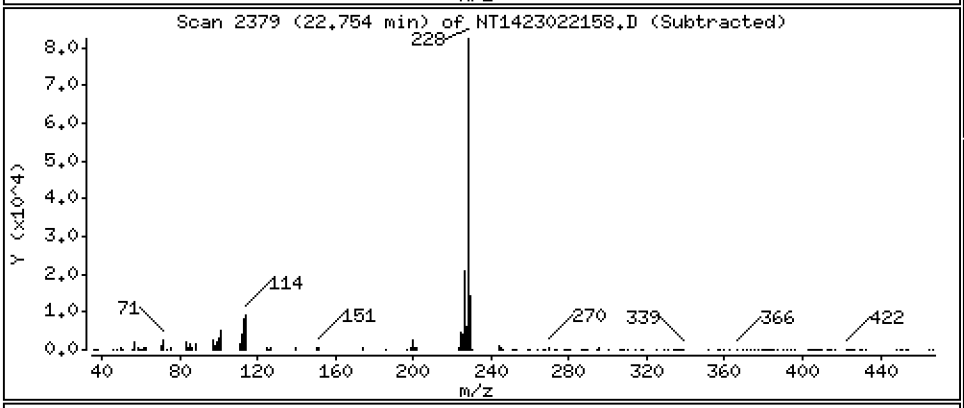
Column phase: ZB-5msi

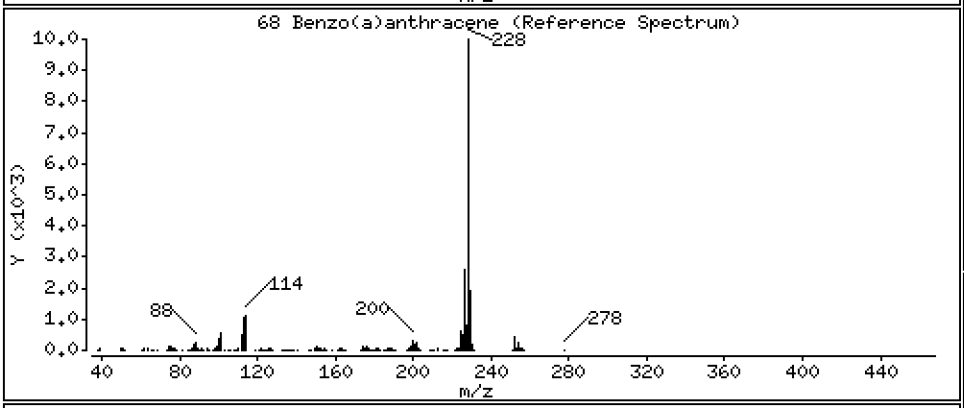
Column diameter: 0.25

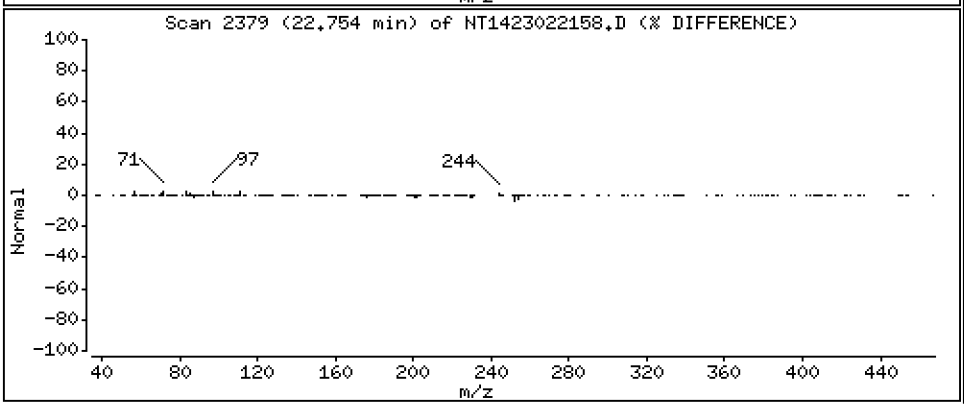
68 Benzo(a)anthracene

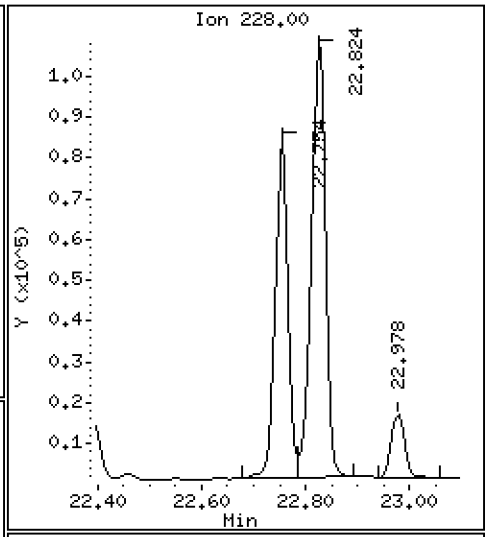
Concentration: 0.7350 ug/mL

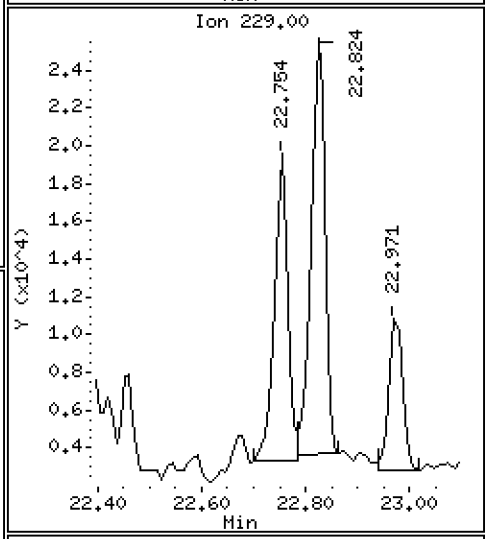


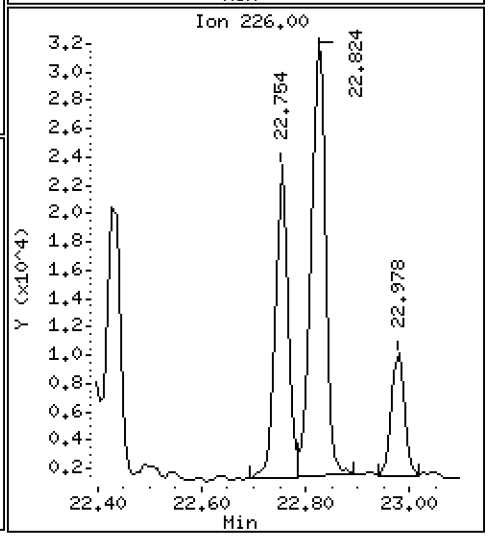












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

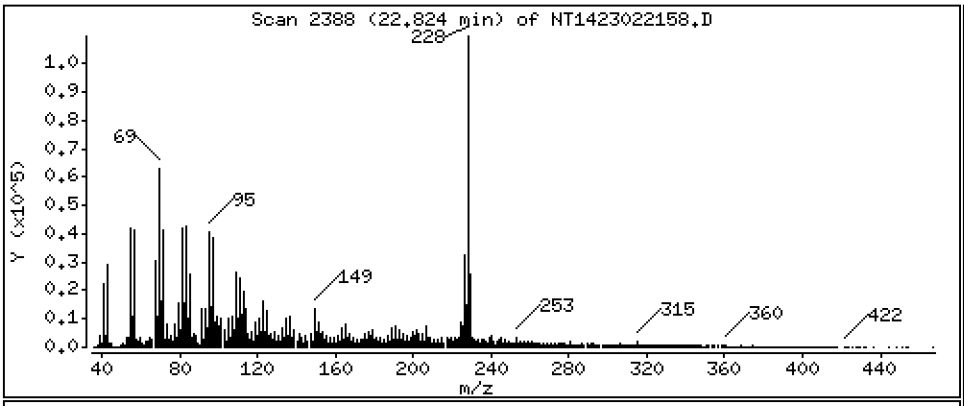
Operator: DSD

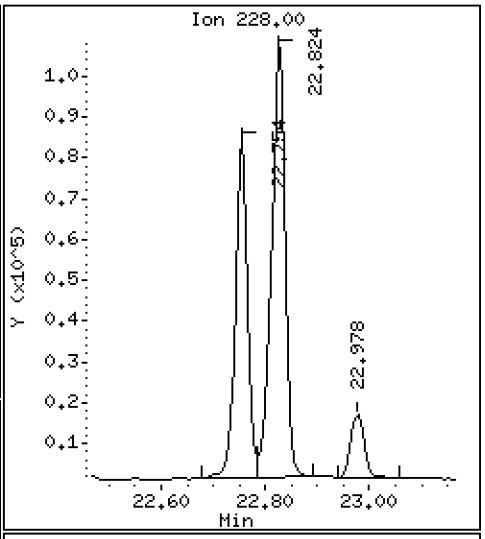
Column phase: ZB-5msi

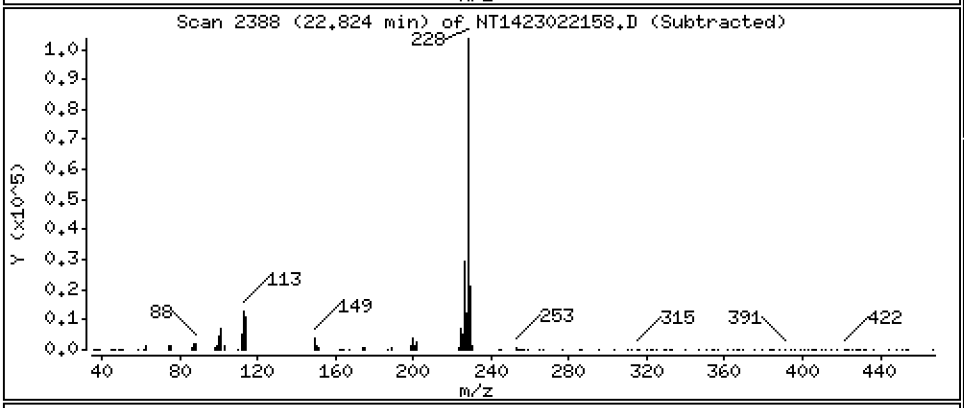
Column diameter: 0.25

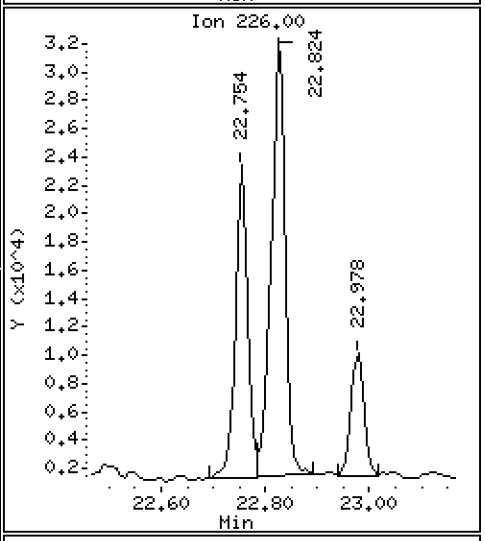
71 Chrysene

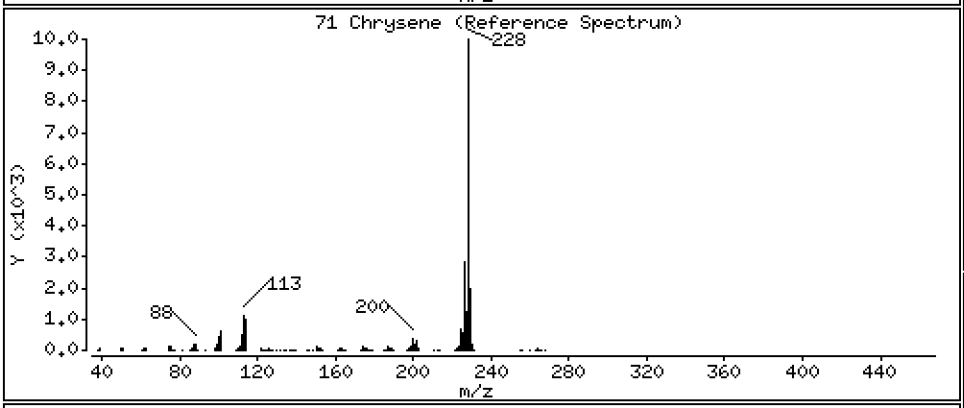
Concentration: 1.140 ug/mL

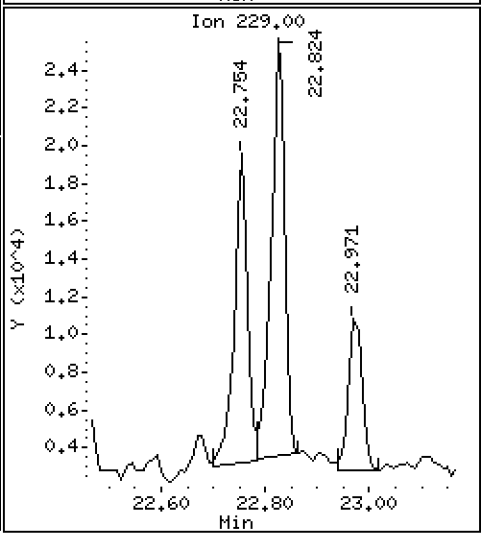


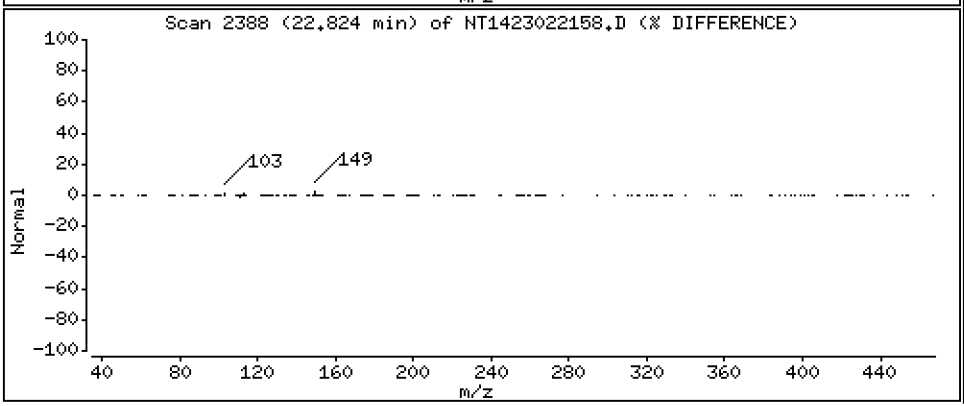












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

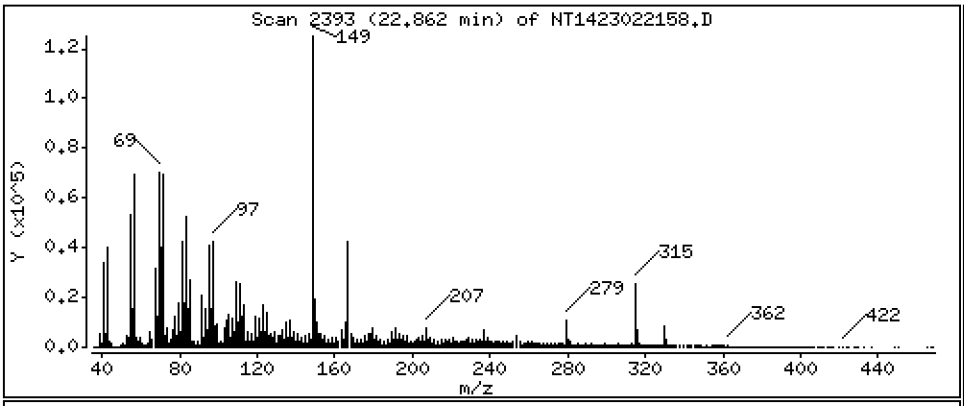
Operator: DSD

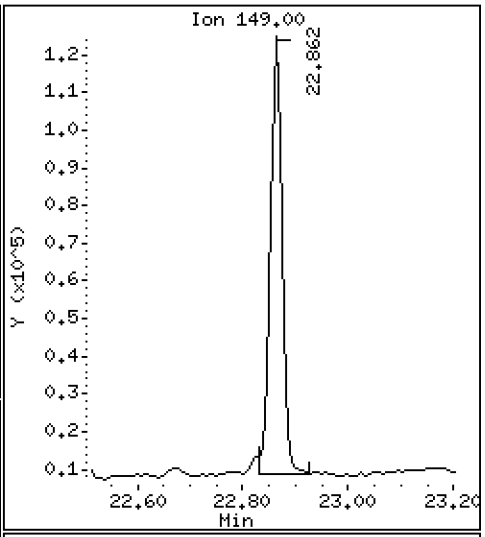
Column phase: ZB-5msi

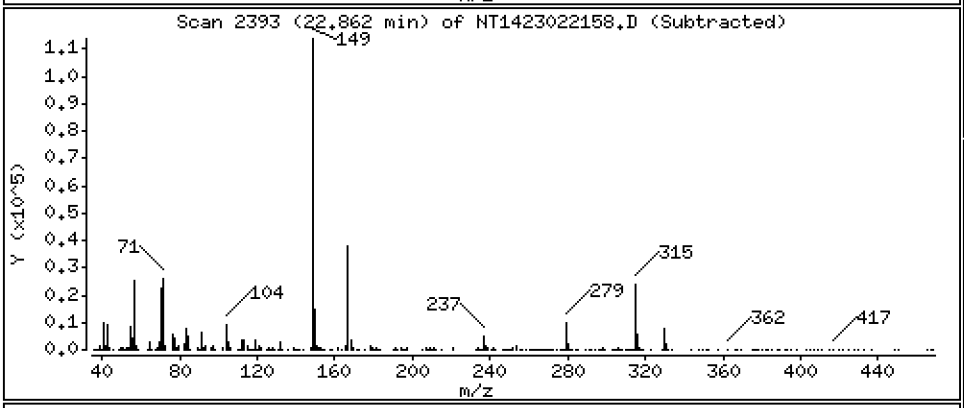
Column diameter: 0.25

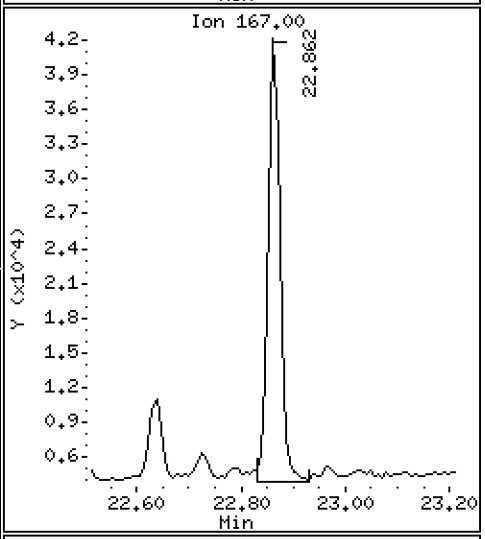
72 bis(2-Ethylhexyl)phthalate

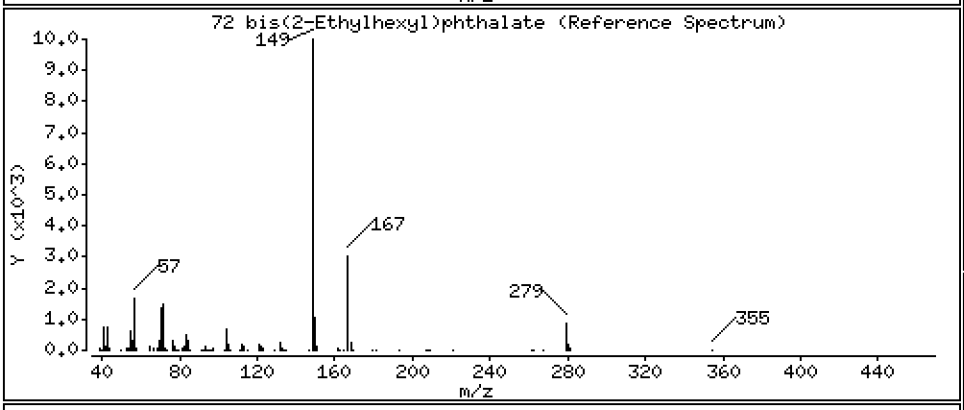
Concentration: 1.028 ug/mL

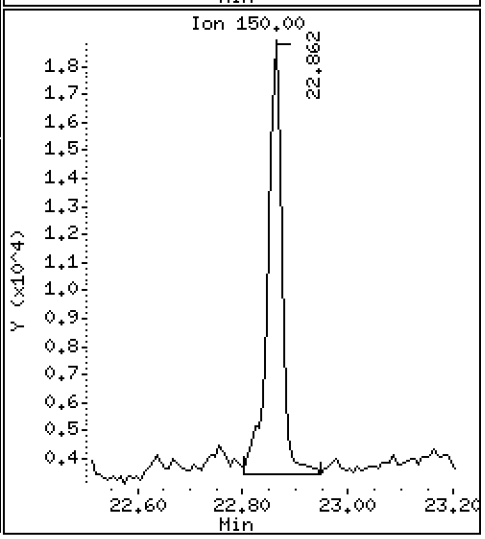


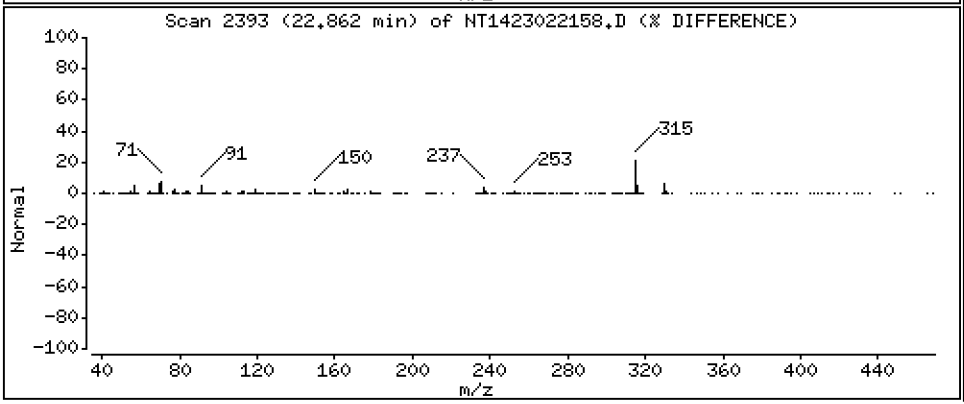












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

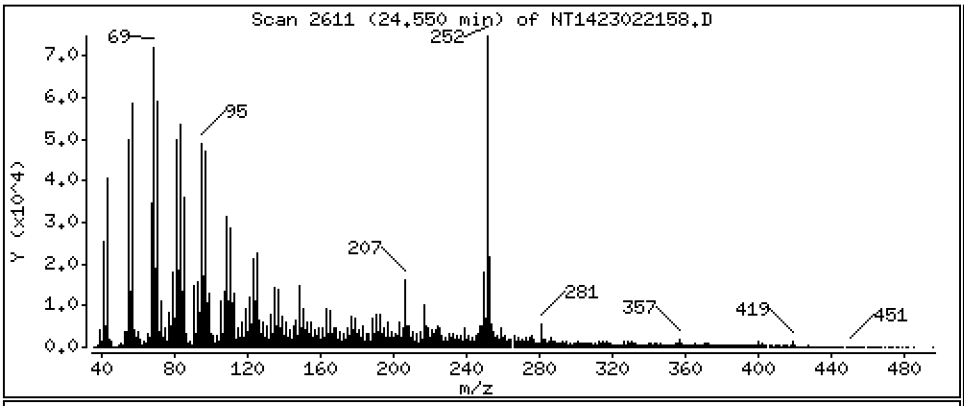
Operator: DSD

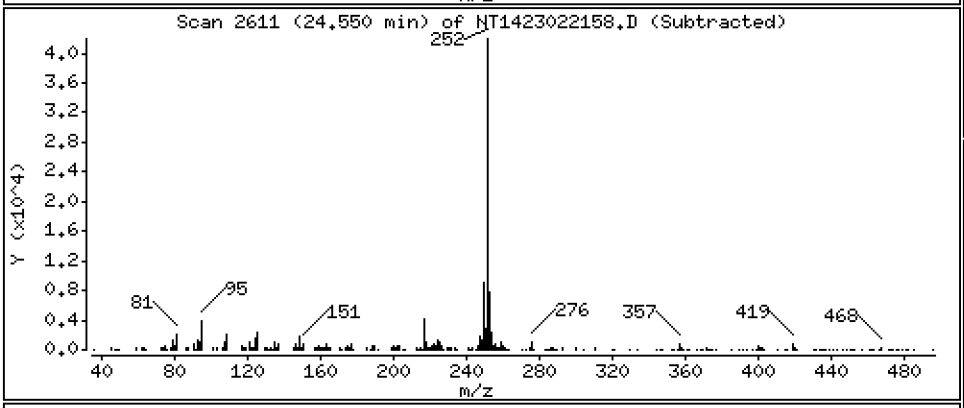
Column phase: ZB-5msi

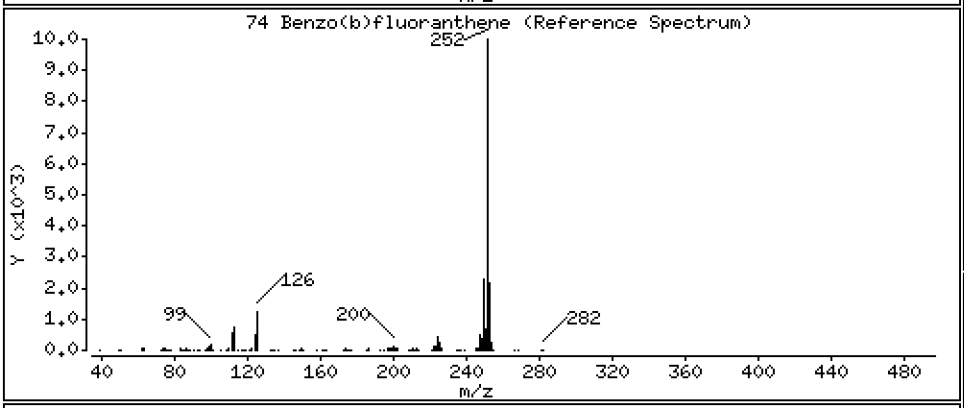
Column diameter: 0.25

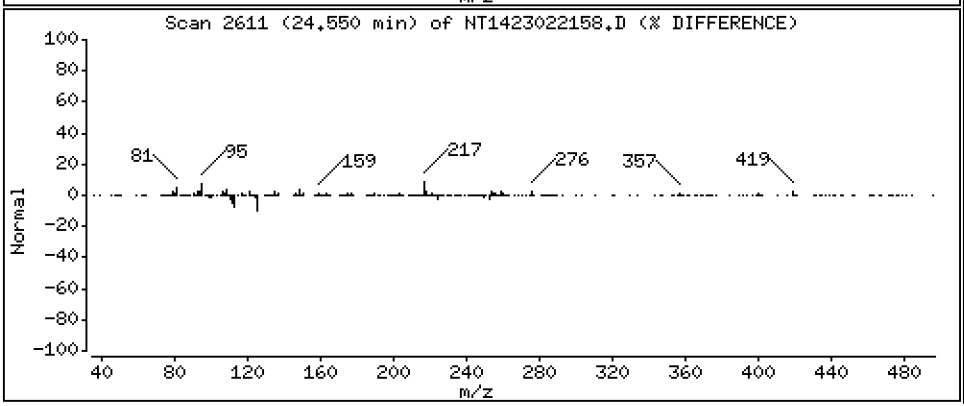
74 Benzo(b)fluoranthene

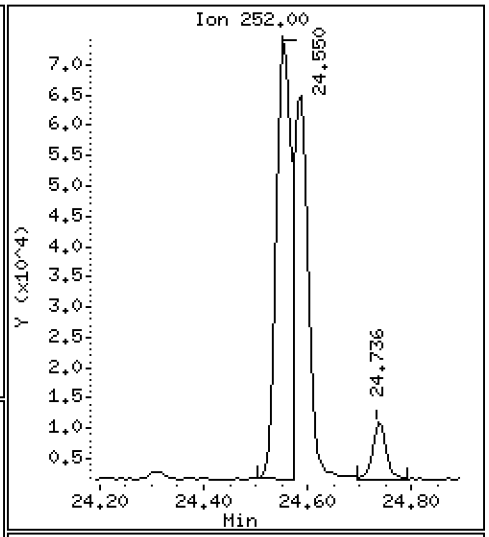
Concentration: 1.023 ug/mL

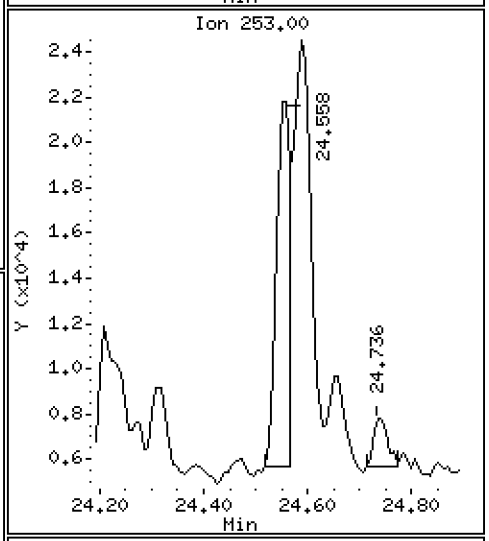


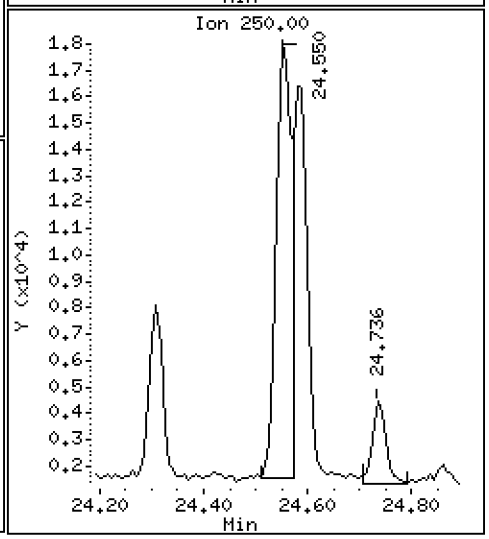












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

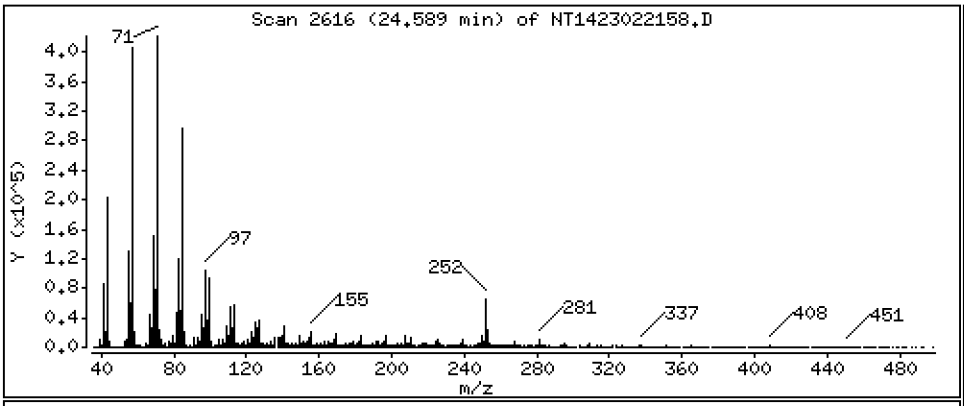
Operator: DSD

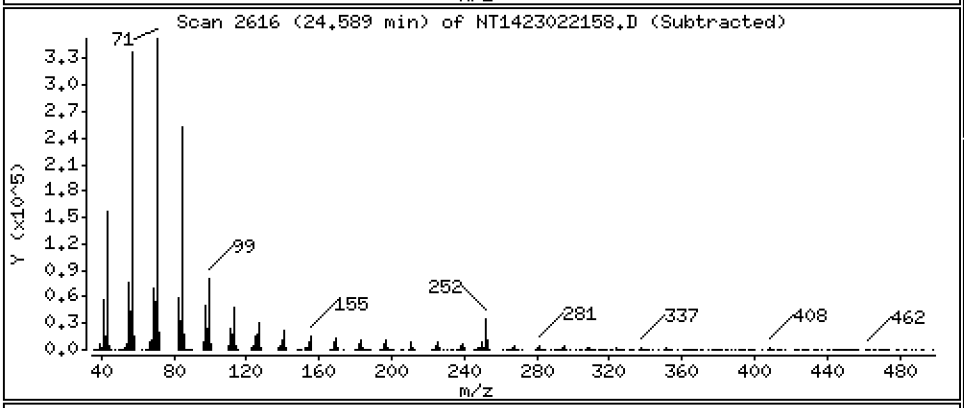
Column phase: ZB-5msi

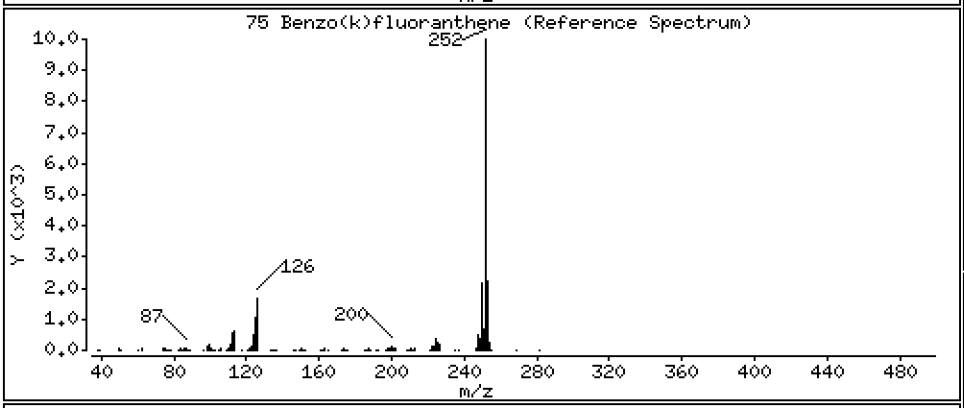
Column diameter: 0.25

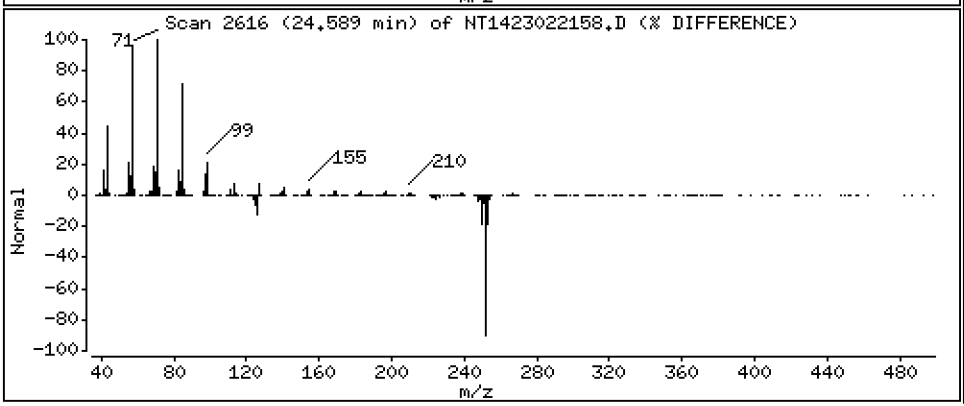
75 Benzo(k)fluoranthene

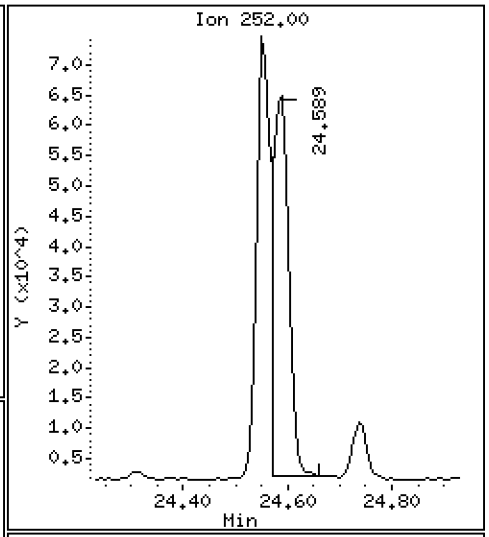
Concentration: 0.8200 ug/mL

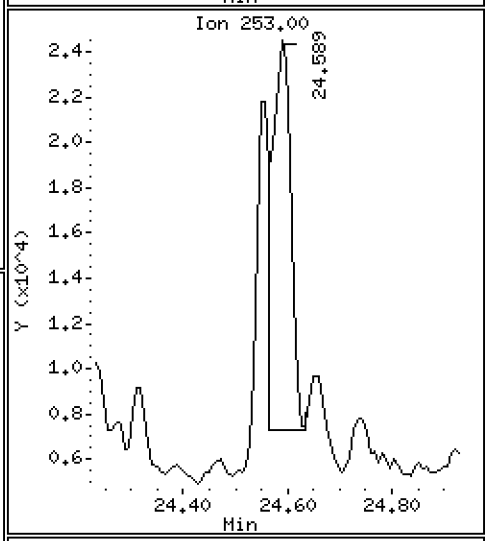


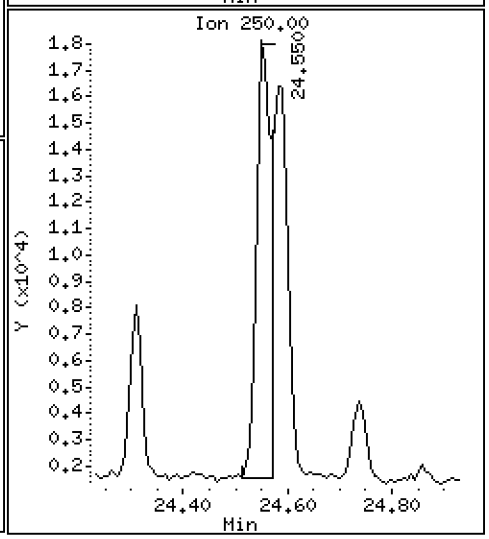












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

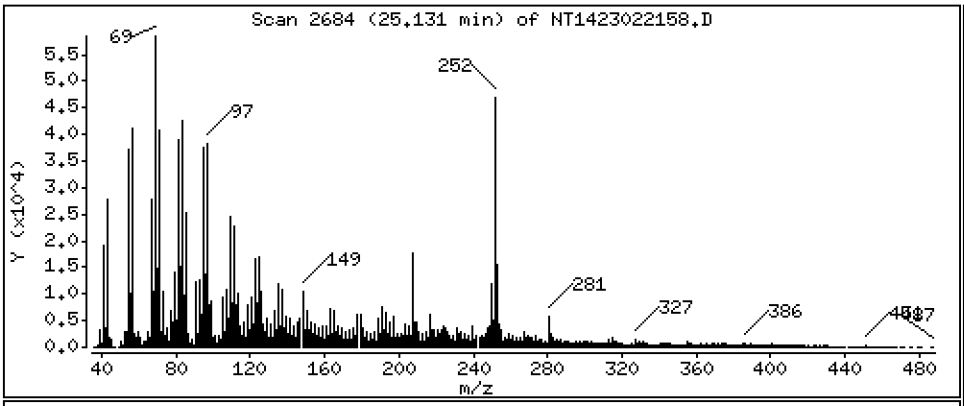
Operator: DSD

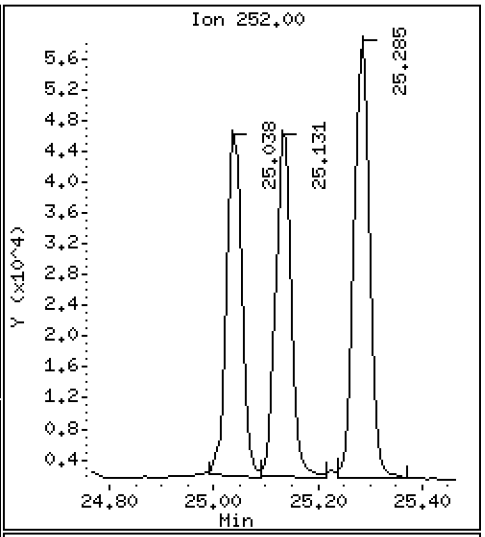
Column phase: ZB-5msi

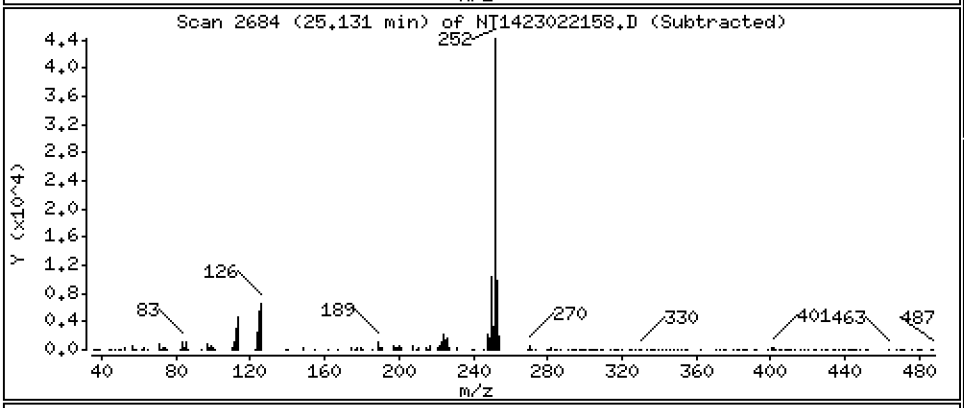
Column diameter: 0.25

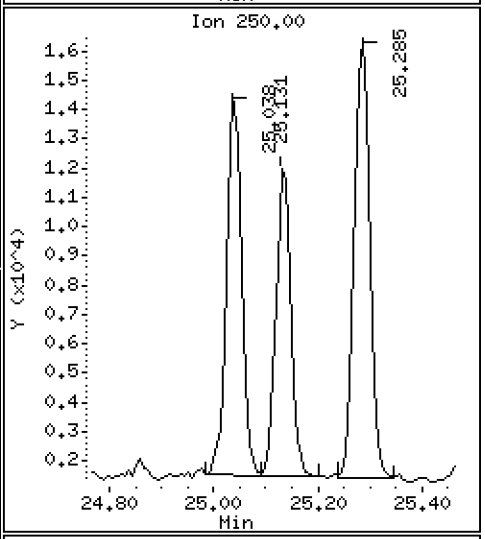
76 Benzo(a)pyrene

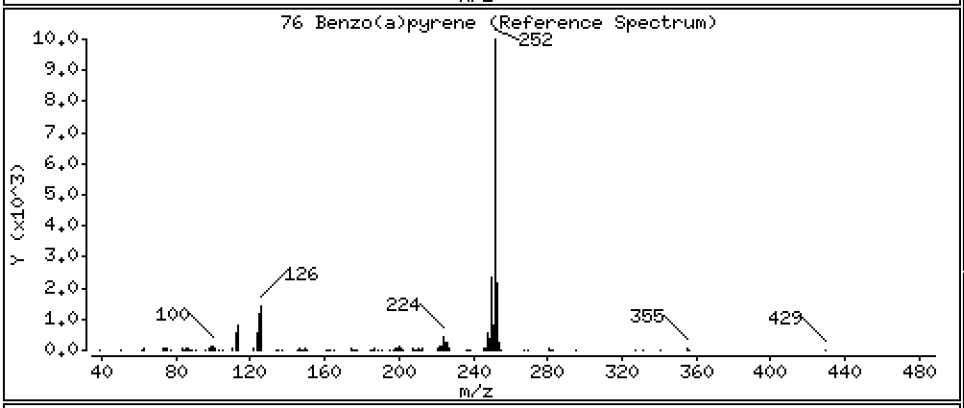
Concentration: 0.6674 ug/mL

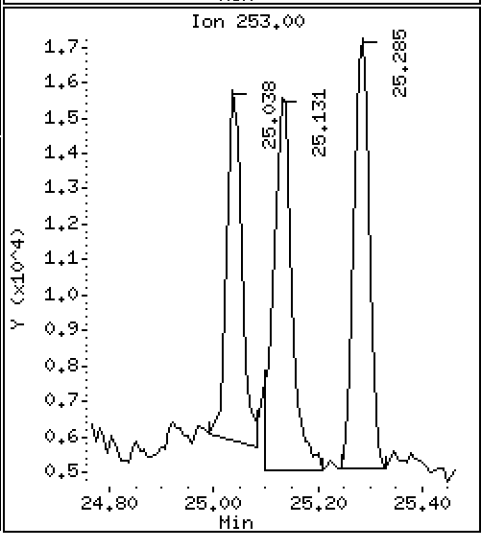


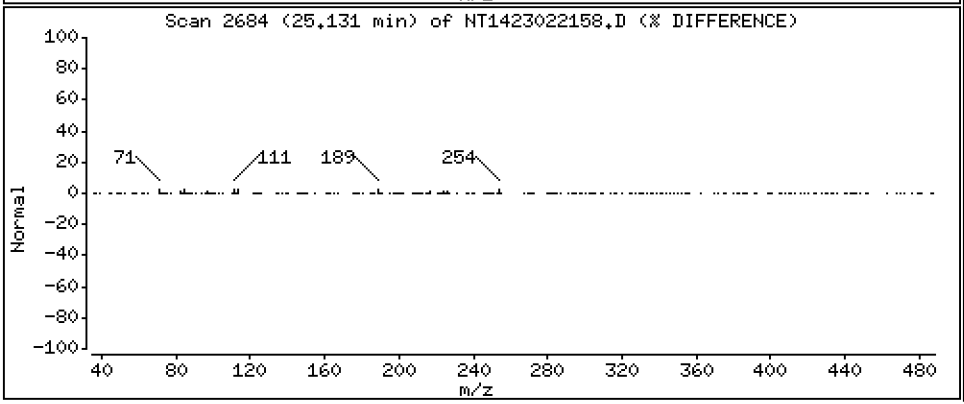












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

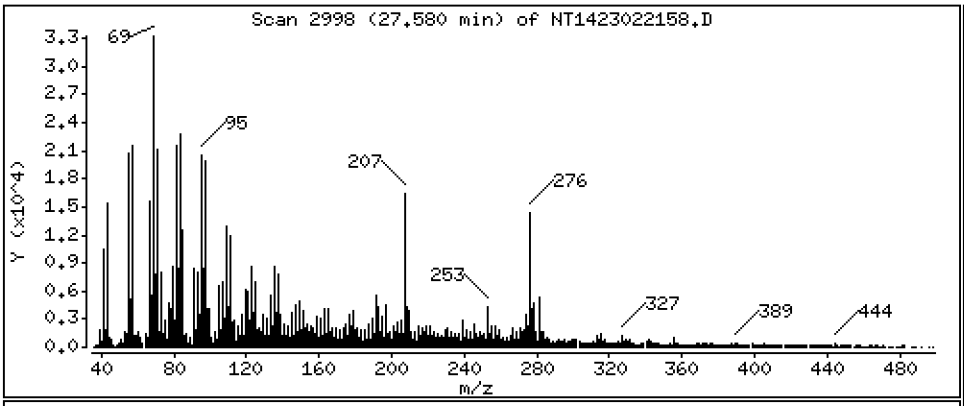
Operator: DSD

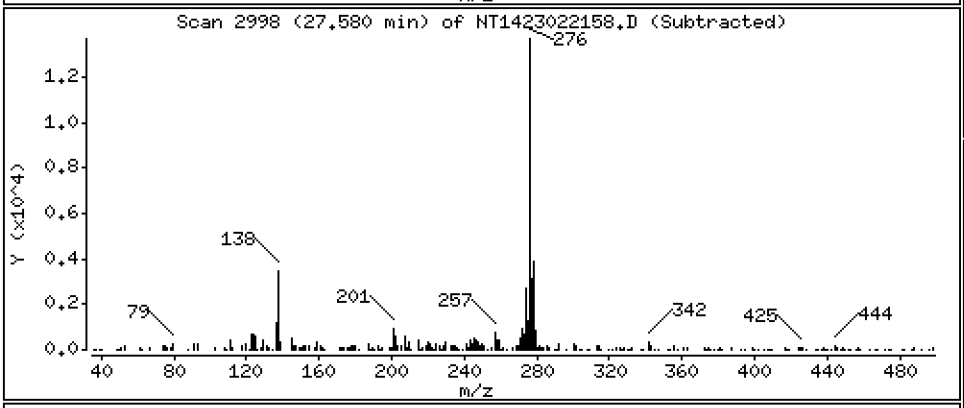
Column phase: ZB-5msi

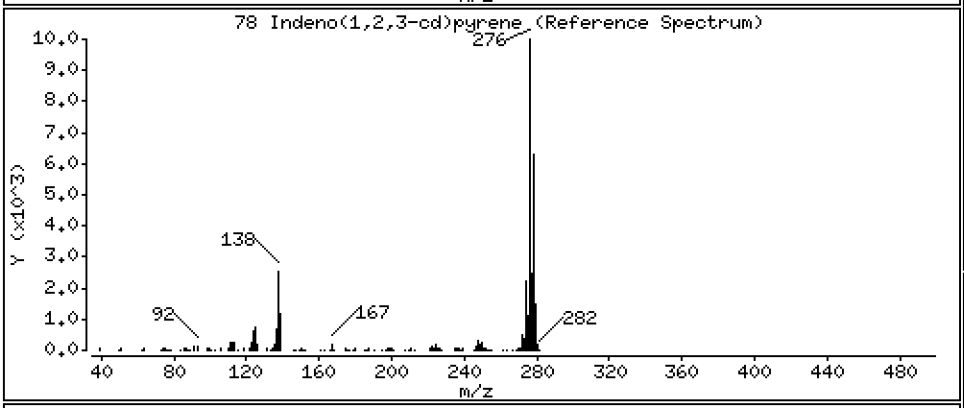
Column diameter: 0.25

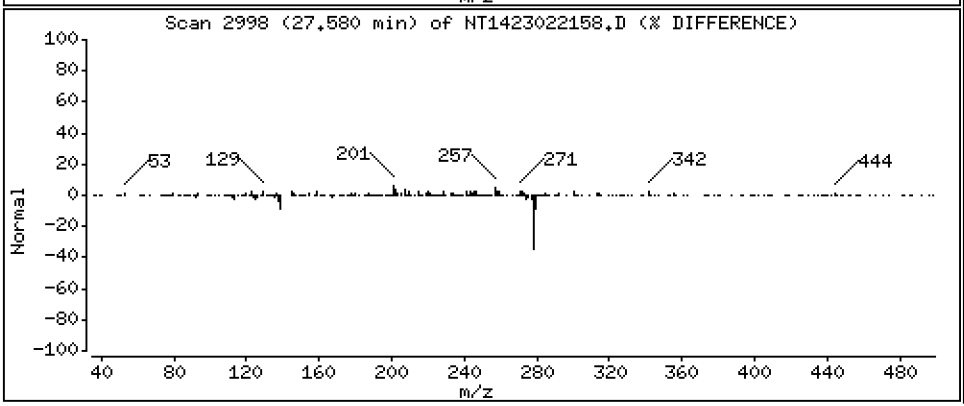
78 Indeno(1,2,3-cd)pyrene

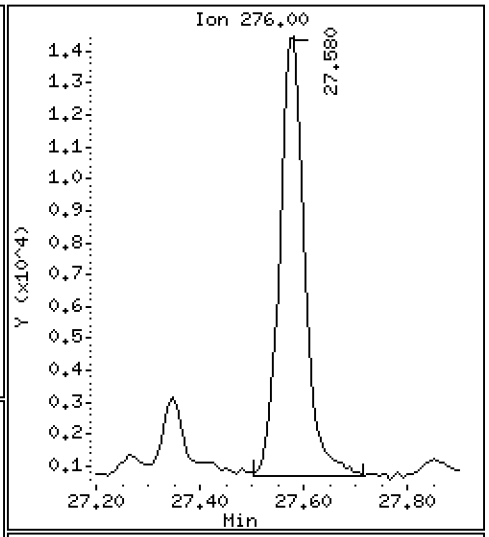
Concentration: 0.4116 ug/mL

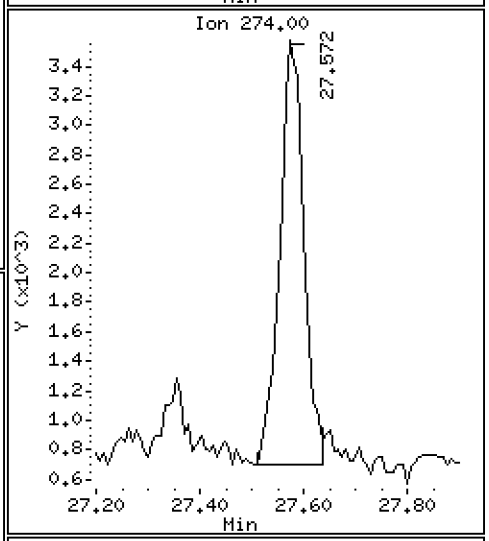


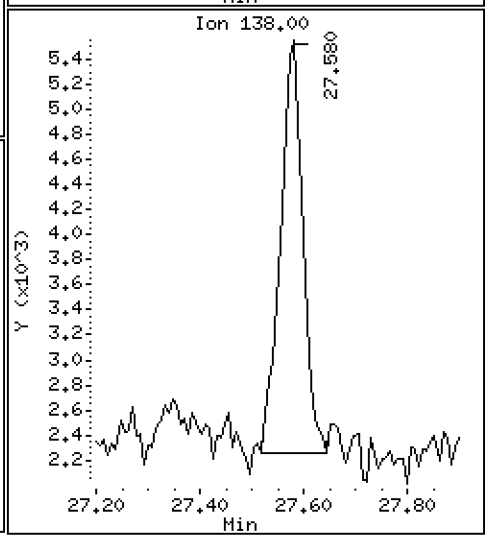












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

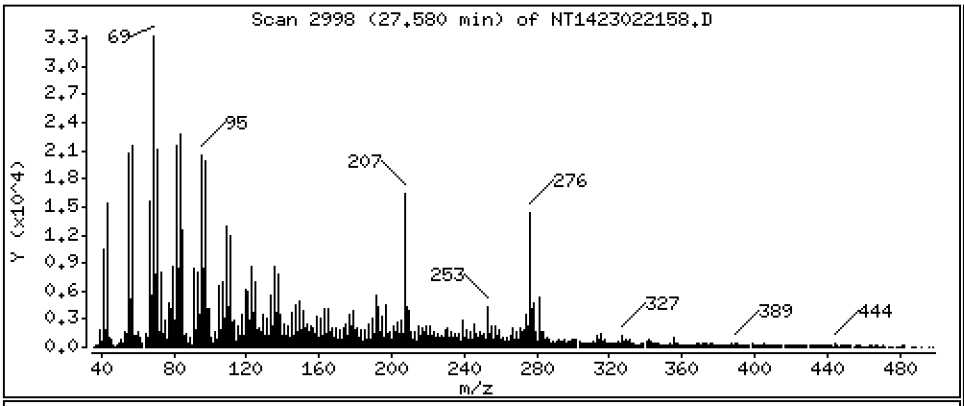
Operator: DSD

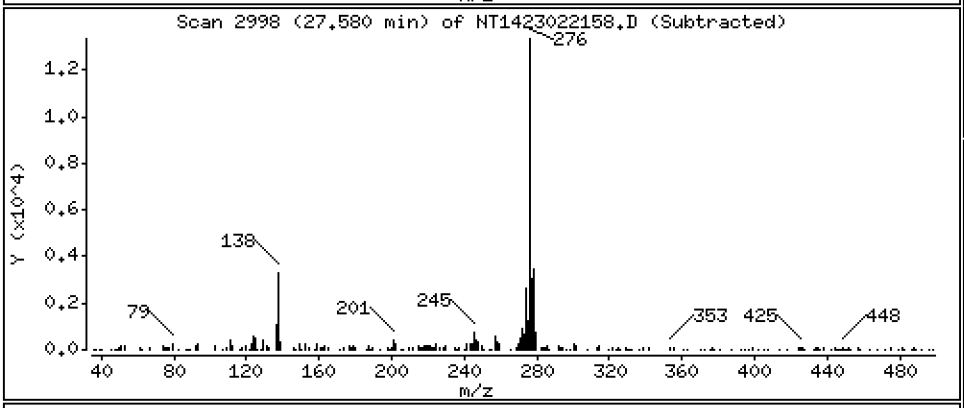
Column phase: ZB-5msi

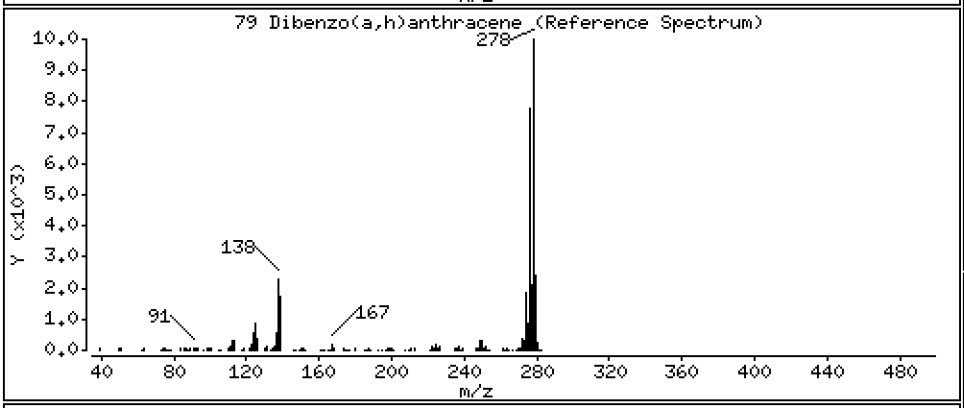
Column diameter: 0.25

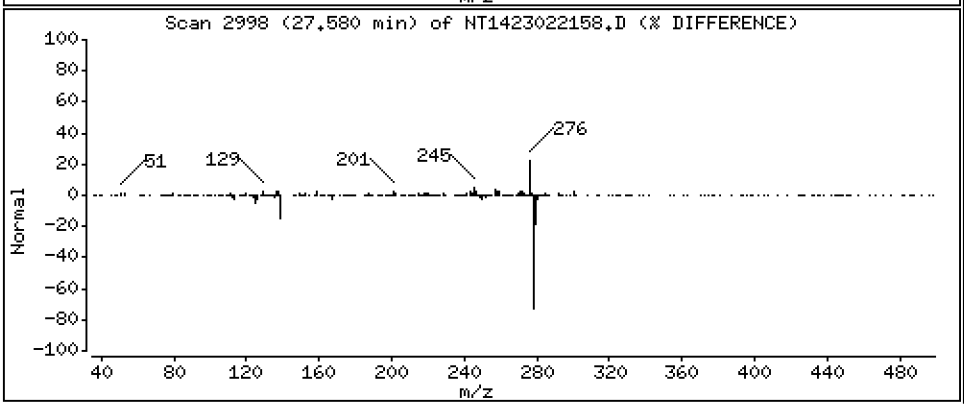
79 Dibenzo(a,h)anthracene

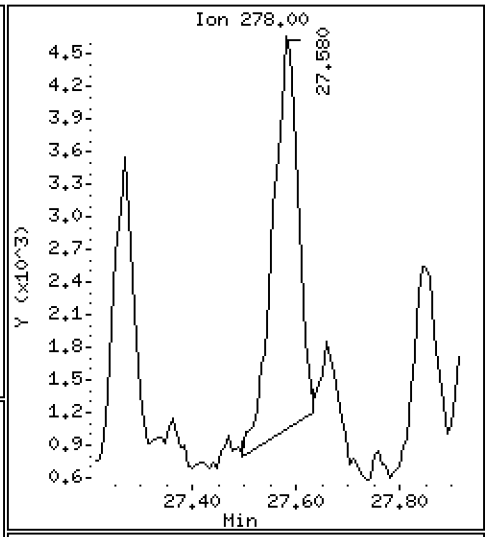
Concentration: 0.1305 ug/mL

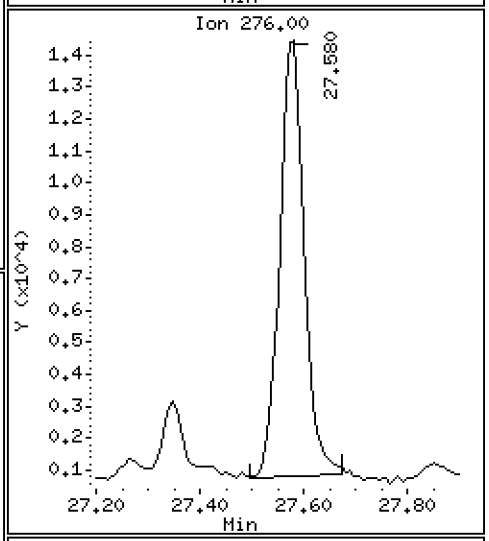


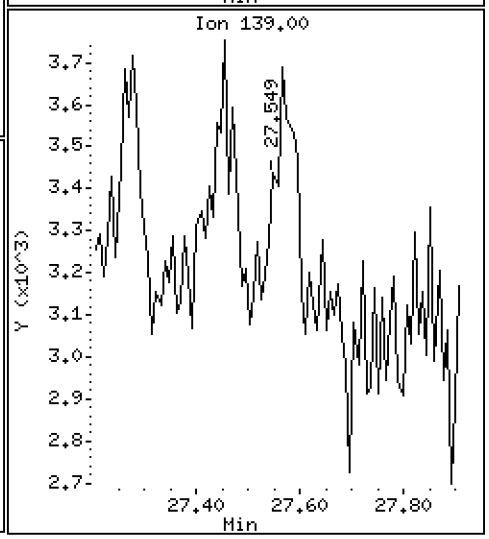












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

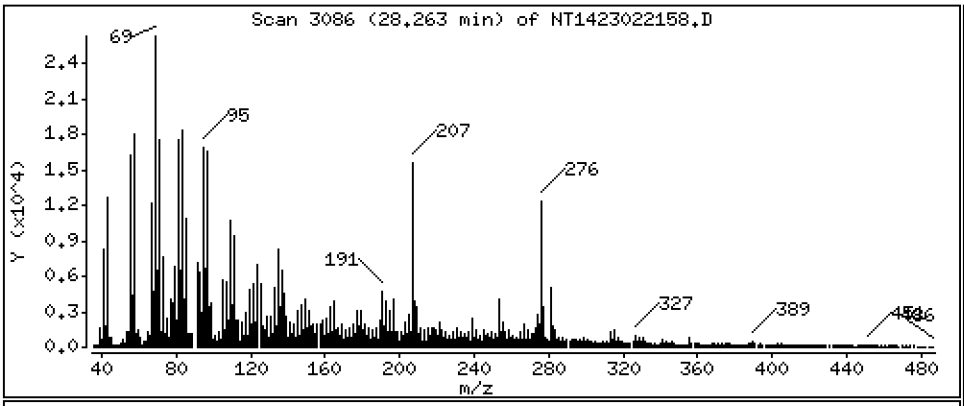
Operator: DSD

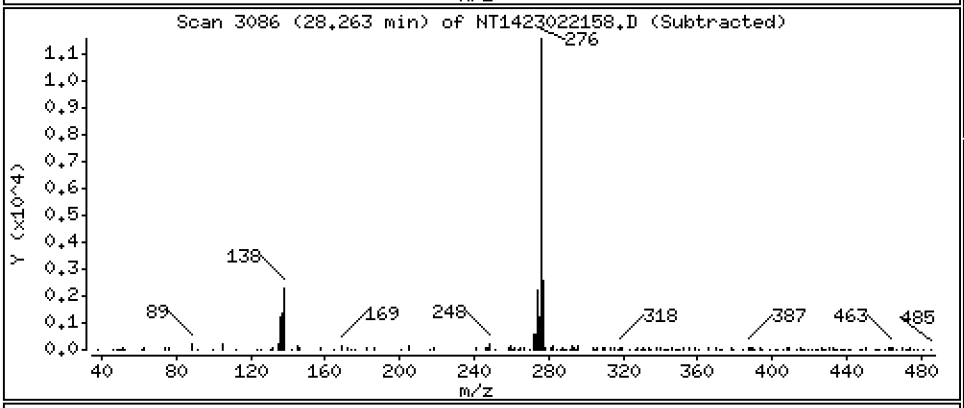
Column phase: ZB-5msi

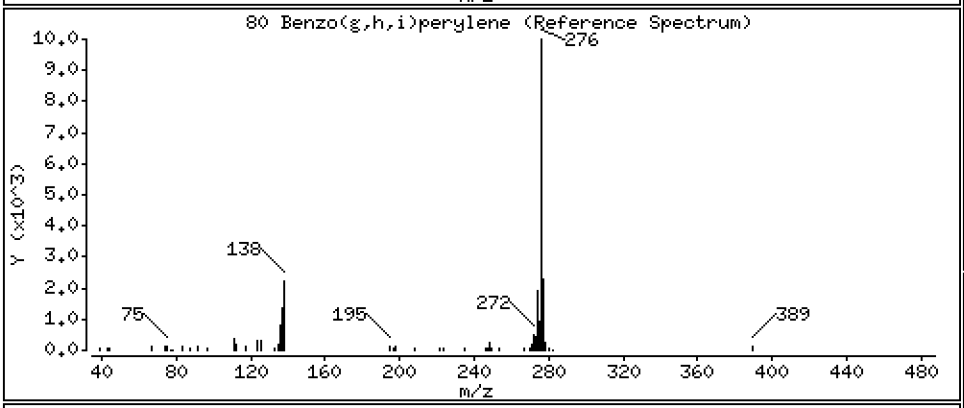
Column diameter: 0.25

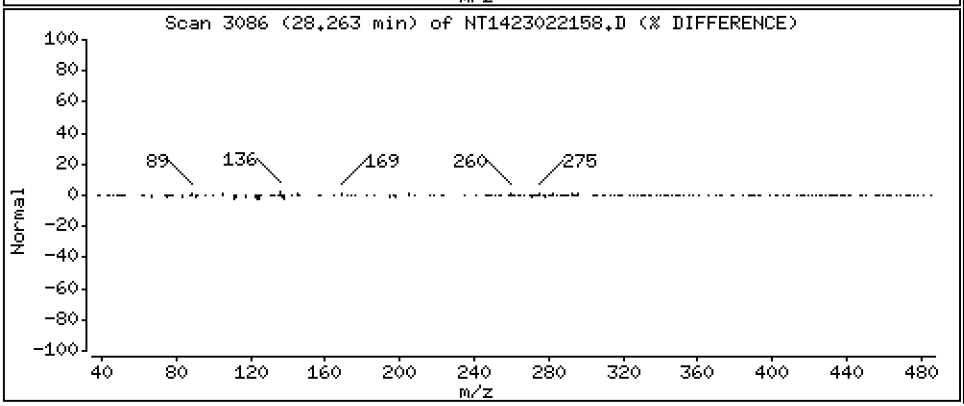
80 Benzo(g,h,i)perylene

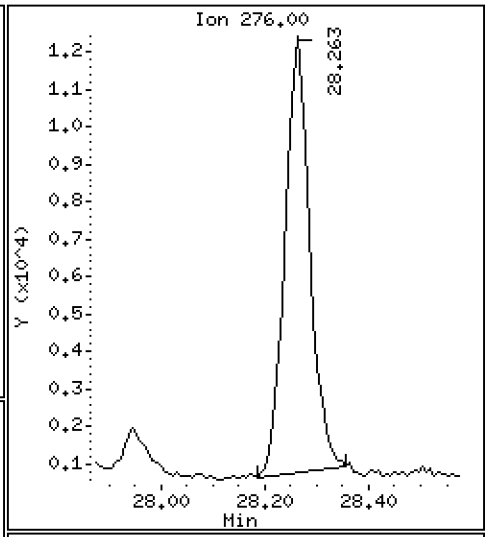
Concentration: 0.4255 ug/mL

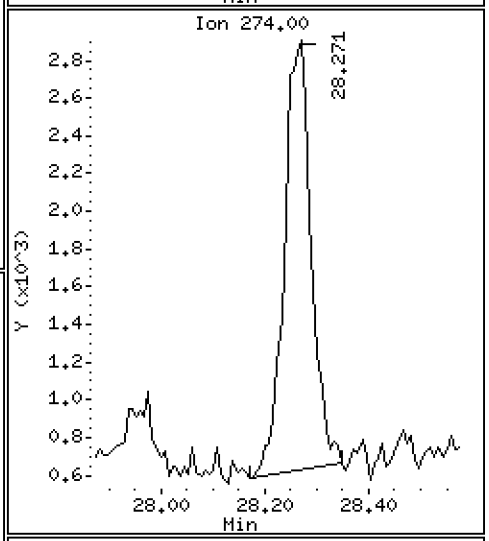


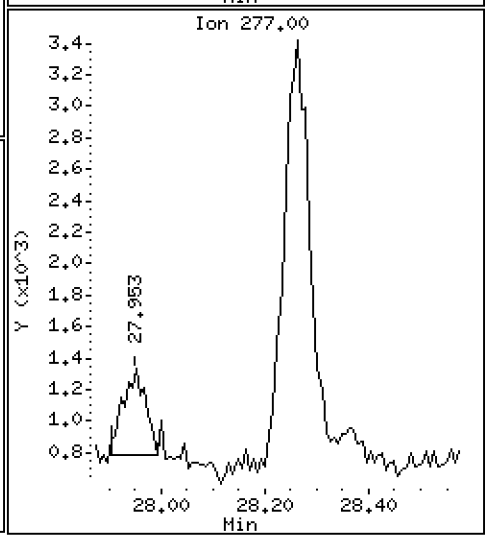












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

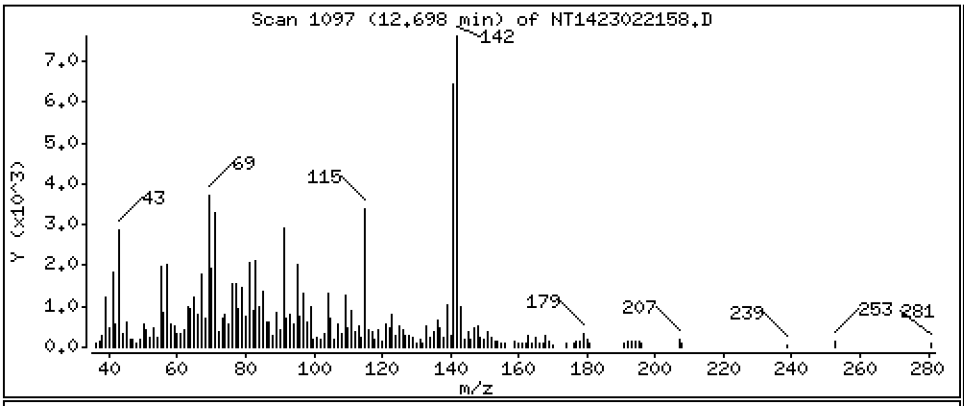
Operator: DSD

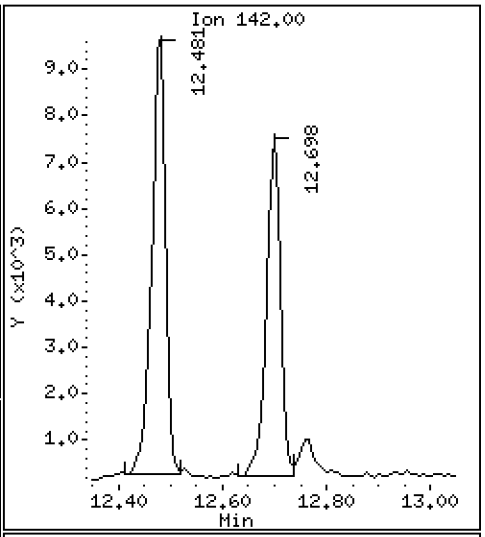
Column phase: ZB-5msi

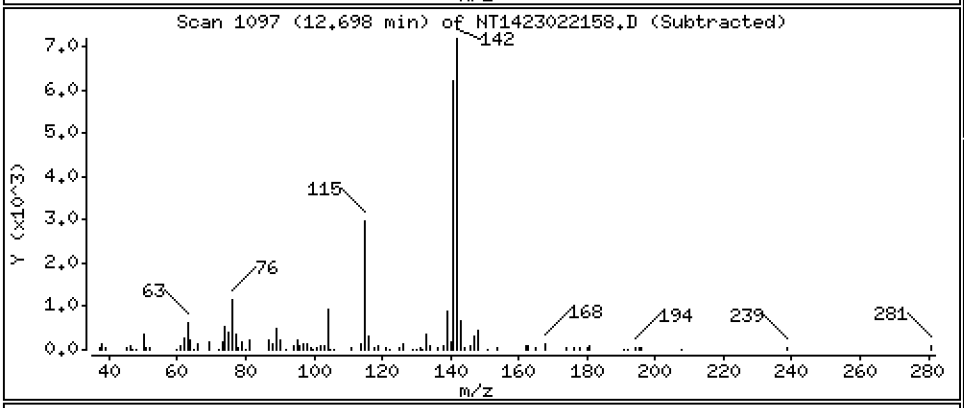
Column diameter: 0.25

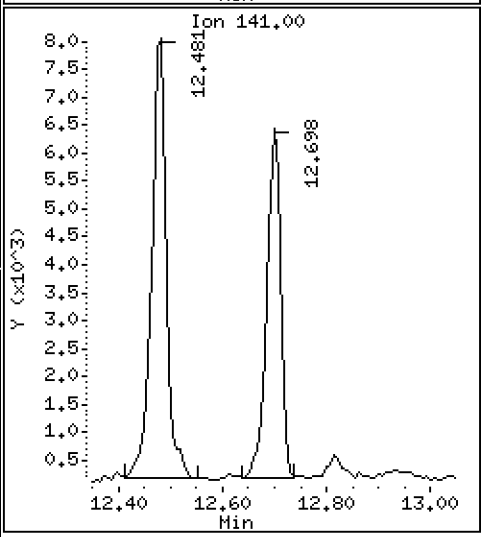
105 1-methylnaphthalene

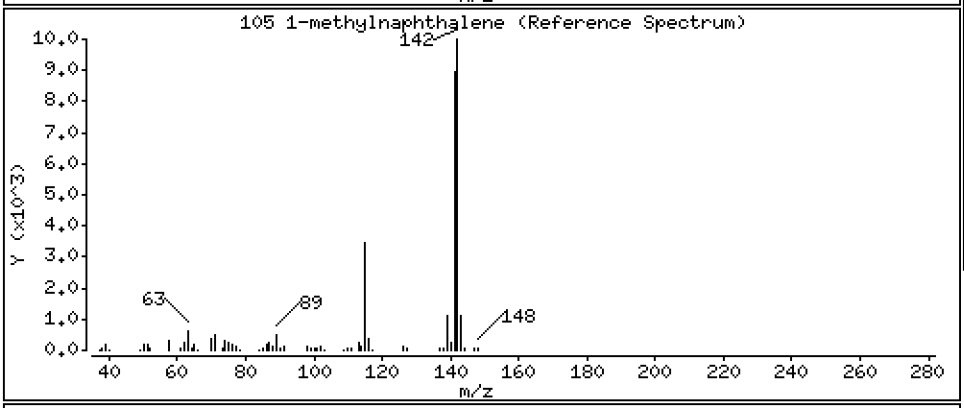
Concentration: 0.08557 ug/mL

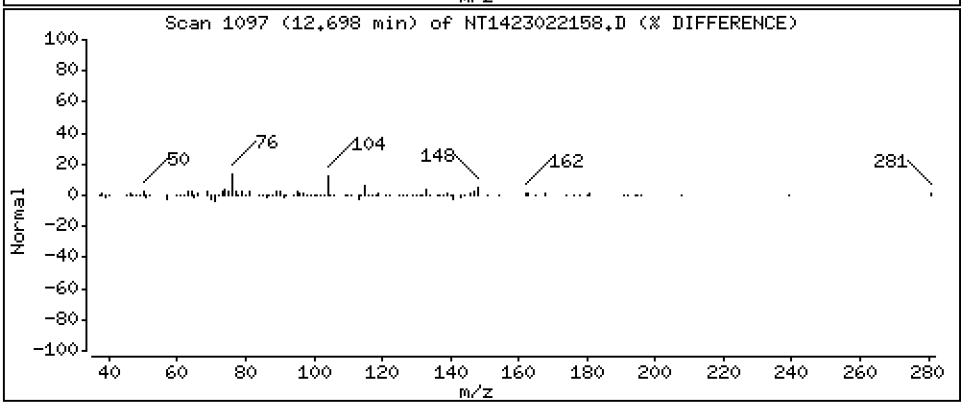












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

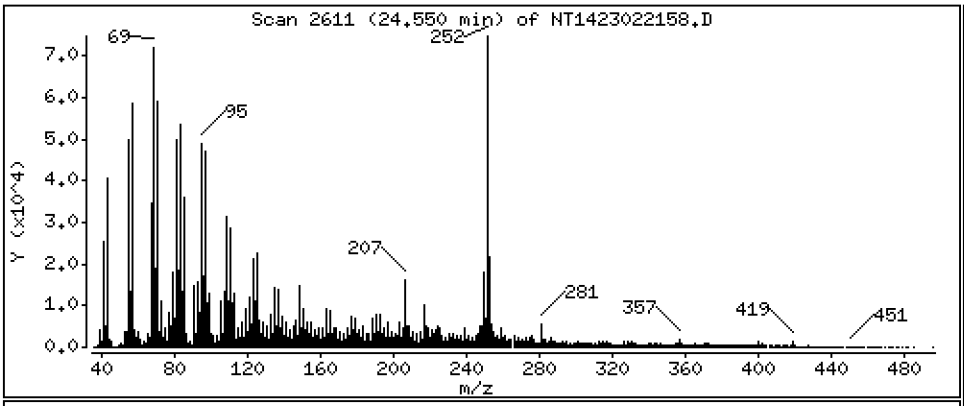
Operator: DSD

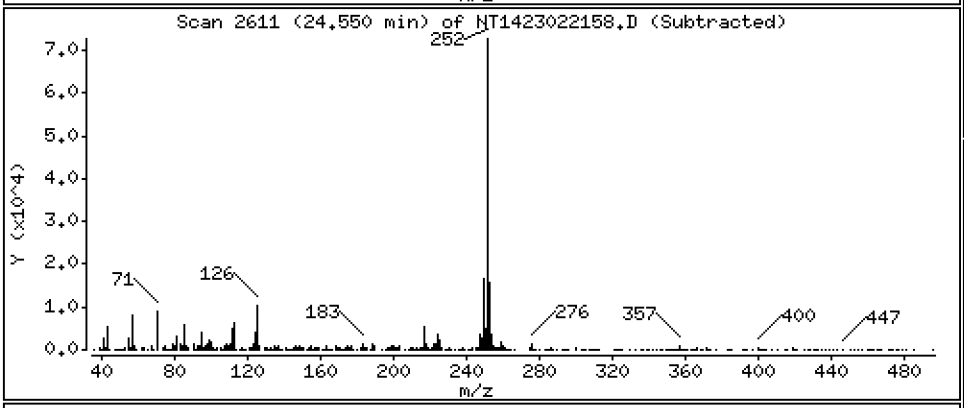
Column phase: ZB-5msi

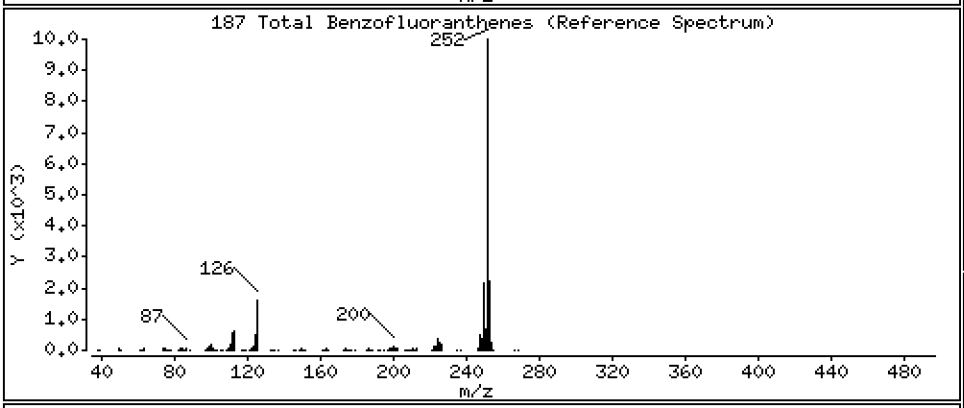
Column diameter: 0.25

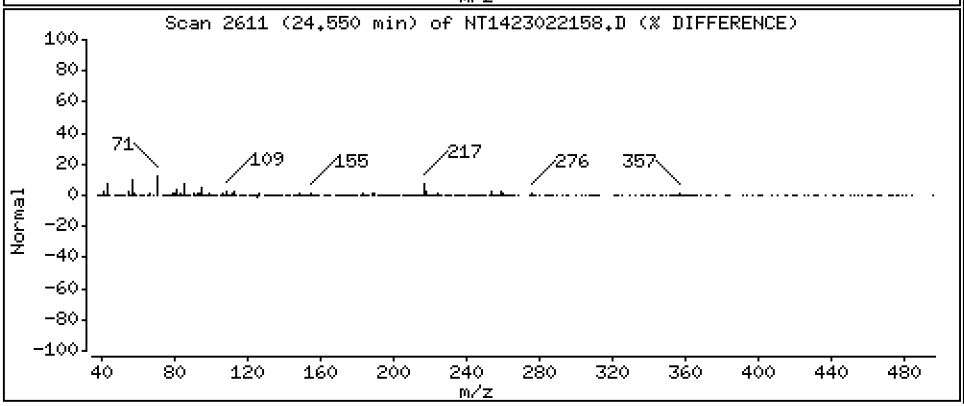
187 Total Benzofluoranthenes

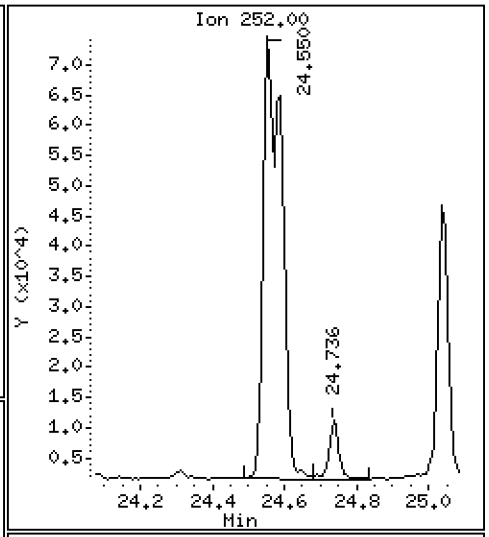
Concentration: 1.806 ug/mL

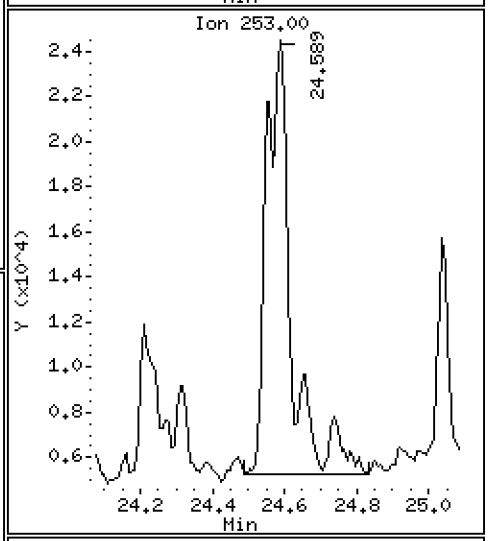


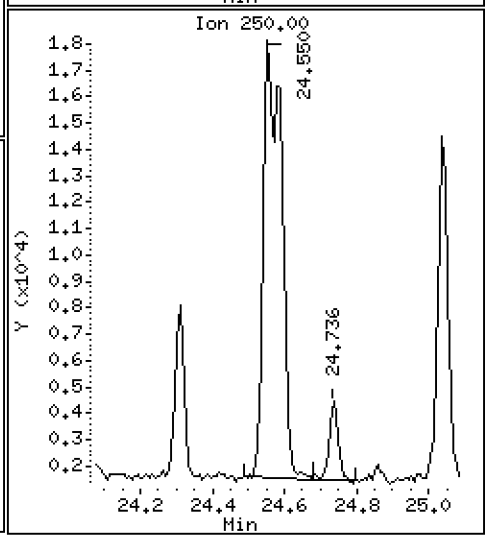












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221C.b\NT1423022158.D
Lab Smp Id: 23A0133-15
Inj Date : 22-FEB-2023 23:50 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-15
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Meth Date : 03-Mar-2023 06:54 van Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 41
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	6.388	6.380	(0.746)	319379	5.10101	5.101
$ 2	Phenol-d5	99	7.972	7.972	(0.930)	475983	4.79229	4.792
3	Phenol	94	7.996	7.996	(0.933)	401997	3.82324	3.823
$ 5	2-Chlorophenol-d4	132	8.212	8.212	(0.958)	350914	4.95154	4.952
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	8.568	8.568	(1.000)	234208	4.00000	
9	1,4-Dichlorobenzene	146	8.599	8.599	(0.992)	1335	0.01706	0.01706(MH)
$ 10	1,2-Dichlorobenzene-d4	152	8.925	8.925	(1.042)	160047	3.01285	3.013
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	8.871	8.863	(1.035)	10452	0.17703	0.1770
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
17	Hexachloroethane	117	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
15	4-Methylphenol	108	9.375	9.367	(1.094)	66752	0.86101	0.8610
$ 18	Nitrobenzene-d5	82	9.662	9.662	(0.875)	338436	3.31768	3.318
19	Nitrobenzene	77	Compound Not Detected.					
20	Isophorone	82	Compound Not Detected.					
21	2-Nitrophenol	139	Compound Not Detected.					
22	2,4-Dimethylphenol	107	Compound Not Detected.					
23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
24	Benzoic acid	105	Compound Not Detected.					
25	2,4-Dichlorophenol	162	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.042	11.042	(1.000)	882984	4.00000	
28	Naphthalene	128	11.081	11.081	(1.003)	27134	0.12463	0.1246
29	4-Chloroaniline	127	Compound Not Detected.					
30	Hexachlorobutadiene	225	Compound Not Detected.					
31	4-Chloro-3-methylphenol	107	Compound Not Detected.					
32	2-Methylnaphthalene	142	12.481	12.481	(1.130)	17354	0.10643	0.1064
33	Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.270	13.270	(0.906)	610759	3.31964	3.320
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	14.183	14.183	(0.968)	37233	0.23704	0.2370
	40	Acenaphthylene	152	Compound Not Detected.					
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	14.648	14.648	(1.000)	514243	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	14.717	14.717	(1.005)	12091	0.08817	0.08817
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.042	15.050	(1.027)	26126	0.11604	0.1160
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	15.637	15.645	(1.068)	33846	0.16208	0.1621
	49	Fluorene	166	15.753	15.753	(1.075)	32800	0.13931	0.1393
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.293	16.293	(1.112)	105643	3.54574	3.546
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	17.684	17.676	(1.000)	946120	4.00000	
	60	Phenanthrene	178	17.731	17.723	(1.003)	171612	0.75484	0.7548
	61	Anthracene	178	17.823	17.816	(1.008)	70376	0.31245	0.3124
	62	Carbazole	167	18.172	18.156	(1.028)	16606	0.08124	0.08124
	63	Di-n-butylphthalate	149	Compound Not Detected.					
	64	Fluoranthene	202	20.175	20.137	(0.885)	431834	1.70663	1.707(H)
	65	Pyrene	202	20.585	20.562	(0.903)	410814	1.53540	1.535
$	66	Terphenyl-d14	244	20.880	20.872	(0.916)	809217	4.25955	4.260
	67	Butylbenzylphthalate	149	21.824	21.816	(0.958)	8249	0.09354	0.09354(MH)
	68	Benzo(a)anthracene	228	22.753	22.745	(0.999)	137949	0.73500	0.7350
*	69	Chrysene-d12	240	22.784	22.769	(1.000)	586498	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	22.823	22.815	(1.002)	192394	1.13966	1.140
	72	bis(2-Ethylhexyl)phthalate	149	22.862	22.854	(0.959)	170181	1.02814	1.028
*	134	Di-n-octylphthalate-d4	153	23.845	23.837	(1.000)	968104	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	24.549	24.542	(0.973)	149191	1.02317	1.023
	75	Benzo(k)fluoranthene	252	24.588	24.580	(0.974)	127764	0.82001	0.8200(M)
	76	Benzo(a)pyrene	252	25.130	25.114	(0.996)	92258	0.66737	0.6674
*	77	Perylene-d12	264	25.238	25.223	(1.000)	459530	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.579	27.548	(1.093)	46825	0.41156	0.4116
	79	Dibenzo(a,h)anthracene	278	27.579	27.564	(1.093)	12218	0.13053	0.1305(M)
	80	Benzo(g,h,i)perylene	276	28.263	28.224	(1.120)	39266	0.42545	0.4255(MH)
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	12.697	12.697	(1.150)	13099	0.08557	0.08557
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

						CONCENTRATIONS	
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.549	24.580	(0.973)	257031	1.80551	1.806
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022158.D
Lab Smp Id: 23A0133-15
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 16:35
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	232195	116098	464390	234208	0.87
27 Naphthalene-d8	800631	400316	1601262	882984	10.29
42 Acenaphthene-d10	488064	244032	976128	514243	5.36
59 Phenanthrene-d10	971279	485640	1942558	946120	-2.59
69 Chrysene-d12	687083	343542	1374166	586498	-14.64
134 Di-n-octylphthala	1174636	587318	2349272	968104	-17.58
77 Perylene-d12	491790	245895	983580	459530	-6.56

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.07
134 Di-n-octylphthala	23.84	23.34	24.34	23.85	0.03
77 Perylene-d12	25.22	24.72	25.72	25.24	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022158.D

Lab ID: 23A0133-15
nt14.i, ABN.m, 22-FEB-2023 23:50

RT	CO-ELUTION COMPOUNDS
27.580	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
27.580	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.992	1.004	-0.0118	1,4-Dichlorobenzene

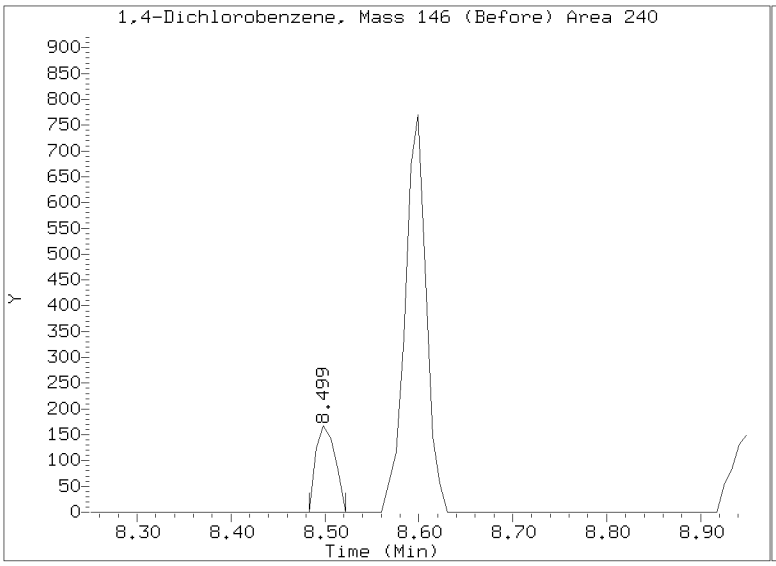
RRT check based on Ccal File: NT1423022146.D

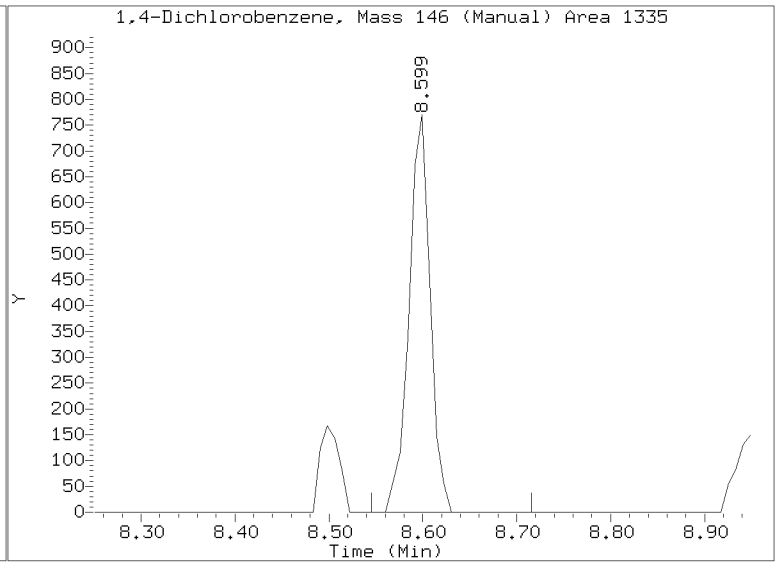
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

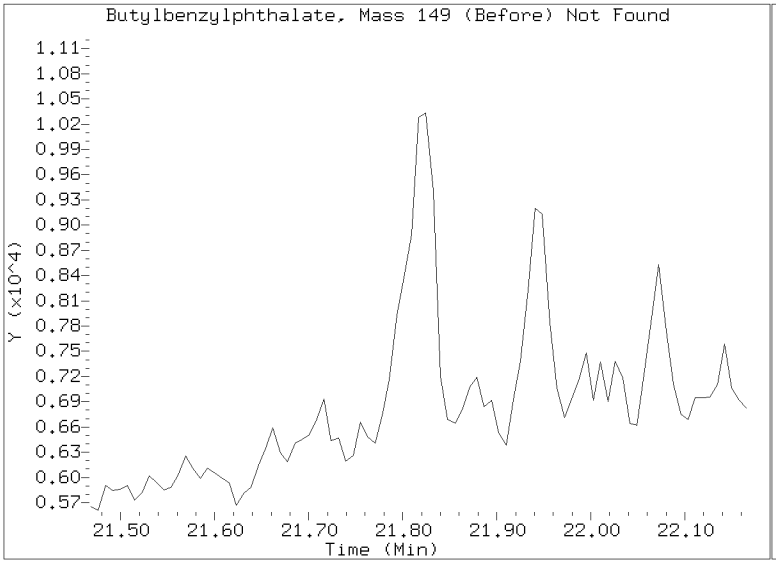
* Only compounds listed in the work order have been verified by the analyst *

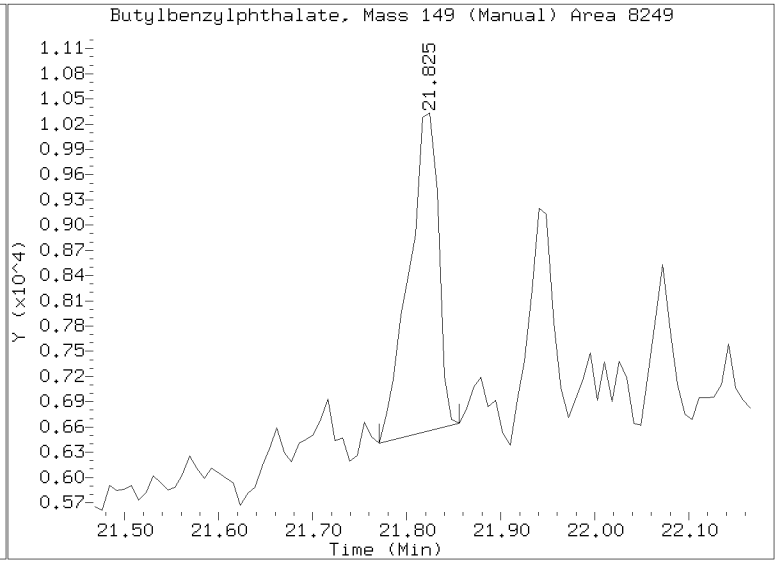
Quant Ion Manual Peak Adjustment Report

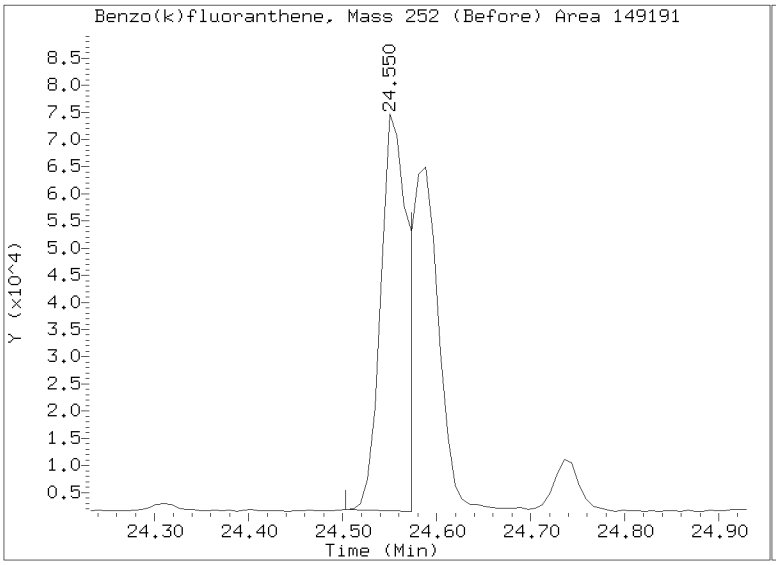
Datafile: //target/share/chem3/nt14.i/20230221C.b/NT1423022158.D
Injection Date: 22-FEB-2023 23:50
Lab ID:23A0133-15 Client ID:
Report Date: 03/03/2023 07:06

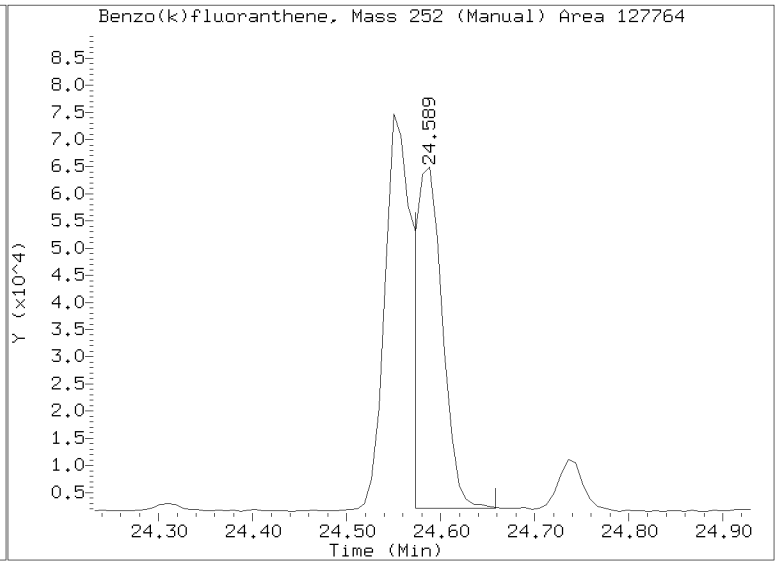






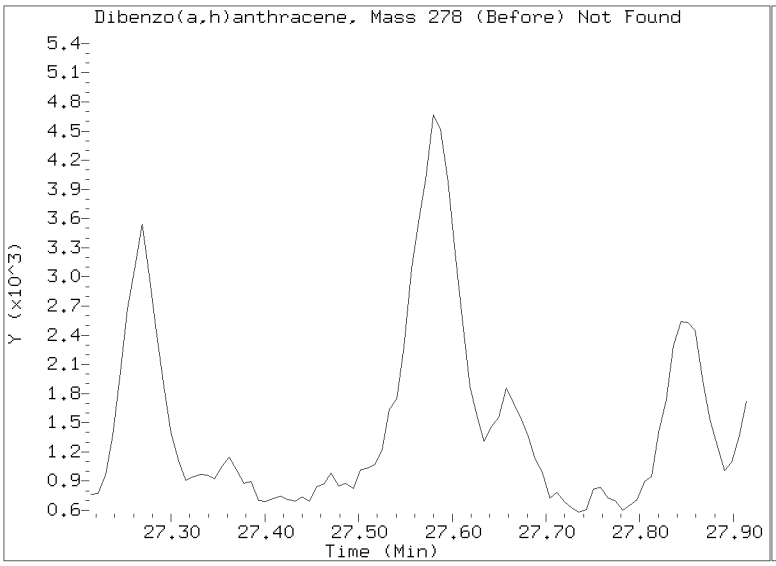


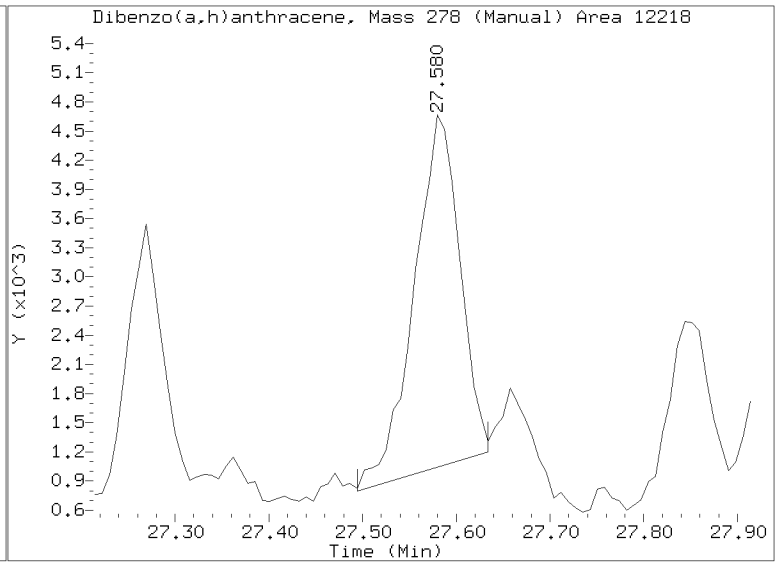


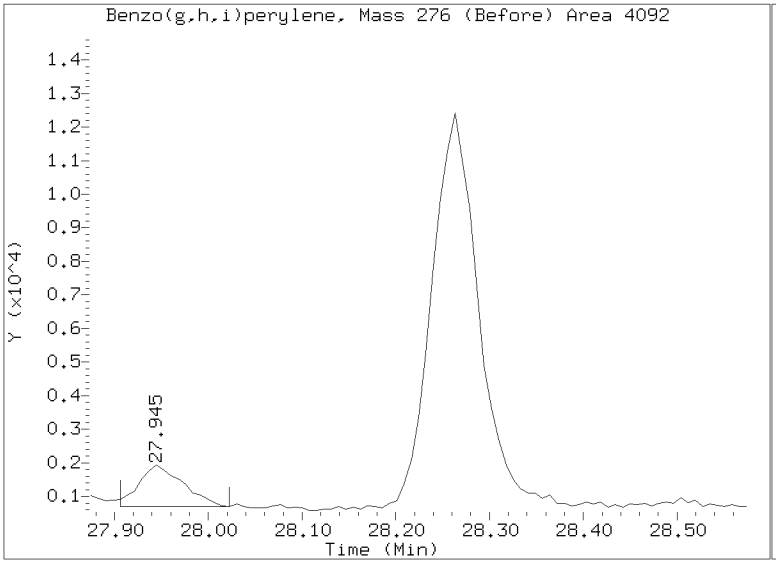


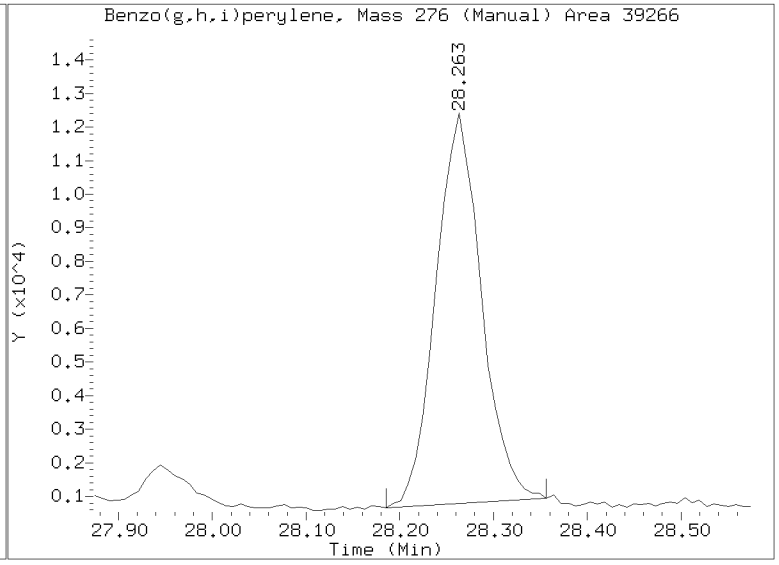
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221C.b/NT1423022158.D
Injection Date: 22-FEB-2023 23:50
Lab ID:23A0133-15 Client ID:
Report Date: 03/03/2023 07:06









Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1091

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-16 C	SDG:	23A0133
Sampled:	01/06/23 14:50	Prepared:	01/18/23 15:24	File ID:	NT1423022159.D
% Solids:	49.38	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/23/23 00:26
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	12.27 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	341		7.2	33.0
106-44-5	4-Methylphenol	1	36.4		12.2	33.0
91-20-3	Naphthalene	1	13.4	J	7.0	33.0
91-57-6	2-Methylnaphthalene	1	11.6	J	7.4	33.0
208-96-8	Acenaphthylene	1	33.0	U	10.3	33.0
131-11-3	Dimethylphthalate	1	33.0	U	7.2	33.0
83-32-9	Acenaphthene	1	13.2	J	8.6	33.0
132-64-9	Dibenzofuran	1	33.0	U	23.3	33.0
86-73-7	Fluorene	1	33.0	U	24.0	33.0
85-01-8	Phenanthrene	1	66.3		14.4	33.0
120-12-7	Anthracene	1	24.9	J	11.9	33.0
206-44-0	Fluoranthene	1	153		10.1	33.0
129-00-0	Pyrene	1	141		9.4	33.0
85-68-7	Butylbenzylphthalate	1	33.0	U	15.5	33.0
56-55-3	Benzo(a)anthracene	1	66.3		9.8	33.0
218-01-9	Chrysene	1	99.0		10.0	33.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	138		9.0	82.5
	Benzofluoranthenes, Total	1	180		16.5	66.0
50-32-8	Benzo(a)pyrene	1	63.3		7.0	33.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	38.2		24.2	33.0
53-70-3	Dibenzo(a,h)anthracene	1	33.0	U	28.4	33.0
191-24-2	Benzo(g,h,i)perylene	1	42.0		22.4	33.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	1237.8	881	71.2	27 - 120	
Phenol-d5	1237.8	822	66.4	29 - 120	
2-Chlorophenol-d4	1237.8	861	69.6	31 - 120	
1,2-Dichlorobenzene-d4	825.23	526	63.8	32 - 120	
Nitrobenzene-d5	825.23	587	71.1	30 - 120	
2-Fluorobiphenyl	825.23	582	70.5	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1091

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-16 C	SDG:	23A0133
Sampled:	01/06/23 14:50	Prepared:	01/18/23 15:24	File ID:	NT1423022159.D
% Solids:	49.38	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/23/23 00:26
Batch:	BLA0393	Sequence:	SLB0308	Initial/Final:	12.27 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GB00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	1237.8	851	68.7	24 - 134	
p-Terphenyl-d14	825.23	664	80.4	37 - 120	

Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022159.D

Page 1

Date : 23-FEB-2023 00:26

Client ID:

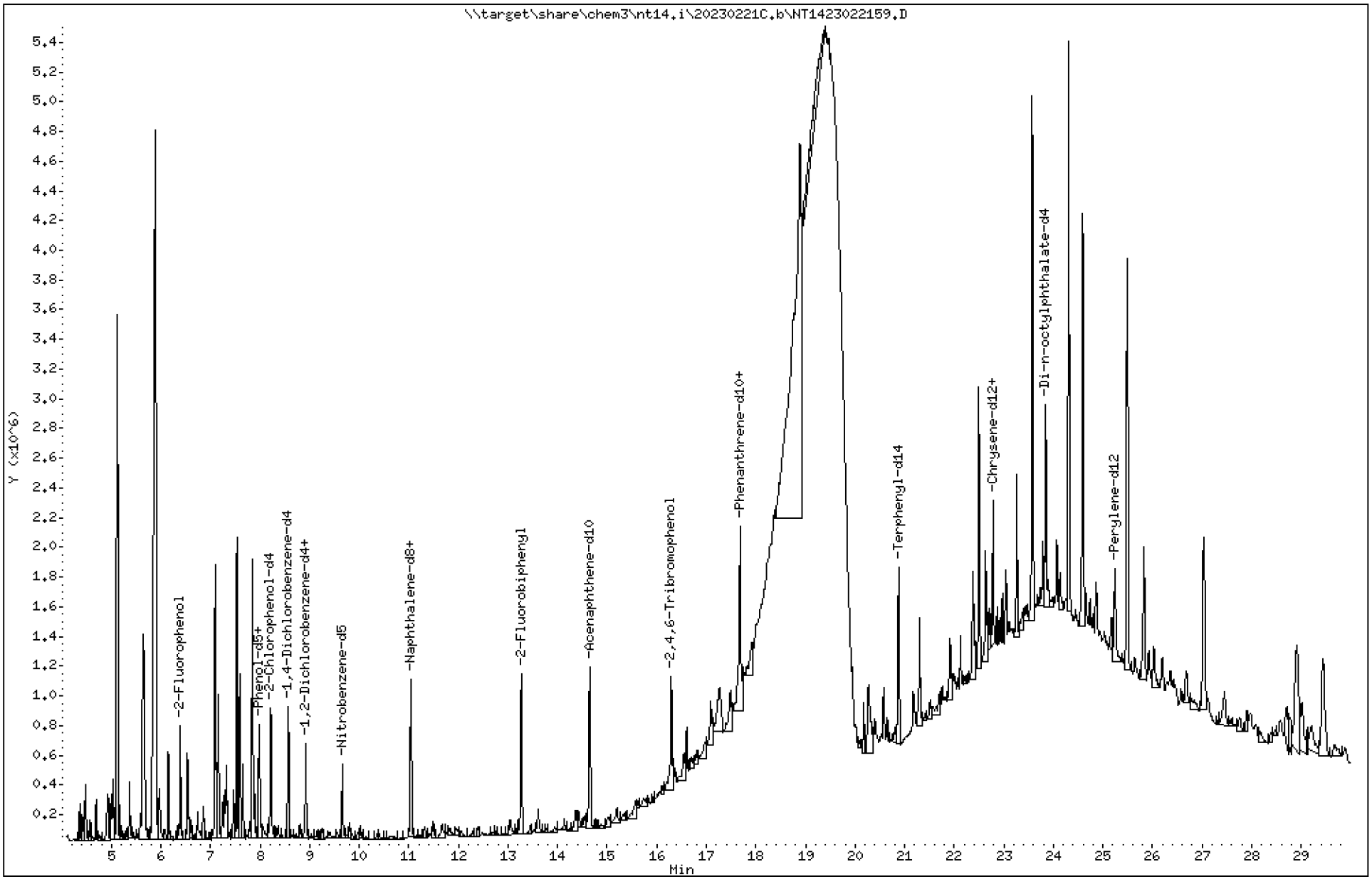
Instrument: nt14.i

Sample Info: 23A0133-16

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

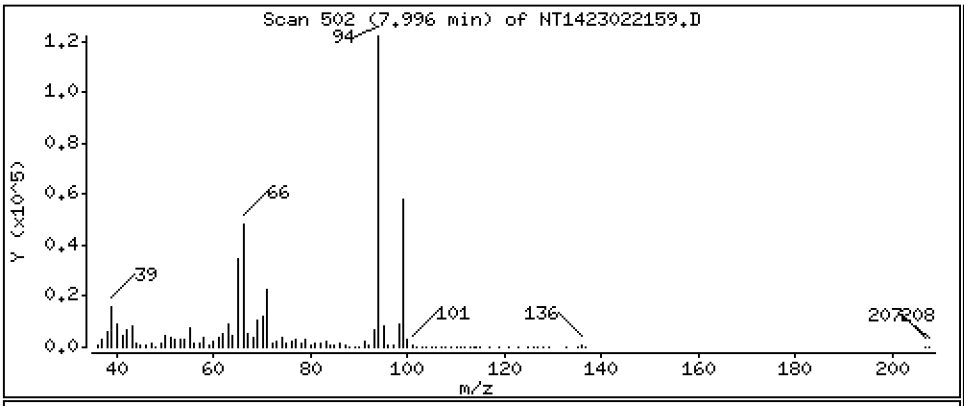
Operator: DSD

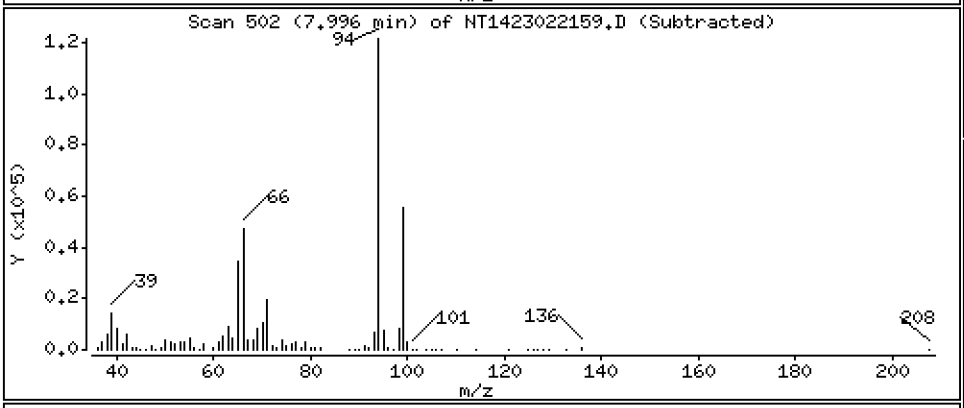
Column phase: ZB-5msi

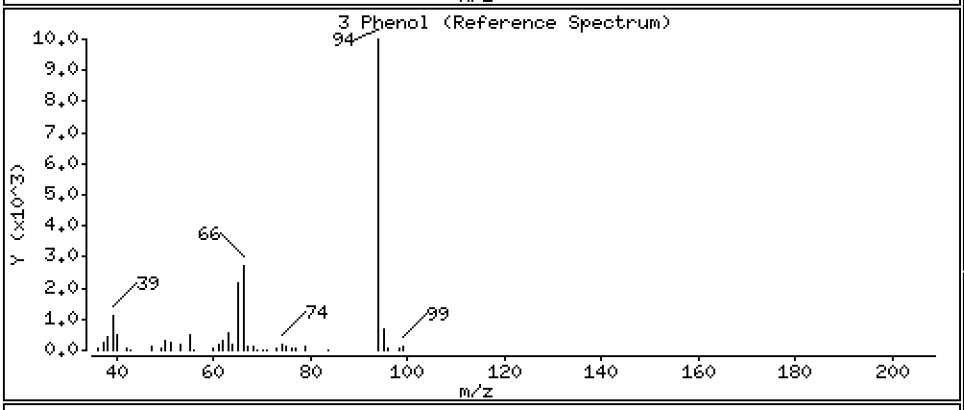
Column diameter: 0.25

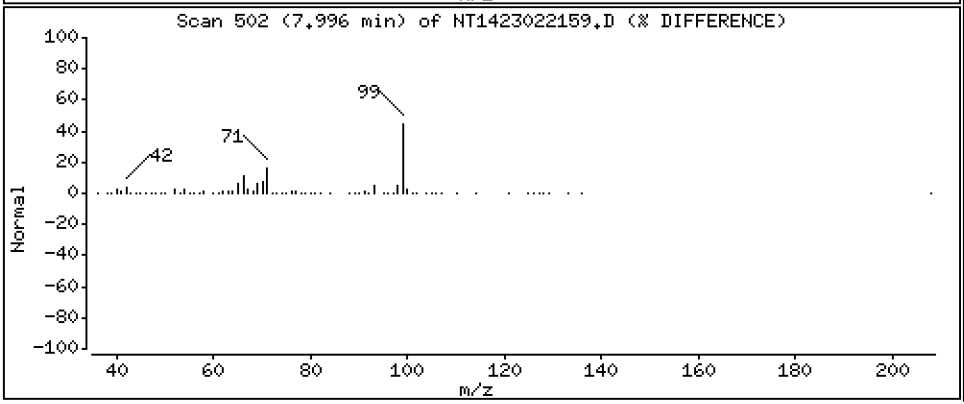
3 Phenol

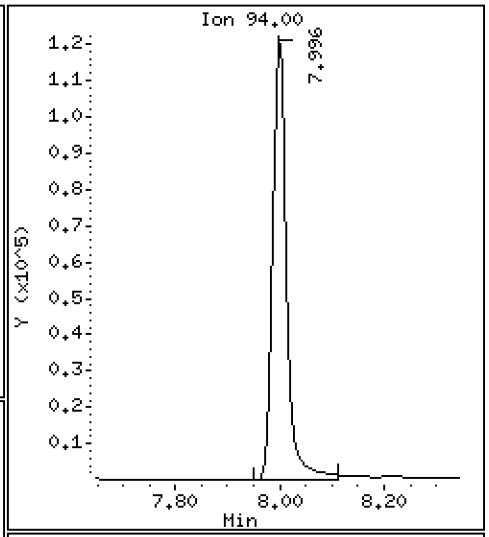
Concentration: 2.066 ug/mL

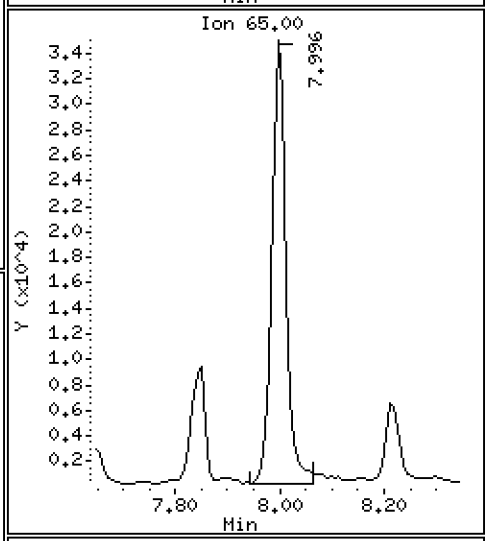


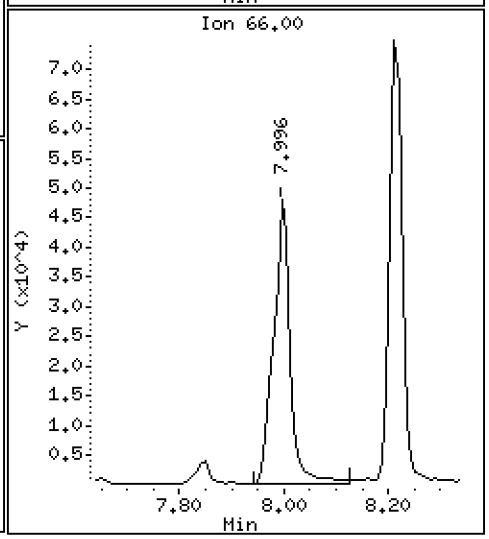












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

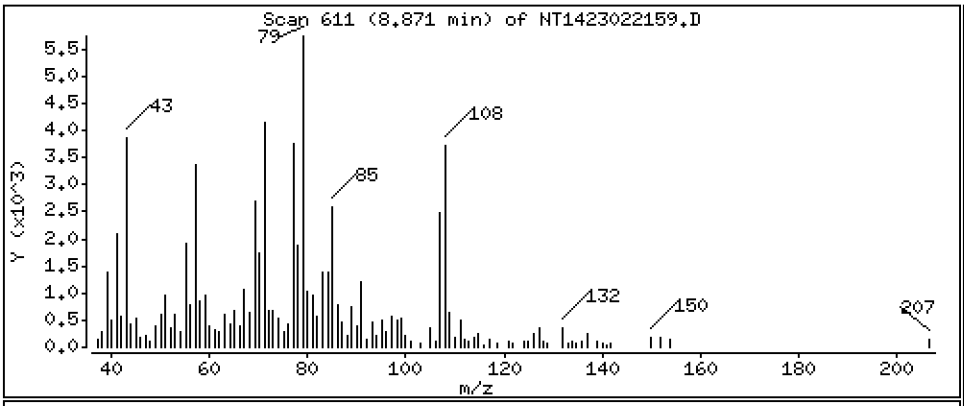
Operator: DSD

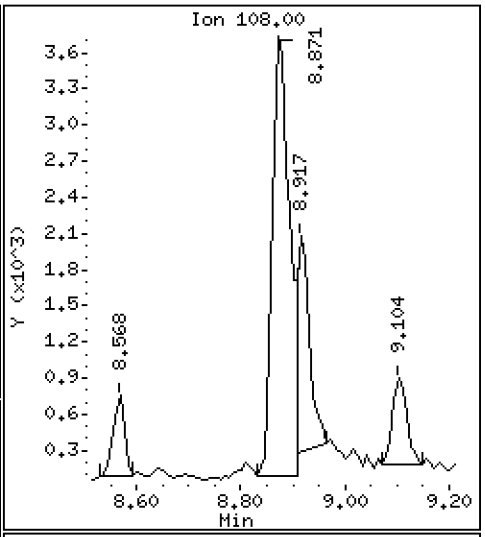
Column phase: ZB-5msi

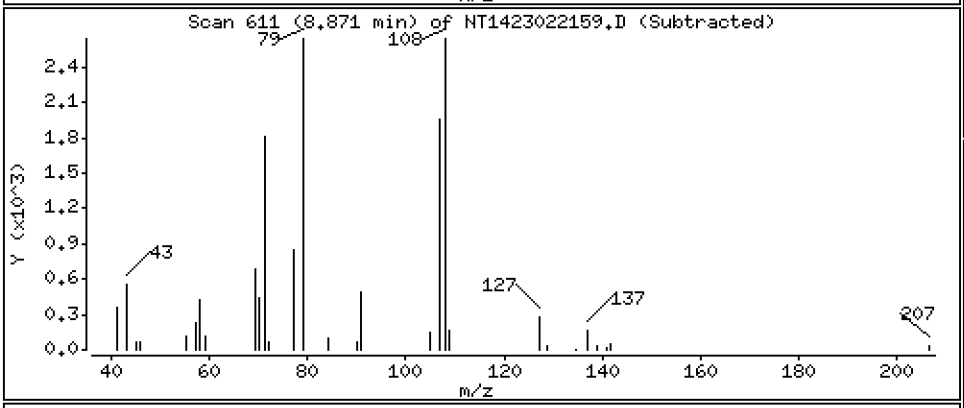
Column diameter: 0.25

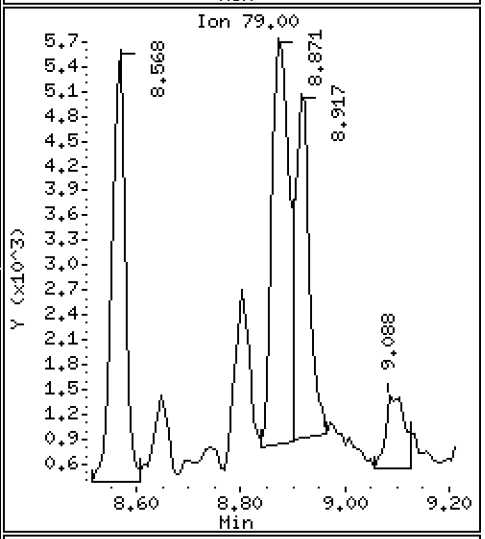
11 Benzyl alcohol

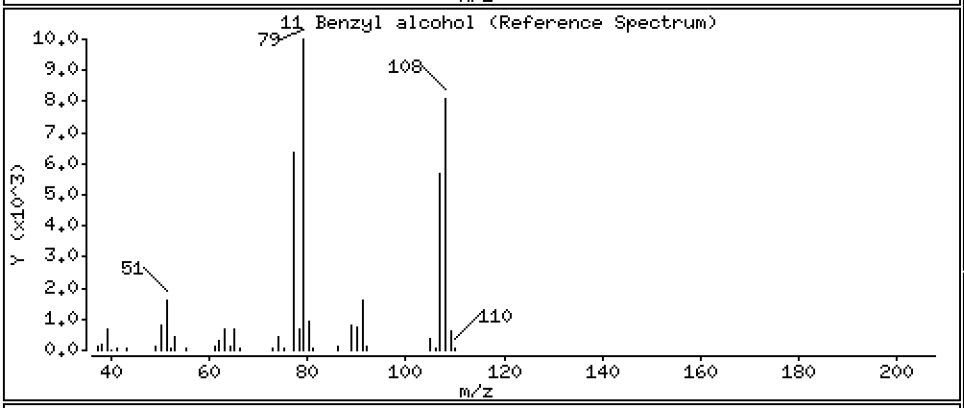
Concentration: 0.1503 ug/mL

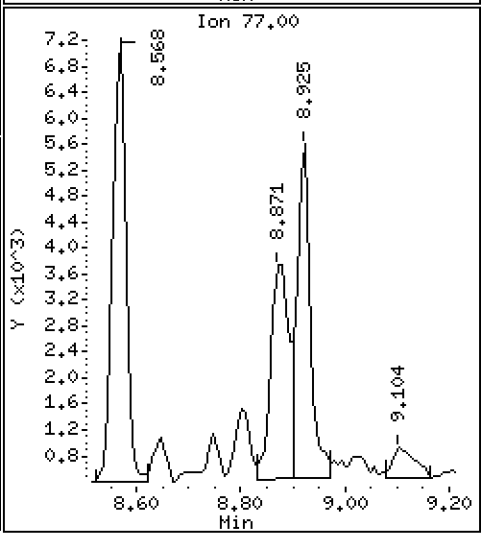


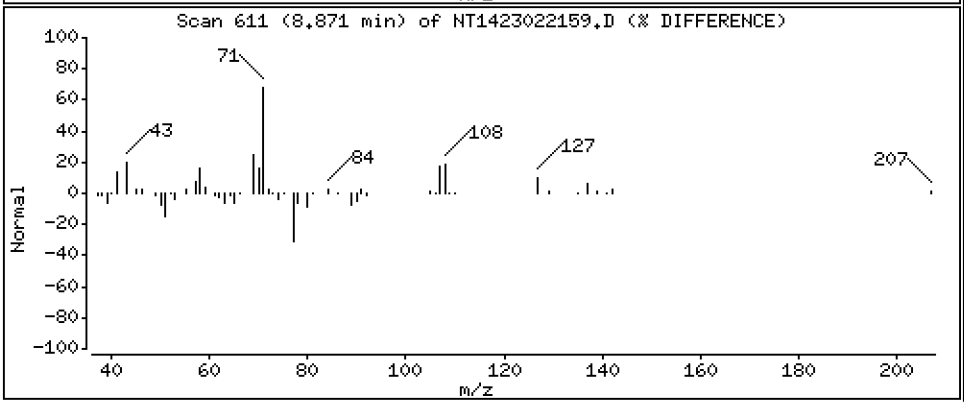












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

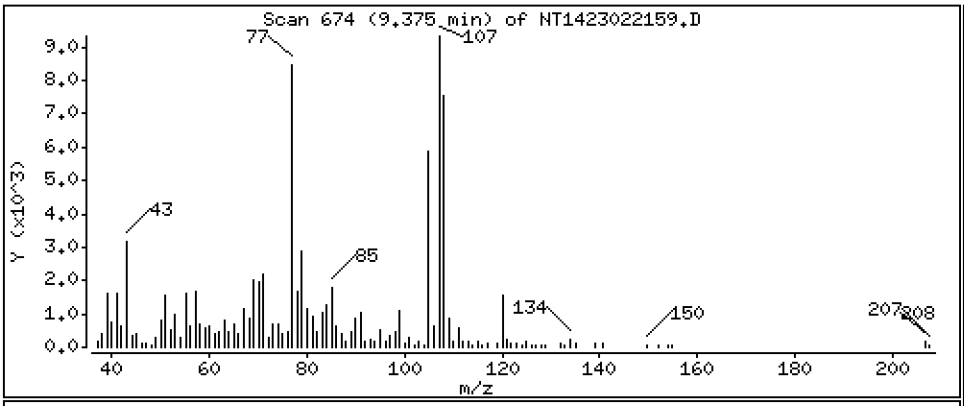
Operator: DSD

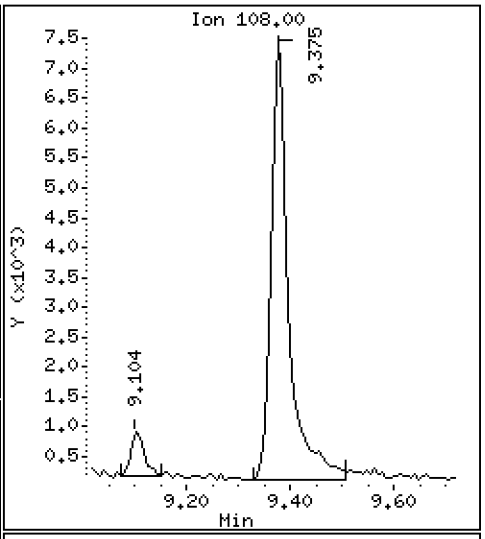
Column phase: ZB-5msi

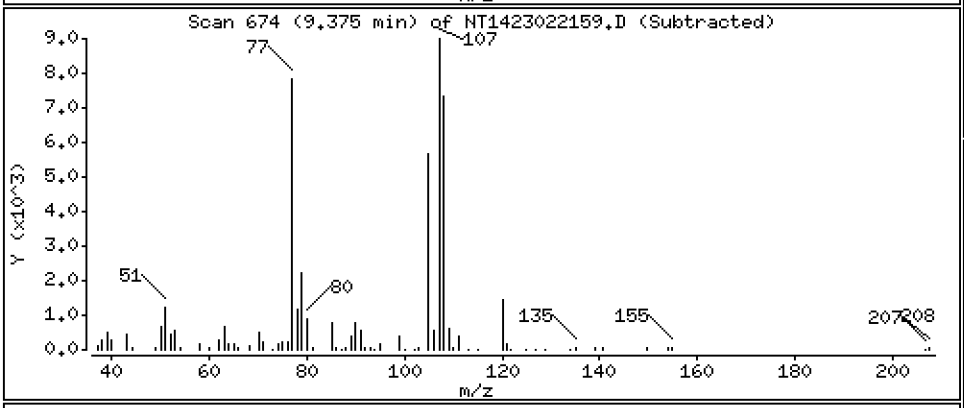
Column diameter: 0.25

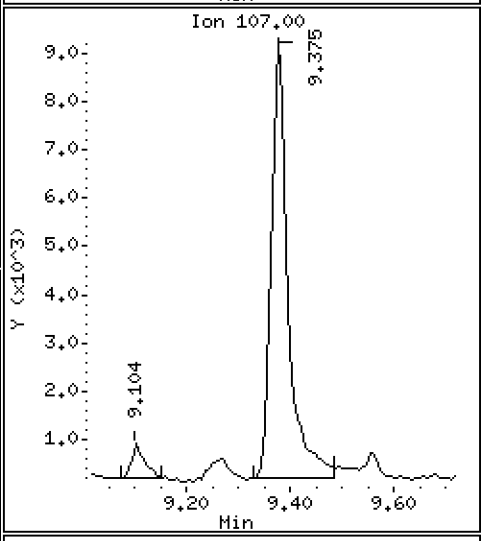
15 4-Methylphenol

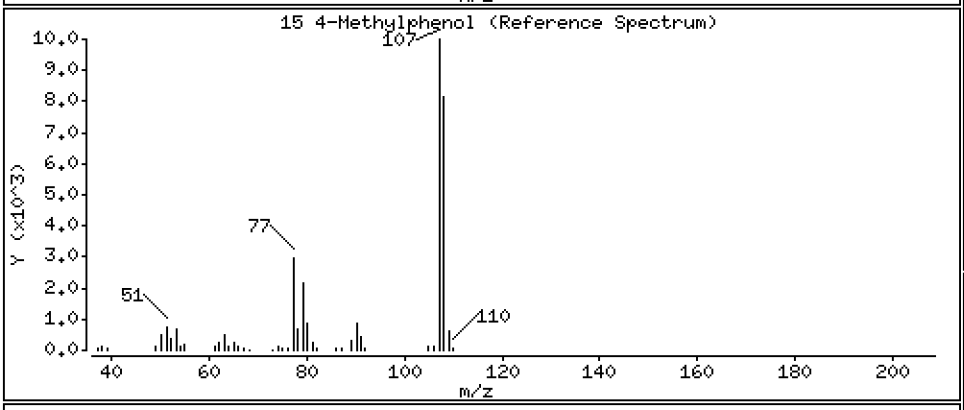
Concentration: 0.2206 ug/mL

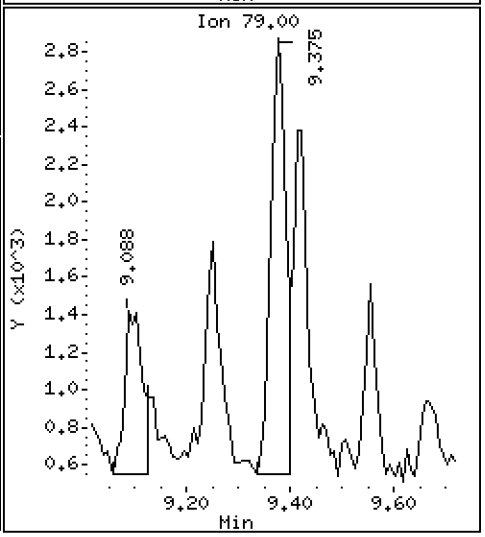


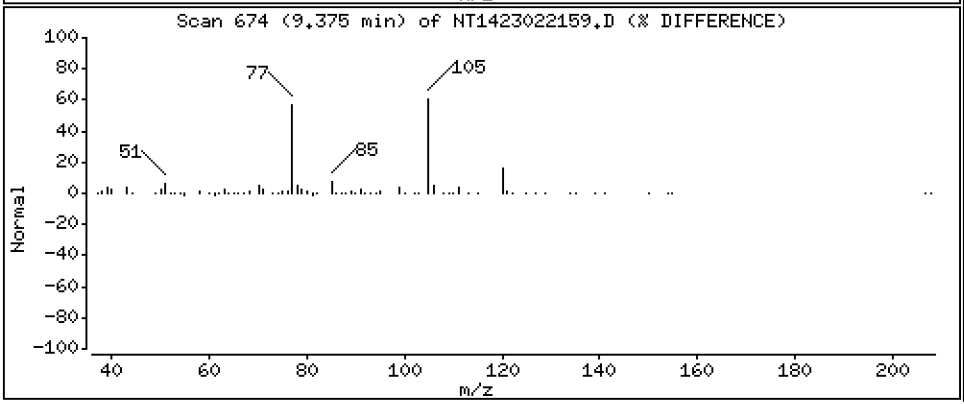












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

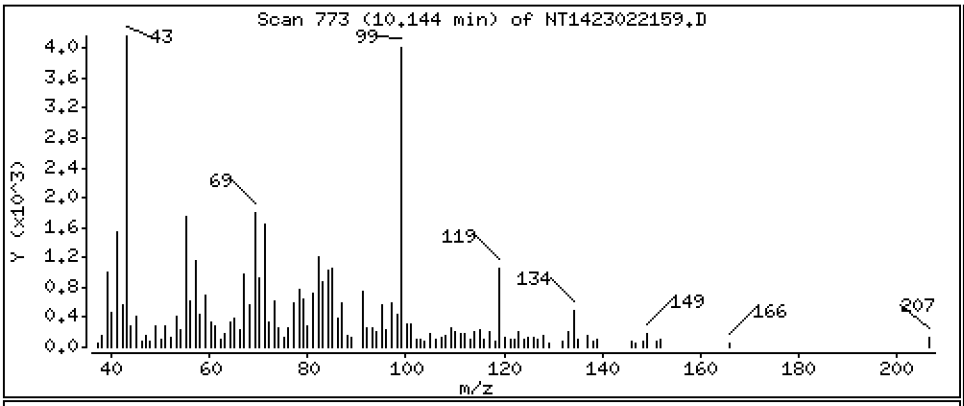
Operator: DSD

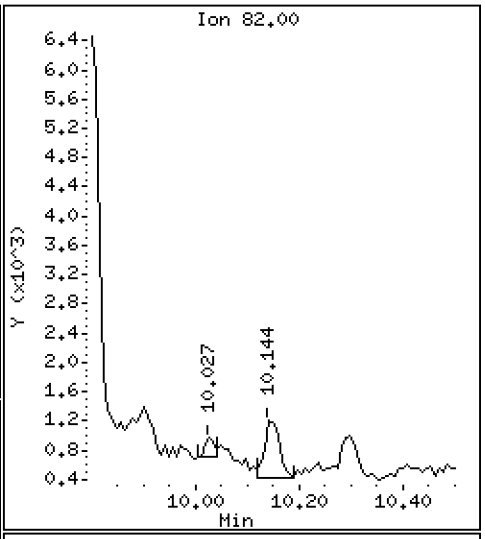
Column phase: ZB-5msi

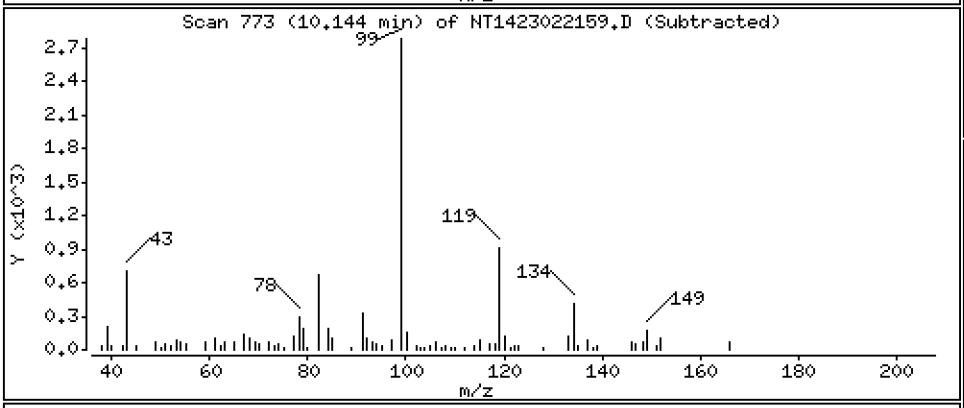
Column diameter: 0.25

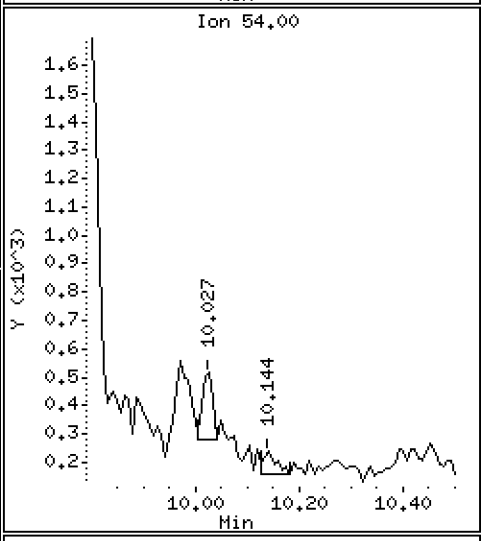
20 Isophorone

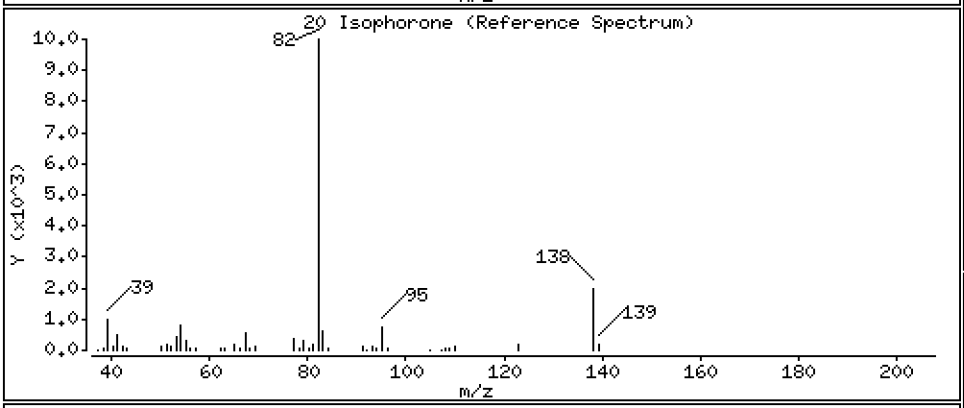
Concentration: 0.01124 ug/mL

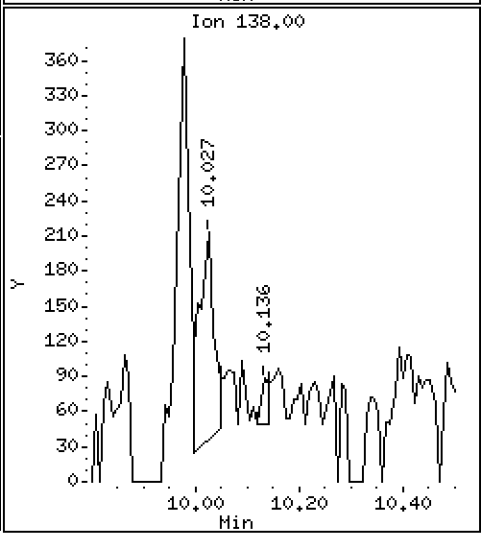


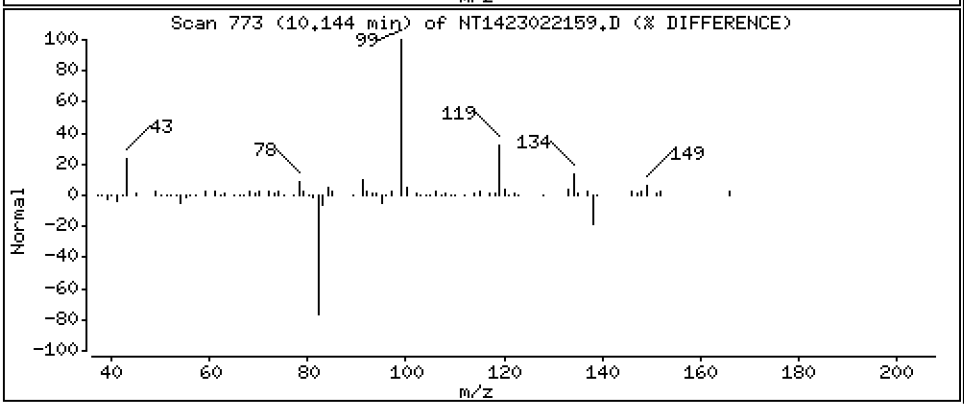












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

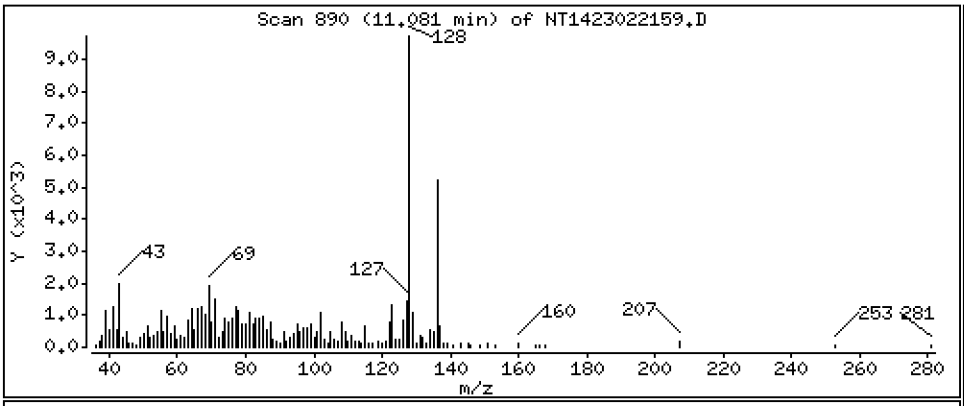
Operator: DSD

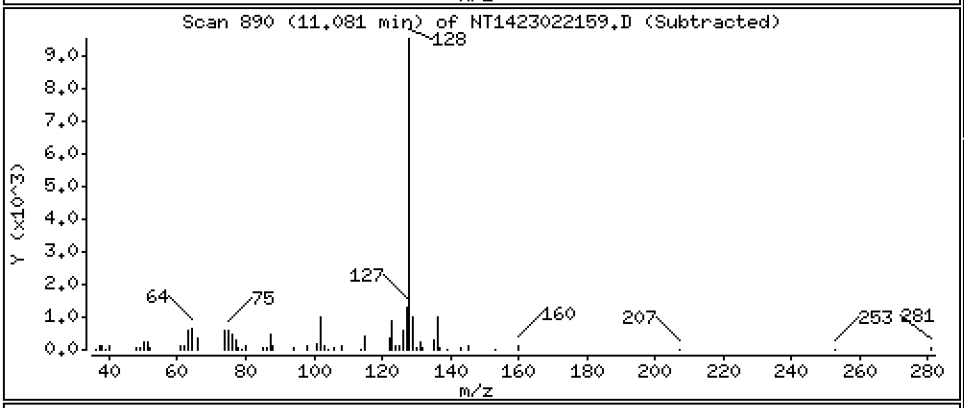
Column phase: ZB-5msi

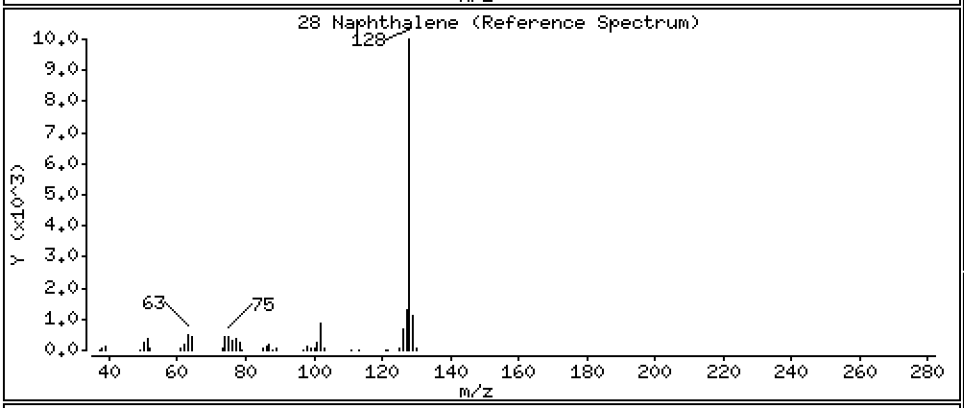
Column diameter: 0.25

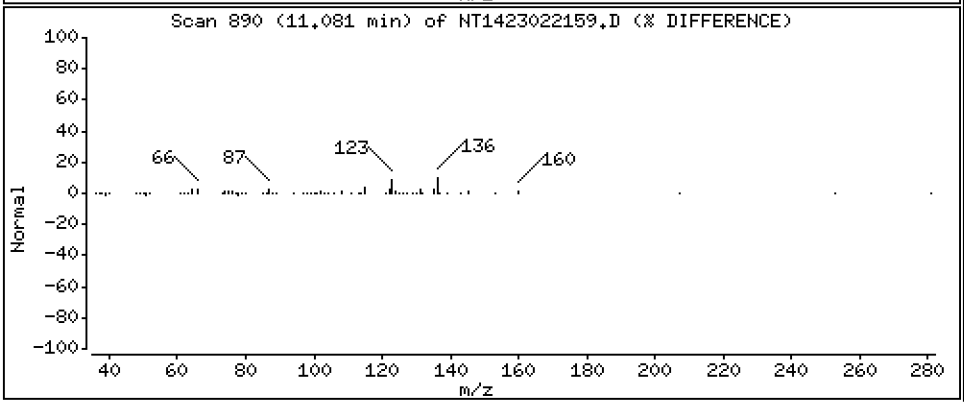
28 Naphthalene

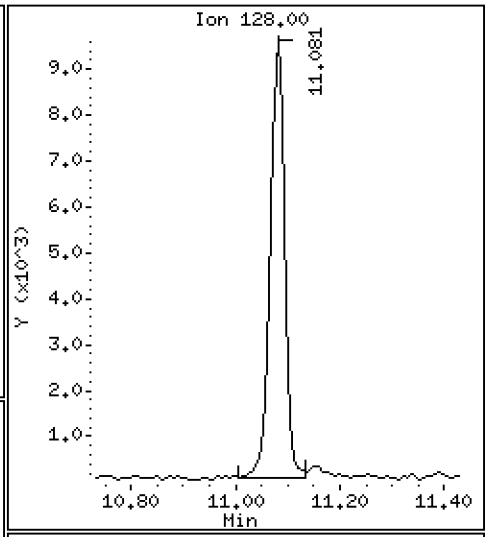
Concentration: 0.08141 ug/mL

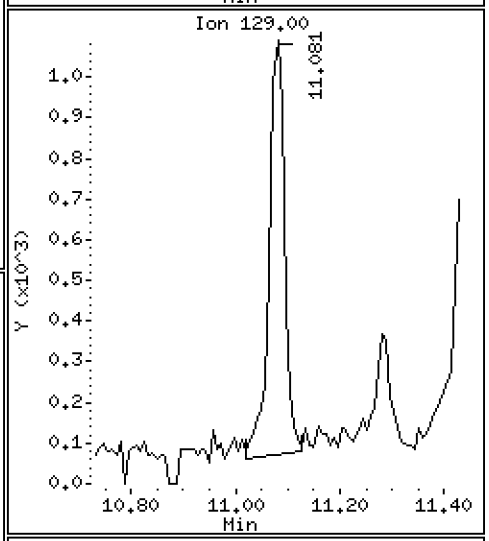


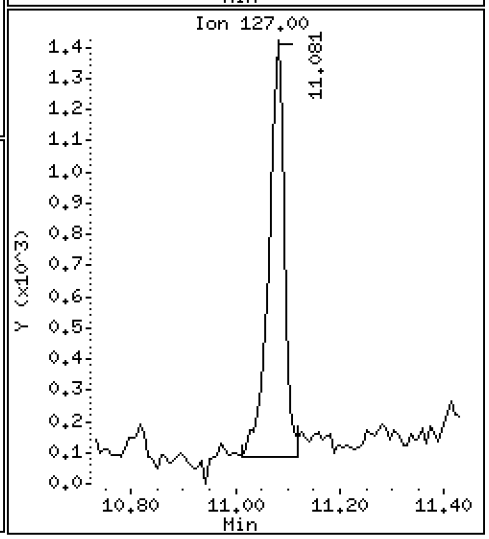












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

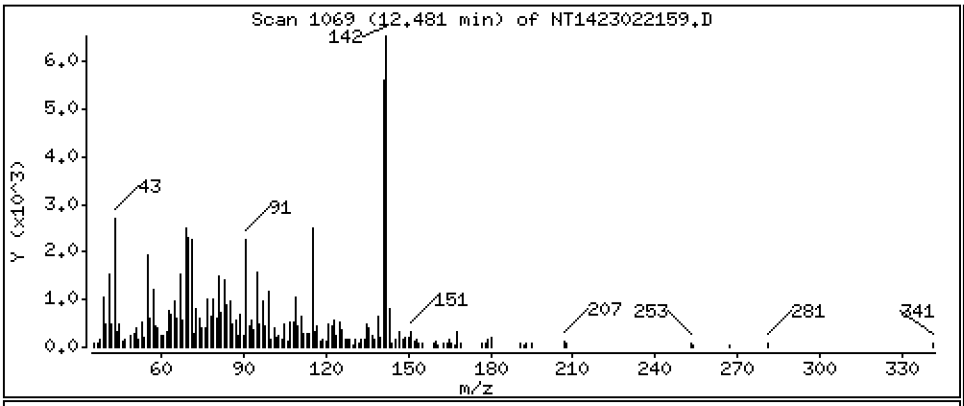
Operator: DSD

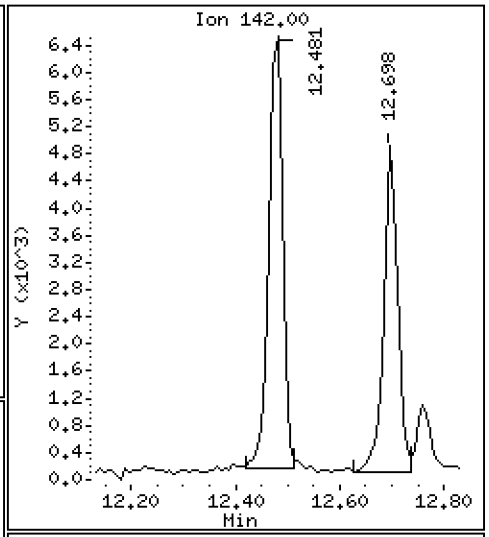
Column phase: ZB-5msi

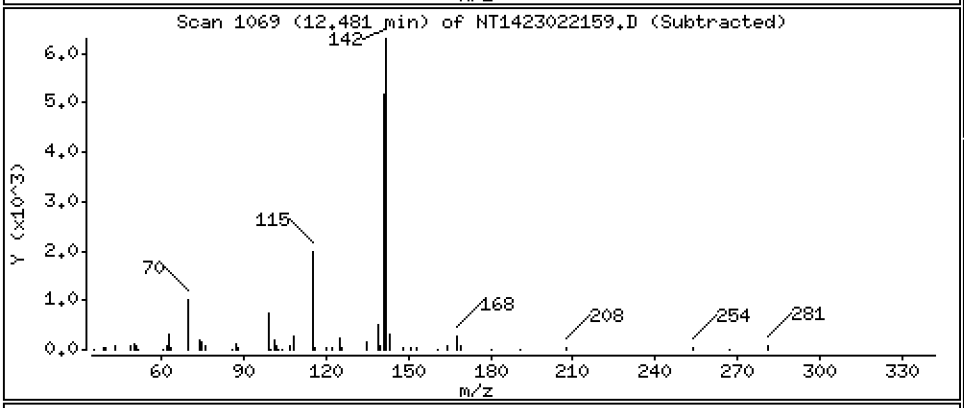
Column diameter: 0.25

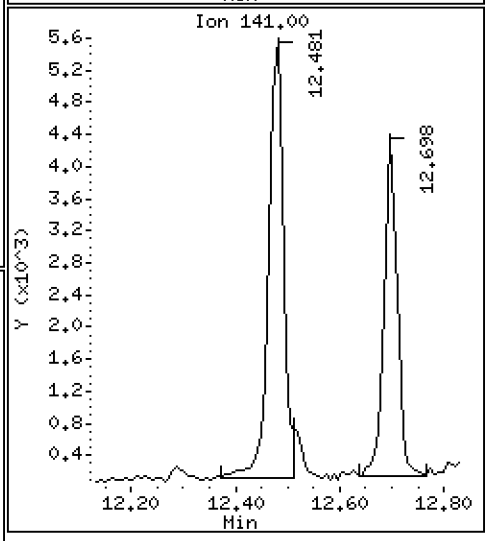
32 2-Methylnaphthalene

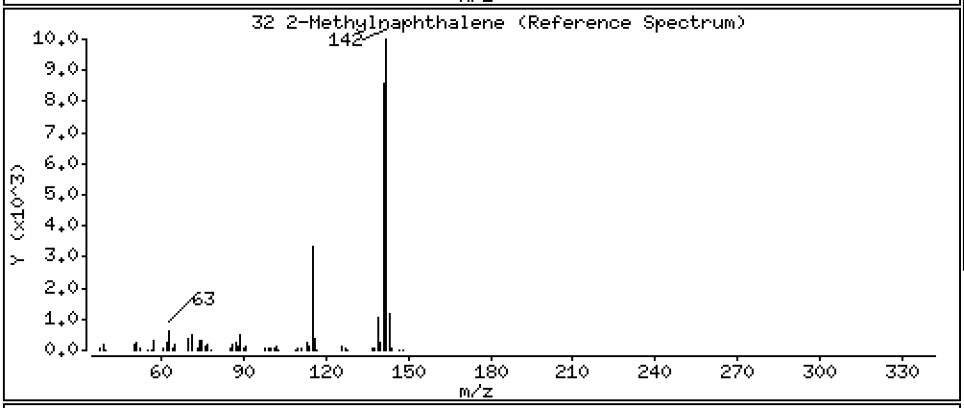
Concentration: 0.07053 ug/mL

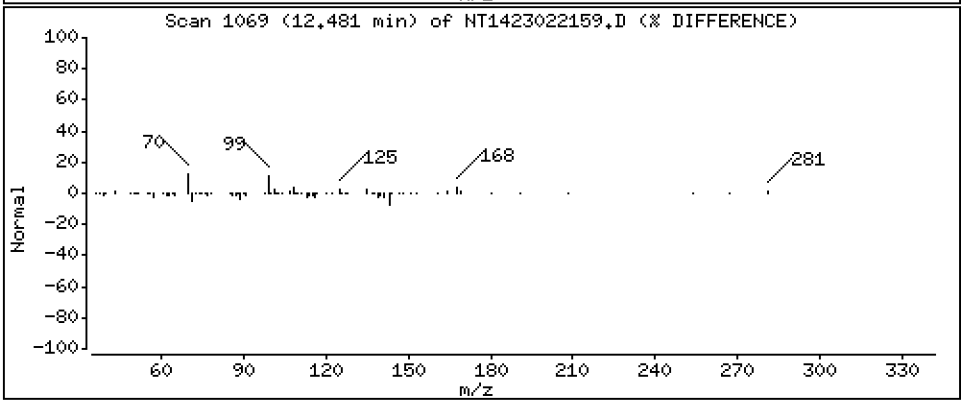












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022159.D

Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

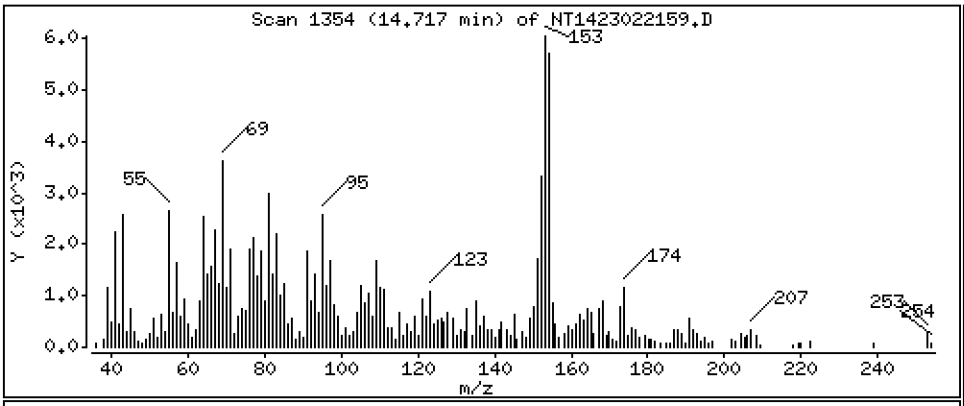
Operator: DSD

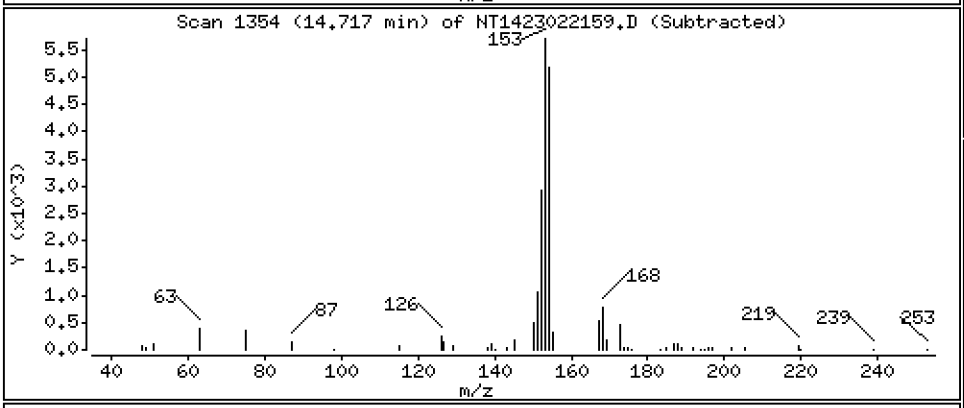
Column phase: ZB-5msi

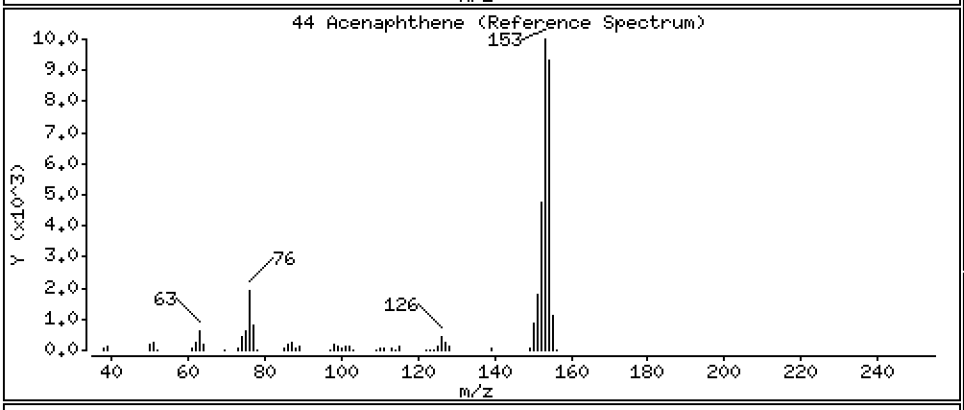
Column diameter: 0.25

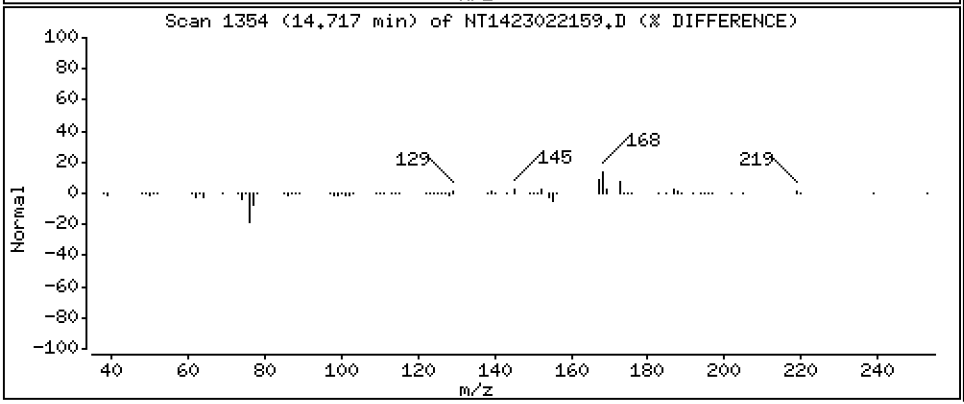
44 Acenaphthene

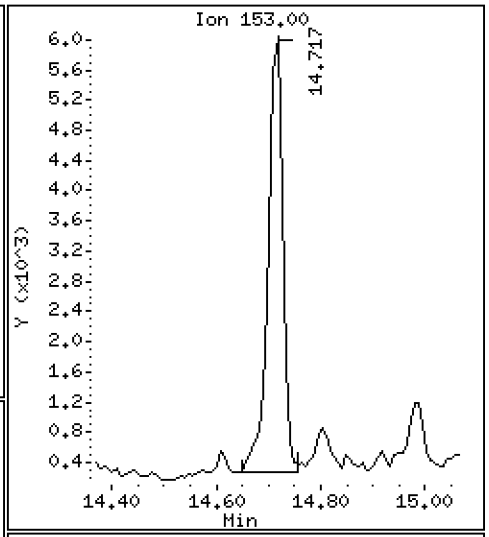
Concentration: 0.07988 ug/mL

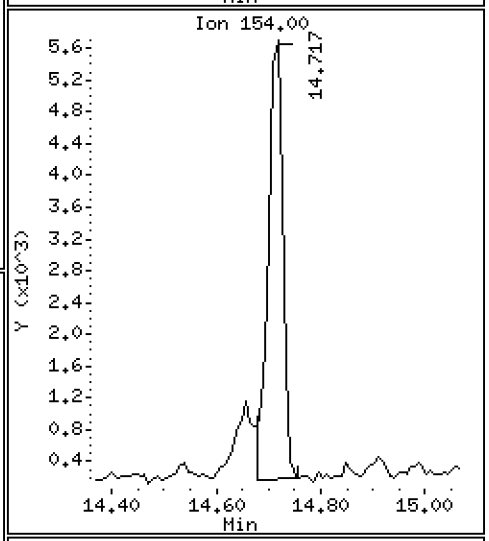


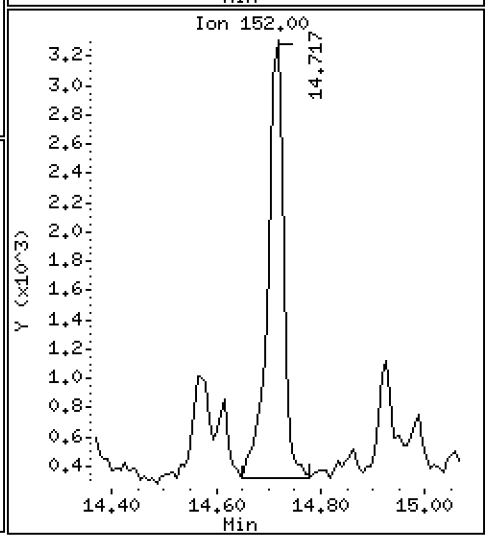












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022159.D

Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

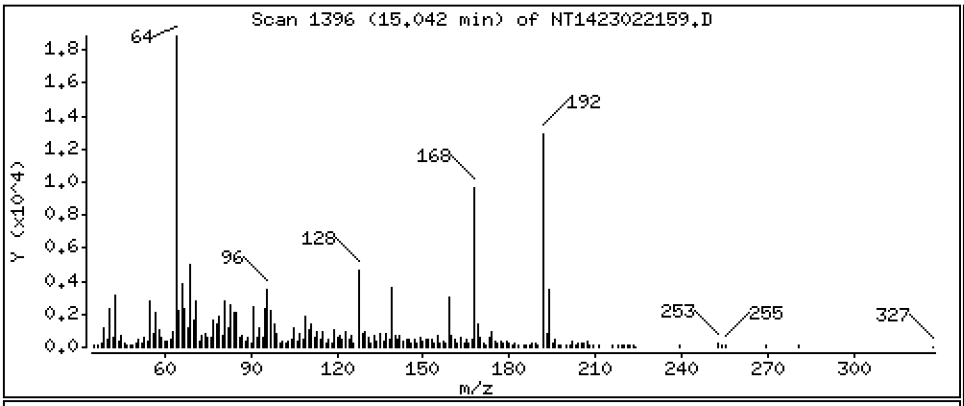
Operator: DSD

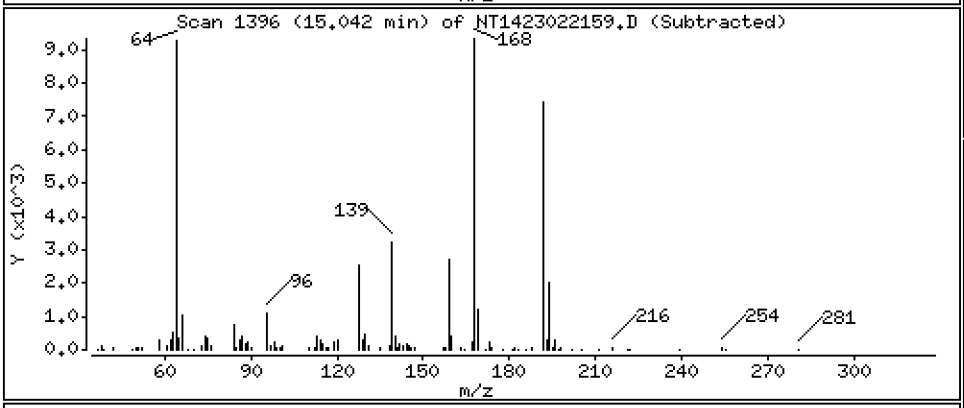
Column phase: ZB-5msi

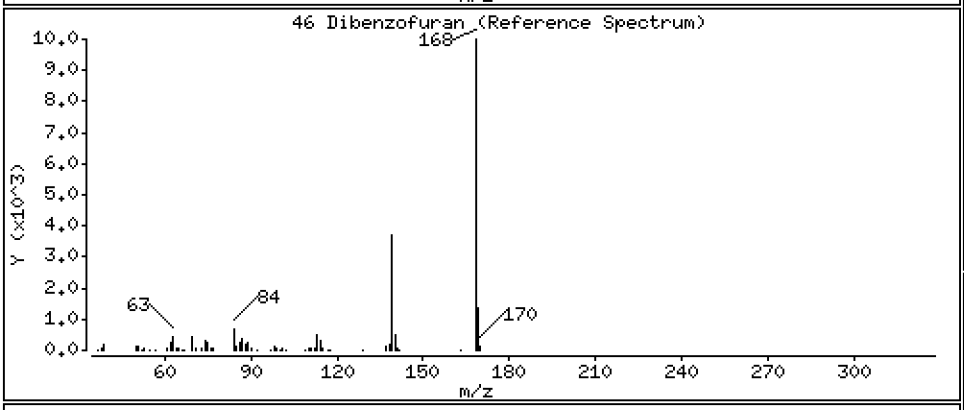
Column diameter: 0.25

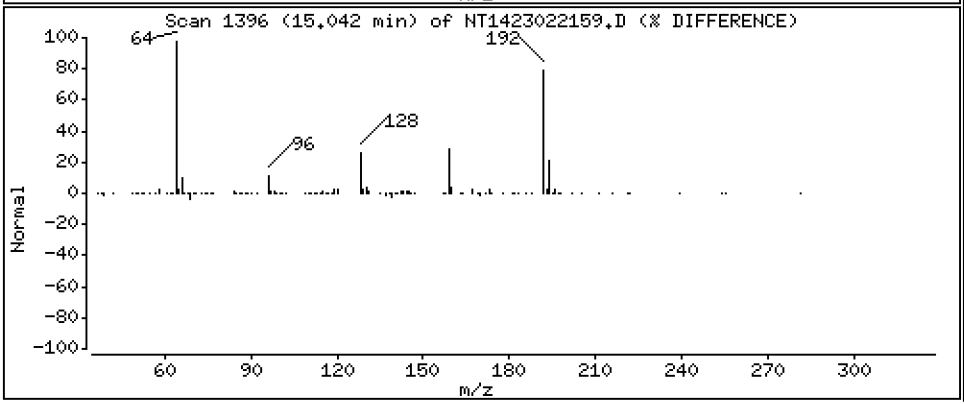
46 Dibenzofuran

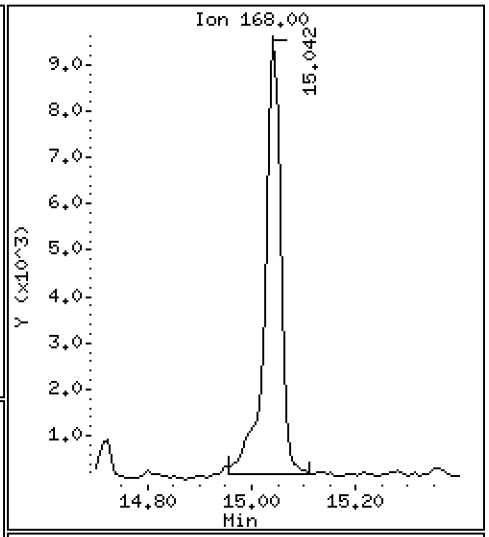
Concentration: 0.08508 ug/mL

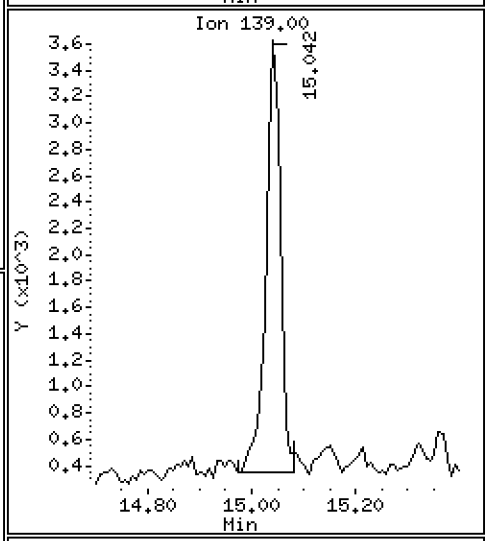


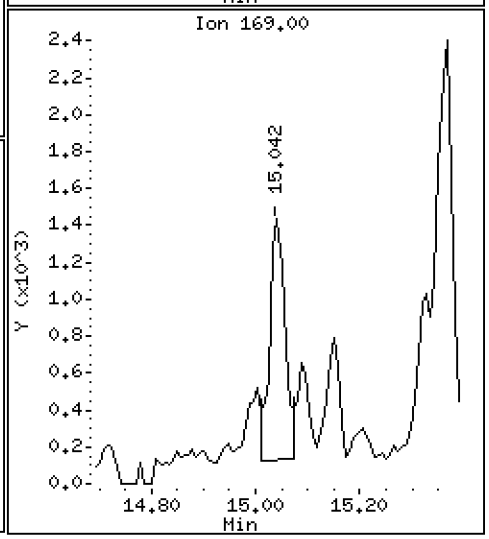












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

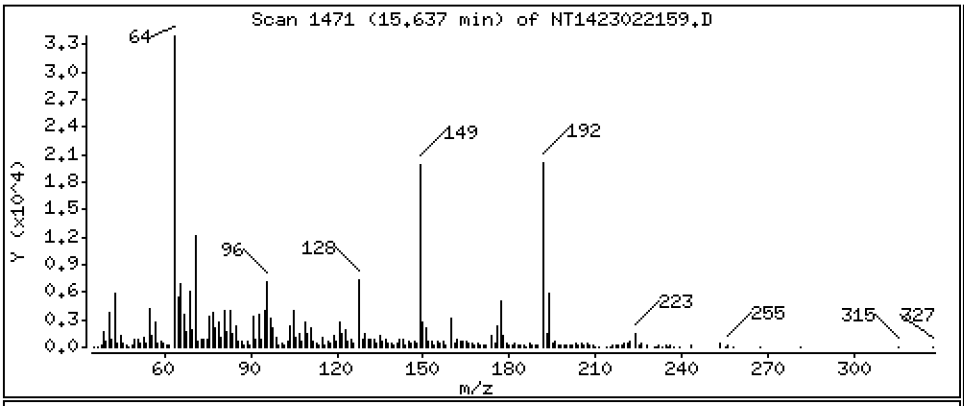
Operator: DSD

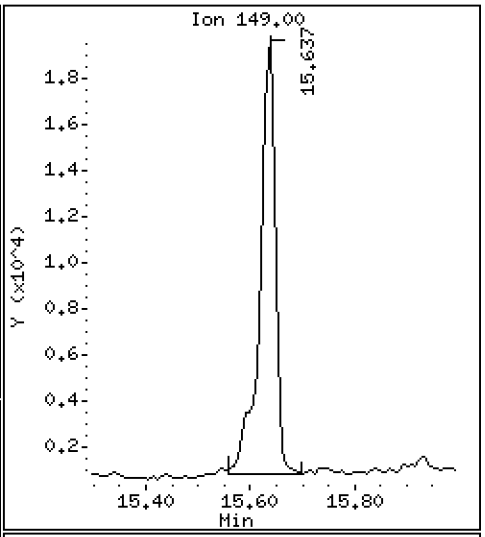
Column phase: ZB-5msi

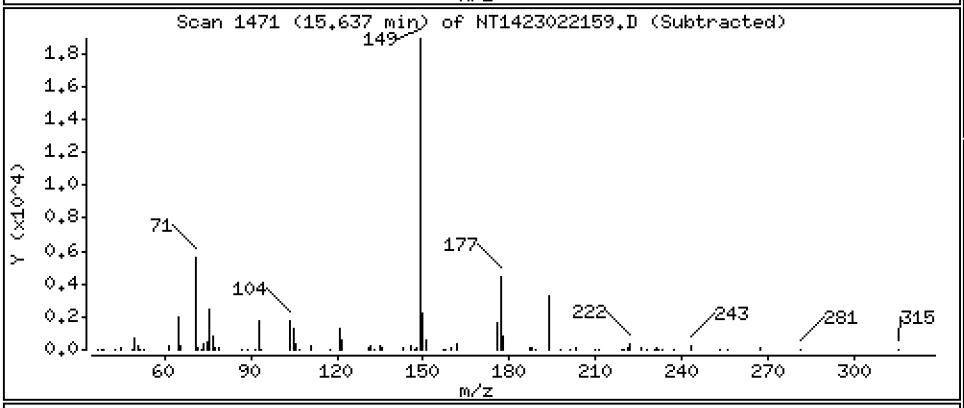
Column diameter: 0.25

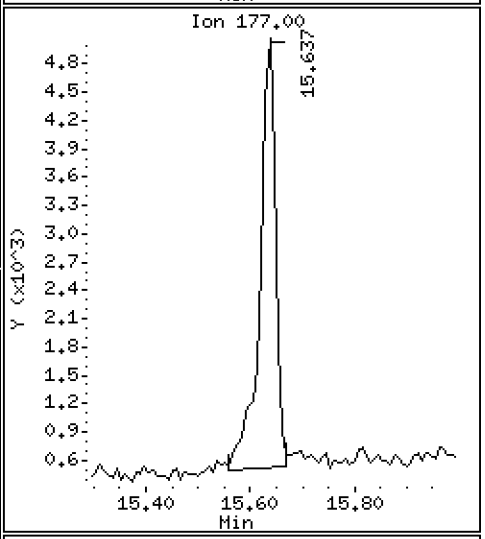
50 Diethylphthalate

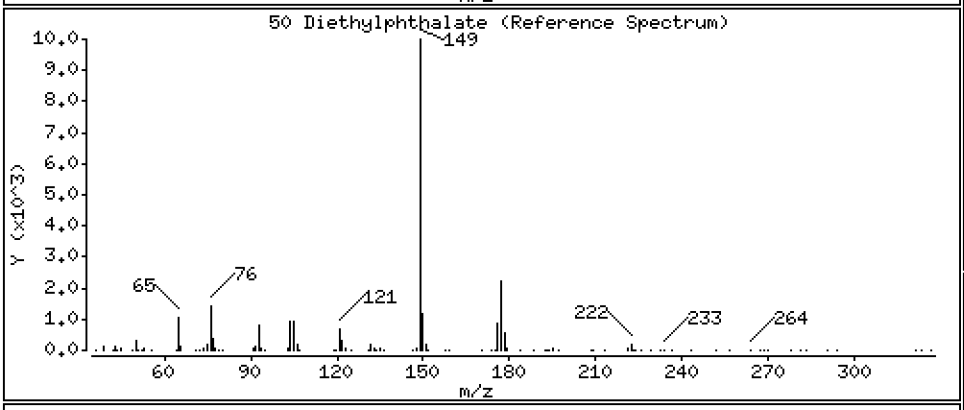
Concentration: 0.1985 ug/mL

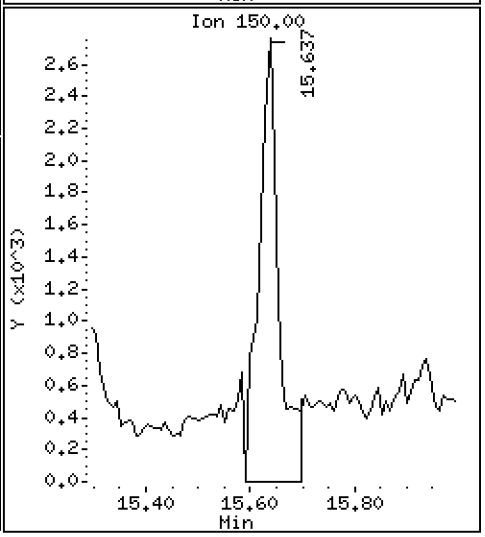


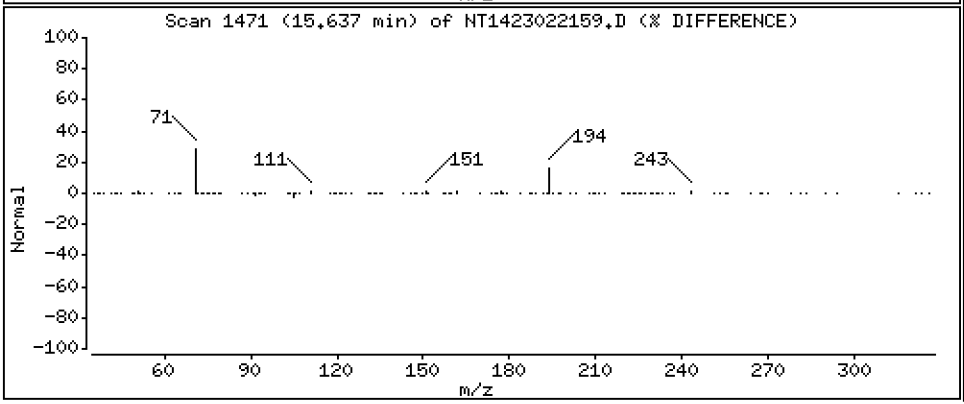












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

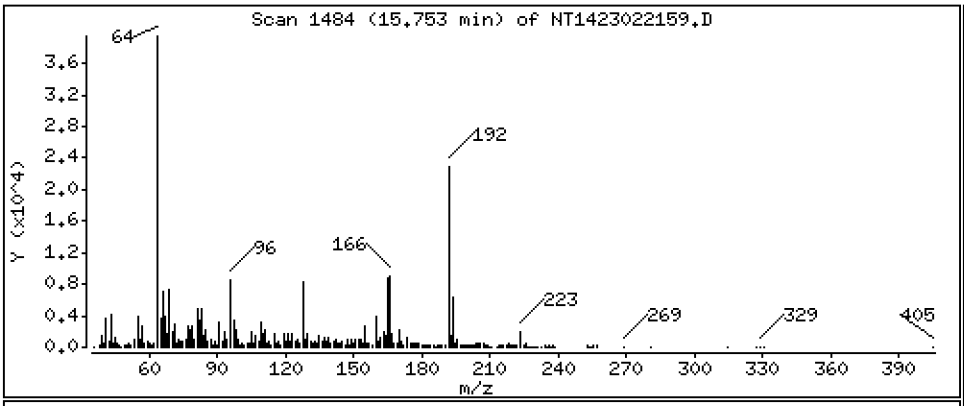
Operator: DSD

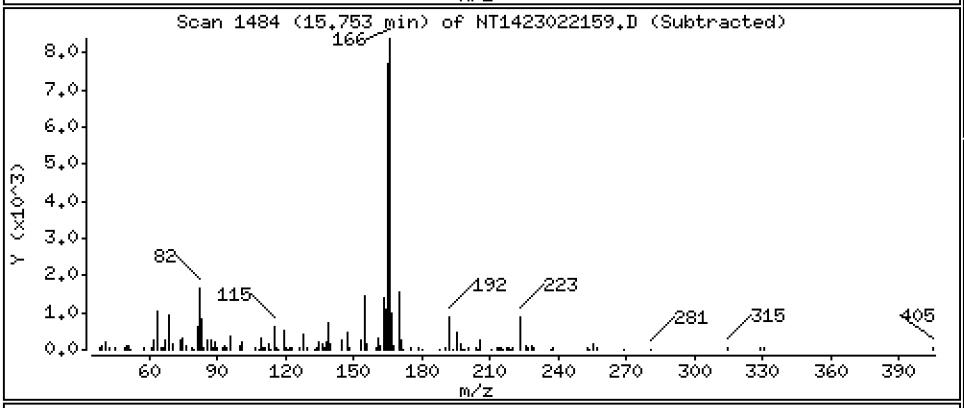
Column phase: ZB-5msi

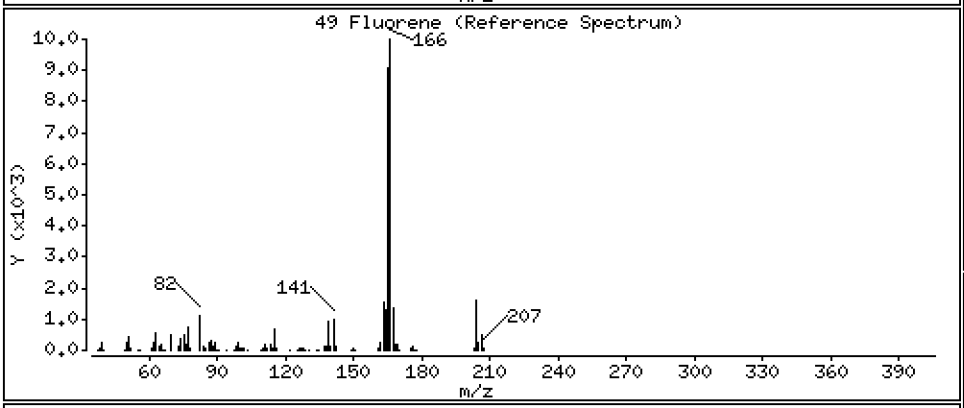
Column diameter: 0.25

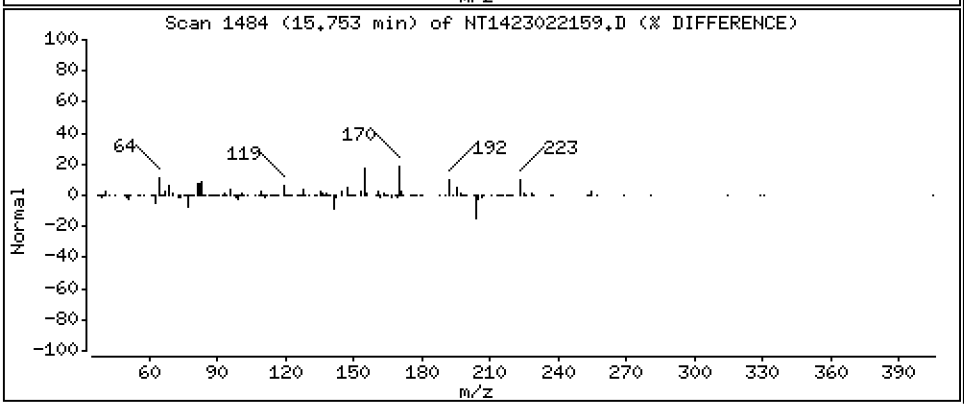
49 Fluorene

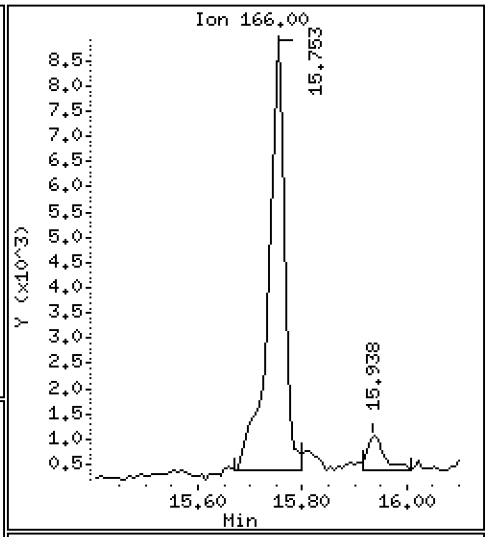
Concentration: 0.08619 ug/mL

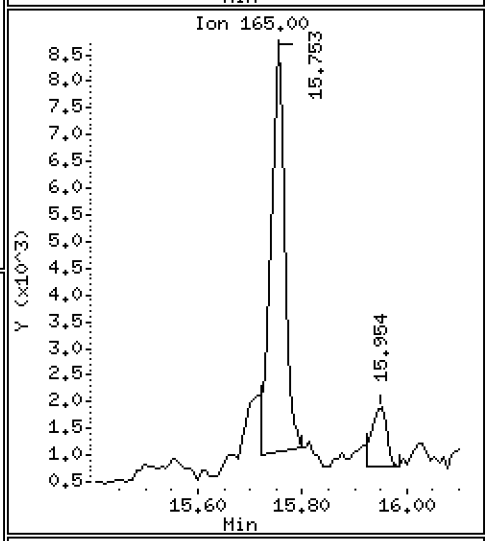


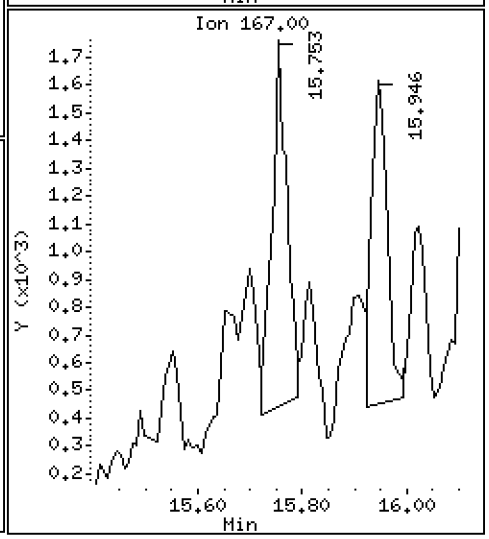












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

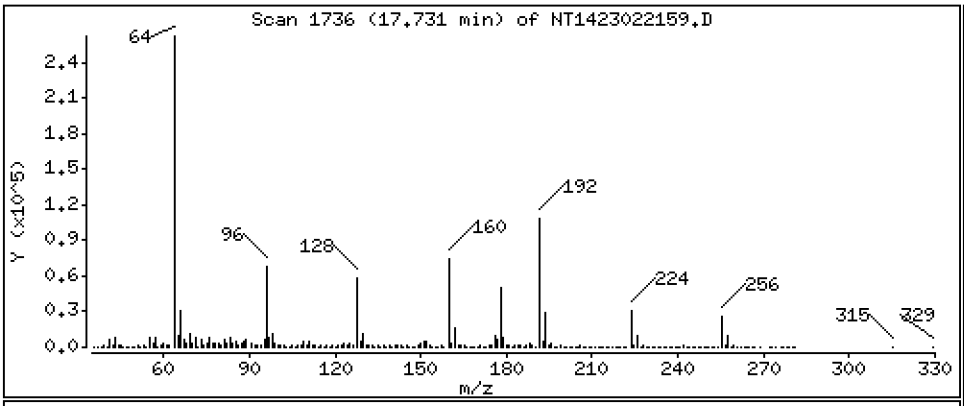
Operator: DSD

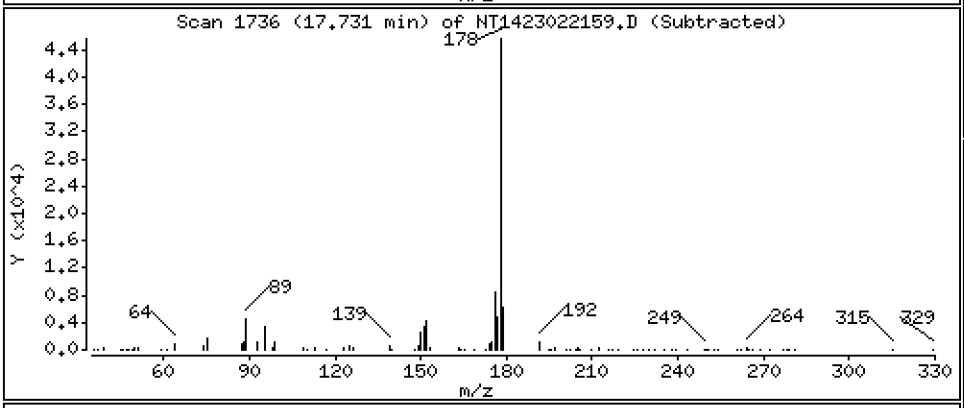
Column phase: ZB-5msi

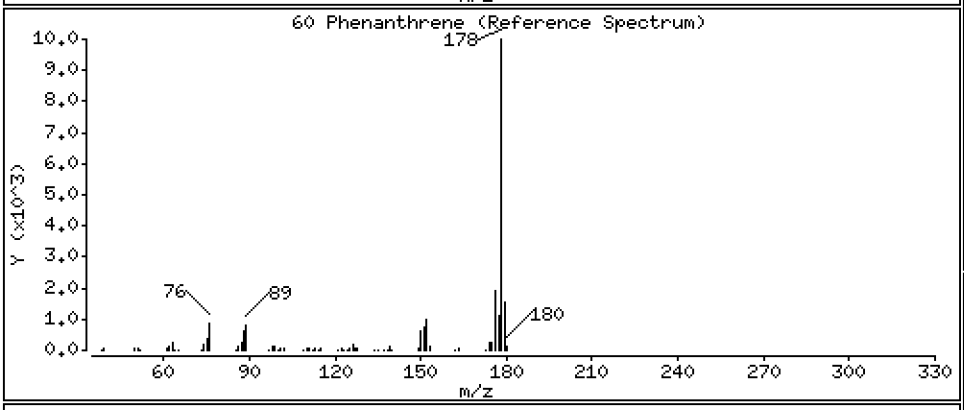
Column diameter: 0.25

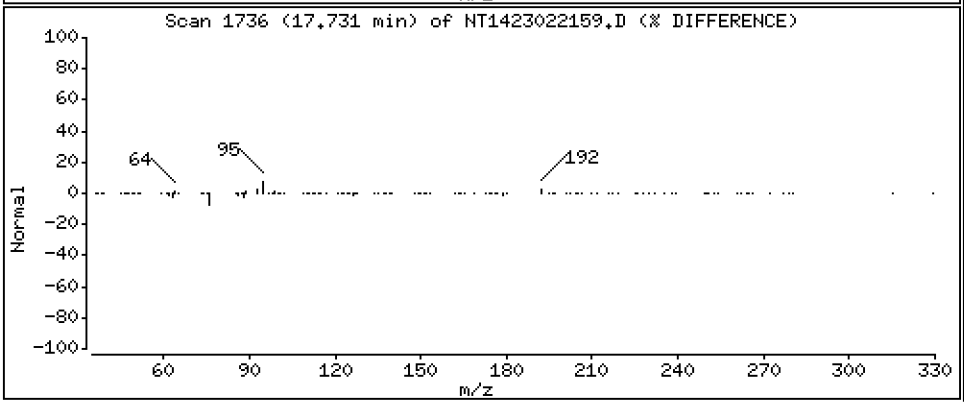
60 Phenanthrene

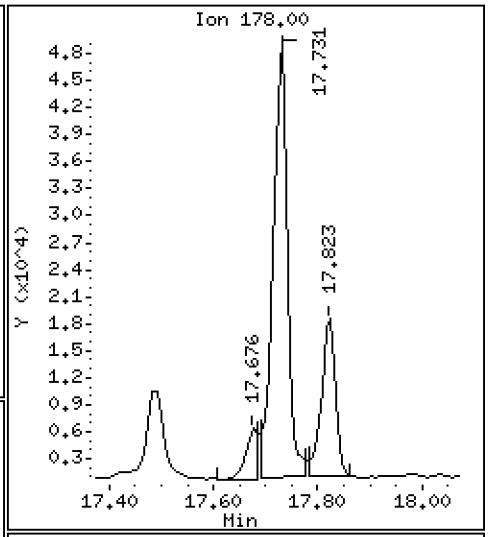
Concentration: 0.4014 ug/mL

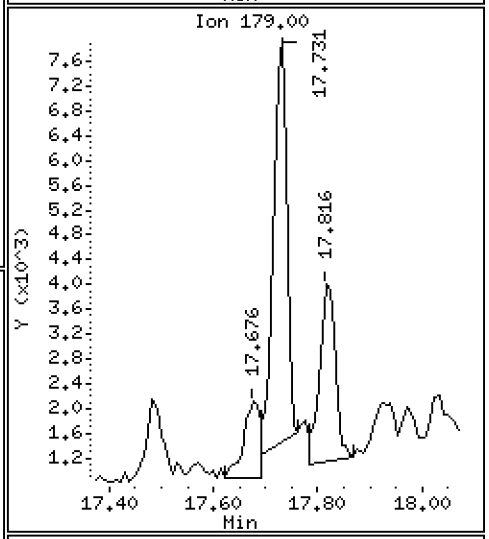


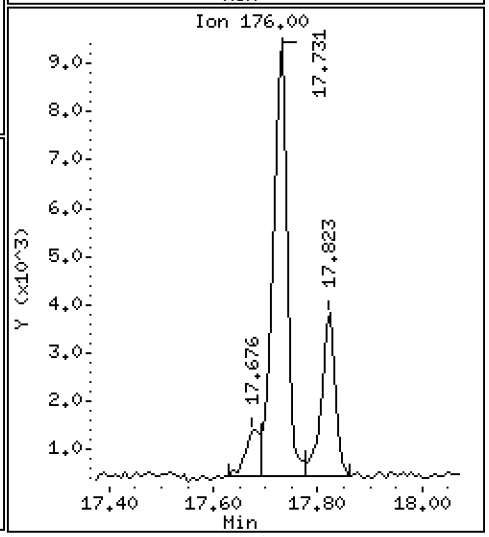












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

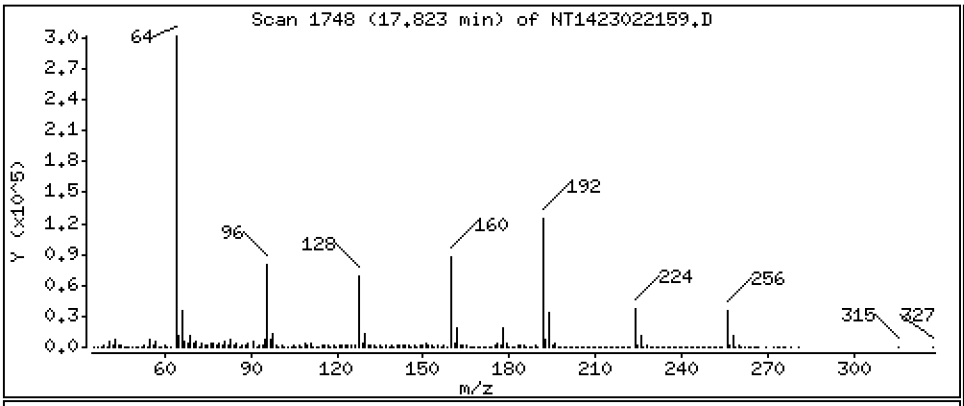
Operator: DSD

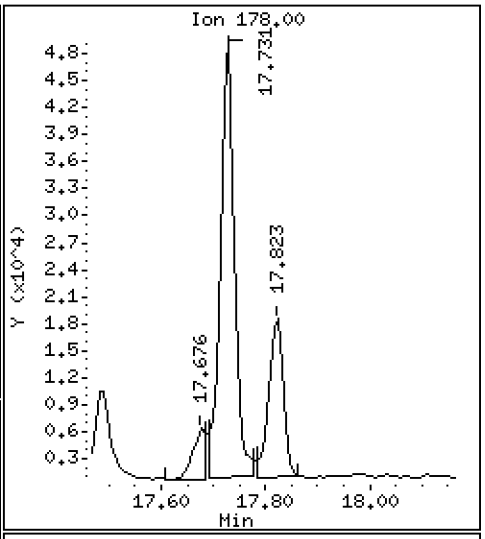
Column phase: ZB-5msi

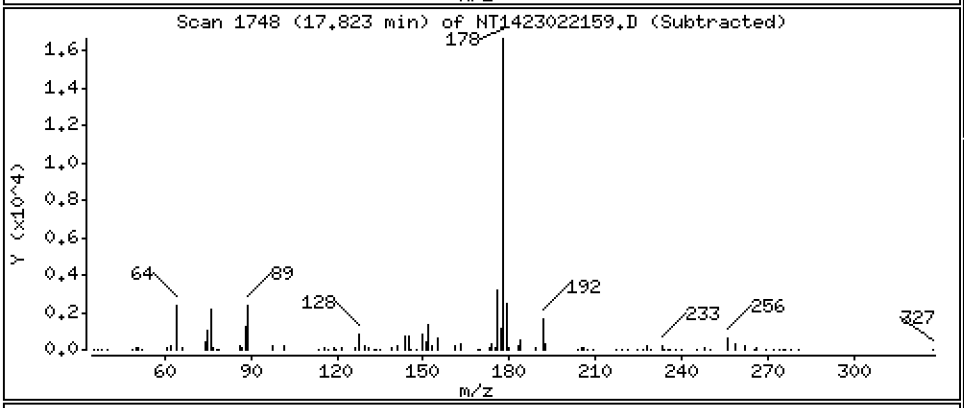
Column diameter: 0.25

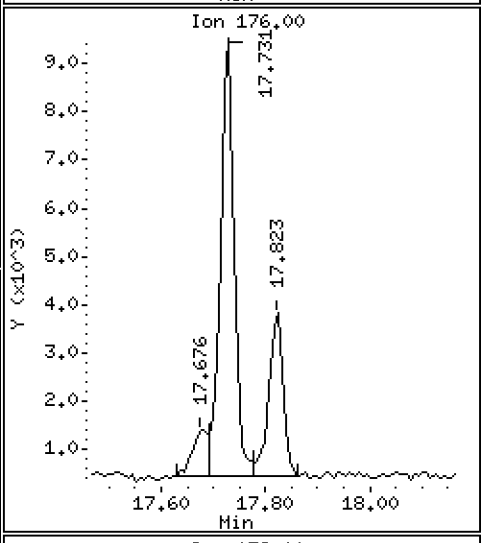
61 Anthracene

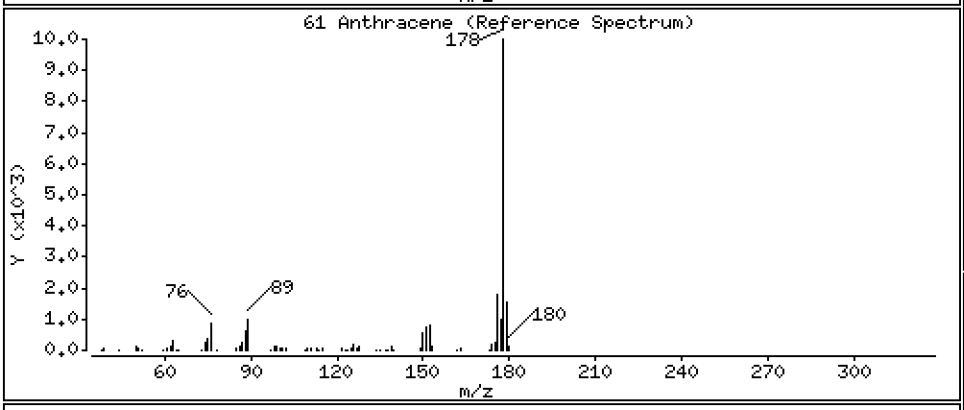
Concentration: 0.1508 ug/mL

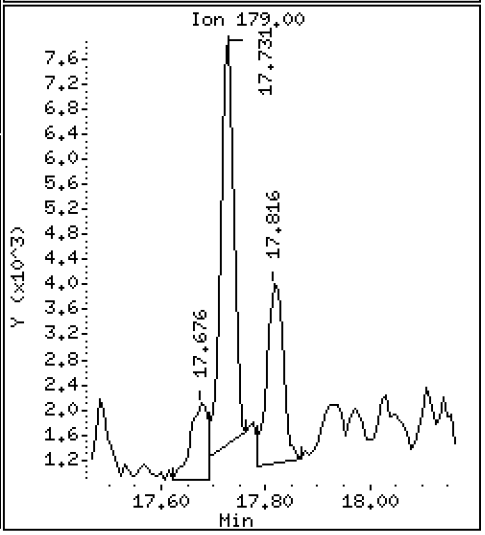


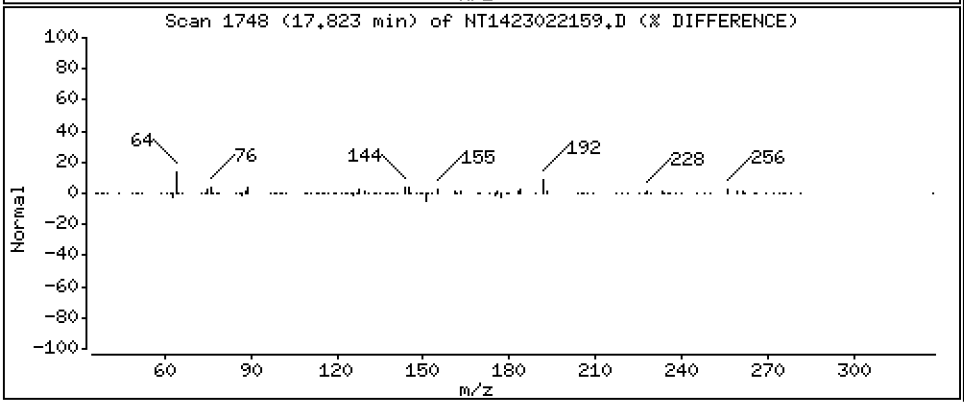












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

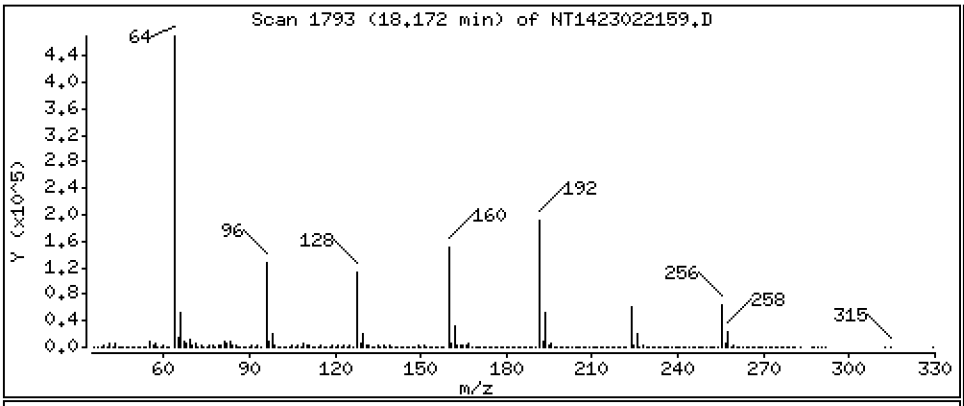
Operator: DSD

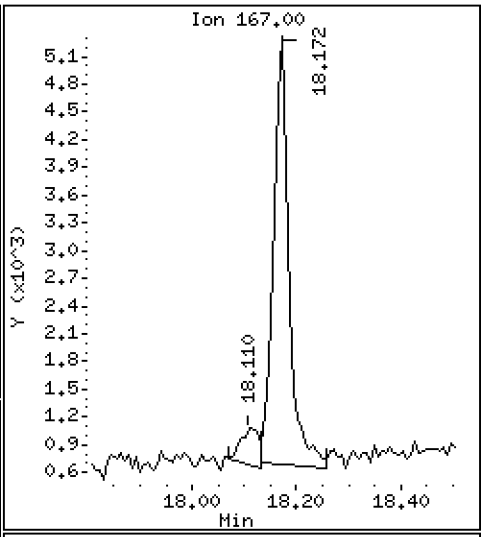
Column phase: ZB-5msi

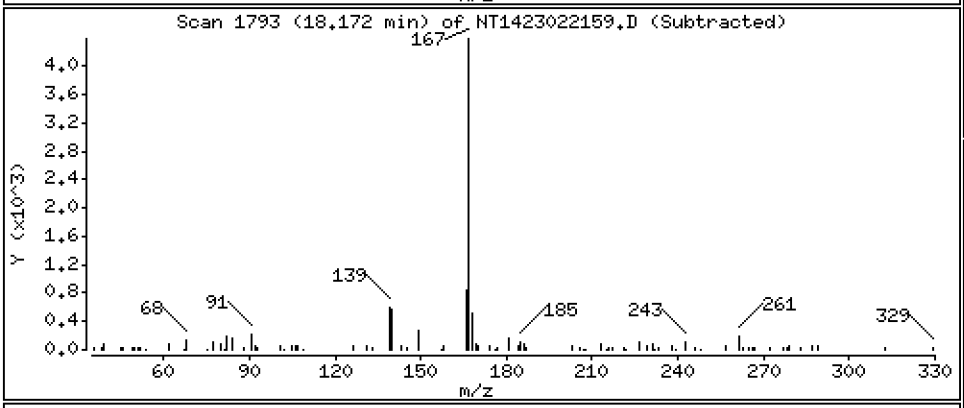
Column diameter: 0.25

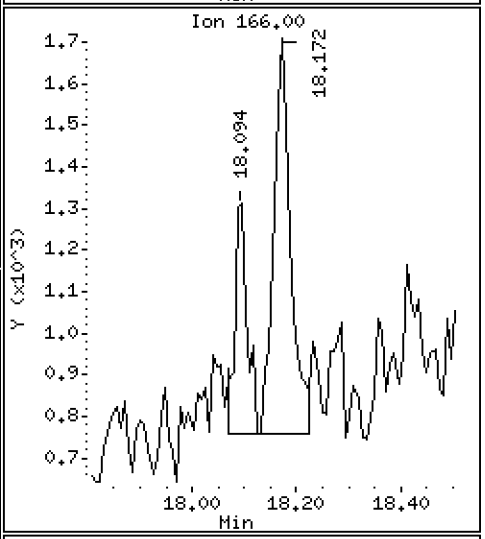
62 Carbazole

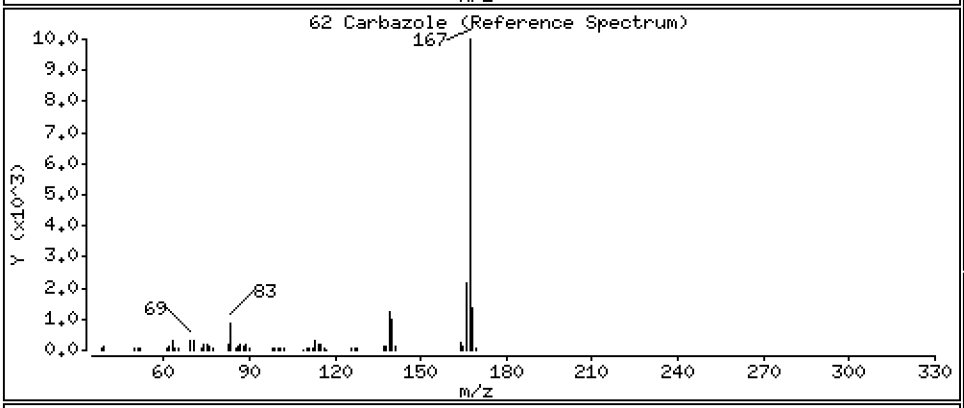
Concentration: 0.04621 ug/mL

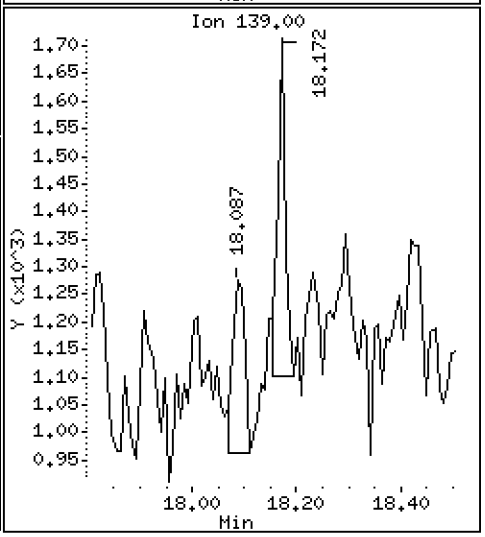


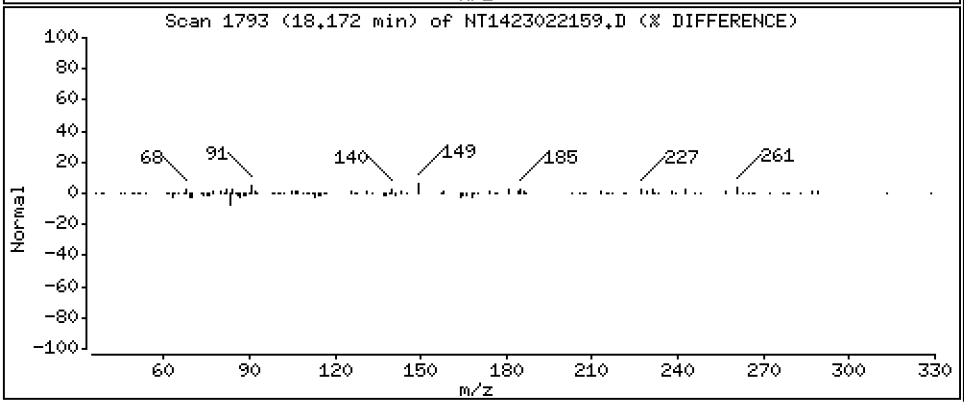












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

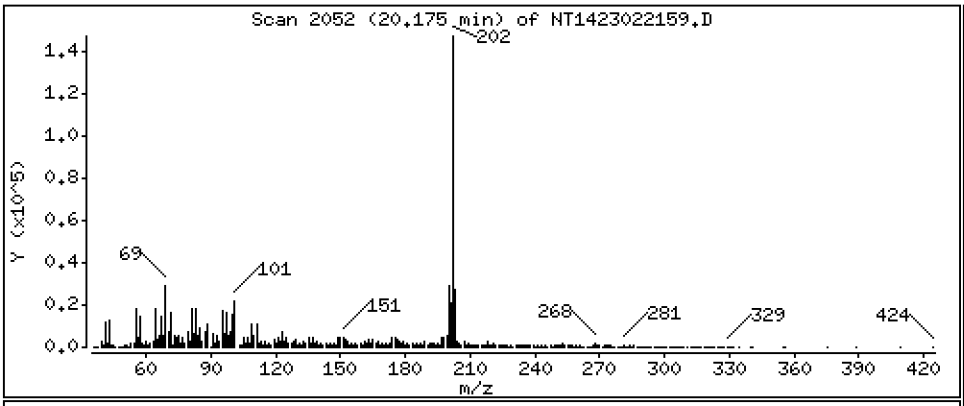
Operator: DSD

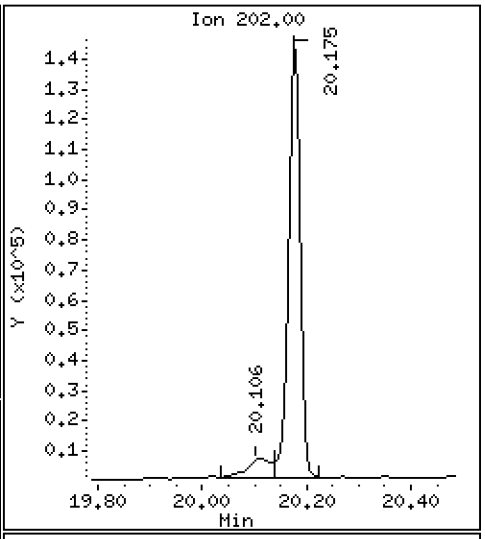
Column phase: ZB-5msi

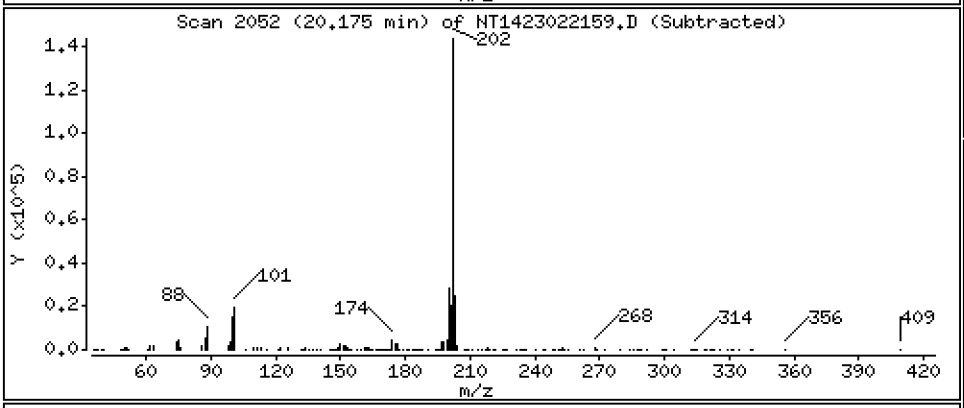
Column diameter: 0.25

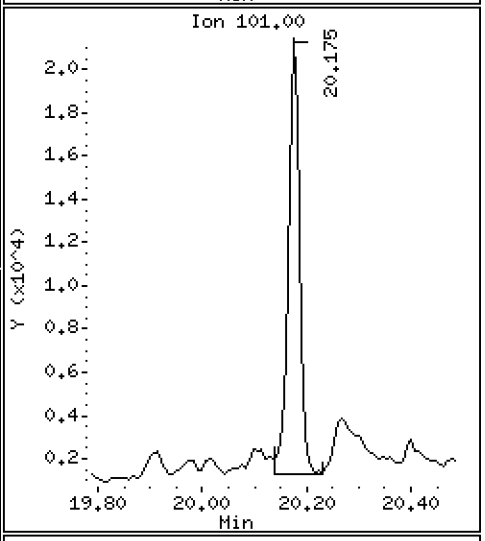
64 Fluoranthene

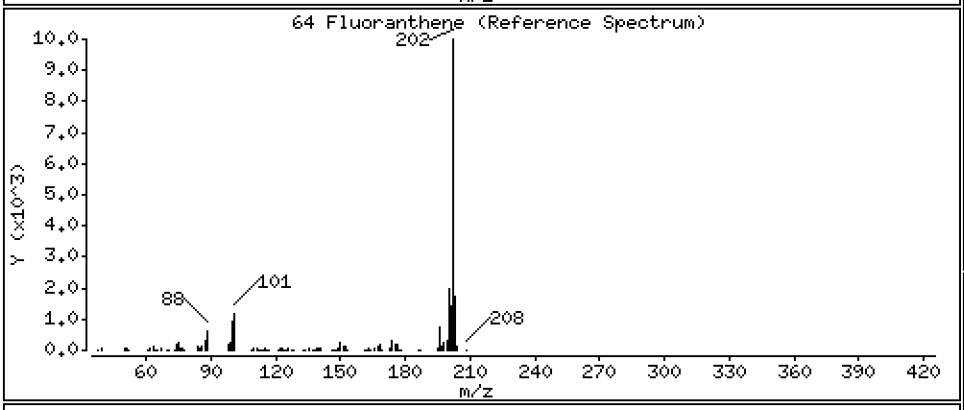
Concentration: 0.9261 ug/mL

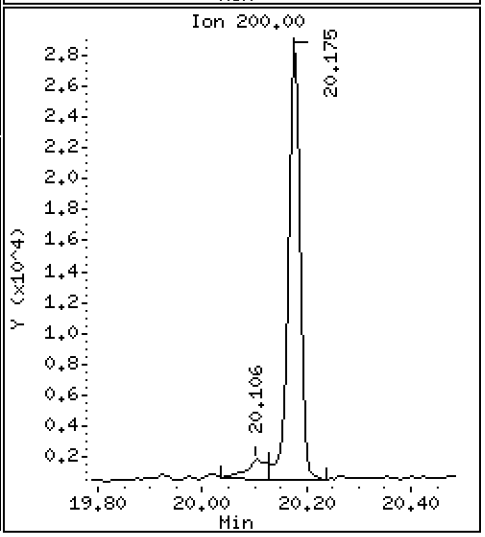


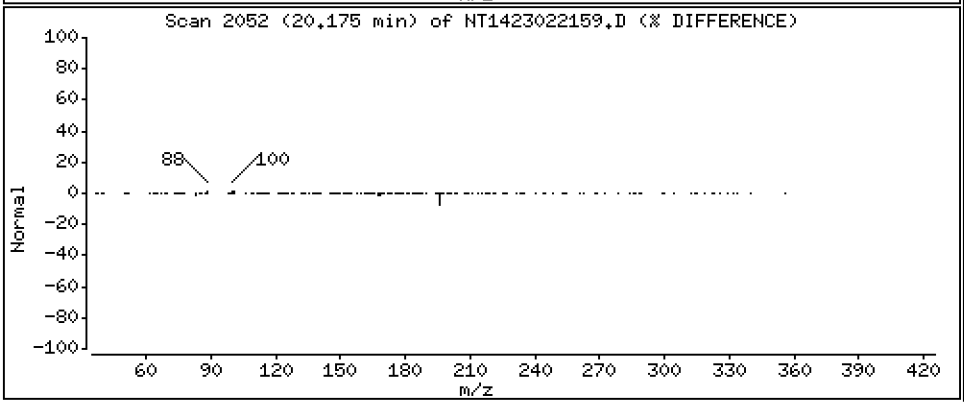












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

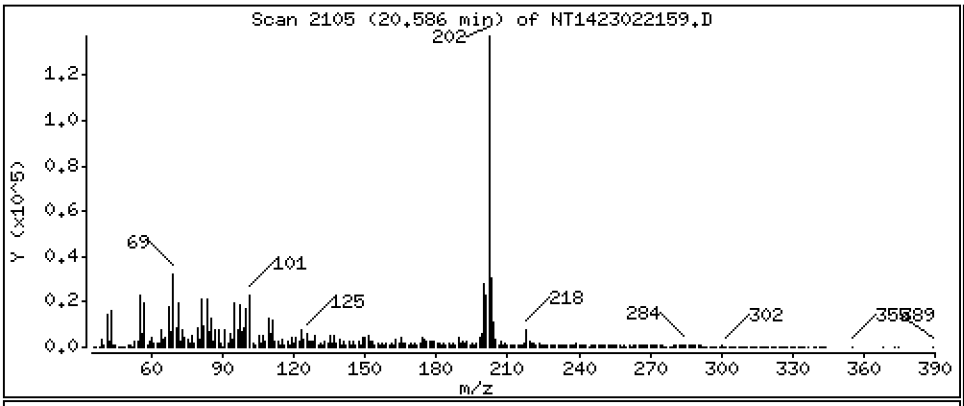
Operator: DSD

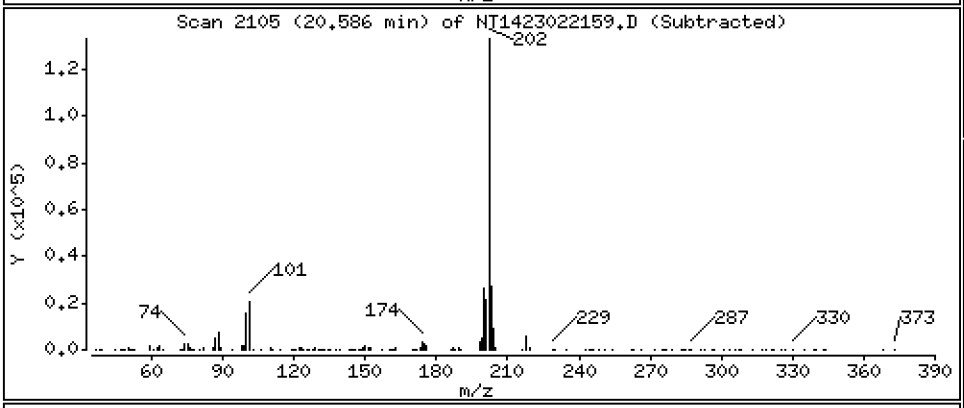
Column phase: ZB-5msi

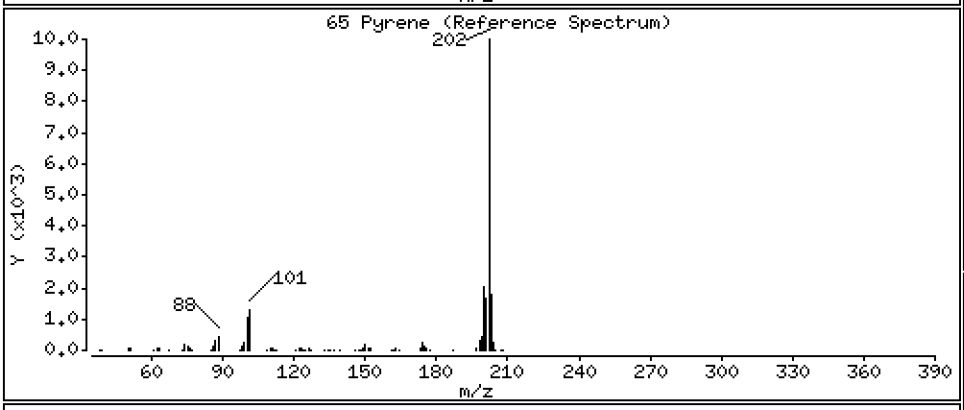
Column diameter: 0.25

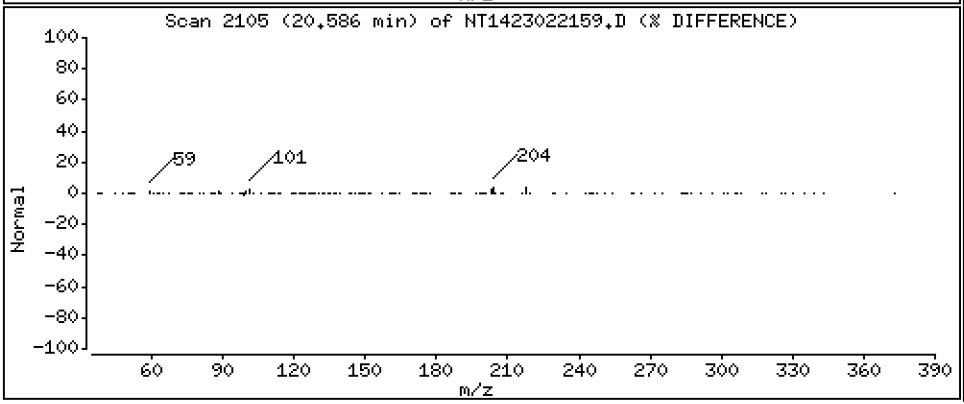
65 Pyrene

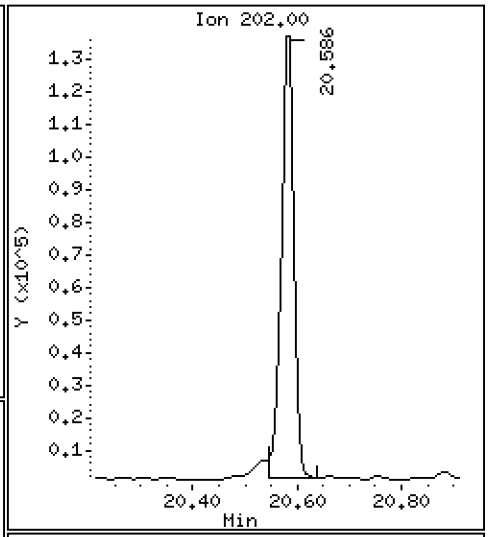
Concentration: 0.8526 ug/mL

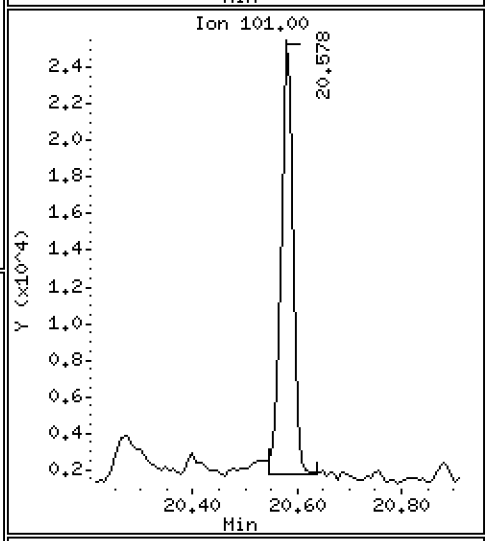


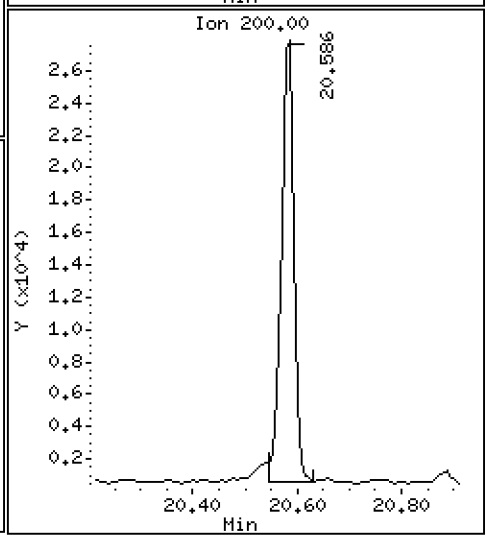












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

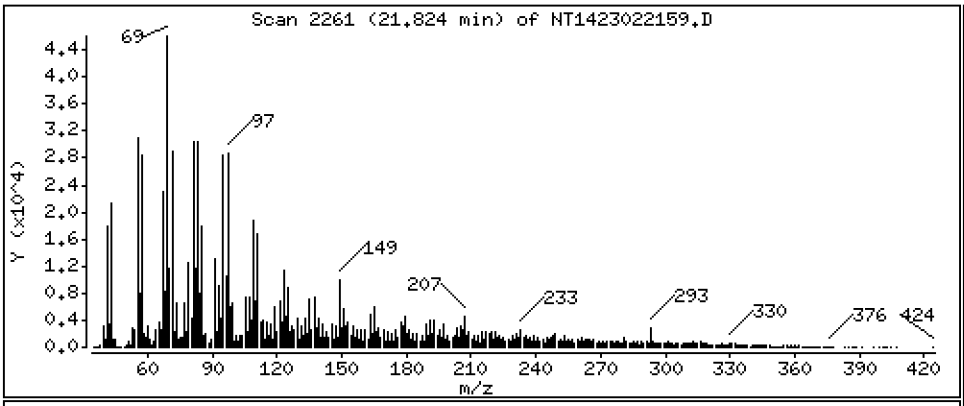
Operator: DSD

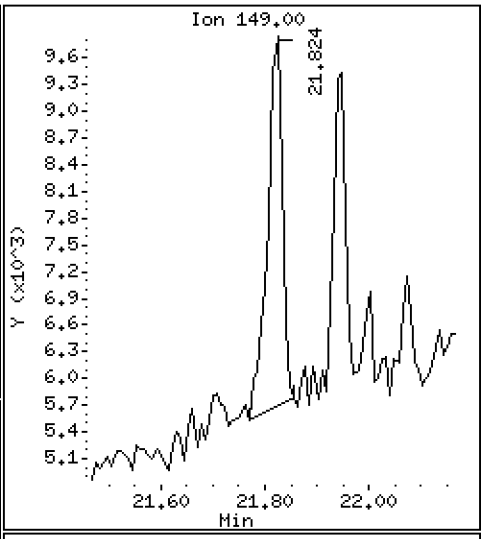
Column phase: ZB-5msi

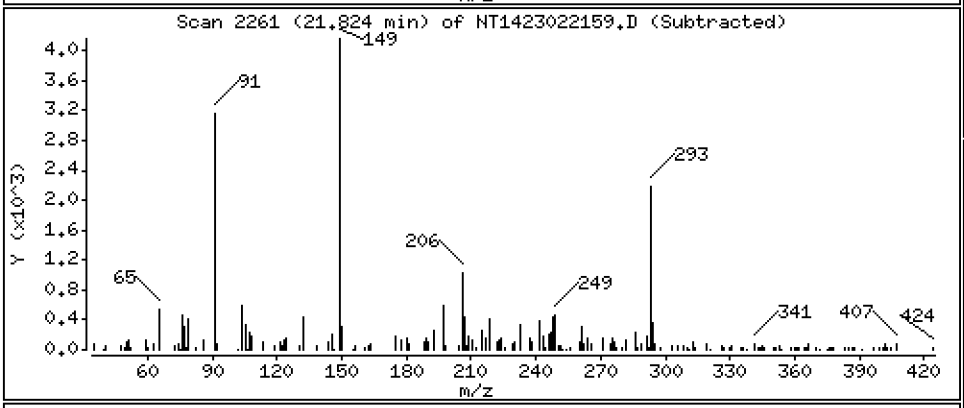
Column diameter: 0.25

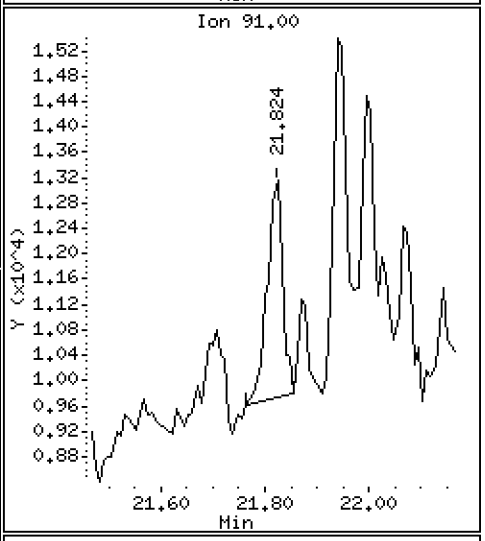
67 Butylbenzylphthalate

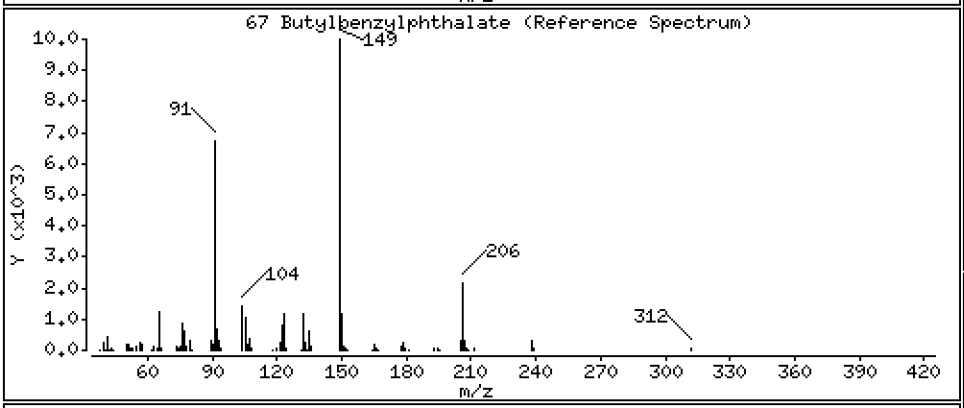
Concentration: 0.08892 ug/mL

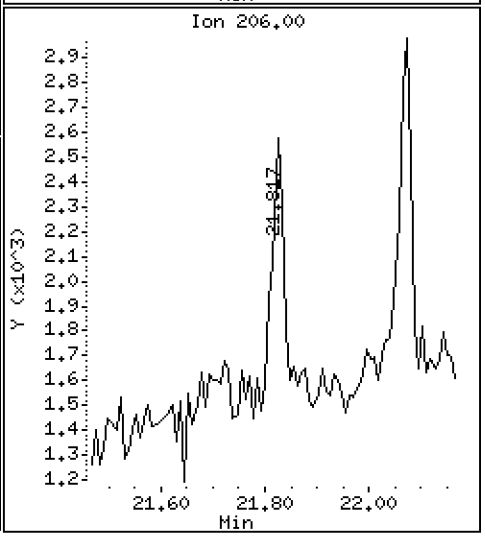


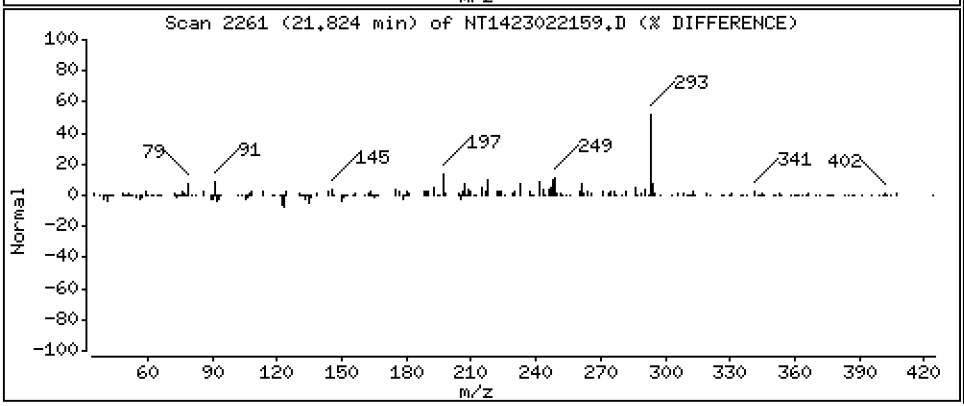












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

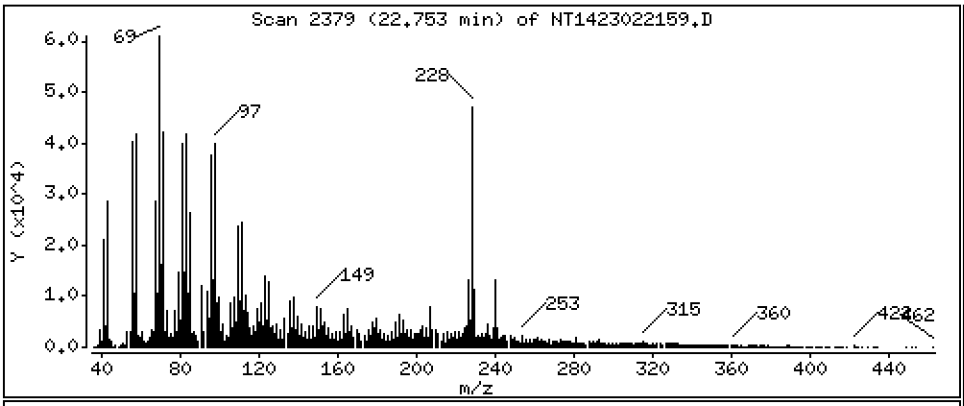
Operator: DSD

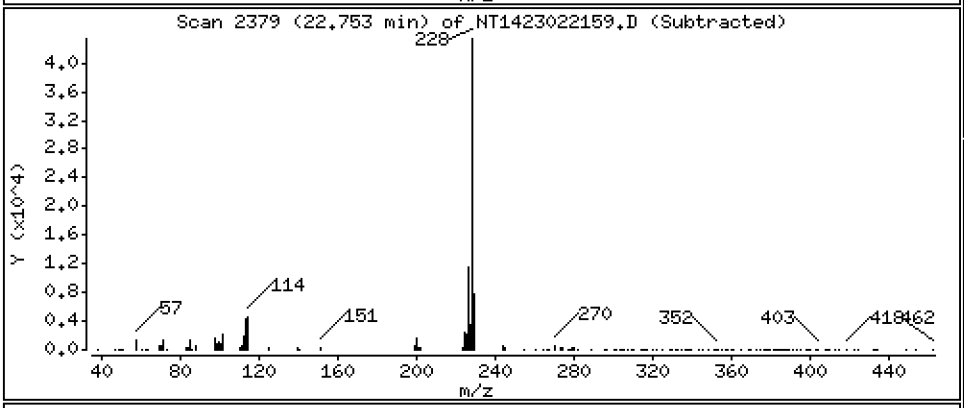
Column phase: ZB-5msi

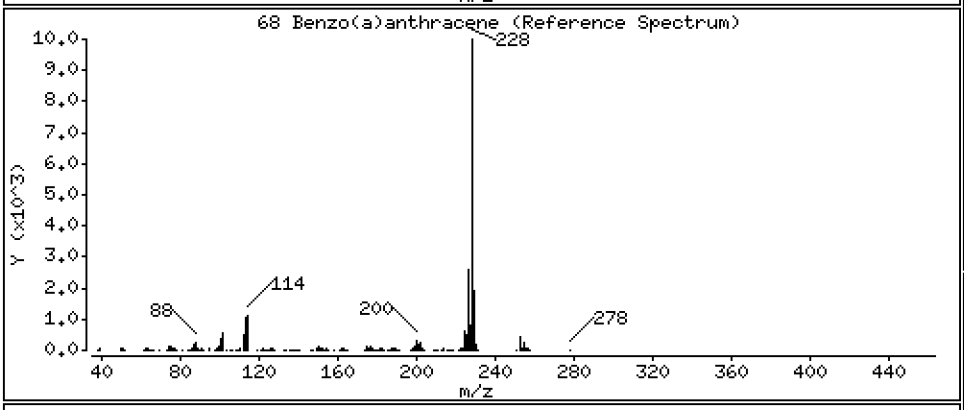
Column diameter: 0.25

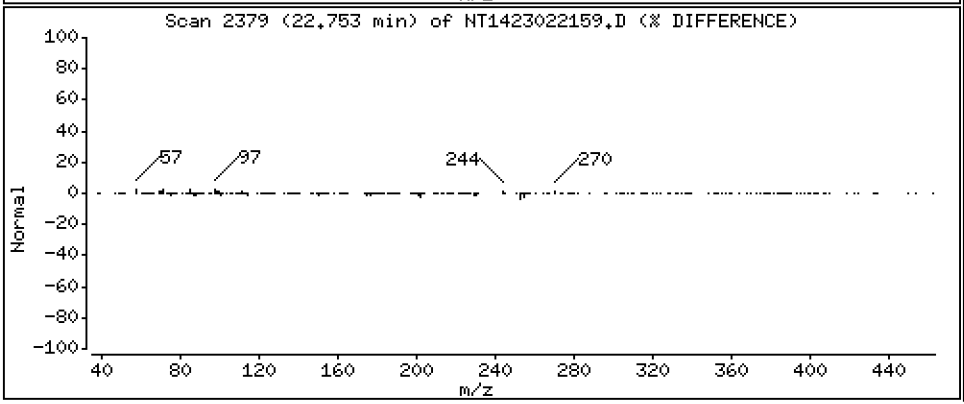
68 Benzo(a)anthracene

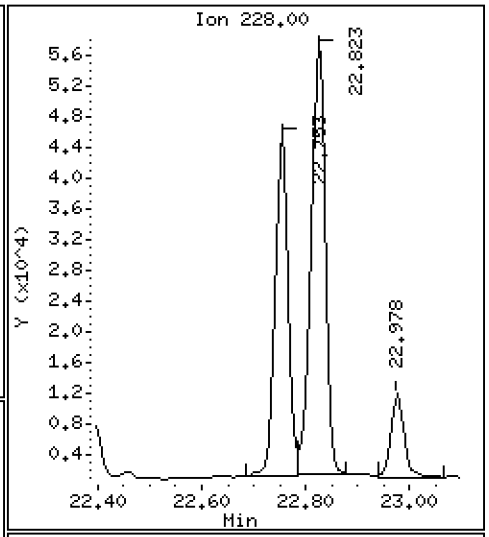
Concentration: 0.4017 ug/mL

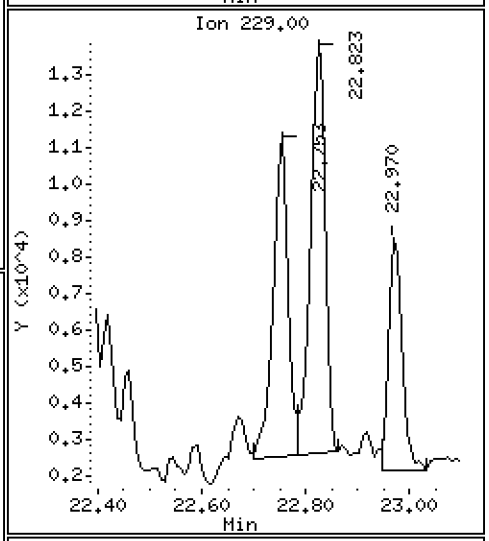


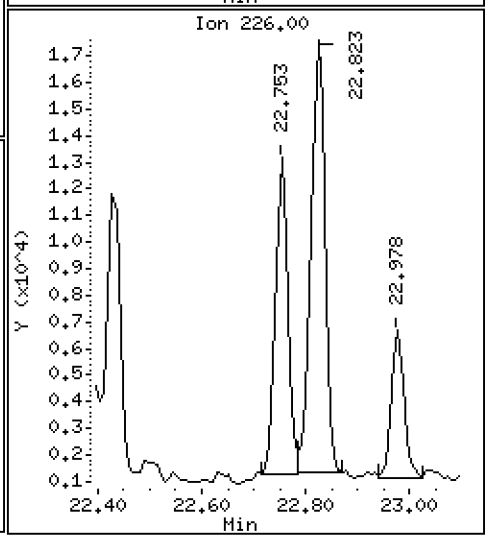












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

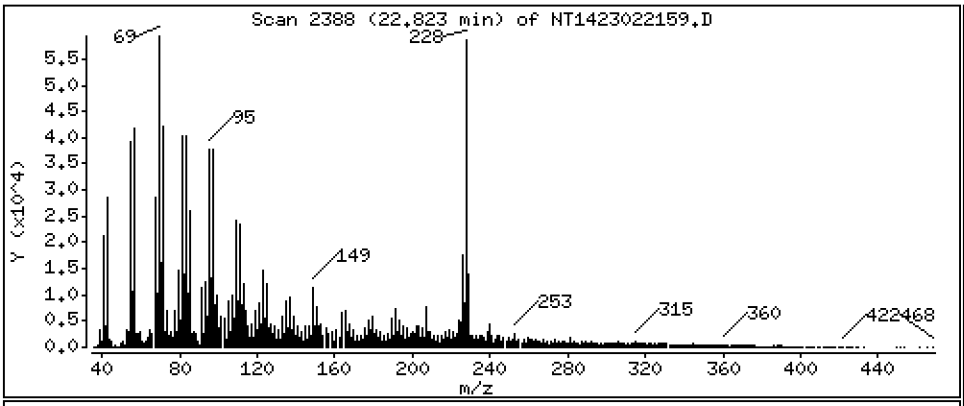
Operator: DSD

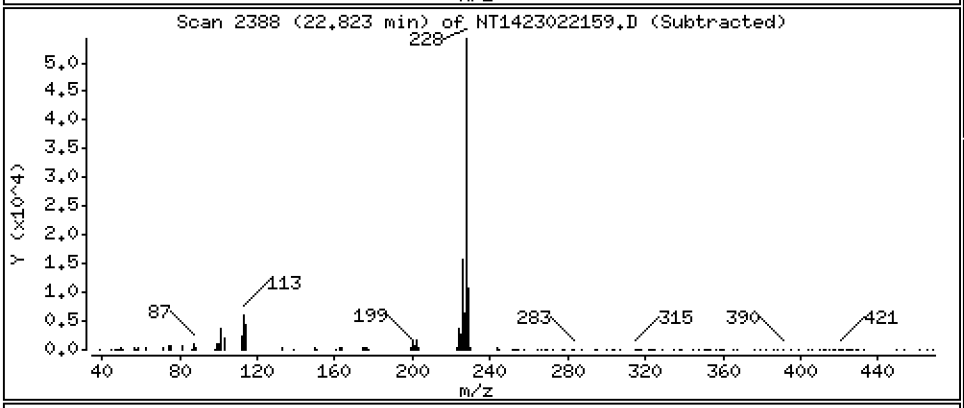
Column phase: ZB-5msi

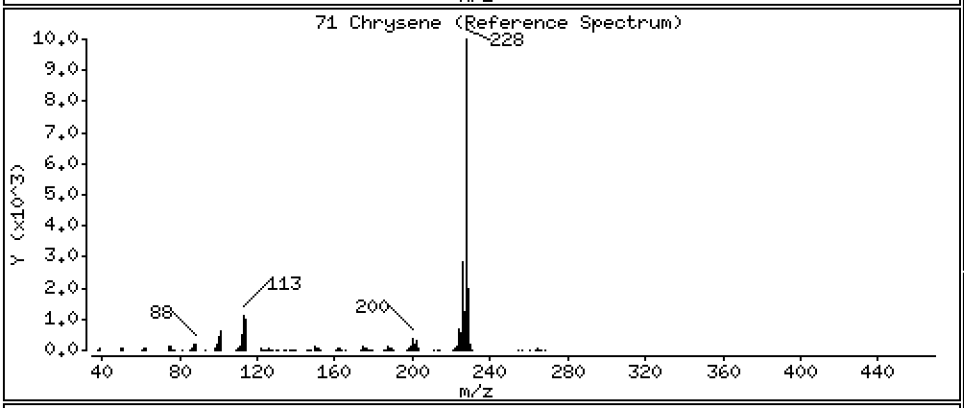
Column diameter: 0.25

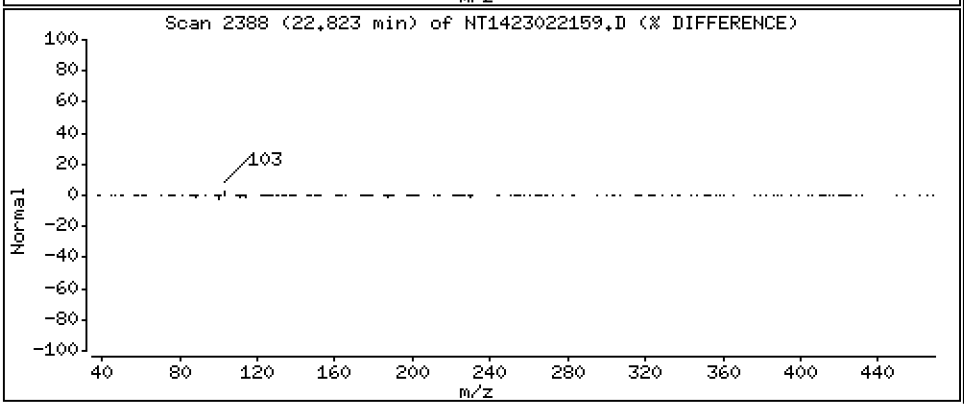
71 Chrysene

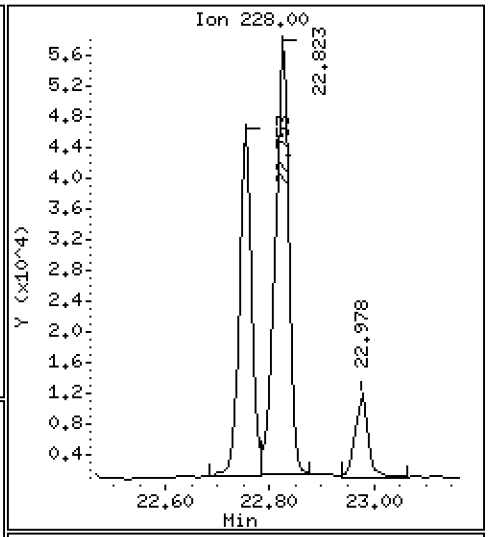
Concentration: 0.5998 ug/mL

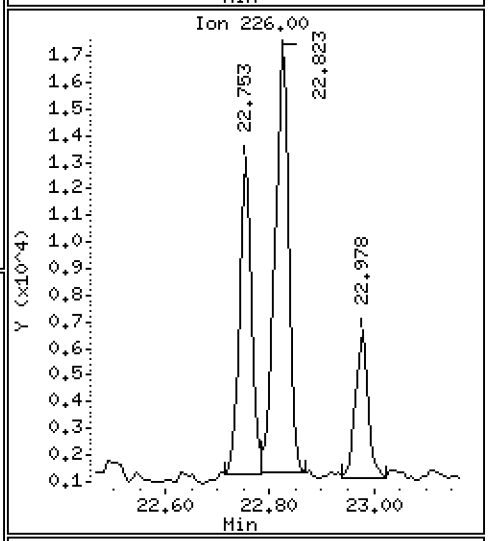


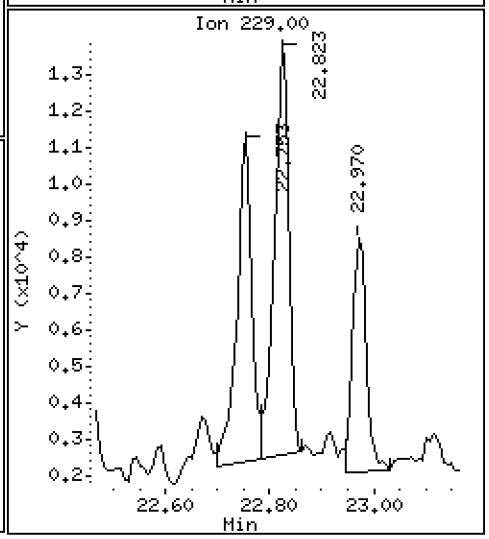












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

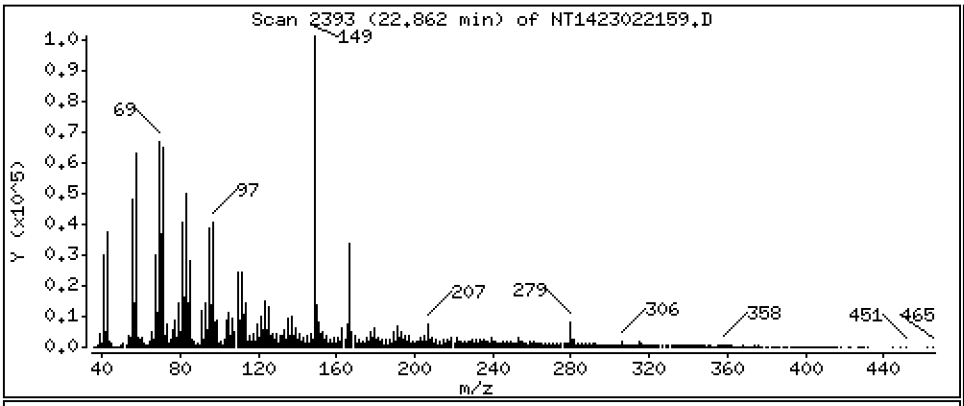
Operator: DSD

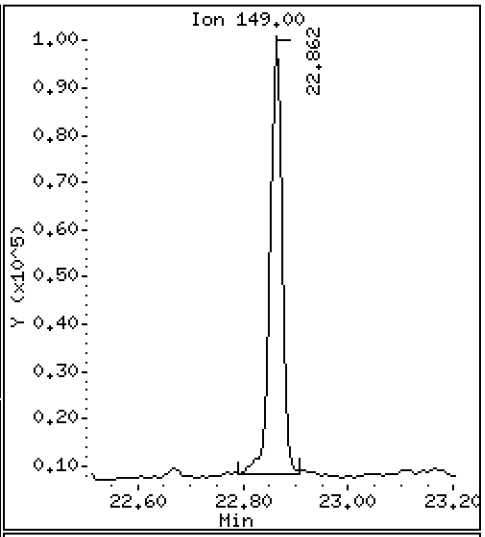
Column phase: ZB-5msi

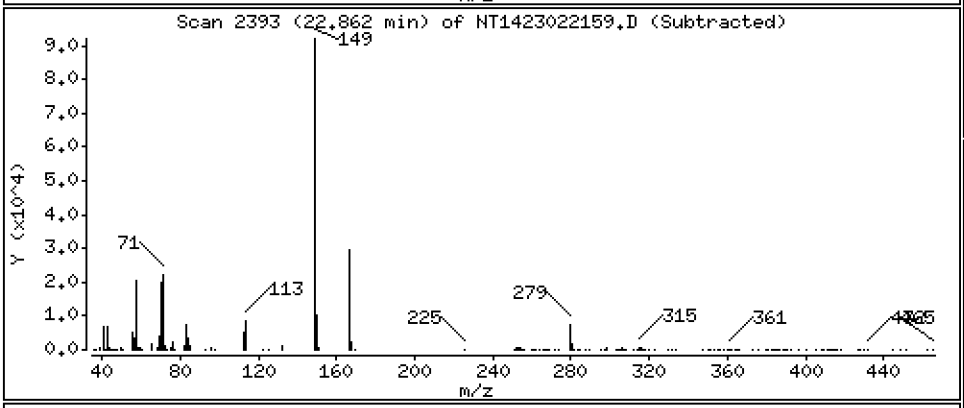
Column diameter: 0.25

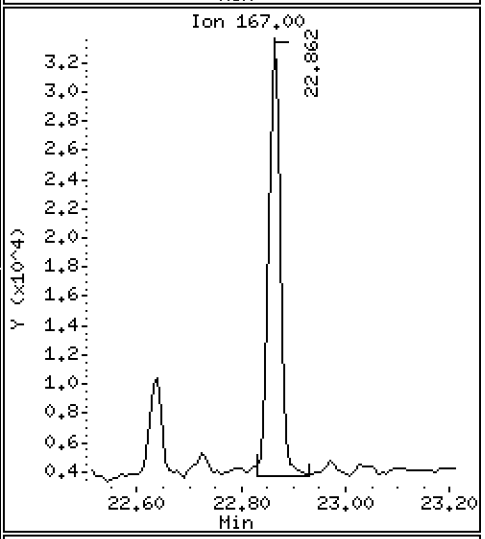
72 bis(2-Ethylhexyl)phthalate

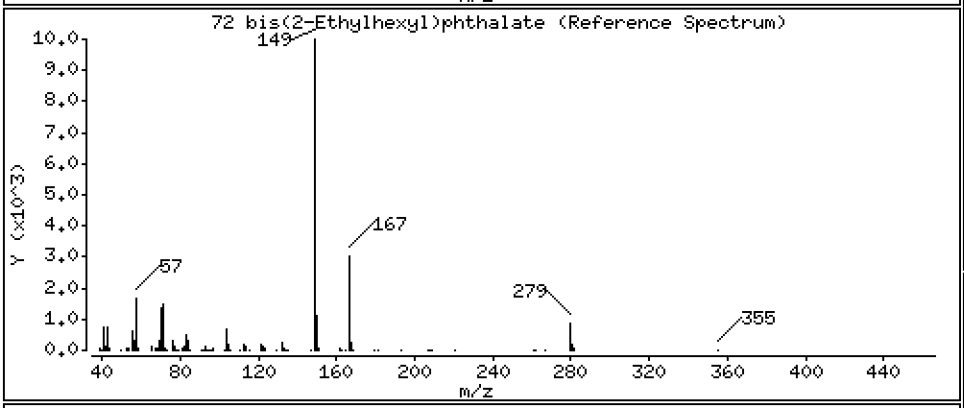
Concentration: 0.8384 ug/mL

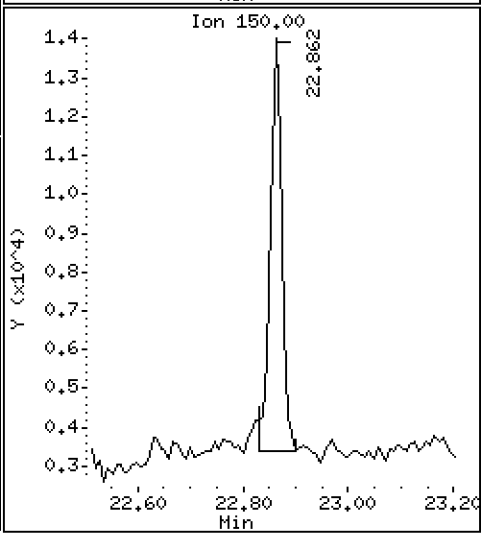


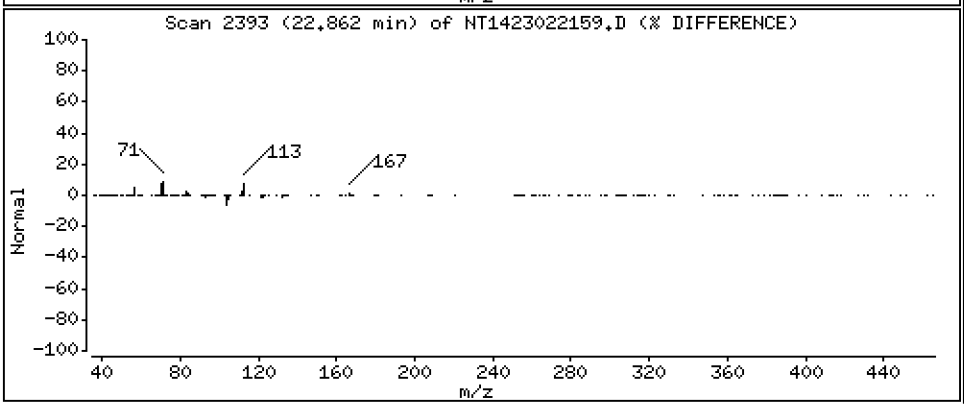












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

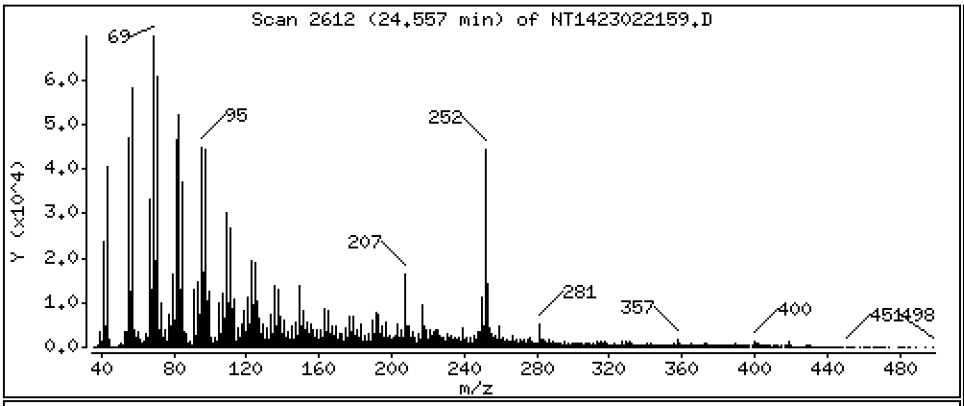
Operator: DSD

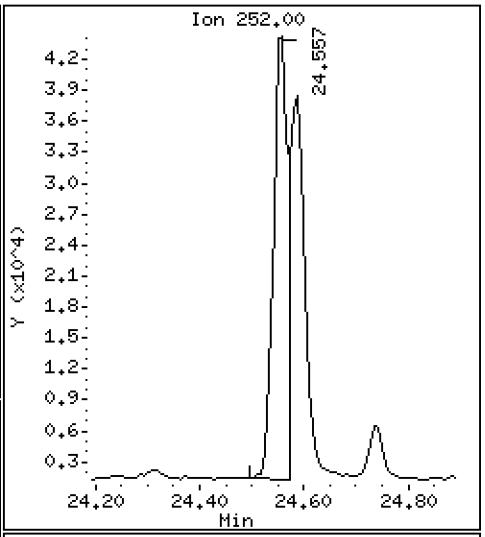
Column phase: ZB-5msi

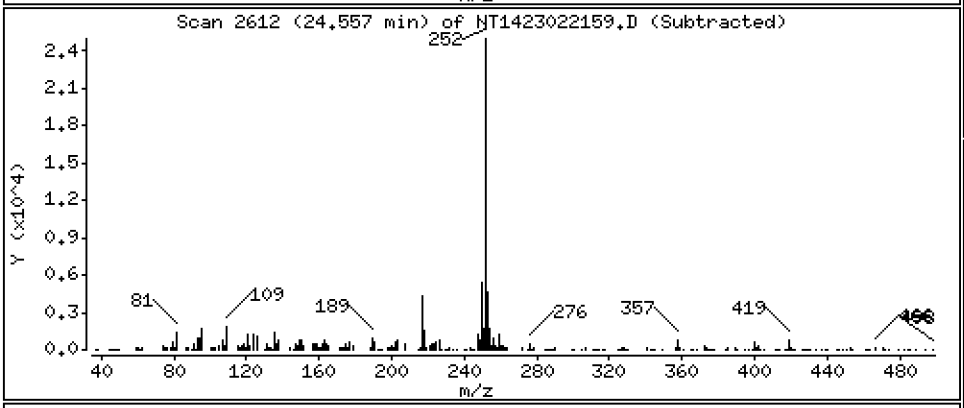
Column diameter: 0.25

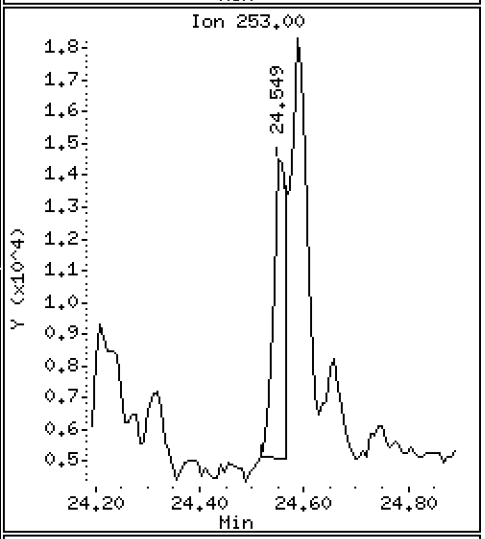
74 Benzo(b)fluoranthene

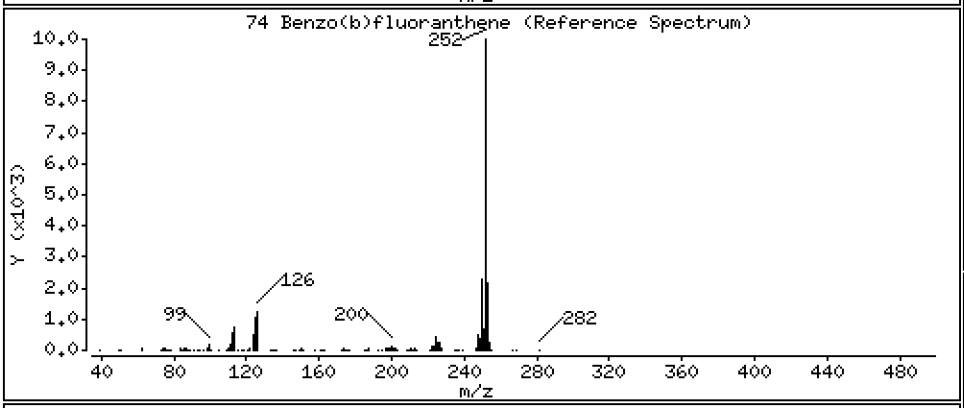
Concentration: 0.6105 ug/mL

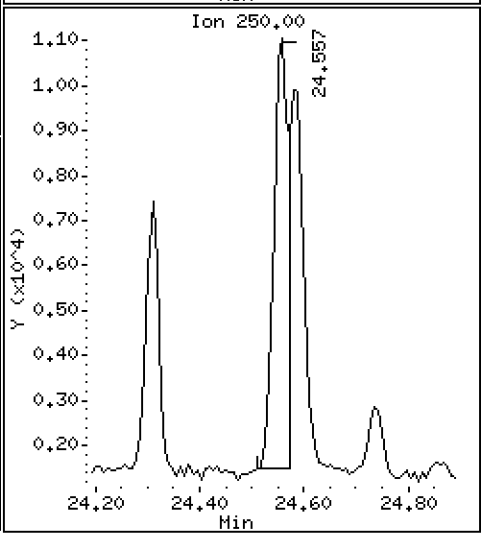


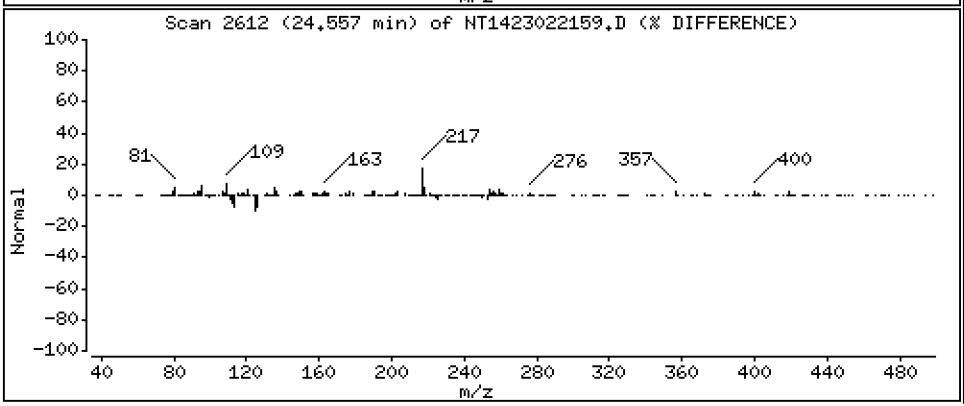












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

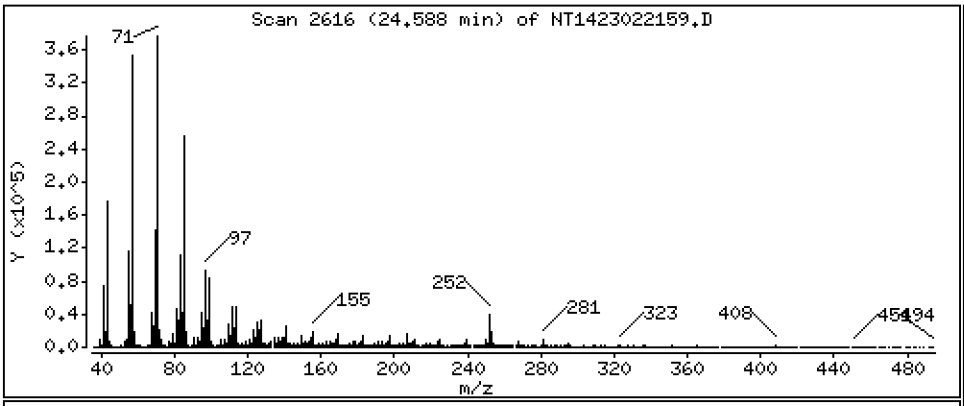
Operator: DSD

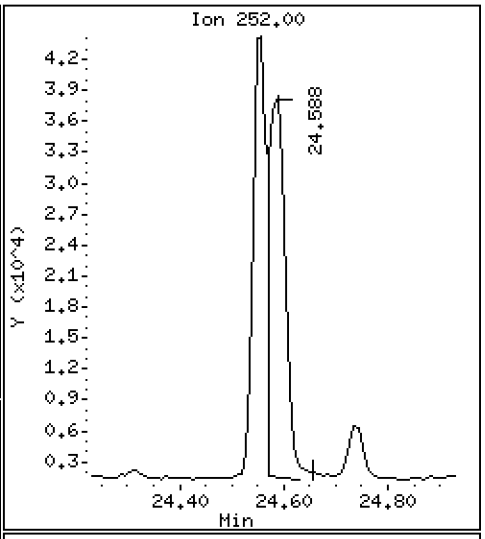
Column phase: ZB-5msi

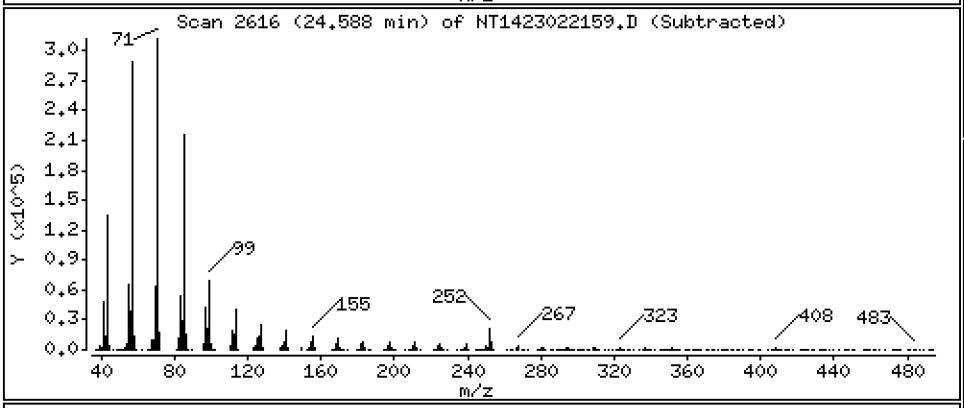
Column diameter: 0.25

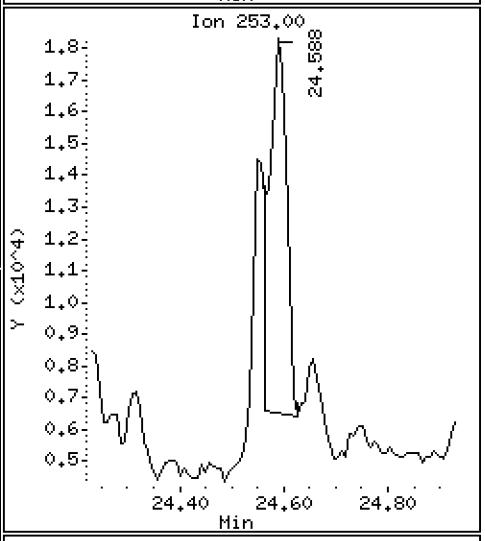
75 Benzo(k)fluoranthene

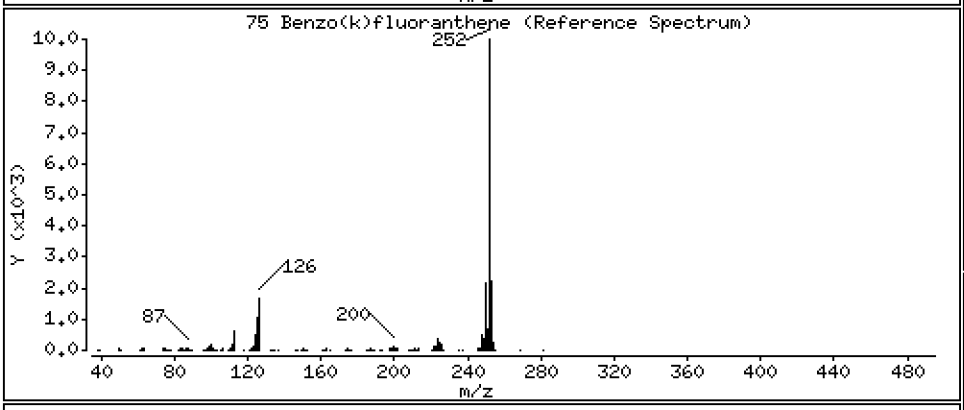
Concentration: 0.5151 ug/mL

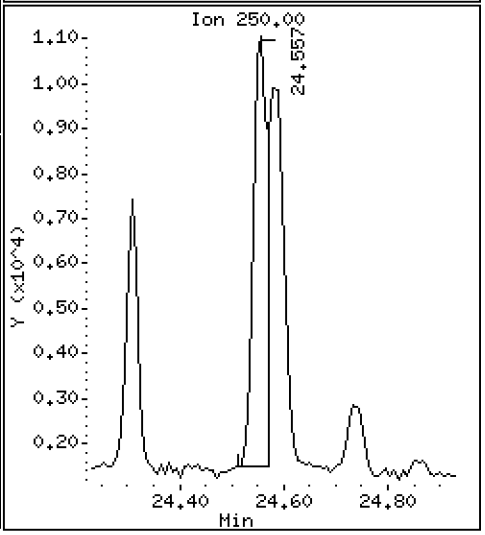


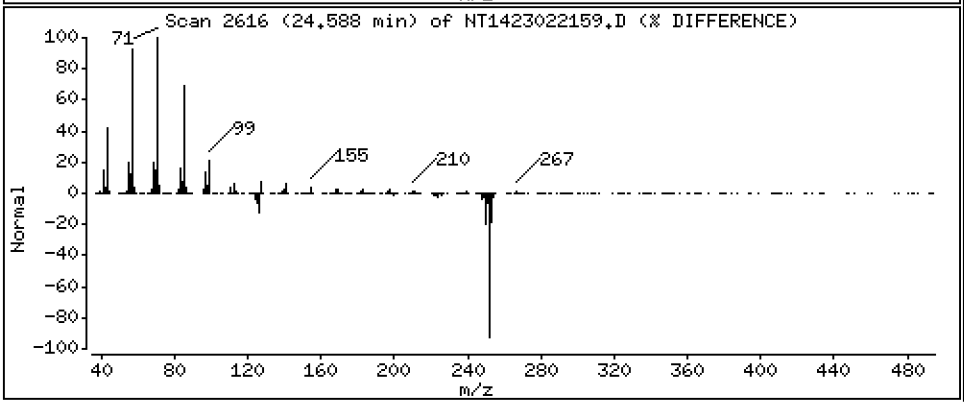












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

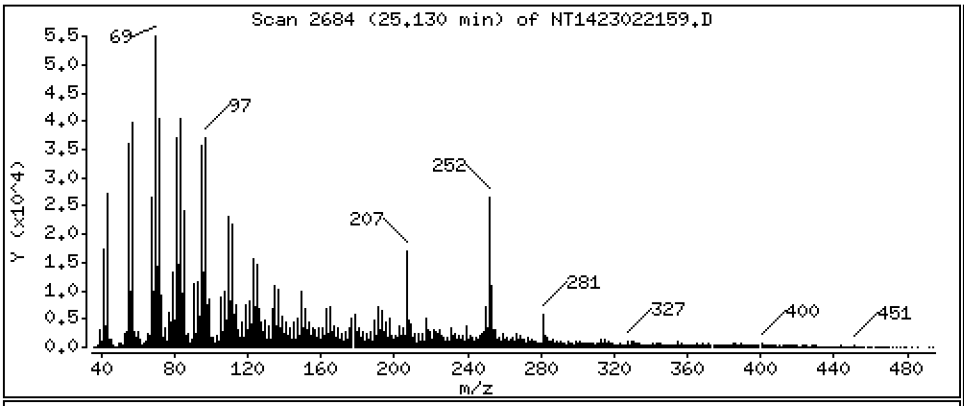
Operator: DSD

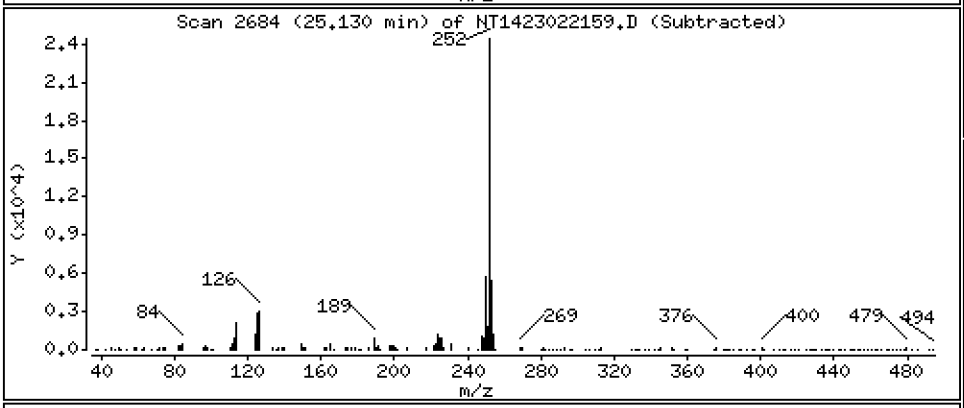
Column phase: ZB-5msi

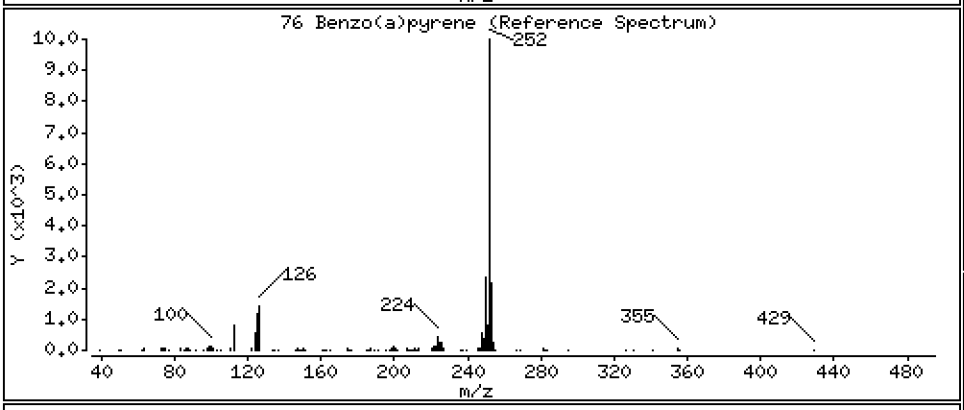
Column diameter: 0.25

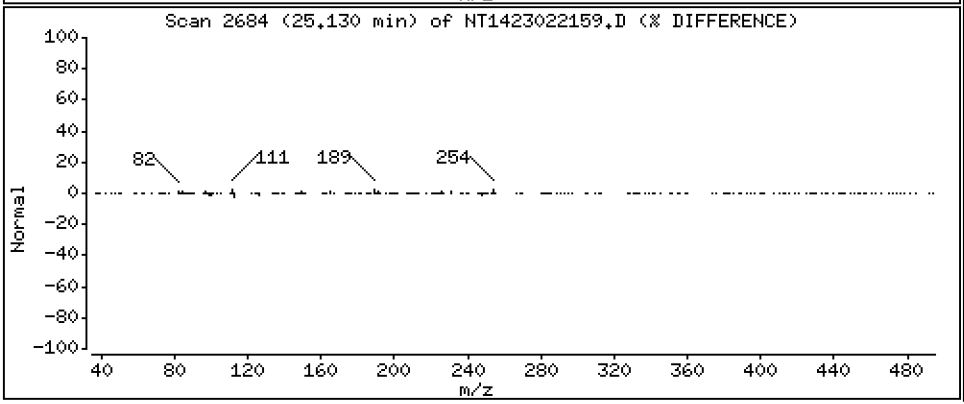
76 Benzo(a)pyrene

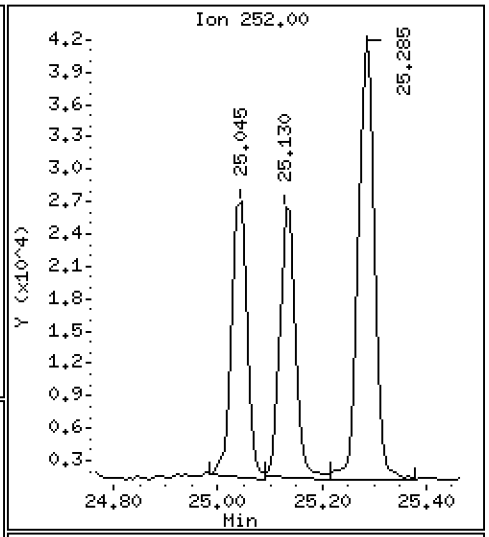
Concentration: 0.3836 ug/mL

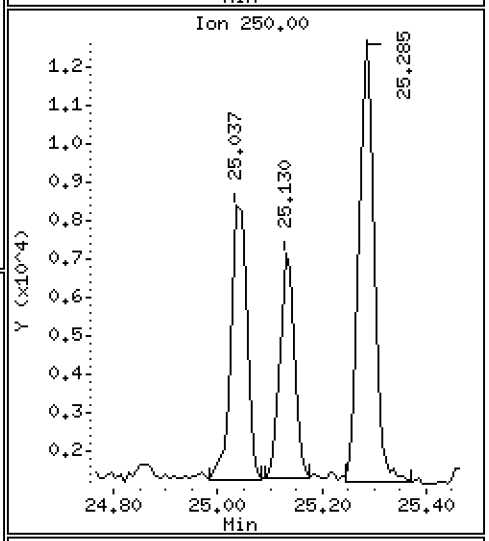


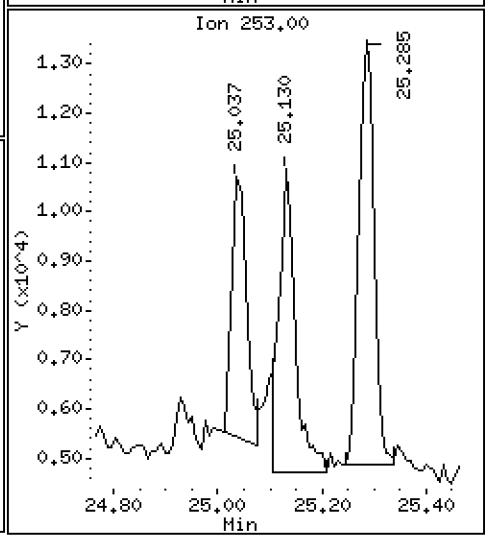












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

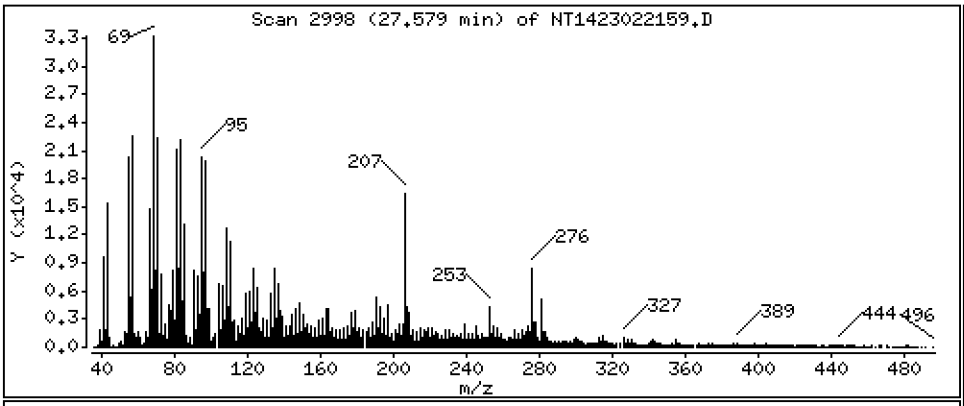
Operator: DSD

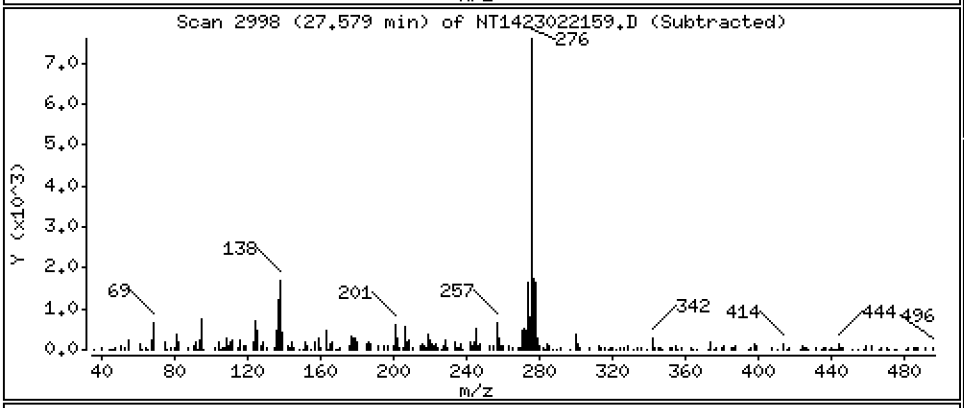
Column phase: ZB-5msi

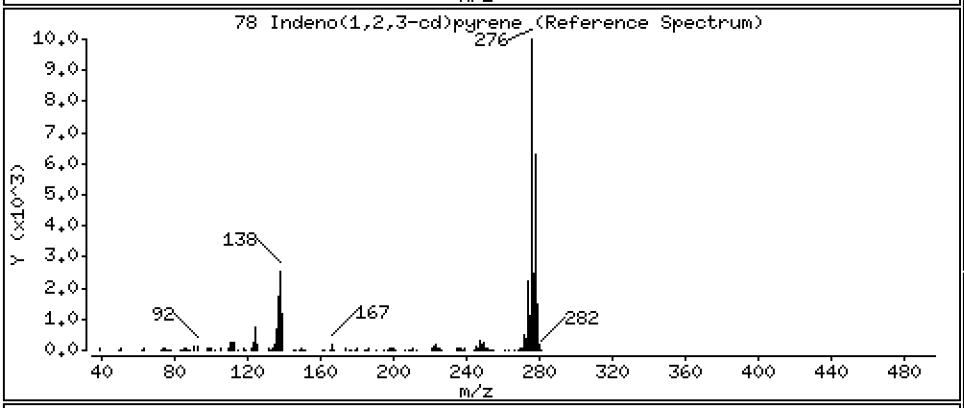
Column diameter: 0.25

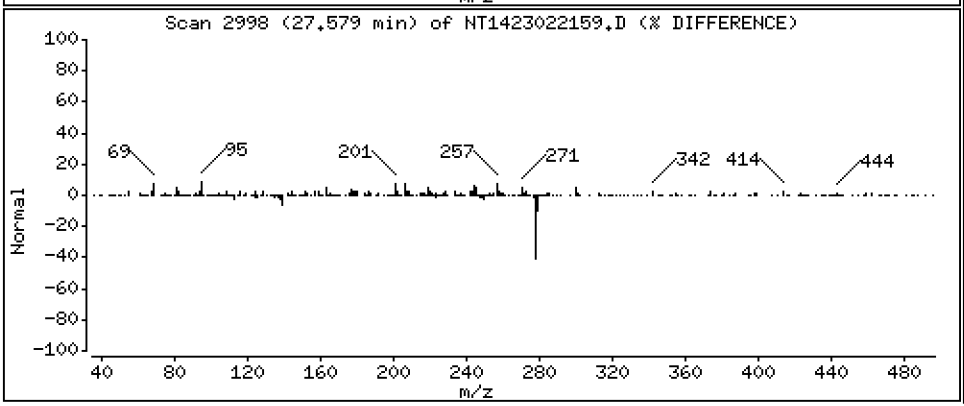
78 Indeno(1,2,3-cd)pyrene

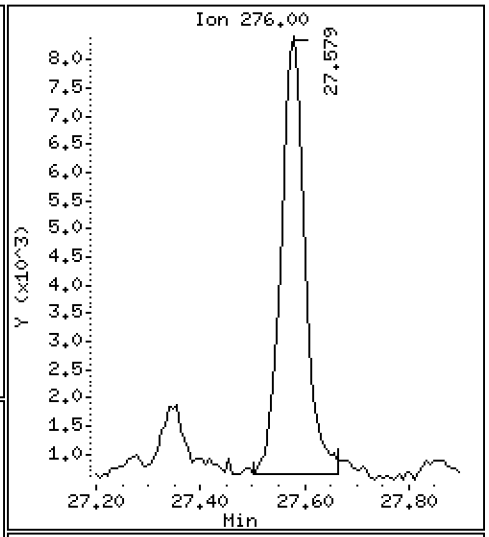
Concentration: 0.2313 ug/mL

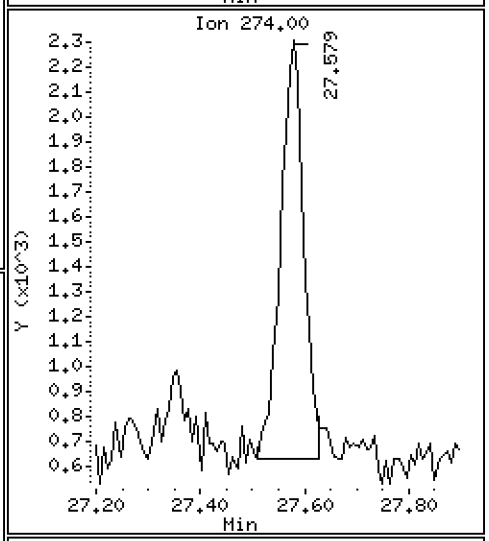


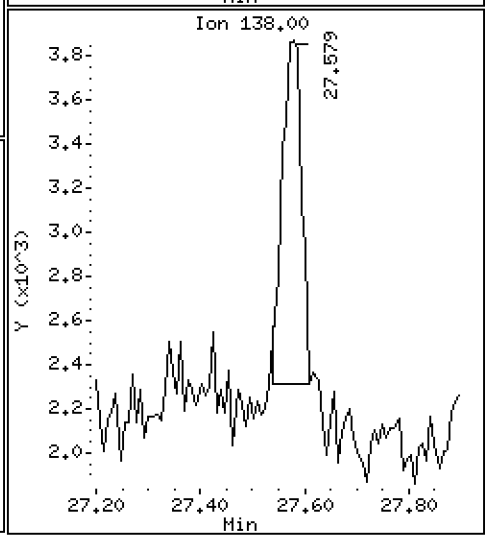












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

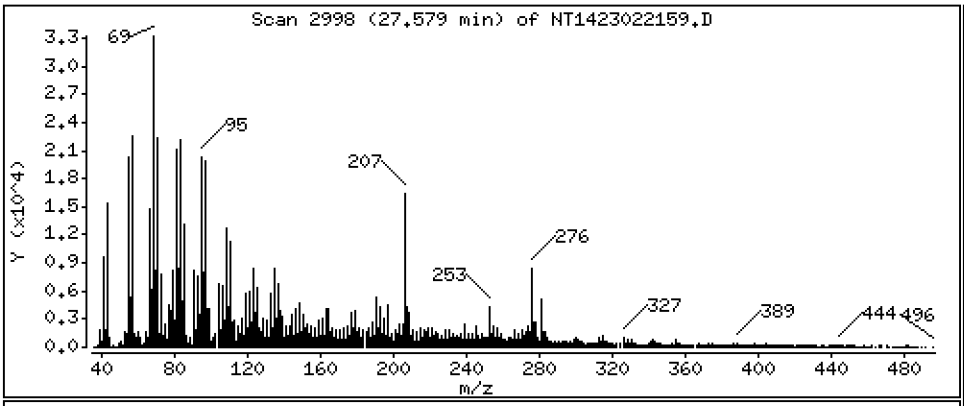
Operator: DSD

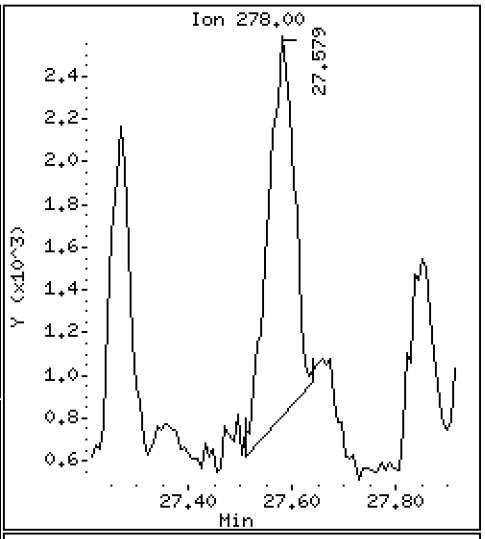
Column phase: ZB-5msi

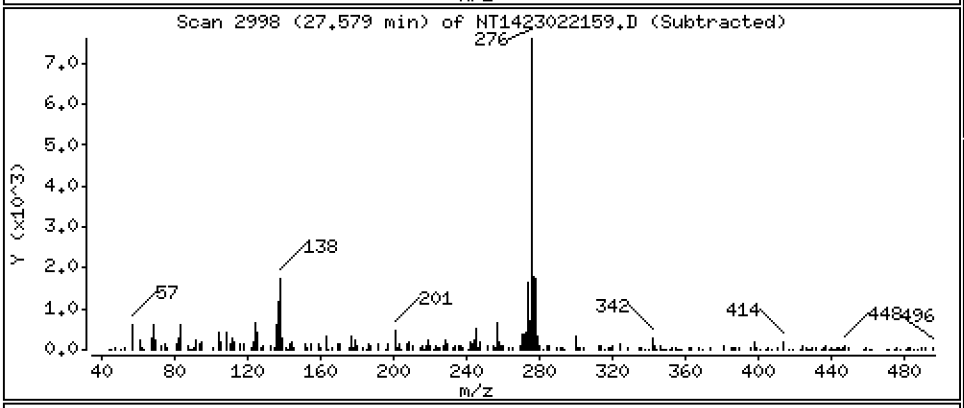
Column diameter: 0.25

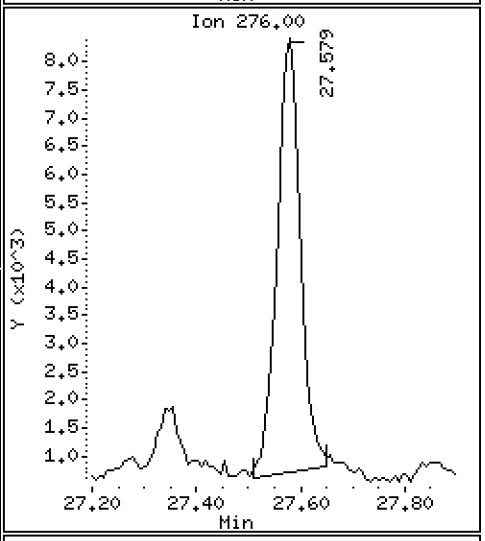
79 Dibenzo(a,h)anthracene

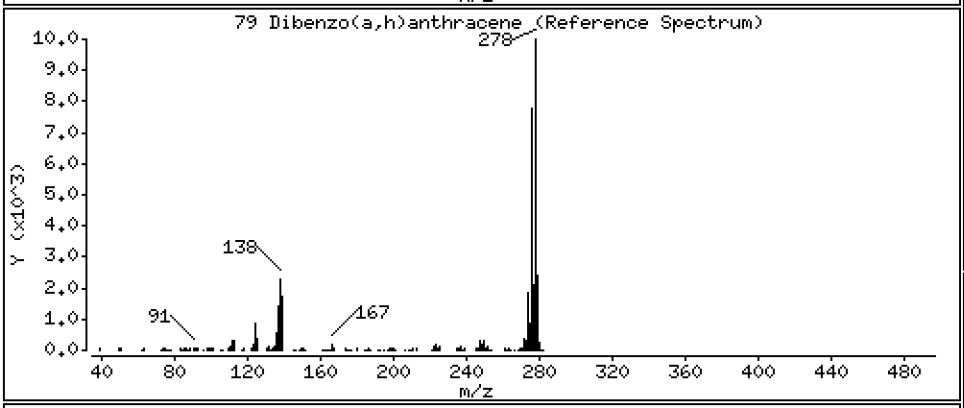
Concentration: 0.06805 ug/mL

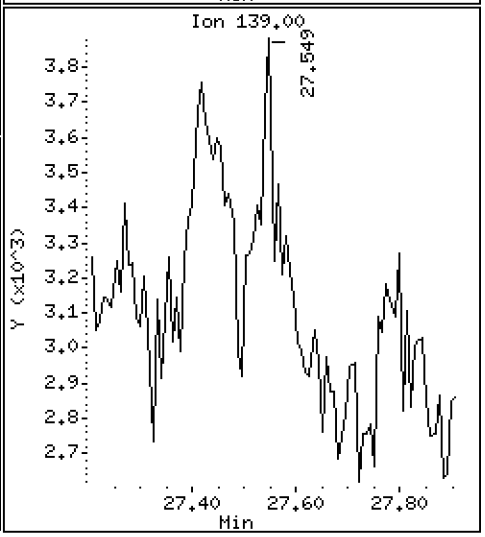


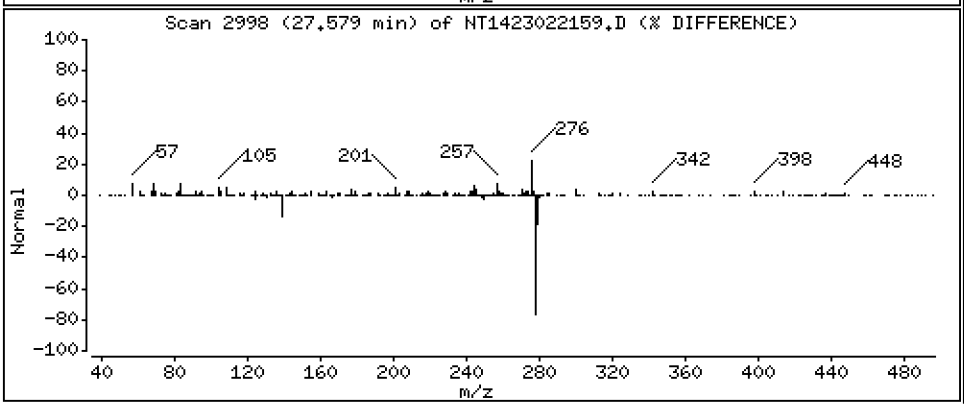












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

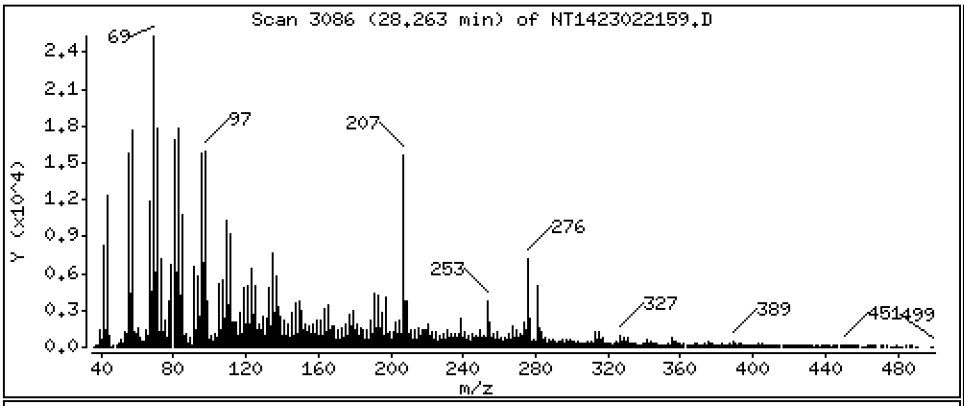
Operator: DSD

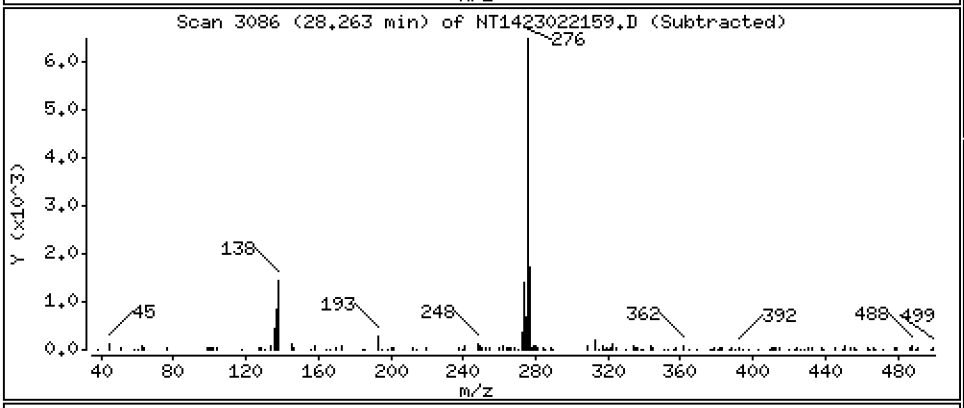
Column phase: ZB-5msi

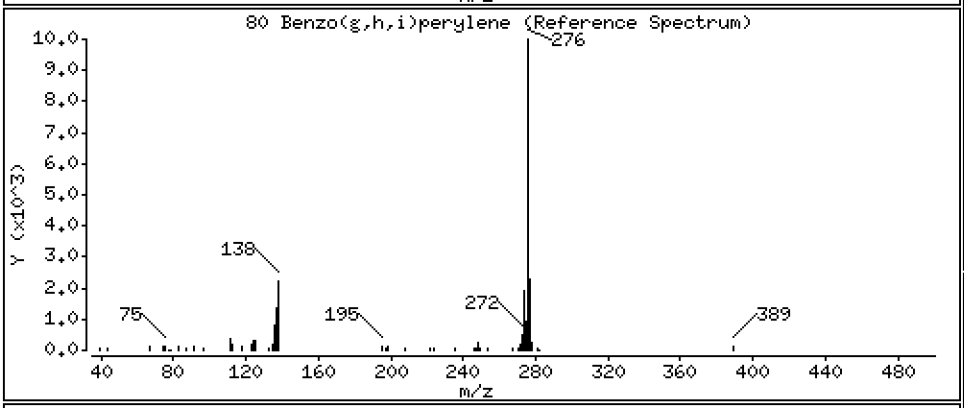
Column diameter: 0.25

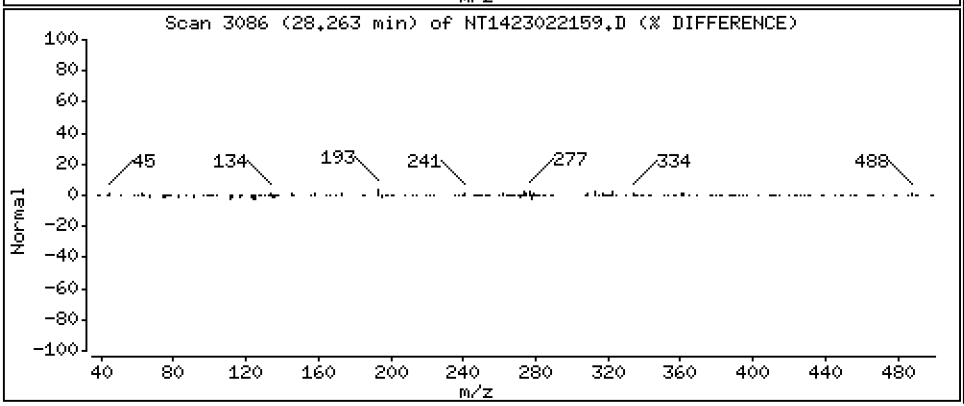
80 Benzo(g,h,i)perylene

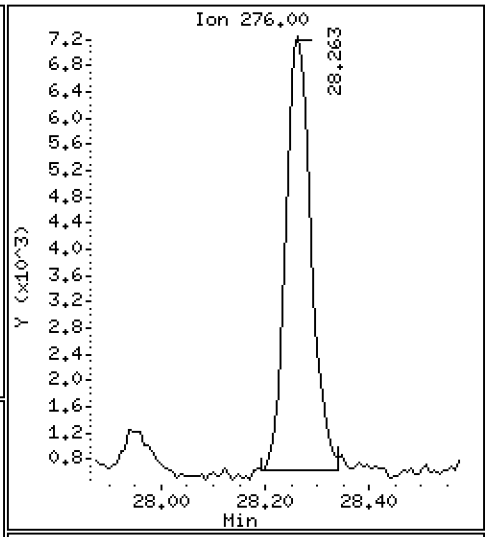
Concentration: 0.2545 ug/mL

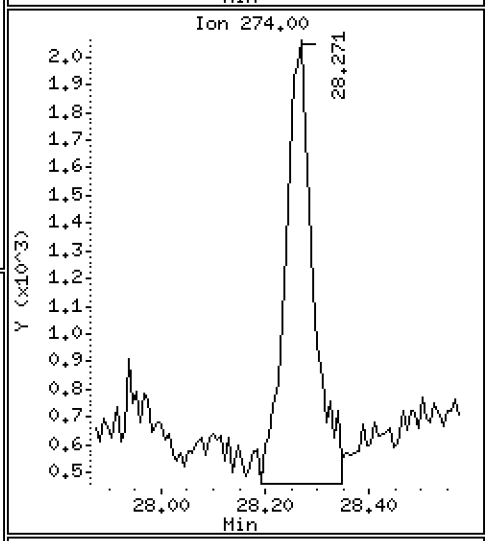


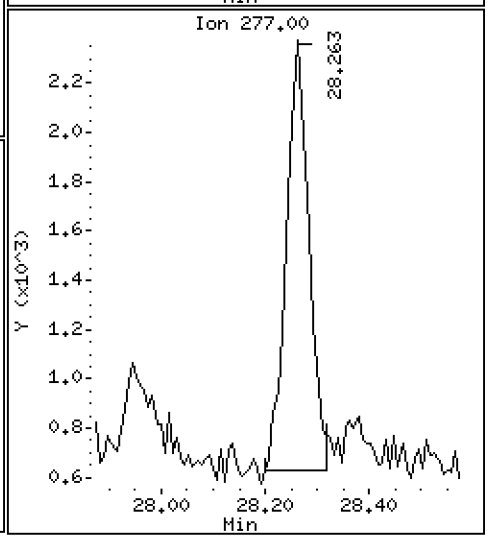












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

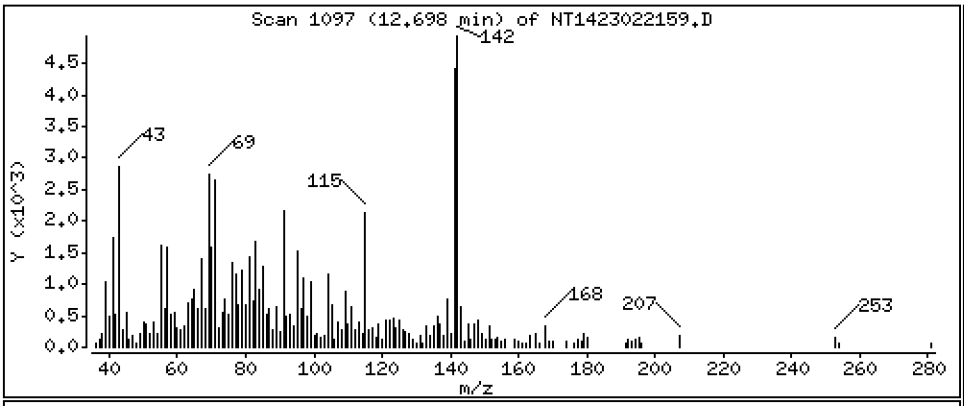
Operator: DSD

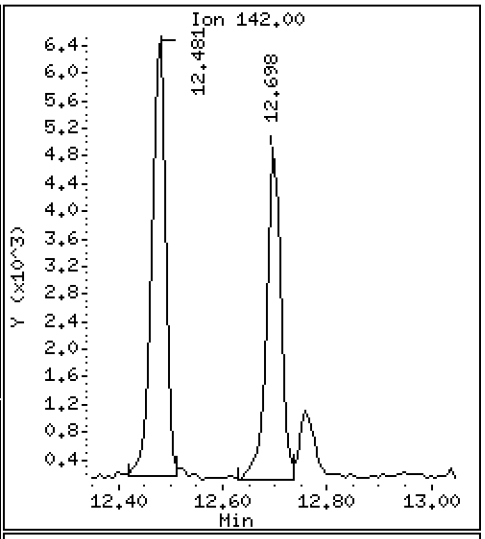
Column phase: ZB-5msi

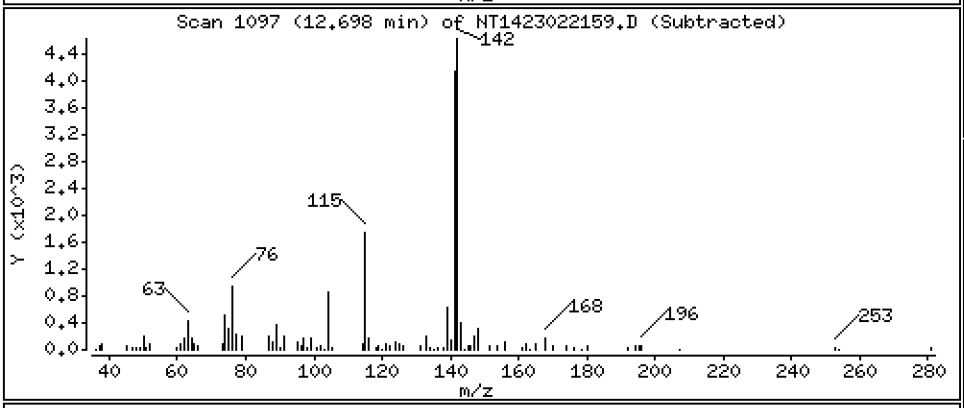
Column diameter: 0.25

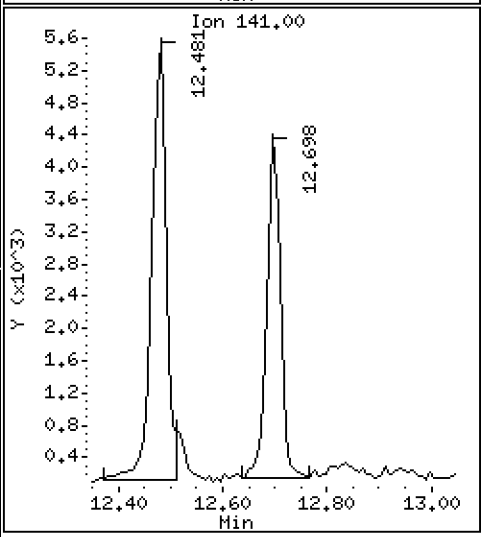
105 1-methylnaphthalene

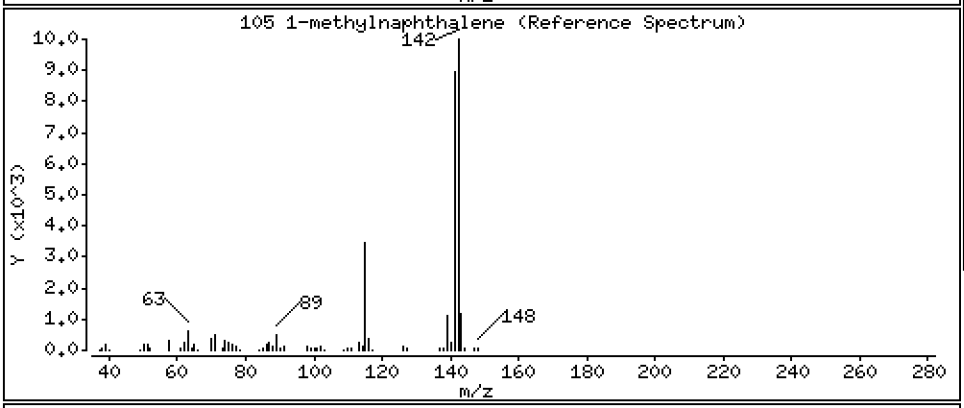
Concentration: 0.05844 ug/mL

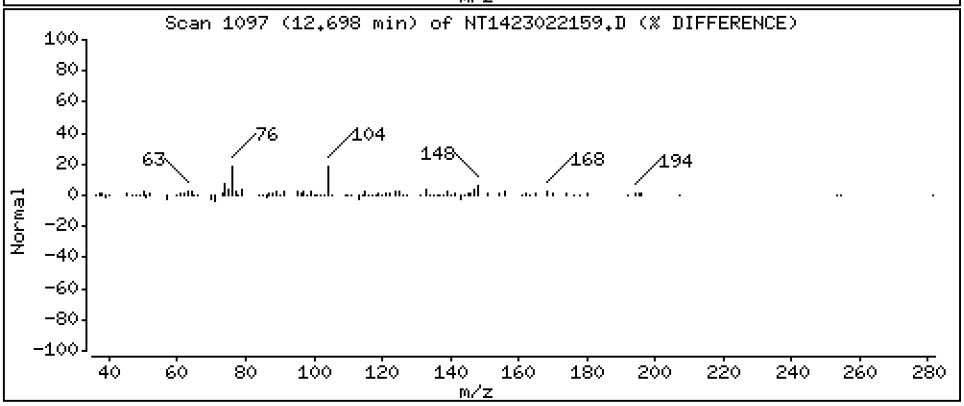












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

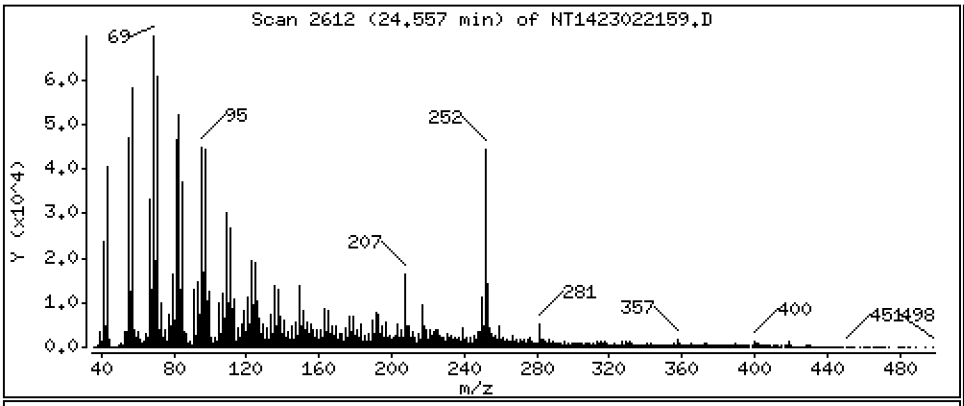
Operator: DSD

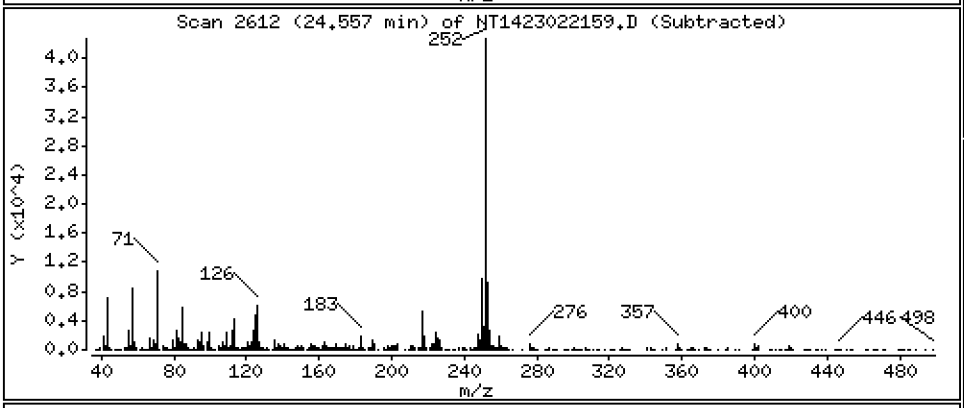
Column phase: ZB-5msi

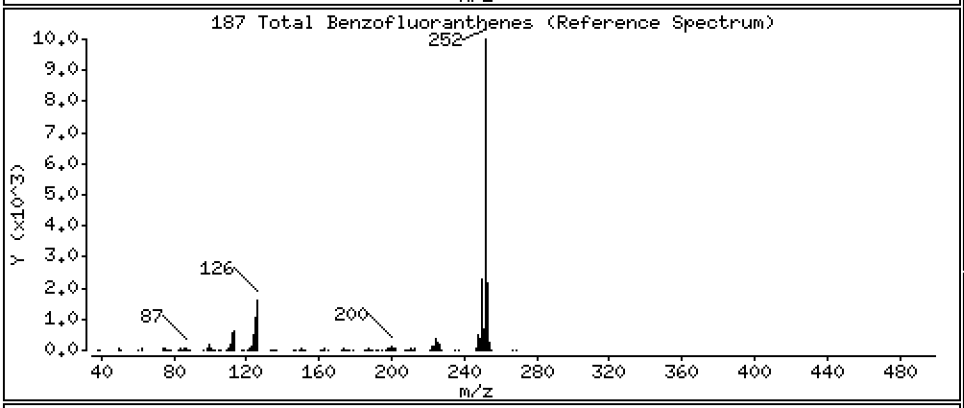
Column diameter: 0.25

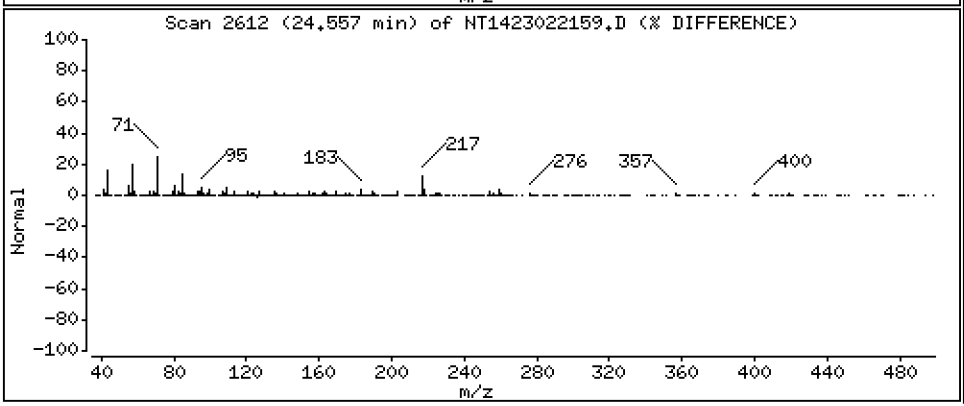
187 Total Benzofluoranthenes

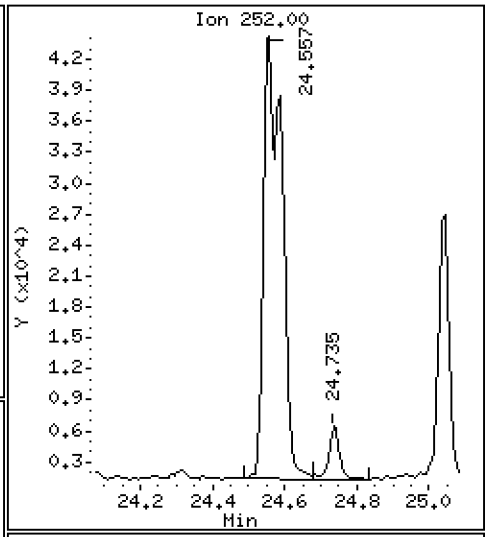
Concentration: 1.090 ug/mL

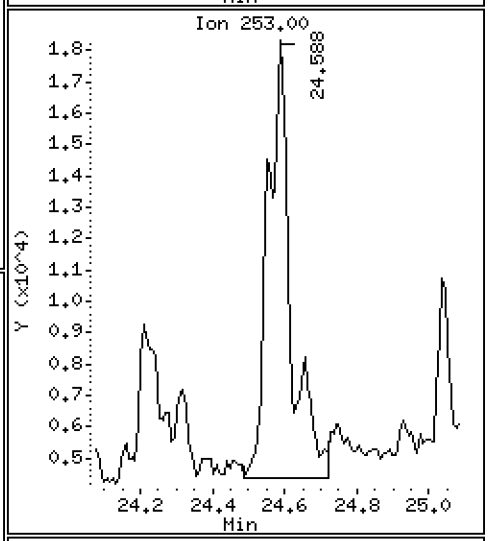


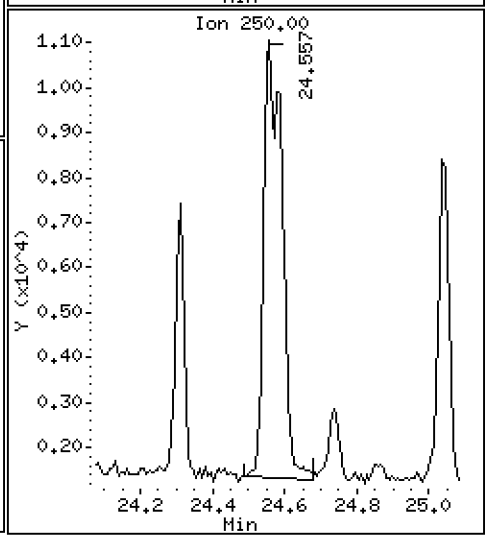












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221C.b\NT1423022159.D
Lab Smp Id: 23A0133-16
Inj Date : 23-FEB-2023 00:26 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-16
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Meth Date : 03-Mar-2023 06:54 van Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 42
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.388	6.380	(0.746)	328290	5.33982	5.340
$	2 Phenol-d5	99	7.980	7.972	(0.931)	485769	4.98082	4.981
	3 Phenol	94	7.995	7.996	(0.933)	213300	2.06594	2.066
$	5 2-Chlorophenol-d4	132	8.211	8.212	(0.958)	363227	5.21960	5.220
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.567	8.568	(1.000)	229976	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.924	8.925	(1.042)	166371	3.18954	3.190
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	8.870	8.863	(1.035)	8716	0.15034	0.1503
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.375	9.367	(1.094)	16794	0.22061	0.2206
$	18 Nitrobenzene-d5	82	9.662	9.662	(0.875)	354168	3.55531	3.555
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	10.143	10.151	(0.919)	1482	0.01124	0.01124
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.042	11.042	(1.000)	862270	4.00000	
	28 Naphthalene	128	11.080	11.081	(1.003)	17308	0.08141	0.08141
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	12.480	12.481	(1.130)	11230	0.07053	0.07053
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.270	13.270	(0.906)	644582	3.52359	3.524
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	Compound Not Detected.					
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	14.647	14.648	(1.000)	511308	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	14.717	14.717	(1.005)	10892	0.07988	0.07988
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.042	15.050	(1.027)	19046	0.08508	0.08508
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	15.637	15.645	(1.068)	41205	0.19845	0.1985
	49	Fluorene	166	15.753	15.753	(1.075)	20179	0.08619	0.08619
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.293	16.293	(1.112)	153451	5.15621	5.156
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	17.684	17.676	(1.000)	937379	4.00000	
	60	Phenanthrene	178	17.730	17.723	(1.003)	90421	0.40143	0.4014
	61	Anthracene	178	17.823	17.816	(1.008)	33654	0.15081	0.1508
	62	Carbazole	167	18.171	18.156	(1.028)	9358	0.04621	0.04621
	63	Di-n-butylphthalate	149	Compound Not Detected.					
	64	Fluoranthene	202	20.175	20.137	(0.885)	235276	0.92615	0.9261
	65	Pyrene	202	20.585	20.562	(0.903)	229023	0.85258	0.8526
$	66	Terphenyl-d14	244	20.887	20.872	(0.917)	766840	4.02054	4.021
	67	Butylbenzylphthalate	149	21.824	21.816	(0.958)	7873	0.08892	0.08892(M)
	68	Benzo(a)anthracene	228	22.753	22.745	(0.999)	75698	0.40173	0.4017
*	69	Chrysene-d12	240	22.784	22.769	(1.000)	588825	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	22.823	22.815	(1.002)	101658	0.59980	0.5998
	72	bis(2-Ethylhexyl)phthalate	149	22.861	22.854	(0.959)	140475	0.83837	0.8384
*	134	Di-n-octylphthalate-d4	153	23.844	23.837	(1.000)	978709	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	24.557	24.542	(0.973)	87321	0.61047	0.6105
	75	Benzo(k)fluoranthene	252	24.588	24.580	(0.974)	78728	0.51509	0.5151(M)
	76	Benzo(a)pyrene	252	25.130	25.114	(0.996)	51987	0.38356	0.3836
*	77	Perylene-d12	264	25.238	25.223	(1.000)	450789	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.579	27.548	(1.093)	25786	0.23127	0.2313
	79	Dibenzo(a,h)anthracene	278	27.579	27.564	(1.093)	6246	0.06805	0.06805(M)
	80	Benzo(g,h,i)perylene	276	28.262	28.224	(1.120)	23018	0.25454	0.2545
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	12.697	12.697	(1.150)	8736	0.05844	0.05844
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.557	24.580	(0.973)	152247	1.09019	1.090
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022159.D
Lab Smp Id: 23A0133-16
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 16:35
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	232195	116098	464390	229976	-0.96
27 Naphthalene-d8	800631	400316	1601262	862270	7.70
42 Acenaphthene-d10	488064	244032	976128	511308	4.76
59 Phenanthrene-d10	971279	485640	1942558	937379	-3.49
69 Chrysene-d12	687083	343542	1374166	588825	-14.30
134 Di-n-octylphthala	1174636	587318	2349272	978709	-16.68
77 Perylene-d12	491790	245895	983580	450789	-8.34

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.07
134 Di-n-octylphthala	23.84	23.34	24.34	23.84	0.03
77 Perylene-d12	25.22	24.72	25.72	25.24	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022159.D

Lab ID: 23A0133-16
nt14.i, ABN.m, 23-FEB-2023 00:26

RT	CO-ELUTION COMPOUNDS
27.579	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
27.579	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

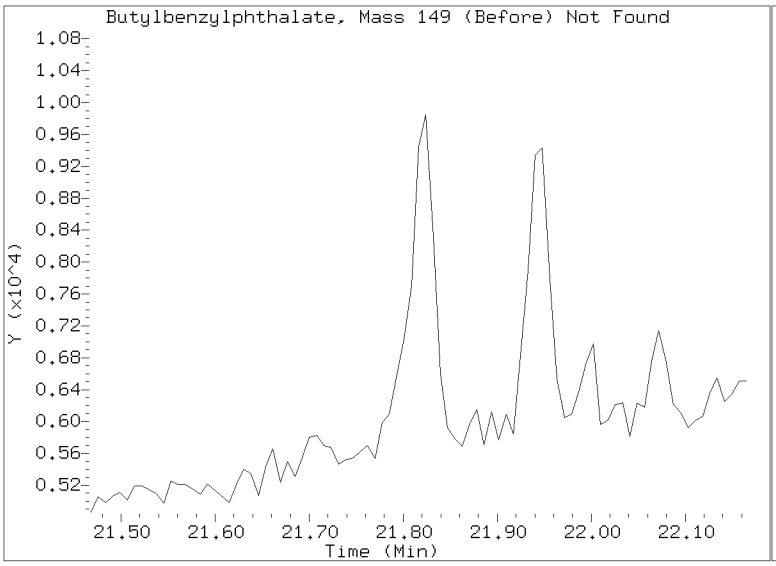
RRT check based on Ccal File: NT1423022146.D

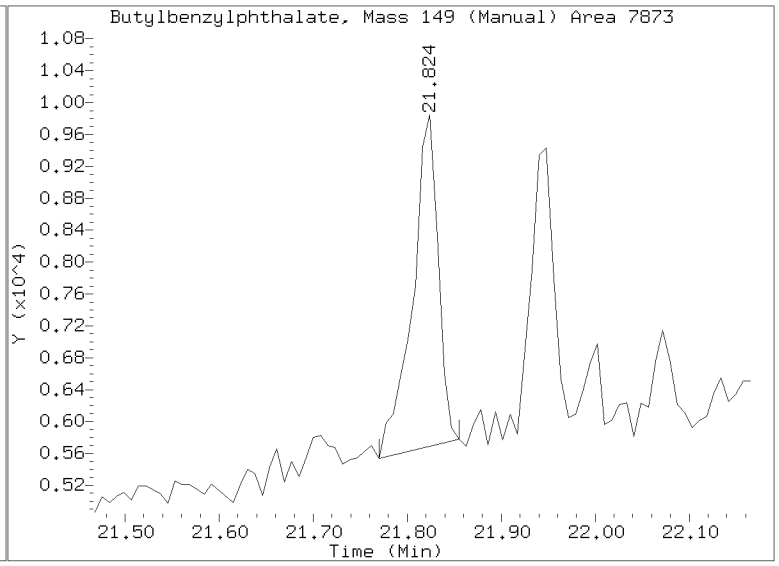
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

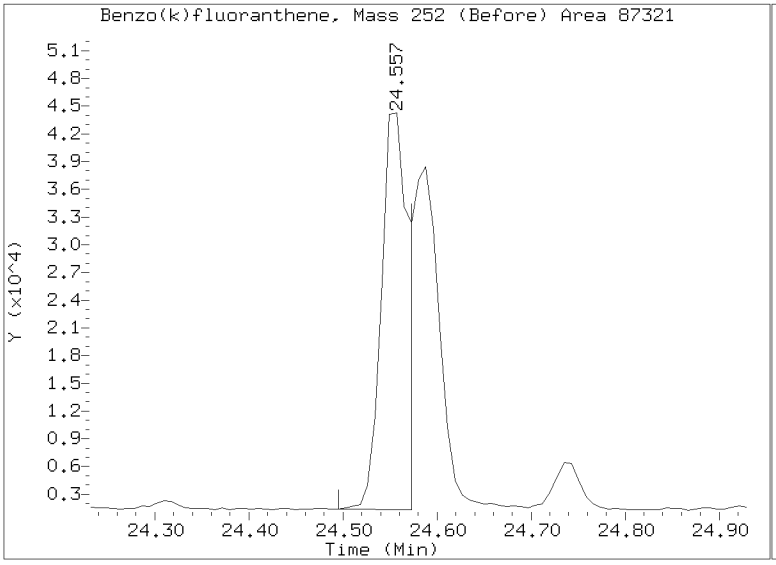
* Only compounds listed in the work order have been verified by the analyst *

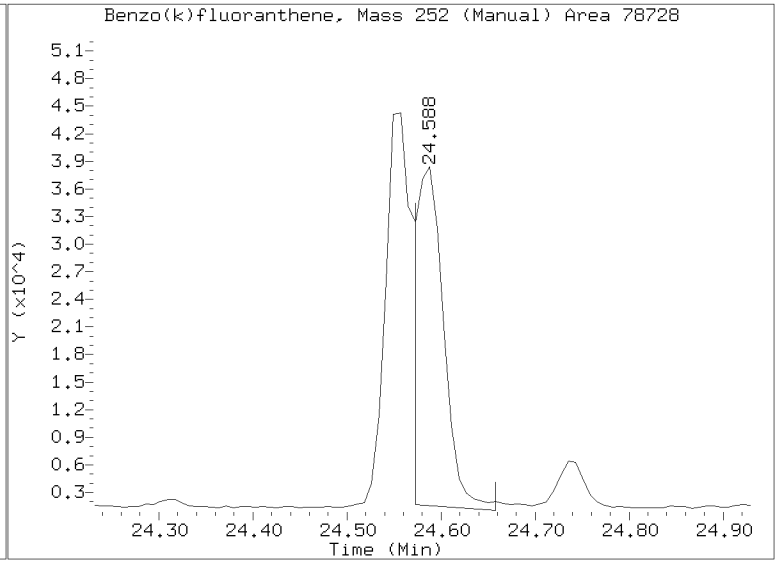
Quant Ion Manual Peak Adjustment Report

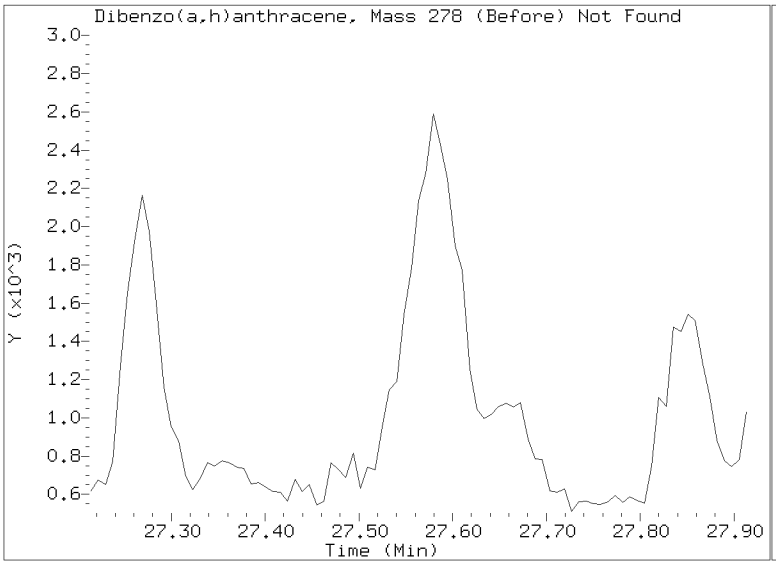
Datafile: //target/share/chem3/nt14.i/20230221C.b/NT1423022159.D
Injection Date: 23-FEB-2023 00:26
Lab ID:23A0133-16 Client ID:
Report Date: 03/03/2023 07:06

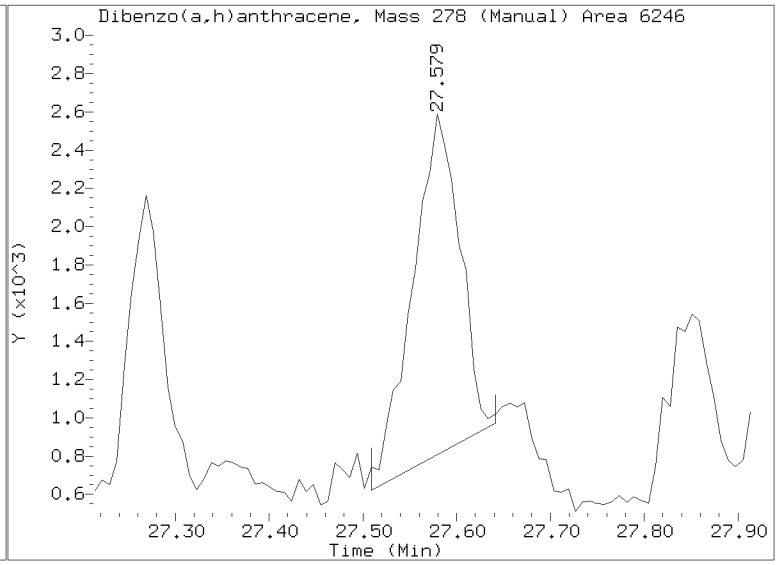












PREPARATION BATCH SUMMARY

EPA 8270E

Laboratory: Analytical Resources, LLC SDG: 23A0133

Client: Anchor QEA, LLC Project: AOC5 MR Phase 1

Batch: BLA0393 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1250	23A0133-03	NT1423022141.D	01/18/23 15:24	
LDW23-SC1241	23A0133-06	NT1423022142.D	01/18/23 15:24	
LDW23-IT1217	23A0133-07	NT1423022143.D	01/18/23 15:24	
LDW23-SC1185	23A0133-08	NT1423022151.D	01/18/23 15:24	
LDW23-SC1234	23A0133-09	NT1423022152.D	01/18/23 15:24	
LDW23-SC1215	23A0133-10	NT1423022153.D	01/18/23 15:24	
LDW23-SC1222	23A0133-11	NT1423022154.D	01/18/23 15:24	
LDW23-SC1227	23A0133-12	NT1423022155.D	01/18/23 15:24	
LDW23-SS1110	23A0133-13	NT1423022156.D	01/18/23 15:24	
LDW23-SS1109	23A0133-14	NT1423022157.D	01/18/23 15:24	
LDW23-SS1092	23A0133-15	NT1423022158.D	01/18/23 15:24	
LDW23-SS1091	23A0133-16	NT1423022159.D	01/18/23 15:24	
Blank	BLA0393-BLK1	NT1423022134.D	01/18/23 15:24	
Blank	BLA0393-BLK2	NT1423022150.D	01/18/23 15:24	FOR DUAL SCAN
LCS	BLA0393-BS1	NT1423022135.D	01/18/23 15:24	
LCS Dup	BLA0393-BSD1	NT1423022136.D	01/18/23 15:24	
LDW23-IT1217	BLA0393-MS1	NT1423022144.D	01/18/23 15:24	
LDW23-IT1217	BLA0393-MSD1	NT1423022145.D	01/18/23 15:24	
Reference	BLA0393-SRM1	NT1423022137.D	01/18/23 15:24	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0393

Prepared using: EPA 3546 (Microwave)

8270E SVOC (20ug/kg solid or 0.2ug/L low H2O Sepf) in Solid (Version:AOC4 List)

Matrix: Solid **Date Prepared:** 01/18/23 **Balance ID:** 131464614 **Set Up By:** QD 1/16/23

WO Comments

23A0133: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

Designator	Description
39	Benzidine Spike
QLS 14	QLS Spike (Freezer)

Analysis: 8270E SVOC (20ug/kg solid or 0.2ug/L low H2O Sepf)

Lab Number & Container	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ) GPC C/U (1:1) 1 2 3	Water Wash 1mL	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23A0133-03 C	51.1	(19.57) 19.60	(1:1)	1mL	1	0.5	
23A0133-06 C	49.0	(20.40) 20.40	(1:1)	1mL	1	0.5	
23A0133-07 C	59.5	(16.81) 16.88	(1:1)	1mL	1	0.5	
23A0133-08 C	58.6	(17.07) 17.09	(1:1)	1mL	1	0.5	
23A0133-09 C	53.7	(18.61) 18.61	(1:1)	1mL	1	0.5	
23A0133-10 C	53.5	(18.70) 18.72	(1:1)	1mL	1	0.5	
23A0133-11 C	52.1	(19.18) 19.20	(1:1)	1mL	1	0.5	
23A0133-12 C	55.8	(17.93) 17.96	(1:1)	1mL	1	0.5	
23A0133-13 C	59.3	(16.86) 16.87	(1:1)	1mL	1	0.5	
23A0133-14 C	45.2	(22.13) 22.15	(1:1)	1mL	1	0.5	
23A0133-15 C	52.3	(19.12) 19.14	(1:1)	1mL	1	0.5	
23A0133-16 C	49.4	(20.25) 12.27	(1:1)	1mL	1	0.5	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ) GPC C/U (1:1) 1 2 3	Water Wash 1mL	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLA0393-BLK1	100.0	(10.00) 10.00	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLA0393-BS1	100.0	(10.00) 10.00	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLA0393-BSD1	100.0	(10.00) 10.00	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLA0393-MS1	59.5	(16.81) 16.81	(1:1)	1mL	1	0.5	Use 23A0133-07
BLA0393-MSD1	59.5	(16.81) 16.81	(1:1)	1mL	1	0.5	Use 23A0133-07
BLA0393-SRM1	100.0	~~(10.00)~~ (1.00) 1.00	(1:1)	1mL	1	0.5	Use K003477

01/18/23
Client ID verified By — Date

TWC 2/2/23
Preparation Reviewed By — Date

01/18/23
1/18/23 01/18/23 15:24
Extraction Date and Time

Printed: 1/16/2023 3:08:01PM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0393

Prepared using: EPA 3546 (Microwave)

8270E SVOC (20ug/kg solid or 0.2ug/L low H2O Sepf) in Solid (Version:AOC4 List)

WO Comments

23A0133: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Steps

Microwave
1 2 3
Analyst/Date: 01/19/23

Pre-GPC KD
100°C
Exchange to Hexane
(add 10 mL to KD)
0 2 4 5 6
Analyst/Date: TWC 1/26/23

TurboVap
Pre GPC
1 2 3 4 5
Analyst/Date: 1/27/23

Post GPC KD
80-85°C
0 2 4 5 6
Analyst/Date: LJ 1/30/23

TurboVap
1 2 3 4 5
Analyst/Date: TWC 2/2/23

Water Wash
Analyst/Date: TWC 2/2/23

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: [illegible] Date: 01/19/23	
Anhydrous Sodium Sulfate	L000453
1:1 Methylene Chloride/Acetone	K011507
Methylene Chloride	K005942
Pre-Deactivated Glass Wool	K016195
Pre GPC KD Analyst: TWC Date: 1/26/23	
Pre-Deactivated Glass Wool	N/A
Anhydrous Sodium Sulfate	N/A
Methylene Chloride	L000808
Hexane	K011373
GPC Filter Prep Analyst: N/A Date: 1/27/23	
Methylene Chloride	L000805
GPC Analyst: CTD Date: 1/28/23	
Methylene Chloride	L000808
GPC Calibration File	CLA0166-GPC1
Post GPC KD Analyst: LJ Date: 1/30/23	
Methylene Chloride	L000809
Vialing Analyst: TWC Date: 2/2/23	
Methylene Chloride	L000808

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 100/150µg/mL	A K010466 (V) Exp Date: 5/9/2023	50µL	CT	
Full List Spike (Freezer) 100µg/mL	7 K011369 (V) Exp K011297 Date: 8/31/2023	50µL	CT	
Base Spike 200µg/mL	56 K011369 (V) Exp K003759 Date: 4/19/2023	50µL	CT	
Acid Spike 100/200µg/mL	38 K011369 (V) Exp K003766 Date: 4/19/2023	50µL	CT	

MANUALLY ENTER EXPIRATION DATES!

(V) indicates a virtual standard combining two or more physical standards. In these cases the Standard ID refers to the virtual standard, not the parent standards.

If a Standard ID is missing, but should be present, check the standard definition in Element LIMS to be sure Standard Info 6 has the correct letter or number designator matching the vial designator inthe Standard ID column. If it is correct, check the batch and bench sheet in Element LIMS to be sure the correct standards are selected for surrogate(s) and spike(s).

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0393

Prepared using: EPA 3546 (Microwave)

8270E SVOC (20ug/kg solid or 0.2ug/L low H2O Sepf) in Solid (Version:AOC4 List)

WO Comments

23A0133: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. 3. Add DCM ONLY to the vessels (until solvent is 3 inches above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-re-homogenize while hot then let cool 10-15 min in Refridgerator 05. Re-homogenize while cool. 7. Decant DCM into Erlenmeyer flask with a funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using 1:1 DCM/ACE. 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD: Add 10 mL Hexane directly to extract in the KD. 12. GPC REQUIRED 100°C water bath (CLP) KD to 5mL. 13. Vialers to take 1:5 Split Pre- GPC. 14. (After GPC): KD at 80°C. 15. TurboVap to 1mL in DCM. 16. WATER WASH REQUIRED: 16a. Vial 1mL of all extracts in 2mL amber vials in DCM. 16b. Add ~0.5mL DI water and vortex for ~5 seconds each. 16c. Centrifuge extracts for 5 minutes at 1500-2000rpm. 16d. Transfer and vial 0.5mL to new 2mL amber vials (Avoiding collecting water in syringe and cleaning syringe with Acetone and DCM between each vial). 17. Archive water wahed vials and deliever new vials to GC Department for analysis. A. Need Total Solids Y/N B. Archive/Freeze Y/N	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: 8082A Extraction Batch BLA0123

Total Solids Batch: NA Work Order(s): 23A0133 01-16

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
[X] No Anomalies (standard soil/wet sediment/sand/gravel)= 01-16	CR 1/13/23
[X] Standing Water Decanted (Not shared)= 01-16	CR 1/13/23
[ ] Standing Water Homogenized (Shared samples)=	
[ ] Clay/Clumps (Difficult to homogenize)=	
[ ] Rocks (%+size)?	
[ ] Organics (Leaves/sticks/grass)=	
[ ] Oily, obvious fuel/sulfur odors=	
[ ] Received in 32oz jar(s)=Homogenized in Pyrex dish=	
[X] Previously Frozen = 01-16	CR 1/13/23
[ ] Other (Details)=	
Aqueous:	
[ ] No Anomalies	
[ ] Turbid/Color=	
[ ] Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
[ ] Emulsions (%)=	
[ ] Oily, obvious fuel/sulfur odors=	
[ ] Other (Details)=	
[ ] Received in 1.0L Bottle(s)=No Bottle Rinse=	
[ ] Other Notes/Comments= (Note problems, concerns, corrective actions).	
[X] Share Samples Y / (N)	CR 1/13/23
[X] Multiple Jars Y / (N)	CR 1/13/23
[ ] Sample Pre-Screens indicate analyte activity=	
[ ] Sample weights/volumes reduced based on Pre-Screen=	

BLA0393 23A0133 svoa

Date:2023-01-27,6:18:33 PM
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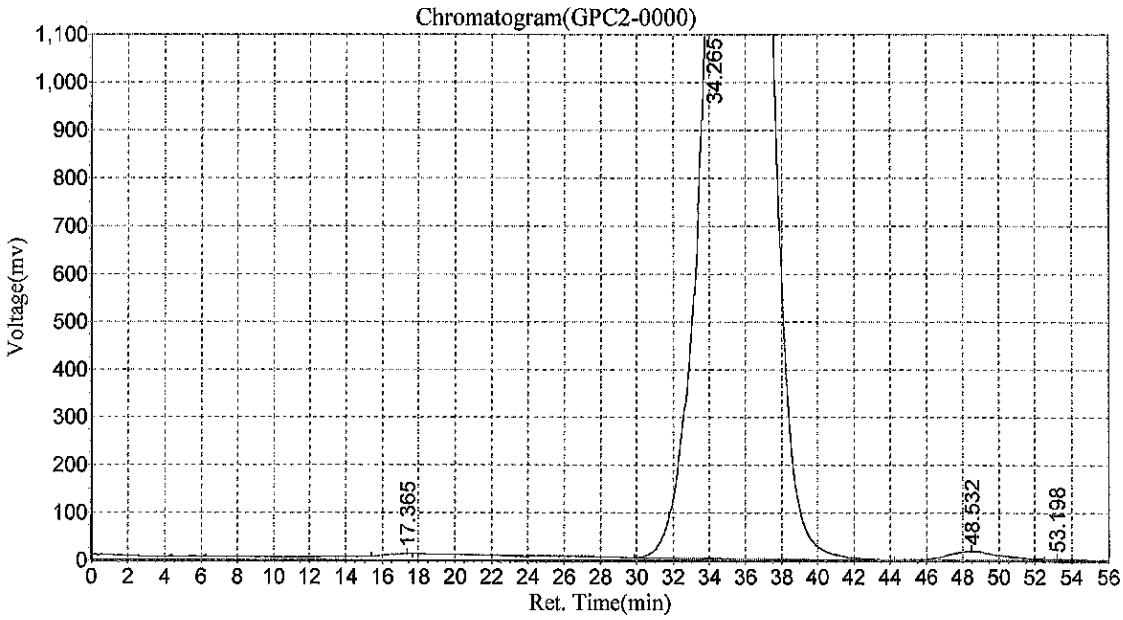
Date/Time2023-01-27,6:18:34 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	3500.491	270370.938	0.0658
2		34.265	1369559.250	406376608.000	98.8973
3		48.532	18845.715	3991164.000	0.9713
4		53.198	2878.464	269595.688	0.0656
Total			1394783.920	410907738.625	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

Date:2023-01-27,7:16:18 PM
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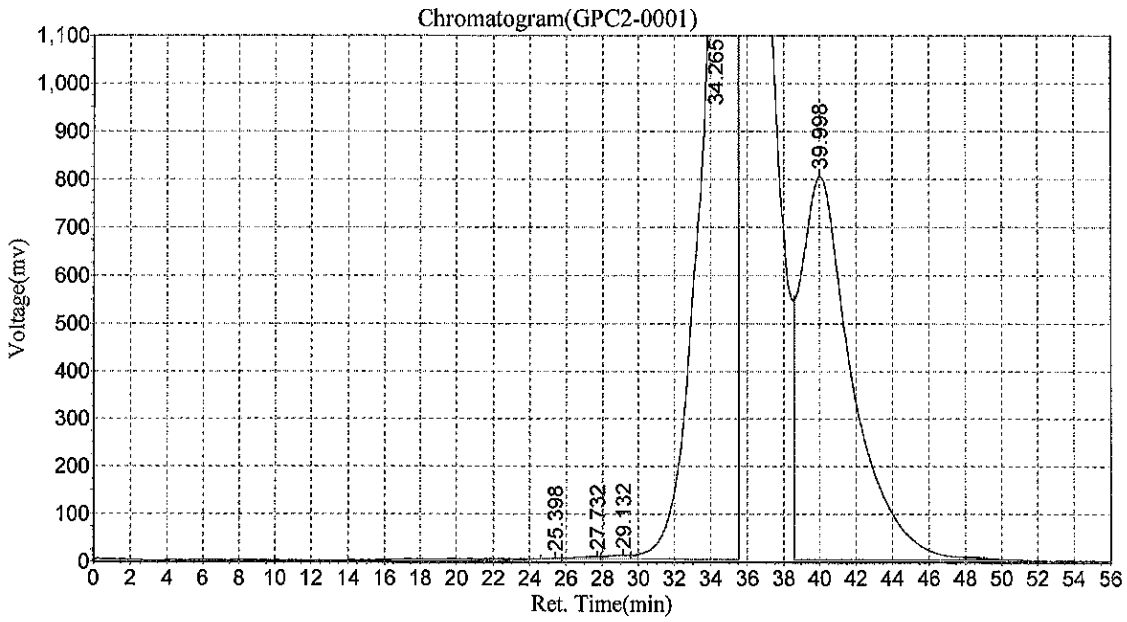
Analyst£°CTO
Date/Time2023-01-27,7:16:18 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		25.398	2786.372	153986.922	0.0429
2		27.732	6113.377	559779.875	0.1559
3		29.132	8451.381	754878.625	0.2103
4		34.265	1368558.375	200437664.000	55.8298
5		39.998	799791.688	157108992.000	43.7611
Total			2185701.193	359015301.422	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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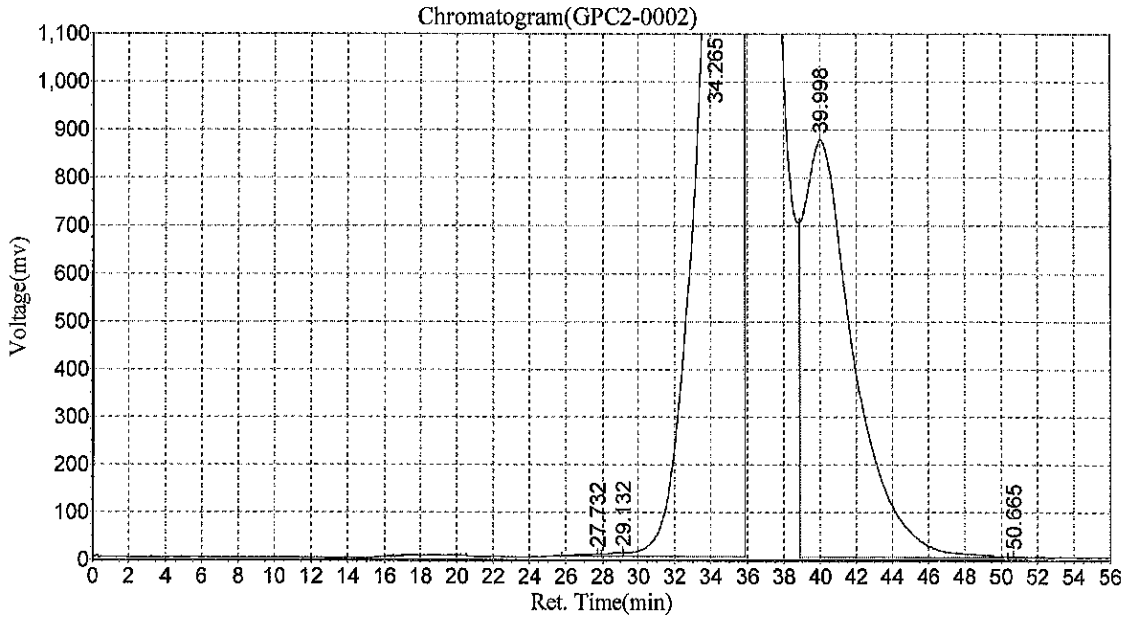

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		27.732	5718.056	511168.125	0.1210
2		29.132	8682.214	569031.000	0.1347
3		34.265	1367353.500	253147408.000	59.9168
4		39.998	871640.063	168103696.000	39.7880
5		50.665	2685.456	166931.844	0.0395
Total			2256079.288	422498234.969	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

Date:2023-01-27,9:11:43 PM
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Method File:E:\GPC2_InHouse.mtd

Analyst£°CTO
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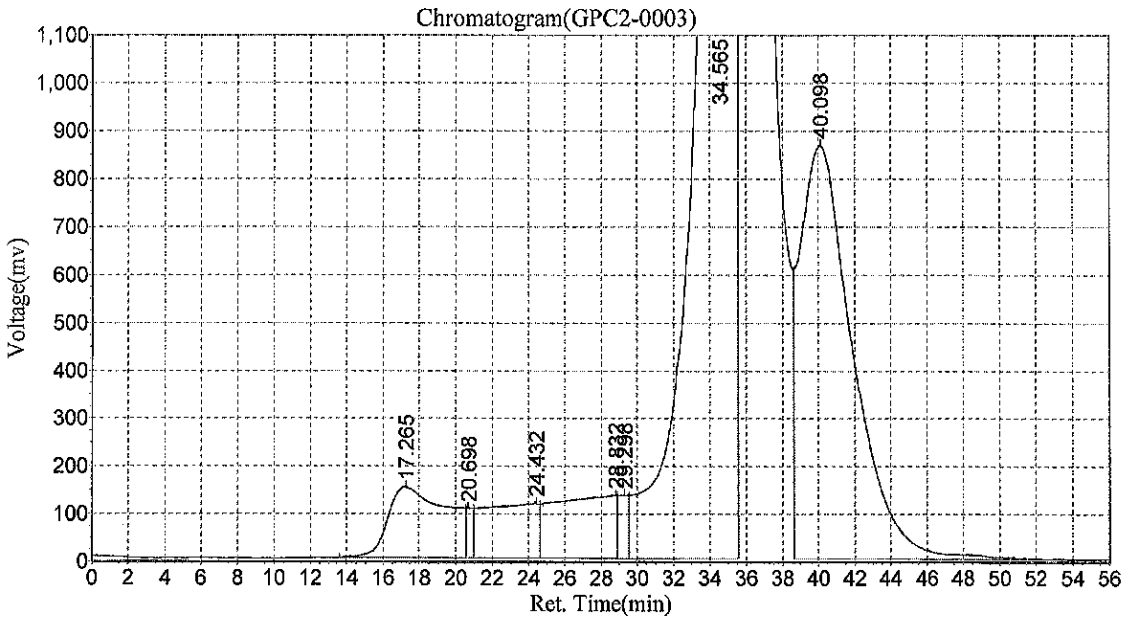

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.265	148674.063	33541946.000	6.3104
2		20.698	104333.375	2915562.000	0.5485
3		24.432	115749.883	23632794.000	4.4462
4		28.832	132610.844	31655022.000	5.9554
5		29.298	132860.156	5306229.000	0.9983
6		34.565	1367299.750	258450624.000	48.6236
7		40.098	861649.438	176030560.000	33.1175
Total			2863177.508	531532737.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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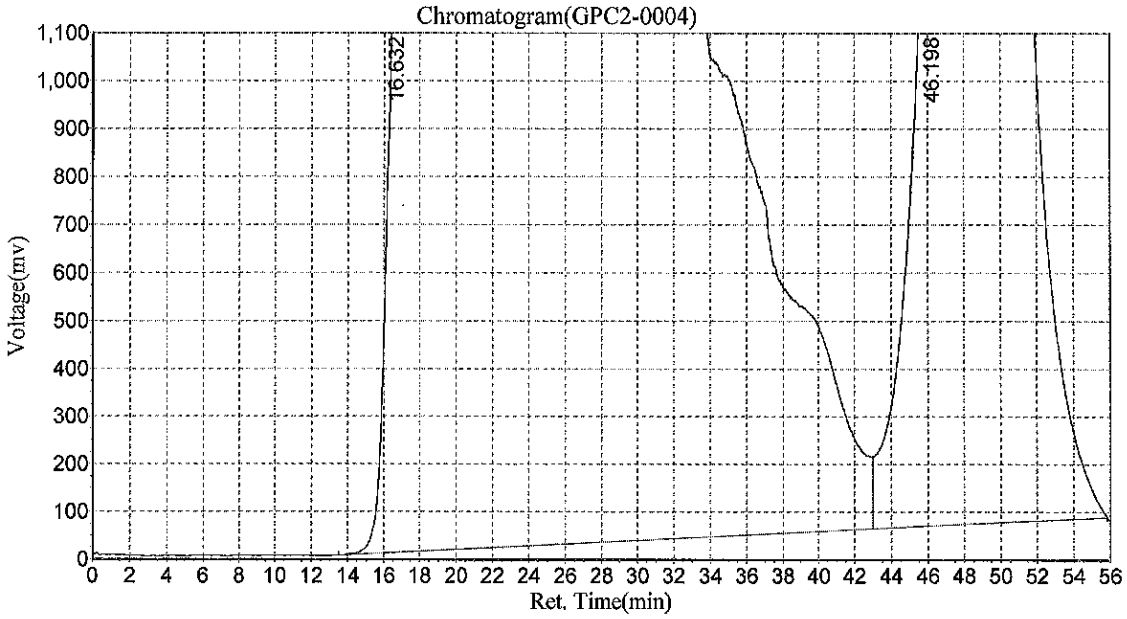

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.632	1364541.000	1633469824.000	72.3128
2		46.198	1305066.000	625425152.000	27.6872
Total			2669607.000	2258894976.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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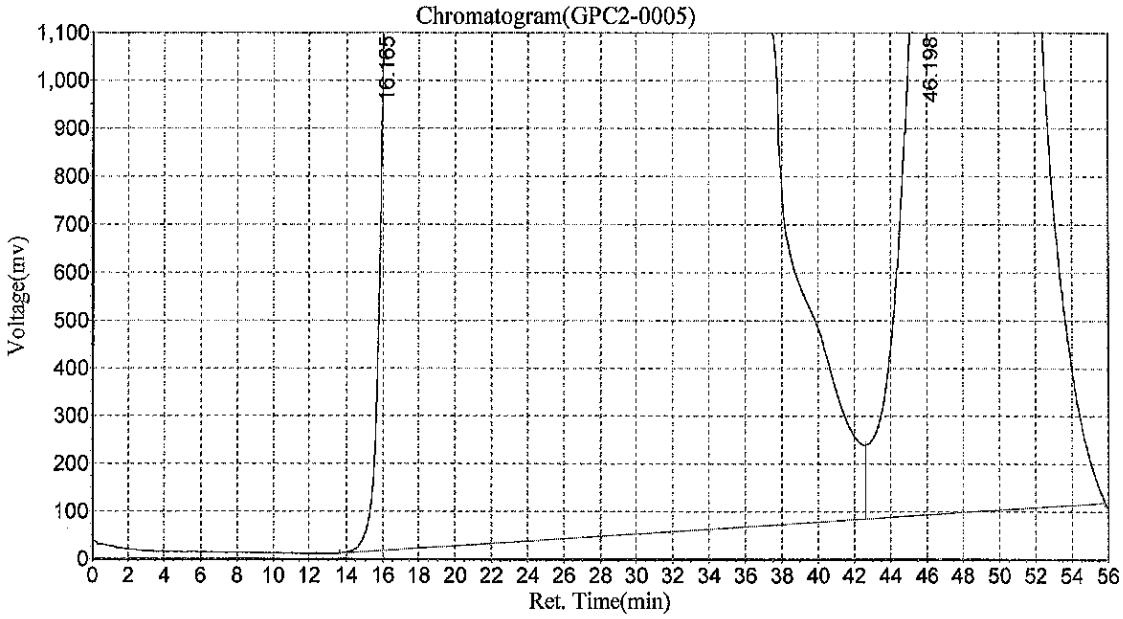

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.165	1361265.125	1797771776.000	72.4820
2		46.198	1281475.375	682530432.000	27.5180
Total			2642740.500	2480302208.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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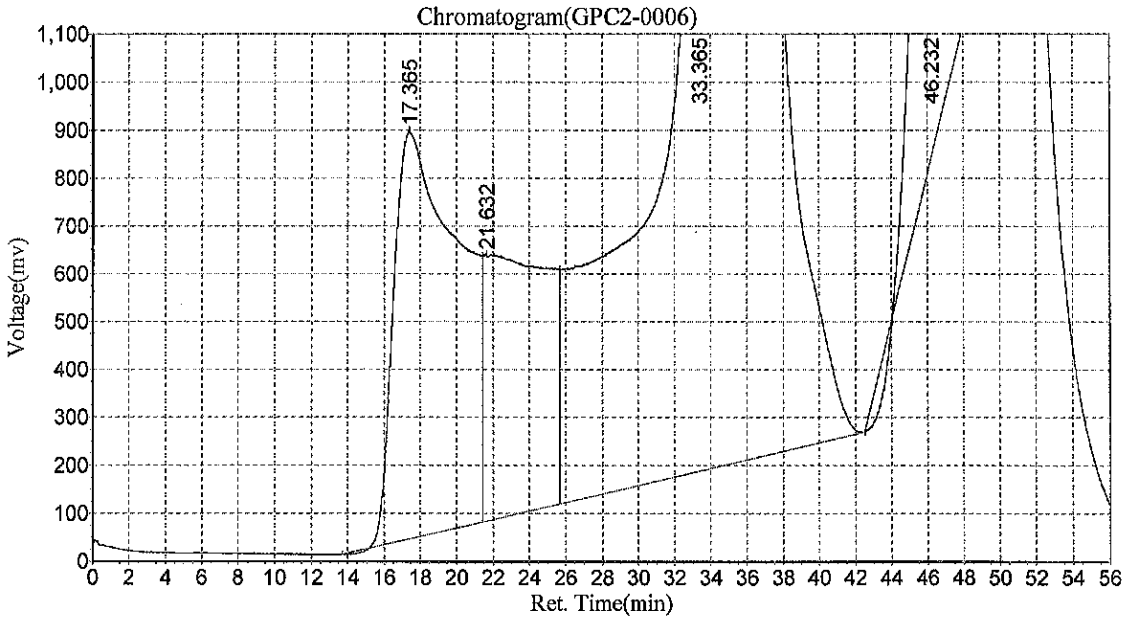

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	849956.313	209130896.000	18.3795
2		21.632	555122.125	134630512.000	11.8320
3		33.365	1185688.250	688140224.000	60.4773
4		46.232	533471.250	105948016.000	9.3112
Total			3124237.938	1137849648.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

Date:2023-01-28,1:02:41 AM
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Method File:E:\GPC2_InHouse.mtd

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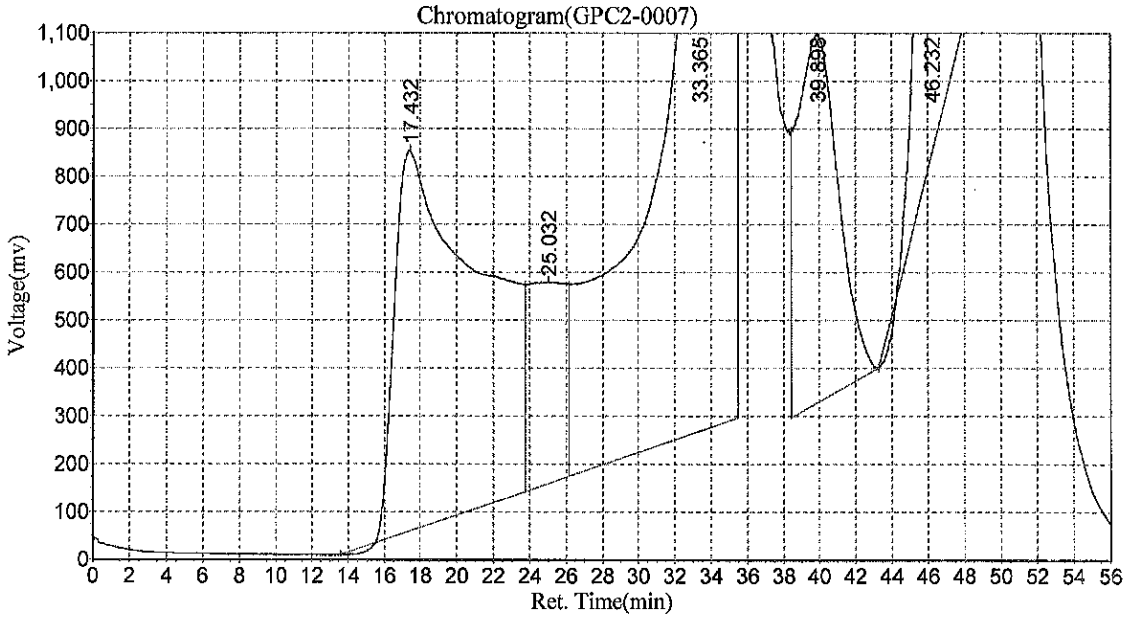

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.432	793538.563	252903408.000	27.6806
2		25.032	418198.094	60930744.000	6.6689
3		33.365	1103112.500	384206240.000	42.0518
4		39.898	739833.000	117336768.000	12.8427
5		46.232	528281.813	98271936.000	10.7560
Total			3582963.969	913649096.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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Method File:E:\GPC2_InHouse.mtd

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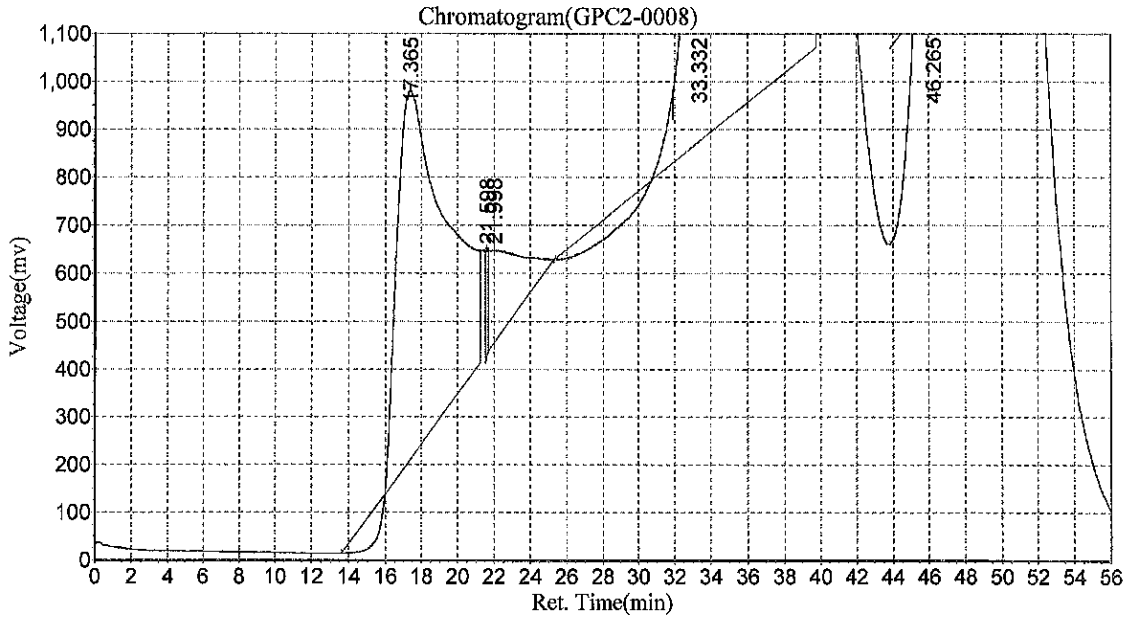

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	770119.938	135110064.000	37.9095
2		21.598	214530.078	1712577.875	0.4805
3		21.998	193751.859	23002938.000	6.4542
4		33.332	500410.188	182349856.000	51.1641
5		46.265	106359.305	14226478.000	3.9917
Total			1785171.367	356401913.875	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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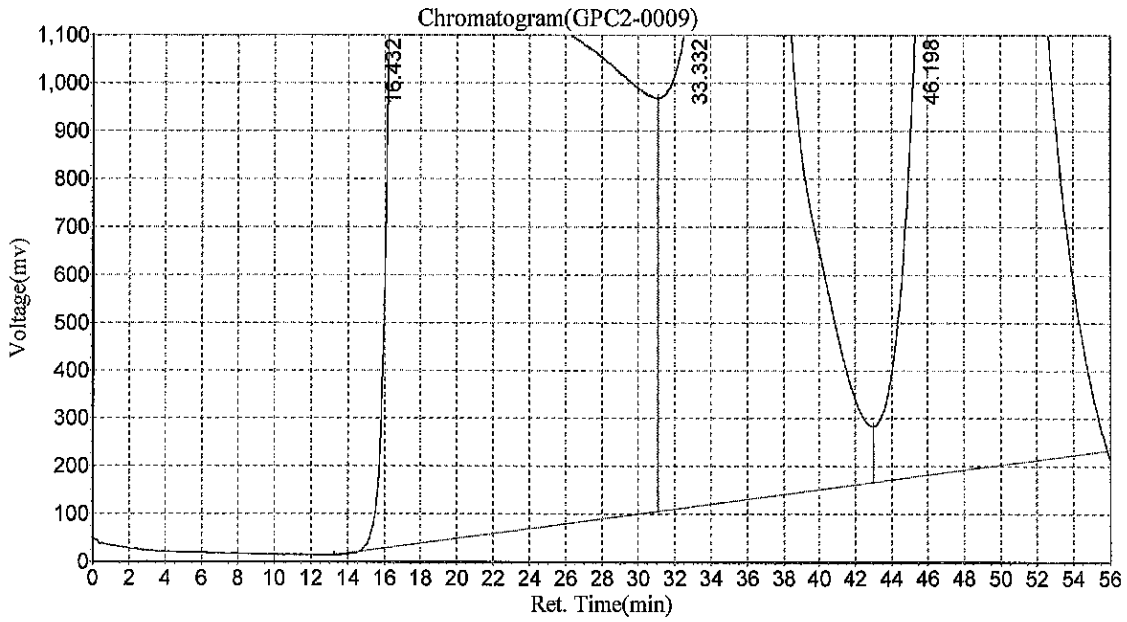

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.432	1348145.750	1030115968.000	45.2184
2		33.332	1254998.250	622634368.000	27.3314
3		46.198	1191784.125	625338176.000	27.4501
Total			3794928.125	2278088512.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

Date:2023-01-28,3:55:46 AM
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Method File:E:\GPC2_InHouse.mtd

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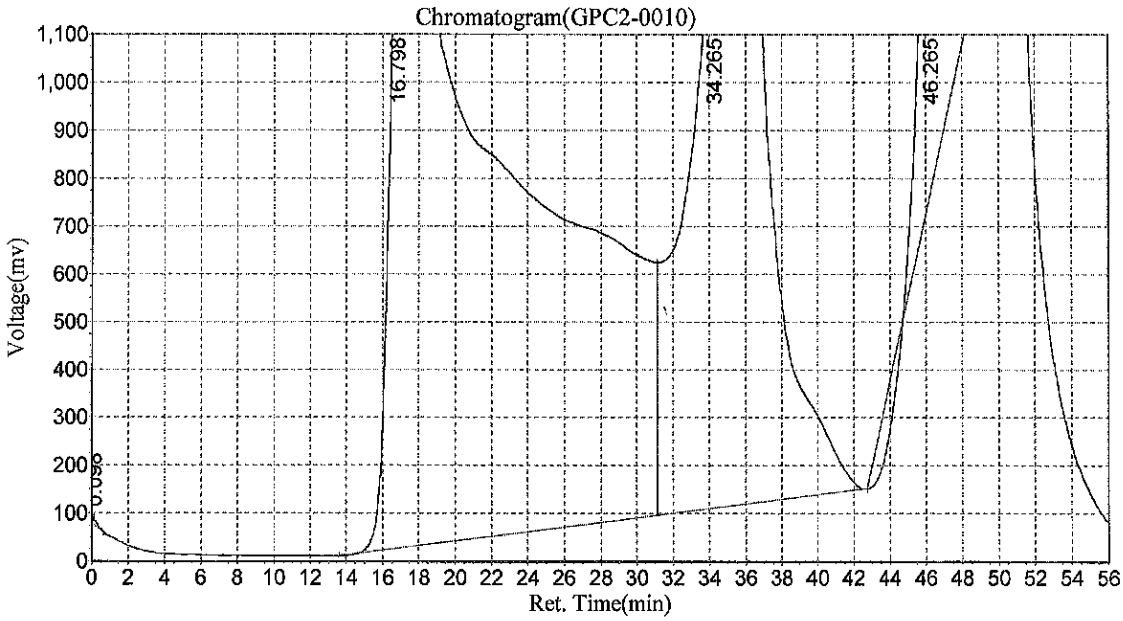

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.098	9564.579	171039.406	0.0137
2		16.798	1352921.375	733402496.000	58.8513
3		34.265	1263466.750	423951680.000	34.0197
4		46.265	606732.250	88670016.000	7.1153
Total			3232684.954	1246195231.406	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

Date:2023-01-28,4:53:30 AM
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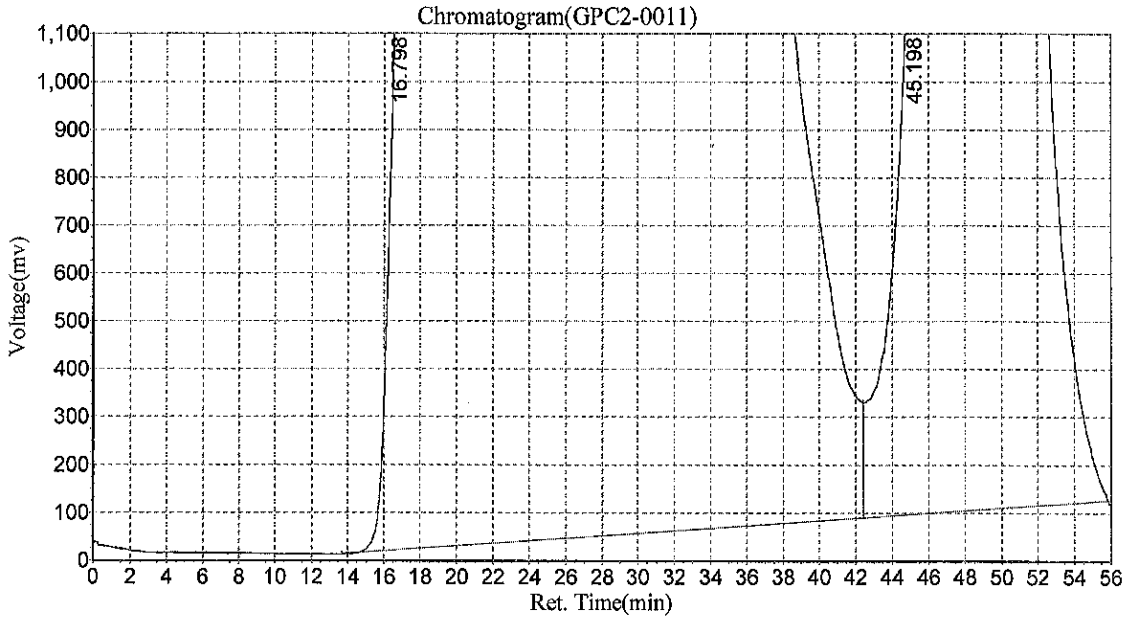

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.798	1357104.125	1803254272.000	71.4757
2		45.198	1277598.375	719637760.000	28.5243
Total			2634702.500	2522892032.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

Date:2023-01-28,5:51:11 AM
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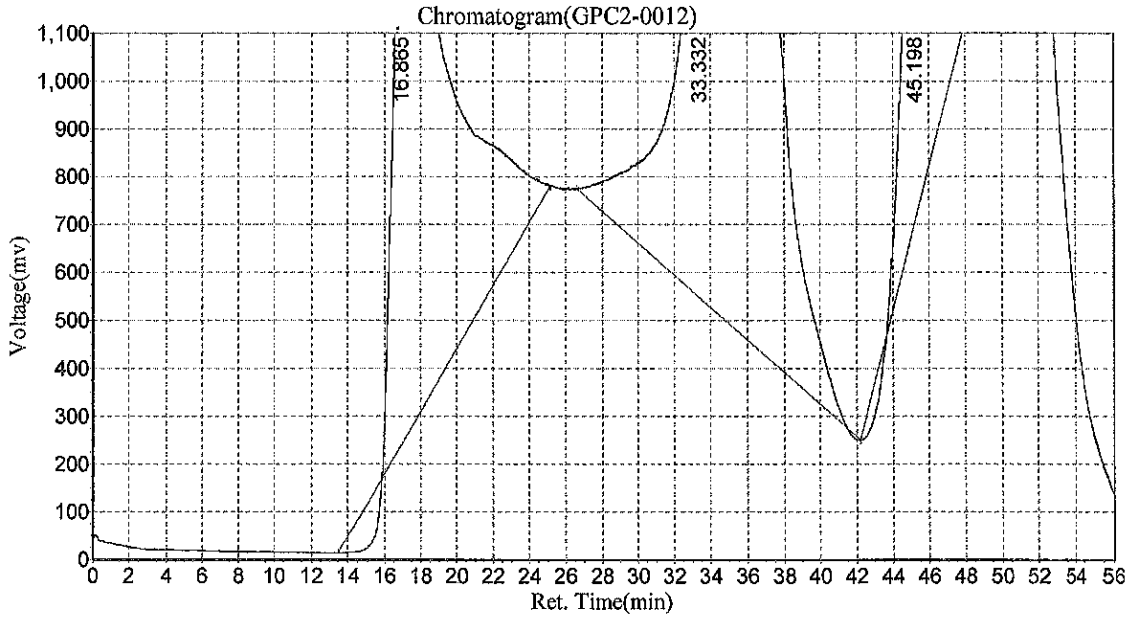


Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.865	1143370.625	266933952.000	34.3376
2		33.332	825429.313	383963680.000	49.3920
3		45.198	677913.250	126482984.000	16.2704
Total			2646713.188	777380616.000	100.000

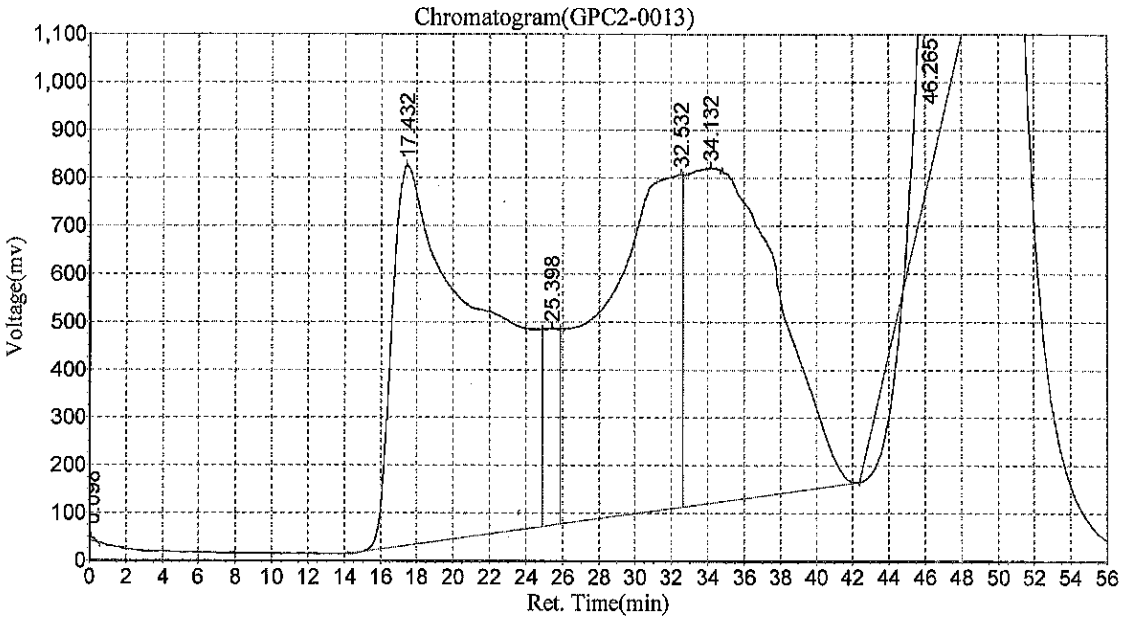
Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

Date:2023-01-28,6:48:58 AM
Data File:c:\n2000\data\gpc2\012723\GPC2-0013
Method File:E:\GPC2_InHouse.mtd

Analyst£ºCTO
Date/Time2023-01-28,6:49:00 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.098	6137.733	109161.000	0.0130
2		17.432	793916.188	275632224.000	32.8020
3		25.398	412373.906	24703880.000	2.9399
4		32.532	695349.563	218738752.000	26.0313
5		34.132	700095.688	243405104.000	28.9668
6		46.265	573110.250	77701080.000	9.2469
Total			3180983.327	840290201.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

Date:2023-01-28,7:46:40 AM
Data File:c:\n2000\data\gpc2\012723\GPC2-0014
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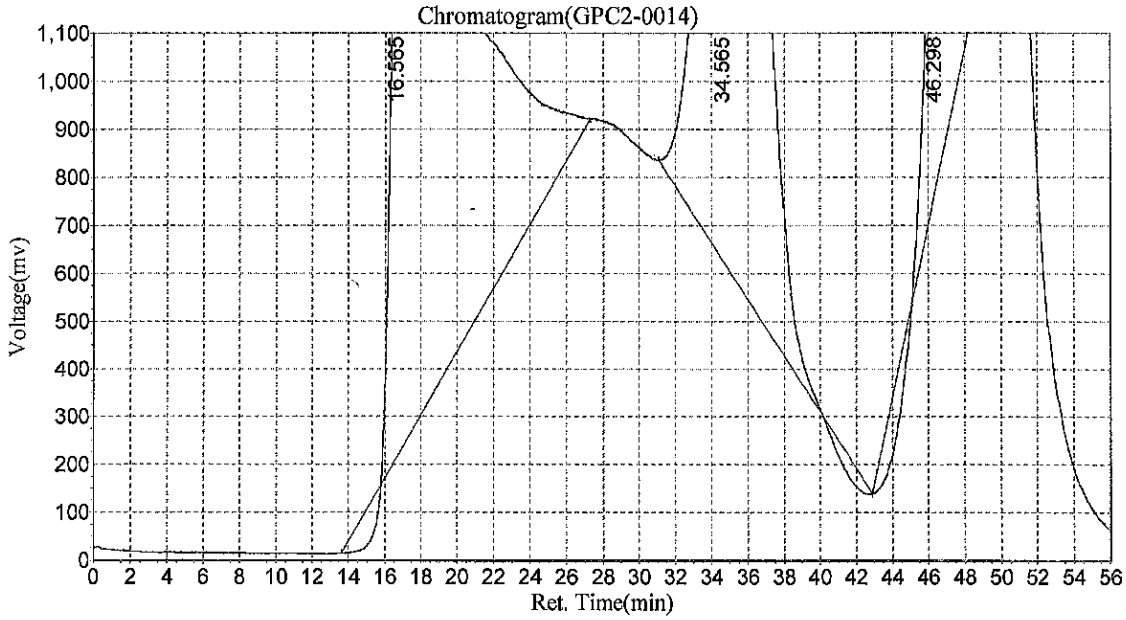
Analyst£°CTO
Date/Time2023-01-28,7:46:41 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.565	1170699.875	385039584.000	54.5110
2		34.565	743407.438	242121840.000	34.2778
3		46.298	624967.125	79191248.000	11.2113
Total			2539074.438	706352672.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

Date:2023-01-28,8:44:23 AM
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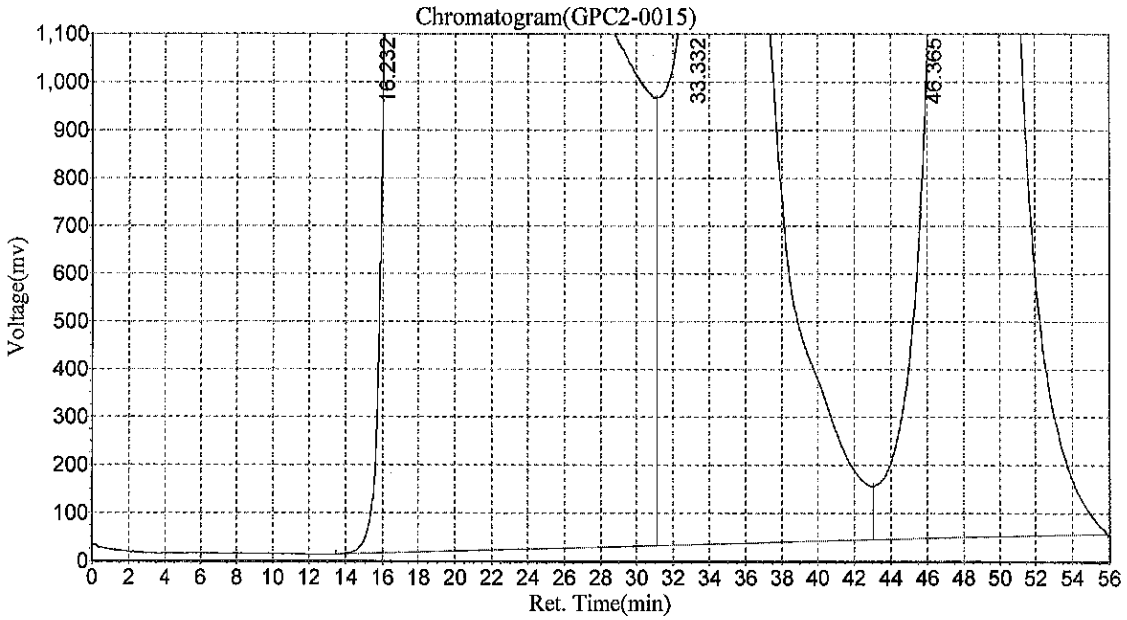

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.232	1362134.875	1135400576.000	50.0039
2		33.332	1338501.750	591854016.000	26.0657
3		46.365	1328132.000	543369408.000	23.9304
Total			4028768.625	2270624000.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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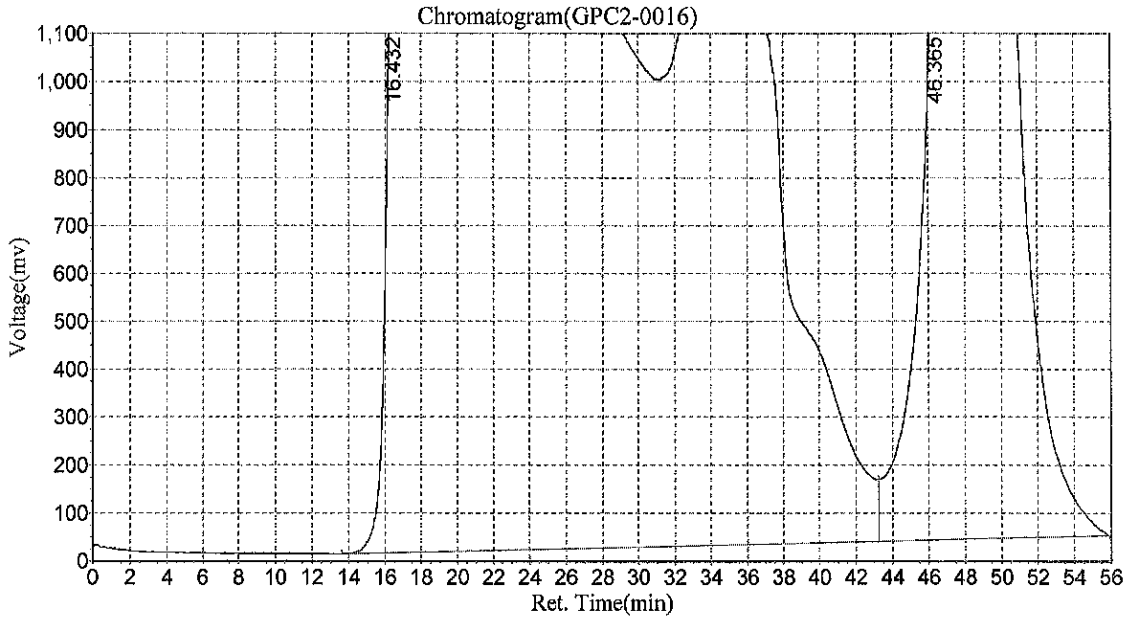

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.432	1362101.500	1724842752.000	76.9808
2		46.365	1332362.500	515771616.000	23.0192
Total			2694464.000	2240614368.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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Method File:E:\GPC2_InHouse.mtd

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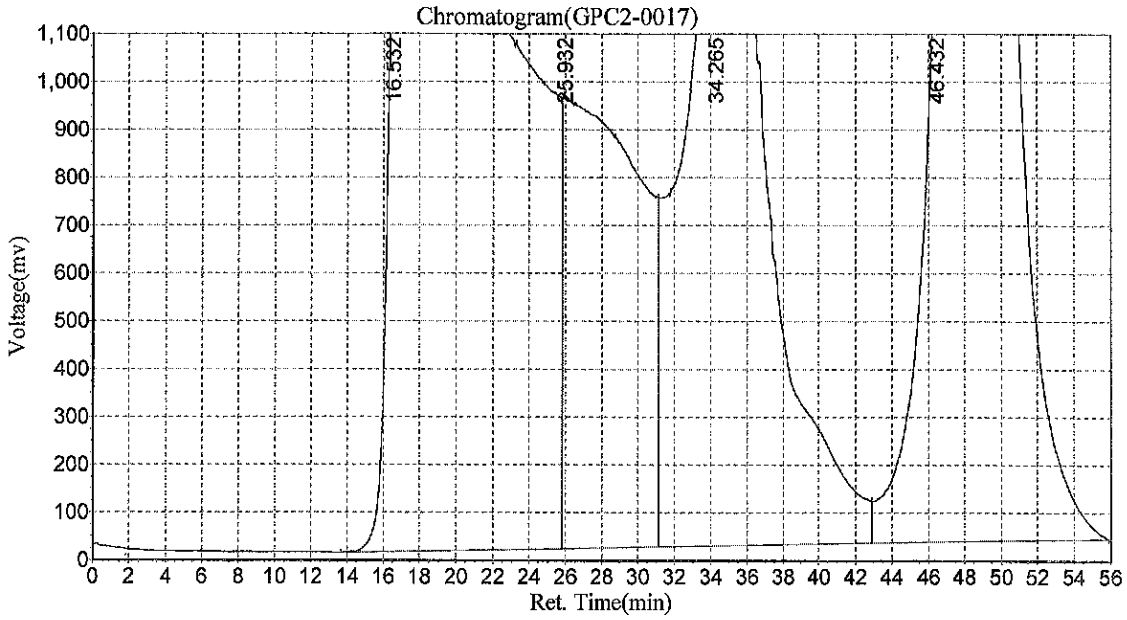

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.532	1361180.500	690363968.000	35.1591
2		25.932	945081.688	271317120.000	13.8177
3		34.265	1343944.875	487445600.000	24.8248
4		46.432	1338246.500	514416928.000	26.1984
Total			4988453.563	1963543616.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0007	Cleanup Type:	GPC
Cleanup Method:	EPA 3640A GPC Cleanup 1:1	Analysis:	EPA 8270E

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1215	23A0133-10	NT1423022153.D	01/28/2023	
LCS	BLA0393-BS1	NT1423022135.D	01/28/2023	
LCS Dup	BLA0393-BSD1	NT1423022136.D	01/28/2023	
Matrix Spike	BLA0393-MS1	NT1423022144.D	01/28/2023	
Matrix Spike Dup	BLA0393-MSD1	NT1423022145.D	01/28/2023	
Reference	BLA0393-SRM1	NT1423022137.D	01/28/2023	
Blank	BLA0393-BLK2	NT1423022150.D	01/28/2023	
LDW23-SC1241	23A0133-06	NT1423022142.D	01/28/2023	
LDW23-SC1250	23A0133-03	NT1423022141.D	01/28/2023	
LDW23-SC1185	23A0133-08	NT1423022151.D	01/28/2023	
LDW23-SS1110	23A0133-13	NT1423022156.D	01/28/2023	
LDW23-SC1222	23A0133-11	NT1423022154.D	01/28/2023	
LDW23-SC1227	23A0133-12	NT1423022155.D	01/28/2023	
LDW23-SS1092	23A0133-15	NT1423022158.D	01/28/2023	
LDW23-SC1234	23A0133-09	NT1423022152.D	01/28/2023	
LDW23-SS1091	23A0133-16	NT1423022159.D	01/28/2023	
Blank	BLA0393-BLK1	NT1423022134.D	01/28/2023	
LDW23-SS1109	23A0133-14	NT1423022157.D	01/28/2023	
LDW23-IT1217	23A0133-07	NT1423022143.D	01/28/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0007

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLA0166-GPC1** **Printed: 2/2/2023 10:43:37AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0133-03	C	LDW23-SC1250	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-03	C	LDW23-SC1250	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-06	C	LDW23-SC1241	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-06	C	LDW23-SC1241	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-07	C	LDW23-IT1217	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-07	C	LDW23-IT1217	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-08	C	LDW23-SC1185	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-08	C	LDW23-SC1185	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-09	C	LDW23-SC1234	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-09	C	LDW23-SC1234	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-10	C	LDW23-SC1215	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-10	C	LDW23-SC1215	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-11	C	LDW23-SC1222	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-11	C	LDW23-SC1222	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-12	C	LDW23-SC1227	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-12	C	LDW23-SC1227	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-13	C	LDW23-SS1110	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-13	C	LDW23-SS1110	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-14	C	LDW23-SS1109	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-14	C	LDW23-SS1109	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-15	C	LDW23-SS1092	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-15	C	LDW23-SS1092	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0007

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLA0166-GPC1** **Printed: 2/2/2023 10:43:37AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0133-16	C	LDW23-SS1091	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-16	C	LDW23-SS1091	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
BLA0393-BLK1	-	Blank	-	1	1	-	1/28/2023	CTO	
BLA0393-BLK2	-	Blank	-	1	1	-	1/28/2023	CTO	
BLA0393-BS1	-	LCS	-	1	1	-	1/28/2023	CTO	
BLA0393-BS2	-	LCS	-	1	1	-	1/28/2023	CTO	
BLA0393-BSD1	-	LCS Dup	-	1	1	-	1/28/2023	CTO	
BLA0393-BSD2	-	LCS Dup	-	1	1	-	1/28/2023	CTO	
BLA0393-MS1	-	Matrix Spike	-	1	1	-	1/28/2023	CTO	
BLA0393-MS2	-	Matrix Spike	-	1	1	-	1/28/2023	CTO	
BLA0393-MSD1	-	Matrix Spike Dup	-	1	1	-	1/28/2023	CTO	
BLA0393-MSD2	-	Matrix Spike Dup	-	1	1	-	1/28/2023	CTO	
BLA0393-SRM1	-	Reference	-	1	1	-	1/28/2023	CTO	
BLA0393-SRM2	-	Reference	-	1	1	-	1/28/2023	CTO	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8270E

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLA0393-BLK1	File ID:	NT1423022134.D
Sampled:	N/A	Prepared:	01/18/23 15:24	Analyzed:	02/22/23 09:21
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 1 mL
Batch:	BLA0393	Sequence:	SLB0305	Calibration:	GB00046
Instrument:	NT14	Column:	ZB-5MS	Cleanups:	GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
108-95-2	Phenol	1	20.0	U	4.4	20.0
106-44-5	4-Methylphenol	1	20.0	U	7.4	20.0
91-20-3	Naphthalene	1	20.0	U	4.2	20.0
91-57-6	2-Methylnaphthalene	1	20.0	U	4.5	20.0
208-96-8	Acenaphthylene	1	20.0	U	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	20.0	U	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	20.0	U	8.7	20.0
120-12-7	Anthracene	1	20.0	U	7.2	20.0
206-44-0	Fluoranthene	1	20.0	U	6.1	20.0
129-00-0	Pyrene	1	20.0	U	5.7	20.0
85-68-7	Butylbenzylphthalate	1	20.0	U	9.4	20.0
56-55-3	Benzo(a)anthracene	1	20.0	U	6.0	20.0
218-01-9	Chrysene	1	20.0	U	6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	50.0	U	5.5	50.0
	Benzofluoranthenes, Total	1	40.0	U	10.0	40.0
50-32-8	Benzo(a)pyrene	1	20.0	U	4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	20.0	U	14.7	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	20.0	U	13.6	20.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	750.00	435	58.0	27 - 120	
Phenol-d5	750.00	434	57.8	29 - 120	
2-Chlorophenol-d4	750.00	454	60.5	31 - 120	
1,2-Dichlorobenzene-d4	500.00	307	61.3	32 - 120	
Nitrobenzene-d5	500.00	337	67.3	30 - 120	
2-Fluorobiphenyl	500.00	341	68.3	35 - 120	
2,4,6-Tribromophenol	750.00	313	41.8	24 - 134	
p-Terphenyl-d14	500.00	352	70.3	37 - 120	

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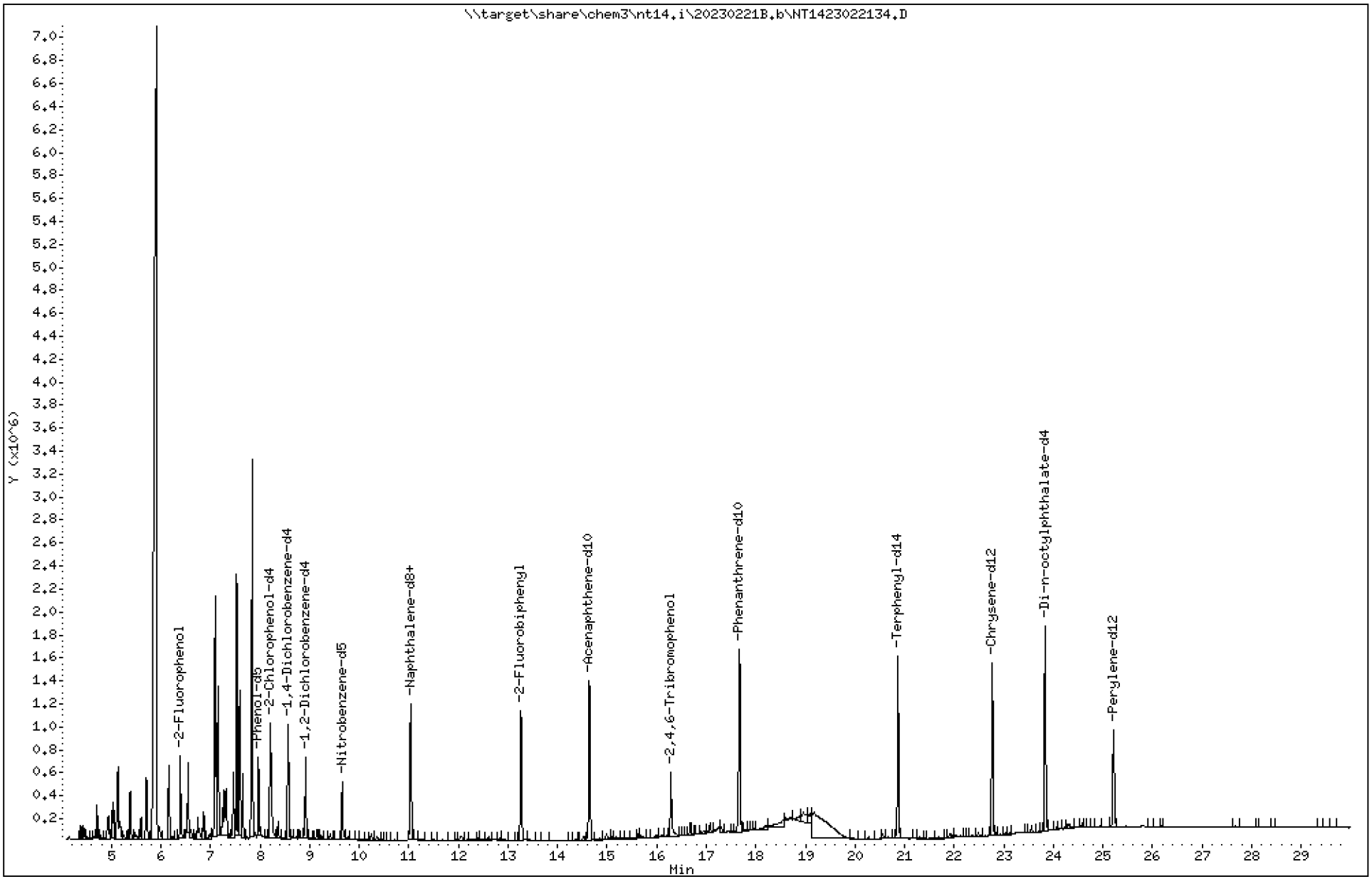
Date : 22-FEB-2023 09:21
Client ID:
Sample Info: BLA0393-BLK1

Instrument: nt14.i
Operator: DSD
Column phase: ZB-5msi
Column diameter: 0.25



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Date : 22-FEB-2023 09:21

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BLK1

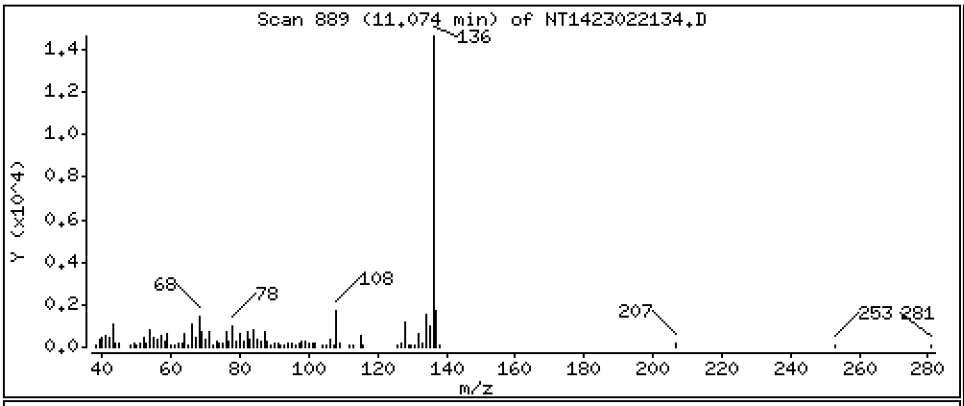
Operator: DSD

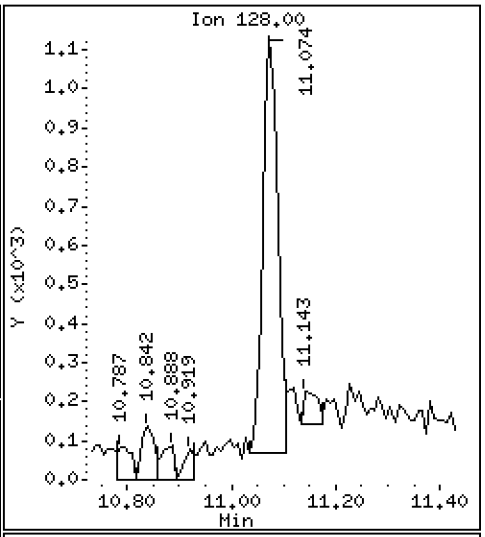
Column phase: ZB-5msi

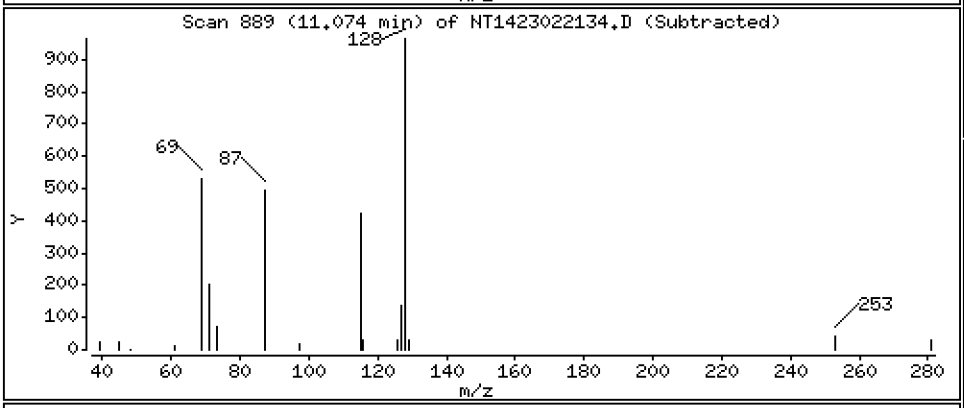
Column diameter: 0.25

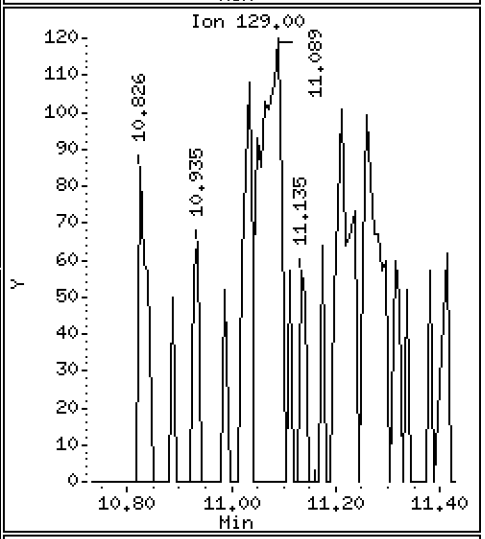
28 Naphthalene

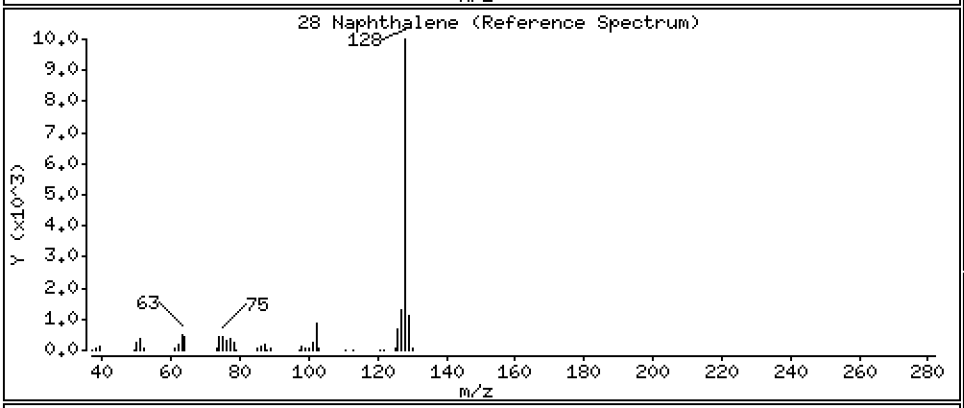
Concentration: 0.007922 ug/mL

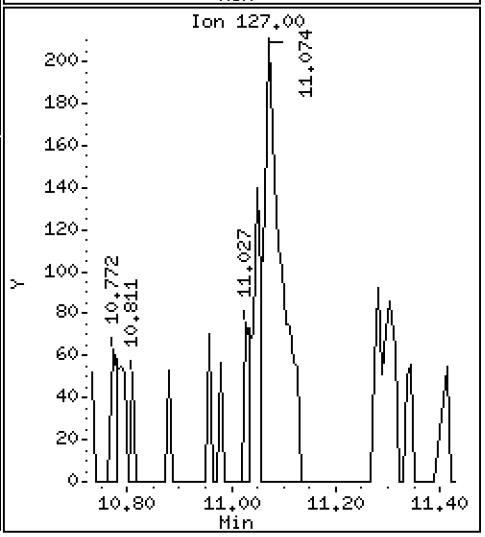


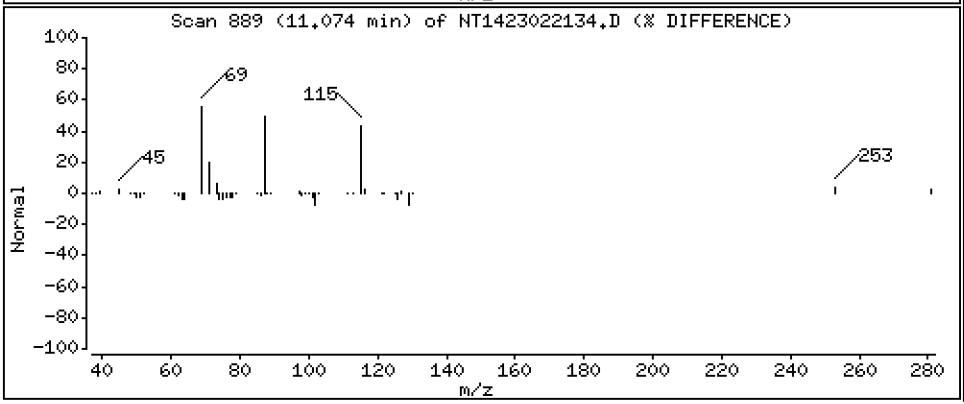












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Date : 22-FEB-2023 09:21

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BLK1

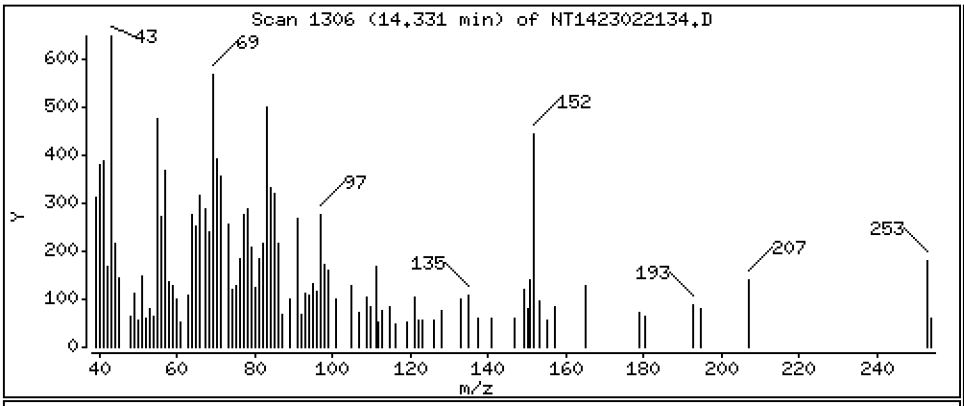
Operator: DSD

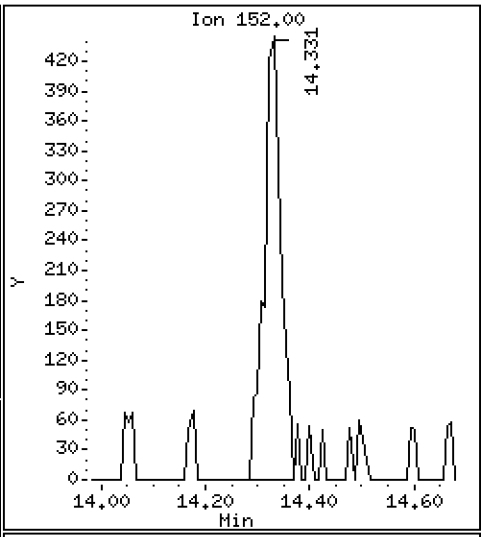
Column phase: ZB-5msi

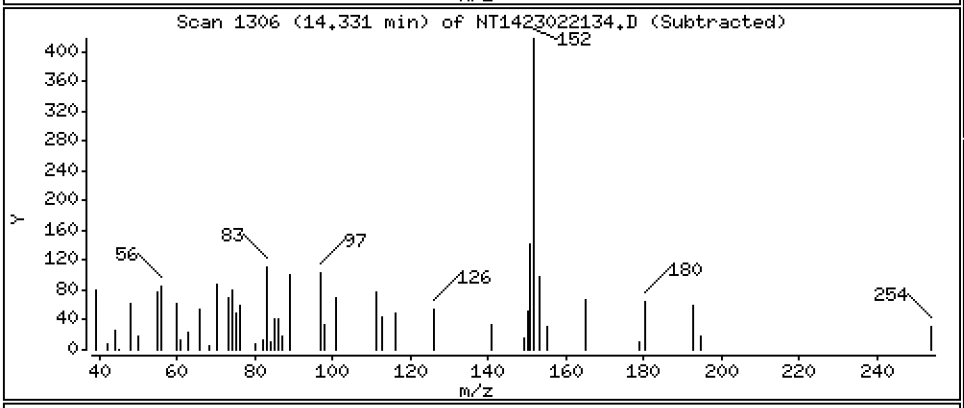
Column diameter: 0.25

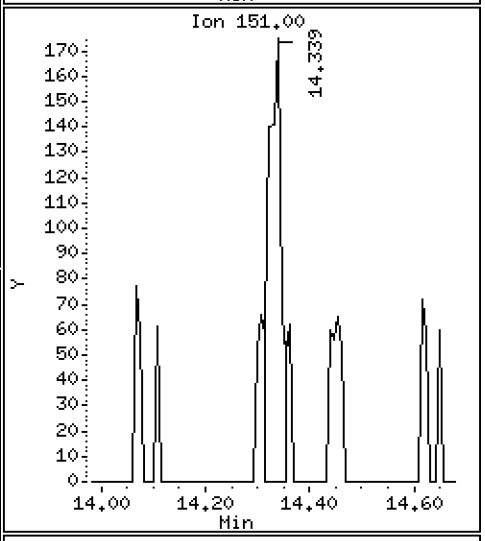
40 Acenaphthylene

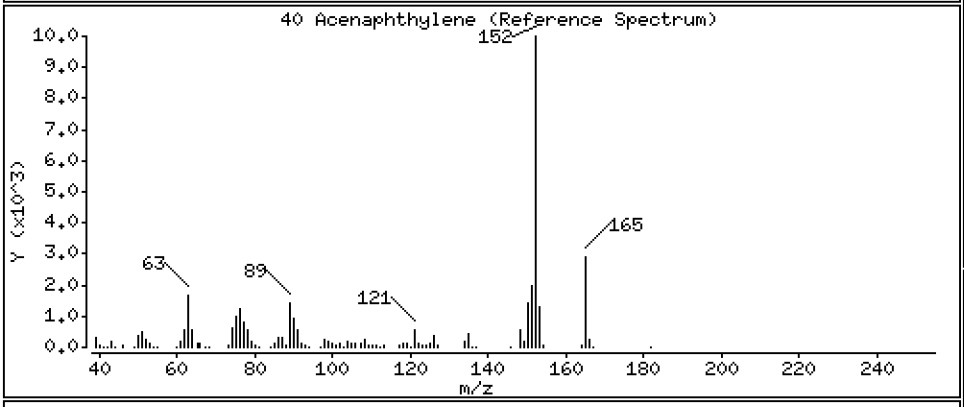
Concentration: 0.003619 ug/mL

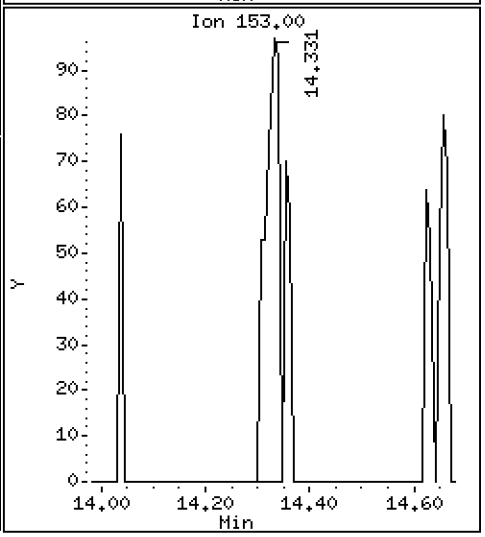


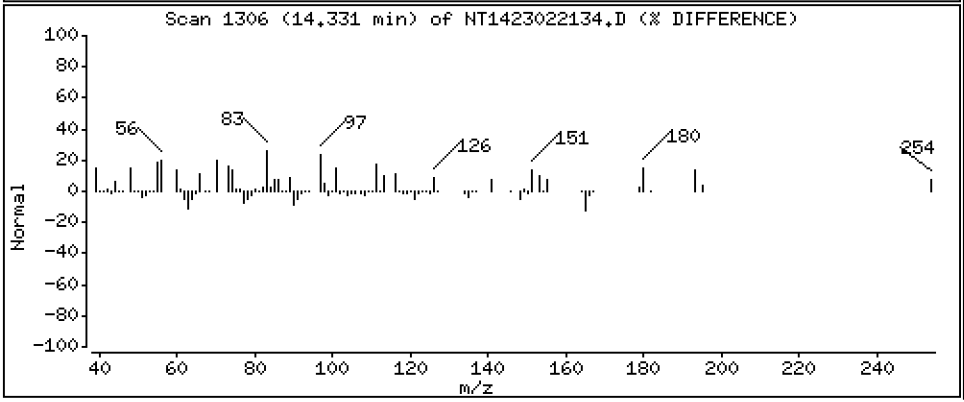












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Date : 22-FEB-2023 09:21

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BLK1

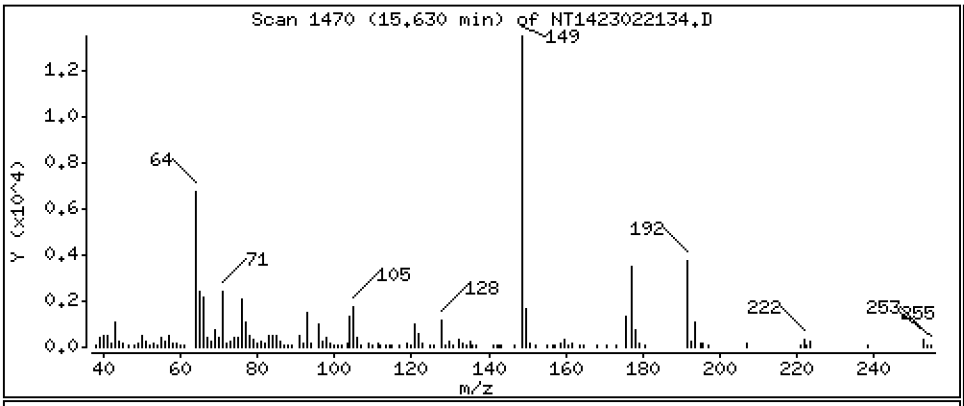
Operator: DSD

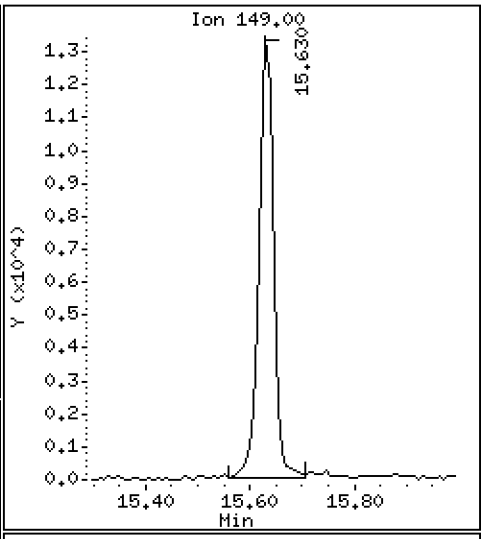
Column phase: ZB-5msi

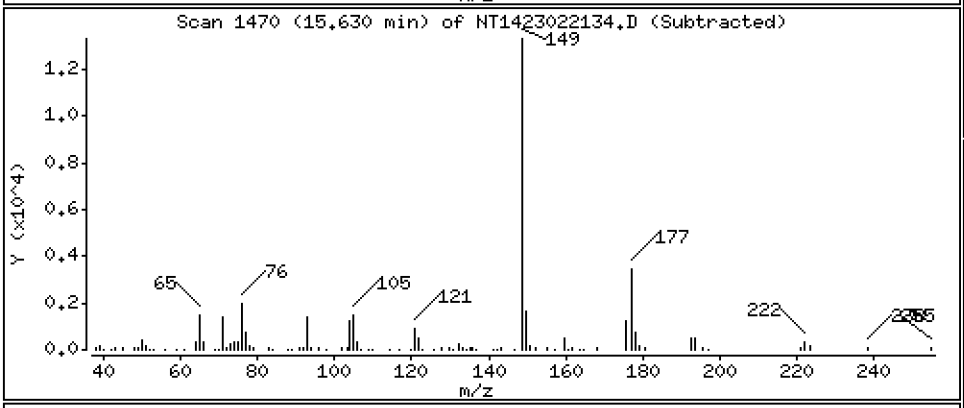
Column diameter: 0.25

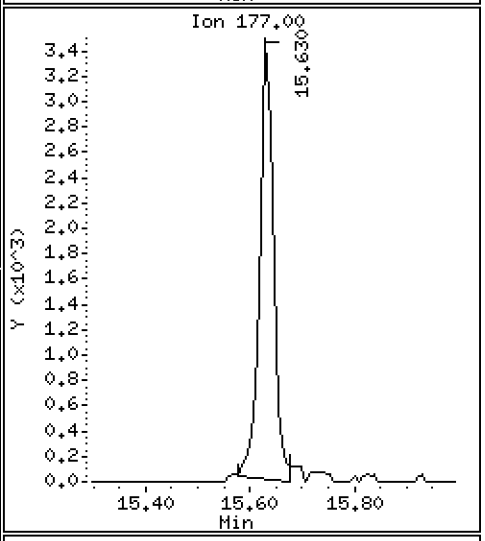
50 Diethylphthalate

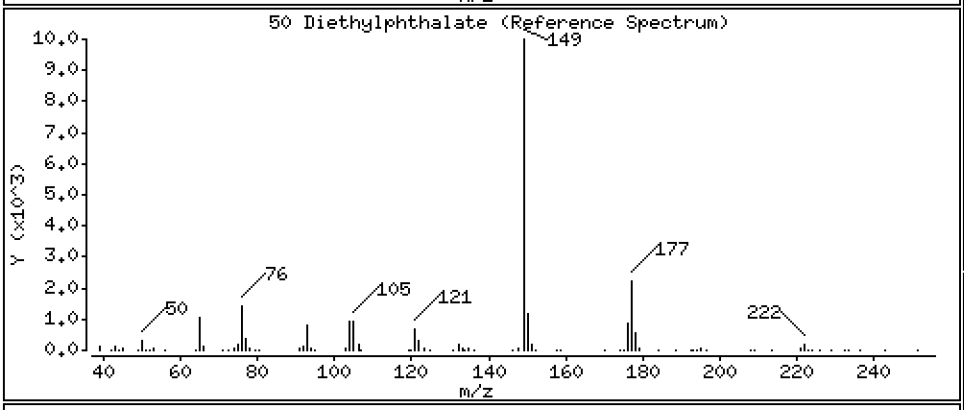
Concentration: 0.1110 ug/mL

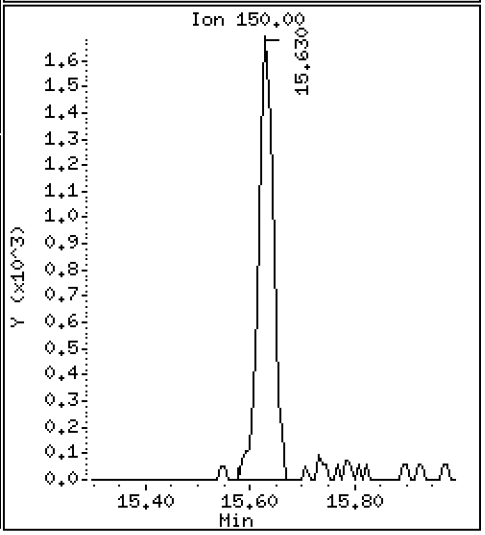


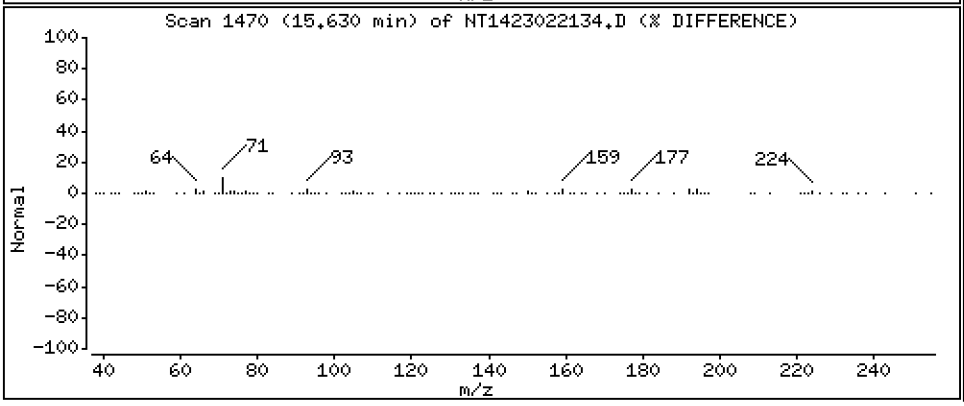












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Date : 22-FEB-2023 09:21

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BLK1

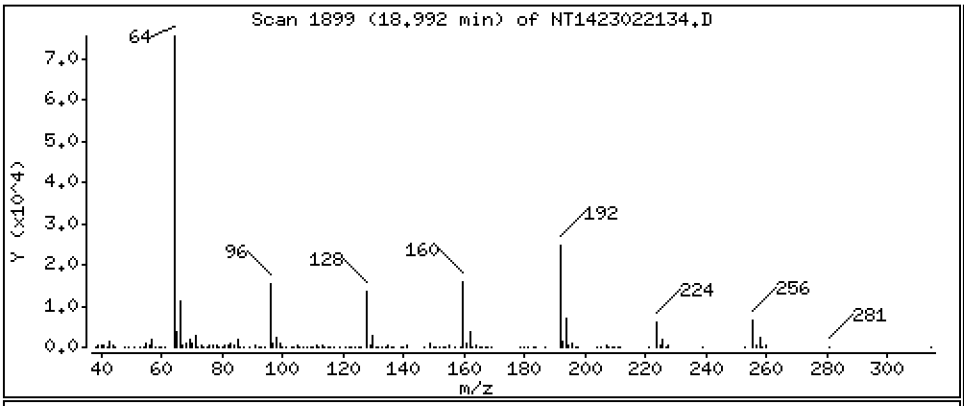
Operator: DSD

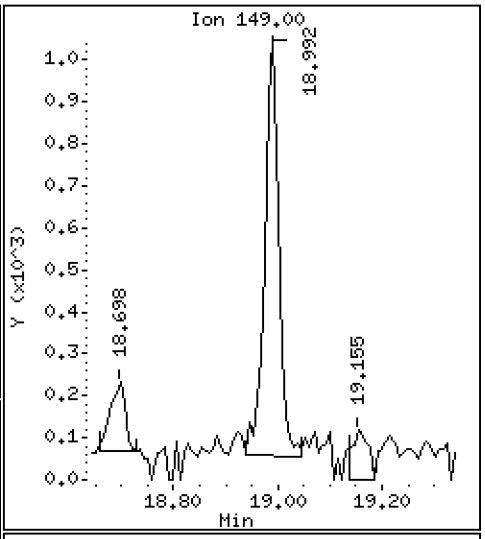
Column phase: ZB-5msi

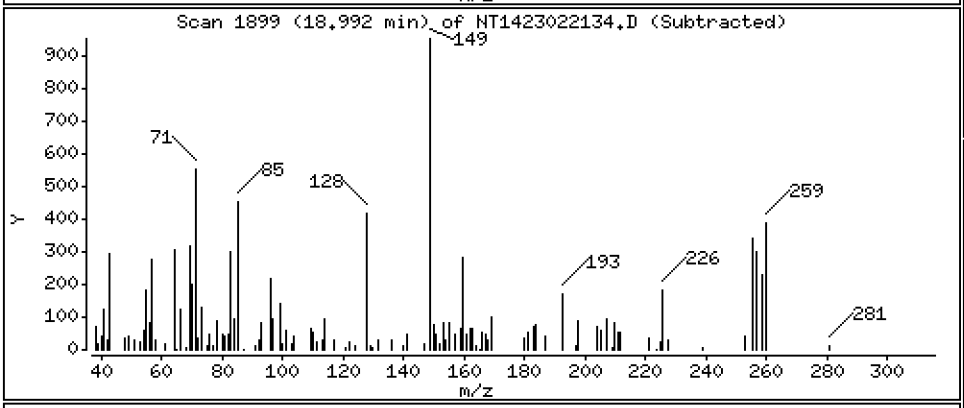
Column diameter: 0.25

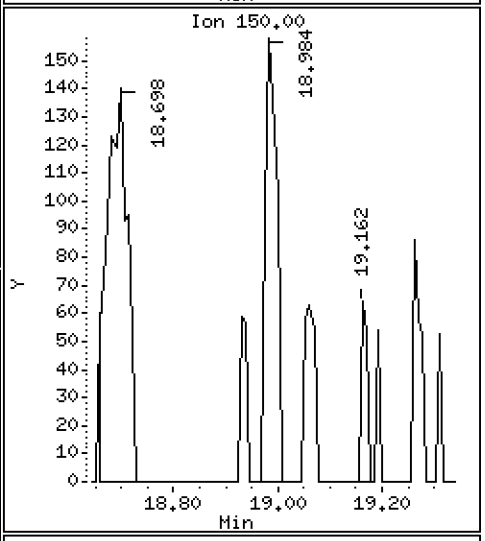
63 Di-n-butylphthalate

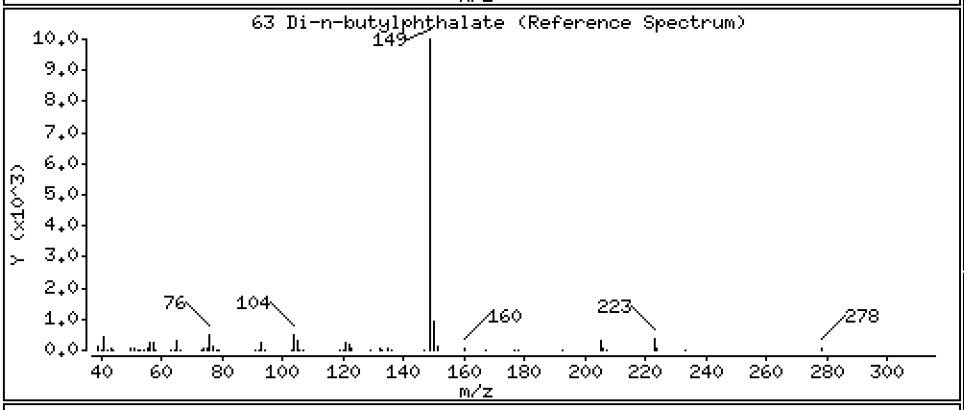
Concentration: 0.005907 ug/mL

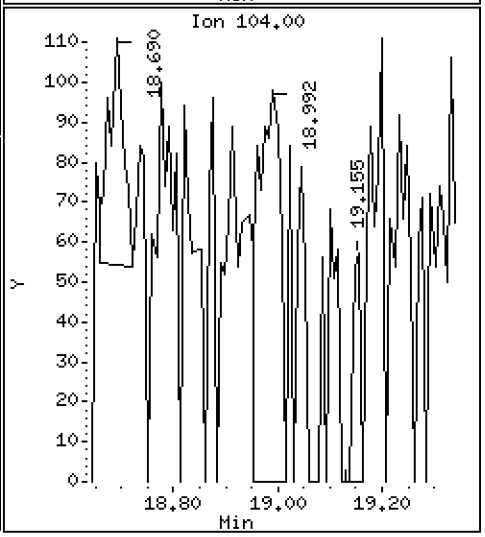


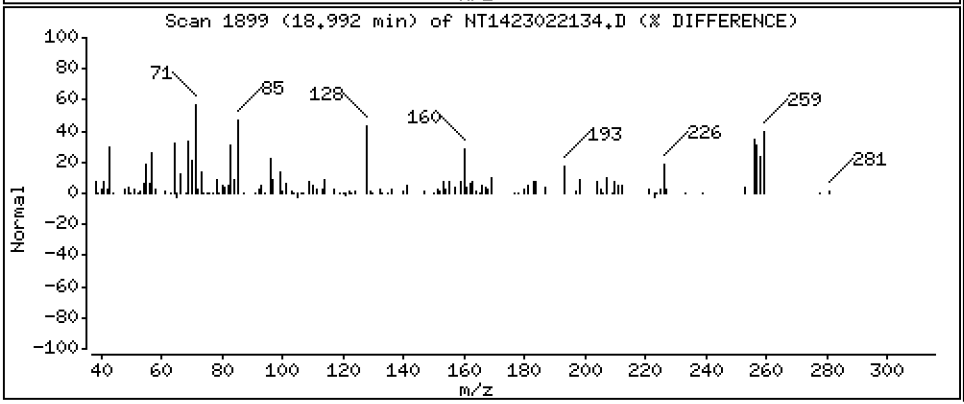












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Date : 22-FEB-2023 09:21

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BLK1

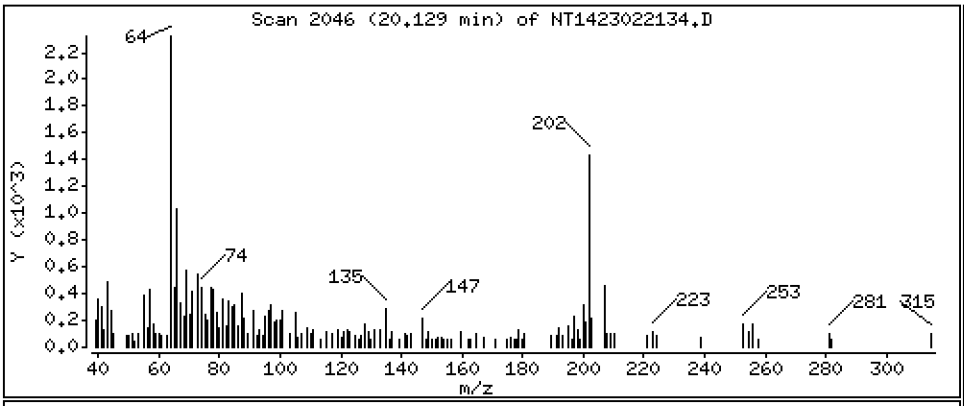
Operator: DSD

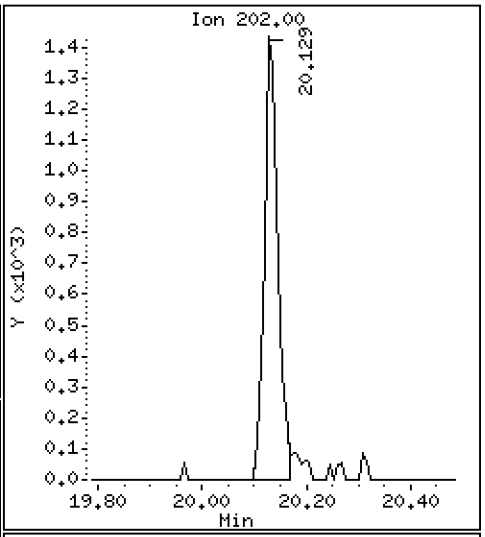
Column phase: ZB-5msi

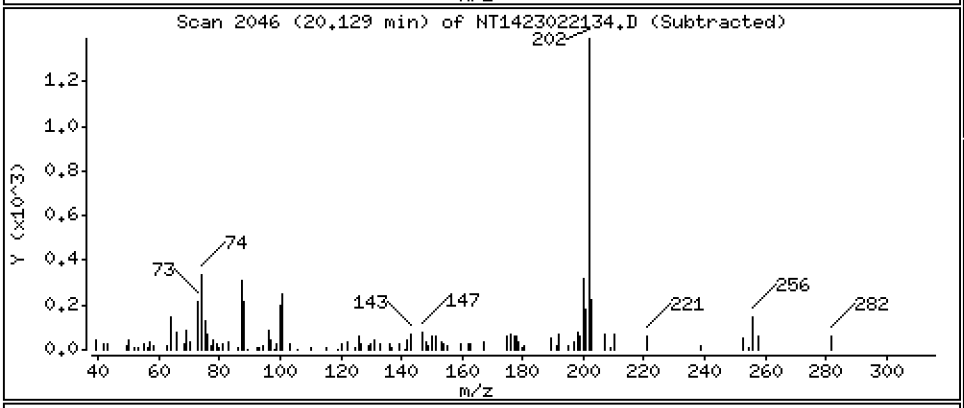
Column diameter: 0.25

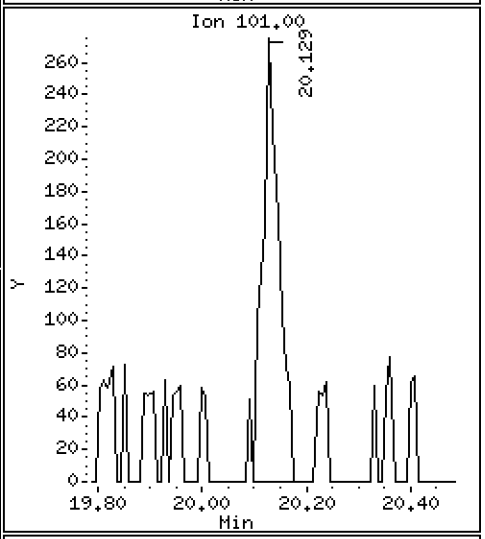
64 Fluoranthene

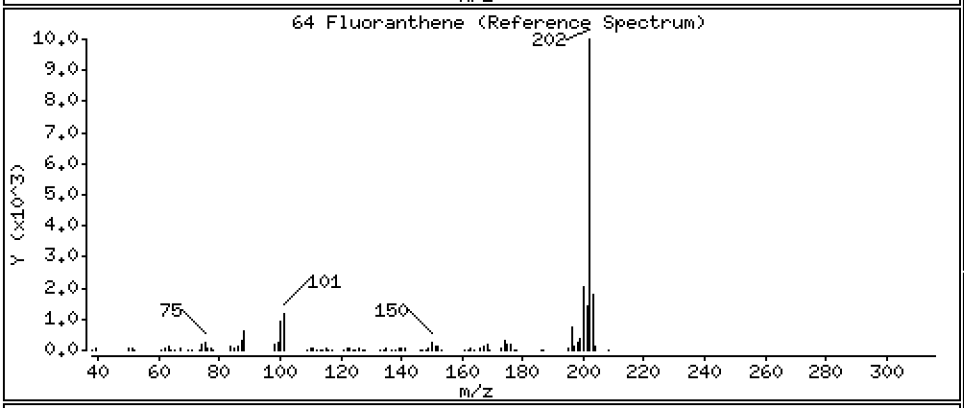
Concentration: 0.006321 ug/mL

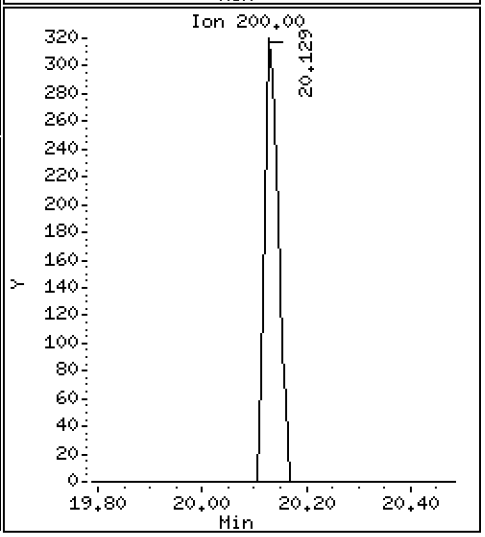


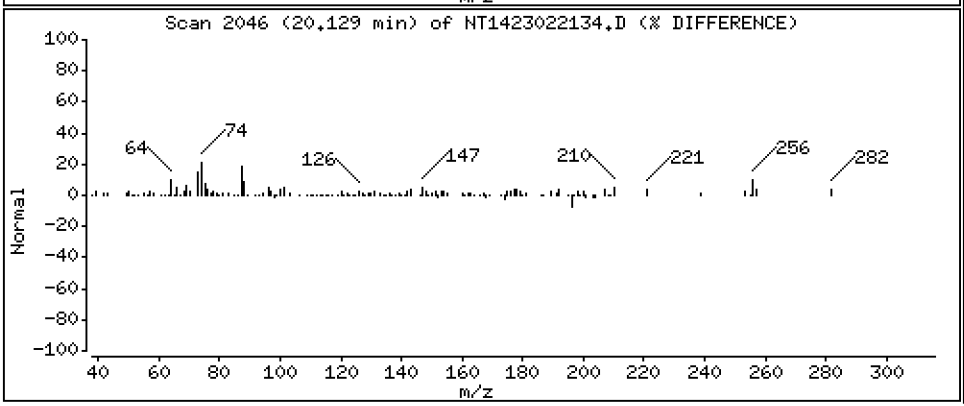












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Date : 22-FEB-2023 09:21

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BLK1

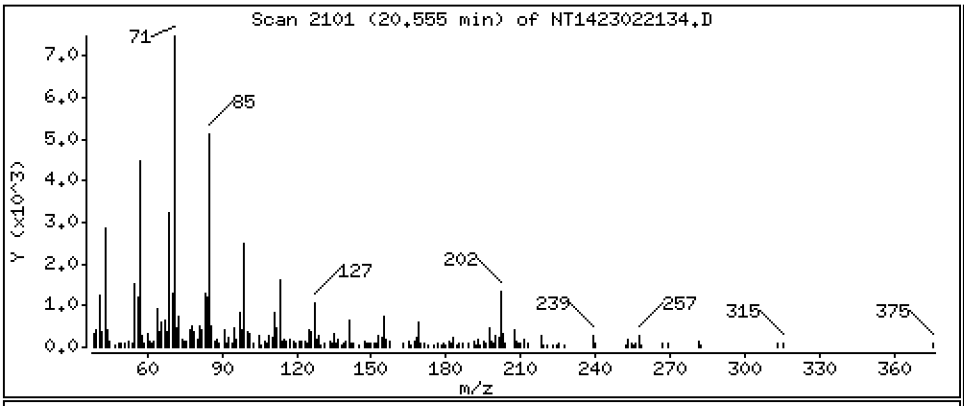
Operator: DSD

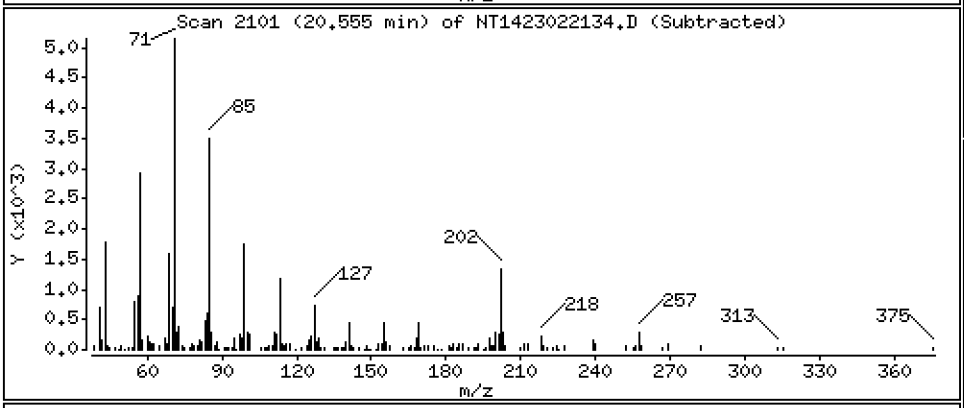
Column phase: ZB-5msi

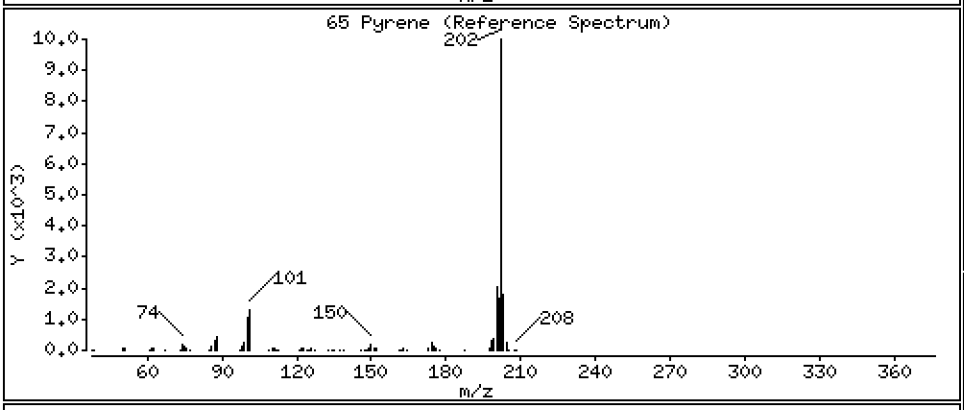
Column diameter: 0.25

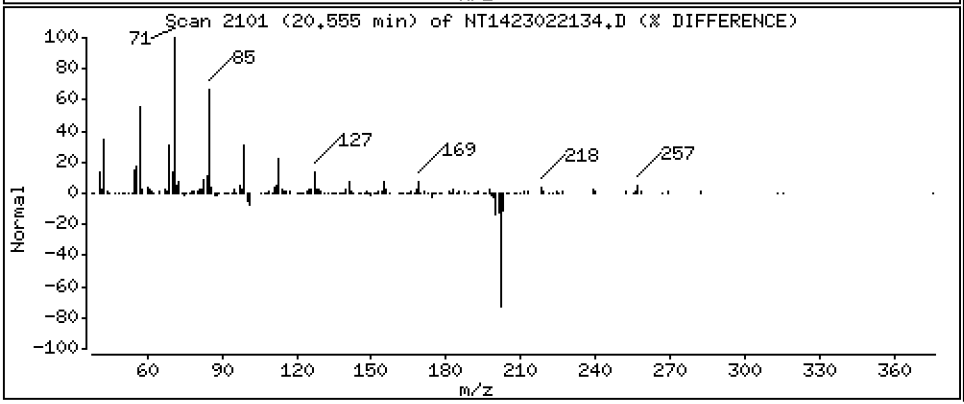
65 Pyrene

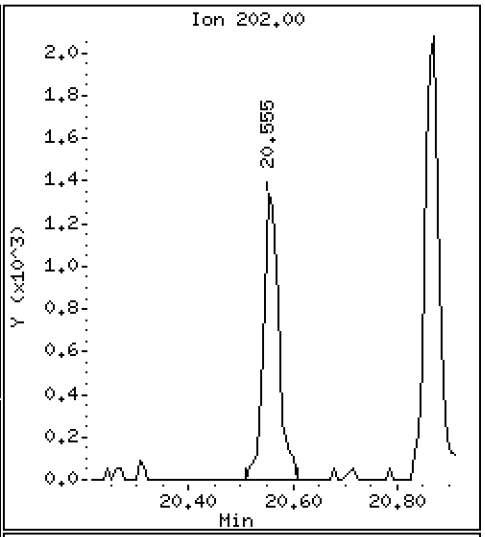
Concentration: 0.006349 ug/mL

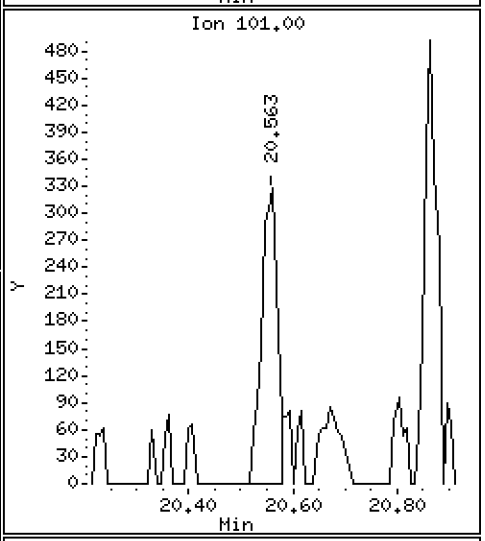


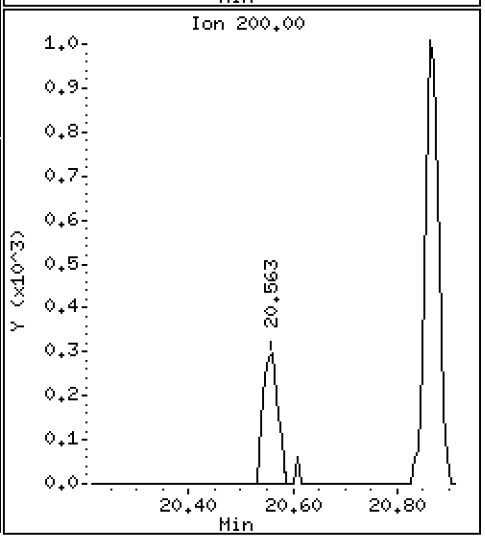












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Date : 22-FEB-2023 09:21

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BLK1

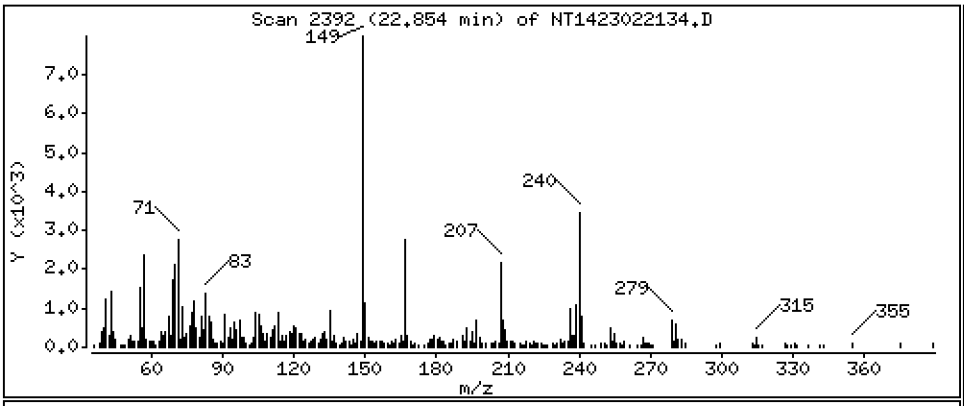
Operator: DSD

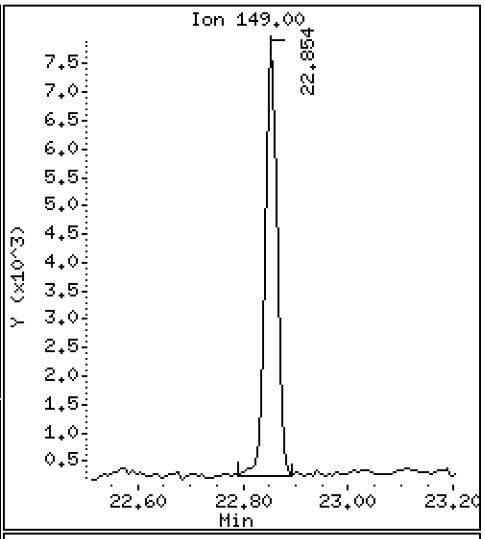
Column phase: ZB-5msi

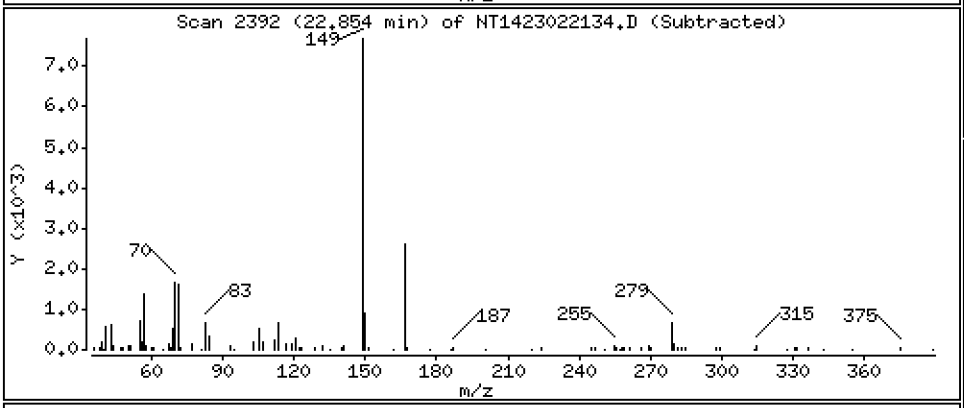
Column diameter: 0.25

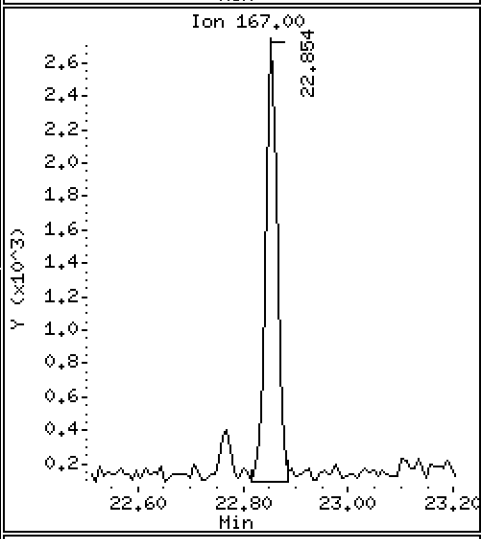
72 bis(2-Ethylhexyl)phthalate

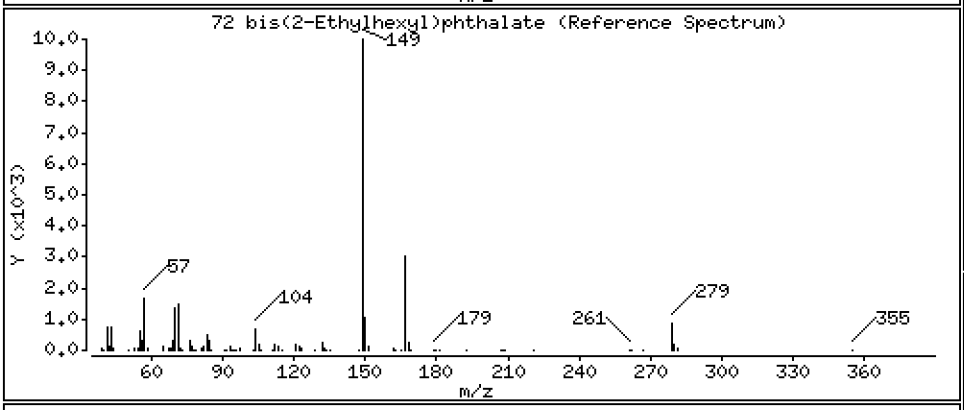
Concentration: 0.04432 ug/mL

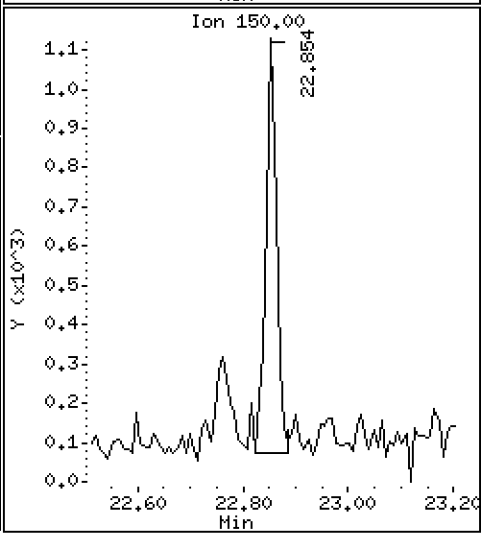


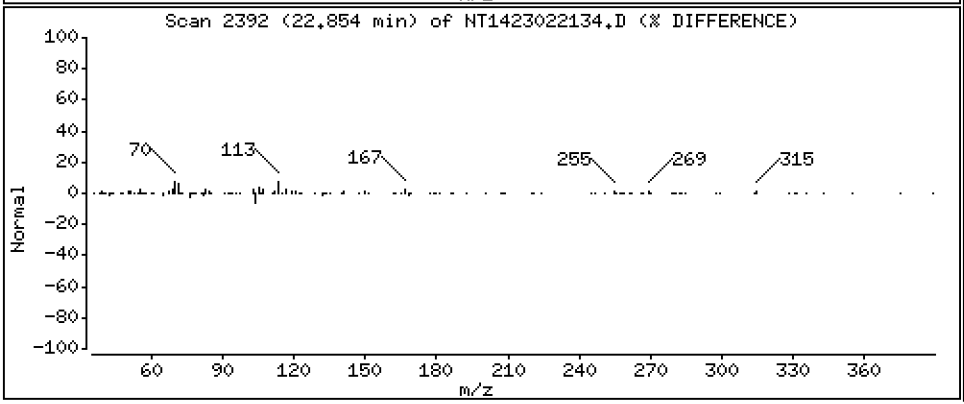












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

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Inj Date : 22-FEB-2023 09:21 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : BLA0393-BLK1
Misc Info :
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Method : \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Meth Date : 23-Feb-2023 09:59 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.388	6.373	(0.746)	330402	4.34972	4.350
$	2 Phenol-d5	99	7.965	7.965	(0.930)	522362	4.33504	4.335
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	8.204	8.212	(0.958)	390399	4.54065	4.541
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.560	8.568	(1.000)	284140	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.917	8.925	(1.042)	197553	3.06537	3.065
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	9.654	9.662	(0.875)	403561	3.36630	3.366
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.034	11.042	(1.000)	1037690	4.00000	
	28 Naphthalene	128	11.073	11.081	(1.003)	2027	0.00792	0.007922
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.262	13.270	(0.906)	744971	3.41440	3.414
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	14.330	14.331	(0.979)	983	0.00362	0.003619
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	14.640	14.648	(1.000)	609838	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	Compound Not Detected.					
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	Compound Not Detected.					
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	15.630	15.645	(1.068)	27496	0.11103	0.1110
	49	Fluorene	166	Compound Not Detected.					
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.285	16.293	(1.112)	110520	3.13162	3.132
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	17.669	17.676	(1.000)	1243935	4.00000	
	60	Phenanthrene	178	Compound Not Detected.					
	61	Anthracene	178	Compound Not Detected.					
	62	Carbazole	167	Compound Not Detected.					
	63	Di-n-butylphthalate	149	18.992	18.992	(1.075)	1773	0.00591	0.005907
	64	Fluoranthene	202	20.129	20.137	(0.884)	2480	0.00632	0.006321
	65	Pyrene	202	20.554	20.562	(0.903)	2634	0.00635	0.006349
$	66	Terphenyl-d14	244	20.864	20.872	(0.916)	1035761	3.51605	3.516
	67	Butylbenzylphthalate	149	Compound Not Detected.					
	68	Benzo(a)anthracene	228	Compound Not Detected.					
*	69	Chrysene-d12	240	22.769	22.769	(1.000)	909432	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	Compound Not Detected.					
	72	bis(2-Ethylhexyl)phthalate	149	22.854	22.854	(0.959)	11287	0.04432	0.04432(H)
*	134	Di-n-octylphthalate-d4	153	23.837	23.837	(1.000)	1479271	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	Compound Not Detected.					
	75	Benzo(k)fluoranthene	252	Compound Not Detected.					
	76	Benzo(a)pyrene	252	Compound Not Detected.					
*	77	Perylene-d12	264	25.215	25.215	(1.000)	647031	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80	Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	Compound Not Detected.					
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

						CONCENTRATIONS	
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	Compound Not Detected.					
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022134.D
Lab Smp Id: BLA0393-BLK1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 06:55
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	235125	117563	470250	284140	20.85
27 Naphthalene-d8	883104	441552	1766208	1037690	17.50
42 Acenaphthene-d10	537789	268895	1075578	609838	13.40
59 Phenanthrene-d10	1079531	539766	2159062	1243935	15.23
69 Chrysene-d12	826409	413205	1652818	909432	10.05
134 Di-n-octylphthala	1339562	669781	2679124	1479271	10.43
77 Perylene-d12	590325	295163	1180650	647031	9.61

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.56	-0.09
27 Naphthalene-d8	11.04	10.54	11.54	11.03	-0.07
42 Acenaphthene-d10	14.65	14.15	15.15	14.64	-0.05
59 Phenanthrene-d10	17.68	17.18	18.18	17.67	-0.04
69 Chrysene-d12	22.77	22.27	23.27	22.77	-0.00
134 Di-n-octylphthala	23.84	23.34	24.34	23.84	-0.00
77 Perylene-d12	25.22	24.72	25.72	25.22	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022134.D

Lab ID: BLA0393-BLK1
nt14.i, ABN.m, 22-FEB-2023 09:21

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: NT1423022130.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8270E

Blank

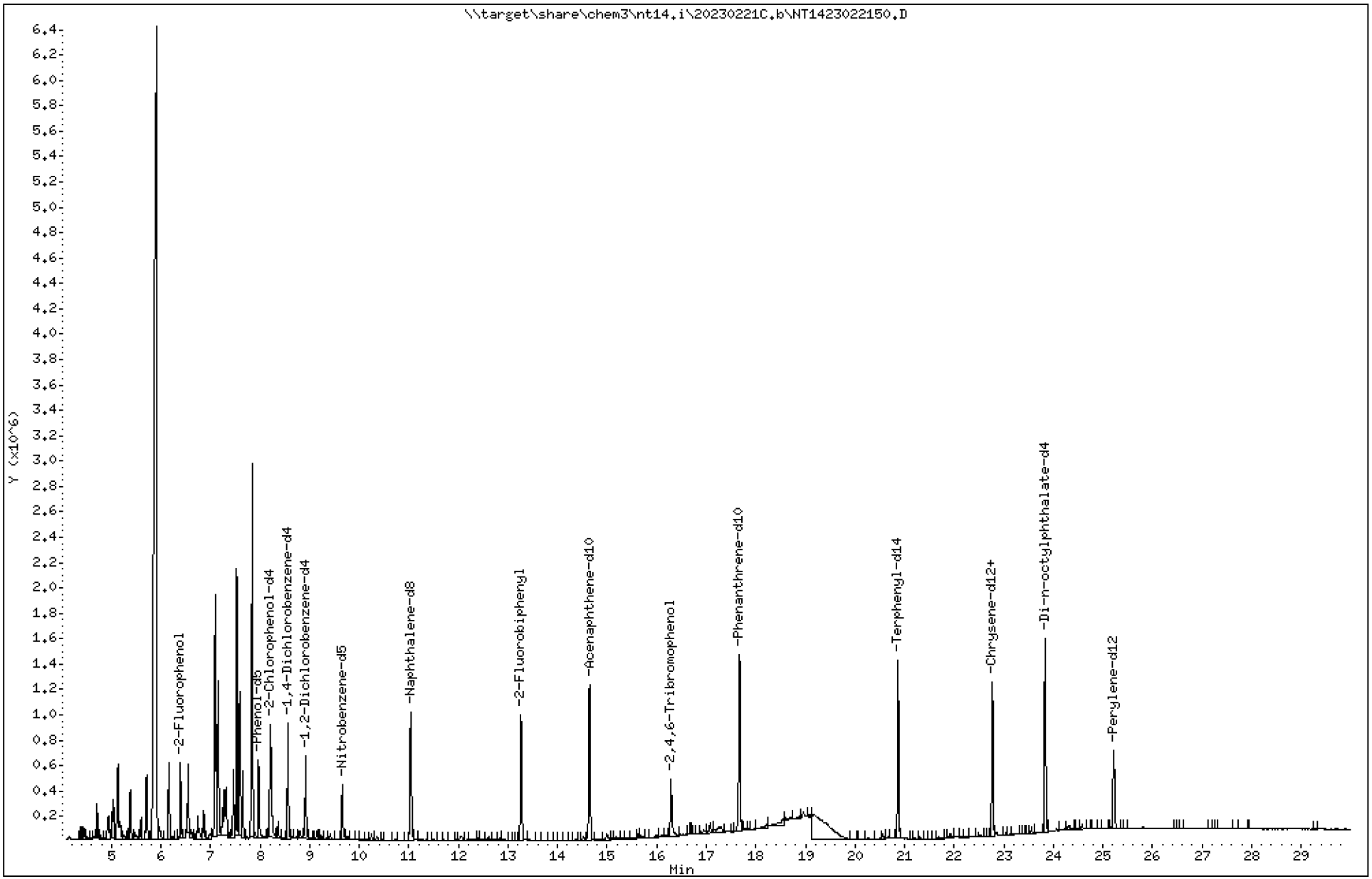
Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLA0393-BLK2	File ID:	NT1423022150.D
Sampled:	N/A	Prepared:	01/18/23 15:24	Analyzed:	02/22/23 18:59
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 1 mL
Batch:	BLA0393	Sequence:	SLB0349	Calibration:	GC00009
Instrument:	NT14	Column:	ZB-5MS	Cleanups:	GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
108-95-2	Phenol	1	20.0	U	4.4	20.0
106-44-5	4-Methylphenol	1	20.0	U	7.4	20.0
91-20-3	Naphthalene	1	20.0	U	4.2	20.0
91-57-6	2-Methylnaphthalene	1	20.0	U	4.5	20.0
208-96-8	Acenaphthylene	1	20.0	U	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	20.0	U	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	20.0	U	8.7	20.0
120-12-7	Anthracene	1	20.0	U	7.2	20.0
206-44-0	Fluoranthene	1	20.0	U	6.1	20.0
129-00-0	Pyrene	1	20.0	U	5.7	20.0
85-68-7	Butylbenzylphthalate	1	20.0	U	9.4	20.0
56-55-3	Benzo(a)anthracene	1	20.0	U	6.0	20.0
218-01-9	Chrysene	1	20.0	U	6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	50.0	U	5.5	50.0
	Benzofluoranthenes, Total	1	40.0	U	10.0	40.0
50-32-8	Benzo(a)pyrene	1	20.0	U	4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	20.0	U	14.7	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	20.0	U	13.6	20.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	750.00	441	58.8	27 - 120	
Phenol-d5	750.00	450	59.9	29 - 120	
2-Chlorophenol-d4	750.00	494	65.8	31 - 120	
1,2-Dichlorobenzene-d4	500.00	309	61.8	32 - 120	
Nitrobenzene-d5	500.00	343	68.7	30 - 120	
2-Fluorobiphenyl	500.00	337	67.4	35 - 120	
2,4,6-Tribromophenol	750.00	326	43.4	24 - 134	
p-Terphenyl-d14	500.00	380	76.1	37 - 120	

Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022150.D
Date : 22-FEB-2023 18:59
Client ID:
Sample Info: BLA0393-BLK2

Instrument: nt14.i
Operator: DSD
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022150.D

Date : 22-FEB-2023 18:59

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BLK2

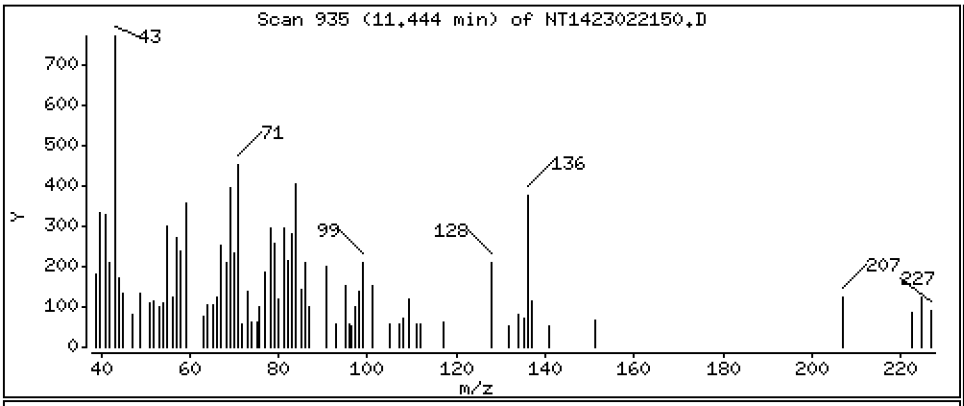
Operator: DSD

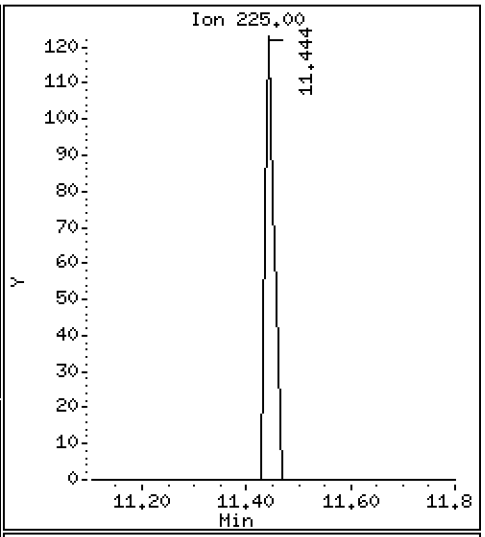
Column phase: ZB-5msi

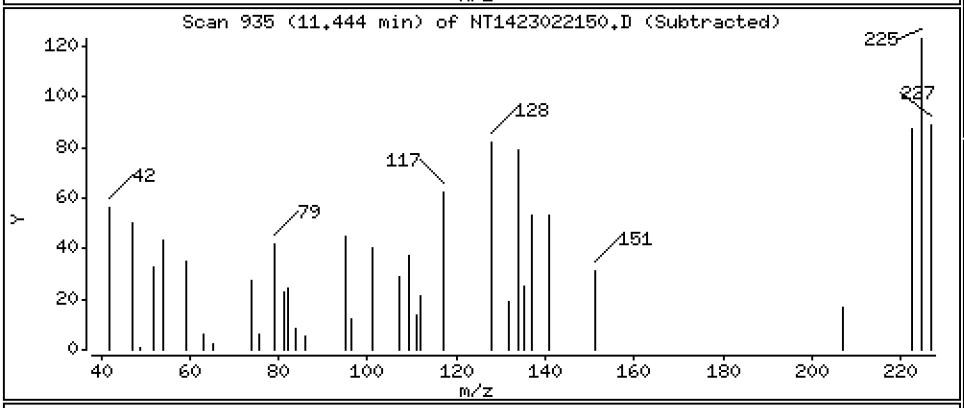
Column diameter: 0.25

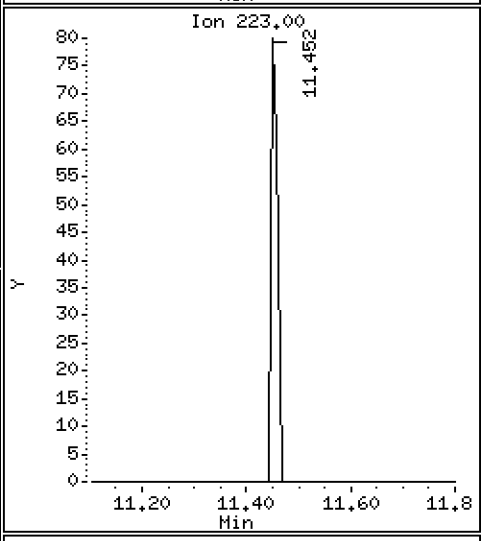
30 Hexachlorobutadiene

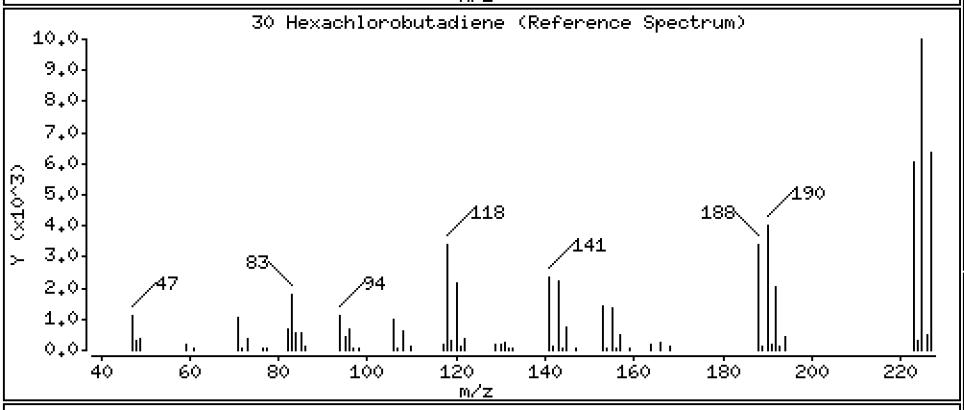
Concentration: 0.002869 ug/mL

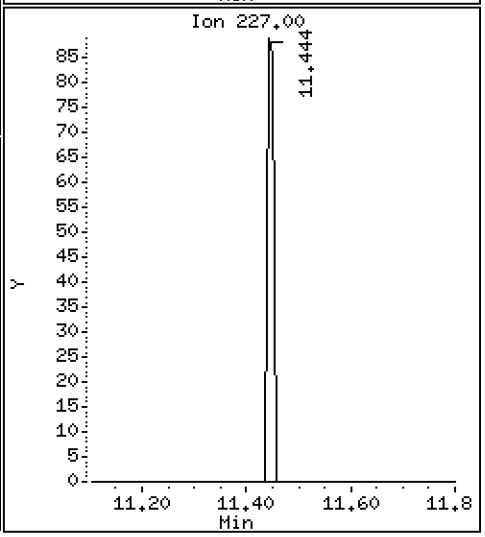


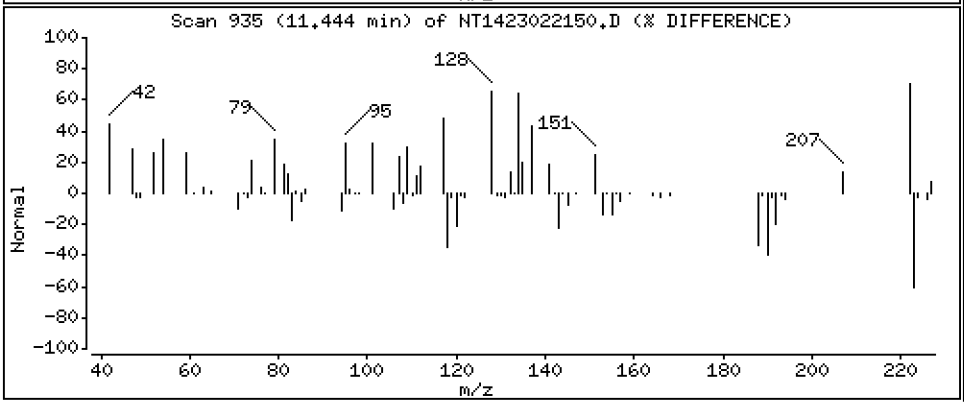












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Date : 22-FEB-2023 18:59

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BLK2

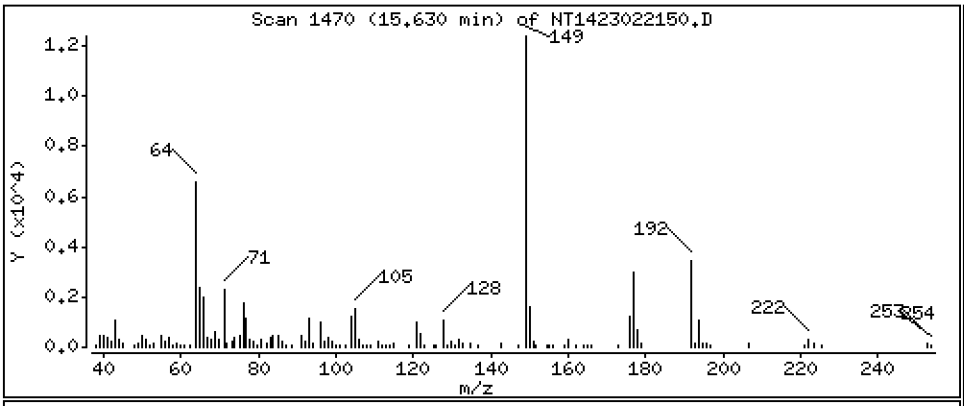
Operator: DSD

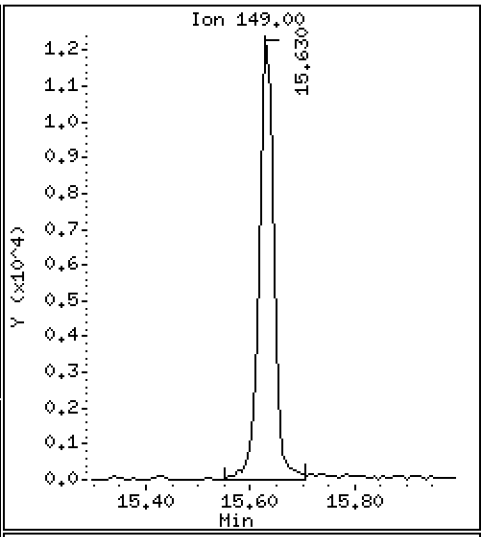
Column phase: ZB-5msi

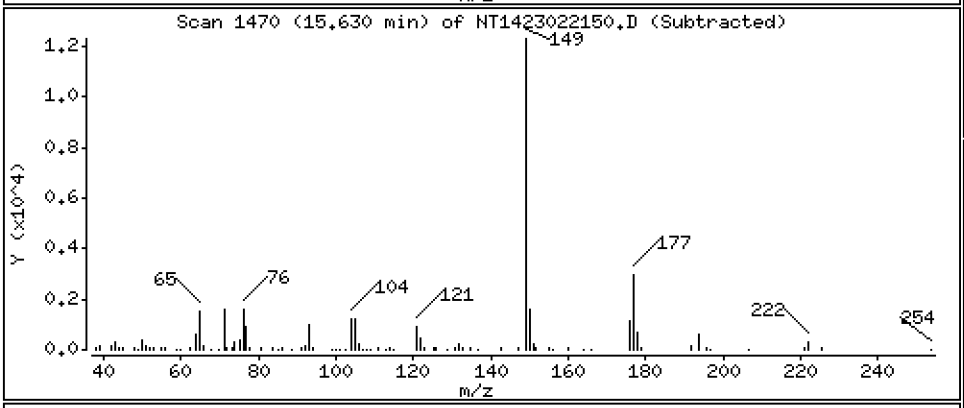
Column diameter: 0.25

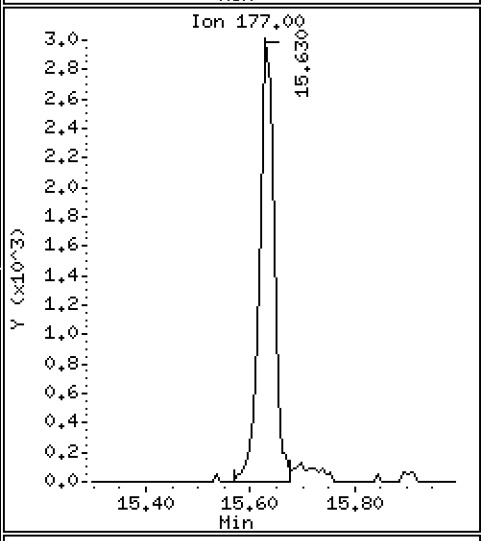
50 Diethylphthalate

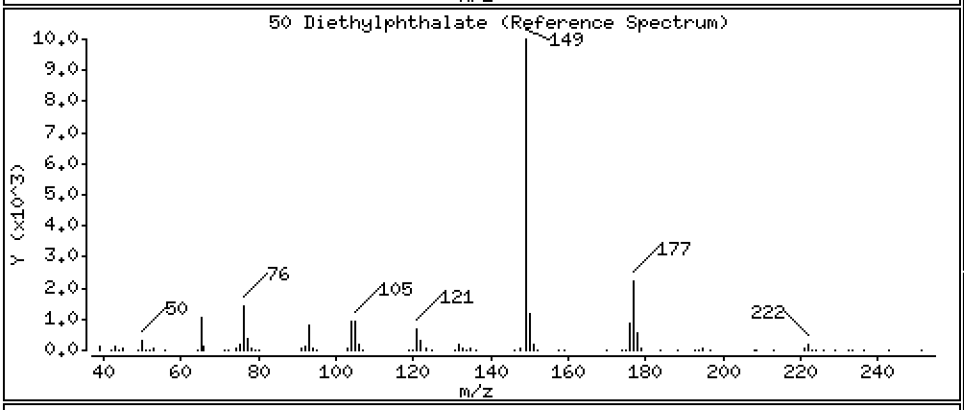
Concentration: 0.1142 ug/mL

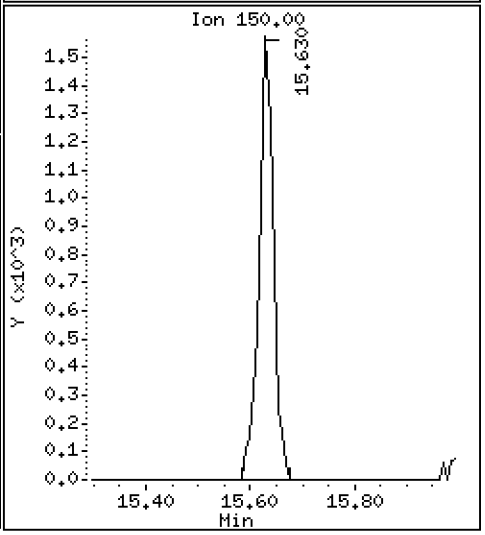


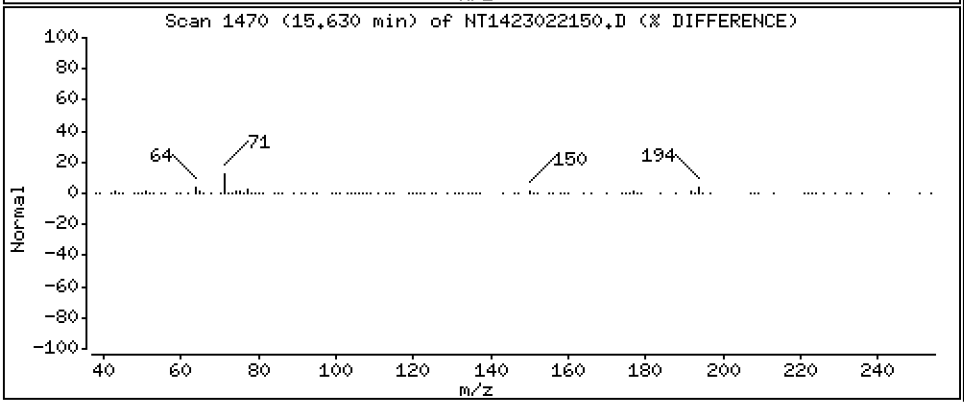












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Date : 22-FEB-2023 18:59

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BLK2

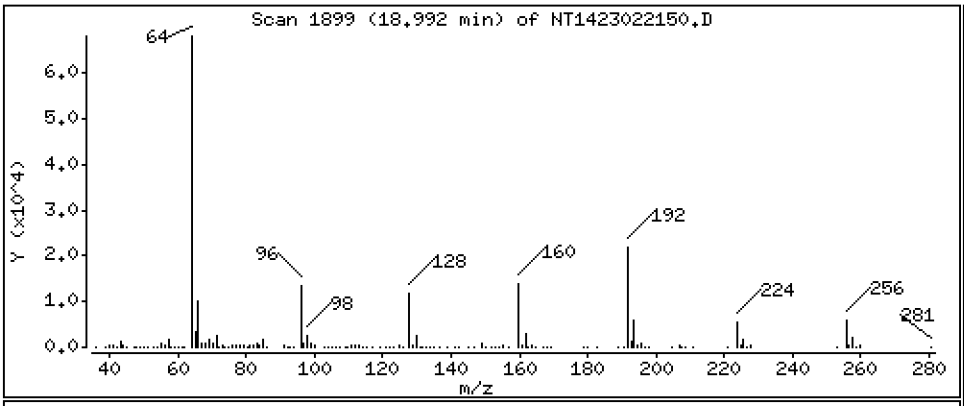
Operator: DSD

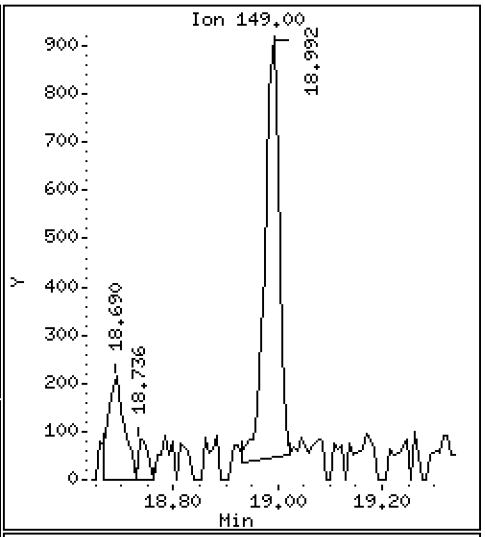
Column phase: ZB-5msi

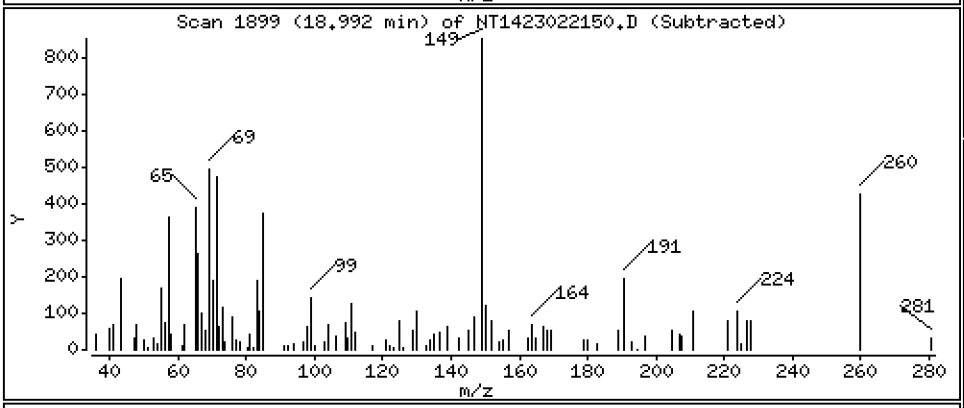
Column diameter: 0.25

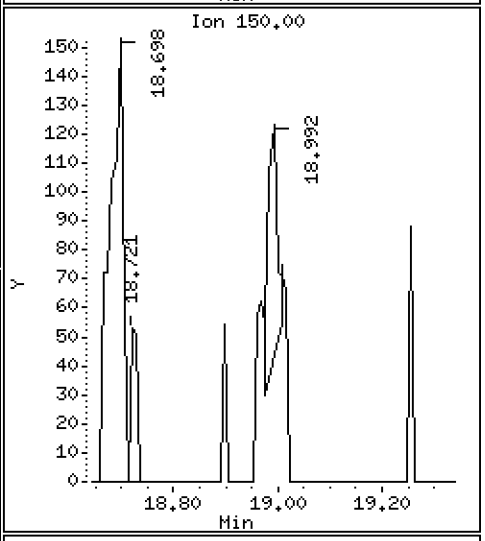
63 Di-n-butylphthalate

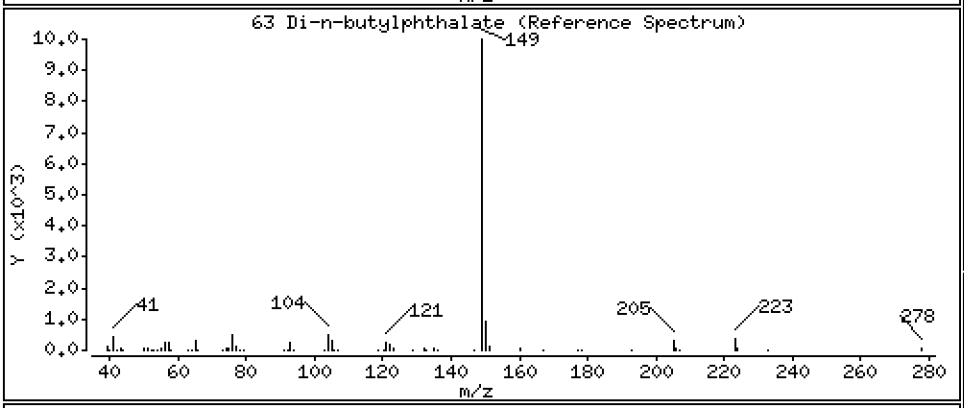
Concentration: 0.005909 ug/mL

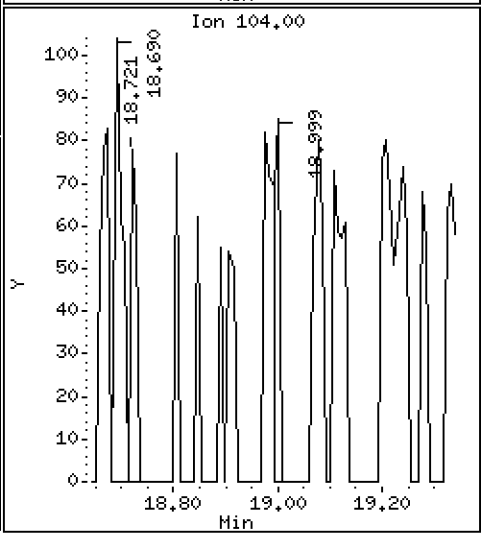


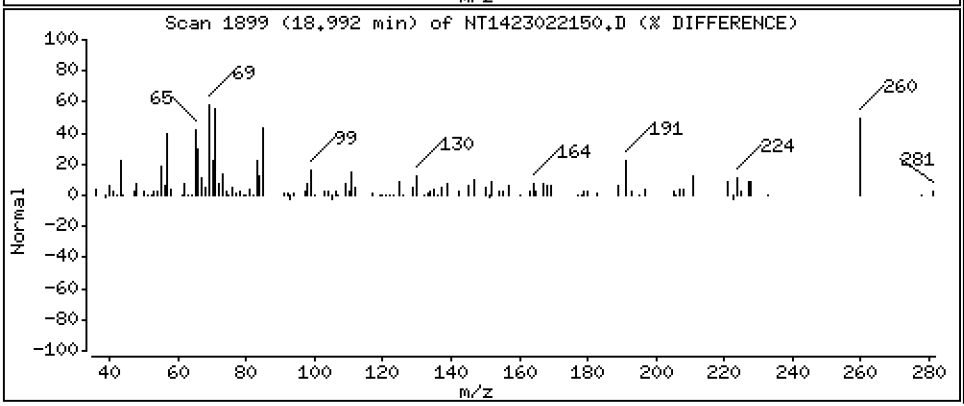












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Date : 22-FEB-2023 18:59

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BLK2

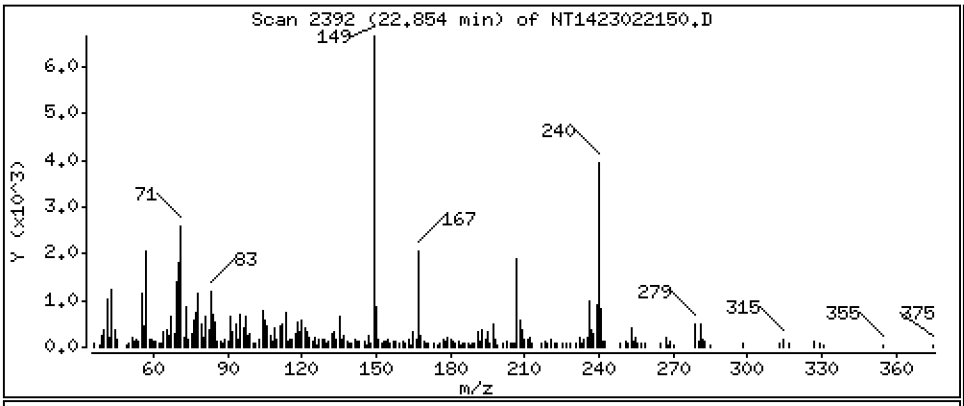
Operator: DSD

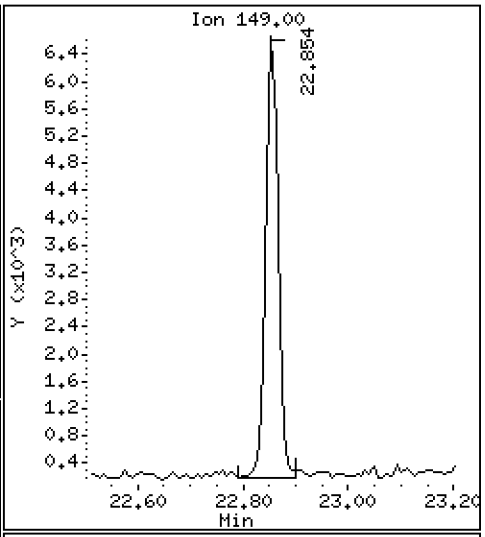
Column phase: ZB-5msi

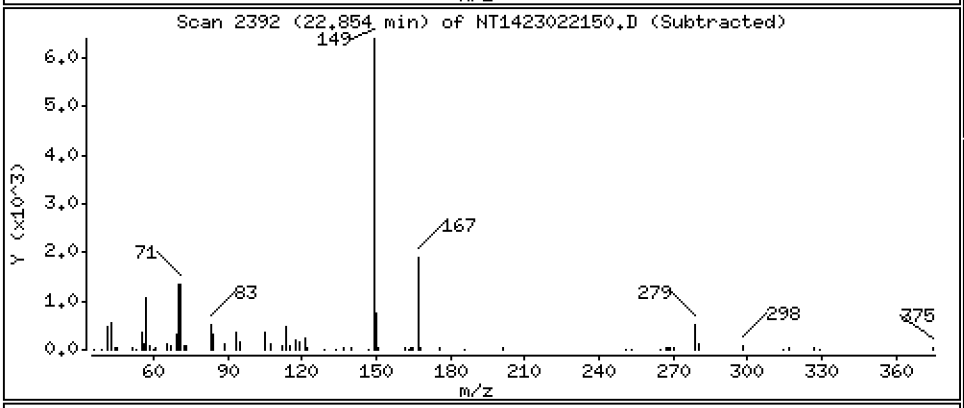
Column diameter: 0.25

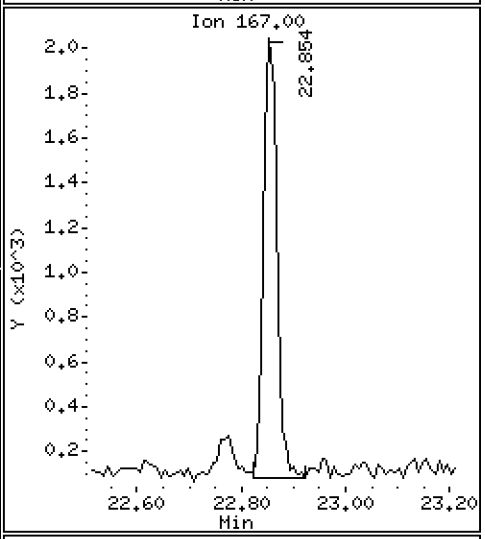
72 bis(2-Ethylhexyl)phthalate

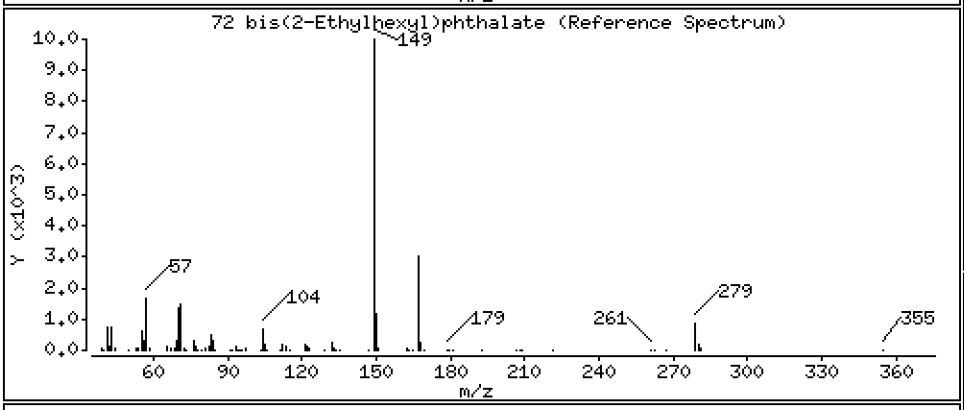
Concentration: 0.04632 ug/mL

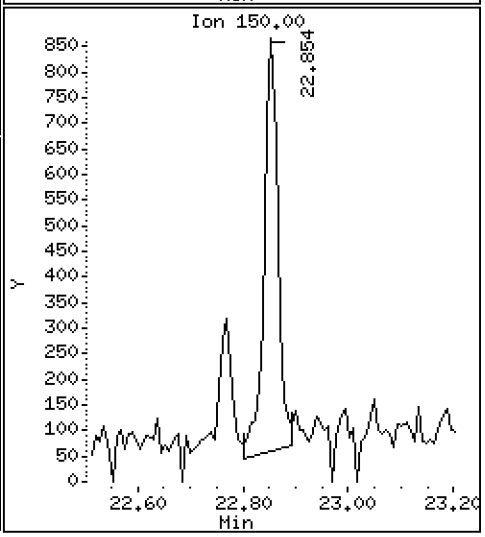


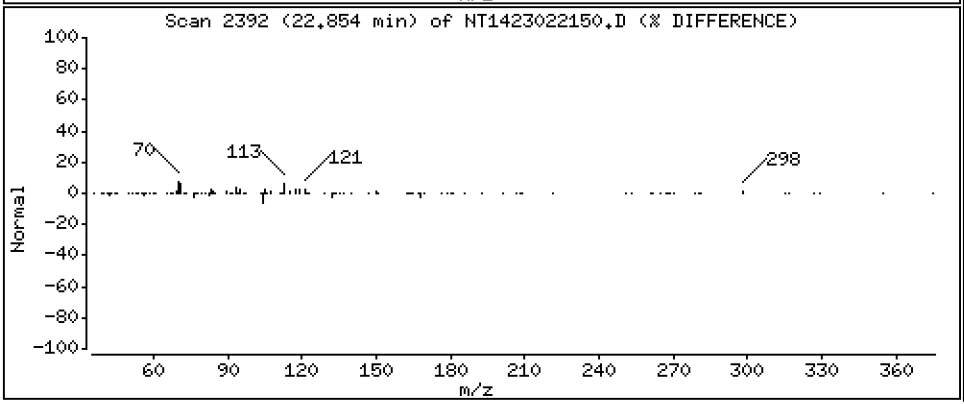












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

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Inj Date : 22-FEB-2023 18:59 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : BLA0393-BLK2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Meth Date : 03-Mar-2023 06:54 van Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	6.396	6.380	(0.747)	299803	4.40820	4.408
$ 2	Phenol-d5	99	7.964	7.972	(0.930)	485008	4.49549	4.495
3	Phenol	94	Compound Not Detected.					
$ 5	2-Chlorophenol-d4	132	8.211	8.212	(0.959)	379944	4.93555	4.936
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	8.560	8.568	(1.000)	254405	4.00000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	8.917	8.925	(1.042)	178312	3.09020	3.090
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
17	Hexachloroethane	117	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
15	4-Methylphenol	108	Compound Not Detected.					
$ 18	Nitrobenzene-d5	82	9.654	9.662	(0.875)	370627	3.43322	3.433
19	Nitrobenzene	77	Compound Not Detected.					
20	Isophorone	82	Compound Not Detected.					
21	2-Nitrophenol	139	Compound Not Detected.					
22	2,4-Dimethylphenol	107	Compound Not Detected.					
23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
24	Benzoic acid	105	Compound Not Detected.					
25	2,4-Dichlorophenol	162	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.034	11.042	(1.000)	934429	4.00000	
28	Naphthalene	128	Compound Not Detected.					
29	4-Chloroaniline	127	Compound Not Detected.					
30	Hexachlorobutadiene	225	11.443	11.451	(1.037)	150	0.00287	0.002869
31	4-Chloro-3-methylphenol	107	Compound Not Detected.					
32	2-Methylnaphthalene	142	Compound Not Detected.					
33	Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.262	13.270	(0.905)	664043	3.36880	3.369
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	Compound Not Detected.					
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	14.647	14.648	(1.000)	550948	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	Compound Not Detected.					
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	Compound Not Detected.					
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	15.629	15.645	(1.067)	25554	0.11422	0.1142
	49	Fluorene	166	Compound Not Detected.					
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.285	16.293	(1.112)	103885	3.25710	3.257
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	17.668	17.676	(1.000)	1110942	4.00000	
	60	Phenanthrene	178	Compound Not Detected.					
	61	Anthracene	178	Compound Not Detected.					
	62	Carbazole	167	Compound Not Detected.					
	63	Di-n-butylphthalate	149	18.991	18.992	(1.075)	1584	0.00591	0.005909
	64	Fluoranthene	202	Compound Not Detected.					
	65	Pyrene	202	Compound Not Detected.					
$	66	Terphenyl-d14	244	20.871	20.872	(0.917)	903776	3.80365	3.804
	67	Butylbenzylphthalate	149	Compound Not Detected.					
	68	Benzo(a)anthracene	228	Compound Not Detected.					
*	69	Chrysene-d12	240	22.768	22.769	(1.000)	733543	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	Compound Not Detected.					
	72	bis(2-Ethylhexyl)phthalate	149	22.854	22.854	(0.959)	10148	0.04632	0.04632
*	134	Di-n-octylphthalate-d4	153	23.829	23.837	(1.000)	1272527	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	Compound Not Detected.					
	75	Benzo(k)fluoranthene	252	Compound Not Detected.					
	76	Benzo(a)pyrene	252	Compound Not Detected.					
*	77	Perylene-d12	264	25.215	25.223	(1.000)	502221	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80	Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	Compound Not Detected.					
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	Compound Not Detected.					
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022150.D
Lab Smp Id: BLA0393-BLK2
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 16:35
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	232195	116098	464390	254405	9.57
27 Naphthalene-d8	800631	400316	1601262	934429	16.71
42 Acenaphthene-d10	488064	244032	976128	550948	12.88
59 Phenanthrene-d10	971279	485640	1942558	1110942	14.38
69 Chrysene-d12	687083	343542	1374166	733543	6.76
134 Di-n-octylphthala	1174636	587318	2349272	1272527	8.33
77 Perylene-d12	491790	245895	983580	502221	2.12

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.56	-0.09
27 Naphthalene-d8	11.04	10.54	11.54	11.03	-0.07
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.67	-0.05
69 Chrysene-d12	22.77	22.27	23.27	22.77	-0.00
134 Di-n-octylphthala	23.84	23.34	24.34	23.83	-0.03
77 Perylene-d12	25.22	24.72	25.72	25.22	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022150.D

Lab ID: BLA0393-BLK2
nt14.i, ABN.m, 22-FEB-2023 18:59

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: NT1423022146.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

LCS / LCS DUPLICATE RECOVERY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/22/23 09:57
Batch:	BLA0393	Laboratory ID:	BLA0393-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	10 g / 1 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Phenol	500	268		53.7	34 - 120
4-Methylphenol	500	281		56.2	29 - 120
Naphthalene	500	335		67.1	43 - 120
2-Methylnaphthalene	500	326		65.1	43 - 120
Acenaphthylene	500	327		65.3	42 - 120
Dimethylphthalate	500	367		73.4	43 - 120
Acenaphthene	500	343		68.6	45 - 120
Dibenzofuran	500	336		67.3	43 - 120
Fluorene	500	334		66.7	45 - 120
Phenanthrene	500	346		69.2	49 - 120
Anthracene	500	316		63.1	45 - 120
Fluoranthene	500	333		66.6	53 - 145
Pyrene	500	312		62.5	52 - 134
Butylbenzylphthalate	500	372		74.4	45 - 132
Benzo(a)anthracene	500	367		73.5	49 - 120
Chrysene	500	369		73.7	47 - 120
bis(2-Ethylhexyl)phthalate	500	294		58.8	34 - 130
Benzofluoranthenes, Total	1000	749		74.9	30 - 160
Benzo(a)pyrene	500	312		62.3	42 - 120
Indeno(1,2,3-cd)pyrene	500	322		64.4	42 - 163
Dibenzo(a,h)anthracene	500	343		68.7	30 - 133
Benzo(g,h,i)perylene	500	291		58.2	46 - 148

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	500	331		66.2	20.8	30	34 - 120
4-Methylphenol	500	318		63.5	12.3	30	29 - 120
Naphthalene	500	374		74.7	10.8	30	43 - 120
2-Methylnaphthalene	500	362		72.5	10.7	30	43 - 120
Acenaphthylene	500	362		72.3	10.2	30	42 - 120
Dimethylphthalate	500	404		80.7	9.56	30	43 - 120
Acenaphthene	500	383		76.6	11.0	30	45 - 120

* Indicates values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/22/23 10:33
Batch:	BLA0393	Laboratory ID:	BLA0393-BSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS Dup
Initial/Final:	10 g / 1 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Dibenzofuran	500	377		75.3	11.3	30	43 - 120
Fluorene	500	359		71.8	7.28	30	45 - 120
Phenanthrene	500	384		76.9	10.5	30	49 - 120
Anthracene	500	344		68.8	8.62	30	45 - 120
Fluoranthene	500	365		73.0	9.16	30	53 - 145
Pyrene	500	364		72.8	15.3	30	52 - 134
Butylbenzylphthalate	500	400		80.0	7.35	30	45 - 132
Benzo(a)anthracene	500	393		78.5	6.68	30	49 - 120
Chrysene	500	402		80.4	8.74	30	47 - 120
bis(2-Ethylhexyl)phthalate	500	326		65.2	10.3	30	34 - 130
Benzofluoranthenes, Total	1000	834		83.4	10.8	30	30 - 160
Benzo(a)pyrene	500	342		68.5	9.38	30	42 - 120
Indeno(1,2,3-cd)pyrene	500	357		71.3	10.2	30	42 - 163
Dibenzo(a,h)anthracene	500	378		75.6	9.52	30	30 - 133
Benzo(g,h,i)perylene	500	326		65.3	11.5	30	46 - 148

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022135.D

Date : 22-FEB-2023 09:57

Client ID:

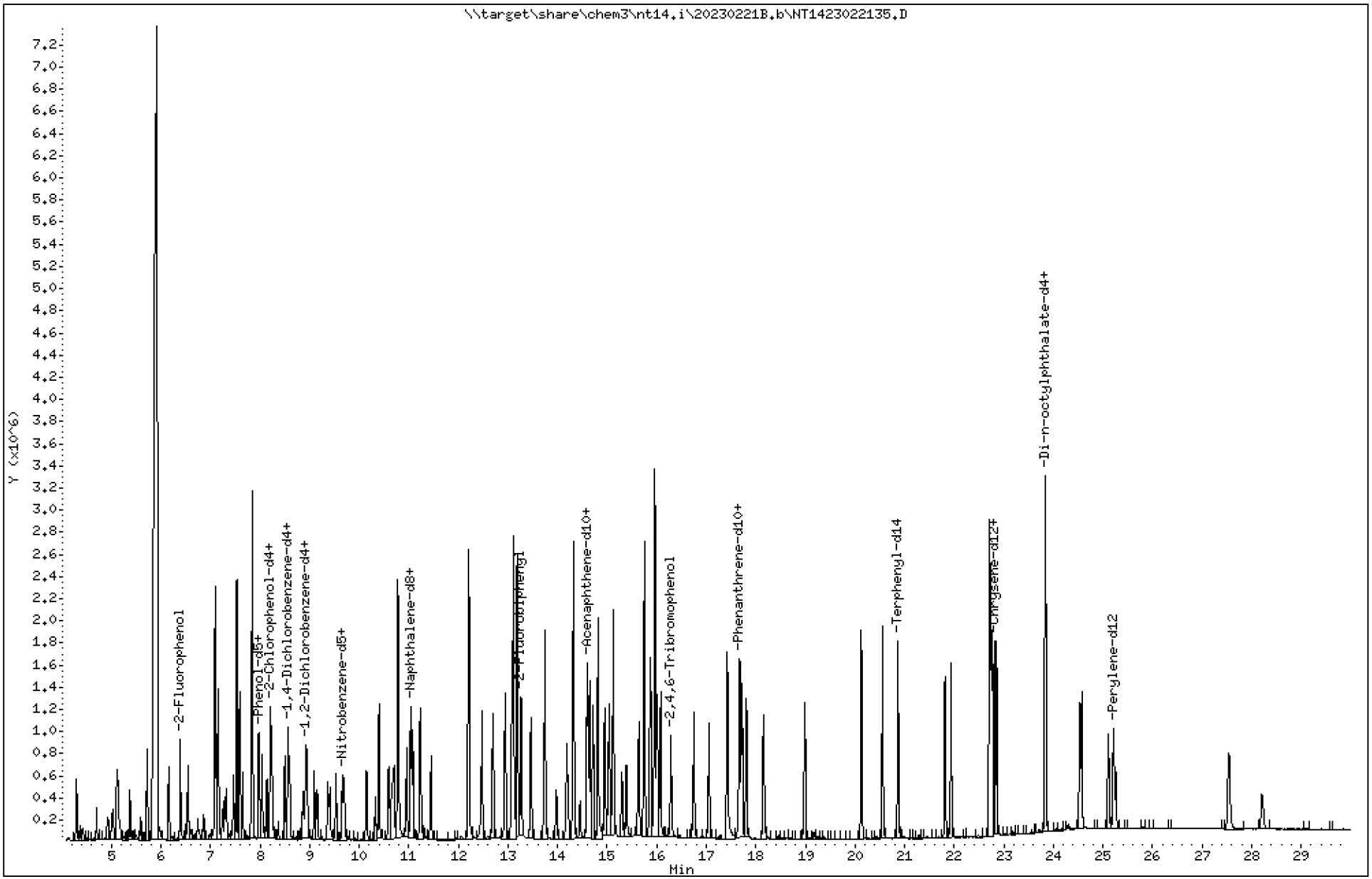
Instrument: nt14.i

Sample Info: BLA0393-BS1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

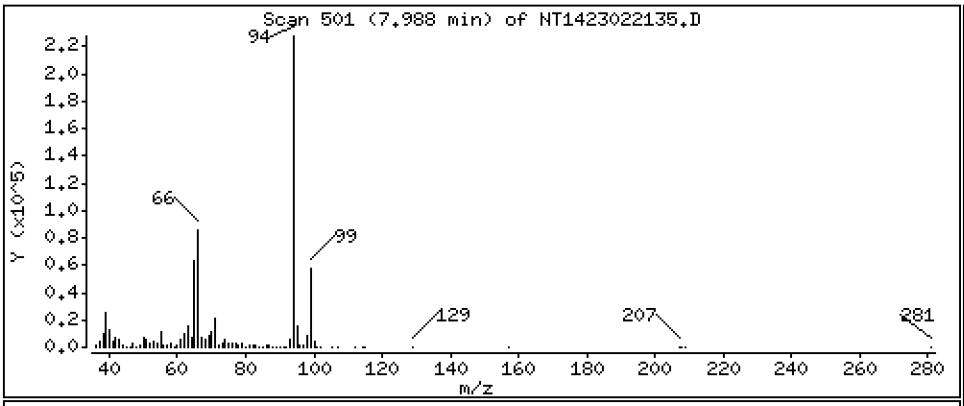
Operator: DSD

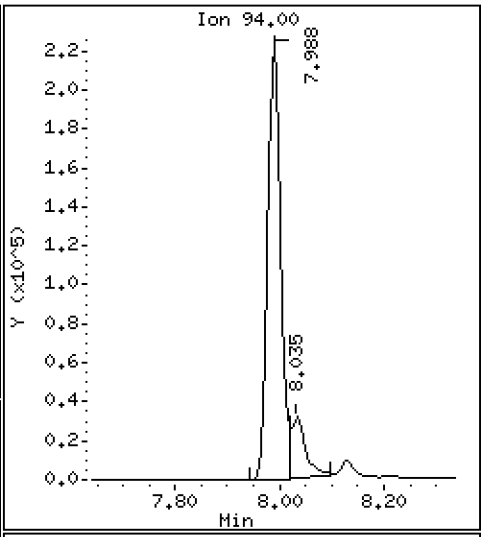
Column phase: ZB-5msi

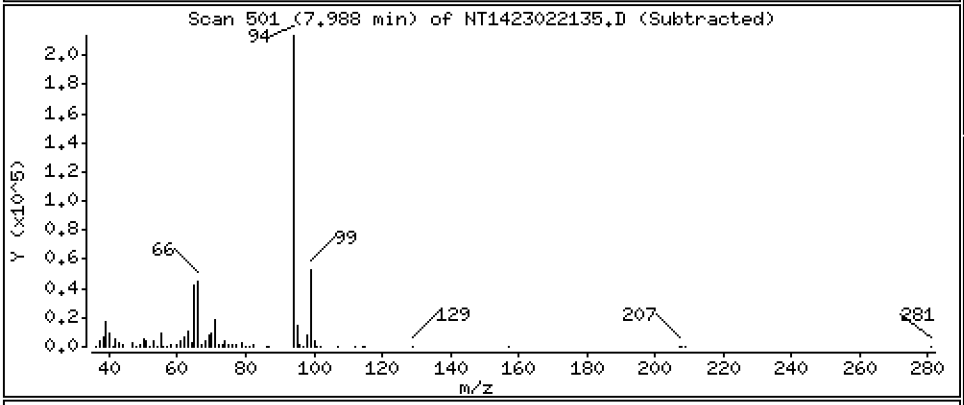
Column diameter: 0.25

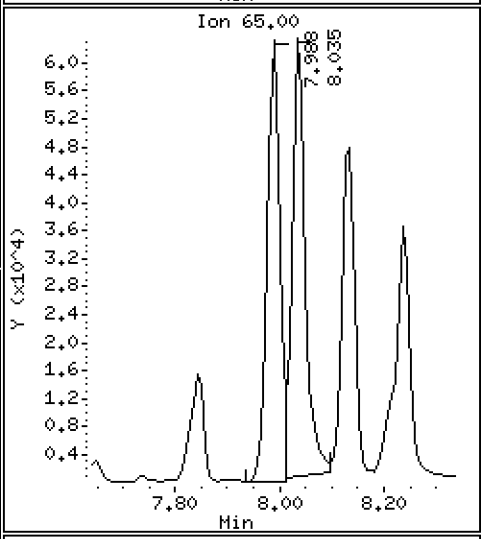
3 Phenol

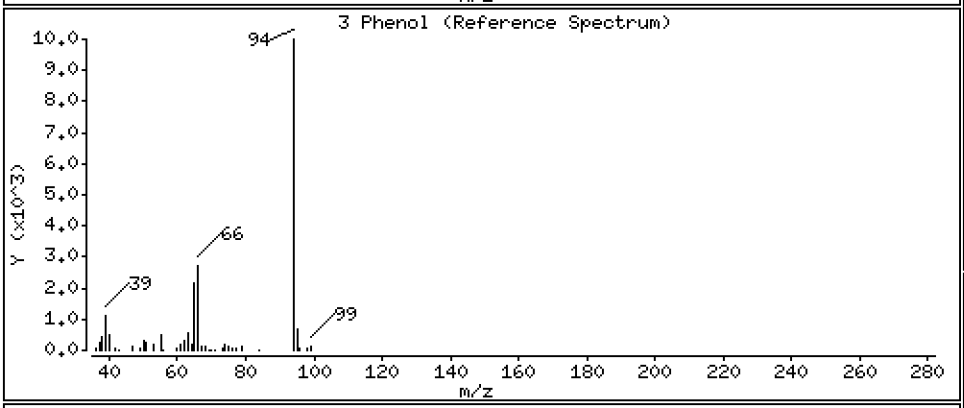
Concentration: 2.684 ug/mL

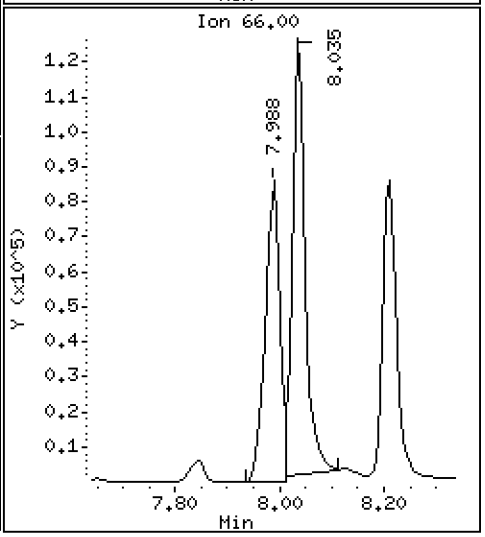


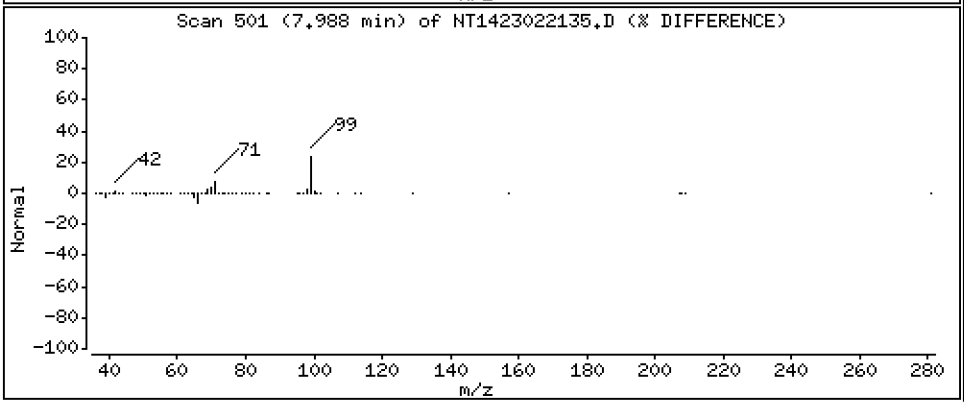












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

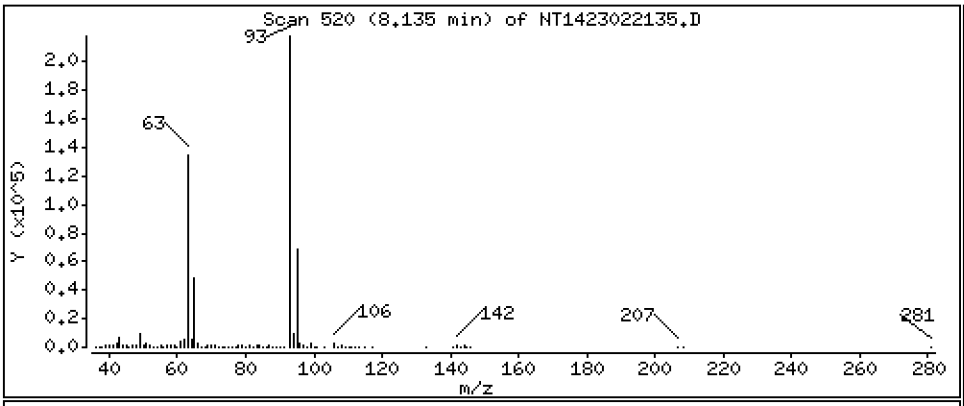
Operator: DSD

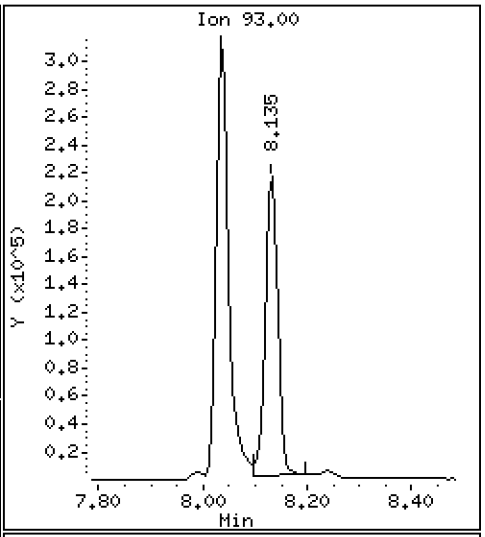
Column phase: ZB-5msi

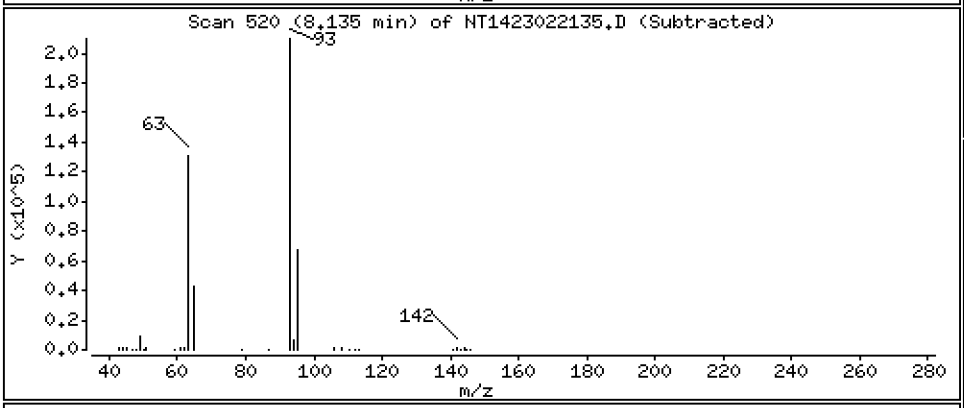
Column diameter: 0.25

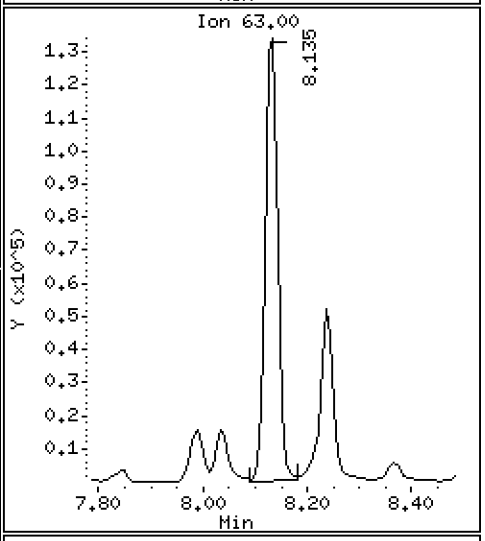
4 Bis(2-Chloroethyl)ether

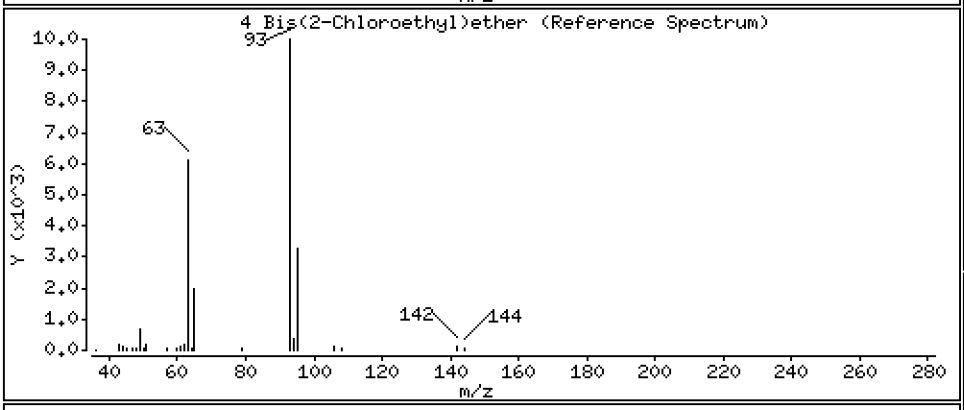
Concentration: 3.269 ug/mL

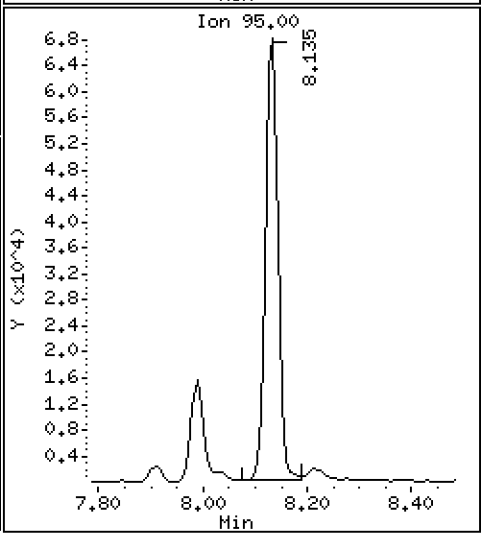


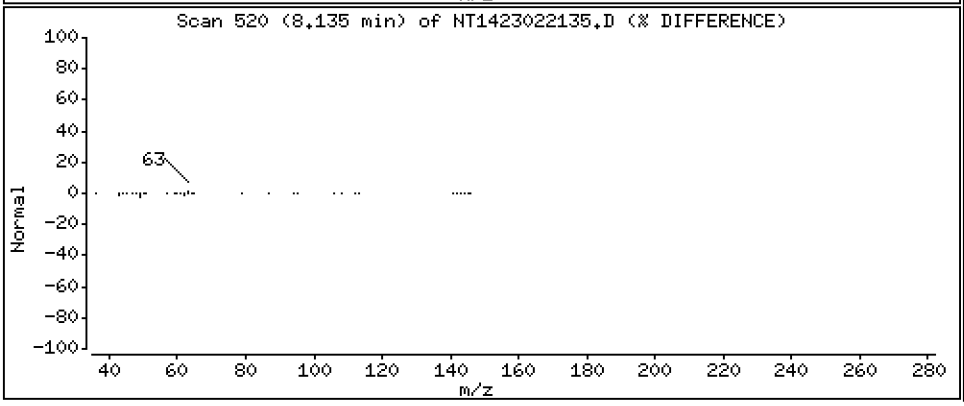












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

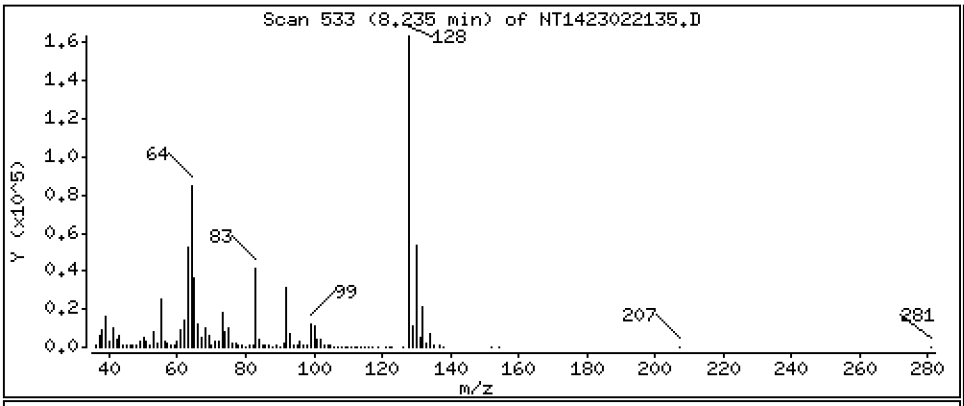
Operator: DSD

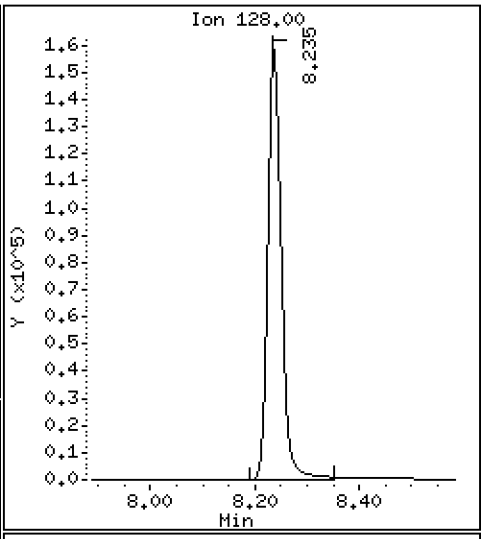
Column phase: ZB-5msi

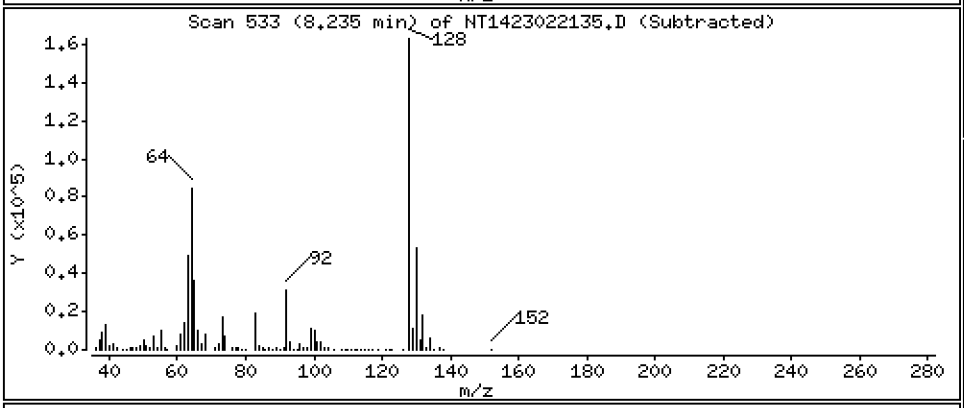
Column diameter: 0.25

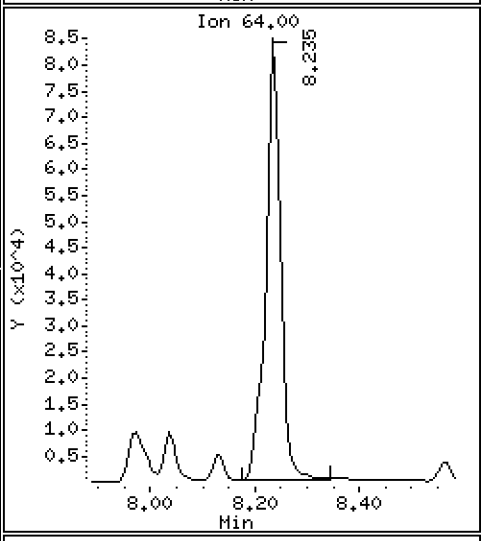
6 2-Chlorophenol

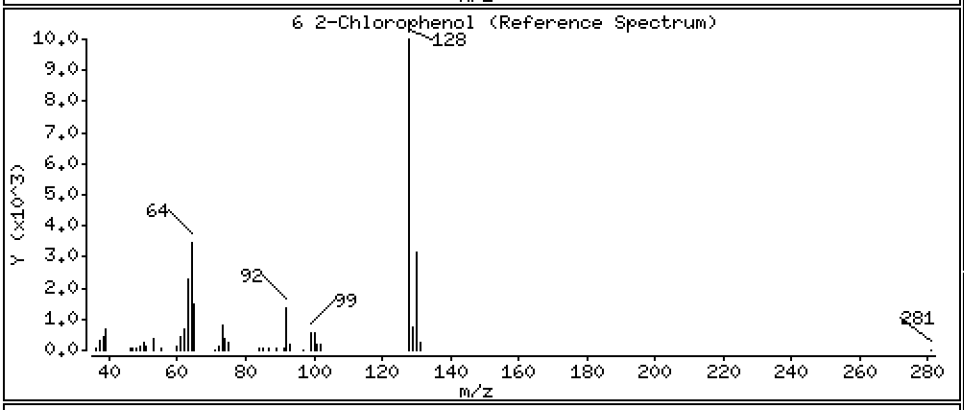
Concentration: 2.852 ug/mL

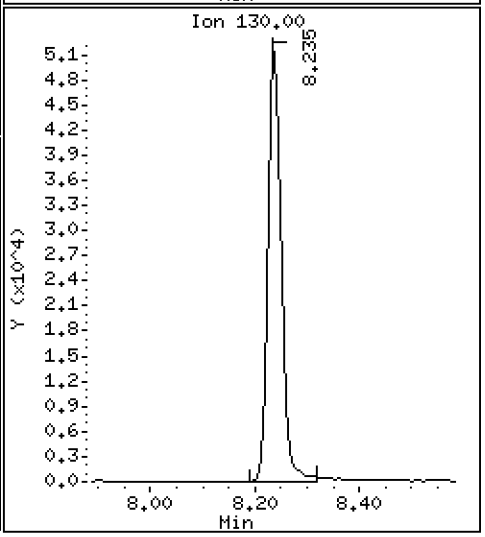


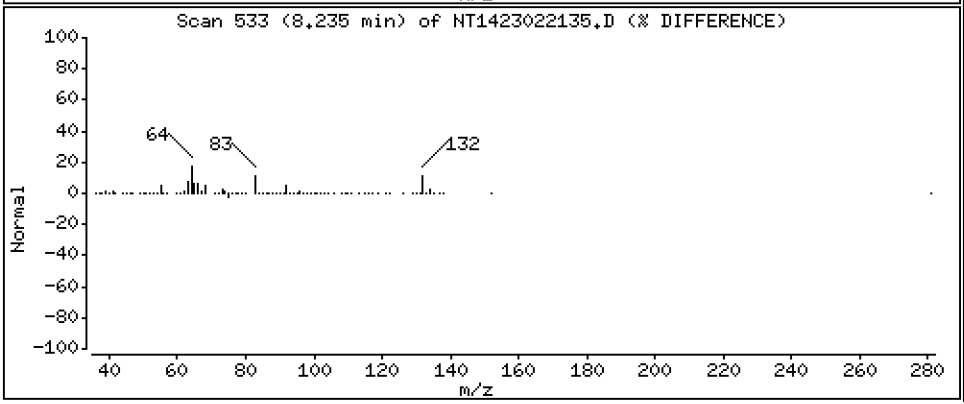












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

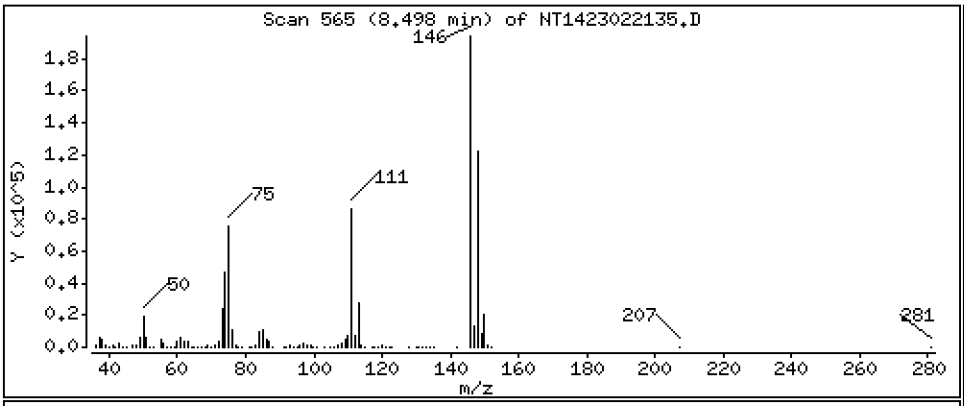
Operator: DSD

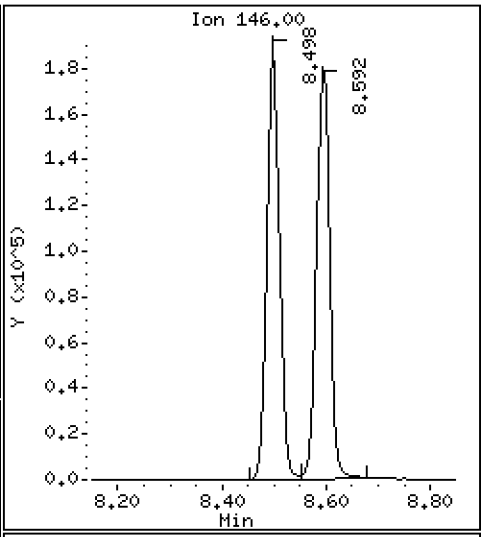
Column phase: ZB-5msi

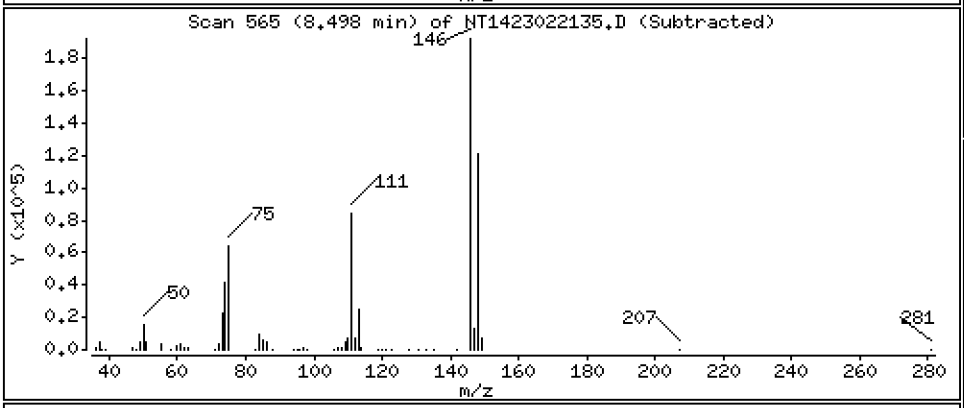
Column diameter: 0.25

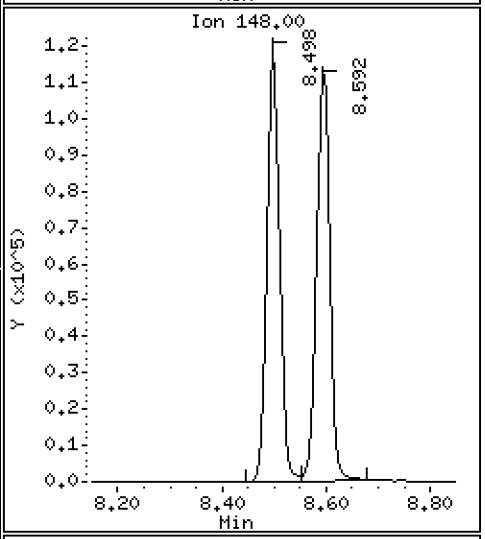
7 1,3-Dichlorobenzene

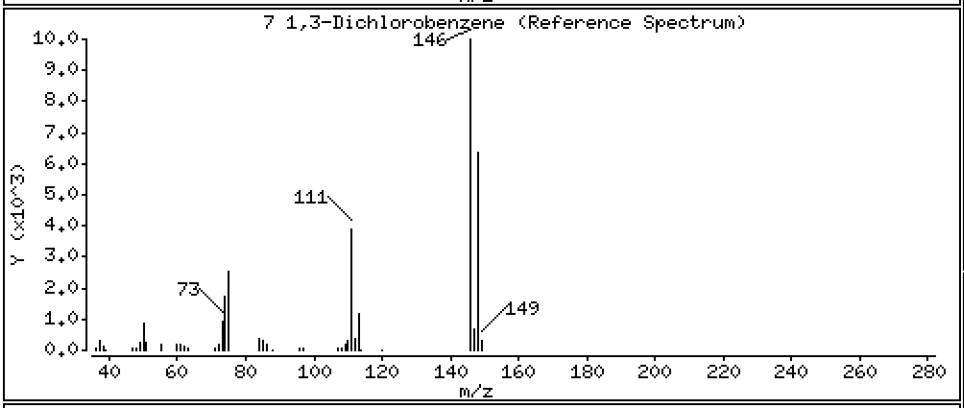
Concentration: 2.892 ug/mL

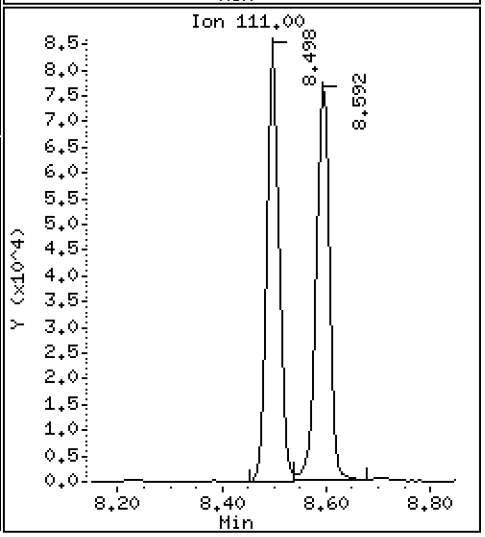


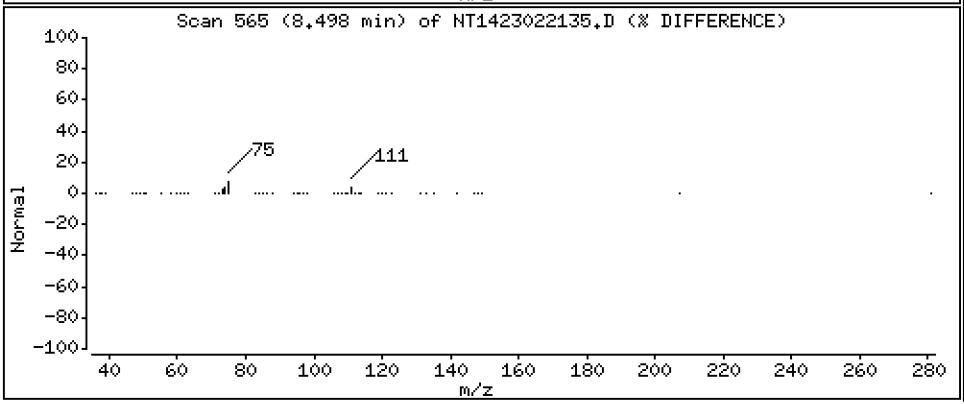












Date : 22-FEB-2023 09:57

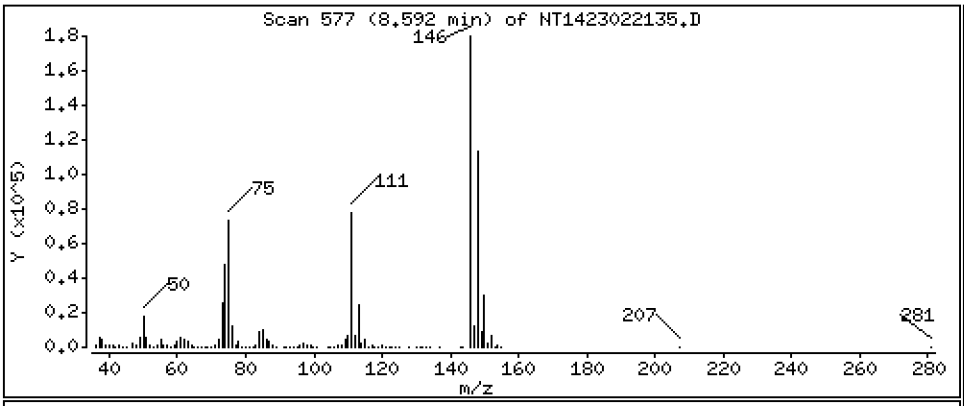
Client ID: Instrument: nt14.i

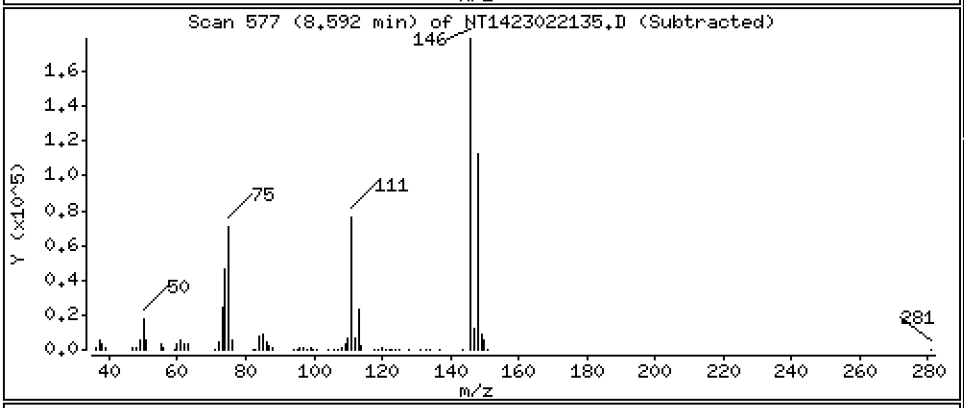
Sample Info: BLA0393-BS1

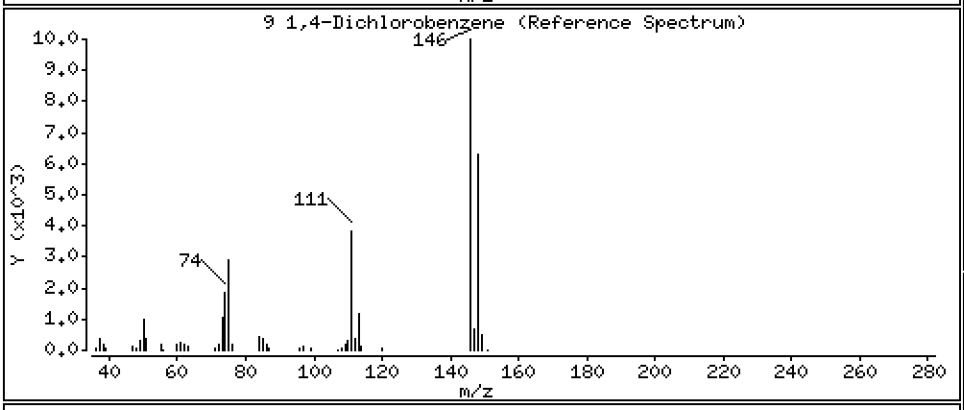
Operator: DSD

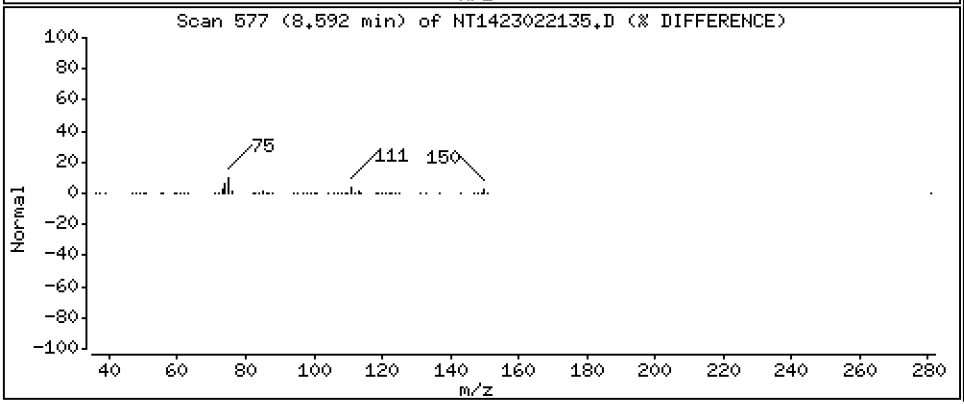
Column phase: ZB-5msi Column diameter: 0.25

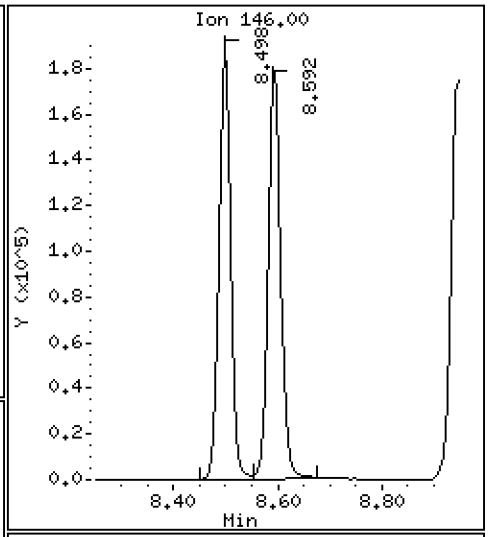
9 1,4-Dichlorobenzene Concentration: 2.945 ug/mL

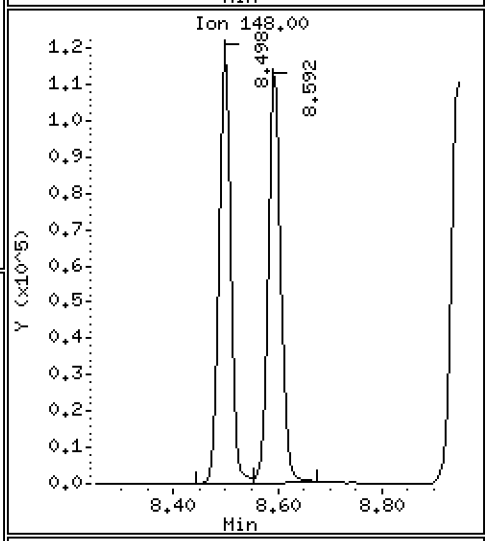


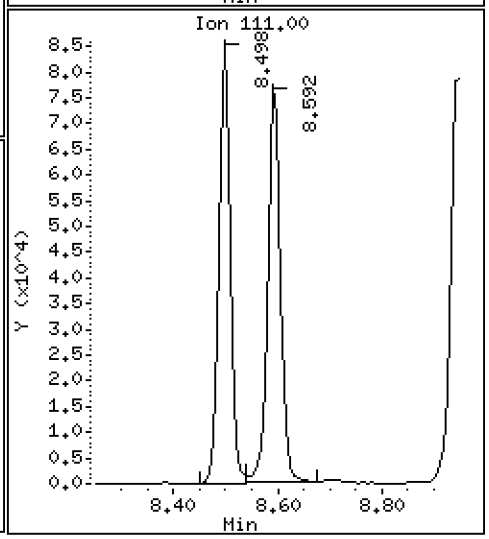












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

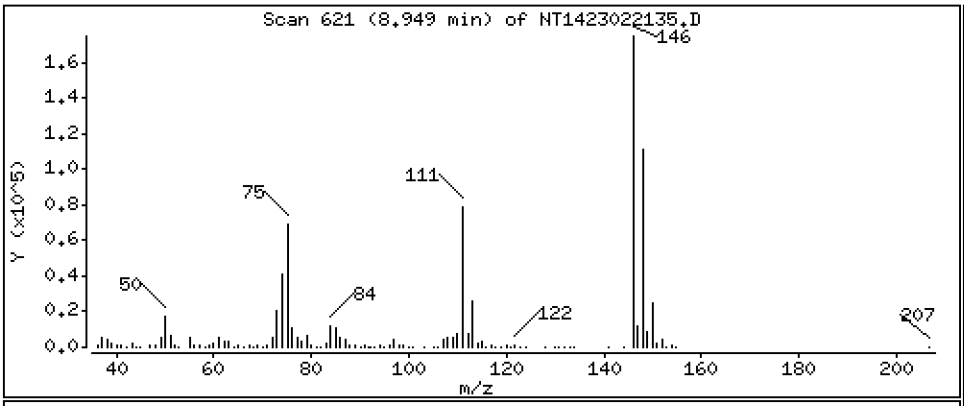
Operator: DSD

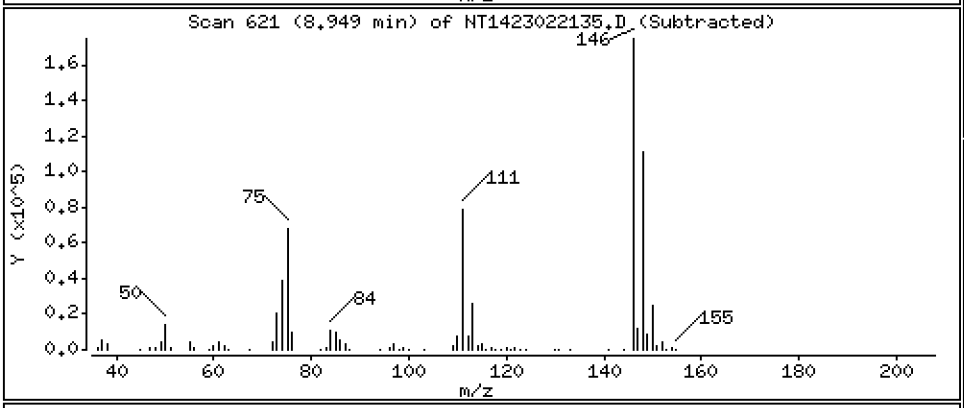
Column phase: ZB-5msi

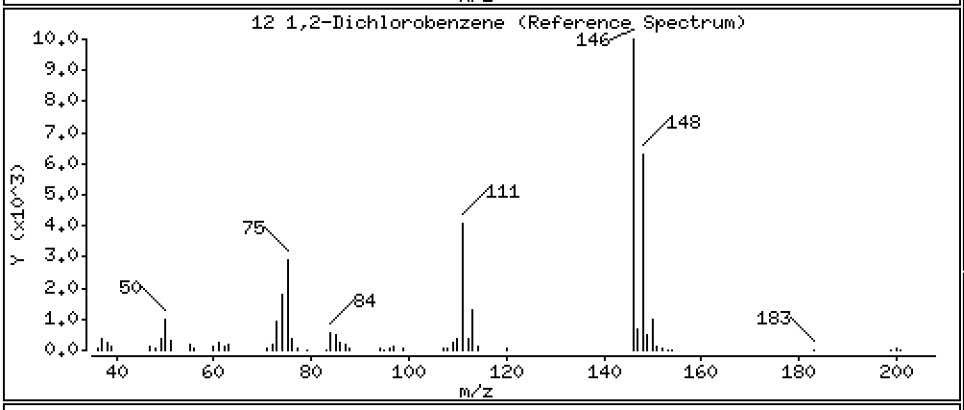
Column diameter: 0.25

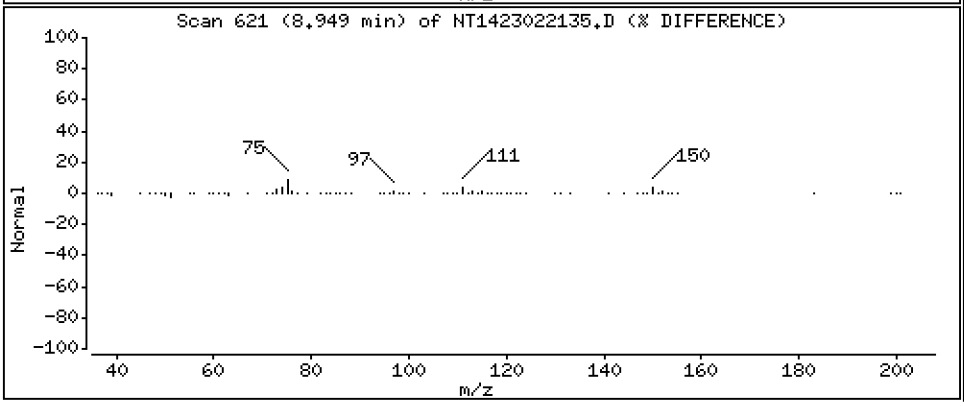
12 1,2-Dichlorobenzene

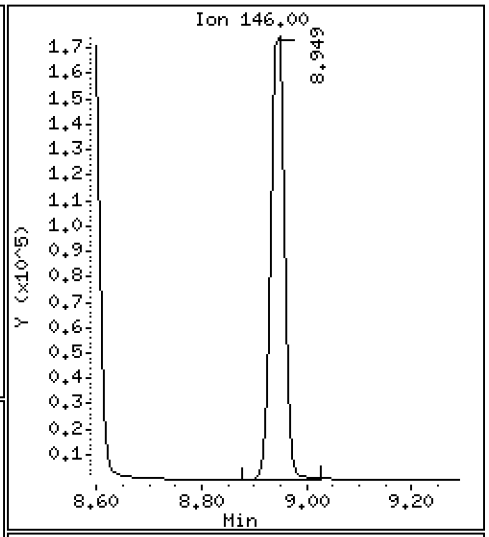
Concentration: 2.950 ug/mL

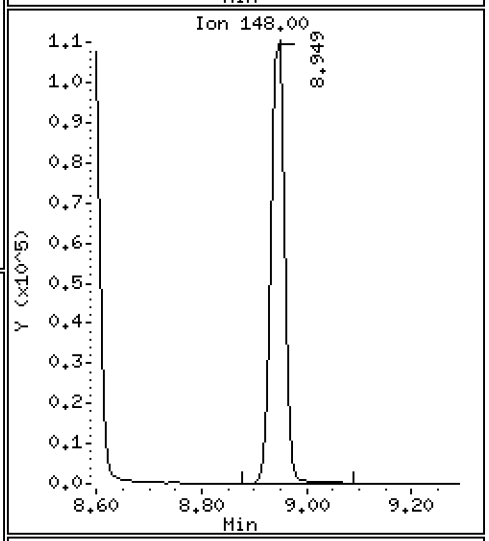


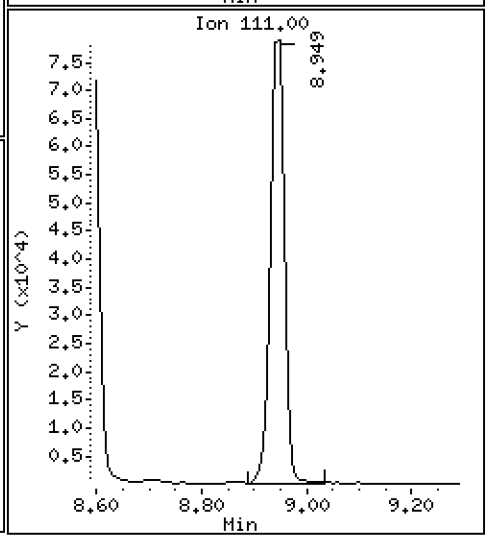












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

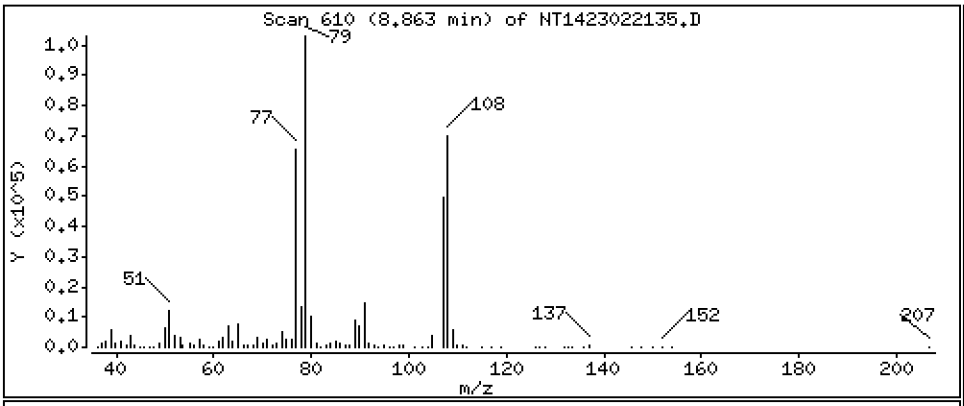
Operator: DSD

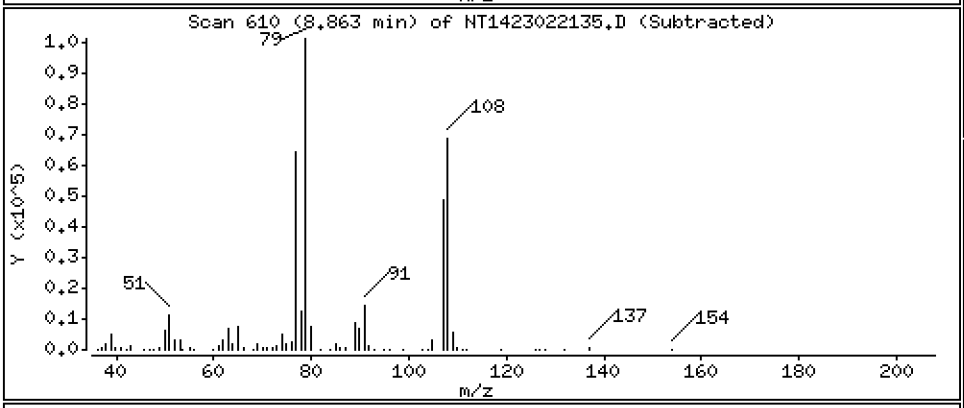
Column phase: ZB-5msi

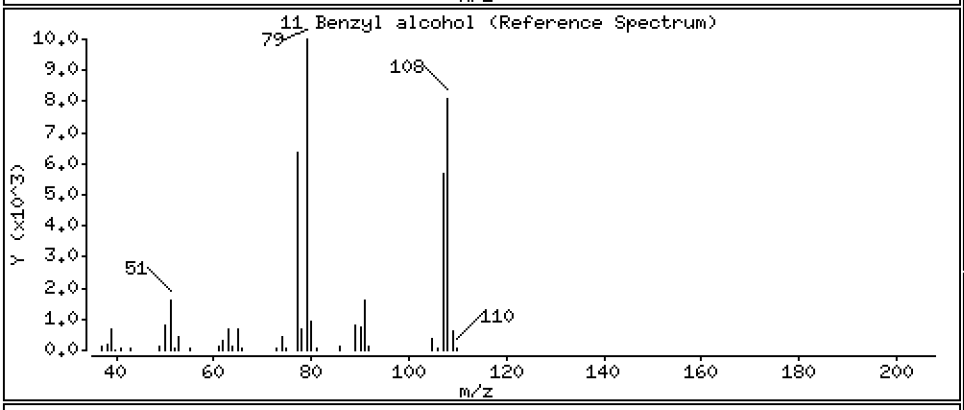
Column diameter: 0.25

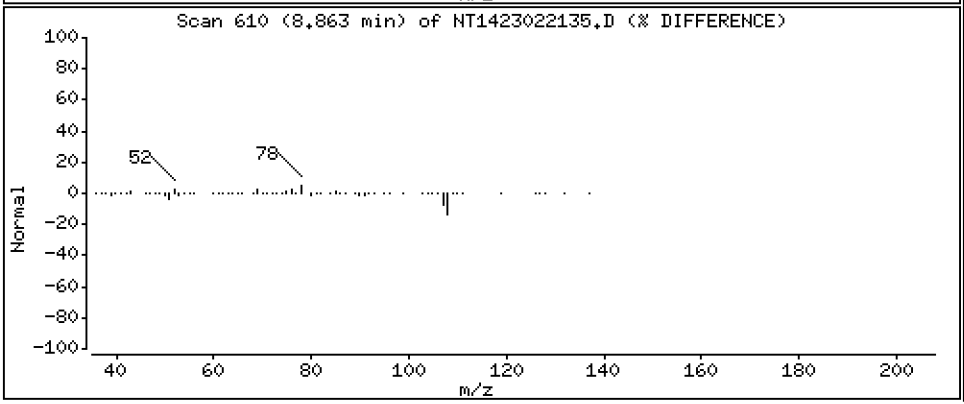
11 Benzyl alcohol

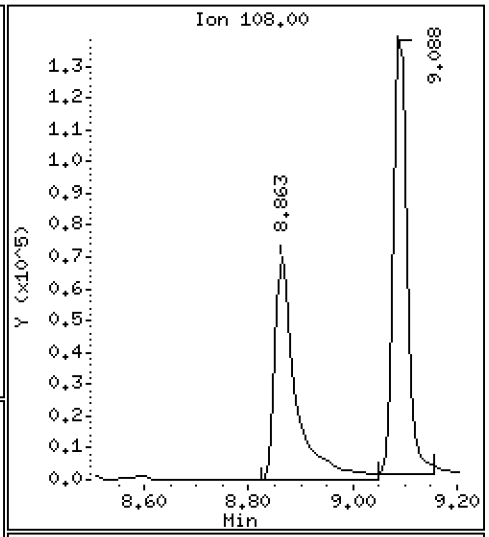
Concentration: 2.490 ug/mL

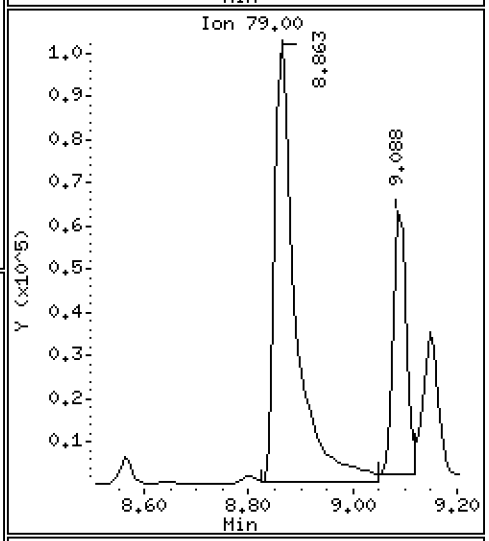


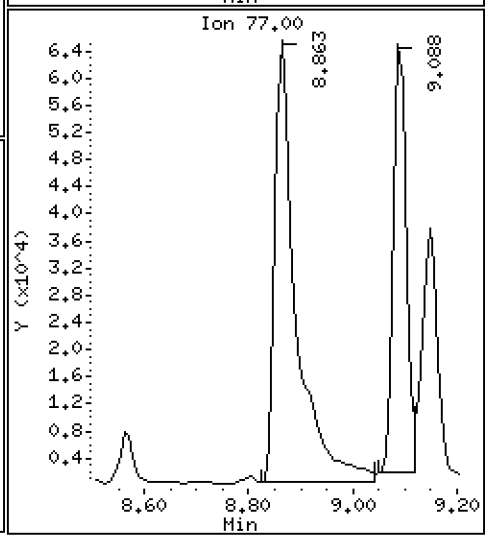












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

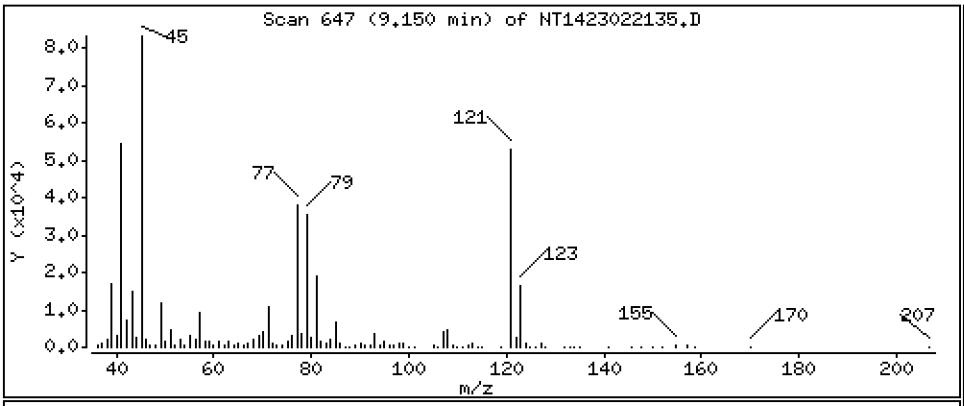
Operator: DSD

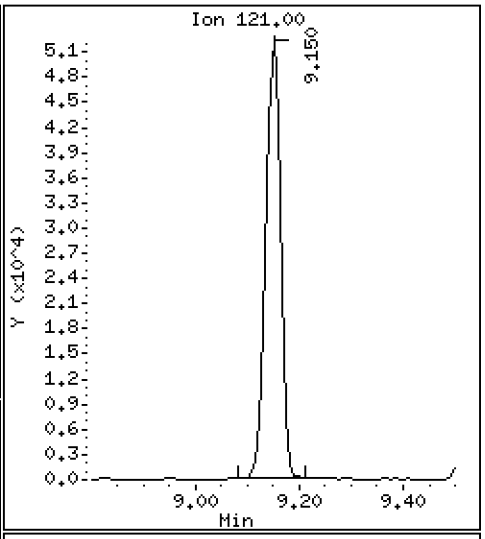
Column phase: ZB-5msi

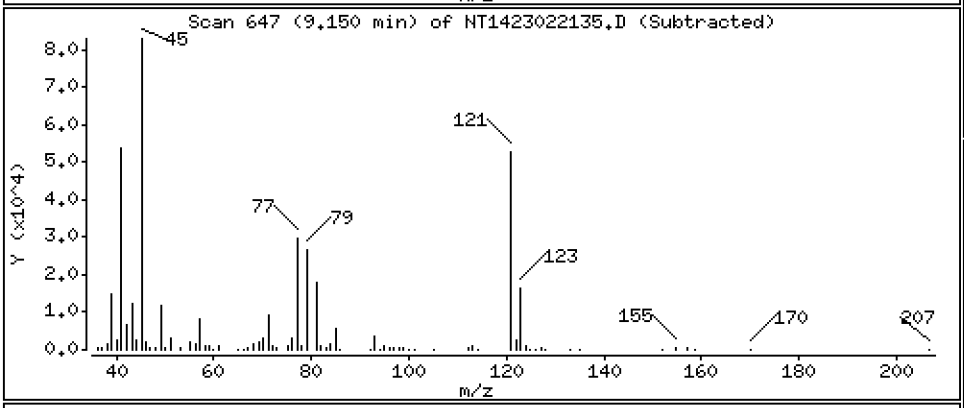
Column diameter: 0.25

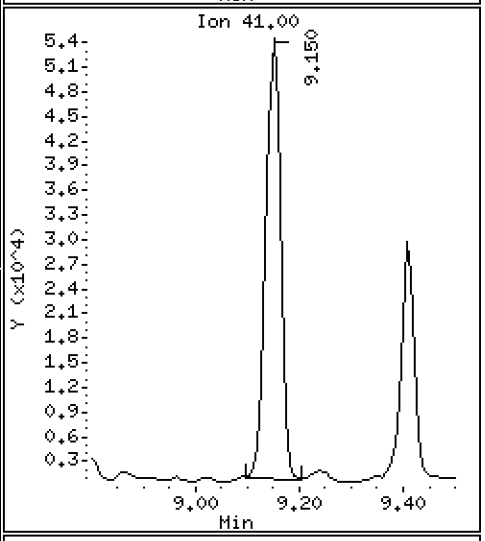
14 2,2'-oxybis(1-Chloropropane)

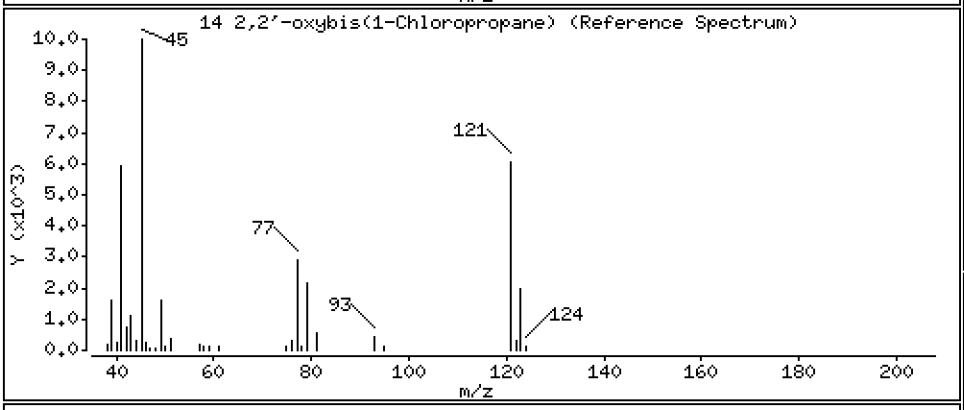
Concentration: 3.423 ug/mL

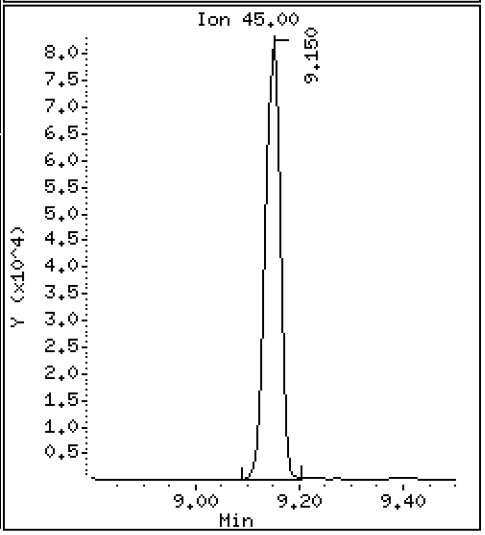


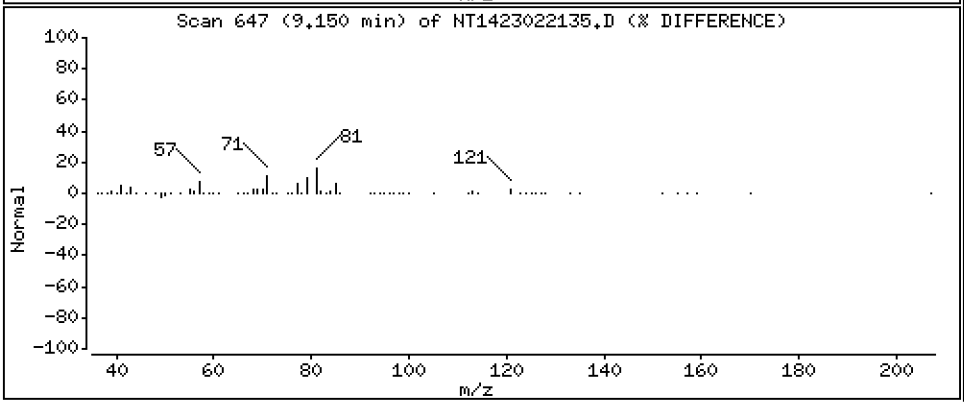












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

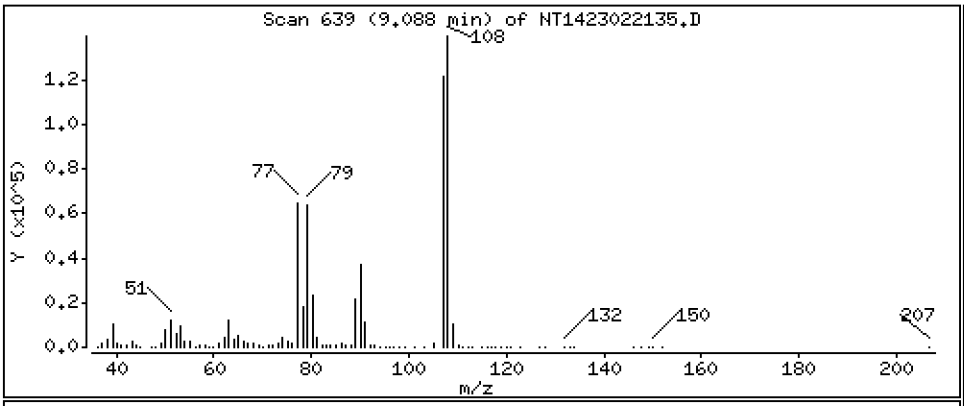
Operator: DSD

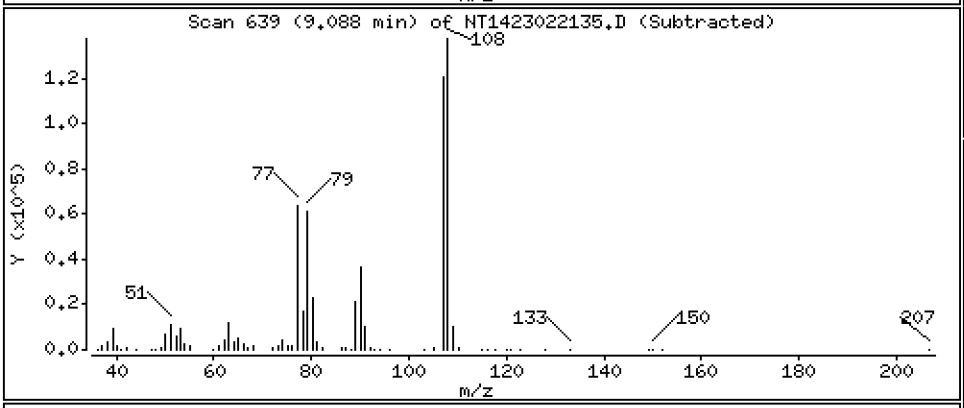
Column phase: ZB-5msi

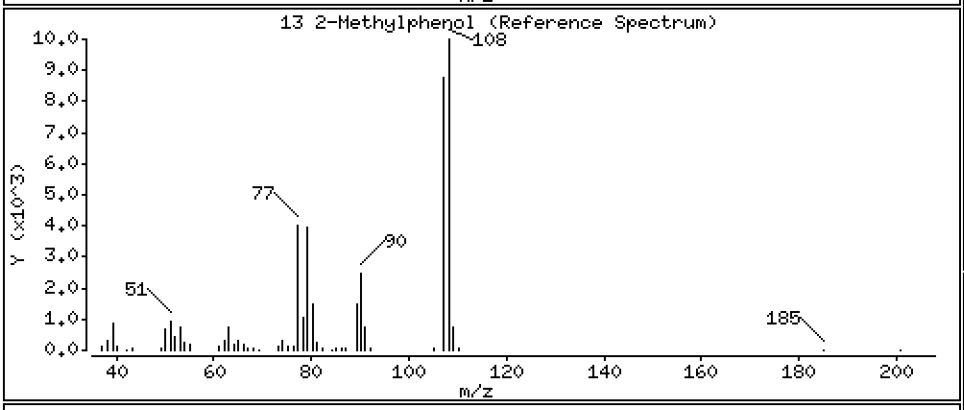
Column diameter: 0.25

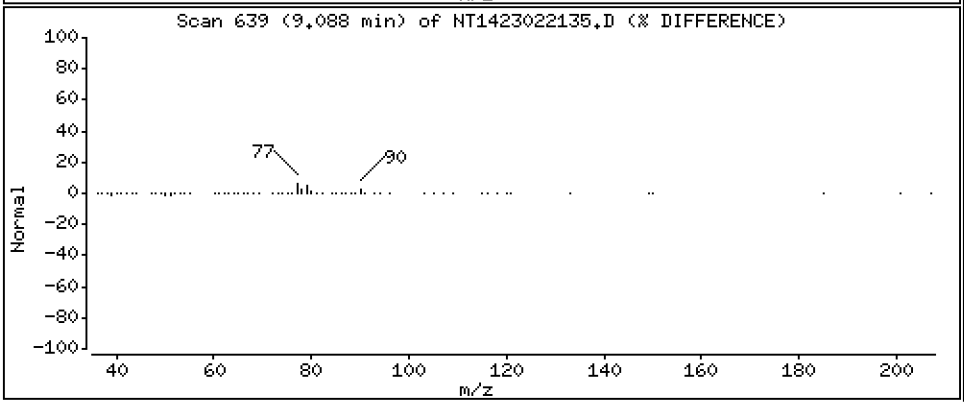
13 2-Methylphenol

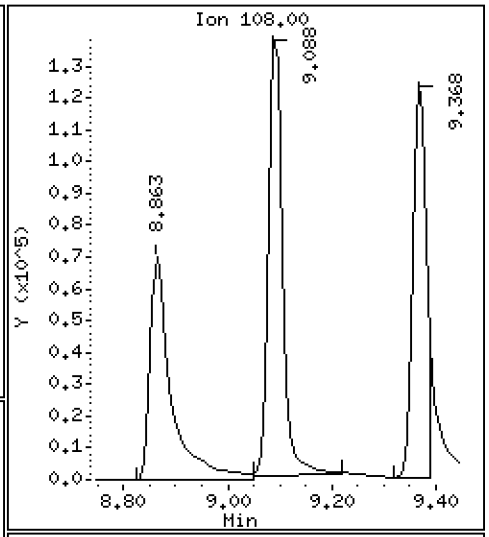
Concentration: 2.577 ug/mL

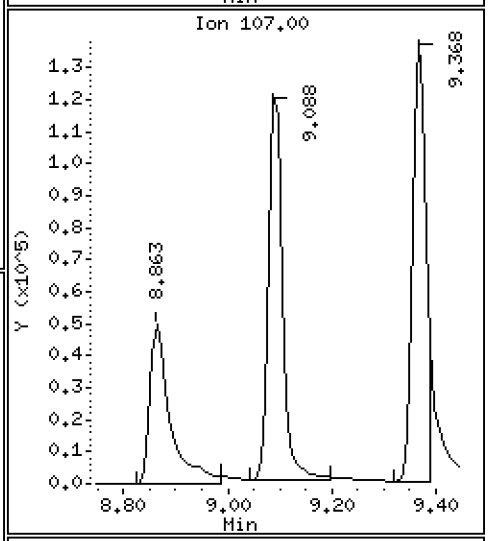


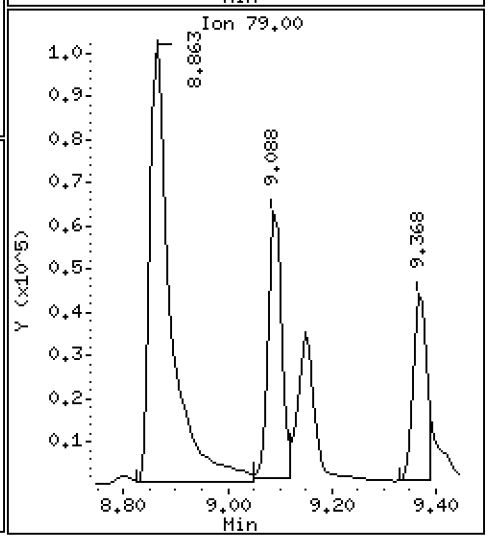












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

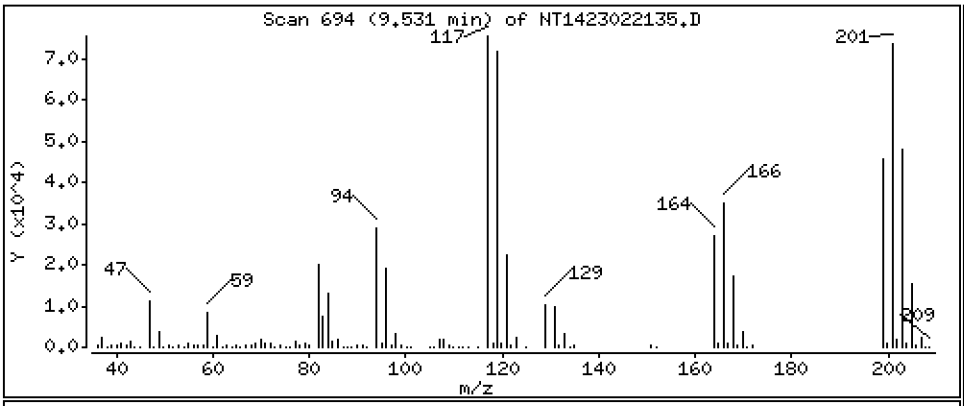
Operator: DSD

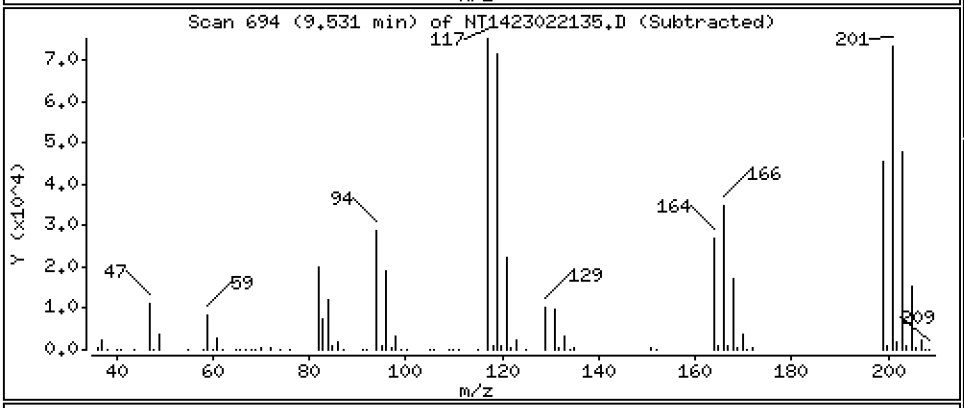
Column phase: ZB-5msi

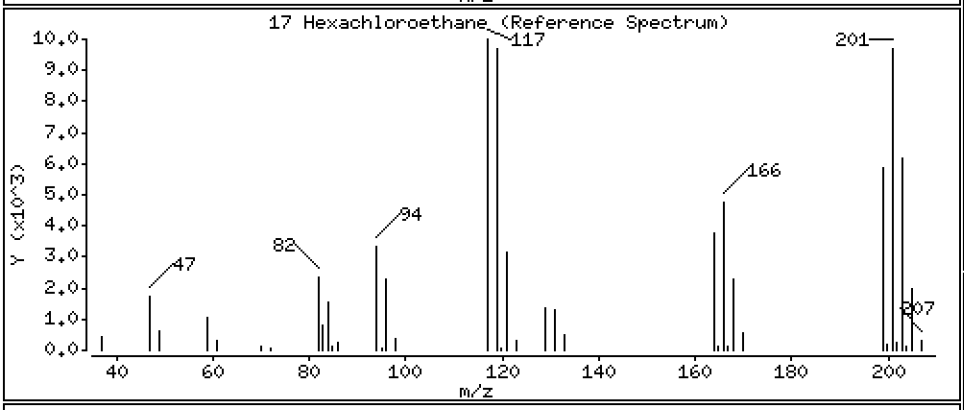
Column diameter: 0.25

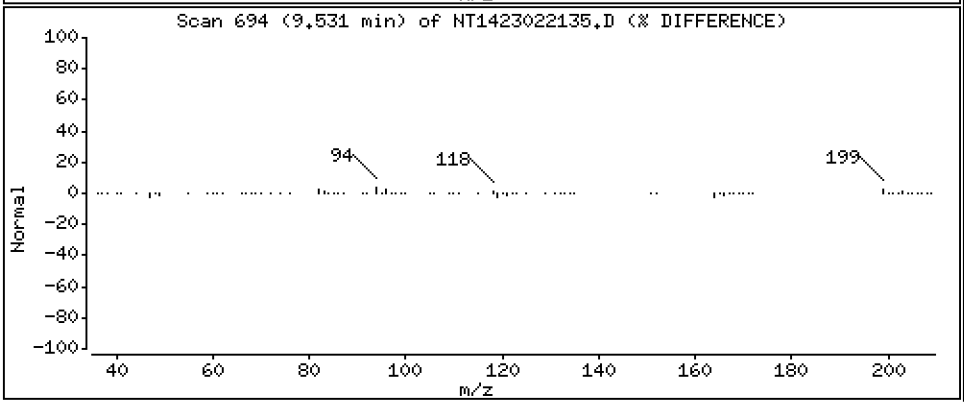
17 Hexachloroethane

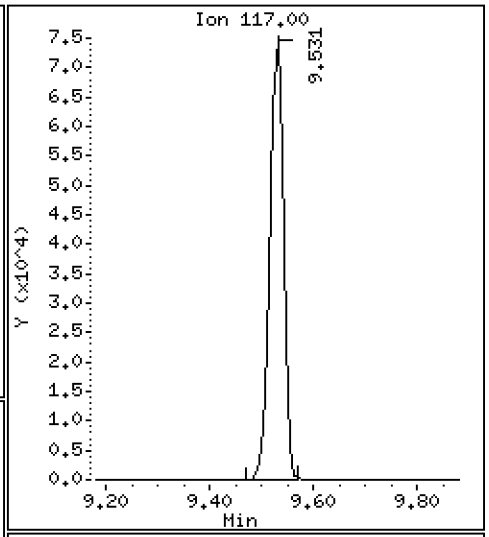
Concentration: 2.942 ug/mL

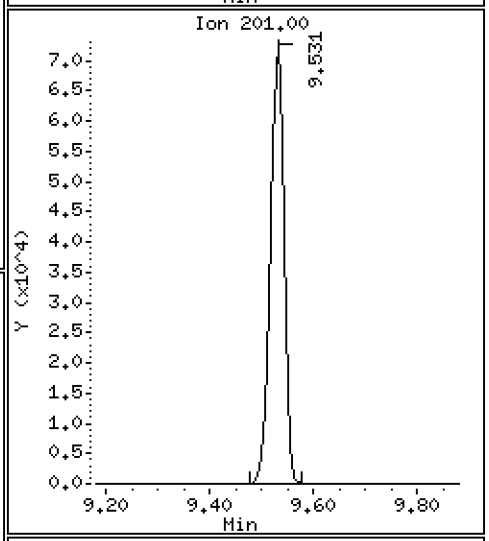


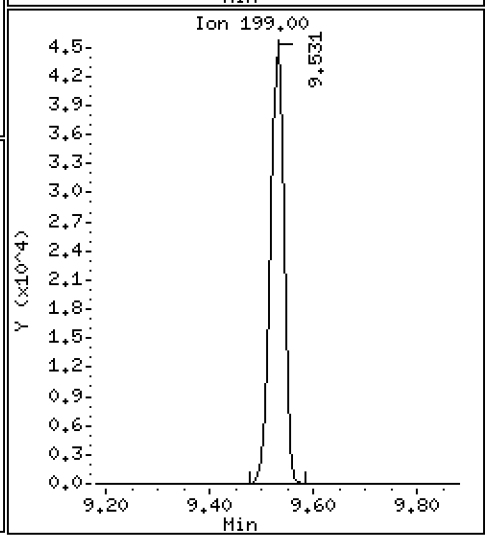












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

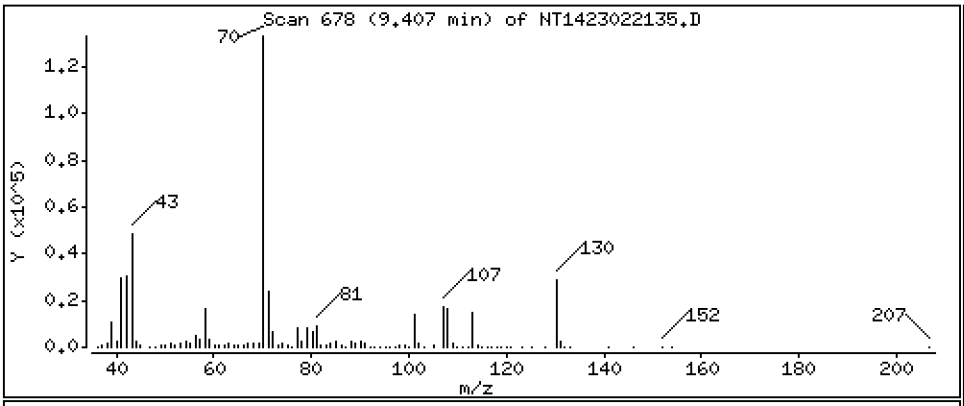
Operator: DSD

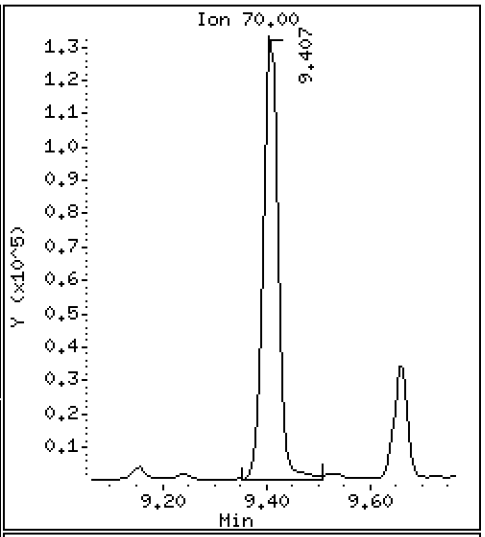
Column phase: ZB-5msi

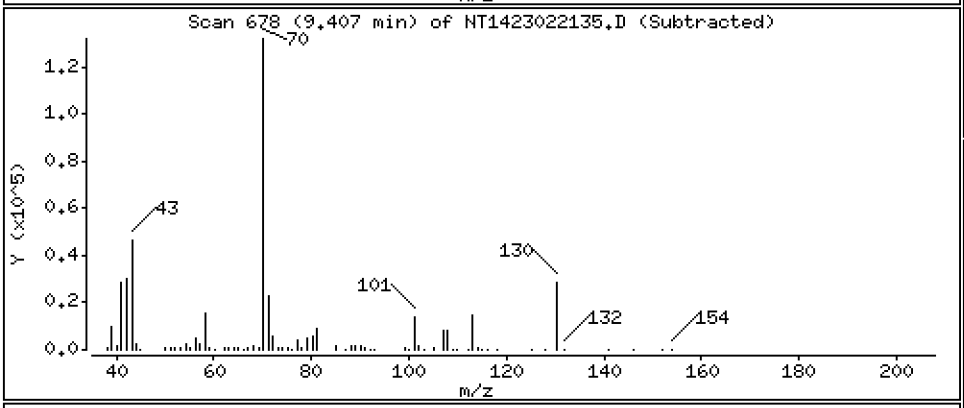
Column diameter: 0.25

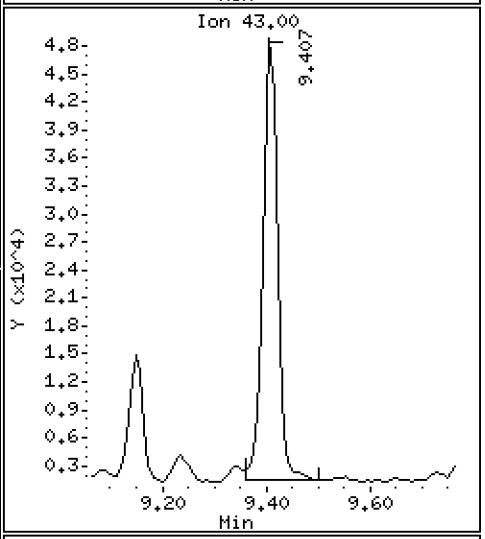
16 N-Nitroso-di-n-propylamine

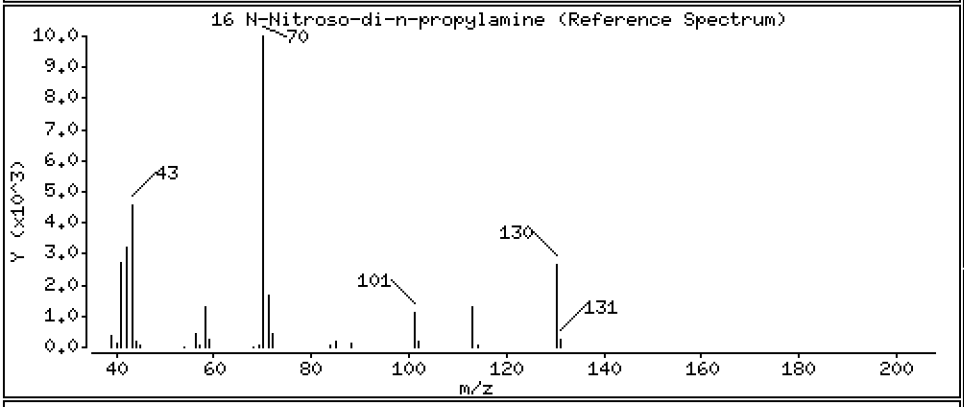
Concentration: 2.891 ug/mL

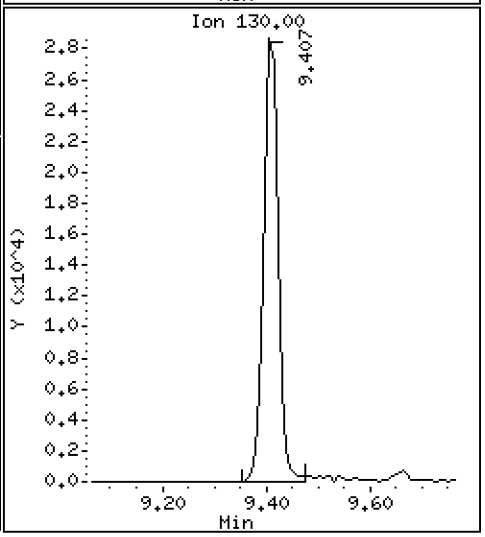


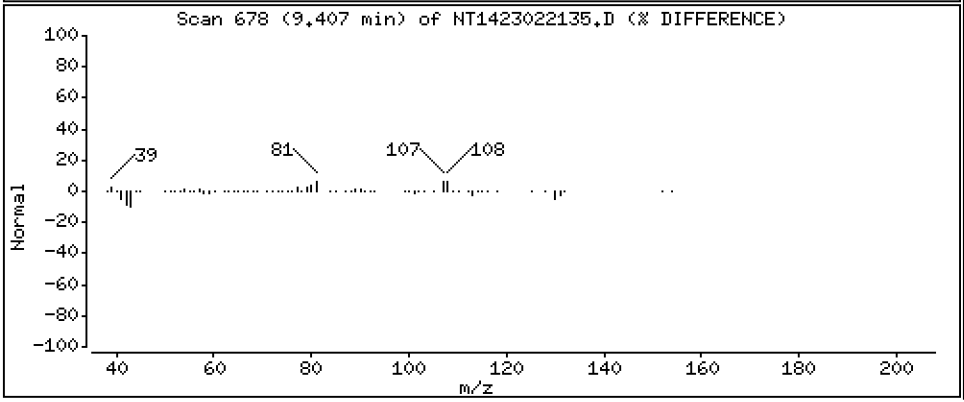












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

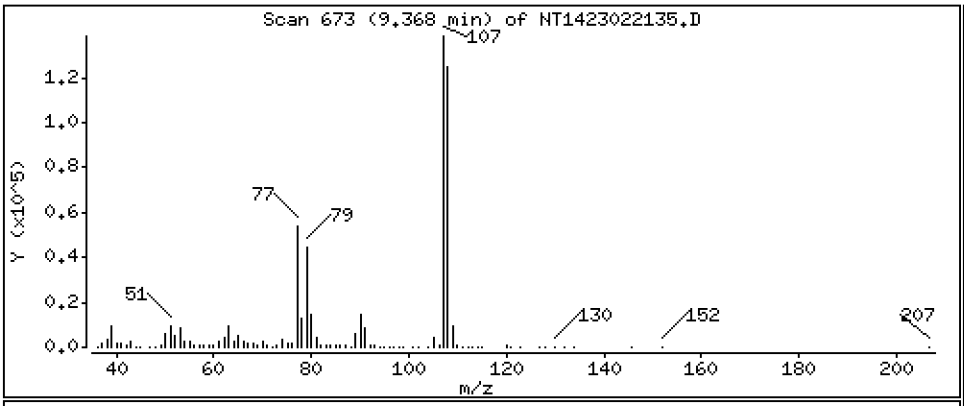
Operator: DSD

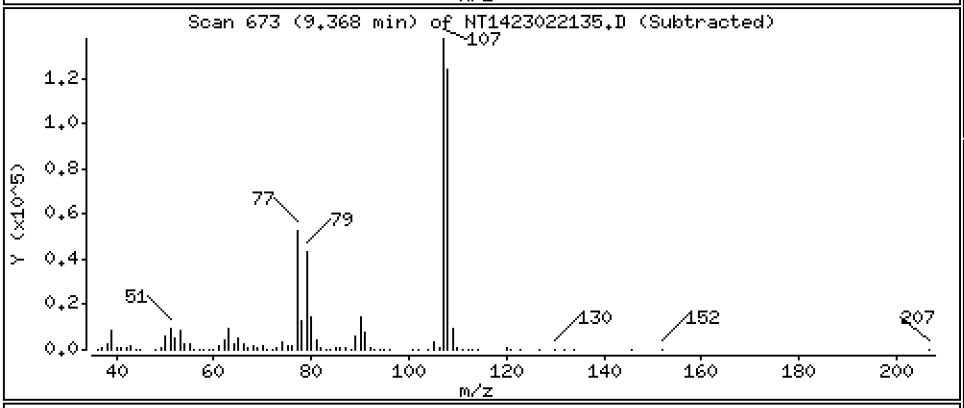
Column phase: ZB-5msi

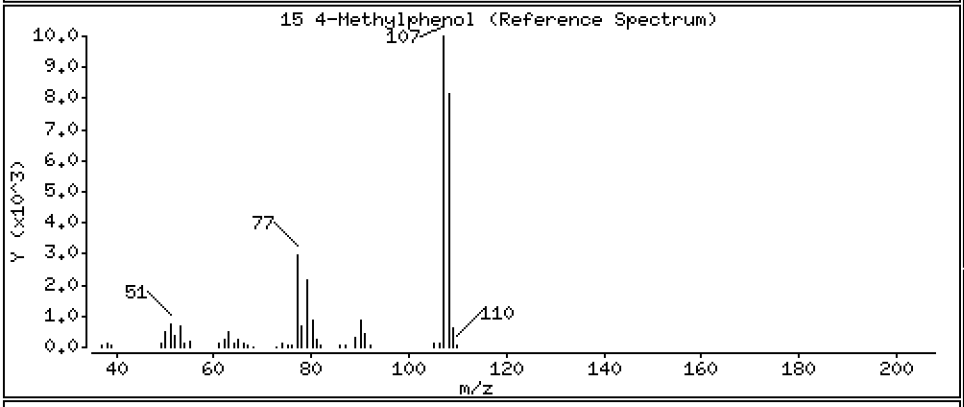
Column diameter: 0.25

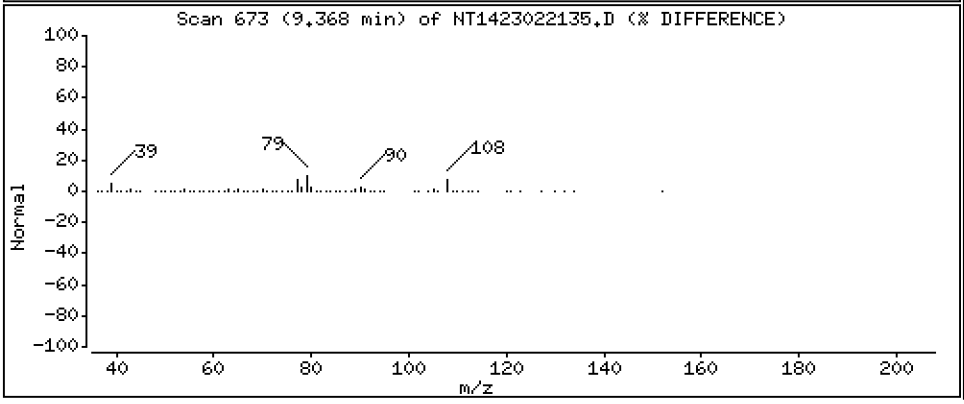
15 4-Methylphenol

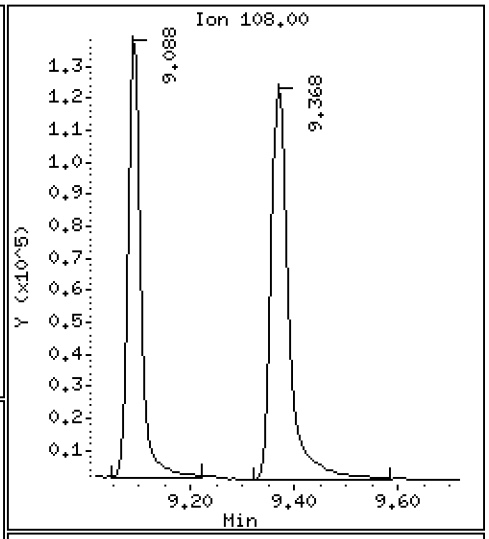
Concentration: 2.810 ug/mL

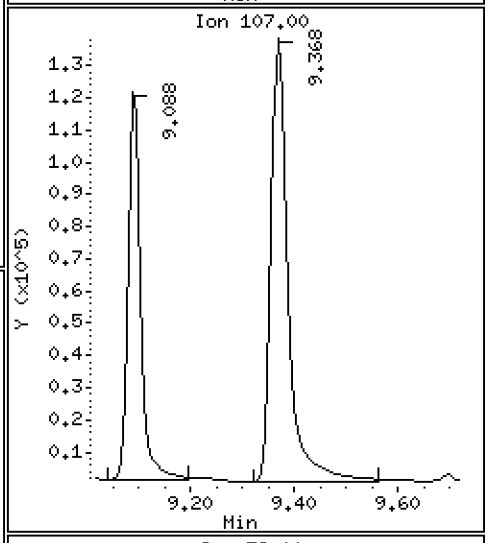


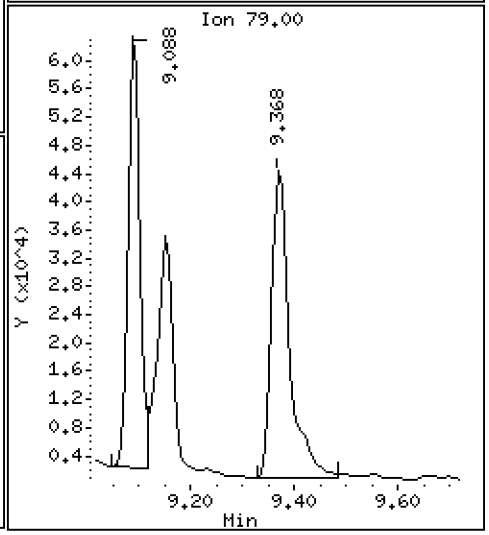












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

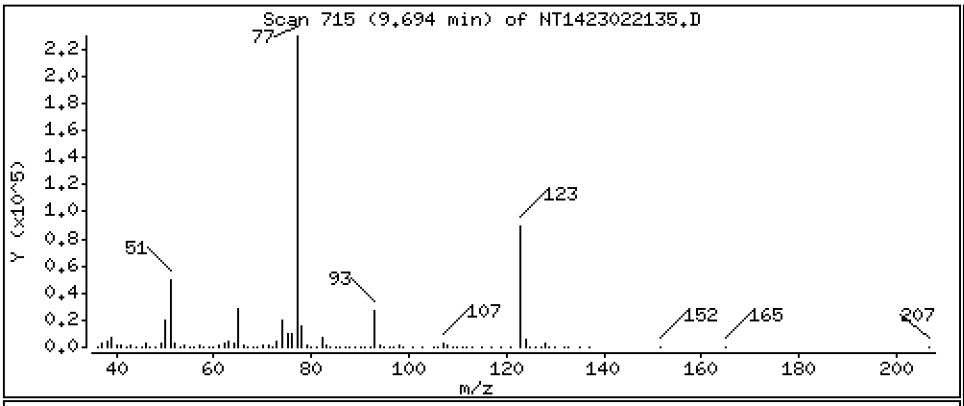
Operator: DSD

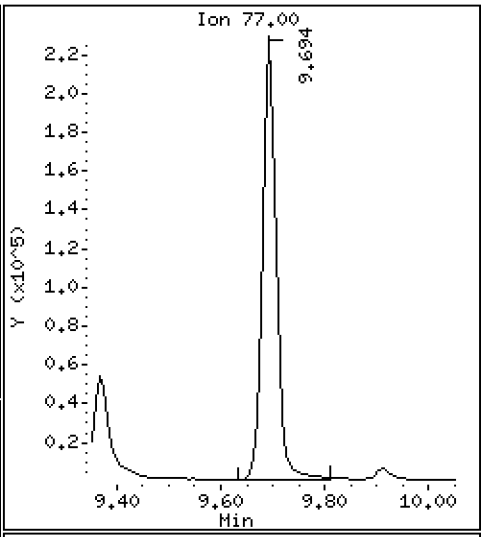
Column phase: ZB-5msi

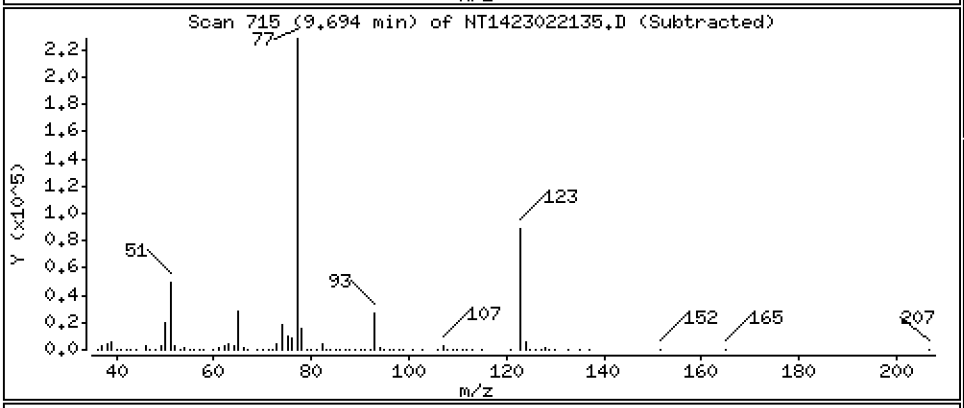
Column diameter: 0.25

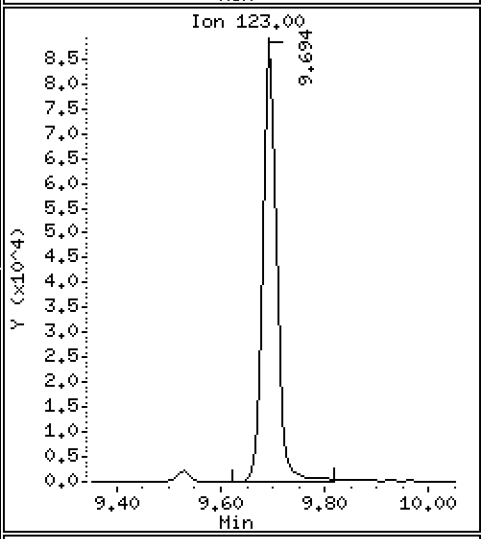
19 Nitrobenzene

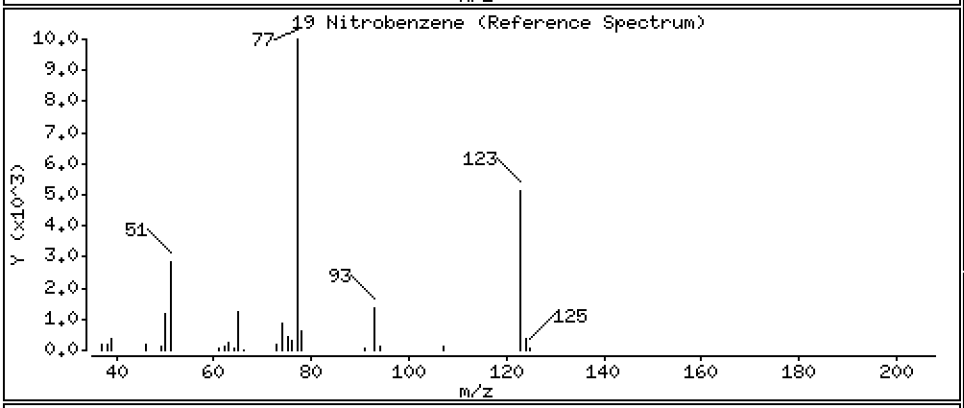
Concentration: 3.400 ug/mL

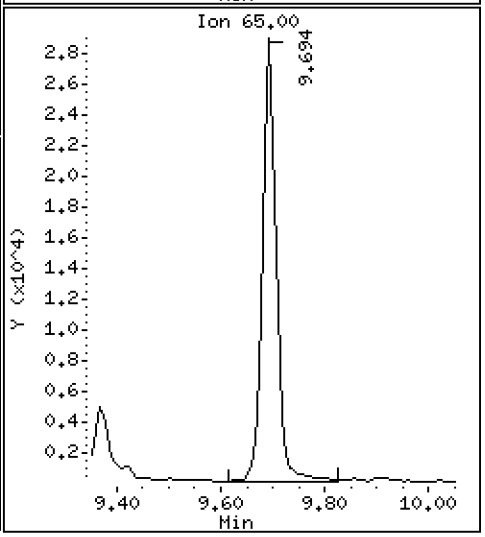


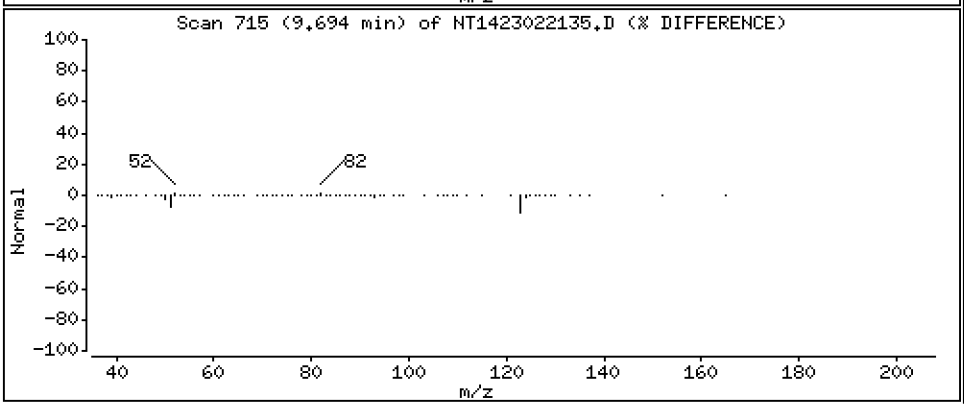












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

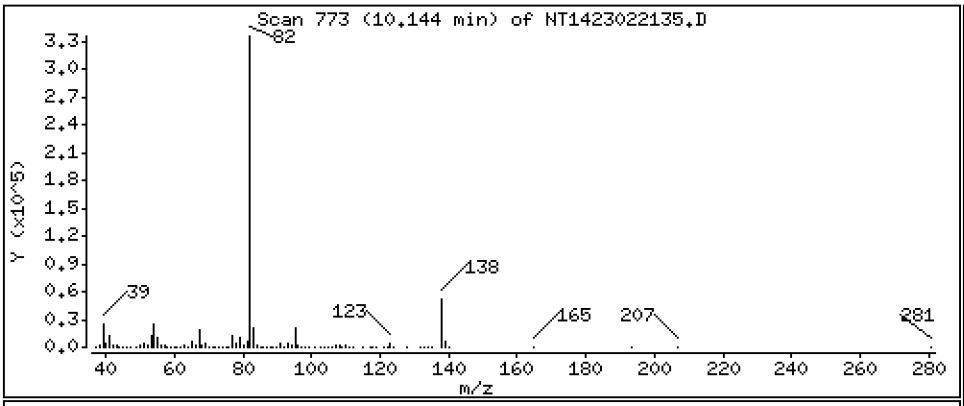
Operator: DSD

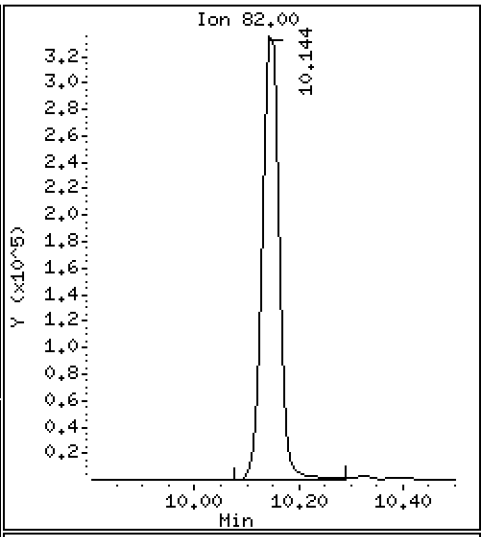
Column phase: ZB-5msi

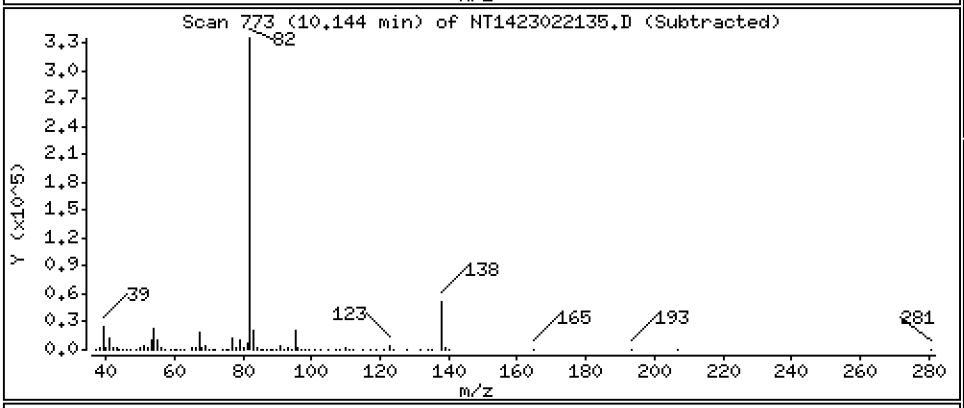
Column diameter: 0.25

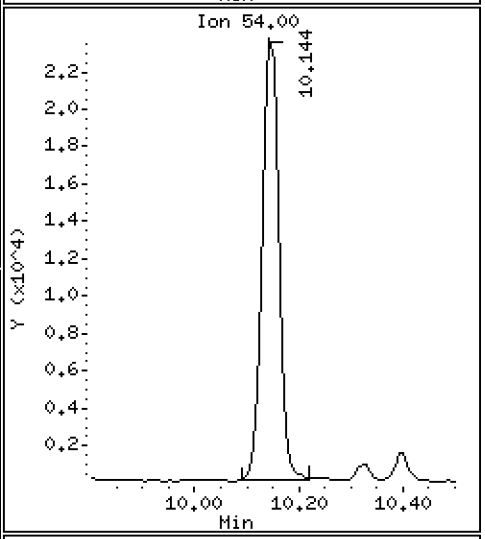
20 Isophorone

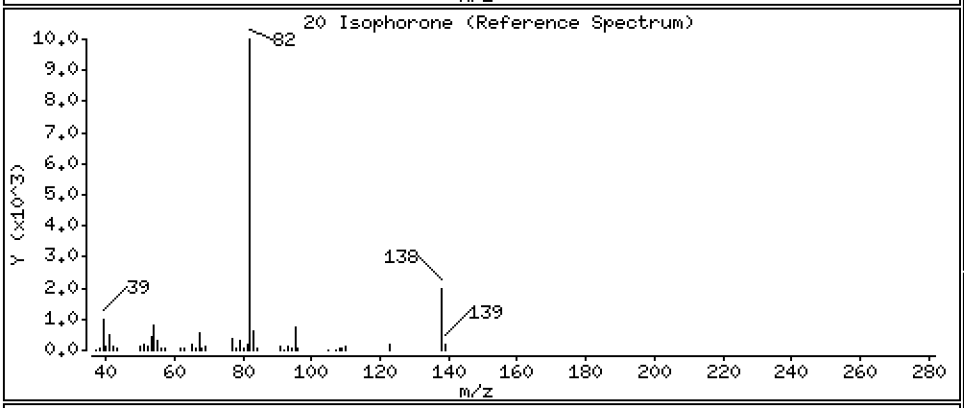
Concentration: 4.995 ug/mL

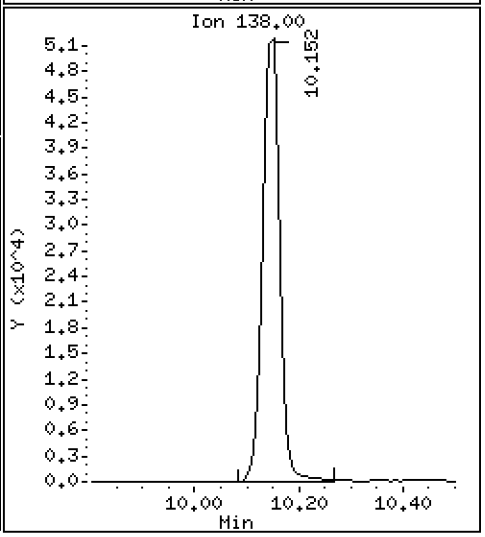


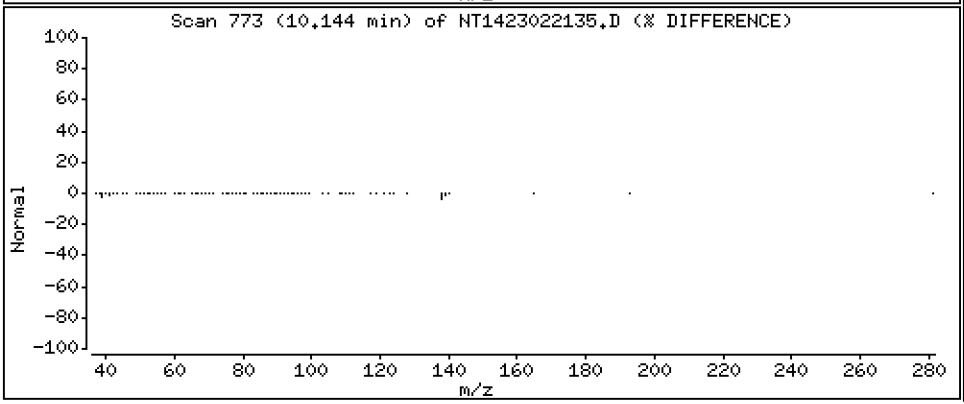












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

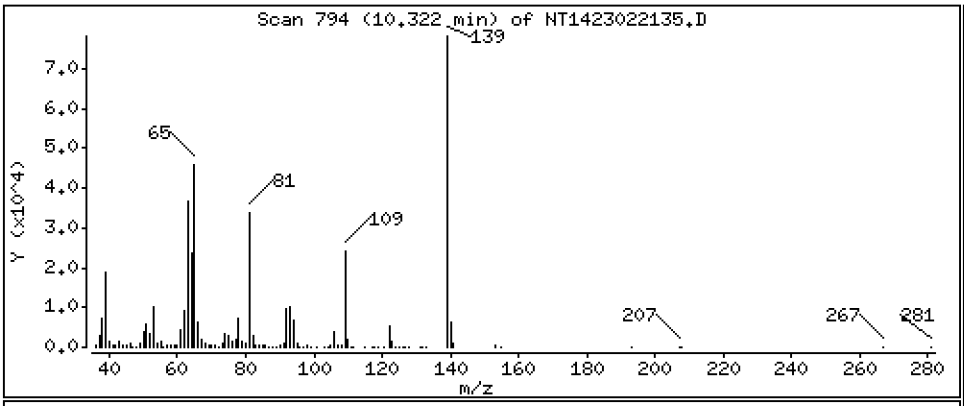
Operator: DSD

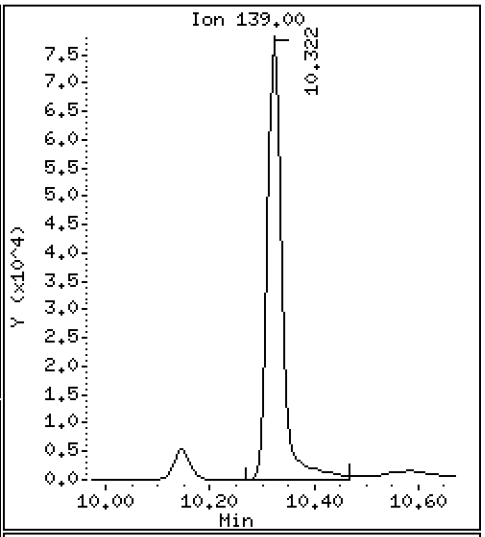
Column phase: ZB-5msi

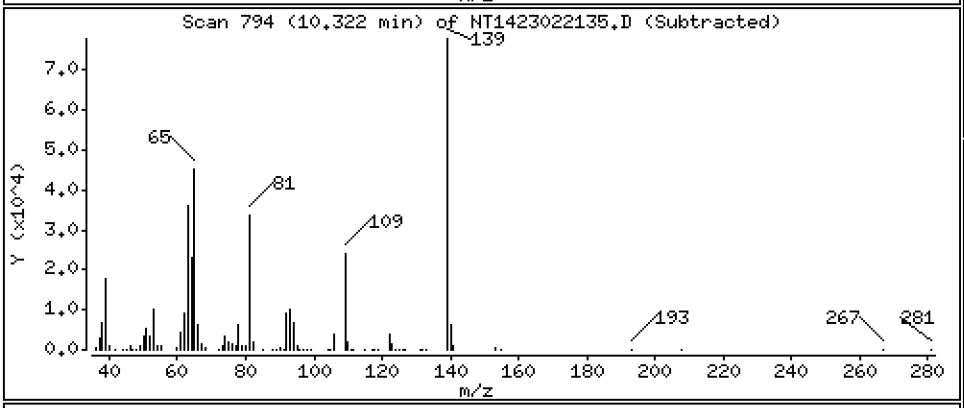
Column diameter: 0.25

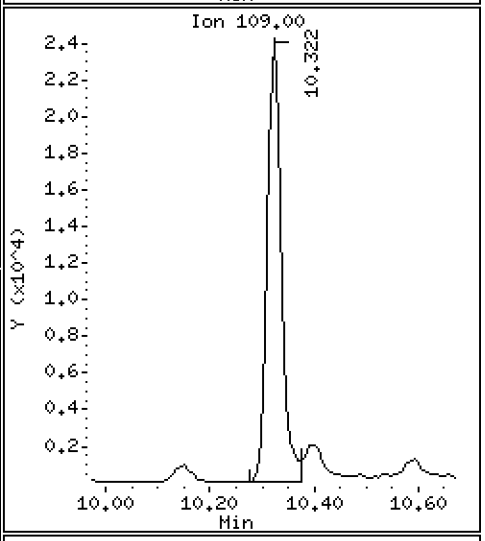
21 2-Nitrophenol

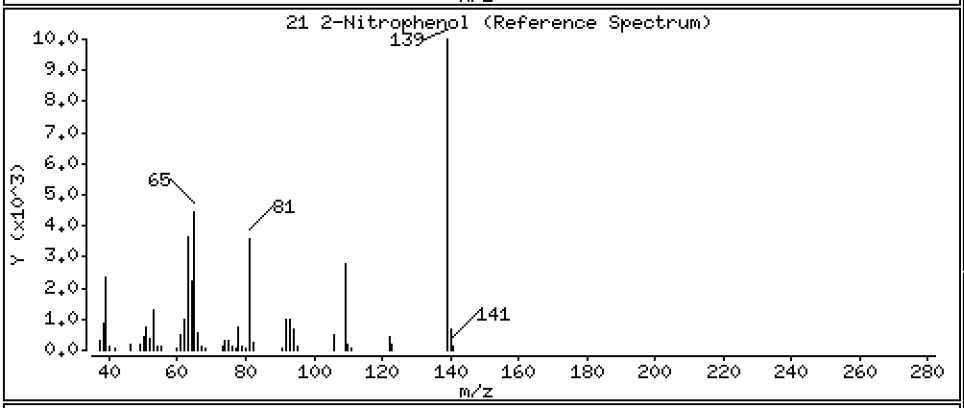
Concentration: 2.710 ug/mL

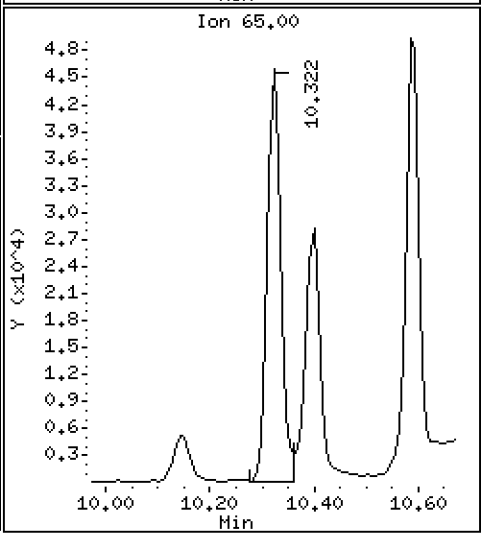


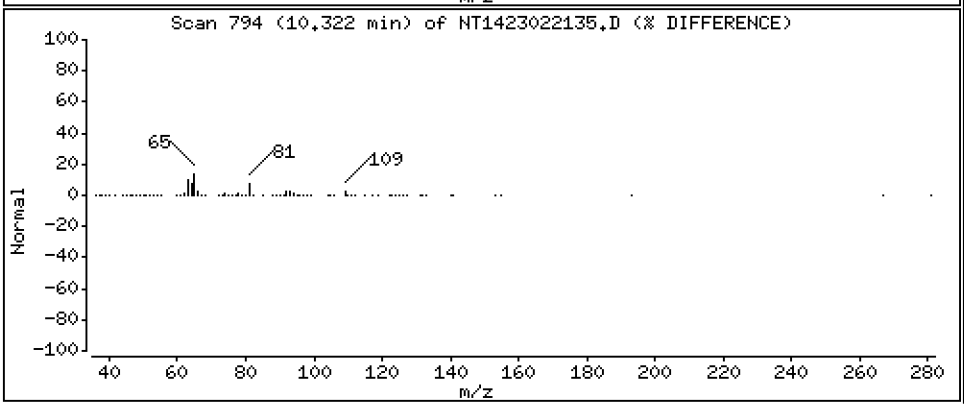












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

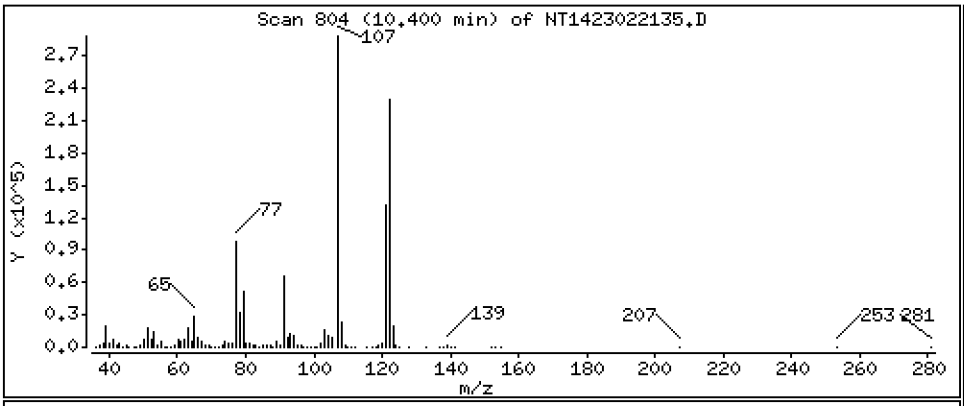
Operator: DSD

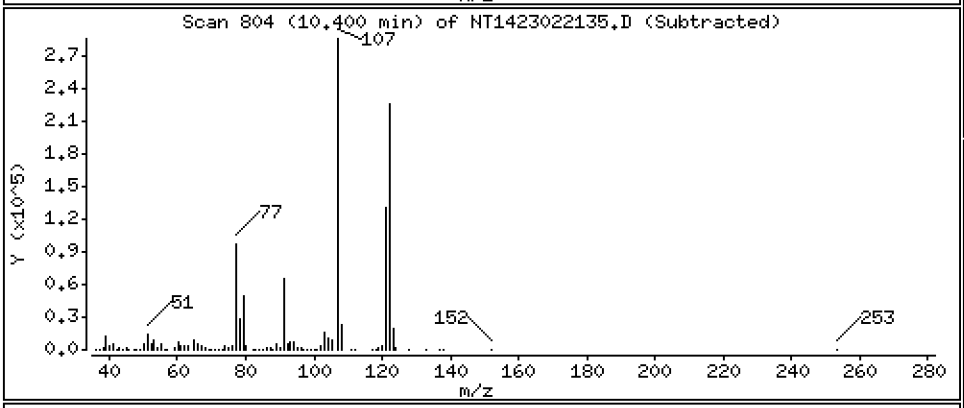
Column phase: ZB-5msi

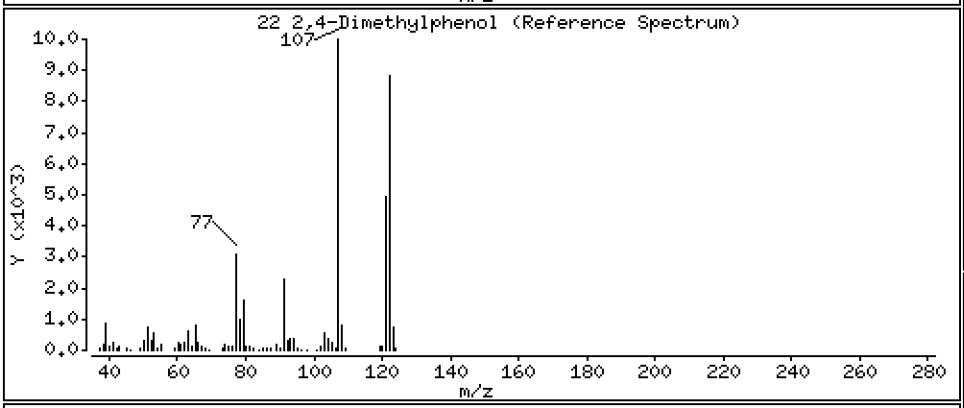
Column diameter: 0.25

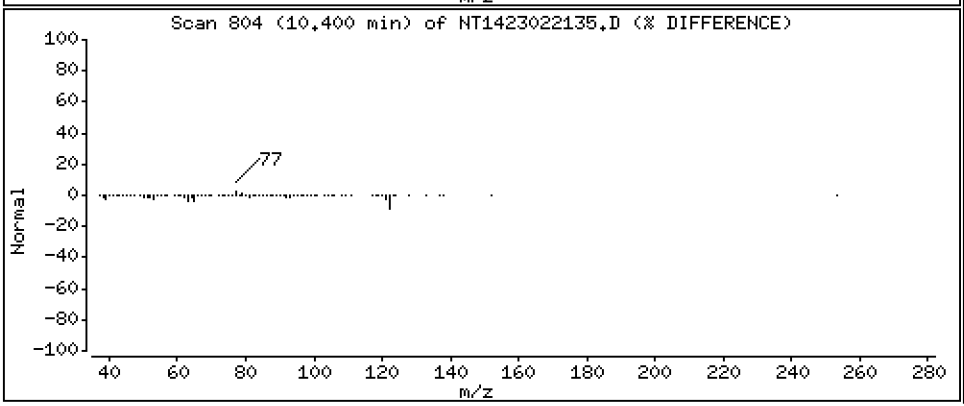
22 2,4-Dimethylphenol

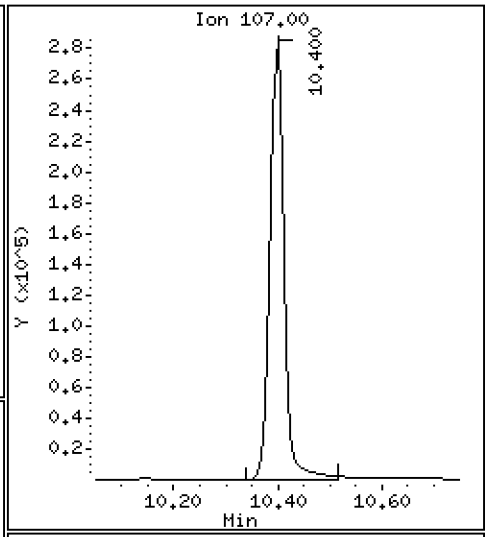
Concentration: 5.631 ug/mL

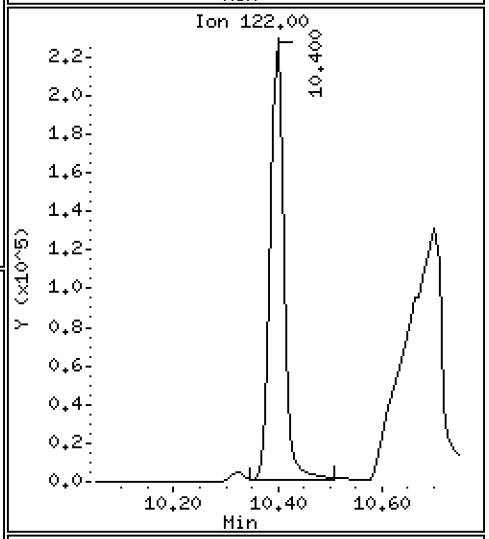


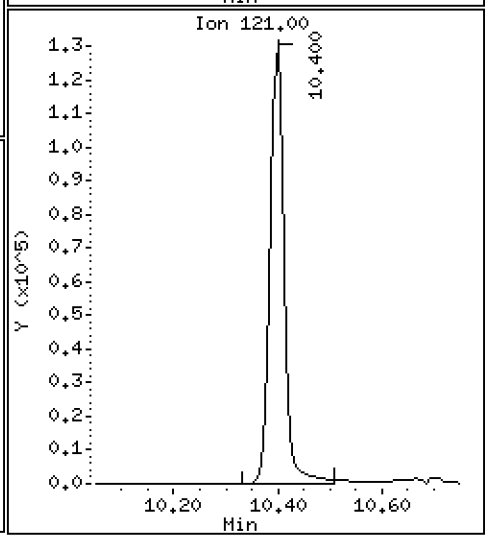












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

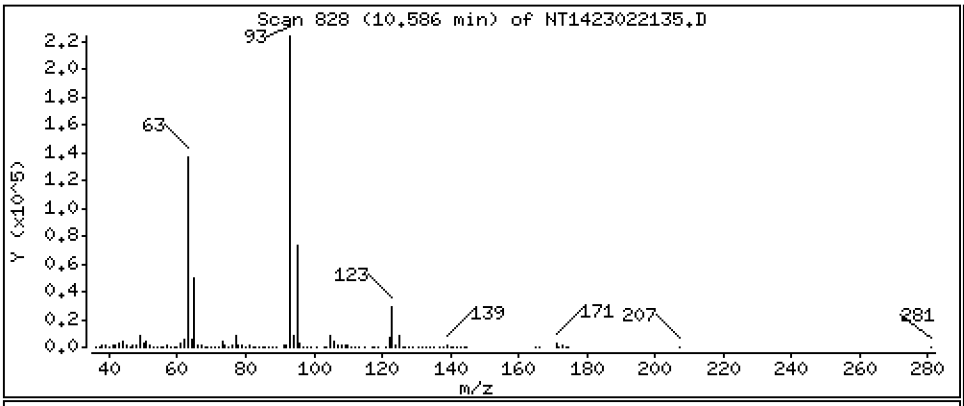
Operator: DSD

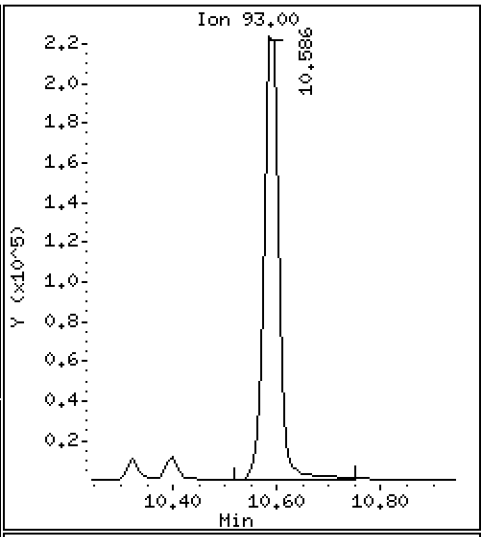
Column phase: ZB-5msi

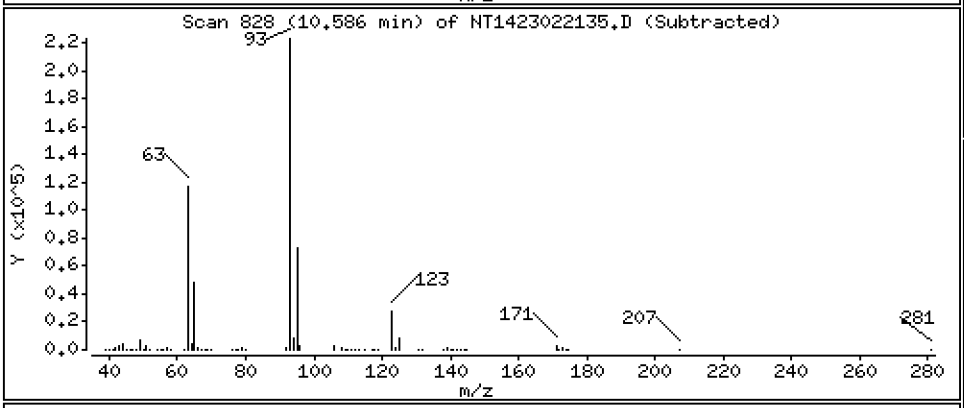
Column diameter: 0.25

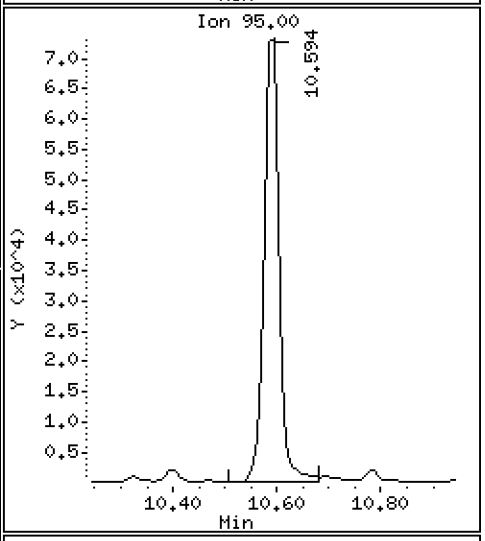
23 Bis(2-Chloroethoxy)methane

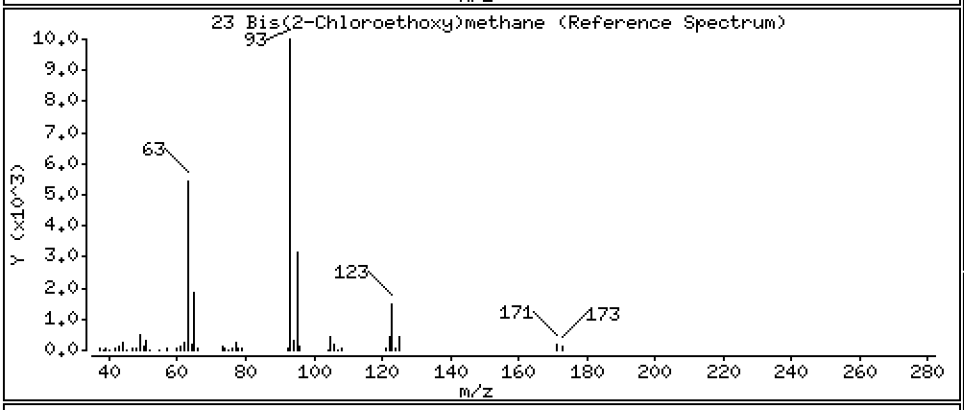
Concentration: 4.123 ug/mL

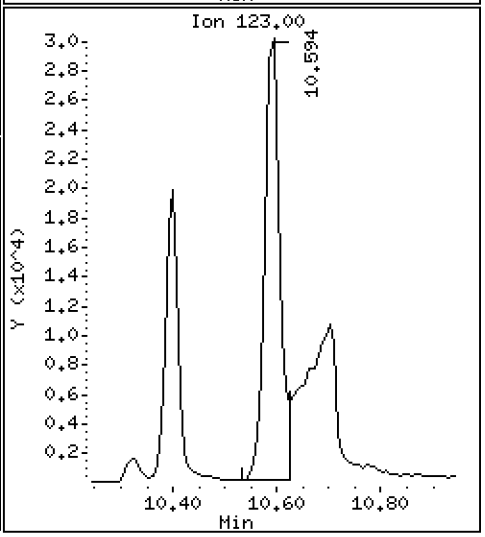


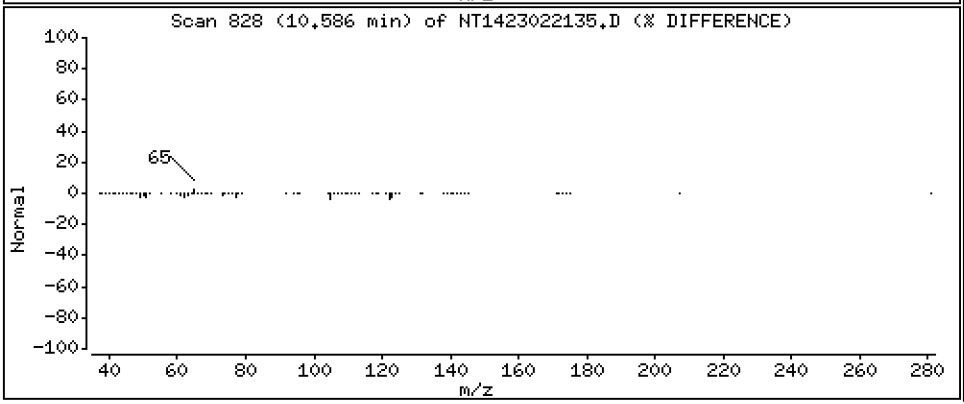












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

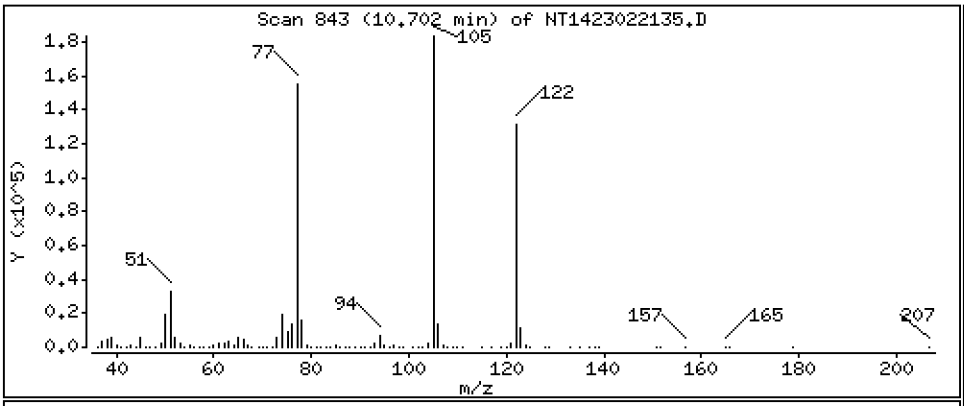
Operator: DSD

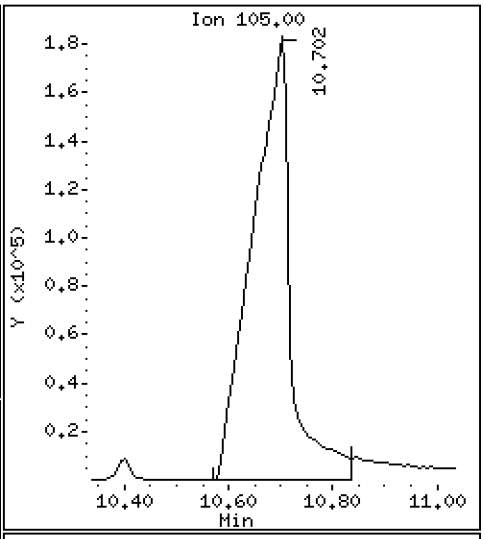
Column phase: ZB-5msi

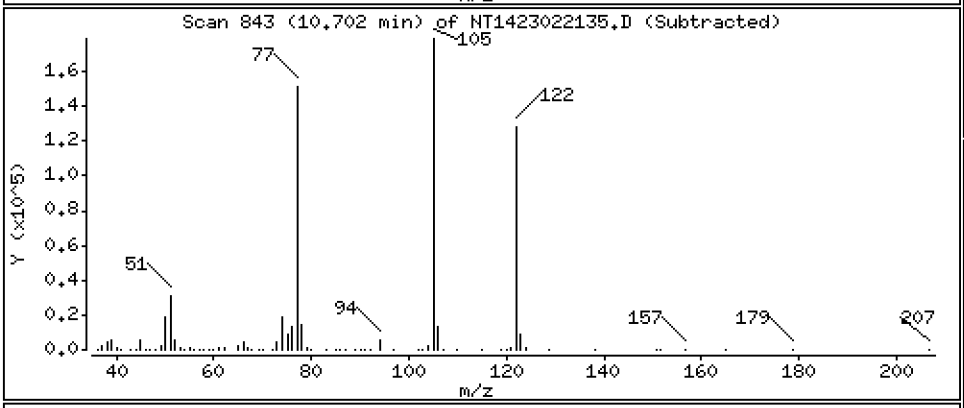
Column diameter: 0.25

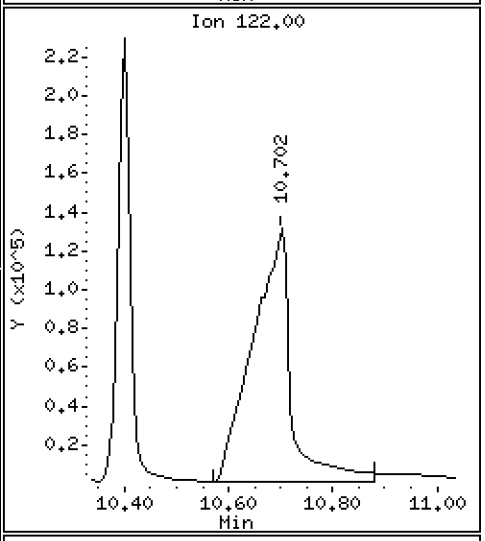
24 Benzoic acid

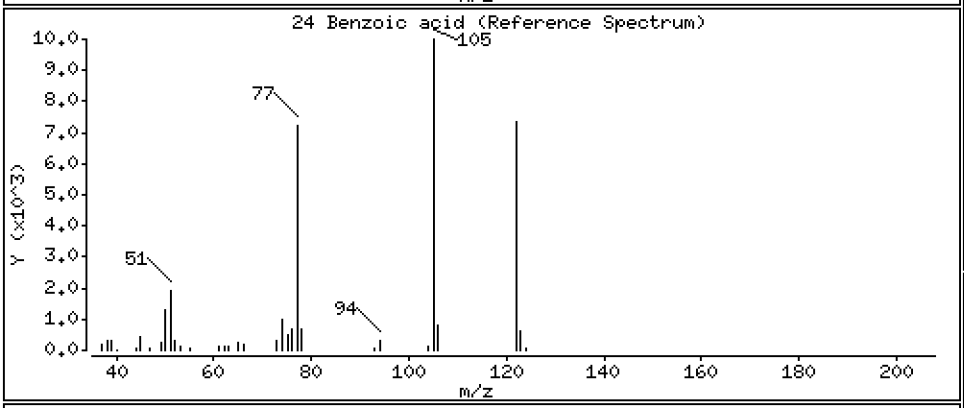
Concentration: 15.79 ug/mL

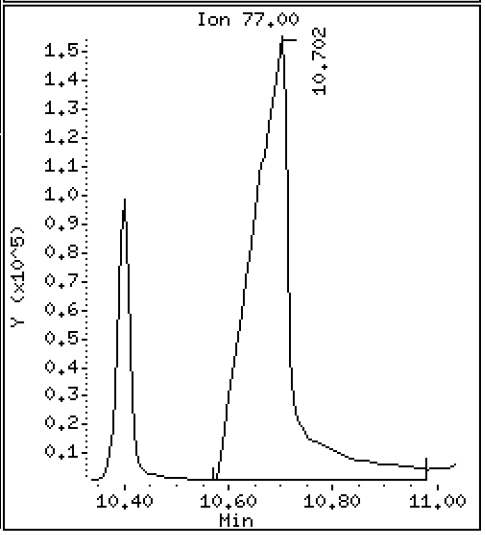


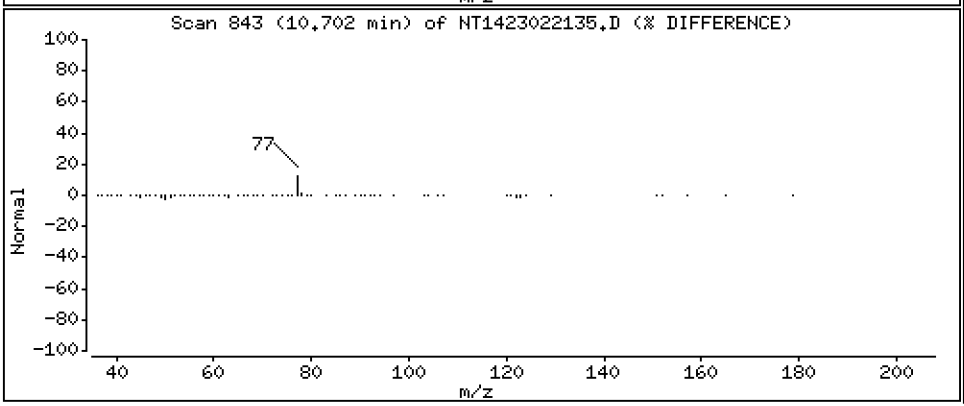












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

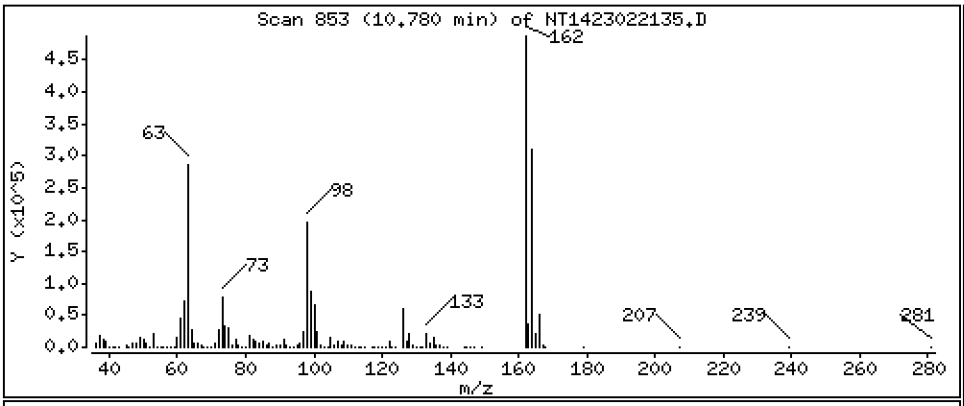
Operator: DSD

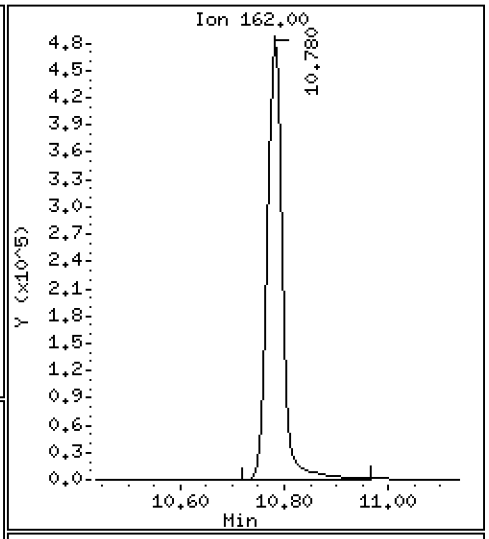
Column phase: ZB-5msi

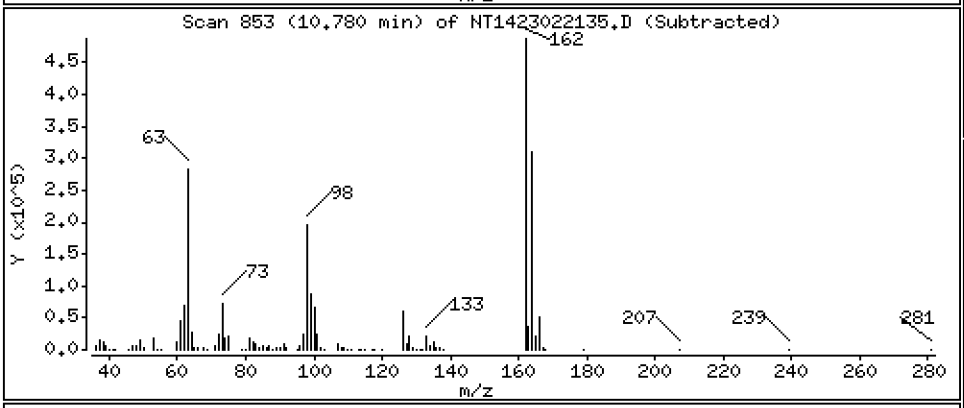
Column diameter: 0.25

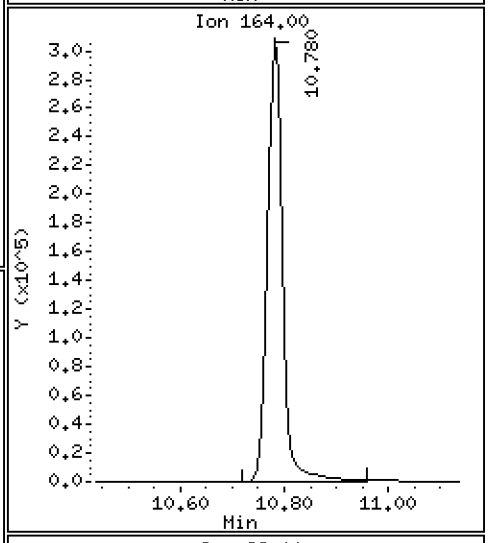
25 2,4-Dichlorophenol

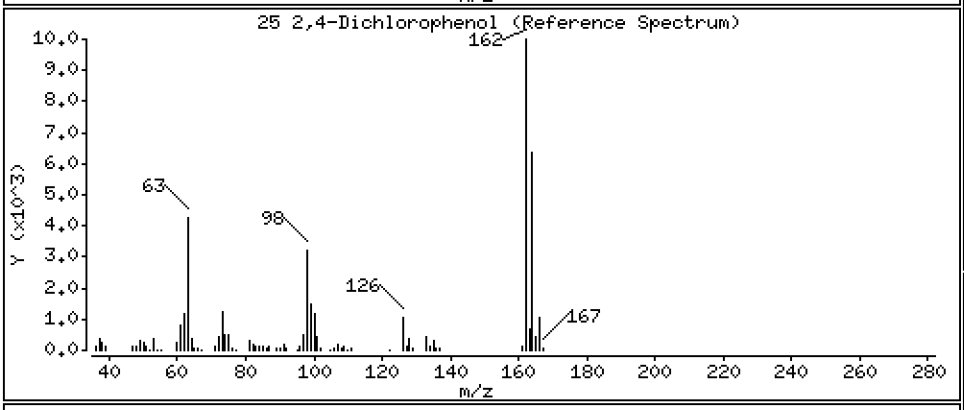
Concentration: 12.91 ug/mL

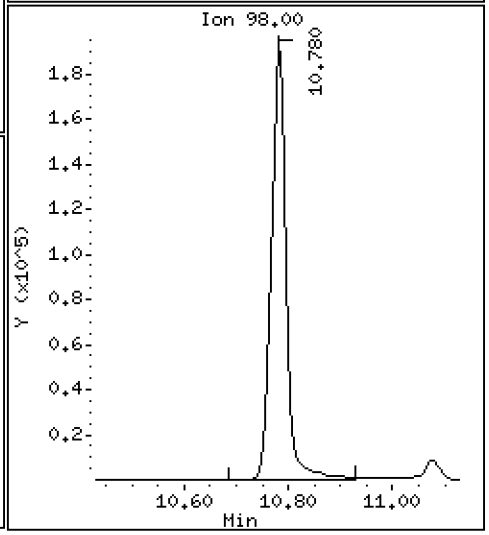


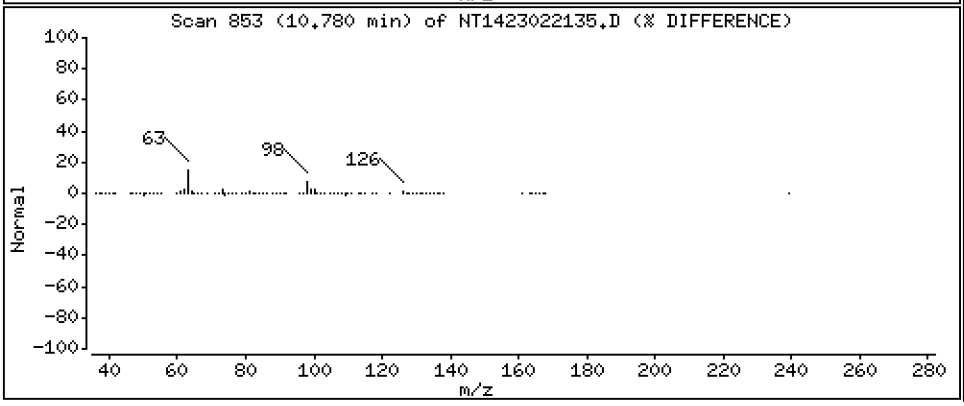












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

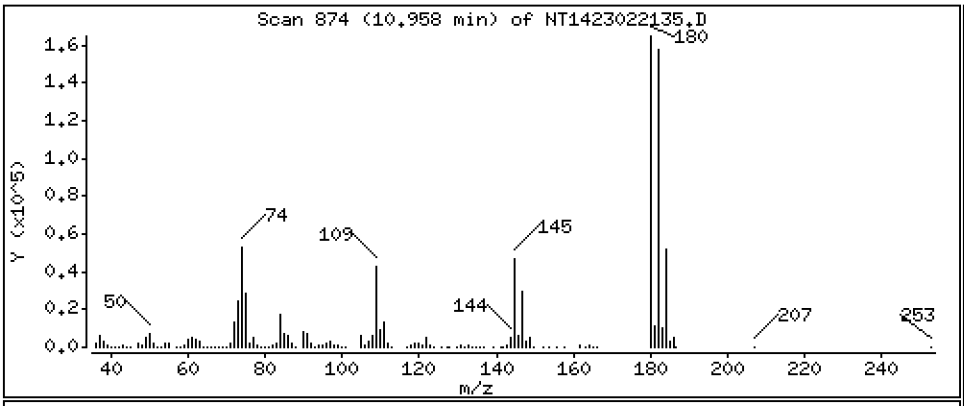
Operator: DSD

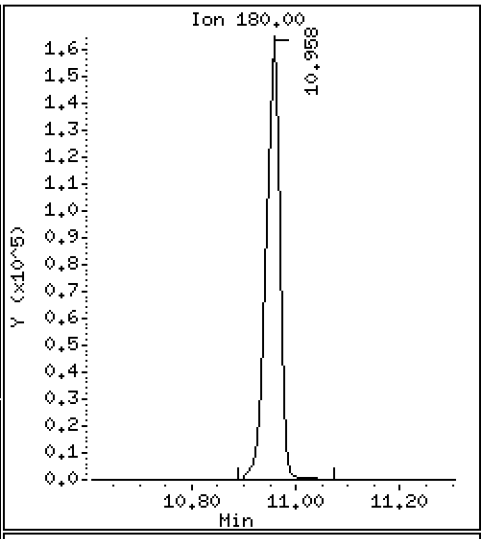
Column phase: ZB-5msi

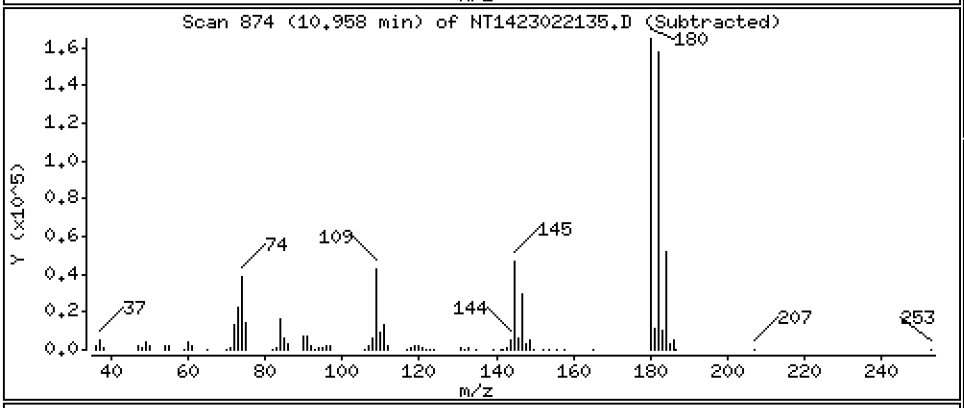
Column diameter: 0.25

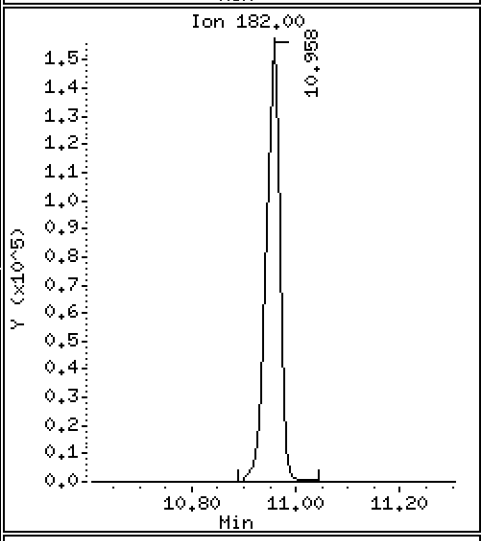
26 1,2,4-Trichlorobenzene

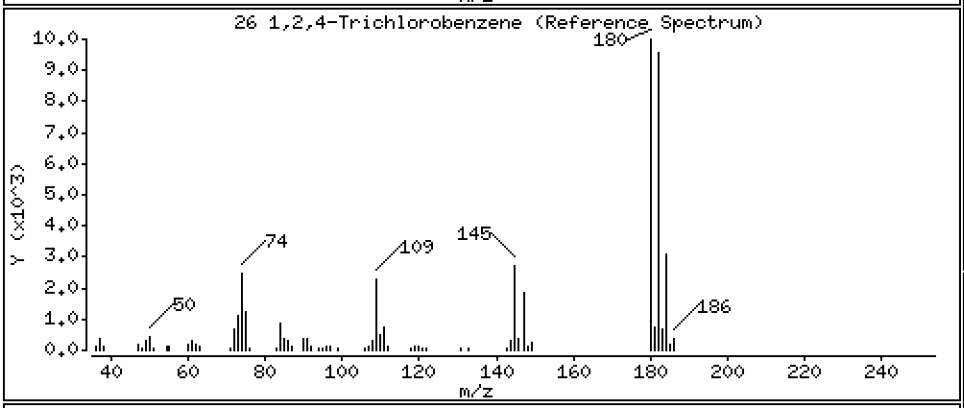
Concentration: 3.371 ug/mL

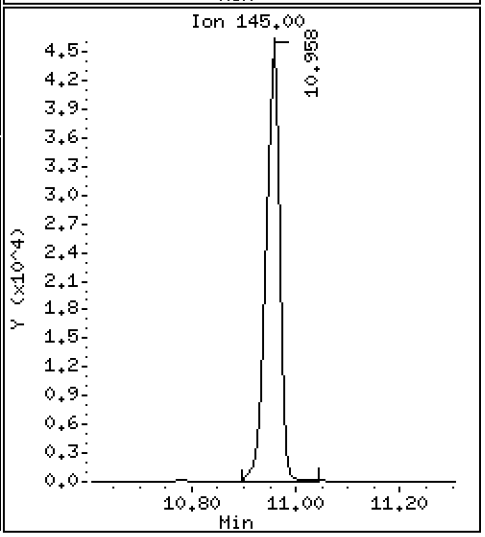


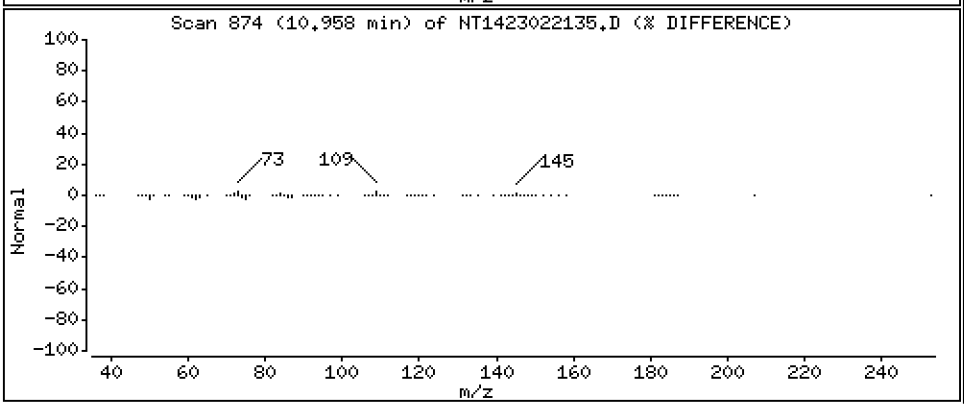












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

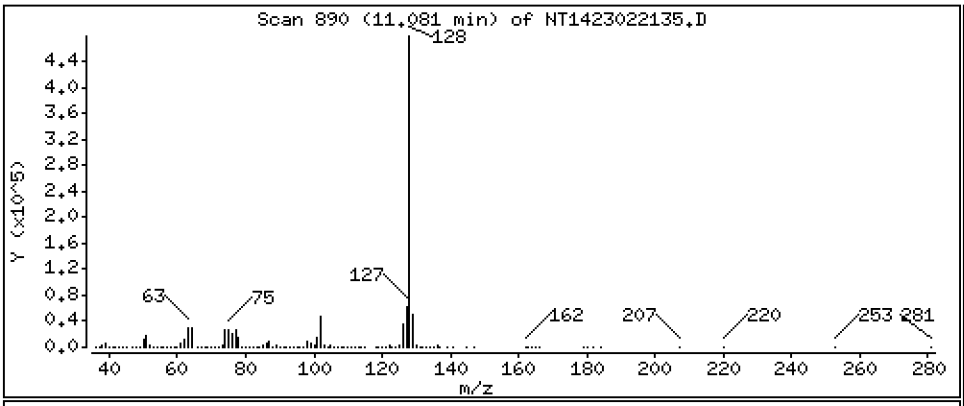
Operator: DSD

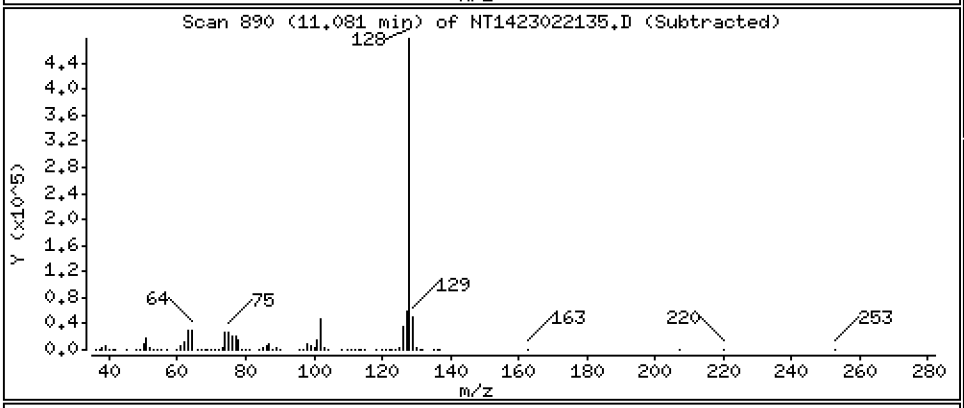
Column phase: ZB-5msi

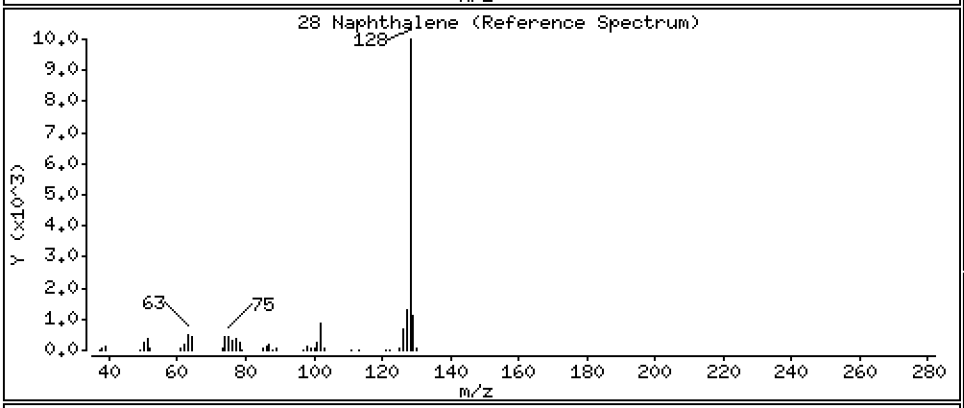
Column diameter: 0.25

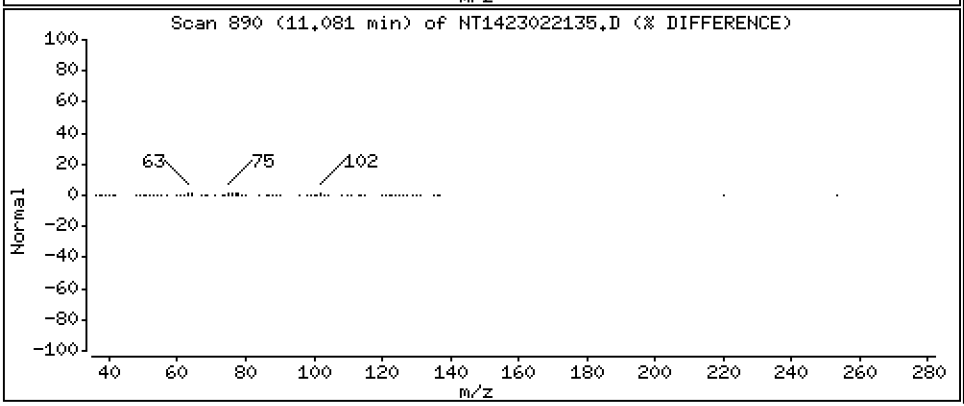
28 Naphthalene

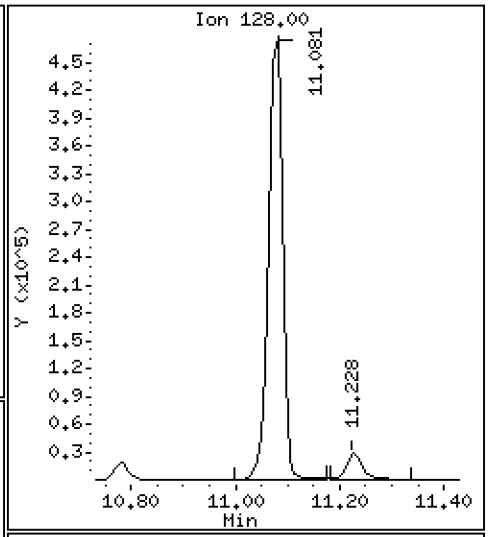
Concentration: 3.354 ug/mL

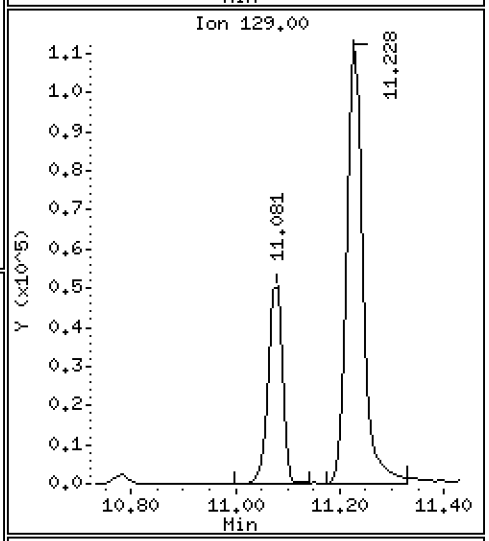


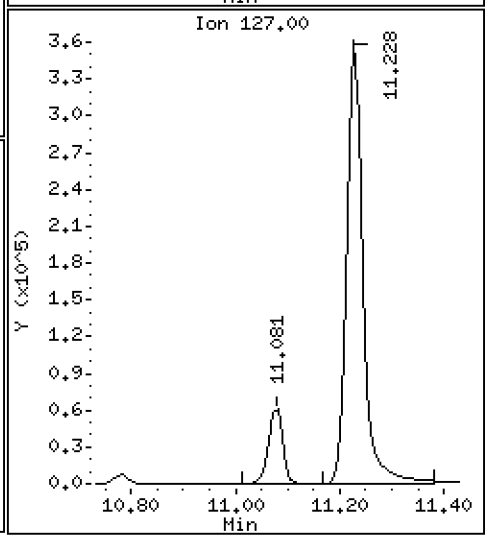












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

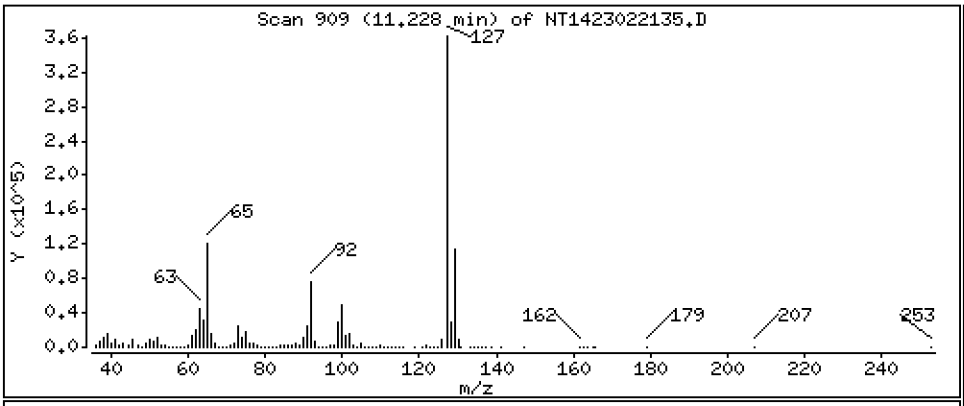
Operator: DSD

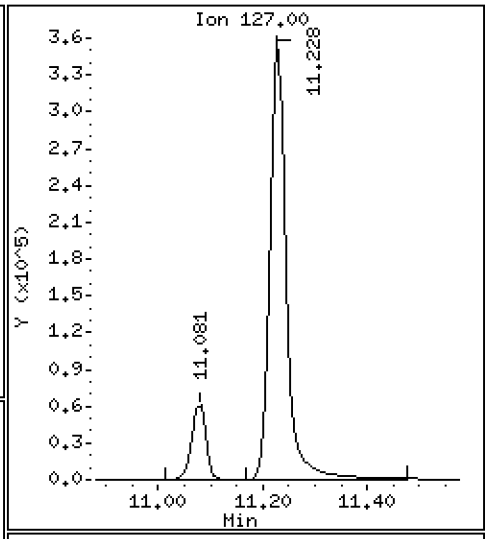
Column phase: ZB-5msi

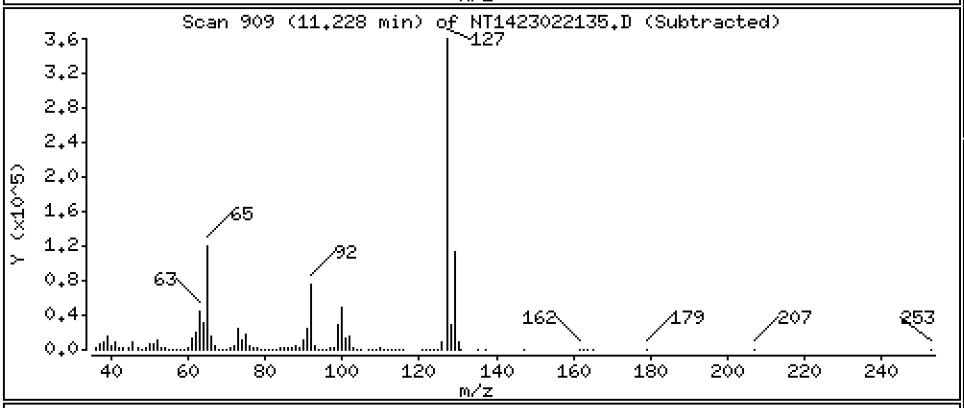
Column diameter: 0.25

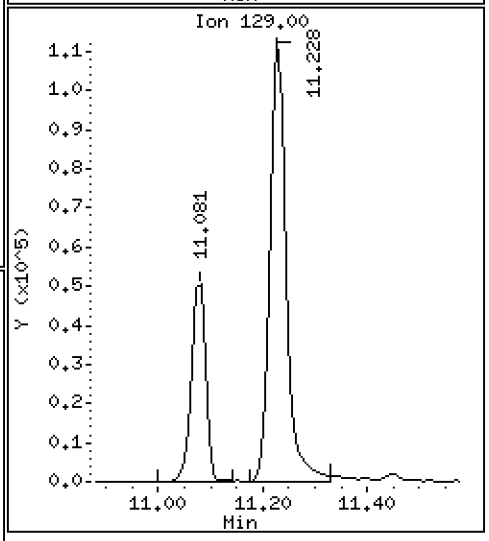
29 4-Chloroaniline

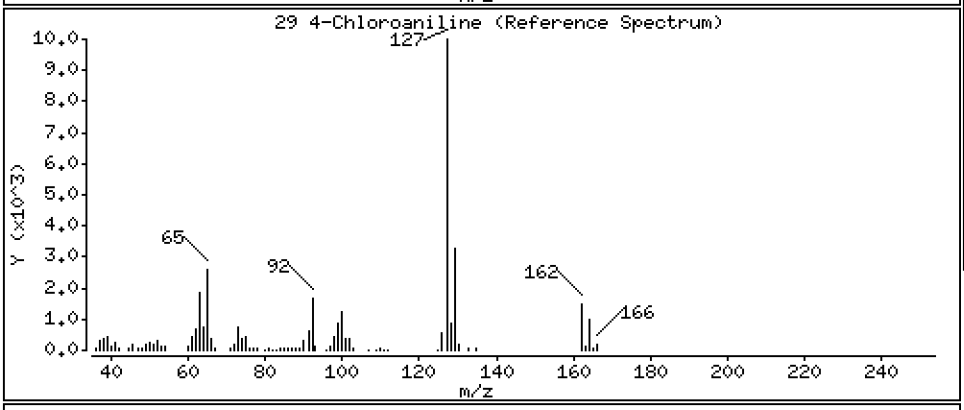
Concentration: 7.212 ug/mL

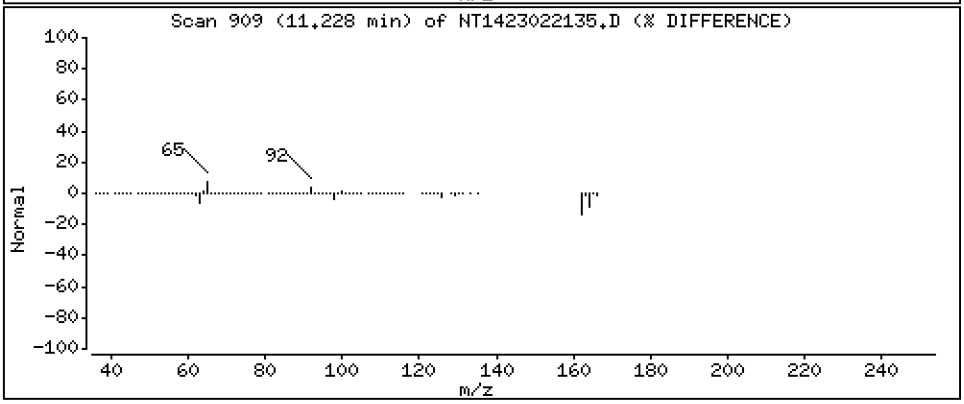












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

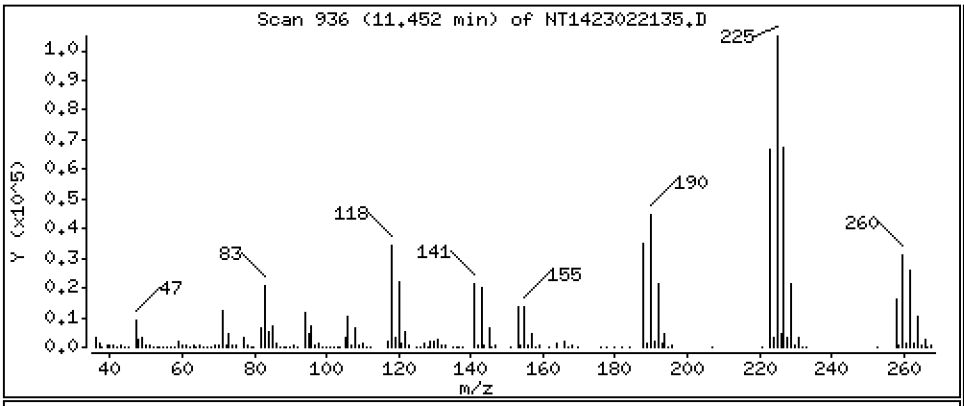
Operator: DSD

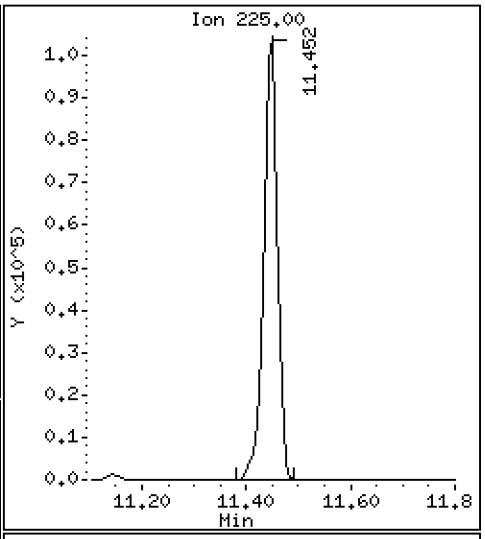
Column phase: ZB-5msi

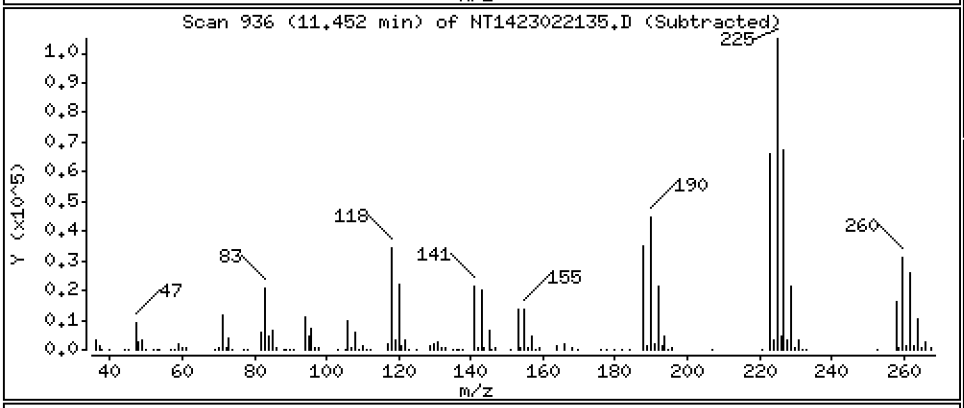
Column diameter: 0.25

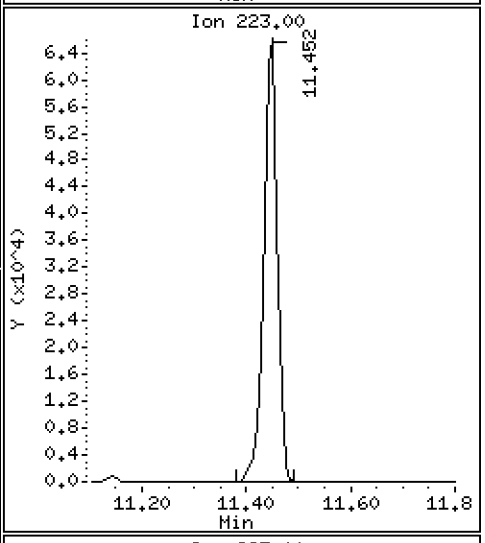
30 Hexachlorobutadiene

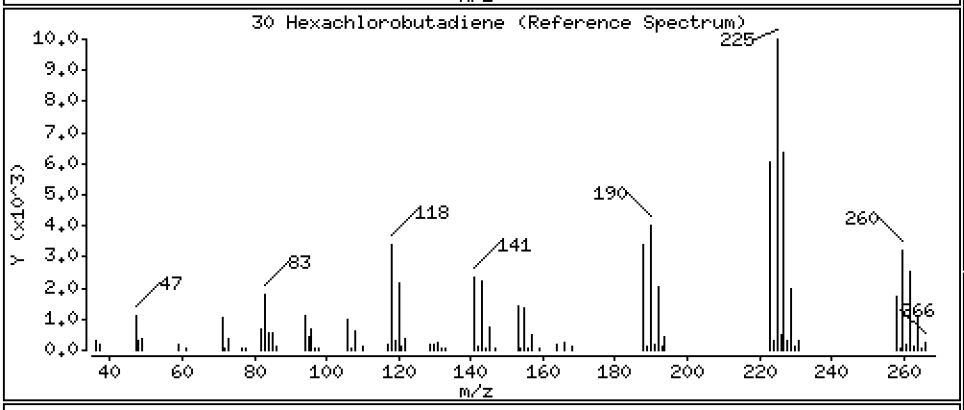
Concentration: 3.766 ug/mL

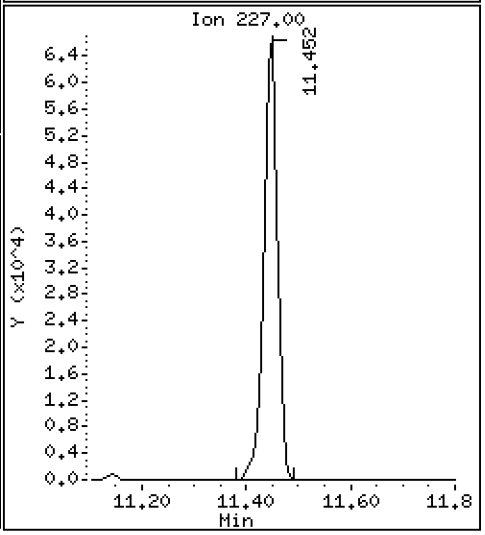


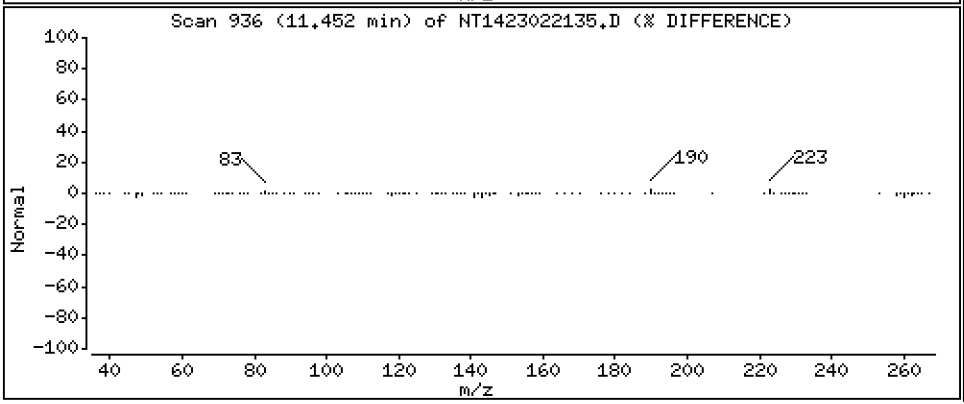












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

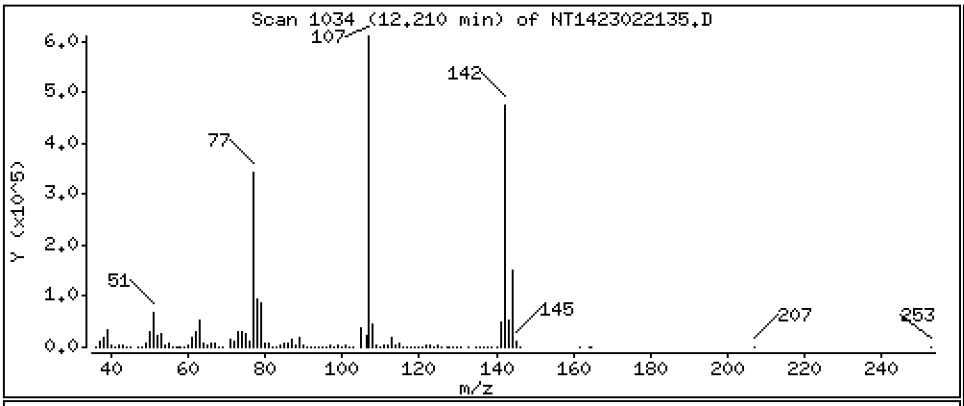
Operator: DSD

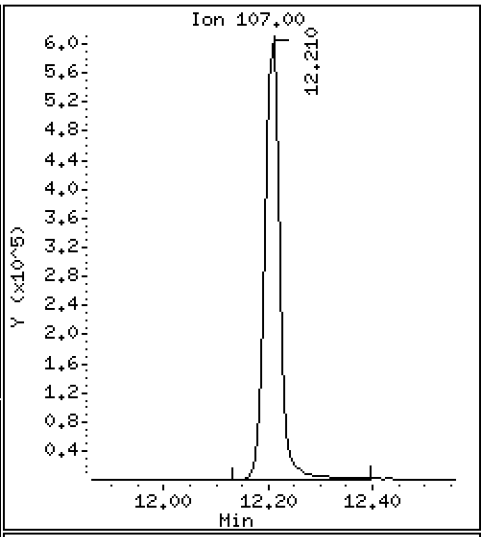
Column phase: ZB-5msi

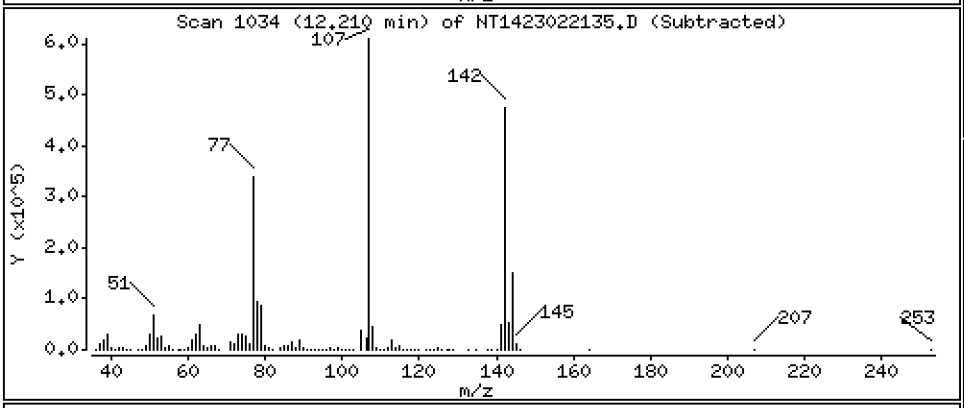
Column diameter: 0.25

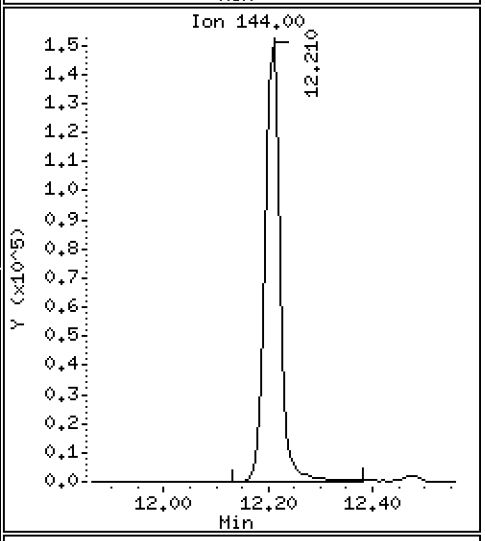
31 4-Chloro-3-methylphenol

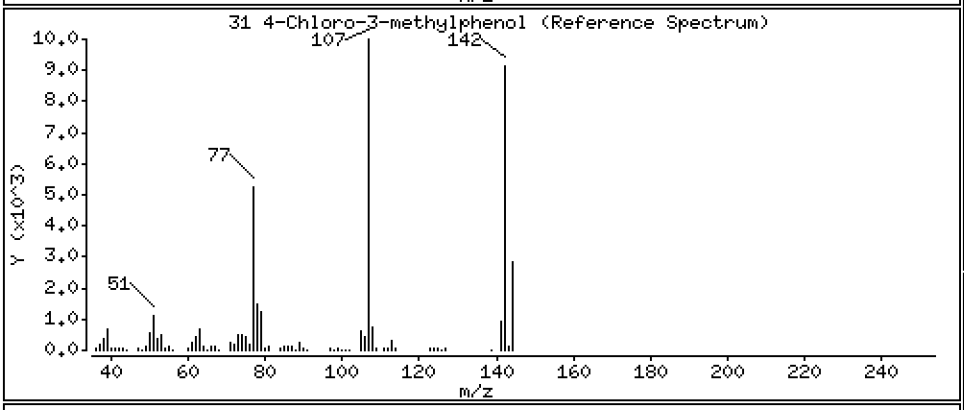
Concentration: 13.91 ug/mL

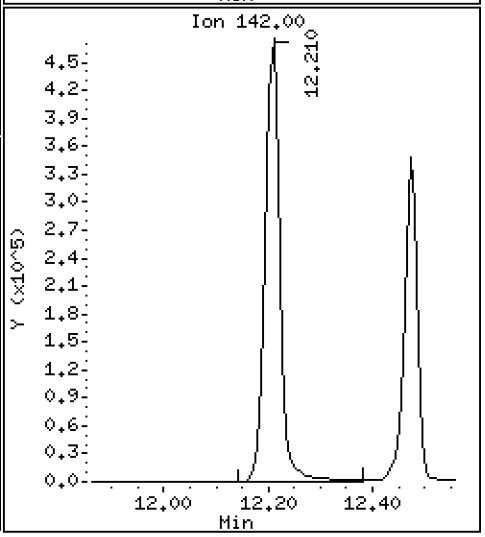


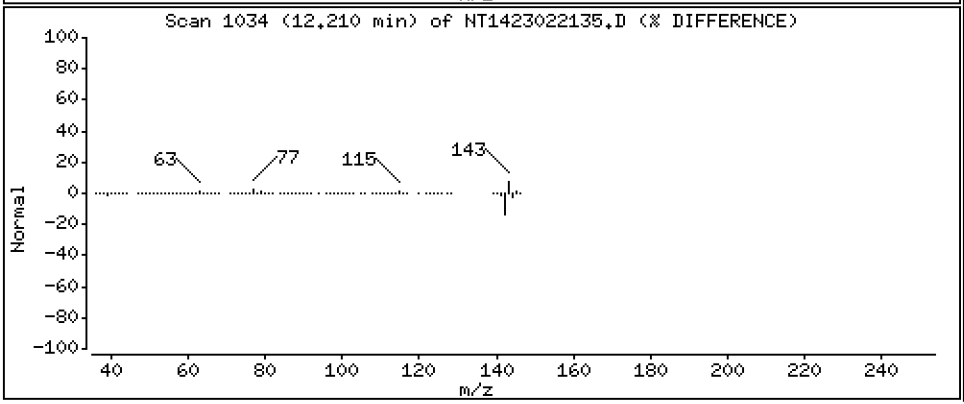












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022135.D

Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

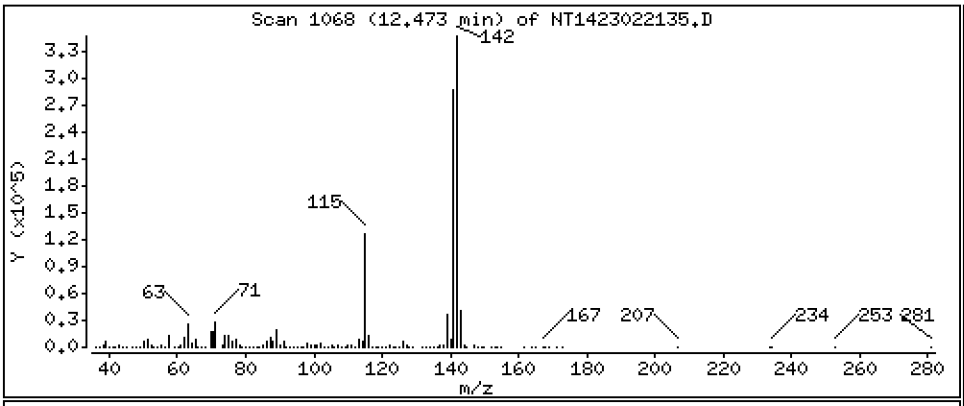
Operator: DSD

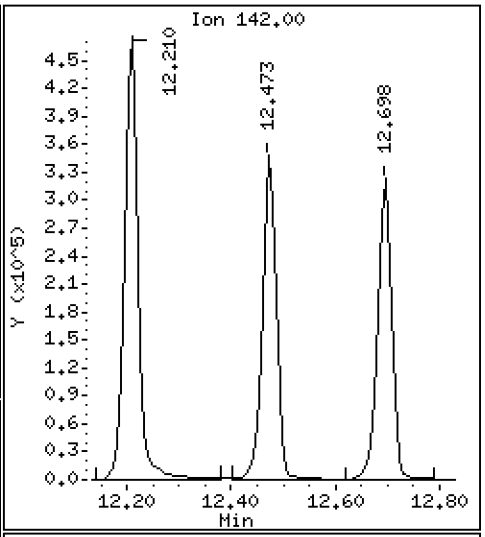
Column phase: ZB-5msi

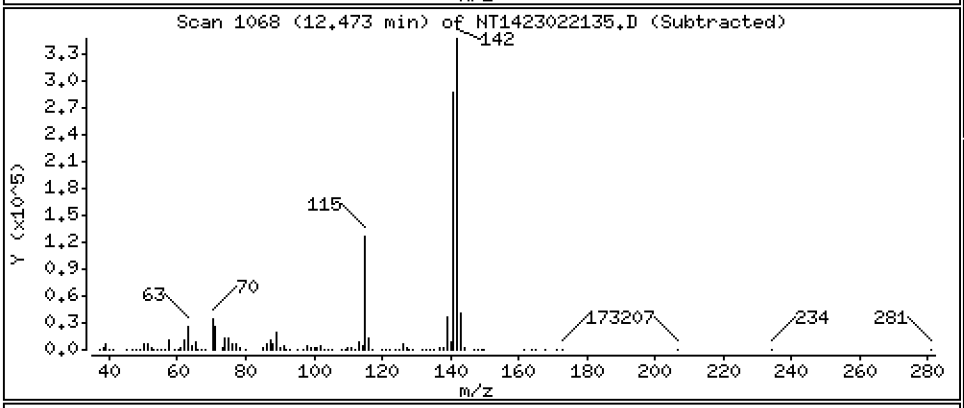
Column diameter: 0.25

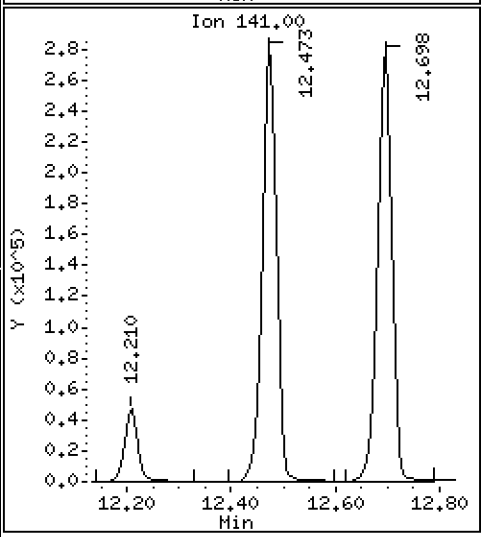
32 2-Methylnaphthalene

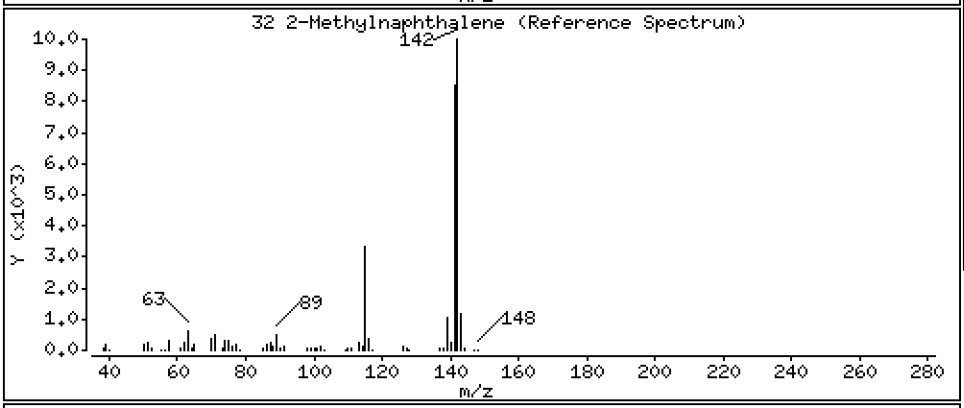
Concentration: 3.256 ug/mL

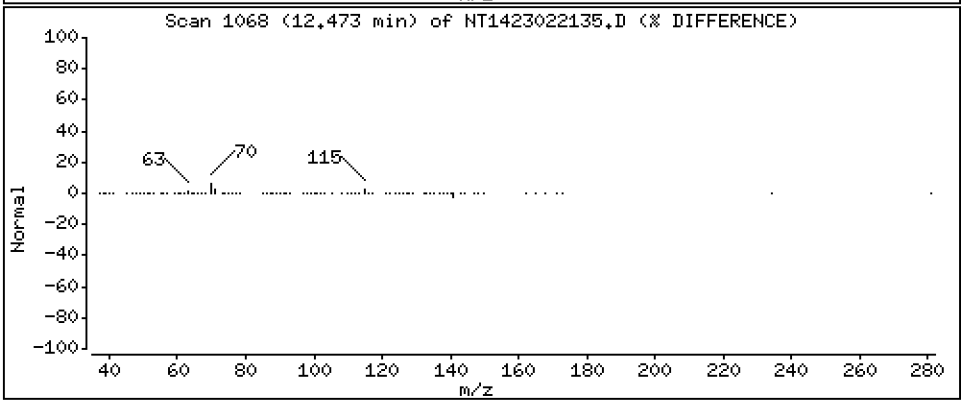












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

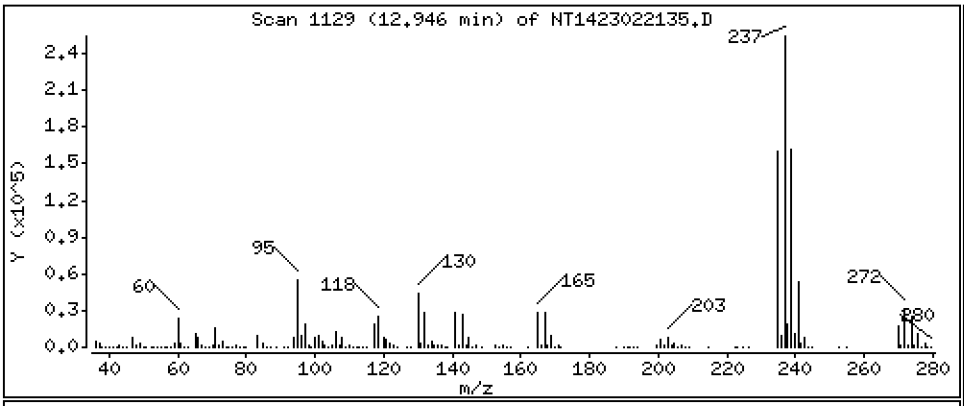
Operator: DSD

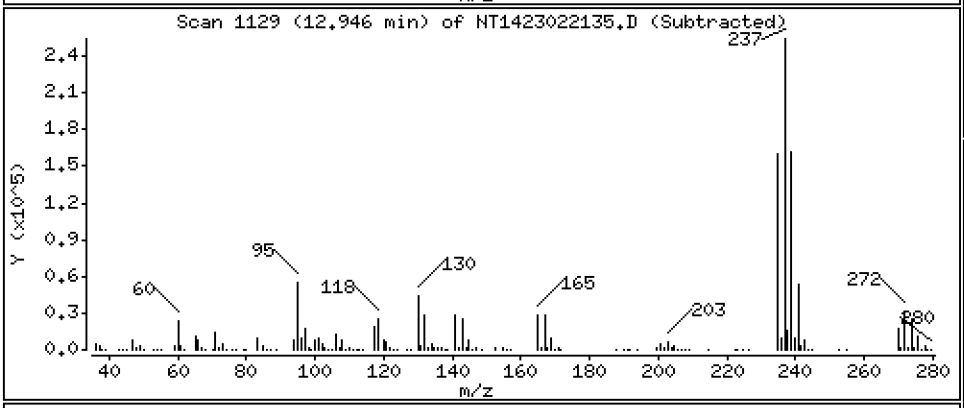
Column phase: ZB-5msi

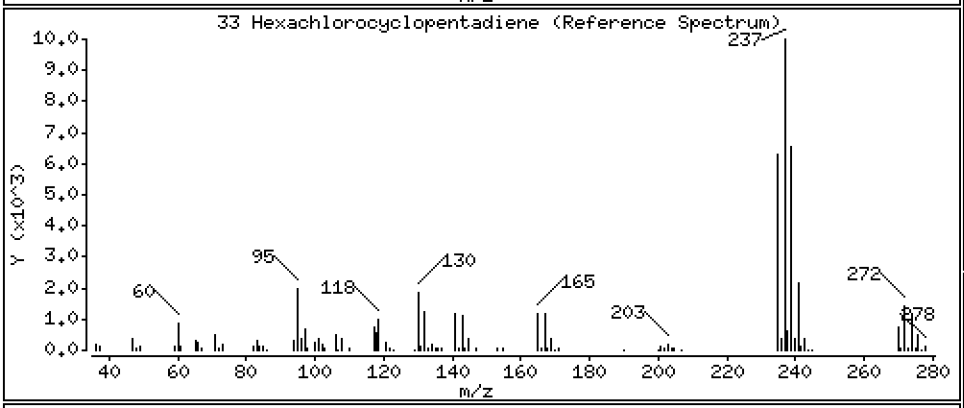
Column diameter: 0.25

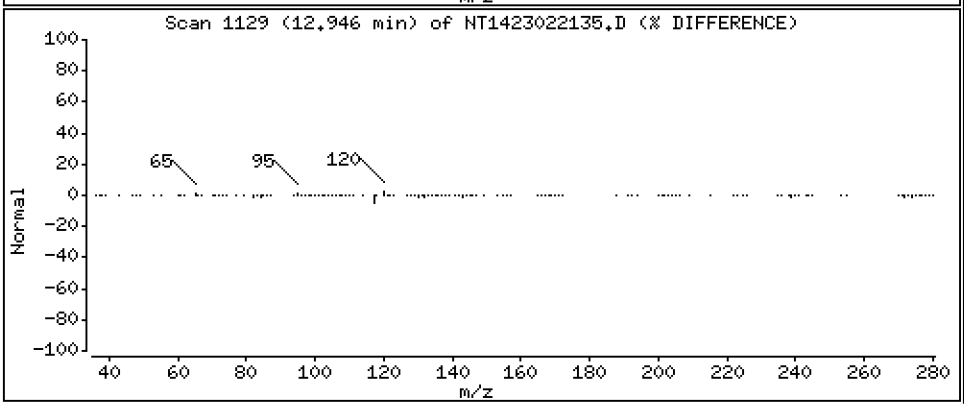
33 Hexachlorocyclopentadiene

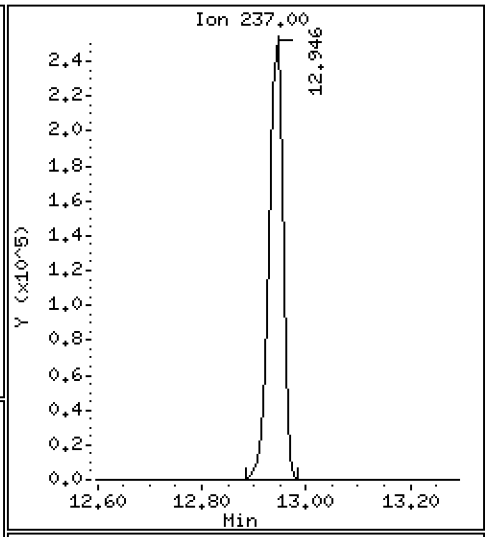
Concentration: 7.442 ug/mL

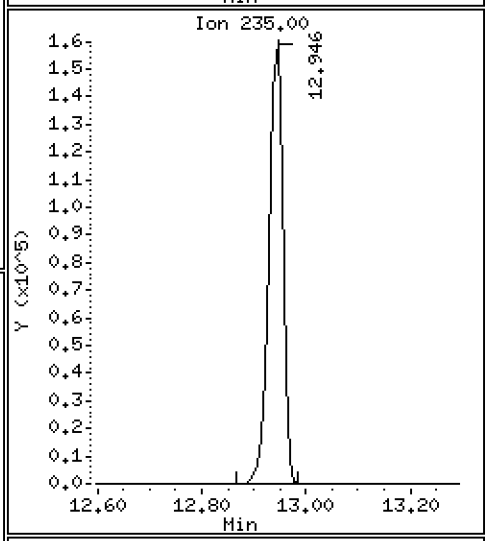


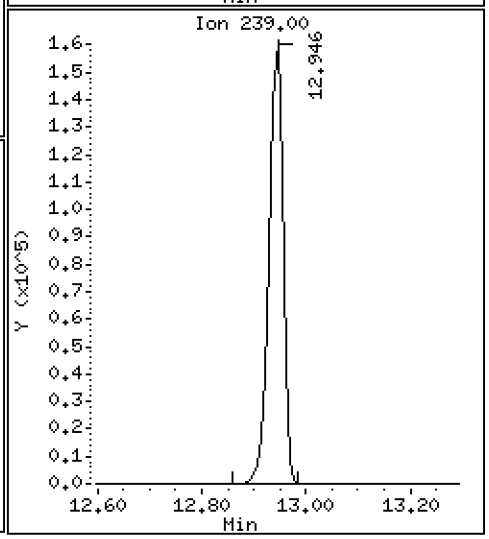












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

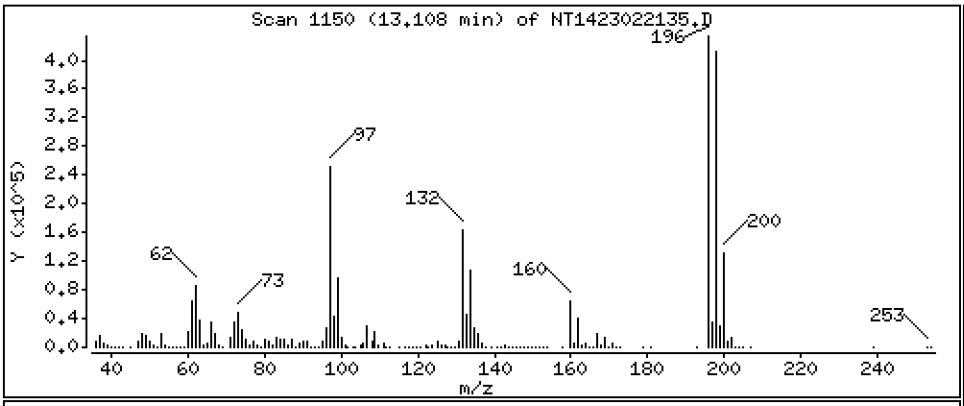
Operator: DSD

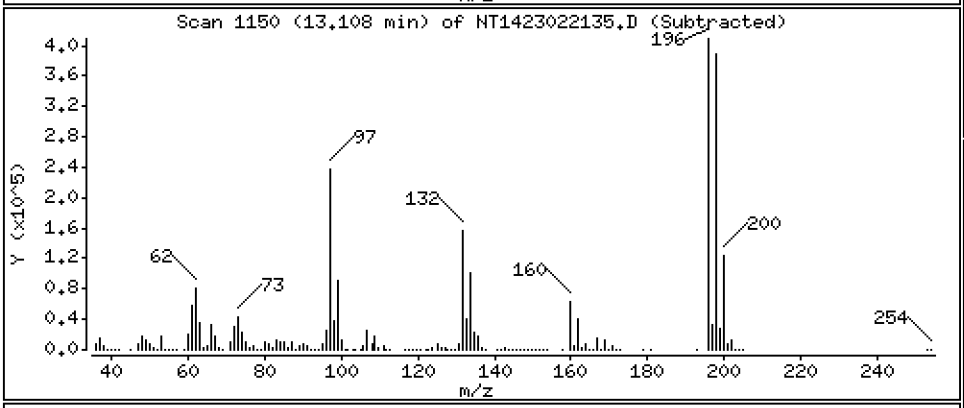
Column phase: ZB-5msi

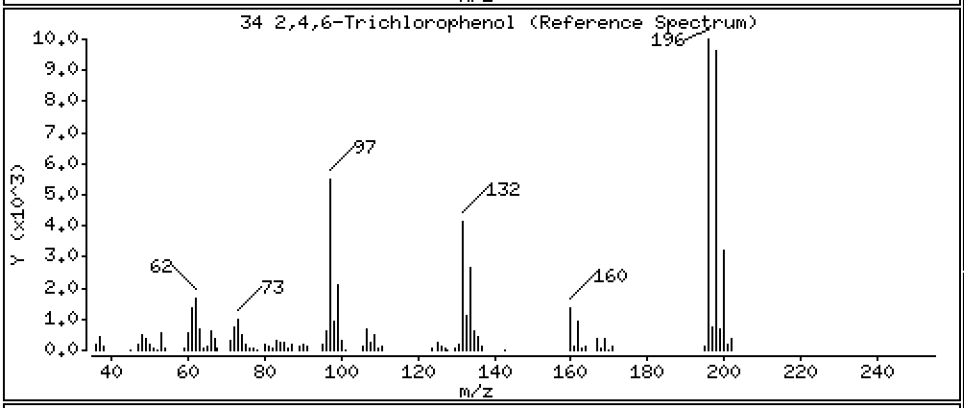
Column diameter: 0.25

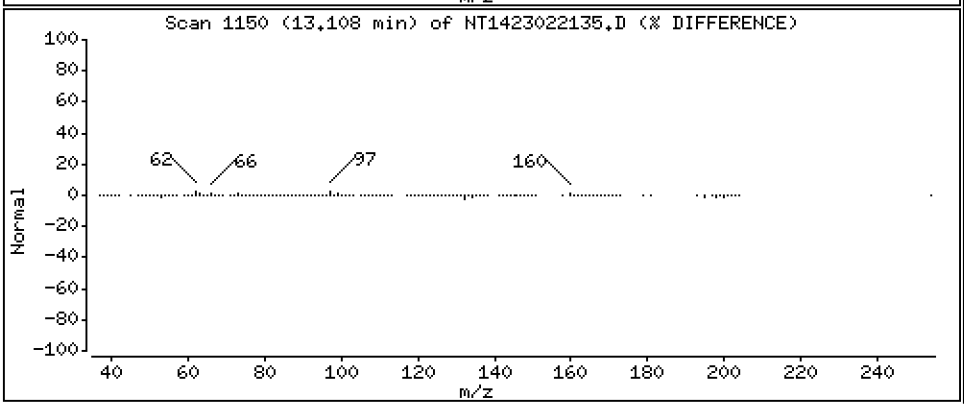
34 2,4,6-Trichlorophenol

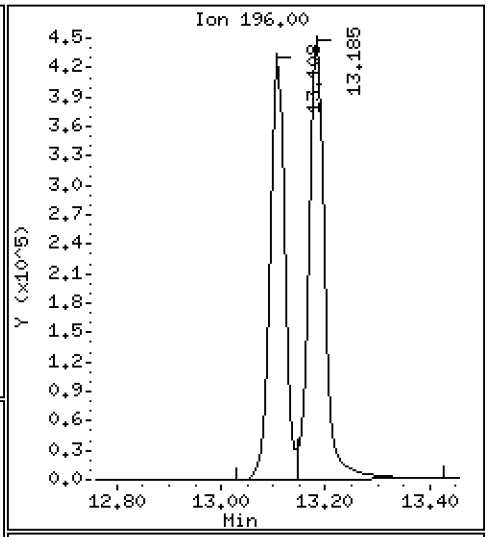
Concentration: 13.16 ug/mL

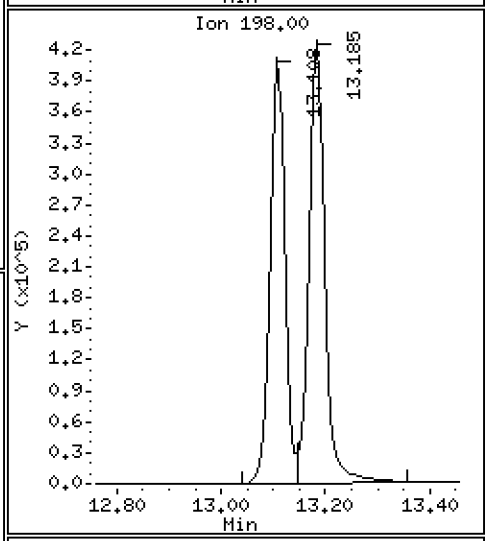


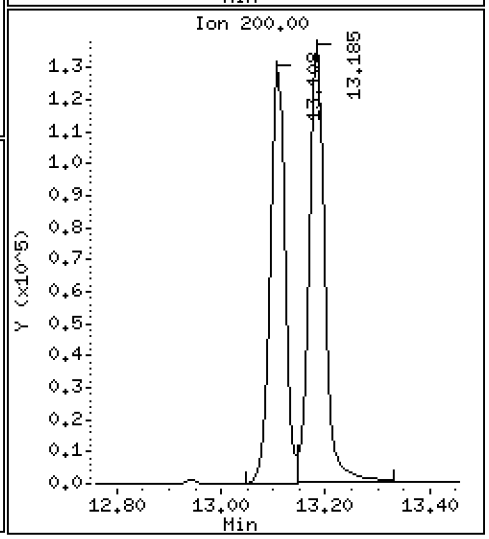












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

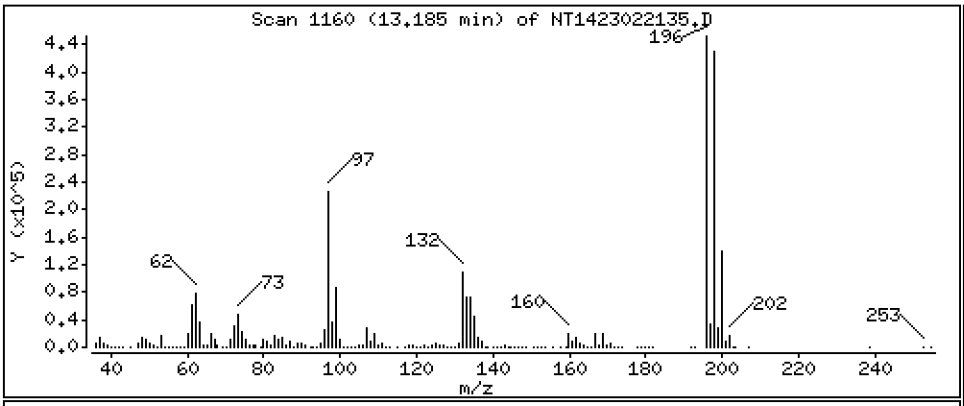
Operator: DSD

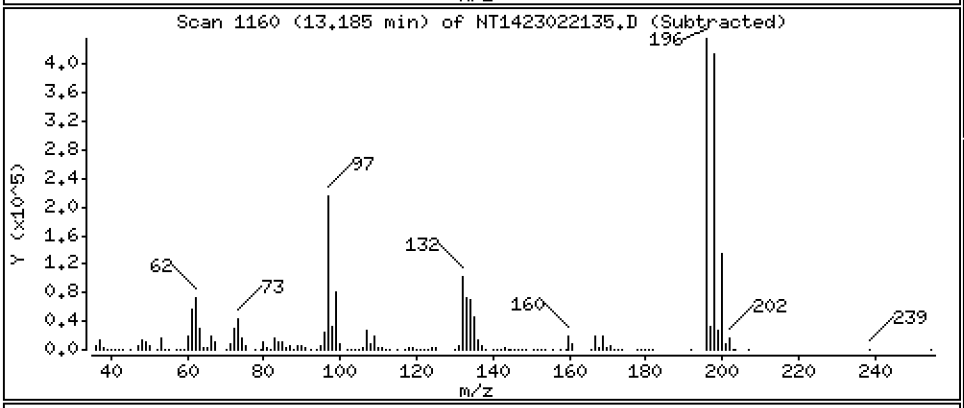
Column phase: ZB-5msi

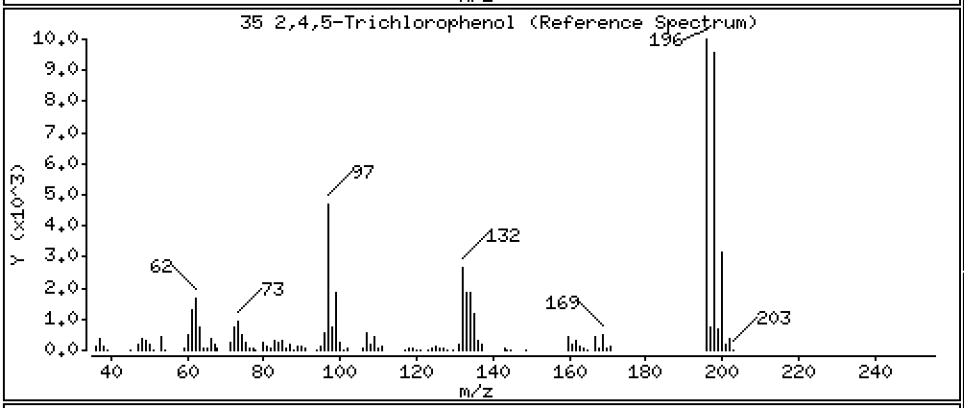
Column diameter: 0.25

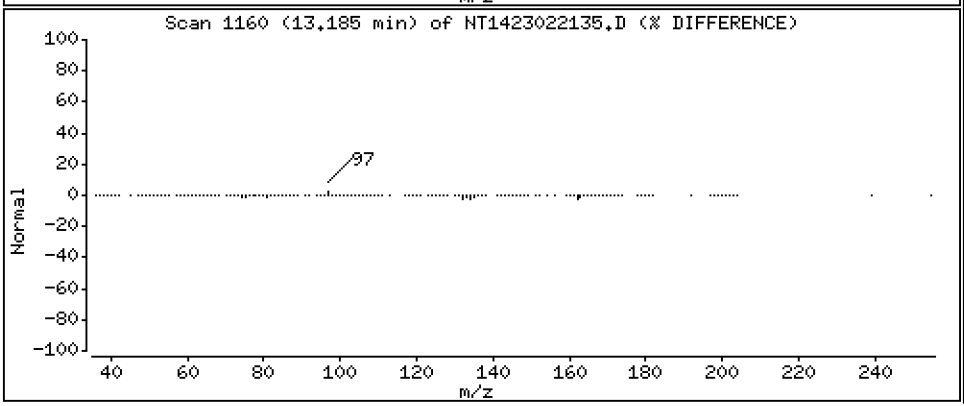
35 2,4,5-Trichlorophenol

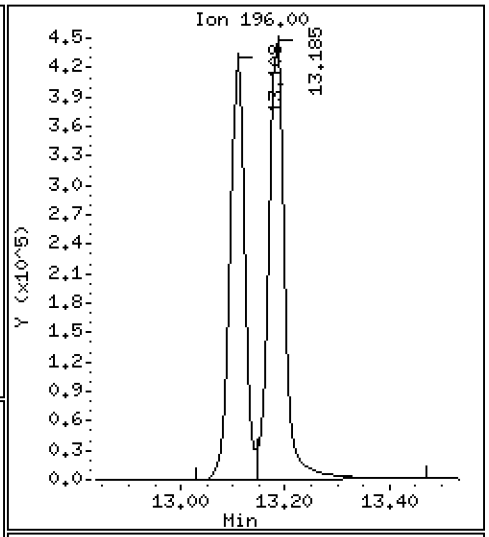
Concentration: 13.78 ug/mL

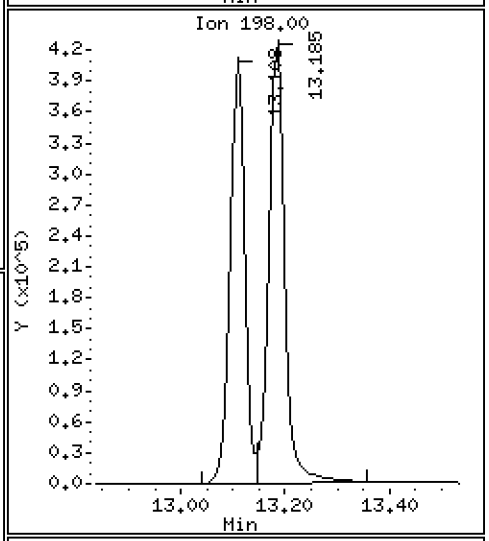


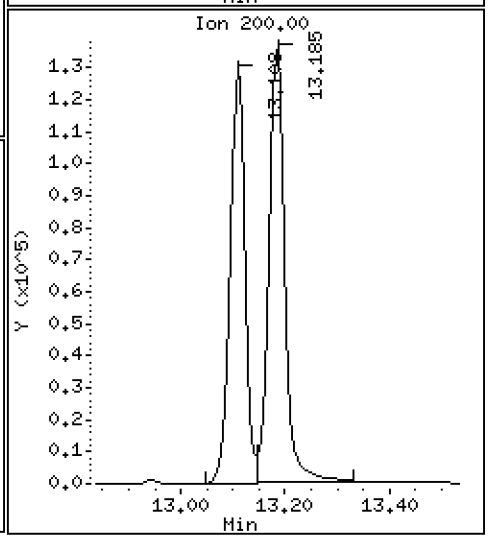












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

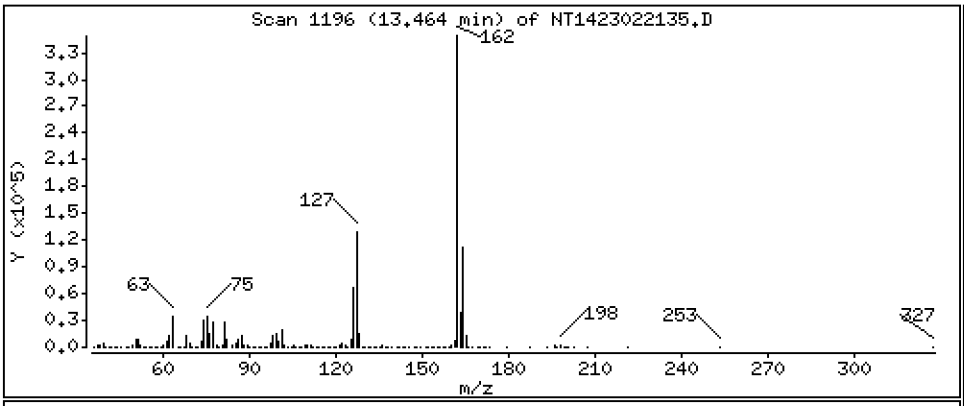
Operator: DSD

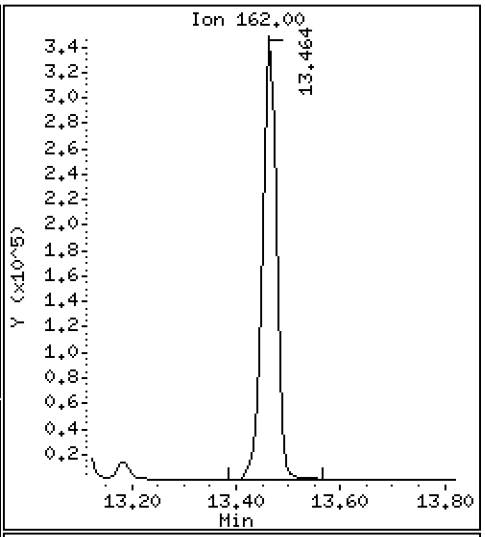
Column phase: ZB-5msi

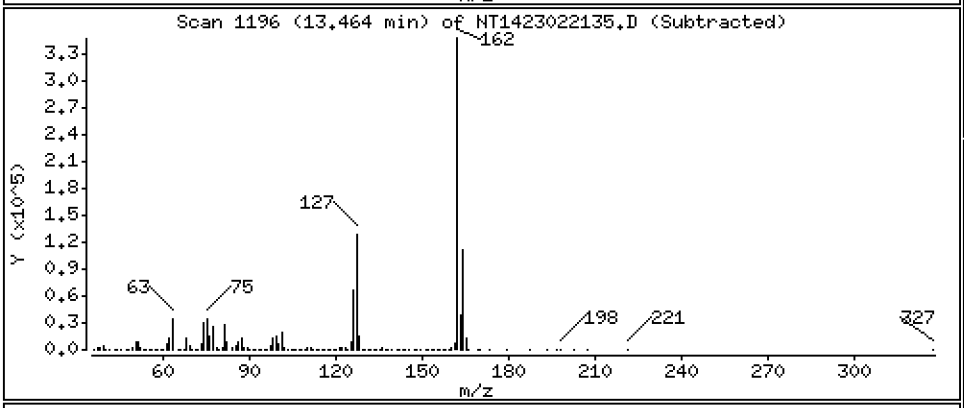
Column diameter: 0.25

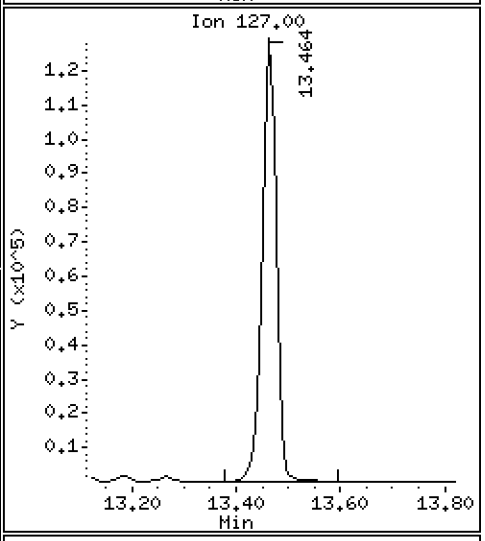
37 2-Chloronaphthalene

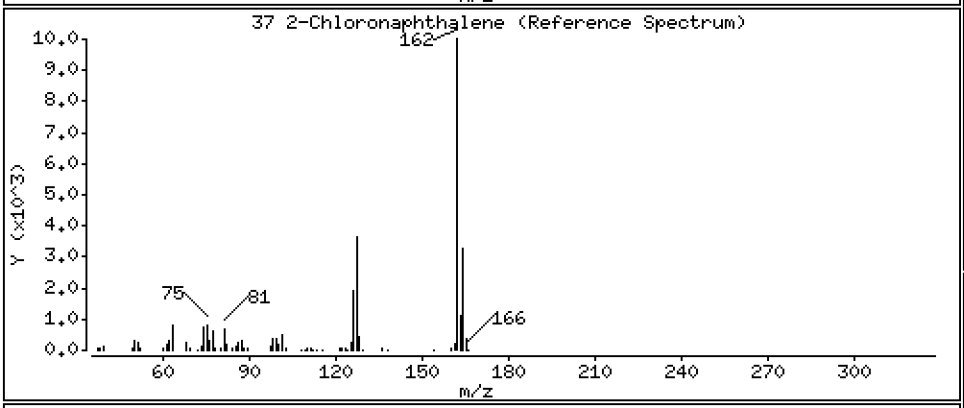
Concentration: 3.402 ug/mL

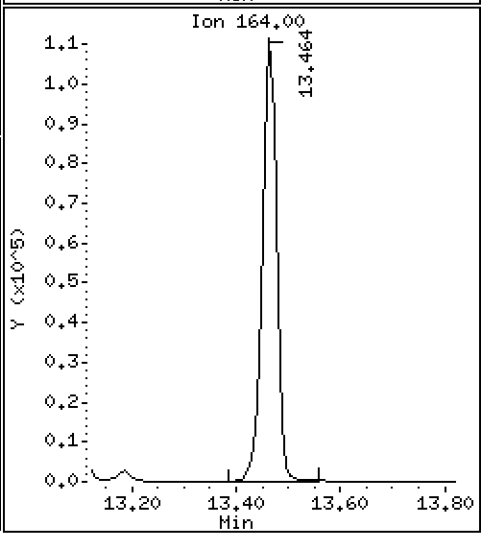


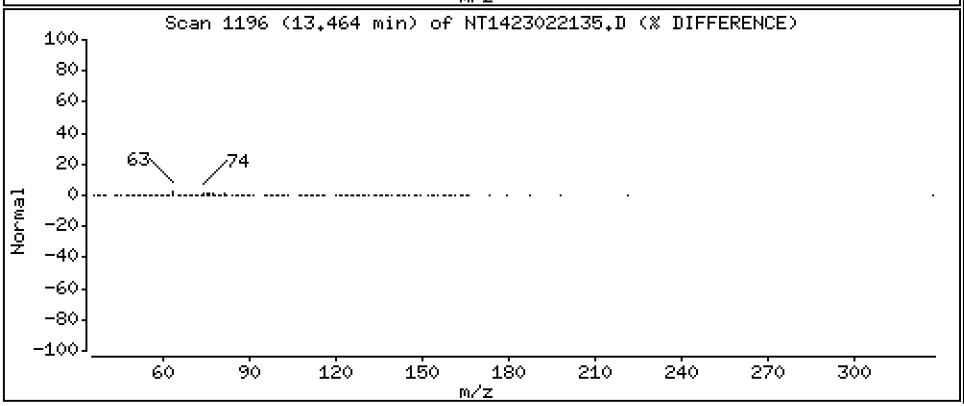












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

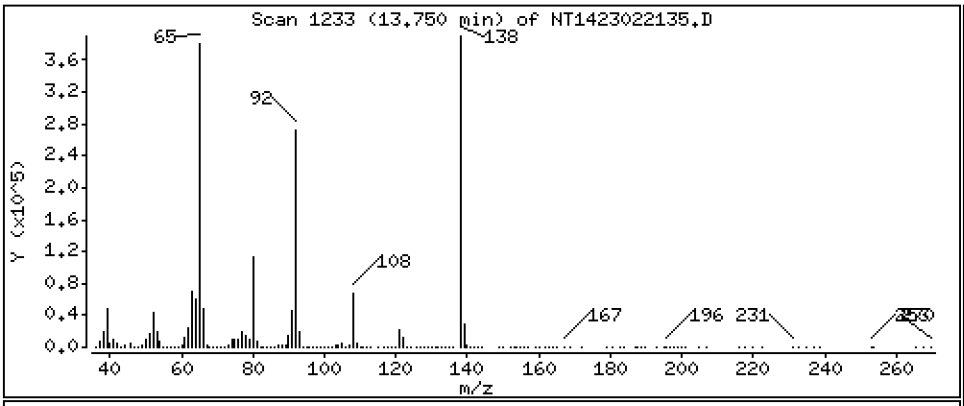
Operator: DSD

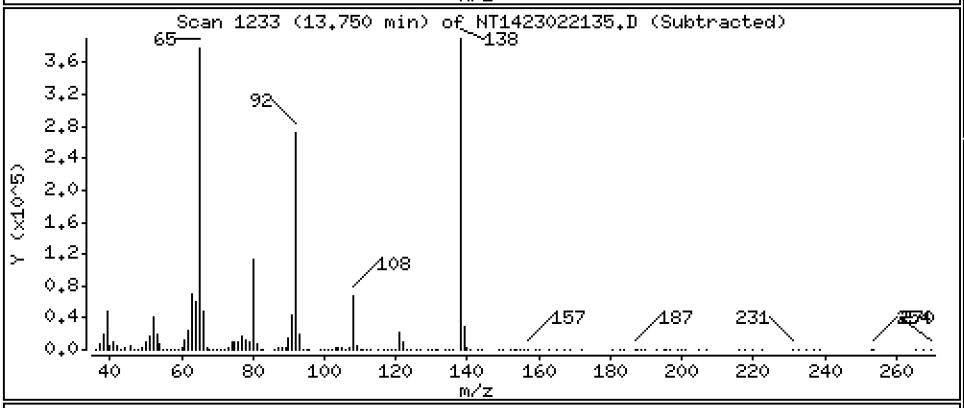
Column phase: ZB-5msi

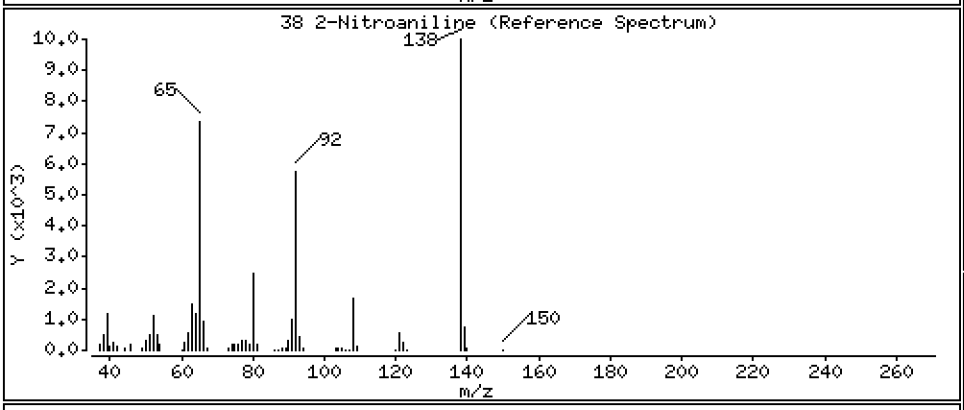
Column diameter: 0.25

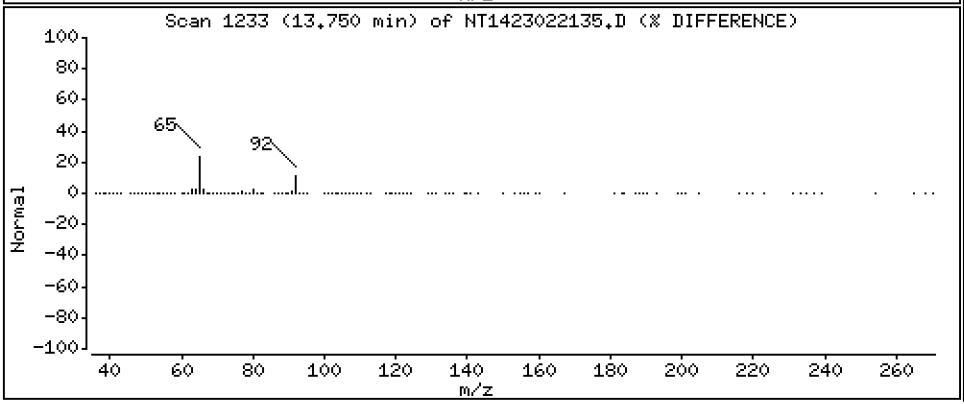
38 2-Nitroaniline

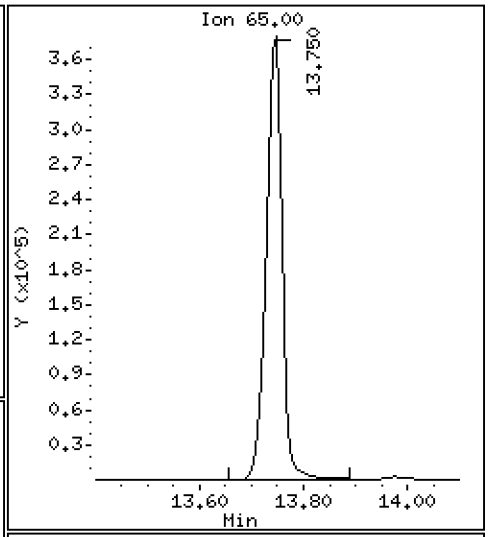
Concentration: 13.10 ug/mL

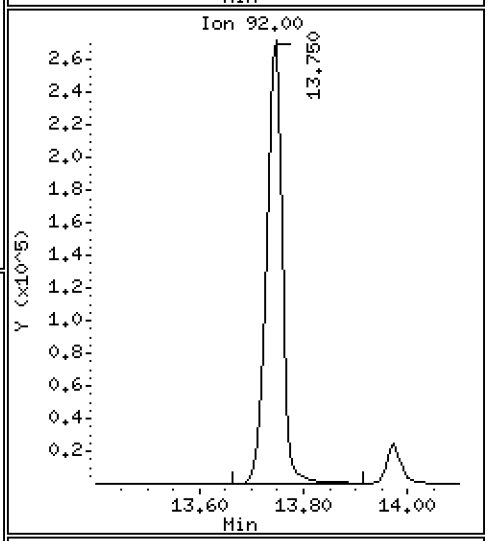


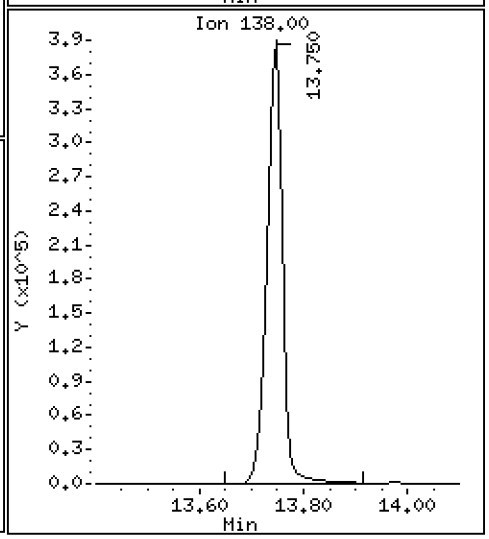












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

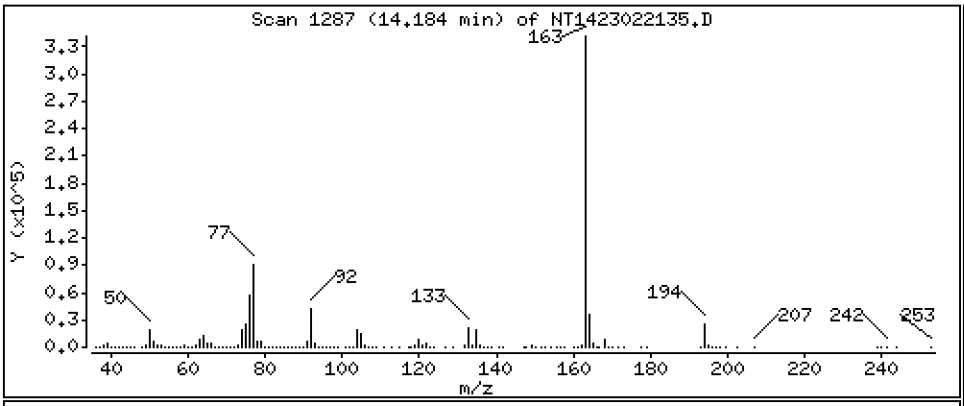
Operator: DSD

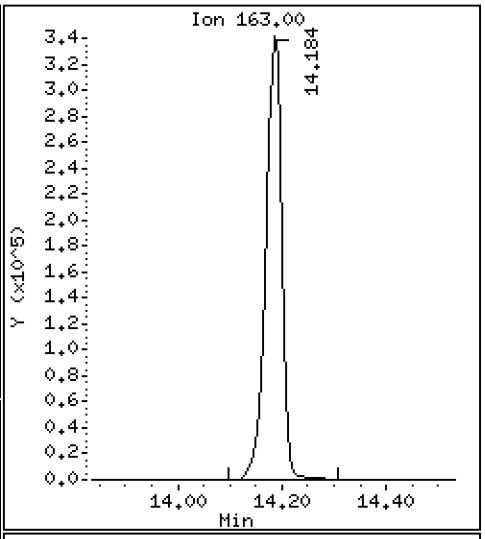
Column phase: ZB-5msi

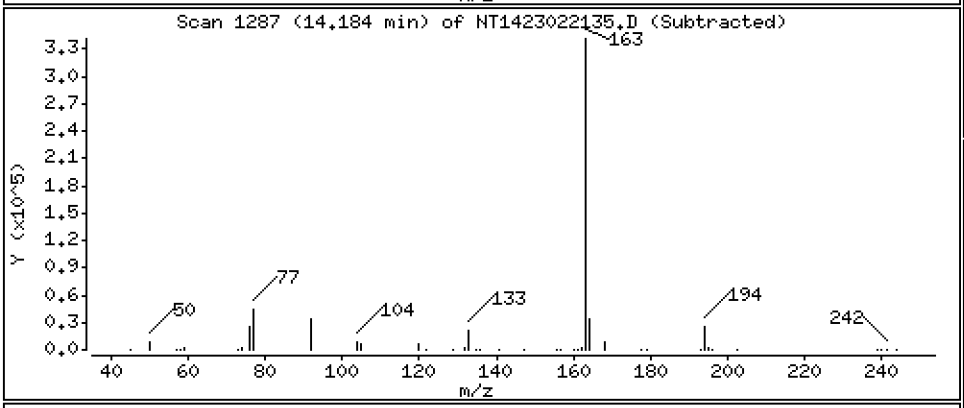
Column diameter: 0.25

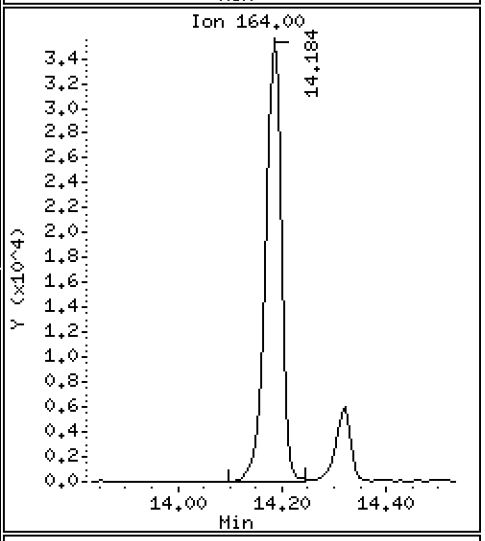
39 Dimethylphthalate

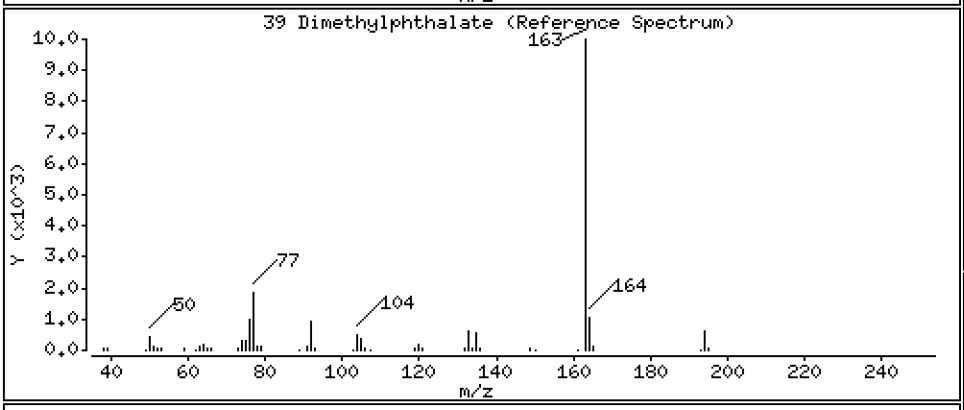
Concentration: 3.669 ug/mL

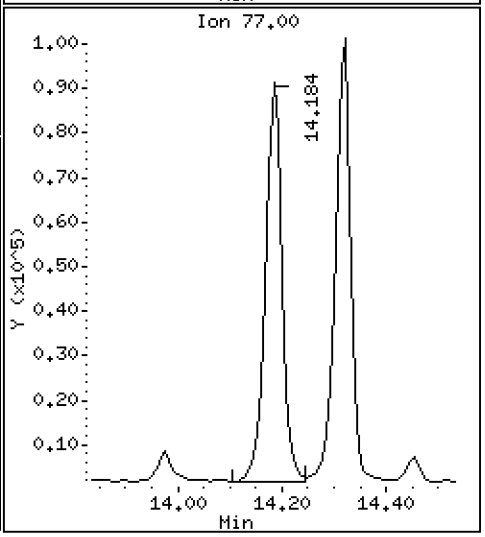


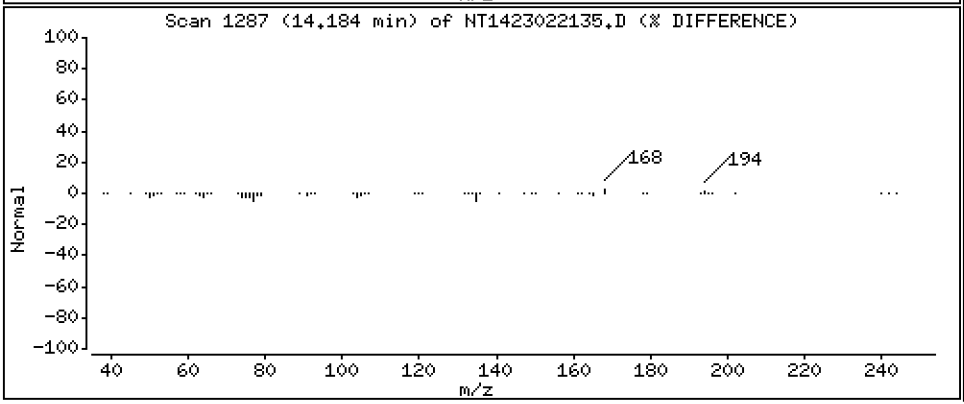












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

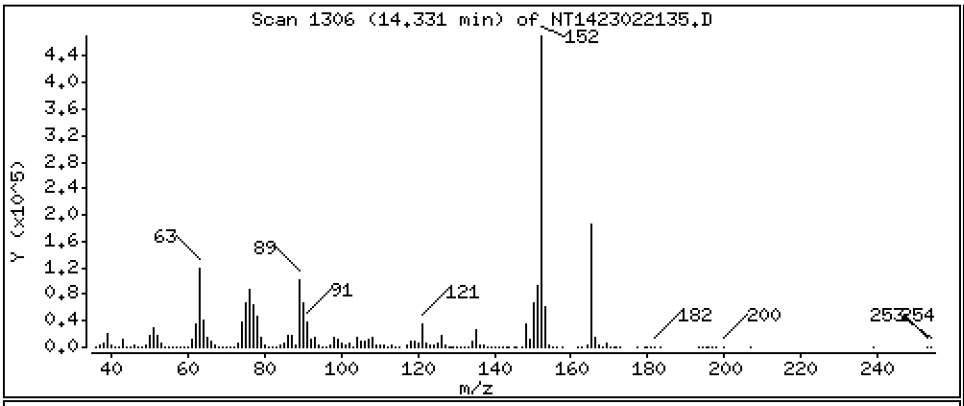
Operator: DSD

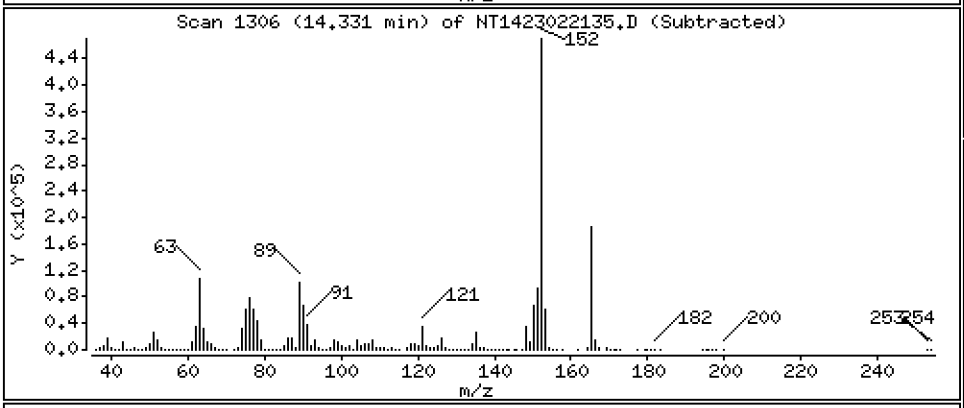
Column phase: ZB-5msi

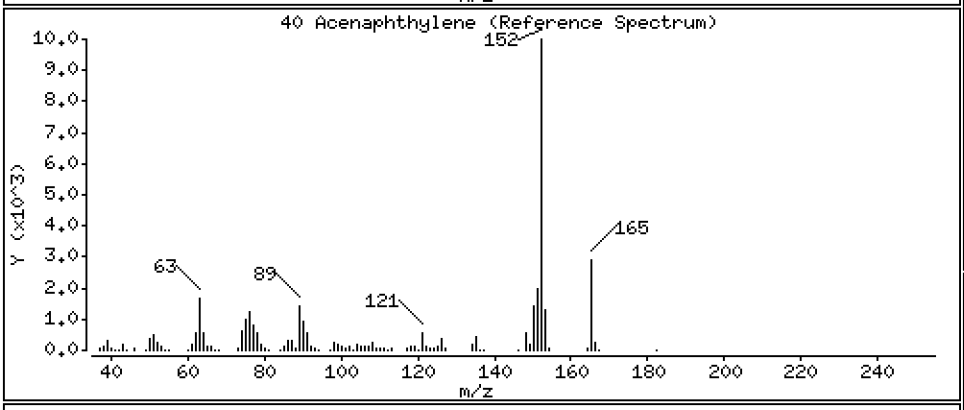
Column diameter: 0.25

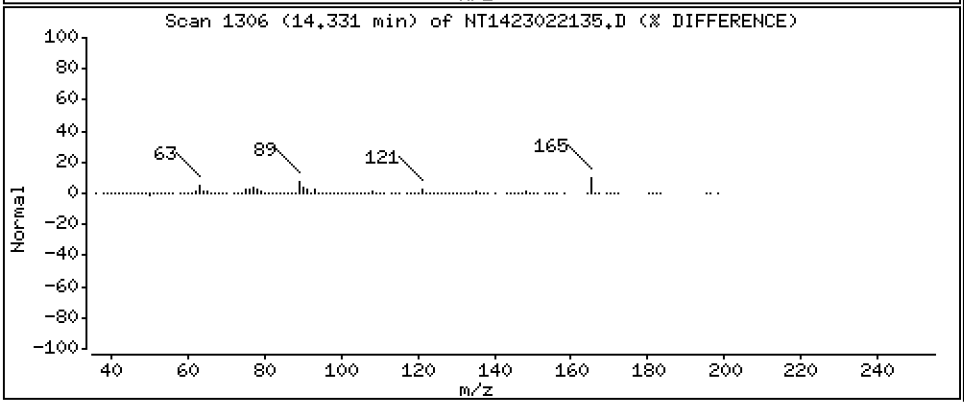
40 Acenaphthylene

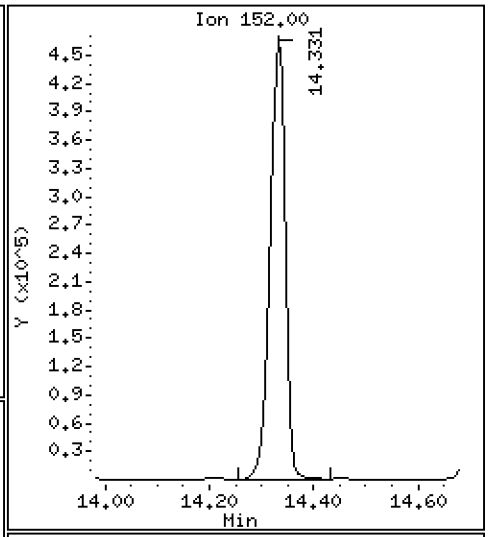
Concentration: 3.267 ug/mL

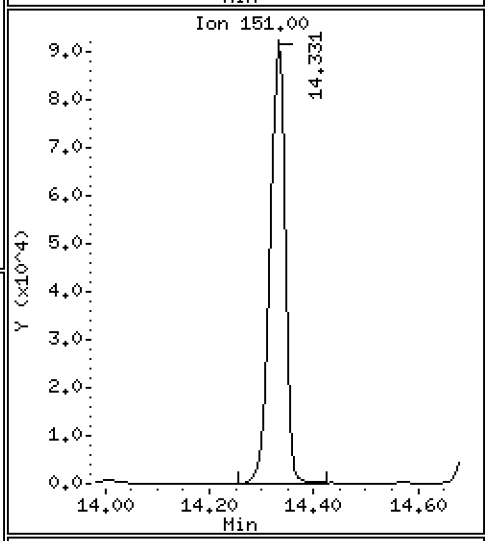


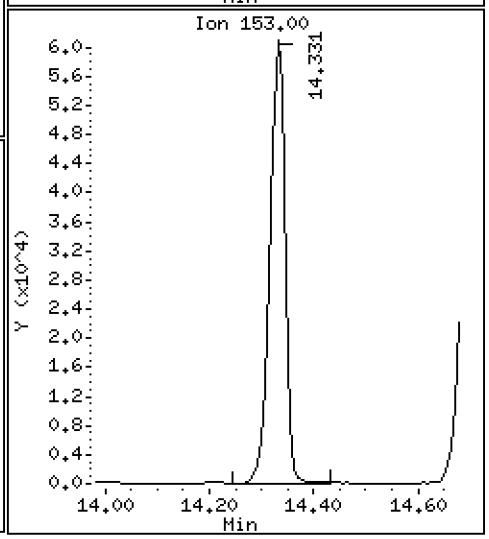












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

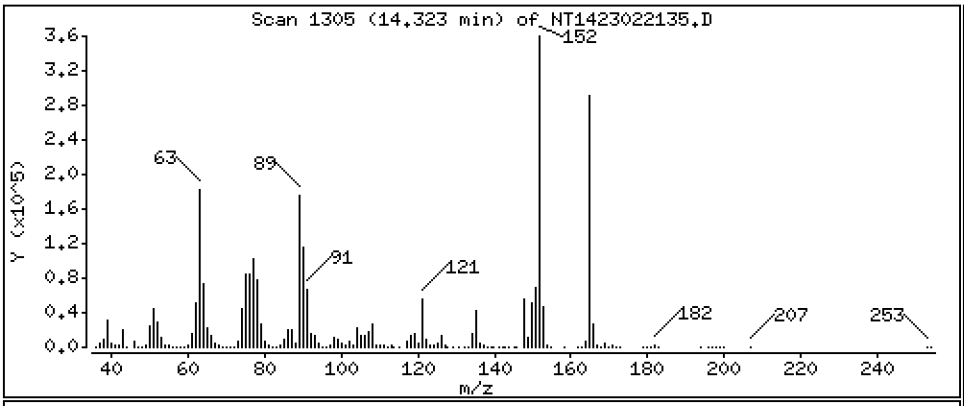
Operator: DSD

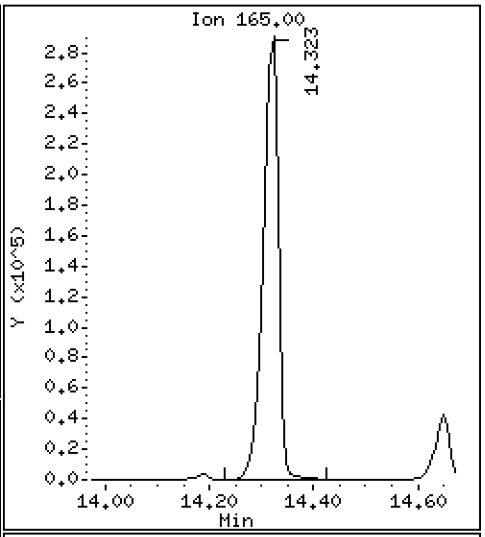
Column phase: ZB-5msi

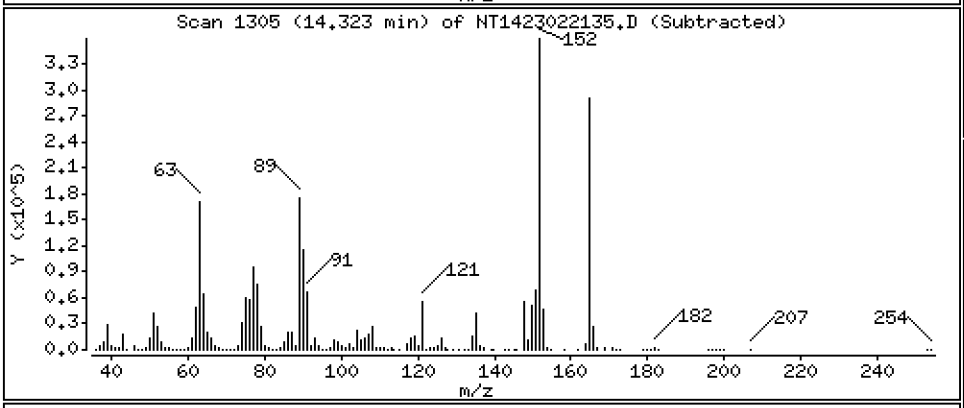
Column diameter: 0.25

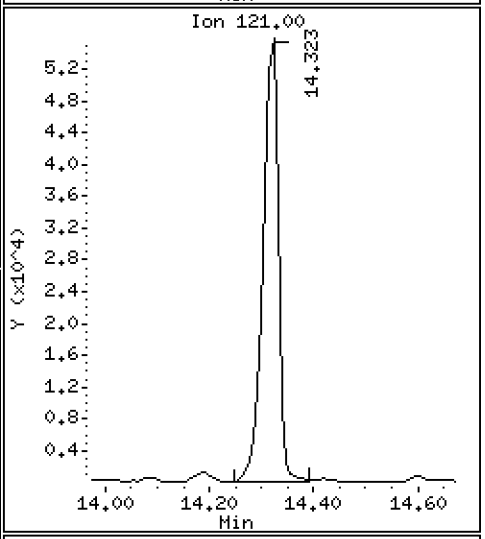
41 2,6-Dinitrotoluene

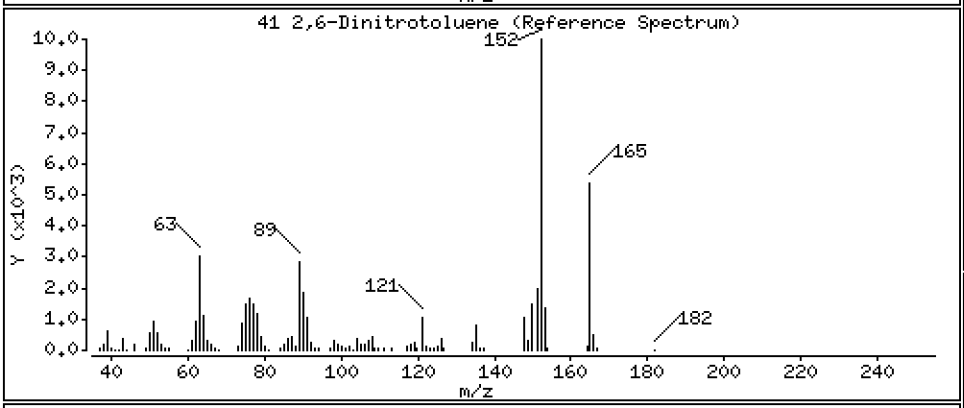
Concentration: 12.57 ug/mL

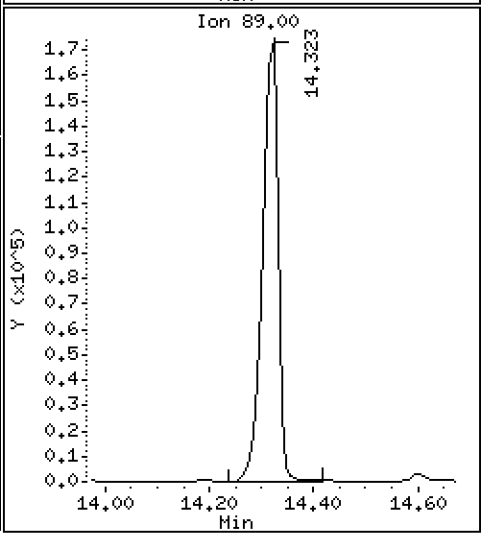


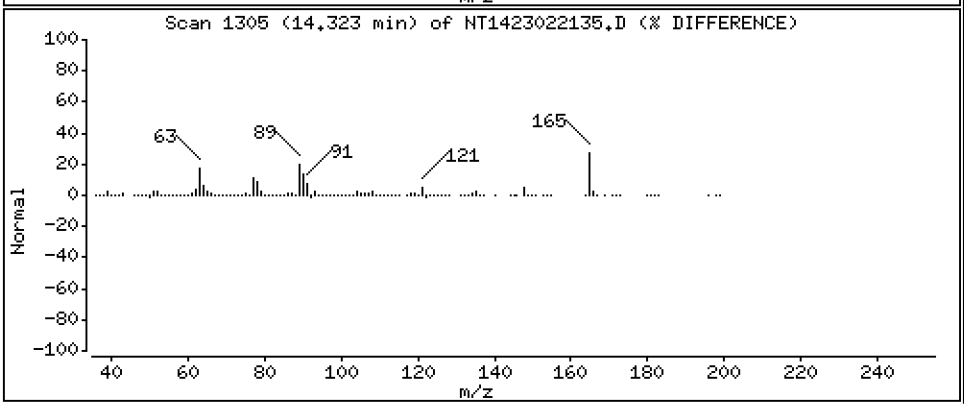












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

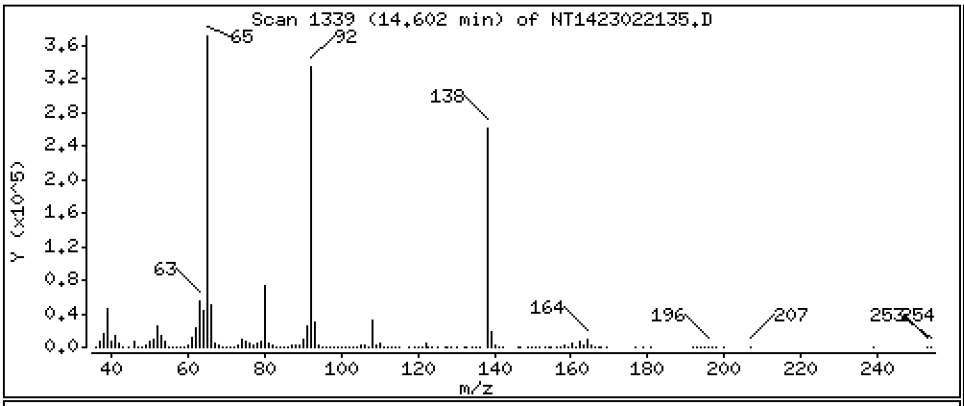
Operator: DSD

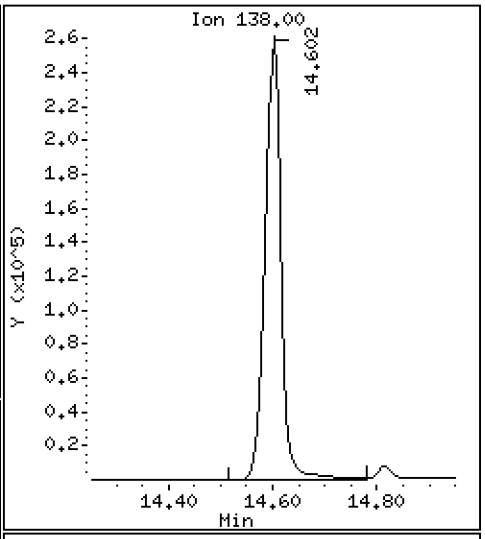
Column phase: ZB-5msi

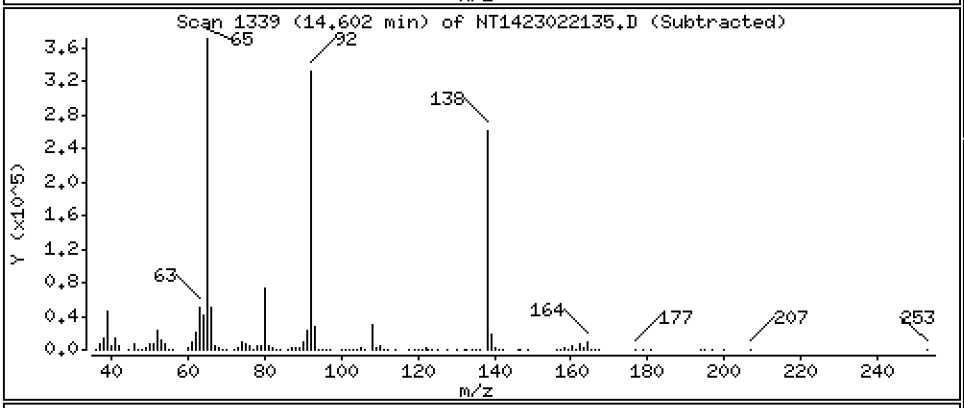
Column diameter: 0.25

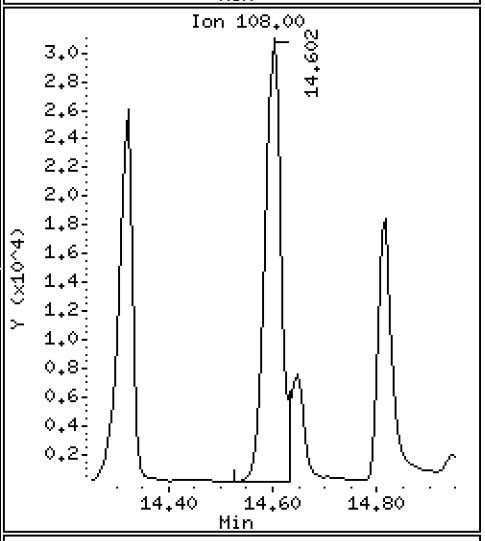
43 3-Nitroaniline

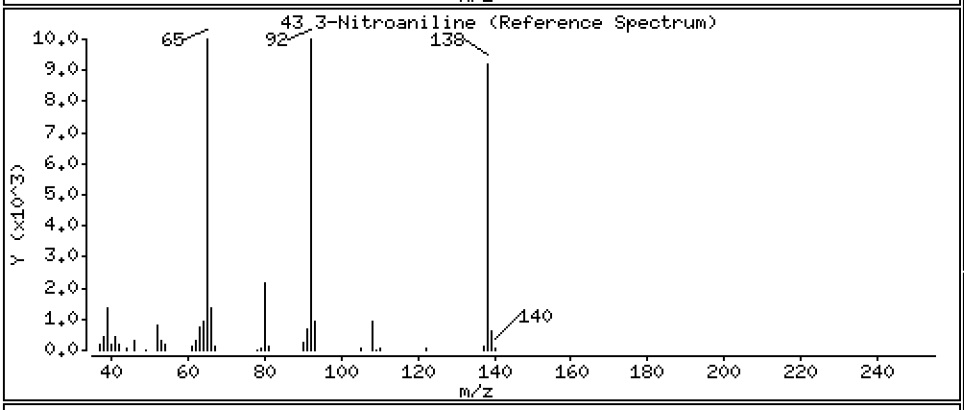
Concentration: 11.15 ug/mL

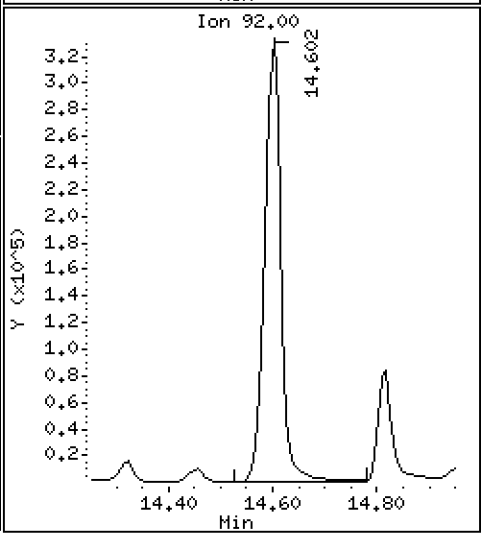


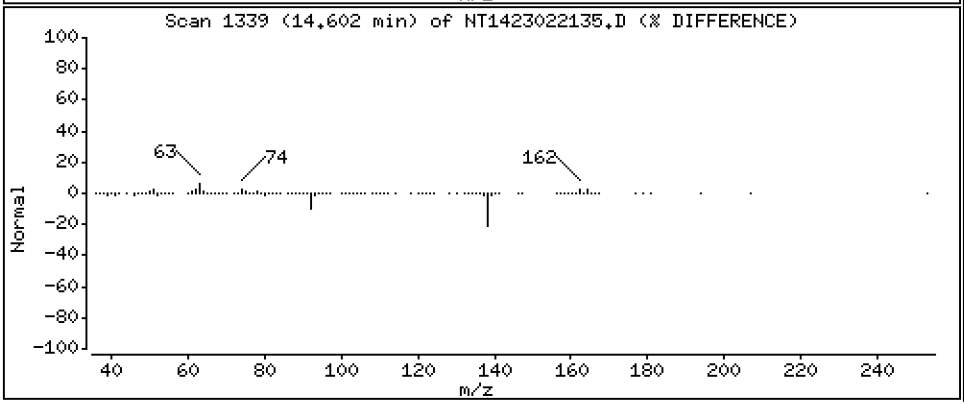












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

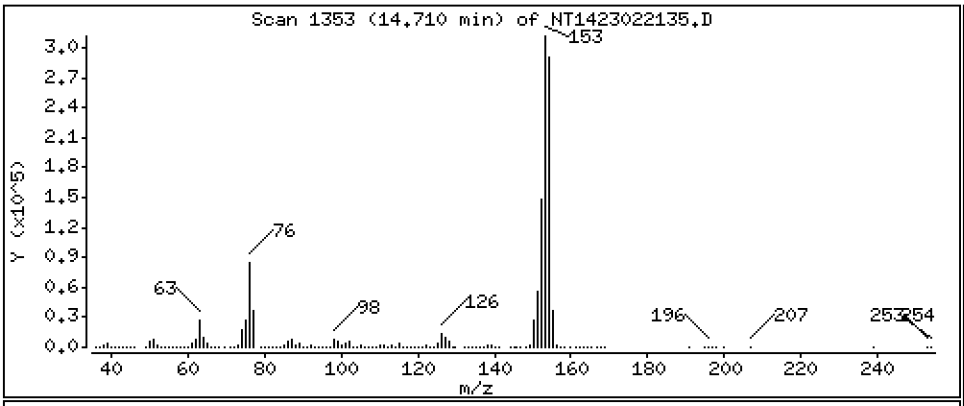
Operator: DSD

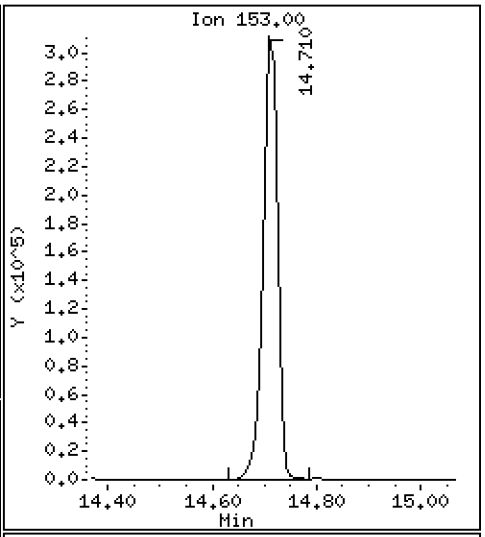
Column phase: ZB-5msi

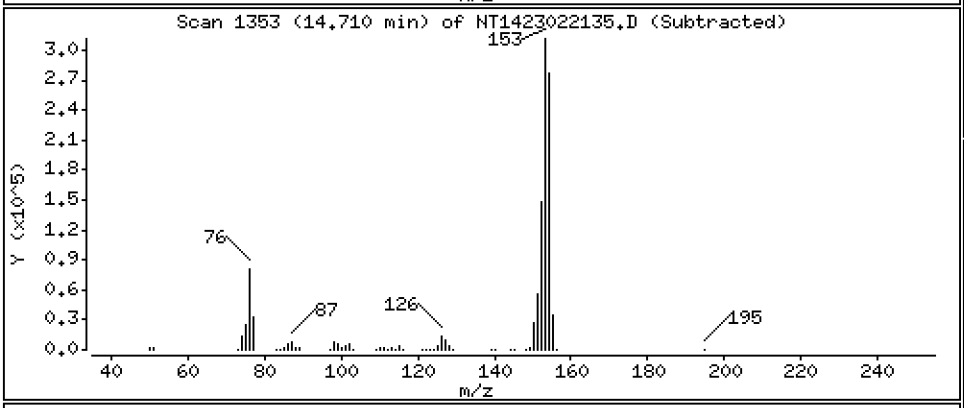
Column diameter: 0.25

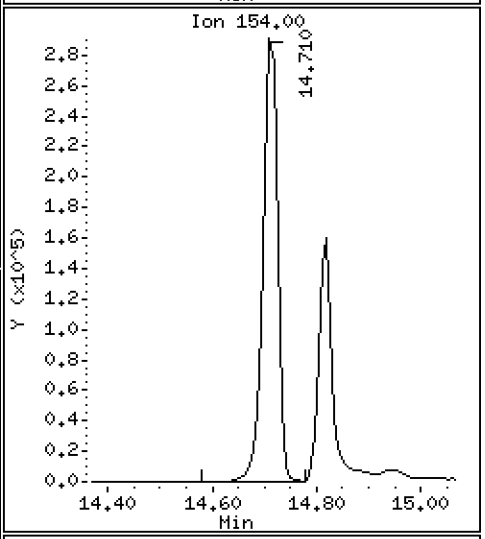
44 Acenaphthene

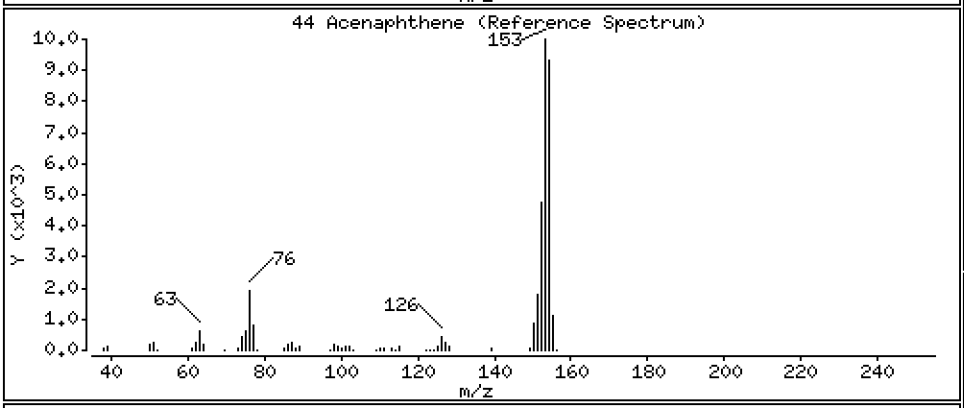
Concentration: 3.428 ug/mL

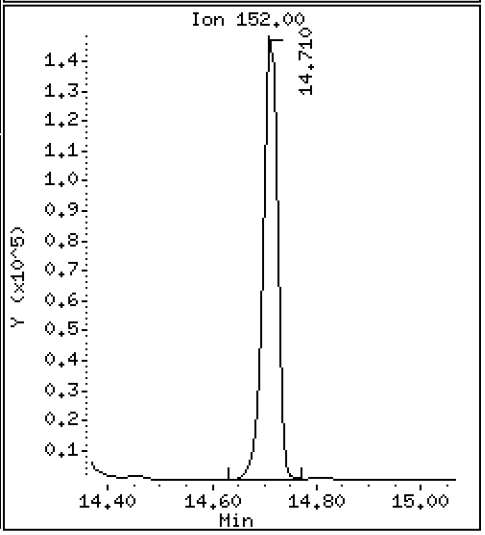


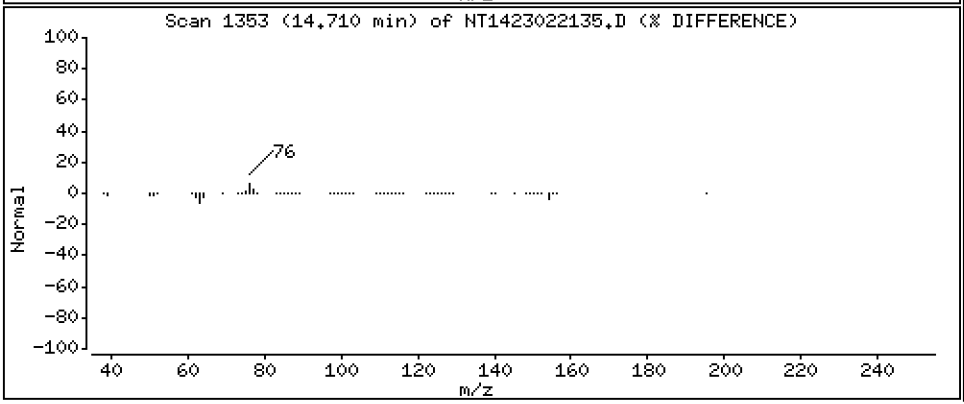












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

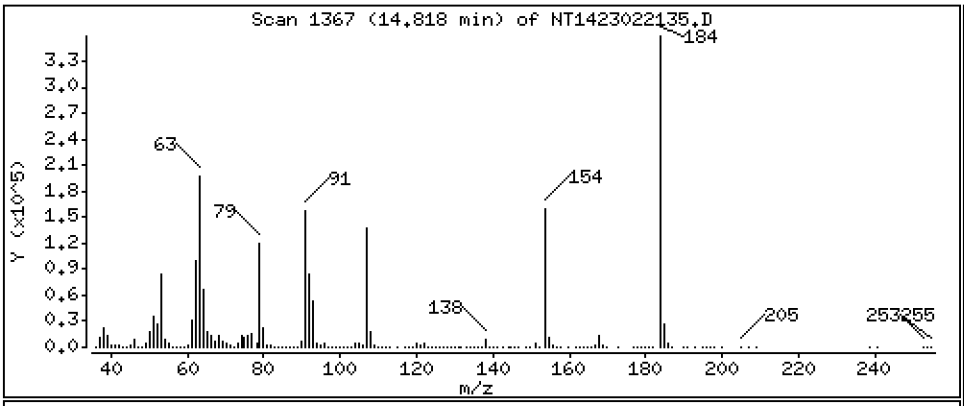
Operator: DSD

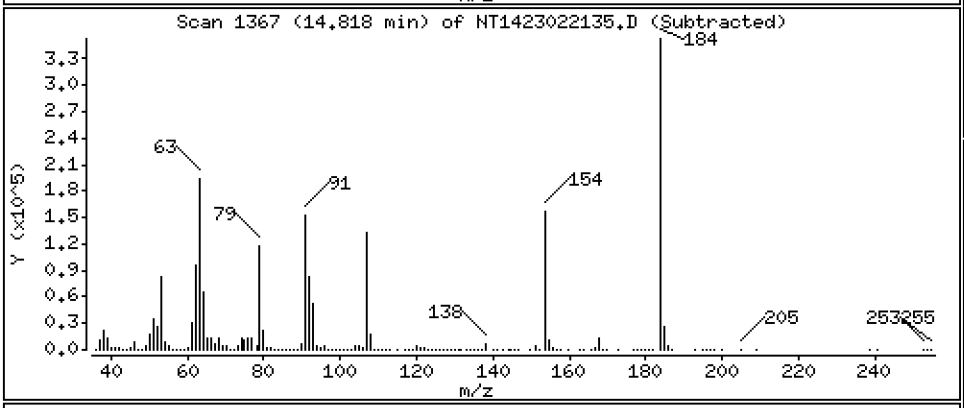
Column phase: ZB-5msi

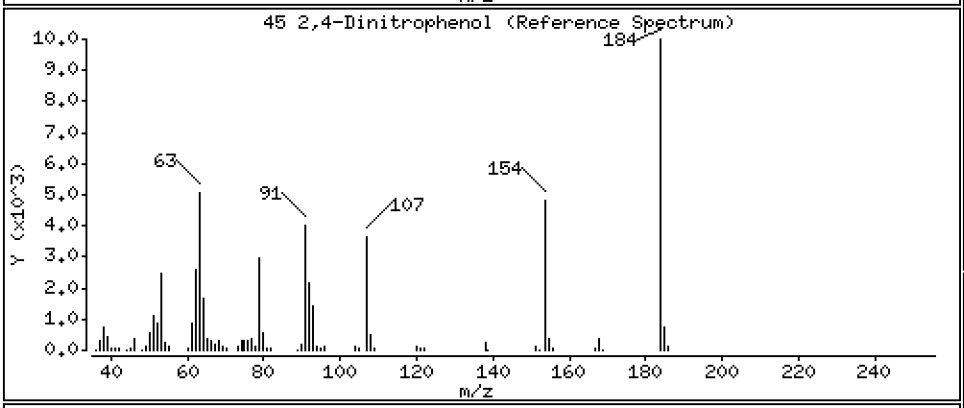
Column diameter: 0.25

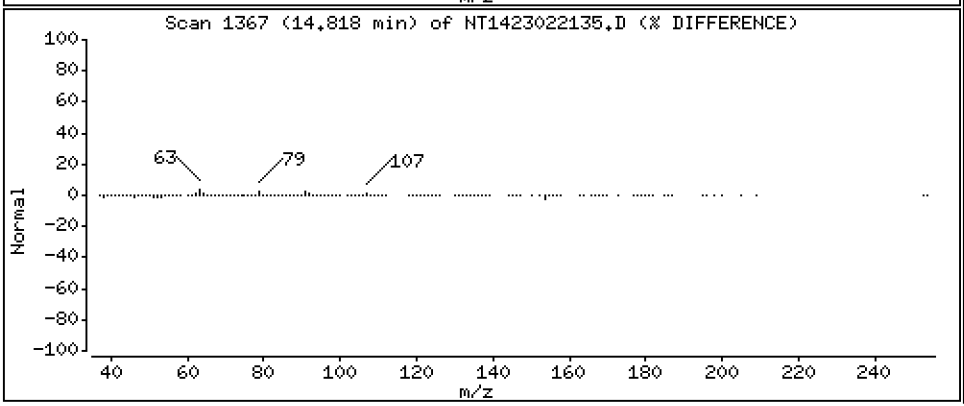
45 2,4-Dinitrophenol

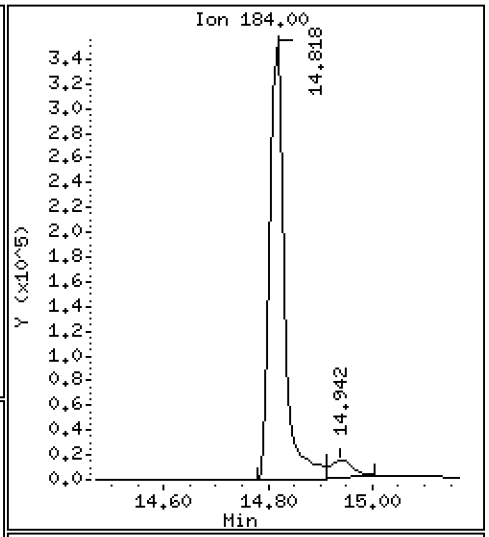
Concentration: 21.44 ug/mL

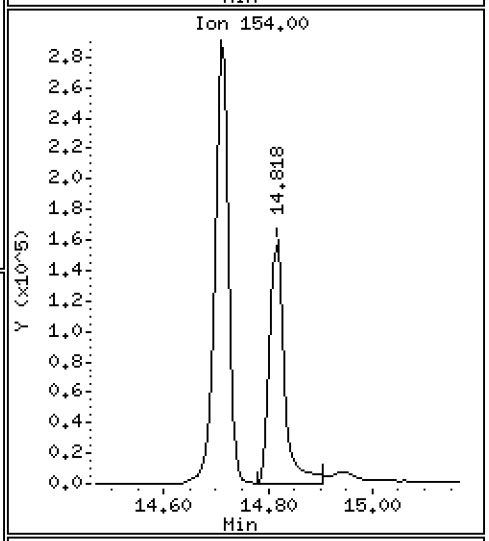


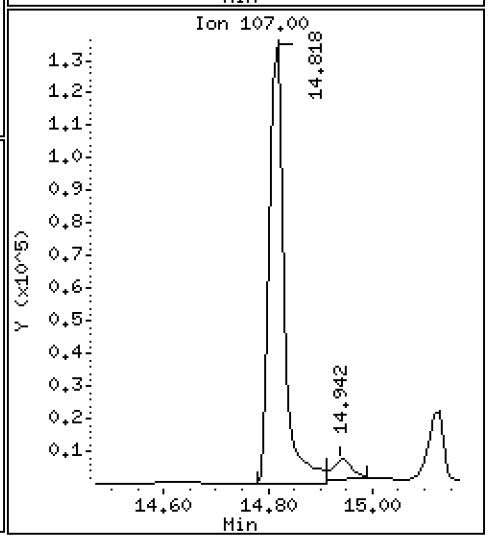












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

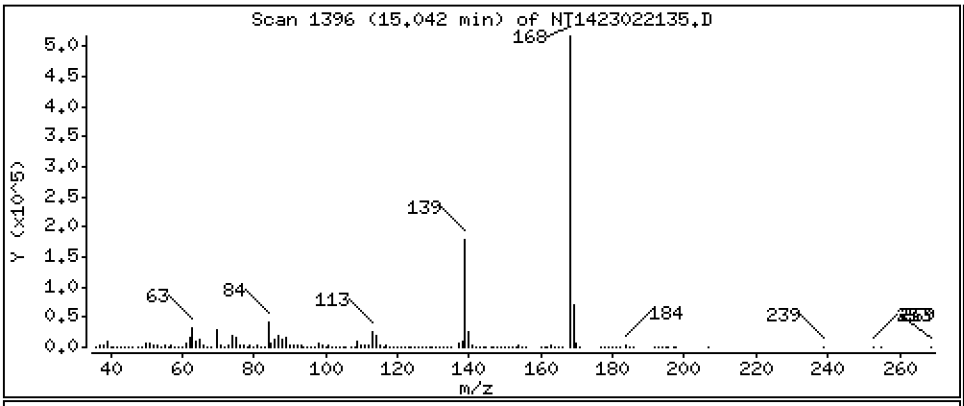
Operator: DSD

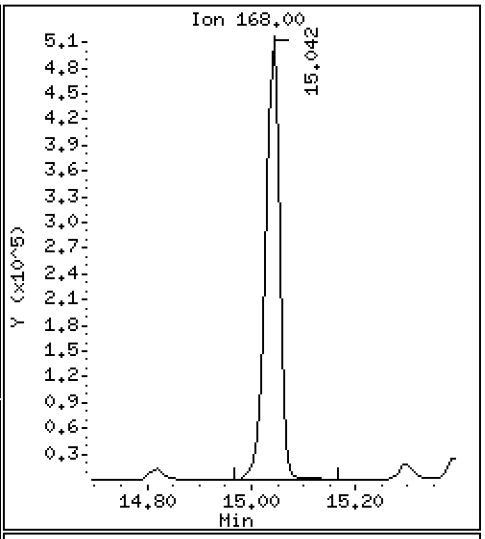
Column phase: ZB-5msi

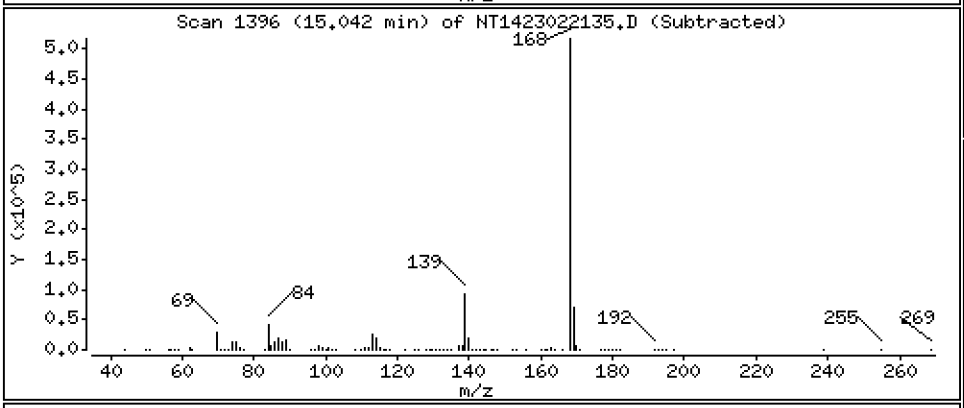
Column diameter: 0.25

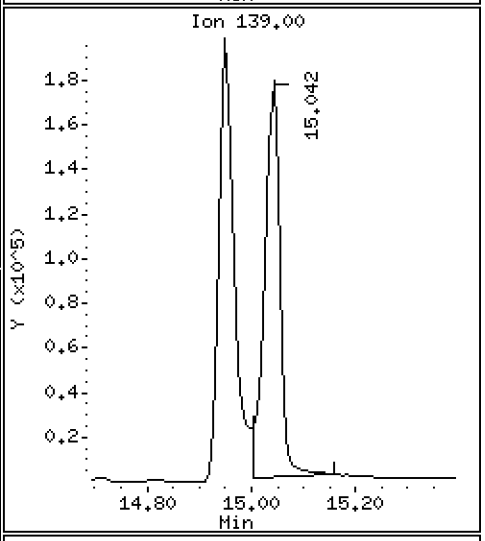
46 Dibenzofuran

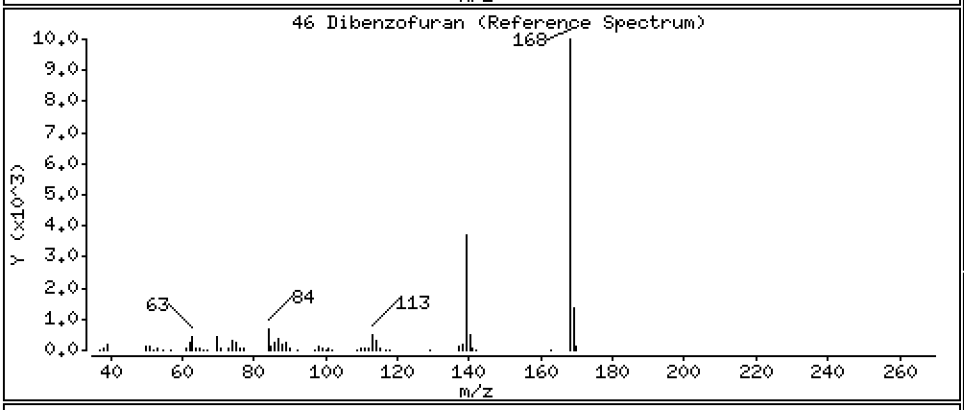
Concentration: 3.365 ug/mL

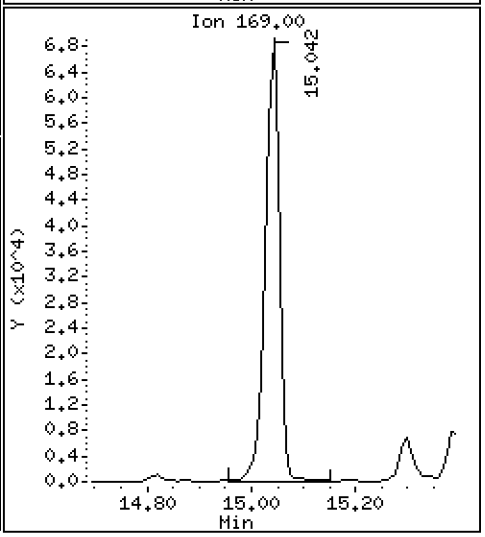


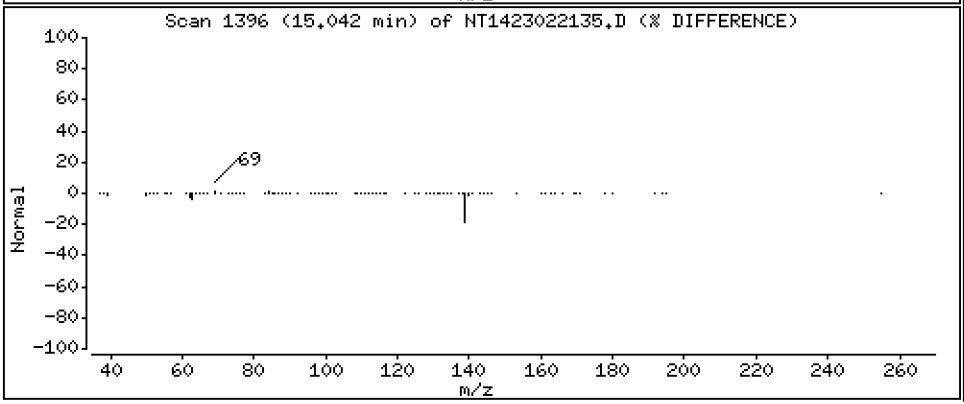












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

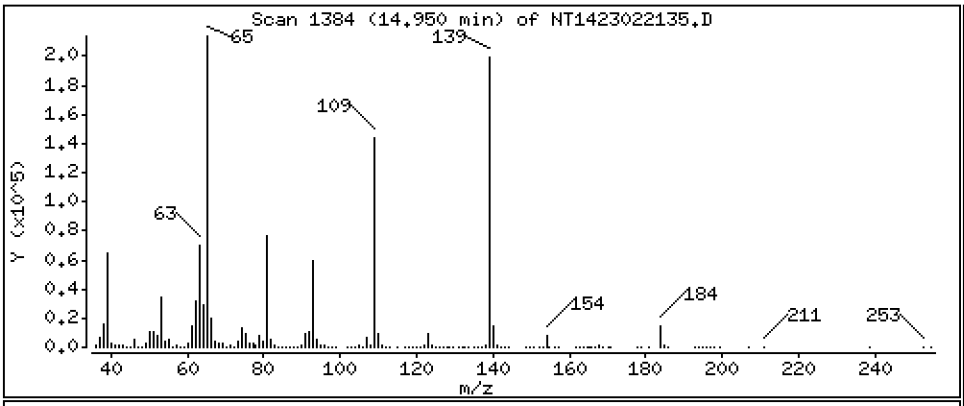
Operator: DSD

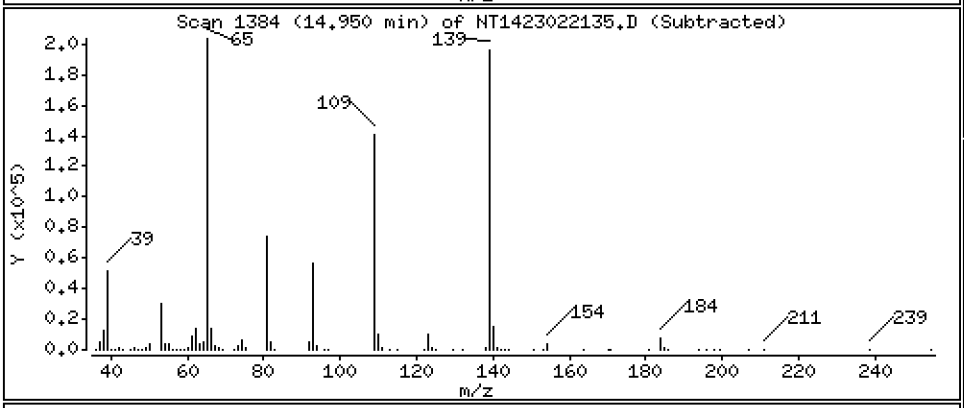
Column phase: ZB-5msi

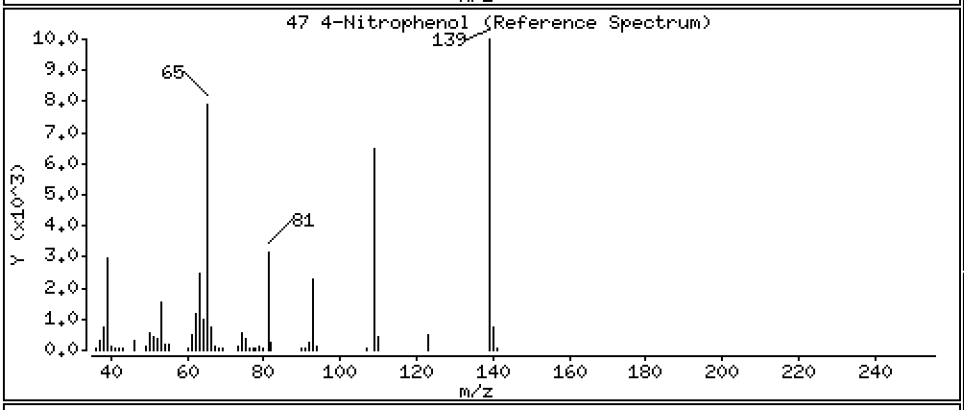
Column diameter: 0.25

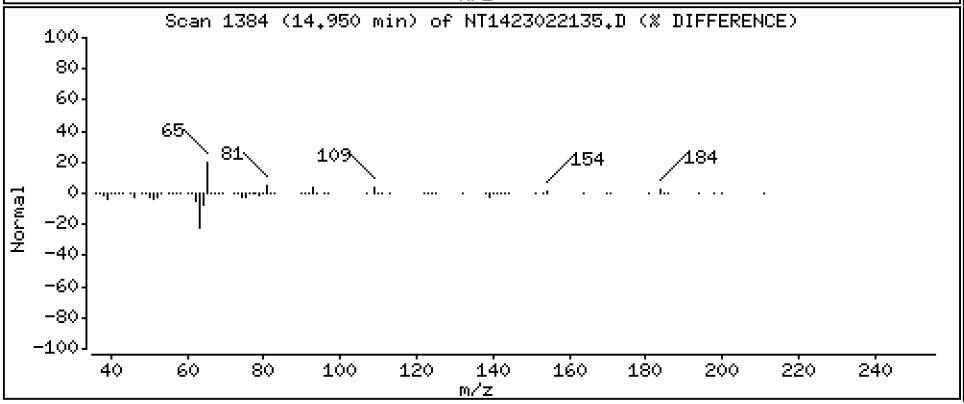
47 4-Nitrophenol

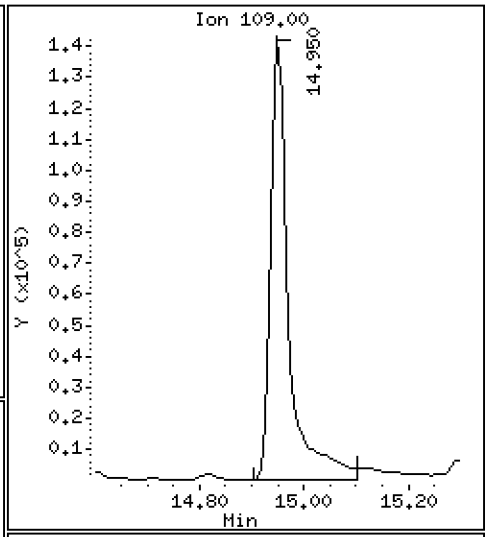
Concentration: 11.66 ug/mL

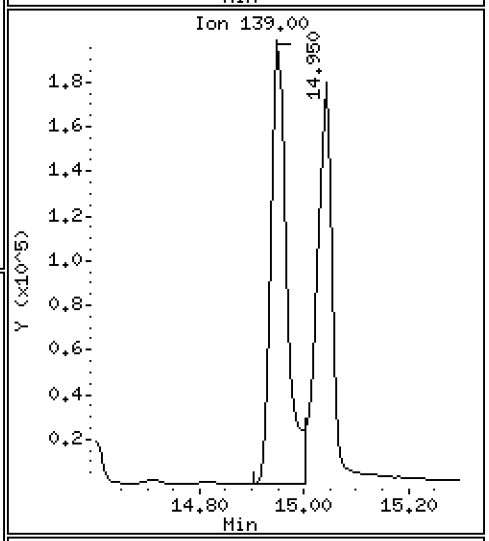


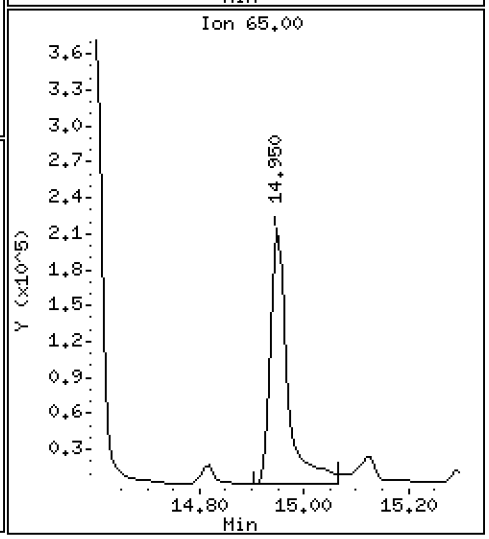












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022135.D

Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

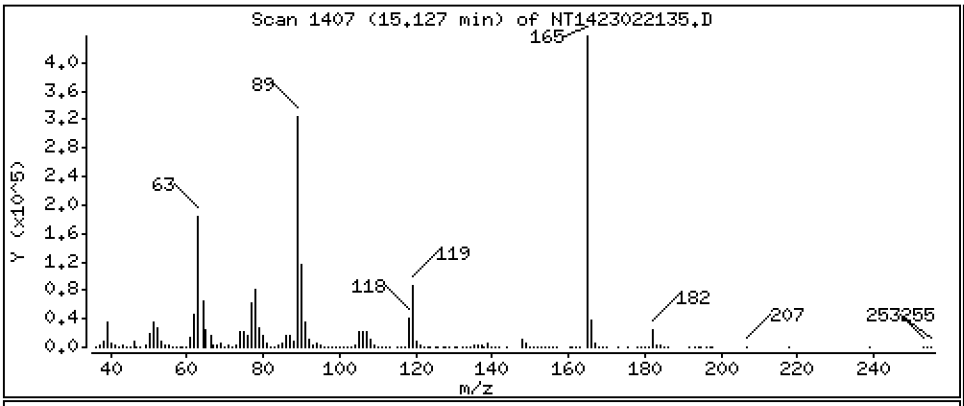
Operator: DSD

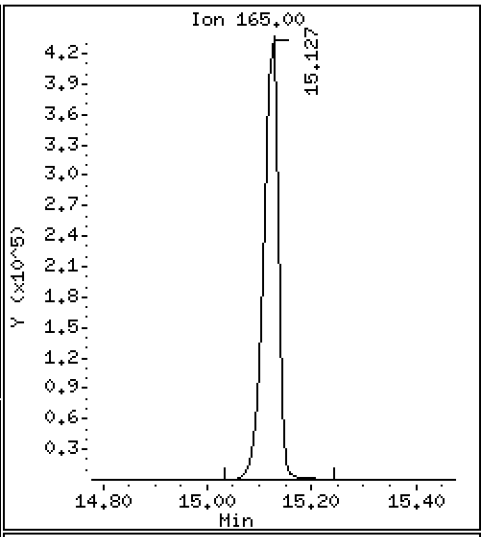
Column phase: ZB-5msi

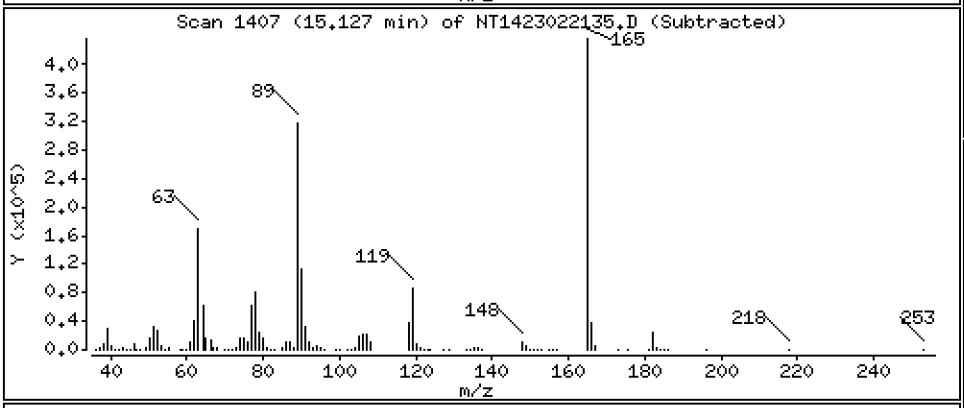
Column diameter: 0.25

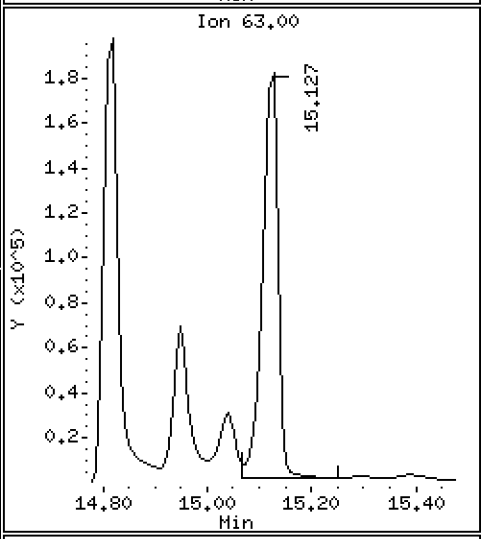
48 2,4-Dinitrotoluene

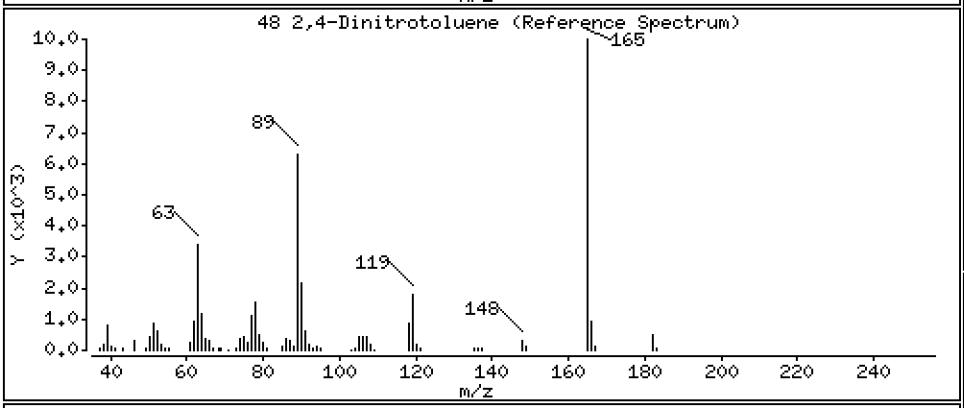
Concentration: 12.75 ug/mL

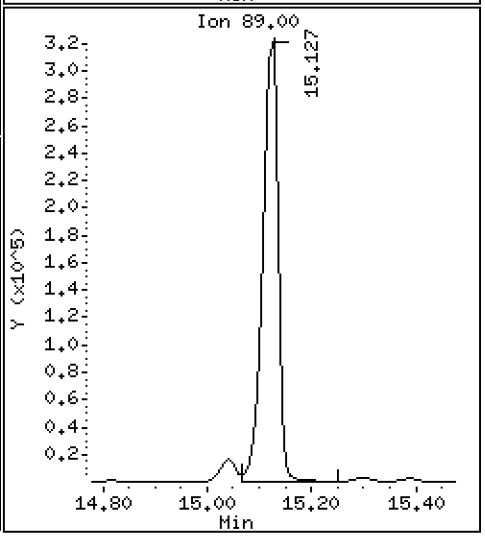


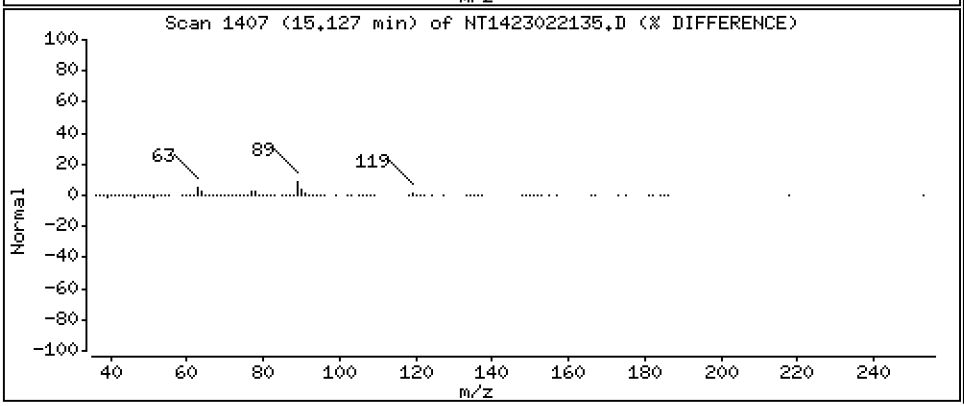












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

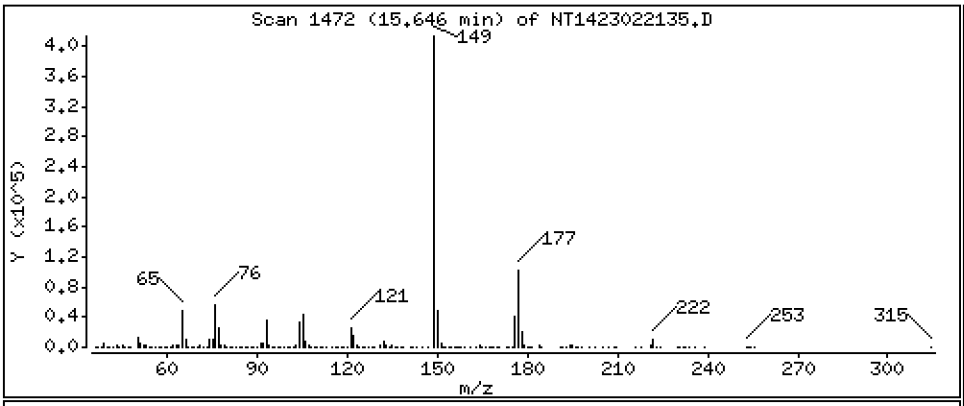
Operator: DSD

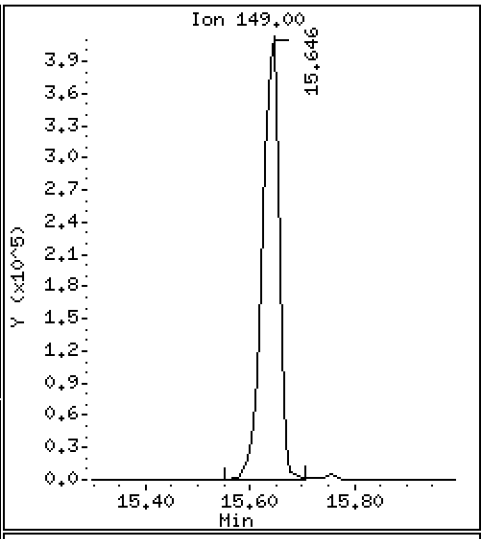
Column phase: ZB-5msi

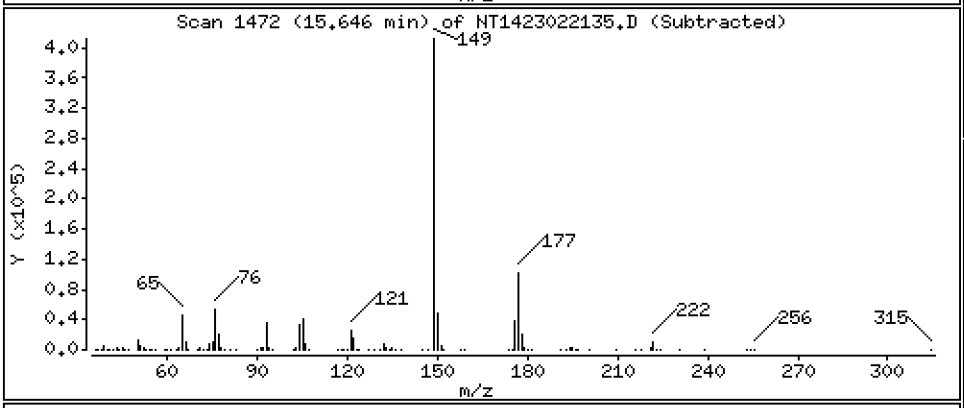
Column diameter: 0.25

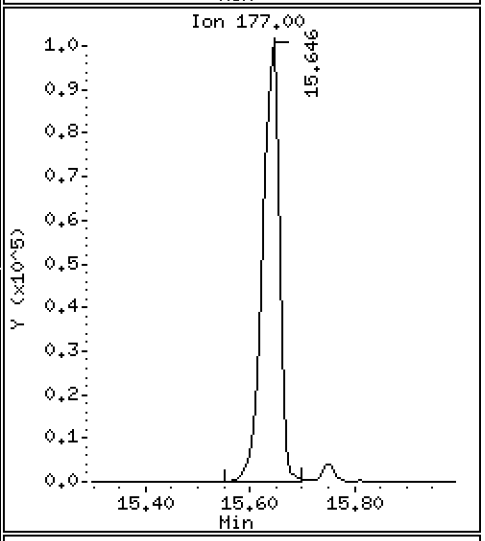
50 Diethylphthalate

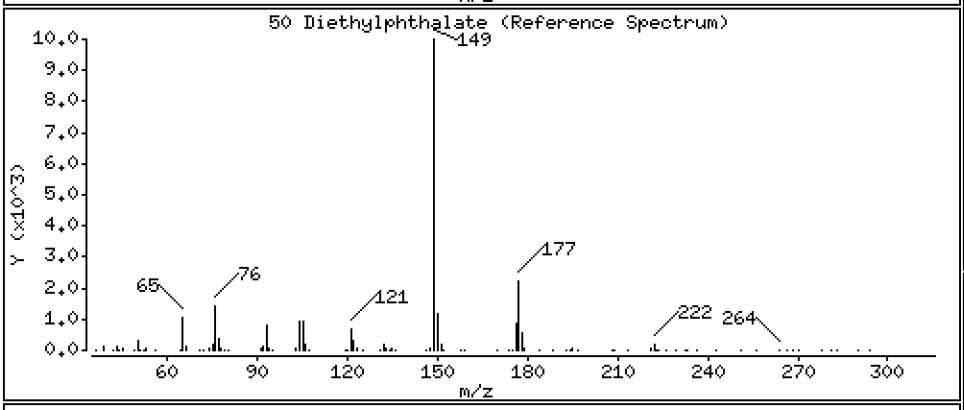
Concentration: 3.922 ug/mL

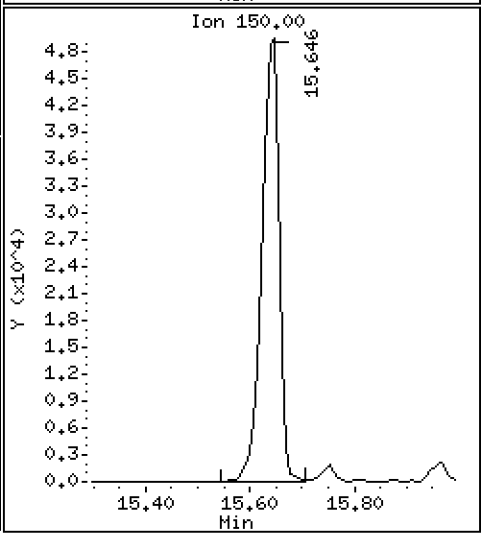


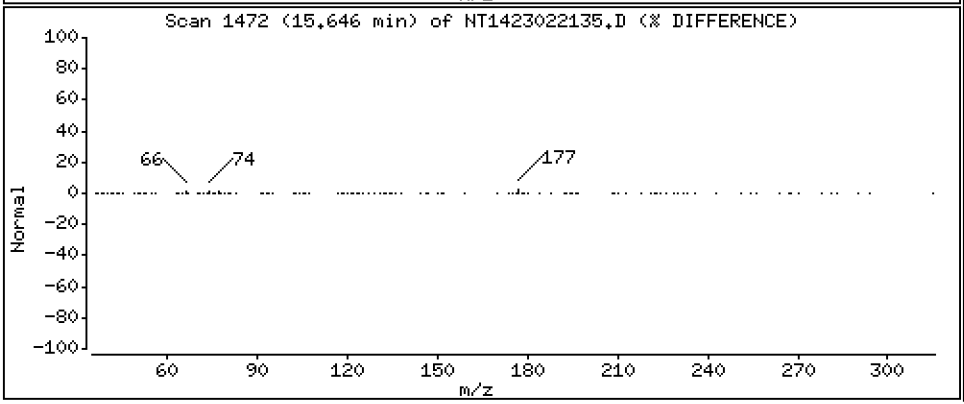












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

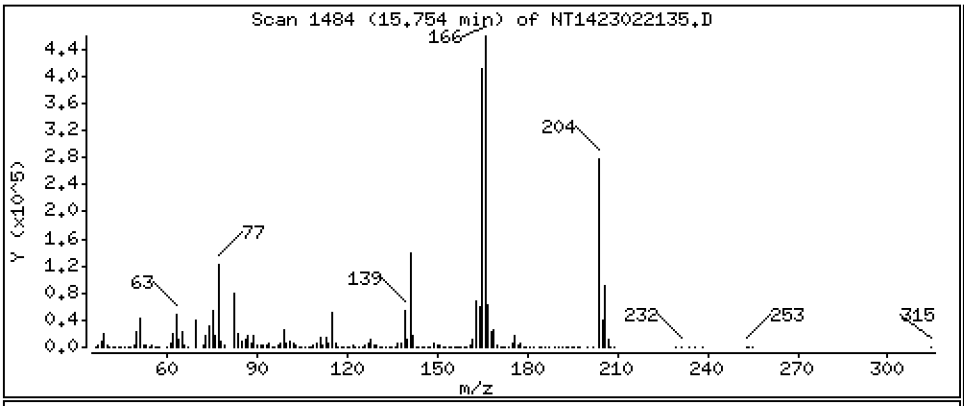
Operator: DSD

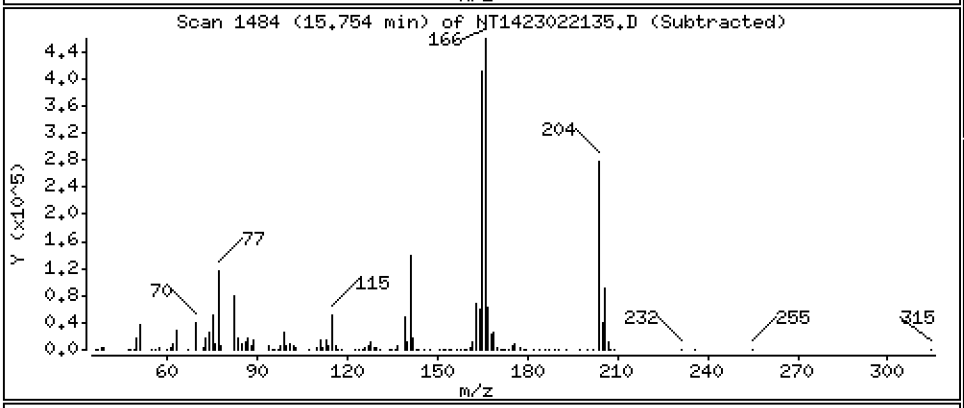
Column phase: ZB-5msi

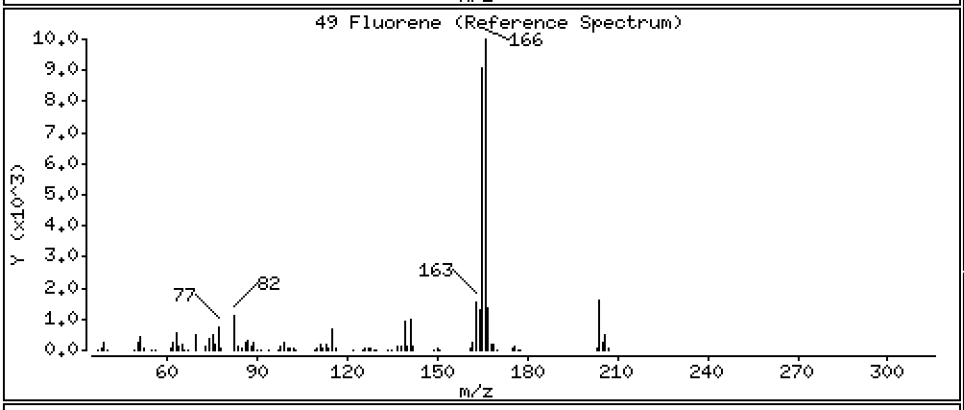
Column diameter: 0.25

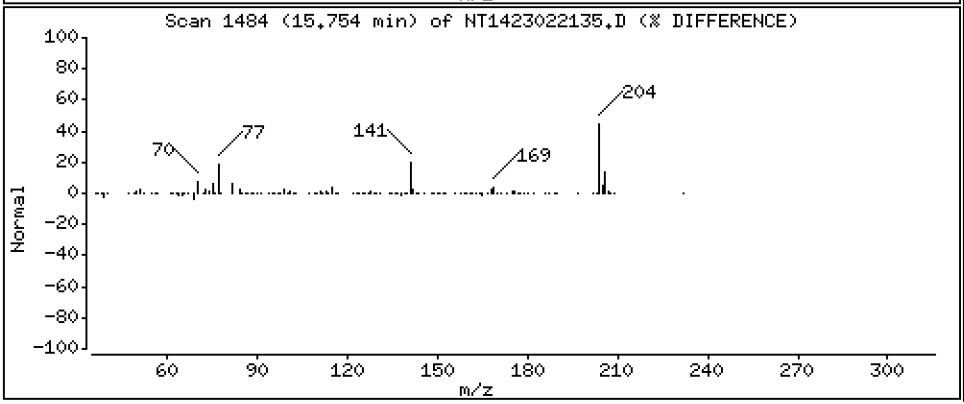
49 Fluorene

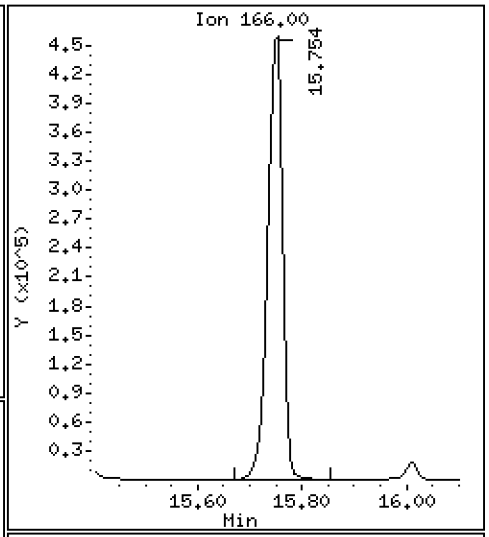
Concentration: 3.336 ug/mL

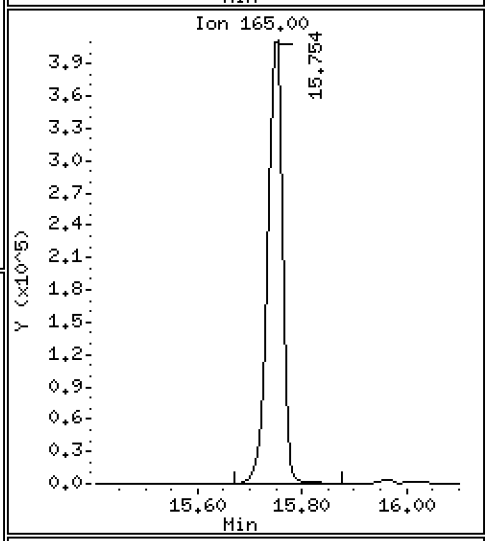


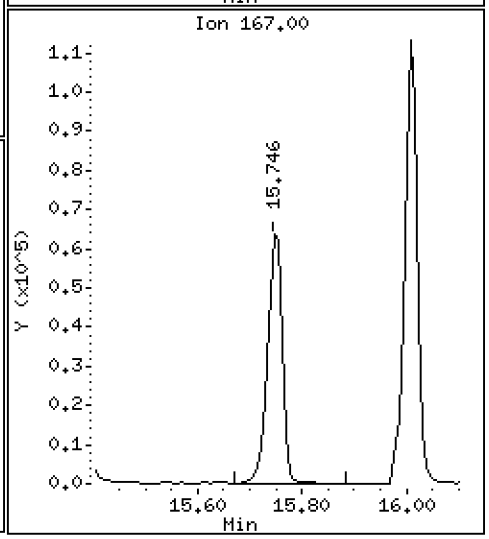












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

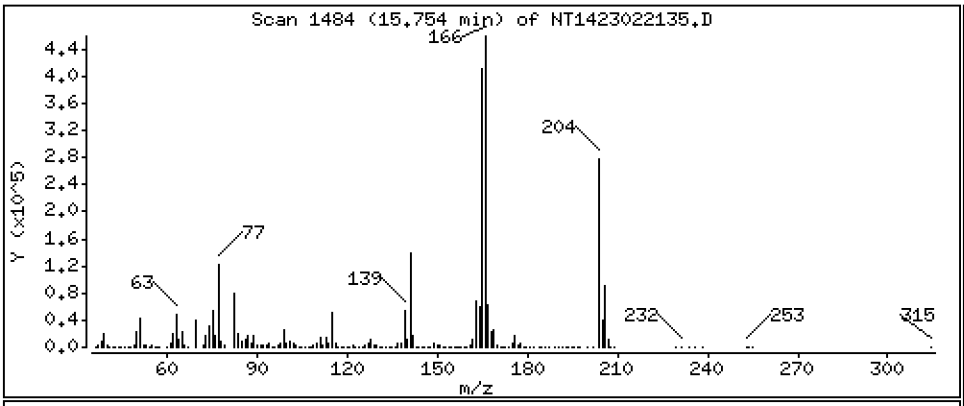
Operator: DSD

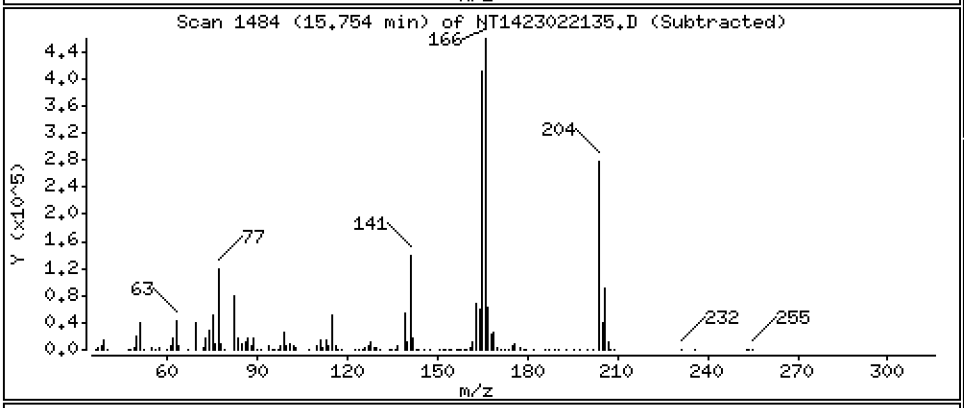
Column phase: ZB-5msi

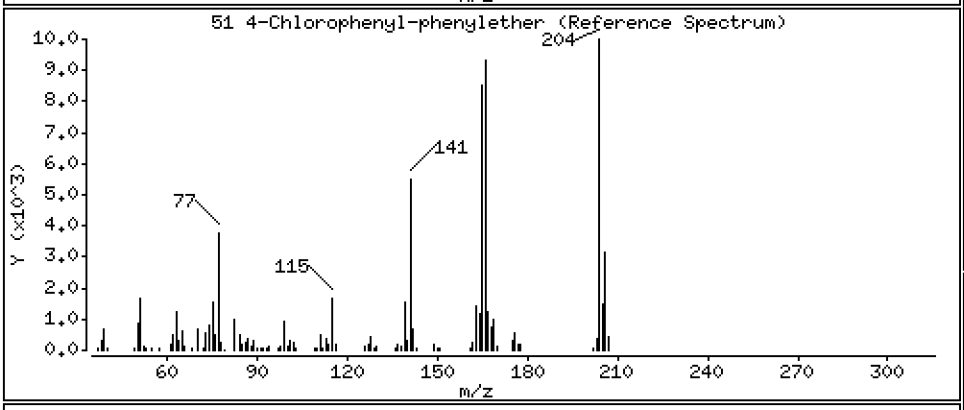
Column diameter: 0.25

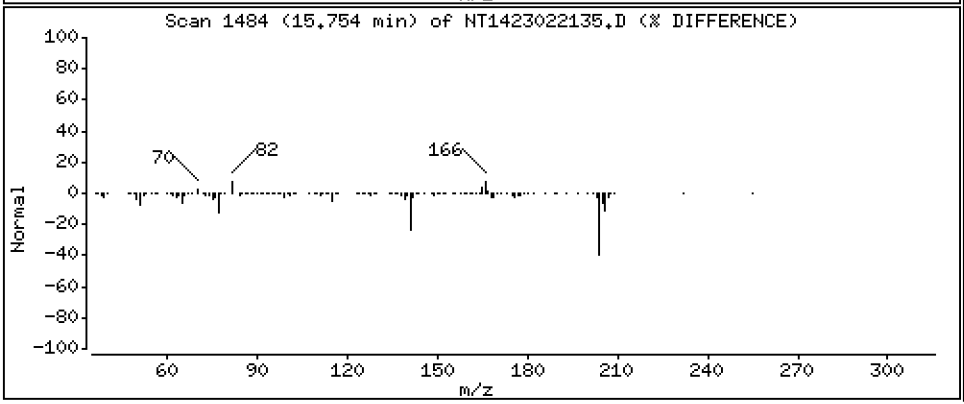
51 4-Chlorophenyl-phenylether

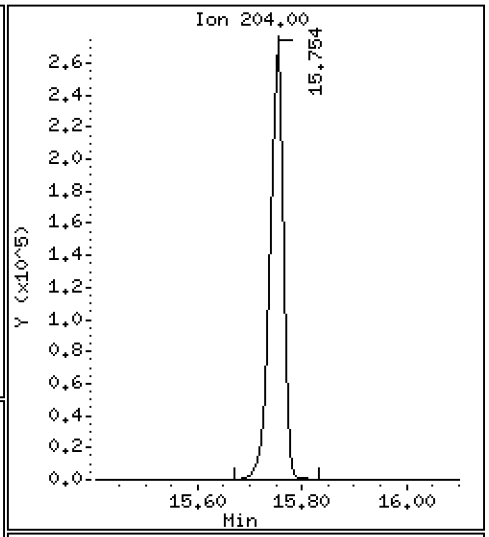
Concentration: 3.398 ug/mL

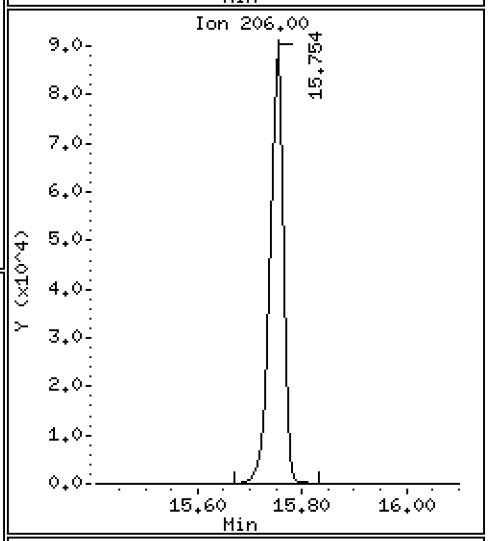


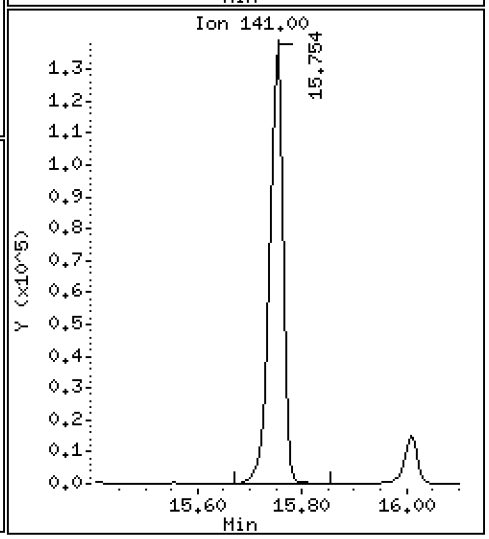












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

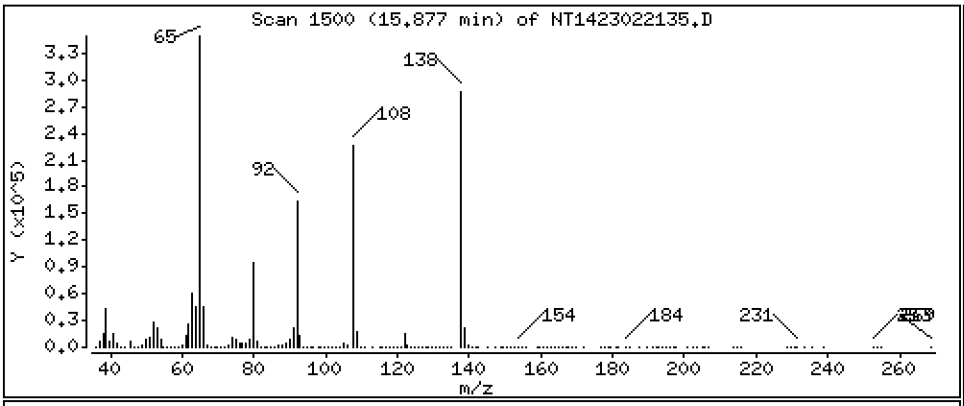
Operator: DSD

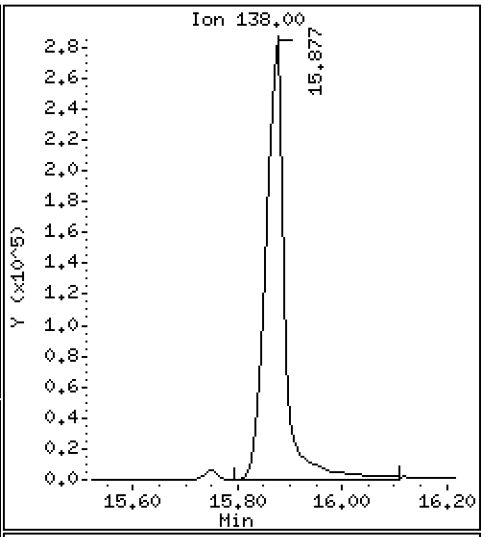
Column phase: ZB-5msi

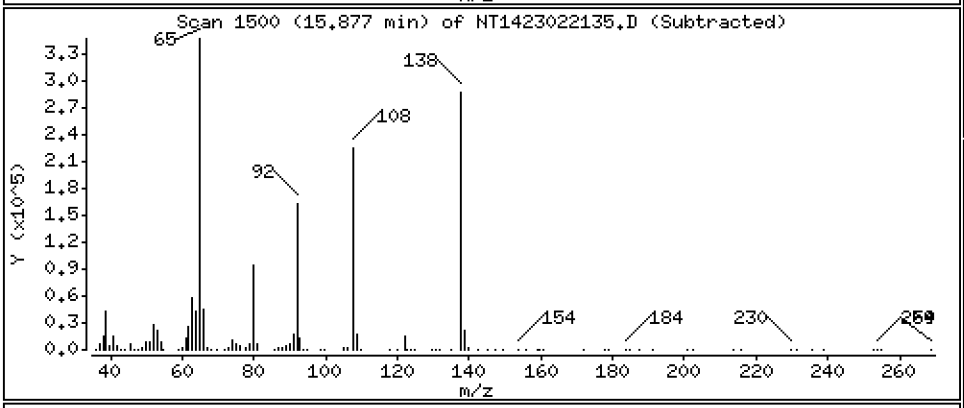
Column diameter: 0.25

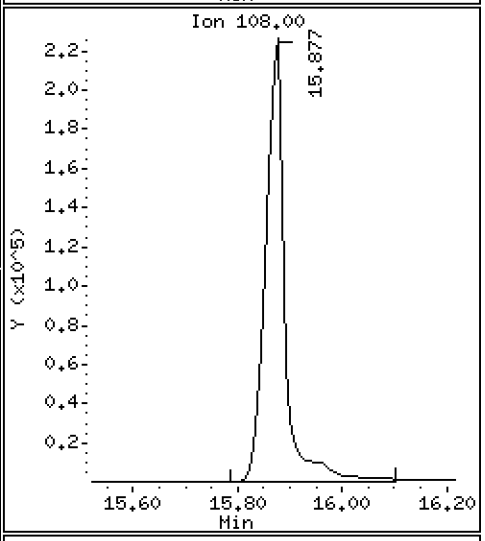
52 4-Nitroaniline

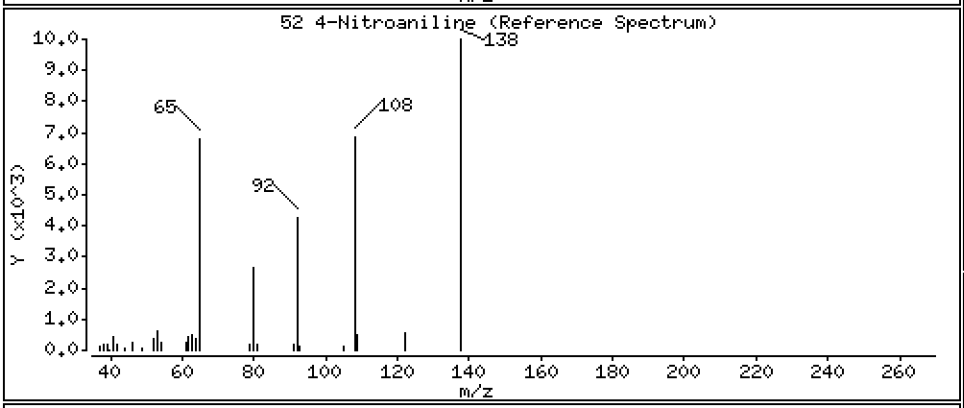
Concentration: 12.72 ug/mL

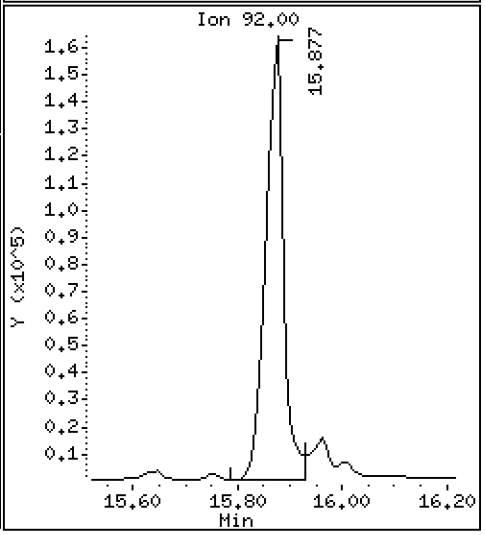


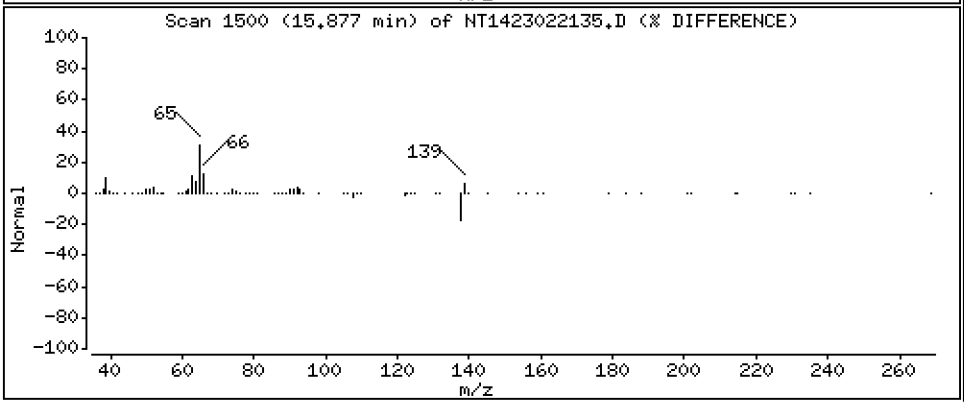












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

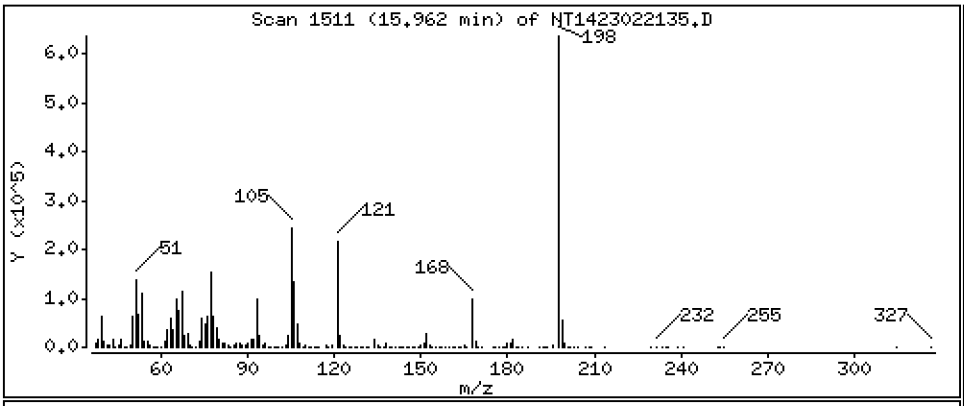
Operator: DSD

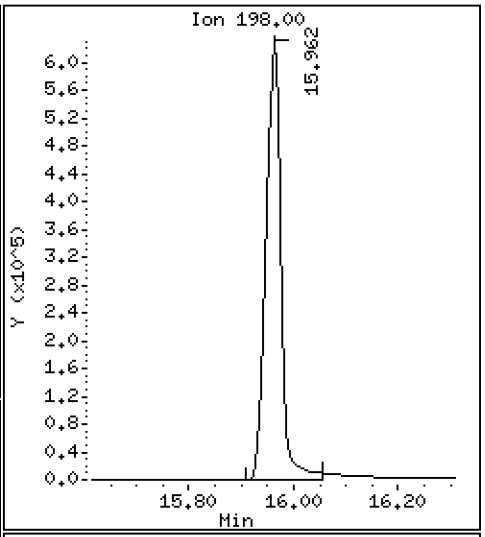
Column phase: ZB-5msi

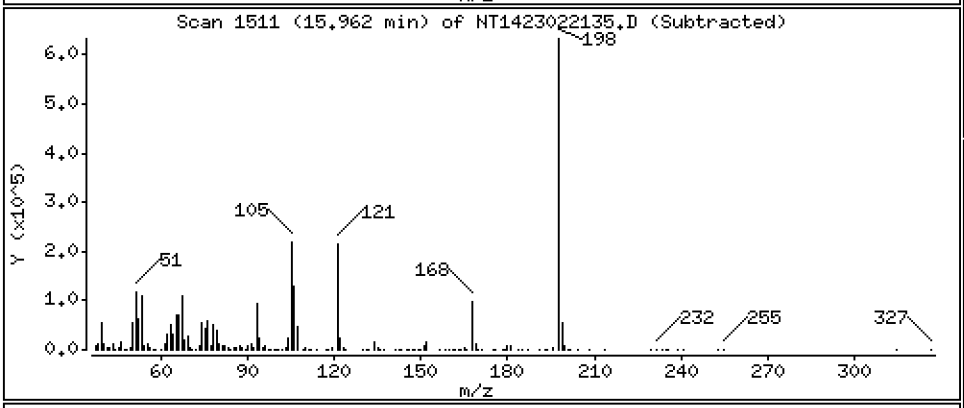
Column diameter: 0.25

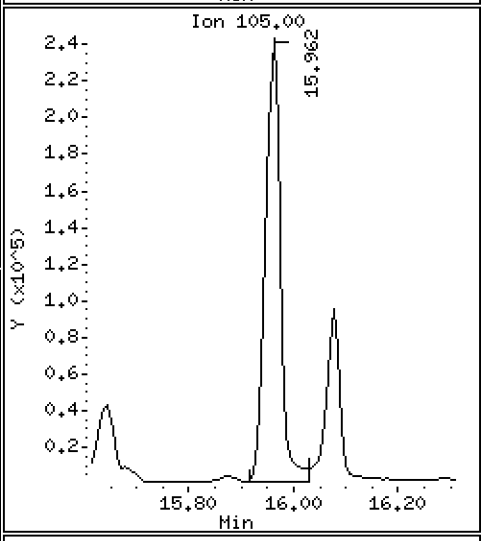
53 4,6-Dinitro-2-methylphenol

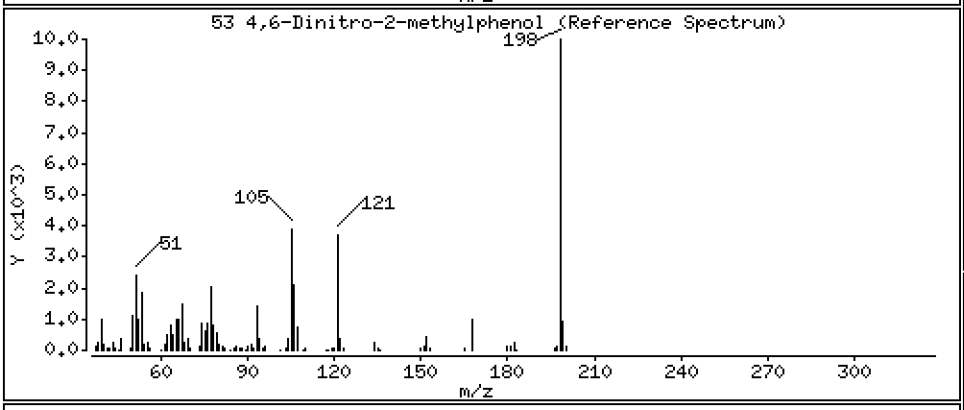
Concentration: 25.45 ug/mL

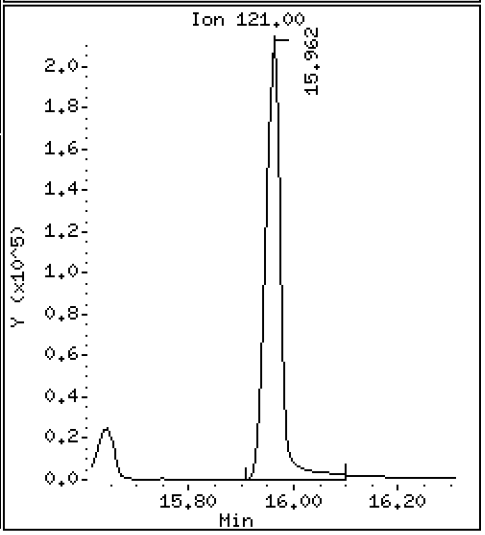


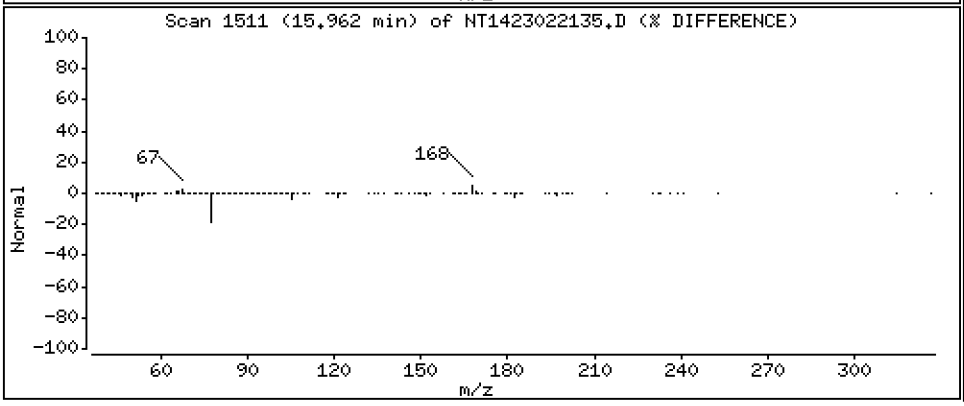












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

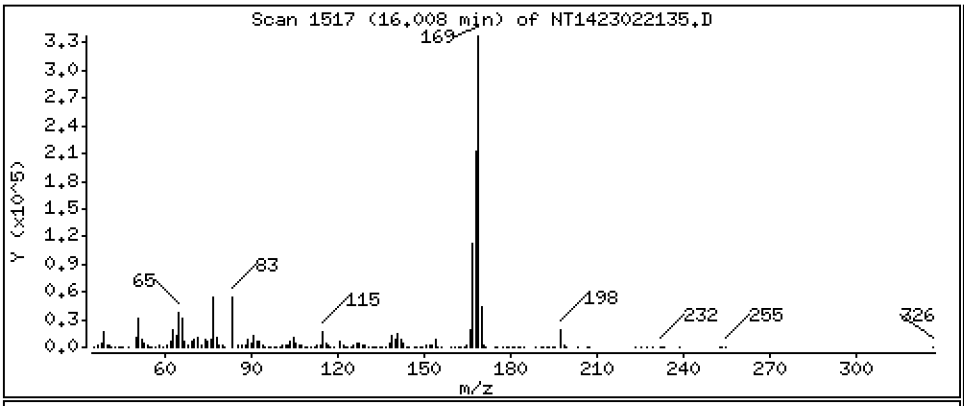
Operator: DSD

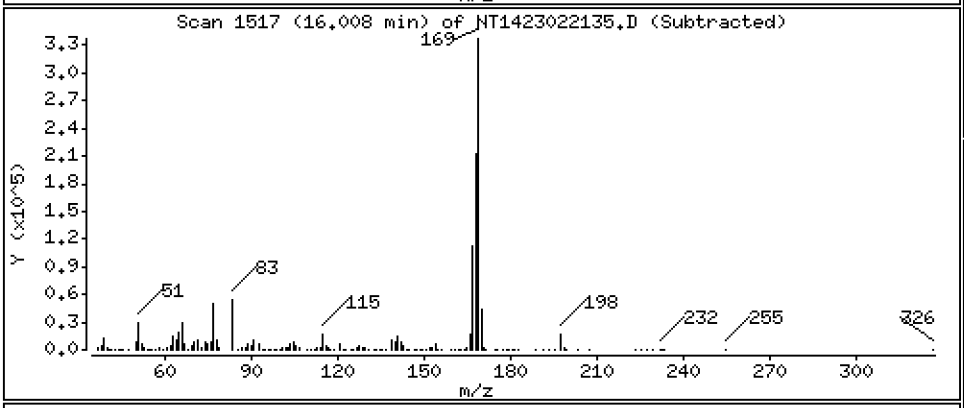
Column phase: ZB-5msi

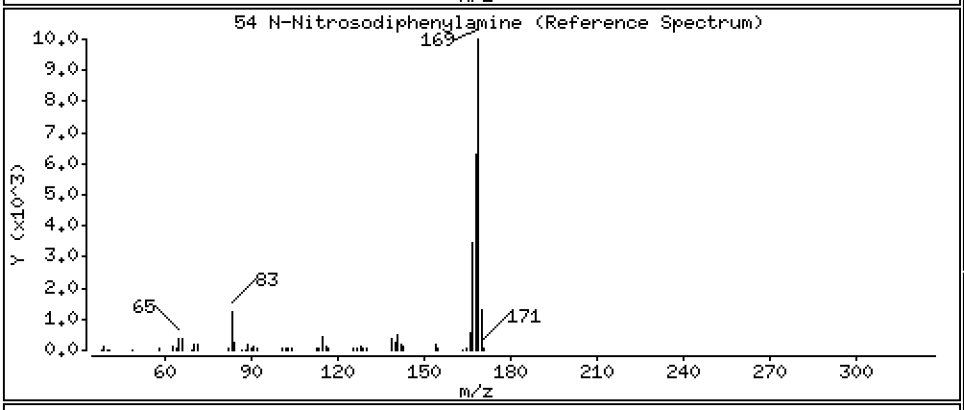
Column diameter: 0.25

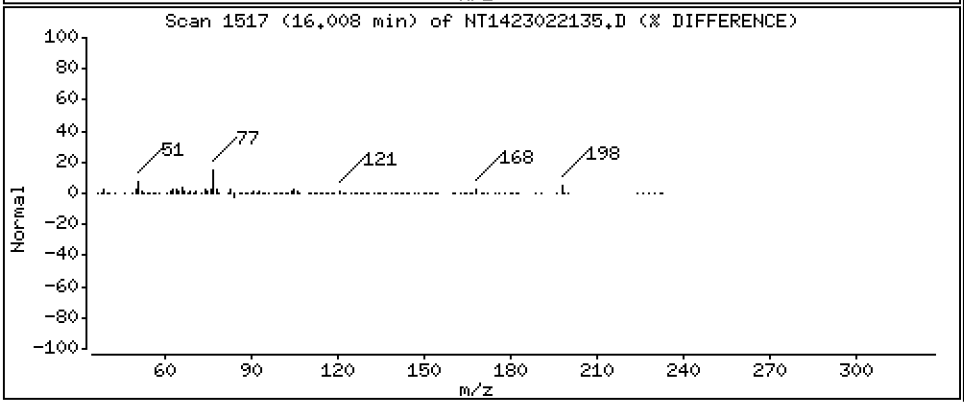
54 N-Nitrosodiphenylamine

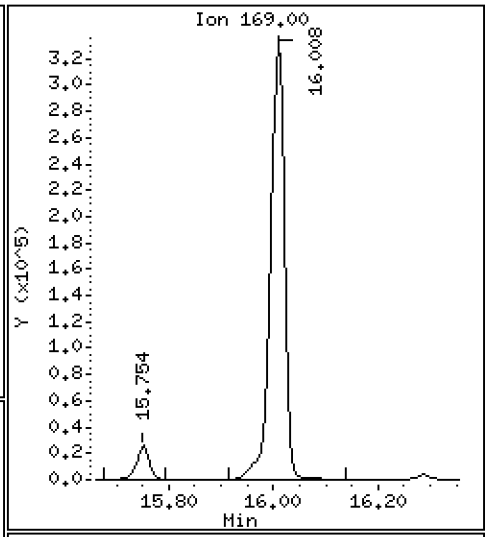
Concentration: 3.276 ug/mL

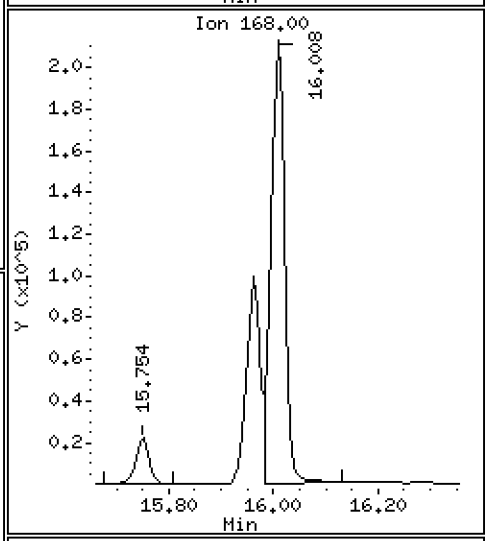


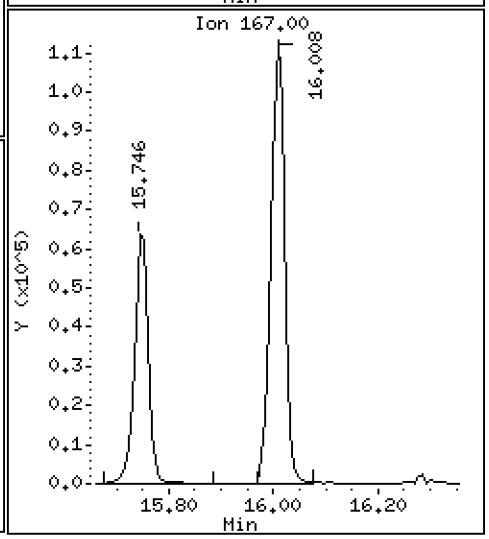












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022135.D

Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

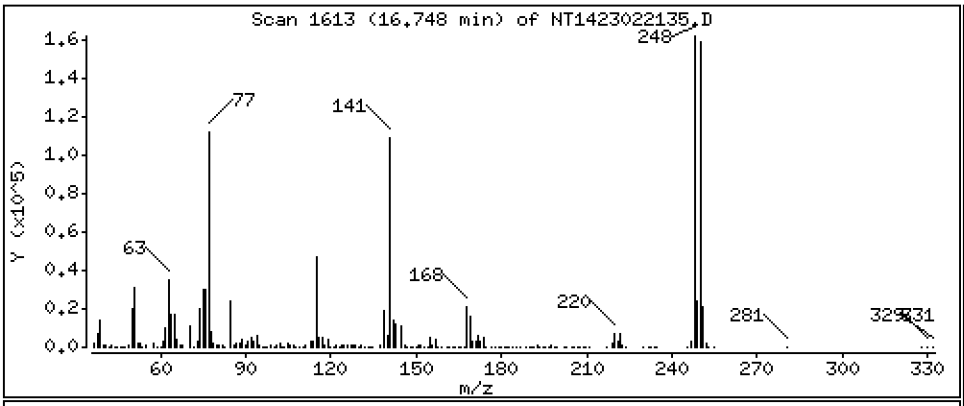
Operator: DSD

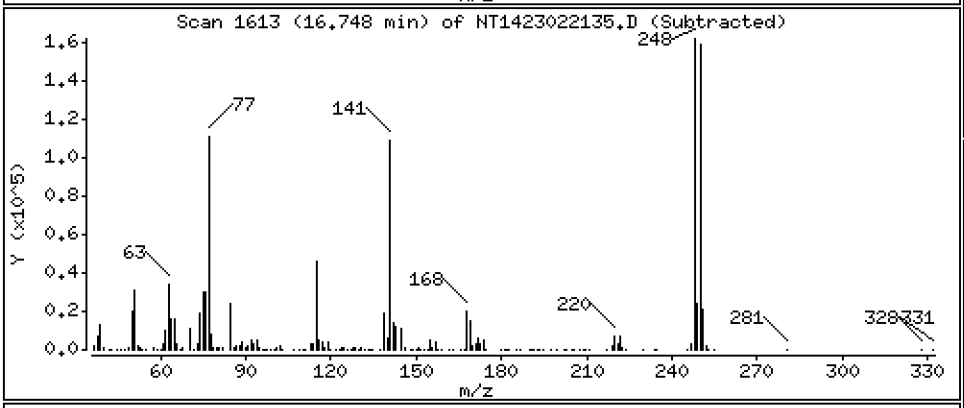
Column phase: ZB-5msi

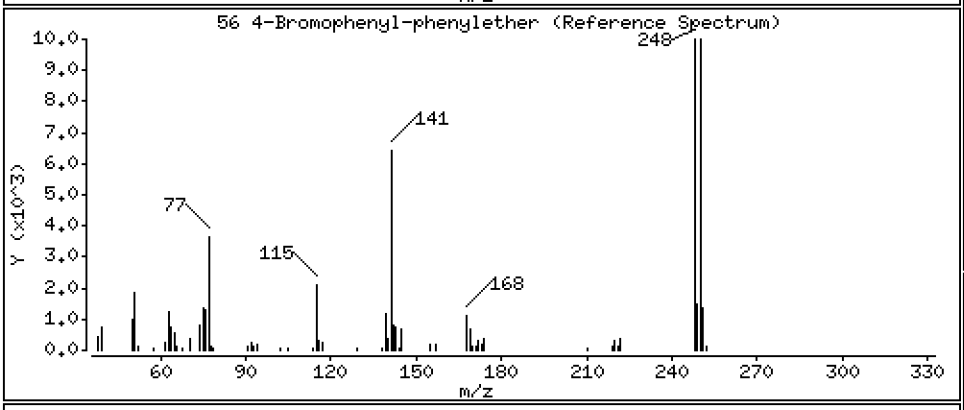
Column diameter: 0.25

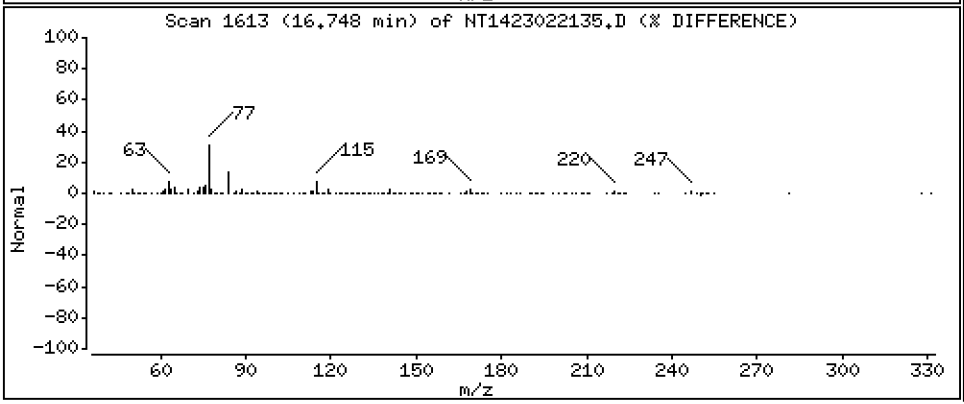
56 4-Bromophenyl-phenylether

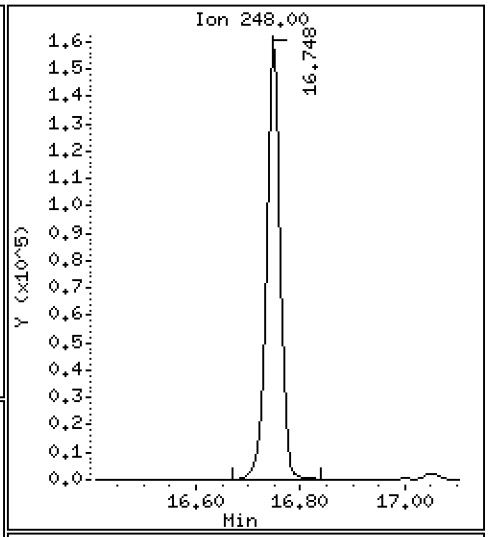
Concentration: 3.653 ug/mL

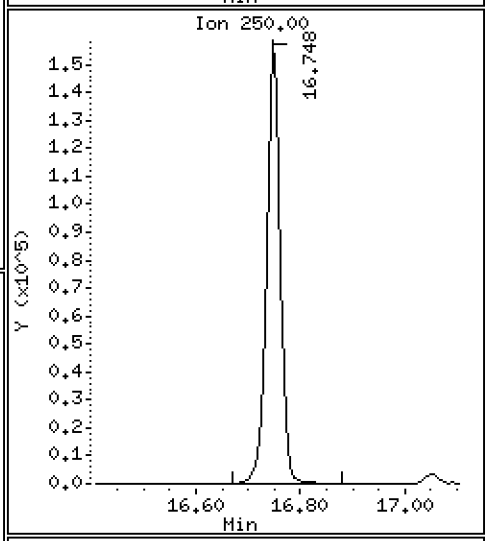


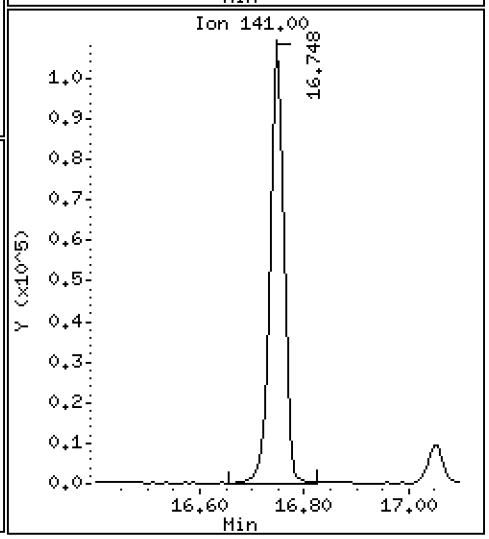












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

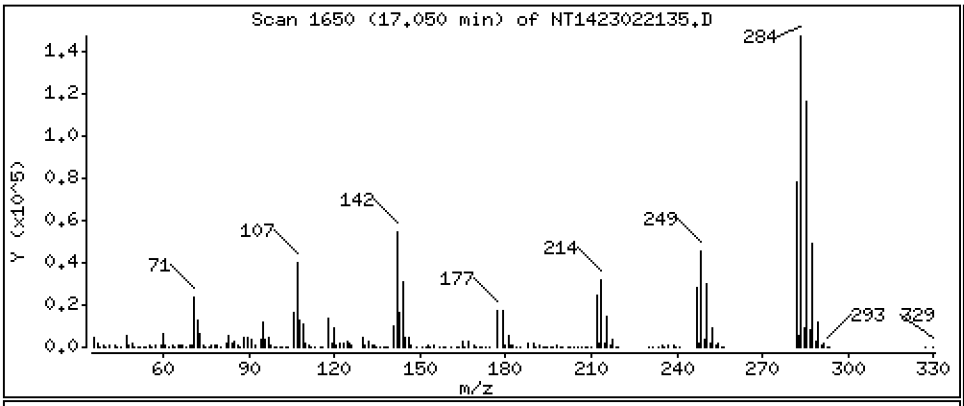
Operator: DSD

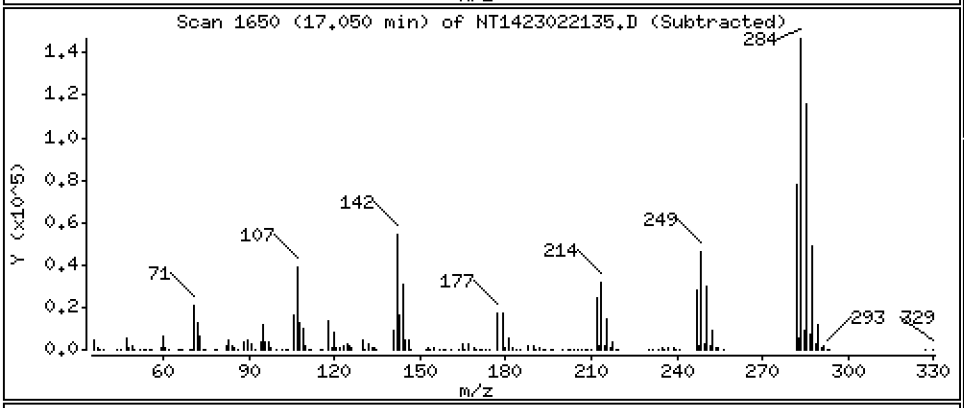
Column phase: ZB-5msi

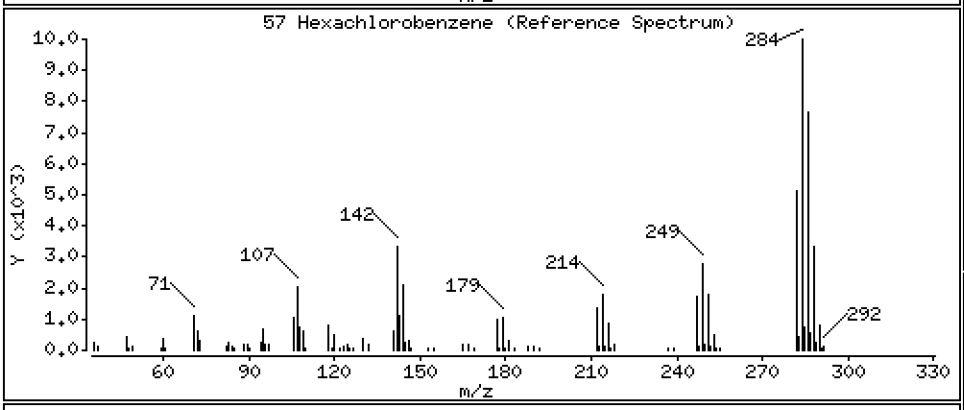
Column diameter: 0.25

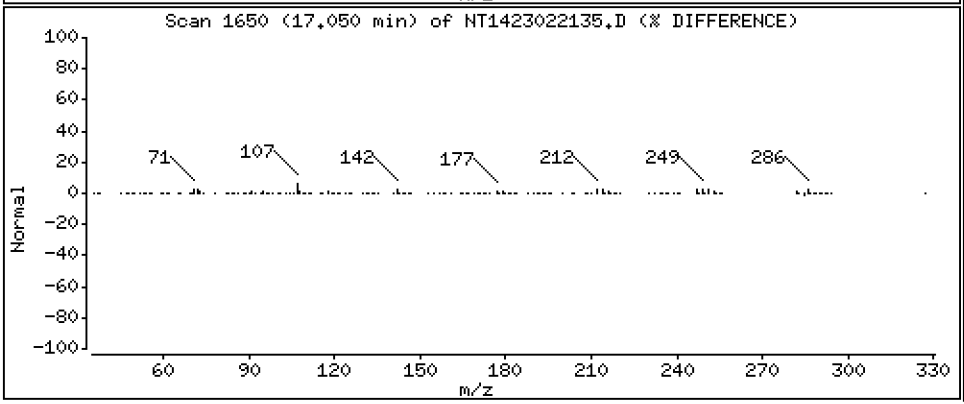
57 Hexachlorobenzene

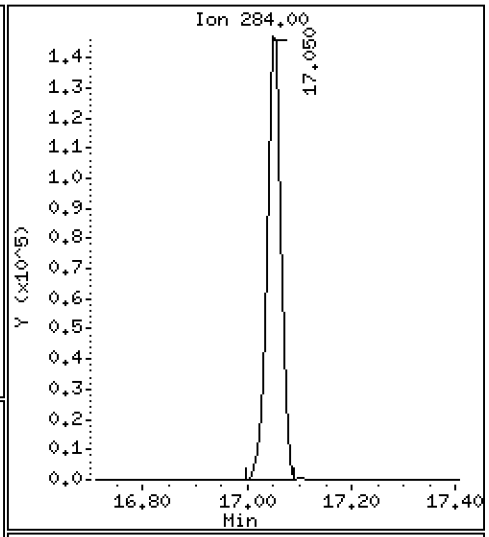
Concentration: 3.387 ug/mL

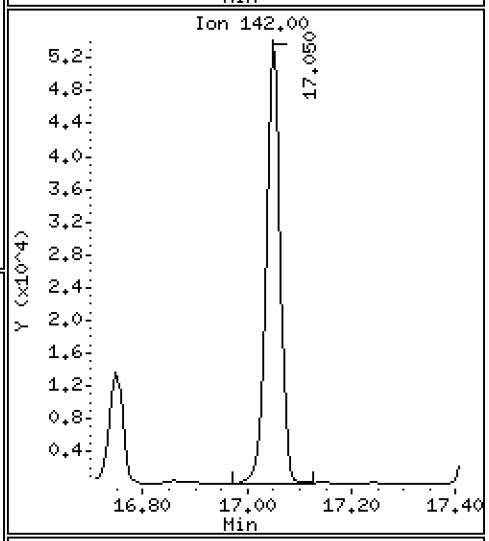


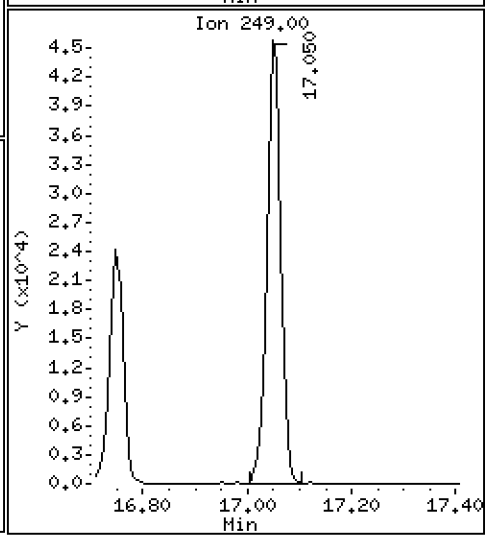












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

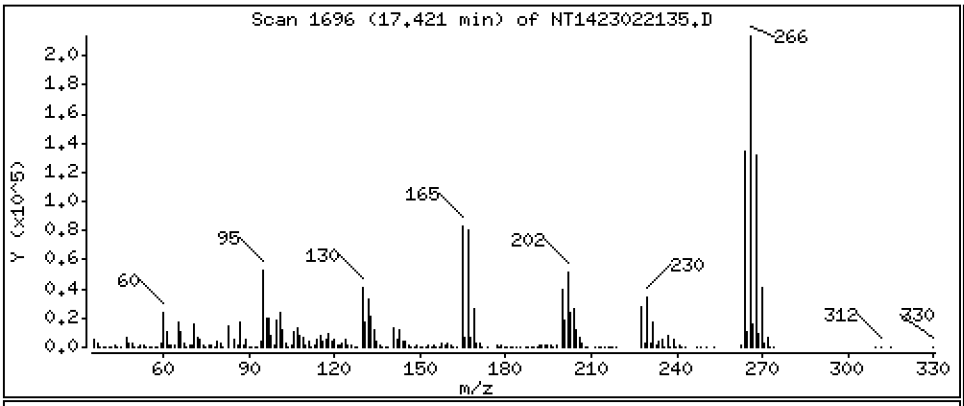
Operator: DSD

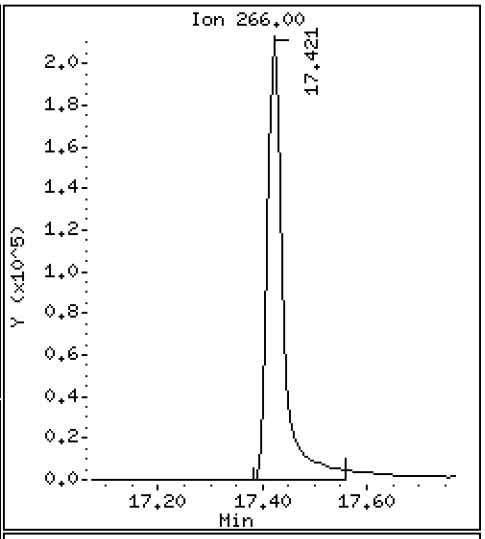
Column phase: ZB-5msi

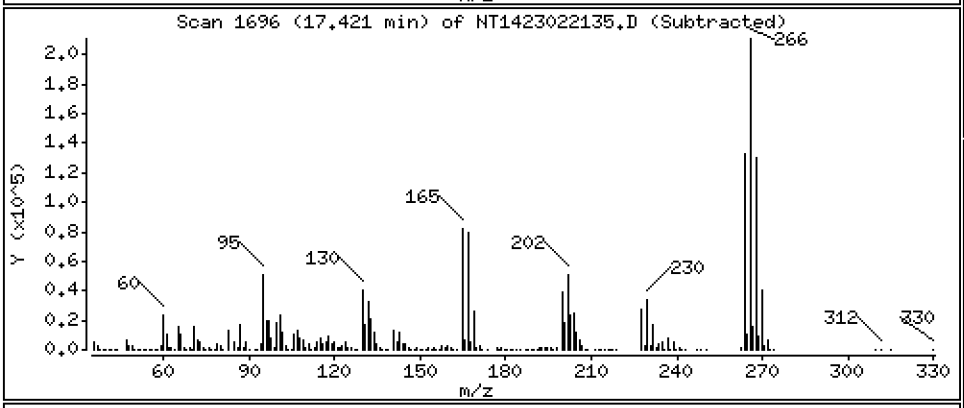
Column diameter: 0.25

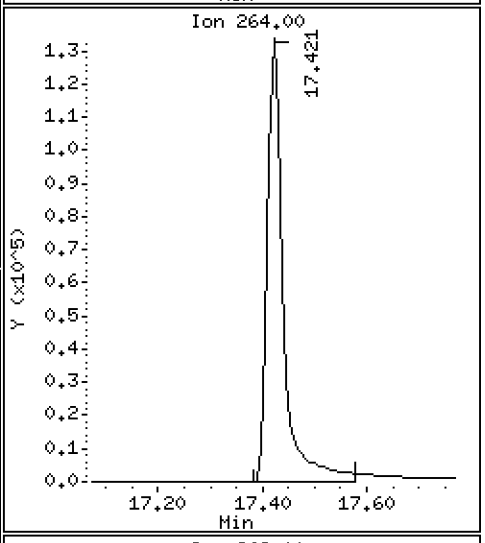
58 Pentachlorophenol

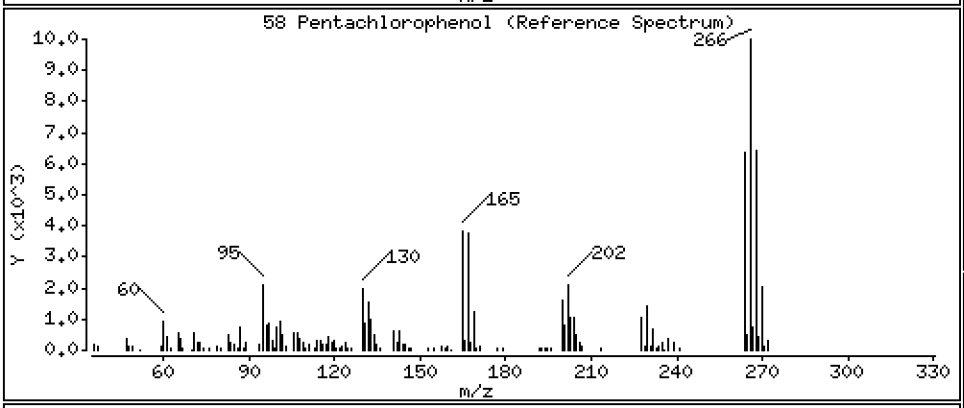
Concentration: 10.61 ug/mL

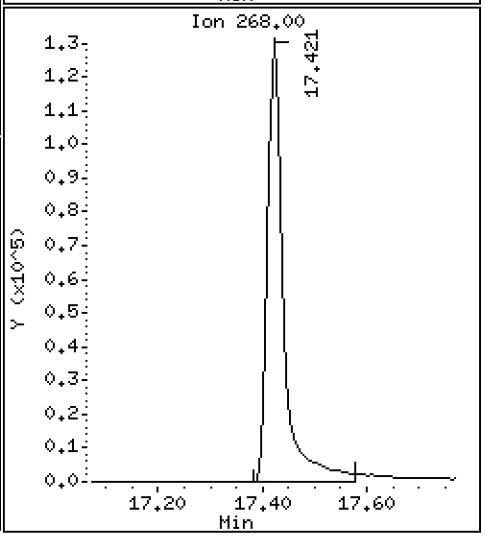


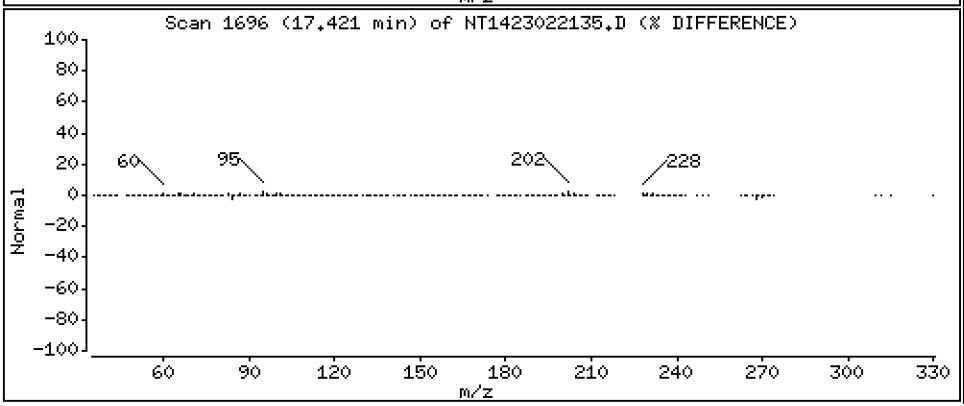












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

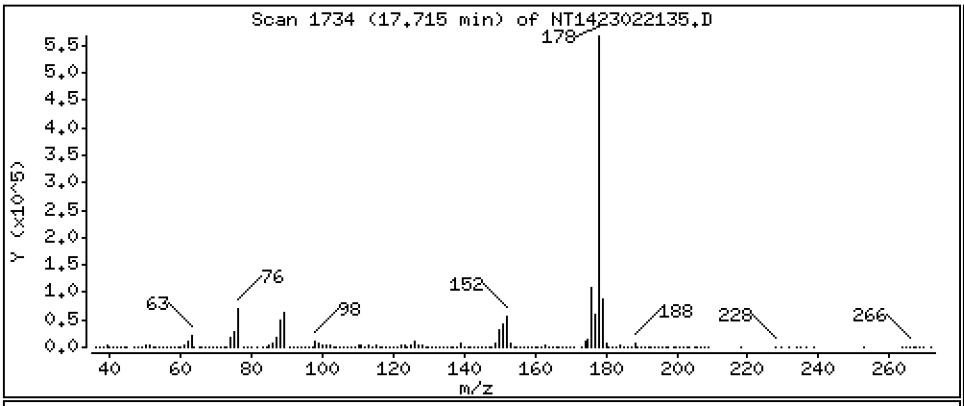
Operator: DSD

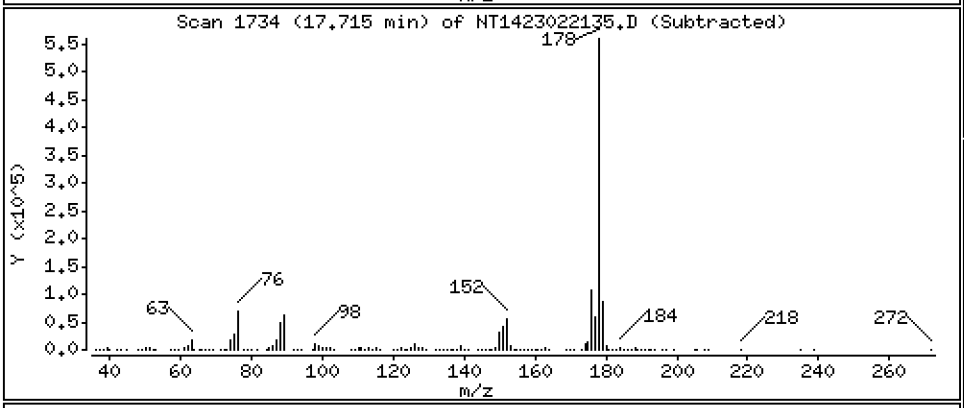
Column phase: ZB-5msi

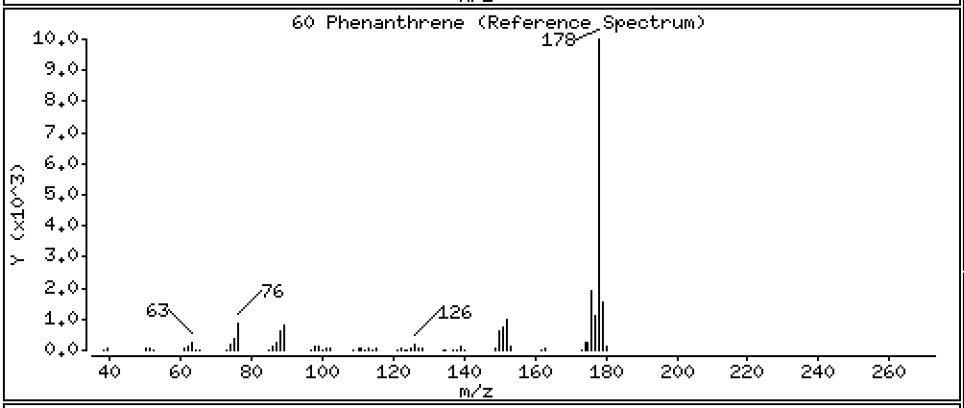
Column diameter: 0.25

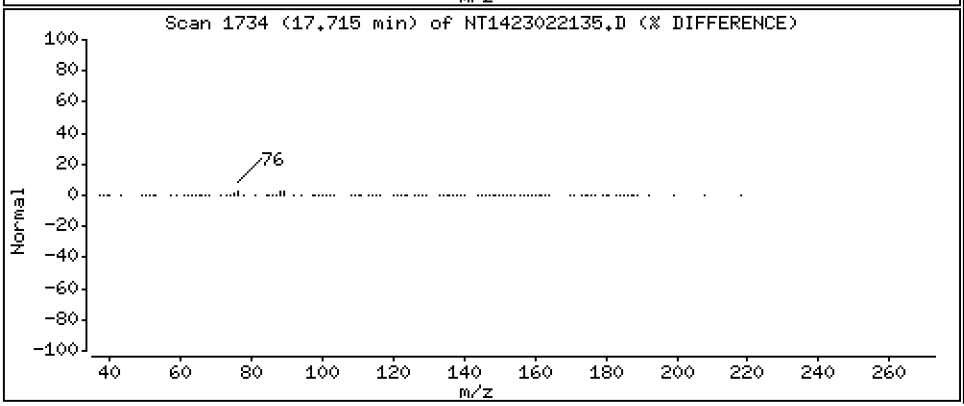
60 Phenanthrene

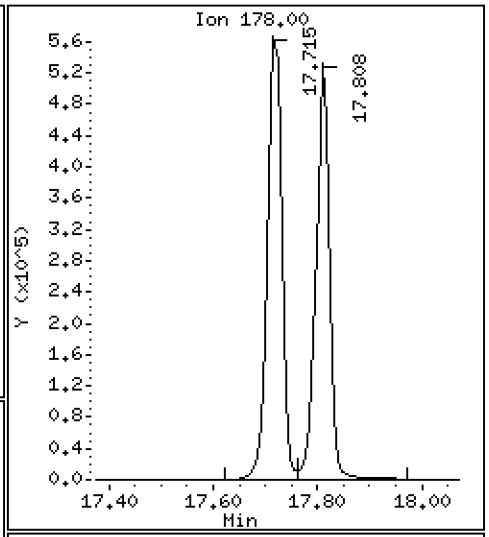
Concentration: 3.459 ug/mL

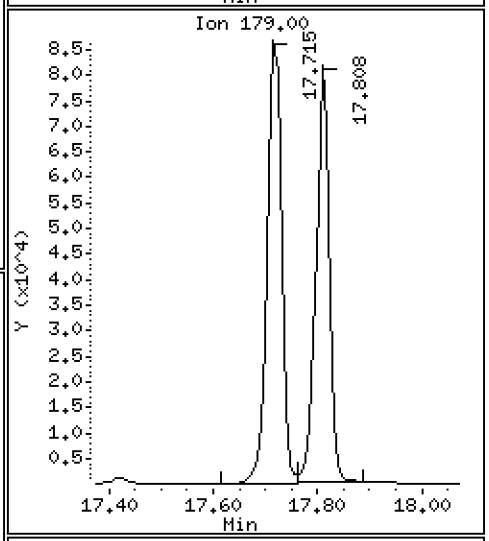


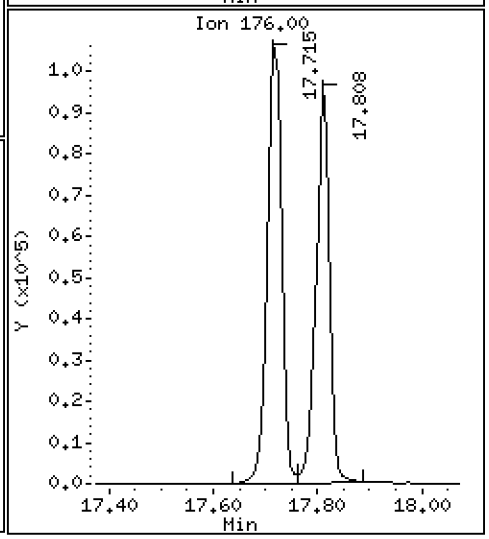












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

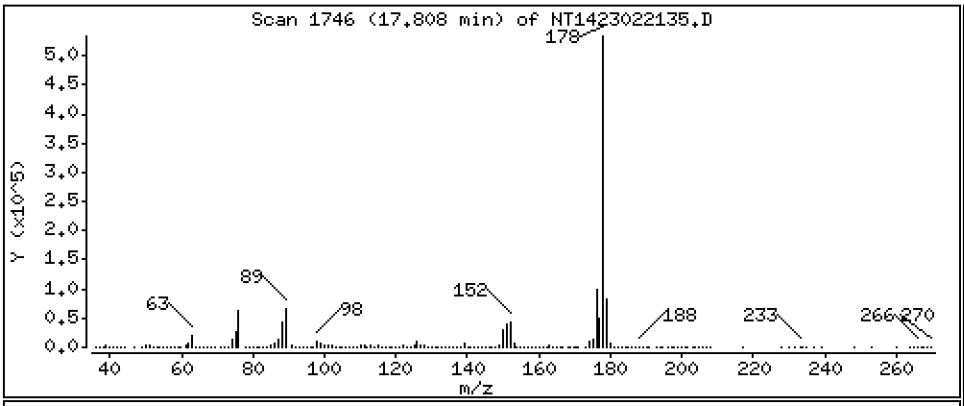
Operator: DSD

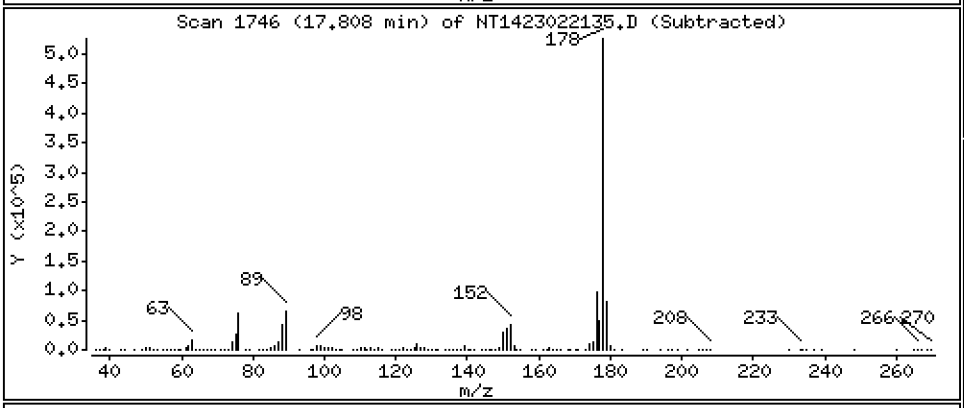
Column phase: ZB-5msi

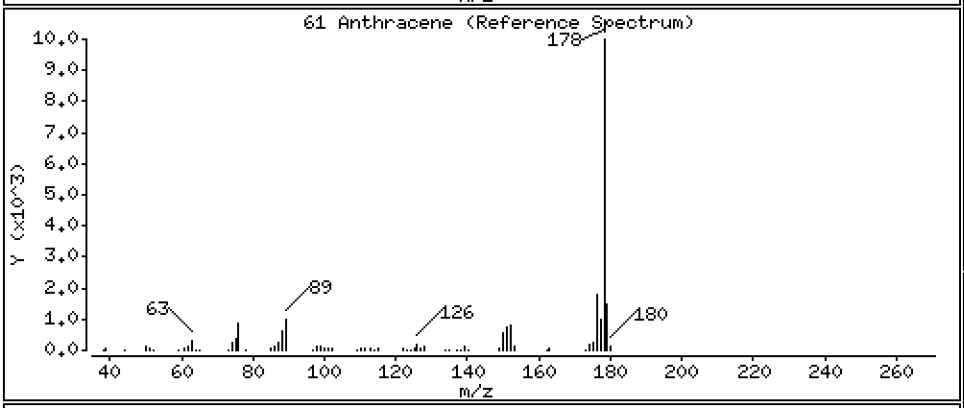
Column diameter: 0.25

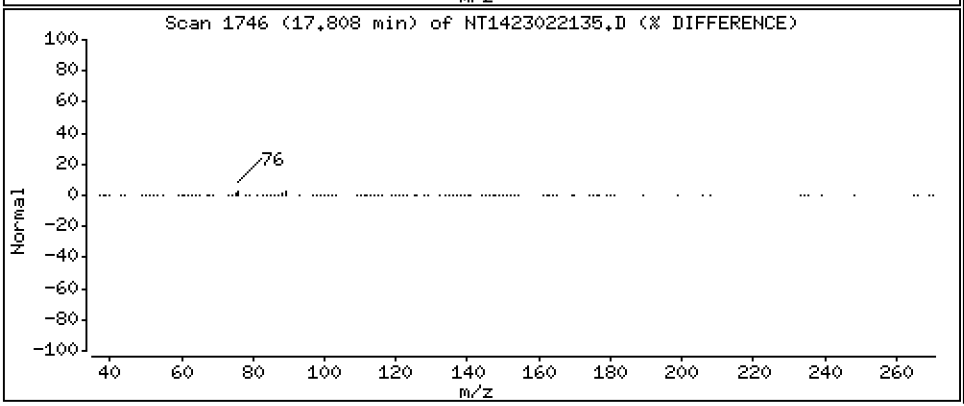
61 Anthracene

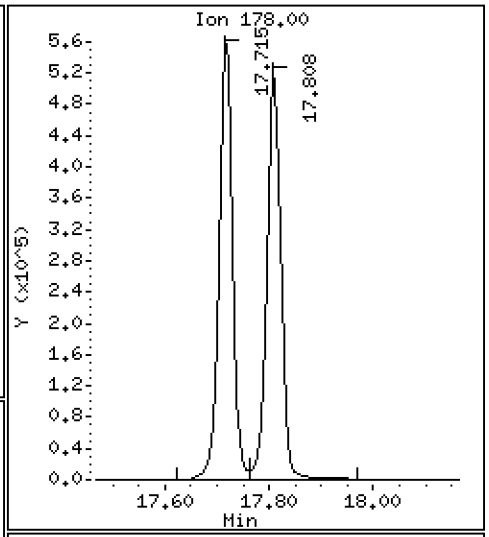
Concentration: 3.155 ug/mL

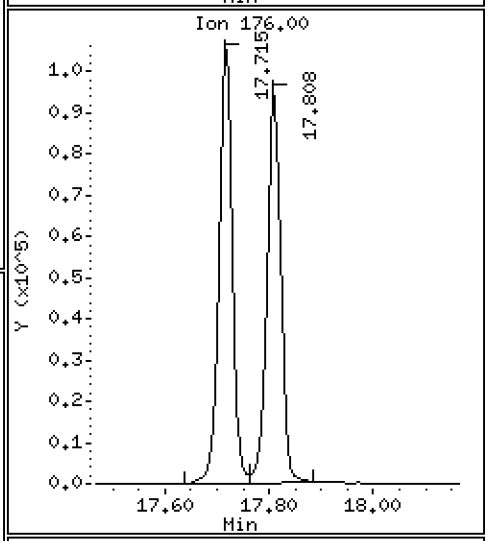


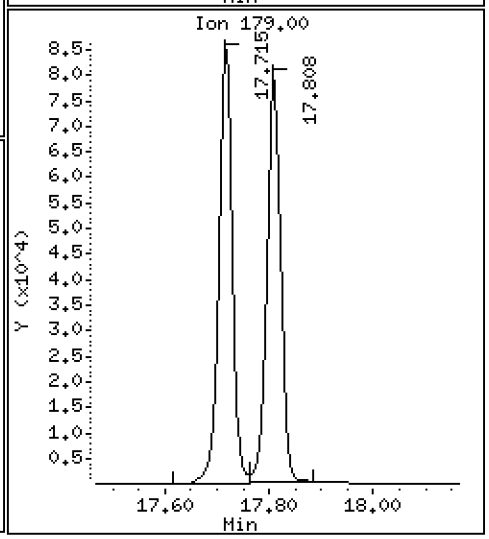












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

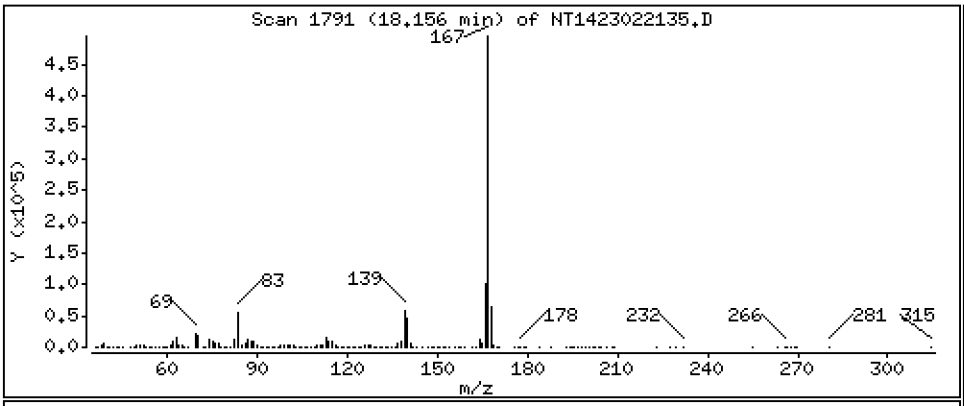
Operator: DSD

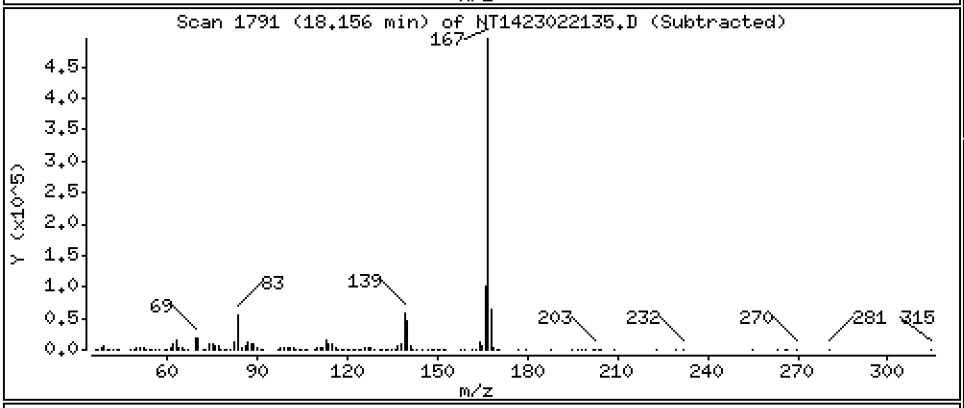
Column phase: ZB-5msi

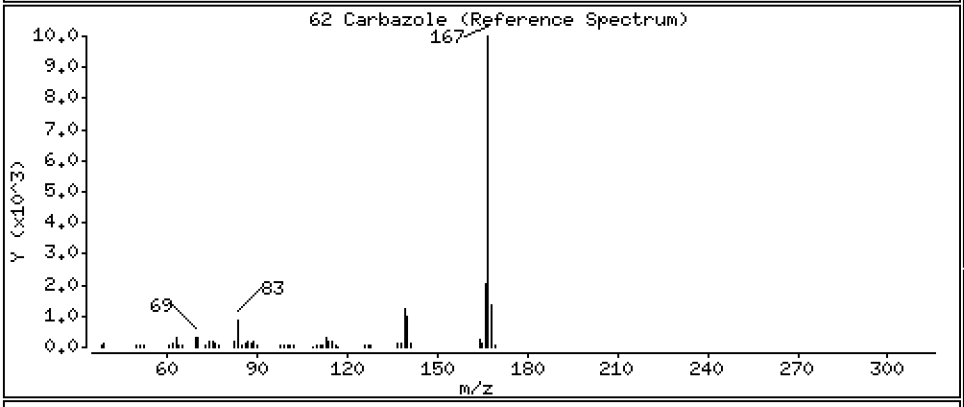
Column diameter: 0.25

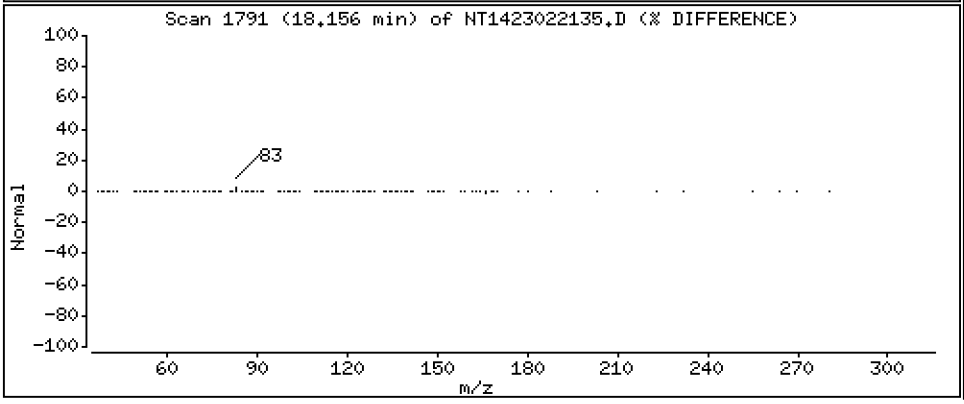
62 Carbazole

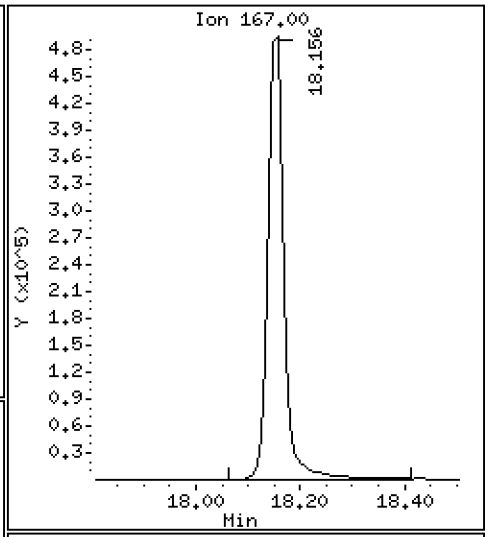
Concentration: 3.761 ug/mL

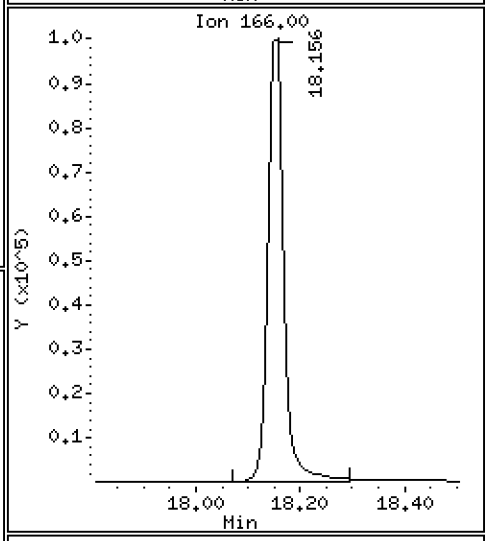


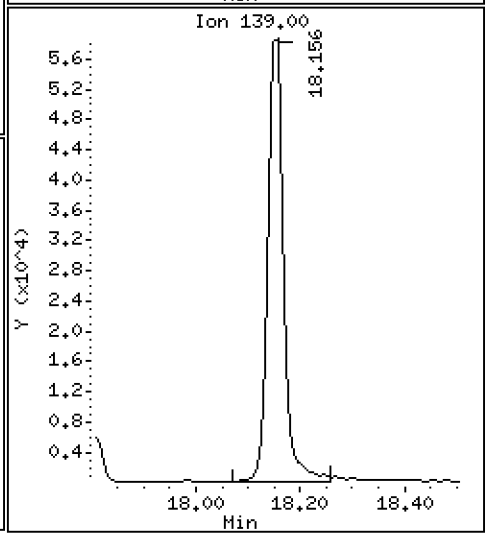












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

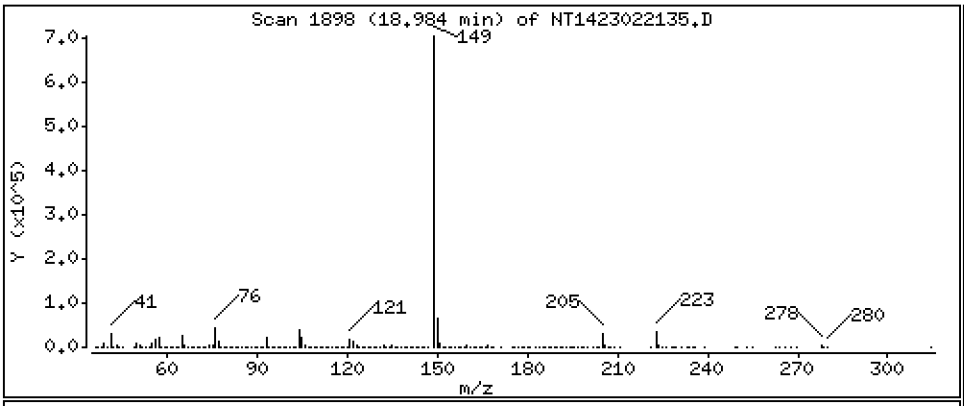
Operator: DSD

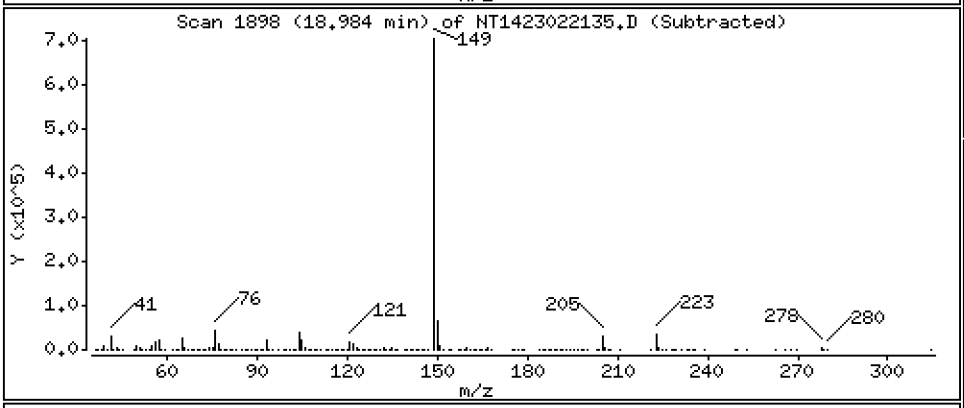
Column phase: ZB-5msi

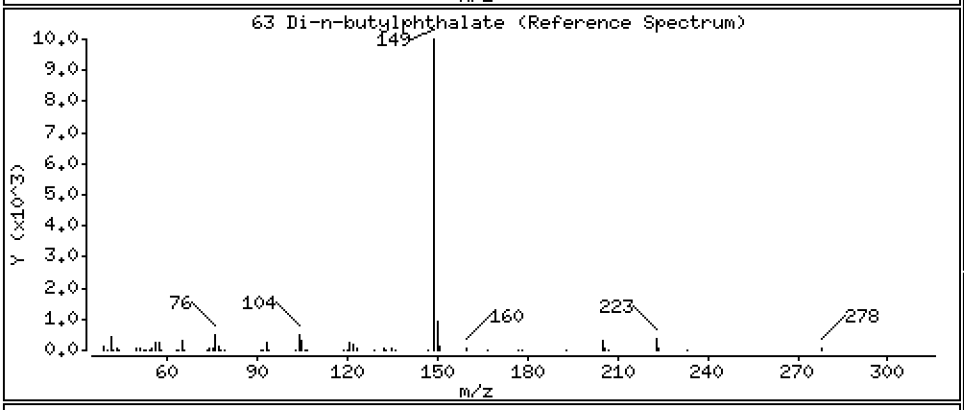
Column diameter: 0.25

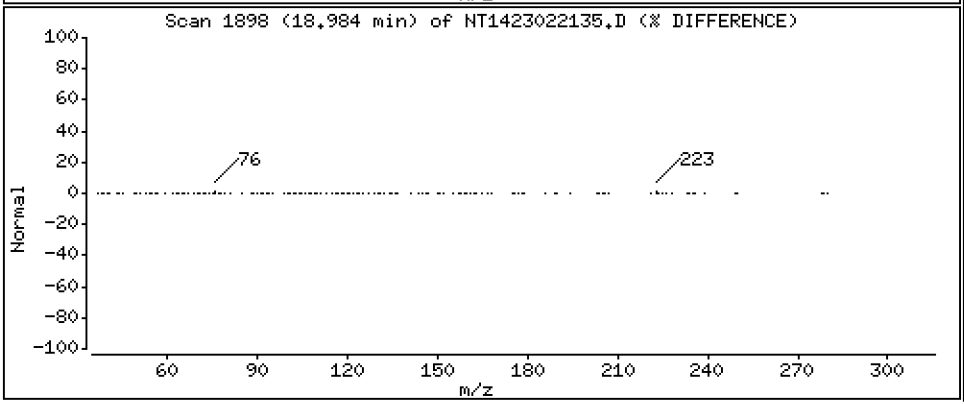
63 Di-n-butylphthalate

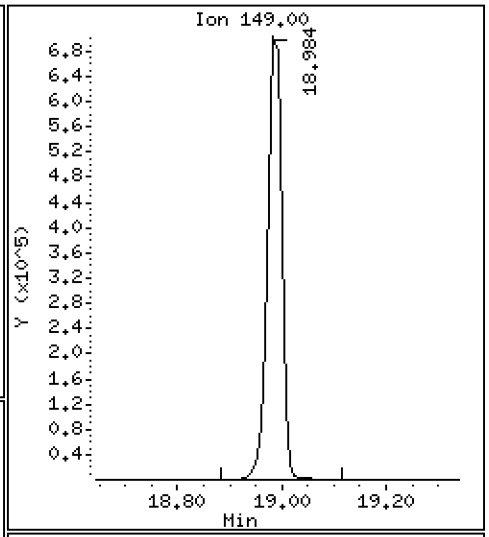
Concentration: 4.244 ug/mL

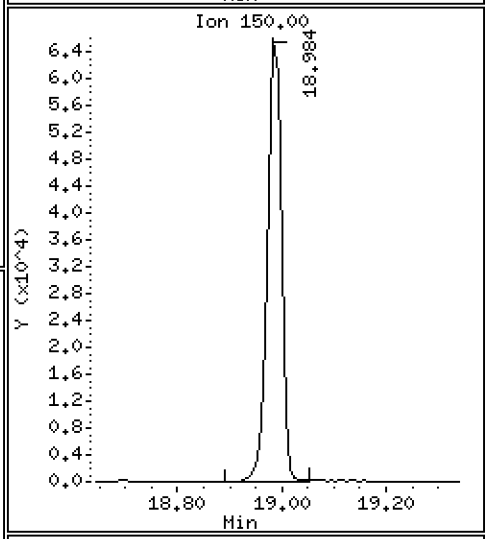


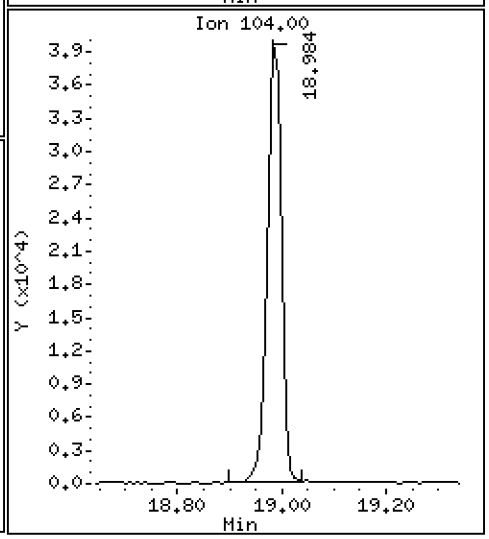












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022135.D

Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

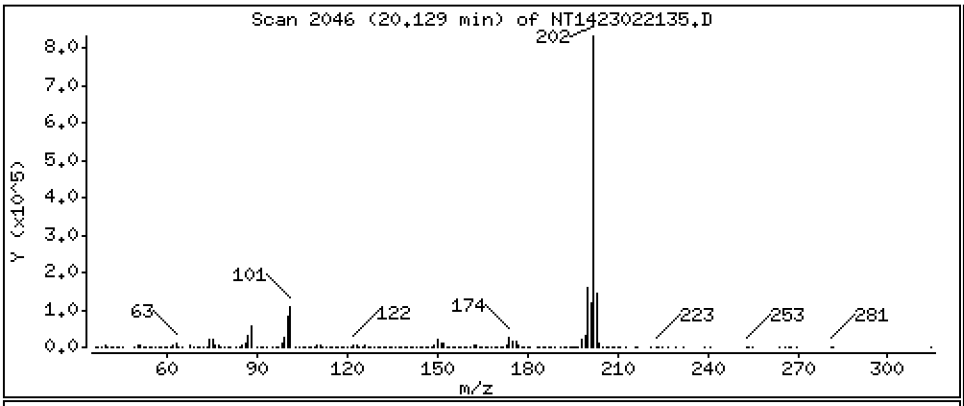
Operator: DSD

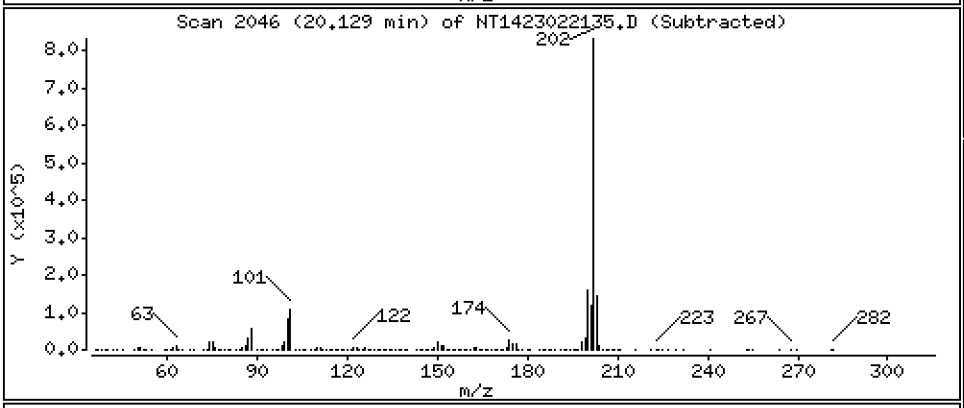
Column phase: ZB-5msi

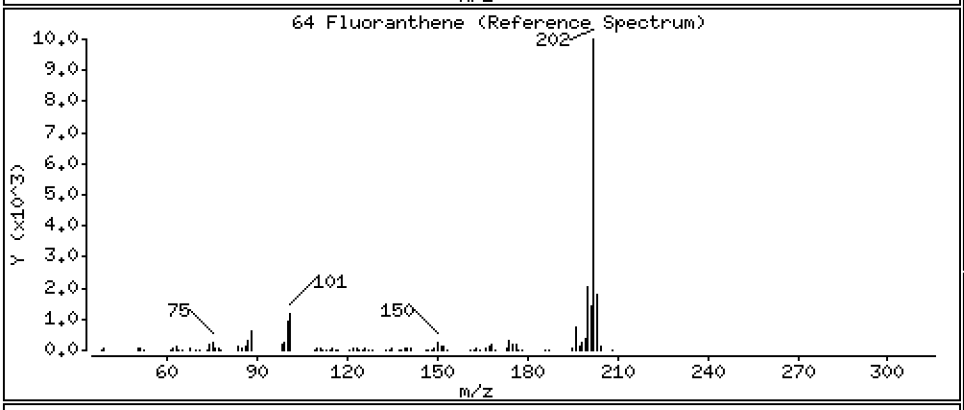
Column diameter: 0.25

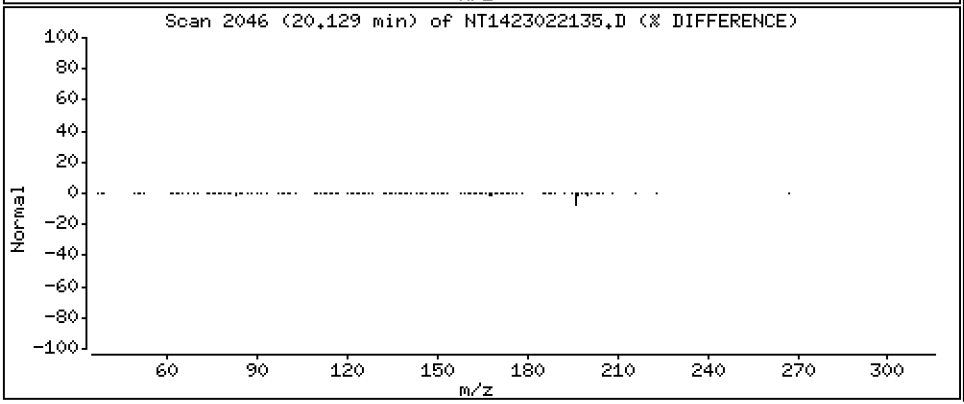
64 Fluoranthene

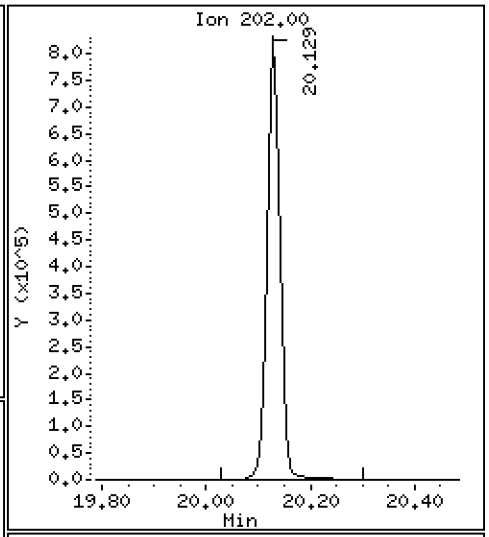
Concentration: 3.332 ug/mL

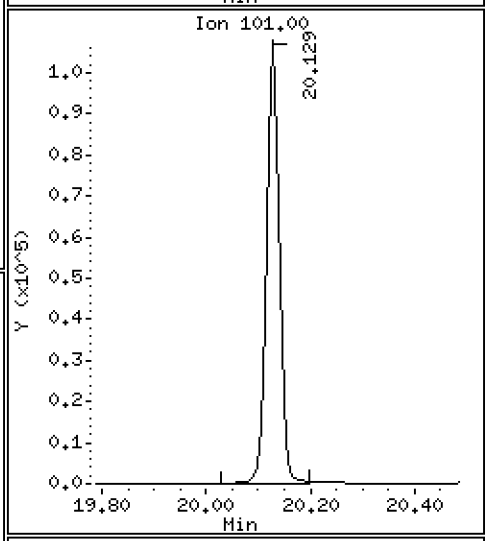


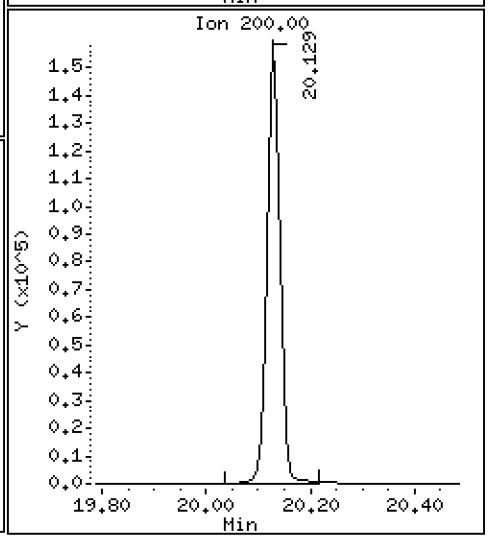












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

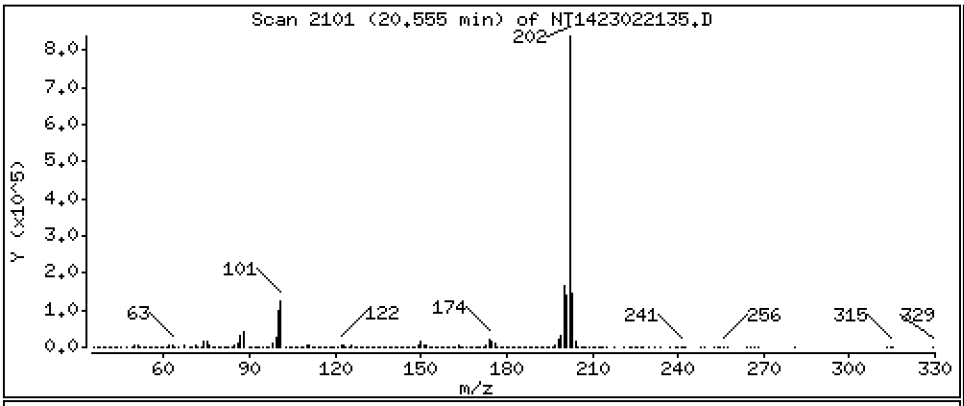
Operator: DSD

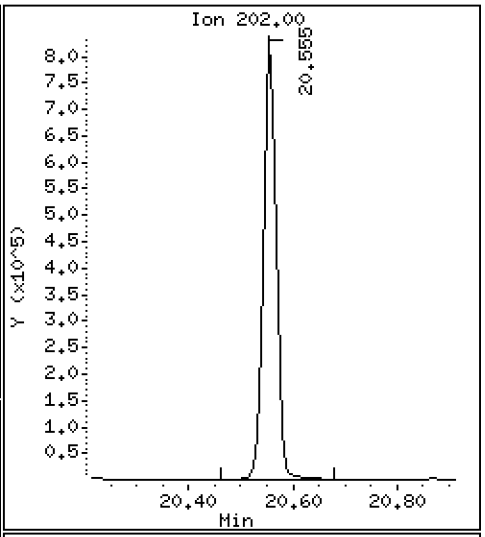
Column phase: ZB-5msi

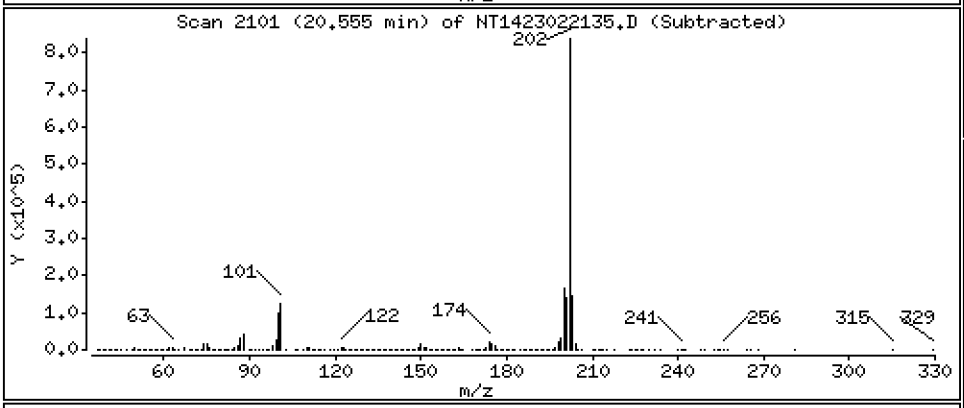
Column diameter: 0.25

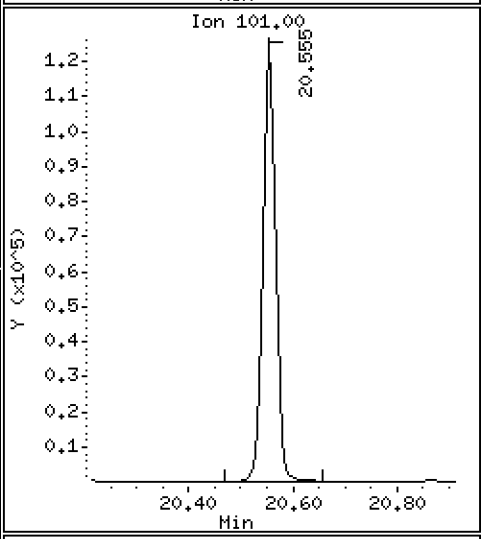
65 Pyrene

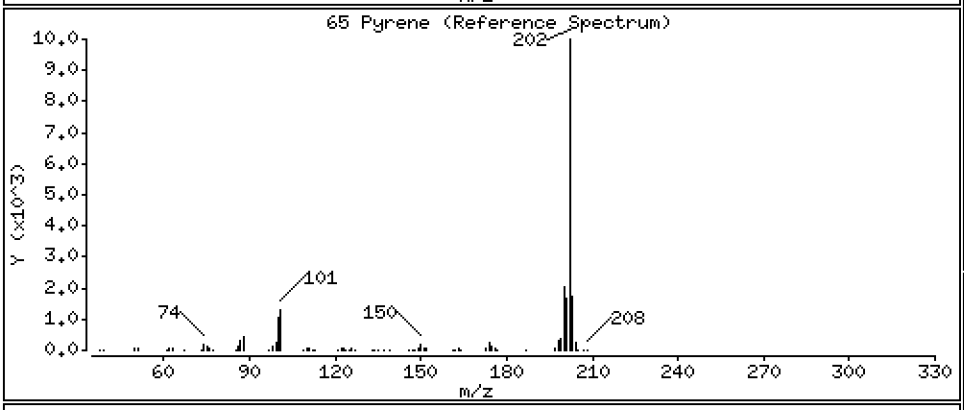
Concentration: 3.124 ug/mL

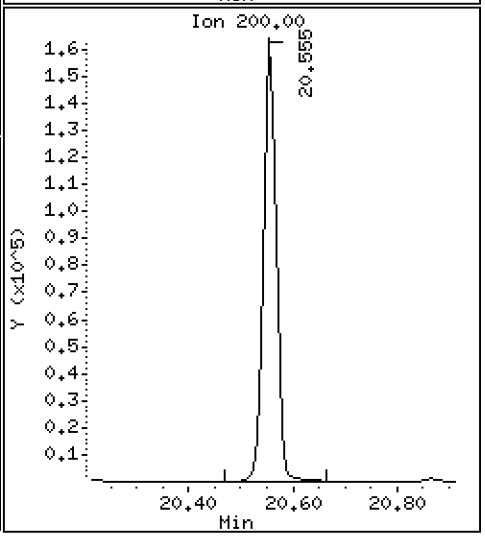


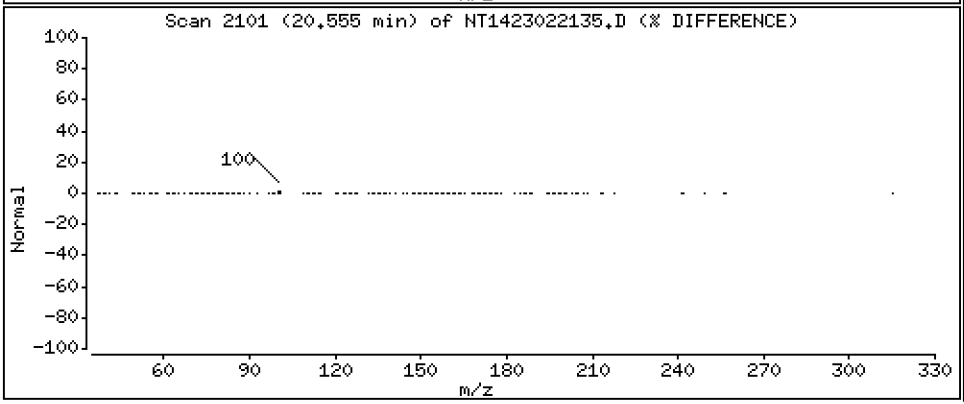












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

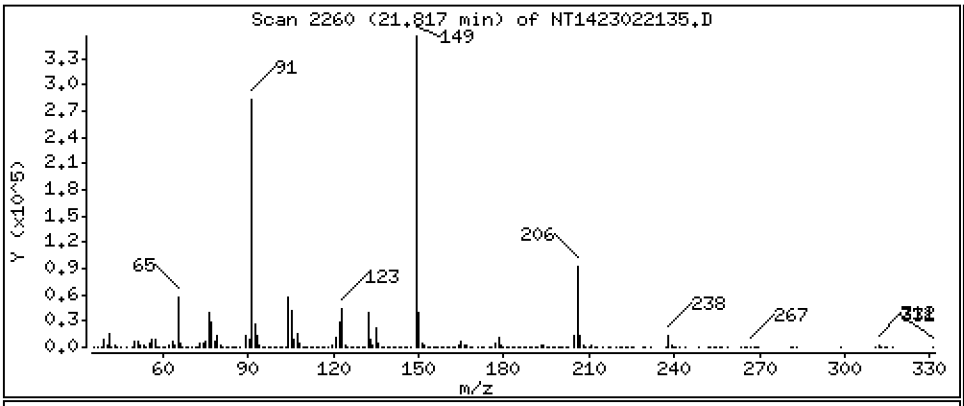
Operator: DSD

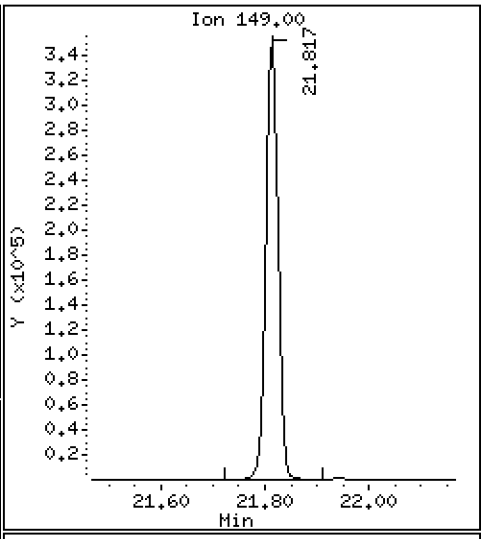
Column phase: ZB-5msi

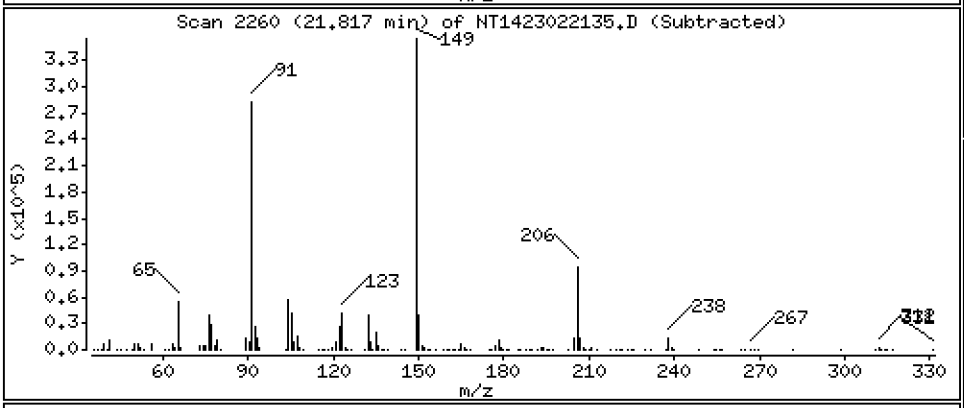
Column diameter: 0.25

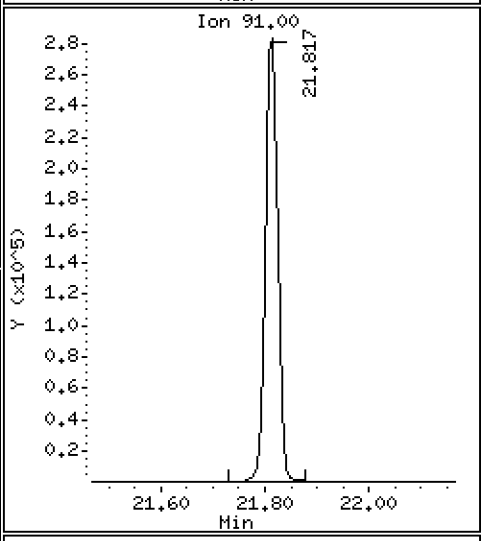
67 Butylbenzylphthalate

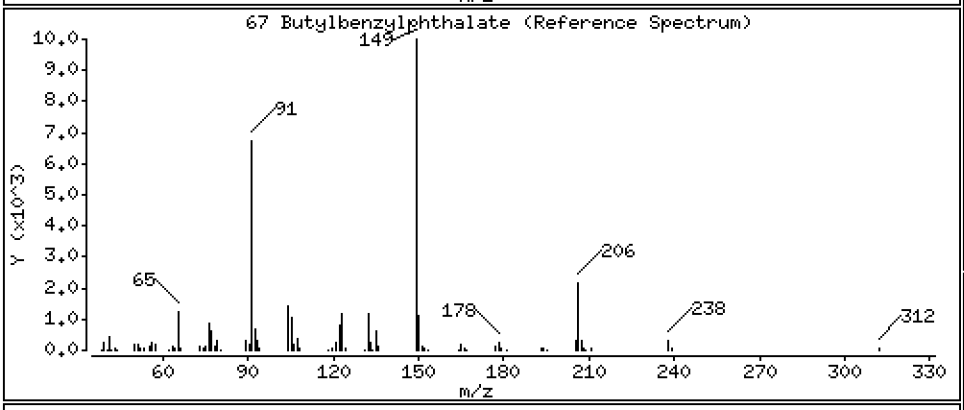
Concentration: 3.718 ug/mL

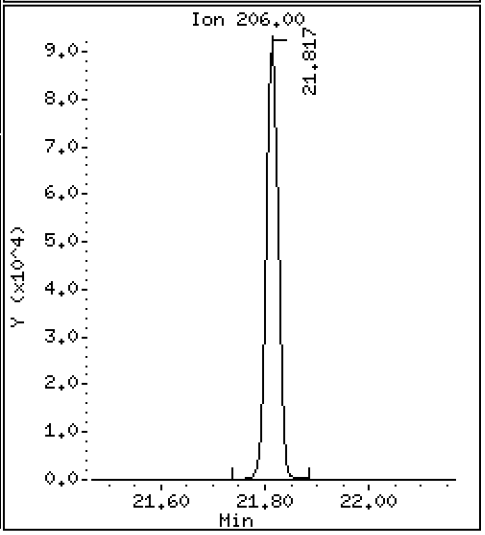


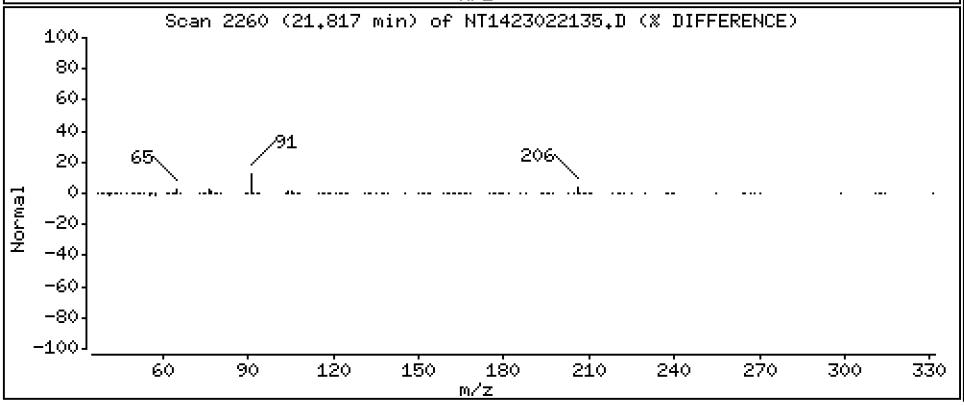












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

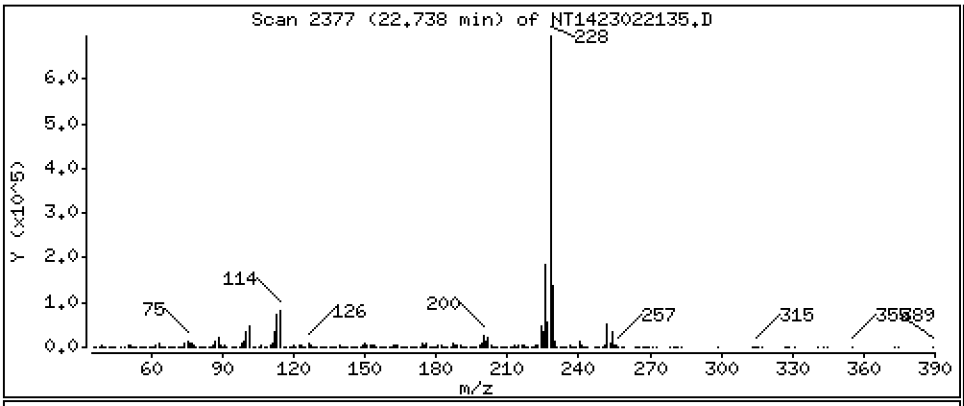
Operator: DSD

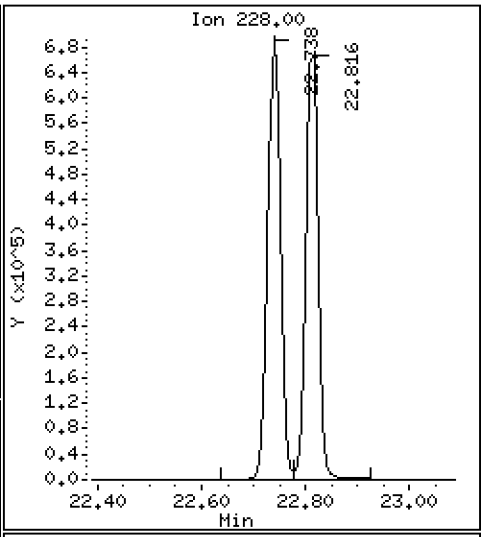
Column phase: ZB-5msi

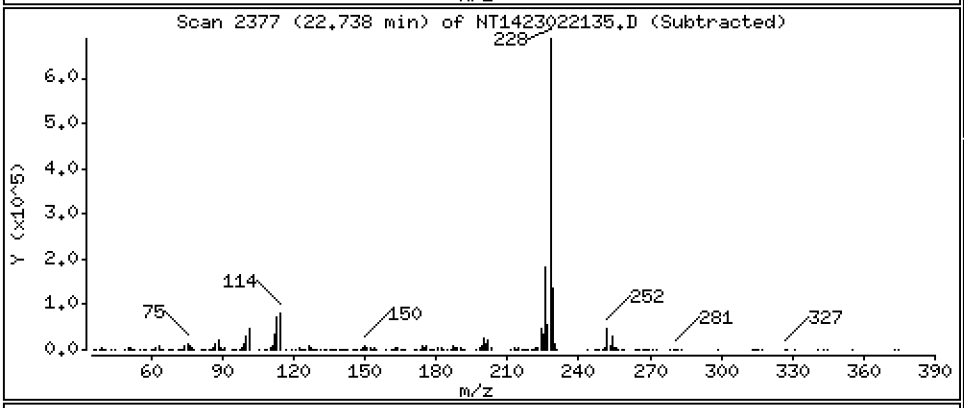
Column diameter: 0.25

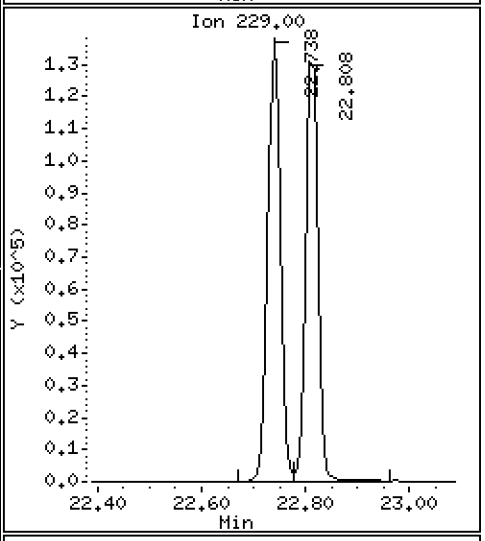
68 Benzo(a)anthracene

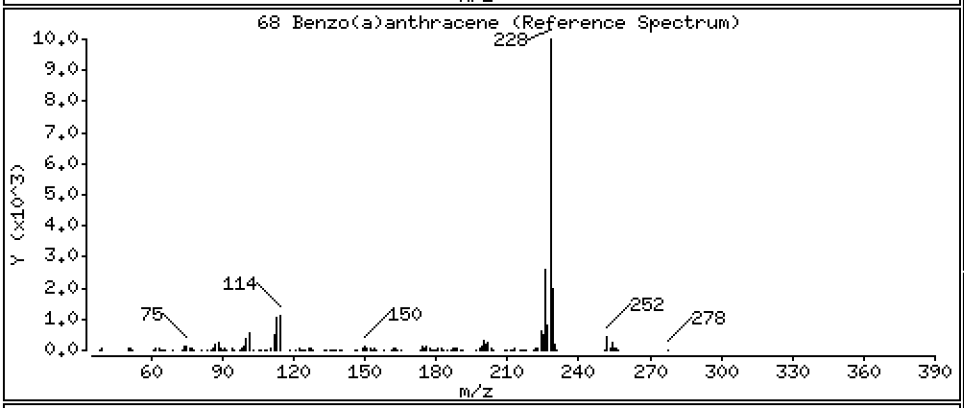
Concentration: 3.673 ug/mL

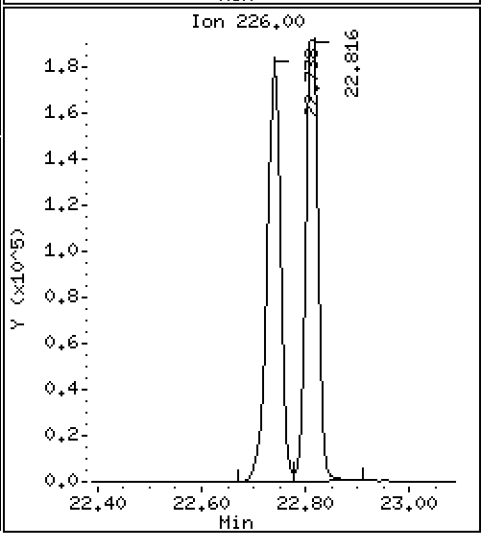


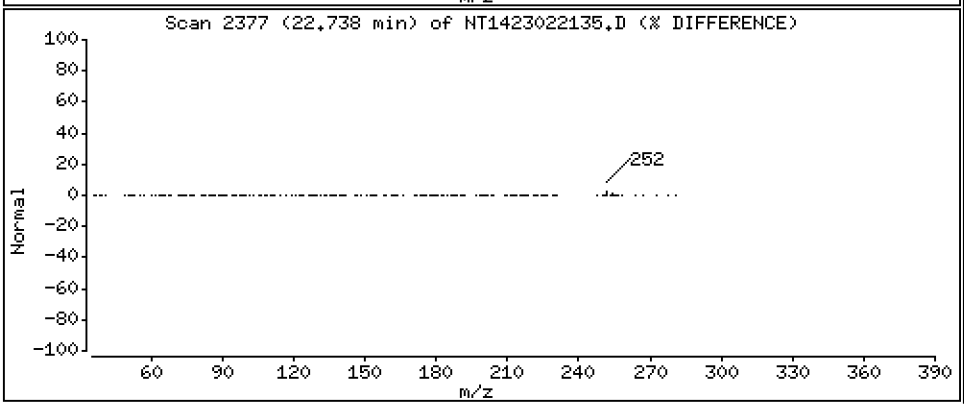












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

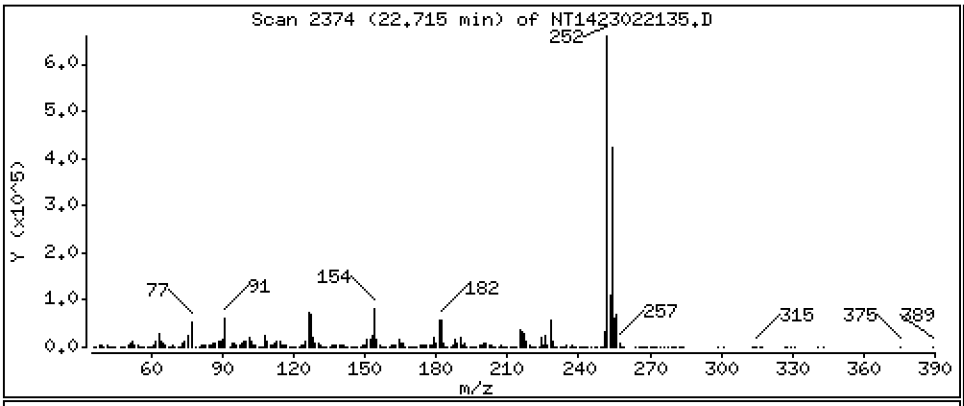
Operator: DSD

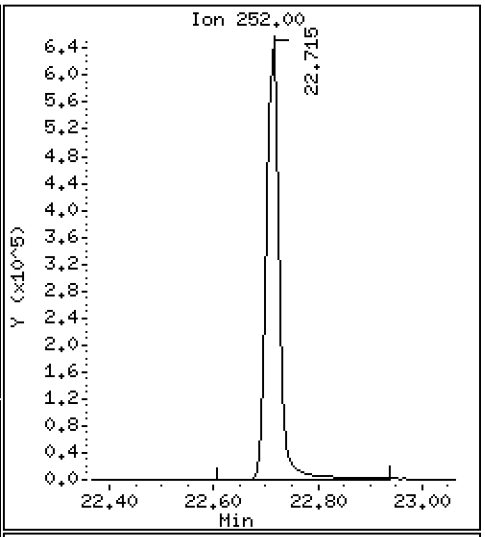
Column phase: ZB-5msi

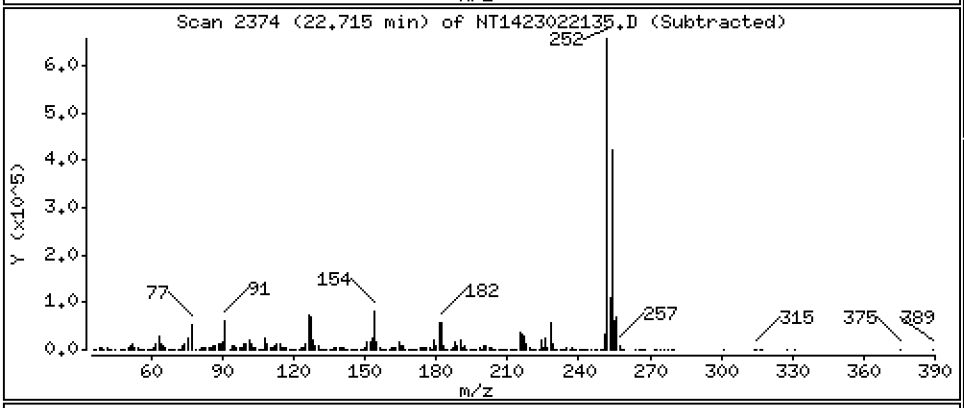
Column diameter: 0.25

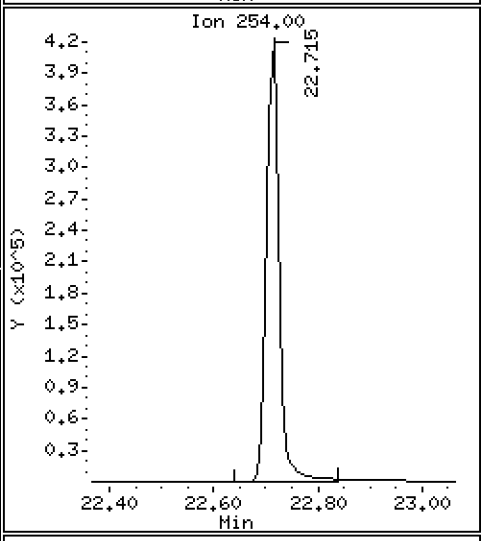
70 3,3'-Dichlorobenzidine

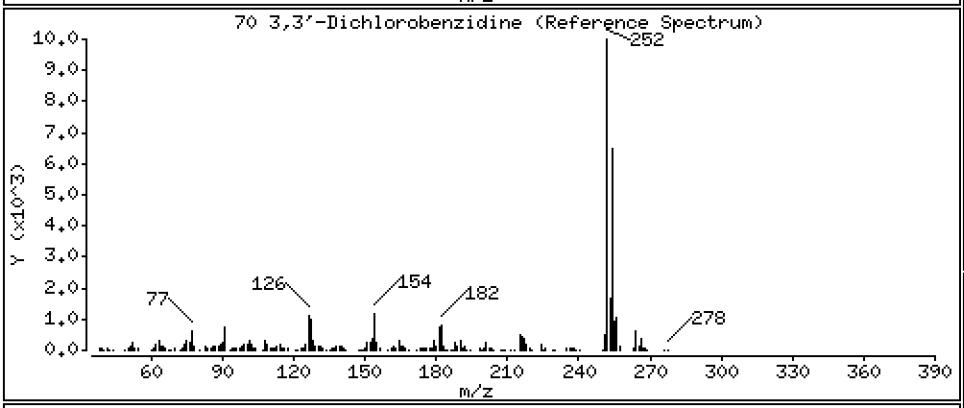
Concentration: 11.14 ug/mL

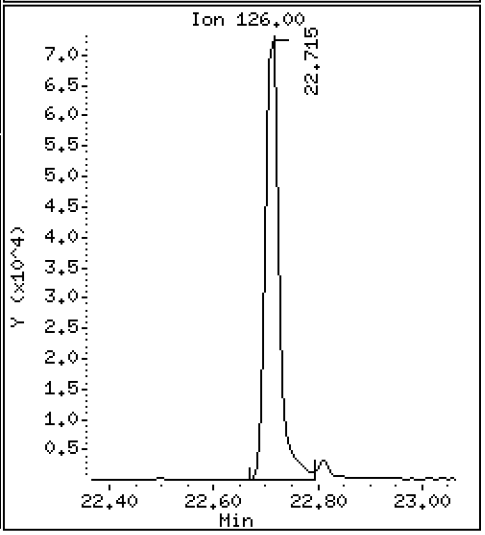


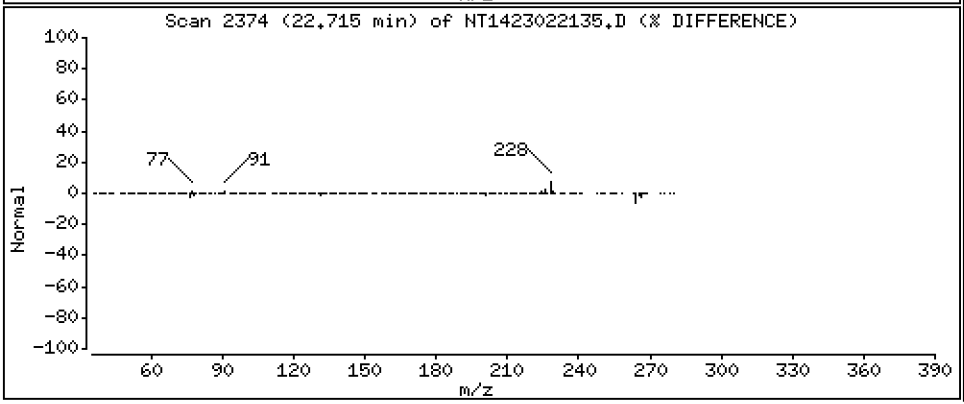












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

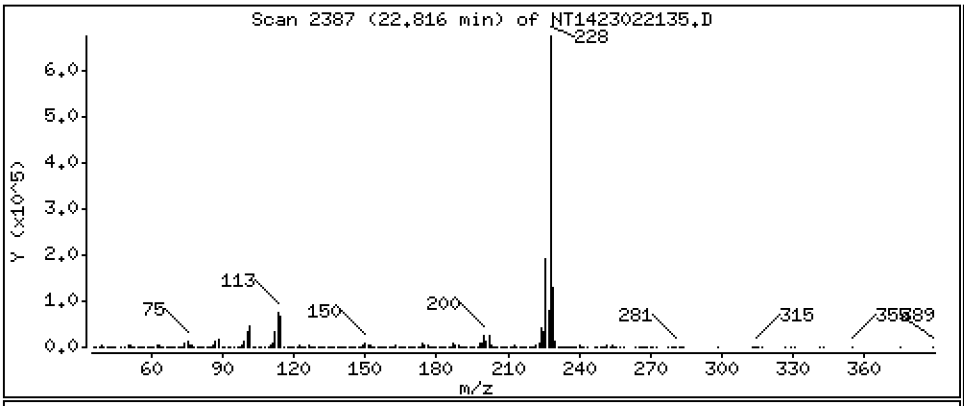
Operator: DSD

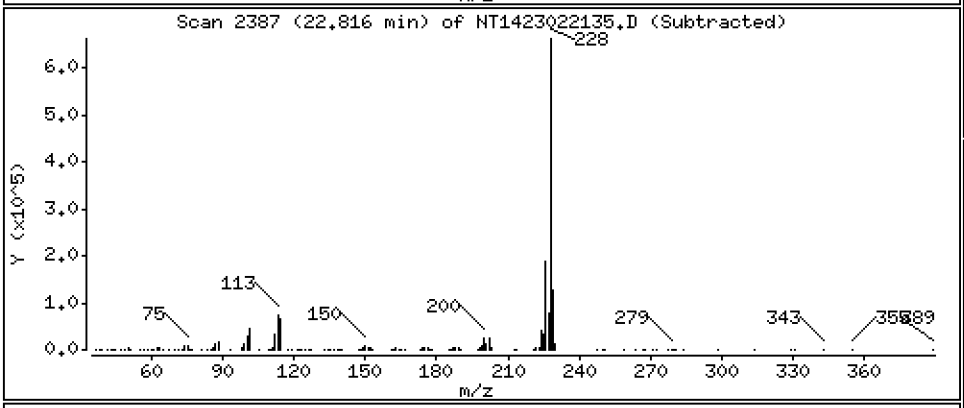
Column phase: ZB-5msi

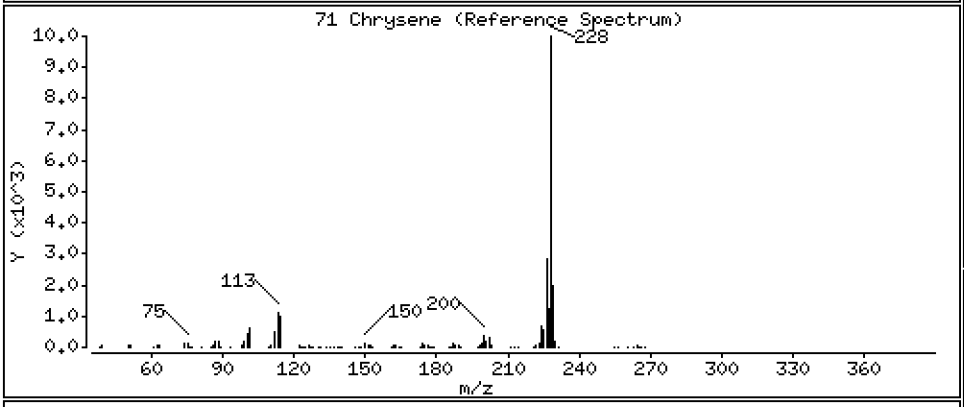
Column diameter: 0.25

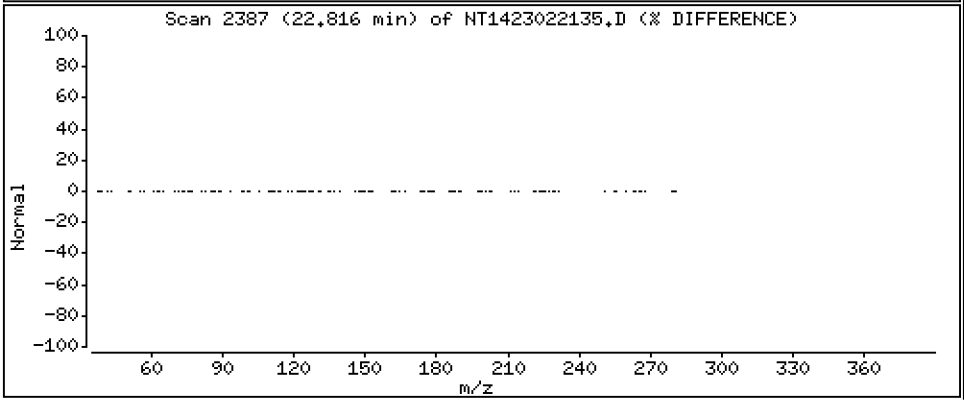
71 Chrysene

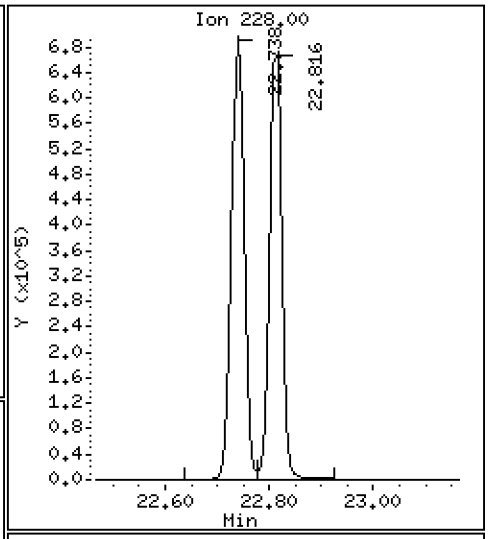
Concentration: 3.685 ug/mL

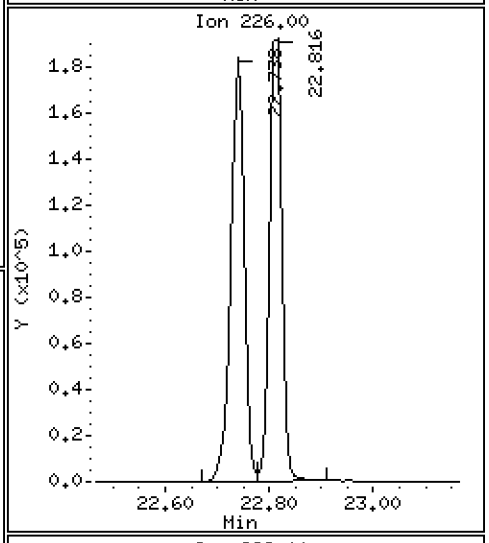


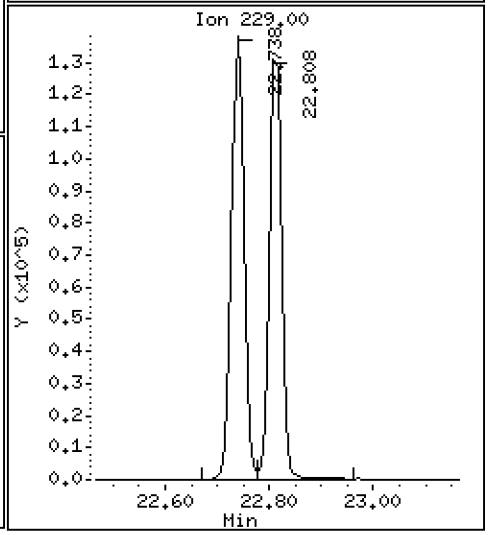












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

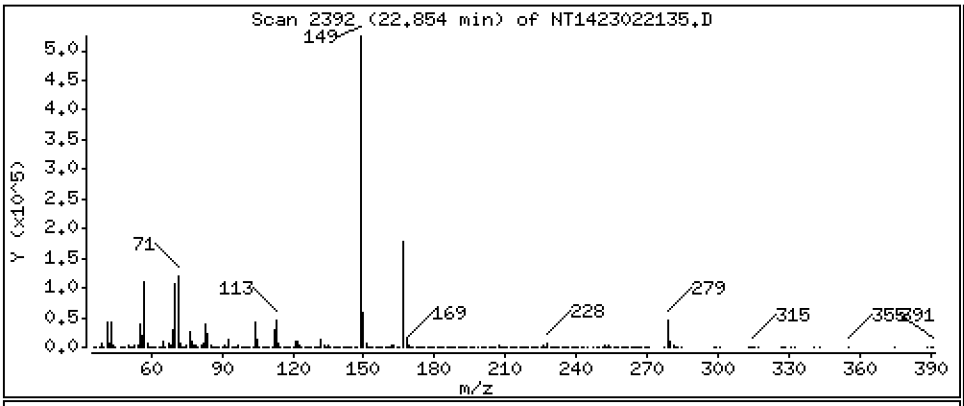
Operator: DSD

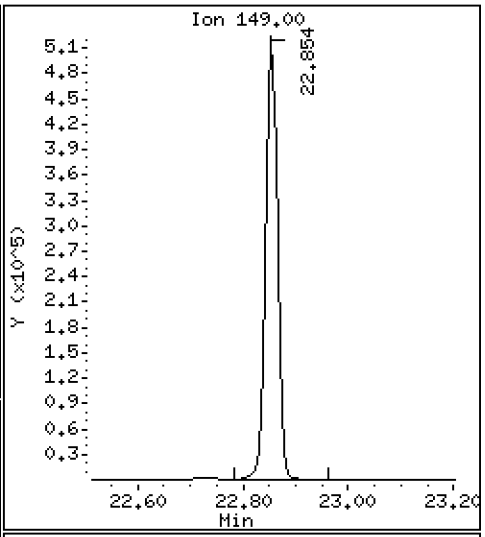
Column phase: ZB-5msi

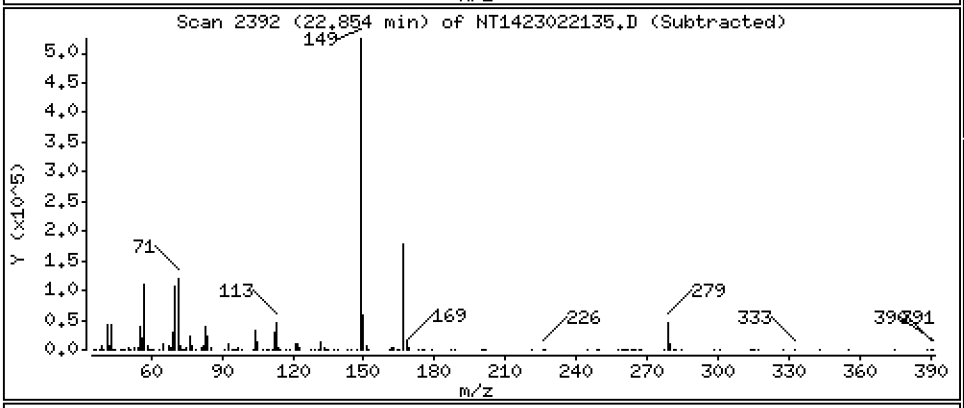
Column diameter: 0.25

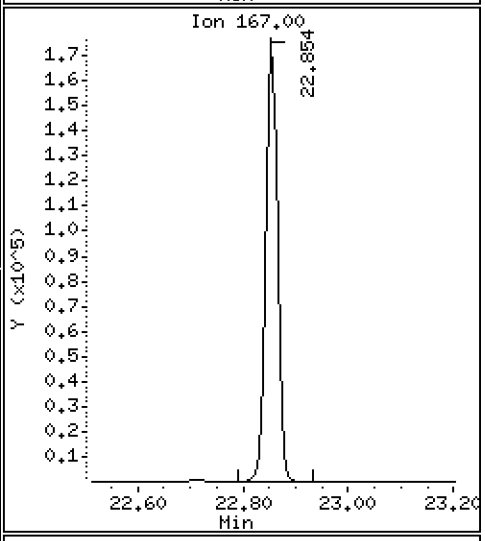
72 bis(2-Ethylhexyl)phthalate

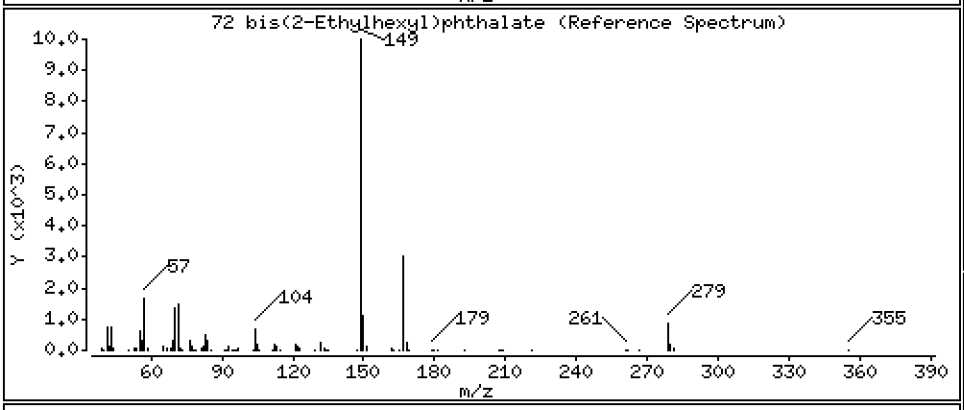
Concentration: 2.938 ug/mL

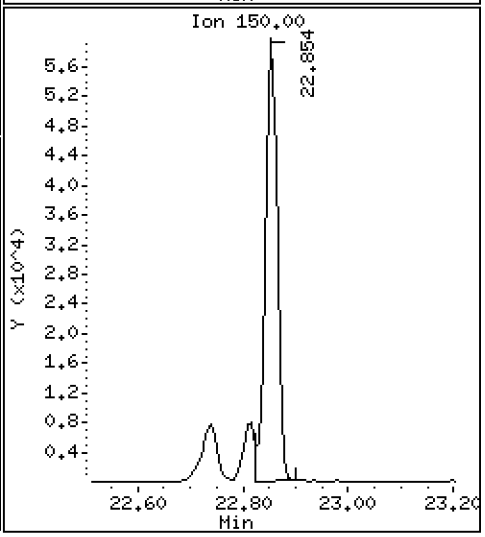


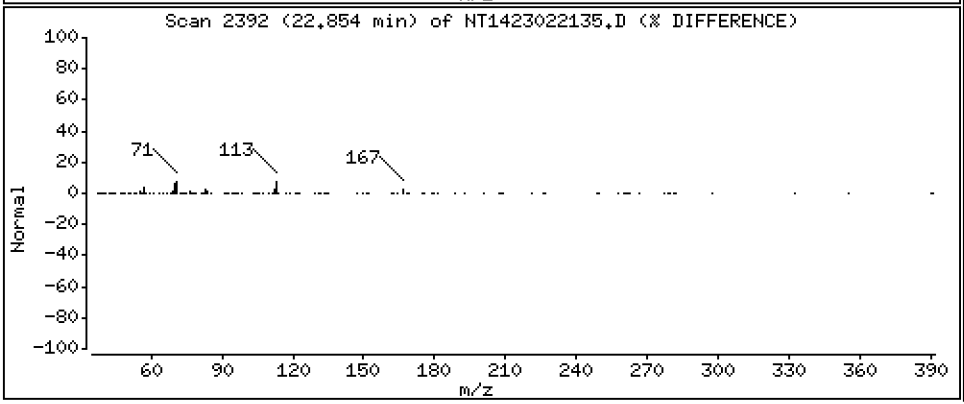












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022135.D

Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

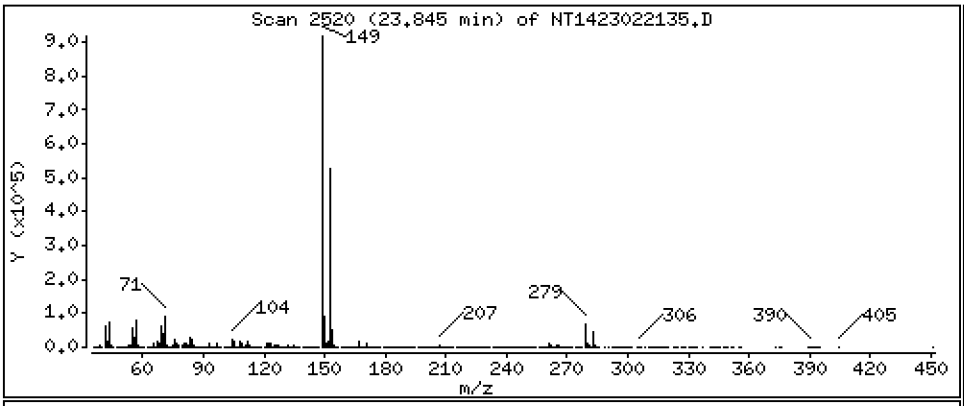
Operator: DSD

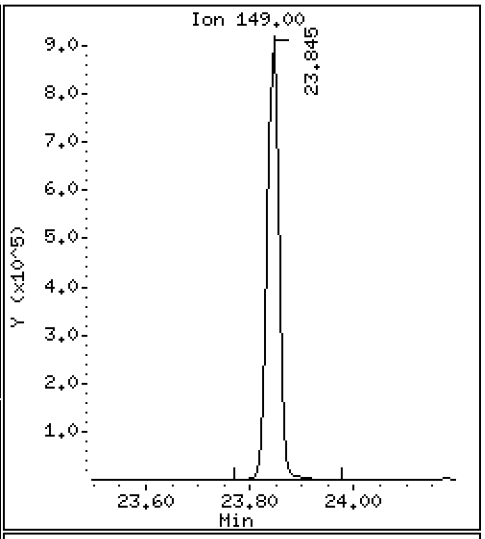
Column phase: ZB-5msi

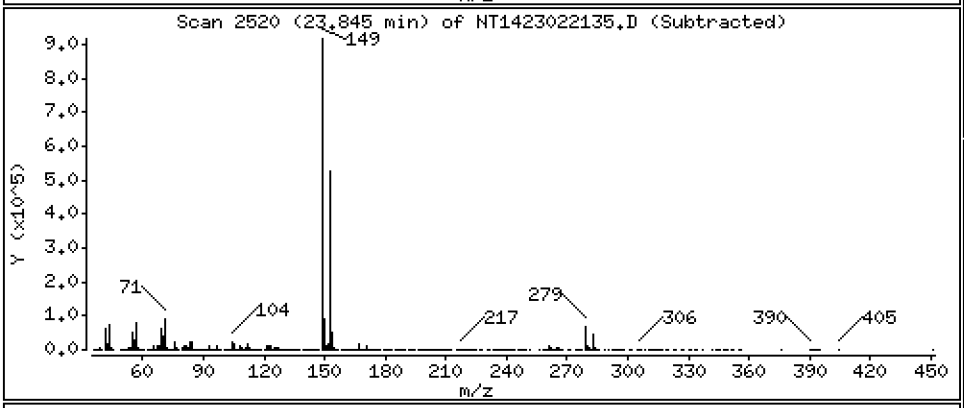
Column diameter: 0.25

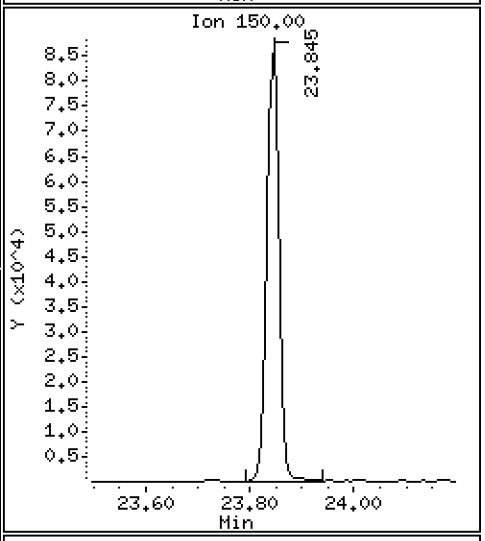
73 Di-n-octylphthalate

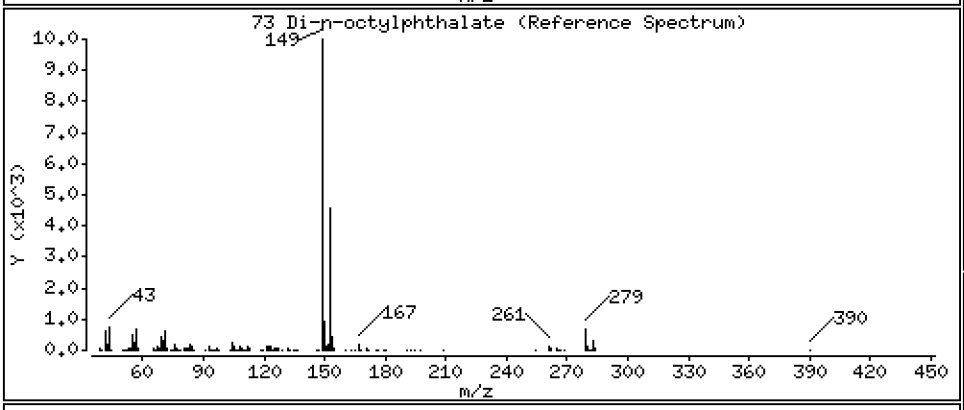
Concentration: 3.733 ug/mL

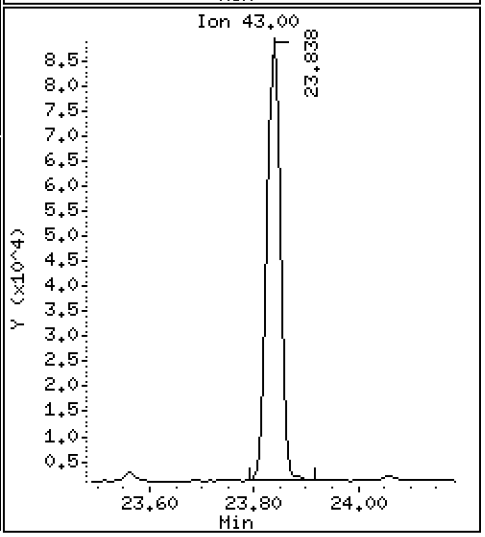


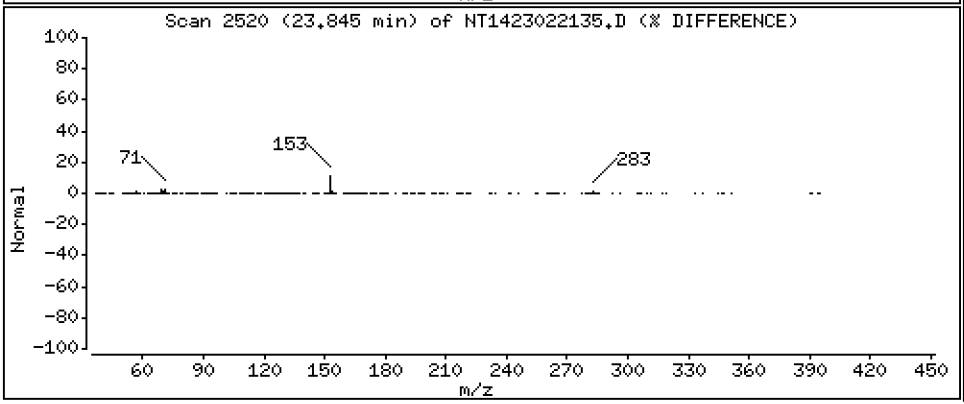












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

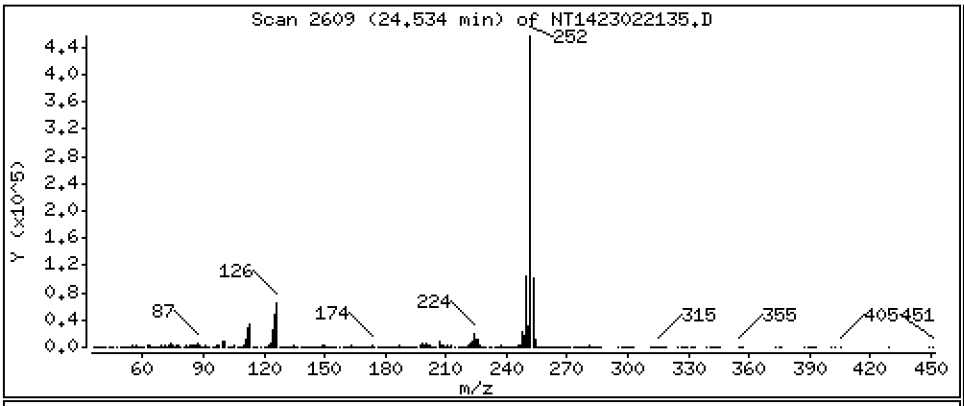
Operator: DSD

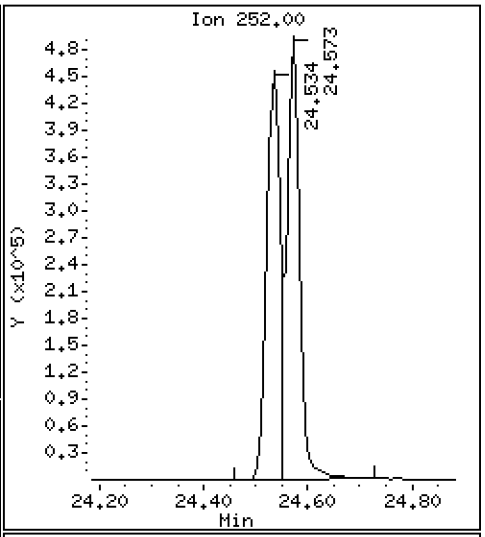
Column phase: ZB-5msi

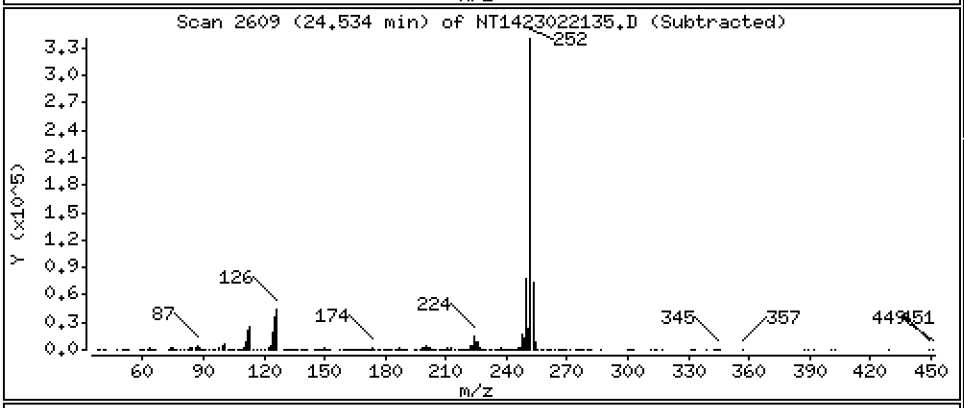
Column diameter: 0.25

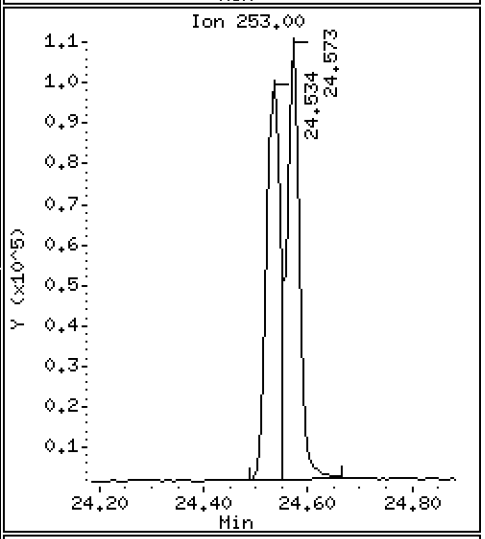
74 Benzo(b)fluoranthene

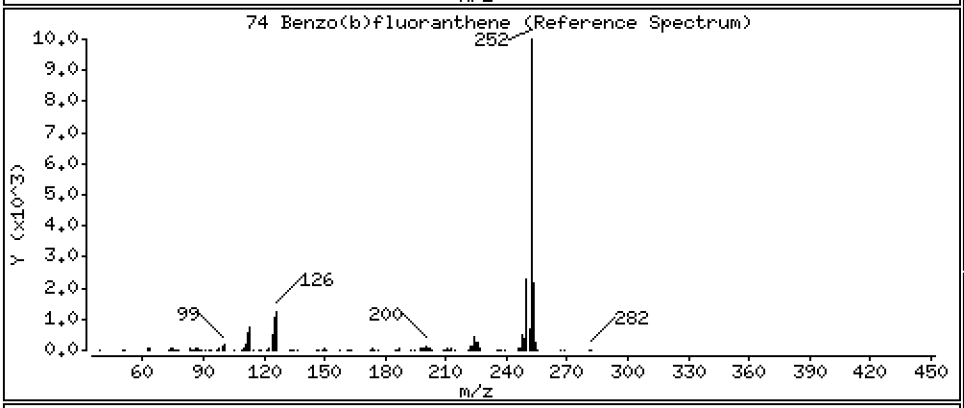
Concentration: 3.543 ug/mL

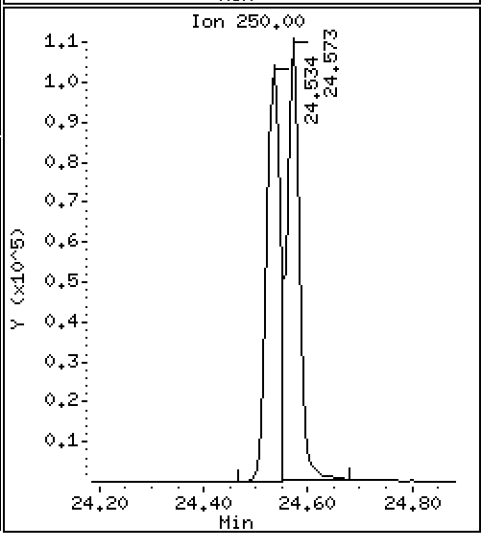


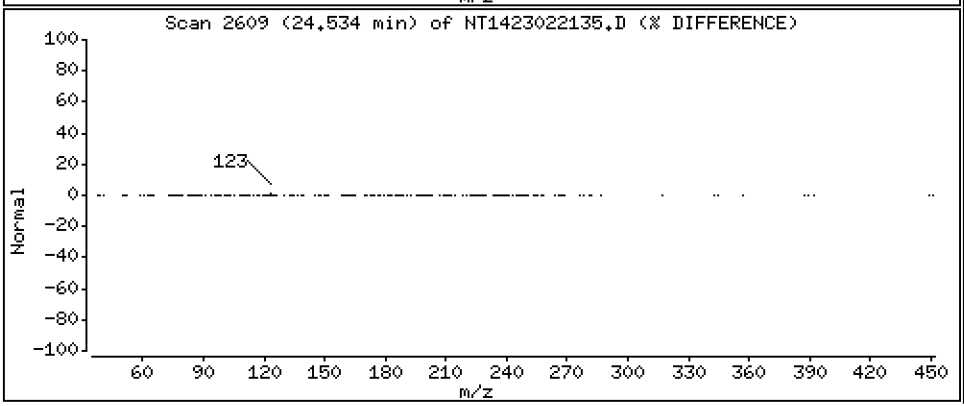












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

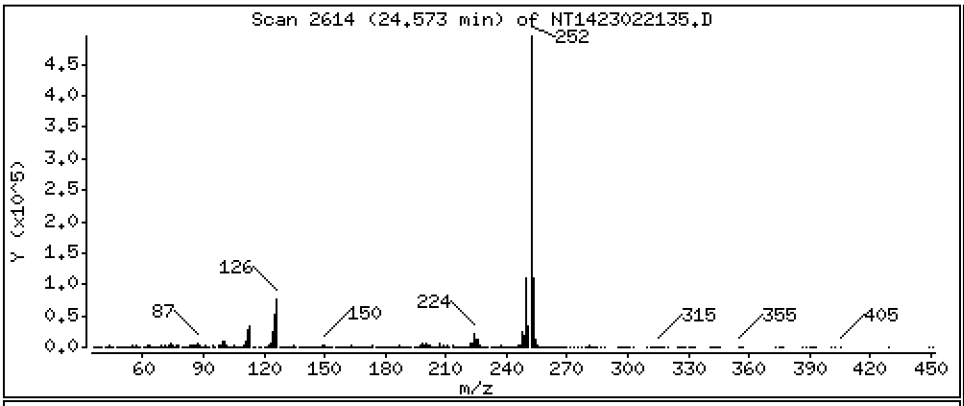
Operator: DSD

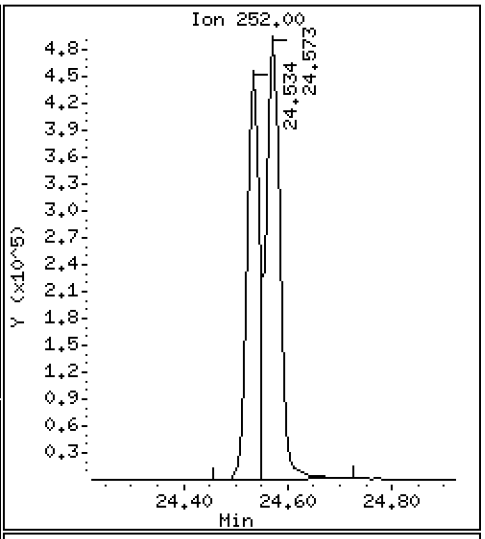
Column phase: ZB-5msi

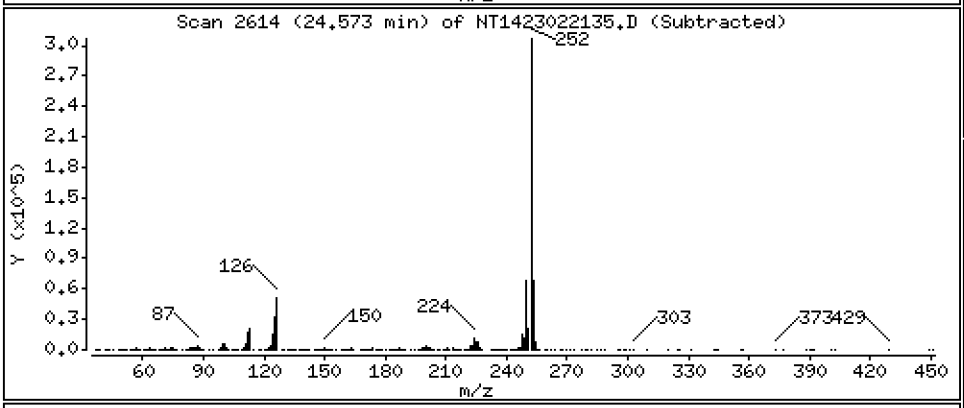
Column diameter: 0.25

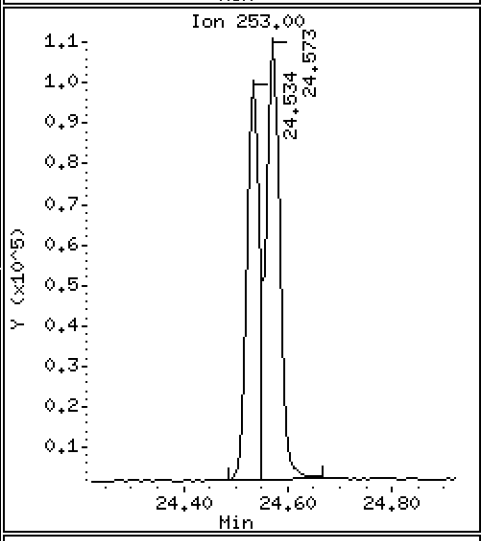
75 Benzo(k)fluoranthene

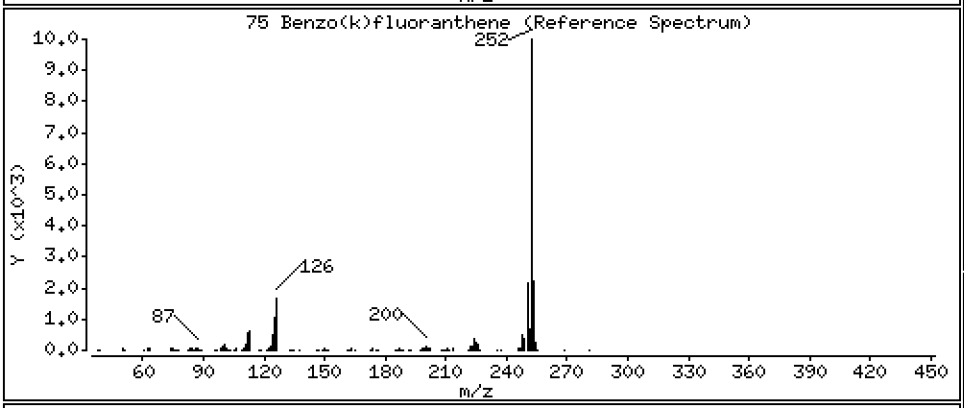
Concentration: 3.972 ug/mL

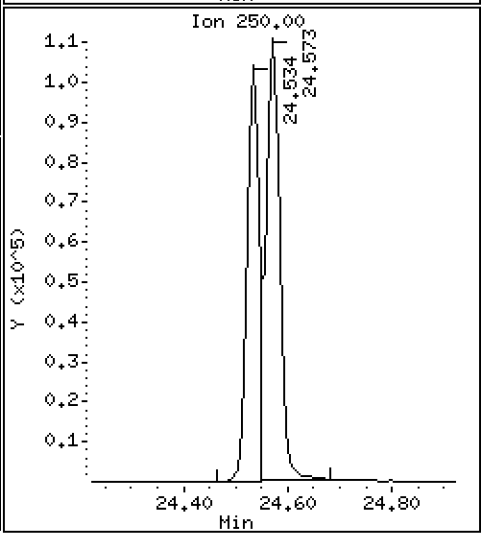


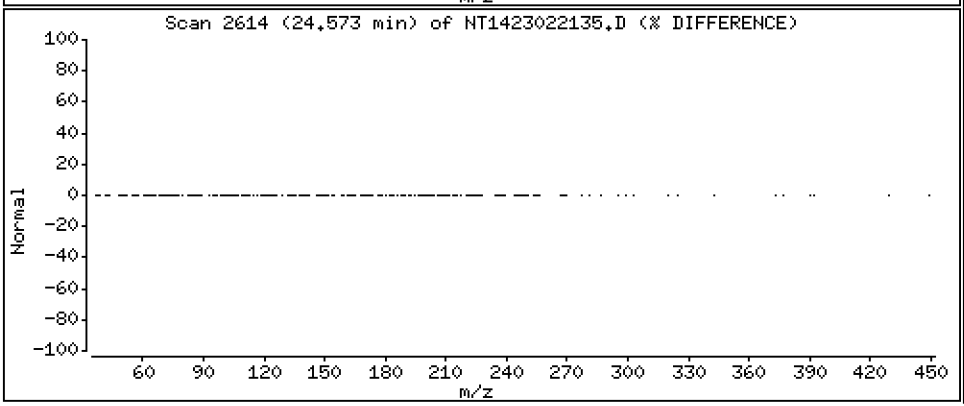












Date : 22-FEB-2023 09:57

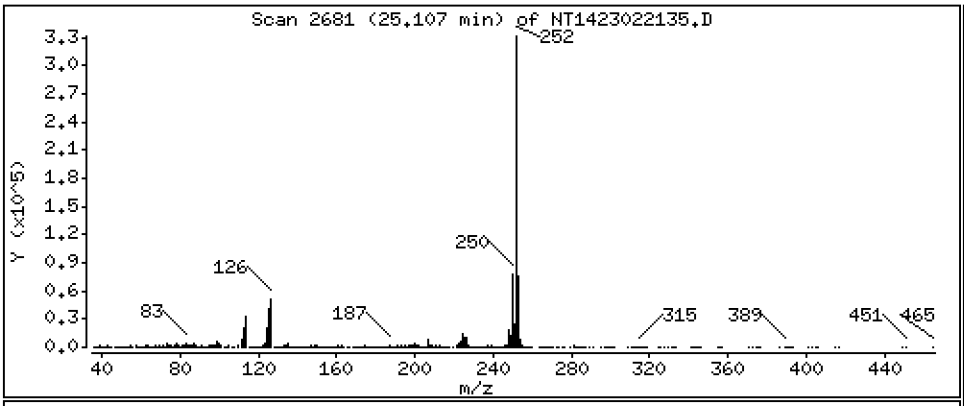
Client ID: Instrument: nt14.i

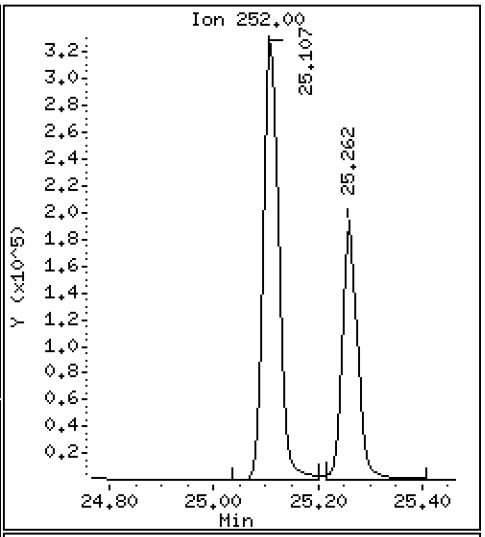
Sample Info: BLA0393-BS1

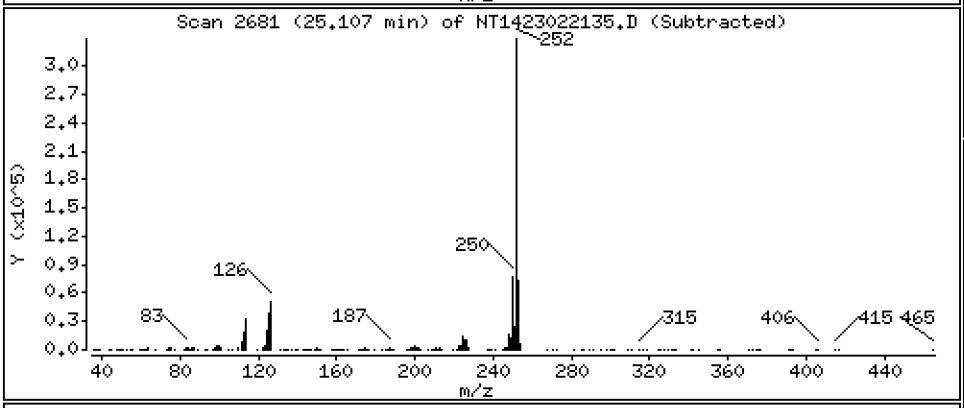
Operator: DSD

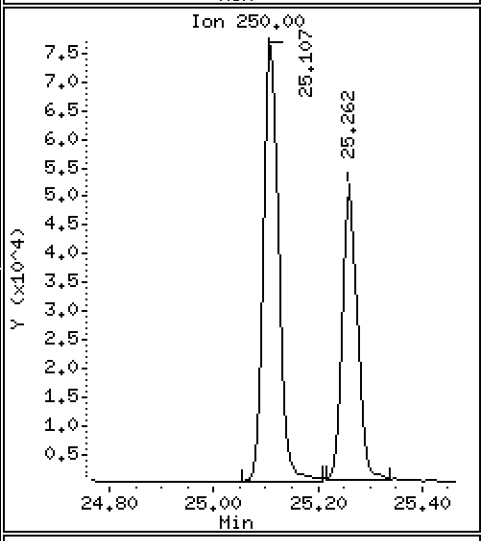
Column phase: ZB-5msi Column diameter: 0.25

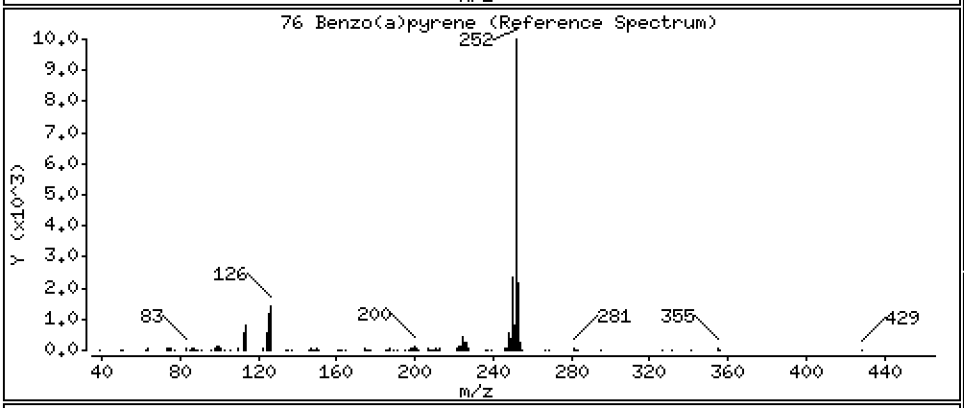
76 Benzo(a)pyrene Concentration: 3.117 ug/mL

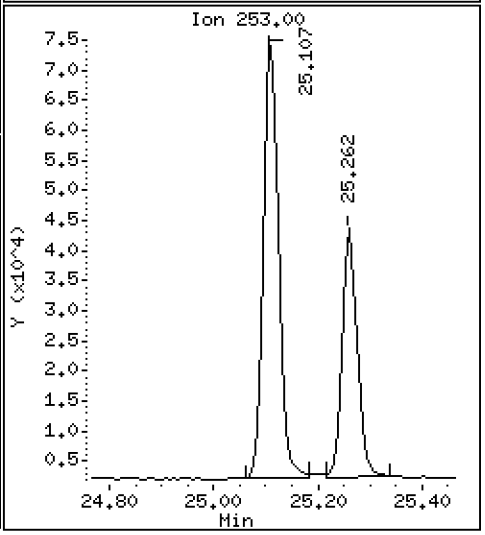


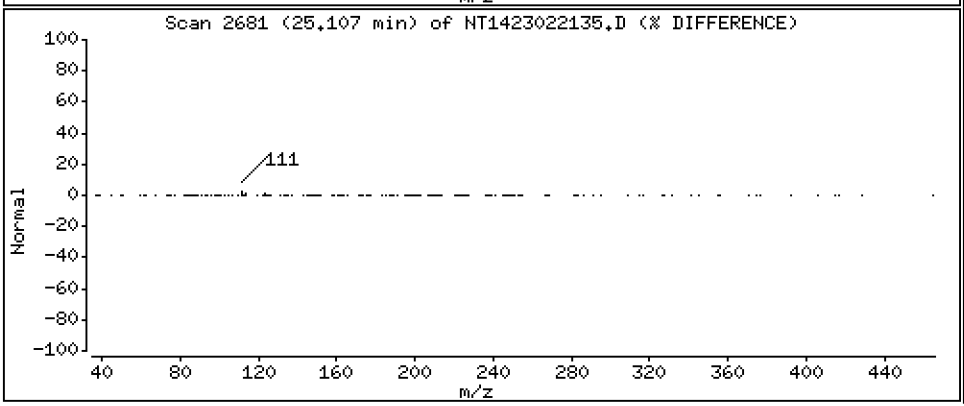












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

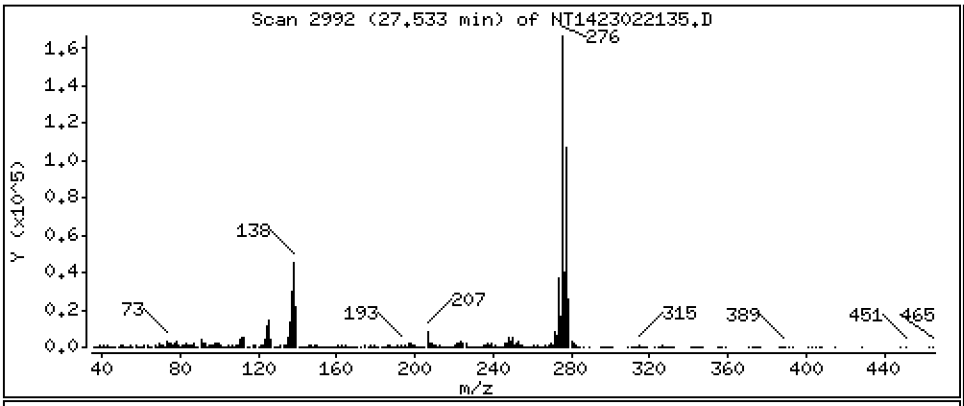
Operator: DSD

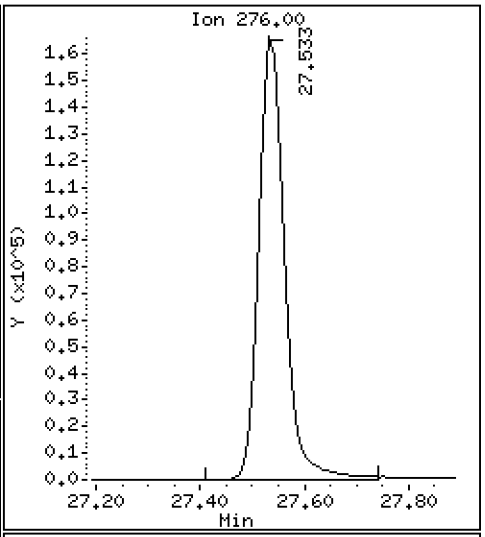
Column phase: ZB-5msi

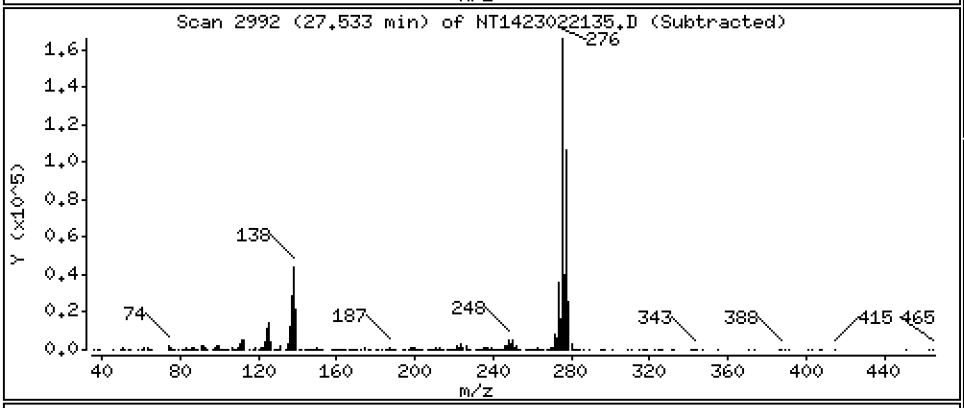
Column diameter: 0.25

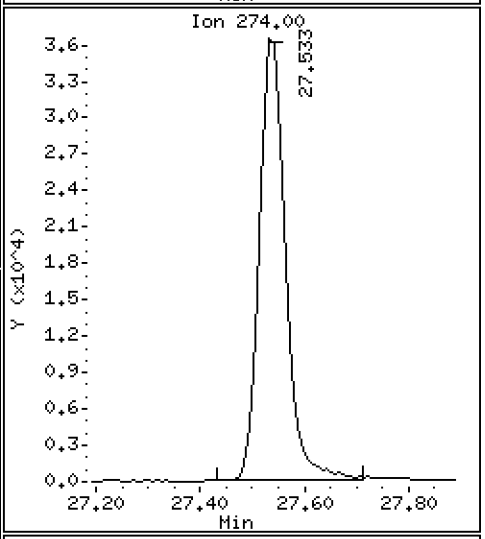
78 Indeno(1,2,3-cd)pyrene

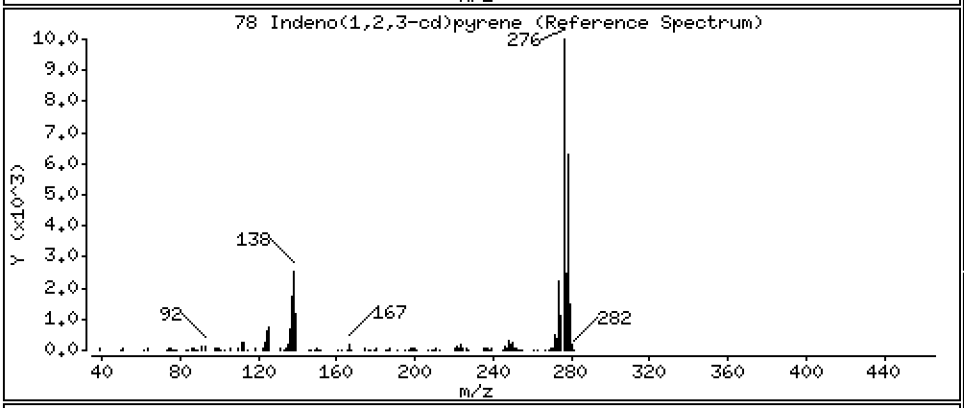
Concentration: 3.219 ug/mL

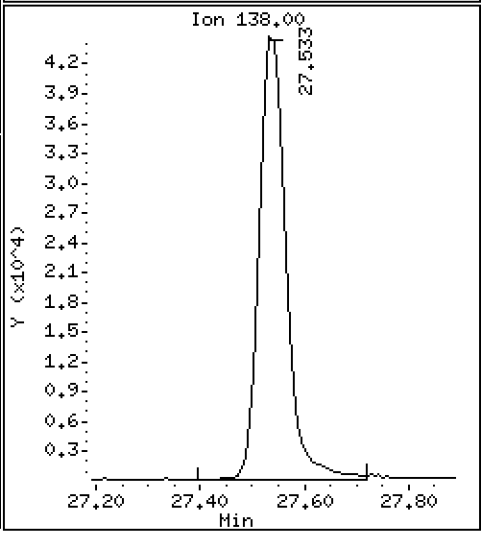


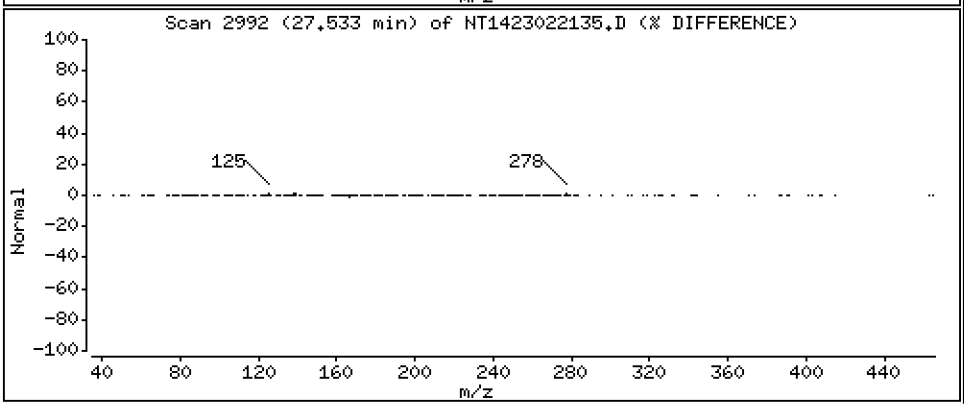












Date : 22-FEB-2023 09:57

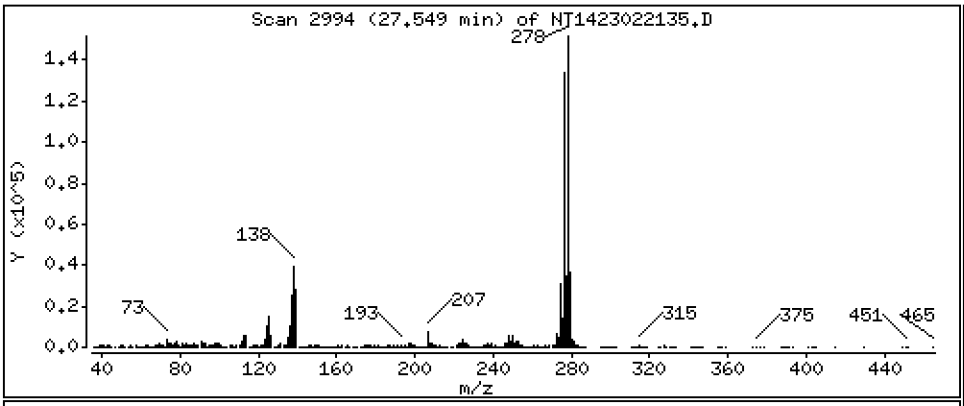
Client ID: Instrument: nt14.i

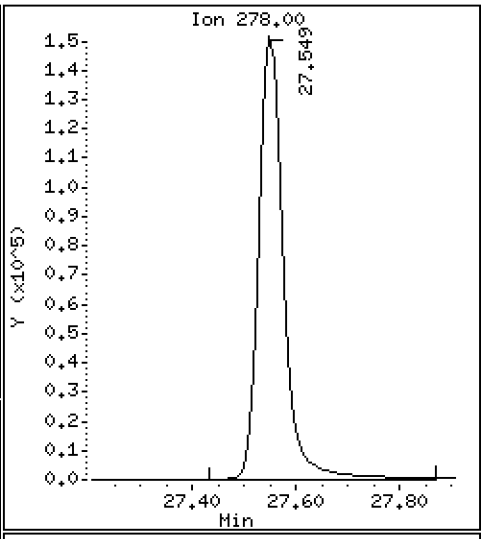
Sample Info: BLA0393-BS1

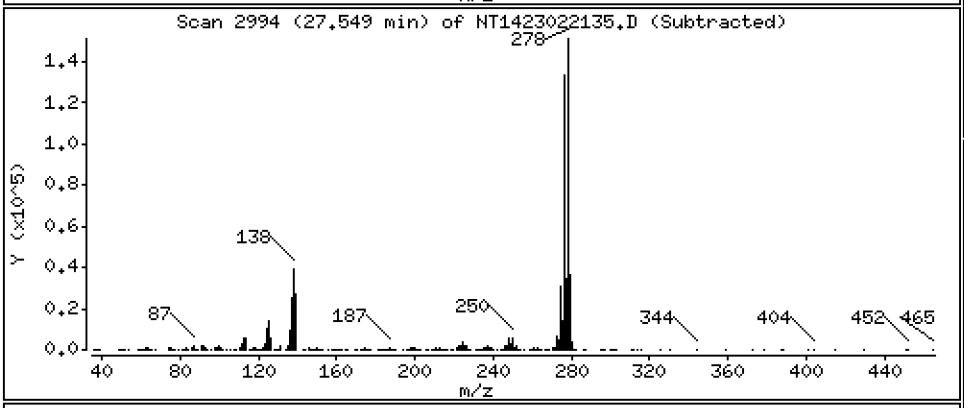
Operator: DSD

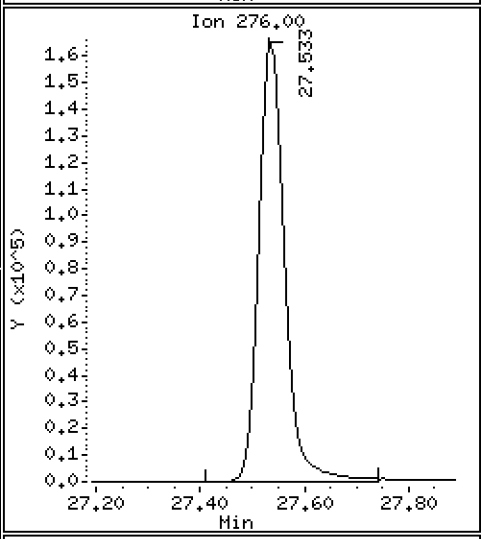
Column phase: ZB-5msi Column diameter: 0.25

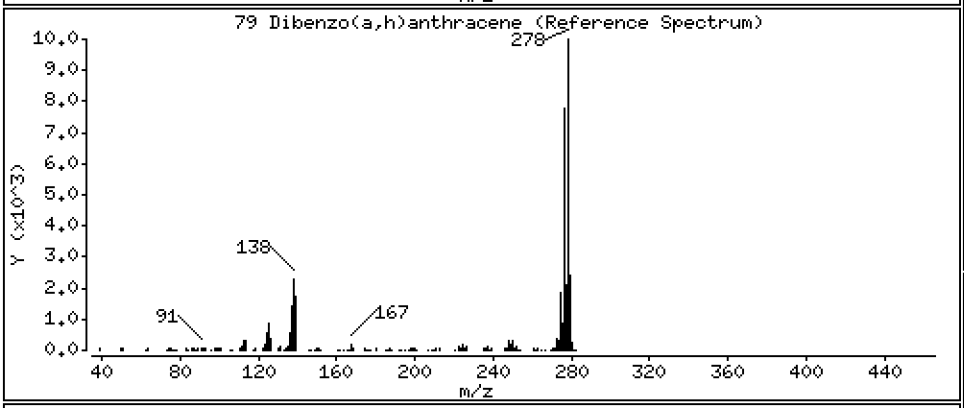
79 Dibenzo(a,h)anthracene Concentration: 3.434 ug/mL

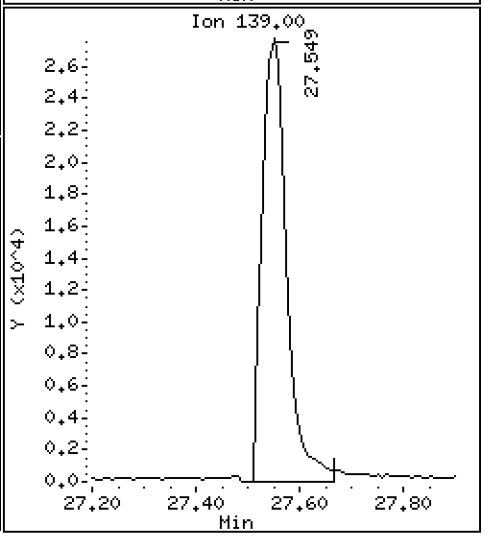


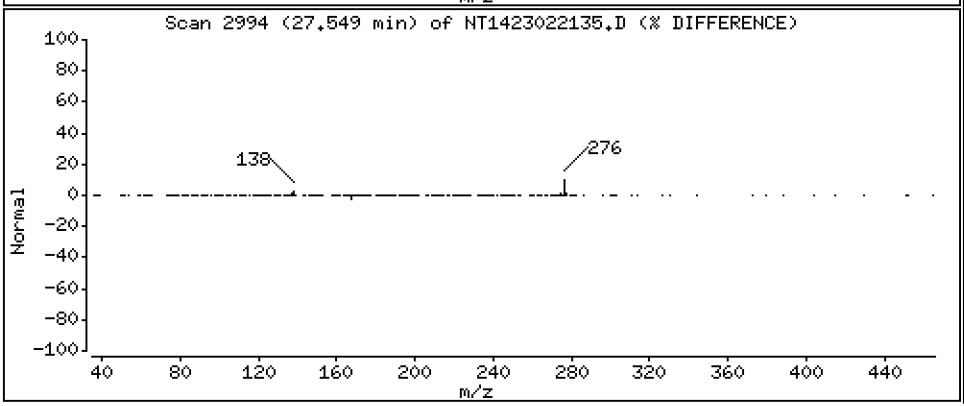












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

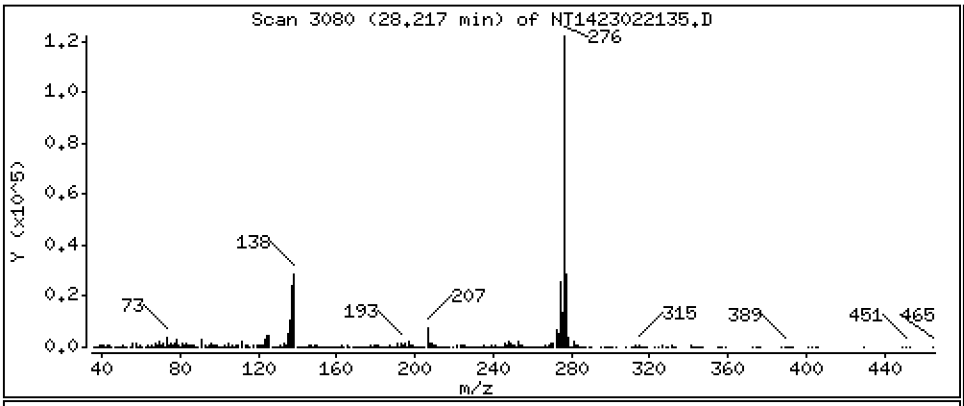
Operator: DSD

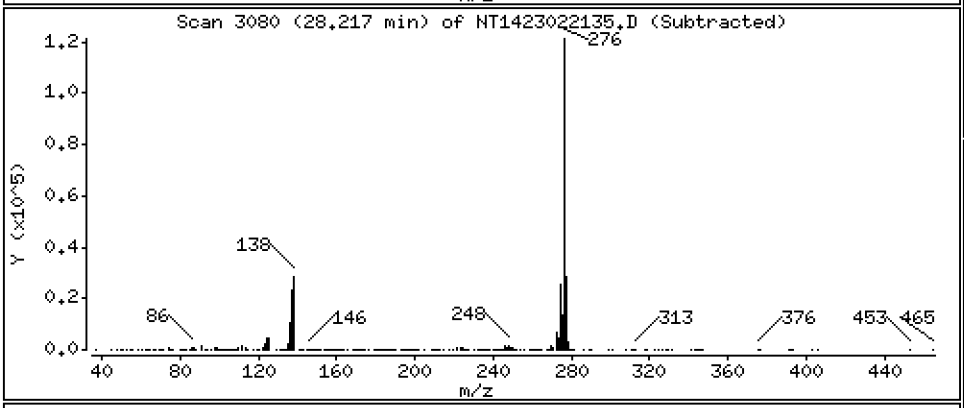
Column phase: ZB-5msi

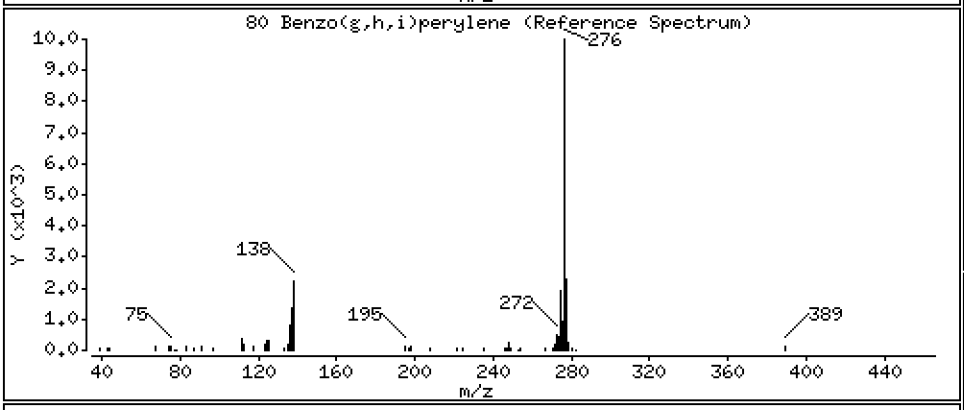
Column diameter: 0.25

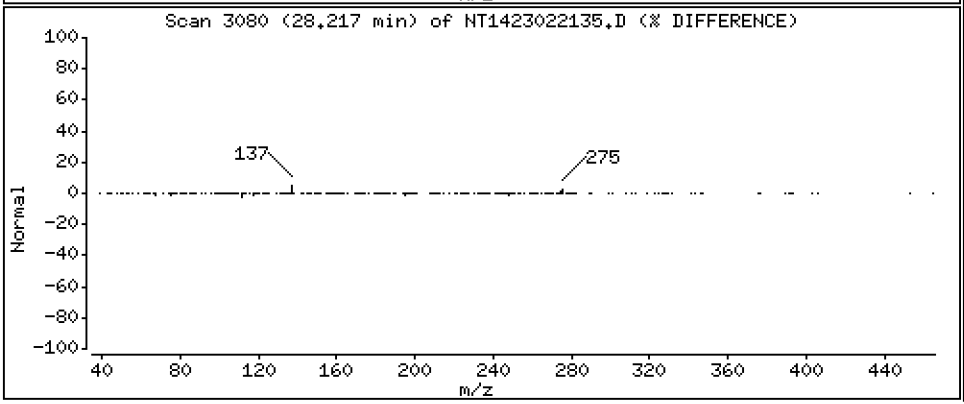
80 Benzo(g,h,i)perylene

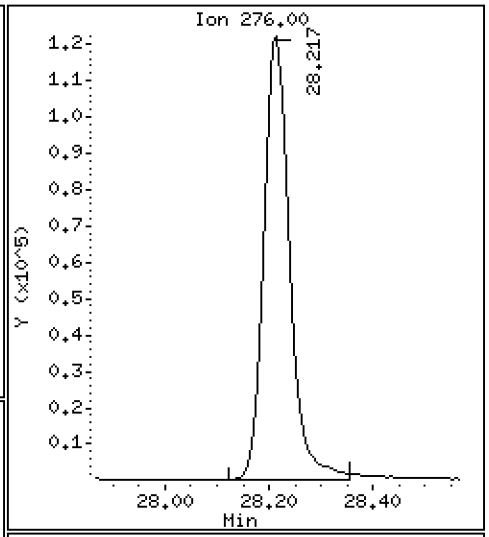
Concentration: 2.910 ug/mL

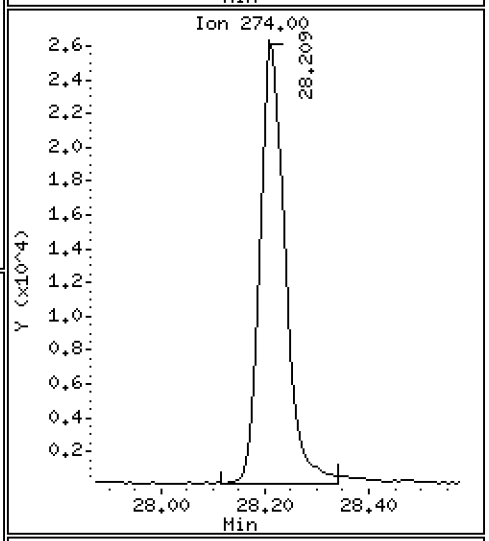


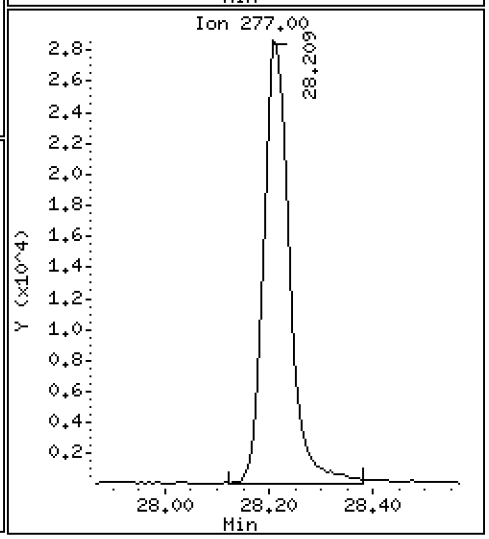












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

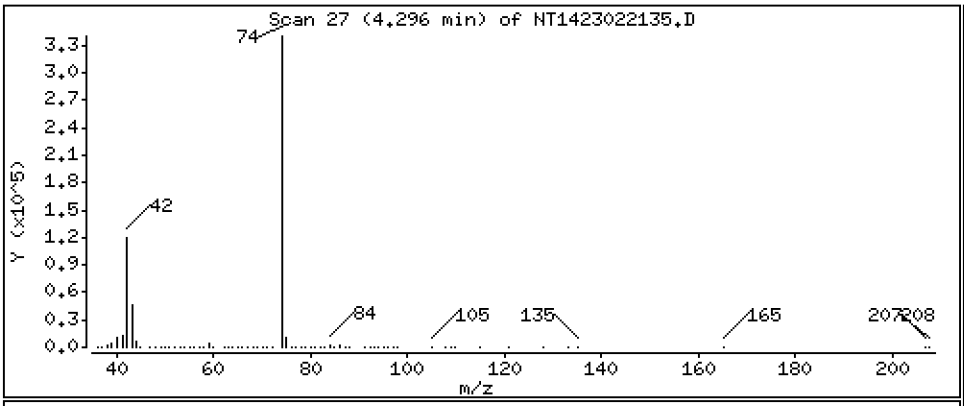
Operator: DSD

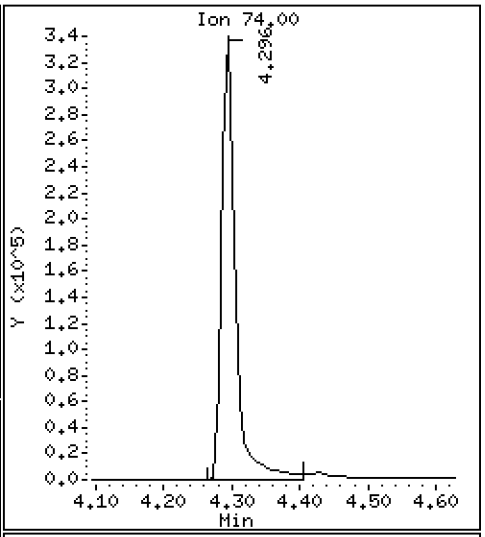
Column phase: ZB-5msi

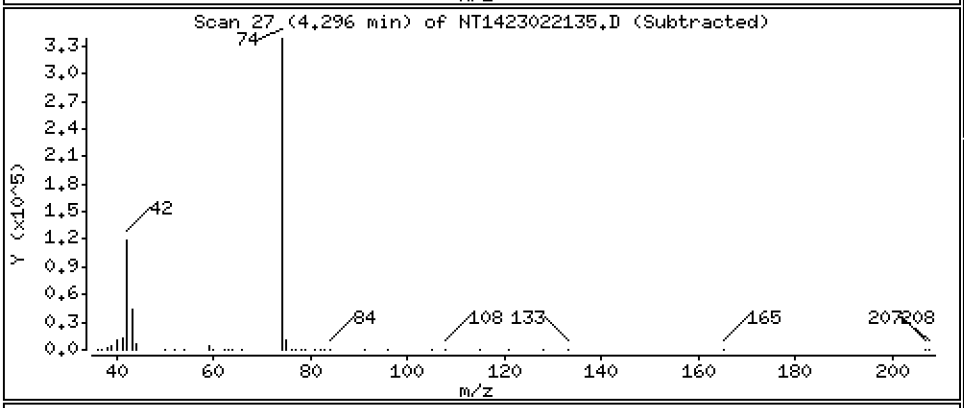
Column diameter: 0.25

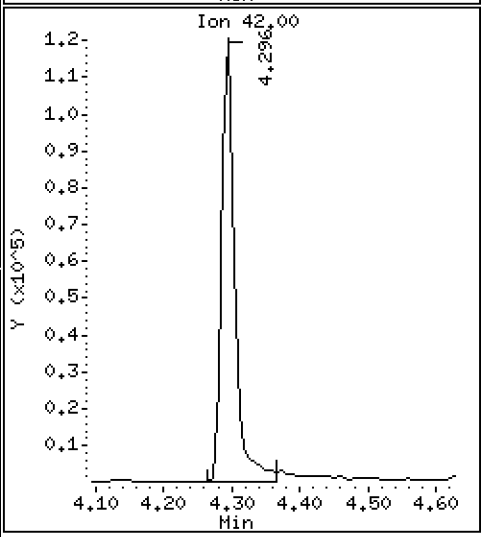
90 N-Nitrosodimethylamine

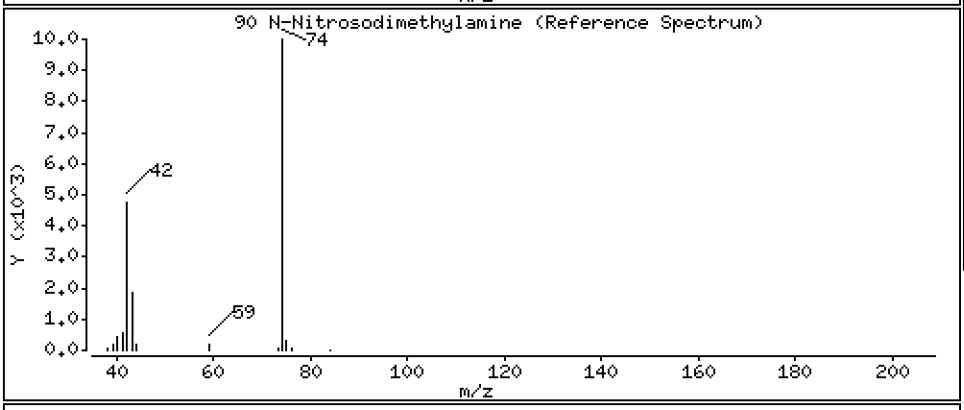
Concentration: 7.535 ug/mL

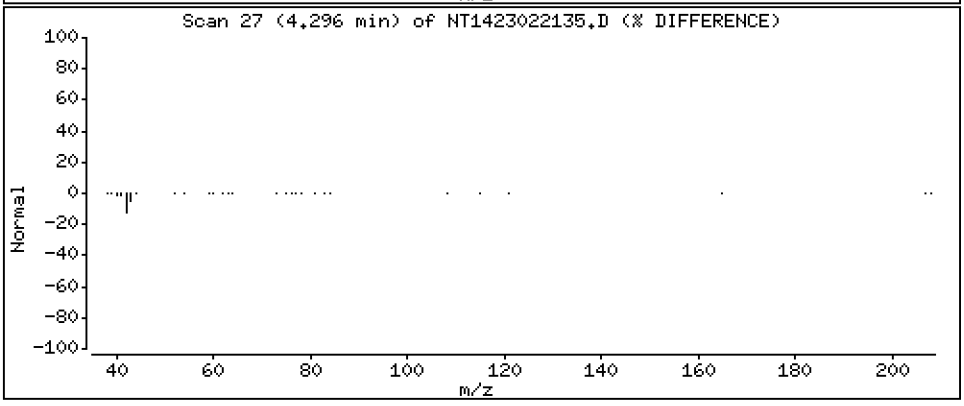












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

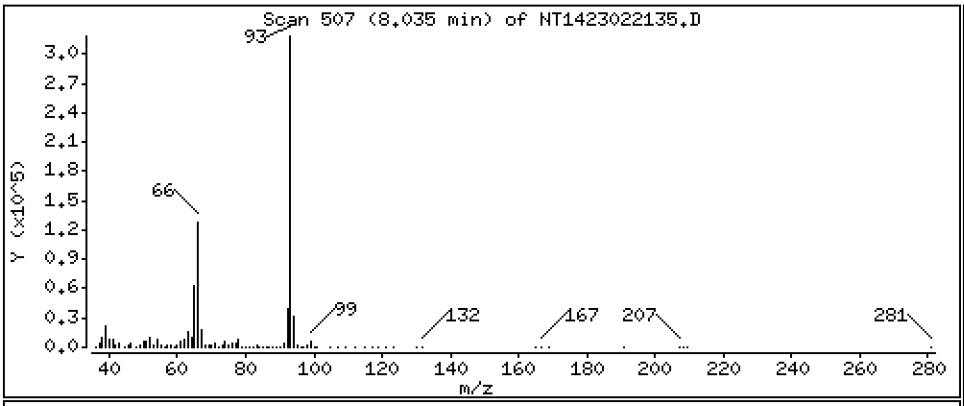
Operator: DSD

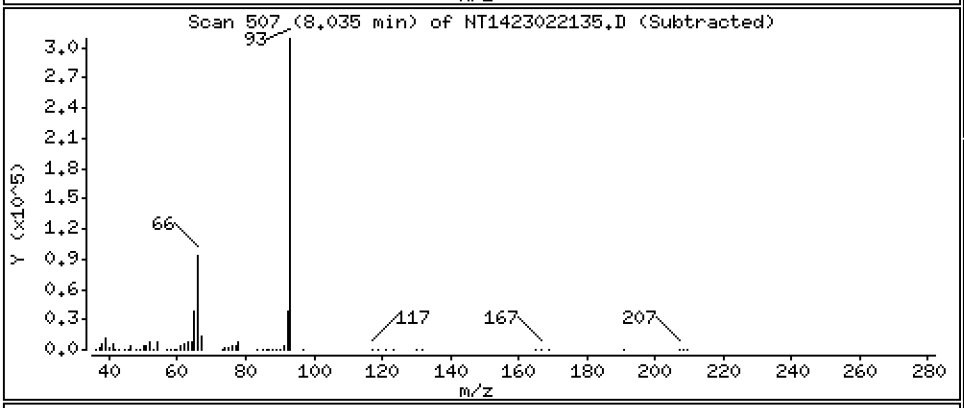
Column phase: ZB-5msi

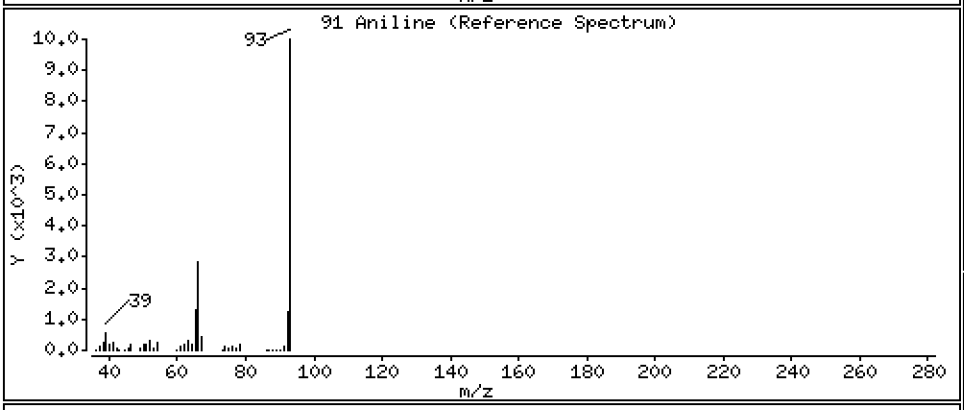
Column diameter: 0.25

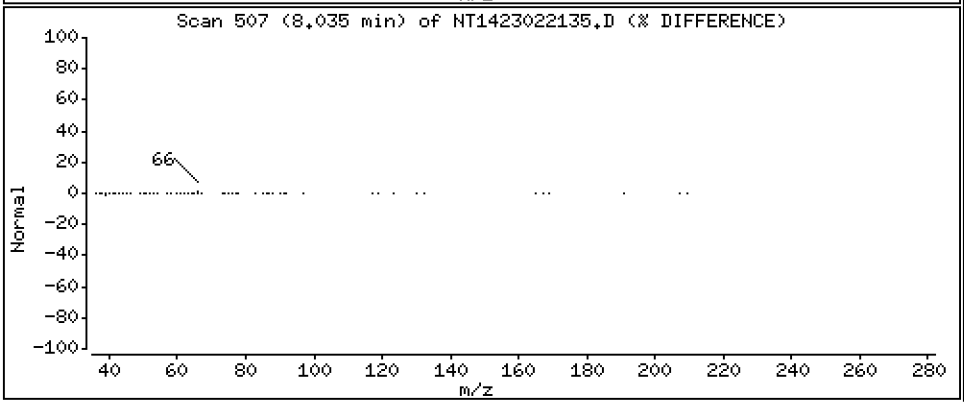
91 Aniline

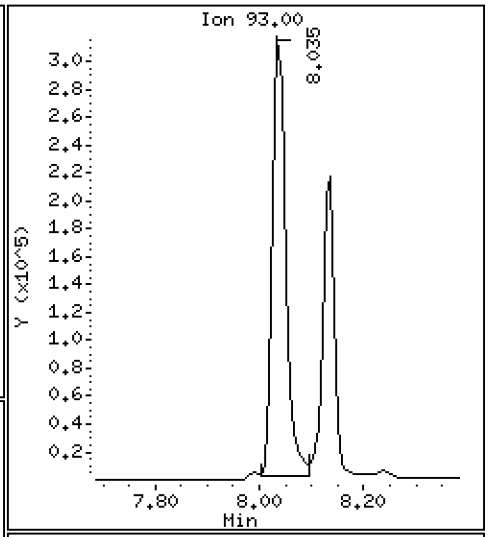
Concentration: 3.662 ug/mL

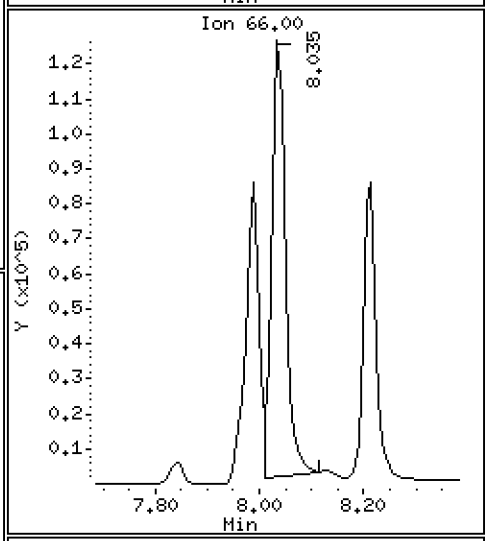


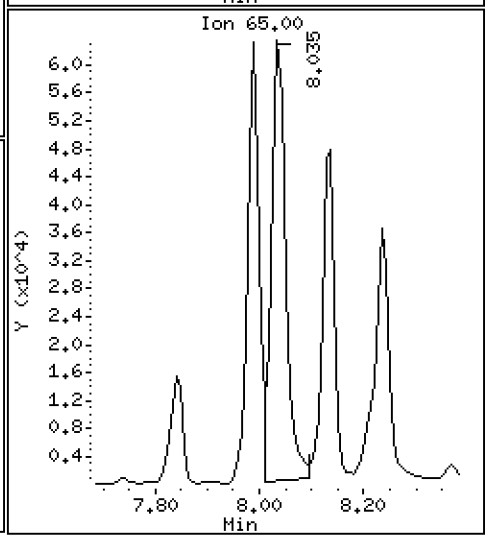












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

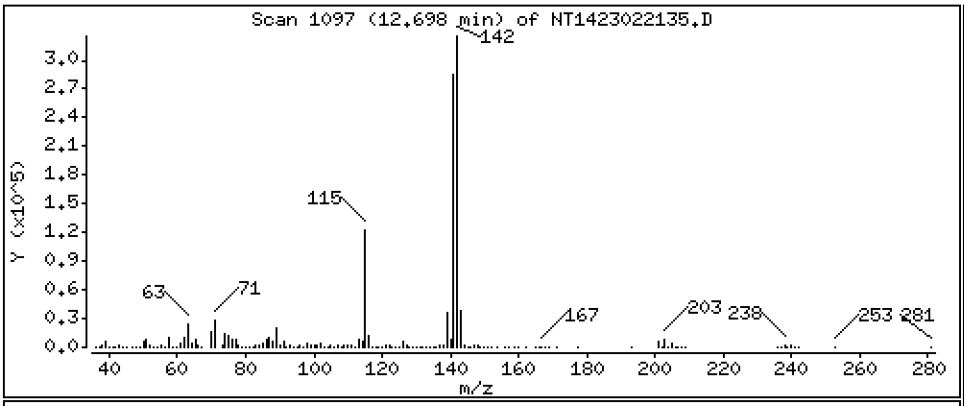
Operator: DSD

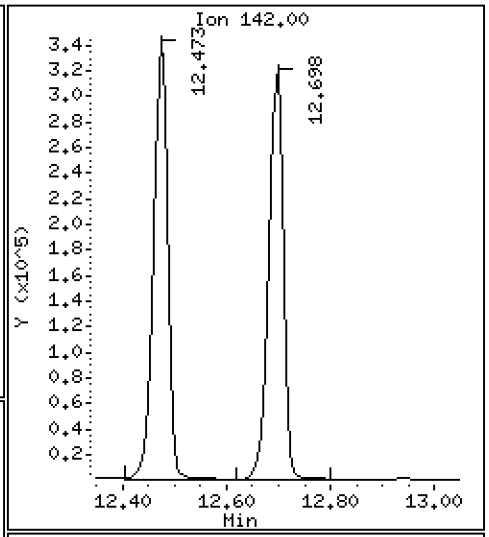
Column phase: ZB-5msi

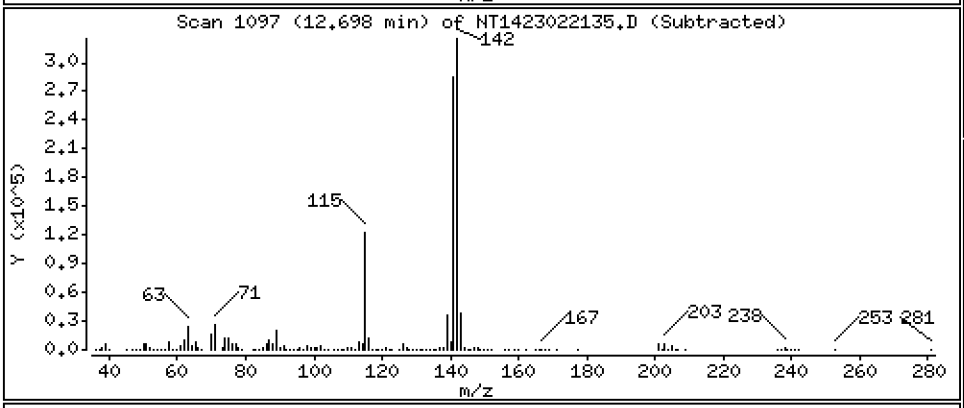
Column diameter: 0.25

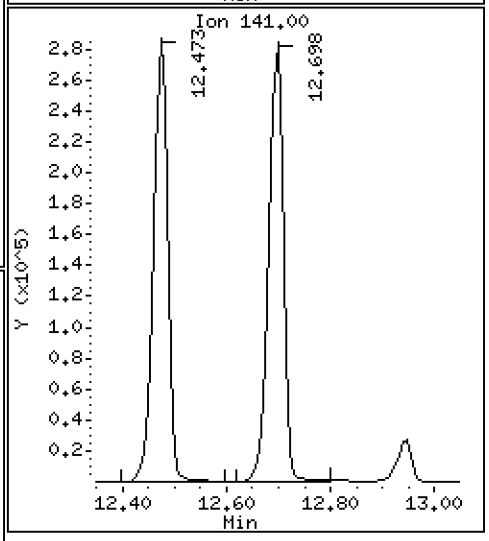
105 1-methylnaphthalene

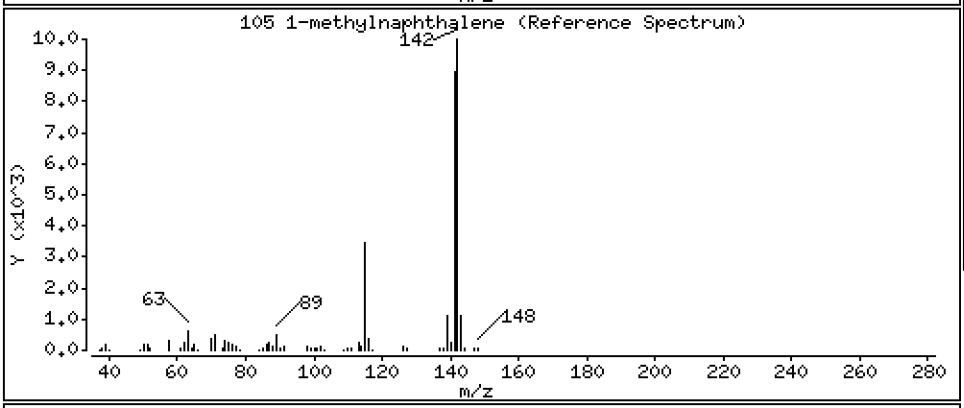
Concentration: 3.323 ug/mL

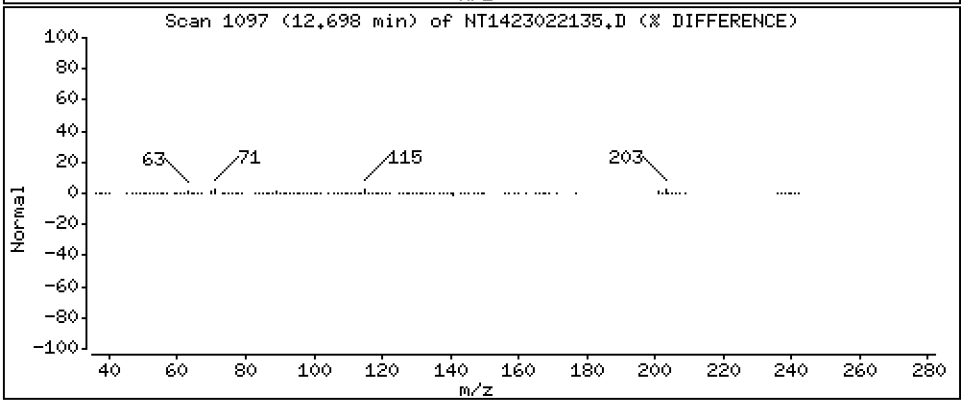












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

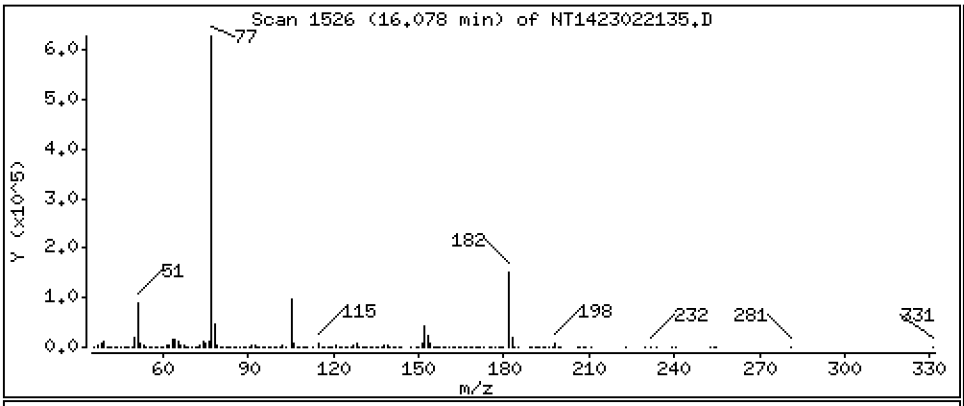
Operator: DSD

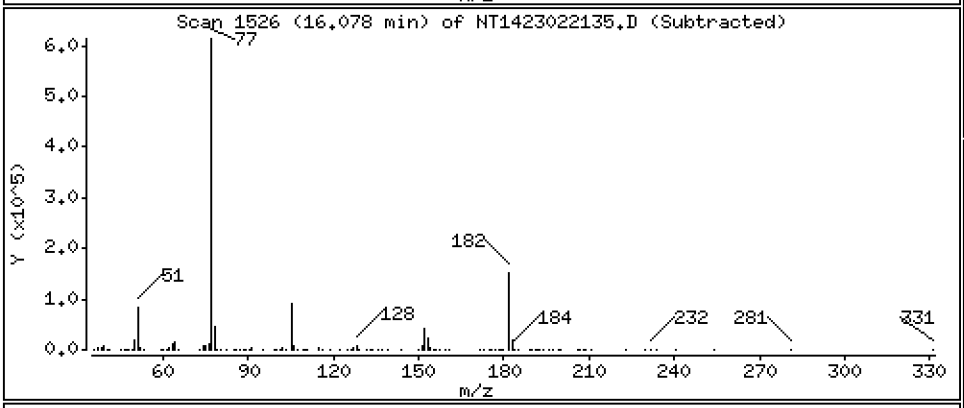
Column phase: ZB-5msi

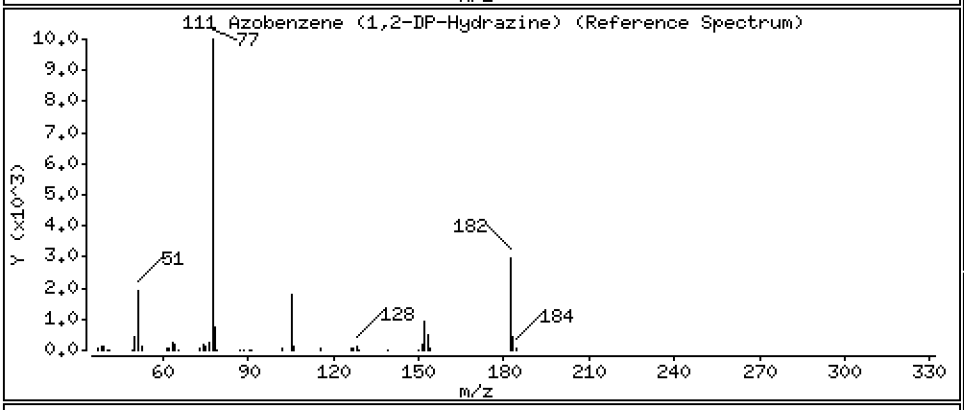
Column diameter: 0.25

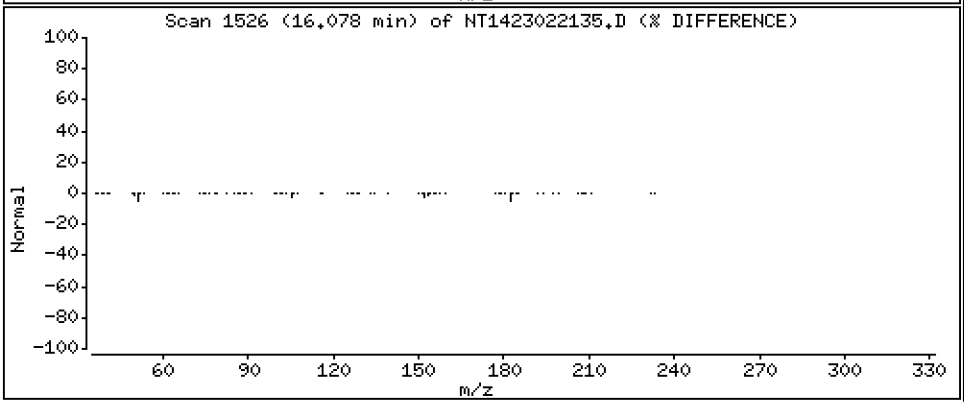
111 Azobenzene (1,2-DP-Hydrazine)

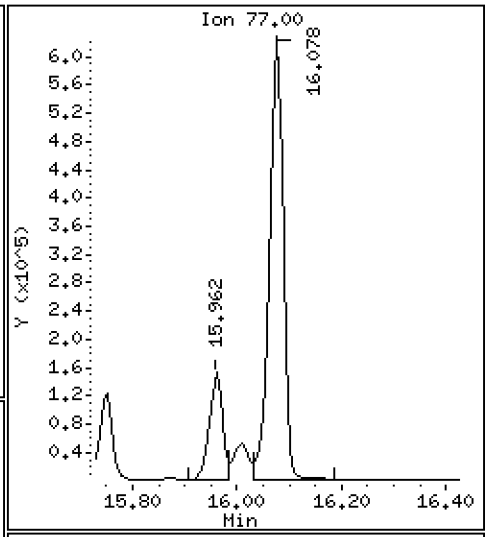
Concentration: 3.522 ug/mL

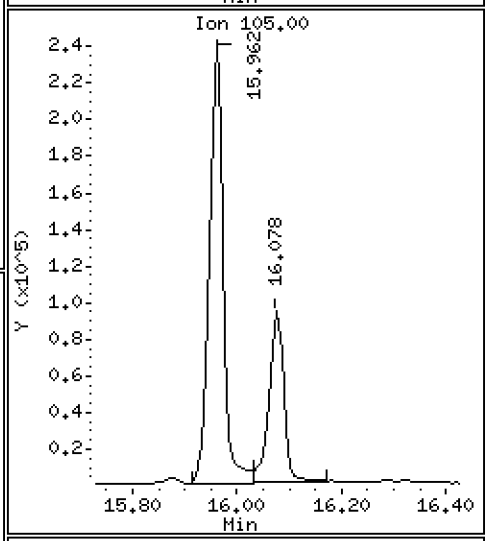


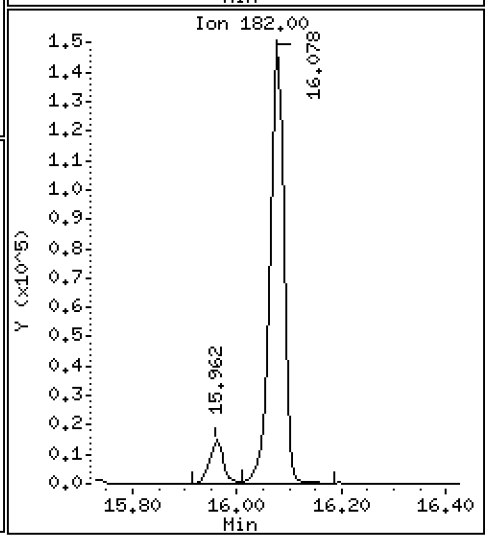












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

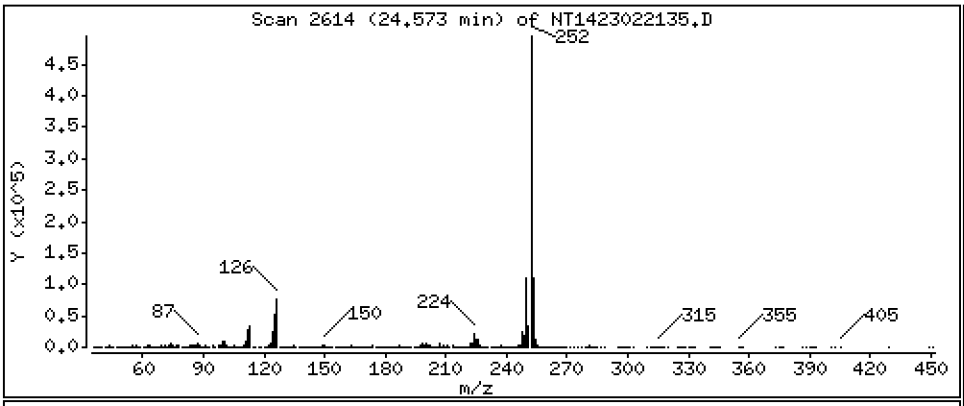
Operator: DSD

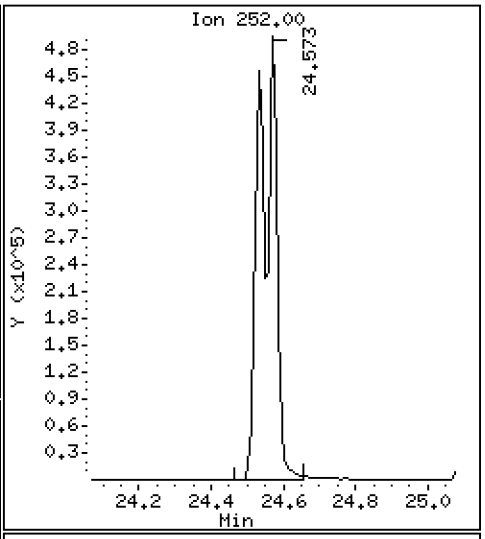
Column phase: ZB-5msi

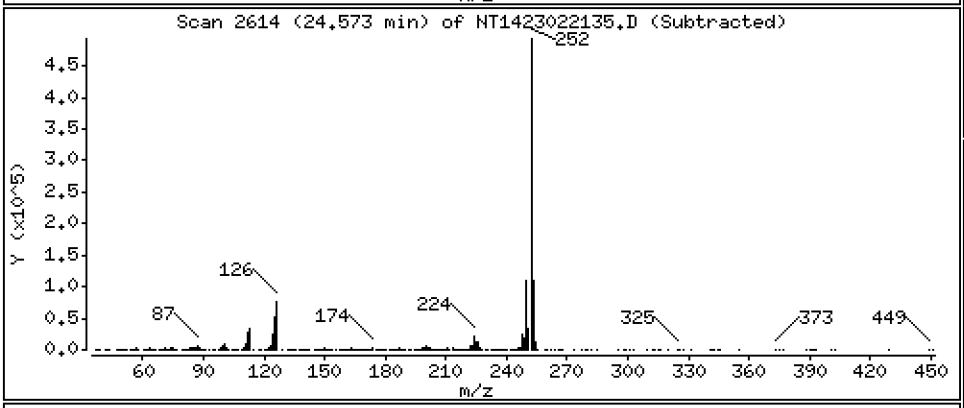
Column diameter: 0.25

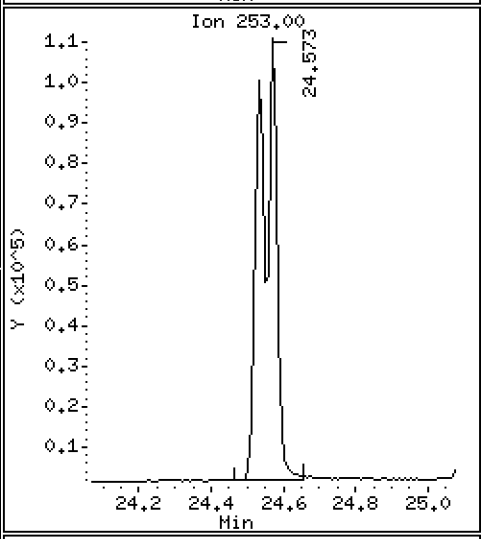
187 Total Benzofluoranthenes

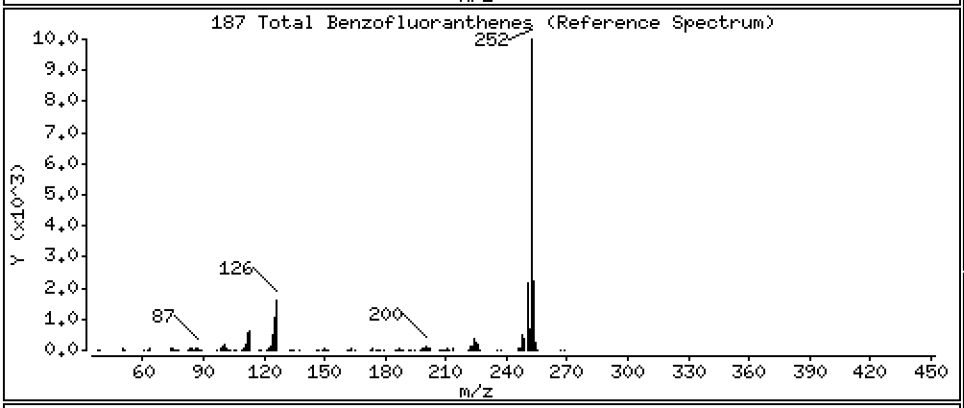
Concentration: 7.488 ug/mL

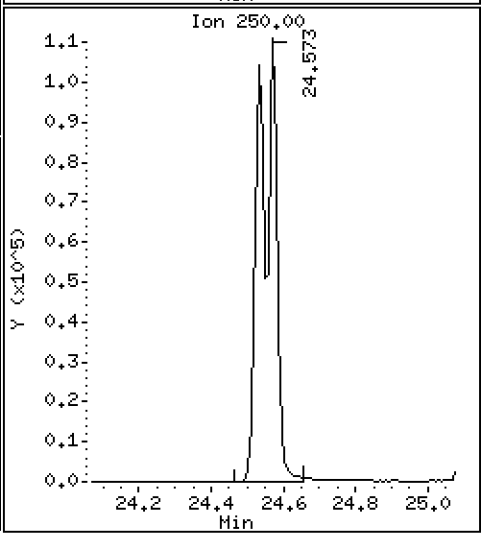


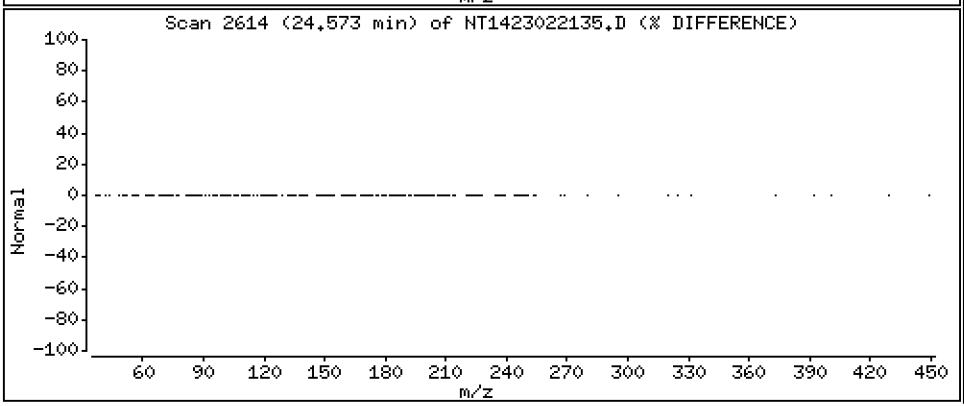












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

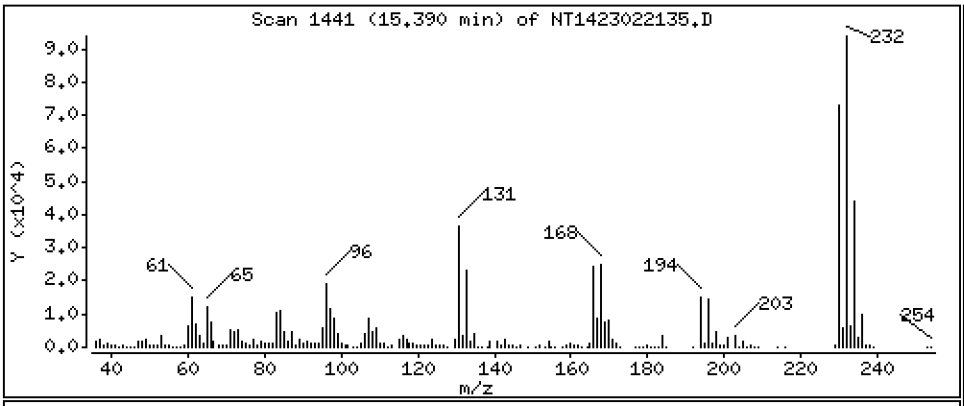
Operator: DSD

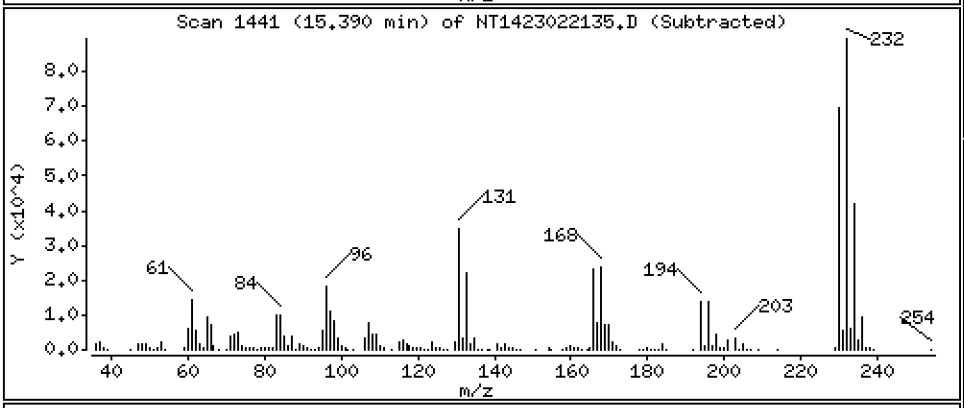
Column phase: ZB-5msi

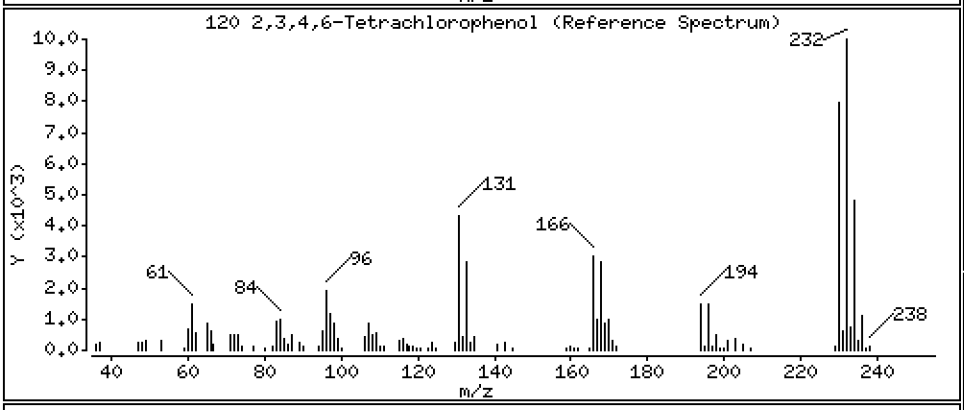
Column diameter: 0.25

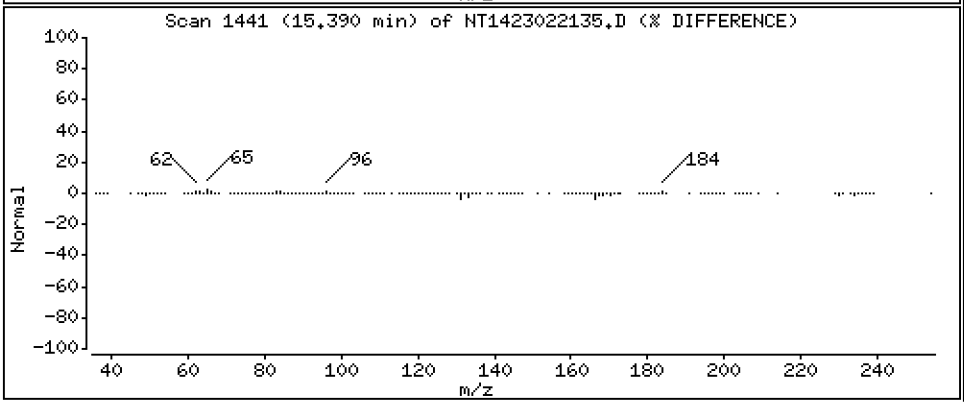
120 2,3,4,6-Tetrachlorophenol

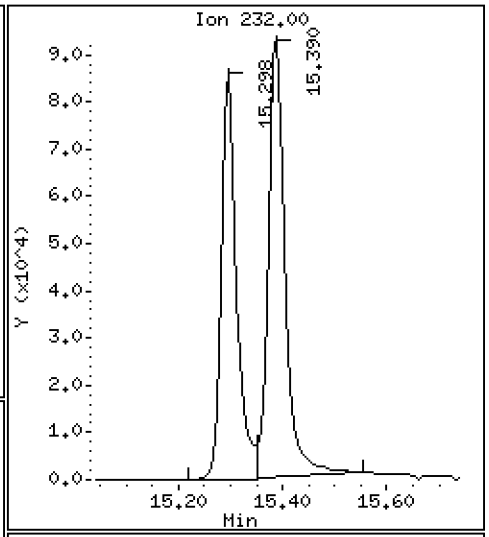
Concentration: 2.988 ug/mL

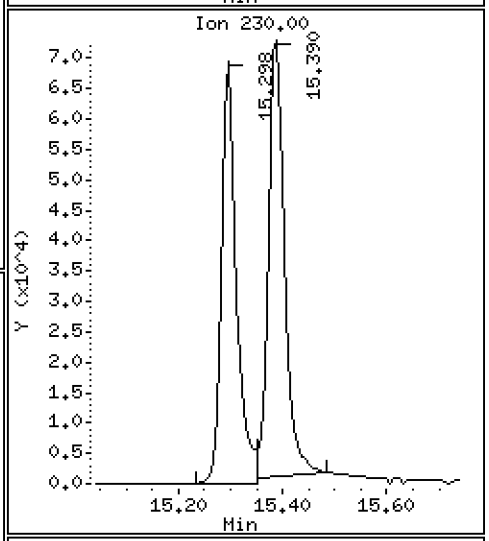


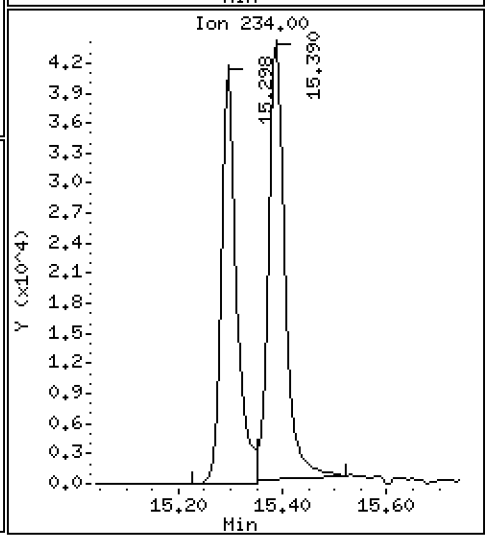












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221B.b\NT1423022135.D
Lab Smp Id: BLA0393-BS1
Inj Date : 22-FEB-2023 09:57 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : BLA0393-BS1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Meth Date : 23-Feb-2023 09:59 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 26
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.388	6.373	(0.746)	405027	4.95803	4.958
$	2 Phenol-d5	99	7.965	7.965	(0.930)	629528	4.85783	4.858
	3 Phenol	94	7.988	7.988	(0.933)	368203	2.68393	2.684
$	5 2-Chlorophenol-d4	132	8.212	8.212	(0.959)	449907	4.86562	4.866
	4 Bis(2-Chloroethyl)ether	93	8.135	8.135	(0.950)	342603	3.26915	3.269
	6 2-Chlorophenol	128	8.235	8.235	(0.962)	275569	2.85237	2.852
	7 1,3-Dichlorobenzene	146	8.498	8.498	(0.993)	311040	2.89199	2.892
*	8 1,4-Dichlorobenzene-d4	152	8.560	8.568	(1.000)	305581	4.00000	
	9 1,4-Dichlorobenzene	146	8.591	8.599	(1.004)	300598	2.94496	2.945
$	10 1,2-Dichlorobenzene-d4	152	8.917	8.925	(1.042)	208782	3.01231	3.012
	12 1,2-Dichlorobenzene	146	8.948	8.948	(1.045)	301029	2.95006	2.950
	11 Benzyl alcohol	108	8.863	8.855	(1.035)	192439	2.49044	2.490
	14 2,2'-oxybis(1-Chloropropane)	121	9.150	9.150	(1.069)	99928	3.42313	3.423
	13 2-Methylphenol	108	9.088	9.096	(1.062)	246887	2.57725	2.577
	17 Hexachloroethane	117	9.530	9.530	(1.113)	130556	2.94207	2.942
	16 N-Nitroso-di-n-propylamine	70	9.406	9.414	(1.099)	252055	2.89051	2.891
	15 4-Methylphenol	108	9.367	9.367	(1.094)	284221	2.80979	2.810
$	18 Nitrobenzene-d5	82	9.662	9.662	(0.875)	432615	3.61699	3.617
	19 Nitrobenzene	77	9.693	9.701	(0.878)	408039	3.39956	3.400
	20 Isophorone	82	10.143	10.151	(0.919)	791048	4.99533	4.995
	21 2-Nitrophenol	139	10.322	10.322	(0.935)	147161	2.71039	2.710
	22 2,4-Dimethylphenol	107	10.399	10.399	(0.942)	510346	5.63082	5.631
	23 Bis(2-Chloroethoxy)methane	93	10.585	10.593	(0.959)	424722	4.12296	4.123
	24 Benzoic acid	105	10.702	10.686	(0.969)	934348	15.7889	15.79
	25 2,4-Dichlorophenol	162	10.779	10.787	(0.976)	1001284	12.9082	12.91
	26 1,2,4-Trichlorobenzene	180	10.957	10.957	(0.992)	316744	3.37086	3.371
*	27 Naphthalene-d8	136	11.042	11.042	(1.000)	1035299	4.00000	
	28 Naphthalene	128	11.081	11.081	(1.003)	856102	3.35369	3.354
	29 4-Chloroaniline	127	11.227	11.228	(1.017)	786565	7.21224	7.212
	30 Hexachlorobutadiene	225	11.451	11.452	(1.037)	218169	3.76639	3.766
	31 4-Chloro-3-methylphenol	107	12.210	12.210	(1.106)	1168203	13.9138	13.91
	32 2-Methylnaphthalene	142	12.473	12.481	(1.130)	622583	3.25644	3.256
	33 Hexachlorocyclopentadiene	237	12.945	12.945	(0.884)	452261	7.44230	7.442

		QUANT SIG					CONCENTRATIONS	
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	13.108	13.108	(0.895)	813133	13.1619	13.16
35	2,4,5-Trichlorophenol	196	13.185	13.185	(0.900)	921837	13.7781	13.78
$ 36	2-Fluorobiphenyl	172	13.270	13.270	(0.906)	803553	3.58058	3.581
37	2-Chloronaphthalene	162	13.464	13.471	(0.919)	623111	3.40170	3.402
38	2-Nitroaniline	65	13.750	13.750	(0.939)	779997	13.0969	13.10
39	Dimethylphthalate	163	14.183	14.184	(0.968)	702927	3.66873	3.669
40	Acenaphthylene	152	14.331	14.331	(0.978)	912684	3.26674	3.267
41	2,6-Dinitrotoluene	165	14.323	14.323	(0.978)	566717	12.5701	12.57
* 42	Acenaphthene-d10	164	14.648	14.648	(1.000)	627265	4.00000	
43	3-Nitroaniline	138	14.601	14.601	(0.997)	533772	11.1544	11.15
44	Acenaphthene	153	14.710	14.717	(1.004)	573331	3.42752	3.428
45	2,4-Dinitrophenol	184	14.818	14.818	(1.012)	664611	21.4353	21.44
46	Dibenzofuran	168	15.042	15.042	(1.027)	924035	3.36453	3.365
47	4-Nitrophenol	109	14.949	14.949	(1.021)	326078	11.6573	11.66
48	2,4-Dinitrotoluene	165	15.127	15.127	(1.033)	812648	12.7486	12.75
50	Diethylphthalate	149	15.645	15.645	(1.068)	999038	3.92215	3.922
49	Fluorene	166	15.753	15.753	(1.075)	958128	3.33608	3.336
51	4-Chlorophenyl-phenylether	204	15.753	15.753	(1.075)	521834	3.39804	3.398
52	4-Nitroaniline	138	15.877	15.869	(1.084)	698533	12.7231	12.72
53	4,6-Dinitro-2-methylphenol	198	15.961	15.961	(0.903)	1202655	25.4470	25.45
54	N-Nitrosodiphenylamine	169	16.008	16.008	(0.906)	591131	3.27601	3.276
$ 55	2,4,6-Tribromophenol	330	16.285	16.293	(1.112)	187844	5.14521	5.145
56	4-Bromophenyl-phenylether	248	16.748	16.756	(0.948)	293551	3.65255	3.653
57	Hexachlorobenzene	284	17.049	17.057	(0.965)	276618	3.38721	3.387
58	Pentachlorophenol	266	17.421	17.421	(0.986)	434803	10.6126	10.61
* 59	Phenanthrene-d10	188	17.669	17.676	(1.000)	1255650	4.00000	
60	Phenanthrene	178	17.715	17.723	(1.003)	1043806	3.45941	3.459
61	Anthracene	178	17.808	17.816	(1.008)	943134	3.15502	3.155
62	Carbazole	167	18.156	18.156	(1.028)	1020282	3.76108	3.761
63	Di-n-butylphthalate	149	18.984	18.992	(1.074)	1285812	4.24363	4.244
64	Fluoranthene	202	20.129	20.137	(0.884)	1387545	3.33211	3.332
65	Pyrene	202	20.554	20.562	(0.903)	1375397	3.12359	3.124
$ 66	Terphenyl-d14	244	20.864	20.872	(0.916)	1111957	3.55661	3.557
67	Butylbenzylphthalate	149	21.816	21.816	(0.958)	543581	3.71764	3.718
68	Benzo(a)anthracene	228	22.738	22.738	(0.999)	1134595	3.67335	3.673
* 69	Chrysene-d12	240	22.769	22.769	(1.000)	965199	4.00000	
70	3,3'-Dichlorobenzidine	252	22.715	22.715	(0.998)	1059530	11.1422	11.14
71	Chrysene	228	22.815	22.815	(1.002)	1023908	3.68549	3.685
72	bis(2-Ethylhexyl)phthalate	149	22.854	22.854	(0.959)	770902	2.93811	2.938
* 134	Di-n-octylphthalate-d4	153	23.837	23.837	(1.000)	1554743	4.00000	
73	Di-n-octylphthalate	149	23.845	23.845	(1.000)	1357027	3.73293	3.733
74	Benzo(b)fluoranthene	252	24.534	24.534	(0.973)	784691	3.54265	3.543
75	Benzo(k)fluoranthene	252	24.573	24.573	(0.975)	940013	3.97164	3.972
76	Benzo(a)pyrene	252	25.107	25.115	(0.996)	657562	3.11665	3.117
* 77	Perylene-d12	264	25.215	25.215	(1.000)	698052	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	27.533	27.540	(1.092)	565226	3.21869	3.219
79	Dibenzo(a,h)anthracene	278	27.548	27.556	(1.093)	497647	3.43420	3.434
80	Benzo(g,h,i)perylene	276	28.216	28.216	(1.119)	415274	2.90966	2.910
90	N-Nitrosodimethylamine	74	4.295	4.280	(0.502)	476594	7.53525	7.535
91	Aniline	93	8.034	8.034	(0.939)	537330	3.66179	3.662
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	12.697	12.698	(1.150)	596381	3.32267	3.323
111	Azobenzene (1,2-DP-Hydrazine)	77	16.077	16.077	(1.098)	1090340	3.52218	3.522

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.573	24.573	(0.975)	1619281	7.48794	7.488
120 2,3,4,6-Tetrachlorophenol	232	15.390	15.390	(1.051)	215643	2.98762	2.988

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022135.D
Lab Smp Id: BLA0393-BS1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 06:55
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	235125	117563	470250	305581	29.97
27 Naphthalene-d8	883104	441552	1766208	1035299	17.23
42 Acenaphthene-d10	537789	268895	1075578	627265	16.64
59 Phenanthrene-d10	1079531	539766	2159062	1255650	16.31
69 Chrysene-d12	826409	413205	1652818	965199	16.79
134 Di-n-octylphthala	1339562	669781	2679124	1554743	16.06
77 Perylene-d12	590325	295163	1180650	698052	18.25

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.56	-0.09
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.67	-0.04
69 Chrysene-d12	22.77	22.27	23.27	22.77	-0.00
134 Di-n-octylphthala	23.84	23.34	24.34	23.84	-0.00
77 Perylene-d12	25.22	24.72	25.72	25.22	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022135.D

Lab ID: BLA0393-BS1
nt14.i, ABN.m, 22-FEB-2023 09:57

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: NT1423022130.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022136.D

Date : 22-FEB-2023 10:33

Client ID:

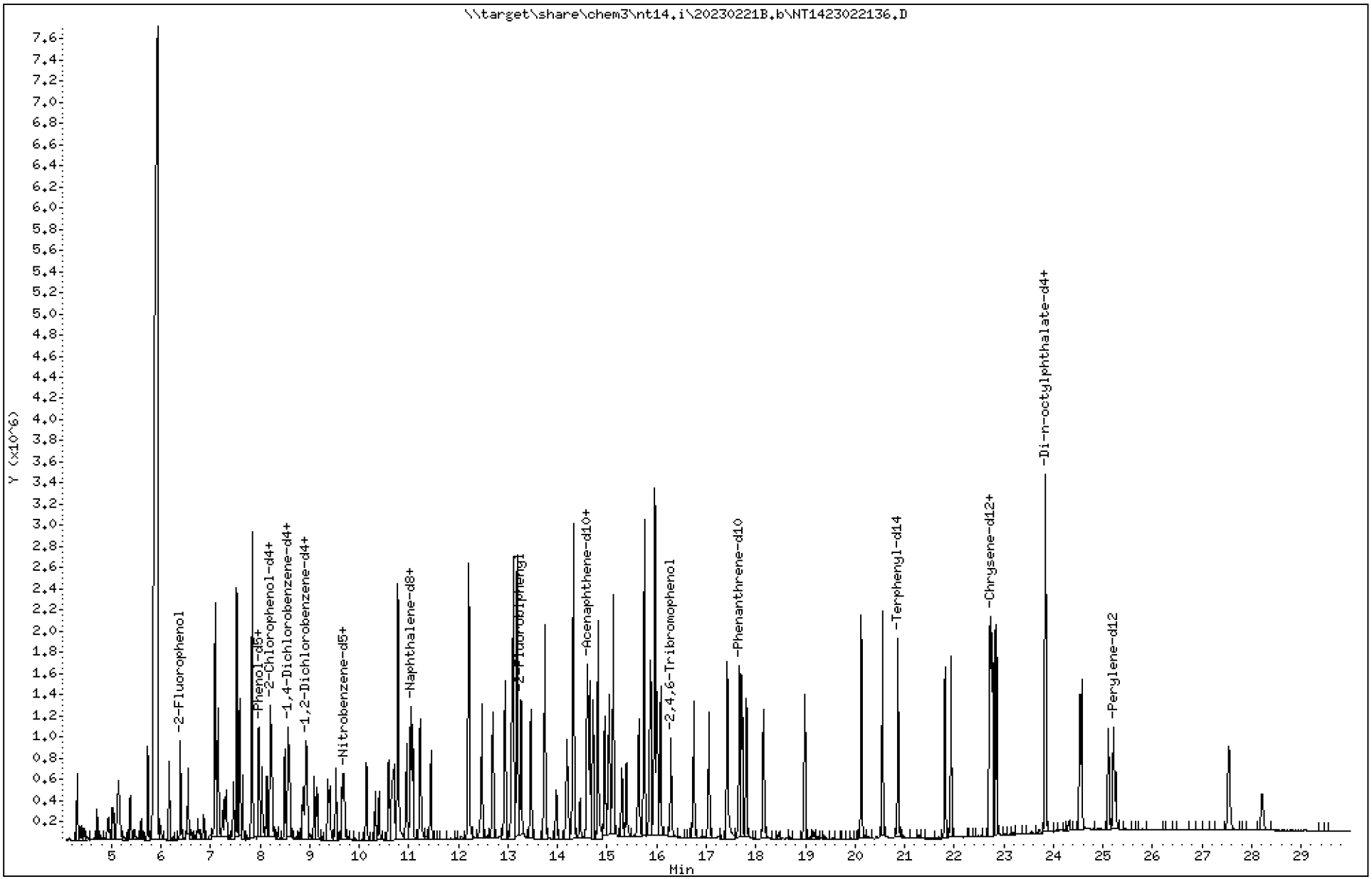
Instrument: nt14.i

Sample Info: BLA0393-BSD1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

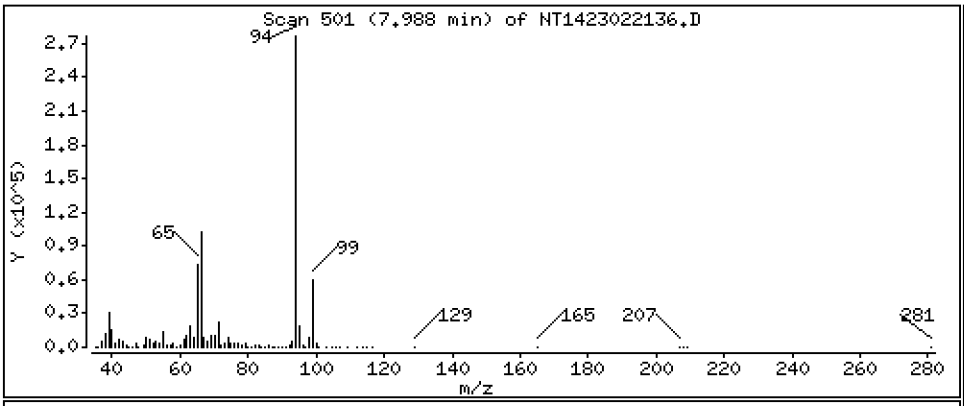
Operator: DSD

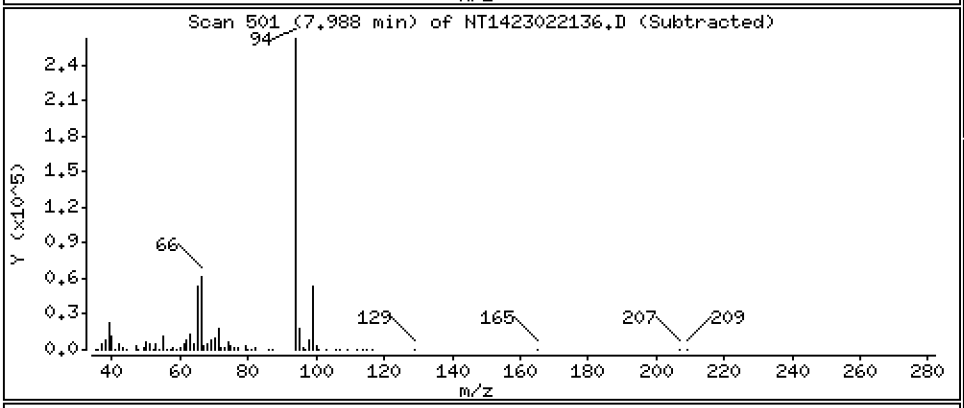
Column phase: ZB-5msi

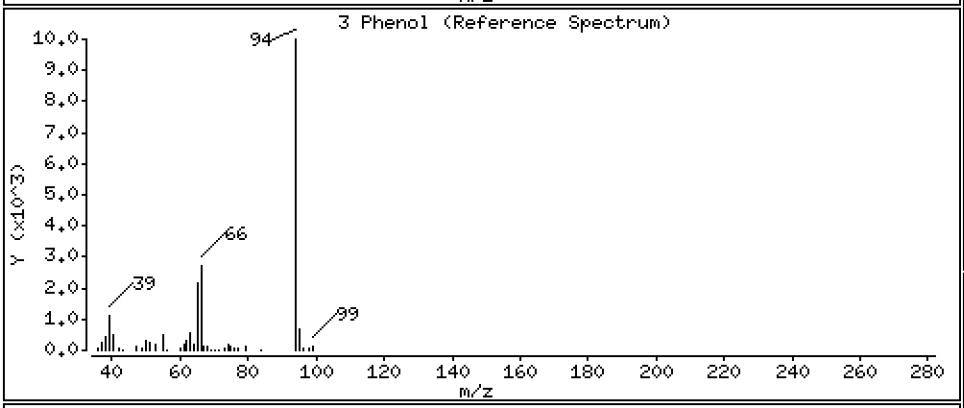
Column diameter: 0.25

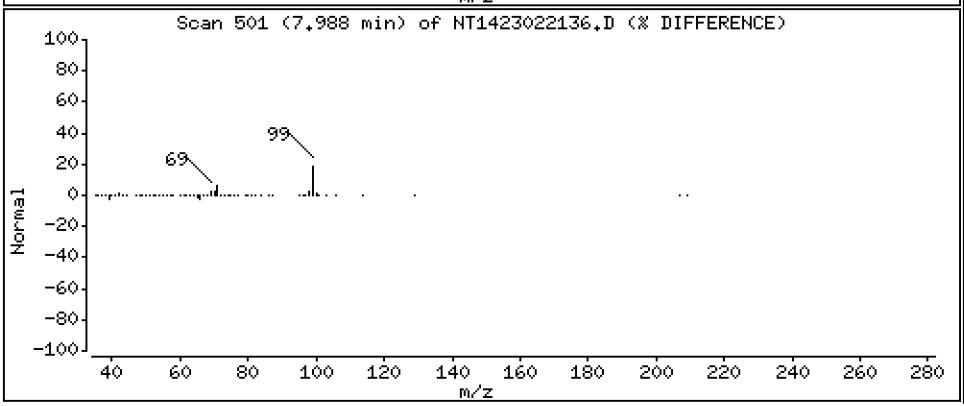
3 Phenol

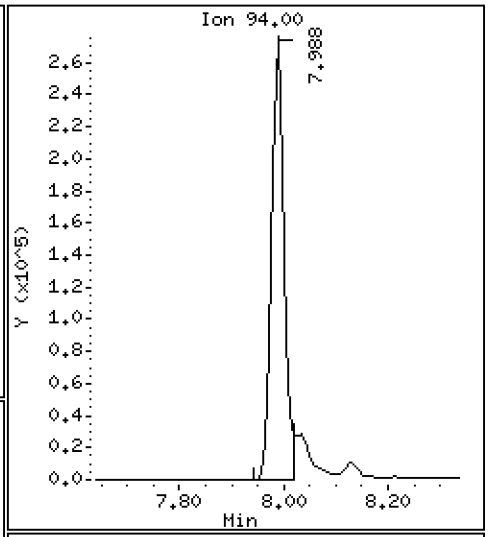
Concentration: 3.309 ug/mL

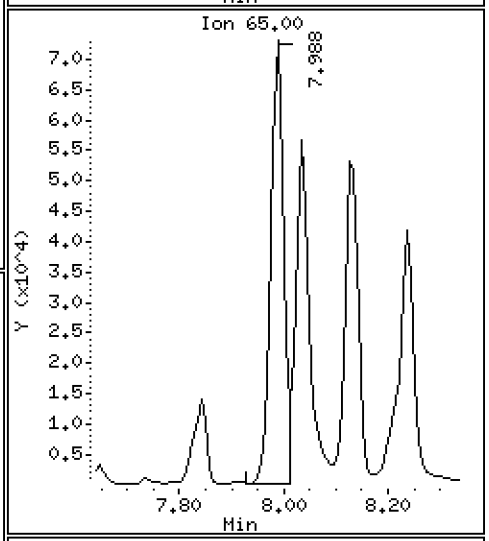


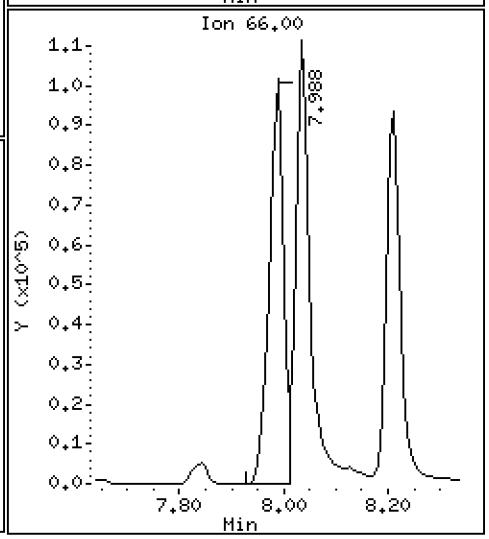












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

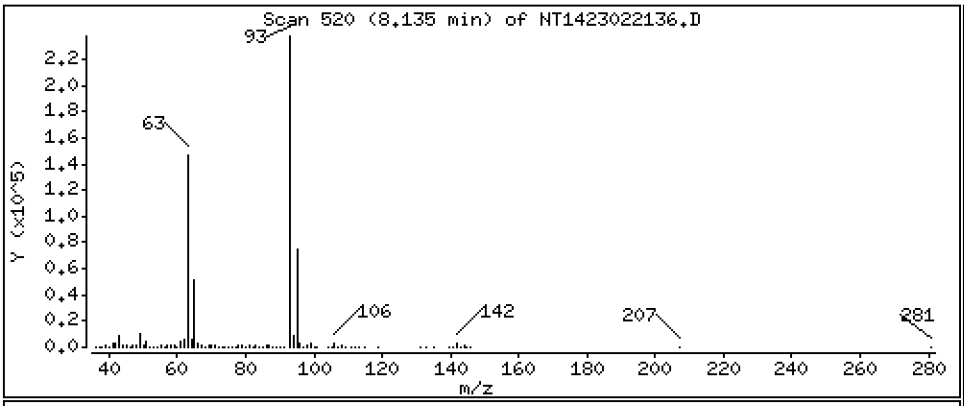
Operator: DSD

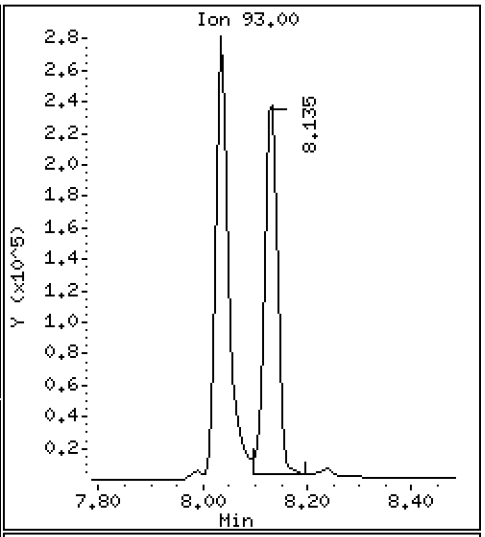
Column phase: ZB-5msi

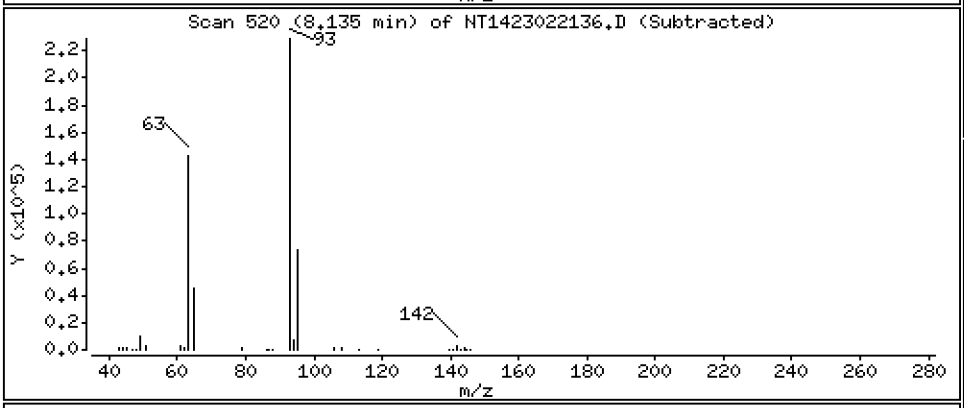
Column diameter: 0.25

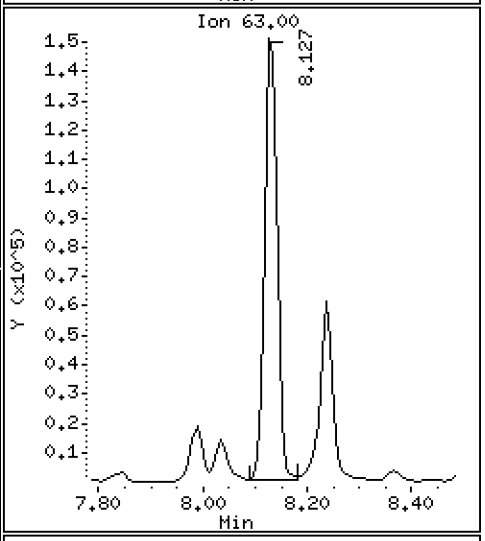
4 Bis(2-Chloroethyl)ether

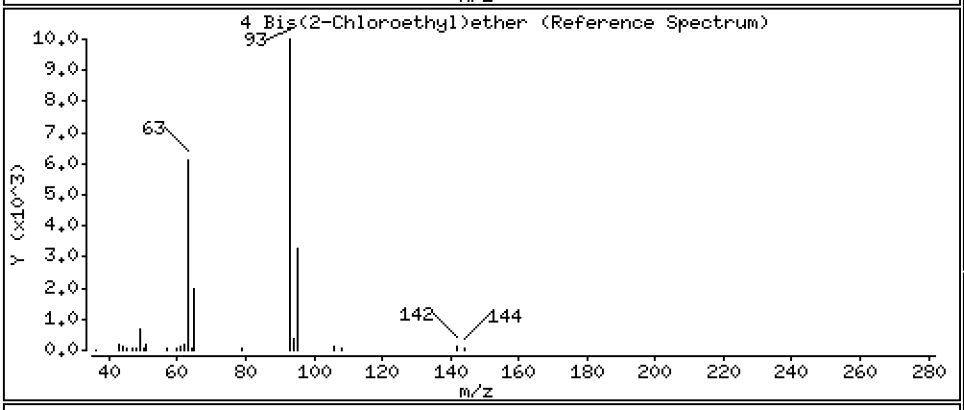
Concentration: 3.934 ug/mL

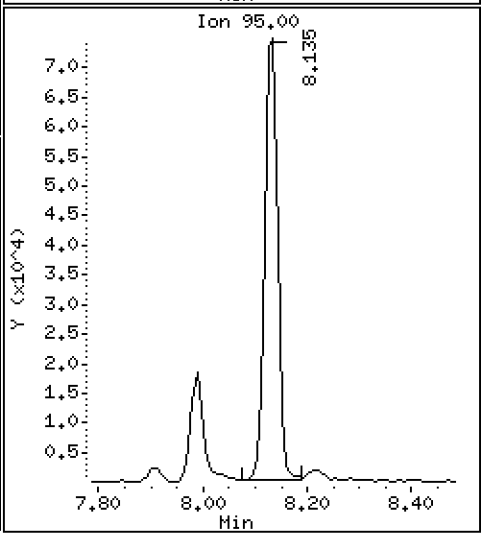


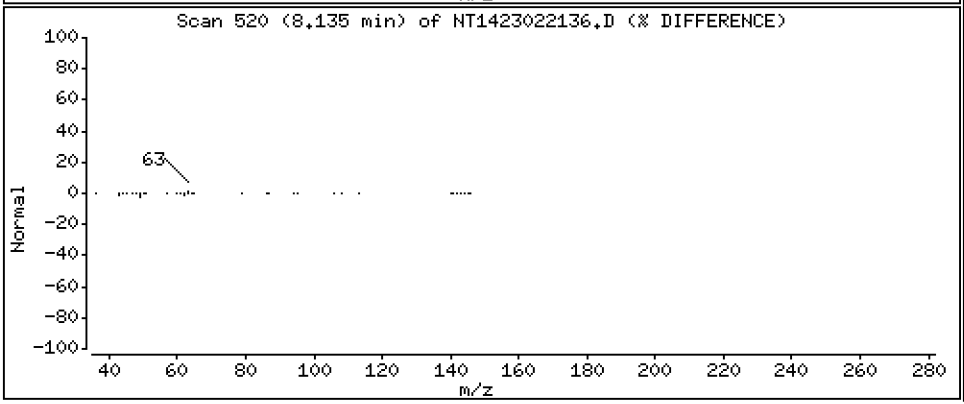












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

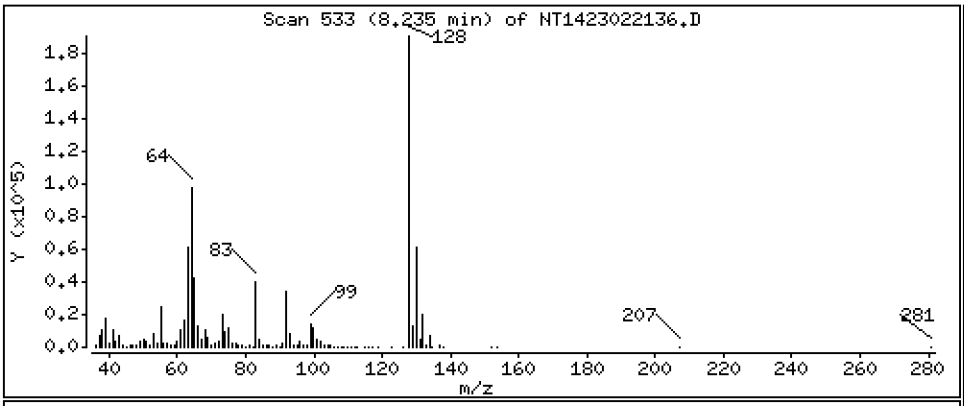
Operator: DSD

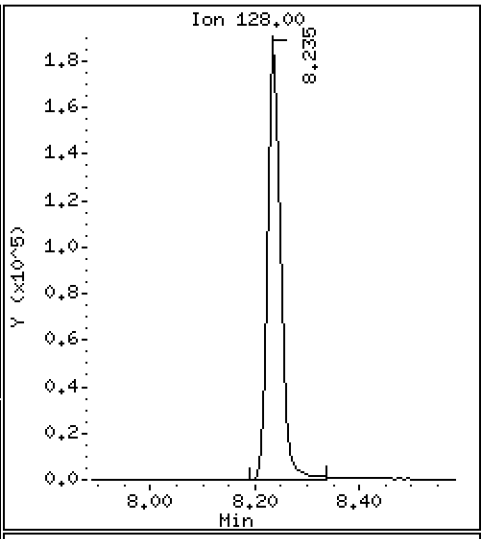
Column phase: ZB-5msi

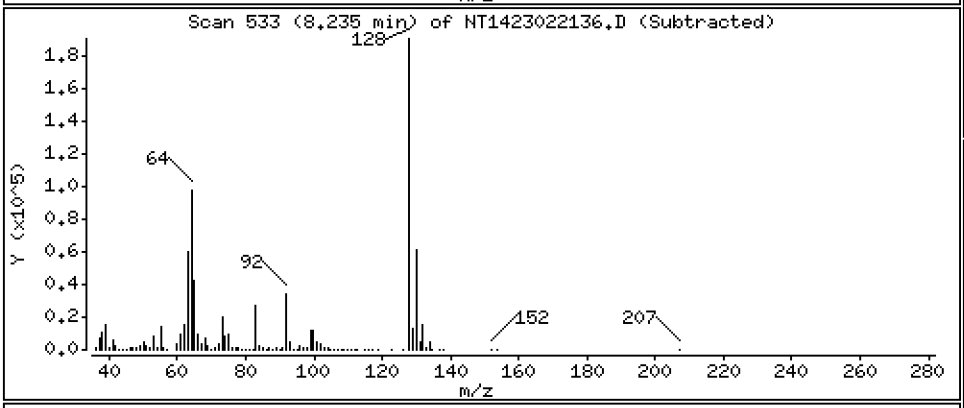
Column diameter: 0.25

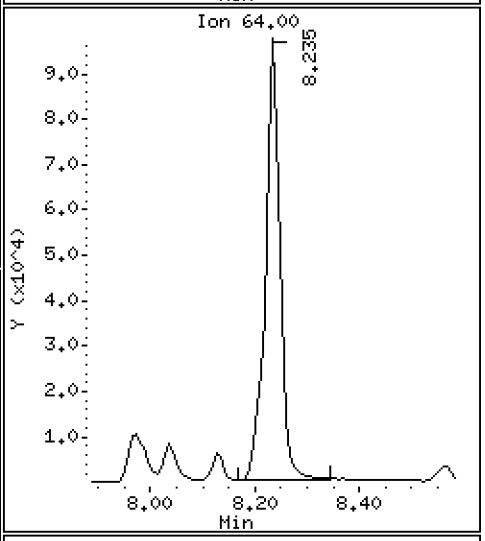
6 2-Chlorophenol

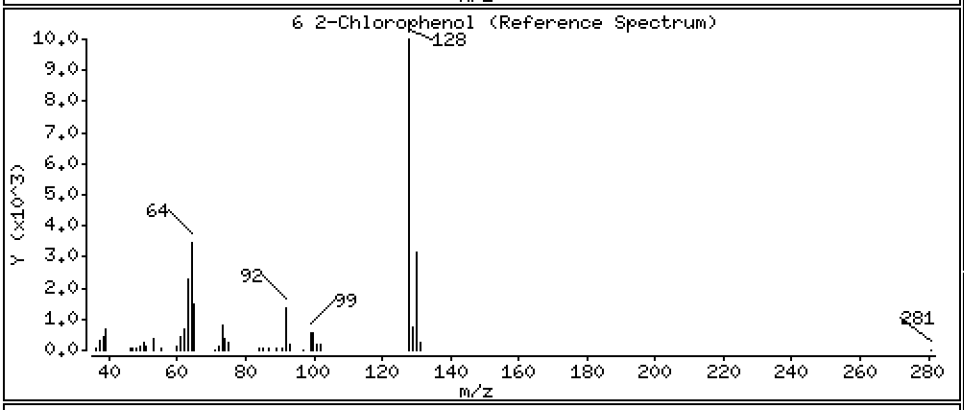
Concentration: 3.461 ug/mL

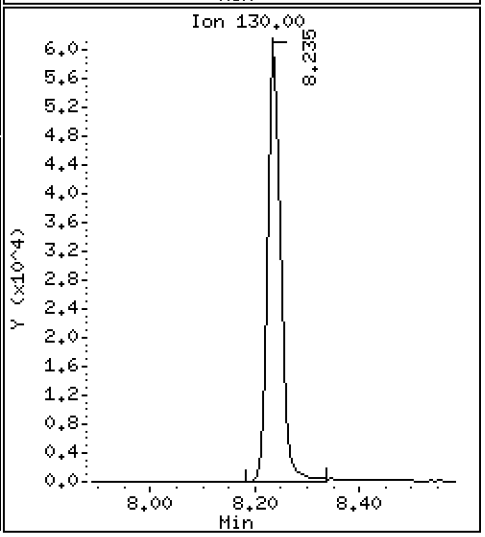


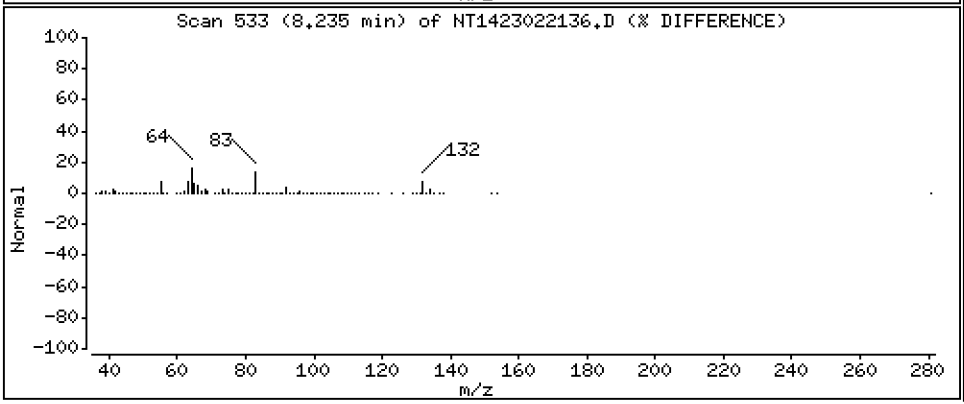












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

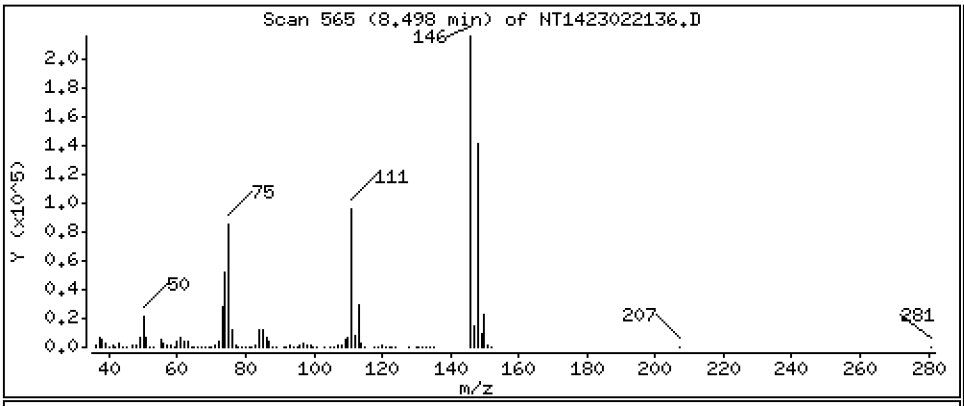
Operator: DSD

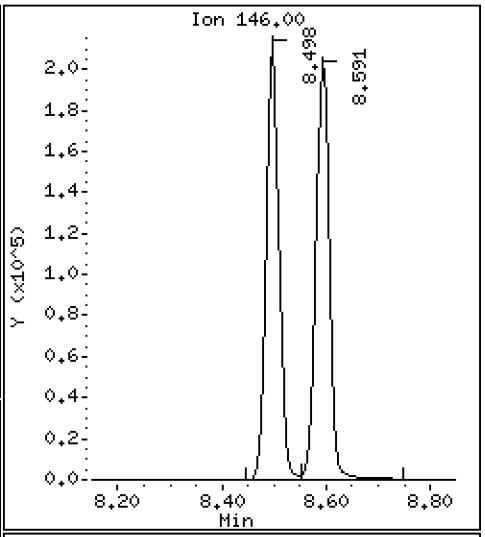
Column phase: ZB-5msi

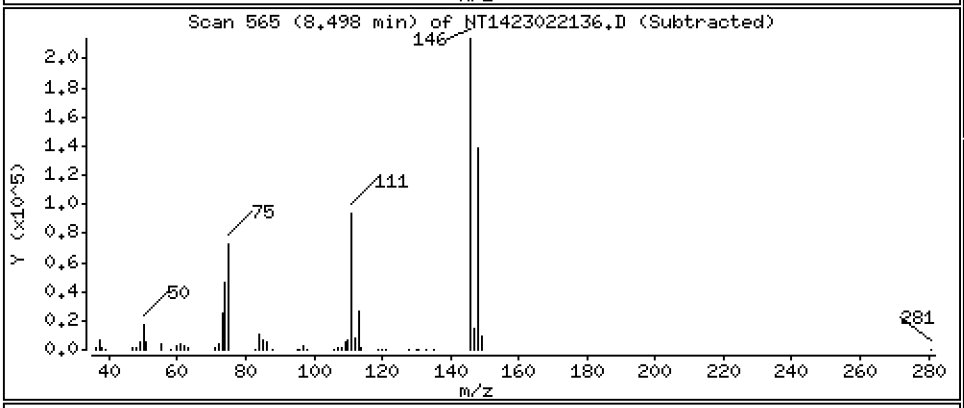
Column diameter: 0.25

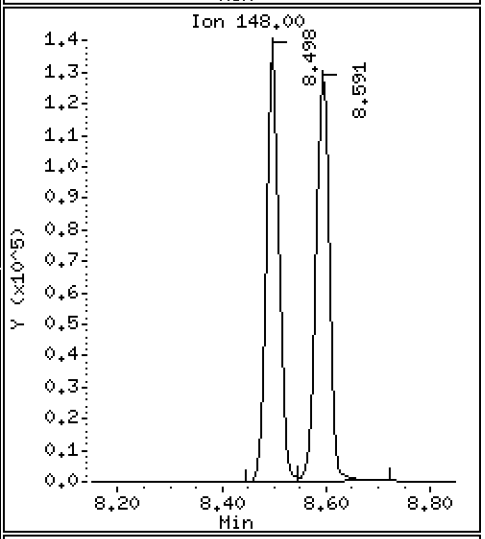
7 1,3-Dichlorobenzene

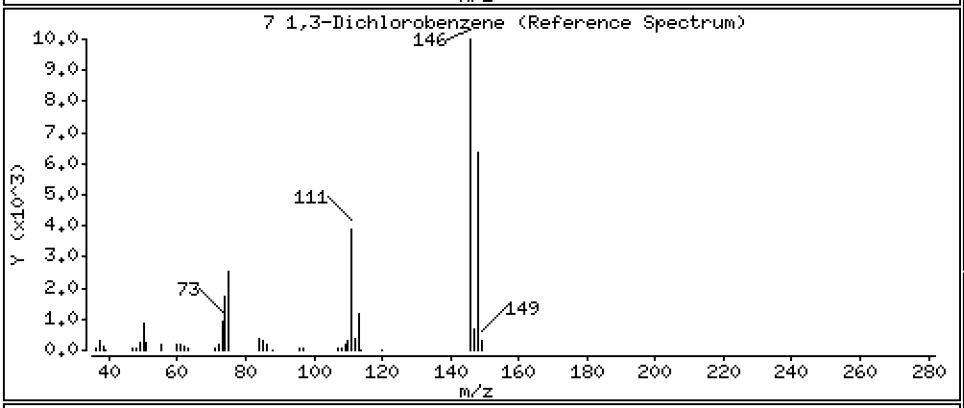
Concentration: 3.500 ug/mL

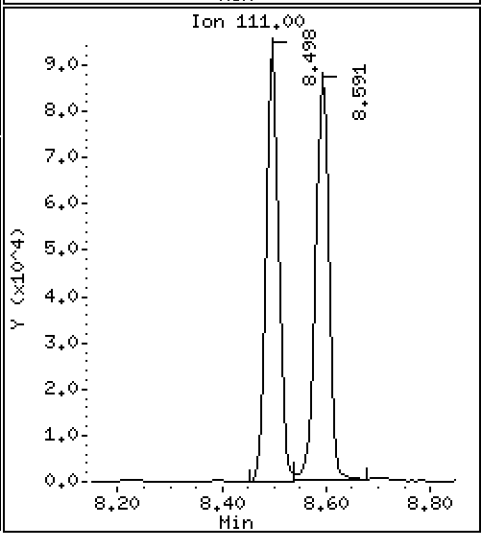


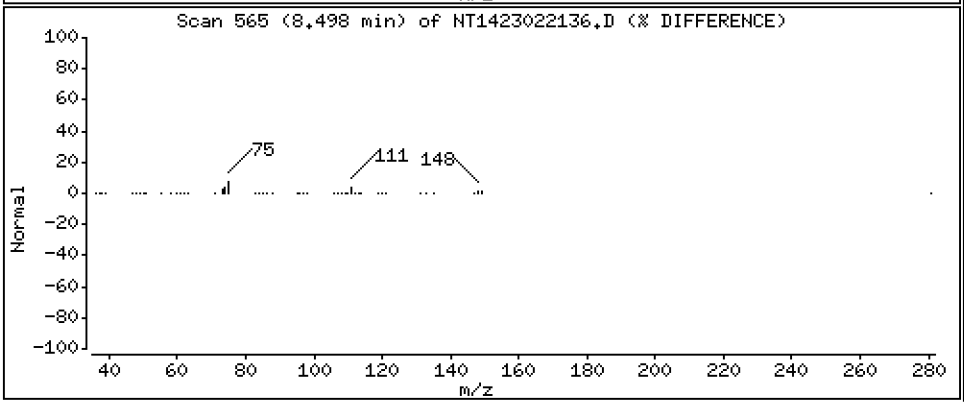












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

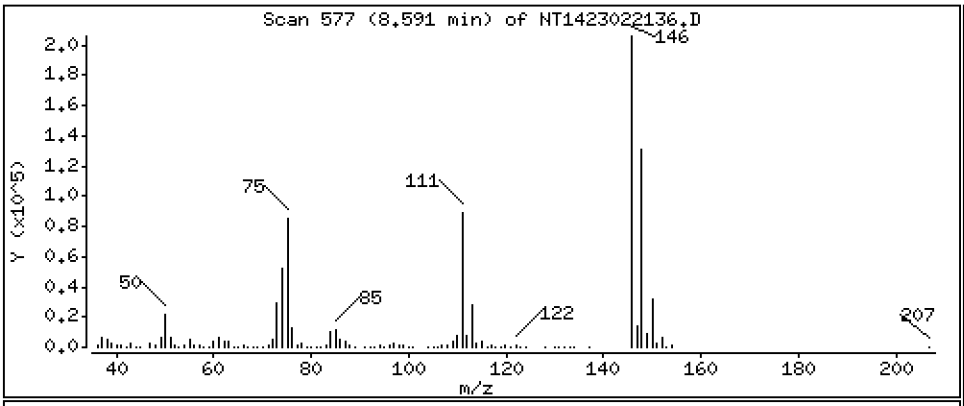
Operator: DSD

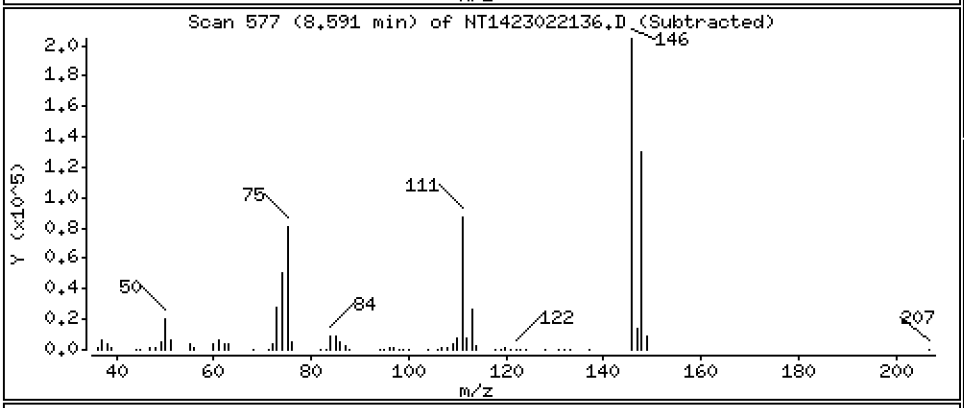
Column phase: ZB-5msi

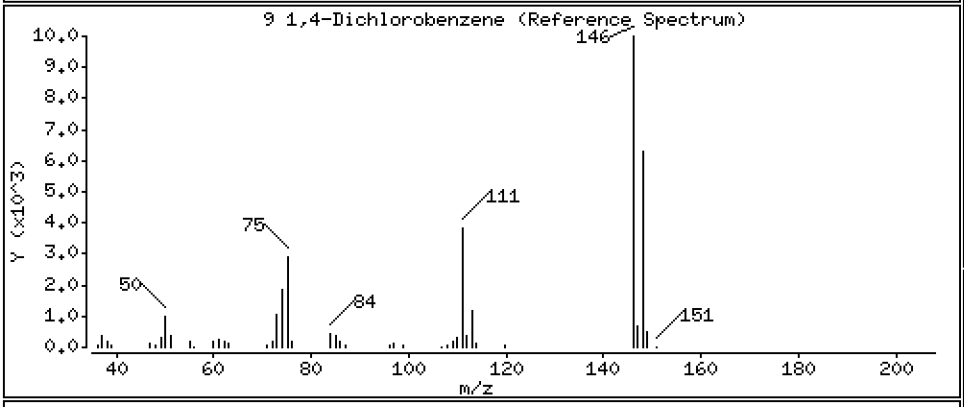
Column diameter: 0.25

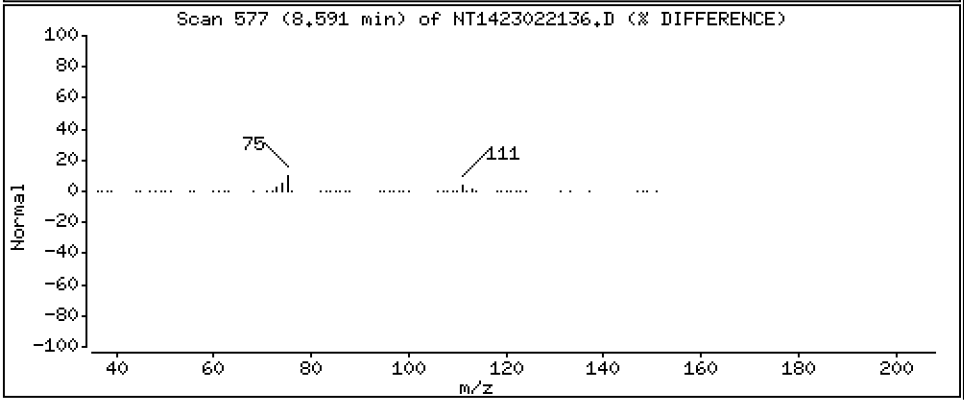
9 1,4-Dichlorobenzene

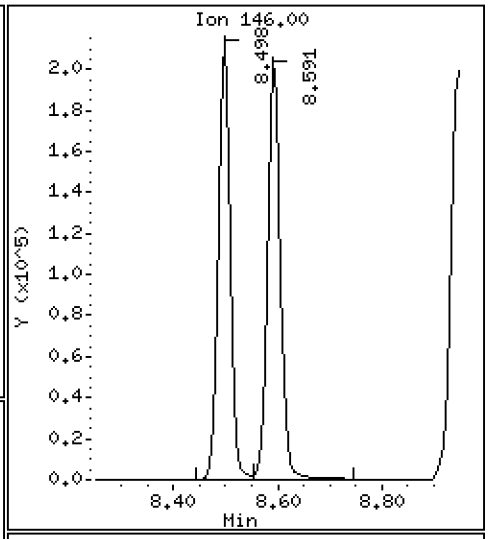
Concentration: 3.923 ug/mL

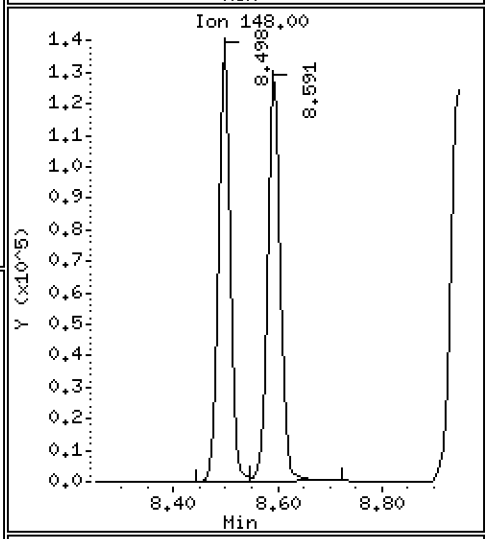


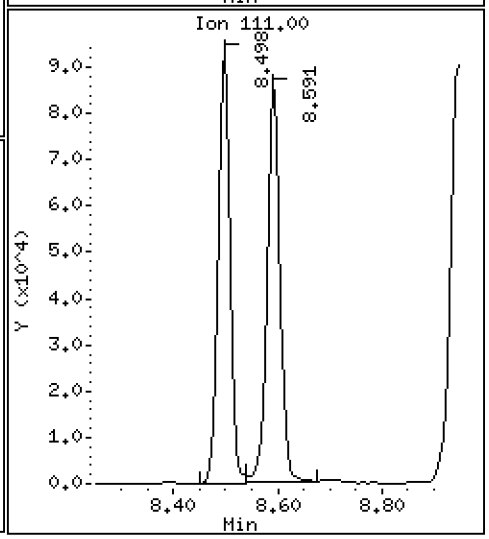












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

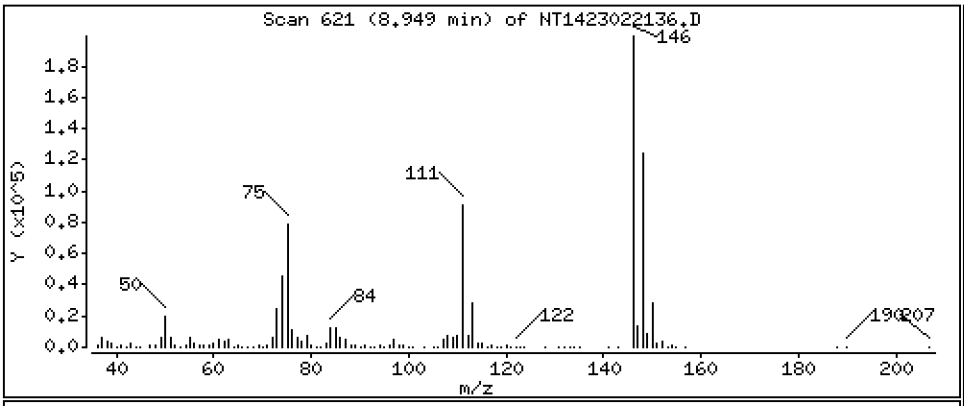
Operator: DSD

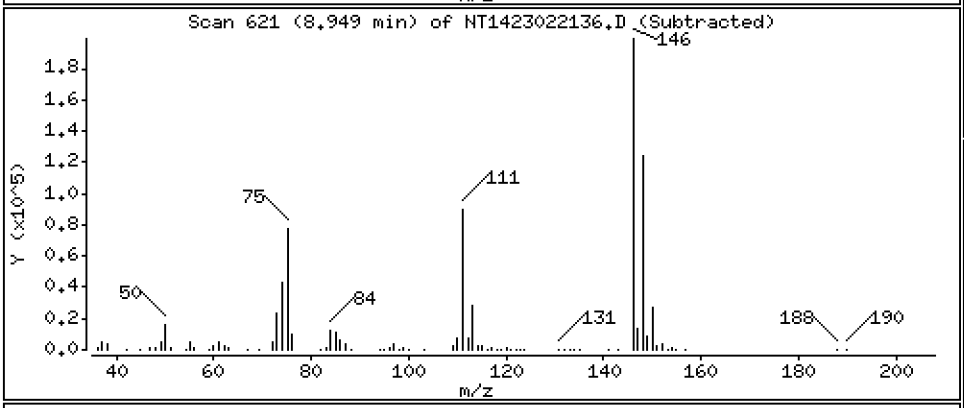
Column phase: ZB-5msi

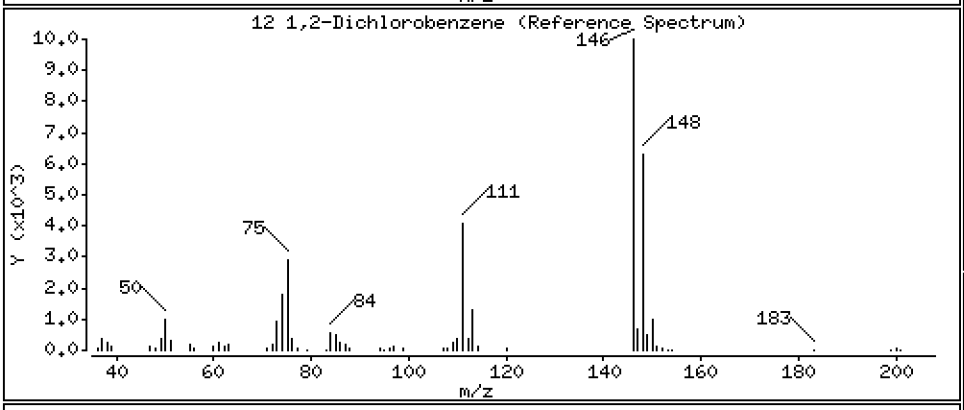
Column diameter: 0.25

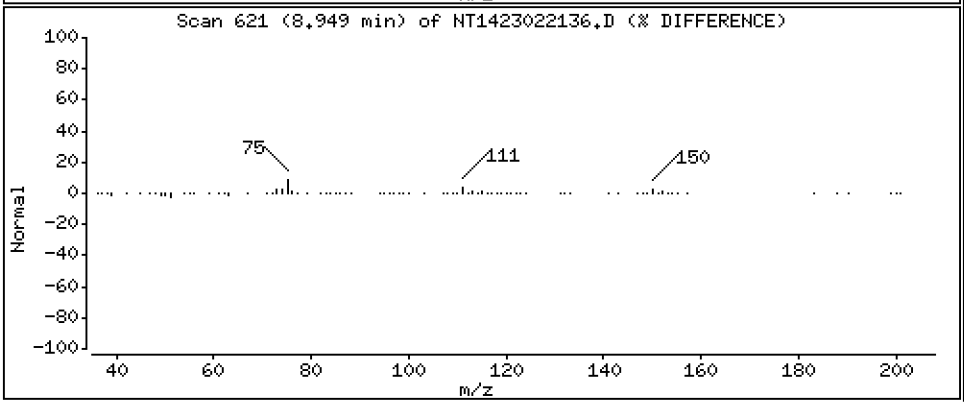
12 1,2-Dichlorobenzene

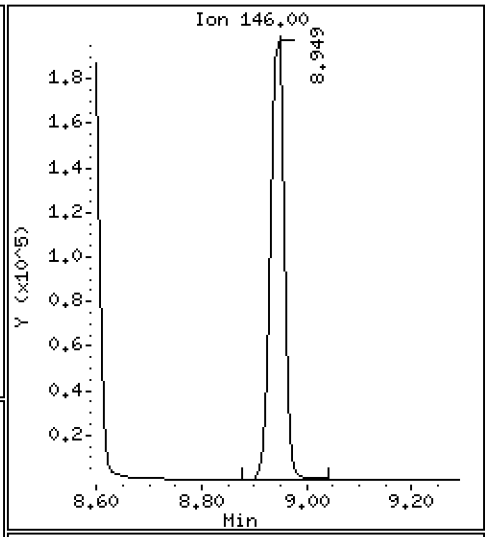
Concentration: 3.567 ug/mL

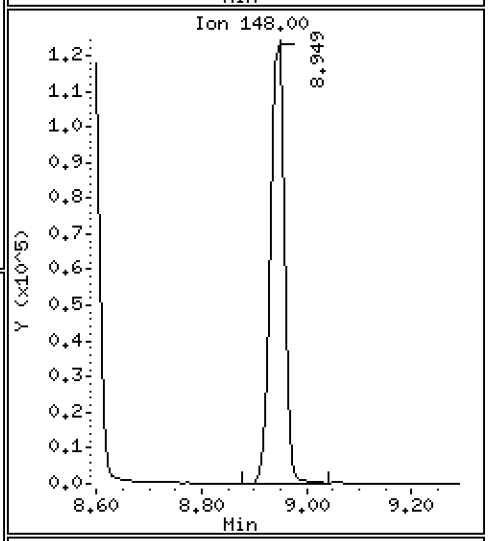


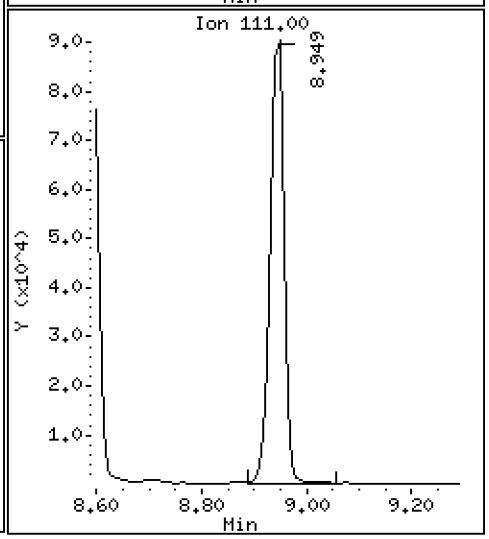












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

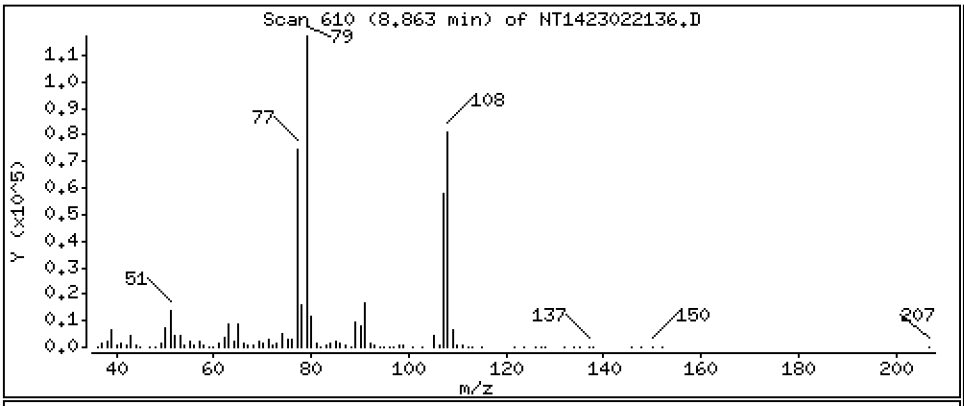
Operator: DSD

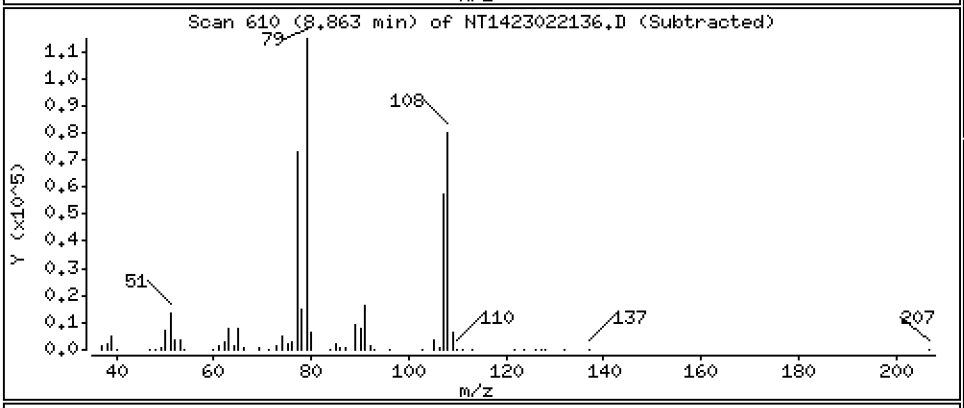
Column phase: ZB-5msi

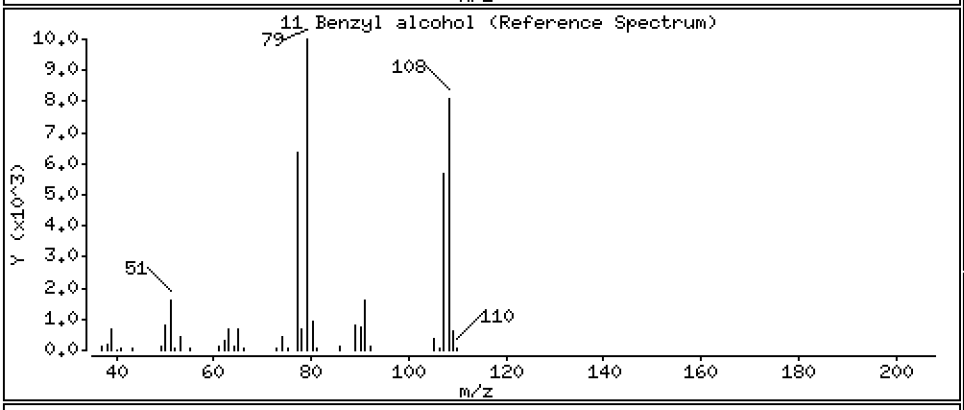
Column diameter: 0.25

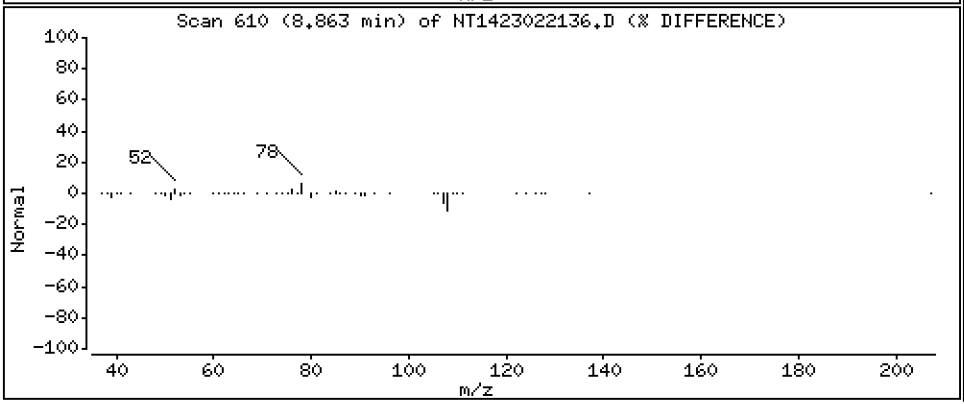
11 Benzyl alcohol

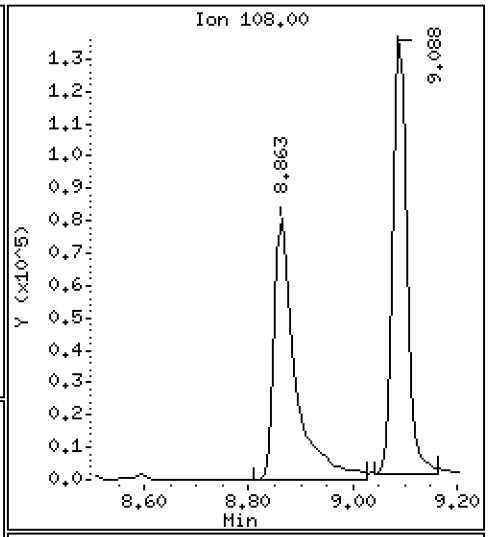
Concentration: 3.049 ug/mL

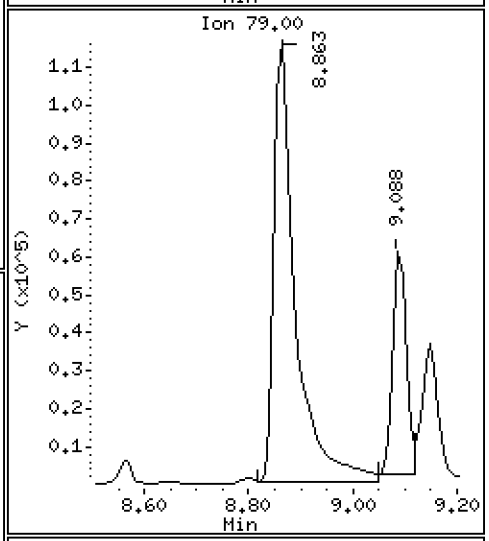


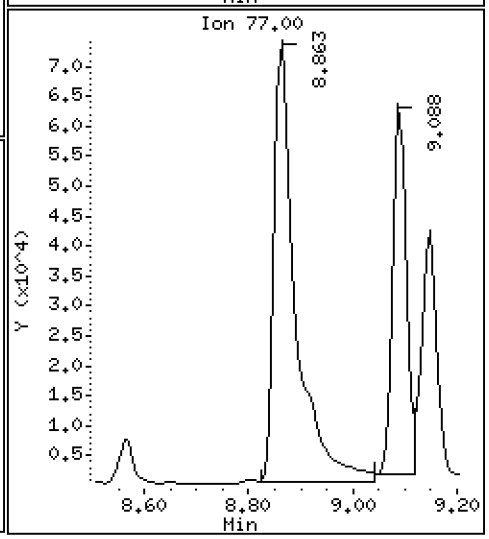












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

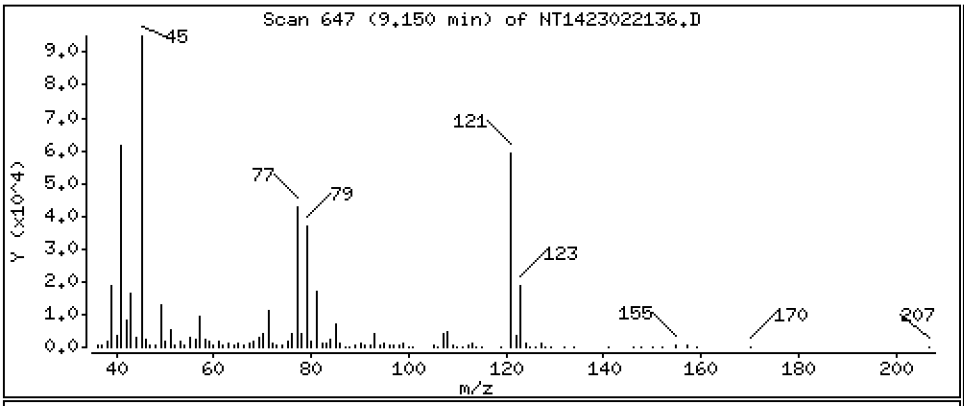
Operator: DSD

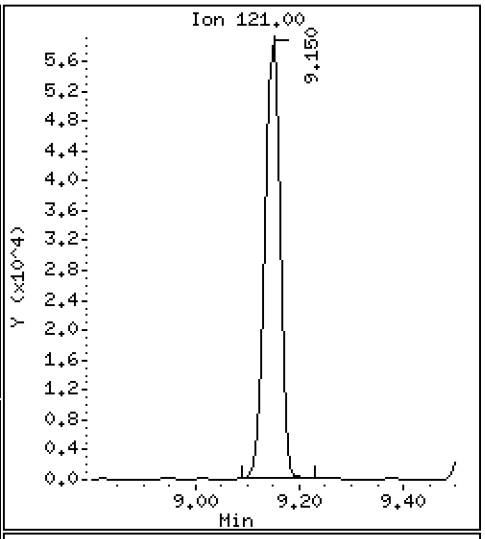
Column phase: ZB-5msi

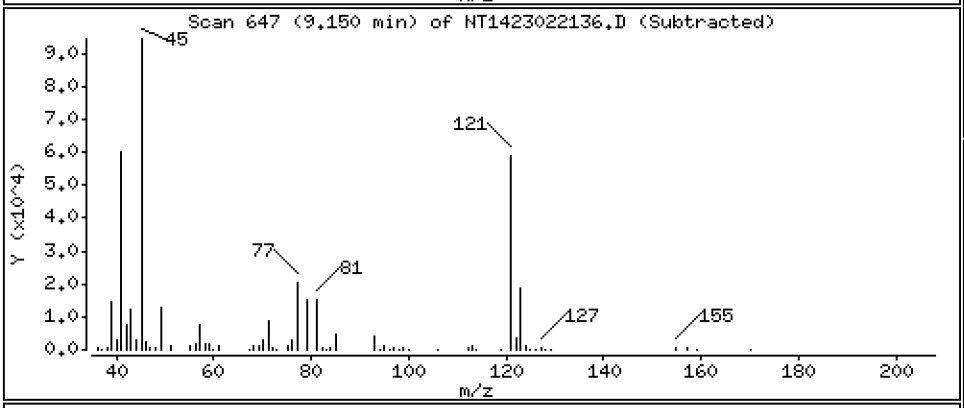
Column diameter: 0.25

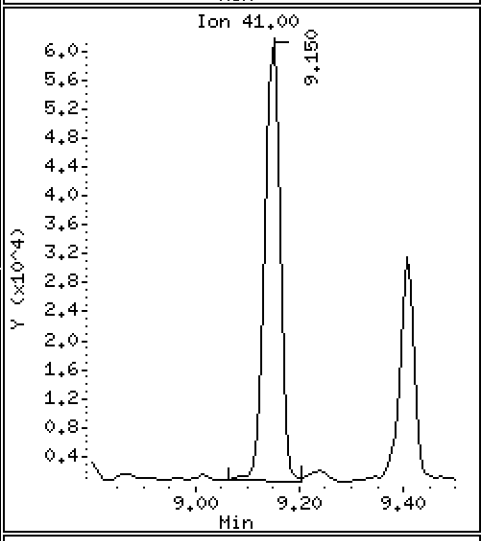
14 2,2'-oxybis(1-Chloropropane)

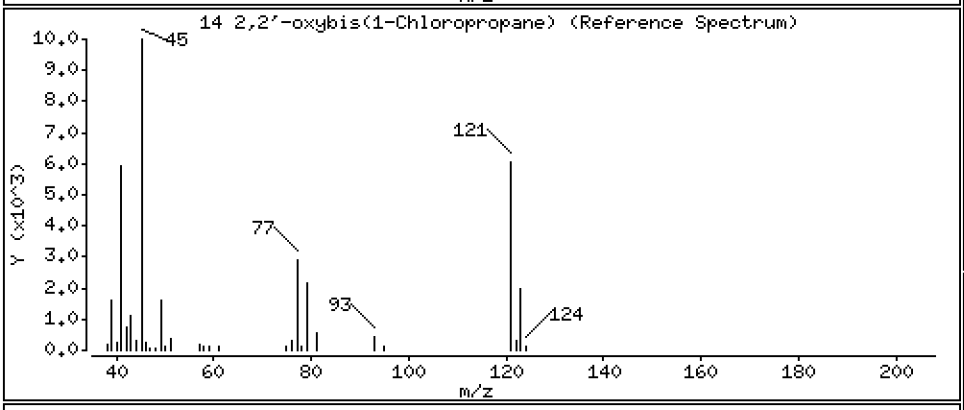
Concentration: 4.174 ug/mL

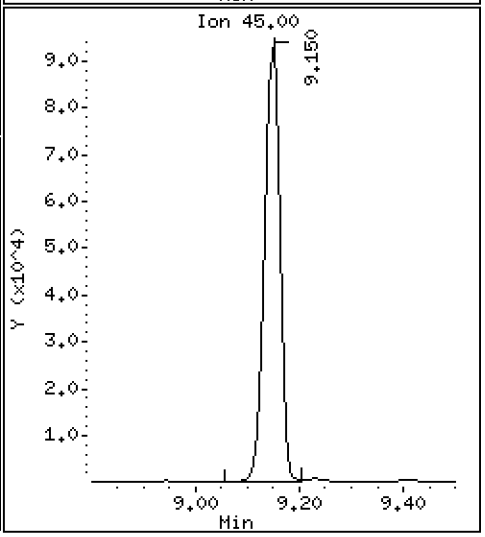


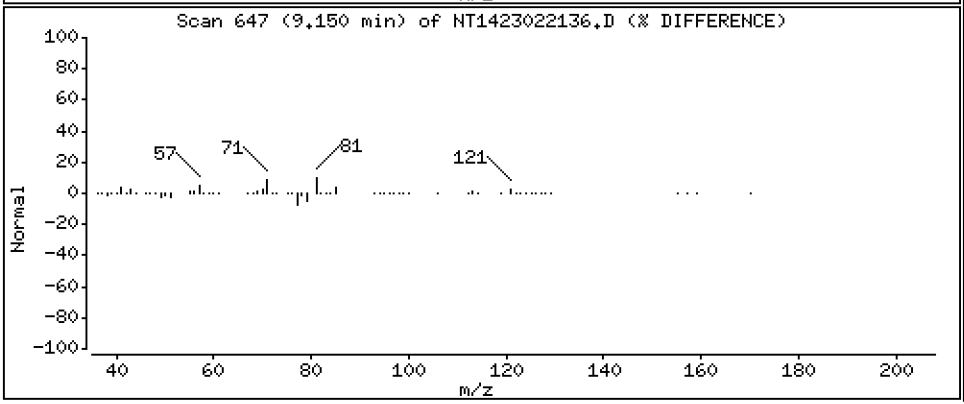












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

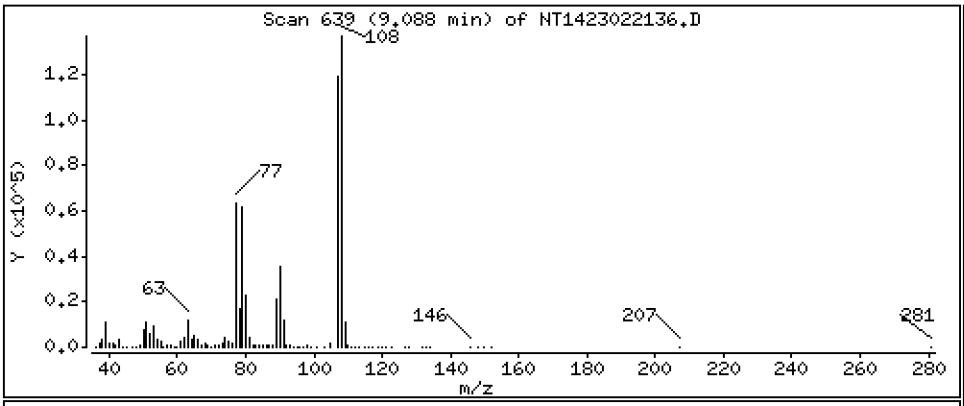
Operator: DSD

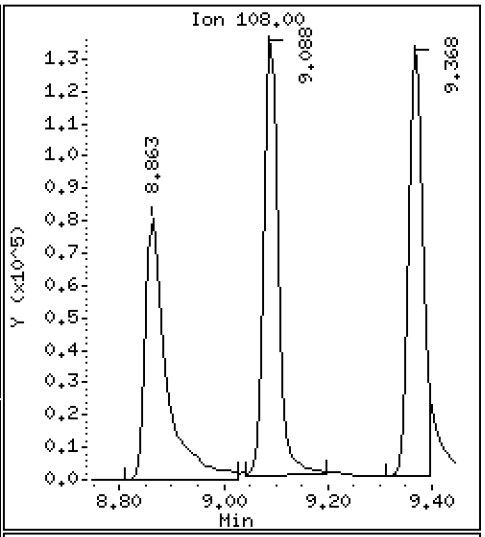
Column phase: ZB-5msi

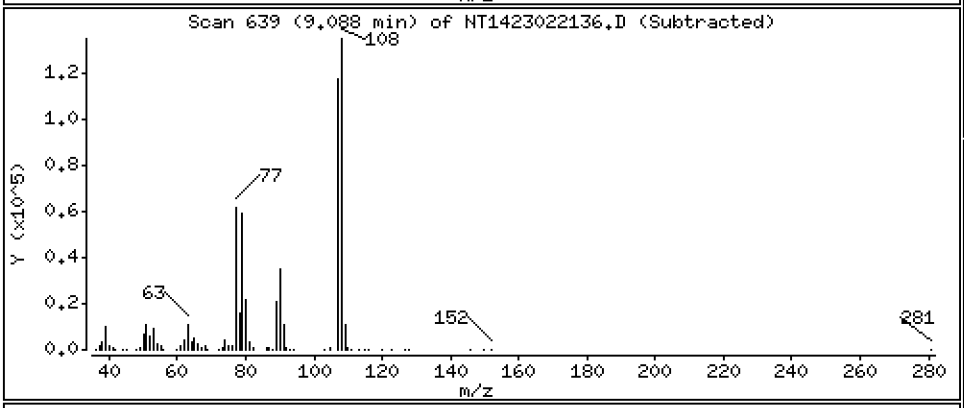
Column diameter: 0.25

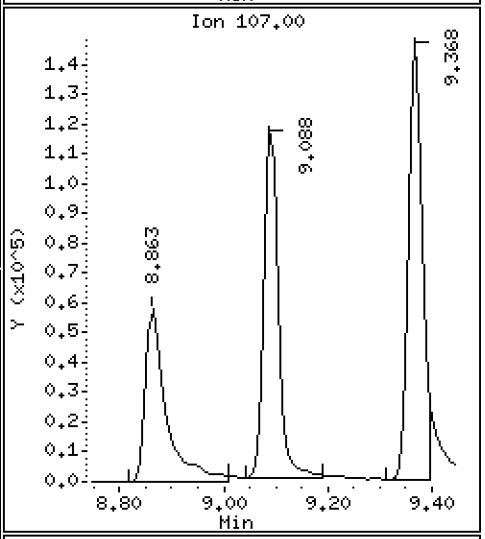
13 2-Methylphenol

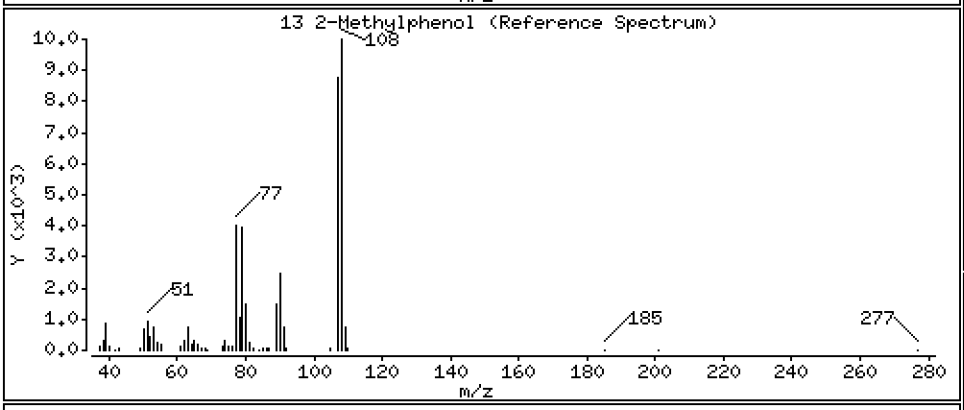
Concentration: 2.729 ug/mL

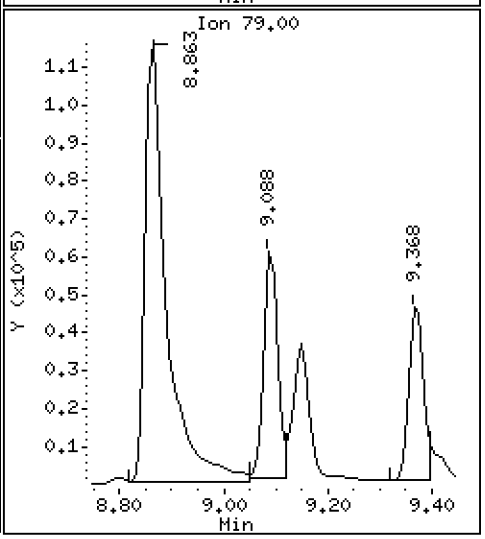


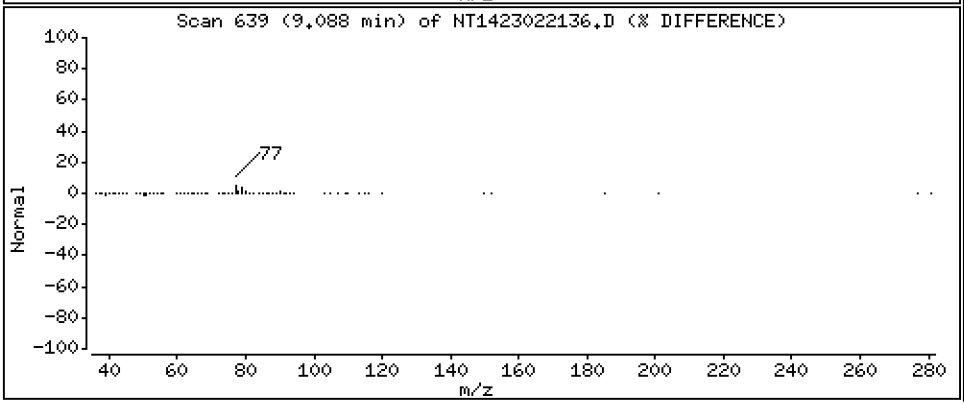












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

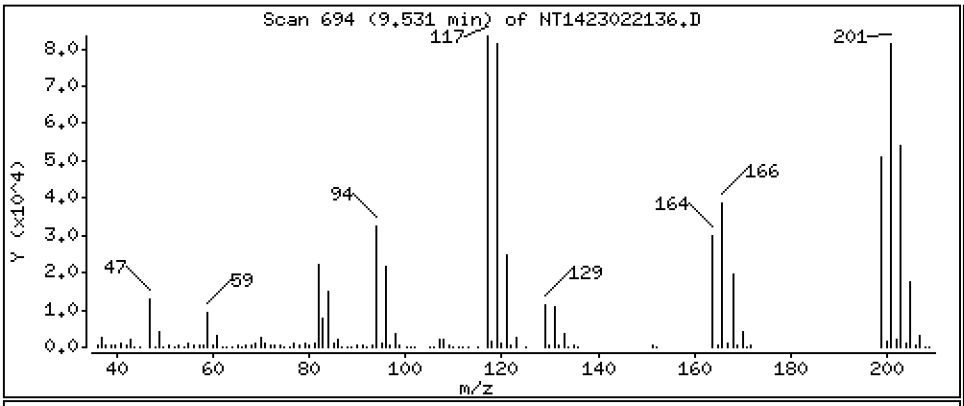
Operator: DSD

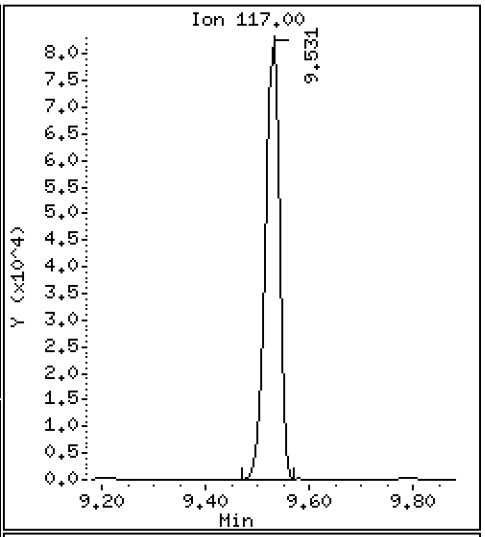
Column phase: ZB-5msi

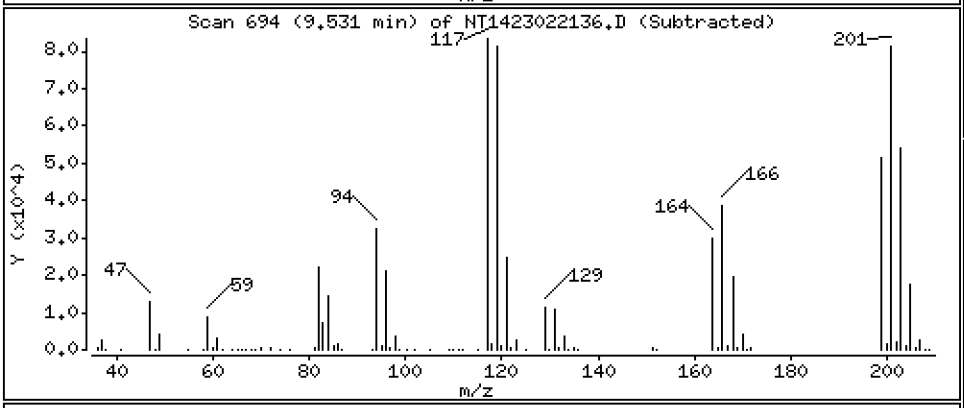
Column diameter: 0.25

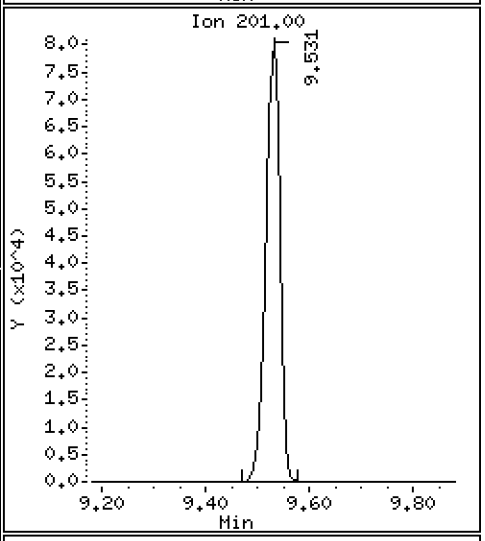
17 Hexachloroethane

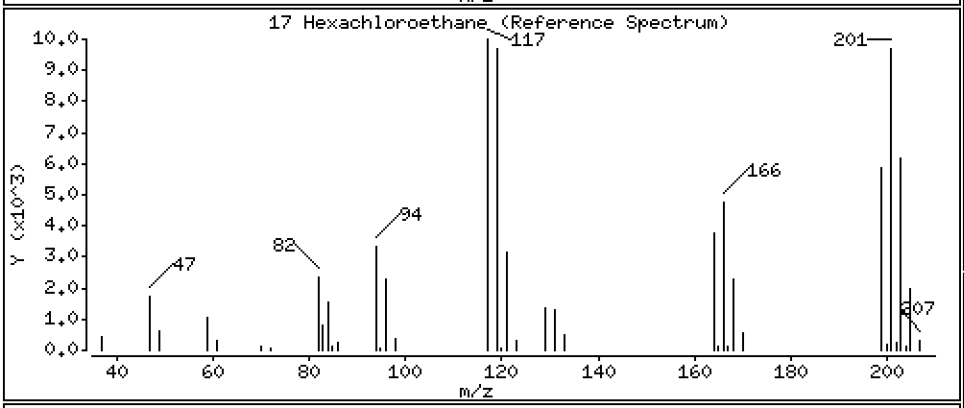
Concentration: 3.556 ug/mL

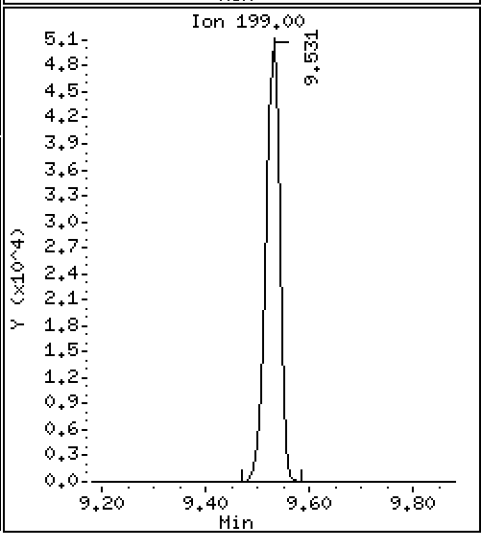


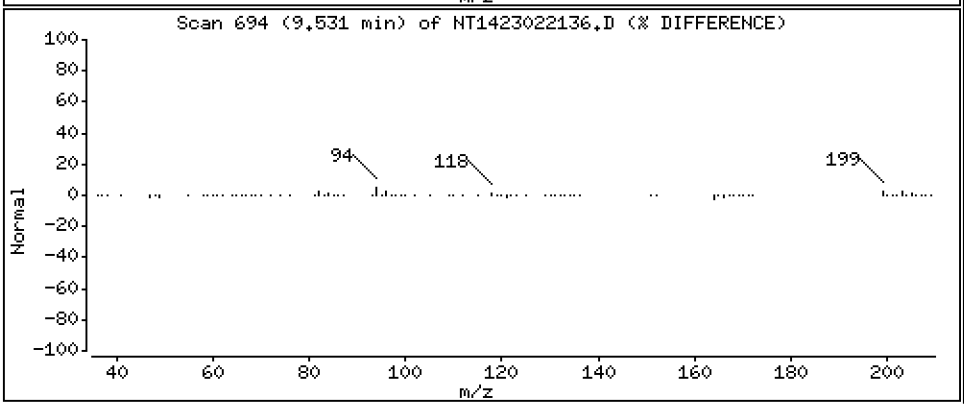












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

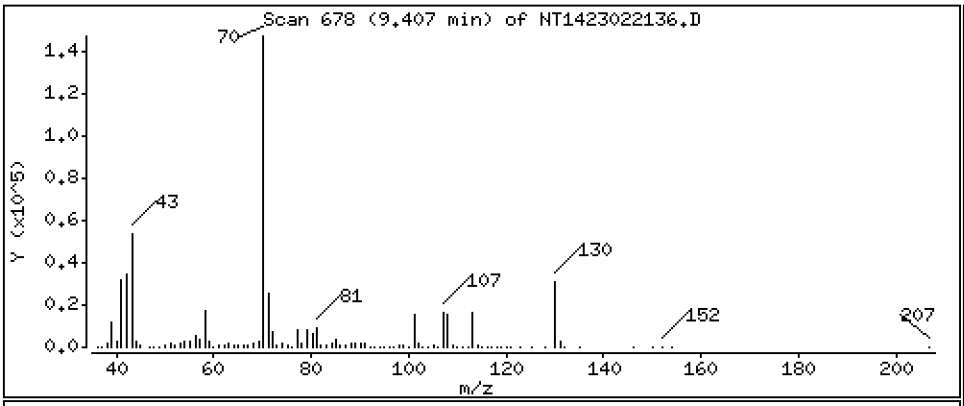
Operator: DSD

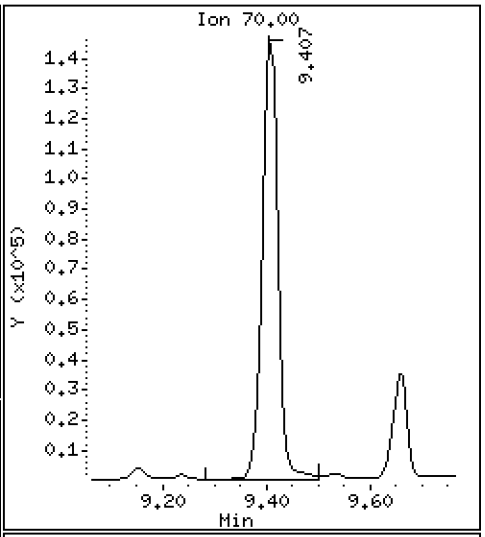
Column phase: ZB-5msi

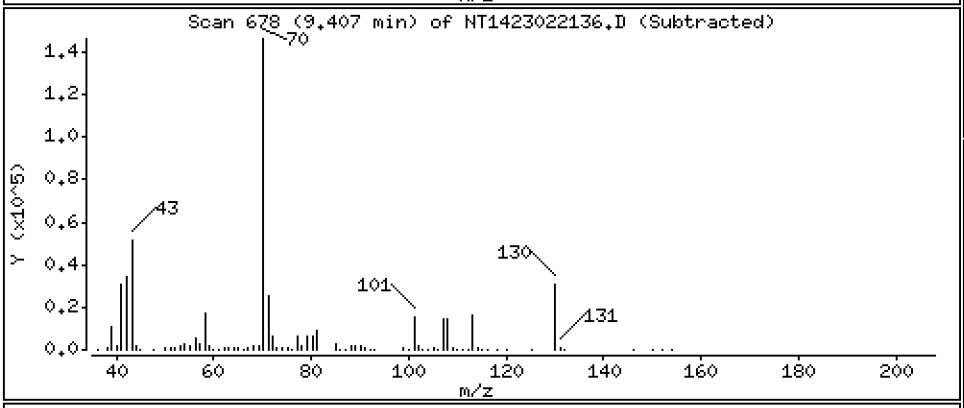
Column diameter: 0.25

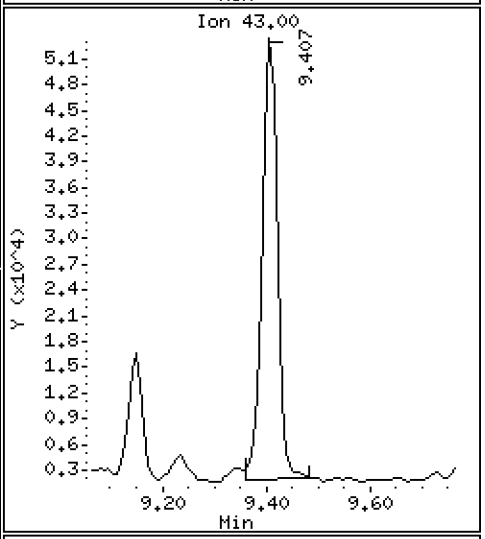
16 N-Nitroso-di-n-propylamine

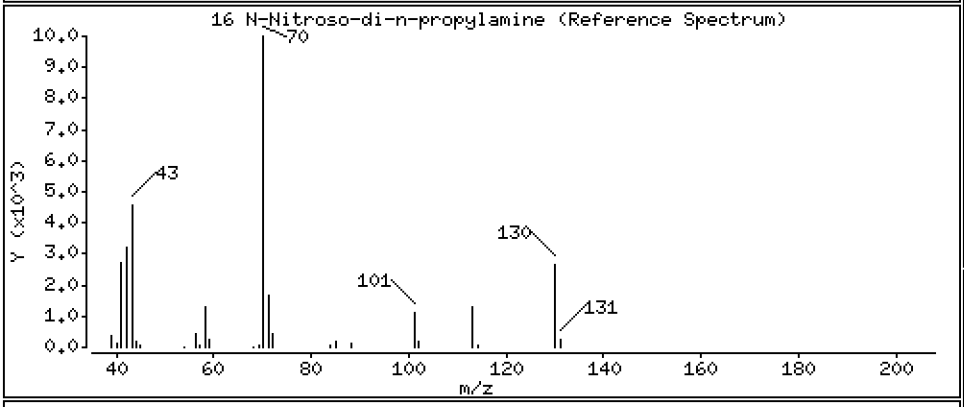
Concentration: 3.853 ug/mL

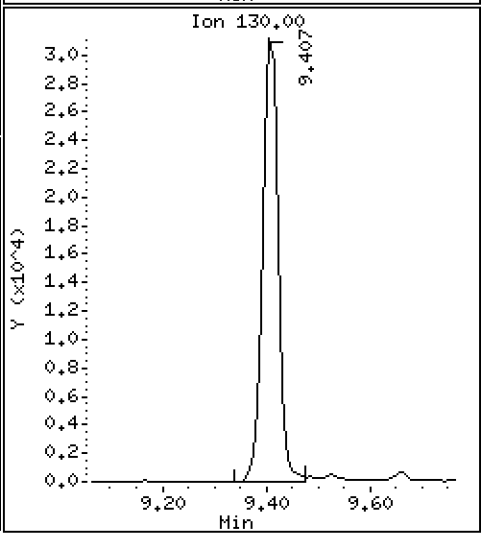


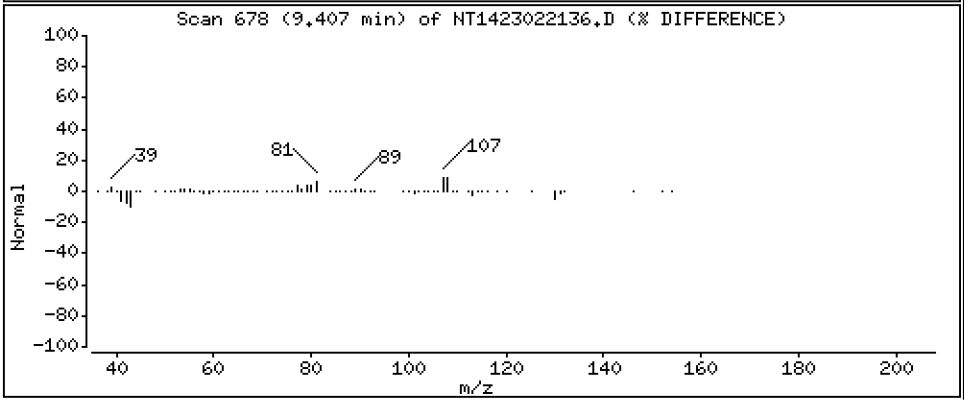












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

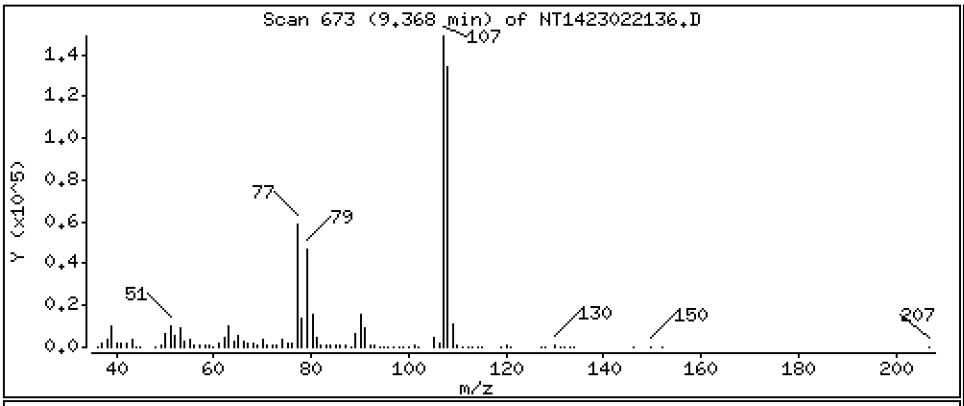
Operator: DSD

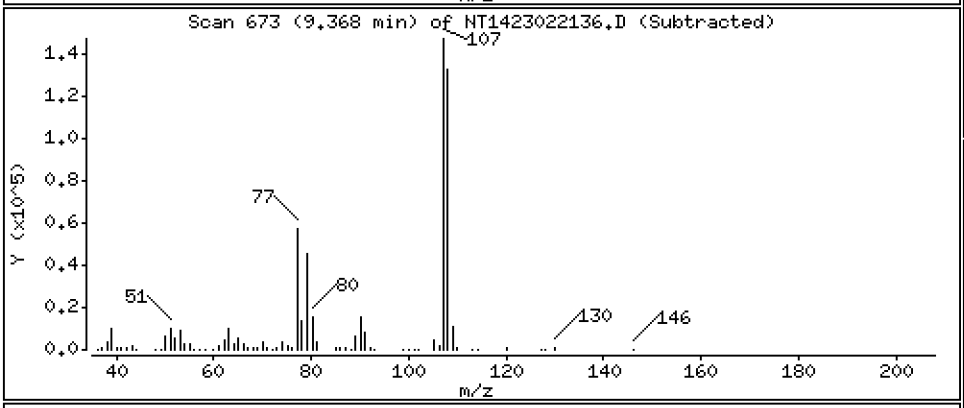
Column phase: ZB-5msi

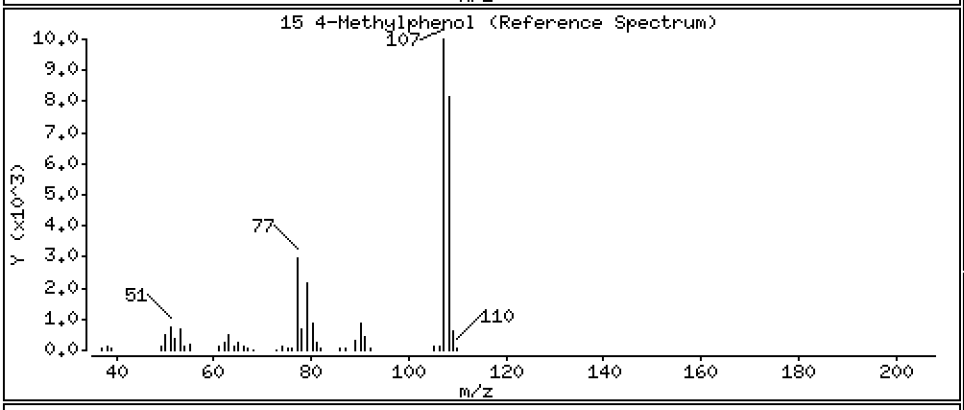
Column diameter: 0.25

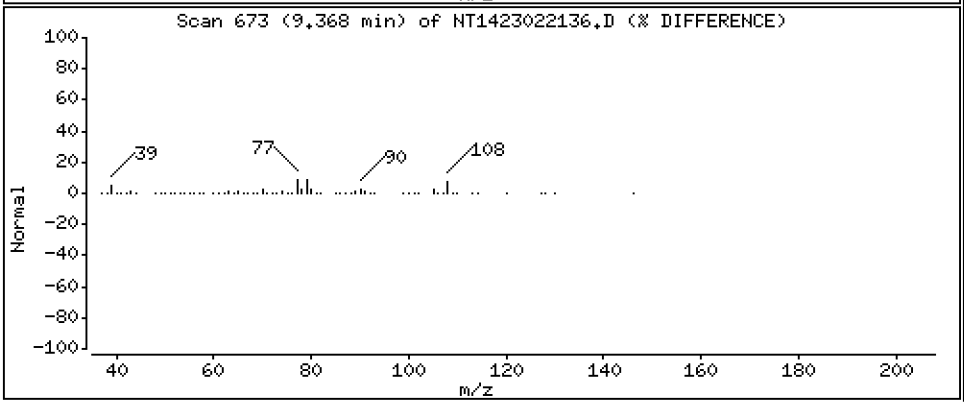
15 4-Methylphenol

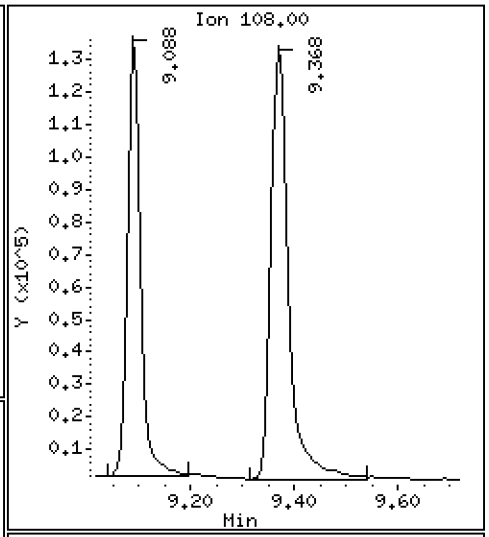
Concentration: 3.177 ug/mL

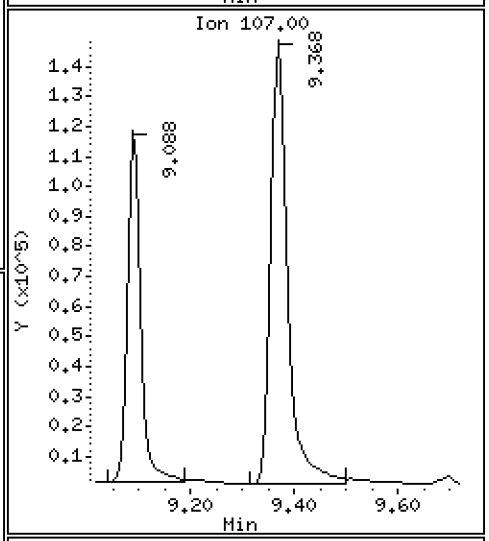


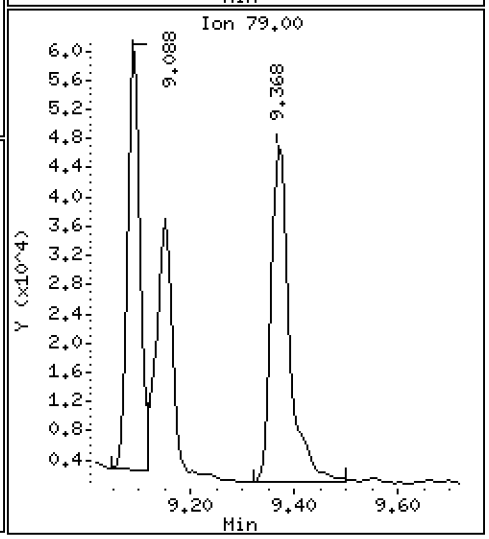












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

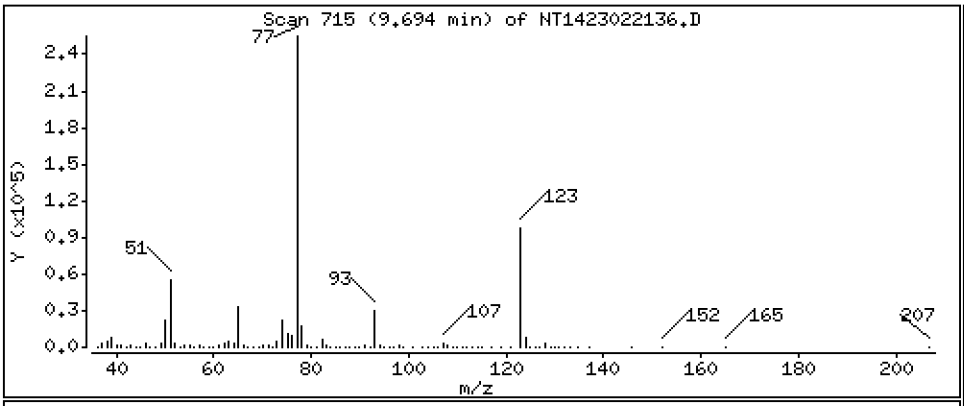
Operator: DSD

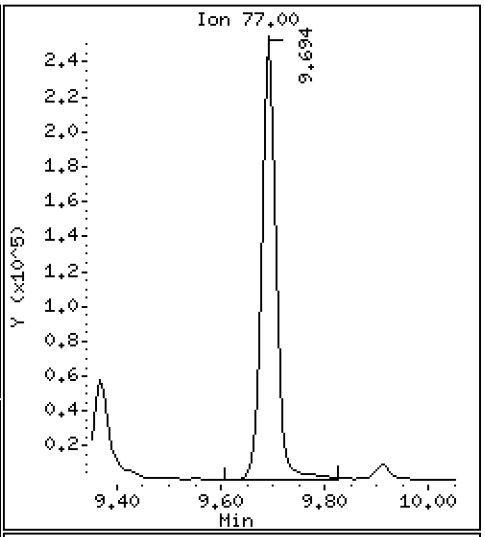
Column phase: ZB-5msi

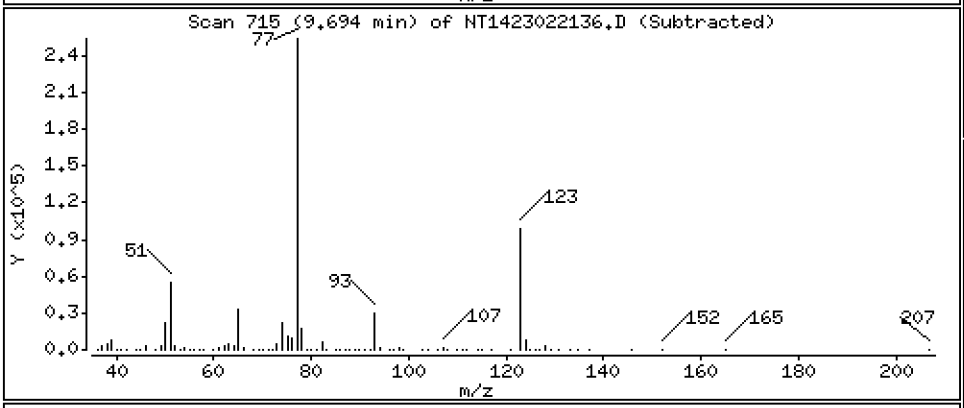
Column diameter: 0.25

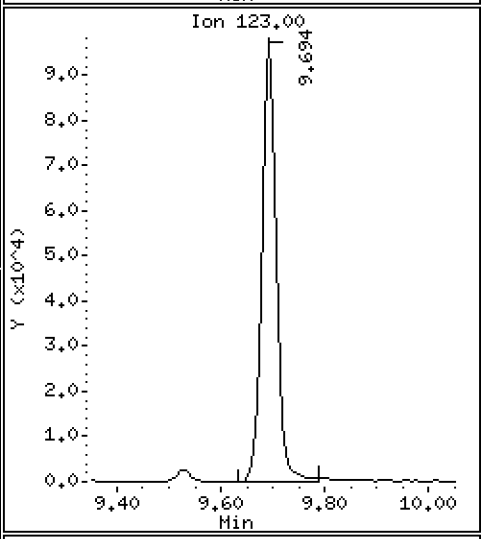
19 Nitrobenzene

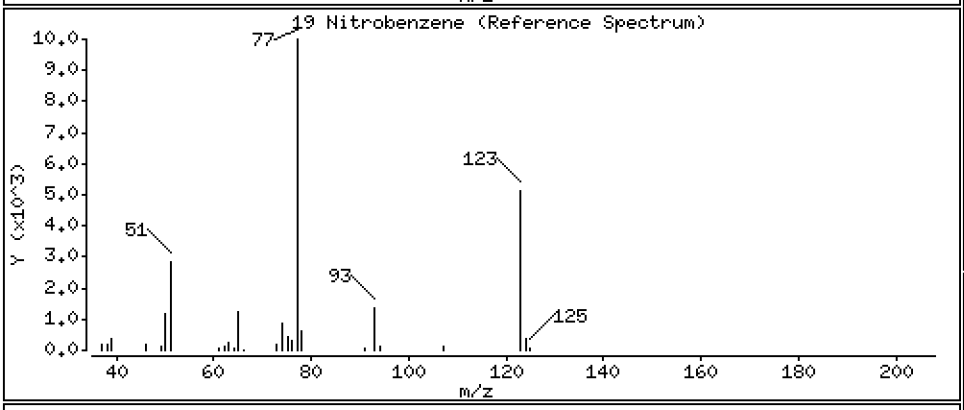
Concentration: 3.839 ug/mL

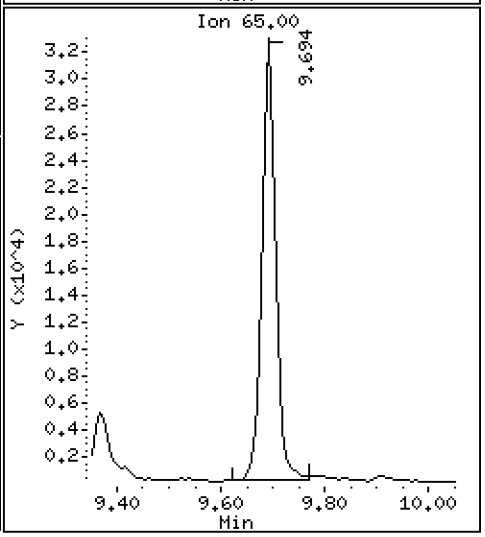


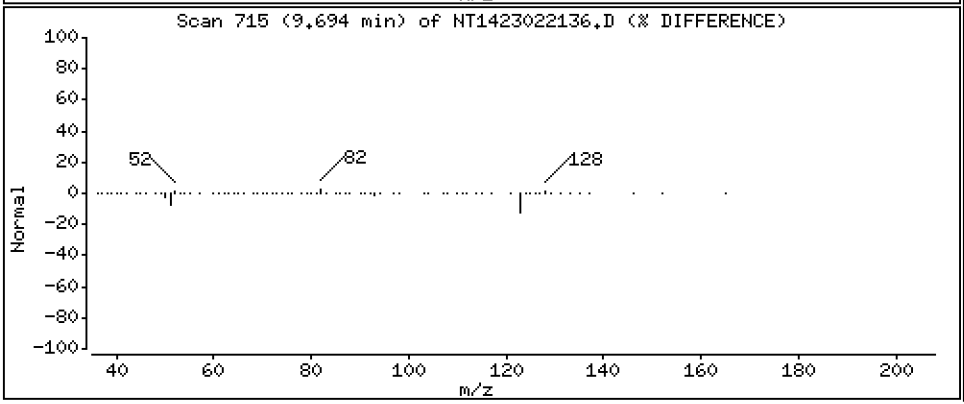












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

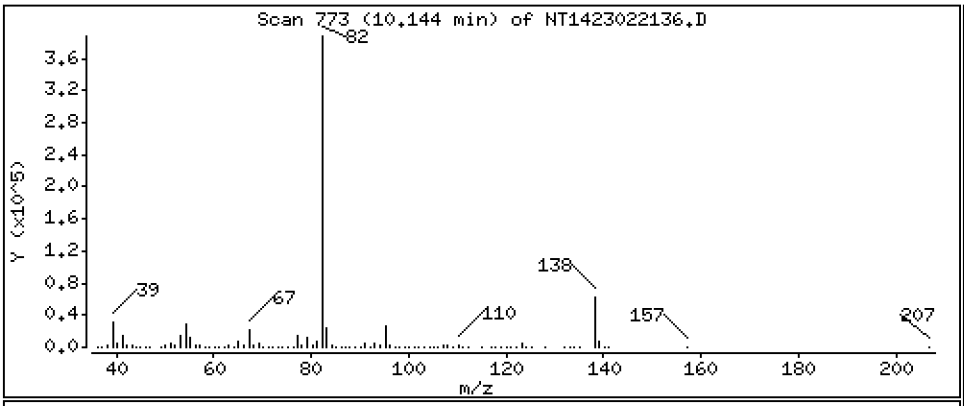
Operator: DSD

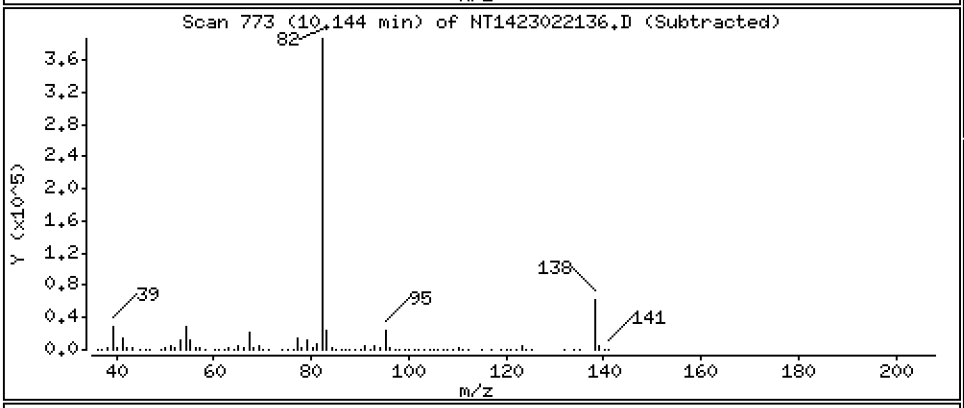
Column phase: ZB-5msi

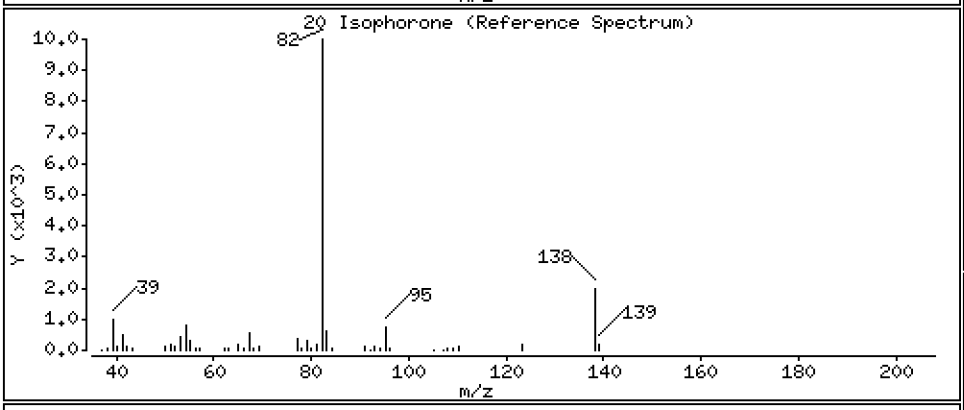
Column diameter: 0.25

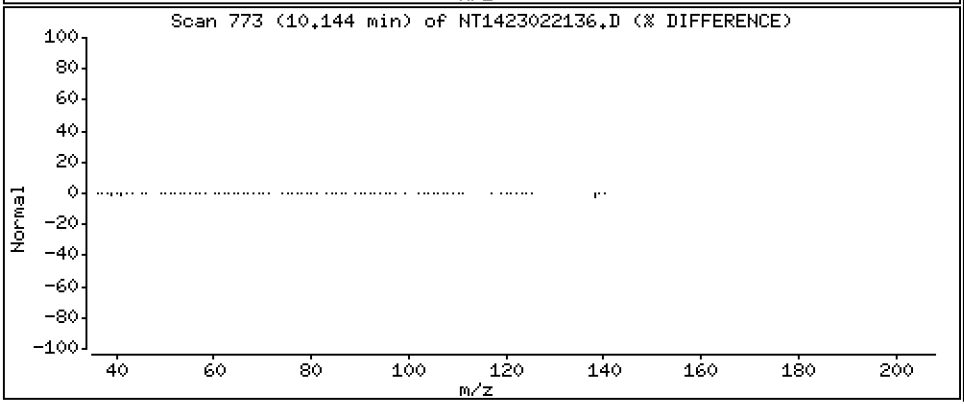
20 Isophorone

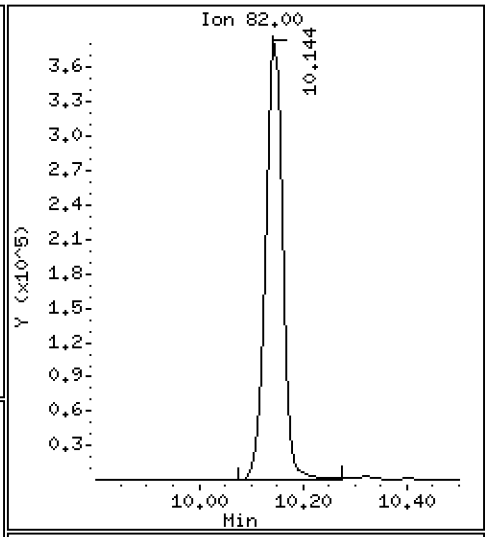
Concentration: 5.574 ug/mL

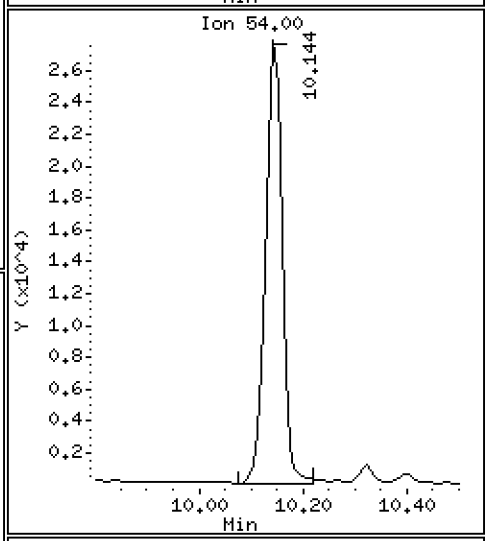


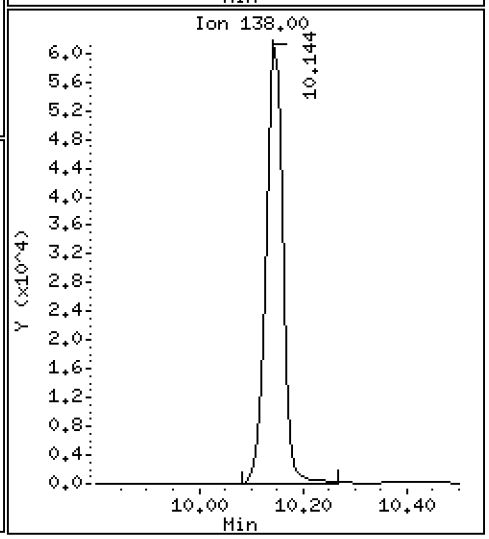












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

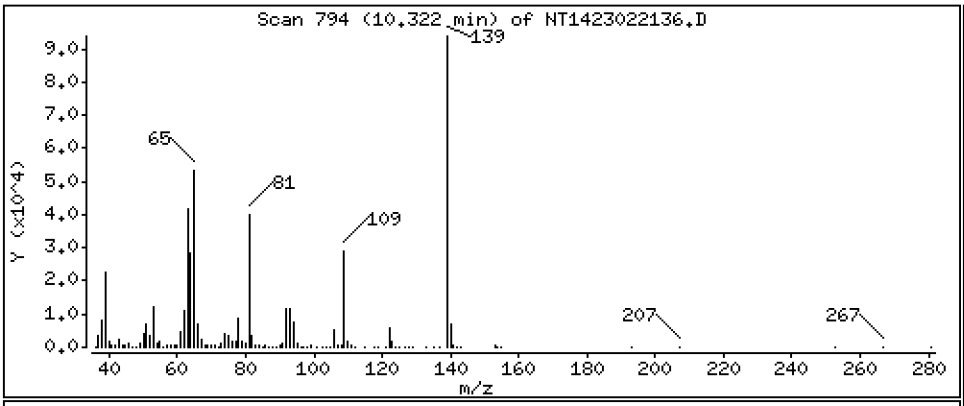
Operator: DSD

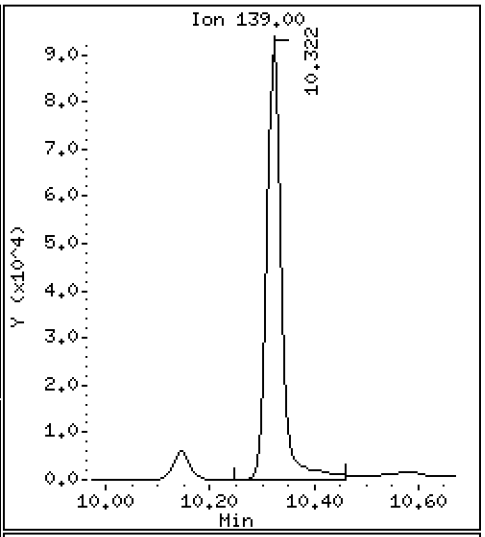
Column phase: ZB-5msi

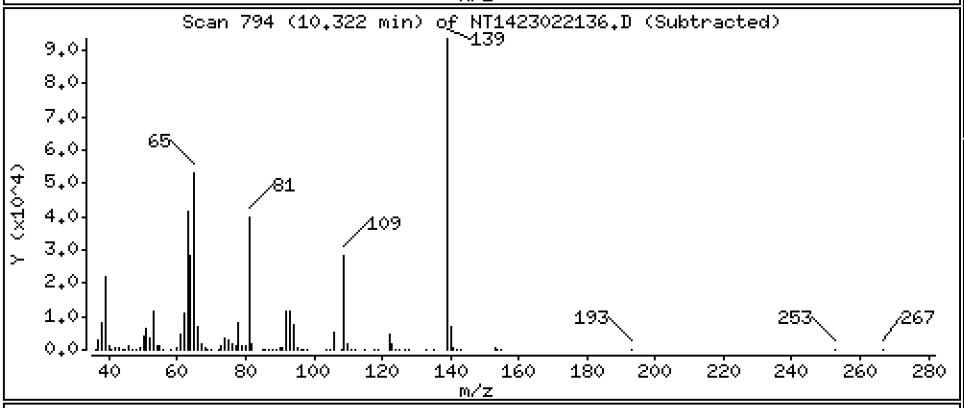
Column diameter: 0.25

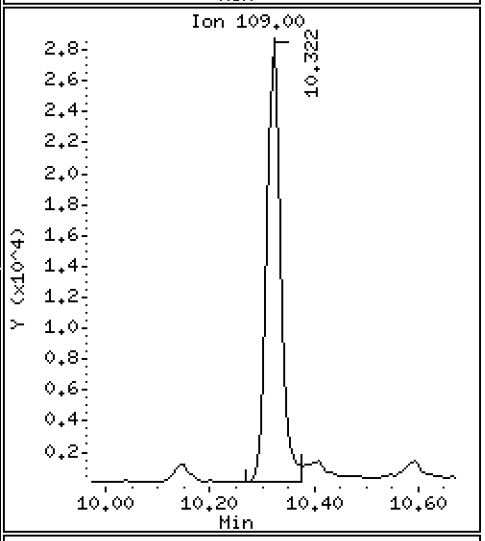
21 2-Nitrophenol

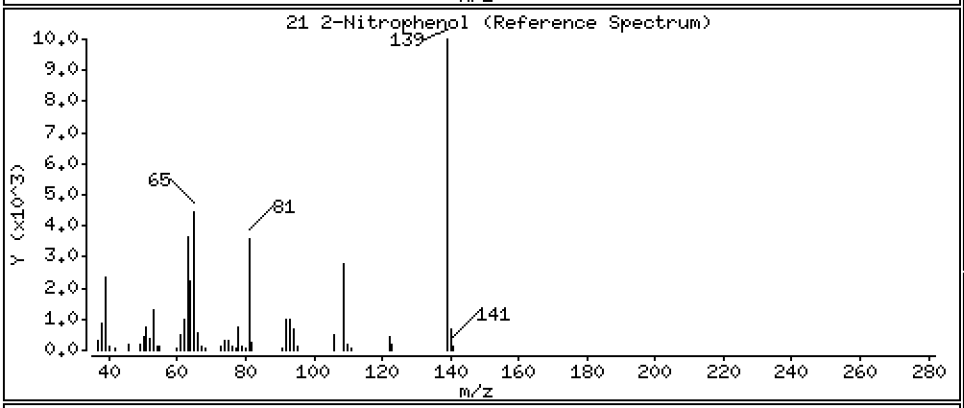
Concentration: 3.309 ug/mL

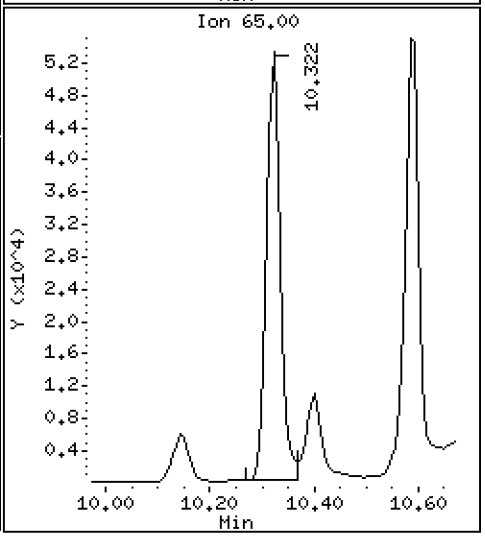


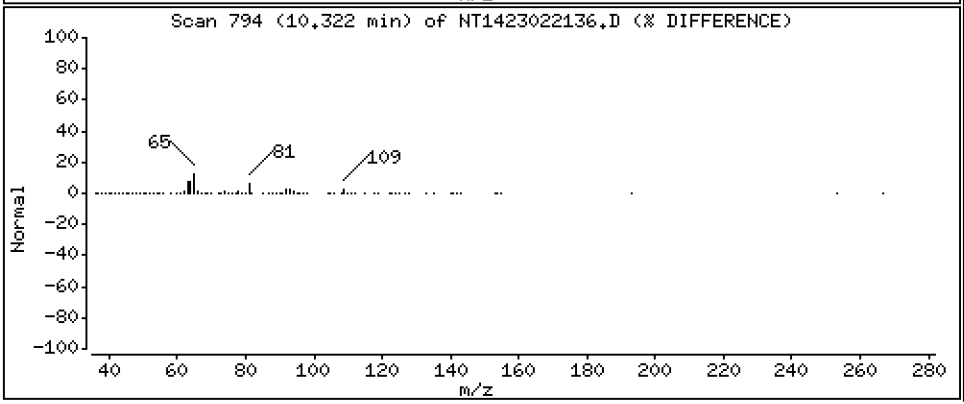












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

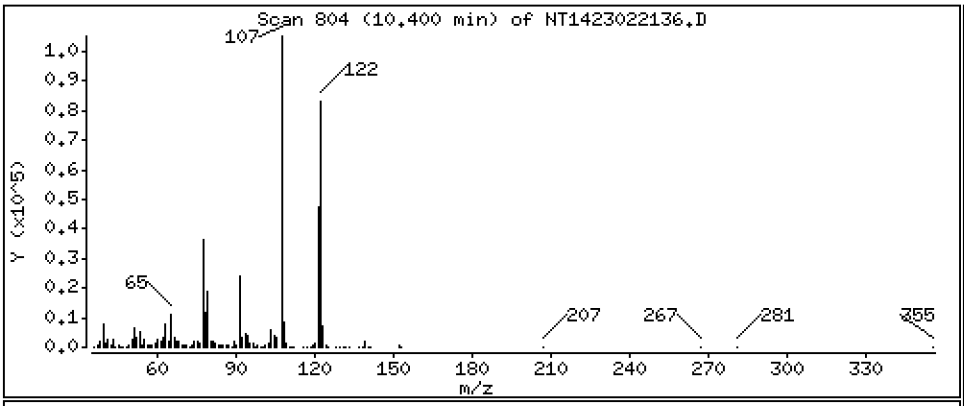
Operator: DSD

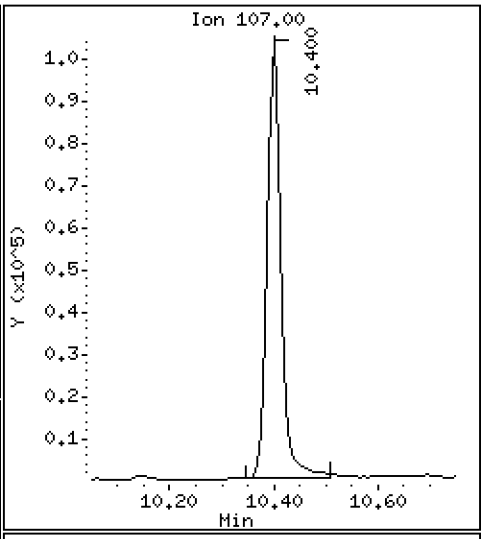
Column phase: ZB-5msi

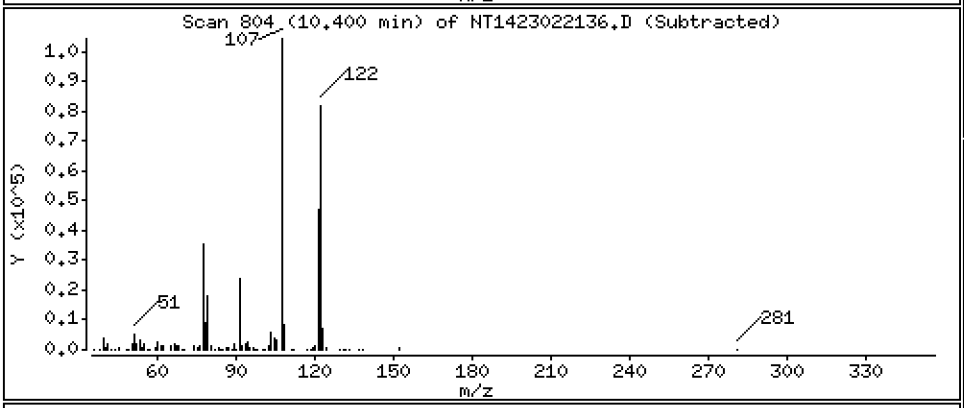
Column diameter: 0.25

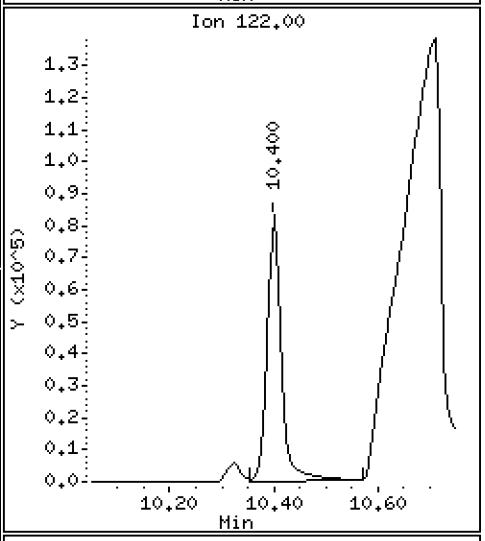
22 2,4-Dimethylphenol

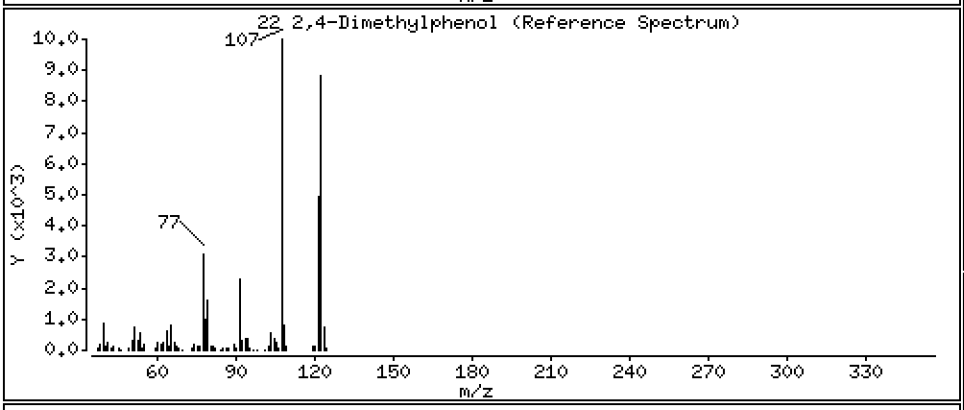
Concentration: 1.956 ug/mL

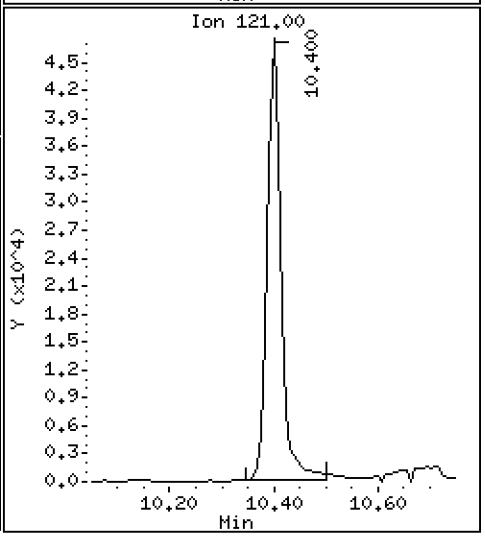


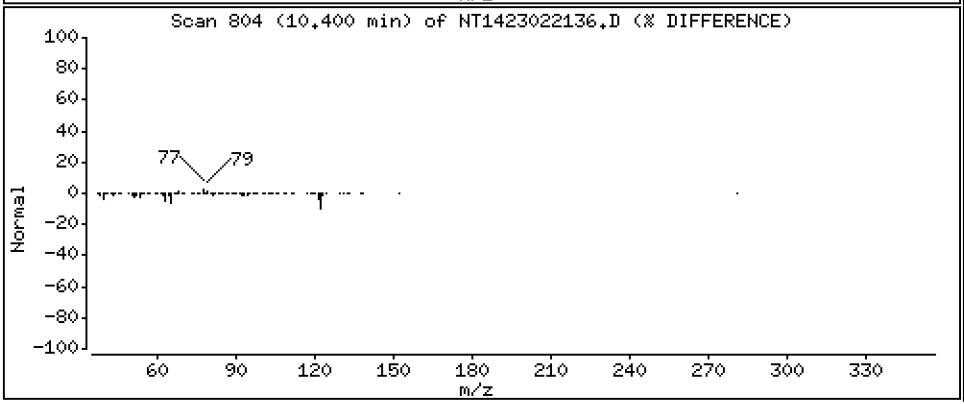












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

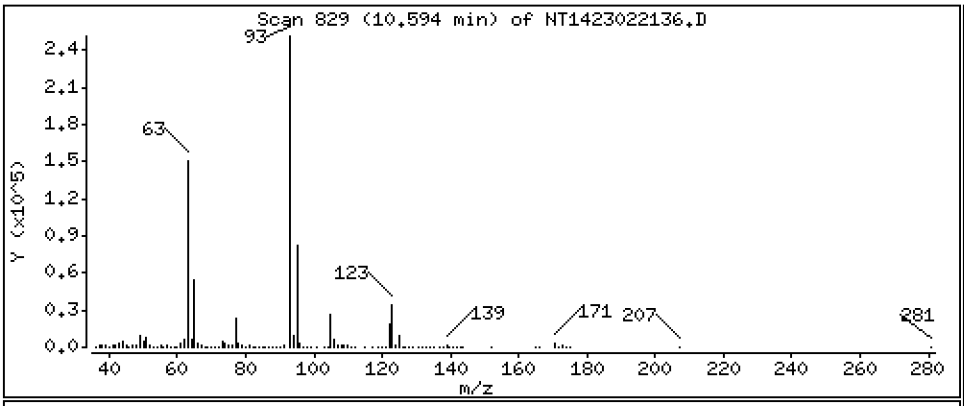
Operator: DSD

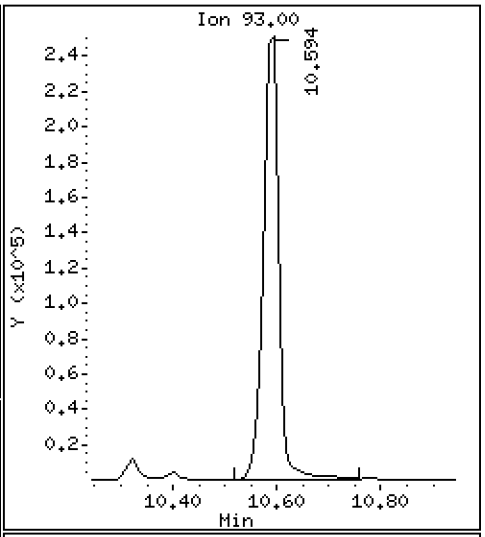
Column phase: ZB-5msi

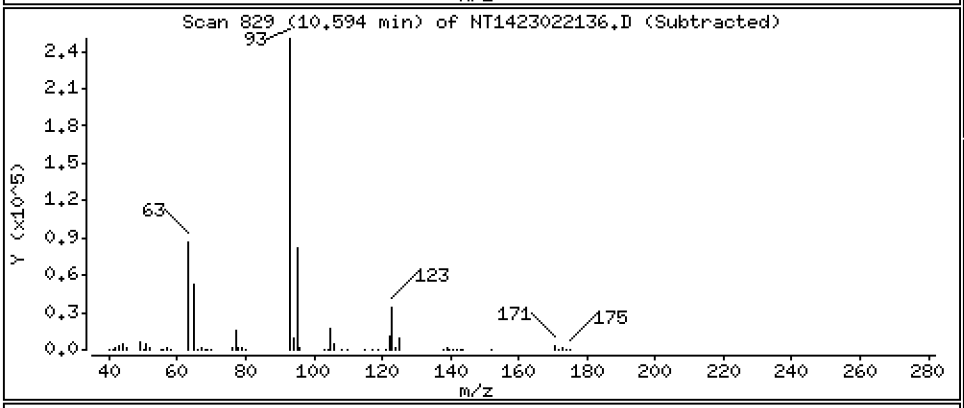
Column diameter: 0.25

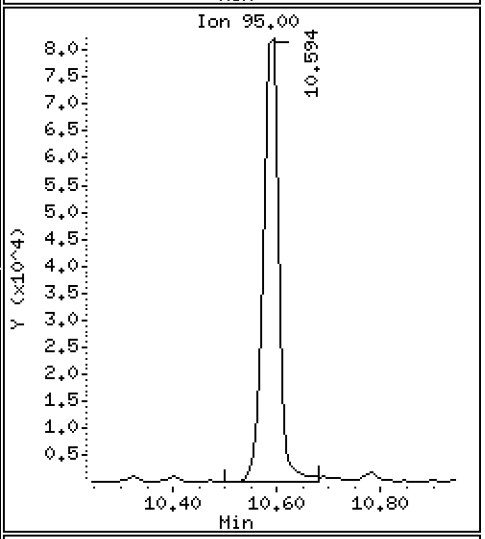
23 Bis(2-Chloroethoxy)methane

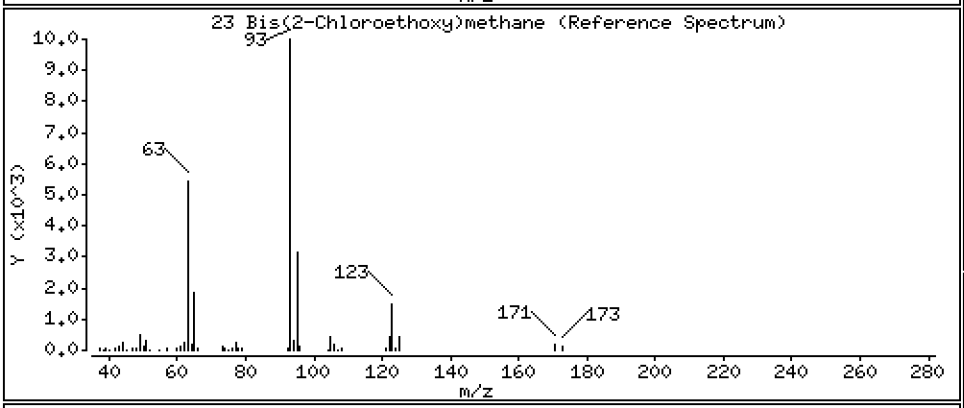
Concentration: 4.634 ug/mL

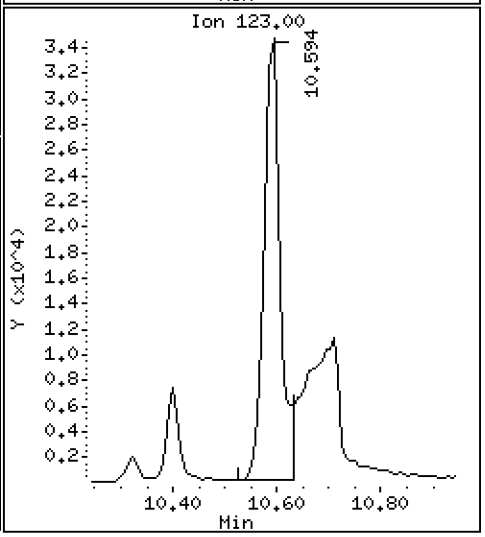


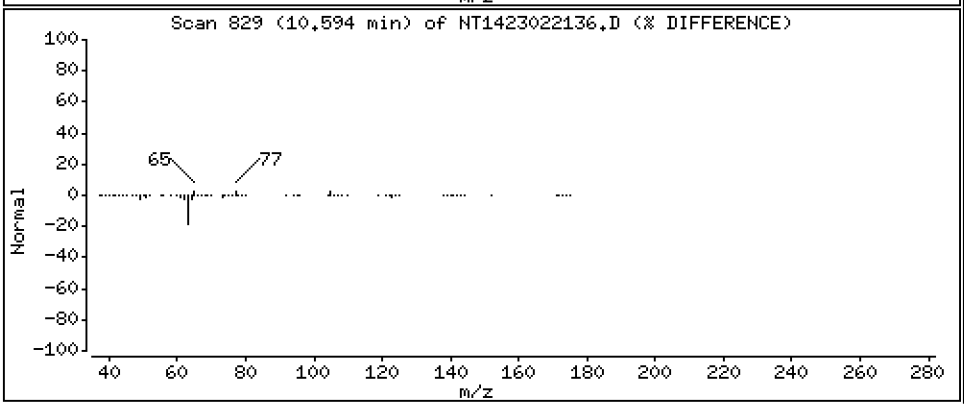












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

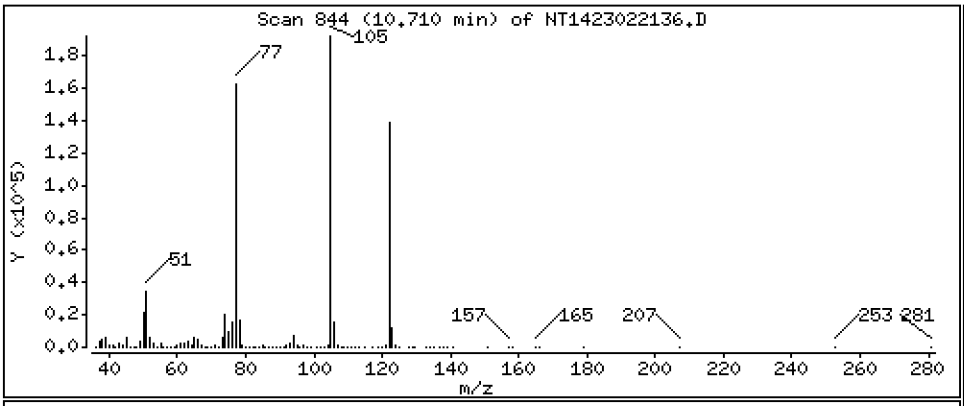
Operator: DSD

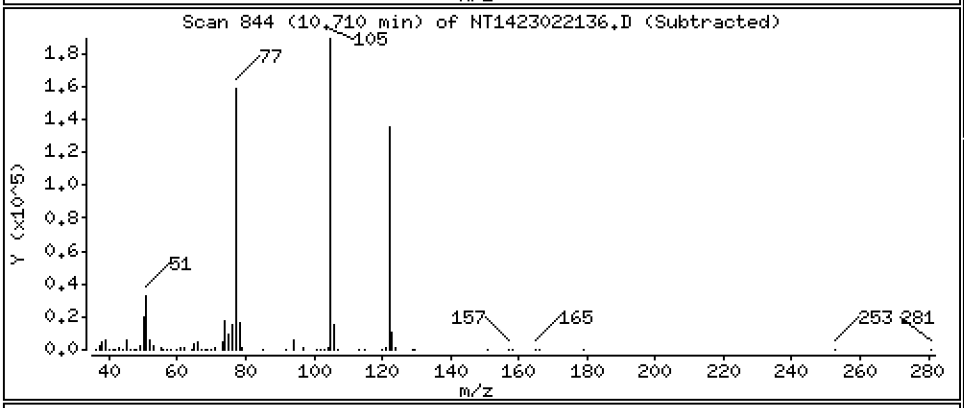
Column phase: ZB-5msi

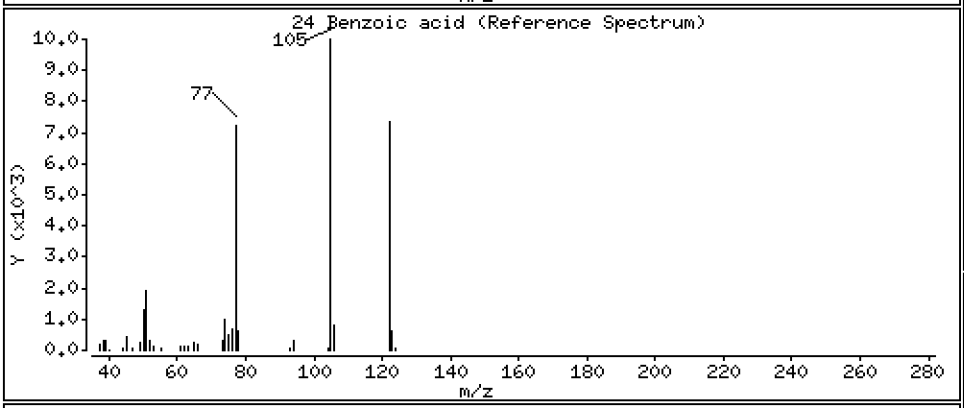
Column diameter: 0.25

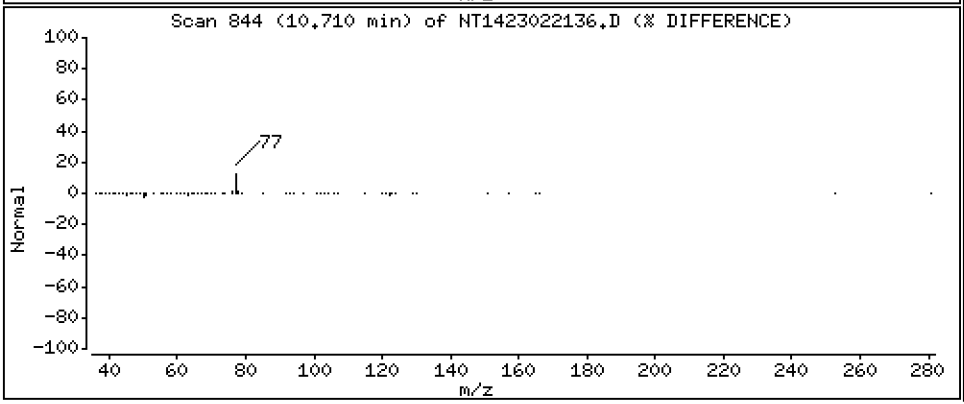
24 Benzoic acid

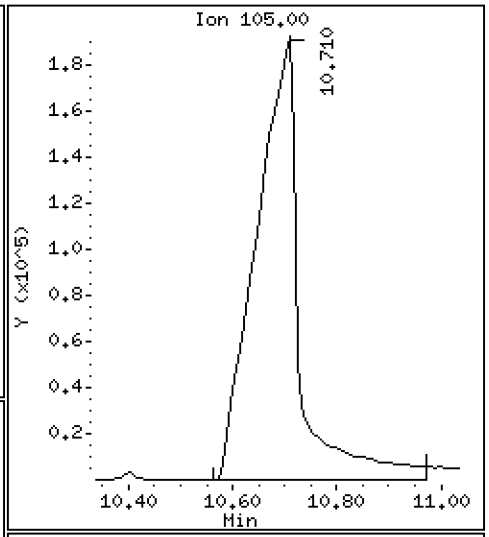
Concentration: 18.68 ug/mL

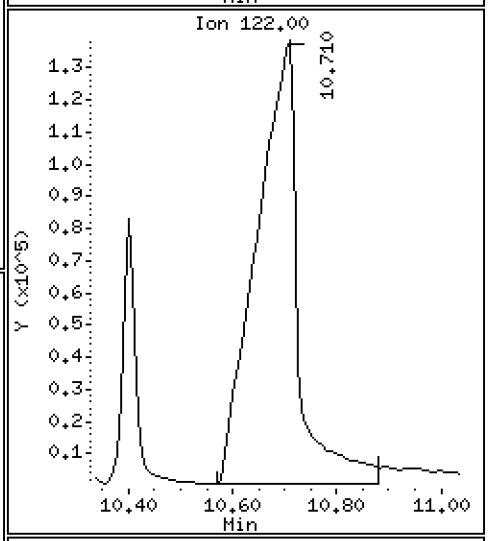


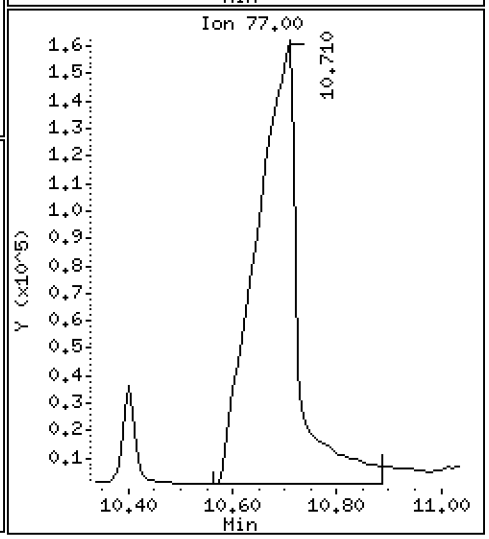












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022136.D

Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

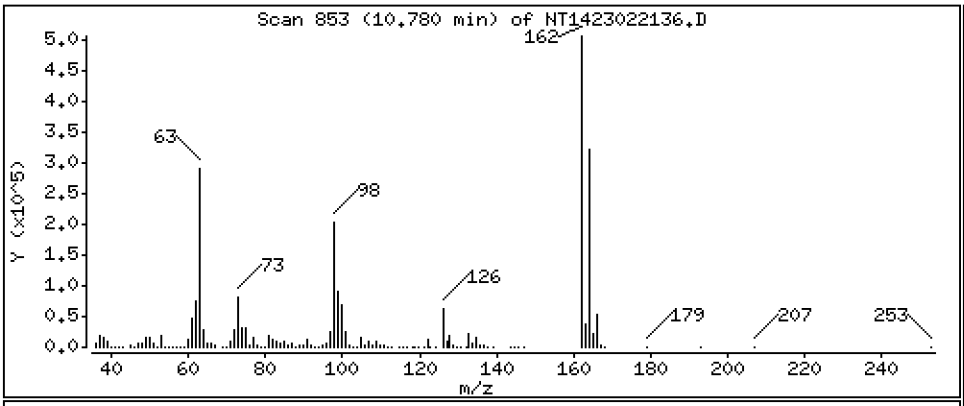
Operator: DSD

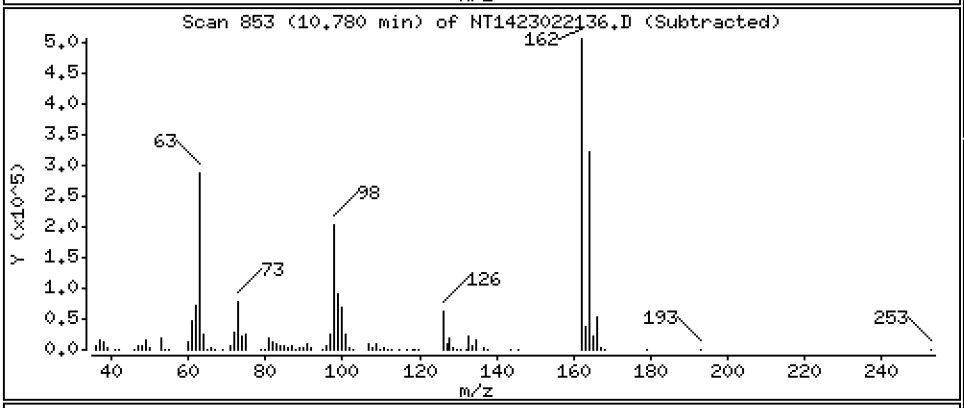
Column phase: ZB-5msi

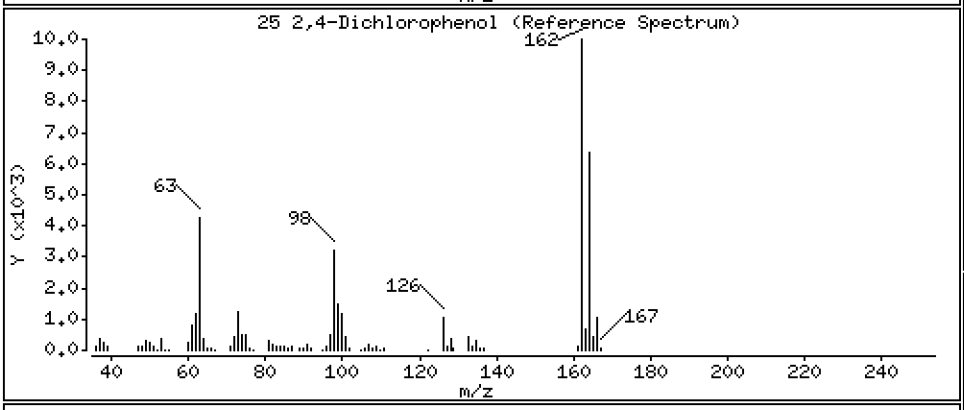
Column diameter: 0.25

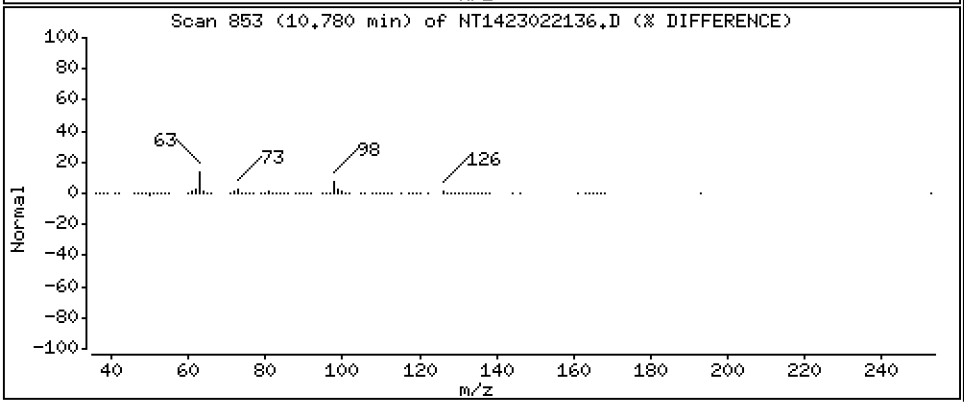
25 2,4-Dichlorophenol

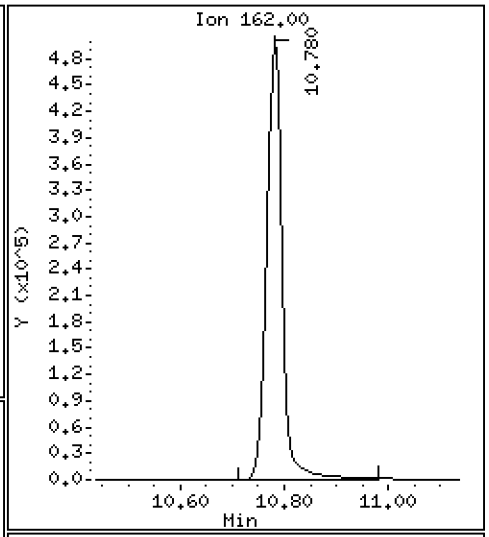
Concentration: 13.10 ug/mL

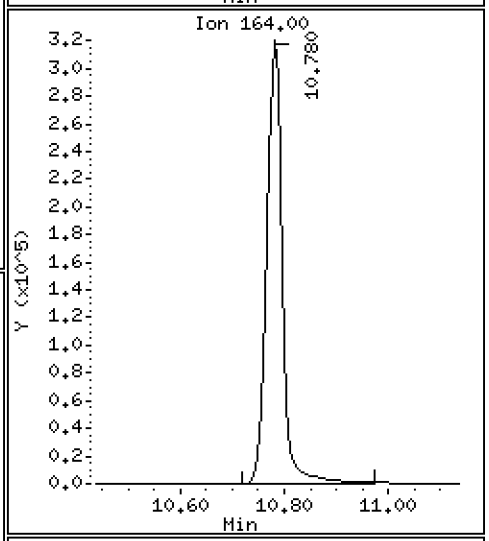


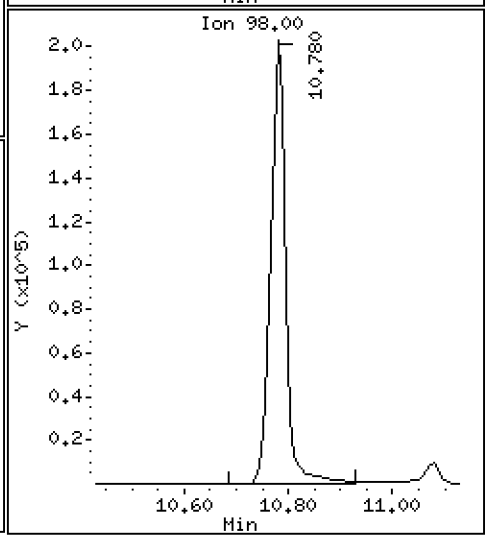












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

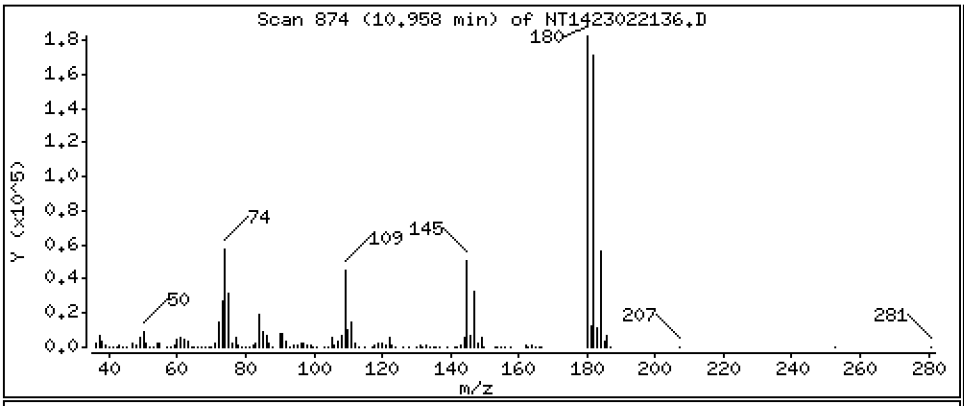
Operator: DSD

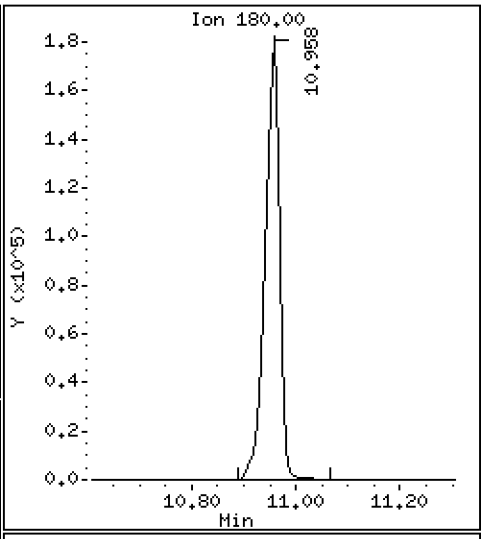
Column phase: ZB-5msi

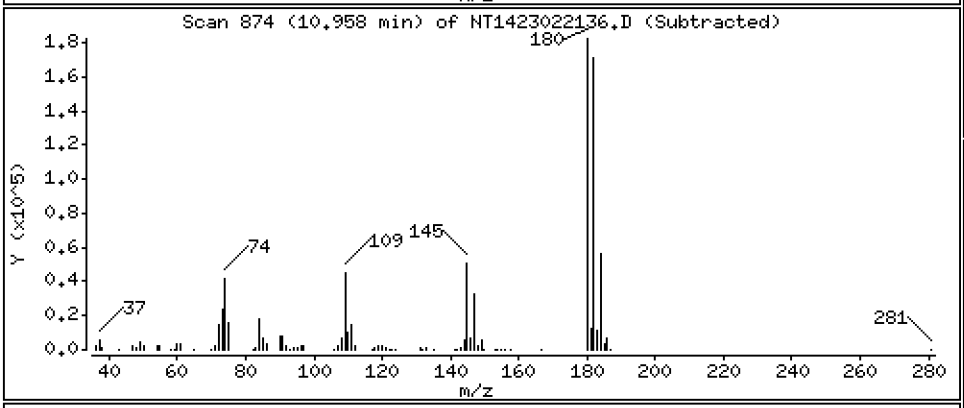
Column diameter: 0.25

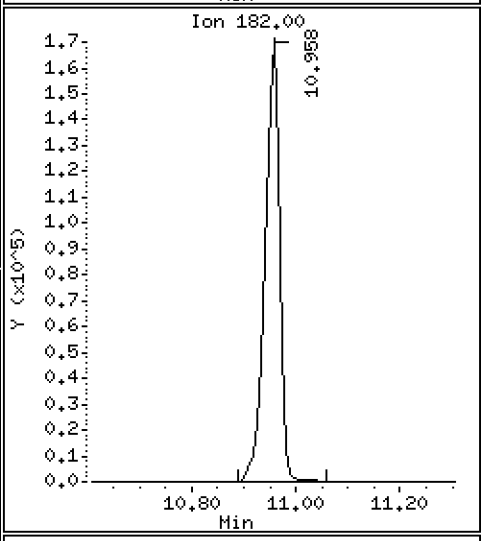
26 1,2,4-Trichlorobenzene

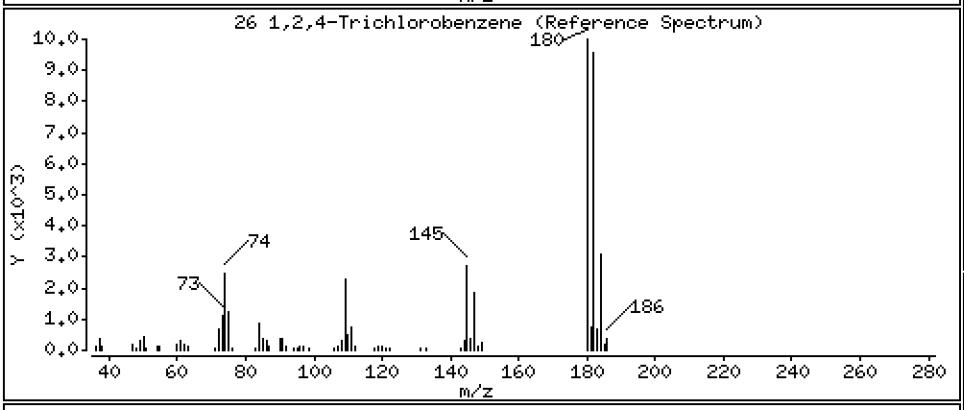
Concentration: 3.739 ug/mL

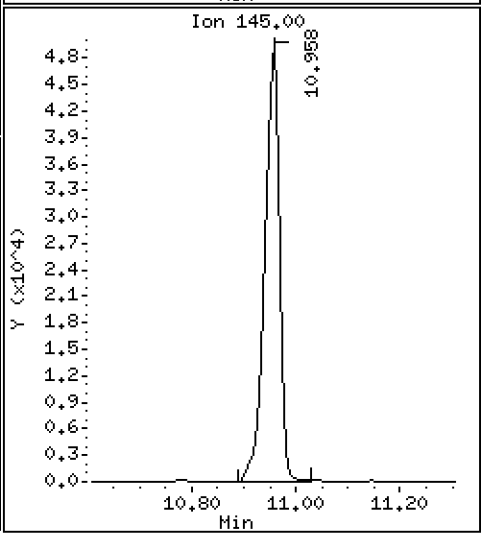


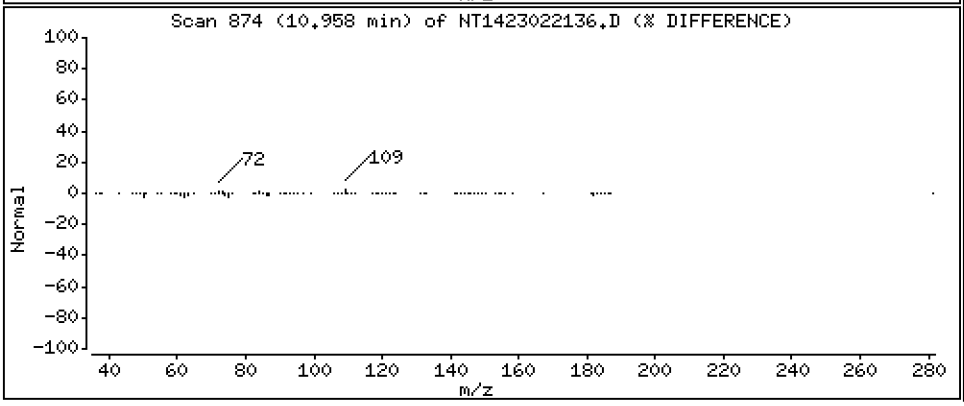












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

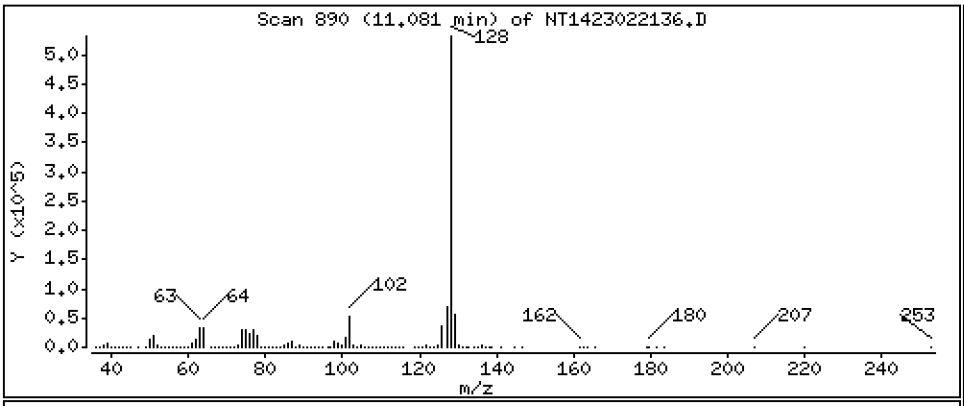
Operator: DSD

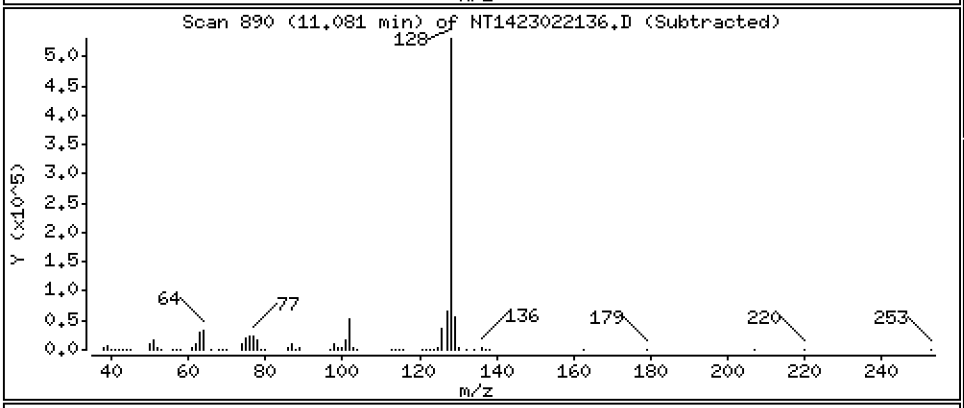
Column phase: ZB-5msi

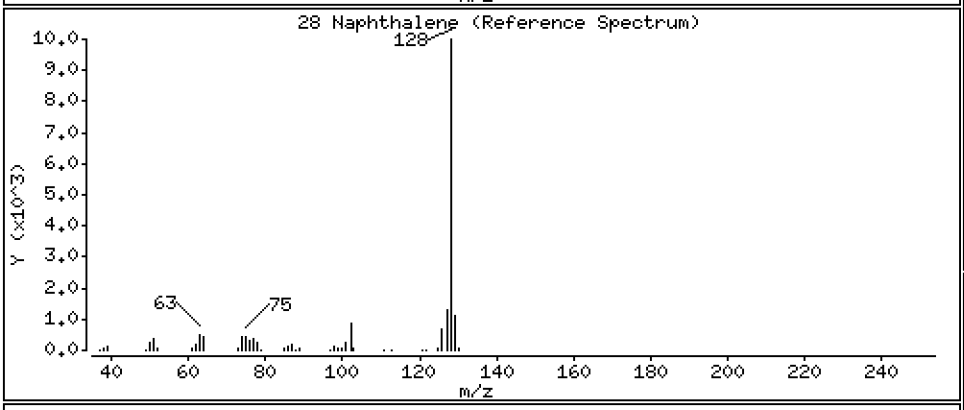
Column diameter: 0.25

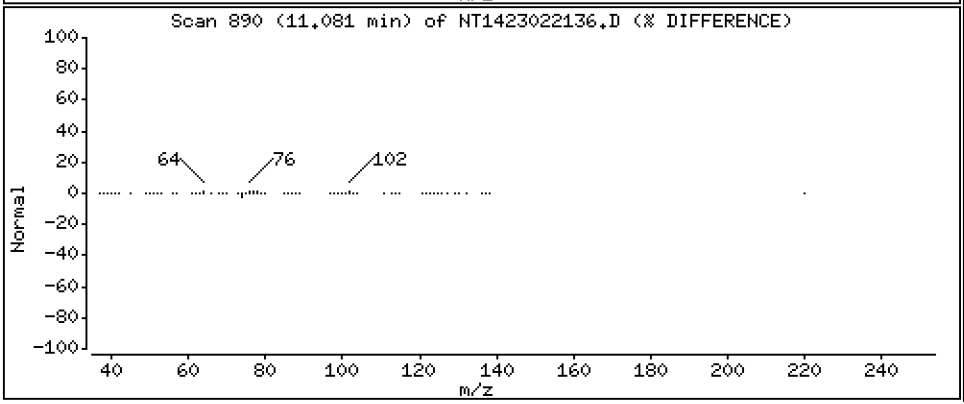
28 Naphthalene

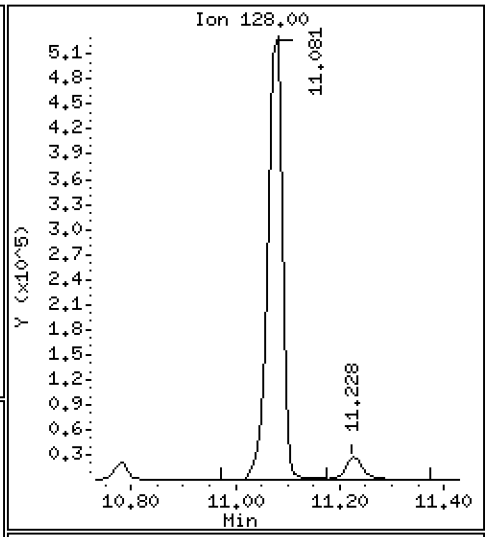
Concentration: 3.735 ug/mL

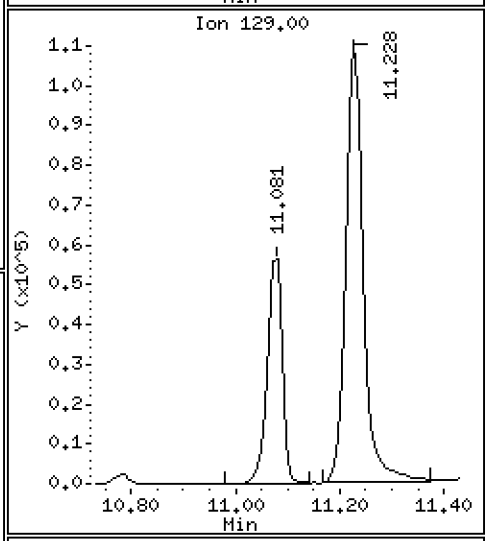


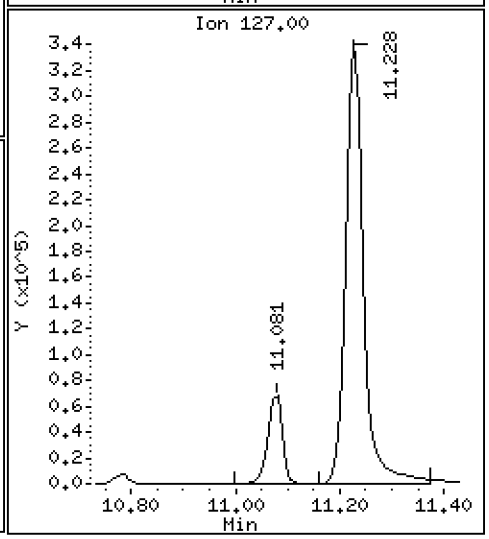












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

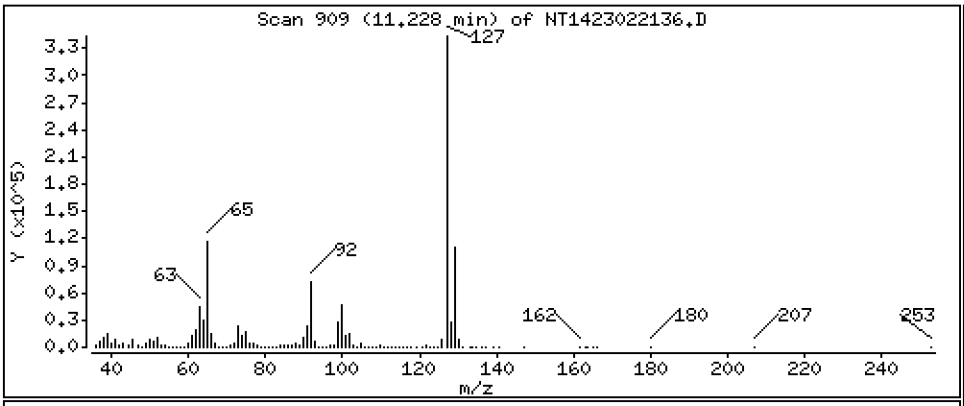
Operator: DSD

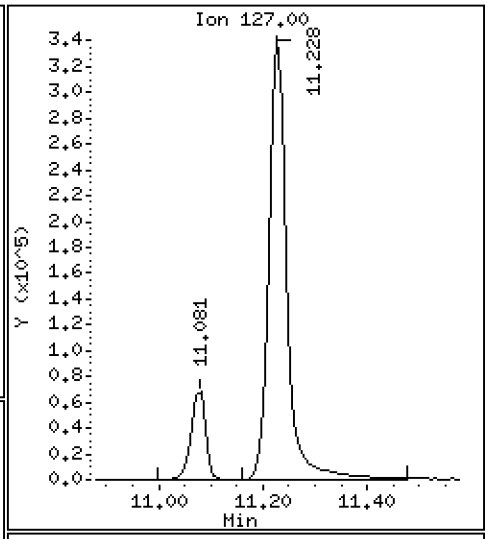
Column phase: ZB-5msi

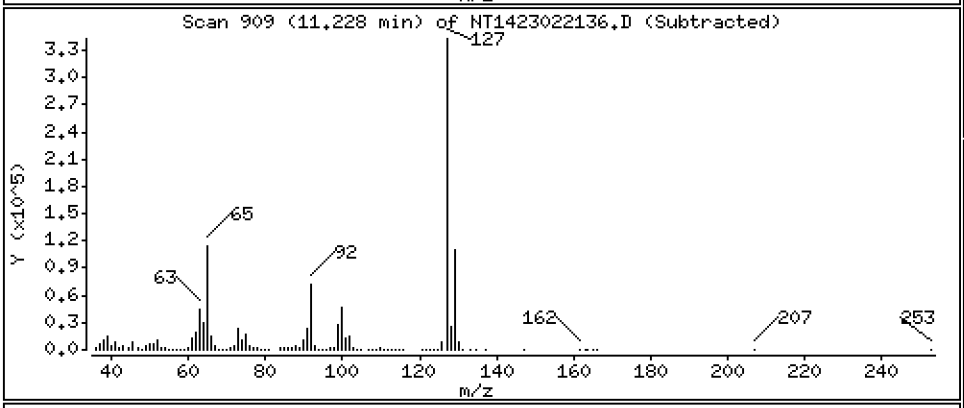
Column diameter: 0.25

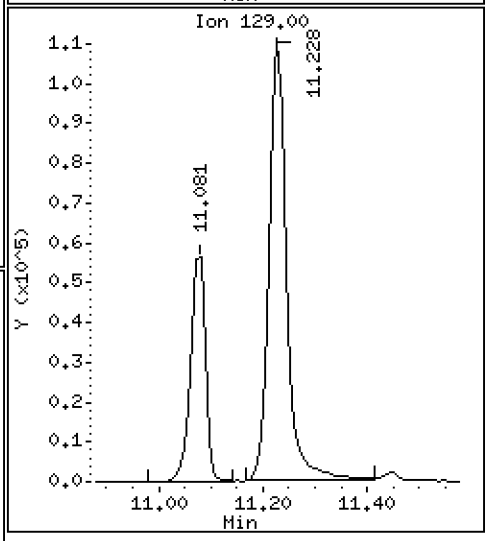
29 4-Chloroaniline

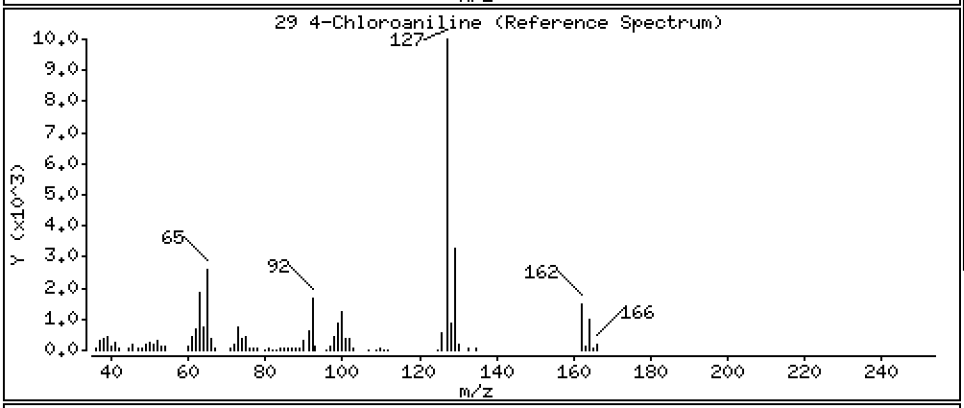
Concentration: 7.274 ug/mL

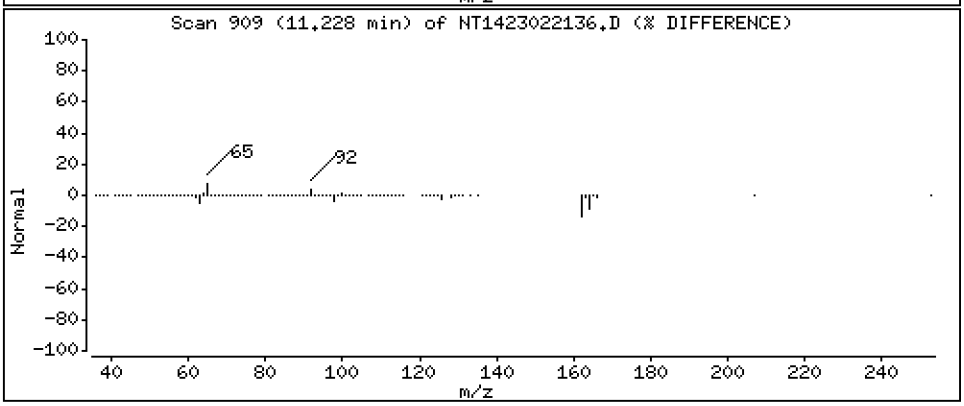












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

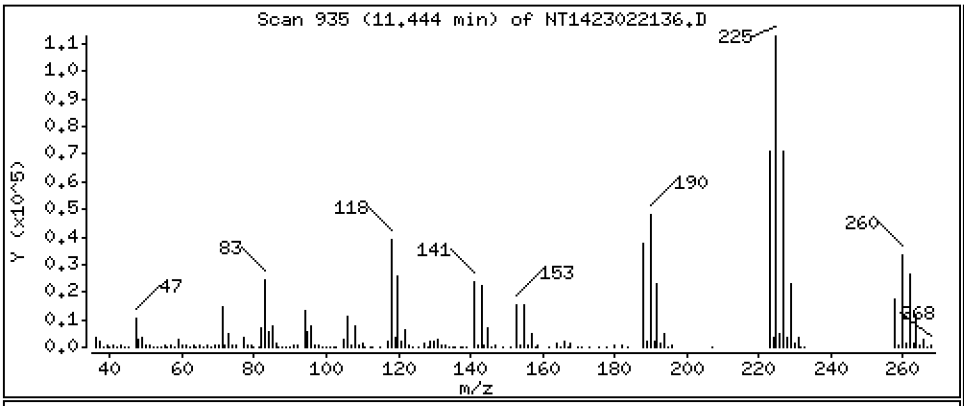
Operator: DSD

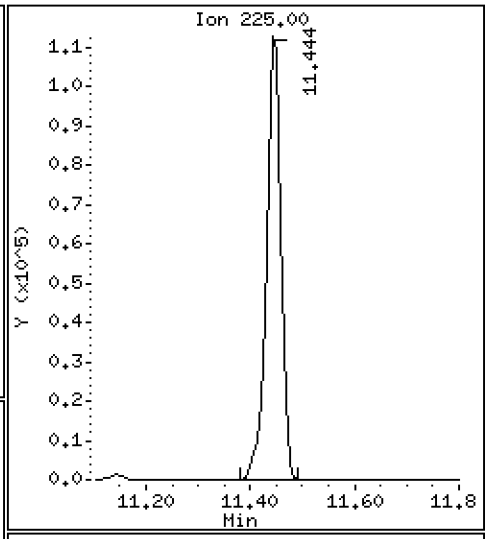
Column phase: ZB-5msi

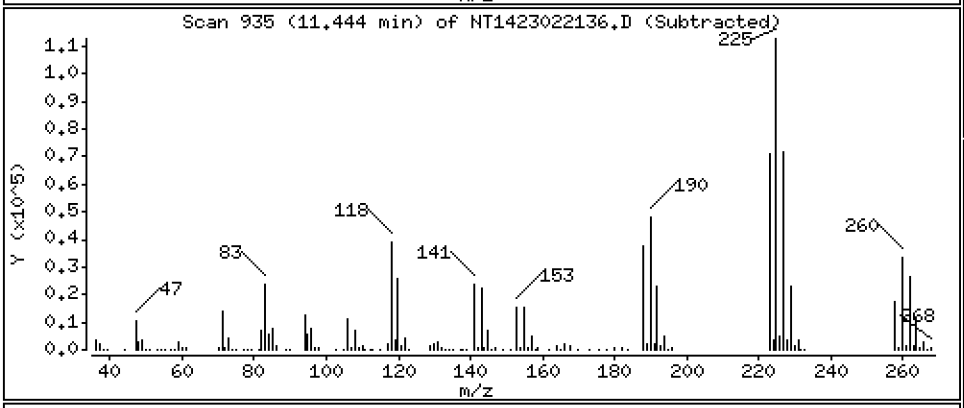
Column diameter: 0.25

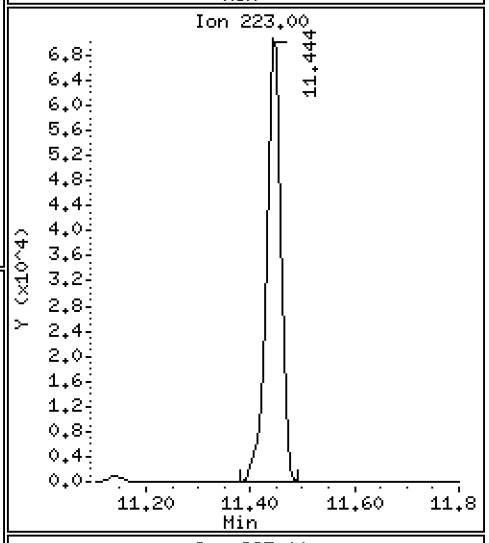
30 Hexachlorobutadiene

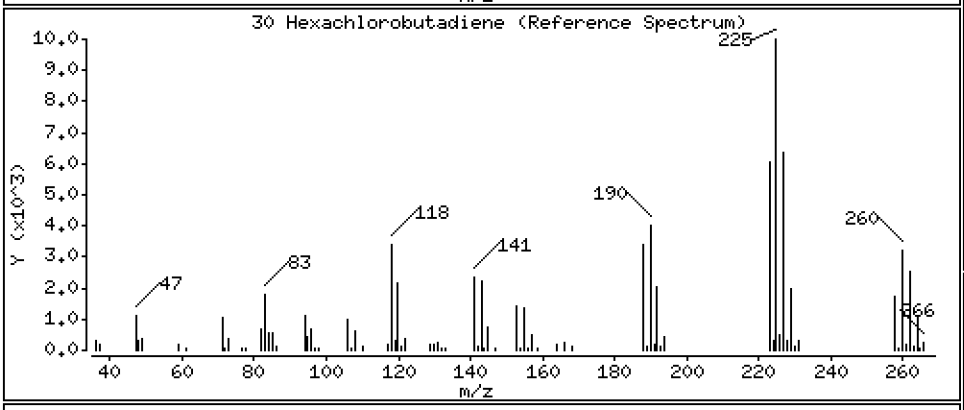
Concentration: 4.147 ug/mL

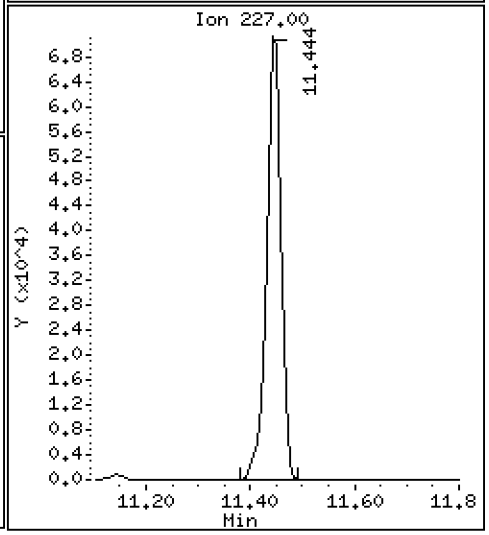


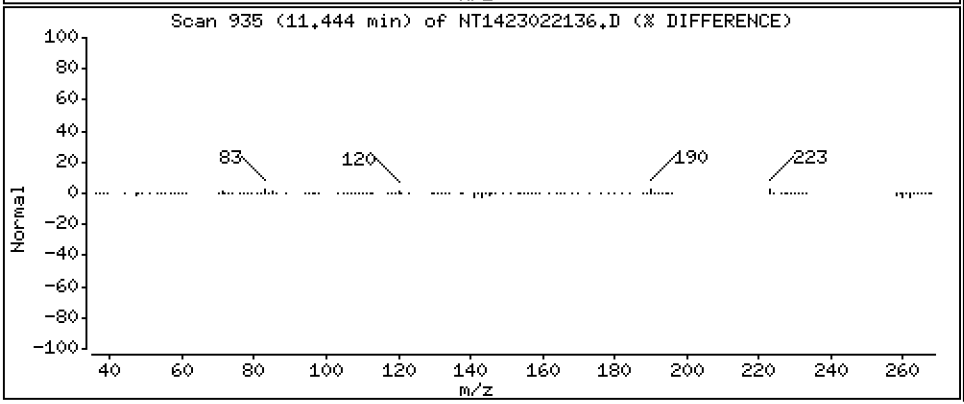












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

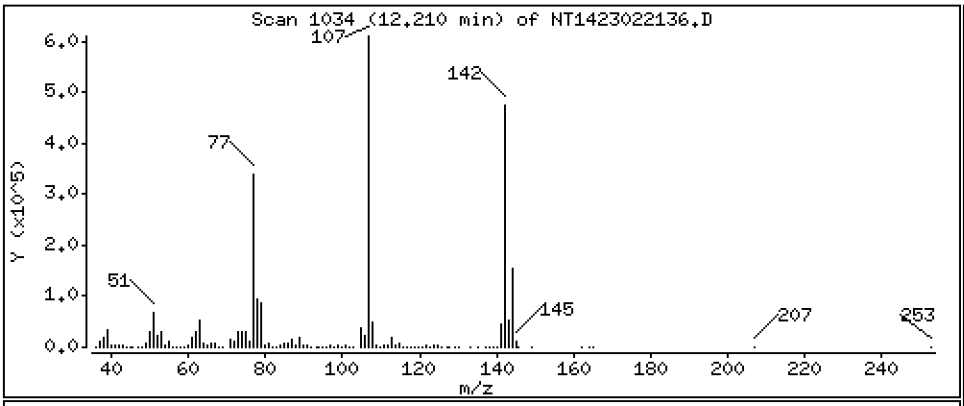
Operator: DSD

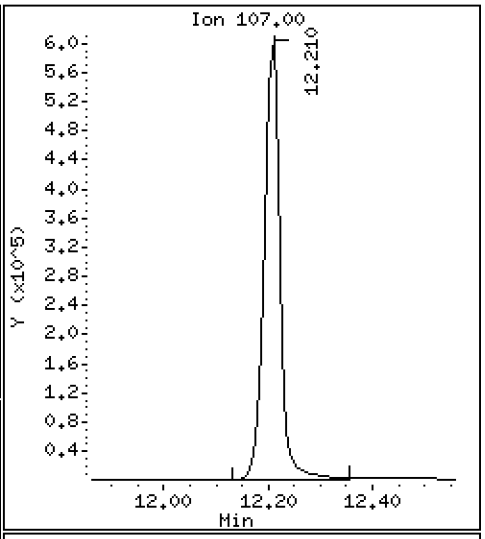
Column phase: ZB-5msi

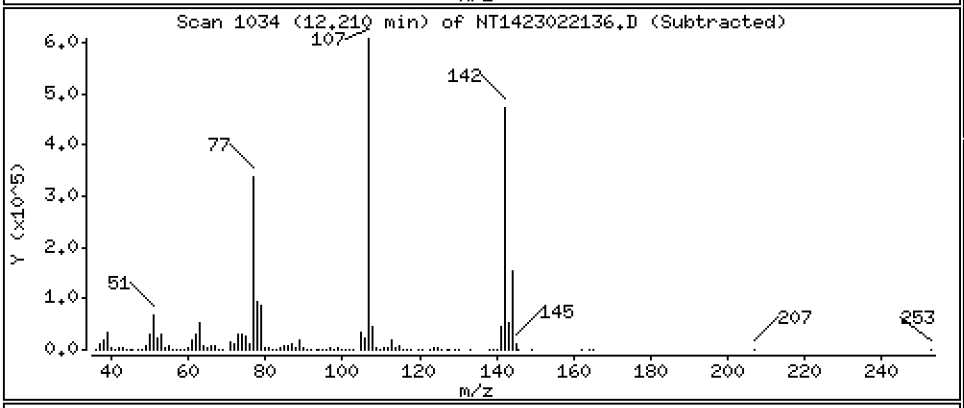
Column diameter: 0.25

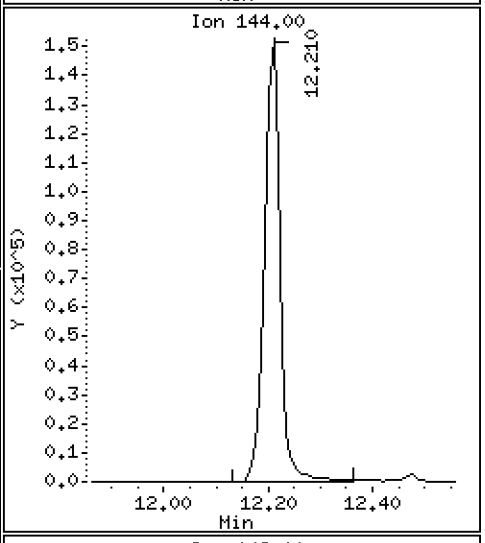
31 4-Chloro-3-methylphenol

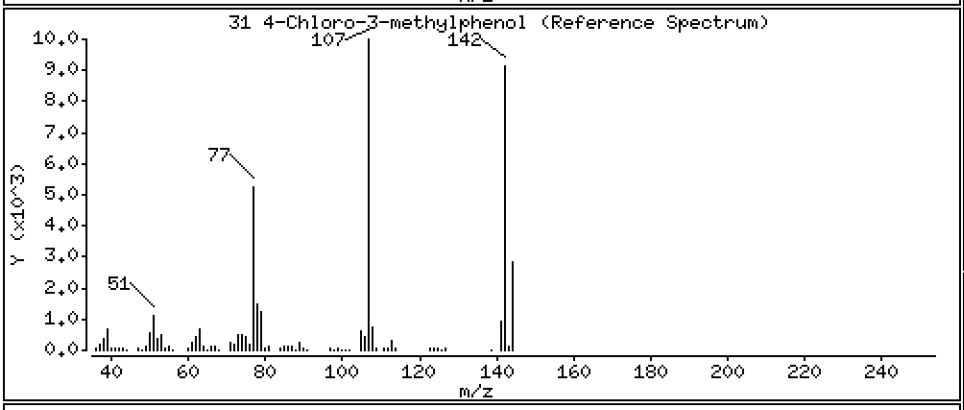
Concentration: 13.96 ug/mL

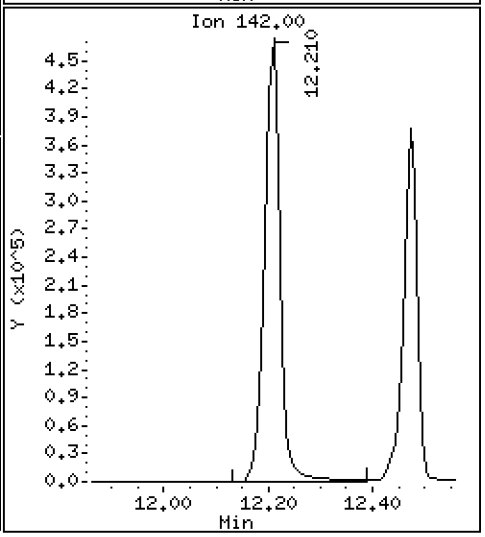


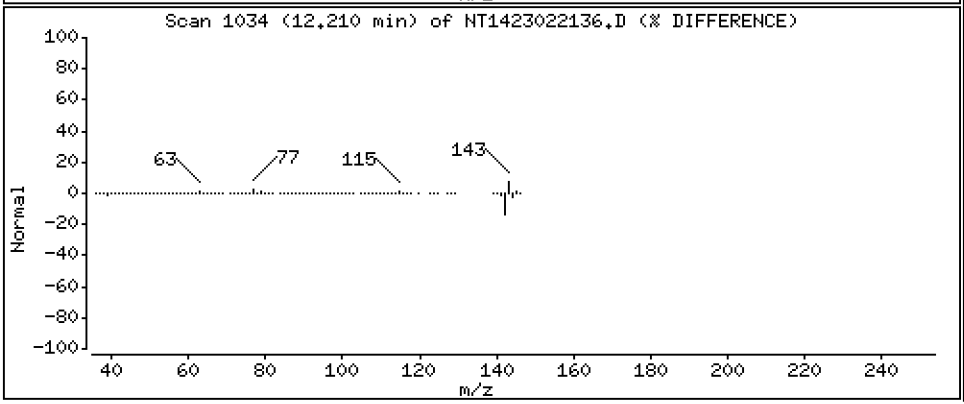












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022136.D

Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

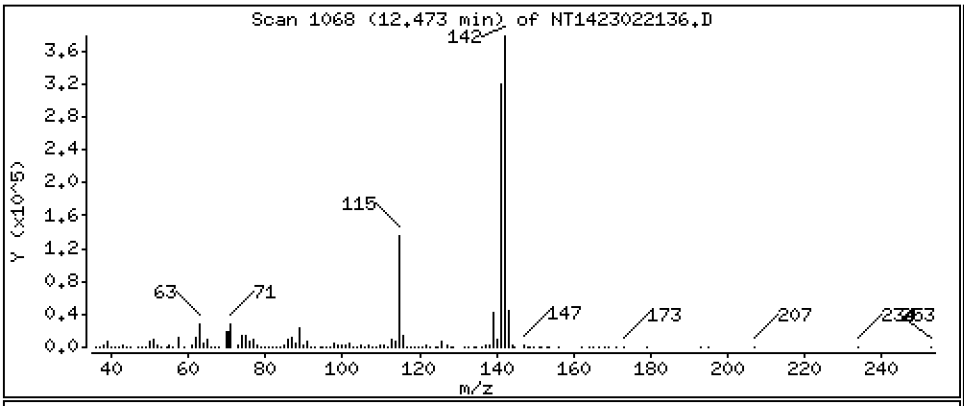
Operator: DSD

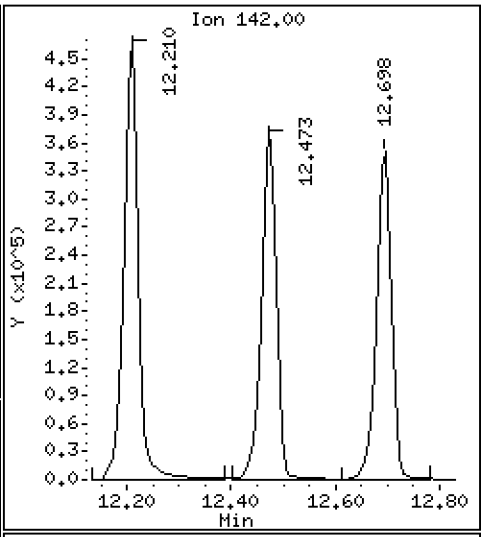
Column phase: ZB-5msi

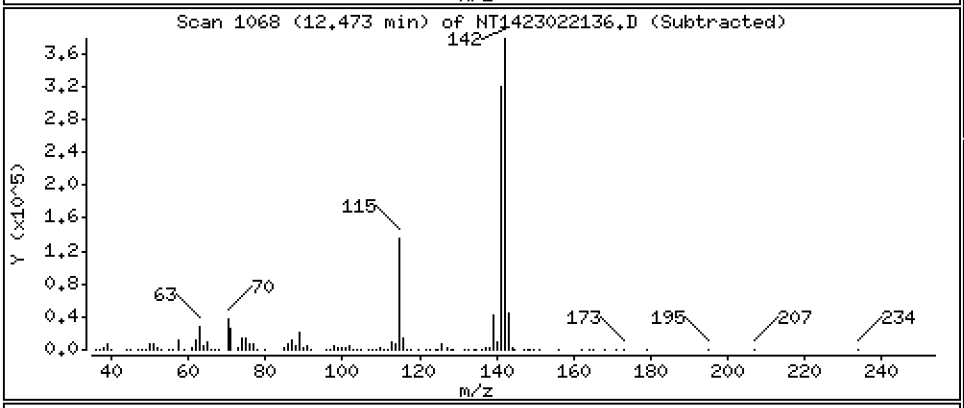
Column diameter: 0.25

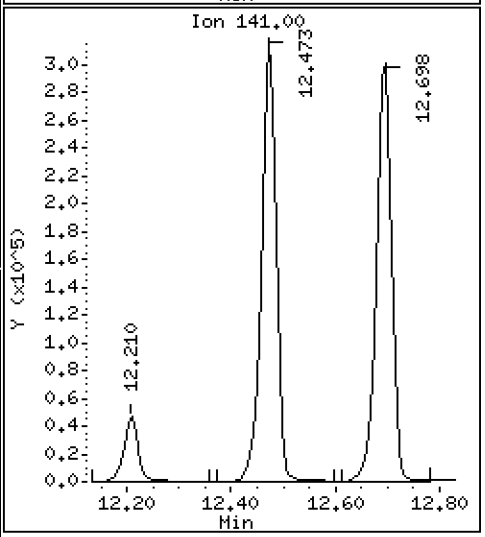
32 2-Methylnaphthalene

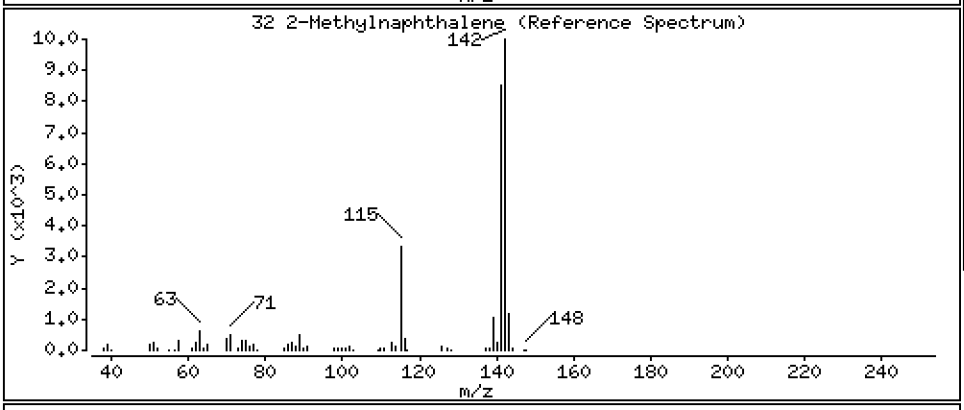
Concentration: 3.624 ug/mL

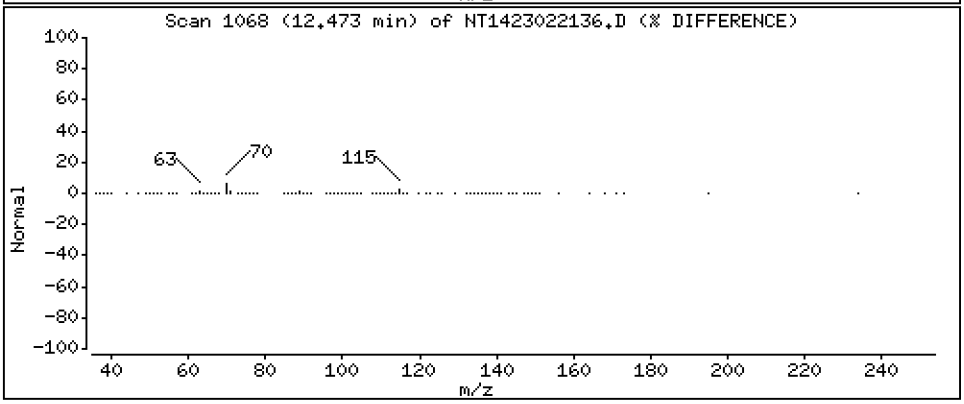












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

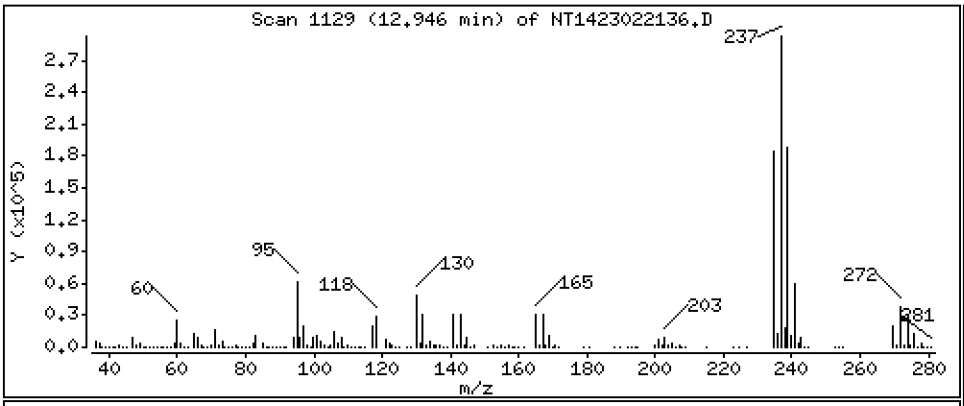
Operator: DSD

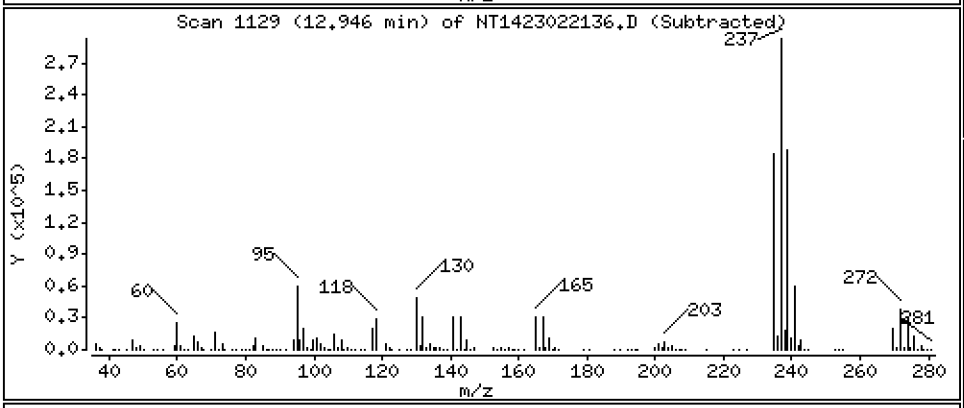
Column phase: ZB-5msi

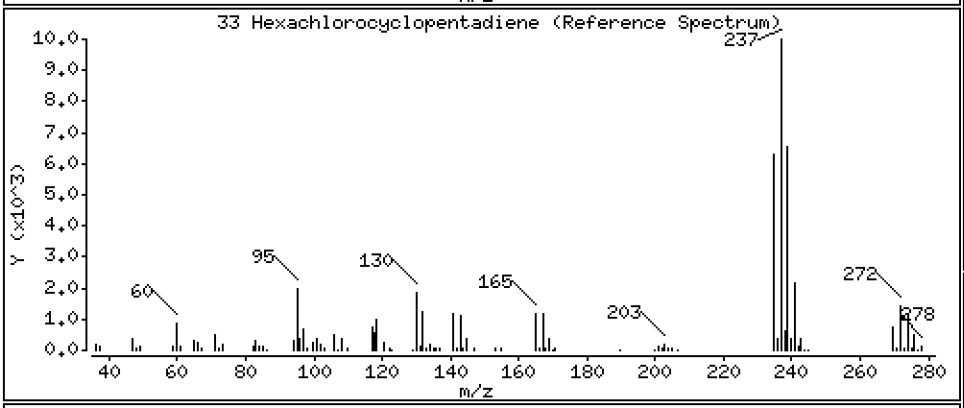
Column diameter: 0.25

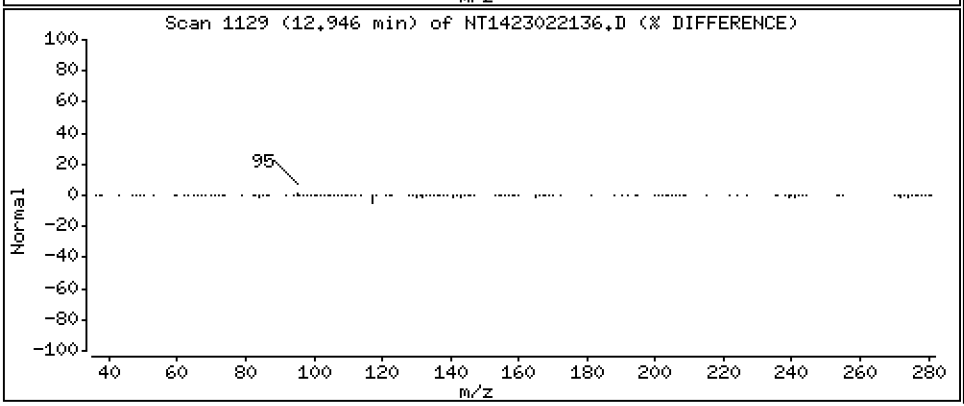
33 Hexachlorocyclopentadiene

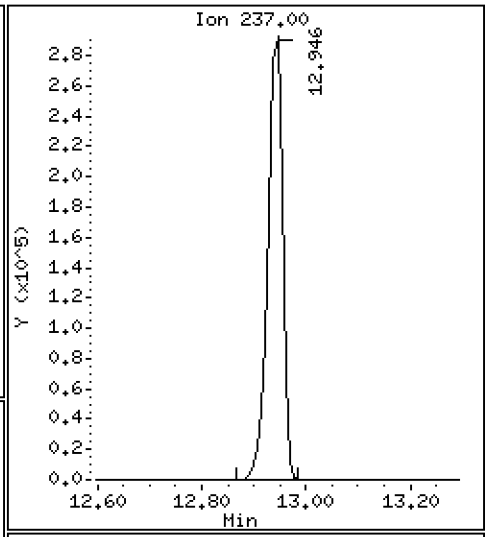
Concentration: 8.836 ug/mL

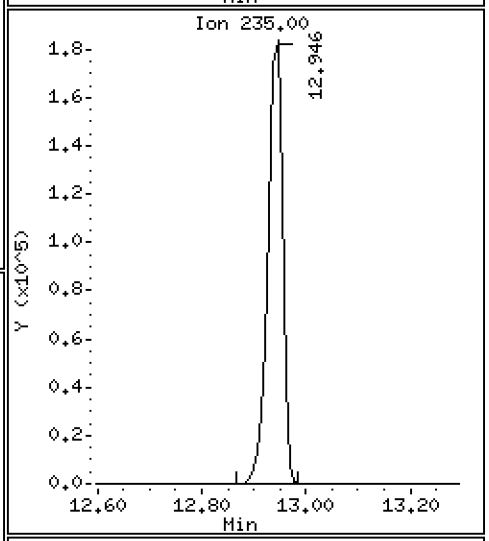


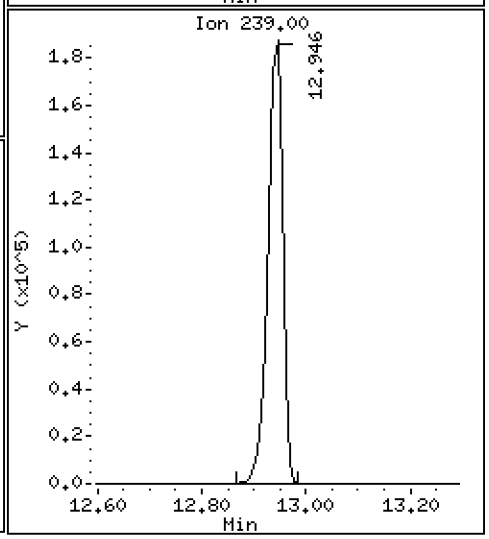












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

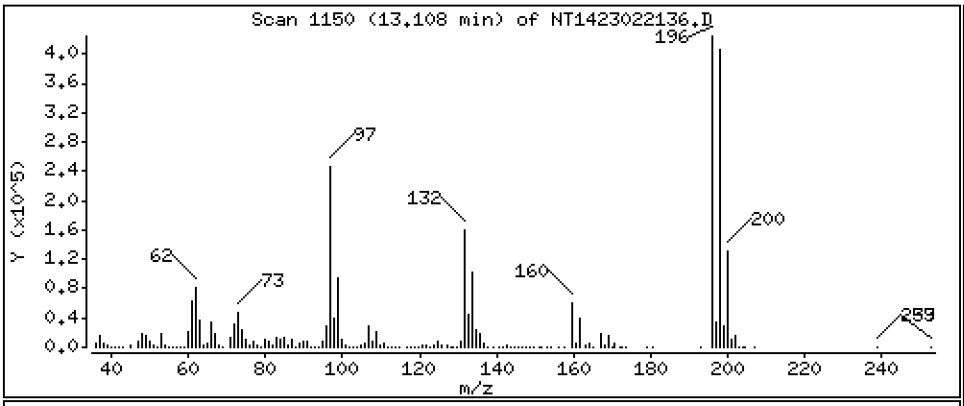
Operator: DSD

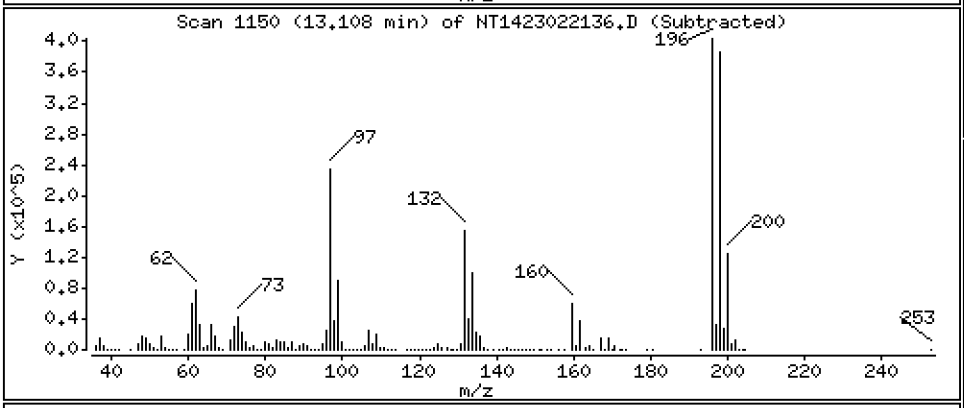
Column phase: ZB-5msi

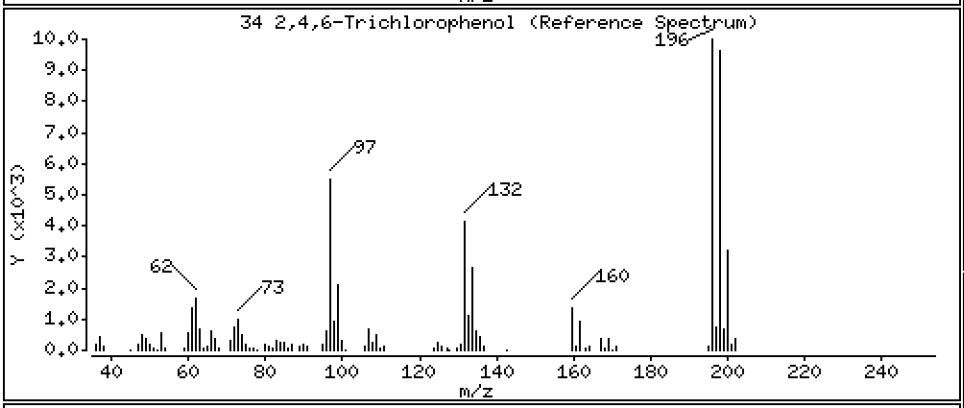
Column diameter: 0.25

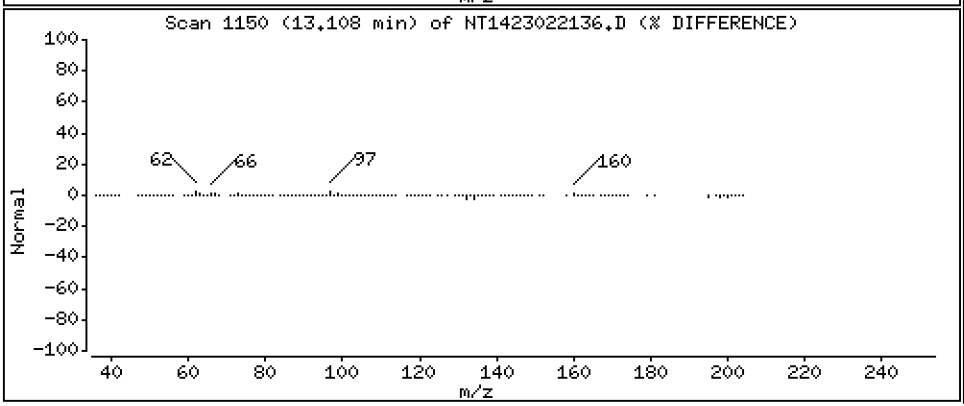
34 2,4,6-Trichlorophenol

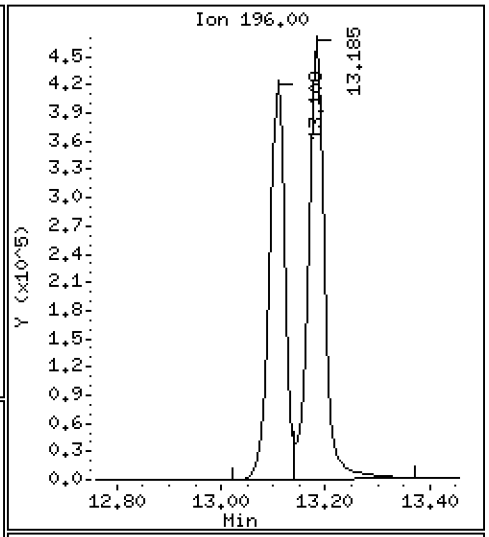
Concentration: 13.16 ug/mL

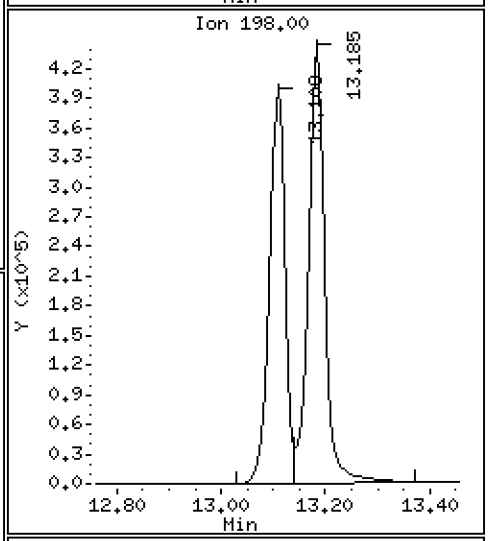


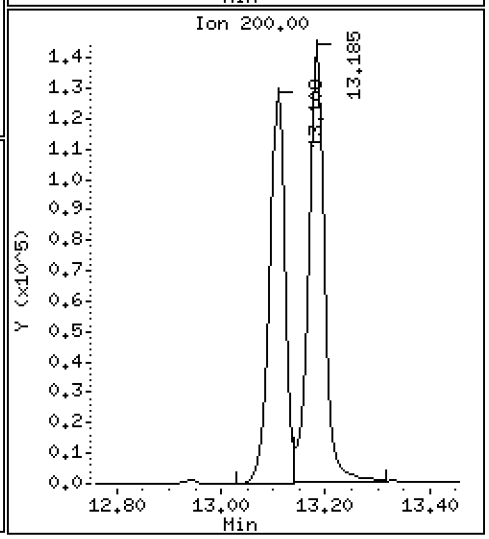












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

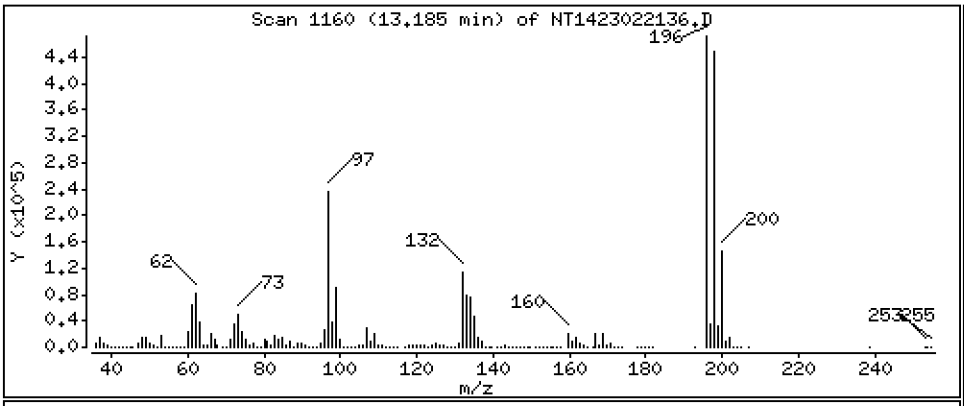
Operator: DSD

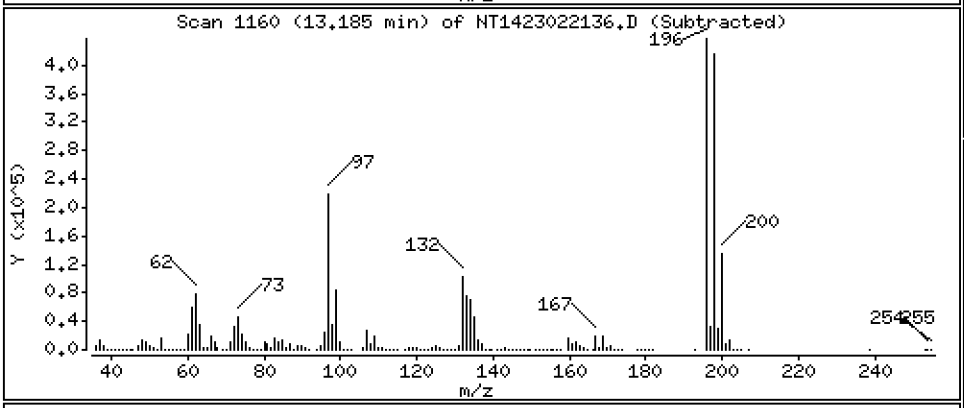
Column phase: ZB-5msi

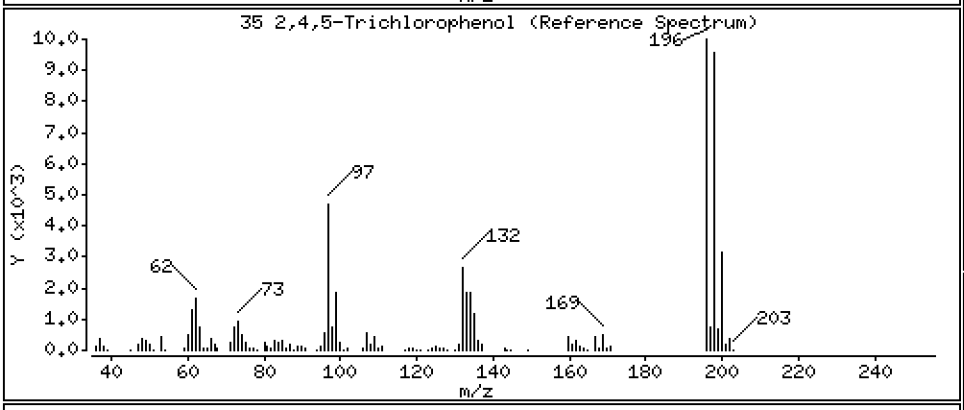
Column diameter: 0.25

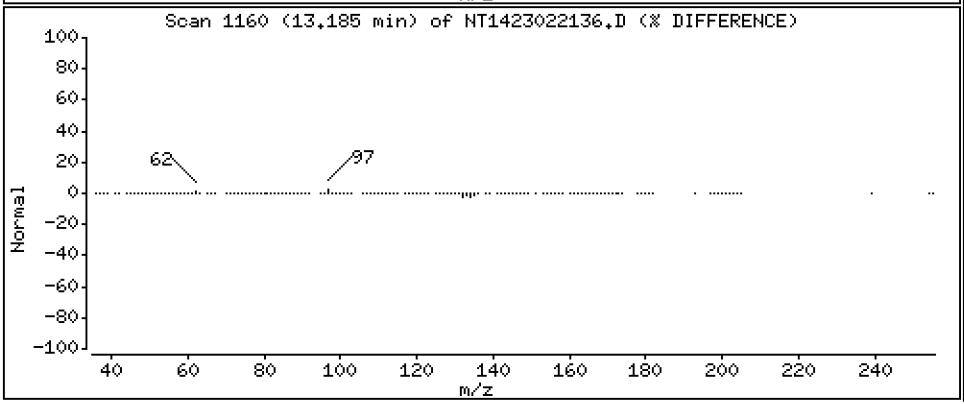
35 2,4,5-Trichlorophenol

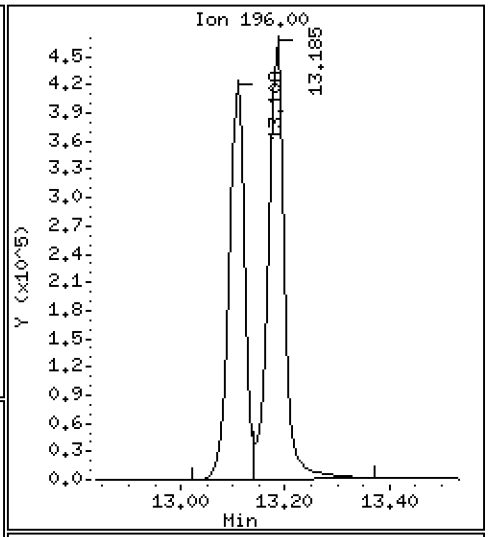
Concentration: 14.03 ug/mL

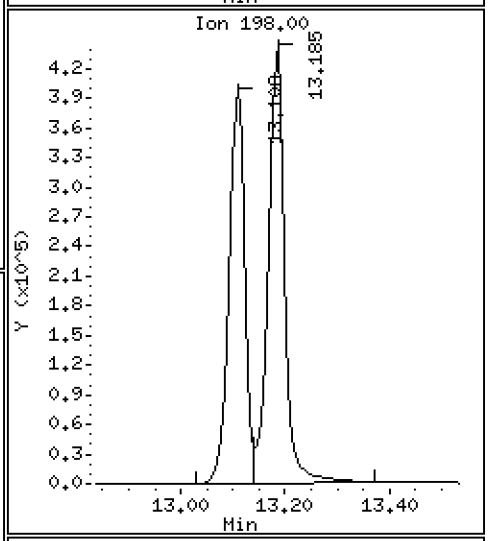


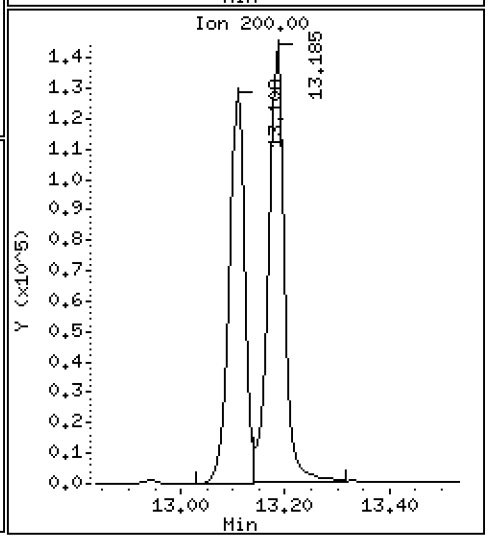












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

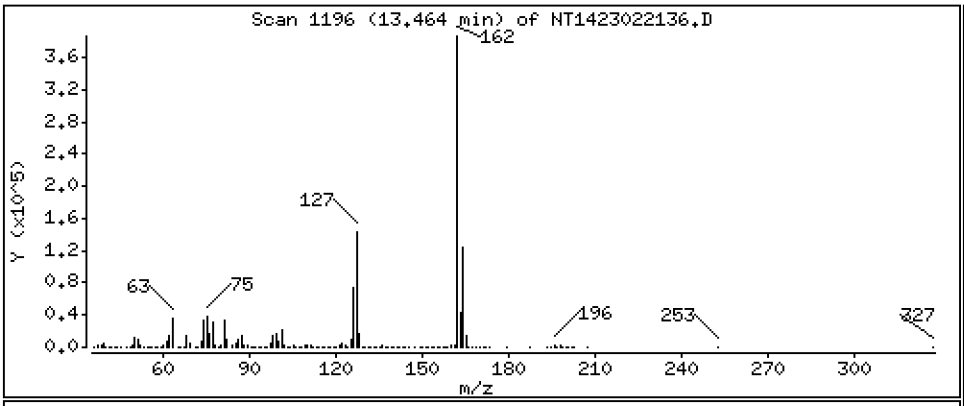
Operator: DSD

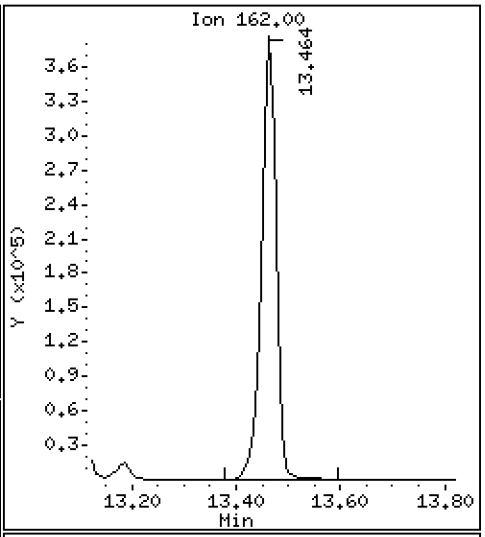
Column phase: ZB-5msi

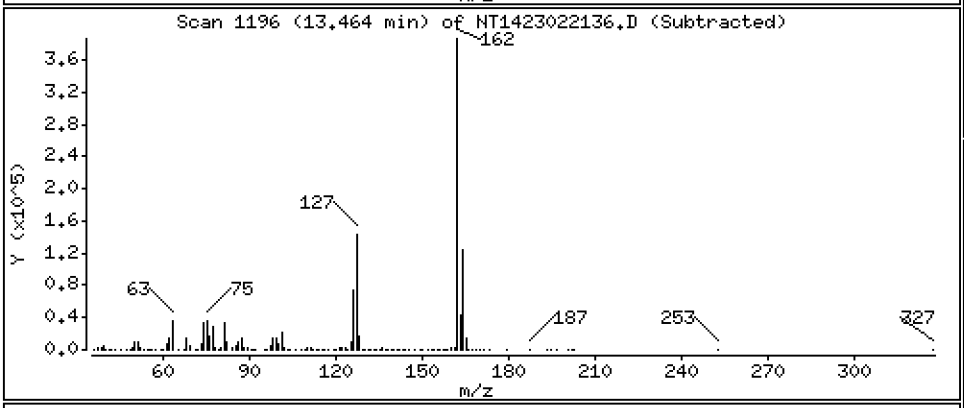
Column diameter: 0.25

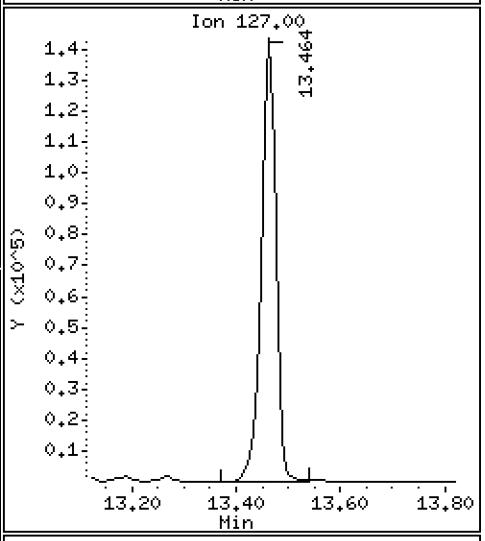
37 2-Chloronaphthalene

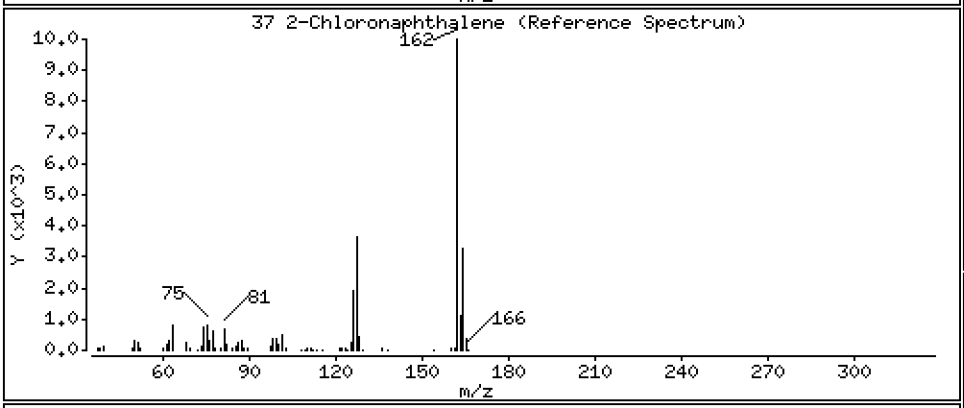
Concentration: 3.811 ug/mL

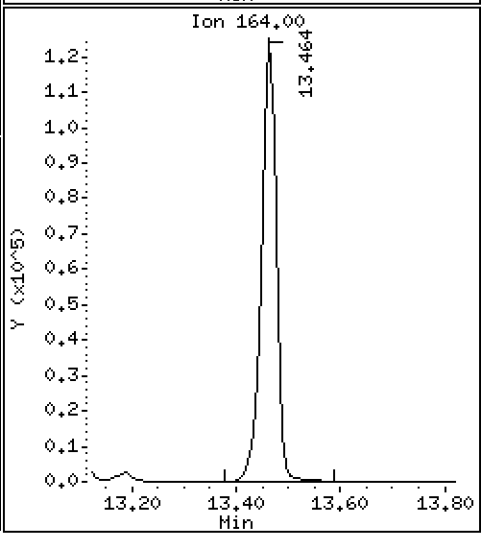


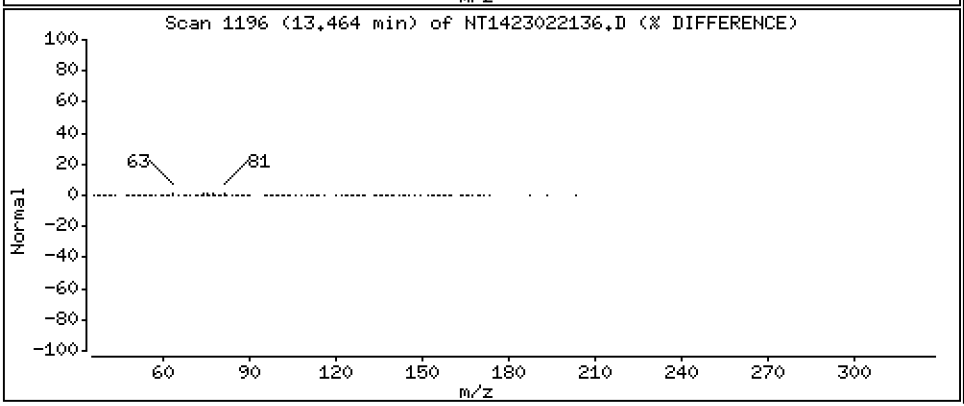












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

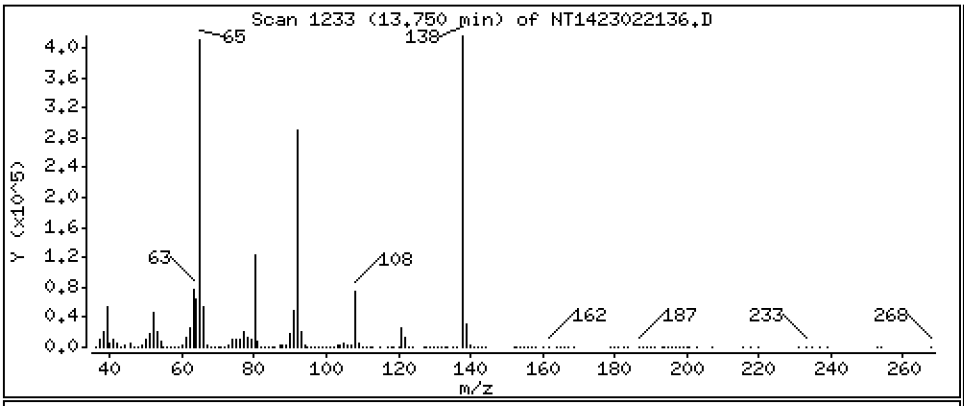
Operator: DSD

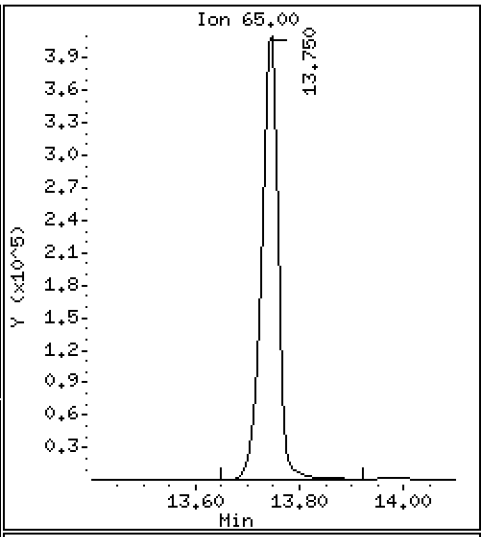
Column phase: ZB-5msi

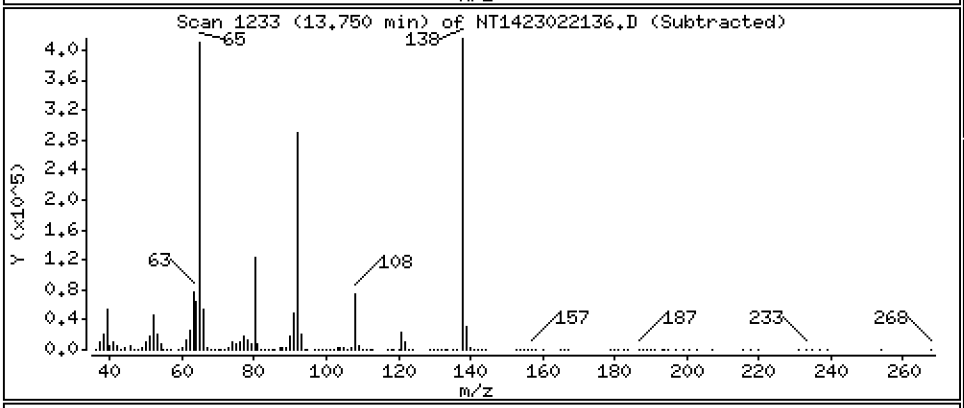
Column diameter: 0.25

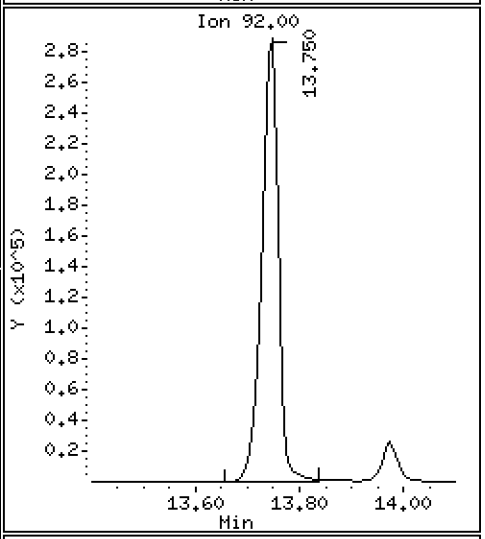
38 2-Nitroaniline

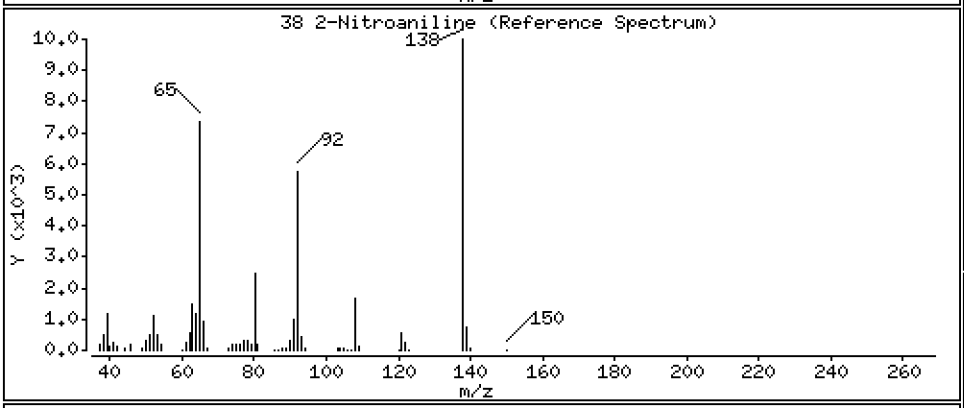
Concentration: 15.33 ug/mL

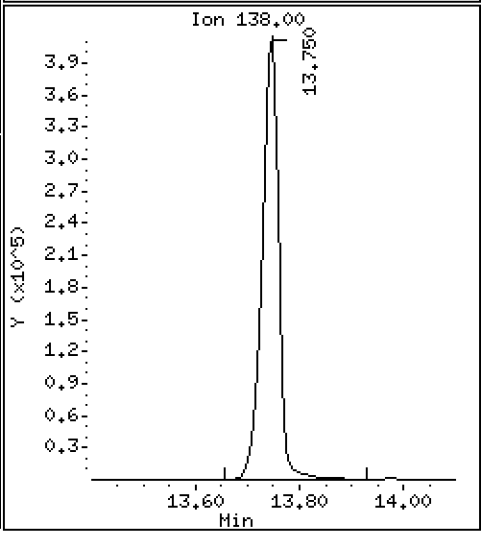


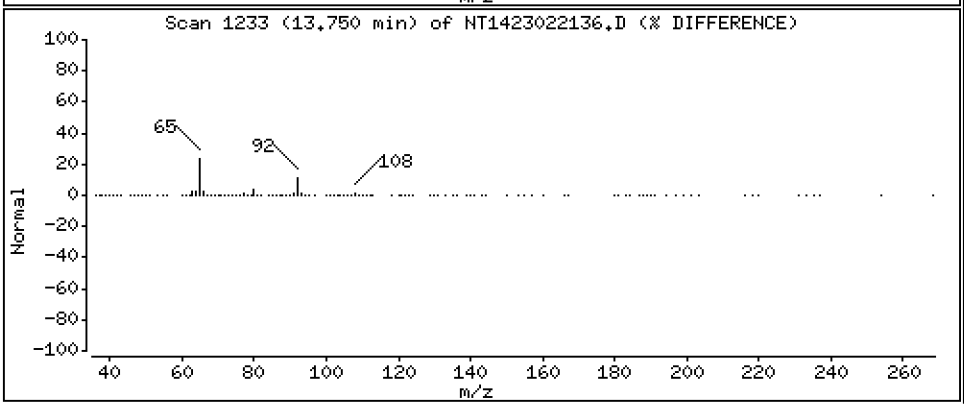












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

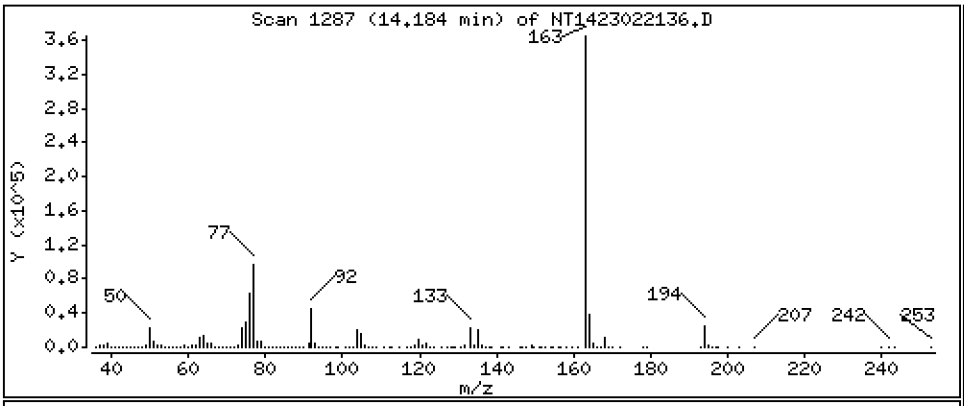
Operator: DSD

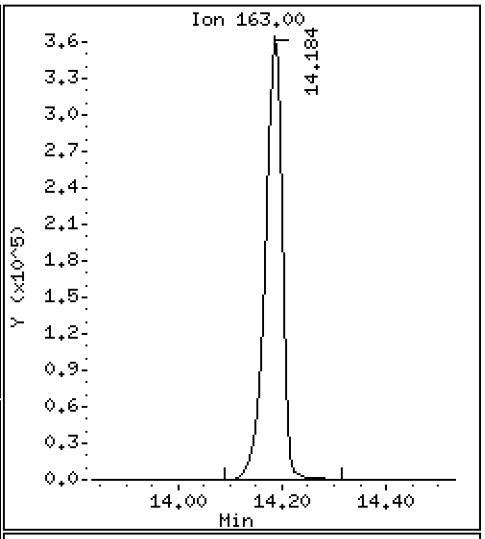
Column phase: ZB-5msi

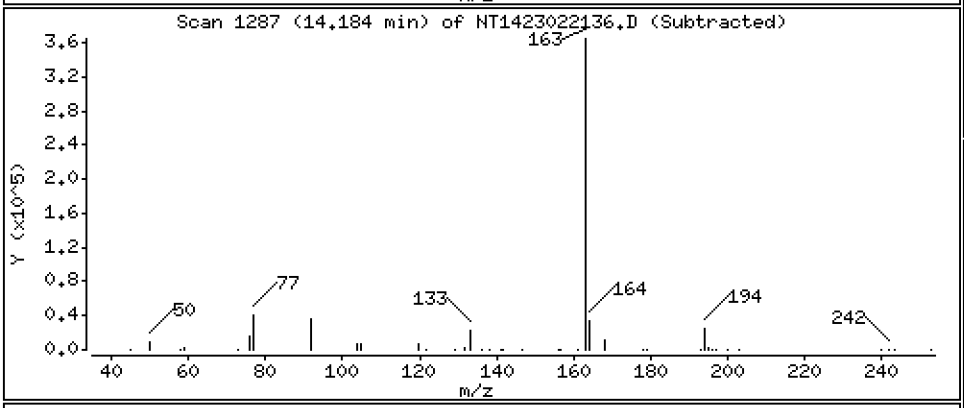
Column diameter: 0.25

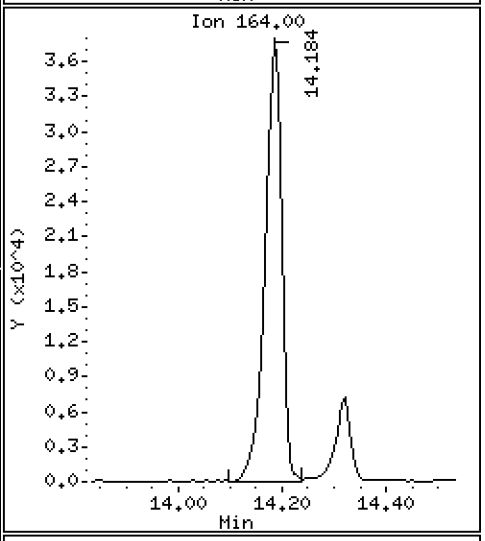
39 Dimethylphthalate

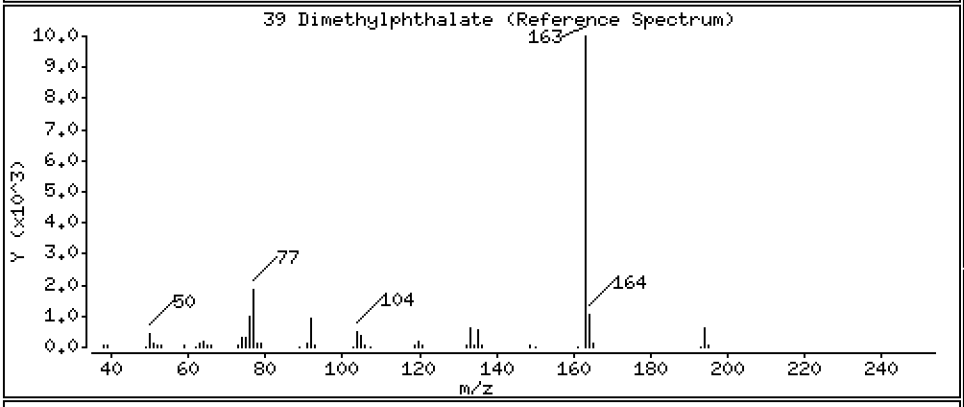
Concentration: 4.037 ug/mL

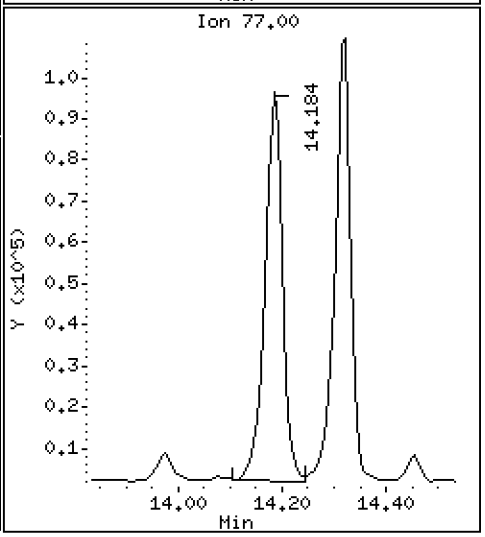


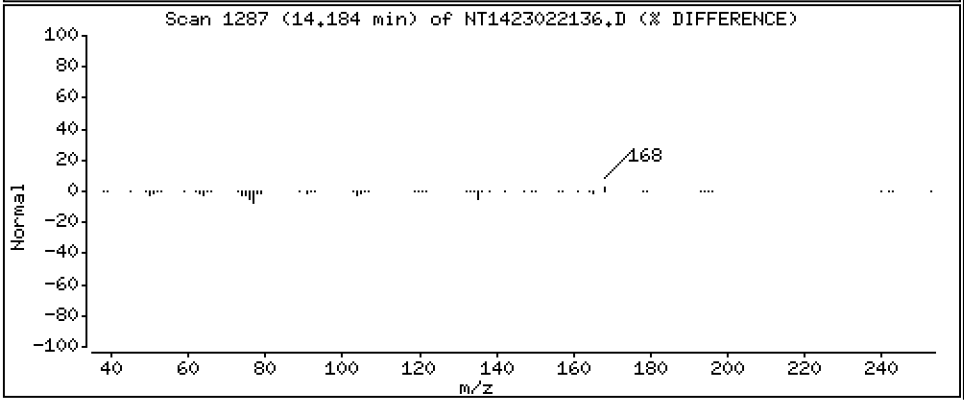












Date : 22-FEB-2023 10:33

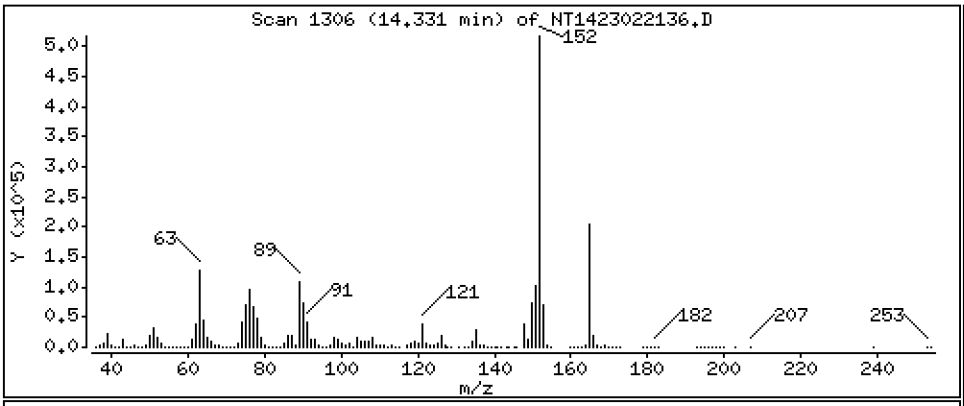
Client ID: Instrument: nt14.i

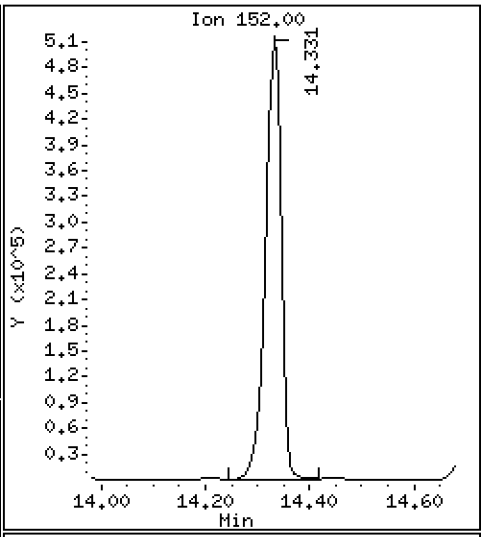
Sample Info: BLA0393-BSD1

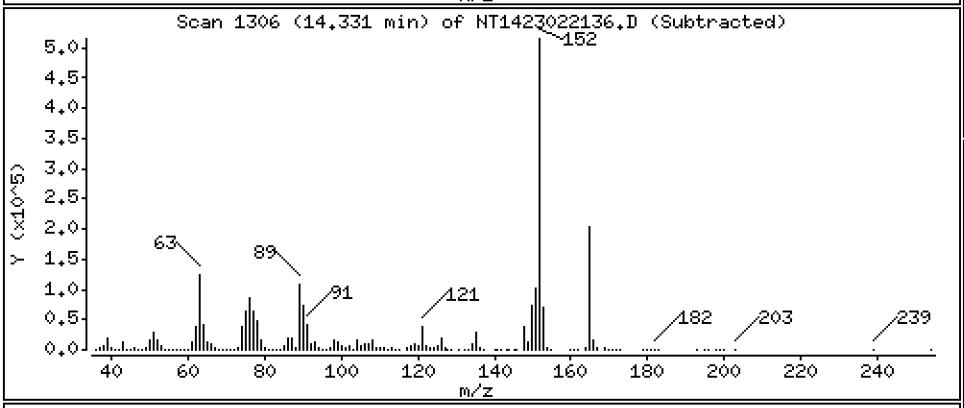
Operator: DSD

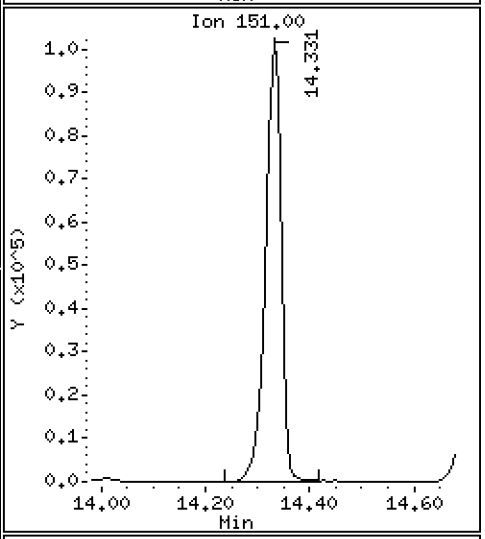
Column phase: ZB-5msi Column diameter: 0.25

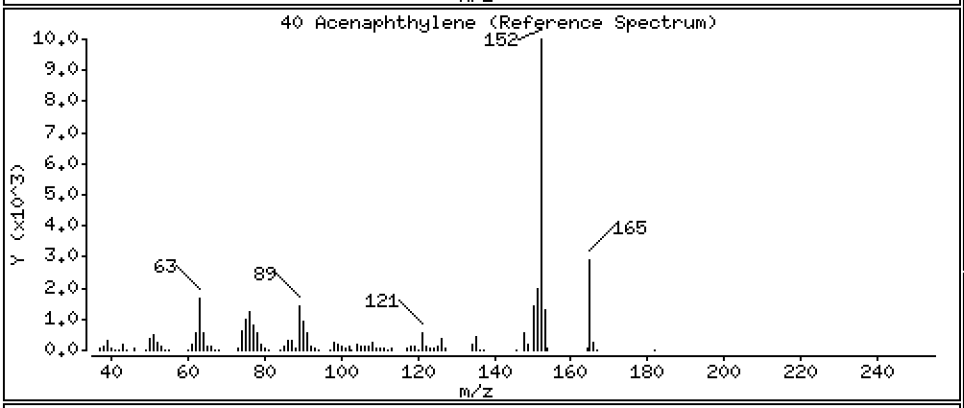
40 Acenaphthylene Concentration: 3.616 ug/mL

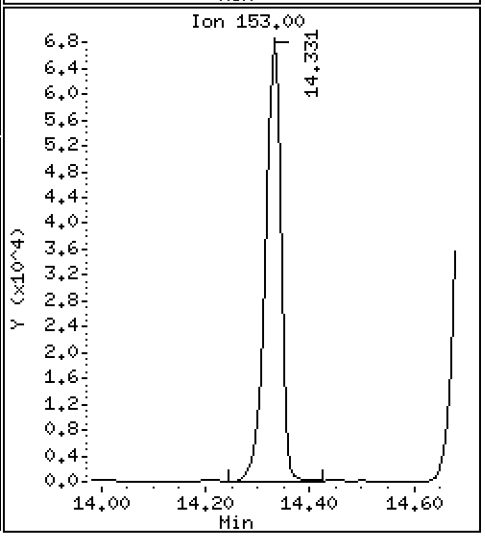


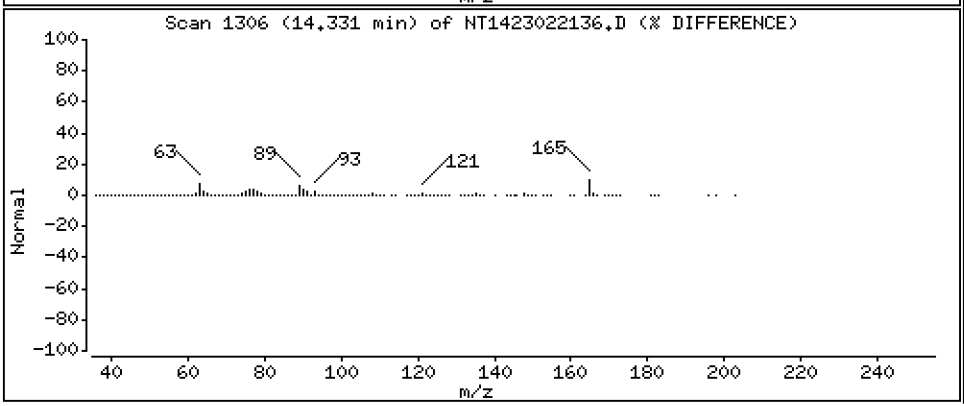












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

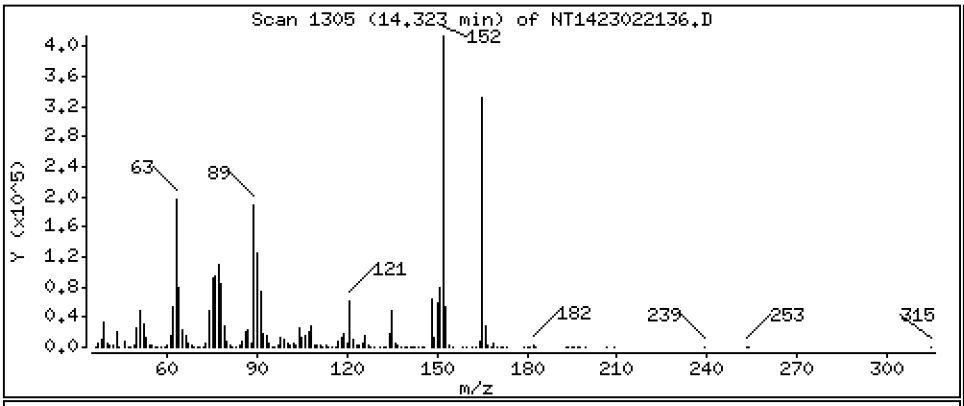
Operator: DSD

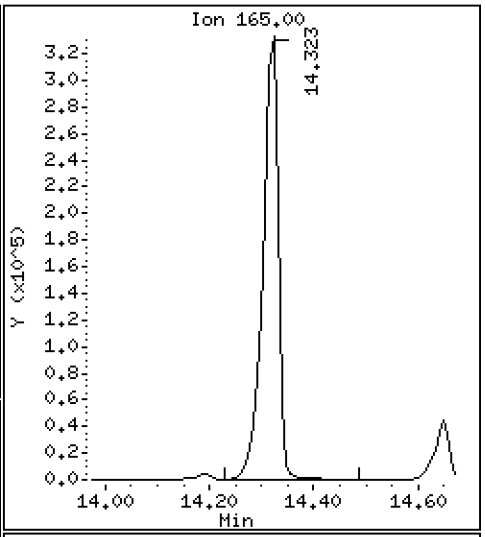
Column phase: ZB-5msi

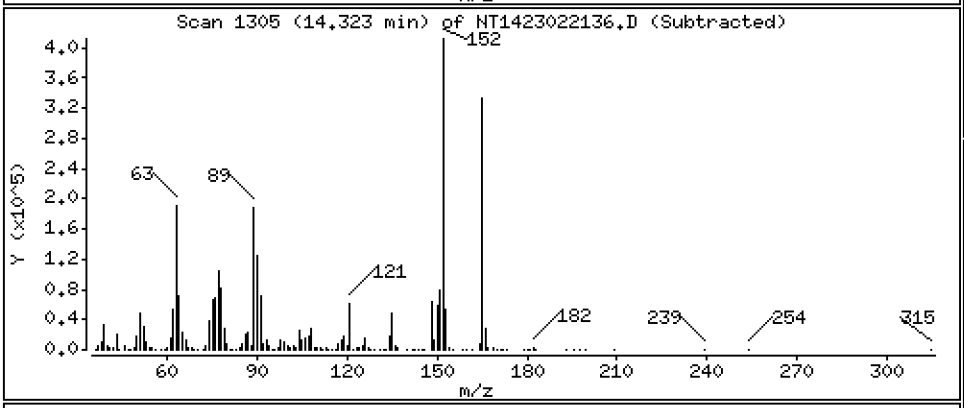
Column diameter: 0.25

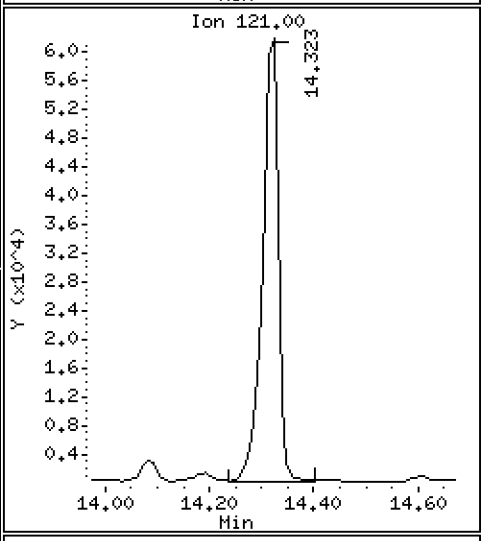
41 2,6-Dinitrotoluene

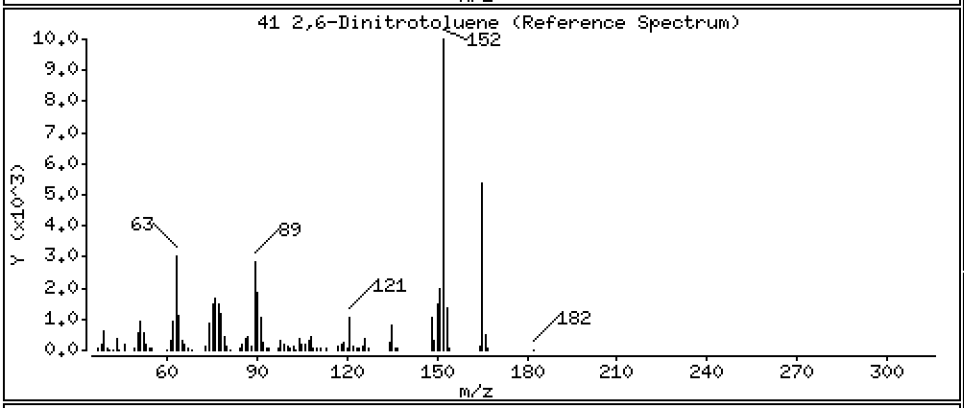
Concentration: 14.07 ug/mL

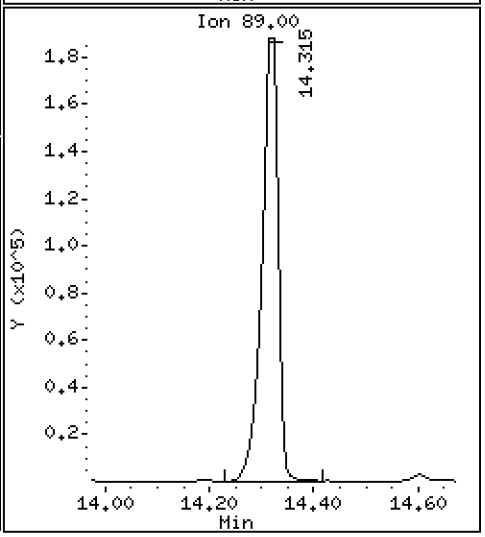


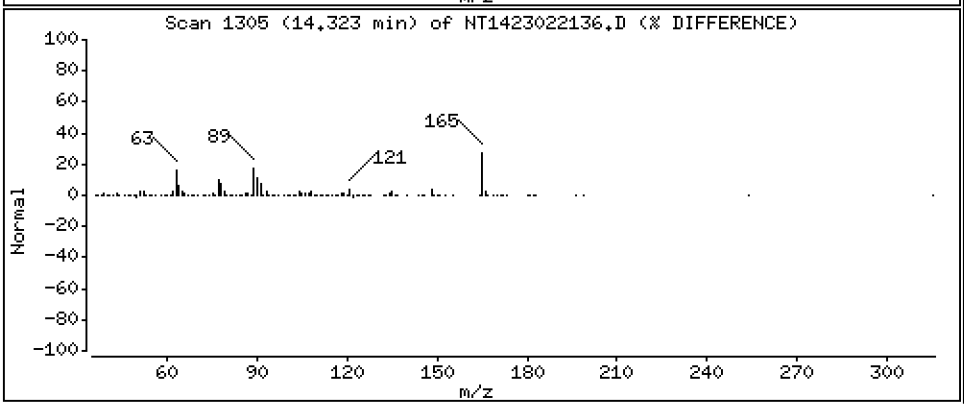












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

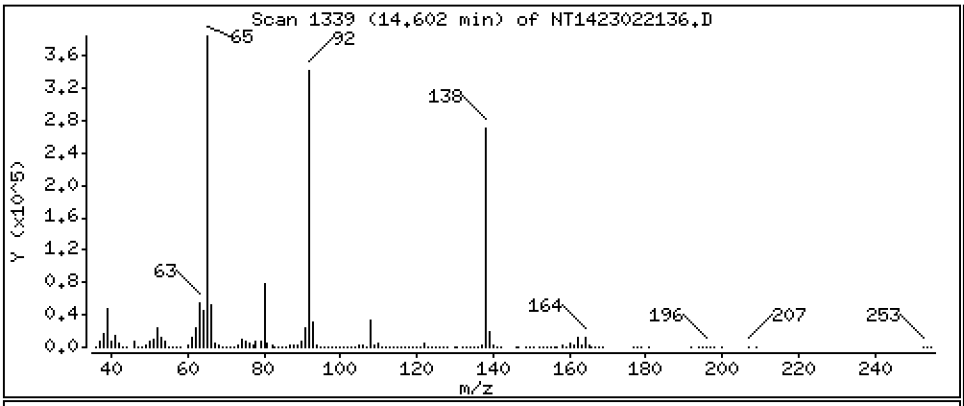
Operator: DSD

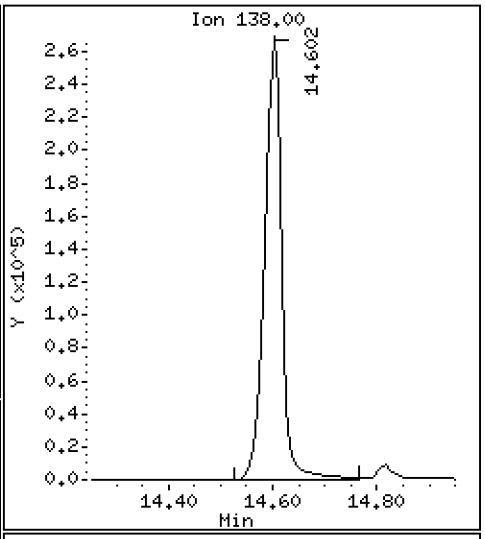
Column phase: ZB-5msi

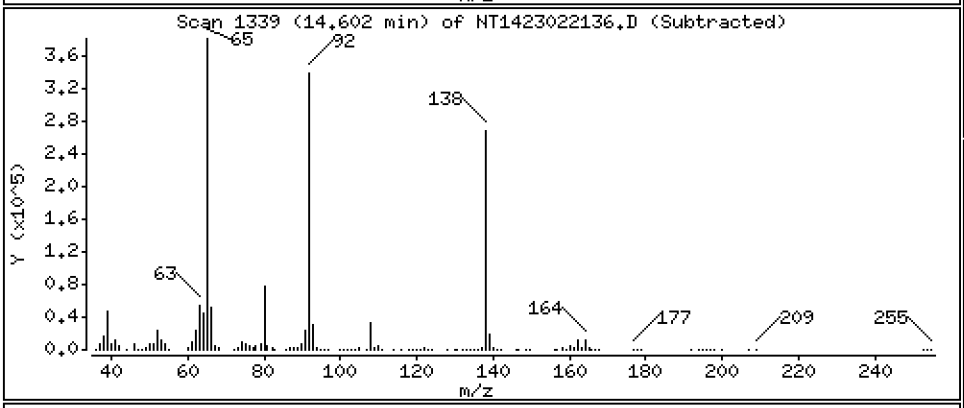
Column diameter: 0.25

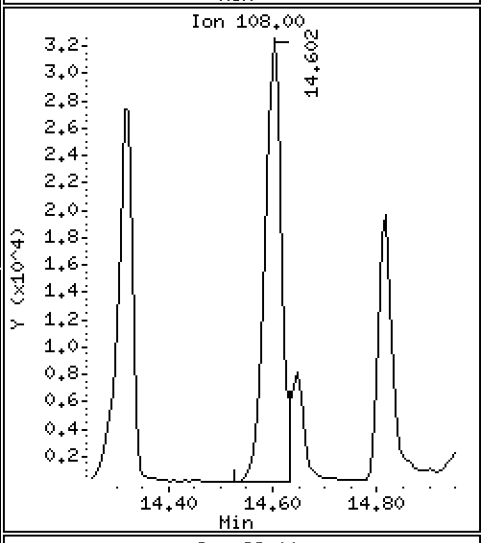
43 3-Nitroaniline

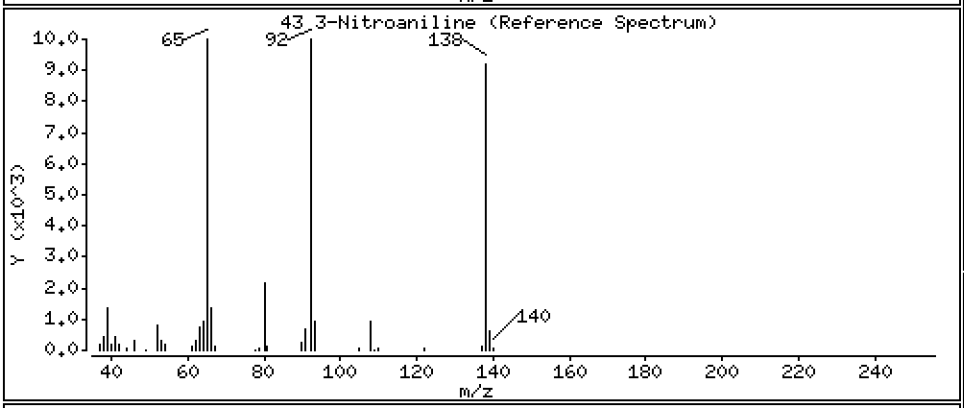
Concentration: 11.87 ug/mL

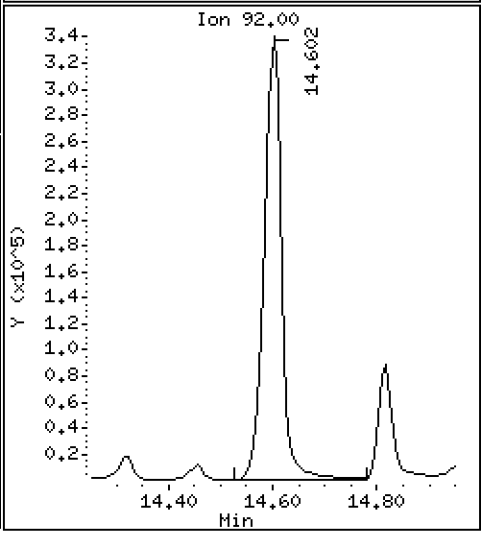


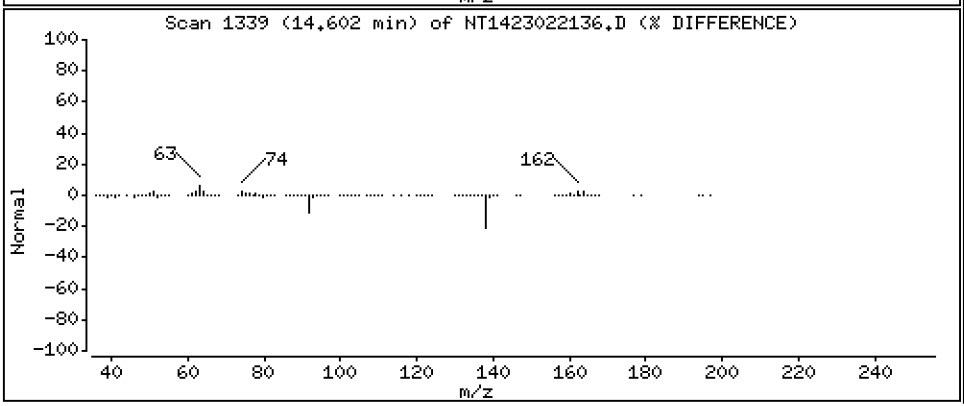












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

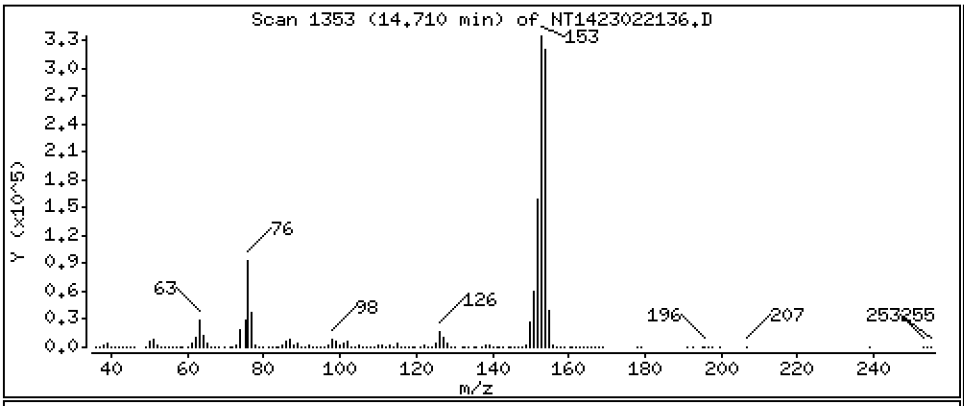
Operator: DSD

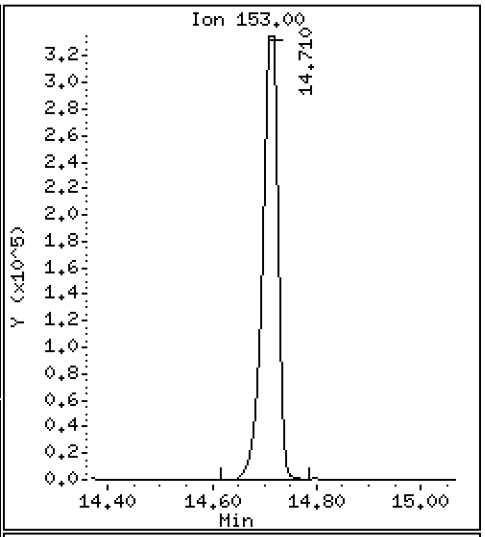
Column phase: ZB-5msi

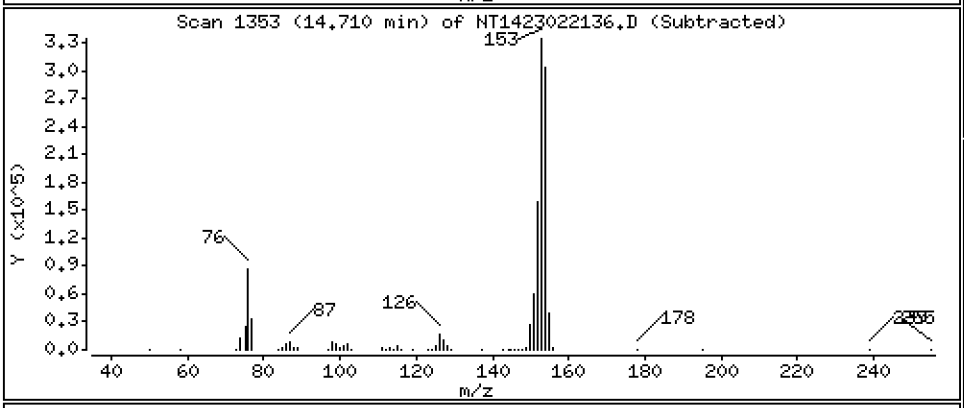
Column diameter: 0.25

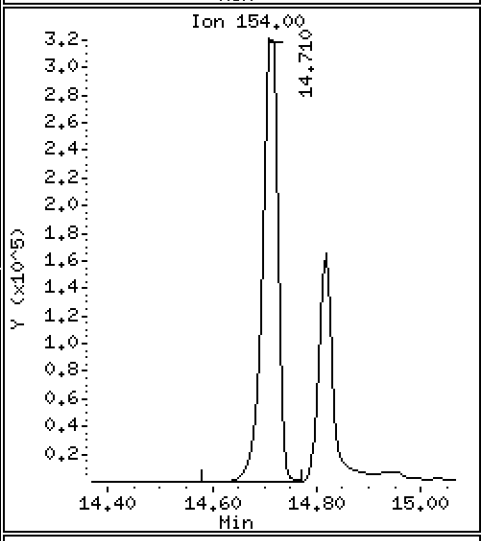
44 Acenaphthene

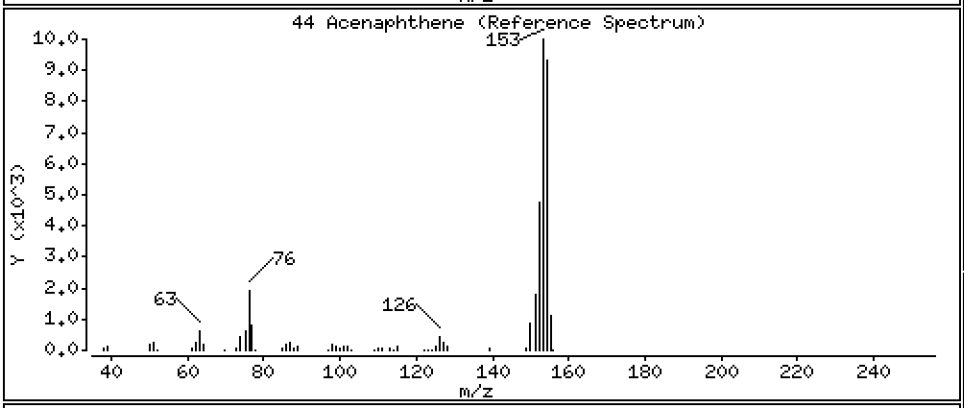
Concentration: 3.828 ug/mL

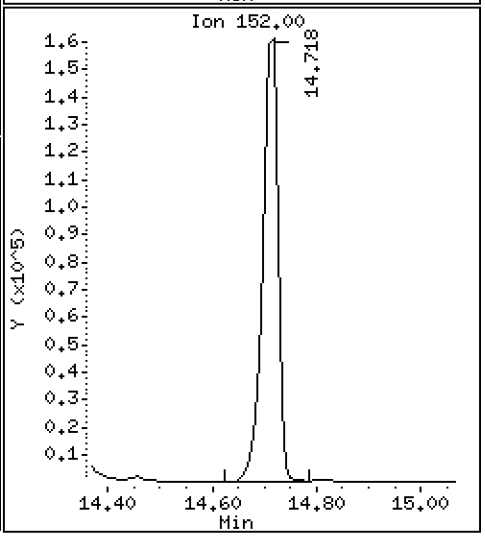


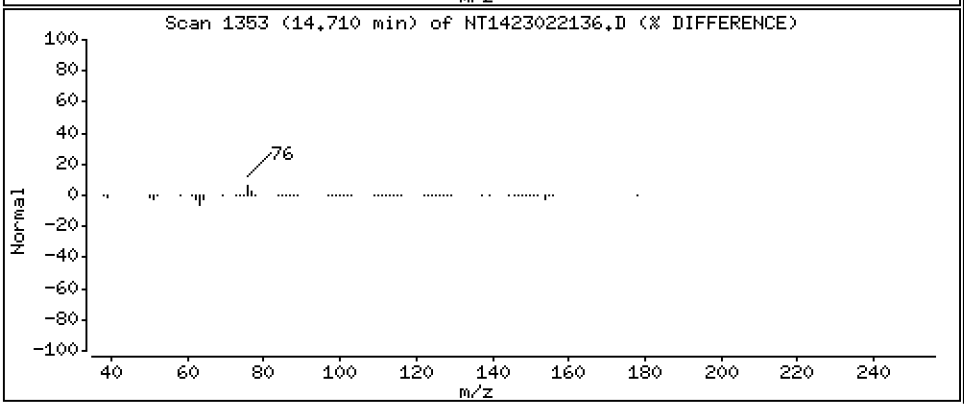












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

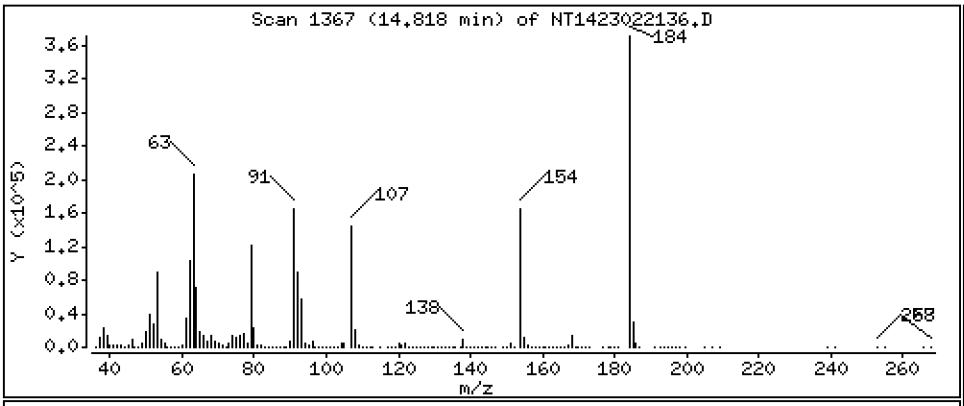
Operator: DSD

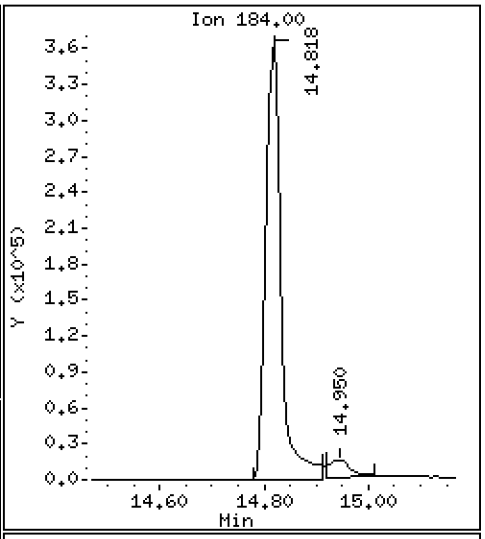
Column phase: ZB-5msi

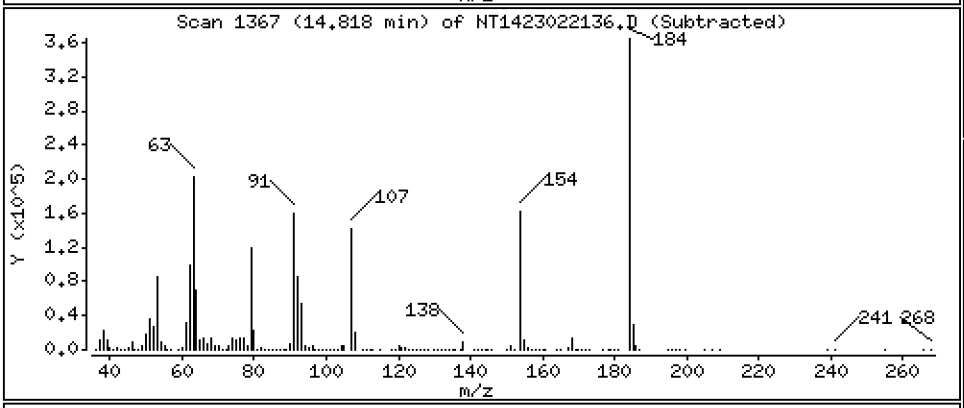
Column diameter: 0.25

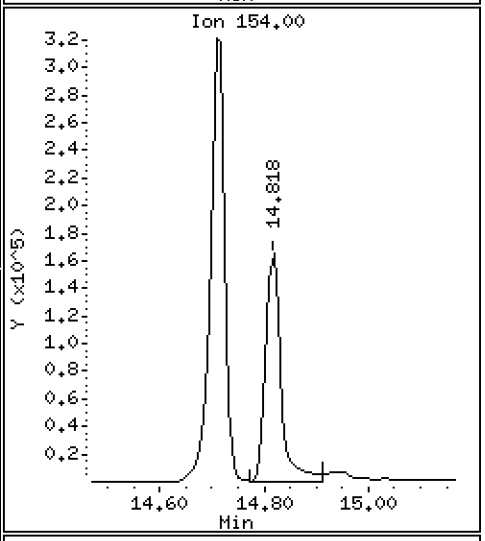
45 2,4-Dinitrophenol

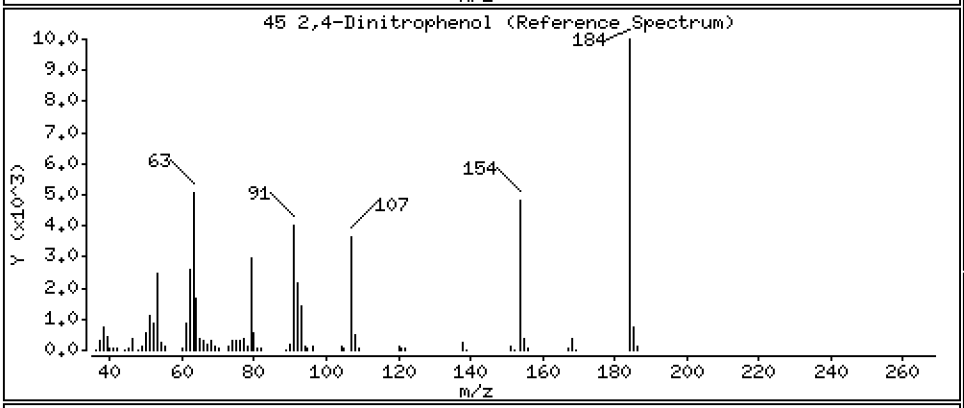
Concentration: 22.31 ug/mL

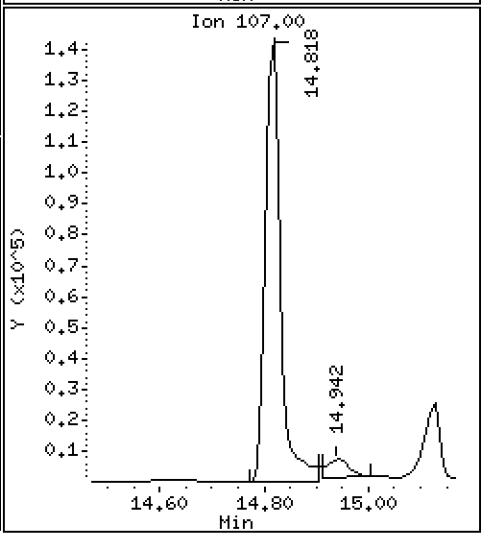


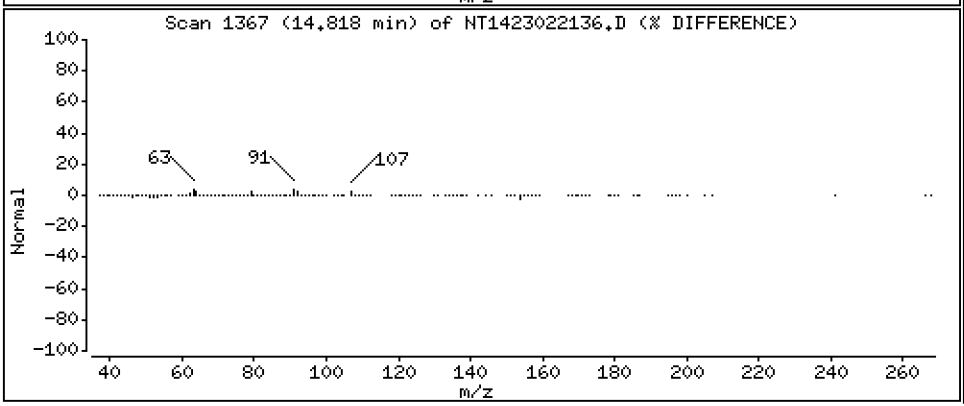












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

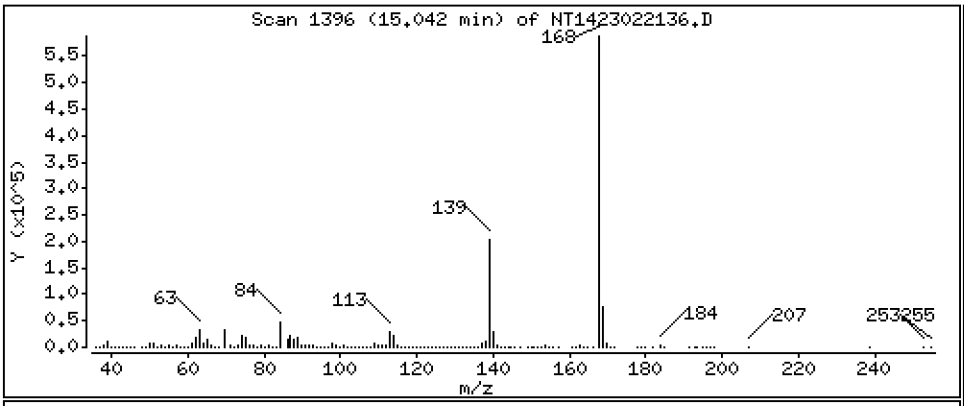
Operator: DSD

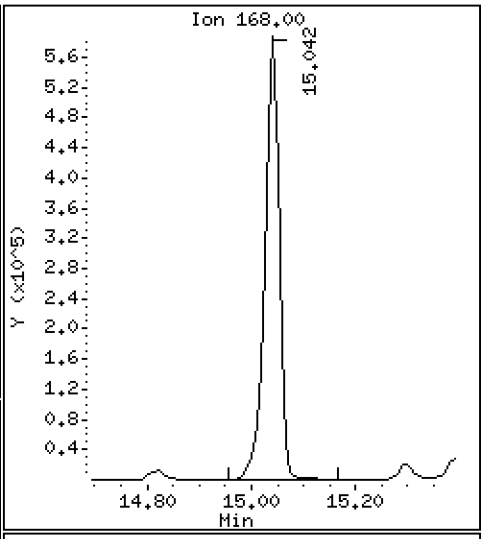
Column phase: ZB-5msi

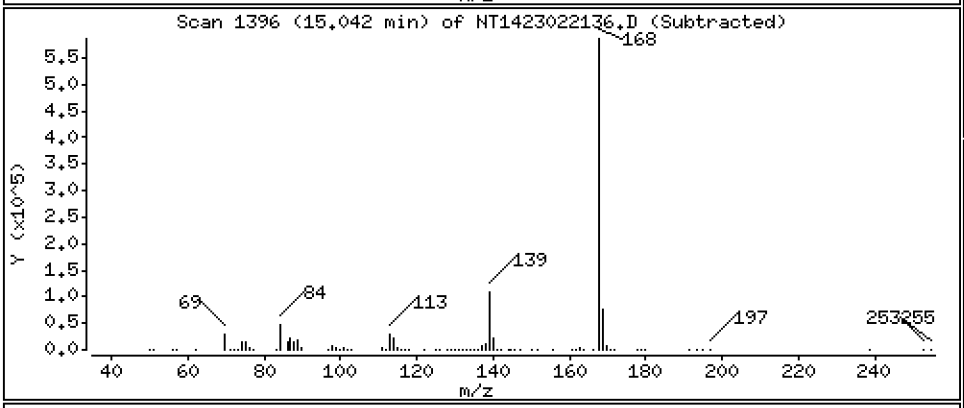
Column diameter: 0.25

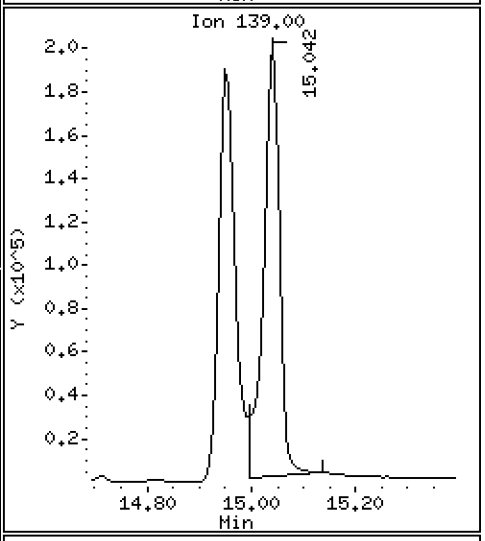
46 Dibenzofuran

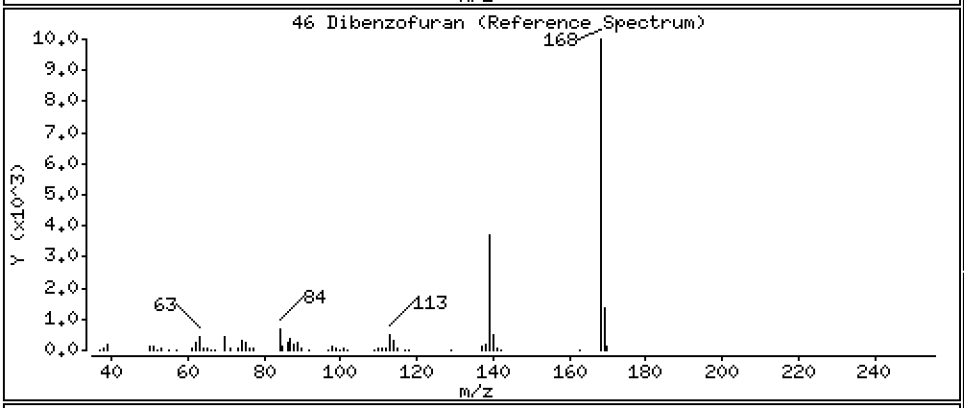
Concentration: 3.767 ug/mL

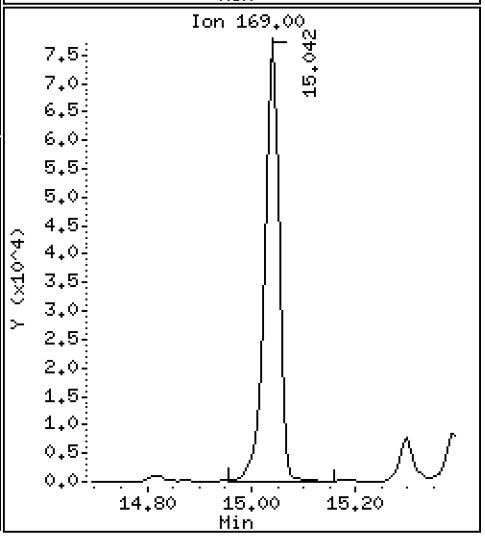


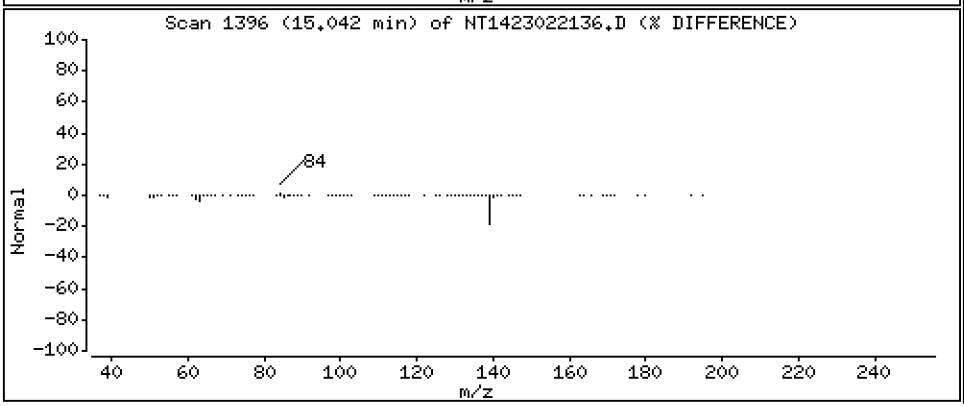












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

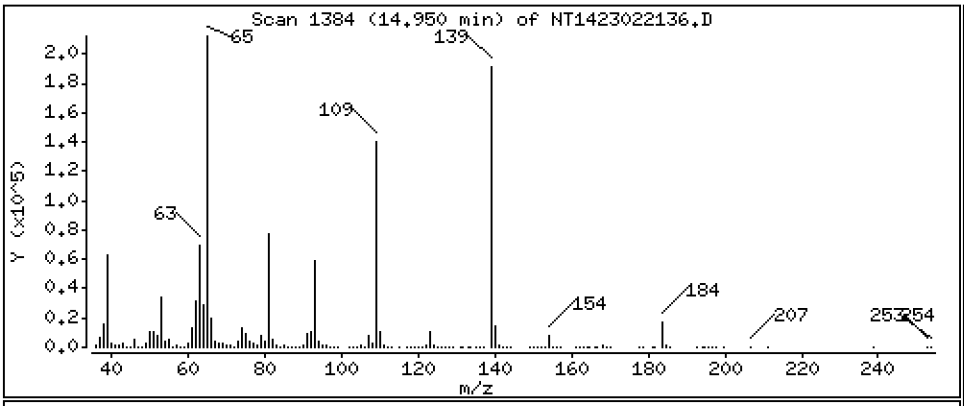
Operator: DSD

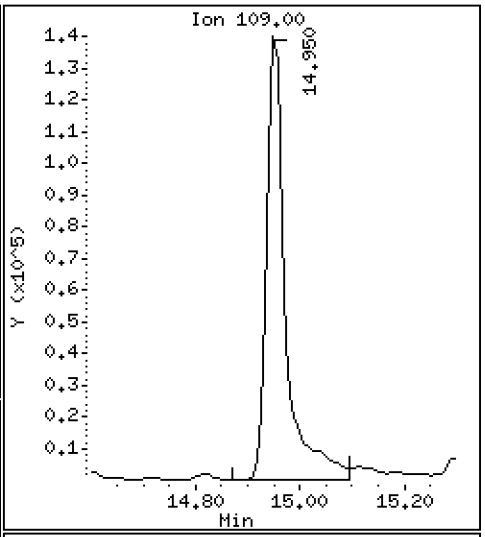
Column phase: ZB-5msi

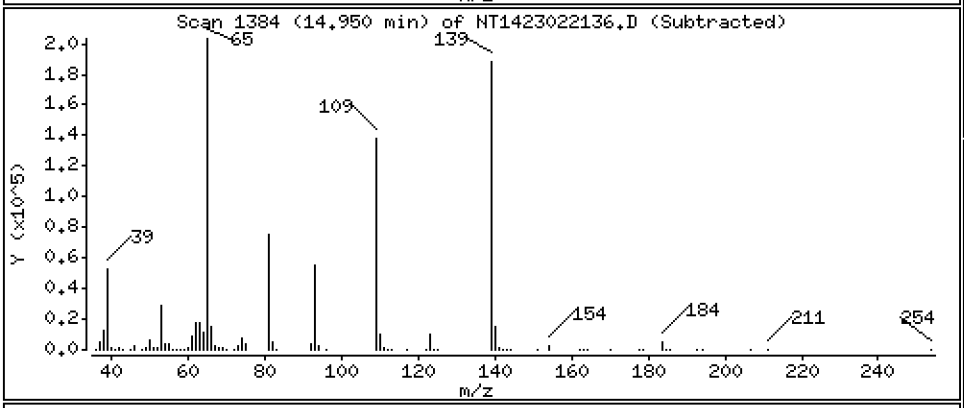
Column diameter: 0.25

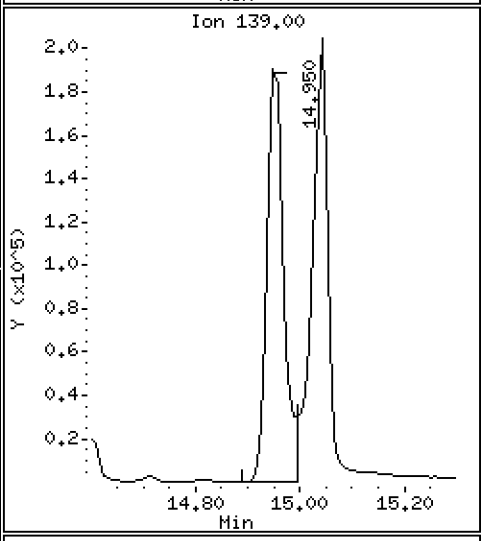
47 4-Nitrophenol

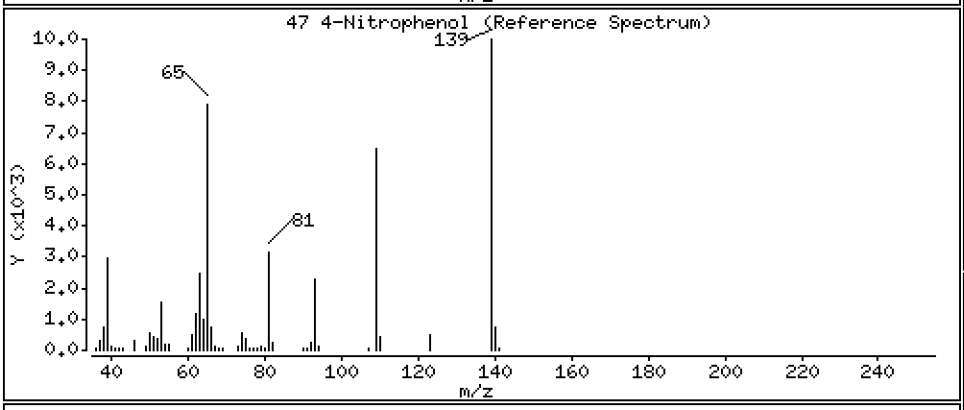
Concentration: 11.84 ug/mL

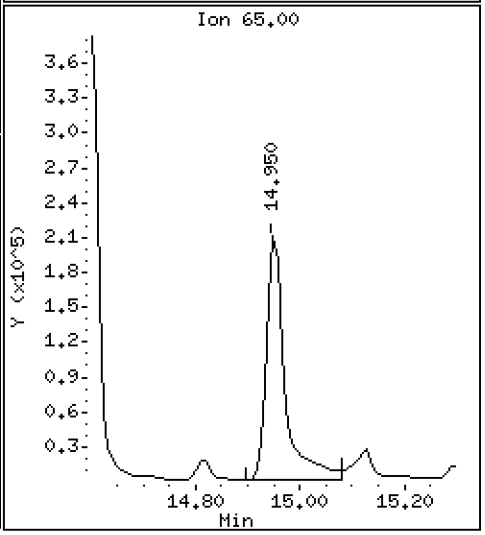


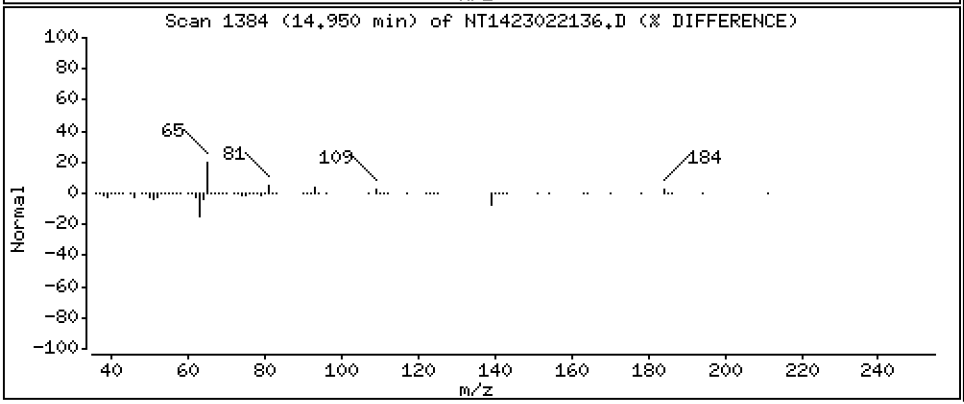












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

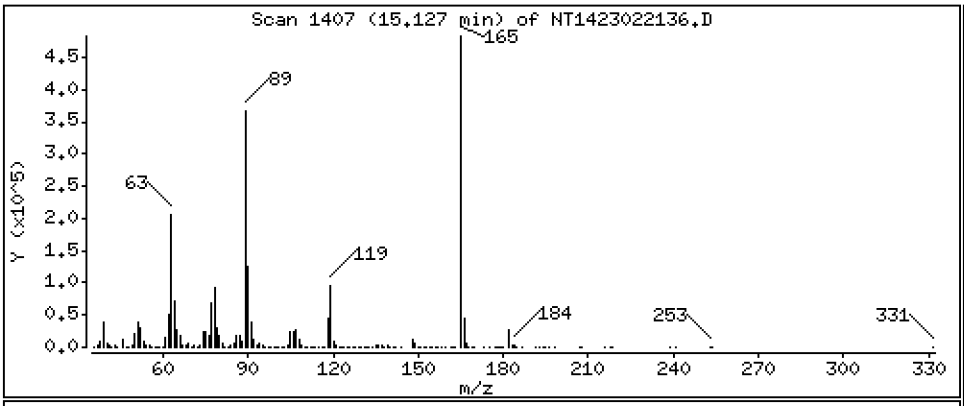
Operator: DSD

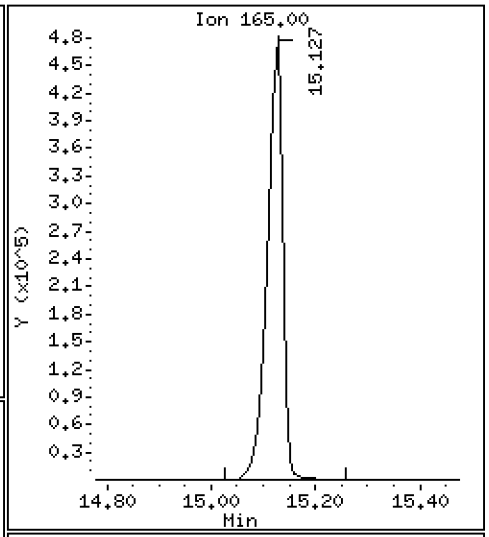
Column phase: ZB-5msi

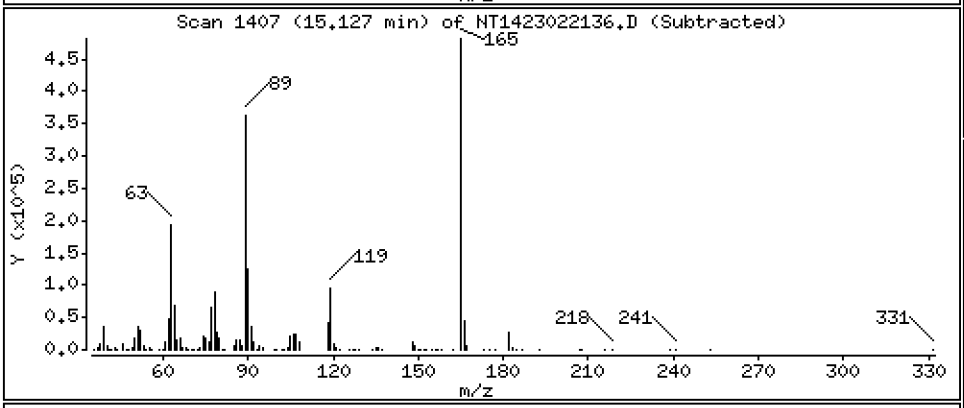
Column diameter: 0.25

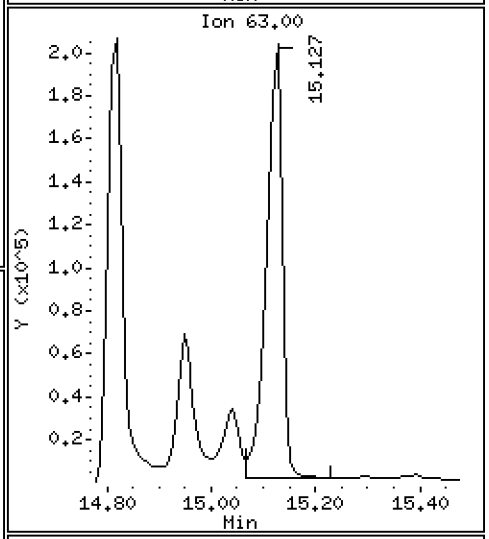
48 2,4-Dinitrotoluene

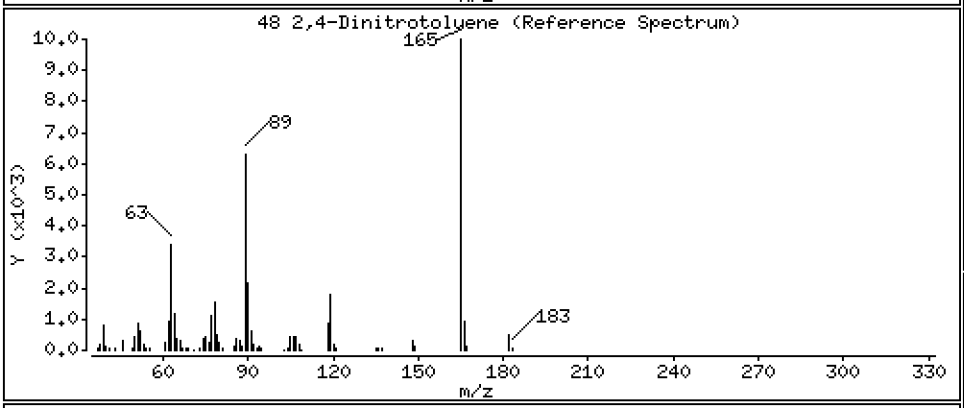
Concentration: 14.24 ug/mL

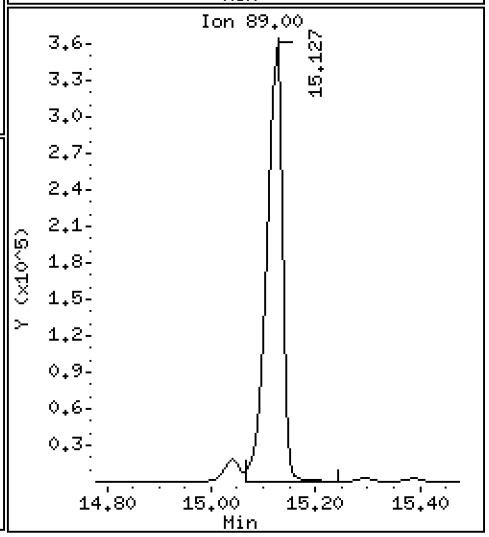


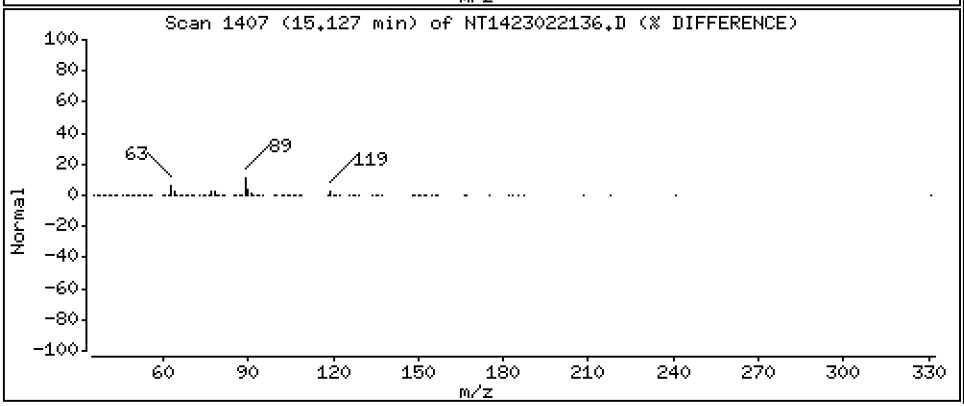












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022136.D

Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

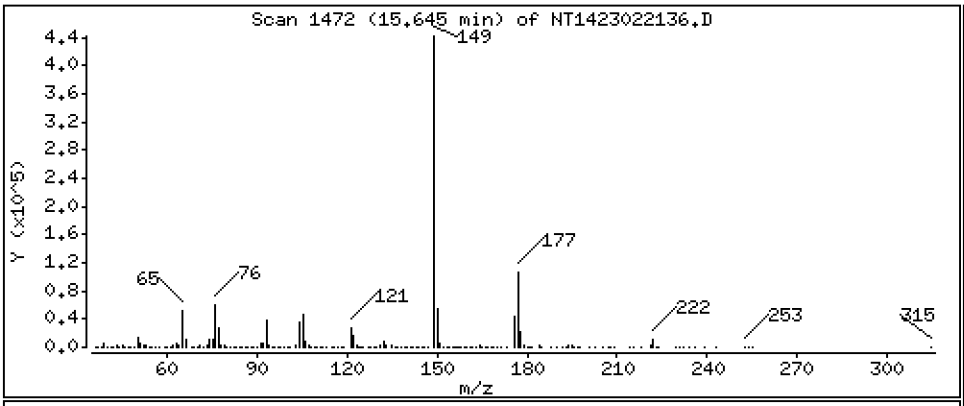
Operator: DSD

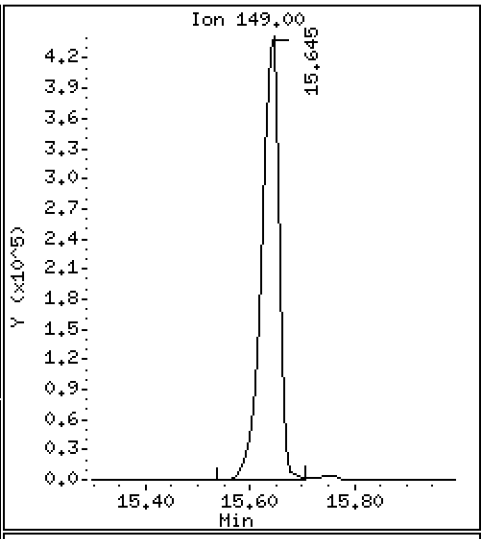
Column phase: ZB-5msi

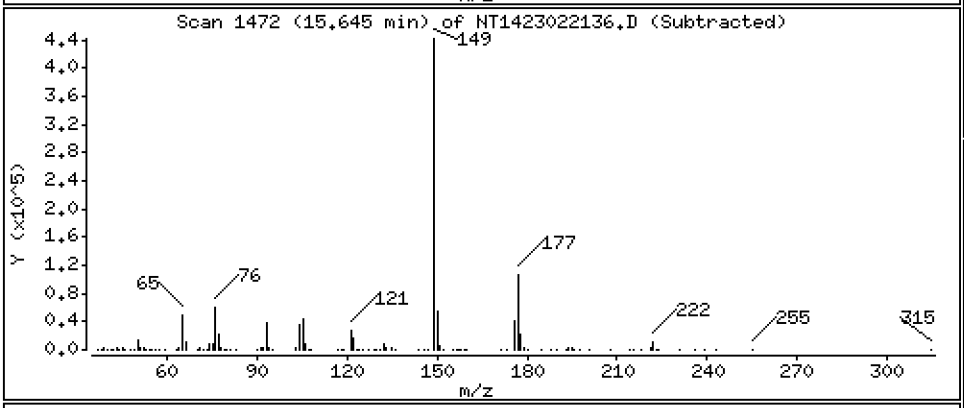
Column diameter: 0.25

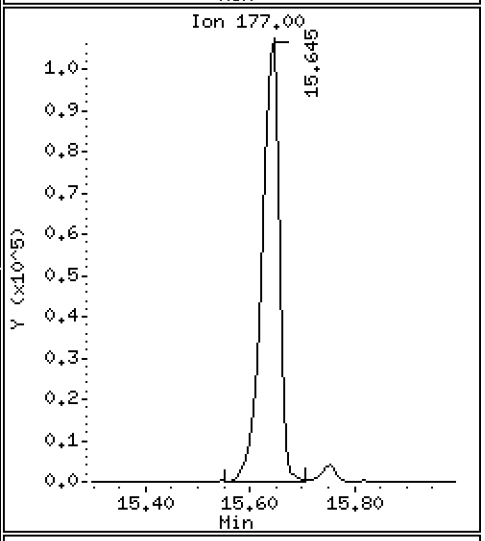
50 Diethylphthalate

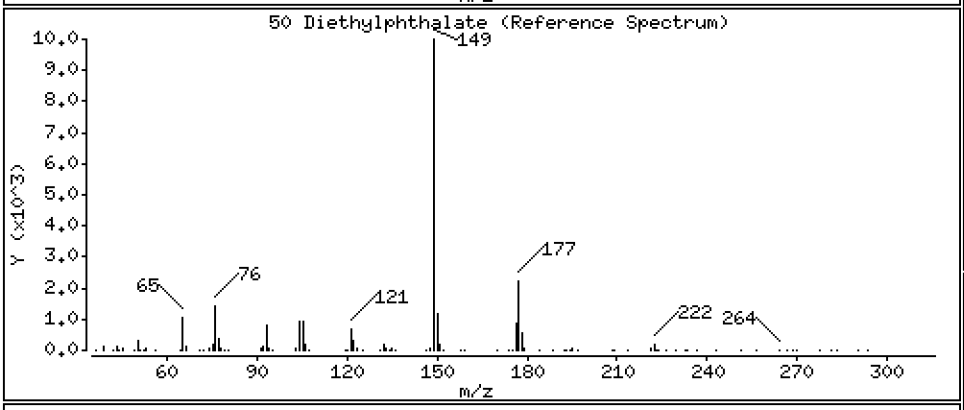
Concentration: 4.157 ug/mL

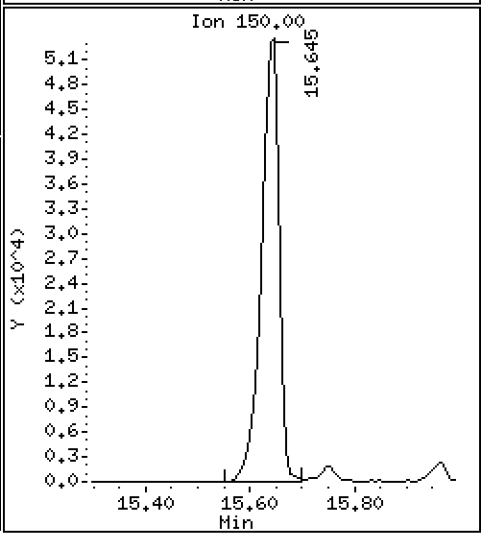


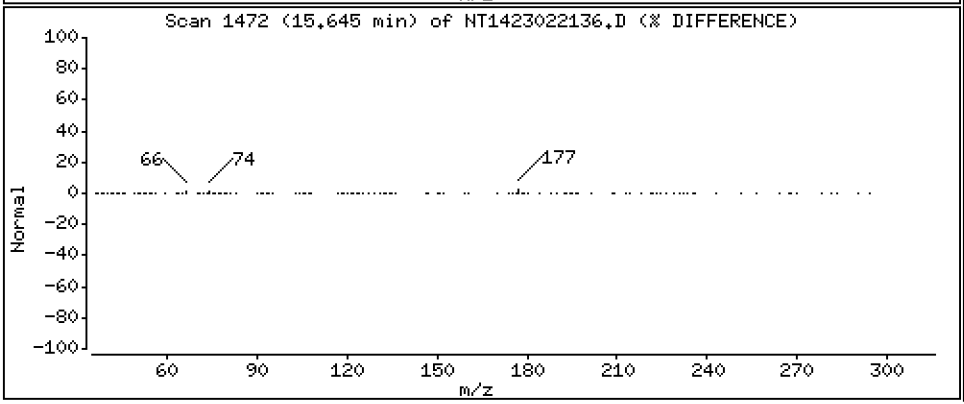












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

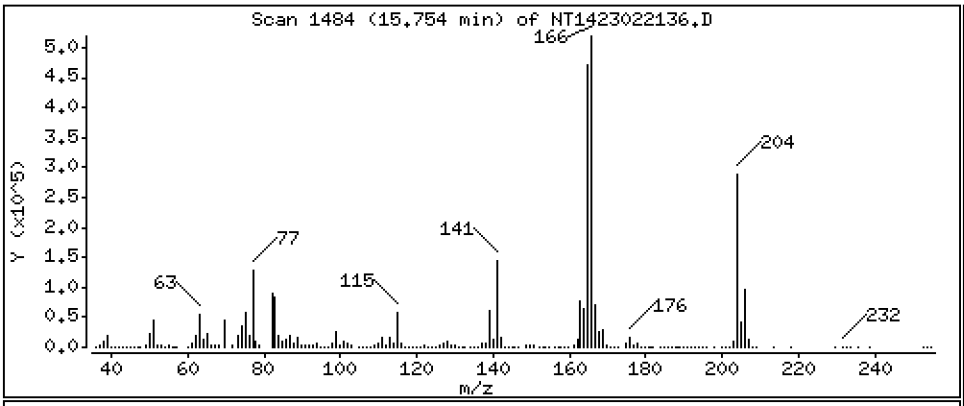
Operator: DSD

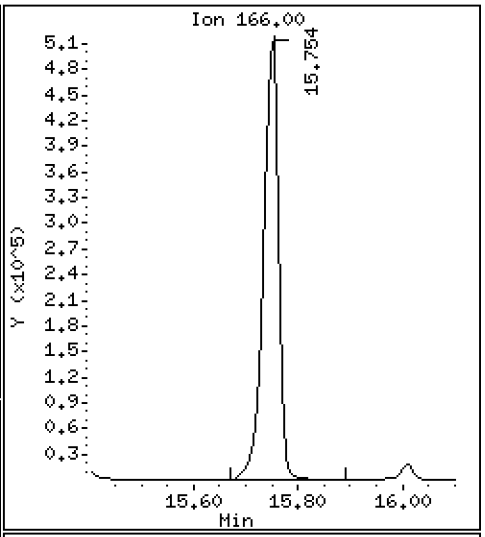
Column phase: ZB-5msi

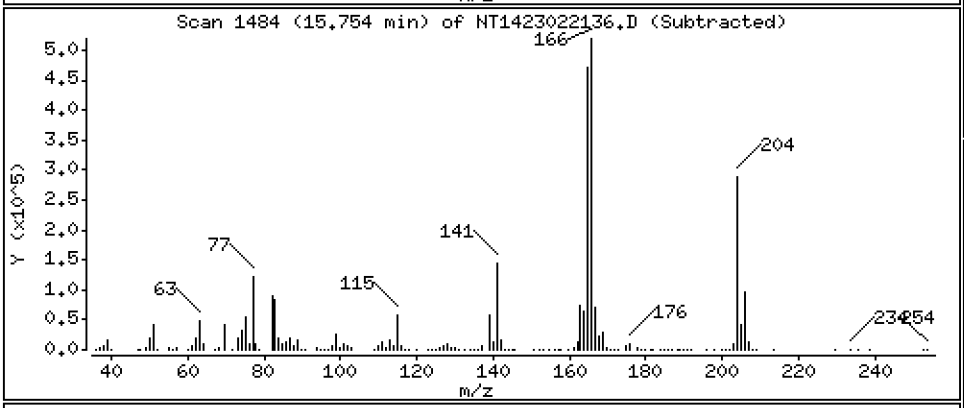
Column diameter: 0.25

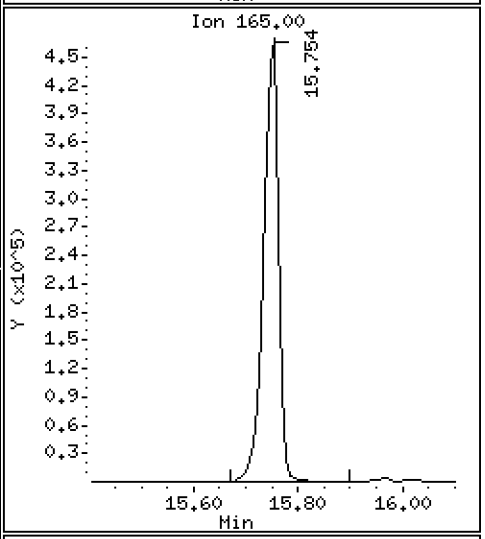
49 Fluorene

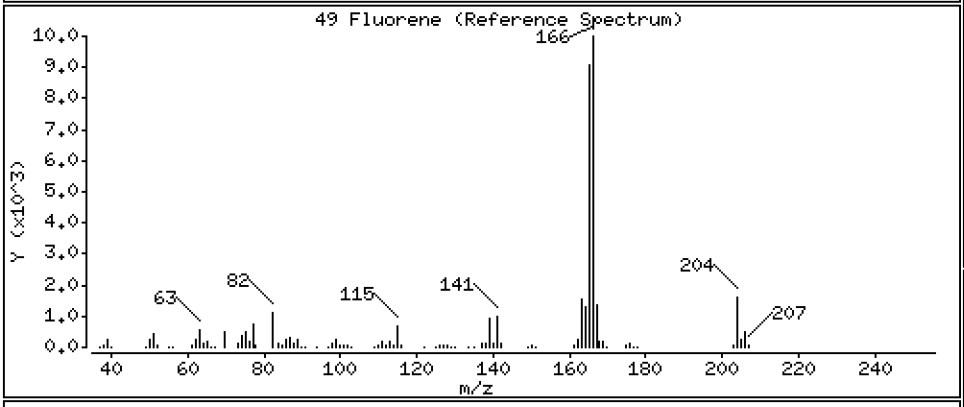
Concentration: 3.588 ug/mL

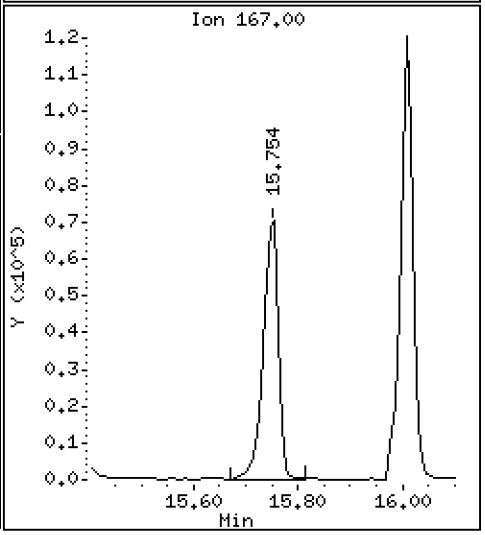


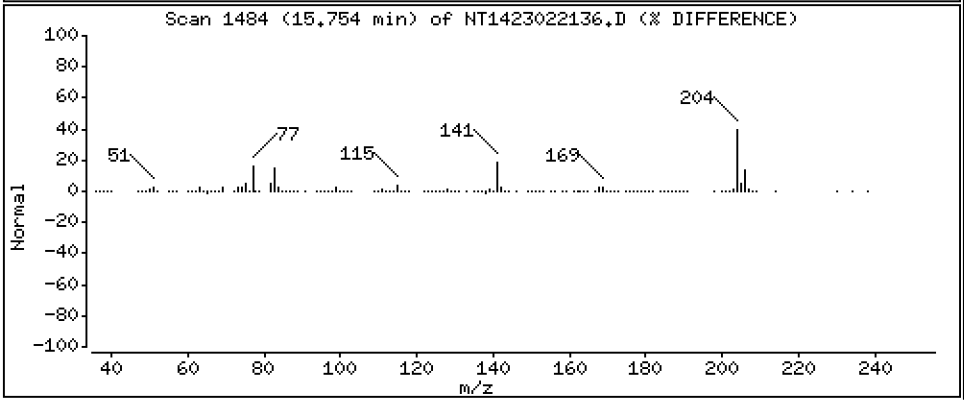












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

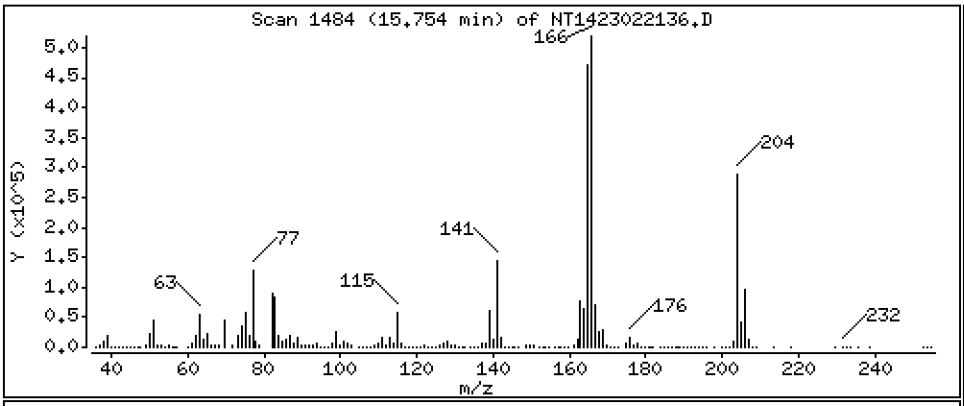
Operator: DSD

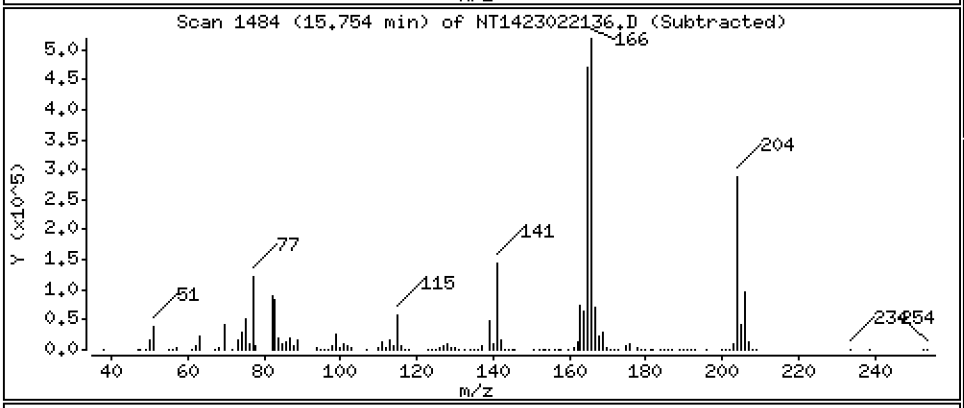
Column phase: ZB-5msi

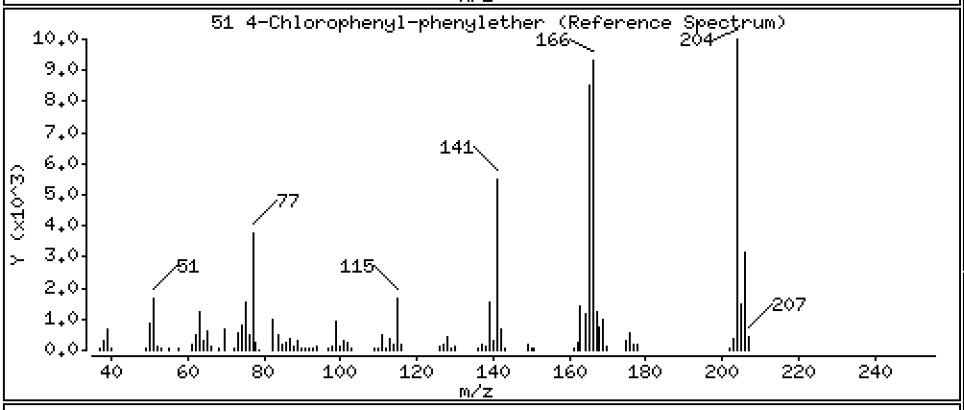
Column diameter: 0.25

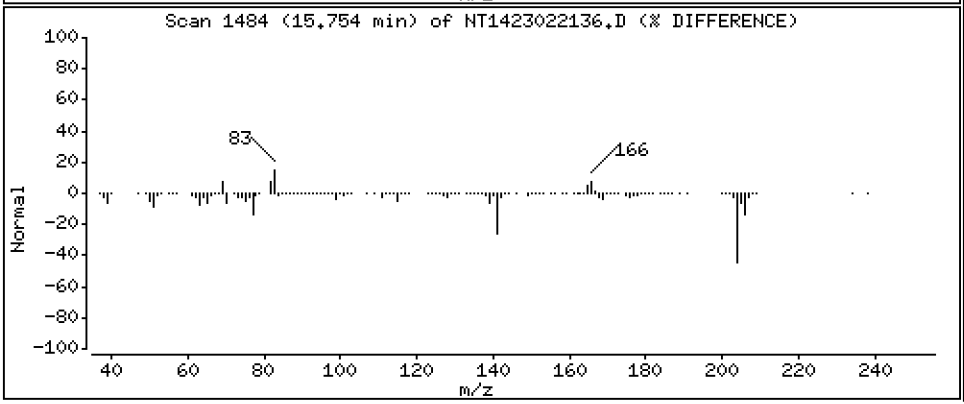
51 4-Chlorophenyl-phenylether

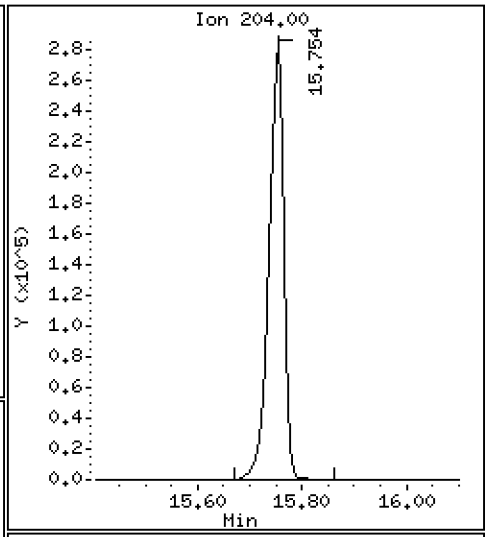
Concentration: 3.694 ug/mL

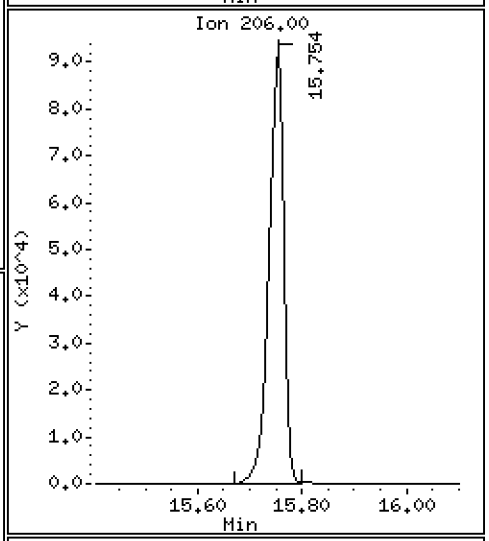


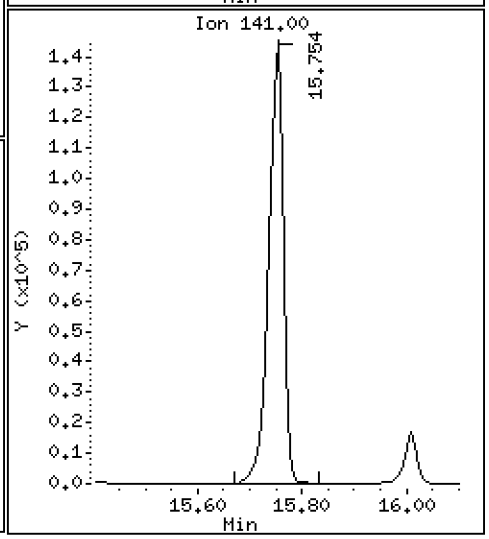












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

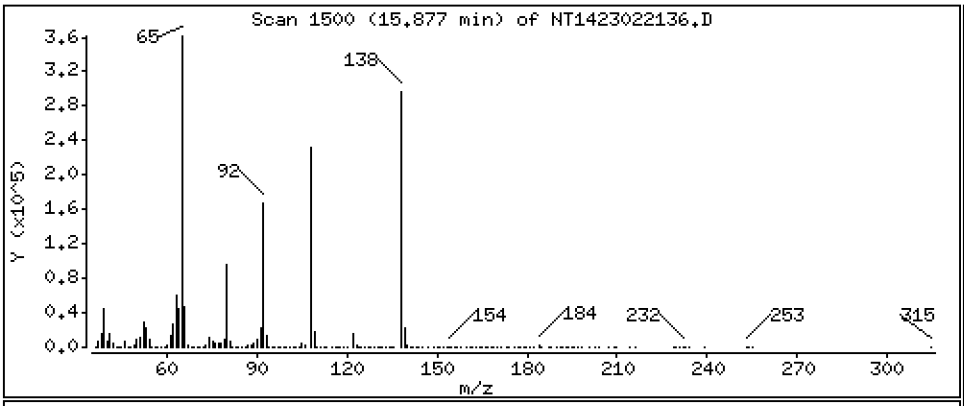
Operator: DSD

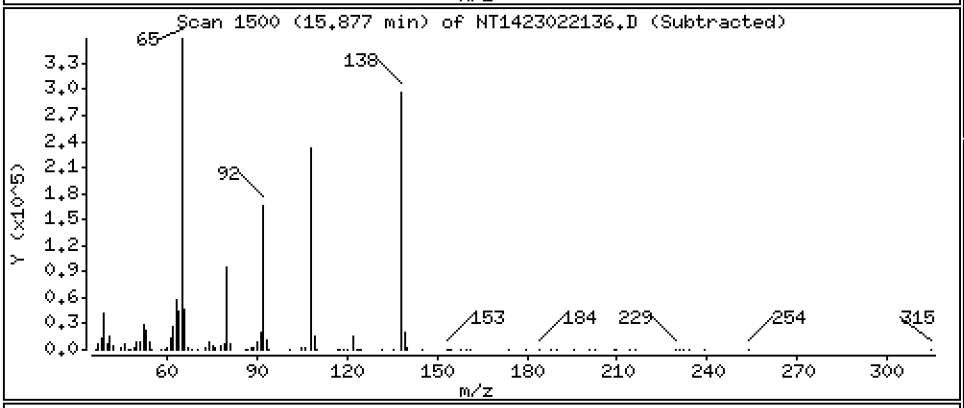
Column phase: ZB-5msi

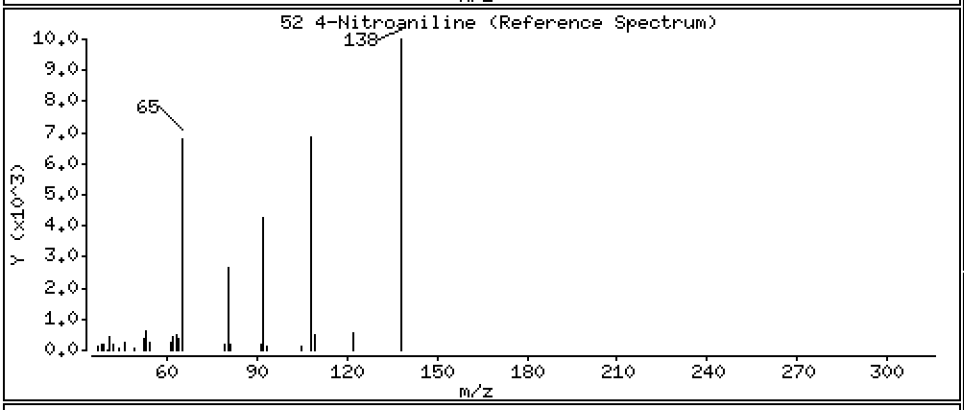
Column diameter: 0.25

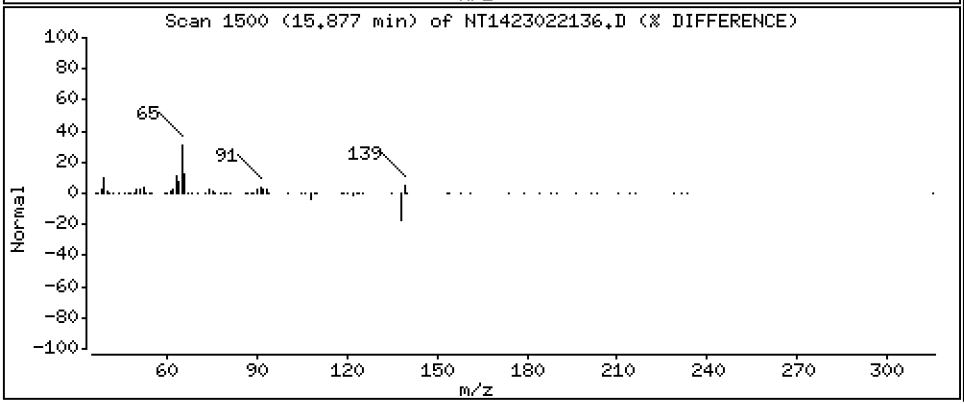
52 4-Nitroaniline

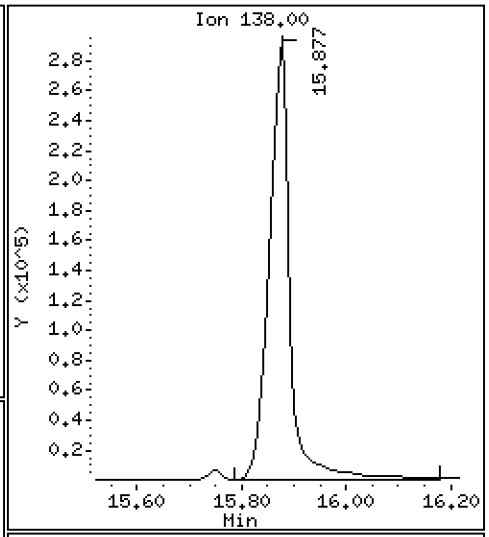
Concentration: 13.88 ug/mL

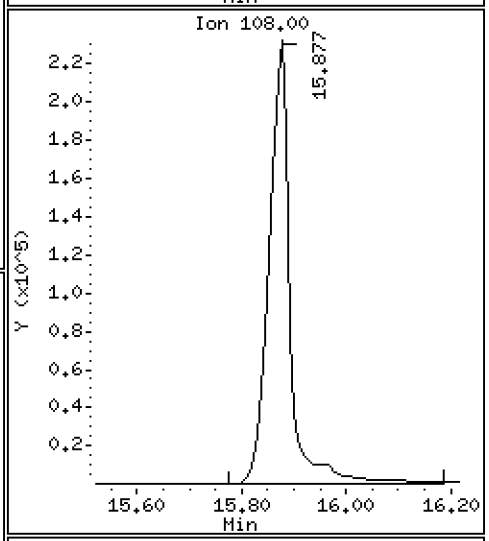


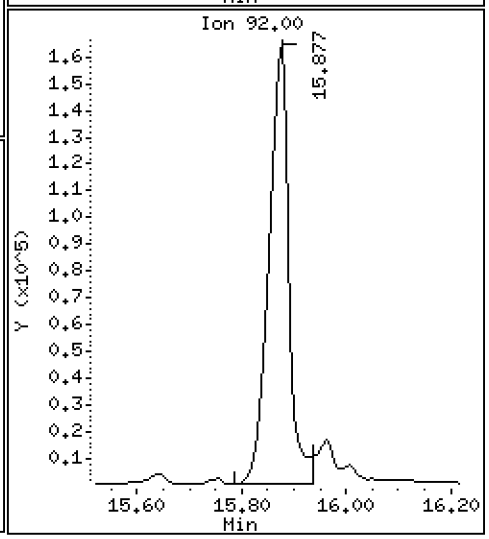












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

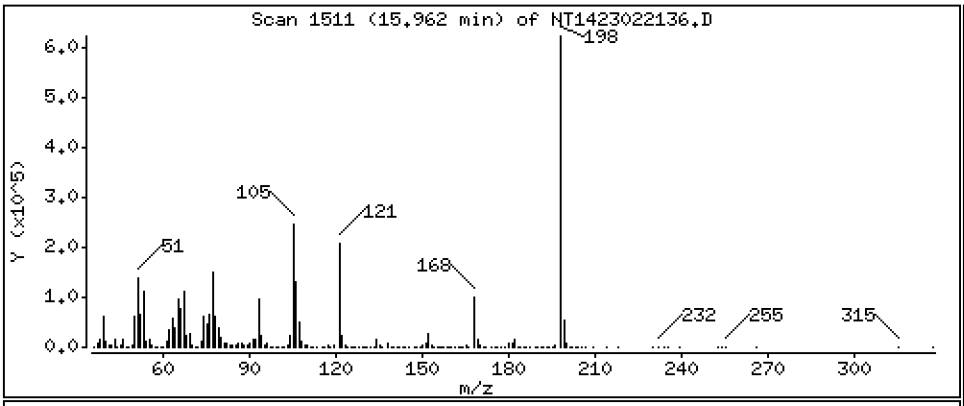
Operator: DSD

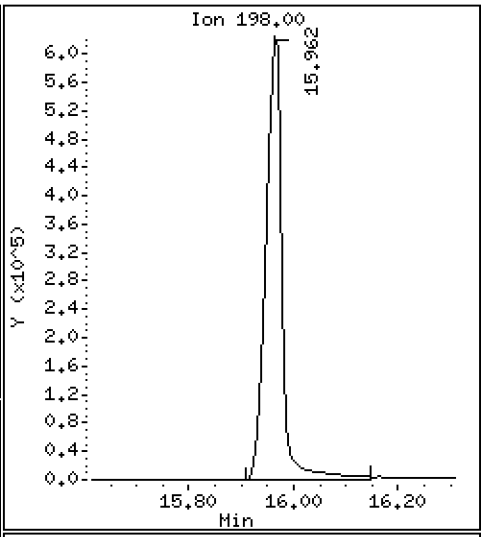
Column phase: ZB-5msi

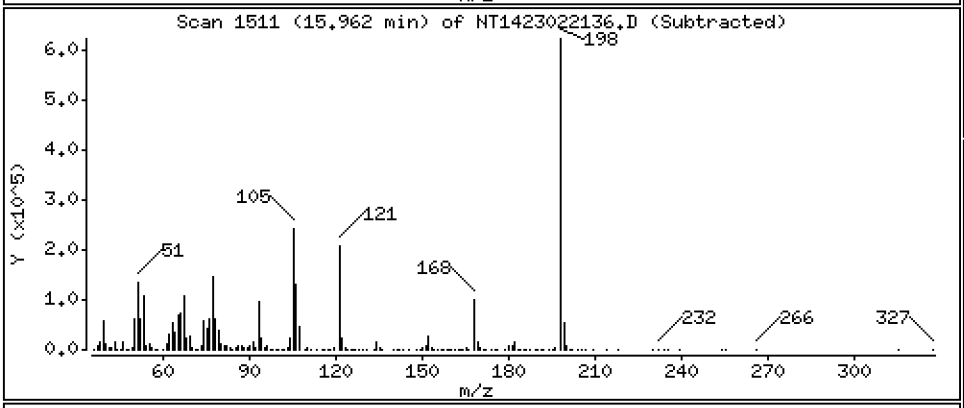
Column diameter: 0.25

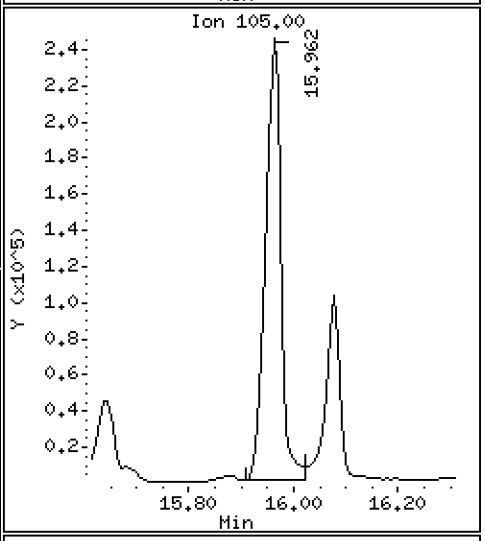
53 4,6-Dinitro-2-methylphenol

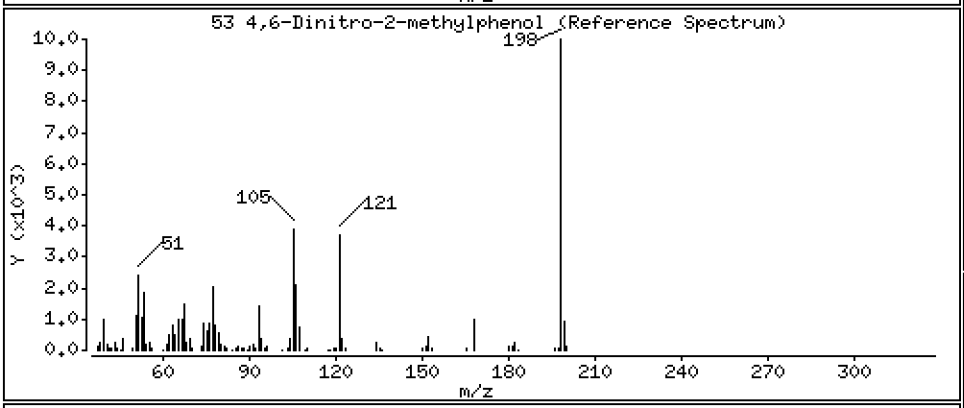
Concentration: 26.49 ug/mL

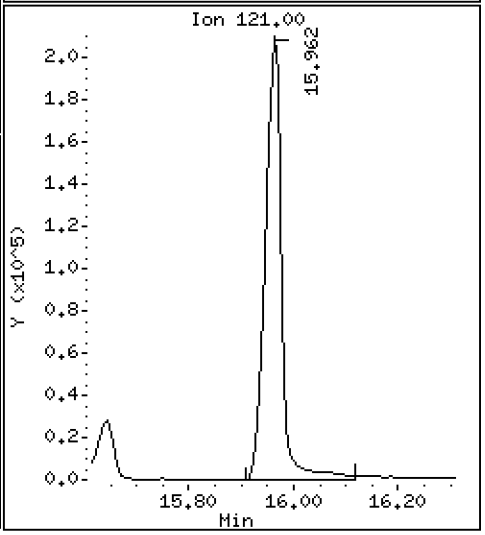


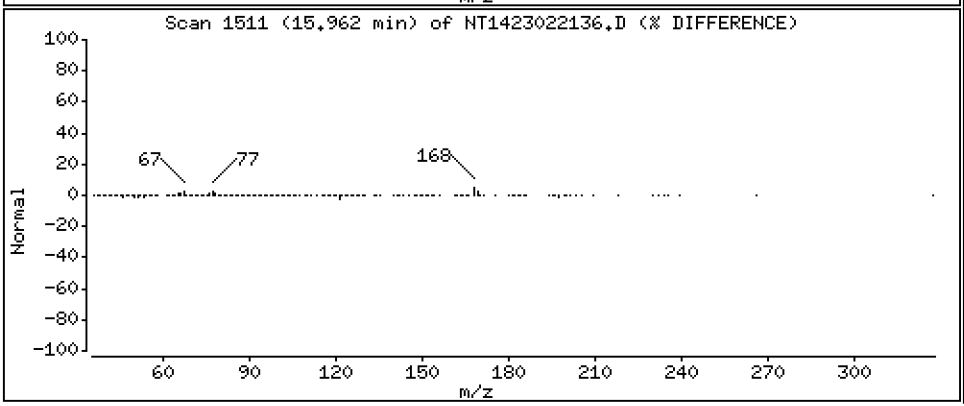












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

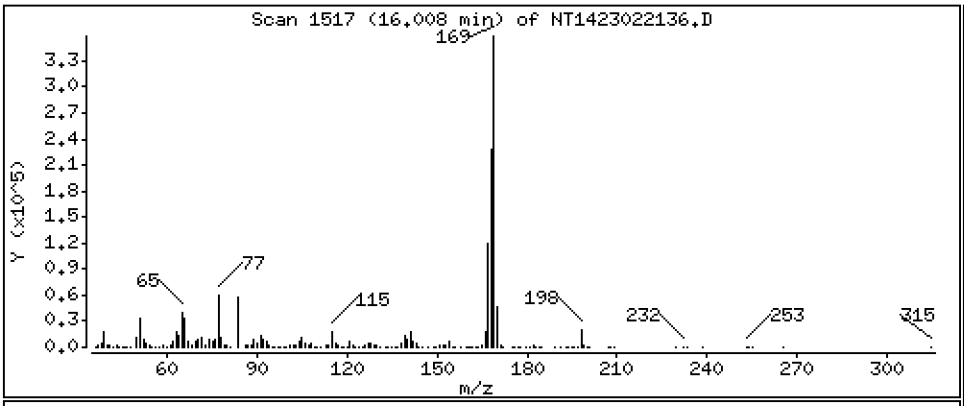
Operator: DSD

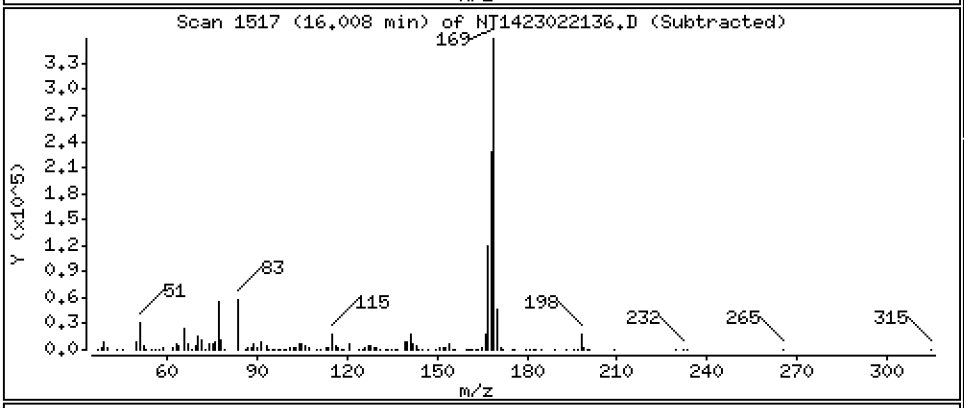
Column phase: ZB-5msi

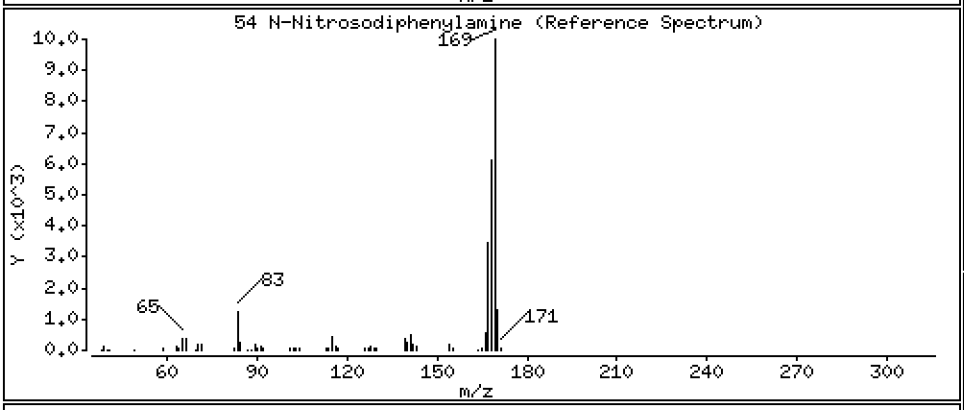
Column diameter: 0.25

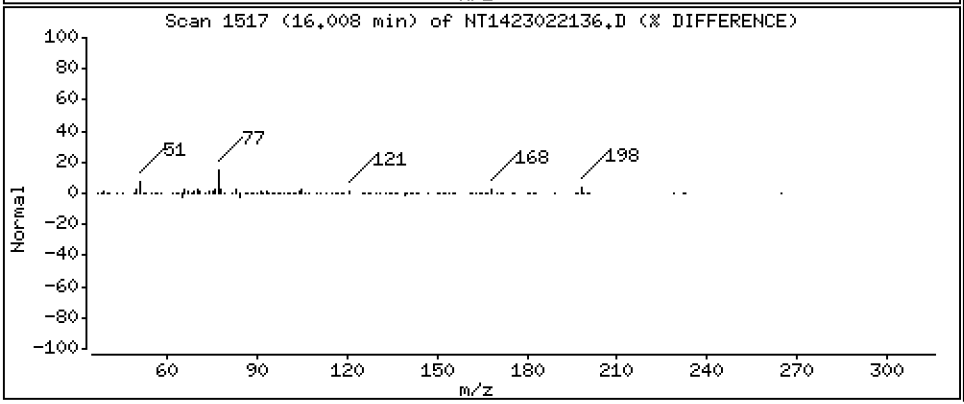
54 N-Nitrosodiphenylamine

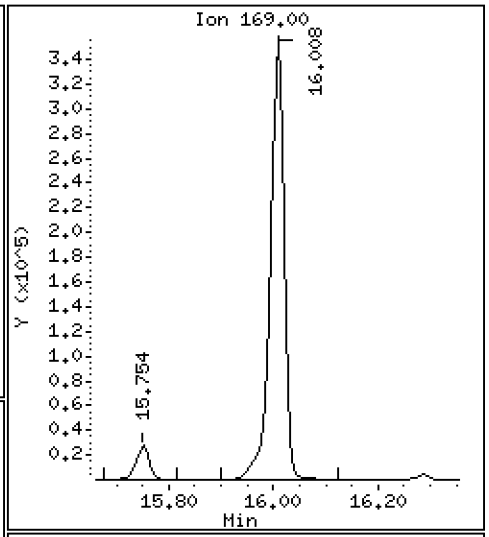
Concentration: 3.363 ug/mL

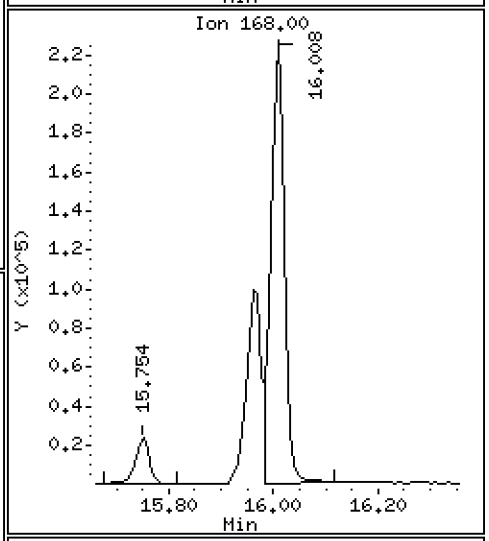


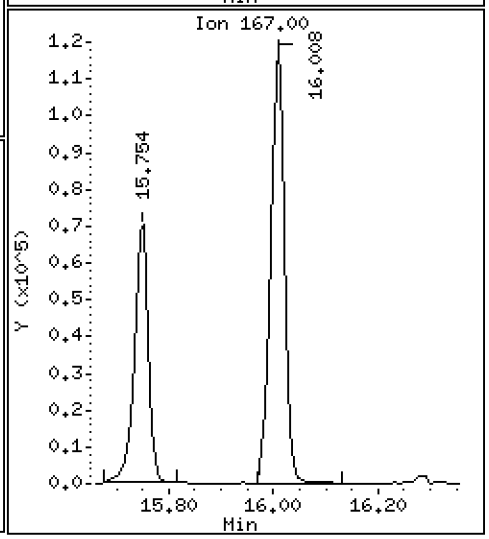












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

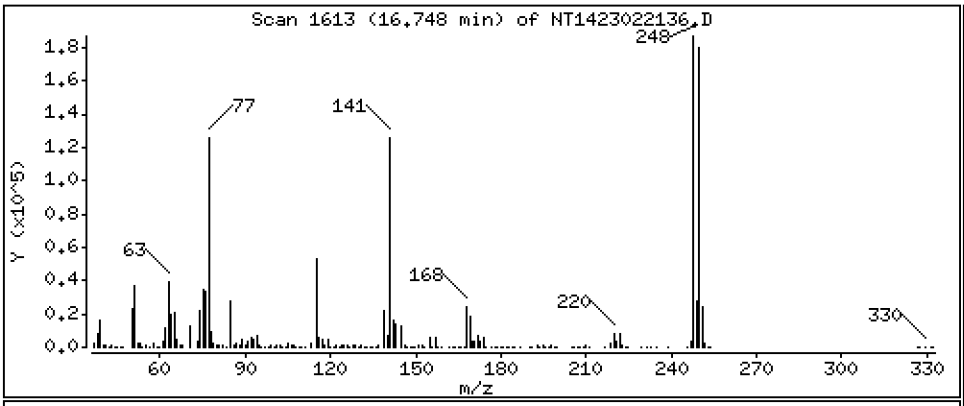
Operator: DSD

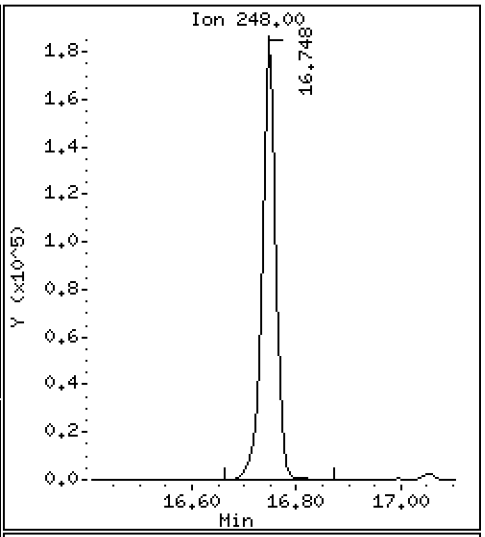
Column phase: ZB-5msi

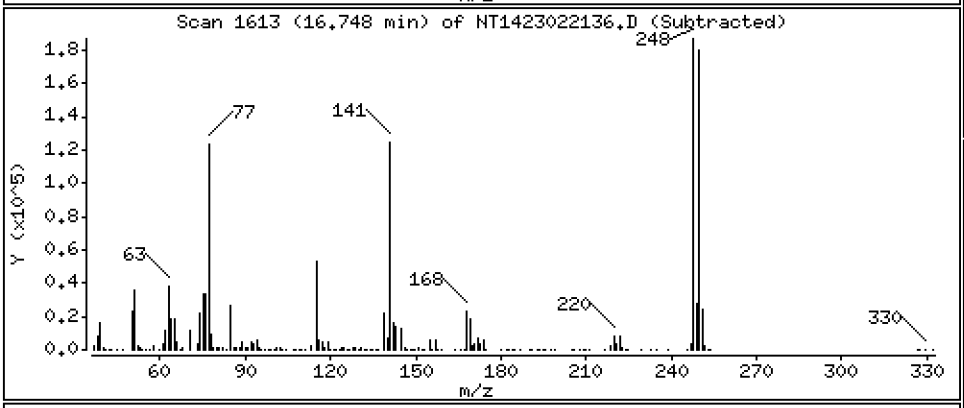
Column diameter: 0.25

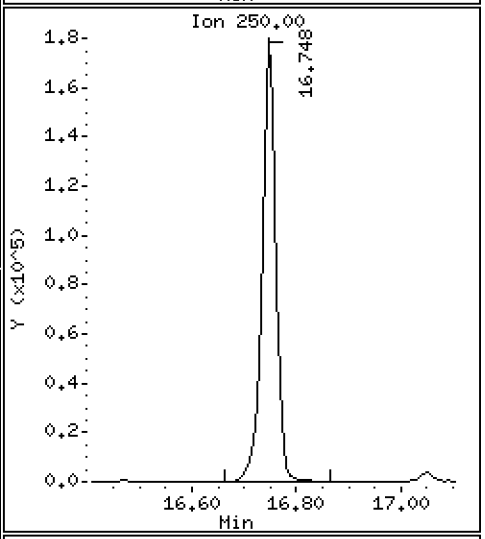
56 4-Bromophenyl-phenylether

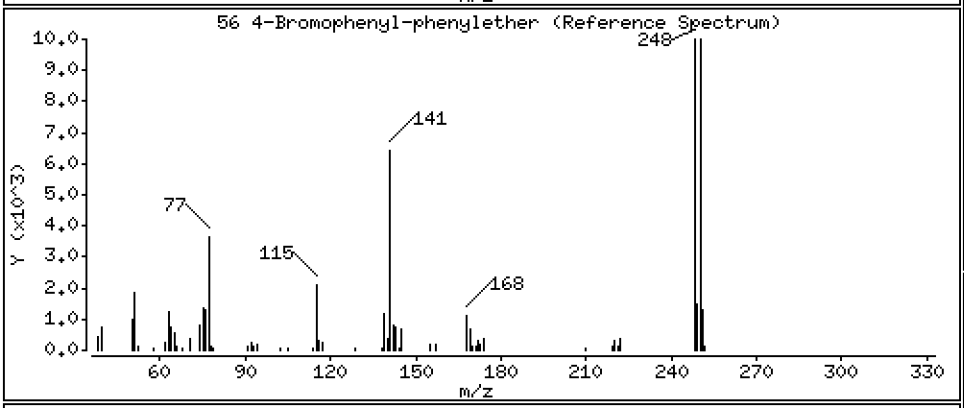
Concentration: 4.082 ug/mL

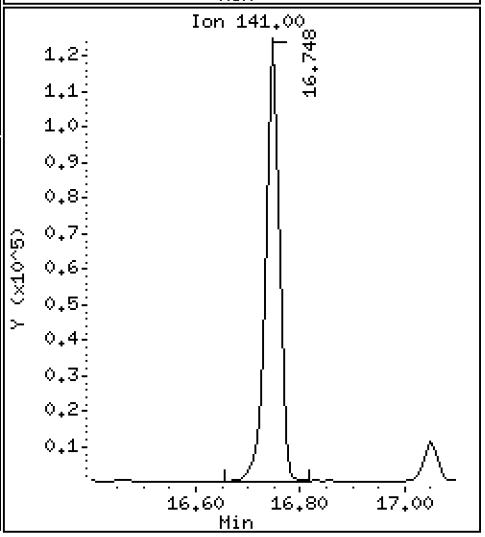


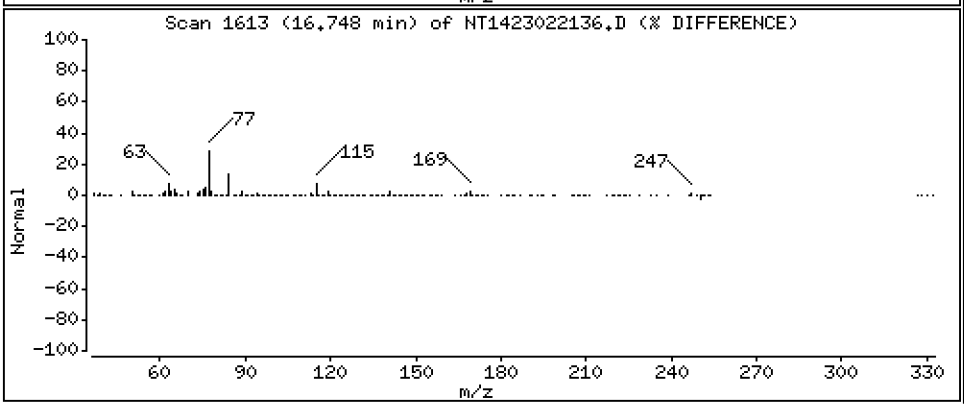












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022136.D

Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

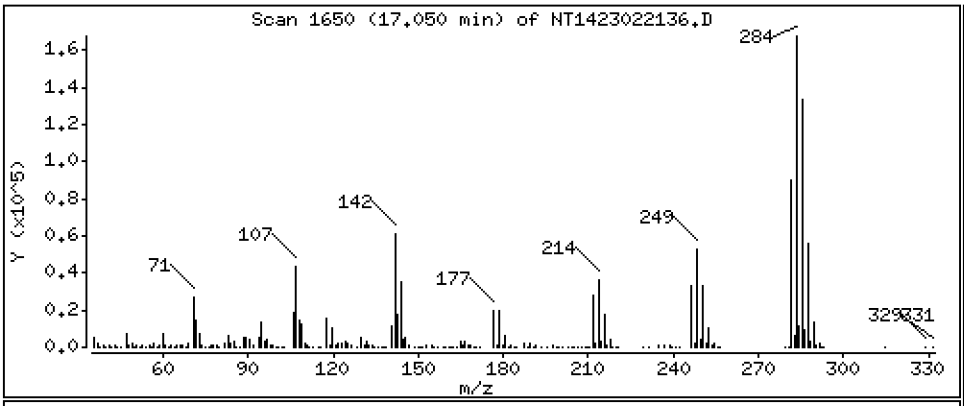
Operator: DSD

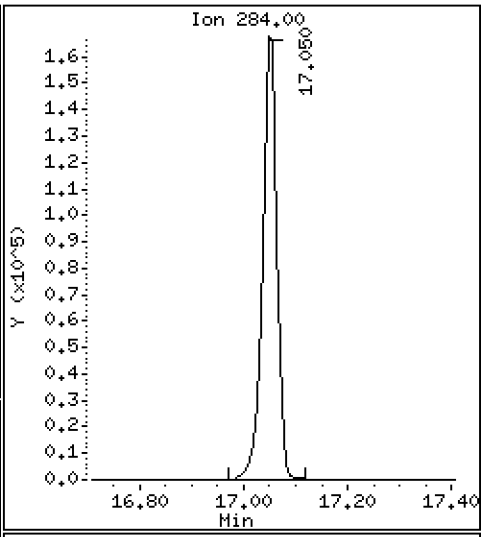
Column phase: ZB-5msi

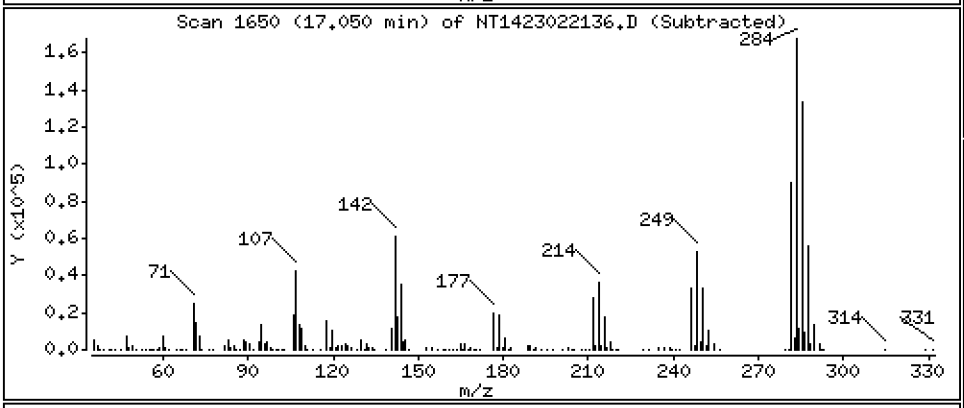
Column diameter: 0.25

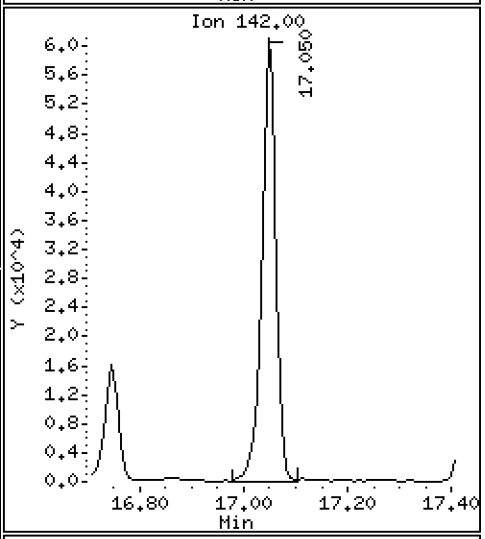
57 Hexachlorobenzene

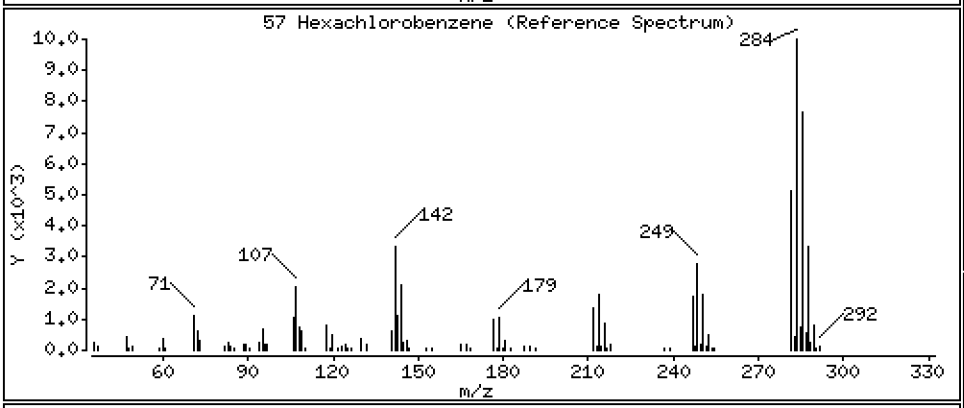
Concentration: 3.836 ug/mL

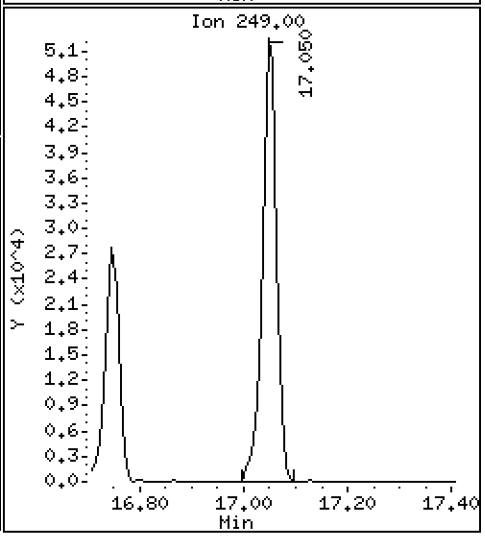


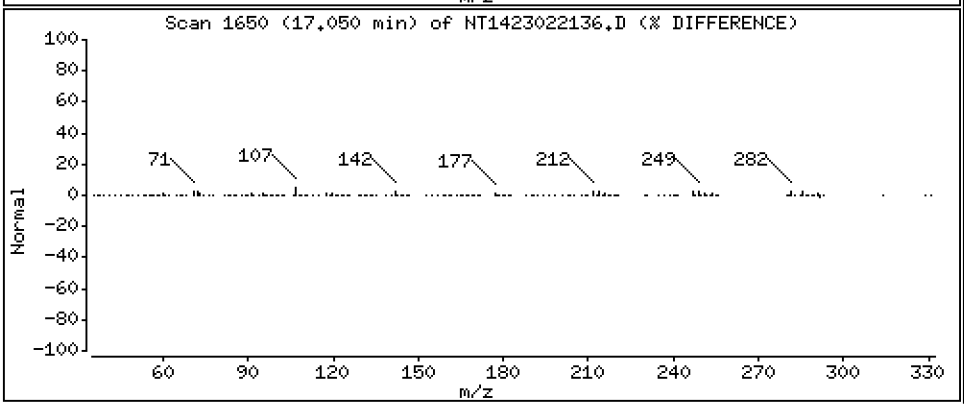












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

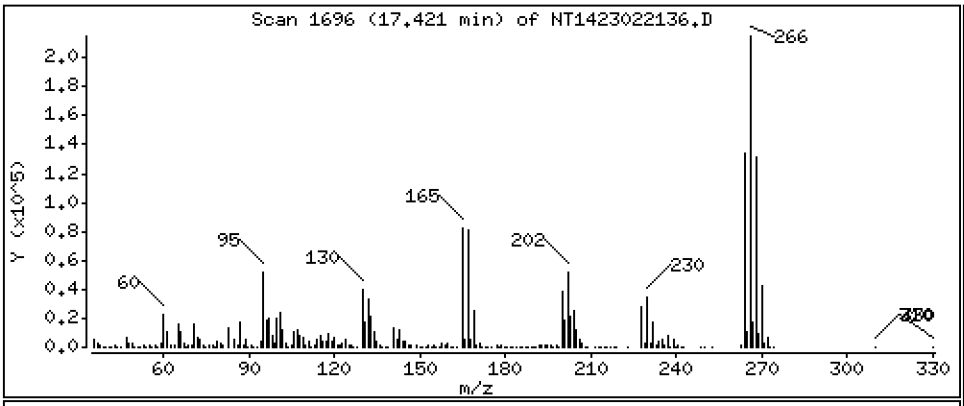
Operator: DSD

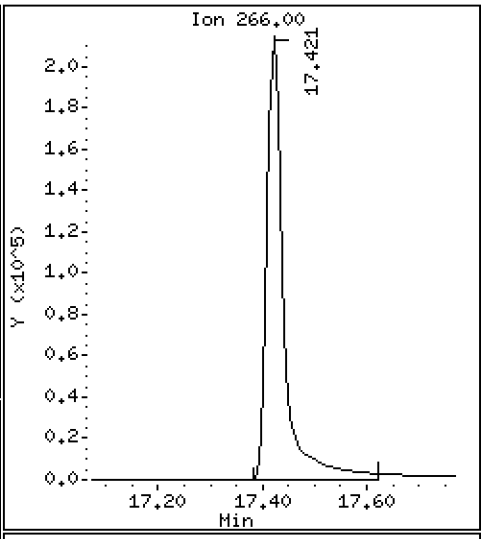
Column phase: ZB-5msi

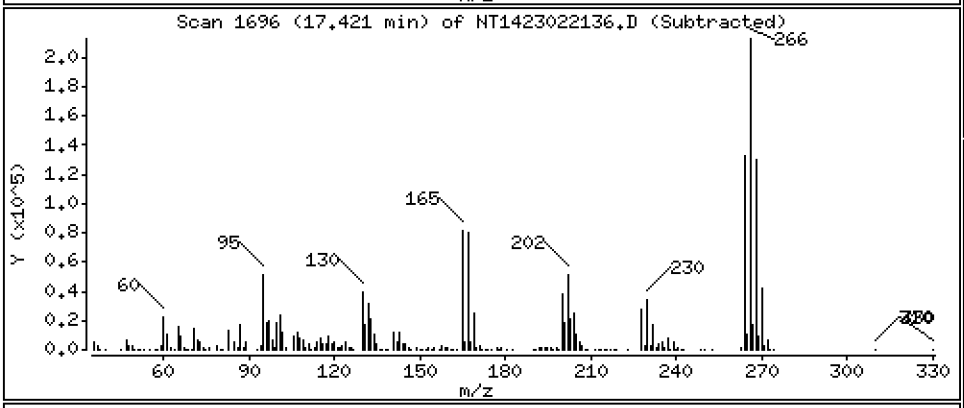
Column diameter: 0.25

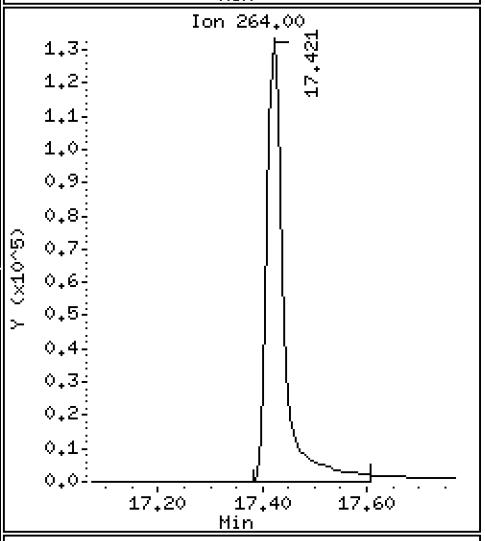
58 Pentachlorophenol

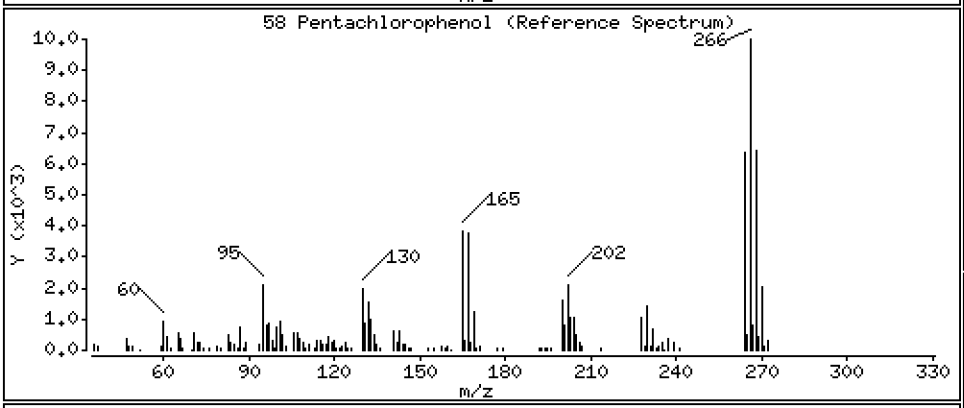
Concentration: 11.10 ug/mL

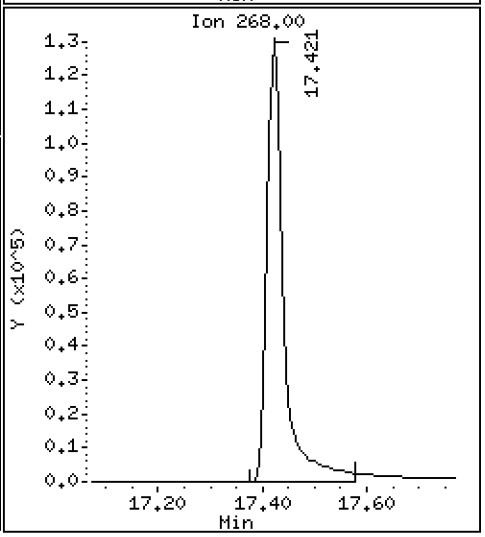


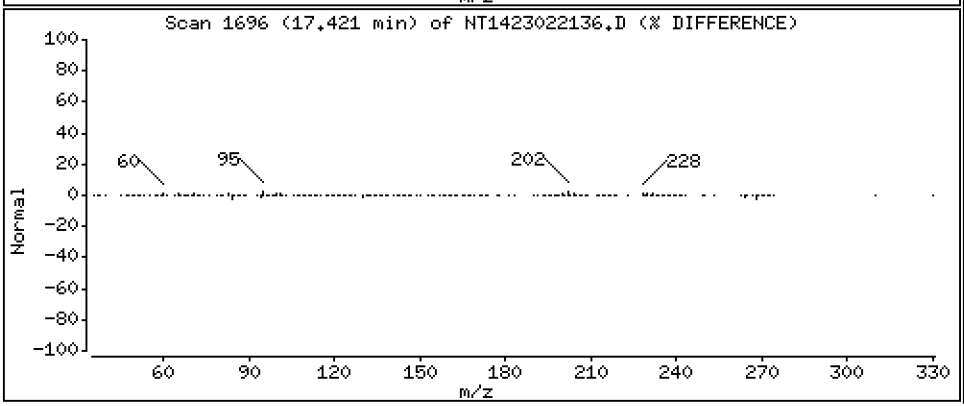












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

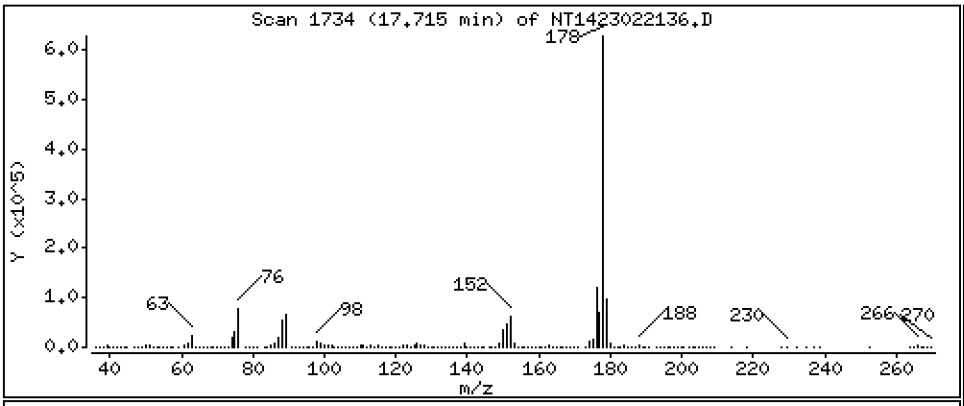
Operator: DSD

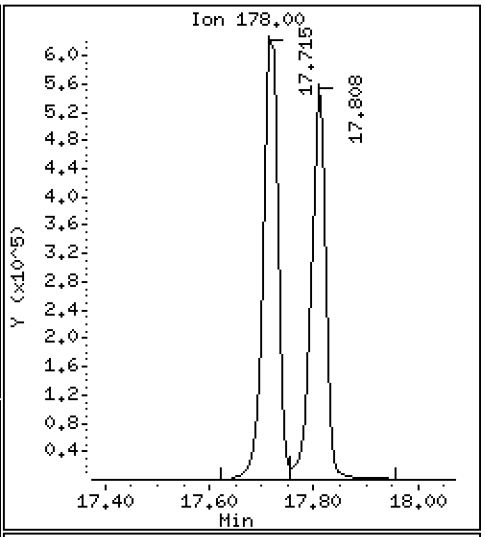
Column phase: ZB-5msi

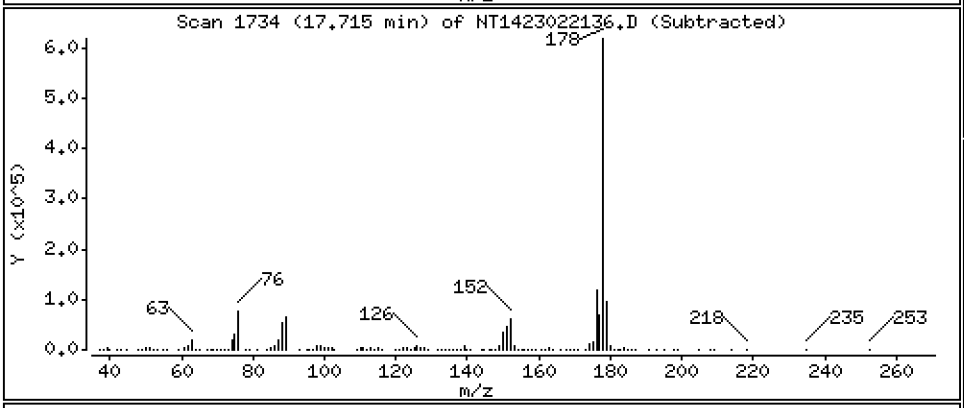
Column diameter: 0.25

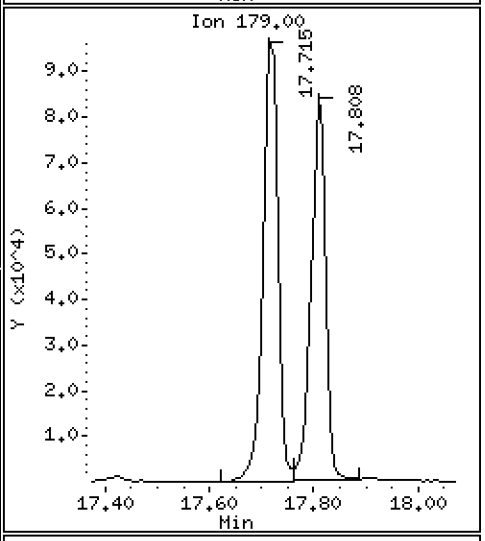
60 Phenanthrene

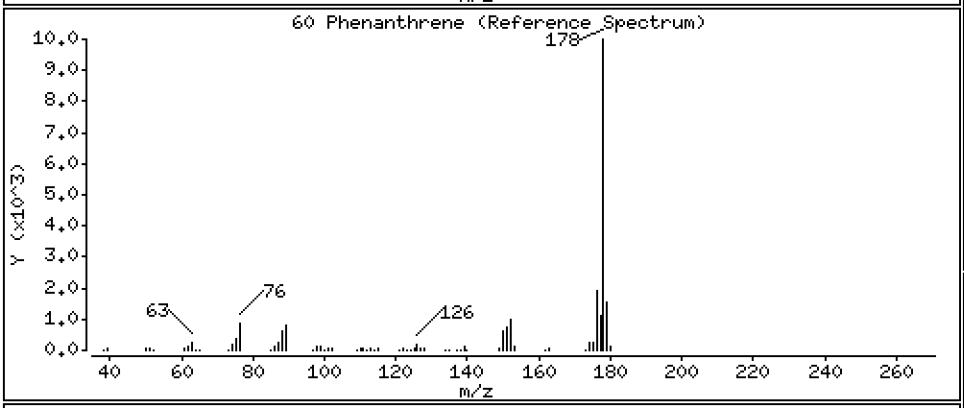
Concentration: 3.844 ug/mL

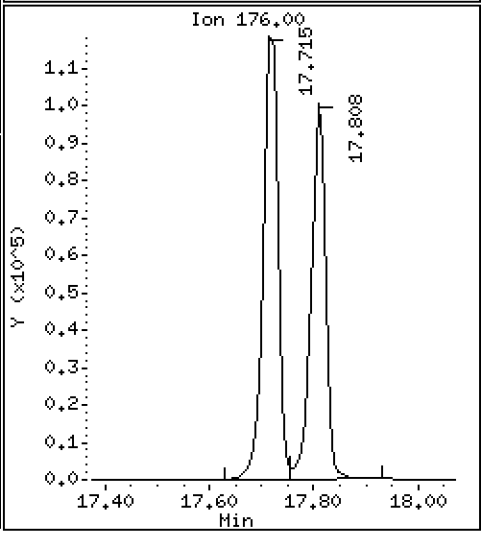


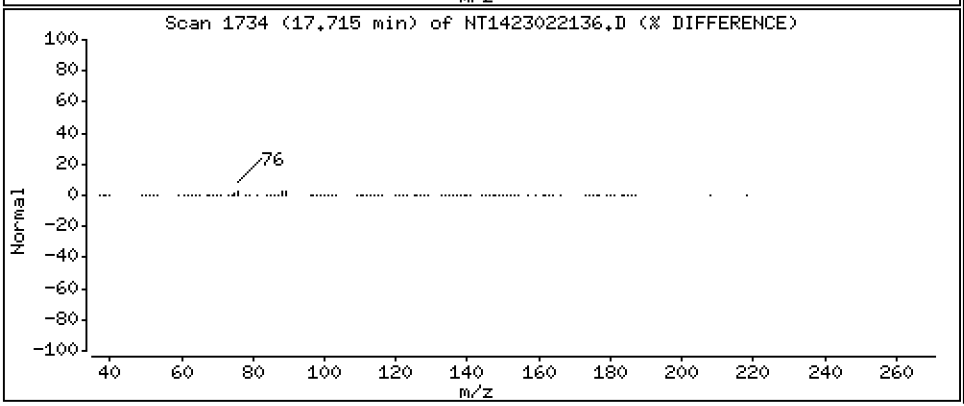












Date : 22-FEB-2023 10:33

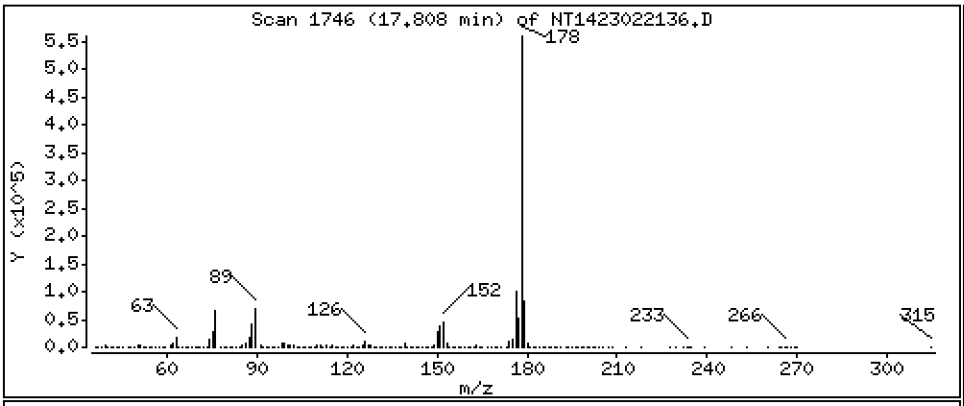
Client ID: Instrument: nt14.i

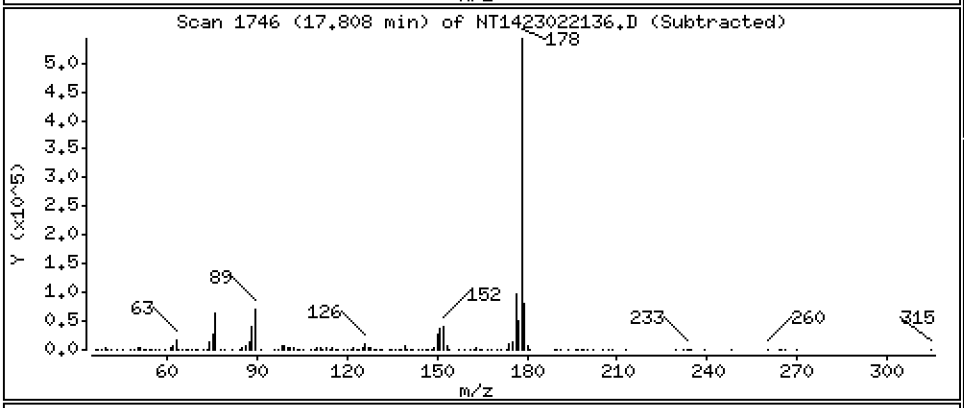
Sample Info: BLA0393-BSD1

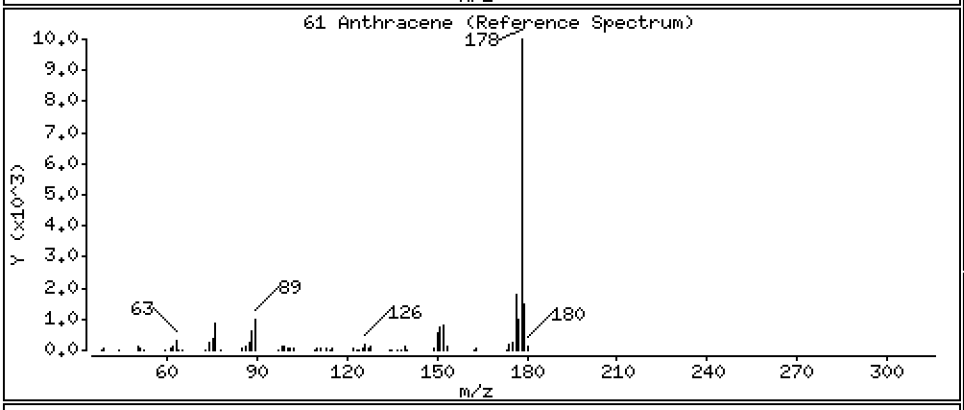
Operator: DSD

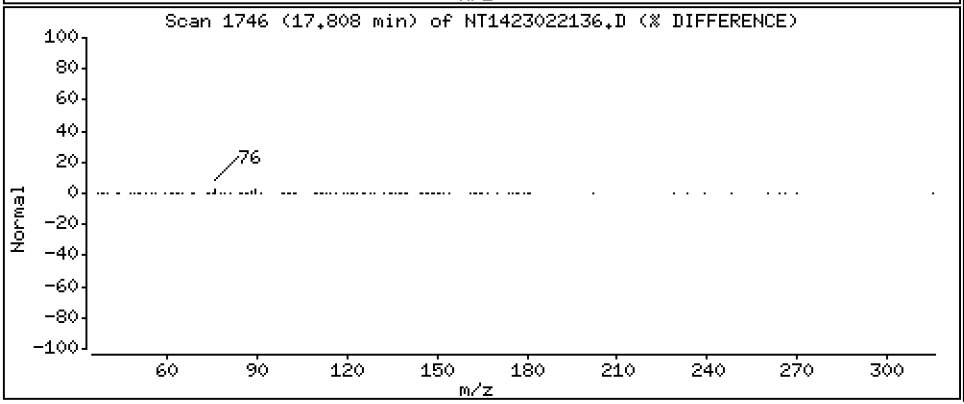
Column phase: ZB-5msi Column diameter: 0.25

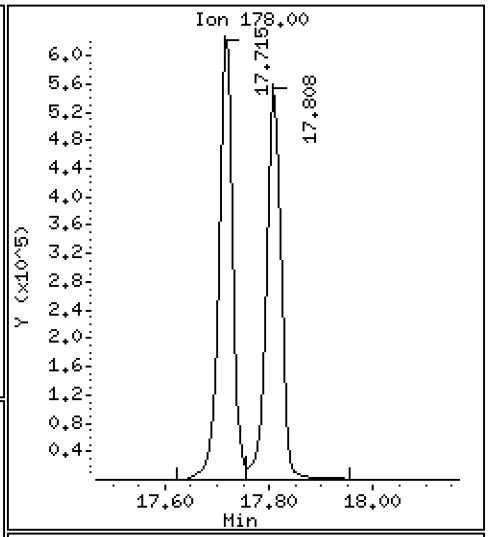
61 Anthracene Concentration: 3.439 ug/mL

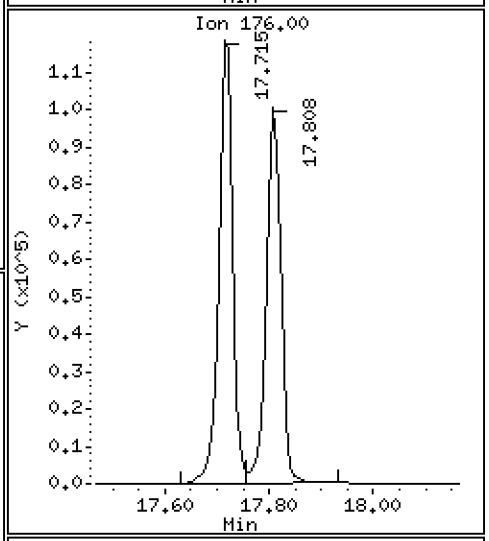


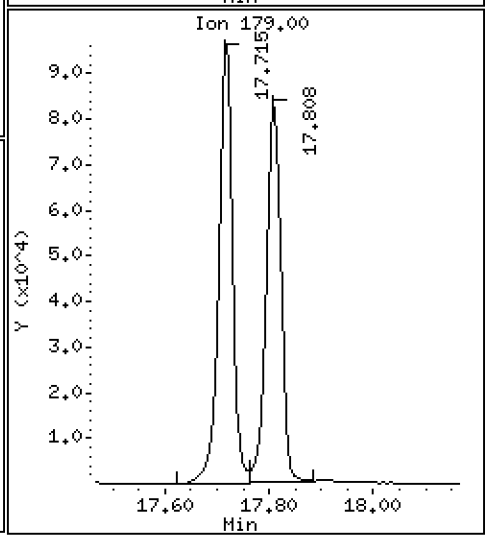












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

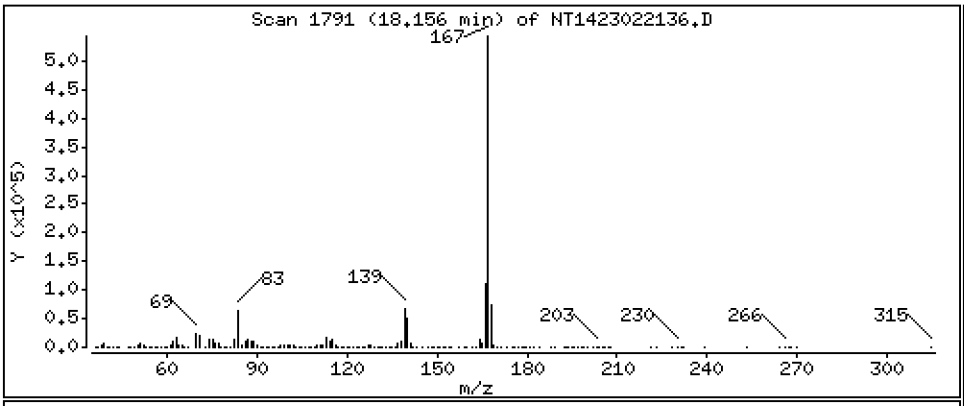
Operator: DSD

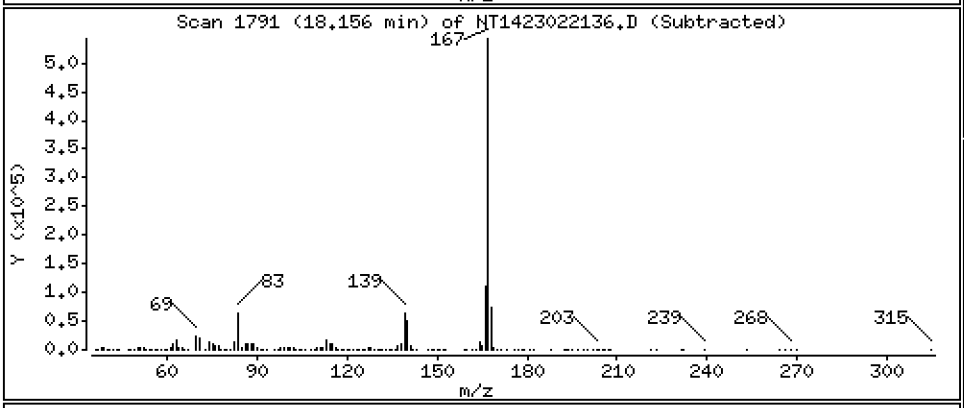
Column phase: ZB-5msi

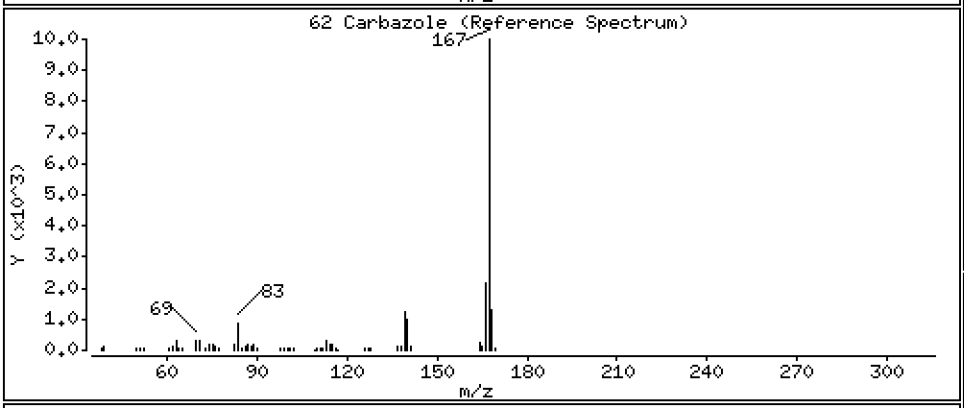
Column diameter: 0.25

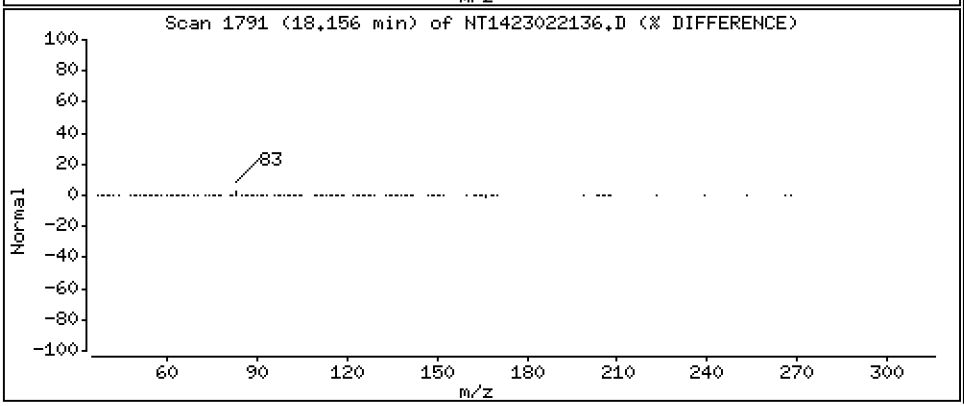
62 Carbazole

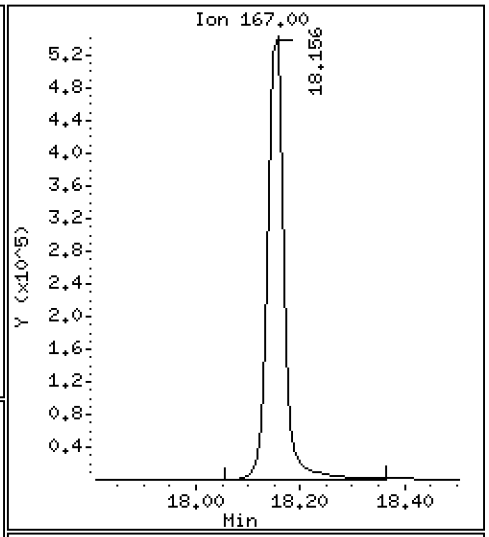
Concentration: 4.121 ug/mL

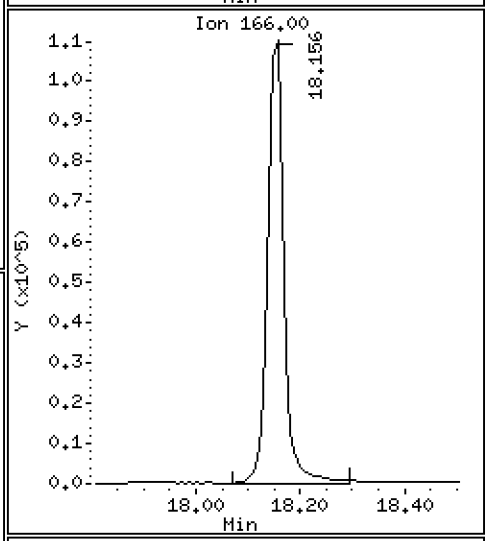


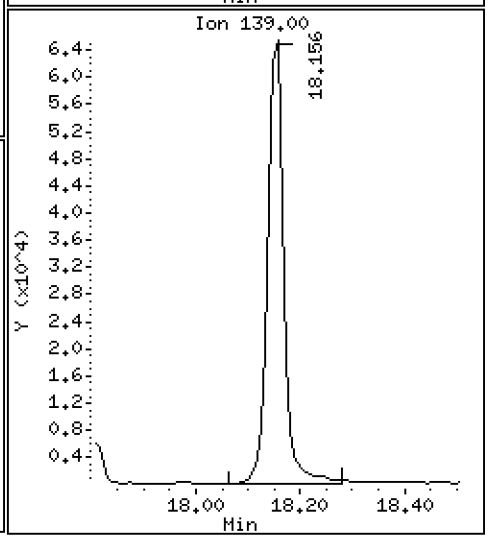












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

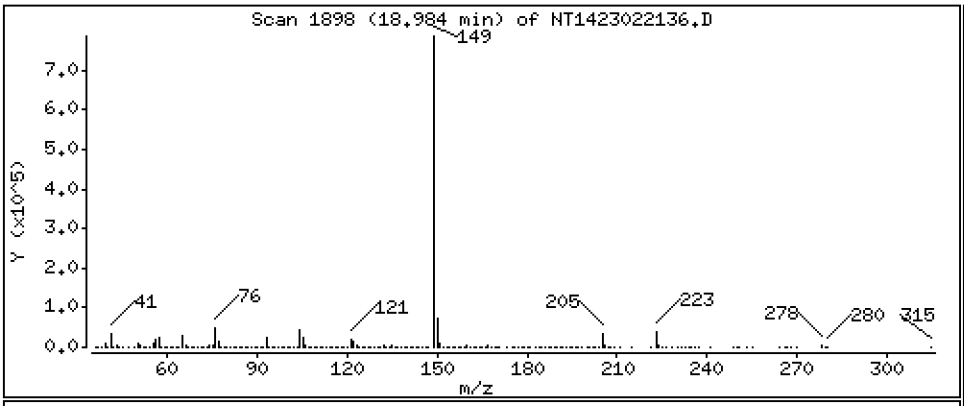
Operator: DSD

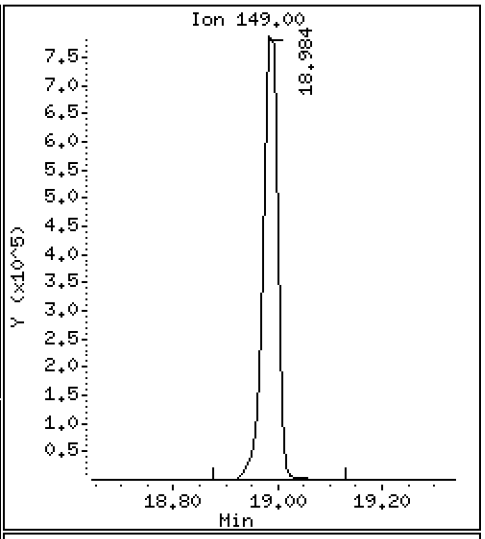
Column phase: ZB-5msi

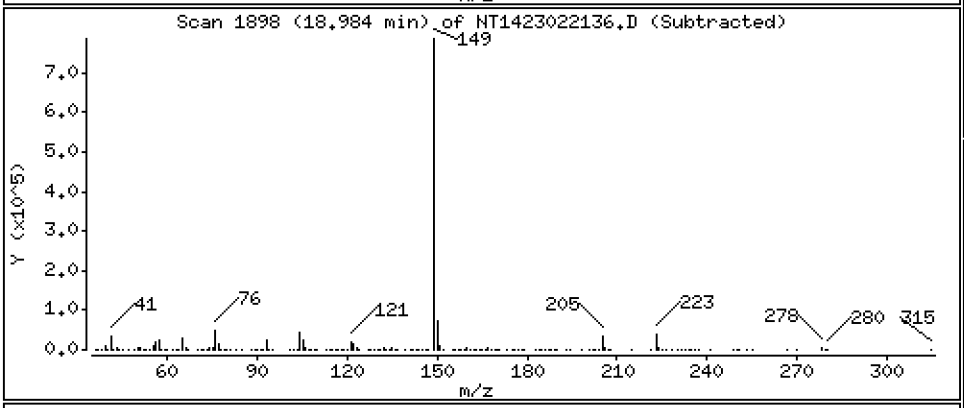
Column diameter: 0.25

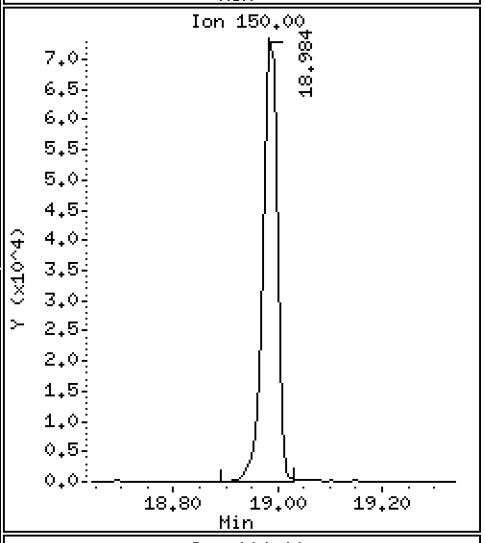
63 Di-n-butylphthalate

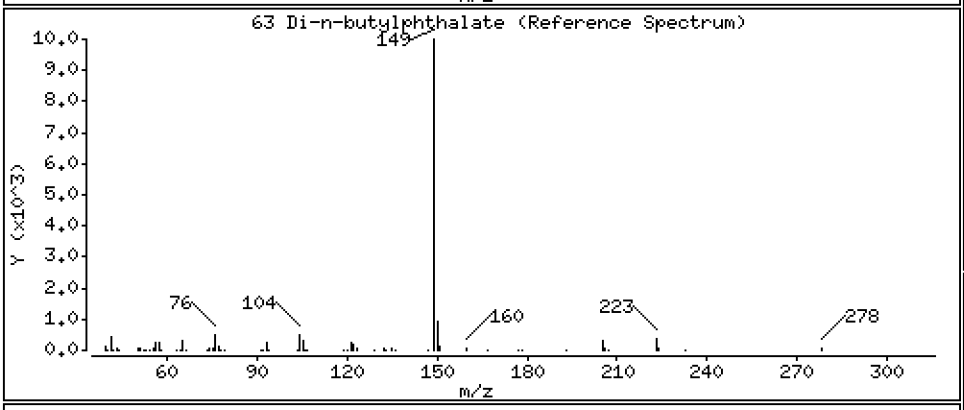
Concentration: 4.748 ug/mL

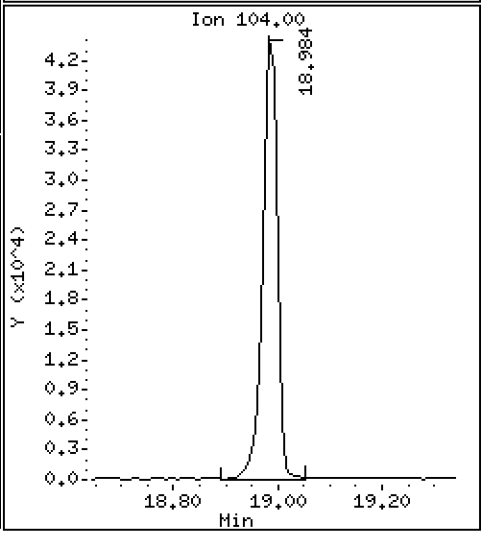


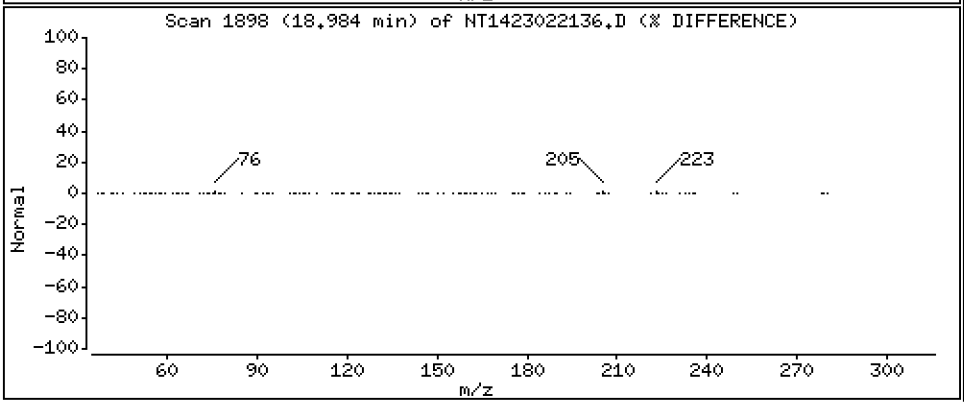












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

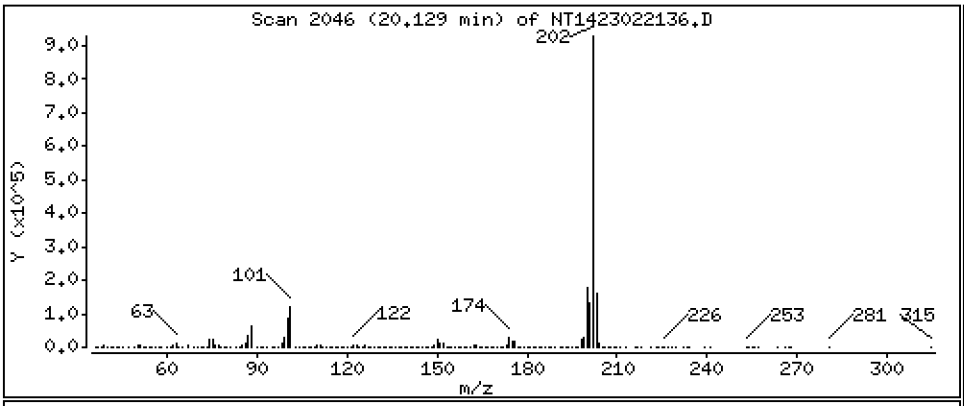
Operator: DSD

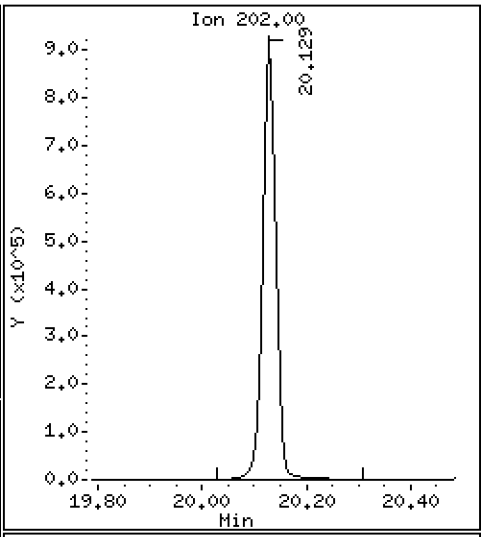
Column phase: ZB-5msi

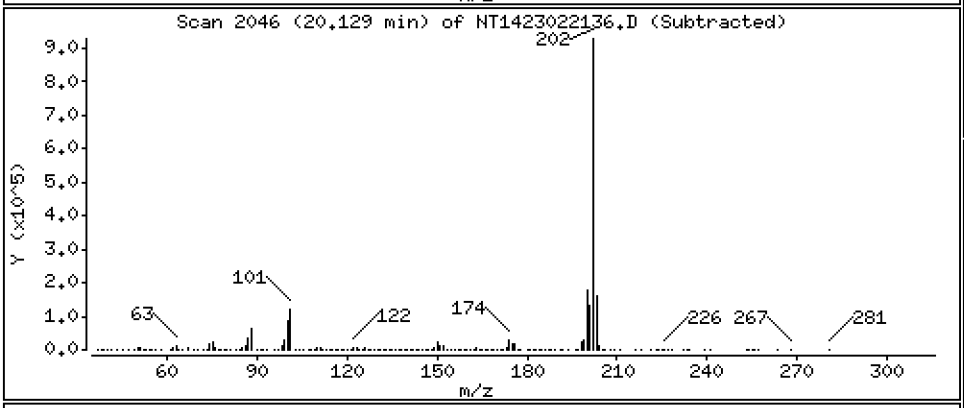
Column diameter: 0.25

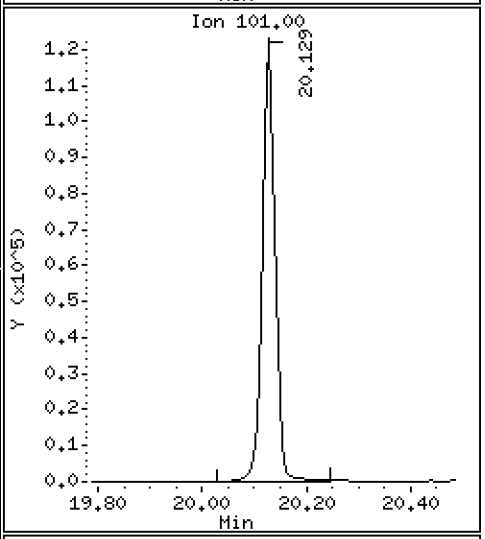
64 Fluoranthene

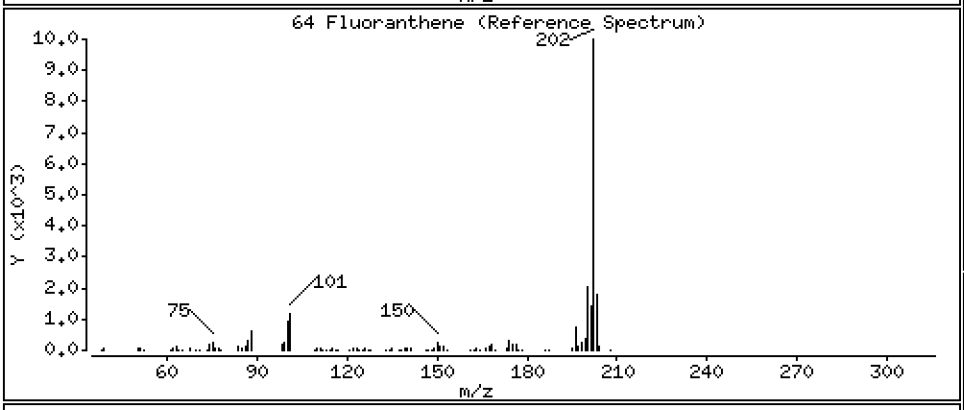
Concentration: 3.652 ug/mL

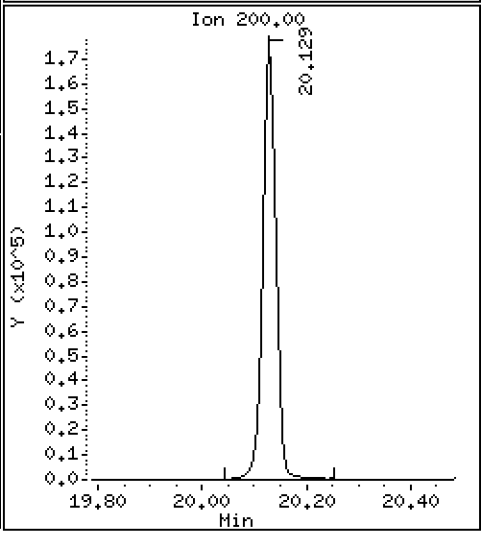


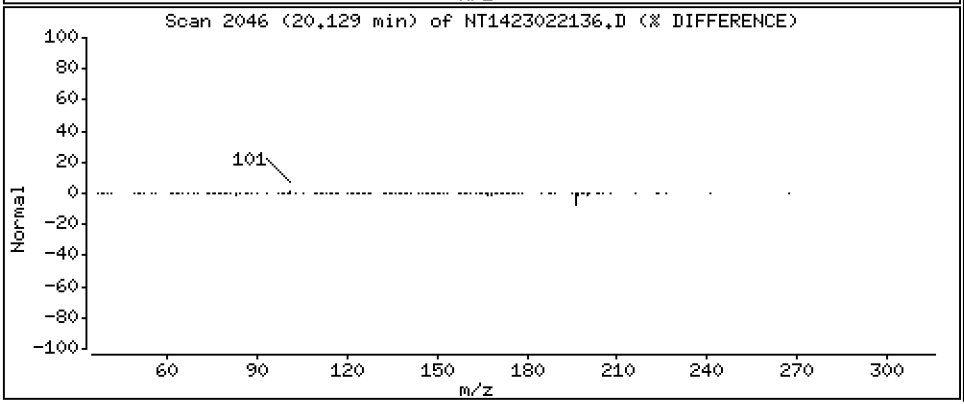












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022136.D

Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

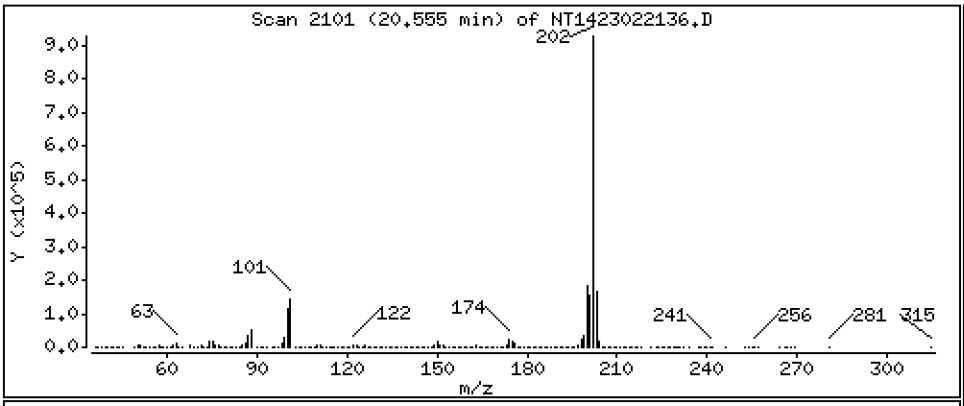
Operator: DSD

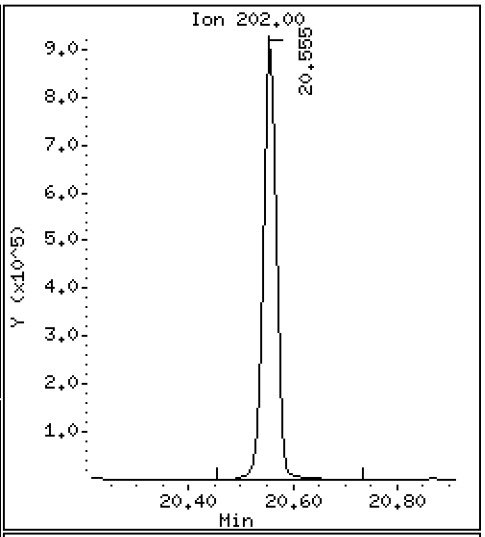
Column phase: ZB-5msi

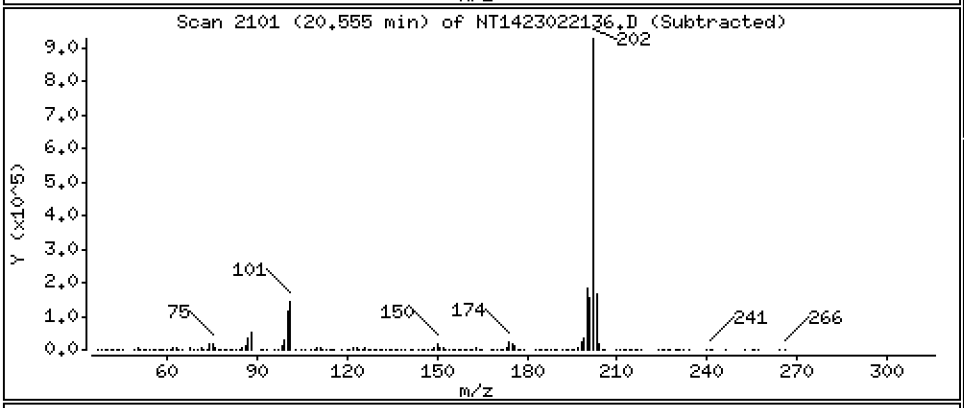
Column diameter: 0.25

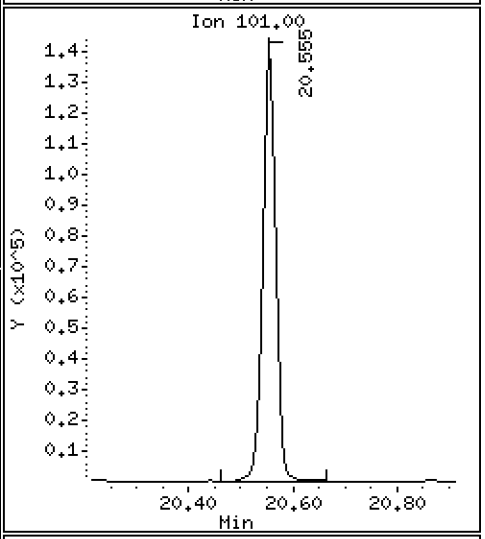
65 Pyrene

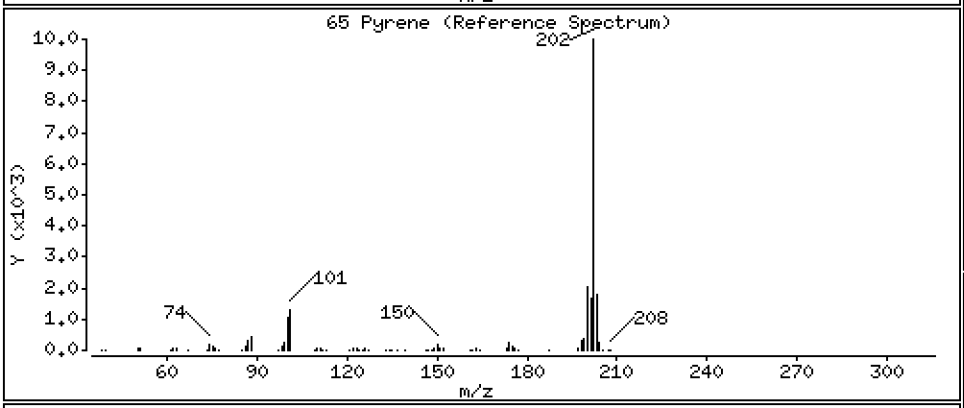
Concentration: 3.642 ug/mL

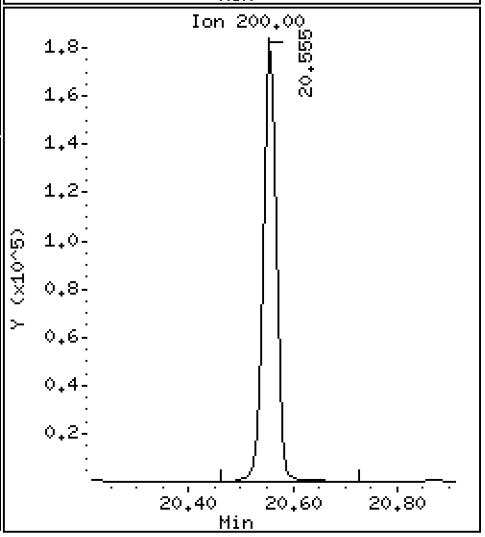


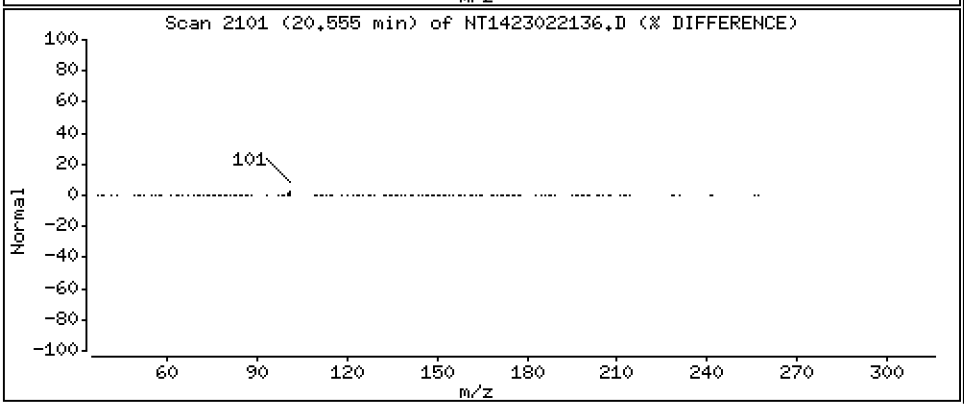












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

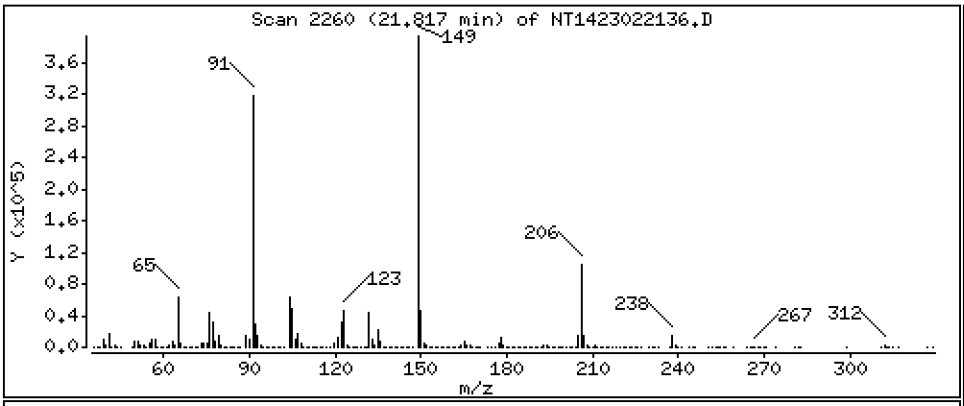
Operator: DSD

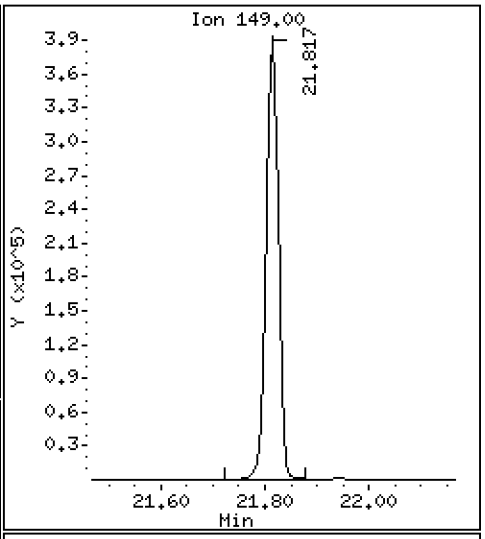
Column phase: ZB-5msi

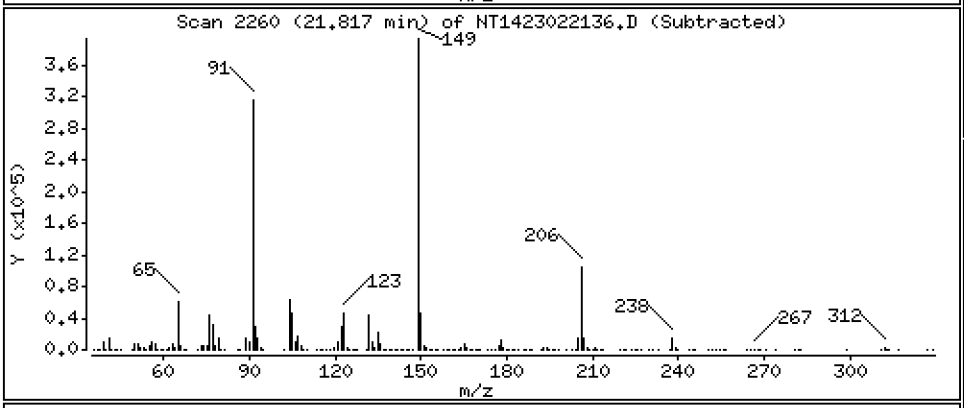
Column diameter: 0.25

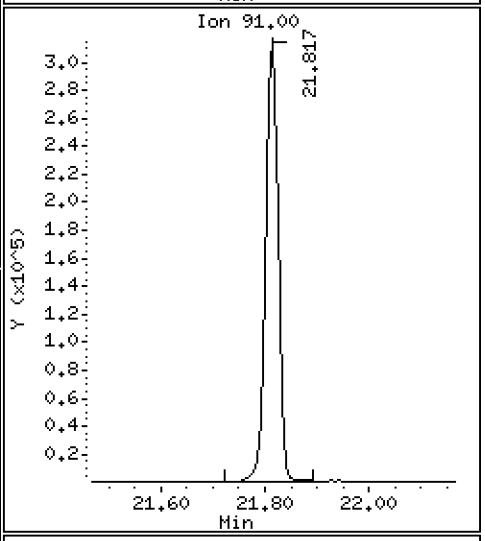
67 Butylbenzylphthalate

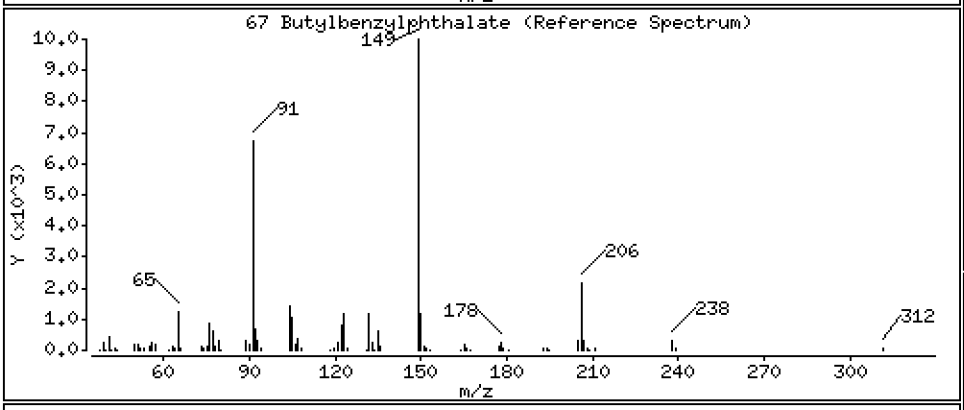
Concentration: 4.001 ug/mL

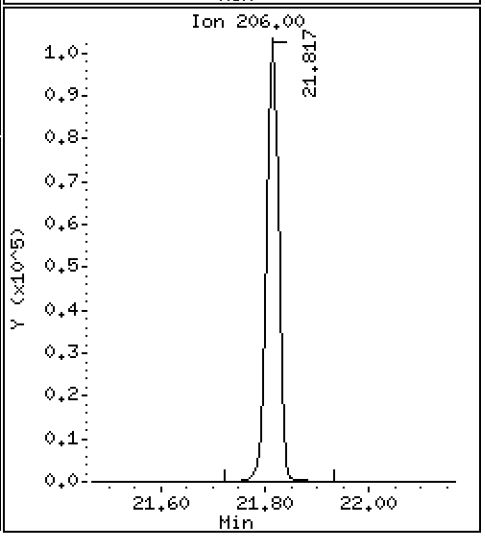


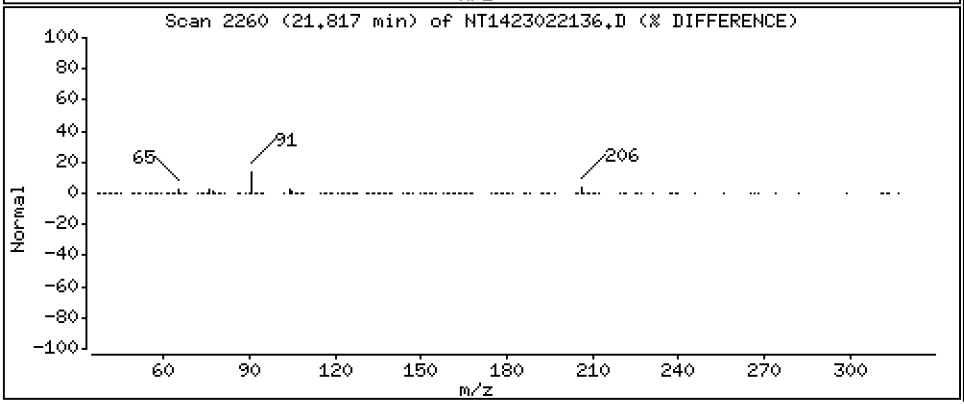












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

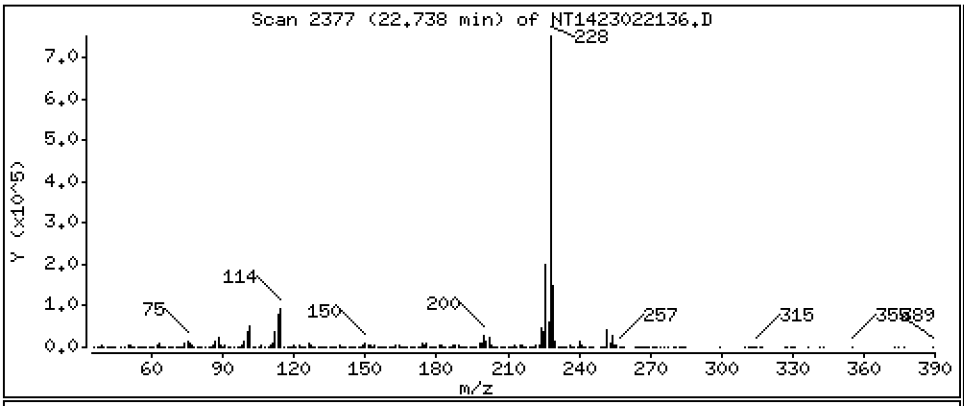
Operator: DSD

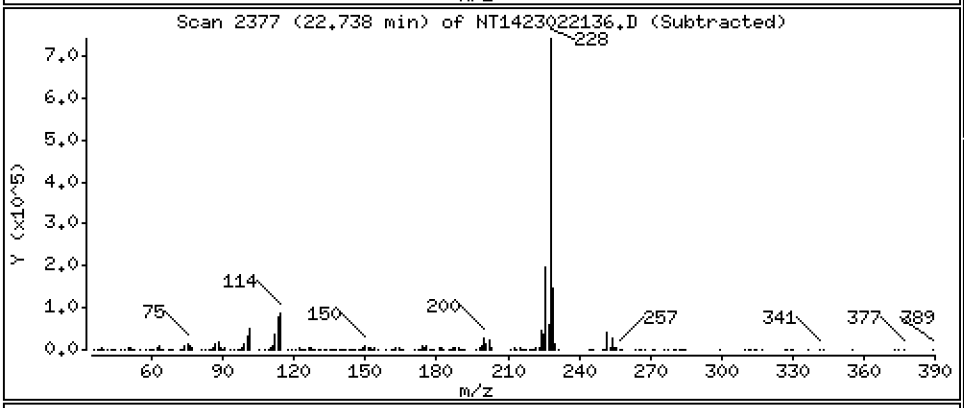
Column phase: ZB-5msi

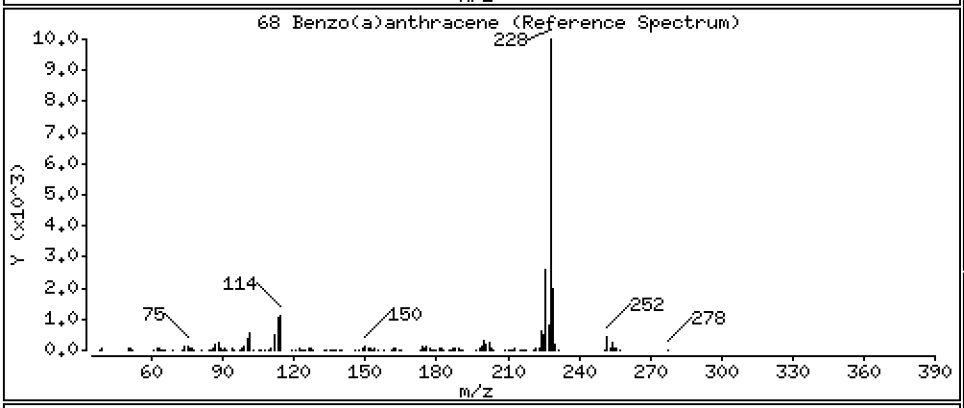
Column diameter: 0.25

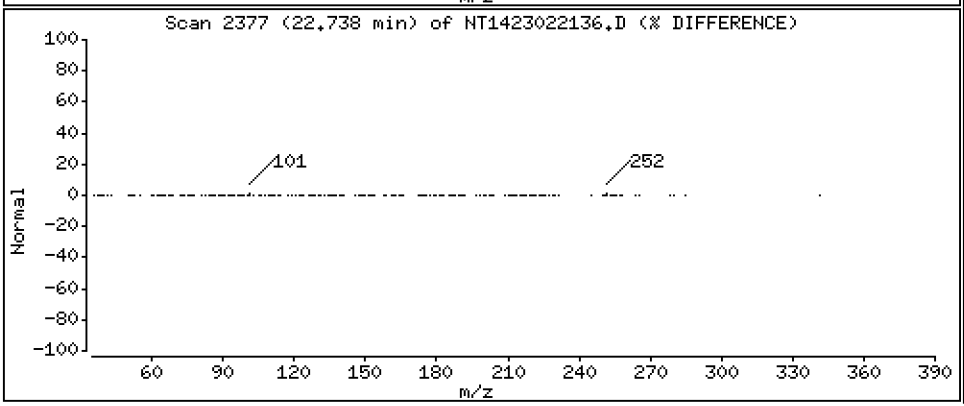
68 Benzo(a)anthracene

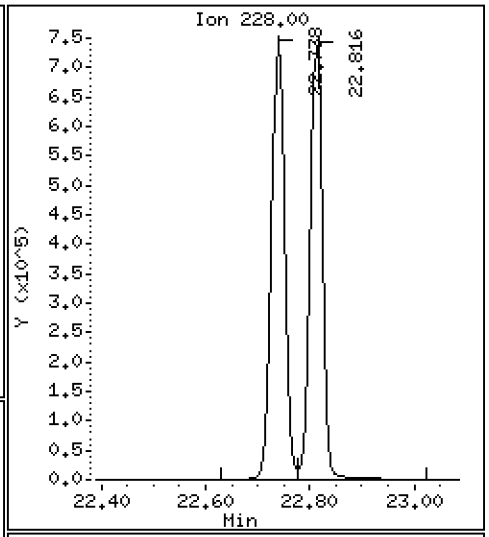
Concentration: 3.927 ug/mL

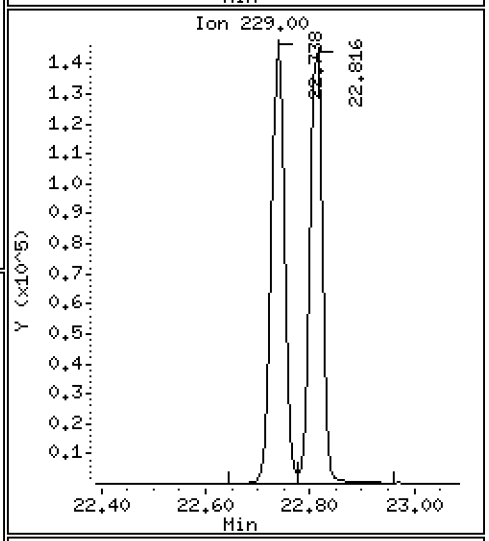


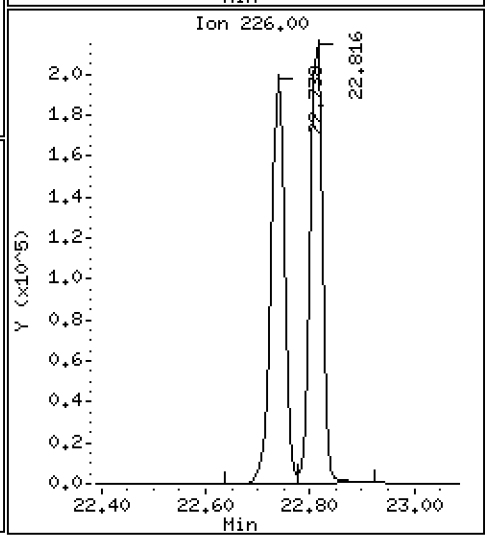












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

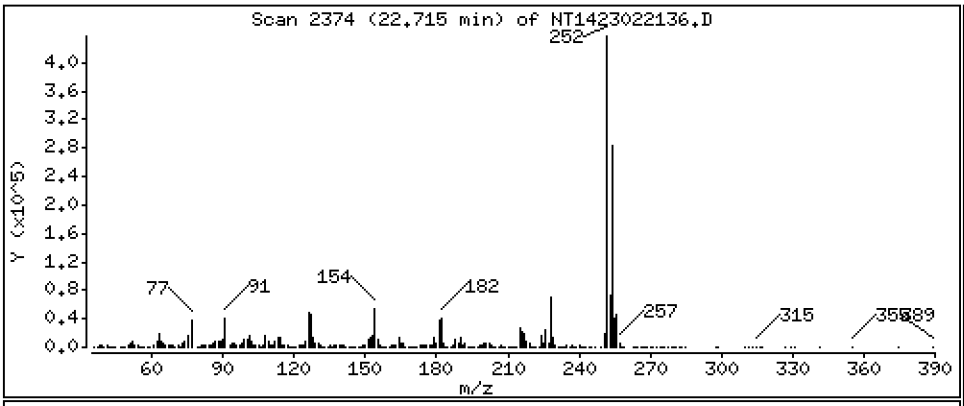
Operator: DSD

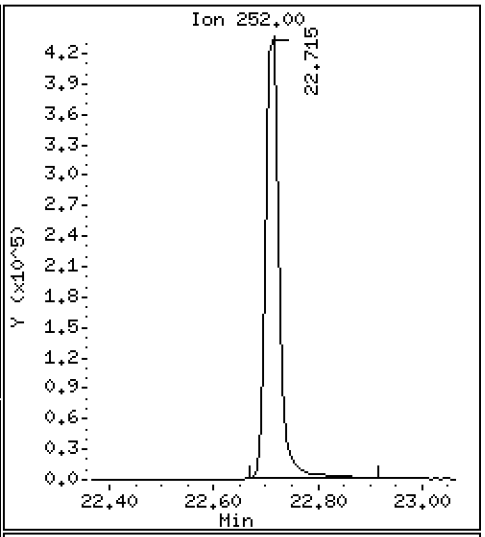
Column phase: ZB-5msi

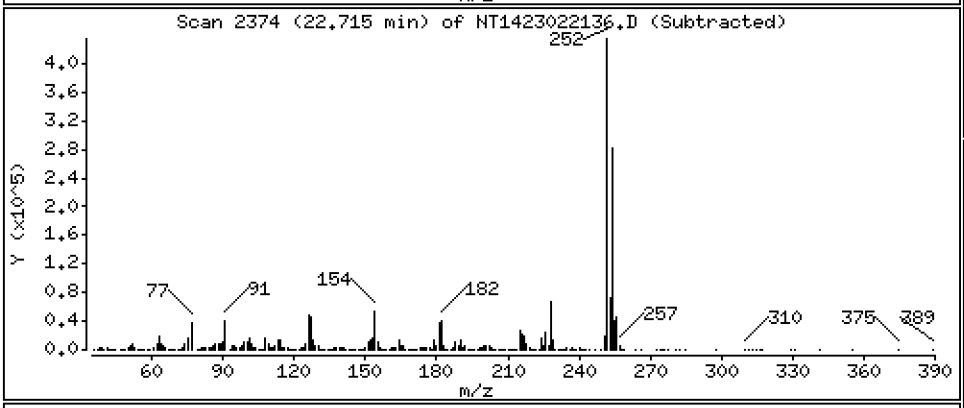
Column diameter: 0.25

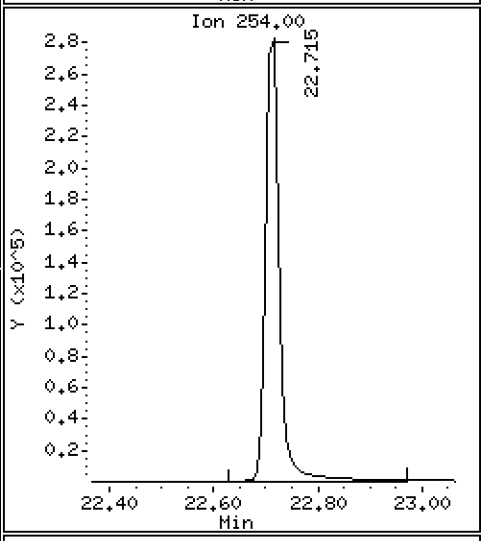
70 3,3'-Dichlorobenzidine

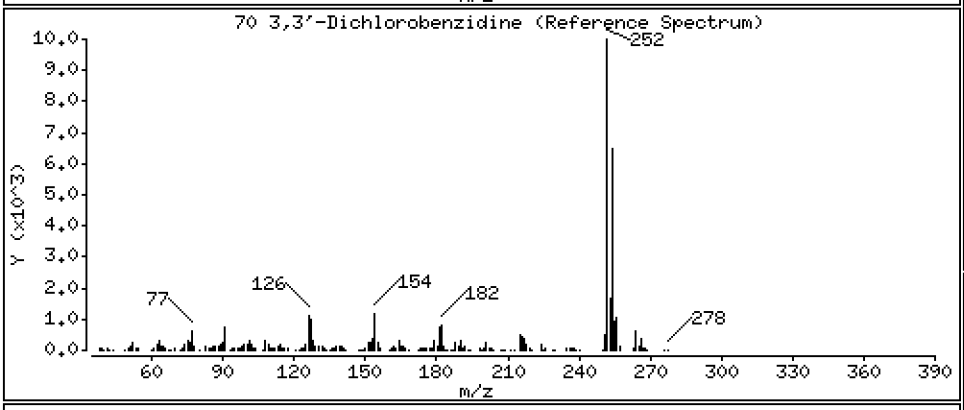
Concentration: 7.551 ug/mL

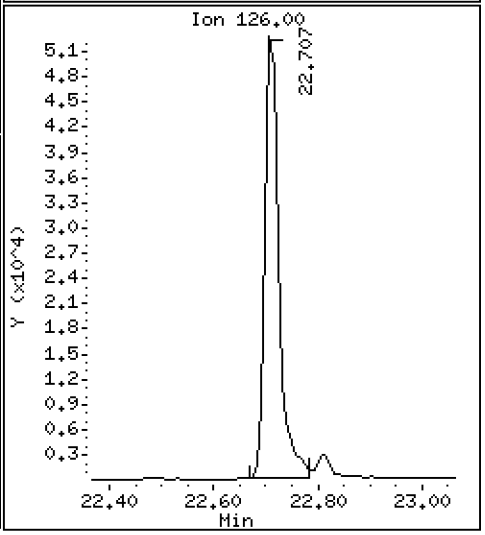


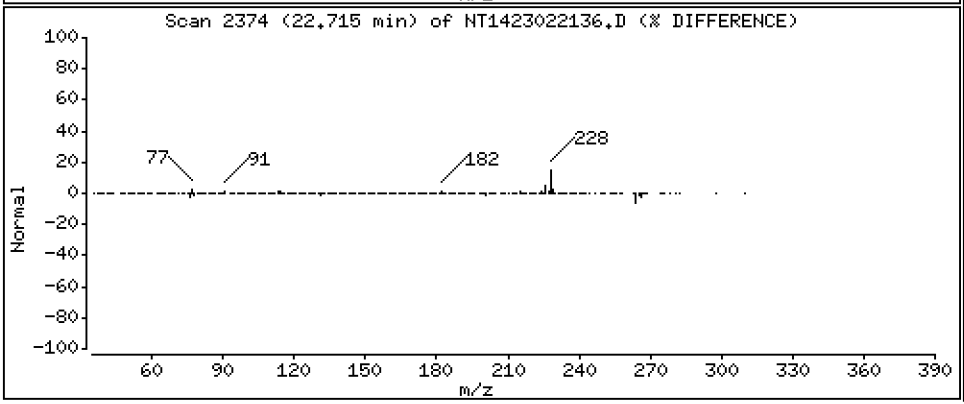












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

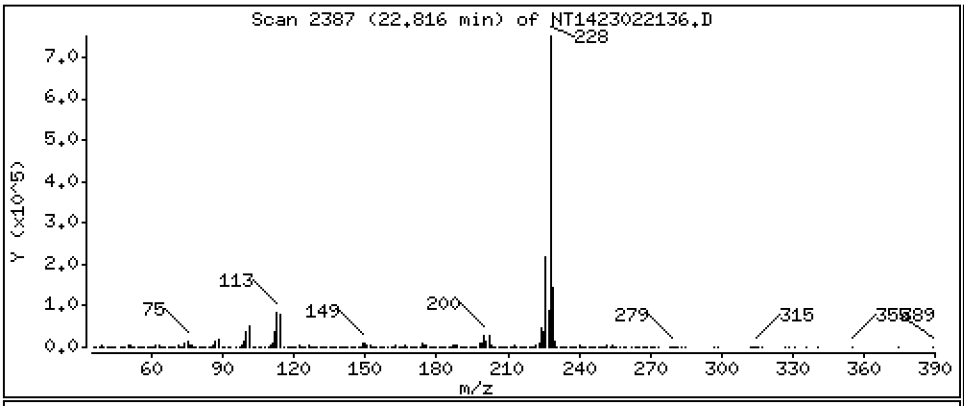
Operator: DSD

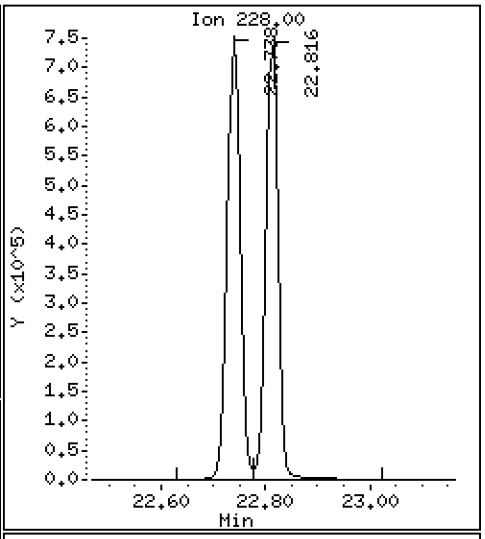
Column phase: ZB-5msi

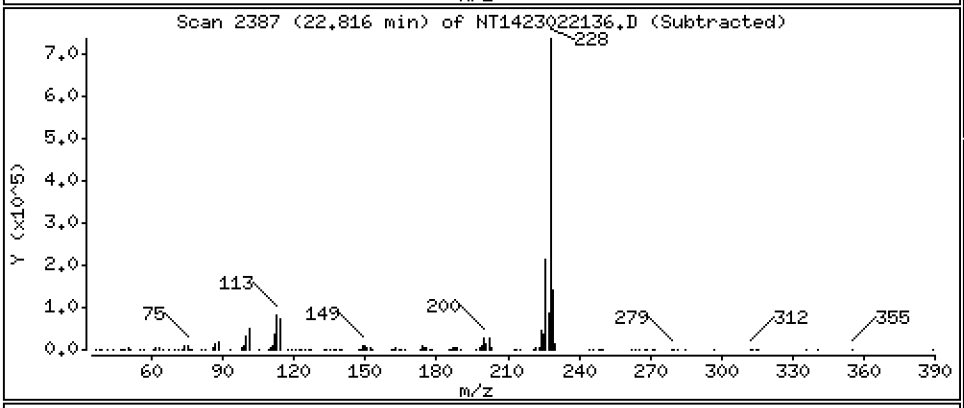
Column diameter: 0.25

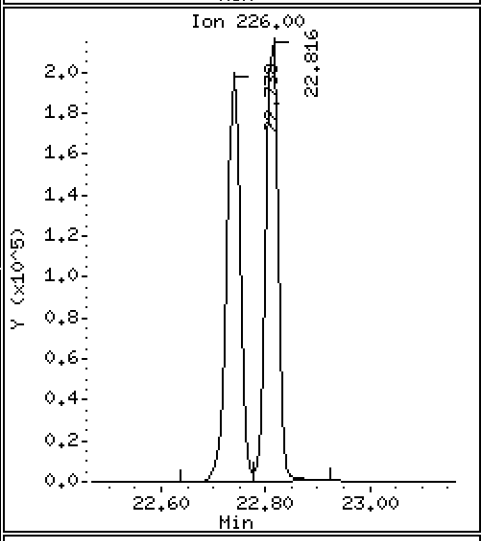
71 Chrysene

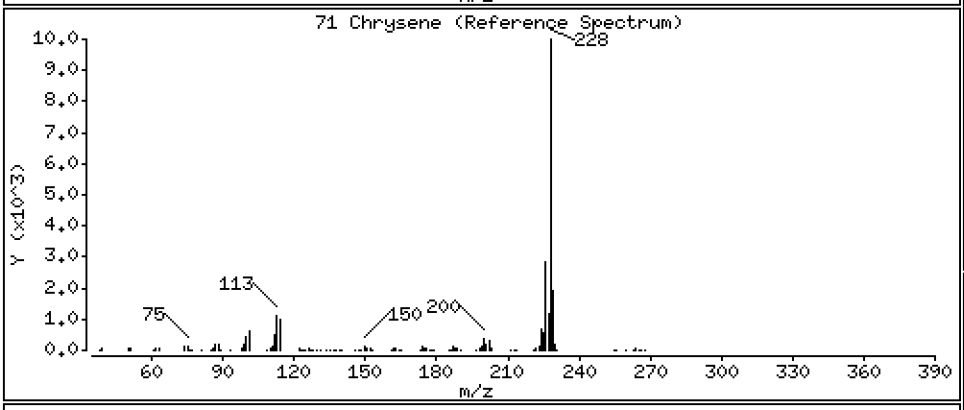
Concentration: 4.022 ug/mL

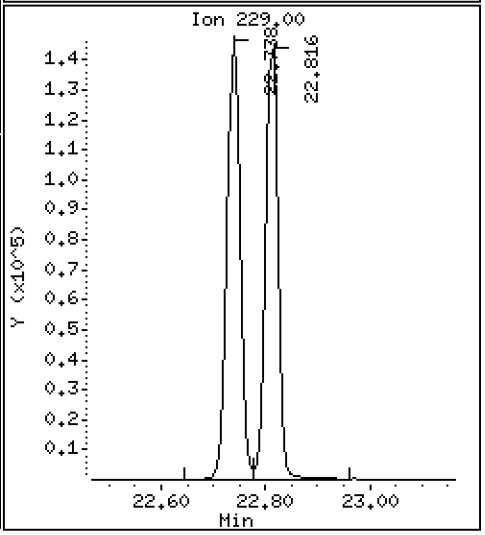


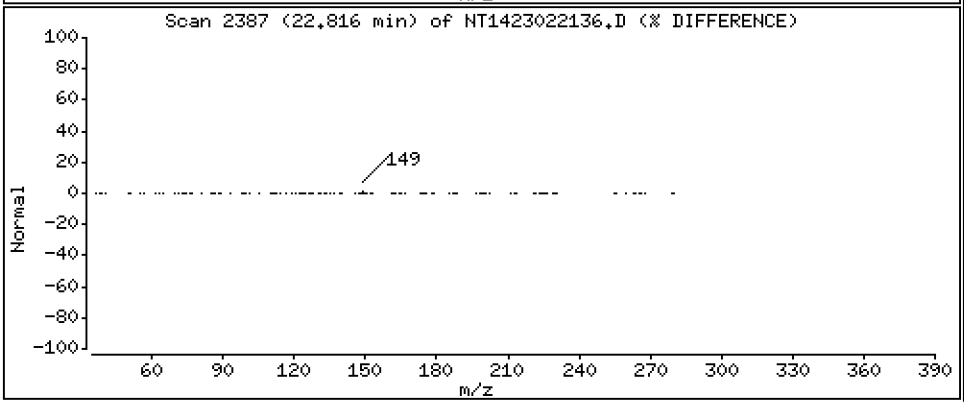












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

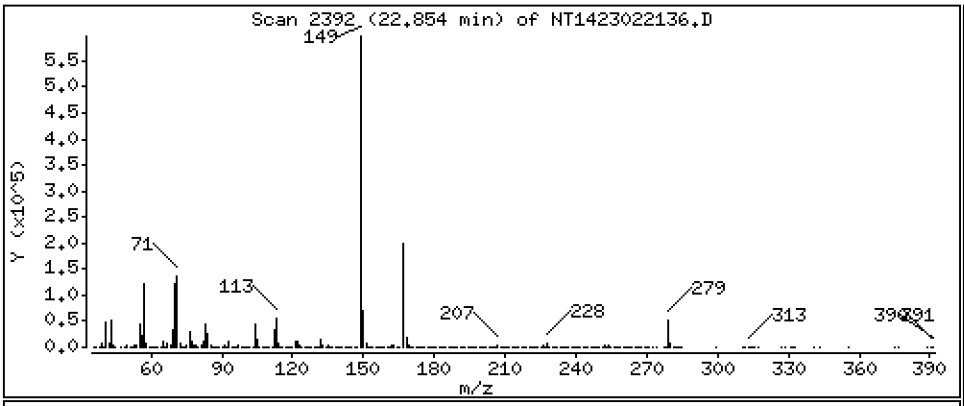
Operator: DSD

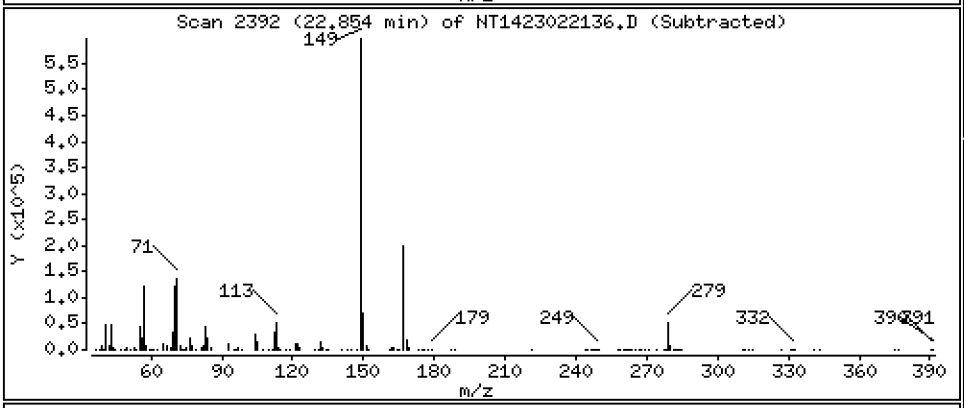
Column phase: ZB-5msi

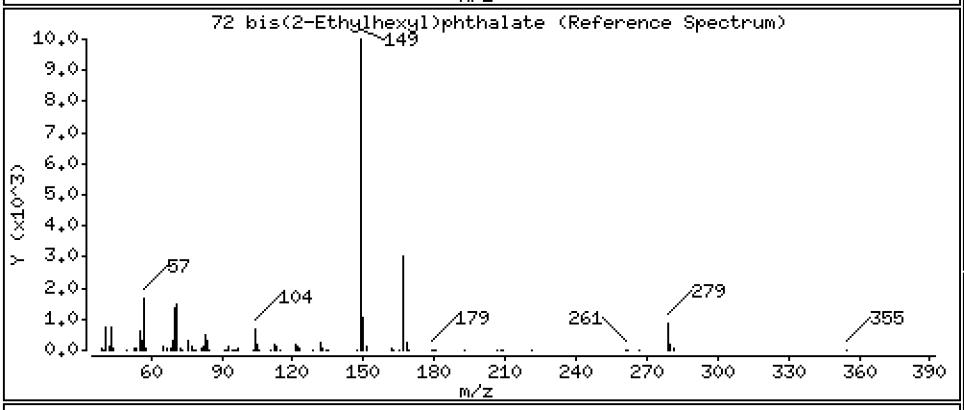
Column diameter: 0.25

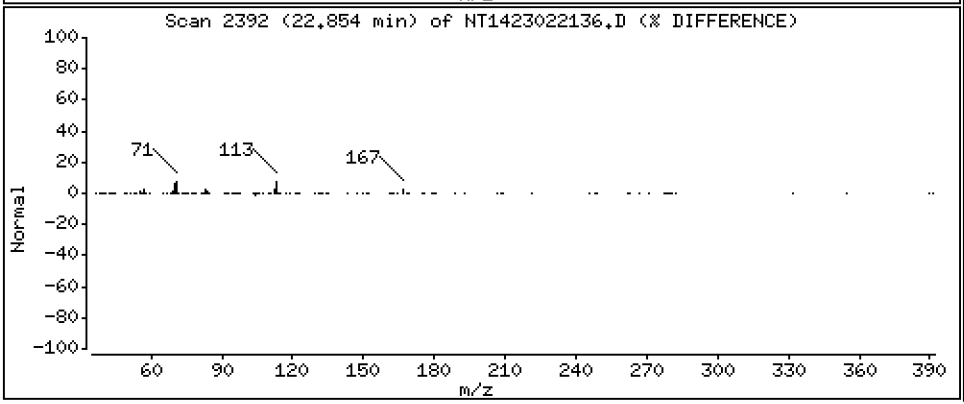
72 bis(2-Ethylhexyl)phthalate

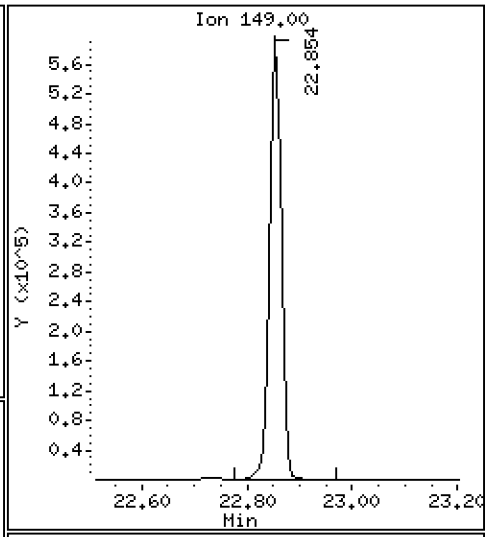
Concentration: 3.258 ug/mL

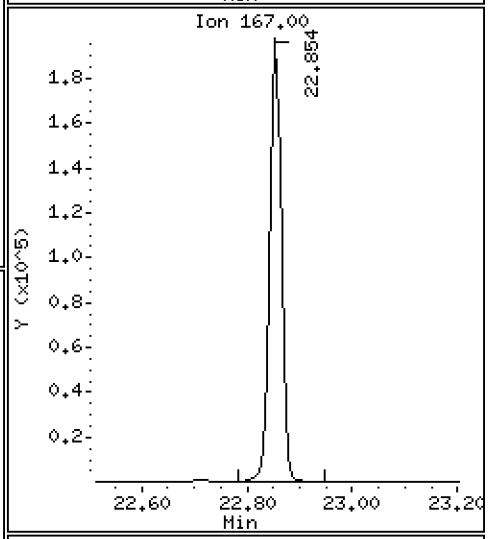


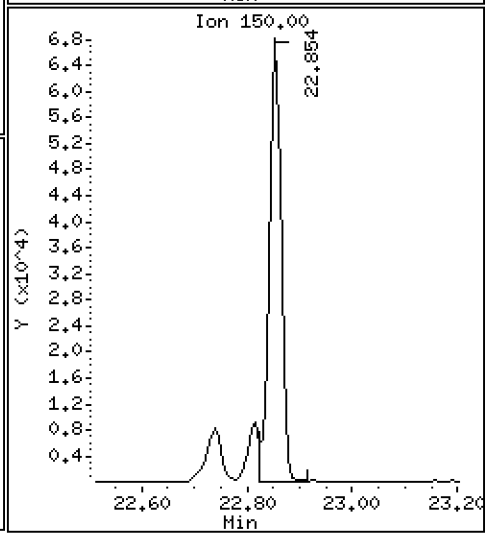












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

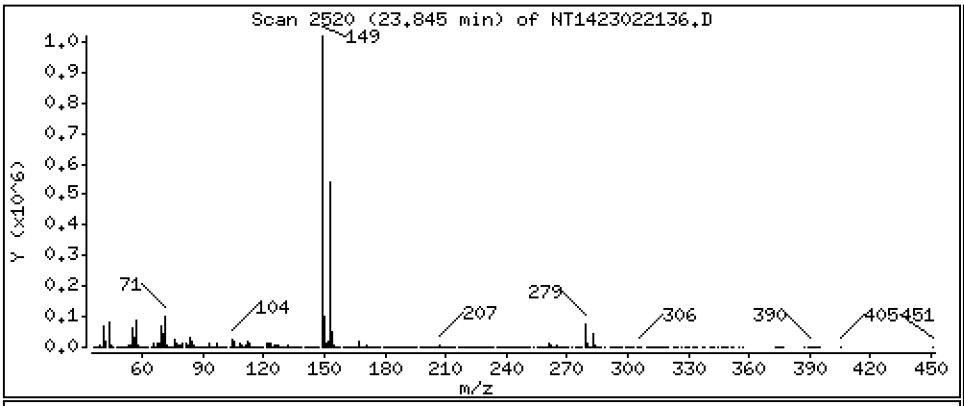
Operator: DSD

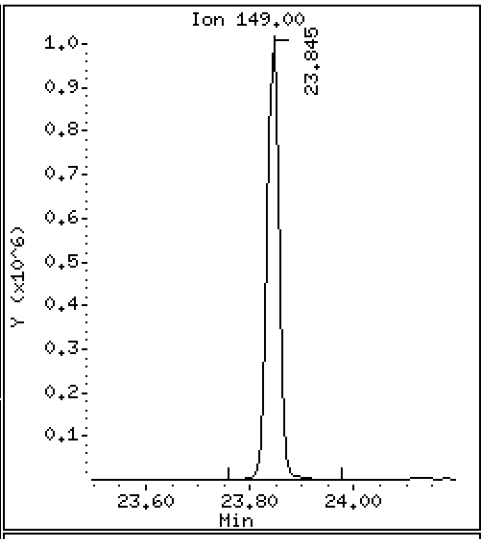
Column phase: ZB-5msi

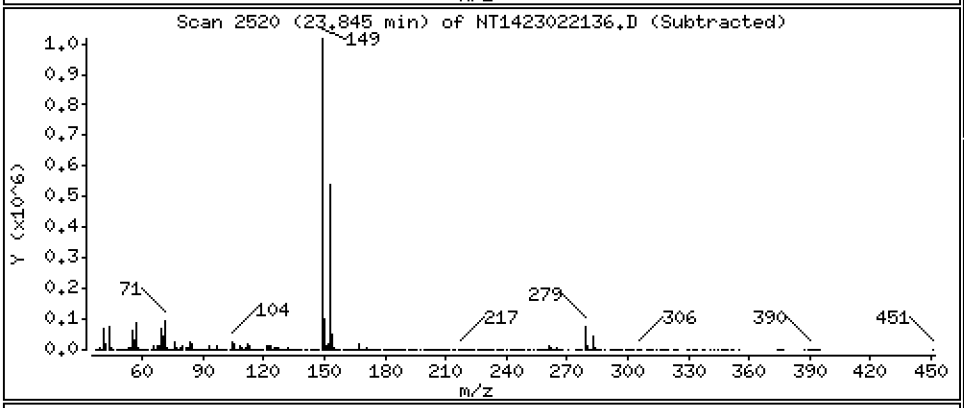
Column diameter: 0.25

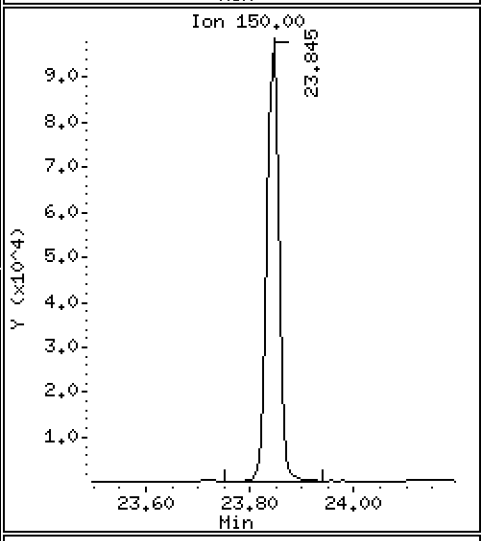
73 Di-n-octylphthalate

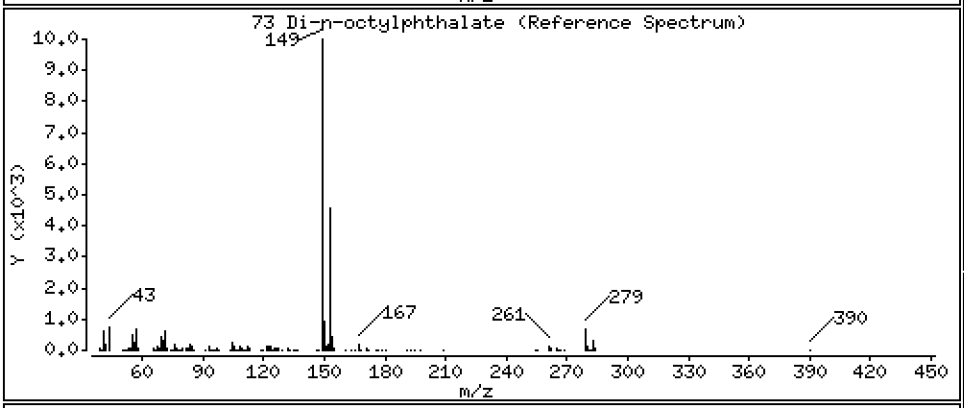
Concentration: 4.145 ug/mL

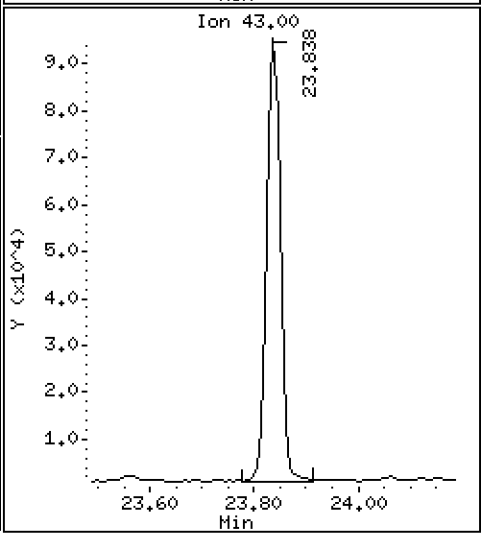


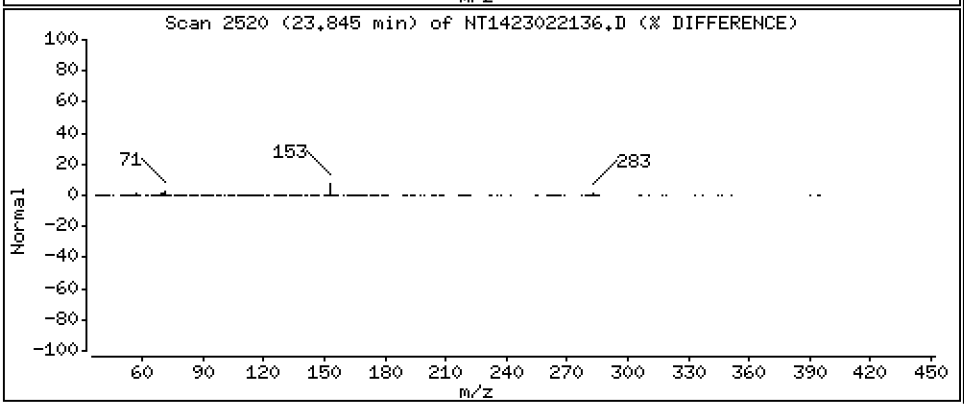












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022136.D

Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

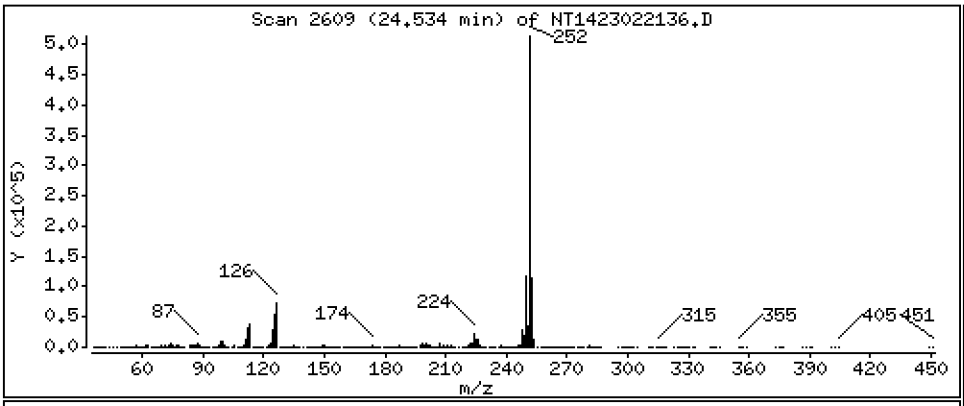
Operator: DSD

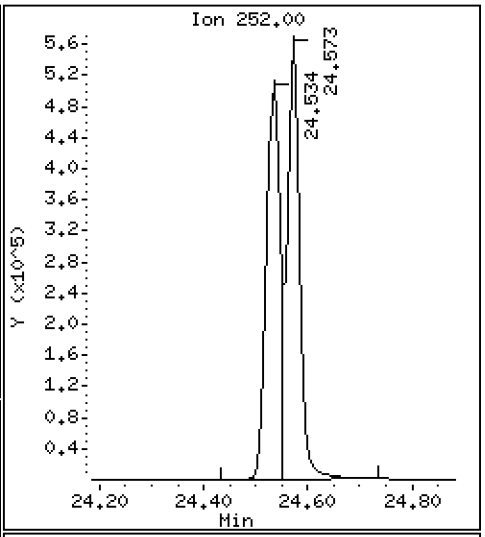
Column phase: ZB-5msi

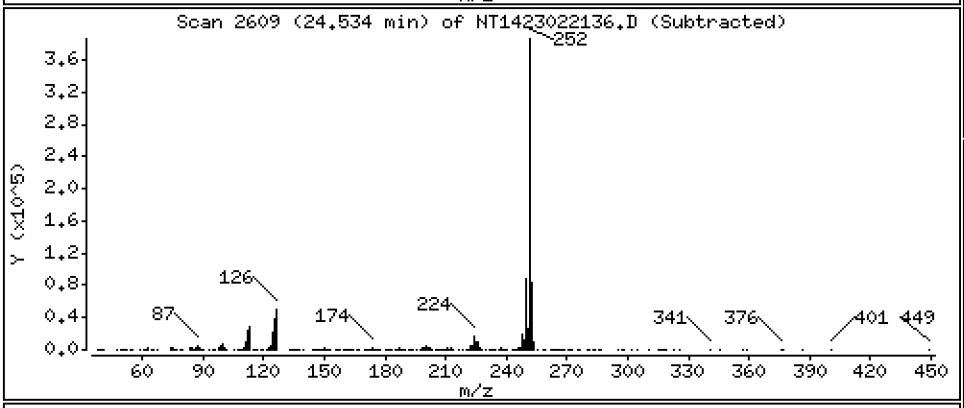
Column diameter: 0.25

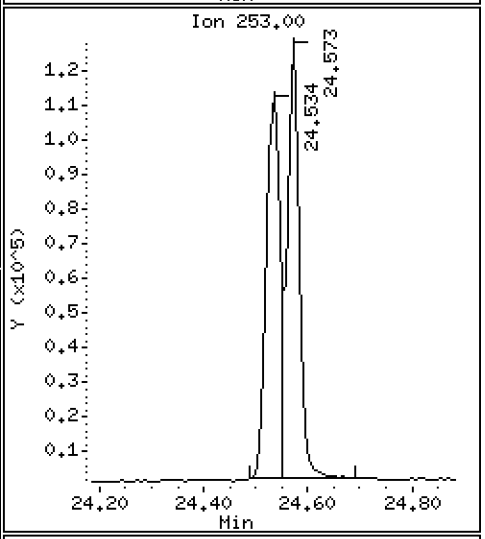
74 Benzo(b)fluoranthene

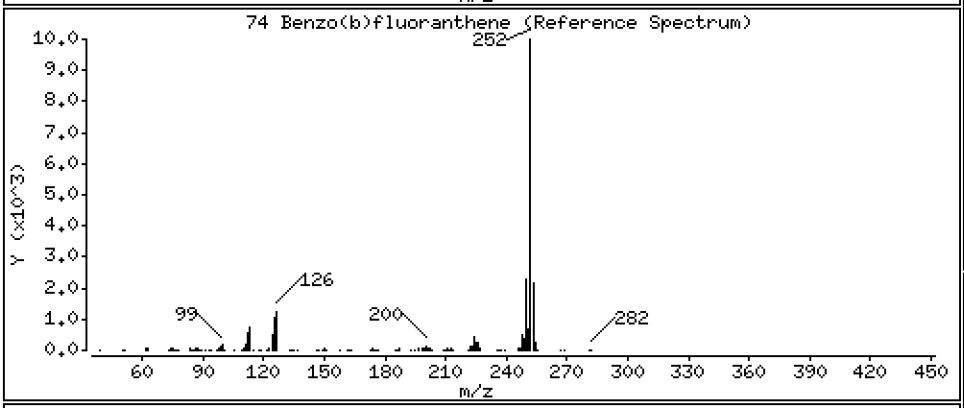
Concentration: 3.963 ug/mL

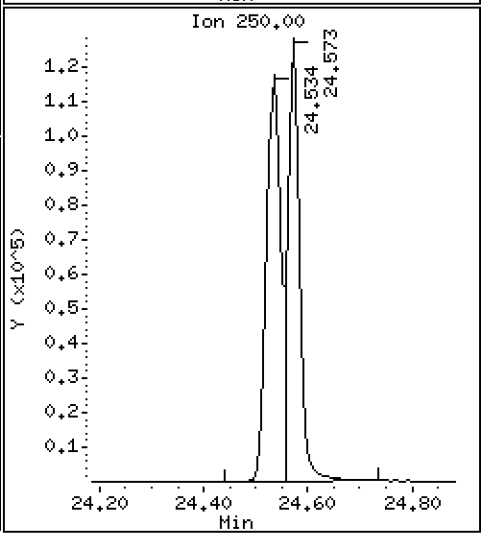


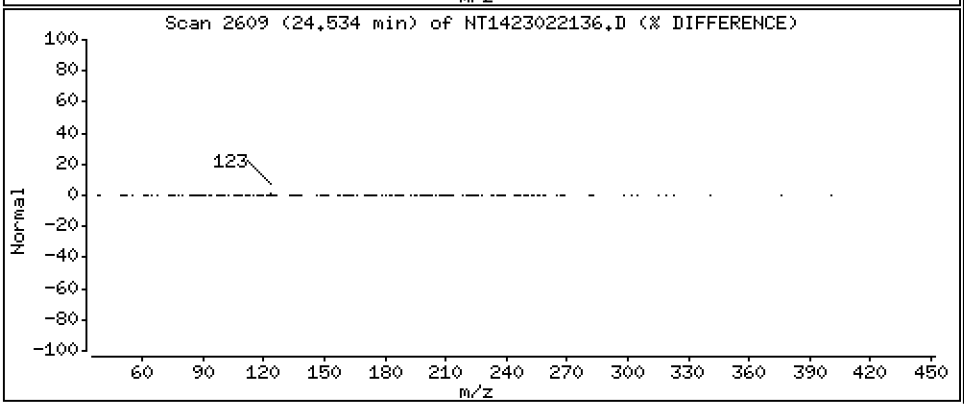












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

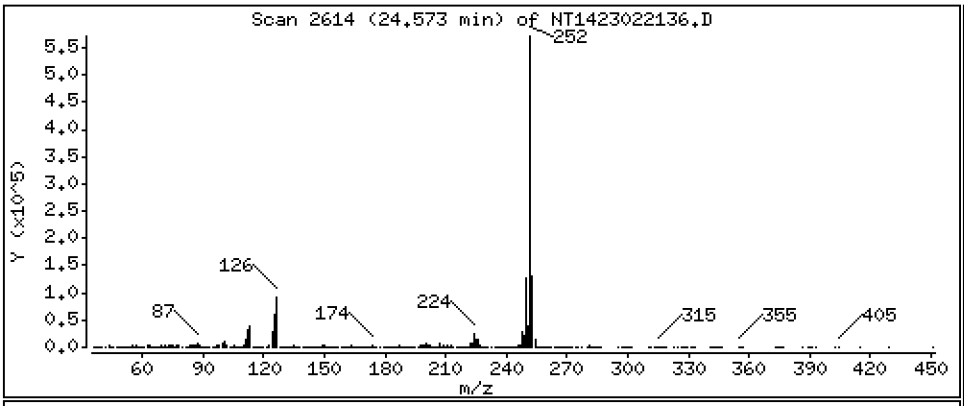
Operator: DSD

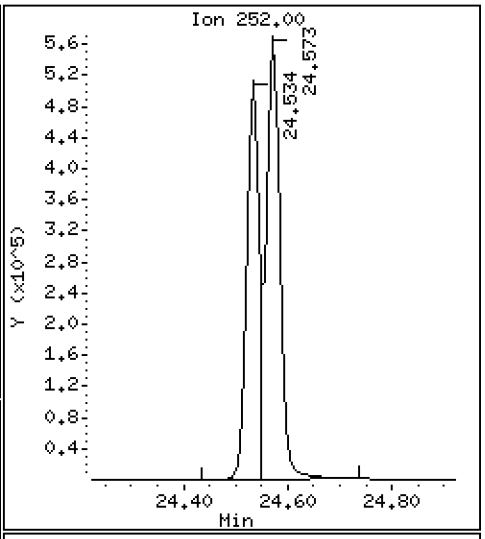
Column phase: ZB-5msi

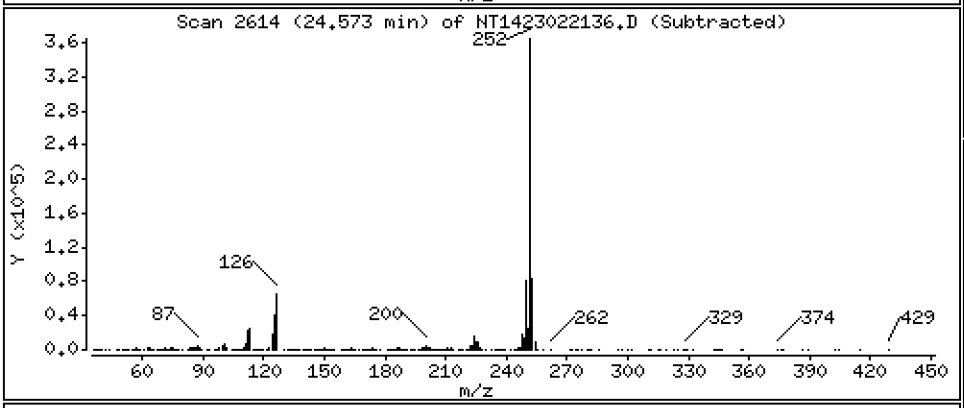
Column diameter: 0.25

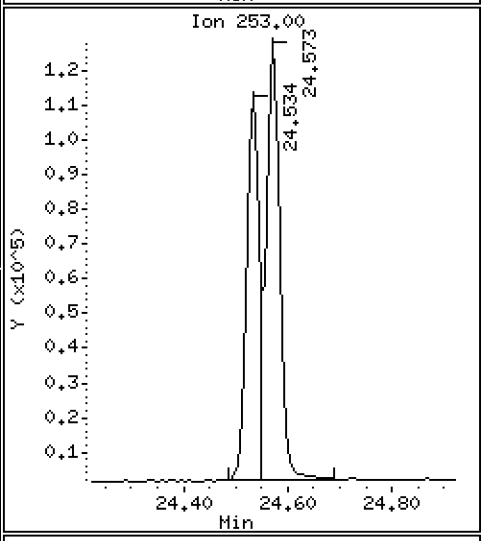
75 Benzo(k)fluoranthene

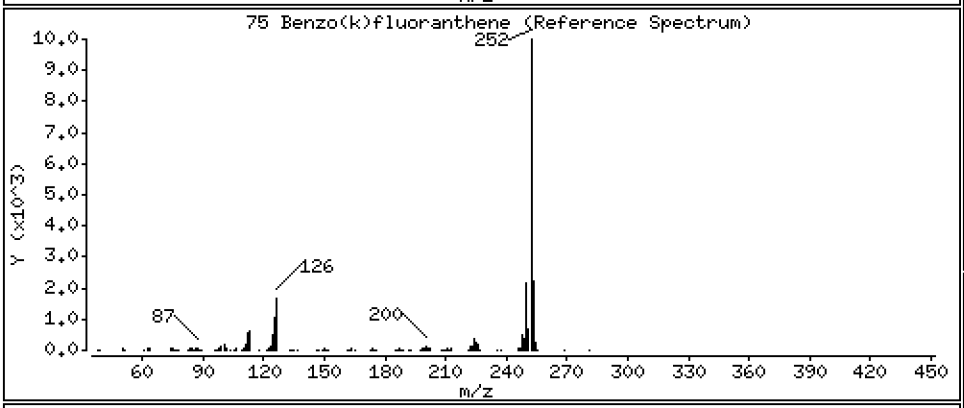
Concentration: 4.411 ug/mL

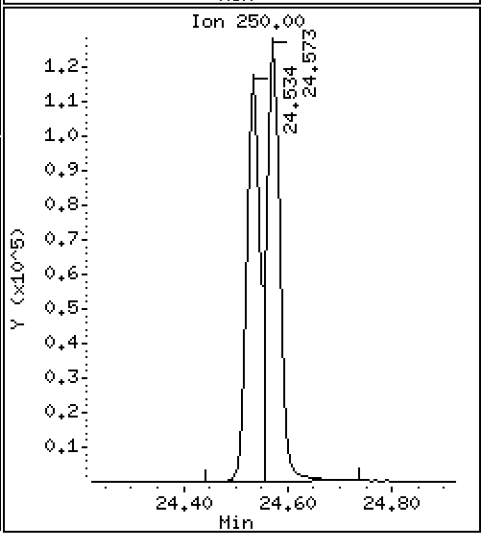


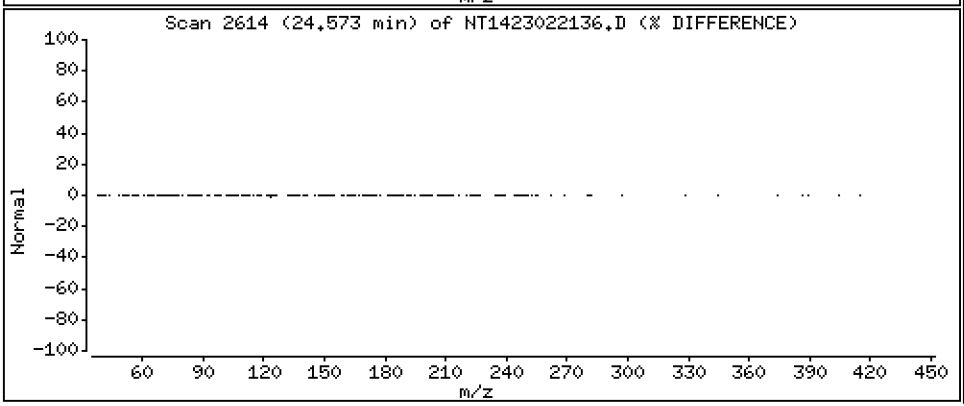












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

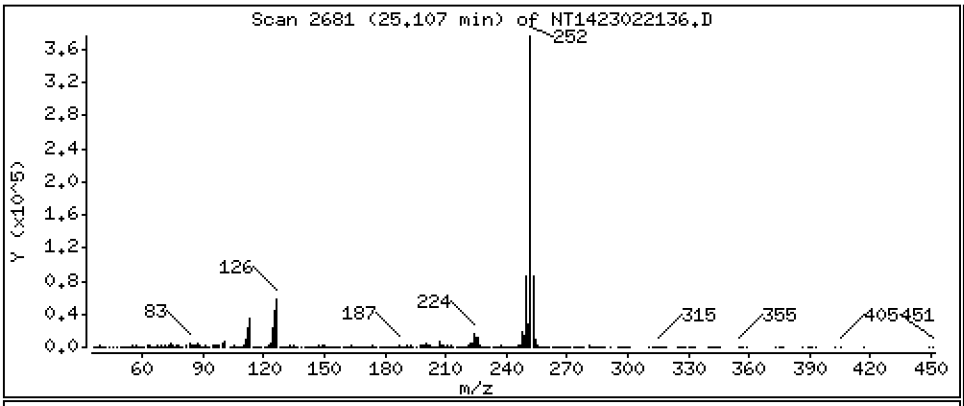
Operator: DSD

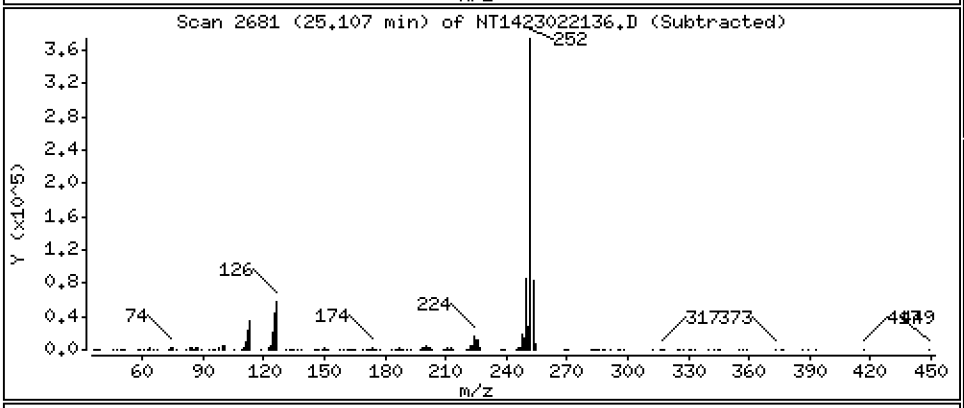
Column phase: ZB-5msi

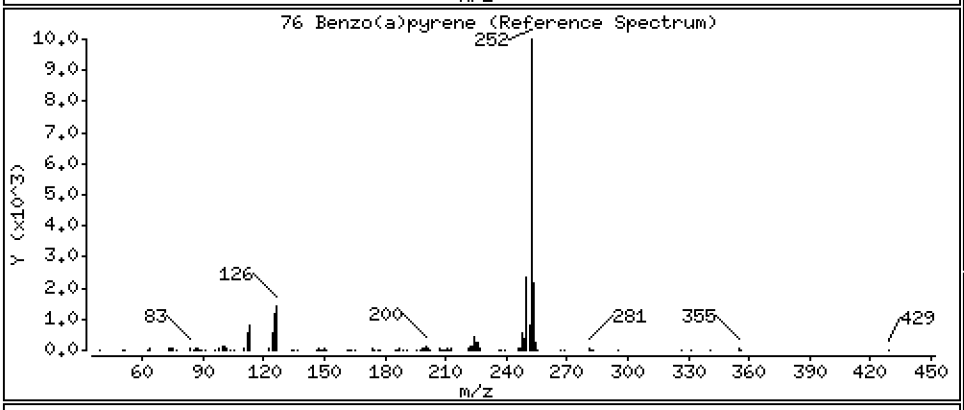
Column diameter: 0.25

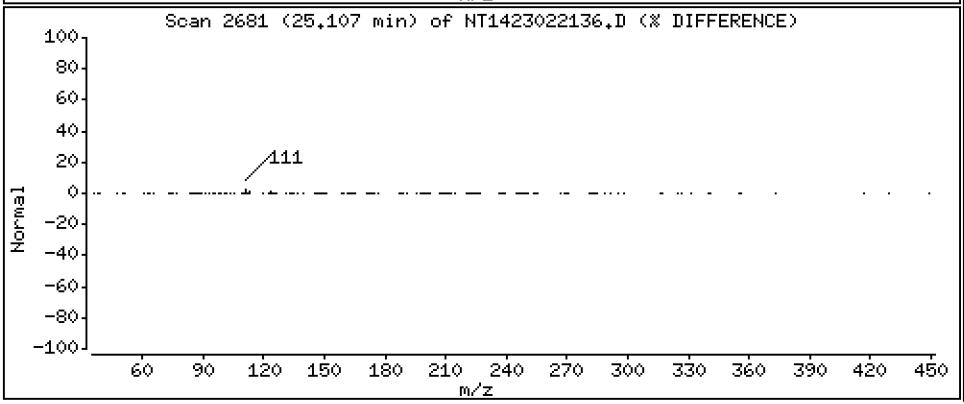
76 Benzo(a)pyrene

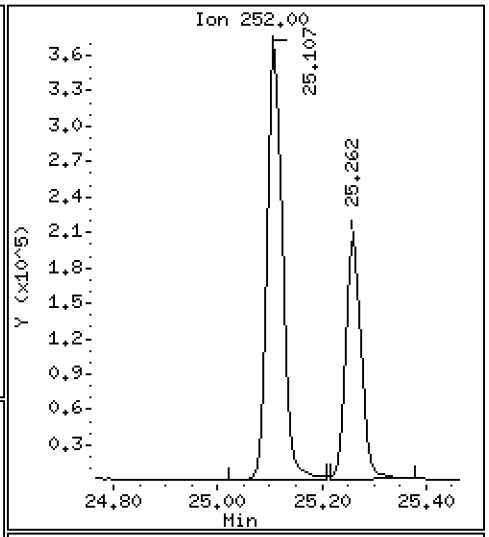
Concentration: 3.423 ug/mL

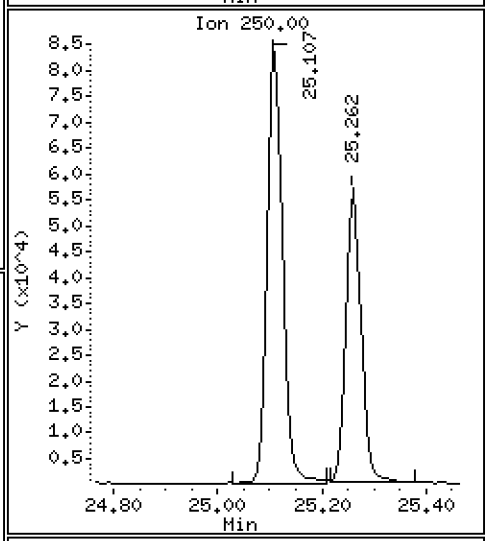


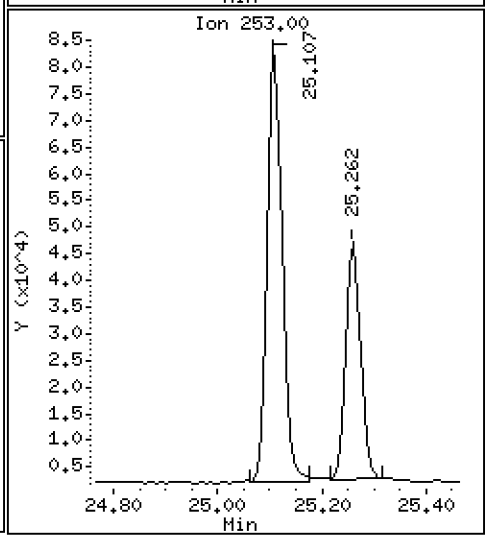












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

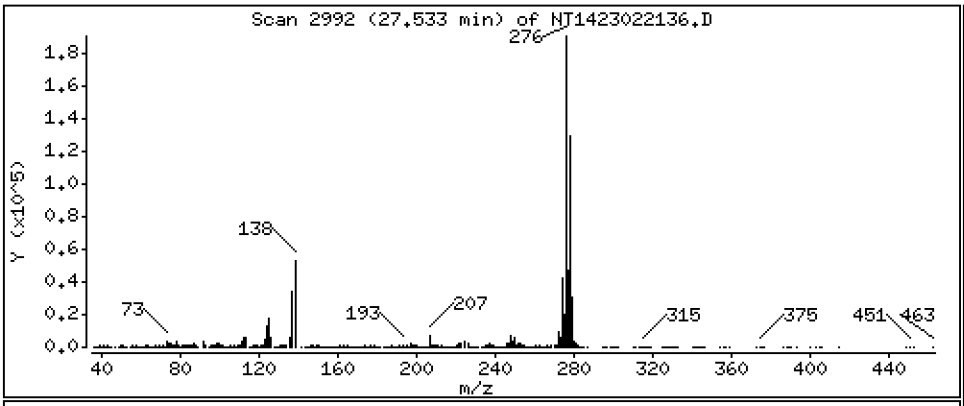
Operator: DSD

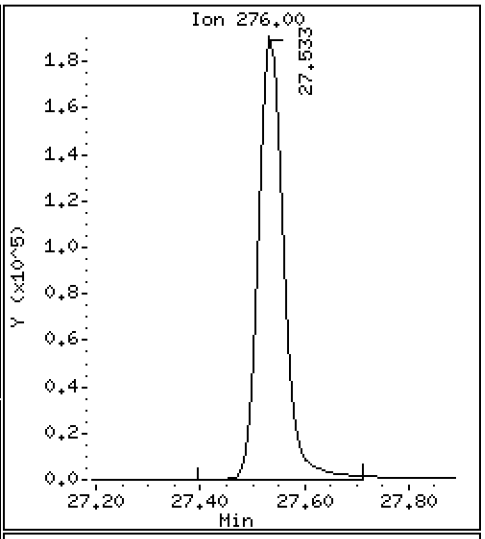
Column phase: ZB-5msi

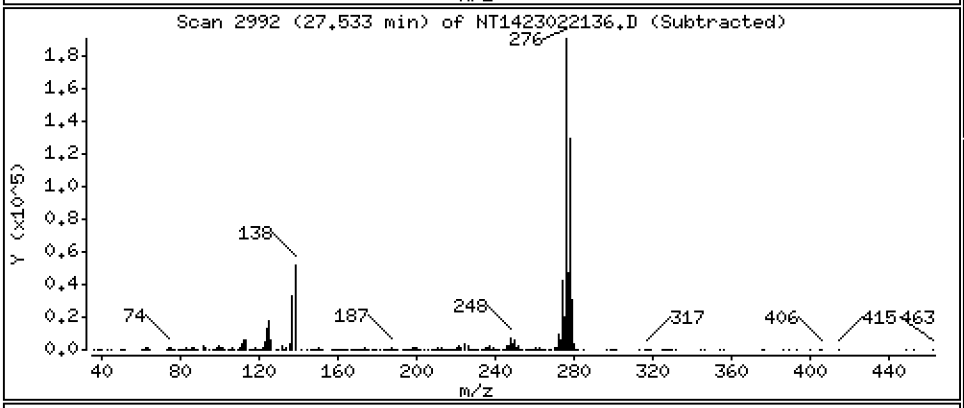
Column diameter: 0.25

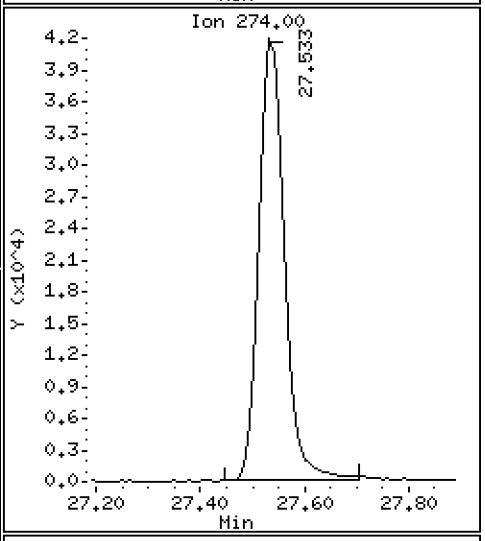
78 Indeno(1,2,3-cd)pyrene

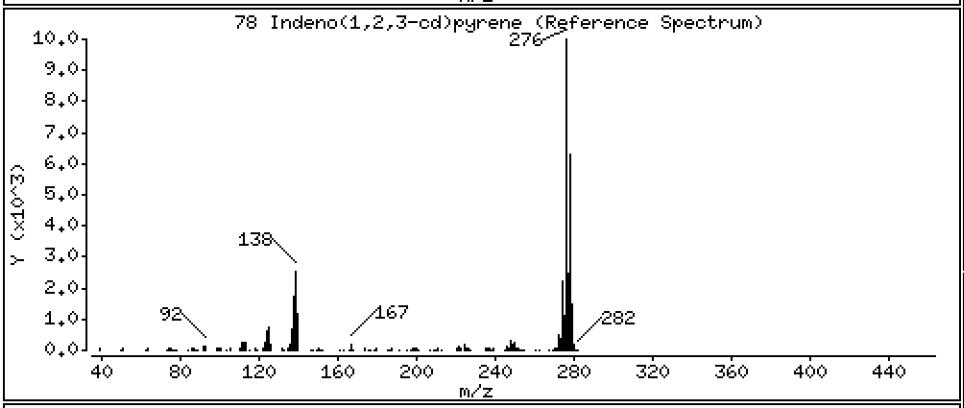
Concentration: 3.565 ug/mL

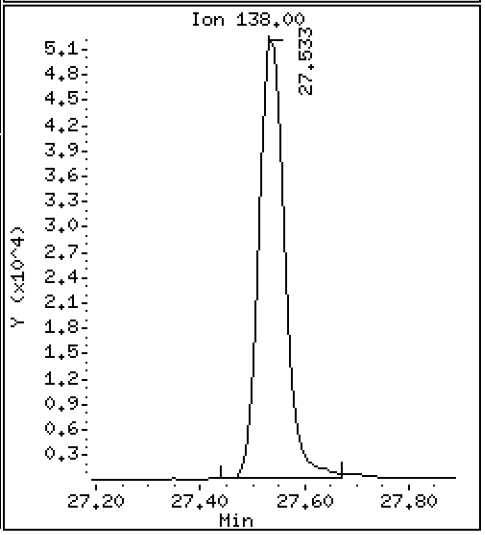


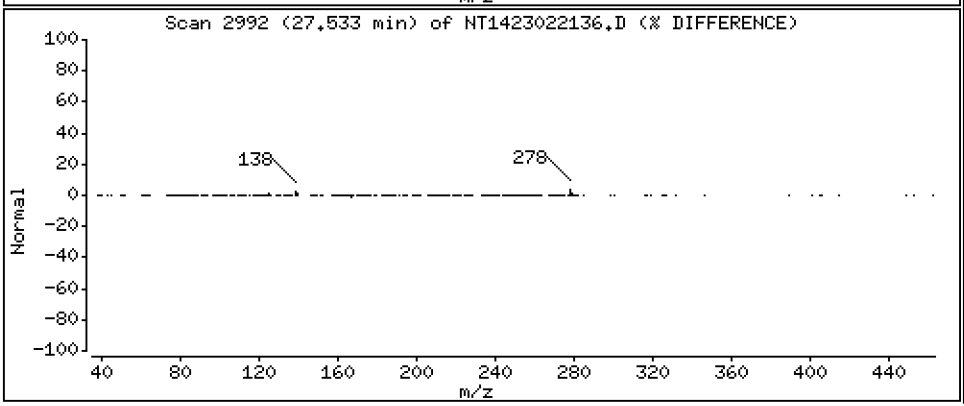












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

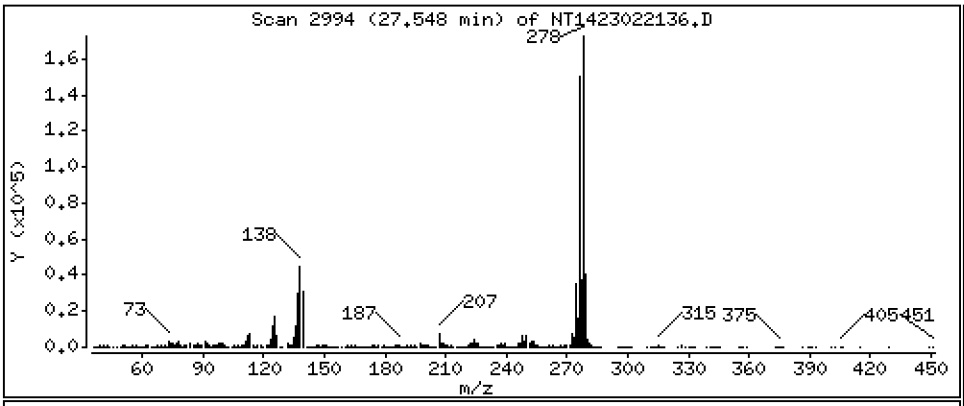
Operator: DSD

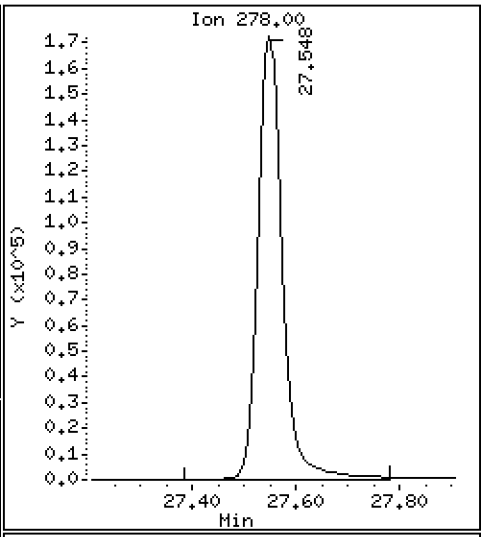
Column phase: ZB-5msi

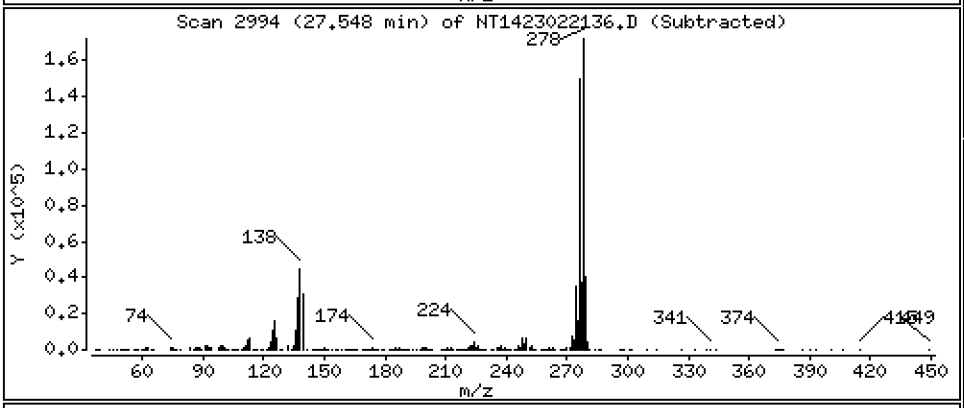
Column diameter: 0.25

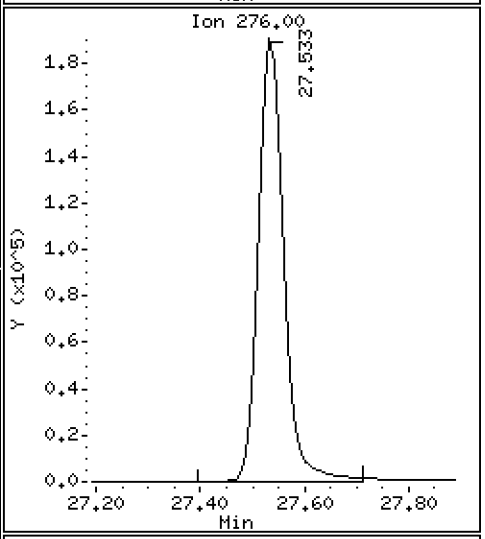
79 Dibenzo(a,h)anthracene

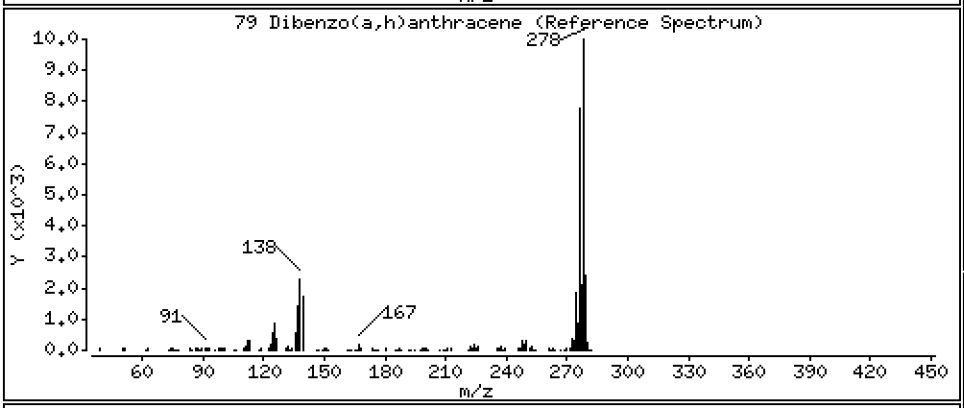
Concentration: 3.778 ug/mL

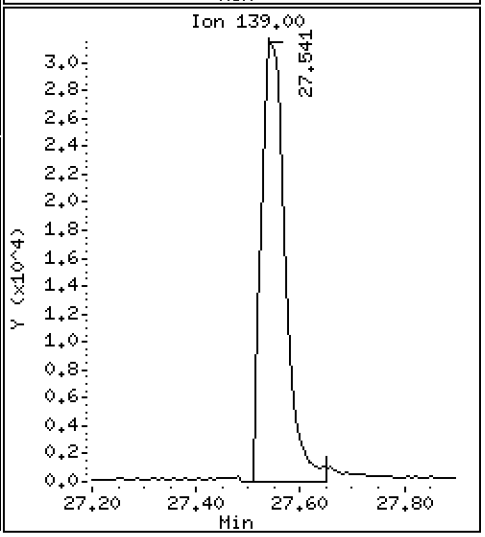


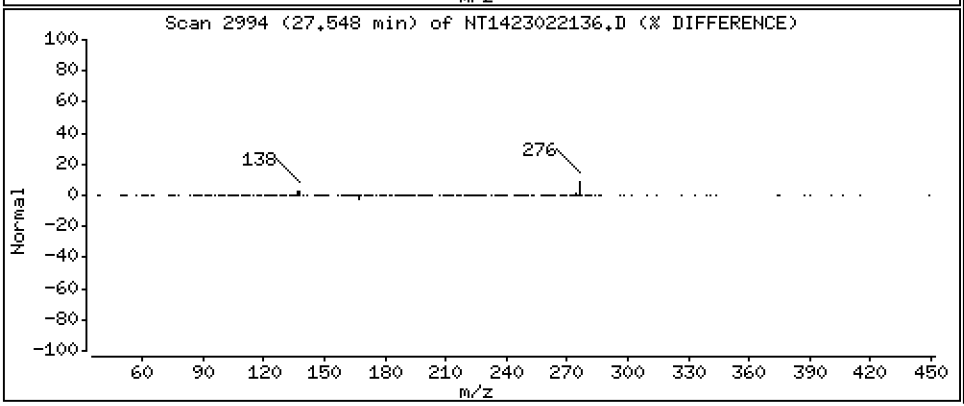












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

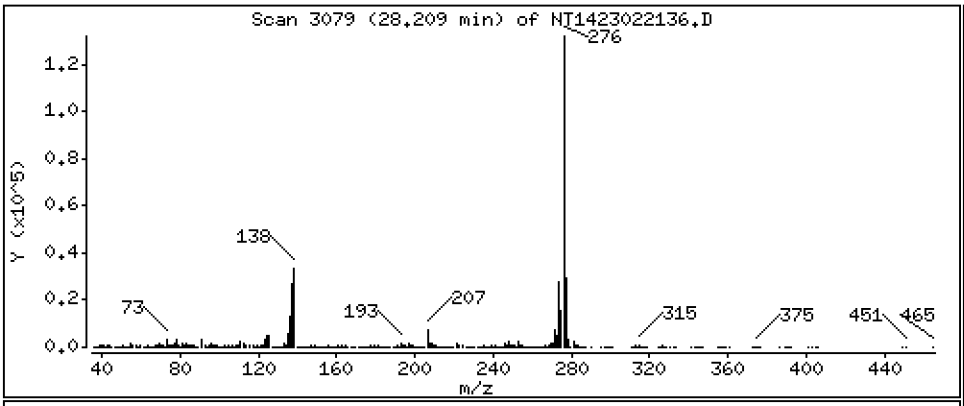
Operator: DSD

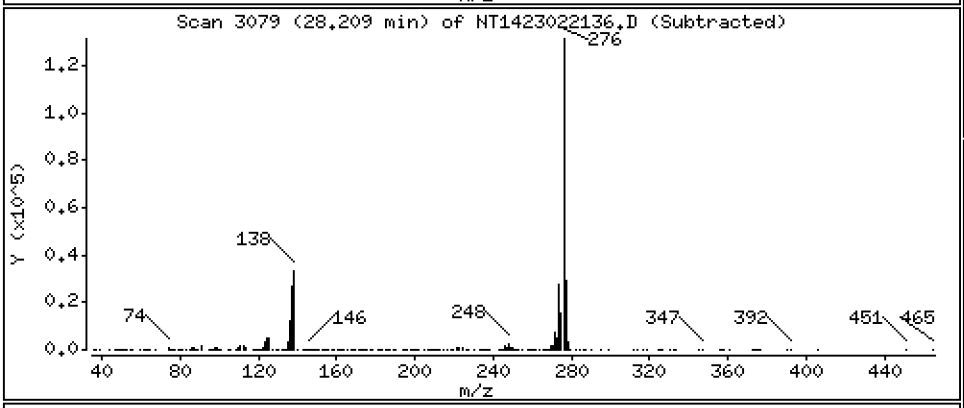
Column phase: ZB-5msi

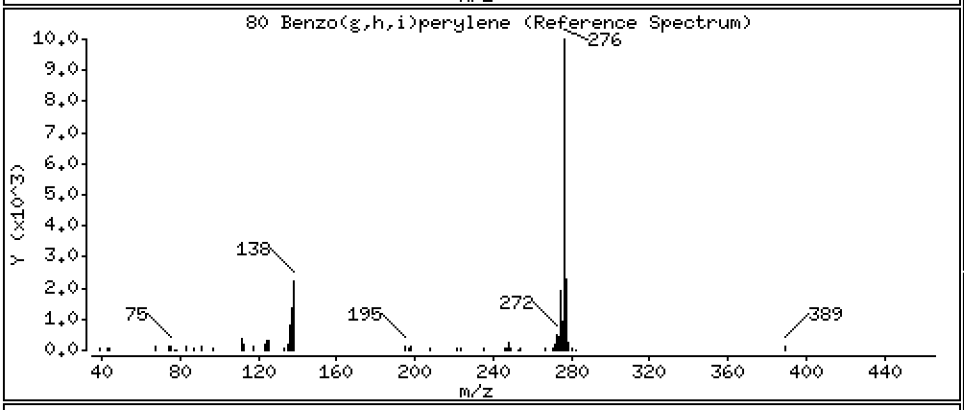
Column diameter: 0.25

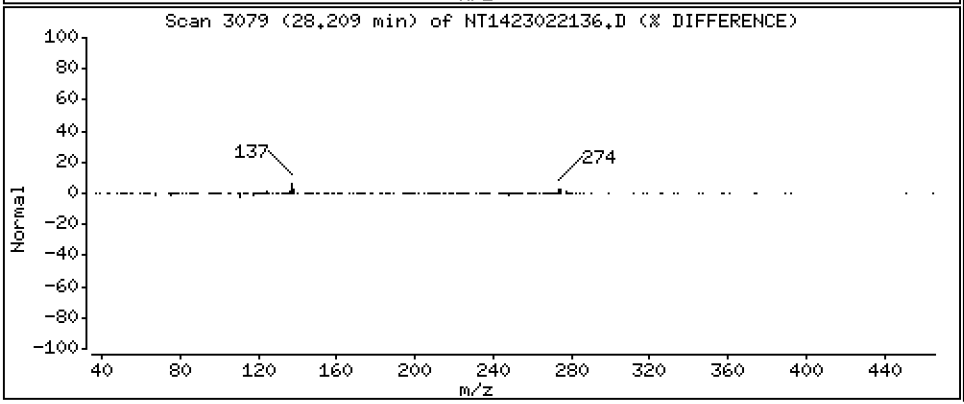
80 Benzo(g,h,i)perylene

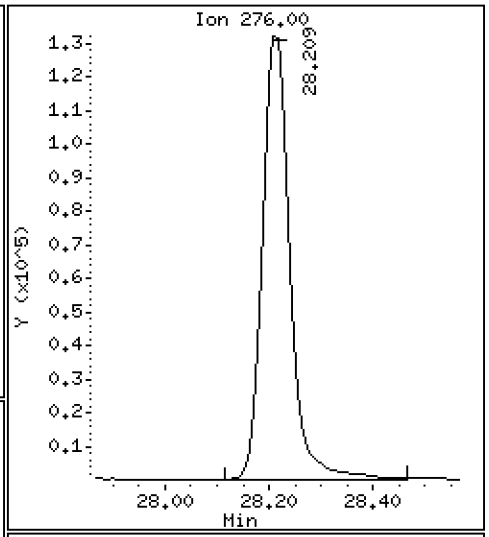
Concentration: 3.265 ug/mL

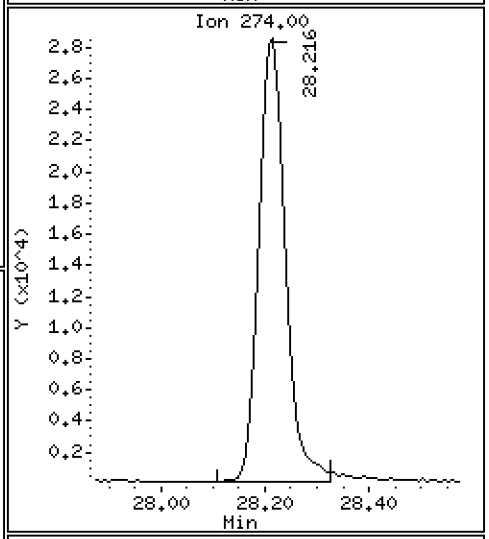


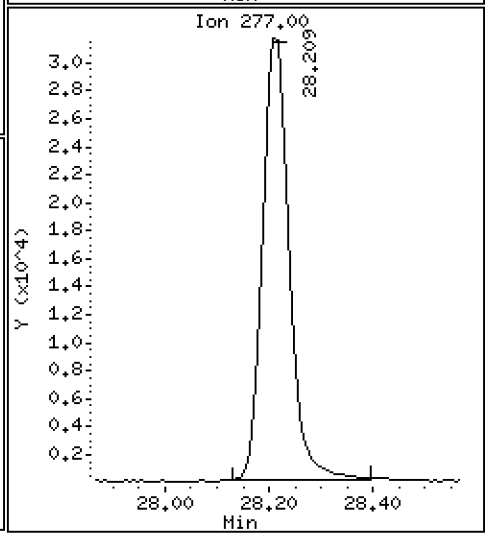












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

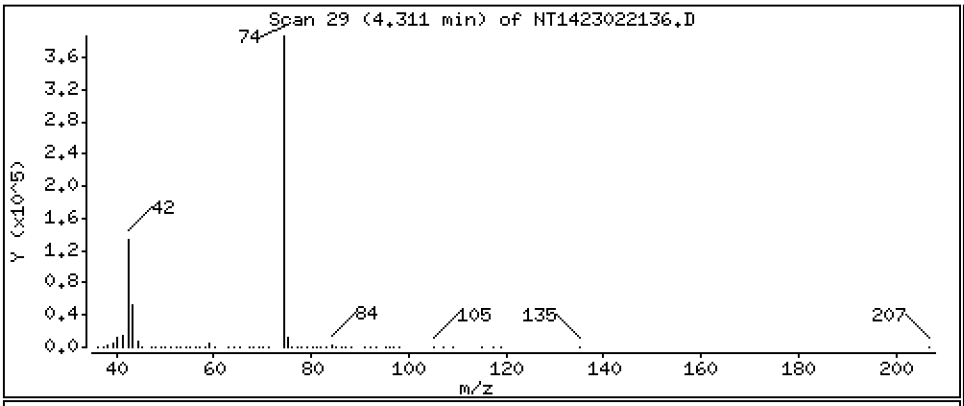
Operator: DSD

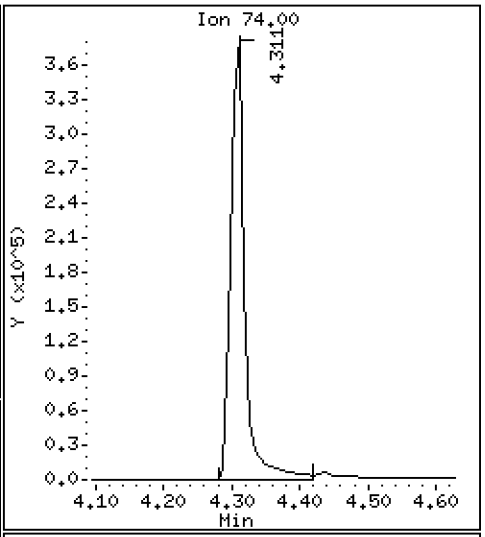
Column phase: ZB-5msi

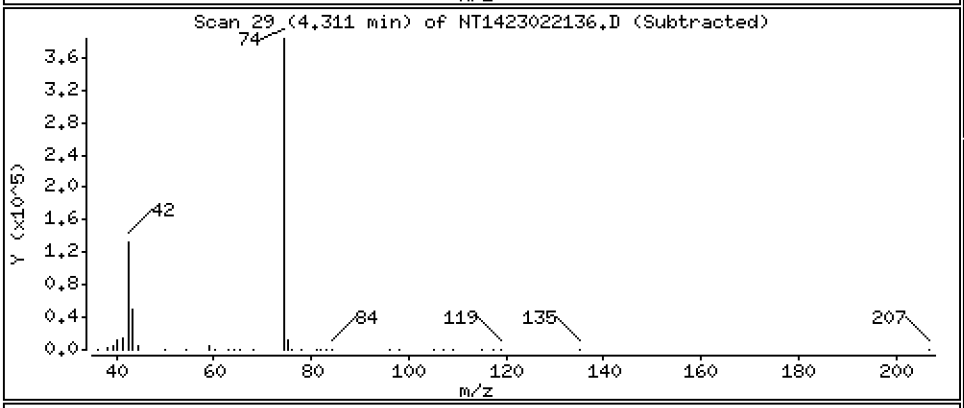
Column diameter: 0.25

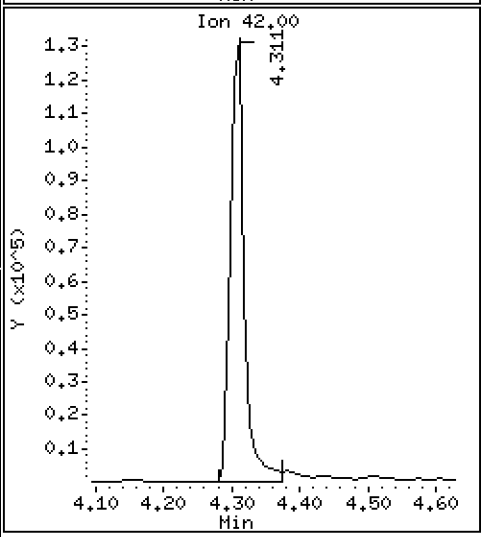
90 N-Nitrosodimethylamine

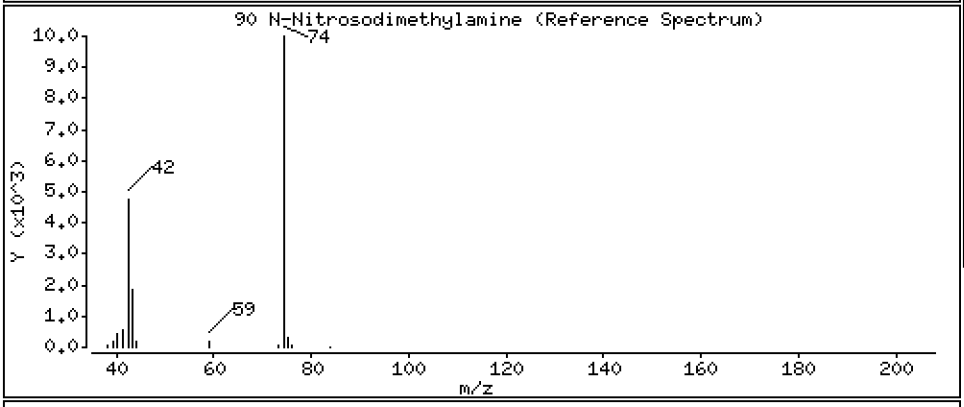
Concentration: 9.194 ug/mL

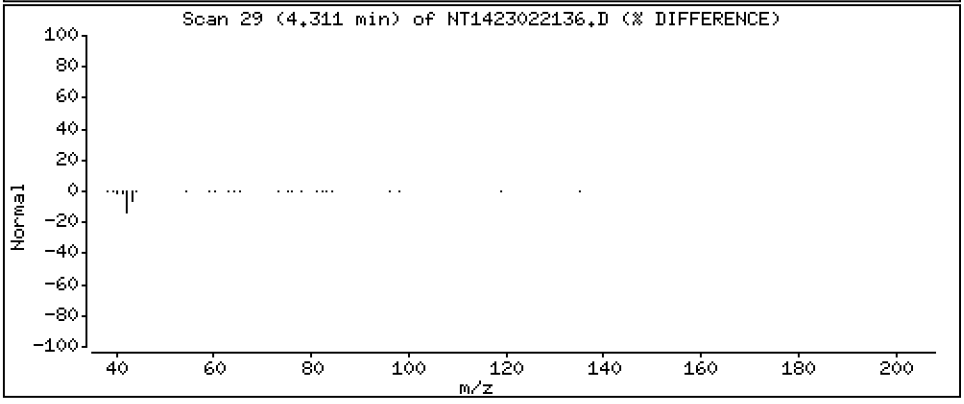












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022136.D

Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

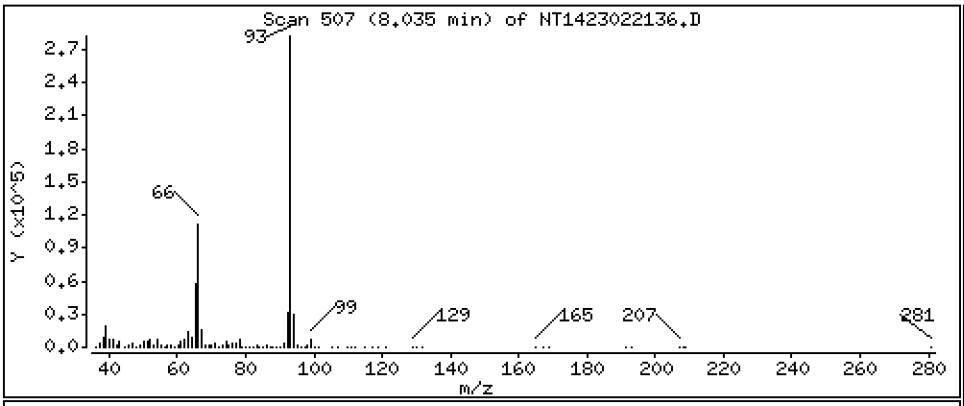
Operator: DSD

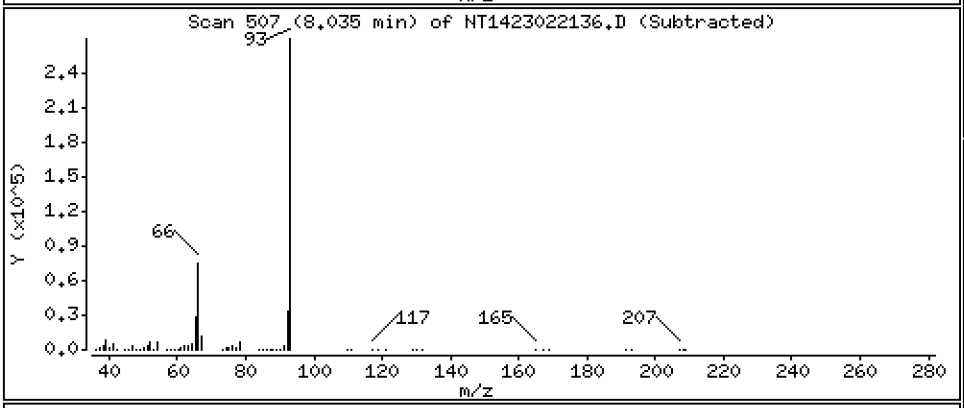
Column phase: ZB-5msi

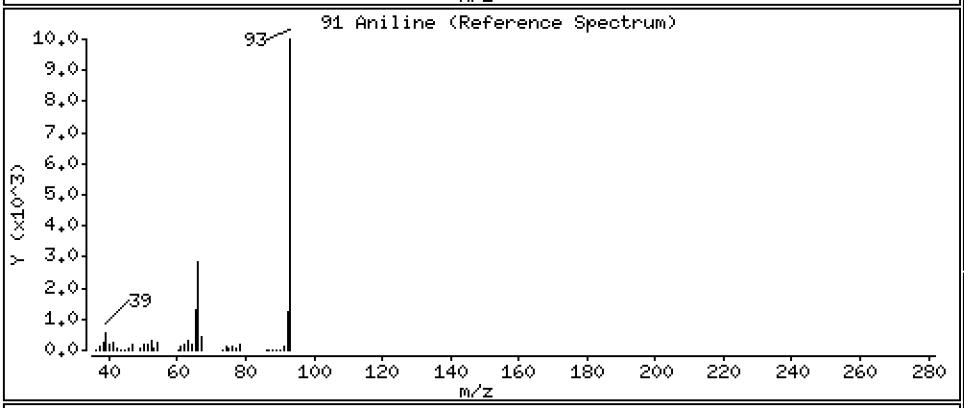
Column diameter: 0.25

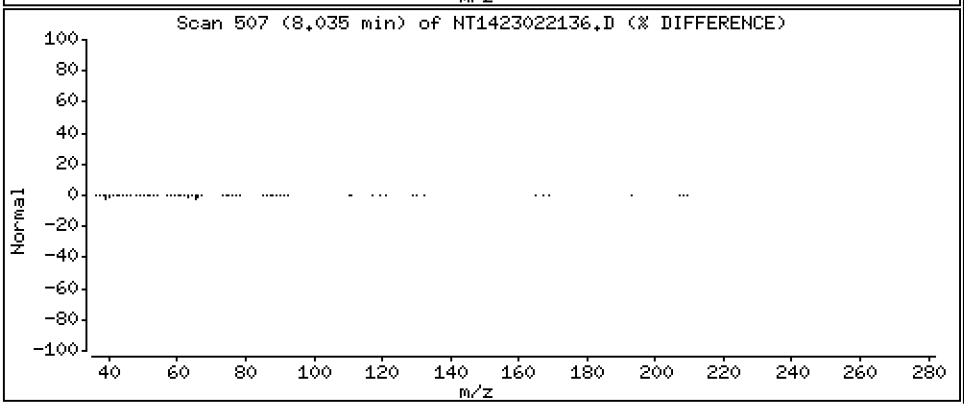
91 Aniline

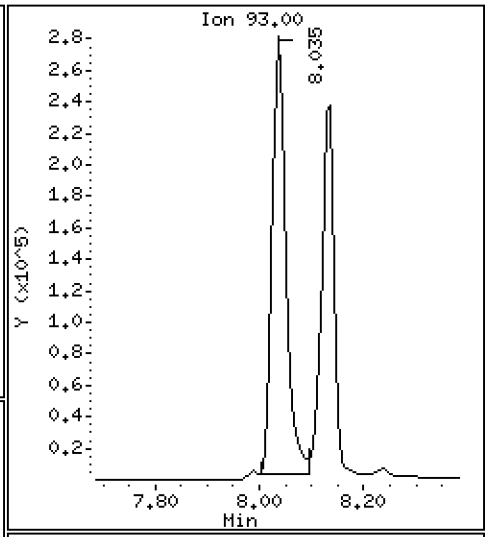
Concentration: 3.541 ug/mL

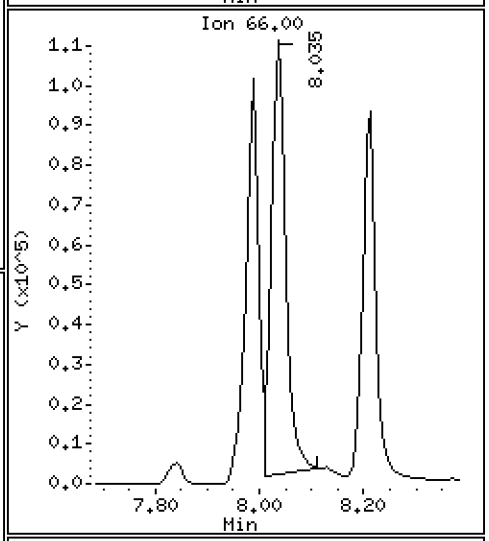


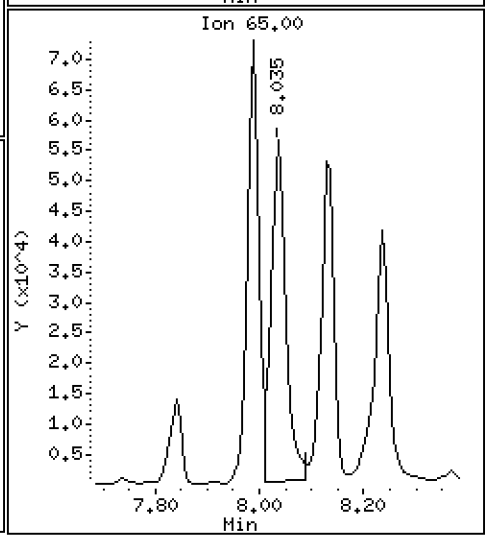












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

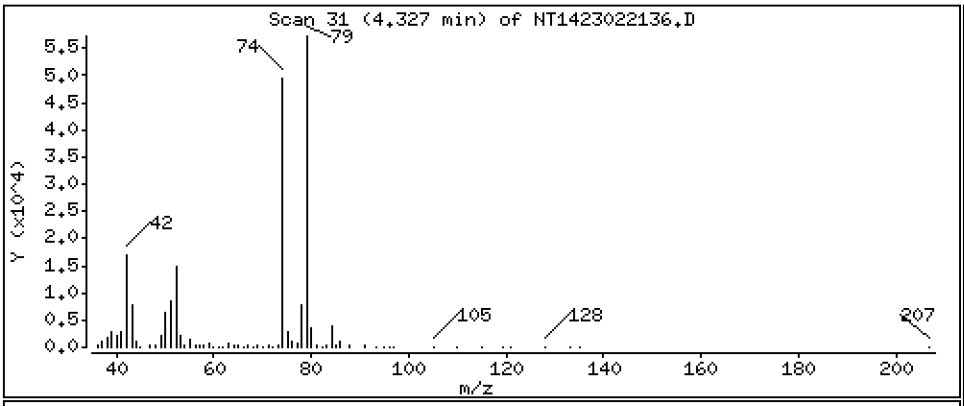
Operator: DSD

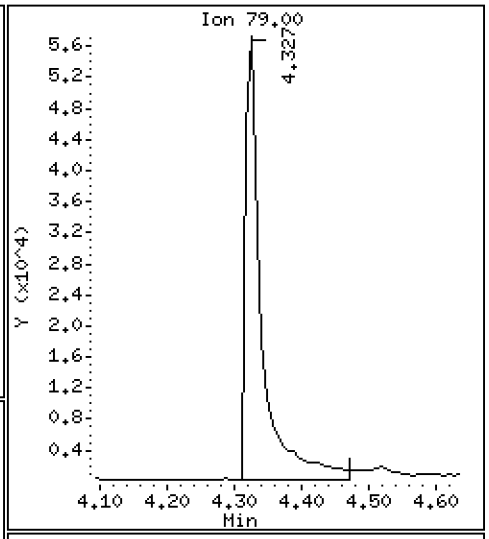
Column phase: ZB-5msi

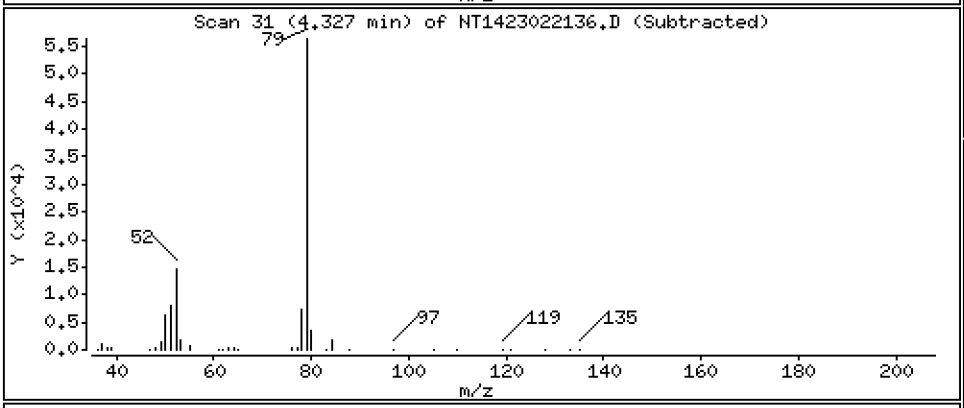
Column diameter: 0.25

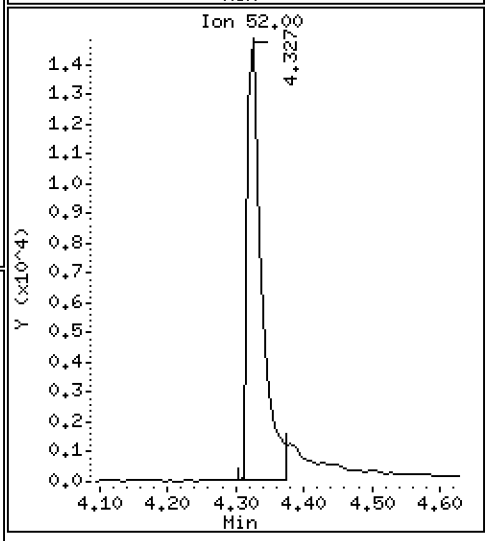
103 Pyridine

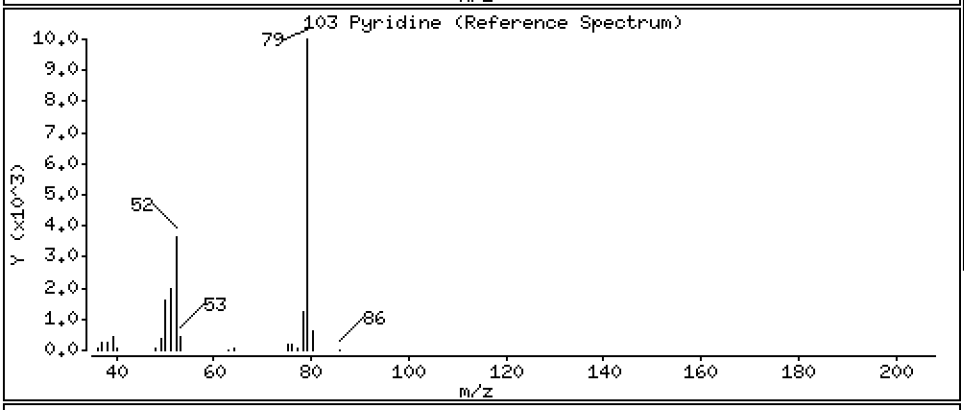
Concentration: 1.010 ug/mL

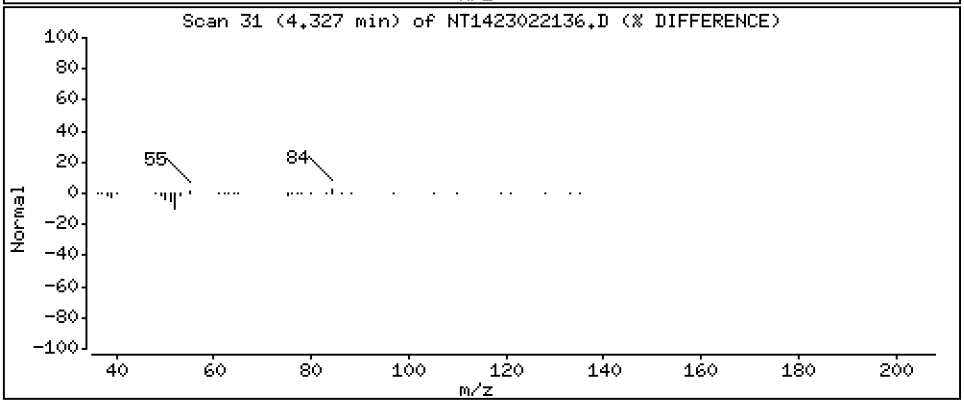












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

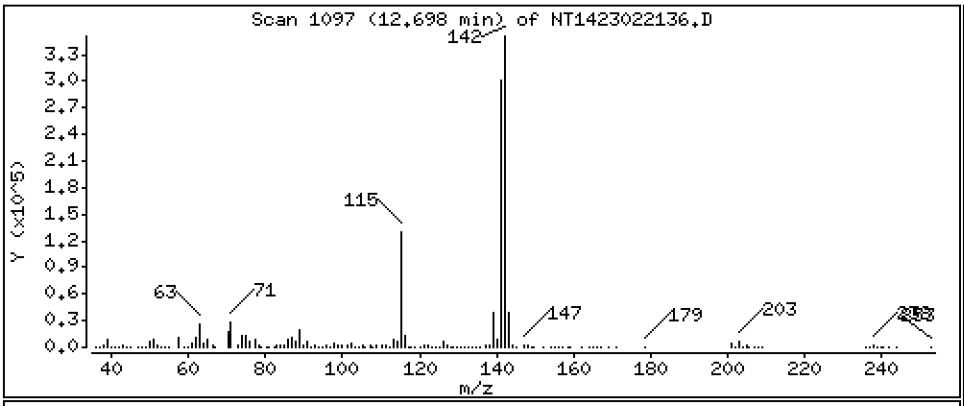
Operator: DSD

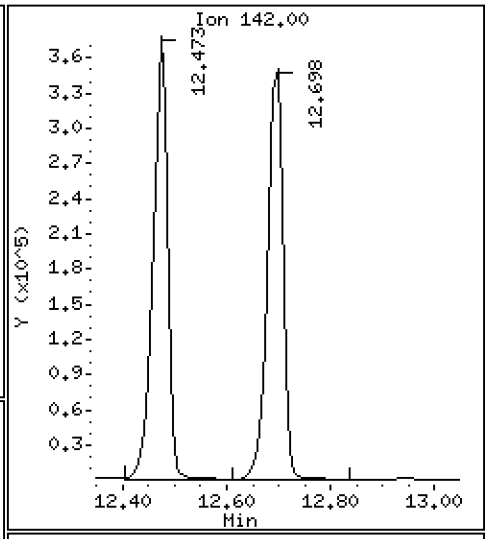
Column phase: ZB-5msi

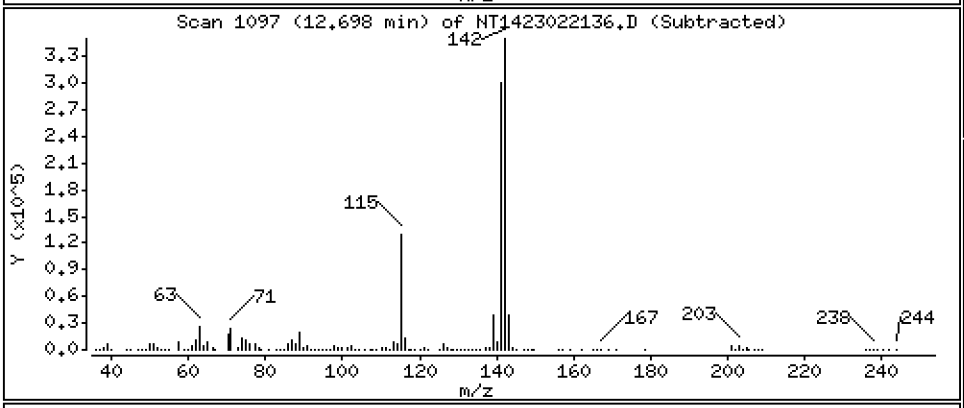
Column diameter: 0.25

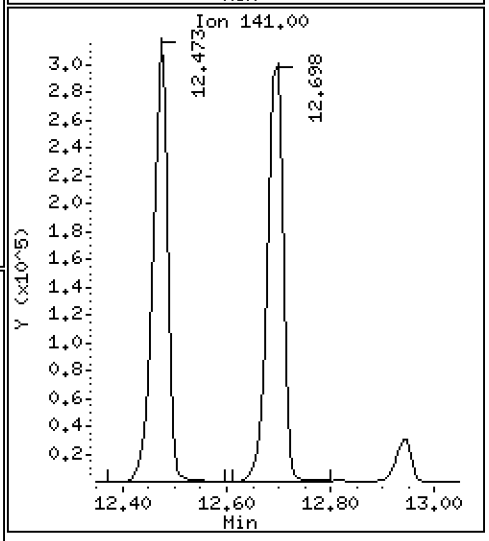
105 1-methylnaphthalene

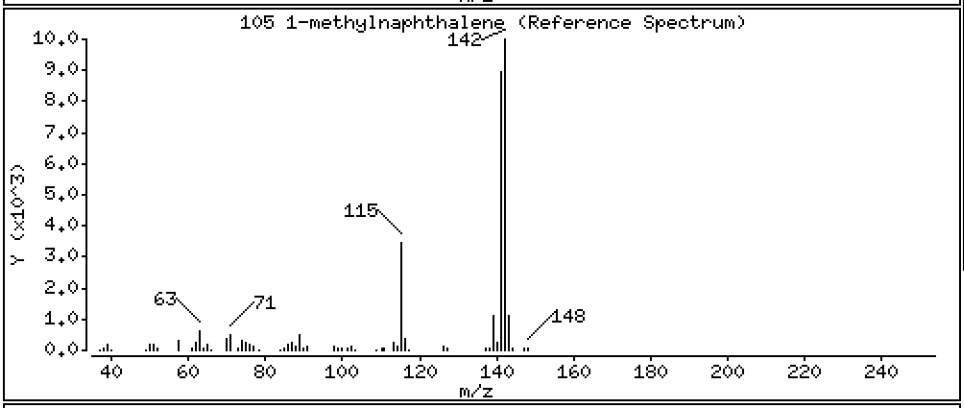
Concentration: 3.726 ug/mL

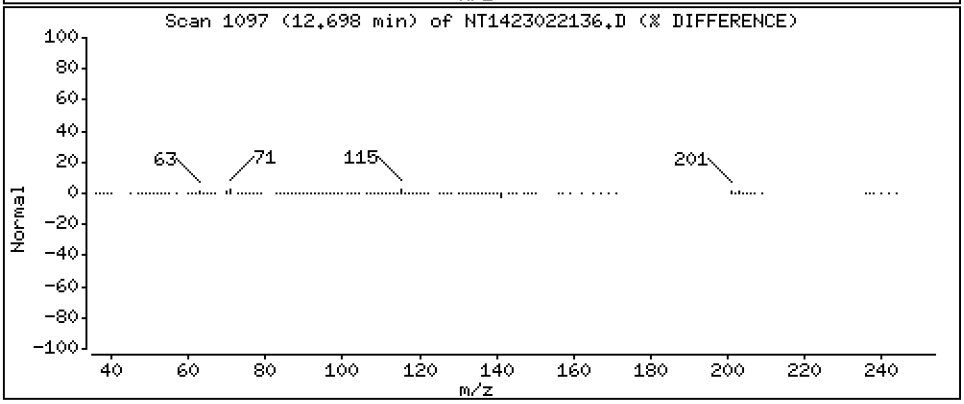












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

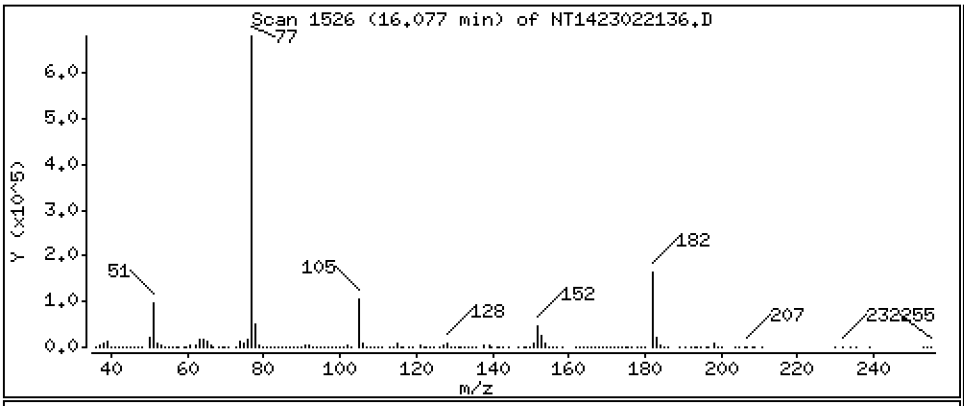
Operator: DSD

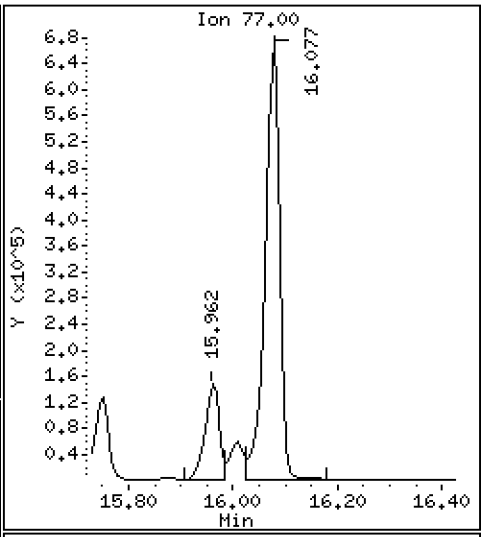
Column phase: ZB-5msi

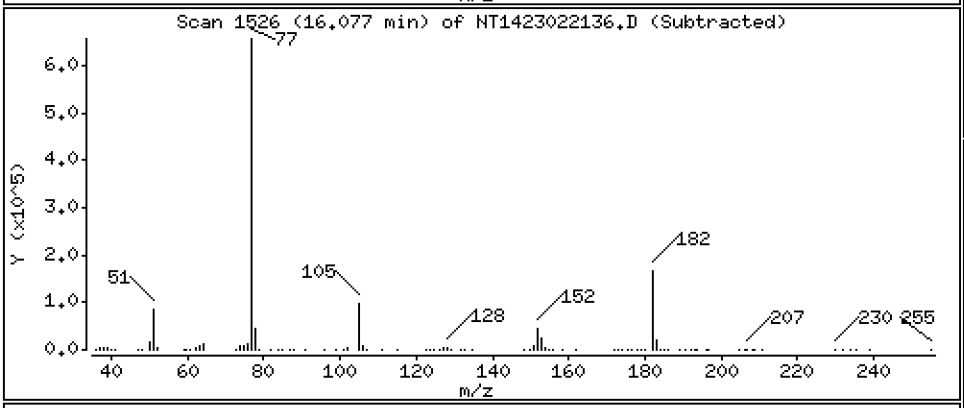
Column diameter: 0.25

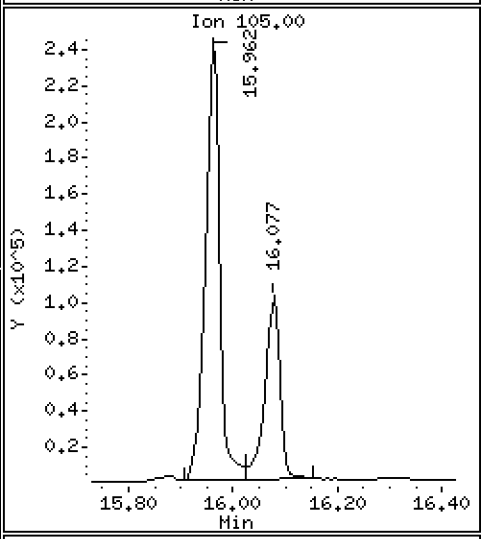
111 Azobenzene (1,2-DP-Hydrazine)

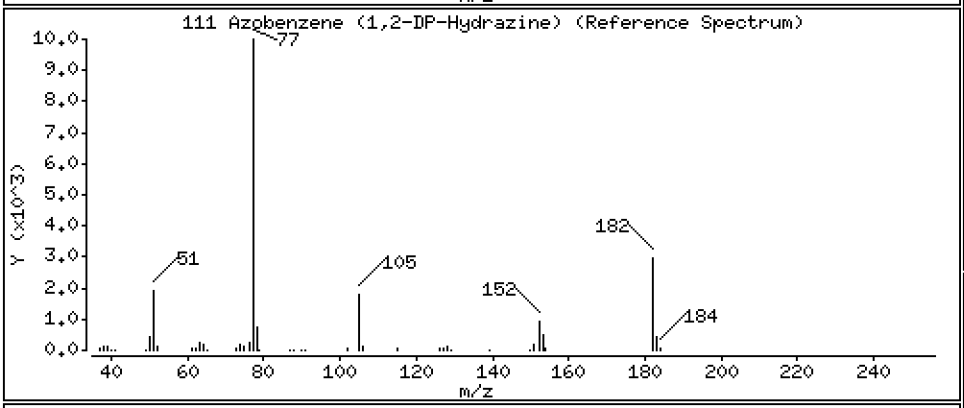
Concentration: 3.851 ug/mL

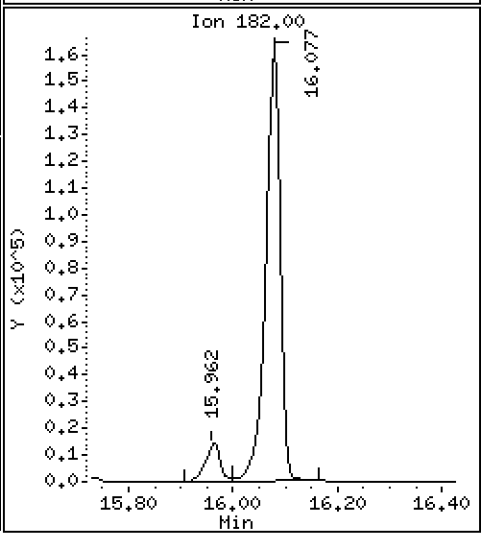


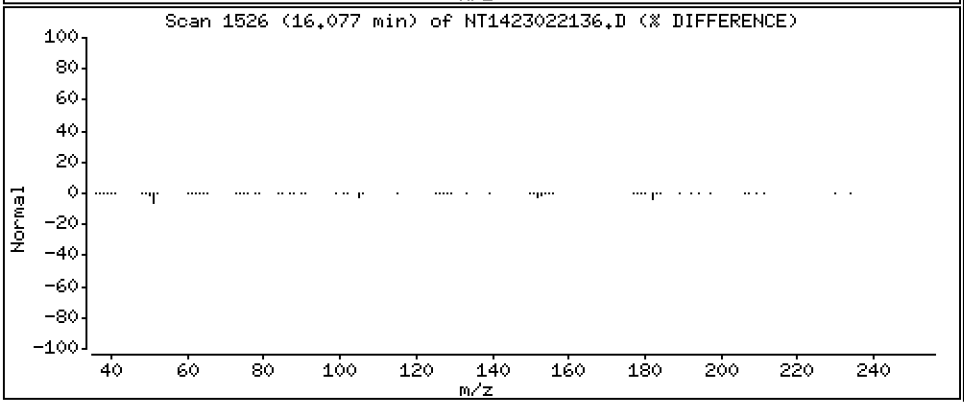












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

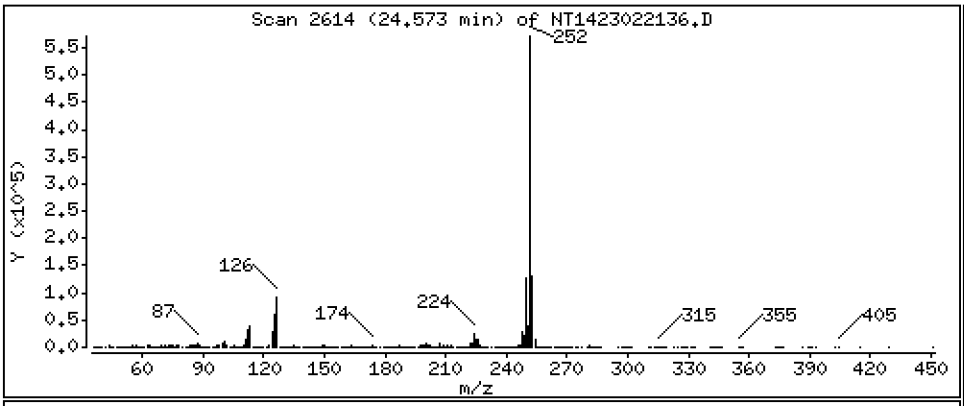
Operator: DSD

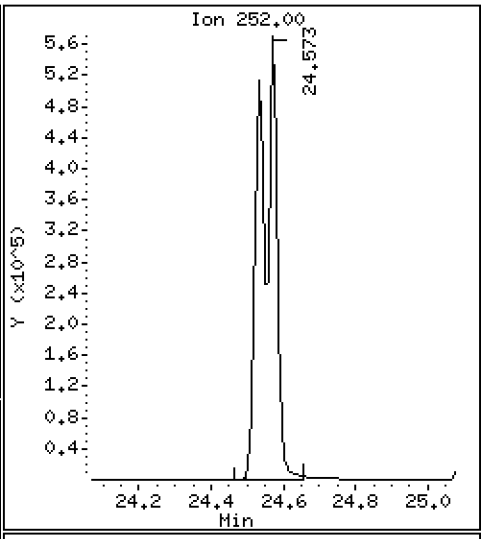
Column phase: ZB-5msi

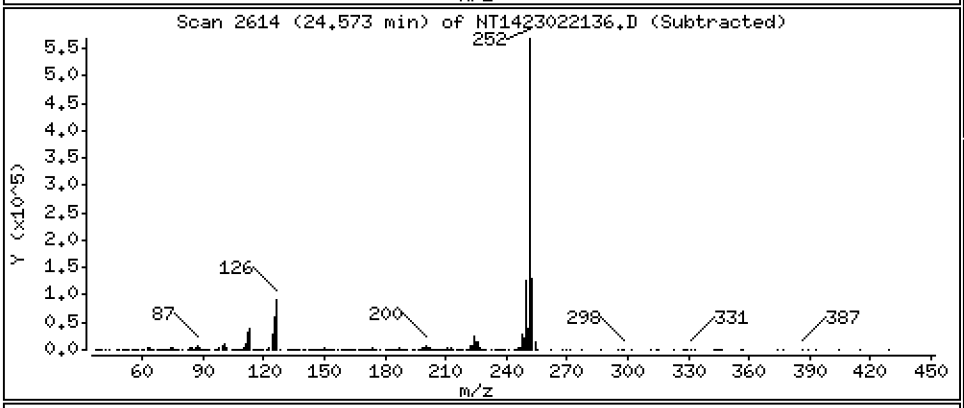
Column diameter: 0.25

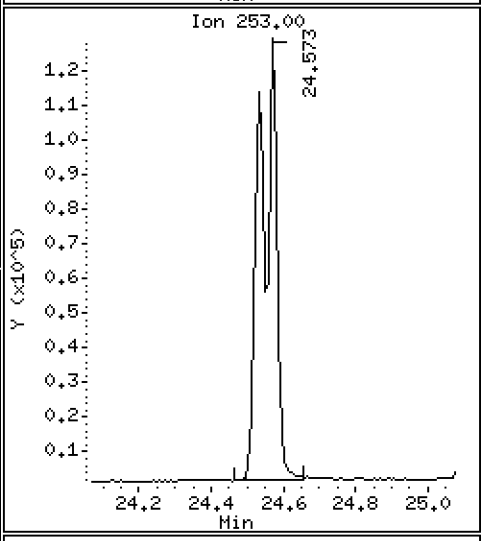
187 Total Benzofluoranthenes

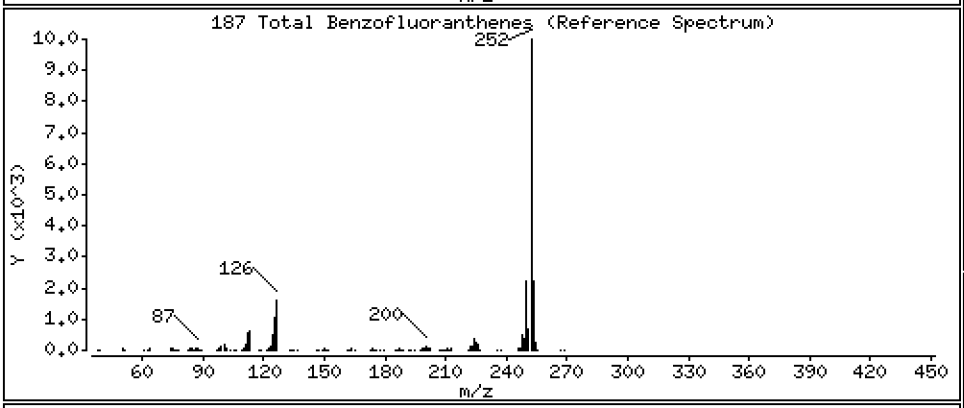
Concentration: 8.341 ug/mL

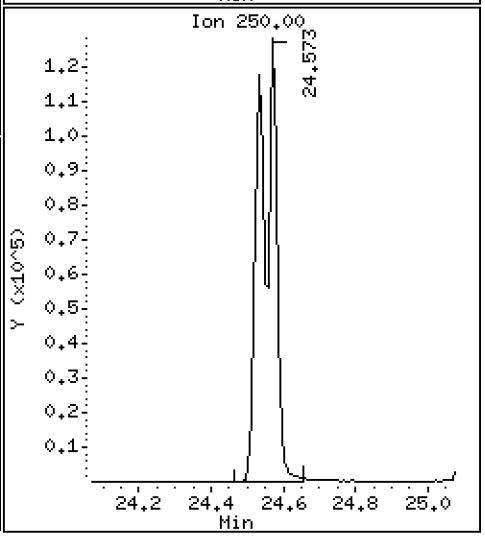


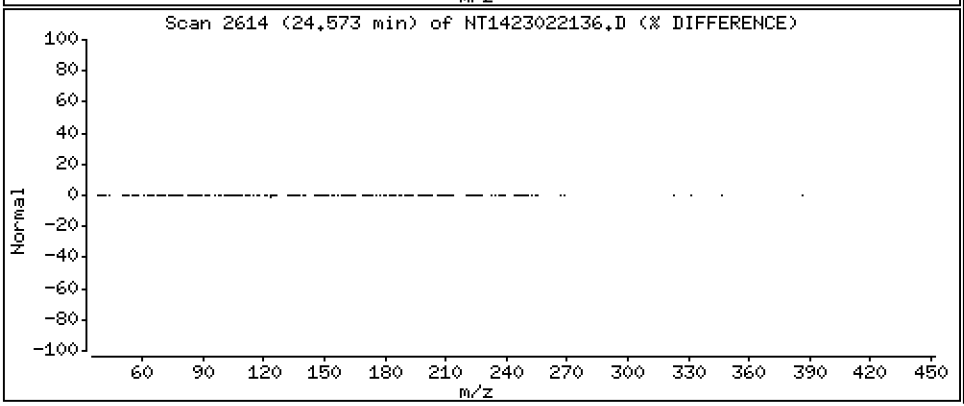












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022136.D

Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

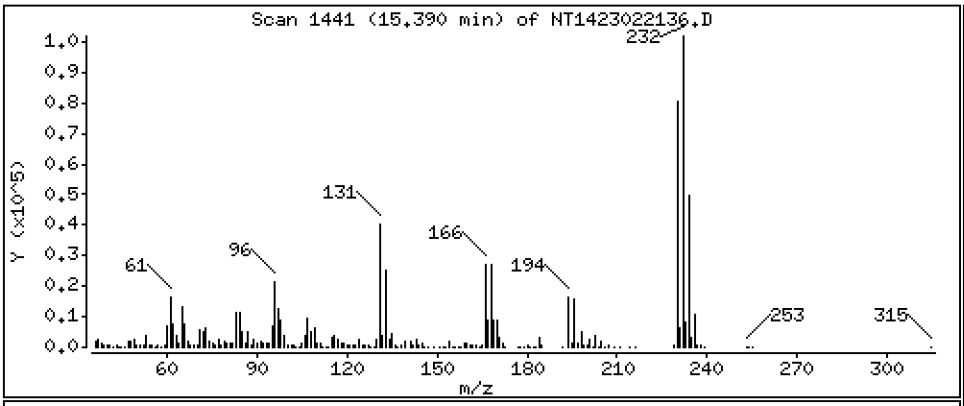
Operator: DSD

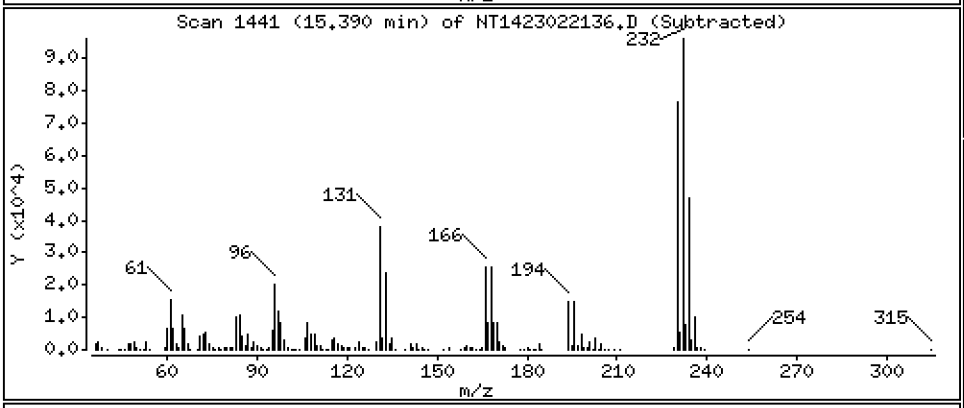
Column phase: ZB-5msi

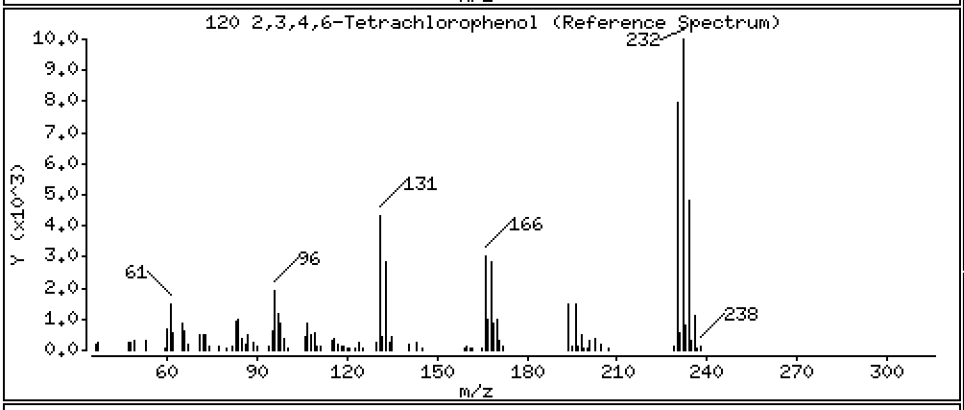
Column diameter: 0.25

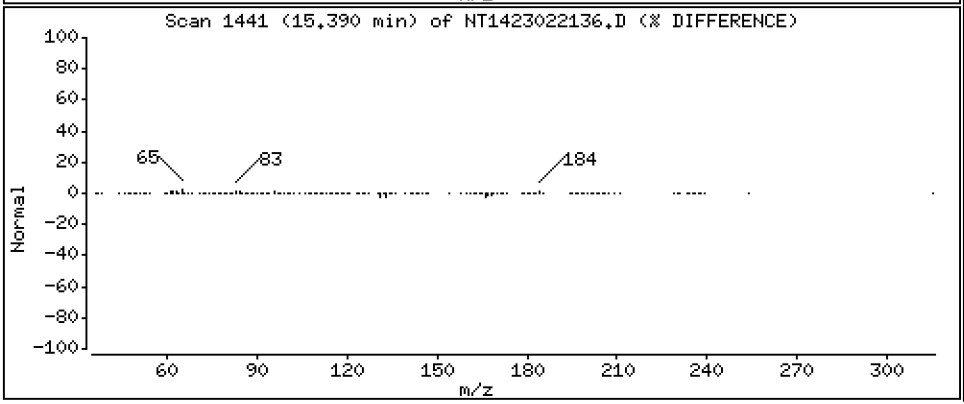
120 2,3,4,6-Tetrachlorophenol

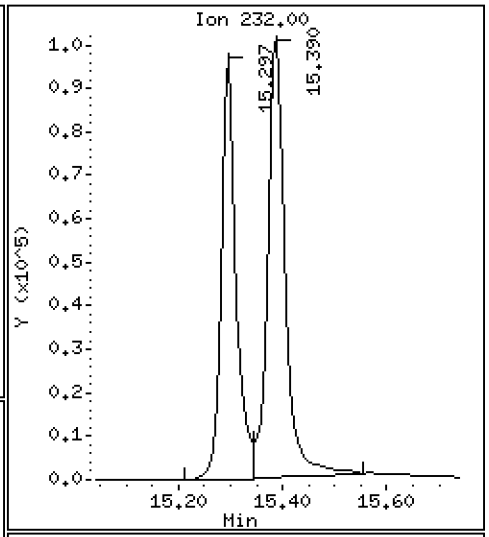
Concentration: 3.271 ug/mL

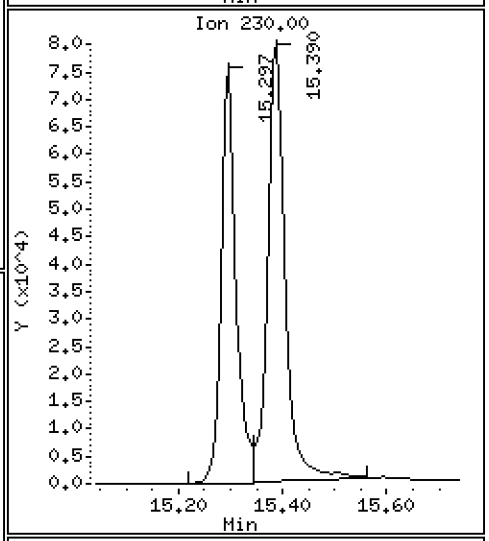


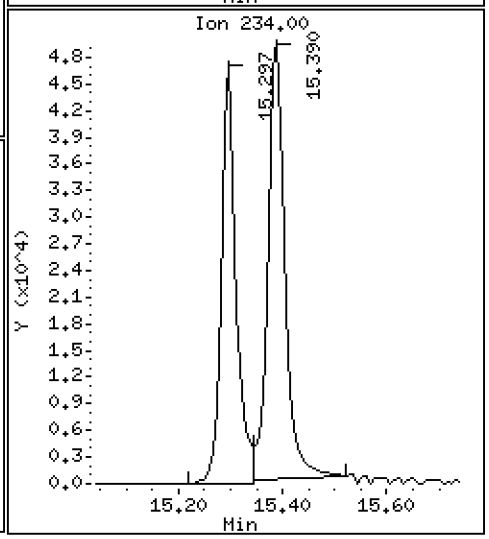












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221B.b\NT1423022136.D
Lab Smp Id: BLA0393-BSD1
Inj Date : 22-FEB-2023 10:33 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : BLA0393-BSD1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Meth Date : 23-Feb-2023 09:59 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 27
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.388	6.373	(0.746)	437672	5.65435	5.654
$	2 Phenol-d5	99	7.965	7.965	(0.930)	681680	5.55158	5.552
	3 Phenol	94	7.988	7.988	(0.932)	430077	3.30856	3.309
$	5 2-Chlorophenol-d4	132	8.212	8.212	(0.958)	485516	5.54150	5.542
	4 Bis(2-Chloroethyl)ether	93	8.135	8.135	(0.949)	390601	3.93356	3.934
	6 2-Chlorophenol	128	8.235	8.235	(0.961)	316790	3.46064	3.461
	7 1,3-Dichlorobenzene	146	8.498	8.498	(0.992)	356696	3.50015	3.500
*	8 1,4-Dichlorobenzene-d4	152	8.568	8.568	(1.000)	289546	4.00000	
	9 1,4-Dichlorobenzene	146	8.591	8.599	(1.003)	379420	3.92304	3.923
$	10 1,2-Dichlorobenzene-d4	152	8.917	8.925	(1.041)	224484	3.41822	3.418
	12 1,2-Dichlorobenzene	146	8.948	8.948	(1.044)	344909	3.56726	3.567
	11 Benzyl alcohol	108	8.863	8.855	(1.034)	223414	3.04916	3.049
	14 2,2'-oxybis(1-Chloropropane)	121	9.150	9.150	(1.068)	115455	4.17405	4.174
	13 2-Methylphenol	108	9.088	9.096	(1.061)	247728	2.72924	2.729
	17 Hexachloroethane	117	9.530	9.530	(1.112)	149517	3.55595	3.556
	16 N-Nitroso-di-n-propylamine	70	9.406	9.414	(1.098)	318343	3.85286	3.853
	15 4-Methylphenol	108	9.367	9.367	(1.093)	304466	3.17662	3.177
$	18 Nitrobenzene-d5	82	9.654	9.662	(0.875)	467584	3.77240	3.772
	19 Nitrobenzene	77	9.693	9.701	(0.878)	477459	3.83857	3.839
	20 Isophorone	82	10.143	10.151	(0.919)	914756	5.57415	5.574
	21 2-Nitrophenol	139	10.322	10.322	(0.935)	186703	3.30875	3.309
	22 2,4-Dimethylphenol	107	10.399	10.399	(0.942)	183752	1.95637	1.956
	23 Bis(2-Chloroethoxy)methane	93	10.593	10.593	(0.960)	494723	4.63424	4.634
	24 Benzoic acid	105	10.709	10.686	(0.971)	1154773	18.6825	18.68
	25 2,4-Dichlorophenol	162	10.779	10.787	(0.977)	1053329	13.1034	13.10
	26 1,2,4-Trichlorobenzene	180	10.957	10.957	(0.993)	364116	3.73925	3.739
*	27 Naphthalene-d8	136	11.034	11.042	(1.000)	1072886	4.00000	
	28 Naphthalene	128	11.081	11.081	(1.004)	988122	3.73525	3.735
	29 4-Chloroaniline	127	11.227	11.228	(1.017)	822090	7.27390	7.274
	30 Hexachlorobutadiene	225	11.444	11.452	(1.037)	248908	4.14651	4.147
	31 4-Chloro-3-methylphenol	107	12.210	12.210	(1.107)	1214935	13.9635	13.96
	32 2-Methylnaphthalene	142	12.473	12.481	(1.130)	717942	3.62367	3.624
	33 Hexachlorocyclopentadiene	237	12.945	12.945	(0.884)	555429	8.83559	8.836

		QUANT SIG					CONCENTRATIONS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.108	13.108	(0.895)	840819	13.1568	13.16
	35 2,4,5-Trichlorophenol	196	13.185	13.185	(0.900)	971042	14.0302	14.03
$	36 2-Fluorobiphenyl	172	13.262	13.270	(0.905)	867711	3.73769	3.738
	37 2-Chloronaphthalene	162	13.464	13.471	(0.919)	722112	3.81087	3.811
	38 2-Nitroaniline	65	13.750	13.750	(0.939)	944422	15.3296	15.33
	39 Dimethylphthalate	163	14.183	14.184	(0.968)	800185	4.03724	4.037
	40 Acenaphthylene	152	14.330	14.331	(0.978)	1045110	3.61614	3.616
	41 2,6-Dinitrotoluene	165	14.323	14.323	(0.978)	656423	14.0749	14.07
*	42 Acenaphthene-d10	164	14.648	14.648	(1.000)	648876	4.00000	
	43 3-Nitroaniline	138	14.601	14.601	(0.997)	587757	11.8734	11.87
	44 Acenaphthene	153	14.710	14.717	(1.004)	662355	3.82785	3.828
	45 2,4-Dinitrophenol	184	14.818	14.818	(1.012)	717267	22.3123	22.31
	46 Dibenzofuran	168	15.042	15.042	(1.027)	1070274	3.76722	3.767
	47 4-Nitrophenol	109	14.949	14.949	(1.021)	342562	11.8369	11.84
	48 2,4-Dinitrotoluene	165	15.127	15.127	(1.033)	939054	14.2410	14.24
	50 Diethylphthalate	149	15.645	15.645	(1.068)	1095402	4.15724	4.157
	49 Fluorene	166	15.753	15.753	(1.075)	1065991	3.58803	3.588
	51 4-Chlorophenyl-phenylether	204	15.753	15.753	(1.075)	586826	3.69398	3.694
	52 4-Nitroaniline	138	15.876	15.869	(1.084)	788263	13.8793	13.88
	53 4,6-Dinitro-2-methylphenol	198	15.961	15.961	(0.903)	1292713	26.4915	26.49
	54 N-Nitrosodiphenylamine	169	16.008	16.008	(0.906)	625388	3.36266	3.363
$	55 2,4,6-Tribromophenol	330	16.285	16.293	(1.112)	193929	5.13512	5.135
	56 4-Bromophenyl-phenylether	248	16.748	16.756	(0.948)	338161	4.08233	4.082
	57 Hexachlorobenzene	284	17.049	17.057	(0.965)	322924	3.83649	3.836
	58 Pentachlorophenol	266	17.421	17.421	(0.986)	469258	11.0950	11.10
*	59 Phenanthrene-d10	188	17.668	17.676	(1.000)	1294186	4.00000	
	60 Phenanthrene	178	17.715	17.723	(1.003)	1195551	3.84434	3.844
	61 Anthracene	178	17.808	17.816	(1.008)	1059619	3.43914	3.439
	62 Carbazole	167	18.156	18.156	(1.028)	1152143	4.12070	4.121
	63 Di-n-butylphthalate	149	18.984	18.992	(1.074)	1482649	4.74756	4.748
	64 Fluoranthene	202	20.129	20.137	(0.884)	1579181	3.65201	3.652
	65 Pyrene	202	20.554	20.562	(0.903)	1665156	3.64174	3.642
$	66 Terphenyl-d14	244	20.864	20.872	(0.916)	1182550	3.64247	3.642
	67 Butylbenzylphthalate	149	21.816	21.816	(0.958)	607916	4.00146	4.001
	68 Benzo(a)anthracene	228	22.738	22.738	(0.999)	1259648	3.92733	3.927
*	69 Chrysene-d12	240	22.769	22.769	(1.000)	1002280	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.714	22.715	(0.998)	744237	7.55103	7.551
	71 Chrysene	228	22.815	22.815	(1.002)	1160464	4.02248	4.022
	72 bis(2-Ethylhexyl)phthalate	149	22.854	22.854	(0.959)	869145	3.25837	3.258
*	134 Di-n-octylphthalate-d4	153	23.829	23.837	(1.000)	1583974	4.00000	
	73 Di-n-octylphthalate	149	23.845	23.845	(1.001)	1535277	4.14533	4.145
	74 Benzo(b)fluoranthene	252	24.534	24.534	(0.973)	895031	3.96266	3.963
	75 Benzo(k)fluoranthene	252	24.572	24.573	(0.975)	1064554	4.41086	4.411
	76 Benzo(a)pyrene	252	25.107	25.115	(0.996)	736968	3.42344	3.423
*	77 Perylene-d12	264	25.215	25.215	(1.000)	711817	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	27.532	27.540	(1.092)	639686	3.56504	3.565
	79 Dibenzo(a,h)anthracene	278	27.548	27.556	(1.093)	559349	3.77766	3.778
	80 Benzo(g,h,i)perylene	276	28.208	28.216	(1.119)	476376	3.26463	3.265
	90 N-Nitrosodimethylamine	74	4.311	4.280	(0.503)	550971	9.19362	9.194
	91 Aniline	93	8.034	8.034	(0.938)	492404	3.54147	3.541
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	4.326	4.288	(0.505)	95744	1.00965	1.010
	105 1-methylnaphthalene	142	12.697	12.698	(1.151)	693042	3.72594	3.726
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.077	16.077	(1.098)	1233304	3.85132	3.851

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.572	24.573	(0.975)	1839389	8.34129	8.341
120 2,3,4,6-Tetrachlorophenol	232	15.390	15.390	(1.051)	244542	3.27129	3.271

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022136.D
Lab Smp Id: BLA0393-BSD1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 06:55
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	235125	117563	470250	289546	23.15
27 Naphthalene-d8	883104	441552	1766208	1072886	21.49
42 Acenaphthene-d10	537789	268895	1075578	648876	20.66
59 Phenanthrene-d10	1079531	539766	2159062	1294186	19.88
69 Chrysene-d12	826409	413205	1652818	1002280	21.28
134 Di-n-octylphthala	1339562	669781	2679124	1583974	18.25
77 Perylene-d12	590325	295163	1180650	711817	20.58

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.03	-0.07
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.67	-0.04
69 Chrysene-d12	22.77	22.27	23.27	22.77	-0.00
134 Di-n-octylphthala	23.84	23.34	24.34	23.83	-0.03
77 Perylene-d12	25.22	24.72	25.72	25.22	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022136.D

Lab ID: BLA0393-BSD1
nt14.i, ABN.m, 22-FEB-2023 10:33

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: NT1423022130.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1217

MS / MS DUPLICATE RECOVERY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/22/23 15:22
Batch:	BLA0393	Laboratory ID:	BLA0393-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	16.81 g / 1 mL	Source Sample:	LDW23-IT1217

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #		QC LIMITS REC.
Phenol	500	19.1	J	315		59.3		34 - 120
4-Methylphenol	500	54.2		338		56.7		29 - 120
Naphthalene	500	110		414		60.7		43 - 120
2-Methylnaphthalene	500	32.9		336		60.6		43 - 120
Acenaphthylene	500	55.3		335		56.0		42 - 120
Dimethylphthalate	500	ND	U	352		70.4		43 - 120
Acenaphthene	500	31.7		357		65.1		45 - 120
Dibenzofuran	500	31.6		346		62.8		43 - 120
Fluorene	500	29.8		341		62.3		45 - 120
Phenanthrene	500	147		460		62.6		49 - 120
Anthracene	500	44.4		324		55.9		45 - 120
Fluoranthene	500	206		470	*	52.7	*	53 - 145
Pyrene	500	231		468	*	47.3	*	52 - 134
Butylbenzylphthalate	500	ND	U	406		81.2		45 - 132
Benzo(a)anthracene	500	81.2		371		58.0		49 - 120
Chrysene	500	98.7		390		58.2		47 - 120
bis(2-Ethylhexyl)phthalate	500	14.8	J	330		63.1		34 - 130
Benzofluoranthenes, Total	1000	137		736		59.9		30 - 160
Benzo(a)pyrene	500	54.4		313		51.8		42 - 120
Indeno(1,2,3-cd)pyrene	500	35.4		315		56.0		42 - 163
Dibenzo(a,h)anthracene	500	ND	U	326		65.1		30 - 133
Benzo(g,h,i)perylene	500	41.0		303		52.3		46 - 148

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY
EPA 8270E

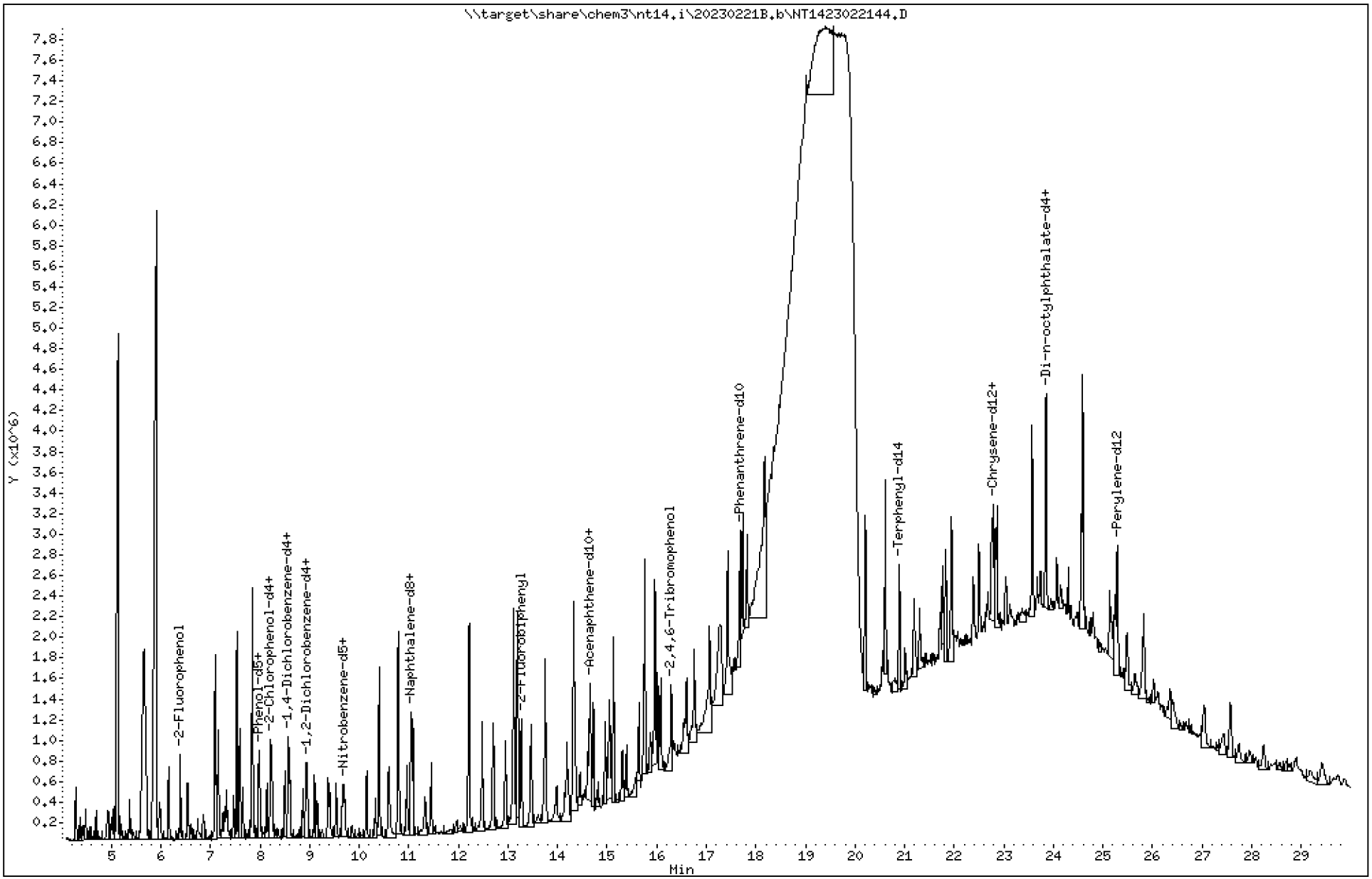
Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/22/23 15:58
Batch:	BLA0393	Laboratory ID:	BLA0393-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	16.81 g / 1 mL	Source Sample:	LDW23-IT1217

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	500	355		67.1	11.7	30	34 - 120
4-Methylphenol	500	388		66.9	14.0	30	29 - 120
Naphthalene	500	446		67.2	7.51	30	43 - 120
2-Methylnaphthalene	500	367		66.8	8.83	30	43 - 120
Acenaphthylene	500	365		62.0	8.56	30	42 - 120
Dimethylphthalate	500	380		75.9	7.55	30	43 - 120
Acenaphthene	500	393		72.3	9.58	30	45 - 120
Dibenzofuran	500	380		69.7	9.55	30	43 - 120
Fluorene	500	384		70.9	11.9	30	45 - 120
Phenanthrene	500	565		83.7	20.6	30	49 - 120
Anthracene	500	367		64.6	12.6	30	45 - 120
Fluoranthene	500	933	*	145	66.0 *	30	53 - 145
Pyrene	500	993	*	152 *	71.9 *	30	52 - 134
Butylbenzylphthalate	500	426		85.2	4.76	30	45 - 132
Benzo(a)anthracene	500	772	*	138 *	70.1 *	30	49 - 120
Chrysene	500	870	*	154 *	76.3 *	30	47 - 120
bis(2-Ethylhexyl)phthalate	500	370		71.0	11.3	30	34 - 130
Benzofluoranthenes, Total	1000	1590	*	145	73.5 *	30	30 - 160
Benzo(a)pyrene	500	699	*	129 *	76.2 *	30	42 - 120
Indeno(1,2,3-cd)pyrene	500	497	*	92.4	44.9 *	30	42 - 163
Dibenzo(a,h)anthracene	500	433		86.6	28.3	30	30 - 133
Benzo(g,h,i)perylene	500	479	*	87.6	45.2 *	30	46 - 148

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022144.D
Date : 22-FEB-2023 15:22
Client ID:
Sample Info: BLA0393-MS1

Instrument: nt14.i
Operator: DSD
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022144.D

Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

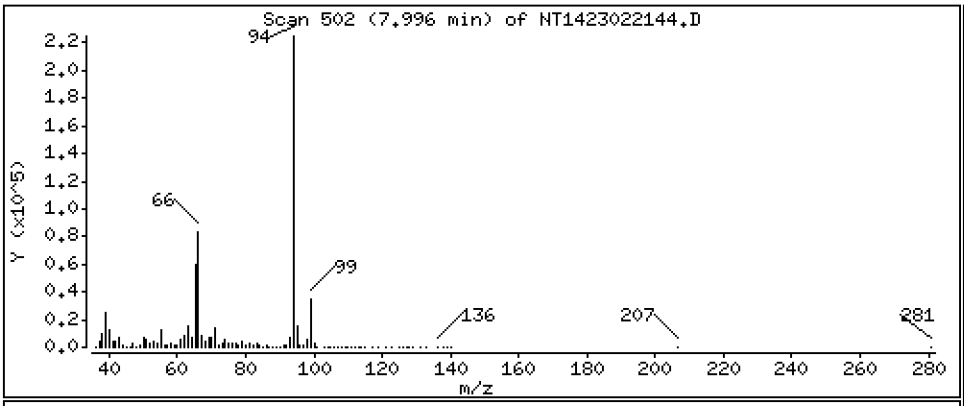
Operator: DSD

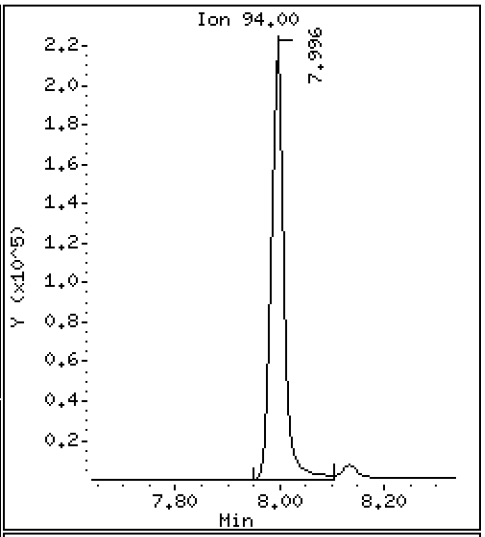
Column phase: ZB-5msi

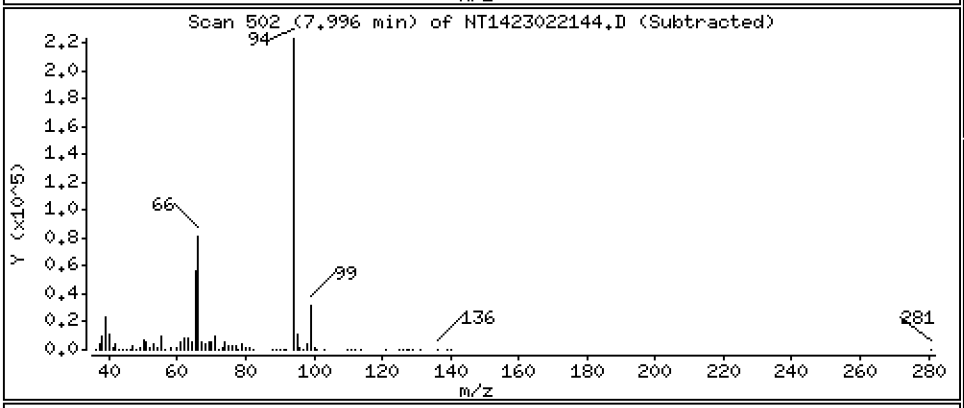
Column diameter: 0.25

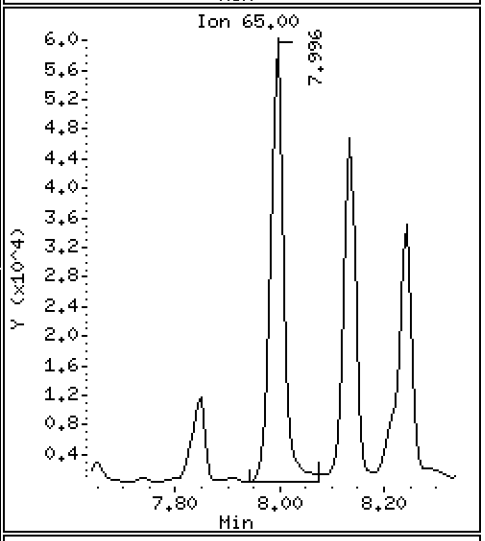
3 Phenol

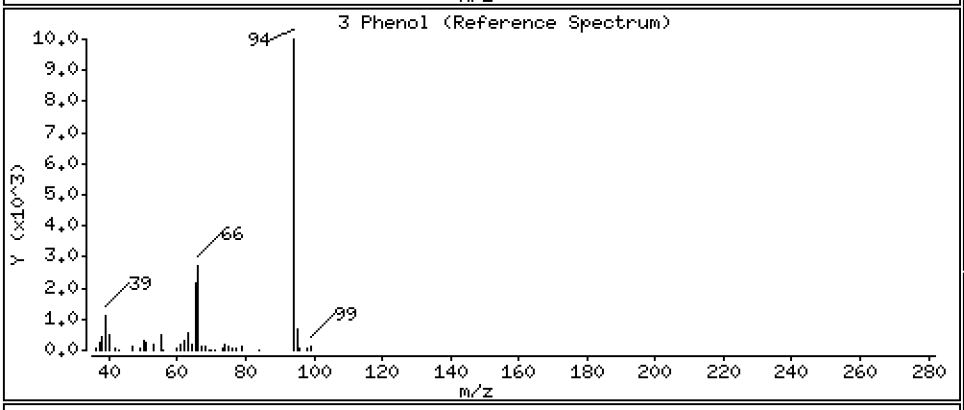
Concentration: 3.155 ug/mL

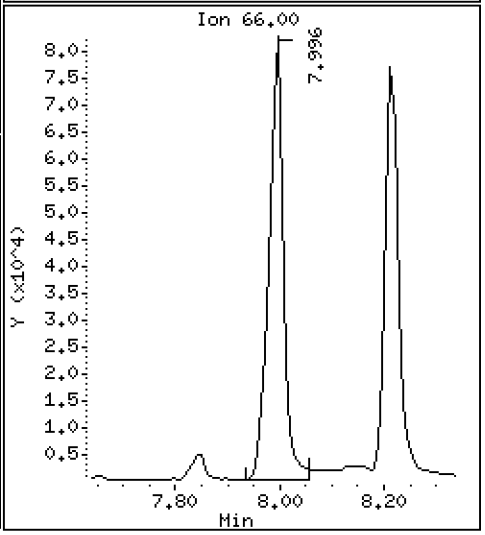


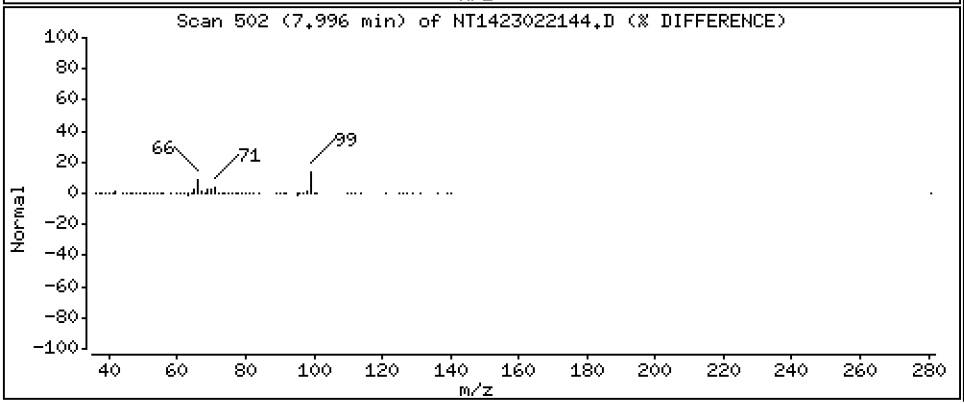












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022144.D

Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

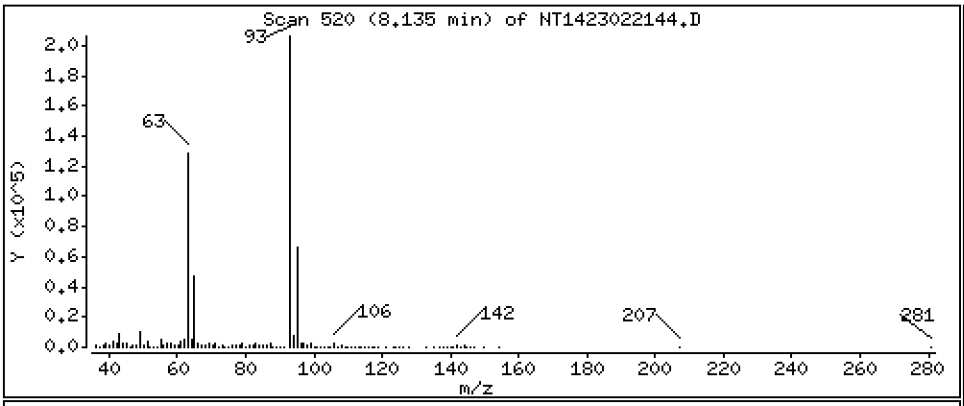
Operator: DSD

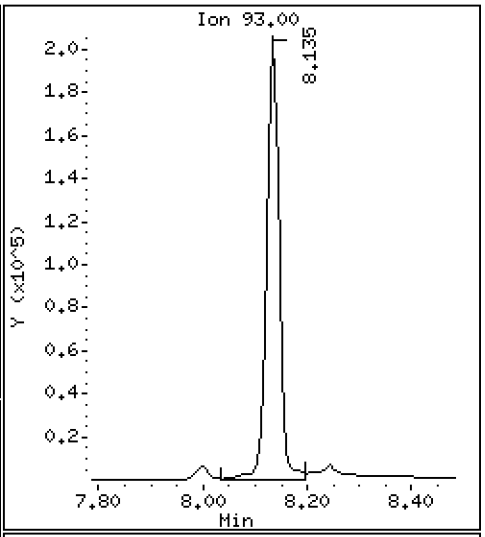
Column phase: ZB-5msi

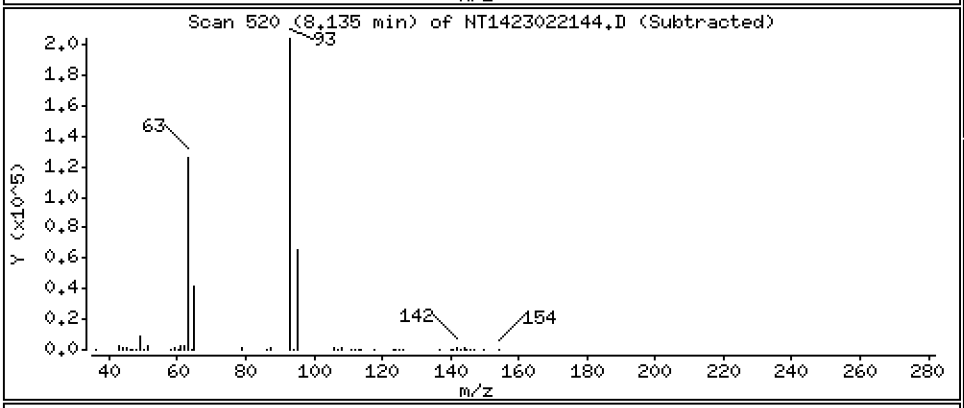
Column diameter: 0.25

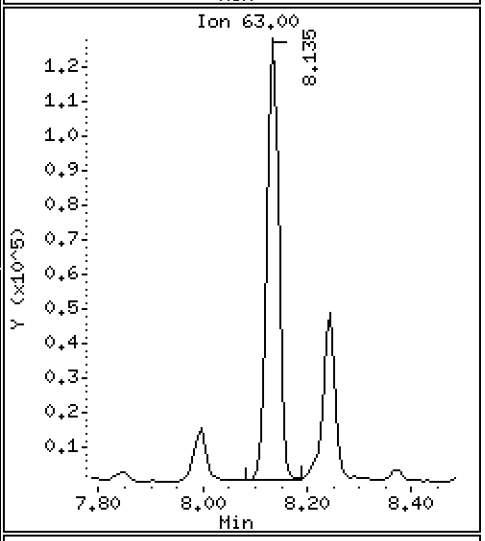
4 Bis(2-Chloroethyl)ether

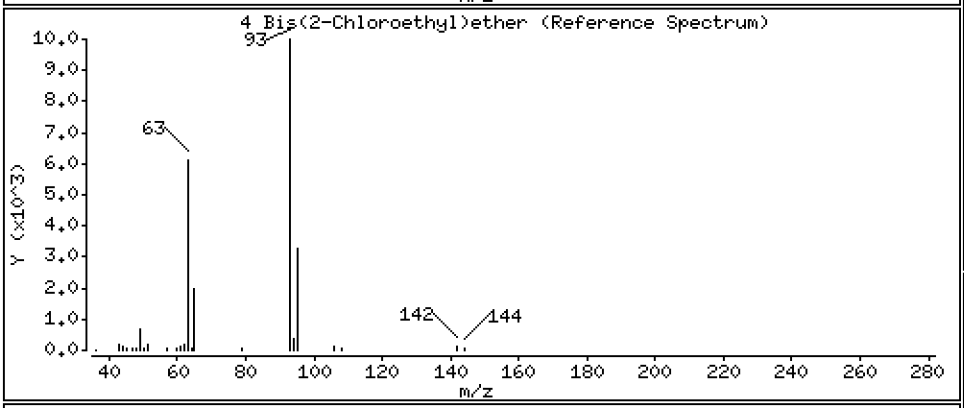
Concentration: 3.672 ug/mL

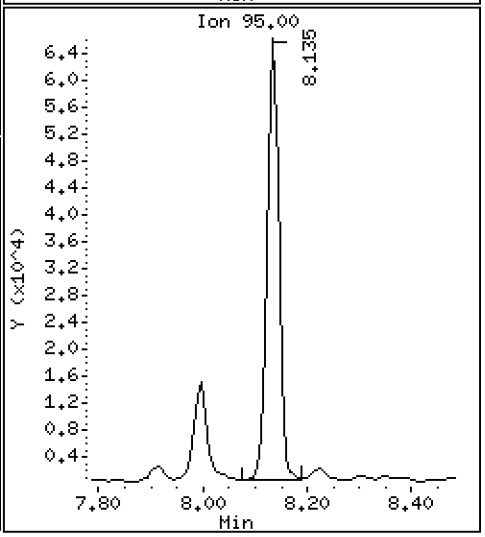


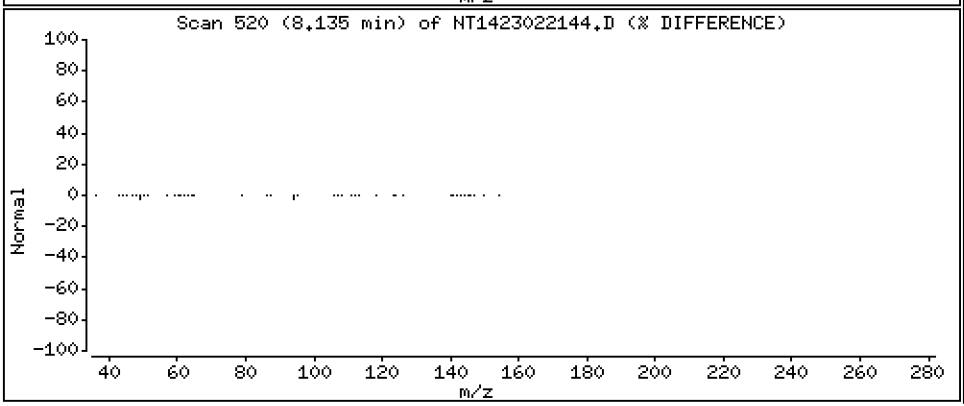












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

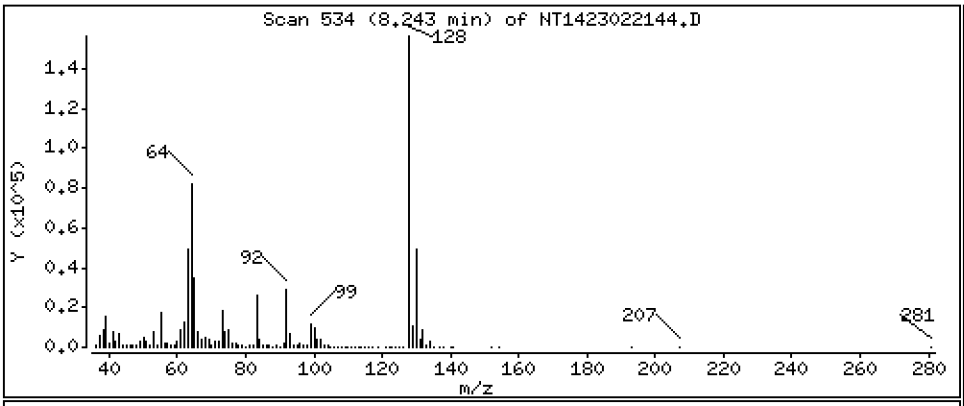
Operator: DSD

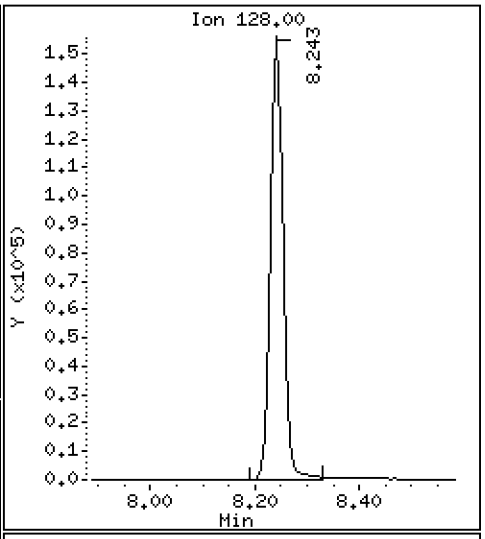
Column phase: ZB-5msi

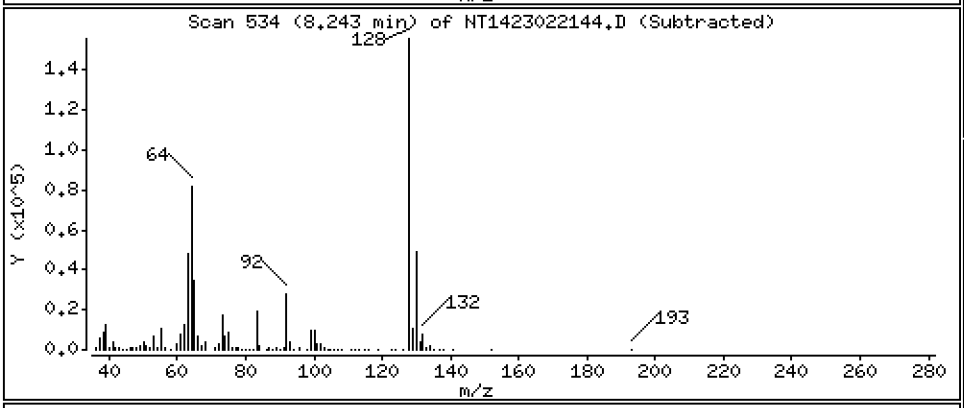
Column diameter: 0.25

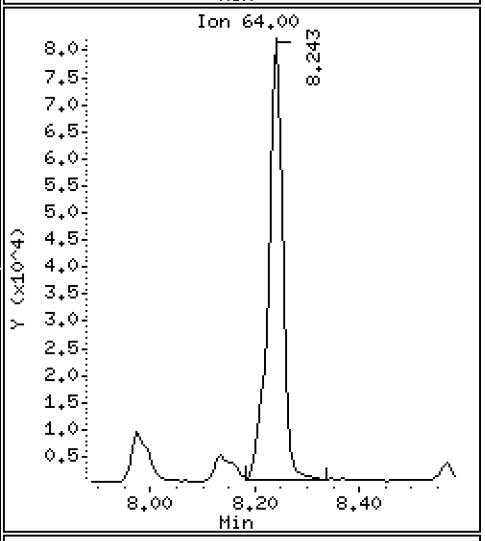
6 2-Chlorophenol

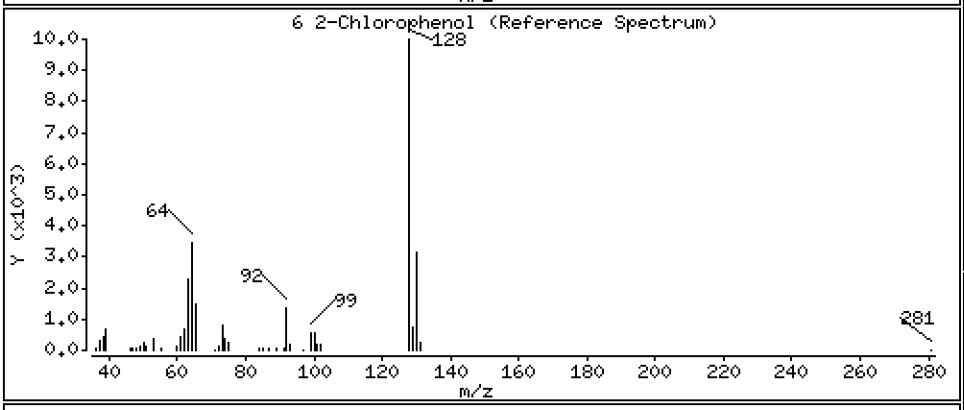
Concentration: 3.078 ug/mL

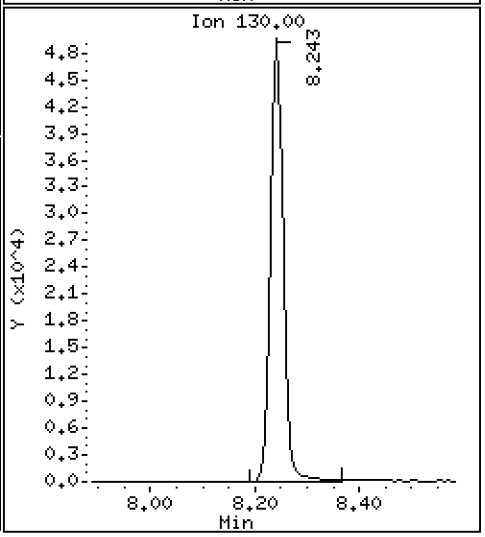


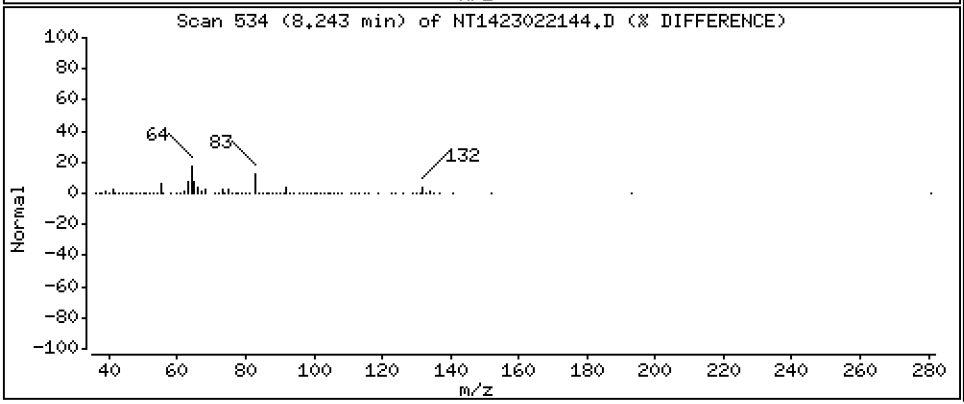












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

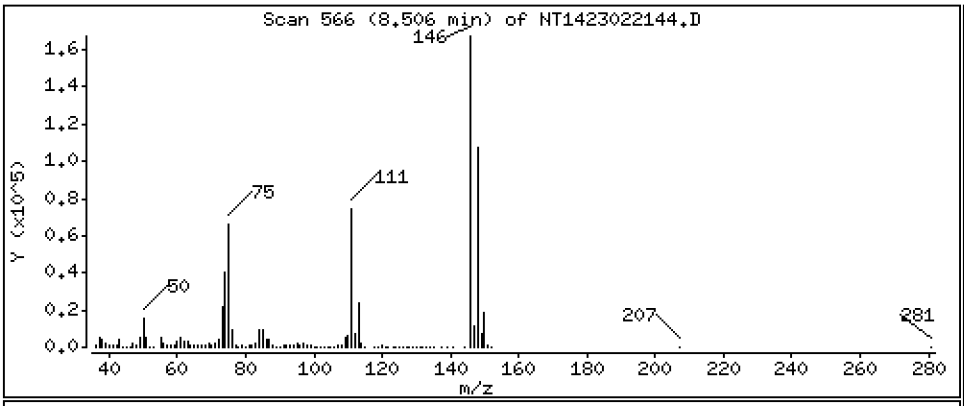
Operator: DSD

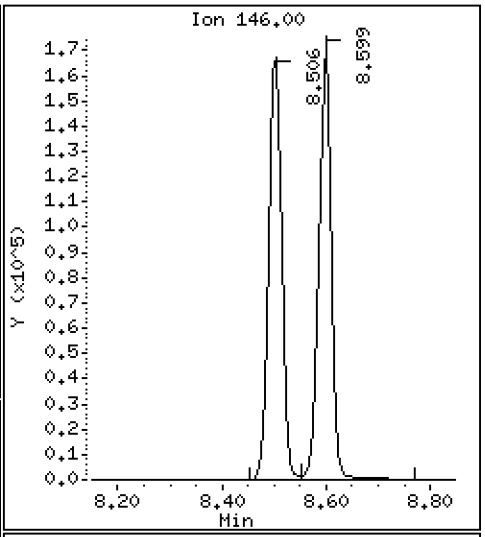
Column phase: ZB-5msi

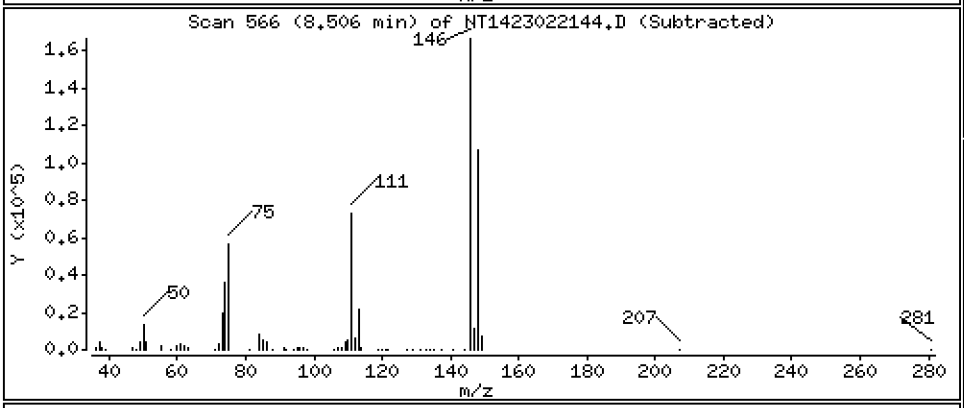
Column diameter: 0.25

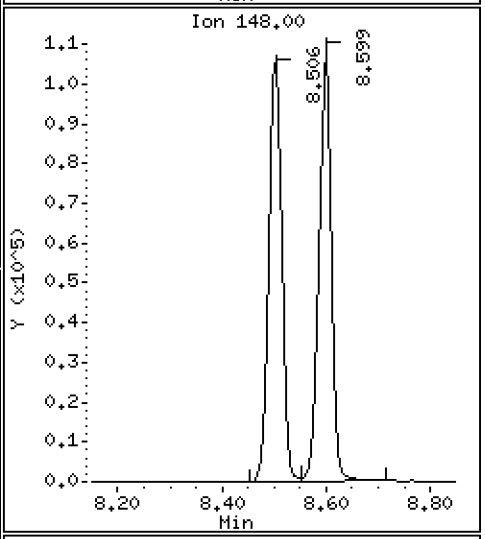
7 1,3-Dichlorobenzene

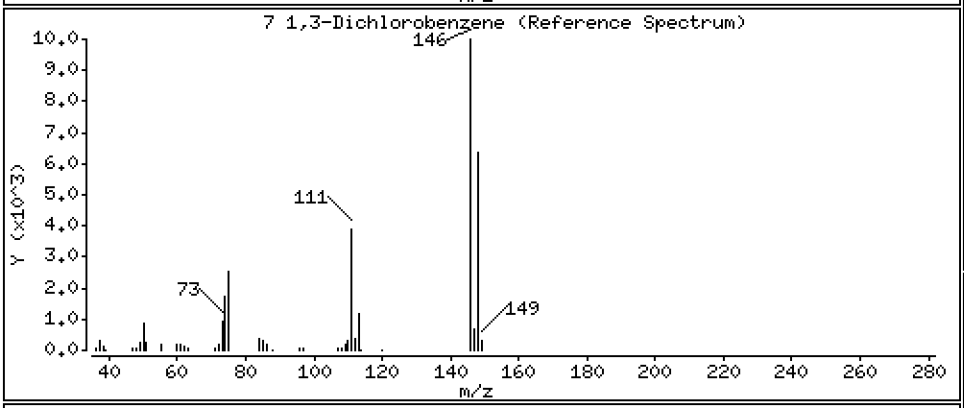
Concentration: 3.120 ug/mL

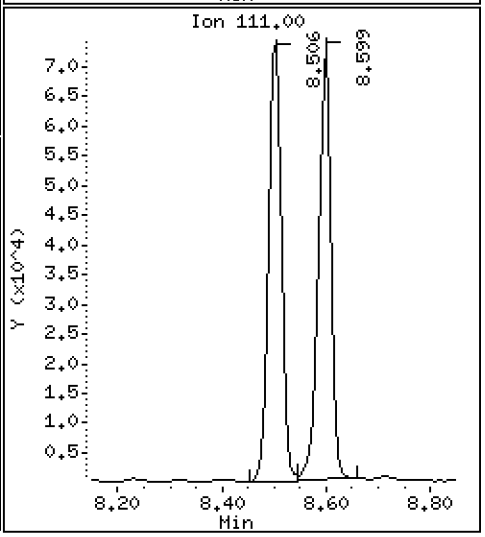


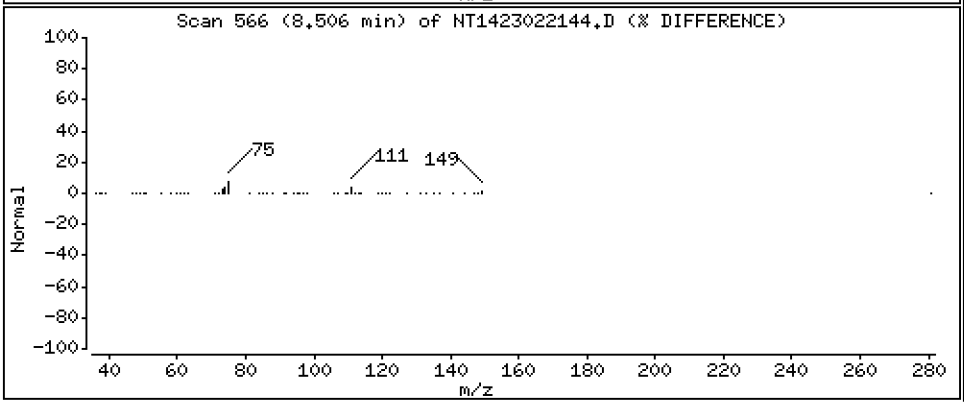












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

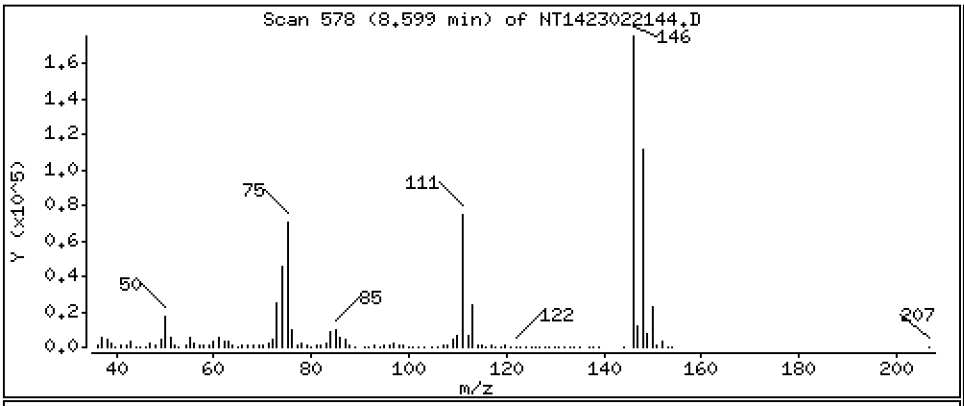
Operator: DSD

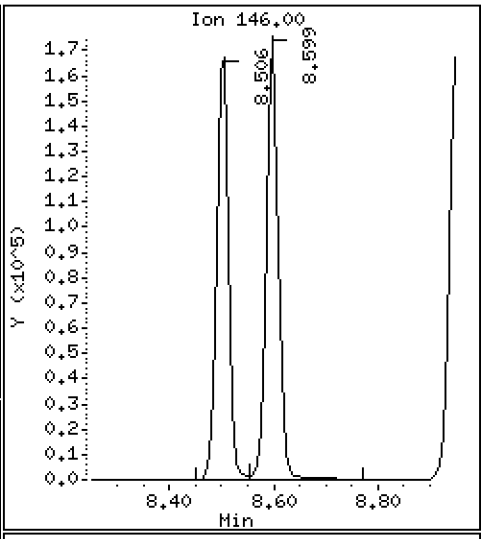
Column phase: ZB-5msi

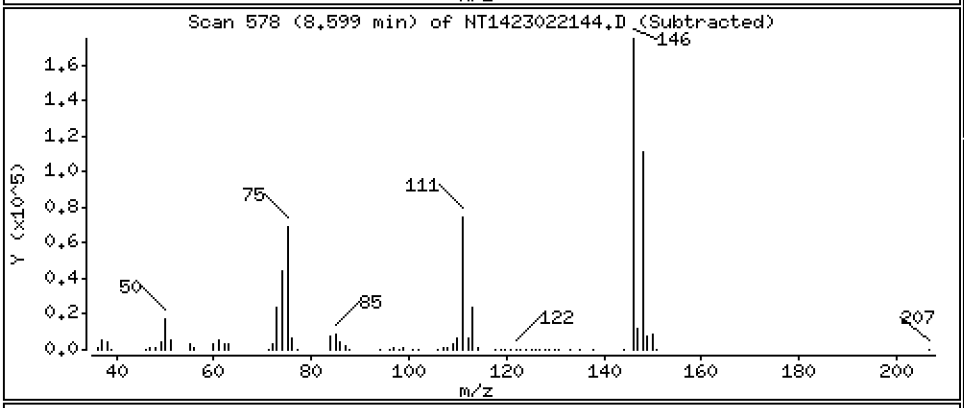
Column diameter: 0.25

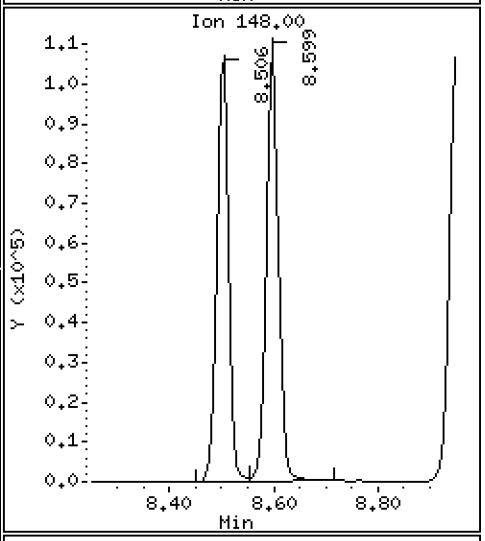
9 1,4-Dichlorobenzene

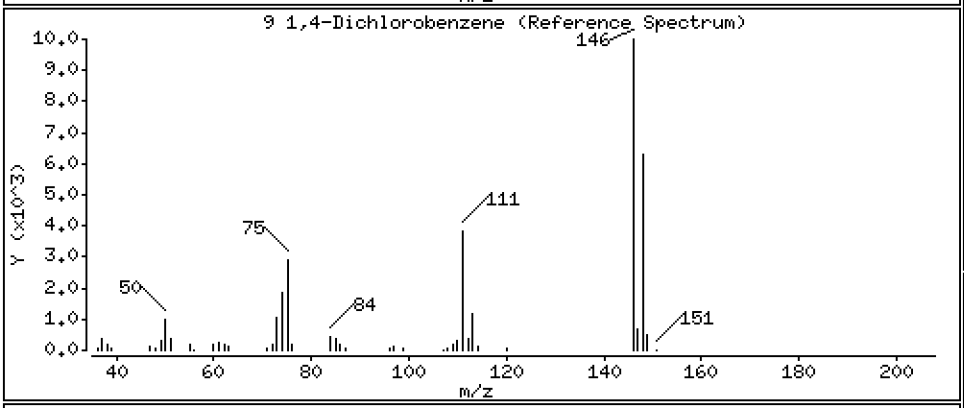
Concentration: 3.474 ug/mL

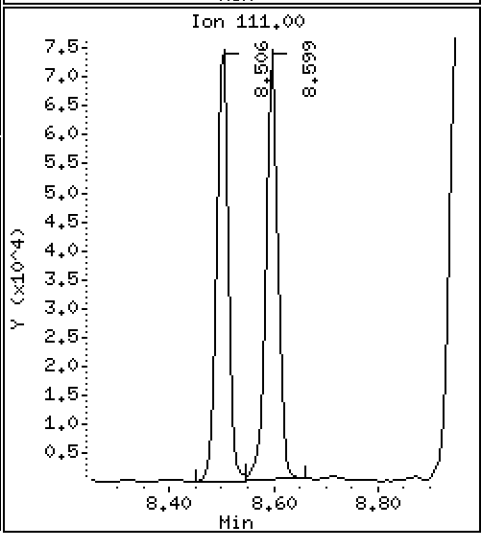


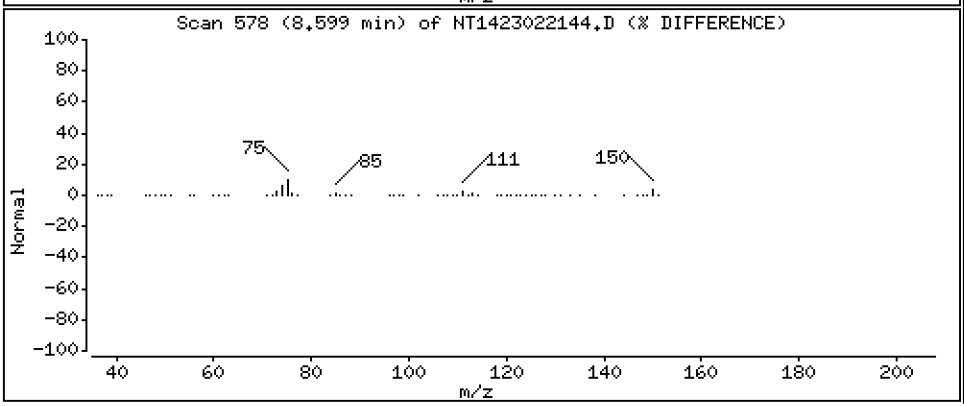












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

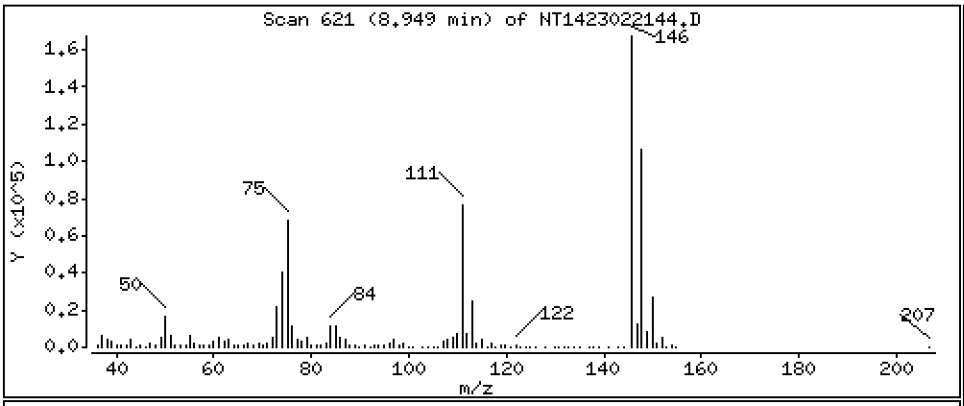
Operator: DSD

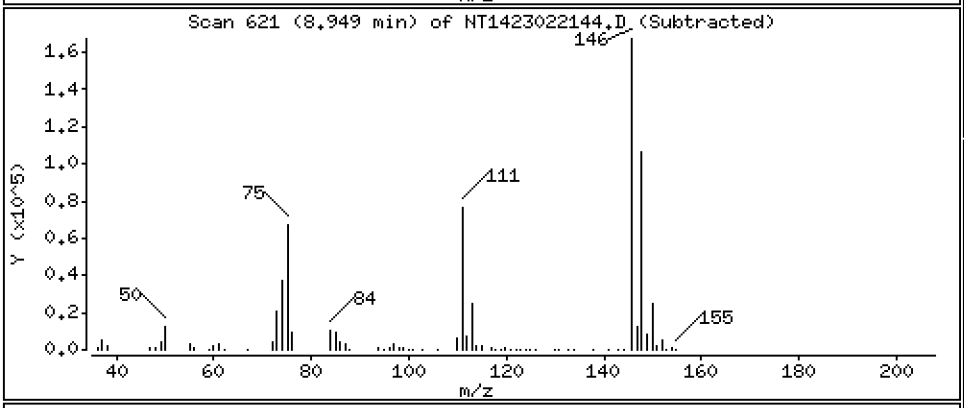
Column phase: ZB-5msi

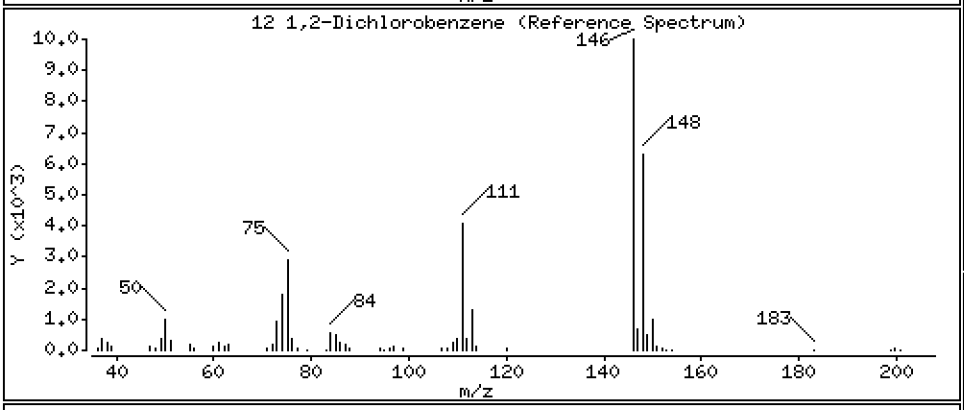
Column diameter: 0.25

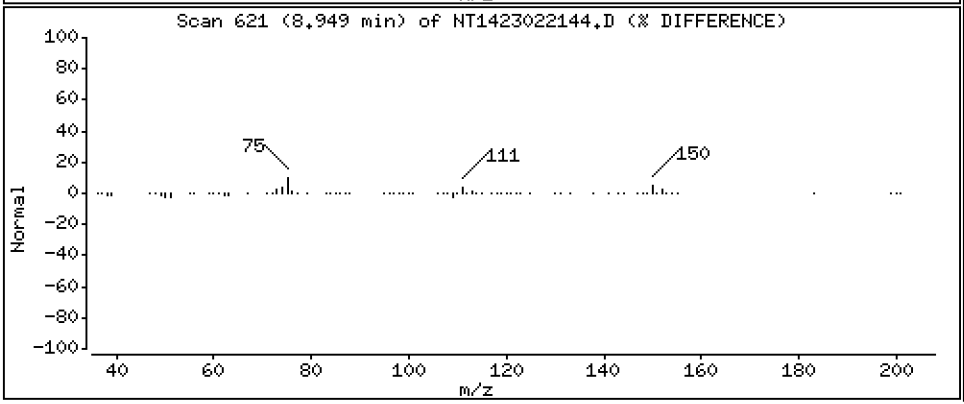
12 1,2-Dichlorobenzene

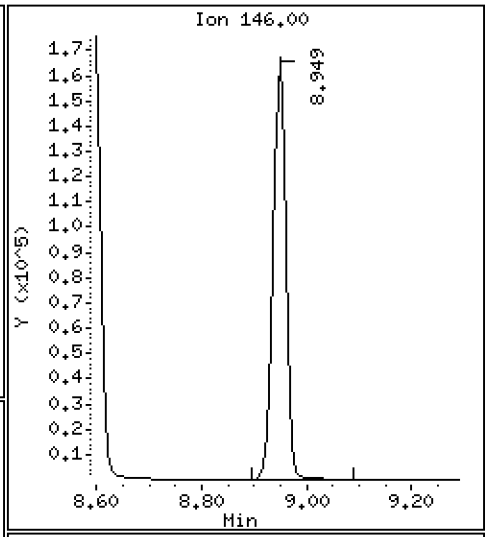
Concentration: 3.180 ug/mL

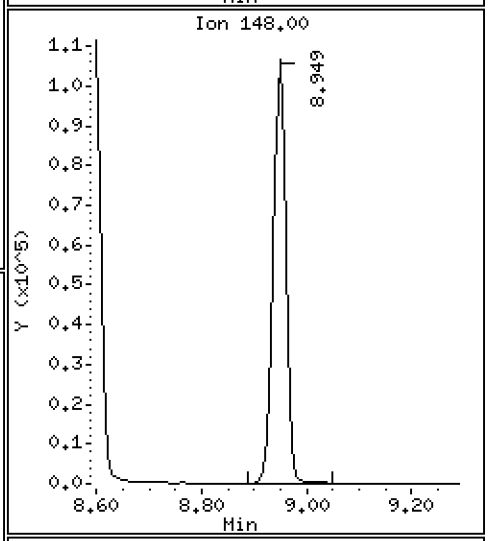


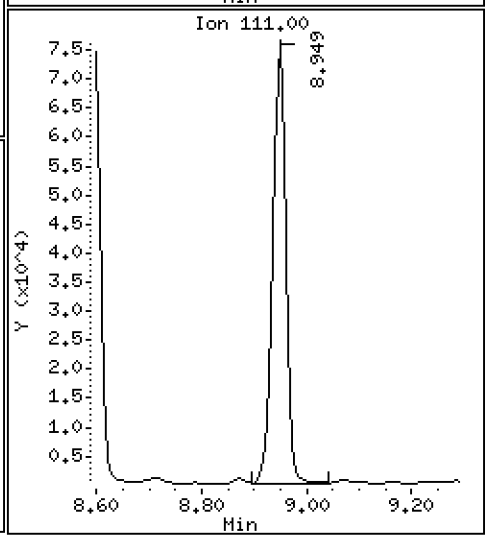












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

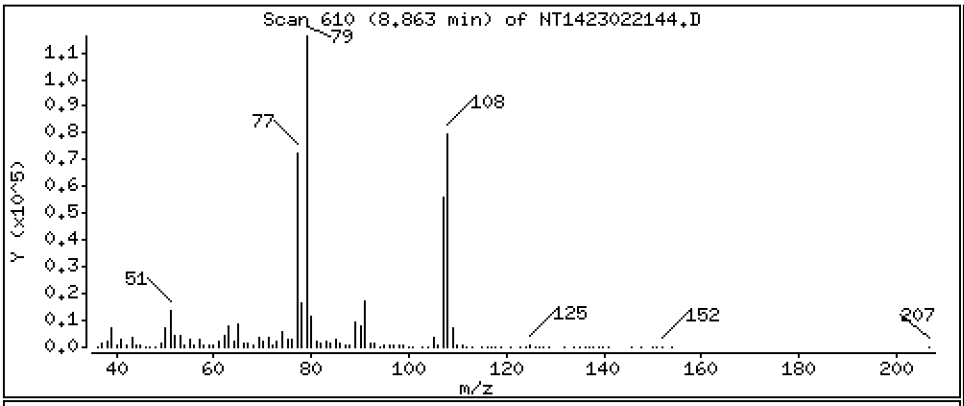
Operator: DSD

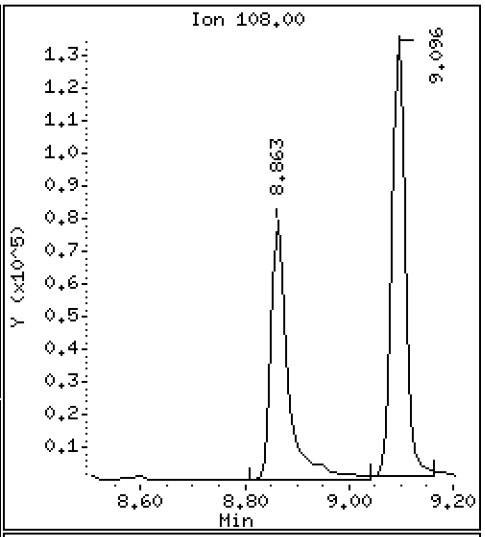
Column phase: ZB-5msi

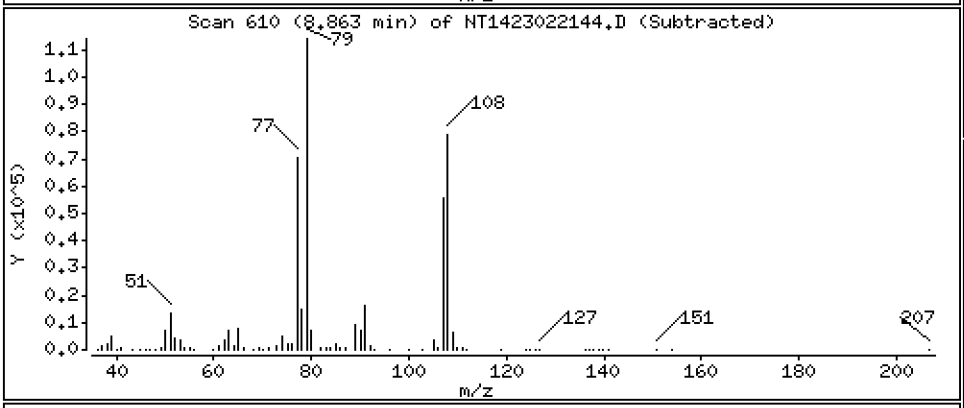
Column diameter: 0.25

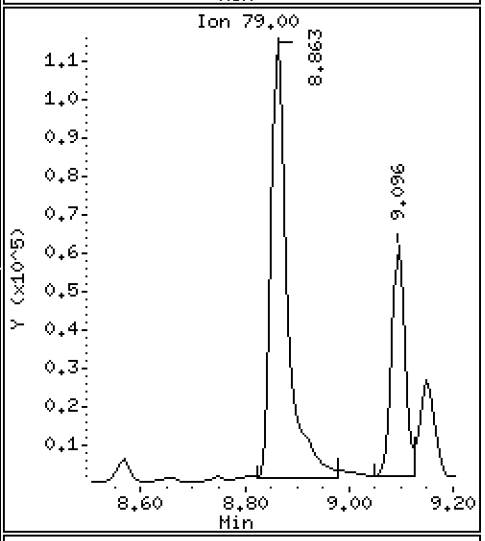
11 Benzyl alcohol

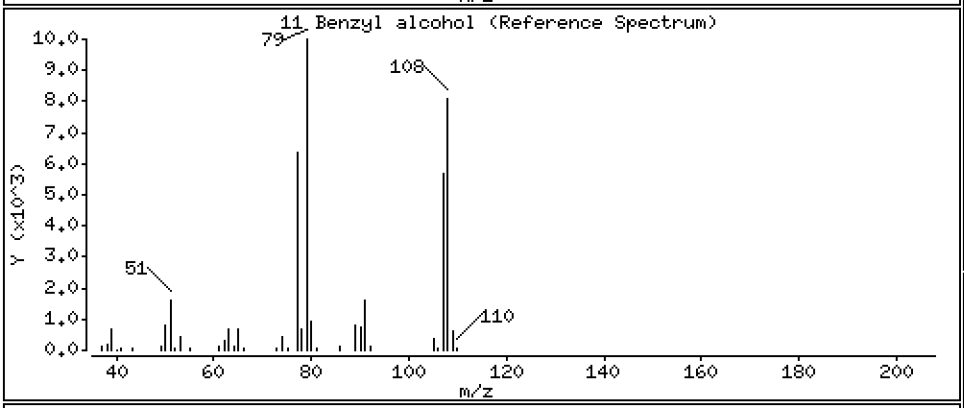
Concentration: 2.746 ug/mL

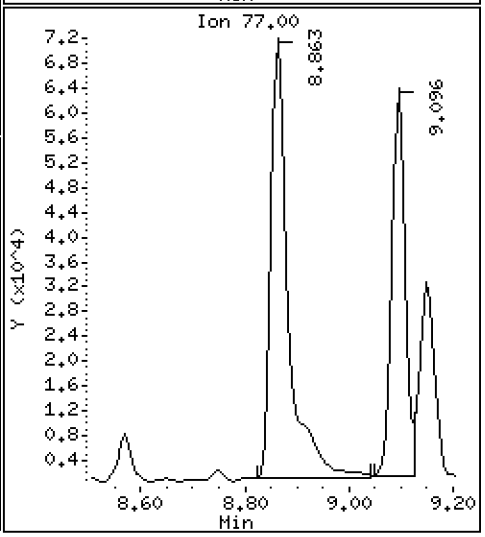


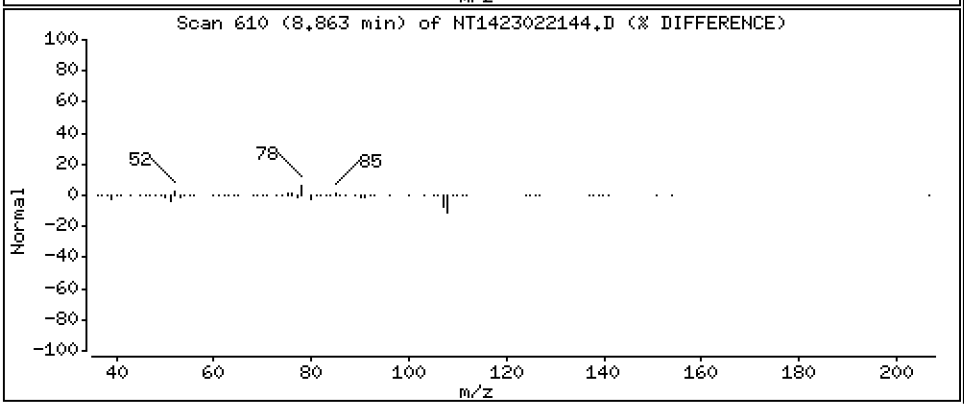












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

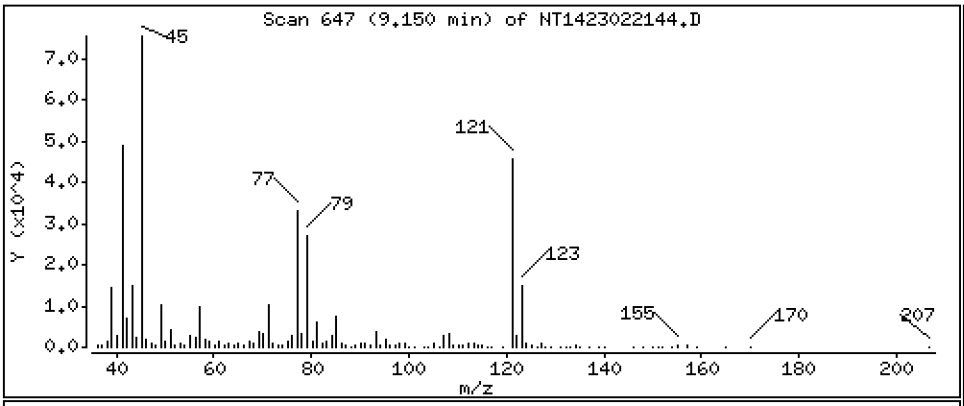
Operator: DSD

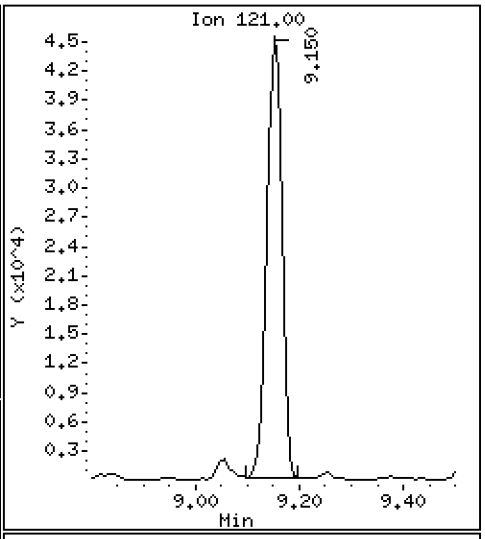
Column phase: ZB-5msi

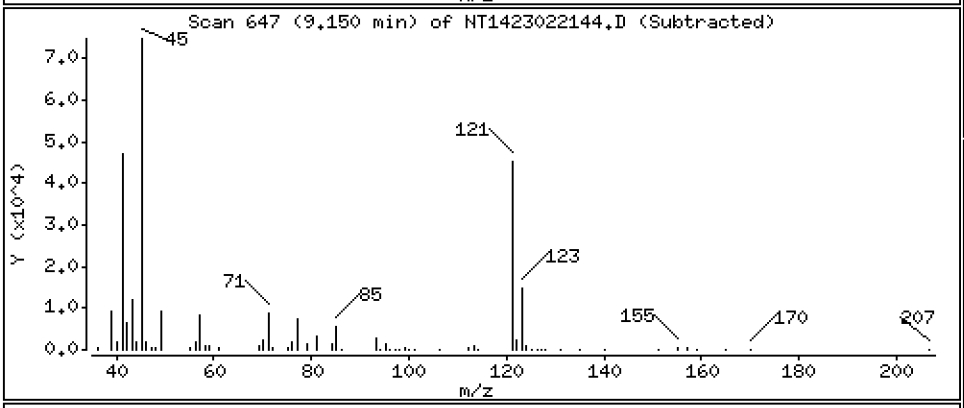
Column diameter: 0.25

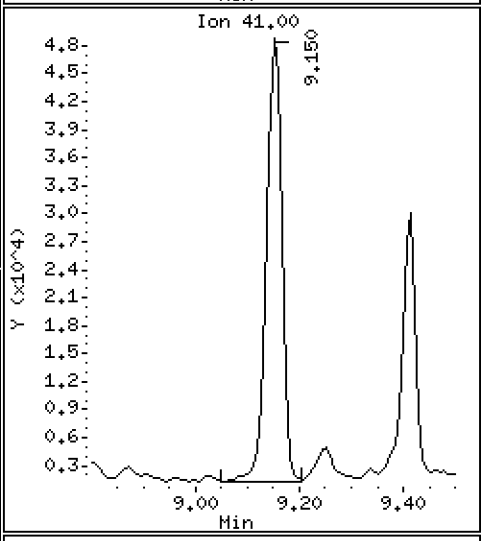
14 2,2'-oxybis(1-Chloropropane)

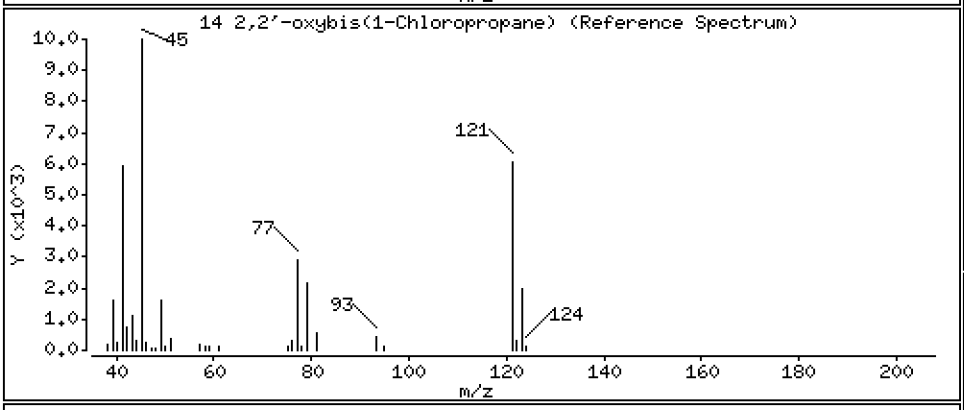
Concentration: 3.617 ug/mL

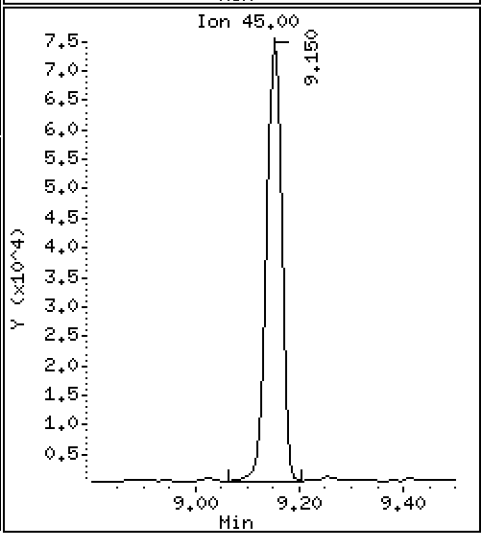


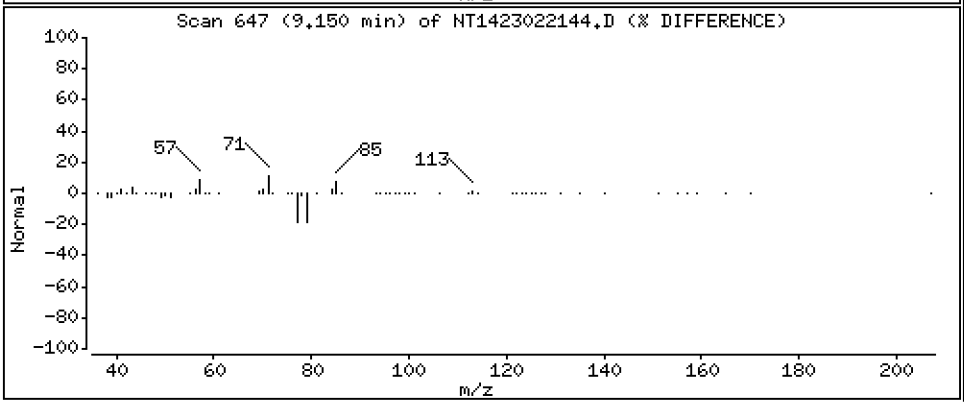












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

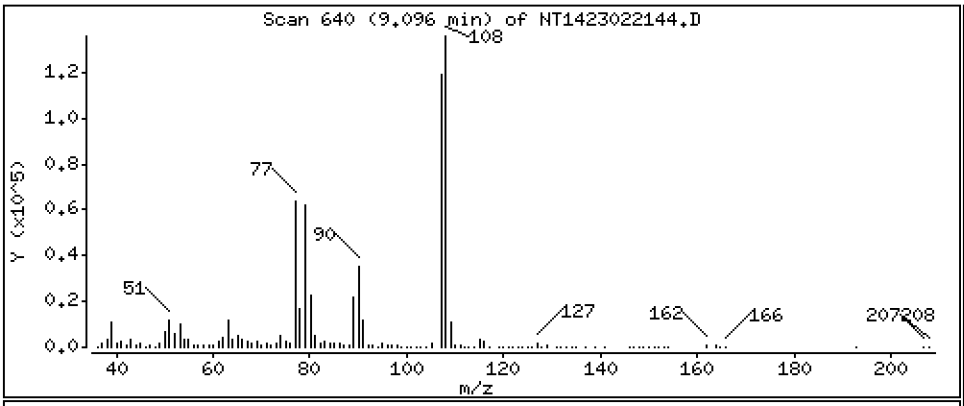
Operator: DSD

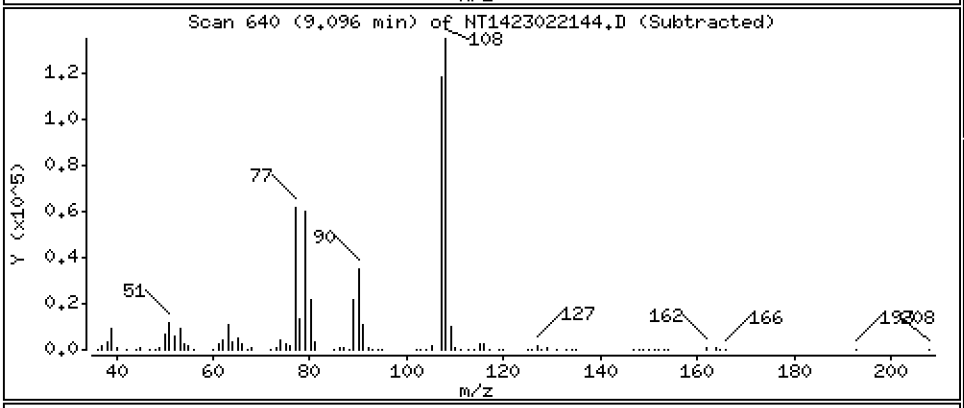
Column phase: ZB-5msi

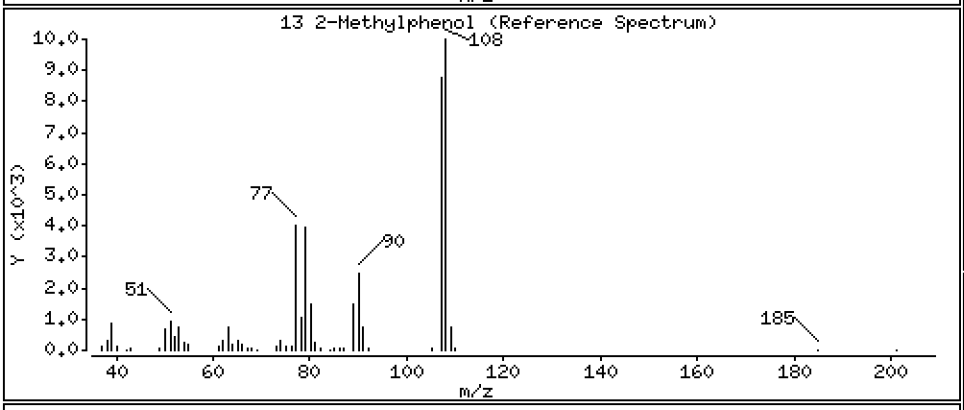
Column diameter: 0.25

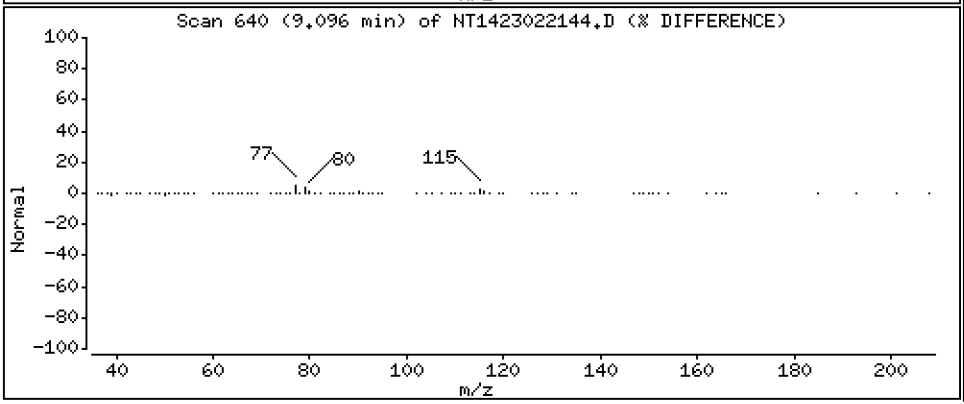
13 2-Methylphenol

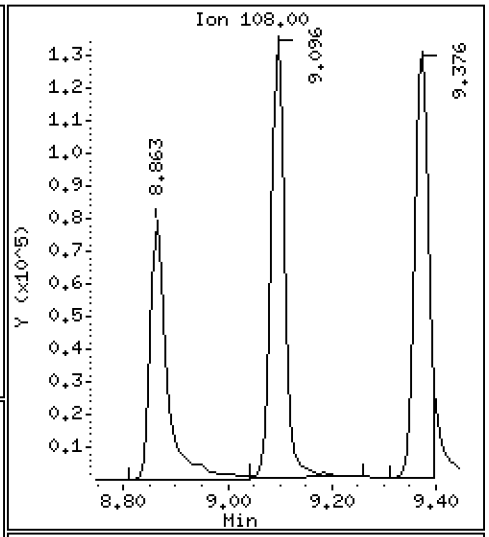
Concentration: 2.963 ug/mL

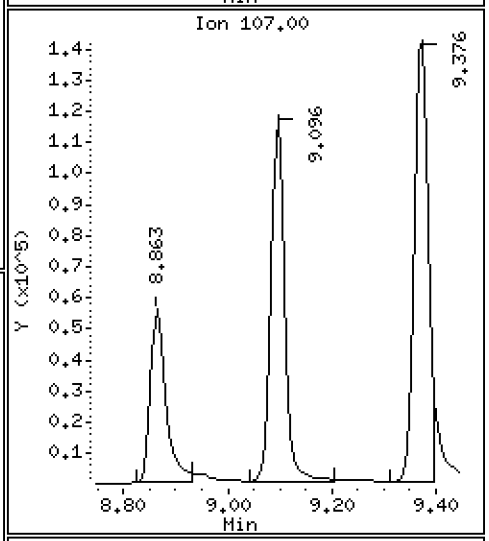


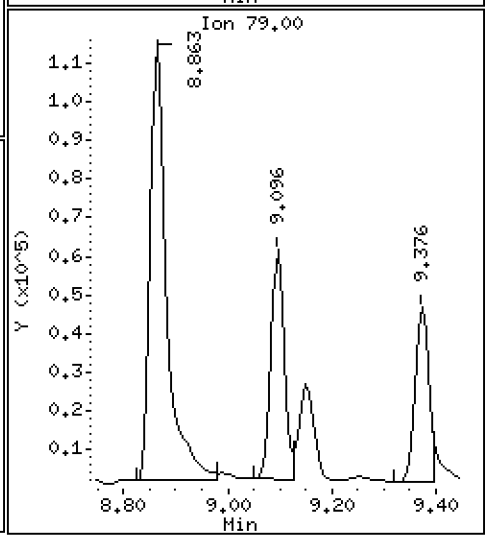












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

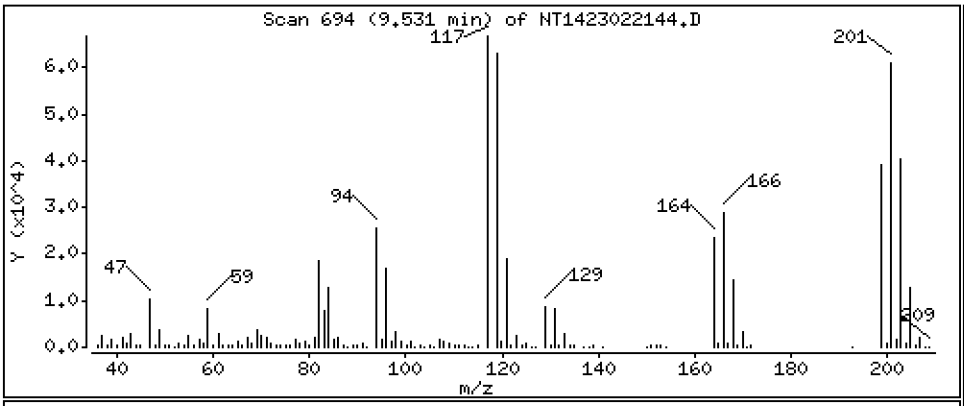
Operator: DSD

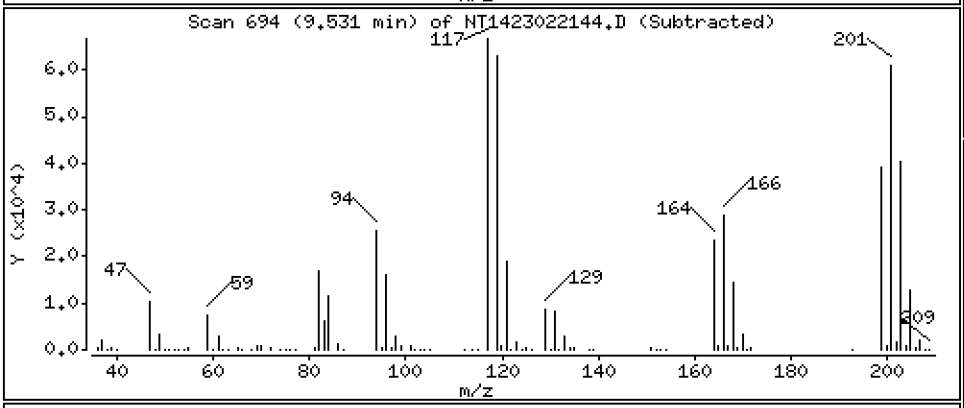
Column phase: ZB-5msi

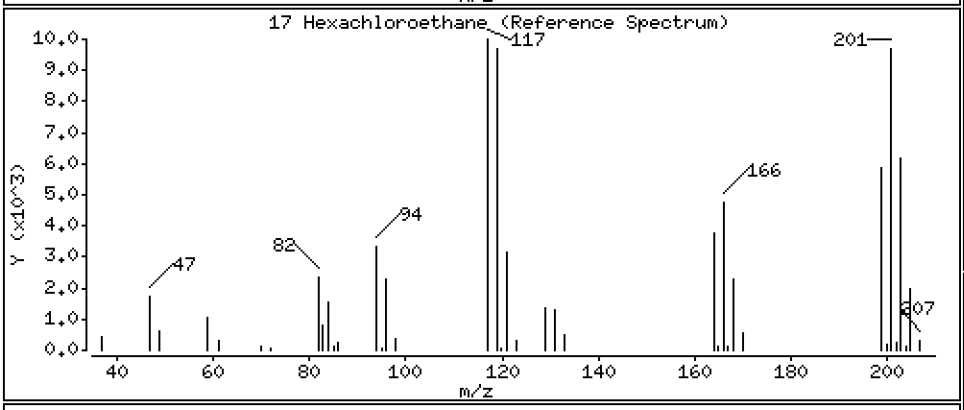
Column diameter: 0.25

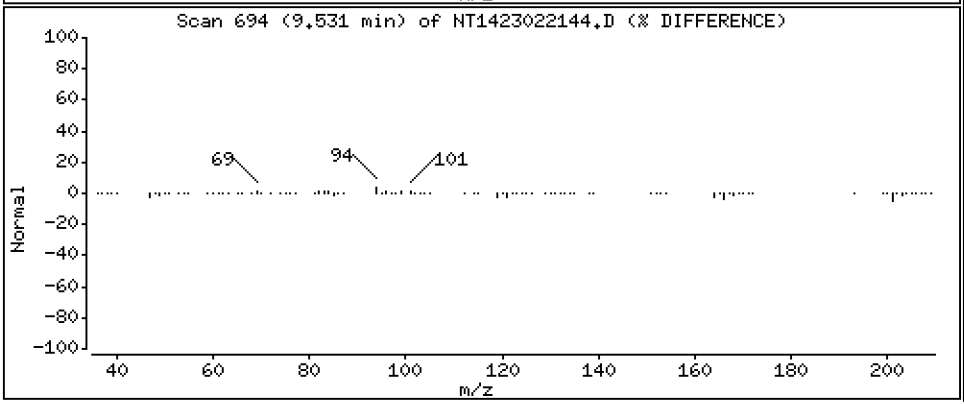
17 Hexachloroethane

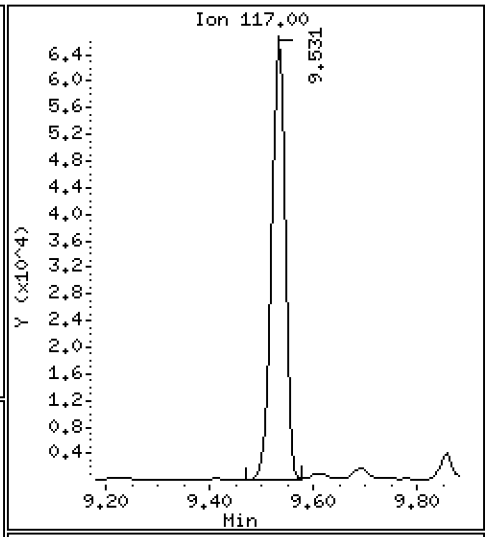
Concentration: 3.111 ug/mL

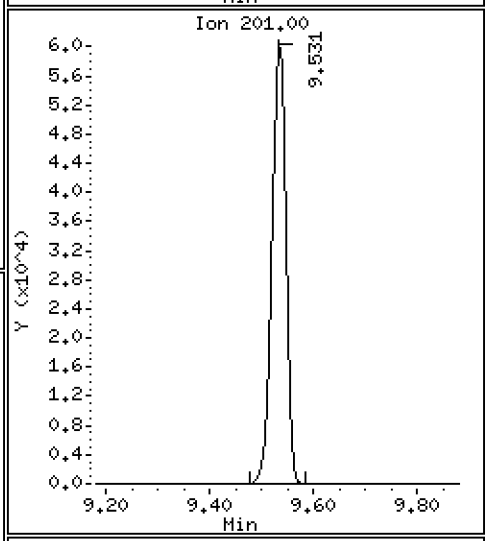


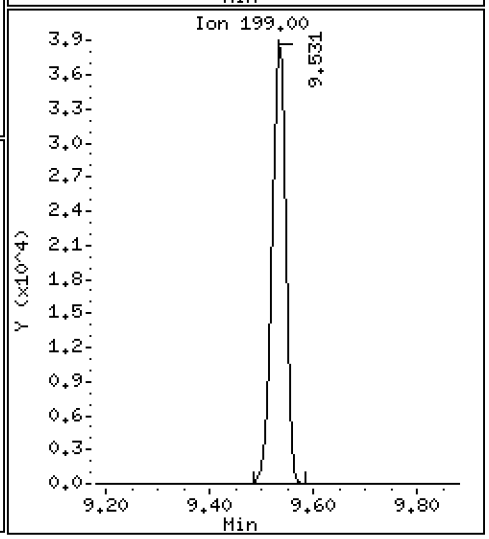












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

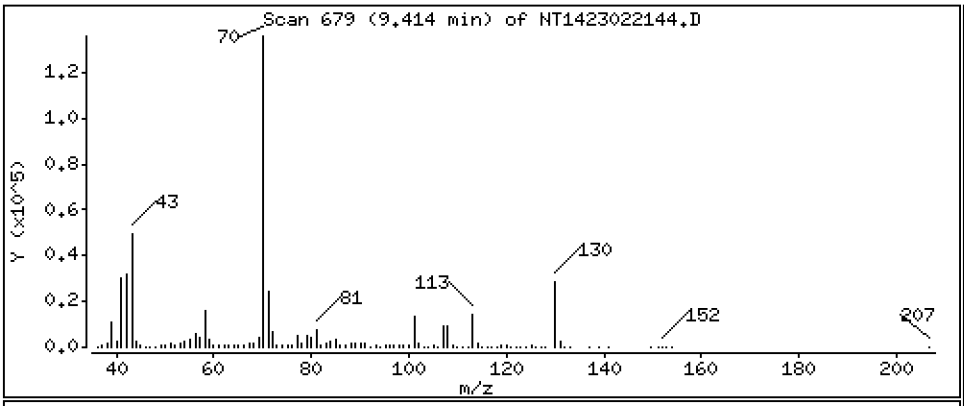
Operator: DSD

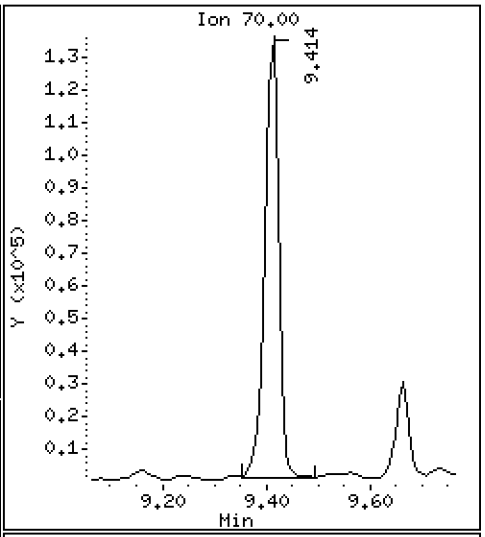
Column phase: ZB-5msi

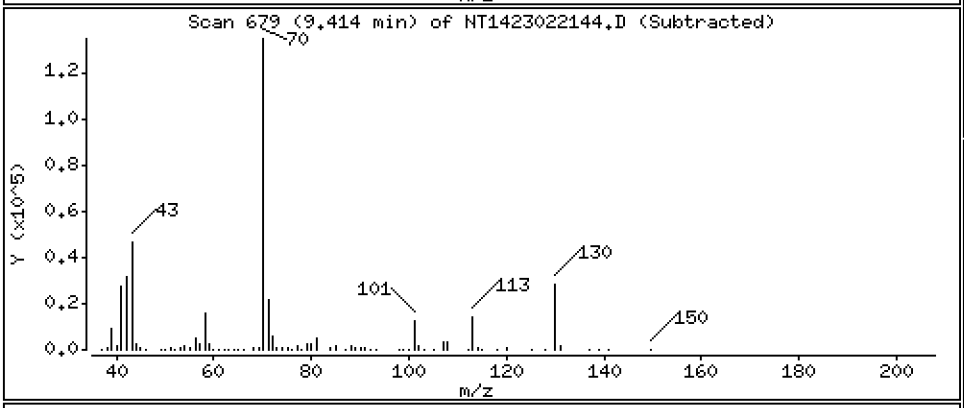
Column diameter: 0.25

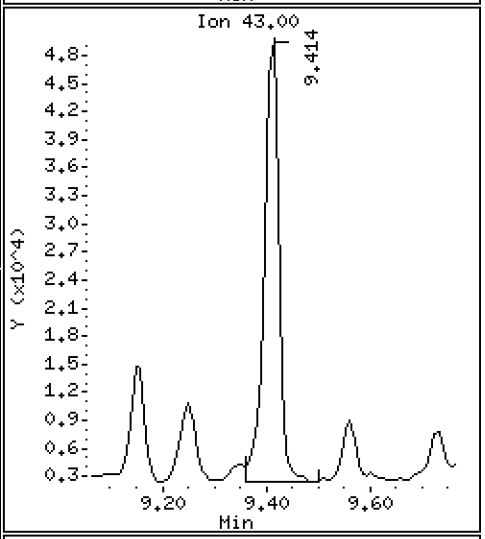
16 N-Nitroso-di-n-propylamine

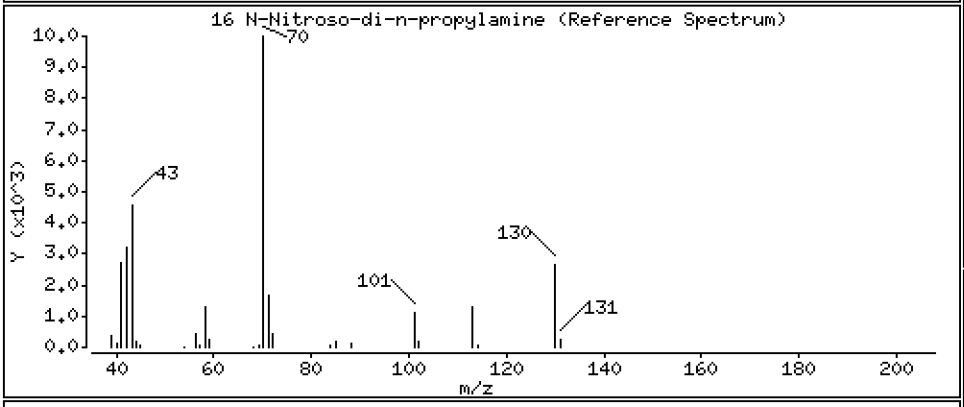
Concentration: 3.291 ug/mL

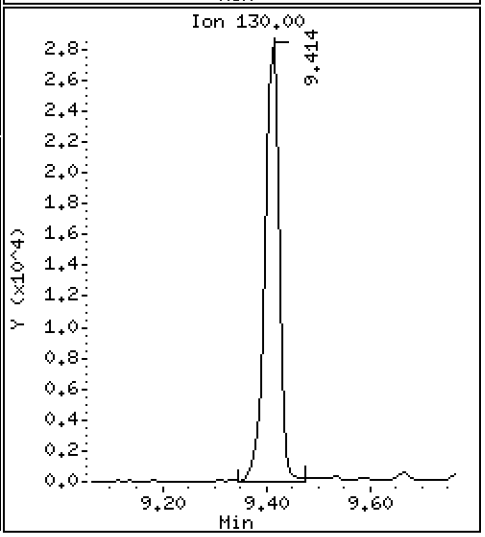


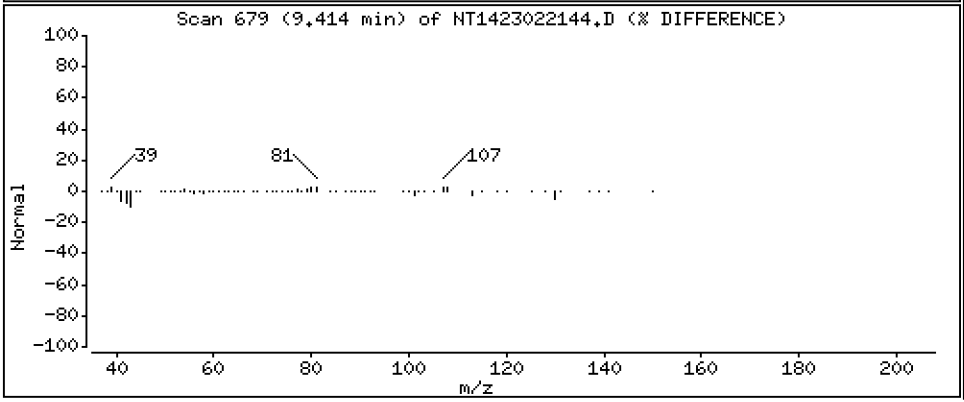












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

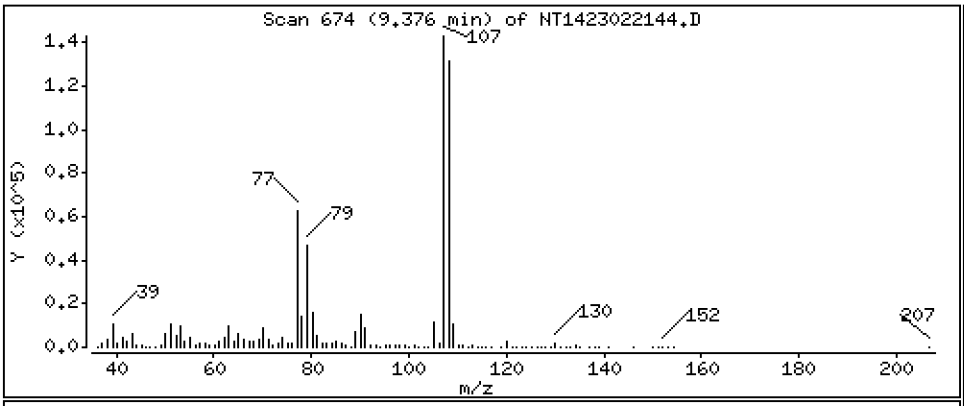
Operator: DSD

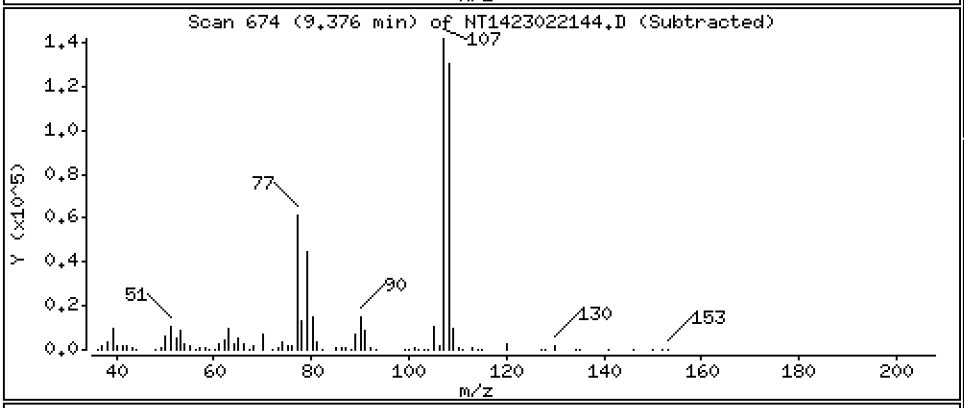
Column phase: ZB-5msi

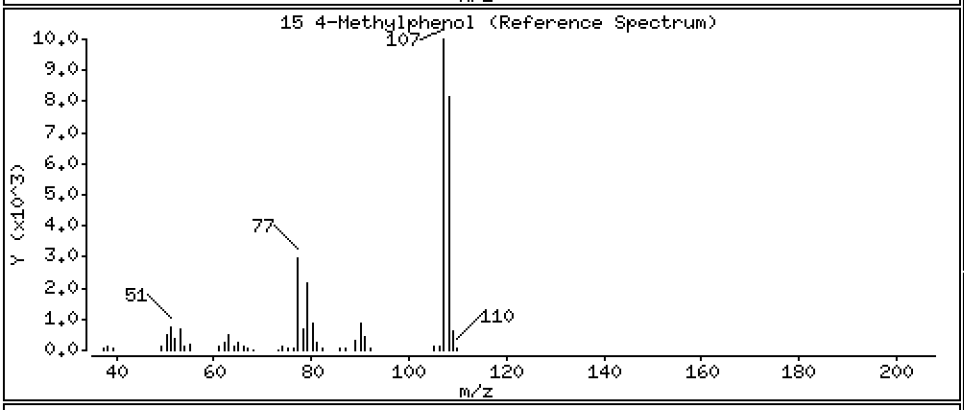
Column diameter: 0.25

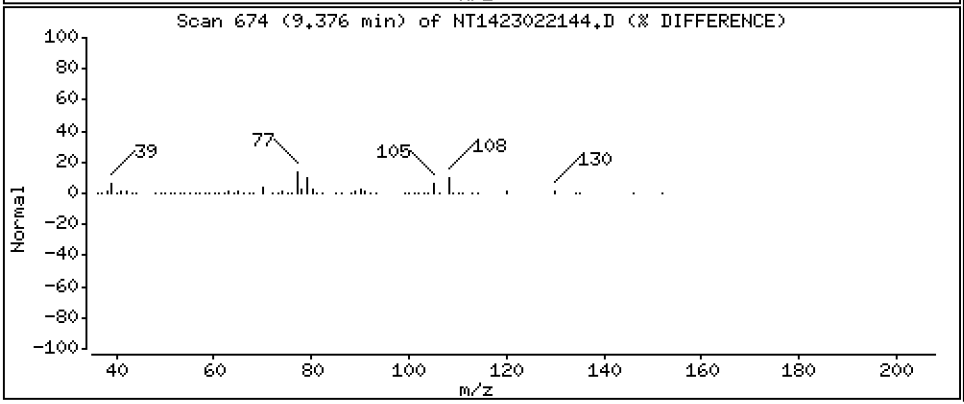
15 4-Methylphenol

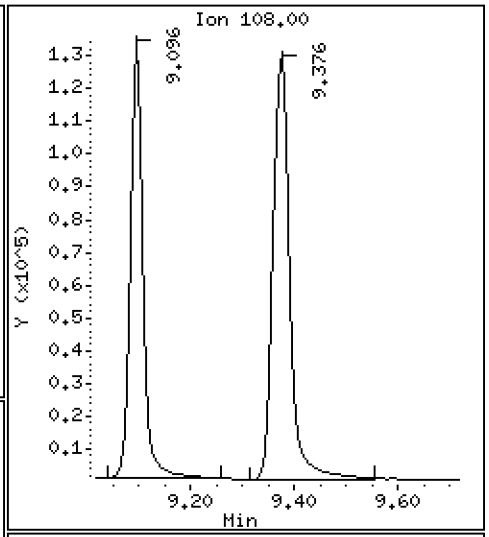
Concentration: 3.378 ug/mL

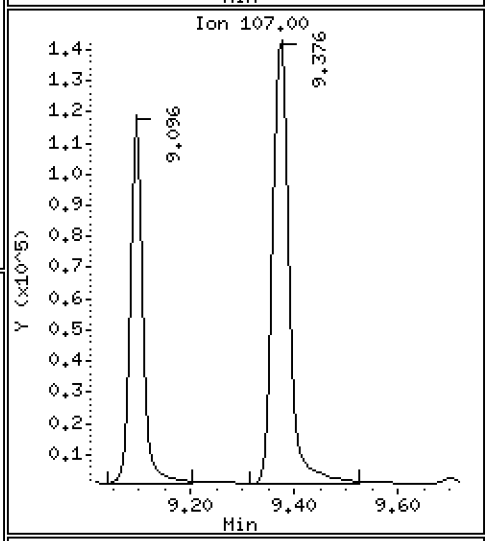


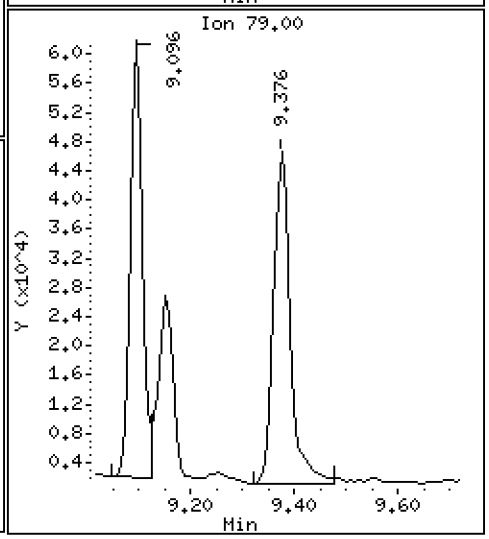












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

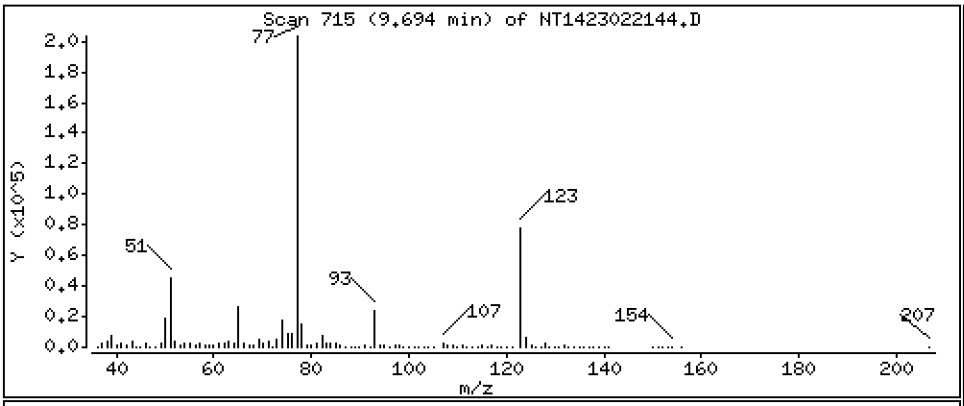
Operator: DSD

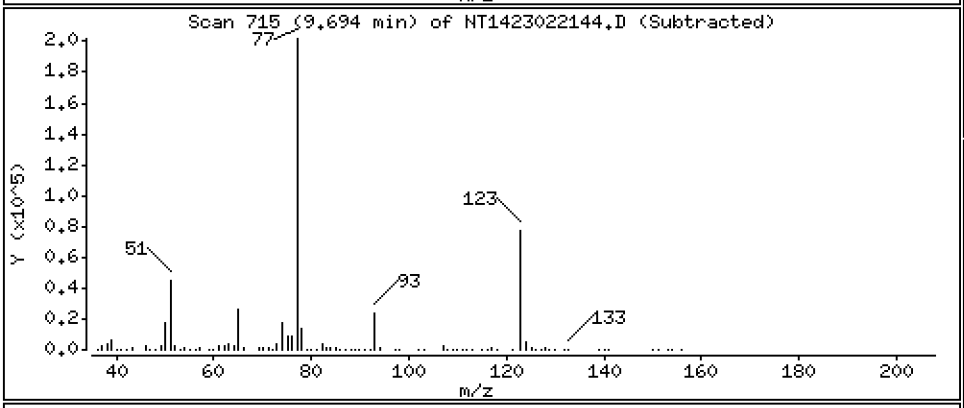
Column phase: ZB-5msi

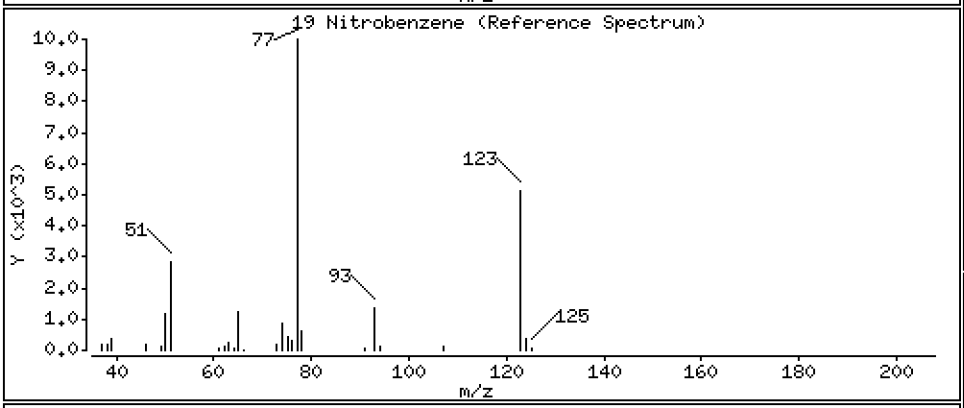
Column diameter: 0.25

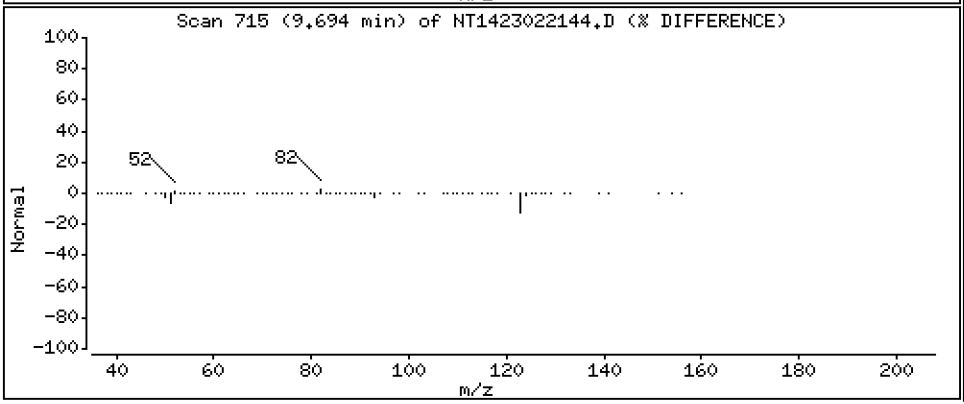
19 Nitrobenzene

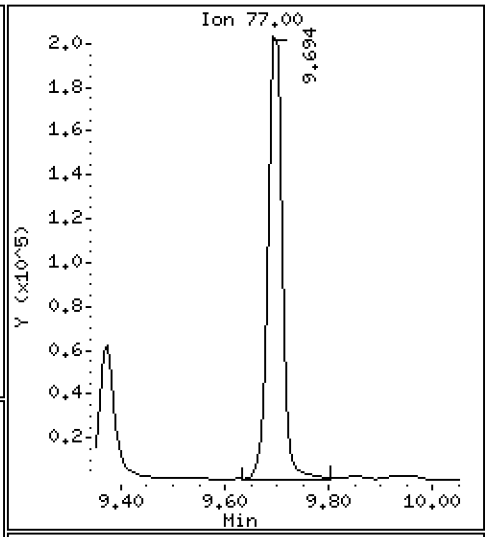
Concentration: 3.333 ug/mL

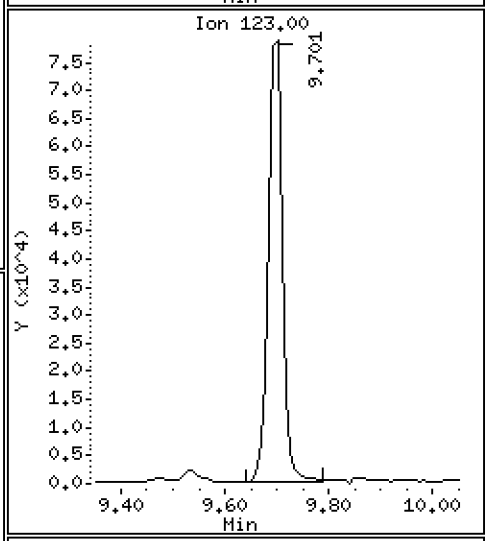


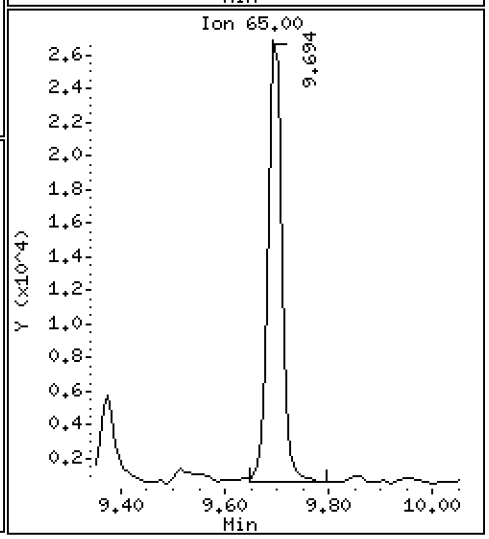












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

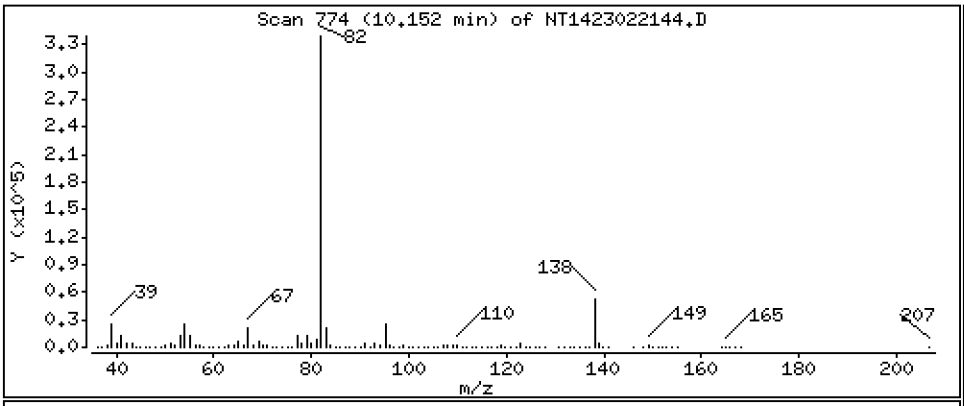
Operator: DSD

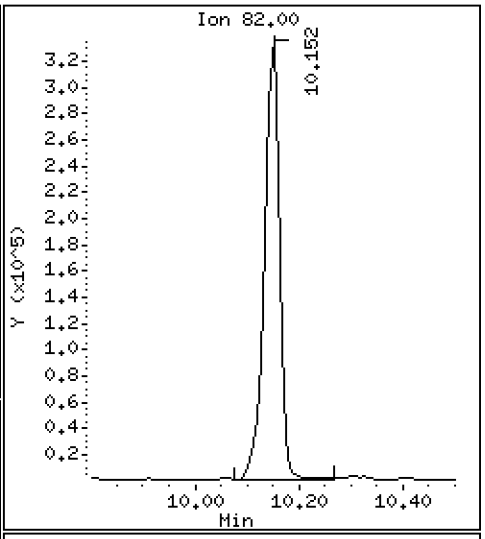
Column phase: ZB-5msi

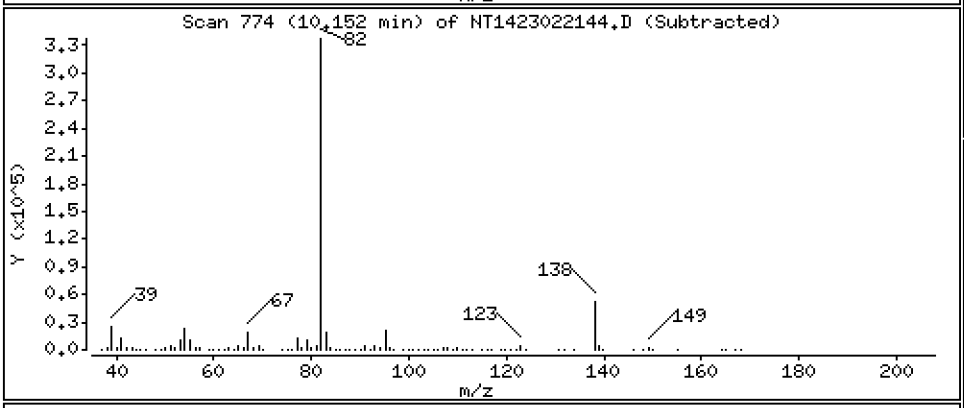
Column diameter: 0.25

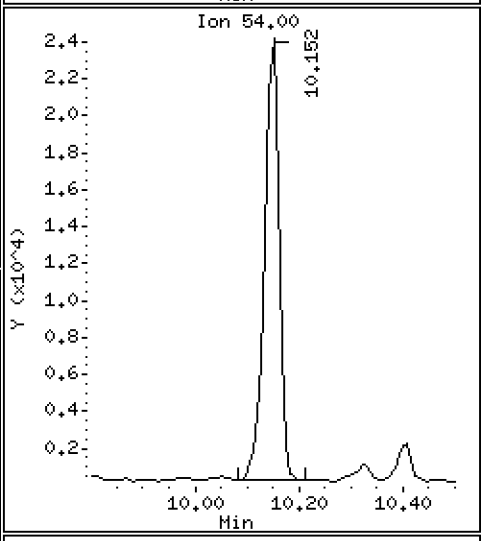
20 Isophorone

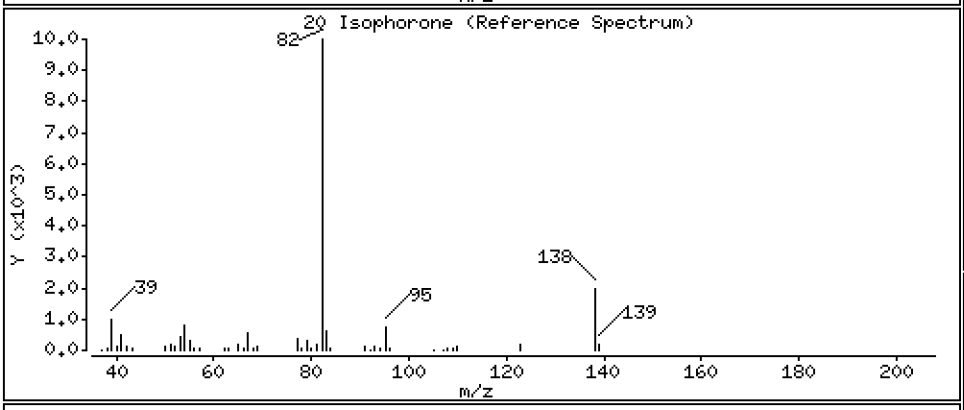
Concentration: 4.819 ug/mL

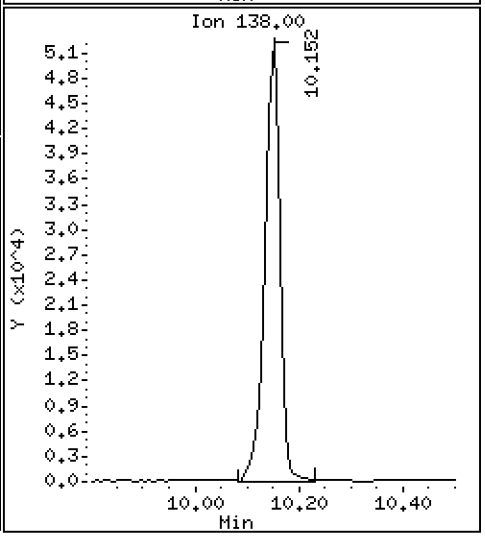


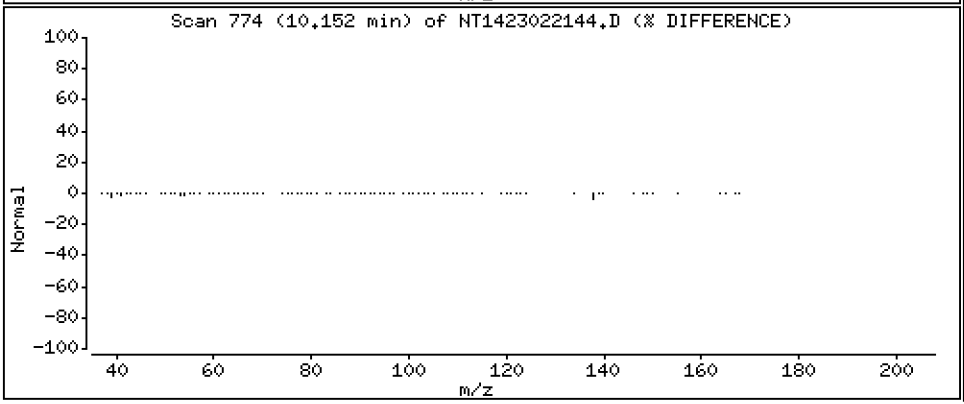












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

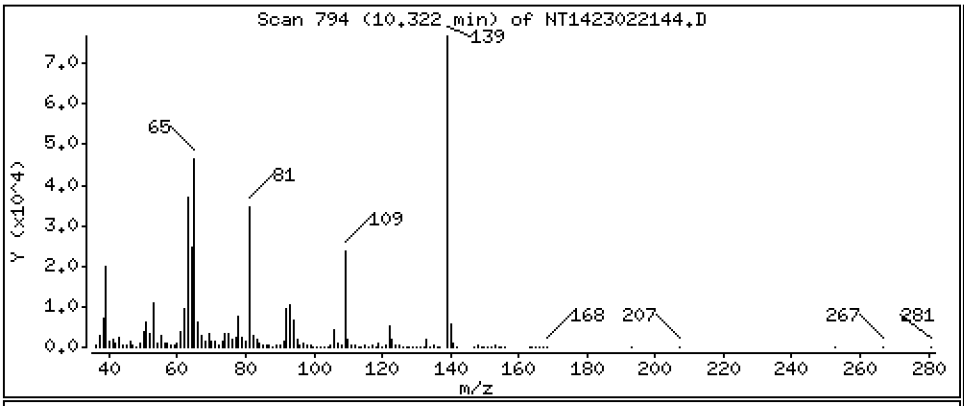
Operator: DSD

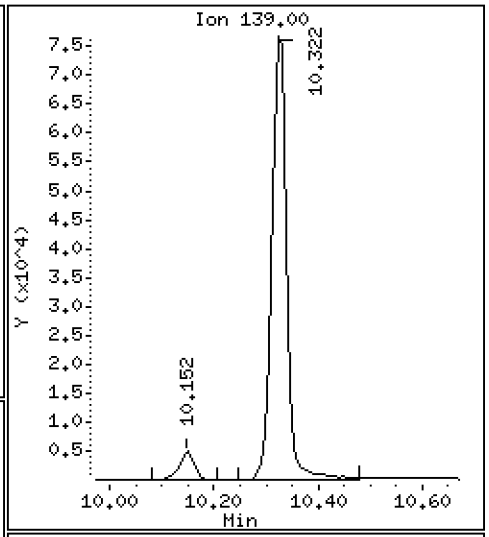
Column phase: ZB-5msi

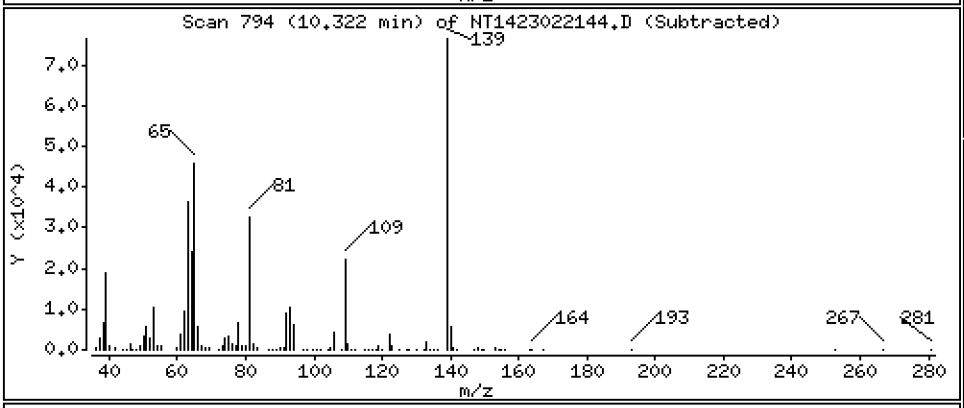
Column diameter: 0.25

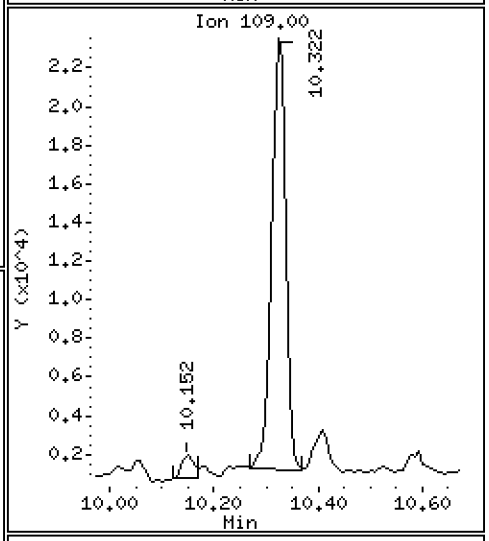
21 2-Nitrophenol

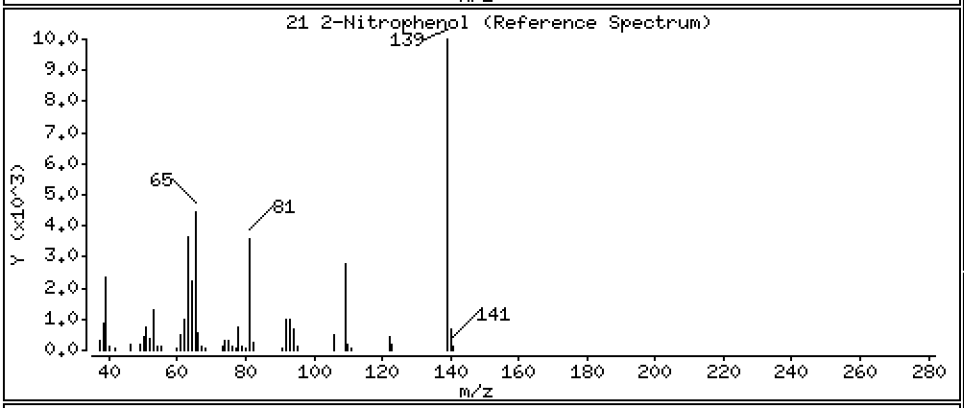
Concentration: 3.137 ug/mL

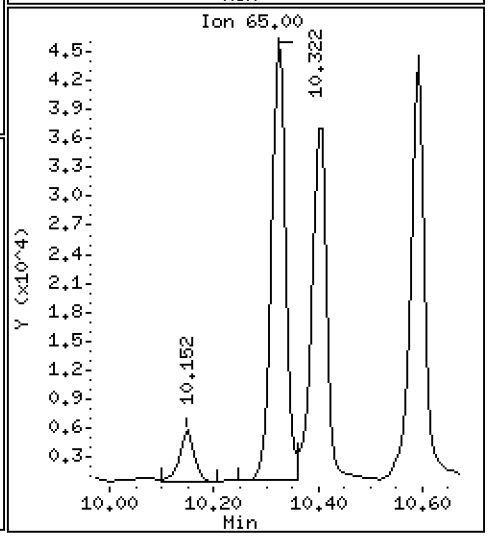


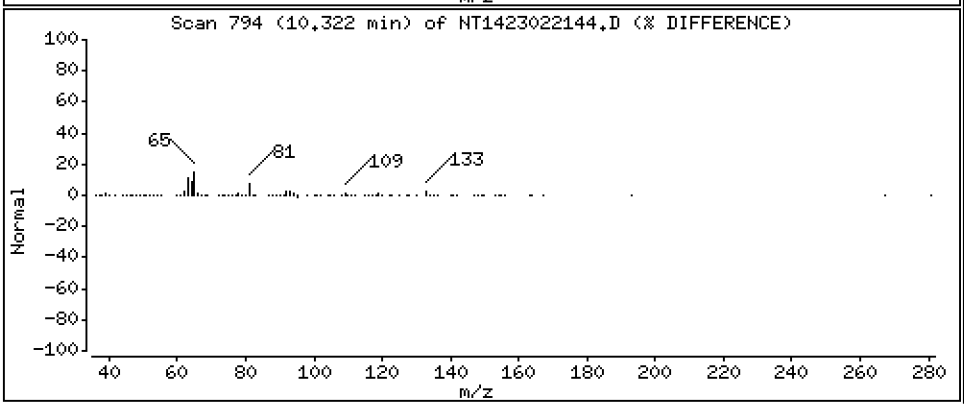












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

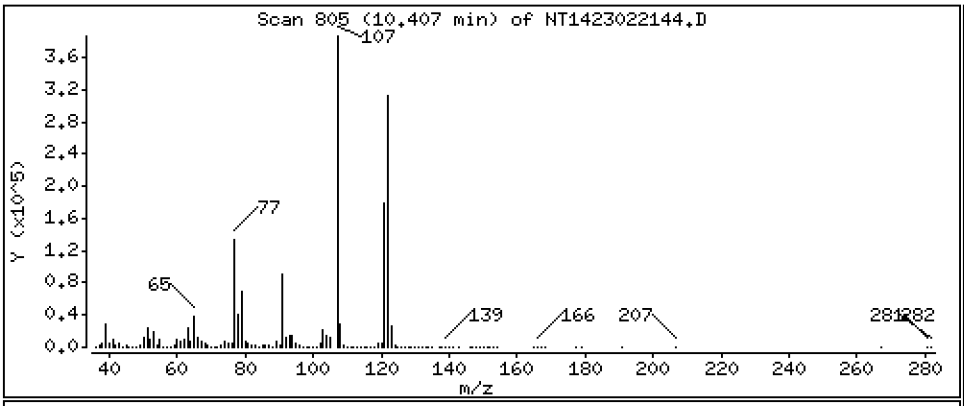
Operator: DSD

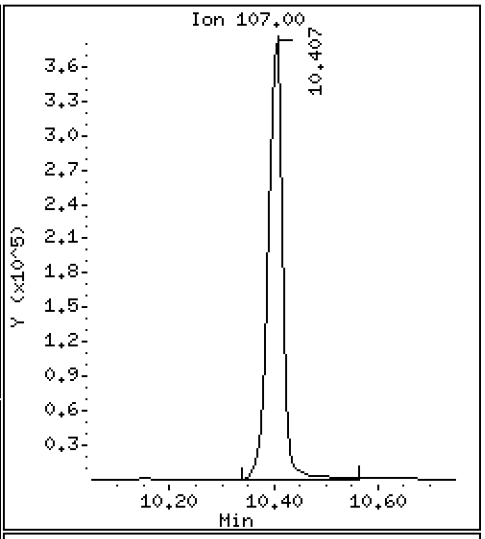
Column phase: ZB-5msi

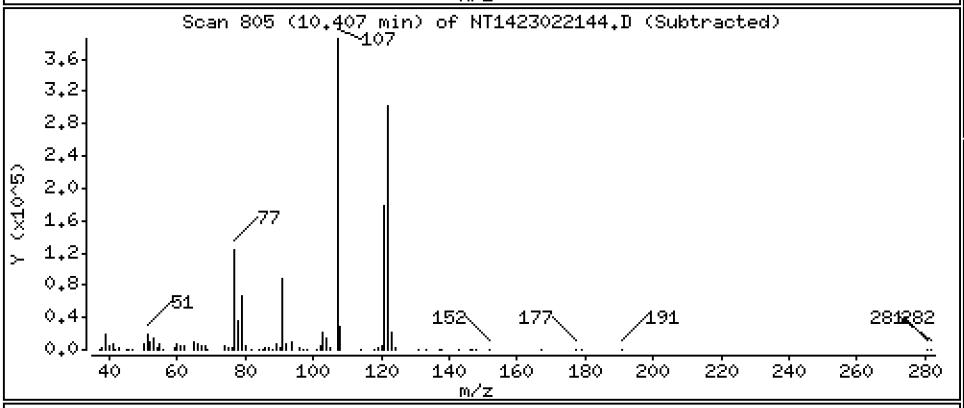
Column diameter: 0.25

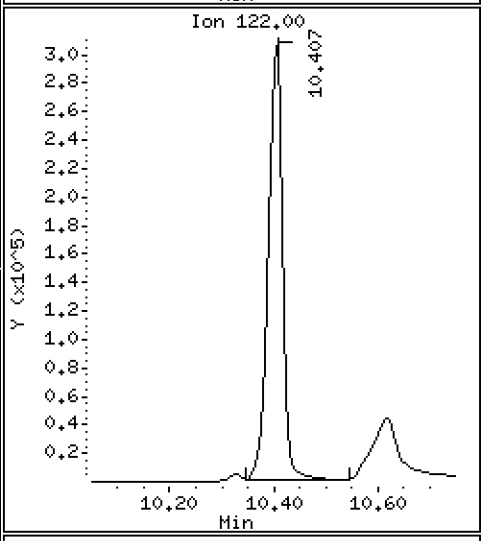
22 2,4-Dimethylphenol

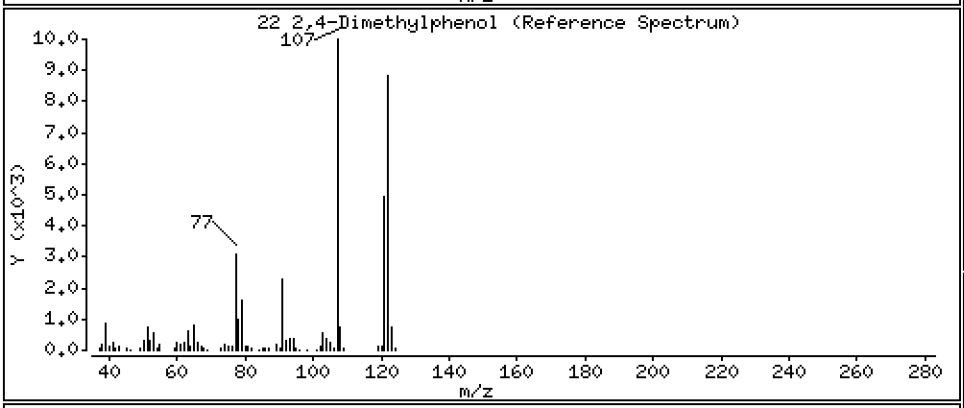
Concentration: 8.578 ug/mL

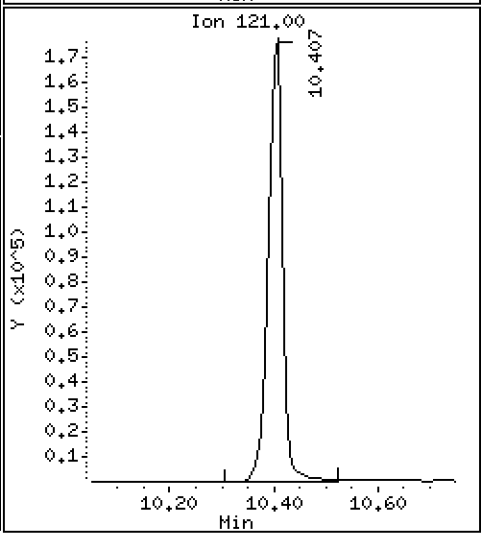


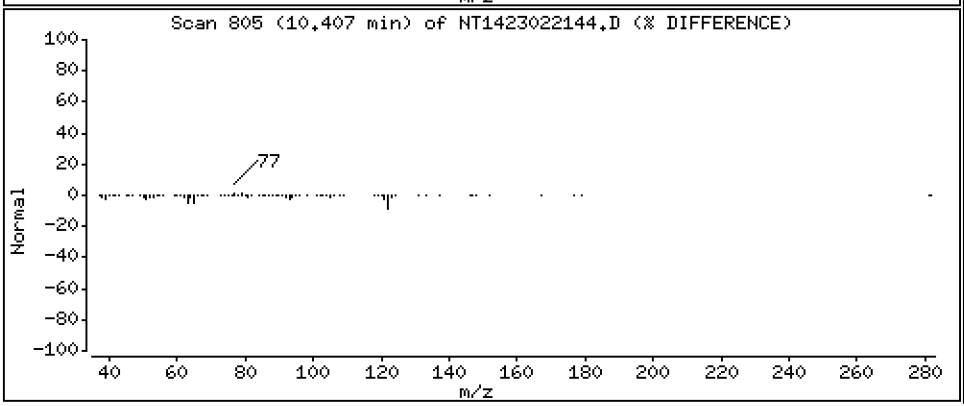












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

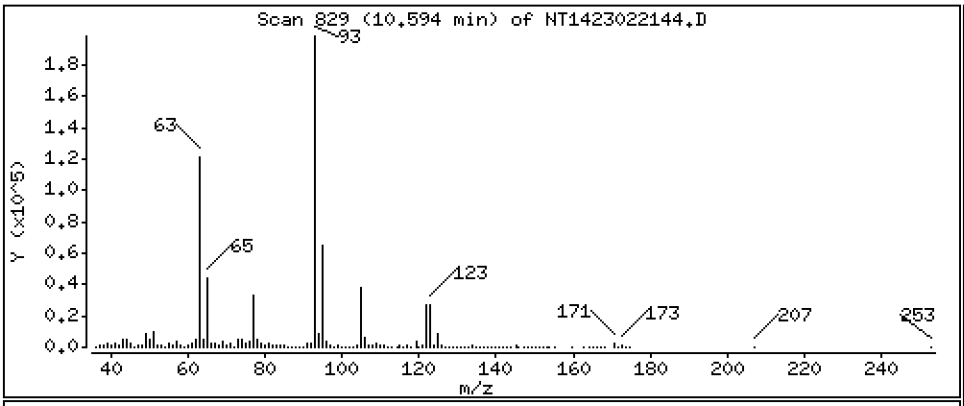
Operator: DSD

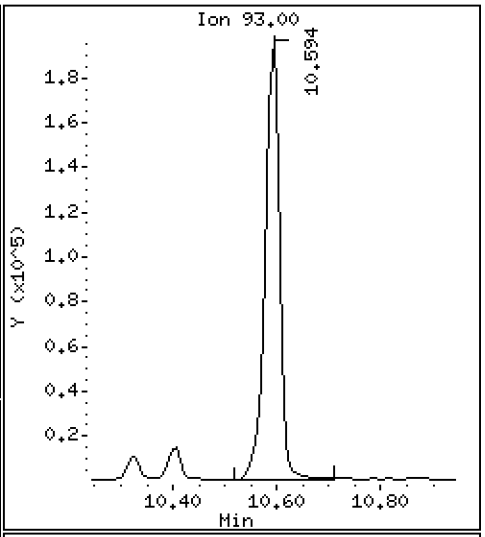
Column phase: ZB-5msi

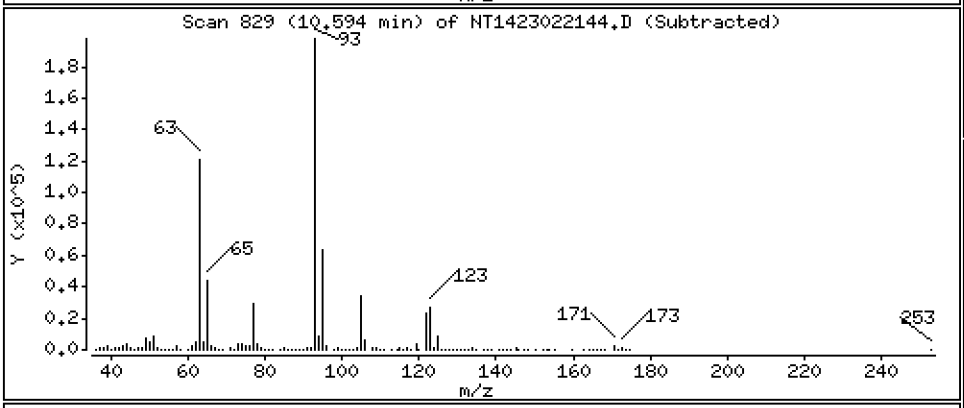
Column diameter: 0.25

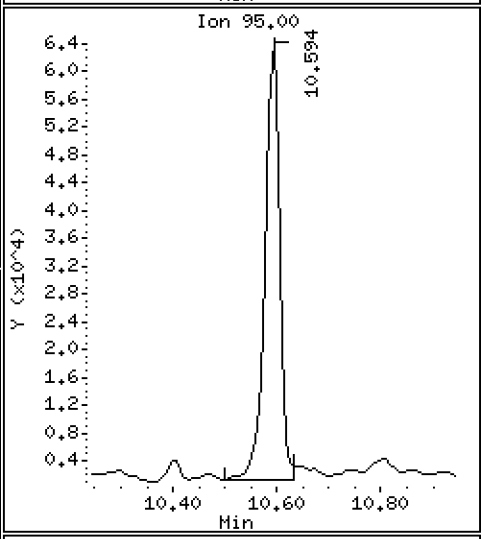
23 Bis(2-Chloroethoxy)methane

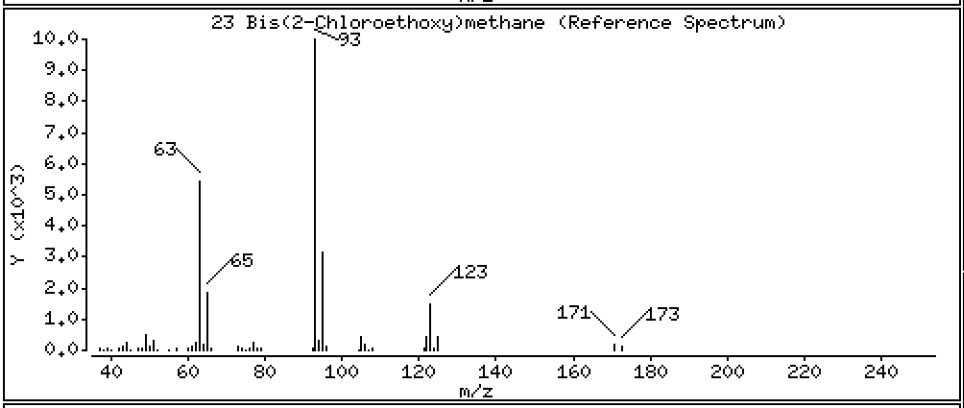
Concentration: 3.872 ug/mL

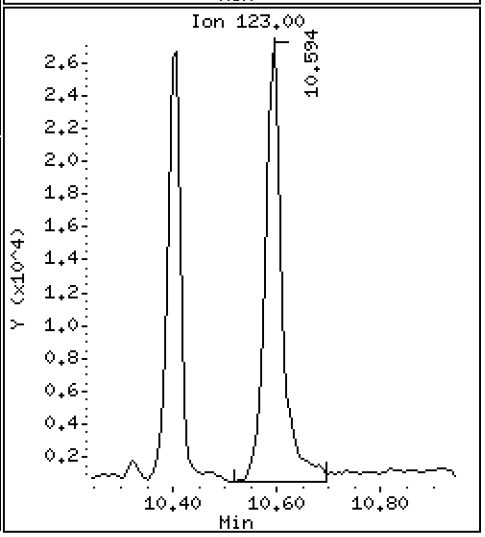


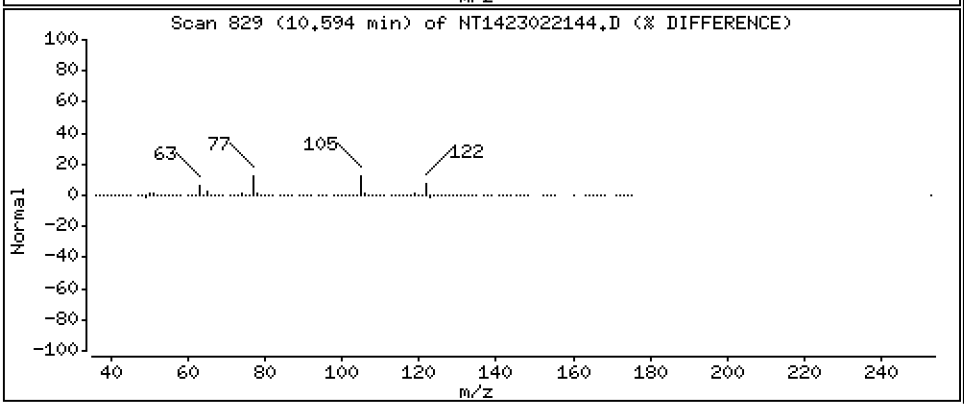












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

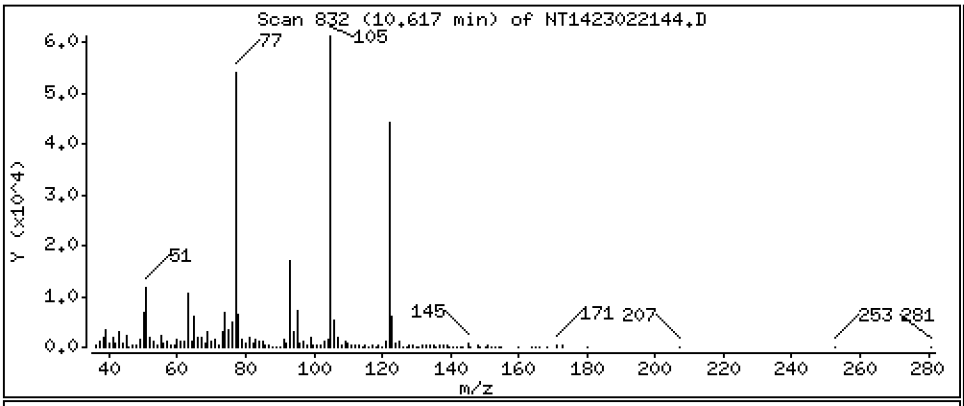
Operator: DSD

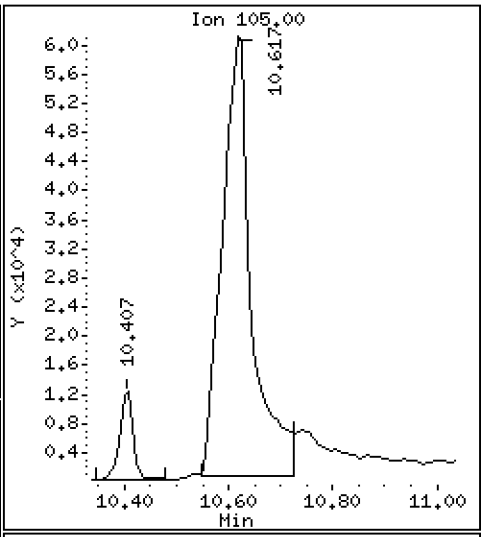
Column phase: ZB-5msi

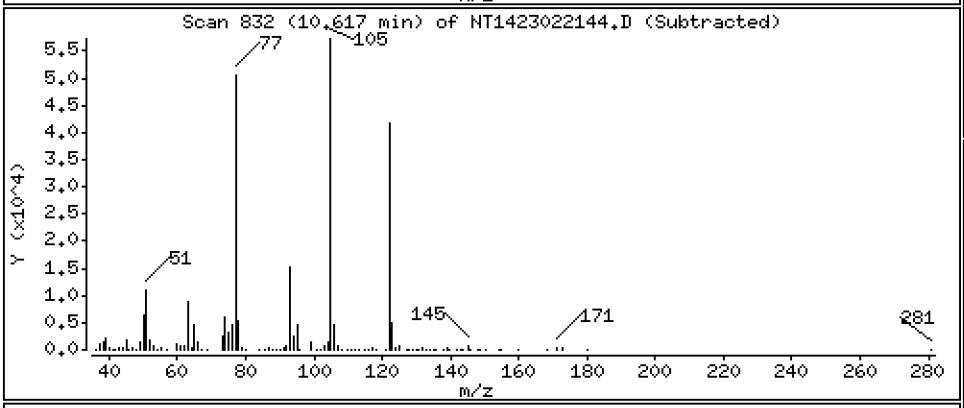
Column diameter: 0.25

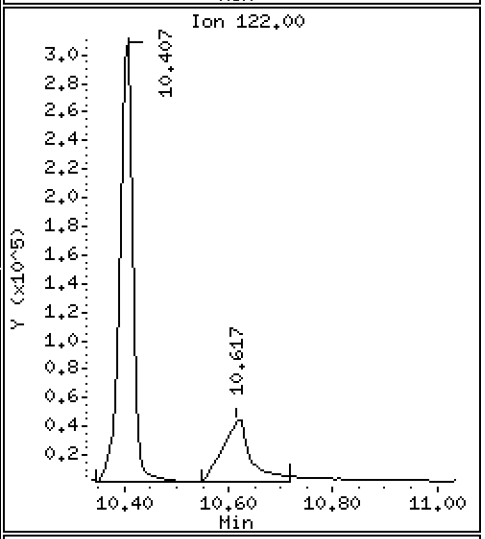
24 Benzoic acid

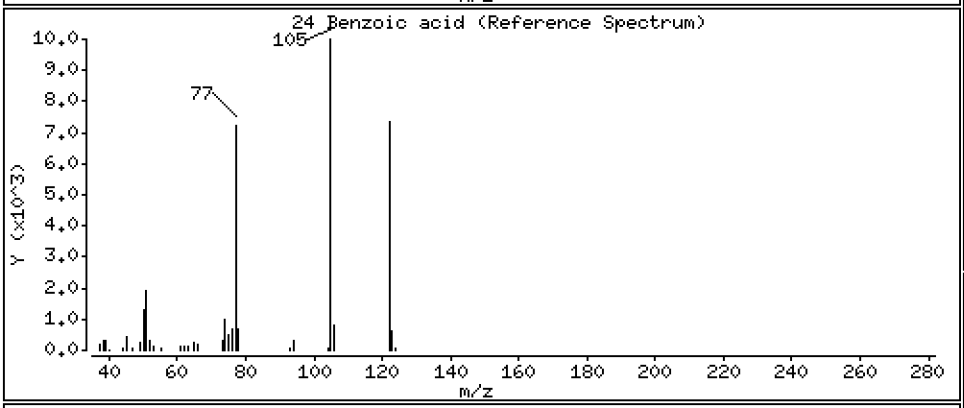
Concentration: 4.500 ug/mL

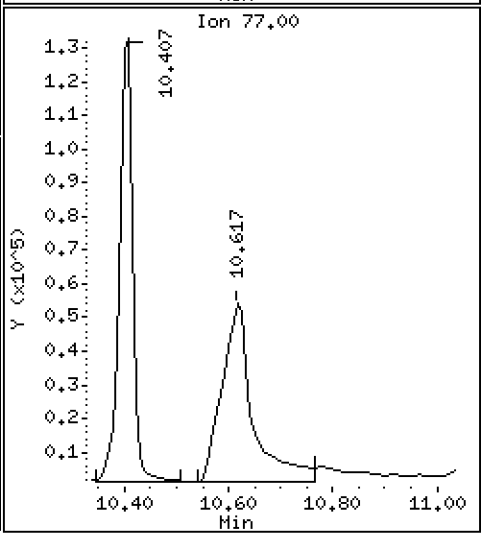


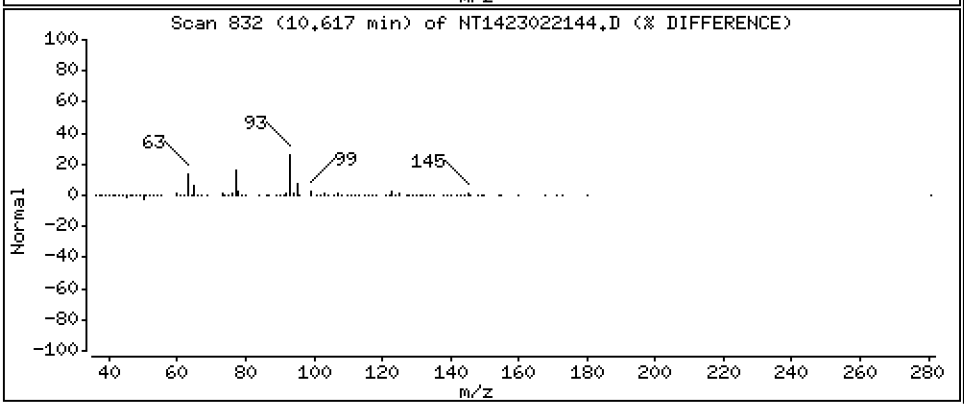












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

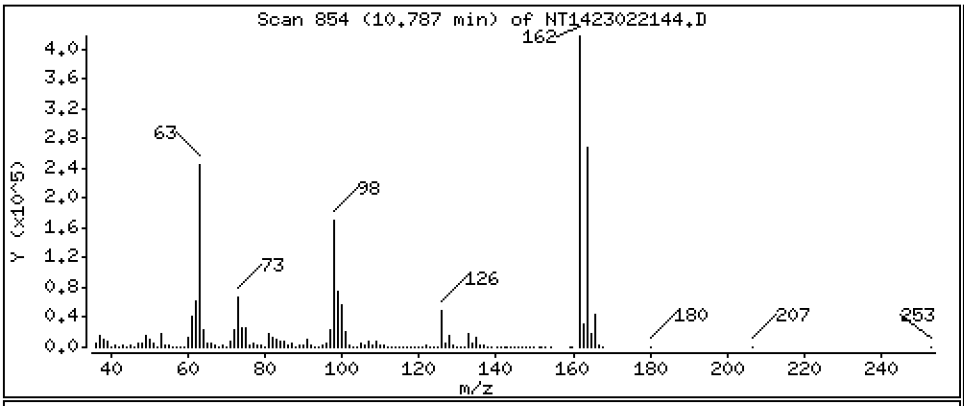
Operator: DSD

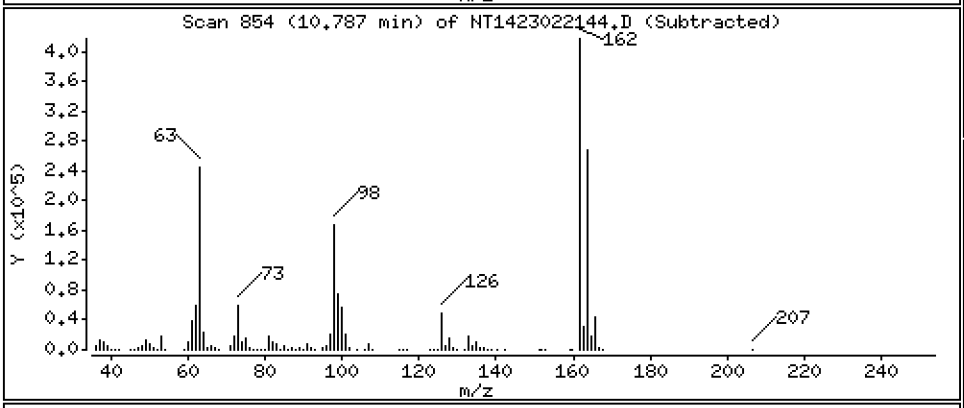
Column phase: ZB-5msi

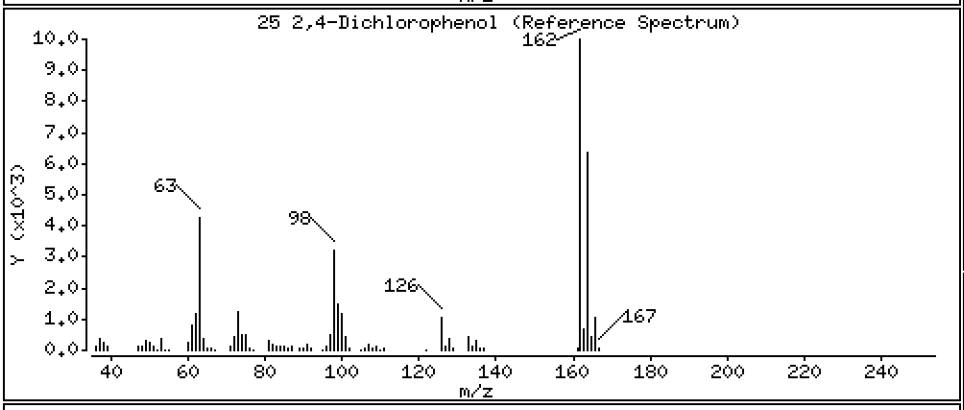
Column diameter: 0.25

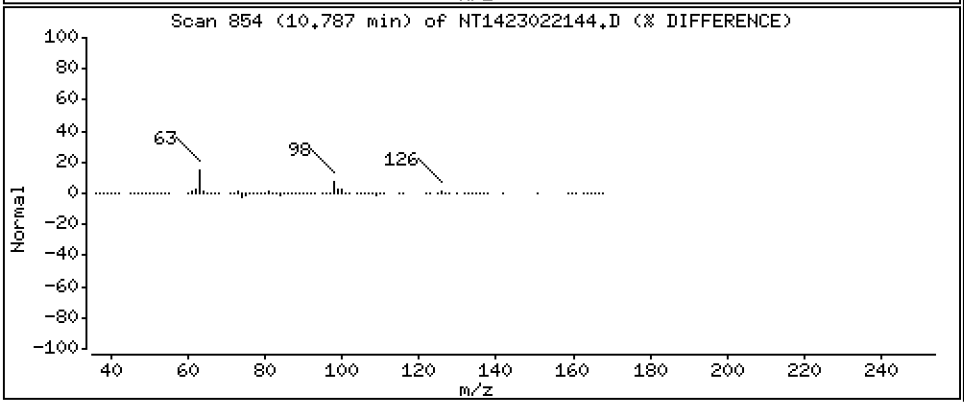
25 2,4-Dichlorophenol

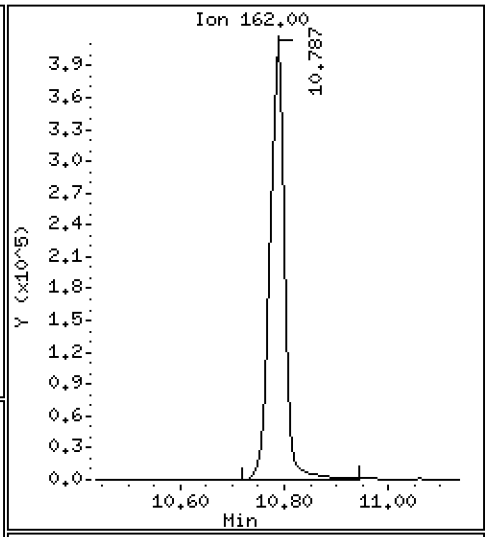
Concentration: 11.98 ug/mL

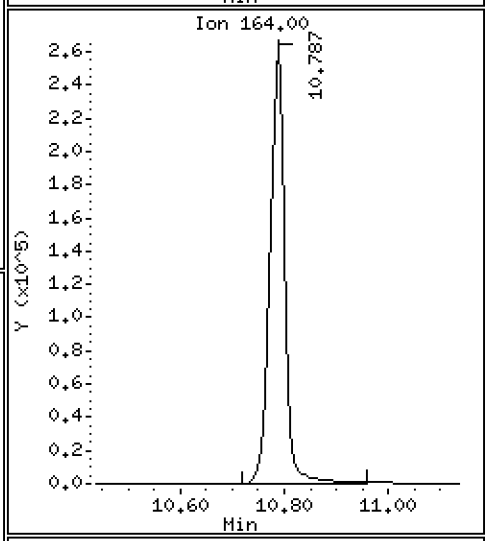


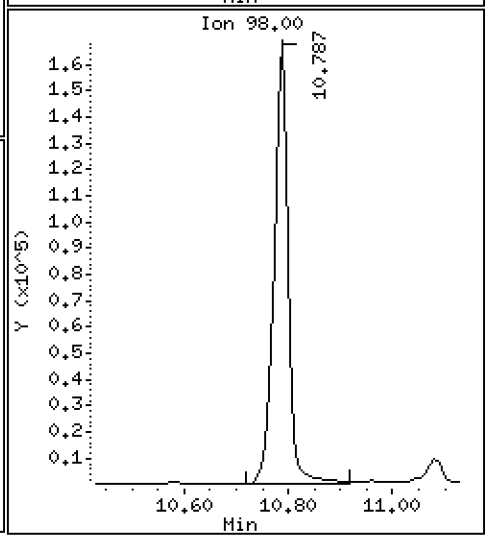












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

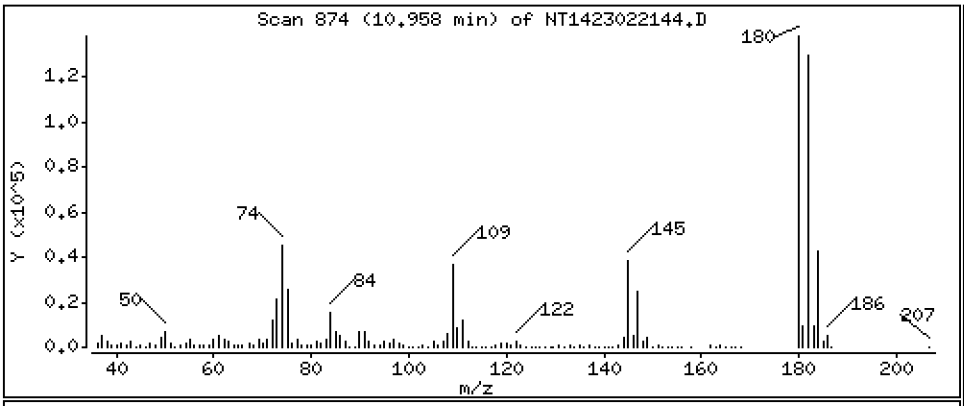
Operator: DSD

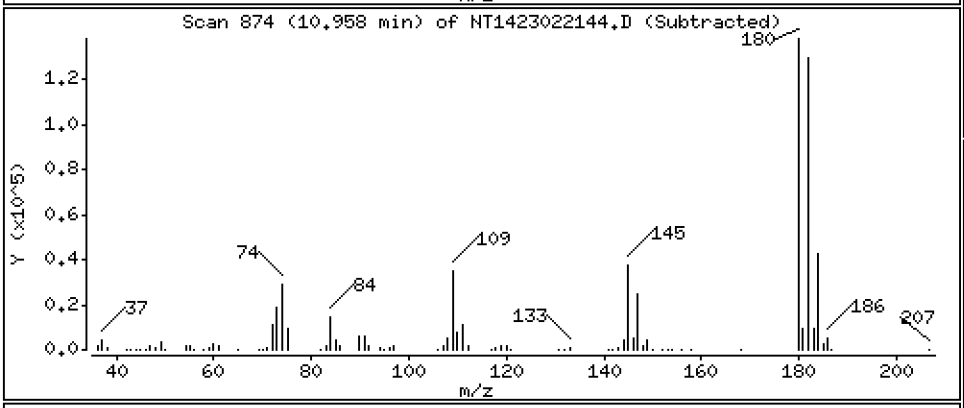
Column phase: ZB-5msi

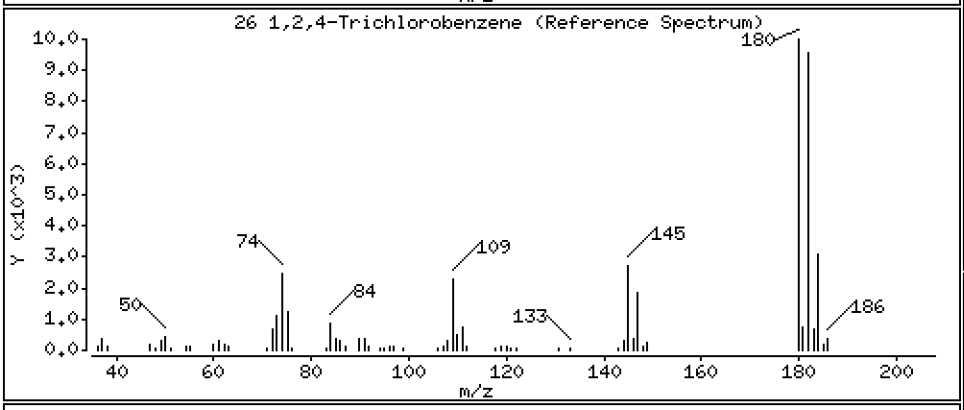
Column diameter: 0.25

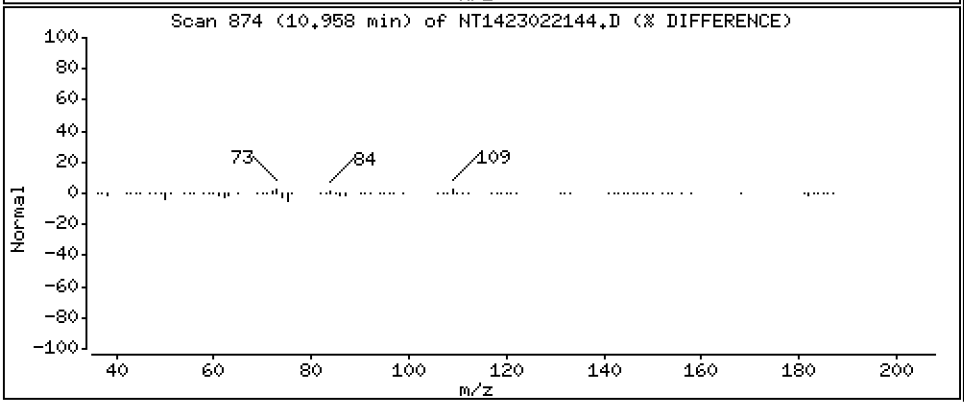
26 1,2,4-Trichlorobenzene

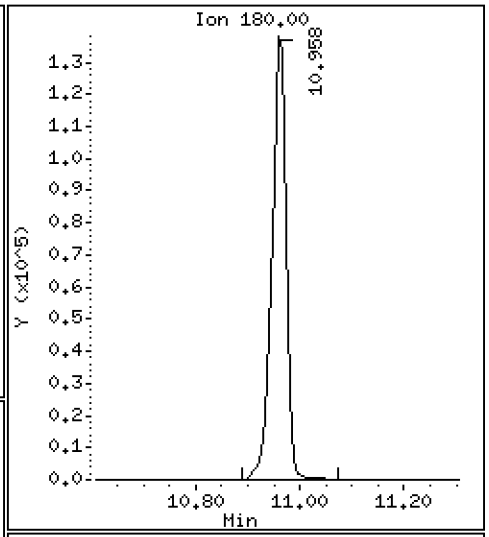
Concentration: 3.271 ug/mL

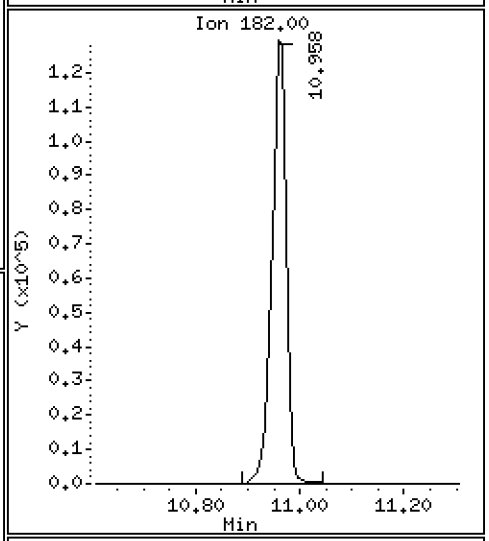


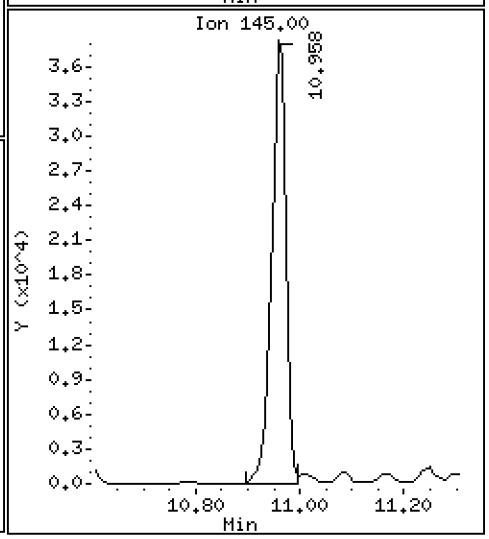












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

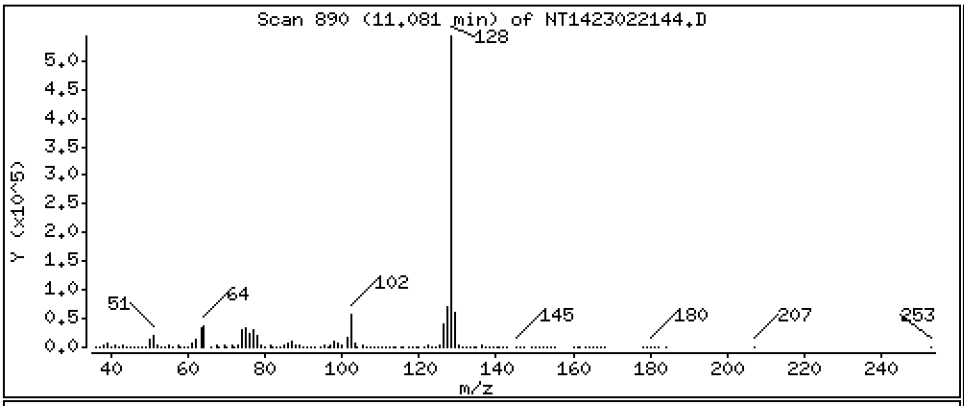
Operator: DSD

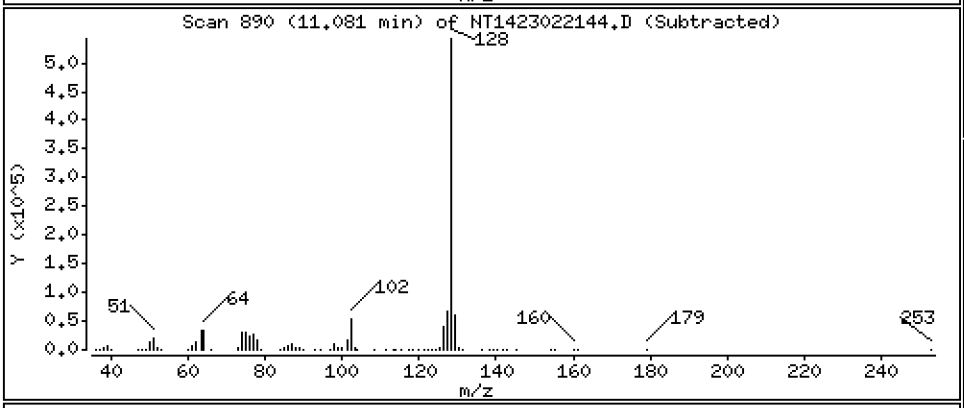
Column phase: ZB-5msi

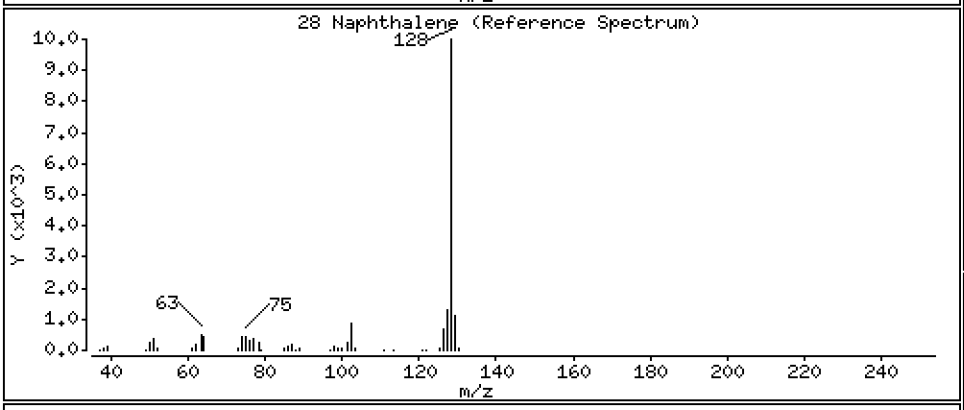
Column diameter: 0.25

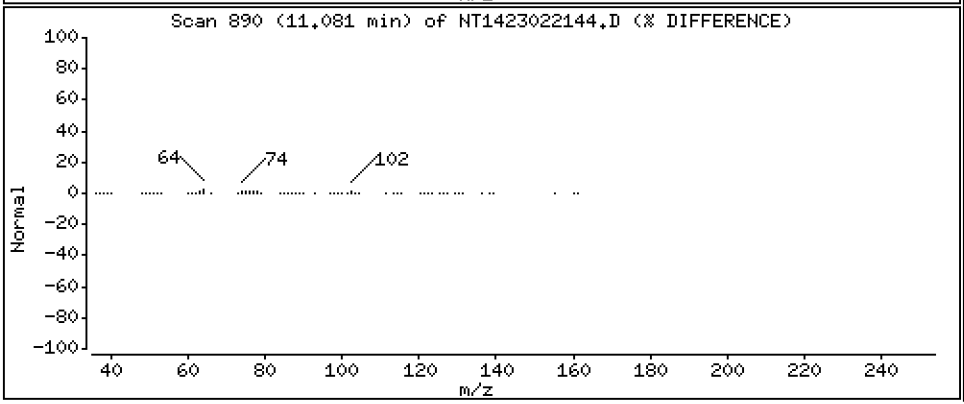
28 Naphthalene

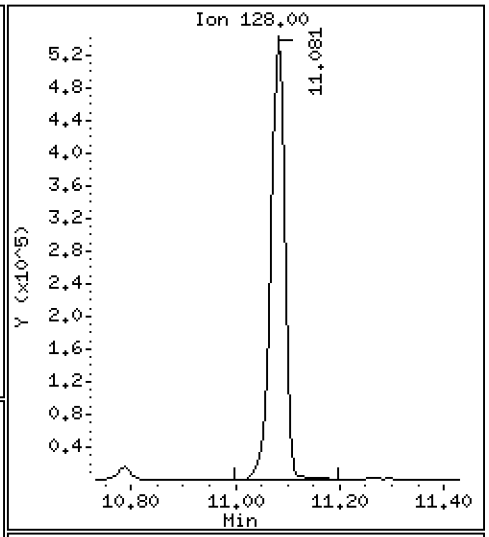
Concentration: 4.141 ug/mL

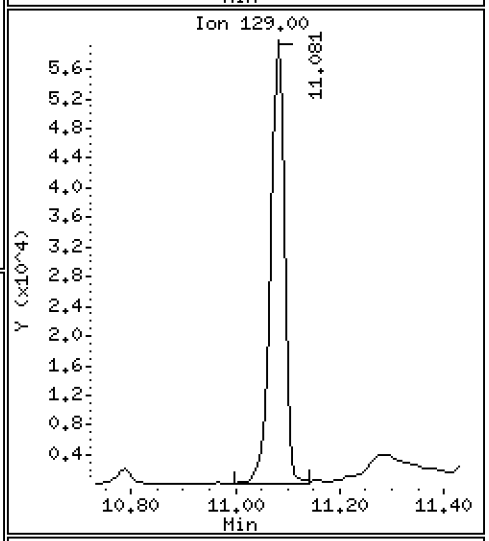


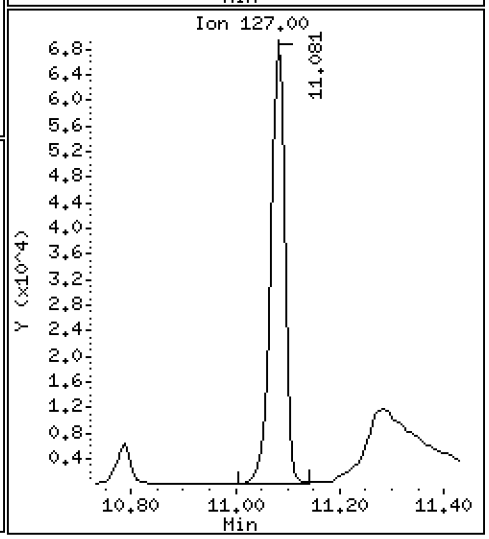












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

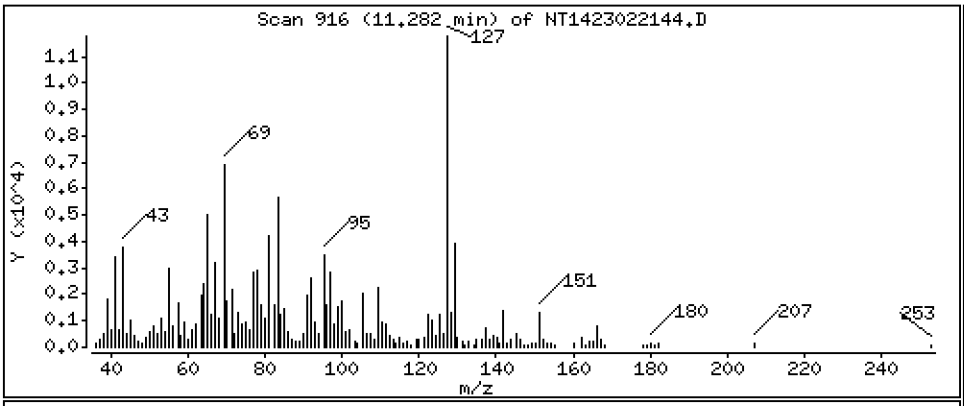
Operator: DSD

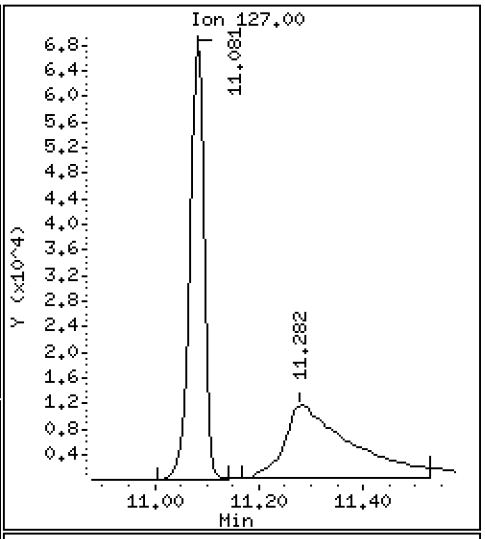
Column phase: ZB-5msi

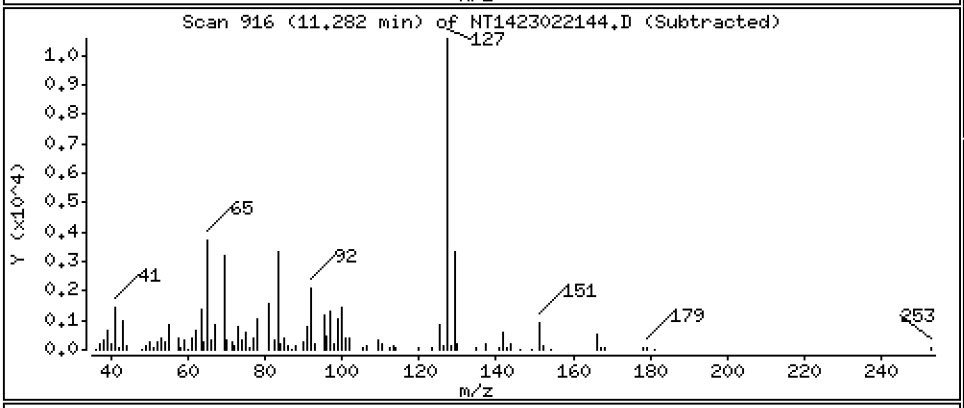
Column diameter: 0.25

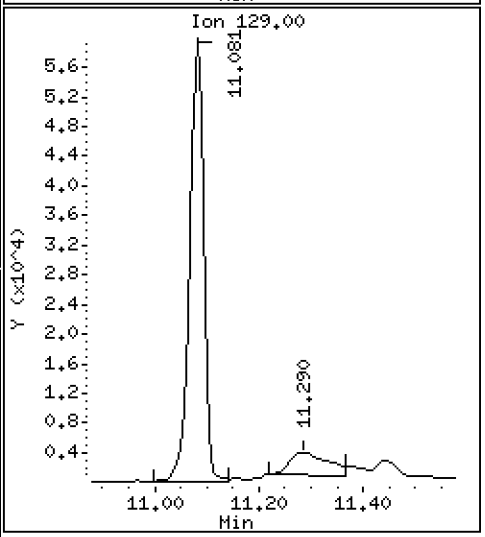
29 4-Chloroaniline

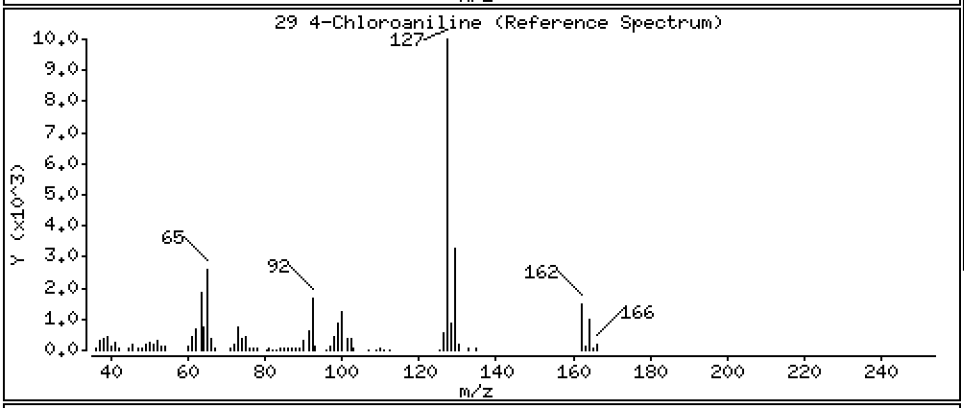
Concentration: 1.033 ug/mL

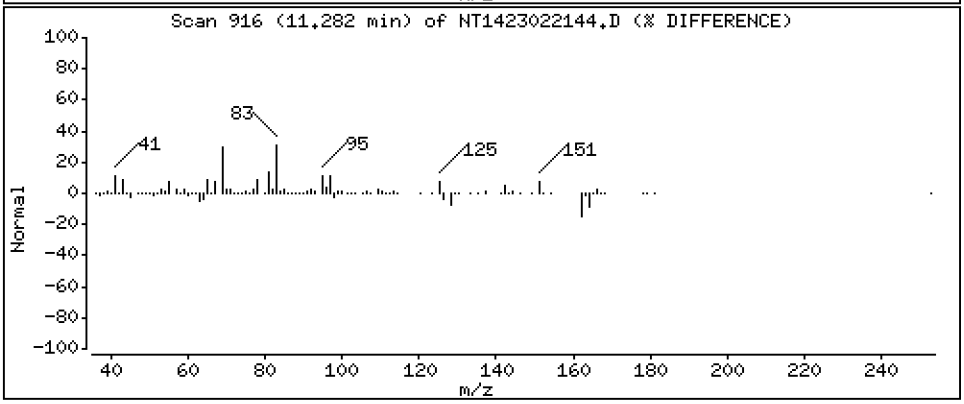












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

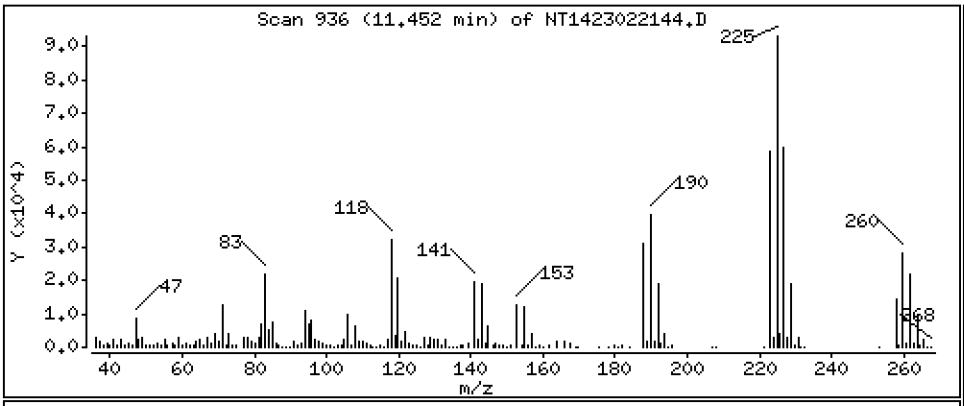
Operator: DSD

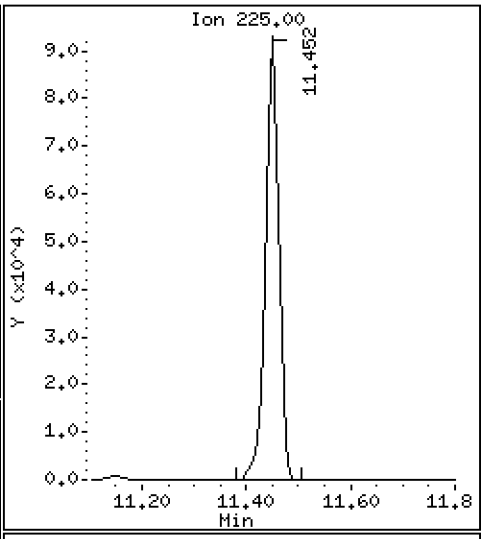
Column phase: ZB-5msi

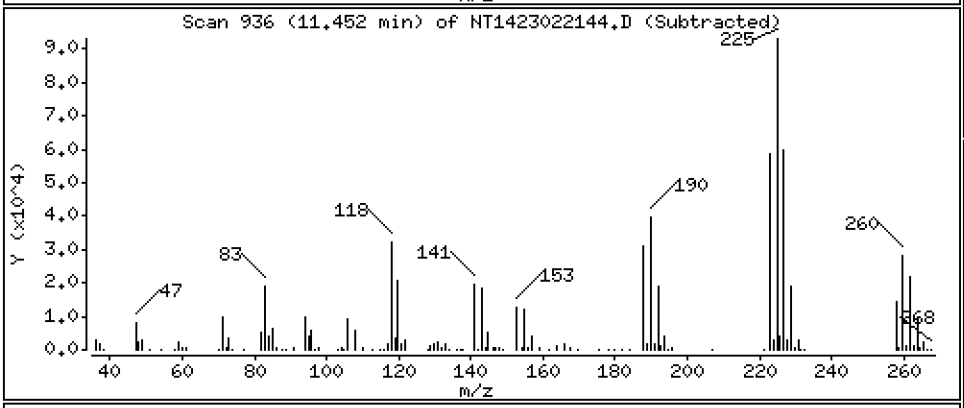
Column diameter: 0.25

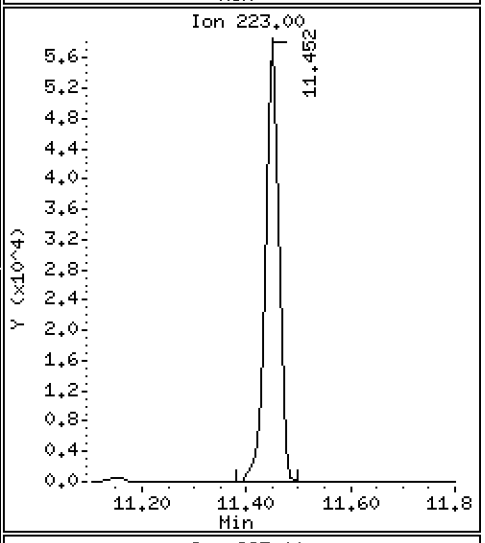
30 Hexachlorobutadiene

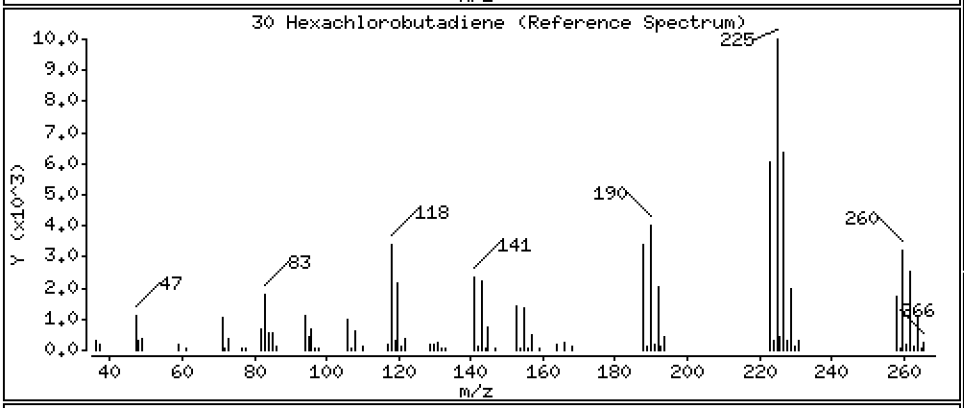
Concentration: 3.477 ug/mL

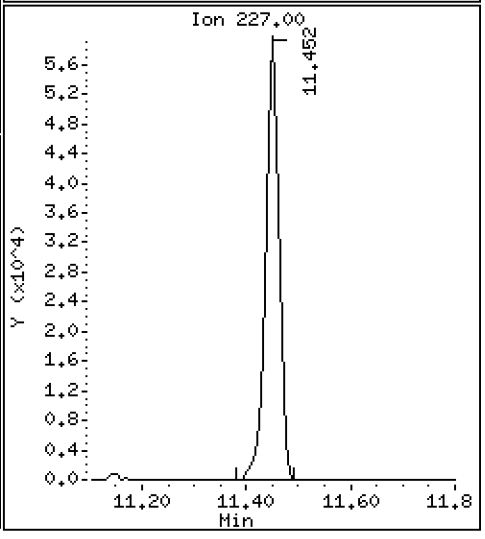


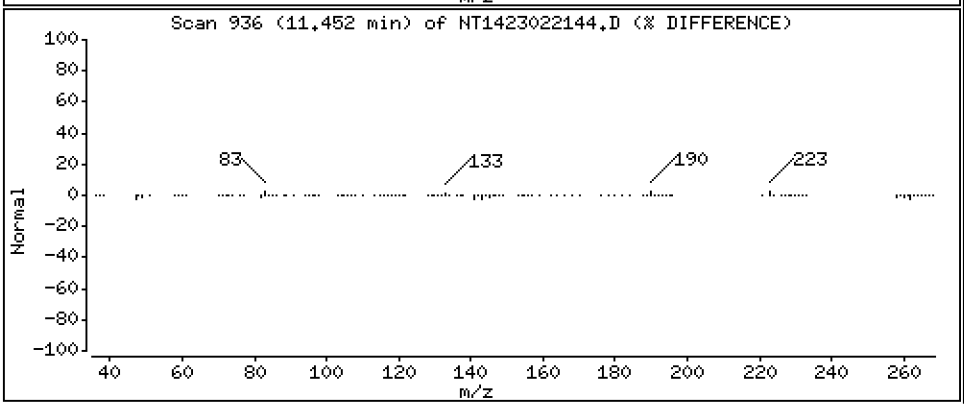












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

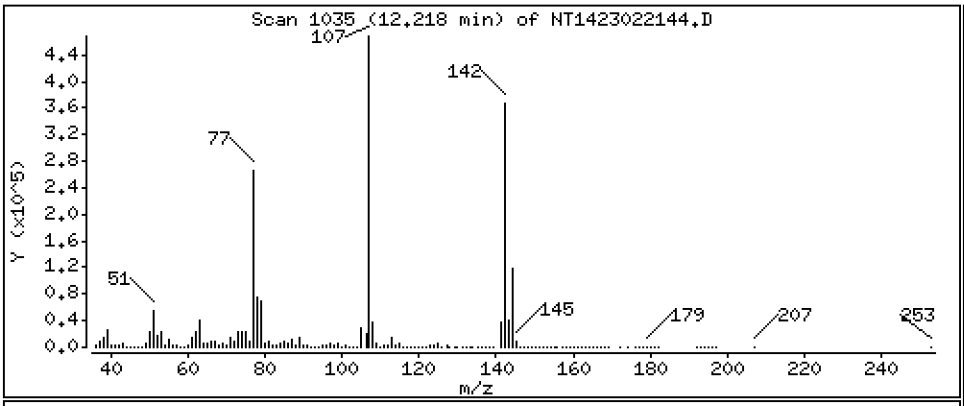
Operator: DSD

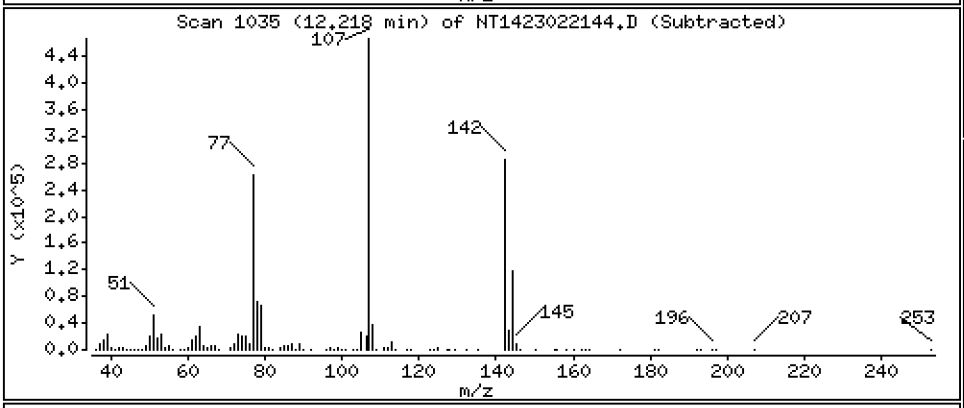
Column phase: ZB-5msi

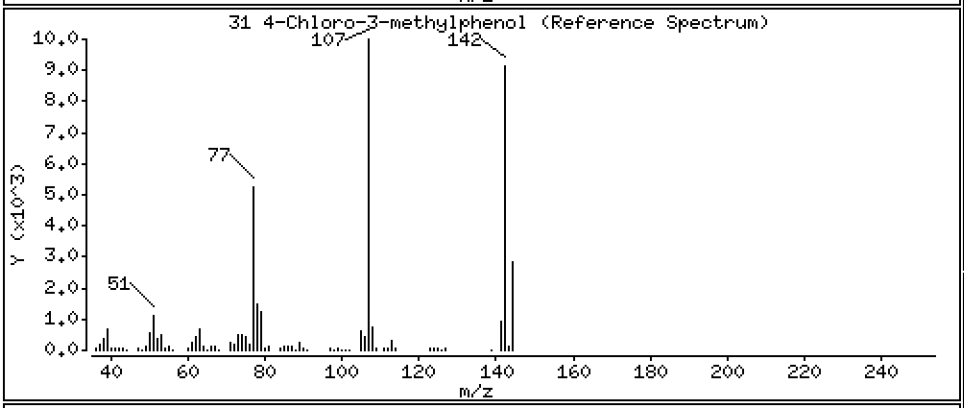
Column diameter: 0.25

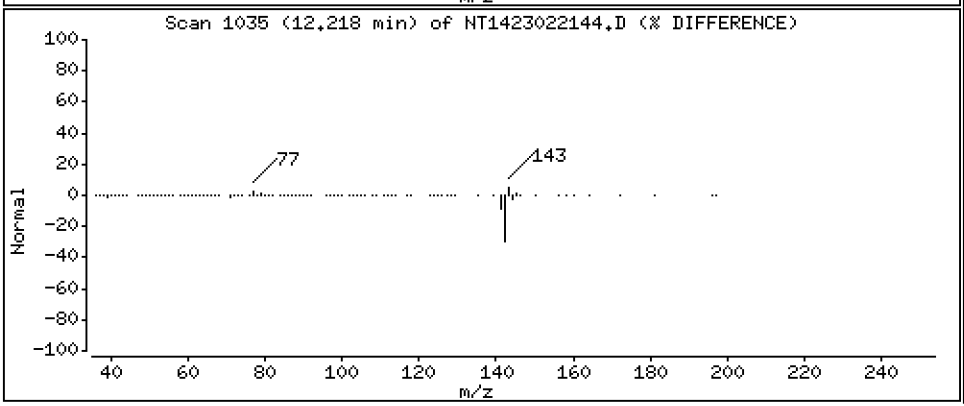
31 4-Chloro-3-methylphenol

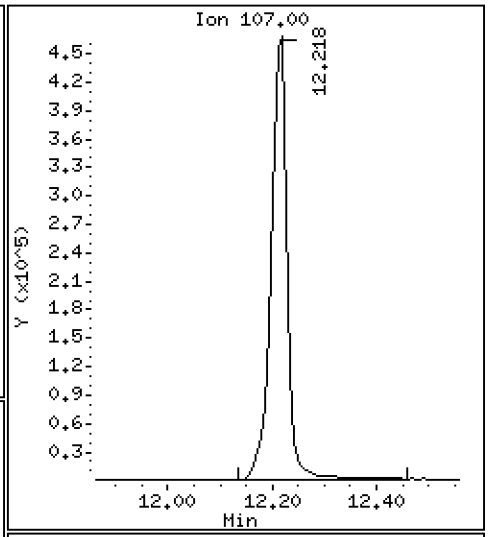
Concentration: 12.71 ug/mL

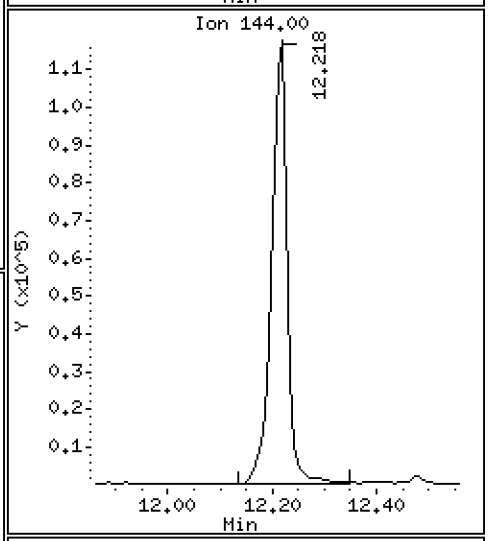


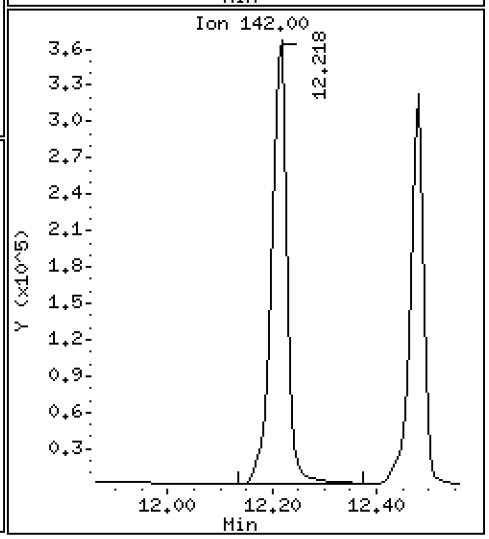












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

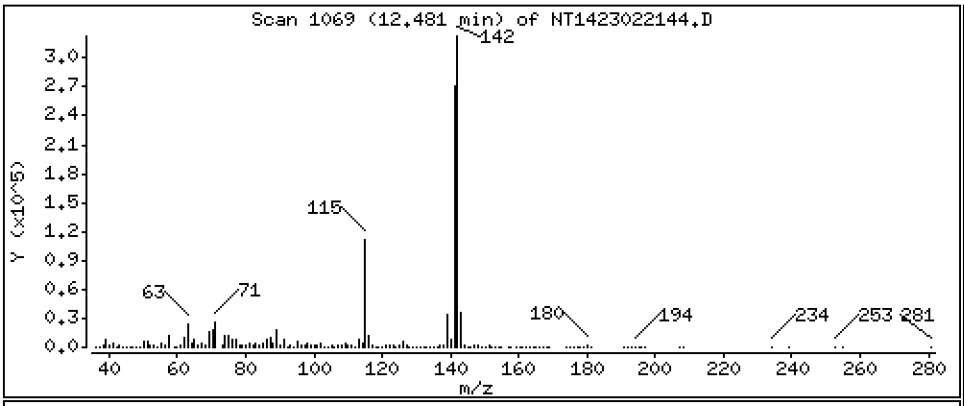
Operator: DSD

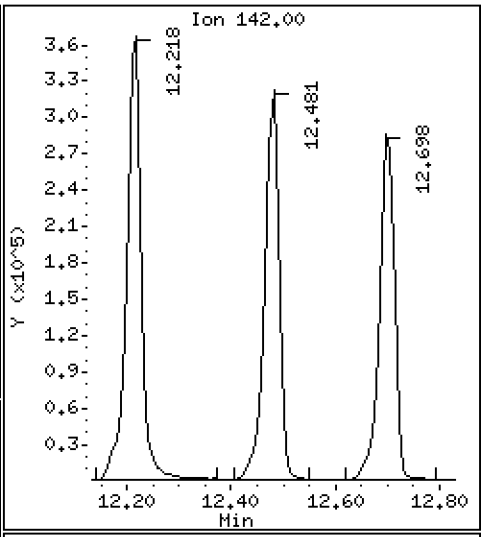
Column phase: ZB-5msi

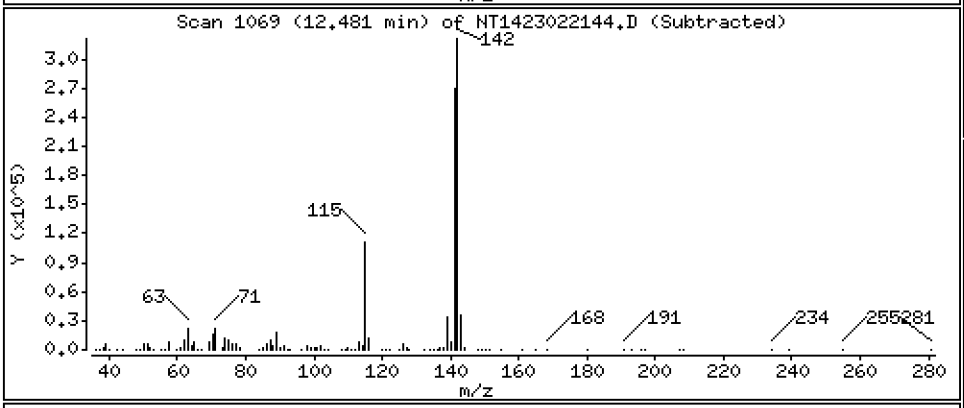
Column diameter: 0.25

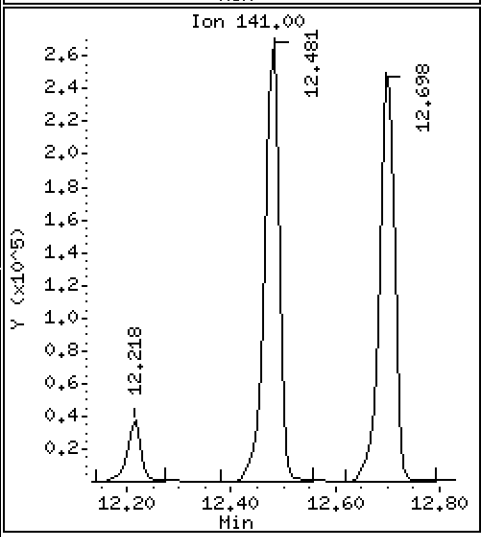
32 2-Methylnaphthalene

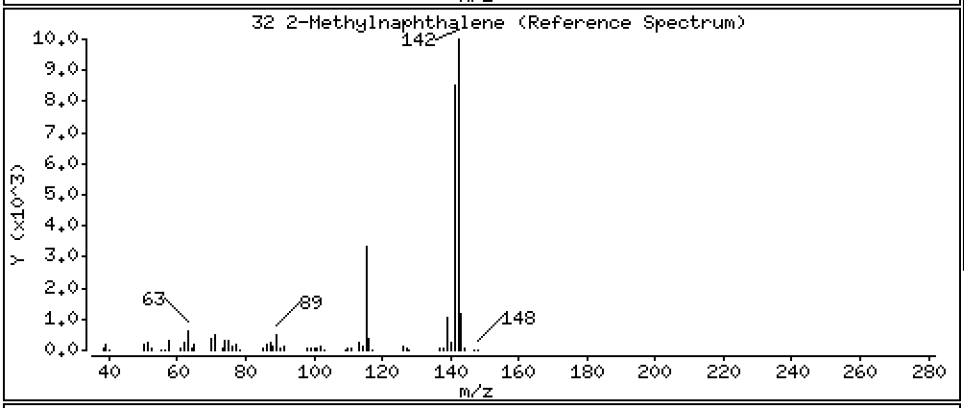
Concentration: 3.361 ug/mL

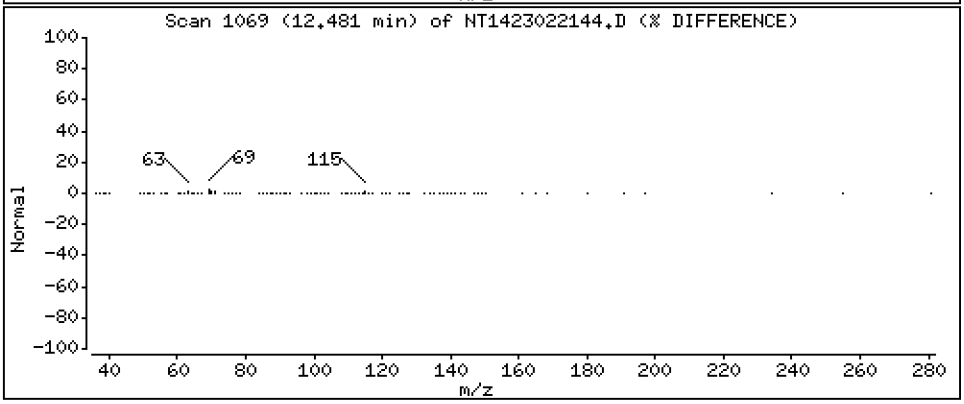












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

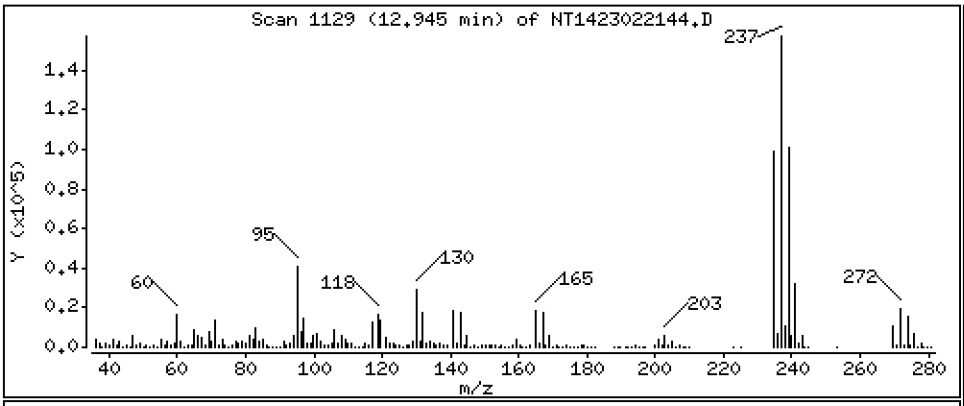
Operator: DSD

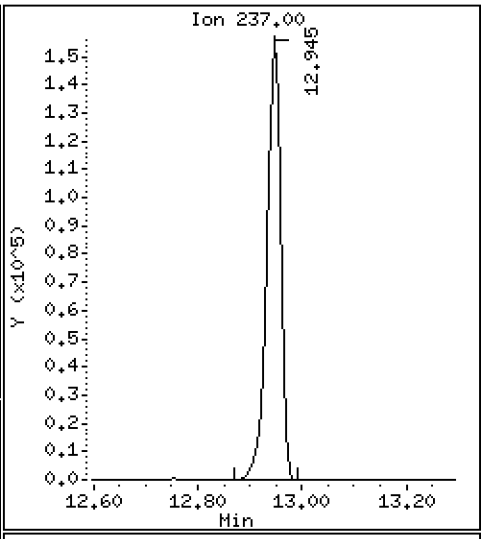
Column phase: ZB-5msi

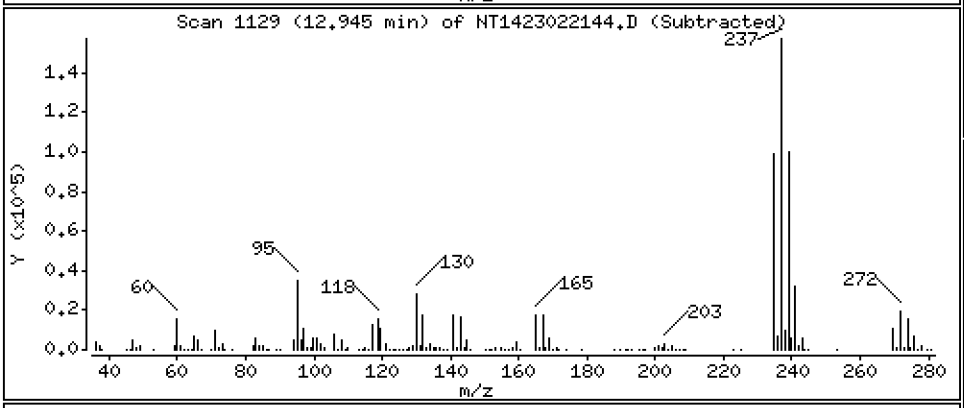
Column diameter: 0.25

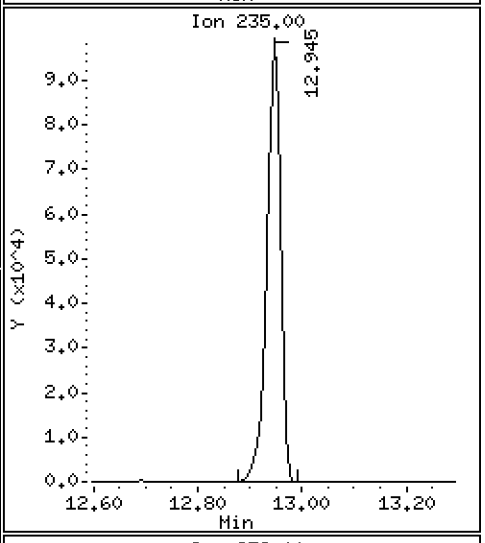
33 Hexachlorocyclopentadiene

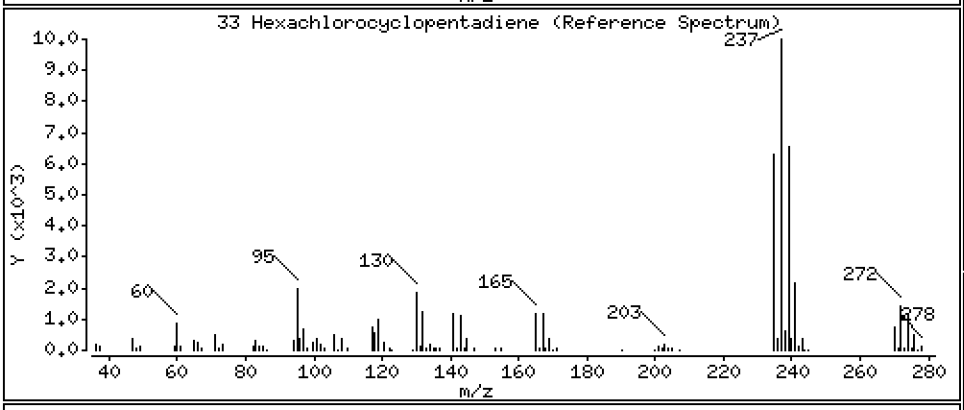
Concentration: 4.927 ug/mL

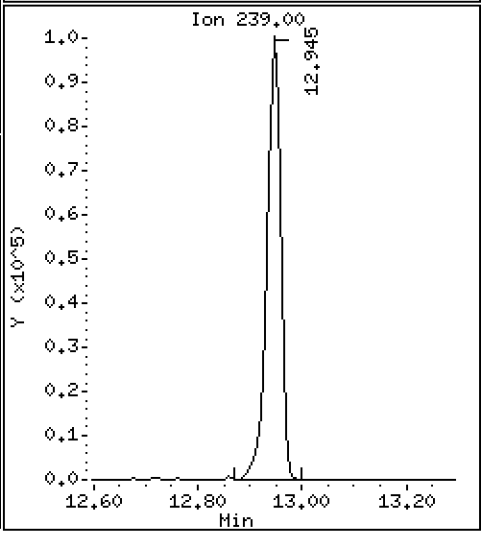


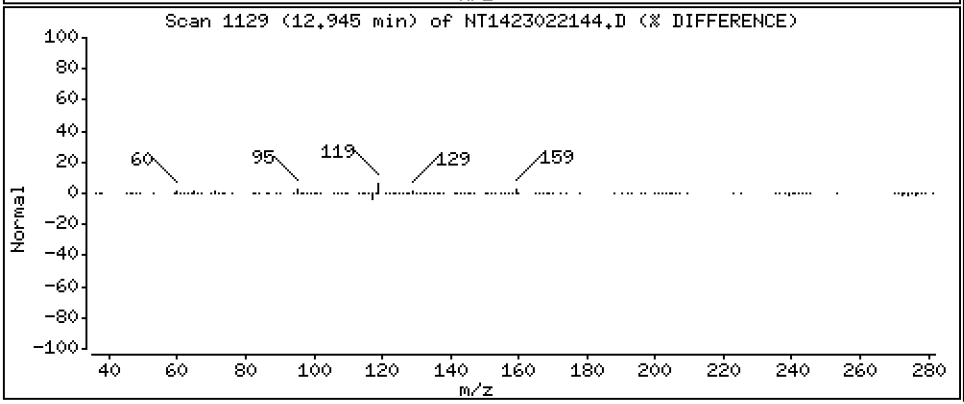












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

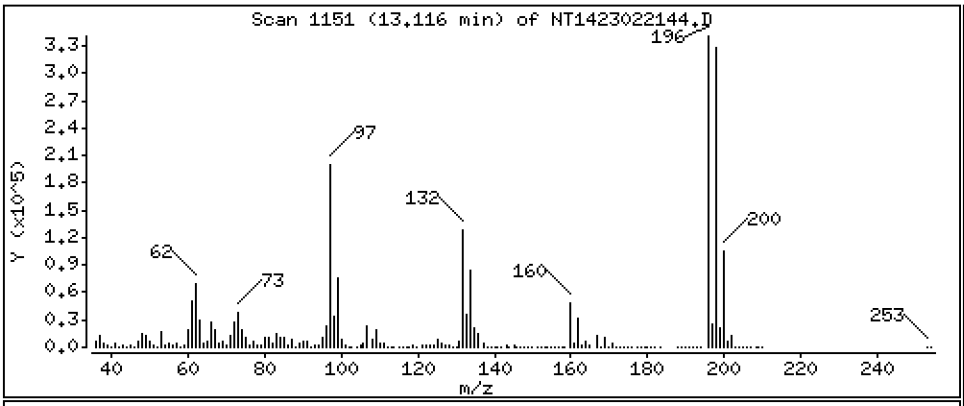
Operator: DSD

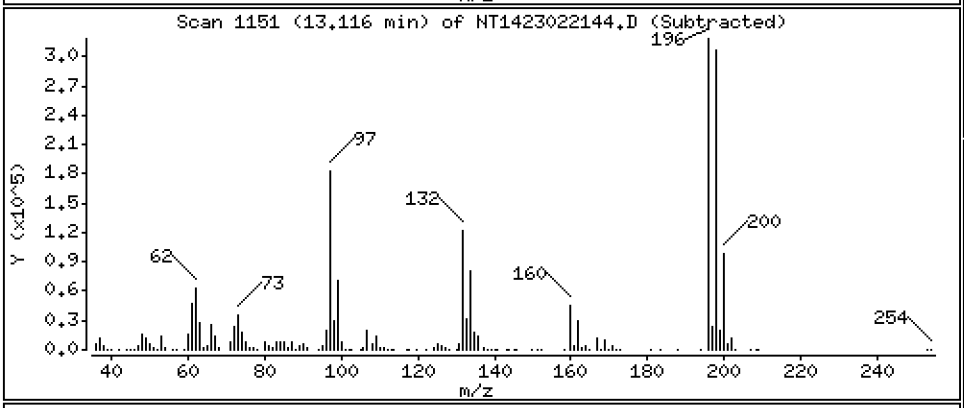
Column phase: ZB-5msi

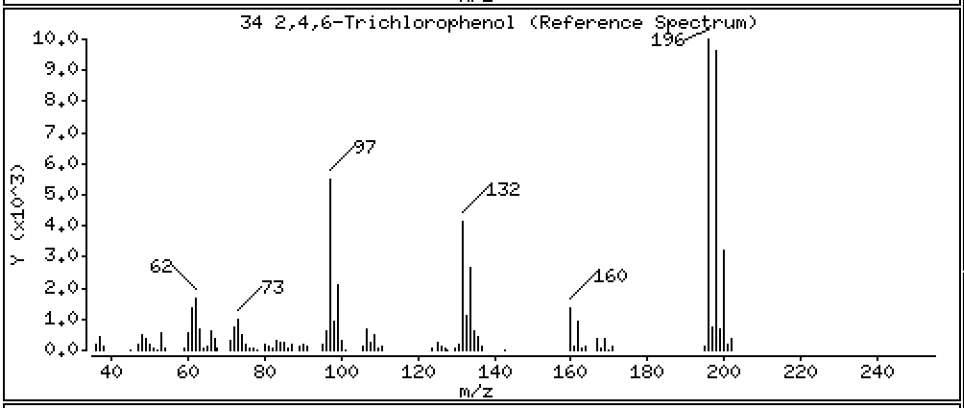
Column diameter: 0.25

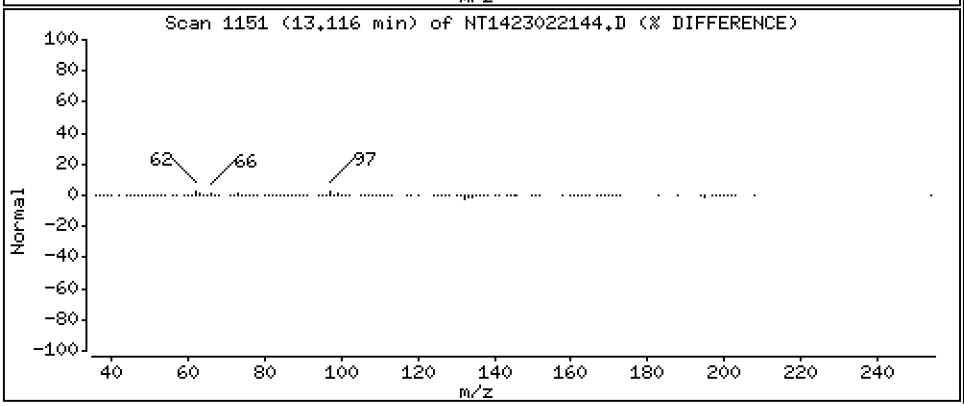
34 2,4,6-Trichlorophenol

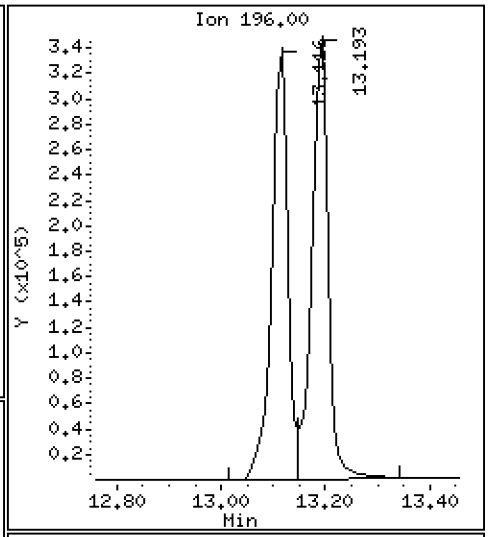
Concentration: 12.38 ug/mL

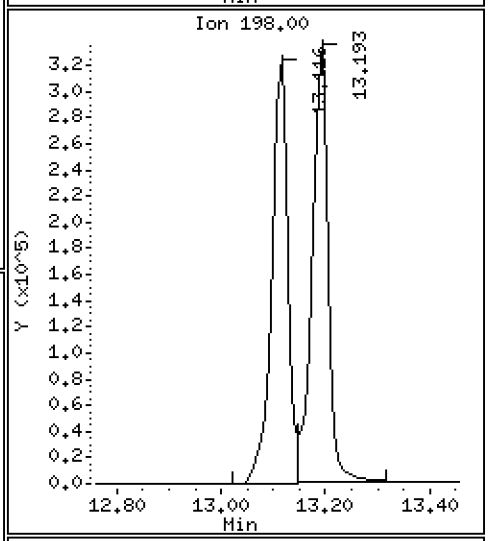


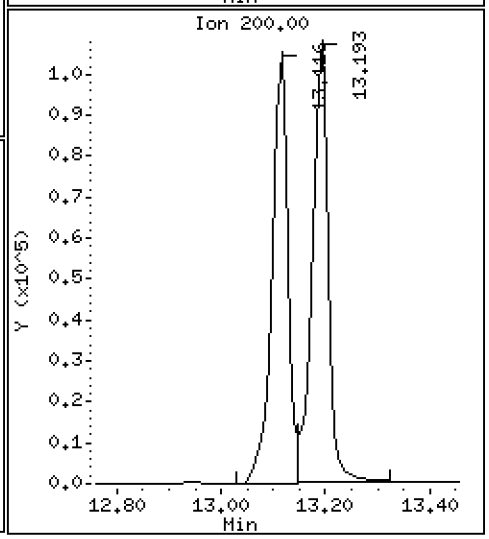












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

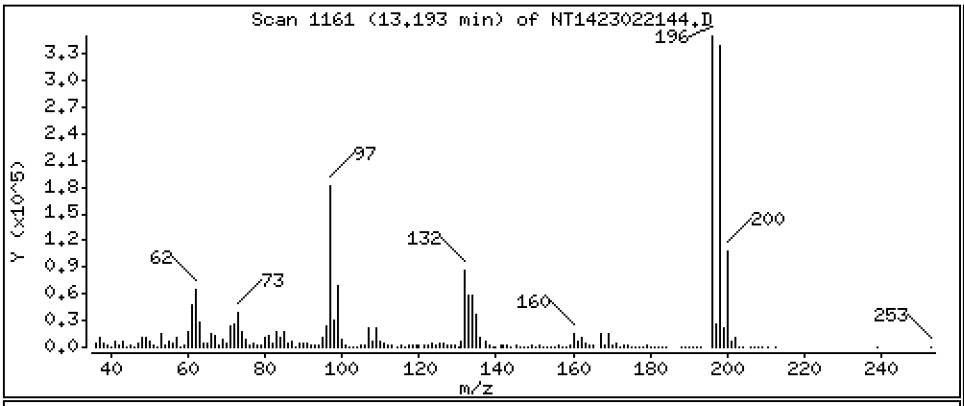
Operator: DSD

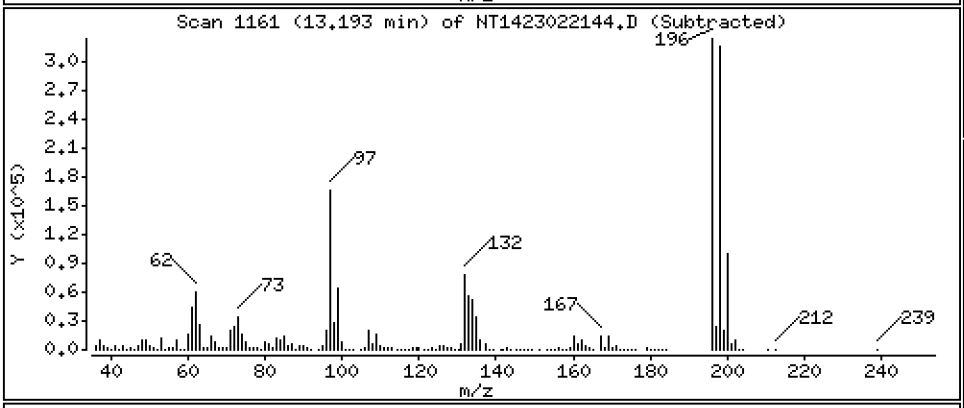
Column phase: ZB-5msi

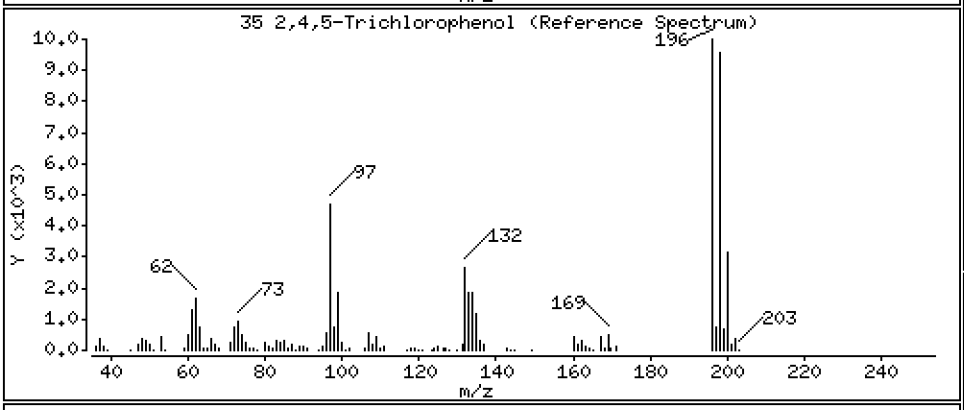
Column diameter: 0.25

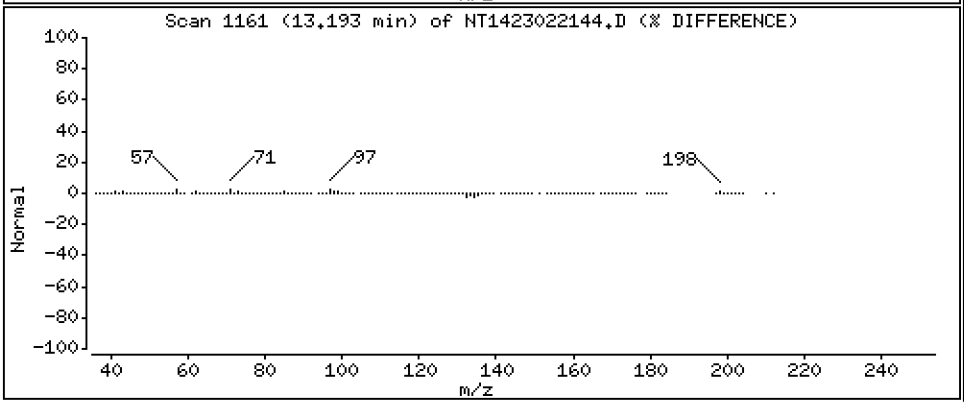
35 2,4,5-Trichlorophenol

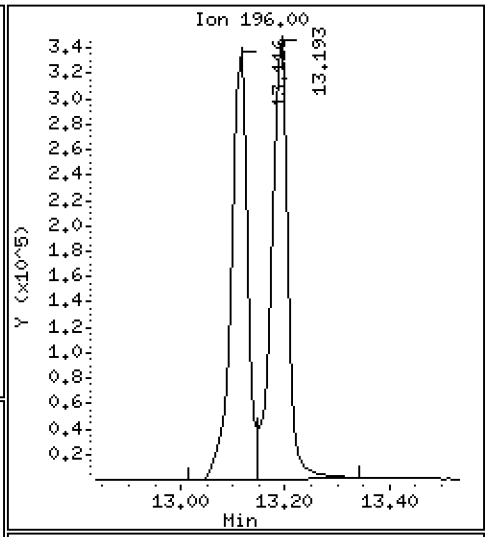
Concentration: 12.01 ug/mL

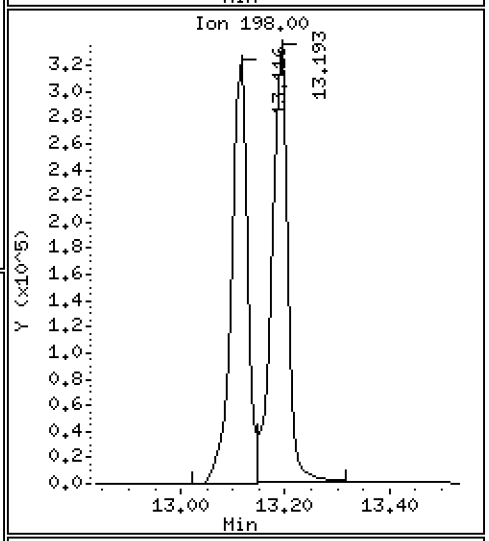


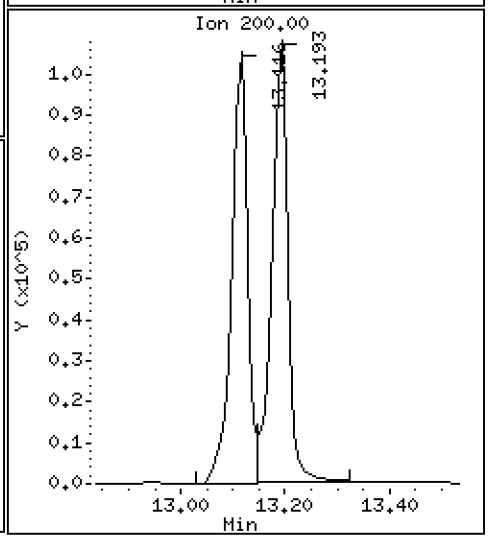












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

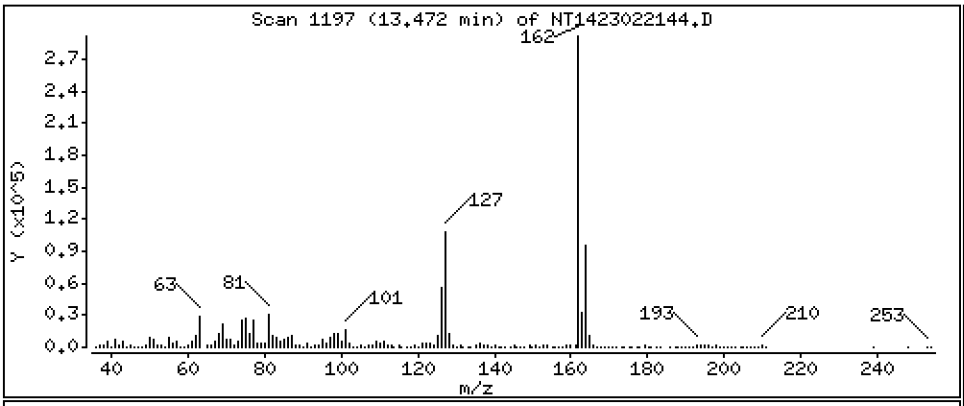
Operator: DSD

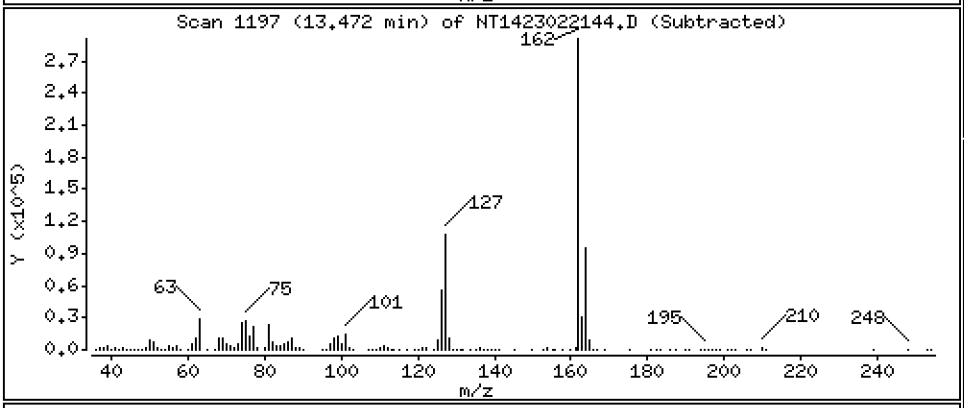
Column phase: ZB-5msi

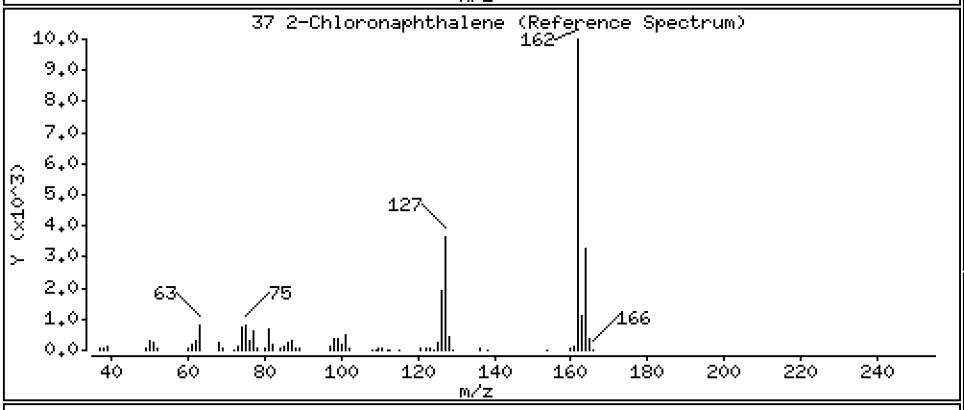
Column diameter: 0.25

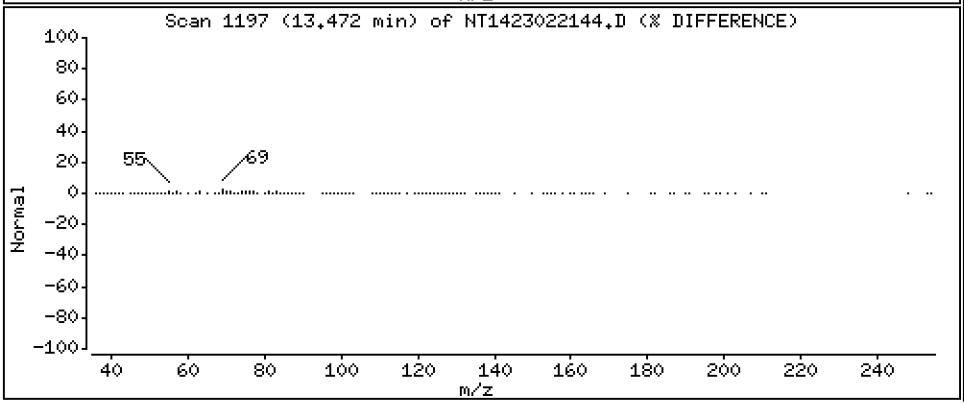
37 2-Chloronaphthalene

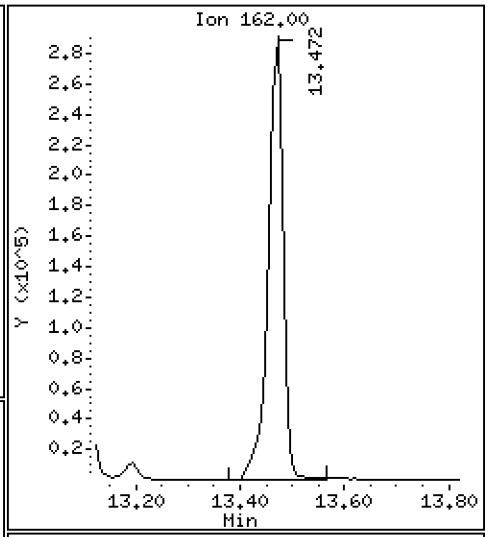
Concentration: 3.277 ug/mL

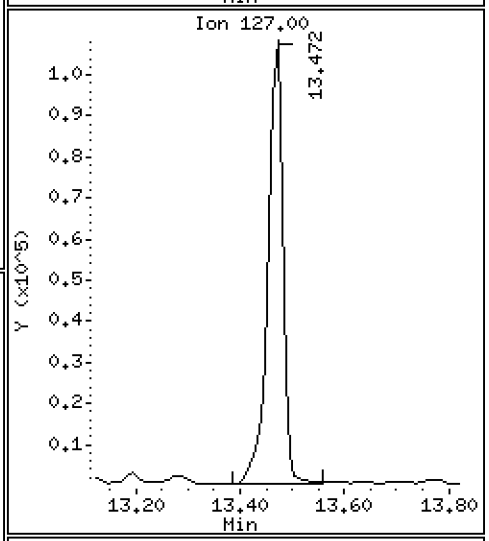


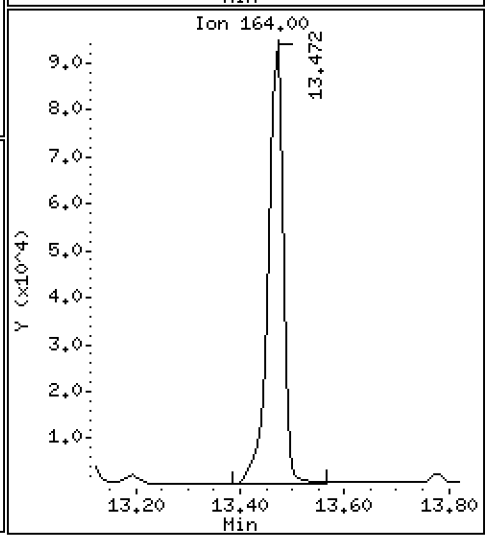












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

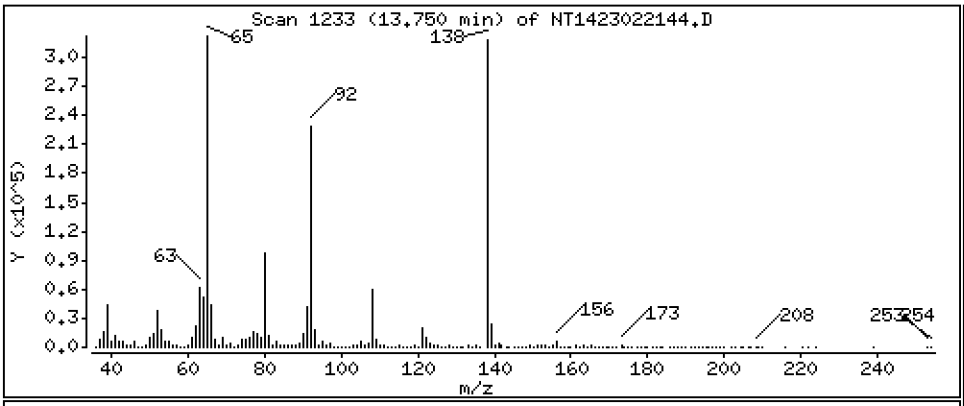
Operator: DSD

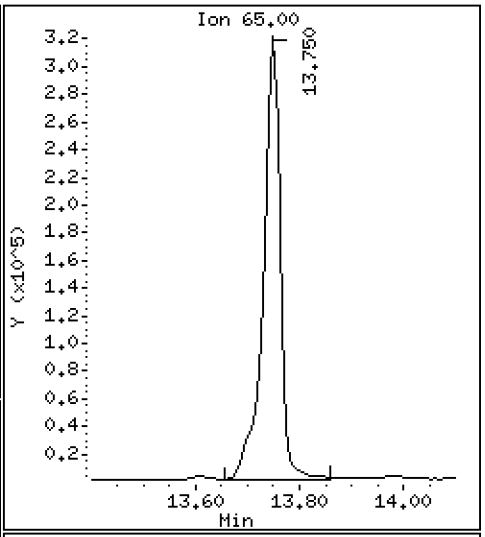
Column phase: ZB-5msi

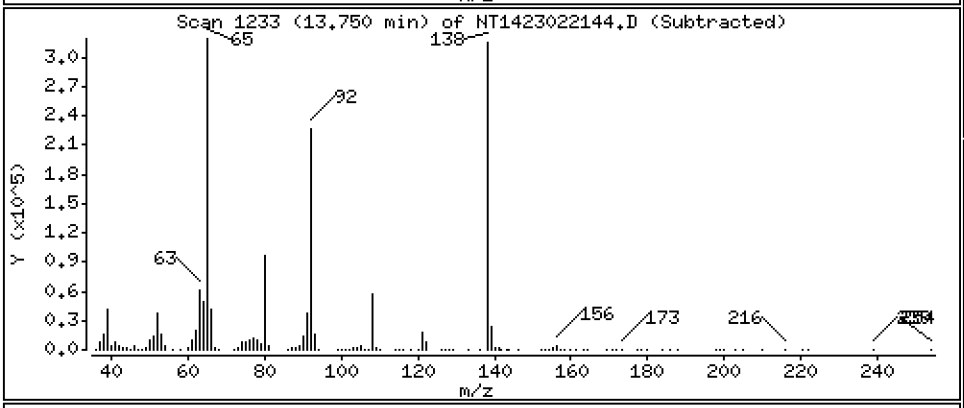
Column diameter: 0.25

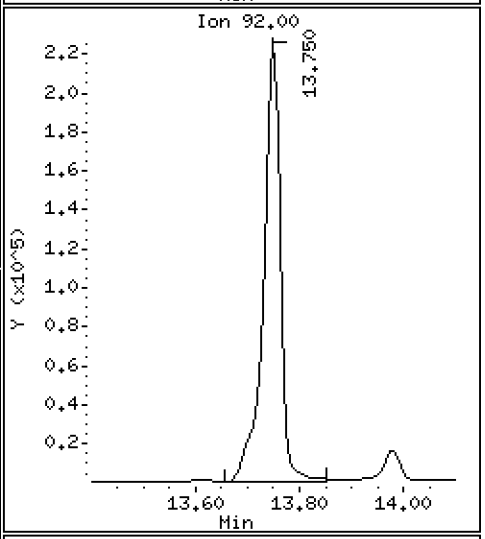
38 2-Nitroaniline

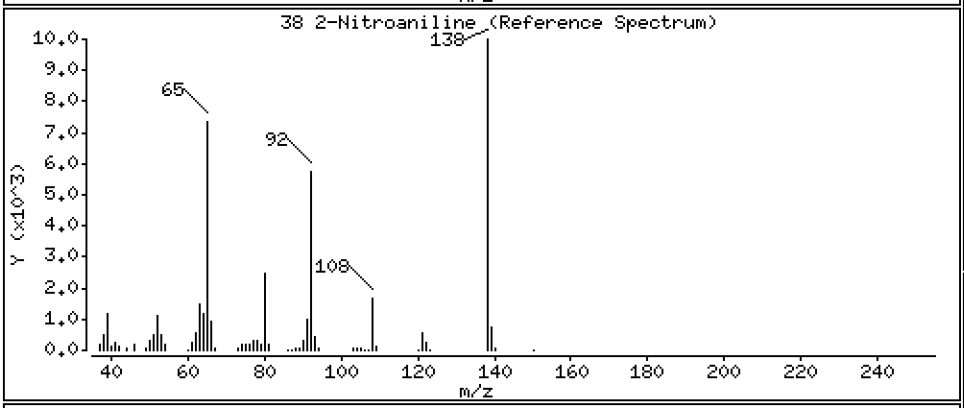
Concentration: 12.74 ug/mL

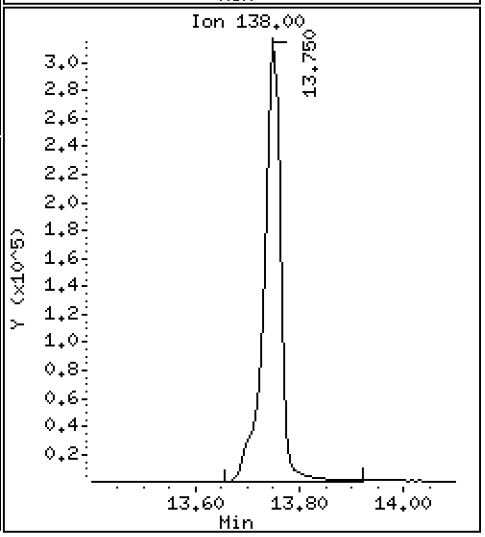


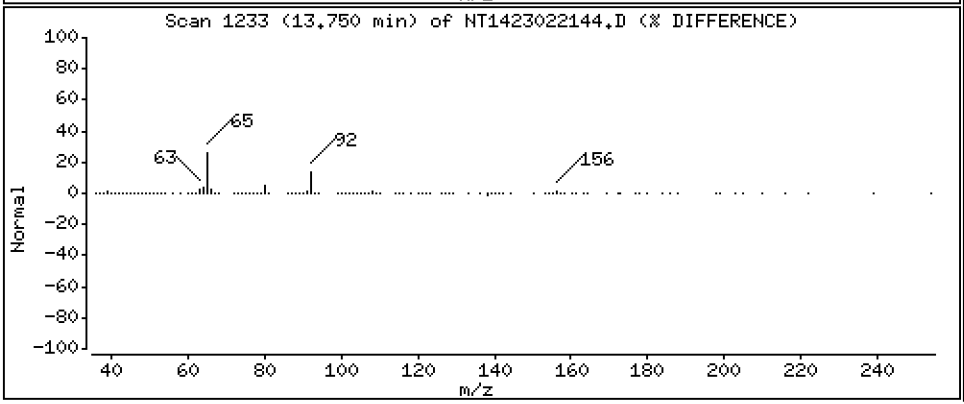












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

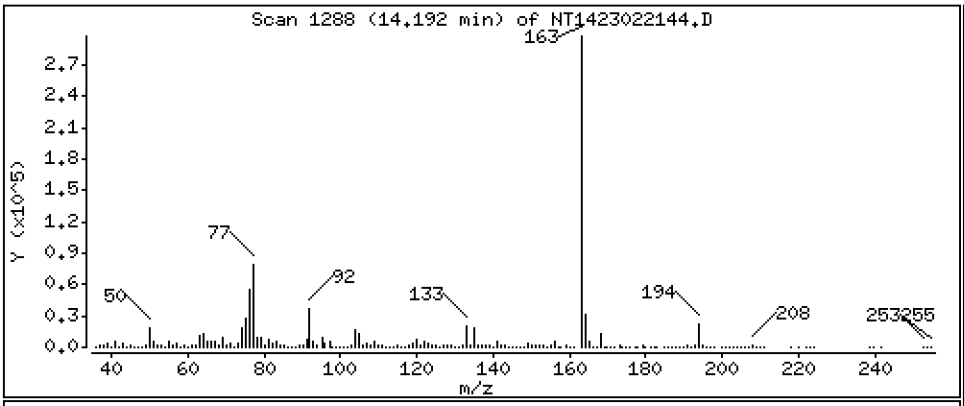
Operator: DSD

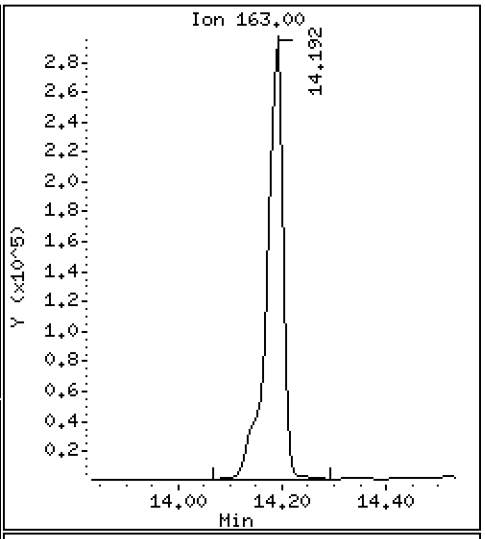
Column phase: ZB-5msi

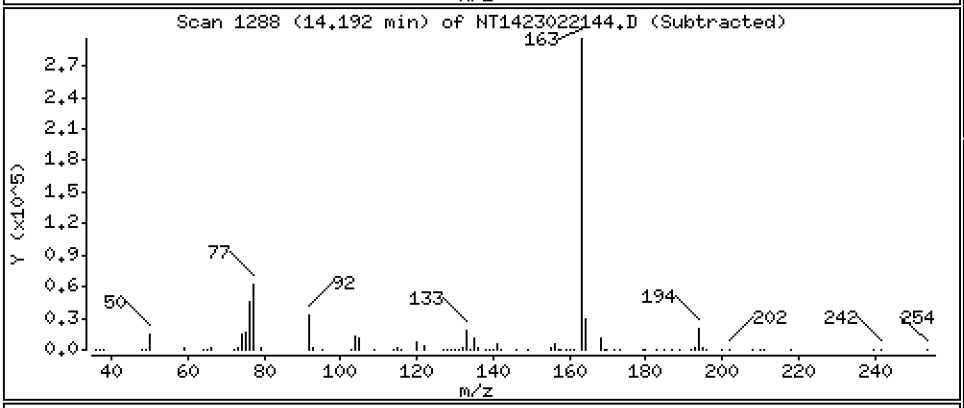
Column diameter: 0.25

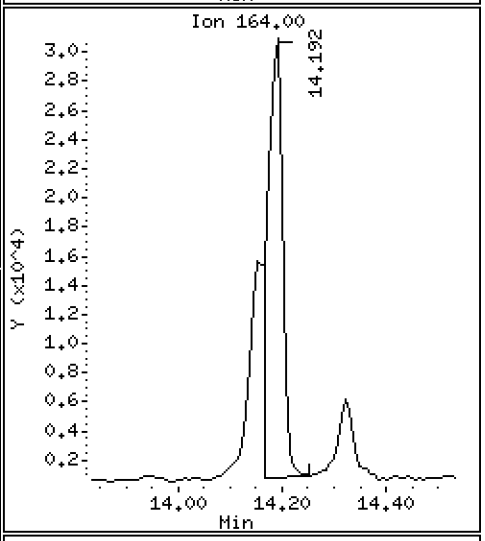
39 Dimethylphthalate

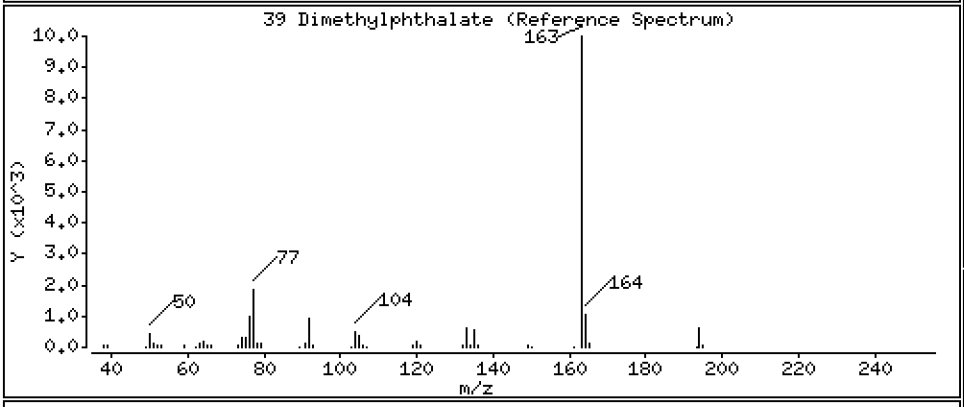
Concentration: 3.520 ug/mL

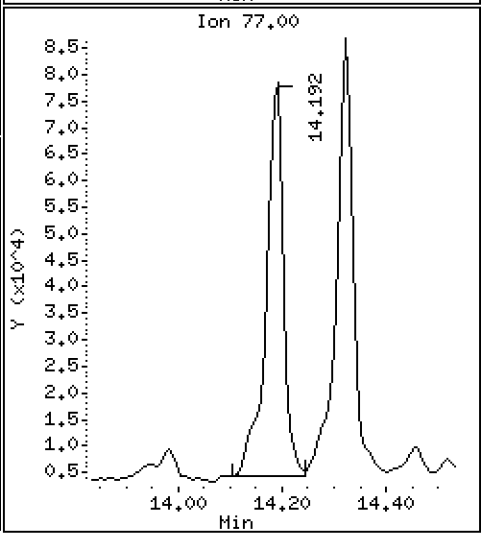


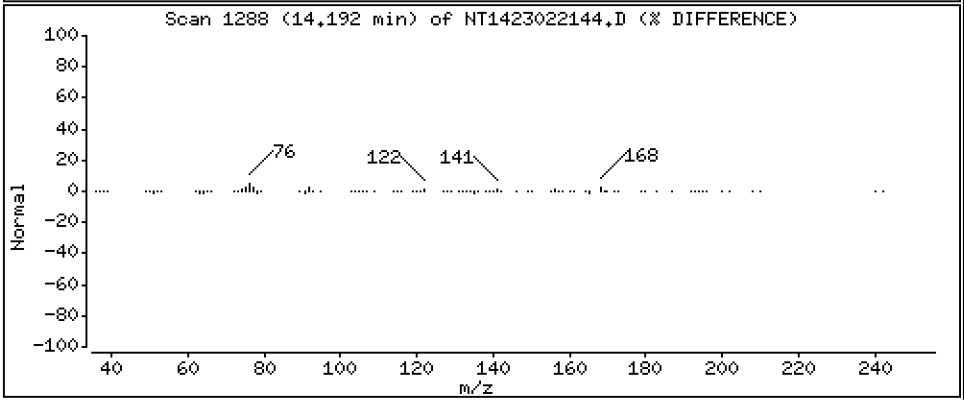












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

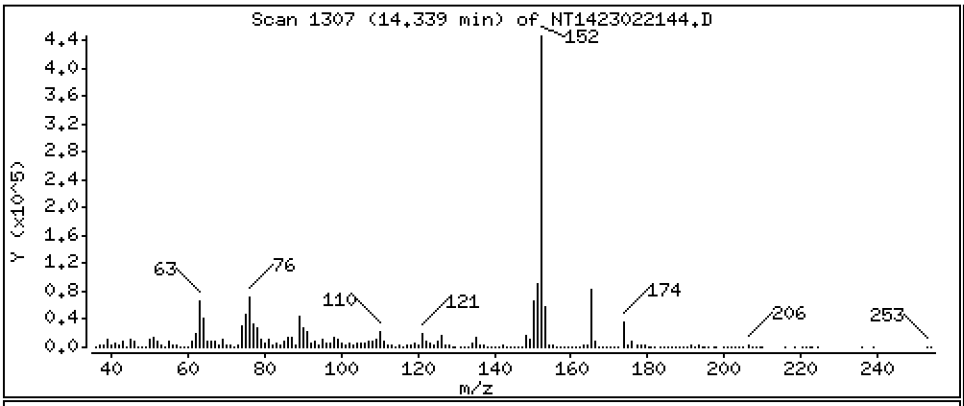
Operator: DSD

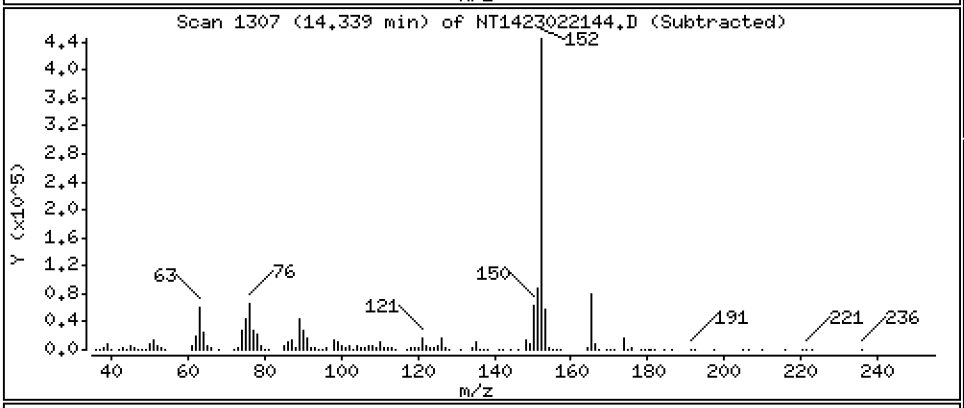
Column phase: ZB-5msi

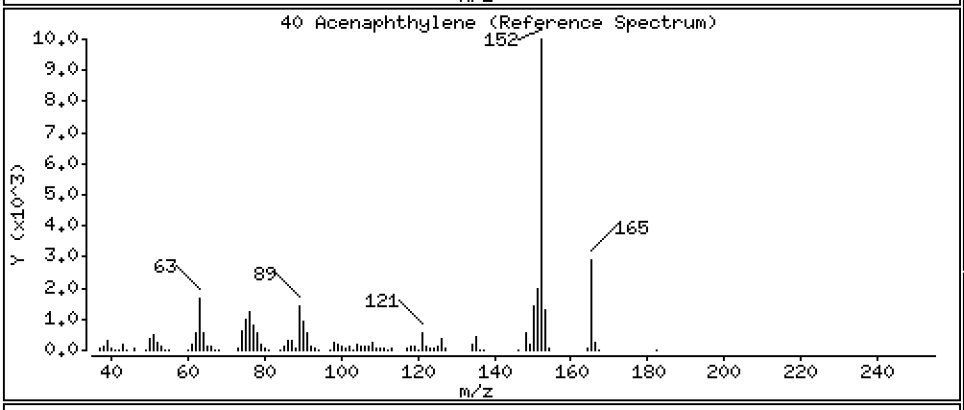
Column diameter: 0.25

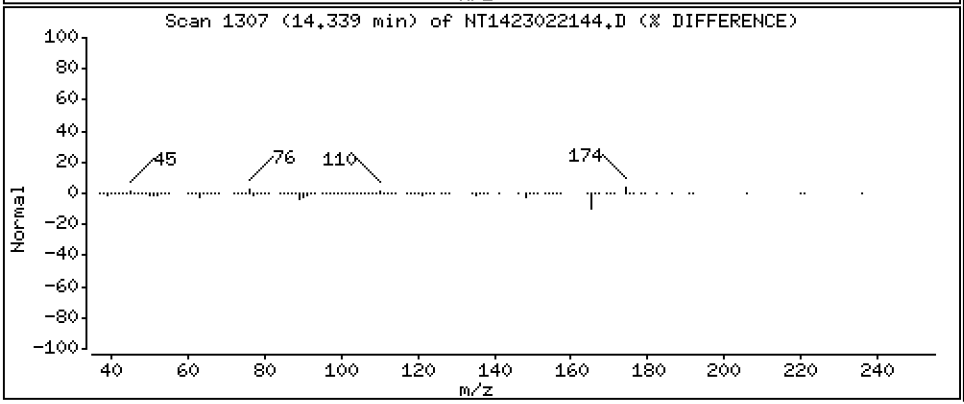
40 Acenaphthylene

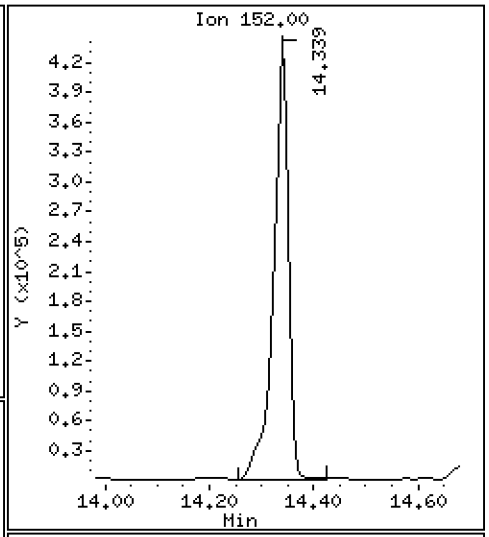
Concentration: 3.355 ug/mL

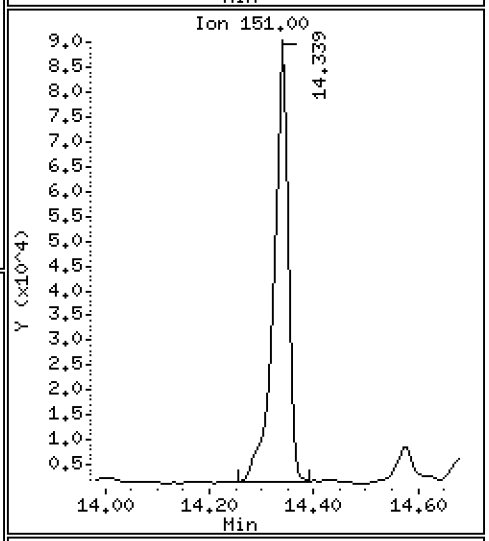


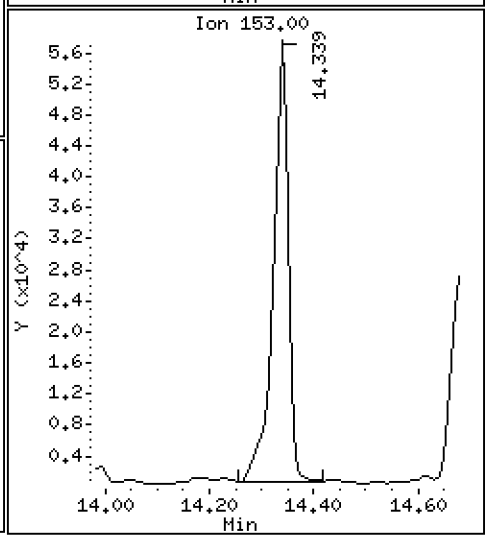












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

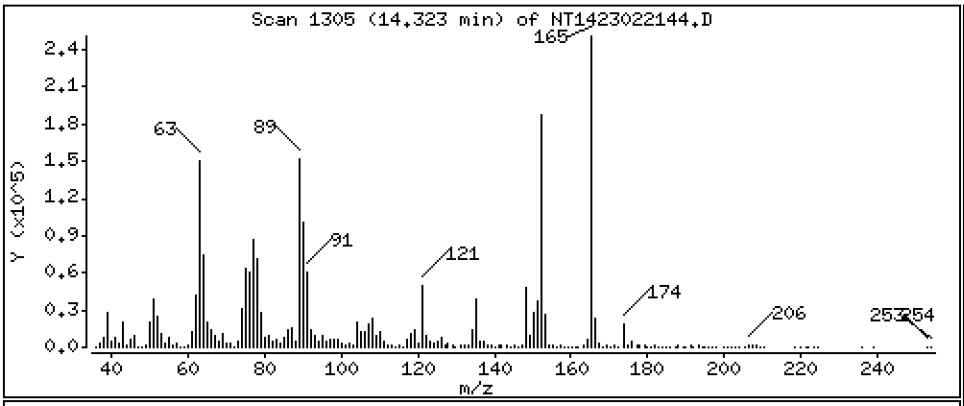
Operator: DSD

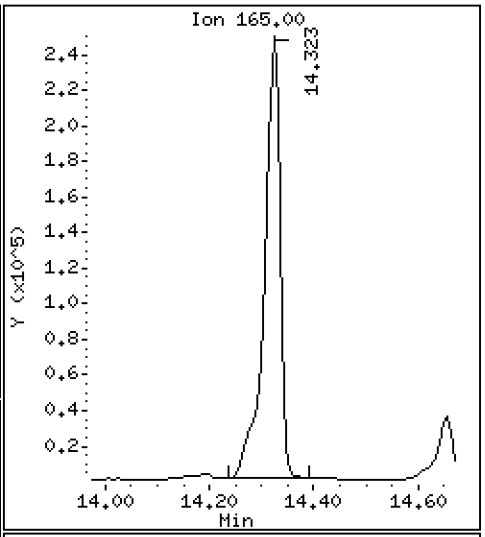
Column phase: ZB-5msi

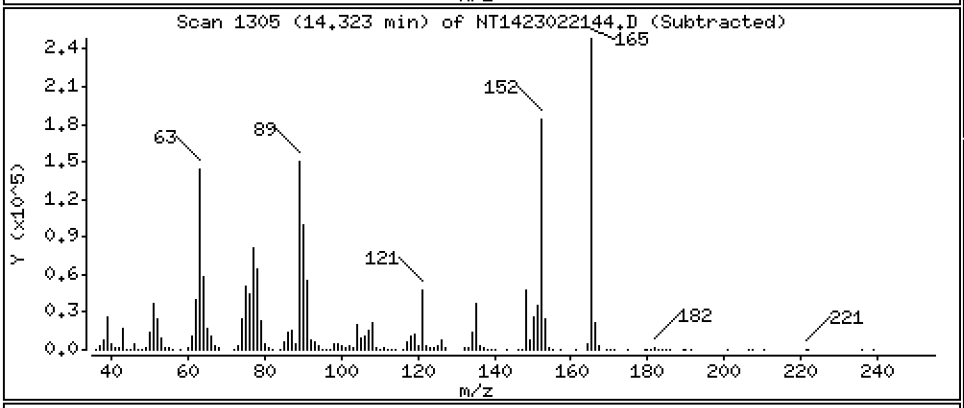
Column diameter: 0.25

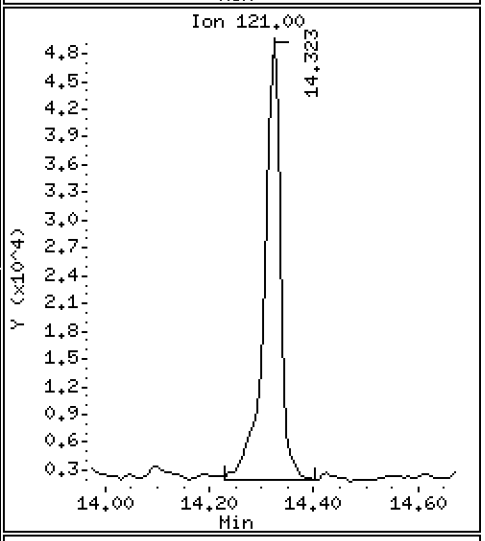
41 2,6-Dinitrotoluene

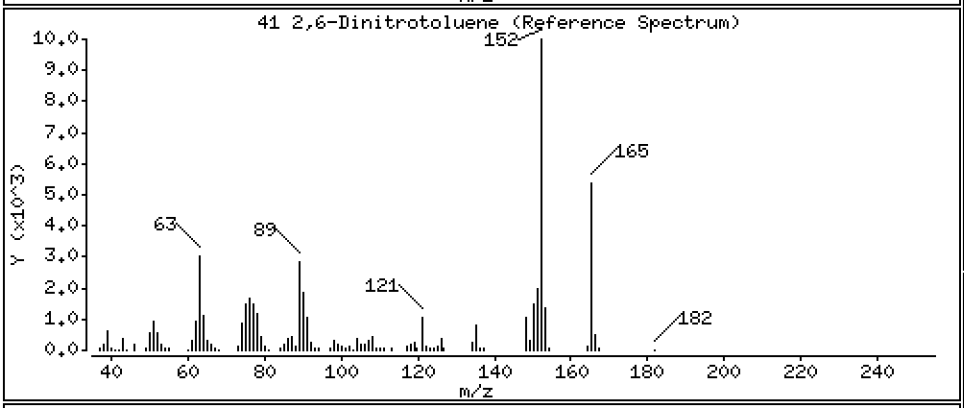
Concentration: 12.13 ug/mL

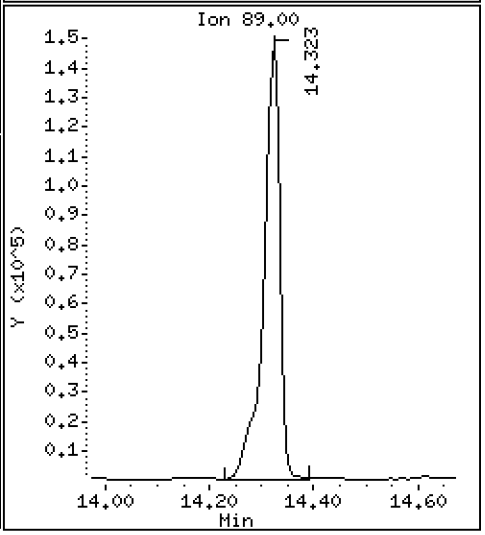


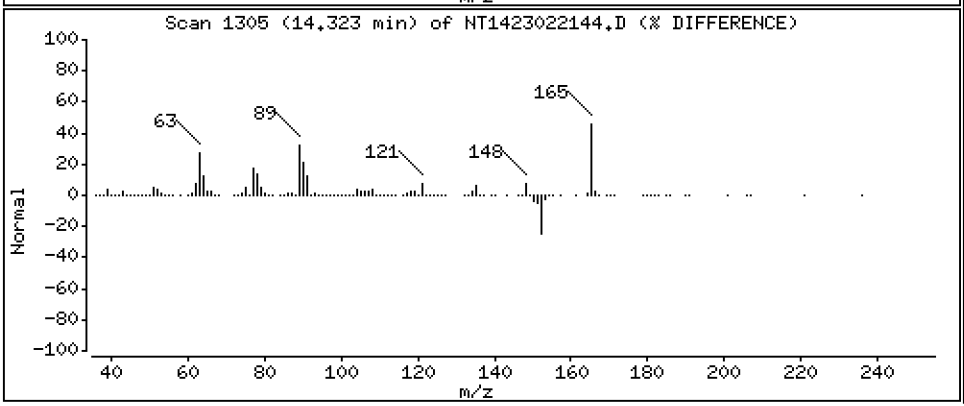












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

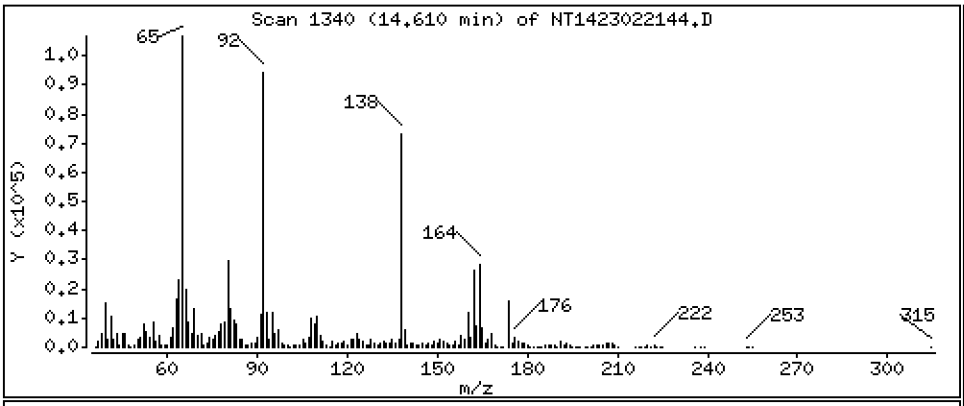
Operator: DSD

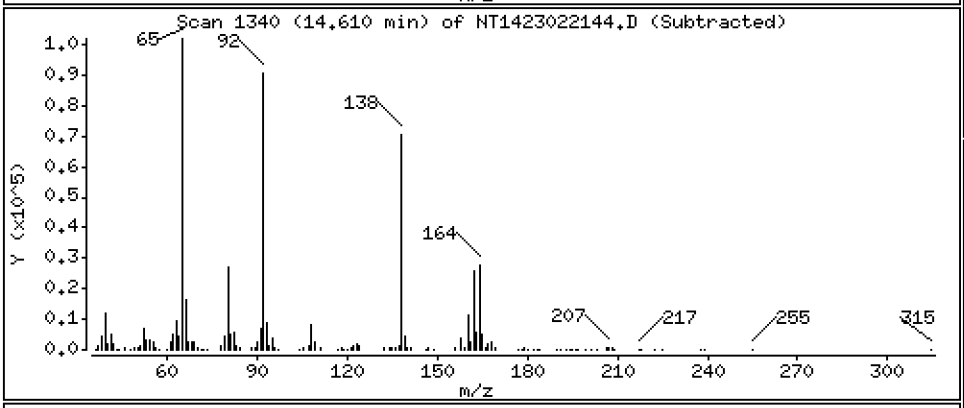
Column phase: ZB-5msi

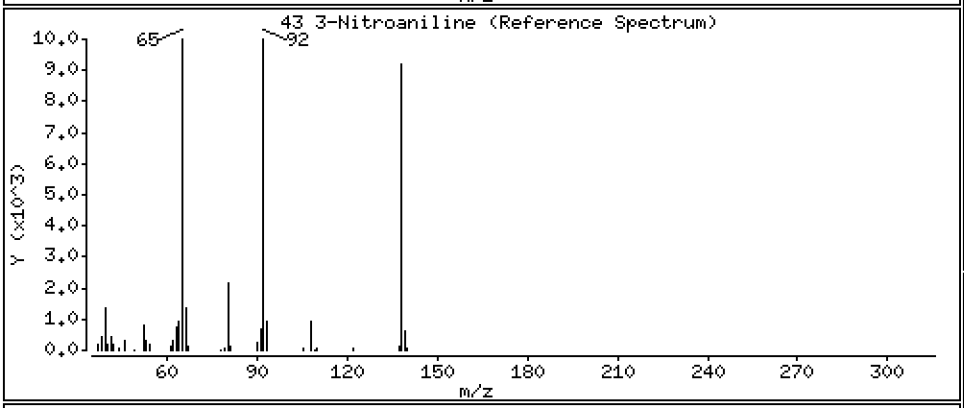
Column diameter: 0.25

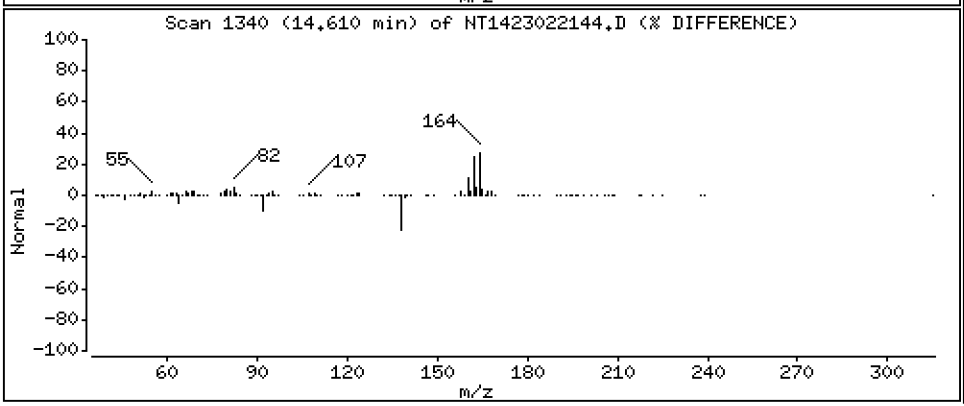
43 3-Nitroaniline

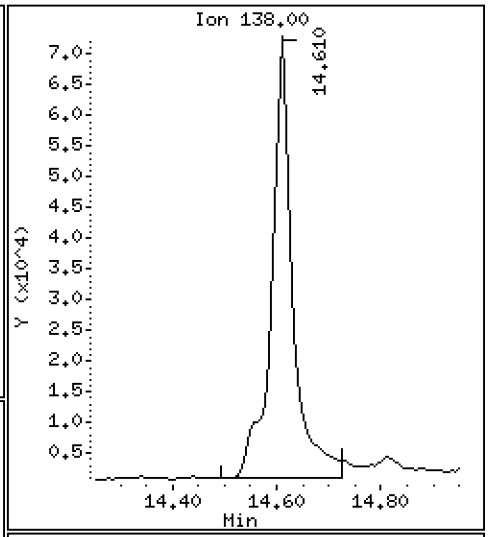
Concentration: 4.908 ug/mL

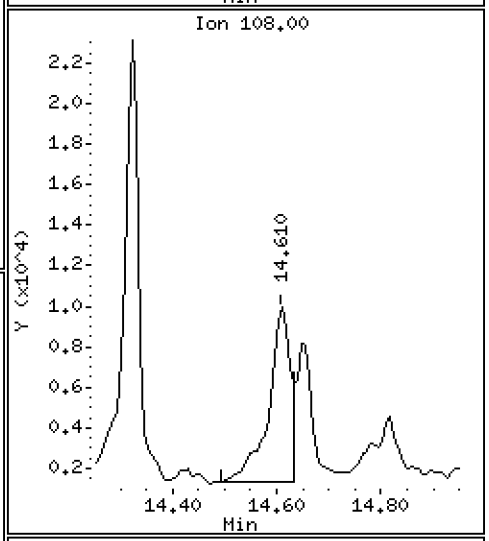


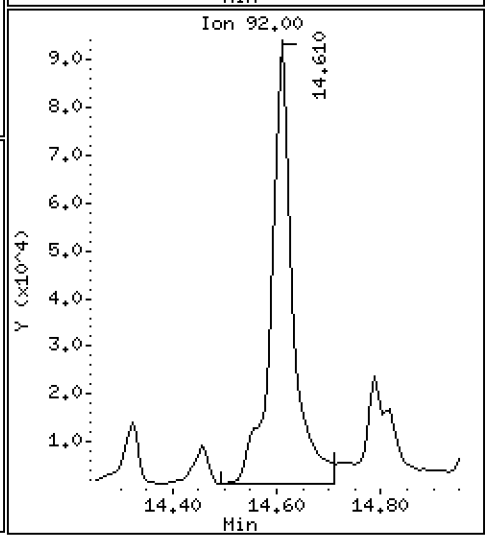












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

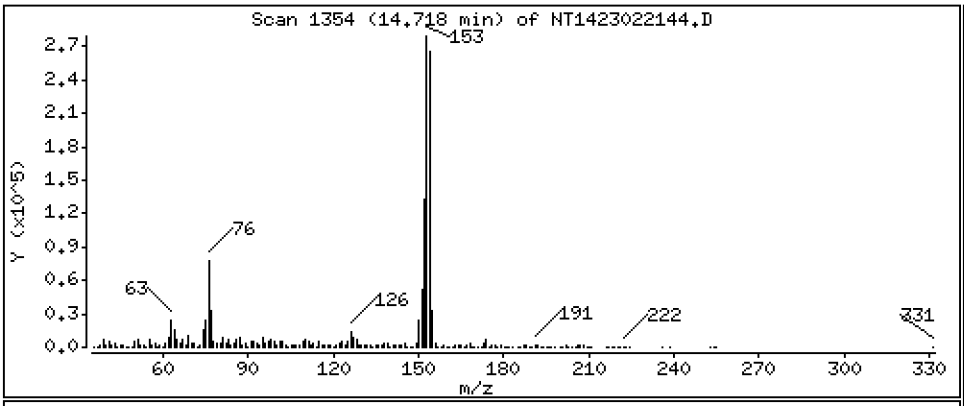
Operator: DSD

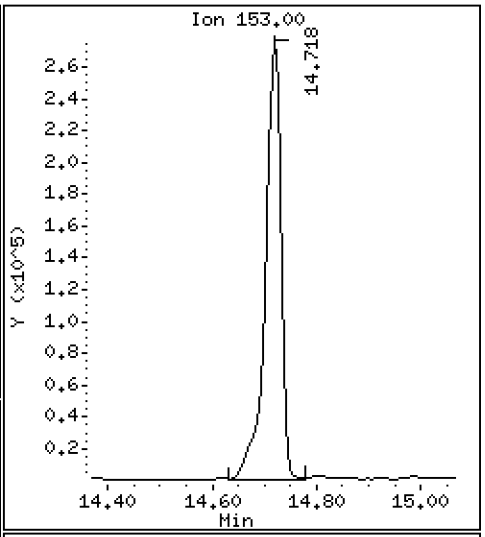
Column phase: ZB-5msi

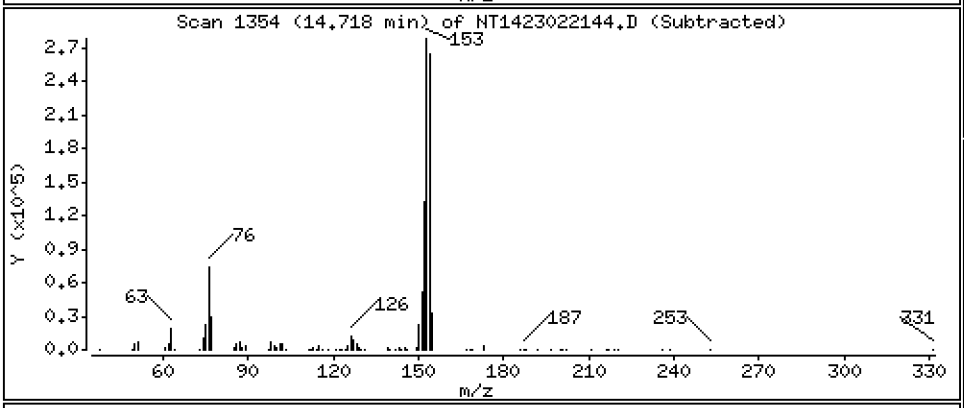
Column diameter: 0.25

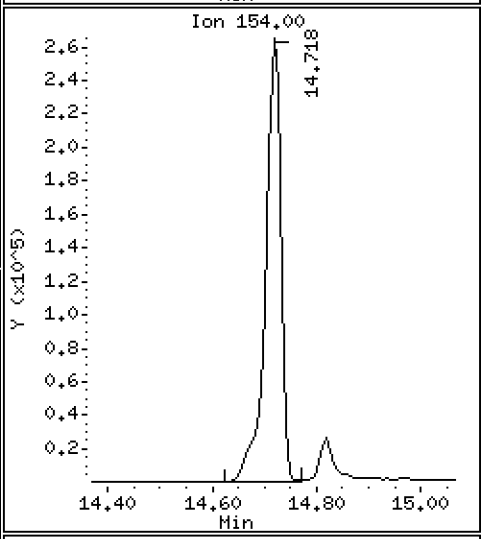
44 Acenaphthene

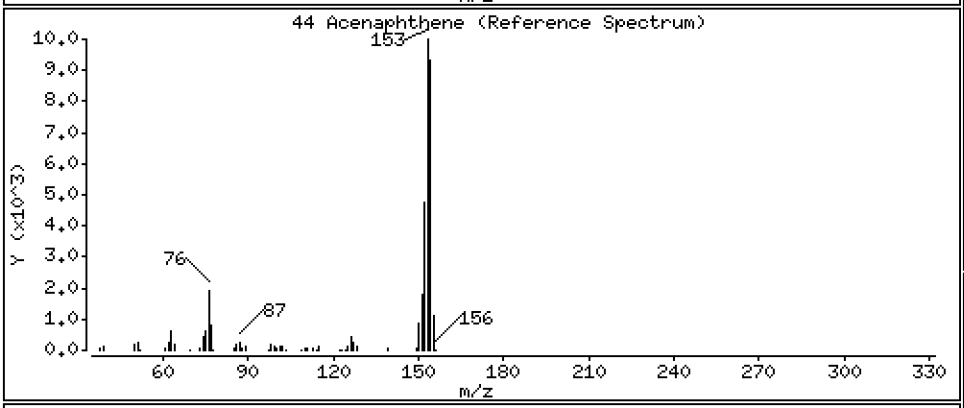
Concentration: 3.575 ug/mL

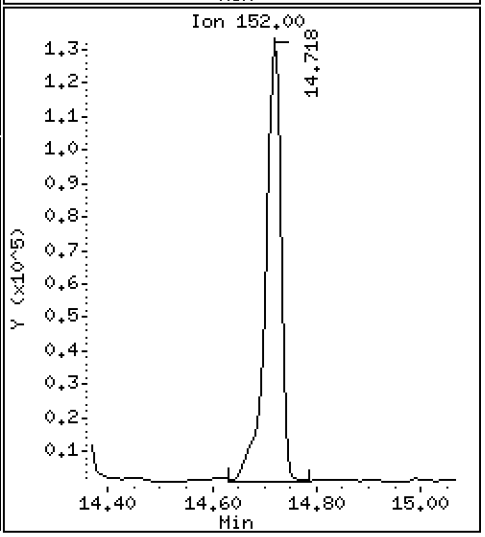


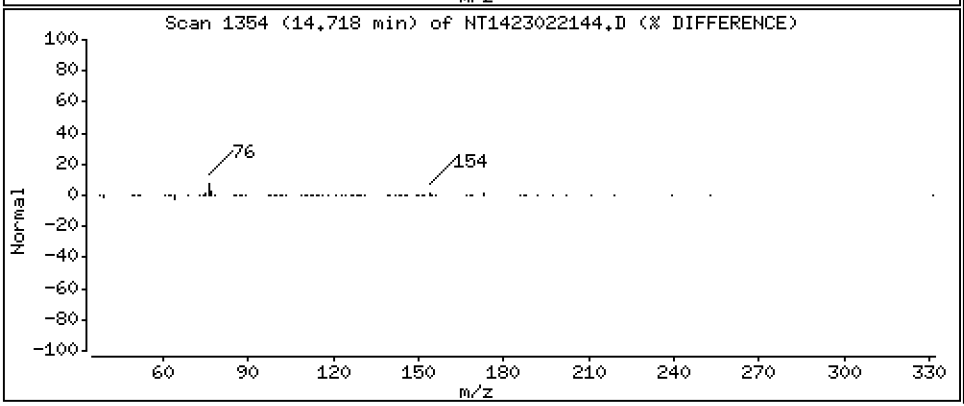












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

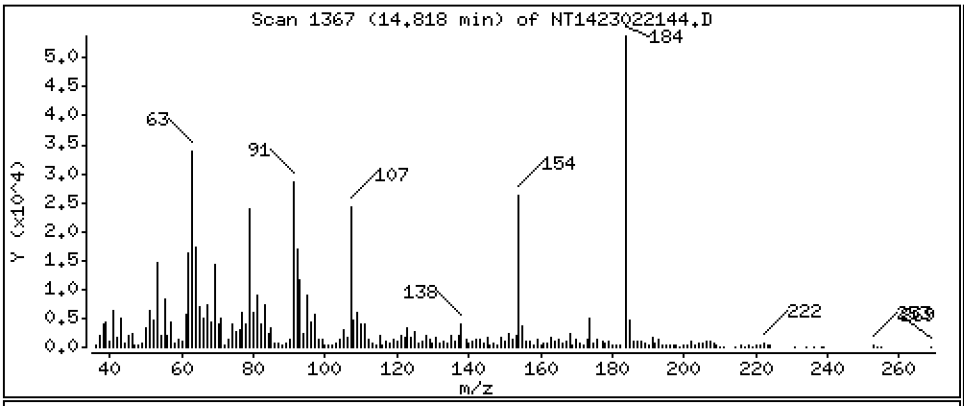
Operator: DSD

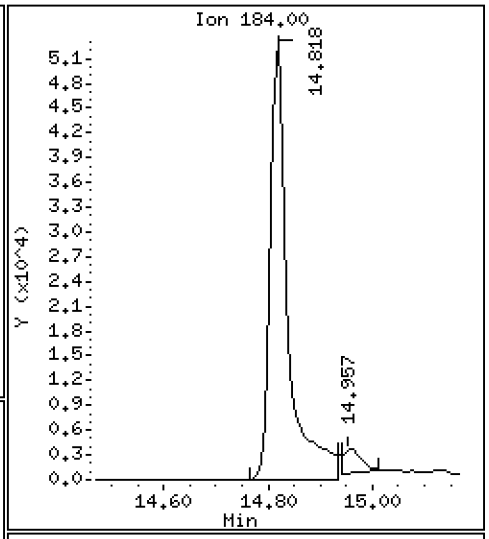
Column phase: ZB-5msi

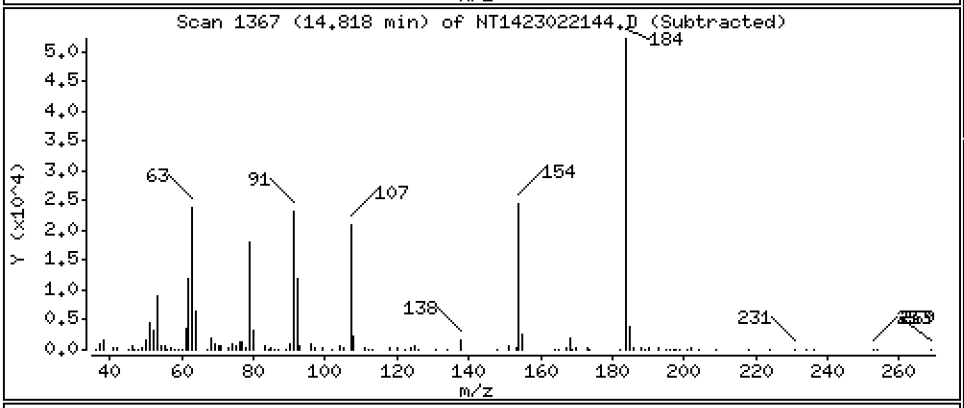
Column diameter: 0.25

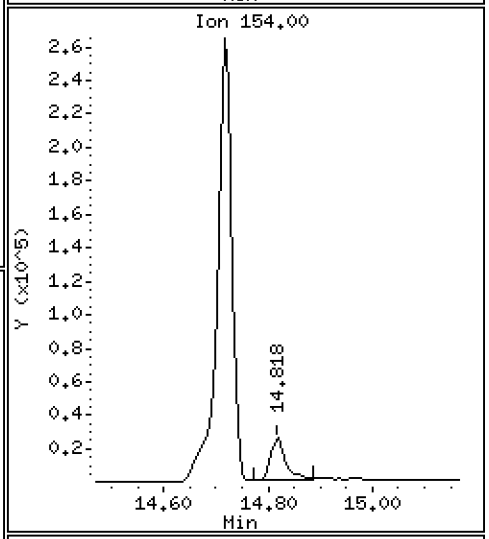
45 2,4-Dinitrophenol

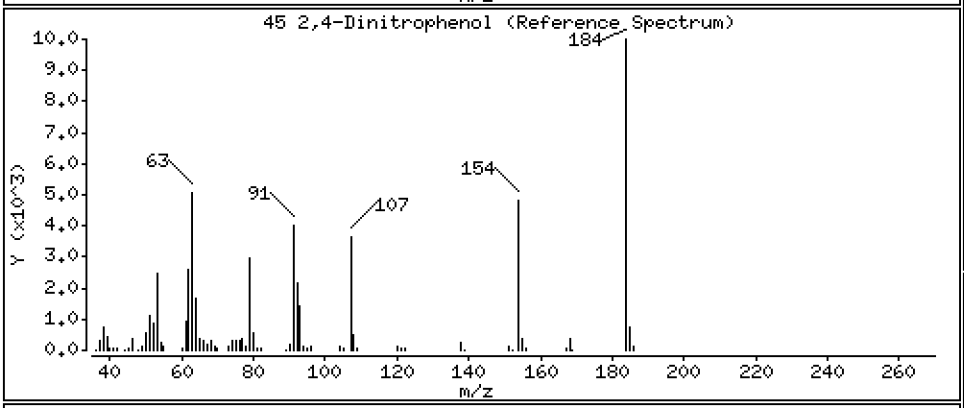
Concentration: 4.427 ug/mL

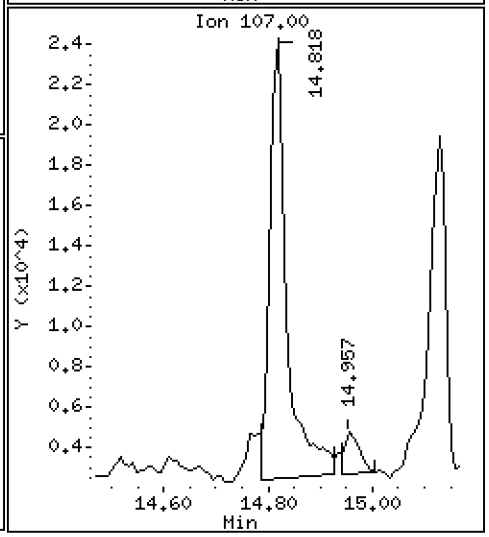


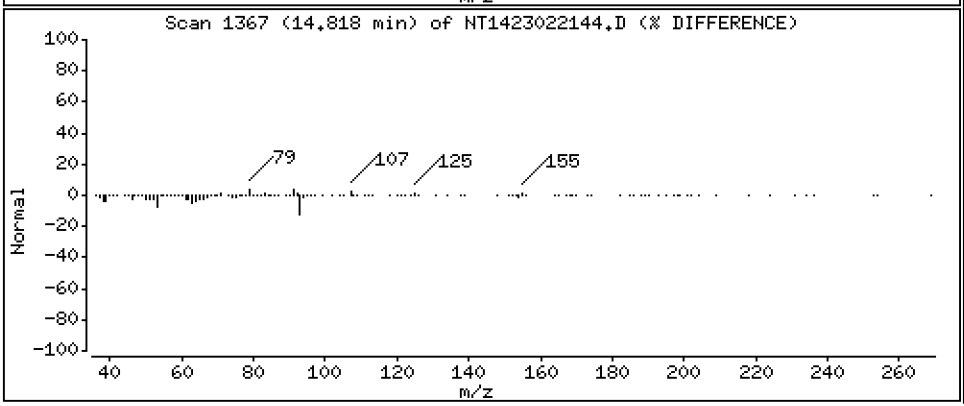












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

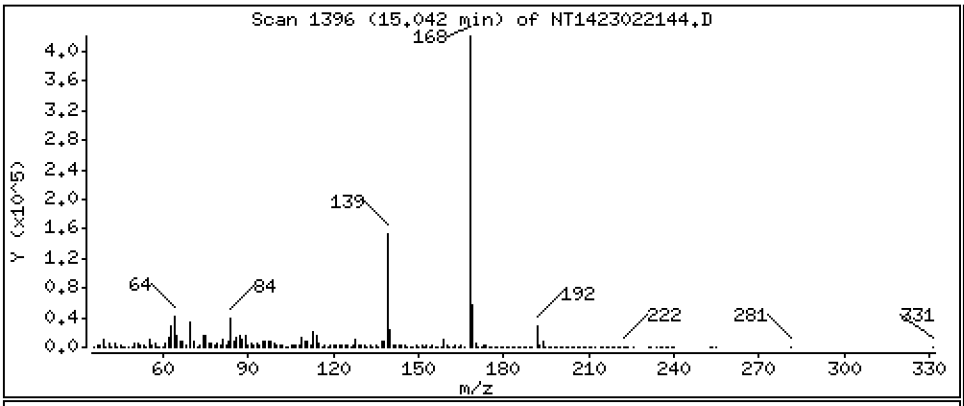
Operator: DSD

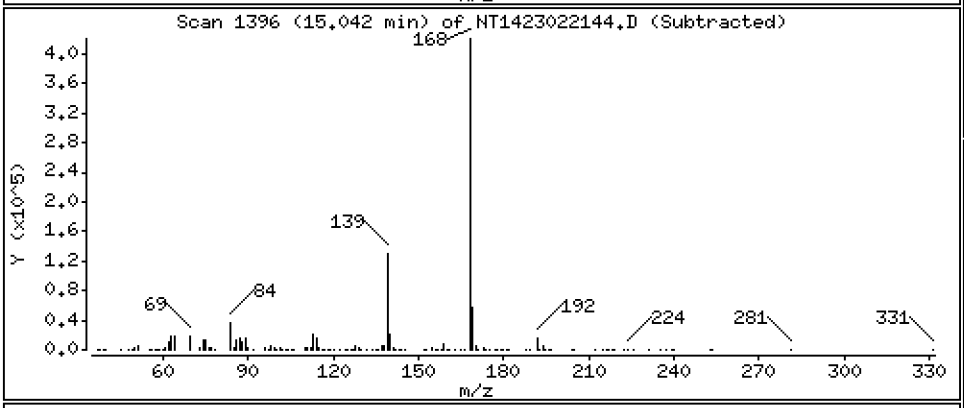
Column phase: ZB-5msi

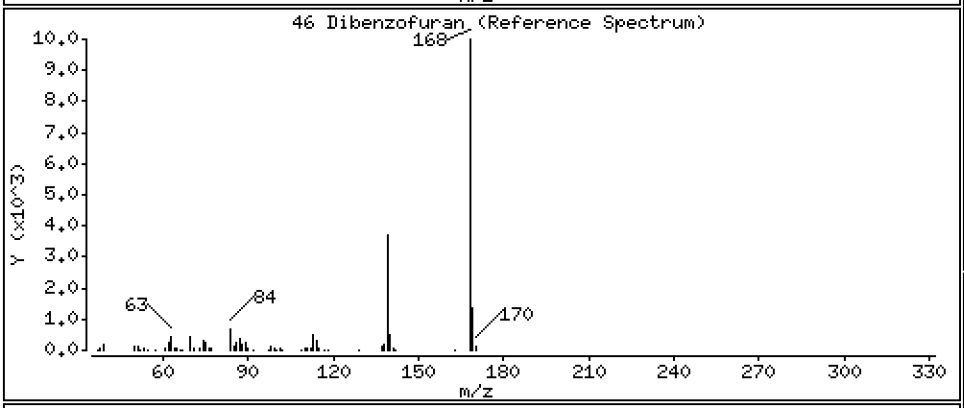
Column diameter: 0.25

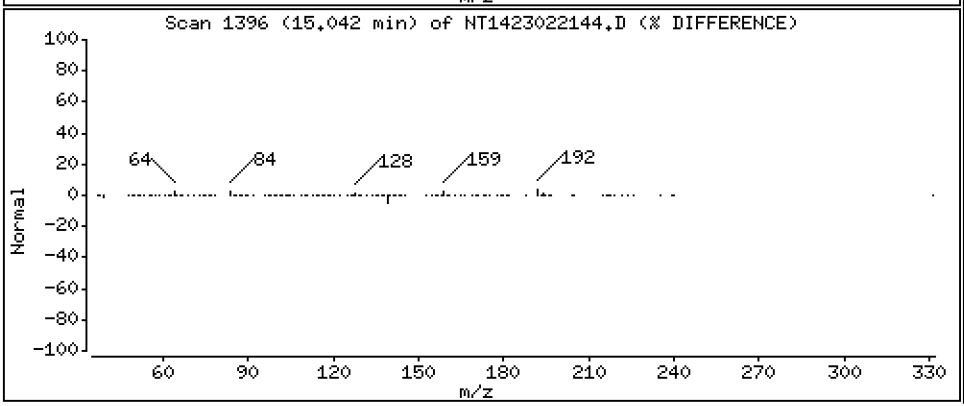
46 Dibenzofuran

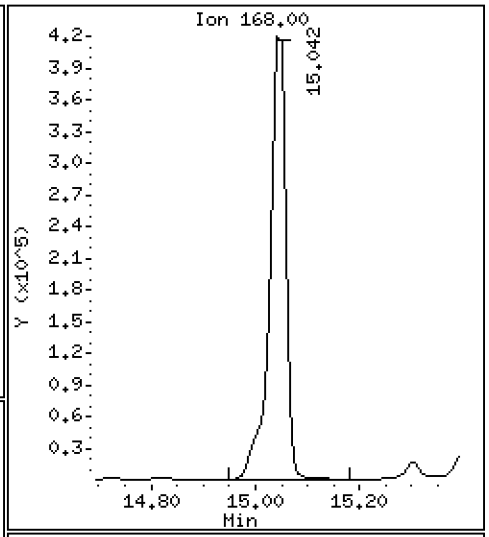
Concentration: 3.456 ug/mL

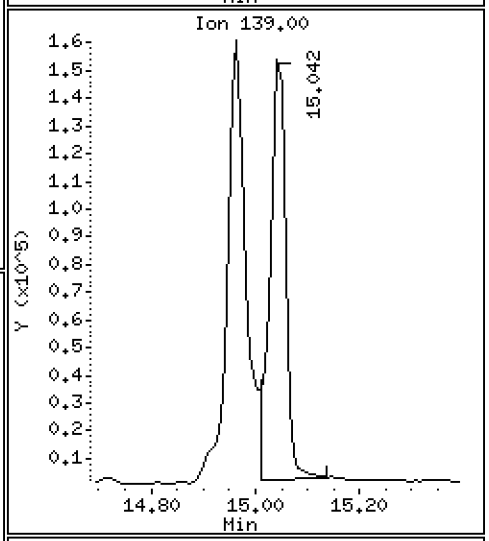


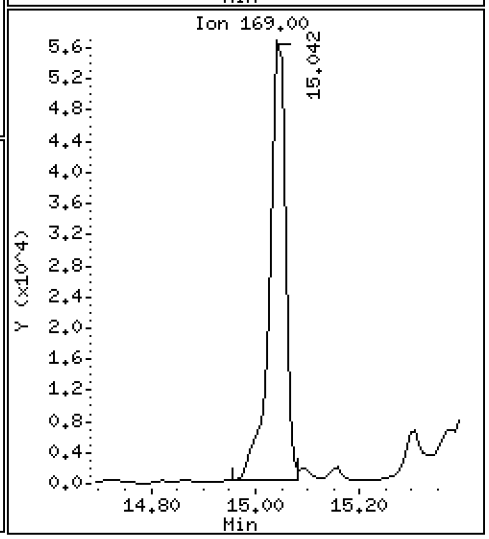












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

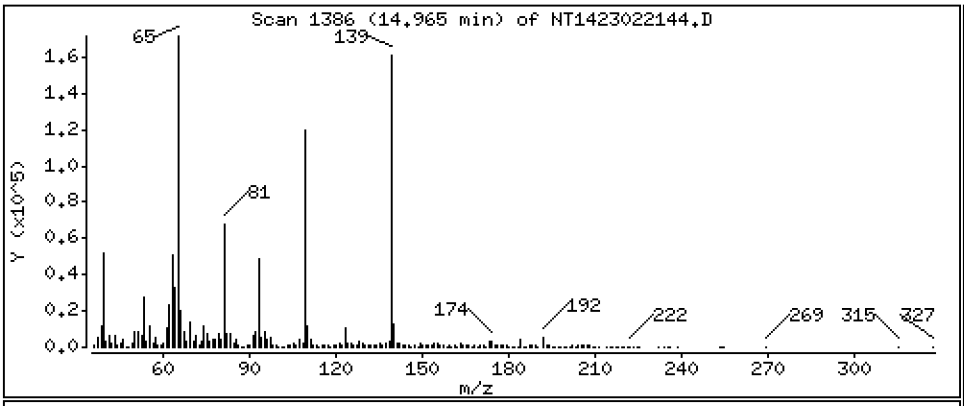
Operator: DSD

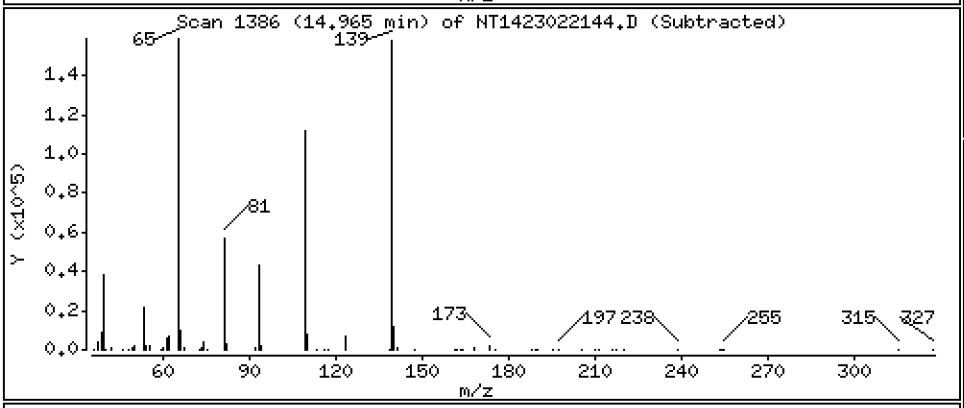
Column phase: ZB-5msi

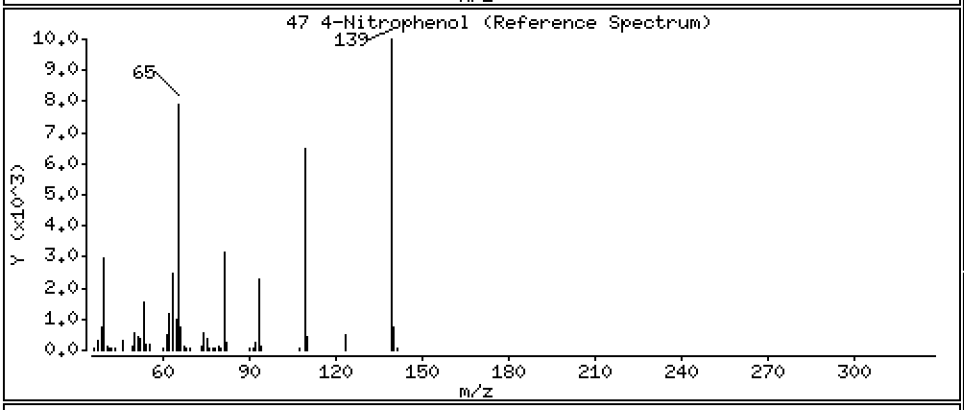
Column diameter: 0.25

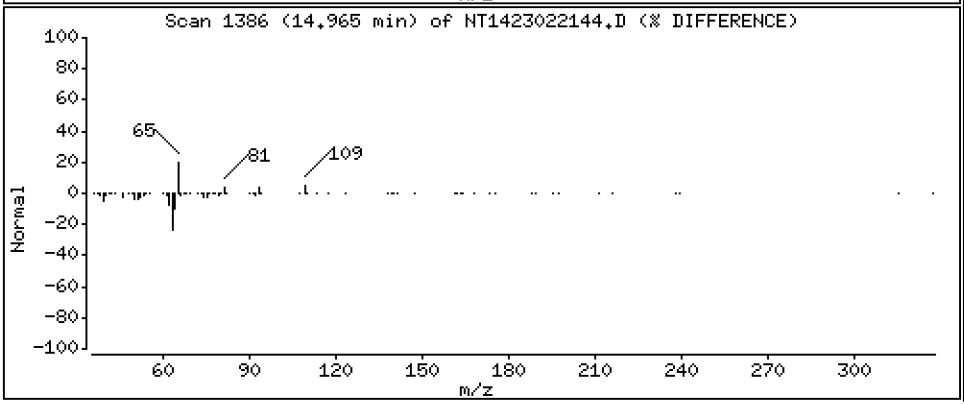
47 4-Nitrophenol

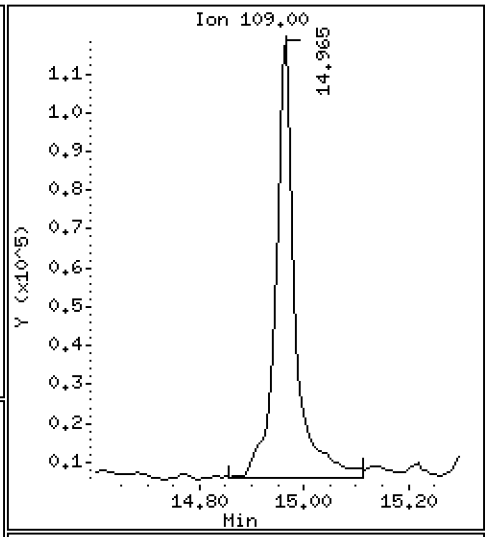
Concentration: 11.36 ug/mL

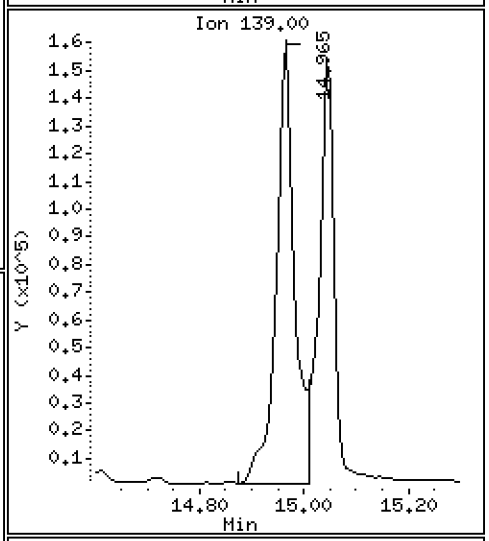


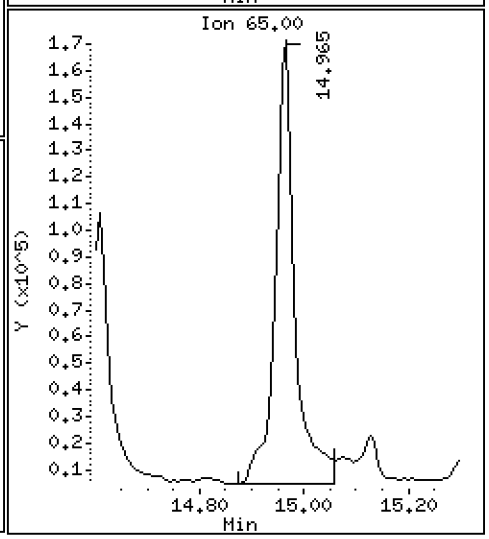












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

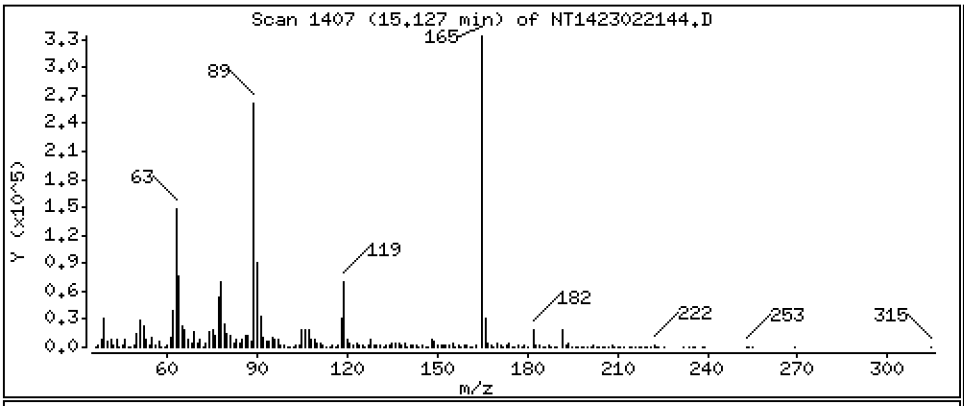
Operator: DSD

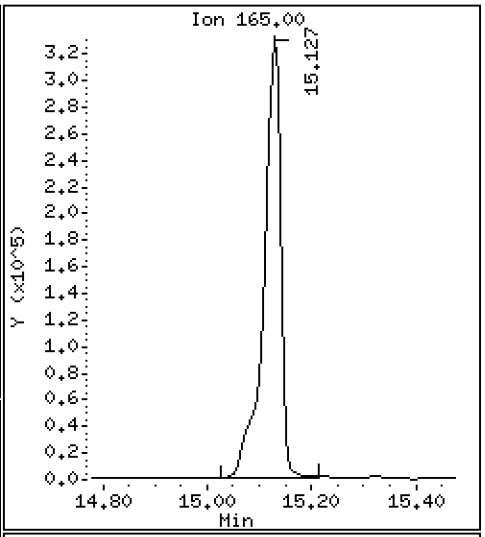
Column phase: ZB-5msi

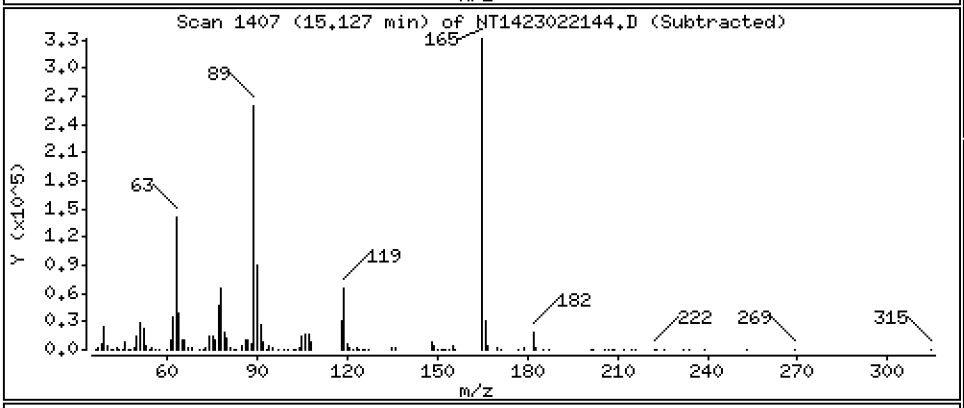
Column diameter: 0.25

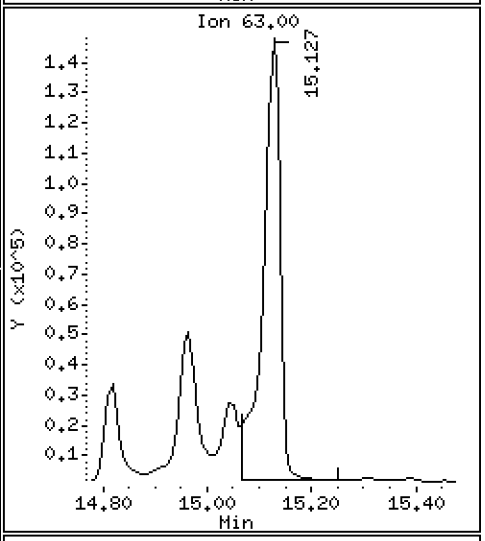
48 2,4-Dinitrotoluene

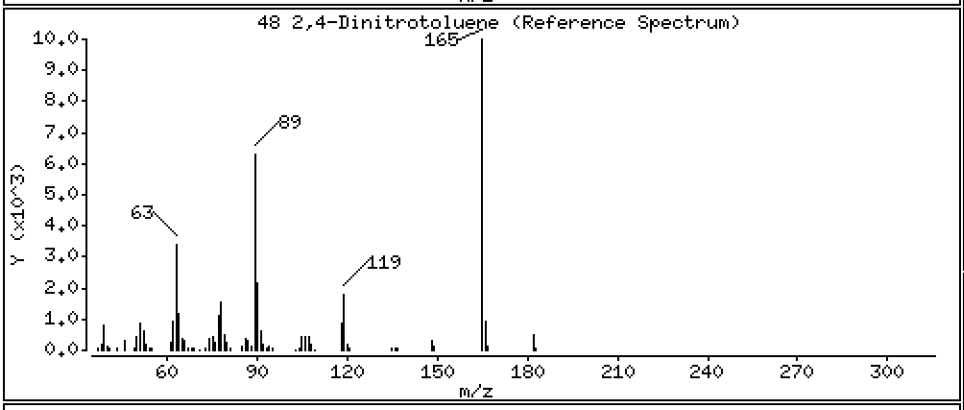
Concentration: 12.30 ug/mL

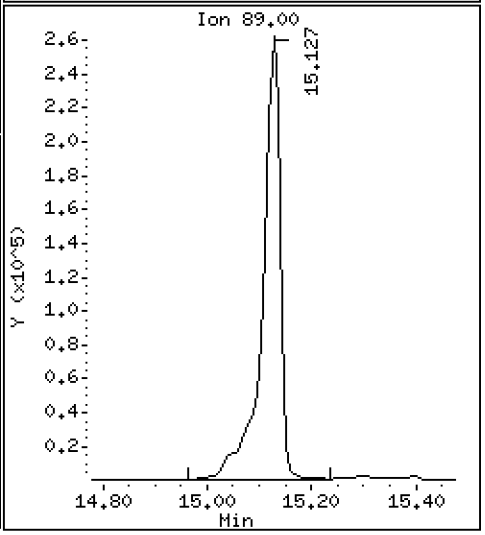


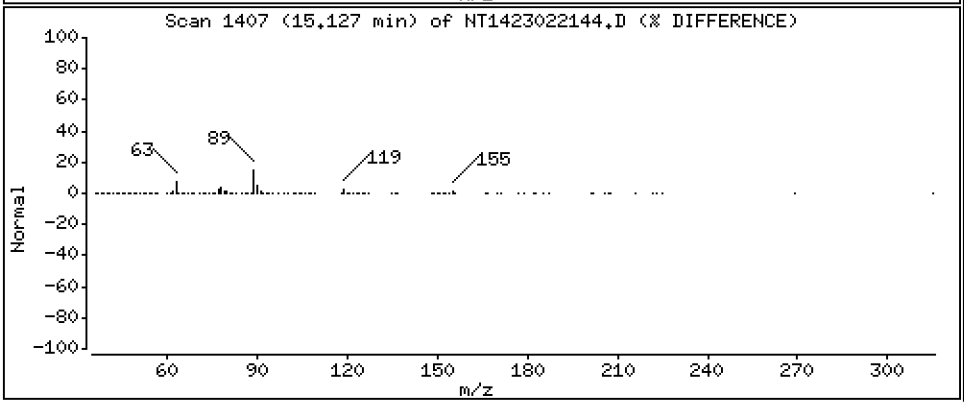












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

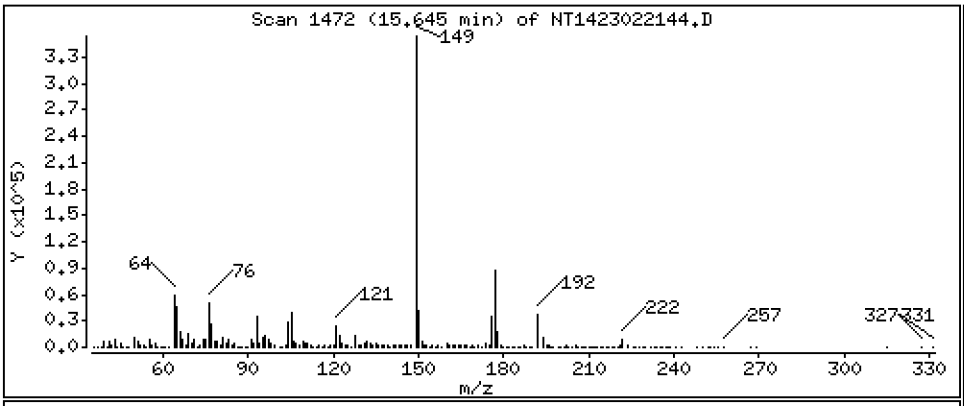
Operator: DSD

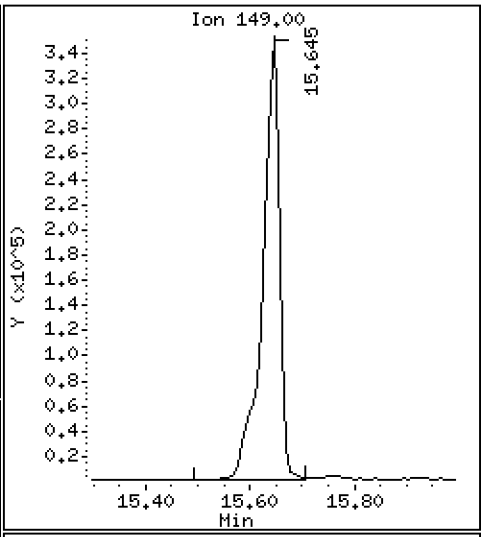
Column phase: ZB-5msi

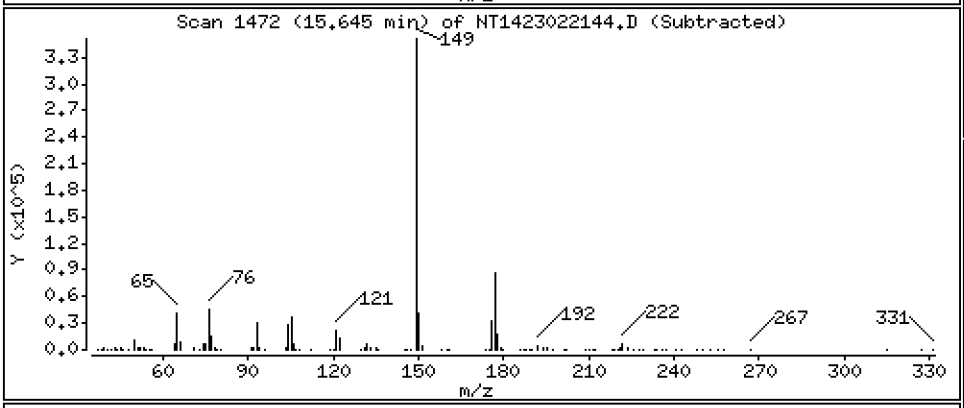
Column diameter: 0.25

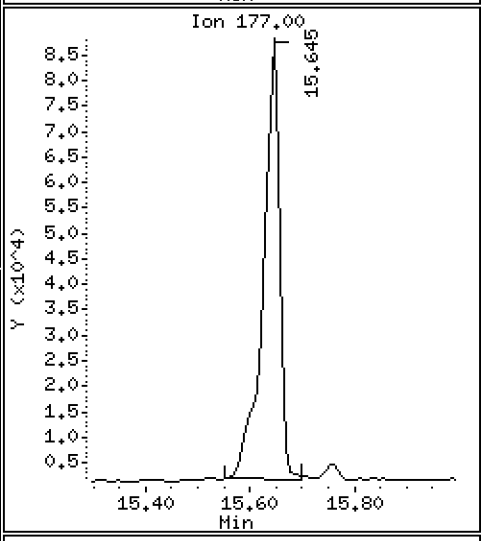
50 Diethylphthalate

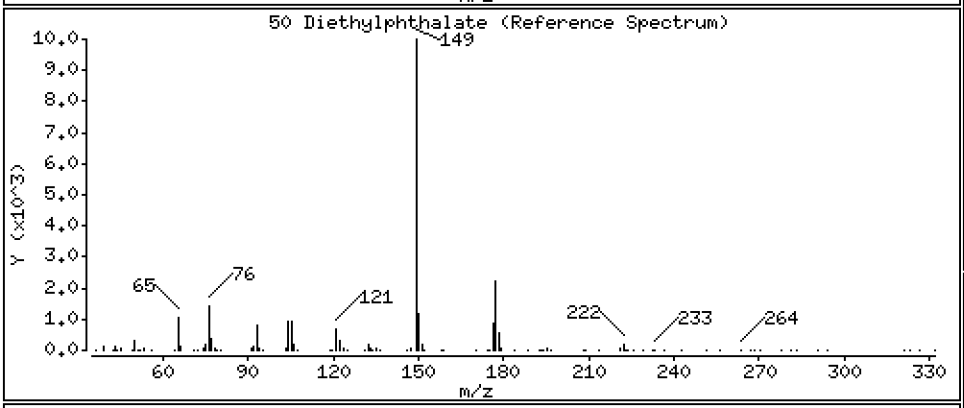
Concentration: 3.840 ug/mL

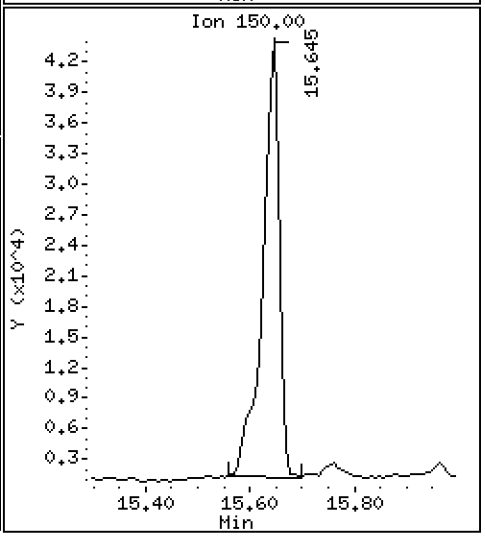


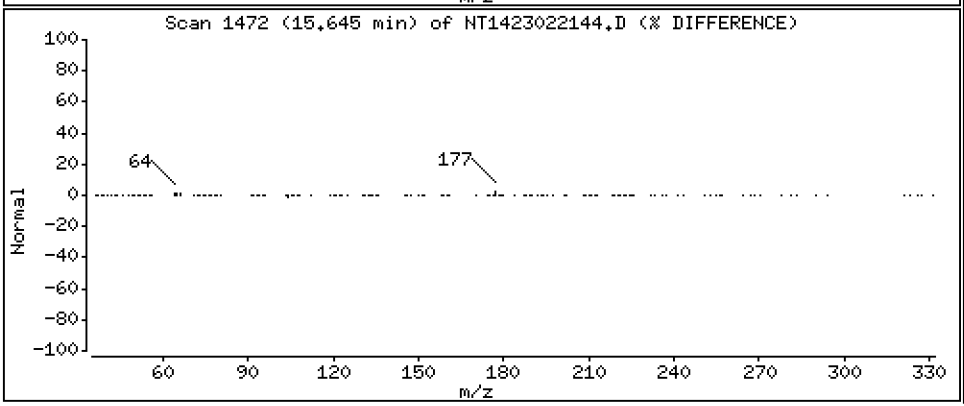












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

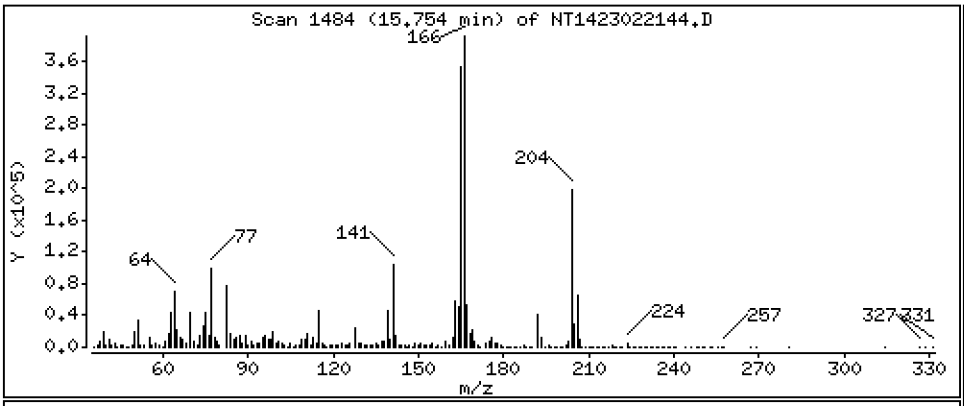
Operator: DSD

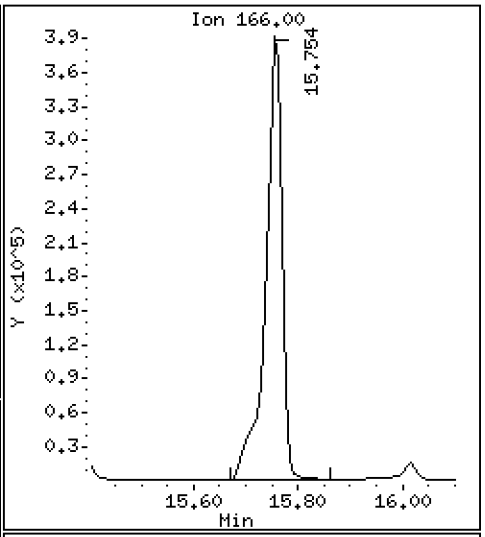
Column phase: ZB-5msi

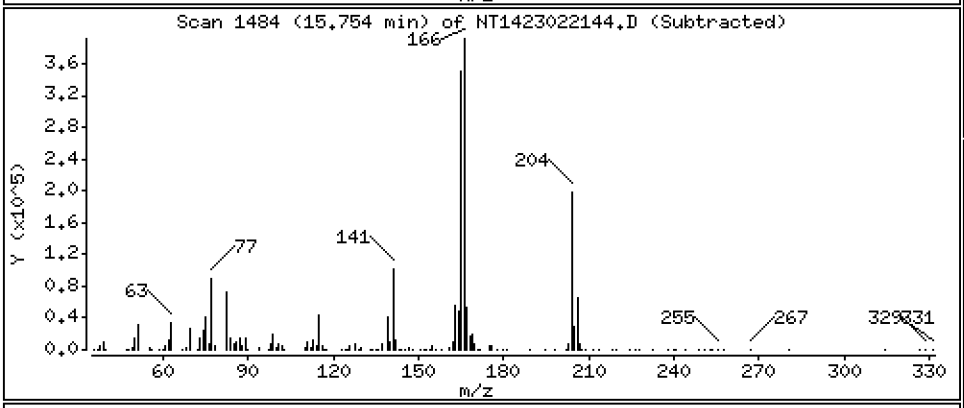
Column diameter: 0.25

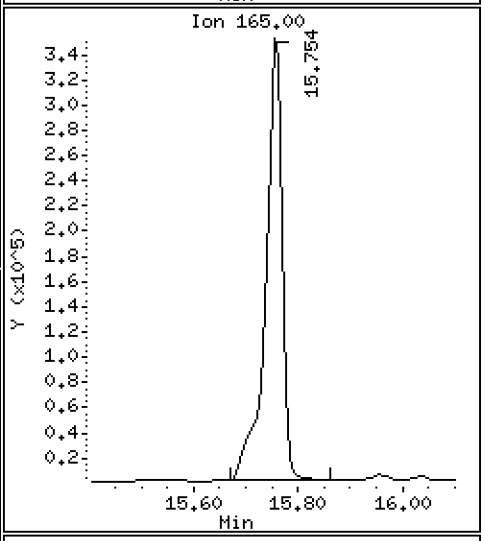
49 Fluorene

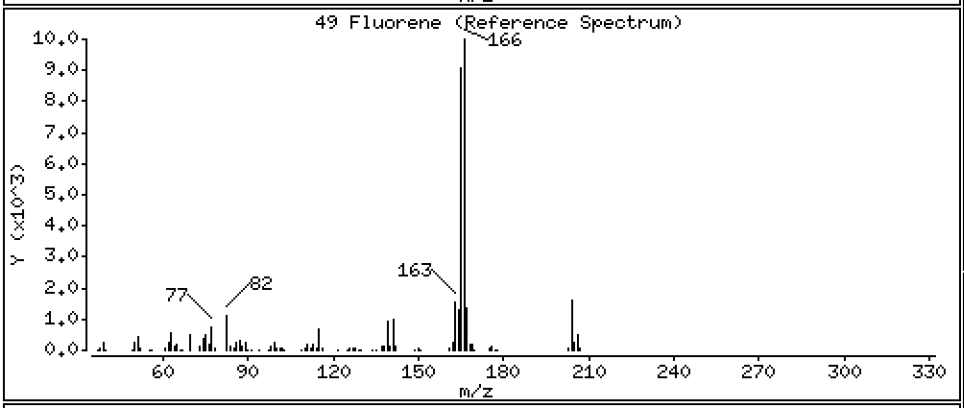
Concentration: 3.411 ug/mL

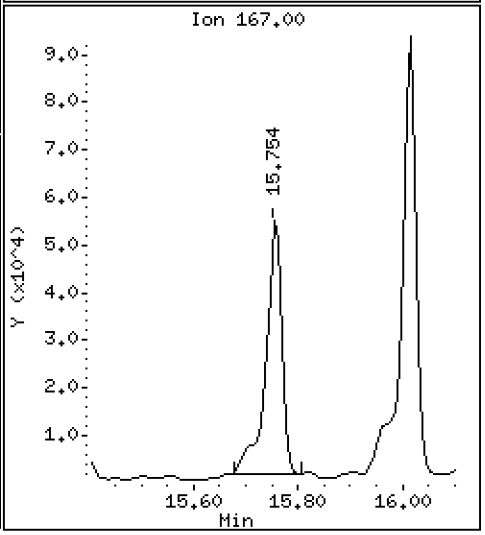


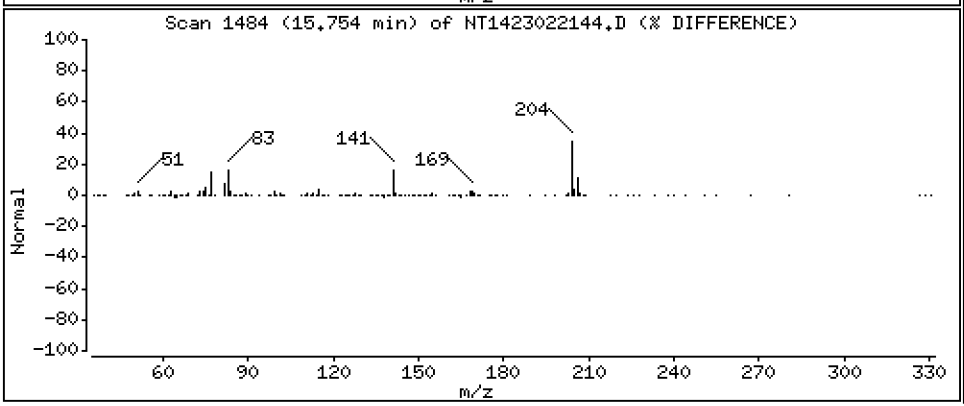












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

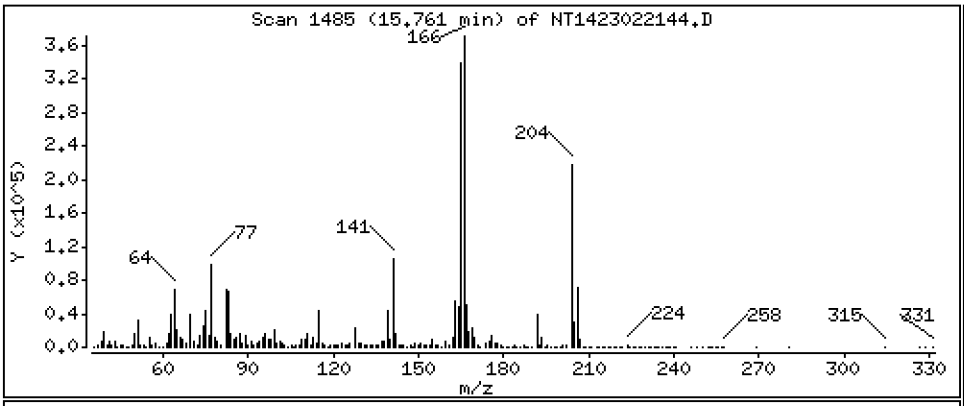
Operator: DSD

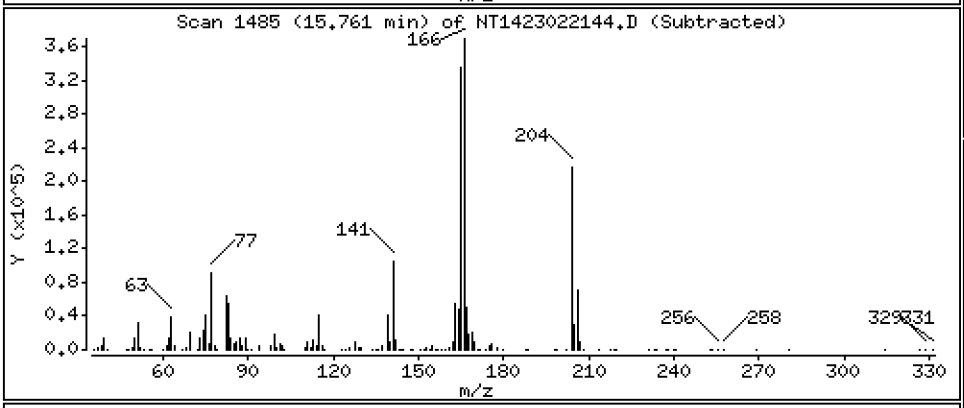
Column phase: ZB-5msi

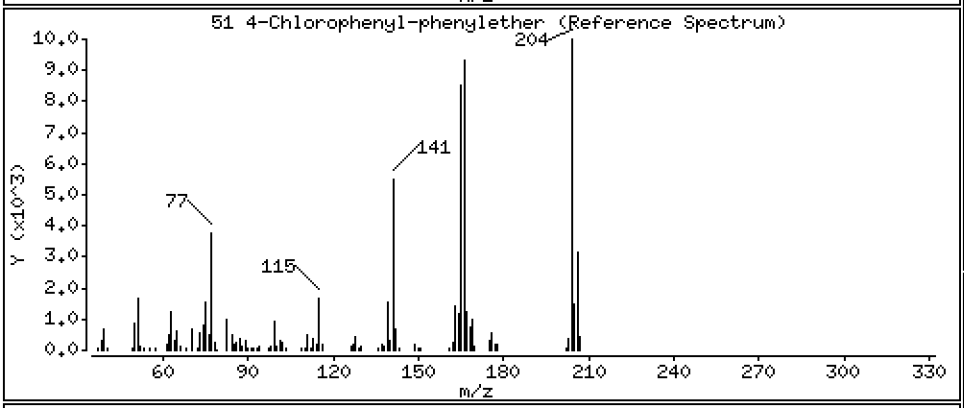
Column diameter: 0.25

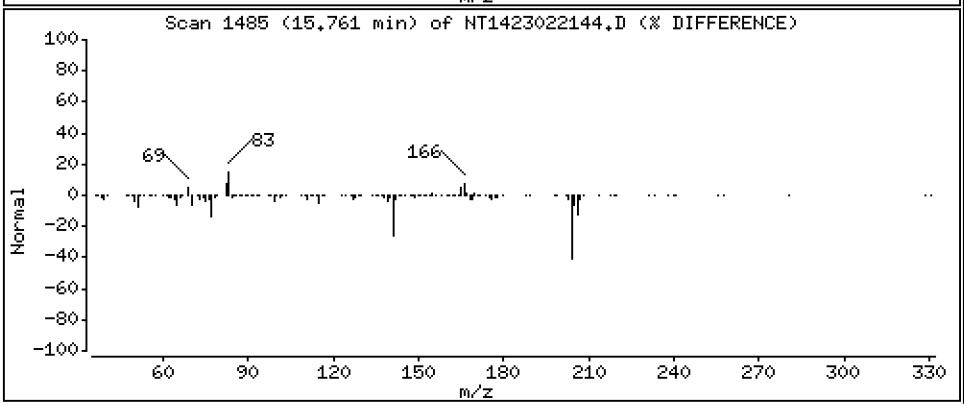
51 4-Chlorophenyl-phenylether

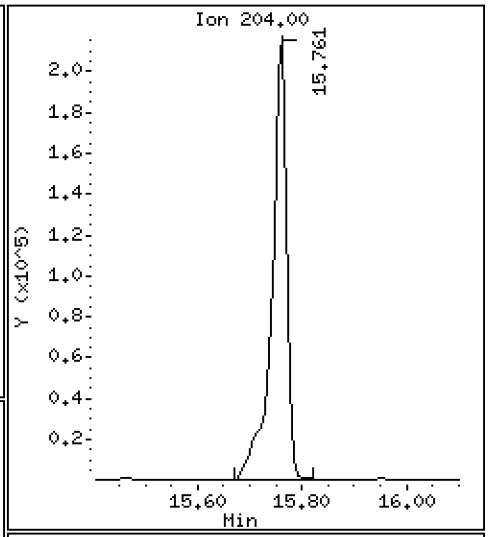
Concentration: 3.276 ug/mL

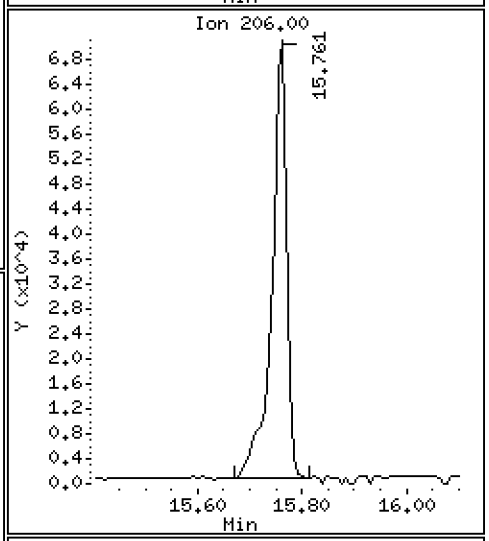


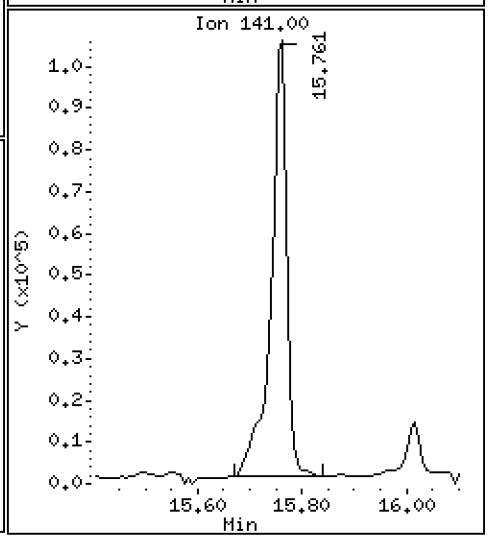












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

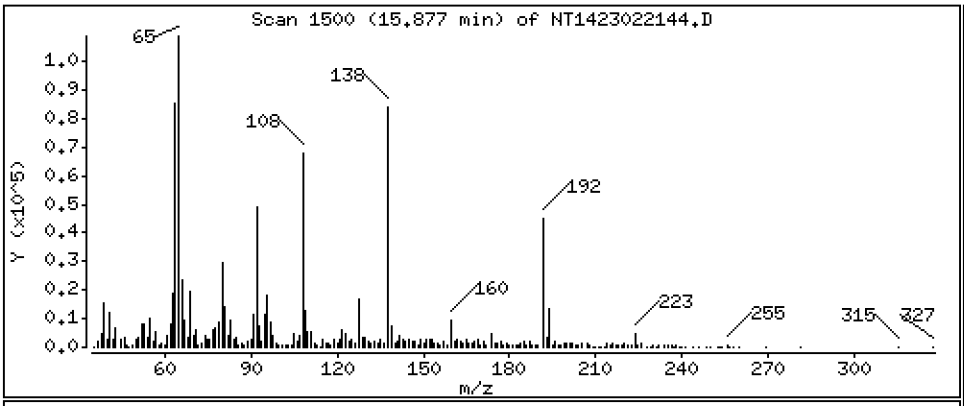
Operator: DSD

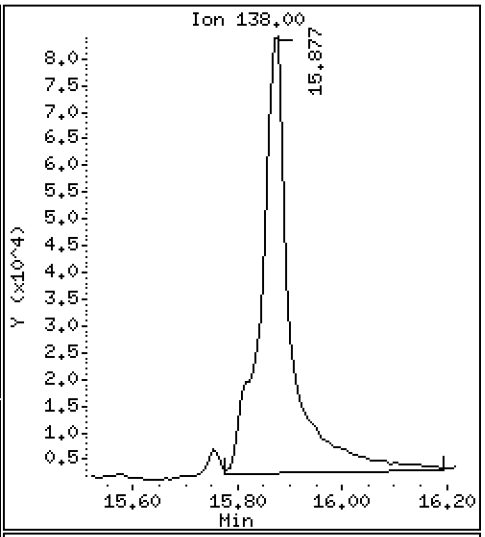
Column phase: ZB-5msi

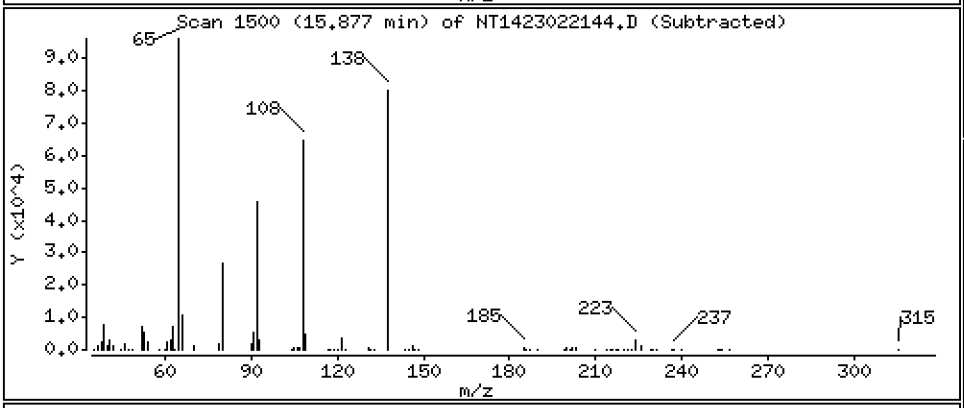
Column diameter: 0.25

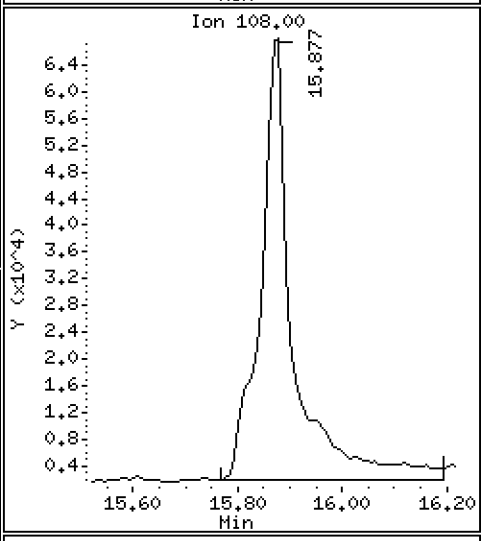
52 4-Nitroaniline

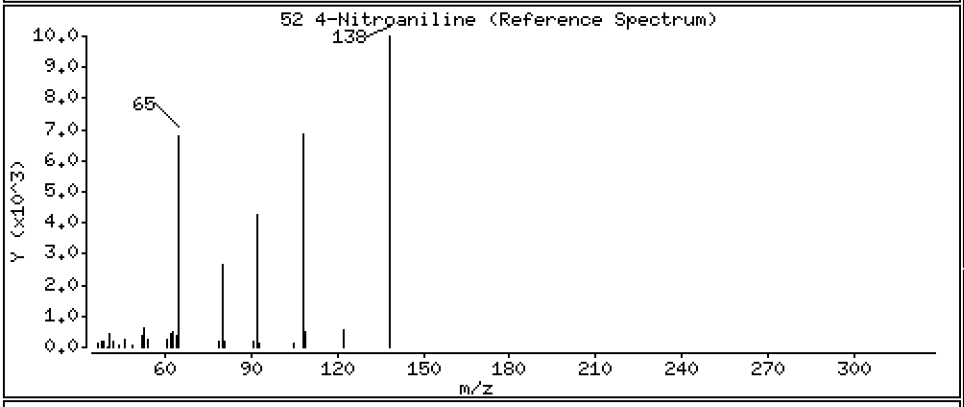
Concentration: 6.356 ug/mL

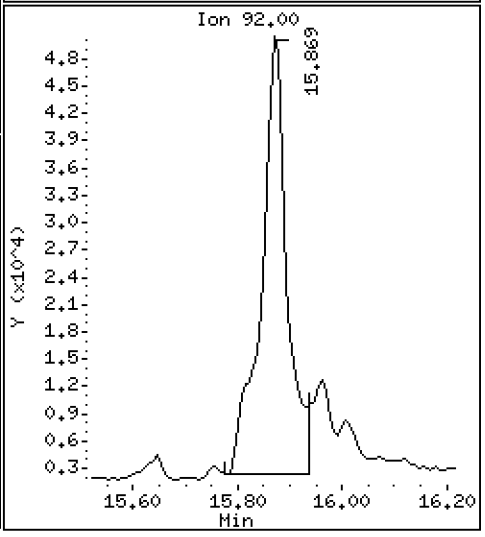


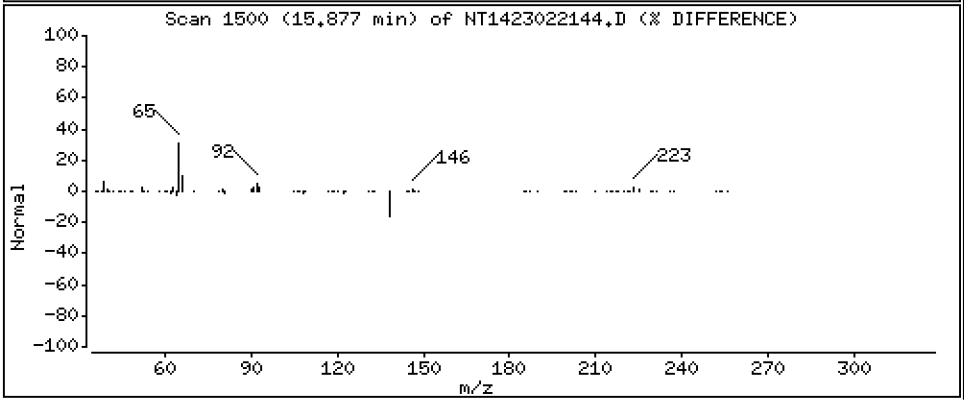












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

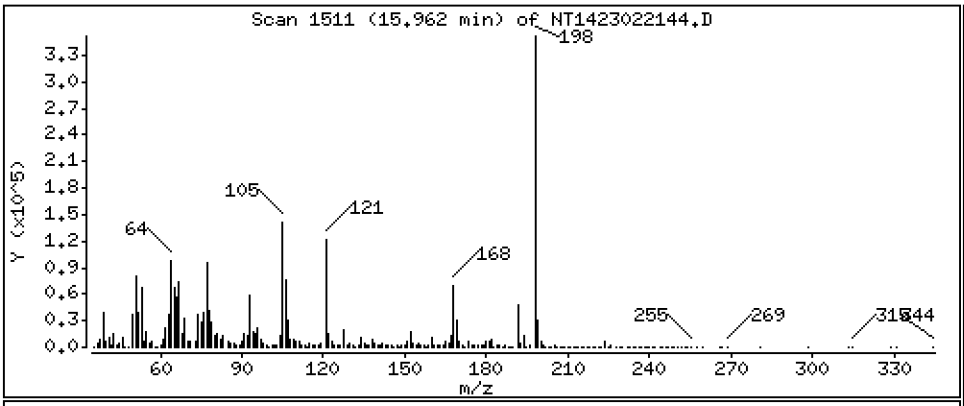
Operator: DSD

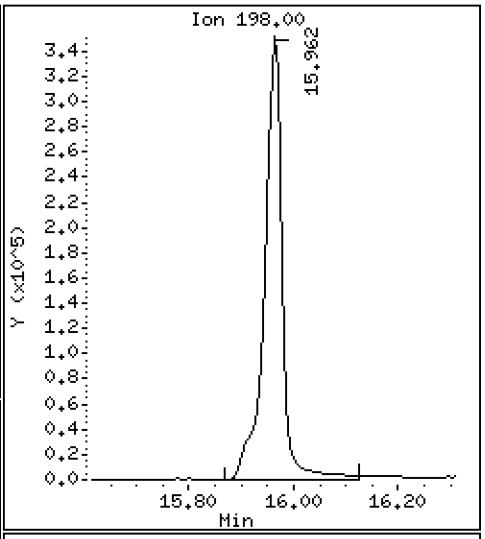
Column phase: ZB-5msi

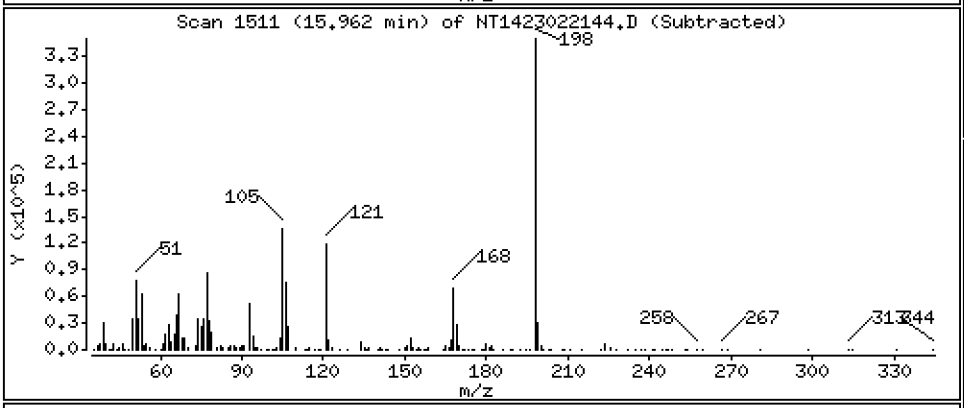
Column diameter: 0.25

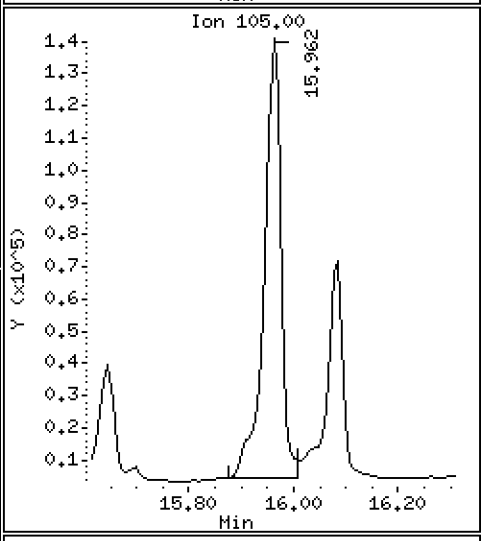
53 4,6-Dinitro-2-methylphenol

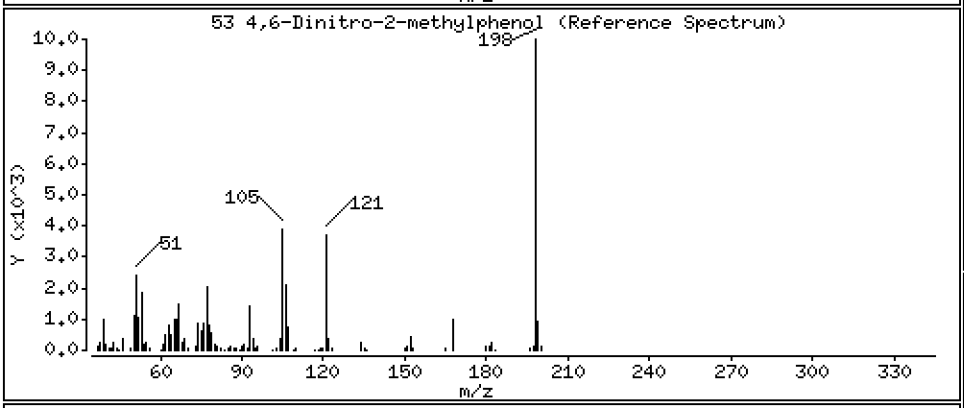
Concentration: 20.12 ug/mL

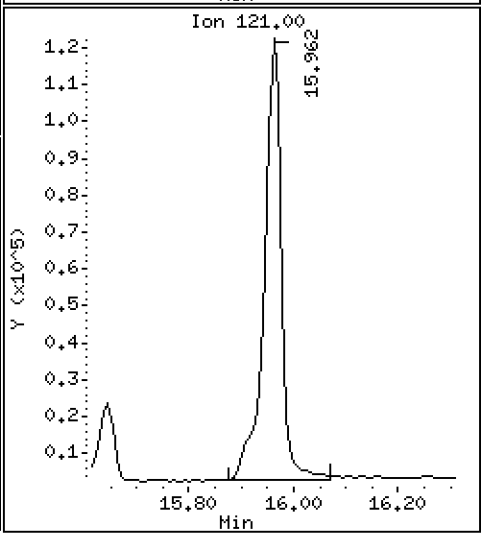


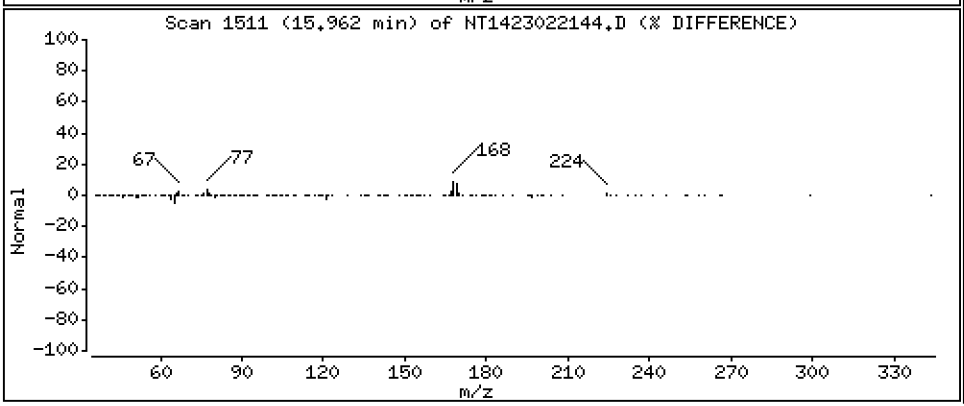












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022144.D

Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

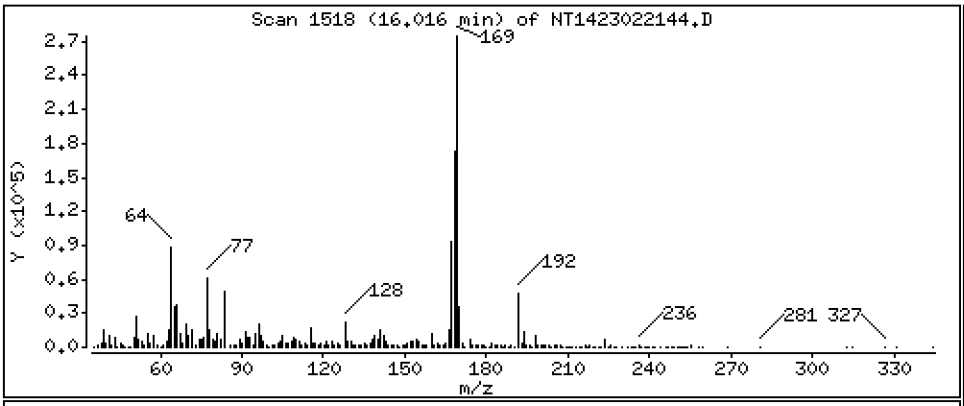
Operator: DSD

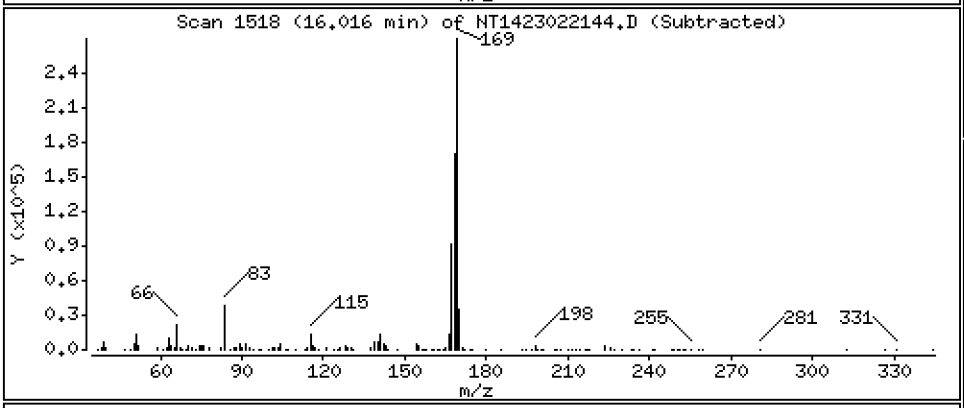
Column phase: ZB-5msi

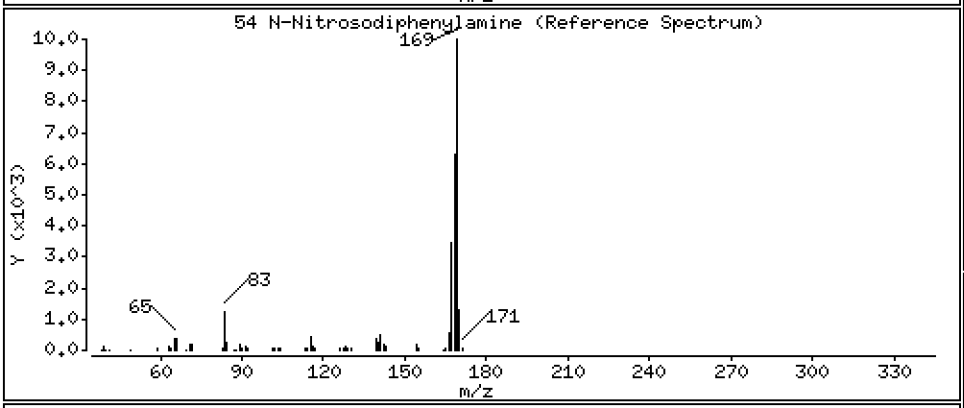
Column diameter: 0.25

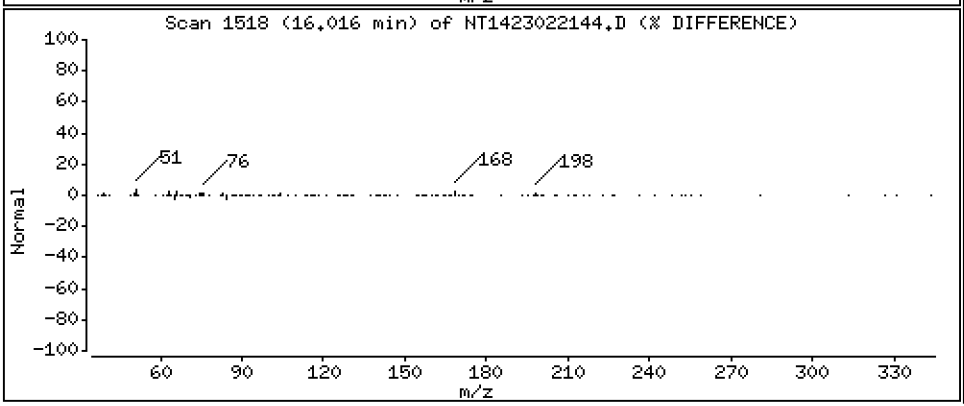
54 N-Nitrosodiphenylamine

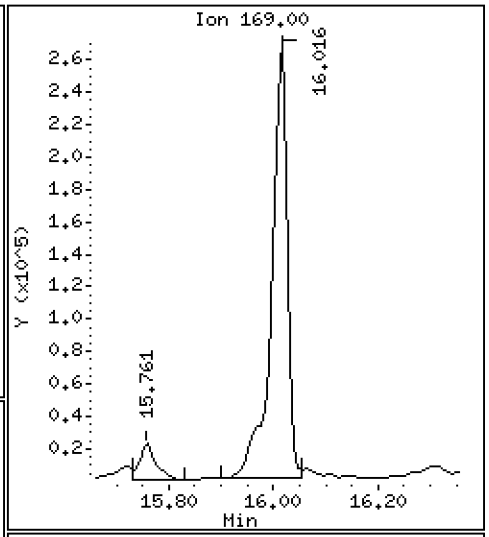
Concentration: 3.587 ug/mL

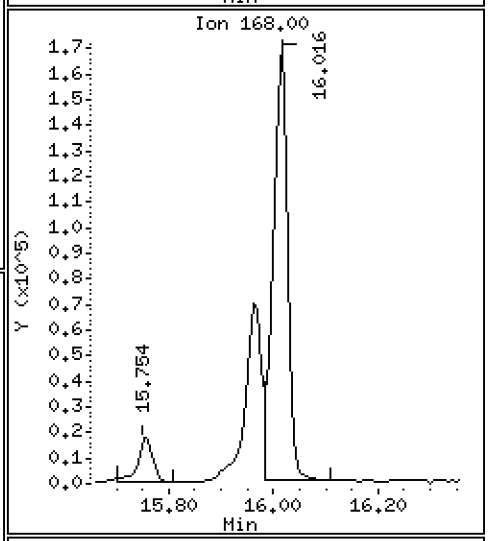


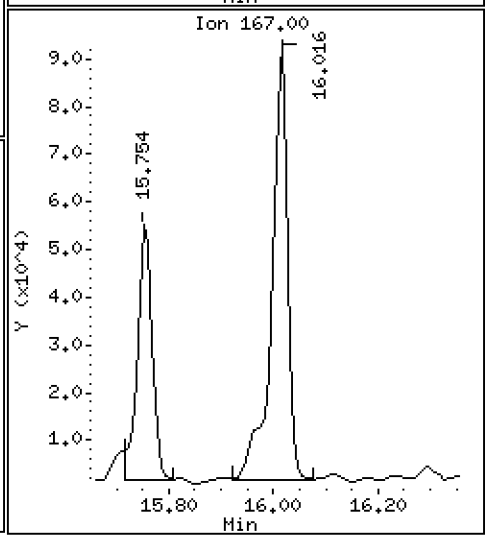












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

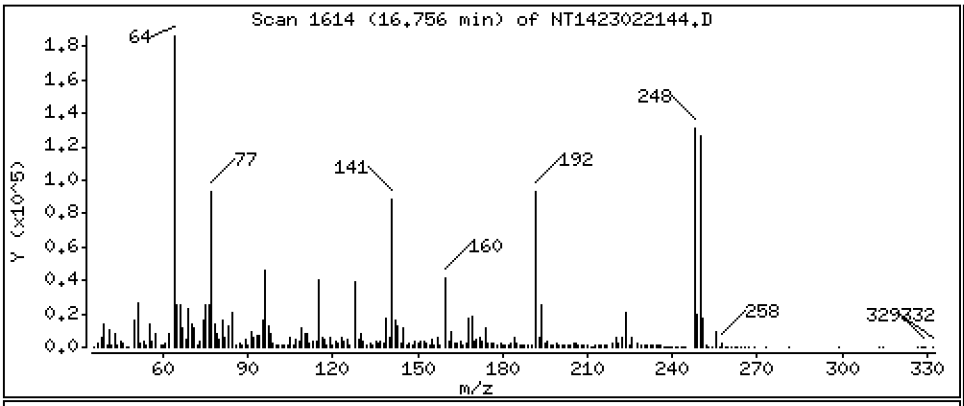
Operator: DSD

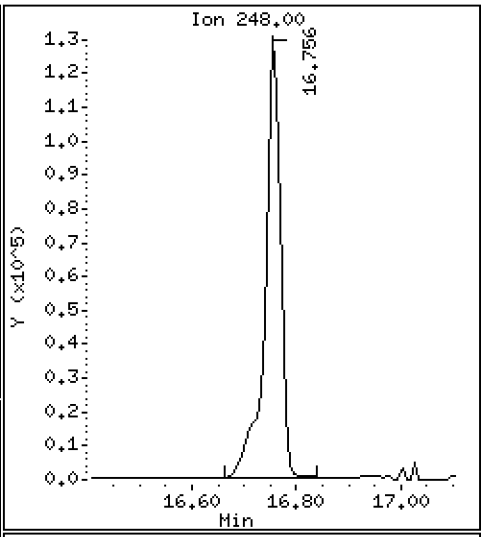
Column phase: ZB-5msi

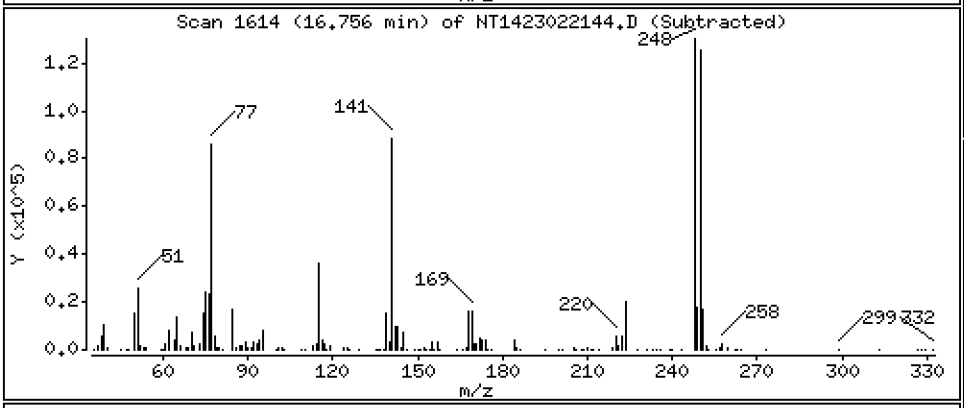
Column diameter: 0.25

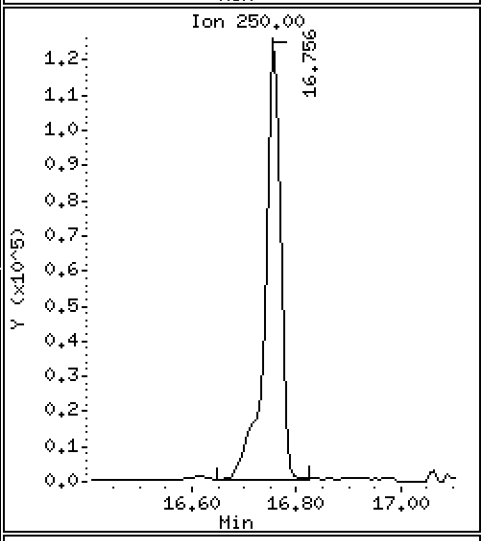
56 4-Bromophenyl-phenylether

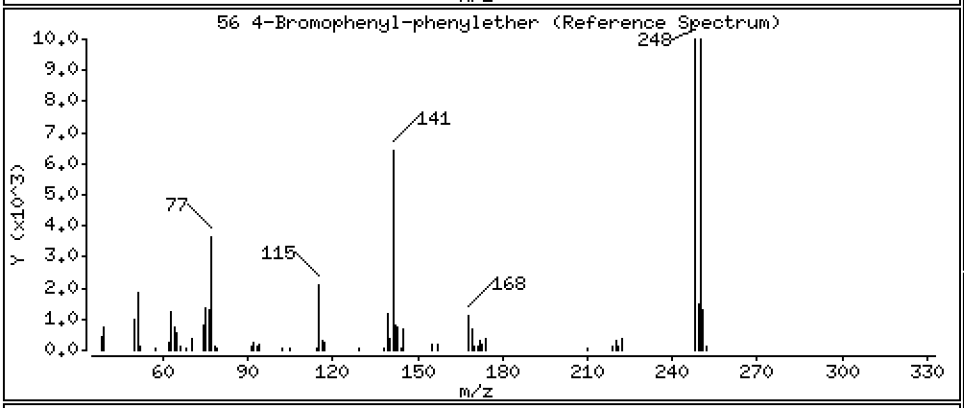
Concentration: 3.801 ug/mL

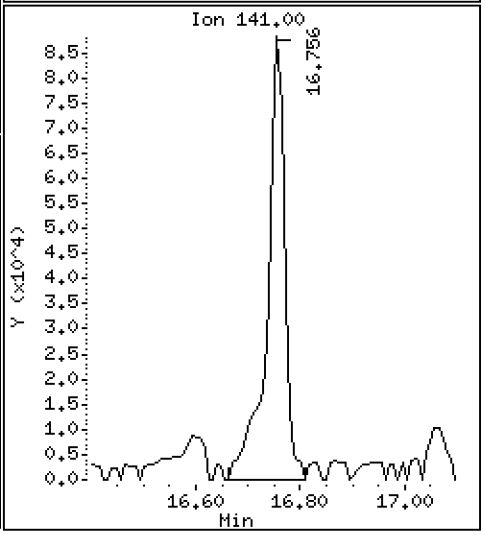


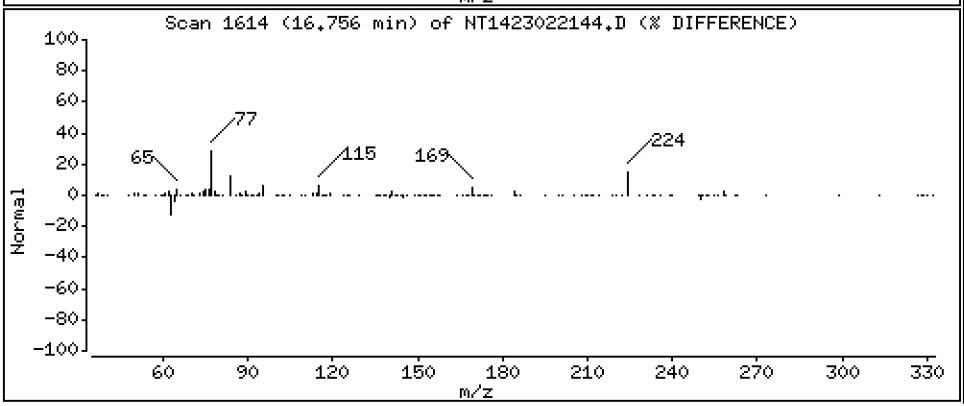












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

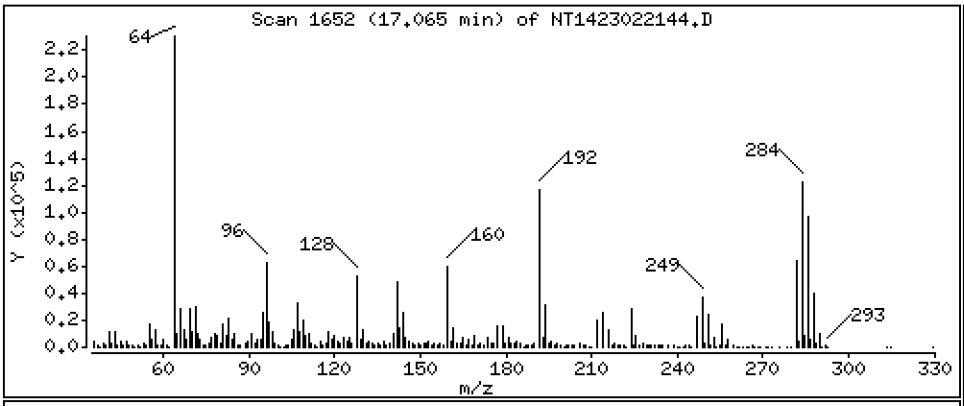
Operator: DSD

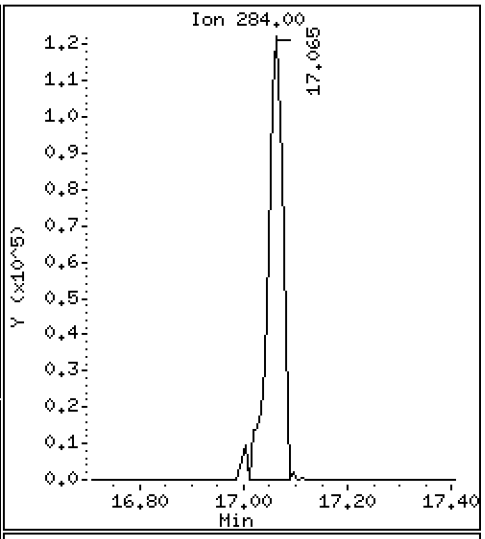
Column phase: ZB-5msi

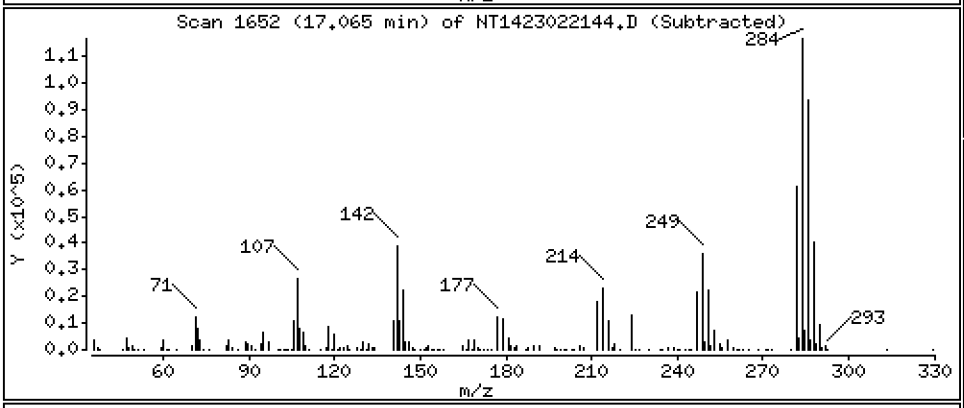
Column diameter: 0.25

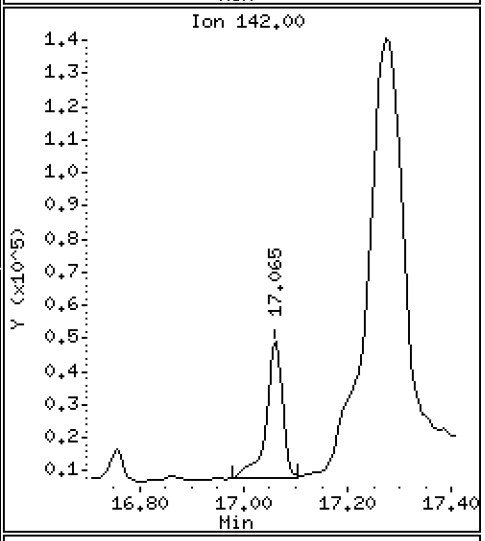
57 Hexachlorobenzene

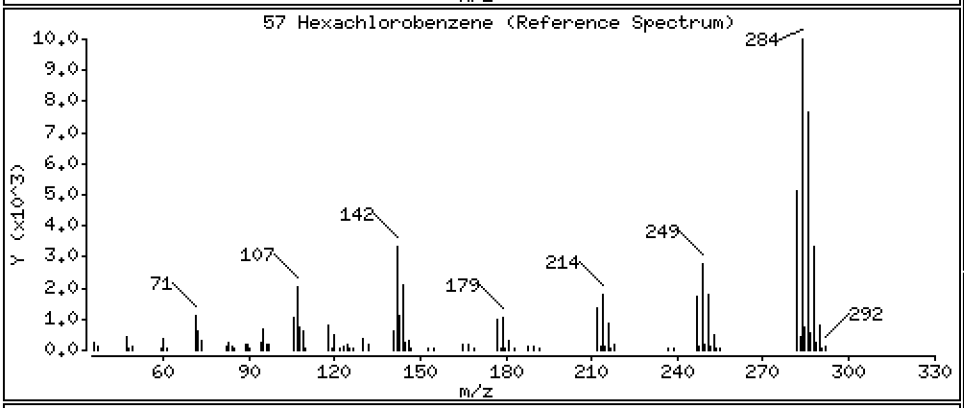
Concentration: 3.356 ug/mL

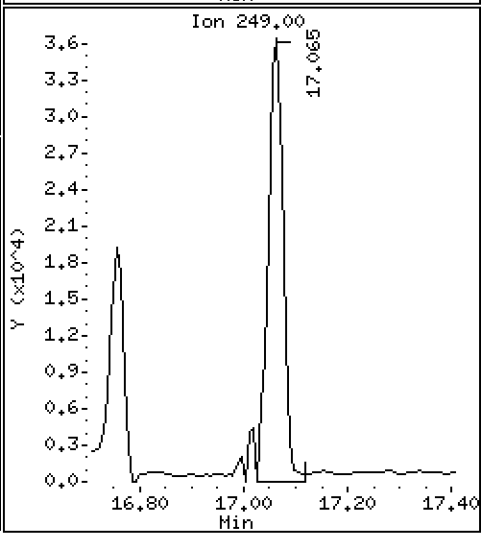


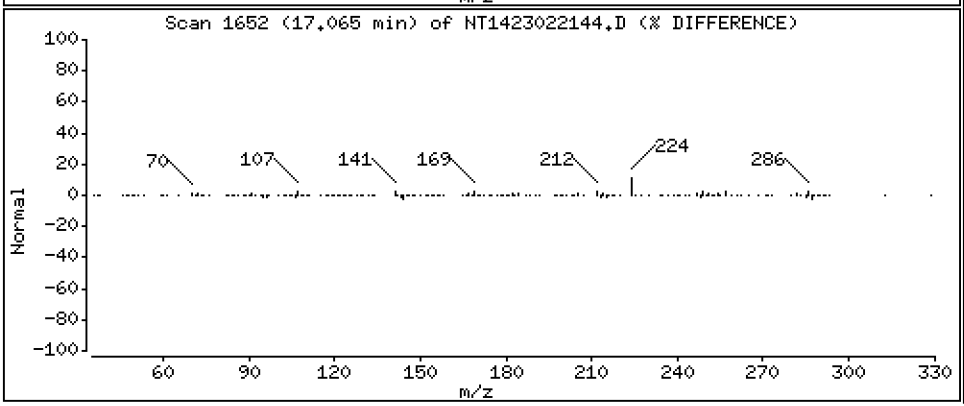












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

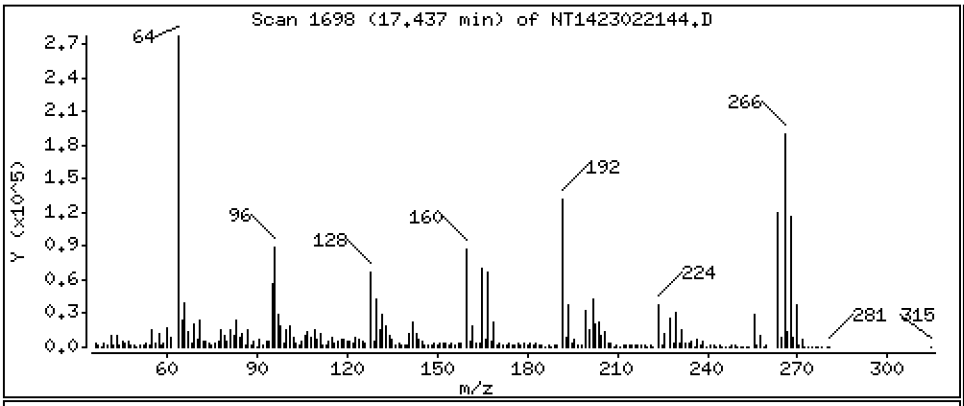
Operator: DSD

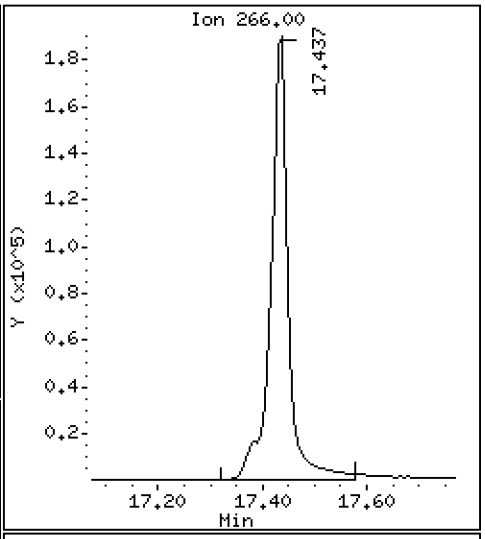
Column phase: ZB-5msi

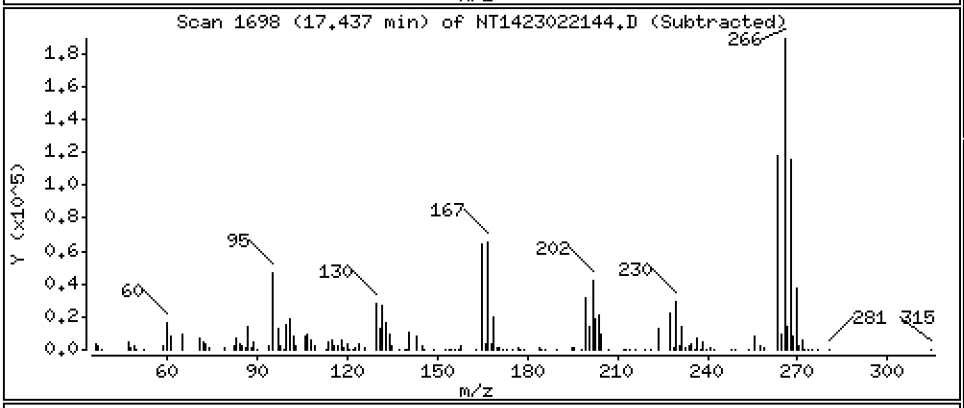
Column diameter: 0.25

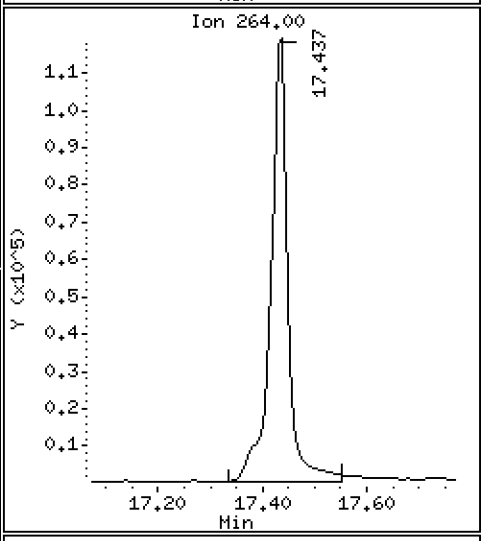
58 Pentachlorophenol

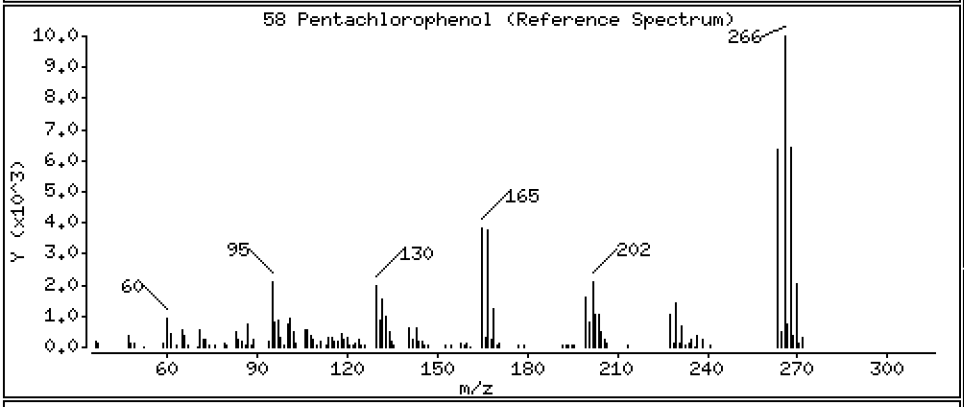
Concentration: 12.68 ug/mL

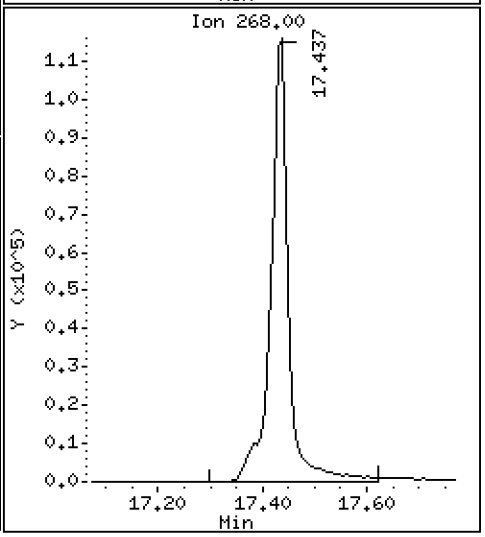


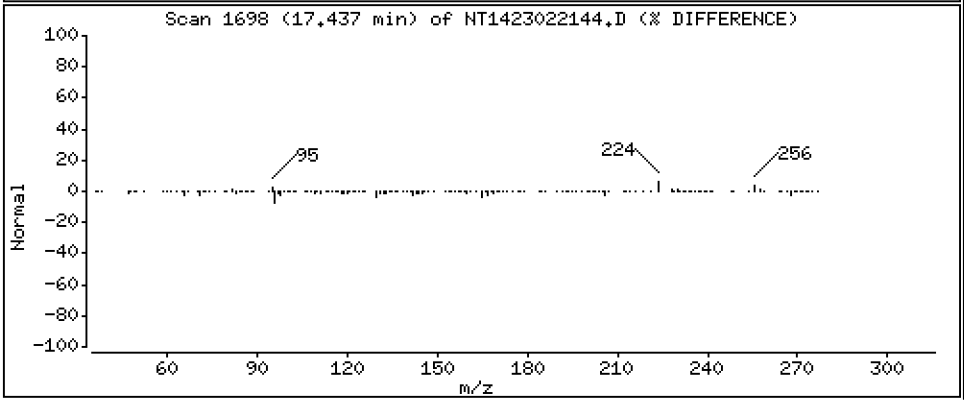












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

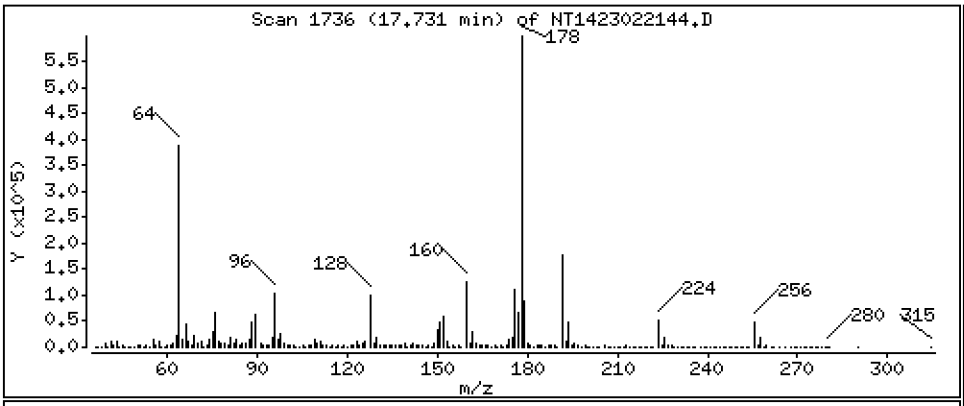
Operator: DSD

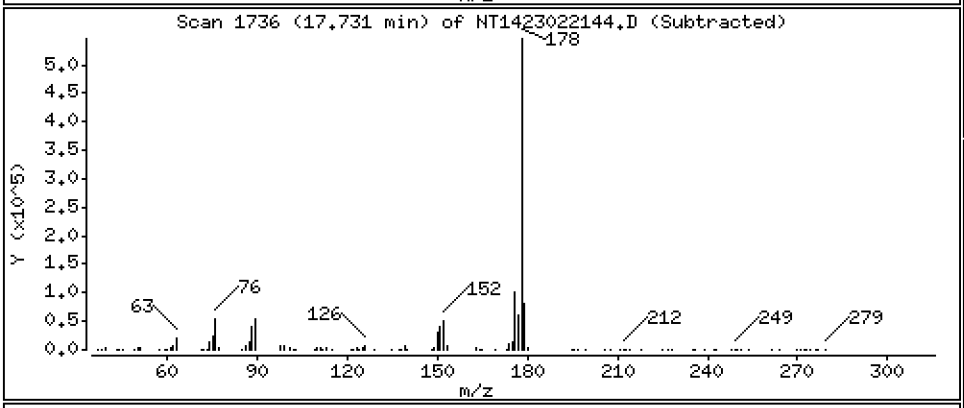
Column phase: ZB-5msi

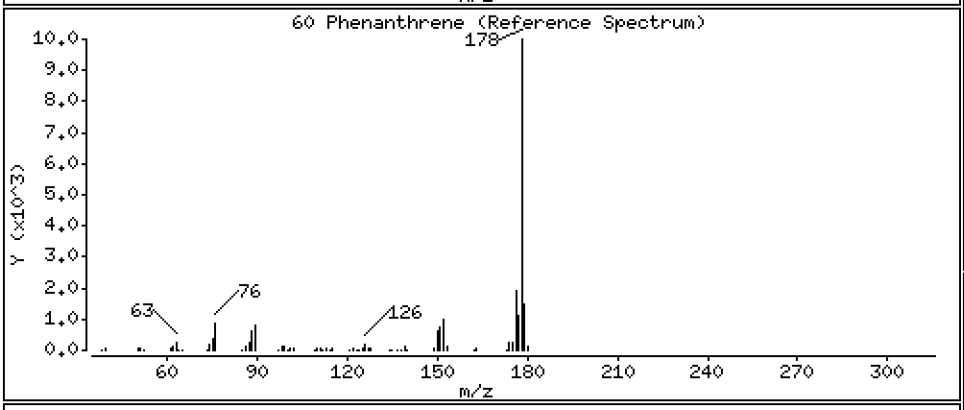
Column diameter: 0.25

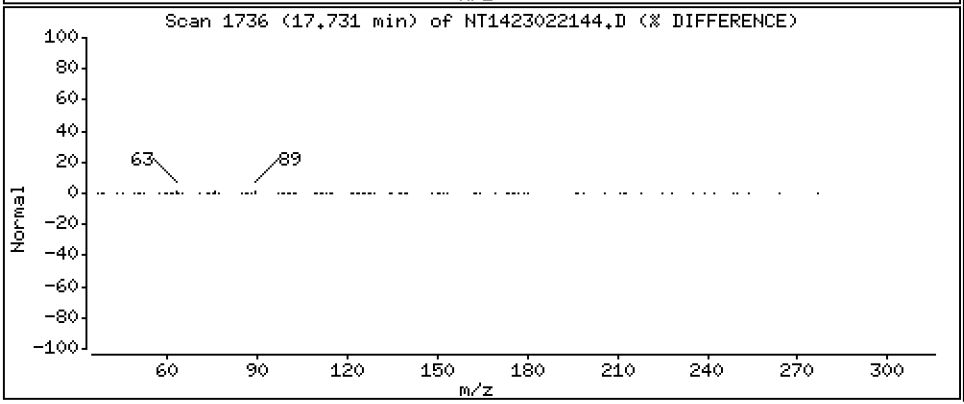
60 Phenanthrene

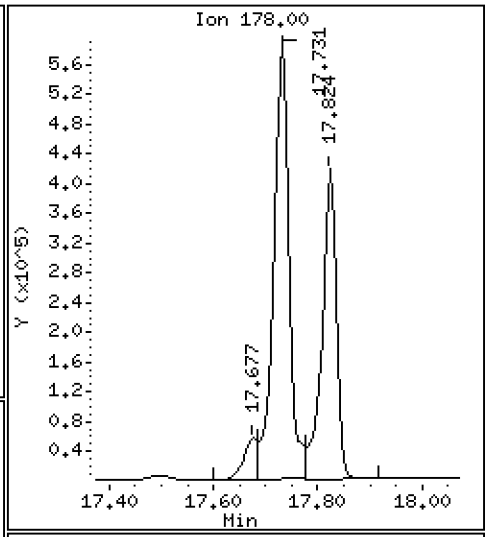
Concentration: 4.599 ug/mL

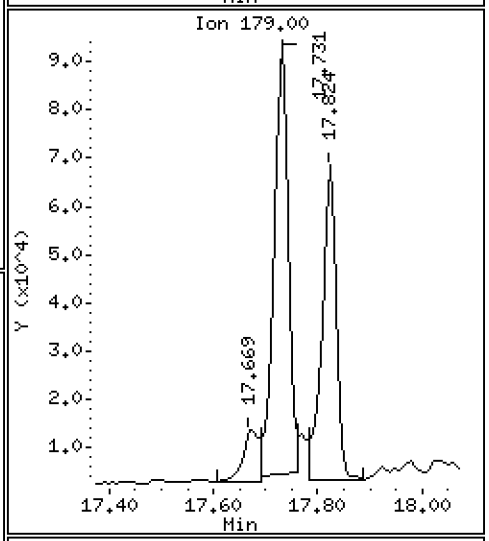


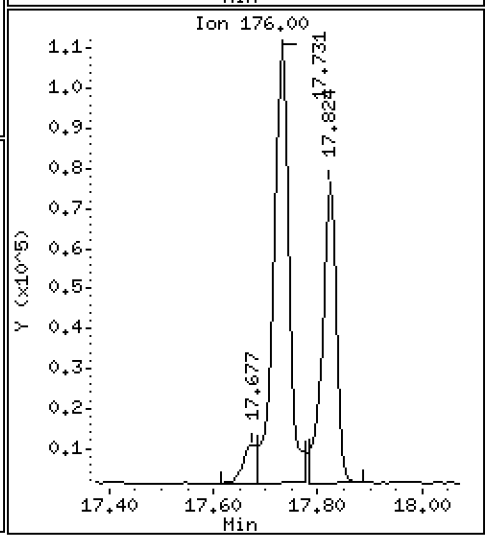












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

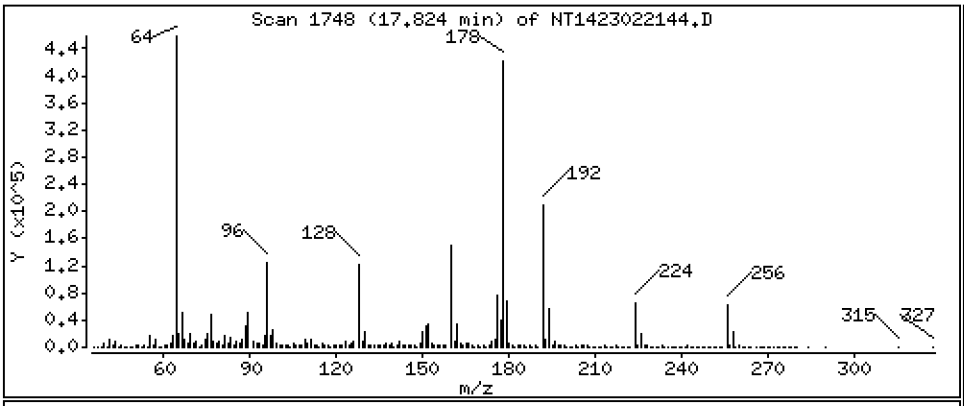
Operator: DSD

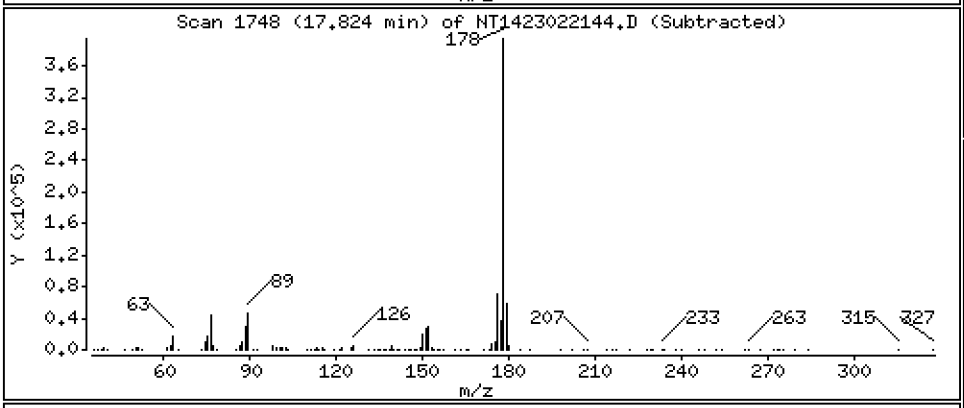
Column phase: ZB-5msi

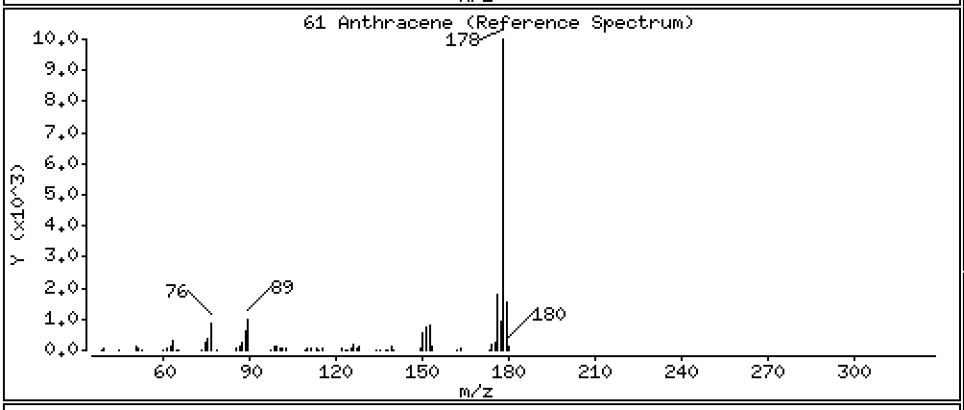
Column diameter: 0.25

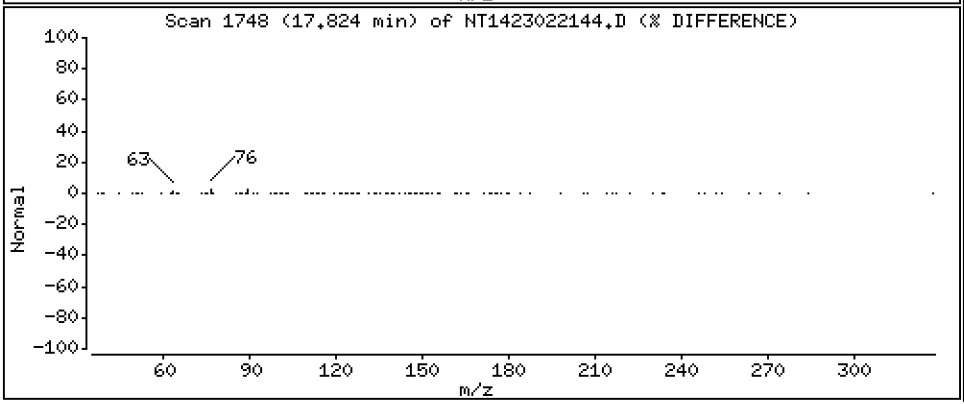
61 Anthracene

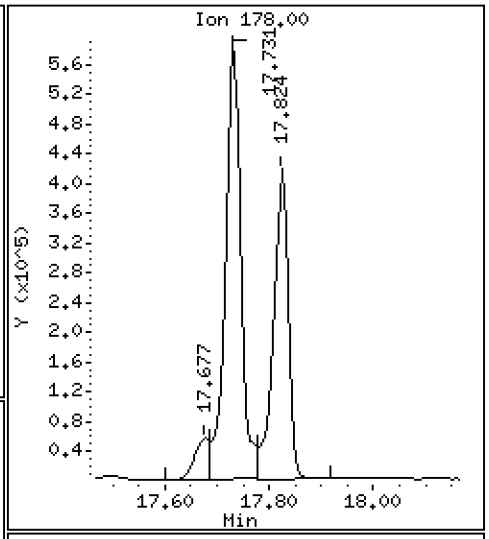
Concentration: 3.237 ug/mL

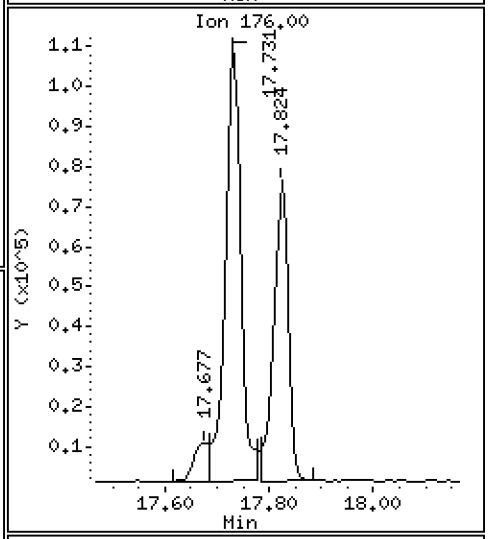


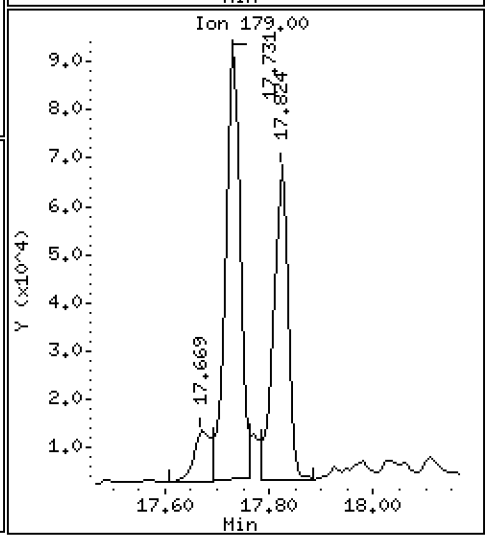












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

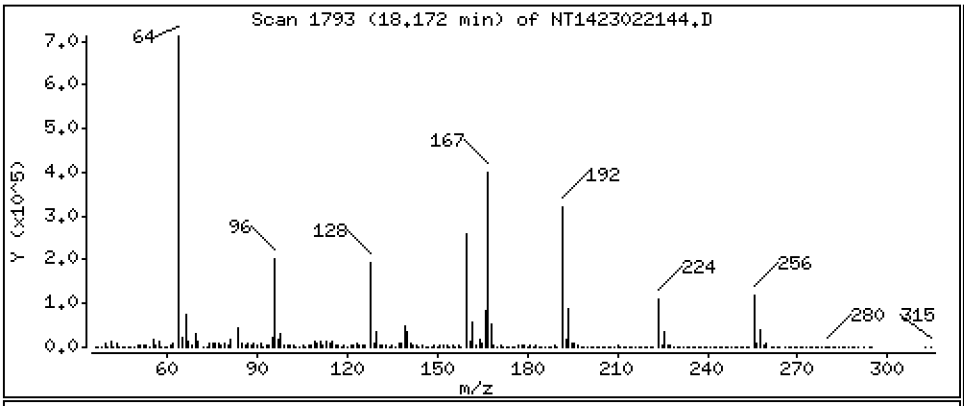
Operator: DSD

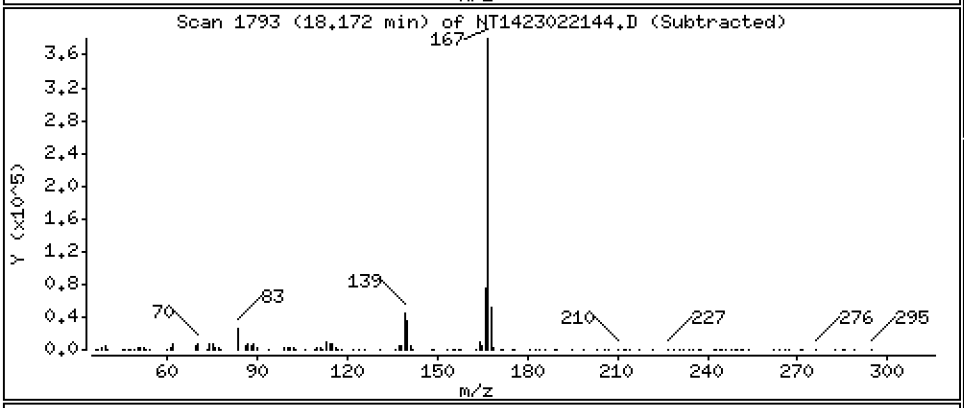
Column phase: ZB-5msi

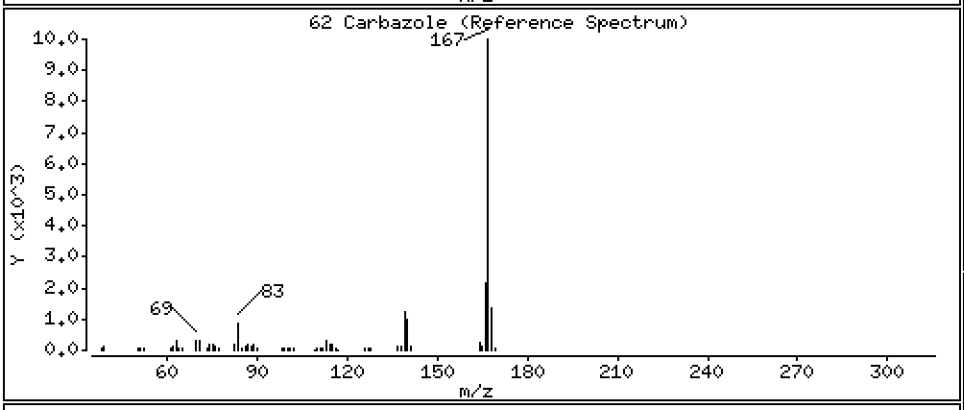
Column diameter: 0.25

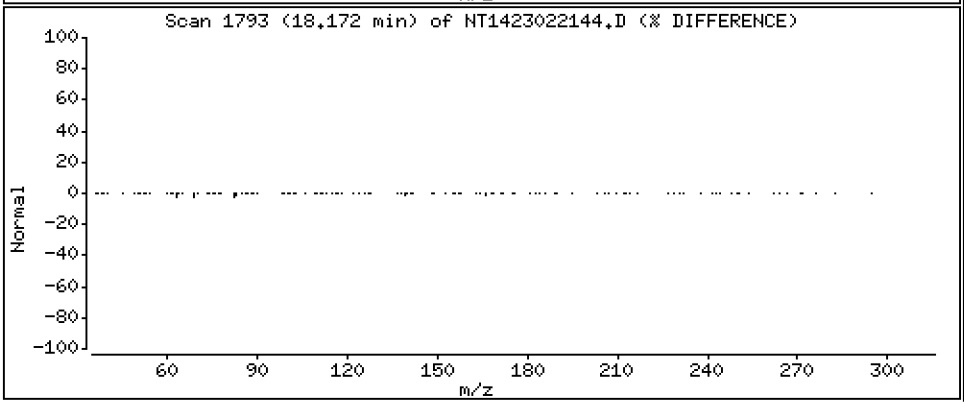
62 Carbazole

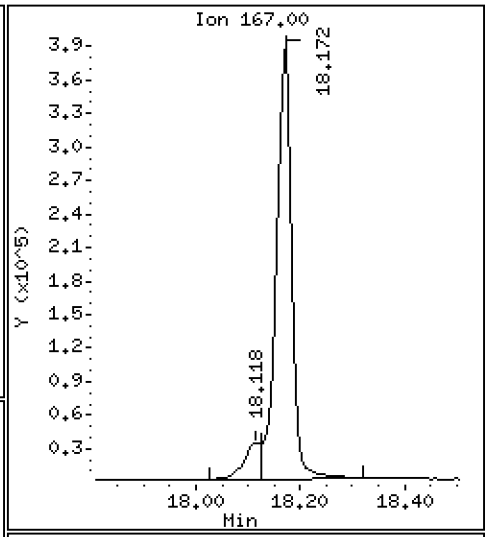
Concentration: 3.398 ug/mL

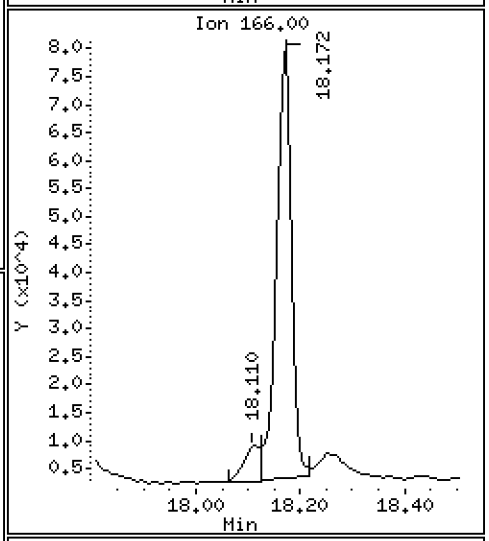


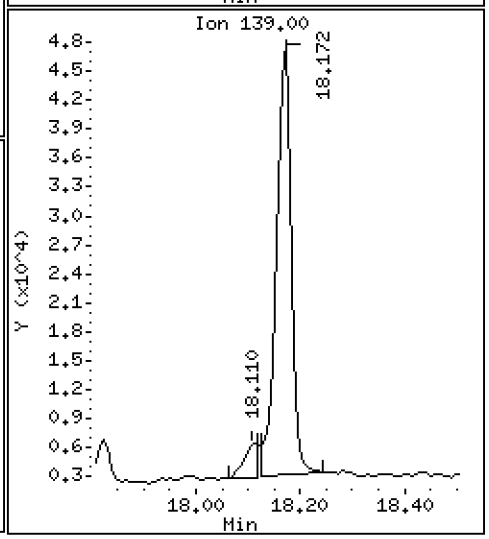












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022144.D

Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

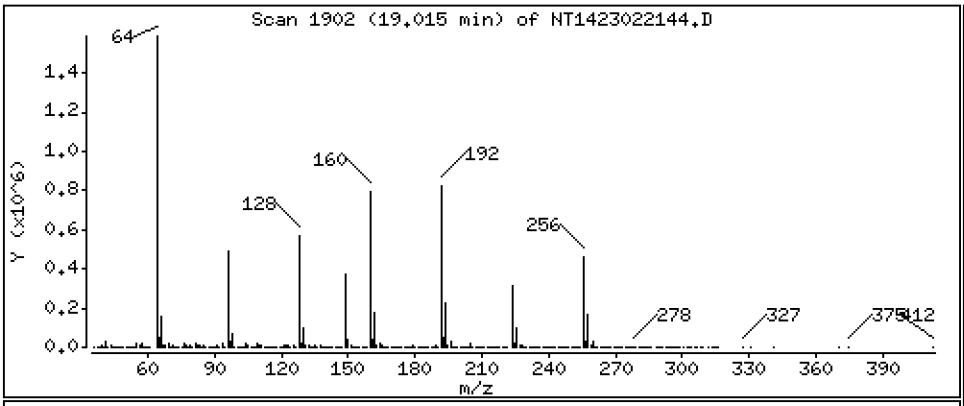
Operator: DSD

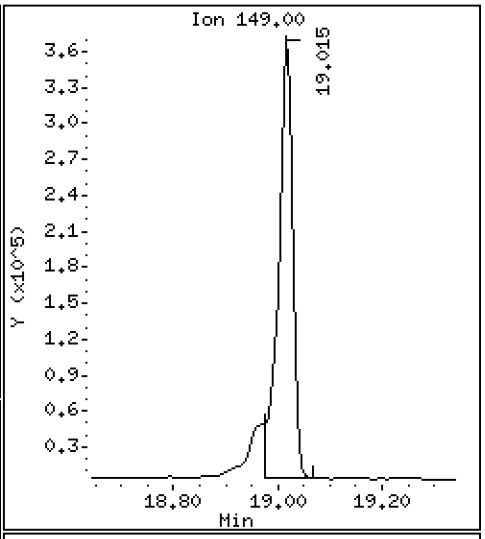
Column phase: ZB-5msi

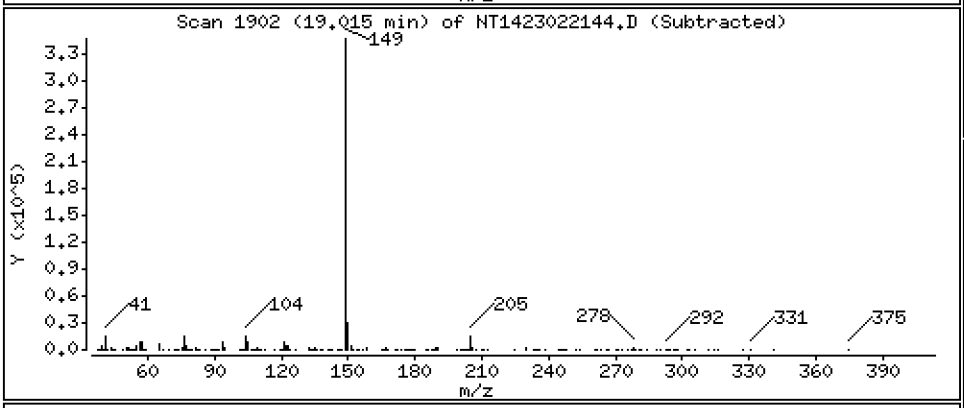
Column diameter: 0.25

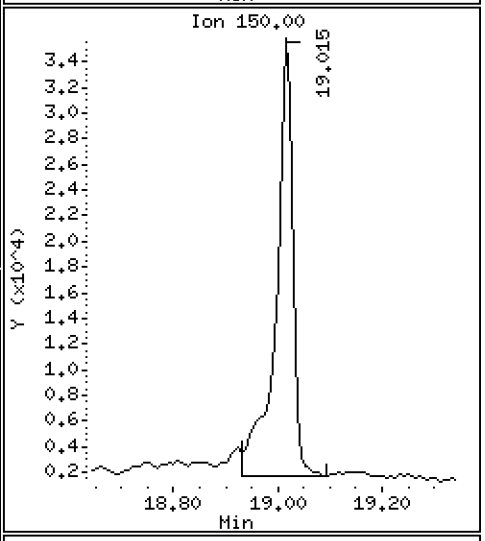
63 Di-n-butylphthalate

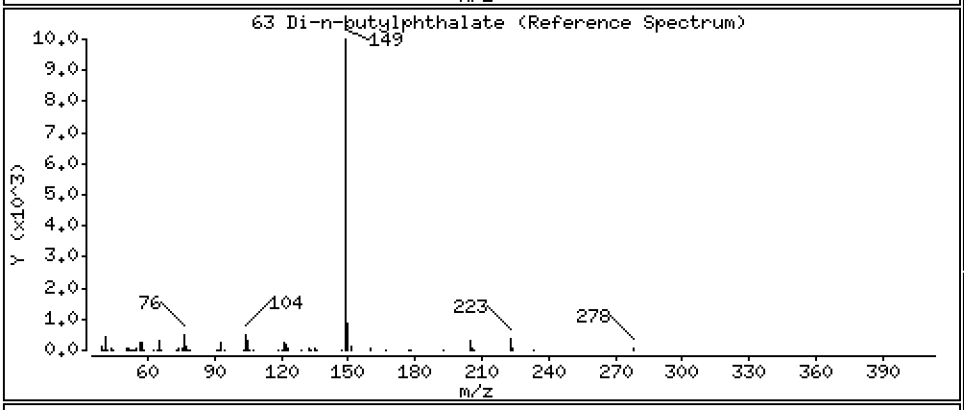
Concentration: 2.765 ug/mL

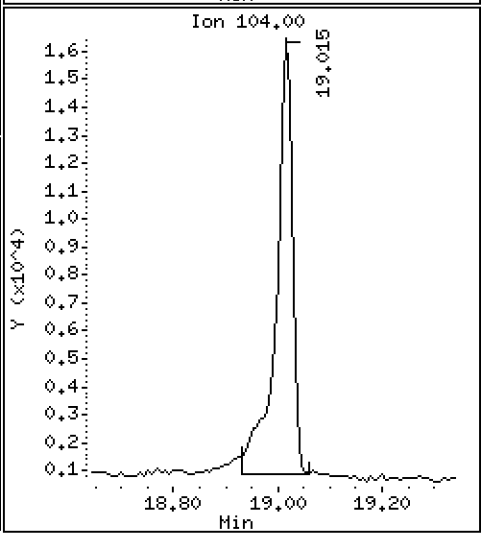


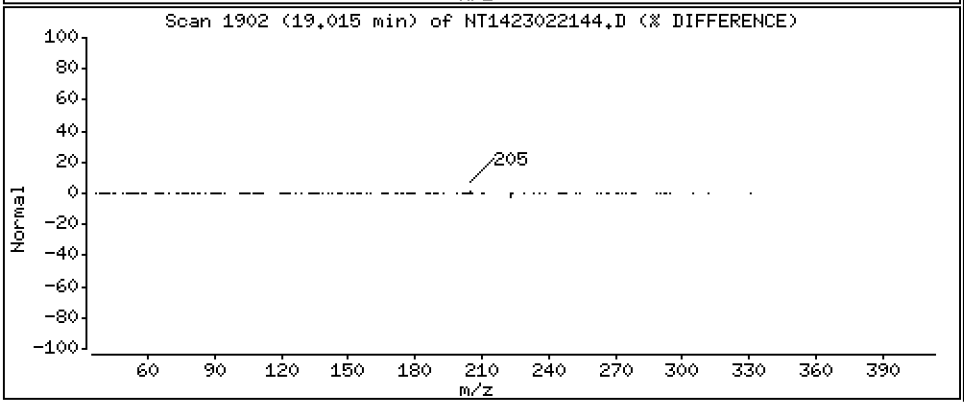












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

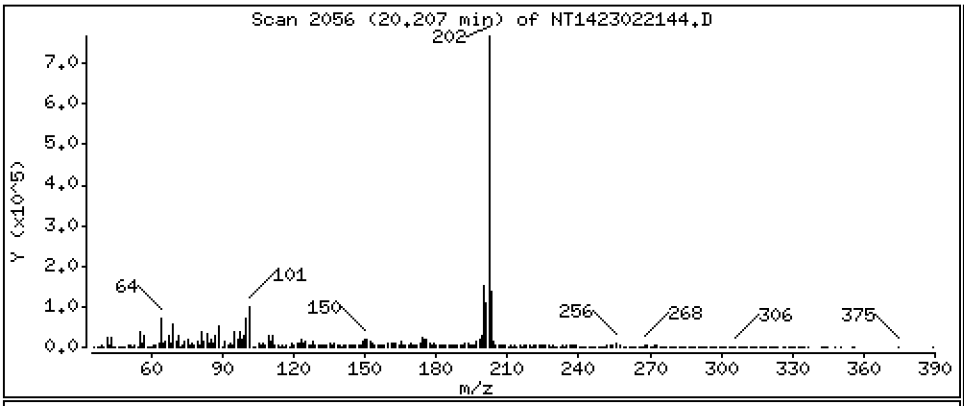
Operator: DSD

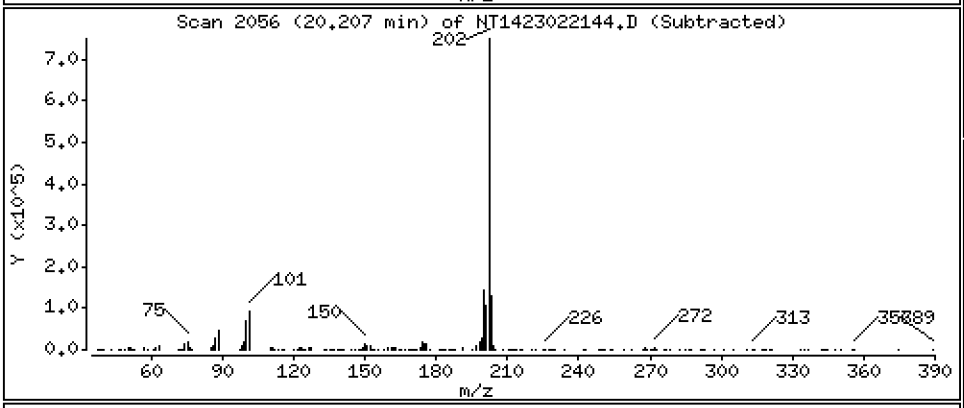
Column phase: ZB-5msi

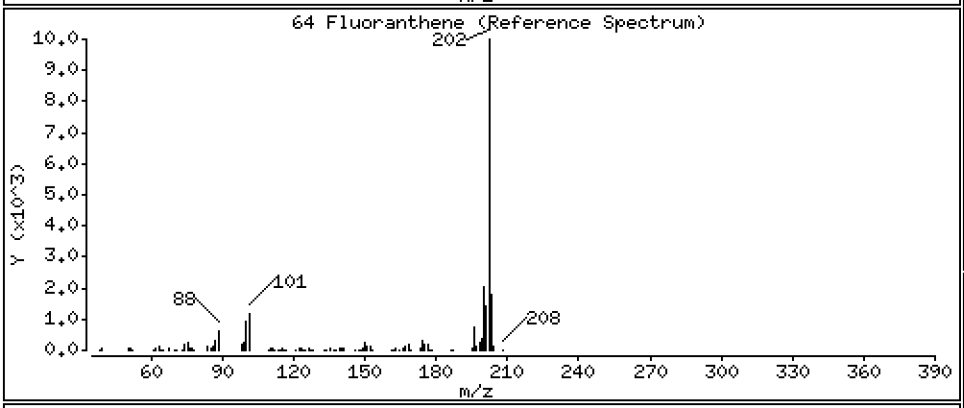
Column diameter: 0.25

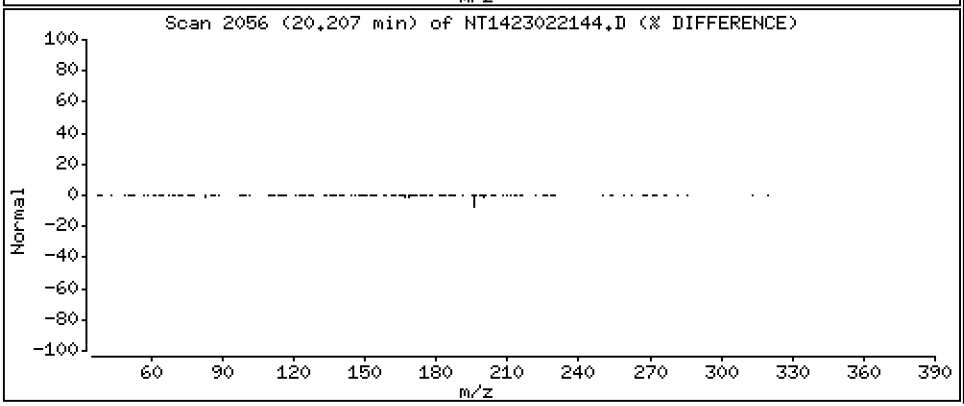
64 Fluoranthene

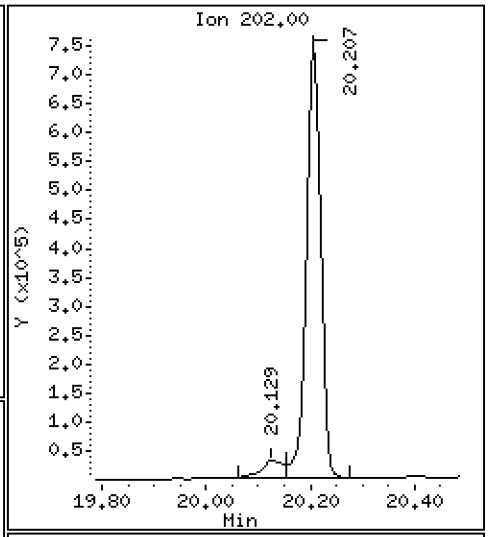
Concentration: 4.698 ug/mL

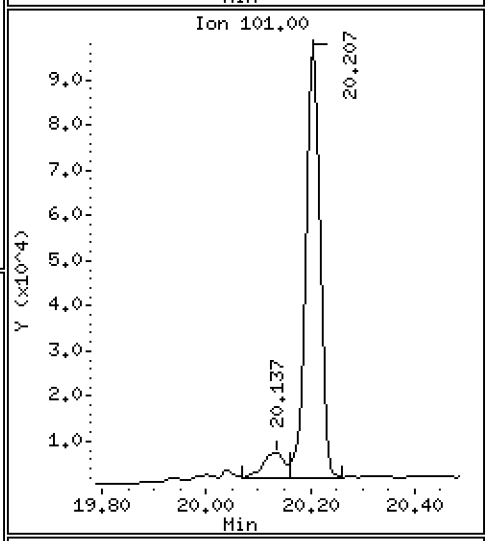


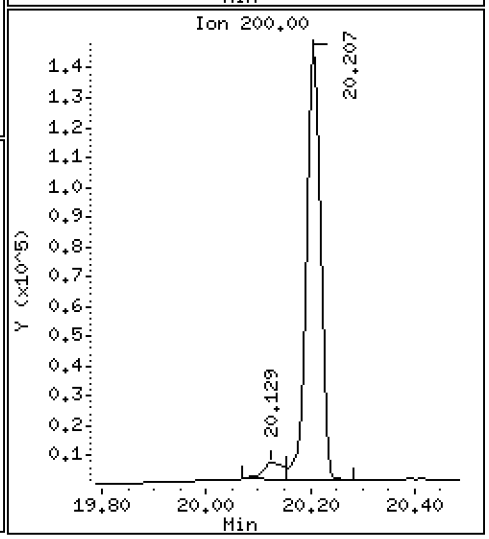












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

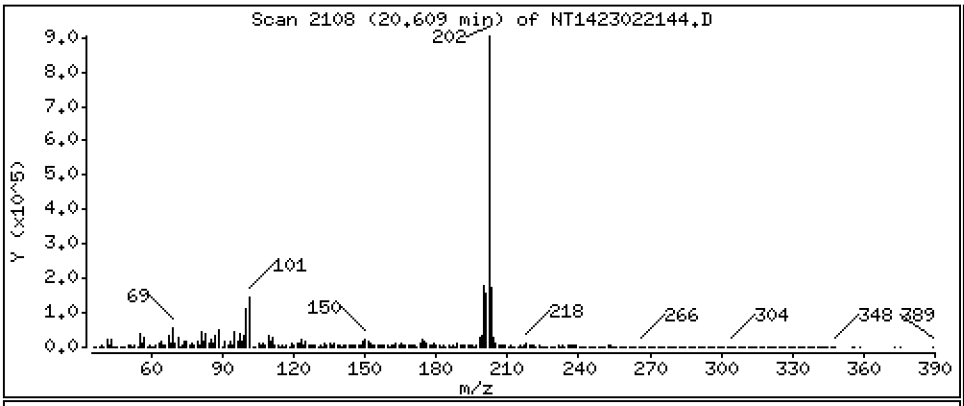
Operator: DSD

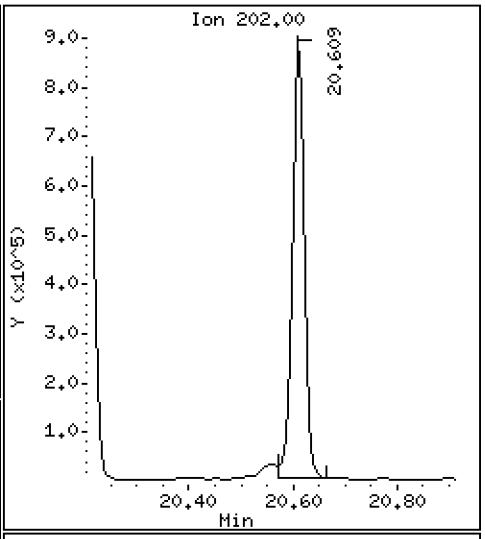
Column phase: ZB-5msi

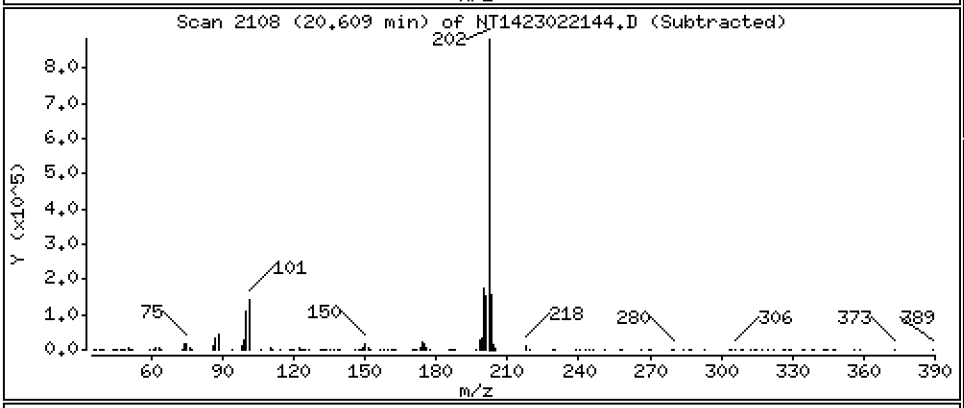
Column diameter: 0.25

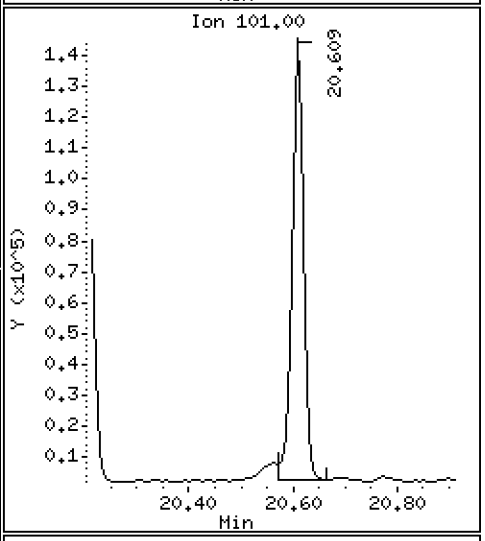
65 Pyrene

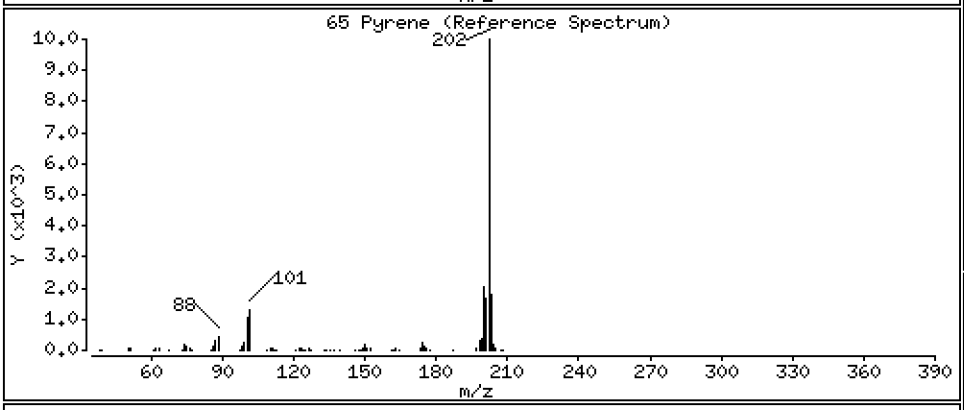
Concentration: 4.678 ug/mL

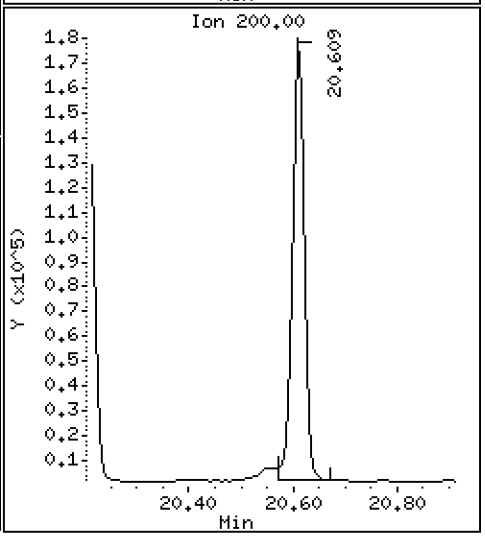


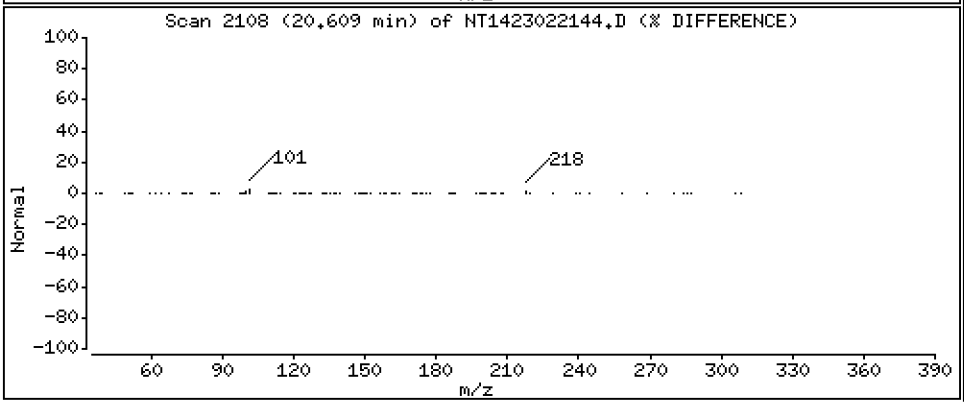












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

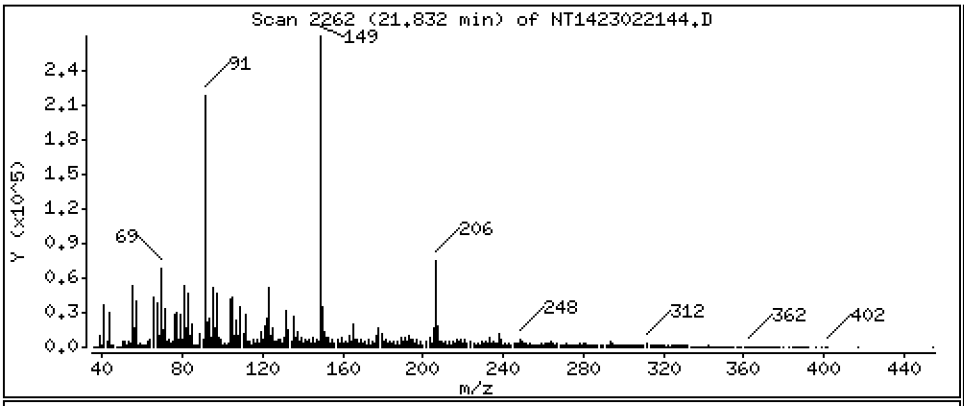
Operator: DSD

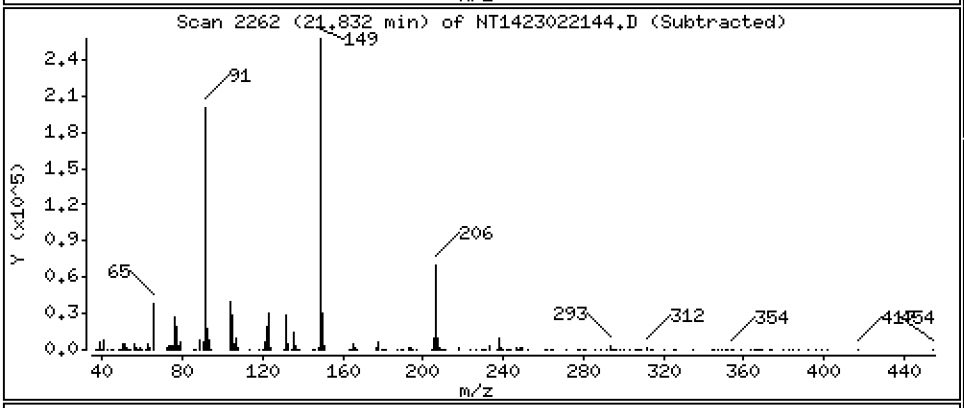
Column phase: ZB-5msi

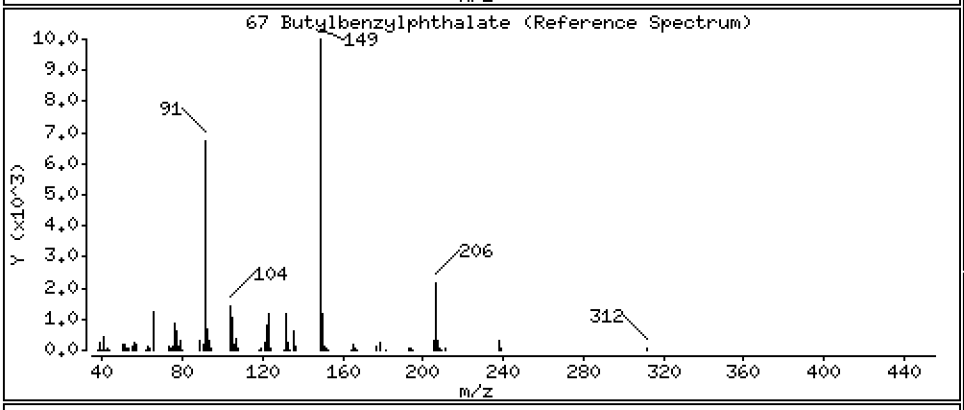
Column diameter: 0.25

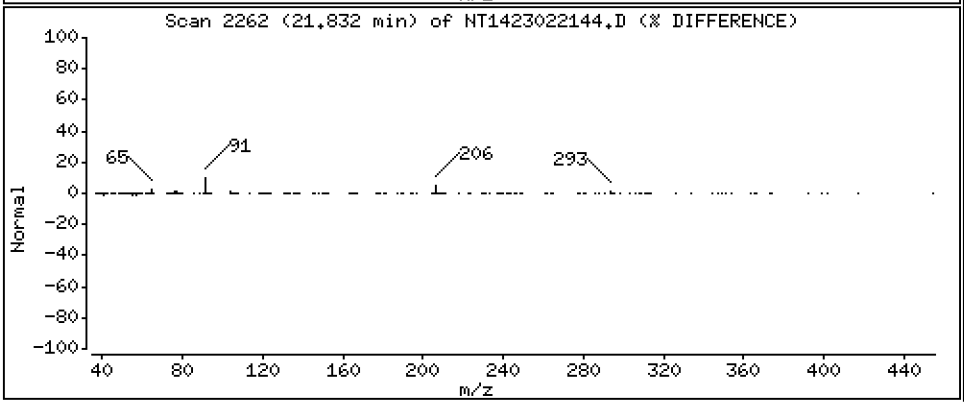
67 Butylbenzylphthalate

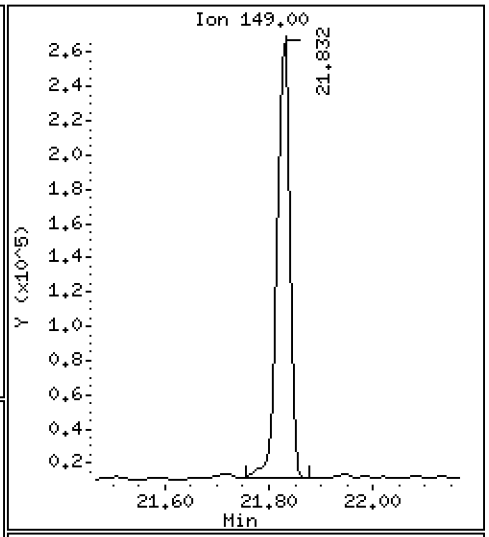
Concentration: 4.062 ug/mL

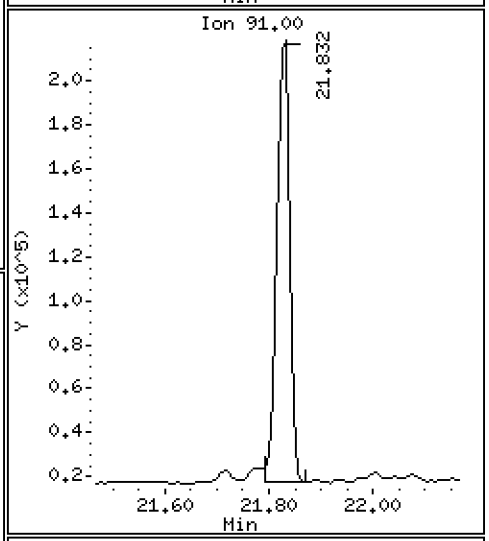


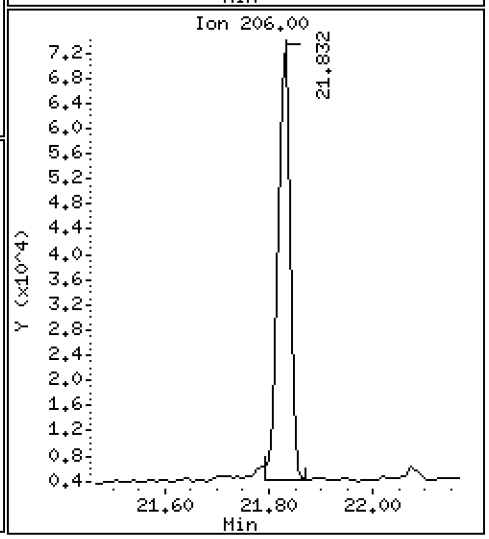












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

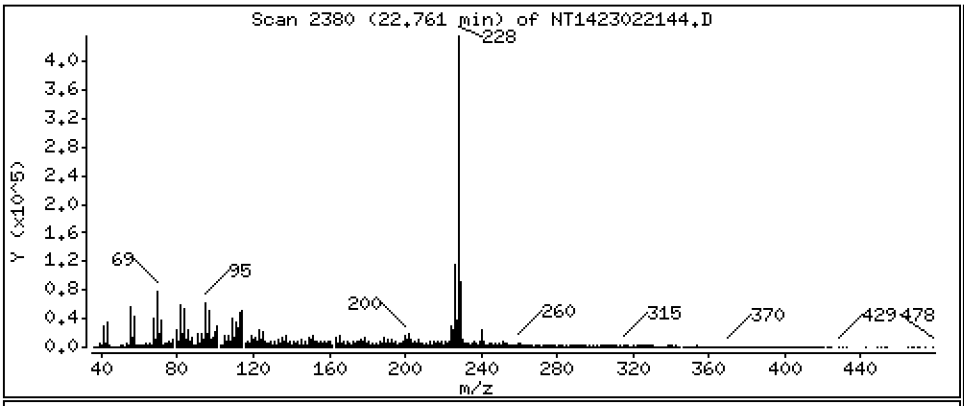
Operator: DSD

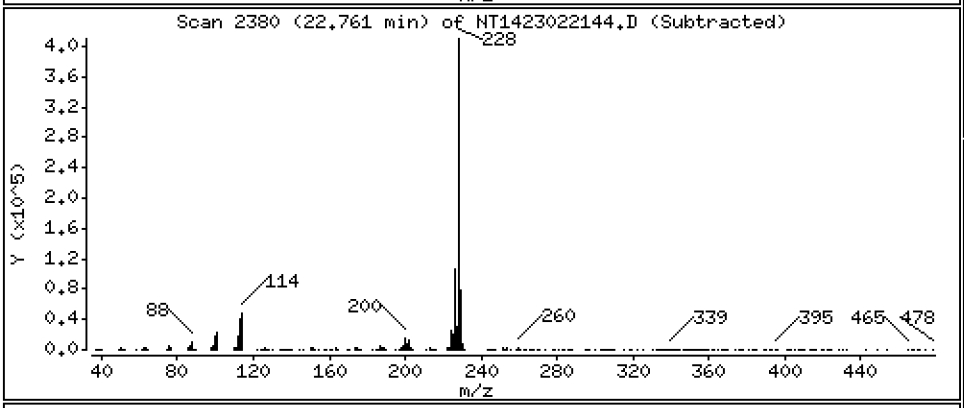
Column phase: ZB-5msi

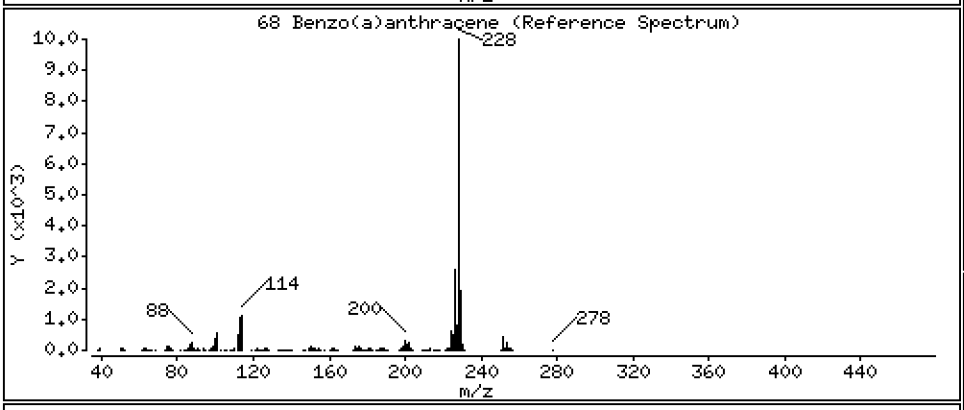
Column diameter: 0.25

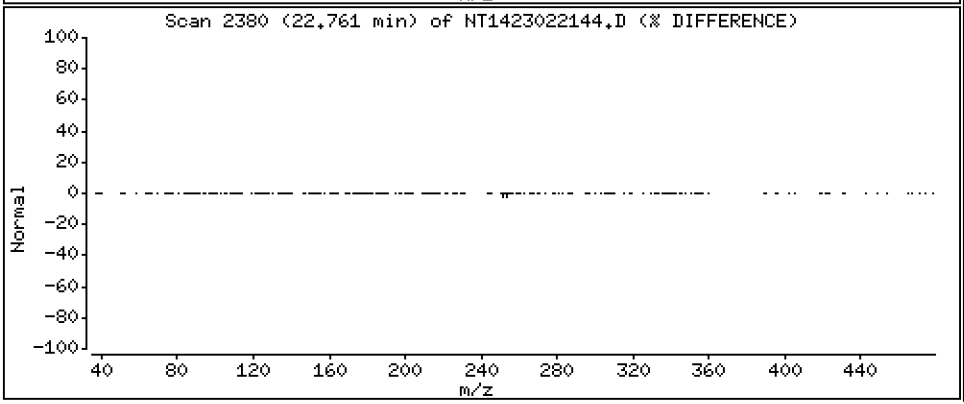
68 Benzo(a)anthracene

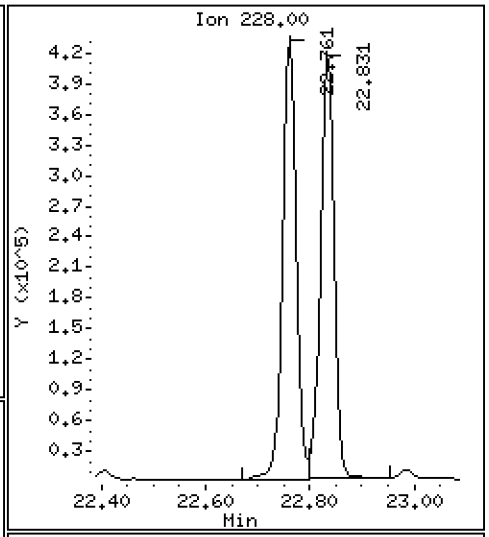
Concentration: 3.711 ug/mL

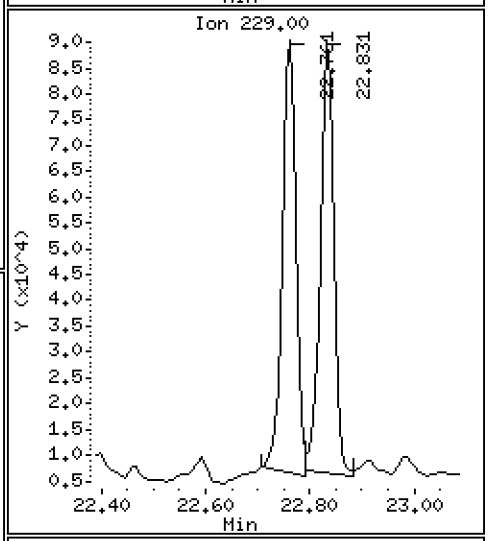


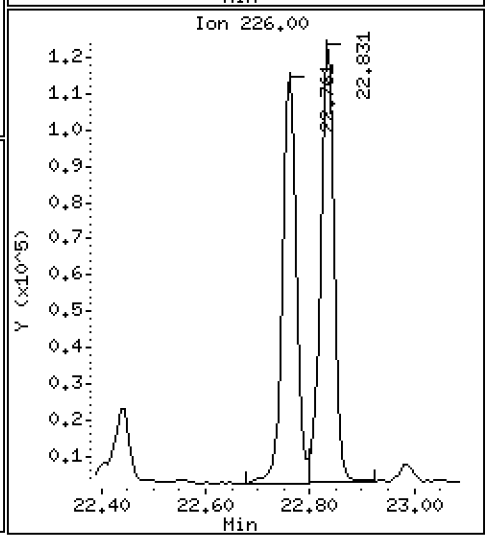












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

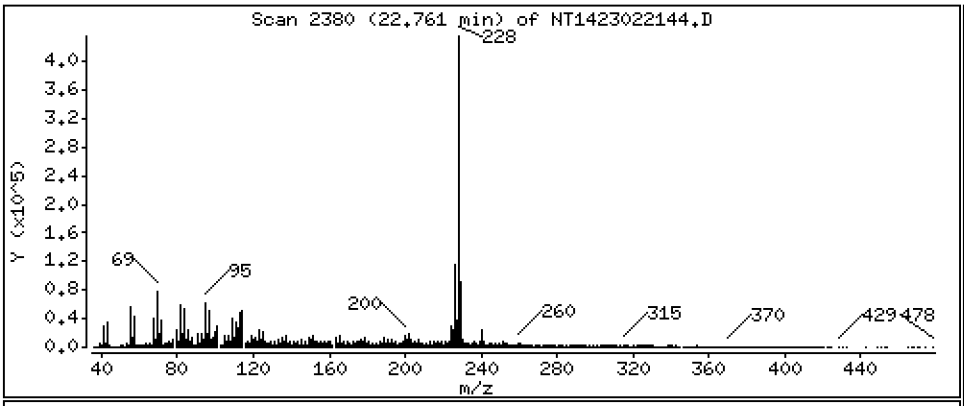
Operator: DSD

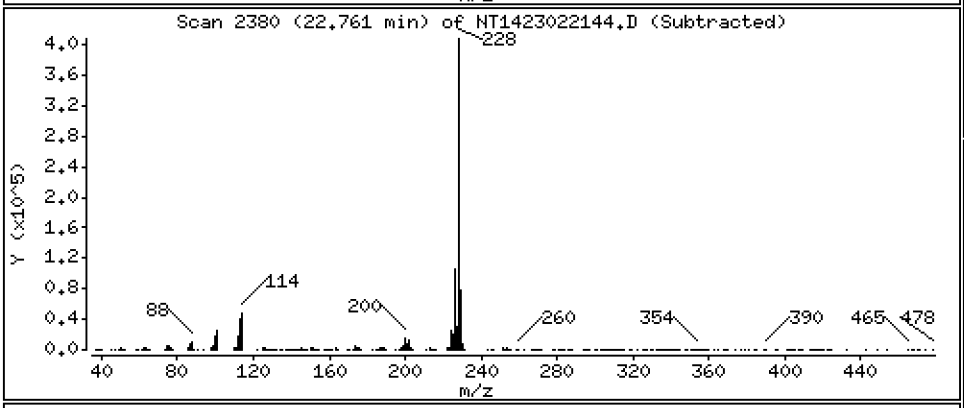
Column phase: ZB-5msi

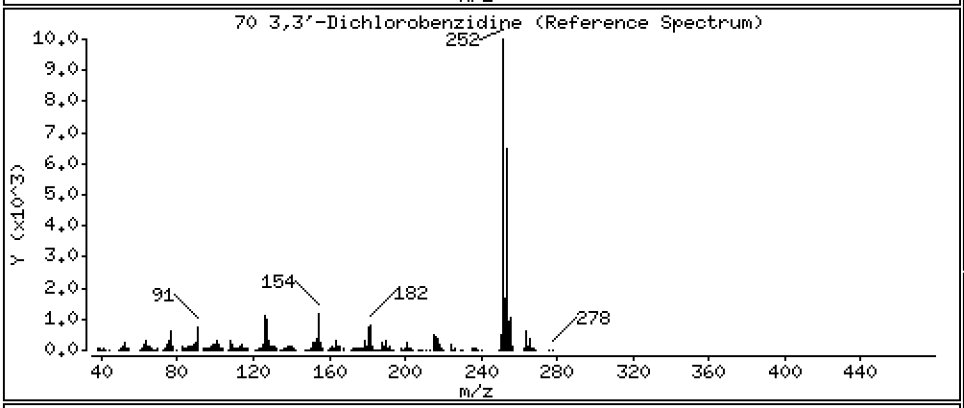
Column diameter: 0.25

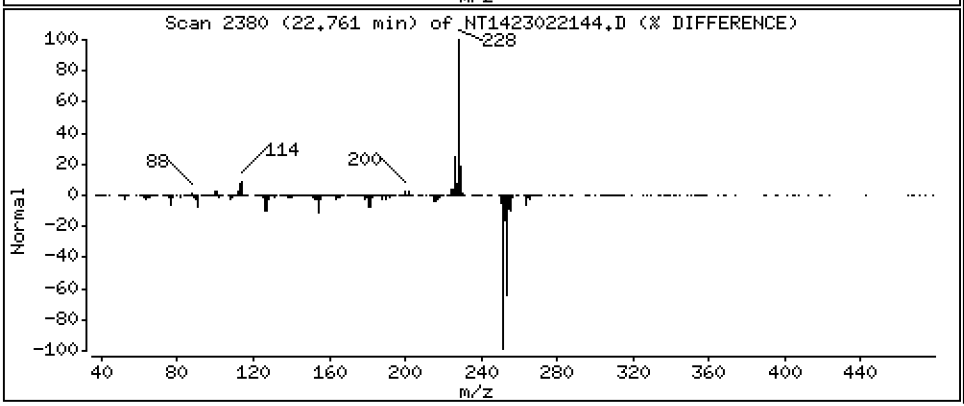
70 3,3'-Dichlorobenzidine

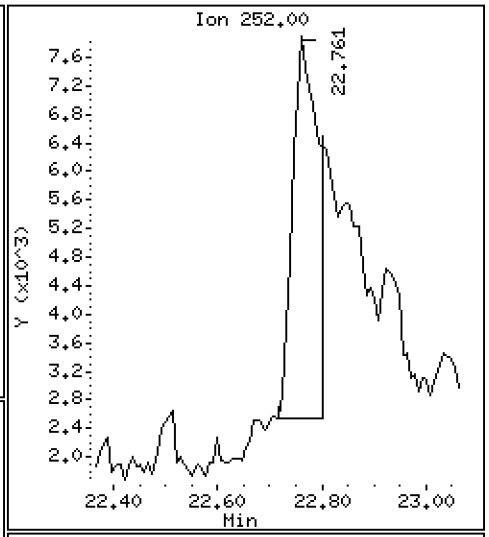
Concentration: 0.2671 ug/mL

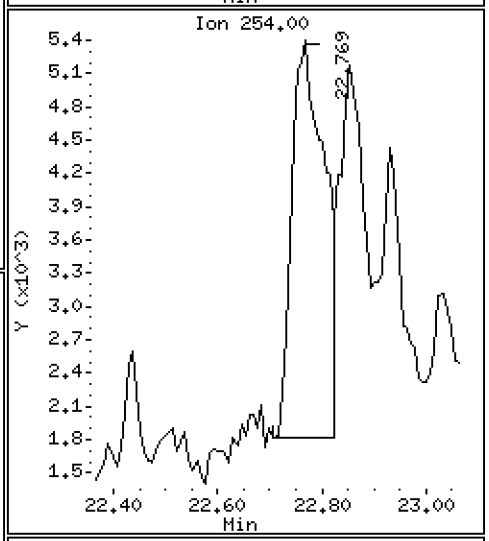


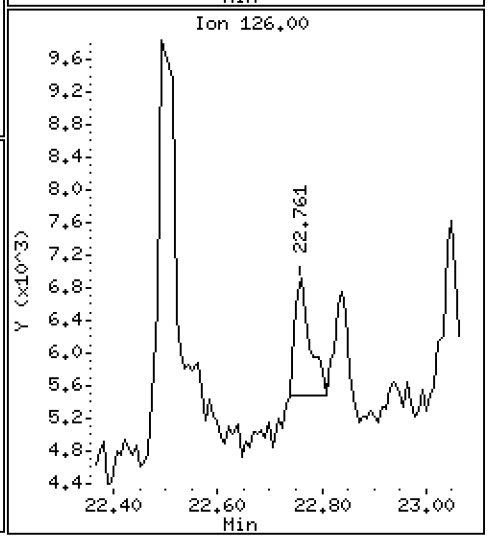












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

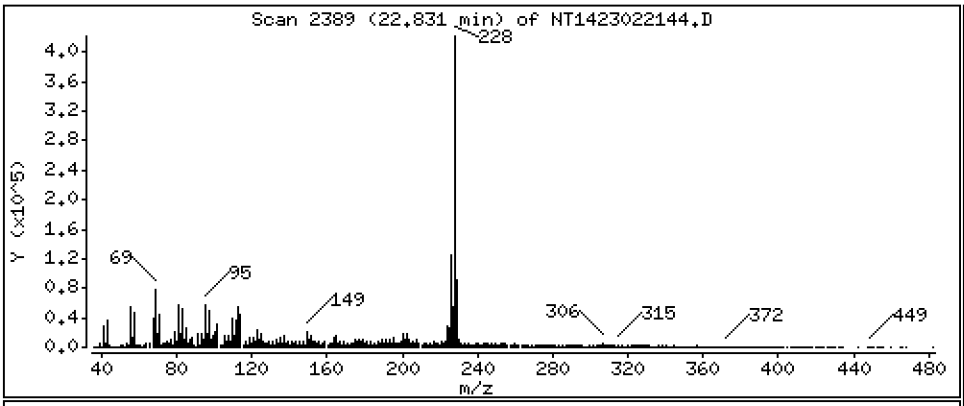
Operator: DSD

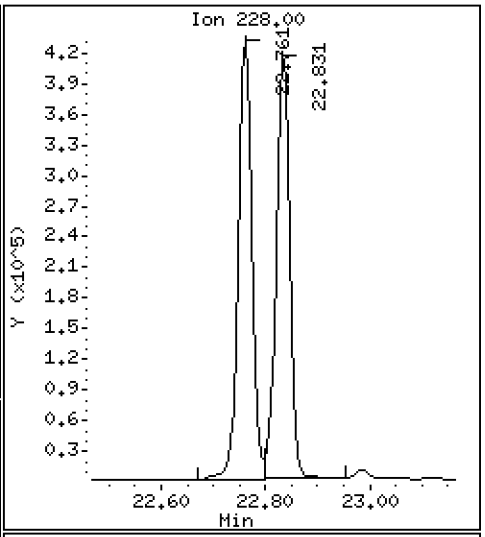
Column phase: ZB-5msi

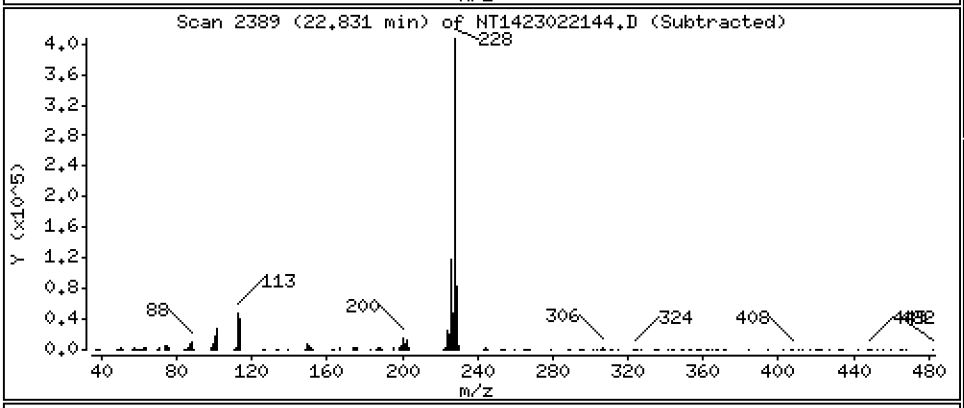
Column diameter: 0.25

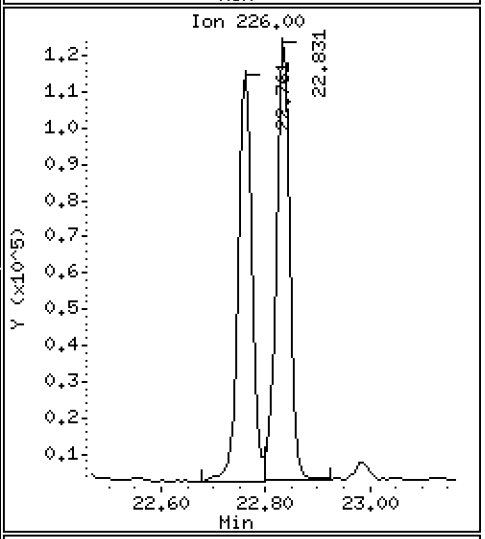
71 Chrysene

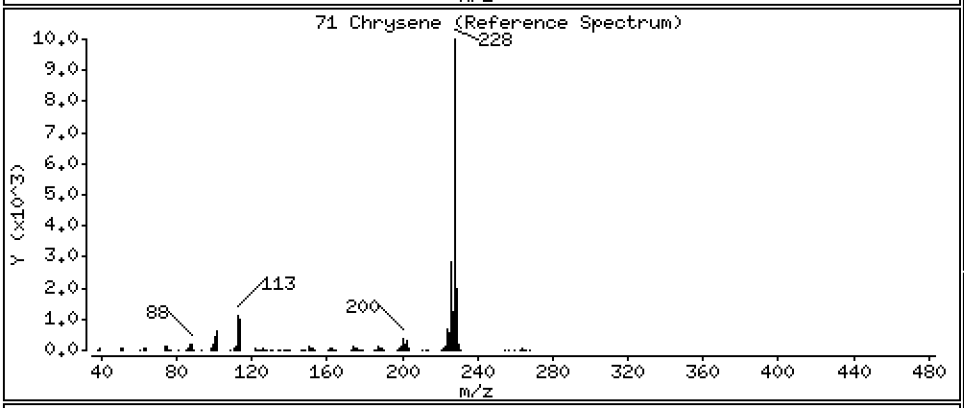
Concentration: 3.896 ug/mL

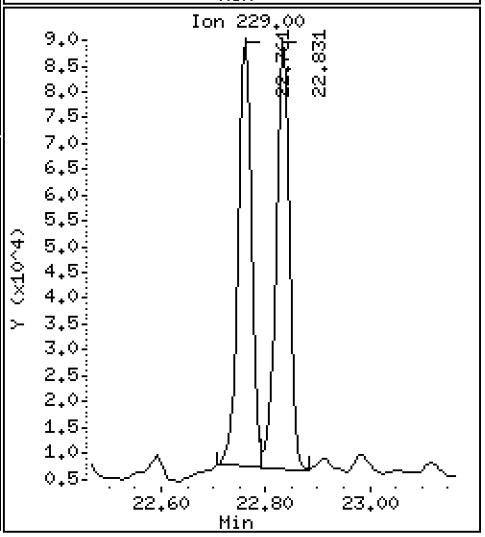


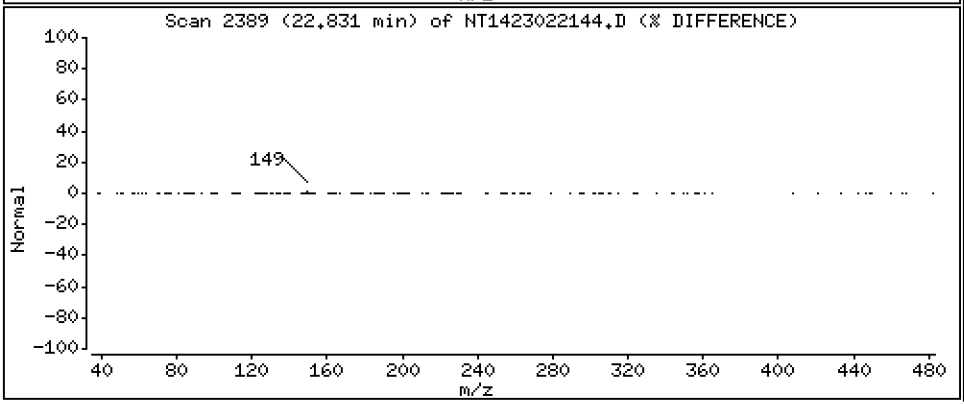












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022144.D

Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

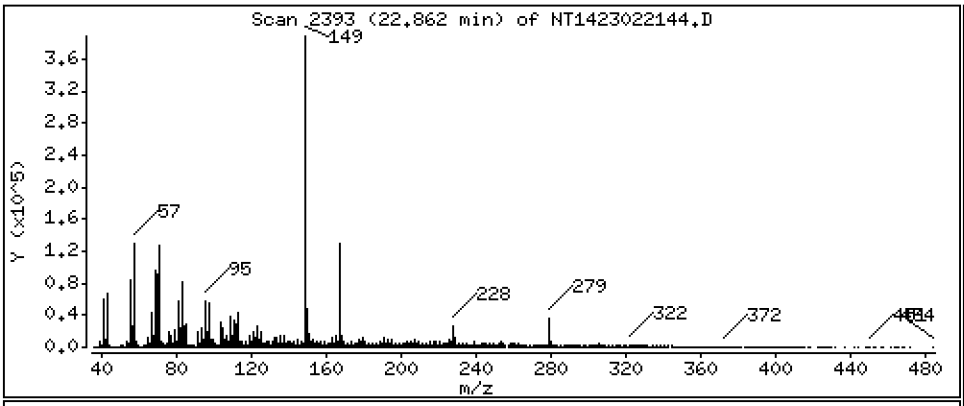
Operator: DSD

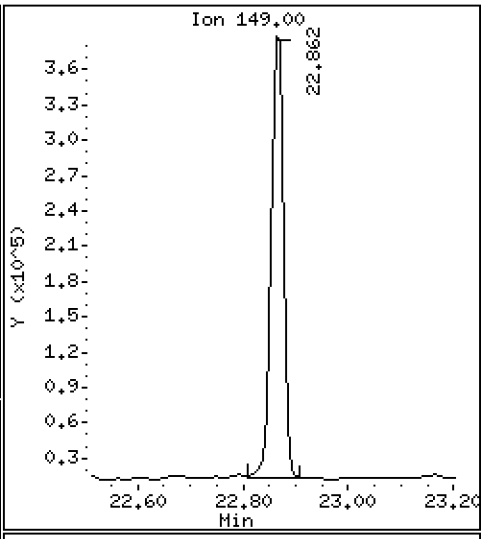
Column phase: ZB-5msi

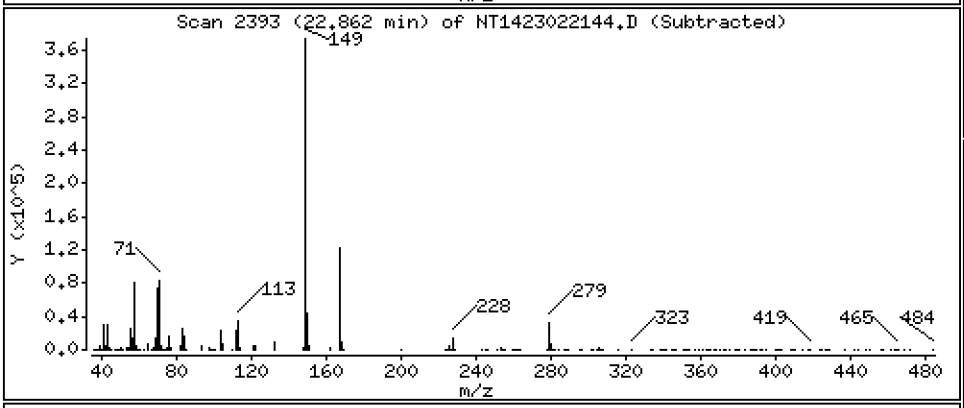
Column diameter: 0.25

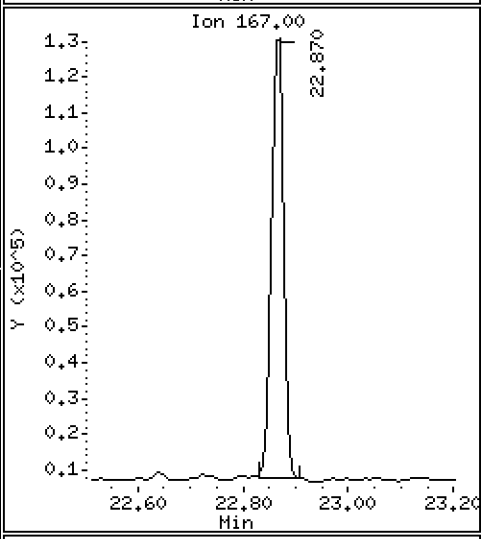
72 bis(2-Ethylhexyl)phthalate

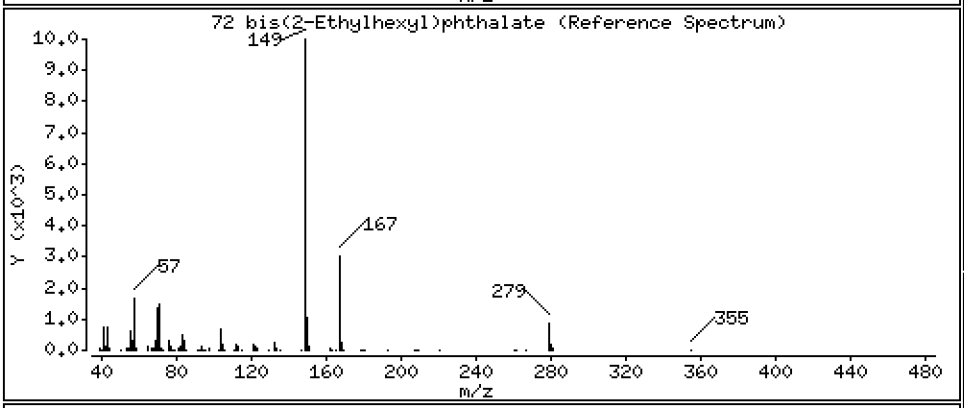
Concentration: 3.302 ug/mL

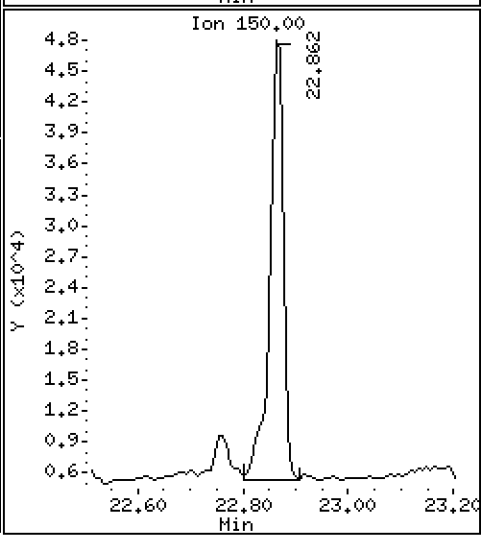


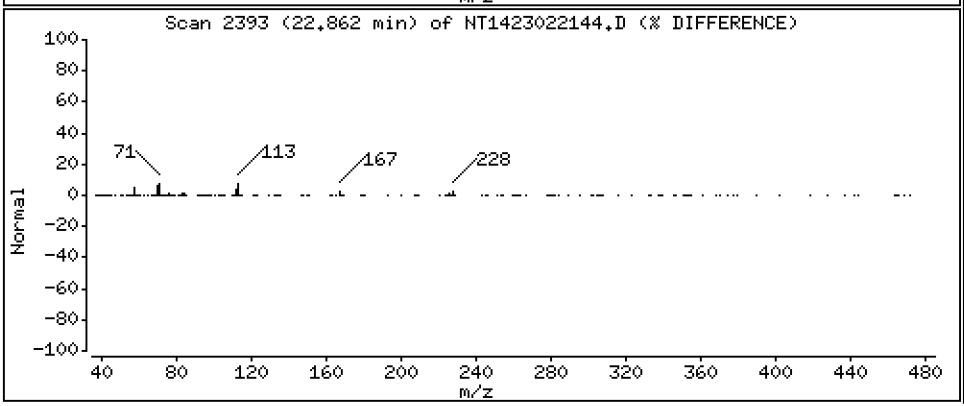












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

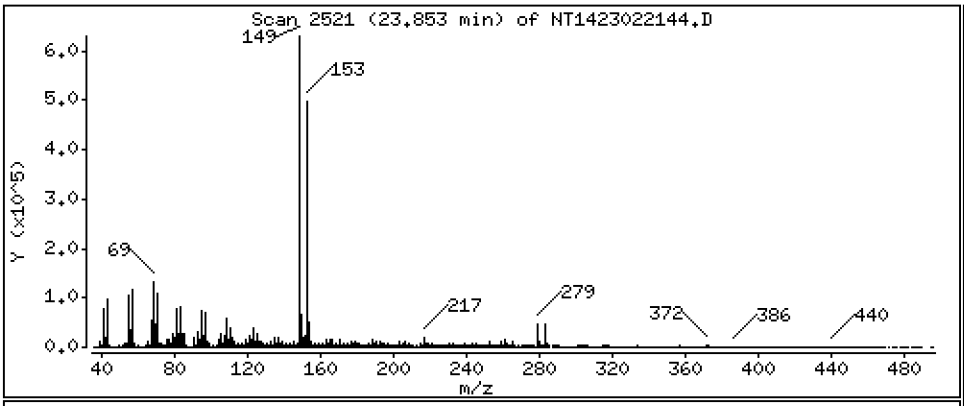
Operator: DSD

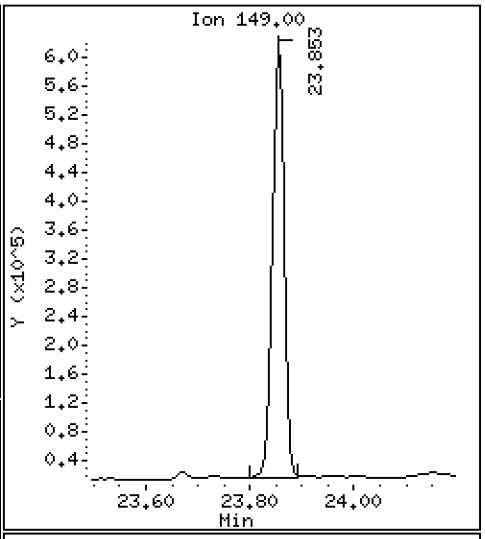
Column phase: ZB-5msi

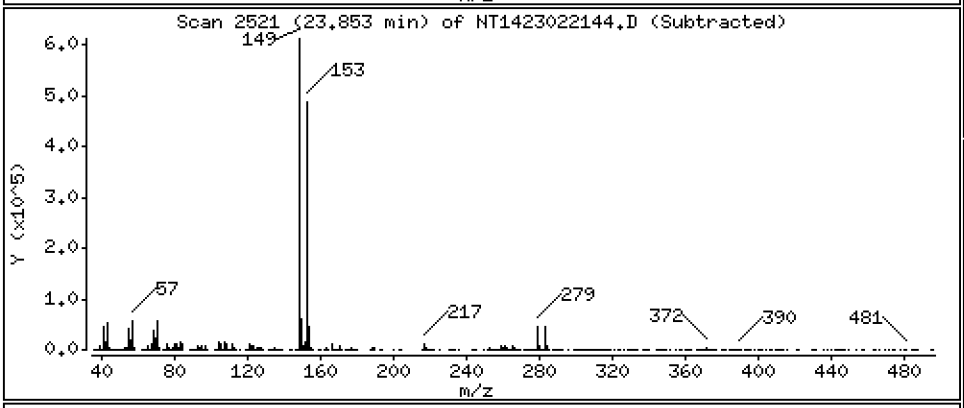
Column diameter: 0.25

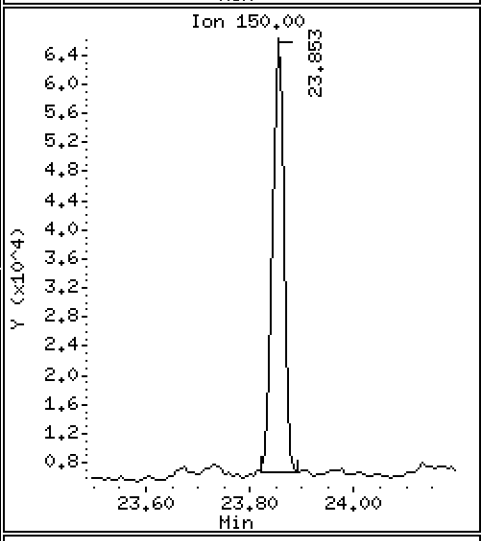
73 Di-n-octylphthalate

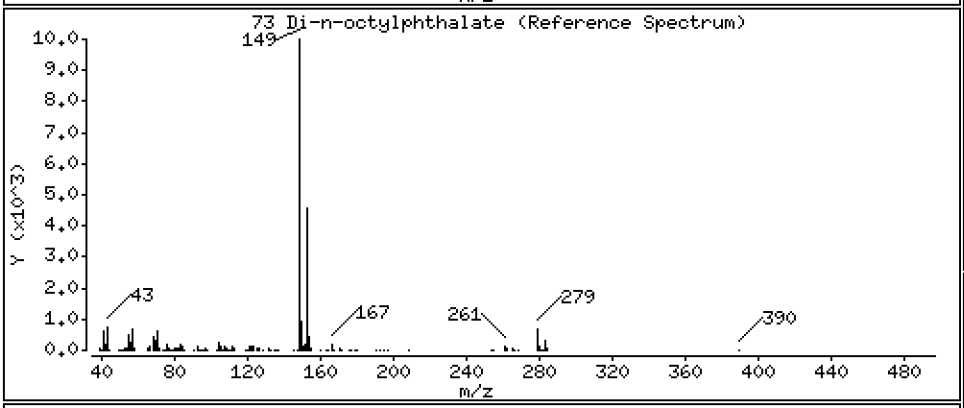
Concentration: 3.547 ug/mL

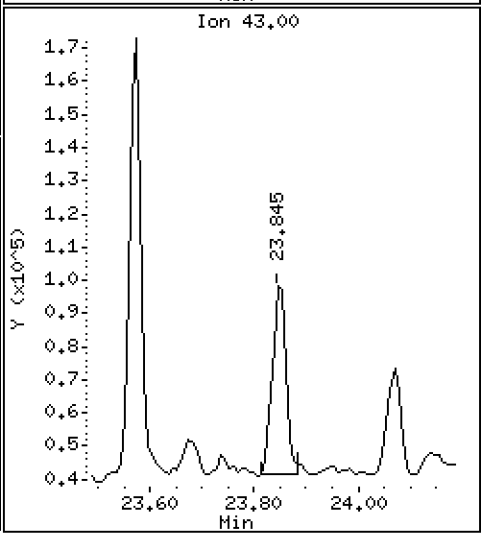


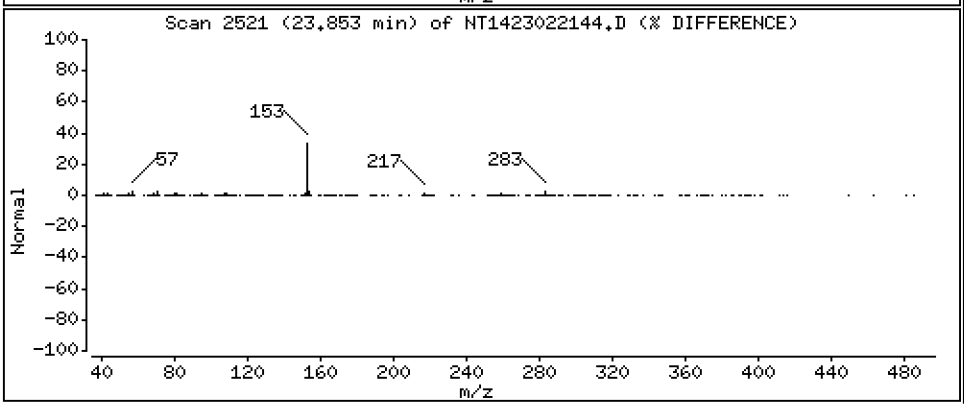












Date : 22-FEB-2023 15:22

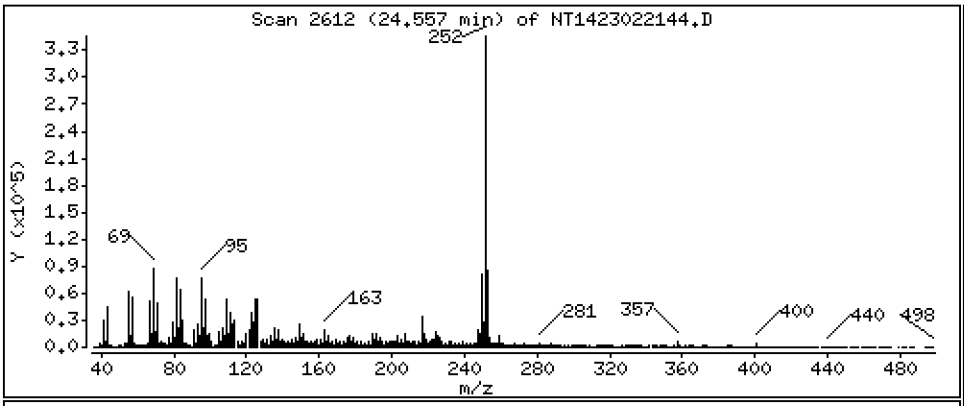
Client ID: Instrument: nt14.i

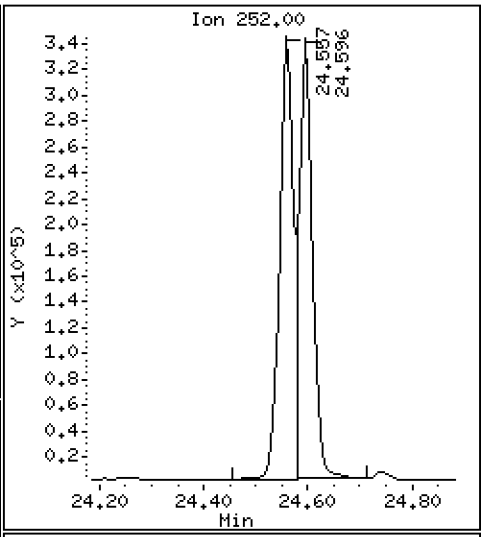
Sample Info: BLA0393-MS1

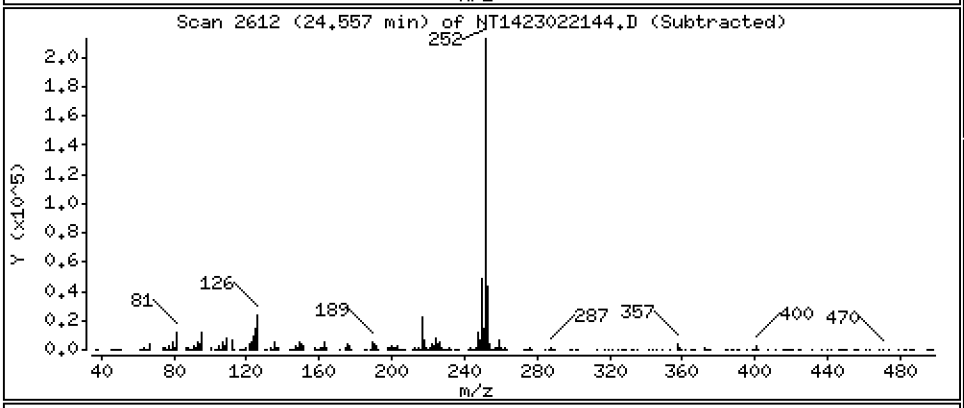
Operator: DSD

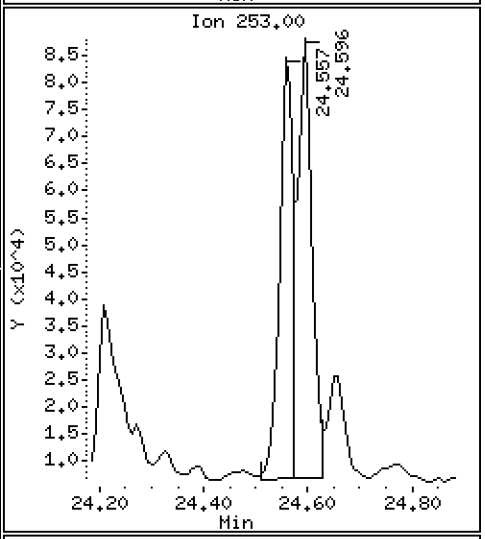
Column phase: ZB-5msi Column diameter: 0.25

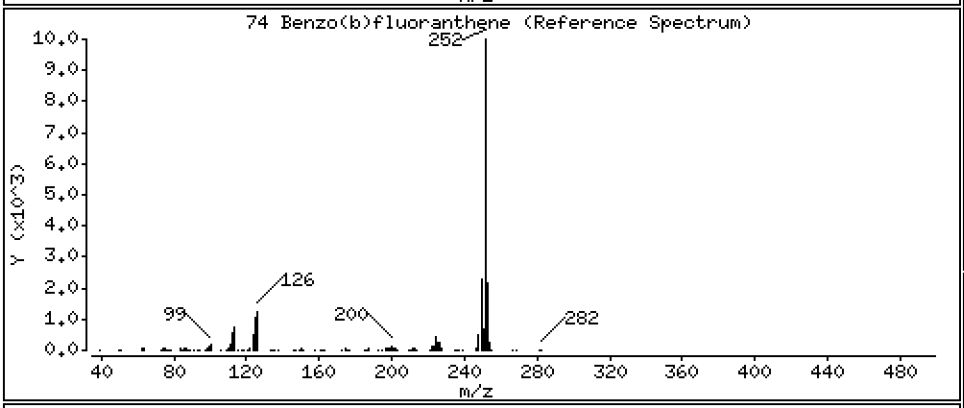
74 Benzo(b)fluoranthene Concentration: 4.141 ug/mL

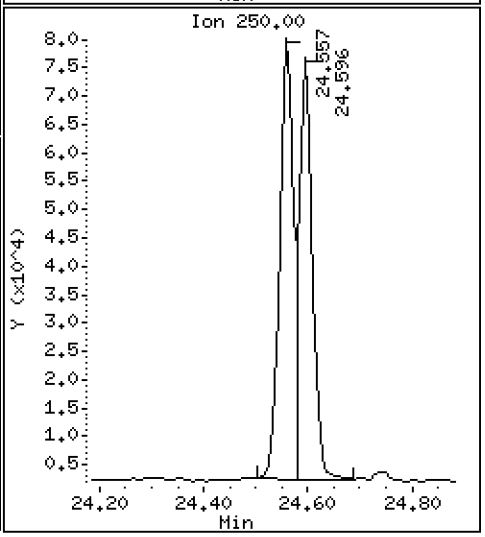


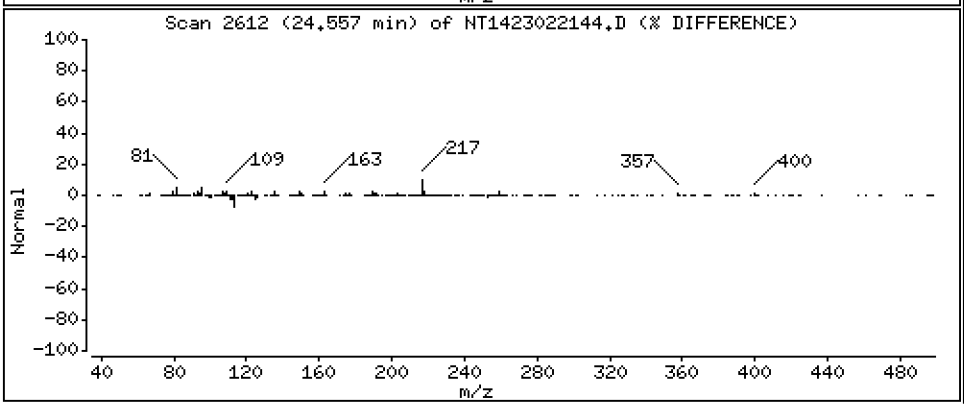












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

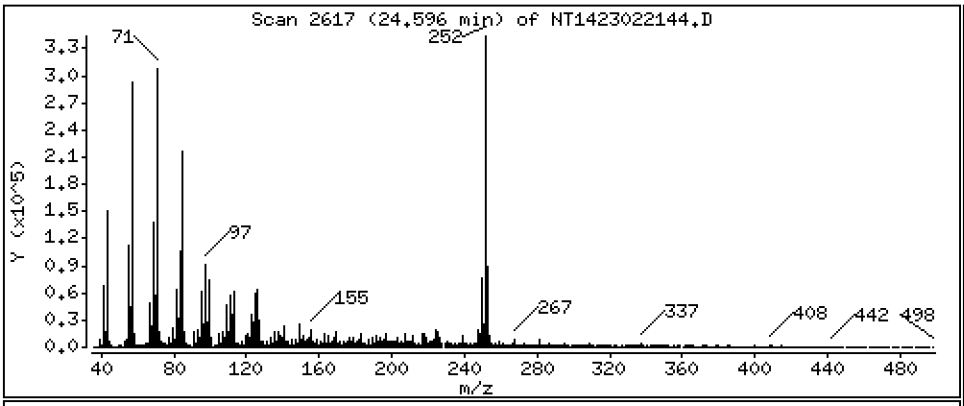
Operator: DSD

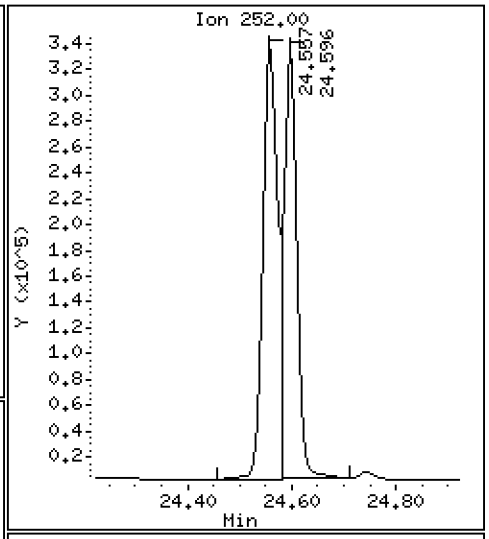
Column phase: ZB-5msi

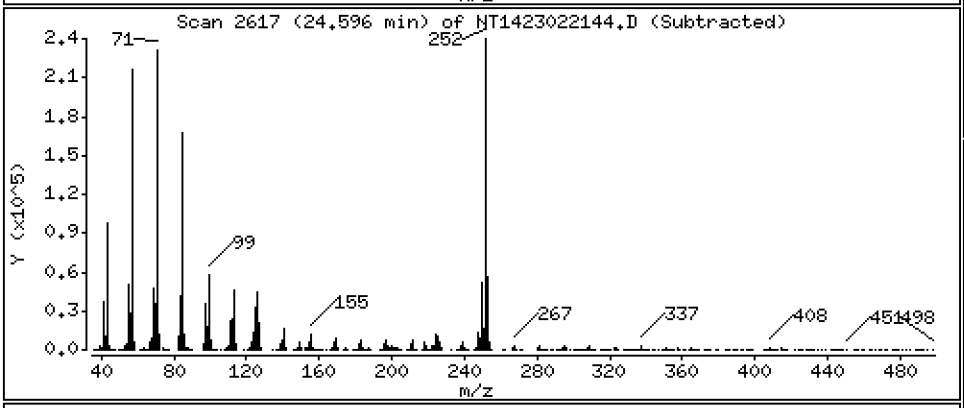
Column diameter: 0.25

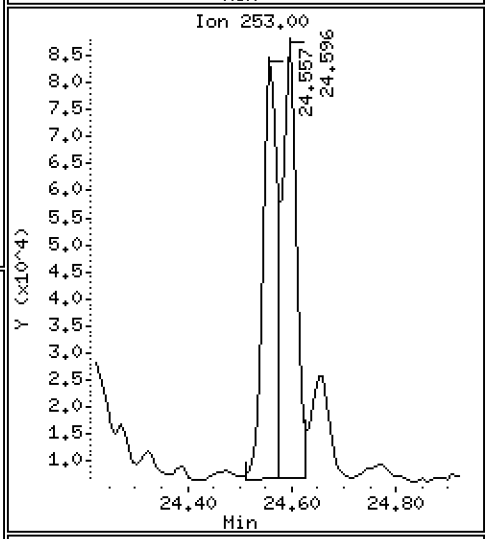
75 Benzo(k)fluoranthene

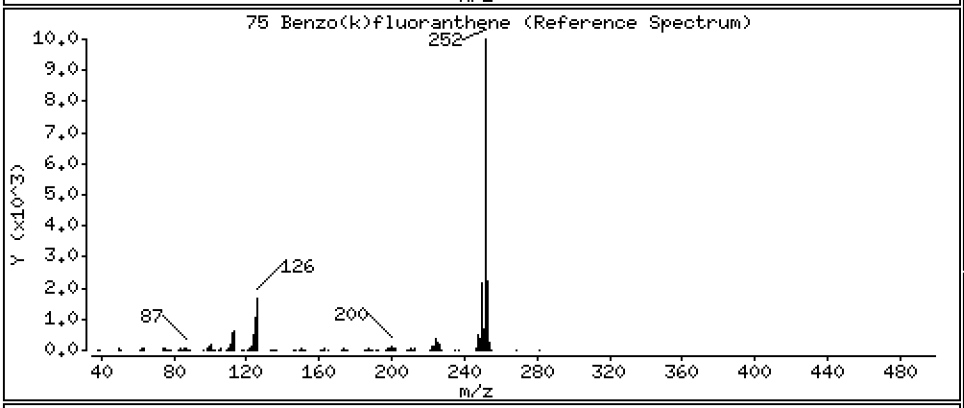
Concentration: 3.423 ug/mL

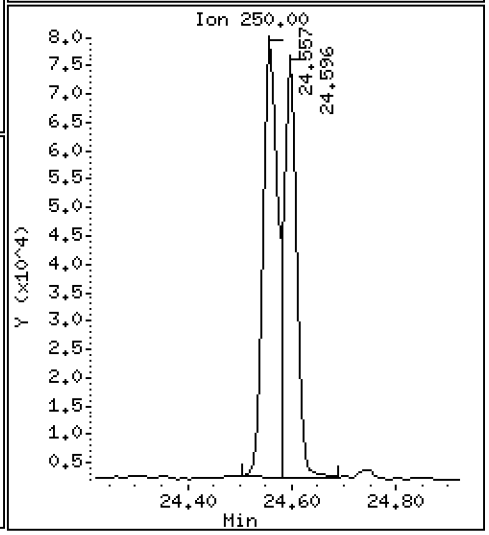


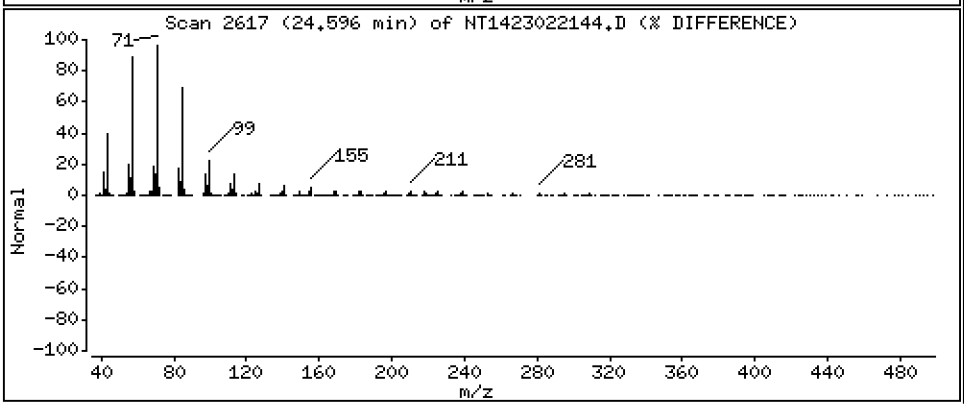












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

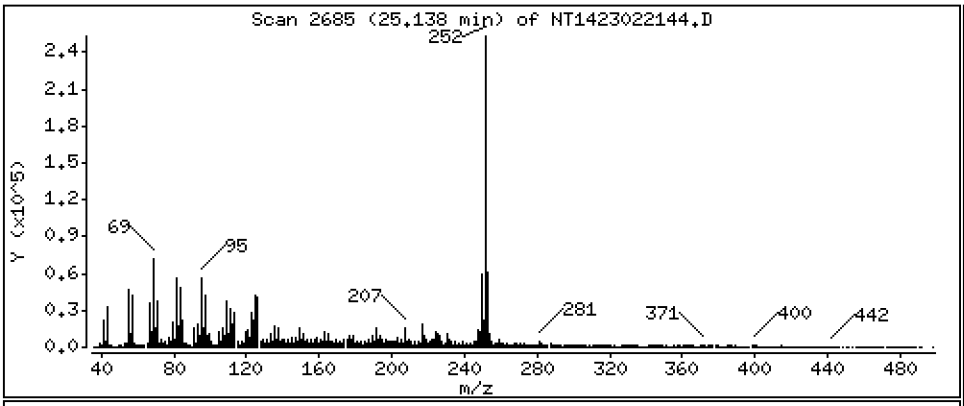
Operator: DSD

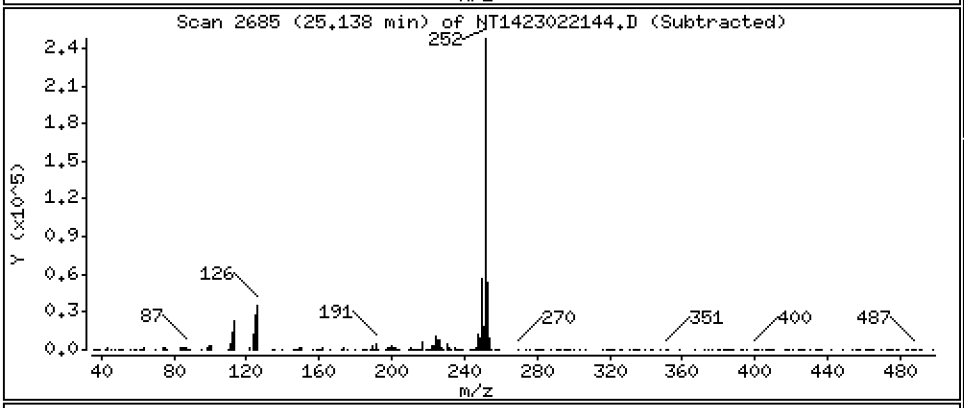
Column phase: ZB-5msi

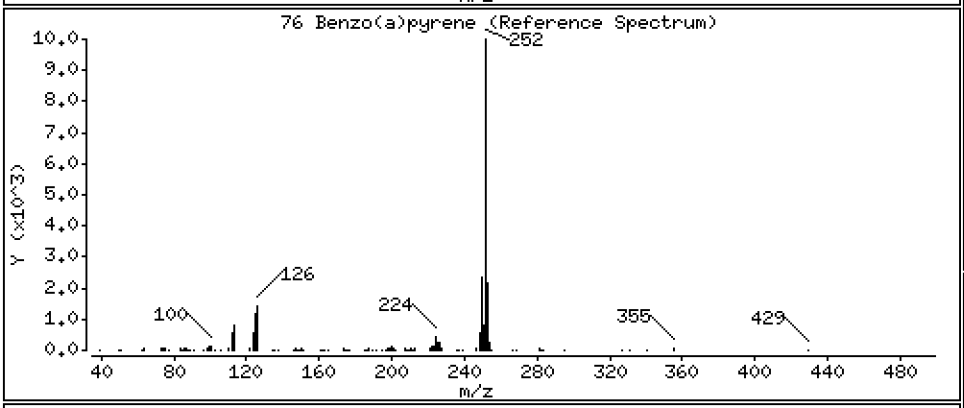
Column diameter: 0.25

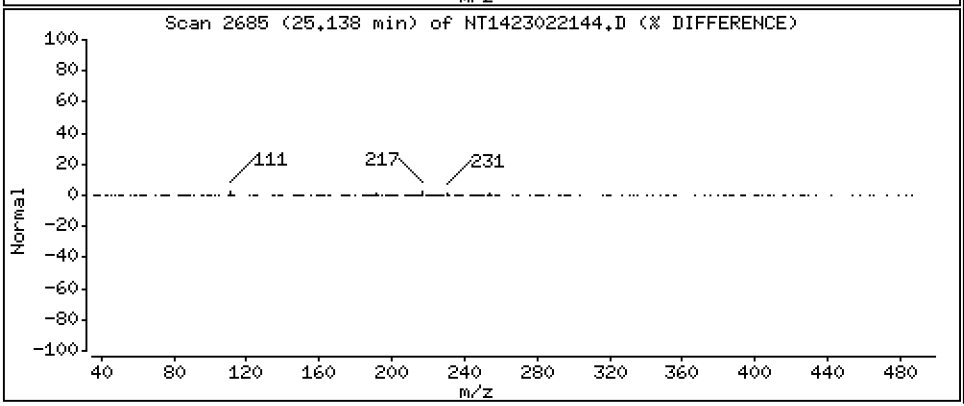
76 Benzo(a)pyrene

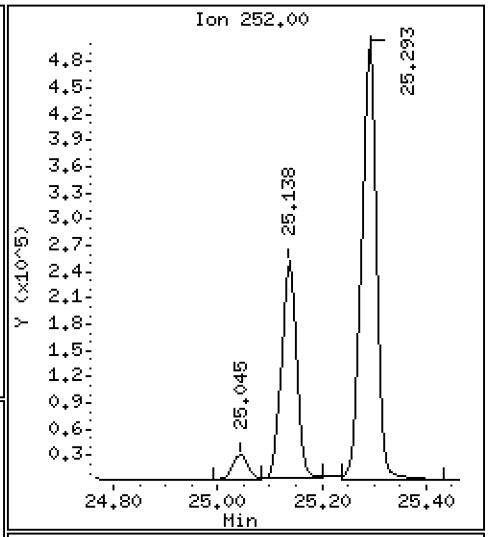
Concentration: 3.133 ug/mL

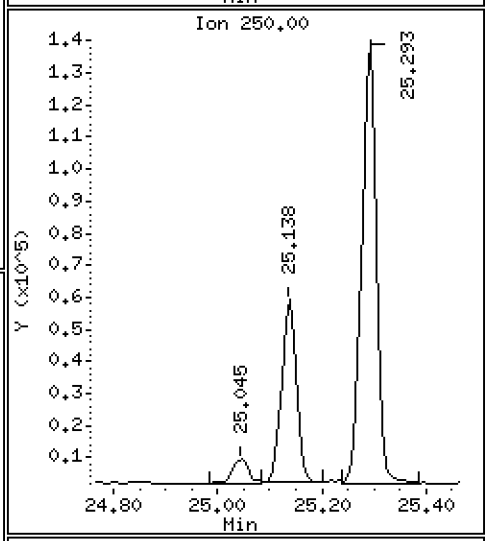


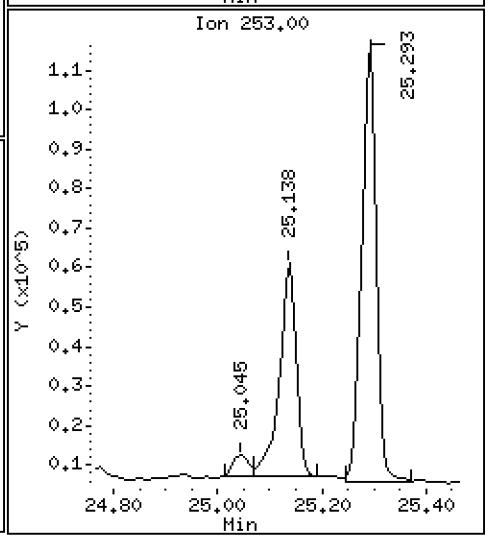












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

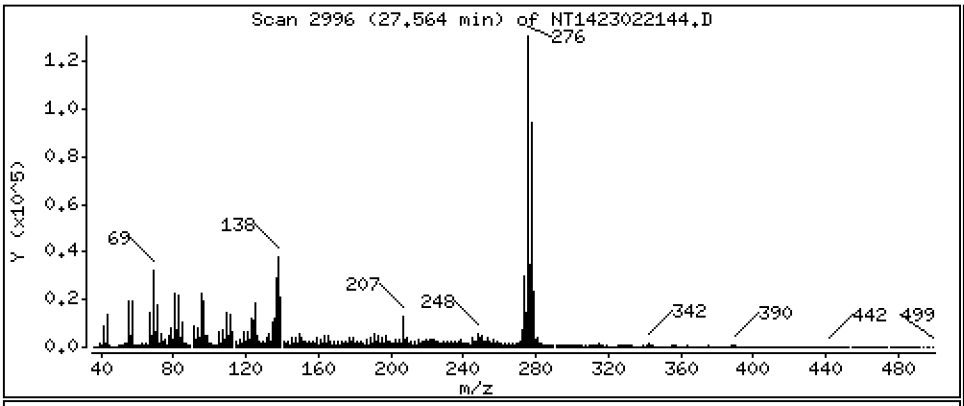
Operator: DSD

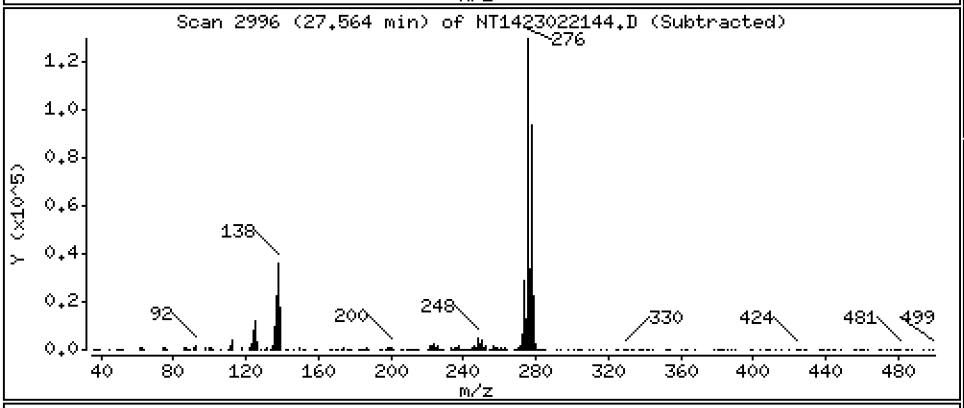
Column phase: ZB-5msi

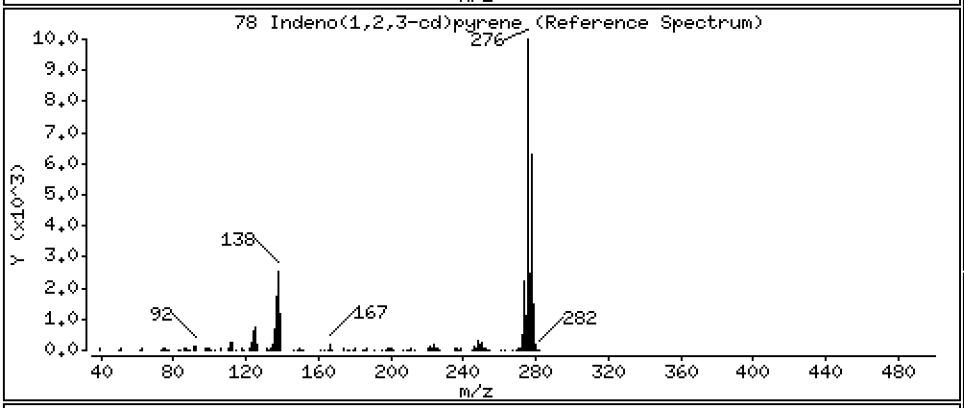
Column diameter: 0.25

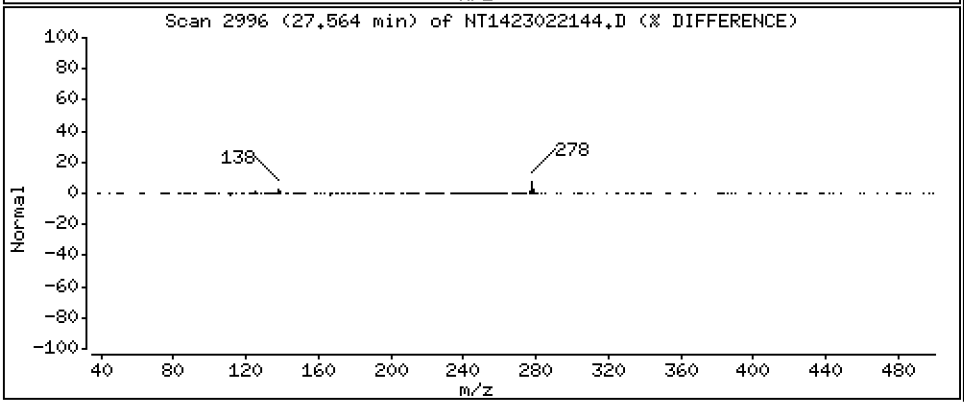
78 Indeno(1,2,3-cd)pyrene

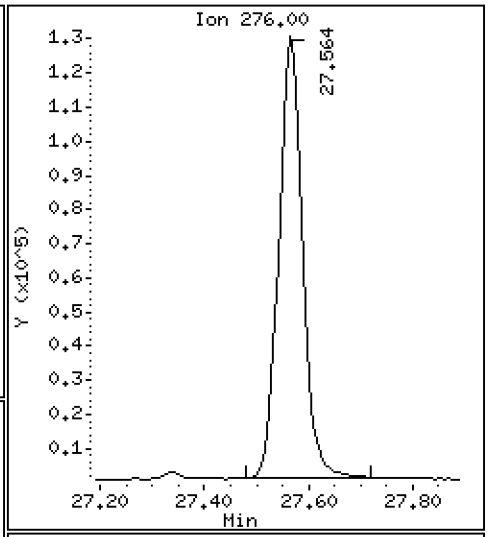
Concentration: 3.152 ug/mL

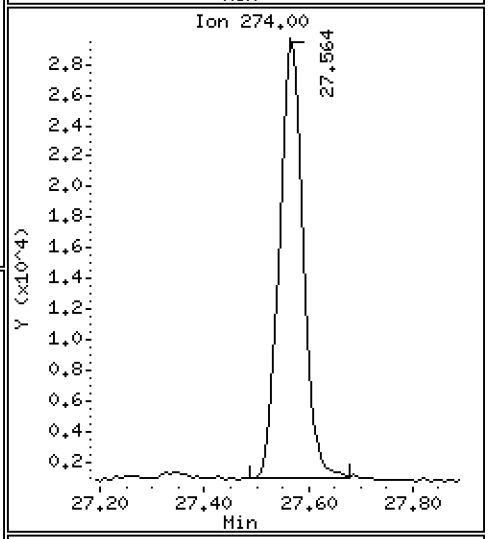


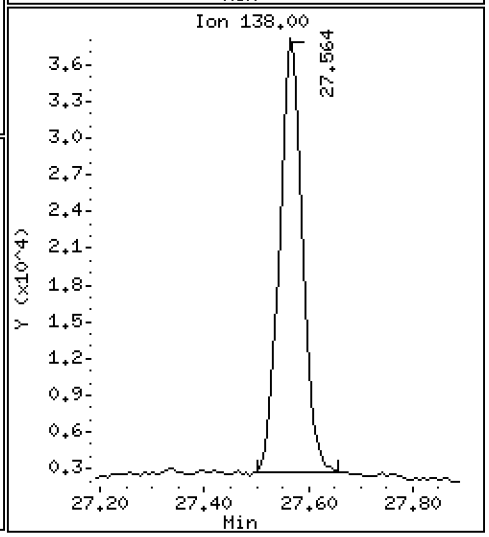












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

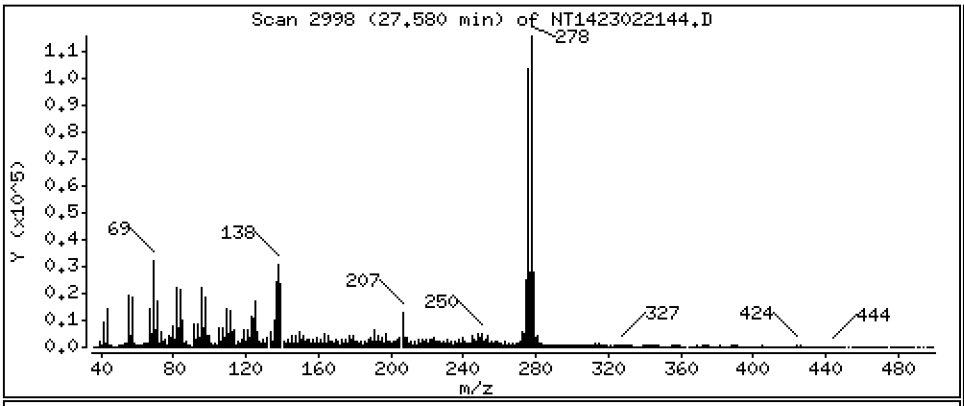
Operator: DSD

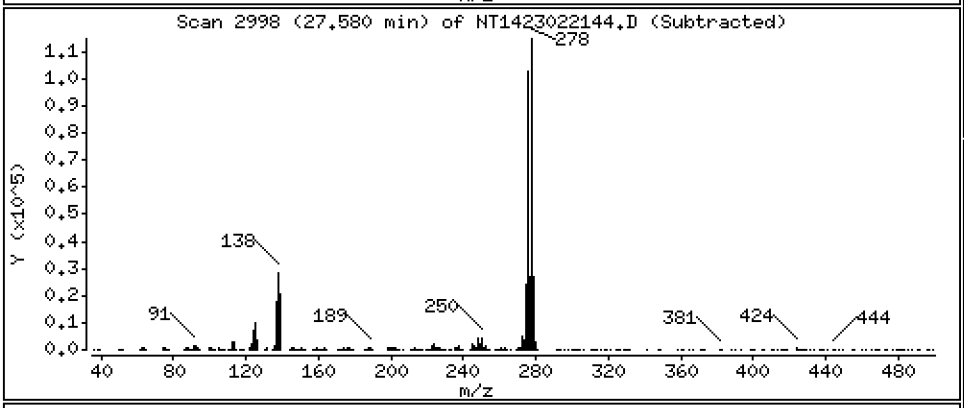
Column phase: ZB-5msi

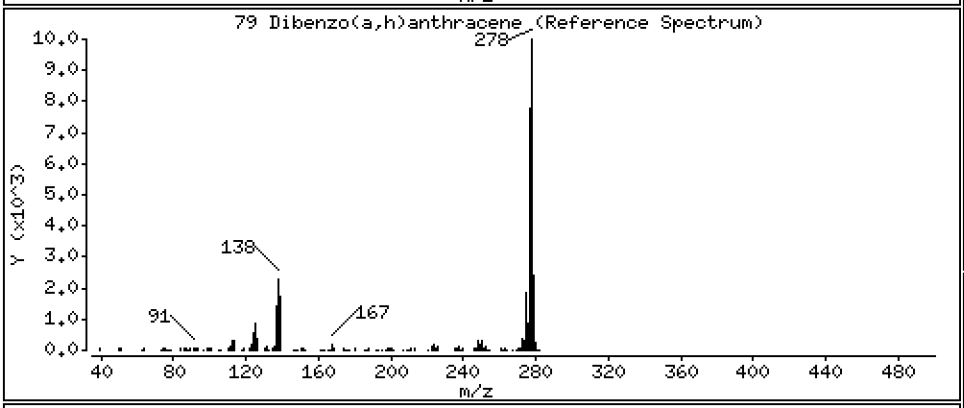
Column diameter: 0.25

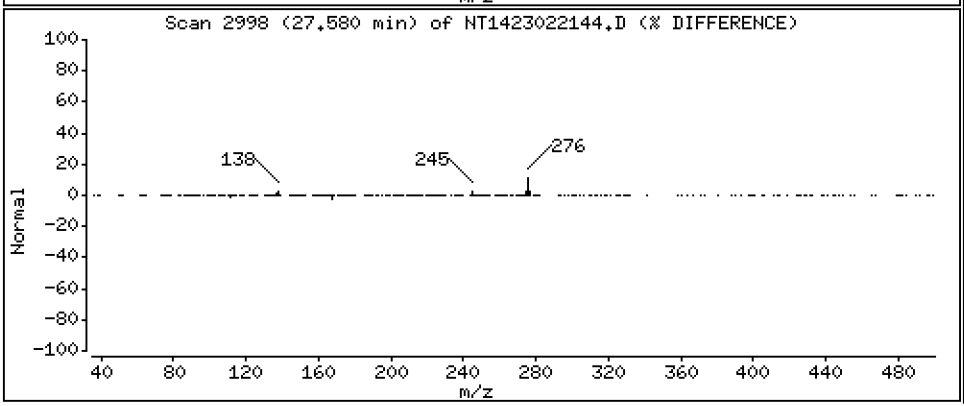
79 Dibenzo(a,h)anthracene

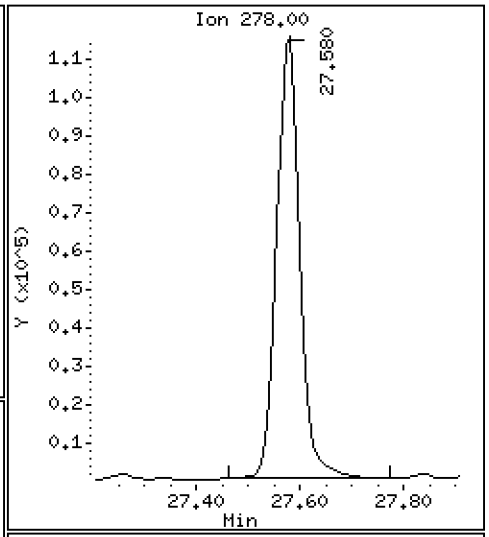
Concentration: 3.257 ug/mL

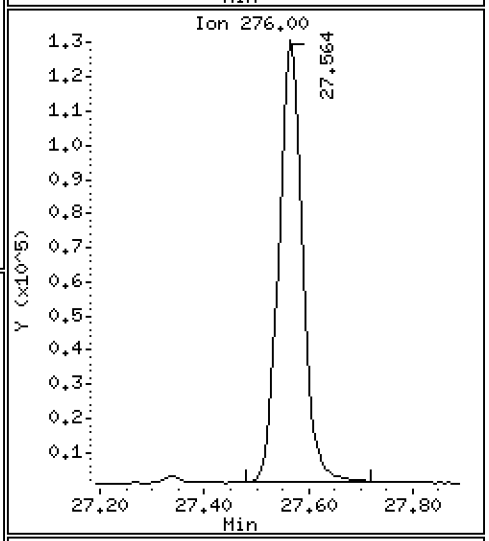


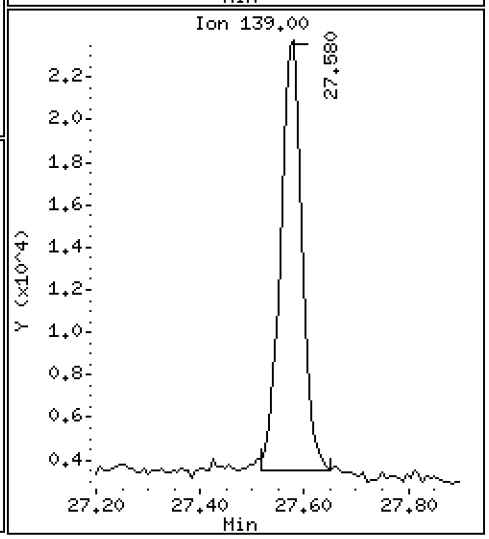












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

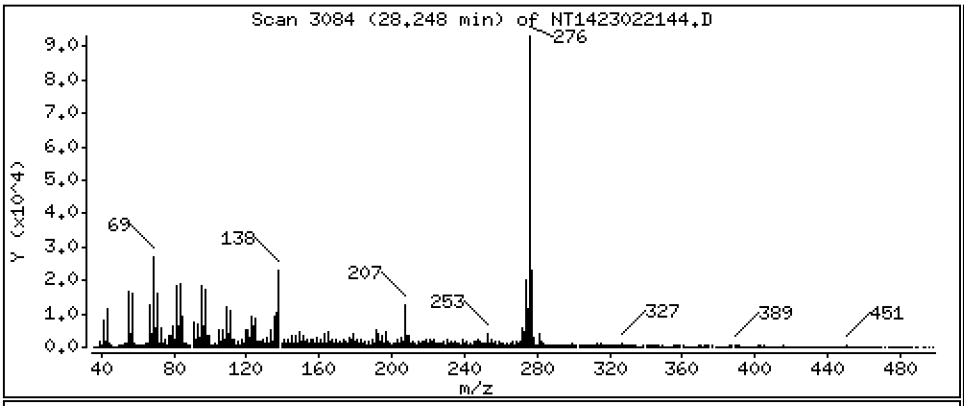
Operator: DSD

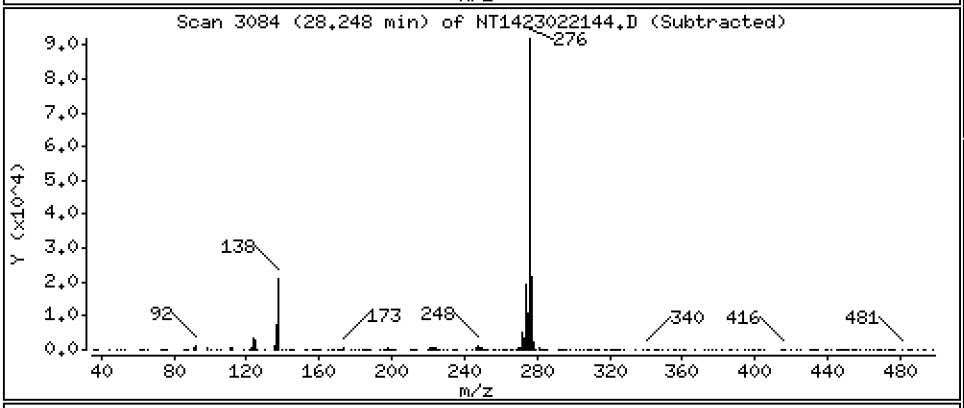
Column phase: ZB-5msi

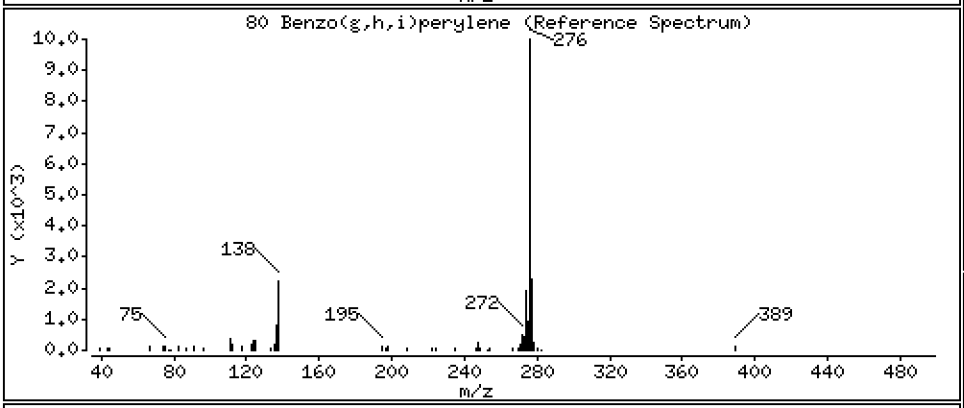
Column diameter: 0.25

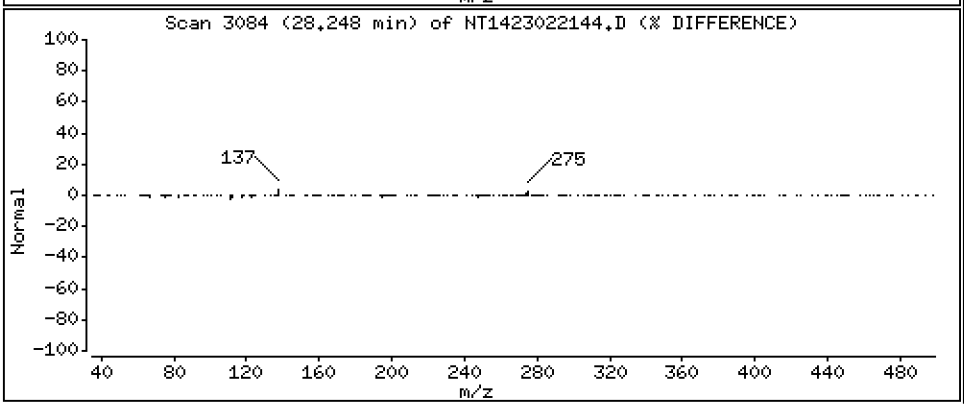
80 Benzo(g,h,i)perylene

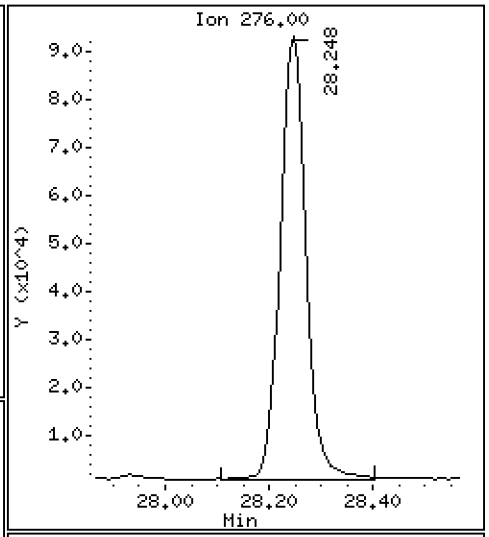
Concentration: 3.026 ug/mL

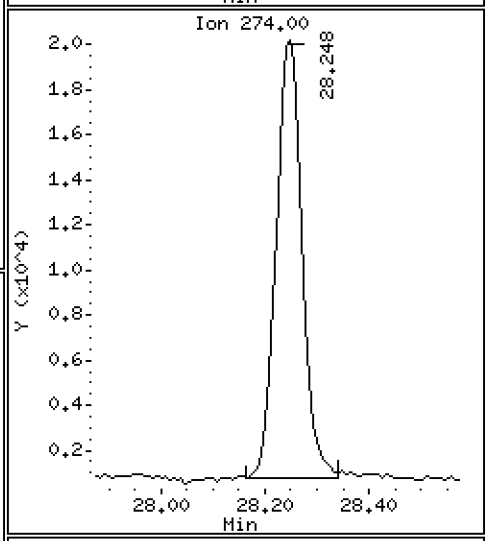


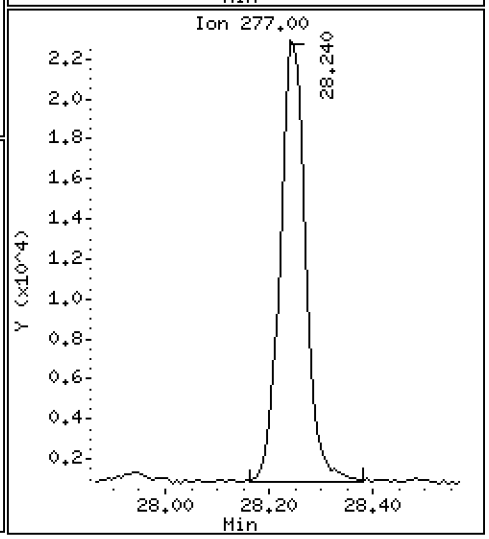












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

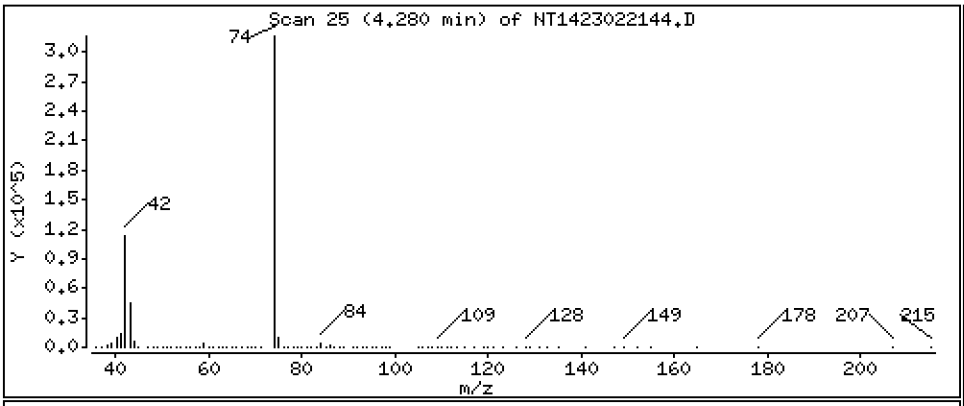
Operator: DSD

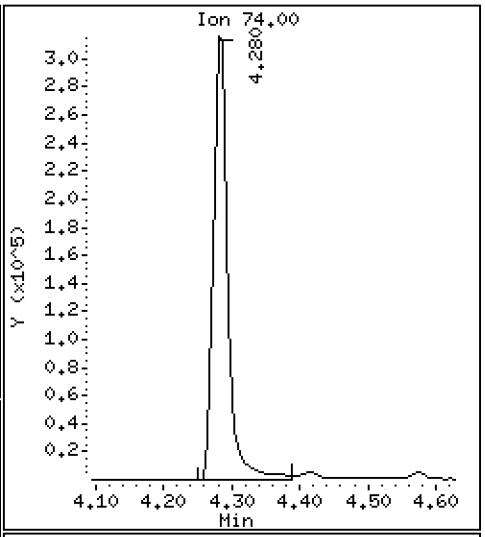
Column phase: ZB-5msi

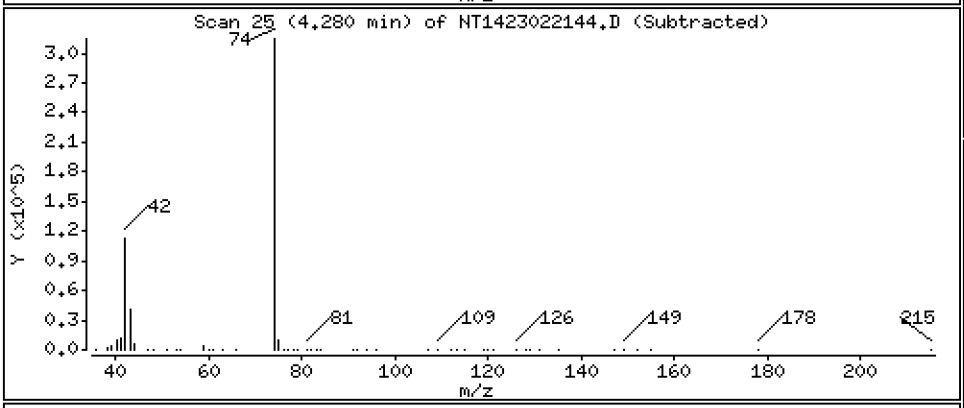
Column diameter: 0.25

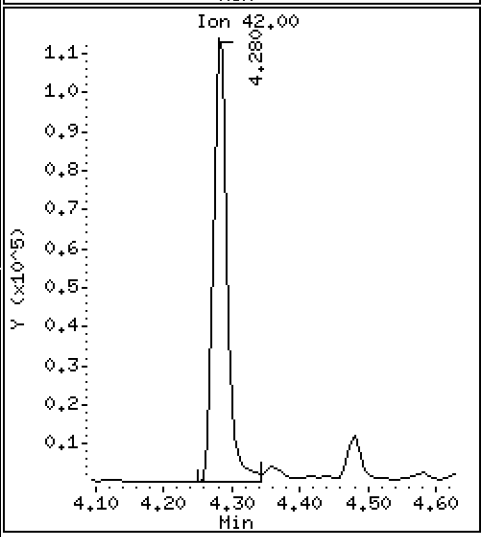
90 N-Nitrosodimethylamine

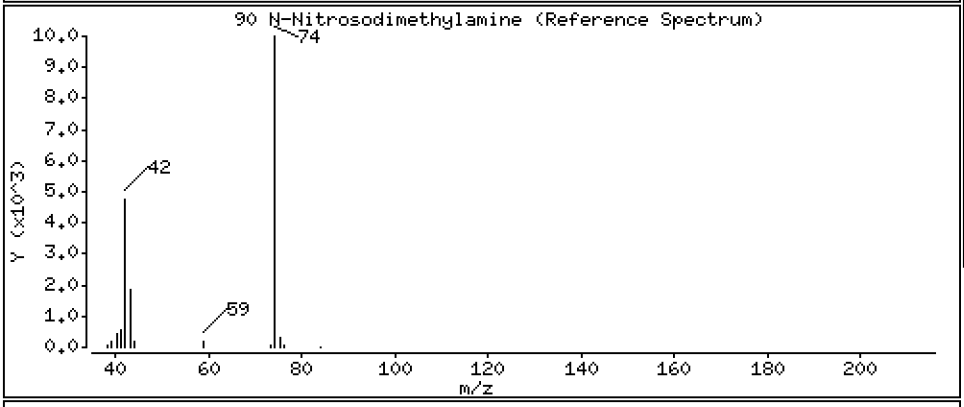
Concentration: 9.127 ug/mL

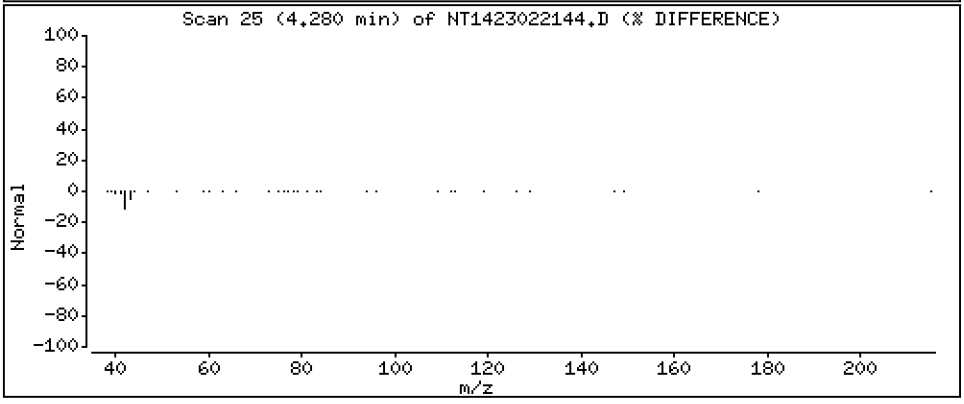












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

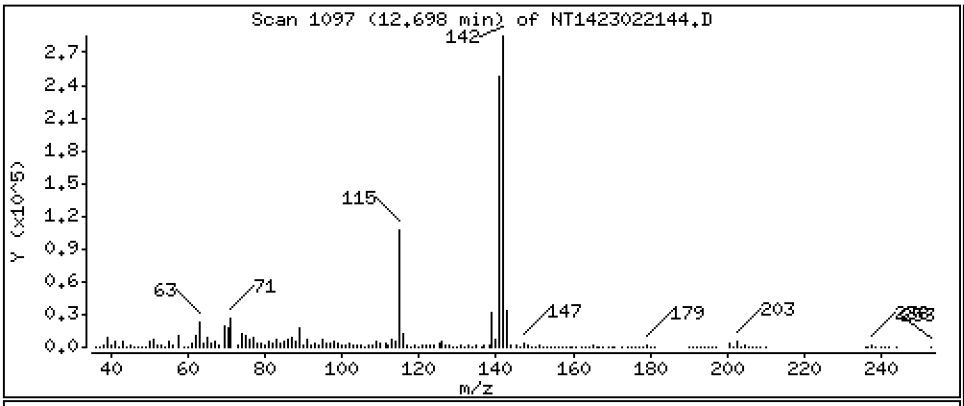
Operator: DSD

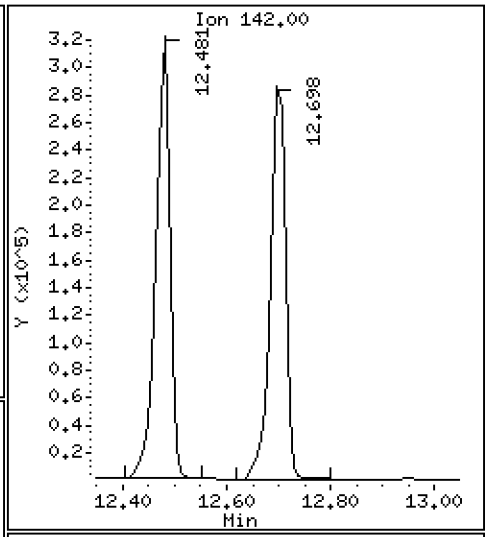
Column phase: ZB-5msi

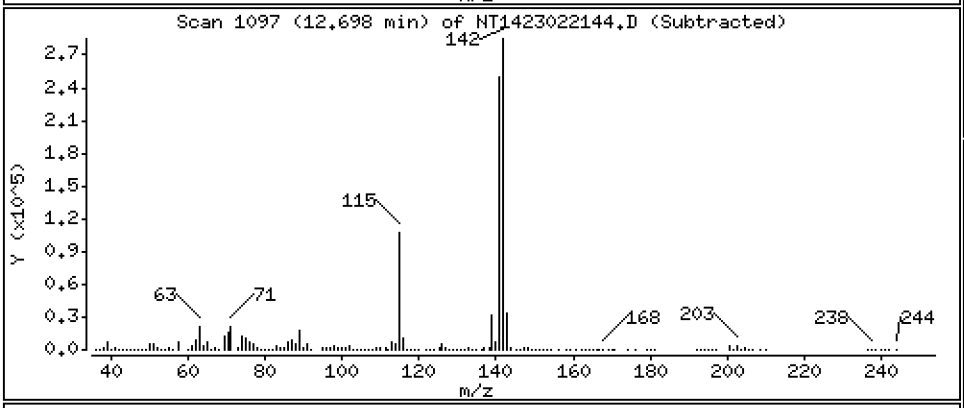
Column diameter: 0.25

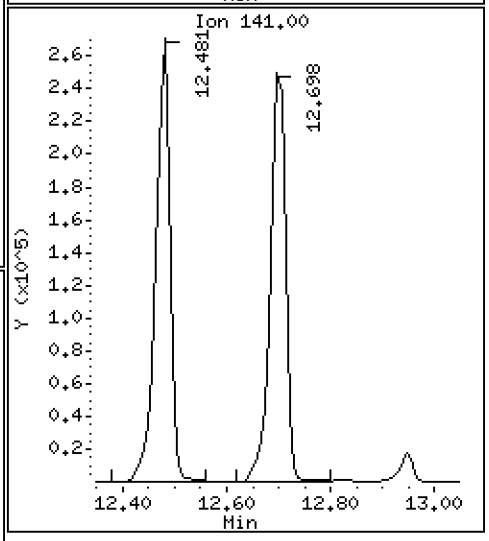
105 1-methylnaphthalene

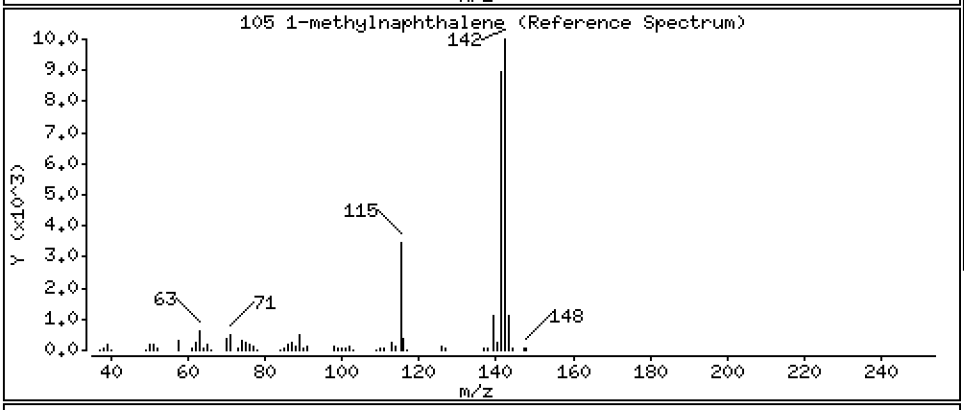
Concentration: 3.391 ug/mL

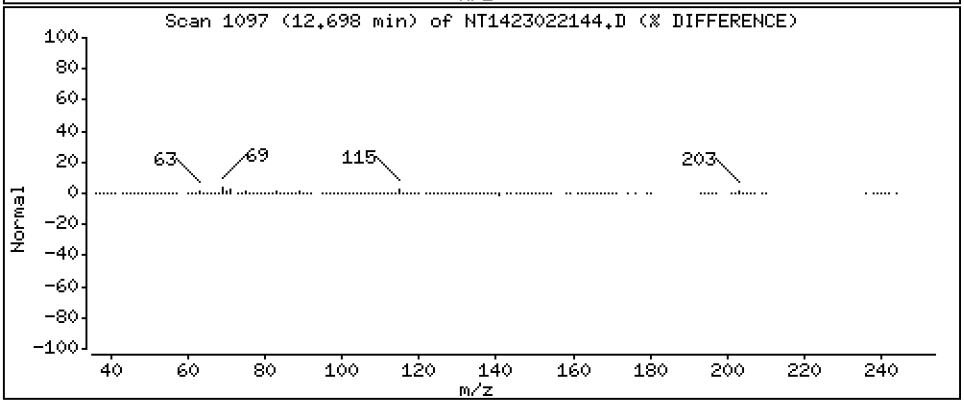












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

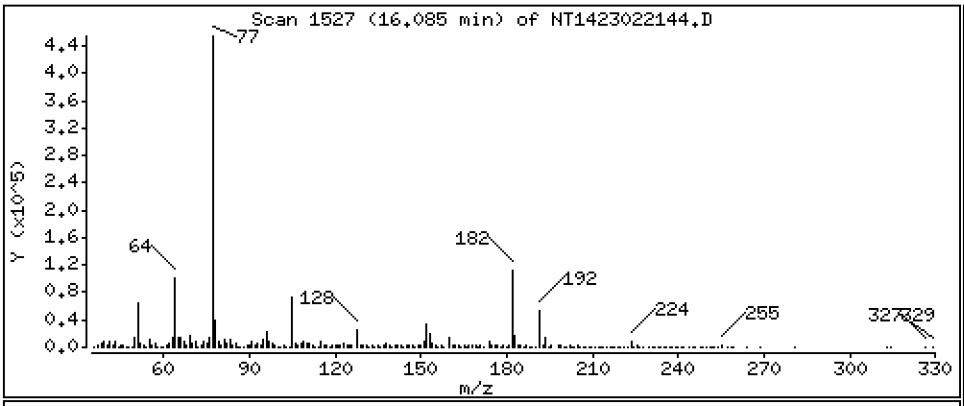
Operator: DSD

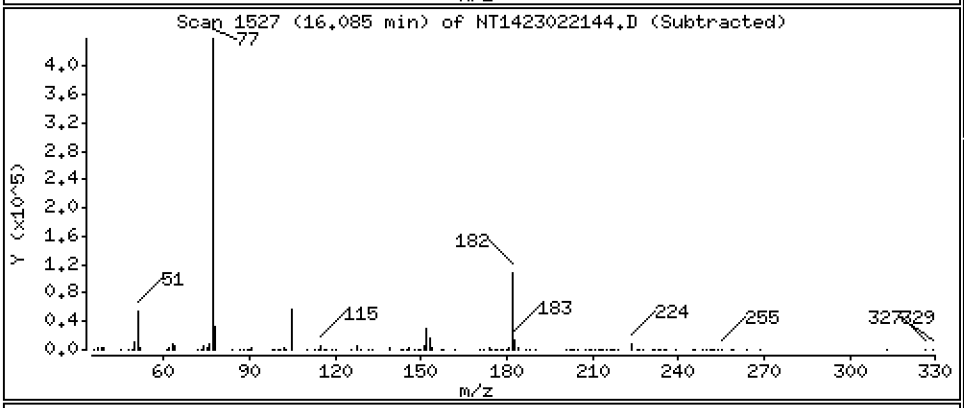
Column phase: ZB-5msi

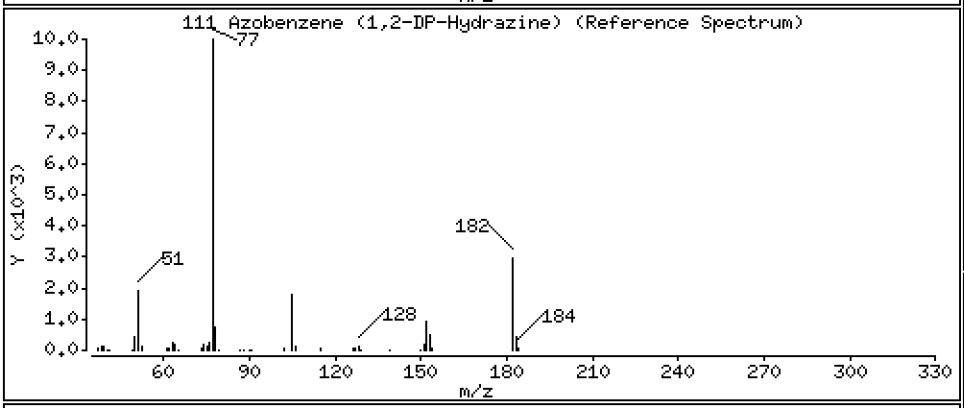
Column diameter: 0.25

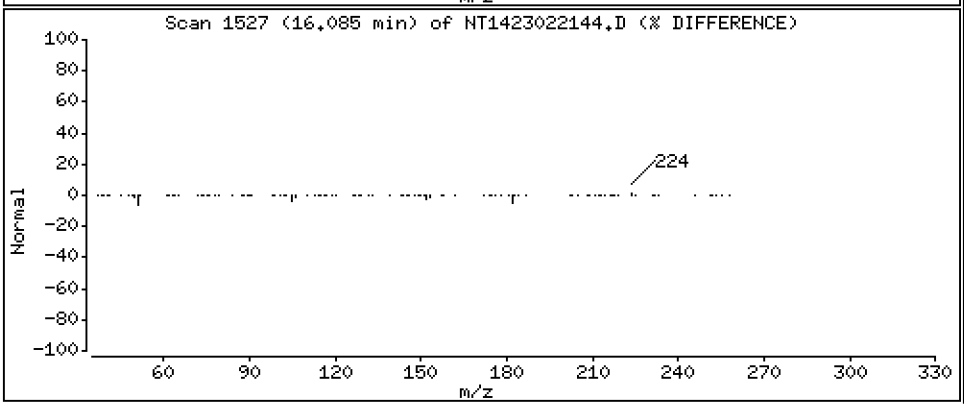
111 Azobenzene (1,2-DP-Hydrazine)

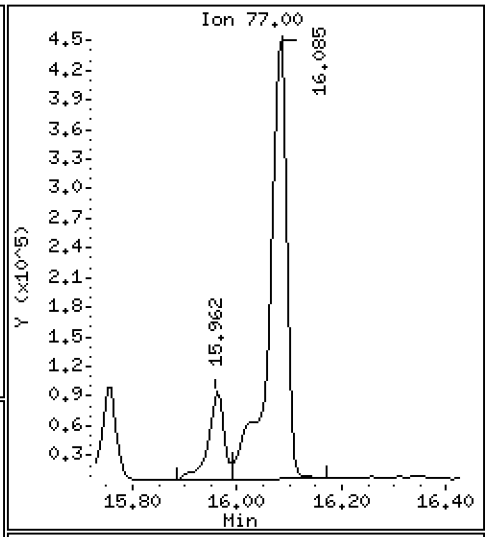
Concentration: 3.554 ug/mL

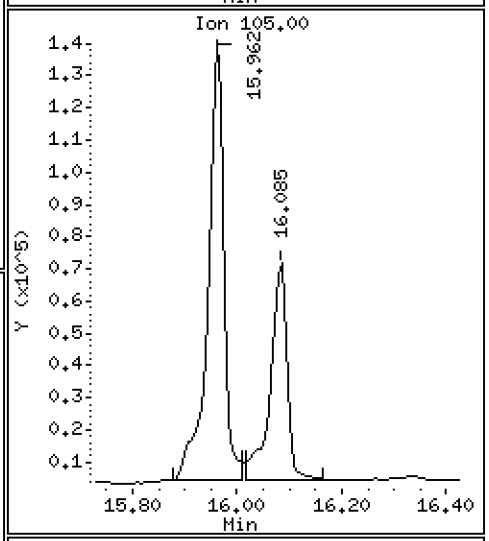


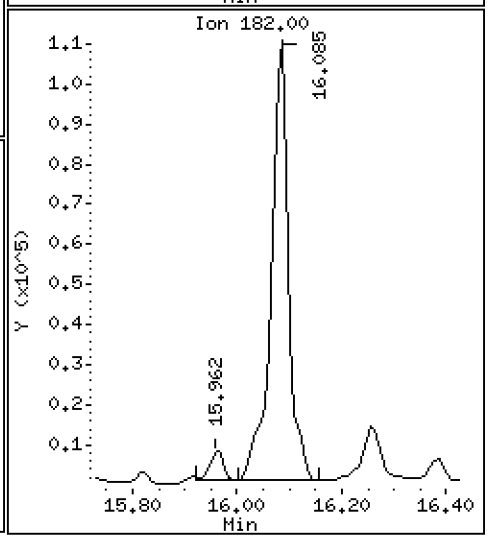












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

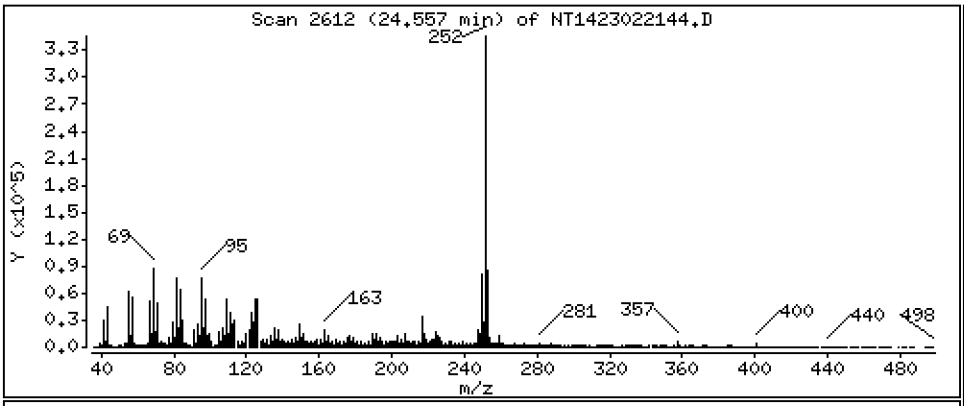
Operator: DSD

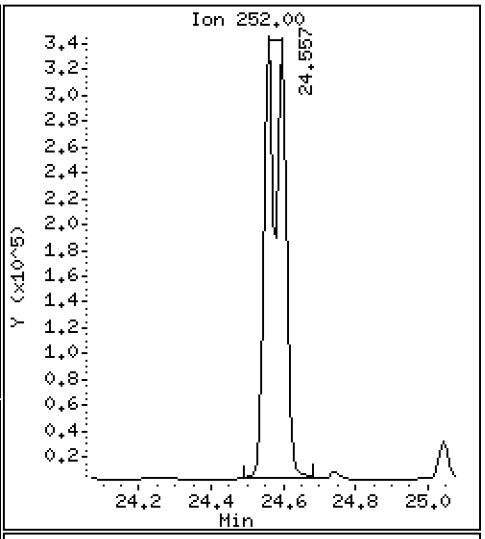
Column phase: ZB-5msi

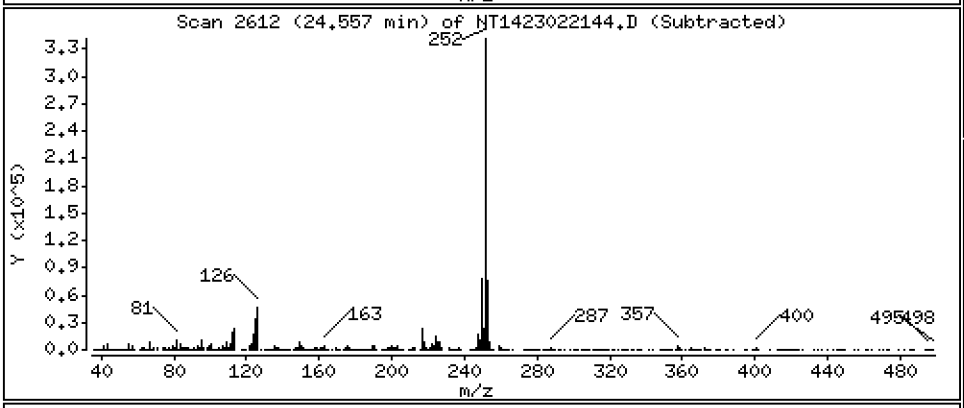
Column diameter: 0.25

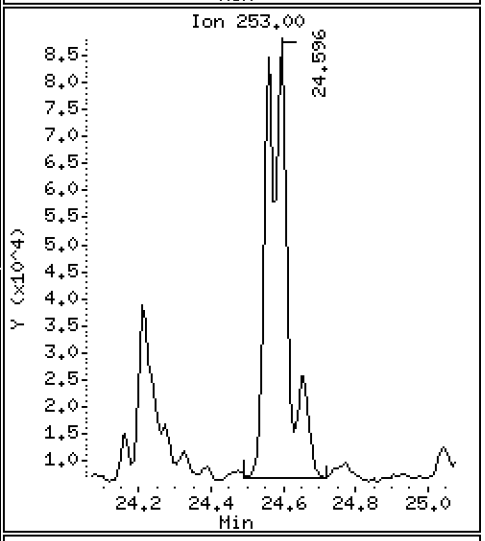
187 Total Benzofluoranthenes

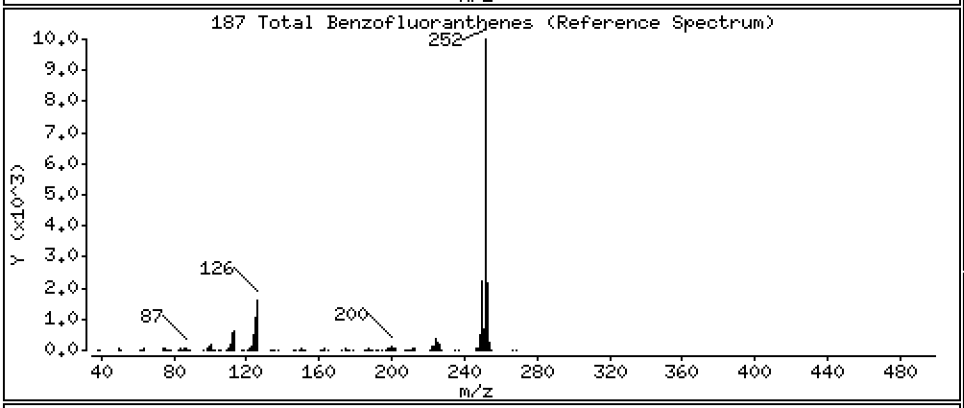
Concentration: 7.357 ug/mL

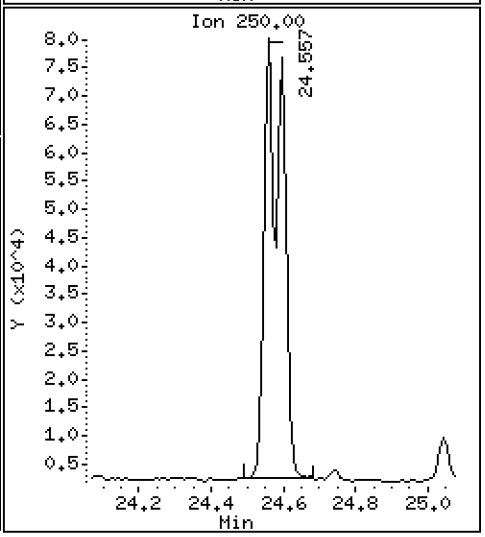


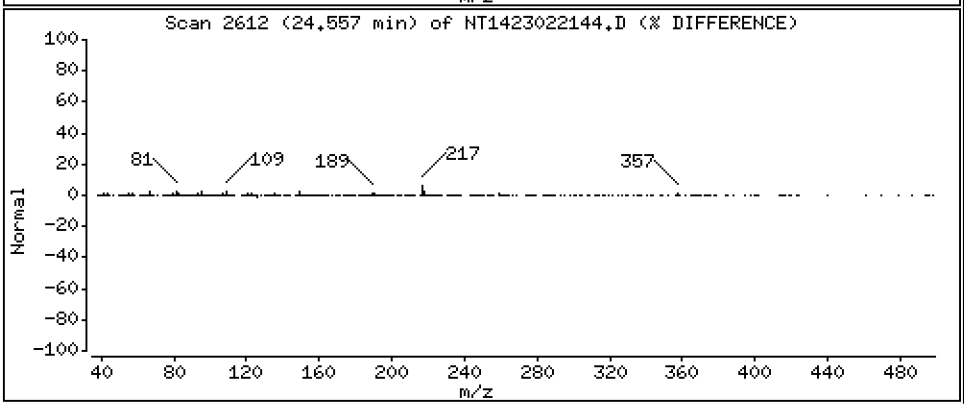












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

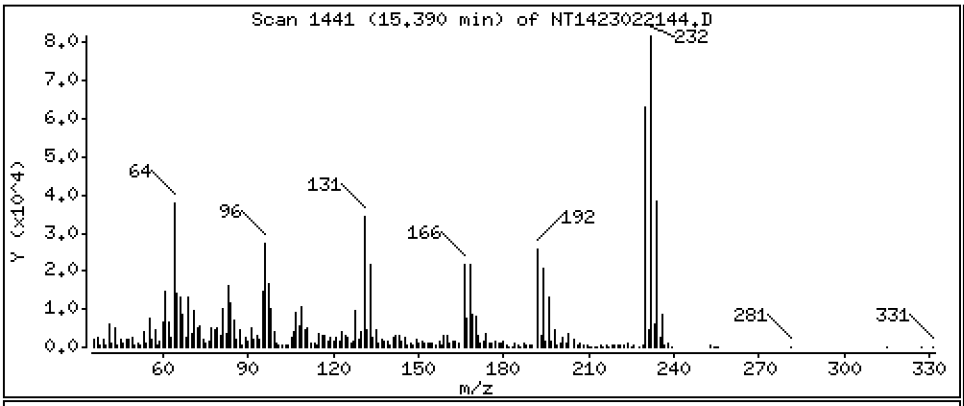
Operator: DSD

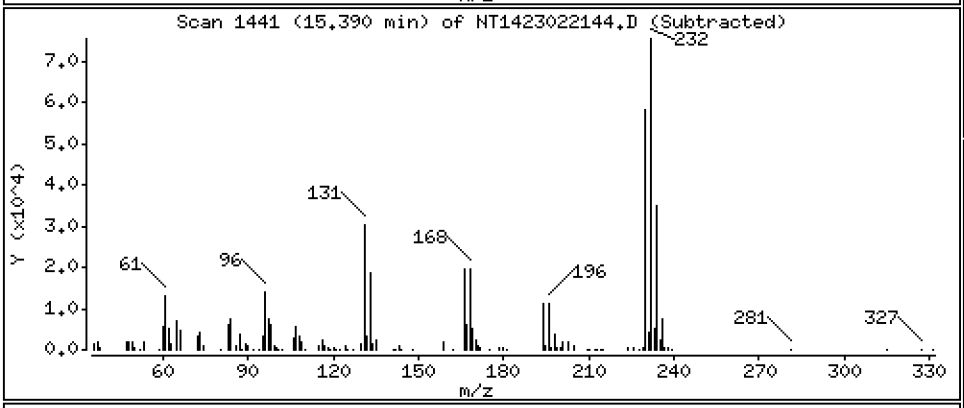
Column phase: ZB-5msi

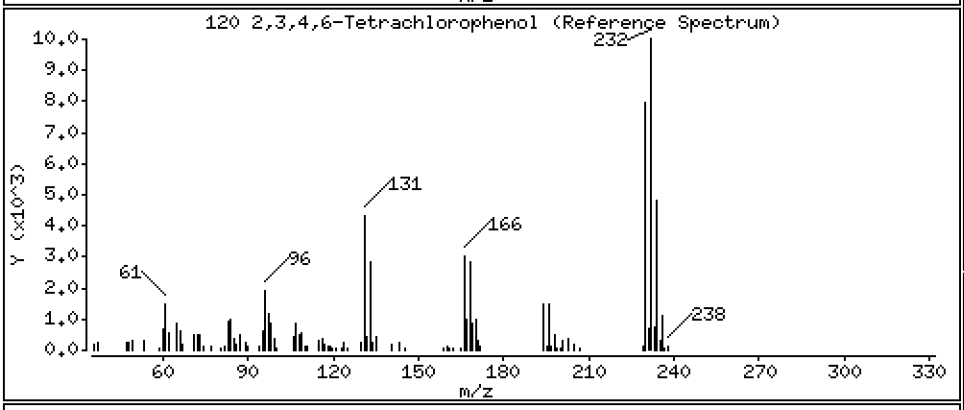
Column diameter: 0.25

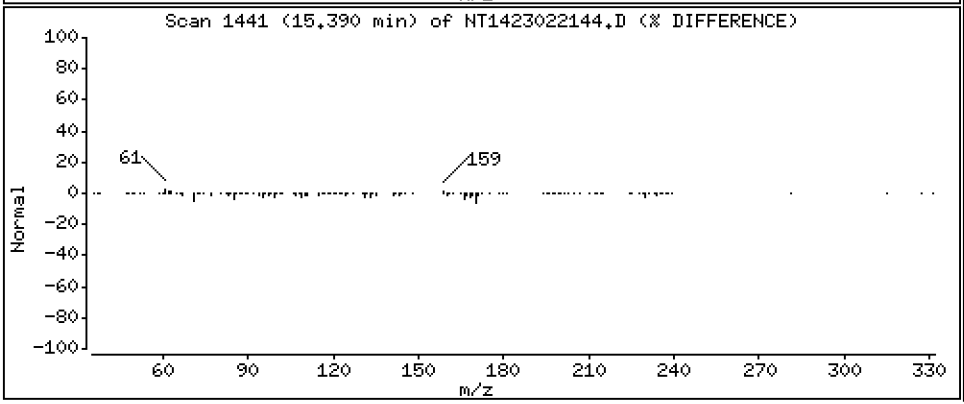
120 2,3,4,6-Tetrachlorophenol

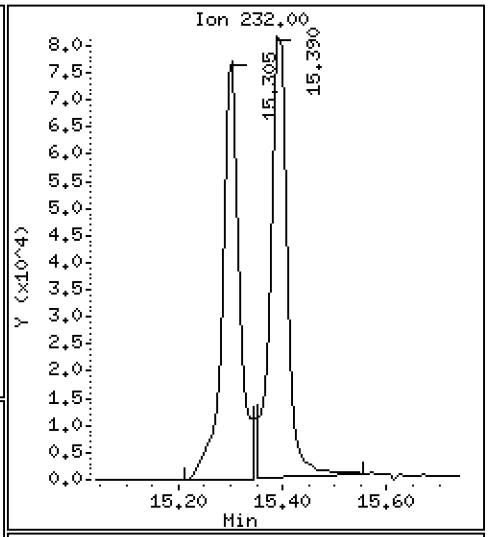
Concentration: 2.879 ug/mL

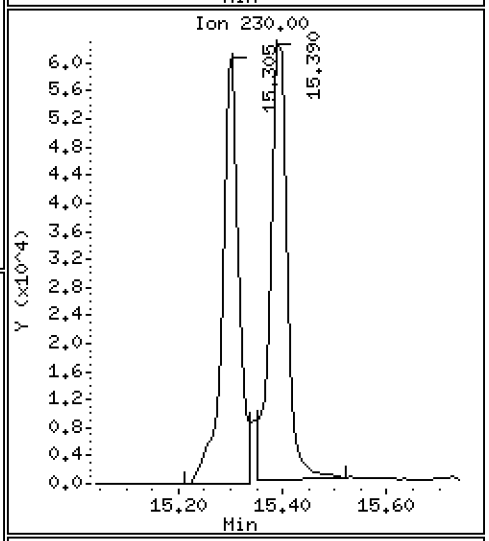


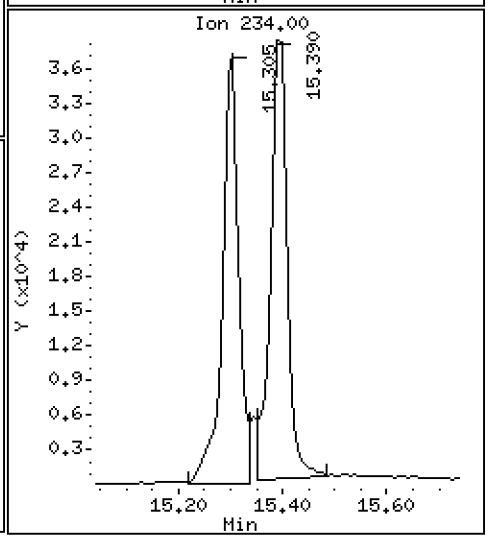












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221B.b\NT1423022144.D
Lab Smp Id: BLA0393-MS1
Inj Date : 22-FEB-2023 15:22 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : BLA0393-MS1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Meth Date : 23-Feb-2023 09:59 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 32
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.388	6.373	(0.746)	349267	5.14349	5.143
$	2 Phenol-d5	99	7.972	7.965	(0.930)	509533	4.73015	4.730
	3 Phenol	94	7.995	7.988	(0.933)	359824	3.15536	3.155
$	5 2-Chlorophenol-d4	132	8.212	8.212	(0.958)	379309	4.93496	4.935
	4 Bis(2-Chloroethyl)ether	93	8.135	8.135	(0.949)	319849	3.67168	3.672
	6 2-Chlorophenol	128	8.243	8.235	(0.962)	247219	3.07846	3.078
	7 1,3-Dichlorobenzene	146	8.506	8.498	(0.993)	278900	3.11964	3.120
*	8 1,4-Dichlorobenzene-d4	152	8.568	8.568	(1.000)	254010	4.00000	
	9 1,4-Dichlorobenzene	146	8.599	8.599	(1.004)	294722	3.47361	3.474
$	10 1,2-Dichlorobenzene-d4	152	8.925	8.925	(1.042)	167575	2.90865	2.909
	12 1,2-Dichlorobenzene	146	8.948	8.948	(1.044)	269750	3.18023	3.180
	11 Benzyl alcohol	108	8.863	8.855	(1.034)	176405	2.74551	2.746
	14 2,2'-oxybis(1-Chloropropane)	121	9.150	9.150	(1.068)	87770	3.61708	3.617
	13 2-Methylphenol	108	9.096	9.096	(1.062)	235970	2.96340	2.963
	17 Hexachloroethane	117	9.530	9.530	(1.112)	114752	3.11094	3.111
	16 N-Nitroso-di-n-propylamine	70	9.414	9.414	(1.099)	238547	3.29100	3.291
	15 4-Methylphenol	108	9.375	9.367	(1.094)	284021	3.37787	3.378
$	18 Nitrobenzene-d5	82	9.662	9.662	(0.875)	359204	3.28914	3.289
	19 Nitrobenzene	77	9.693	9.701	(0.878)	365286	3.33311	3.333
	20 Isophorone	82	10.151	10.151	(0.919)	696793	4.81904	4.819
	21 2-Nitrophenol	139	10.322	10.322	(0.935)	155853	3.13738	3.137
	22 2,4-Dimethylphenol	107	10.407	10.399	(0.942)	709878	8.57800	8.578
	23 Bis(2-Chloroethoxy)methane	93	10.593	10.593	(0.959)	364150	3.87150	3.872
	24 Benzoic acid	105	10.616	10.686	(0.961)	236194	4.49991	4.500
	25 2,4-Dichlorophenol	162	10.787	10.787	(0.977)	848200	11.9757	11.98
	26 1,2,4-Trichlorobenzene	180	10.957	10.957	(0.992)	280605	3.27057	3.271
*	27 Naphthalene-d8	136	11.042	11.042	(1.000)	945302	4.00000	
	28 Naphthalene	128	11.081	11.081	(1.003)	965107	4.14064	4.141
	29 4-Chloroaniline	127	11.281	11.228	(1.022)	102869	1.03304	1.033
	30 Hexachlorobutadiene	225	11.451	11.452	(1.037)	183918	3.47737	3.477
	31 4-Chloro-3-methylphenol	107	12.218	12.210	(1.106)	974041	12.7058	12.71
	32 2-Methylnaphthalene	142	12.481	12.481	(1.130)	586679	3.36080	3.361
	33 Hexachlorocyclopentadiene	237	12.945	12.945	(0.883)	274892	4.92703	4.927

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.115	13.108	(0.895)	702085	12.3781	12.38
	35	2,4,5-Trichlorophenol	196	13.193	13.185	(0.900)	737845	12.0117	12.01
$	36	2-Fluorobiphenyl	172	13.270	13.270	(0.905)	663627	3.22083	3.221
	37	2-Chloronaphthalene	162	13.471	13.471	(0.919)	551167	3.27732	3.277
	38	2-Nitroaniline	65	13.750	13.750	(0.938)	696600	12.7398	12.74
	39	Dimethylphthalate	163	14.191	14.184	(0.968)	619236	3.52020	3.520
	40	Acenaphthylene	152	14.338	14.331	(0.978)	860471	3.35456	3.355
	41	2,6-Dinitrotoluene	165	14.323	14.323	(0.977)	502195	12.1325	12.13
*	42	Acenaphthene-d10	164	14.655	14.648	(1.000)	575898	4.00000	
	43	3-Nitroaniline	138	14.609	14.601	(0.997)	215636	4.90812	4.908
	44	Acenaphthene	153	14.717	14.717	(1.004)	548974	3.57464	3.575
	45	2,4-Dinitrophenol	184	14.818	14.818	(1.011)	120921	4.42666	4.427
	46	Dibenzofuran	168	15.042	15.042	(1.026)	871446	3.45607	3.456
	47	4-Nitrophenol	109	14.965	14.949	(1.021)	291703	11.3613	11.36
	48	2,4-Dinitrotoluene	165	15.127	15.127	(1.032)	720136	12.3050	12.30
	50	Diethylphthalate	149	15.645	15.645	(1.068)	898062	3.84020	3.840
	49	Fluorene	166	15.753	15.753	(1.075)	899542	3.41146	3.411
	51	4-Chlorophenyl-phenylether	204	15.761	15.753	(1.075)	461909	3.27610	3.276
	52	4-Nitroaniline	138	15.876	15.869	(1.083)	320402	6.35636	6.356
	53	4,6-Dinitro-2-methylphenol	198	15.961	15.961	(0.903)	795977	20.1176	20.12
	54	N-Nitrosodiphenylamine	169	16.015	16.008	(0.906)	546731	3.58748	3.587
$	55	2,4,6-Tribromophenol	330	16.293	16.293	(1.112)	162120	4.84090	4.841
	56	4-Bromophenyl-phenylether	248	16.755	16.756	(0.947)	258039	3.80147	3.801
	57	Hexachlorobenzene	284	17.065	17.057	(0.965)	231504	3.35640	3.356
	58	Pentachlorophenol	266	17.436	17.421	(0.986)	441868	12.6830	12.68
*	59	Phenanthrene-d10	188	17.684	17.676	(1.000)	1060510	4.00000	
	60	Phenanthrene	178	17.730	17.723	(1.003)	1171880	4.59853	4.599
	61	Anthracene	178	17.823	17.816	(1.008)	817231	3.23688	3.237
	62	Carbazole	167	18.171	18.156	(1.028)	778453	3.39765	3.398
	63	Di-n-butylphthalate	149	19.015	18.992	(1.075)	707535	2.76479	2.765
	64	Fluoranthene	202	20.206	20.137	(0.887)	1400849	4.69764	4.698(H)
	65	Pyrene	202	20.609	20.562	(0.904)	1475200	4.67836	4.678
$	66	Terphenyl-d14	244	20.895	20.872	(0.917)	817277	3.65035	3.650
	67	Butylbenzylphthalate	149	21.832	21.816	(0.958)	425582	4.06156	4.062
	68	Benzo(a)anthracene	228	22.761	22.738	(0.999)	820929	3.71144	3.711
*	69	Chrysene-d12	240	22.792	22.769	(1.000)	691195	4.00000	
	70	3,3'-Dichlorobenzidine	252	22.761	22.715	(0.999)	18085	0.26707	0.2671
	71	Chrysene	228	22.831	22.815	(1.002)	775110	3.89596	3.896
	72	bis(2-Ethylhexyl)phthalate	149	22.862	22.854	(0.959)	589557	3.30187	3.302
*	134	Di-n-octylphthalate-d4	153	23.845	23.837	(1.000)	1060591	4.00000	
	73	Di-n-octylphthalate	149	23.853	23.845	(1.000)	879525	3.54667	3.547
	74	Benzo(b)fluoranthene	252	24.557	24.534	(0.973)	692818	4.14150	4.141
	75	Benzo(k)fluoranthene	252	24.596	24.573	(0.975)	611866	3.42296	3.423
	76	Benzo(a)pyrene	252	25.138	25.115	(0.996)	499226	3.13289	3.133
*	77	Perylene-d12	264	25.238	25.215	(1.000)	527204	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.563	27.540	(1.092)	417814	3.15151	3.152
	79	Dibenzo(a,h)anthracene	278	27.579	27.556	(1.093)	356090	3.25707	3.257
	80	Benzo(g,h,i)perylene	276	28.247	28.216	(1.119)	326479	3.02620	3.026
	90	N-Nitrosodimethylamine	74	4.280	4.280	(0.500)	479837	9.12680	9.127
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	12.697	12.698	(1.150)	555688	3.39070	3.391
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.085	16.077	(1.098)	1010200	3.55437	3.554

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.557	24.573	(0.973)	1201526	7.35669	7.357
120 2,3,4,6-Tetrachlorophenol	232	15.390	15.390	(1.050)	190703	2.87904	2.879

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022144.D
Lab Smp Id: BLA0393-MS1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 06:55
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	235125	117563	470250	254010	8.03
27 Naphthalene-d8	883104	441552	1766208	945302	7.04
42 Acenaphthene-d10	537789	268895	1075578	575898	7.09
59 Phenanthrene-d10	1079531	539766	2159062	1060510	-1.76
69 Chrysene-d12	826409	413205	1652818	691195	-16.36
134 Di-n-octylphthala	1339562	669781	2679124	1060591	-20.83
77 Perylene-d12	590325	295163	1180650	527204	-10.69

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.66	0.05
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.79	0.10
134 Di-n-octylphthala	23.84	23.34	24.34	23.85	0.03
77 Perylene-d12	25.22	24.72	25.72	25.24	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022144.D

Lab ID: BLA0393-MS1
nt14.i, ABN.m, 22-FEB-2023 15:22

RT	CO-ELUTION COMPOUNDS
22.761	3,3′-Dichlorobenzidine and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.961	0.968	-0.0063	Benzoic acid

RRT check based on Ccal File: NT1423022130.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

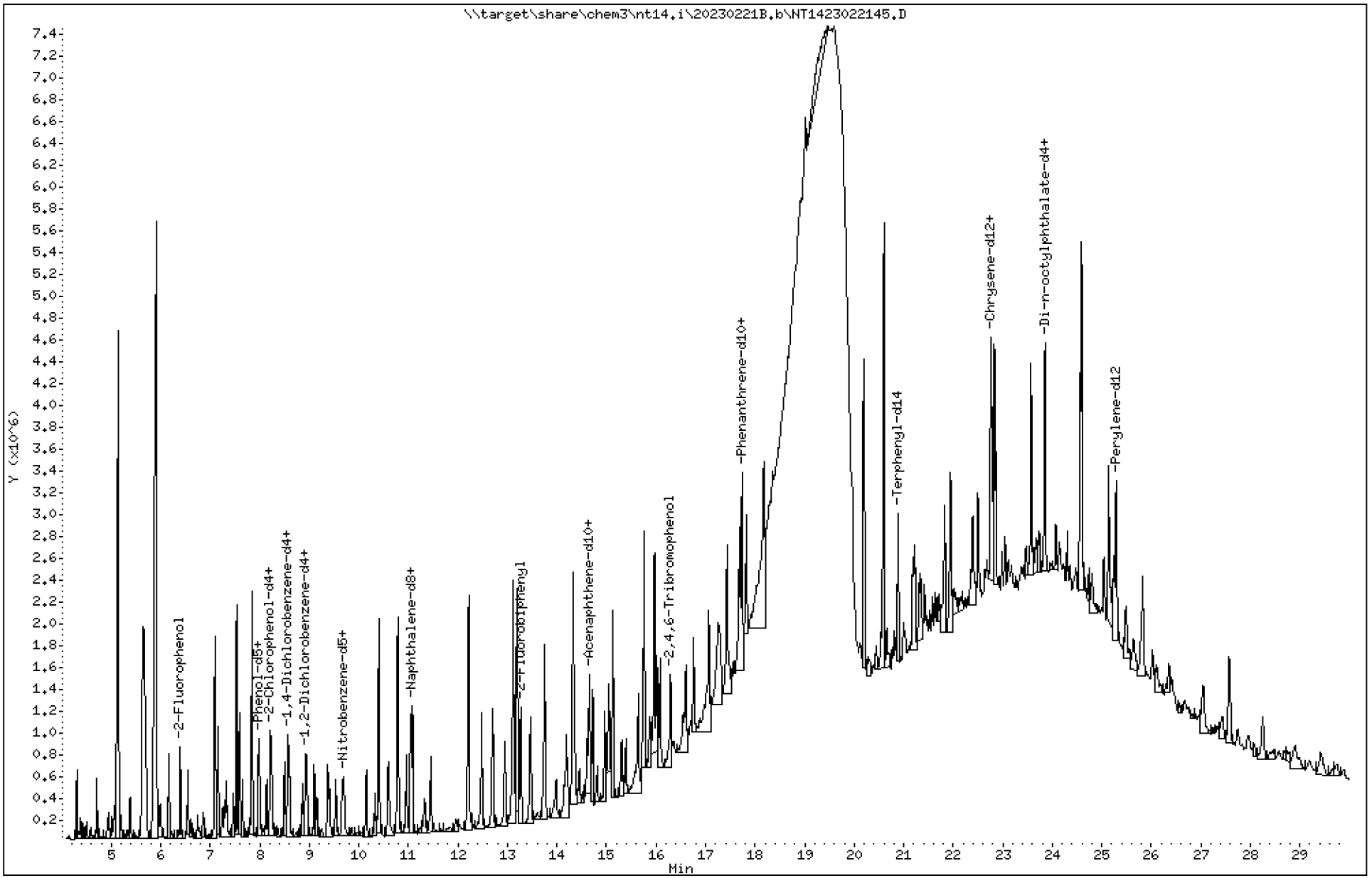
* Only compounds listed in the work order have been verified by the analyst *

Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022145.D
Date : 22-FEB-2023 15:58
Client ID:
Sample Info: BLA0393-MSD1

Column phase: ZB-5msi

Instrument: nt14.i

Operator: DSD
Column diameter: 0.25



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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

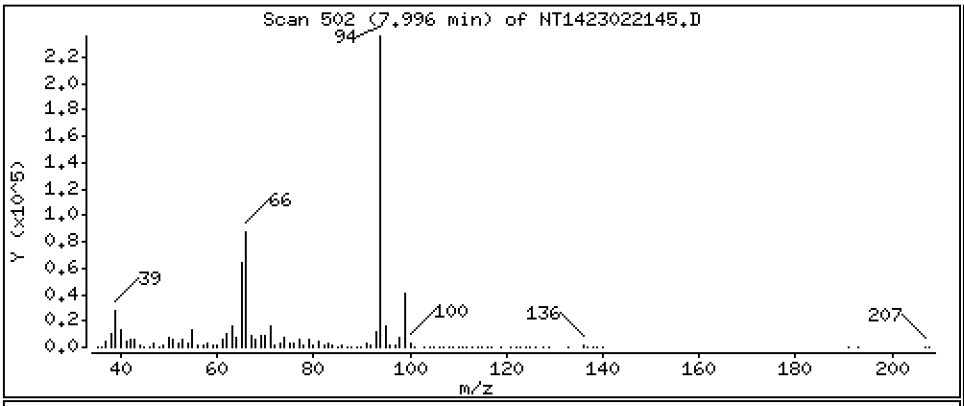
Operator: DSD

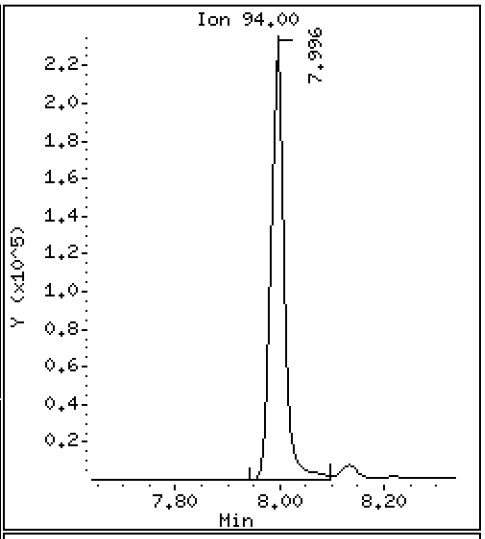
Column phase: ZB-5msi

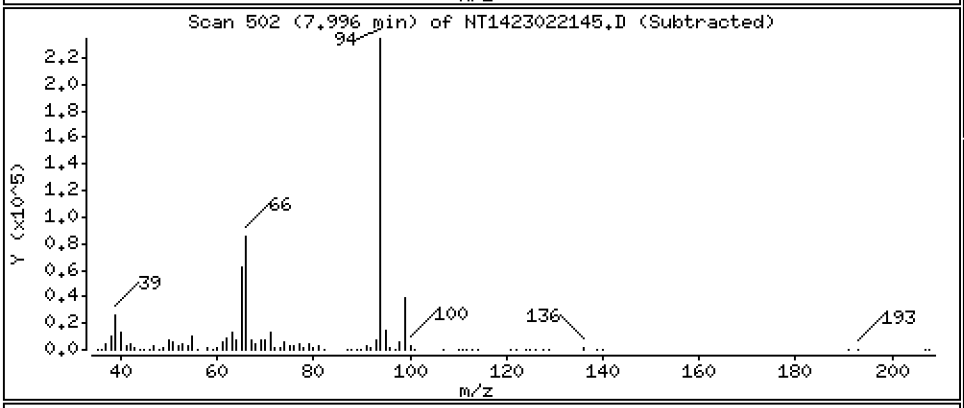
Column diameter: 0.25

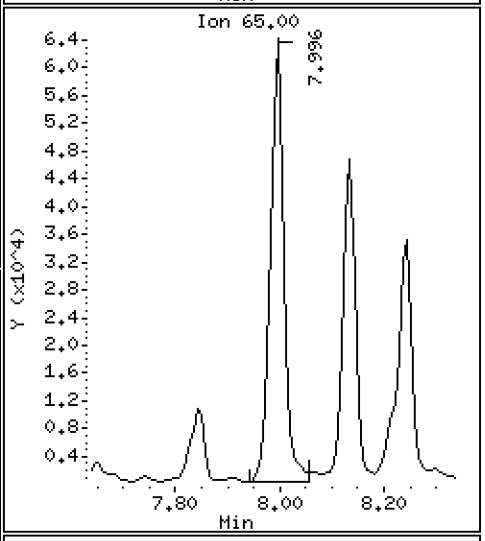
3 Phenol

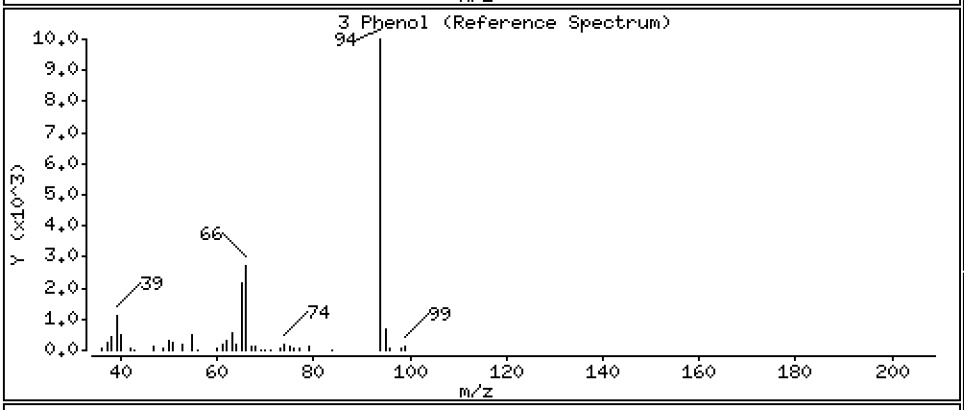
Concentration: 3.546 ug/mL

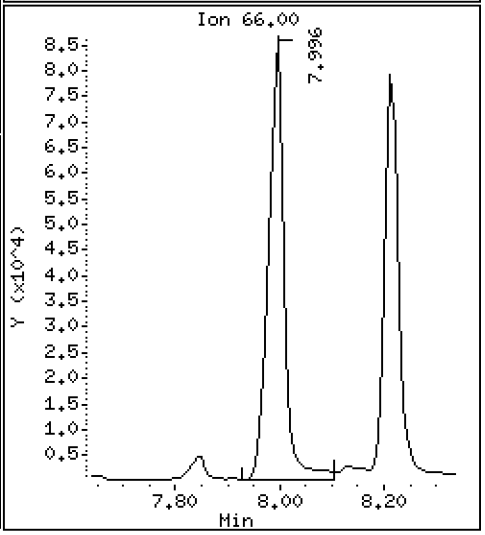


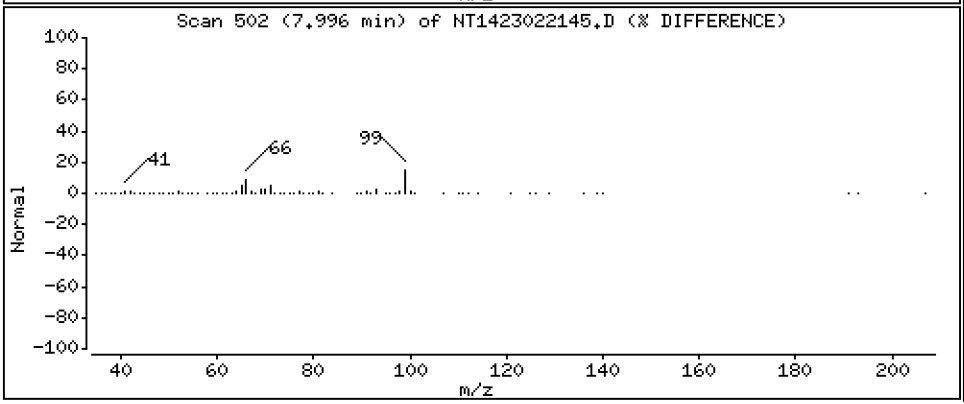












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

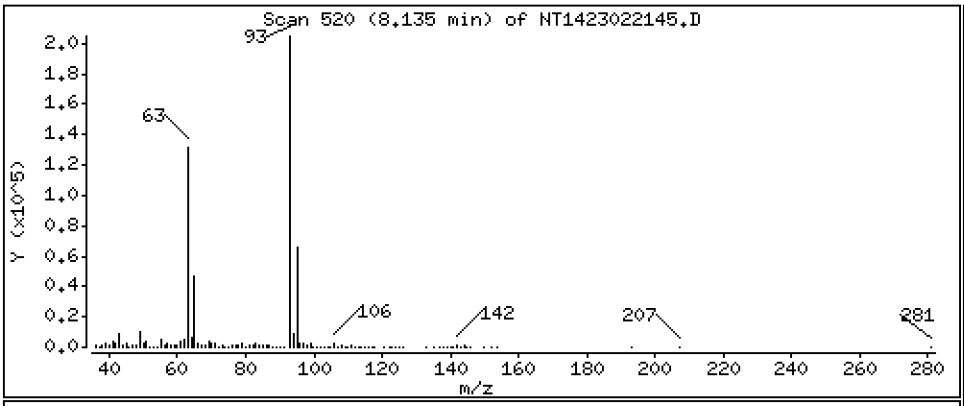
Operator: DSD

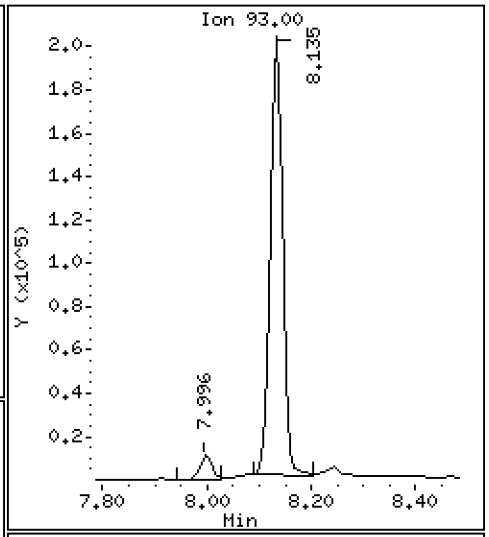
Column phase: ZB-5msi

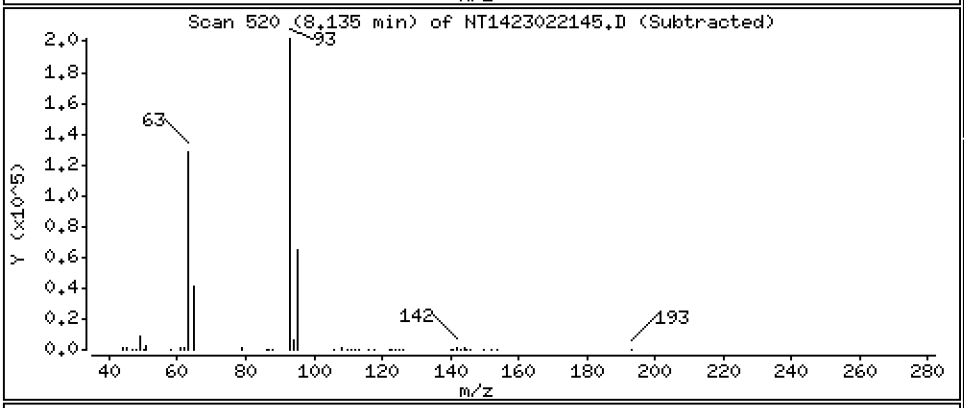
Column diameter: 0.25

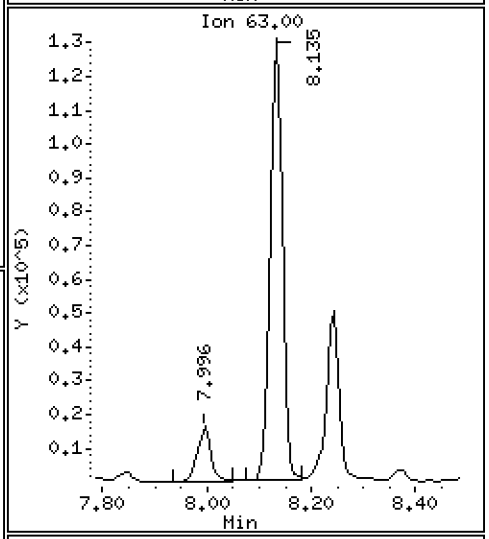
4 Bis(2-Chloroethyl)ether

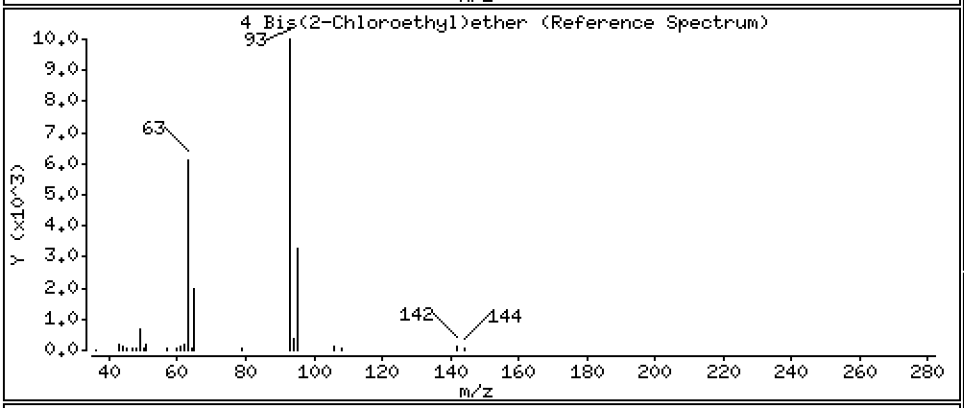
Concentration: 3.679 ug/mL

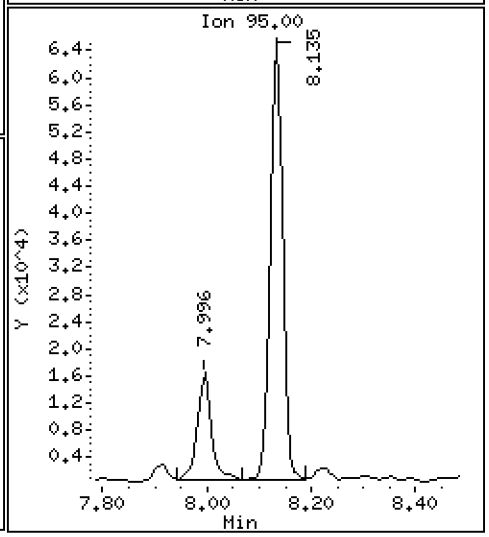


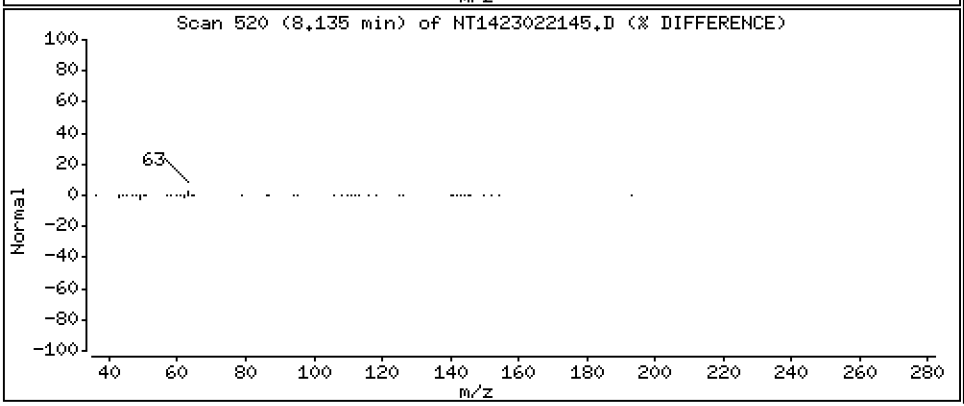












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

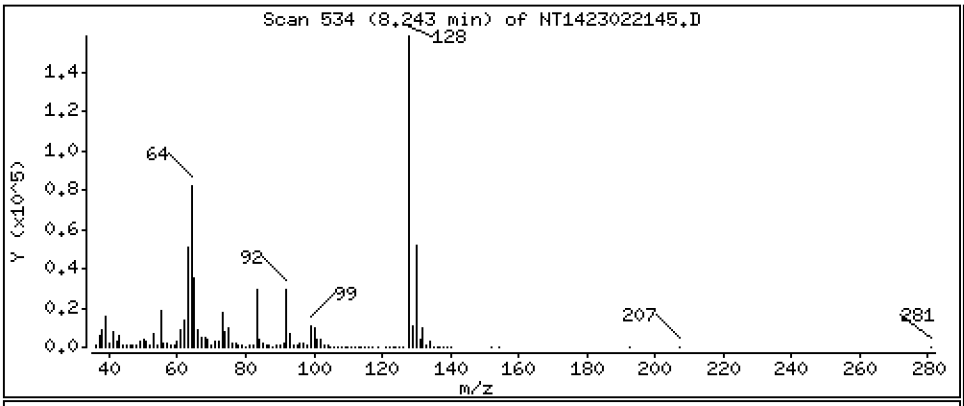
Operator: DSD

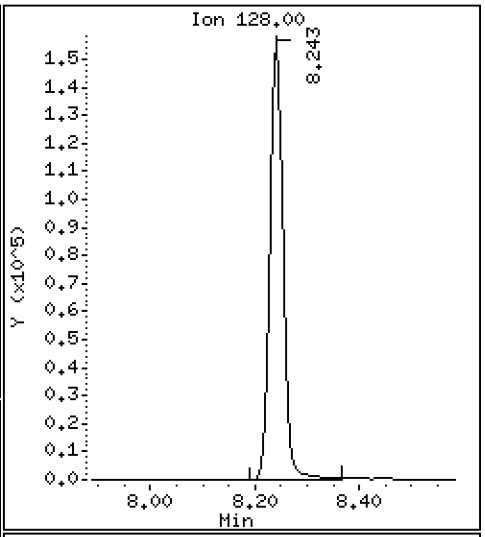
Column phase: ZB-5msi

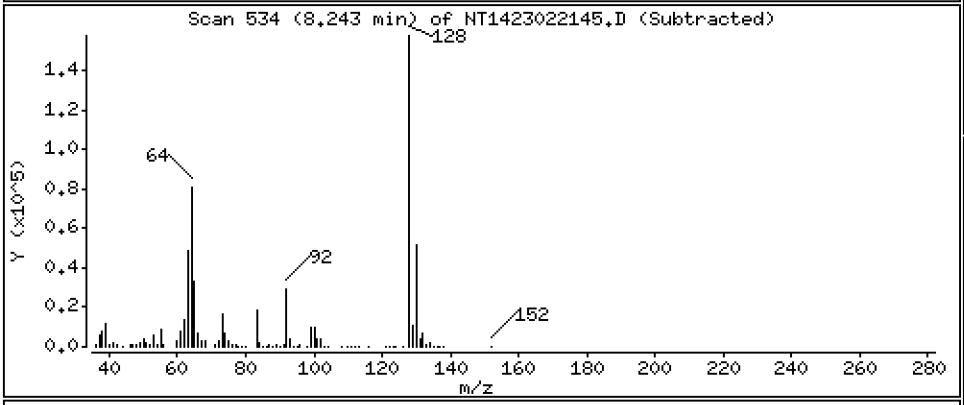
Column diameter: 0.25

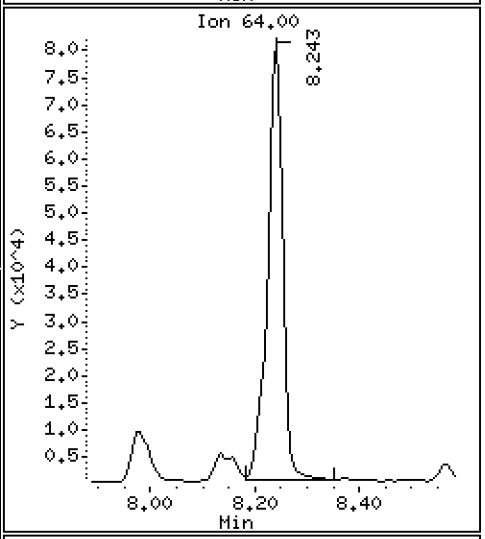
6 2-Chlorophenol

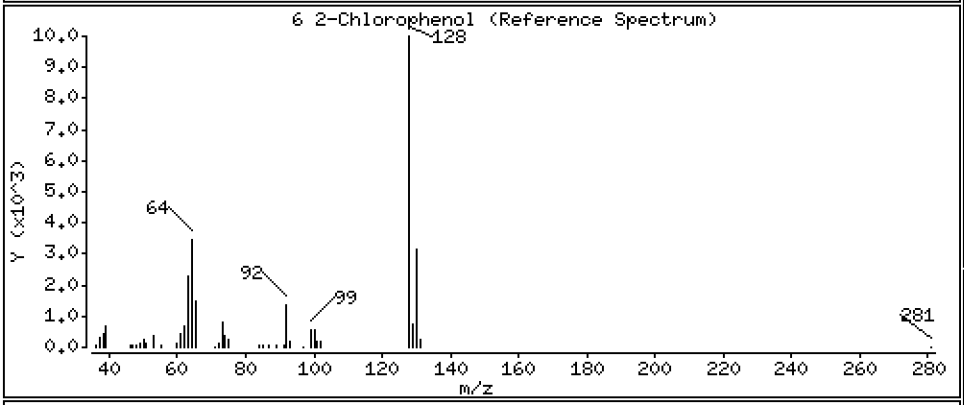
Concentration: 3.312 ug/mL

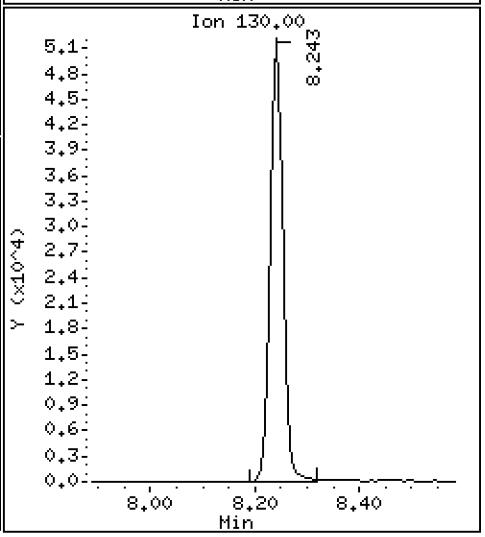


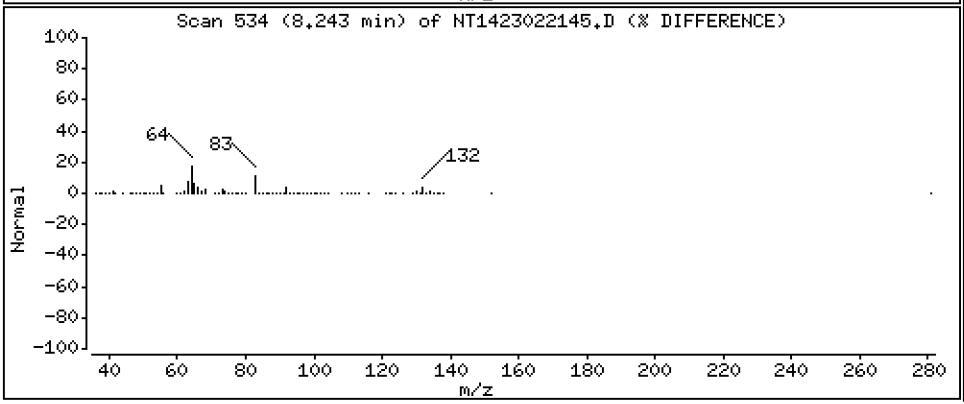












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

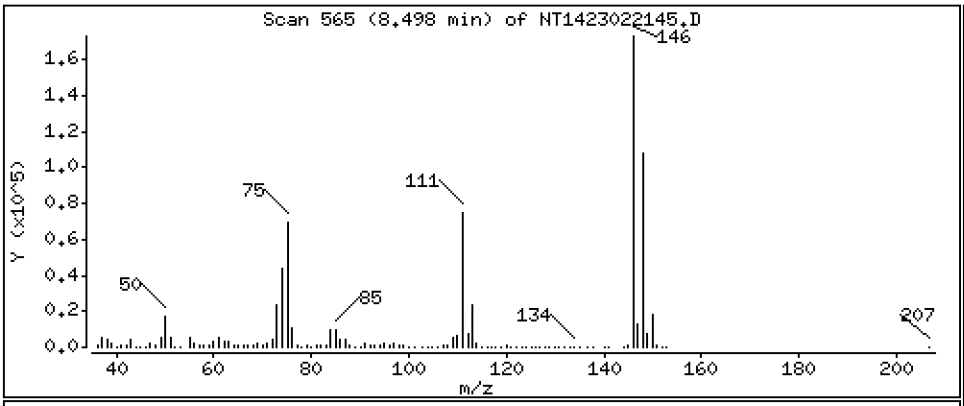
Operator: DSD

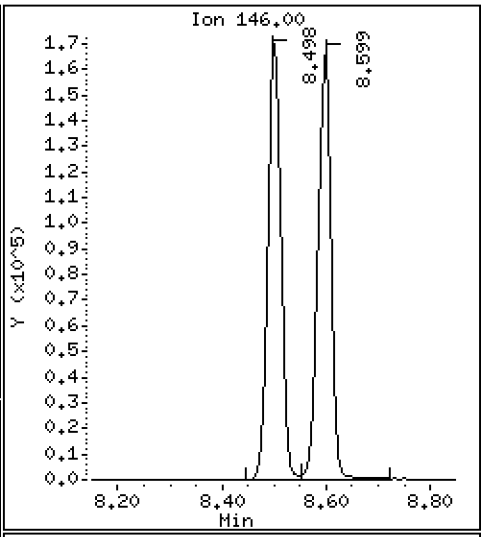
Column phase: ZB-5msi

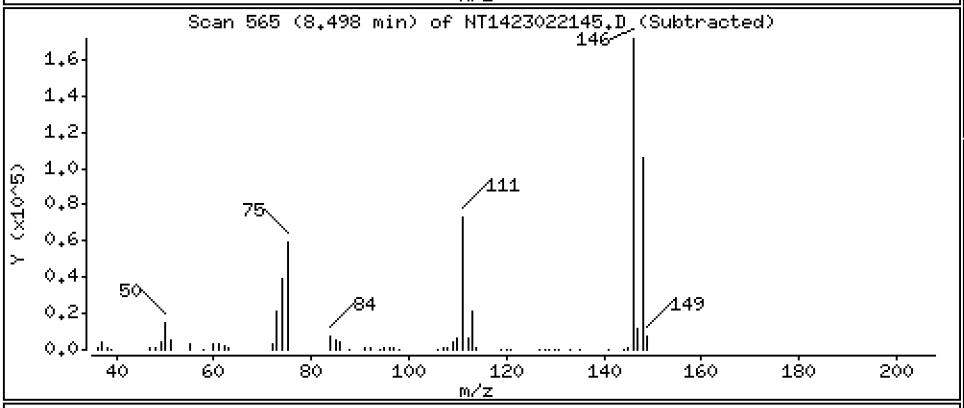
Column diameter: 0.25

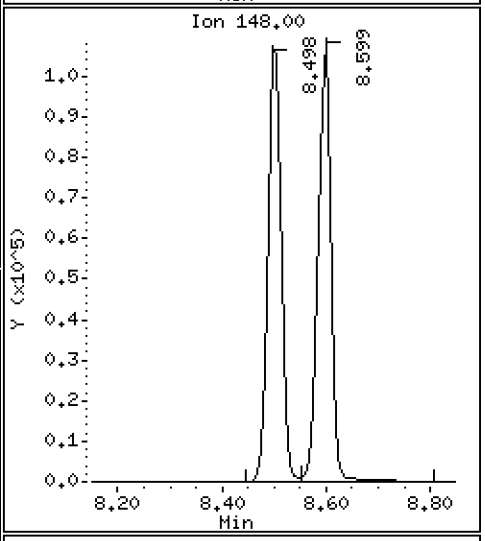
7 1,3-Dichlorobenzene

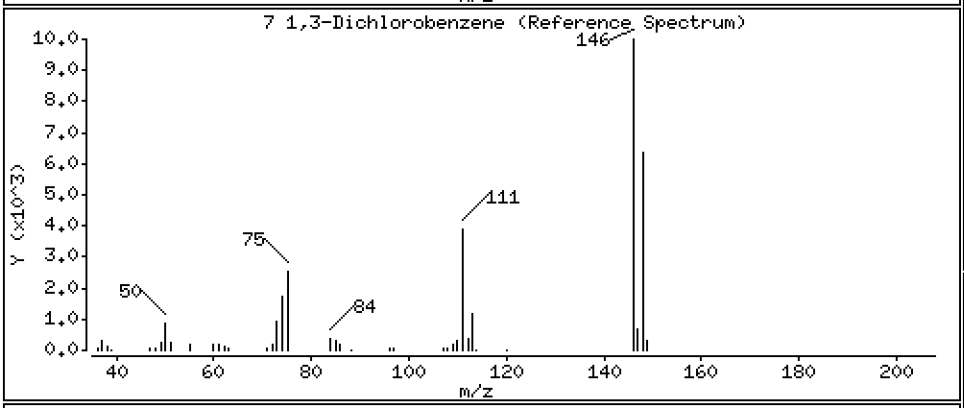
Concentration: 3.300 ug/mL

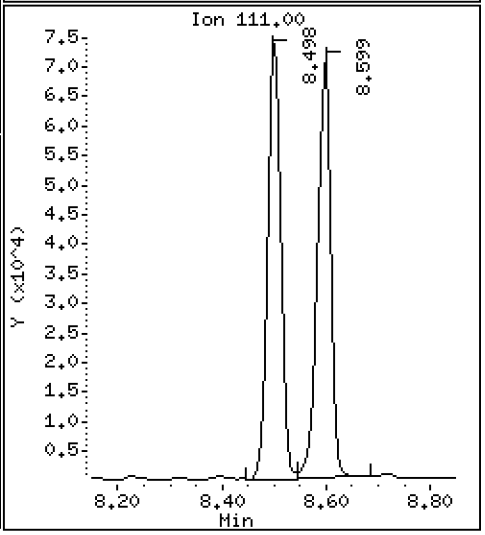


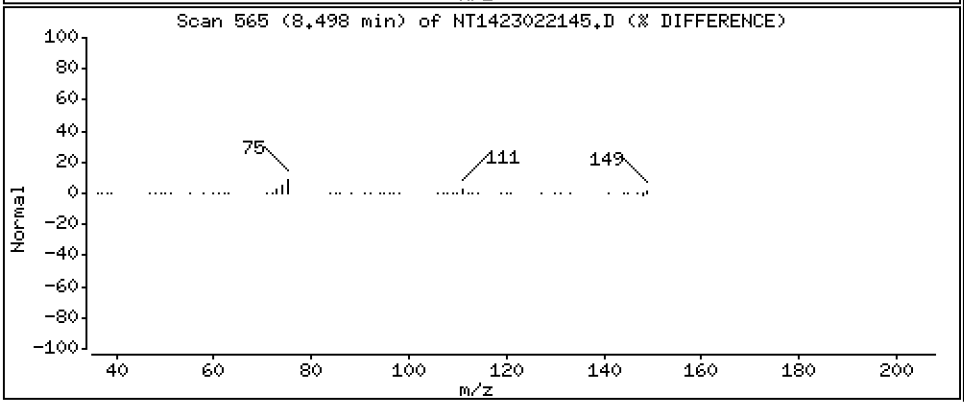












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

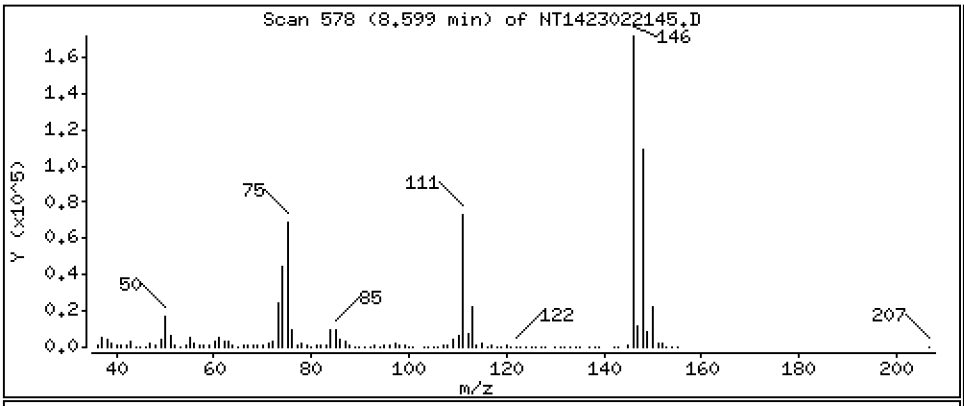
Operator: DSD

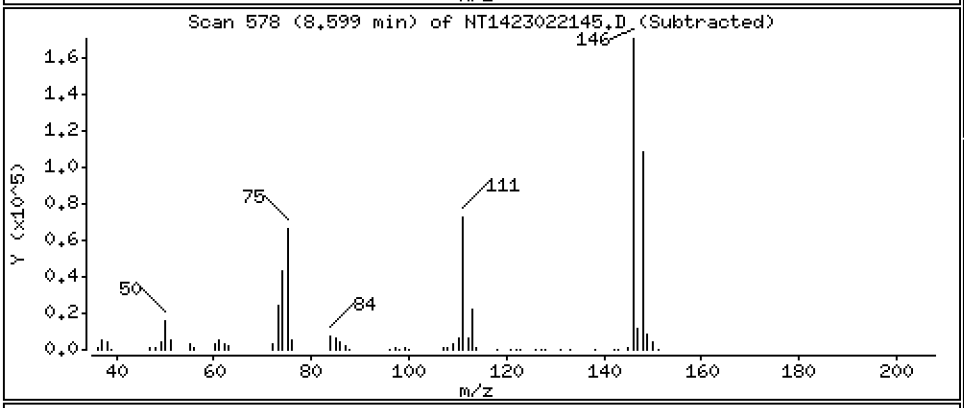
Column phase: ZB-5msi

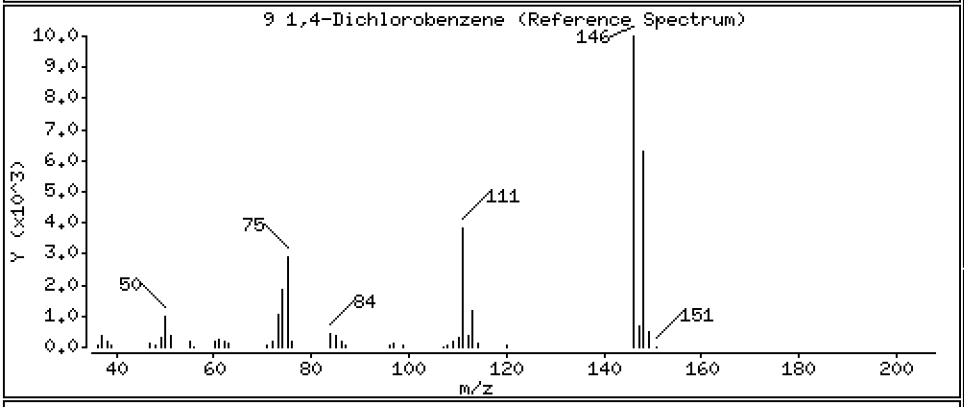
Column diameter: 0.25

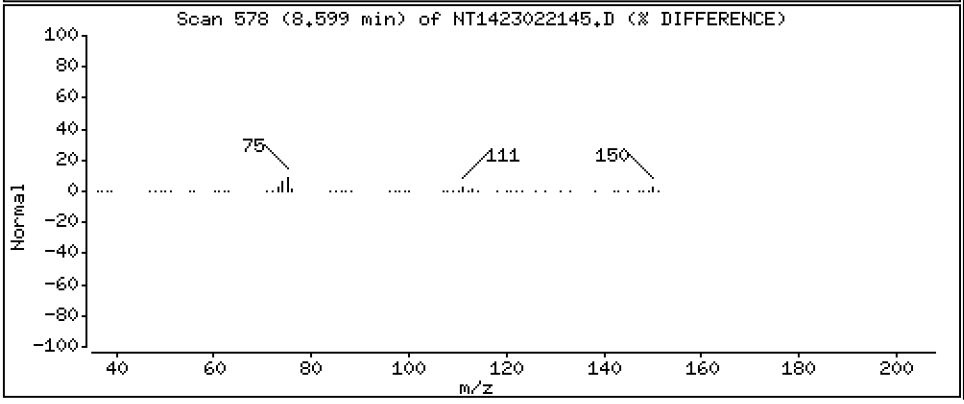
9 1,4-Dichlorobenzene

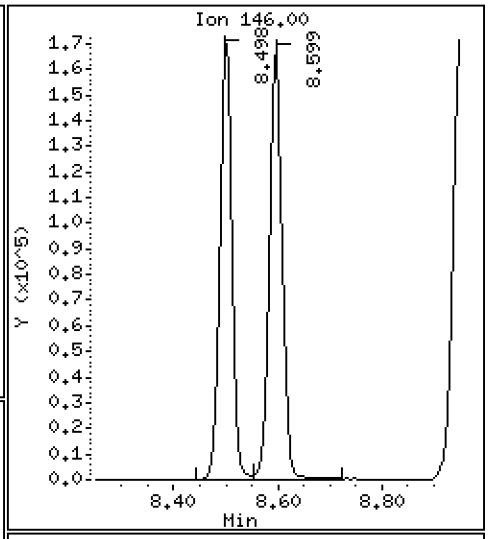
Concentration: 3.738 ug/mL

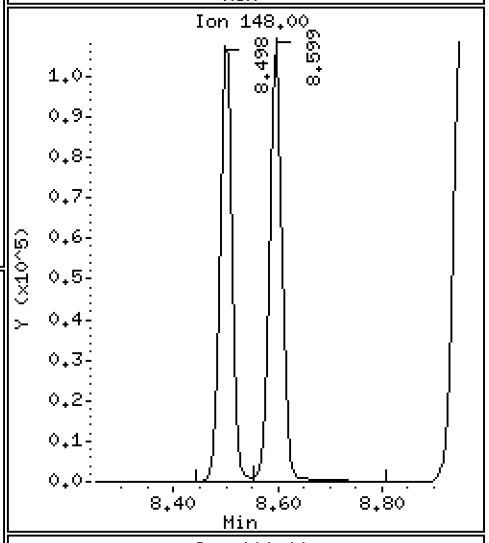


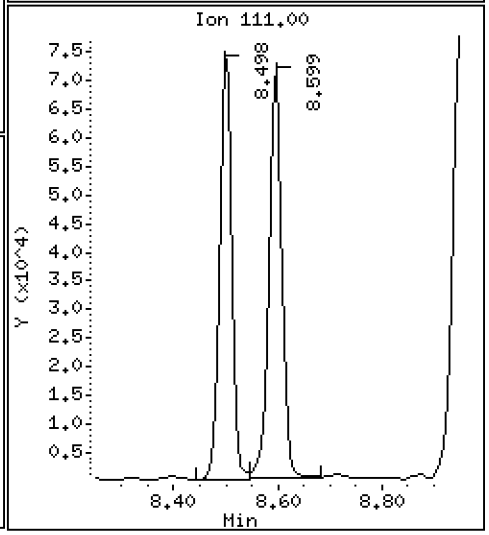












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

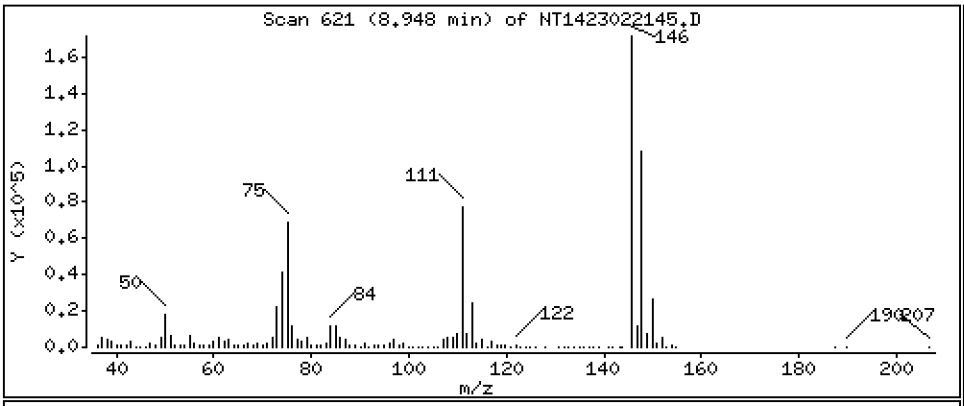
Operator: DSD

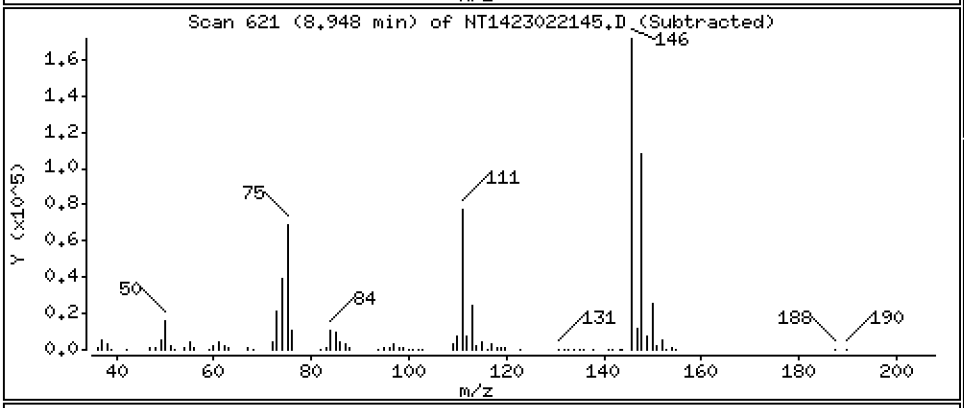
Column phase: ZB-5msi

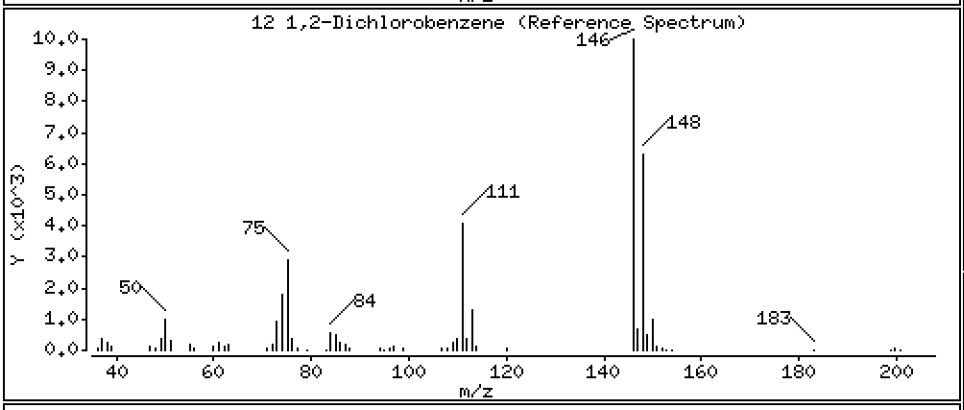
Column diameter: 0.25

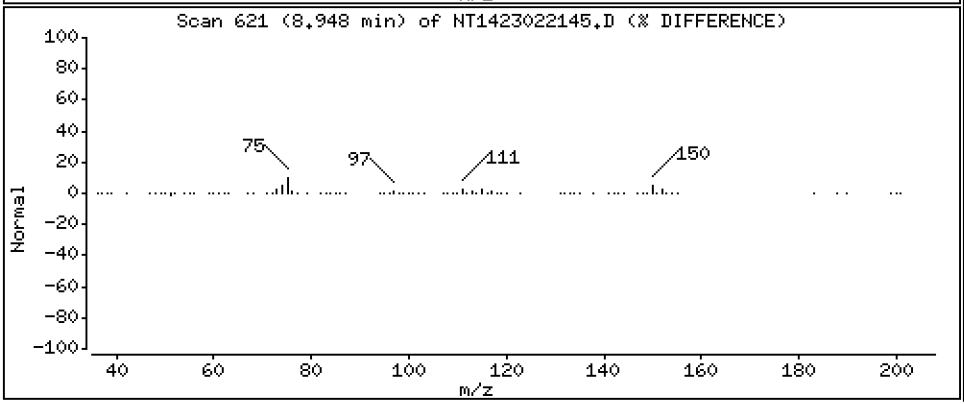
12 1,2-Dichlorobenzene

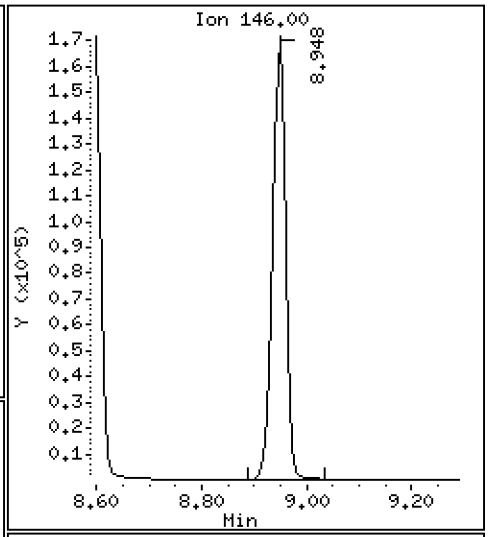
Concentration: 3.357 ug/mL

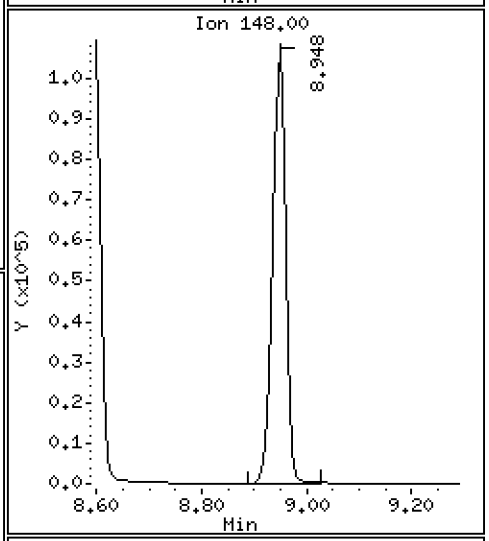


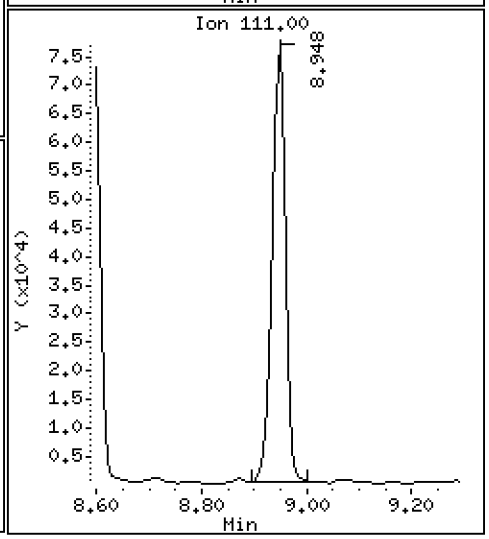












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

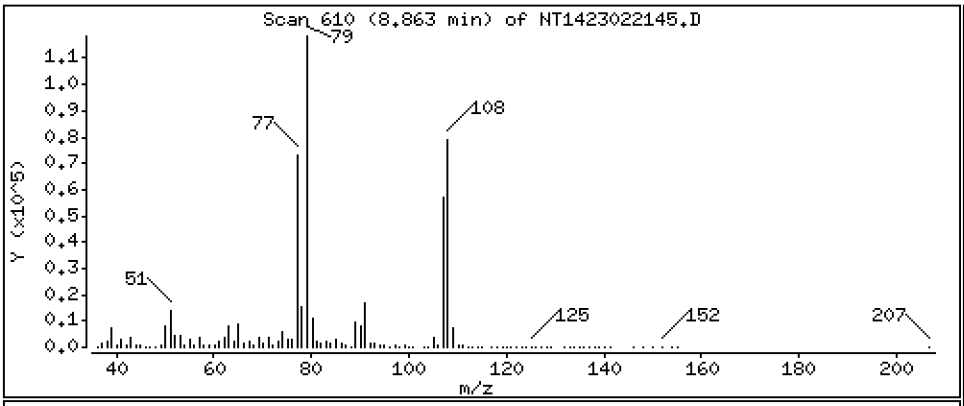
Operator: DSD

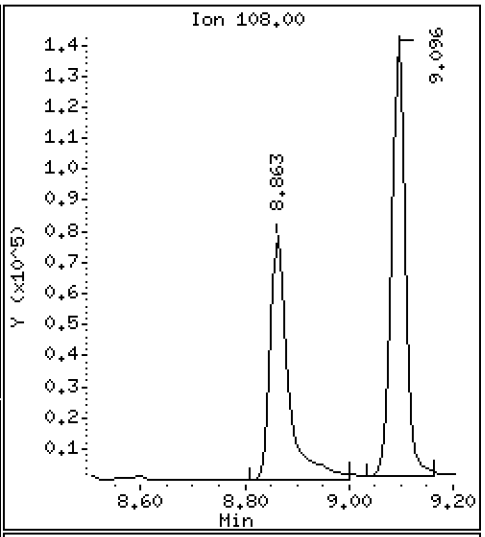
Column phase: ZB-5msi

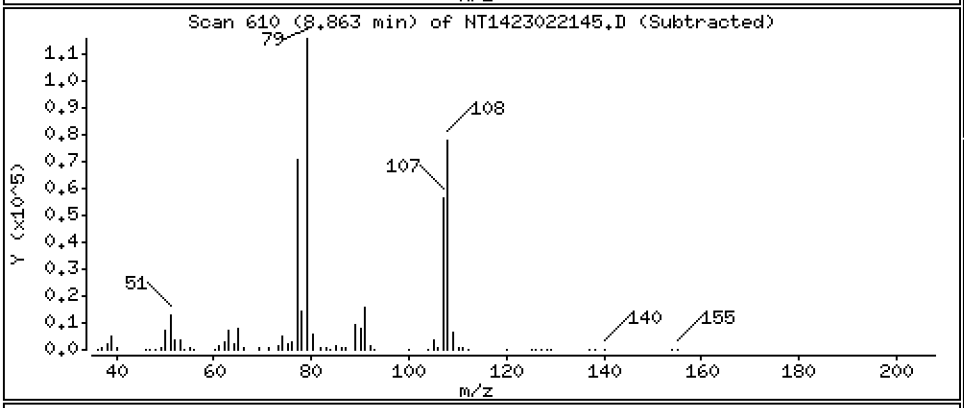
Column diameter: 0.25

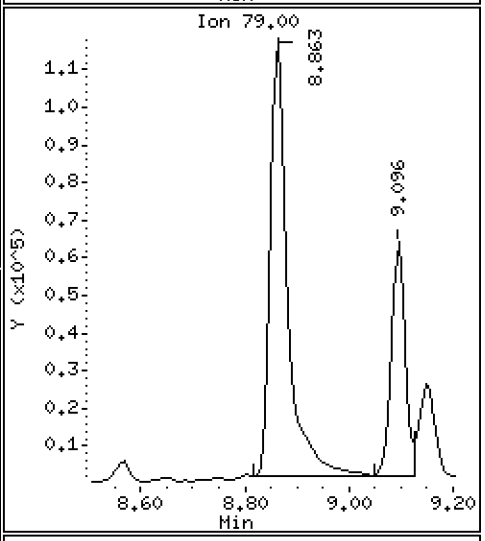
11 Benzyl alcohol

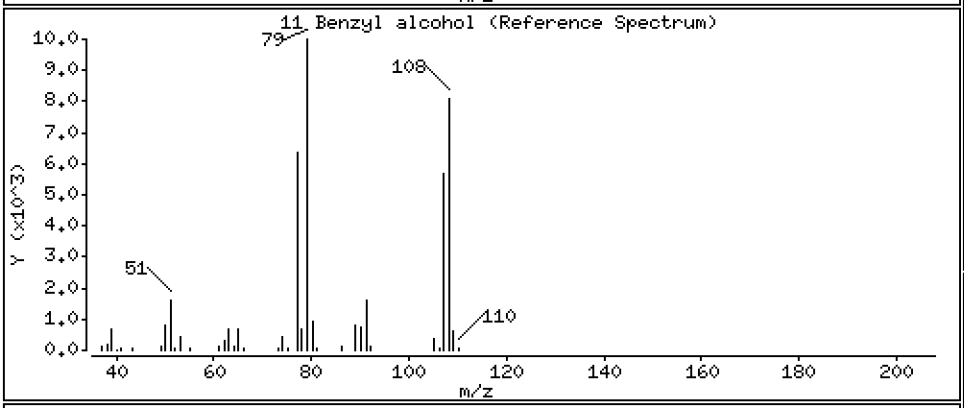
Concentration: 2.929 ug/mL

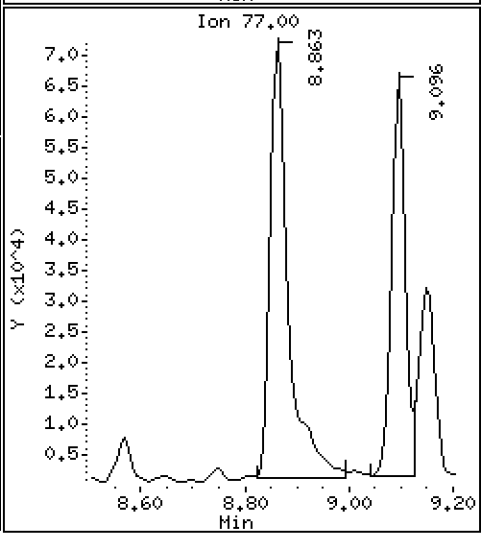


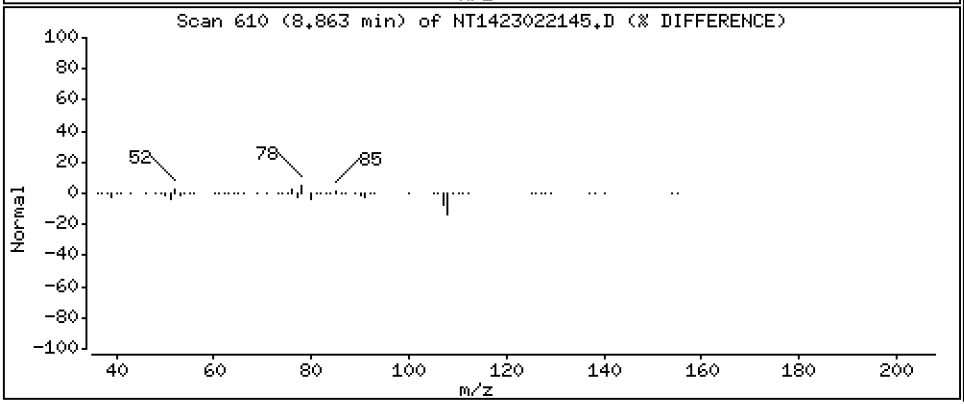












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

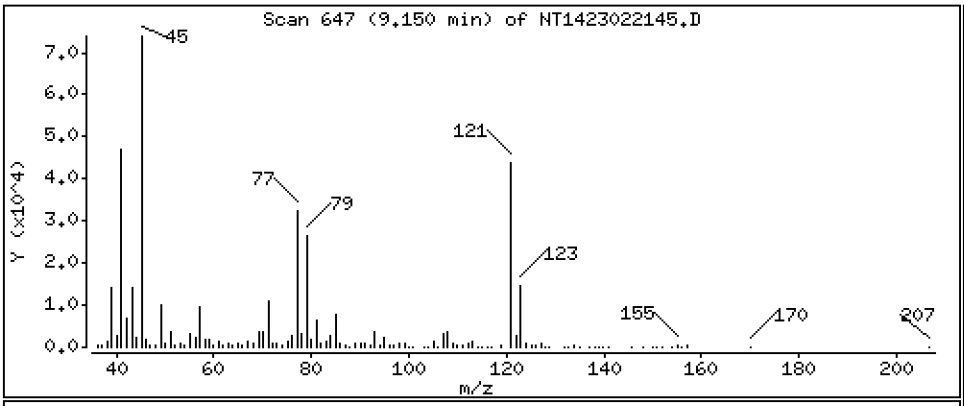
Operator: DSD

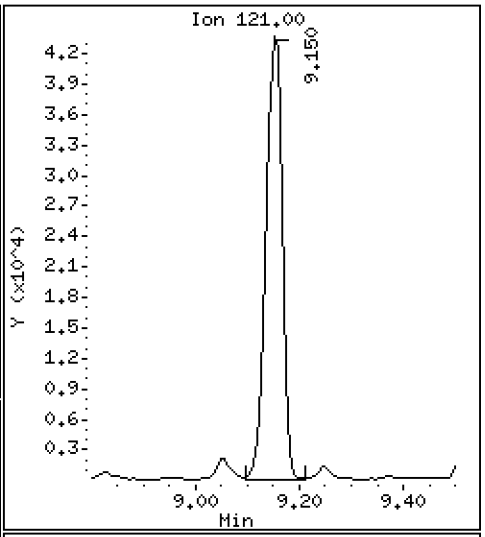
Column phase: ZB-5msi

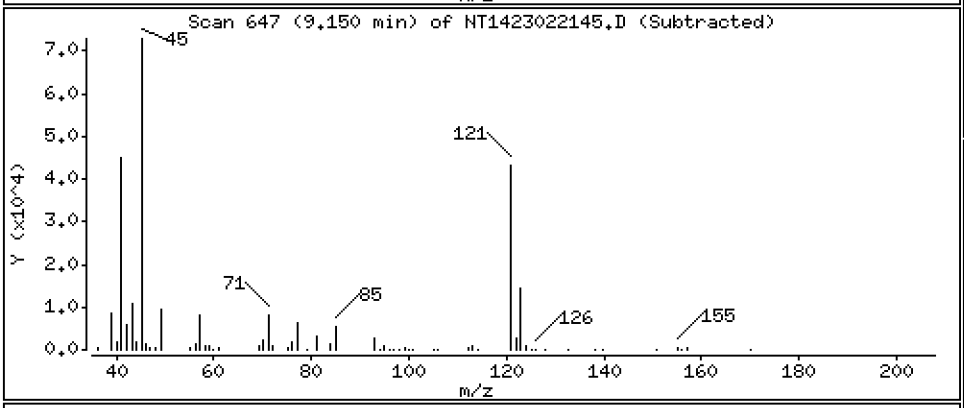
Column diameter: 0.25

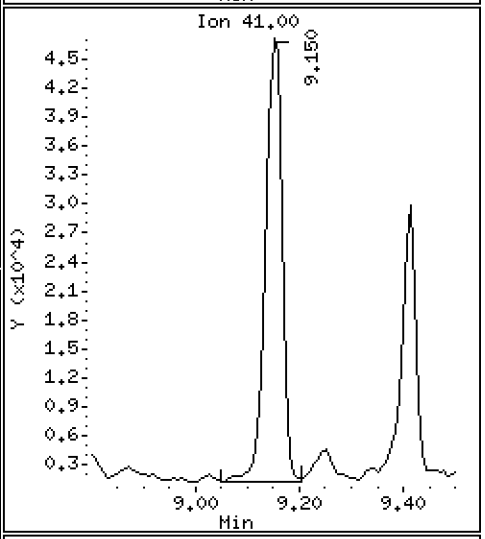
14 2,2'-oxybis(1-Chloropropane)

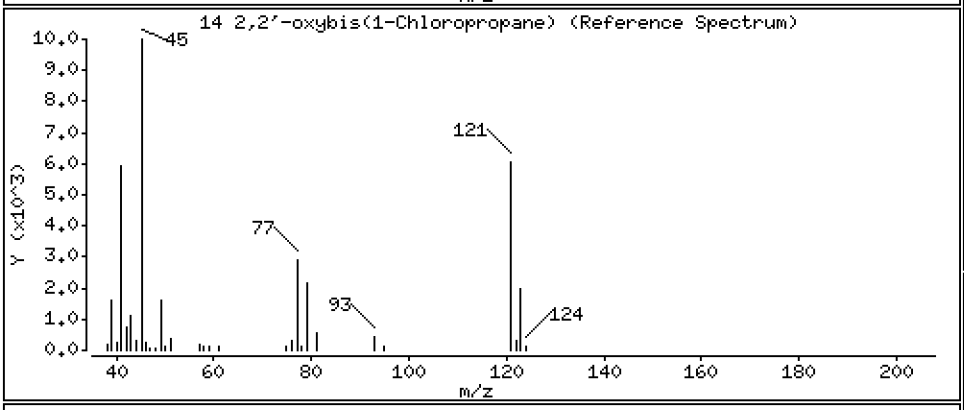
Concentration: 3.876 ug/mL

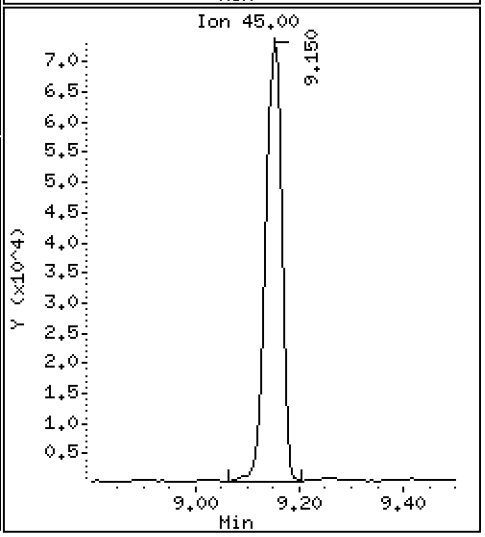


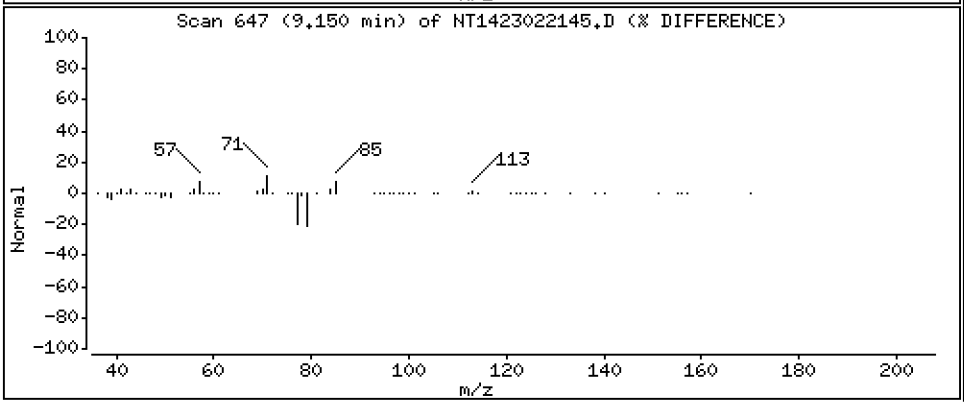












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

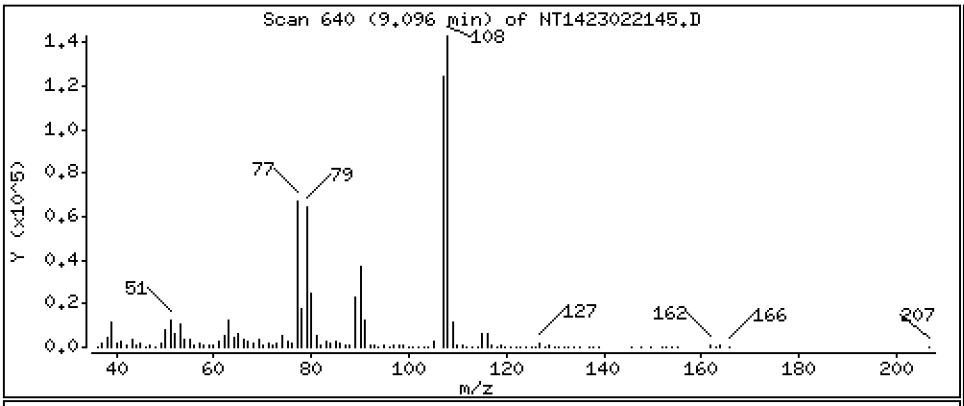
Operator: DSD

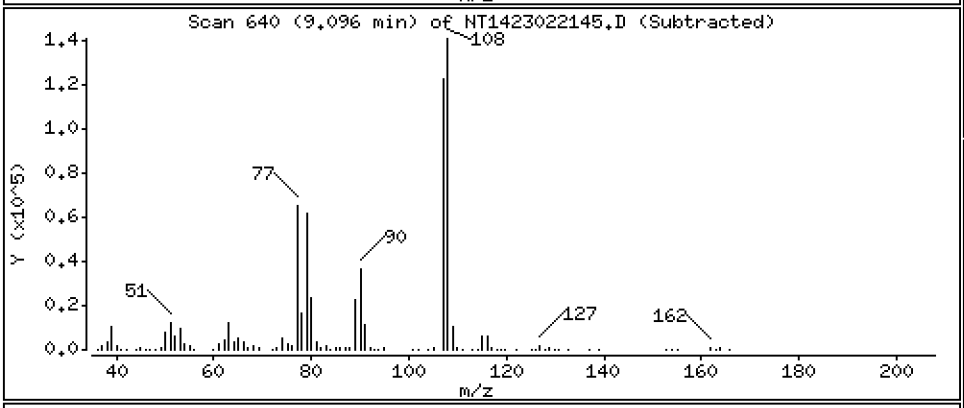
Column phase: ZB-5msi

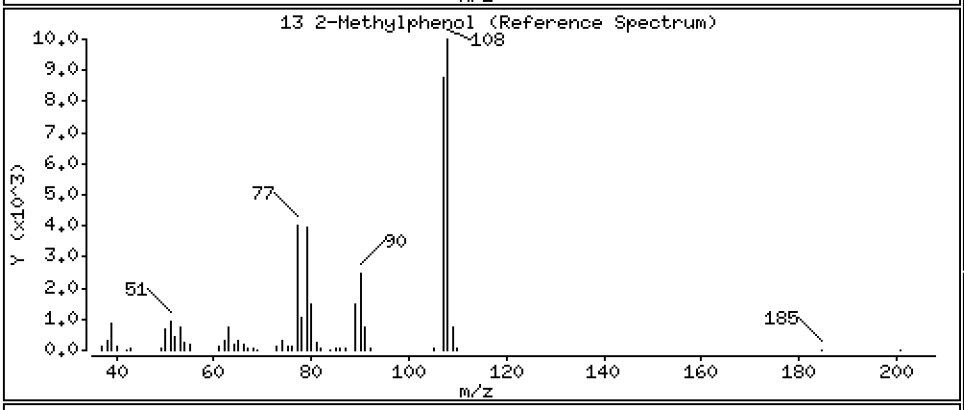
Column diameter: 0.25

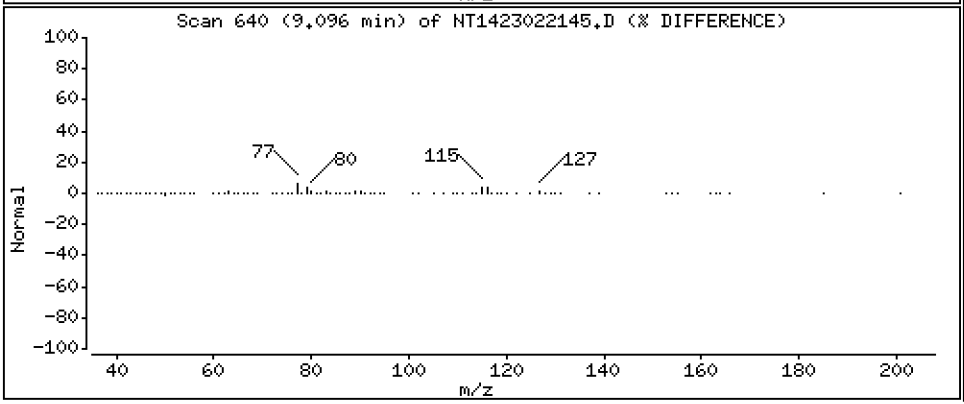
13 2-Methylphenol

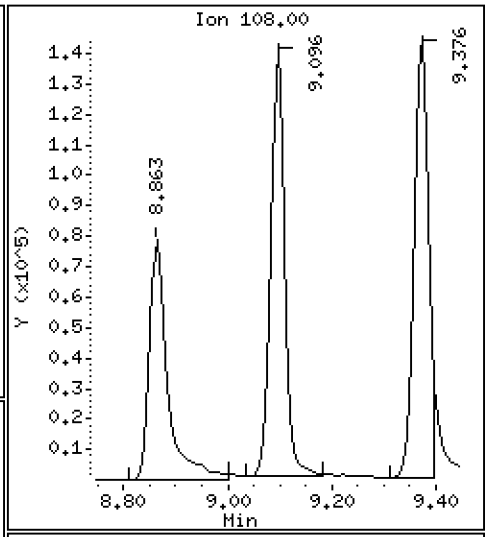
Concentration: 3.172 ug/mL

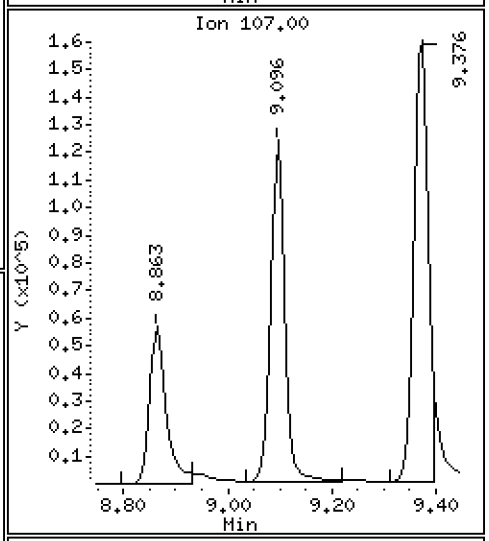


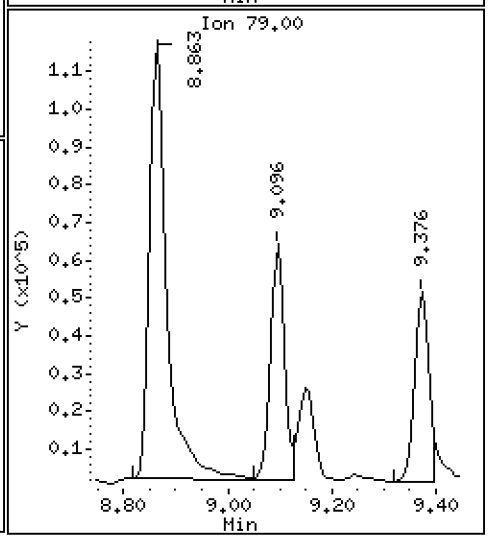












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

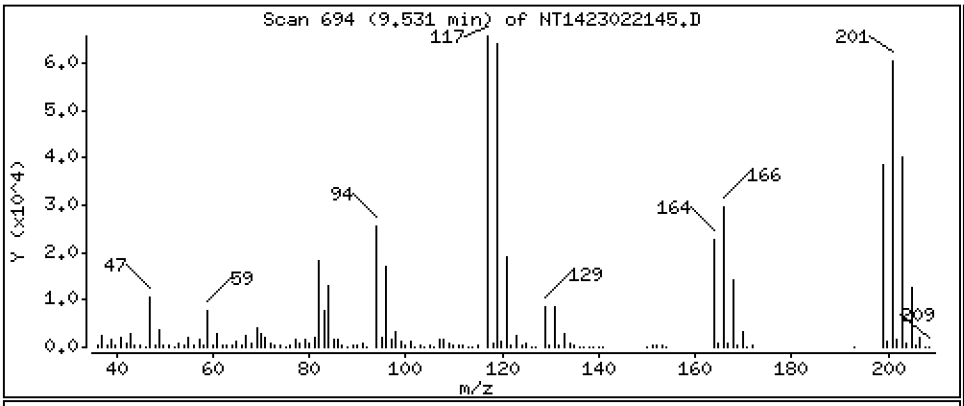
Operator: DSD

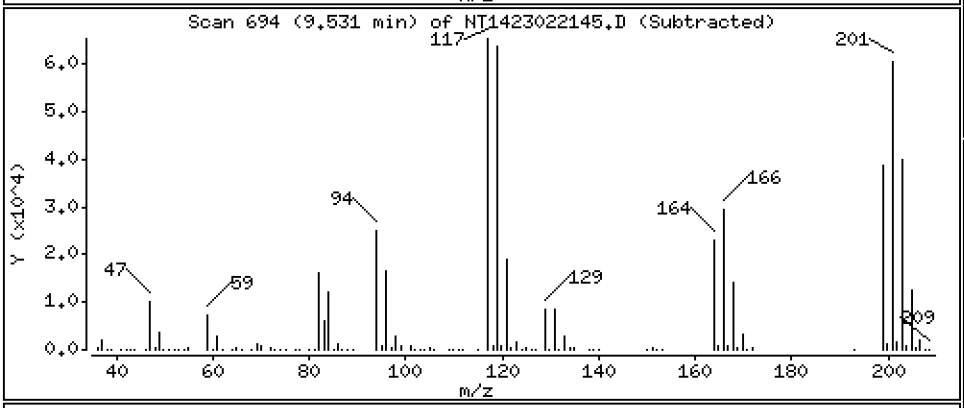
Column phase: ZB-5msi

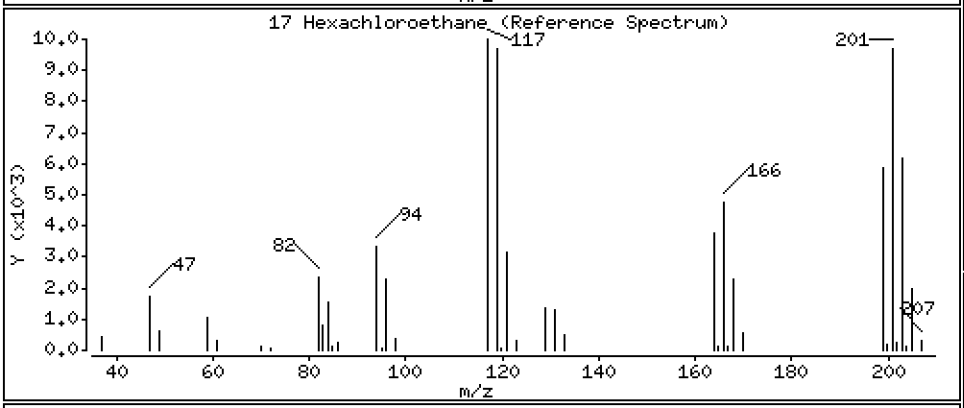
Column diameter: 0.25

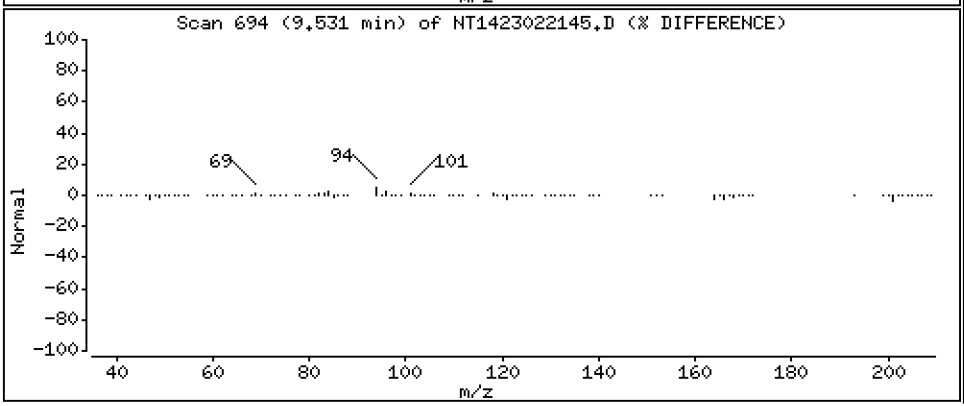
17 Hexachloroethane

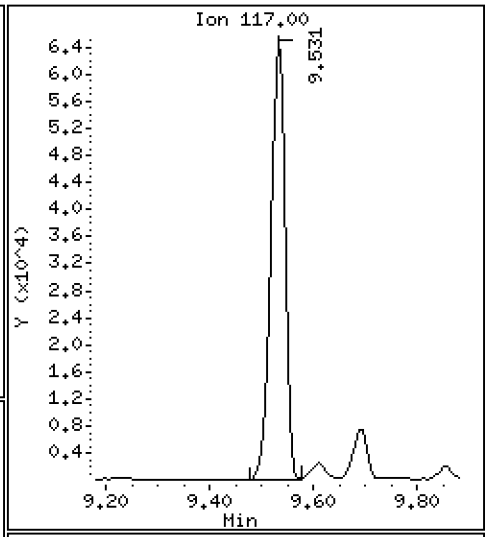
Concentration: 3.258 ug/mL

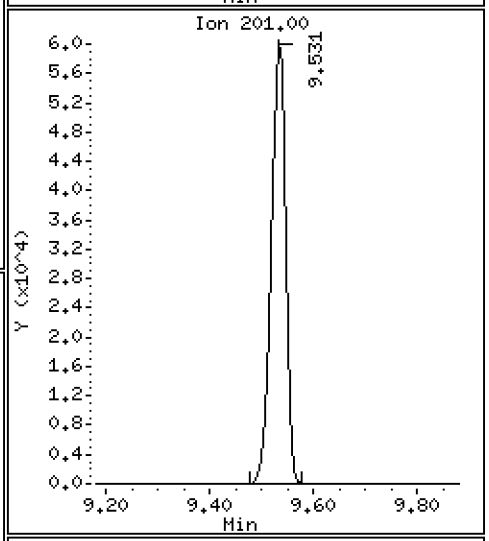


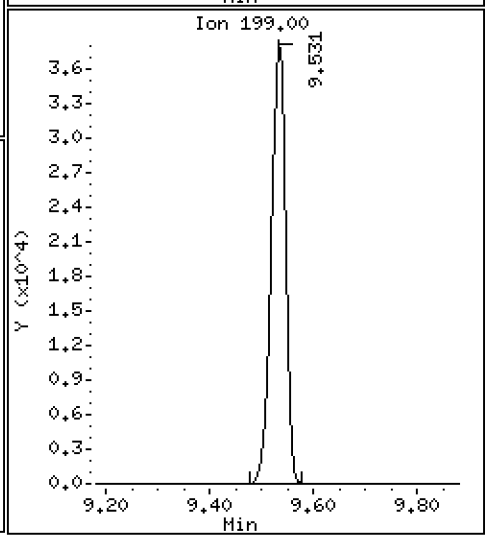












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

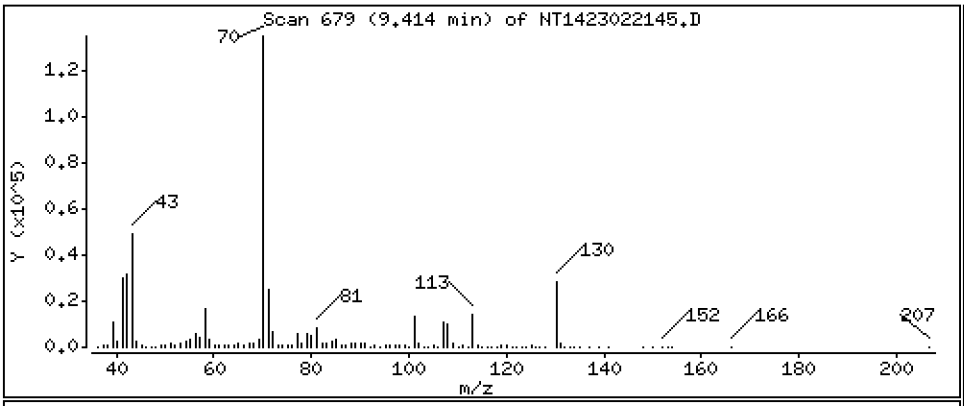
Operator: DSD

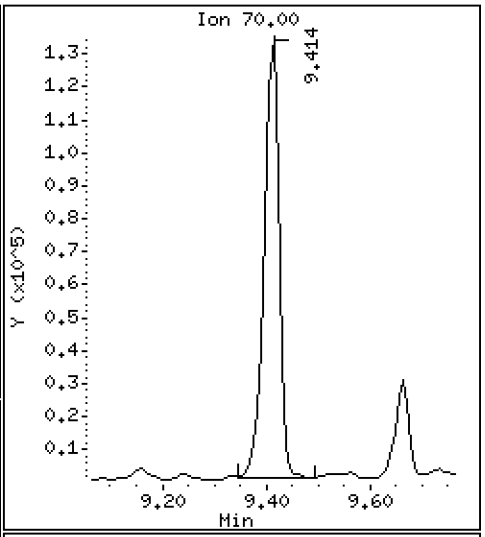
Column phase: ZB-5msi

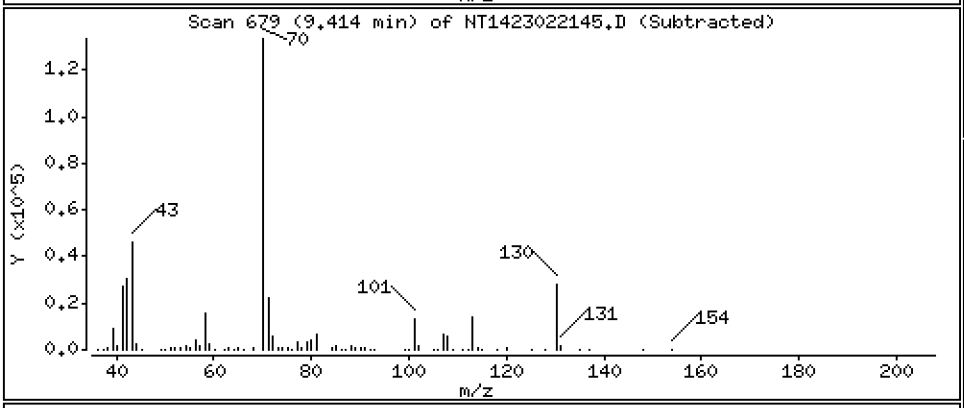
Column diameter: 0.25

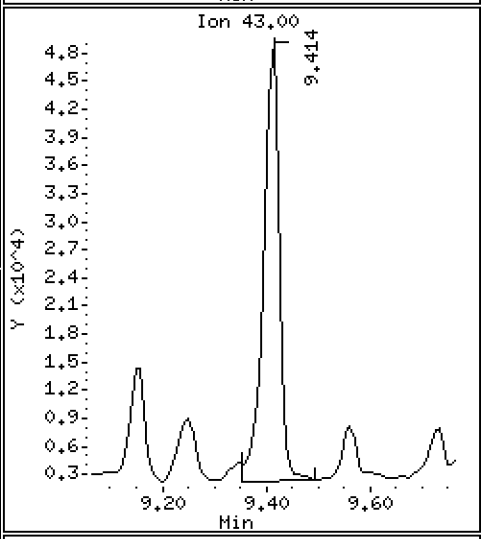
16 N-Nitroso-di-n-propylamine

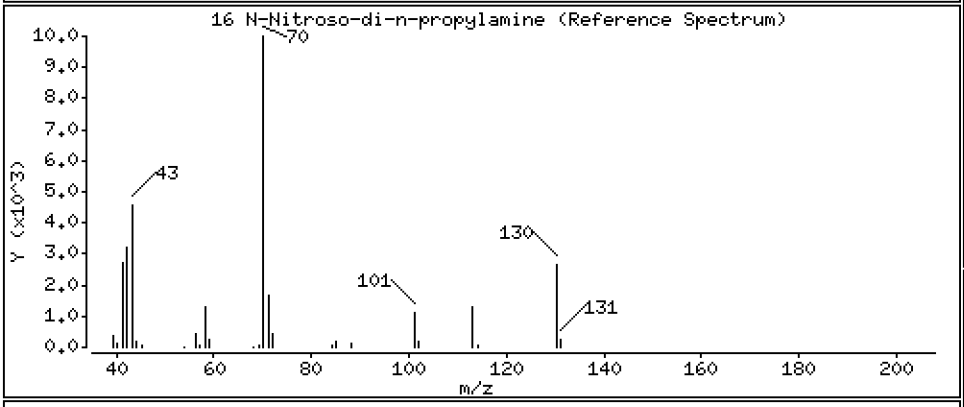
Concentration: 3.587 ug/mL

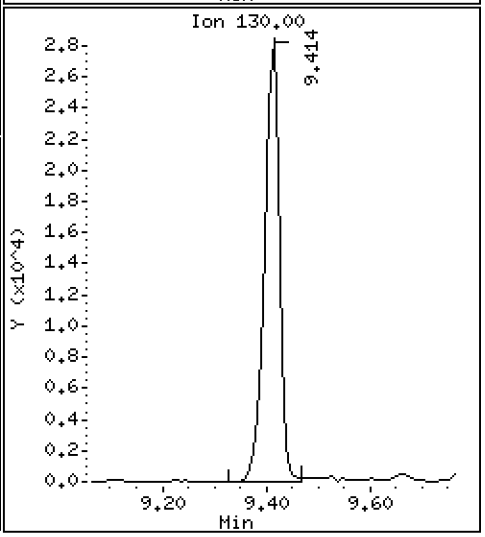


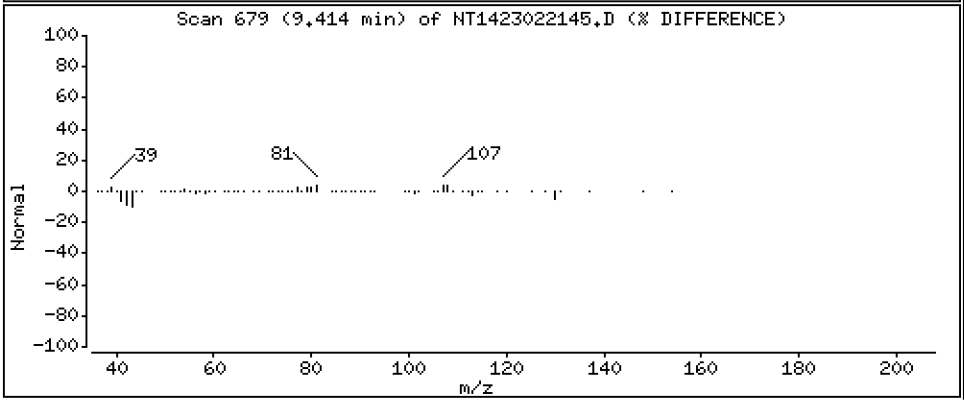












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

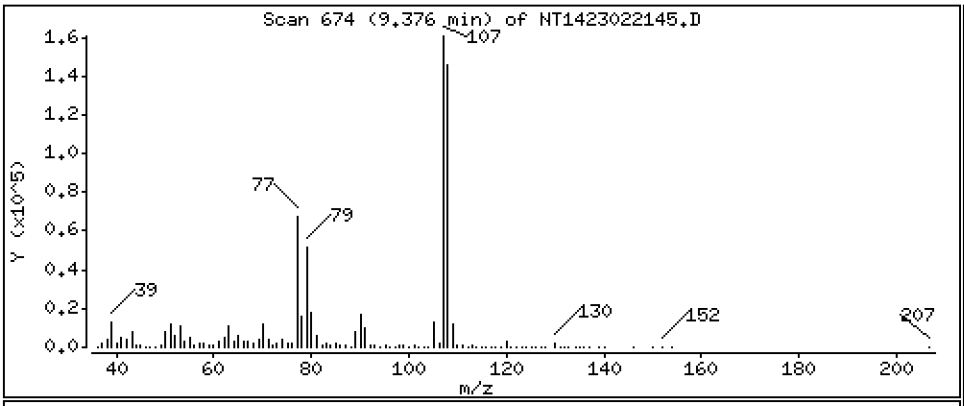
Operator: DSD

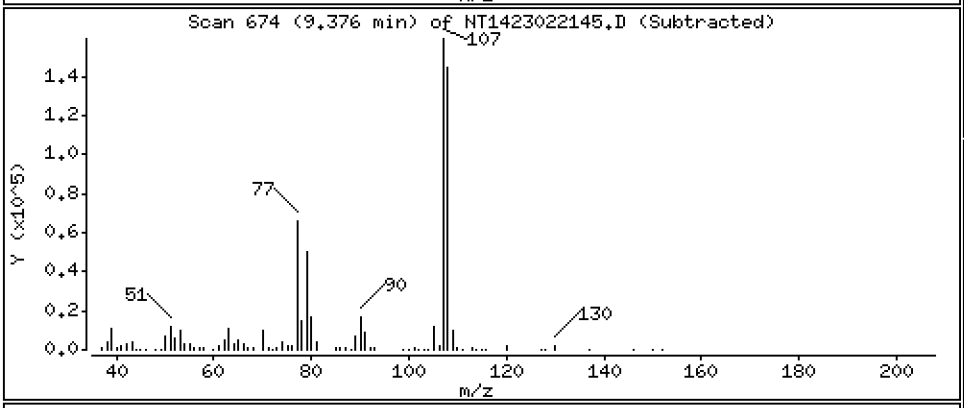
Column phase: ZB-5msi

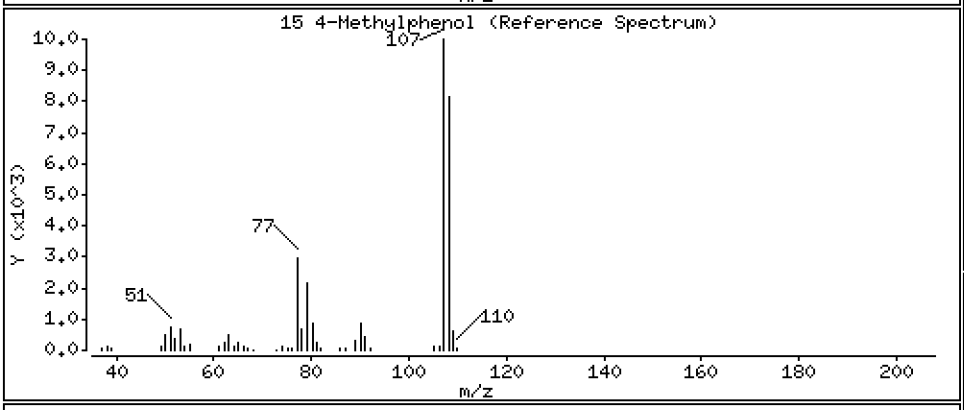
Column diameter: 0.25

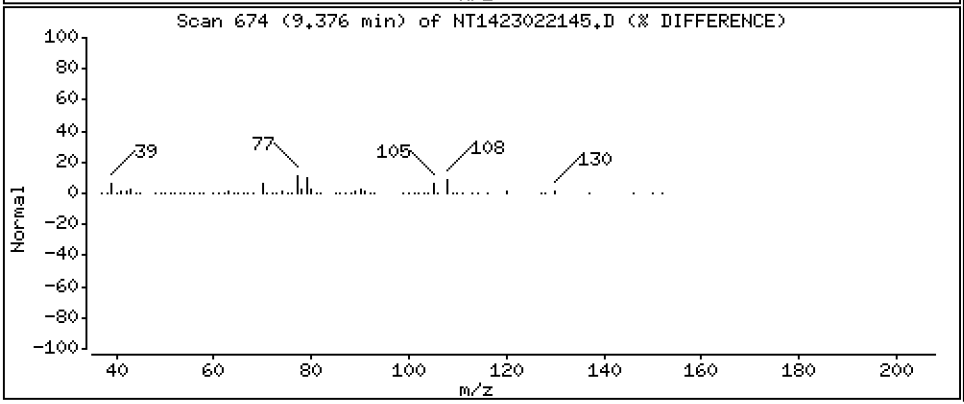
15 4-Methylphenol

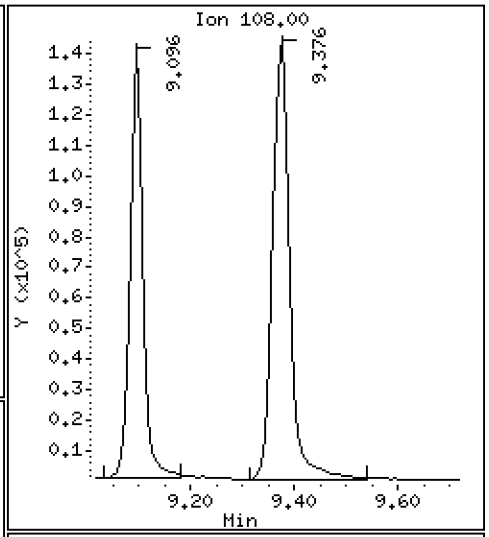
Concentration: 3.884 ug/mL

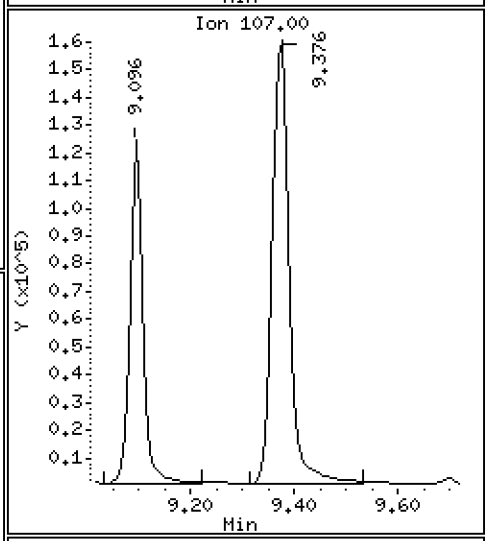


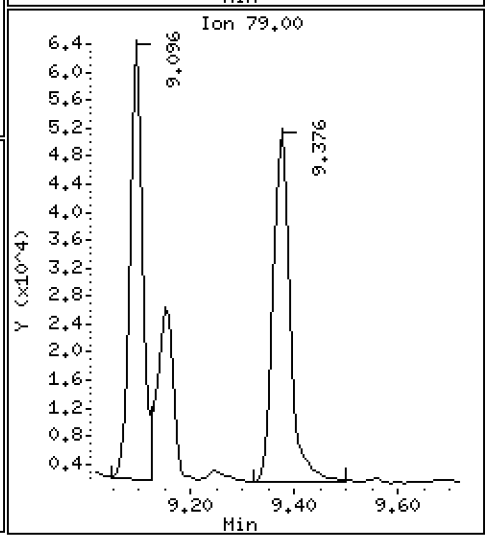












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

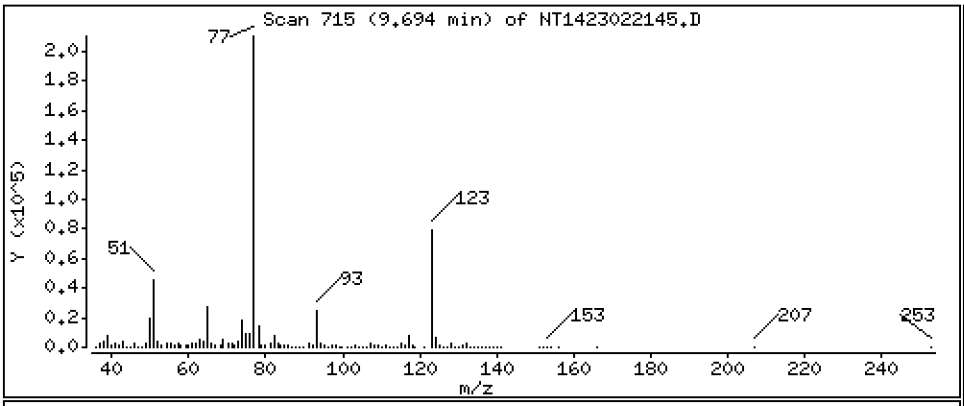
Operator: DSD

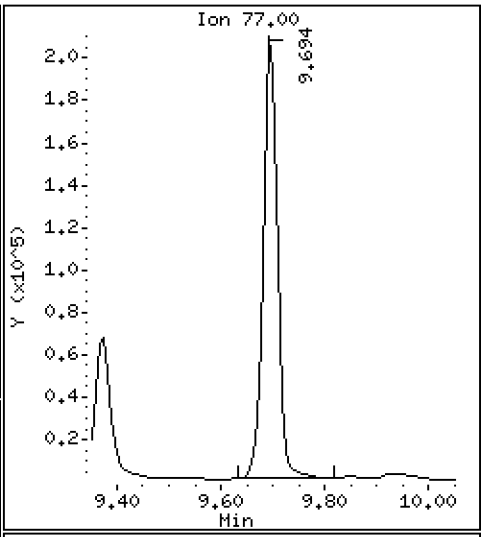
Column phase: ZB-5msi

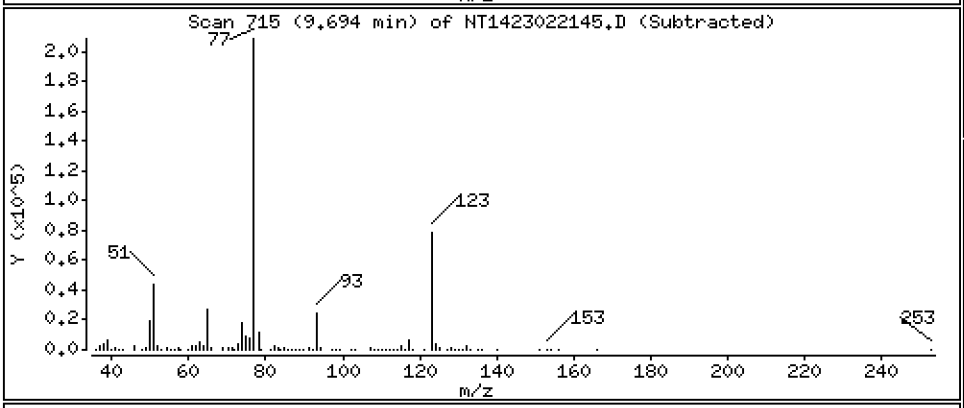
Column diameter: 0.25

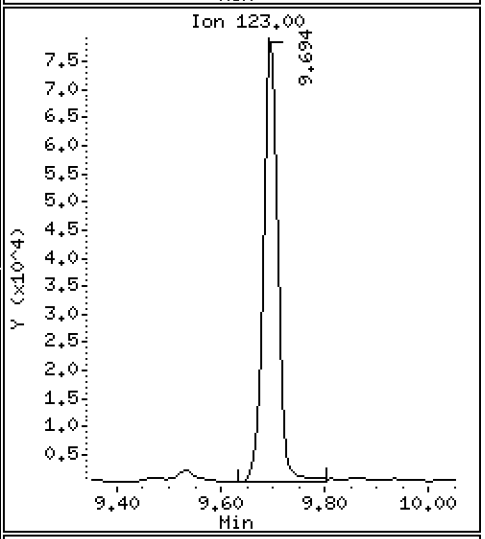
19 Nitrobenzene

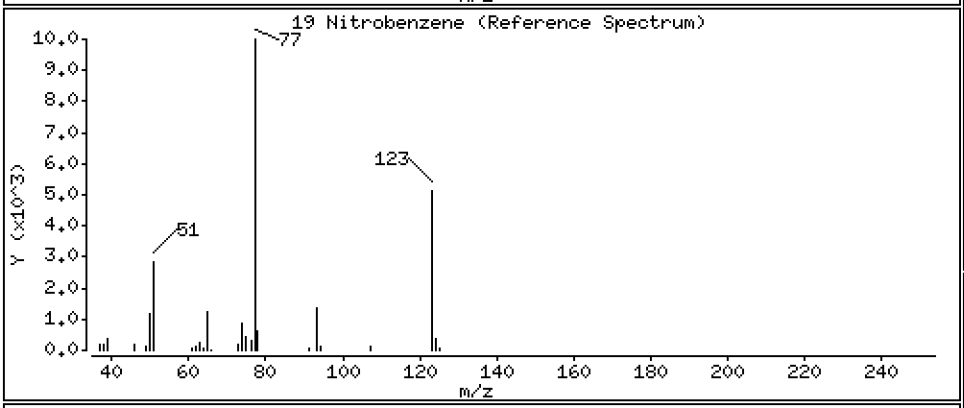
Concentration: 3.553 ug/mL

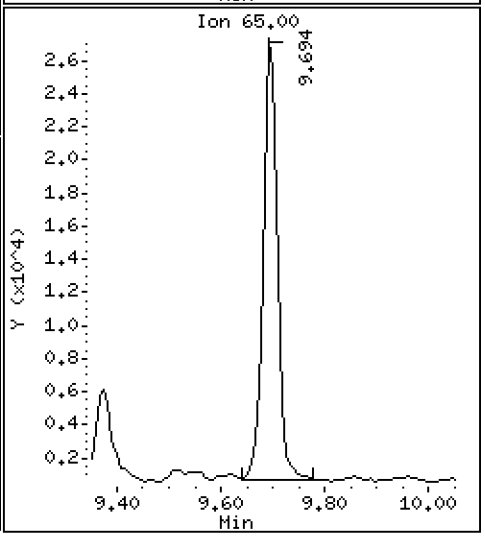


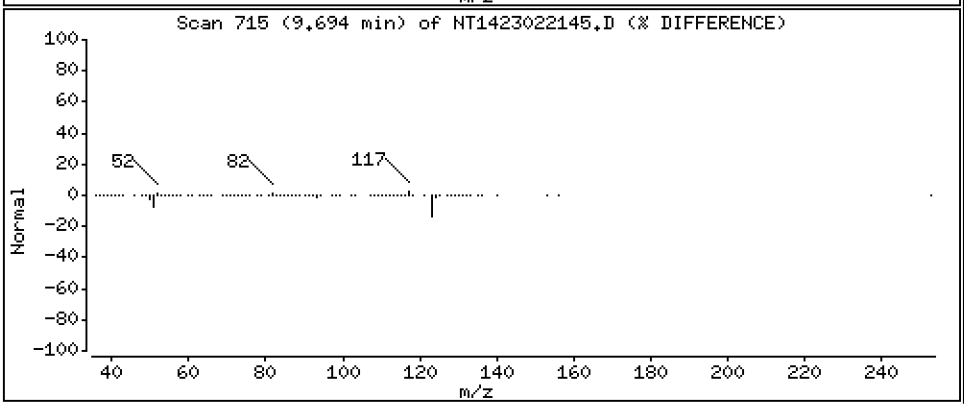












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

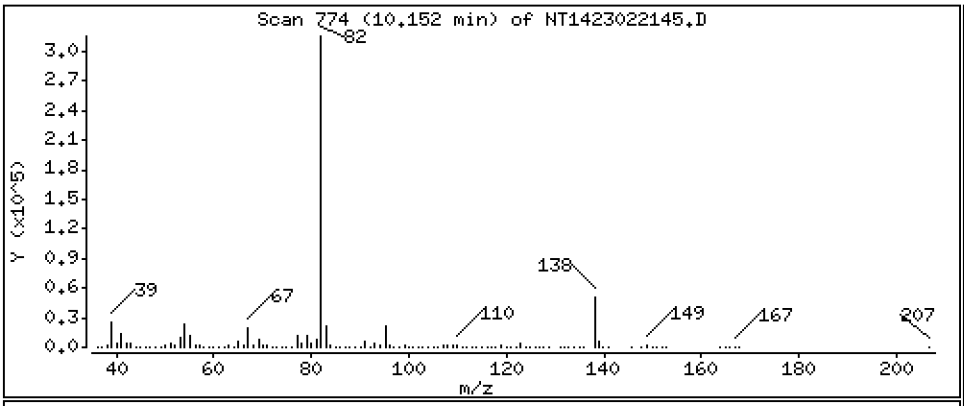
Operator: DSD

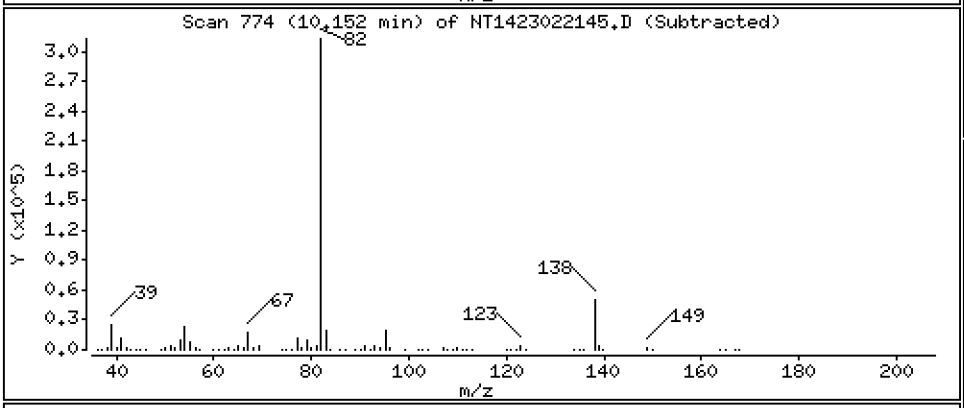
Column phase: ZB-5msi

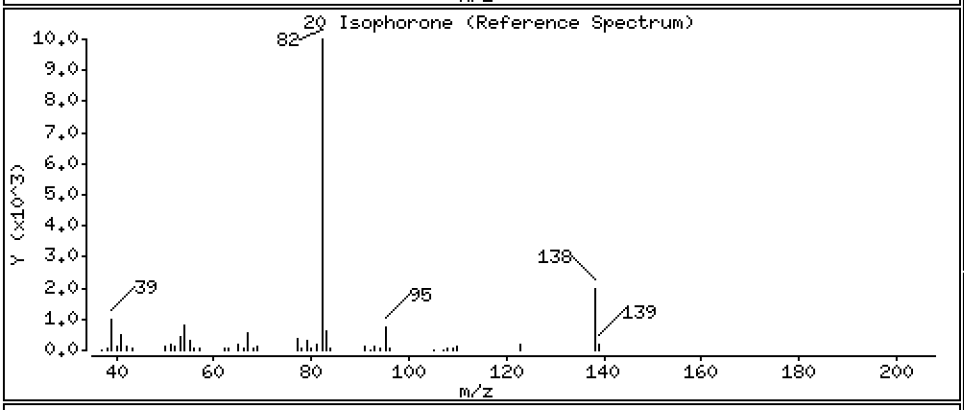
Column diameter: 0.25

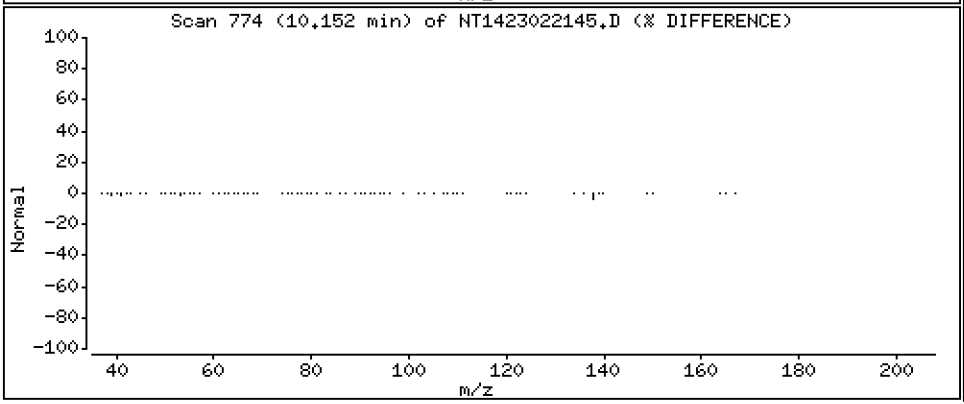
20 Isophorone

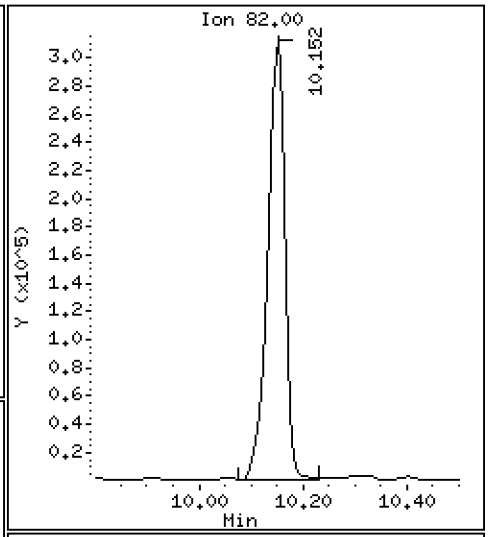
Concentration: 4.797 ug/mL

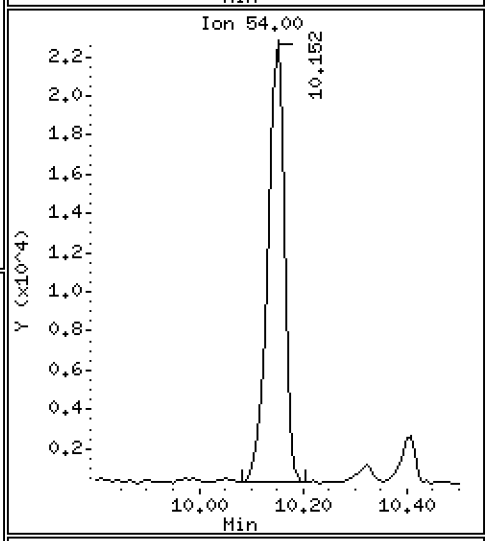


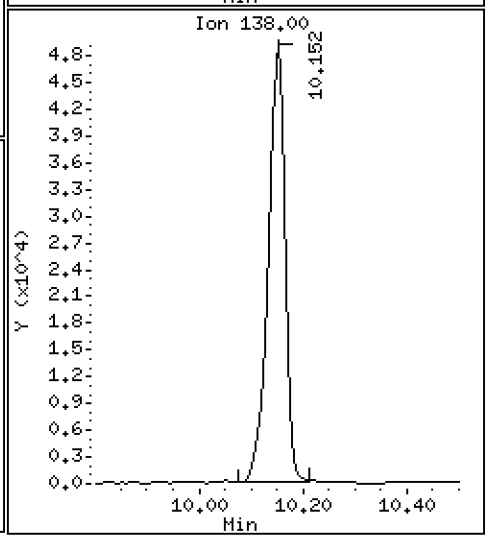












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

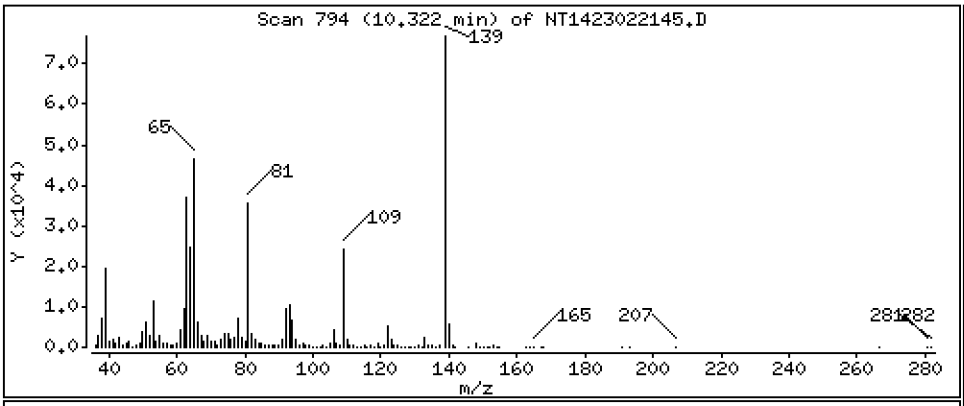
Operator: DSD

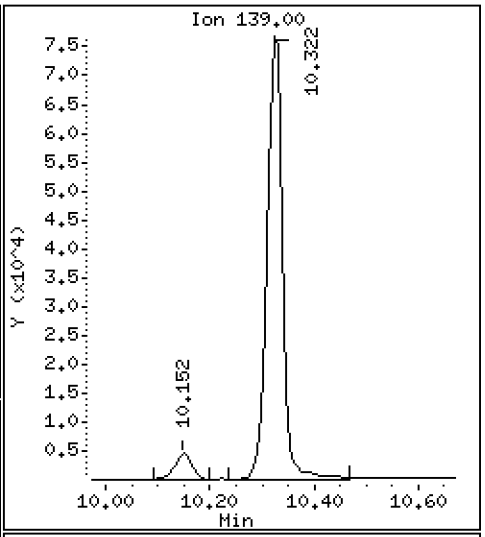
Column phase: ZB-5msi

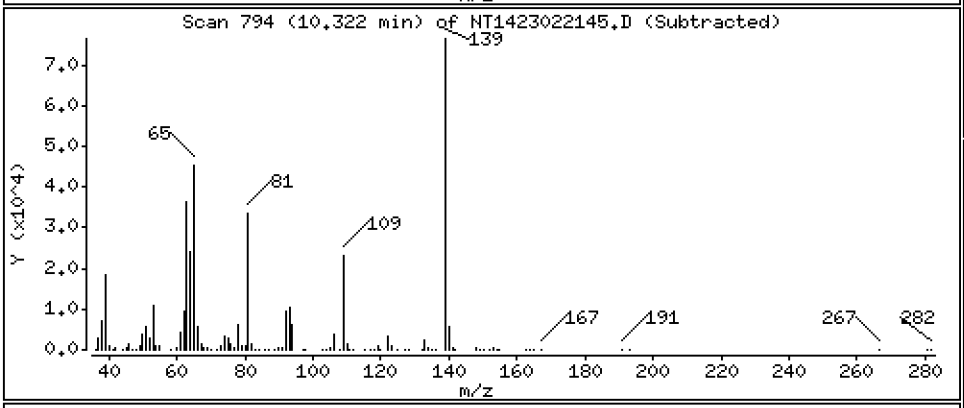
Column diameter: 0.25

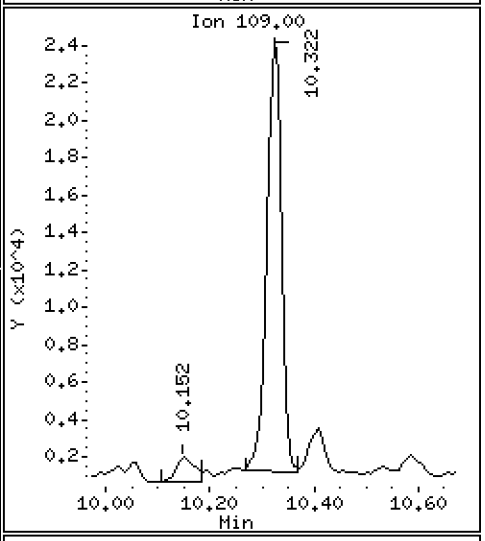
21 2-Nitrophenol

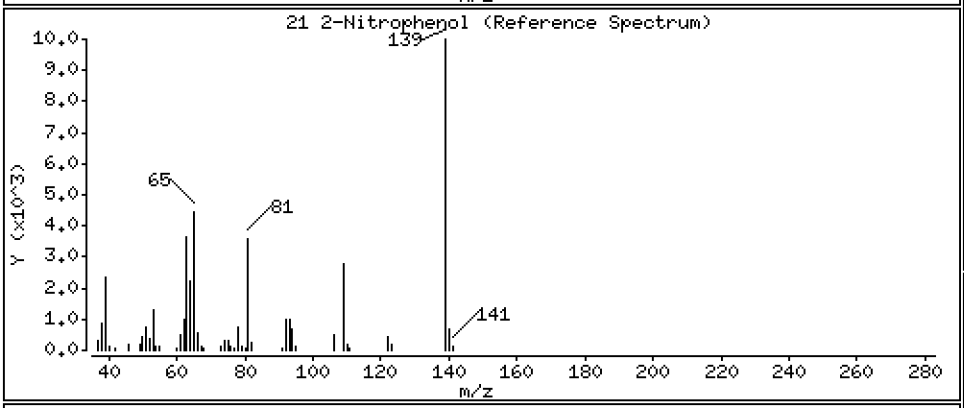
Concentration: 3.334 ug/mL

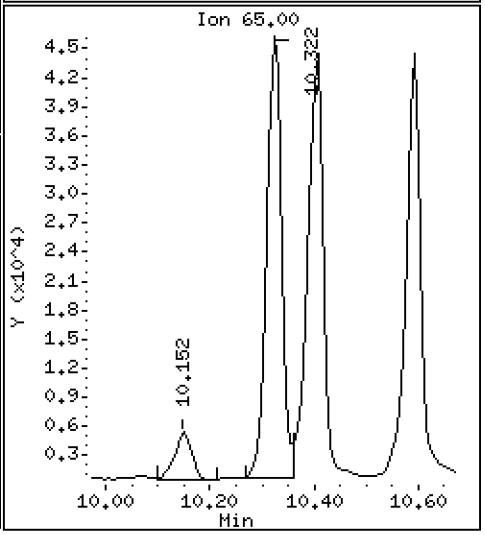


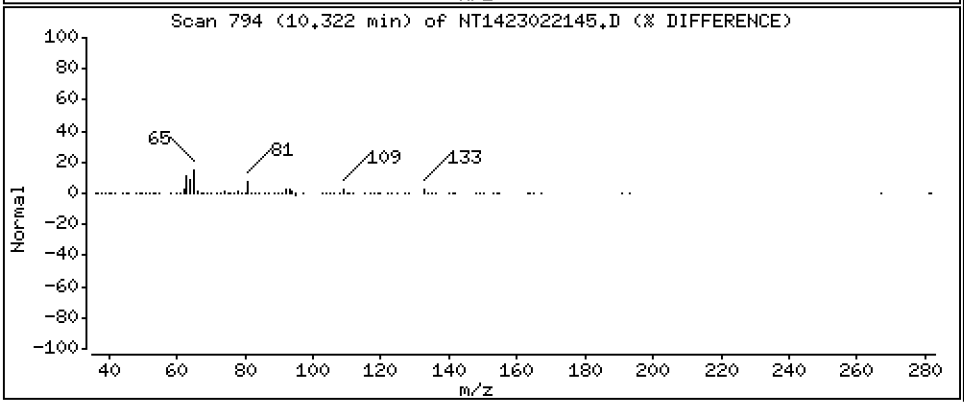












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

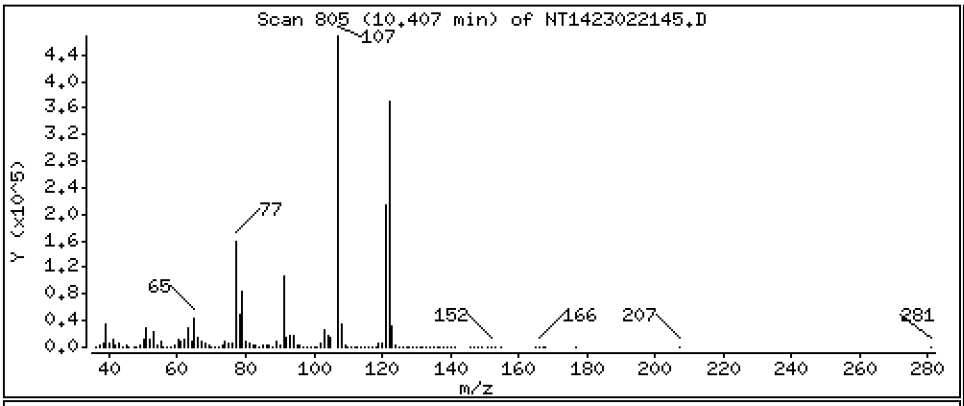
Operator: DSD

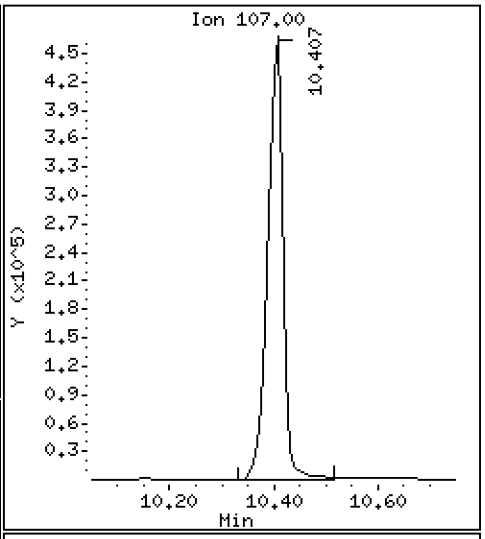
Column phase: ZB-5msi

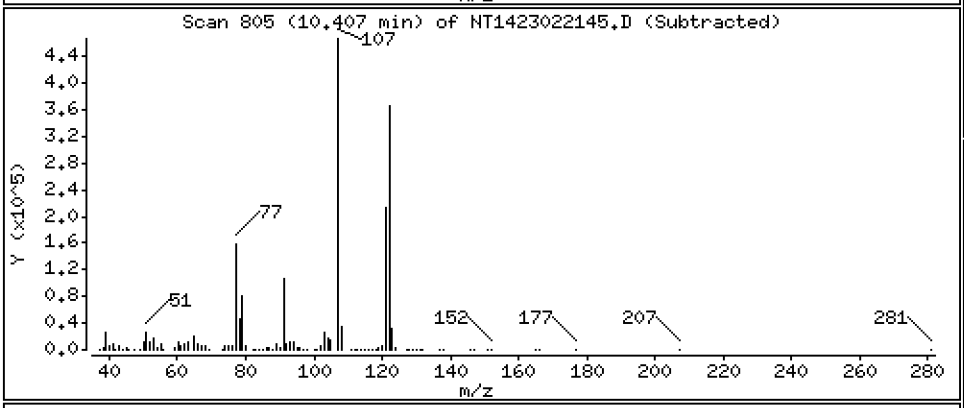
Column diameter: 0.25

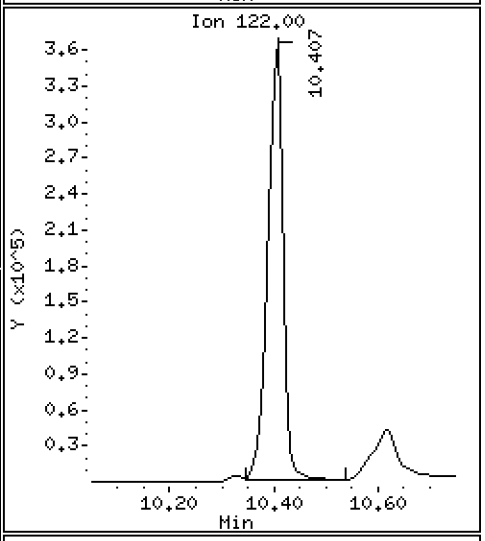
22 2,4-Dimethylphenol

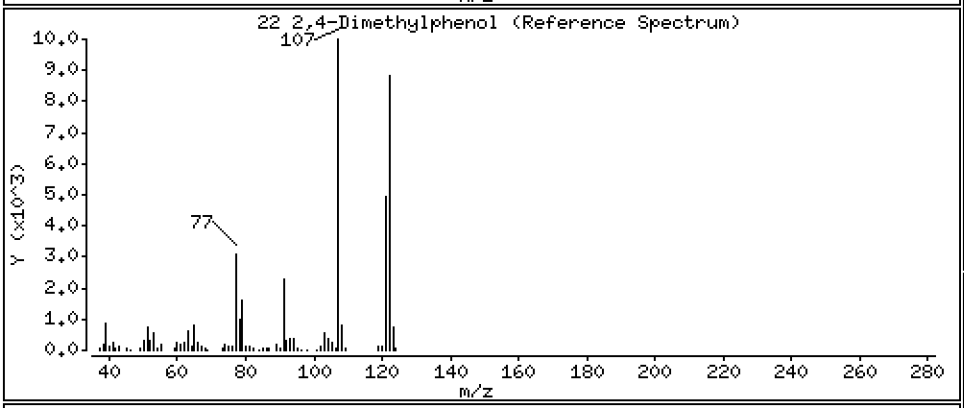
Concentration: 11.27 ug/mL

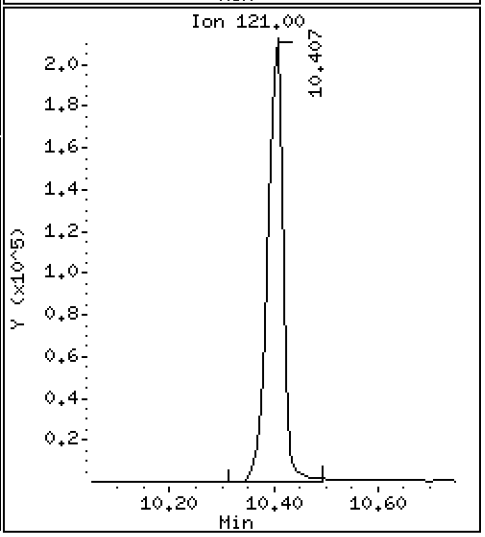


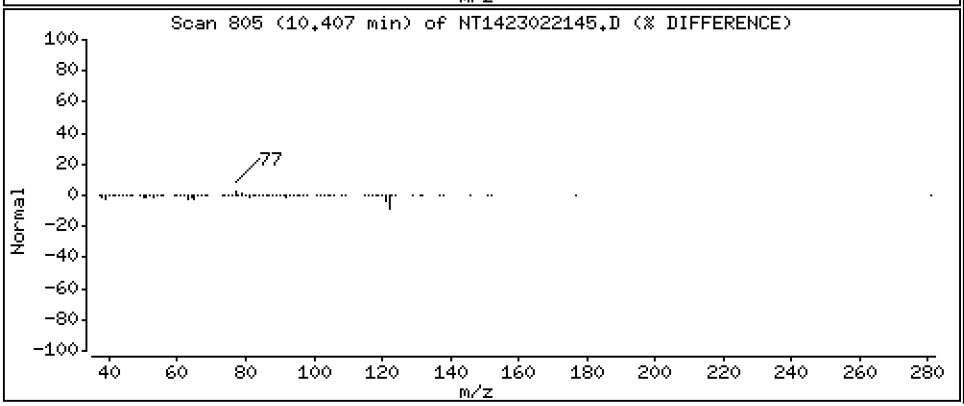












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

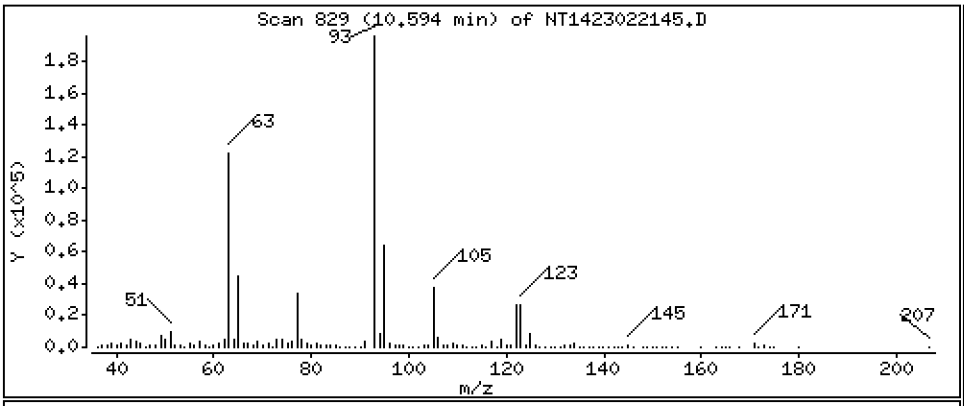
Operator: DSD

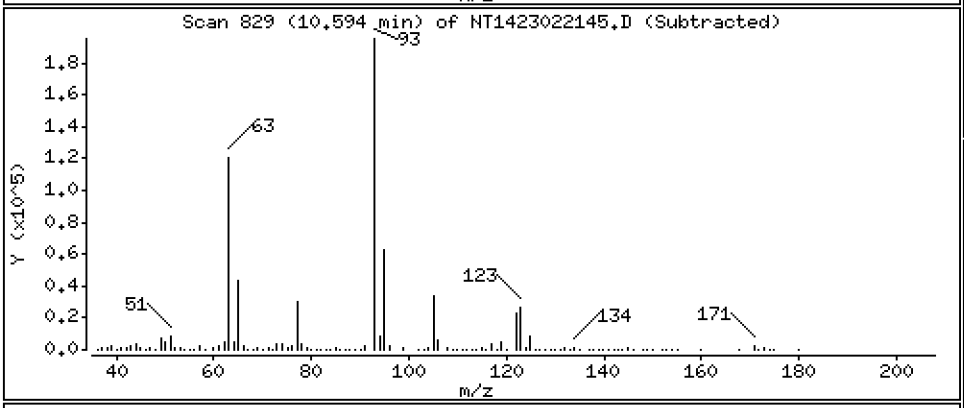
Column phase: ZB-5msi

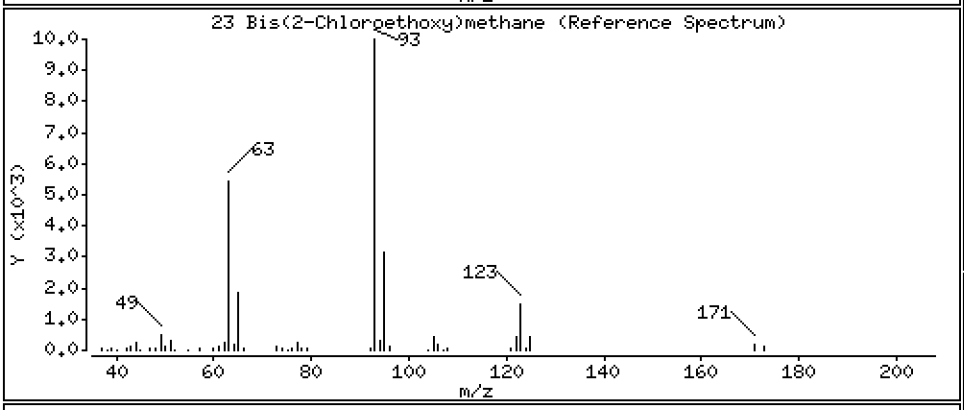
Column diameter: 0.25

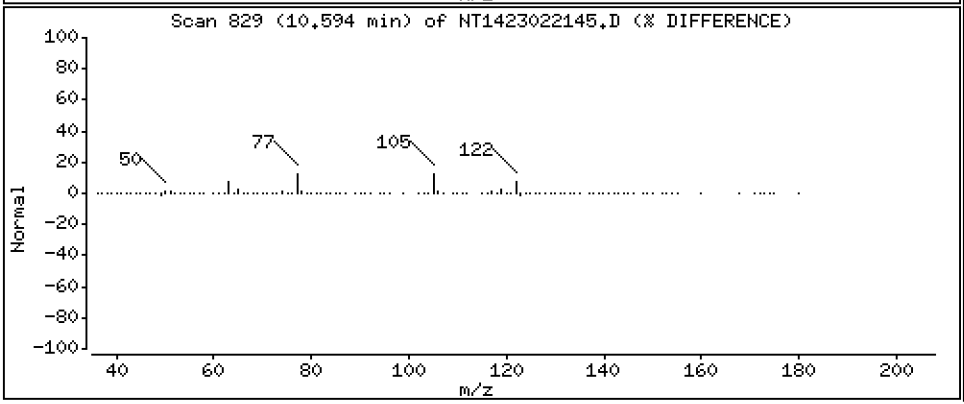
23 Bis(2-Chloroethoxy)methane

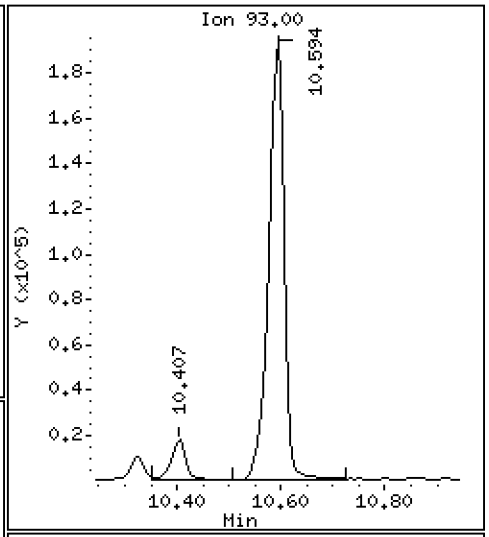
Concentration: 4.130 ug/mL

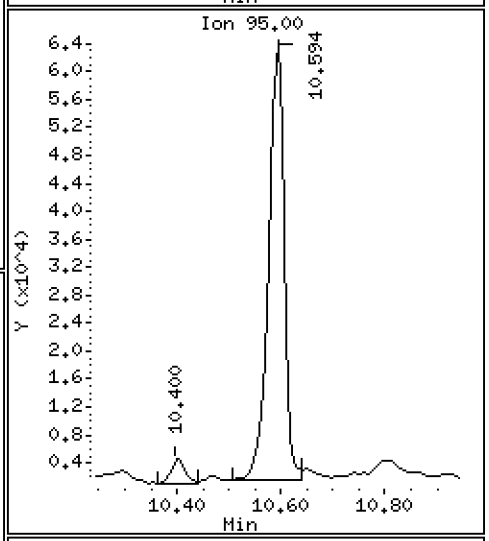


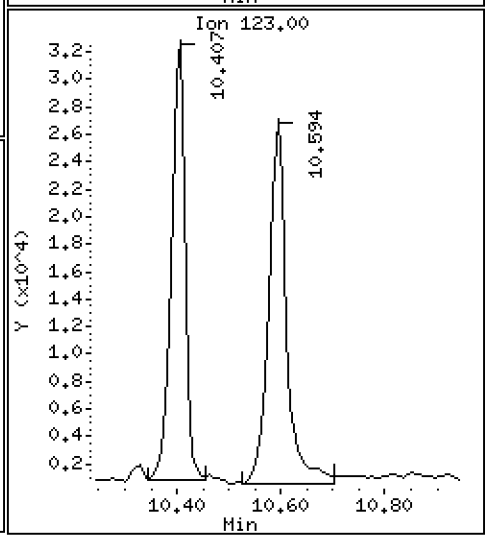












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

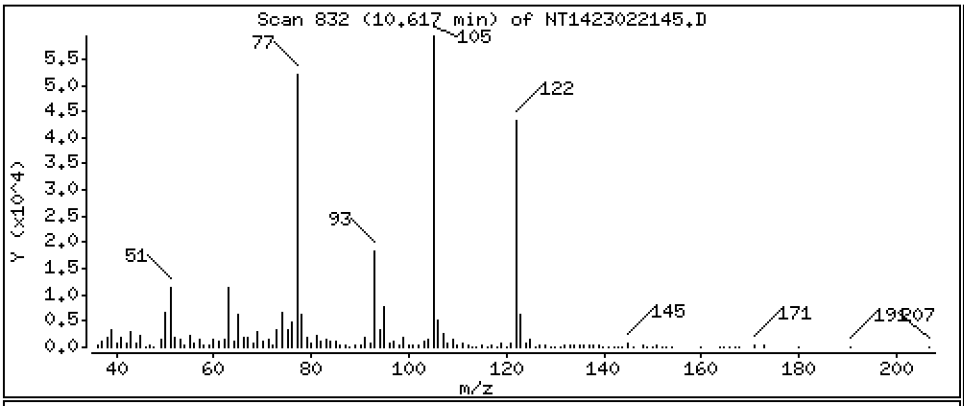
Operator: DSD

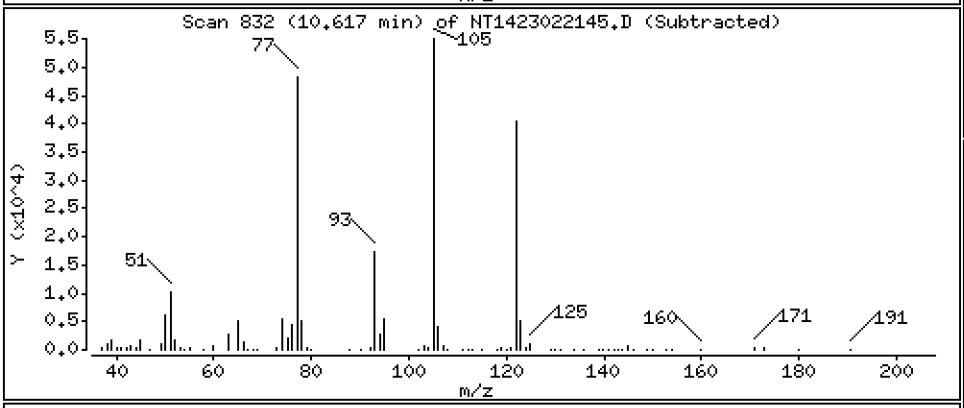
Column phase: ZB-5msi

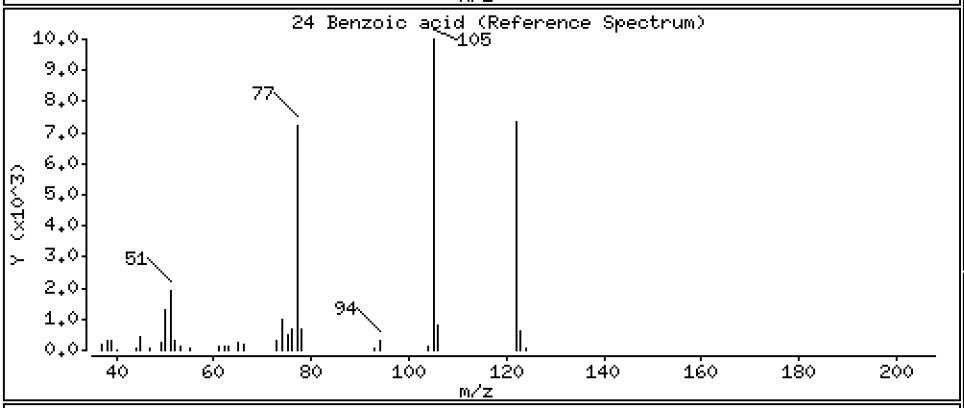
Column diameter: 0.25

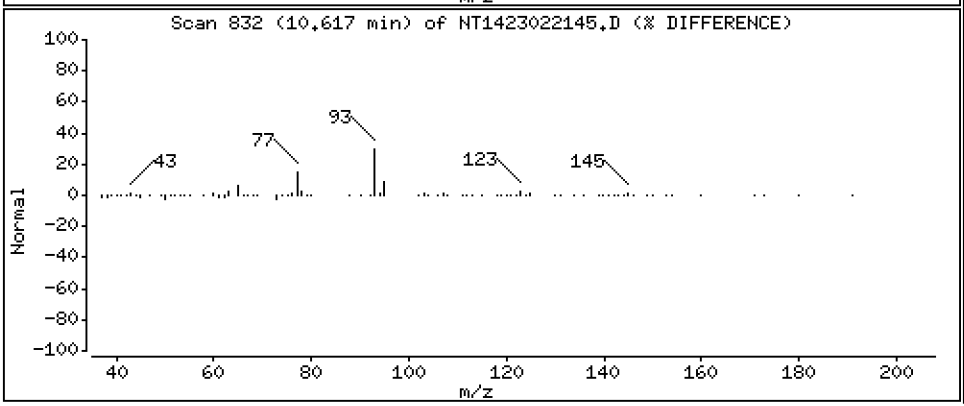
24 Benzoic acid

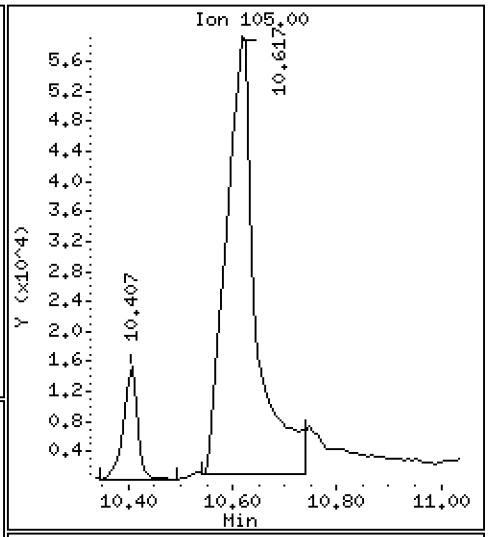
Concentration: 4.491 ug/mL

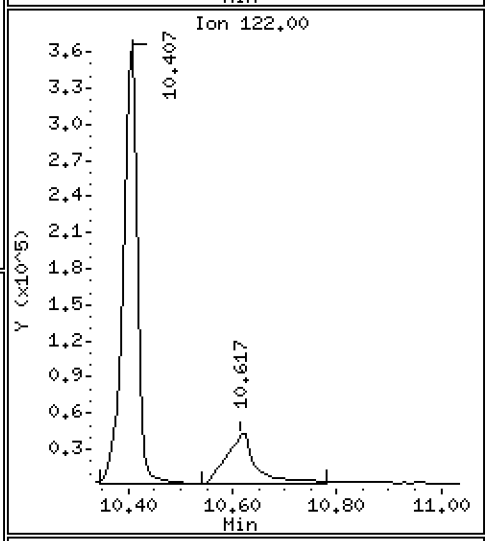


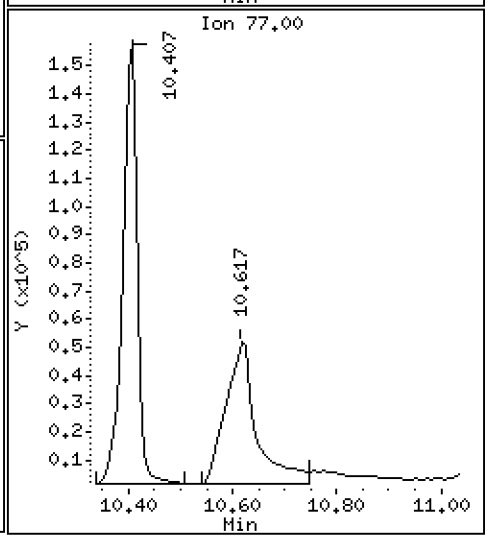












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022145.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

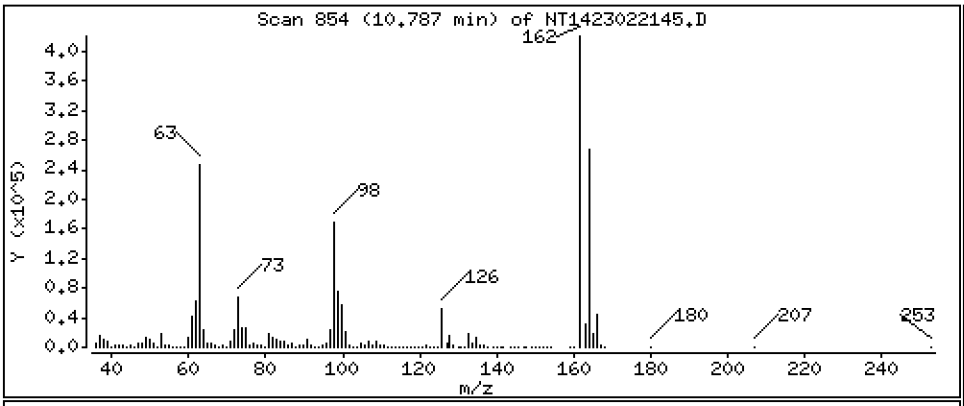
Operator: DSD

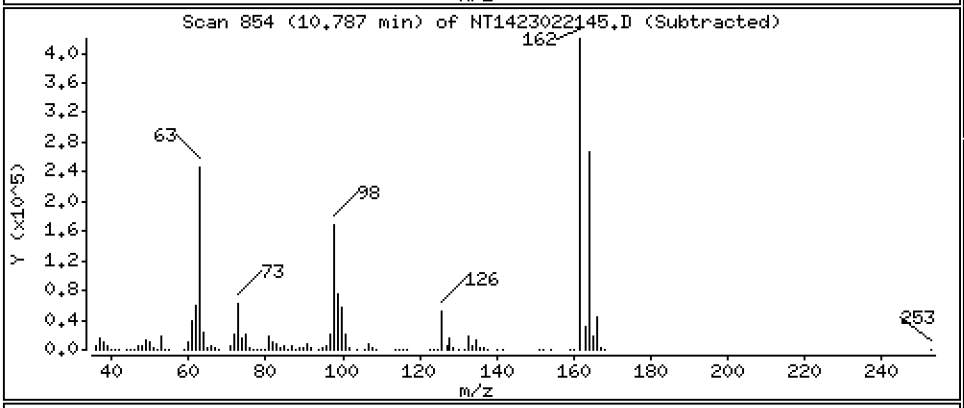
Column phase: ZB-5msi

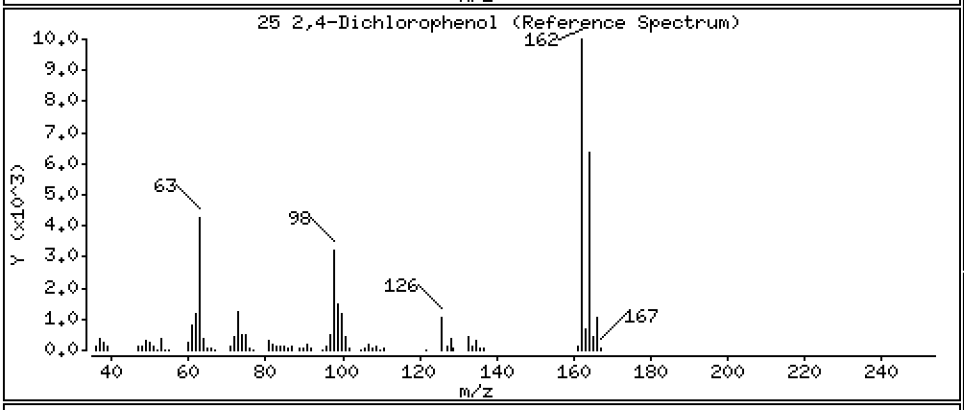
Column diameter: 0.25

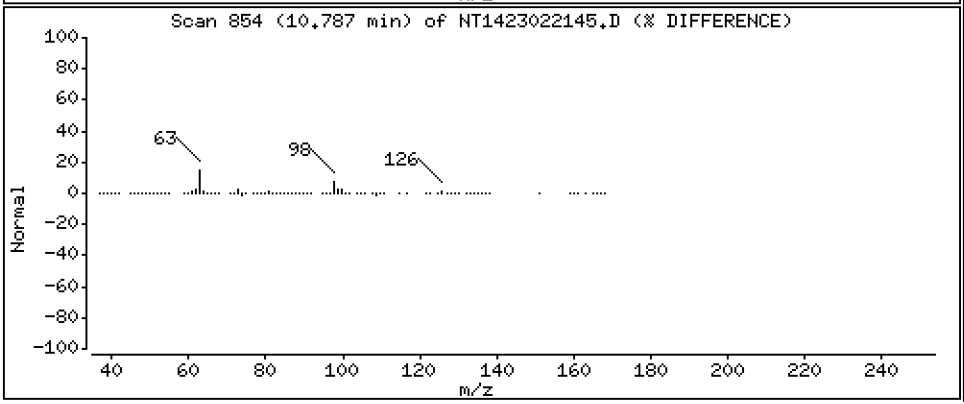
25 2,4-Dichlorophenol

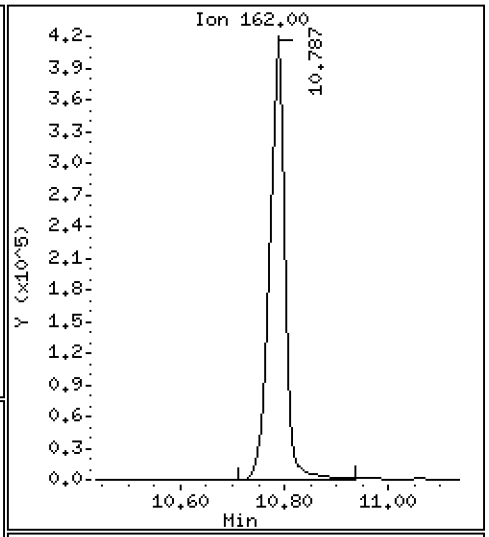
Concentration: 12.89 ug/mL

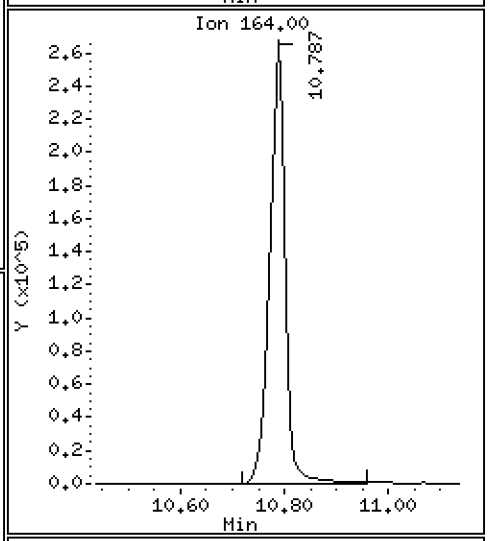


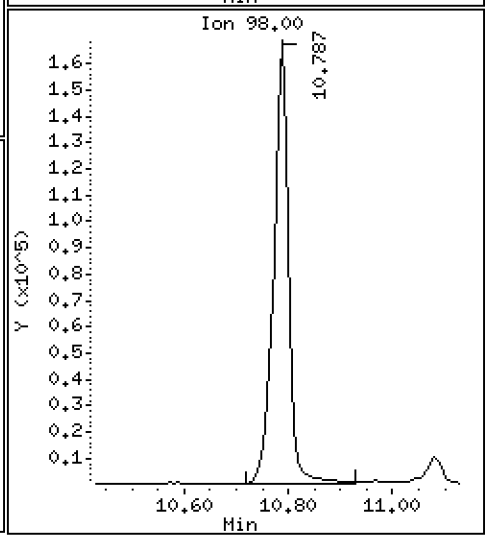












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

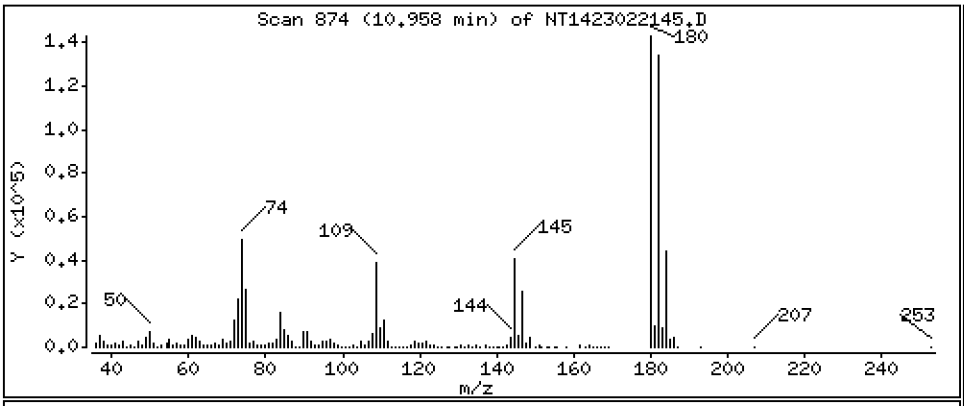
Operator: DSD

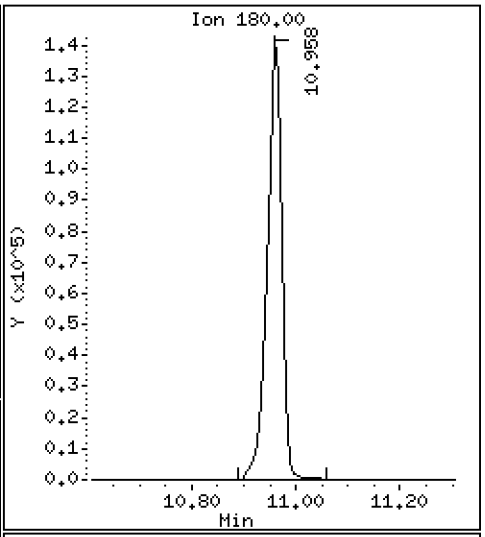
Column phase: ZB-5msi

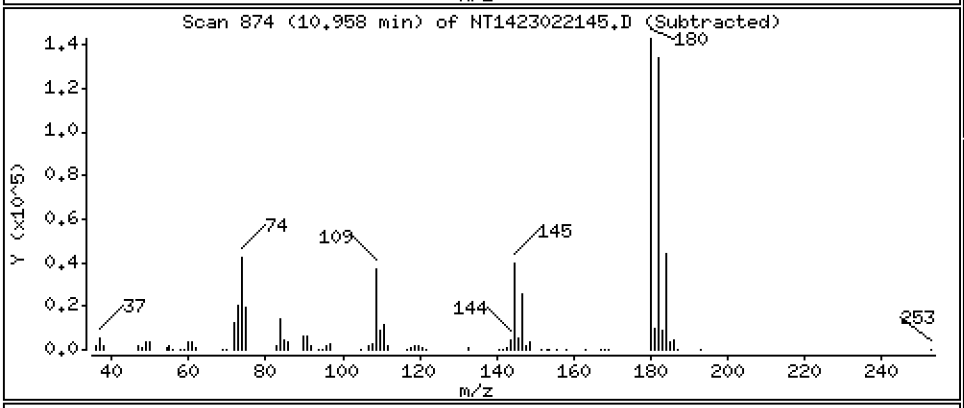
Column diameter: 0.25

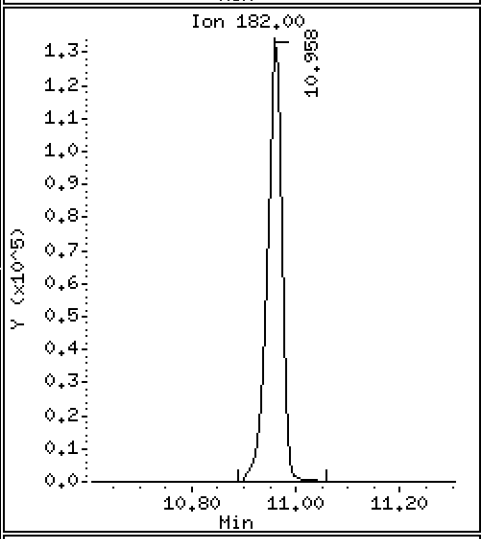
26 1,2,4-Trichlorobenzene

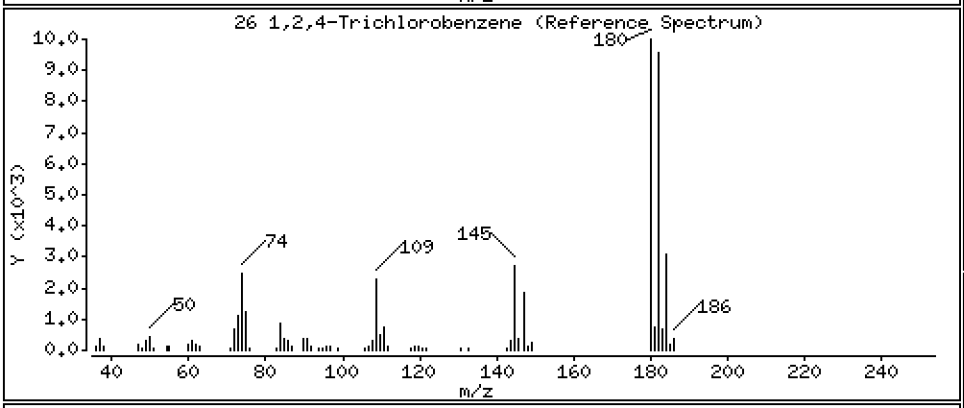
Concentration: 3.493 ug/mL

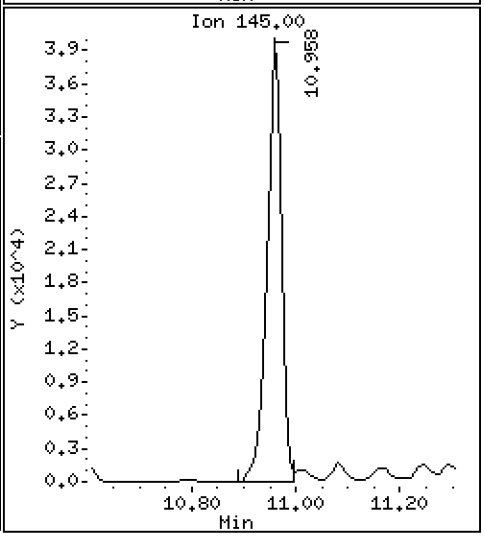


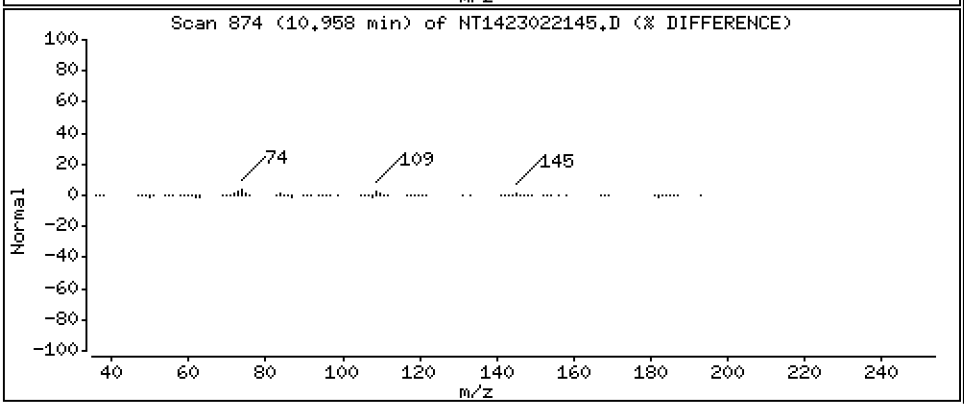












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

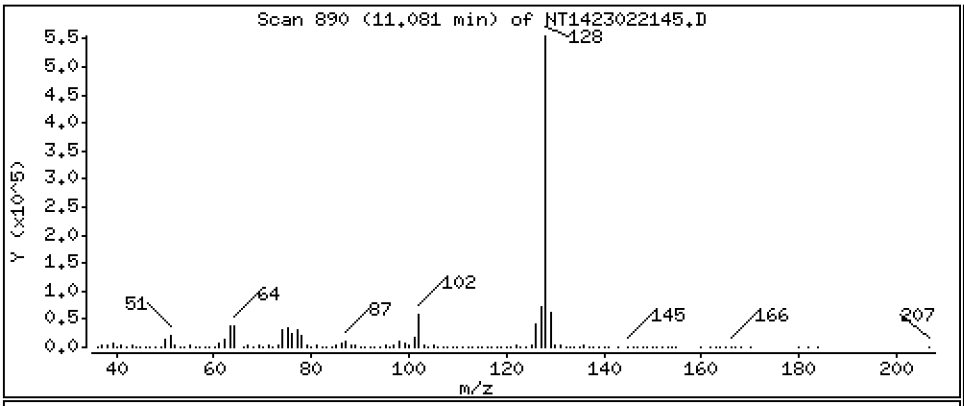
Operator: DSD

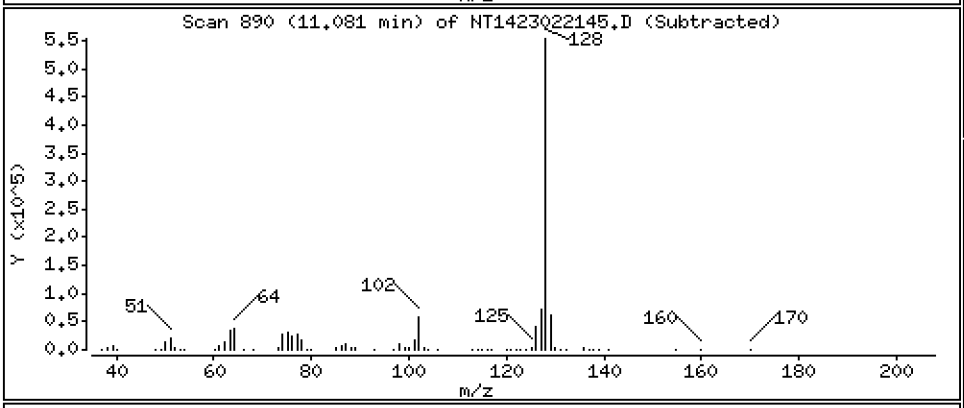
Column phase: ZB-5msi

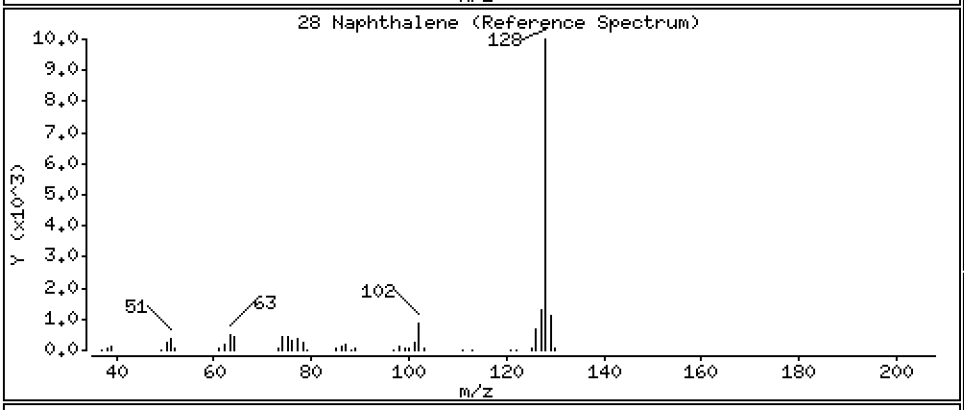
Column diameter: 0.25

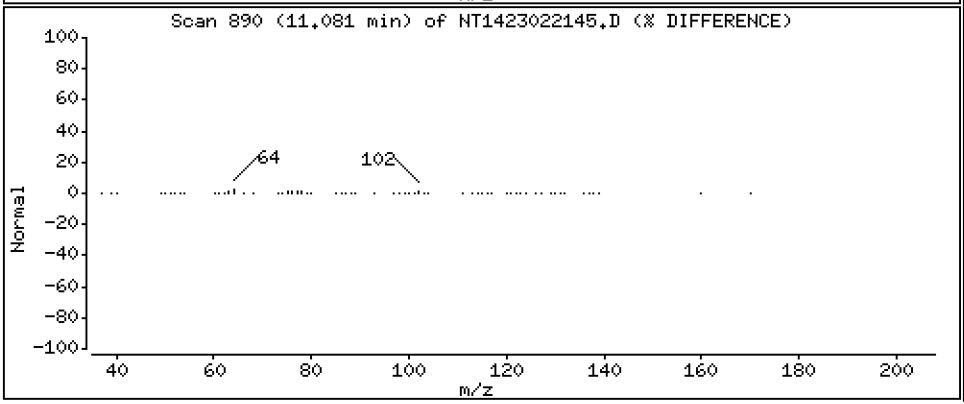
28 Naphthalene

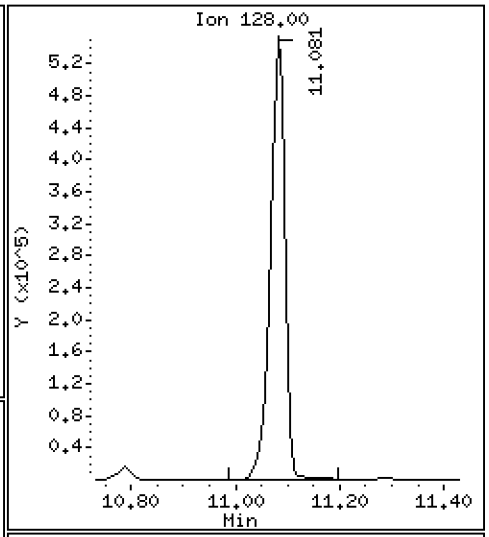
Concentration: 4.464 ug/mL

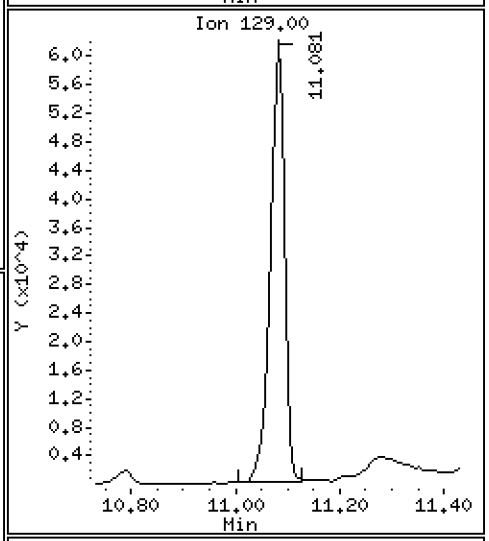


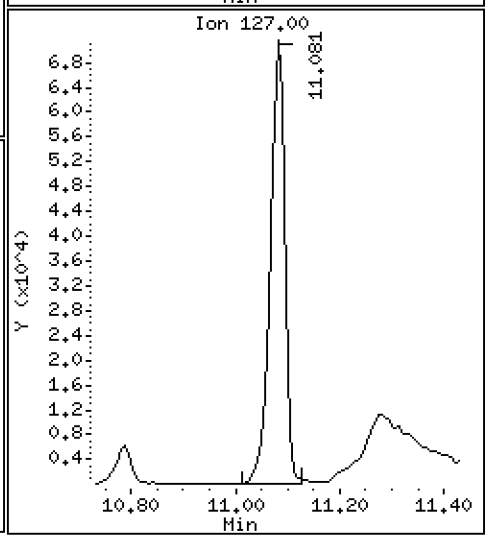












Date : 22-FEB-2023 15:58

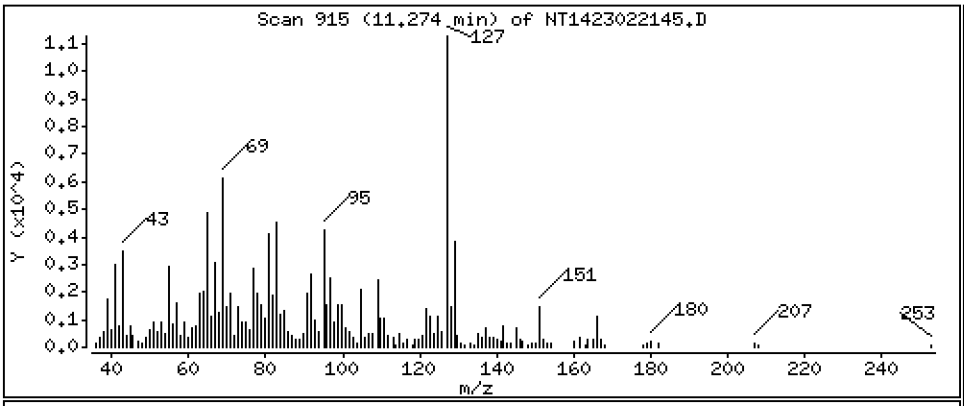
Client ID: Instrument: nt14.i

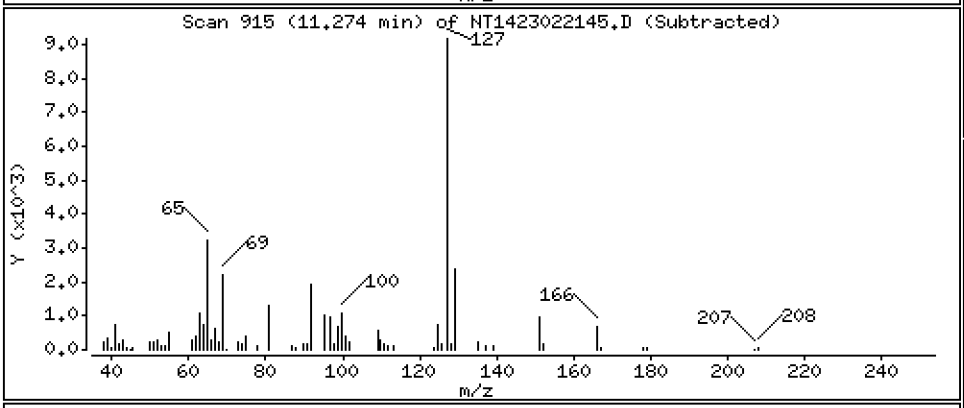
Sample Info: BLA0393-MSD1

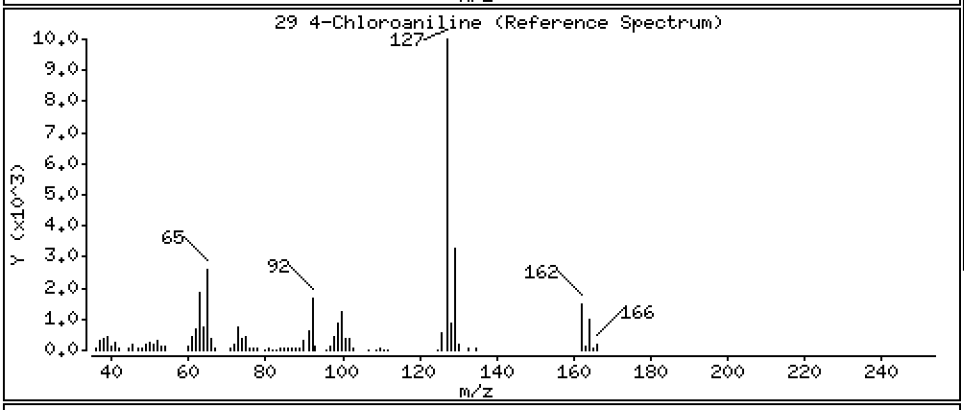
Operator: DSD

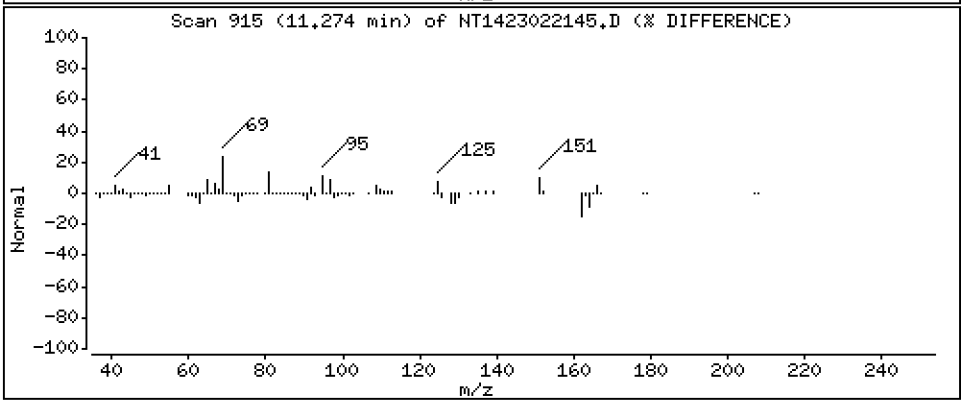
Column phase: ZB-5msi Column diameter: 0.25

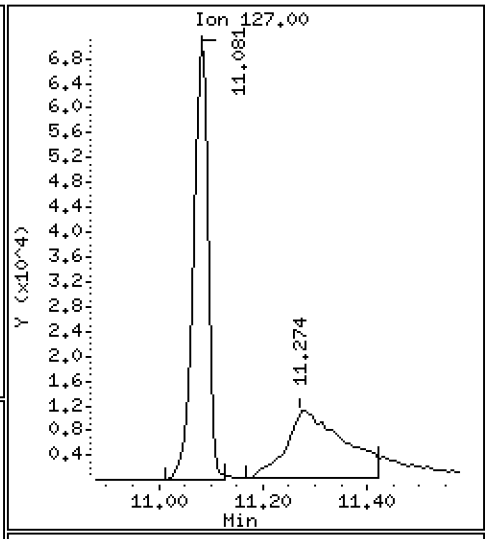
29 4-Chloroaniline Concentration: 0.8591 ug/mL

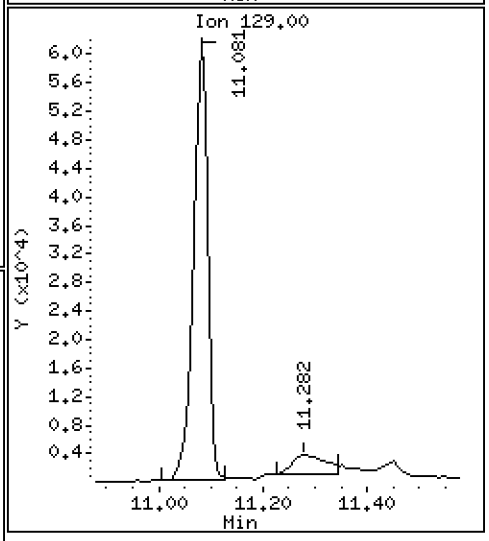












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

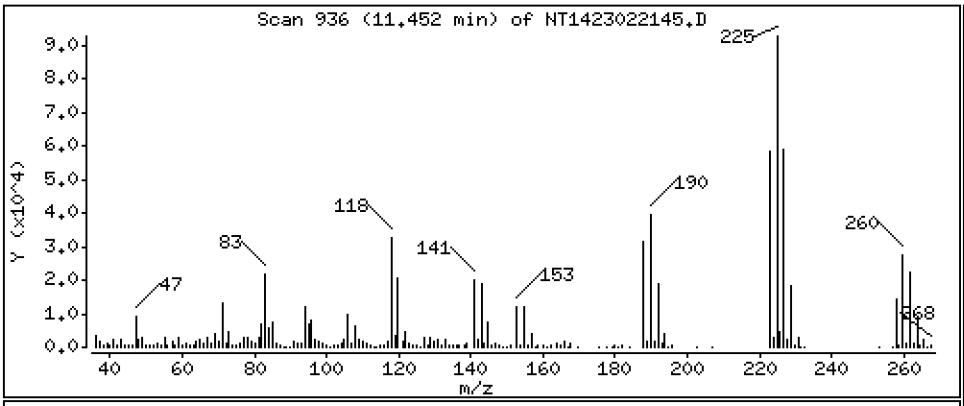
Operator: DSD

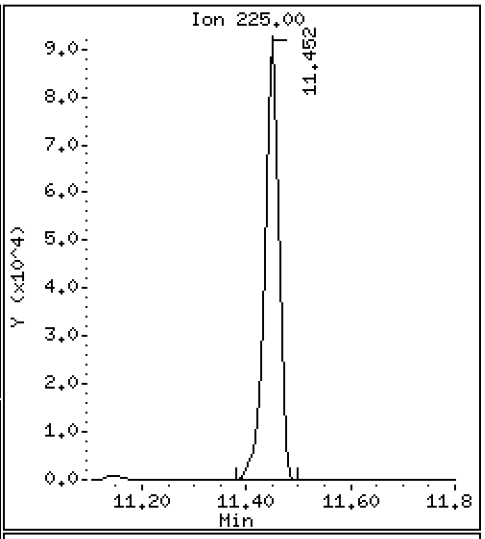
Column phase: ZB-5msi

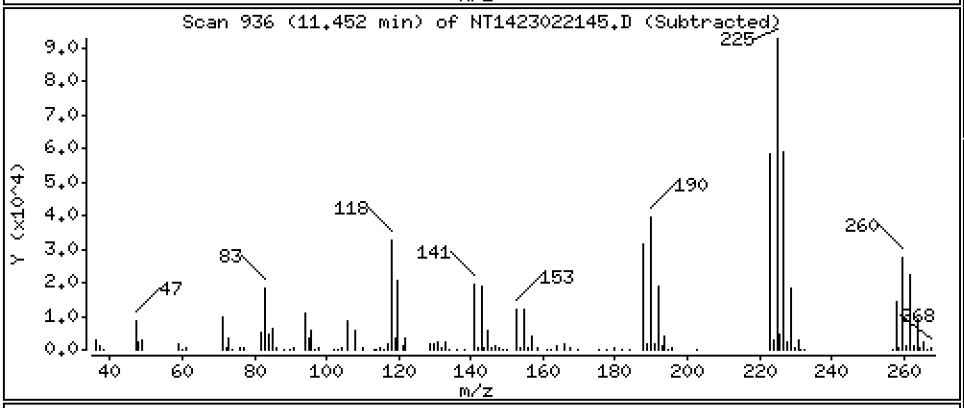
Column diameter: 0.25

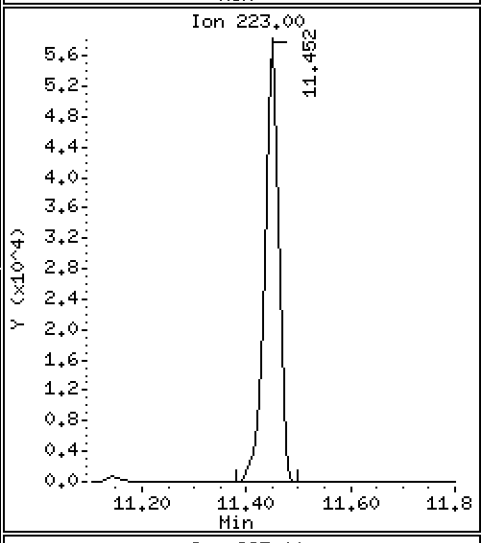
30 Hexachlorobutadiene

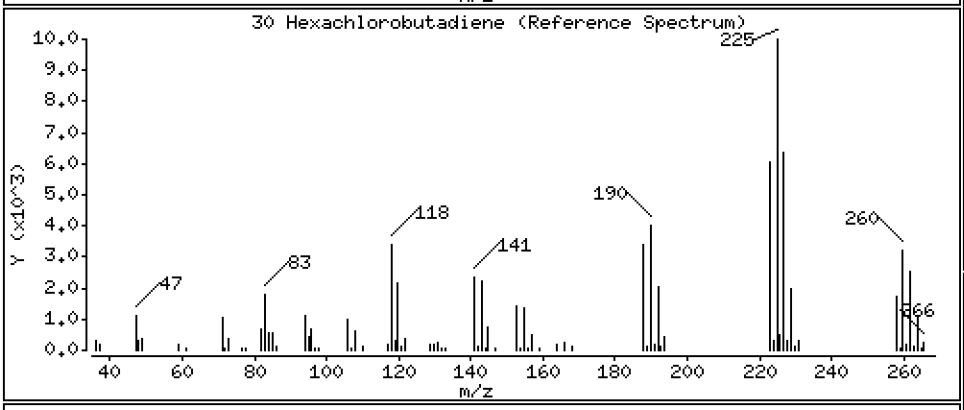
Concentration: 3.739 ug/mL

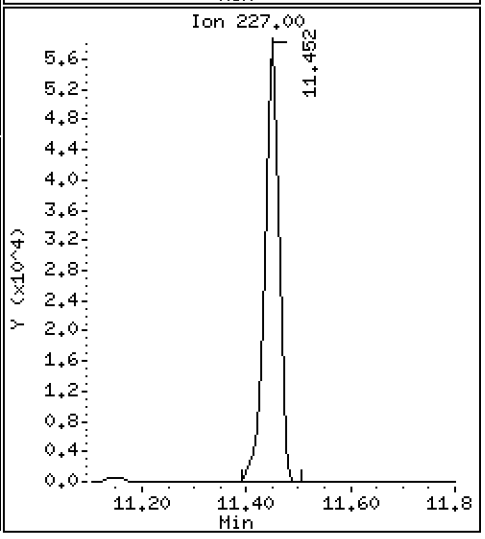


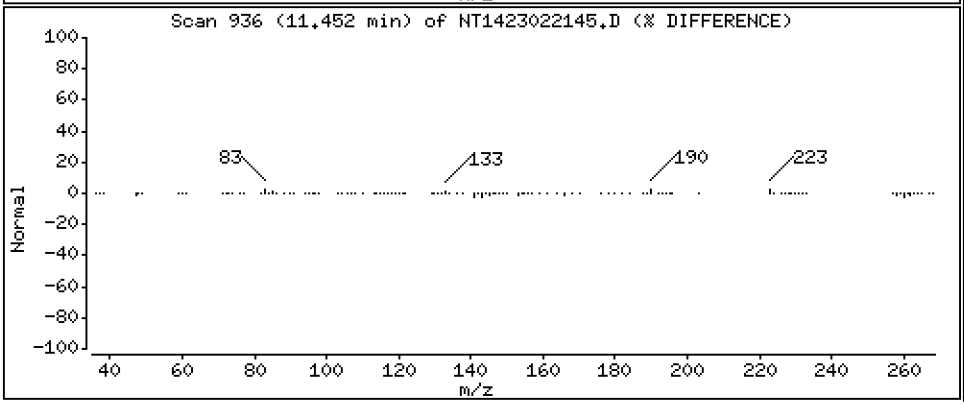












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

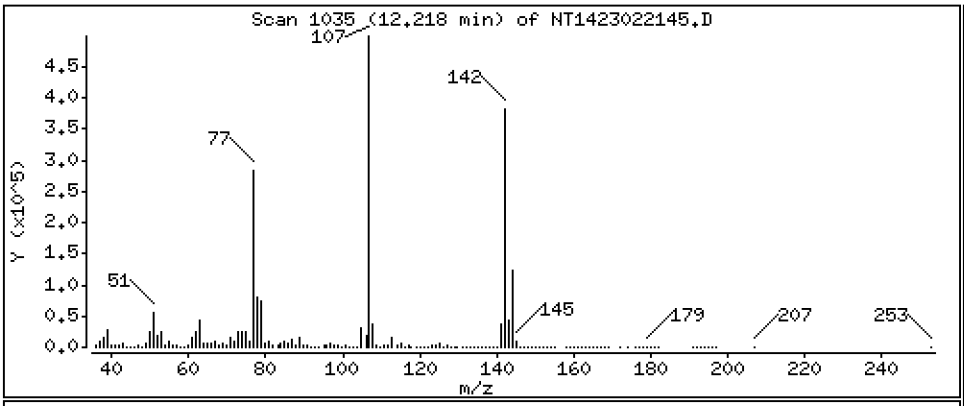
Operator: DSD

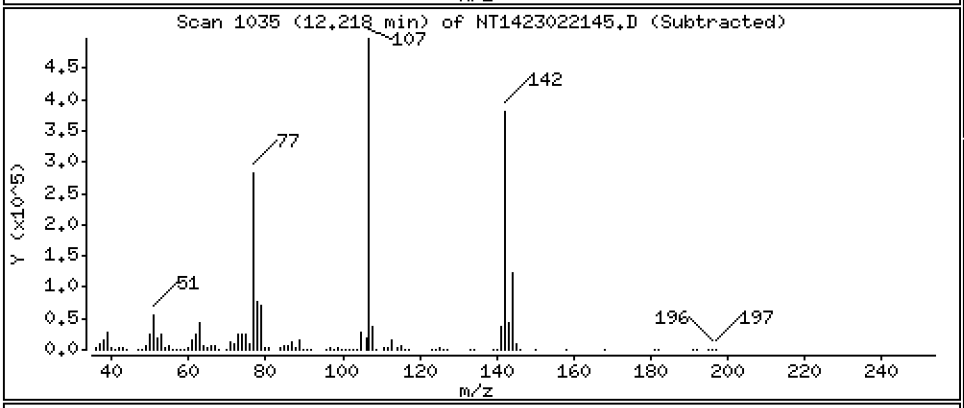
Column phase: ZB-5msi

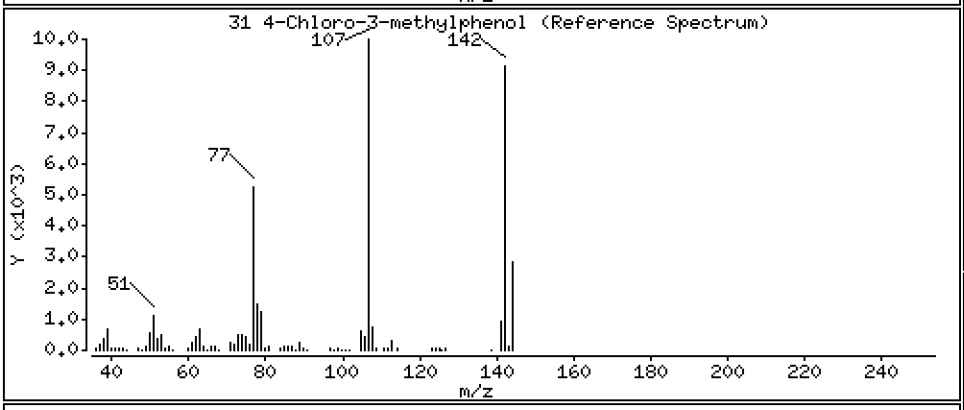
Column diameter: 0.25

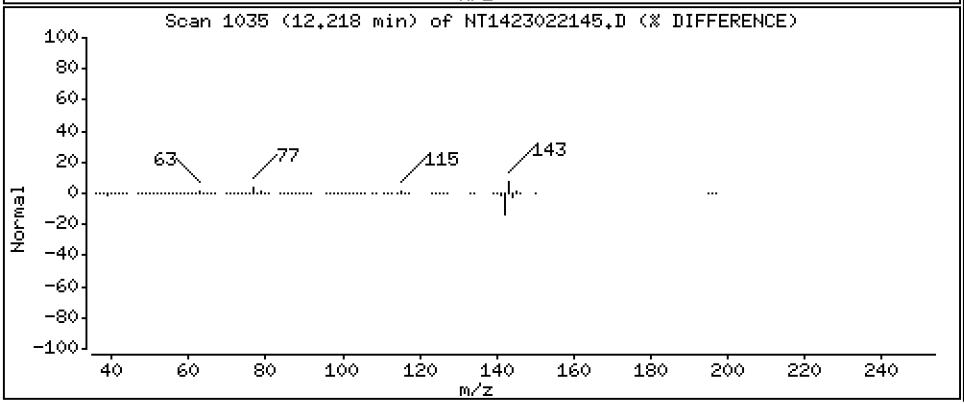
31 4-Chloro-3-methylphenol

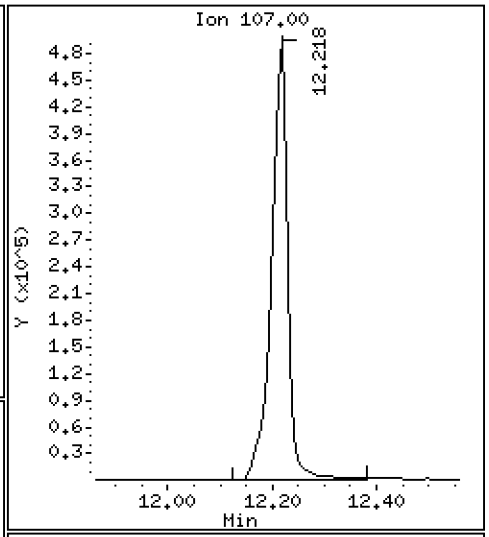
Concentration: 13.80 ug/mL

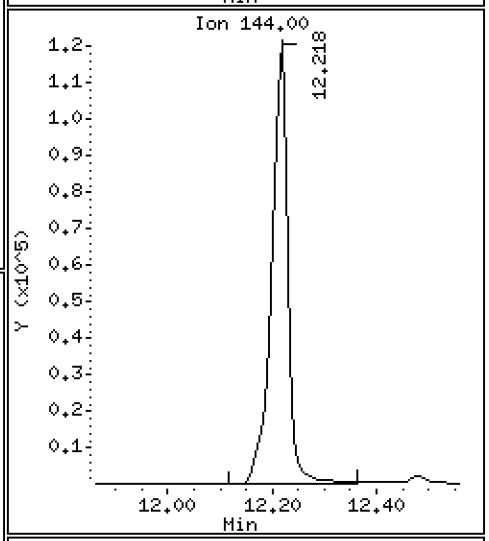


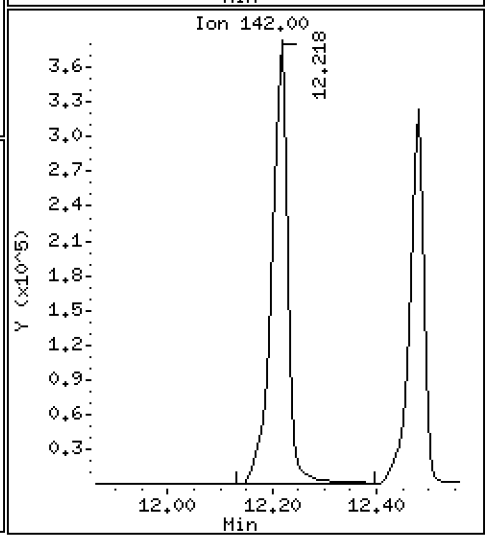












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022145.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

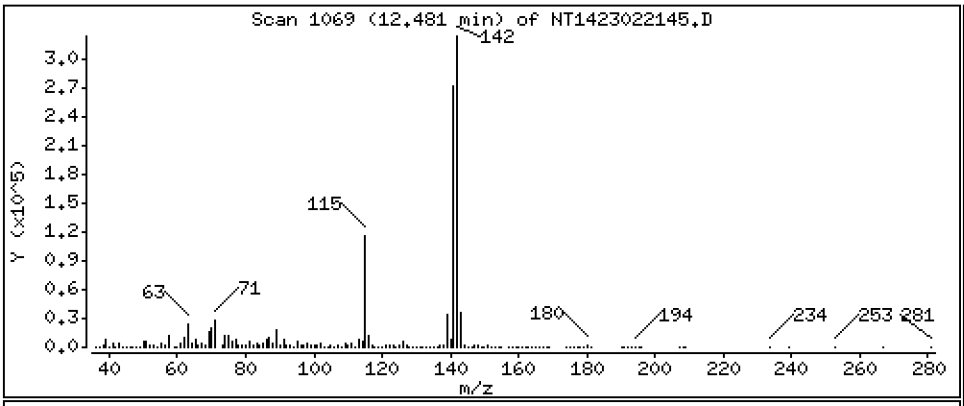
Operator: DSD

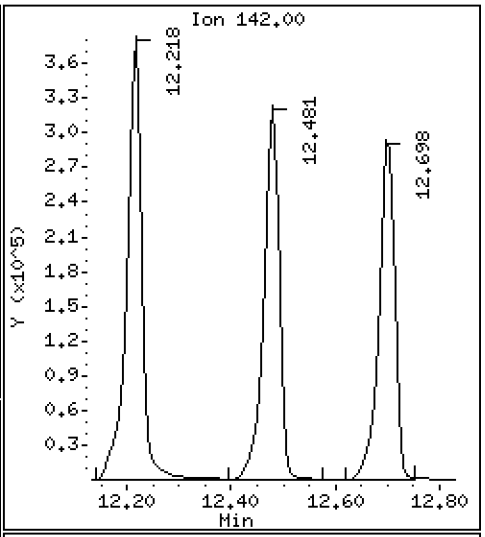
Column phase: ZB-5msi

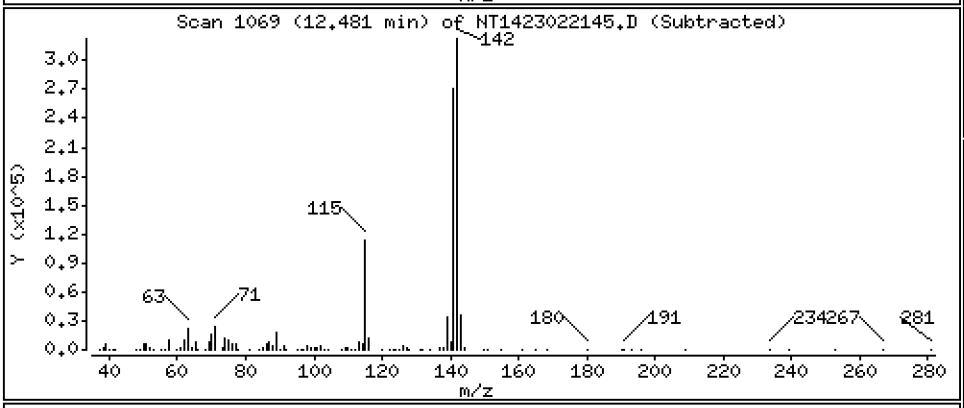
Column diameter: 0.25

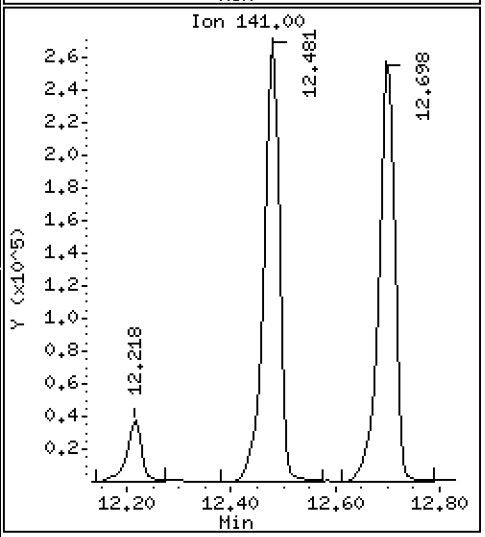
32 2-Methylnaphthalene

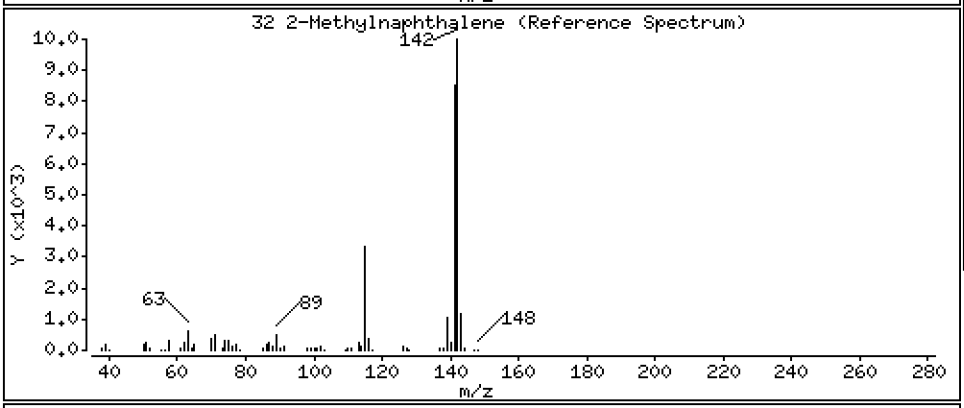
Concentration: 3.671 ug/mL

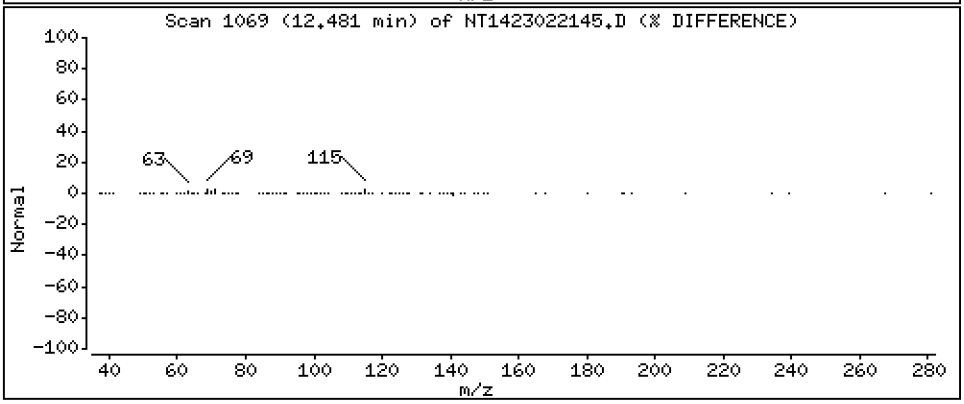












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022145.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

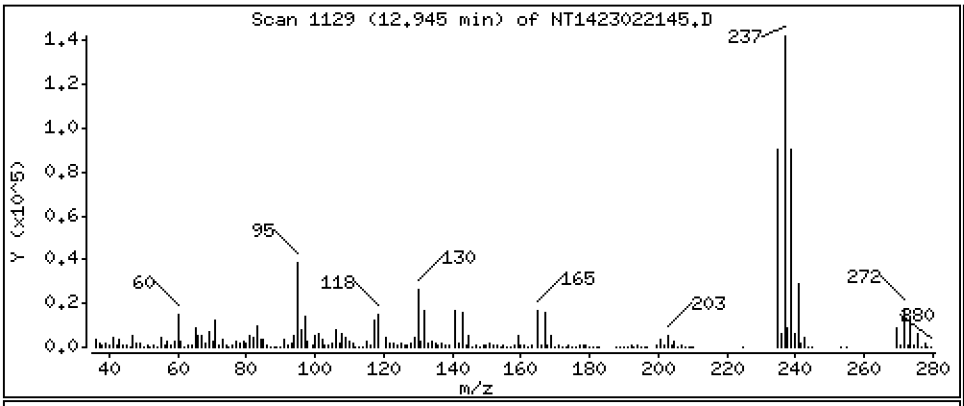
Operator: DSD

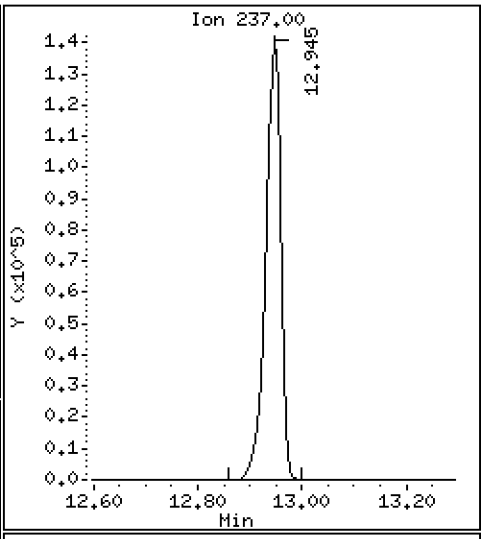
Column phase: ZB-5msi

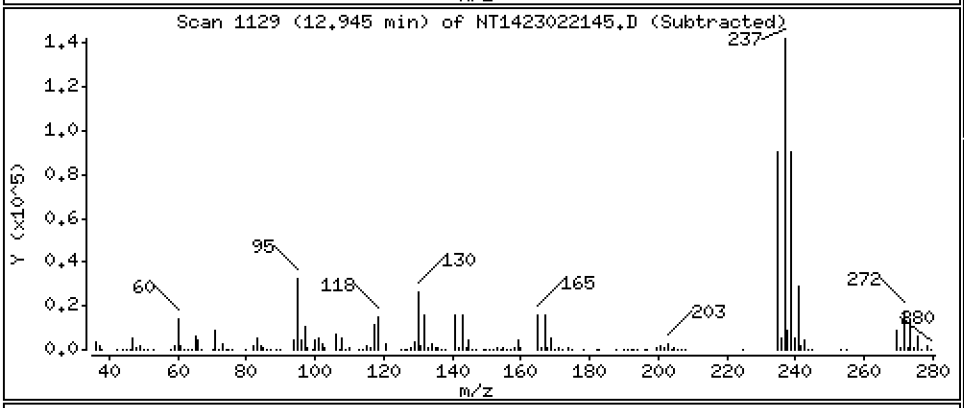
Column diameter: 0.25

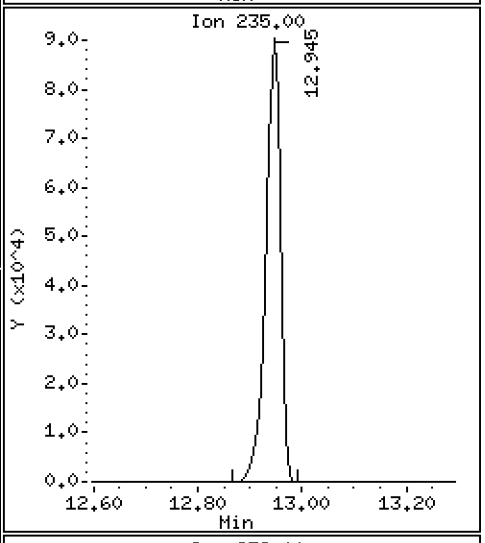
33 Hexachlorocyclopentadiene

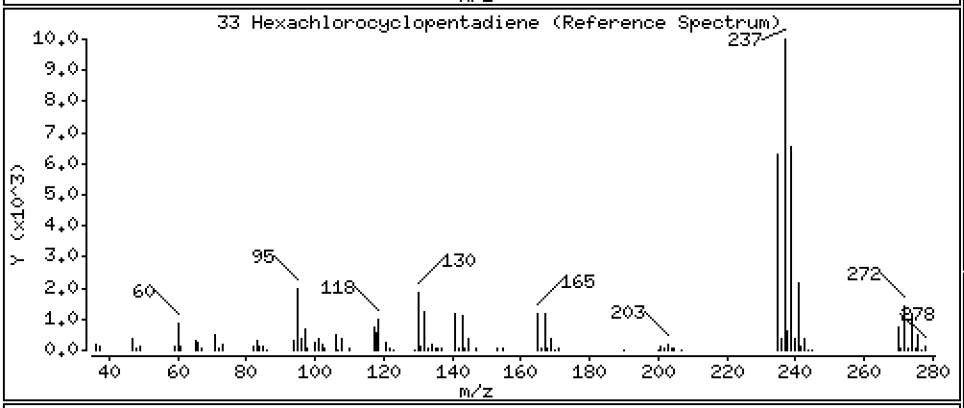
Concentration: 4.944 ug/mL

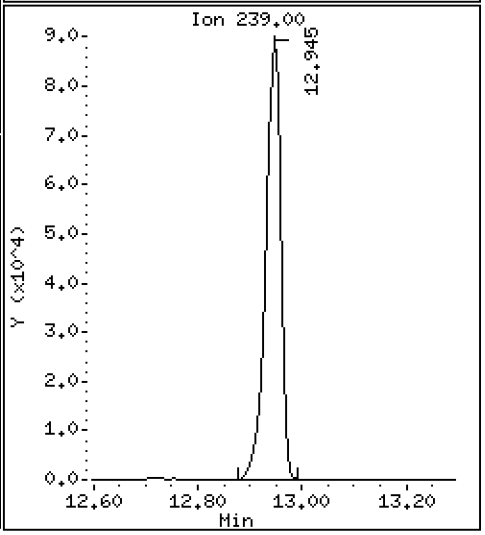


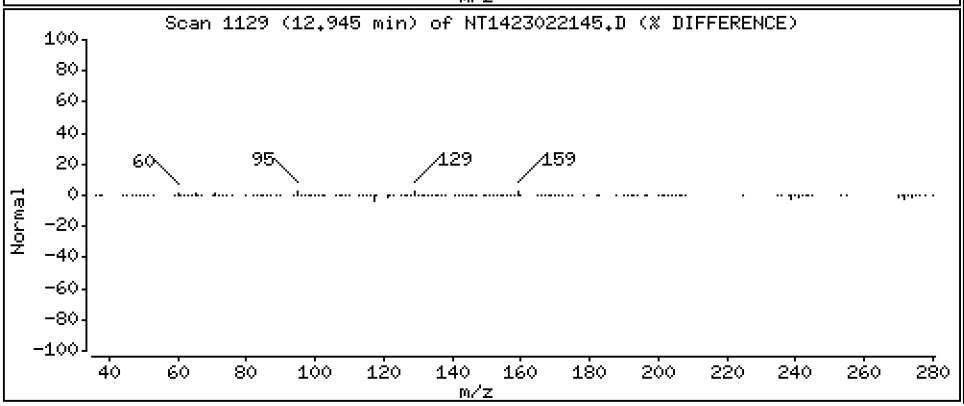












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

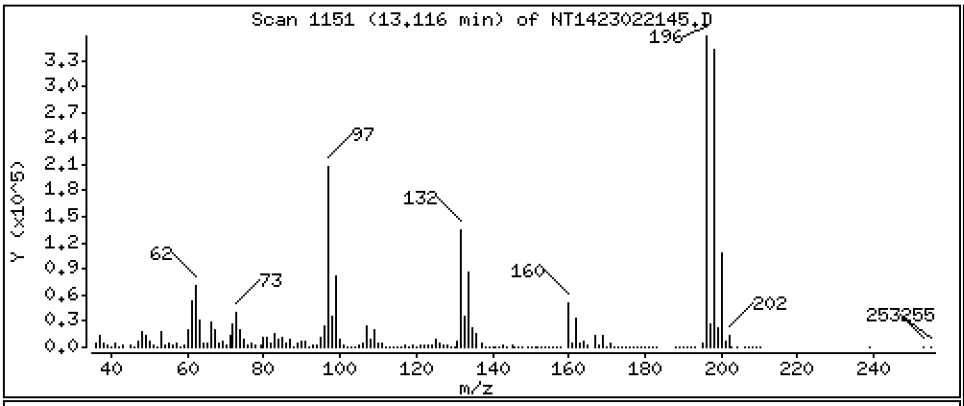
Operator: DSD

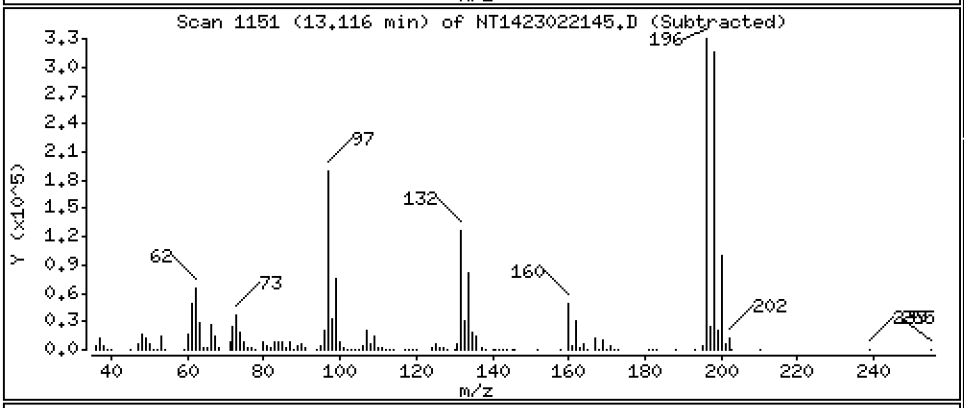
Column phase: ZB-5msi

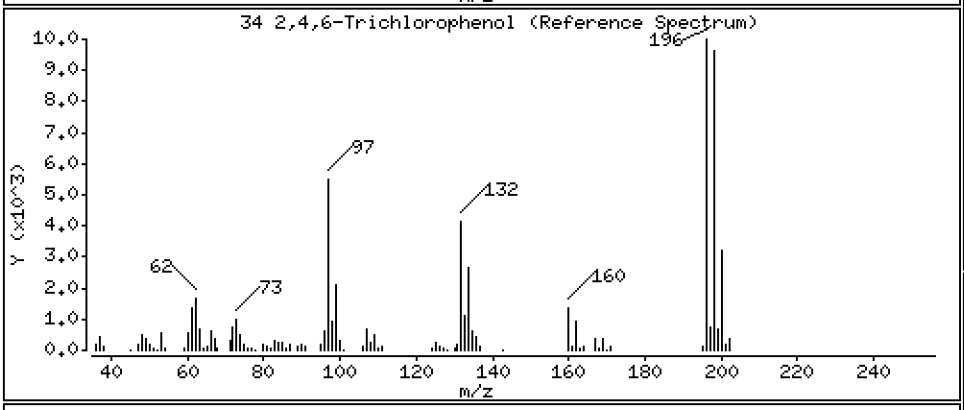
Column diameter: 0.25

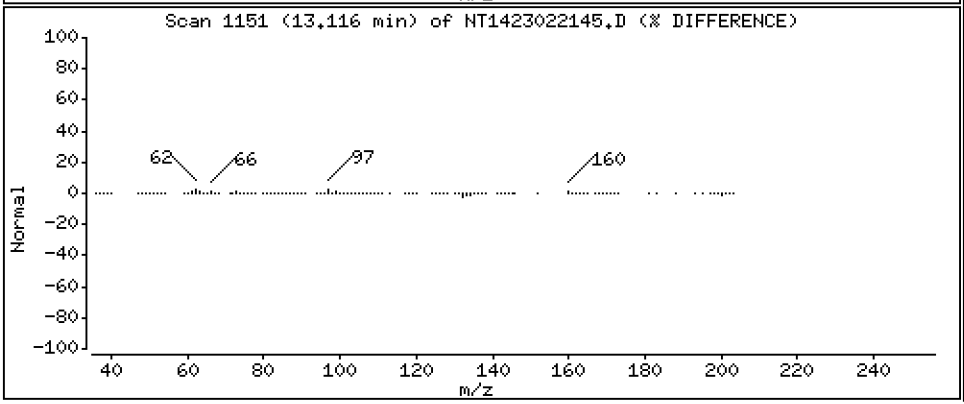
34 2,4,6-Trichlorophenol

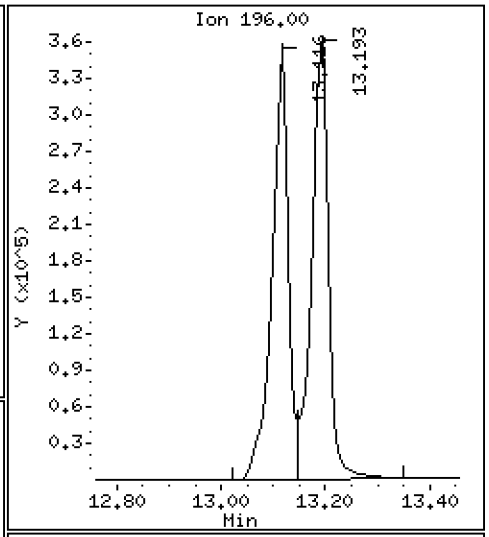
Concentration: 13.62 ug/mL

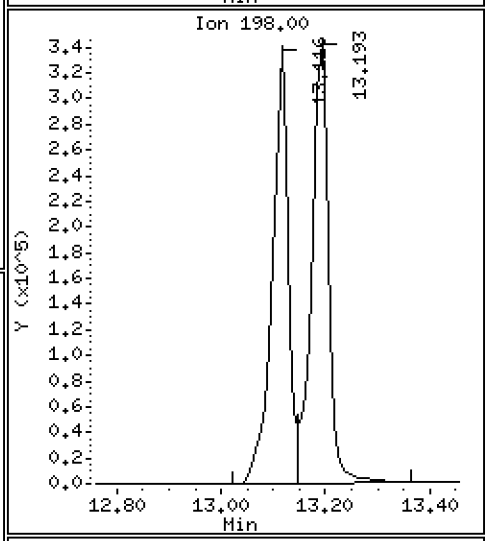


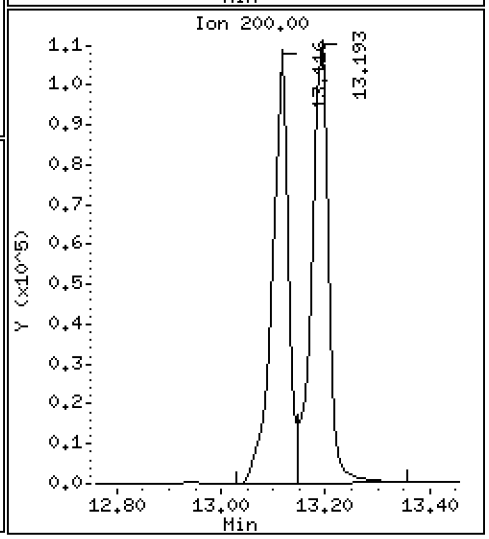












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

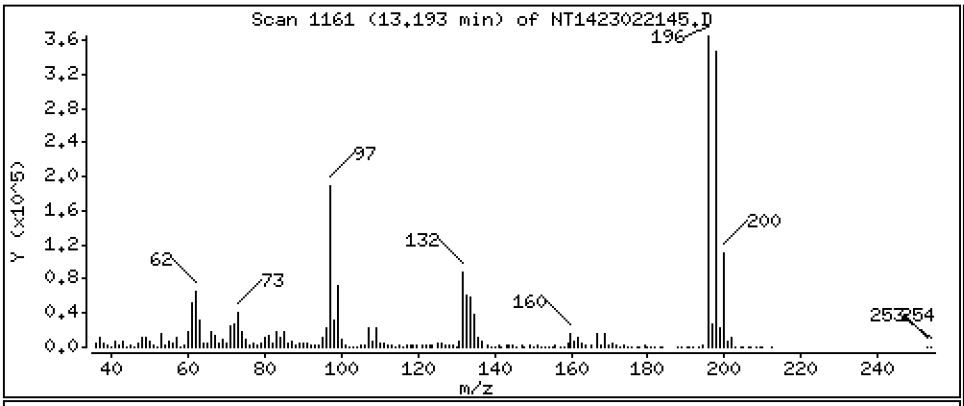
Operator: DSD

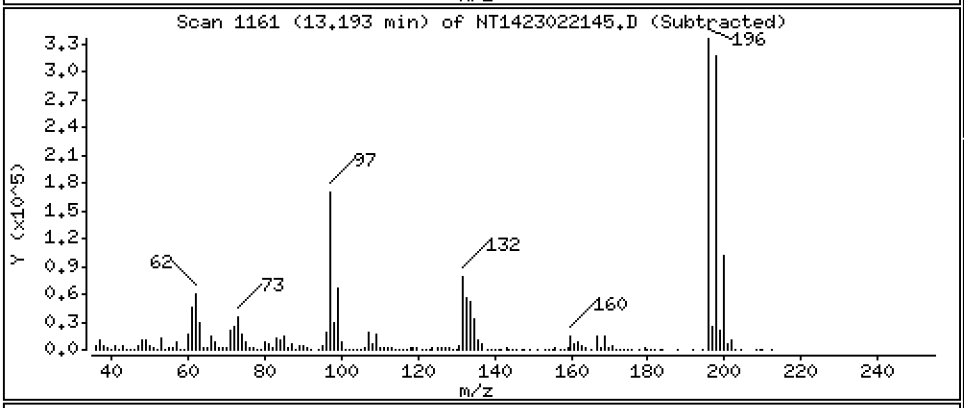
Column phase: ZB-5msi

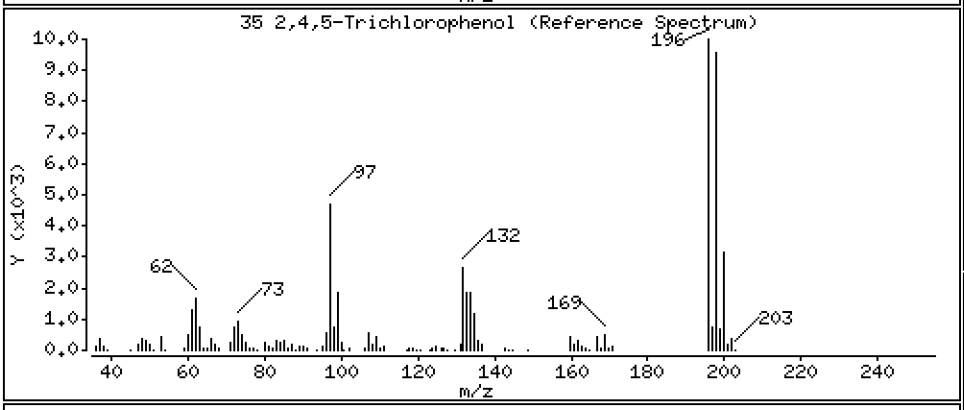
Column diameter: 0.25

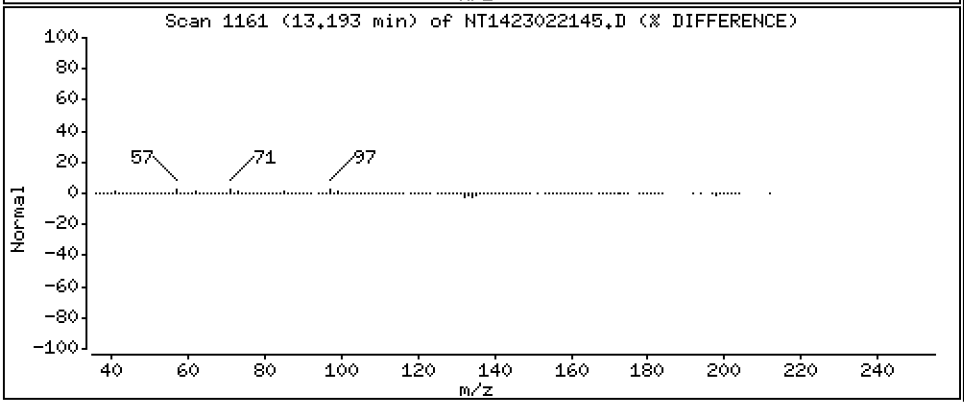
35 2,4,5-Trichlorophenol

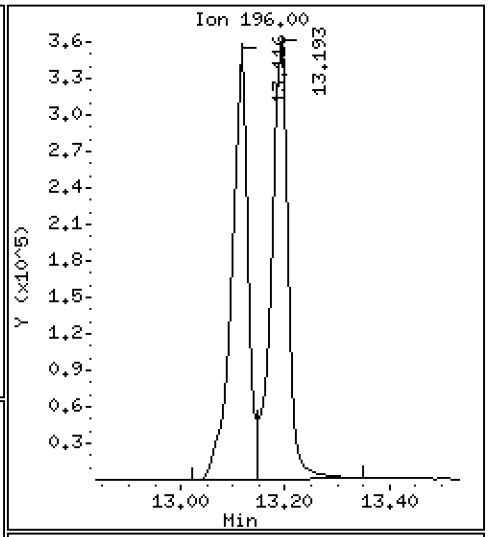
Concentration: 13.02 ug/mL

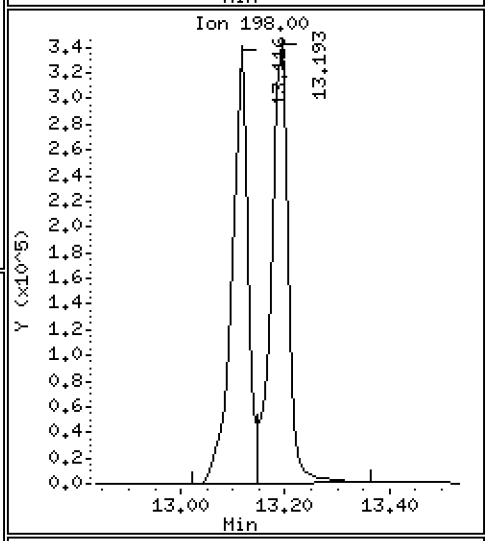


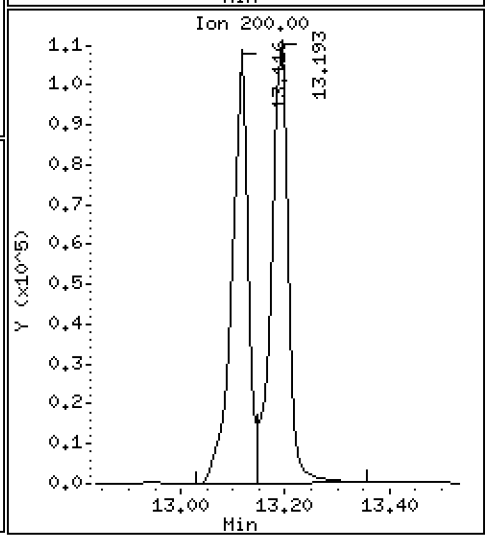












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

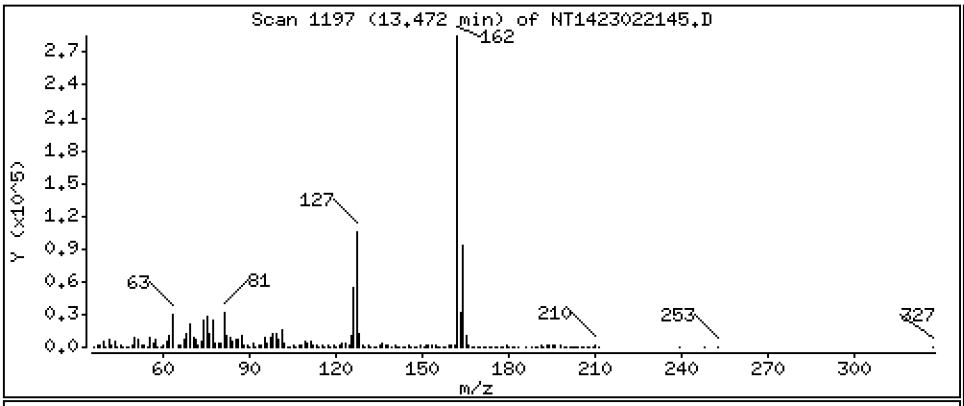
Operator: DSD

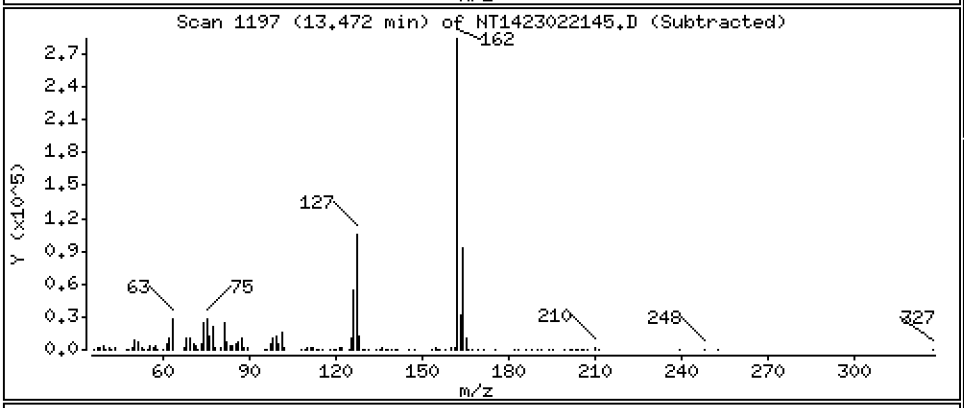
Column phase: ZB-5msi

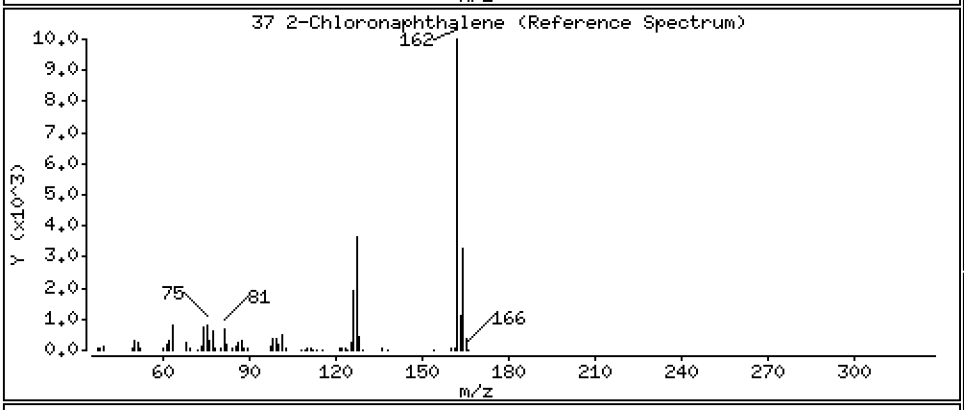
Column diameter: 0.25

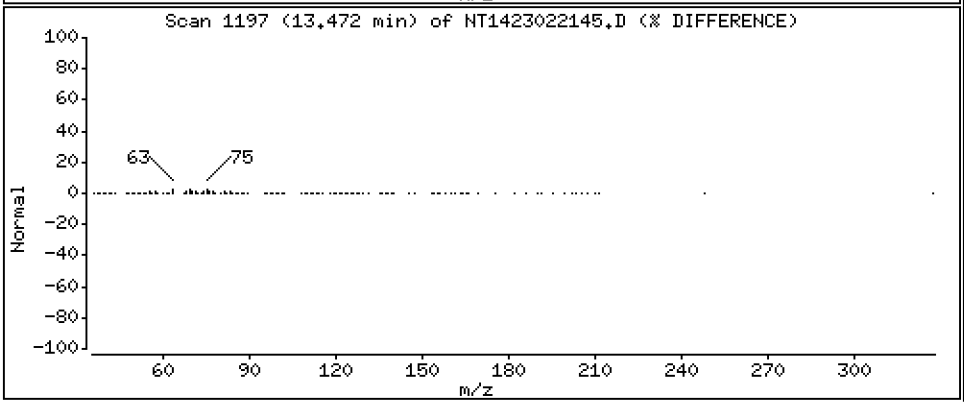
37 2-Chloronaphthalene

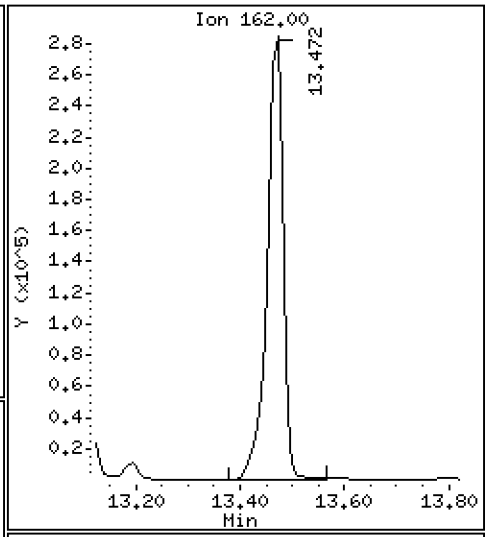
Concentration: 3.536 ug/mL

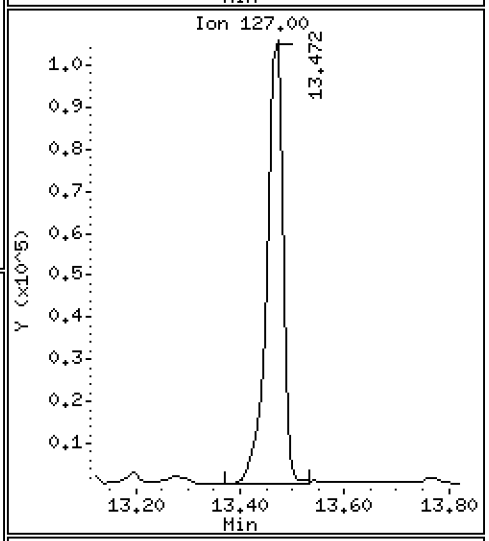


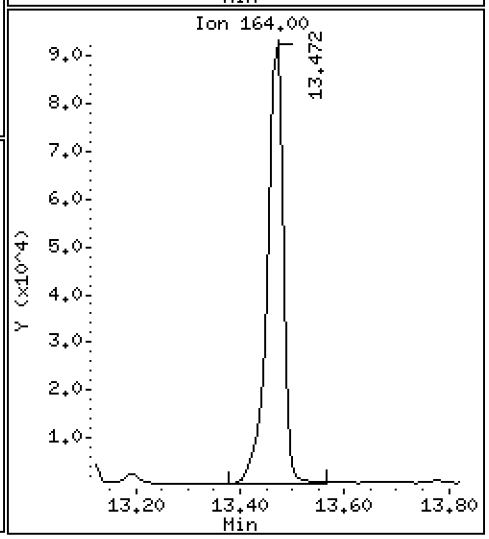












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

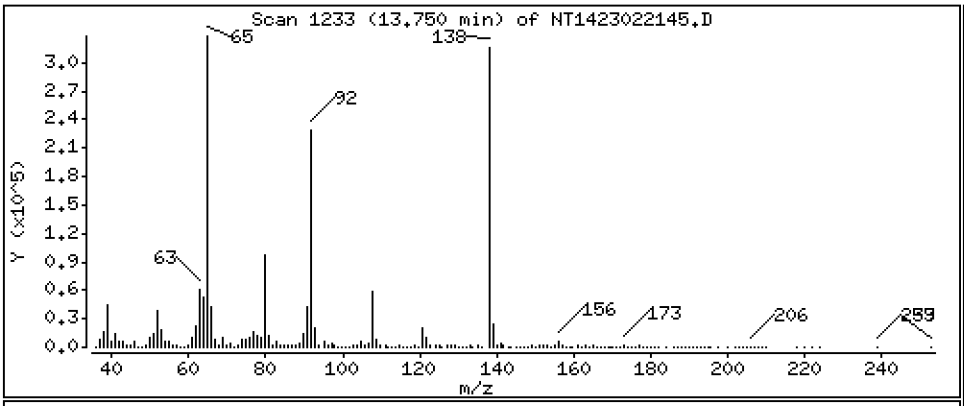
Operator: DSD

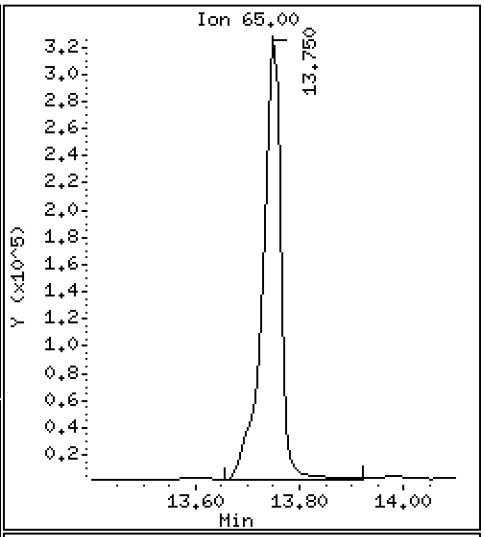
Column phase: ZB-5msi

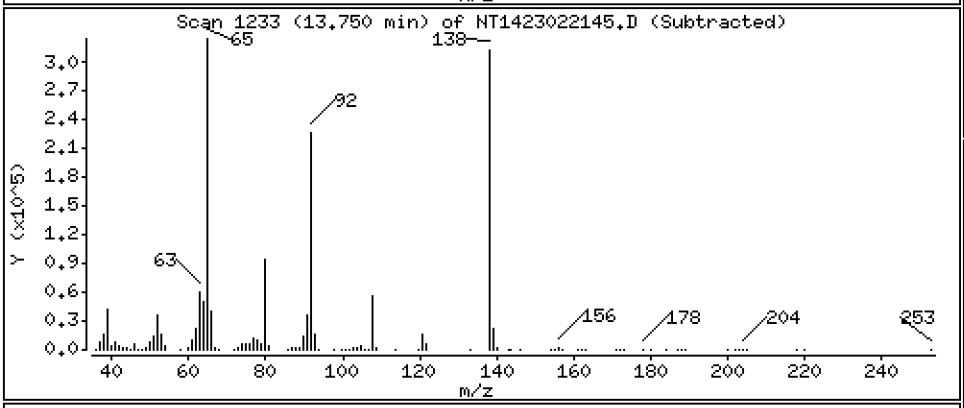
Column diameter: 0.25

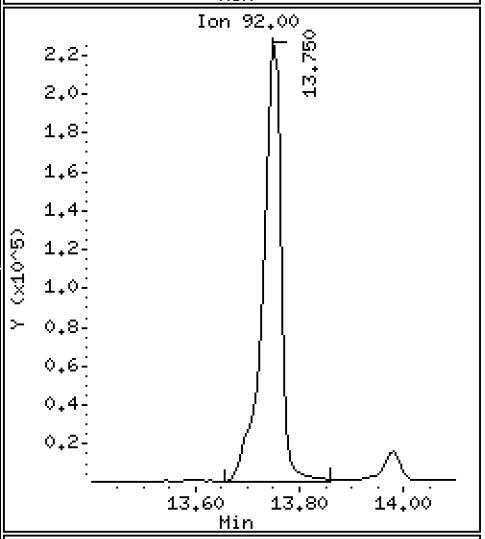
38 2-Nitroaniline

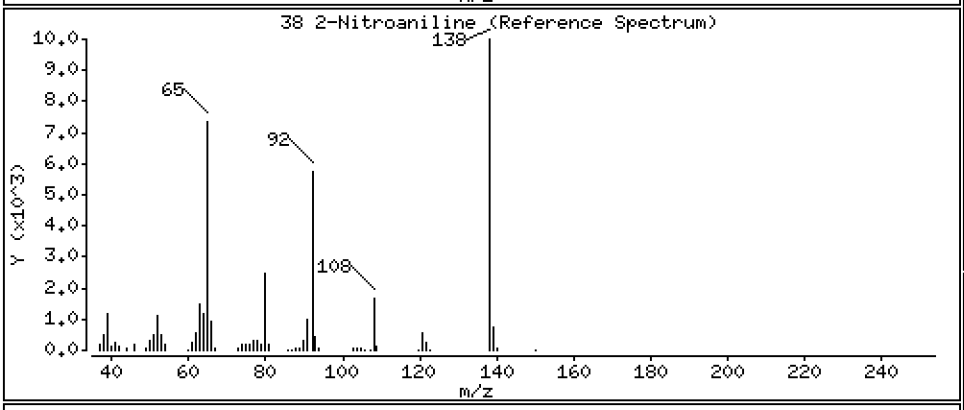
Concentration: 15.10 ug/mL

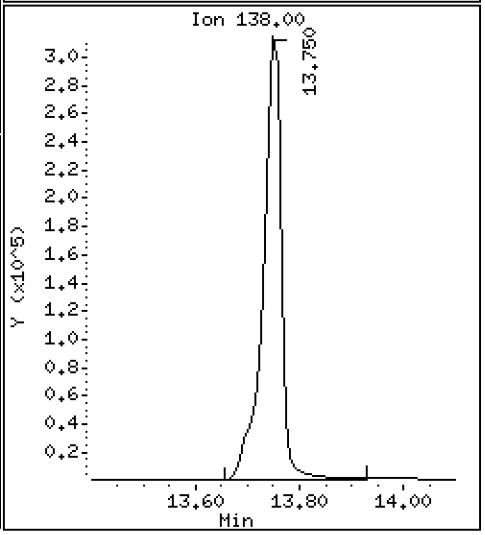


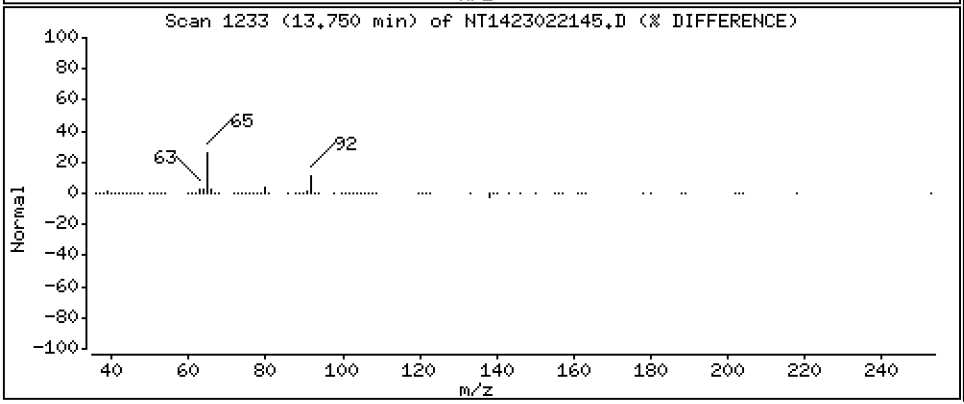












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

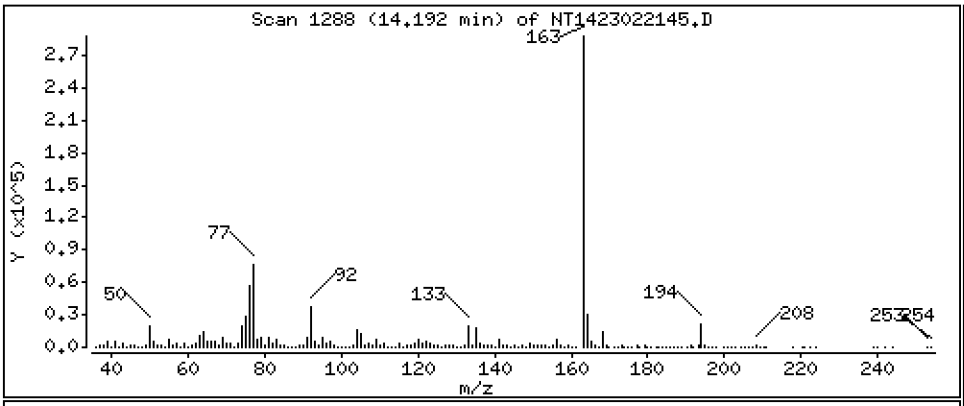
Operator: DSD

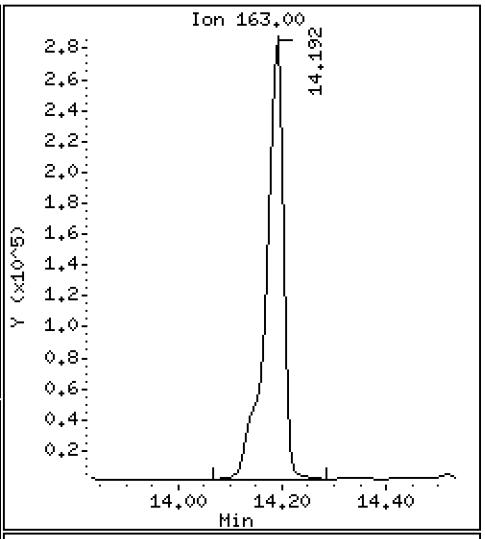
Column phase: ZB-5msi

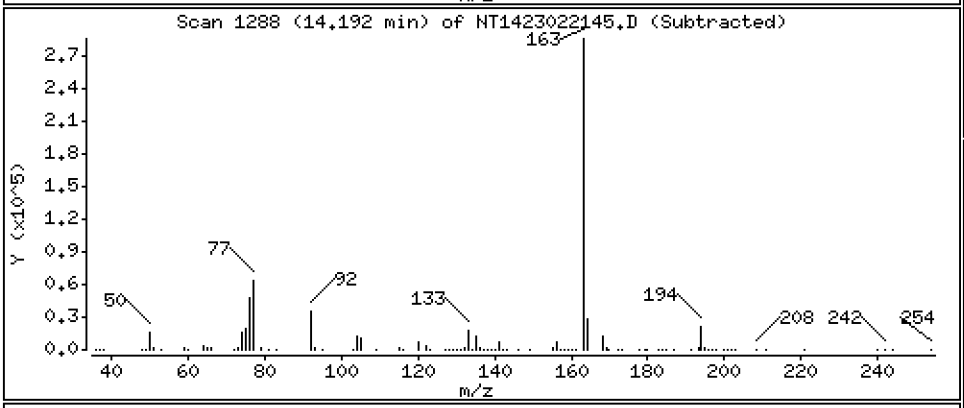
Column diameter: 0.25

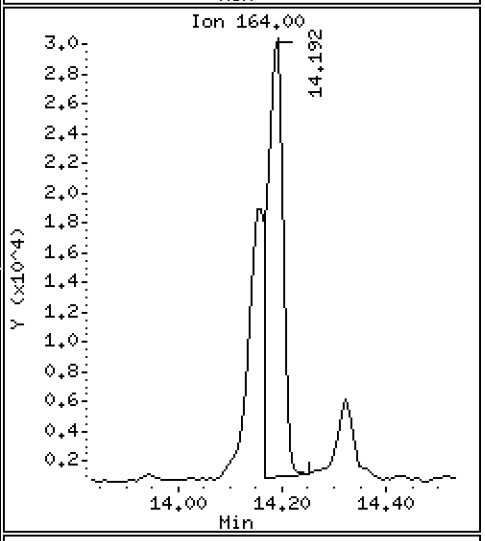
39 Dimethylphthalate

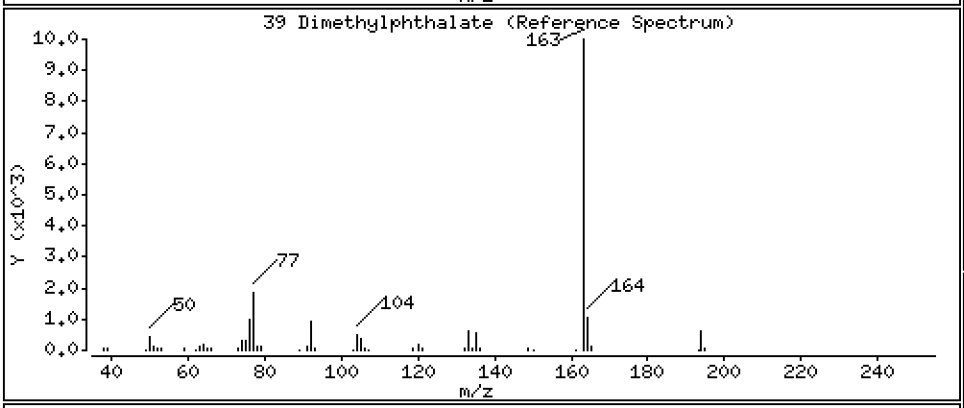
Concentration: 3.796 ug/mL

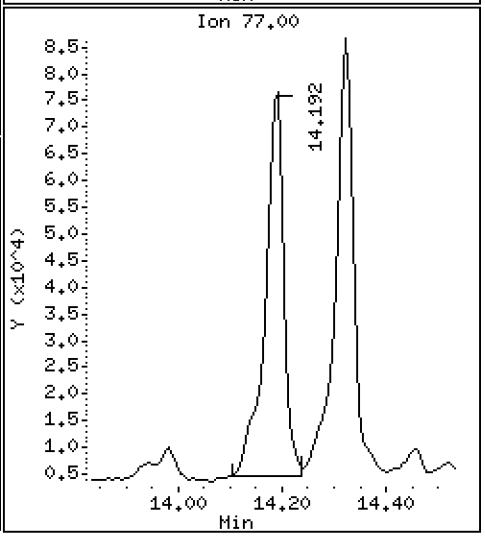


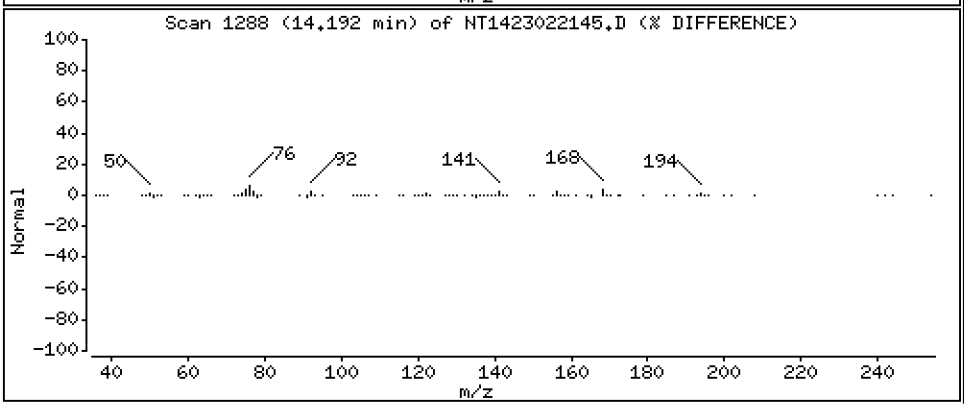












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

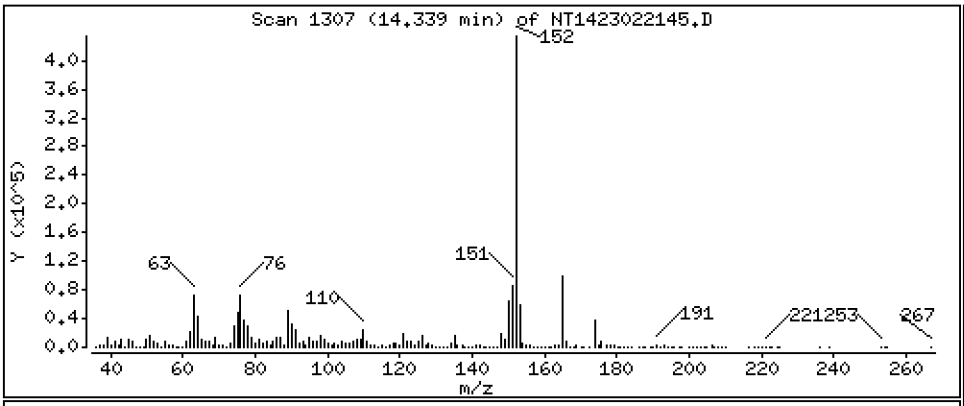
Operator: DSD

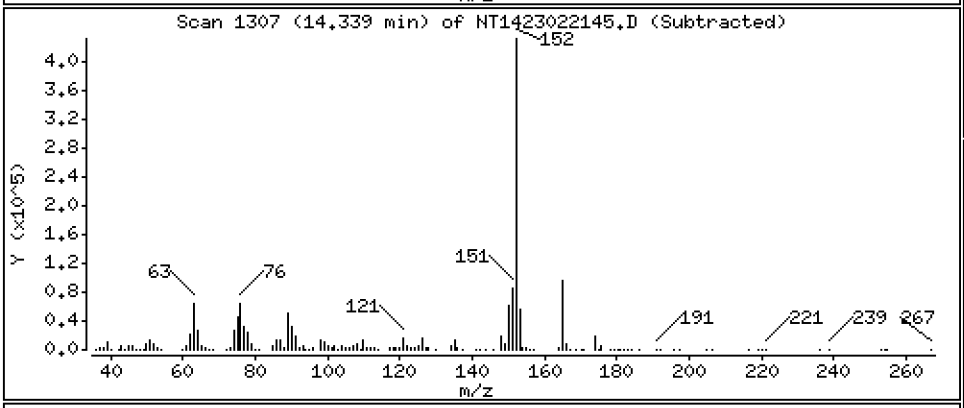
Column phase: ZB-5msi

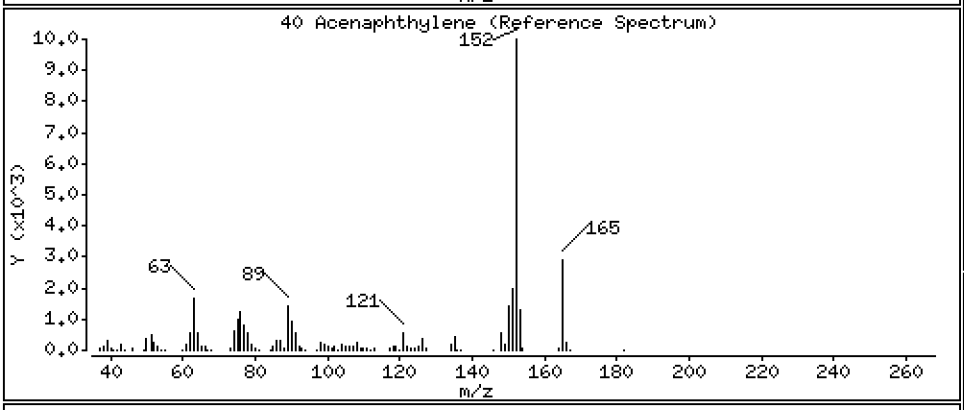
Column diameter: 0.25

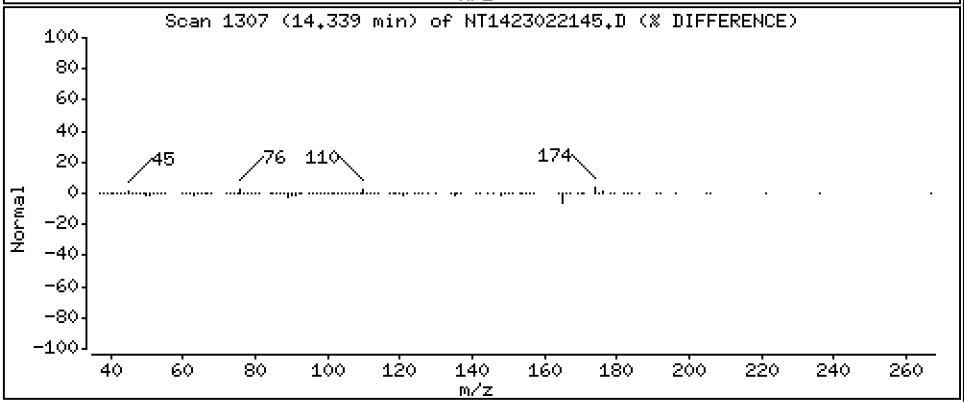
40 Acenaphthylene

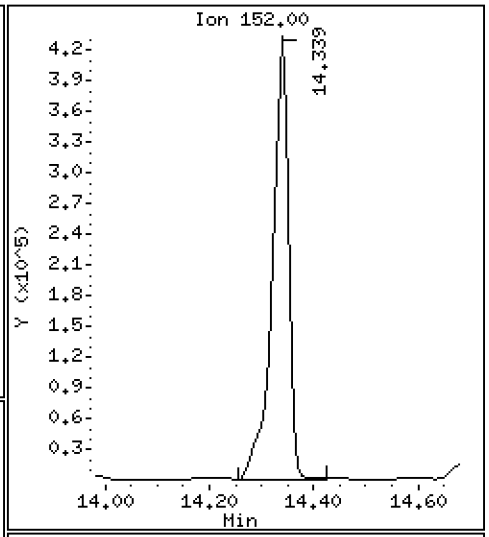
Concentration: 3.655 ug/mL

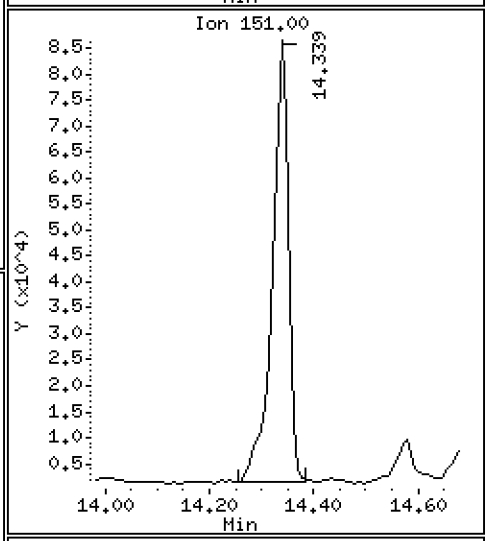


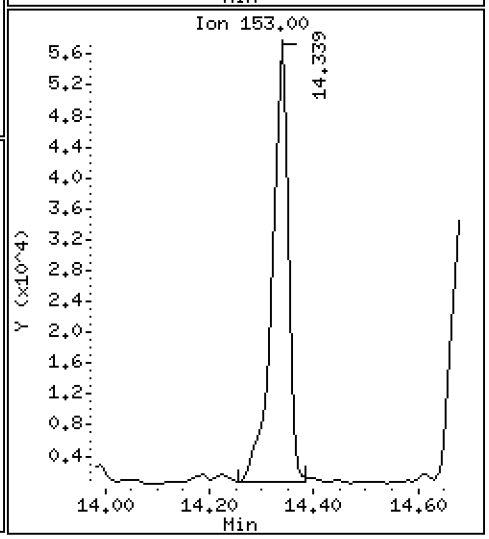












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

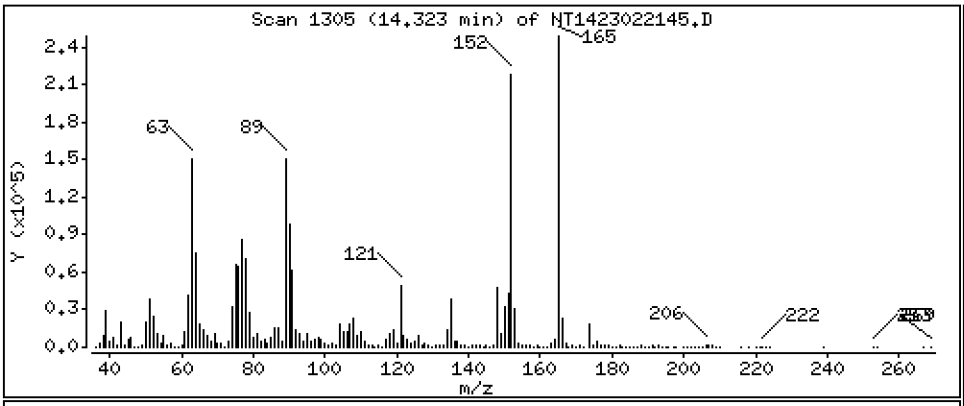
Operator: DSD

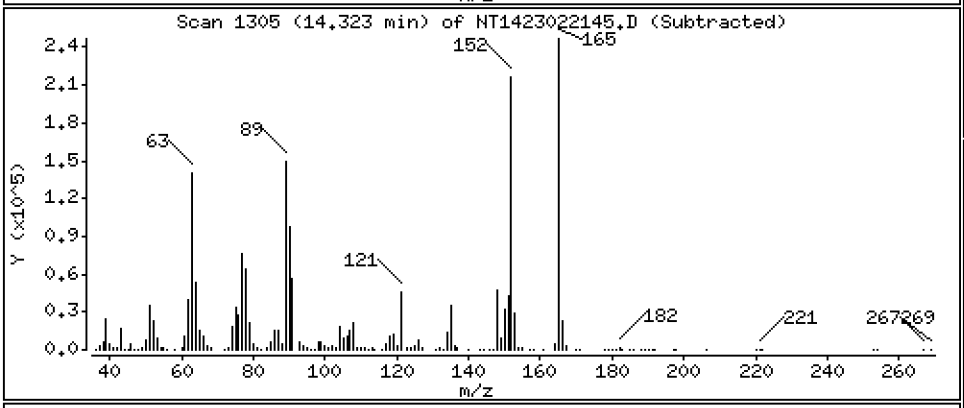
Column phase: ZB-5msi

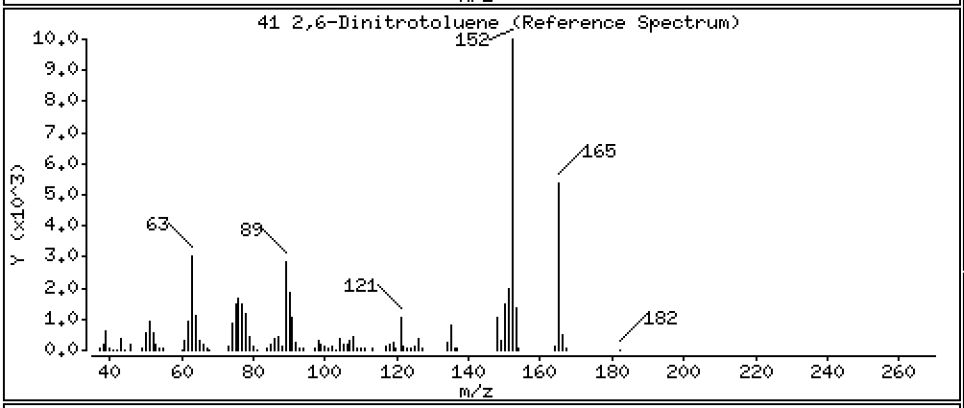
Column diameter: 0.25

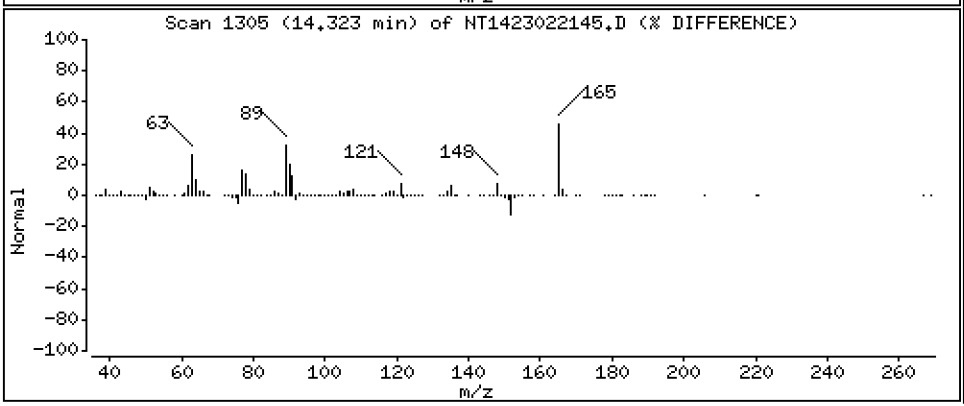
41 2,6-Dinitrotoluene

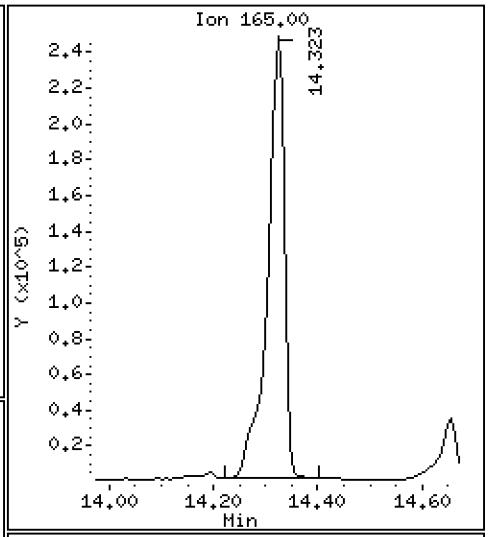
Concentration: 13.34 ug/mL

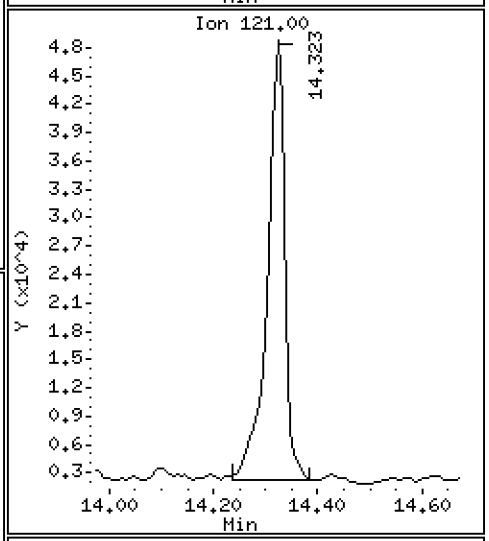


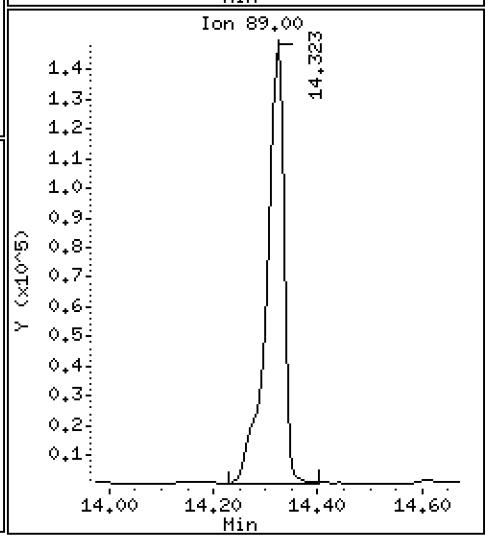












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

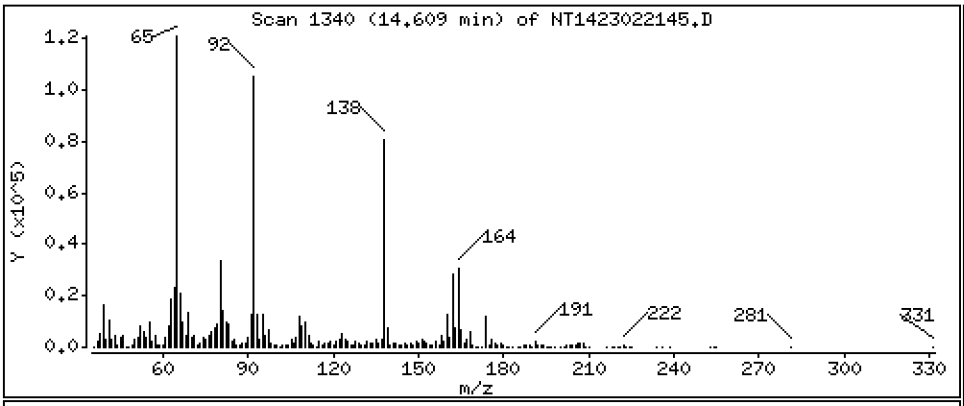
Operator: DSD

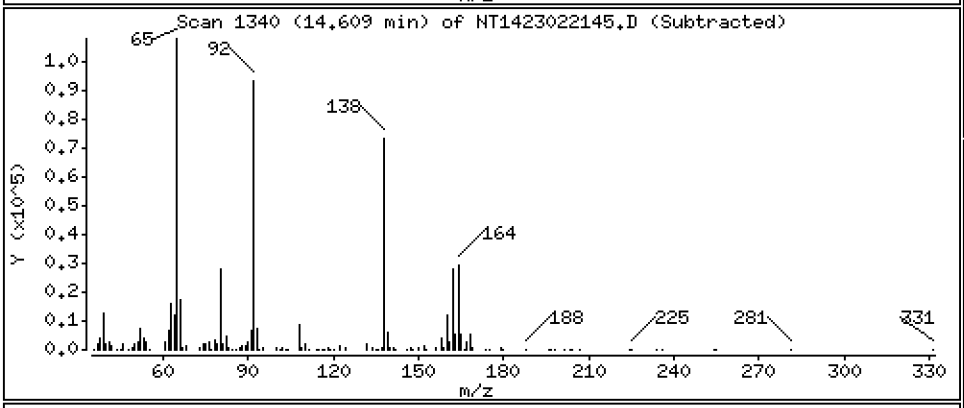
Column phase: ZB-5msi

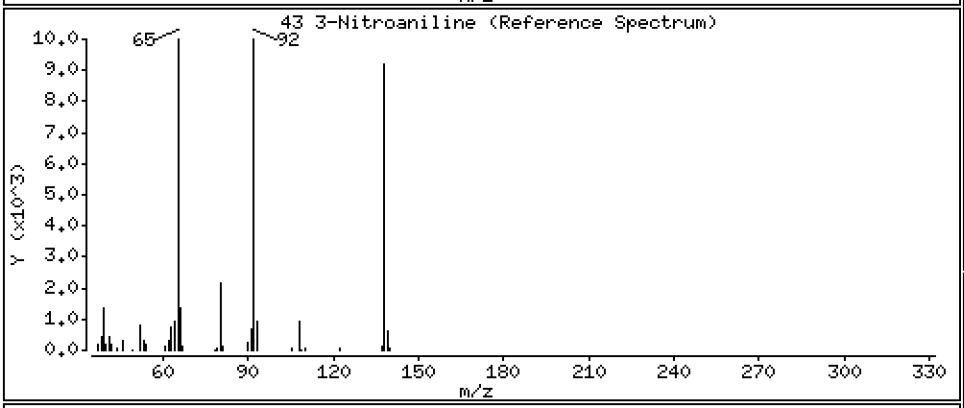
Column diameter: 0.25

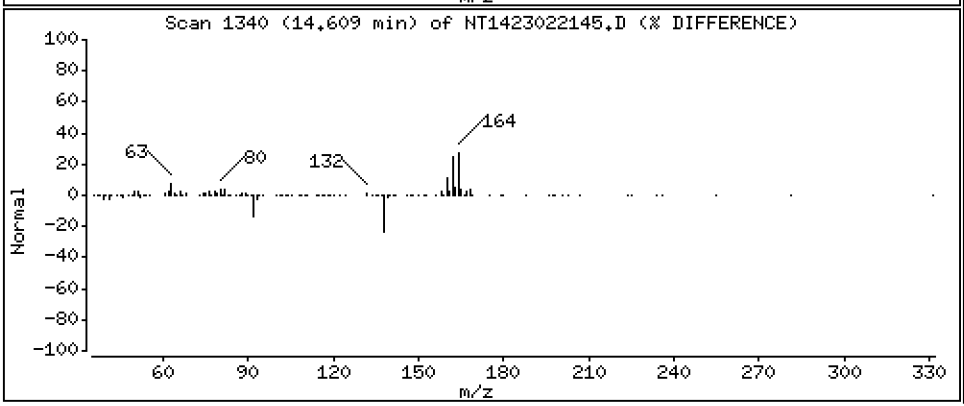
43 3-Nitroaniline

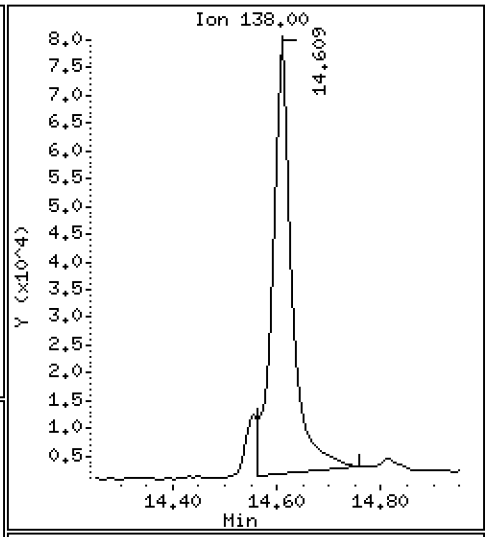
Concentration: 4.644 ug/mL

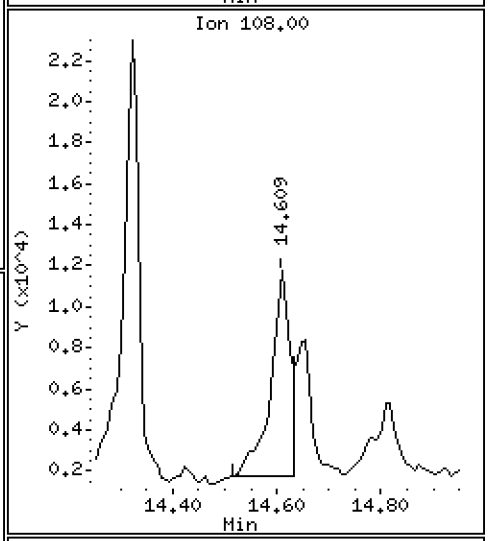


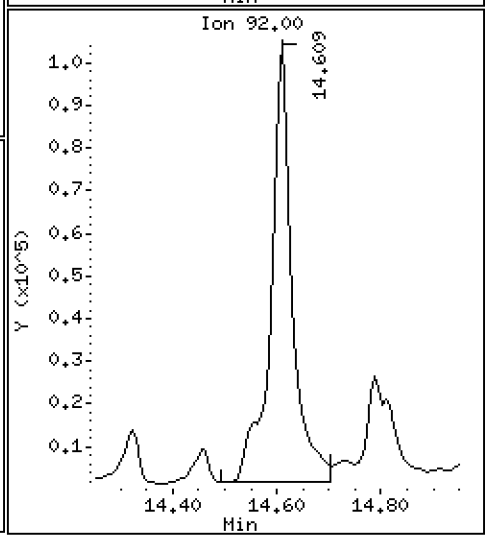












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

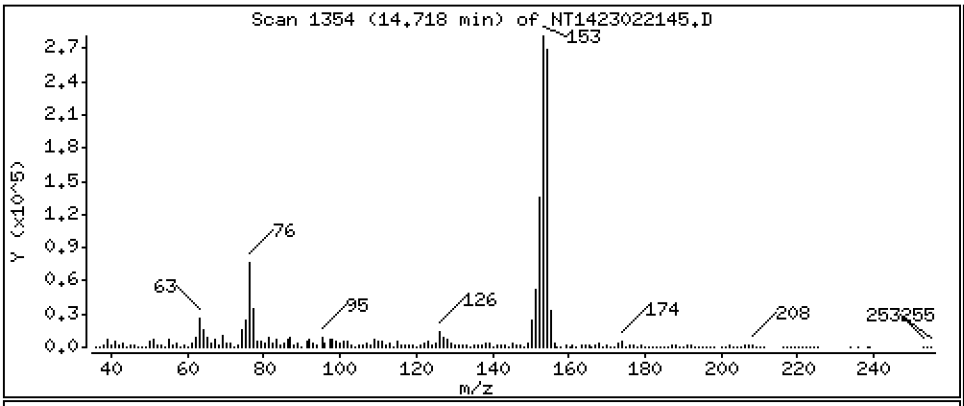
Operator: DSD

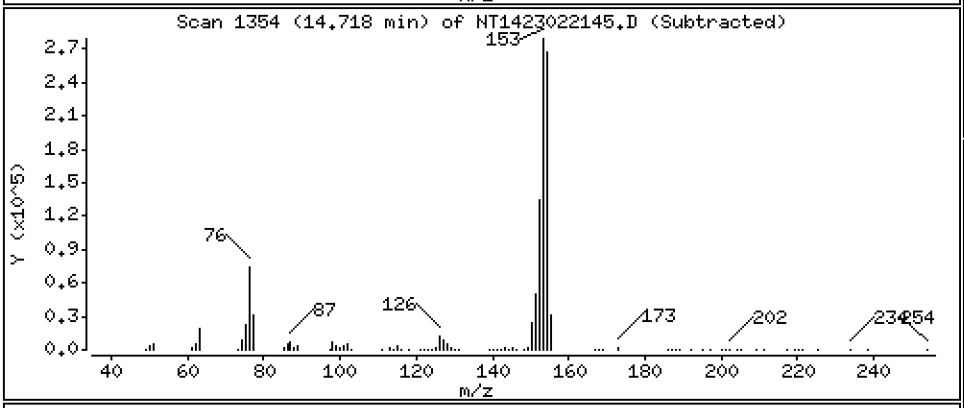
Column phase: ZB-5msi

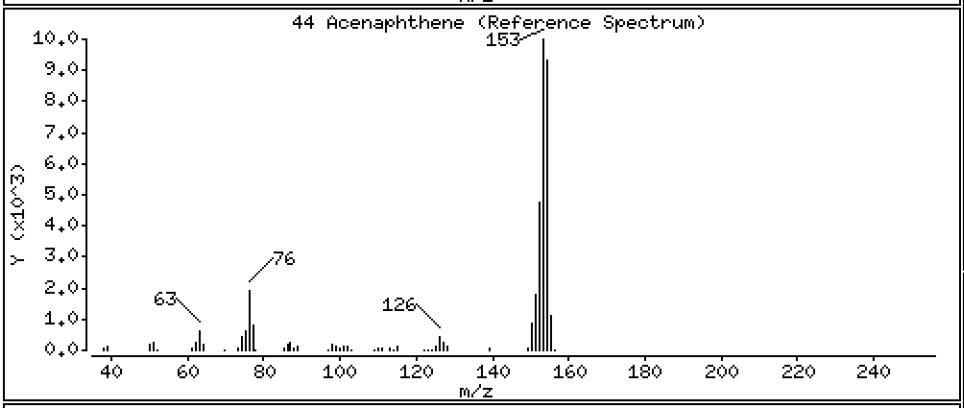
Column diameter: 0.25

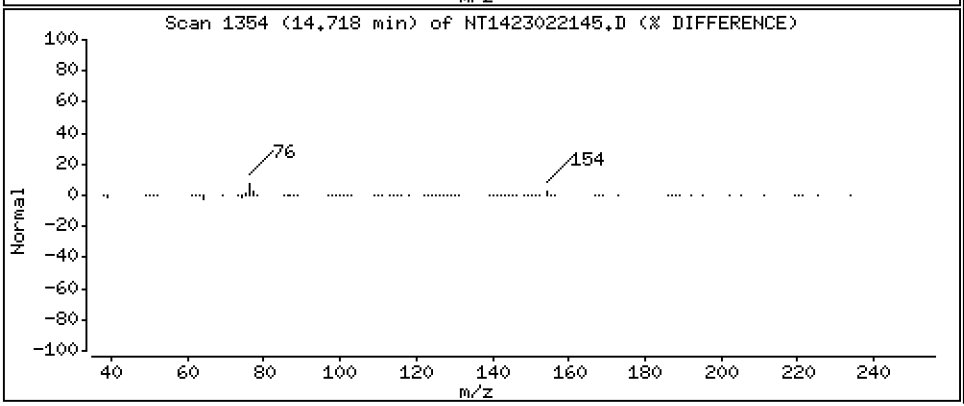
44 Acenaphthene

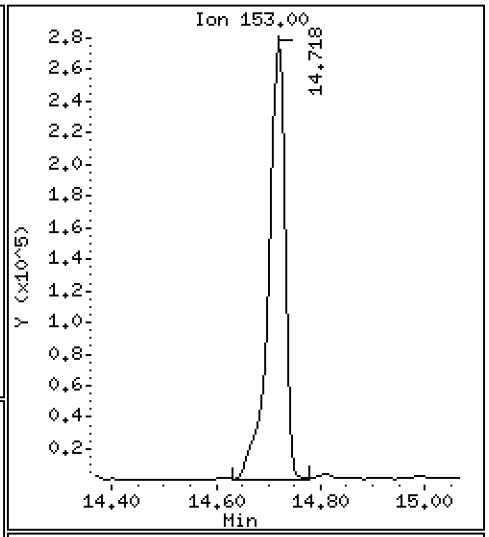
Concentration: 3.934 ug/mL

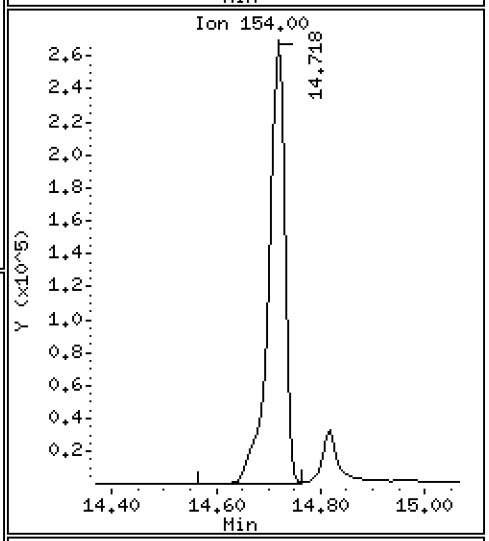


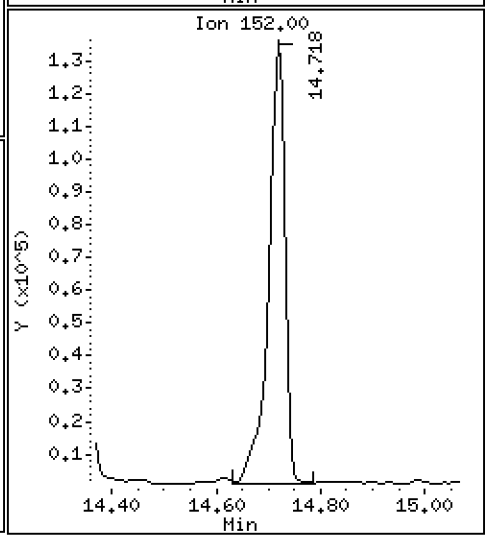












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

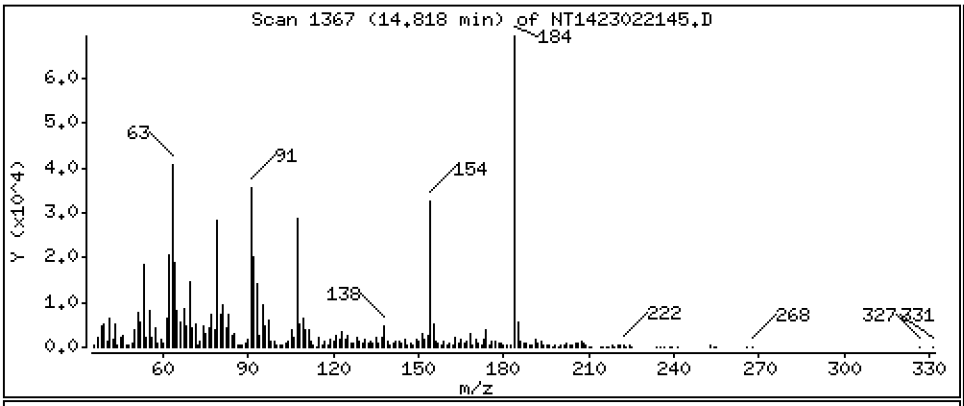
Operator: DSD

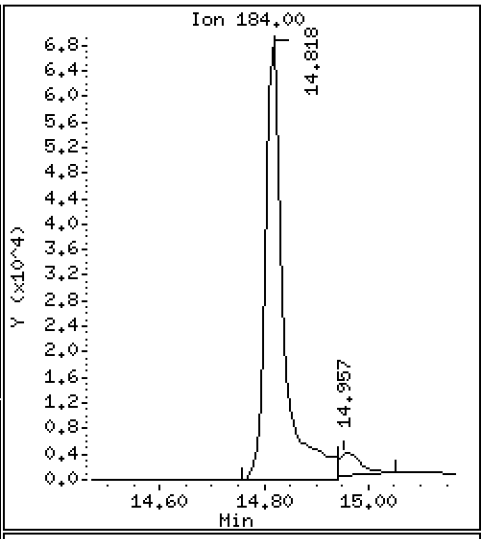
Column phase: ZB-5msi

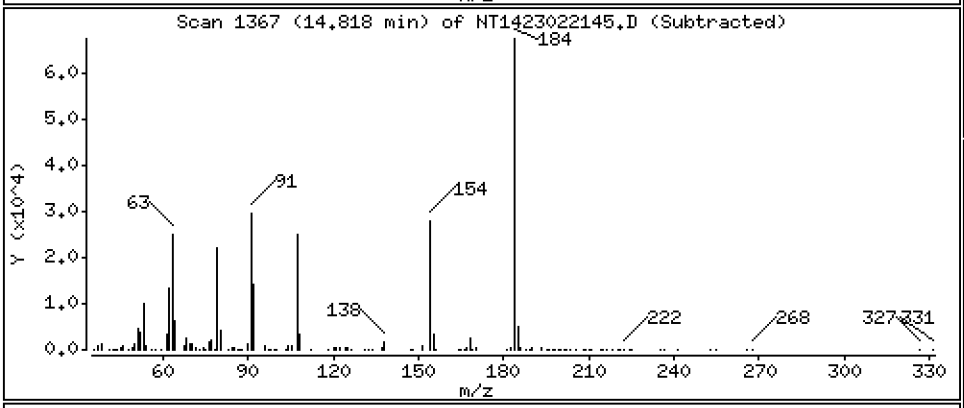
Column diameter: 0.25

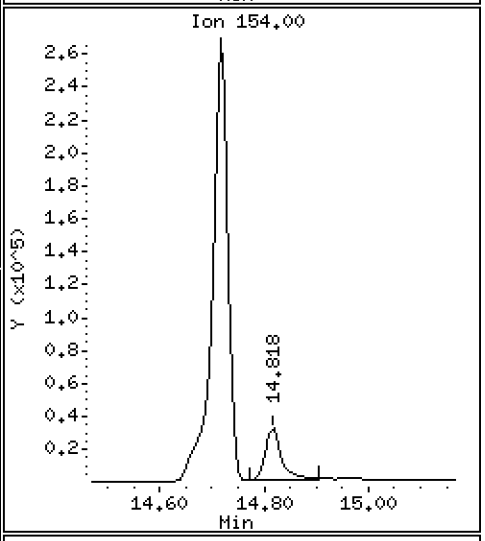
45 2,4-Dinitrophenol

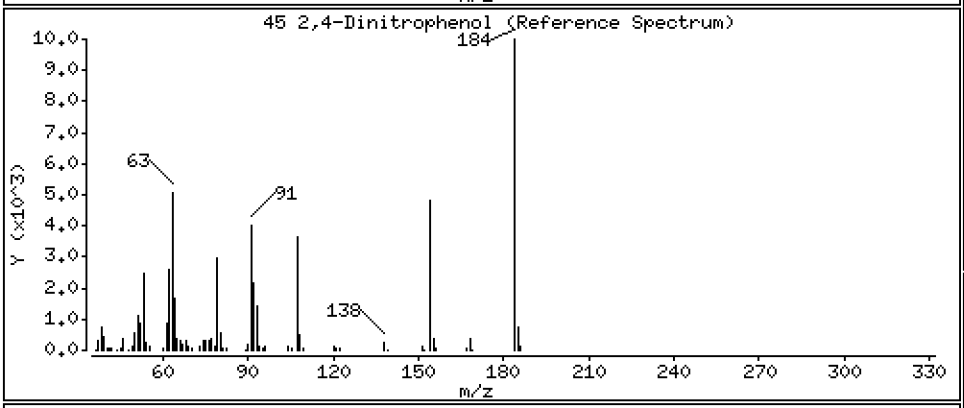
Concentration: 5.963 ug/mL

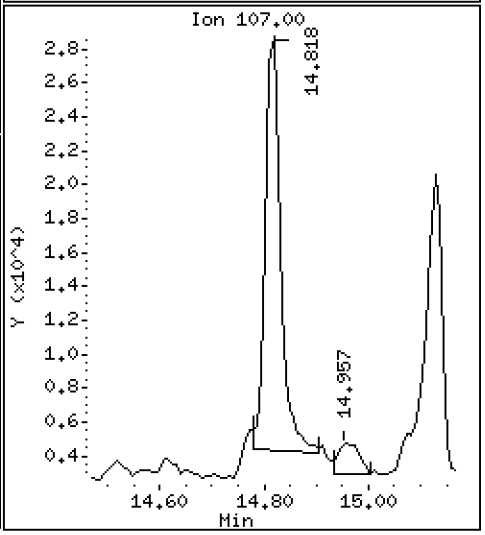


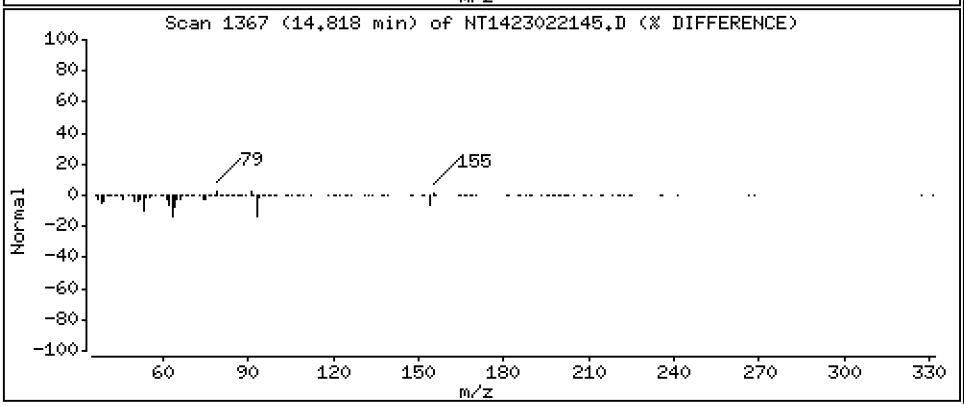












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

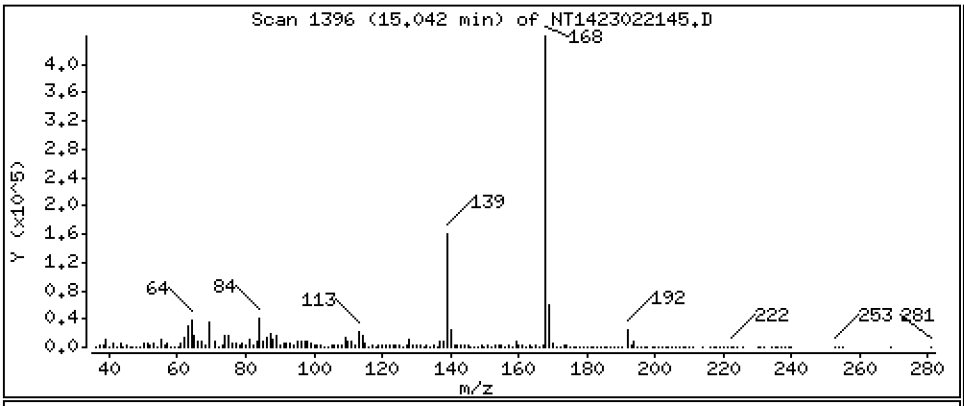
Operator: DSD

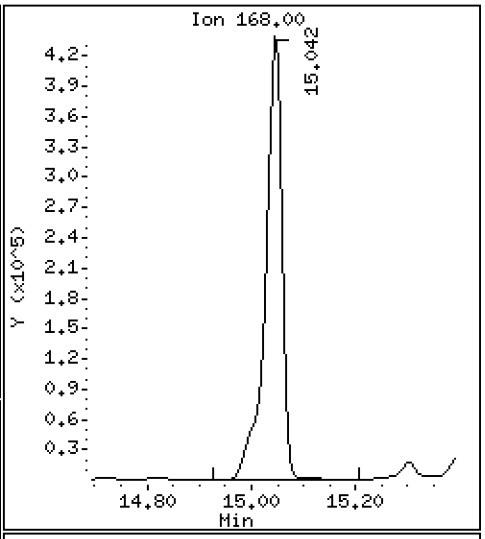
Column phase: ZB-5msi

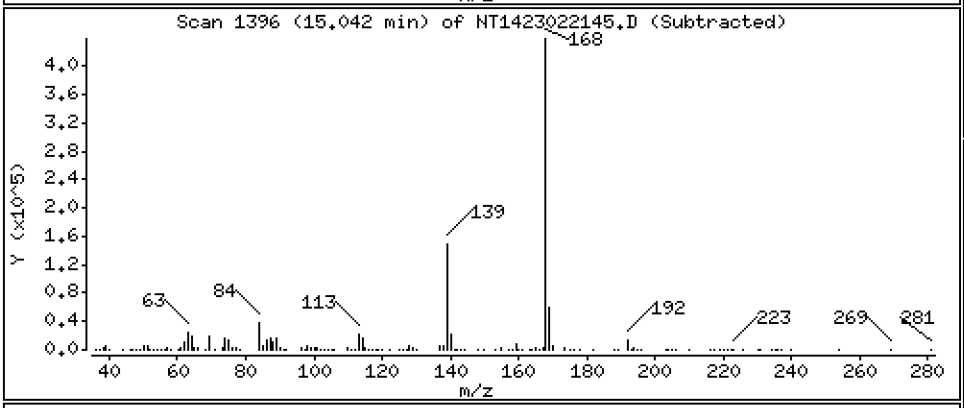
Column diameter: 0.25

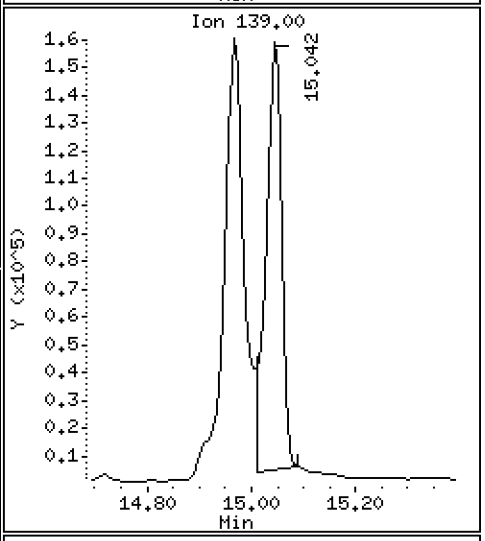
46 Dibenzofuran

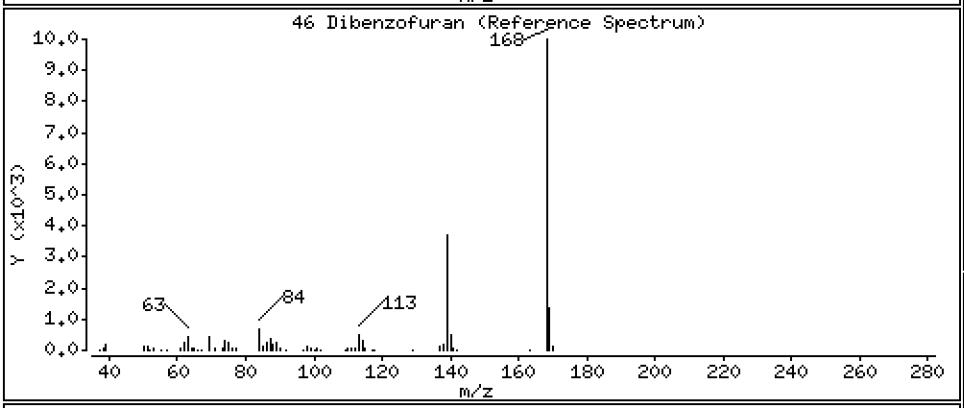
Concentration: 3.803 ug/mL

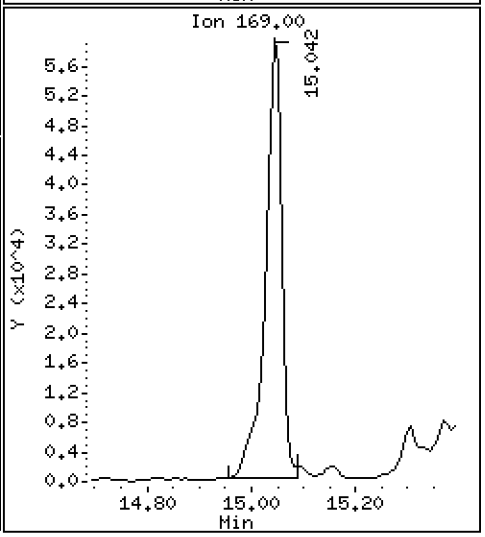


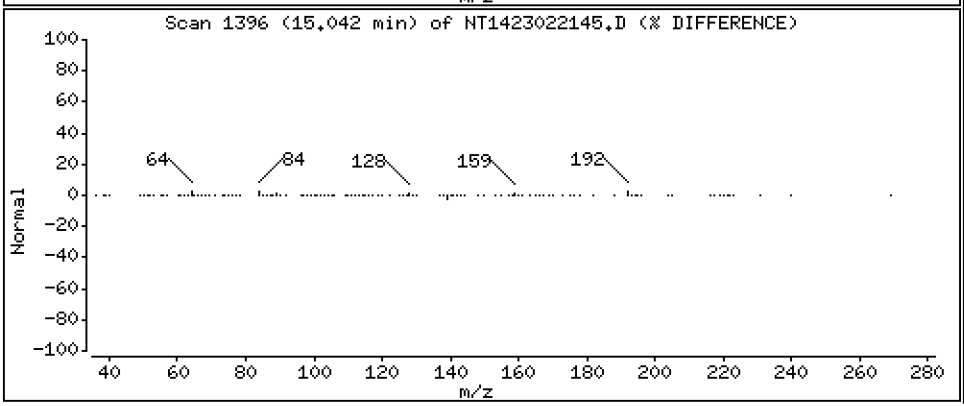












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

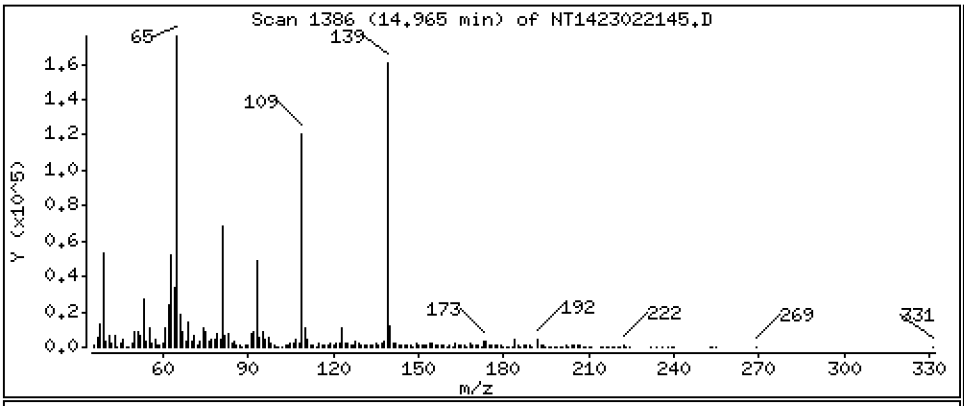
Operator: DSD

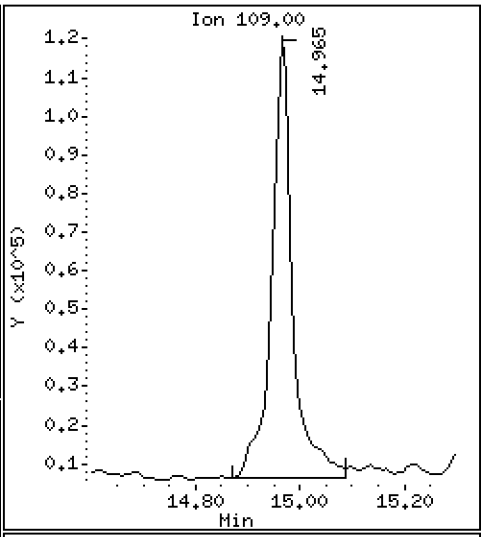
Column phase: ZB-5msi

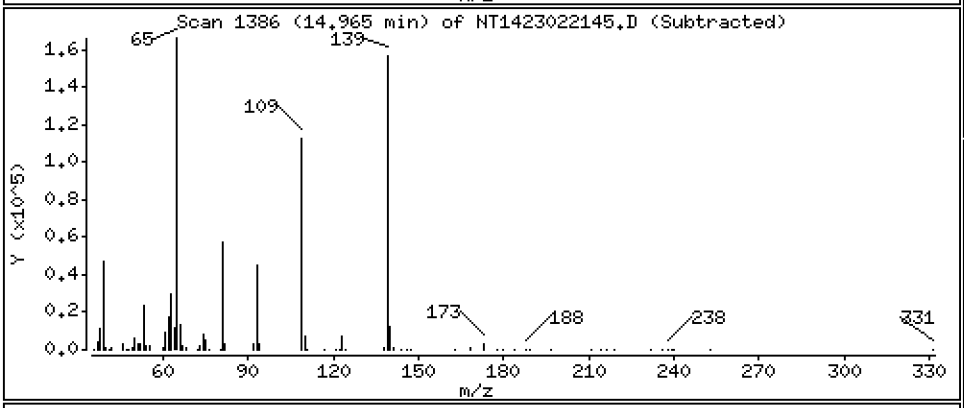
Column diameter: 0.25

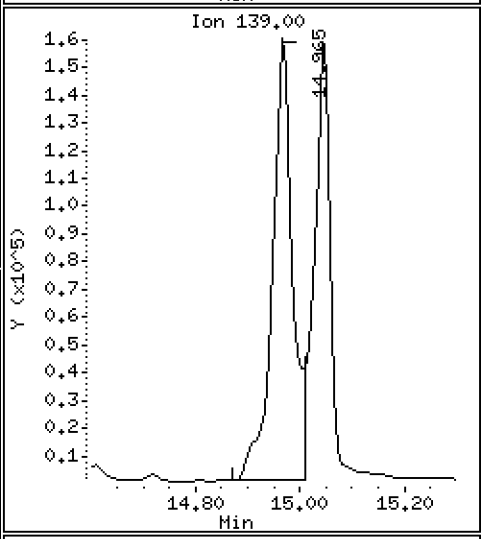
47 4-Nitrophenol

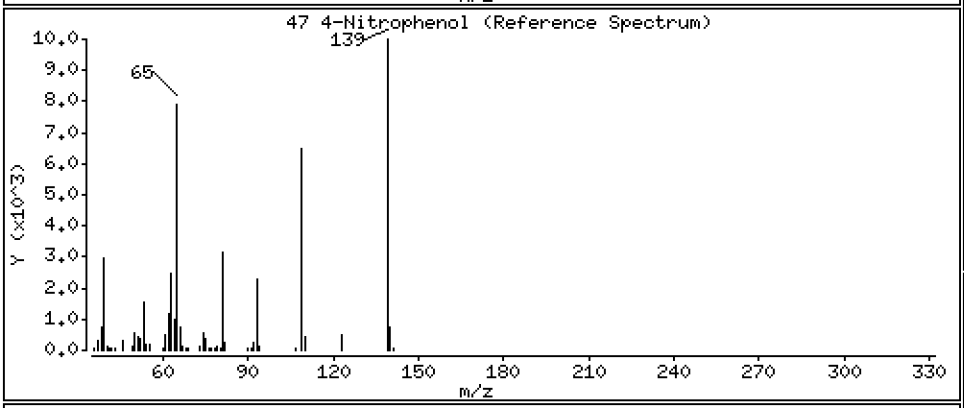
Concentration: 12.62 ug/mL

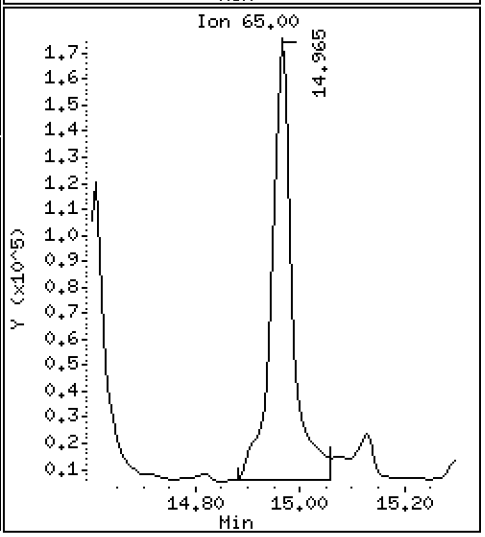


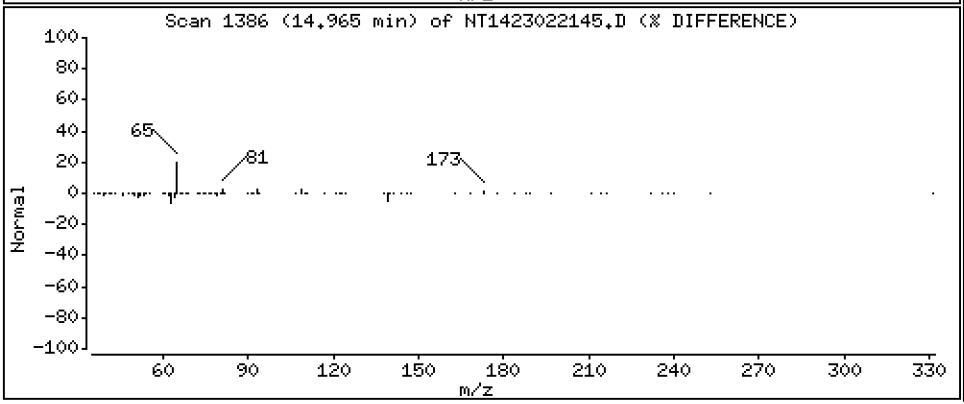












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

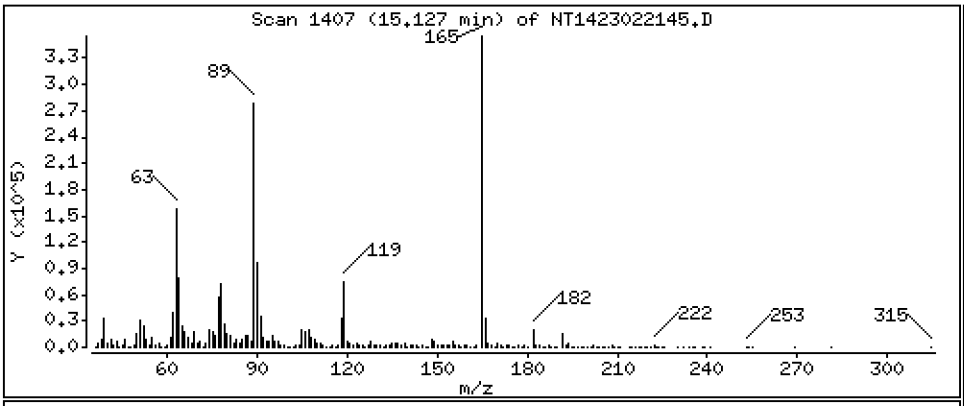
Operator: DSD

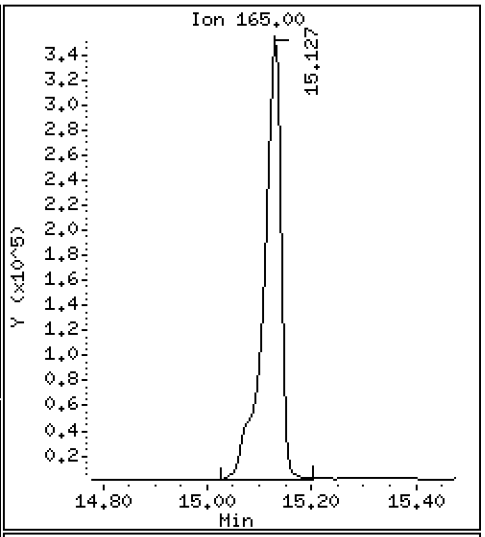
Column phase: ZB-5msi

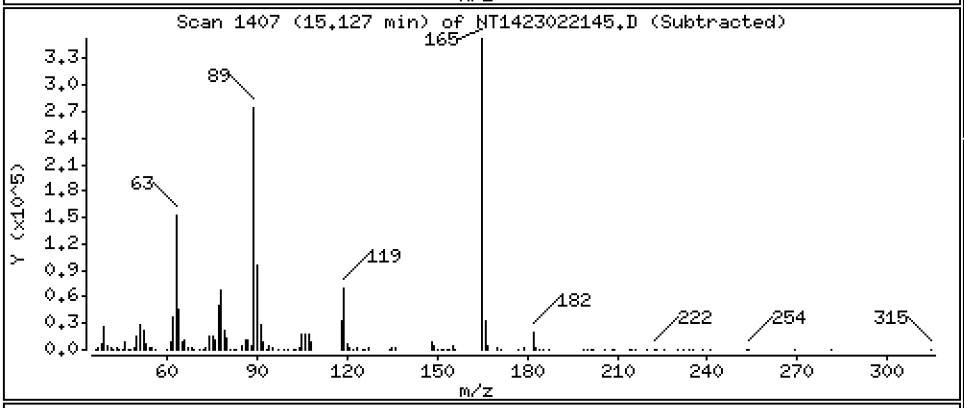
Column diameter: 0.25

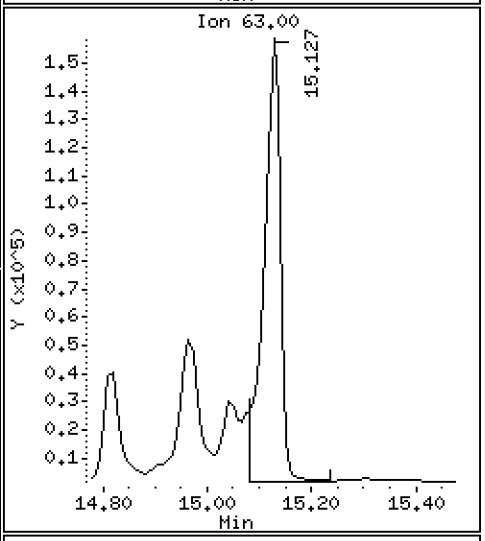
48 2,4-Dinitrotoluene

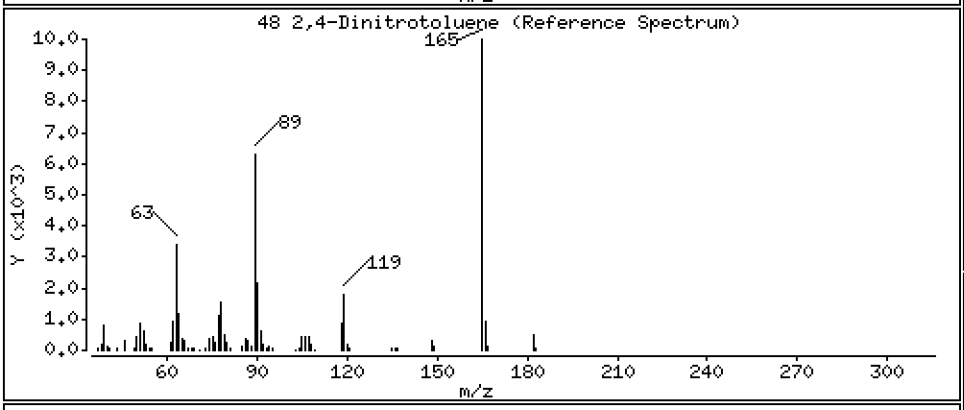
Concentration: 13.73 ug/mL

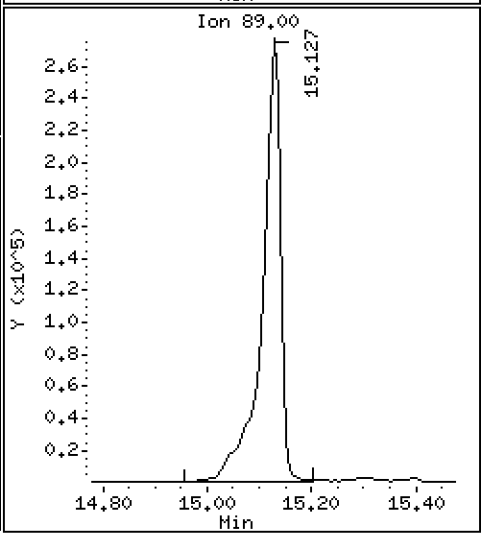


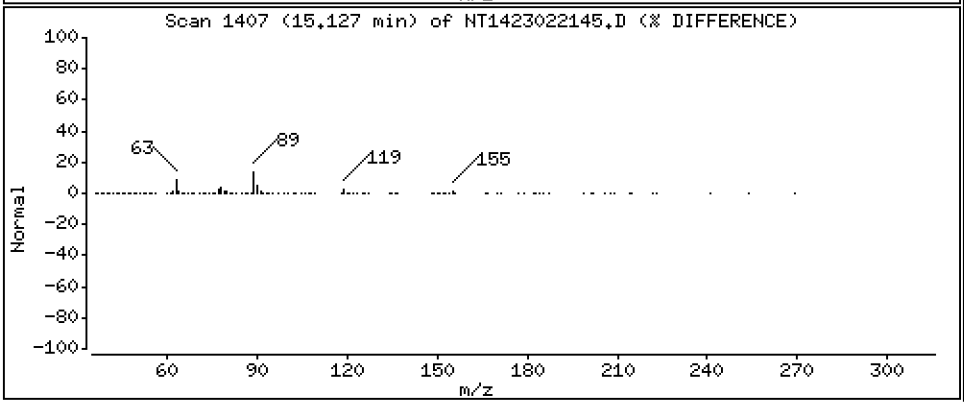












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022145.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

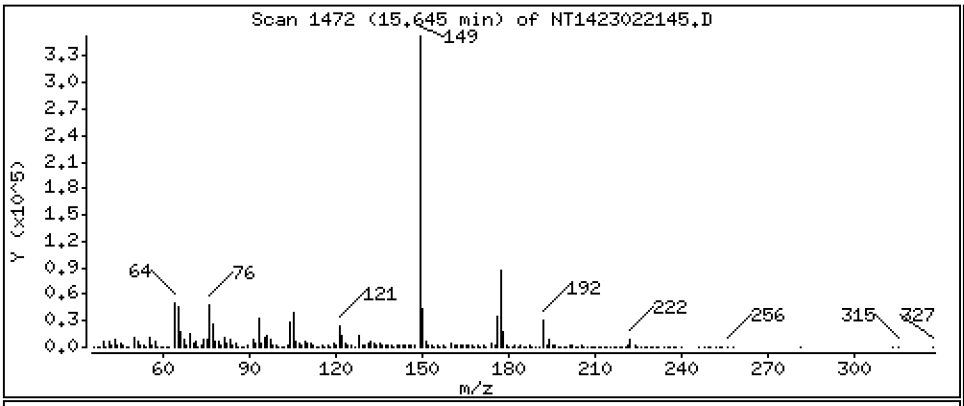
Operator: DSD

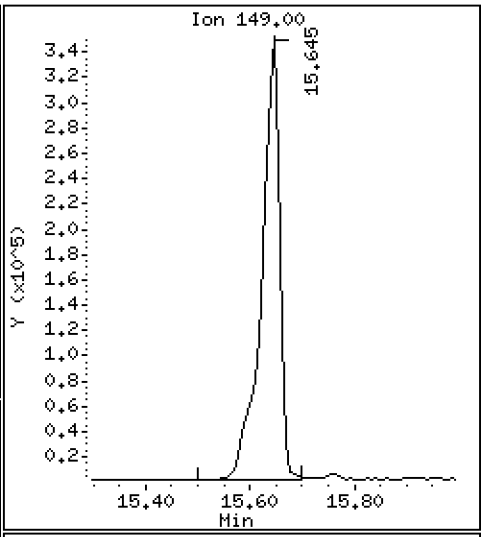
Column phase: ZB-5msi

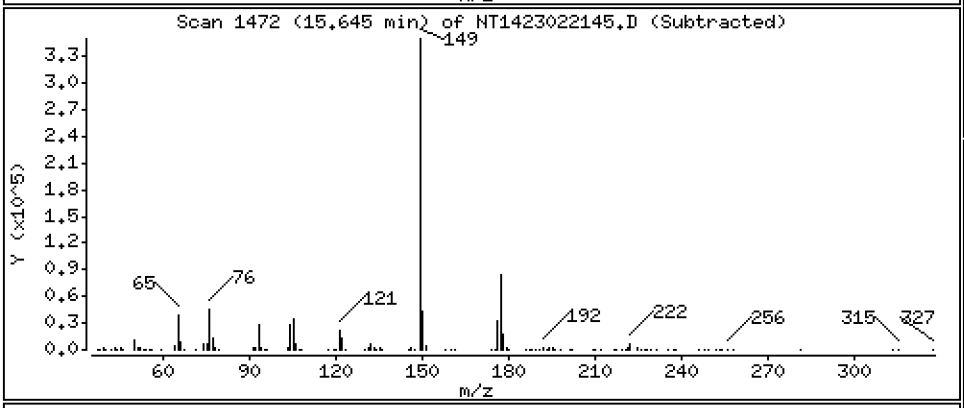
Column diameter: 0.25

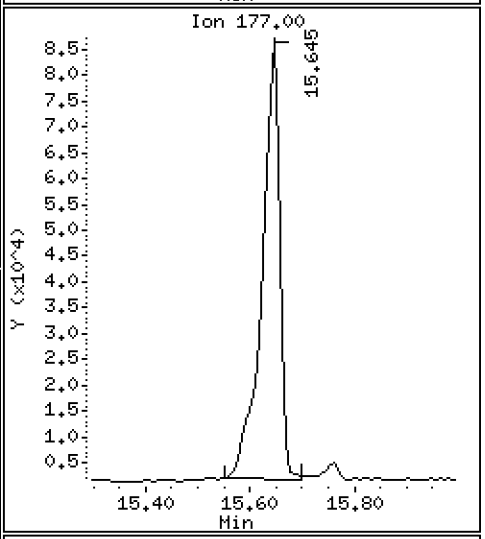
50 Diethylphthalate

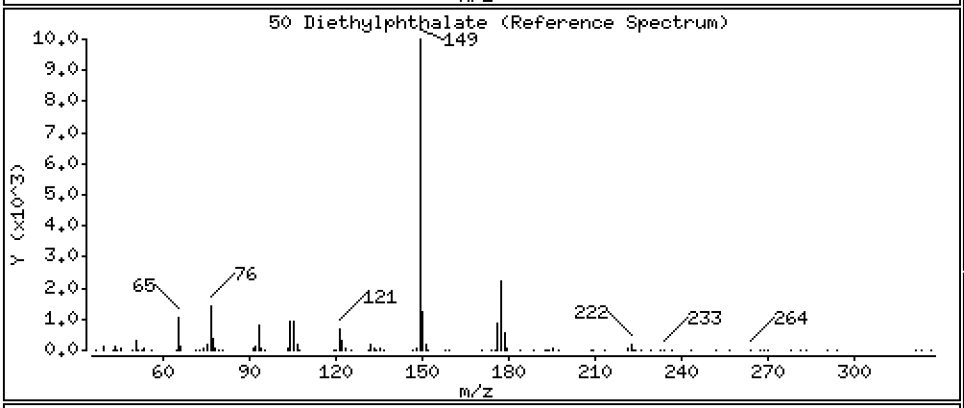
Concentration: 4.232 ug/mL

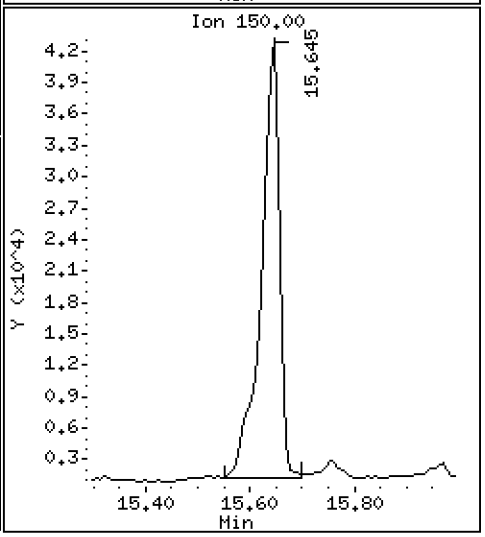


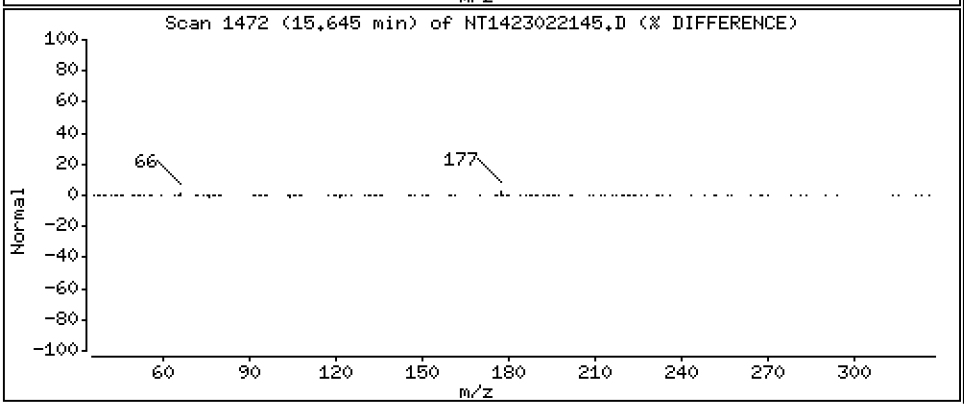












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

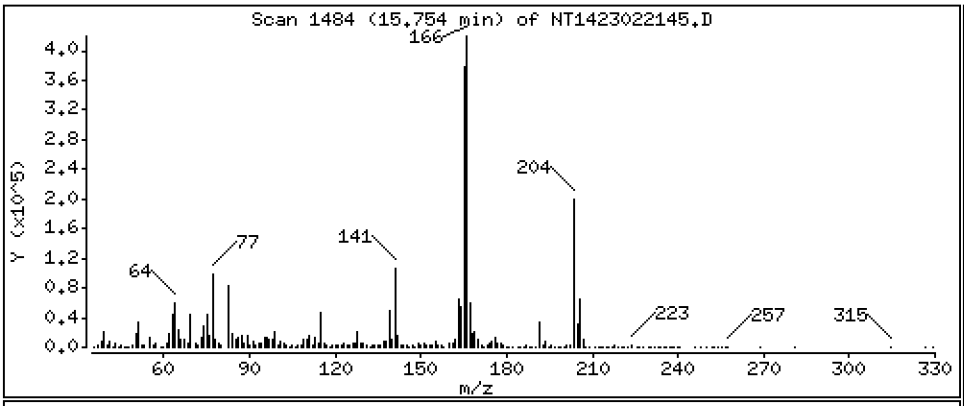
Operator: DSD

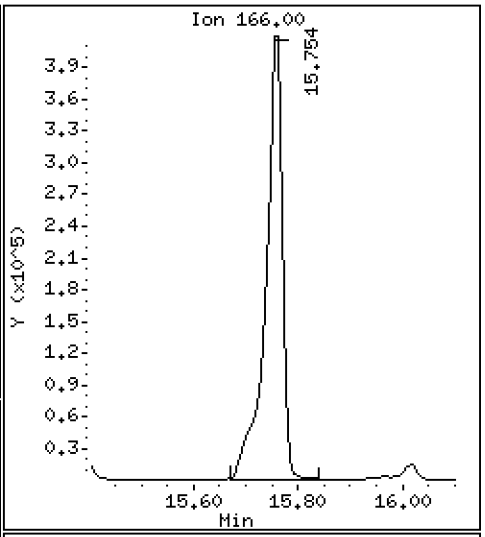
Column phase: ZB-5msi

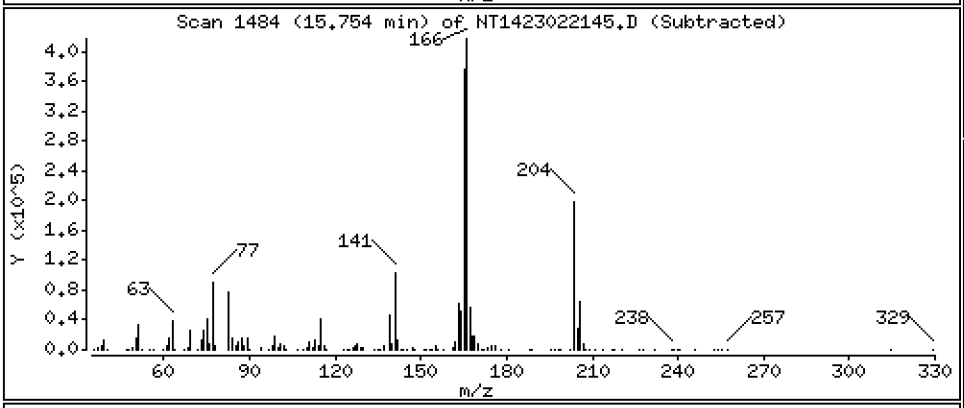
Column diameter: 0.25

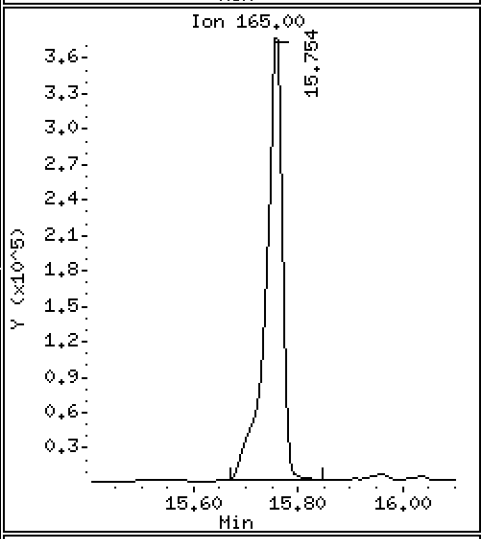
49 Fluorene

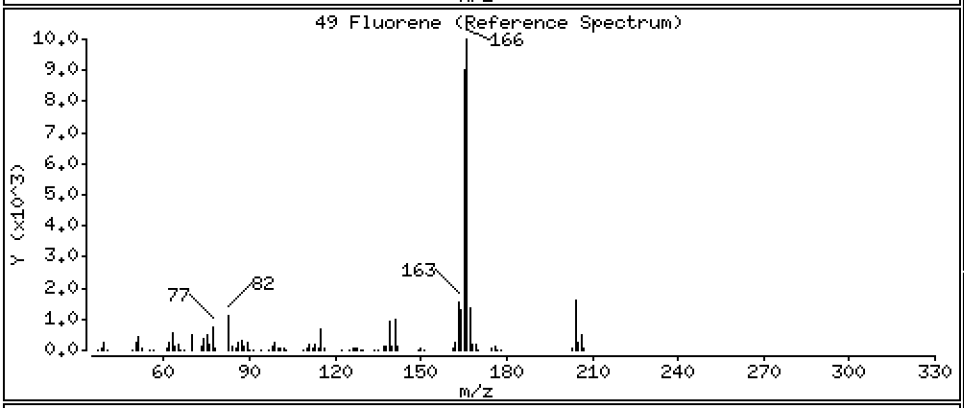
Concentration: 3.844 ug/mL

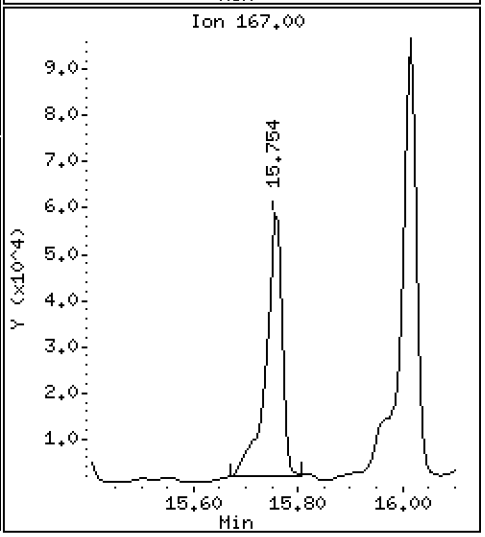


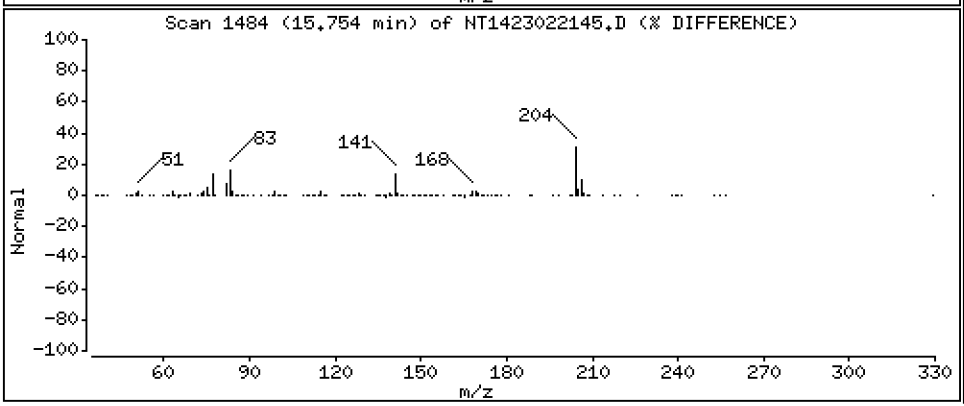












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

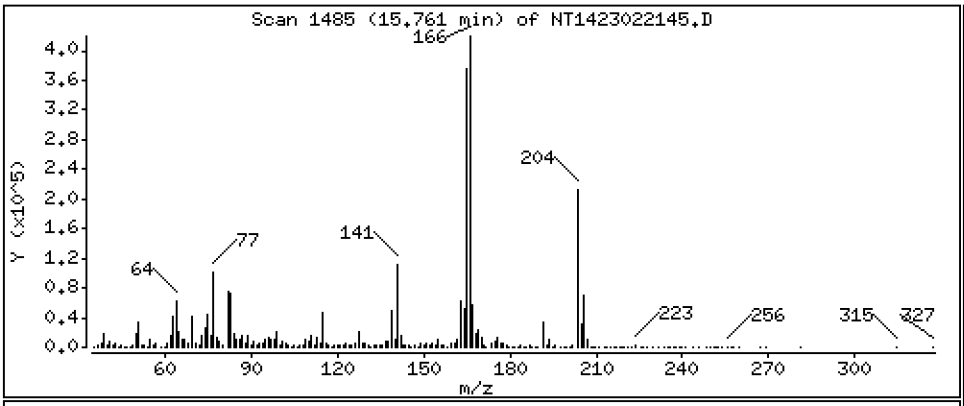
Operator: DSD

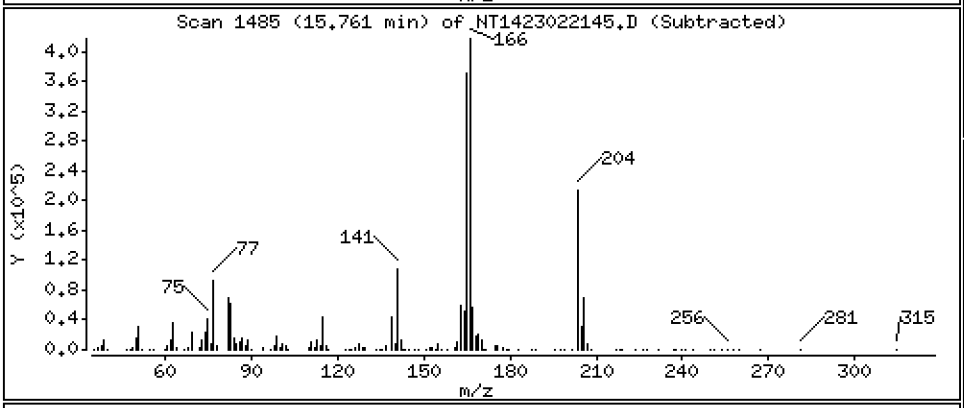
Column phase: ZB-5msi

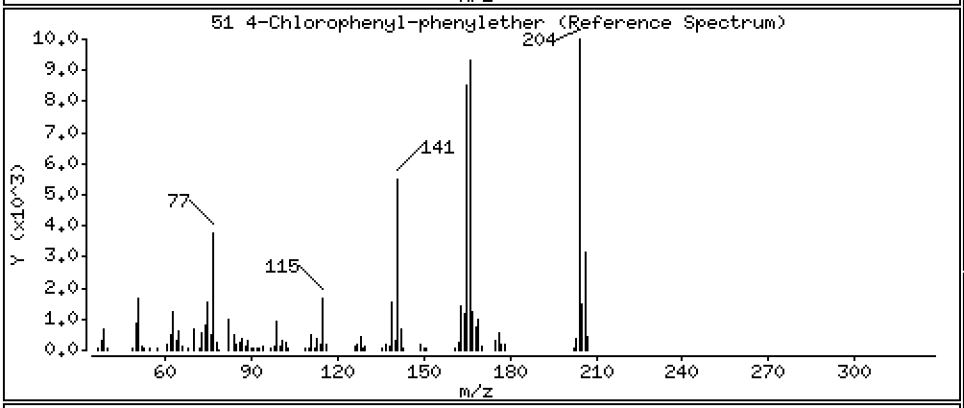
Column diameter: 0.25

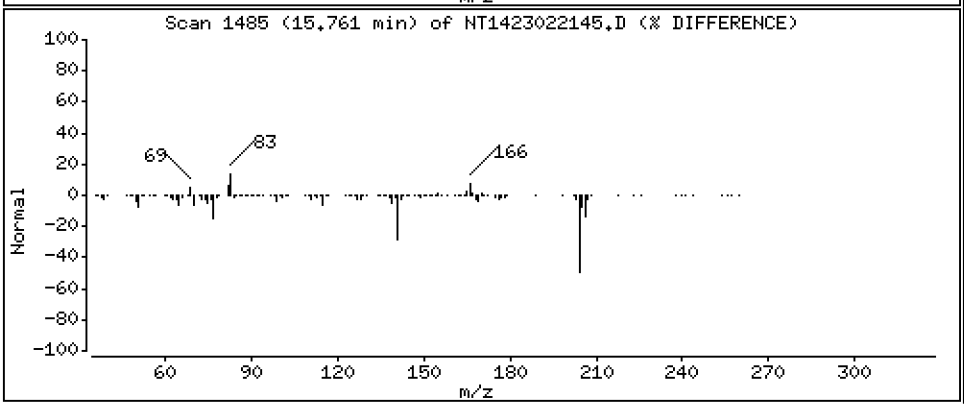
51 4-Chlorophenyl-phenylether

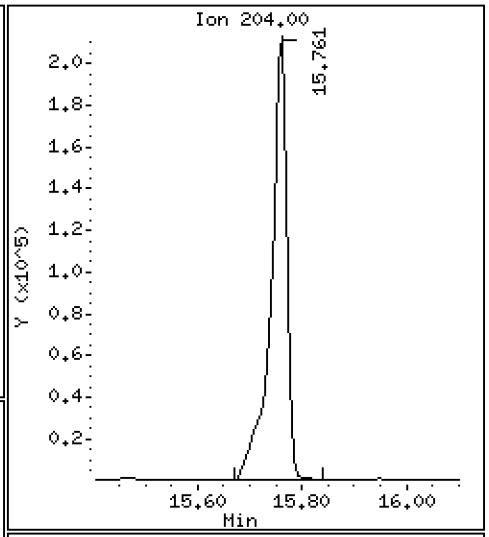
Concentration: 3.488 ug/mL

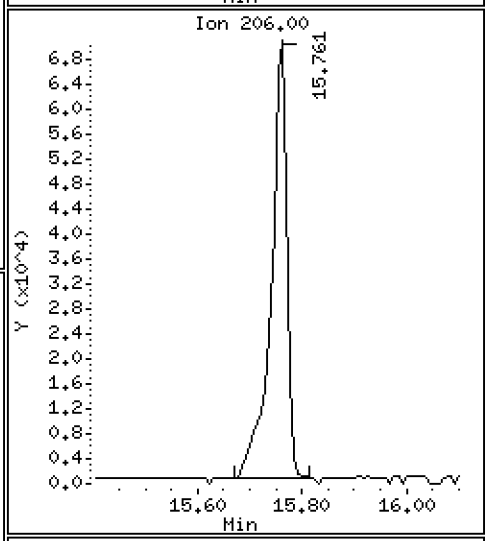


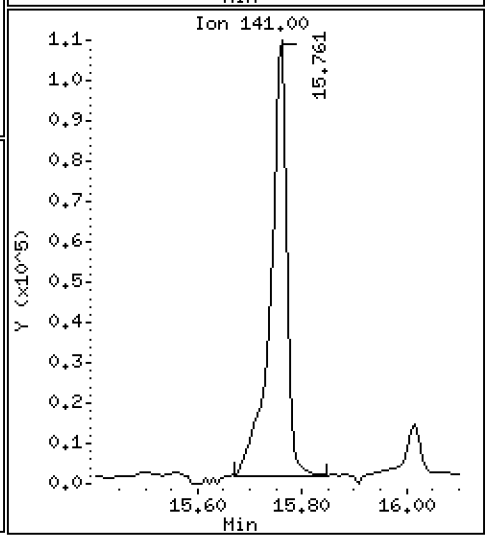












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

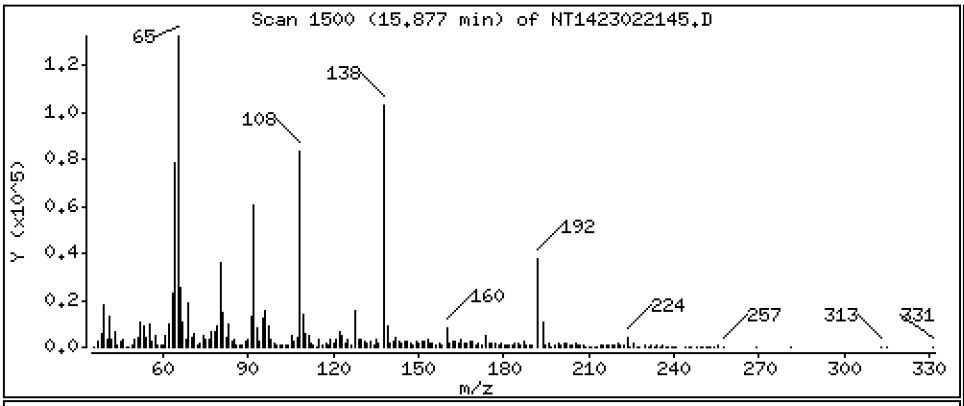
Operator: DSD

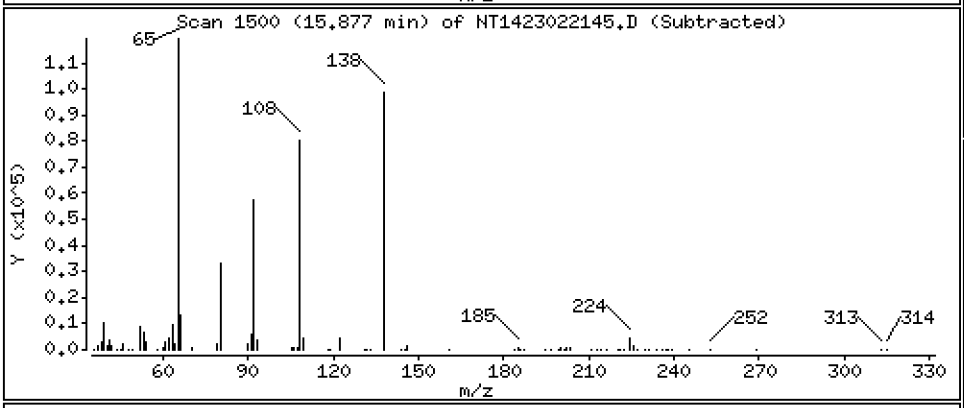
Column phase: ZB-5msi

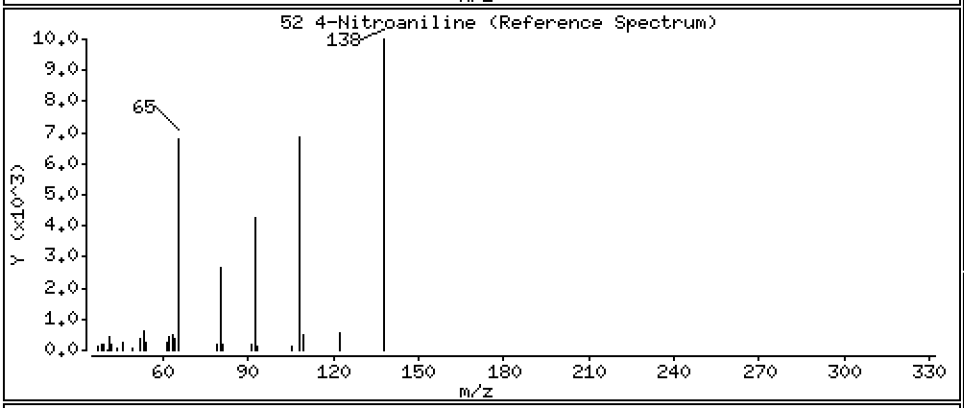
Column diameter: 0.25

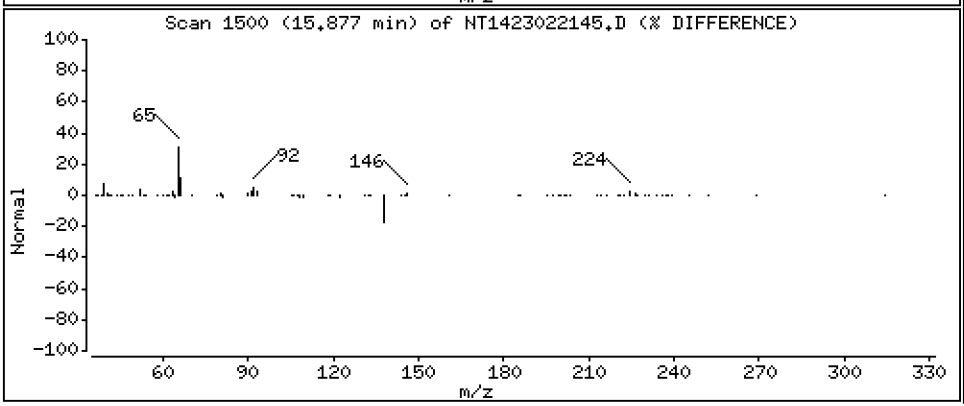
52 4-Nitroaniline

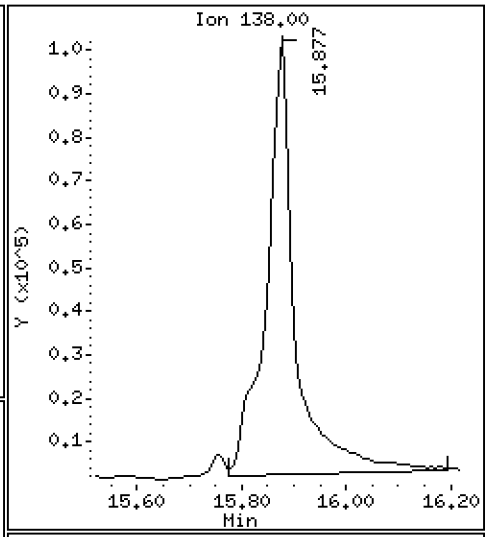
Concentration: 7.872 ug/mL

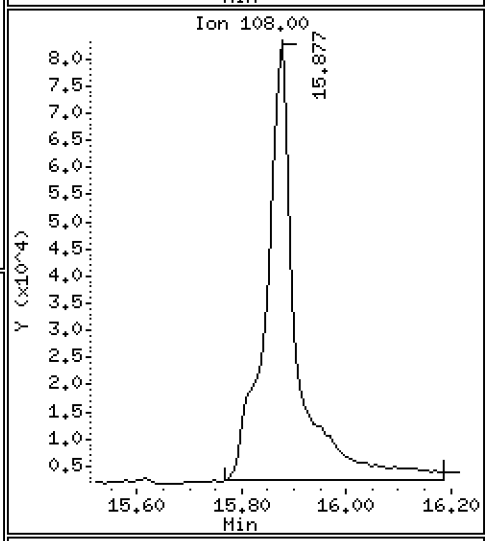


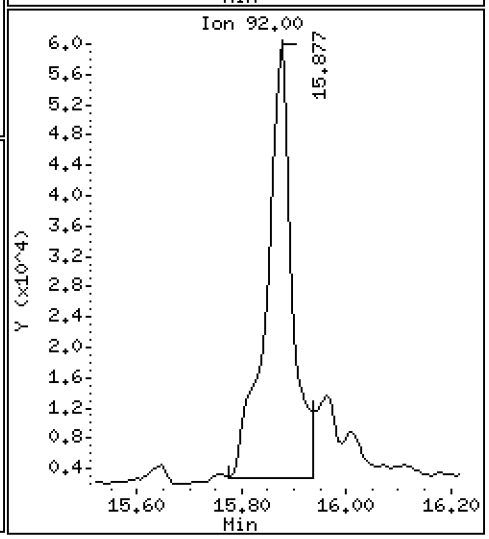












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

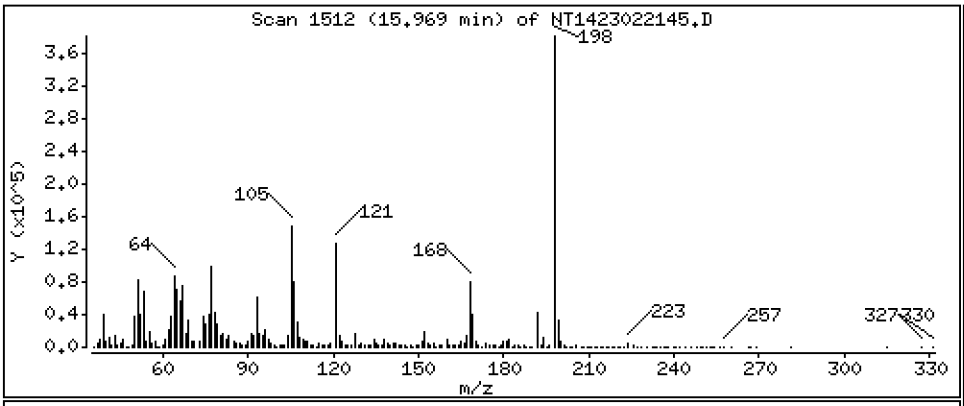
Operator: DSD

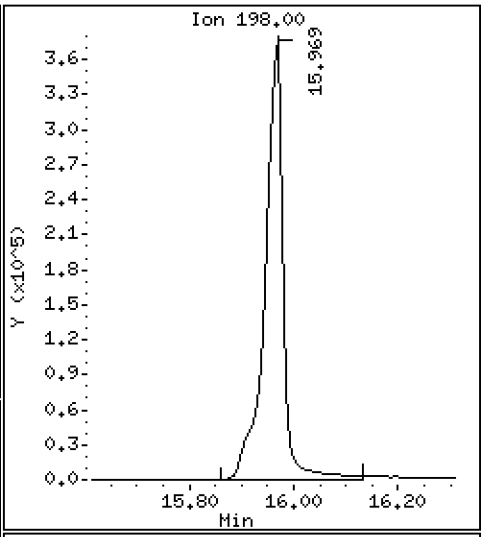
Column phase: ZB-5msi

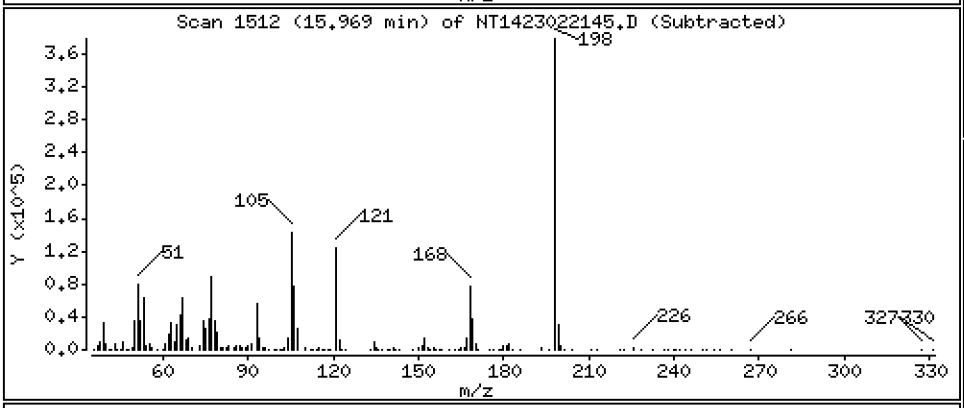
Column diameter: 0.25

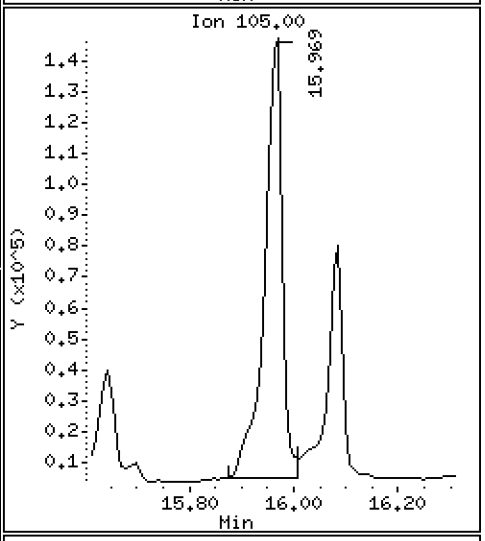
53 4,6-Dinitro-2-methylphenol

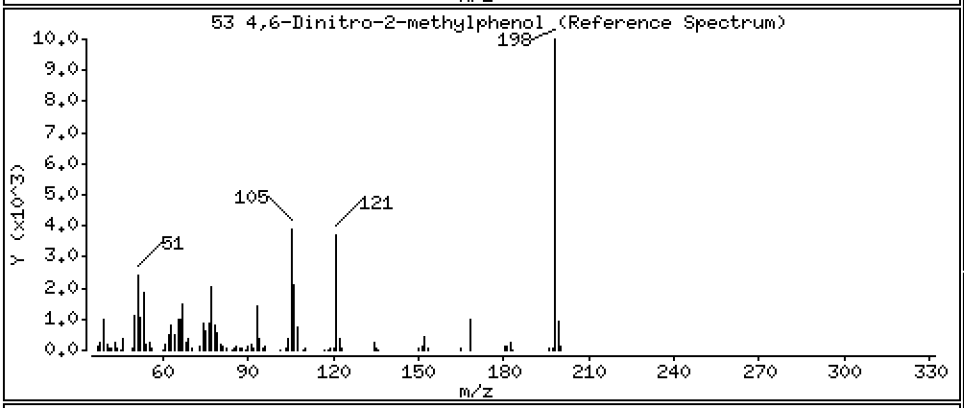
Concentration: 21.00 ug/mL

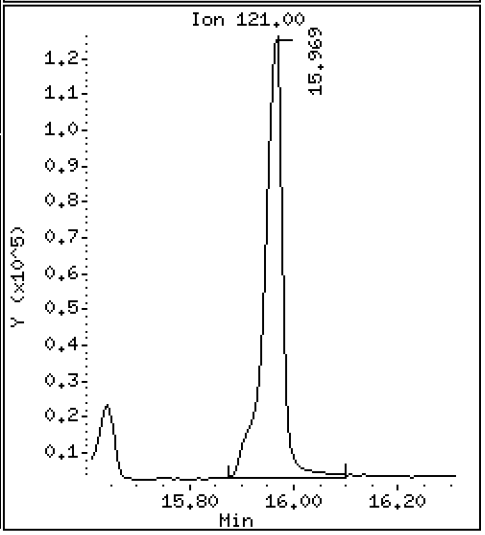


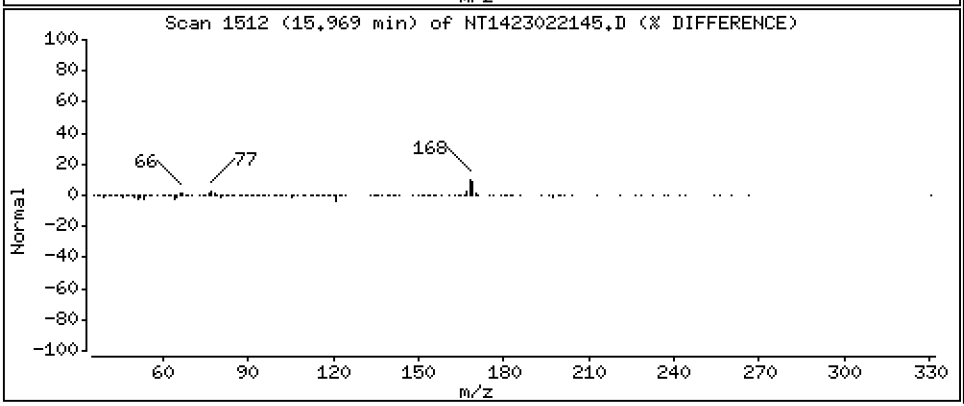












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

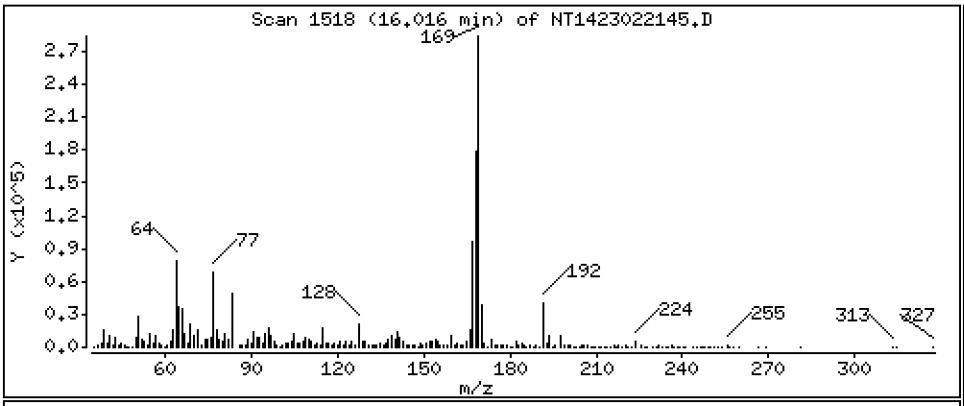
Operator: DSD

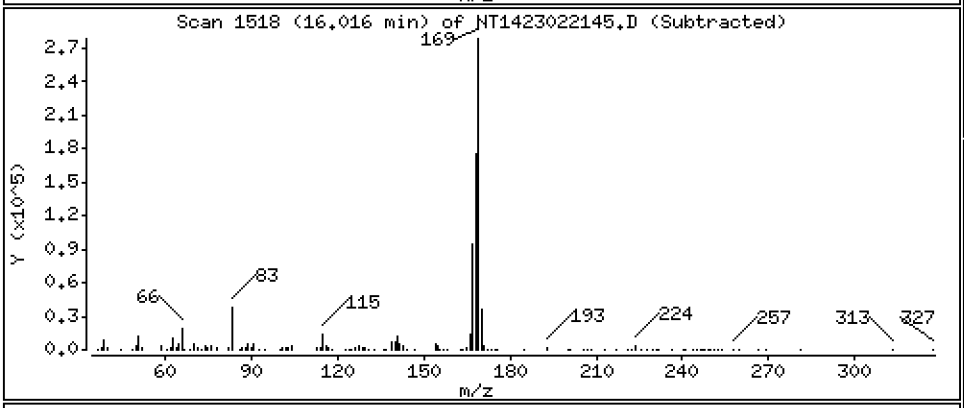
Column phase: ZB-5msi

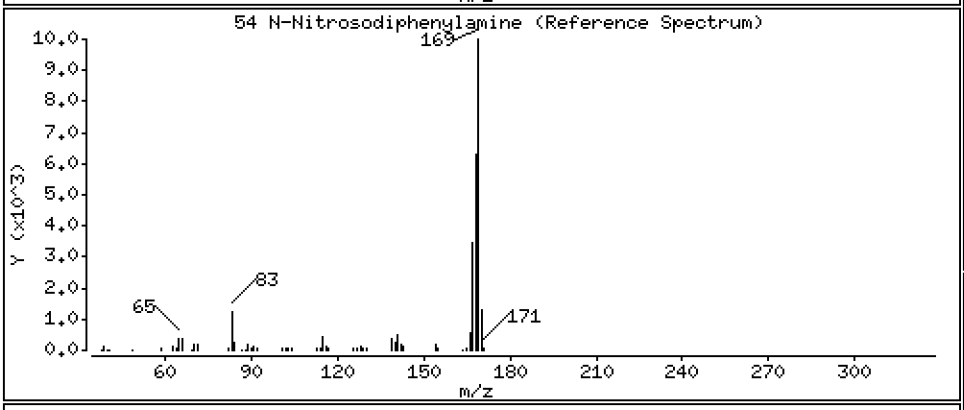
Column diameter: 0.25

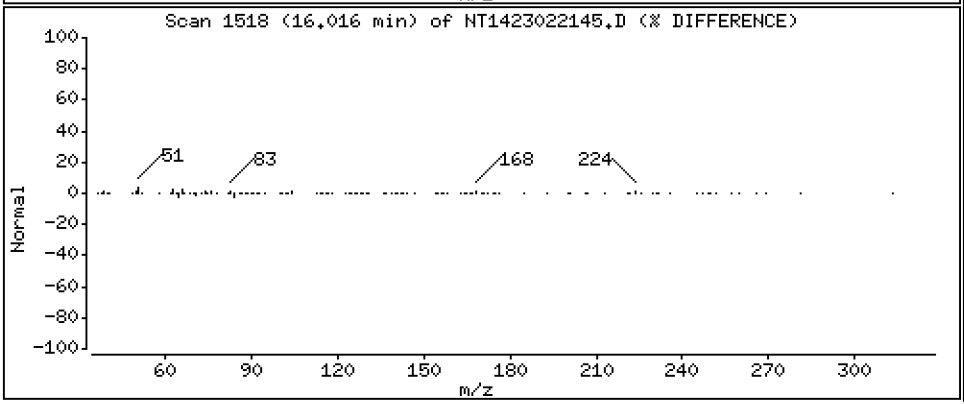
54 N-Nitrosodiphenylamine

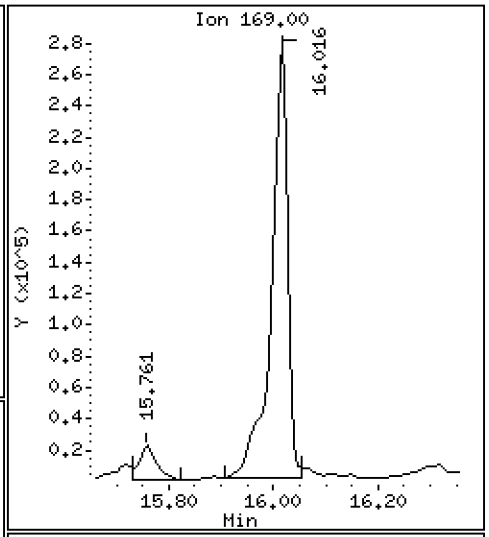
Concentration: 3.619 ug/mL

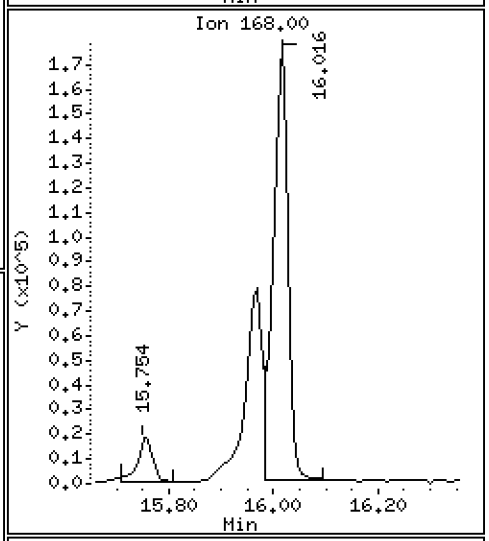


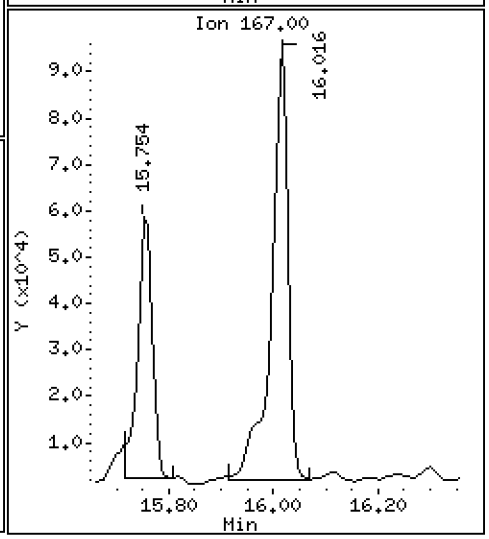












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

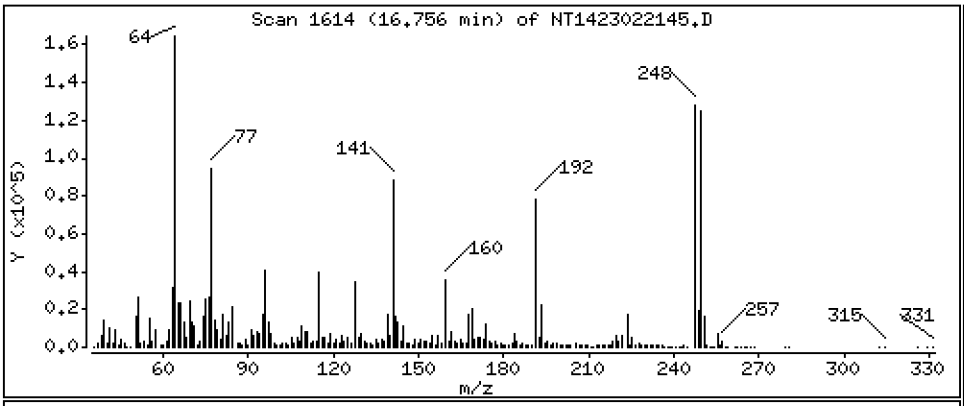
Operator: DSD

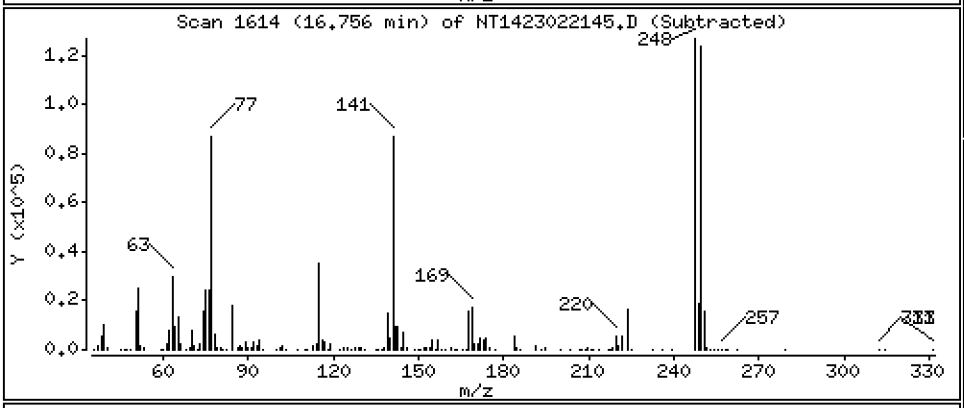
Column phase: ZB-5msi

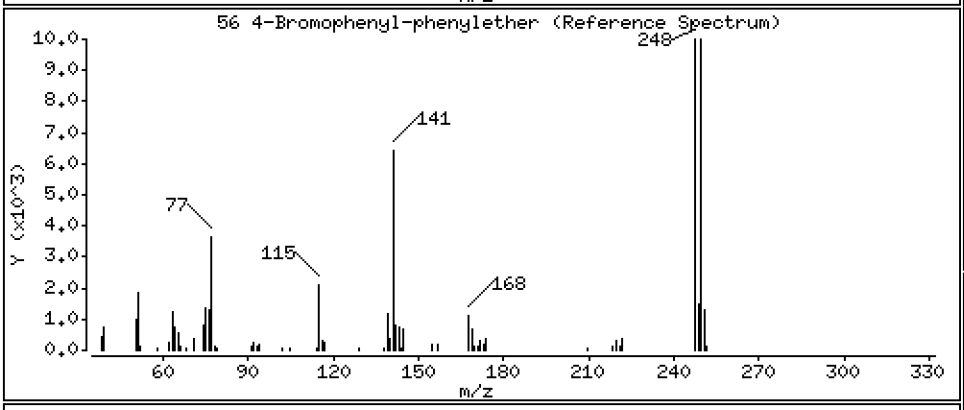
Column diameter: 0.25

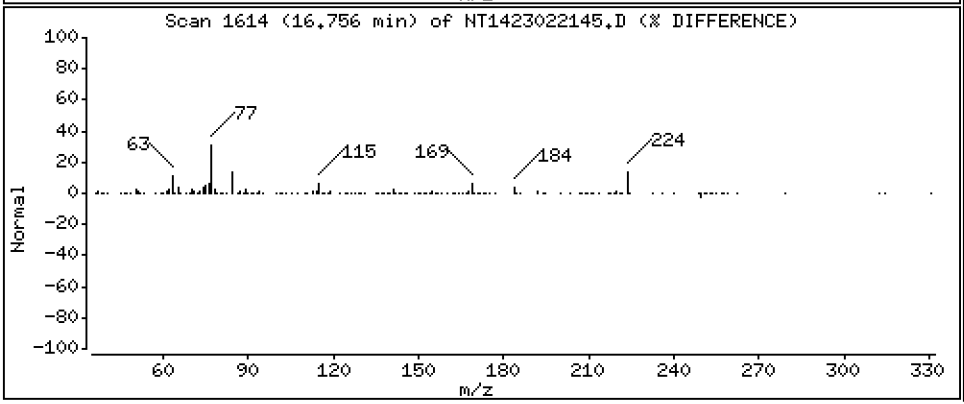
56 4-Bromophenyl-phenylether

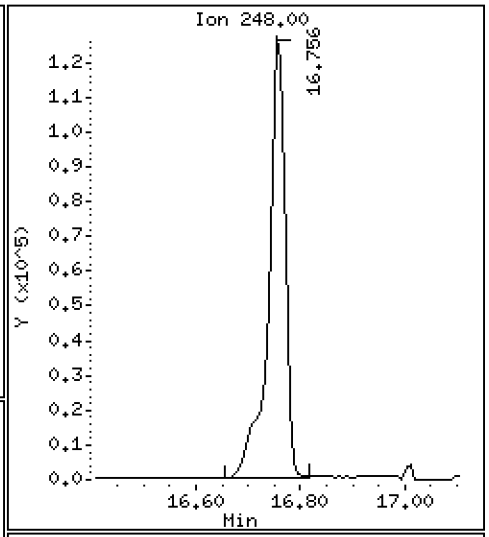
Concentration: 3.763 ug/mL

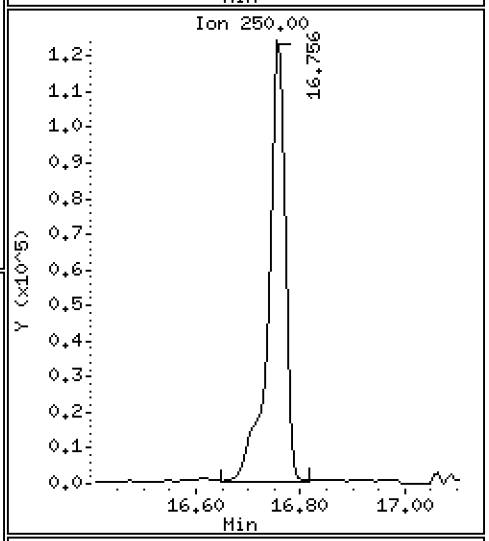


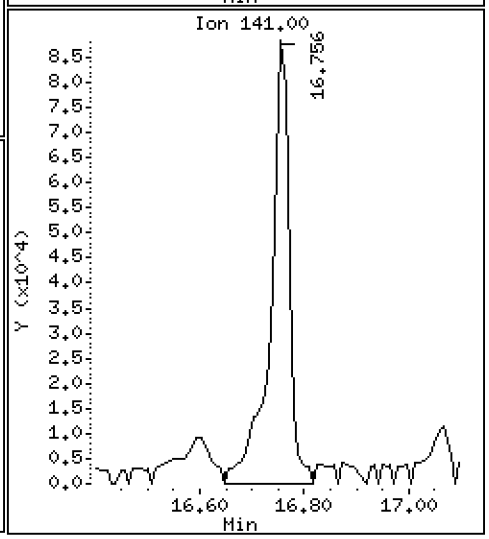












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022145.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

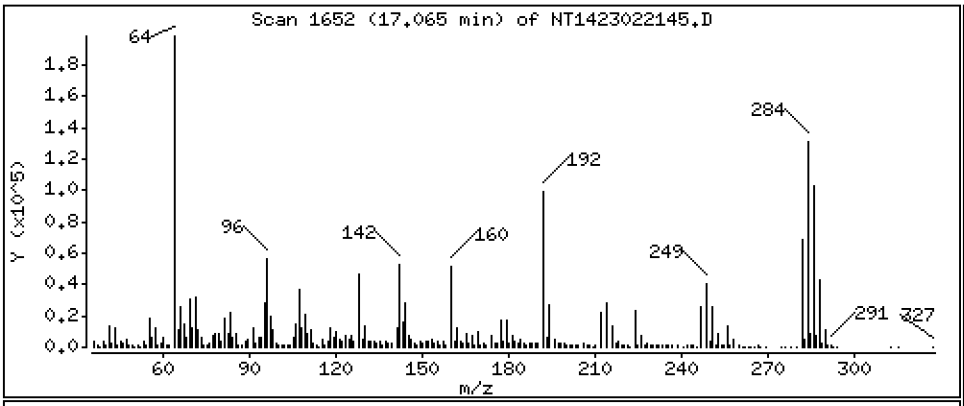
Operator: DSD

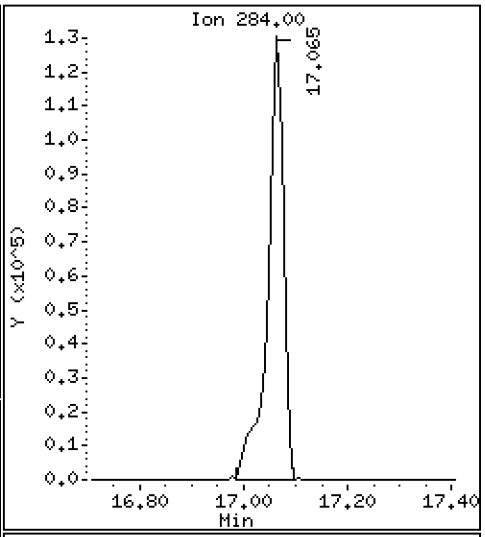
Column phase: ZB-5msi

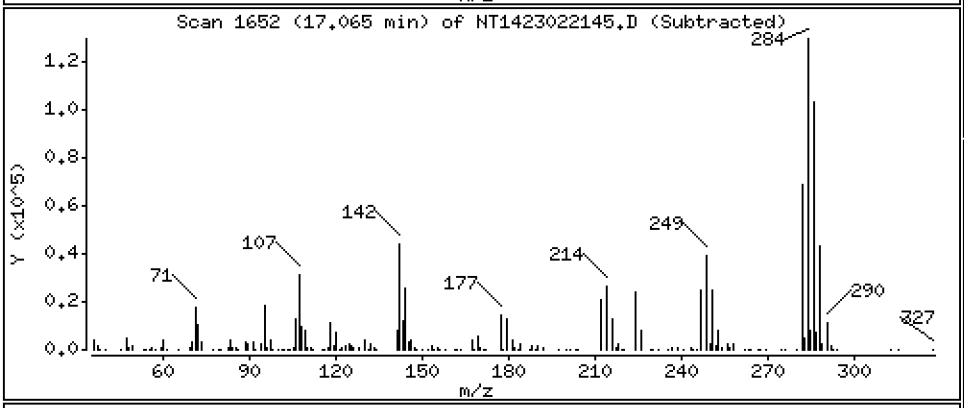
Column diameter: 0.25

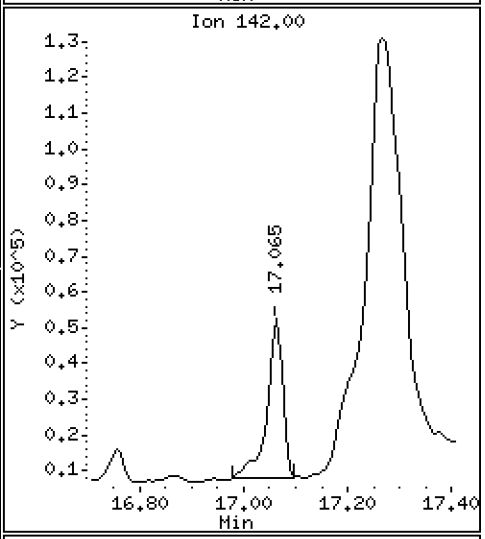
57 Hexachlorobenzene

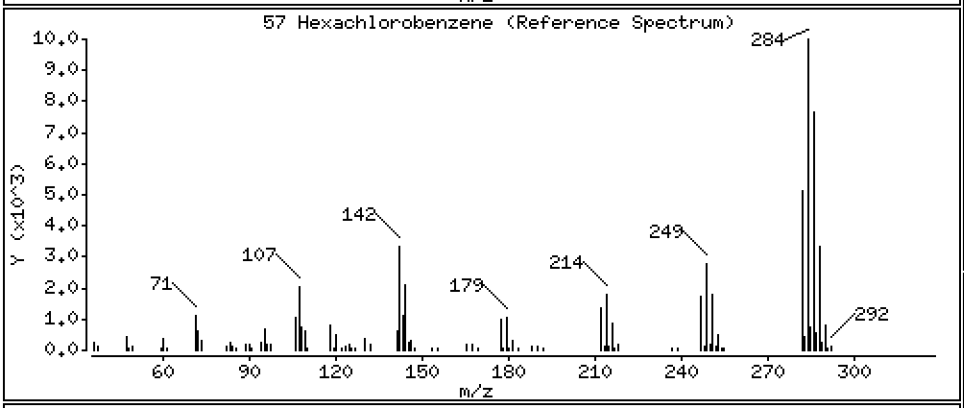
Concentration: 3.588 ug/mL

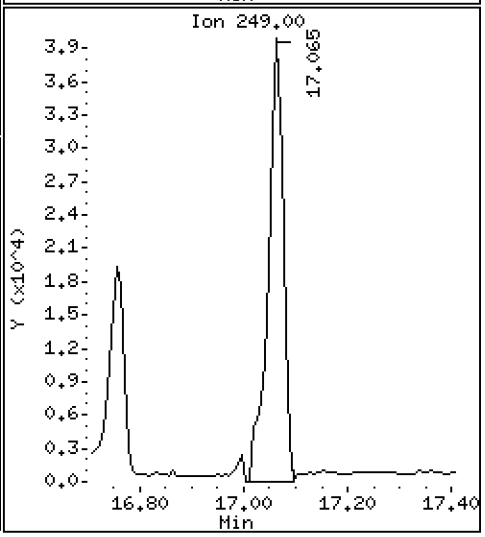


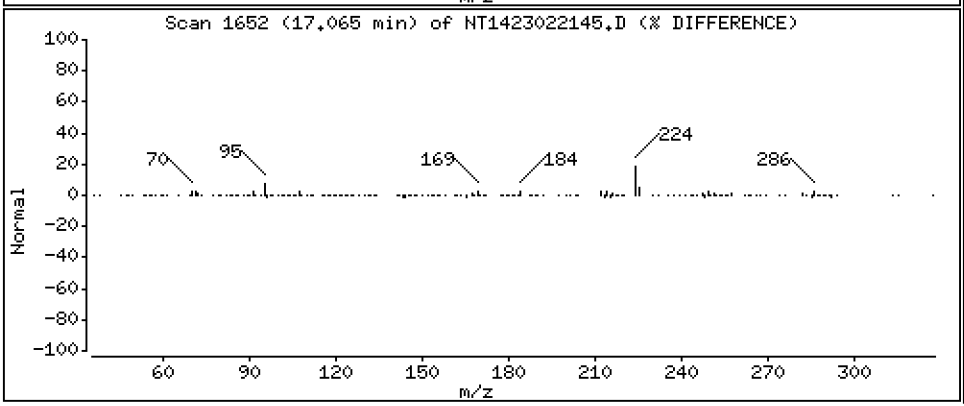












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

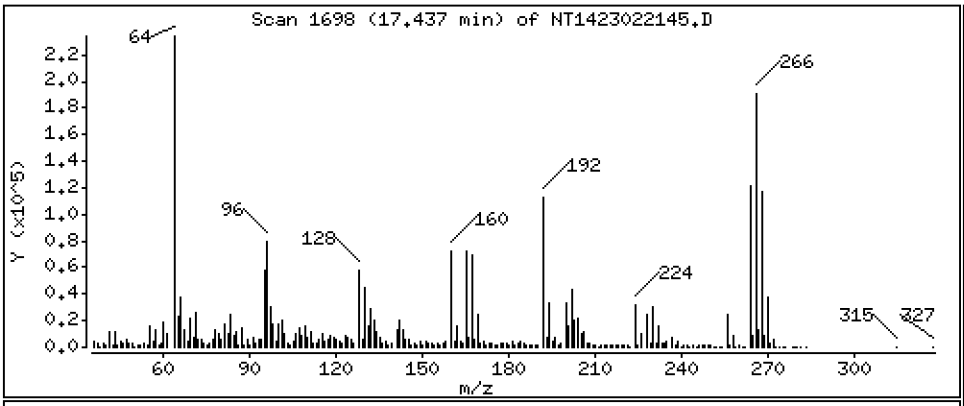
Operator: DSD

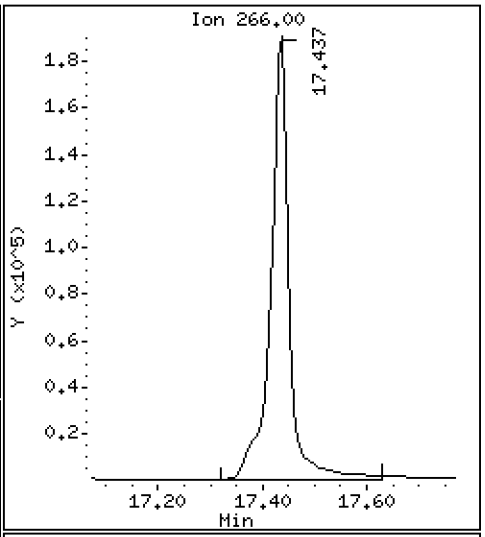
Column phase: ZB-5msi

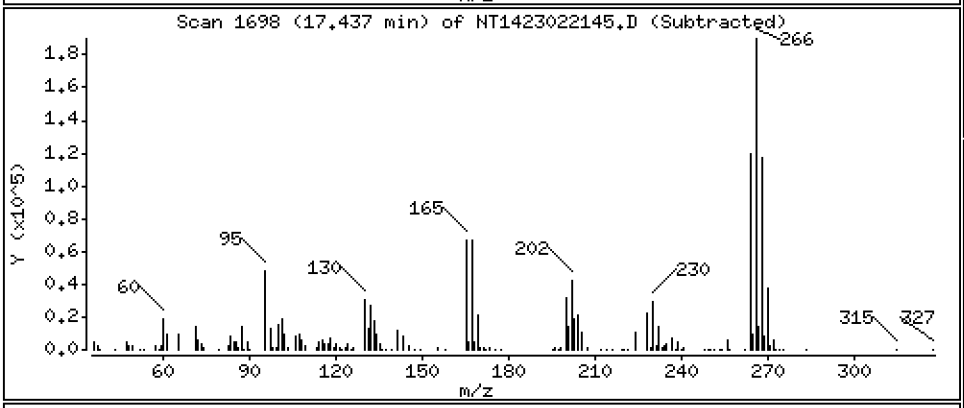
Column diameter: 0.25

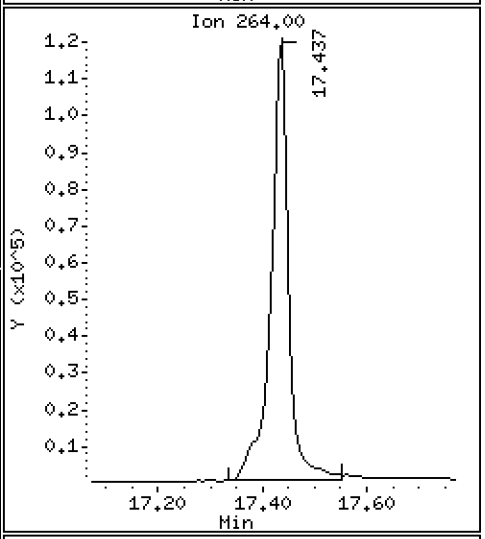
58 Pentachlorophenol

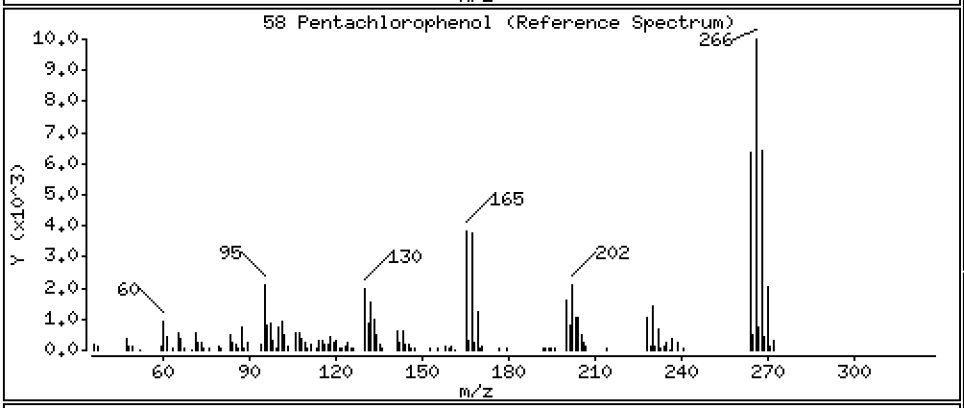
Concentration: 12.69 ug/mL

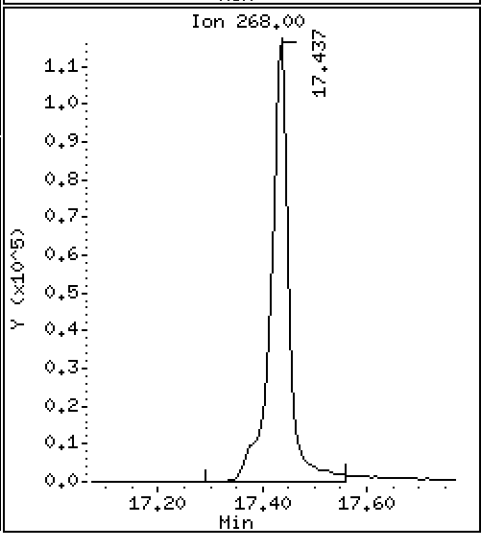


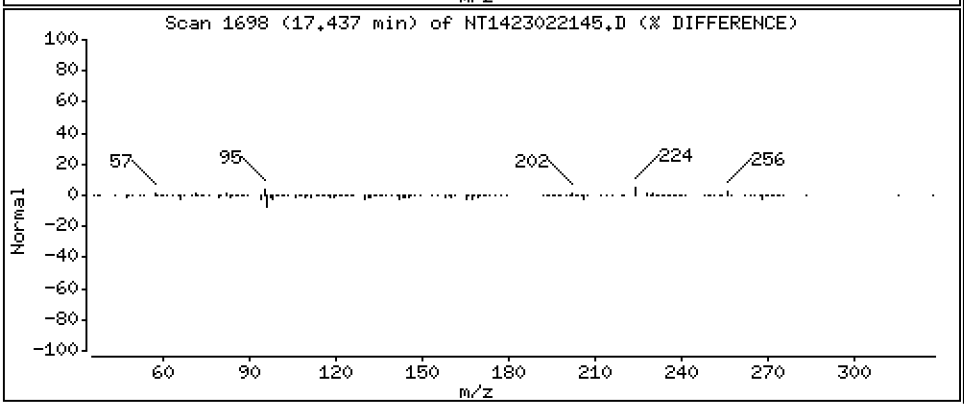












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

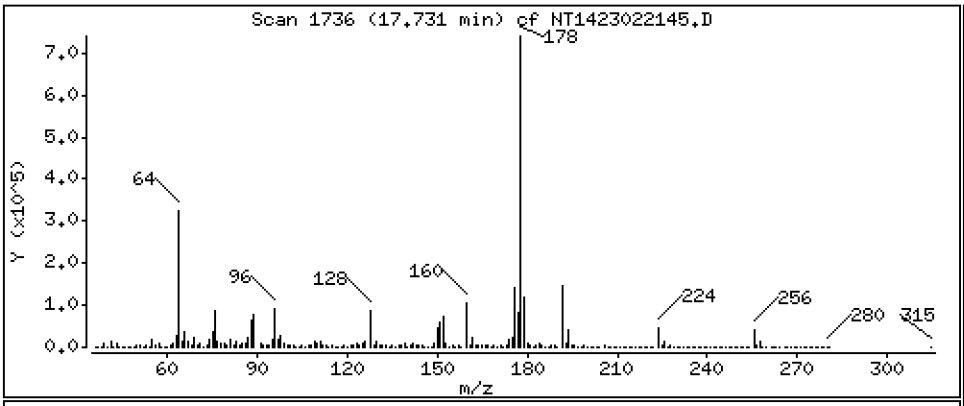
Operator: DSD

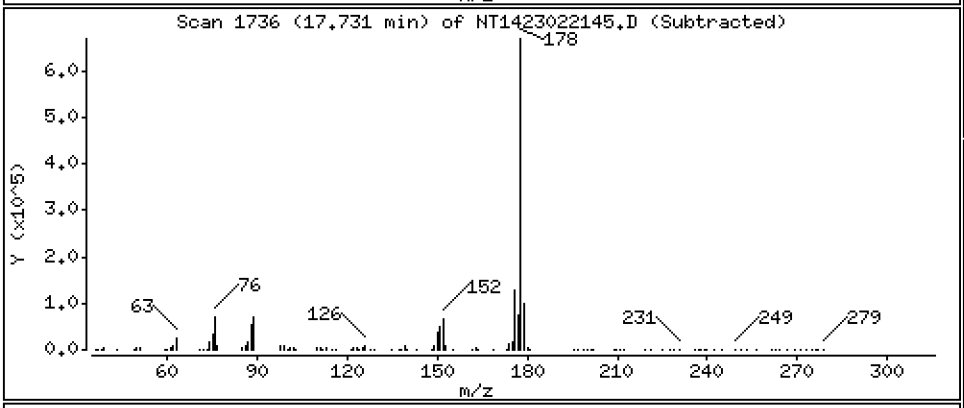
Column phase: ZB-5msi

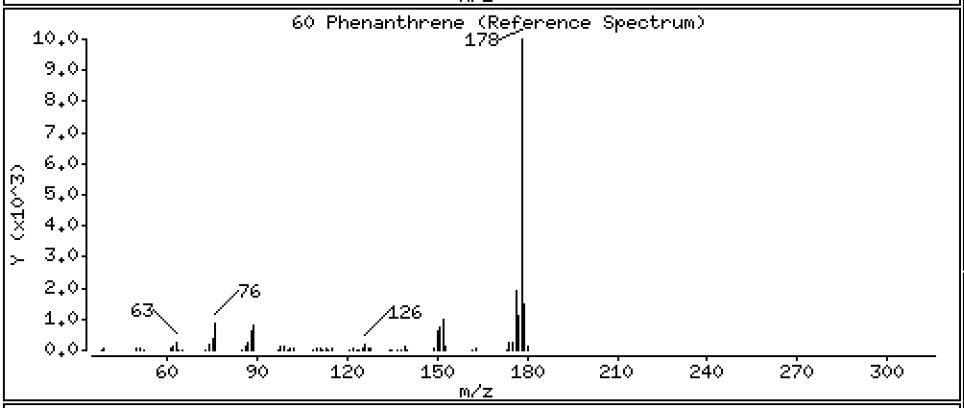
Column diameter: 0.25

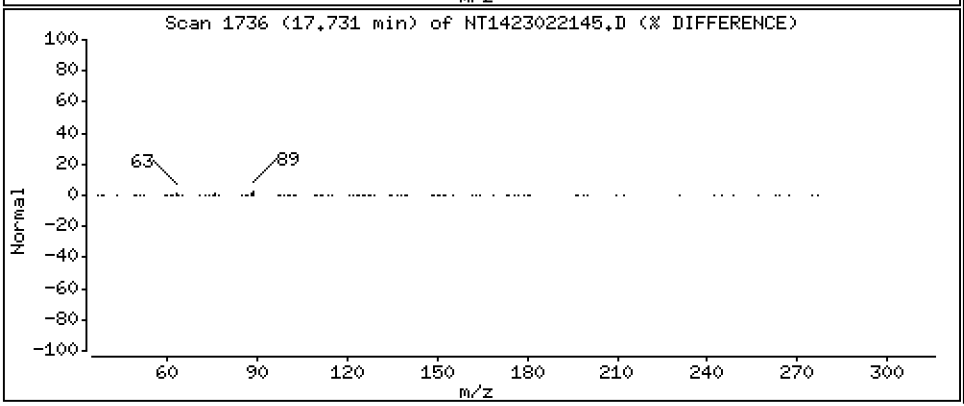
60 Phenanthrene

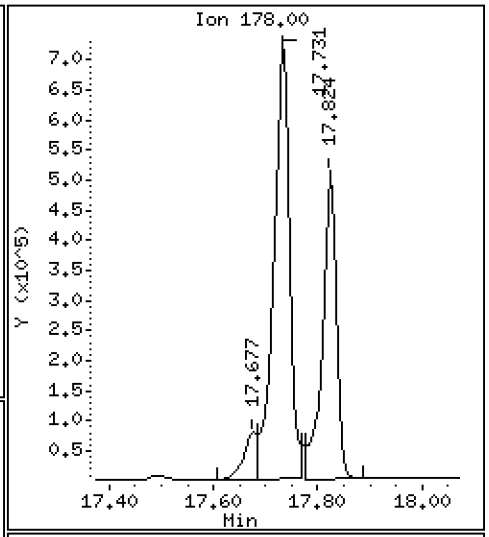
Concentration: 5.652 ug/mL

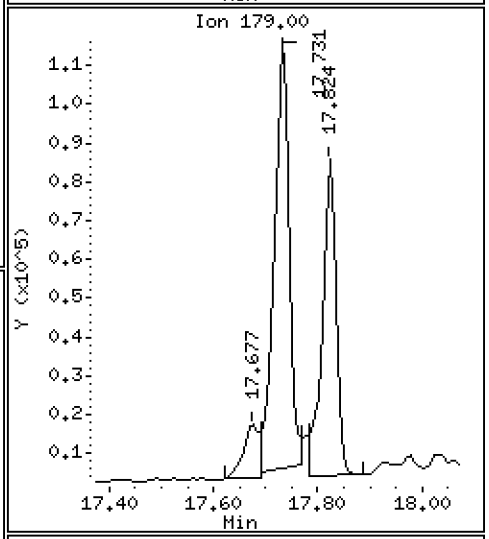


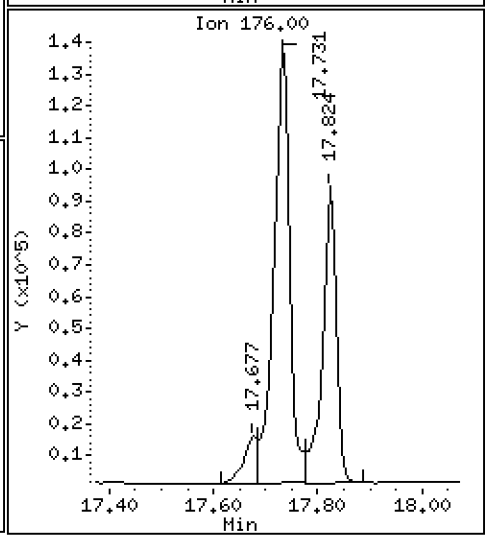












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

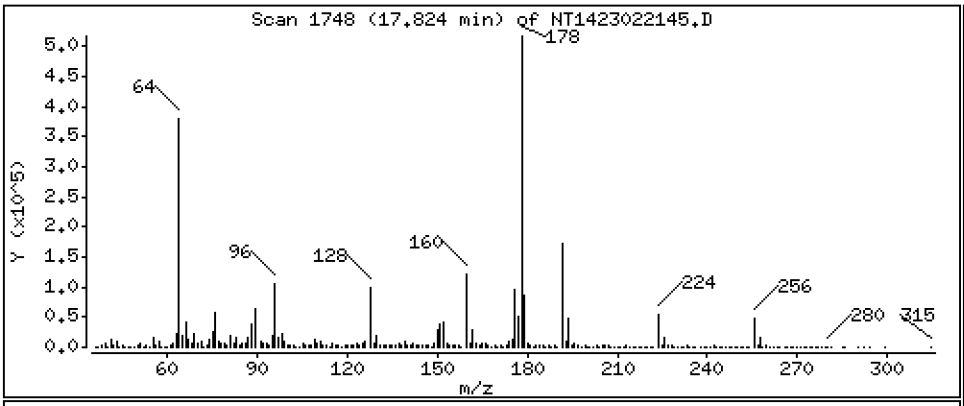
Operator: DSD

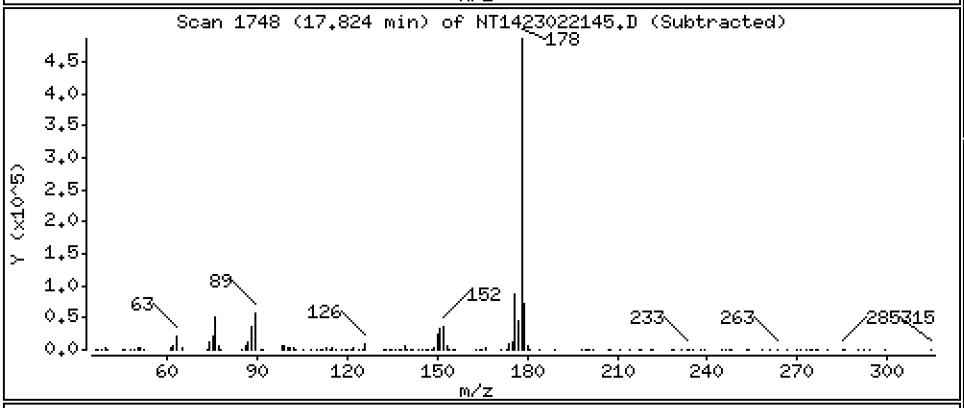
Column phase: ZB-5msi

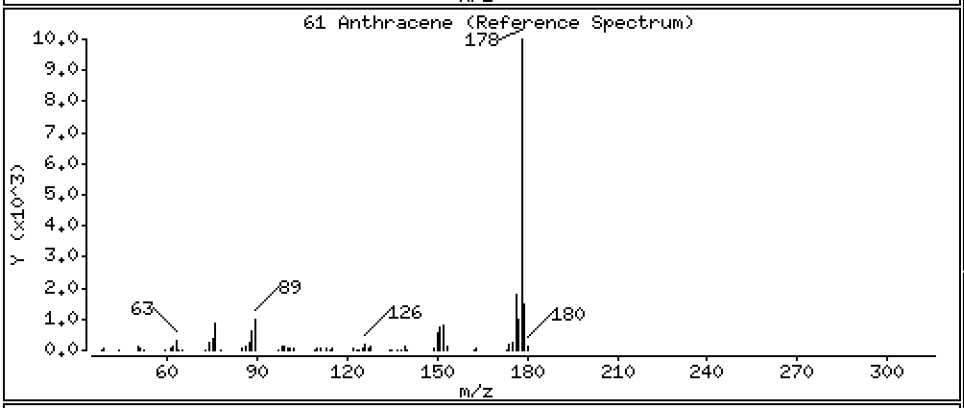
Column diameter: 0.25

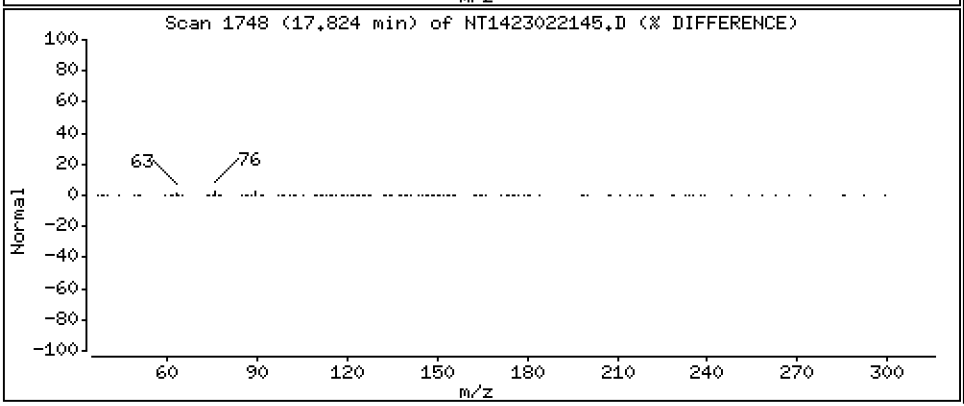
61 Anthracene

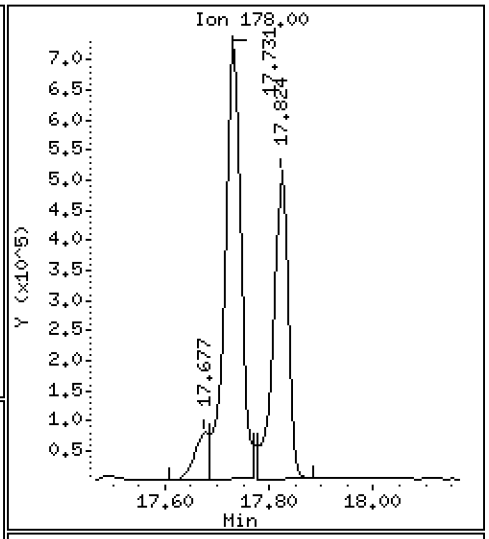
Concentration: 3.674 ug/mL

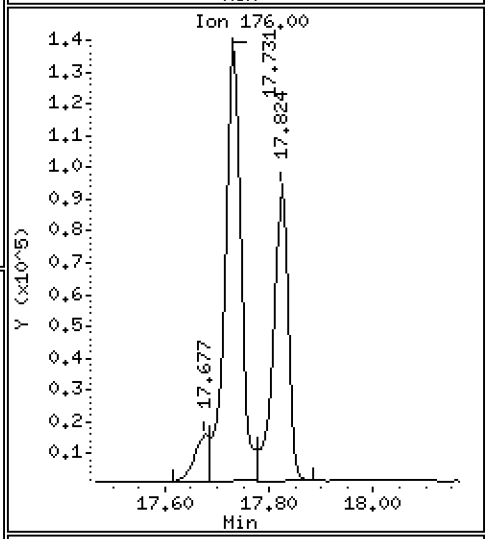


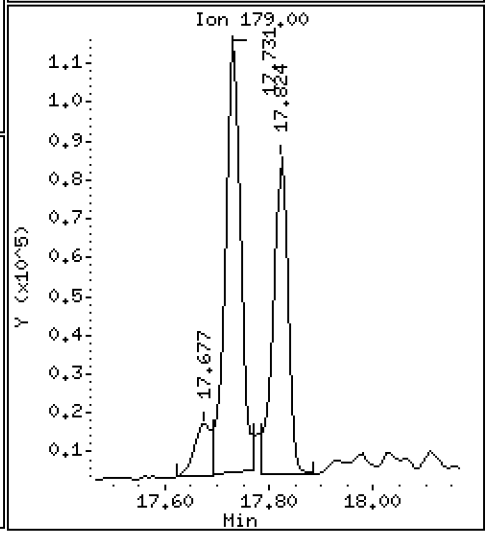












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

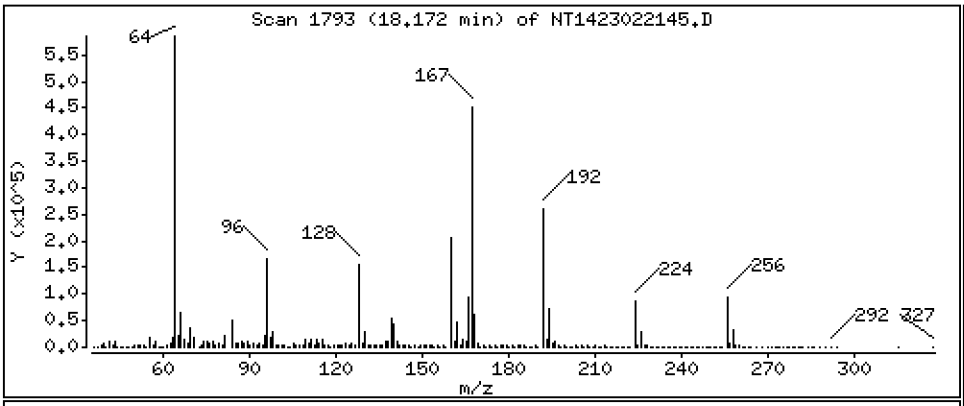
Operator: DSD

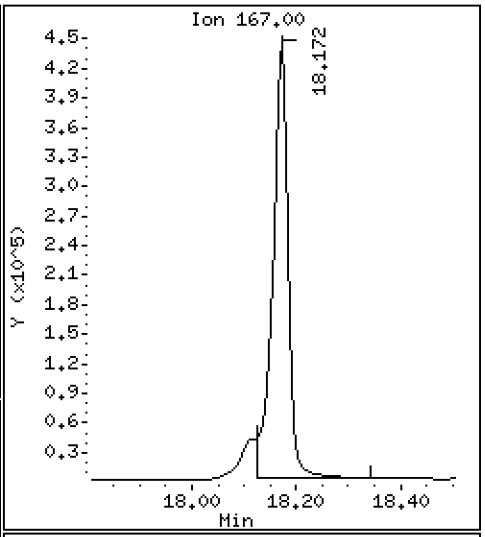
Column phase: ZB-5msi

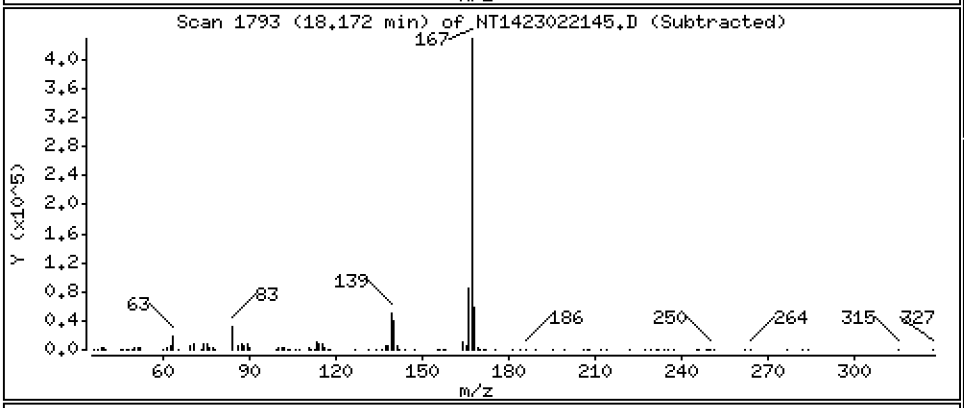
Column diameter: 0.25

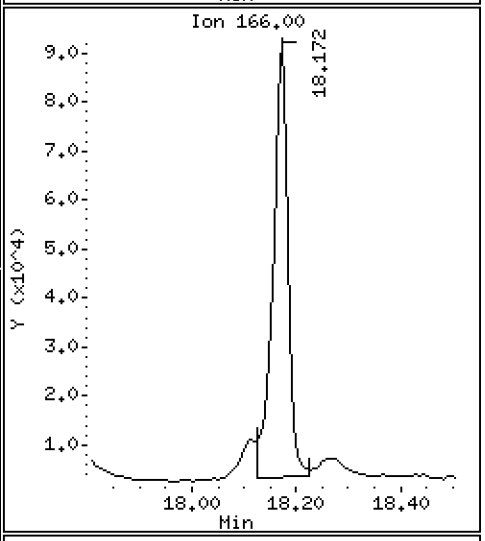
62 Carbazole

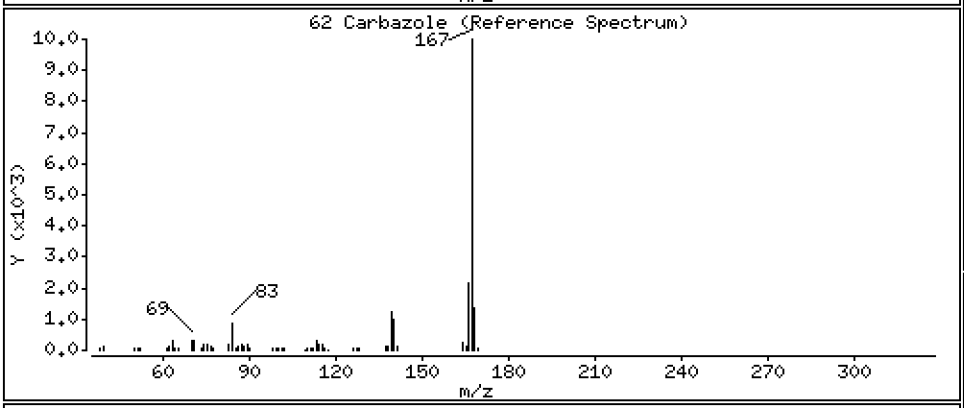
Concentration: 3.749 ug/mL

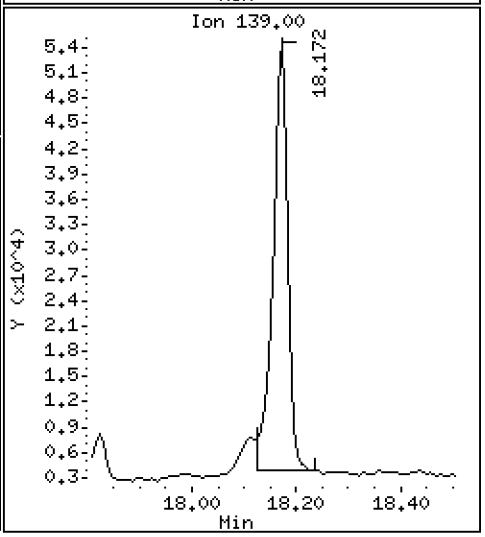


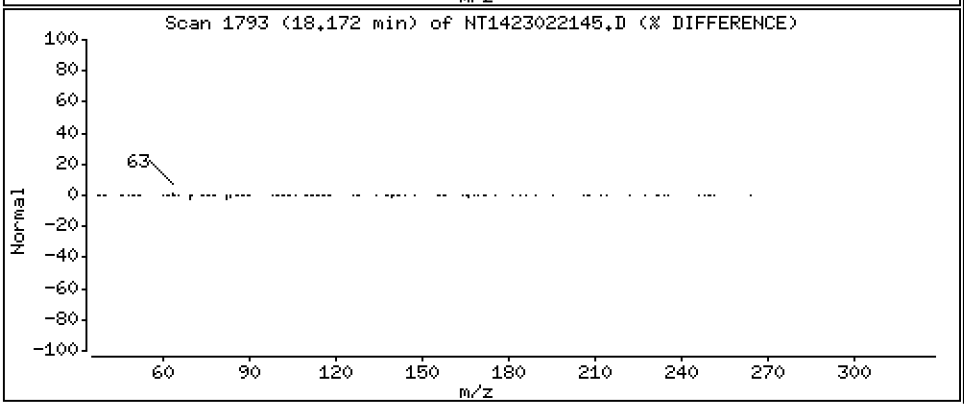












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

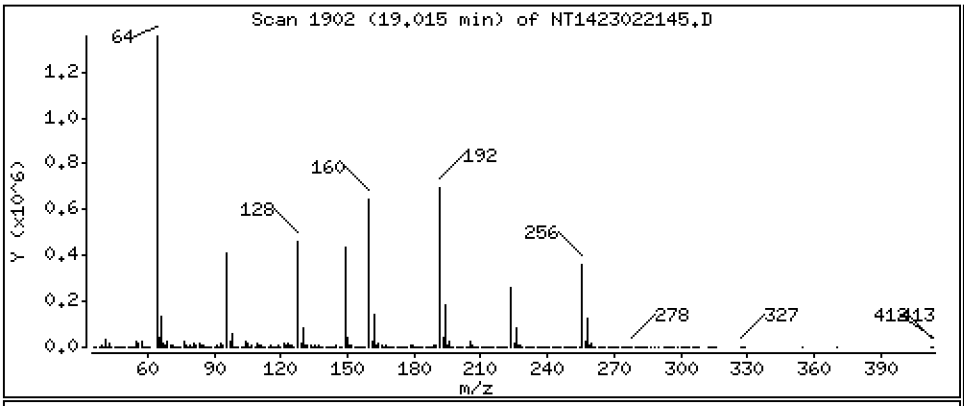
Operator: DSD

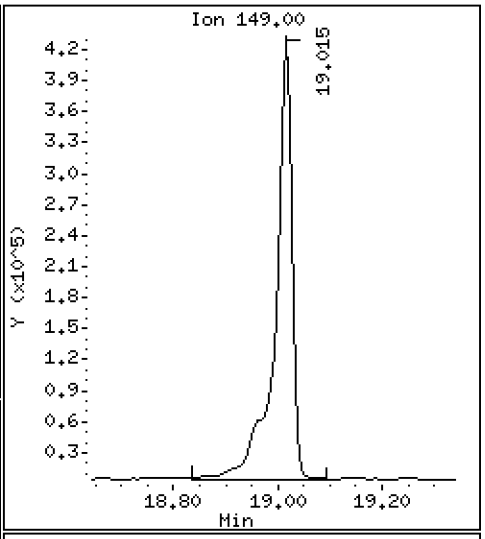
Column phase: ZB-5msi

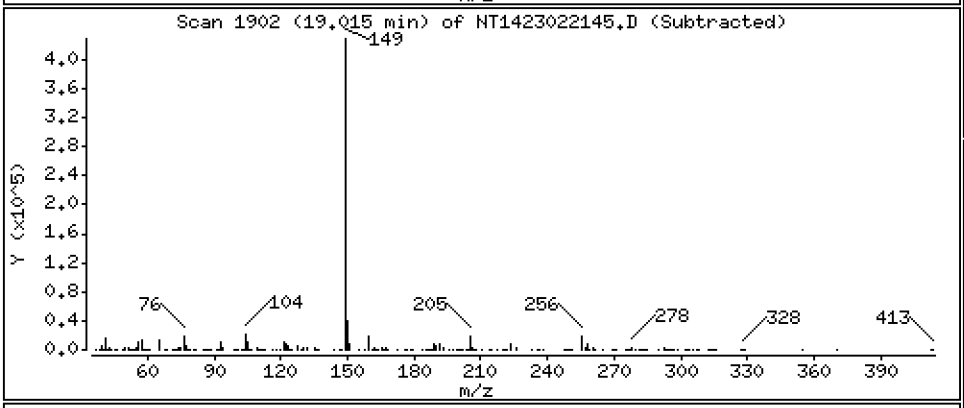
Column diameter: 0.25

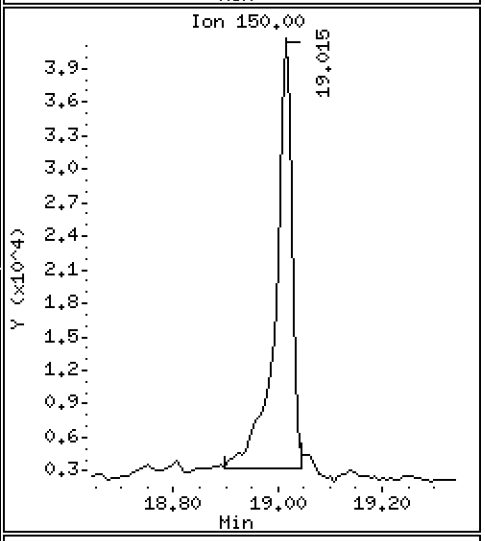
63 Di-n-butylphthalate

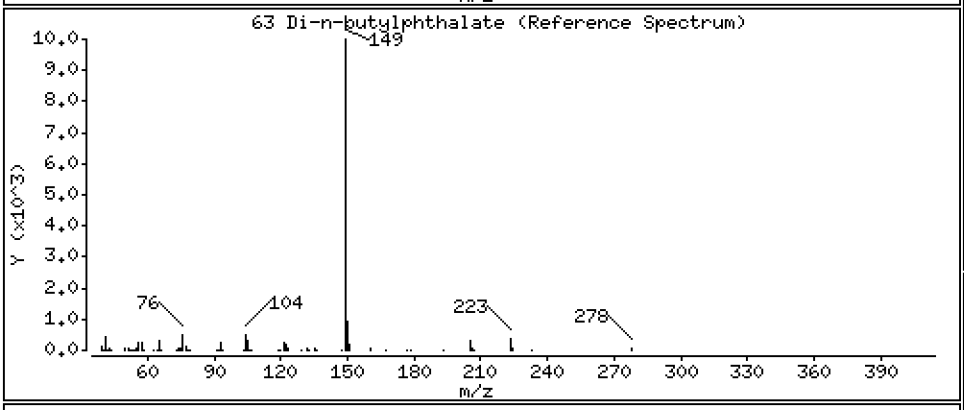
Concentration: 3.559 ug/mL

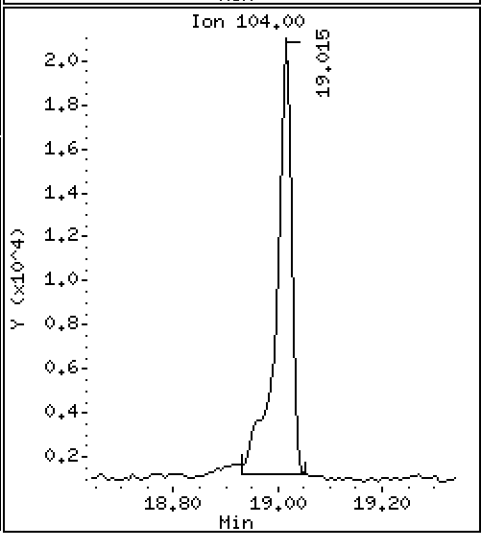


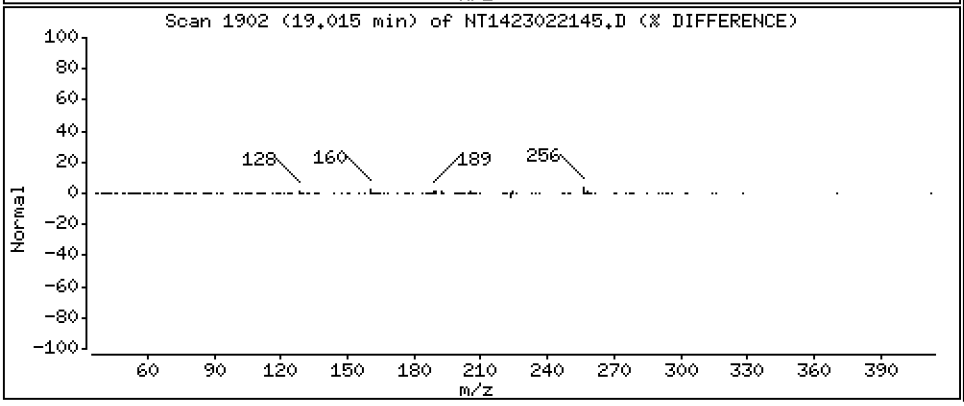












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

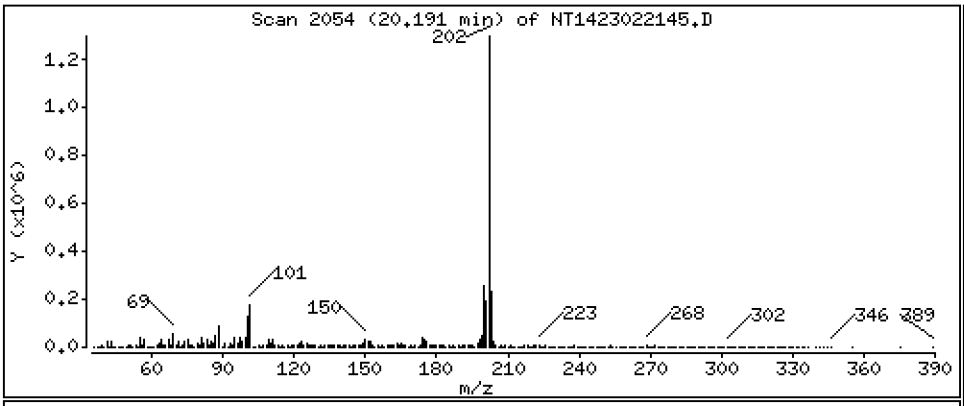
Operator: DSD

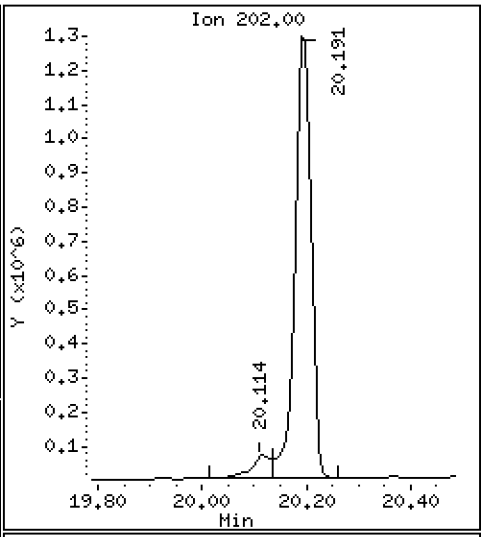
Column phase: ZB-5msi

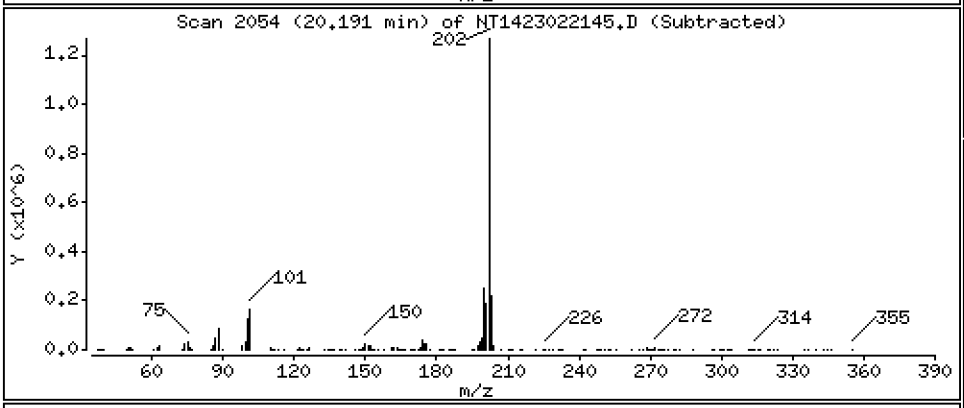
Column diameter: 0.25

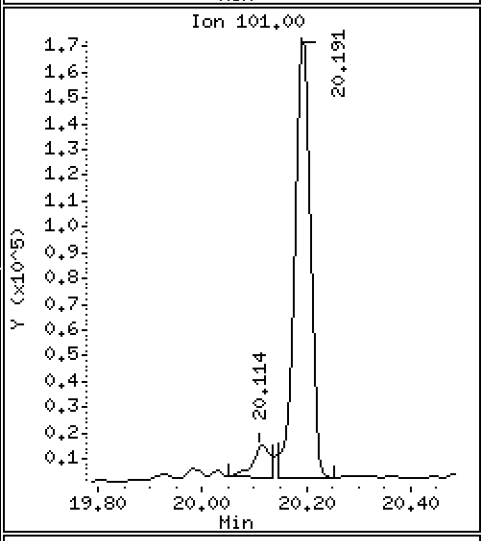
64 Fluoranthene

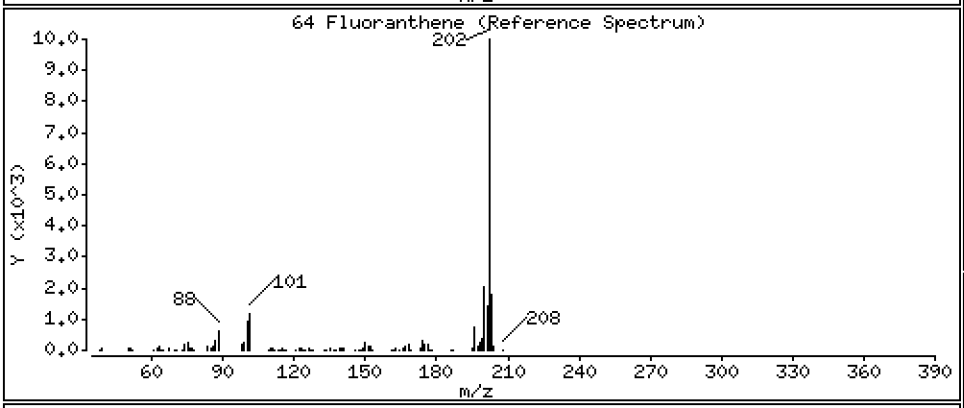
Concentration: 9.330 ug/mL

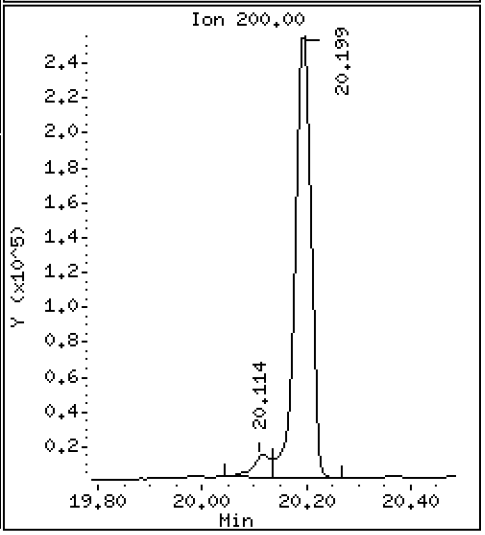


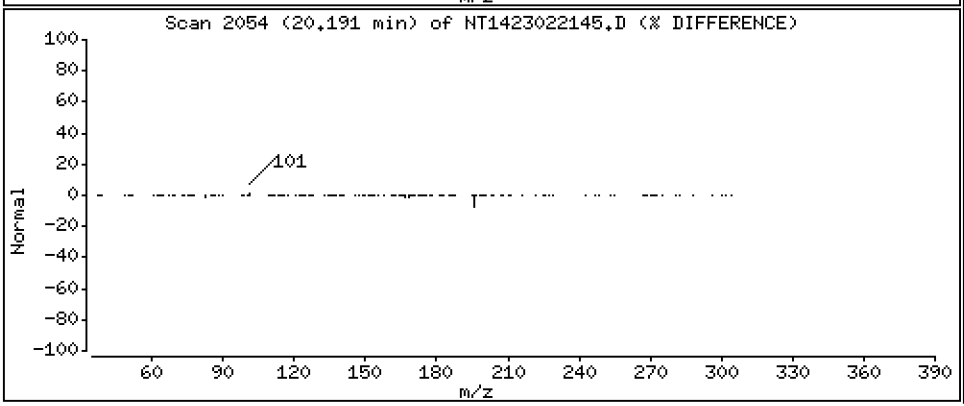












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022145.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

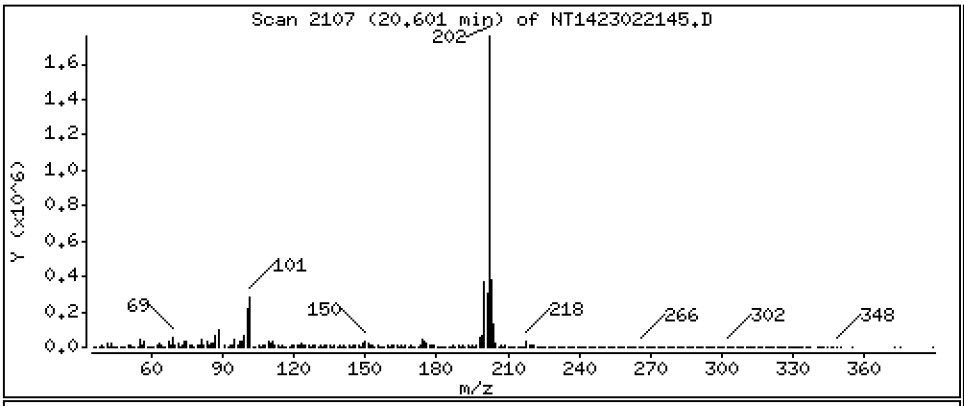
Operator: DSD

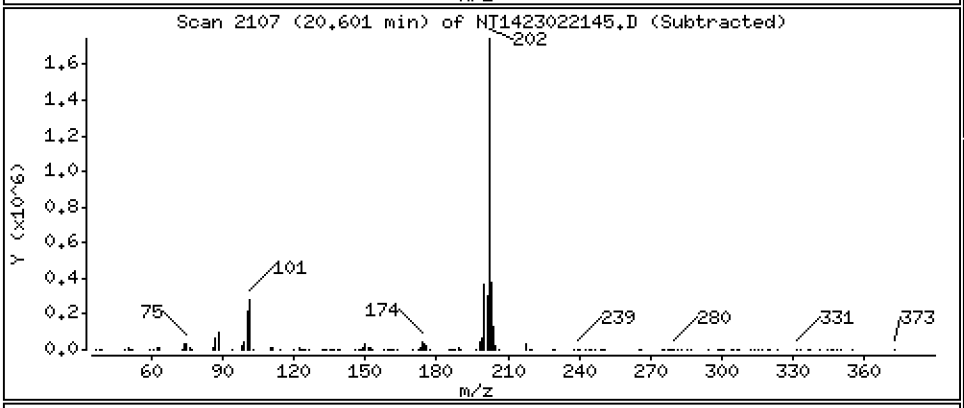
Column phase: ZB-5msi

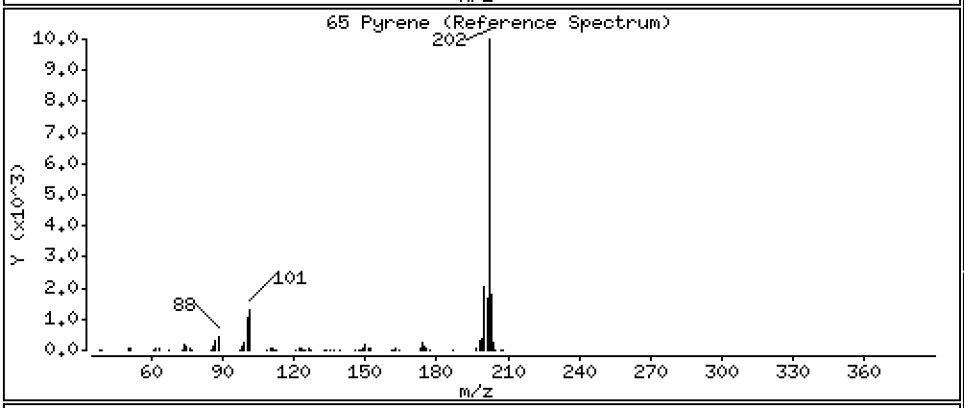
Column diameter: 0.25

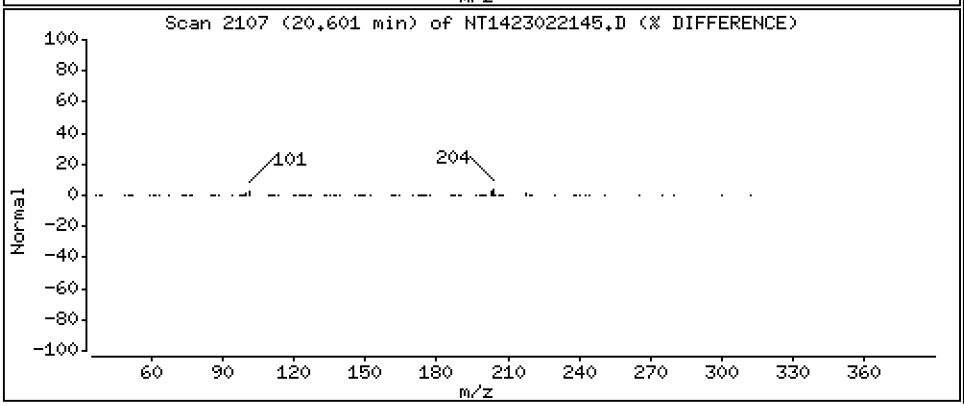
65 Pyrene

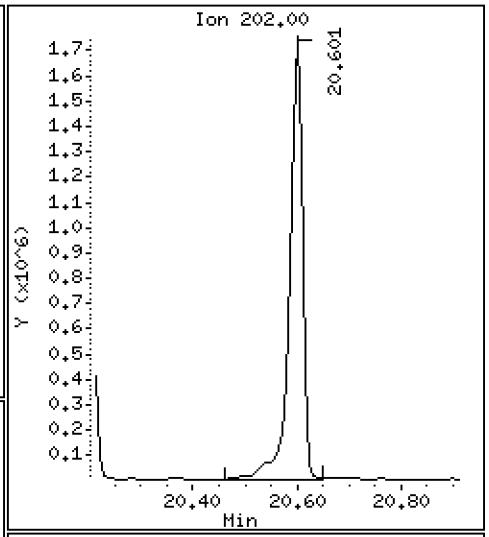
Concentration: 9.934 ug/mL

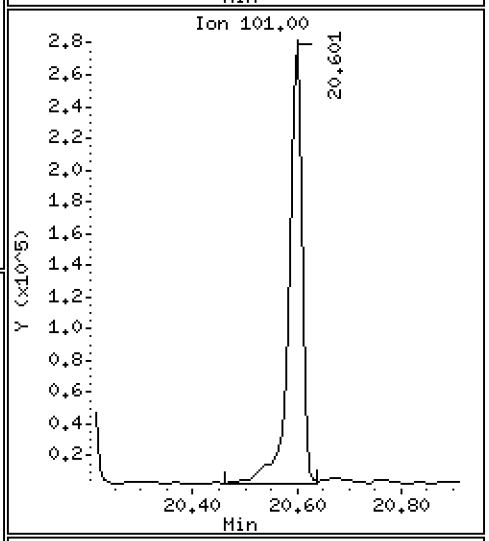


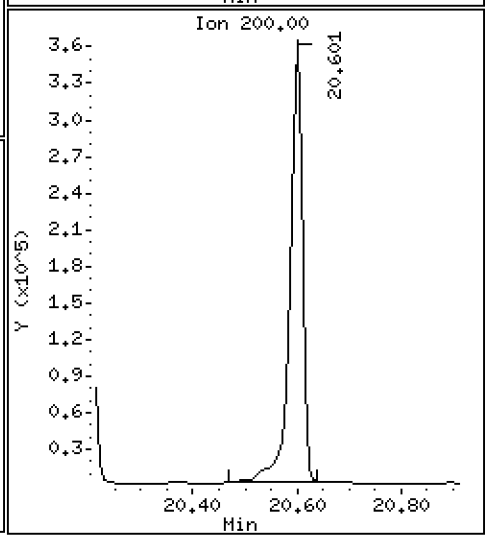












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

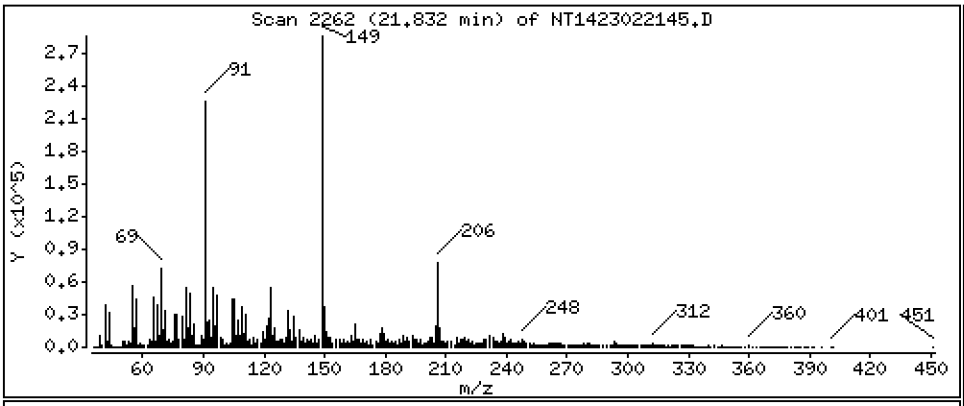
Operator: DSD

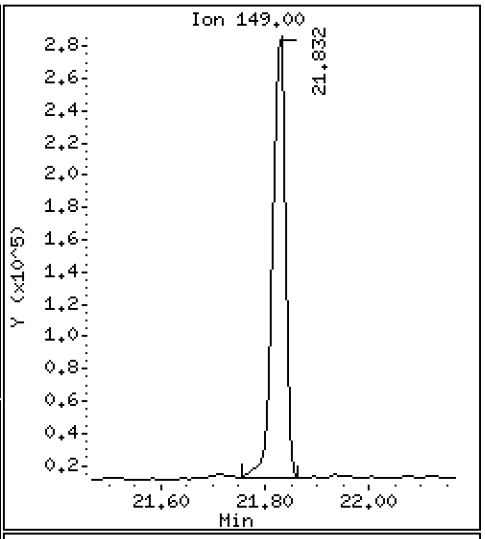
Column phase: ZB-5msi

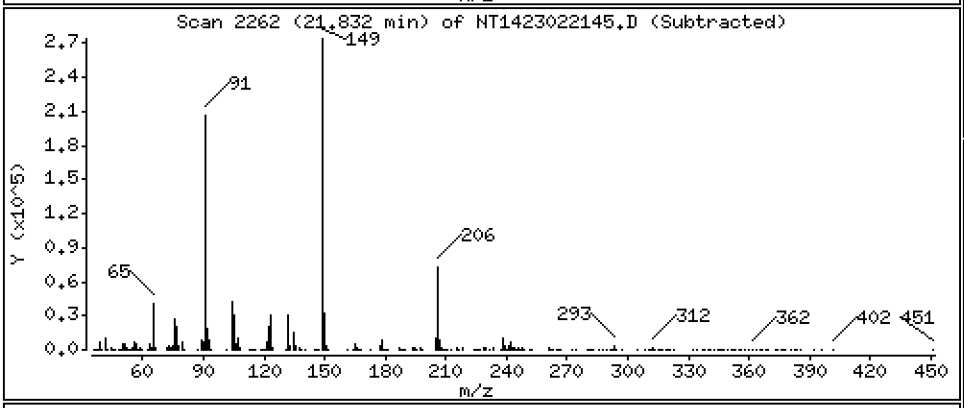
Column diameter: 0.25

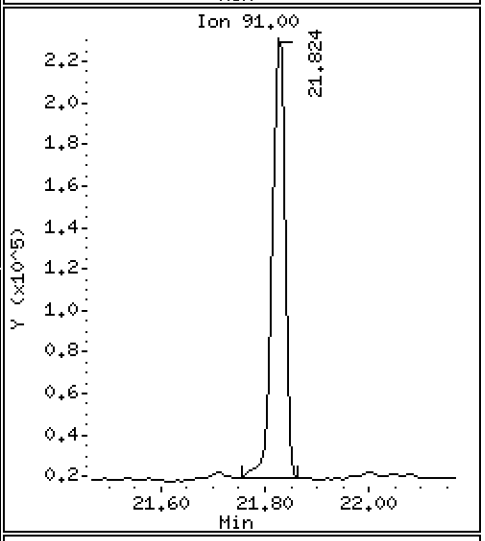
67 Butylbenzylphthalate

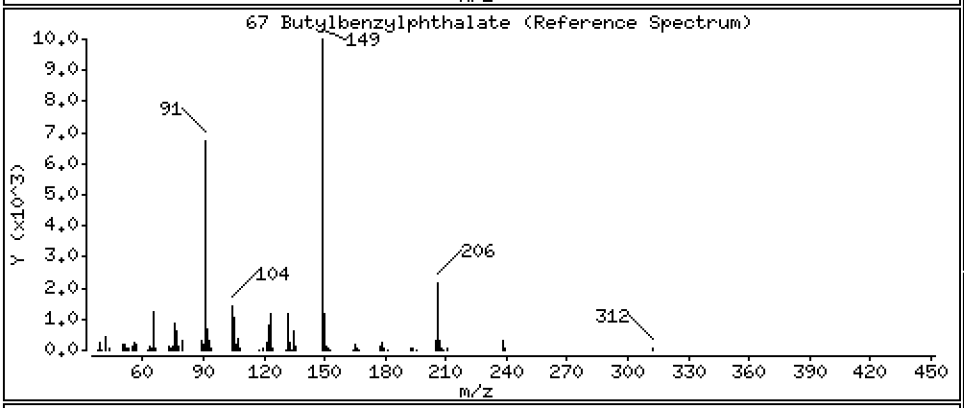
Concentration: 4.260 ug/mL

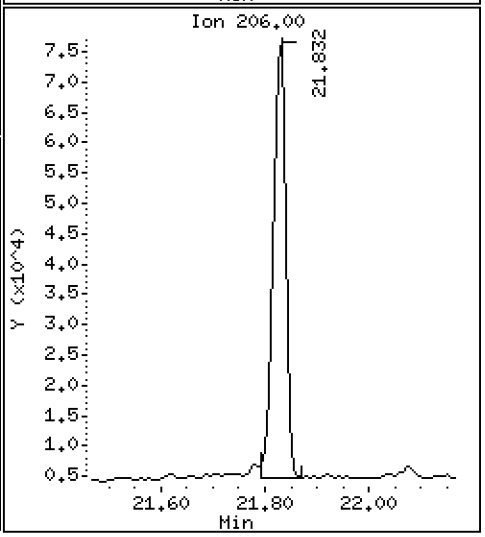


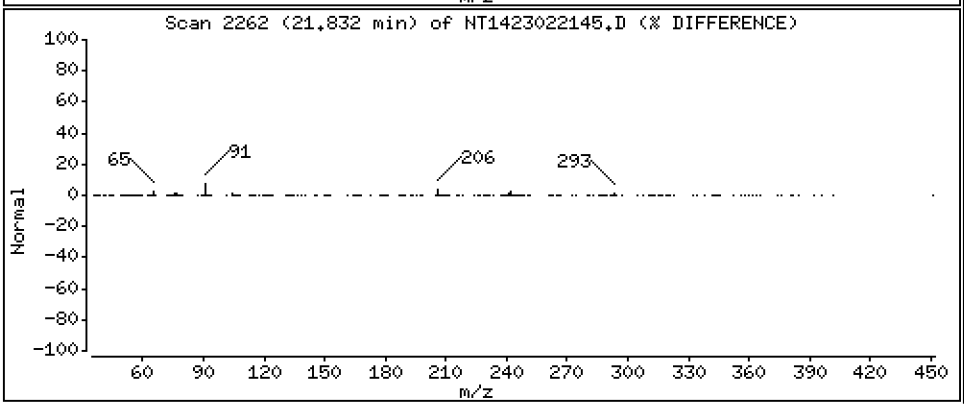












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022145.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

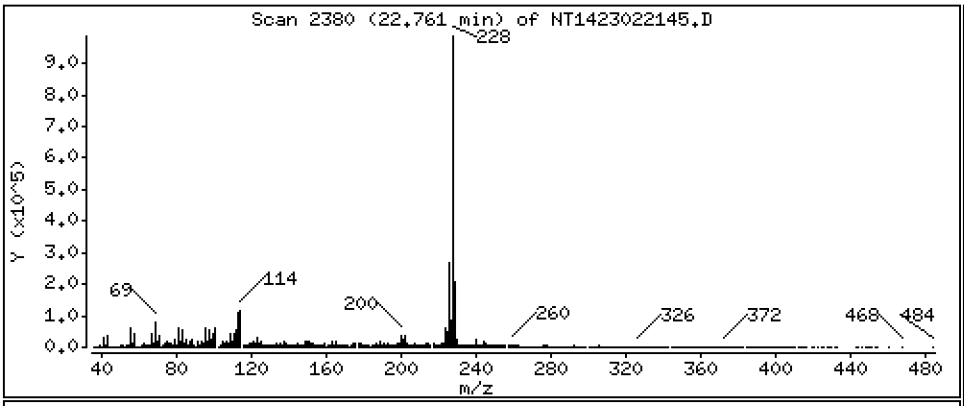
Operator: DSD

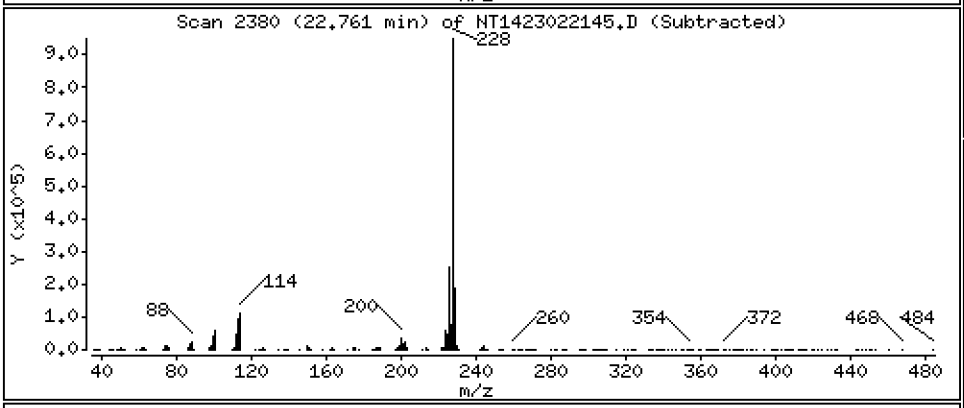
Column phase: ZB-5msi

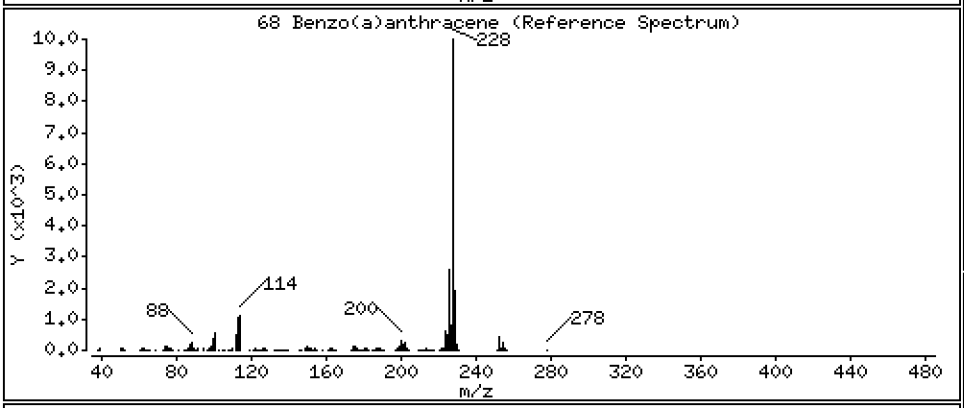
Column diameter: 0.25

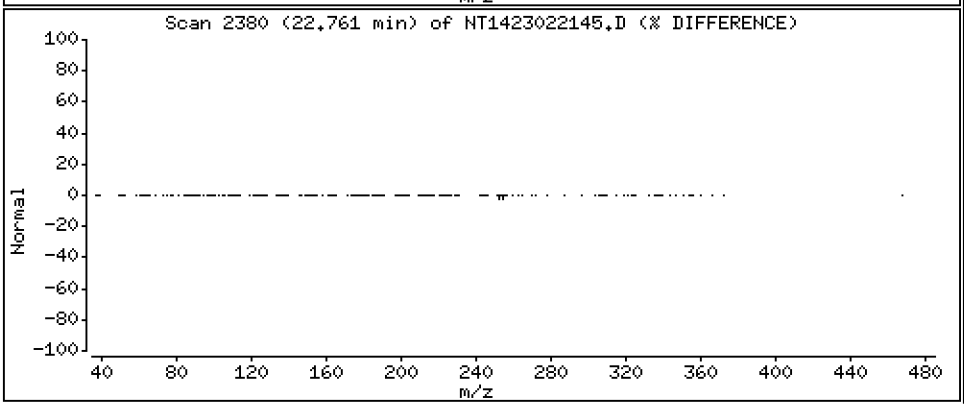
68 Benzo(a)anthracene

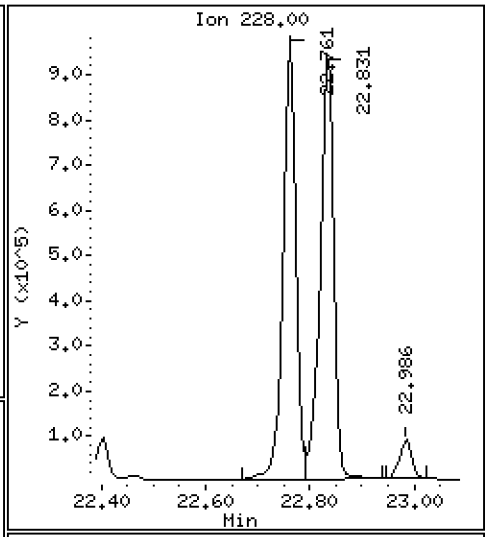
Concentration: 7.718 ug/mL

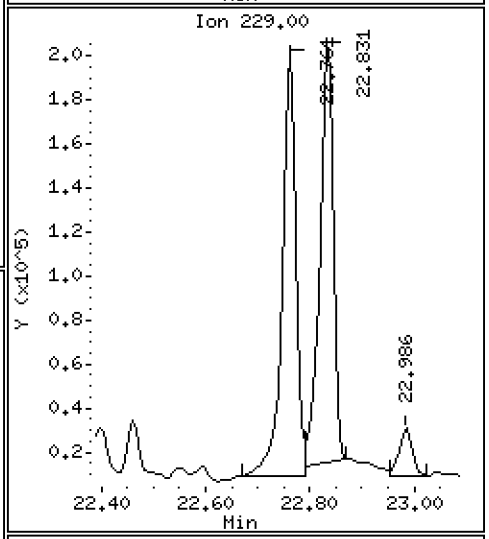


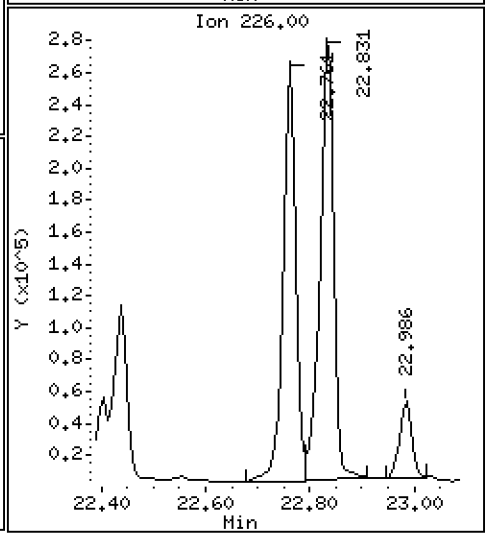












Date : 22-FEB-2023 15:58

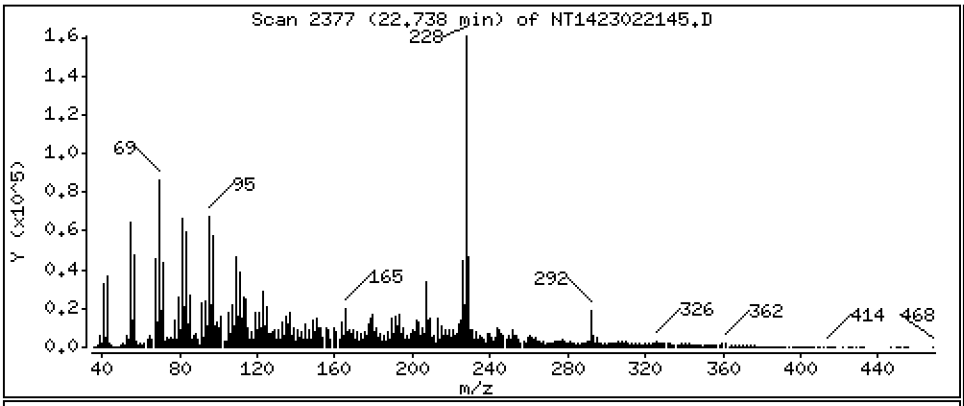
Client ID: Instrument: nt14.i

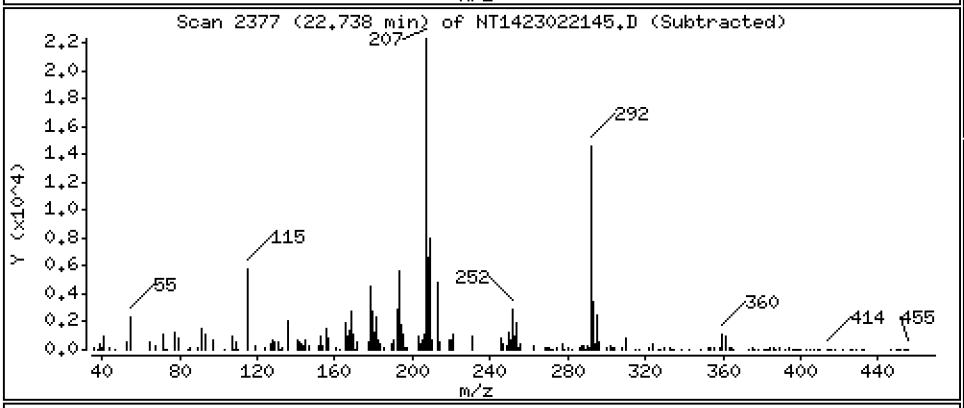
Sample Info: BLA0393-MSD1

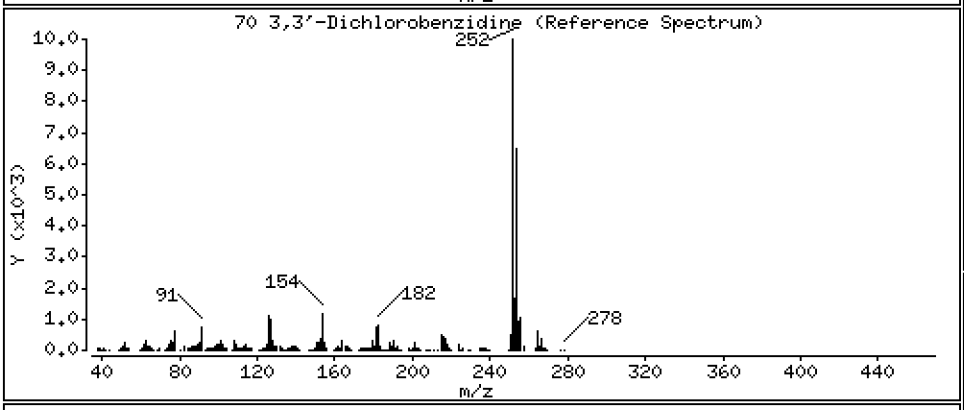
Operator: DSD

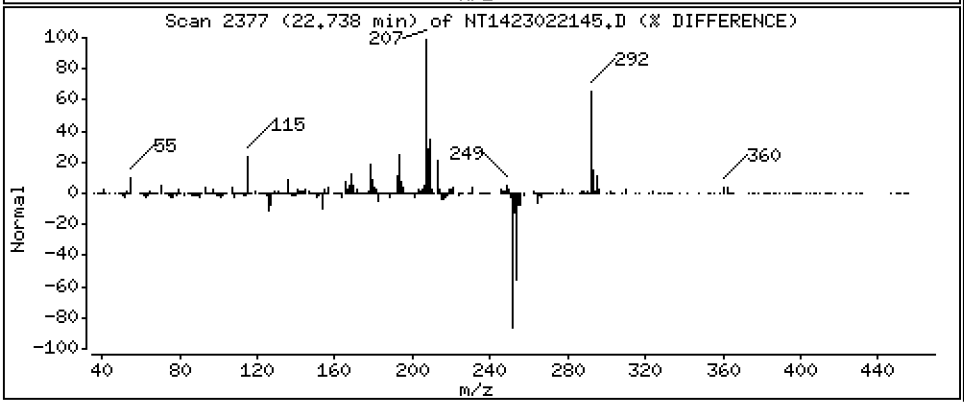
Column phase: ZB-5msi Column diameter: 0.25

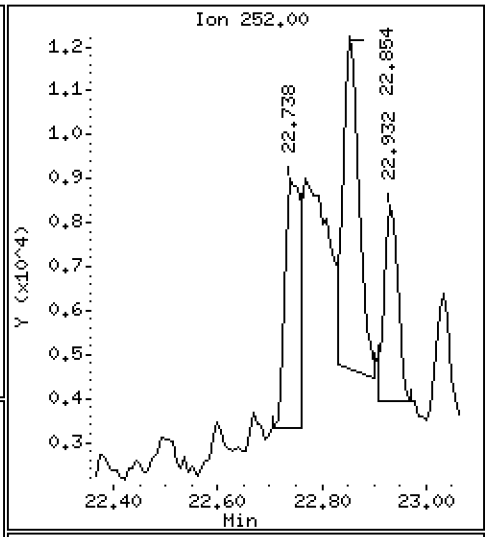
70 3,3'-Dichlorobenzidine Concentration: 0.1905 ug/mL

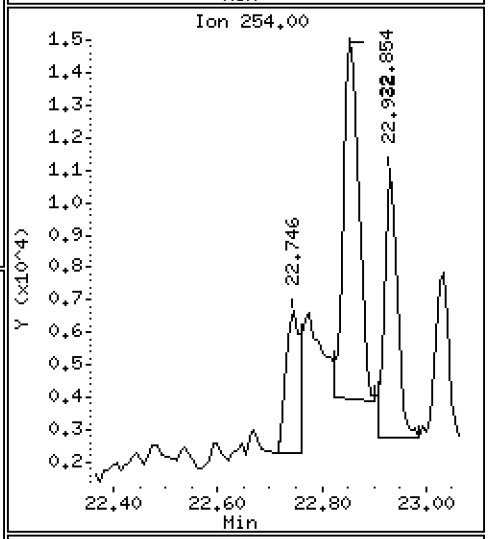


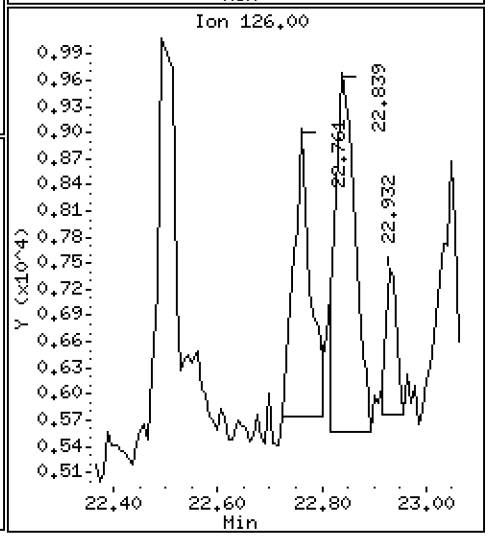












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022145.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

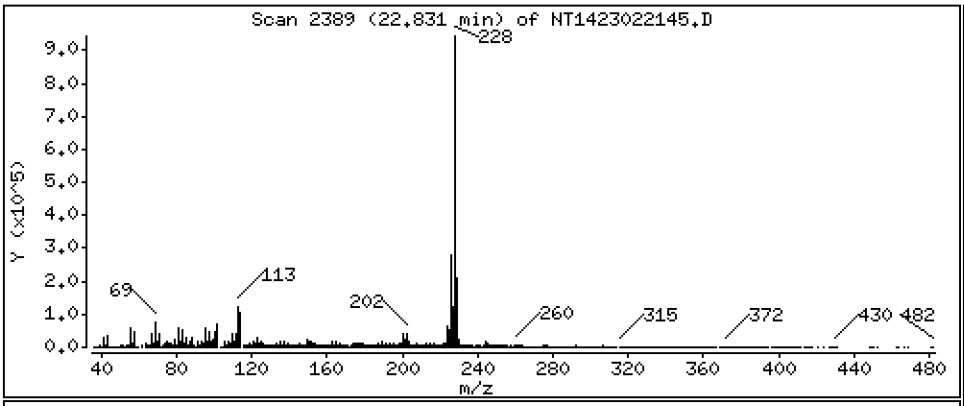
Operator: DSD

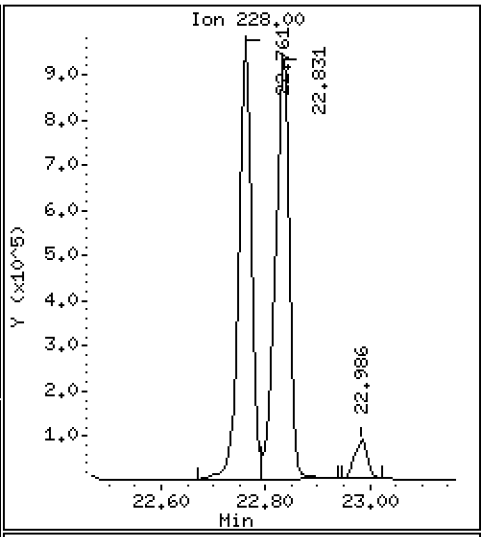
Column phase: ZB-5msi

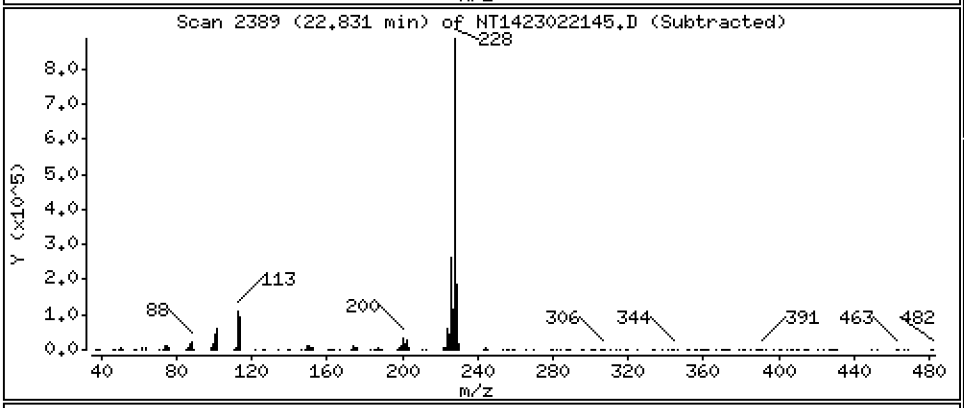
Column diameter: 0.25

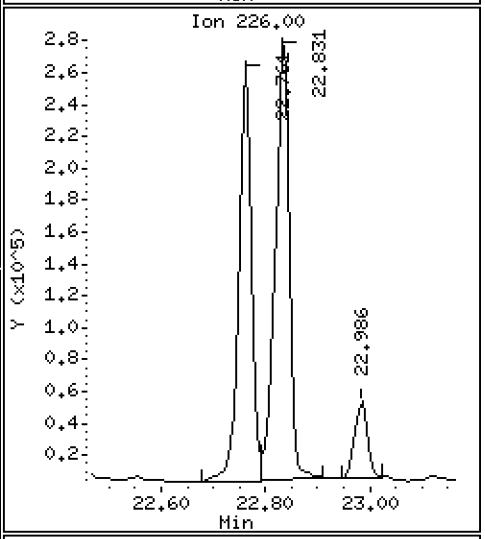
71 Chrysene

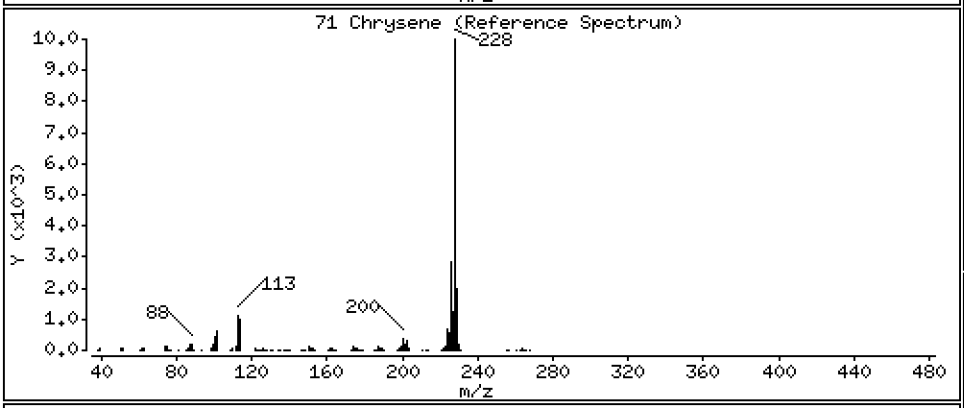
Concentration: 8.705 ug/mL

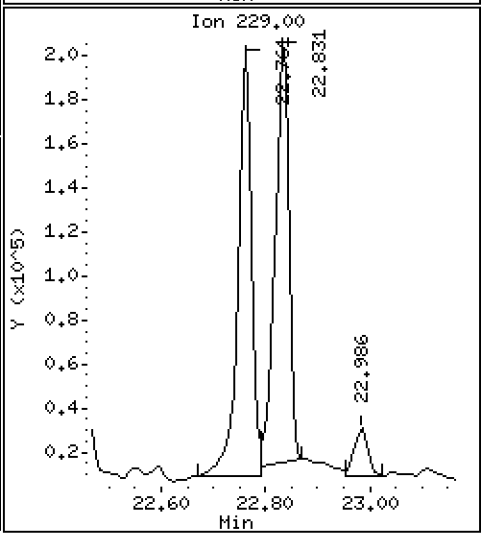


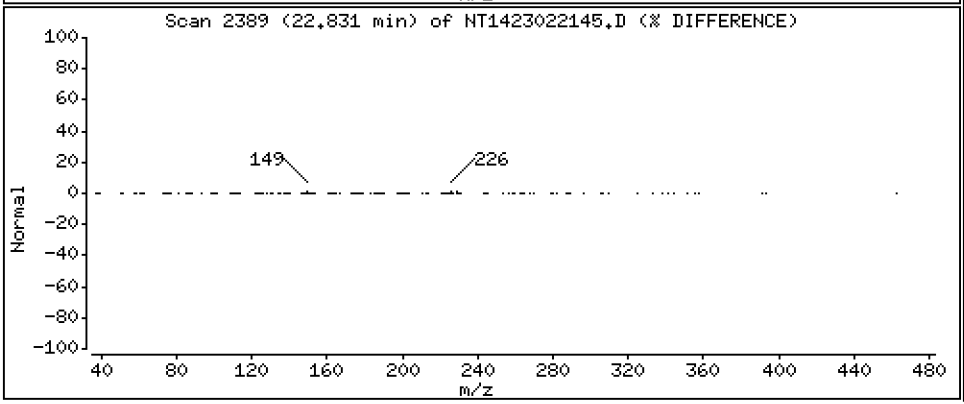












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

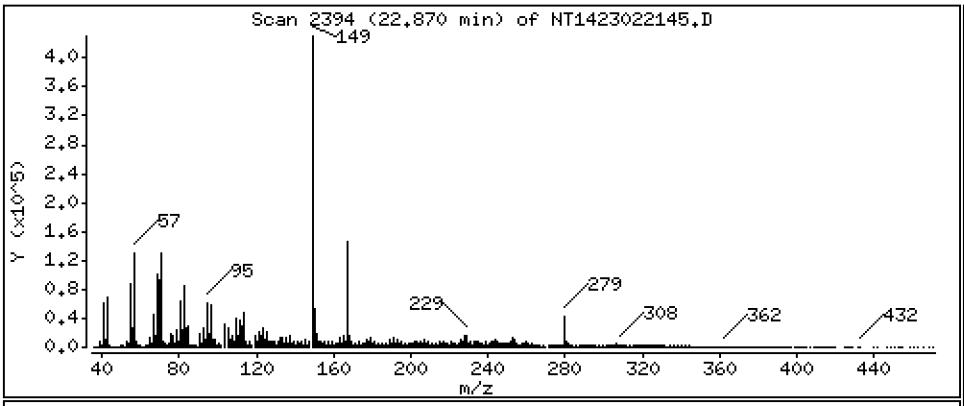
Operator: DSD

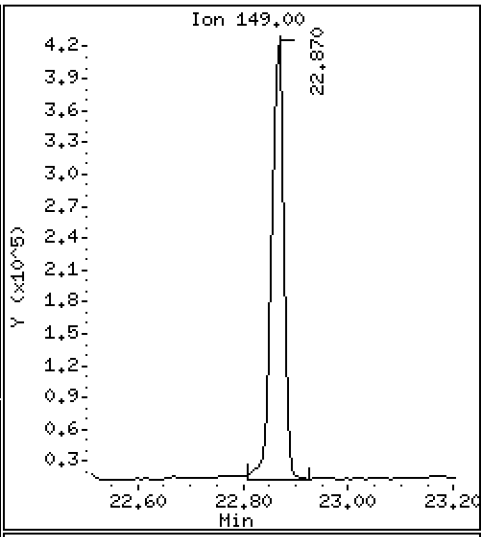
Column phase: ZB-5msi

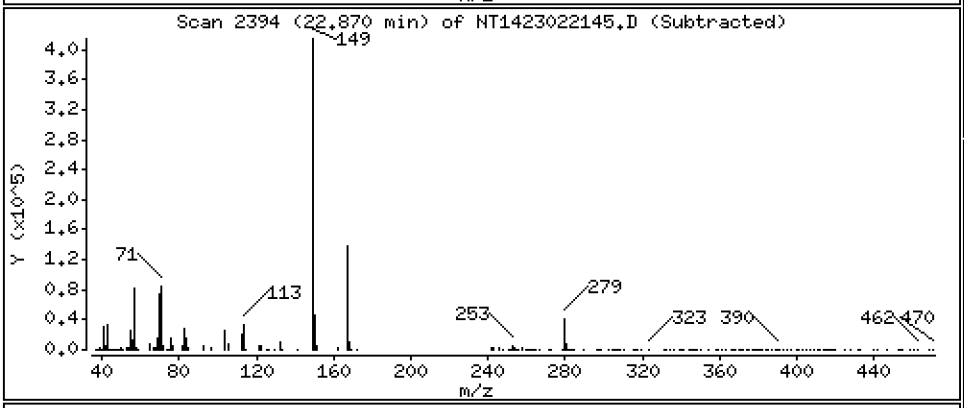
Column diameter: 0.25

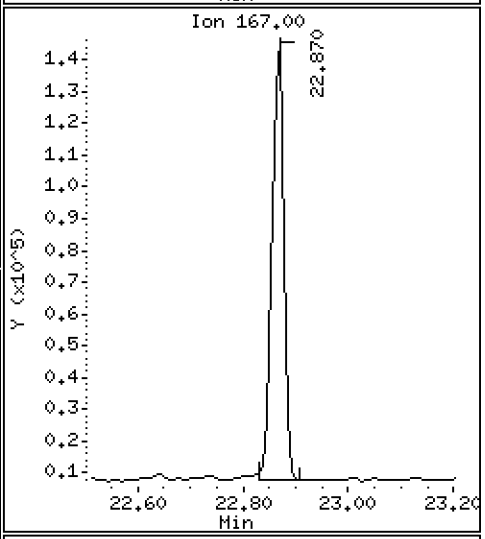
72 bis(2-Ethylhexyl)phthalate

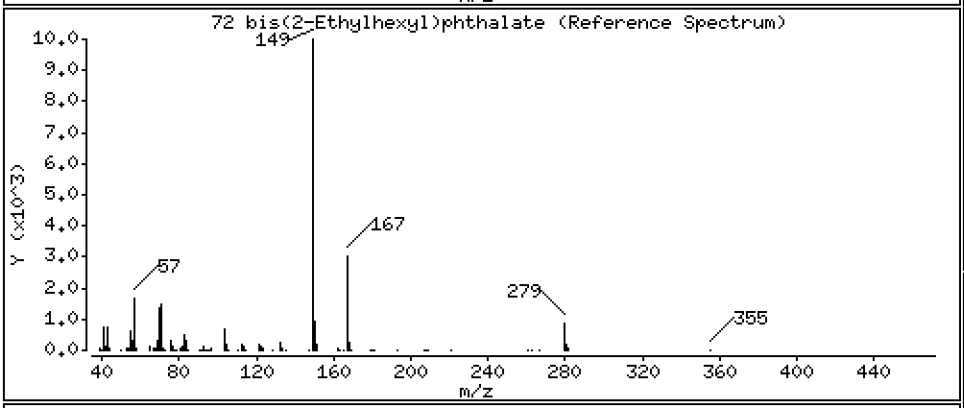
Concentration: 3.697 ug/mL

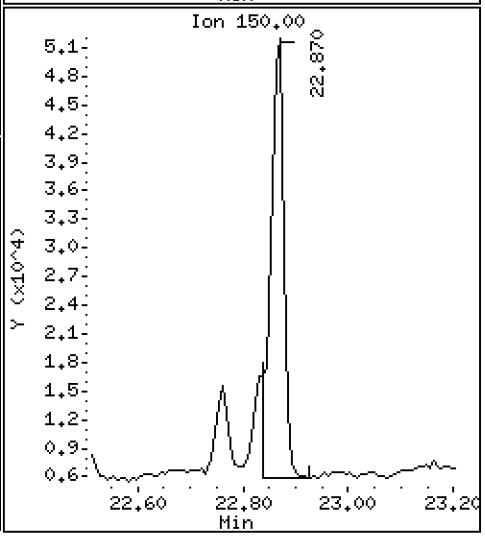


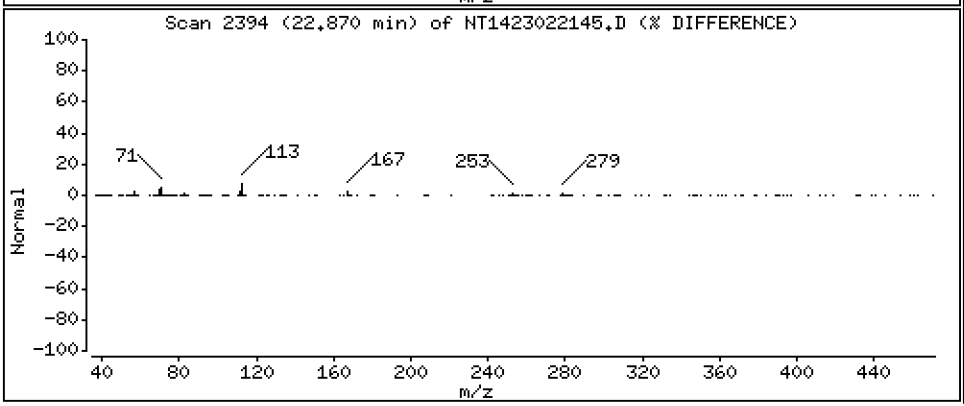












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

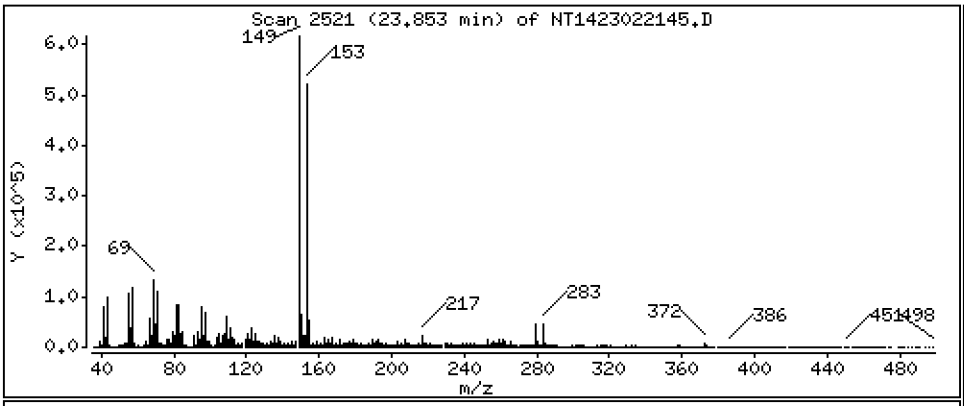
Operator: DSD

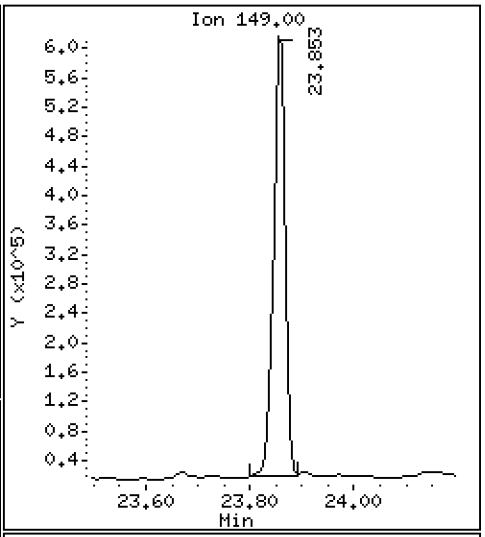
Column phase: ZB-5msi

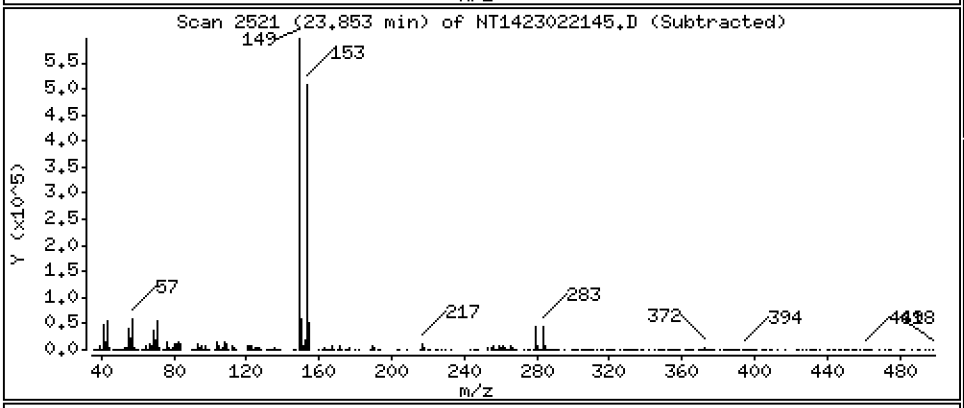
Column diameter: 0.25

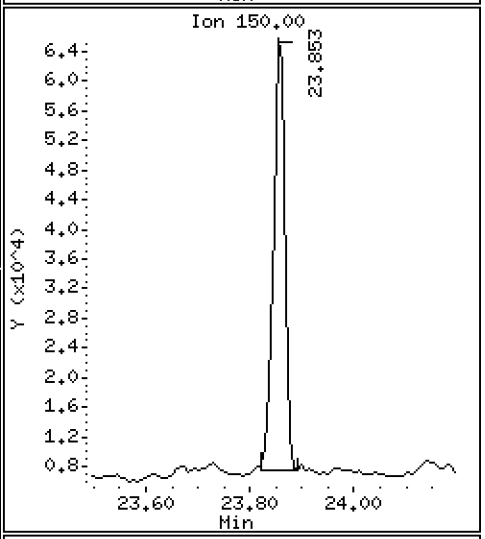
73 Di-n-octylphthalate

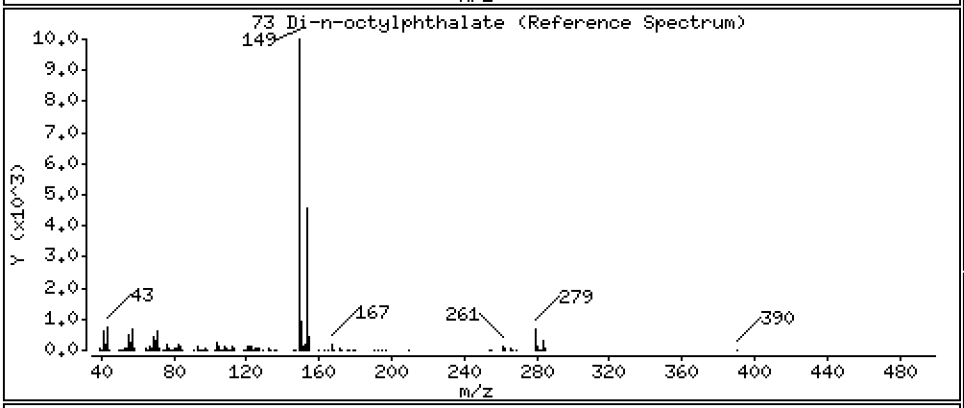
Concentration: 3.814 ug/mL

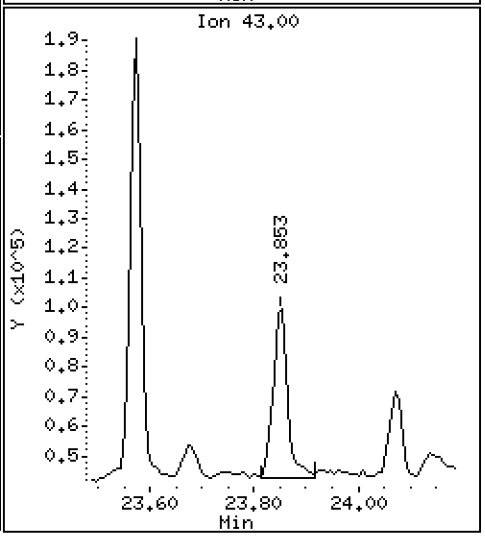


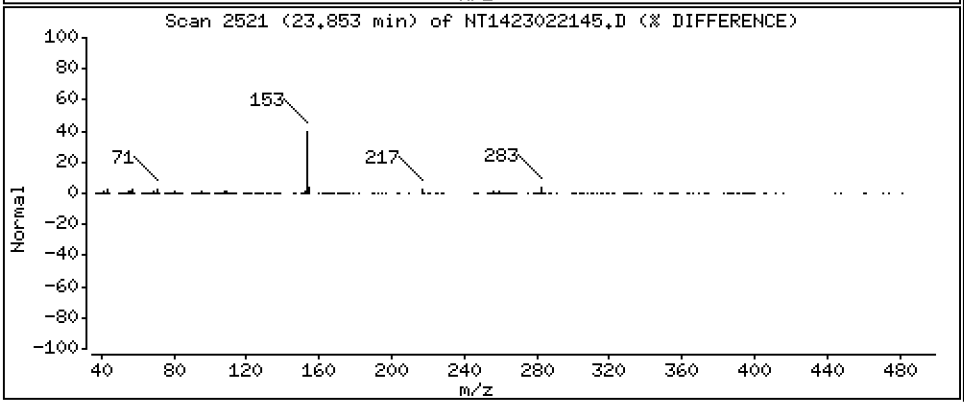












Date : 22-FEB-2023 15:58

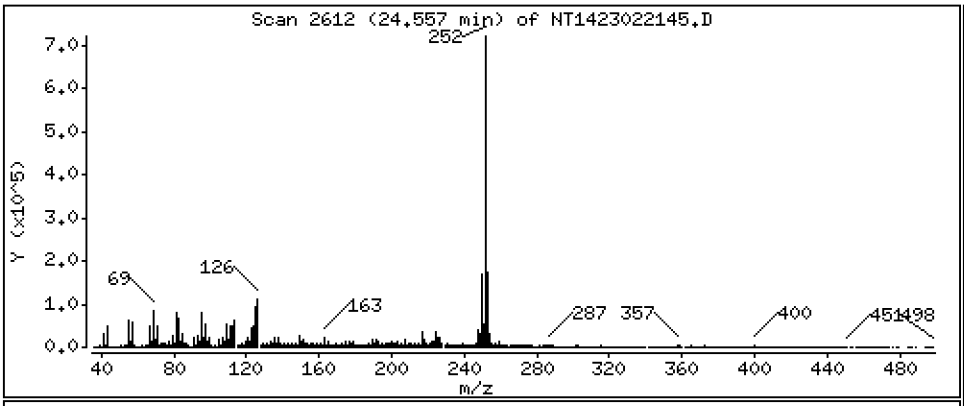
Client ID: Instrument: nt14.i

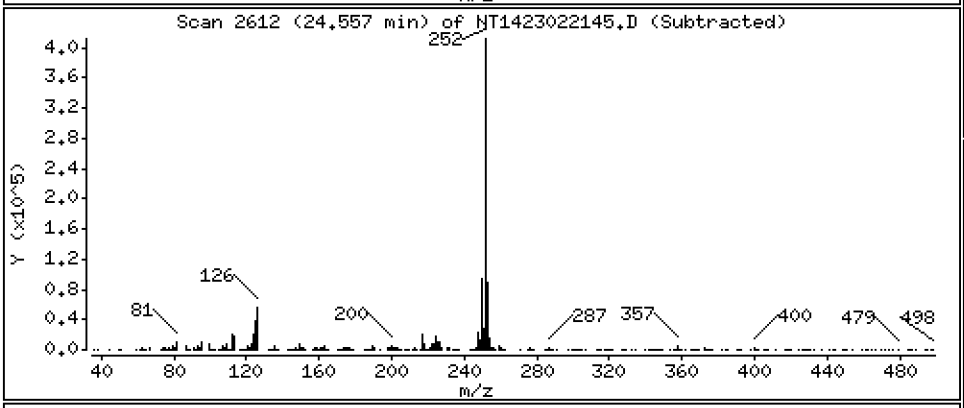
Sample Info: BLA0393-MSD1

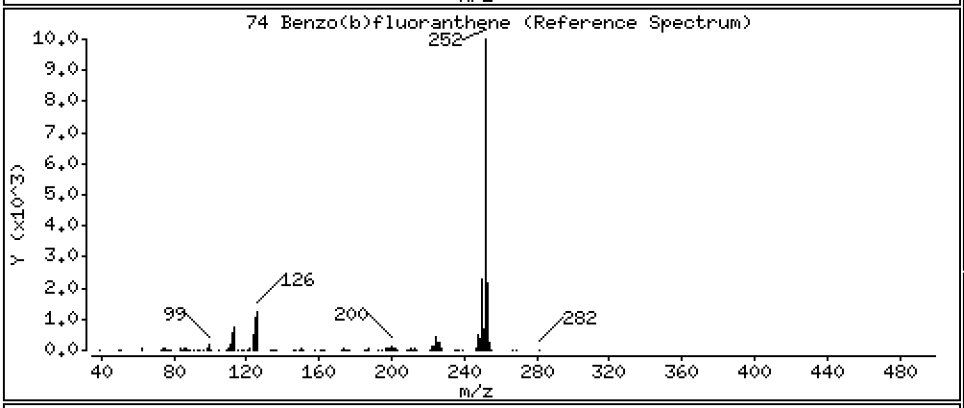
Operator: DSD

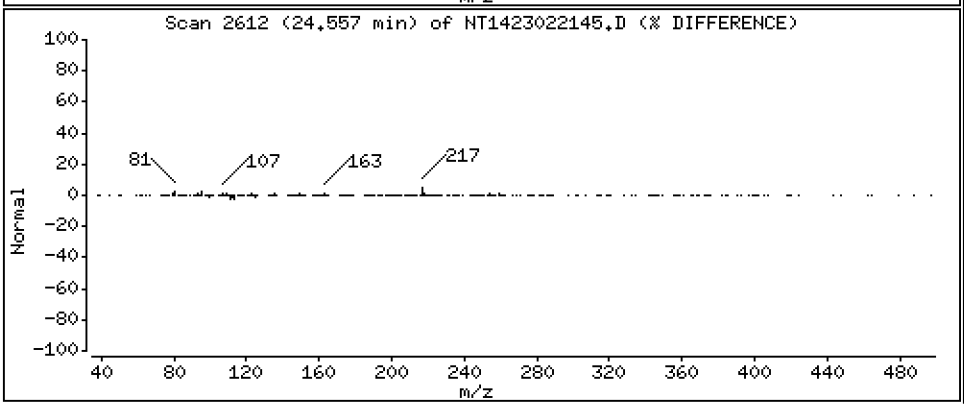
Column phase: ZB-5msi Column diameter: 0.25

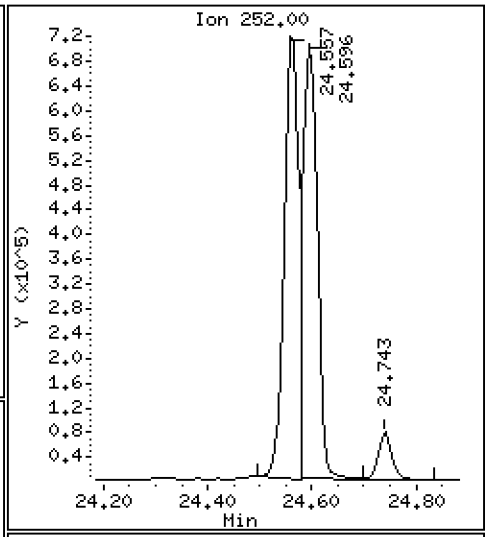
74 Benzo(b)fluoranthene Concentration: 8.862 ug/mL

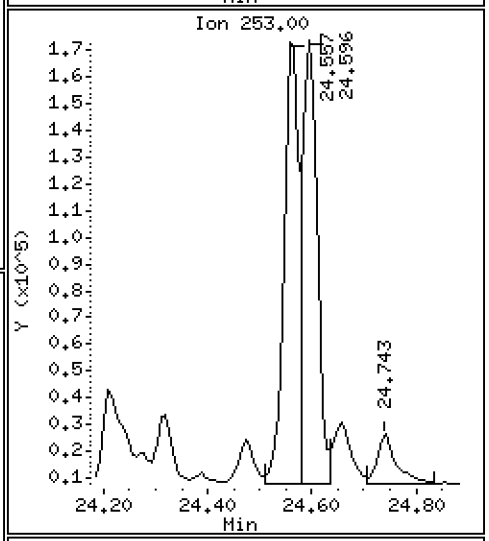


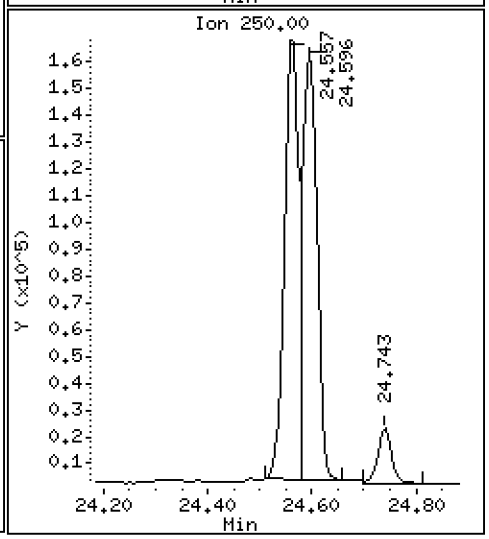












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

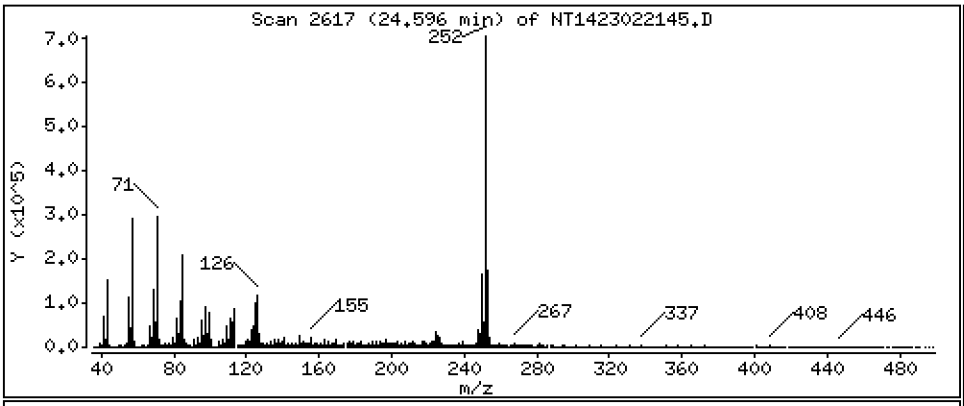
Operator: DSD

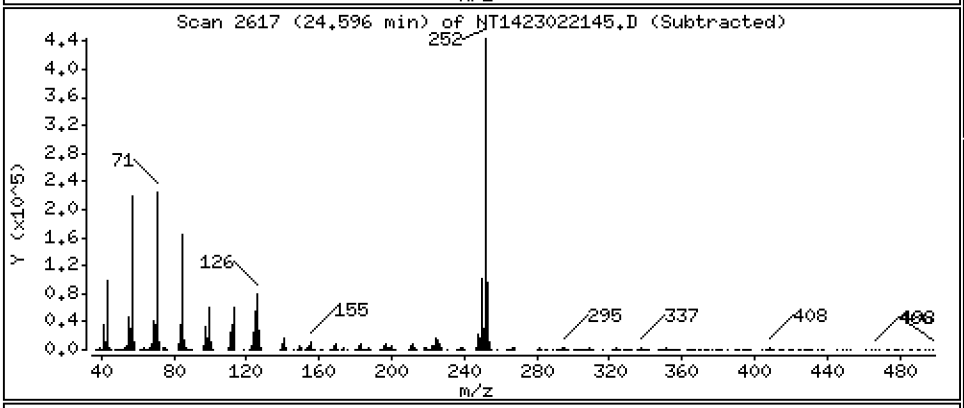
Column phase: ZB-5msi

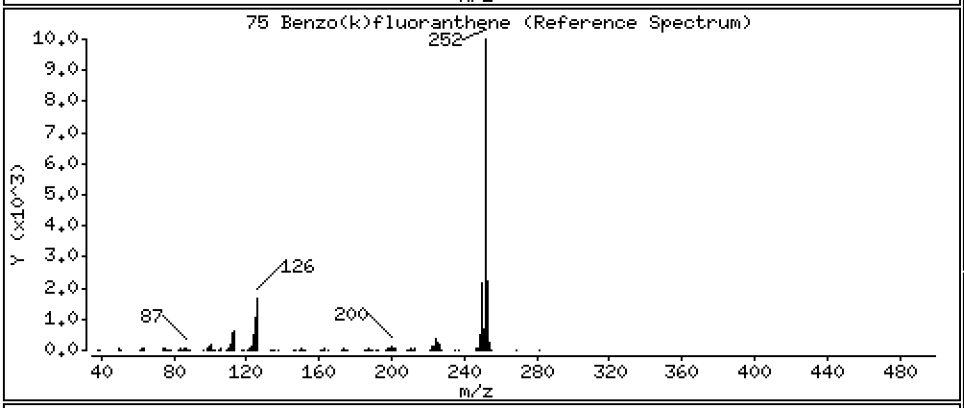
Column diameter: 0.25

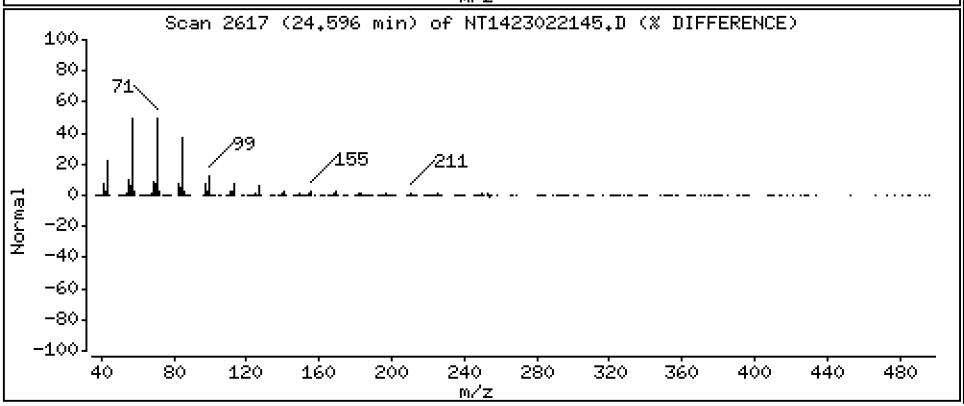
75 Benzo(k)fluoranthene

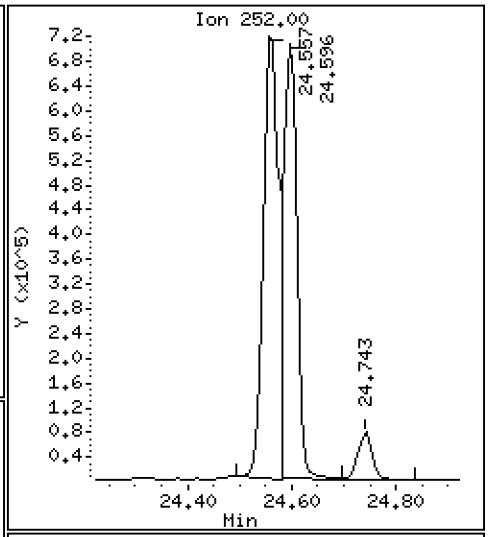
Concentration: 7.373 ug/mL

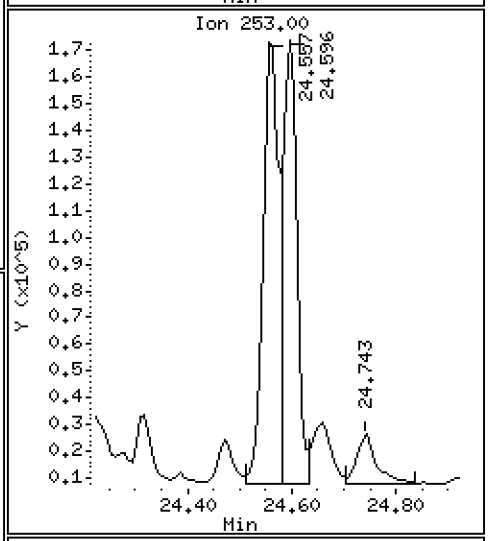


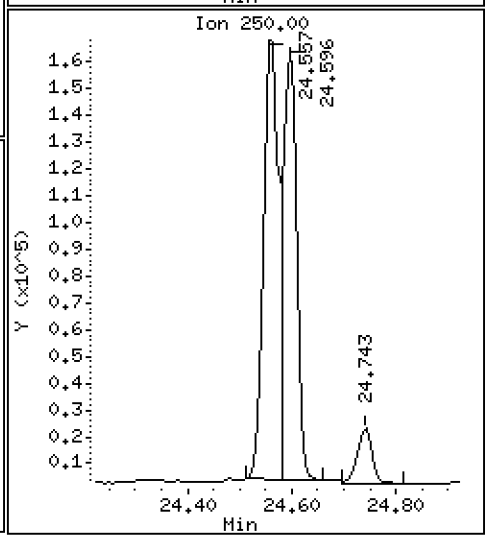












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

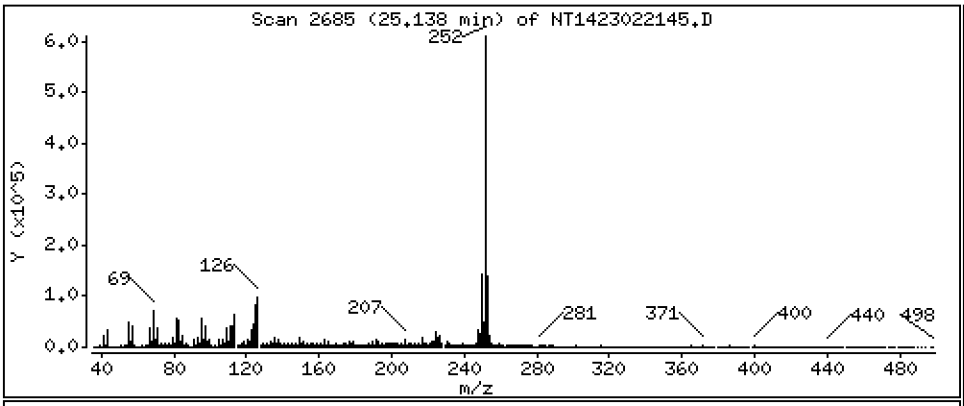
Operator: DSD

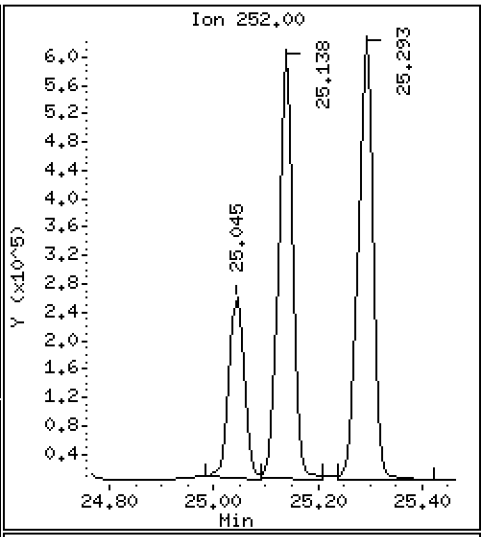
Column phase: ZB-5msi

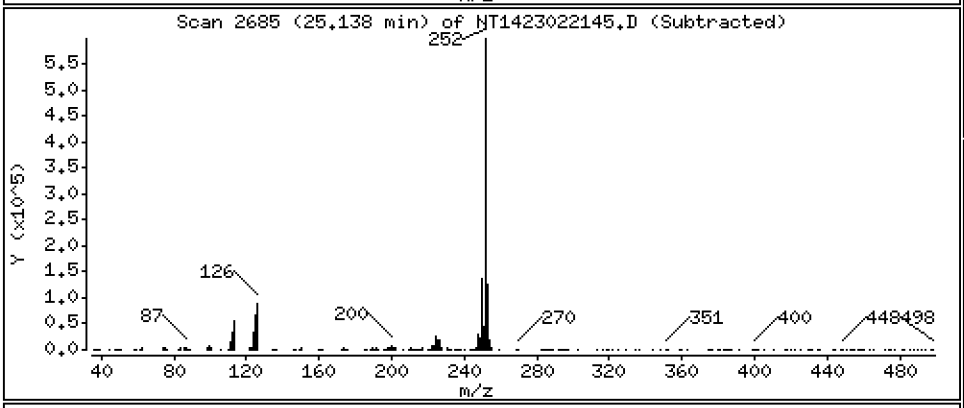
Column diameter: 0.25

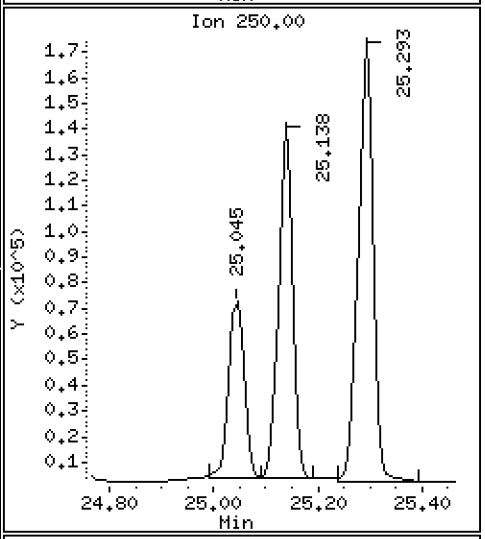
76 Benzo(a)pyrene

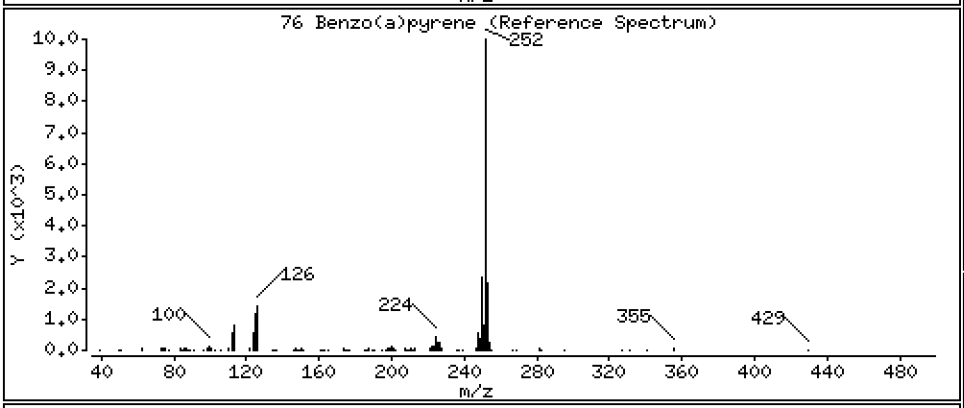
Concentration: 6.993 ug/mL

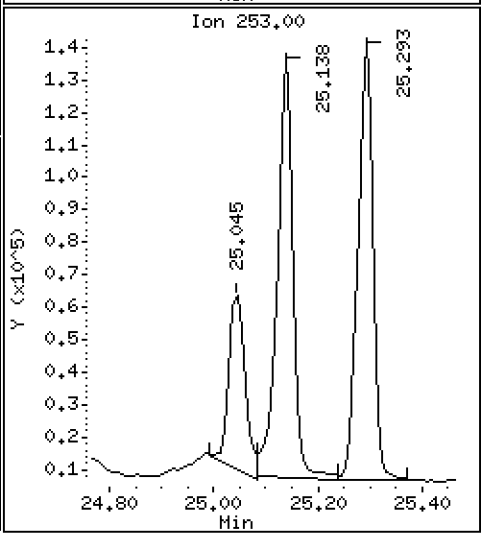


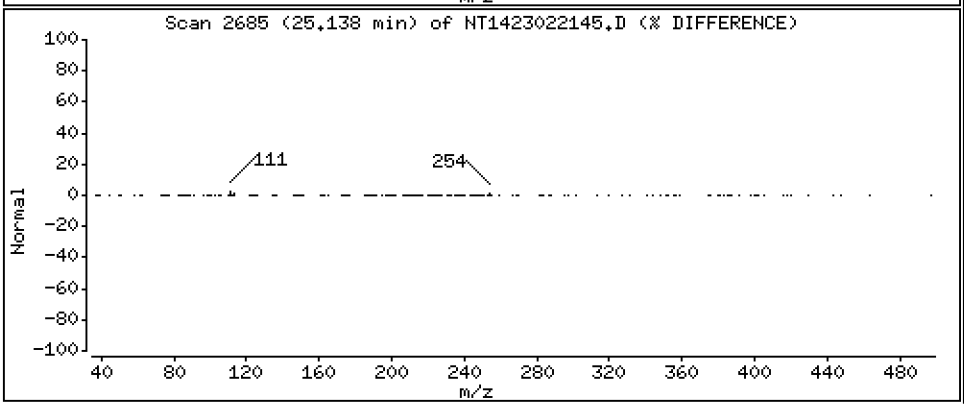












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

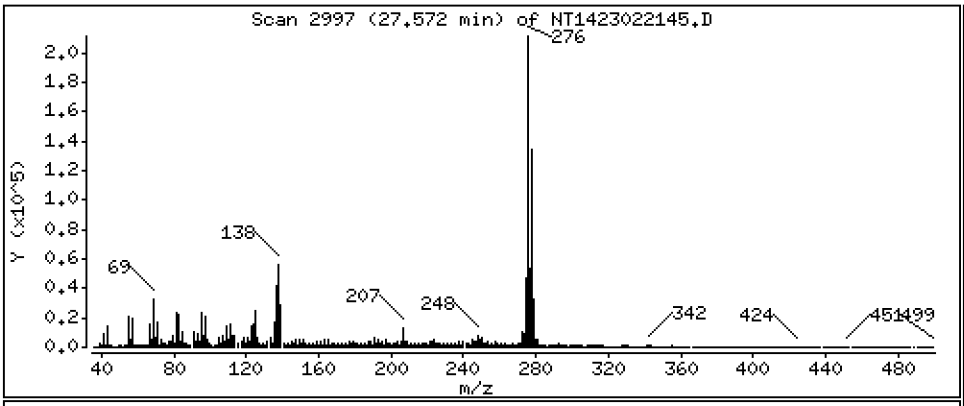
Operator: DSD

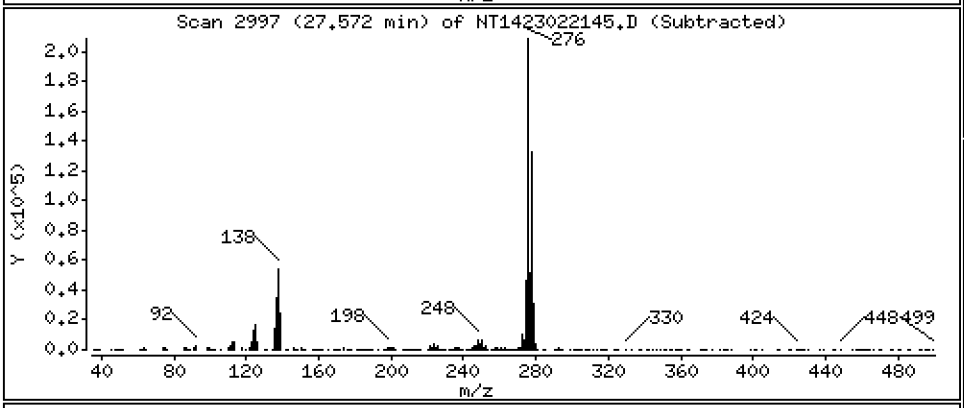
Column phase: ZB-5msi

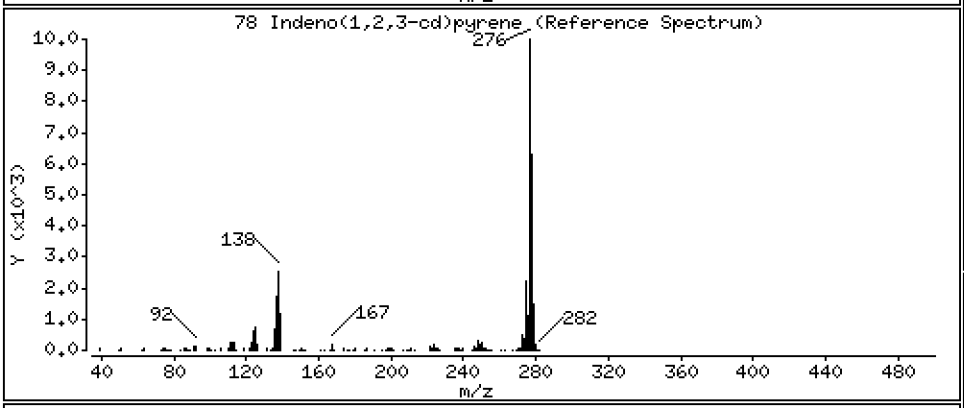
Column diameter: 0.25

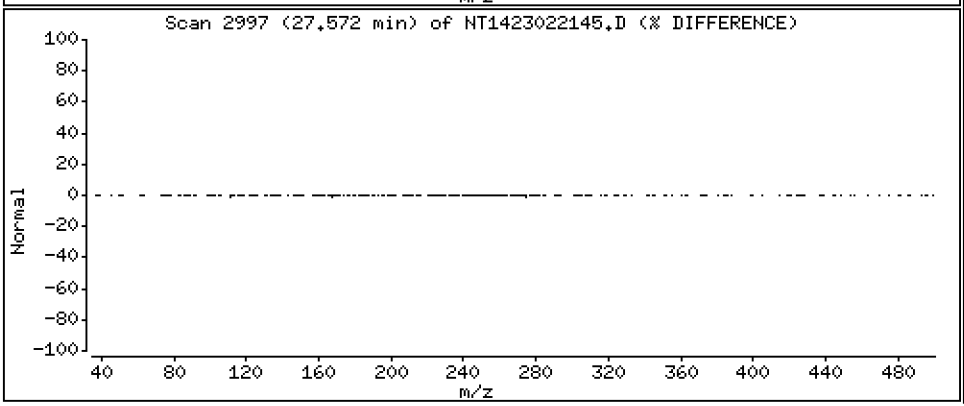
78 Indeno(1,2,3-cd)pyrene

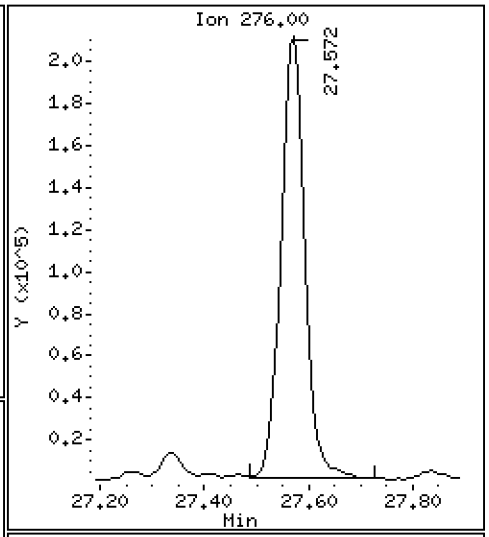
Concentration: 4.975 ug/mL

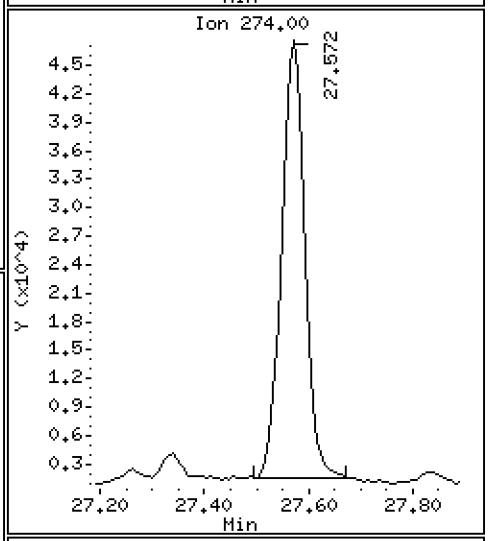


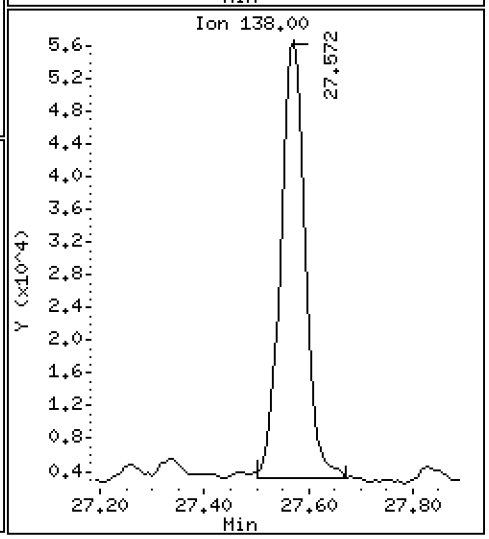












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

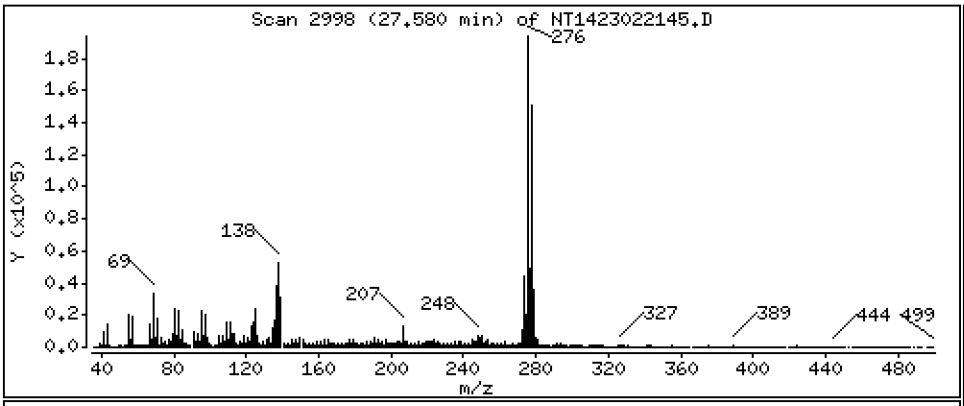
Operator: DSD

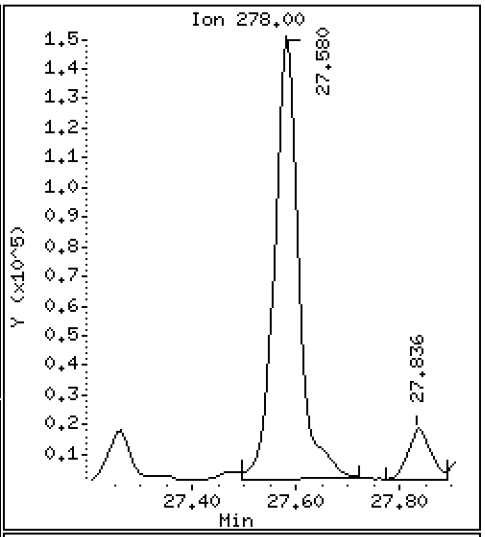
Column phase: ZB-5msi

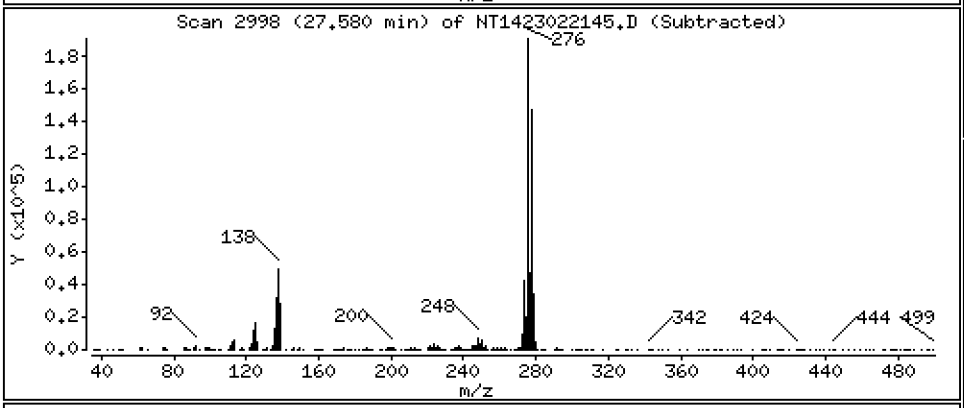
Column diameter: 0.25

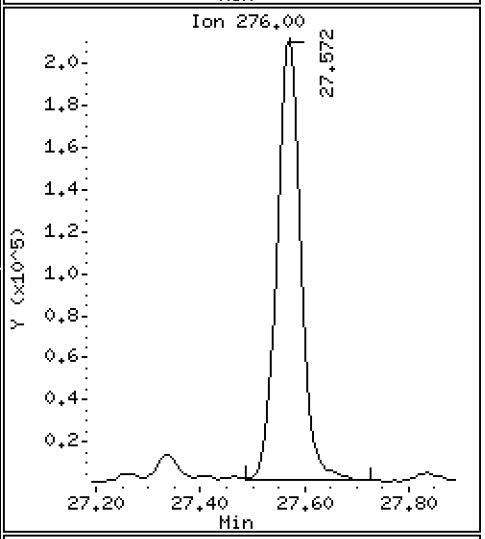
79 Dibenzo(a,h)anthracene

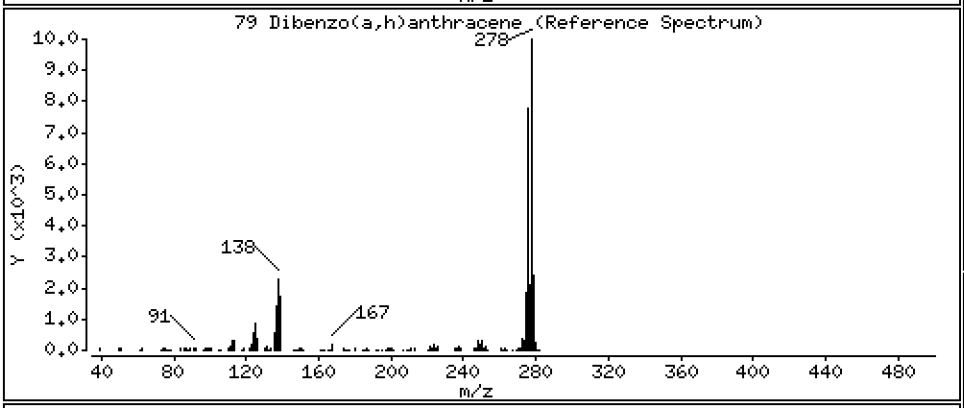
Concentration: 4.330 ug/mL

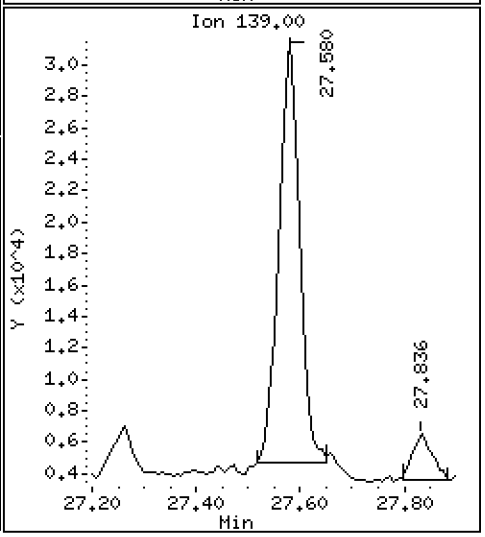


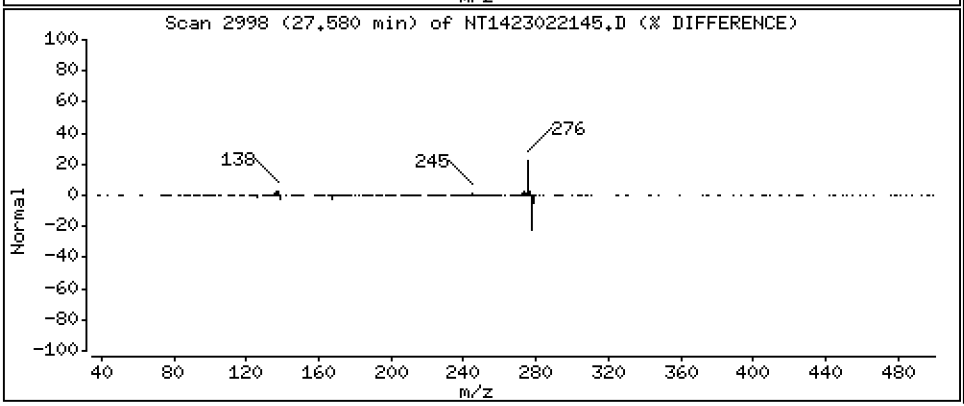












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

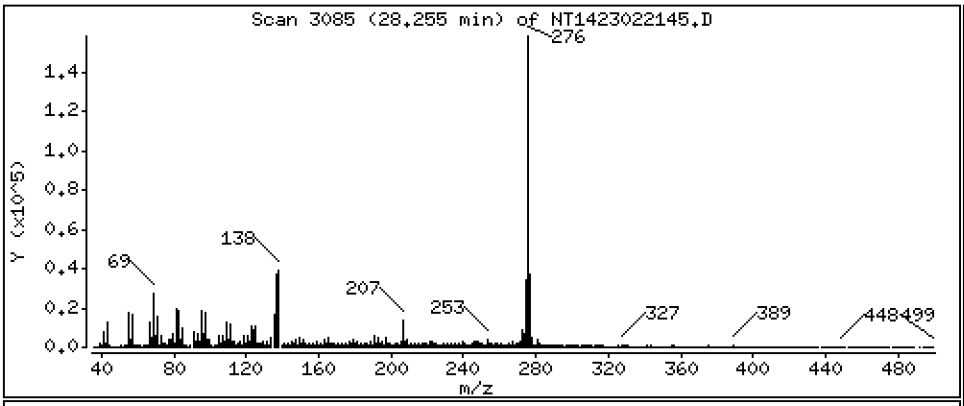
Operator: DSD

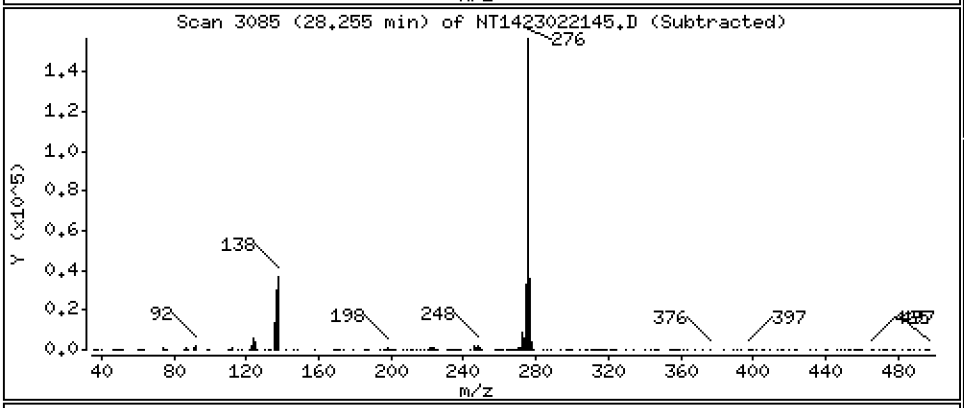
Column phase: ZB-5msi

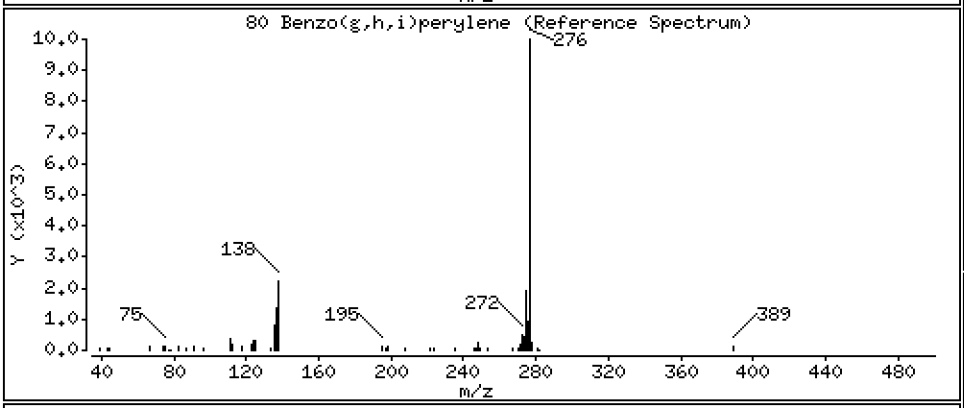
Column diameter: 0.25

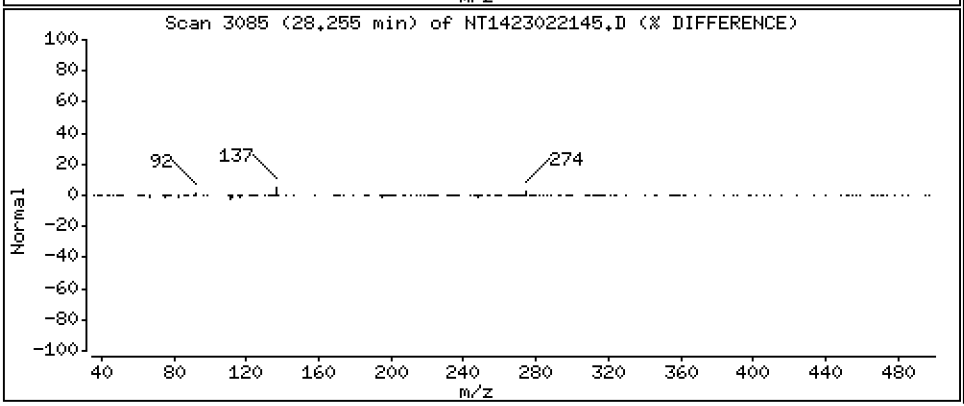
80 Benzo(g,h,i)perylene

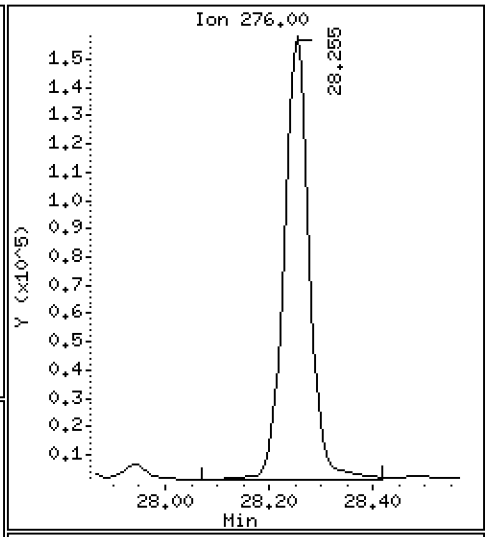
Concentration: 4.792 ug/mL

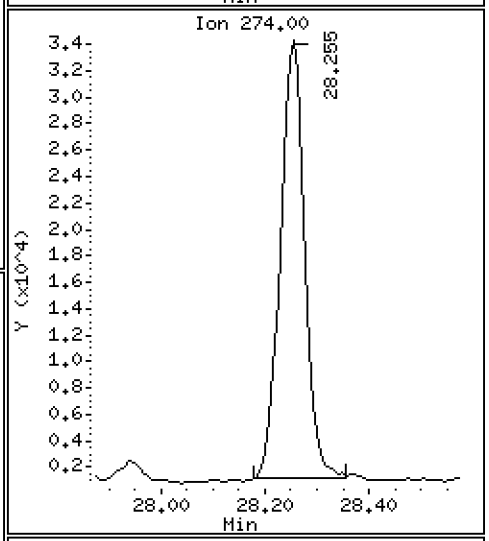


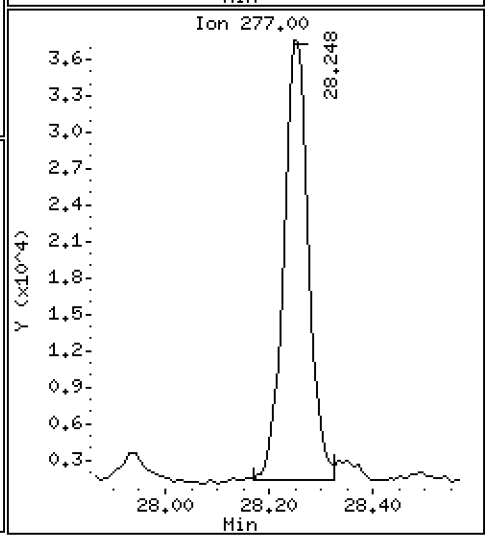












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

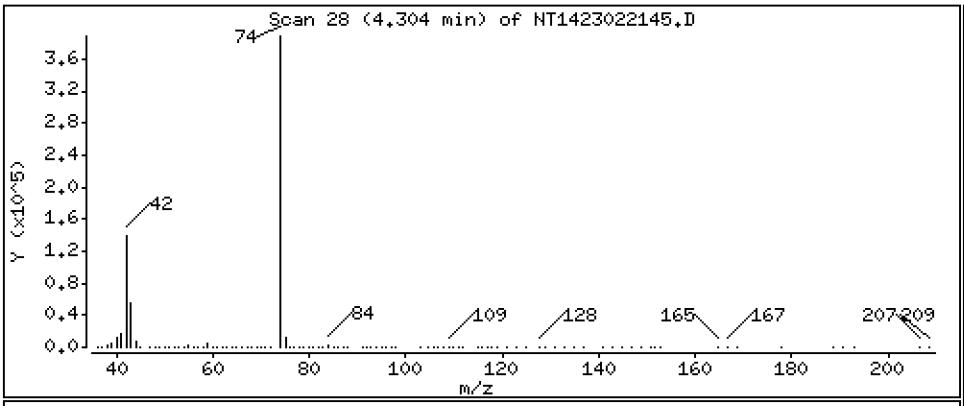
Operator: DSD

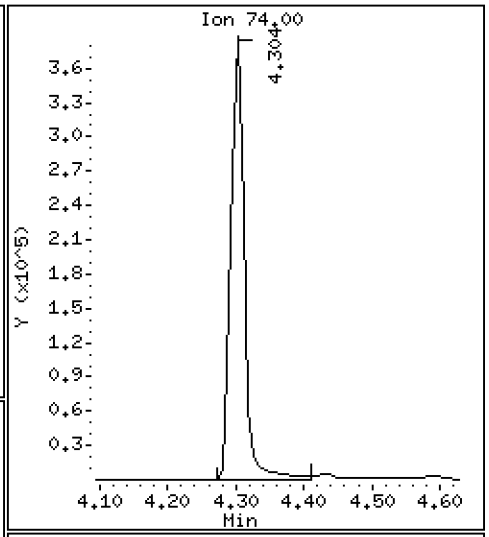
Column phase: ZB-5msi

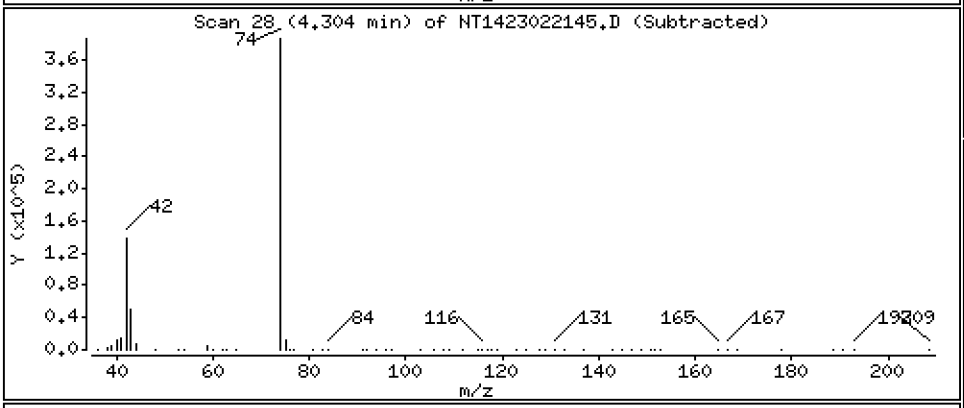
Column diameter: 0.25

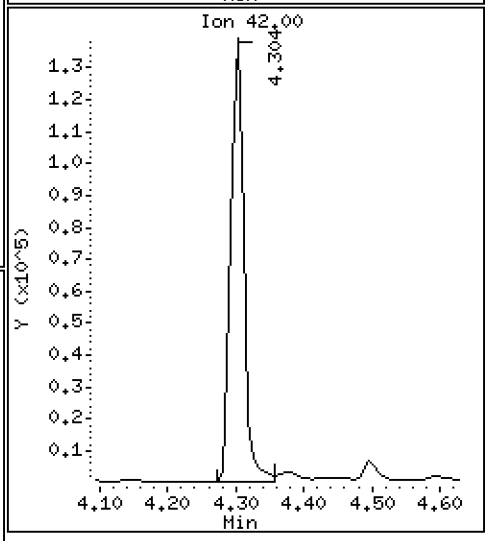
90 N-Nitrosodimethylamine

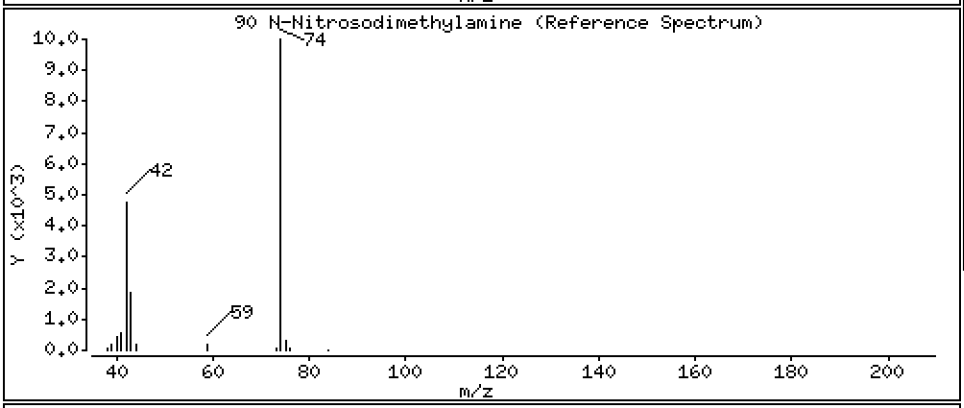
Concentration: 10.28 ug/mL

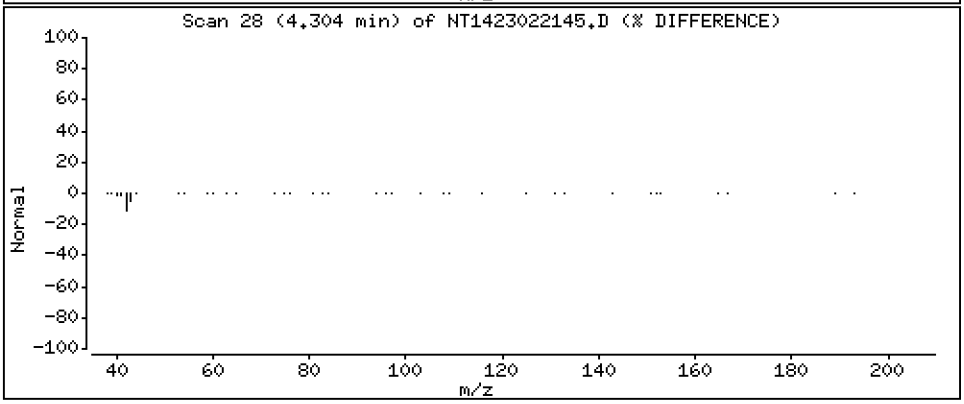












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

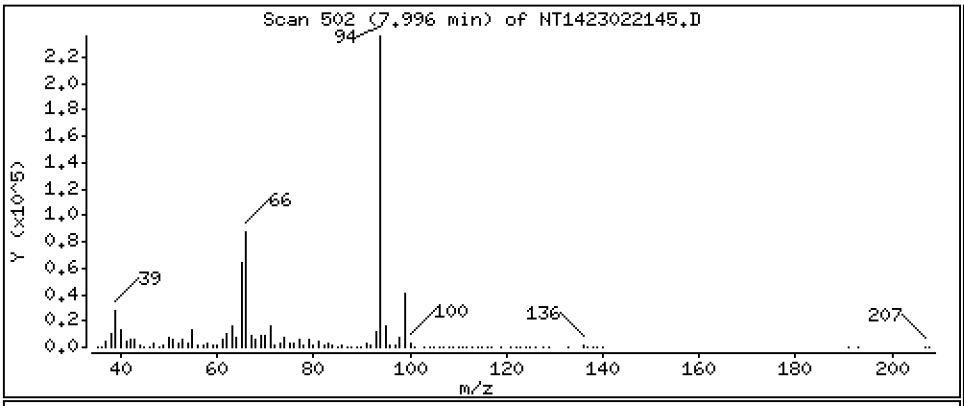
Operator: DSD

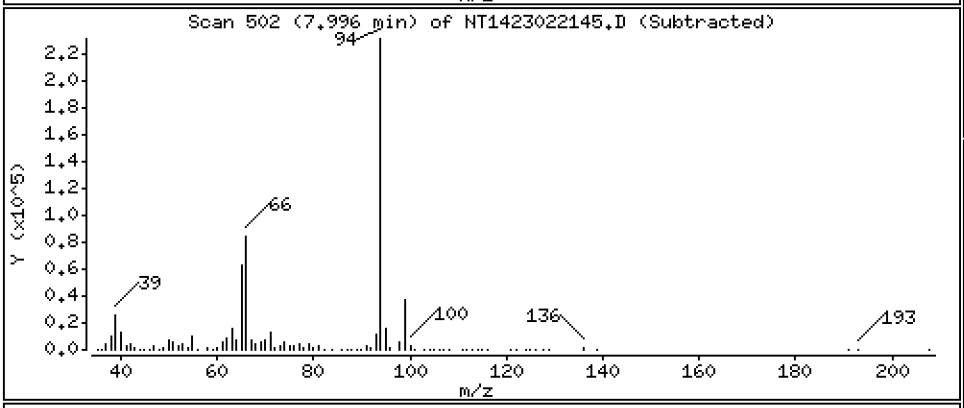
Column phase: ZB-5msi

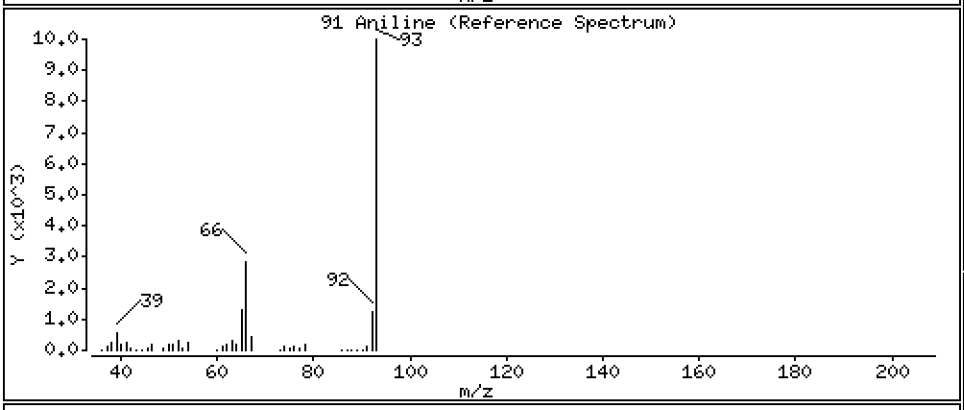
Column diameter: 0.25

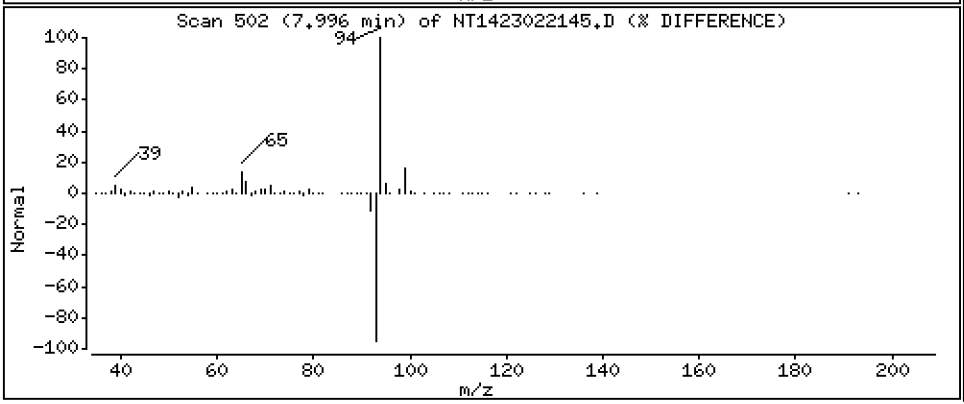
91 Aniline

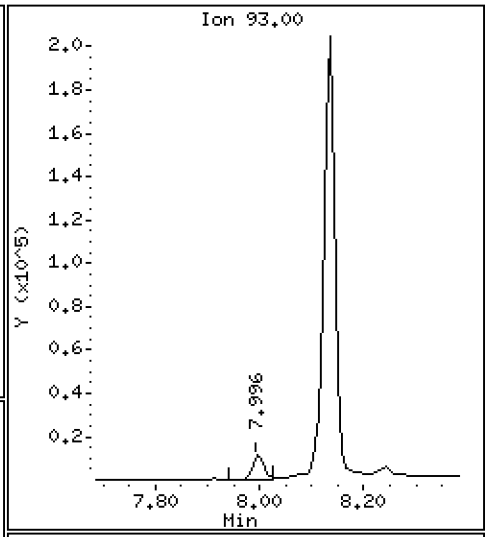
Concentration: 0.1544 ug/mL

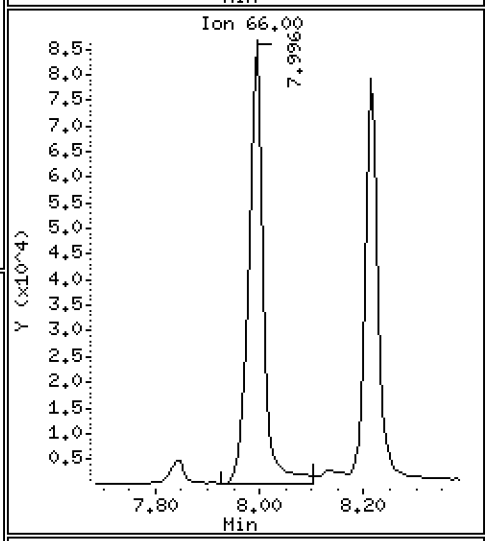


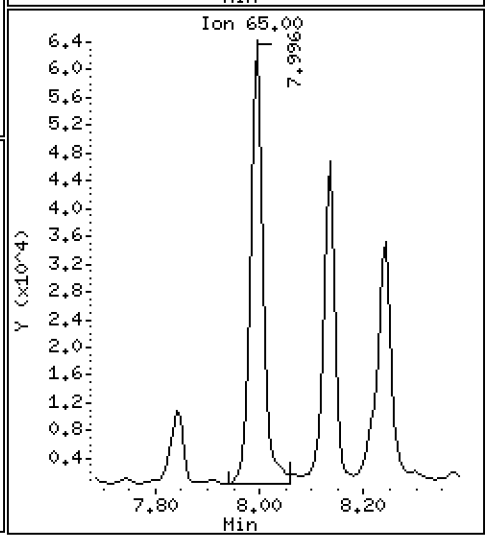












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

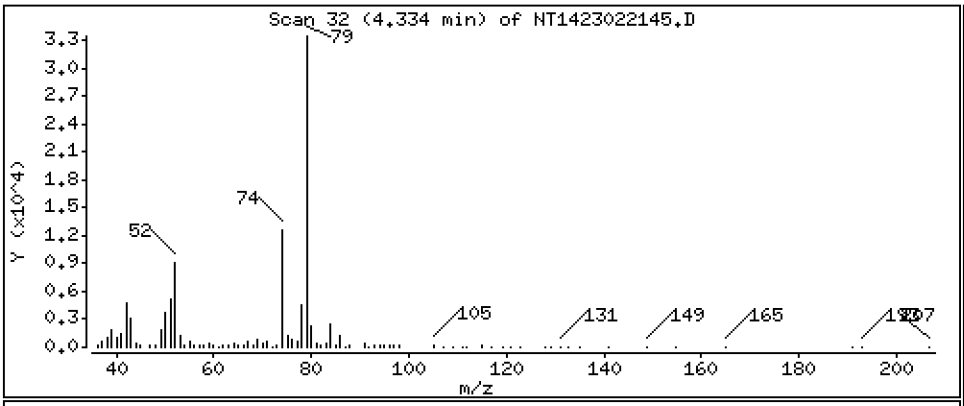
Operator: DSD

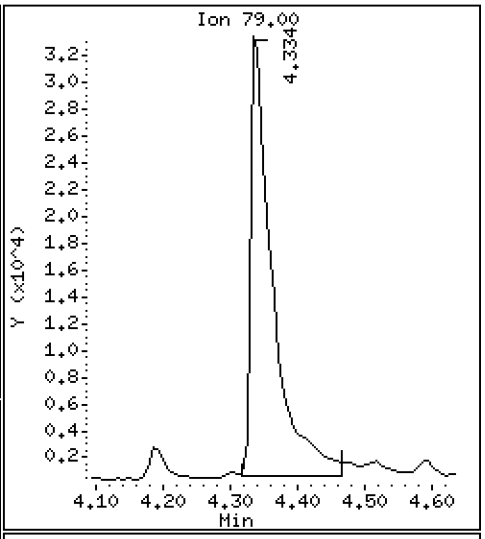
Column phase: ZB-5msi

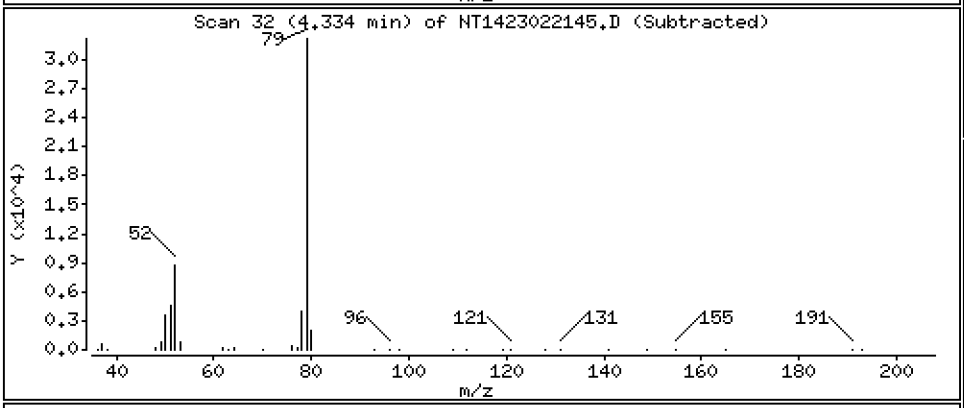
Column diameter: 0.25

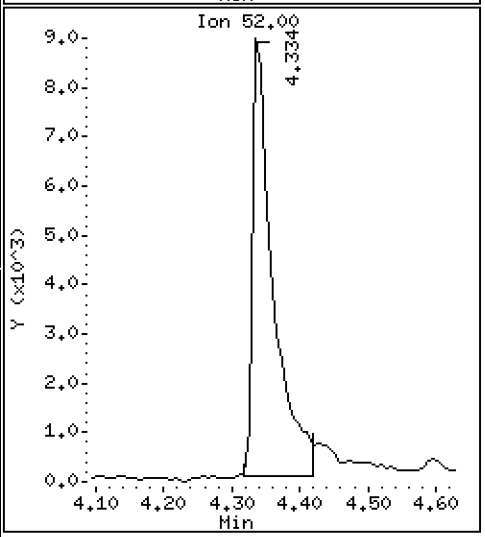
103 Pyridine

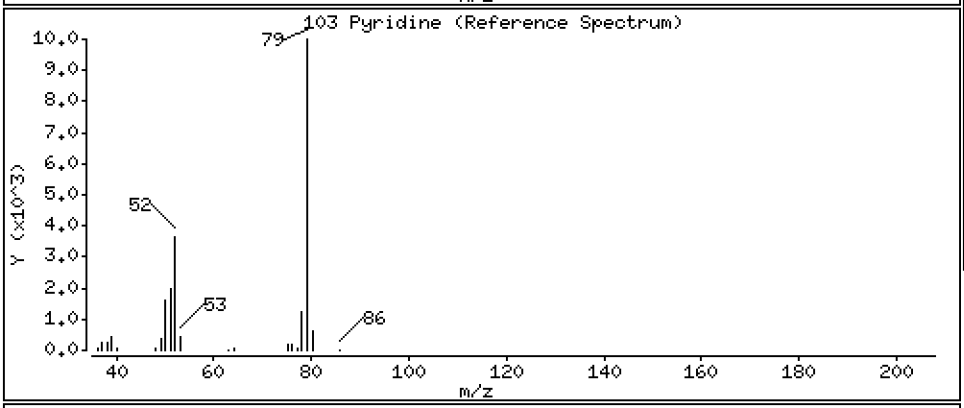
Concentration: 0.9187 ug/mL

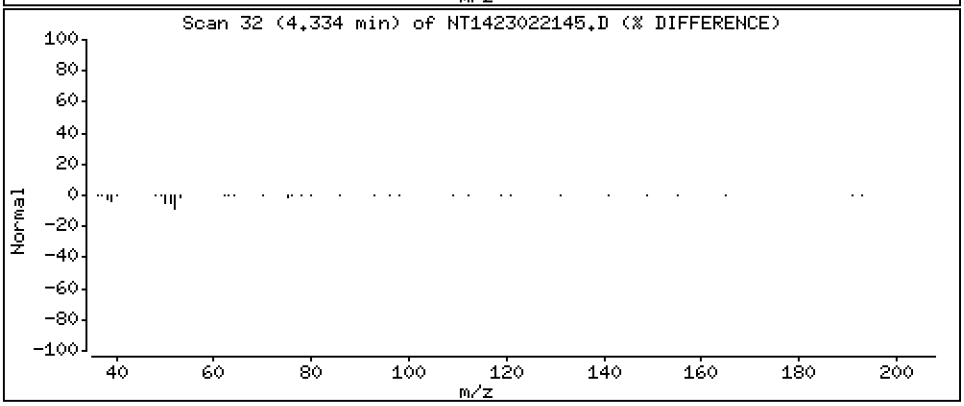












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

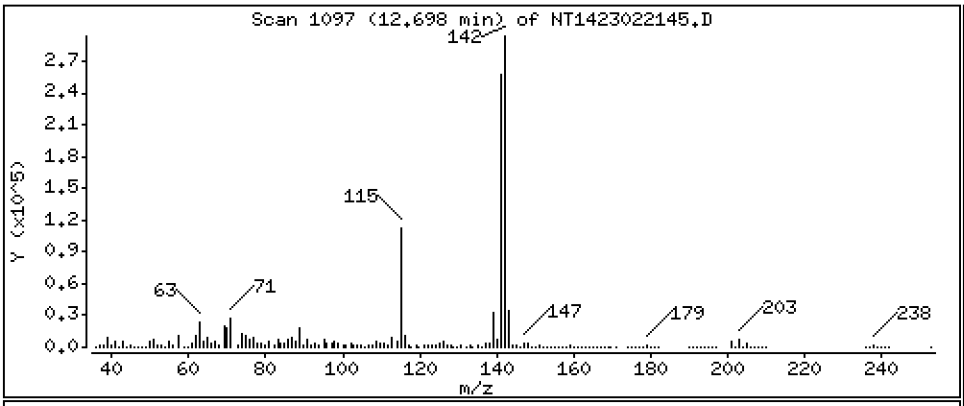
Operator: DSD

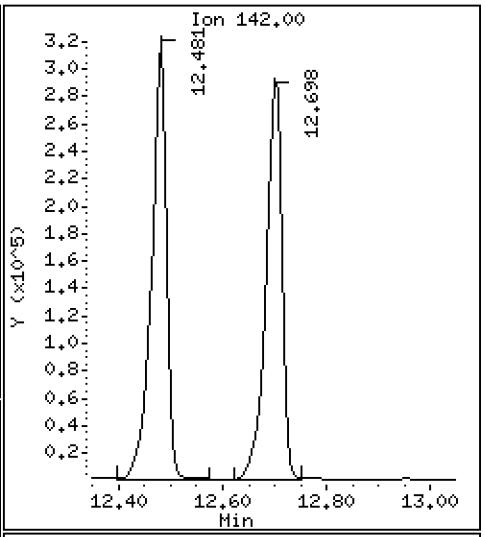
Column phase: ZB-5msi

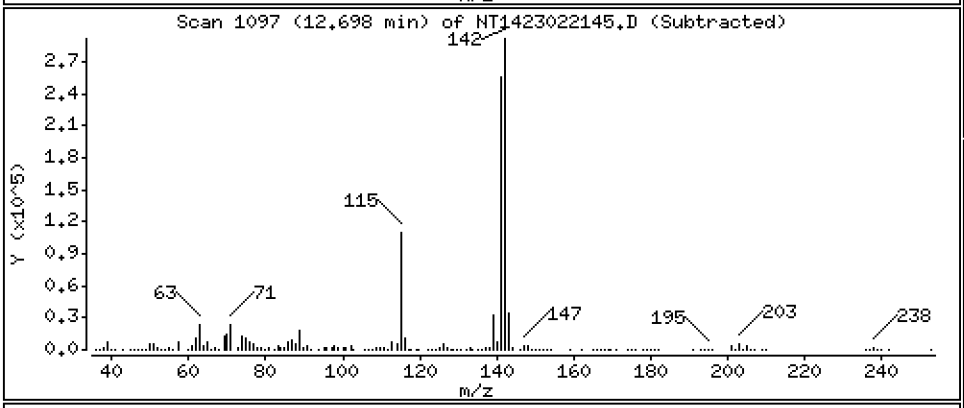
Column diameter: 0.25

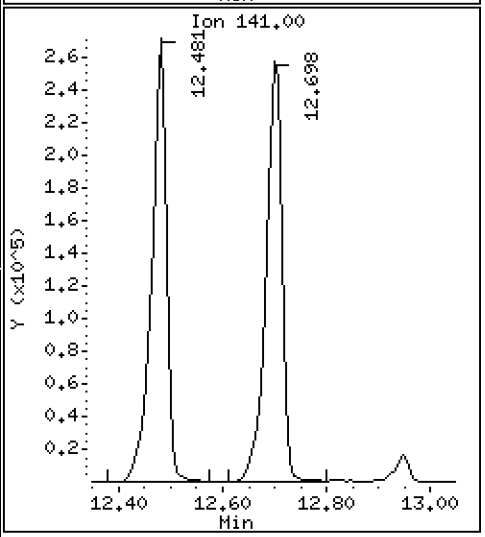
105 1-methylnaphthalene

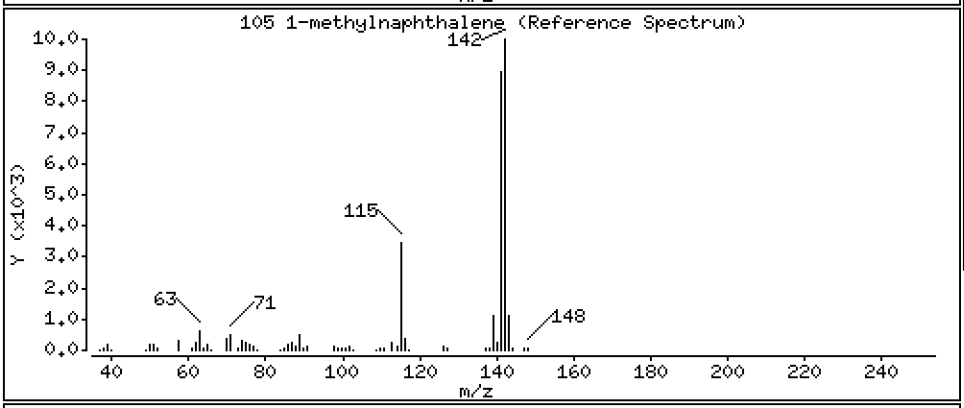
Concentration: 3.710 ug/mL

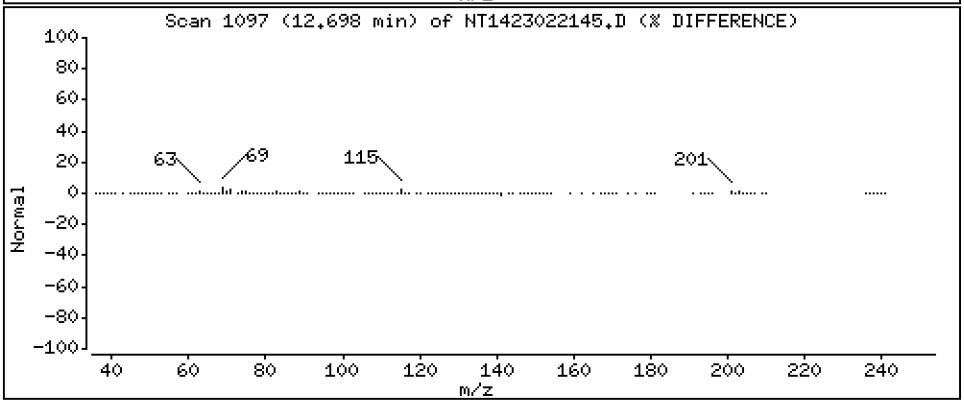












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

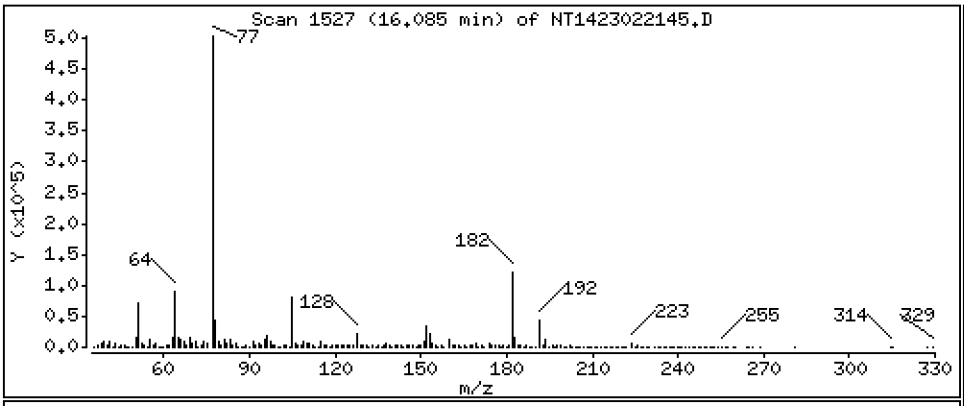
Operator: DSD

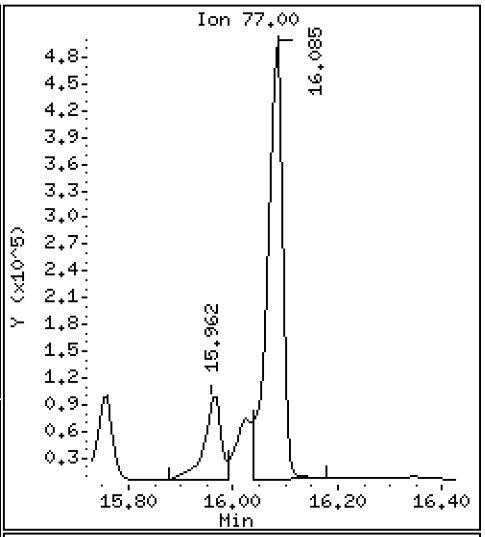
Column phase: ZB-5msi

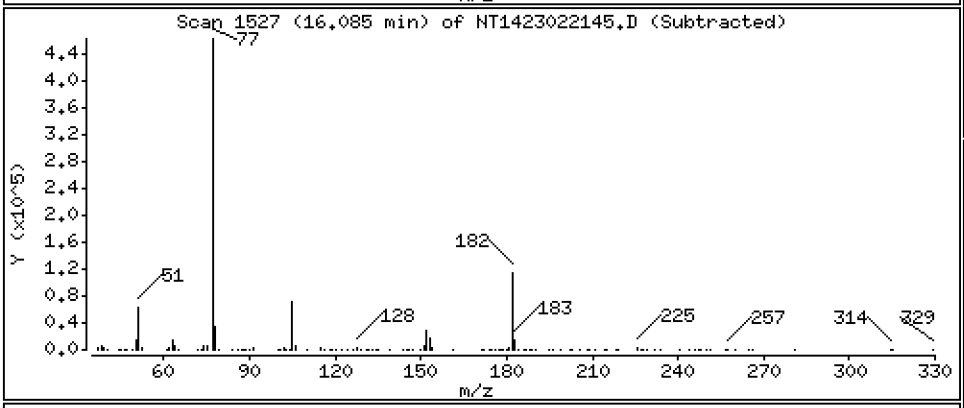
Column diameter: 0.25

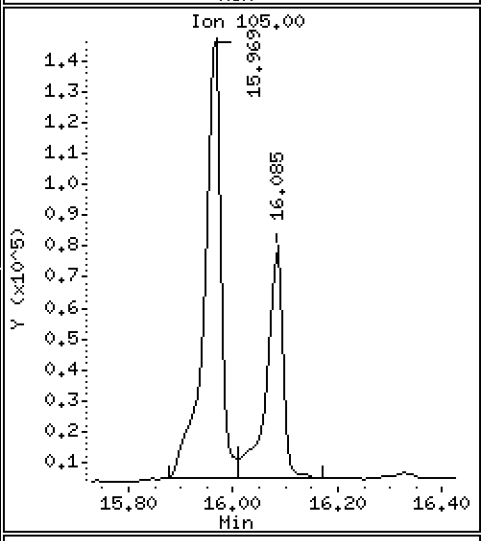
111 Azobenzene (1,2-DP-Hydrazine)

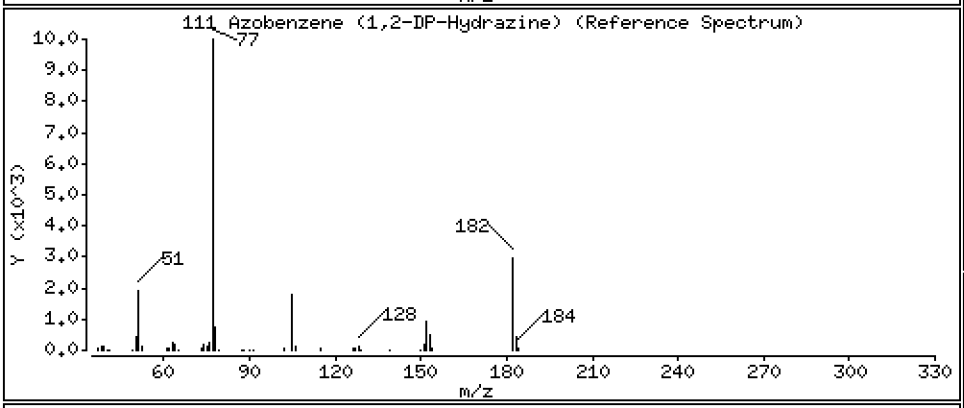
Concentration: 3.447 ug/mL

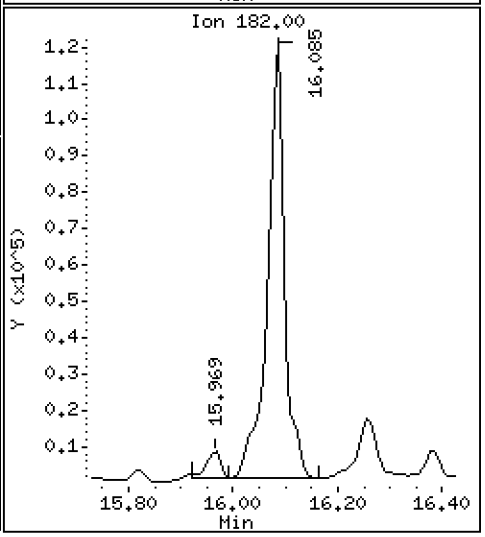


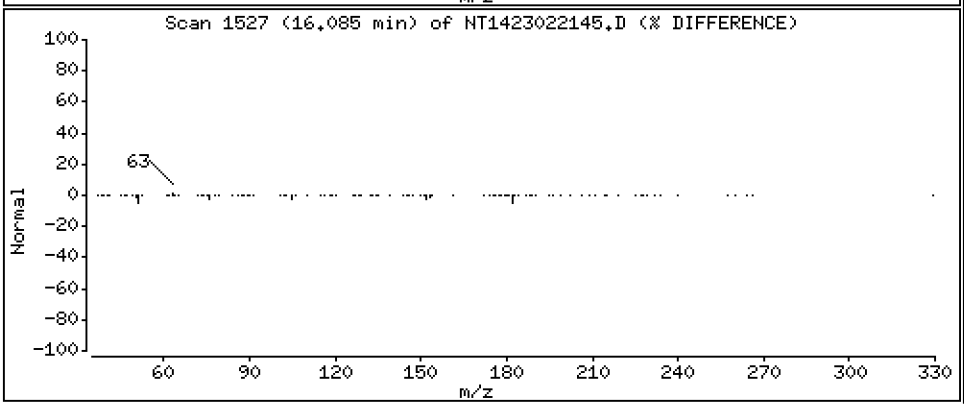












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

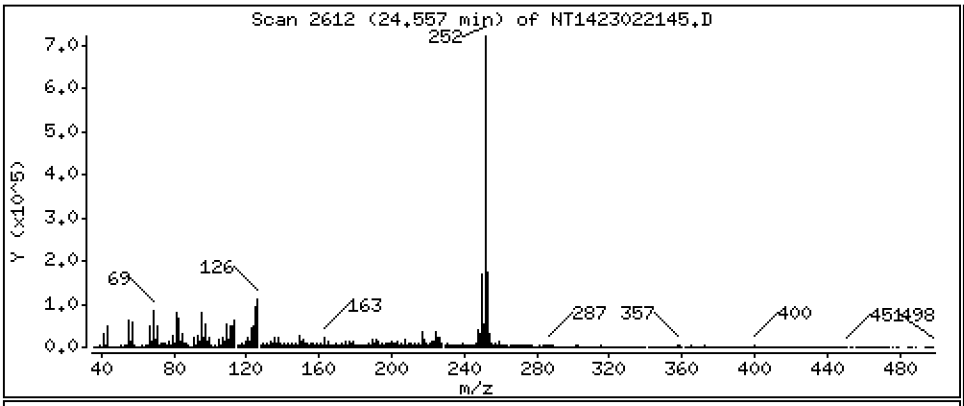
Operator: DSD

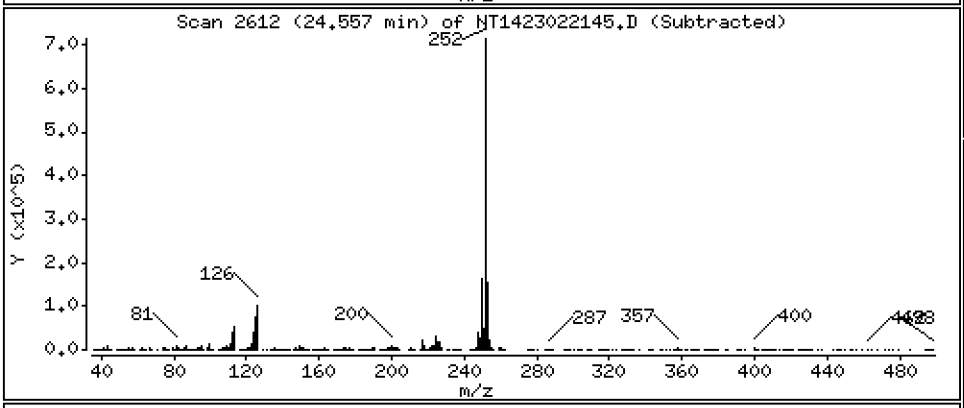
Column phase: ZB-5msi

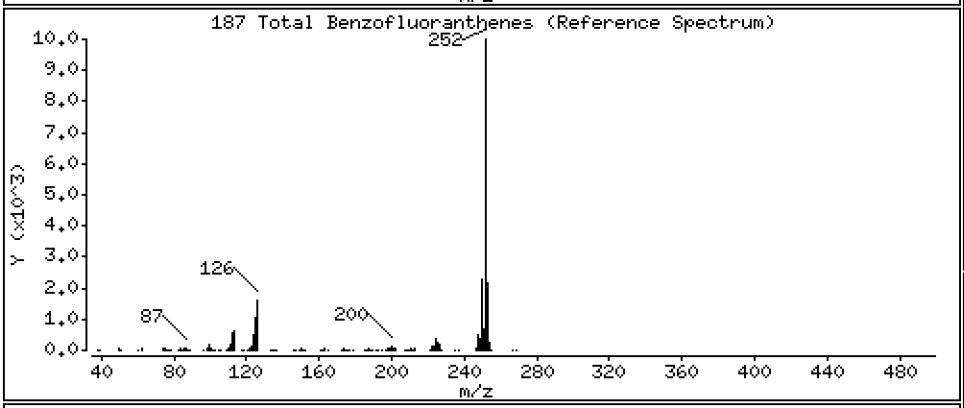
Column diameter: 0.25

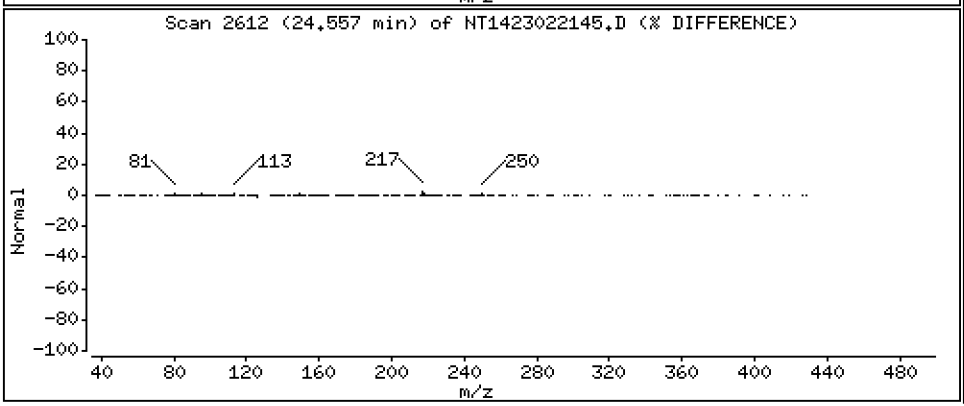
187 Total Benzofluoranthenes

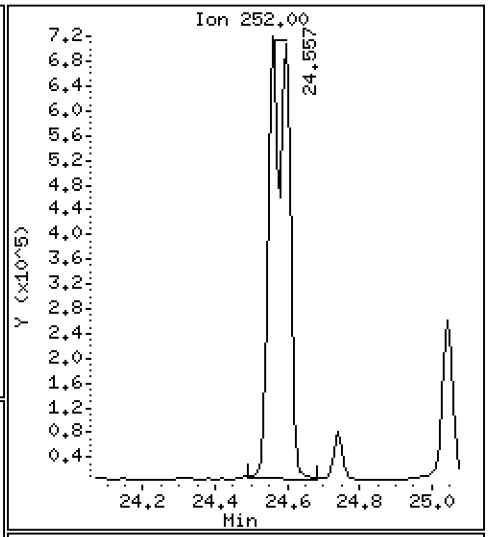
Concentration: 15.91 ug/mL

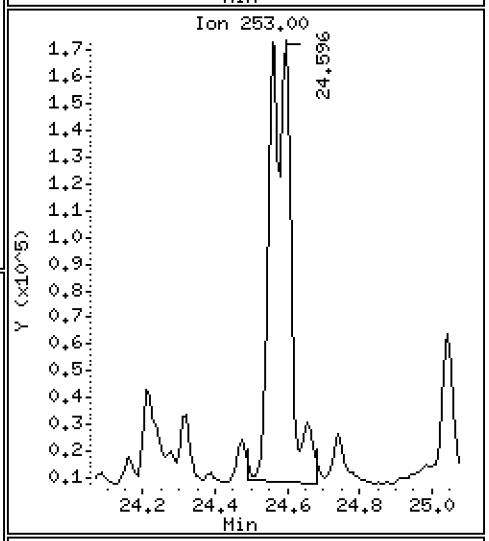


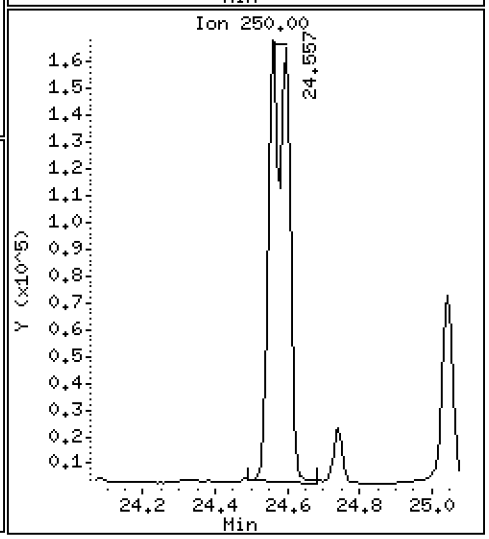












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

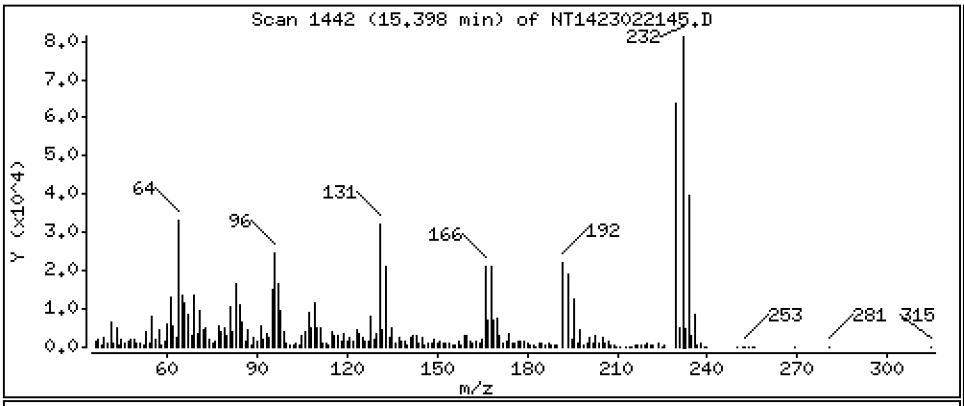
Operator: DSD

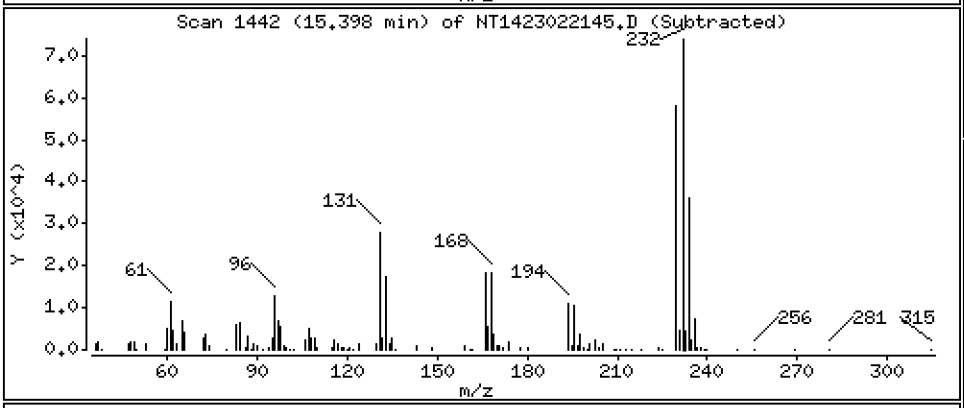
Column phase: ZB-5msi

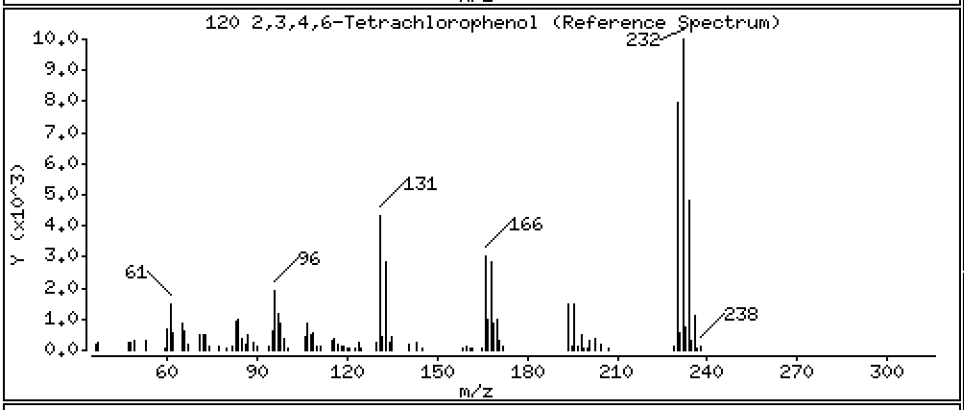
Column diameter: 0.25

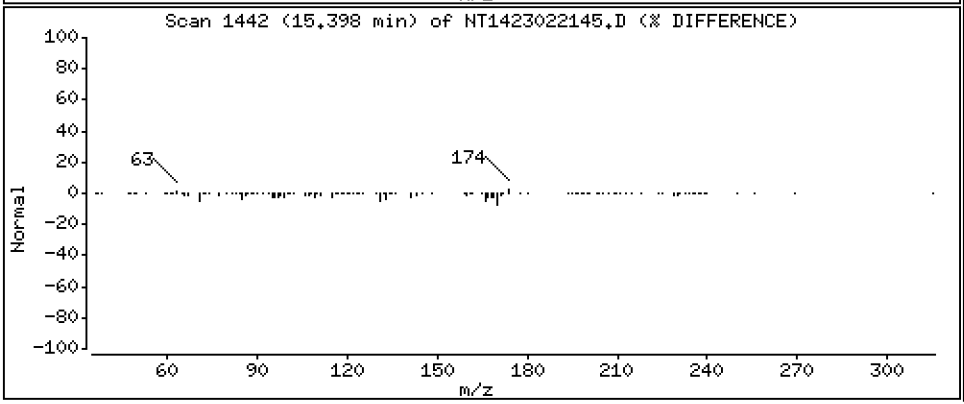
120 2,3,4,6-Tetrachlorophenol

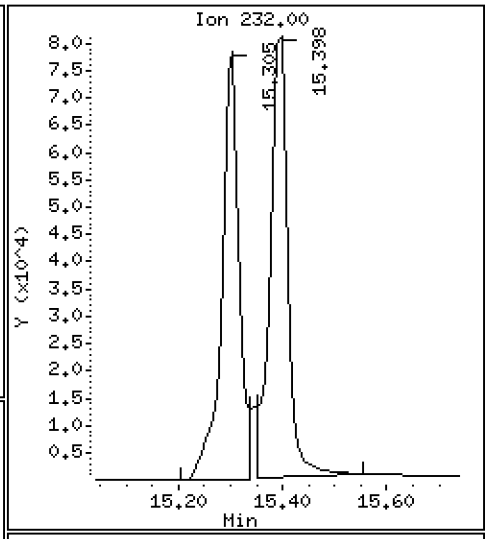
Concentration: 3.068 ug/mL

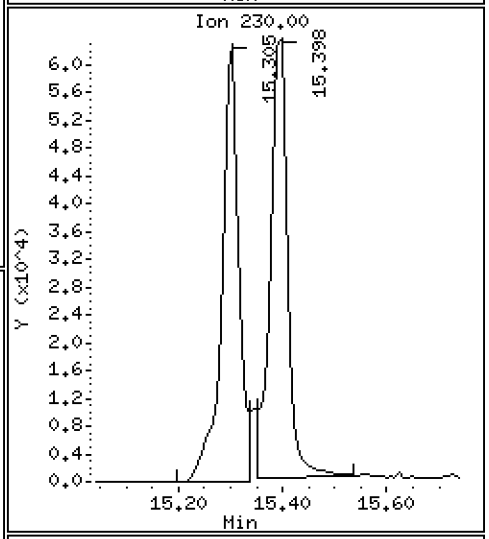


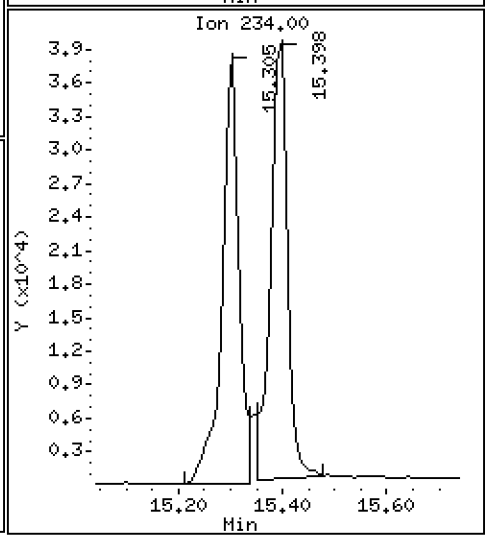












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221B.b\NT1423022145.D
Lab Smp Id: BLA0393-MSD1
Inj Date : 22-FEB-2023 15:58 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : BLA0393-MSD1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Meth Date : 23-Feb-2023 09:59 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 33
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.396	6.373	(0.747)	370147	5.56656	5.567
$	2 Phenol-d5	99	7.972	7.965	(0.930)	557530	5.28547	5.285
	3 Phenol	94	7.995	7.988	(0.933)	395953	3.54581	3.546
$	5 2-Chlorophenol-d4	132	8.212	8.212	(0.958)	394589	5.24262	5.243
	4 Bis(2-Chloroethyl)ether	93	8.135	8.135	(0.949)	313873	3.67947	3.679
	6 2-Chlorophenol	128	8.243	8.235	(0.962)	260436	3.31180	3.312
	7 1,3-Dichlorobenzene	146	8.498	8.498	(0.992)	288868	3.29964	3.300
*	8 1,4-Dichlorobenzene-d4	152	8.568	8.568	(1.000)	248736	4.00000	
	9 1,4-Dichlorobenzene	146	8.599	8.599	(1.004)	310580	3.73813	3.738
$	10 1,2-Dichlorobenzene-d4	152	8.925	8.925	(1.042)	177584	3.14773	3.148
	12 1,2-Dichlorobenzene	146	8.948	8.948	(1.044)	278861	3.35736	3.357
	11 Benzyl alcohol	108	8.863	8.855	(1.034)	184356	2.92937	2.929
	14 2,2'-oxybis(1-Chloropropane)	121	9.150	9.150	(1.068)	92100	3.87600	3.876
	13 2-Methylphenol	108	9.096	9.096	(1.062)	247301	3.17155	3.172
	17 Hexachloroethane	117	9.530	9.530	(1.112)	117679	3.25794	3.258
	16 N-Nitroso-di-n-propylamine	70	9.414	9.414	(1.099)	254600	3.58695	3.587
	15 4-Methylphenol	108	9.375	9.367	(1.094)	319832	3.88443	3.884
$	18 Nitrobenzene-d5	82	9.662	9.662	(0.875)	376084	3.49709	3.497
	19 Nitrobenzene	77	9.693	9.701	(0.878)	383464	3.55322	3.553
	20 Isophorone	82	10.151	10.151	(0.919)	682984	4.79676	4.797
	21 2-Nitrophenol	139	10.322	10.322	(0.935)	163247	3.33403	3.334
	22 2,4-Dimethylphenol	107	10.407	10.399	(0.942)	918561	11.2717	11.27
	23 Bis(2-Chloroethoxy)methane	93	10.593	10.593	(0.959)	382488	4.12951	4.130
	24 Benzoic acid	105	10.616	10.686	(0.961)	232133	4.49120	4.491
	25 2,4-Dichlorophenol	162	10.787	10.787	(0.977)	899056	12.8905	12.89
	26 1,2,4-Trichlorobenzene	180	10.957	10.957	(0.992)	295120	3.49307	3.493
*	27 Naphthalene-d8	136	11.042	11.042	(1.000)	930871	4.00000	
	28 Naphthalene	128	11.081	11.081	(1.003)	1024507	4.46363	4.464
	29 4-Chloroaniline	127	11.274	11.228	(1.021)	84239	0.85906	0.8591
	30 Hexachlorobutadiene	225	11.451	11.452	(1.037)	194720	3.73868	3.739
	31 4-Chloro-3-methylphenol	107	12.218	12.210	(1.106)	1041486	13.7961	13.80
	32 2-Methylnaphthalene	142	12.481	12.481	(1.130)	631078	3.67118	3.671
	33 Hexachlorocyclopentadiene	237	12.945	12.945	(0.883)	269874	4.94441	4.944

		QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
34	2,4,6-Trichlorophenol	196	13.115	13.108	(0.895)	755654	13.6181	13.62
35	2,4,5-Trichlorophenol	196	13.193	13.185	(0.900)	782486	13.0211	13.02
$ 36	2-Fluorobiphenyl	172	13.270	13.270	(0.905)	708588	3.51535	3.515
37	2-Chloronaphthalene	162	13.471	13.471	(0.919)	581739	3.53586	3.536
38	2-Nitroaniline	65	13.750	13.750	(0.938)	807626	15.0980	15.10
39	Dimethylphthalate	163	14.191	14.184	(0.968)	653311	3.79630	3.796
40	Acenaphthylene	152	14.338	14.331	(0.978)	917073	3.65455	3.655
41	2,6-Dinitrotoluene	165	14.323	14.323	(0.977)	540003	13.3354	13.34
* 42	Acenaphthene-d10	164	14.655	14.648	(1.000)	563398	4.00000	
43	3-Nitroaniline	138	14.609	14.601	(0.997)	199586	4.64360	4.644
44	Acenaphthene	153	14.717	14.717	(1.004)	591088	3.93426	3.934
45	2,4-Dinitrophenol	184	14.818	14.818	(1.011)	159905	5.96264	5.963
46	Dibenzofuran	168	15.042	15.042	(1.026)	938005	3.80257	3.803
47	4-Nitrophenol	109	14.965	14.949	(1.021)	317371	12.6221	12.62
48	2,4-Dinitrotoluene	165	15.127	15.127	(1.032)	785976	13.7279	13.73
50	Diethylphthalate	149	15.645	15.645	(1.068)	968197	4.23196	4.232
49	Fluorene	166	15.753	15.753	(1.075)	991554	3.84384	3.844
51	4-Chlorophenyl-phenylether	204	15.761	15.753	(1.075)	481053	3.48758	3.488
52	4-Nitroaniline	138	15.876	15.869	(1.083)	388209	7.87243	7.872
53	4,6-Dinitro-2-methylphenol	198	15.969	15.961	(0.903)	886298	21.0041	21.00
54	N-Nitrosodiphenylamine	169	16.015	16.008	(0.906)	587411	3.61940	3.619
$ 55	2,4,6-Tribromophenol	330	16.293	16.293	(1.112)	171778	5.23714	5.237
56	4-Bromophenyl-phenylether	248	16.755	16.756	(0.947)	271994	3.76274	3.763
57	Hexachlorobenzene	284	17.065	17.057	(0.965)	263563	3.58821	3.588
58	Pentachlorophenol	266	17.436	17.421	(0.986)	470876	12.6912	12.69
* 59	Phenanthrene-d10	188	17.684	17.676	(1.000)	1129370	4.00000	
60	Phenanthrene	178	17.730	17.723	(1.003)	1533990	5.65245	5.652
61	Anthracene	178	17.823	17.816	(1.008)	987711	3.67359	3.674
62	Carbazole	167	18.171	18.156	(1.028)	914771	3.74919	3.749
63	Di-n-butylphthalate	149	19.015	18.992	(1.075)	970047	3.55947	3.559
64	Fluoranthene	202	20.191	20.137	(0.886)	2792719	9.32973	9.330(H)
65	Pyrene	202	20.601	20.562	(0.904)	3144368	9.93412	9.934
$ 66	Terphenyl-d14	244	20.887	20.872	(0.917)	898489	3.99789	3.998
67	Butylbenzylphthalate	149	21.832	21.816	(0.958)	448214	4.25960	4.260
68	Benzo(a)anthracene	228	22.761	22.738	(0.999)	1713600	7.71791	7.718
* 69	Chrysene-d12	240	22.784	22.769	(1.000)	693821	4.00000	
70	3,3'-Dichlorobenzidine	252	22.738	22.715	(0.998)	12948	0.19050	0.1905
71	Chrysene	228	22.831	22.815	(1.002)	1738553	8.70546	8.705
72	bis(2-Ethylhexyl)phthalate	149	22.869	22.854	(0.959)	644728	3.69714	3.697
* 134	Di-n-octylphthalate-d4	153	23.845	23.837	(1.000)	1038555	4.00000	
73	Di-n-octylphthalate	149	23.852	23.845	(1.000)	926242	3.81430	3.814
74	Benzo(b)fluoranthene	252	24.557	24.534	(0.973)	1529669	8.86185	8.862
75	Benzo(k)fluoranthene	252	24.596	24.573	(0.975)	1359867	7.37276	7.373
76	Benzo(a)pyrene	252	25.138	25.115	(0.996)	1158479	6.99291	6.993
* 77	Perylene-d12	264	25.238	25.215	(1.000)	543989	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	27.571	27.540	(1.092)	687923	4.97487	4.975
79	Dibenzo(a,h)anthracene	278	27.579	27.556	(1.093)	491641	4.33045	4.330
80	Benzo(g,h,i)perylene	276	28.255	28.216	(1.120)	540650	4.79238	4.792
90	N-Nitrosodimethylamine	74	4.303	4.280	(0.502)	529203	10.2792	10.28
91	Aniline	93	7.995	8.034	(0.933)	18436	0.15435	0.1544
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	4.334	4.288	(0.506)	74840	0.91869	0.9187
105	1-methylnaphthalene	142	12.697	12.698	(1.150)	598722	3.70992	3.710
111	Azobenzene (1,2-DP-Hydrazine)	77	16.085	16.077	(1.098)	958419	3.44700	3.447

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.557	24.573	(0.973)	2680805	15.9075	15.91
120 2,3,4,6-Tetrachlorophenol	232	15.397	15.390	(1.051)	198956	3.06787	3.068

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022145.D
Lab Smp Id: BLA0393-MSD1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 06:55
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	235125	117563	470250	248736	5.79
27 Naphthalene-d8	883104	441552	1766208	930871	5.41
42 Acenaphthene-d10	537789	268895	1075578	563398	4.76
59 Phenanthrene-d10	1079531	539766	2159062	1129370	4.62
69 Chrysene-d12	826409	413205	1652818	693821	-16.04
134 Di-n-octylphthala	1339562	669781	2679124	1038555	-22.47
77 Perylene-d12	590325	295163	1180650	543989	-7.85

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.66	0.05
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.07
134 Di-n-octylphthala	23.84	23.34	24.34	23.85	0.03
77 Perylene-d12	25.22	24.72	25.72	25.24	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022145.D

Lab ID: BLA0393-MSD1
nt14.i, ABN.m, 22-FEB-2023 15:58

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.961	0.968	-0.0063	Benzoic acid
0.506	0.500	0.0054	Pyridine

RRT check based on Ccal File: NT1423022130.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

STANDARD REFERENCE MATERIAL RECOVERY

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0393-SRM1
Batch: BLA0393
Initial/Final: 1 g / 1 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 02/22/2023 11:09
Standard ID: K003477
Expires: 01/31/2024
Standard Lot#: CRM 143 (LRAC8918)
Description: CRM 143 BNAs - Sandy Loam

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Phenol	2660.0	3320	43.9	200		125	26 - 174
4-Methylphenol	6617.0	8990	73.9	200		136	40 - 160
Naphthalene	4458.0	5070	42.4	200		114	25 - 175
Acenaphthylene	1948.0	2320	62.4	200		119	37 - 167
Dimethylphthalate	4537.0	5680	43.9	200		125	41 - 159
Acenaphthene	5489.0	6850	52.2	200		125	41 - 159
Dibenzofuran	6130.0	7590	141	200		124	45 - 155
Fluorene	3724.0	4510	146	200		121	44 - 156
Phenanthrene	5052.0	6030	87.2	200		119	46 - 154
Anthracene	2866.0	3050	71.9	200		106	42 - 158
Fluoranthene	2497.0	2900	60.9	200		116	39 - 161
Pyrene	2964.0	3620	56.8	200		122	38 - 162
Butylbenzylphthalate	3511.0	4550	94.1	200		130	36 - 164
Benzo(a)anthracene	5751.0	7240	59.6	200		126	49 - 151
Chrysene	1477.0	1880	60.6	200		127	45 - 155
bis(2-Ethylhexyl)phthalate	2905.0	2830	54.6	500		97.6	26 - 174
Benzofluoranthenes, Total	6534.0	7060	100	400		108	40 - 160
Benzo(a)pyrene	5902.0	5470	42.3	200		92.7	43 - 157
Indeno(1,2,3-cd)pyrene	3914.0	4380	147	200		112	22 - 178
Dibenzo(a,h)anthracene	3420.0	4200	172	200		123	37 - 163
Benzo(g,h,i)perylene	1380.0	1480	136	200		107	35 - 165

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022137.D

Date : 22-FEB-2023 11:09

Client ID:

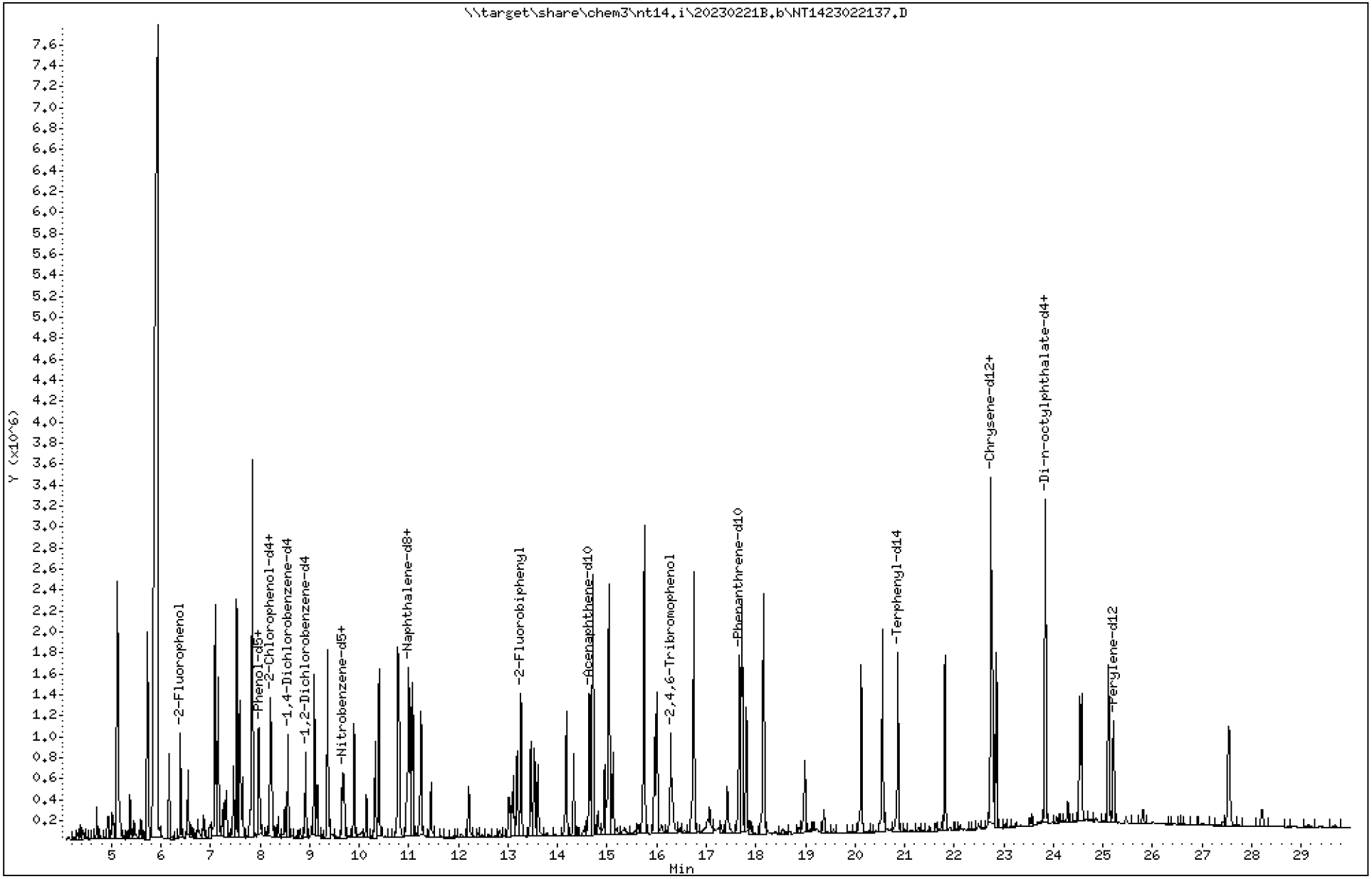
Sample Info: BLA0393-SRM1

Column phase: ZB-5msi

Instrument: nt14.i

Operator: DSD

Column diameter: 0.25



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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

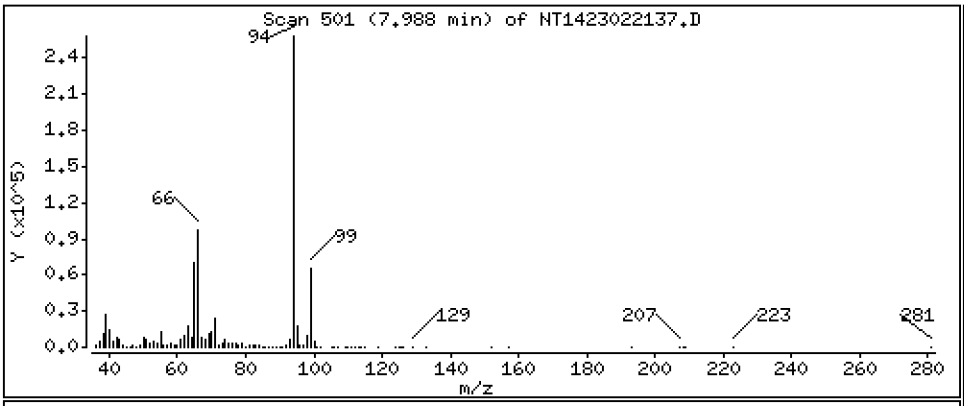
Operator: DSD

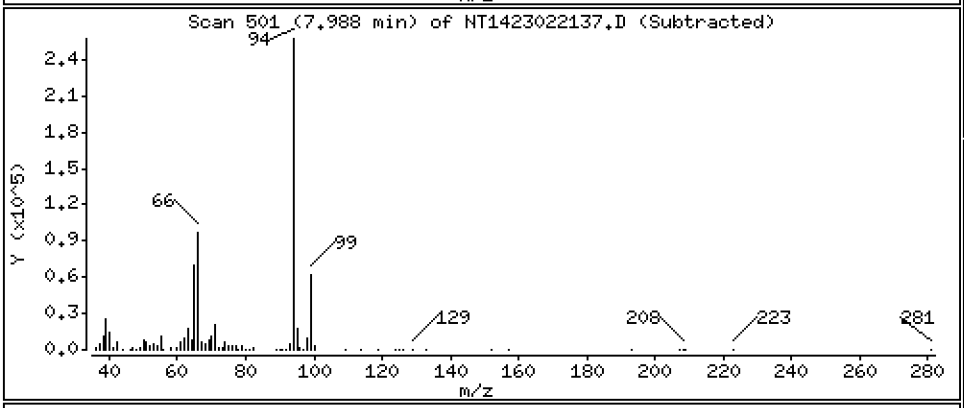
Column phase: ZB-5msi

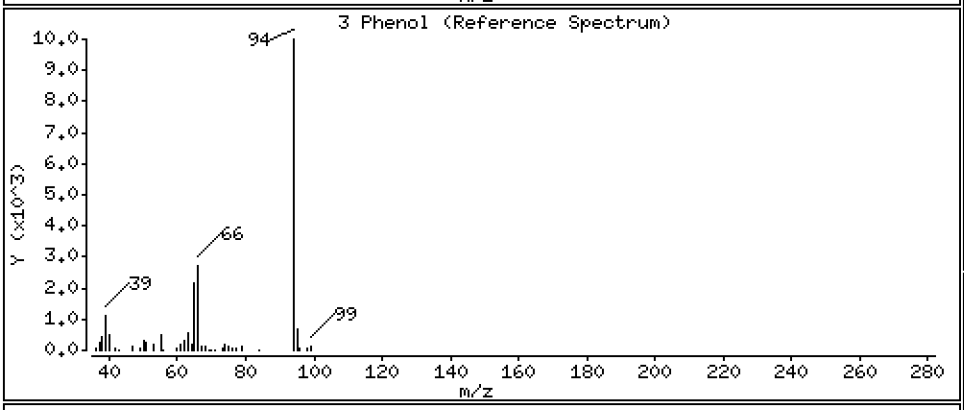
Column diameter: 0.25

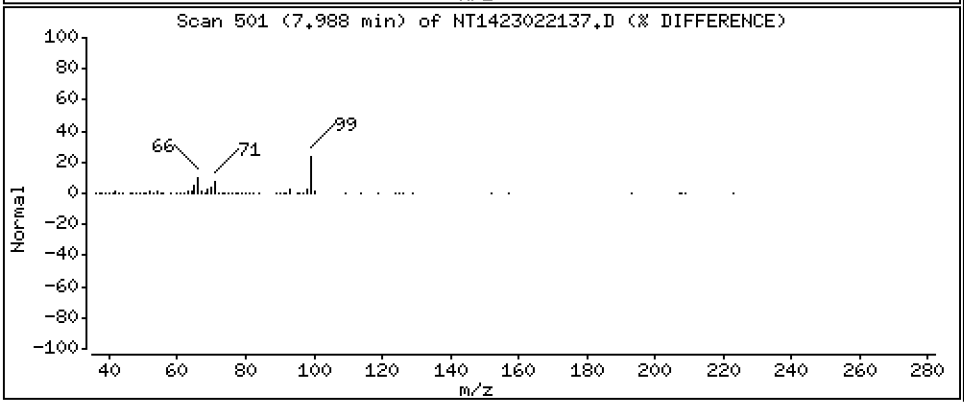
3 Phenol

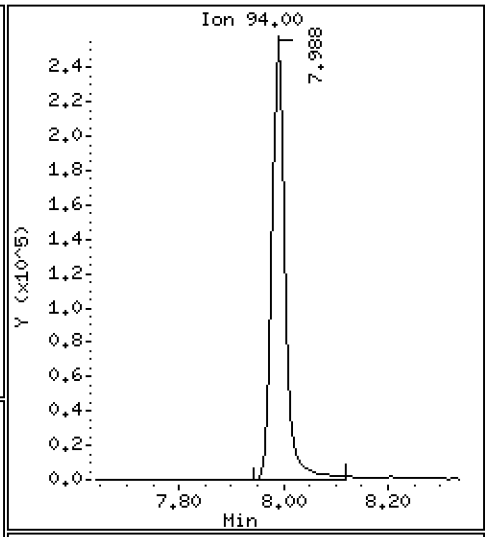
Concentration: 3.318 ug/mL

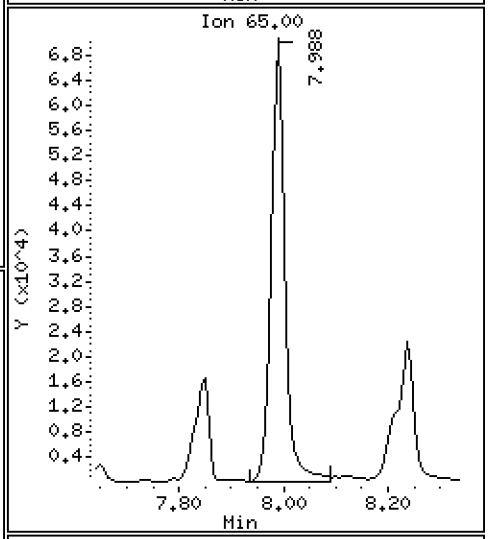


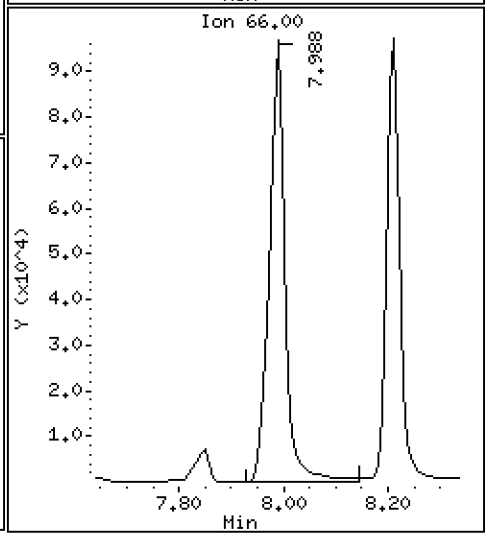












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

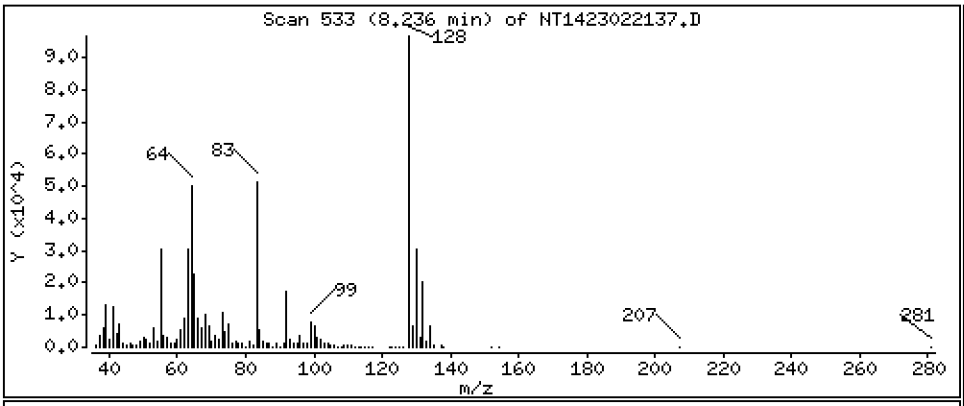
Operator: DSD

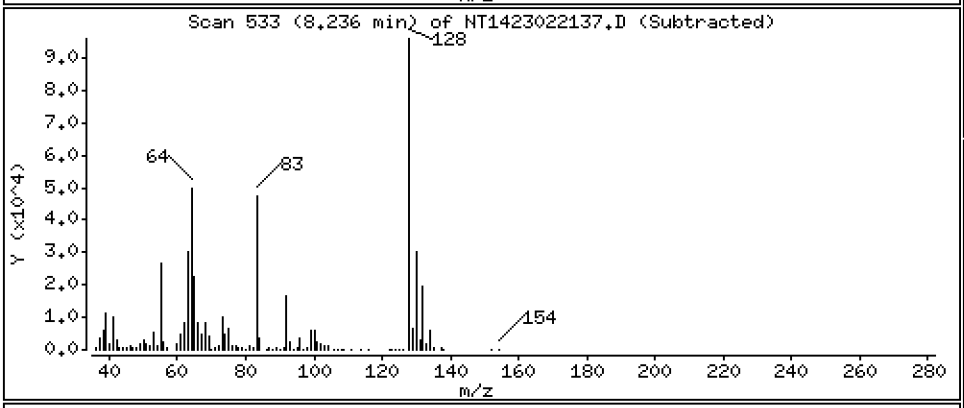
Column phase: ZB-5msi

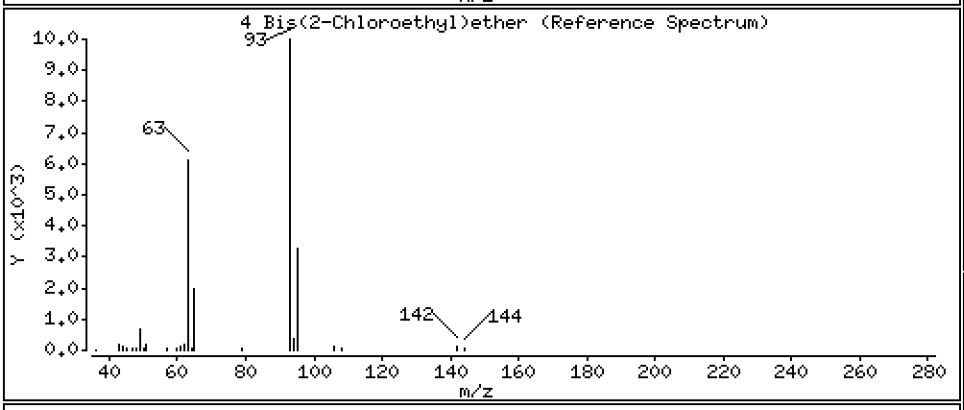
Column diameter: 0.25

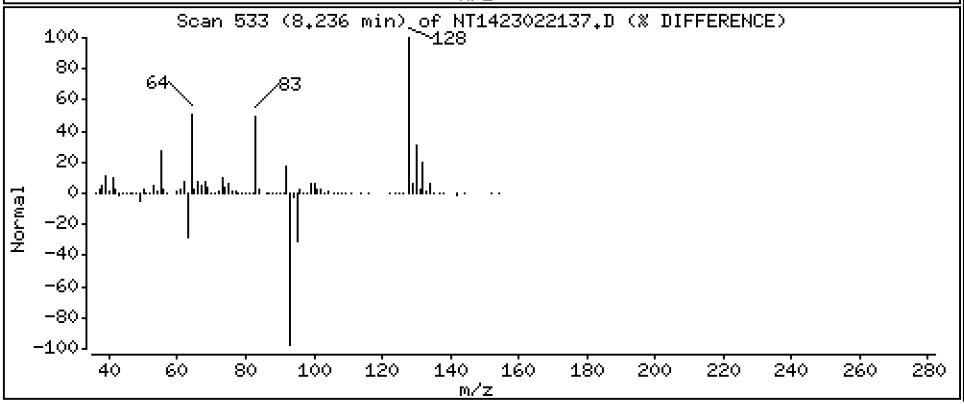
4 Bis(2-Chloroethyl)ether

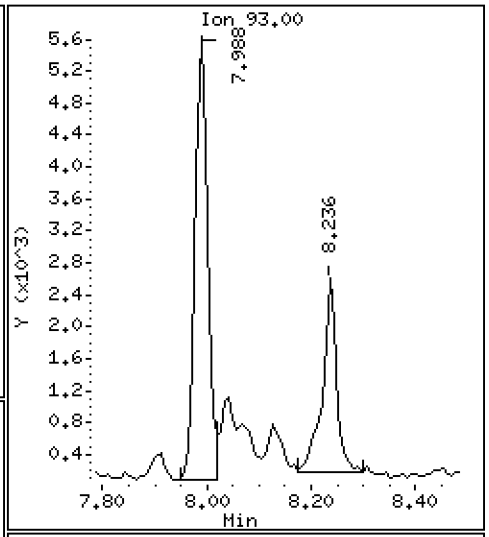
Concentration: 0.04614 ug/mL

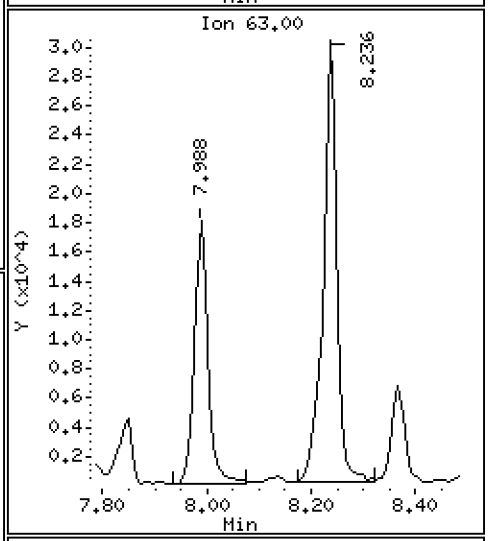


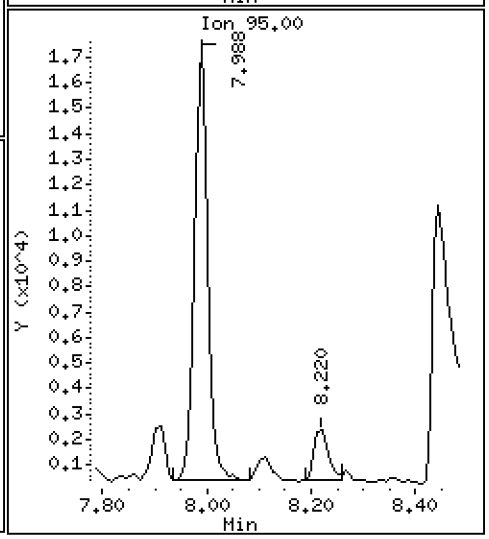












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

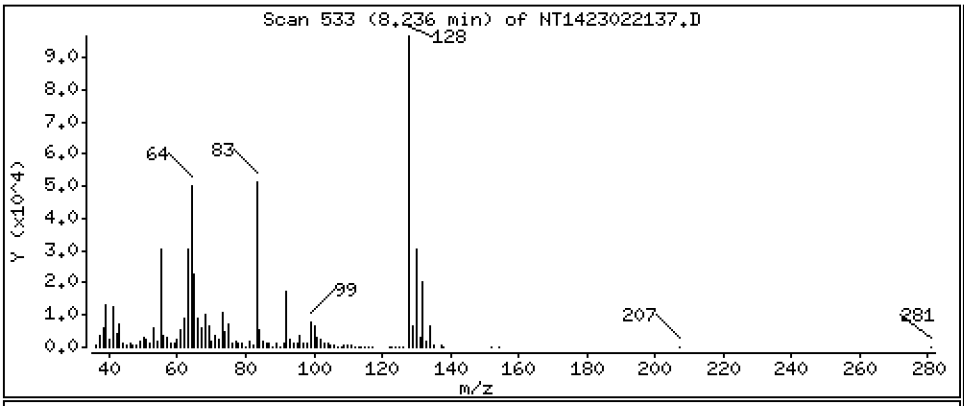
Operator: DSD

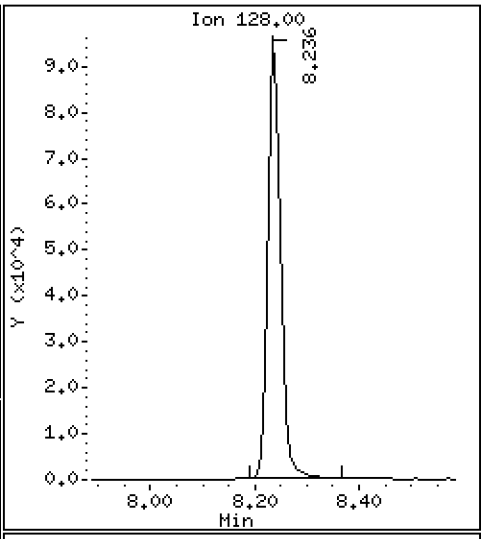
Column phase: ZB-5msi

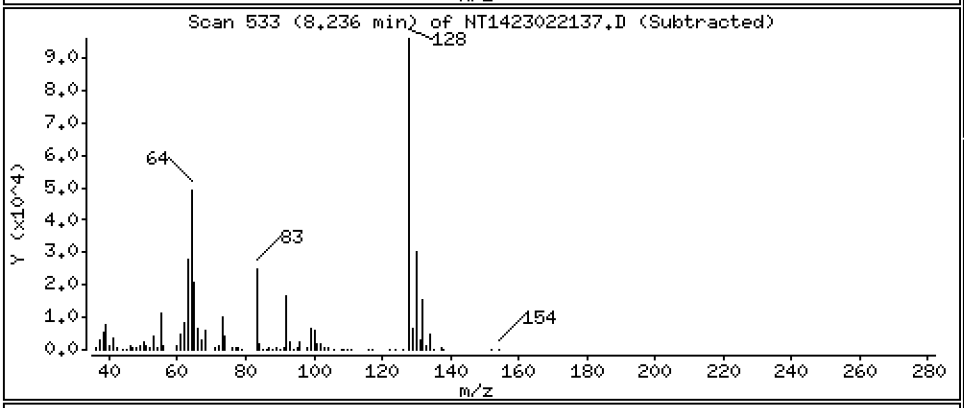
Column diameter: 0.25

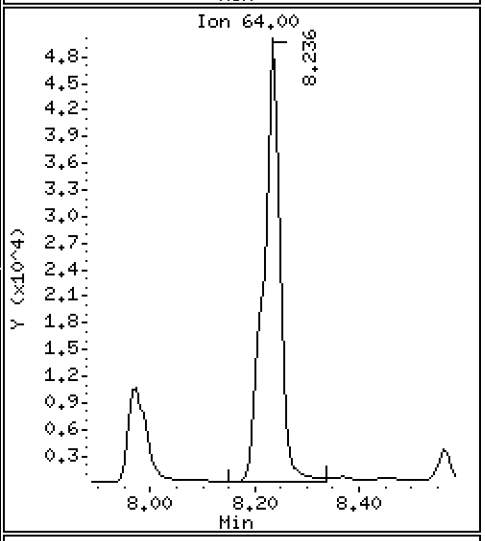
6 2-Chlorophenol

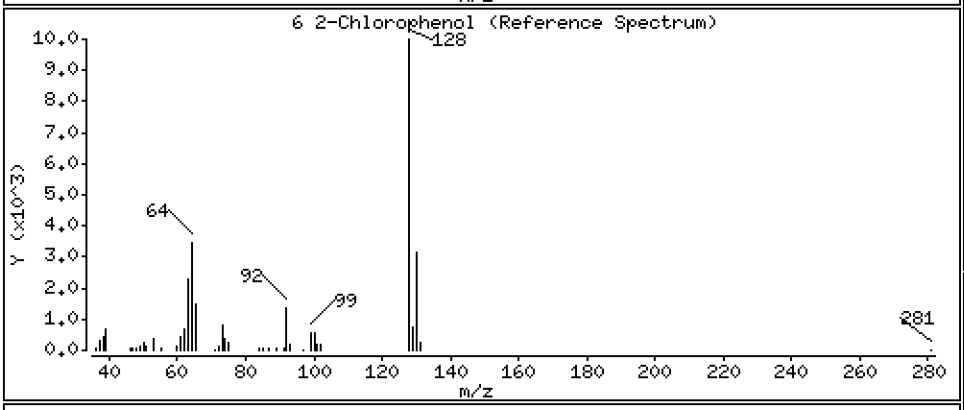
Concentration: 1.723 ug/mL

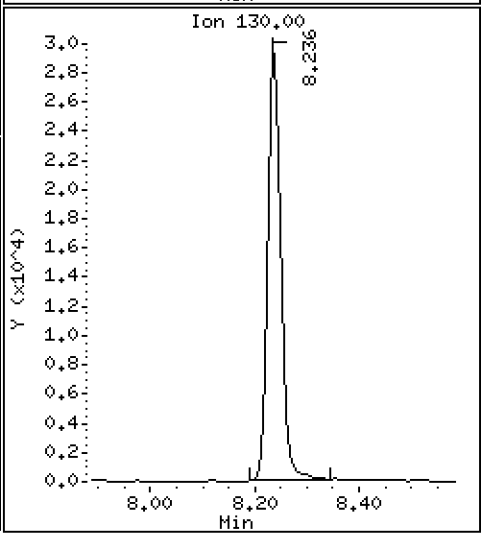


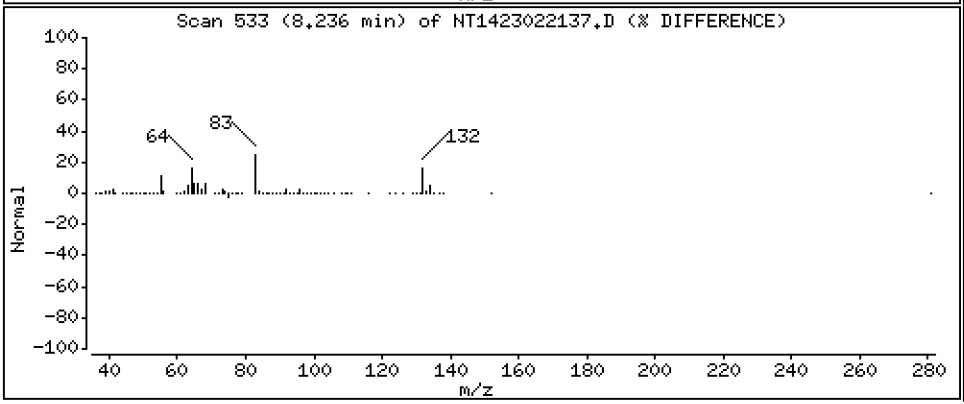












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

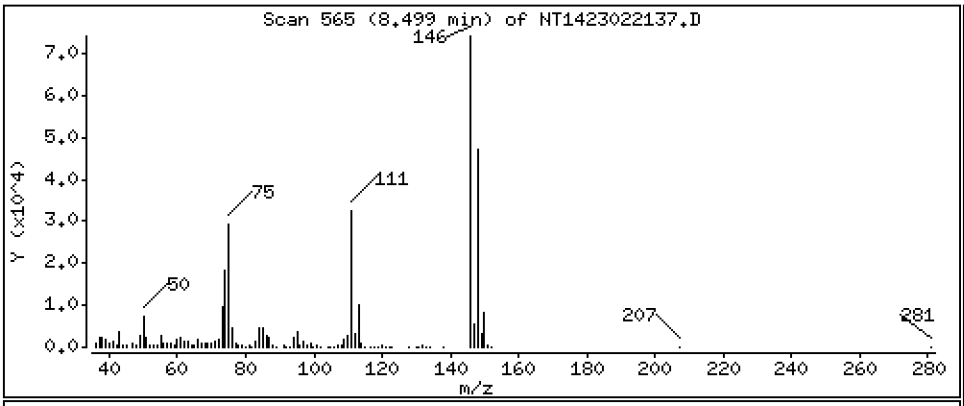
Operator: DSD

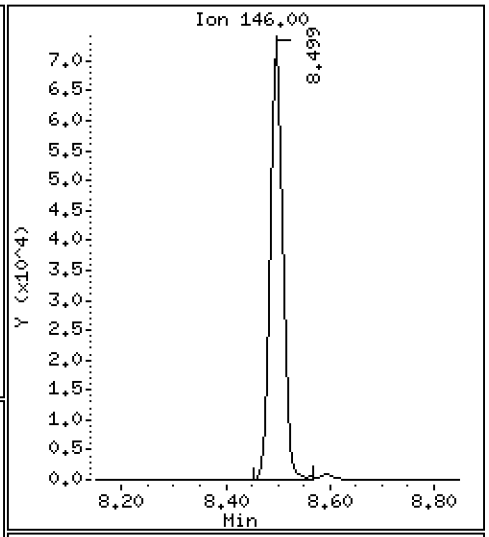
Column phase: ZB-5msi

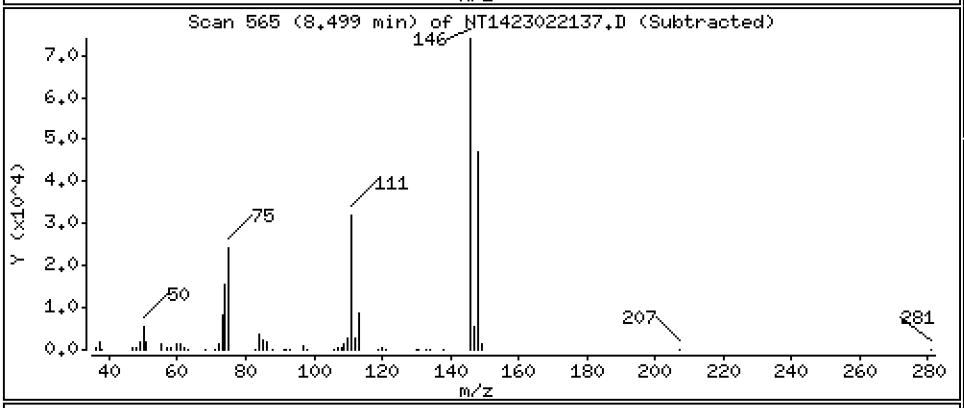
Column diameter: 0.25

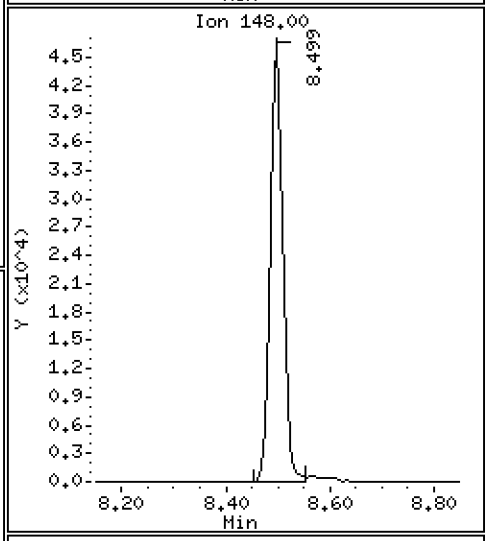
7 1,3-Dichlorobenzene

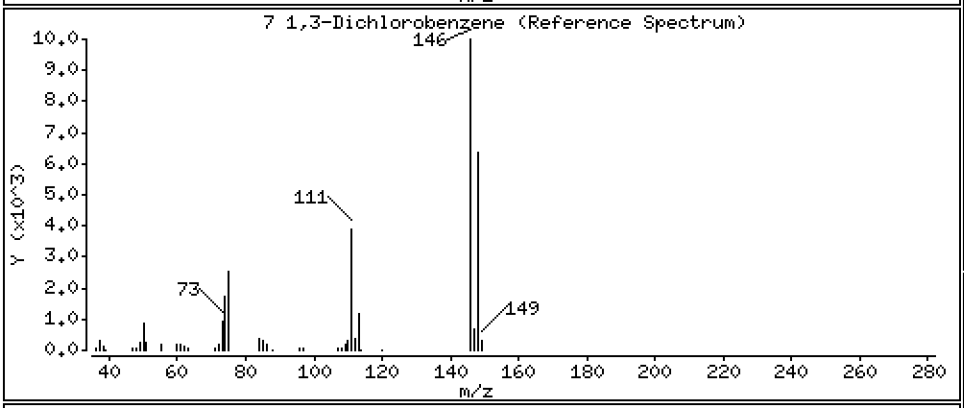
Concentration: 1.196 ug/mL

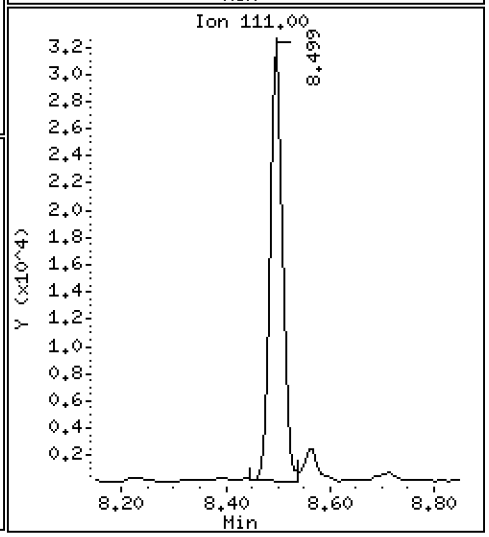


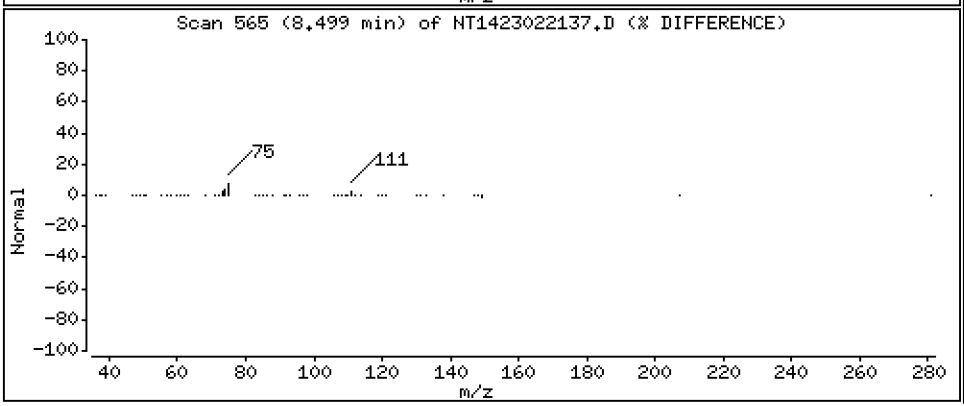












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

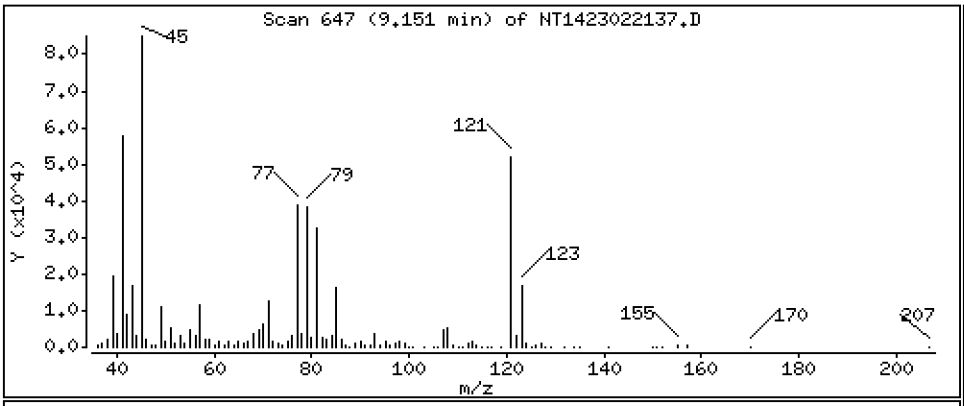
Operator: DSD

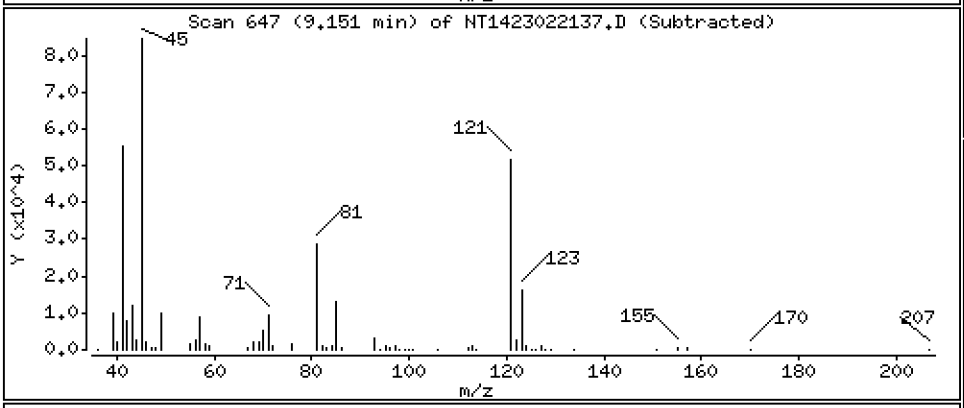
Column phase: ZB-5msi

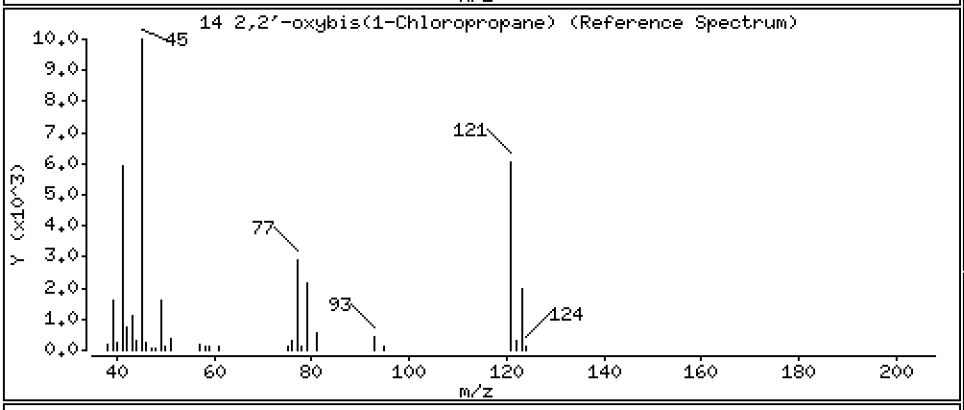
Column diameter: 0.25

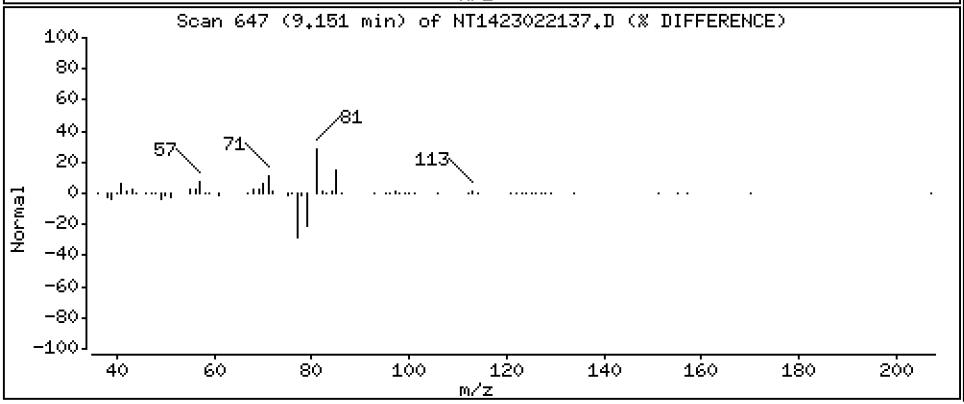
14 2,2'-oxybis(1-Chloropropane)

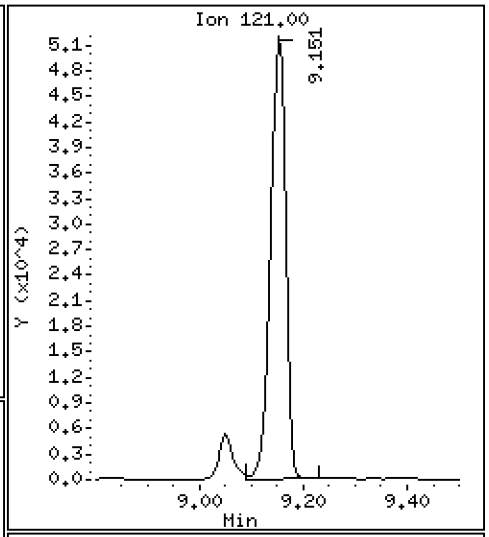
Concentration: 3.661 ug/mL

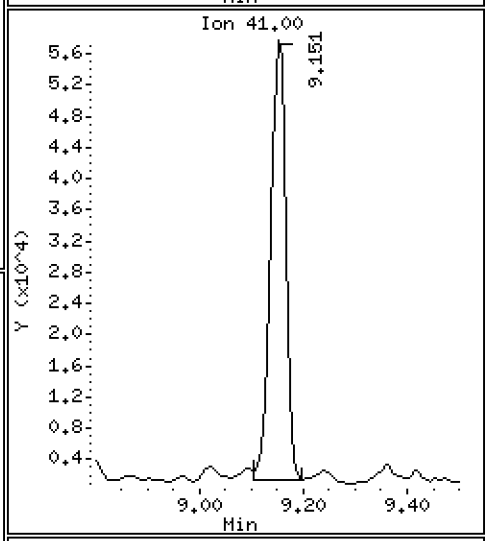


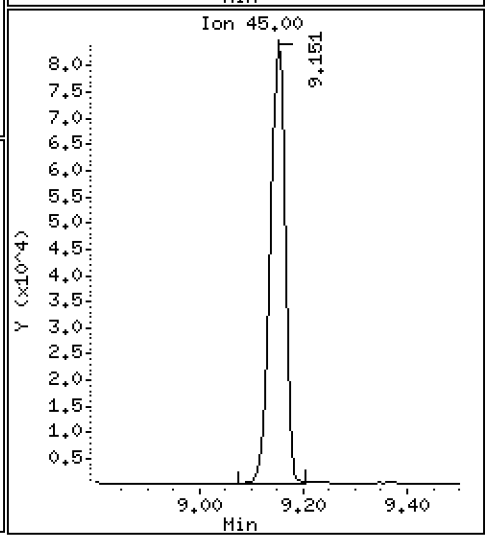












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

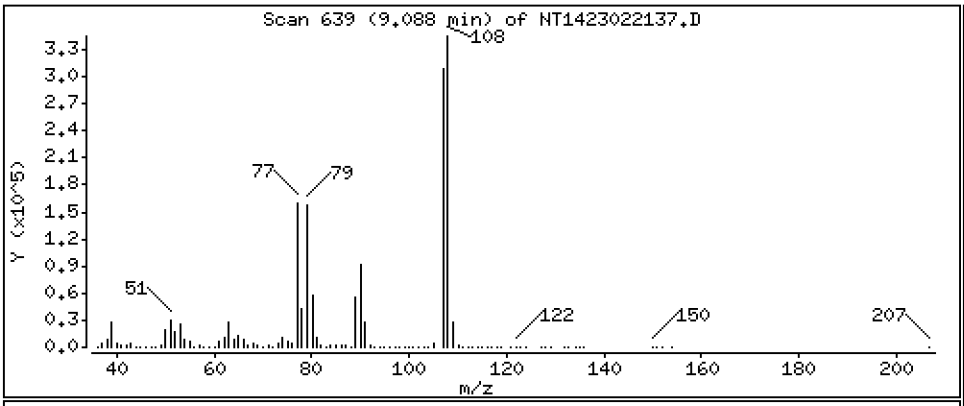
Operator: DSD

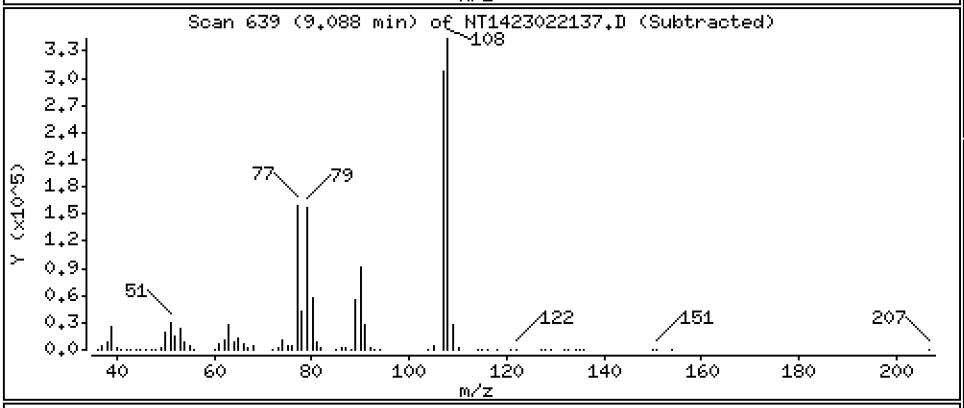
Column phase: ZB-5msi

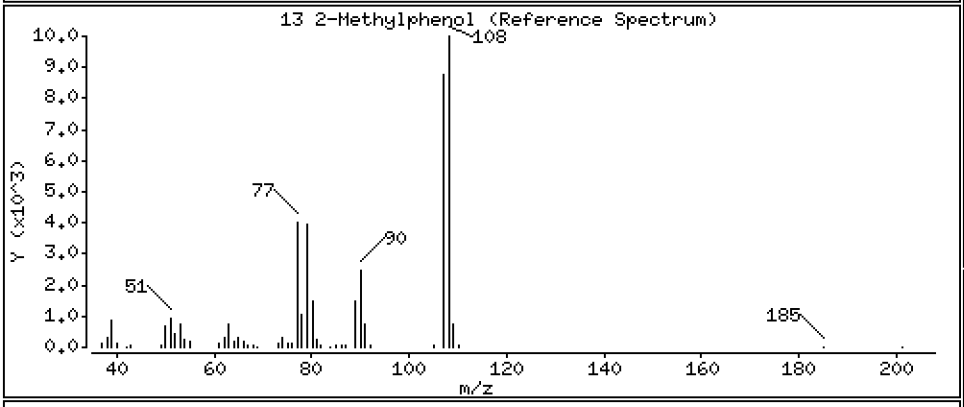
Column diameter: 0.25

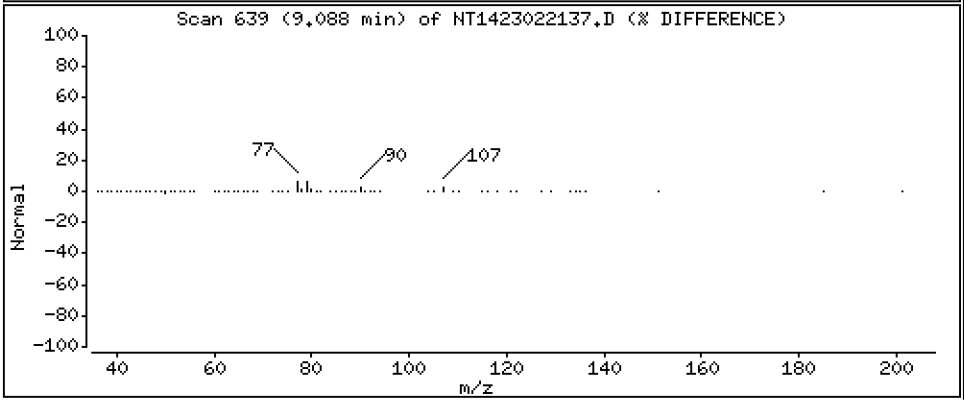
13 2-Methylphenol

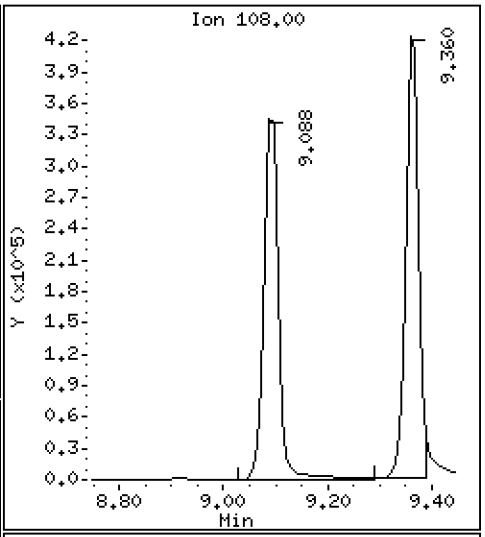
Concentration: 7.132 ug/mL

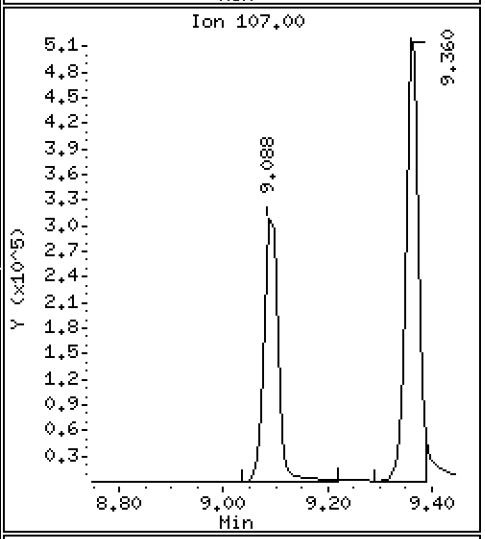


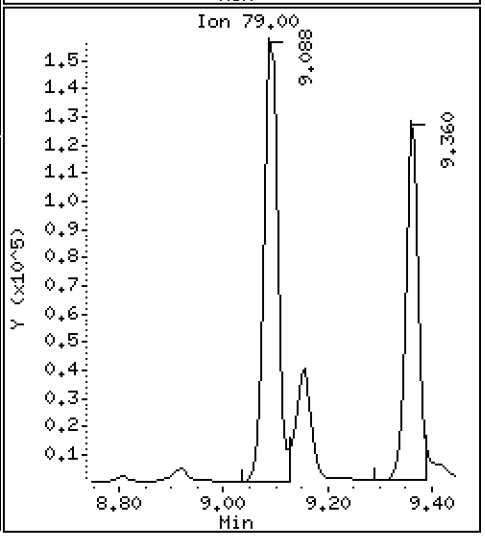












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

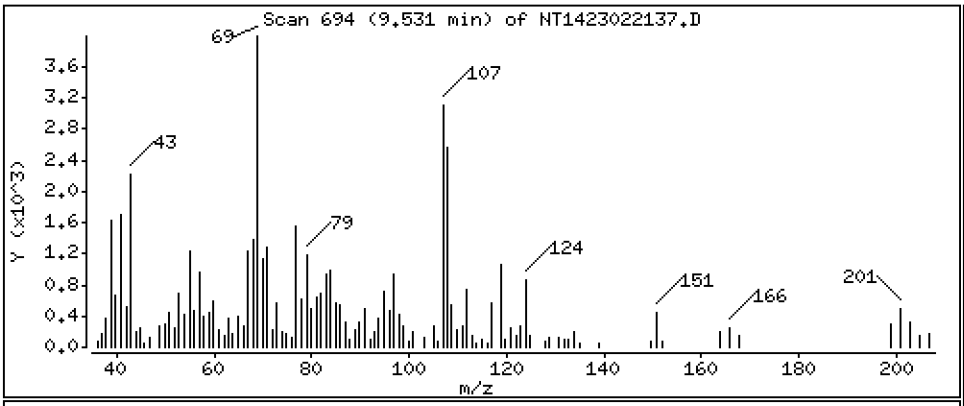
Operator: DSD

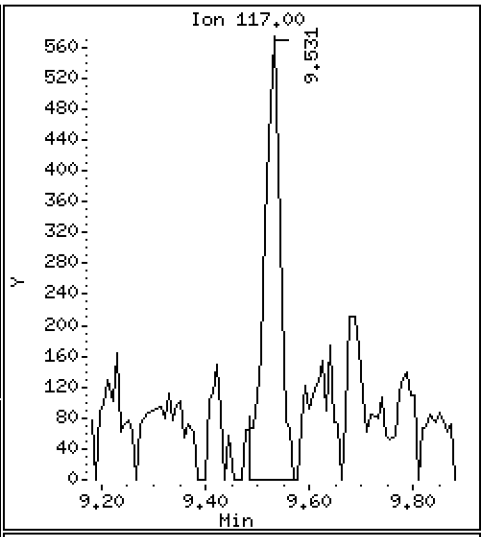
Column phase: ZB-5msi

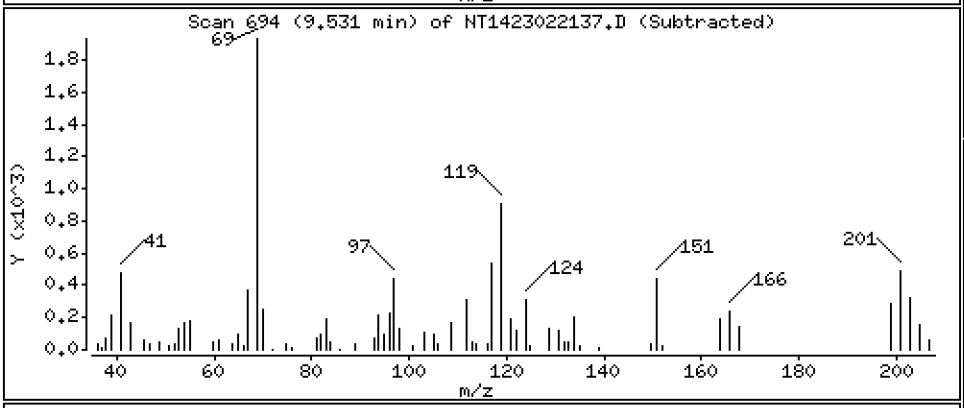
Column diameter: 0.25

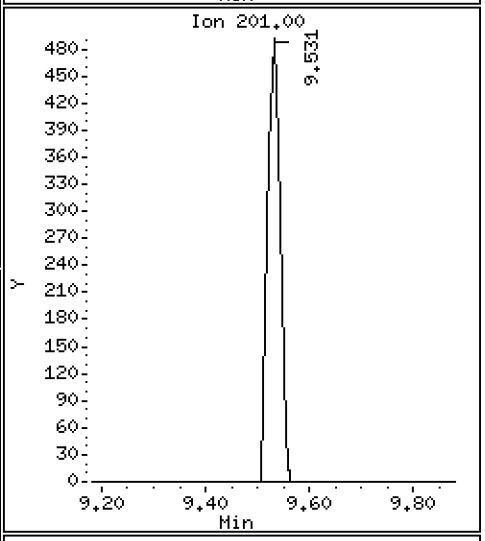
17 Hexachloroethane

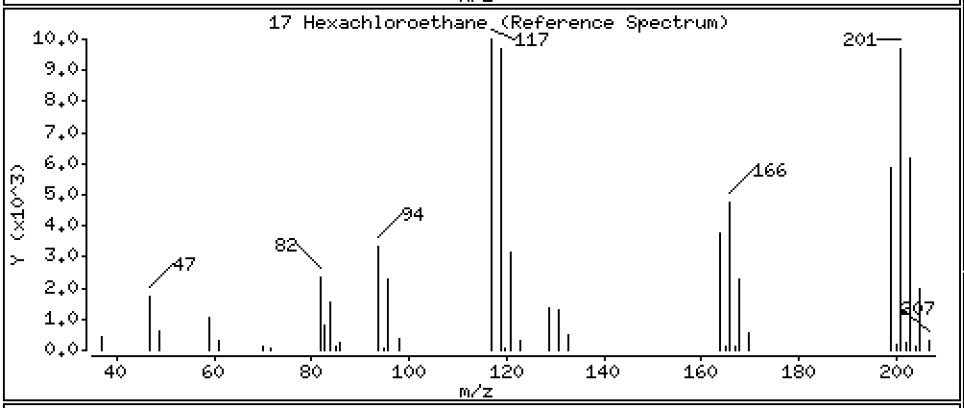
Concentration: 0.02813 ug/mL

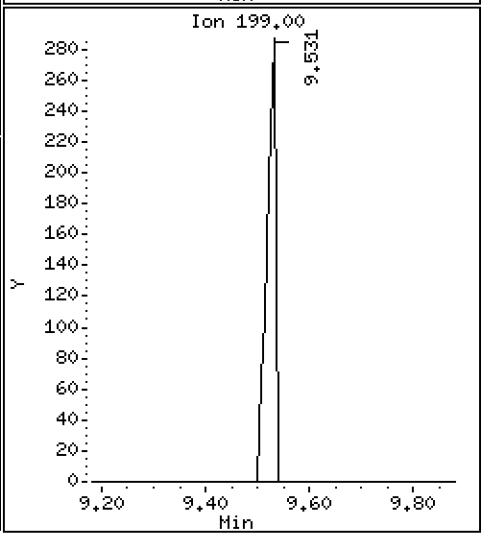


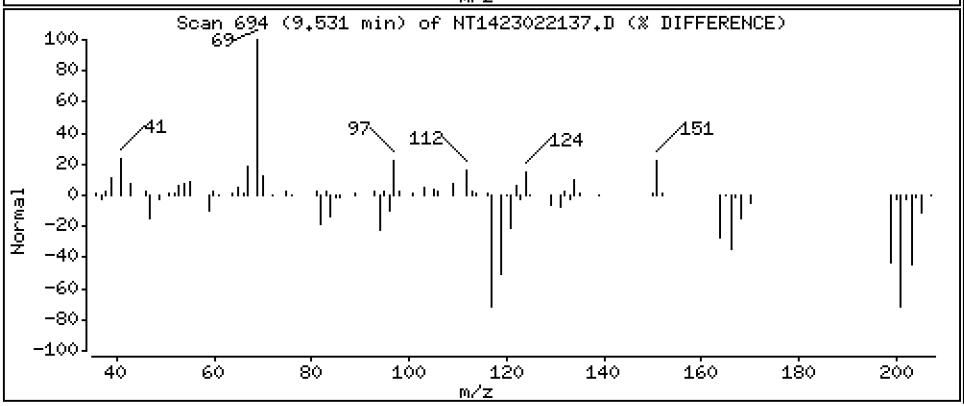












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

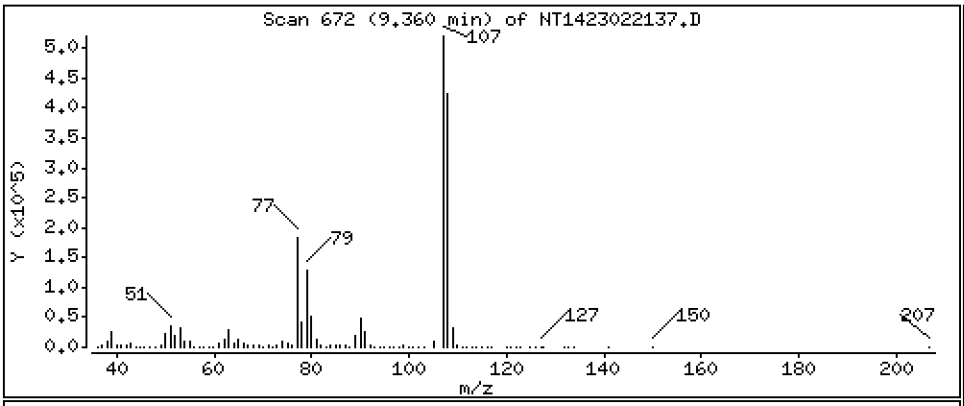
Operator: DSD

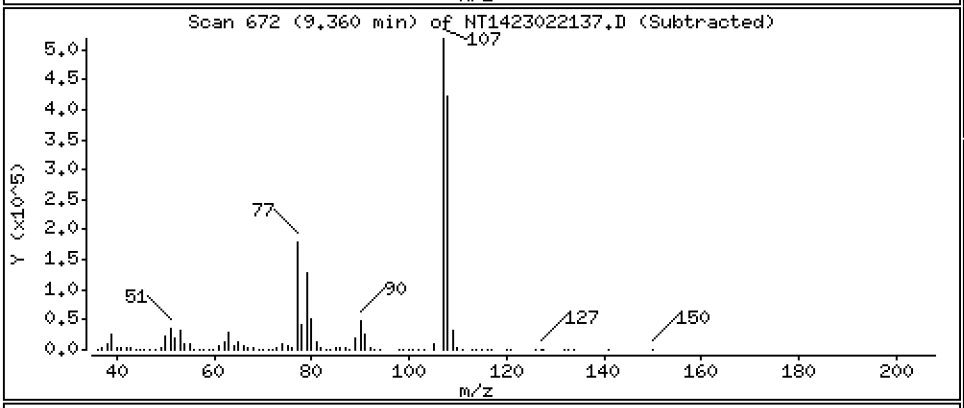
Column phase: ZB-5msi

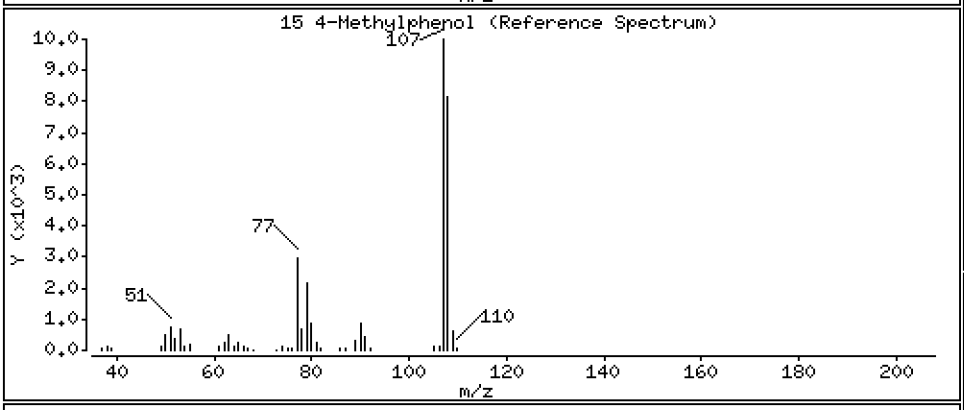
Column diameter: 0.25

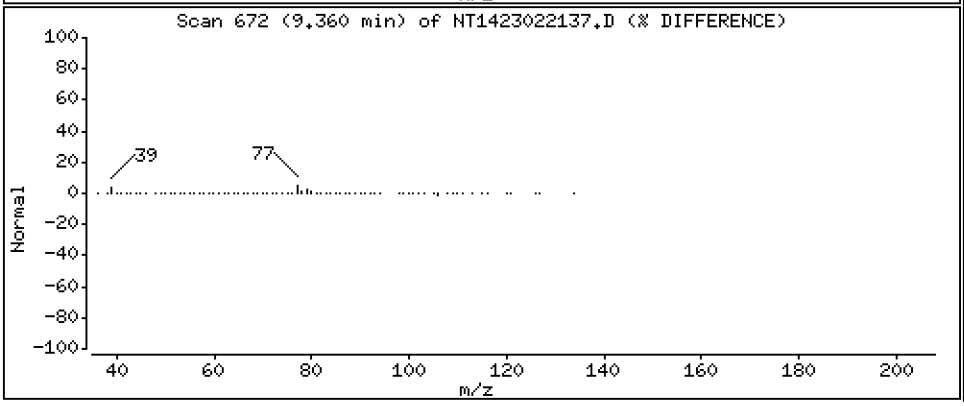
15 4-Methylphenol

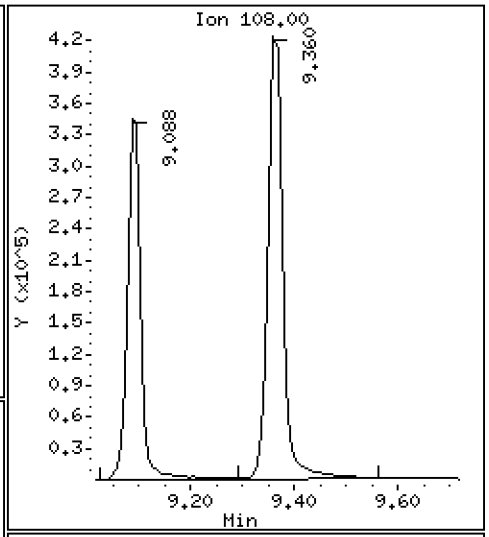
Concentration: 8.994 ug/mL

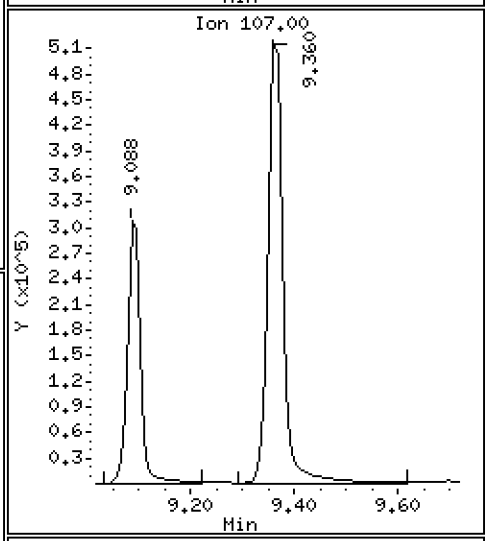


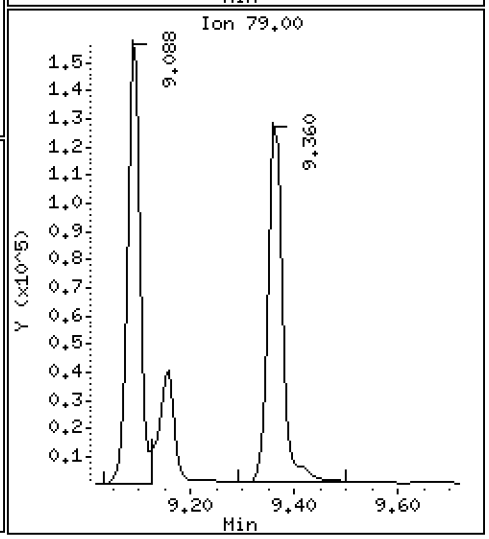












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

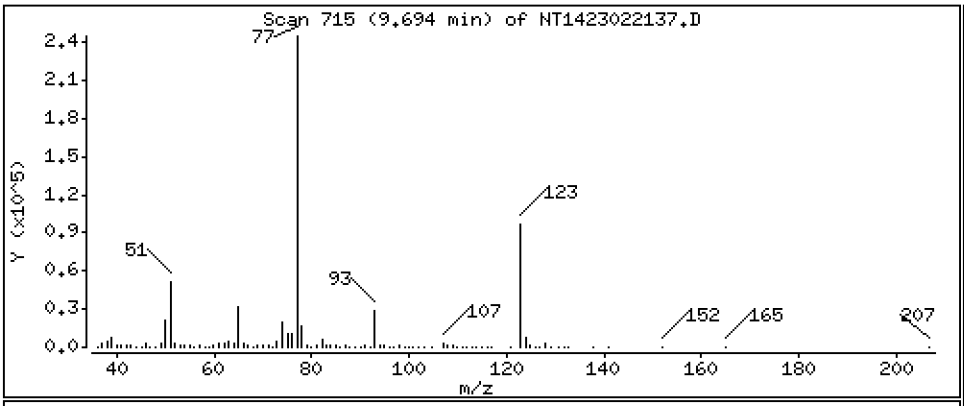
Operator: DSD

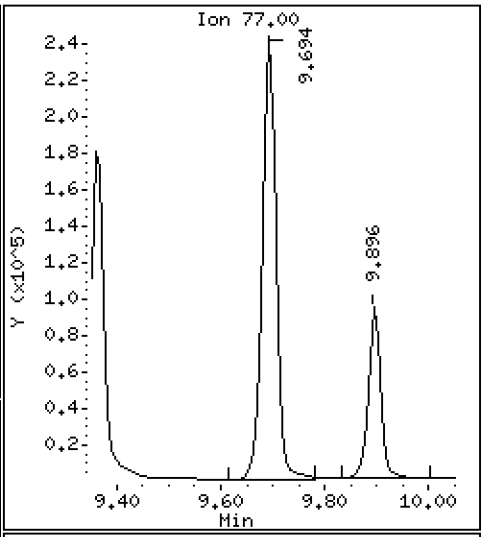
Column phase: ZB-5msi

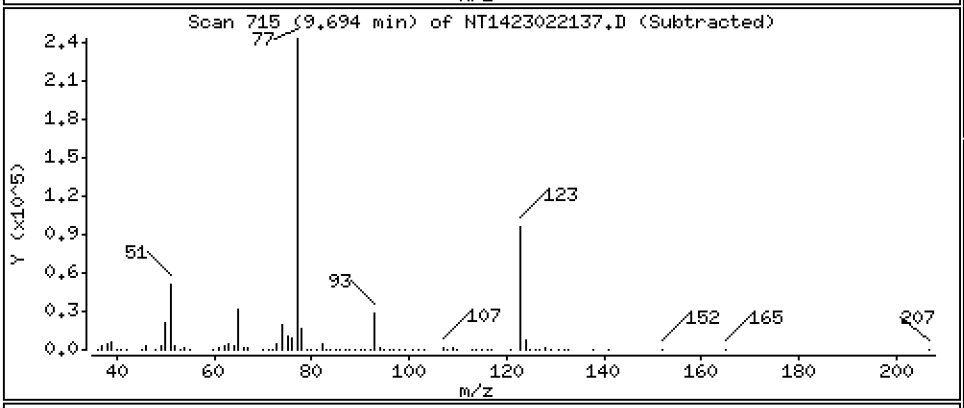
Column diameter: 0.25

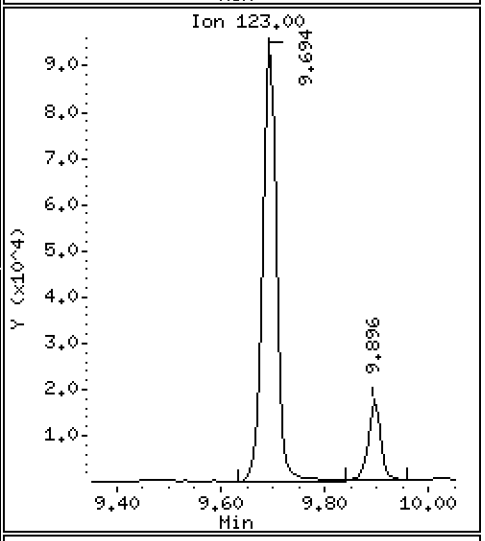
19 Nitrobenzene

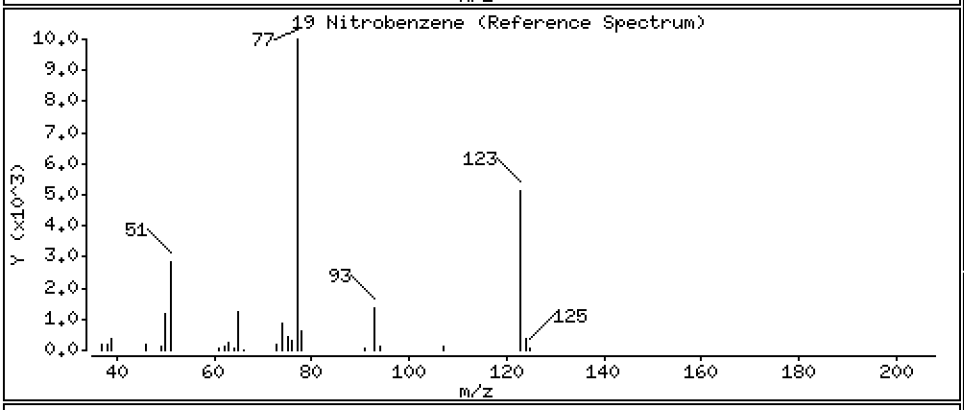
Concentration: 3.524 ug/mL

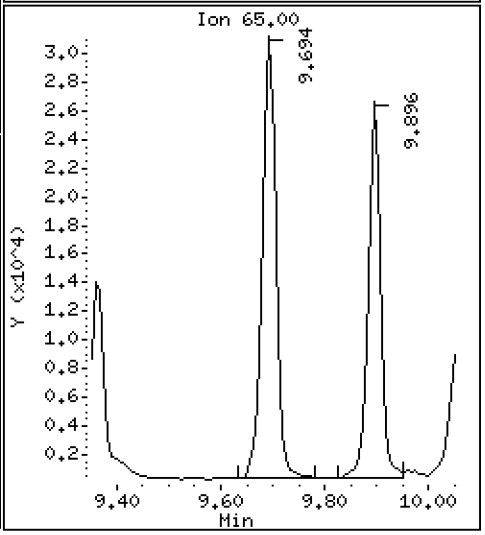


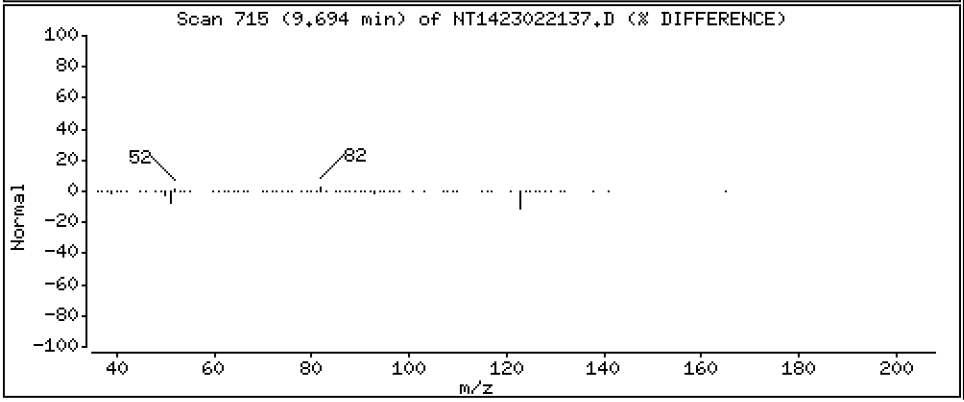












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

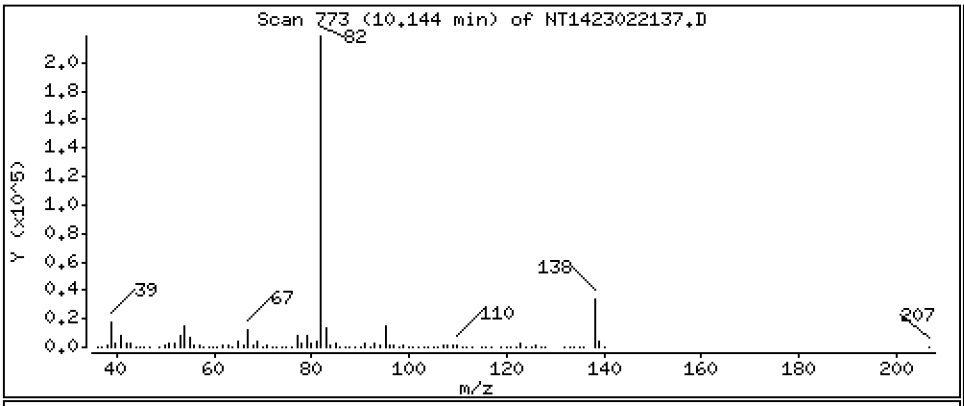
Operator: DSD

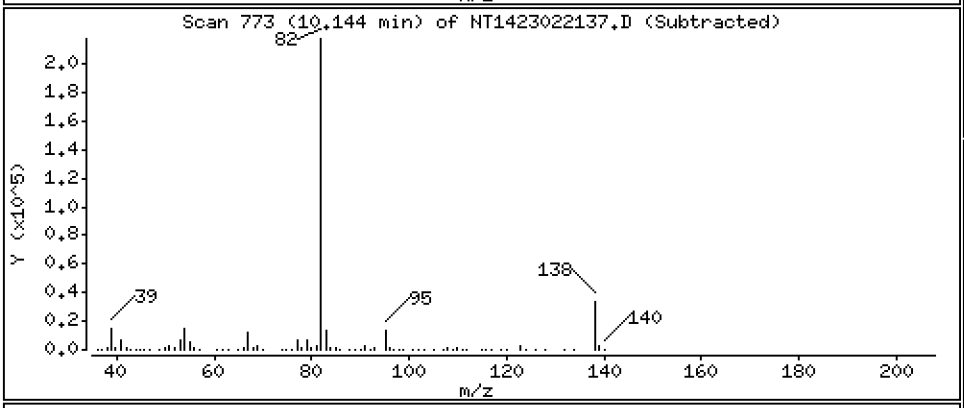
Column phase: ZB-5msi

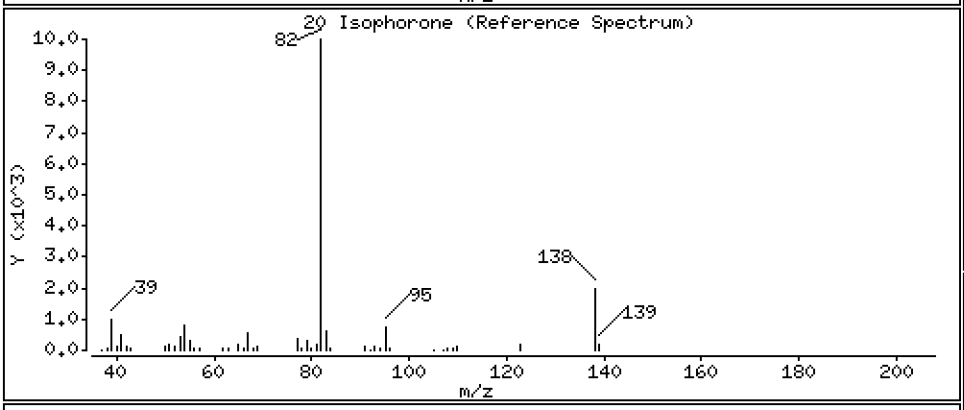
Column diameter: 0.25

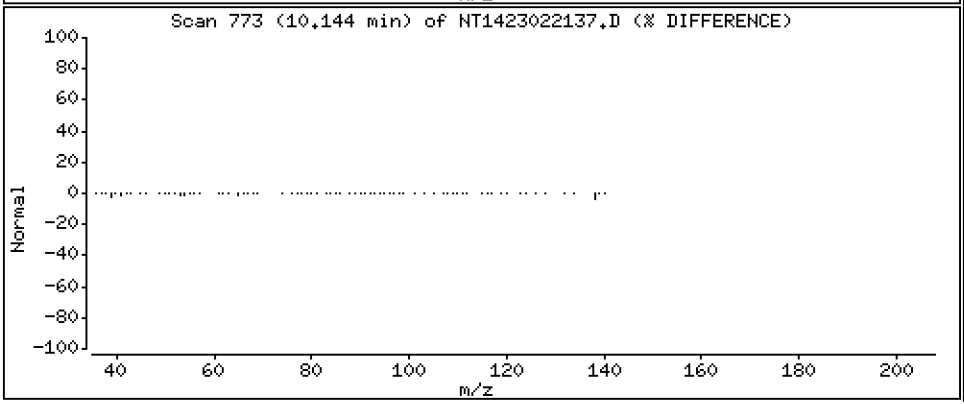
20 Isophorone

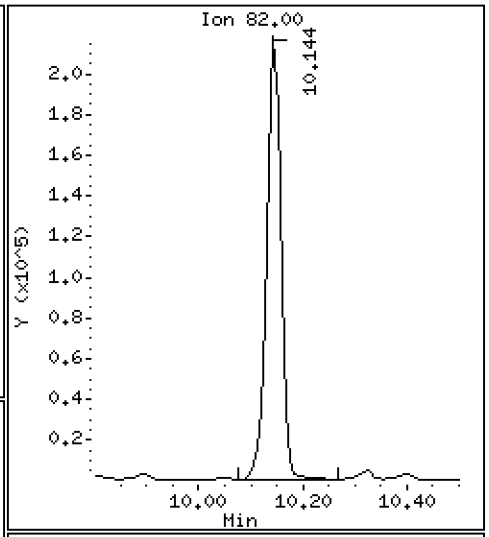
Concentration: 2.681 ug/mL

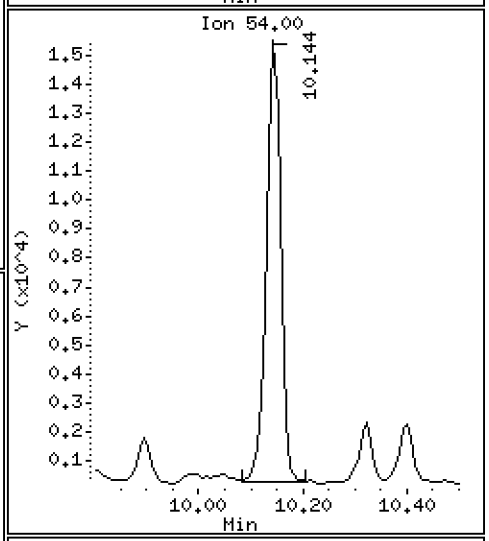


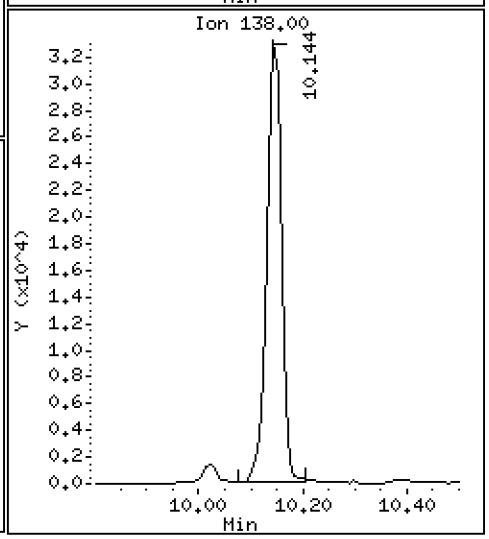












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

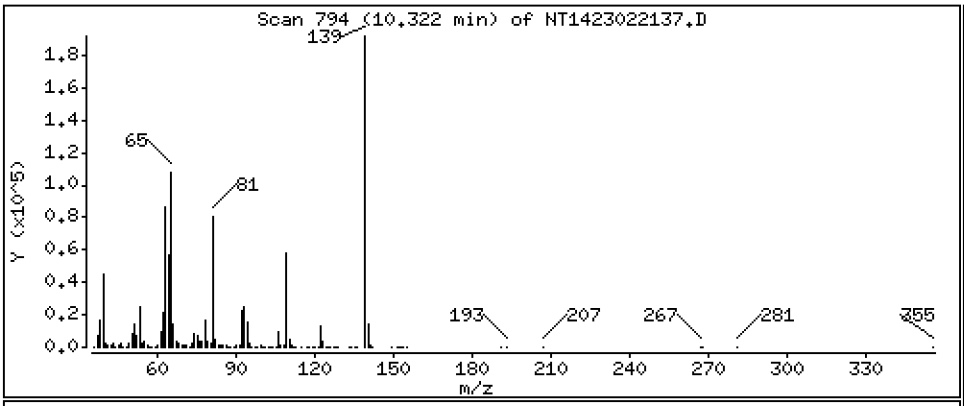
Operator: DSD

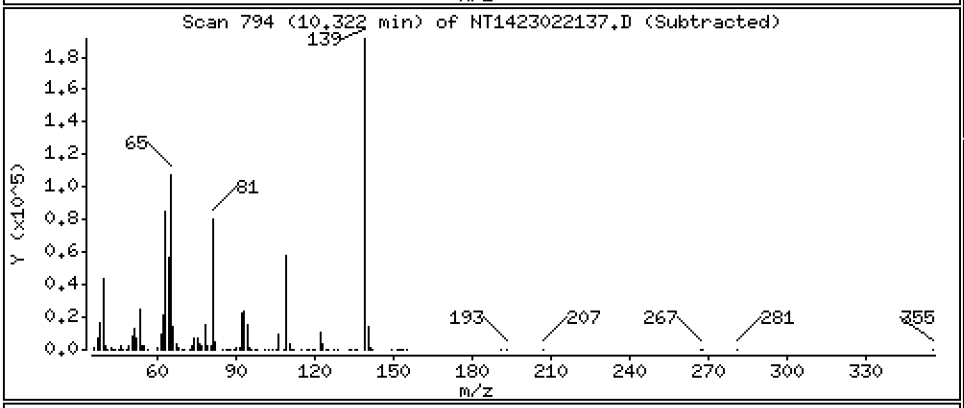
Column phase: ZB-5msi

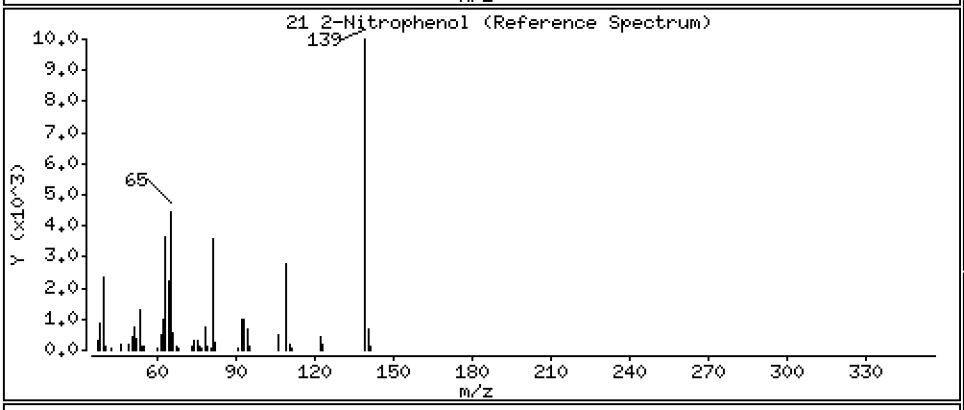
Column diameter: 0.25

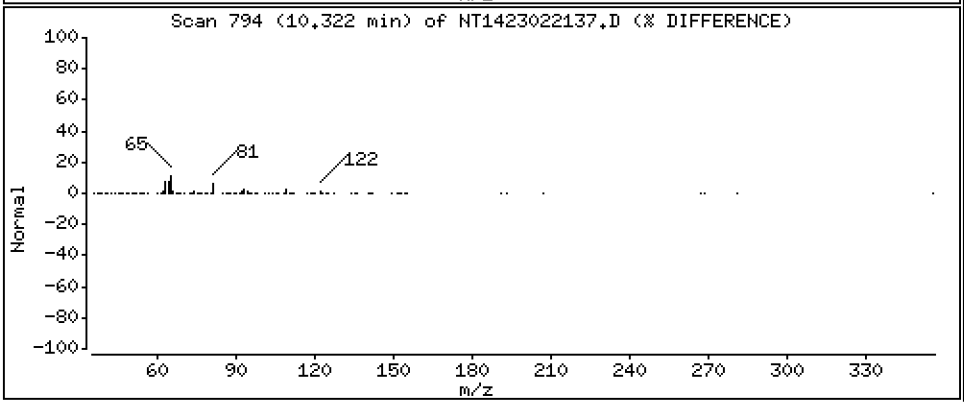
21 2-Nitrophenol

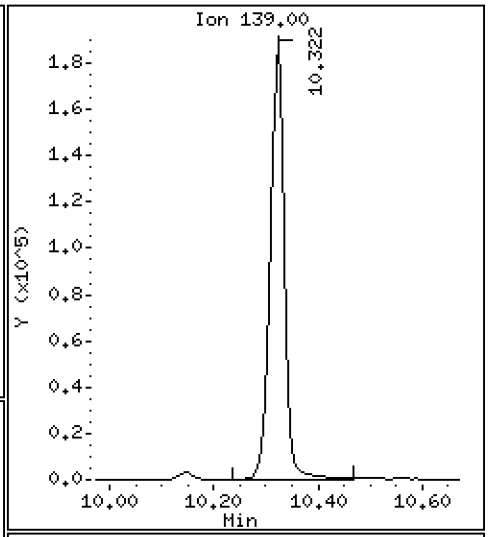
Concentration: 6.516 ug/mL

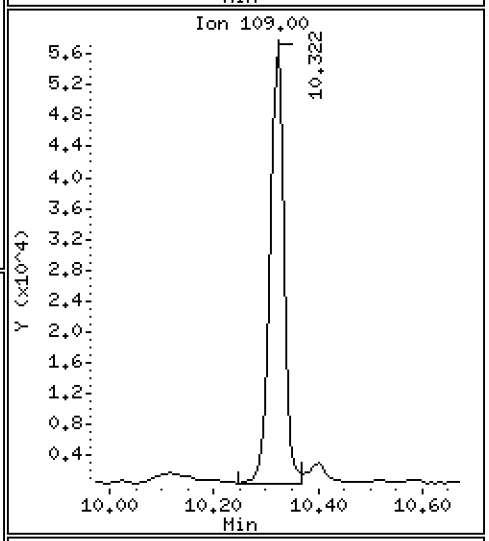


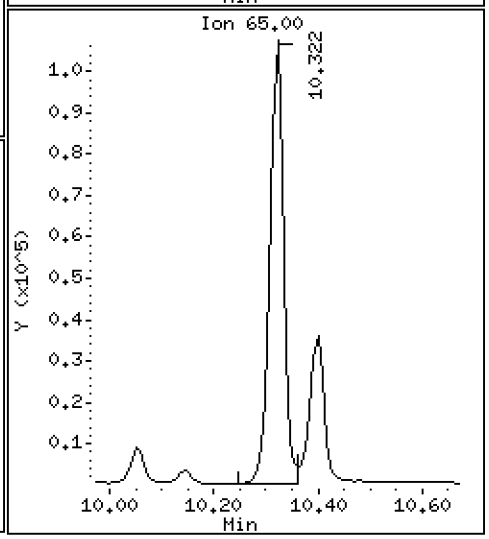












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

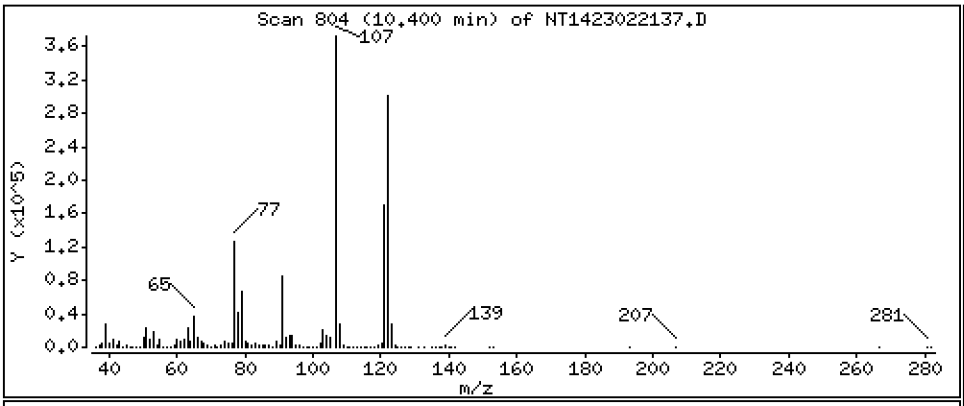
Operator: DSD

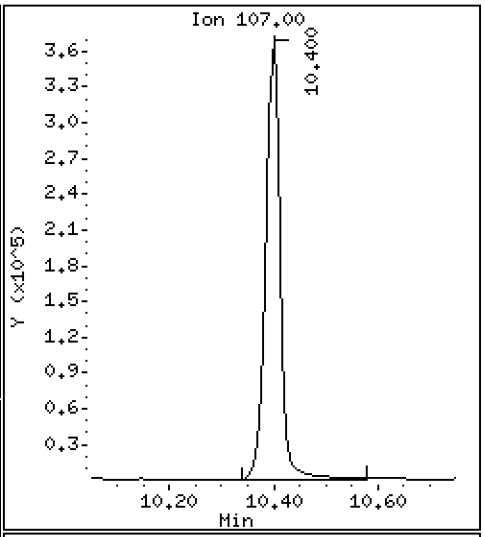
Column phase: ZB-5msi

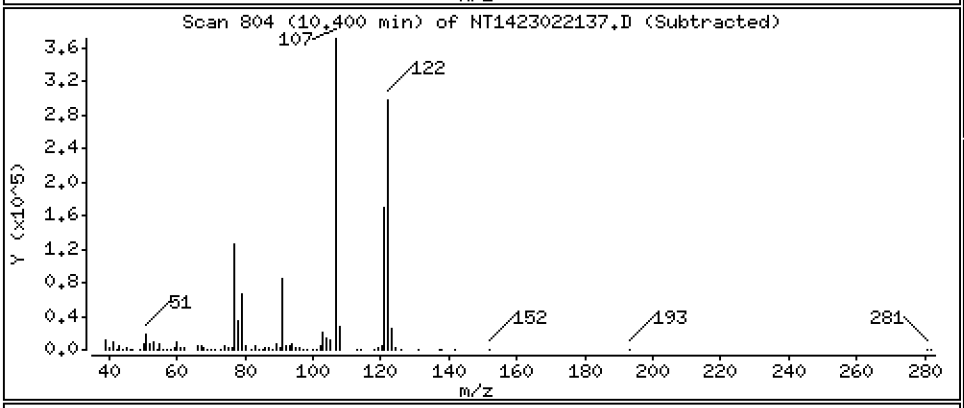
Column diameter: 0.25

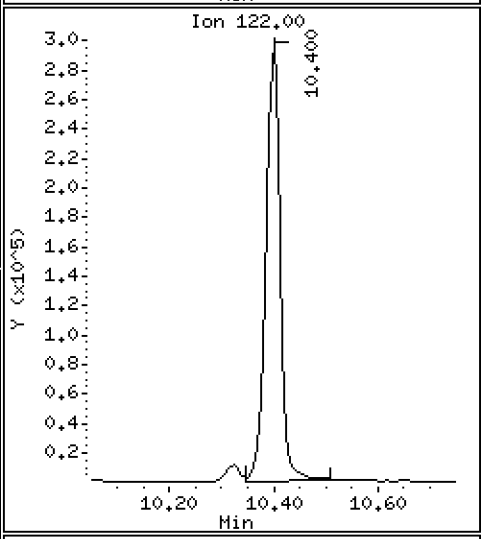
22 2,4-Dimethylphenol

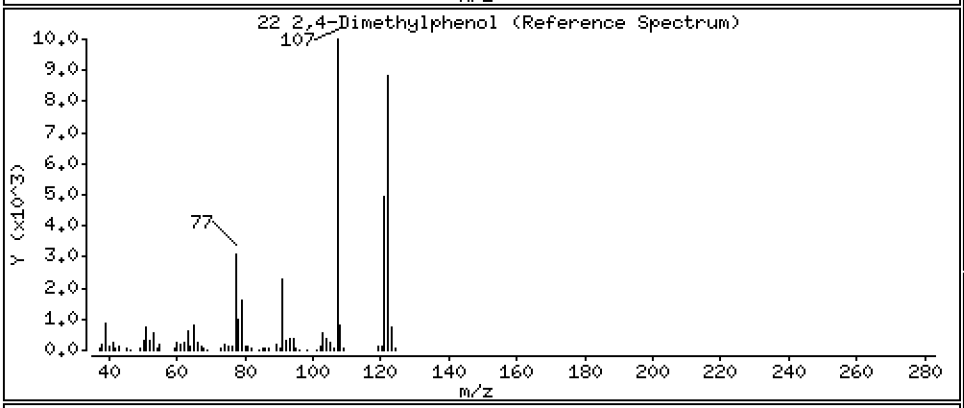
Concentration: 7.388 ug/mL

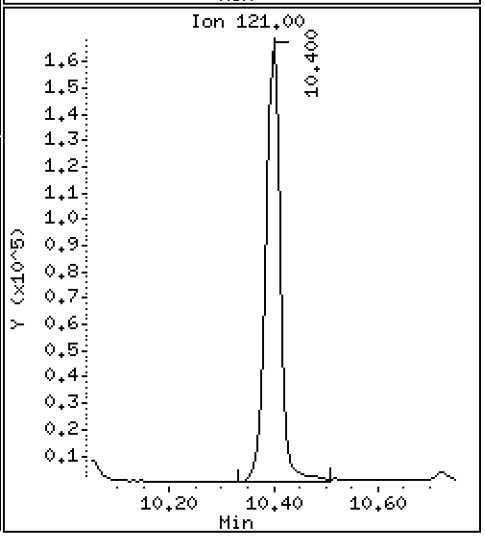


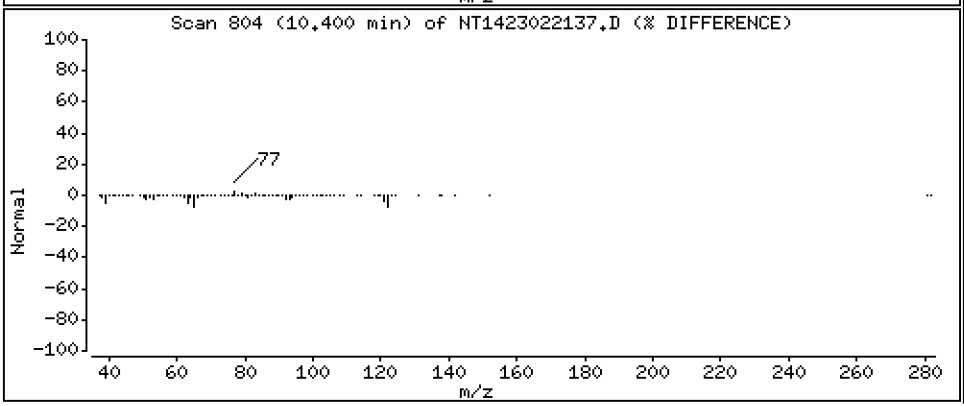












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

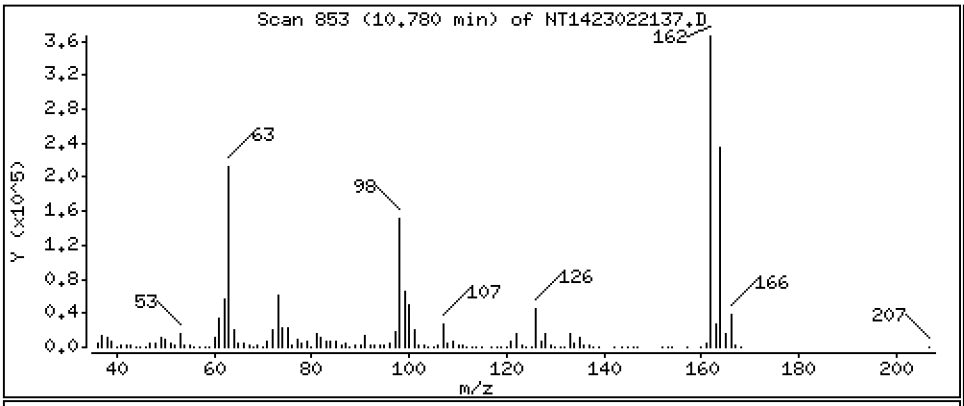
Operator: DSD

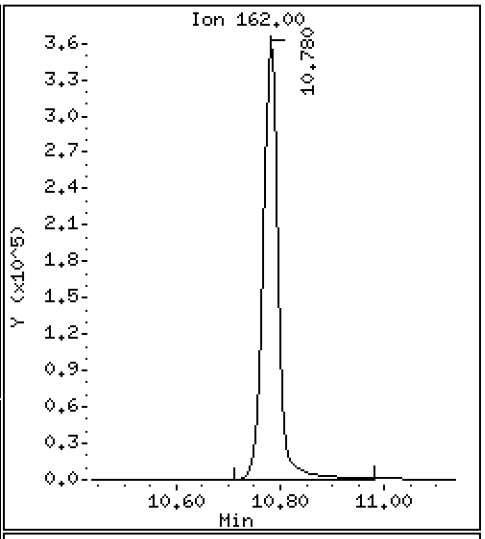
Column phase: ZB-5msi

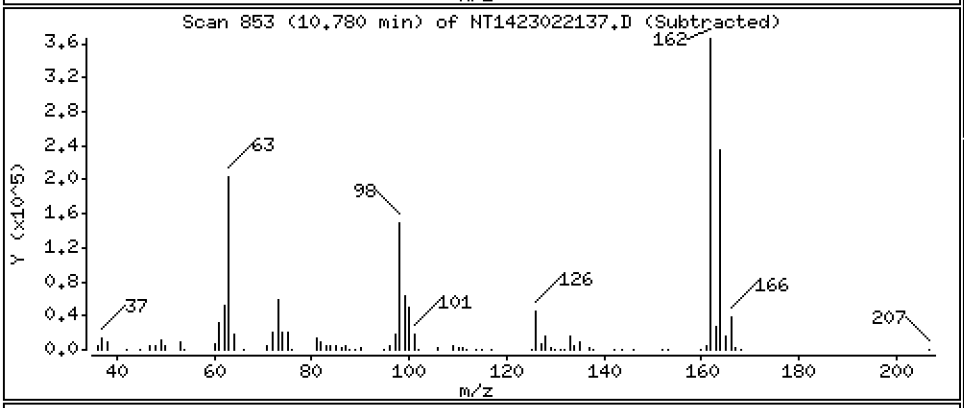
Column diameter: 0.25

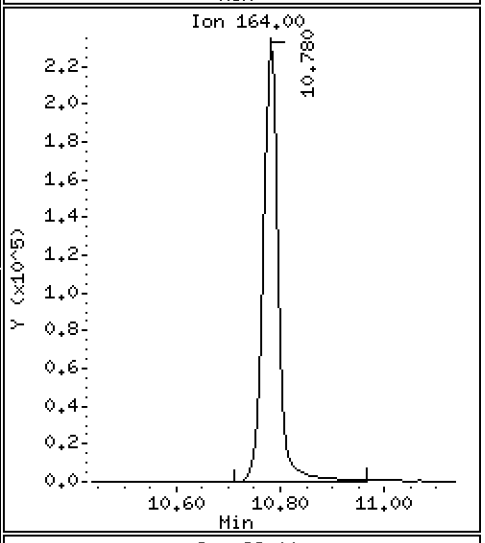
25 2,4-Dichlorophenol

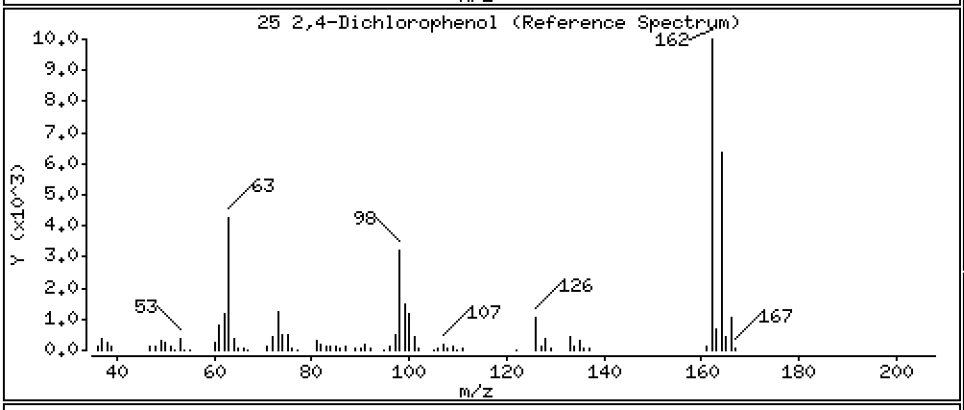
Concentration: 9.557 ug/mL

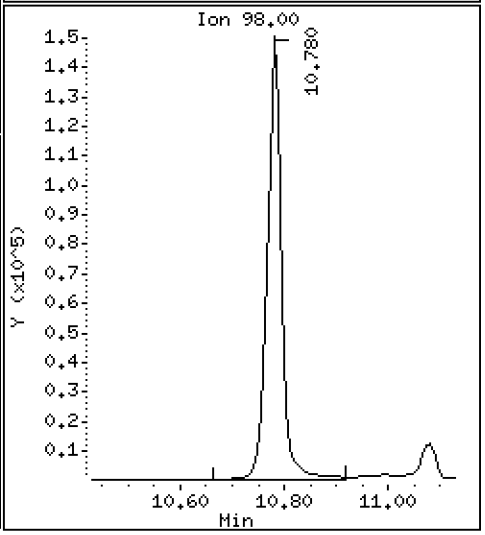


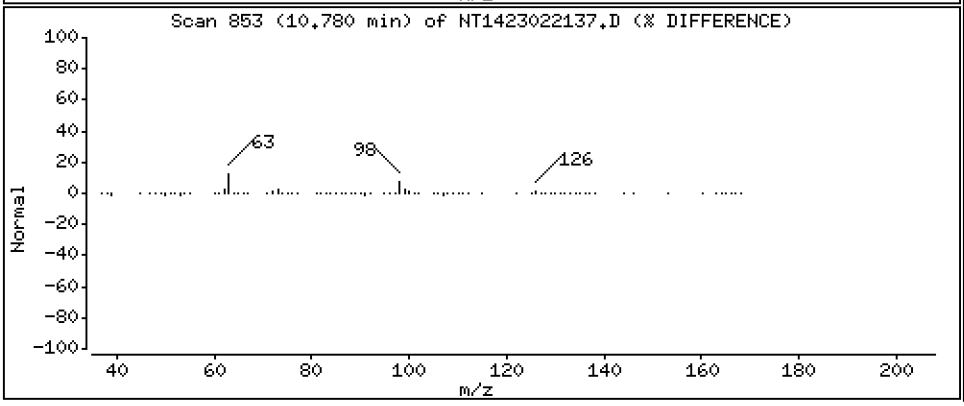












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

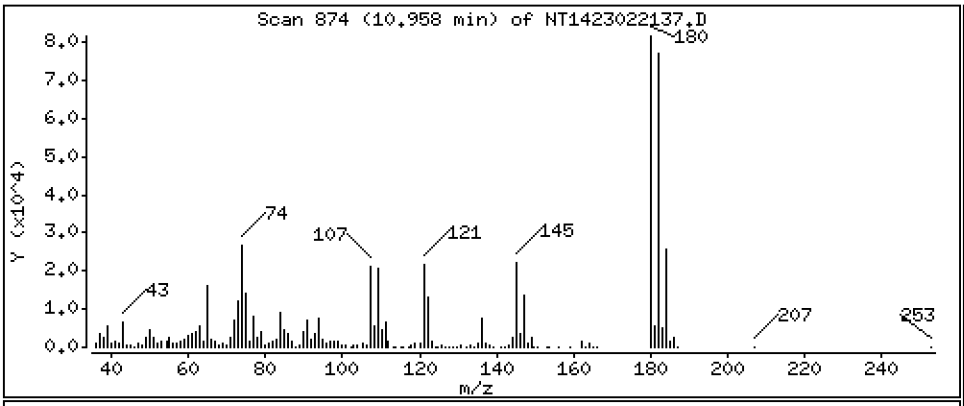
Operator: DSD

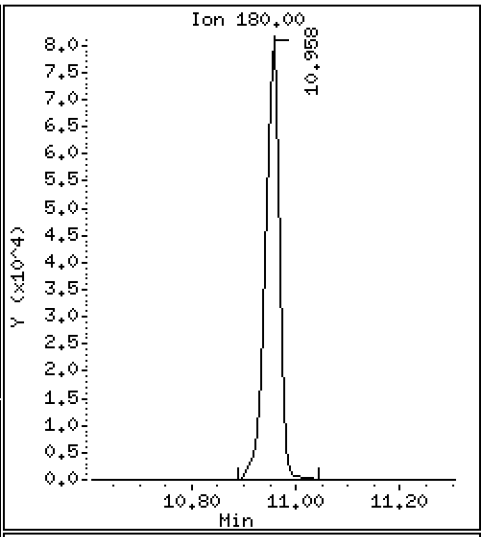
Column phase: ZB-5msi

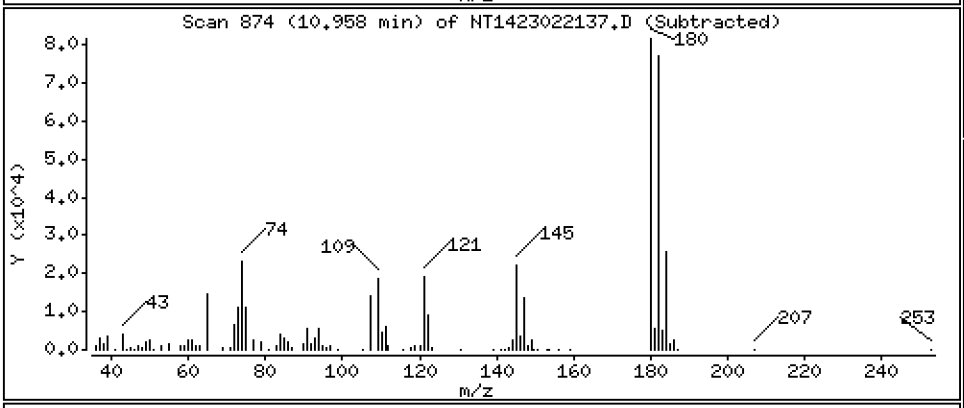
Column diameter: 0.25

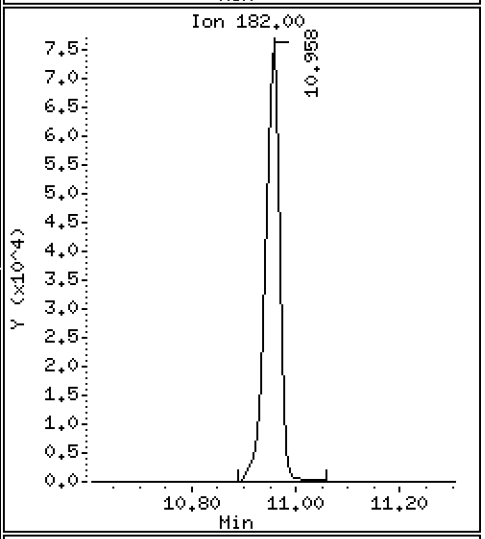
26 1,2,4-Trichlorobenzene

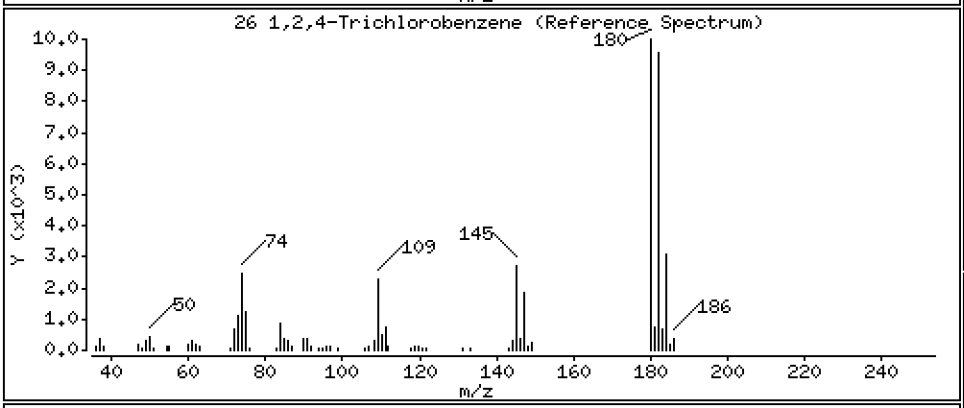
Concentration: 1.716 ug/mL

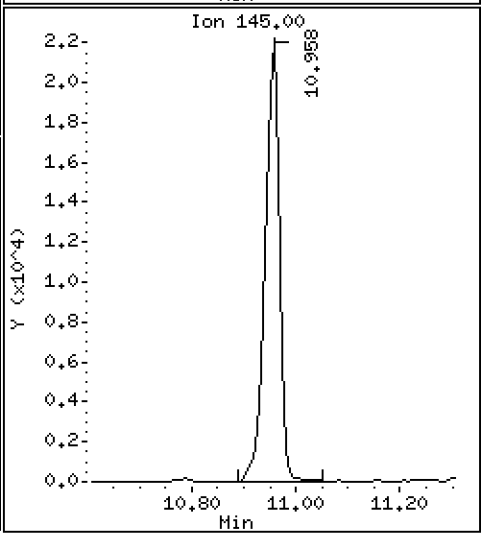


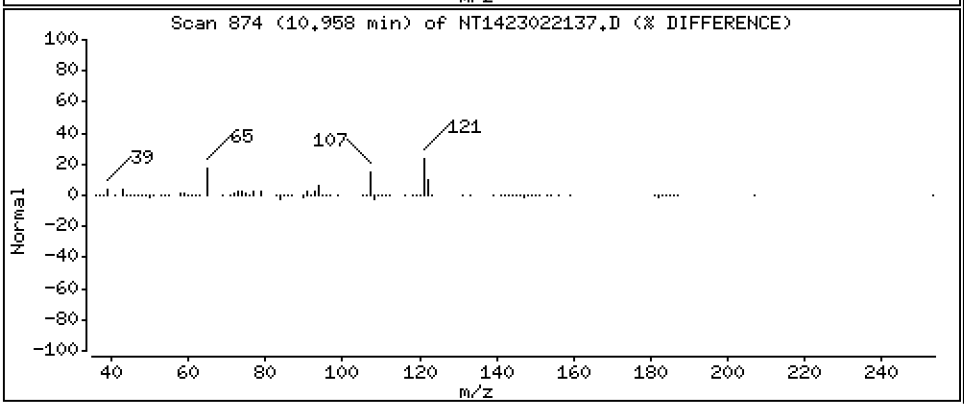












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

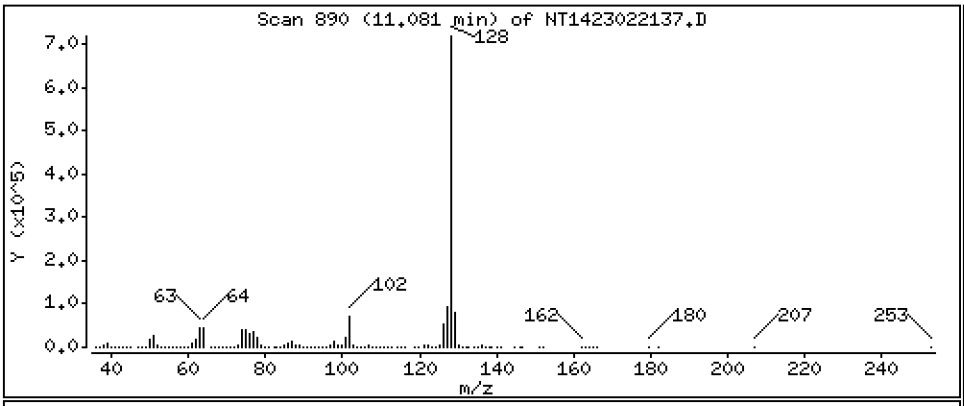
Operator: DSD

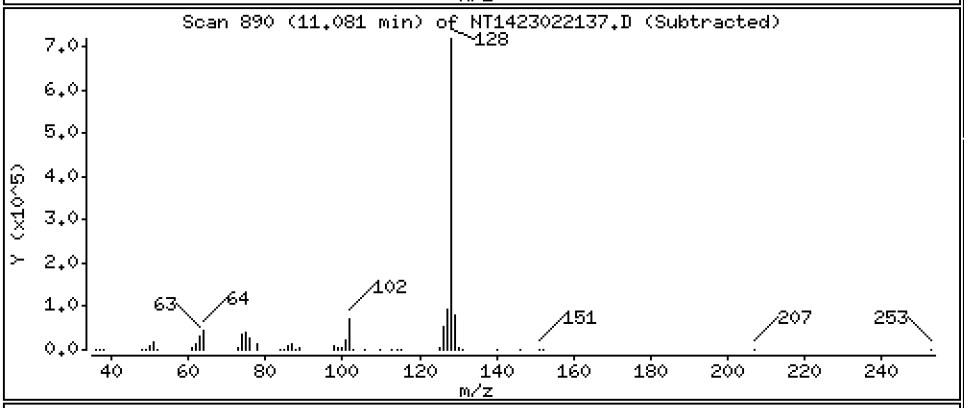
Column phase: ZB-5msi

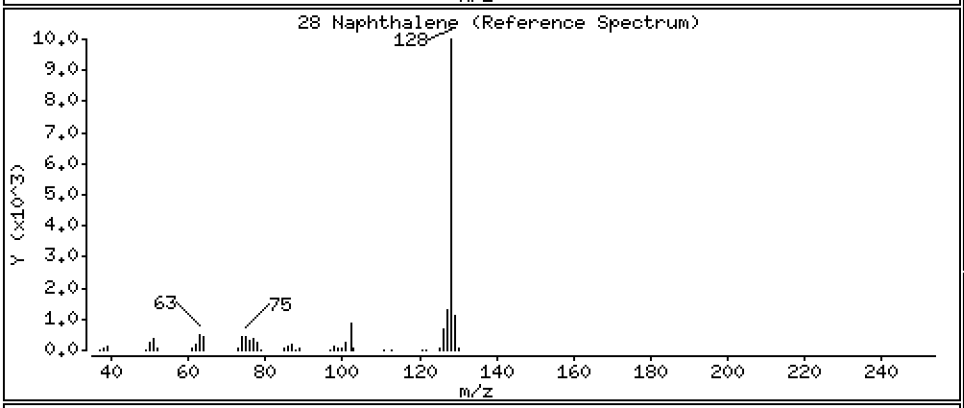
Column diameter: 0.25

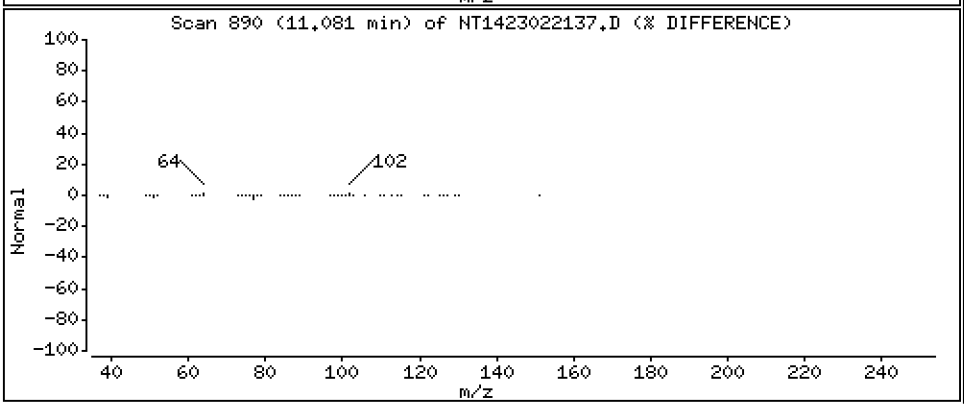
28 Naphthalene

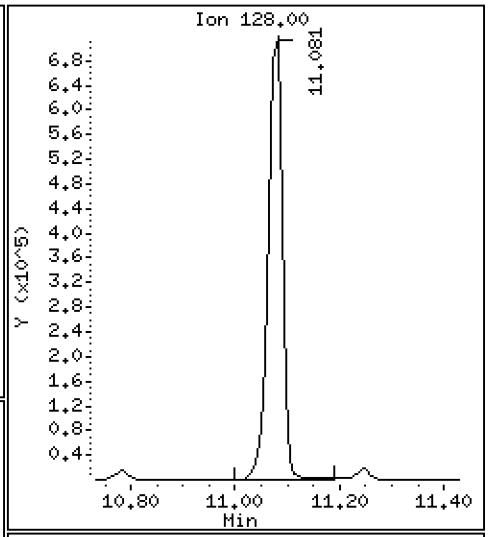
Concentration: 5.068 ug/mL

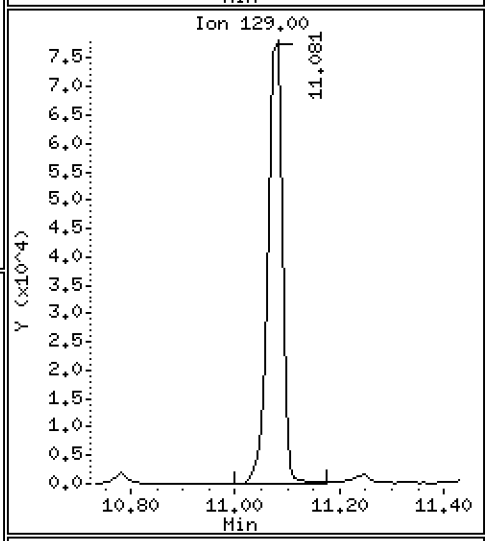


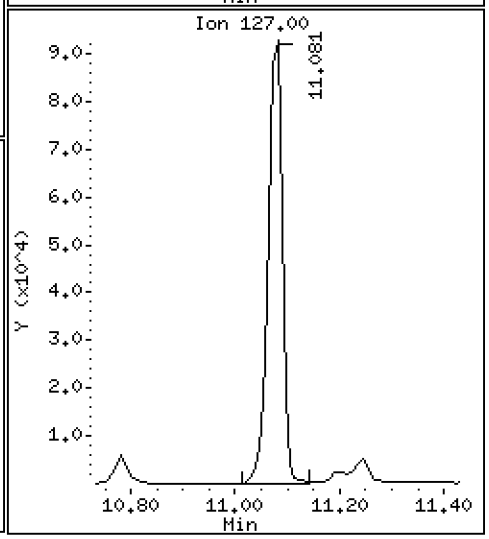












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

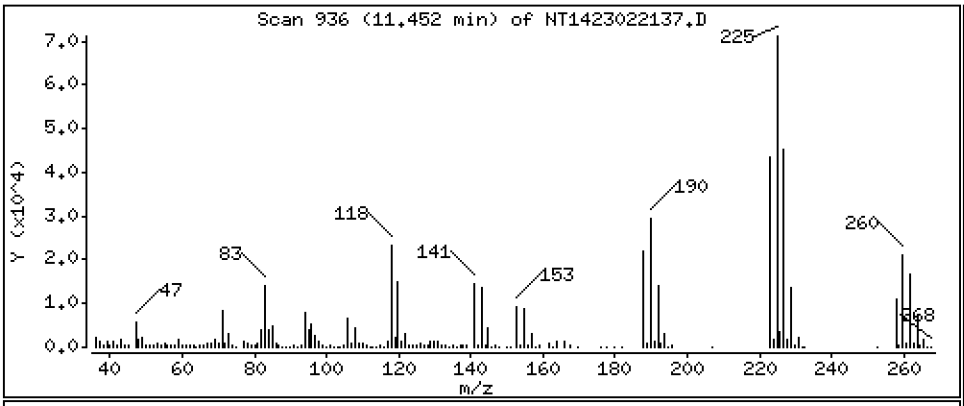
Operator: DSD

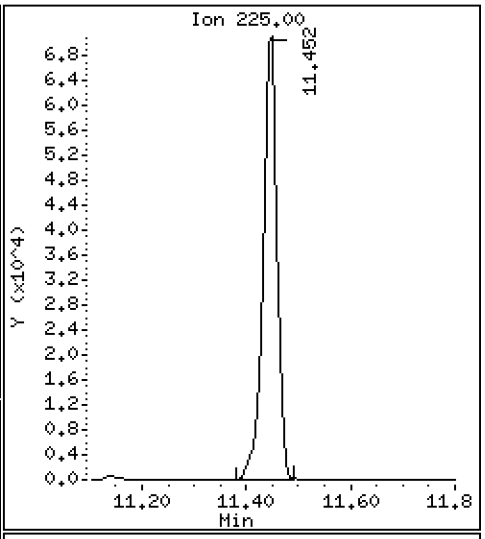
Column phase: ZB-5msi

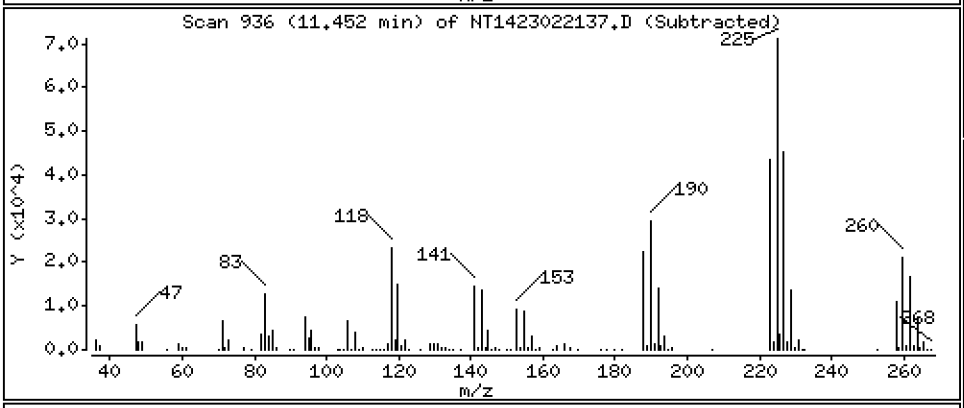
Column diameter: 0.25

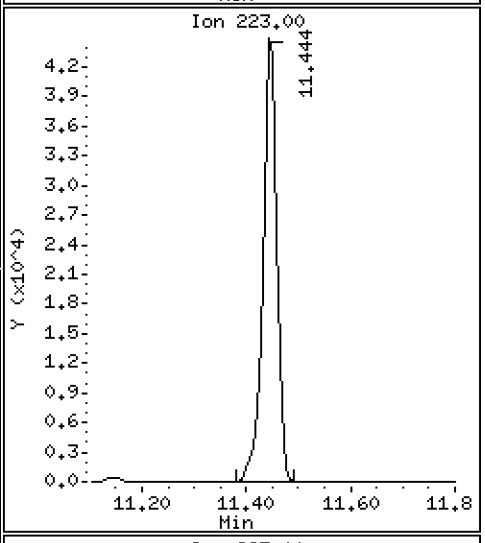
30 Hexachlorobutadiene

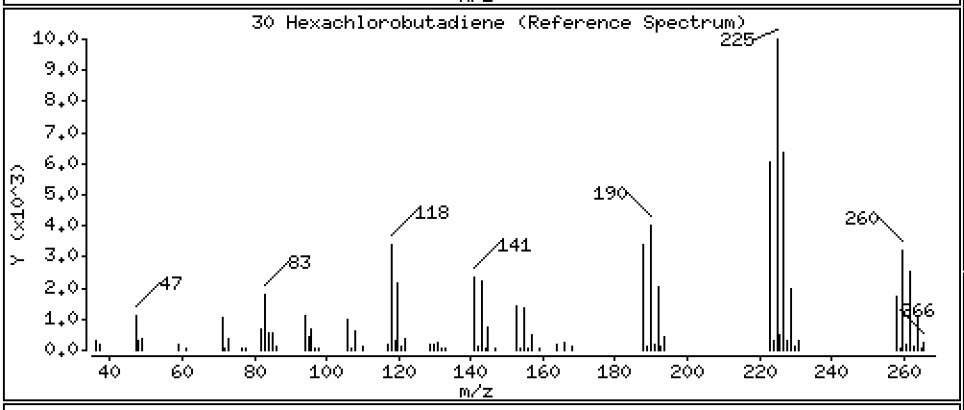
Concentration: 2.604 ug/mL

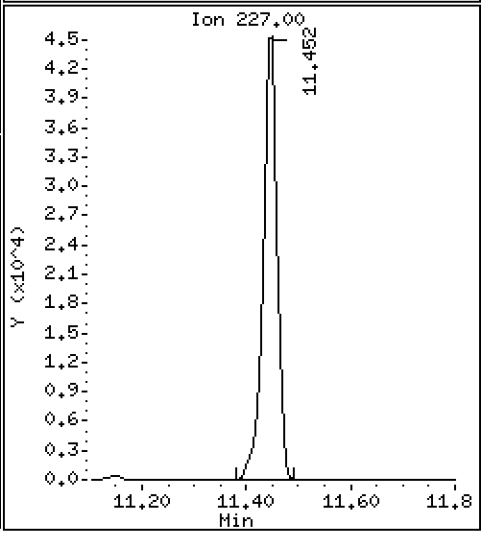


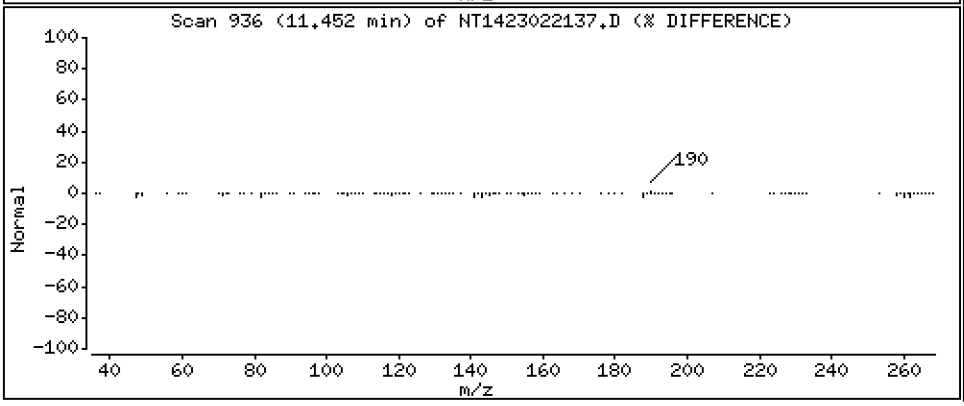












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

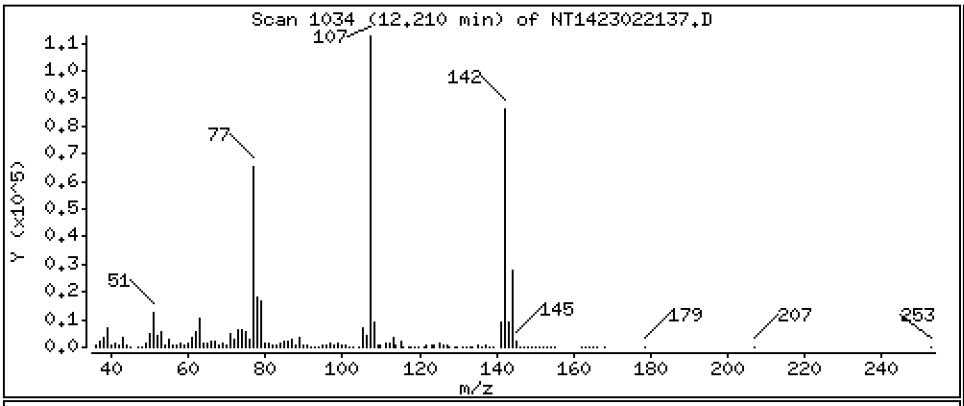
Operator: DSD

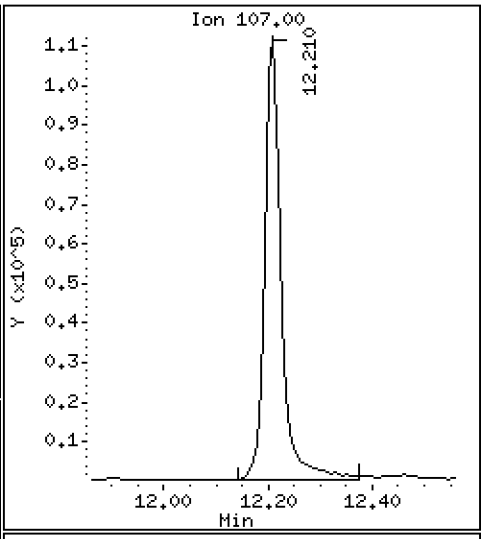
Column phase: ZB-5msi

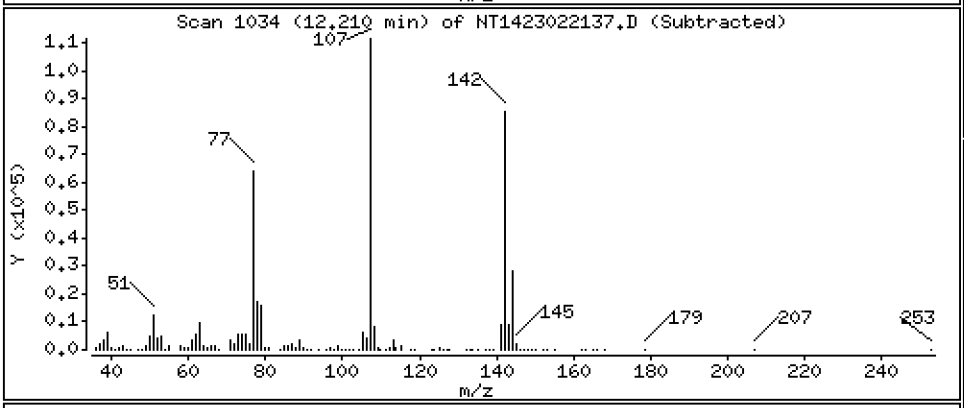
Column diameter: 0.25

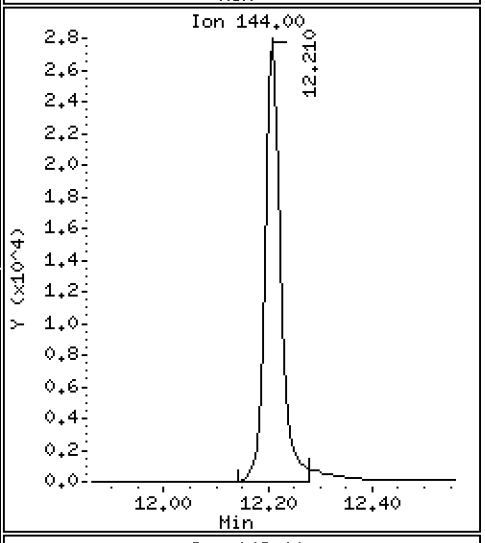
31 4-Chloro-3-methylphenol

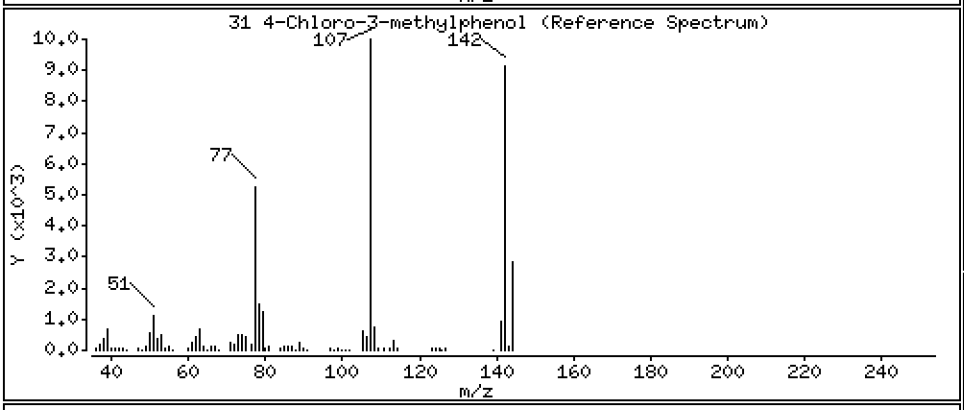
Concentration: 2.776 ug/mL

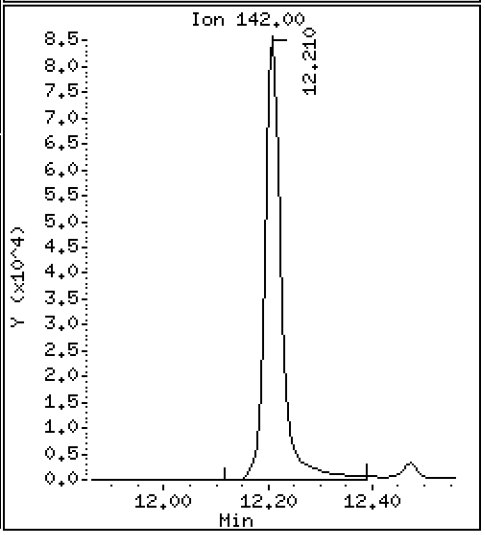


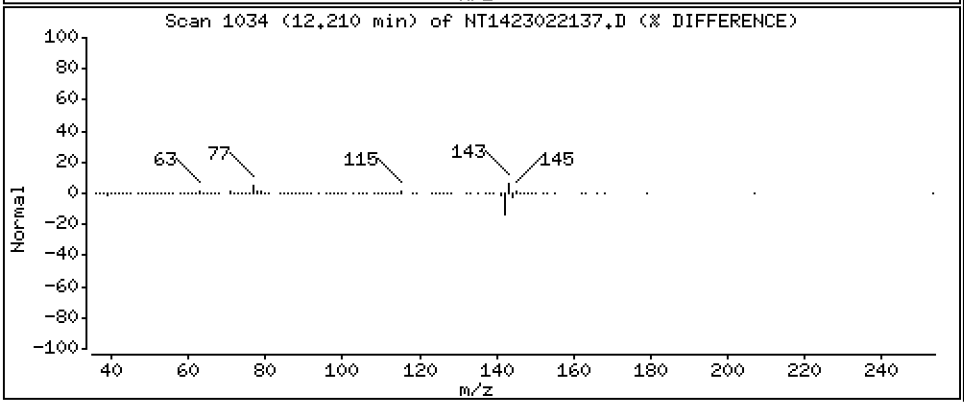












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022137.D

Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

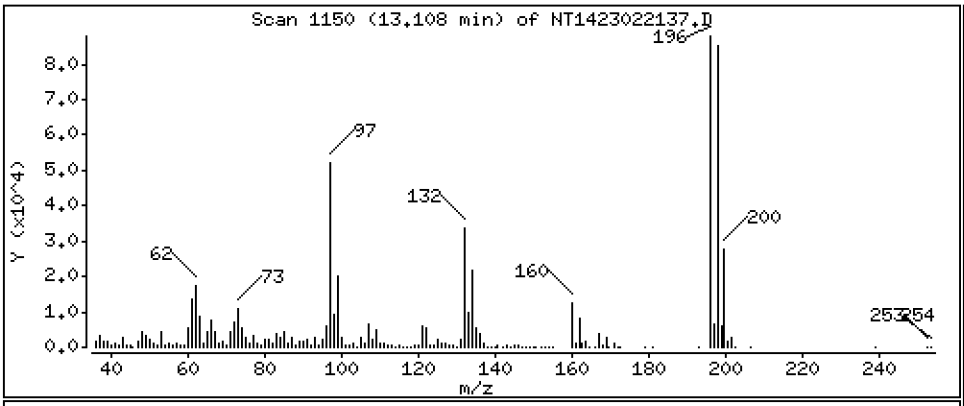
Operator: DSD

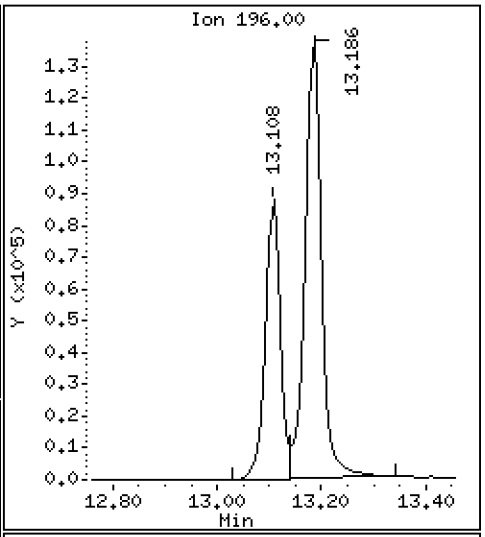
Column phase: ZB-5msi

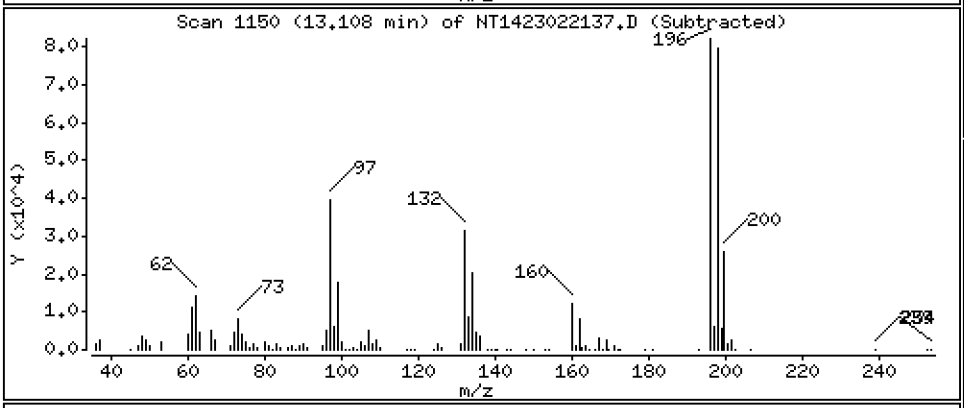
Column diameter: 0.25

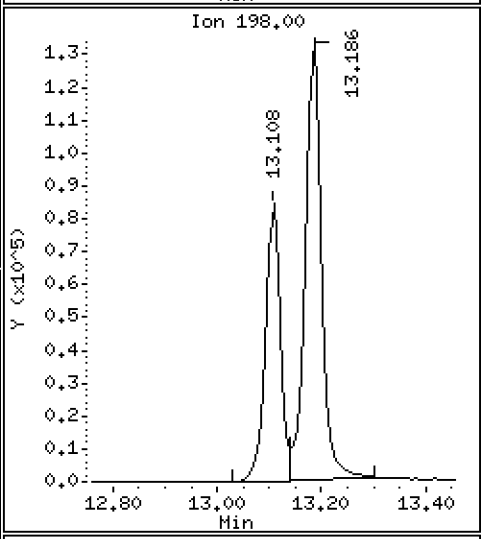
34 2,4,6-Trichlorophenol

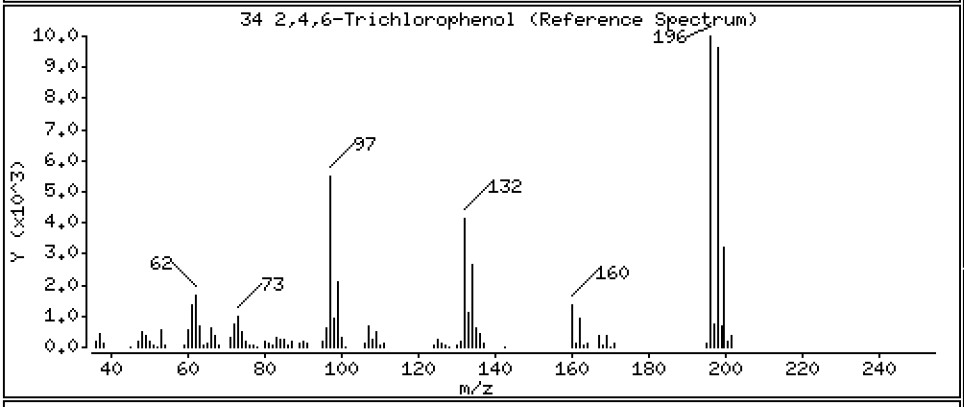
Concentration: 2.760 ug/mL

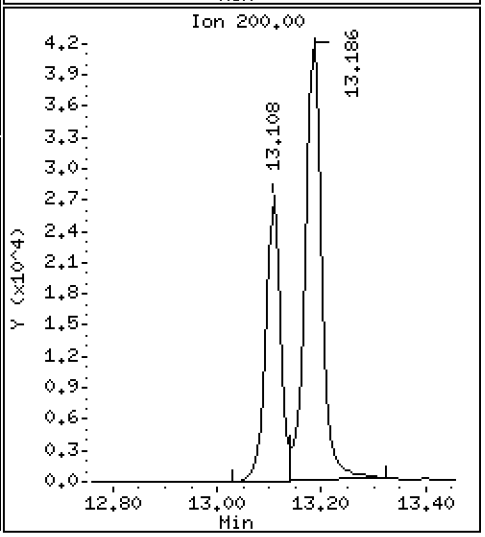


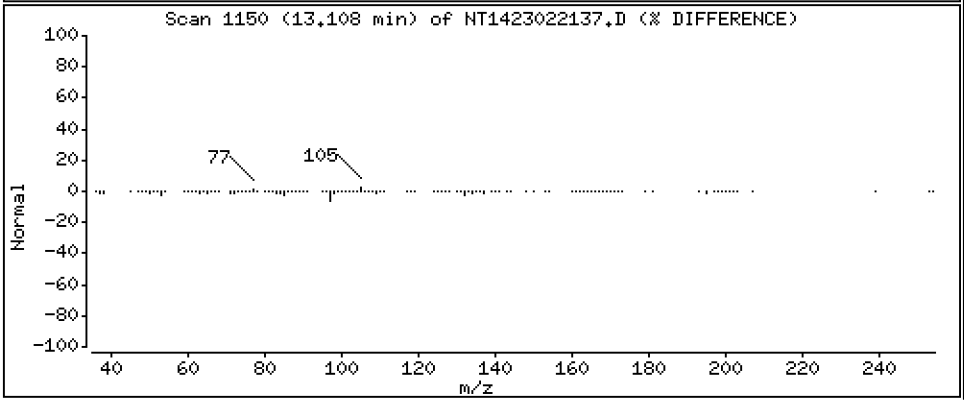












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

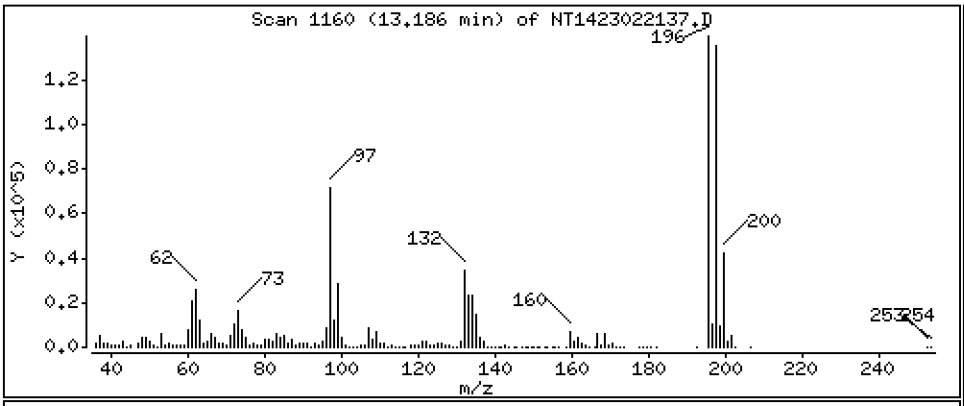
Operator: DSD

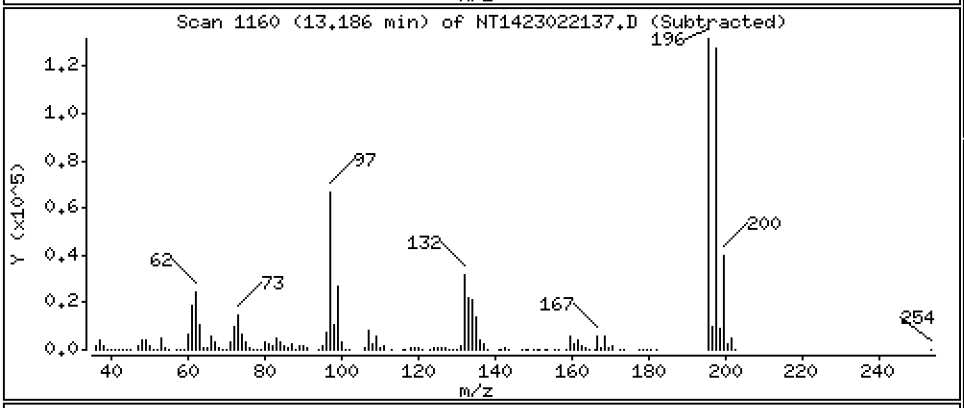
Column phase: ZB-5msi

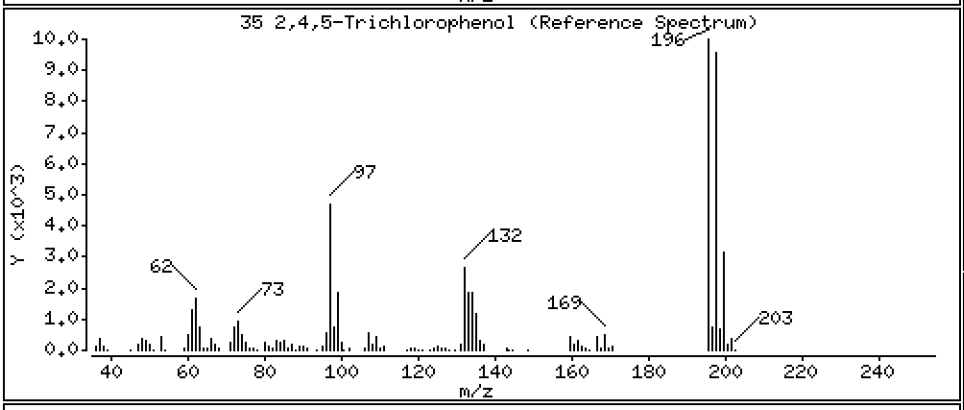
Column diameter: 0.25

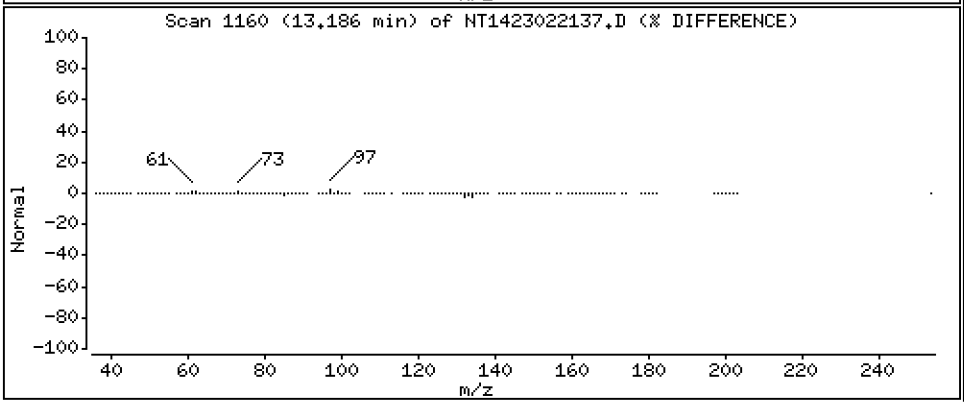
35 2,4,5-Trichlorophenol

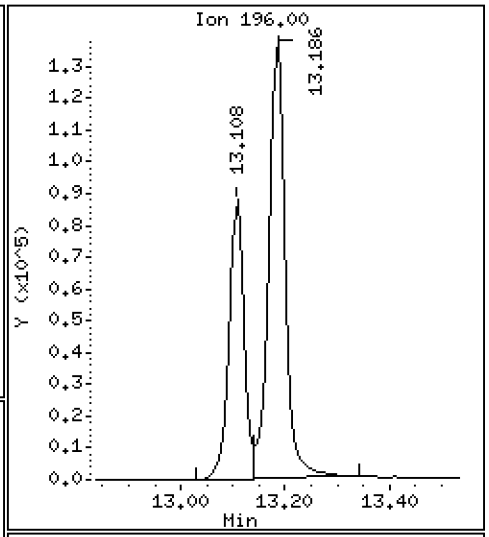
Concentration: 4.397 ug/mL

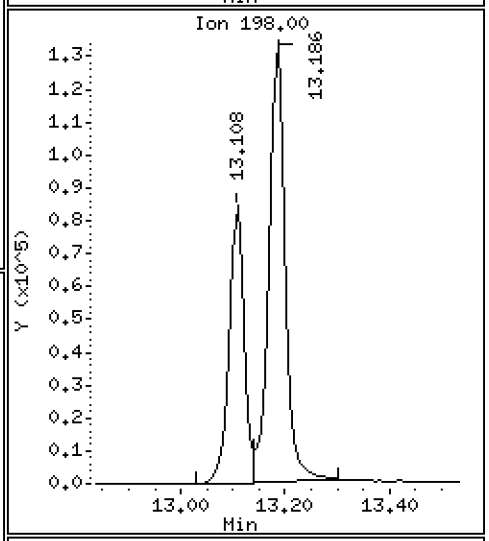


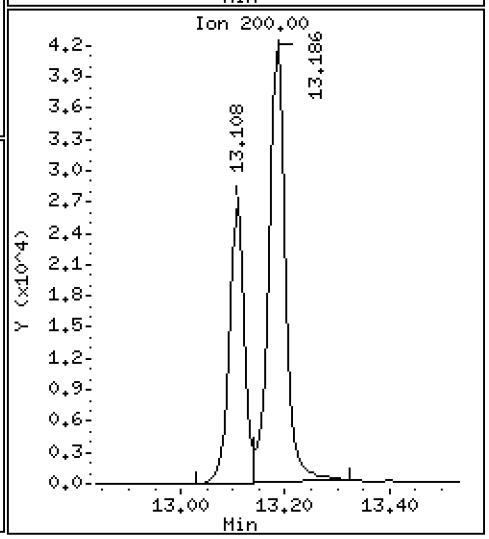












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

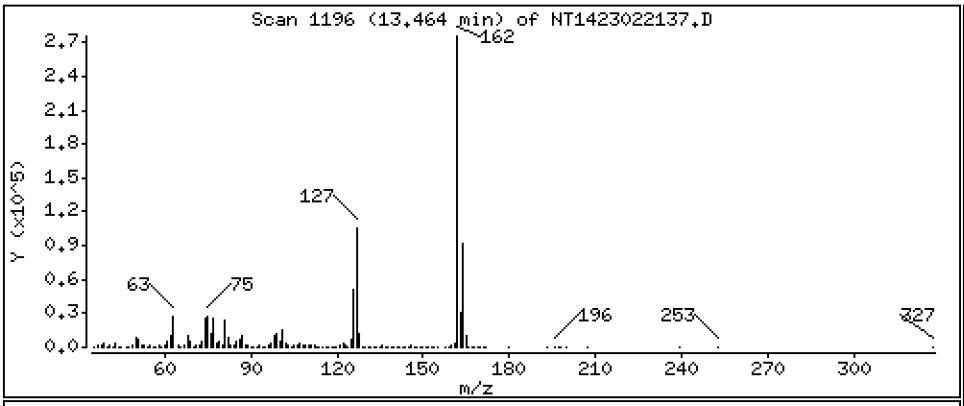
Operator: DSD

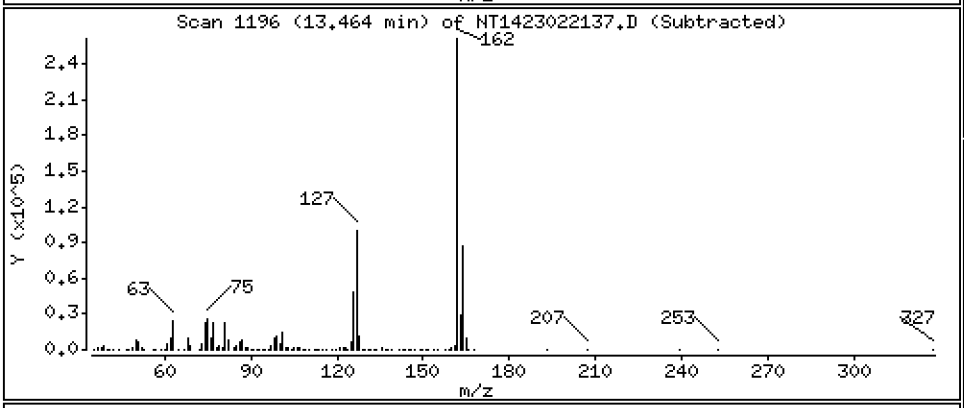
Column phase: ZB-5msi

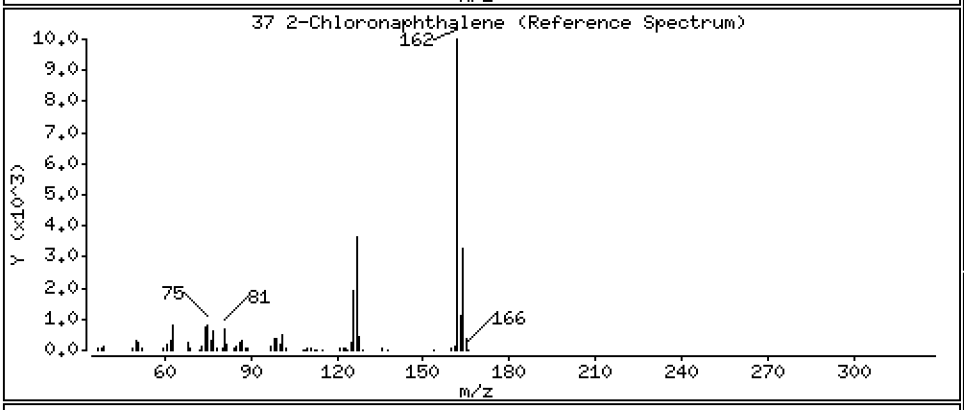
Column diameter: 0.25

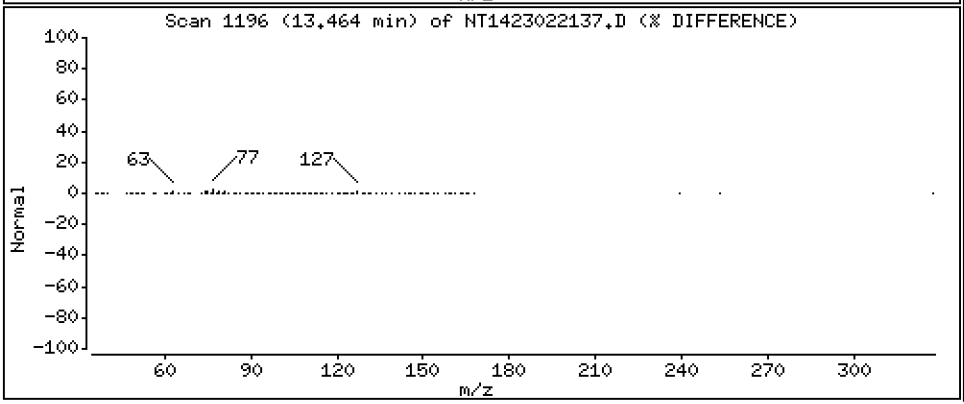
37 2-Chloronaphthalene

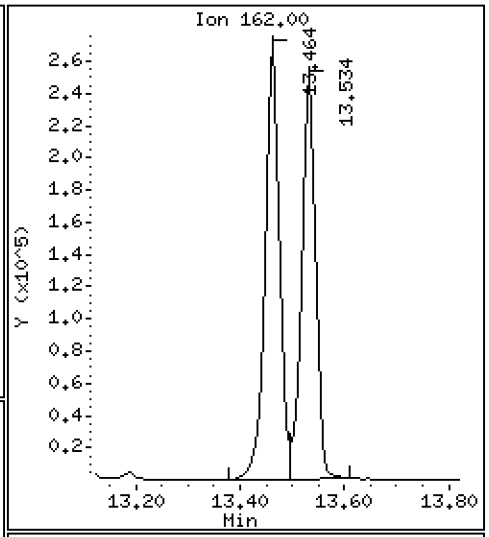
Concentration: 2.817 ug/mL

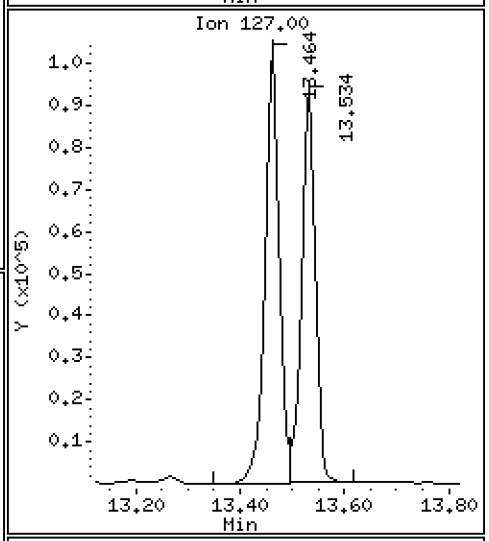


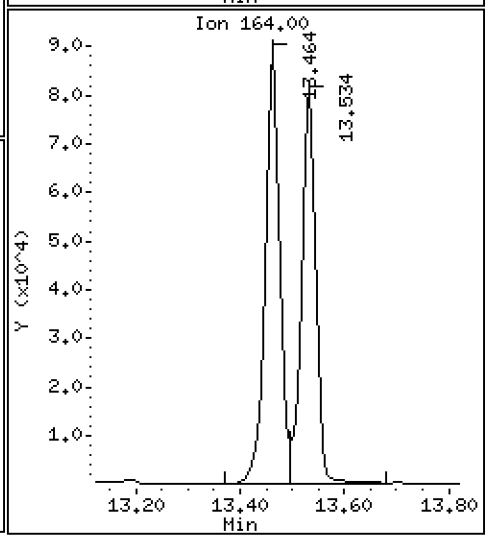












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

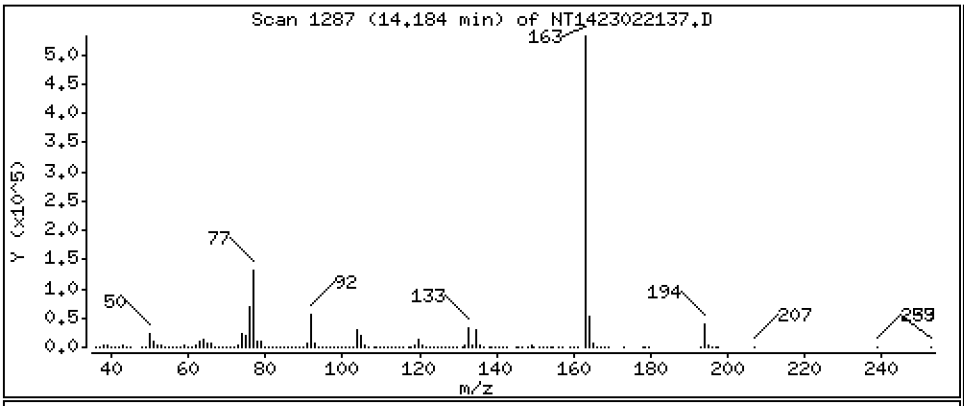
Operator: DSD

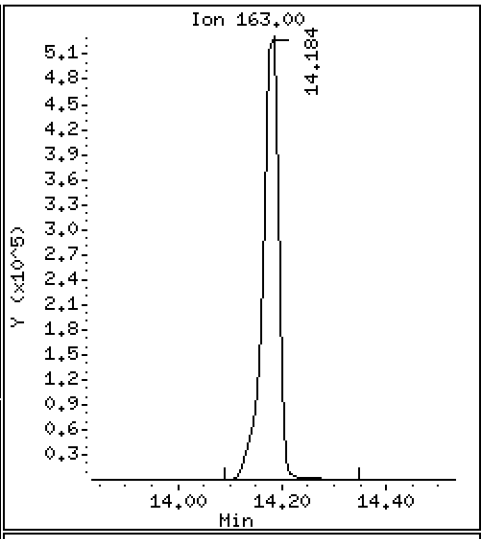
Column phase: ZB-5msi

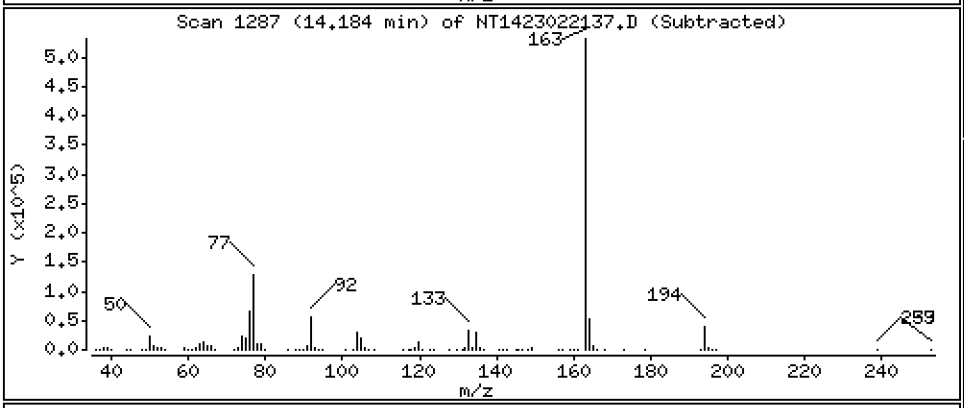
Column diameter: 0.25

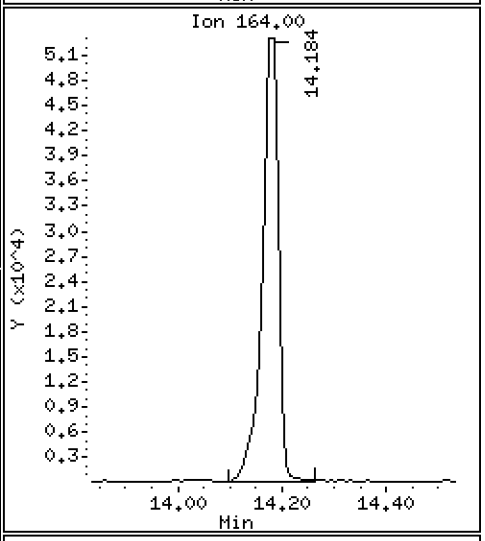
39 Dimethylphthalate

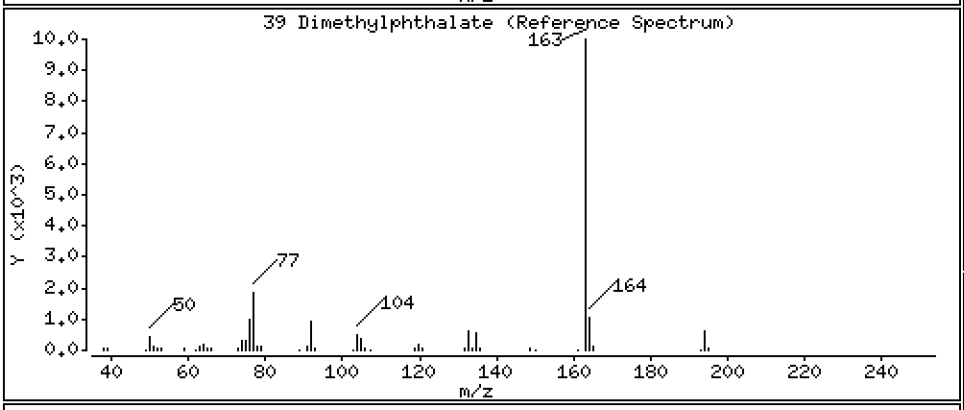
Concentration: 5.679 ug/mL

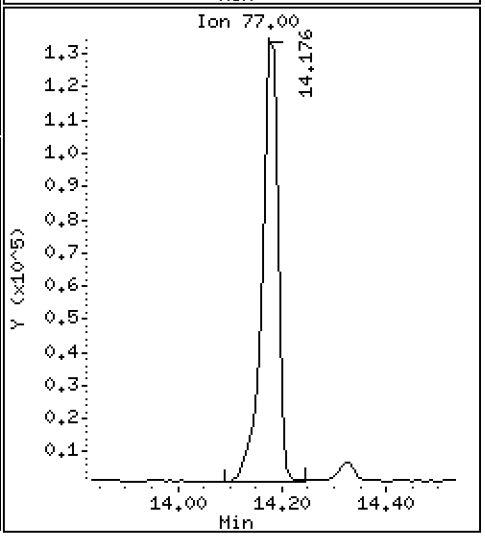


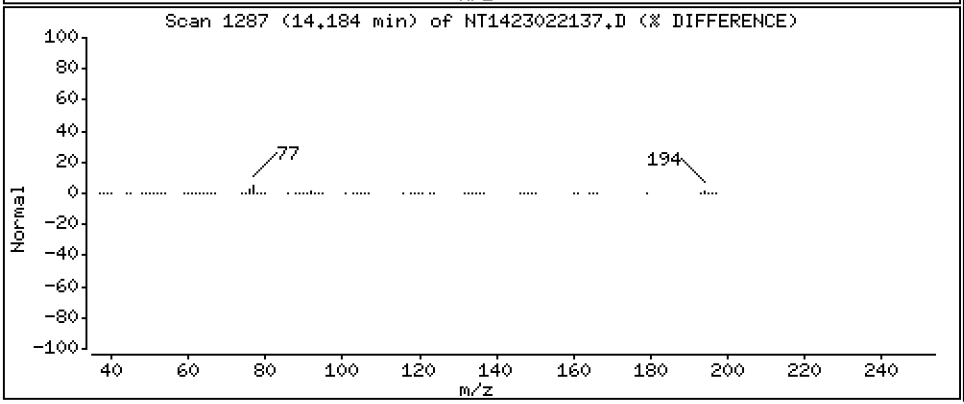












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

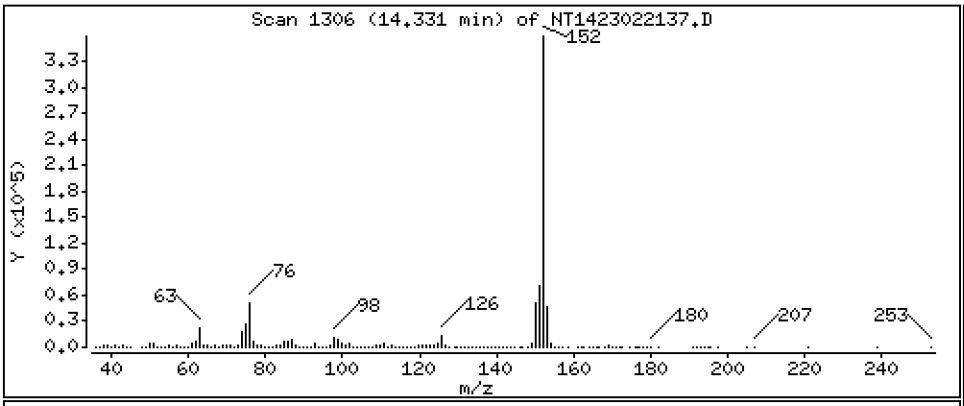
Operator: DSD

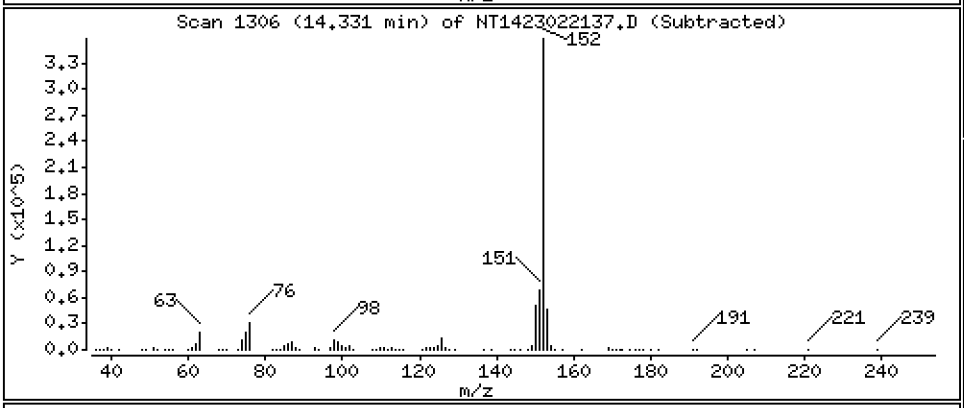
Column phase: ZB-5msi

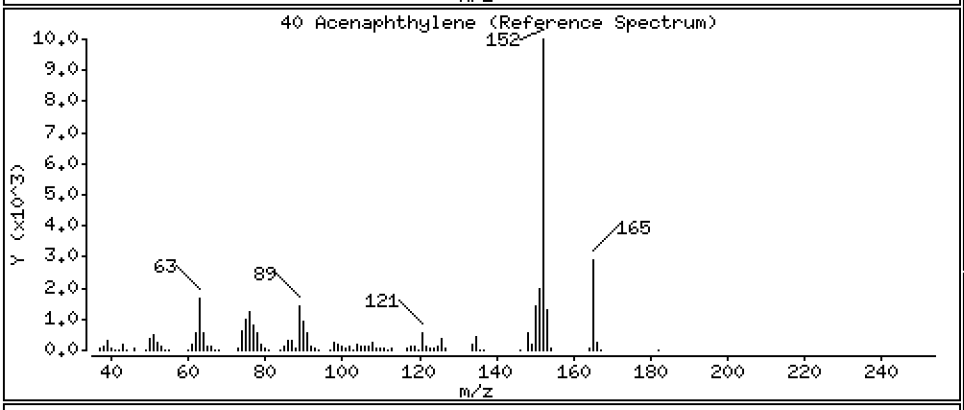
Column diameter: 0.25

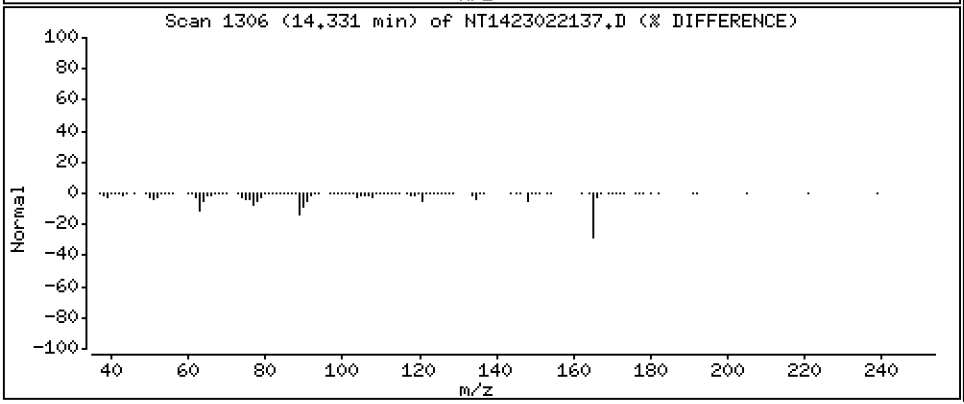
40 Acenaphthylene

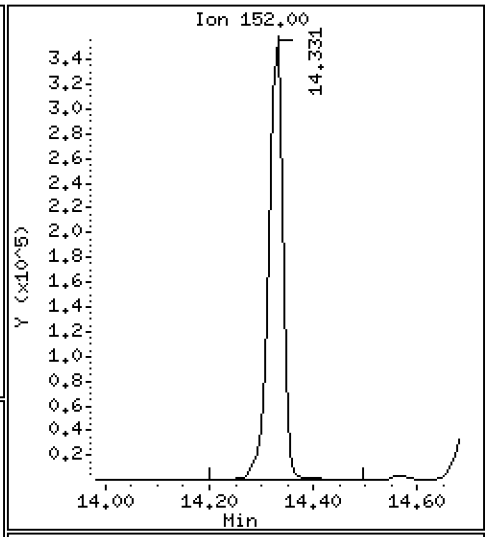
Concentration: 2.324 ug/mL

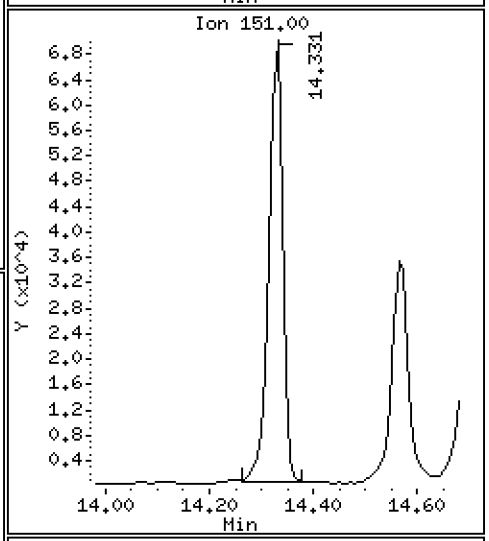


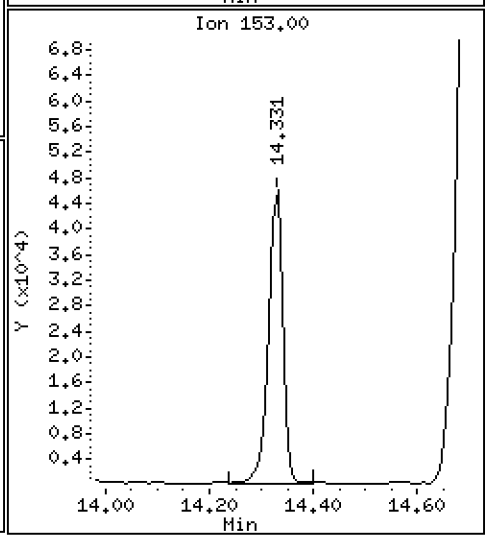












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

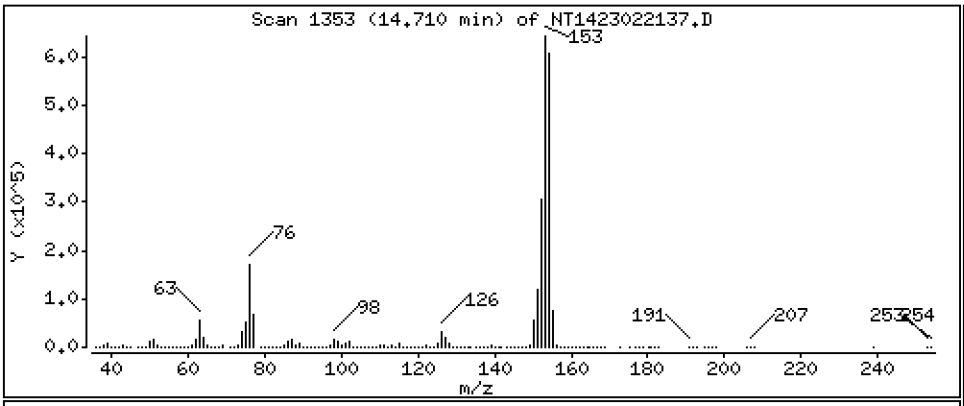
Operator: DSD

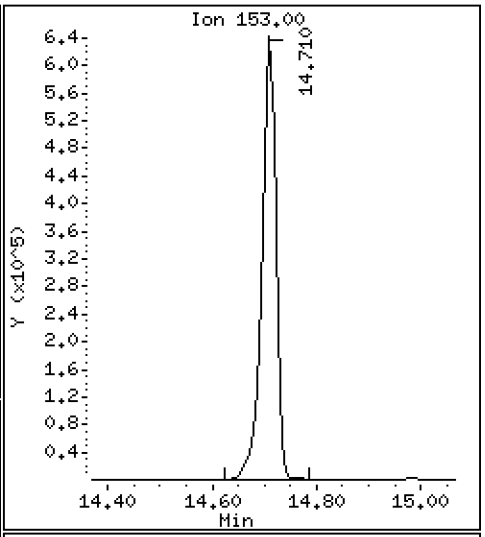
Column phase: ZB-5msi

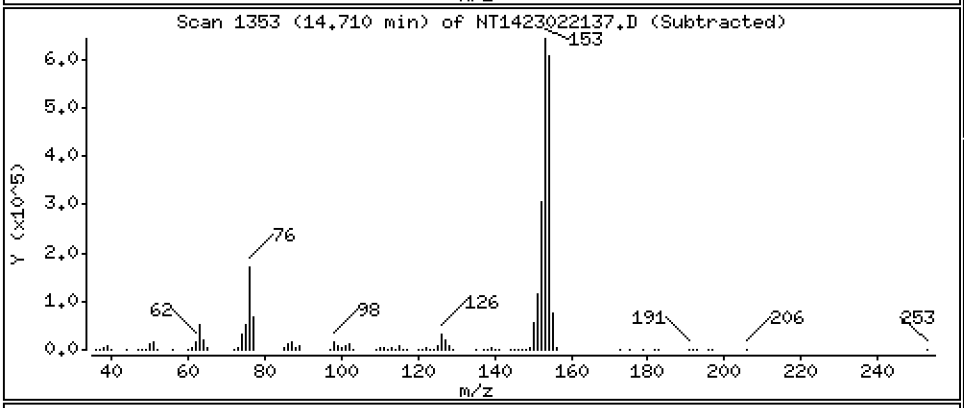
Column diameter: 0.25

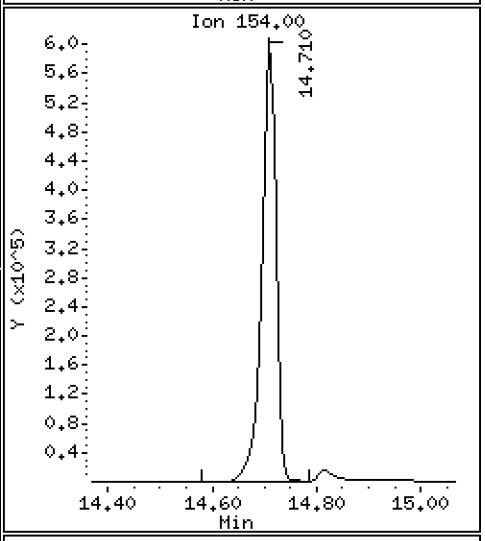
44 Acenaphthene

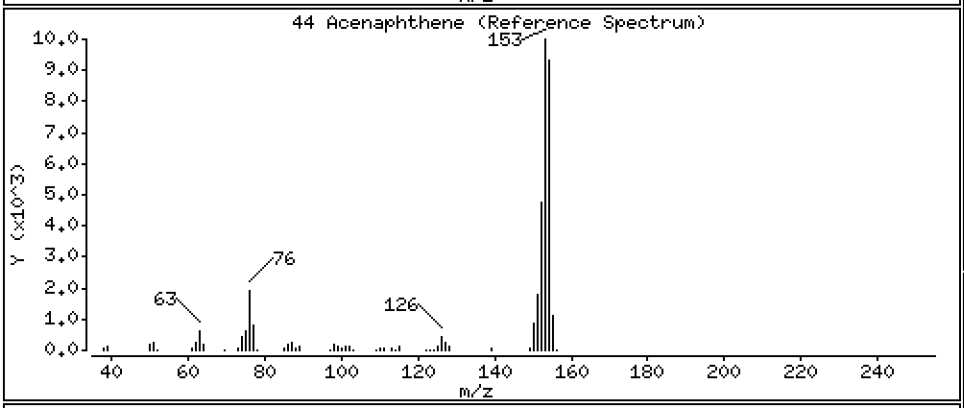
Concentration: 6.847 ug/mL

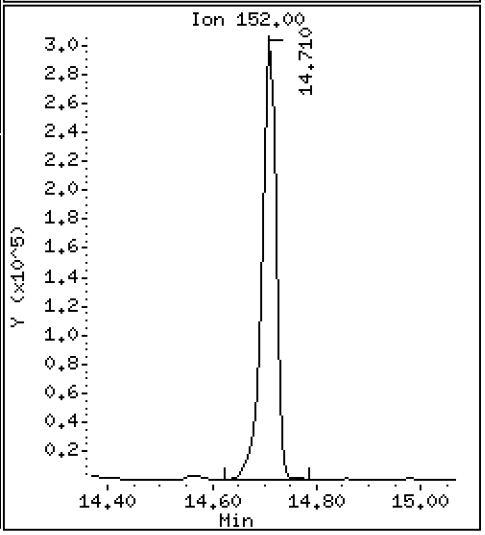


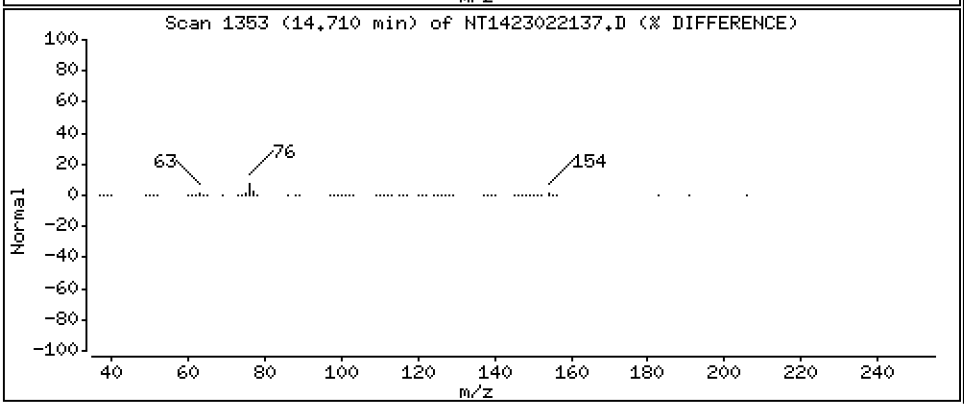












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

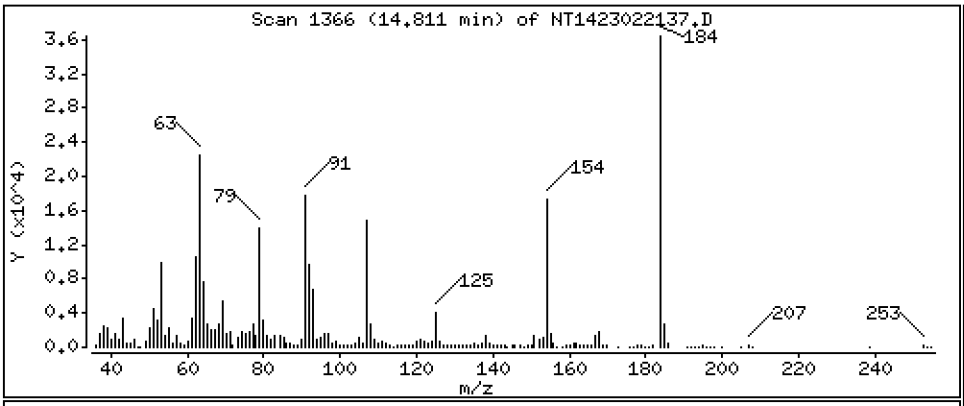
Operator: DSD

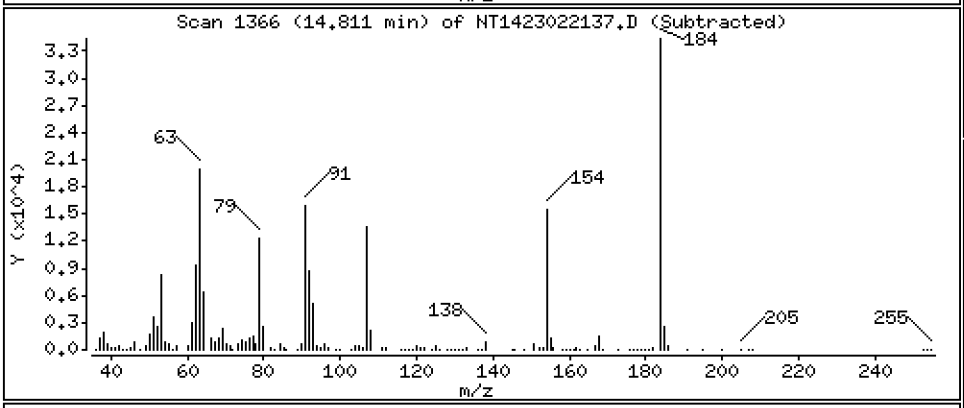
Column phase: ZB-5msi

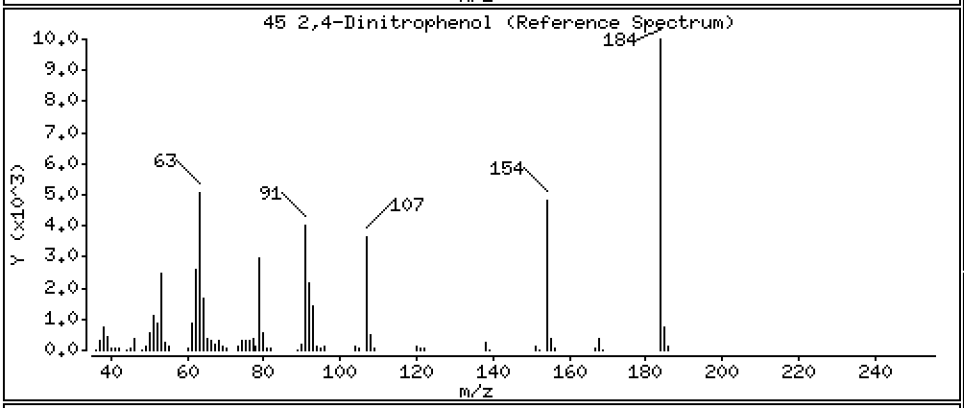
Column diameter: 0.25

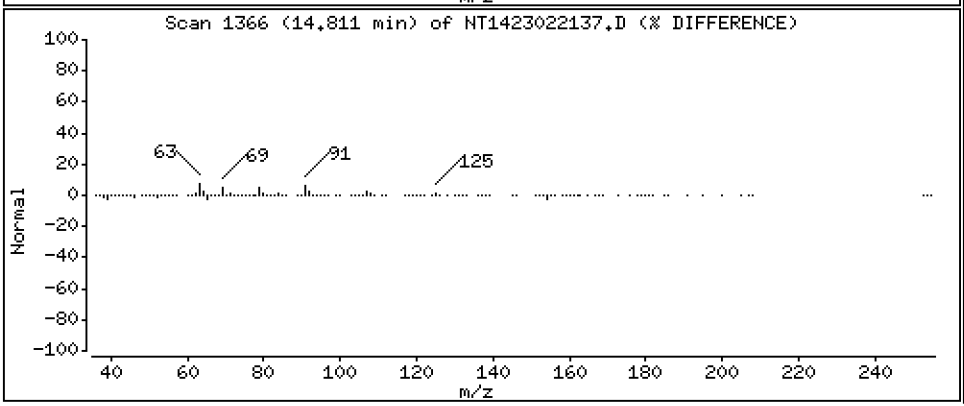
45 2,4-Dinitrophenol

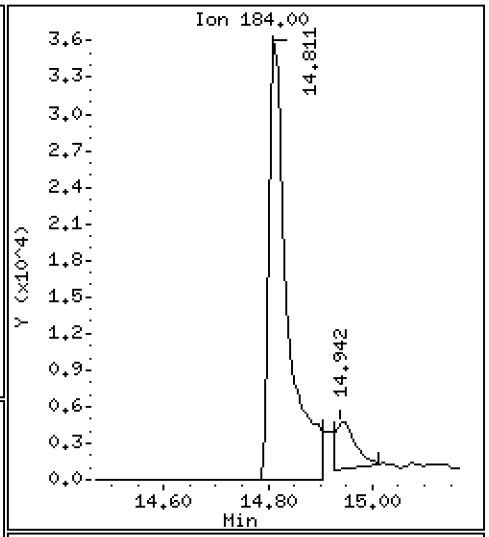
Concentration: 2.921 ug/mL

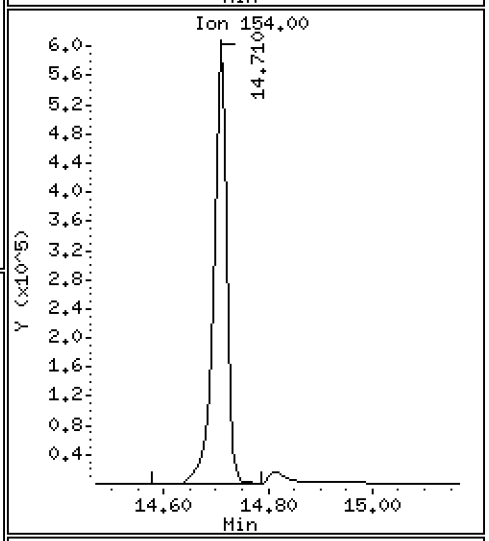


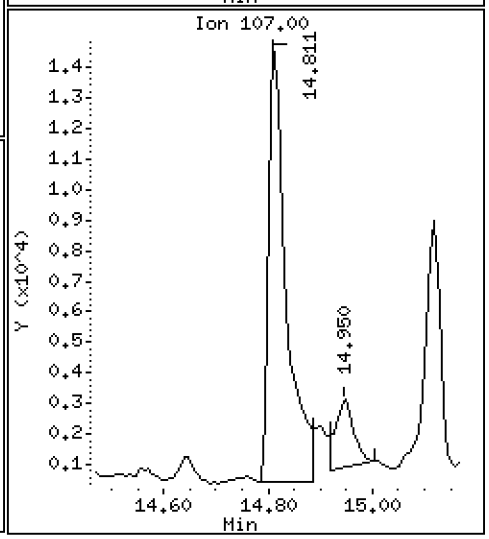












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

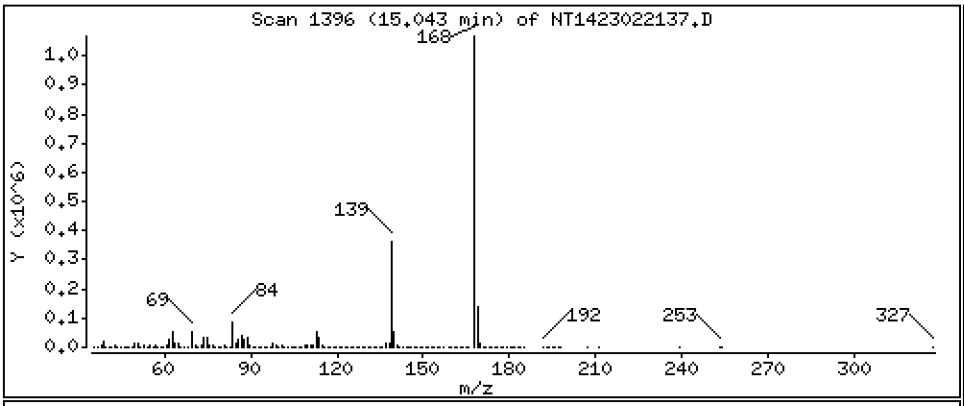
Operator: DSD

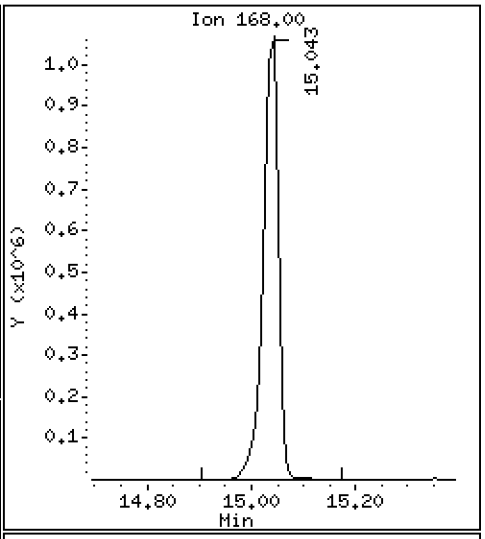
Column phase: ZB-5msi

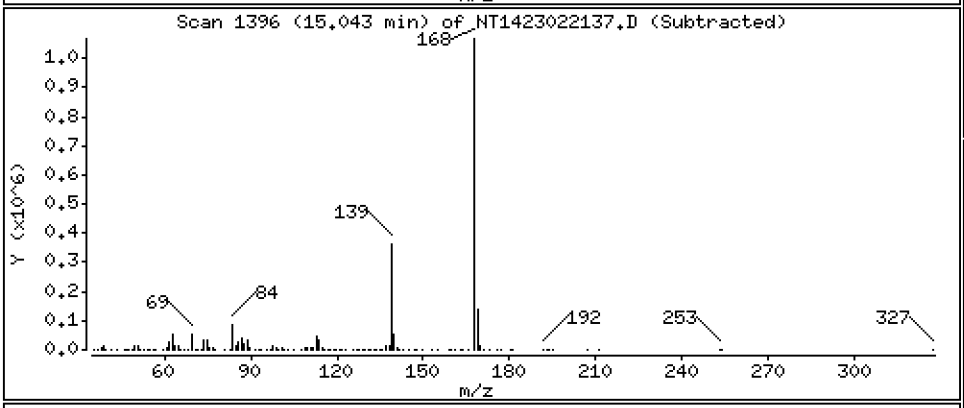
Column diameter: 0.25

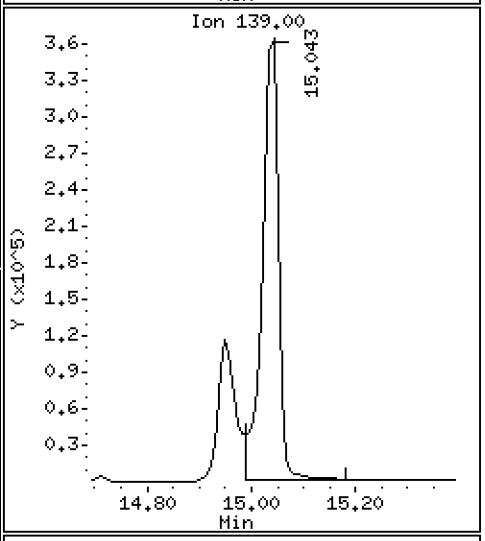
46 Dibenzofuran

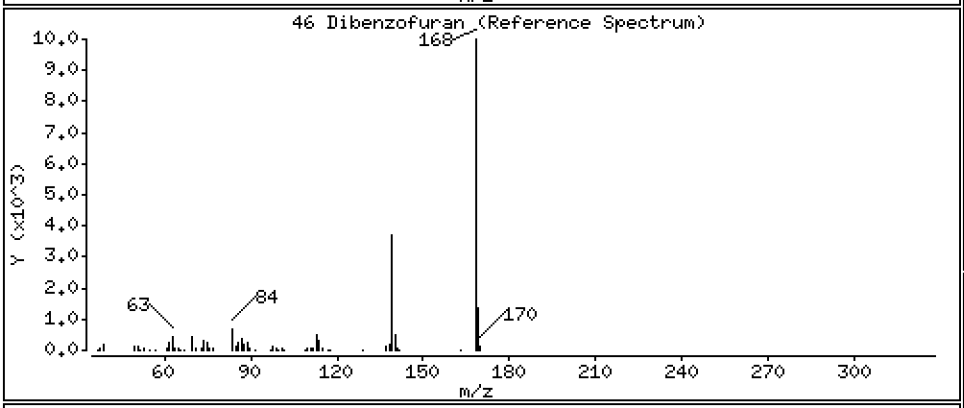
Concentration: 7.593 ug/mL

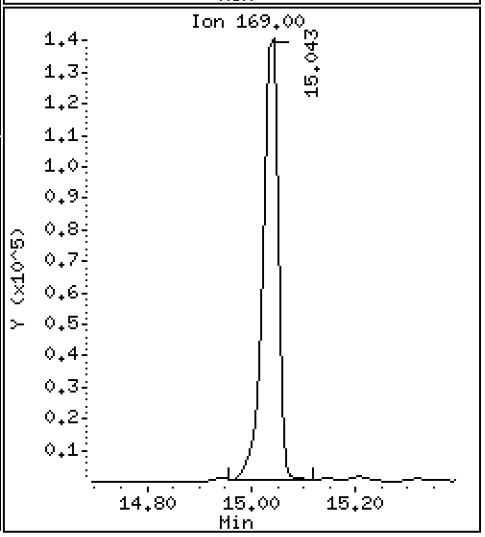


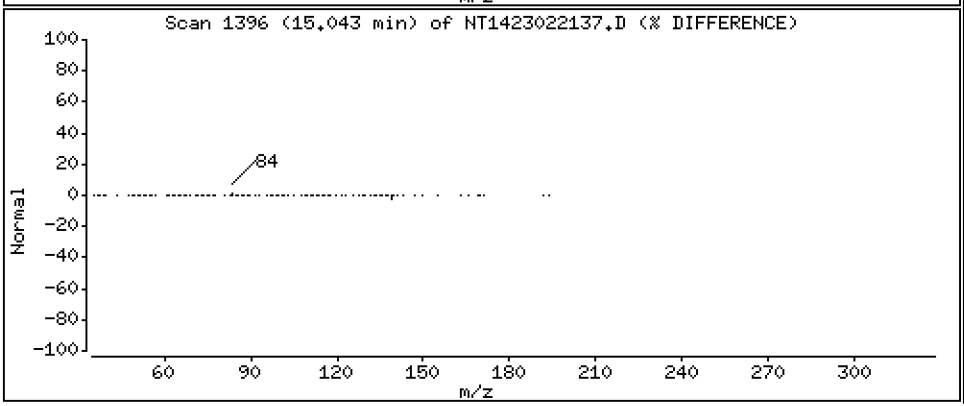












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

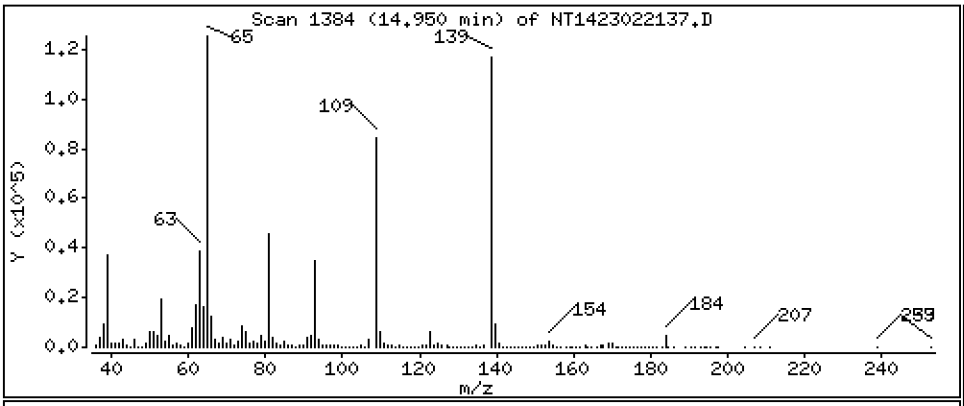
Operator: DSD

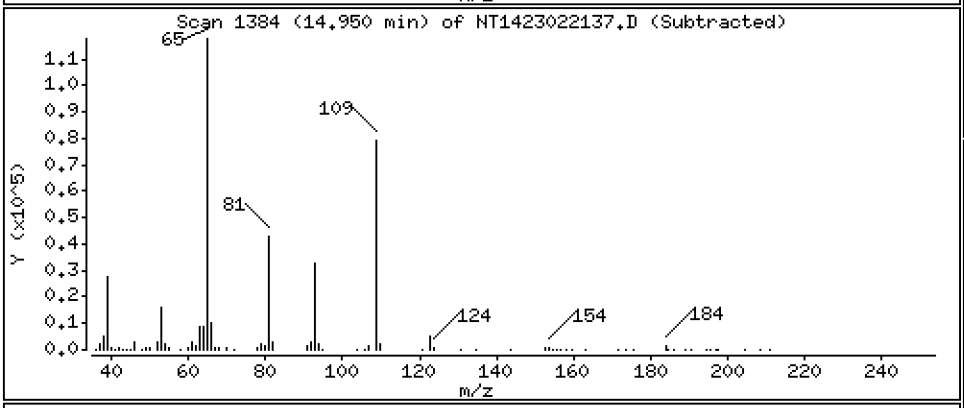
Column phase: ZB-5msi

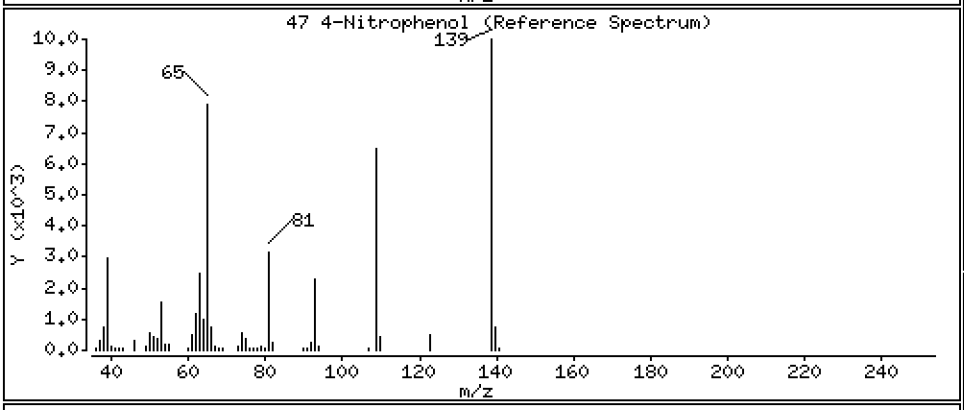
Column diameter: 0.25

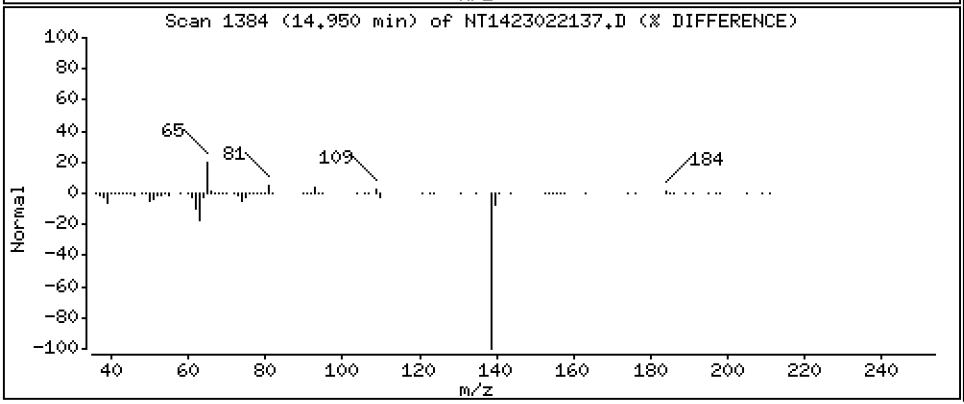
47 4-Nitrophenol

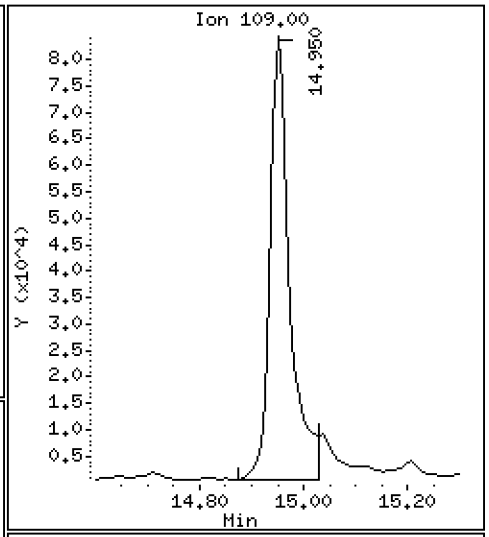
Concentration: 7.727 ug/mL

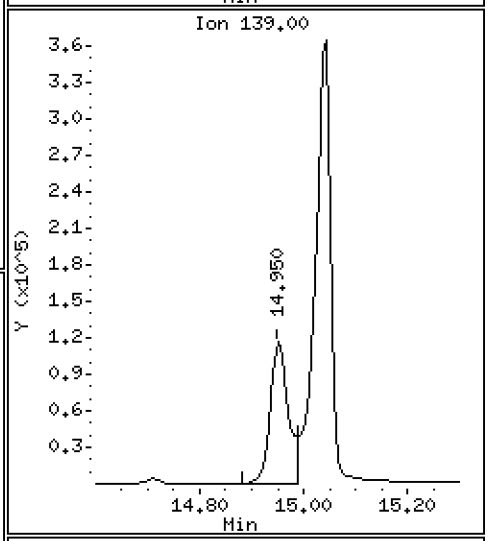


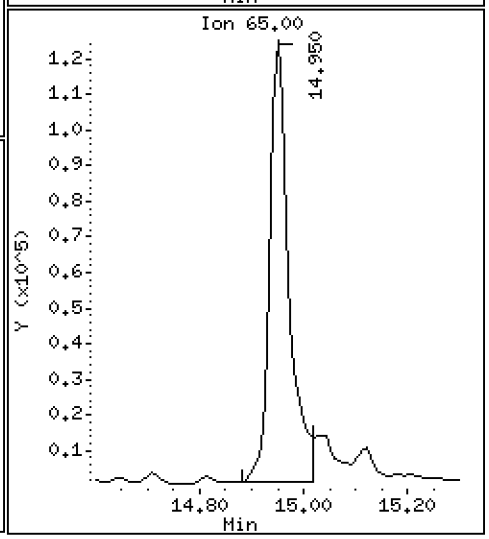












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

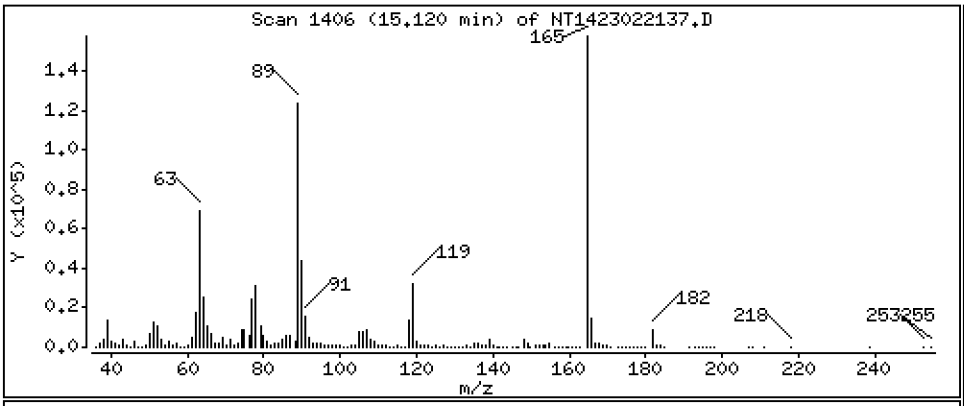
Operator: DSD

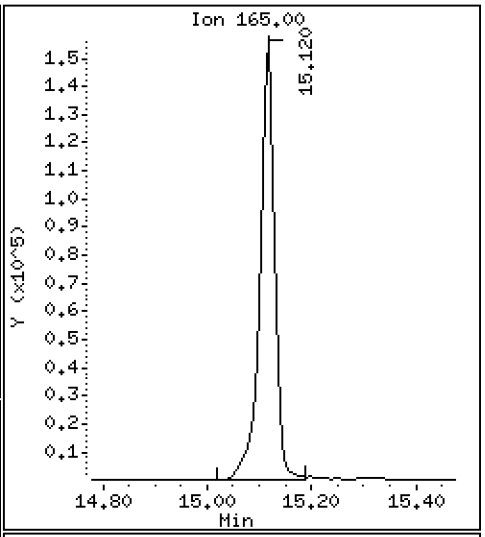
Column phase: ZB-5msi

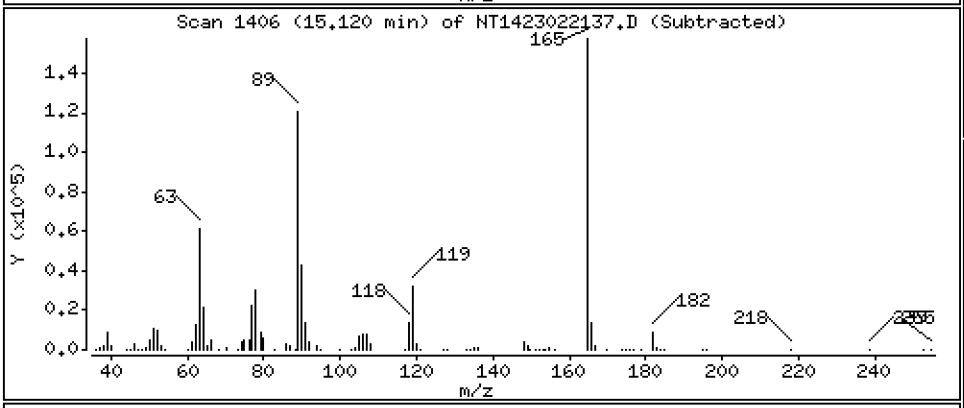
Column diameter: 0.25

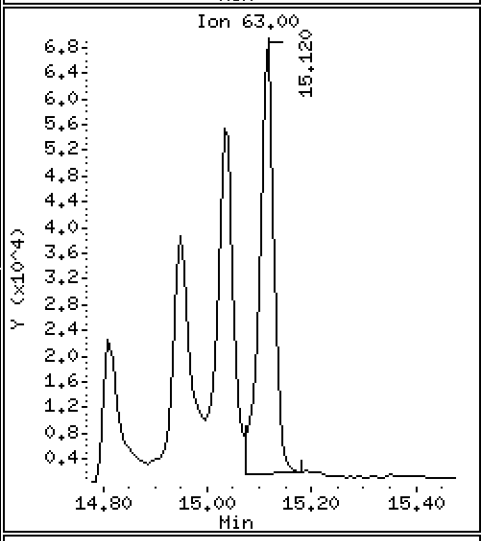
48 2,4-Dinitrotoluene

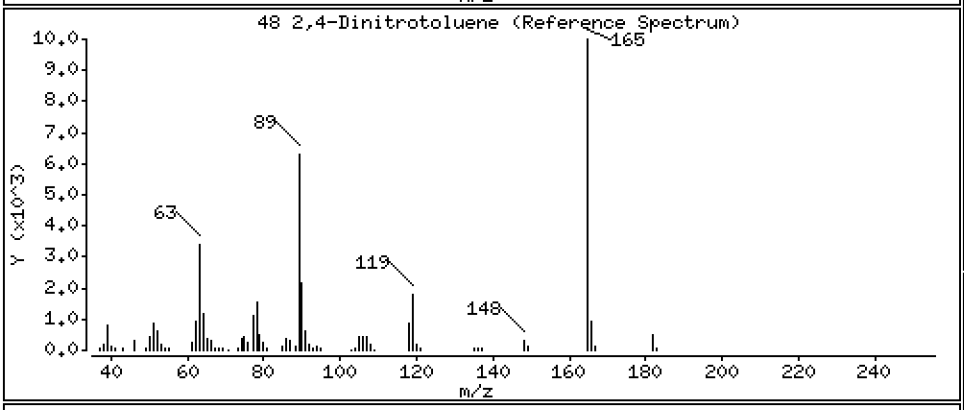
Concentration: 4.742 ug/mL

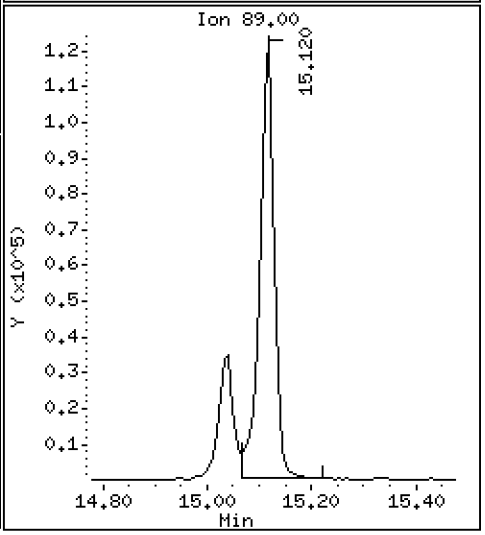


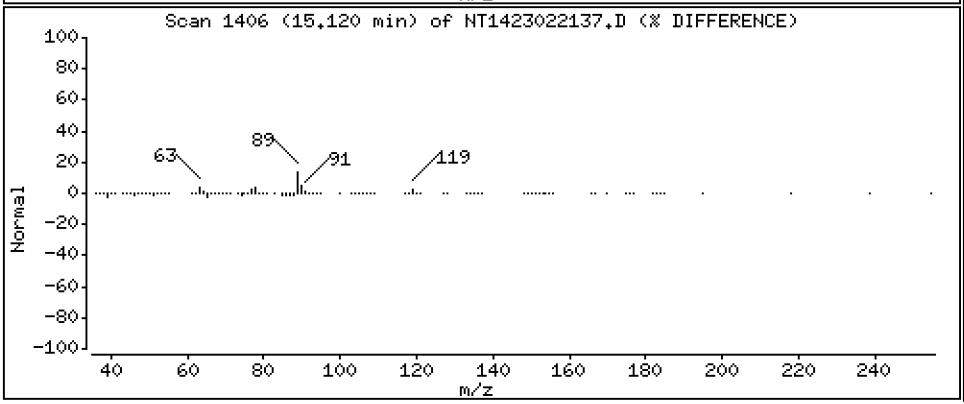












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

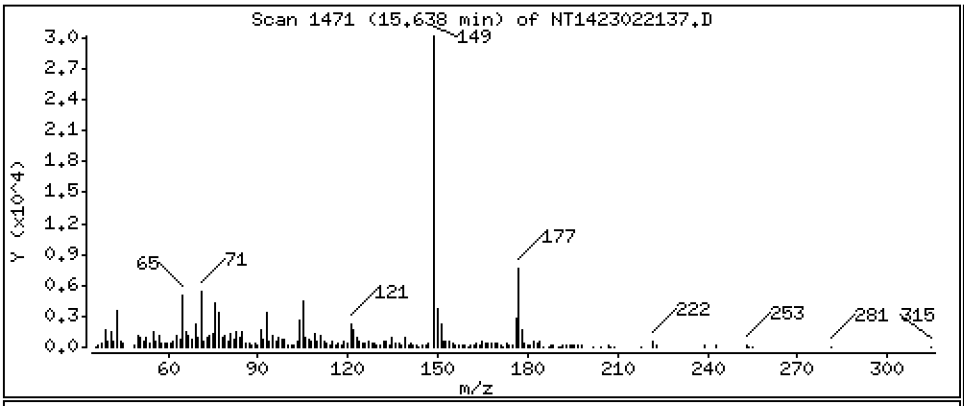
Operator: DSD

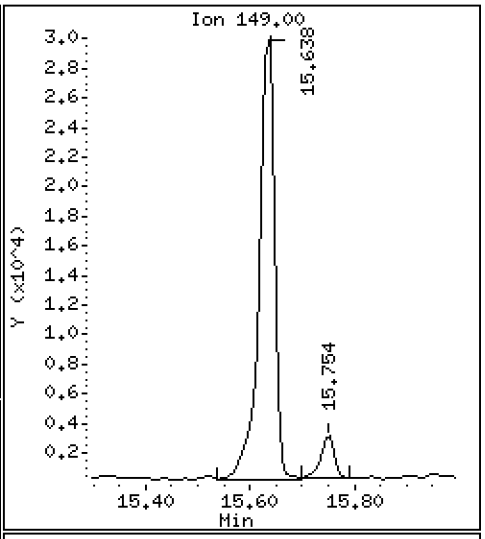
Column phase: ZB-5msi

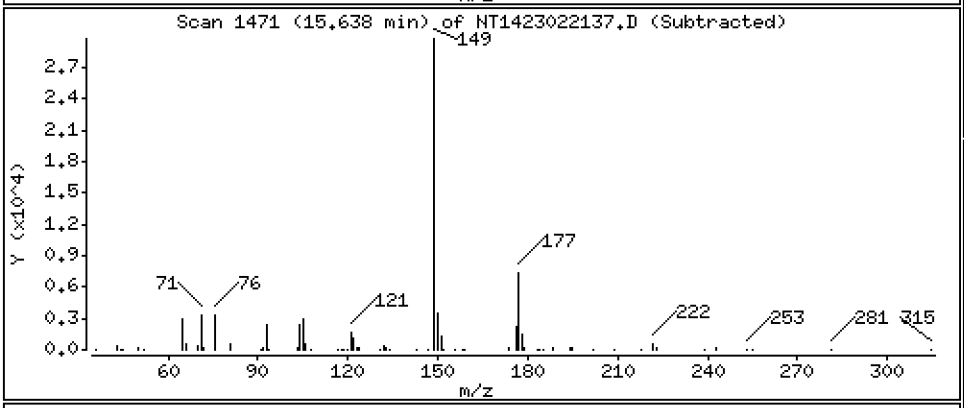
Column diameter: 0.25

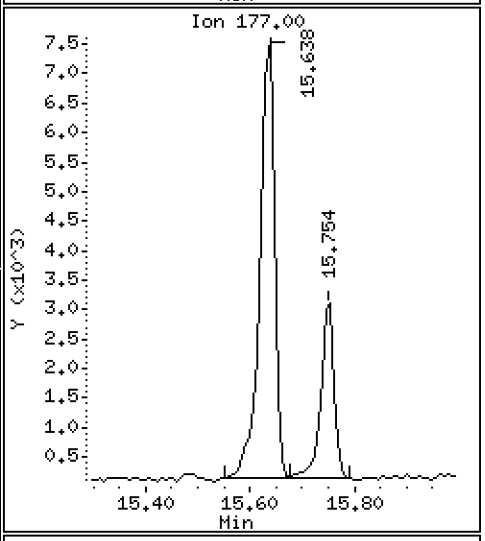
50 Diethylphthalate

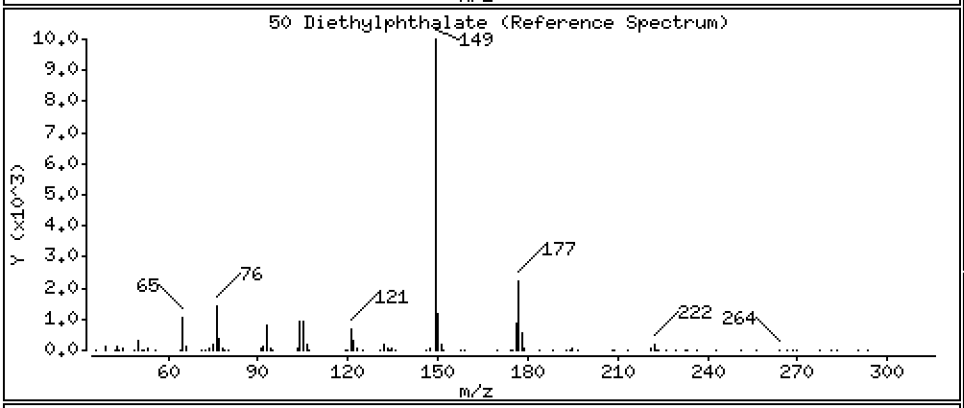
Concentration: 0.2539 ug/mL

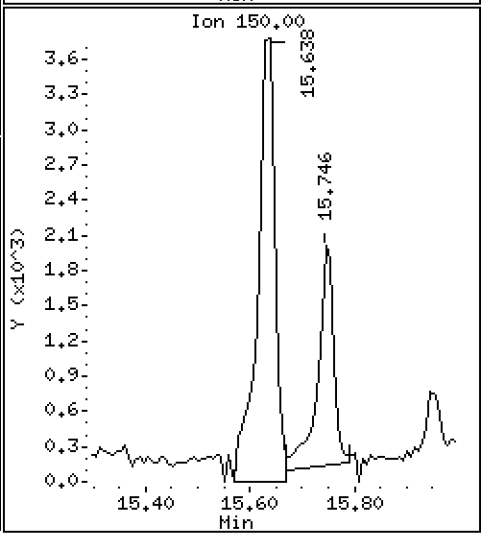


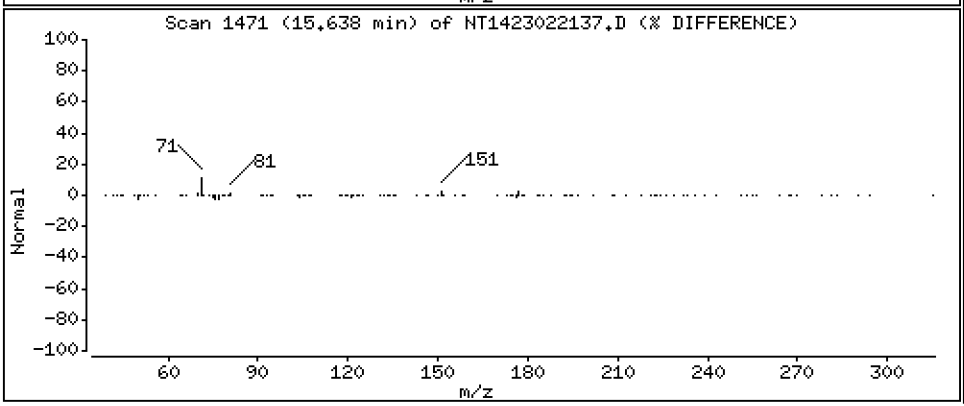












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

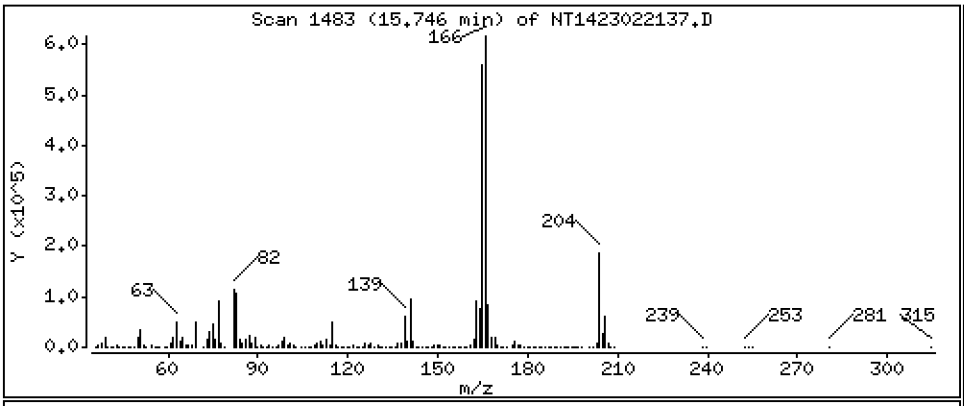
Operator: DSD

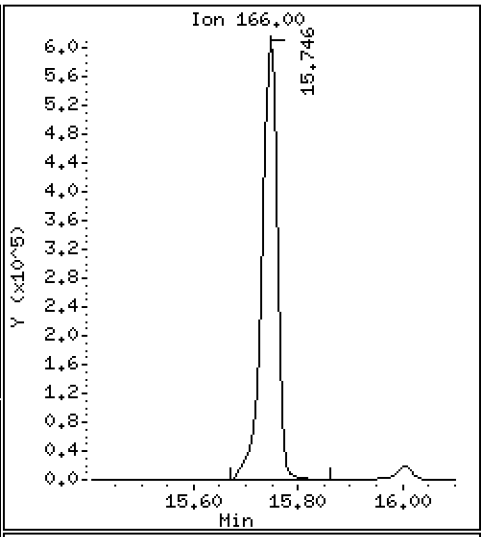
Column phase: ZB-5msi

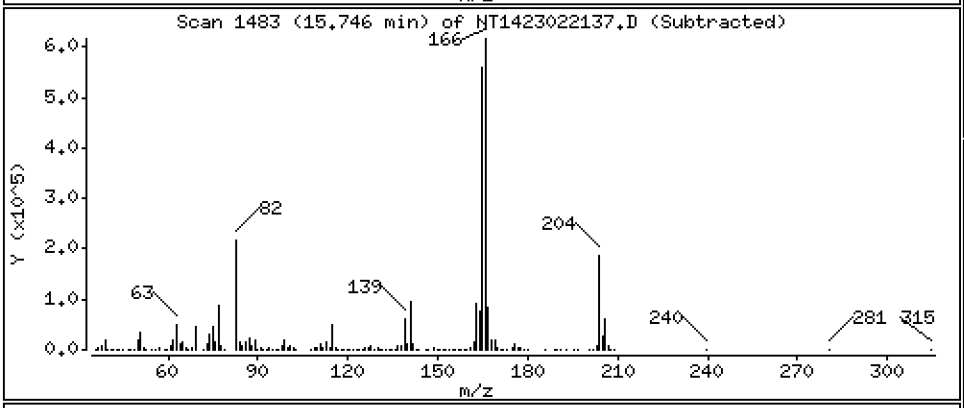
Column diameter: 0.25

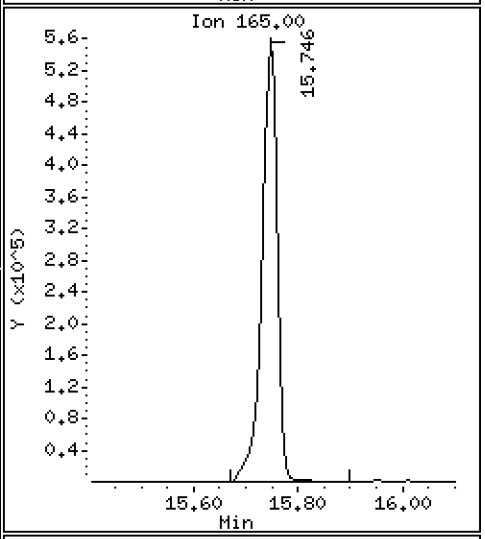
49 Fluorene

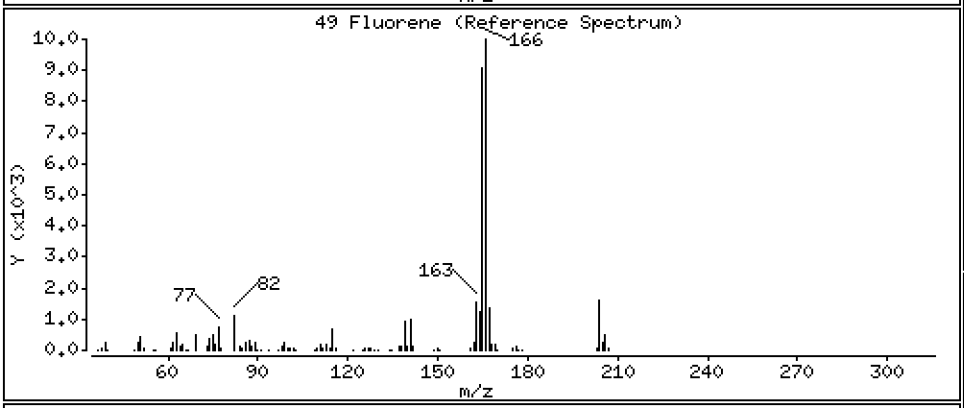
Concentration: 4.507 ug/mL

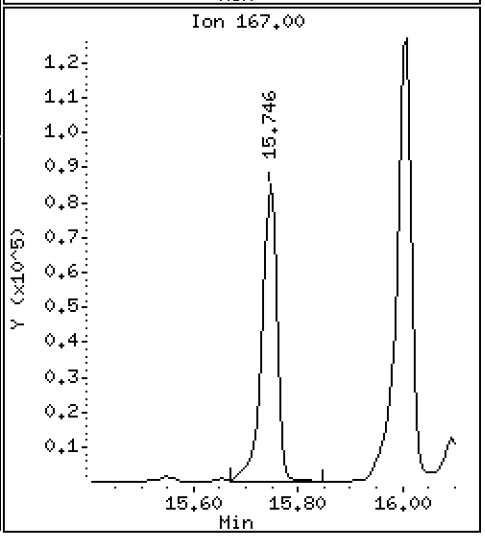


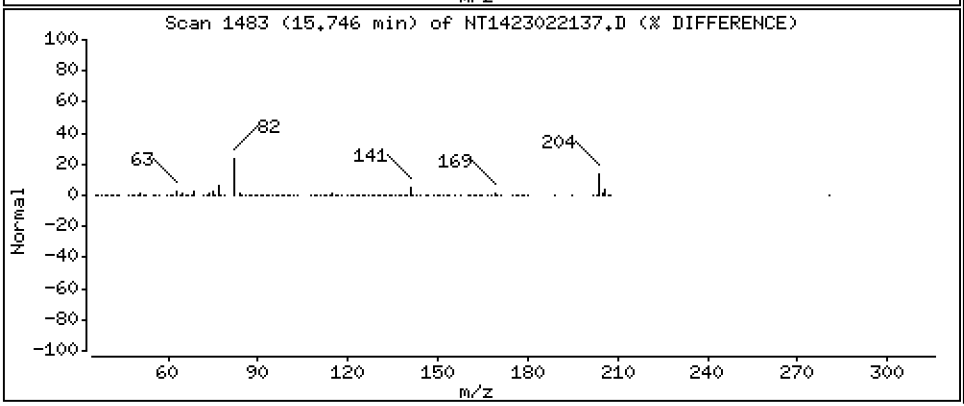












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

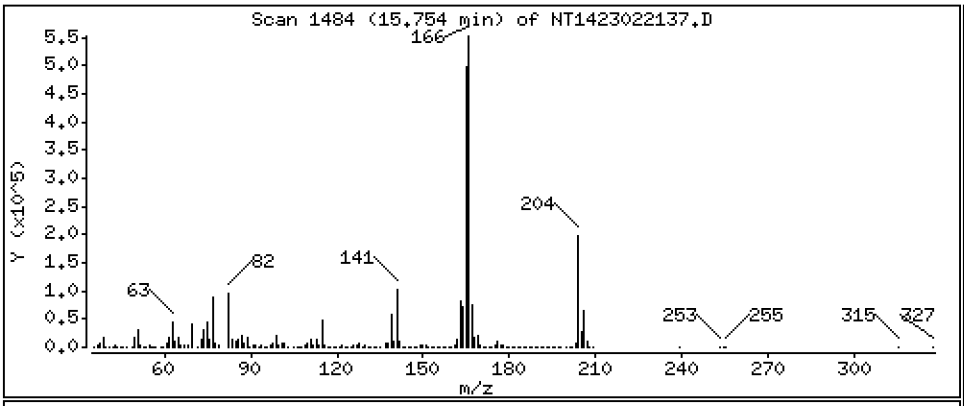
Operator: DSD

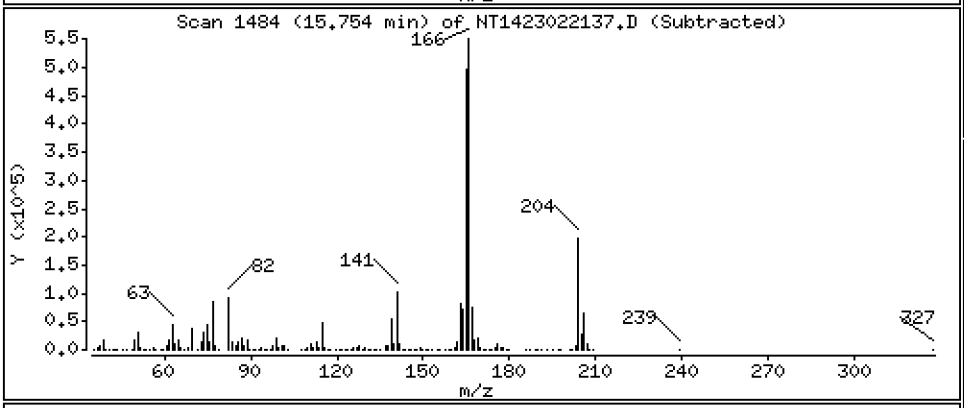
Column phase: ZB-5msi

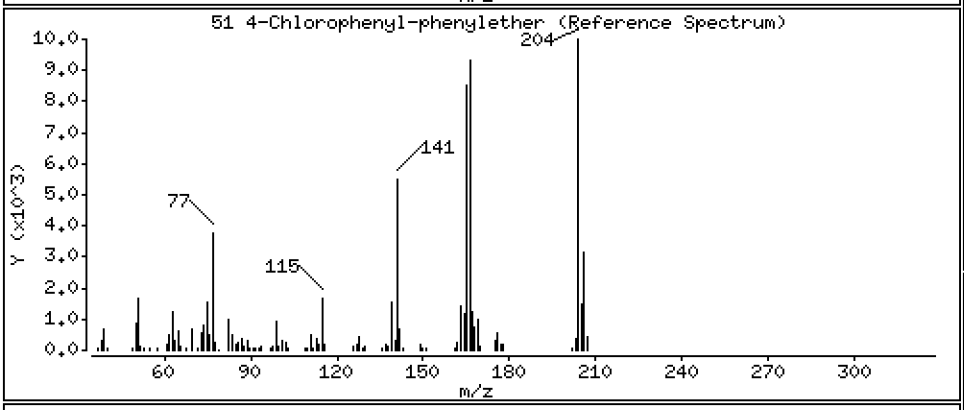
Column diameter: 0.25

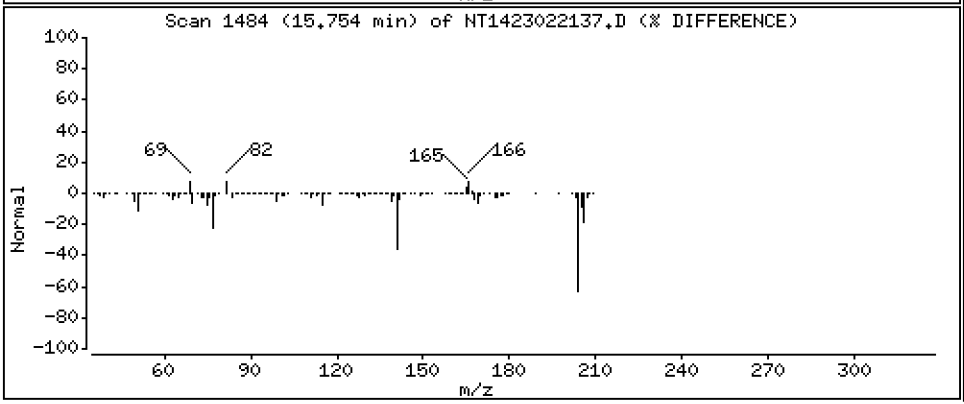
51 4-Chlorophenyl-phenylether

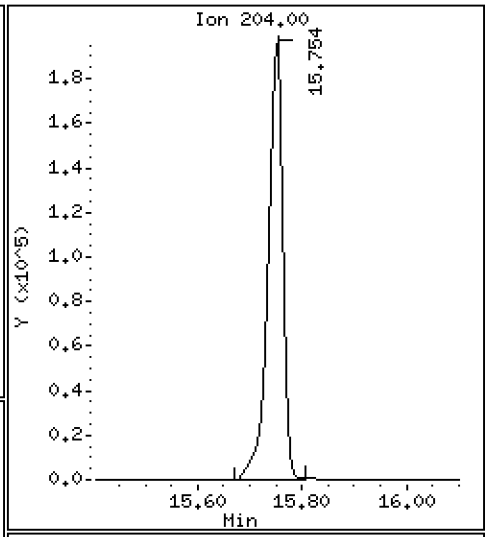
Concentration: 2.714 ug/mL

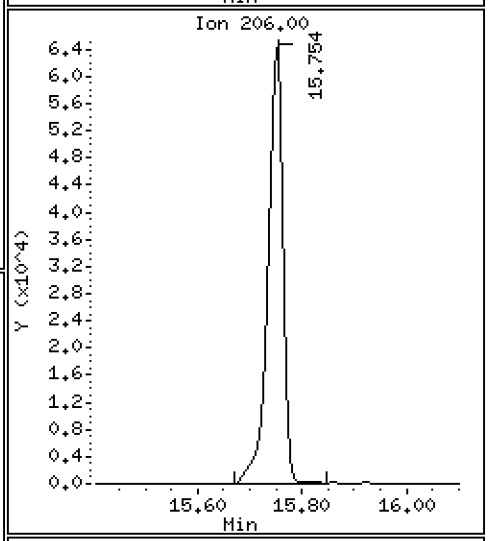


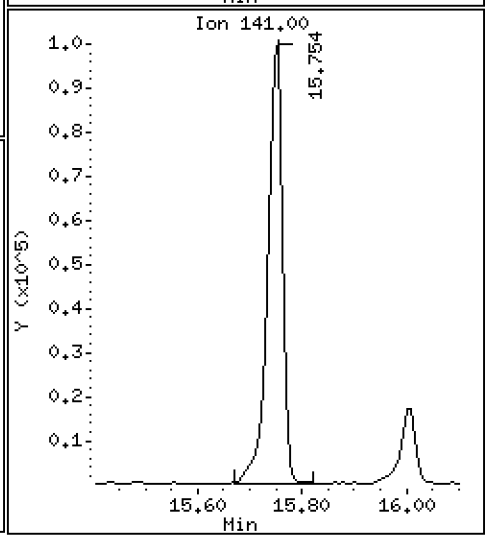












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

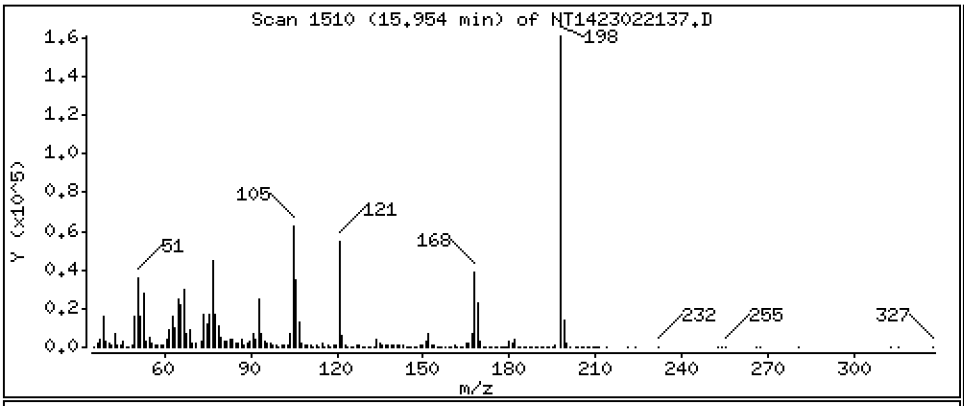
Operator: DSD

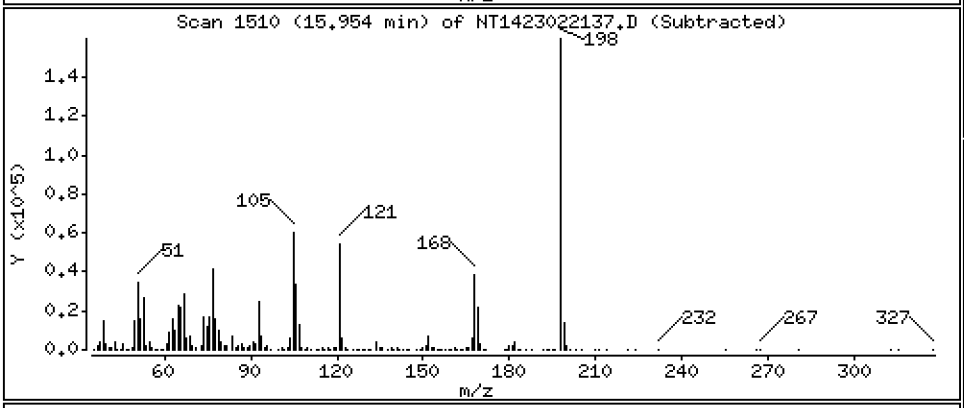
Column phase: ZB-5msi

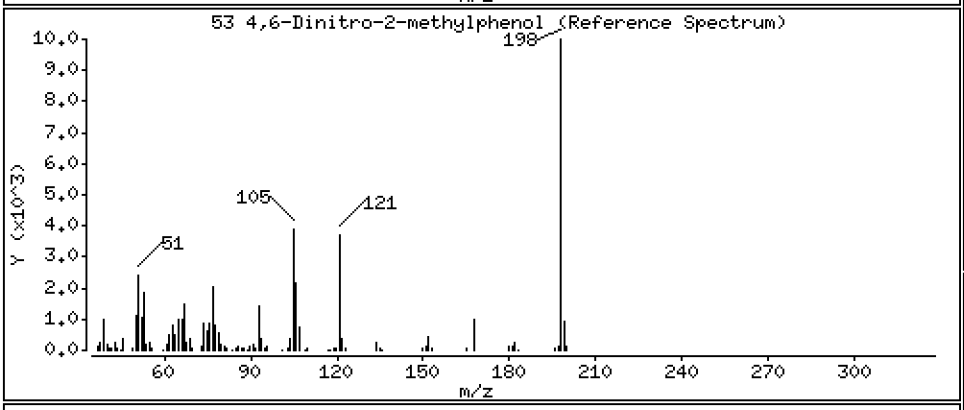
Column diameter: 0.25

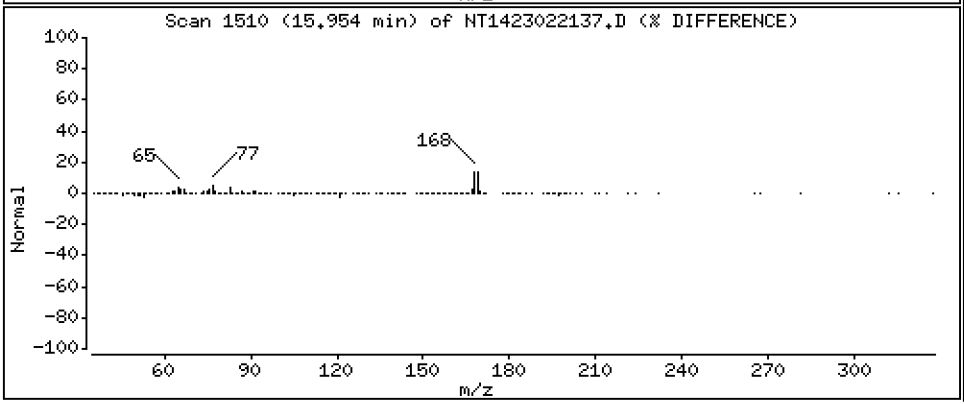
53 4,6-Dinitro-2-methylphenol

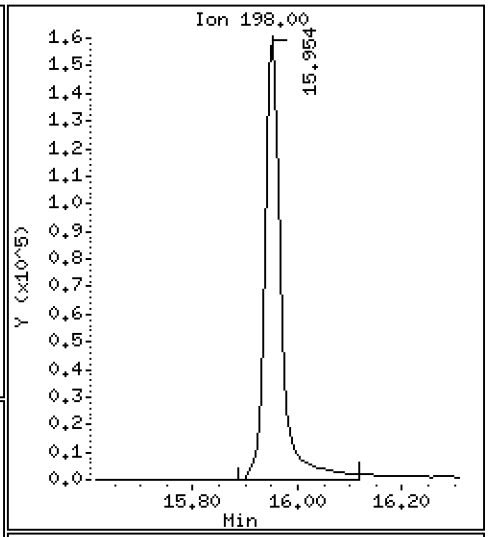
Concentration: 7.154 ug/mL

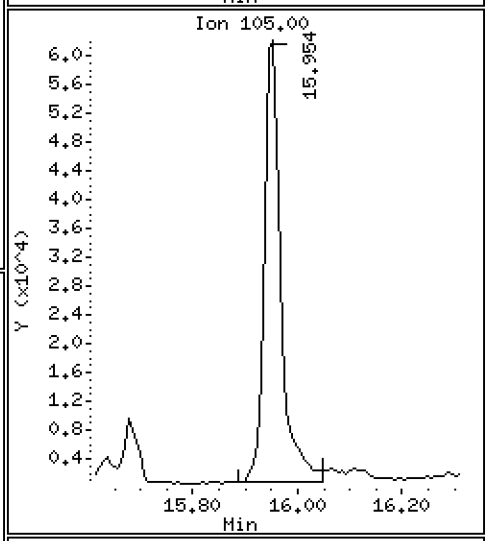


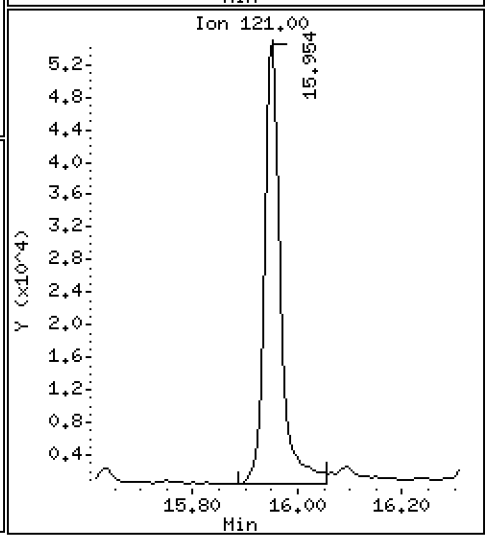












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

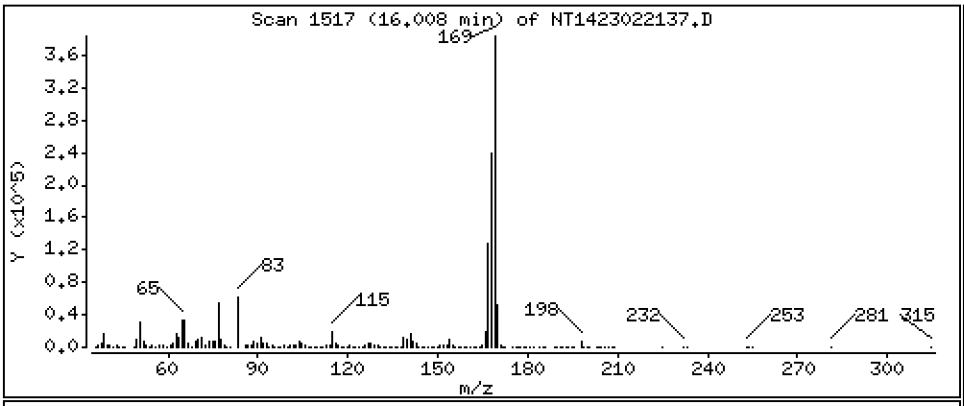
Operator: DSD

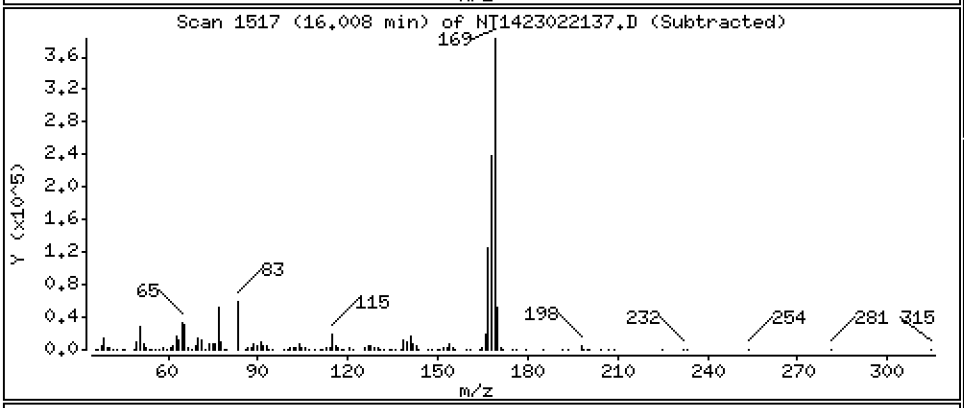
Column phase: ZB-5msi

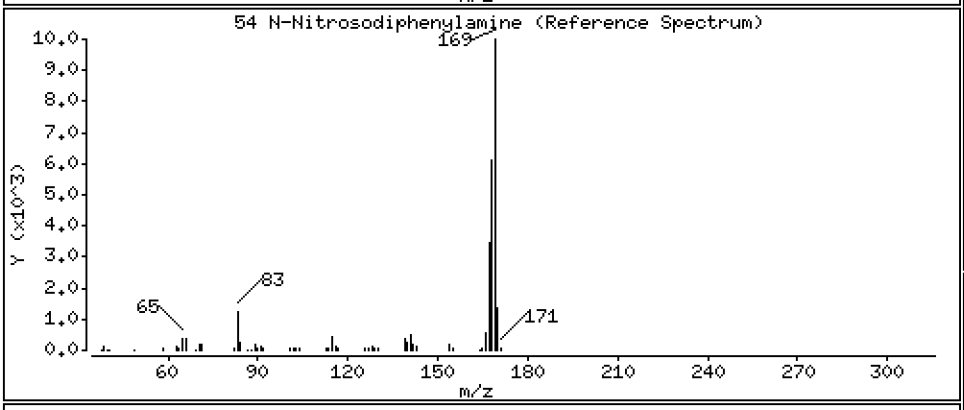
Column diameter: 0.25

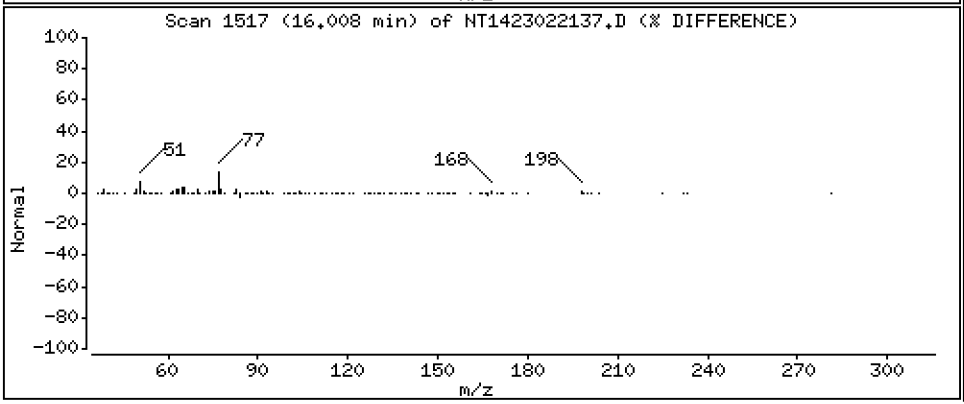
54 N-Nitrosodiphenylamine

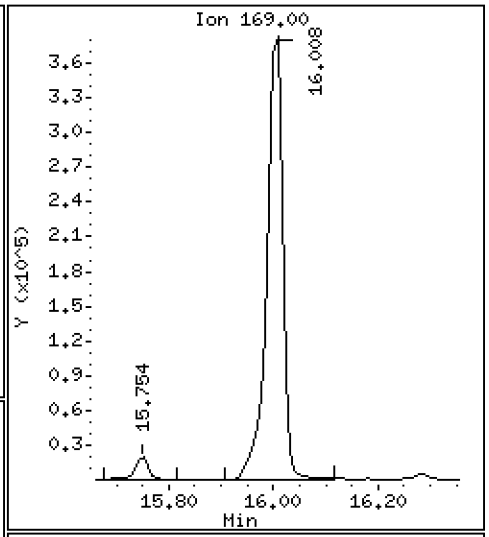
Concentration: 4.286 ug/mL

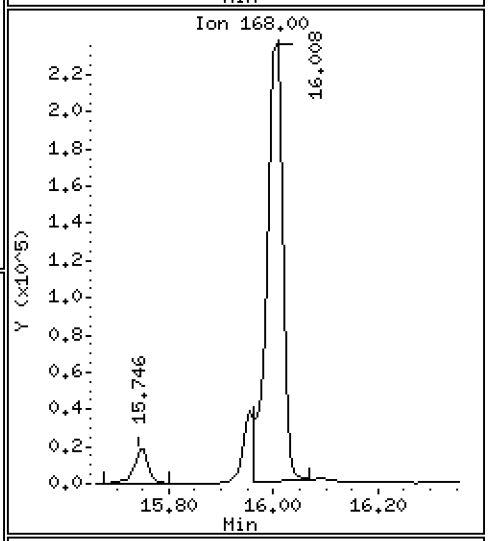


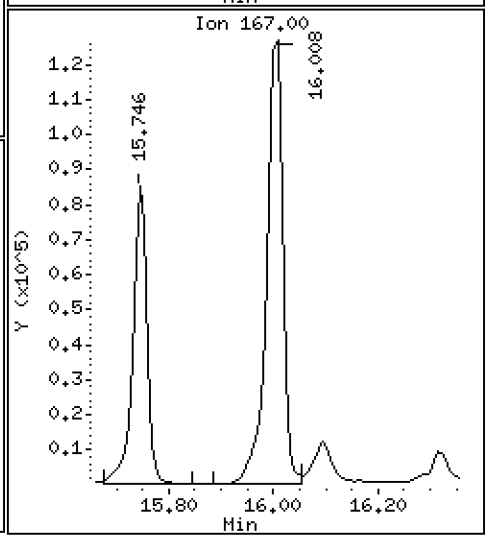












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

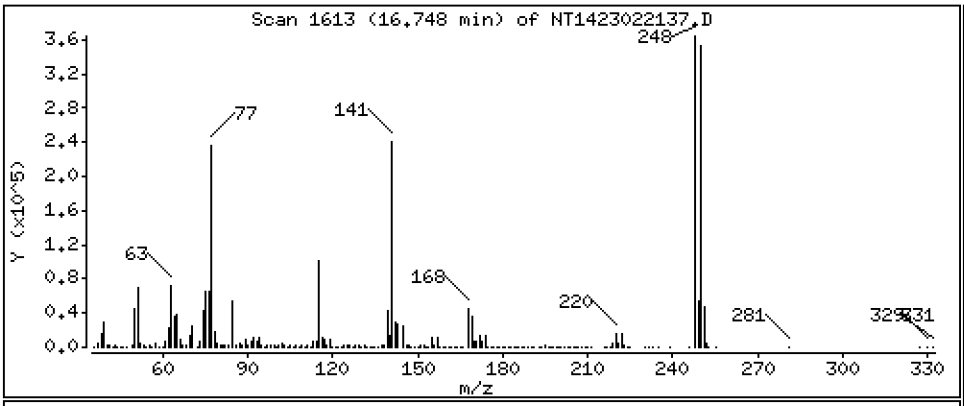
Operator: DSD

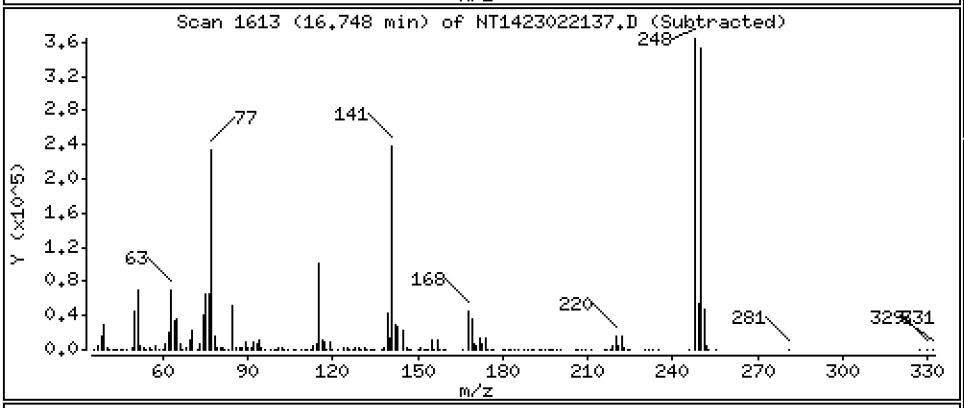
Column phase: ZB-5msi

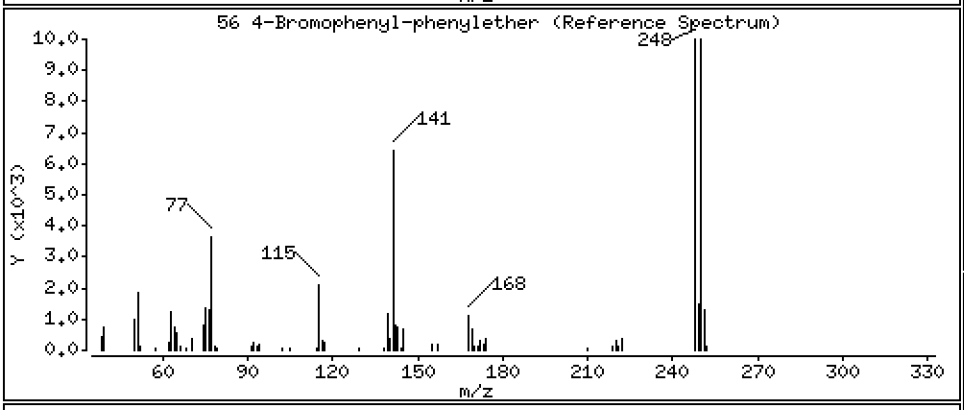
Column diameter: 0.25

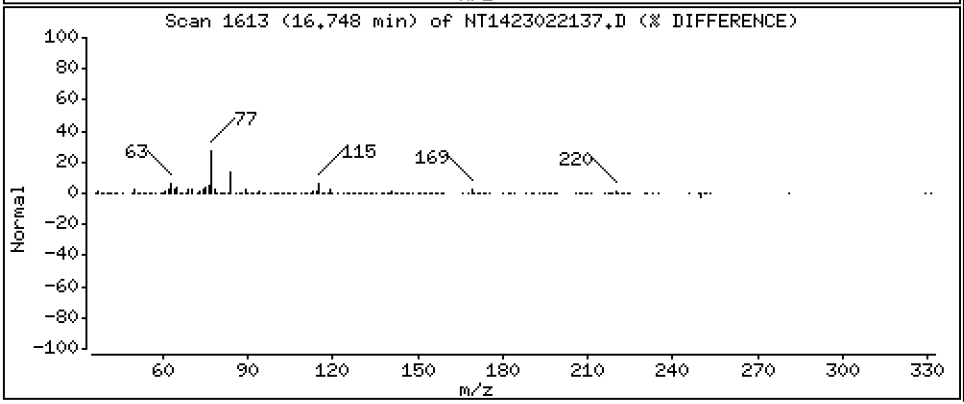
56 4-Bromophenyl-phenylether

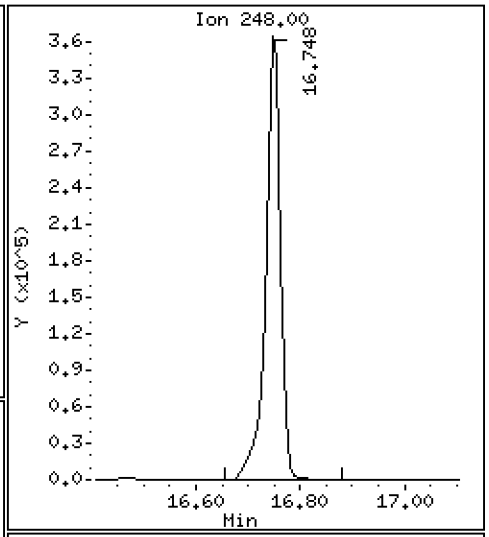
Concentration: 8.791 ug/mL

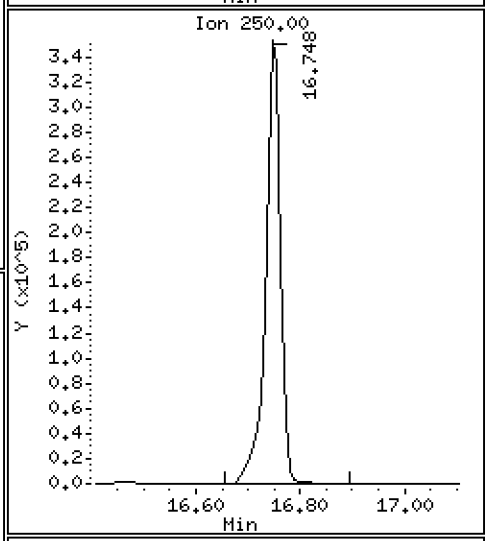


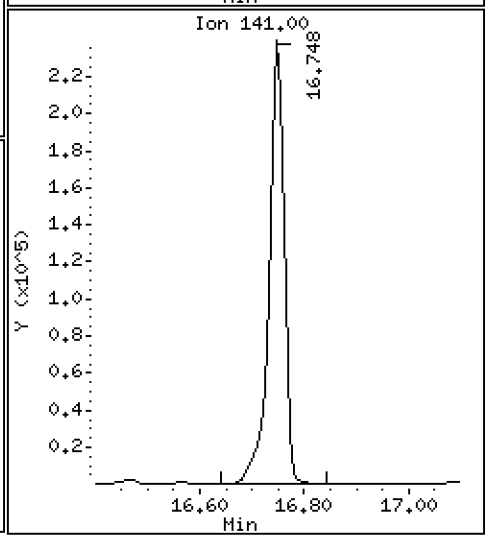












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

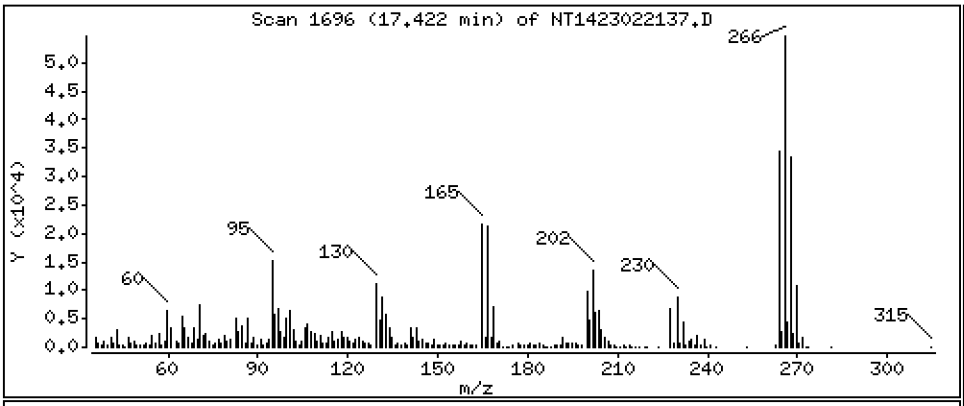
Operator: DSD

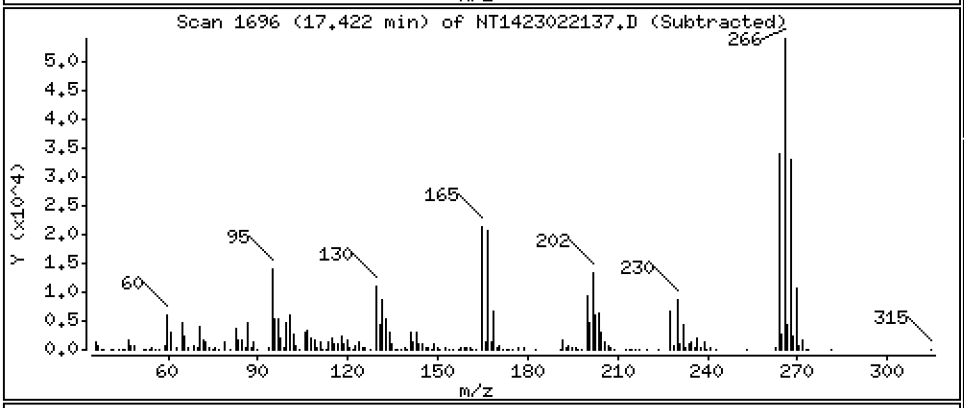
Column phase: ZB-5msi

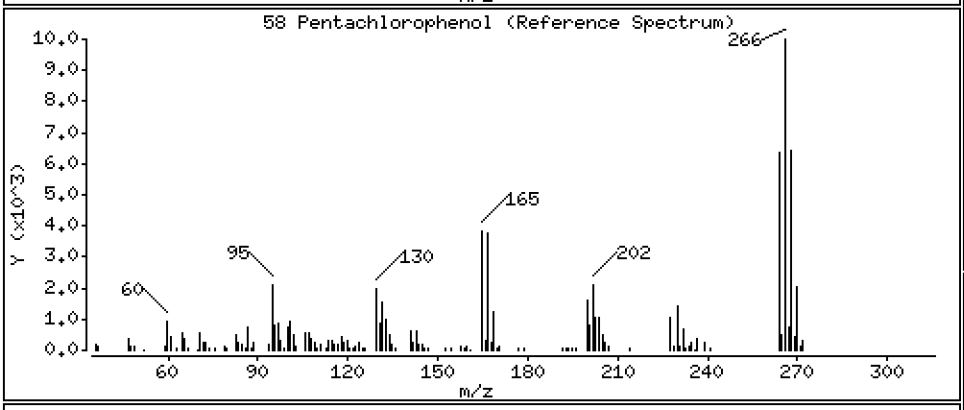
Column diameter: 0.25

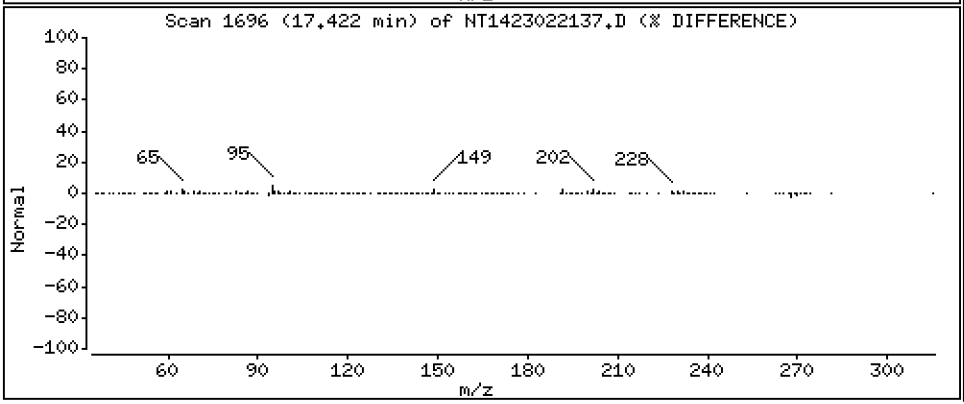
58 Pentachlorophenol

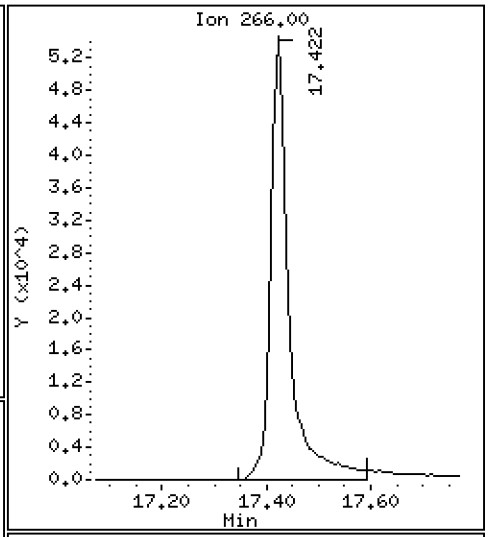
Concentration: 3.230 ug/mL

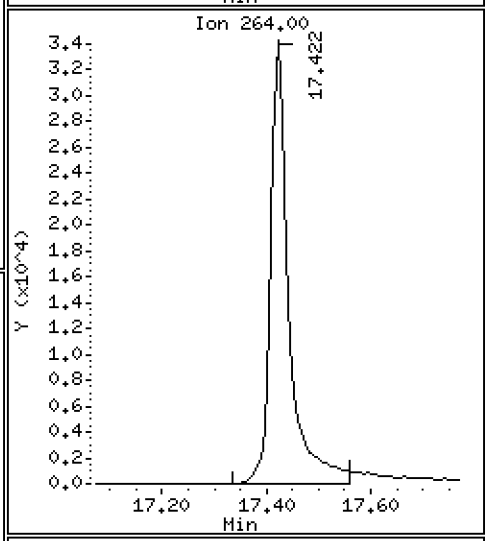


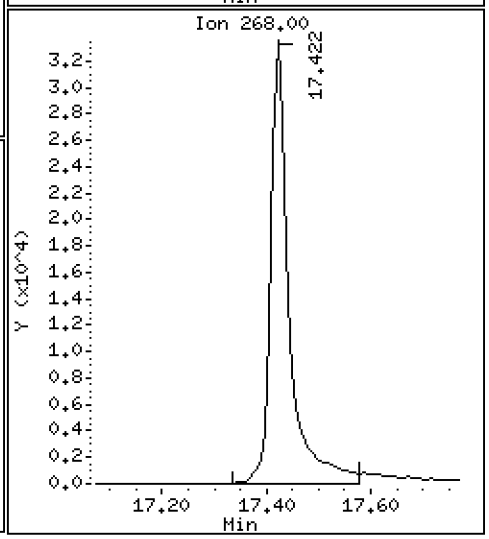












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

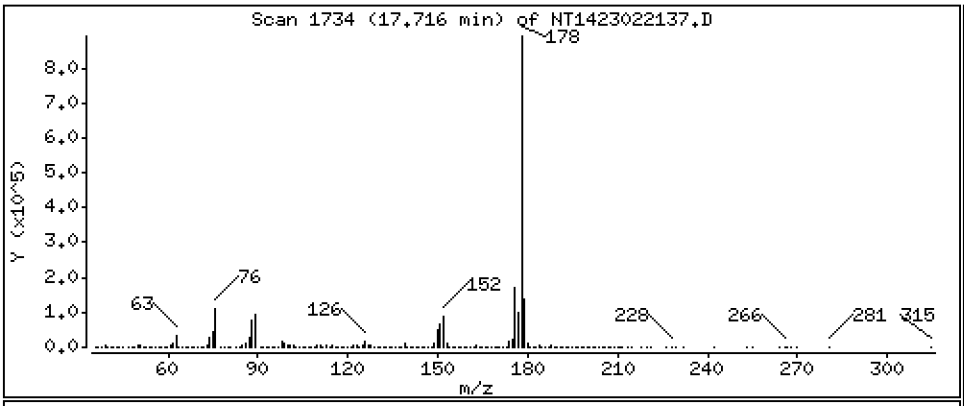
Operator: DSD

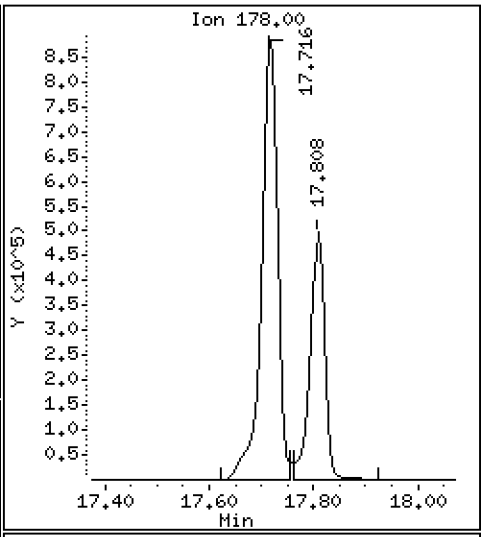
Column phase: ZB-5msi

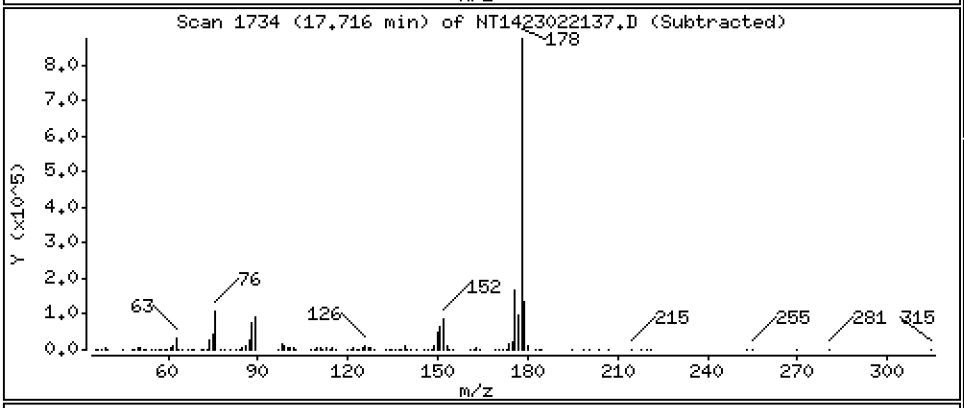
Column diameter: 0.25

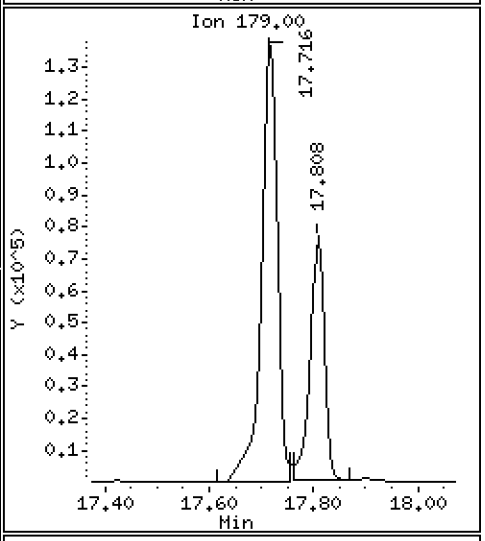
60 Phenanthrene

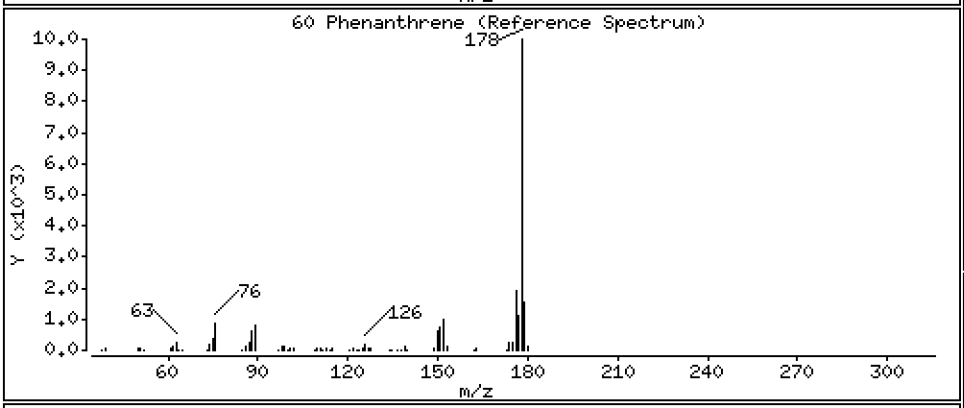
Concentration: 6.034 ug/mL

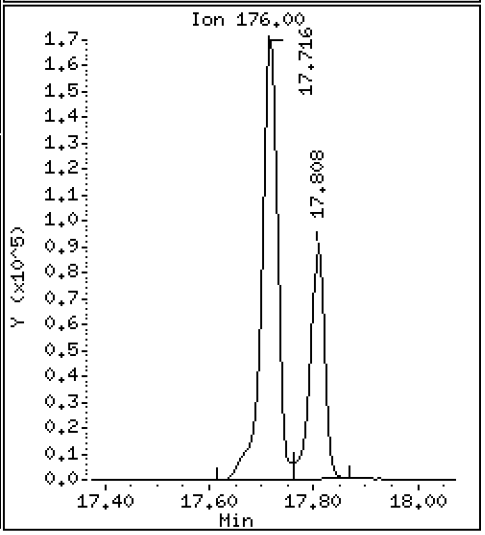


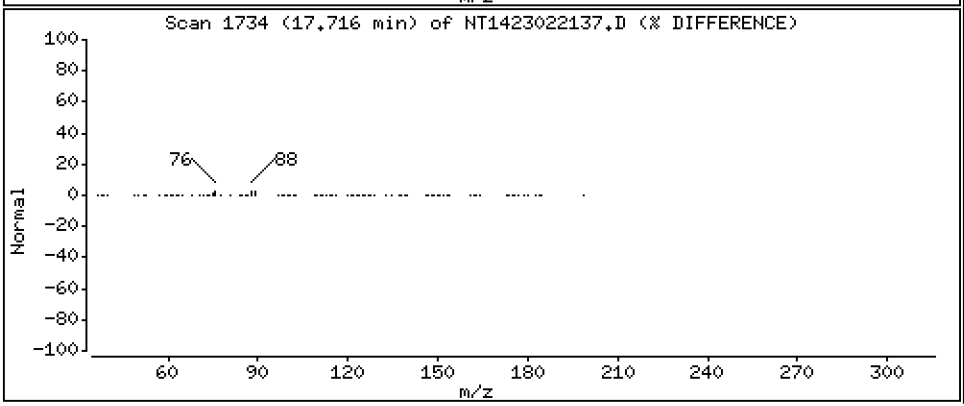












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

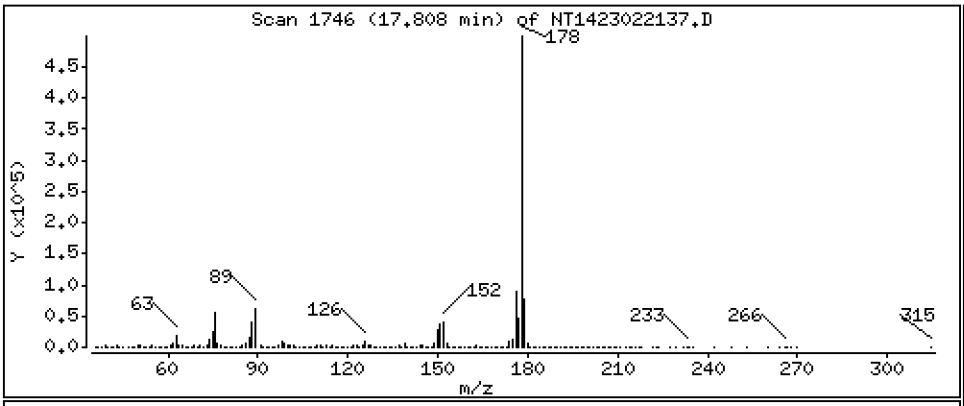
Operator: DSD

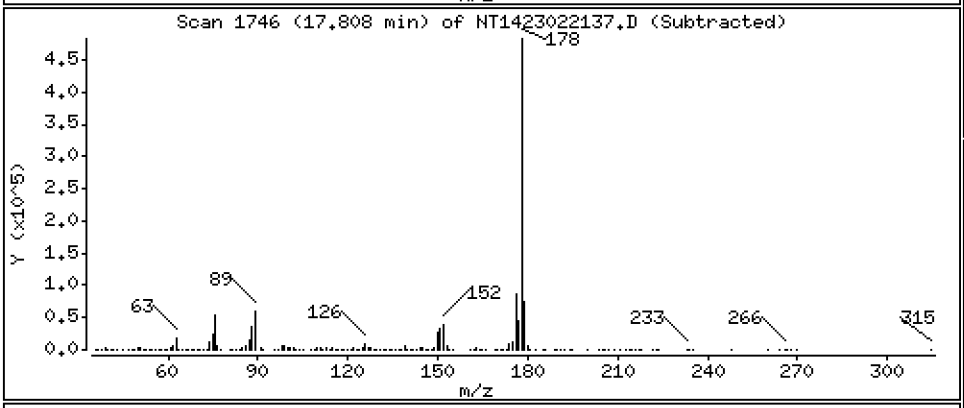
Column phase: ZB-5msi

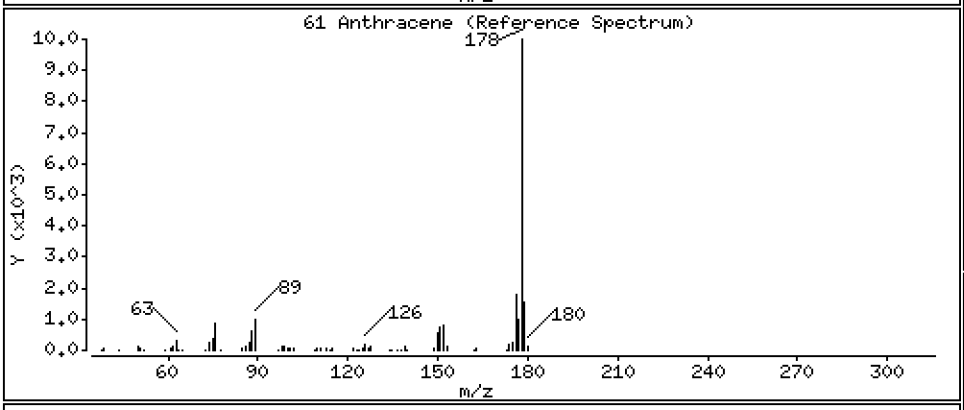
Column diameter: 0.25

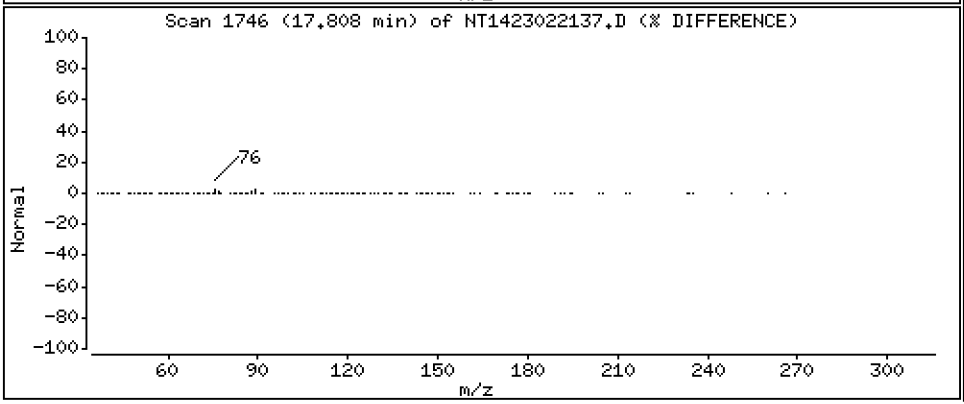
61 Anthracene

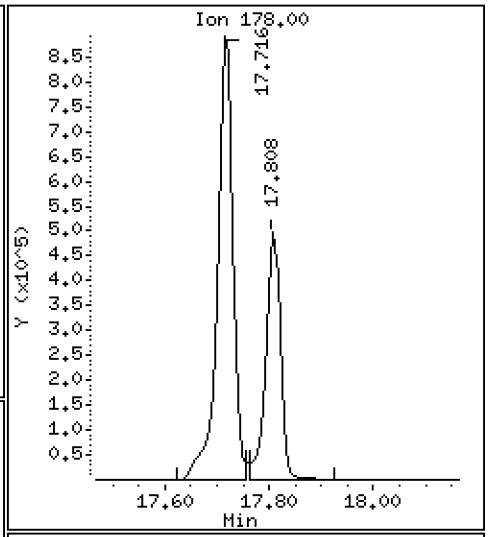
Concentration: 3.045 ug/mL

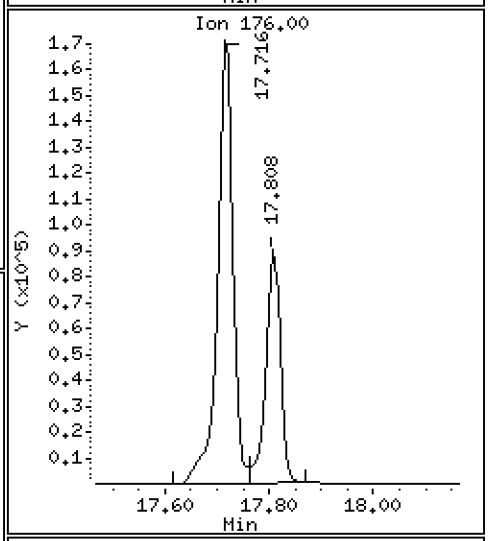


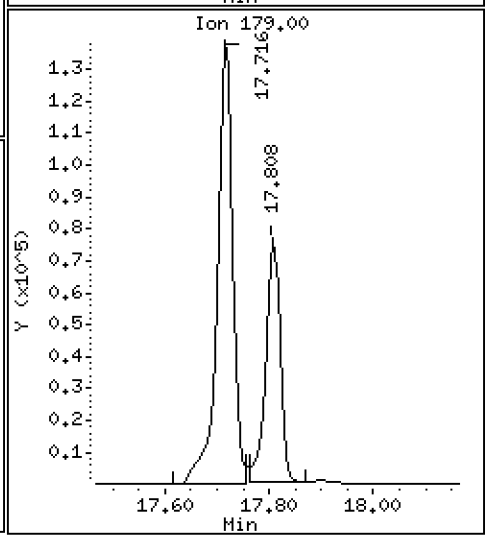












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

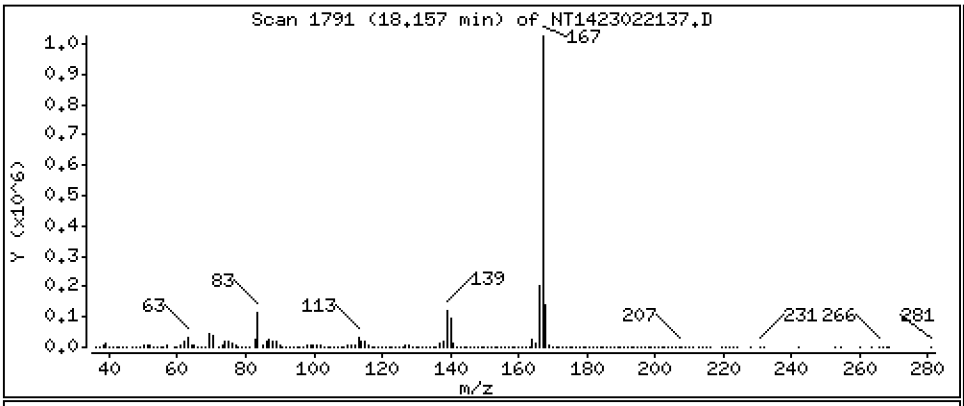
Operator: DSD

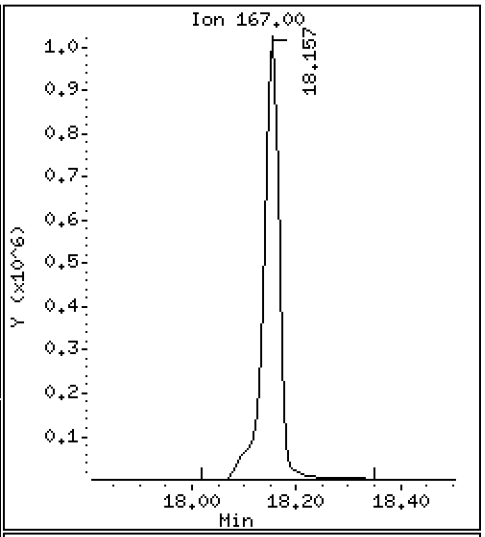
Column phase: ZB-5msi

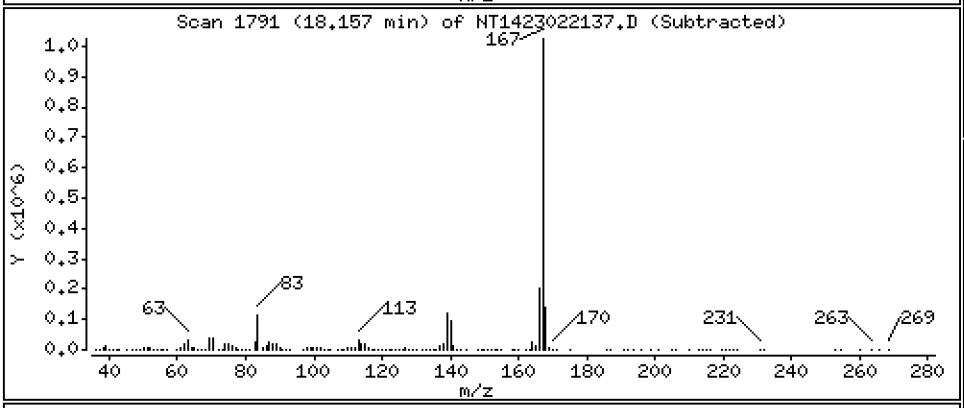
Column diameter: 0.25

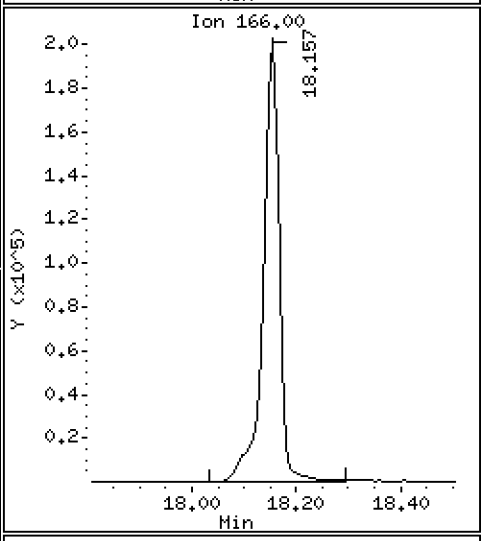
62 Carbazole

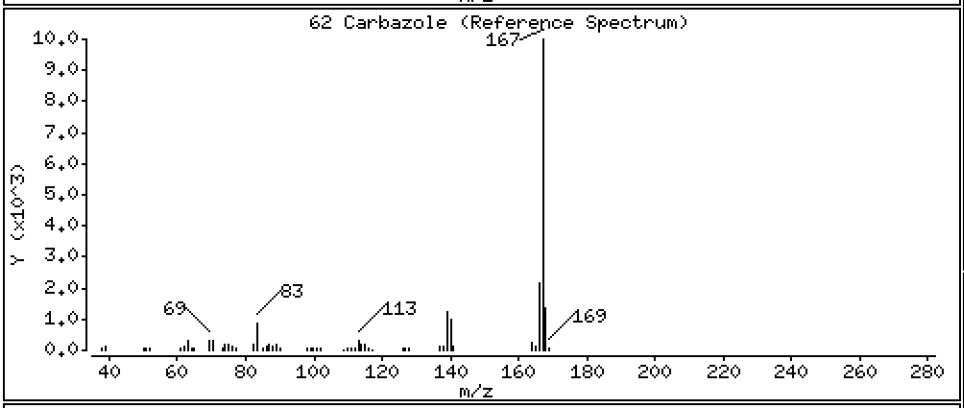
Concentration: 7.596 ug/mL

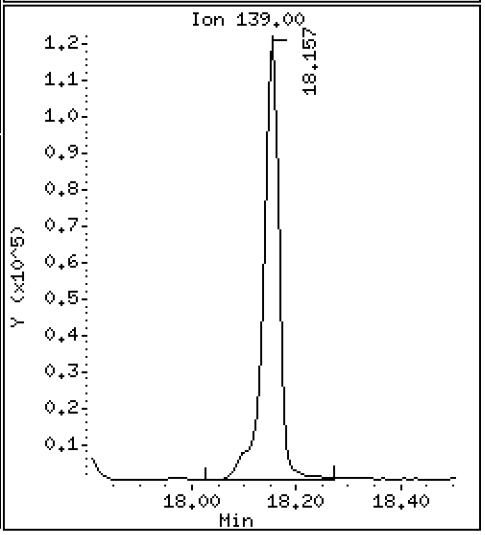


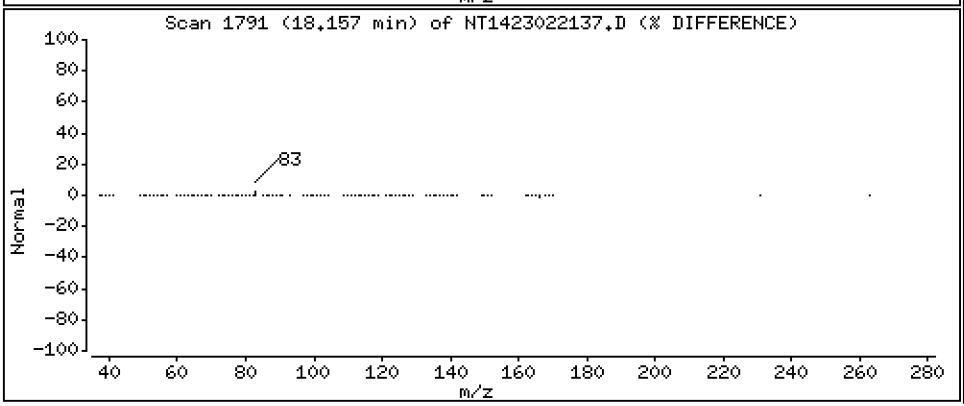












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

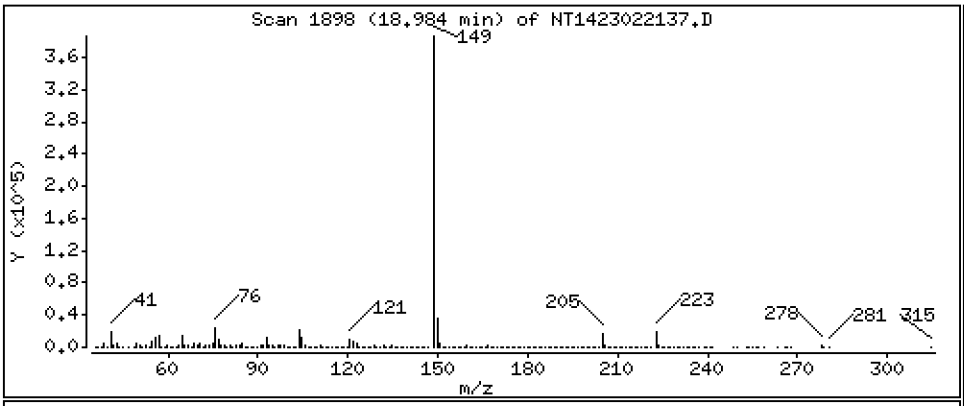
Operator: DSD

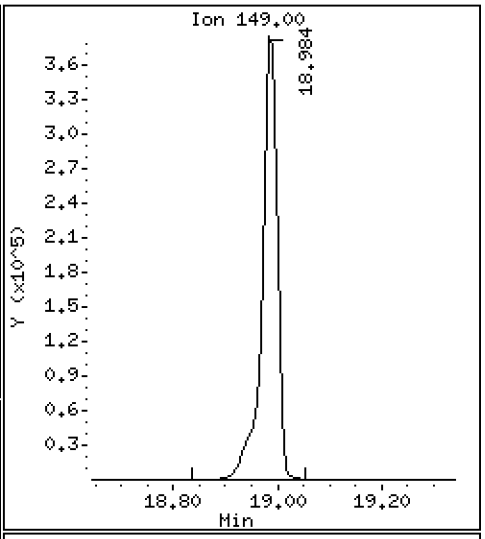
Column phase: ZB-5msi

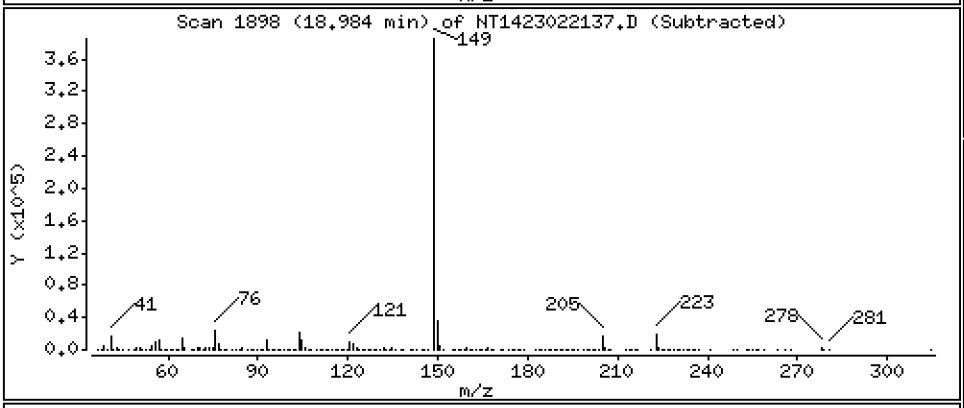
Column diameter: 0.25

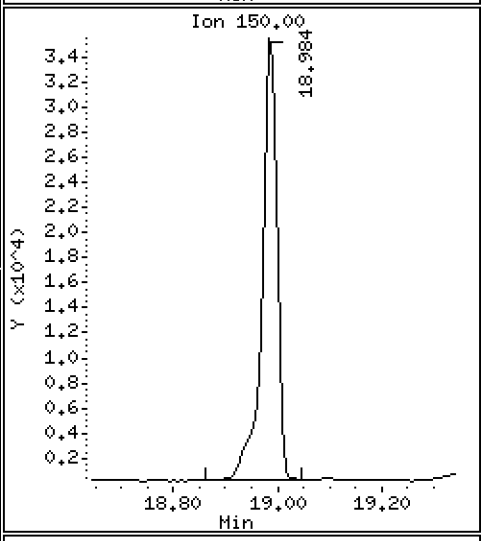
63 Di-n-butylphthalate

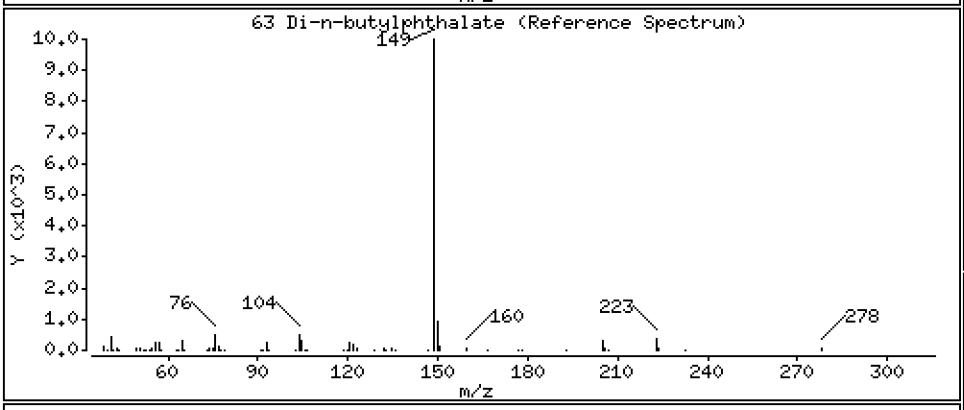
Concentration: 2.484 ug/mL

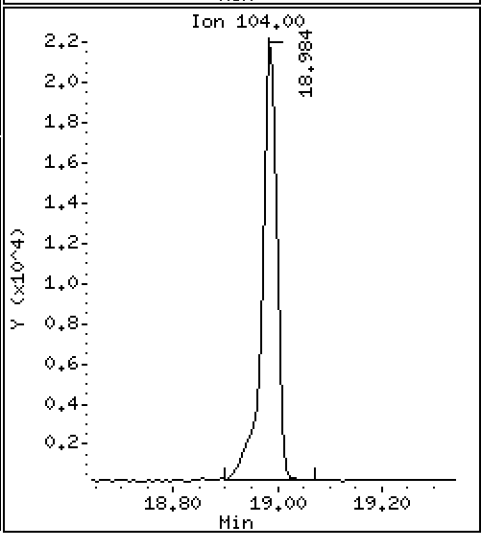


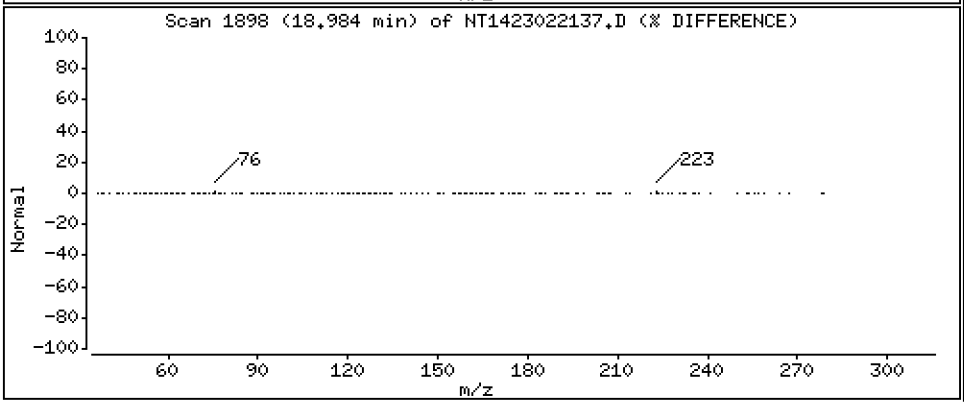












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

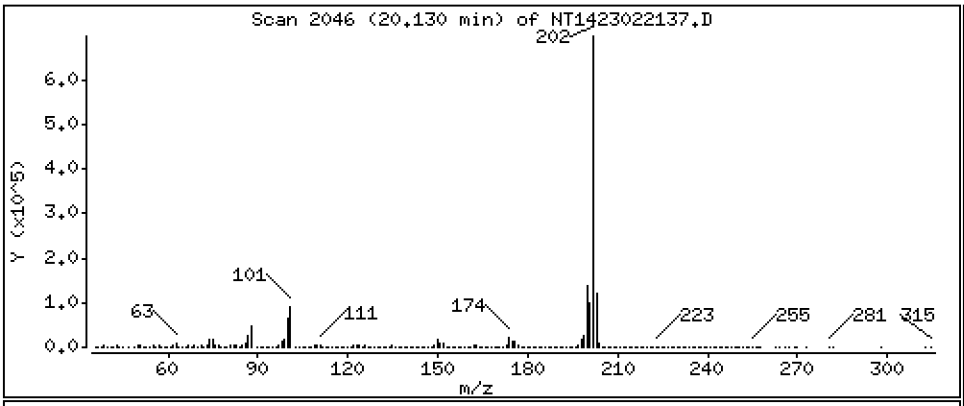
Operator: DSD

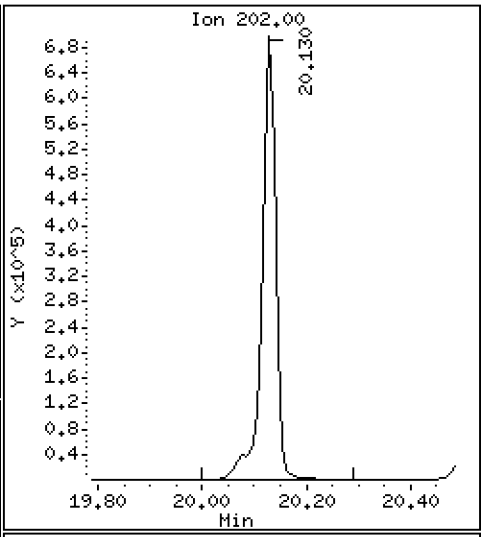
Column phase: ZB-5msi

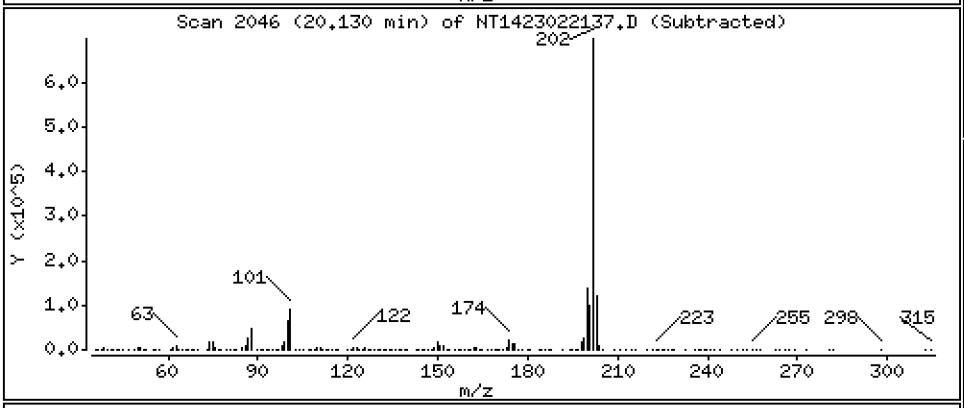
Column diameter: 0.25

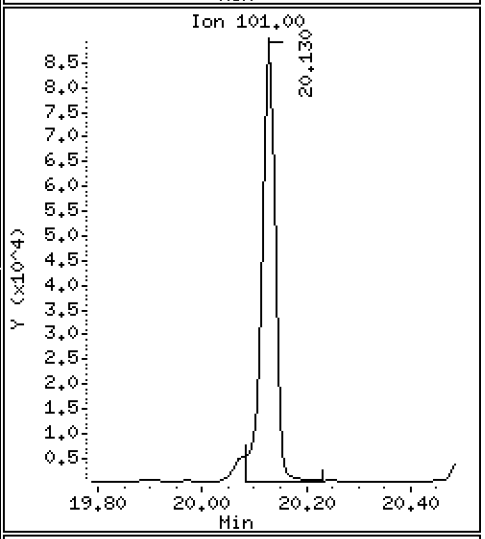
64 Fluoranthene

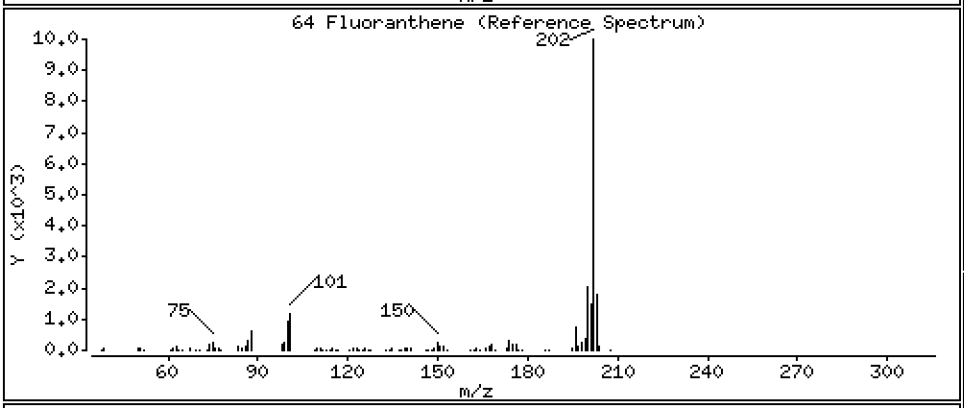
Concentration: 2.905 ug/mL

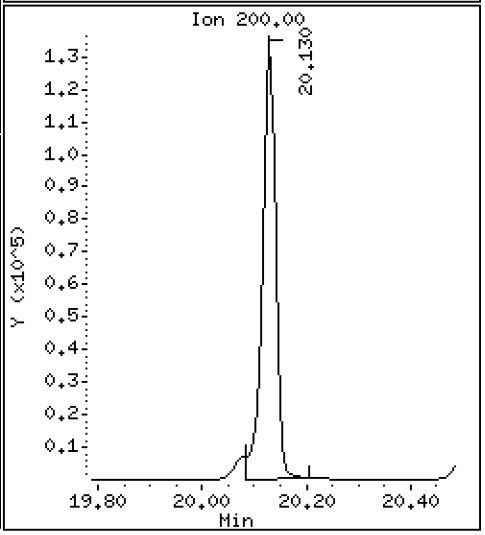


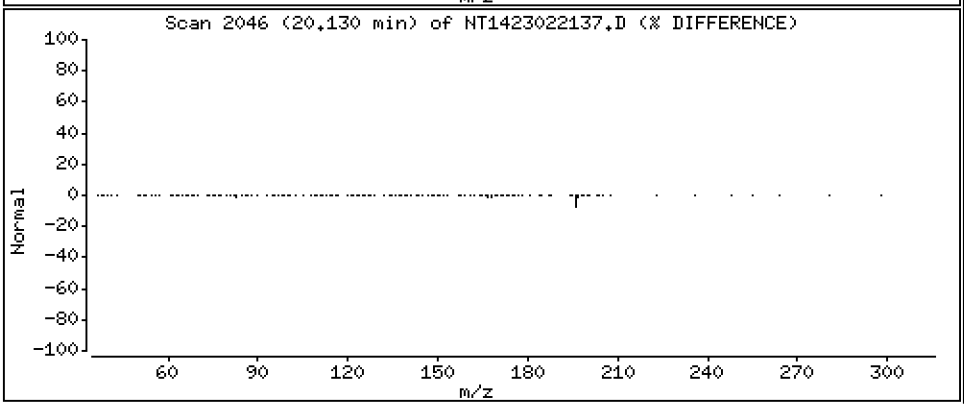












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

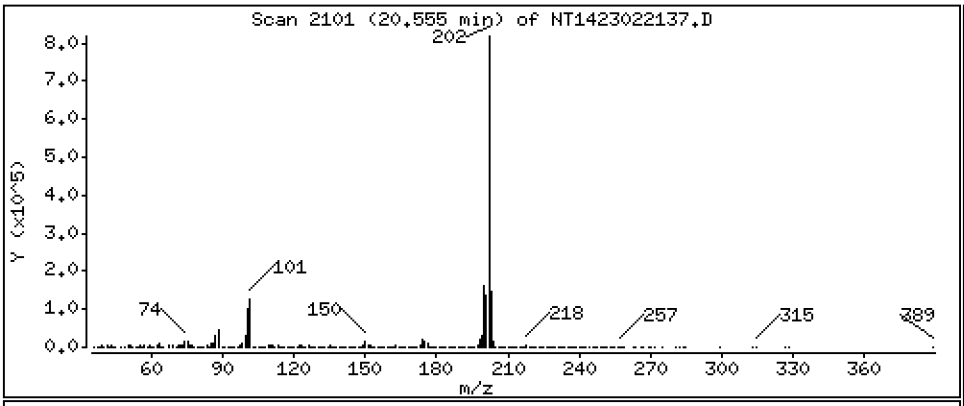
Operator: DSD

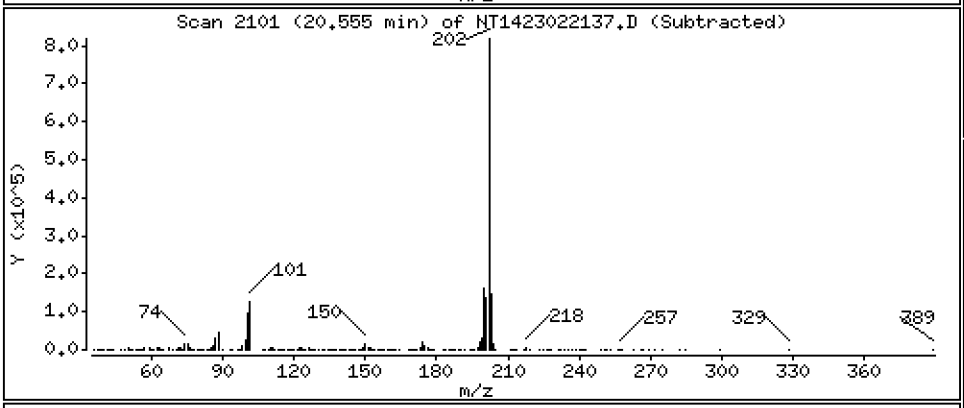
Column phase: ZB-5msi

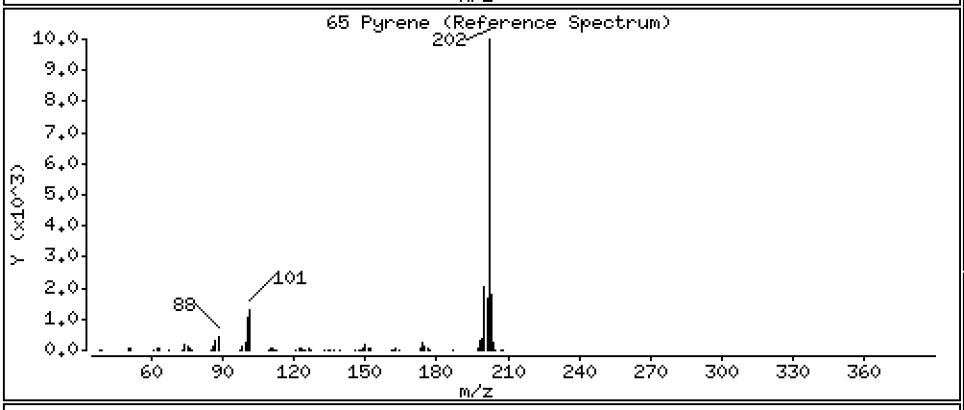
Column diameter: 0.25

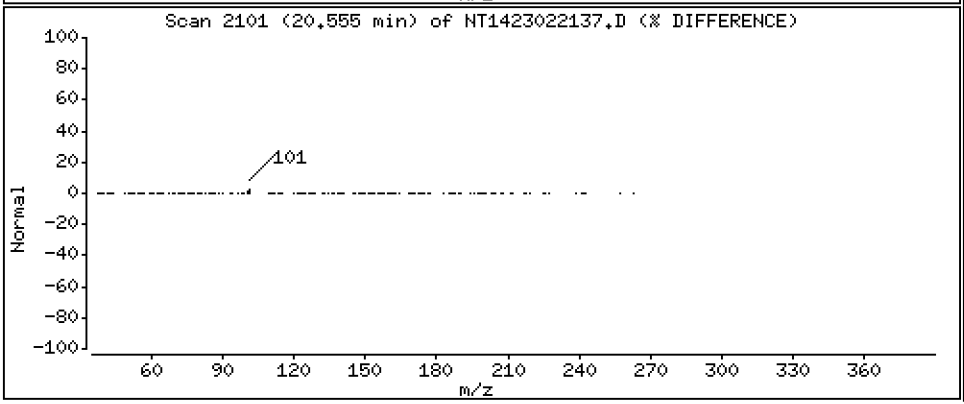
65 Pyrene

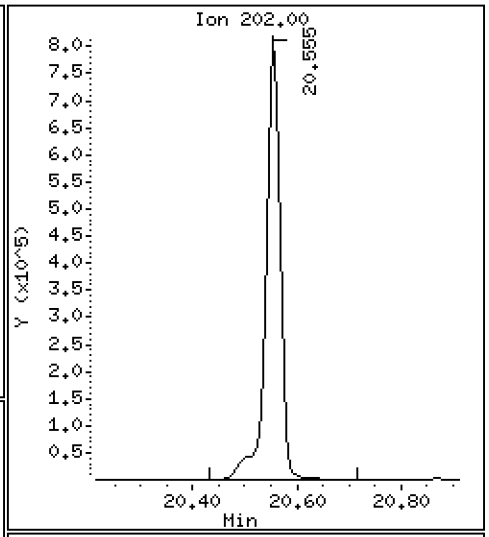
Concentration: 3.625 ug/mL

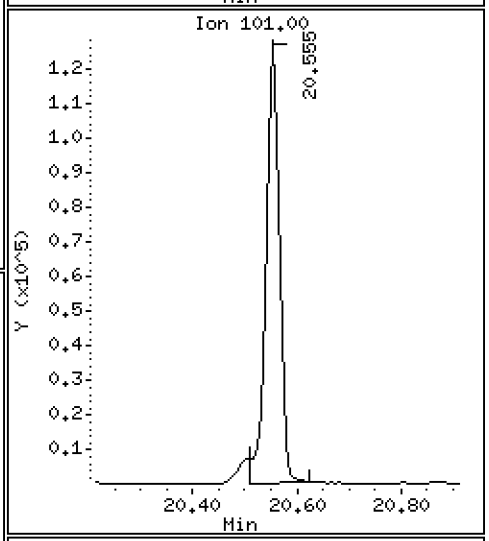


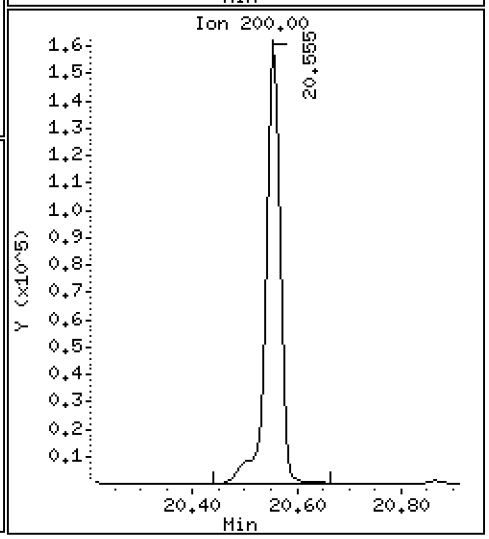












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

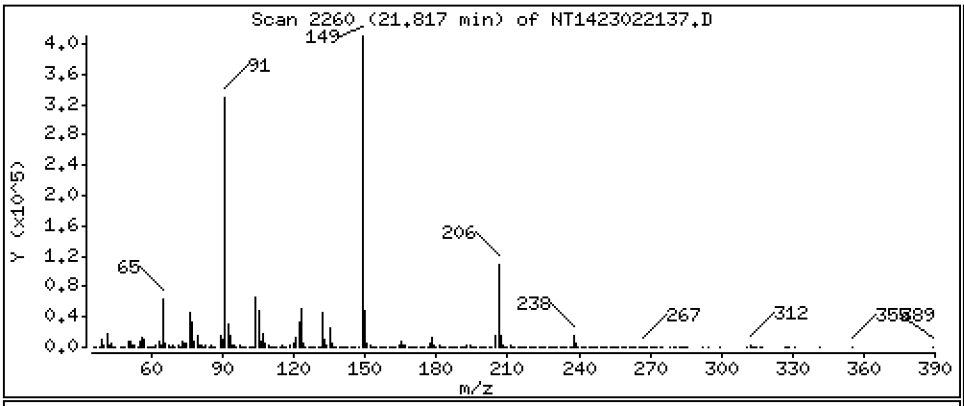
Operator: DSD

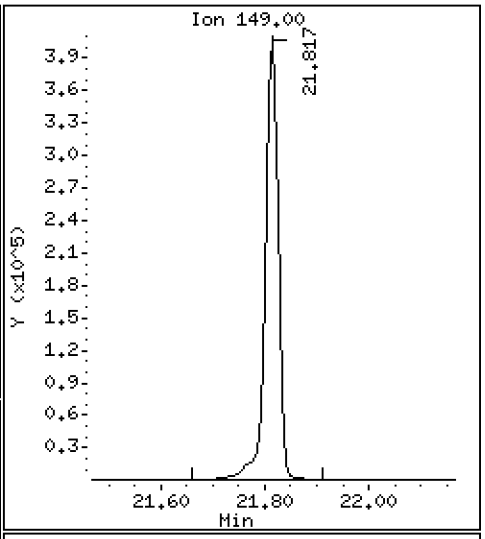
Column phase: ZB-5msi

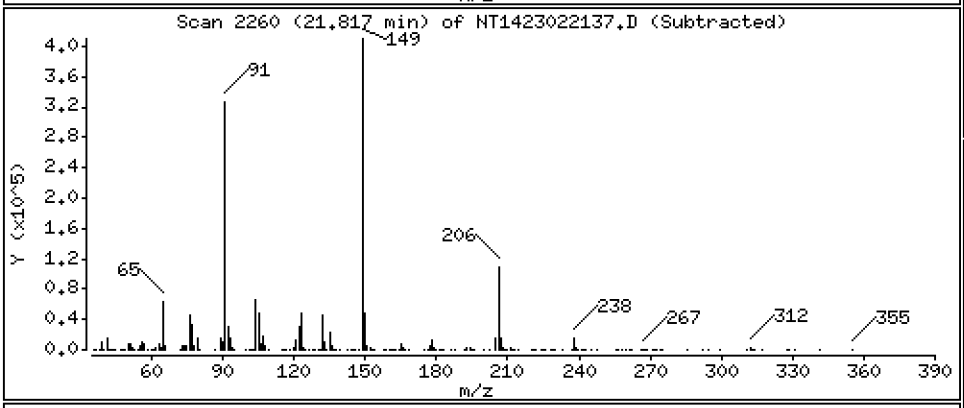
Column diameter: 0.25

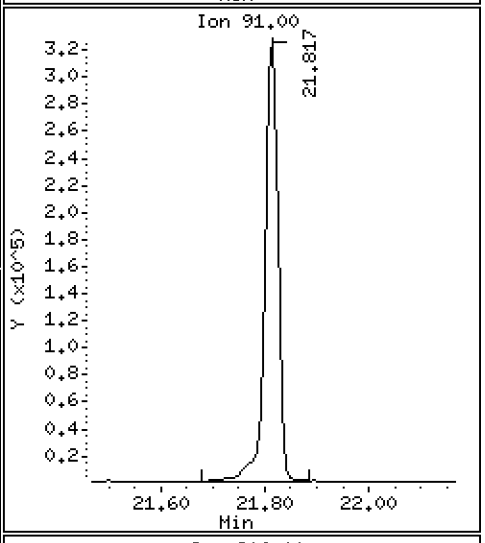
67 Butylbenzylphthalate

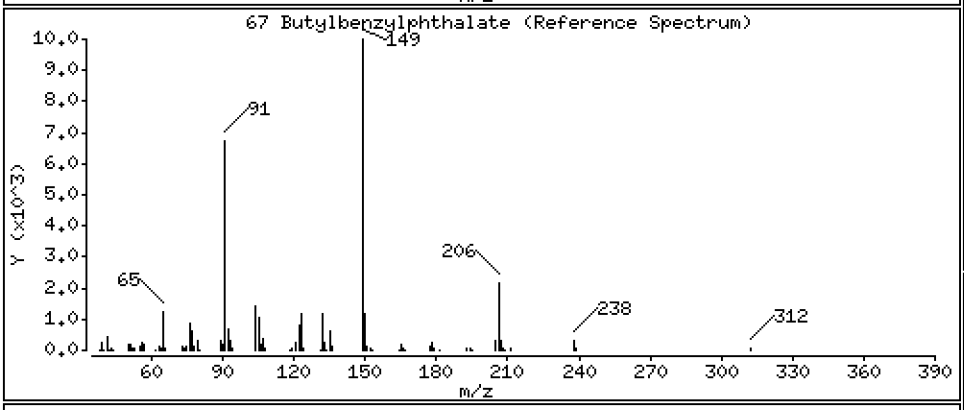
Concentration: 4.553 ug/mL

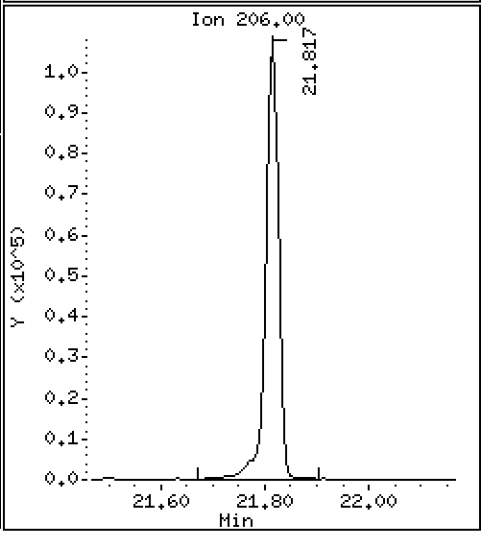


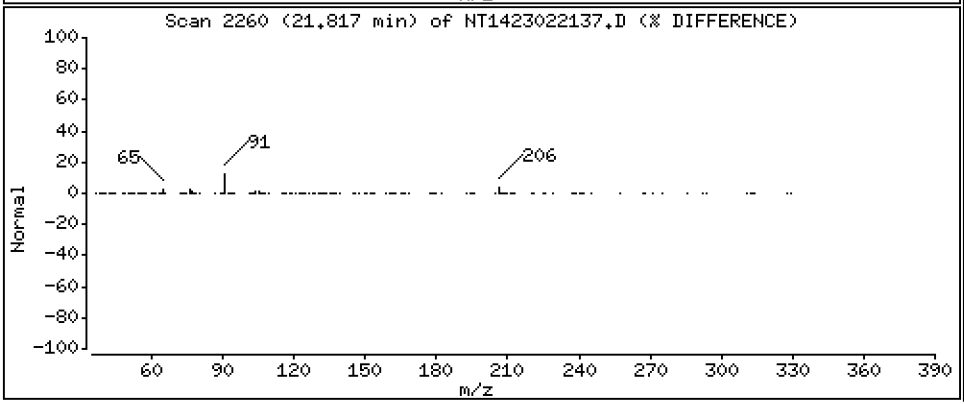












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

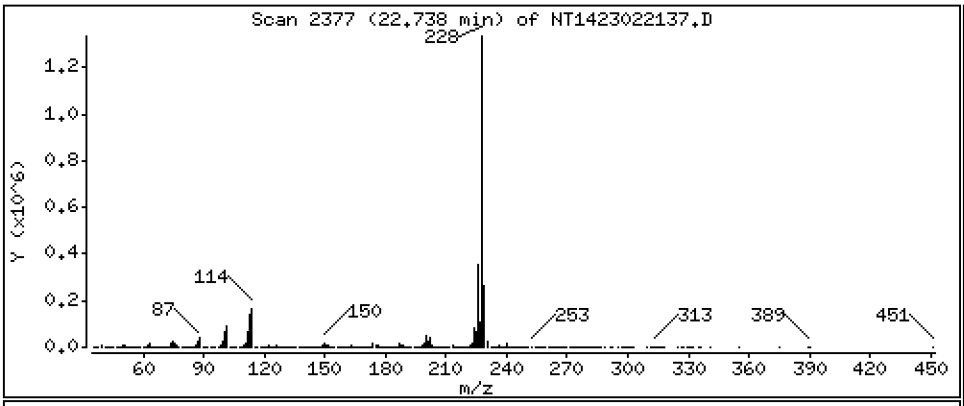
Operator: DSD

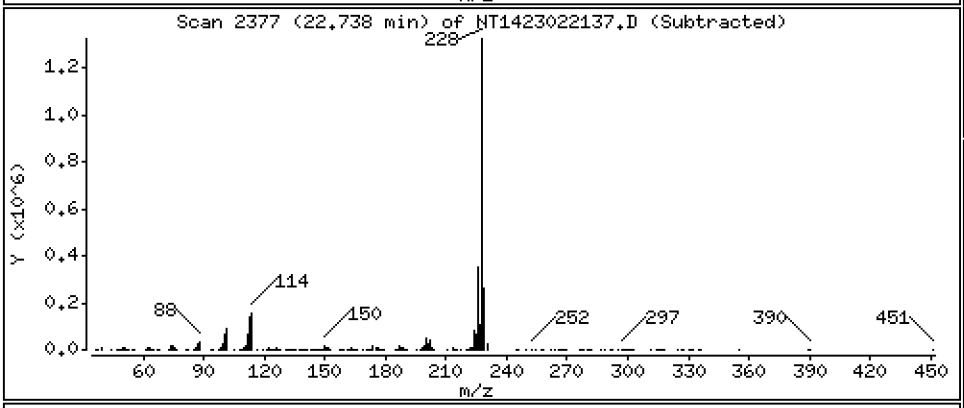
Column phase: ZB-5msi

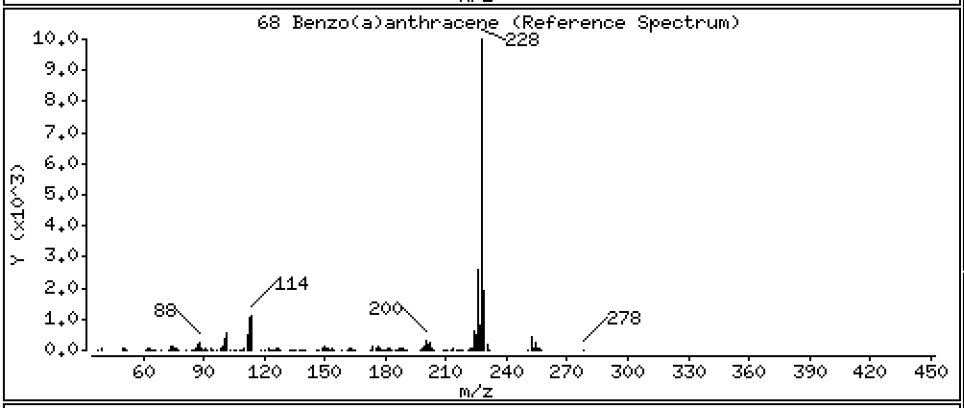
Column diameter: 0.25

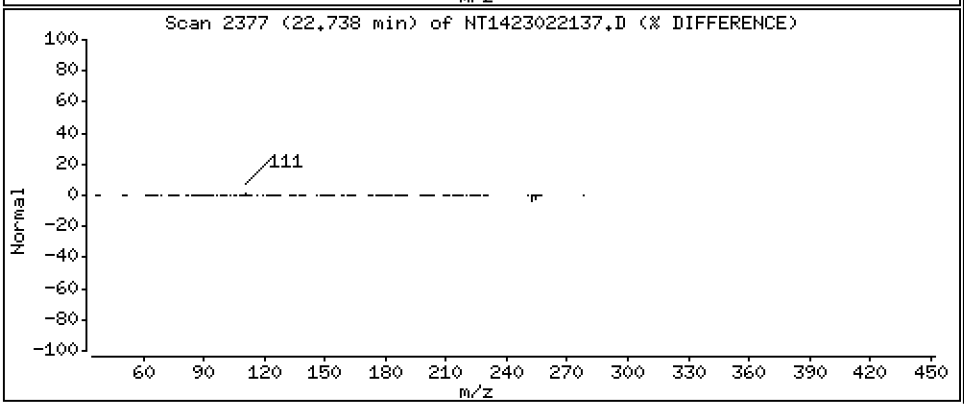
68 Benzo(a)anthracene

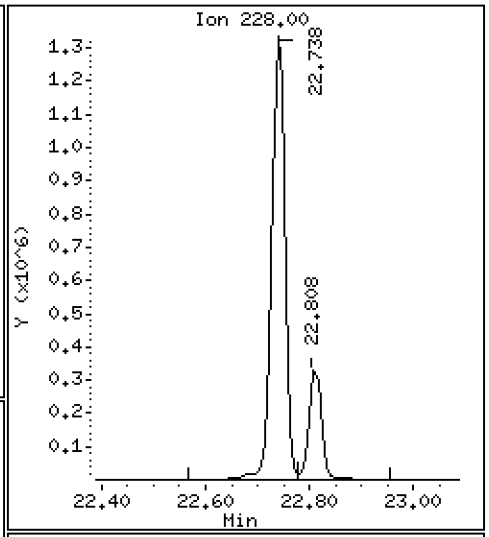
Concentration: 7.243 ug/mL

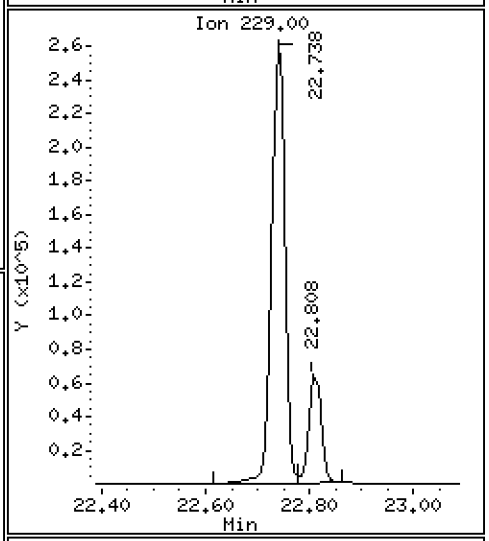


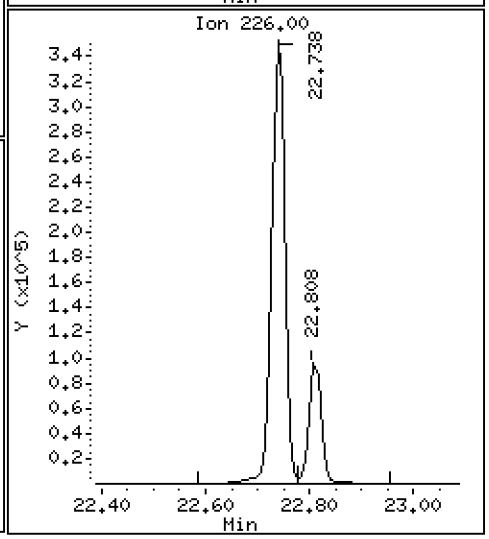












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

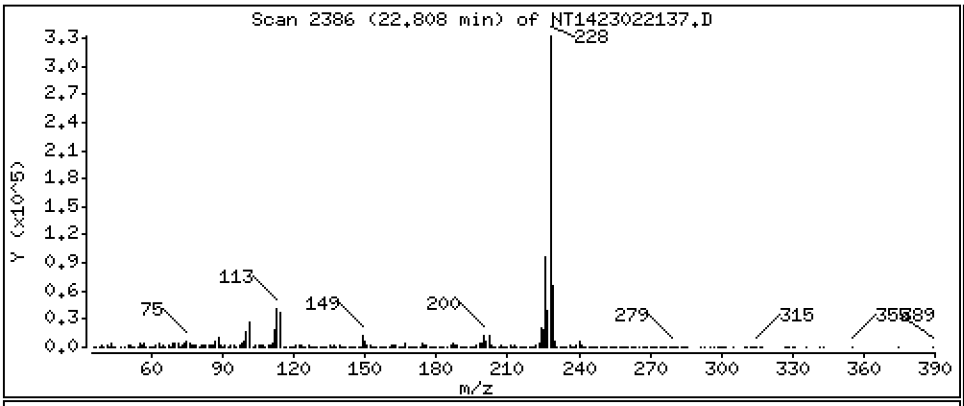
Operator: DSD

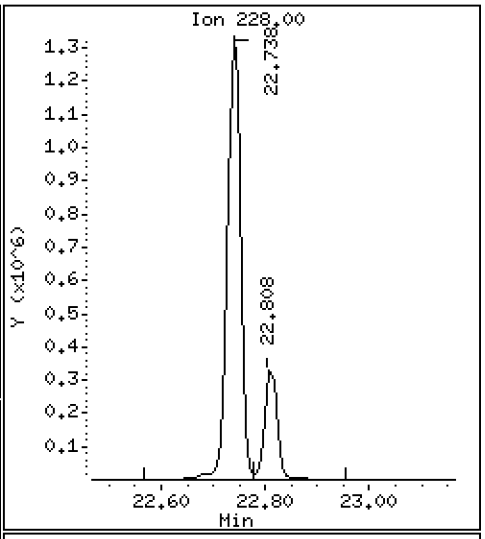
Column phase: ZB-5msi

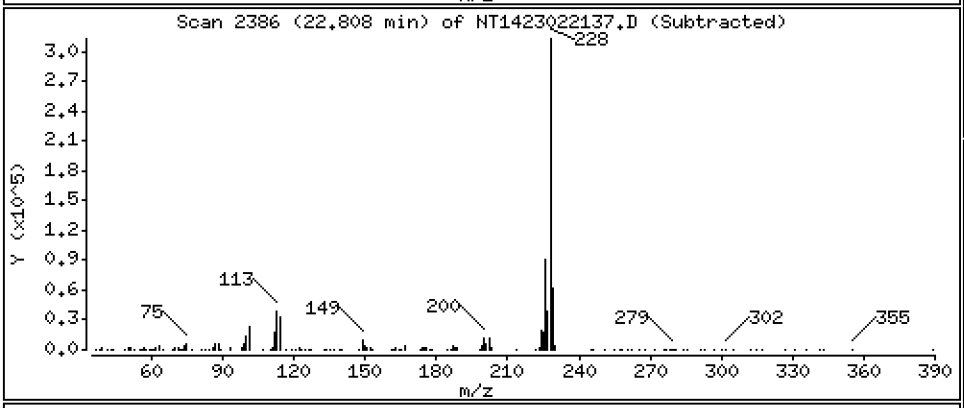
Column diameter: 0.25

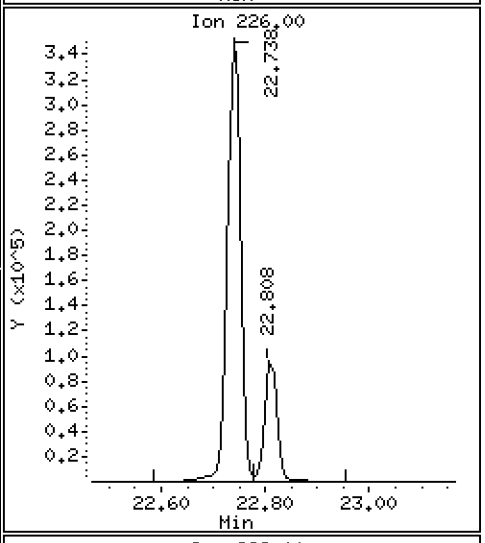
71 Chrysene

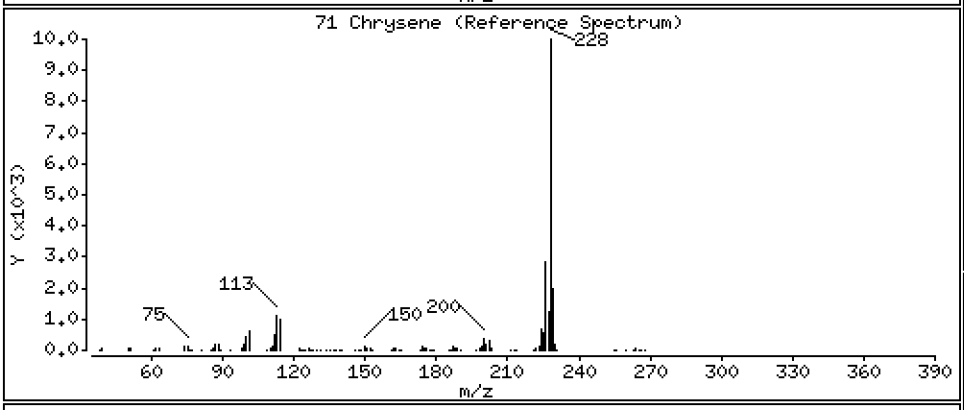
Concentration: 1.876 ug/mL

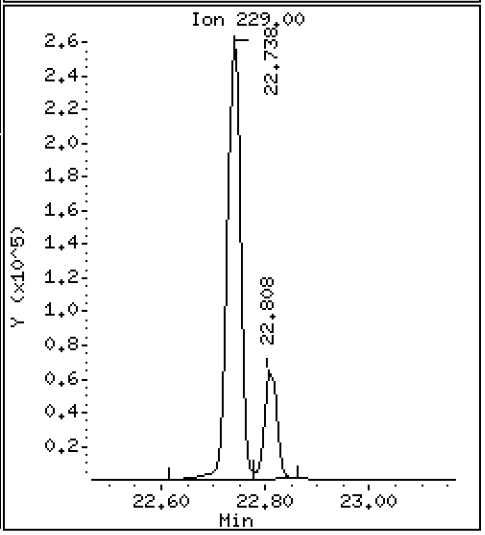


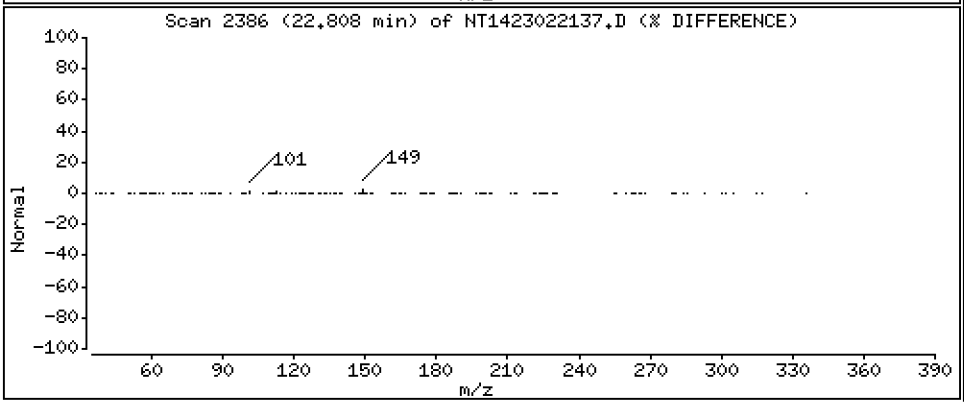












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

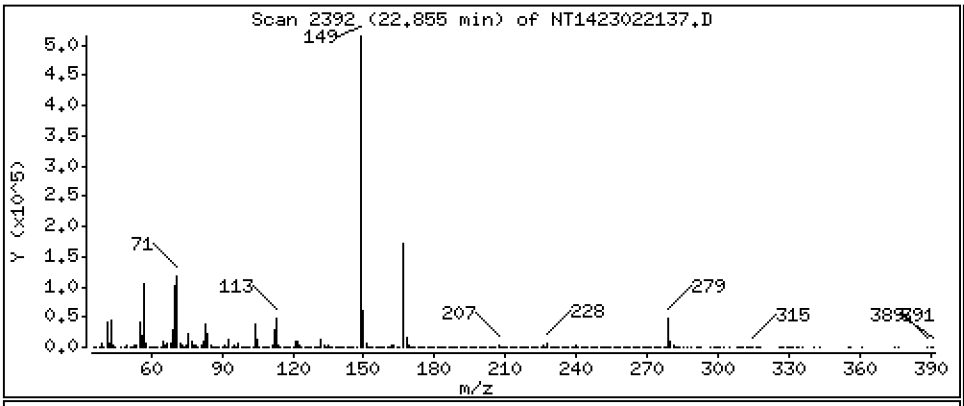
Operator: DSD

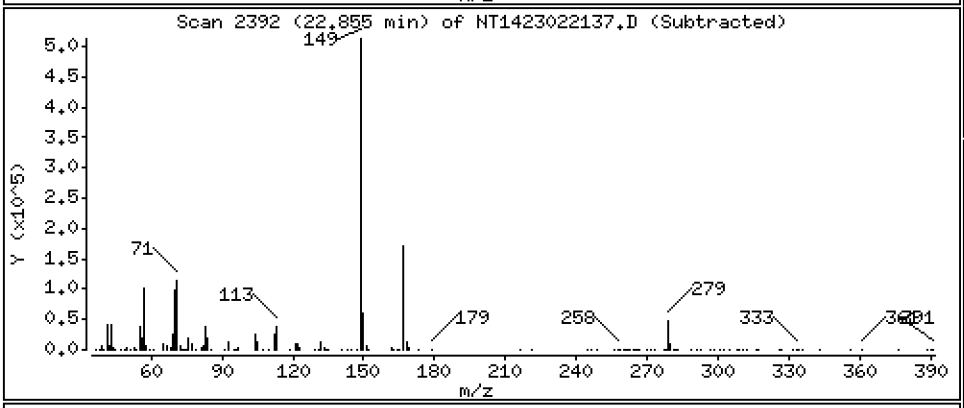
Column phase: ZB-5msi

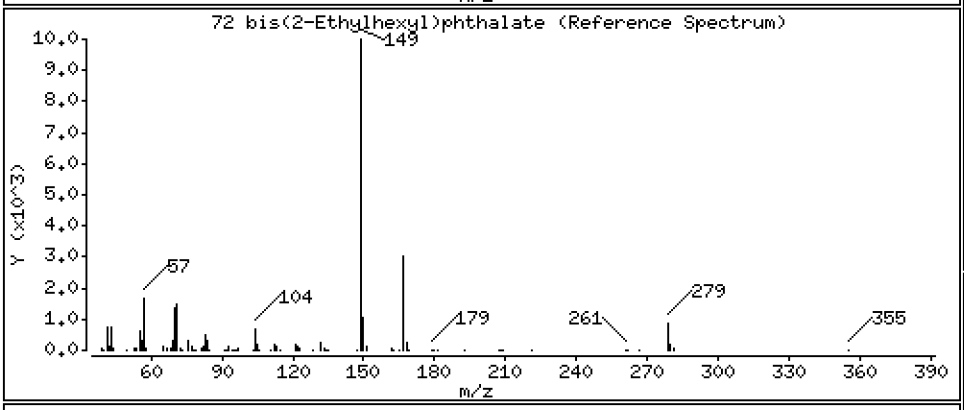
Column diameter: 0.25

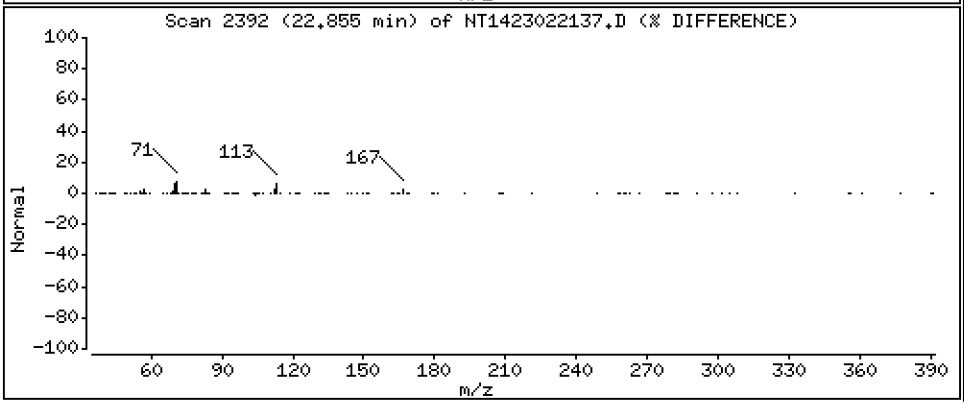
72 bis(2-Ethylhexyl)phthalate

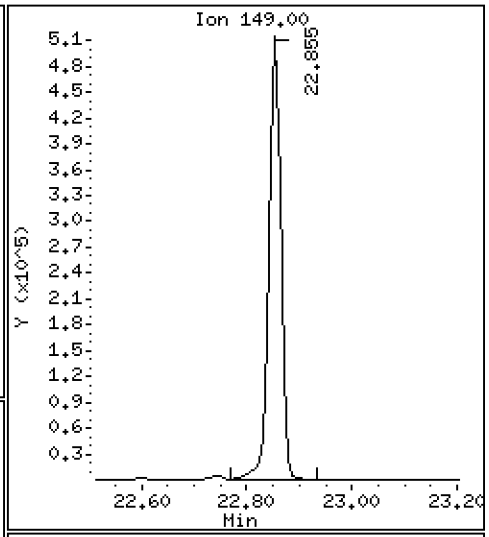
Concentration: 2.835 ug/mL

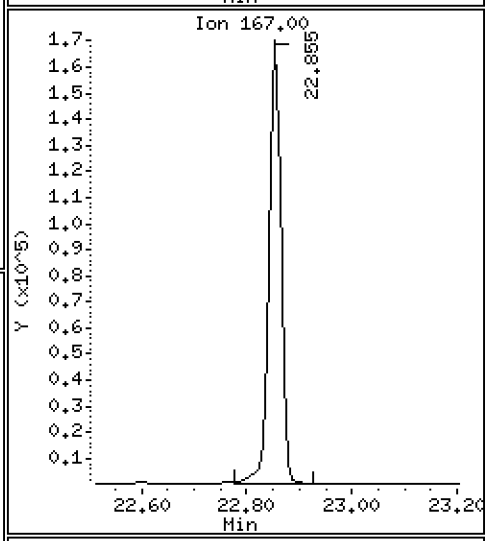


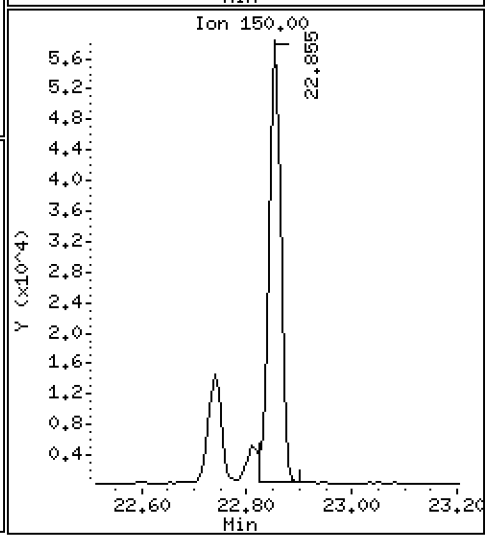












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

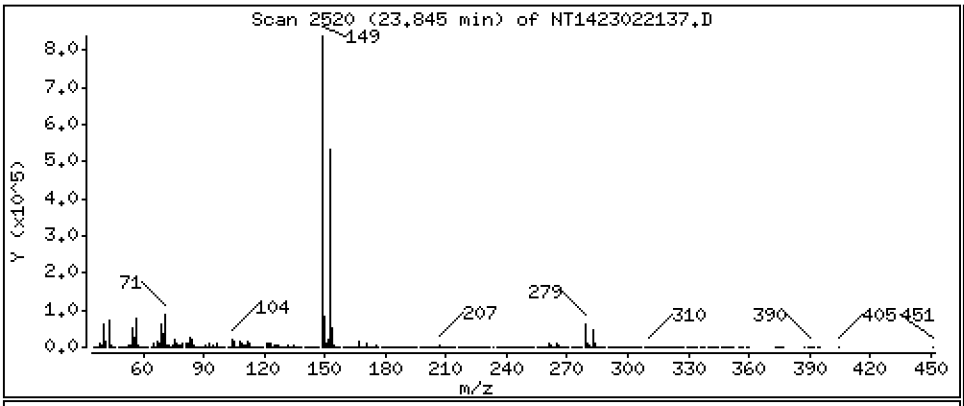
Operator: DSD

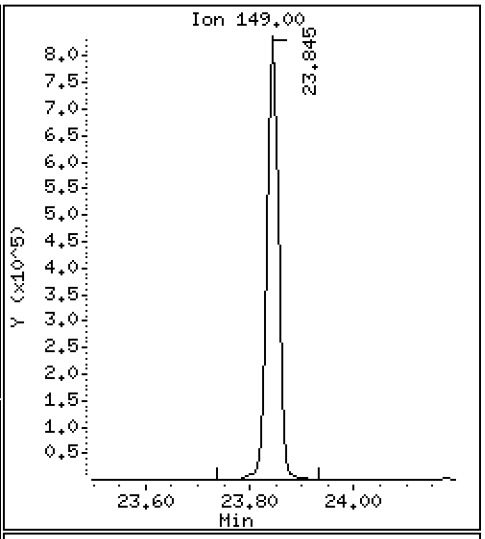
Column phase: ZB-5msi

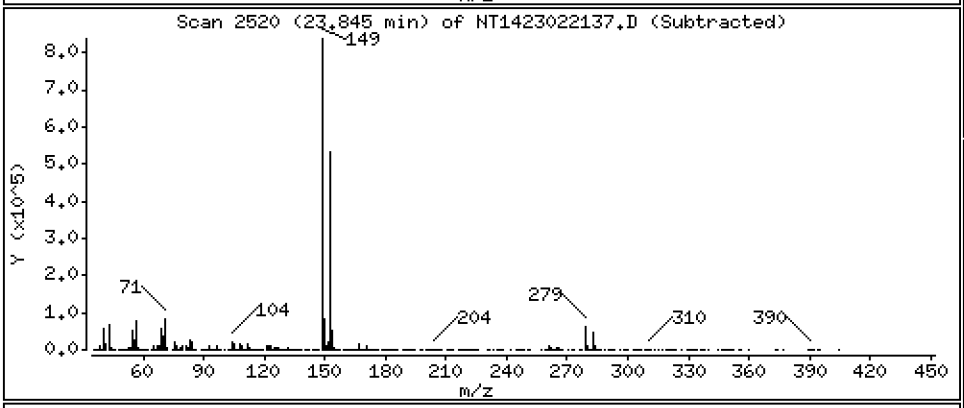
Column diameter: 0.25

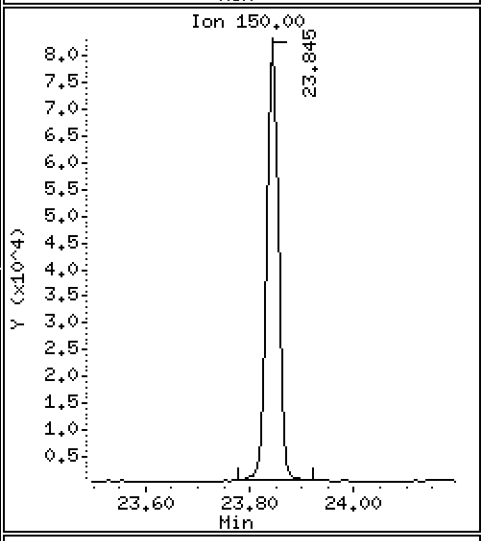
73 Di-n-octylphthalate

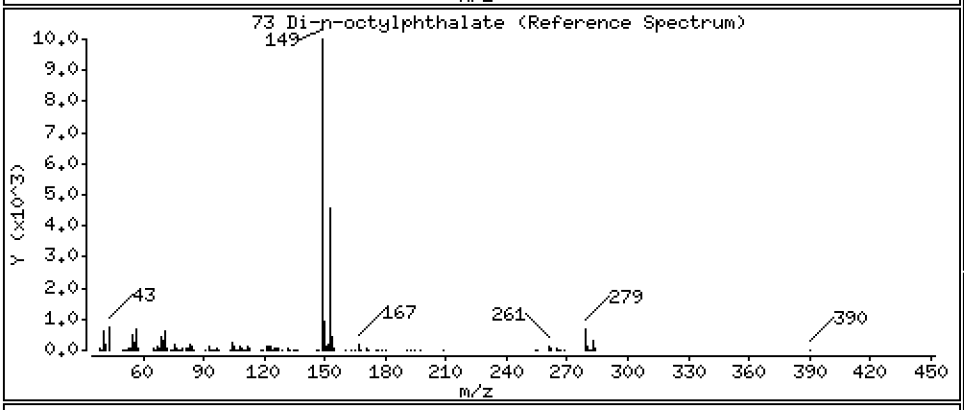
Concentration: 3.257 ug/mL

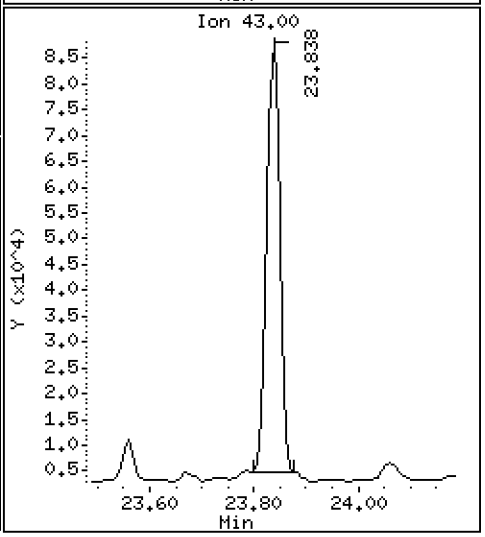


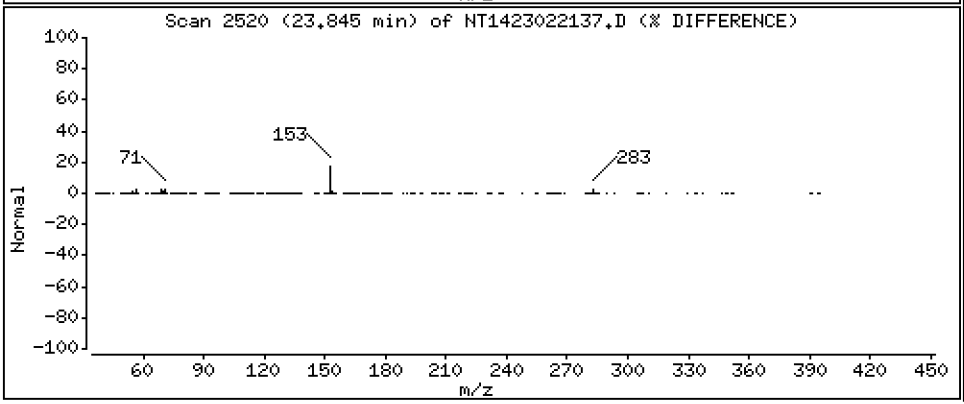












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022137.D

Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

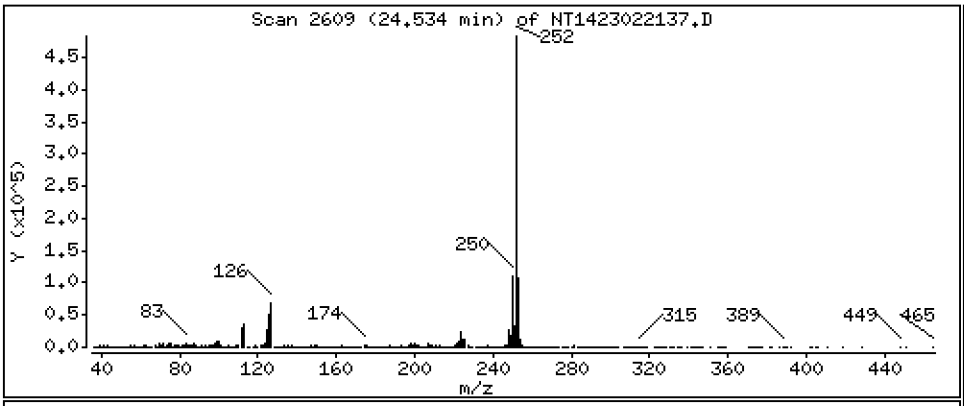
Operator: DSD

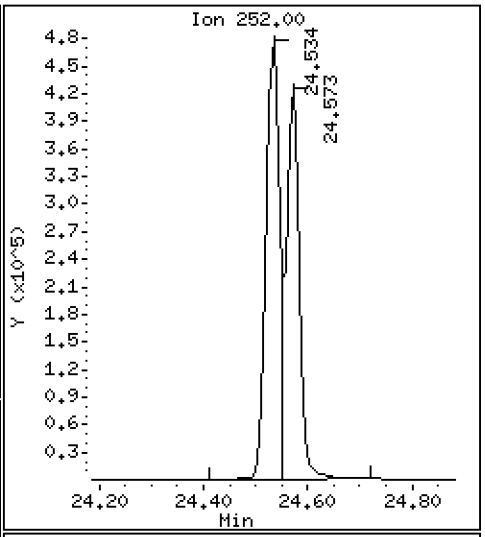
Column phase: ZB-5msi

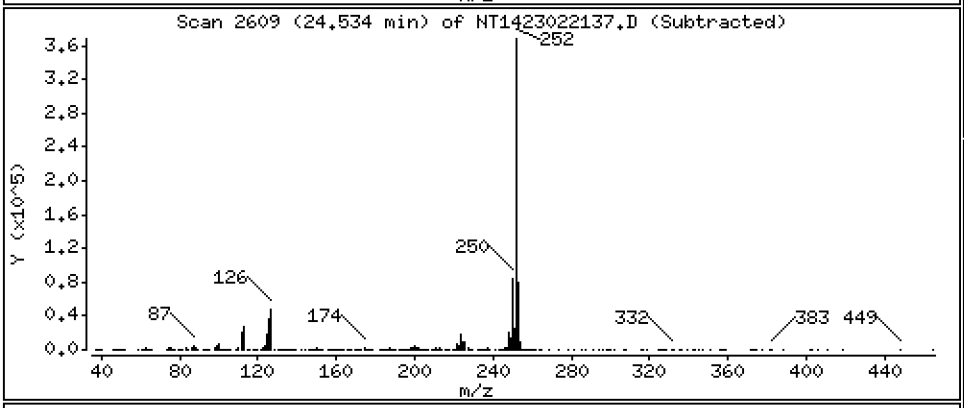
Column diameter: 0.25

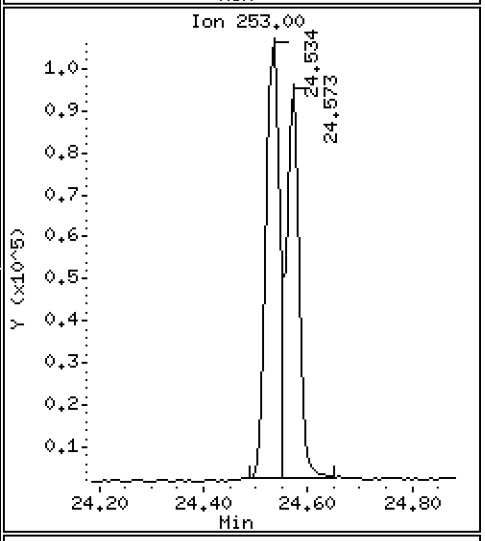
74 Benzo(b)fluoranthene

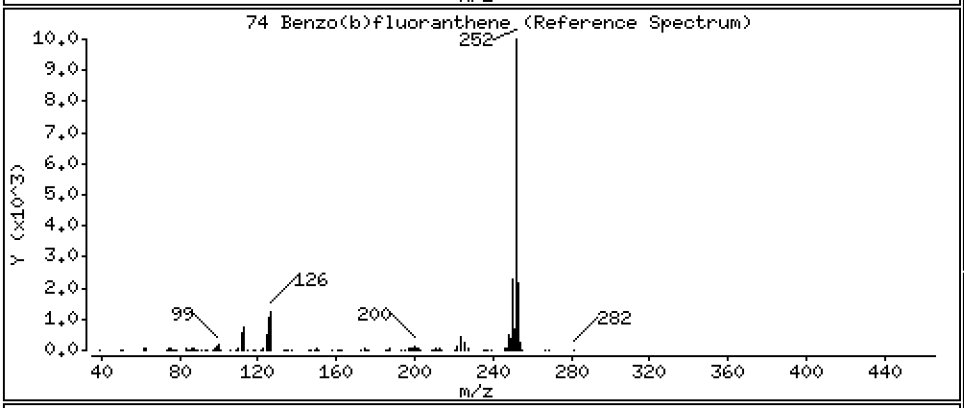
Concentration: 3.693 ug/mL

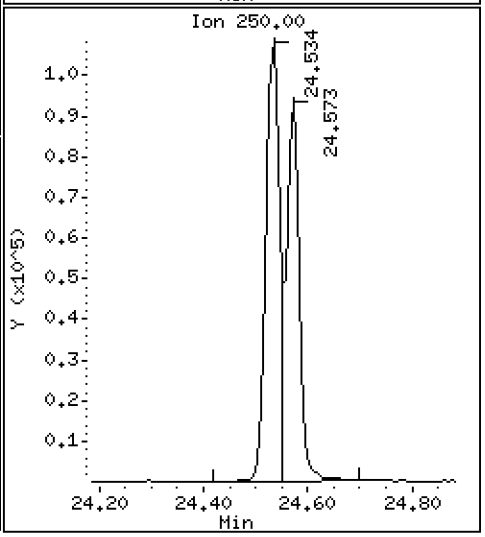


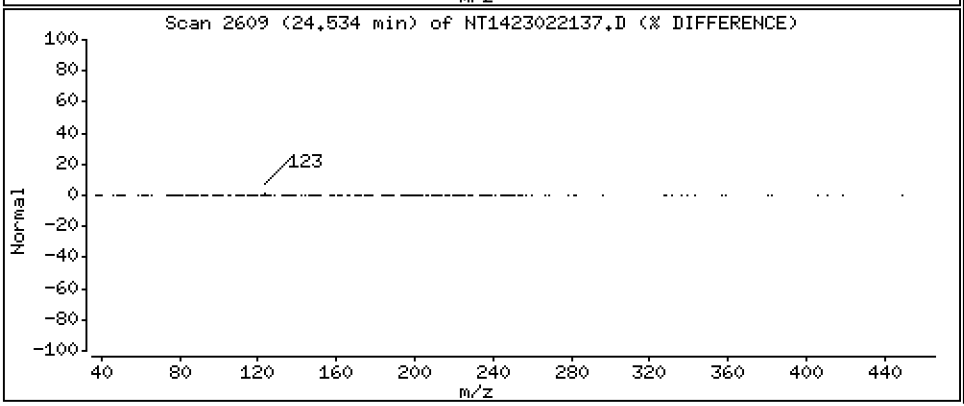












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

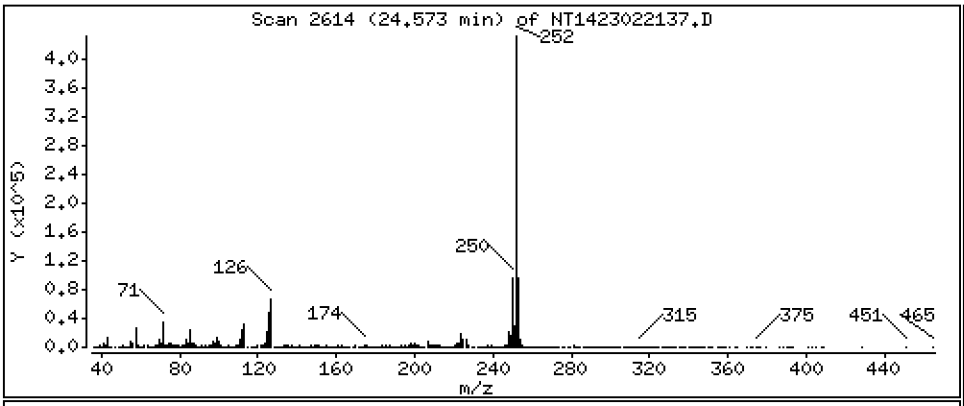
Operator: DSD

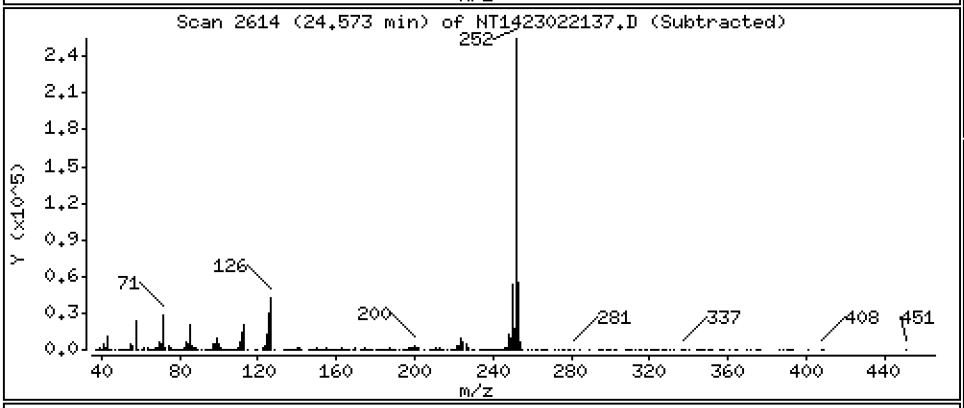
Column phase: ZB-5msi

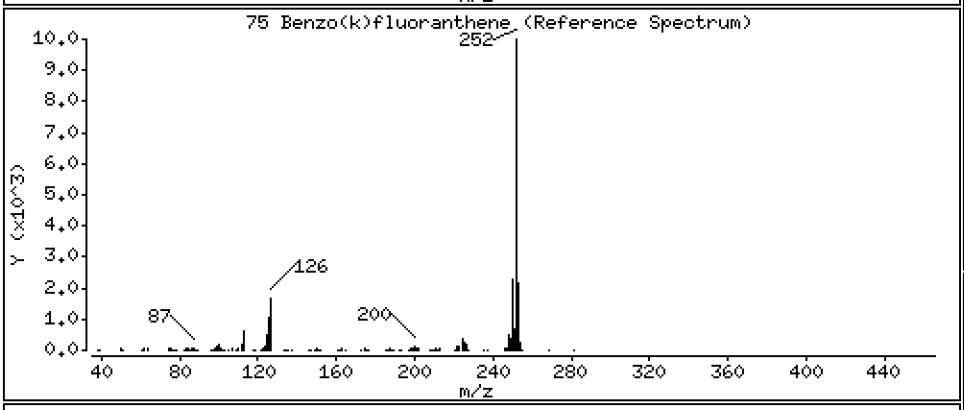
Column diameter: 0.25

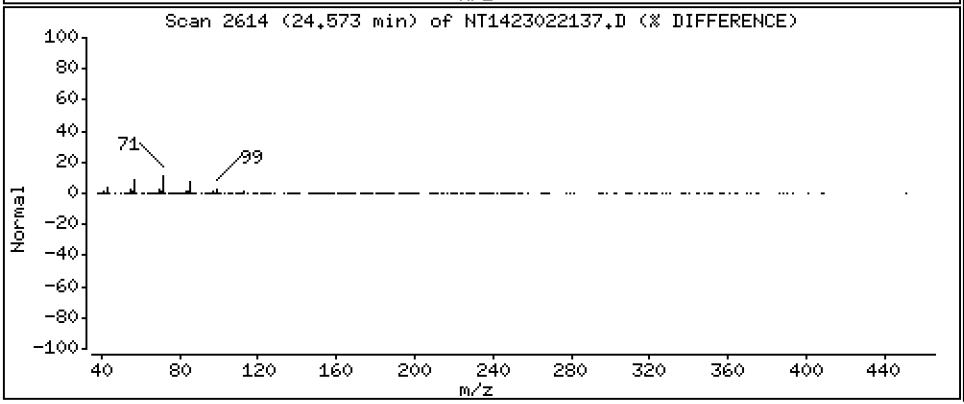
75 Benzo(k)fluoranthene

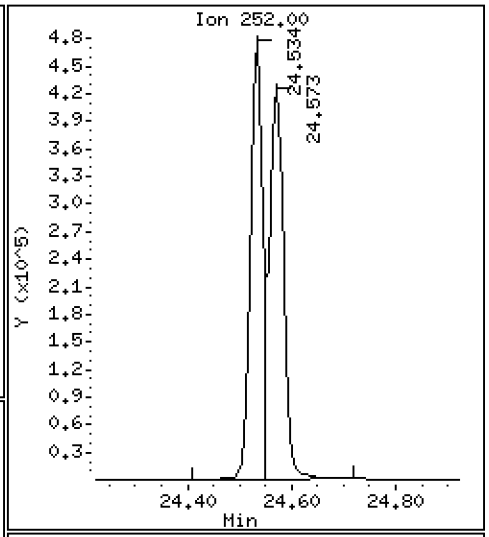
Concentration: 3.457 ug/mL

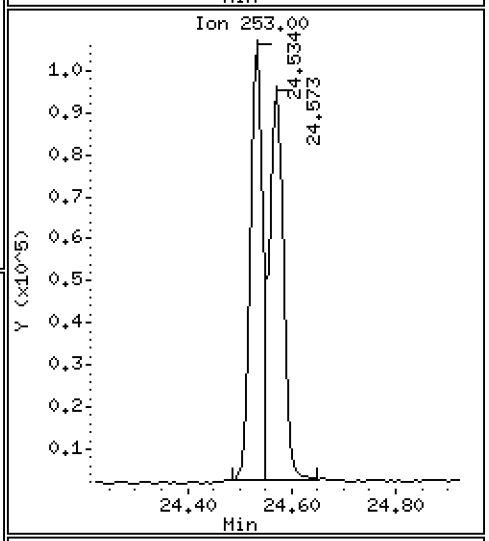


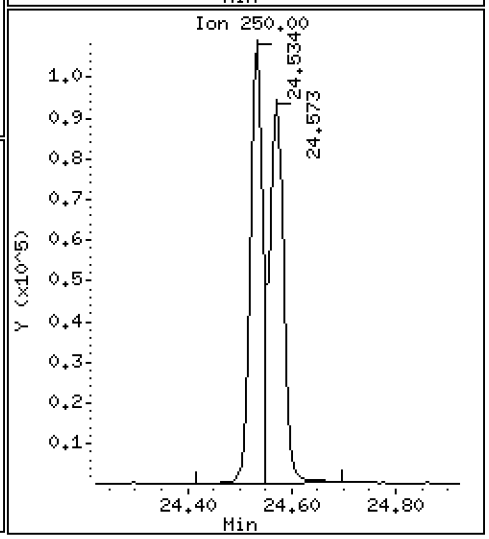












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

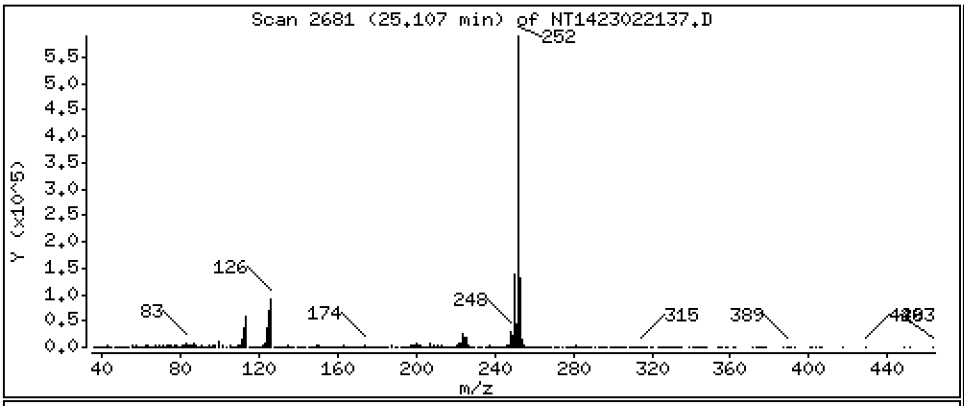
Operator: DSD

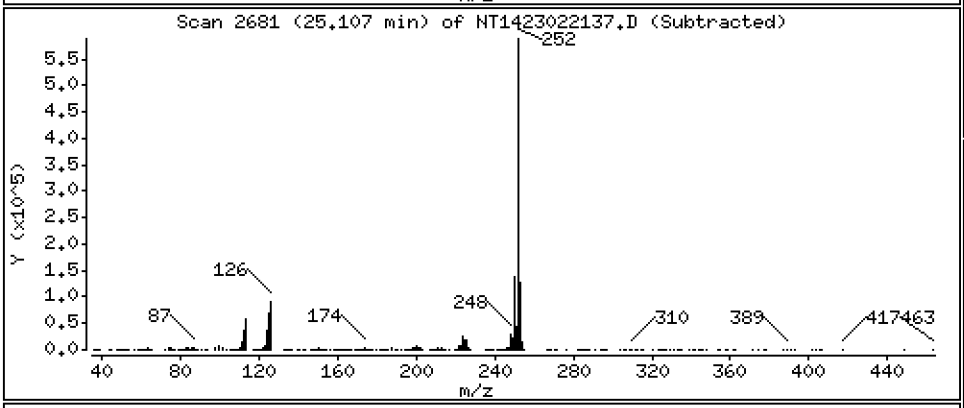
Column phase: ZB-5msi

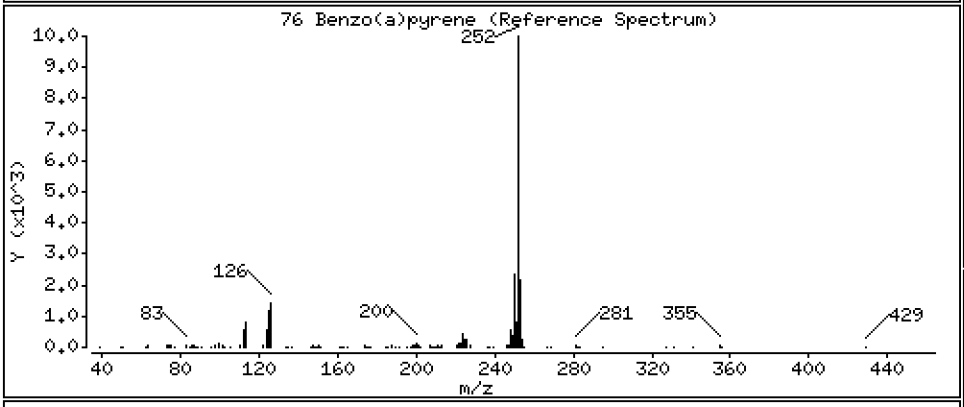
Column diameter: 0.25

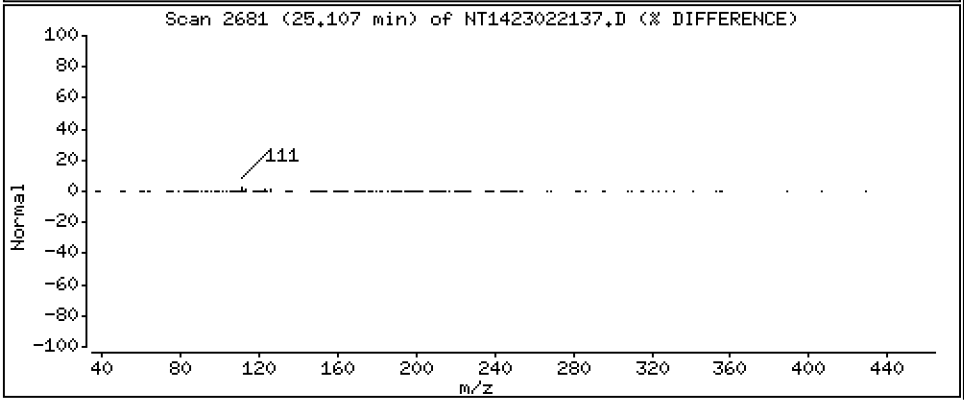
76 Benzo(a)pyrene

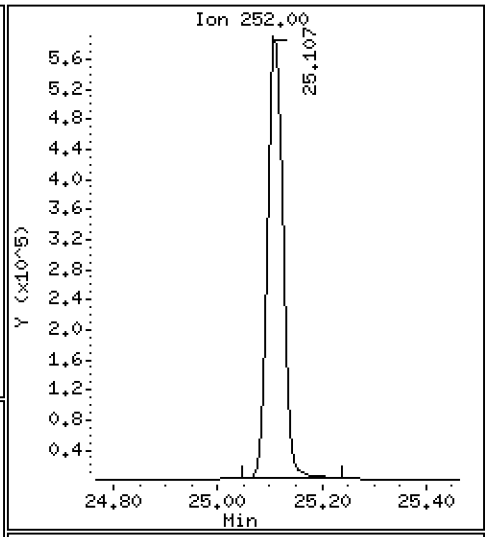
Concentration: 5.471 ug/mL

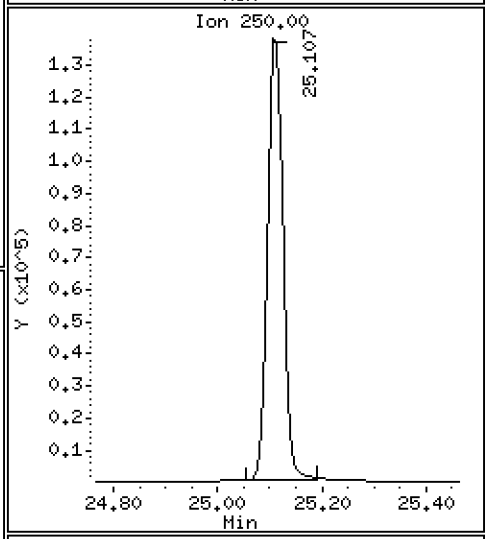


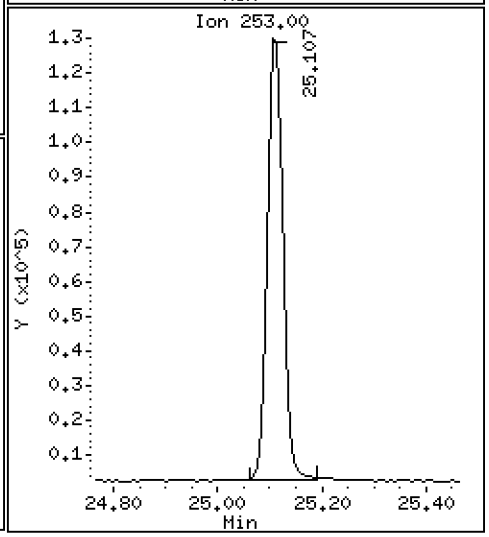












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

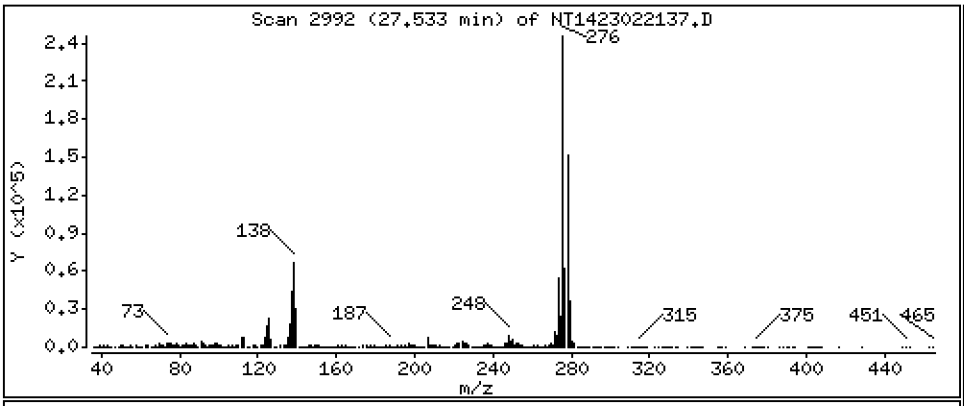
Operator: DSD

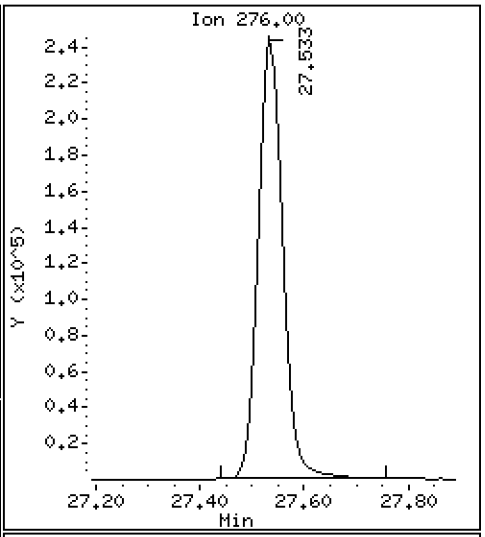
Column phase: ZB-5msi

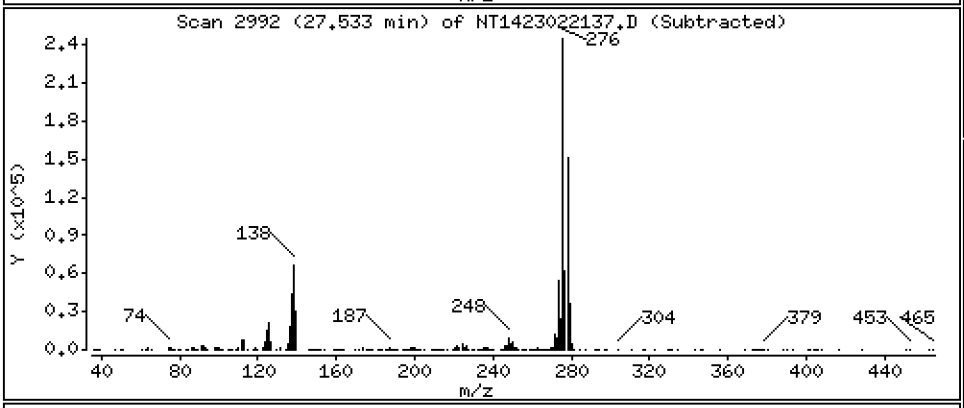
Column diameter: 0.25

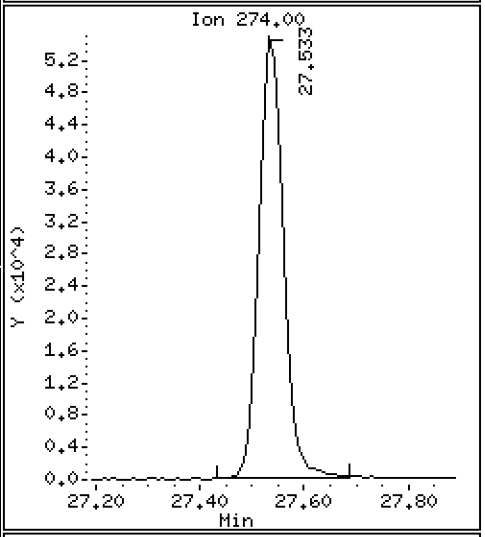
78 Indeno(1,2,3-cd)pyrene

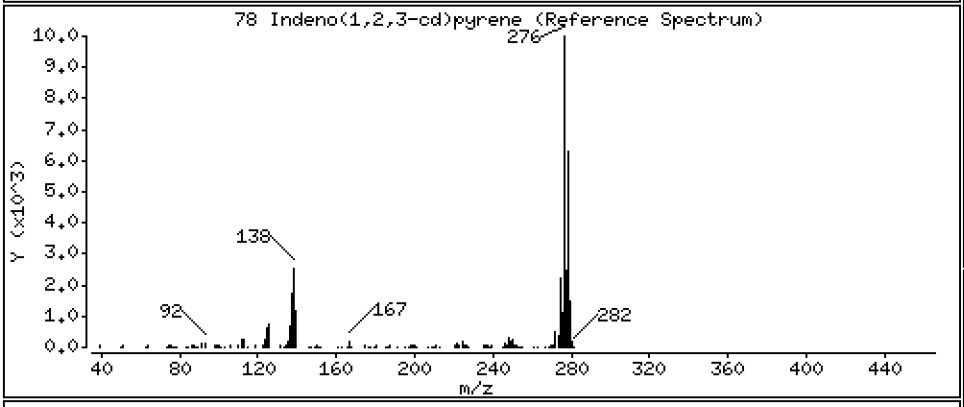
Concentration: 4.384 ug/mL

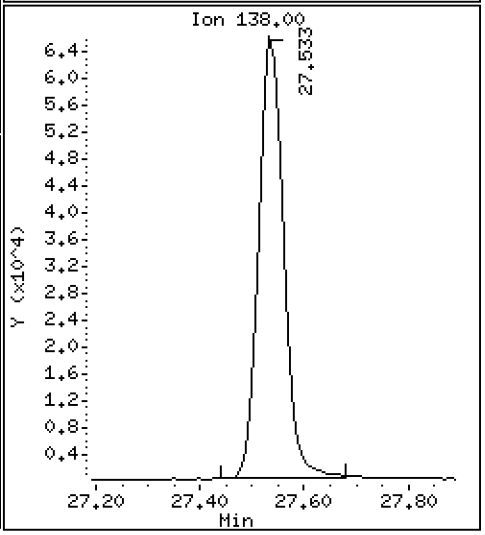


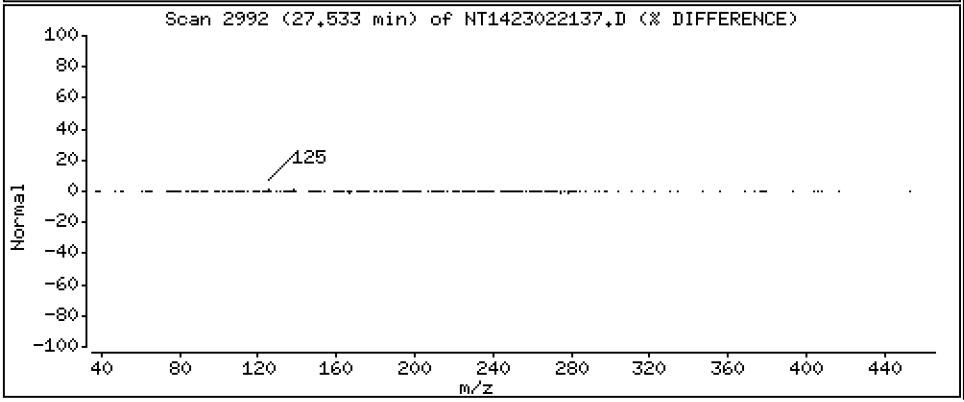












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

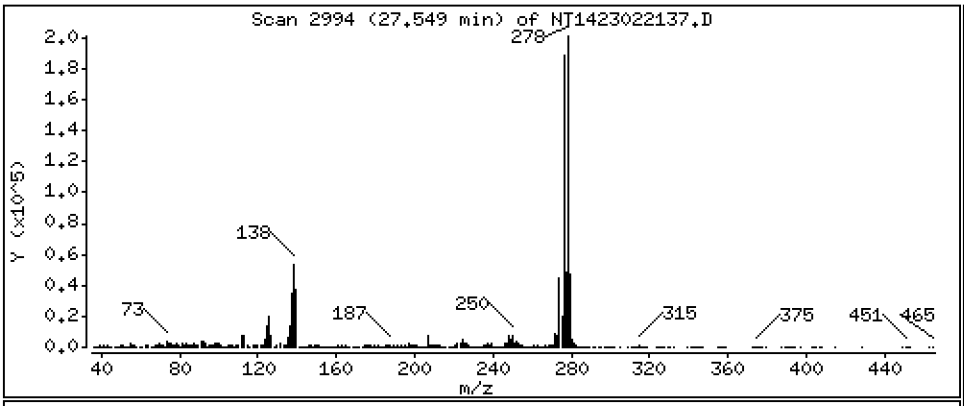
Operator: DSD

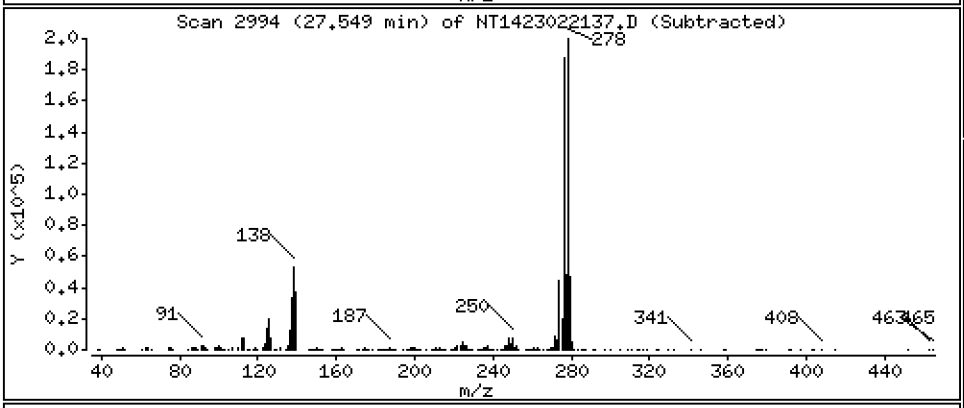
Column phase: ZB-5msi

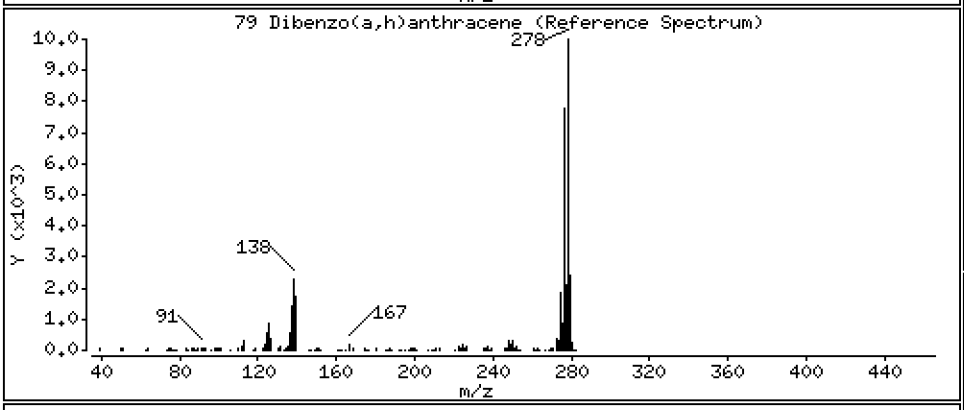
Column diameter: 0.25

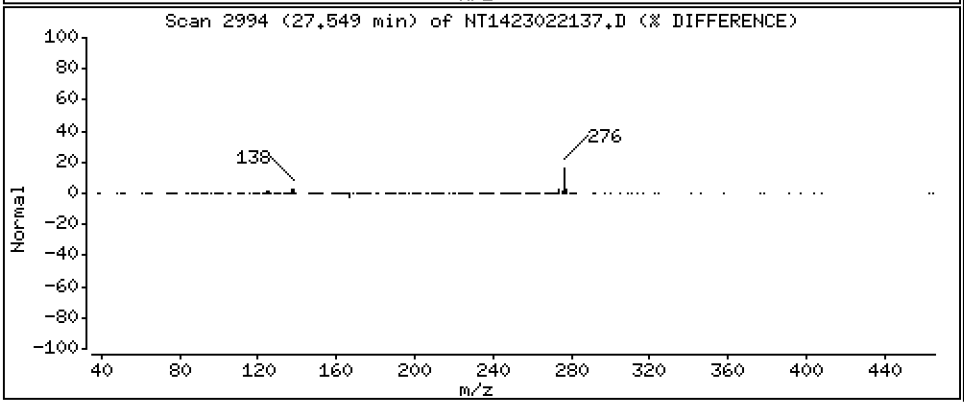
79 Dibenzo(a,h)anthracene

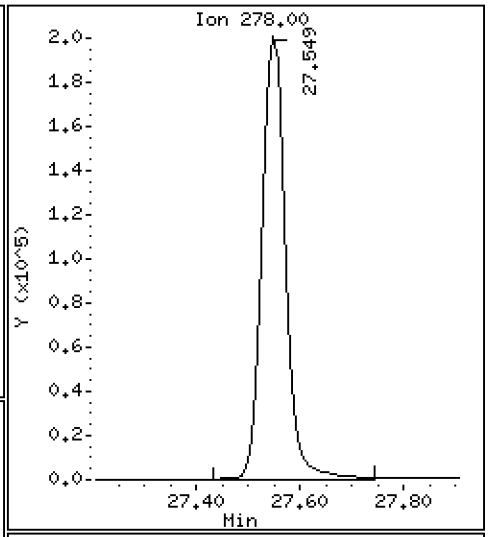
Concentration: 4.205 ug/mL

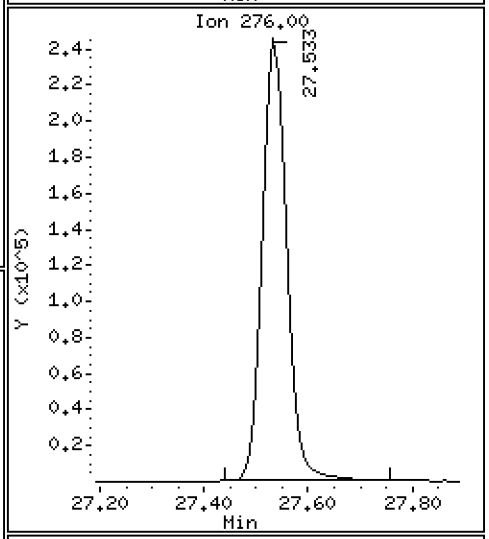


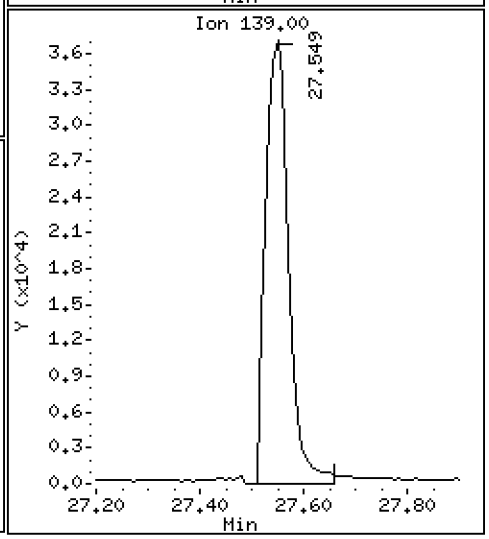












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

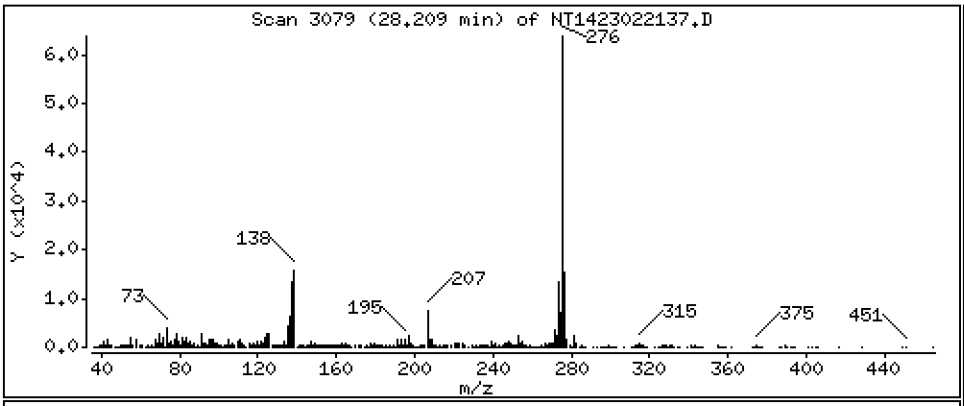
Operator: DSD

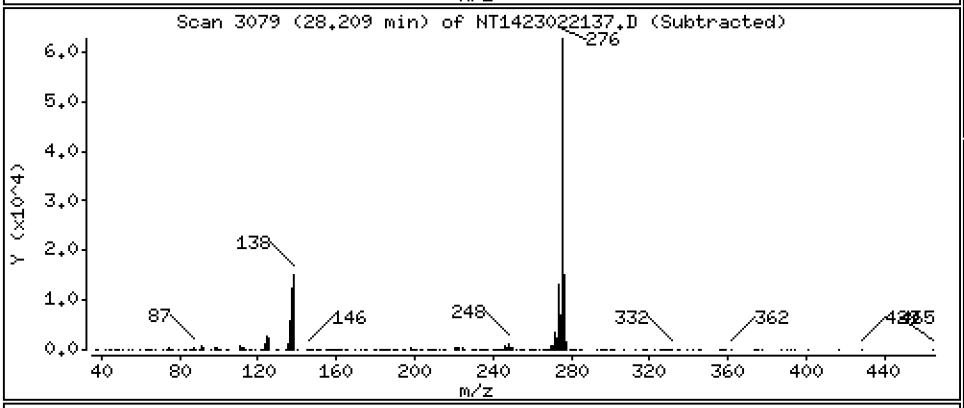
Column phase: ZB-5msi

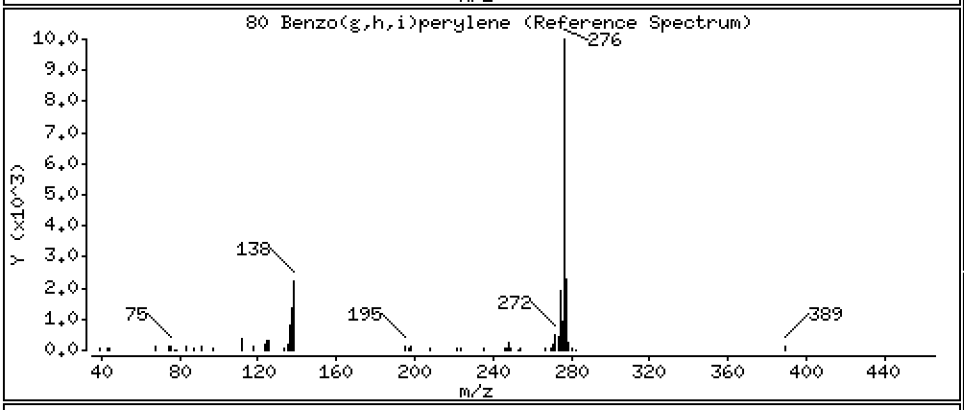
Column diameter: 0.25

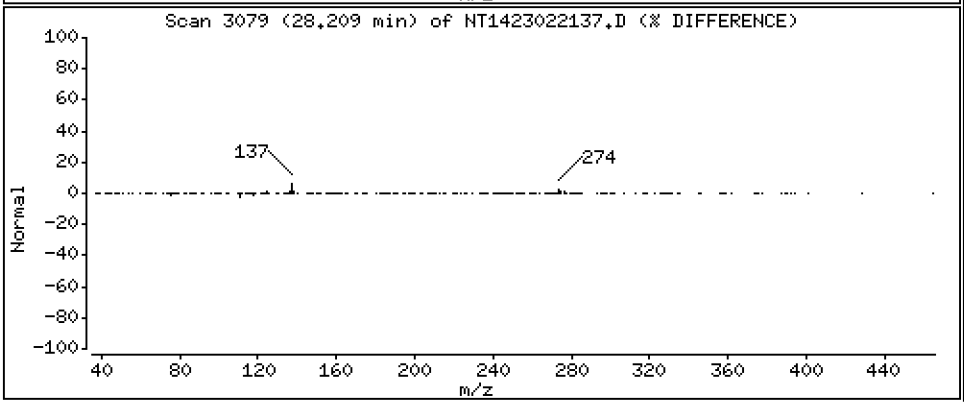
80 Benzo(g,h,i)perylene

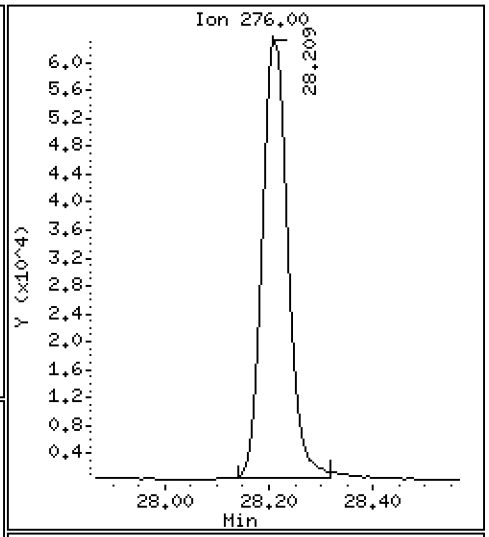
Concentration: 1.480 ug/mL

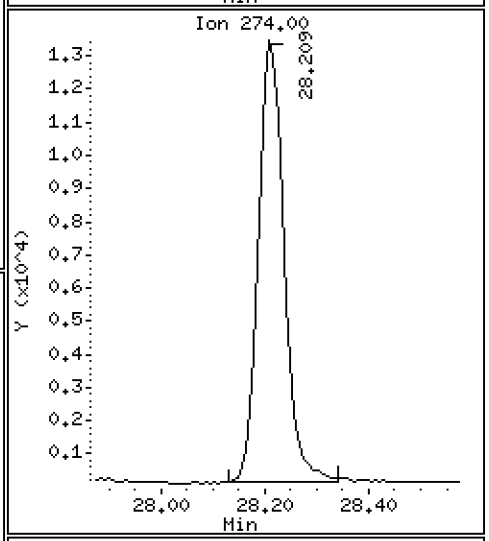


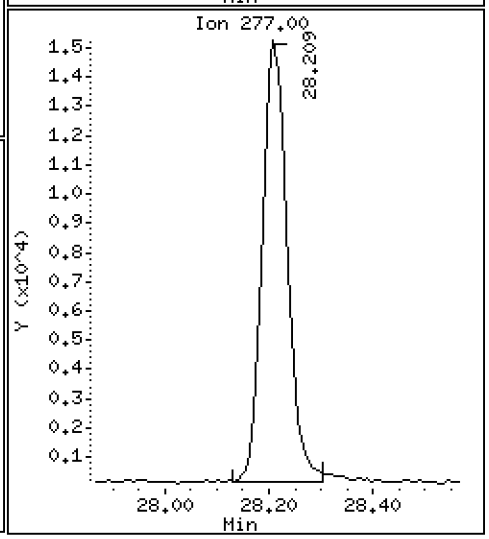












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

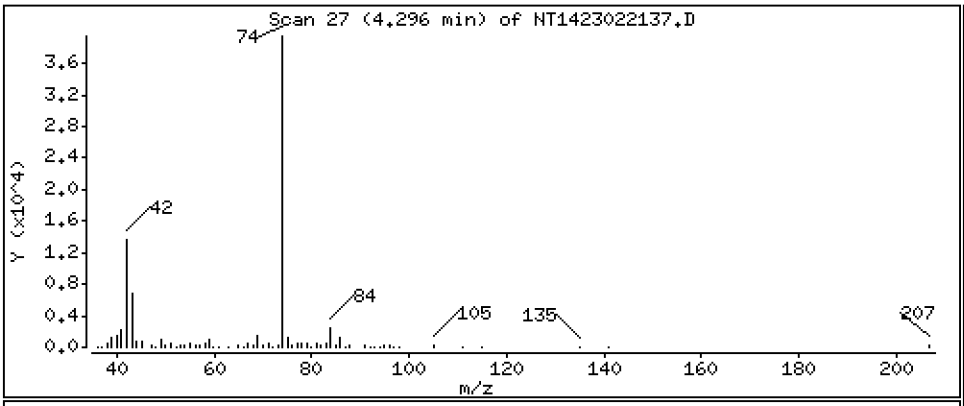
Operator: DSD

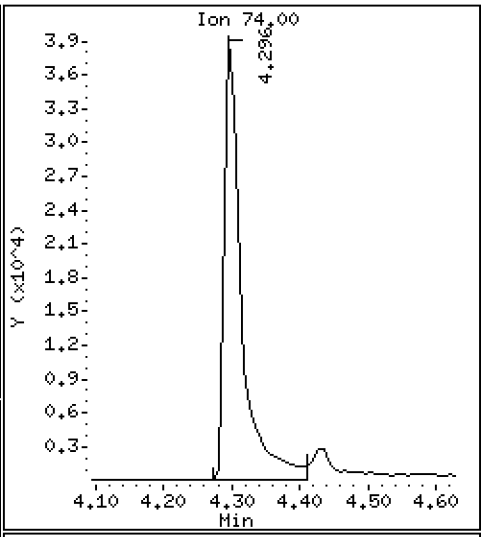
Column phase: ZB-5msi

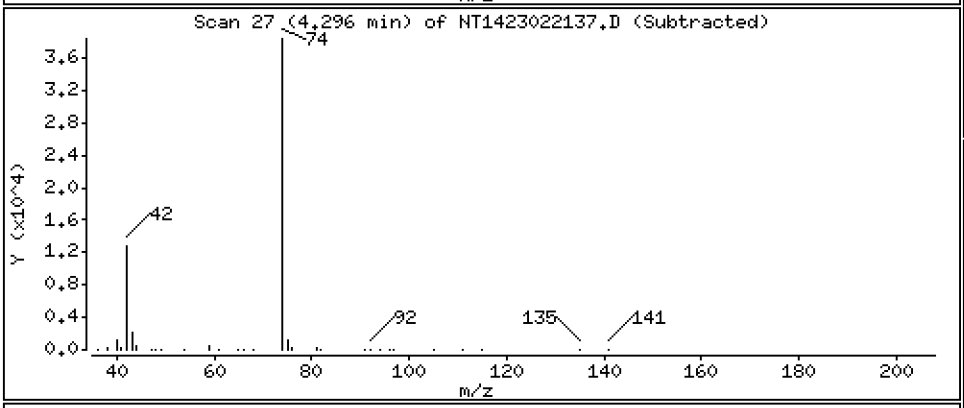
Column diameter: 0.25

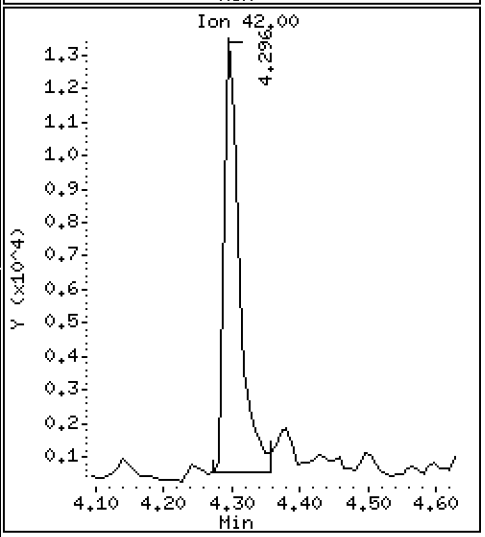
90 N-Nitrosodimethylamine

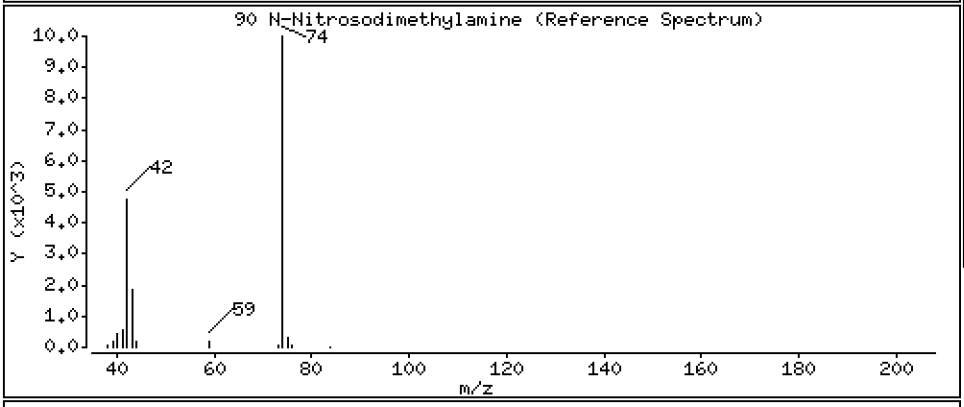
Concentration: 1.143 ug/mL

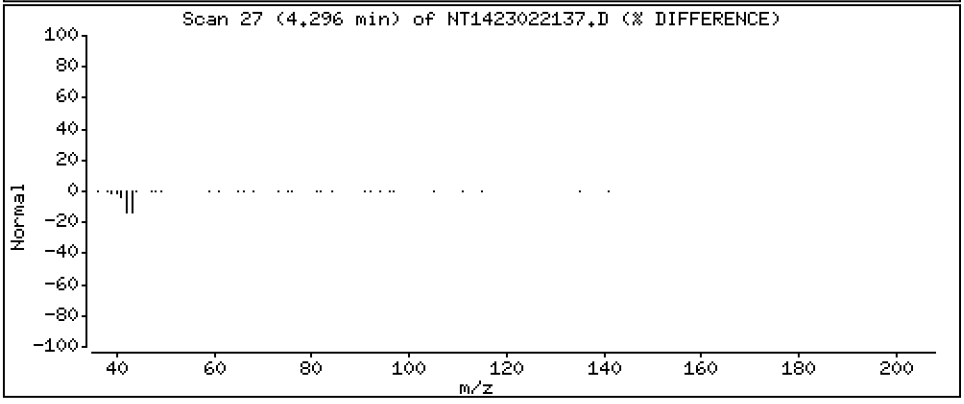












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

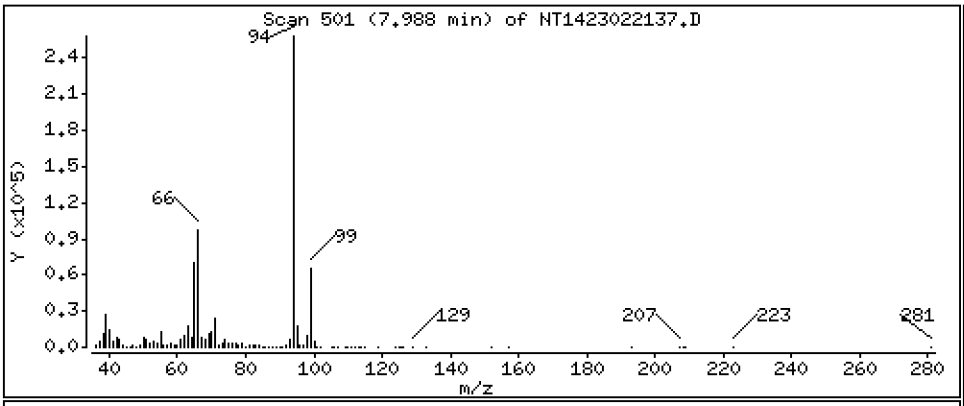
Operator: DSD

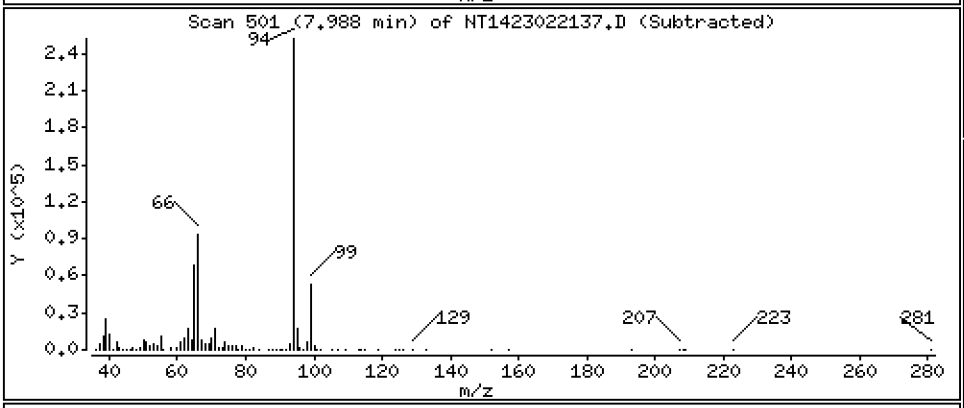
Column phase: ZB-5msi

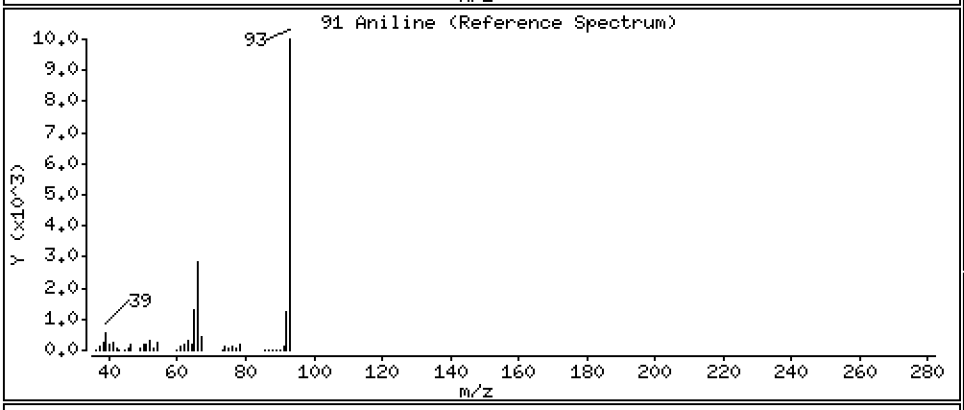
Column diameter: 0.25

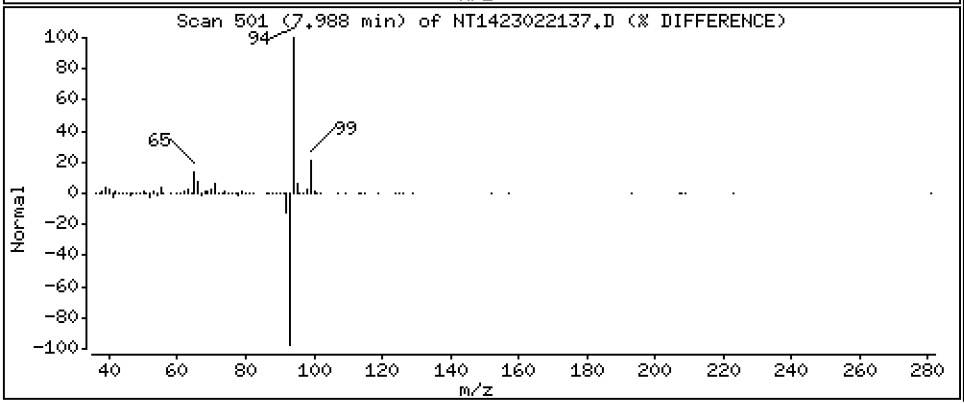
91 Aniline

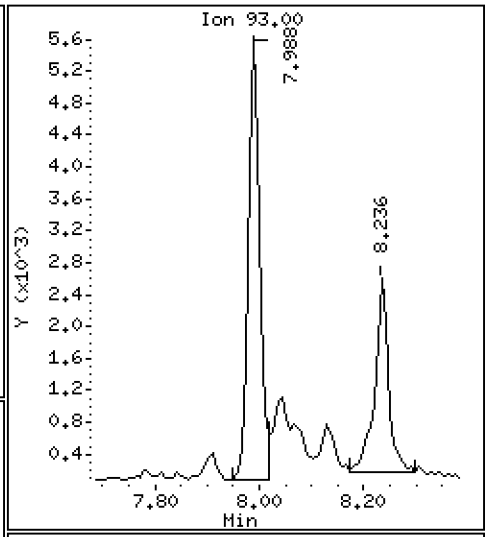
Concentration: 0.06392 ug/mL

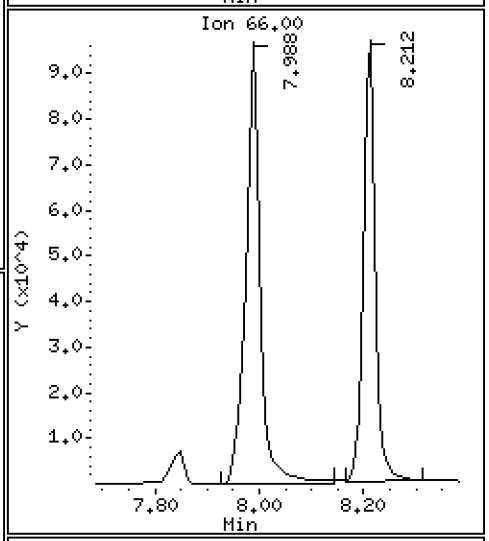


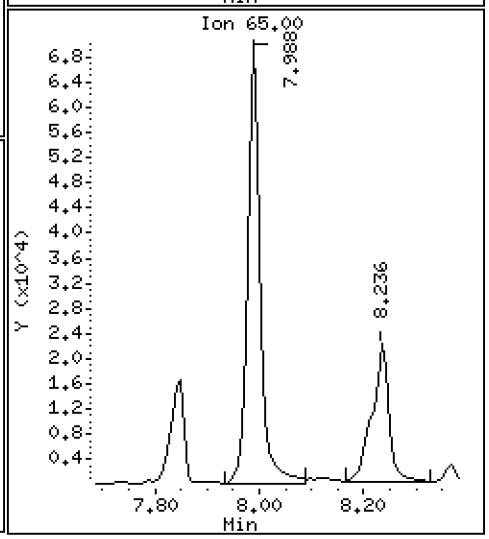












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

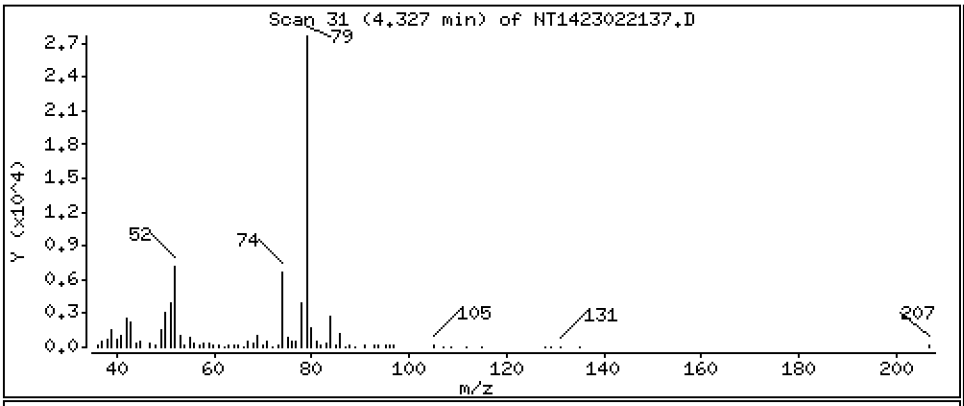
Operator: DSD

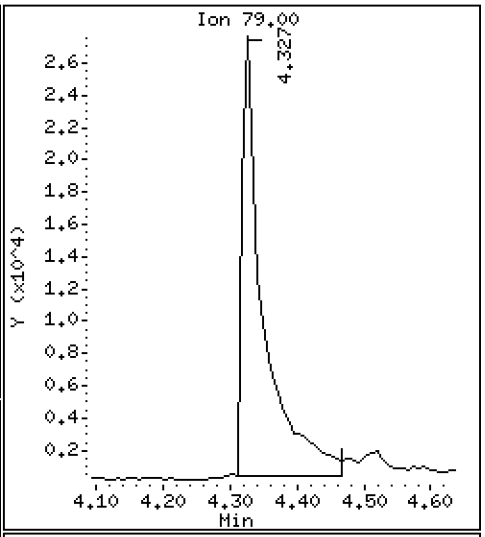
Column phase: ZB-5msi

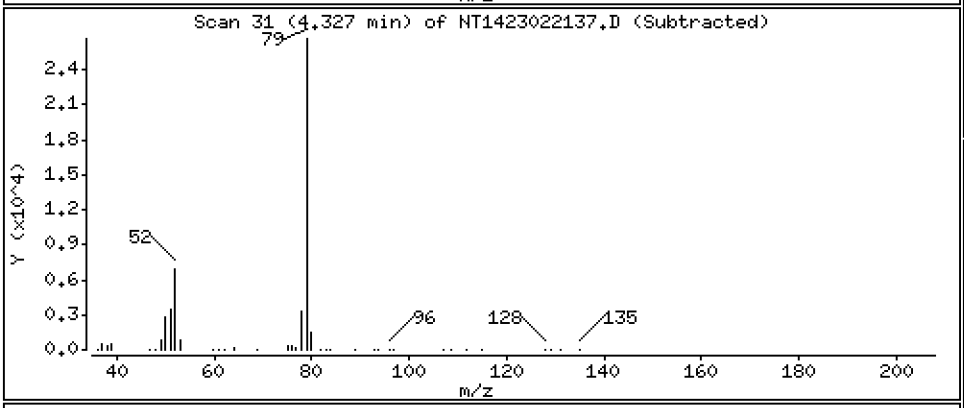
Column diameter: 0.25

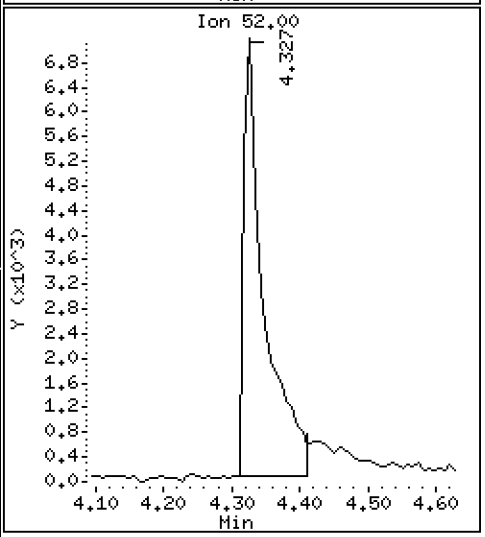
103 Pyridine

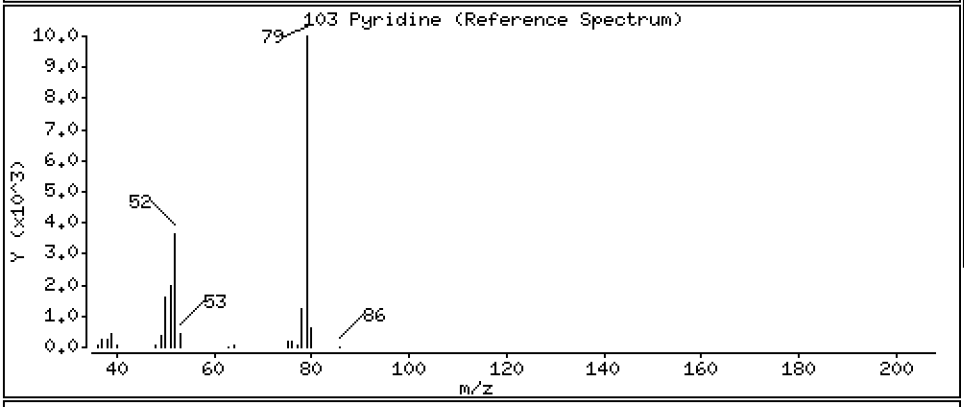
Concentration: 0.6294 ug/mL

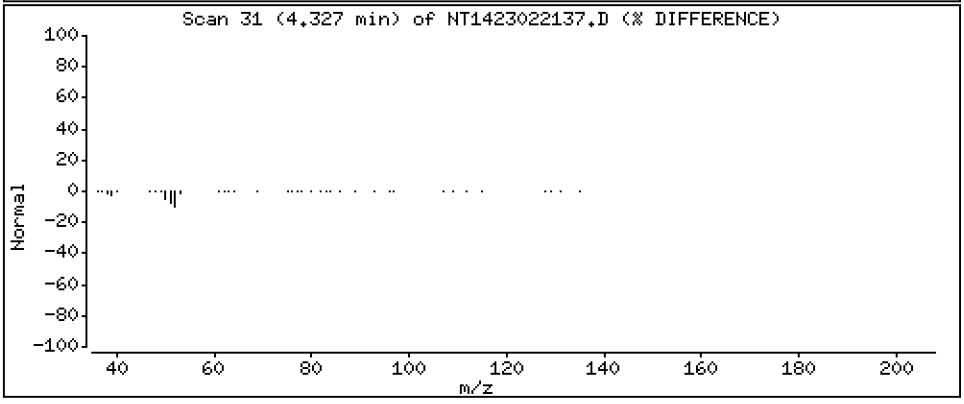












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

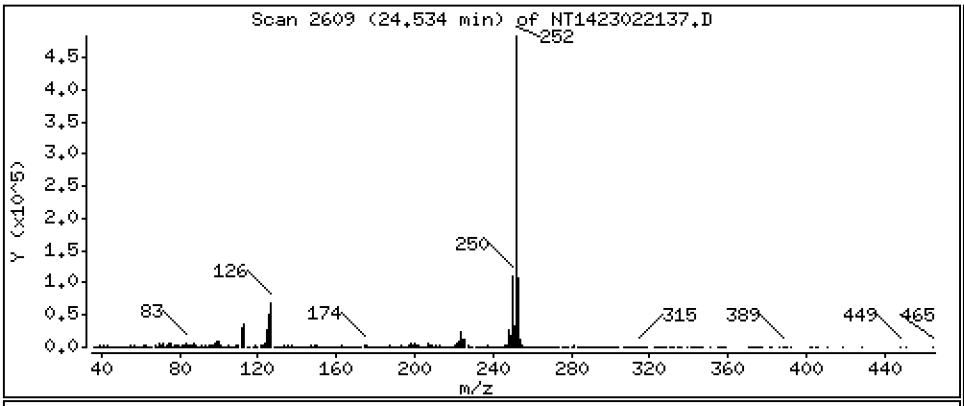
Operator: DSD

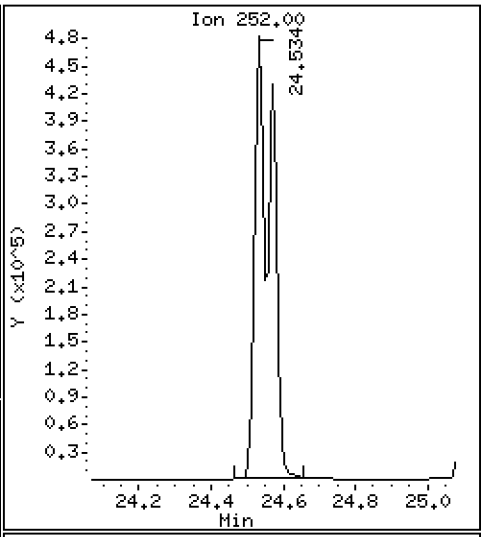
Column phase: ZB-5msi

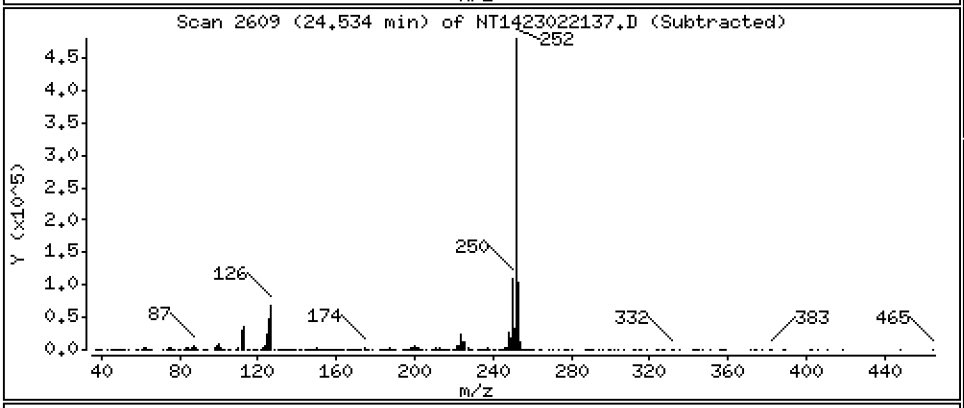
Column diameter: 0.25

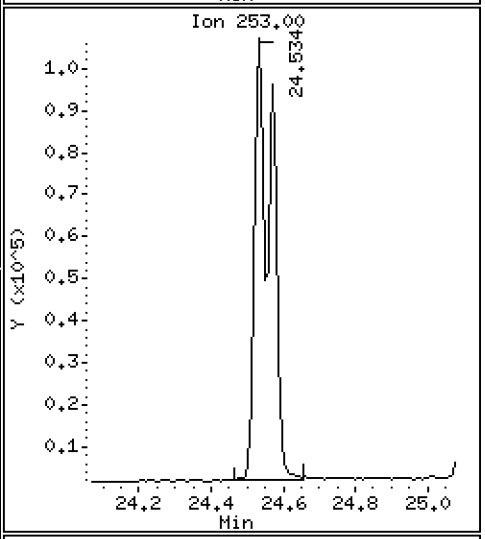
187 Total Benzofluoranthenes

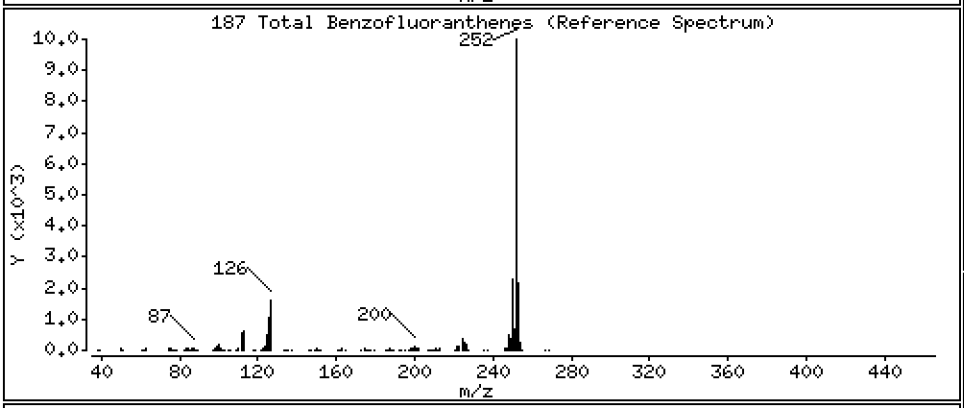
Concentration: 7.059 ug/mL

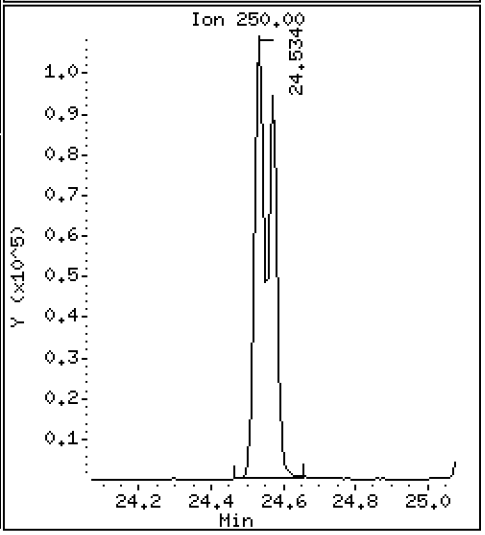


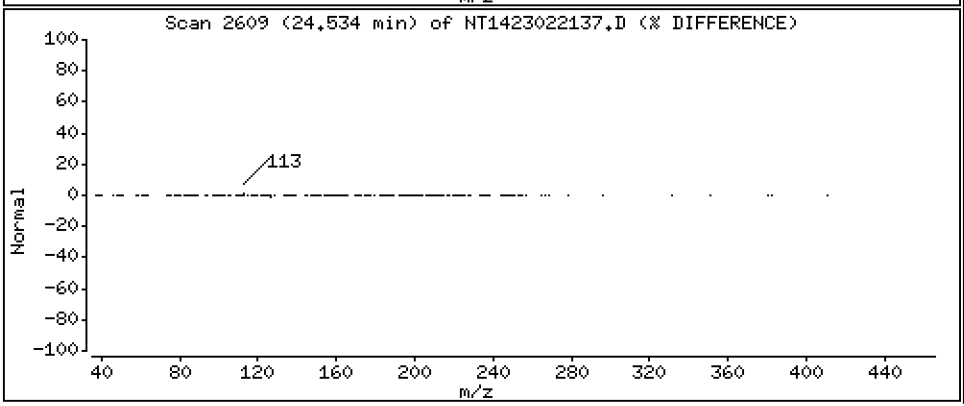












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

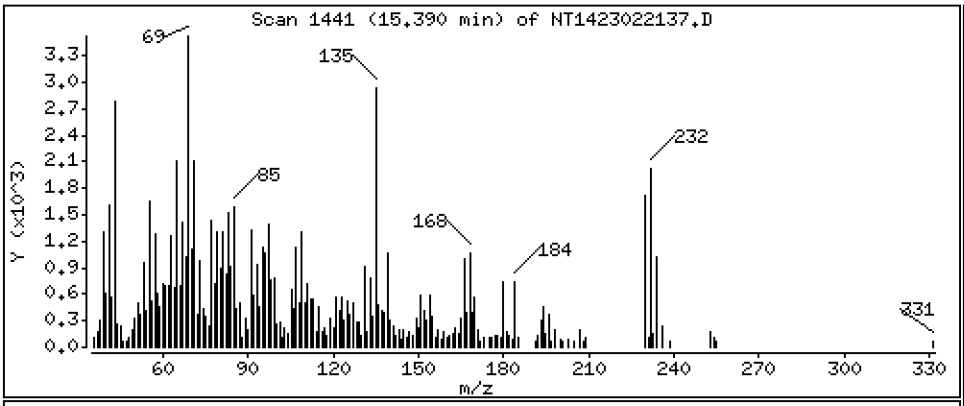
Operator: DSD

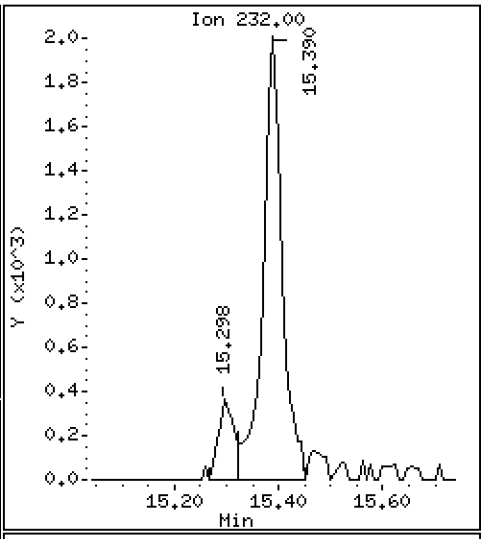
Column phase: ZB-5msi

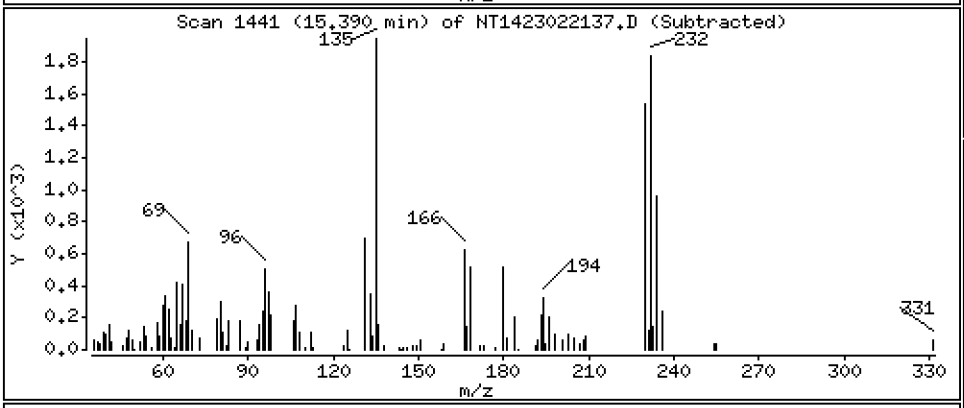
Column diameter: 0.25

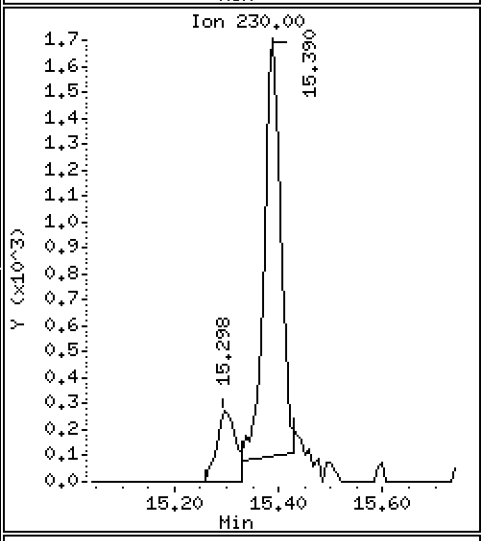
120 2,3,4,6-Tetrachlorophenol

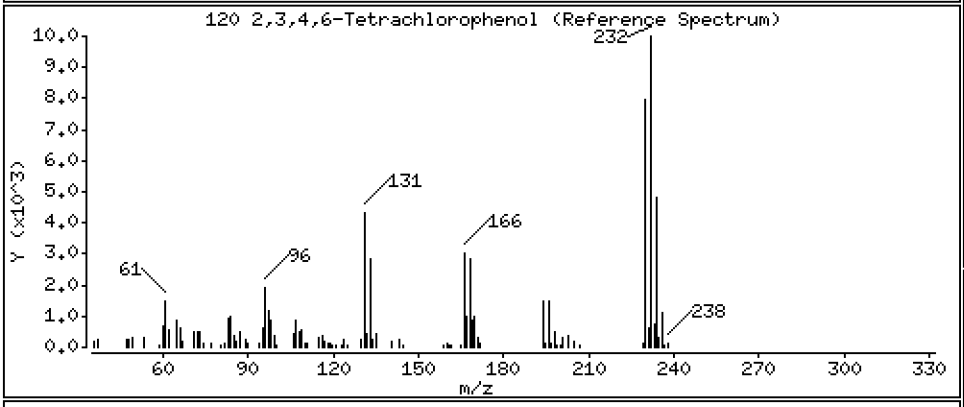
Concentration: 0.07081 ug/mL

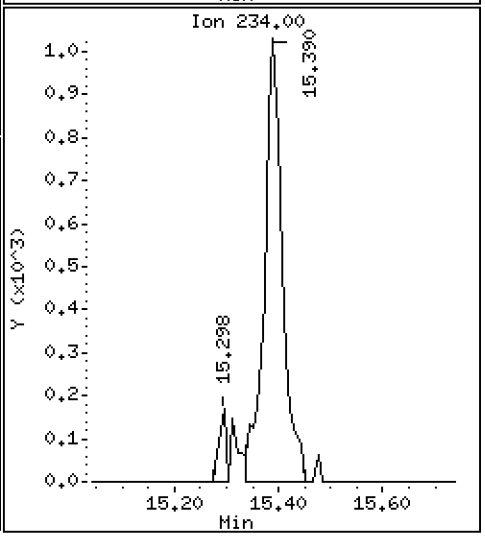


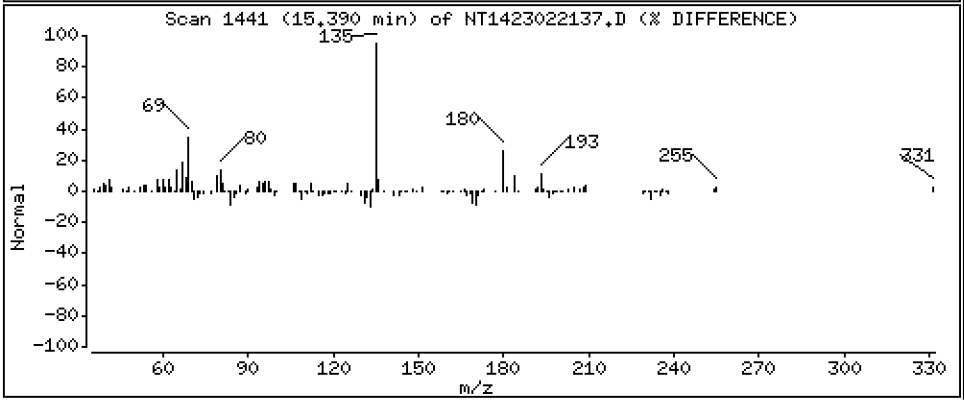












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221B.b\NT1423022137.D
Lab Smp Id: BLA0393-SRM1
Inj Date : 22-FEB-2023 11:09 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : BLA0393-SRM1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Meth Date : 23-Feb-2023 09:59 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 28
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.388	6.373	(0.746)	459040	5.95434	5.954
$	2 Phenol-d5	99	7.965	7.965	(0.930)	686174	5.61073	5.611
	3 Phenol	94	7.988	7.988	(0.933)	429550	3.31784	3.318
$	5 2-Chlorophenol-d4	132	8.212	8.212	(0.959)	496398	5.68858	5.689
	4 Bis(2-Chloroethyl)ether	93	8.235	8.135	(0.962)	4563	0.04614	0.04614
	6 2-Chlorophenol	128	8.235	8.235	(0.962)	157095	1.72304	1.723
	7 1,3-Dichlorobenzene	146	8.498	8.498	(0.993)	121373	1.19580	1.196
*	8 1,4-Dichlorobenzene-d4	152	8.560	8.568	(1.000)	288382	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.917	8.925	(1.042)	227403	3.47664	3.477
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	9.150	9.150	(1.069)	100844	3.66054	3.661
	13 2-Methylphenol	108	9.088	9.096	(1.062)	644799	7.13249	7.132
	17 Hexachloroethane	117	9.530	9.530	(1.113)	1178	0.02813	0.02813
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.360	9.367	(1.093)	858526	8.99351	8.994
$	18 Nitrobenzene-d5	82	9.662	9.662	(0.876)	451574	3.75428	3.754
	19 Nitrobenzene	77	9.693	9.701	(0.878)	425389	3.52419	3.524
	20 Isophorone	82	10.143	10.151	(0.919)	426910	2.68071	2.681
	21 2-Nitrophenol	139	10.322	10.322	(0.935)	362453	6.51598	6.516
	22 2,4-Dimethylphenol	107	10.399	10.399	(0.942)	673416	7.38826	7.388
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	10.779	10.787	(0.977)	745515	9.55688	9.557
	26 1,2,4-Trichlorobenzene	180	10.957	10.957	(0.993)	162154	1.71598	1.716
*	27 Naphthalene-d8	136	11.035	11.042	(1.000)	1041151	4.00000	
	28 Naphthalene	128	11.081	11.081	(1.004)	1301138	5.06842	5.068
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	11.452	11.452	(1.038)	151696	2.60410	2.604
	31 4-Chloro-3-methylphenol	107	12.210	12.210	(1.107)	234393	2.77603	2.776
	32 2-Methylnaphthalene	142	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	13.108	13.108	(0.895)	170019	2.75956	2.760
	35	2,4,5-Trichlorophenol	196	13.185	13.185	(0.901)	293415	4.39746	4.397
$	36	2-Fluorobiphenyl	172	13.262	13.270	(0.906)	864299	3.86177	3.862
	37	2-Chloronaphthalene	162	13.464	13.471	(0.920)	514520	2.81655	2.817
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	14.184	14.184	(0.969)	1085179	5.67925	5.679
	40	Acenaphthylene	152	14.331	14.331	(0.979)	647435	2.32367	2.324
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	14.640	14.648	(1.000)	625557	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	14.710	14.717	(1.005)	1142135	6.84662	6.847
	45	2,4-Dinitrophenol	184	14.810	14.818	(1.012)	86386	2.92131	2.921
	46	Dibenzofuran	168	15.042	15.042	(1.027)	2079777	7.59342	7.593
	47	4-Nitrophenol	109	14.949	14.949	(1.021)	214855	7.72705	7.727
	48	2,4-Dinitrotoluene	165	15.119	15.127	(1.033)	301432	4.74170	4.742
	50	Diethylphthalate	149	15.637	15.645	(1.068)	64495	0.25389	0.2539
	49	Fluorene	166	15.746	15.753	(1.076)	1290930	4.50713	4.507
	51	4-Chlorophenyl-phenylether	204	15.753	15.753	(1.076)	415634	2.71388	2.714
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	15.954	15.961	(0.903)	333574	7.15355	7.154
	54	N-Nitrosodiphenylamine	169	16.008	16.008	(0.906)	785731	4.28595	4.286
$	55	2,4,6-Tribromophenol	330	16.285	16.293	(1.112)	218638	5.99045	5.990
	56	4-Bromophenyl-phenylether	248	16.748	16.756	(0.948)	717786	8.79061	8.791
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	17.421	17.421	(0.986)	131361	3.22971	3.230
*	59	Phenanthrene-d10	188	17.669	17.676	(1.000)	1275726	4.00000	
	60	Phenanthrene	178	17.715	17.723	(1.003)	1849713	6.03389	6.034
	61	Anthracene	178	17.808	17.816	(1.008)	924825	3.04508	3.045
	62	Carbazole	167	18.156	18.156	(1.028)	2093451	7.59568	7.596
	63	Di-n-butylphthalate	149	18.984	18.992	(1.074)	764740	2.48419	2.484
	64	Fluoranthene	202	20.129	20.137	(0.884)	1219358	2.90451	2.905
	65	Pyrene	202	20.555	20.562	(0.903)	1609077	3.62471	3.625
$	66	Terphenyl-d14	244	20.864	20.872	(0.916)	1097044	3.48050	3.481
	67	Butylbenzylphthalate	149	21.816	21.816	(0.958)	672347	4.55315	4.553
	68	Benzo(a)anthracene	228	22.738	22.738	(0.999)	2255486	7.24320	7.243
*	69	Chrysene-d12	240	22.769	22.769	(1.000)	973077	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	22.808	22.815	(1.002)	525520	1.87626	1.876
	72	bis(2-Ethylhexyl)phthalate	149	22.854	22.854	(0.959)	768003	2.83467	2.835
*	134	Di-n-octylphthalate-d4	153	23.837	23.837	(1.000)	1604308	4.00000	
	73	Di-n-octylphthalate	149	23.845	23.845	(1.000)	1221805	3.25712	3.257
	74	Benzo(b)fluoranthene	252	24.534	24.534	(0.973)	833926	3.69251	3.693
	75	Benzo(k)fluoranthene	252	24.573	24.573	(0.975)	834342	3.45736	3.457
	76	Benzo(a)pyrene	252	25.107	25.115	(0.996)	1182340	5.47111	5.471
*	77	Perylene-d12	264	25.215	25.215	(1.000)	711743	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.533	27.540	(1.092)	790372	4.38404	4.384
	79	Dibenzo(a,h)anthracene	278	27.548	27.556	(1.093)	624100	4.20469	4.205
	80	Benzo(g,h,i)perylene	276	28.208	28.216	(1.119)	213112	1.47977	1.480
	90	N-Nitrosodimethylamine	74	4.296	4.280	(0.502)	68219	1.14291	1.143
	91	Aniline	93	7.988	8.034	(0.933)	8852	0.06392	0.06392
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	4.326	4.288	(0.505)	59442	0.62936	0.6294
	105	1-methylnaphthalene	142	Compound Not Detected.					
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.534	24.573	(0.973)	1556554	7.05942	7.059
120 2,3,4,6-Tetrachlorophenol	232	15.390	15.390	(1.051)	5037	0.07081	0.07081

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022137.D
Lab Smp Id: BLA0393-SRM1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 06:55
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	235125	117563	470250	288382	22.65
27 Naphthalene-d8	883104	441552	1766208	1041151	17.90
42 Acenaphthene-d10	537789	268895	1075578	625557	16.32
59 Phenanthrene-d10	1079531	539766	2159062	1275726	18.17
69 Chrysene-d12	826409	413205	1652818	973077	17.75
134 Di-n-octylphthala	1339562	669781	2679124	1604308	19.76
77 Perylene-d12	590325	295163	1180650	711743	20.57

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.56	-0.09
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.07
42 Acenaphthene-d10	14.65	14.15	15.15	14.64	-0.05
59 Phenanthrene-d10	17.68	17.18	18.18	17.67	-0.04
69 Chrysene-d12	22.77	22.27	23.27	22.77	0.00
134 Di-n-octylphthala	23.84	23.34	24.34	23.84	0.00
77 Perylene-d12	25.22	24.72	25.72	25.22	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022137.D

Lab ID: BLA0393-SRM1
nt14.i, ABN.m, 22-FEB-2023 11:09

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.962	0.949	0.0126	Bis(2-Chloroethyl)ether

RRT check based on Ccal File: NT1423022130.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Analytical Resources, LLC
Analytical Chemists and Consultants

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270E

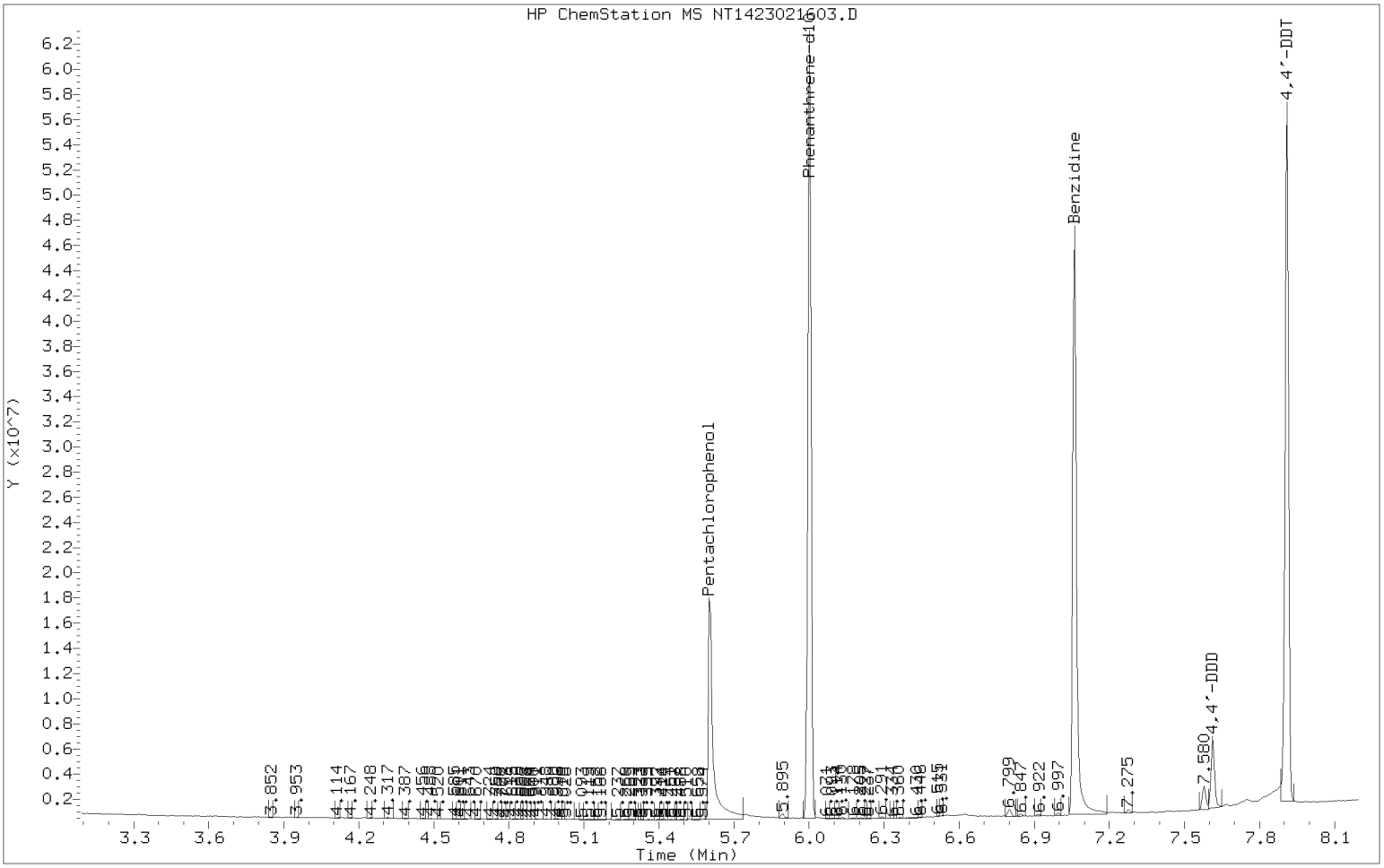
Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Lab File ID:	NT1423021603.D	Injection Date:	02/16/23
Instrument ID:	NT14	Injection Time:	14:33
Sequence:	SLB0234	Lab Sample ID:	SLB0234-TUN3

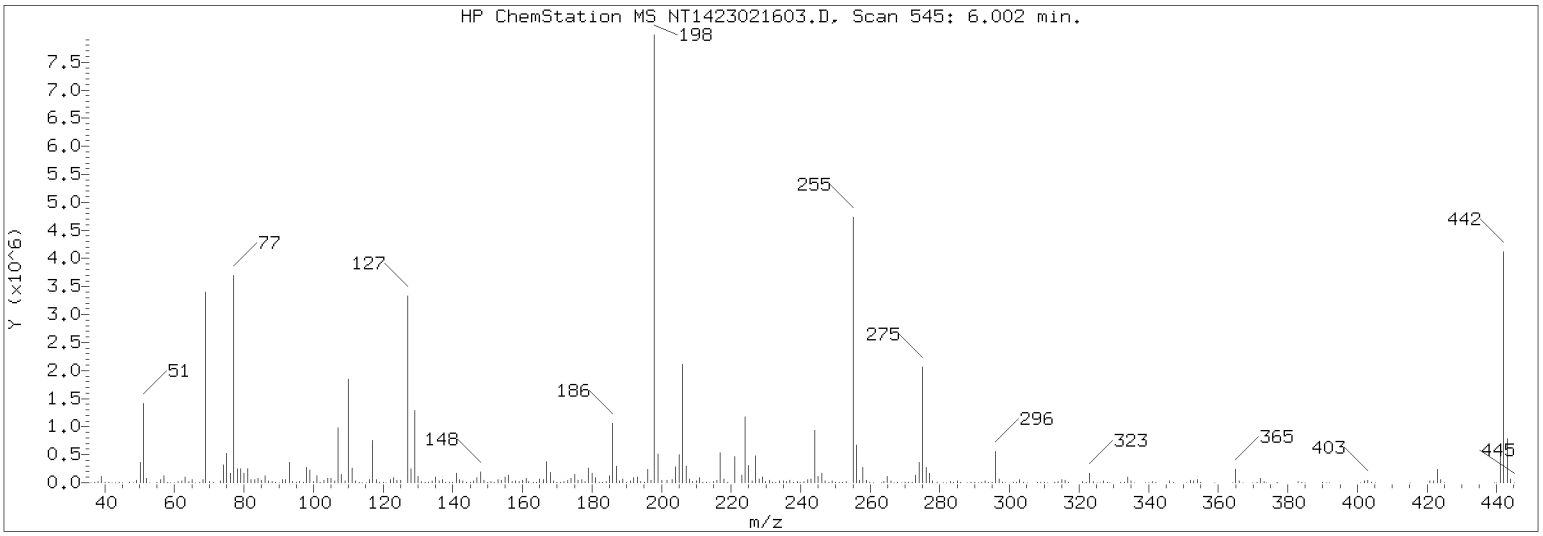
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	1.69	PASS
69	Less than 100% of 198	43.6	PASS
70	Less than 2% of 69	0.508	PASS
197	Less than 2% of 198	0.611	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.61	PASS
365	1 - 100% of 198	2.96	PASS
441	Less than 150% of 443	74.2	PASS
442	1 - 200% of 198	52	PASS
443	15 - 24% of 442	19	PASS
4,4'-DDD	Less than 20% of		
4,4'-DDE	Less than 20% of 4,4'-DDT		
4,4'-DDT	Less than 200% of		

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SLB0234-TUN3	NT1423021603.D	02/16/2023	14:33
Cal Standard	SLB0234-CAL7	NT1423021604.D	02/16/2023	15:54
Cal Standard	SLB0234-CAL6	NT1423021605.D	02/16/2023	16:30
Cal Standard	SLB0234-CAL5	NT1423021606.D	02/16/2023	17:06
Cal Standard	SLB0234-CAL4	NT1423021607.D	02/16/2023	17:42
Cal Standard	SLB0234-CAL3	NT1423021608.D	02/16/2023	18:18
Cal Standard	SLB0234-CAL2	NT1423021609.D	02/16/2023	18:54
Cal Standard	SLB0234-CAL1	NT1423021610.D	02/16/2023	19:30
Secondary Cal Check	SLB0234-SCV1	NT1423021613.D	02/16/2023	21:18
Initial Cal Blank	SLB0234-ICB1	NT1423021618.D	02/17/2023	0:17

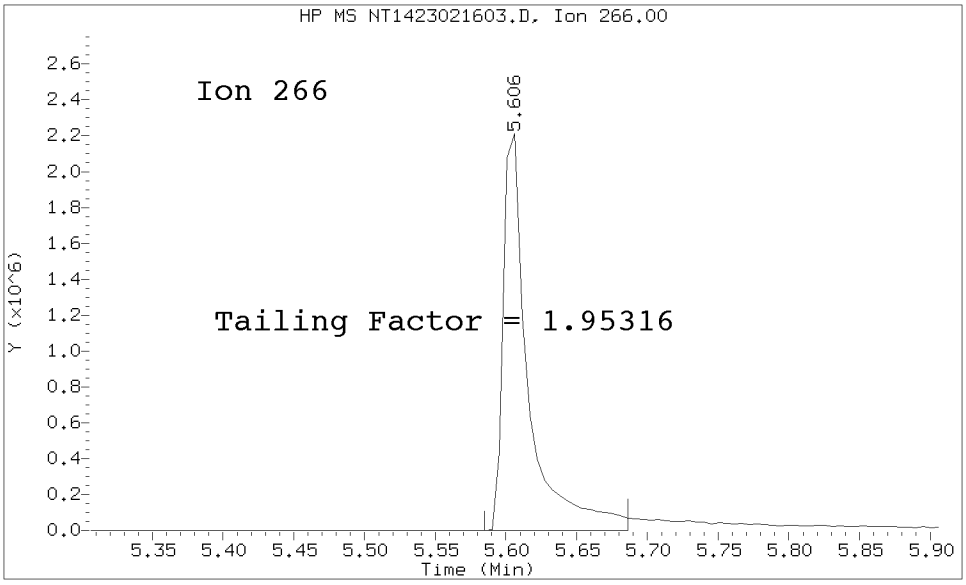
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230216.b/NT1423021603.D/NT1423021603.D
Method Used: \20230216.b\DFTPP8270E.m Inst: nt14
Injection Date: 16-FEB-2023 14:33 Operator: DSD
Sample Info: SLB0234-TUN3 SLB0234-TUN3
Report Date: 02/28/2023 14:33



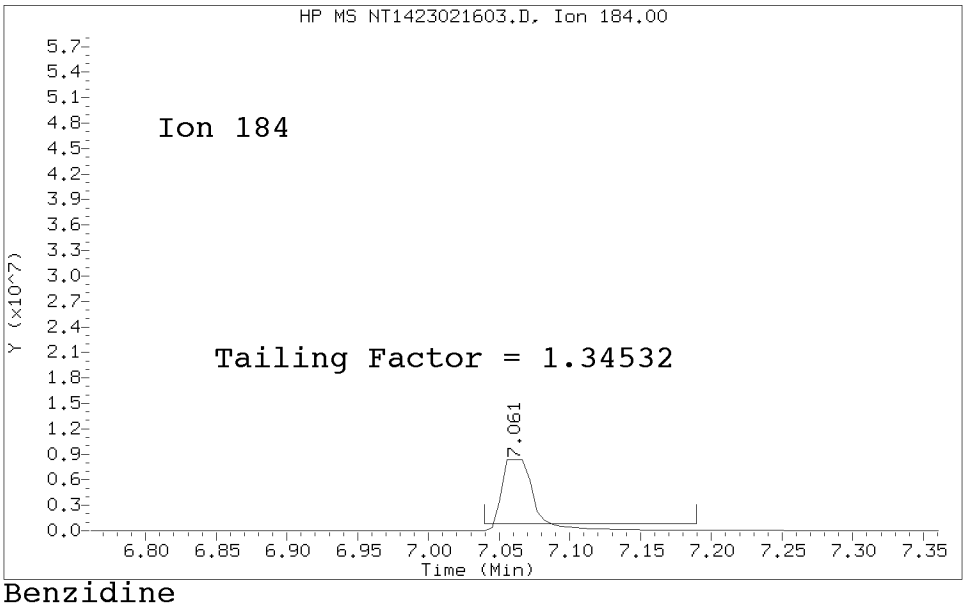


Datafile Analyzed: /20230216.b/NT1423021603.D/NT1423021603.D
Method Used: \20230216.b\DFTPP8270E.m\sw846ddt.m Inst: nt14
Injection Date: 16-FEB-2023 14:33 Operator: DSD
Sample Info: SEQ-TUN3
Report Date: 02/28/2023 14:33



Pentachlorophenol
==========
 Exp. RT = 5.606
Found RT = 5.606

Tail Factor = 1.953 Maximum Allowed = 2.0



Benzidine
=========
 Exp. RT = 7.061
Found RT = 7.061

Tail Factor = 1.345 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.9531646	2.000	PASS
Benzidine	1.3453237	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	9391744			N/A
4,4-DDE	0	0.0	20.0	PASS
4,4-DDD	1131675	10.8	20.0	PASS
4,4-DDD + DDE	1131675	10.8	20.0	PASS

Tuning Sample, nt14.i/20230216.b/NT1423021603.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.74 (1.69)
69	Mass 69 relative abundance	43.59
70	Less than 2.00% of mass 69	0.22 (0.51)
197	Less than 2.00% of mass 198	0.61
199	5.00 - 9.00% of mass 198	6.61
365	1.00 - 100.00% of mass 198	2.96
441	Less than 150.00% of mass 443	7.33 (74.20)
442	Less than 200.00% of mass 198	52.01
443	15.00 - 24.00% of mass 442	9.87 (18.98)

Data File: NT1423021603.D
Spectrum: Avg. Scans 544-546 (6.00), Background Scan 538
Location of Maximum: 198.00
Number of points: 325

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	234	127.00	2627072	210.00	30808	297.00	57304
37.00	4928	128.00	193536	211.00	66264	298.00	4346
38.00	16100	129.00	1002176	212.00	9012	299.00	778
39.00	86128	130.00	83024	213.00	4418	301.00	6536
40.00	1445	131.00	16110	214.00	2279	302.00	8309
41.00	1468	132.00	6808	215.00	17000	303.00	46096
42.00	911	133.00	2061	216.00	33704	304.00	12268
45.00	3191	134.00	28776	217.00	423104	305.00	985
48.00	1341	135.00	78176	218.00	55256	308.00	6175
49.00	6693	136.00	33232	219.00	5491	309.00	4166
50.00	287040	137.00	42088	221.00	341952	310.00	5991
51.00	1107456	138.00	8363	223.00	98976	311.00	732
52.00	60656	139.00	5700	224.00	901184	313.00	4780
53.00	2876	140.00	12940	225.00	232640	314.00	21184
55.00	10099	141.00	129168	226.00	25264	315.00	48568
56.00	44688	142.00	43080	227.00	360896	316.00	28648
57.00	99760	143.00	28672	228.00	53192	317.00	5757
58.00	6888	144.00	8339	229.00	80040	321.00	13596
59.00	1648	145.00	7386	230.00	9491	322.00	5967
60.00	1219	146.00	24536	231.00	35008	323.00	128608
61.00	23280	147.00	65392	232.00	5357	324.00	21648
62.00	28400	148.00	150720	233.00	6636	325.00	923
63.00	82528	149.00	32664	234.00	23312	326.00	1964
64.00	13066	150.00	10353	235.00	28000	327.00	25704
65.00	44920	151.00	16872	236.00	18056	328.00	12093
66.00	4461	152.00	11153	237.00	35552	329.00	3076
67.00	1649	153.00	42824	238.00	4722	332.00	9967
68.00	45176	154.00	34848	239.00	14633	333.00	12196
69.00	2675712	155.00	74600	240.00	12321	334.00	85224
70.00	13596	156.00	107384	241.00	22320	335.00	22864
73.00	21600	157.00	20016	242.00	47792	336.00	2619
74.00	251584	158.00	24240	243.00	50944	339.00	718
75.00	407680	159.00	22784	244.00	707776	340.00	1309
76.00	140096	160.00	40720	245.00	89264	341.00	14289
77.00	2915840	161.00	62672	246.00	131016	342.00	4394
78.00	200000	162.00	16872	247.00	28936	346.00	28552
79.00	186752	163.00	6683	248.00	6201	347.00	5145
80.00	136704	164.00	8065	249.00	26176	350.00	717
81.00	195200	165.00	49128	250.00	5926	351.00	823
82.00	47032	166.00	40400	251.00	5853	352.00	38056
83.00	45208	167.00	281088	252.00	7432	353.00	26224
85.00	31296	168.00	145536	253.00	15033	354.00	38056
86.00	54160	169.00	23504	254.00	9410	355.00	6985
87.00	26064	170.00	9632	255.00	3554304	359.00	2383
88.00	9527	171.00	12313	256.00	515328	364.00	1635
89.00	7167	172.00	22392	257.00	38256	365.00	181568
90.00	698	173.00	32920	258.00	210304	366.00	24640
91.00	40408	174.00	61832	259.00	31408	367.00	955
92.00	45528	175.00	112128	260.00	6139	370.00	3600

93.00	296960	176.00	31504	261.00	5764	371.00	8738
94.00	22352	177.00	48936	263.00	1078	372.00	60448
95.00	4027	178.00	18064	264.00	5808	373.00	16079
96.00	11069	179.00	205632	265.00	83712	374.00	1592
97.00	3421	180.00	139904	266.00	10984	377.00	1690
98.00	217408	181.00	66784	267.00	858	383.00	15955
99.00	183808	182.00	10904	268.00	681	384.00	4548
100.00	17952	183.00	6693	269.00	1031	385.00	782
101.00	98832	184.00	17728	270.00	3497	390.00	7317
102.00	4121	185.00	100784	271.00	7357	391.00	5379
103.00	32928	186.00	819968	272.00	11090	392.00	3751
104.00	64456	187.00	233216	273.00	102560	401.00	3177
105.00	58656	188.00	25416	274.00	276800	402.00	23400
106.00	20736	189.00	49520	275.00	1550848	403.00	32568
107.00	771648	190.00	8839	276.00	207552	404.00	11566
108.00	119928	191.00	20984	277.00	134784	405.00	2935
109.00	22672	192.00	68752	278.00	23960	415.00	674
110.00	1432064	193.00	74840	279.00	4579	421.00	24160
111.00	204544	194.00	19224	281.00	931	422.00	26616
112.00	24896	195.00	6565	282.00	3437	423.00	186048
113.00	8405	196.00	183680	283.00	14509	424.00	41216
114.00	1701	197.00	37512	284.00	9331	425.00	4321
115.00	1796	198.00	6138368	285.00	23984	438.00	1391
116.00	40928	199.00	405696	286.00	4717	439.00	1400
117.00	604736	200.00	30232	288.00	884	440.00	2550
118.00	44648	201.00	34040	289.00	5002	441.00	449664
119.00	8501	203.00	43656	290.00	4674	442.00	3192320
120.00	8877	204.00	213312	291.00	3293	443.00	606016
121.00	3538	205.00	381120	292.00	6118	444.00	54800
122.00	44736	206.00	1595904	293.00	25544	445.00	2486
123.00	73984	207.00	210944	294.00	6665		
124.00	34728	208.00	47112	295.00	9652		
125.00	32952	209.00	14622	296.00	426176		

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00046	Instrument:	NT14
Calibration Date:	02/16/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
Phenol	0.2	1.774541	0.5	1.639004	1	1.802186	2.5	1.979108	5	1.736309	10	1.867998
bis(2-chloroethyl) ether	0.2	1.548367	0.5	1.293159	1	1.341938	2.5	1.422743	5	1.245725	10	1.390469
2-Chlorophenol	0.2	1.274664	0.5	1.150961	1	1.21585	2.5	1.331081	5	1.223749	10	1.345902
1,3-Dichlorobenzene	0.2	1.631574	0.5	1.33554	1	1.369604	2.5	1.466131	5	1.288626	10	1.406453
1,4-Dichlorobenzene	0.2	1.552803	0.5	1.235439	1	1.298594	2.5	1.383491	5	1.227555	10	1.350102
1,2-Dichlorobenzene	0.2	1.540572	0.5	1.255654	1	1.300974	2.5	1.396876	5	1.225526	10	1.335821
Benzyl Alcohol	0.2	0.4230078	0.5	0.6821133	1	0.8625967	2.5	1.016704	5	0.939509	10	1.051749
2,2'-Oxybis(1-chloropropane)	0.2	0.4328938	0.5	0.3527133	1	0.3650537	2.5	0.3922745	5	0.3006275	10	0.3986169
2-Methylphenol	0.2	1.209454	0.5	1.14368	1	1.256352	2.5	1.347057	5	1.228202	10	1.313957
Hexachloroethane	0.2	0.649816	0.5	0.5238375	1	0.5543179	2.5	0.5931919	5	0.5400284	10	0.6048627
N-Nitroso-di-n-Propylamine	0.2	1.132837	0.5	1.025402	1	1.093938	2.5	1.229126	5	1.088117	10	1.211726
4-Methylphenol	0.2	1.226754	0.5	1.157396	1	1.319253	2.5	1.449198	5	1.317406	10	1.411814
Nitrobenzene	0.2	0.4888566	0.5	0.4259418	1	0.4433679	2.5	0.4929486	5	0.4411621	10	0.4867516
Isophorone	0.2	0.5532393	0.5	0.4559633	1	0.5866061	2.5	0.6738111	5	0.6150445	10	0.7007138
2-Nitrophenol	0.2	5.892626E-02	0.5	0.1071584	1	0.1480794	2.5	0.2010659	5	0.1984993	10	0.2244677
2,4-Dimethylphenol	0.4	0.3936776	1	0.3445792	2	0.3694083	5	0.3630598	10	0.3387161	20	0.3189191
Bis(2-Chloroethoxy)methane	0.2	0.4239618	0.5	0.3591245	1	0.3916308	2.5	0.4188771	5	0.3738165	10	0.415741
2,4-Dichlorophenol	0.4	0.2585462	1	0.2753685	2	0.3109592	5	0.3326045	10	0.3065583	20	0.3223347
1,2,4-Trichlorobenzene	0.2	0.4312371	0.5	0.3485662	1	0.355031	2.5	0.373089	5	0.3283684	10	0.3599381
Naphthalene	0.2	1.145839	0.5	0.9310198	1	0.9594187	2.5	0.9828545	5	0.9354499	10	0.9897557
Benzoic acid	0.8		2		4	3.005635E-02	10	0.1514055	20	0.2018266	40	0.2618054
4-Chloroaniline			1	0.3666298	2	0.4119131	5	0.4684844	10	0.431505	20	0.4319783
Hexachlorobutadiene	0.2	0.2575132	0.5	0.210491	1	0.2205688	2.5	0.229162	5	0.2050837	10	0.2260092
4-Chloro-3-Methylphenol			1	0.2792272	2	0.3165984	5	0.3494863	10	0.3241858	20	0.3466222
2-Methylnaphthalene	0.2	0.8379466	0.5	0.6942257	1	0.7348638	2.5	0.753674	5	0.6806457	10	0.7506724
Hexachlorocyclopentadiene			1	0.3097661	2	0.3494775	5	0.4006967	10	0.3900889	20	0.441245
2,4,6-Trichlorophenol			1	0.3197148	2	0.3745669	5	0.4092901	10	0.3951941	20	0.4335281

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00046	Instrument:	NT14
Calibration Date:	02/16/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
2,4,5-Trichlorophenol			1	0.3497415	2	0.408525	5	0.4506027	10	0.4281145	20	0.4745865
2-Chloronaphthalene	0.2	1.289455	0.5	1.072228	1	1.128993	2.5	1.190217	5	1.08193	10	1.224648
2-Nitroaniline			1	0.3244738	2	0.366902	5	0.407421	10	0.3646791	20	0.4126418
Acenaphthylene	0.2	2.070077	0.5	1.730918	1	1.791647	2.5	1.773028	5	1.677114	10	1.761502
Dimethylphthalate	0.2	1.358859	0.5	1.14041	1	1.210959	2.5	1.26939	5	1.116372	10	1.246292
2,6-Dinitrotoluene			1	0.2585363	2	0.2773524	5	0.3042317	10	0.2739006	20	0.3129035
Acenaphthene	0.2	1.201369	0.5	1.005659	1	1.044413	2.5	1.061492	5	1.005131	10	1.094657
3-Nitroaniline			1	0.2485094	2	0.2844635	5	0.3190441	10	0.2967385	20	0.3423737
2,4-Dinitrophenol	0.8		2	2.841757E-03	4	3.857443E-02	10	0.1196777	20	0.1695336	40	0.2231567
Dibenzofuran	0.2	2.020709	0.5	1.666795	1	1.721988	2.5	1.736549	5	1.600945	10	1.791312
4-Nitrophenol	0.4		1	6.958146E-02	2	0.1214277	5	0.1565799	10	0.1654371	20	0.1871749
2,4-Dinitrotoluene			1	0.3360512	2	0.3806073	5	0.4302785	10	0.39053	20	0.4525117
Fluorene	0.2	2.111796	0.5	1.769529	1	1.845242	2.5	1.847244	5	1.720333	10	1.816649
4-Chlorophenylphenyl ether	0.2	1.158003	0.5	0.9373493	1	0.9616299	2.5	1.010155	5	0.8842218	10	0.9842114
Diethyl phthalate	0.2	1.734798	0.5	1.560677	1	1.535918	2.5	1.648649	5	1.442422	10	1.764006
4-Nitroaniline			1	0.2742271	2	0.3192018	5	0.3655106	10	0.3399166	20	0.4019225
4,6-Dinitro-2-methylphenol	0.8	1.168045E-03	2	3.528843E-02	4	7.901793E-02	10	0.1247432	20	0.136336	40	0.1618783
N-Nitrosodiphenylamine	0.2	0.5917414	0.5	0.5355618	1	0.5658666	2.5	0.6267734	5	0.530631	10	0.5956972
4-Bromophenyl phenyl ether	0.2	0.2659628	0.5	0.2232278	1	0.2394325	2.5	0.2711516	5	0.2399704	10	0.2766802
Hexachlorobenzene	0.2	0.2969838	0.5	0.23596	1	0.2474585	2.5	0.2772606	5	0.2332177	10	0.2657791
Pentachlorophenol	0.4		1	3.638779E-02	2	6.295541E-02	5	0.1009905	10	0.1204468	20	0.1414085
Phenanthrene	0.2	1.090962	0.5	0.8932503	1	0.9310429	2.5	0.9866633	5	0.8938755	10	0.9745269
Anthracene	0.2	0.976984	0.5	0.8820678	1	0.939946	2.5	1.002564	5	0.9449707	10	0.97807
Carbazole	0.2	0.8023557	0.5	0.7567361	1	0.8290407	2.5	0.9540148	5	0.8420745	10	0.9466283
Di-n-Butylphthalate	0.2	0.7694454	0.5	0.7824137	1	0.9454219	2.5	1.097243	5	0.982282	10	1.110866
Fluoranthene	0.2	1.830446	0.5	1.532727	1	1.691617	2.5	1.717196	5	1.648857	10	1.857606
Pyrene	0.2	2.031721	0.5	1.723089	1	1.856976	2.5	1.896926	5	1.669151	10	1.823868

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00046	Instrument:	NT14
Calibration Date:	02/16/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
Butylbenzylphthalate	0.2	0.3710966	0.5	0.3950638	1	0.4931541	2.5	0.5852617	5	0.5571076	10	0.6365005
Benzo(a)anthracene	0.2	1.370173	0.5	1.177508	1	1.281172	2.5	1.267753	5	1.224925	10	1.33108
3,3'-Dichlorobenzidine	0.6	0.2350457	1.5	0.2650574	3	0.3234083	7.5	0.3752759	15	0.361634	30	0.4132299
Chrysene	0.2	1.325538	0.5	1.092839	1	1.138605	2.5	1.140188	5	1.095668	10	1.174675
bis(2-Ethylhexyl)phthalate	0.2	0.3946174	0.5	0.4287519	1	0.5082251	2.5	0.629324	5	0.5761929	10	0.6851799
Di-n-Octylphthalate	0.2	1.060271	0.5	0.8545037	1	0.8704387	2.5	0.961576	5	0.8518093	10	0.9958332
Benzofluoranthenes, Total	0.4	1.193635	1	1.091257	2	1.168248	5	1.304101	10	1.205603	20	1.357727
Benzo(a)pyrene	0.2	0.904521	0.5	0.8419381	1	1.054343	2.5	1.160628	5	1.116976	10	1.268633
Indeno(1,2,3-cd)pyrene	0.2	0.6564156	0.5	0.6100594	1	0.7457887	2.5	0.8899137	5	0.9040508	10	1.104522
Dibenzo(a,h)anthracene	0.2	0.4949923	0.5	0.5125102	1	0.6084081	2.5	0.7363566	5	0.7407528	10	0.911839
Benzo(g,h,i)perylene	0.2	0.5942066	0.5	0.5318934	1	0.595943	2.5	0.7083501	5	0.7204419	10	0.9175366
1-Methylnaphthalene	0.2	0.7695554	0.5	0.6460957	1	0.6717759	2.5	0.7242832	5	0.6269013	10	0.7218961
2-Fluorophenol	0.3	0.8334258	0.75	0.9179344	1.5	1.127094	3.75	1.221498	7.5	1.161305	15	1.145663
Phenol-d5	0.3	1.650671	0.75	1.529847	1.5	1.717591	3.75	1.820997	7.5	1.749741	15	1.737211
2-Chlorophenol-d4	0.3	1.241921	0.75	1.13869	1.5	1.206188	3.75	1.258647	7.5	1.216881	15	1.217744
1,2-Dichlorobenzene-d4	0.2	1.075866	0.5	0.8860843	1	0.9072079	2.5	0.9118611	5	0.8645581	10	0.864159
Nitrobenzene-d5	0.2	0.5010233	0.5	0.4240498	1	0.4564956	2.5	0.4734308	5	0.4640273	10	0.4616663
2-Fluorobiphenyl	0.2	1.728678	0.5	1.382317	1	1.425311	2.5	1.40442	5	1.378991	10	1.373039
2,4,6-Tribromophenol	0.3	0.1256857	0.75	0.1582254	1.5	0.2038137	3.75	0.2123544	7.5	0.2231717	15	0.2465391
p-Terphenyl-d14	0.2	1.47811	0.5	1.25932	1	1.347532	2.5	1.266693	5	1.247869	10	1.254347

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00046	Instrument:	NT14
Calibration Date:	02/16/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Phenol	20	1.771217										
bis(2-chloroethyl) ether	20	1.360175										
2-Chlorophenol	20	1.310092										
1,3-Dichlorobenzene	20	1.356963										
1,4-Dichlorobenzene	20	1.304743										
1,2-Dichlorobenzene	20	1.294536										
Benzyl Alcohol	20	1.033181										
2,2'-Oxybis(1-chloropropane)	20	0.432644										
2-Methylphenol	20	1.278848										
Hexachloroethane	20	0.6000208										
N-Nitroso-di-n-Propylamine	20	1.208964										
4-Methylphenol	20	1.386784										
Nitrobenzene	20	0.4671398										
Isophorone	20	0.6974522										
2-Nitrophenol	20	0.2298697										
2,4-Dimethylphenol	40	0.3228772										
Bis(2-Chloroethoxy)methane	20	0.4028921										
2,4-Dichlorophenol	40	0.291528										
1,2,4-Trichlorobenzene	20	0.3450898										
Naphthalene	20	0.9595736										
Benzoic acid	80	0.2931724										
4-Chloroaniline	40	0.4176791										
Hexachlorobutadiene	20	0.21778										
4-Chloro-3-Methylphenol	40	0.3302149										
2-Methylnaphthalene	20	0.7186292										
Hexachlorocyclopentadiene	40	0.4338294										
2,4,6-Trichlorophenol	40	0.431457										

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00046	Instrument:	NT14
Calibration Date:	02/16/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2,4,5-Trichlorophenol	40	0.4483409										
2-Chloronaphthalene	20	1.189199										
2-Nitroaniline	40	0.402573										
Acenaphthylene	20	1.667048										
Dimethylphthalate	20	1.210388										
2,6-Dinitrotoluene	40	0.298066										
Acenaphthene	20	1.05404										
3-Nitroaniline	40	0.3398001										
2,4-Dinitrophenol	80	0.2419218										
Dibenzofuran	20	1.721143										
4-Nitrophenol	40	0.1819528										
2,4-Dinitrotoluene	40	0.4489533										
Fluorene	20	1.709379										
4-Chlorophenylphenyl ether	20	0.9194885										
Diethyl phthalate	20	1.683638										
4-Nitroaniline	40	0.3998668										
4,6-Dinitro-2-methylphenol	80	0.166873										
N-Nitrosodiphenylamine	20	0.5774469										
4-Bromophenyl phenyl ether	20	0.2757341										
Hexachlorobenzene	20	0.2644157										
Pentachlorophenol	40	0.1454637										
Phenanthrene	20	0.9580091										
Anthracene	20	0.9413352										
Carbazole	20	0.9183321										
Di-n-Butylphthalate	20	1.068949										
Fluoranthene	20	1.801606										
Pyrene	20	1.771908										

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00046	Instrument:	NT14
Calibration Date:	02/16/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Butylbenzylphthalate	20	0.625608										
Benzo(a)anthracene	20	1.307642										
3,3'-Dichlorobenzidine	60	0.4030643										
Chrysene	20	1.091964										
bis(2-Ethylhexyl)phthalate	20	0.6070881										
Di-n-Octylphthalate	20	0.952501										
Benzofluoranthenes, Total	40	1.353642										
Benzo(a)pyrene	20	1.246655										
Indeno(1,2,3-cd)pyrene	20	1.124574										
Dibenzo(a,h)anthracene	20	0.9279728										
Benzo(g,h,i)perylene	20	0.9548503										
1-Methylnaphthalene	20	0.693815										
2-Fluorophenol	30	1.07834										
Phenol-d5	30	1.668142										
2-Chlorophenol-d4	30	1.192523										
1,2-Dichlorobenzene-d4	20	0.8410243										
Nitrobenzene-d5	20	0.4541029										
2-Fluorobiphenyl	20	1.324951										
2,4,6-Tribromophenol	30	0.2516169										
p-Terphenyl-d14	20	1.215823										

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00046	Instrument:	NT14
Calibration Date:	02/16/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Phenol	1.795766	5.9			RSD (15)	
bis(2-chloroethyl) ether	1.371797	7.1			RSD (15)	
2-Chlorophenol	1.264614	5.6			RSD (15)	
1,3-Dichlorobenzene	1.407842	8.0			RSD (15)	
1,4-Dichlorobenzene	1.336104	8.3			RSD (15)	
1,2-Dichlorobenzene	1.335708	7.9			RSD (15)	
Benzyl Alcohol	0.8584087	26.9		0.9991	QCOD (0.99)	
2,2'-Oxybis(1-chloropropane)	0.3821177	12.3			RSD (15)	
2-Methylphenol	1.253936	5.4			RSD (15)	
Hexachloroethane	0.5808679	7.5			RSD (15)	
N-Nitroso-di-n-Propylamine	1.141444	6.8			RSD (15)	
4-Methylphenol	1.324086	7.8			RSD (15)	
Nitrobenzene	0.4637383	5.8			RSD (15)	
Isophorone	0.6118329	14.5			RSD (15)	
2-Nitrophenol	0.1668667	38.7		0.9988	QCOD (0.99)	
2,4-Dimethylphenol	0.3501768	7.7			RSD (15)	
Bis(2-Chloroethoxy)methane	0.3980063	6.1			RSD (15)	
2,4-Dichlorophenol	0.2996999	8.7			RSD (15)	
1,2,4-Trichlorobenzene	0.3630457	9.1			RSD (15)	
Naphthalene	0.986273	7.5			RSD (15)	
Benzoic acid	0.1876532	55.2		0.9911	QCOD (0.99)	
4-Chloroaniline	0.4213649	7.9			RSD (15)	
Hexachlorobutadiene	0.2238011	7.6			RSD (15)	
4-Chloro-3-Methylphenol	0.3243891	7.9			RSD (15)	
2-Methylnaphthalene	0.7386653	7.0			RSD (15)	
Hexachlorocyclopentadiene	0.3875173	13.0			RSD (15)	
2,4,6-Trichlorophenol	0.3939585	10.8			RSD (15)	
2,4,5-Trichlorophenol	0.4266518	10.3			RSD (15)	
2-Chloronaphthalene	1.168096	6.7			RSD (15)	
2-Nitroaniline	0.3797818	9.0			RSD (15)	

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00046	Instrument:	NT14
Calibration Date:	02/16/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Acenaphthylene	1.781619	7.6			RSD (15)	
Dimethylphthalate	1.22181	6.7			RSD (15)	
2,6-Dinitrotoluene	0.2874984	7.2			RSD (15)	
Acenaphthene	1.06668	6.3			RSD (15)	
3-Nitroaniline	0.3051549	11.8			RSD (15)	
2,4-Dinitrophenol	0.1326177	73.4		0.9907	QCOD (0.99)	
Dibenzofuran	1.751349	7.6			RSD (15)	
4-Nitrophenol	0.1470256	30.3		0.9979	QCOD (0.99)	
2,4-Dinitrotoluene	0.4064887	11.2			RSD (15)	
Fluorene	1.831453	7.4			RSD (15)	
4-Chlorophenylphenyl ether	0.9792941	9.1			RSD (15)	
Diethyl phthalate	1.624301	7.1			RSD (15)	
4-Nitroaniline	0.3501076	14.1			RSD (15)	
4,6-Dinitro-2-methylphenol	0.1007578	63.6		0.9971	QCOD (0.99)	
N-Nitrosodiphenylamine	0.5748169	5.9			RSD (15)	
4-Bromophenyl phenyl ether	0.2560228	8.4			RSD (15)	
Hexachlorobenzene	0.2601536	8.8			RSD (15)	
Pentachlorophenol	0.1012755	43.3		0.9964	QCOD (0.99)	
Phenanthrene	0.96119	7.1			RSD (15)	
Anthracene	0.9522768	4.1			RSD (15)	
Carbazole	0.8641689	8.8			RSD (15)	
Di-n-Butylphthalate	0.9652316	14.8			RSD (15)	
Fluoranthene	1.725722	6.6			RSD (15)	
Pyrene	1.824806	6.6			RSD (15)	
Butylbenzylphthalate	0.5233989	20.5		0.9988	QCOD (0.99)	
Benzo(a)anthracene	1.280036	5.1			RSD (15)	
3,3'-Dichlorobenzidine	0.3395308	20.1		0.9987	QCOD (0.99)	
Chrysene	1.151354	7.2			RSD (15)	
bis(2-Ethylhexyl)phthalate	0.5470542	19.6		0.9966	QCOD (0.99)	
Di-n-Octylphthalate	0.9352762	8.5			RSD (15)	

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00046	Instrument:	NT14
Calibration Date:	02/16/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Benzofluoranthenes, Total	1.239173	8.2			RSD (15)	
Benzo(a)pyrene	1.084813	15.0		0.9990	QCOD (0.99)	
Indeno(1,2,3-cd)pyrene	0.8621891	23.7		0.9977	QCOD (0.99)	
Dibenzo(a,h)anthracene	0.7046903	24.9		0.9976	QCOD (0.99)	
Benzo(g,h,i)perylene	0.7176031	22.8		0.9970	QCOD (0.99)	
1-Methylnaphthalene	0.6934747	7.1			RSD (15)	
2-Fluorophenol	1.069323	13.2			RSD (15)	
Phenol-d5	1.696314	5.4			RSD (15)	
2-Chlorophenol-d4	1.210371	3.2			RSD (15)	
1,2-Dichlorobenzene-d4	0.9072515	8.7			RSD (15)	
Nitrobenzene-d5	0.4621137	5.0			RSD (15)	
2-Fluorobiphenyl	1.431101	9.4			RSD (15)	
2,4,6-Tribromophenol	0.2030581	22.7		0.9993	QCOD (0.99)	
p-Terphenyl-d14	1.295671	6.9			RSD (15)	

Printed: 3/1/2023 9:00:16AM

ANALYSIS SEQUENCE

SLB0234

Instrument ID: NT14
Calibration ID: GB00046
MS EM Level: 1706 EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: L001045

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLB0234-TUN3	MS Tune	QC		1	L001678		02/16/2023 14:33	NT1423021603.D	DSD	
SLB0234-CAL1	ABN 0.2	QC		2	K011105	K010831	02/16/2023 19:30	NT1423021610.D	DSD	
SLB0234-CAL2	ABN 0.5	QC		3	K011106	K010831	02/16/2023 18:54	NT1423021609.D	DSD	
SLB0234-CAL3	ABN 1.0	QC		4	K011107	K010831	02/16/2023 18:18	NT1423021608.D	DSD	
SLB0234-CAL4	ABN 2.5	QC		5	K011108	K010831	02/16/2023 17:42	NT1423021607.D	DSD	
SLB0234-CAL5	ABN 5	QC		6	K011109	K010831	02/16/2023 17:06	NT1423021606.D	DSD	
SLB0234-CAL6	ABN 10	QC		7	K011110	K010831	02/16/2023 16:30	NT1423021605.D	DSD	
SLB0234-CAL7	ABN 20	QC		8	K011111	K010831	02/16/2023 15:54	NT1423021604.D	DSD	
SLB0234-SCV1	SCV 5.0	QC		9	K010066	K010831	02/16/2023 21:18	NT1423021613.D	DSD	
SLB0234-ICB1	Initial Cal Blank	QC		10	K005156	K010831	02/17/2023 00:17	NT1423021618.D	DSD	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230216.b

	Time	Filename	LabID	ClientId	DF																	
1	1220	NT1423021601.D			1	|NO ISTDS FOUND||																
2	1407	NT1423021602.D	SEQ-TUN2		1	|NO ISTDS FOUND||																
3	1433	NT1423021603.D	SLB0234-TUN3		1	|NO ISTDS FOUND||																
4	1554	NT1423021604.D	SLB0234-CAL7		1	| 8.91	259368	11.40	972103	15.03	589881	18.07	1170883	23.13	710371	25.69	450749	24.16	918441 |			
5	1630	NT1423021605.D	SLB0234-CAL6		1	| 8.90	291239	11.40	1073728	15.02	652598	18.06	1295935	23.12	801336	25.69	501893	24.15	964521 |			
6	1706	NT1423021606.D	SLB0234-CAL5		1	| 8.90	375798	11.40	1378169	15.02	847135	18.05	1675180	23.12	1073562	25.69	721978	24.15	1344129 |			
7	1742	NT1423021607.D	SLB0234-CAL4		1	| 8.90	329194	11.39	1213660	15.02	760118	18.05	1448105	23.12	989085	25.69	640481	24.15	1170114 |			
8	1818	NT1423021608.D	SLB0234-CAL3		1	| 8.90	363048	11.39	1323614	15.02	812533	18.05	1628200	23.12	1067204	25.69	739668	24.15	1276639 |			
9	1854	NT1423021609.D	SLB0234-CAL2		1	| 8.90	369229	11.39	1340371	15.02	817804	18.05	1651873	23.12	1097443	25.69	733004	24.15	1258630 |			
10	1930	NT1423021610.D	SLB0234-CAL1		1	| 8.90	315597	11.39	1132602	15.02	679791	18.05	1365529	23.12	860315	25.69	574514	24.15	913087 |			
11	2006	NT1423021611.D	SIM 0.1		1	| 8.90	323228	11.39	1153158	15.02	693417	18.05	1395554	23.12	888516	25.69	590195	24.15	942766 |			
12	2042	NT1423021612.D	SIM 0.05		1	| 8.90	325804	11.39	1179450	15.02	699735	18.05	1419663	23.12	892941	25.69	583873	24.15	922711 |			
13	2118	NT1423021613.D	SLB0234-SCV1		1	| 8.90	362894	11.40	1343351	15.02	854455	18.05	1630237	23.12	1112056	25.69	733476	24.15	1298332 |			
14	2154	NT1423021614.D	SEQ-ICV1		1	| 9.26	379473	11.40	1277038	15.02	790990	18.06	1598997	23.12	1030873	25.69	689426	24.15	1262589 |			
15	2230	NT1423021615.D	SEQ-LCV1		1	| 9.26	39089	11.39	1297021	15.02	796314	18.05	1596176	23.12	1039333	25.69	693092	24.15	1184417 |			
16	2306	NT1423021616.D	SIM-ICV1		1	| 9.26	78399	11.39	1262464	15.02	789163	18.05	1586131	23.12	1059006	25.69	701741	24.15	1219722 |			
17	2342	NT1423021617.D	SIM-LCV1		1	| 8.90	315583	11.39	1132828	15.01	674086	18.05	1359277	23.12	885569	25.69	581219	24.15	907558 |			
18	0017	NT1423021618.D	SLB0234-ICB1		1	| 8.90	274788	11.39	975858	15.01	576816	18.05	1140272	23.12	714655	25.69	466173	24.15	689415 |			

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230216.b

Instrument: nt14.i Date: 16-FEB-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
1220	NT1423021601.D		1	NO MANUAL INTEGRATION
1407	NT1423021602.D	SEQ-TUN2	1	NO MANUAL INTEGRATION
1433	NT1423021603.D	SLB0234-TUN3	1	NO MANUAL INTEGRATION
1554	NT1423021604.D	SLB0234-CAL7	1	2,2'-oxybis(1-Chloropropane), Benzoic acid, Total Benzofluoranthenes,
1630	NT1423021605.D	SLB0234-CAL6	1	2,2'-oxybis(1-Chloropropane), Total Benzofluoranthenes,
1706	NT1423021606.D	SLB0234-CAL5	1	NO MANUAL INTEGRATION
1742	NT1423021607.D	SLB0234-CAL4	1	2,2'-oxybis(1-Chloropropane), Total Benzofluoranthenes,
1818	NT1423021608.D	SLB0234-CAL3	1	2,2'-oxybis(1-Chloropropane), Benzoic acid, Pentachlorophenol, Total Benzofluoranthenes,
1854	NT1423021609.D	SLB0234-CAL2	1	2,2'-oxybis(1-Chloropropane), 2,4-Dinitrophenol, 4-Nitrophenol, 4,6-Dinitro-2-methylphenol, Pentachlorophenol, 2,4,6-Tribromophenol,
1930	NT1423021610.D	SLB0234-CAL1	1	Total Benzofluoranthenes, 2,4,6-Tribromophenol,
2006	NT1423021611.D	SIM 0.1	1	NO MANUAL INTEGRATION
2042	NT1423021612.D	SIM 0.05	1	NO MANUAL INTEGRATION
2118	NT1423021613.D	SLB0234-SCV1	1	NO MANUAL INTEGRATION
2154	NT1423021614.D	SEQ-ICV1	1	NO MANUAL INTEGRATION
2230	NT1423021615.D	SEQ-LCV1	1	NO MANUAL INTEGRATION
2306	NT1423021616.D	SIM-ICV1	1	NO MANUAL INTEGRATION
2342	NT1423021617.D	SIM-LCV1	1	NO MANUAL INTEGRATION

Instrument: nt14.i Date: 17-FEB-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
0017	NT1423021618.D	SLB0234-ICB1	1	Phenol-d5, 2-Chlorophenol-d4, 1,2-Dichlorobenzene-d4,

Security Status Report

Date: 01-Mar-2023 08:58

NT1423021601.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021602.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021603.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021604.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021605.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021606.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021607.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021608.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021609.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021610.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021611.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021612.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021613.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021614.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021615.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021616.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021617.D	Data Locked	van, 01-Mar-2023 08:58
NT1423021618.D	Data Locked	van, 01-Mar-2023 08:58

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-DEC-2022 08:06
End Cal Date : 16-FEB-2023 19:30
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Last Edit : 17-Feb-2023 10:36 deenayd

Calibration File Names:
Level 1: \\target\share\chem3\nt14.i\20230216.b\NT1423021610.D
Level 2: \\target\share\chem3\nt14.i\20230216.b\NT1423021609.D
Level 3: \\target\share\chem3\nt14.i\20230216.b\NT1423021608.D
Level 4: \\target\share\chem3\nt14.i\20230216.b\NT1423021607.D
Level 5: \\target\share\chem3\nt14.i\20230216.b\NT1423021606.D
Level 6: \\target\share\chem3\nt14.i\20230216.b\NT1423021605.D
Level 7: \\target\share\chem3\nt14.i\20230216.b\NT1423021604.D

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	20.0000 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	

ARI Labs, Inc.

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Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Last Edit : 17-Feb-2023 10:36 deenayd

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	20.0000 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
170 N,N-Dimethylaniline	#####	#####	#####	#####	#####	#####	#####					
								AVRG		0.000e+000		0.000e+000
171 2,3-Dimethylaniline	#####	#####	#####	#####	#####	#####	#####					
								AVRG		0.000e+000		0.000e+000
172 2,4-Dimethylaniline	#####	#####	#####	#####	#####	#####	#####					
								AVRG		0.000e+000		0.000e+000
173 2,5-Dimethylaniline	#####	#####	#####	#####	#####	#####	#####					
								AVRG		0.000e+000		0.000e+000
174 2,6-Dimethylaniline	#####	#####	#####	#####	#####	#####	#####					
								AVRG		0.000e+000		0.000e+000
175 3,4-Dimethylaniline	#####	#####	#####	#####	#####	#####	#####					
								AVRG		0.000e+000		0.000e+000
176 3,5-Dimethylaniline	#####	#####	#####	#####	#####	#####	#####					
								AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

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Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Last Edit : 17-Feb-2023 10:36 deenayd

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
177 p-Benzoquinone	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
168 Pentachlorobenzene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
145 4,4'-DDE	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
146 4,4'-DDD	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
147 4,4'-DDT	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
148 Dieldrin	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
149 TCMX	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	

ARI Labs, Inc.

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
150 DCBP	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
138 Chlorobenzilate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
139 Isodrin	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
140 Diallate A	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
141 Diallate B	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
142 1,2-Dibromo-3-Chloropropane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
135 2,3,5,6-Tetrachlorophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-

ARI Labs, Inc.

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Last Edit : 17-Feb-2023 10:36 deenayd

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
136 2,3,4,5-tetrachlorophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
133 Butylatedhydroxytoluene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
132 3,6-Dimethylphenanthrene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
131 1-Methylphenanthrene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
130 Dibenzothiophene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
129 1-Methylfluorene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
128 N-Hexadecane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	

ARI Labs, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Last Edit : 17-Feb-2023 10:36 deenayd

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
127 2-Isopropylnaphthalene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
126 N-Tetradecane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
144 alpha-Terpineol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
125 Safrole	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
124 3,4-Dimethylphenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
123 Acetophenone	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
122 Furfuraldehyde	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	

ARI Labs, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Last Edit : 17-Feb-2023 10:36 deenayd

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	
120 2,3,4,6-Tetrachlorophenol	5181	28898	74897	205457	459997	799412						
	1465480						QUAD	0.000e+000	2.19925	-0.07751	0.99940	
178 2-Benzyl-4-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
117 Butyl Diphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-DEC-2022 08:06
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Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Last Edit : 17-Feb-2023 10:36 deenayd

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
116 Dibutyl Phenyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
115 Tributyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
114 Beta-Pinene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
113 Diphenyl Oxide	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
112 Biphenyl	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
111 Azobenzene (1,2-DP-Hydrazine)	2.17511 / 1.91809	1.86164	1.91637	2.04699	1.84942	2.05076	AVRG		1.97405		6.07383	
110 Tetrachloroguaiacol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-DEC-2022 08:06
End Cal Date : 16-FEB-2023 19:30
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Last Edit : 17-Feb-2023 10:36 deenayd

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
109 3,4,5-Trichloroguaiacol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
181 3,4,6-Trichloroguaiacol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
108 4,5,6-Trichloroguaiacol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
184 3,4-Dichloroguaiacol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
107 4,5-Dichloroguaiacol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
182 4,6-Dichloroguaiacol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
185 4-Chloroguaiacol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-

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Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Last Edit : 17-Feb-2023 10:36 deenayd

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
105 1-methylnaphthalene	0.76956	0.64610	0.67178	0.72428	0.62690	0.72190						
	0.69381						AVRG		0.69347		7.13589	
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	

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INITIAL CALIBRATION DATA

Start Cal Date : 30-DEC-2022 08:06
End Cal Date : 16-FEB-2023 19:30
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Last Edit : 17-Feb-2023 10:36 deenayd

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
156 Methyl Parathion	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
157 Ethyl Parathion	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
158 Ethion	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
159 4-Nonylphenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
160 Tetraethyl Tin	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
161 1,2,3-Trichloronaphthalene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
162 1,2,3,4-Tetrachloronapthalene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
163 1,2,3,5,8-Pentachloronaphthal	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
164 1,2,3,4,6,7-Hexachloronaphtha	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
165 1,2,3,4,5,6,7-Heptachloronaph	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
166 Octachloronaphthalene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
167 2,2',4,4',5-Pentabromobipheny	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
3 Phenol	1.77454 / 1.77122	1.63900	1.80219	1.97911	1.73631	1.86800	AVRG		1.79577		5.92982
4 Bis(2-Chloroethyl)ether	1.54837 / 1.36017	1.29316	1.34194	1.42274	1.24572	1.39047	AVRG		1.37180		7.11919

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
6 2-Chlorophenol	1.27466	1.15096	1.21585	1.33108	1.22375	1.34590					
	1.31009						AVRG		1.26461		5.60637
7 1,3-Dichlorobenzene	1.63157	1.33554	1.36960	1.46613	1.28863	1.40645					
	1.35696						AVRG		1.40784		8.04387
9 1,4-Dichlorobenzene	1.55280	1.23544	1.29859	1.38349	1.22756	1.35010					
	1.30474						AVRG		1.33610		8.29540
11 Benzyl alcohol	6675	31482	78291	209183	441332	765776					
	1339870						QUAD	0.000e+000	0.99193	-0.00518	0.99932
12 1,2-Dichlorobenzene	1.54057	1.25565	1.30097	1.39688	1.22553	1.33582					
	1.29454						AVRG		1.33571		7.92084
13 2-Methylphenol	1.20945	1.14368	1.25635	1.34706	1.22820	1.31396					
	1.27885						AVRG		1.25394		5.41840
14 2,2'-oxybis(1-Chloropropane)	0.43289	0.35271	0.36505	0.39227	0.30063	0.39862					
	0.43264						AVRG		0.38212		12.32257

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
15 4-Methylphenol	1.22675	1.15740	1.31925	1.44920	1.31741	1.41181						
	1.38678						AVRG		1.32409		7.83698	
16 N-Nitroso-di-n-propylamine	1.13284	1.02540	1.09394	1.22913	1.08812	1.21173						
	1.20896						AVRG		1.14144		6.76981	
17 Hexachloroethane	0.64982	0.52384	0.55432	0.59319	0.54003	0.60486						
	0.60002						AVRG		0.58087		7.52828	
19 Nitrobenzene	0.48886	0.42594	0.44337	0.49295	0.44116	0.48675						
	0.46714						AVRG		0.46374		5.82529	
20 Isophorone	0.55324	0.45596	0.58661	0.67381	0.61504	0.70071						
	0.69745						AVRG		0.61183		14.53436	
21 2-Nitrophenol	3337	17954	49000	152516	341957	602543						
	1117285						QUAD	0.000e+000	4.82750	-0.42568	0.99937	<-
22 2,4-Dimethylphenol	0.39368	0.34458	0.36941	0.36306	0.33872	0.31892						
	0.32288						AVRG		0.35018		7.65655	

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
23 Bis(2-Chloroethoxy)methane	0.42396	0.35912	0.39163	0.41888	0.37382	0.41574						
	0.40289						AVRG		0.39801		6.14179	
24 Benzoic acid	+++++	+++++	39783	459387	1390756	2811078						
	5699876						QUAD	0.000e+000	4.55169	-0.19720	0.99674	<-
25 2,4-Dichlorophenol	0.25855	0.27537	0.31096	0.33260	0.30656	0.32233						
	0.29153						AVRG		0.29970		8.74488	
26 1,2,4-Trichlorobenzene	0.43124	0.34857	0.35503	0.37309	0.32837	0.35994						
	0.34509						AVRG		0.36305		9.10742	
28 Naphthalene	1.14584	0.93102	0.95942	0.98285	0.93545	0.98976						
	0.95957						AVRG		0.98627		7.46856	
29 4-Chloroaniline	+++++	0.36663	0.41191	0.46848	0.43150	0.43198						
	0.41768						AVRG		0.42136		7.89584	
30 Hexachlorobutadiene	0.25751	0.21049	0.22057	0.22916	0.20508	0.22601						
	0.21778						AVRG		0.22380		7.61861	

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
31 4-Chloro-3-methylphenol	+++++	0.27923	0.31660	0.34949	0.32419	0.34662					
	0.33021						AVRG		0.32439		7.86964
32 2-Methylnaphthalene	0.83795	0.69423	0.73486	0.75367	0.68065	0.75067					
	0.71863						AVRG		0.73867		6.98730
33 Hexachlorocyclopentadiene	+++++	0.30977	0.34948	0.40070	0.39009	0.44124					
	0.43383						AVRG		0.38752		13.00754
34 2,4,6-Trichlorophenol	+++++	0.31971	0.37457	0.40929	0.39519	0.43353					
	0.43146						AVRG		0.39396		10.82693
35 2,4,5-Trichlorophenol	+++++	0.34974	0.40852	0.45060	0.42811	0.47459					
	0.44834						AVRG		0.42665		10.26358
37 2-Chloronaphthalene	1.28946	1.07223	1.12899	1.19022	1.08193	1.22465					
	1.18920						AVRG		1.16810		6.72322
38 2-Nitroaniline	+++++	0.32447	0.36690	0.40742	0.36468	0.41264					
	0.40257						AVRG		0.37978		8.98042

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
39 Dimethylphthalate	1.35886	1.14041	1.21096	1.26939	1.11637	1.24629						
	1.21039						AVRG		1.22181		6.65229	
40 Acenaphthylene	2.07008	1.73092	1.79165	1.77303	1.67711	1.76150						
	1.66705						AVRG		1.78162		7.61386	
41 2,6-Dinitrotoluene	+++++	0.25854	0.27735	0.30423	0.27390	0.31290						
	0.29807						AVRG		0.28750		7.23573	
43 3-Nitroaniline	+++++	0.24851	0.28446	0.31904	0.29674	0.34237						
	0.33980						AVRG		0.30515		11.80285	
44 Acenaphthene	1.20137	1.00566	1.04441	1.06149	1.00513	1.09466						
	1.05404						AVRG		1.06668		6.30262	
45 2,4-Dinitrophenol	+++++	1162	31343	227423	718089	1456316						
	2854102						QUAD	0.000e+000	5.32321	-0.25058	0.99647	<-
46 Dibenzofuran	2.02071	1.66680	1.72199	1.73655	1.60095	1.79131						
	1.72114						AVRG		1.75135		7.58634	

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
47 4-Nitrophenol	+++++	14226	49332	148774	350369	610750					
	1073305						QUAD	0.000e+000	5.65986	-0.10326	0.99889
48 2,4-Dinitrotoluene	+++++	0.33605	0.38061	0.43028	0.39053	0.45251					
	0.44895						AVRG		0.40649		11.20533
49 Fluorene	2.11180	1.76953	1.84524	1.84724	1.72033	1.81665					
	1.70938						AVRG		1.83145		7.40432
50 Diethylphthalate	1.73480	1.56068	1.53592	1.64865	1.44242	1.76401					
	1.68364						AVRG		1.62430		7.14349
51 4-Chlorophenyl-phenylether	1.15800	0.93735	0.96163	1.01015	0.88422	0.98421					
	0.91949						AVRG		0.97929		9.09528
52 4-Nitroaniline	+++++	0.27423	0.31920	0.36551	0.33992	0.40192					
	0.39987						AVRG		0.35011		14.11751
53 4,6-Dinitro-2-methylphenol	+++++	29146	128657	451603	1141937	2097838					
	3907775						QUAD	0.000e+000	6.91369	-0.28358	0.99859

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
54 N-Nitrosodiphenylamine	0.59174	0.53556	0.56587	0.62677	0.53063	0.59570					
	0.57745						AVRG		0.57482		5.94312
56 4-Bromophenyl-phenylether	0.26596	0.22323	0.23943	0.27115	0.23997	0.27668					
	0.27573						AVRG		0.25602		8.36414
57 Hexachlorobenzene	0.29698	0.23596	0.24746	0.27726	0.23322	0.26578					
	0.26442						AVRG		0.26015		8.83670
58 Pentachlorophenol	+++++	15027	51252	182806	504425	916281					
	1703210						QUAD	0.000e+000	7.91738	-0.73777	0.99844
60 Phenanthrene	1.09096	0.89325	0.93104	0.98666	0.89388	0.97453					
	0.95801						AVRG		0.96119		7.07323
61 Anthracene	0.97698	0.88207	0.93995	1.00256	0.94497	0.97807					
	0.94134						AVRG		0.95228		4.08038
62 Carbazole	0.80236	0.75674	0.82904	0.95401	0.84207	0.94663					
	0.91833						AVRG		0.86417		8.82426

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63 Di-n-butylphthalate	0.76945	0.78241	0.94542	1.09724	0.98228	1.11087					
	1.06895						AVRG		0.96523		14.76294
64 Fluoranthene	1.83045	1.53273	1.69162	1.71720	1.64886	1.85761					
	1.80161						AVRG		1.72572		6.62852
65 Pyrene	2.03172	1.72309	1.85698	1.89693	1.66915	1.82387					
	1.77191						AVRG		1.82481		6.57694
67 Butylbenzylphthalate	15963	54195	131574	361796	747612	1275127					
	2222069						QUAD	0.000e+000	1.66291	-0.02242	0.99910
68 Benzo(a)anthracene	1.37017	1.17751	1.28117	1.26775	1.22492	1.33108					
	1.30764						AVRG		1.28004		5.06229
70 3,3'-Dichlorobenzidine	+++++	109082	258857	695962	1455887	2483520					
	4294878						QUAD	0.000e+000	2.55218	-0.01333	0.99896
71 Chrysene	1.32554	1.09284	1.13861	1.14019	1.09567	1.17468					
	1.09196						AVRG		1.15135		7.19925

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	20.0000 Level 7										
72 bis(2-Ethylhexyl)phthalate	18016	67455	162205	460238	968097	1652176					
	2787873						QUAD	0.000e+000	1.45165	0.05996	0.99721
73 Di-n-octylphthalate	1.06027	0.85450	0.87044	0.96158	0.85181	0.99583					
	0.95250						AVRG		0.93528		8.50606
74 Benzo(b)fluoranthene	1.20864	1.14709	1.14517	1.36875	1.26830	1.37282					
	1.37389						AVRG		1.26924		8.23621
75 Benzo(k)fluoranthene	1.32495	1.18084	1.35491	1.37164	1.26586	1.50904					
	1.48643						AVRG		1.35624		8.53801
187 Total Benzofluoranthenes	1.19363	1.09126	1.16825	1.30410	1.20560	1.35773					
	1.35364						AVRG		1.23917		8.16907
76 Benzo(a)pyrene	25983	77143	194966	464600	1008040	1591795					
	2809643						QUAD	0.000e+000	0.83208	-0.00524	0.99917
78 Indeno(1,2,3-cd)pyrene	18856	55897	137909	356233	815881	1385879					
	2534503						QUAD	0.000e+000	1.01205	-0.02258	0.99835

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79 Dibenzo(a,h)anthracene	14219	46959	112505	294764	668509	1144114						
	2091414						QUAD	0.000e+000	1.22823	-0.03357	0.99825	
80 Benzo(g,h,i)perylene	17069	48735	110200	283553	650179	1151263						
	2151989						QUAD	0.000e+000	1.24846	-0.04323	0.99780	
90 N-Nitrosodimethylamine	0.71309	0.75515	0.87746	0.98364	0.83460	0.85109						
	0.78035						AVRG		0.82791		10.80638	
91 Aniline	2.11345	1.90858	2.02775	1.96557	1.85334	1.83207						
	1.74479						AVRG		1.92079		6.52023	
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	
93 Benzidine	+++++	94244	233886	457874	1382091	1329832						
	2294259						QUAD	0.000e+000	2.14244	0.29989	0.98574	<-
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	

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INITIAL CALIBRATION DATA

Start Cal Date : 30-DEC-2022 08:06
End Cal Date : 16-FEB-2023 19:30
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Last Edit : 17-Feb-2023 10:36 deenayd

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
97 Caffeine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
98 Retene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
99 Perylene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
100 3-beta-Coprostanol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
101 Cholesterol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
102 beta-Sitosterol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
103 Pyridine	2.25509 / 2.49678	2.34554	2.83461	3.09016	2.61958	2.69879	AVRG		2.62008		10.98457	

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
188 2,6-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
189 N-Nitrosomethylethylamine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
$ 1 2-Fluorophenol	0.83343	0.91793	1.12709	1.22150	1.16130	1.14566						
	1.07834						AVRG		1.06932		13.19390	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
$ 2 Phenol-d5	1.65067	1.52985	1.71759	1.82100	1.74974	1.73721						
	1.66814						AVRG		1.69631		5.44111	
$ 5 2-Chlorophenol-d4	1.24192	1.13869	1.20619	1.25865	1.21688	1.21774						
	1.19252						AVRG		1.21037		3.18147	
$ 10 1,2-Dichlorobenzene-d4	1.07587	0.88608	0.90721	0.91186	0.86456	0.86416						
	0.84102						AVRG		0.90725		8.65161	

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
$ 18 Nitrobenzene-d5	0.50102	0.42405	0.45650	0.47343	0.46403	0.46167					
	0.45410						AVRG		0.46211		4.99005
$ 36 2-Fluorobiphenyl	1.72868	1.38232	1.42531	1.40442	1.37899	1.37304					
	1.32495						AVRG		1.43110		9.41958
$ 55 2,4,6-Tribromophenol	+++++	24262	62102	151326	354481	603341					
	1113180						QUAD	0.000e+000	4.35777	-0.20851	0.99952
$ 66 Terphenyl-d14	1.47811	1.25932	1.34753	1.26669	1.24787	1.25435					
	1.21582						AVRG		1.29567		6.93927
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
$ 88 Dibenz(a,h)anthracene-d14	+++++ / +++++	+++++	+++++	+++++	+++++	+++++ / +++++	AVRG		0.000e+000		0.000e+000
$ 89 Diphenyl-d10	+++++ / +++++	+++++	+++++	+++++	+++++	+++++ / +++++	AVRG		0.000e+000		0.000e+000
$ 95 D10-1-methylnaphthalene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++ / +++++	AVRG		0.000e+000		0.000e+000

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Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Batch File: \\target\share\chem3\nt14.i\20230216.b
Inst ID: nt14.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	NT1423021604	NT1423021605	NT1423021606	NT1423021607	NT1423021608	NT1423021609	NT1423021610
INJ.DATE:	16-FEB-2023	16-FEB-2023	16-FEB-2023	16-FEB-2023	16-FEB-2023	16-FEB-2023	16-FEB-2023
INJ.TIME:	15:54	16:30	17:06	17:42	18:18	18:54	19:30

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.682	6.674	6.674	6.674	6.674	6.674	6.682	6.682	3.682-9.682	6.676	0.004
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.785	15.785-21.785	+++++	+++++
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.645	5.645-11.645	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.455	14.455-20.455	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.696	17.696-23.696	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.219	16.219-22.219	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.949	19.949-25.949	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.196	16.196-22.196	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.503	17.503-23.503	+++++	+++++
177 p-Benzoquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.827	4.827-10.827	+++++	+++++
168 Pentachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.842	12.842-18.842	+++++	+++++
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

Reviewer 1 _____ Date:_____
Reviewer 2 _____ Date:_____

ARI Labs, Inc.
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Batch File: \\target\share\chem3\nt14.i\20230216.b
Inst ID: nt14.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.383	13.383-19.383	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.445	0.000-5.445	+++++	+++++
* 134 Di-n-octylphthalate-d4	24.161	24.153	24.154	24.153	24.154	24.154	24.154	24.161	21.161-27.161	24.155	0.003
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.571	12.571-18.571	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.447	8.447-14.447	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

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Inst ID: nt14.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.252	7.252-13.252	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.697	0.000-5.697	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	15.760	15.753	15.753	15.745	15.745	15.753	15.761	15.760	12.760-18.760	15.753	0.006
178 2-Benzyl-4-Chloropheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.963	15.963-21.963	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.215	18.215-24.215	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.761	13.761-19.761	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.747	15.747-21.747	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.923	13.923-19.923	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.341	11.341-17.341	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.085	11.085-17.085	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	16.463	16.455	16.448	16.440	16.440	16.440	16.440	16.463	13.463-19.463	16.447	0.009
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.140	14.140-20.140	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.070	12.070-18.070	+++++	+++++
181 3,4,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.232	12.232-18.232	+++++	+++++
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.374	13.374-19.374	+++++	+++++
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.120	10.120-16.120	+++++	+++++
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.096	11.096-17.096	+++++	+++++
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.096	11.096-17.096	+++++	+++++
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.735	8.735-14.735	+++++	+++++

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Batch File: \\target\share\chem3\nt14.i\20230216.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.243	6.243-12.243	+++++	+++++
	105 1-methylnaphthalene	13.068	13.061	13.061	13.053	13.053	13.053	13.053	13.068	10.068-16.068	13.057	0.006
	151 1,2,4,5-Tetrachloroben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.499	8.499-14.499	+++++	+++++
	152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
	153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.642	24.642-30.642	+++++	+++++
	154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.953	22.953-28.953	+++++	+++++
	155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.750	24.750-30.750	+++++	+++++
	156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.464	23.464-29.464	+++++	+++++
	157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.099	24.099-30.099	+++++	+++++
	158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.513	21.513-27.513	+++++	+++++
	159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.132	22.132-28.132	+++++	+++++
	160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.528	16.528-22.528	+++++	+++++
	161 1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
	162 1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
	163 1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
	164 1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
	165 1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
	166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
	167 2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$	2 Phenol-d5	8.289	8.274	8.266	8.266	8.266	8.266	8.266	8.289	5.289-11.289	8.271	0.009
	3 Phenol	8.312	8.297	8.289	8.289	8.282	8.289	8.289	8.312	5.312-11.312	8.293	0.010
	4 Bis(2-Chloroethyl)ethe	8.467	8.459	8.459	8.451	8.452	8.452	8.452	8.467	5.467-11.467	8.456	0.006
$	5 2-Chlorophenol-d4	8.544	8.544	8.537	8.536	8.537	8.537	8.537	8.544	5.544-11.544	8.539	0.004

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

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Batch File: \\target\share\chem3\nt14.i\20230216.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	8.575	8.567	8.567	8.559	8.560	8.560	8.567	8.575	5.575-11.575	8.565	0.006
	7 1,3-Dichlorobenzene	8.838	8.838	8.838	8.838	8.838	8.838	8.838	8.838	5.838-11.838	8.838	0.000
*	8 1,4-Dichlorobenzene-d4	8.908	8.900	8.900	8.900	8.900	8.900	8.900	8.908	5.908-11.908	8.901	0.003
	9 1,4-Dichlorobenzene	8.939	8.931	8.931	8.931	8.931	8.931	8.931	8.939	5.939-11.939	8.932	0.003
$	10 1,2-Dichlorobenzene-d4	9.265	9.265	9.265	9.257	9.257	9.257	9.257	9.265	6.265-12.265	9.260	0.004
	11 Benzyl alcohol	9.195	9.187	9.180	9.179	9.180	9.187	9.203	9.195	6.195-12.195	9.187	0.009
	12 1,2-Dichlorobenzene	9.296	9.288	9.288	9.288	9.288	9.288	9.288	9.296	6.296-12.296	9.289	0.003
	13 2-Methylphenol	9.412	9.412	9.405	9.405	9.405	9.405	9.405	9.412	6.412-12.412	9.407	0.004
	14 2,2'-oxybis(1-Chloropr	9.490	9.482	9.482	9.482	9.475	9.475	9.482	9.490	6.490-12.490	9.481	0.005
	15 4-Methylphenol	9.692	9.684	9.676	9.676	9.677	9.677	9.684	9.692	6.692-12.692	9.681	0.006
	16 N-Nitroso-di-n-propyla	9.769	9.754	9.746	9.738	9.739	9.739	9.739	9.769	6.769-12.769	9.746	0.012
	17 Hexachloroethane	9.886	9.878	9.878	9.878	9.878	9.878	9.878	9.886	6.886-12.886	9.879	0.003
$	18 Nitrobenzene-d5	10.010	10.010	10.002	10.002	9.995	10.002	10.002	10.010	7.010-13.010	10.003	0.005
	19 Nitrobenzene	10.049	10.041	10.041	10.033	10.034	10.034	10.033	10.049	7.049-13.049	10.038	0.006
	20 Isophorone	10.522	10.507	10.491	10.483	10.484	10.484	10.491	10.522	7.522-13.522	10.495	0.015
	21 2-Nitrophenol	10.677	10.670	10.670	10.669	10.670	10.670	10.677	10.677	7.677-13.677	10.672	0.004
	22 2,4-Dimethylphenol	10.739	10.732	10.724	10.724	10.724	10.724	10.724	10.739	7.739-13.739	10.727	0.006
	23 Bis(2-Chloroethoxy)met	10.941	10.933	10.926	10.925	10.926	10.926	10.926	10.941	7.941-13.941	10.929	0.006
	24 Benzoic acid	11.150	11.057	10.995	10.925	10.879	+++++	+++++	11.150	8.150-14.150	11.001	0.107
	25 2,4-Dichlorophenol	11.135	11.127	11.119	11.119	11.119	11.119	11.127	11.135	8.135-14.135	11.124	0.006
	26 1,2,4-Trichlorobenzene	11.312	11.313	11.313	11.305	11.305	11.305	11.305	11.312	8.312-14.312	11.308	0.004
*	27 Naphthalene-d8	11.397	11.397	11.398	11.390	11.390	11.390	11.390	11.397	8.397-14.397	11.393	0.004
	28 Naphthalene	11.444	11.436	11.436	11.436	11.429	11.429	11.429	11.444	8.444-14.444	11.434	0.006
	29 4-Chloroaniline	11.590	11.583	11.575	11.567	11.568	11.568	11.575	11.590	8.590-14.590	11.575	0.009

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Batch File: \\target\share\chem3\nt14.i\20230216.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	11.807	11.799	11.799	11.799	11.799	11.799	11.799	11.807	8.807-14.807	11.800	0.003
	31 4-Chloro-3-methylpheno	12.550	12.542	12.534	12.534	12.535	12.535	12.542	12.550	9.550-15.550	12.539	0.006
	32 2-Methylnaphthalene	12.844	12.836	12.836	12.836	12.836	12.829	12.836	12.844	9.844-15.844	12.836	0.004
	33 Hexachlorocyclopentadi	13.308	13.308	13.308	13.300	13.301	13.301	13.301	13.308	10.308-16.308	13.304	0.004
	34 2,4,6-Trichlorophenol	13.471	13.463	13.463	13.455	13.456	13.455	13.463	13.471	10.471-16.471	13.461	0.006
	35 2,4,5-Trichlorophenol	13.548	13.540	13.533	13.533	13.533	13.533	13.541	13.548	10.548-16.548	13.537	0.006
$	36 2-Fluorobiphenyl	13.633	13.626	13.626	13.625	13.618	13.618	13.618	13.633	10.633-16.633	13.623	0.006
	37 2-Chloronaphthalene	13.842	13.834	13.835	13.827	13.827	13.827	13.827	13.842	10.842-16.842	13.831	0.006
	38 2-Nitroaniline	14.121	14.113	14.098	14.098	14.090	14.090	14.098	14.121	11.121-17.121	14.101	0.012
	39 Dimethylphthalate	14.562	14.547	14.539	14.531	14.531	14.531	14.531	14.562	11.562-17.562	14.539	0.012
	40 Acenaphthylene	14.717	14.709	14.702	14.701	14.702	14.702	14.702	14.717	11.717-17.717	14.705	0.006
	41 2,6-Dinitrotoluene	14.694	14.686	14.678	14.670	14.671	14.671	14.671	14.694	11.694-17.694	14.677	0.009
*	42 Acenaphthene-d10	15.026	15.019	15.019	15.018	15.019	15.019	15.019	15.026	12.026-18.026	15.020	0.003
	43 3-Nitroaniline	14.987	14.972	14.957	14.949	14.949	14.949	14.957	14.987	11.987-17.987	14.960	0.015
	44 Acenaphthene	15.096	15.088	15.088	15.080	15.081	15.081	15.081	15.096	12.096-18.096	15.085	0.006
	45 2,4-Dinitrophenol	15.204	15.181	15.173	15.165	15.166	15.282	+++++	15.204	12.204-18.204	15.195	0.045
	46 Dibenzofuran	15.428	15.420	15.413	15.413	15.405	15.405	15.405	15.428	12.428-18.428	15.413	0.009
	47 4-Nitrophenol	15.312	15.289	15.274	15.266	15.266	15.274	+++++	15.312	12.312-18.312	15.280	0.018
	48 2,4-Dinitrotoluene	15.513	15.490	15.482	15.475	15.475	15.475	15.475	15.513	12.513-18.513	15.483	0.014
	49 Fluorene	16.139	16.132	16.124	16.124	16.124	16.124	16.124	16.139	13.139-19.139	16.127	0.006
	50 Diethylphthalate	16.016	16.008	16.000	15.992	15.985	15.985	15.985	16.016	13.016-19.016	15.996	0.012
	51 4-Chlorophenyl-phenyle	16.131	16.124	16.116	16.116	16.116	16.116	16.116	16.131	13.131-19.131	16.120	0.006
	52 4-Nitroaniline	16.286	16.255	16.232	16.224	16.217	16.217	16.224	16.286	13.286-19.286	16.236	0.025
	53 4,6-Dinitro-2-methylph	16.363	16.340	16.325	16.317	16.309	16.317	16.371	16.363	13.363-19.363	16.334	0.024

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Batch File: \\target\share\chem3\nt14.i\20230216.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	16.394	16.386	16.379	16.371	16.371	16.363	16.371	16.394	13.394-19.394	16.376	0.011
$	55 2,4,6-Tribromophenol	16.679	16.671	16.664	16.656	16.656	16.656	16.664	16.679	13.679-19.679	16.664	0.009
	56 4-Bromophenyl-phenylet	17.134	17.126	17.126	17.119	17.119	17.119	17.119	17.134	14.134-20.134	17.123	0.006
	57 Hexachlorobenzene	17.443	17.443	17.435	17.435	17.428	17.428	17.435	17.443	14.443-20.443	17.435	0.006
	58 Pentachlorophenol	17.807	17.799	17.792	17.791	17.799	17.815	+++++	17.807	14.807-20.807	17.801	0.009
*	59 Phenanthrene-d10	18.070	18.062	18.055	18.054	18.055	18.055	18.055	18.070	15.070-21.070	18.058	0.006
	60 Phenanthrene	18.124	18.109	18.109	18.101	18.101	18.101	18.101	18.124	15.124-21.124	18.107	0.008
	61 Anthracene	18.217	18.202	18.202	18.194	18.194	18.194	18.194	18.217	15.217-21.217	18.199	0.009
	62 Carbazole	18.542	18.534	18.534	18.526	18.527	18.527	18.534	18.542	15.542-21.542	18.532	0.006
	63 Di-n-butylphthalate	19.354	19.347	19.339	19.339	19.339	19.339	19.347	19.354	16.354-22.354	19.343	0.006
	64 Fluoranthene	20.515	20.507	20.500	20.499	20.500	20.500	20.500	20.515	17.515-23.515	20.503	0.006
	65 Pyrene	20.940	20.933	20.925	20.925	20.925	20.925	20.925	20.940	17.940-23.940	20.928	0.006
$	66 Terphenyl-d14	21.227	21.219	21.219	21.219	21.219	21.219	21.219	21.227	18.227-24.227	21.220	0.003
	67 Butylbenzylphthalate	22.156	22.148	22.148	22.148	22.148	22.148	22.148	22.156	19.156-25.156	22.149	0.003
	68 Benzo(a)anthracene	23.100	23.093	23.093	23.093	23.093	23.093	23.093	23.100	20.100-26.100	23.094	0.003
*	69 Chrysene-d12	23.131	23.124	23.124	23.124	23.116	23.124	23.124	23.131	20.131-26.131	23.124	0.004
	70 3,3'-Dichlorobenzidine	23.069	23.062	23.054	23.054	23.054	23.054	23.054	23.069	20.069-26.069	23.057	0.006
	71 Chrysene	23.178	23.170	23.170	23.162	23.163	23.163	23.163	23.178	20.178-26.178	23.167	0.006
	72 bis(2-Ethylhexyl)phtha	23.178	23.178	23.178	23.178	23.170	23.178	23.178	23.178	20.178-26.178	23.177	0.003
	73 Di-n-octylphthalate	24.169	24.161	24.161	24.161	24.161	24.161	24.161	24.169	21.169-27.169	24.162	0.003
	74 Benzo(b)fluoranthene	24.958	24.951	24.943	24.943	24.943	24.943	24.943	24.958	21.958-27.958	24.946	0.006
	75 Benzo(k)fluoranthene	24.997	24.989	24.990	24.982	24.982	24.990	24.990	24.997	21.997-27.997	24.988	0.005
	187 Total Benzofluoranthen	24.997	24.989	24.990	24.943	24.982	24.943	24.943	24.997	21.997-27.997	24.970	0.025
	76 Benzo(a)pyrene	25.585	25.578	25.578	25.570	25.570	25.570	25.578	25.585	22.585-28.585	25.576	0.006

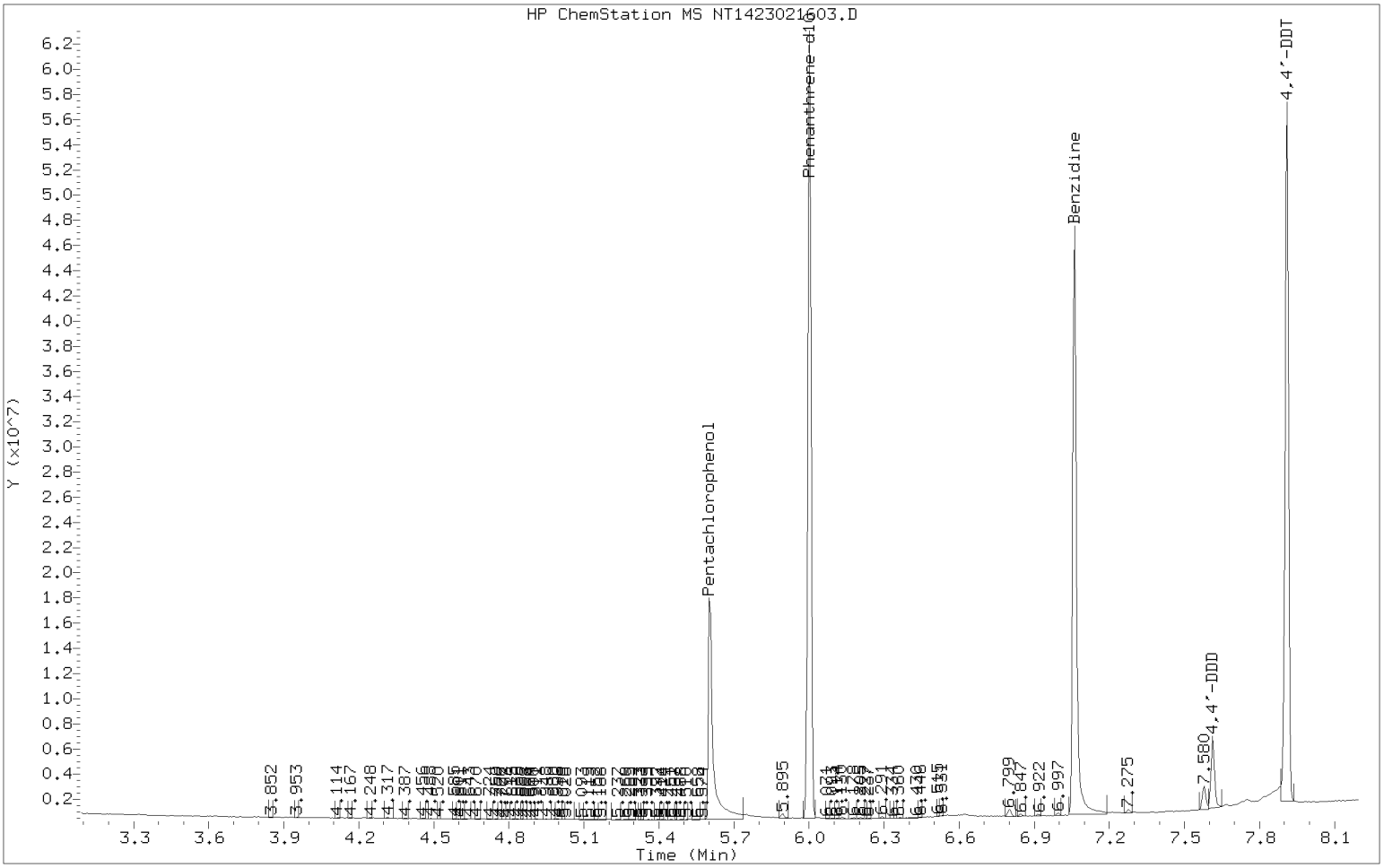
ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

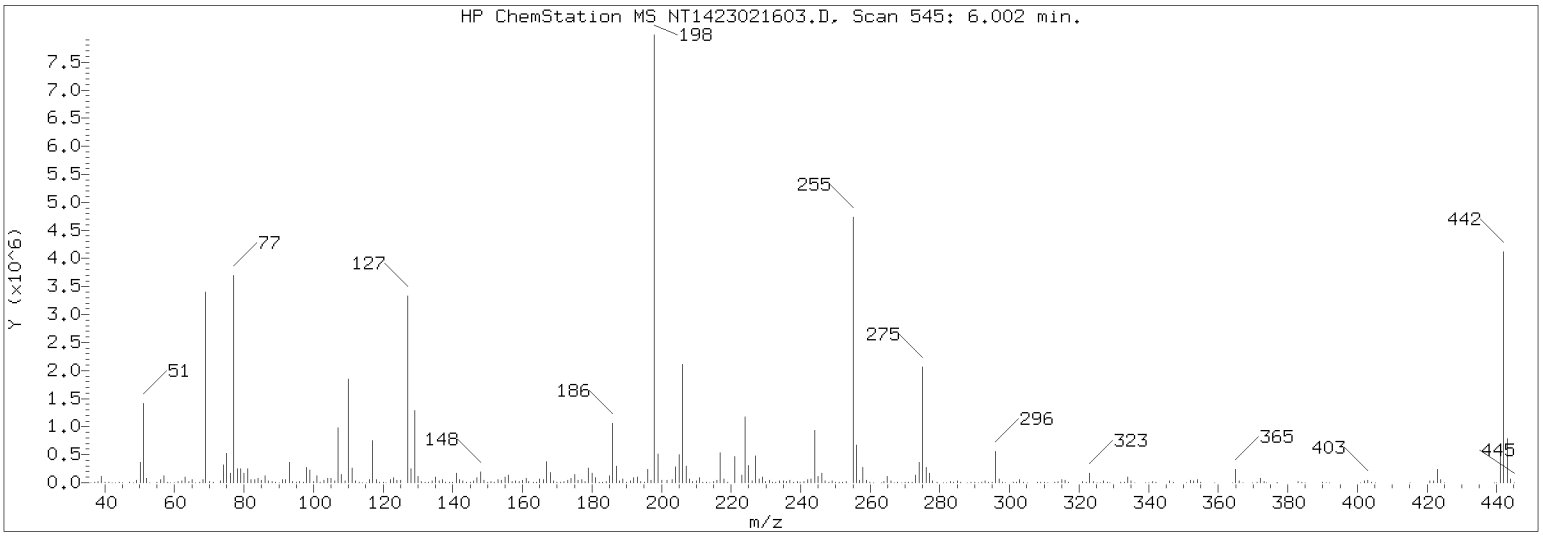
Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Batch File: \\target\share\chem3\nt14.i\20230216.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	77 Perylene-d12	25.694	25.686	25.686	25.686	25.687	25.687	25.686	25.694	22.694-28.694	25.688	0.003
	78 Indeno(1,2,3-cd)pyrene	28.260	28.237	28.237	28.229	28.237	28.237	28.245	28.260	25.260-31.260	28.240	0.010
	79 Dibenzo(a,h)anthracene	28.267	28.260	28.252	28.244	28.245	28.252	28.268	28.267	25.267-31.267	28.256	0.010
	80 Benzo(g,h,i)perylene	29.013	28.998	28.990	28.982	28.983	28.982	28.998	29.013	26.013-32.013	28.992	0.012
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
	90 N-Nitrosodimethylamine	4.597	4.589	4.574	4.566	4.566	4.566	4.566	4.597	1.597-7.597	4.575	0.013
	91 Aniline	8.374	8.366	8.359	8.359	8.359	8.359	8.359	8.374	5.374-11.374	8.362	0.006
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
	93 Benzidine	20.747	20.747	20.739	20.739	20.740	20.747	20.755	20.747	17.747-23.747	20.745	0.006
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
	98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.787	15.787-21.787	+++++	+++++
	99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.361	21.361-27.361	+++++	+++++
	100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.411	22.411-28.411	+++++	+++++
	101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.023	23.023-29.023	+++++	+++++
	102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	79.550	76.550-82.550	+++++	+++++
	103 Pyridine	4.581	4.581	4.582	4.581	4.582	4.589	4.597	4.581	1.581-7.581	4.585	0.006
	188 2,6-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.874	8.874-14.874	+++++	+++++
	189 N-Nitrosomethylethylam	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.818	2.818-8.818	+++++	+++++

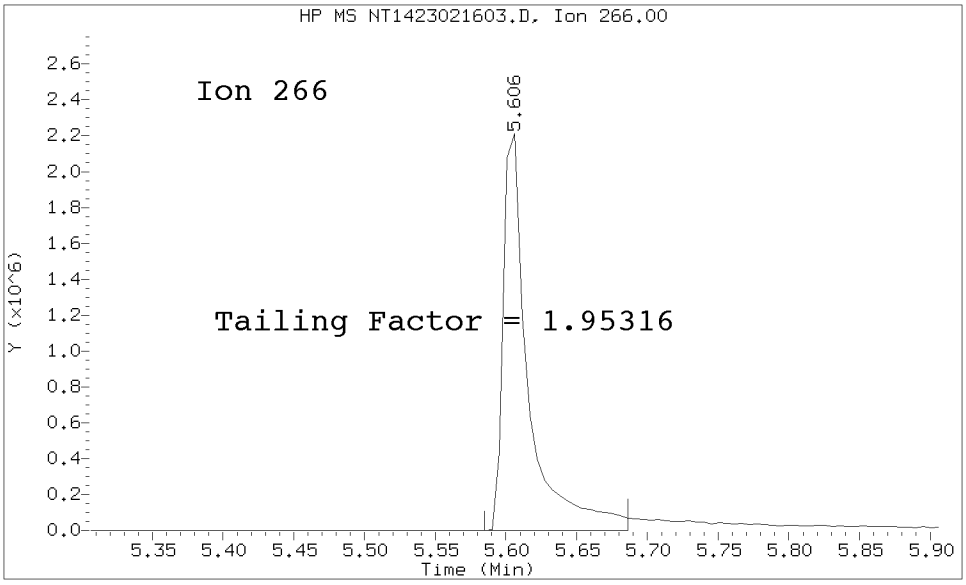
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230216.b/NT1423021603.D/NT1423021603.D
Method Used: \20230216.b\DFTPP8270E.m Inst: nt14
Injection Date: 16-FEB-2023 14:33 Operator: DSD
Sample Info: SLB0234-TUN3 SLB0234-TUN3
Report Date: 02/28/2023 14:33



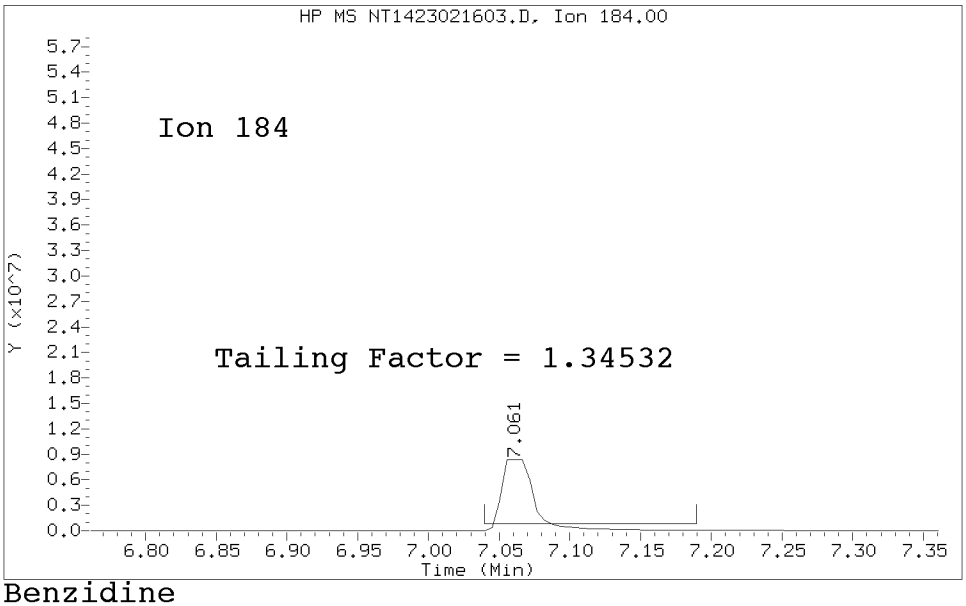


Datafile Analyzed: /20230216.b/NT1423021603.D/NT1423021603.D
Method Used: \20230216.b\DFTPP8270E.m\sw846ddt.m Inst: nt14
Injection Date: 16-FEB-2023 14:33 Operator: DSD
Sample Info: SEQ-TUN3
Report Date: 02/28/2023 14:33



Pentachlorophenol
==========
Exp. RT = 5.606
Found RT = 5.606

Tail Factor = 1.953 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.061
Found RT = 7.061

Tail Factor = 1.345 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.9531646	2.000	PASS
Benzidine	1.3453237	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	9391744			N/A
4,4-DDE	0	0.0	20.0	PASS
4,4-DDD	1131675	10.8	20.0	PASS
4,4-DDD + DDE	1131675	10.8	20.0	PASS

Tuning Sample, nt14.i/20230216.b/NT1423021603.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.74 (1.69)
69	Mass 69 relative abundance	43.59
70	Less than 2.00% of mass 69	0.22 (0.51)
197	Less than 2.00% of mass 198	0.61
199	5.00 - 9.00% of mass 198	6.61
365	1.00 - 100.00% of mass 198	2.96
441	Less than 150.00% of mass 443	7.33 (74.20)
442	Less than 200.00% of mass 198	52.01
443	15.00 - 24.00% of mass 442	9.87 (18.98)

Data File: NT1423021603.D
Spectrum: Avg. Scans 544-546 (6.00), Background Scan 538
Location of Maximum: 198.00
Number of points: 325

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	234	127.00	2627072	210.00	30808	297.00	57304
37.00	4928	128.00	193536	211.00	66264	298.00	4346
38.00	16100	129.00	1002176	212.00	9012	299.00	778
39.00	86128	130.00	83024	213.00	4418	301.00	6536
40.00	1445	131.00	16110	214.00	2279	302.00	8309
41.00	1468	132.00	6808	215.00	17000	303.00	46096
42.00	911	133.00	2061	216.00	33704	304.00	12268
45.00	3191	134.00	28776	217.00	423104	305.00	985
48.00	1341	135.00	78176	218.00	55256	308.00	6175
49.00	6693	136.00	33232	219.00	5491	309.00	4166
50.00	287040	137.00	42088	221.00	341952	310.00	5991
51.00	1107456	138.00	8363	223.00	98976	311.00	732
52.00	60656	139.00	5700	224.00	901184	313.00	4780
53.00	2876	140.00	12940	225.00	232640	314.00	21184
55.00	10099	141.00	129168	226.00	25264	315.00	48568
56.00	44688	142.00	43080	227.00	360896	316.00	28648
57.00	99760	143.00	28672	228.00	53192	317.00	5757
58.00	6888	144.00	8339	229.00	80040	321.00	13596
59.00	1648	145.00	7386	230.00	9491	322.00	5967
60.00	1219	146.00	24536	231.00	35008	323.00	128608
61.00	23280	147.00	65392	232.00	5357	324.00	21648
62.00	28400	148.00	150720	233.00	6636	325.00	923
63.00	82528	149.00	32664	234.00	23312	326.00	1964
64.00	13066	150.00	10353	235.00	28000	327.00	25704
65.00	44920	151.00	16872	236.00	18056	328.00	12093
66.00	4461	152.00	11153	237.00	35552	329.00	3076
67.00	1649	153.00	42824	238.00	4722	332.00	9967
68.00	45176	154.00	34848	239.00	14633	333.00	12196
69.00	2675712	155.00	74600	240.00	12321	334.00	85224
70.00	13596	156.00	107384	241.00	22320	335.00	22864
73.00	21600	157.00	20016	242.00	47792	336.00	2619
74.00	251584	158.00	24240	243.00	50944	339.00	718
75.00	407680	159.00	22784	244.00	707776	340.00	1309
76.00	140096	160.00	40720	245.00	89264	341.00	14289
77.00	2915840	161.00	62672	246.00	131016	342.00	4394
78.00	200000	162.00	16872	247.00	28936	346.00	28552
79.00	186752	163.00	6683	248.00	6201	347.00	5145
80.00	136704	164.00	8065	249.00	26176	350.00	717
81.00	195200	165.00	49128	250.00	5926	351.00	823
82.00	47032	166.00	40400	251.00	5853	352.00	38056
83.00	45208	167.00	281088	252.00	7432	353.00	26224
85.00	31296	168.00	145536	253.00	15033	354.00	38056
86.00	54160	169.00	23504	254.00	9410	355.00	6985
87.00	26064	170.00	9632	255.00	3554304	359.00	2383
88.00	9527	171.00	12313	256.00	515328	364.00	1635
89.00	7167	172.00	22392	257.00	38256	365.00	181568
90.00	698	173.00	32920	258.00	210304	366.00	24640
91.00	40408	174.00	61832	259.00	31408	367.00	955
92.00	45528	175.00	112128	260.00	6139	370.00	3600

93.00	296960	176.00	31504	261.00	5764	371.00	8738
94.00	22352	177.00	48936	263.00	1078	372.00	60448
95.00	4027	178.00	18064	264.00	5808	373.00	16079
96.00	11069	179.00	205632	265.00	83712	374.00	1592
97.00	3421	180.00	139904	266.00	10984	377.00	1690
98.00	217408	181.00	66784	267.00	858	383.00	15955
99.00	183808	182.00	10904	268.00	681	384.00	4548
100.00	17952	183.00	6693	269.00	1031	385.00	782
101.00	98832	184.00	17728	270.00	3497	390.00	7317
102.00	4121	185.00	100784	271.00	7357	391.00	5379
103.00	32928	186.00	819968	272.00	11090	392.00	3751
104.00	64456	187.00	233216	273.00	102560	401.00	3177
105.00	58656	188.00	25416	274.00	276800	402.00	23400
106.00	20736	189.00	49520	275.00	1550848	403.00	32568
107.00	771648	190.00	8839	276.00	207552	404.00	11566
108.00	119928	191.00	20984	277.00	134784	405.00	2935
109.00	22672	192.00	68752	278.00	23960	415.00	674
110.00	1432064	193.00	74840	279.00	4579	421.00	24160
111.00	204544	194.00	19224	281.00	931	422.00	26616
112.00	24896	195.00	6565	282.00	3437	423.00	186048
113.00	8405	196.00	183680	283.00	14509	424.00	41216
114.00	1701	197.00	37512	284.00	9331	425.00	4321
115.00	1796	198.00	6138368	285.00	23984	438.00	1391
116.00	40928	199.00	405696	286.00	4717	439.00	1400
117.00	604736	200.00	30232	288.00	884	440.00	2550
118.00	44648	201.00	34040	289.00	5002	441.00	449664
119.00	8501	203.00	43656	290.00	4674	442.00	3192320
120.00	8877	204.00	213312	291.00	3293	443.00	606016
121.00	3538	205.00	381120	292.00	6118	444.00	54800
122.00	44736	206.00	1595904	293.00	25544	445.00	2486
123.00	73984	207.00	210944	294.00	6665		
124.00	34728	208.00	47112	295.00	9652		
125.00	32952	209.00	14622	296.00	426176		

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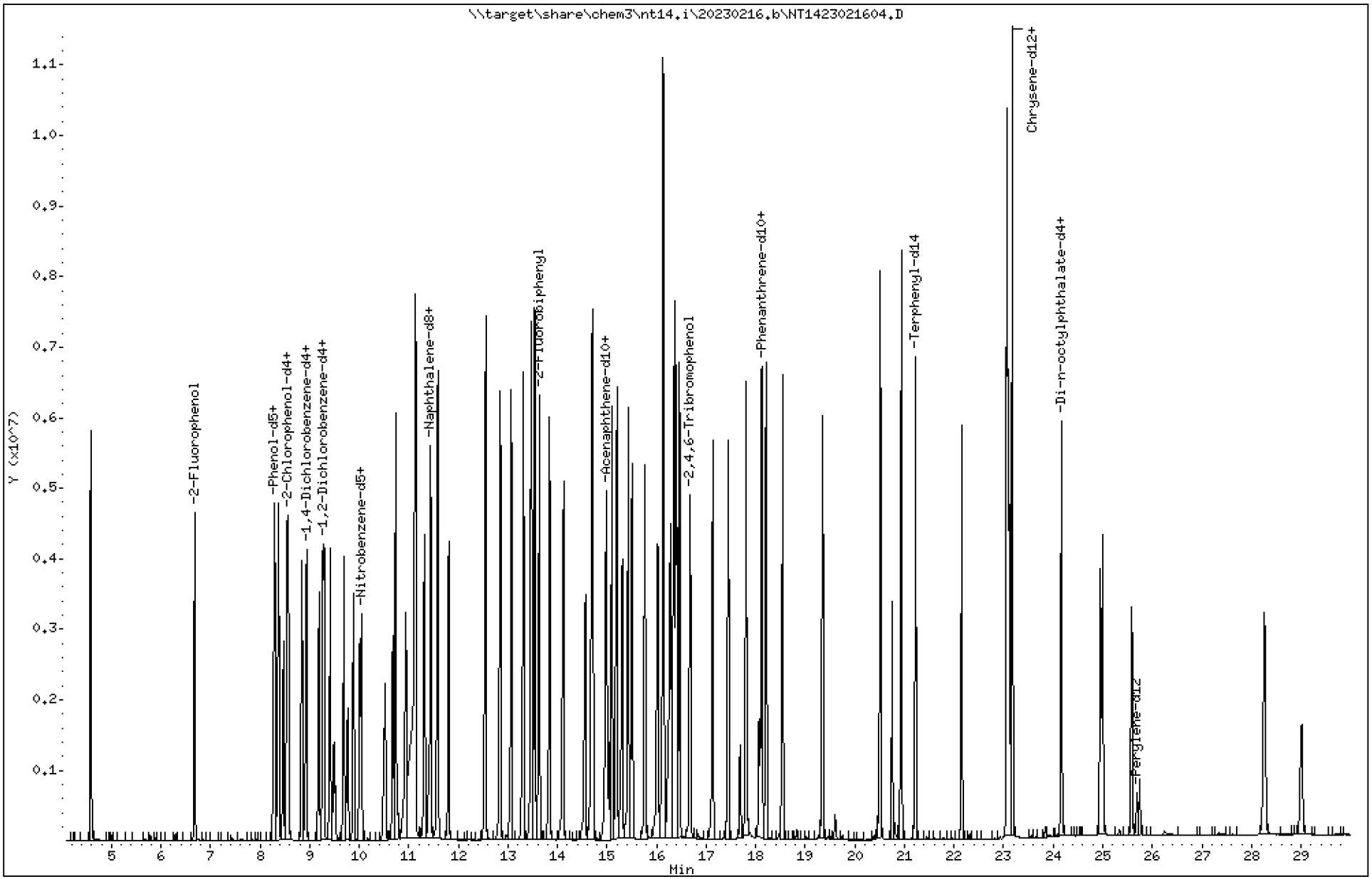
Date : 16-FEB-2023 15:54
Client ID:
Sample Info: SLB0234-CAL7

Instrument: nt14.i
Operator: DSD
Column diameter: 0.25

Column phase: ZB-5msi



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230216.b\NT1423021604.D
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Inj Date : 16-FEB-2023 15:54 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
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Misc Info :
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Meth Date : 17-Feb-2023 15:05 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 15:54 Cal File: NT1423021604.D
Als bottle: 2 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.681	6.682	(0.750)	2097651	30.0000	30.25
$	2 Phenol-d5	99	8.289	8.266	(0.931)	3244970	30.0000	29.50
	3 Phenol	94	8.312	8.289	(0.933)	2296985	20.0000	19.73
$	5 2-Chlorophenol-d4	132	8.543	8.536	(0.959)	2319767	30.0000	29.56
	4 Bis(2-Chloroethyl)ether	93	8.466	8.451	(0.950)	1763929	20.0000	19.83
	6 2-Chlorophenol	128	8.574	8.567	(0.963)	1698980	20.0000	20.72
	7 1,3-Dichlorobenzene	146	8.837	8.838	(0.992)	1759764	20.0000	19.28
*	8 1,4-Dichlorobenzene-d4	152	8.907	8.900	(1.000)	259368	4.00000	
	9 1,4-Dichlorobenzene	146	8.938	8.931	(1.003)	1692043	20.0000	19.53
$	10 1,2-Dichlorobenzene-d4	152	9.264	9.257	(1.040)	1090674	20.0000	18.54
	12 1,2-Dichlorobenzene	146	9.295	9.288	(1.044)	1678806	20.0000	19.38
	11 Benzyl alcohol	108	9.194	9.202	(1.032)	1339870	20.0000	19.94
	14 2,2'-oxybis(1-Chloropropane)	121	9.489	9.482	(1.065)	561070	20.0000	22.64(M)
	13 2-Methylphenol	108	9.412	9.404	(1.057)	1658461	20.0000	20.40
	17 Hexachloroethane	117	9.885	9.878	(1.110)	778131	20.0000	20.66
	16 N-Nitroso-di-n-propylamine	70	9.769	9.738	(1.097)	1567833	20.0000	21.18
	15 4-Methylphenol	108	9.691	9.684	(1.088)	1798437	20.0000	20.95
$	18 Nitrobenzene-d5	82	10.009	10.002	(0.878)	2207174	20.0000	19.65
	19 Nitrobenzene	77	10.048	10.033	(0.882)	2270540	20.0000	20.15
	20 Isophorone	82	10.521	10.491	(0.923)	3389977	20.0000	22.80
	21 2-Nitrophenol	139	10.677	10.677	(0.937)	1117285	20.0000	19.94
	22 2,4-Dimethylphenol	107	10.739	10.724	(0.942)	3138699	40.0000	36.88
	23 Bis(2-Chloroethoxy)methane	93	10.940	10.925	(0.960)	1958263	20.0000	20.25
	24 Benzoic acid	105	11.150	10.879	(0.978)	5699876	80.0000	79.64(M)
	25 2,4-Dichlorophenol	162	11.134	11.127	(0.977)	2833952	40.0000	38.91
	26 1,2,4-Trichlorobenzene	180	11.312	11.305	(0.993)	1677314	20.0000	19.01
*	27 Naphthalene-d8	136	11.397	11.389	(1.000)	972103	4.00000	
	28 Naphthalene	128	11.443	11.428	(1.004)	4664022	20.0000	19.46
	29 4-Chloroaniline	127	11.590	11.575	(1.017)	4060271	40.0000	39.65
	30 Hexachlorobutadiene	225	11.806	11.799	(1.036)	1058523	20.0000	19.46
	31 4-Chloro-3-methylphenol	107	12.549	12.542	(1.101)	3210029	40.0000	40.72
	32 2-Methylnaphthalene	142	12.843	12.836	(1.127)	3492908	20.0000	19.46
	33 Hexachlorocyclopentadiene	237	13.308	13.301	(0.886)	2559077	40.0000	44.78
	34 2,4,6-Trichlorophenol	196	13.470	13.463	(0.896)	2545083	40.0000	43.81

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	35	2,4,5-Trichlorophenol	196	13.547	13.541	(0.902)	2644678	40.0000	42.03
$	36	2-Fluorobiphenyl	172	13.633	13.617	(0.907)	3907816	20.0000	18.52
	37	2-Chloronaphthalene	162	13.842	13.826	(0.921)	3507429	20.0000	20.36
	38	2-Nitroaniline	65	14.120	14.097	(0.940)	2374702	40.0000	42.40
	39	Dimethylphthalate	163	14.561	14.531	(0.969)	3569925	20.0000	19.81
	40	Acenaphthylene	152	14.716	14.701	(0.979)	4916800	20.0000	18.71
	41	2,6-Dinitrotoluene	165	14.693	14.670	(0.978)	1758235	40.0000	41.47
*	42	Acenaphthene-d10	164	15.026	15.018	(1.000)	589881	4.00000	
	43	3-Nitroaniline	138	14.987	14.957	(0.997)	2004416	40.0000	44.54
	44	Acenaphthene	153	15.095	15.080	(1.005)	3108791	20.0000	19.76
	45	2,4-Dinitrophenol	184	15.203	15.282	(1.012)	2854102	80.0000	79.56
	46	Dibenzofuran	168	15.428	15.405	(1.027)	5076349	20.0000	19.66
	47	4-Nitrophenol	109	15.312	15.273	(1.019)	1073305	40.0000	39.83
	48	2,4-Dinitrotoluene	165	15.513	15.475	(1.032)	2648290	40.0000	44.18
	50	Diethylphthalate	149	16.015	15.984	(1.066)	4965731	20.0000	20.73
	49	Fluorene	166	16.139	16.124	(1.074)	5041652	20.0000	18.67
	51	4-Chlorophenyl-phenylether	204	16.131	16.116	(1.074)	2711944	20.0000	18.78
	52	4-Nitroaniline	138	16.285	16.224	(1.084)	2358738	40.0000	45.69
	53	4,6-Dinitro-2-methylphenol	198	16.362	16.370	(0.906)	3907775	80.0000	79.66
	54	N-Nitrosodiphenylamine	169	16.393	16.370	(0.907)	3380614	20.0000	20.09
$	55	2,4,6-Tribromophenol	330	16.678	16.663	(1.110)	1113180	30.0000	29.92
	56	4-Bromophenyl-phenylether	248	17.133	17.118	(0.948)	1614262	20.0000	21.54
	57	Hexachlorobenzene	284	17.442	17.434	(0.965)	1547999	20.0000	20.33
	58	Pentachlorophenol	266	17.806	17.814	(0.985)	1703210	40.0000	39.82
*	59	Phenanthrene-d10	188	18.069	18.054	(1.000)	1170883	4.00000	
	60	Phenanthrene	178	18.123	18.101	(1.003)	5608583	20.0000	19.93
	61	Anthracene	178	18.216	18.193	(1.008)	5510967	20.0000	19.77
	62	Carbazole	167	18.541	18.534	(1.026)	5376297	20.0000	21.25
	63	Di-n-butylphthalate	149	19.354	19.346	(1.071)	6258073	20.0000	22.15
	64	Fluoranthene	202	20.514	20.499	(0.887)	6399044	20.0000	20.88
	65	Pyrene	202	20.940	20.925	(0.905)	6293561	20.0000	19.42
$	66	Terphenyl-d14	244	21.226	21.219	(0.918)	4318428	20.0000	18.77
	67	Butylbenzylphthalate	149	22.155	22.148	(0.958)	2222069	20.0000	19.93
	68	Benzo(a)anthracene	228	23.100	23.092	(0.999)	4644554	20.0000	20.43
*	69	Chrysene-d12	240	23.131	23.123	(1.000)	710371	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.069	23.054	(0.997)	4294878	60.0000	59.77
	71	Chrysene	228	23.177	23.162	(1.002)	3878496	20.0000	18.97
	72	bis(2-Ethylhexyl)phthalate	149	23.177	23.178	(0.959)	2787873	20.0000	19.84
*	134	Di-n-octylphthalate-d4	153	24.160	24.153	(1.000)	918441	4.00000	
	73	Di-n-octylphthalate	149	24.168	24.161	(1.000)	4374080	20.0000	20.37
	74	Benzo(b)fluoranthene	252	24.958	24.943	(0.971)	3096394	20.0000	21.65
	75	Benzo(k)fluoranthene	252	24.997	24.989	(0.973)	3350043	20.0000	21.92(H)
	76	Benzo(a)pyrene	252	25.585	25.578	(0.996)	2809643	20.0000	19.93
*	77	Perylene-d12	264	25.693	25.686	(1.000)	450749	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.259	28.244	(1.100)	2534503	20.0000	19.91
	79	Dibenzo(a,h)anthracene	278	28.267	28.267	(1.100)	2091414	20.0000	19.90
	80	Benzo(g,h,i)perylene	276	29.013	28.997	(1.129)	2151989	20.0000	19.90
	90	N-Nitrosodimethylamine	74	4.596	4.566	(0.516)	2023986	40.0000	37.70
	91	Aniline	93	8.374	8.358	(0.940)	4525432	40.0000	36.33
	93	Benzidine	184	20.746	20.754	(0.897)	2294259	40.0000	40.19
	103	Pyridine	79	4.581	4.597	(0.514)	3237928	40.0000	38.12
	105	1-methylnaphthalene	142	13.068	13.053	(1.147)	3372298	20.0000	20.01
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.462	16.440	(1.096)	5657218	20.0000	19.43
	187	Total Benzofluoranthenes	252	24.997	24.943	(0.973)	6101526	40.0000	43.69(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
120 2,3,4,6-Tetrachlorophenol	232	15.760	15.760	(1.049)	1465480	20.0000	19.94

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021604.D
Lab Smp Id: SLB0234-CAL7
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 17:06
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	375798	187899	751596	259368	-30.98
27 Naphthalene-d8	1378169	689085	2756338	972103	-29.46
42 Acenaphthene-d10	847135	423568	1694270	589881	-30.37
59 Phenanthrene-d10	1675180	837590	3350360	1170883	-30.10
69 Chrysene-d12	1073562	536781	2147124	710371	-33.83
134 Di-n-octylphthala	1344129	672065	2688258	918441	-31.67
77 Perylene-d12	721978	360989	1443956	450749	-37.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.90	8.40	9.40	8.91	0.08
27 Naphthalene-d8	11.40	10.90	11.90	11.40	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.03	0.05
59 Phenanthrene-d10	18.05	17.55	18.55	18.07	0.08
69 Chrysene-d12	23.12	22.62	23.62	23.13	0.03
134 Di-n-octylphthala	24.15	23.65	24.65	24.16	0.03
77 Perylene-d12	25.69	25.19	26.19	25.69	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021604.D

Lab ID: SLB0234-CAL7
nt14.i, ABN.m, 16-FEB-2023 15:54

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.978	0.000	0.9783	Benzoic acid
1.012	0.000	1.0118	2,4-Dinitrophenol
1.019	0.000	1.0190	4-Nitrophenol
0.985	0.000	0.9854	Pentachlorophenol

RRT check based on Ccal File: NT1423021610.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Quant Ion Manual Peak Adjustment Report

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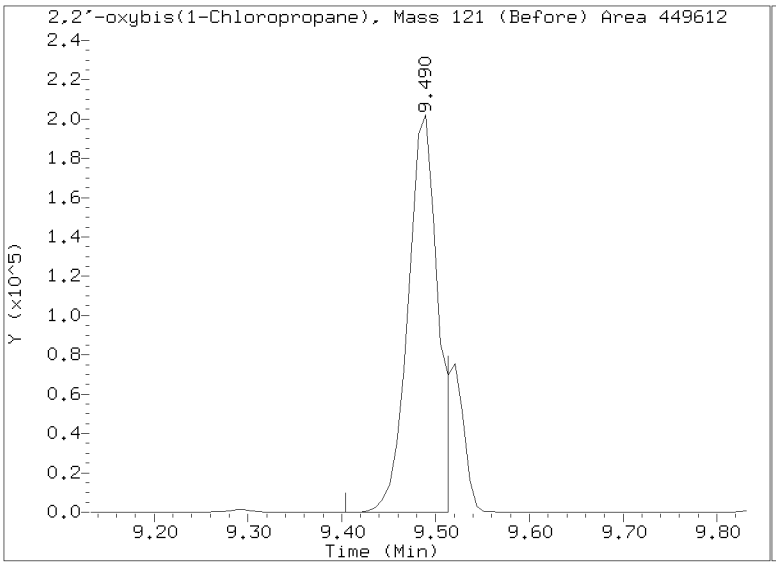
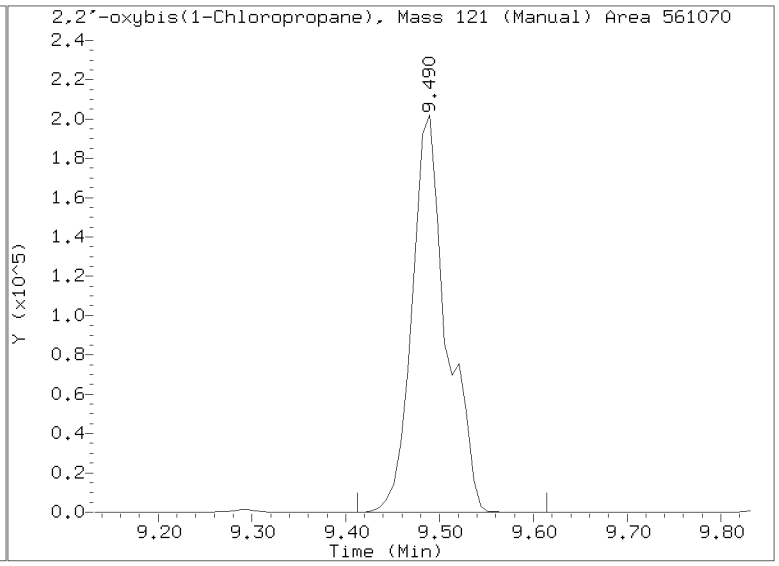
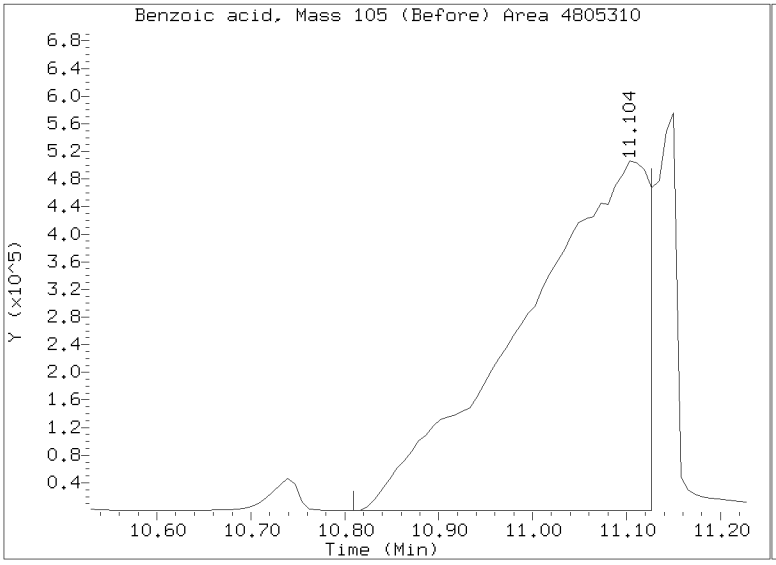
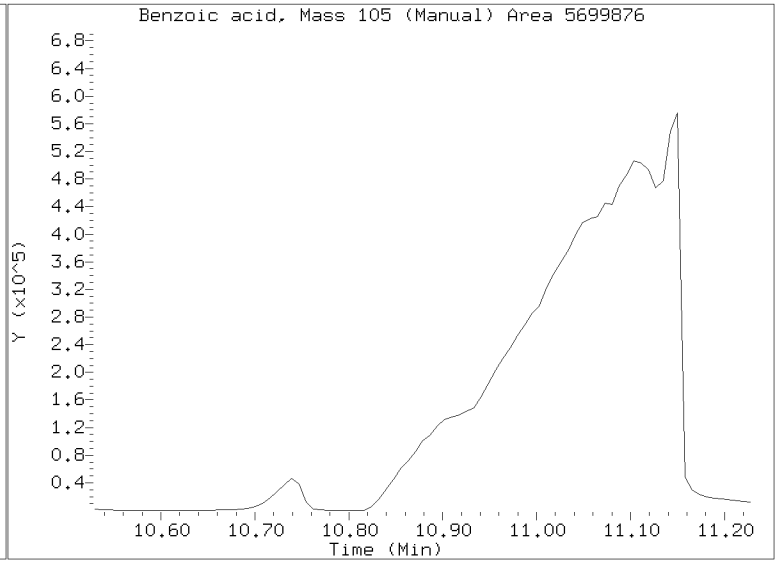
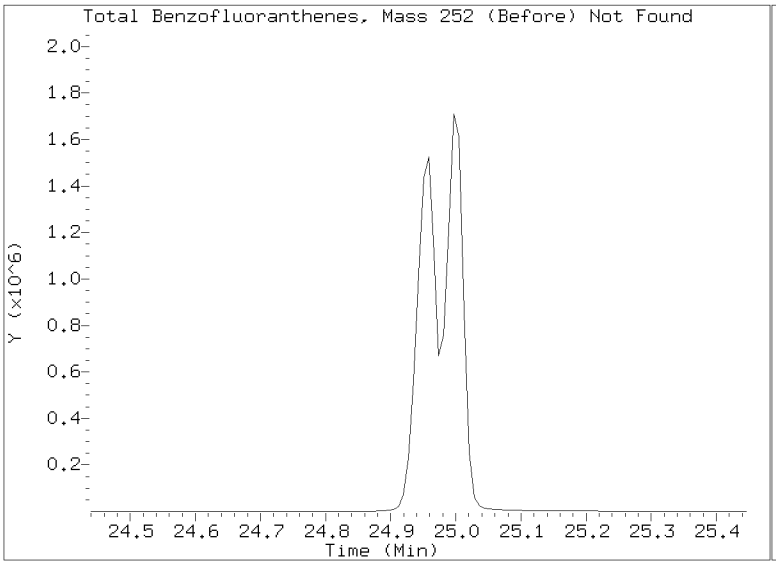
Injection Date: 16-FEB-2023 15:54
Lab ID:SLB0234-CAL7 Client ID:
Report Date: 02/28/2023 14:37

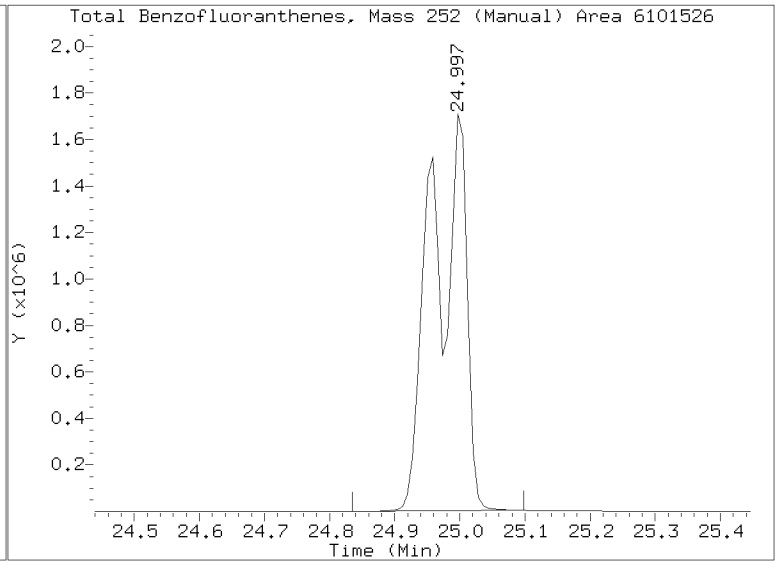












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Page 1

Date : 16-FEB-2023 16:30

Client ID:

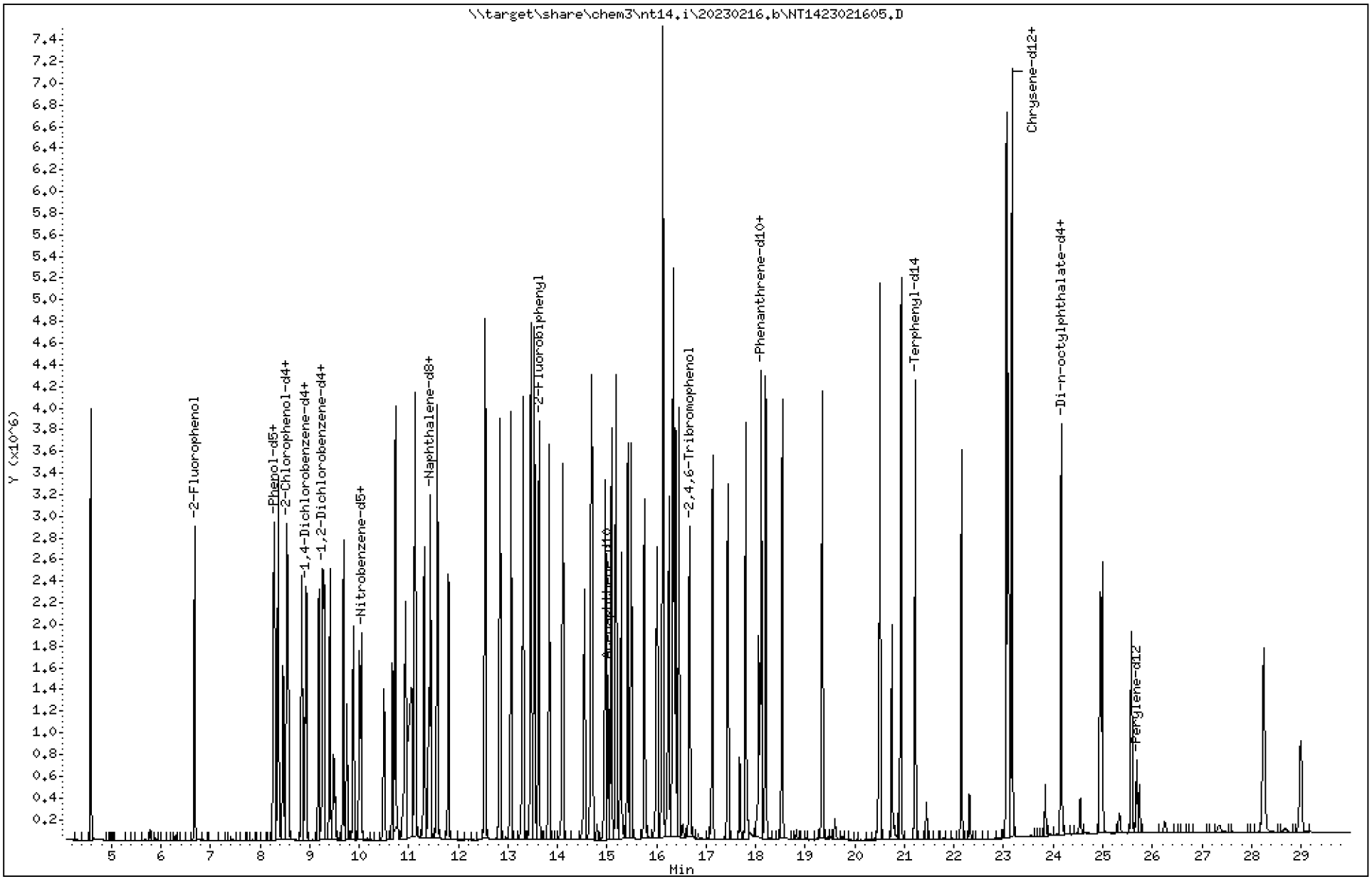
Instrument: nt14.i

Sample Info: SLB0234-CAL6

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230216.b\NT1423021605.D
Lab Smp Id: SLB0234-CAL6
Inj Date : 16-FEB-2023 16:30 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0234-CAL6
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Meth Date : 17-Feb-2023 15:05 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 16:30 Cal File: NT1423021605.D
Als bottle: 3 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.674	6.682	(0.750)	1251231	15.0000	16.07
$	2 Phenol-d5	99	8.273	8.266	(0.930)	1897289	15.0000	15.36
	3 Phenol	94	8.296	8.289	(0.932)	1360085	10.0000	10.40
$	5 2-Chlorophenol-d4	132	8.544	8.536	(0.960)	1329954	15.0000	15.09
	4 Bis(2-Chloroethyl)ether	93	8.459	8.451	(0.950)	1012397	10.0000	10.14
	6 2-Chlorophenol	128	8.567	8.567	(0.963)	979948	10.0000	10.64
	7 1,3-Dichlorobenzene	146	8.838	8.838	(0.993)	1024035	10.0000	9.990
*	8 1,4-Dichlorobenzene-d4	152	8.900	8.900	(1.000)	291239	4.00000	
	9 1,4-Dichlorobenzene	146	8.931	8.931	(1.003)	983006	10.0000	10.10
$	10 1,2-Dichlorobenzene-d4	152	9.264	9.257	(1.041)	629192	10.0000	9.525
	12 1,2-Dichlorobenzene	146	9.288	9.288	(1.044)	972608	10.0000	10.00
	11 Benzyl alcohol	108	9.187	9.202	(1.032)	765776	10.0000	10.29
	14 2,2'-oxybis(1-Chloropropane)	121	9.482	9.482	(1.065)	290232	10.0000	10.43(M)
	13 2-Methylphenol	108	9.412	9.404	(1.058)	956689	10.0000	10.48
	17 Hexachloroethane	117	9.878	9.878	(1.110)	440399	10.0000	10.41
	16 N-Nitroso-di-n-propylamine	70	9.753	9.738	(1.096)	882255	10.0000	10.62
	15 4-Methylphenol	108	9.684	9.684	(1.088)	1027938	10.0000	10.66
$	18 Nitrobenzene-d5	82	10.009	10.002	(0.878)	1239260	10.0000	9.990
	19 Nitrobenzene	77	10.041	10.033	(0.881)	1306597	10.0000	10.50
	20 Isophorone	82	10.506	10.491	(0.922)	1880940	10.0000	11.45
	21 2-Nitrophenol	139	10.669	10.677	(0.936)	602543	10.0000	10.30
	22 2,4-Dimethylphenol	107	10.731	10.724	(0.942)	1712162	20.0000	18.21
	23 Bis(2-Chloroethoxy)methane	93	10.933	10.925	(0.959)	1115982	10.0000	10.45
	24 Benzoic acid	105	11.057	10.879	(0.970)	2811078	40.0000	42.26
	25 2,4-Dichlorophenol	162	11.126	11.127	(0.976)	1730499	20.0000	21.51
	26 1,2,4-Trichlorobenzene	180	11.312	11.305	(0.993)	966189	10.0000	9.914
*	27 Naphthalene-d8	136	11.397	11.389	(1.000)	1073728	4.00000	
	28 Naphthalene	128	11.436	11.428	(1.003)	2656821	10.0000	10.04
	29 4-Chloroaniline	127	11.582	11.575	(1.016)	2319136	20.0000	20.50
	30 Hexachlorobutadiene	225	11.799	11.799	(1.035)	606681	10.0000	10.10
	31 4-Chloro-3-methylphenol	107	12.542	12.542	(1.100)	1860890	20.0000	21.37
	32 2-Methylnaphthalene	142	12.836	12.836	(1.126)	2015045	10.0000	10.16
	33 Hexachlorocyclopentadiene	237	13.308	13.301	(0.886)	1439778	20.0000	22.77
	34 2,4,6-Trichlorophenol	196	13.463	13.463	(0.896)	1414598	20.0000	22.01

		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	35 2,4,5-Trichlorophenol	196	13.540	13.541	(0.902)	1548571	20.0000	22.25
$	36 2-Fluorobiphenyl	172	13.625	13.617	(0.907)	2240106	10.0000	9.594
	37 2-Chloronaphthalene	162	13.834	13.826	(0.921)	1998007	10.0000	10.48
	38 2-Nitroaniline	65	14.113	14.097	(0.940)	1346446	20.0000	21.73
	39 Dimethylphthalate	163	14.546	14.531	(0.969)	2033320	10.0000	10.20
	40 Acenaphthylene	152	14.709	14.701	(0.979)	2873882	10.0000	9.887
	41 2,6-Dinitrotoluene	165	14.685	14.670	(0.978)	1021001	20.0000	21.77
*	42 Acenaphthene-d10	164	15.018	15.018	(1.000)	652598	4.00000	
	43 3-Nitroaniline	138	14.972	14.957	(0.997)	1117162	20.0000	22.44
	44 Acenaphthene	153	15.088	15.080	(1.005)	1785928	10.0000	10.26
	45 2,4-Dinitrophenol	184	15.180	15.282	(1.011)	1456316	40.0000	42.52
	46 Dibenzofuran	168	15.420	15.405	(1.027)	2922516	10.0000	10.23
	47 4-Nitrophenol	109	15.289	15.273	(1.018)	610750	20.0000	20.83
	48 2,4-Dinitrotoluene	165	15.490	15.475	(1.031)	1476541	20.0000	22.26
	50 Diethylphthalate	149	16.008	15.984	(1.066)	2877967	10.0000	10.86
	49 Fluorene	166	16.131	16.124	(1.074)	2963854	10.0000	9.919
	51 4-Chlorophenyl-phenylether	204	16.123	16.116	(1.074)	1605736	10.0000	10.05
	52 4-Nitroaniline	138	16.254	16.224	(1.082)	1311469	20.0000	22.96
	53 4,6-Dinitro-2-methylphenol	198	16.339	16.370	(0.905)	2097838	40.0000	41.79
	54 N-Nitrosodiphenylamine	169	16.386	16.370	(0.907)	1929962	10.0000	10.36
$	55 2,4,6-Tribromophenol	330	16.671	16.663	(1.110)	603341	15.0000	15.40
	56 4-Bromophenyl-phenylether	248	17.126	17.118	(0.948)	896399	10.0000	10.81
	57 Hexachlorobenzene	284	17.443	17.434	(0.966)	861081	10.0000	10.22
	58 Pentachlorophenol	266	17.799	17.814	(0.985)	916281	20.0000	20.92
*	59 Phenanthrene-d10	188	18.062	18.054	(1.000)	1295935	4.00000	
	60 Phenanthrene	178	18.108	18.101	(1.003)	3157309	10.0000	10.14
	61 Anthracene	178	18.201	18.193	(1.008)	3168788	10.0000	10.27
	62 Carbazole	167	18.534	18.534	(1.026)	3066922	10.0000	10.95
	63 Di-n-butylphthalate	149	19.346	19.346	(1.071)	3599026	10.0000	11.51
	64 Fluoranthene	202	20.507	20.499	(0.887)	3721417	10.0000	10.76
	65 Pyrene	202	20.932	20.925	(0.905)	3653827	10.0000	9.995
$	66 Terphenyl-d14	244	21.219	21.219	(0.918)	2512884	10.0000	9.681
	67 Butylbenzylphthalate	149	22.148	22.148	(0.958)	1275127	10.0000	10.36
	68 Benzo(a)anthracene	228	23.092	23.092	(0.999)	2666606	10.0000	10.40
*	69 Chrysene-d12	240	23.123	23.123	(1.000)	801336	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.061	23.054	(0.997)	2483520	30.0000	31.13
	71 Chrysene	228	23.170	23.162	(1.002)	2353274	10.0000	10.20
	72 bis(2-Ethylhexyl)phthalate	149	23.177	23.178	(0.960)	1652176	10.0000	10.65
*	134 Di-n-octylphthalate-d4	153	24.153	24.153	(1.000)	964521	4.00000	
	73 Di-n-octylphthalate	149	24.161	24.161	(1.000)	2401255	10.0000	10.65
	74 Benzo(b)fluoranthene	252	24.950	24.943	(0.971)	1722526	10.0000	10.82
	75 Benzo(k)fluoranthene	252	24.989	24.989	(0.973)	1893445	10.0000	11.13(H)
	76 Benzo(a)pyrene	252	25.577	25.578	(0.996)	1591795	10.0000	10.35
*	77 Perylene-d12	264	25.686	25.686	(1.000)	501893	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.236	28.244	(1.099)	1385879	10.0000	10.49
	79 Dibenzo(a,h)anthracene	278	28.259	28.267	(1.100)	1144114	10.0000	10.50
	80 Benzo(g,h,i)perylene	276	28.997	28.997	(1.129)	1151263	10.0000	10.55
	90 N-Nitrosodimethylamine	74	4.589	4.566	(0.516)	1239357	20.0000	20.56
	91 Aniline	93	8.366	8.358	(0.940)	2667847	20.0000	19.08
	93 Benzidine	184	20.746	20.754	(0.897)	1329832	20.0000	17.53
	103 Pyridine	79	4.581	4.597	(0.515)	1964983	20.0000	20.60
	105 1-methylnaphthalene	142	13.060	13.053	(1.146)	1937800	10.0000	10.41
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.455	16.440	(1.096)	3345797	10.0000	10.39
	187 Total Benzofluoranthenes	252	24.989	24.943	(0.973)	3407168	20.0000	21.91(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
120 2,3,4,6-Tetrachlorophenol	232	15.752	15.760	(1.049)	799412	10.0000	10.31

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021605.D
Lab Smp Id: SLB0234-CAL6
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 17:06
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	375798	187899	751596	291239	-22.50
27 Naphthalene-d8	1378169	689085	2756338	1073728	-22.09
42 Acenaphthene-d10	847135	423568	1694270	652598	-22.96
59 Phenanthrene-d10	1675180	837590	3350360	1295935	-22.64
69 Chrysene-d12	1073562	536781	2147124	801336	-25.36
134 Di-n-octylphthala	1344129	672065	2688258	964521	-28.24
77 Perylene-d12	721978	360989	1443956	501893	-30.48

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.90	8.40	9.40	8.90	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.40	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	-0.00
59 Phenanthrene-d10	18.05	17.55	18.55	18.06	0.04
69 Chrysene-d12	23.12	22.62	23.62	23.12	-0.00
134 Di-n-octylphthala	24.15	23.65	24.65	24.15	-0.00
77 Perylene-d12	25.69	25.19	26.19	25.69	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021605.D

Lab ID: SLB0234-CAL6
nt14.i, ABN.m, 16-FEB-2023 16:30

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.970	0.000	0.9701	Benzoic acid
1.011	0.000	1.0108	2,4-Dinitrophenol
1.018	0.000	1.0180	4-Nitrophenol
0.985	0.000	0.9854	Pentachlorophenol

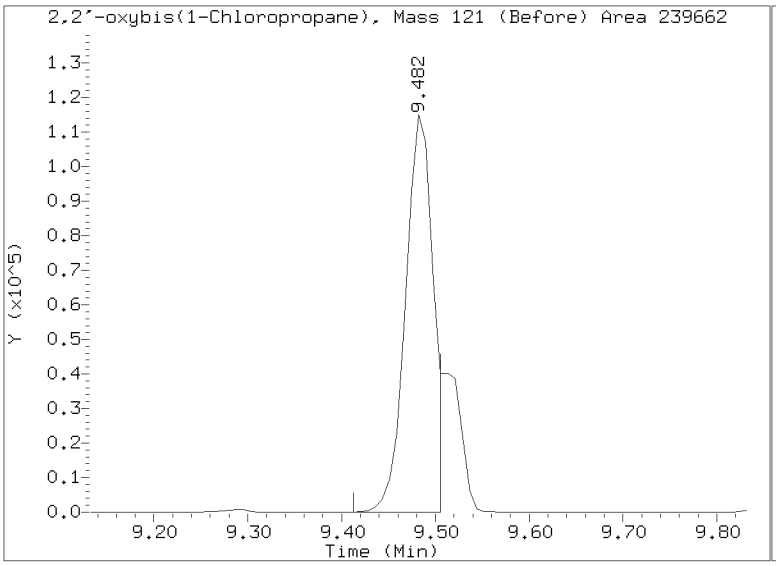
RRT check based on Ccal File: NT1423021610.D

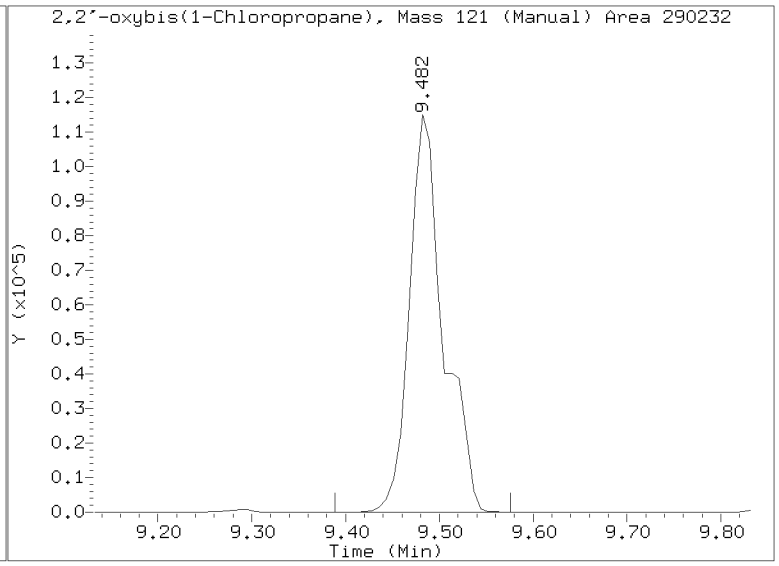
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

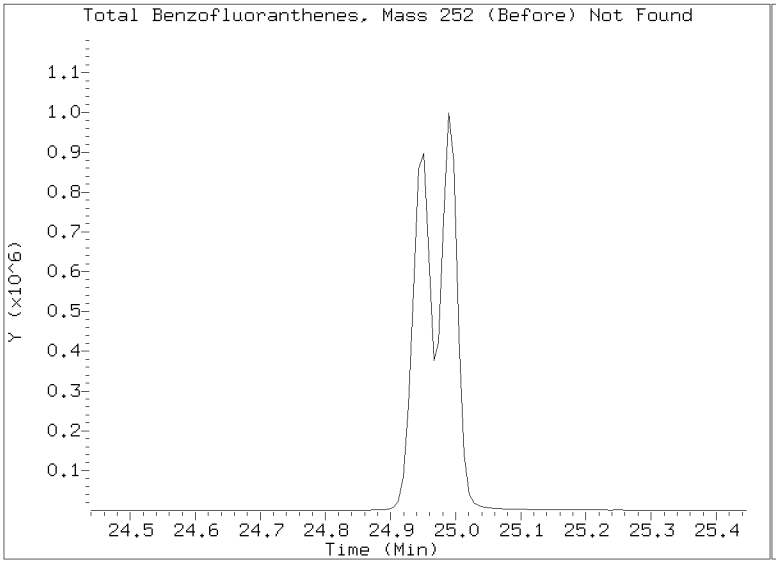
* Only compounds listed in the work order have been verified by the analyst *

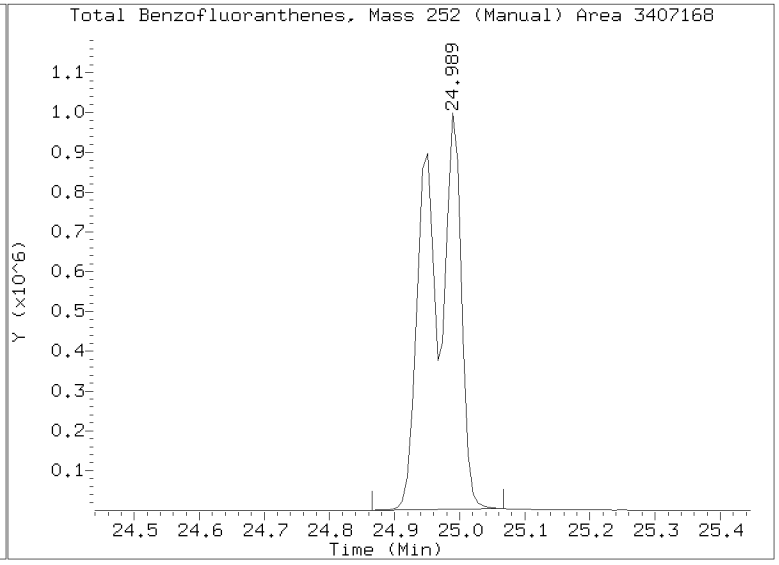
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230216.b/NT1423021605.D
Injection Date: 16-FEB-2023 16:30
Lab ID:SLB0234-CAL6 Client ID:
Report Date: 02/28/2023 14:37





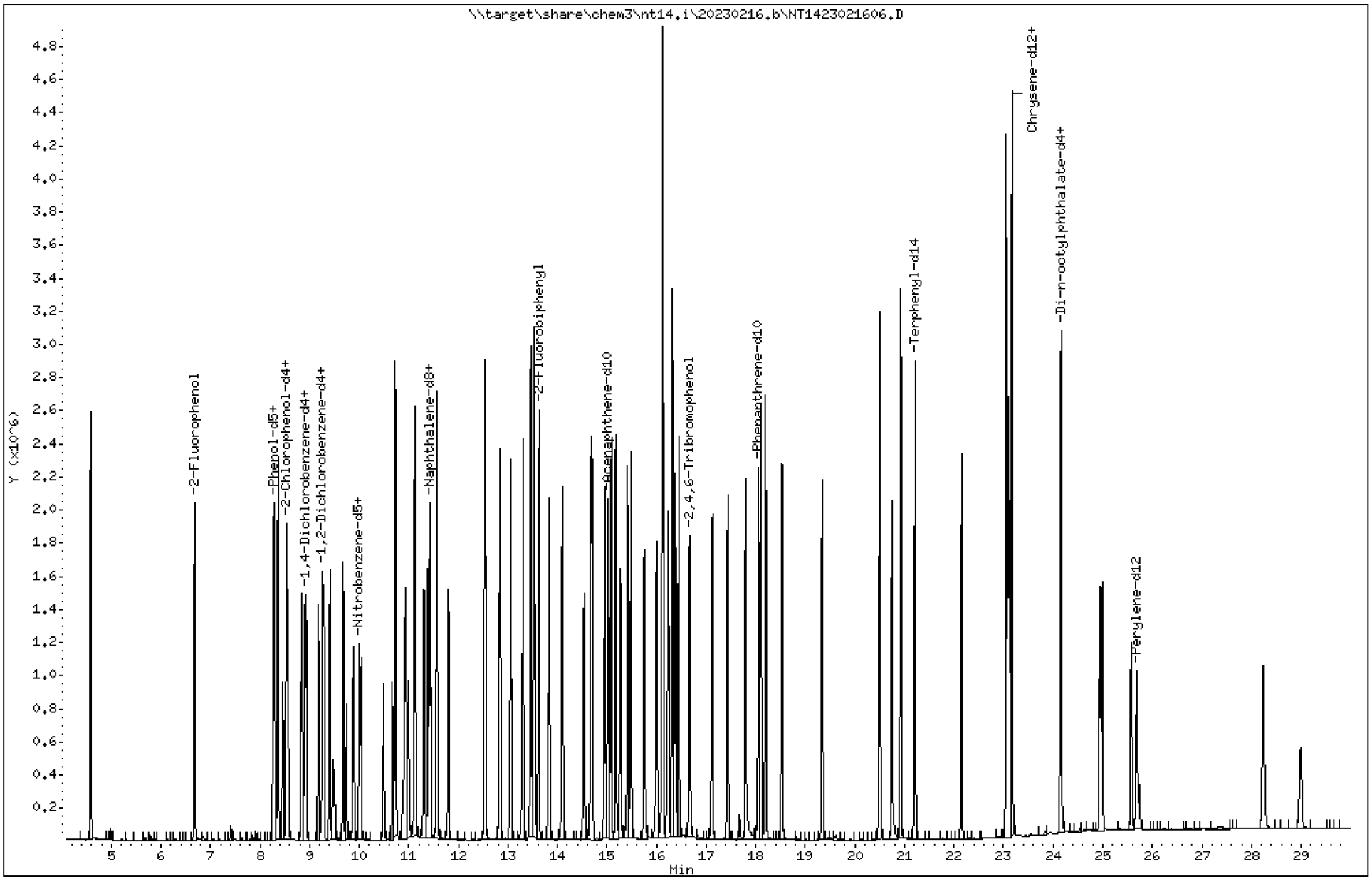




Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021606.D
Date : 16-FEB-2023 17:06
Client ID:
Sample Info: SLB0234-CAL5

Instrument: nt14.i
Operator: DSD
Column diameter: 0.25

Column phase: ZB-5msi



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230216.b\NT1423021606.D
Lab Smp Id: SLB0234-CAL5
Inj Date : 16-FEB-2023 17:06 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0234-CAL5
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Meth Date : 17-Feb-2023 15:05 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 17:06 Cal File: NT1423021606.D
Als bottle: 4 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.674	6.682	(0.750)	818280	7.50000	8.145
$	2 Phenol-d5	99	8.266	8.266	(0.929)	1232905	7.50000	7.736
	3 Phenol	94	8.289	8.289	(0.931)	815627	5.00000	4.834
$	5 2-Chlorophenol-d4	132	8.536	8.536	(0.959)	857440	7.50000	7.540
	4 Bis(2-Chloroethyl)ether	93	8.459	8.451	(0.950)	585176	5.00000	4.540
	6 2-Chlorophenol	128	8.567	8.567	(0.963)	574853	5.00000	4.838
	7 1,3-Dichlorobenzene	146	8.838	8.838	(0.993)	605329	5.00000	4.577
*	8 1,4-Dichlorobenzene-d4	152	8.900	8.900	(1.000)	375798	4.00000	
	9 1,4-Dichlorobenzene	146	8.931	8.931	(1.003)	576641	5.00000	4.594
$	10 1,2-Dichlorobenzene-d4	152	9.265	9.257	(1.041)	406124	5.00000	4.765
	12 1,2-Dichlorobenzene	146	9.288	9.288	(1.044)	575688	5.00000	4.588
	11 Benzyl alcohol	108	9.179	9.202	(1.031)	441332	5.00000	4.631
	14 2,2'-oxybis(1-Chloropropane)	121	9.482	9.482	(1.065)	141219	5.00000	3.934
	13 2-Methylphenol	108	9.404	9.404	(1.057)	576945	5.00000	4.897
	17 Hexachloroethane	117	9.878	9.878	(1.110)	253677	5.00000	4.648
	16 N-Nitroso-di-n-propylamine	70	9.746	9.738	(1.095)	511140	5.00000	4.766
	15 4-Methylphenol	108	9.676	9.684	(1.087)	618848	5.00000	4.975
$	18 Nitrobenzene-d5	82	10.002	10.002	(0.878)	799385	5.00000	5.021
	19 Nitrobenzene	77	10.041	10.033	(0.881)	759995	5.00000	4.757
	20 Isophorone	82	10.491	10.491	(0.920)	1059544	5.00000	5.026
	21 2-Nitrophenol	139	10.669	10.677	(0.936)	341957	5.00000	4.686
	22 2,4-Dimethylphenol	107	10.723	10.724	(0.941)	1167020	10.0000	9.673
	23 Bis(2-Chloroethoxy)methane	93	10.925	10.925	(0.959)	643978	5.00000	4.696
	24 Benzoic acid	105	10.995	10.879	(0.965)	1390756	20.0000	17.57
	25 2,4-Dichlorophenol	162	11.119	11.127	(0.976)	1056223	10.0000	10.23
	26 1,2,4-Trichlorobenzene	180	11.312	11.305	(0.993)	565684	5.00000	4.522
*	27 Naphthalene-d8	136	11.397	11.389	(1.000)	1378169	4.00000	
	28 Naphthalene	128	11.436	11.428	(1.003)	1611510	5.00000	4.742
	29 4-Chloroaniline	127	11.575	11.575	(1.016)	1486717	10.0000	10.24
	30 Hexachlorobutadiene	225	11.799	11.799	(1.035)	353300	5.00000	4.582
	31 4-Chloro-3-methylphenol	107	12.534	12.542	(1.100)	1116957	10.0000	9.994
	32 2-Methylnaphthalene	142	12.836	12.836	(1.126)	1172556	5.00000	4.607
	33 Hexachlorocyclopentadiene	237	13.308	13.301	(0.886)	826145	10.0000	10.07
	34 2,4,6-Trichlorophenol	196	13.463	13.463	(0.896)	836957	10.0000	10.03

		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	35 2,4,5-Trichlorophenol	196	13.532	13.541	(0.901)	906677	10.0000	10.03
$	36 2-Fluorobiphenyl	172	13.625	13.617	(0.907)	1460239	5.00000	4.818
	37 2-Chloronaphthalene	162	13.834	13.826	(0.921)	1145676	5.00000	4.631
	38 2-Nitroaniline	65	14.097	14.097	(0.939)	772331	10.0000	9.602
	39 Dimethylphthalate	163	14.538	14.531	(0.968)	1182147	5.00000	4.569
	40 Acenaphthylene	152	14.701	14.701	(0.979)	1775928	5.00000	4.707
	41 2,6-Dinitrotoluene	165	14.678	14.670	(0.977)	580077	10.0000	9.527
*	42 Acenaphthene-d10	164	15.018	15.018	(1.000)	847135	4.00000	
	43 3-Nitroaniline	138	14.956	14.957	(0.996)	628444	10.0000	9.724
	44 Acenaphthene	153	15.088	15.080	(1.005)	1064352	5.00000	4.711
	45 2,4-Dinitrophenol	184	15.173	15.282	(1.010)	718089	20.0000	17.33
	46 Dibenzofuran	168	15.412	15.405	(1.026)	1695271	5.00000	4.571
	47 4-Nitrophenol	109	15.273	15.273	(1.017)	350369	10.0000	9.293
	48 2,4-Dinitrotoluene	165	15.482	15.475	(1.031)	827079	10.0000	9.607
	50 Diethylphthalate	149	16.000	15.984	(1.065)	1527408	5.00000	4.440
	49 Fluorene	166	16.124	16.124	(1.074)	1821693	5.00000	4.697
	51 4-Chlorophenyl-phenylether	204	16.116	16.116	(1.073)	936319	5.00000	4.515
	52 4-Nitroaniline	138	16.231	16.224	(1.081)	719888	10.0000	9.709
	53 4,6-Dinitro-2-methylphenol	198	16.324	16.370	(0.904)	1141937	20.0000	18.32
	54 N-Nitrosodiphenylamine	169	16.378	16.370	(0.907)	1111128	5.00000	4.616
$	55 2,4,6-Tribromophenol	330	16.663	16.663	(1.110)	354481	7.50000	7.148
	56 4-Bromophenyl-phenylether	248	17.126	17.118	(0.949)	502492	5.00000	4.687
	57 Hexachlorobenzene	284	17.435	17.434	(0.966)	488352	5.00000	4.482
	58 Pentachlorophenol	266	17.791	17.814	(0.985)	504425	10.0000	9.269
*	59 Phenanthrene-d10	188	18.054	18.054	(1.000)	1675180	4.00000	
	60 Phenanthrene	178	18.108	18.101	(1.003)	1871753	5.00000	4.650
	61 Anthracene	178	18.201	18.193	(1.008)	1978745	5.00000	4.962
	62 Carbazole	167	18.534	18.534	(1.027)	1763283	5.00000	4.872
	63 Di-n-butylphthalate	149	19.339	19.346	(1.071)	2056874	5.00000	5.088
	64 Fluoranthene	202	20.499	20.499	(0.887)	2212688	5.00000	4.777
	65 Pyrene	202	20.925	20.925	(0.905)	2239922	5.00000	4.574
$	66 Terphenyl-d14	244	21.219	21.219	(0.918)	1674581	5.00000	4.816
	67 Butylbenzylphthalate	149	22.148	22.148	(0.958)	747612	5.00000	4.589
	68 Benzo(a)anthracene	228	23.092	23.092	(0.999)	1643791	5.00000	4.785
*	69 Chrysene-d12	240	23.123	23.123	(1.000)	1073562	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.054	23.054	(0.997)	1455887	15.0000	13.75
	71 Chrysene	228	23.170	23.162	(1.002)	1470334	5.00000	4.758
	72 bis(2-Ethylhexyl)phthalate	149	23.178	23.178	(0.960)	968097	5.00000	4.307
*	134 Di-n-octylphthalate-d4	153	24.153	24.153	(1.000)	1344129	4.00000	
	73 Di-n-octylphthalate	149	24.161	24.161	(1.000)	1431177	5.00000	4.554
	74 Benzo(b)fluoranthene	252	24.943	24.943	(0.971)	1144607	5.00000	4.996
	75 Benzo(k)fluoranthene	252	24.989	24.989	(0.973)	1142401	5.00000	4.667
	76 Benzo(a)pyrene	252	25.578	25.578	(0.996)	1008040	5.00000	4.606
*	77 Perylene-d12	264	25.686	25.686	(1.000)	721978	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.236	28.244	(1.099)	815881	5.00000	4.459
	79 Dibenzo(a,h)anthracene	278	28.252	28.267	(1.100)	668509	5.00000	4.434
	80 Benzo(g,h,i)perylene	276	28.990	28.997	(1.129)	650179	5.00000	4.357
	90 N-Nitrosodimethylamine	74	4.573	4.566	(0.514)	784103	10.0000	10.08
	91 Aniline	93	8.358	8.358	(0.939)	1741207	10.0000	9.649
	93 Benzidine	184	20.739	20.754	(0.897)	1382091	10.0000	13.02
	103 Pyridine	79	4.581	4.597	(0.515)	1230542	10.0000	9.998
	105 1-methylnaphthalene	142	13.060	13.053	(1.146)	1079970	5.00000	4.520
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.447	16.440	(1.095)	1958385	5.00000	4.684
	187 Total Benzofluoranthenes	252	24.989	24.943	(0.973)	2176047	10.0000	9.729

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
120 2,3,4,6-Tetrachlorophenol	232	15.753	15.760	(1.049)	459997	5.00000	4.685

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021606.D
Lab Smp Id: SLB0234-CAL5
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 17:06
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	375798	187899	751596	375798	0.00
27 Naphthalene-d8	1378169	689085	2756338	1378169	0.00
42 Acenaphthene-d10	847135	423568	1694270	847135	0.00
59 Phenanthrene-d10	1675180	837590	3350360	1675180	0.00
69 Chrysene-d12	1073562	536781	2147124	1073562	0.00
134 Di-n-octylphthala	1344129	672065	2688258	1344129	0.00
77 Perylene-d12	721978	360989	1443956	721978	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.90	8.40	9.40	8.90	0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.40	0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	0.00
59 Phenanthrene-d10	18.05	17.55	18.55	18.05	0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	0.00
134 Di-n-octylphthala	24.15	23.65	24.65	24.15	0.00
77 Perylene-d12	25.69	25.19	26.19	25.69	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021606.D

Lab ID: SLB0234-CAL5
nt14.i, ABN.m, 16-FEB-2023 17:06

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.965	0.000	0.9647	Benzoic acid
1.010	0.000	1.0103	2,4-Dinitrophenol
1.017	0.000	1.0170	4-Nitrophenol
0.985	0.000	0.9854	Pentachlorophenol

RRT check based on Ccal File: NT1423021610.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021607.D

Date : 16-FEB-2023 17:42

Client ID:

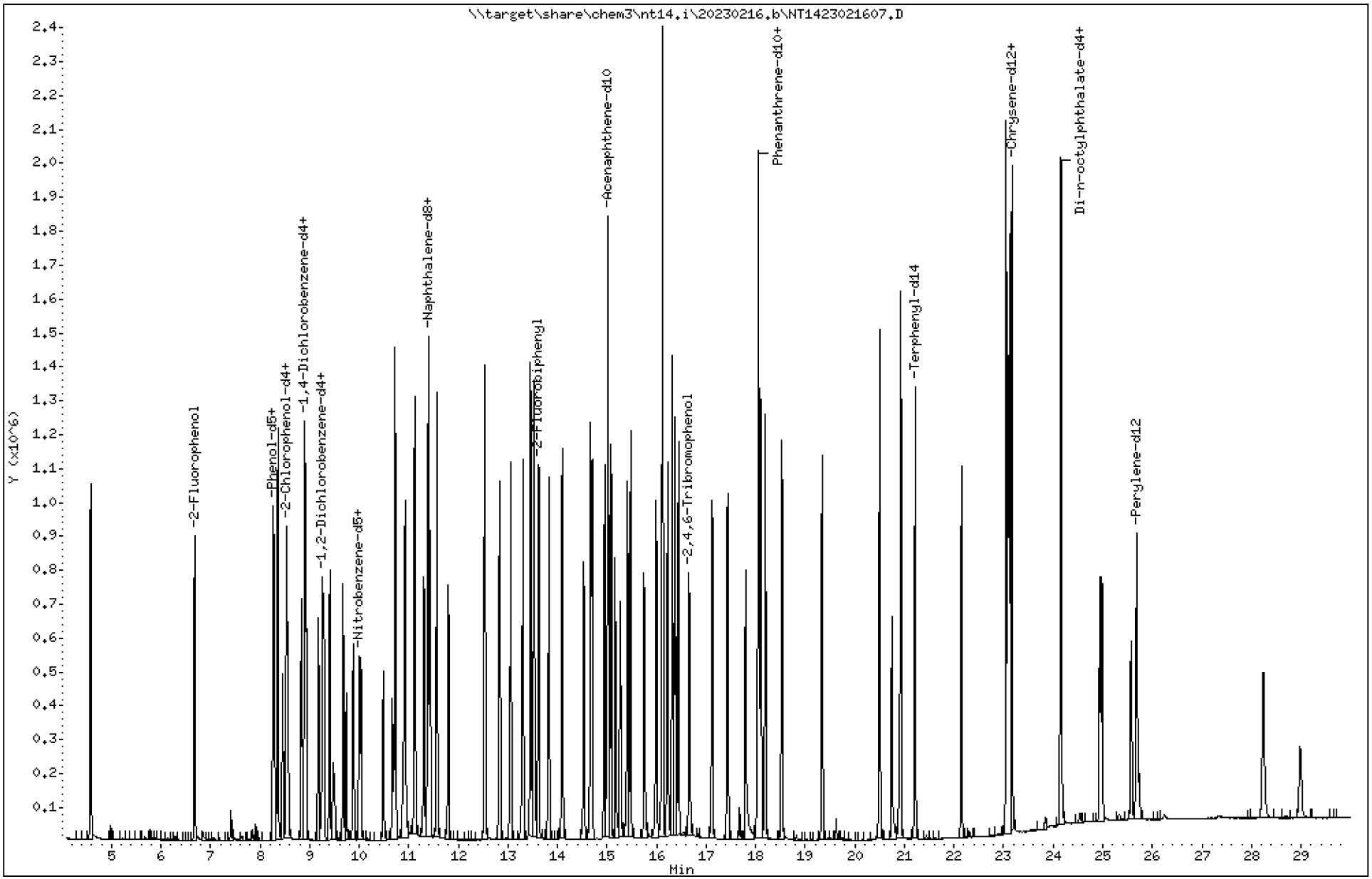
Instrument: nt14.i

Sample Info: SLB0234-CAL4

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230216.b\NT1423021607.D
Lab Smp Id: SLB0234-CAL4
Inj Date : 16-FEB-2023 17:42 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0234-CAL4
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Meth Date : 17-Feb-2023 15:05 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 17:42 Cal File: NT1423021607.D
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.674	6.682	(0.750)	376978	3.75000	4.284
$	2 Phenol-d5	99	8.265	8.266	(0.929)	561995	3.75000	4.026
	3 Phenol	94	8.289	8.289	(0.931)	407194	2.50000	2.755
$	5 2-Chlorophenol-d4	132	8.536	8.536	(0.959)	388443	3.75000	3.900
	4 Bis(2-Chloroethyl)ether	93	8.451	8.451	(0.950)	292724	2.50000	2.593
	6 2-Chlorophenol	128	8.559	8.567	(0.962)	273865	2.50000	2.631
	7 1,3-Dichlorobenzene	146	8.838	8.838	(0.993)	301651	2.50000	2.604
*	8 1,4-Dichlorobenzene-d4	152	8.900	8.900	(1.000)	329194	4.00000	
	9 1,4-Dichlorobenzene	146	8.931	8.931	(1.003)	284648	2.50000	2.589
$	10 1,2-Dichlorobenzene-d4	152	9.256	9.257	(1.040)	187612	2.50000	2.513
	12 1,2-Dichlorobenzene	146	9.288	9.288	(1.044)	287402	2.50000	2.614
	11 Benzyl alcohol	108	9.179	9.202	(1.031)	209183	2.50000	2.513
	14 2,2'-oxybis(1-Chloropropane)	121	9.482	9.482	(1.065)	80709	2.50000	2.566(M)
	13 2-Methylphenol	108	9.404	9.404	(1.057)	277152	2.50000	2.686
	17 Hexachloroethane	117	9.878	9.878	(1.110)	122047	2.50000	2.553
	16 N-Nitroso-di-n-propylamine	70	9.738	9.738	(1.094)	252888	2.50000	2.692
	15 4-Methylphenol	108	9.676	9.684	(1.087)	298167	2.50000	2.736
$	18 Nitrobenzene-d5	82	10.002	10.002	(0.878)	359115	2.50000	2.561
	19 Nitrobenzene	77	10.033	10.033	(0.881)	373920	2.50000	2.657
	20 Isophorone	82	10.483	10.491	(0.920)	511111	2.50000	2.753
	21 2-Nitrophenol	139	10.669	10.677	(0.937)	152516	2.50000	2.400
	22 2,4-Dimethylphenol	107	10.723	10.724	(0.942)	550789	5.00000	5.184
	23 Bis(2-Chloroethoxy)methane	93	10.925	10.925	(0.959)	317734	2.50000	2.631
	24 Benzoic acid	105	10.925	10.879	(0.959)	459387	10.0000	6.778
	25 2,4-Dichlorophenol	162	11.119	11.127	(0.976)	504586	5.00000	5.549
	26 1,2,4-Trichlorobenzene	180	11.304	11.305	(0.993)	283002	2.50000	2.569
*	27 Naphthalene-d8	136	11.389	11.389	(1.000)	1213660	4.00000	
	28 Naphthalene	128	11.436	11.428	(1.004)	745532	2.50000	2.491
	29 4-Chloroaniline	127	11.567	11.575	(1.016)	710726	5.00000	5.559
	30 Hexachlorobutadiene	225	11.799	11.799	(1.036)	173828	2.50000	2.560
	31 4-Chloro-3-methylphenol	107	12.534	12.542	(1.100)	530197	5.00000	5.387
	32 2-Methylnaphthalene	142	12.836	12.836	(1.127)	571690	2.50000	2.551
	33 Hexachlorocyclopentadiene	237	13.300	13.301	(0.886)	380721	5.00000	5.170
	34 2,4,6-Trichlorophenol	196	13.455	13.463	(0.896)	388886	5.00000	5.195

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	35	2,4,5-Trichlorophenol	196	13.532	13.541	(0.901)	428139	5.00000	5.281
$	36	2-Fluorobiphenyl	172	13.625	13.617	(0.907)	667203	2.50000	2.453
	37	2-Chloronaphthalene	162	13.826	13.826	(0.921)	565441	2.50000	2.547
	38	2-Nitroaniline	65	14.097	14.097	(0.939)	387110	5.00000	5.364
	39	Dimethylphthalate	163	14.531	14.531	(0.968)	603054	2.50000	2.597
	40	Acenaphthylene	152	14.701	14.701	(0.979)	842319	2.50000	2.488
	41	2,6-Dinitrotoluene	165	14.670	14.670	(0.977)	289065	5.00000	5.291
*	42	Acenaphthene-d10	164	15.018	15.018	(1.000)	760118	4.00000	
	43	3-Nitroaniline	138	14.948	14.957	(0.995)	303139	5.00000	5.228
	44	Acenaphthene	153	15.080	15.080	(1.004)	504287	2.50000	2.488
	45	2,4-Dinitrophenol	184	15.165	15.282	(1.010)	227423	10.0000	6.281
	46	Dibenzofuran	168	15.412	15.405	(1.026)	824989	2.50000	2.479
	47	4-Nitrophenol	109	15.265	15.273	(1.016)	148774	5.00000	4.415
	48	2,4-Dinitrotoluene	165	15.474	15.475	(1.030)	408828	5.00000	5.293
	50	Diethylphthalate	149	15.992	15.984	(1.065)	783230	2.50000	2.537
	49	Fluorene	166	16.123	16.124	(1.074)	877577	2.50000	2.522
	51	4-Chlorophenyl-phenylether	204	16.116	16.116	(1.073)	479898	2.50000	2.579
	52	4-Nitroaniline	138	16.224	16.224	(1.080)	347289	5.00000	5.220
	53	4,6-Dinitro-2-methylphenol	198	16.316	16.370	(0.904)	451603	10.0000	8.514
	54	N-Nitrosodiphenylamine	169	16.370	16.370	(0.907)	567271	2.50000	2.726
$	55	2,4,6-Tribromophenol	330	16.655	16.663	(1.109)	151326	3.75000	3.437
	56	4-Bromophenyl-phenylether	248	17.118	17.118	(0.948)	245410	2.50000	2.648
	57	Hexachlorobenzene	284	17.435	17.434	(0.966)	250939	2.50000	2.664
	58	Pentachlorophenol	266	17.791	17.814	(0.985)	182806	5.00000	3.951
*	59	Phenanthrene-d10	188	18.054	18.054	(1.000)	1448105	4.00000	
	60	Phenanthrene	178	18.100	18.101	(1.003)	892995	2.50000	2.566
	61	Anthracene	178	18.193	18.193	(1.008)	907386	2.50000	2.632
	62	Carbazole	167	18.526	18.534	(1.026)	863446	2.50000	2.760
	63	Di-n-butylphthalate	149	19.338	19.346	(1.071)	993077	2.50000	2.842
	64	Fluoranthene	202	20.499	20.499	(0.887)	1061533	2.50000	2.488
	65	Pyrene	202	20.924	20.925	(0.905)	1172638	2.50000	2.599
$	66	Terphenyl-d14	244	21.218	21.219	(0.918)	783042	2.50000	2.444
	67	Butylbenzylphthalate	149	22.148	22.148	(0.958)	361796	2.50000	2.421
	68	Benzo(a)anthracene	228	23.092	23.092	(0.999)	783697	2.50000	2.476
*	69	Chrysene-d12	240	23.123	23.123	(1.000)	989085	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.054	23.054	(0.997)	695962	7.50000	7.157
	71	Chrysene	228	23.162	23.162	(1.002)	704839	2.50000	2.476
	72	bis(2-Ethylhexyl)phthalate	149	23.177	23.178	(0.960)	460238	2.50000	2.321
*	134	Di-n-octylphthalate-d4	153	24.153	24.153	(1.000)	1170114	4.00000	
	73	Di-n-octylphthalate	149	24.161	24.161	(1.000)	703221	2.50000	2.570
	74	Benzo(b)fluoranthene	252	24.942	24.943	(0.971)	547910	2.50000	2.696
	75	Benzo(k)fluoranthene	252	24.981	24.989	(0.973)	549070	2.50000	2.528(H)
	76	Benzo(a)pyrene	252	25.570	25.578	(0.995)	464600	2.50000	2.403
*	77	Perylene-d12	264	25.686	25.686	(1.000)	640481	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.228	28.244	(1.099)	356233	2.50000	2.224
	79	Dibenzo(a,h)anthracene	278	28.244	28.267	(1.100)	294764	2.50000	2.233
	80	Benzo(g,h,i)perylene	276	28.982	28.997	(1.128)	283553	2.50000	2.177
	90	N-Nitrosodimethylamine	74	4.565	4.566	(0.513)	404759	5.00000	5.940
	91	Aniline	93	8.358	8.358	(0.939)	808819	5.00000	5.117
	93	Benzidine	184	20.739	20.754	(0.897)	457874	5.00000	4.224
	103	Pyridine	79	4.581	4.597	(0.515)	635789	5.00000	5.897
	105	1-methylnaphthalene	142	13.052	13.053	(1.146)	549396	2.50000	2.611
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.439	16.440	(1.095)	972471	2.50000	2.592
	187	Total Benzofluoranthenes	252	24.942	24.943	(0.971)	1044065	5.00000	5.262(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
120 2,3,4,6-Tetrachlorophenol	232	15.745	15.760	(1.048)	205457	2.50000	2.355

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021607.D
Lab Smp Id: SLB0234-CAL4
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 17:06
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	375798	187899	751596	329194	-12.40
27 Naphthalene-d8	1378169	689085	2756338	1213660	-11.94
42 Acenaphthene-d10	847135	423568	1694270	760118	-10.27
59 Phenanthrene-d10	1675180	837590	3350360	1448105	-13.56
69 Chrysene-d12	1073562	536781	2147124	989085	-7.87
134 Di-n-octylphthala	1344129	672065	2688258	1170114	-12.95
77 Perylene-d12	721978	360989	1443956	640481	-11.29

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.90	8.40	9.40	8.90	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.07
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	-0.00
59 Phenanthrene-d10	18.05	17.55	18.55	18.05	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	-0.00
134 Di-n-octylphthala	24.15	23.65	24.65	24.15	-0.00
77 Perylene-d12	25.69	25.19	26.19	25.69	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021607.D

Lab ID: SLB0234-CAL4
nt14.i, ABN.m, 16-FEB-2023 17:42

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.959	0.000	0.9592	Benzoic acid
1.010	0.000	1.0098	2,4-Dinitrophenol
1.016	0.000	1.0165	4-Nitrophenol
0.985	0.000	0.9854	Pentachlorophenol

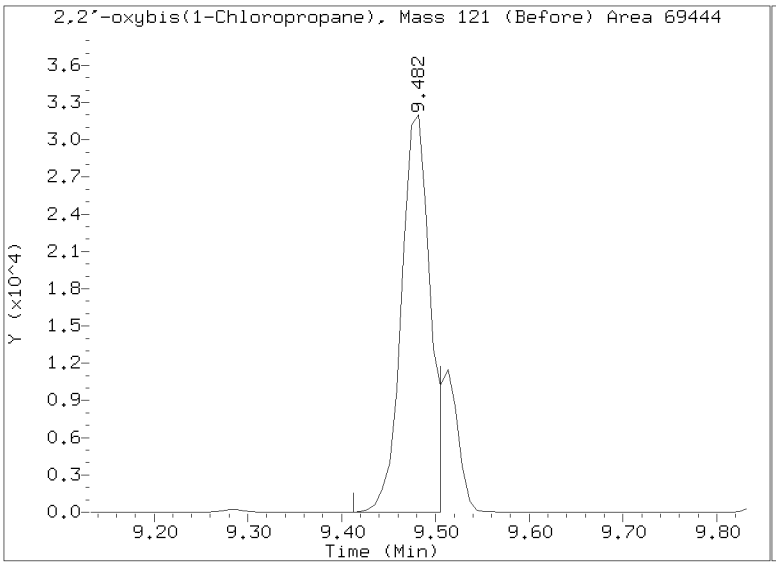
RRT check based on Ccal File: NT1423021610.D

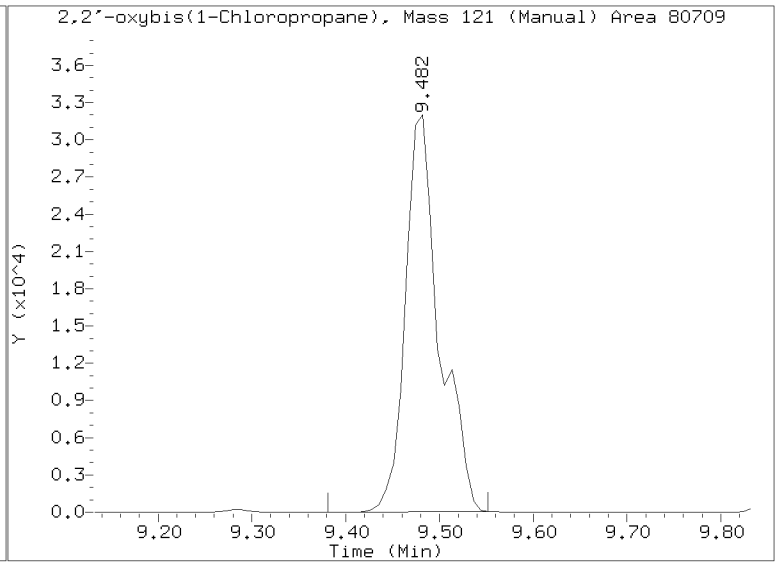
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

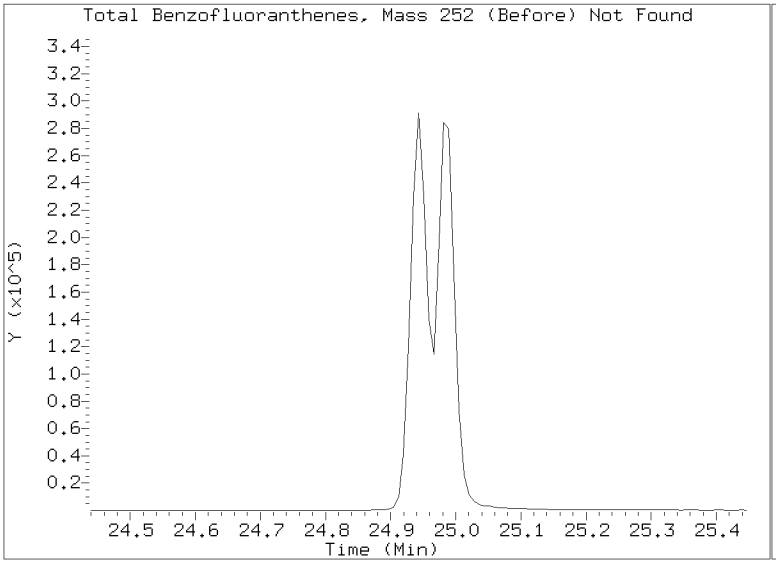
* Only compounds listed in the work order have been verified by the analyst *

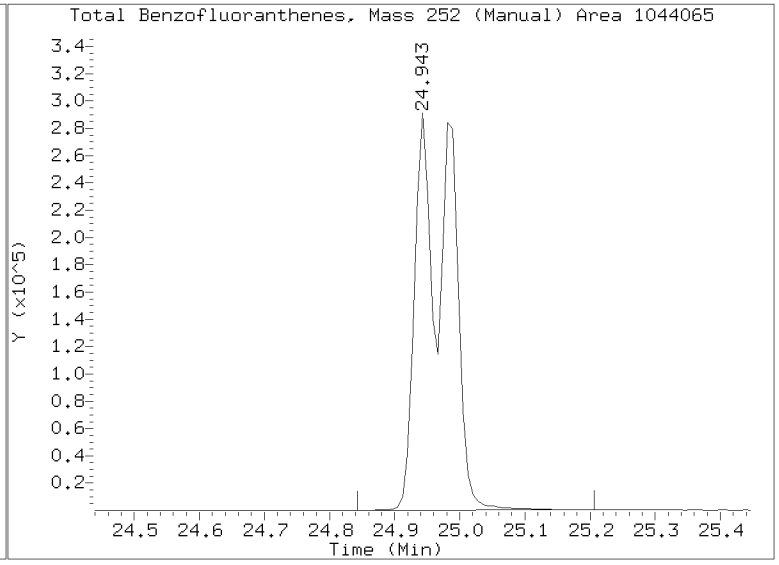
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230216.b/NT1423021607.D
Injection Date: 16-FEB-2023 17:42
Lab ID:SLB0234-CAL4 Client ID:
Report Date: 02/28/2023 14:37









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Page 1

Date : 16-FEB-2023 18:18

Client ID:

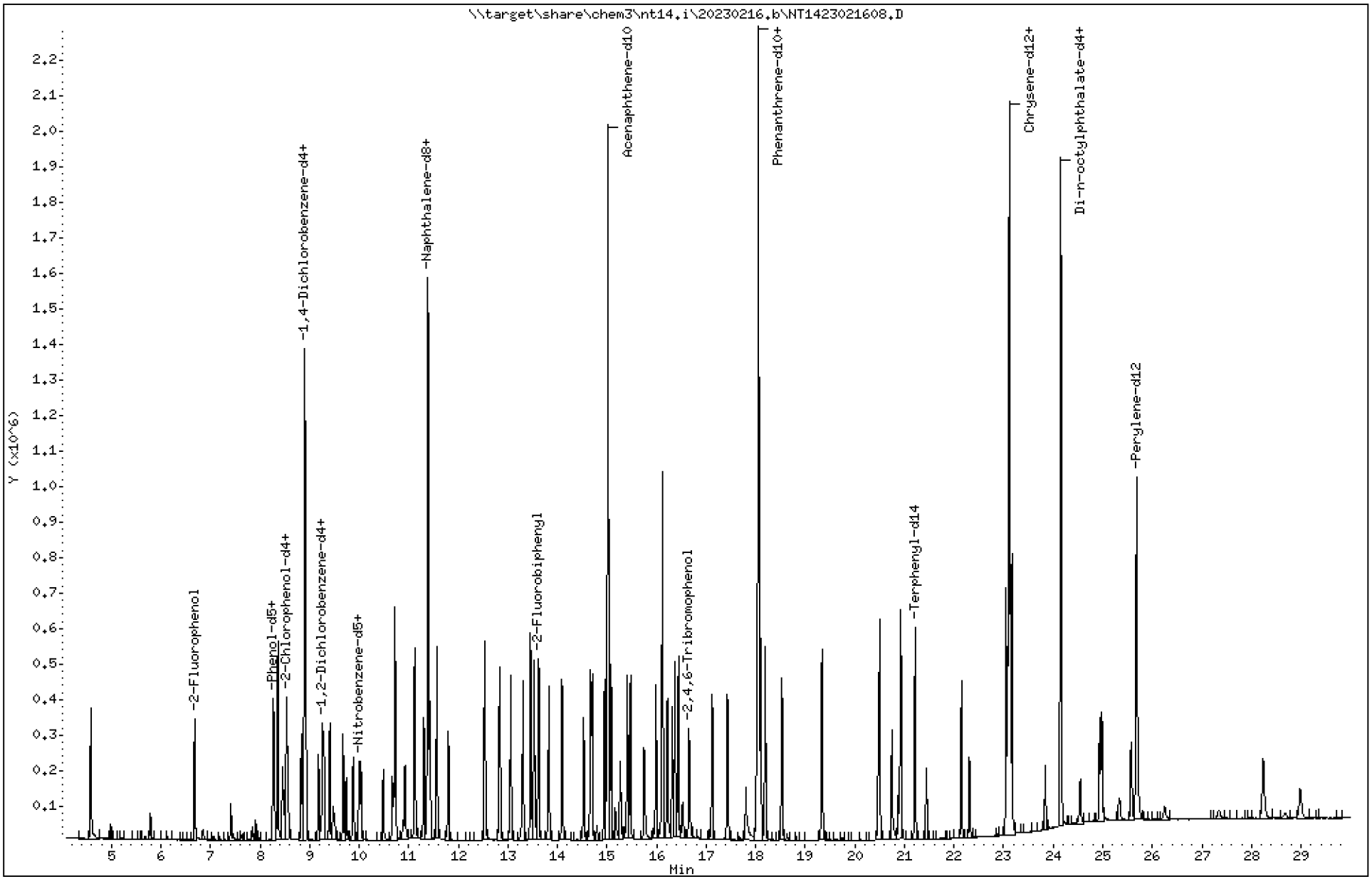
Instrument: nt14.i

Sample Info: SLB0234-CAL3

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230216.b\NT1423021608.D
Lab Smp Id: SLB0234-CAL3
Inj Date : 16-FEB-2023 18:18 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0234-CAL3
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Meth Date : 17-Feb-2023 15:05 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 18:18 Cal File: NT1423021608.D
Als bottle: 6 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.674	6.682	(0.750)	153446	1.50000	1.581
$	2 Phenol-d5	99	8.266	8.266	(0.929)	233838	1.50000	1.519
	3 Phenol	94	8.281	8.289	(0.930)	163570	1.00000	1.004
$	5 2-Chlorophenol-d4	132	8.536	8.536	(0.959)	164214	1.50000	1.495
	4 Bis(2-Chloroethyl)ether	93	8.451	8.451	(0.950)	121797	1.00000	0.9782
	6 2-Chlorophenol	128	8.559	8.567	(0.962)	110353	1.00000	0.9614
	7 1,3-Dichlorobenzene	146	8.838	8.838	(0.993)	124308	1.00000	0.9728
*	8 1,4-Dichlorobenzene-d4	152	8.900	8.900	(1.000)	363048	4.00000	
	9 1,4-Dichlorobenzene	146	8.931	8.931	(1.003)	117863	1.00000	0.9719
$	10 1,2-Dichlorobenzene-d4	152	9.257	9.257	(1.040)	82340	1.00000	1.0000
	12 1,2-Dichlorobenzene	146	9.288	9.288	(1.044)	118079	1.00000	0.9740
	11 Benzyl alcohol	108	9.179	9.202	(1.031)	78291	1.00000	0.8547
	14 2,2'-oxybis(1-Chloropropane)	121	9.474	9.482	(1.065)	33133	1.00000	0.9553(M)
	13 2-Methylphenol	108	9.404	9.404	(1.057)	114029	1.00000	1.002
	17 Hexachloroethane	117	9.878	9.878	(1.110)	50311	1.00000	0.9543
	16 N-Nitroso-di-n-propylamine	70	9.738	9.738	(1.094)	99288	1.00000	0.9584
	15 4-Methylphenol	108	9.676	9.684	(1.087)	119738	1.00000	0.9963
$	18 Nitrobenzene-d5	82	9.994	10.002	(0.878)	151056	1.00000	0.9878
	19 Nitrobenzene	77	10.033	10.033	(0.881)	146712	1.00000	0.9561
	20 Isophorone	82	10.483	10.491	(0.920)	194110	1.00000	0.9588
	21 2-Nitrophenol	139	10.669	10.677	(0.937)	49000	1.00000	0.7125
	22 2,4-Dimethylphenol	107	10.724	10.724	(0.942)	244477	2.00000	2.110
	23 Bis(2-Chloroethoxy)methane	93	10.925	10.925	(0.959)	129592	1.00000	0.9840
	24 Benzoic acid	105	10.879	10.879	(0.955)	39783	4.00000	0.5465(M)
	25 2,4-Dichlorophenol	162	11.119	11.127	(0.976)	205795	2.00000	2.075
	26 1,2,4-Trichlorobenzene	180	11.305	11.305	(0.993)	117481	1.00000	0.9779
*	27 Naphthalene-d8	136	11.390	11.389	(1.000)	1323614	4.00000	
	28 Naphthalene	128	11.428	11.428	(1.003)	317475	1.00000	0.9728
	29 4-Chloroaniline	127	11.567	11.575	(1.016)	272607	2.00000	1.955
	30 Hexachlorobutadiene	225	11.799	11.799	(1.036)	72987	1.00000	0.9856
	31 4-Chloro-3-methylphenol	107	12.534	12.542	(1.100)	209527	2.00000	1.952
	32 2-Methylnaphthalene	142	12.836	12.836	(1.127)	243169	1.00000	0.9949
	33 Hexachlorocyclopentadiene	237	13.300	13.301	(0.886)	141981	2.00000	1.804
	34 2,4,6-Trichlorophenol	196	13.455	13.463	(0.896)	152174	2.00000	1.902

		QUANT SIG					AMOUNTS CAL-AMT	ON-COL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
35	2,4,5-Trichlorophenol	196	13.532	13.541	(0.901)	165970	2.00000	1.915
$ 36	2-Fluorobiphenyl	172	13.618	13.617	(0.907)	289528	1.00000	0.9960
37	2-Chloronaphthalene	162	13.827	13.826	(0.921)	229336	1.00000	0.9665
38	2-Nitroaniline	65	14.090	14.097	(0.938)	149060	2.00000	1.932
39	Dimethylphthalate	163	14.531	14.531	(0.968)	245986	1.00000	0.9911
40	Acenaphthylene	152	14.701	14.701	(0.979)	363943	1.00000	1.006
41	2,6-Dinitrotoluene	165	14.670	14.670	(0.977)	112679	2.00000	1.929
* 42	Acenaphthene-d10	164	15.018	15.018	(1.000)	812533	4.00000	
43	3-Nitroaniline	138	14.949	14.957	(0.995)	115568	2.00000	1.864
44	Acenaphthene	153	15.080	15.080	(1.004)	212155	1.00000	0.9791
45	2,4-Dinitrophenol	184	15.165	15.282	(1.010)	31343	4.00000	0.8199
46	Dibenzofuran	168	15.405	15.405	(1.026)	349793	1.00000	0.9832
47	4-Nitrophenol	109	15.266	15.273	(1.016)	49332	2.00000	1.373
48	2,4-Dinitrotoluene	165	15.474	15.475	(1.030)	154628	2.00000	1.873
50	Diethylphthalate	149	15.985	15.984	(1.064)	311996	1.00000	0.9456
49	Fluorene	166	16.124	16.124	(1.074)	374830	1.00000	1.008
51	4-Chlorophenyl-phenylether	204	16.116	16.116	(1.073)	195339	1.00000	0.9820
52	4-Nitroaniline	138	16.216	16.224	(1.080)	129681	2.00000	1.823
53	4,6-Dinitro-2-methylphenol	198	16.309	16.370	(0.903)	128657	4.00000	2.178
54	N-Nitrosodiphenylamine	169	16.370	16.370	(0.907)	230336	1.00000	0.9844
$ 55	2,4,6-Tribromophenol	330	16.656	16.663	(1.109)	62102	1.50000	1.327
56	4-Bromophenyl-phenylether	248	17.118	17.118	(0.948)	97461	1.00000	0.9352
57	Hexachlorobenzene	284	17.427	17.434	(0.965)	100728	1.00000	0.9512
58	Pentachlorophenol	266	17.799	17.814	(0.986)	51252	2.00000	0.9940(M)
* 59	Phenanthrene-d10	188	18.054	18.054	(1.000)	1628200	4.00000	
60	Phenanthrene	178	18.101	18.101	(1.003)	378981	1.00000	0.9686
61	Anthracene	178	18.194	18.193	(1.008)	382605	1.00000	0.9871
62	Carbazole	167	18.526	18.534	(1.026)	337461	1.00000	0.9594
63	Di-n-butylphthalate	149	19.339	19.346	(1.071)	384834	1.00000	0.9795
64	Fluoranthene	202	20.499	20.499	(0.887)	451325	1.00000	0.9802
65	Pyrene	202	20.925	20.925	(0.905)	495443	1.00000	1.018
$ 66	Terphenyl-d14	244	21.219	21.219	(0.918)	359523	1.00000	1.040
67	Butylbenzylphthalate	149	22.148	22.148	(0.958)	131574	1.00000	0.8187
68	Benzo(a)anthracene	228	23.093	23.092	(0.999)	341818	1.00000	1.001
* 69	Chrysene-d12	240	23.116	23.123	(1.000)	1067204	4.00000	
70	3,3'-Dichlorobenzidine	252	23.054	23.054	(0.997)	258857	3.00000	2.473
71	Chrysene	228	23.162	23.162	(1.002)	303781	1.00000	0.9889
72	bis(2-Ethylhexyl)phthalate	149	23.170	23.178	(0.959)	162205	1.00000	0.7416
* 134	Di-n-octylphthalate-d4	153	24.153	24.153	(1.000)	1276639	4.00000	
73	Di-n-octylphthalate	149	24.161	24.161	(1.000)	277809	1.00000	0.9307
74	Benzo(b)fluoranthene	252	24.943	24.943	(0.971)	211762	1.00000	0.9023
75	Benzo(k)fluoranthene	252	24.982	24.989	(0.973)	250546	1.00000	0.9990(H)
76	Benzo(a)pyrene	252	25.570	25.578	(0.995)	194966	1.00000	0.8758
* 77	Perylene-d12	264	25.686	25.686	(1.000)	739668	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.236	28.244	(1.099)	137909	1.00000	0.7516
79	Dibenzo(a,h)anthracene	278	28.244	28.267	(1.100)	112505	1.00000	0.7442
80	Benzo(g,h,i)perylene	276	28.982	28.997	(1.128)	110200	1.00000	0.7402
90	N-Nitrosodimethylamine	74	4.566	4.566	(0.513)	159280	2.00000	2.120
91	Aniline	93	8.359	8.358	(0.939)	368085	2.00000	2.111
93	Benzidine	184	20.739	20.754	(0.897)	233886	2.00000	1.936
103	Pyridine	79	4.581	4.597	(0.515)	257275	2.00000	2.164
105	1-methylnaphthalene	142	13.053	13.053	(1.146)	222293	1.00000	0.9687
111	Azobenzene (1,2-DP-Hydrazine)	77	16.440	16.440	(1.095)	389278	1.00000	0.9708
187	Total Benzofluoranthenes	252	24.982	24.943	(0.973)	432058	2.00000	1.886(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
120 2,3,4,6-Tetrachlorophenol	232	15.745	15.760	(1.048)	74897	1.00000	0.8082

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021608.D
Lab Smp Id: SLB0234-CAL3
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 17:06
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	375798	187899	751596	363048	-3.39
27 Naphthalene-d8	1378169	689085	2756338	1323614	-3.96
42 Acenaphthene-d10	847135	423568	1694270	812533	-4.08
59 Phenanthrene-d10	1675180	837590	3350360	1628200	-2.80
69 Chrysene-d12	1073562	536781	2147124	1067204	-0.59
134 Di-n-octylphthala	1344129	672065	2688258	1276639	-5.02
77 Perylene-d12	721978	360989	1443956	739668	2.45

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.90	8.40	9.40	8.90	0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.07
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	0.00
59 Phenanthrene-d10	18.05	17.55	18.55	18.05	0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	-0.03
134 Di-n-octylphthala	24.15	23.65	24.65	24.15	0.00
77 Perylene-d12	25.69	25.19	26.19	25.69	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021608.D

Lab ID: SLB0234-CAL3
nt14.i, ABN.m, 16-FEB-2023 18:18

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.955	0.000	0.9551	Benzoic acid
1.010	0.000	1.0098	2,4-Dinitrophenol
1.016	0.000	1.0165	4-Nitrophenol
0.986	0.000	0.9859	Pentachlorophenol

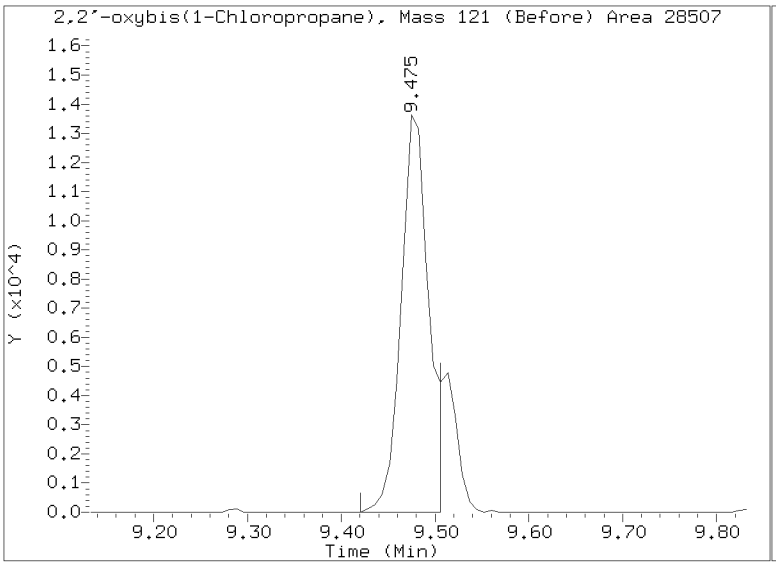
RRT check based on Ccal File: NT1423021610.D

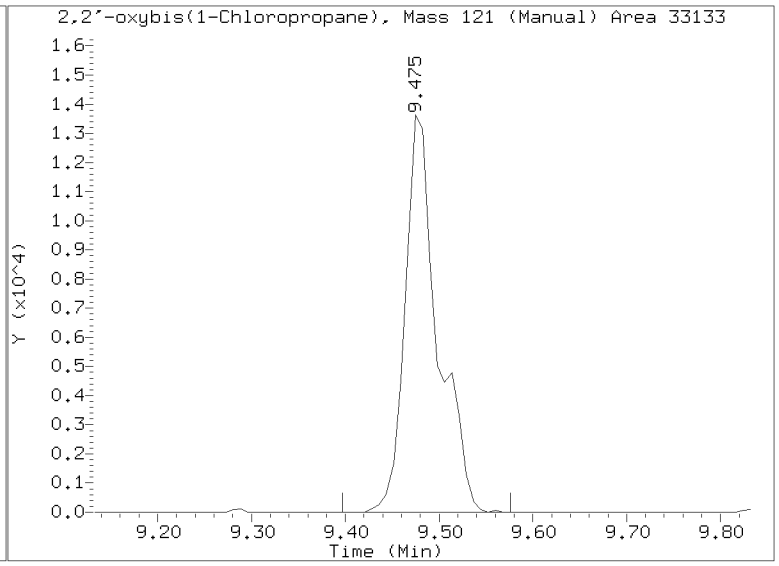
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

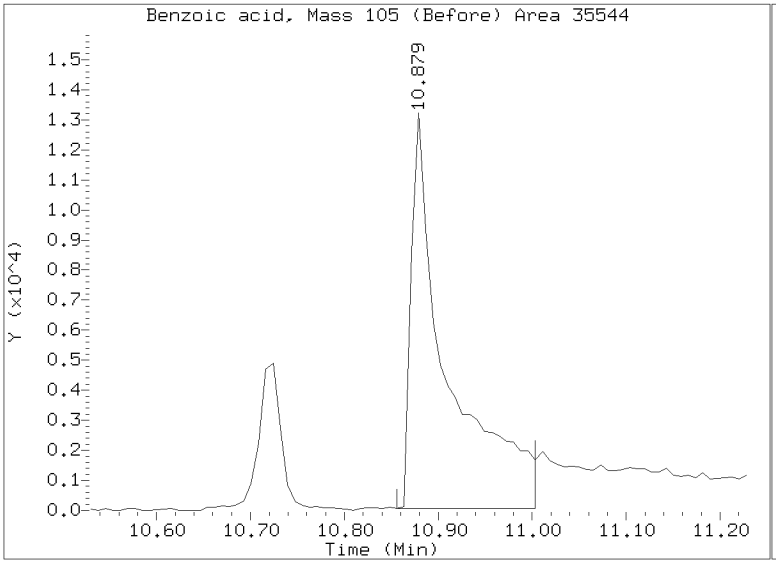
* Only compounds listed in the work order have been verified by the analyst *

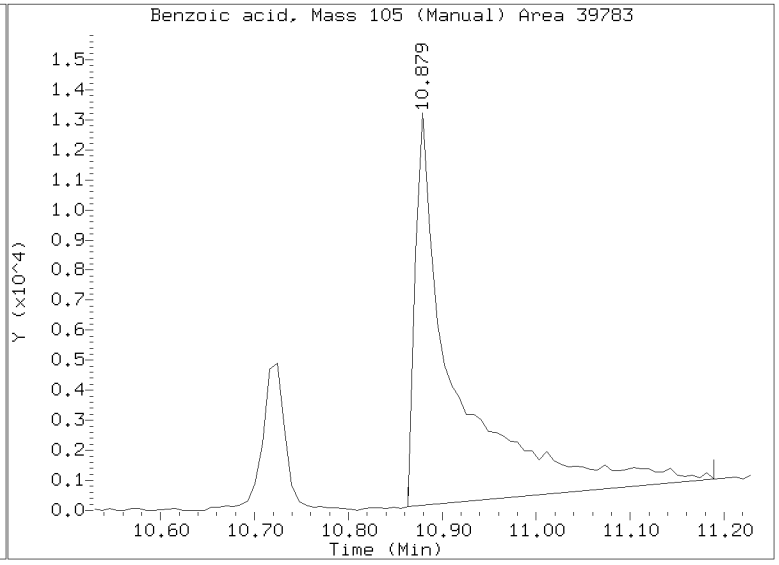
Quant Ion Manual Peak Adjustment Report

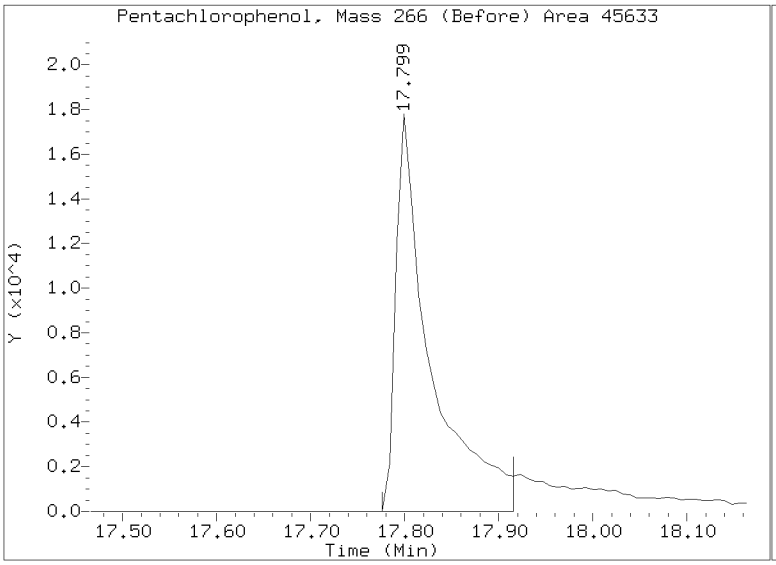
Datafile: //target/share/chem3/nt14.i/20230216.b/NT1423021608.D
Injection Date: 16-FEB-2023 18:18
Lab ID:SLB0234-CAL3 Client ID:
Report Date: 02/28/2023 14:37

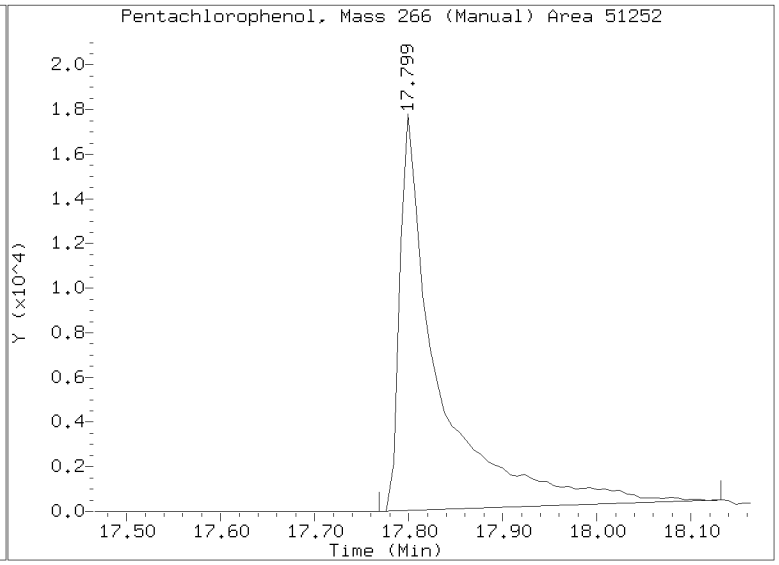












Quant Ion Manual Peak Adjustment Report

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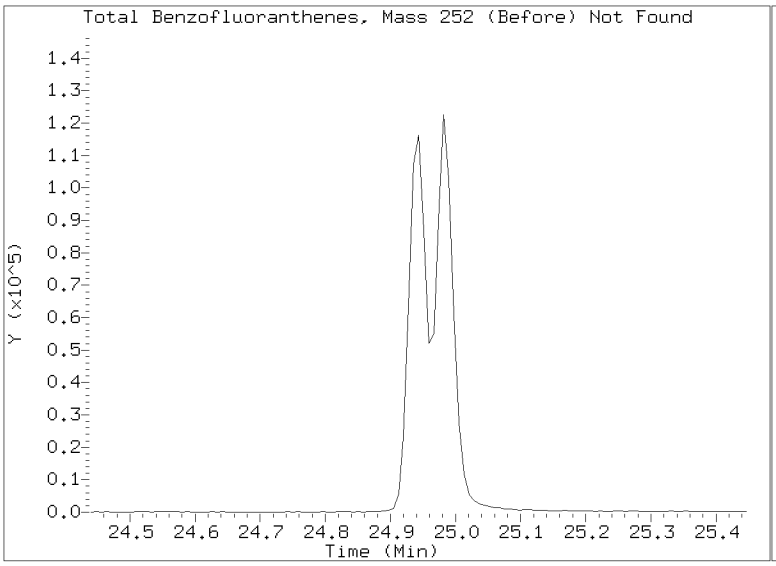
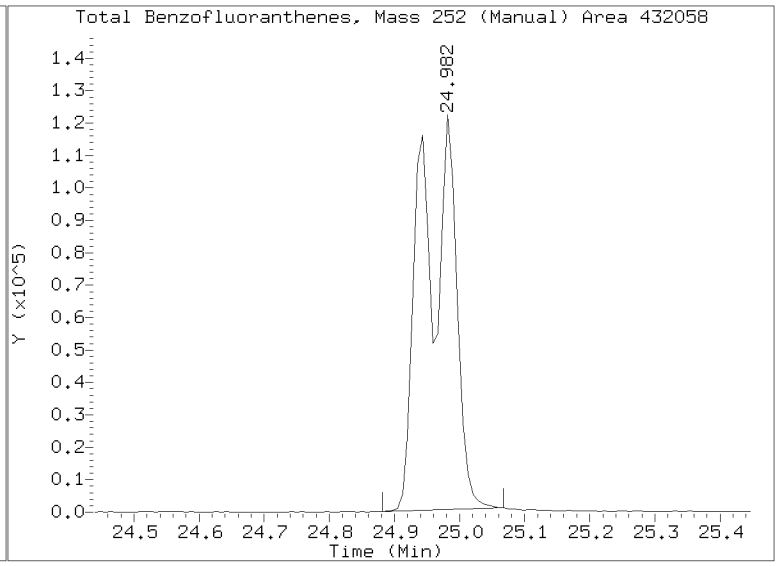
Injection Date: 16-FEB-2023 18:18
Lab ID:SLB0234-CAL3 Client ID:
Report Date: 02/28/2023 14:37





Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021609.D

Page 1

Date : 16-FEB-2023 18:54

Client ID:

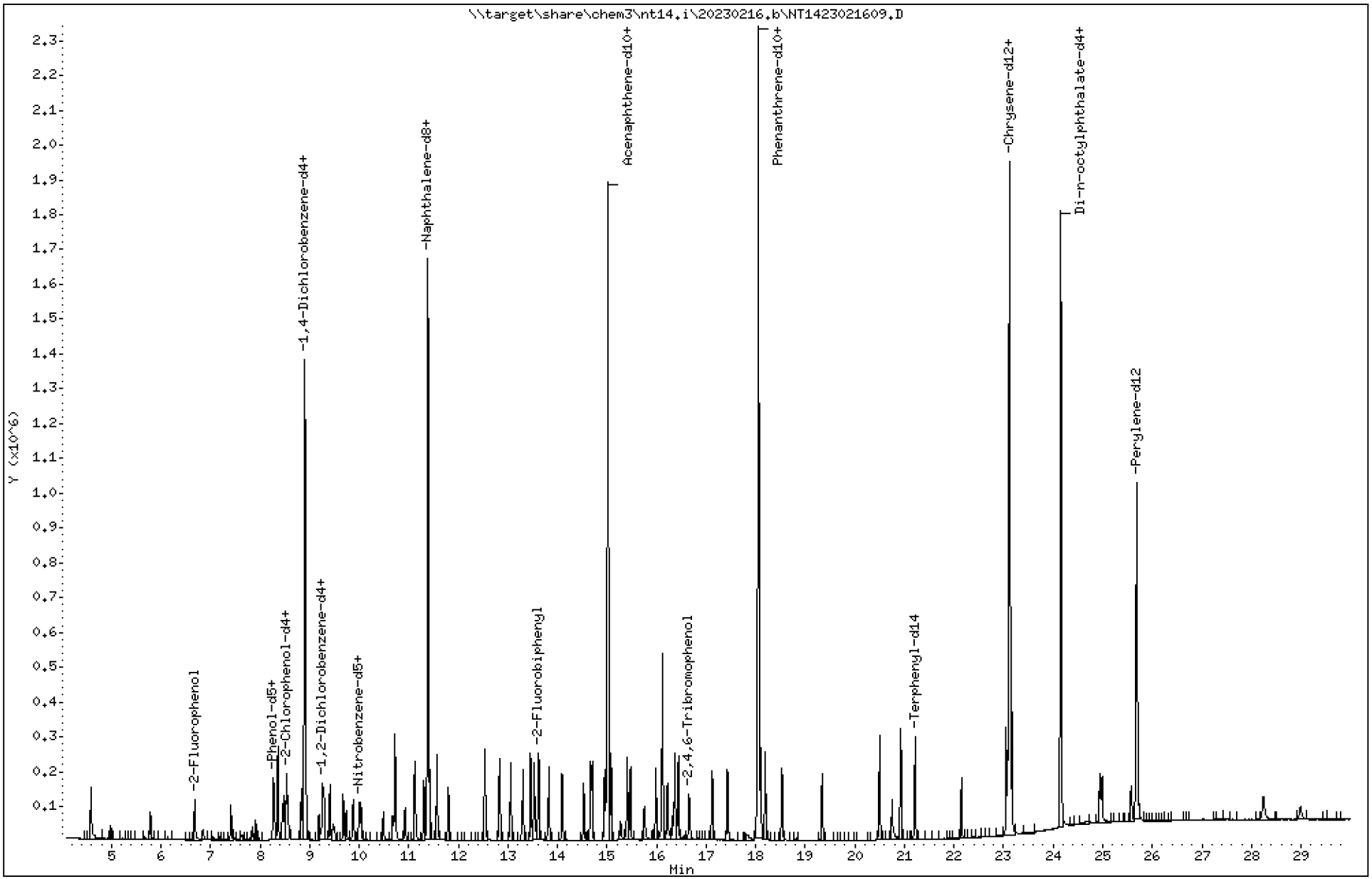
Instrument: nt14.i

Sample Info: SLB0234-CAL2

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230216.b\NT1423021609.D
Lab Smp Id: SLB0234-CAL2
Inj Date : 16-FEB-2023 18:54 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0234-CAL2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Meth Date : 17-Feb-2023 15:05 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 18:54 Cal File: NT1423021609.D
Als bottle: 7 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.674	6.682	(0.750)	63549	0.75000	0.6438
$	2 Phenol-d5	99	8.266	8.266	(0.929)	105912	0.75000	0.6764
	3 Phenol	94	8.289	8.289	(0.931)	75646	0.50000	0.4564
$	5 2-Chlorophenol-d4	132	8.536	8.536	(0.959)	78832	0.75000	0.7056
	4 Bis(2-Chloroethyl)ether	93	8.451	8.451	(0.950)	59684	0.50000	0.4713
	6 2-Chlorophenol	128	8.559	8.567	(0.962)	53121	0.50000	0.4551
	7 1,3-Dichlorobenzene	146	8.838	8.838	(0.993)	61640	0.50000	0.4743
*	8 1,4-Dichlorobenzene-d4	152	8.900	8.900	(1.000)	369229	4.00000	
	9 1,4-Dichlorobenzene	146	8.931	8.931	(1.003)	57020	0.50000	0.4623
$	10 1,2-Dichlorobenzene-d4	152	9.257	9.257	(1.040)	40896	0.50000	0.4883
	12 1,2-Dichlorobenzene	146	9.288	9.288	(1.044)	57953	0.50000	0.4700
	11 Benzyl alcohol	108	9.187	9.202	(1.032)	31482	0.50000	0.3382
	14 2,2'-oxybis(1-Chloropropane)	121	9.474	9.482	(1.065)	16279	0.50000	0.4615(M)
	13 2-Methylphenol	108	9.404	9.404	(1.057)	52785	0.50000	0.4560
	17 Hexachloroethane	117	9.878	9.878	(1.110)	24177	0.50000	0.4509
	16 N-Nitroso-di-n-propylamine	70	9.738	9.738	(1.094)	47326	0.50000	0.4492
	15 4-Methylphenol	108	9.676	9.684	(1.087)	53418	0.50000	0.4371
$	18 Nitrobenzene-d5	82	10.002	10.002	(0.878)	71048	0.50000	0.4588
	19 Nitrobenzene	77	10.033	10.033	(0.881)	71365	0.50000	0.4592
	20 Isophorone	82	10.483	10.491	(0.920)	76395	0.50000	0.3726
	21 2-Nitrophenol	139	10.669	10.677	(0.937)	17954	0.50000	0.2583
	22 2,4-Dimethylphenol	107	10.724	10.724	(0.942)	115466	1.00000	0.9840
	23 Bis(2-Chloroethoxy)methane	93	10.925	10.925	(0.959)	60170	0.50000	0.4512
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	11.119	11.127	(0.976)	92274	1.00000	0.9188
	26 1,2,4-Trichlorobenzene	180	11.305	11.305	(0.993)	58401	0.50000	0.4801
*	27 Naphthalene-d8	136	11.389	11.389	(1.000)	1340371	4.00000	
	28 Naphthalene	128	11.428	11.428	(1.003)	155989	0.50000	0.4720
	29 4-Chloroaniline	127	11.567	11.575	(1.016)	122855	1.00000	0.8701
	30 Hexachlorobutadiene	225	11.799	11.799	(1.036)	35267	0.50000	0.4703
	31 4-Chloro-3-methylphenol	107	12.534	12.542	(1.100)	93567	1.00000	0.8608
	32 2-Methylnaphthalene	142	12.828	12.836	(1.126)	116315	0.50000	0.4699
	33 Hexachlorocyclopentadiene	237	13.300	13.301	(0.886)	63332	1.00000	0.7994
	34 2,4,6-Trichlorophenol	196	13.455	13.463	(0.896)	65366	1.00000	0.8115

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	35	2,4,5-Trichlorophenol	196	13.532	13.541	(0.901)	71505	1.00000	0.8197
$	36	2-Fluorobiphenyl	172	13.617	13.617	(0.907)	141308	0.50000	0.4830
	37	2-Chloronaphthalene	162	13.826	13.826	(0.921)	109609	0.50000	0.4590
	38	2-Nitroaniline	65	14.090	14.097	(0.938)	66339	1.00000	0.8544
	39	Dimethylphthalate	163	14.531	14.531	(0.968)	116579	0.50000	0.4667
	40	Acenaphthylene	152	14.701	14.701	(0.979)	176944	0.50000	0.4858
	41	2,6-Dinitrotoluene	165	14.670	14.670	(0.977)	52858	1.00000	0.8993
*	42	Acenaphthene-d10	164	15.018	15.018	(1.000)	817804	4.00000	
	43	3-Nitroaniline	138	14.949	14.957	(0.995)	50808	1.00000	0.8144
	44	Acenaphthene	153	15.080	15.080	(1.004)	102804	0.50000	0.4714
	45	2,4-Dinitrophenol	184	15.281	15.282	(1.017)	1162	2.00000	0.03025(M)
	46	Dibenzofuran	168	15.405	15.405	(1.026)	170389	0.50000	0.4759
	47	4-Nitrophenol	109	15.273	15.273	(1.017)	14226	1.00000	0.3937(M)
	48	2,4-Dinitrotoluene	165	15.474	15.475	(1.030)	68706	1.00000	0.8267
	50	Diethylphthalate	149	15.985	15.984	(1.064)	159541	0.50000	0.4804
	49	Fluorene	166	16.124	16.124	(1.074)	180891	0.50000	0.4831
	51	4-Chlorophenyl-phenylether	204	16.116	16.116	(1.073)	95821	0.50000	0.4786
	52	4-Nitroaniline	138	16.216	16.224	(1.080)	56066	1.00000	0.7833
	53	4,6-Dinitro-2-methylphenol	198	16.316	16.370	(0.904)	29146	2.00000	0.4876(M)
	54	N-Nitrosodiphenylamine	169	16.363	16.370	(0.906)	110585	0.50000	0.4659
$	55	2,4,6-Tribromophenol	330	16.656	16.663	(1.109)	24262	0.75000	0.5164(M)
	56	4-Bromophenyl-phenylether	248	17.118	17.118	(0.948)	46093	0.50000	0.4360
	57	Hexachlorobenzene	284	17.427	17.434	(0.965)	48722	0.50000	0.4535
	58	Pentachlorophenol	266	17.814	17.814	(0.987)	15027	1.00000	0.2879(M)
*	59	Phenanthrene-d10	188	18.054	18.054	(1.000)	1651873	4.00000	
	60	Phenanthrene	178	18.101	18.101	(1.003)	184442	0.50000	0.4647
	61	Anthracene	178	18.193	18.193	(1.008)	182133	0.50000	0.4631
	62	Carbazole	167	18.526	18.534	(1.026)	156254	0.50000	0.4378
	63	Di-n-butylphthalate	149	19.339	19.346	(1.071)	161556	0.50000	0.4053
	64	Fluoranthene	202	20.499	20.499	(0.887)	210260	0.50000	0.4441
	65	Pyrene	202	20.925	20.925	(0.905)	236374	0.50000	0.4721
$	66	Terphenyl-d14	244	21.219	21.219	(0.918)	172754	0.50000	0.4860
	67	Butylbenzylphthalate	149	22.148	22.148	(0.958)	54195	0.50000	0.3283
	68	Benzo(a)anthracene	228	23.093	23.092	(0.999)	161531	0.50000	0.4600
*	69	Chrysene-d12	240	23.123	23.123	(1.000)	1097443	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.054	23.054	(0.997)	109082	1.50000	1.014
	71	Chrysene	228	23.162	23.162	(1.002)	149916	0.50000	0.4746
	72	bis(2-Ethylhexyl)phthalate	149	23.178	23.178	(0.960)	67455	0.50000	0.3119
*	134	Di-n-octylphthalate-d4	153	24.153	24.153	(1.000)	1258630	4.00000	
	73	Di-n-octylphthalate	149	24.161	24.161	(1.000)	134438	0.50000	0.4568
	74	Benzo(b)fluoranthene	252	24.943	24.943	(0.971)	105103	0.50000	0.4519
	75	Benzo(k)fluoranthene	252	24.989	24.989	(0.973)	108195	0.50000	0.4353(H)
	76	Benzo(a)pyrene	252	25.570	25.578	(0.995)	77143	0.50000	0.3500
*	77	Perylene-d12	264	25.686	25.686	(1.000)	733004	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.236	28.244	(1.099)	55897	0.50000	0.3082
	79	Dibenzo(a,h)anthracene	278	28.252	28.267	(1.100)	46959	0.50000	0.3142
	80	Benzo(g,h,i)perylene	276	28.982	28.997	(1.128)	48735	0.50000	0.3313
	90	N-Nitrosodimethylamine	74	4.566	4.566	(0.513)	69706	1.00000	0.9121
	91	Aniline	93	8.358	8.358	(0.939)	176176	1.00000	0.9936
	93	Benzidine	184	20.747	20.754	(0.897)	94244	1.00000	0.7448
	103	Pyridine	79	4.589	4.597	(0.516)	108255	1.00000	0.8952
	105	1-methylnaphthalene	142	13.053	13.053	(1.146)	108251	0.50000	0.4658
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.440	16.440	(1.095)	190307	0.50000	0.4715
	187	Total Benzofluoranthenes	252	24.943	24.943	(0.971)	199974	1.00000	0.8806(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
120 2,3,4,6-Tetrachlorophenol	232	15.753	15.760	(1.049)	28898	0.50000	0.3105

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021609.D
Lab Smp Id: SLB0234-CAL2
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 17:06
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	375798	187899	751596	369229	-1.75
27 Naphthalene-d8	1378169	689085	2756338	1340371	-2.74
42 Acenaphthene-d10	847135	423568	1694270	817804	-3.46
59 Phenanthrene-d10	1675180	837590	3350360	1651873	-1.39
69 Chrysene-d12	1073562	536781	2147124	1097443	2.22
134 Di-n-octylphthala	1344129	672065	2688258	1258630	-6.36
77 Perylene-d12	721978	360989	1443956	733004	1.53

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.90	8.40	9.40	8.90	0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.07
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	0.00
59 Phenanthrene-d10	18.05	17.55	18.55	18.05	0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	0.00
134 Di-n-octylphthala	24.15	23.65	24.65	24.15	0.00
77 Perylene-d12	25.69	25.19	26.19	25.69	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021609.D

Lab ID: SLB0234-CAL2
nt14.i, ABN.m, 16-FEB-2023 18:54

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.017	0.000	1.0175	2,4-Dinitrophenol
1.017	0.000	1.0170	4-Nitrophenol
0.987	0.000	0.9867	Pentachlorophenol

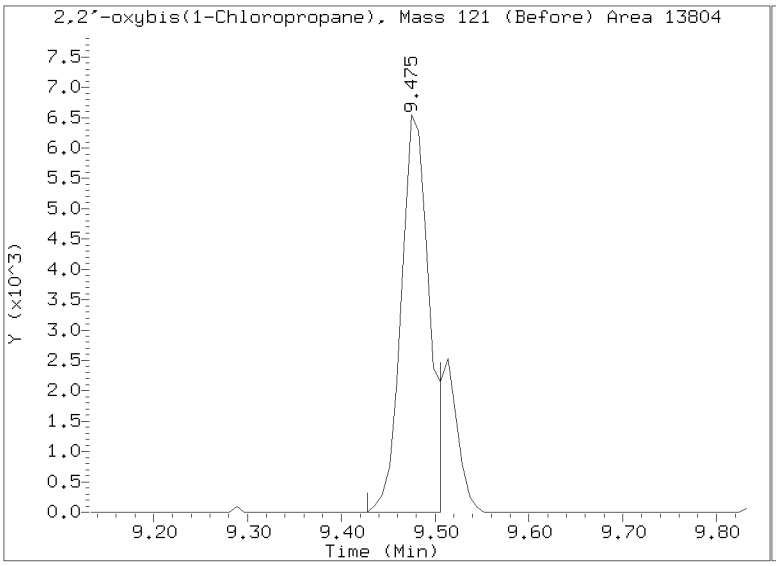
RRT check based on Ccal File: NT1423021610.D

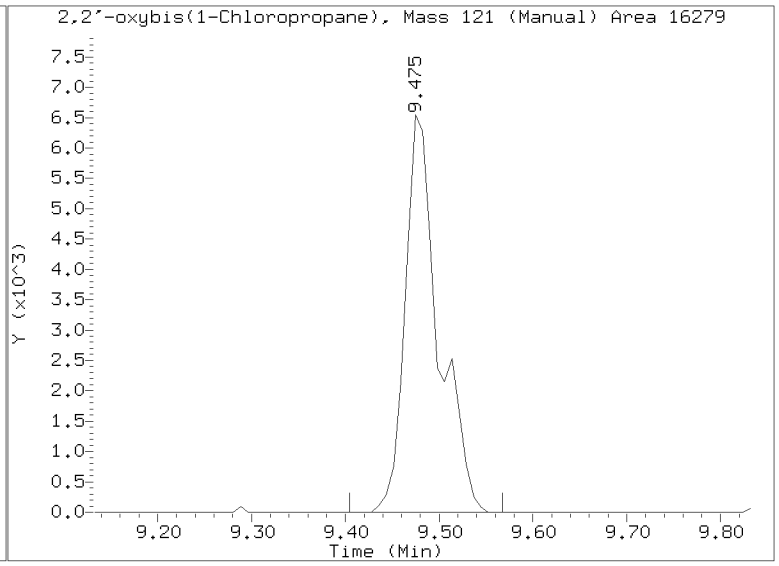
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

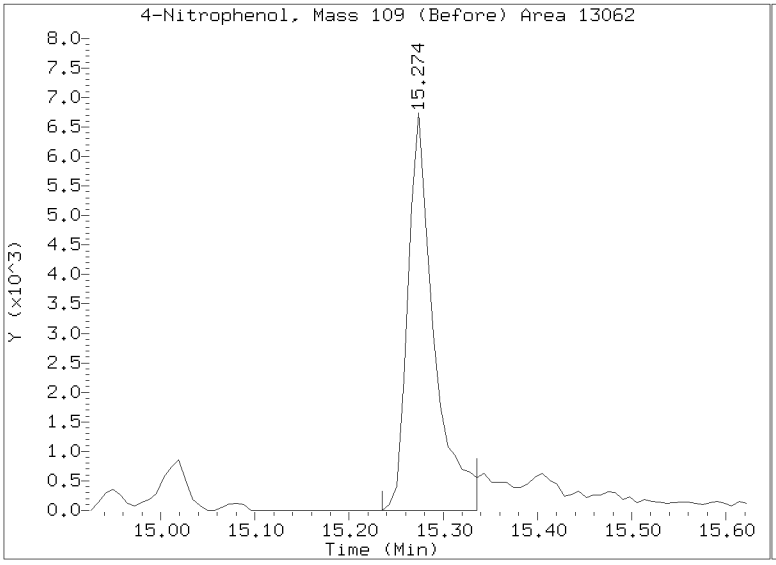
* Only compounds listed in the work order have been verified by the analyst *

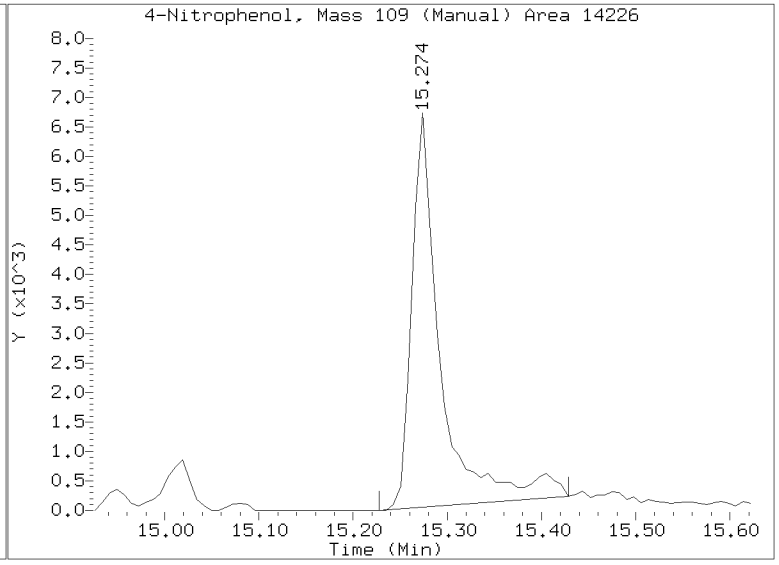
Quant Ion Manual Peak Adjustment Report

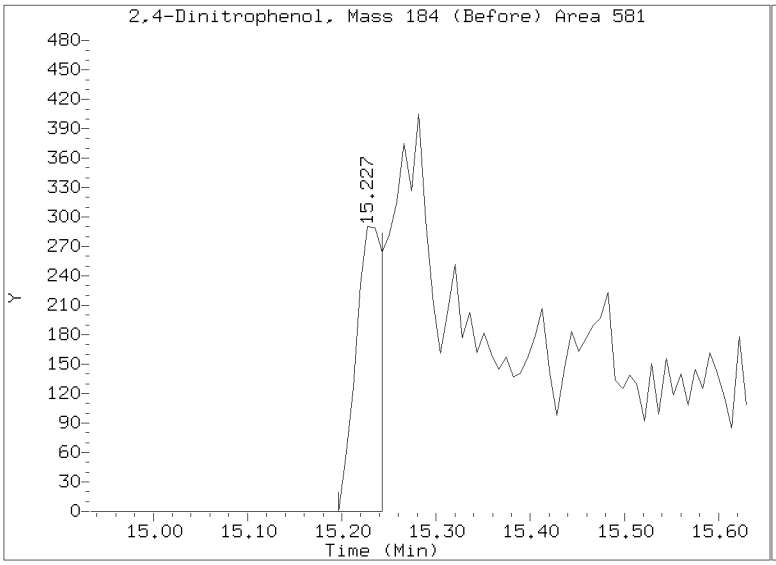
Datafile: //target/share/chem3/nt14.i/20230216.b/NT1423021609.D
Injection Date: 16-FEB-2023 18:54
Lab ID:SLB0234-CAL2 Client ID:
Report Date: 02/28/2023 14:37

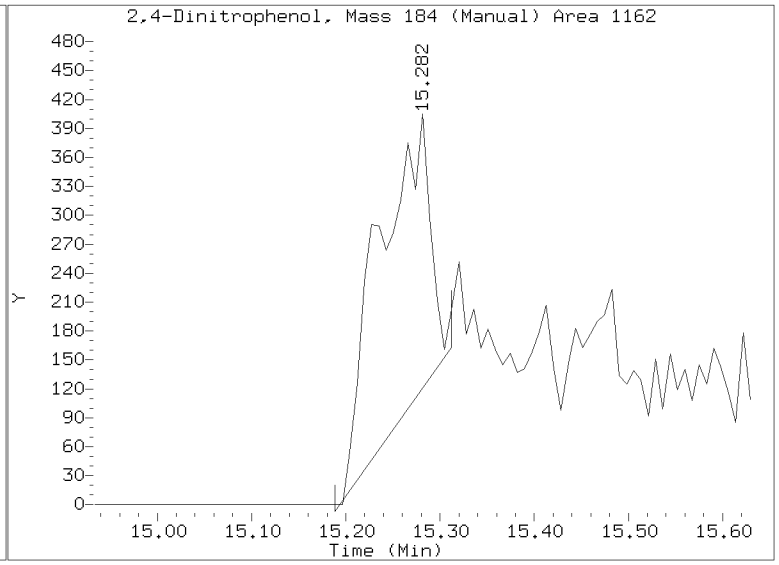












Quant Ion Manual Peak Adjustment Report

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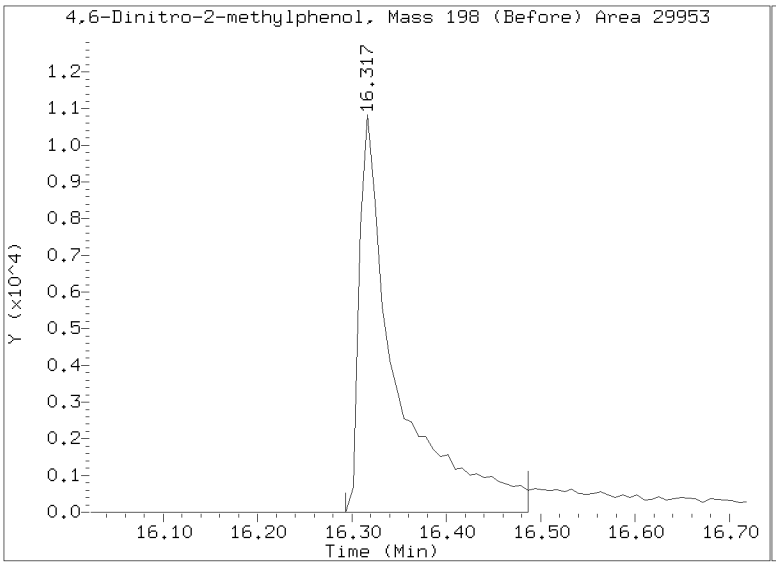
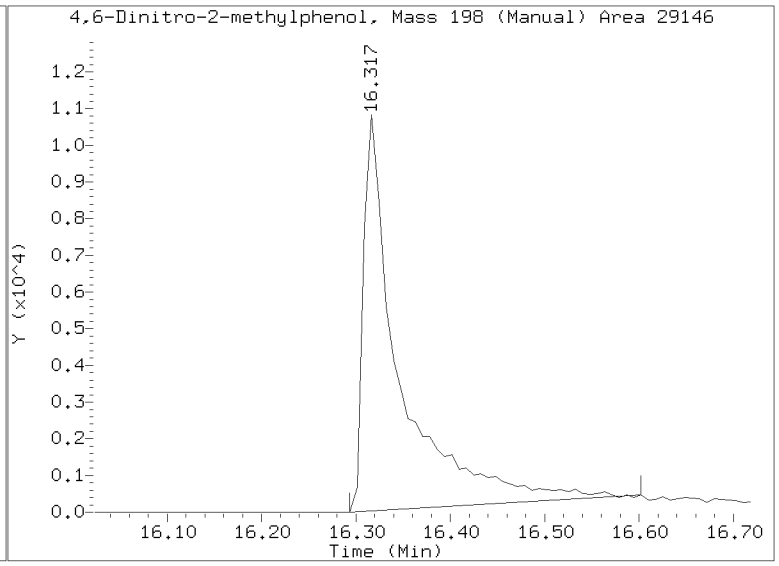
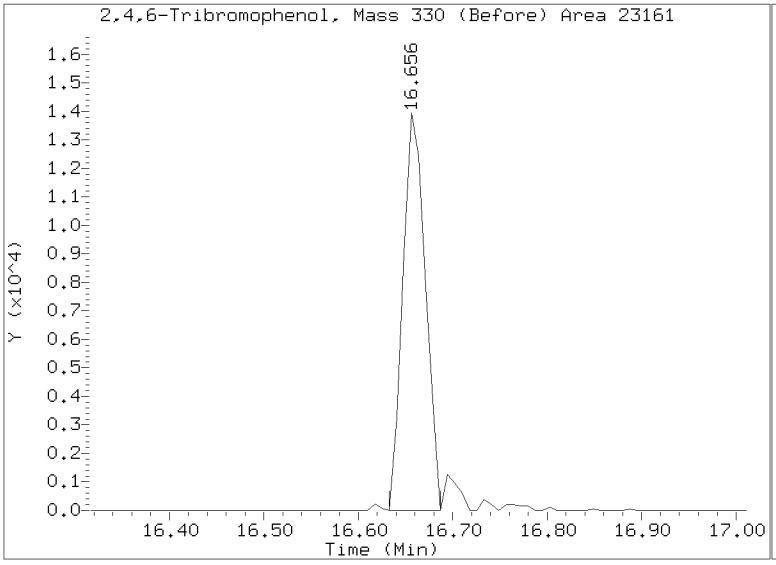
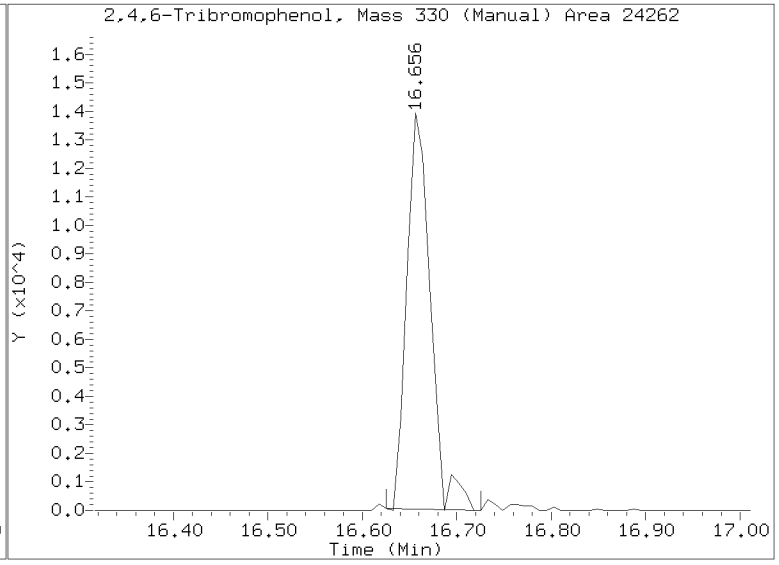
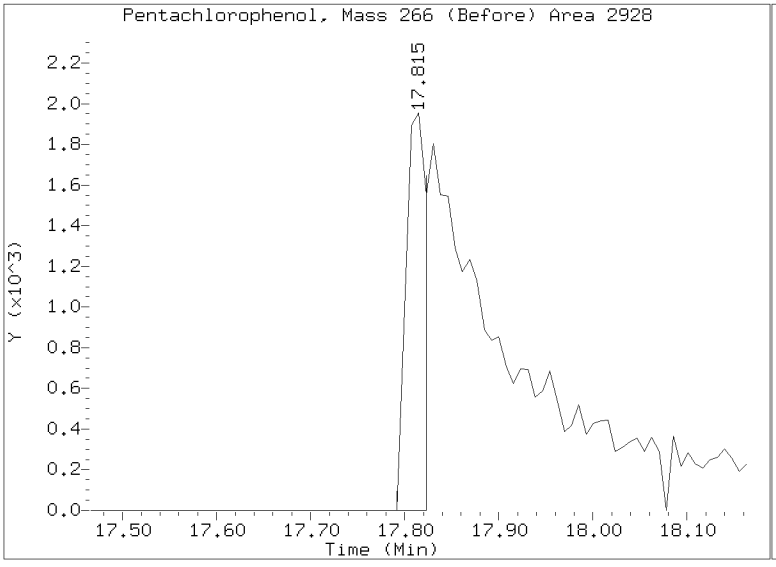
Injection Date: 16-FEB-2023 18:54
Lab ID:SLB0234-CAL2 Client ID:
Report Date: 02/28/2023 14:37

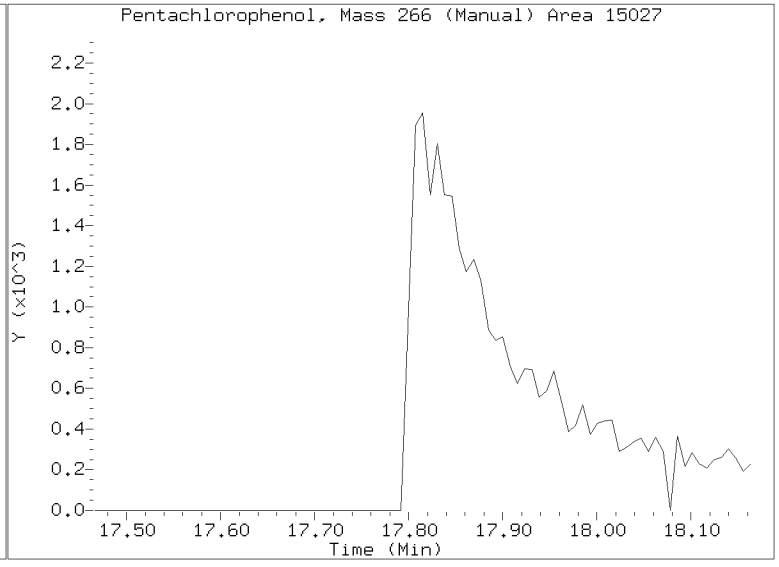






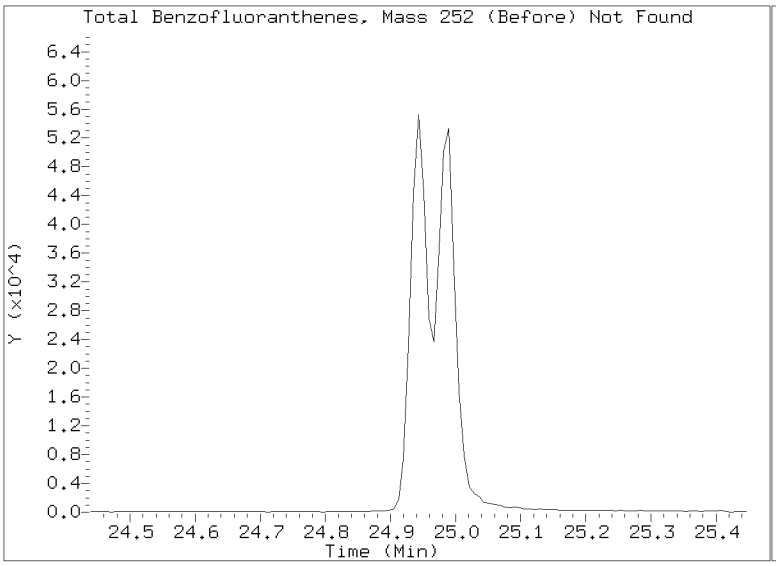


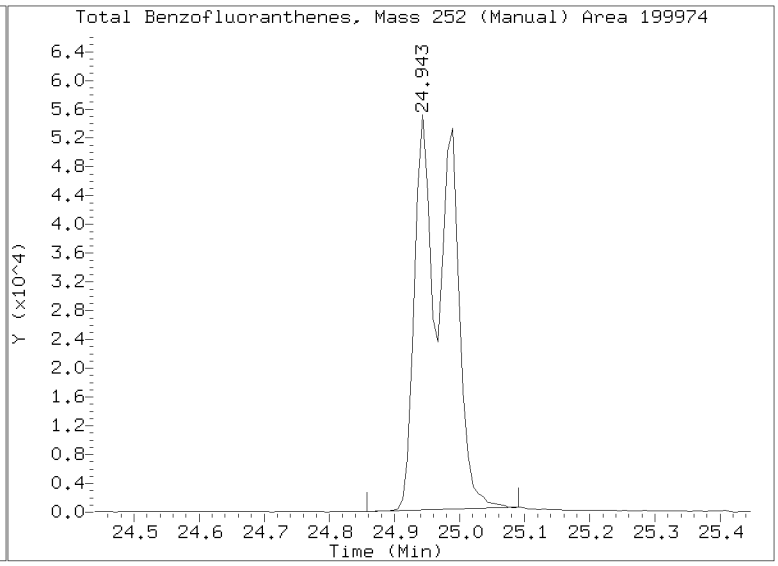




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230216.b/NT1423021609.D
Injection Date: 16-FEB-2023 18:54
Lab ID:SLB0234-CAL2 Client ID:
Report Date: 02/28/2023 14:37





Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021610.D

Date : 16-FEB-2023 19:30

Client ID:

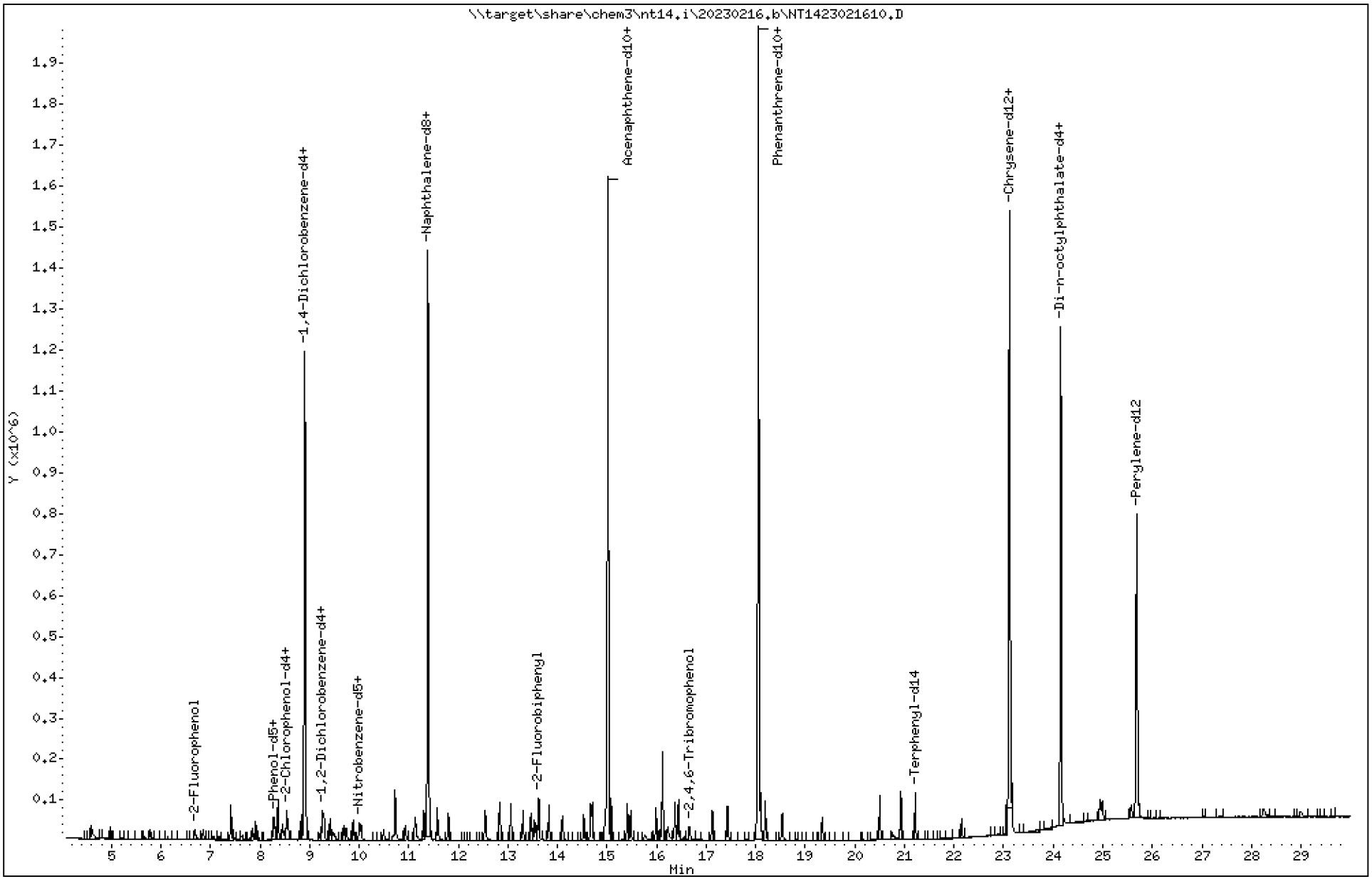
Instrument: nt14.i

Sample Info: SLB0234-CAL1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230216.b\NT1423021610.D
Lab Smp Id: SLB0234-CAL1
Inj Date : 16-FEB-2023 19:30 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0234-CAL1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Meth Date : 17-Feb-2023 15:05 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 8 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.682	6.682	(0.751)	19727	0.30000	0.2338
$	2 Phenol-d5	99	8.266	8.266	(0.929)	39071	0.30000	0.2919
	3 Phenol	94	8.289	8.289	(0.931)	28002	0.20000	0.1976
$	5 2-Chlorophenol-d4	132	8.536	8.536	(0.959)	29396	0.30000	0.3078
	4 Bis(2-Chloroethyl)ether	93	8.451	8.451	(0.950)	24433	0.20000	0.2257
	6 2-Chlorophenol	128	8.567	8.567	(0.963)	20114	0.20000	0.2016
	7 1,3-Dichlorobenzene	146	8.838	8.838	(0.993)	25746	0.20000	0.2318
*	8 1,4-Dichlorobenzene-d4	152	8.900	8.900	(1.000)	315597	4.00000	
	9 1,4-Dichlorobenzene	146	8.931	8.931	(1.003)	24503	0.20000	0.2324
$	10 1,2-Dichlorobenzene-d4	152	9.257	9.257	(1.040)	16977	0.20000	0.2372
	12 1,2-Dichlorobenzene	146	9.288	9.288	(1.044)	24310	0.20000	0.2307
	11 Benzyl alcohol	108	9.202	9.202	(1.034)	6675	0.20000	0.08391
	14 2,2'-oxybis(1-Chloropropane)	121	9.482	9.482	(1.065)	6831	0.20000	0.2266
	13 2-Methylphenol	108	9.404	9.404	(1.057)	19085	0.20000	0.1929
	17 Hexachloroethane	117	9.878	9.878	(1.110)	10254	0.20000	0.2237
	16 N-Nitroso-di-n-propylamine	70	9.738	9.738	(1.094)	17876	0.20000	0.1985
	15 4-Methylphenol	108	9.684	9.684	(1.088)	19358	0.20000	0.1853
$	18 Nitrobenzene-d5	82	10.002	10.002	(0.878)	28373	0.20000	0.2168
	19 Nitrobenzene	77	10.033	10.033	(0.881)	27684	0.20000	0.2108
	20 Isophorone	82	10.491	10.491	(0.921)	31330	0.20000	0.1808
	21 2-Nitrophenol	139	10.677	10.677	(0.937)	3337	0.20000	0.05688
	22 2,4-Dimethylphenol	107	10.724	10.724	(0.942)	44588	0.40000	0.4497
	23 Bis(2-Chloroethoxy)methane	93	10.925	10.925	(0.959)	24009	0.20000	0.2130
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	11.127	11.127	(0.977)	29283	0.40000	0.3451
	26 1,2,4-Trichlorobenzene	180	11.305	11.305	(0.993)	24421	0.20000	0.2376
*	27 Naphthalene-d8	136	11.389	11.389	(1.000)	1132602	4.00000	
	28 Naphthalene	128	11.428	11.428	(1.003)	64889	0.20000	0.2324
	29 4-Chloroaniline	127	11.575	11.575	(1.016)	44962	0.40000	0.3769
	30 Hexachlorobutadiene	225	11.799	11.799	(1.036)	14583	0.20000	0.2301
	31 4-Chloro-3-methylphenol	107	12.542	12.542	(1.101)	32488	0.40000	0.3537
	32 2-Methylnaphthalene	142	12.836	12.836	(1.127)	47453	0.20000	0.2269
	33 Hexachlorocyclopentadiene	237	13.300	13.301	(0.886)	21835	0.40000	0.3315
	34 2,4,6-Trichlorophenol	196	13.463	13.463	(0.896)	18177	0.40000	0.2715

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	35	2,4,5-Trichlorophenol	196	13.540	13.541	(0.902)	19352	0.40000	0.2669
$	36	2-Fluorobiphenyl	172	13.617	13.617	(0.907)	58757	0.20000	0.2416
	37	2-Chloronaphthalene	162	13.826	13.826	(0.921)	43828	0.20000	0.2208
	38	2-Nitroaniline	65	14.097	14.097	(0.939)	22321	0.40000	0.3458
	39	Dimethylphthalate	163	14.531	14.531	(0.968)	46187	0.20000	0.2224
	40	Acenaphthylene	152	14.701	14.701	(0.979)	70361	0.20000	0.2324
	41	2,6-Dinitrotoluene	165	14.670	14.670	(0.977)	19314	0.40000	0.3953
*	42	Acenaphthene-d10	164	15.018	15.018	(1.000)	679791	4.00000	
	43	3-Nitroaniline	138	14.956	14.957	(0.996)	16429	0.40000	0.3168
	44	Acenaphthene	153	15.080	15.080	(1.004)	40834	0.20000	0.2253
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.405	15.405	(1.026)	68683	0.20000	0.2308
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	15.474	15.475	(1.030)	22350	0.40000	0.3235
	50	Diethylphthalate	149	15.984	15.984	(1.064)	58965	0.20000	0.2136
	49	Fluorene	166	16.124	16.124	(1.074)	71779	0.20000	0.2306
	51	4-Chlorophenyl-phenylether	204	16.116	16.116	(1.073)	39360	0.20000	0.2365
	52	4-Nitroaniline	138	16.224	16.224	(1.080)	13890	0.40000	0.2334
	53	4,6-Dinitro-2-methylphenol	198	16.370	16.370	(0.907)	319	0.80000	0.006460
	54	N-Nitrosodiphenylamine	169	16.370	16.370	(0.907)	40402	0.20000	0.2059
$	55	2,4,6-Tribromophenol	330	16.663	16.663	(1.110)	6408	0.30000	0.1642(M)
	56	4-Bromophenyl-phenylether	248	17.118	17.118	(0.948)	18159	0.20000	0.2078
	57	Hexachlorobenzene	284	17.435	17.434	(0.966)	20277	0.20000	0.2283
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.054	18.054	(1.000)	1365529	4.00000	
	60	Phenanthrene	178	18.101	18.101	(1.003)	74487	0.20000	0.2270
	61	Anthracene	178	18.193	18.193	(1.008)	66705	0.20000	0.2052
	62	Carbazole	167	18.534	18.534	(1.027)	54782	0.20000	0.1857
	63	Di-n-butylphthalate	149	19.346	19.346	(1.072)	52535	0.20000	0.1594
	64	Fluoranthene	202	20.499	20.499	(0.887)	78738	0.20000	0.2121
	65	Pyrene	202	20.925	20.925	(0.905)	87396	0.20000	0.2227
$	66	Terphenyl-d14	244	21.219	21.219	(0.918)	63582	0.20000	0.2282
	67	Butylbenzylphthalate	149	22.148	22.148	(0.958)	15963	0.20000	0.1234
	68	Benzo(a)anthracene	228	23.092	23.092	(0.999)	58939	0.20000	0.2141
*	69	Chrysene-d12	240	23.123	23.123	(1.000)	860315	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.054	23.054	(0.997)	30332	0.60000	0.3599
	71	Chrysene	228	23.162	23.162	(1.002)	57019	0.20000	0.2303
	72	bis(2-Ethylhexyl)phthalate	149	23.178	23.178	(0.960)	18016	0.20000	0.1147
*	134	Di-n-octylphthalate-d4	153	24.153	24.153	(1.000)	913087	4.00000	
	73	Di-n-octylphthalate	149	24.161	24.161	(1.000)	48406	0.20000	0.2267
	74	Benzo(b)fluoranthene	252	24.943	24.943	(0.971)	34719	0.20000	0.1905
	75	Benzo(k)fluoranthene	252	24.989	24.989	(0.973)	38060	0.20000	0.1954(H)
	76	Benzo(a)pyrene	252	25.578	25.578	(0.996)	25983	0.20000	0.1505
*	77	Perylene-d12	264	25.686	25.686	(1.000)	574514	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.244	28.244	(1.100)	18856	0.20000	0.1328
	79	Dibenzo(a,h)anthracene	278	28.267	28.267	(1.100)	14219	0.20000	0.1215
	80	Benzo(g,h,i)perylene	276	28.997	28.997	(1.129)	17069	0.20000	0.1482
	90	N-Nitrosodimethylamine	74	4.566	4.566	(0.513)	22505	0.40000	0.3445
	91	Aniline	93	8.358	8.358	(0.939)	66700	0.40000	0.4401
	93	Benzidine	184	20.754	20.754	(0.898)	22396	0.40000	0.2239
	103	Pyridine	79	4.597	4.597	(0.517)	35585	0.40000	0.3443
	105	1-methylnaphthalene	142	13.053	13.053	(1.146)	43580	0.20000	0.2219
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.440	16.440	(1.095)	73931	0.20000	0.2204
	187	Total Benzofluoranthenes	252	24.943	24.943	(0.971)	68576	0.40000	0.3853(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
120 2,3,4,6-Tetrachlorophenol	232	15.760	15.760	(1.049)	5181	0.20000	0.06703

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021610.D
Lab Smp Id: SLB0234-CAL1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 17:06
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	375798	187899	751596	315597	-16.02
27 Naphthalene-d8	1378169	689085	2756338	1132602	-17.82
42 Acenaphthene-d10	847135	423568	1694270	679791	-19.75
59 Phenanthrene-d10	1675180	837590	3350360	1365529	-18.48
69 Chrysene-d12	1073562	536781	2147124	860315	-19.86
134 Di-n-octylphthala	1344129	672065	2688258	913087	-32.07
77 Perylene-d12	721978	360989	1443956	574514	-20.42

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.90	8.40	9.40	8.90	0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.07
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	0.00
59 Phenanthrene-d10	18.05	17.55	18.55	18.05	0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	0.00
134 Di-n-octylphthala	24.15	23.65	24.65	24.15	0.00
77 Perylene-d12	25.69	25.19	26.19	25.69	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021610.D

Lab ID: SLB0234-CAL1
nt14.i, ABN.m, 16-FEB-2023 19:30

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

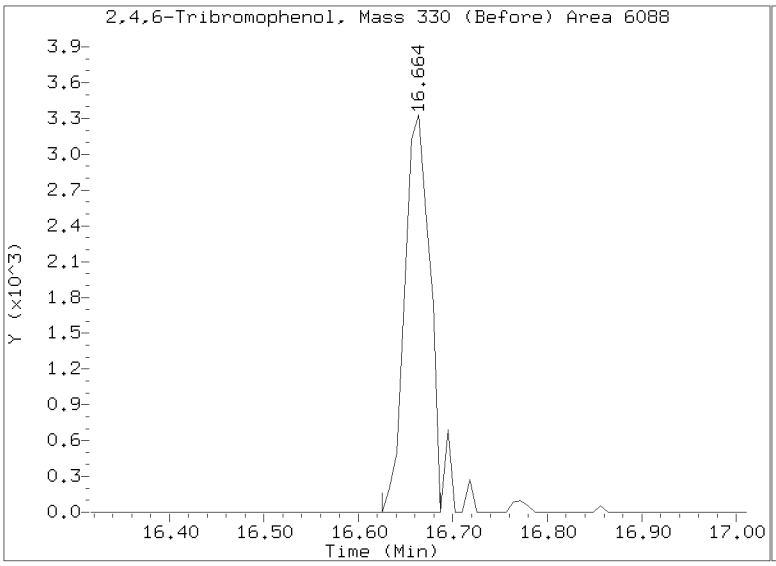
RRT check based on Ccal File: NT1423021610.D

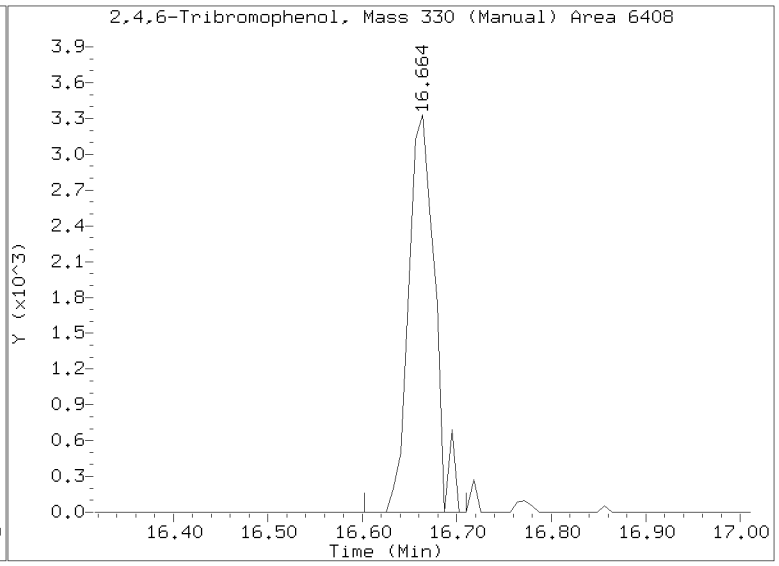
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

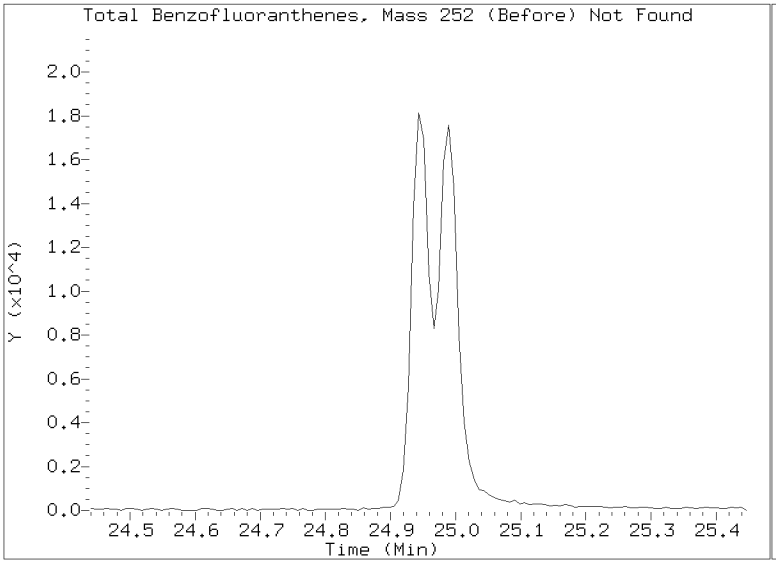
* Only compounds listed in the work order have been verified by the analyst *

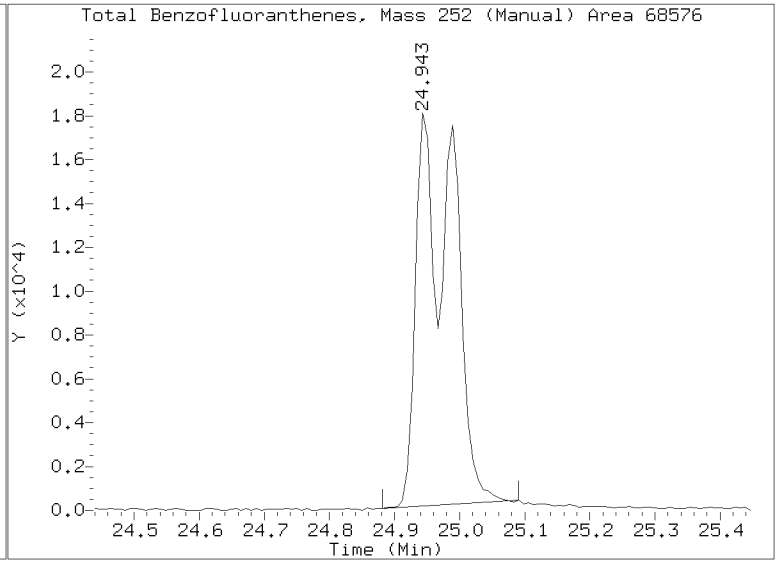
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230216.b/NT1423021610.D
Injection Date: 16-FEB-2023 19:30
Lab ID:SLB0234-CAL1 Client ID:
Report Date: 02/28/2023 14:37









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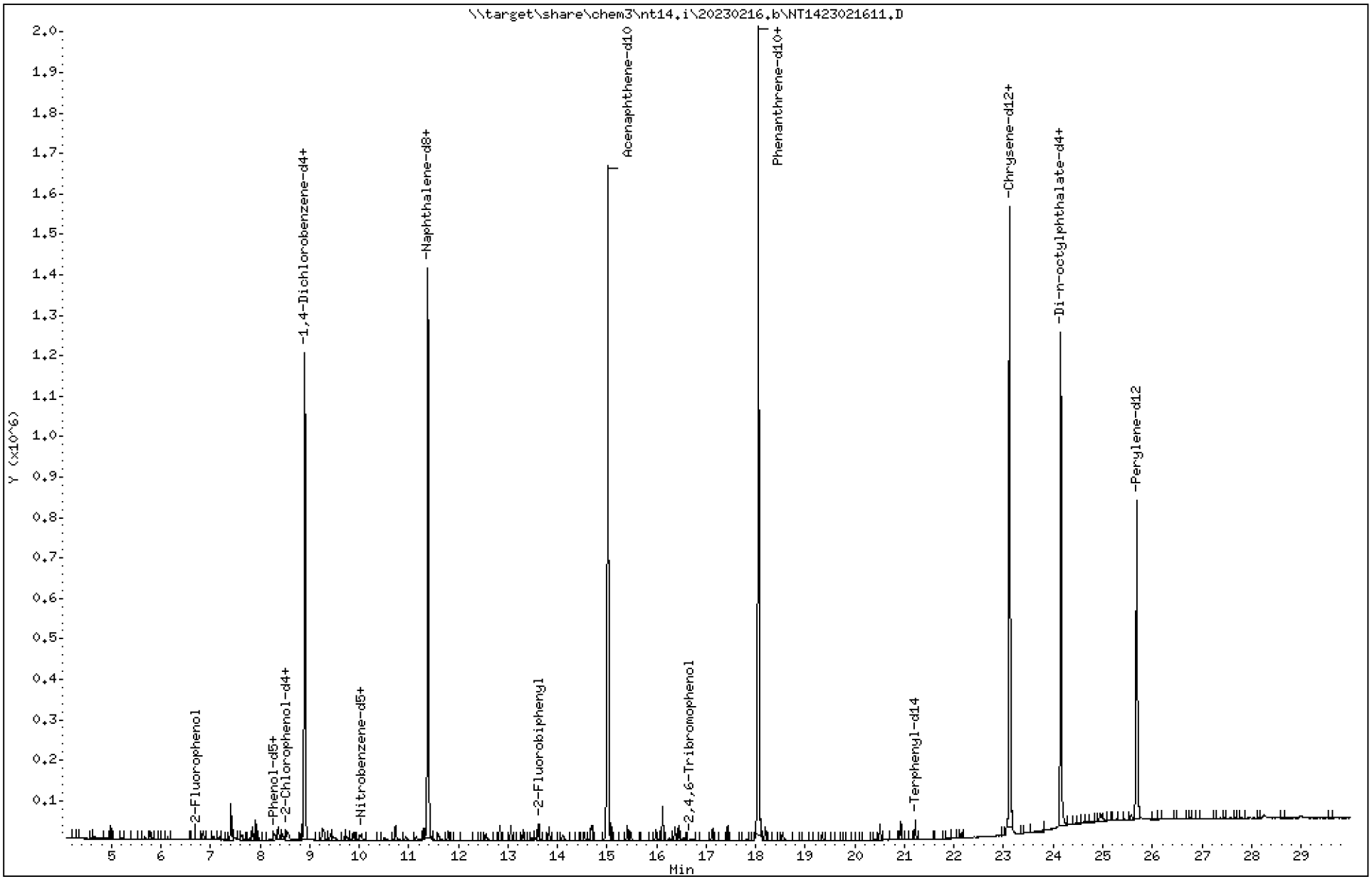
Date : 16-FEB-2023 20:06
Client ID:
Sample Info: SIM 0.1

Instrument: nt14.i
Operator: DSD
Column diameter: 0.25

Column phase: ZB-5msi



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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

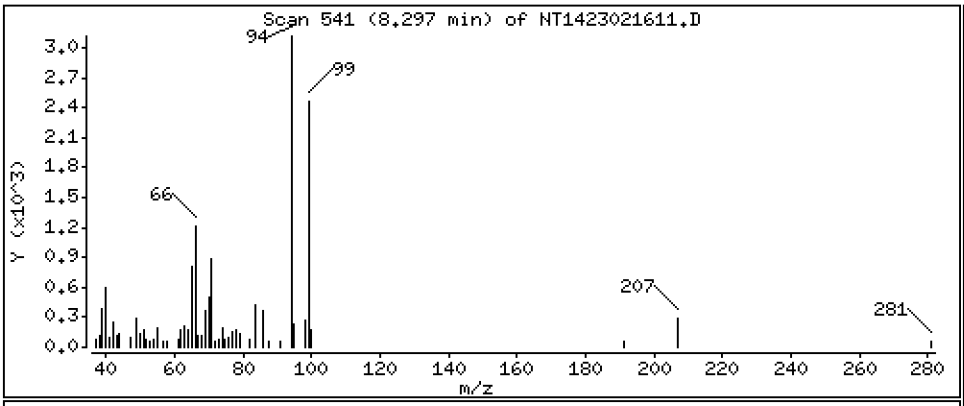
Operator: DSD

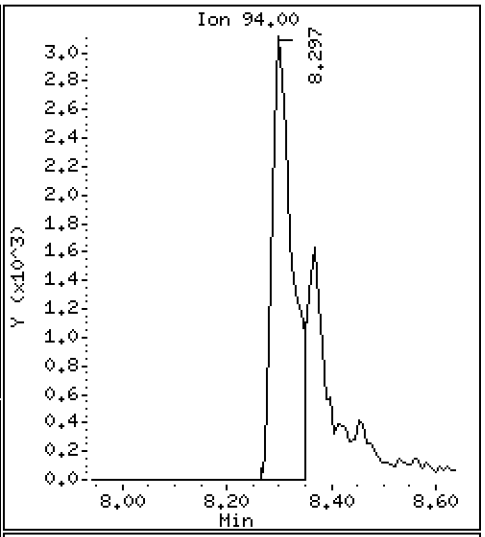
Column phase: ZB-5msi

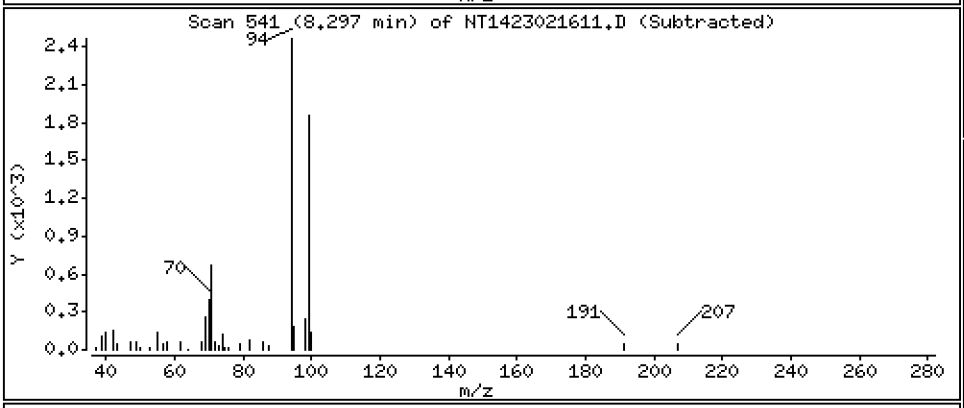
Column diameter: 0.25

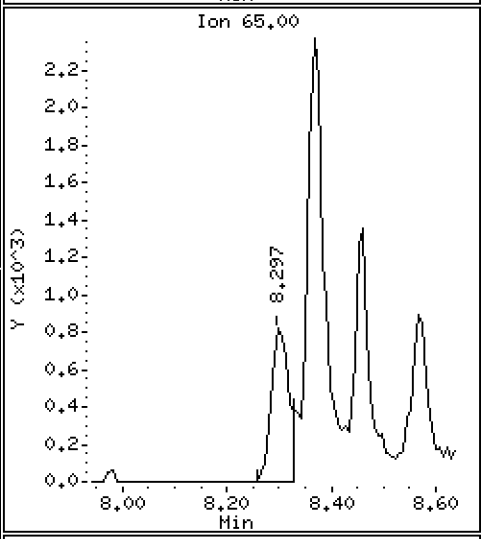
3 Phenol

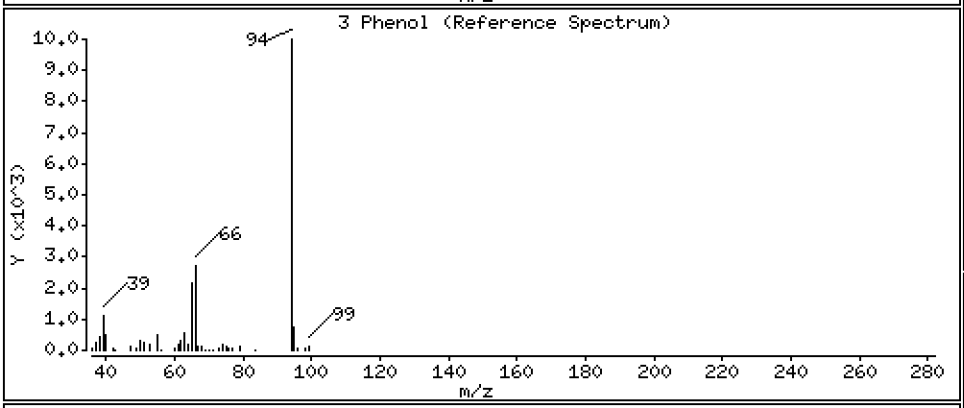
Concentration: 0.05905 ug/mL

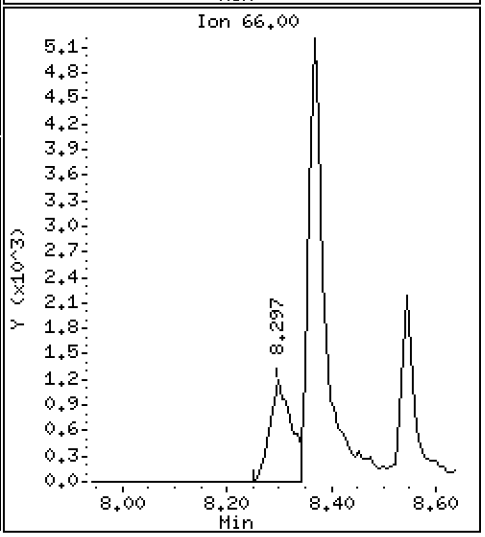


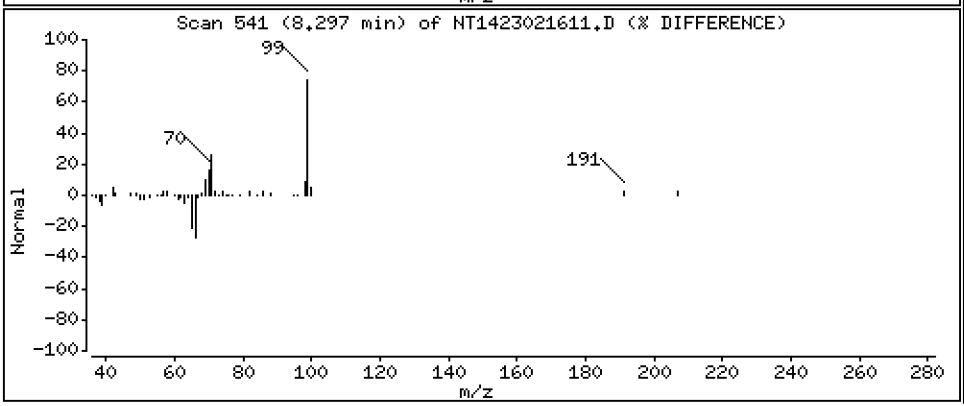












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

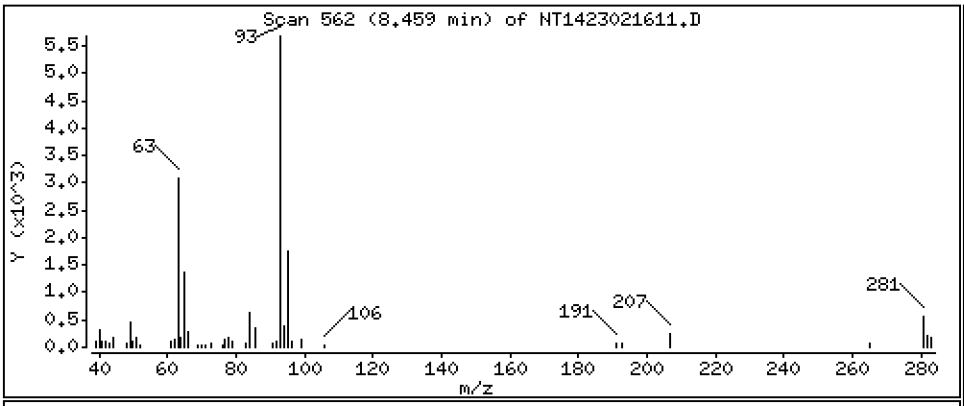
Operator: DSD

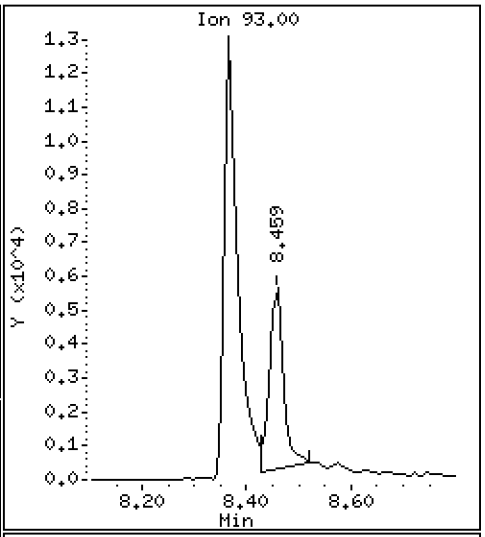
Column phase: ZB-5msi

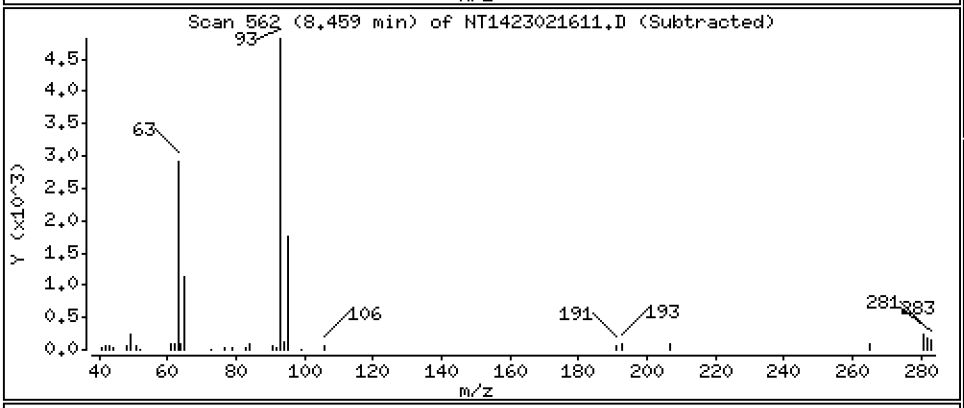
Column diameter: 0.25

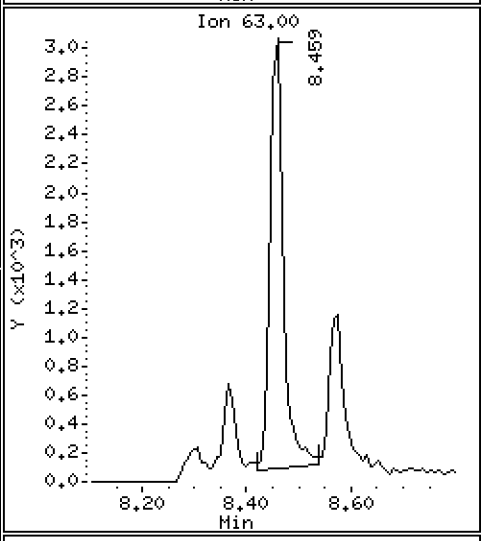
4 Bis(2-Chloroethyl)ether

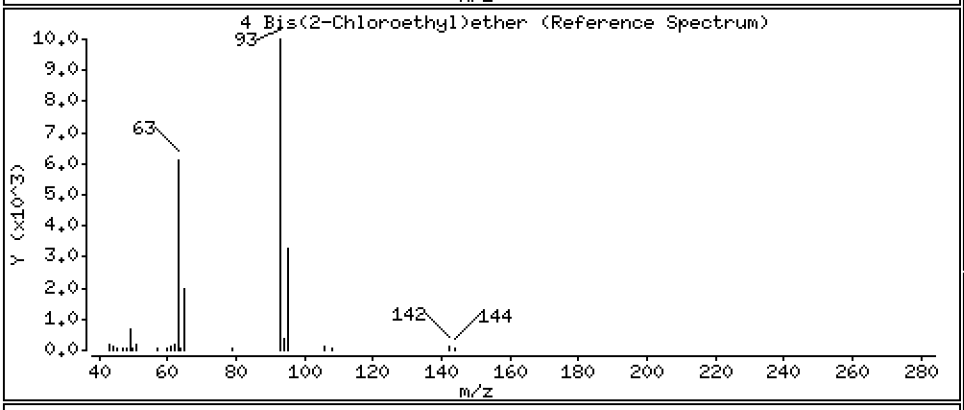
Concentration: 0.08655 ug/mL

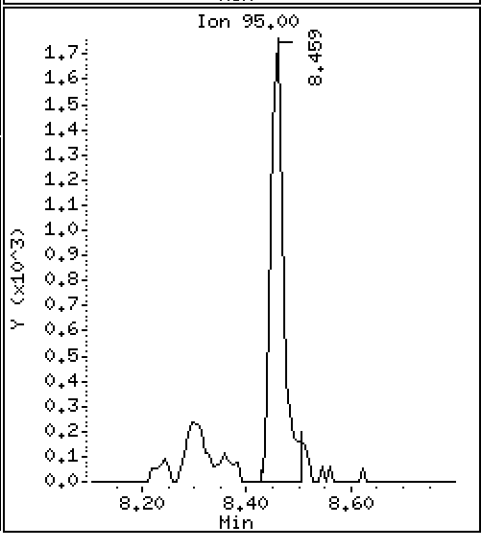


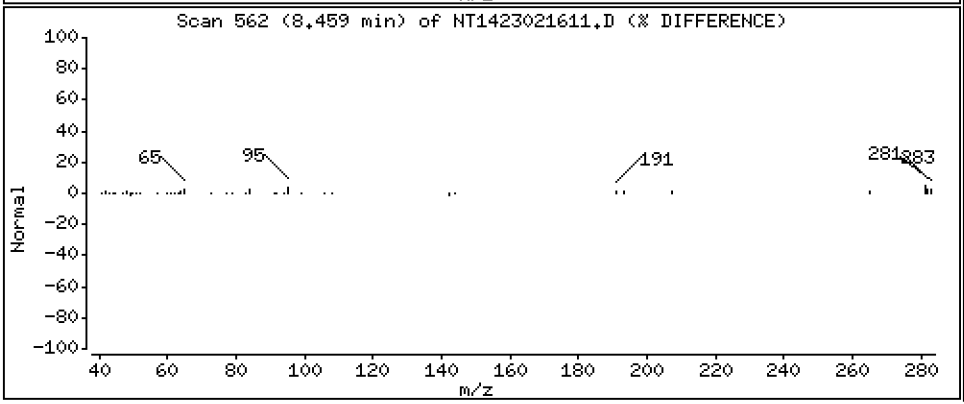












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

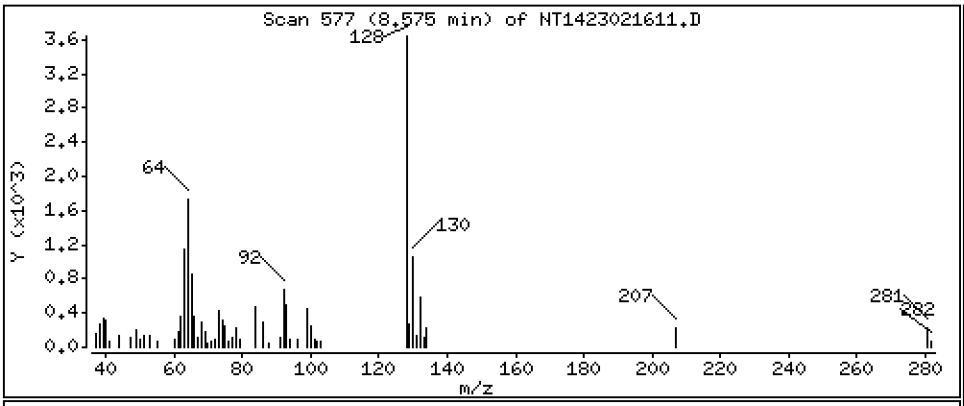
Operator: DSD

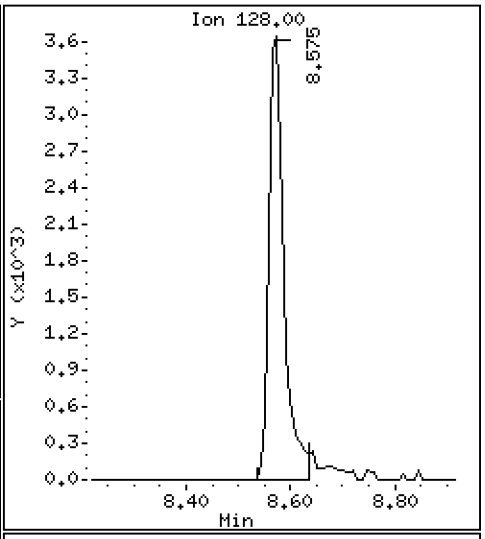
Column phase: ZB-5msi

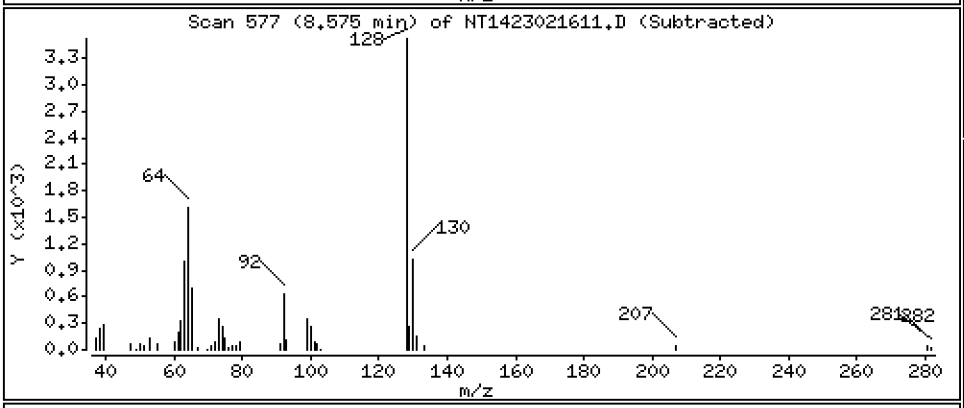
Column diameter: 0.25

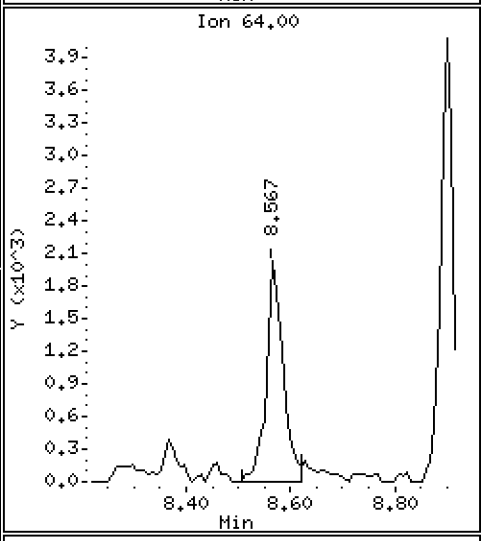
6 2-Chlorophenol

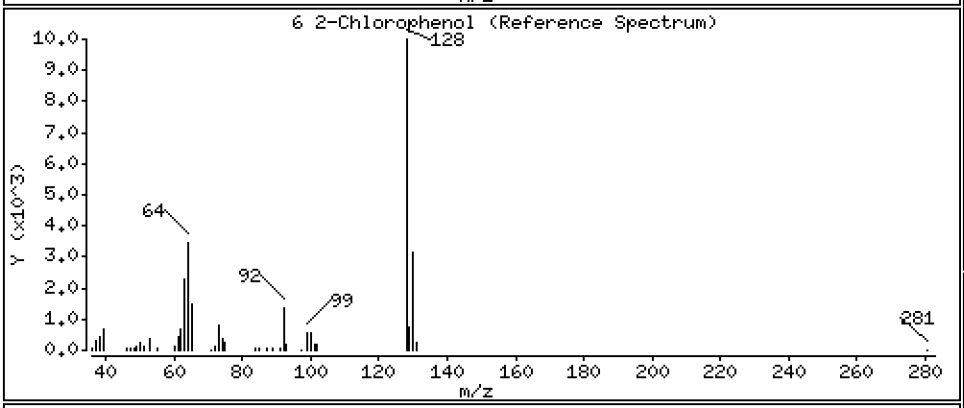
Concentration: 0.06896 ug/mL

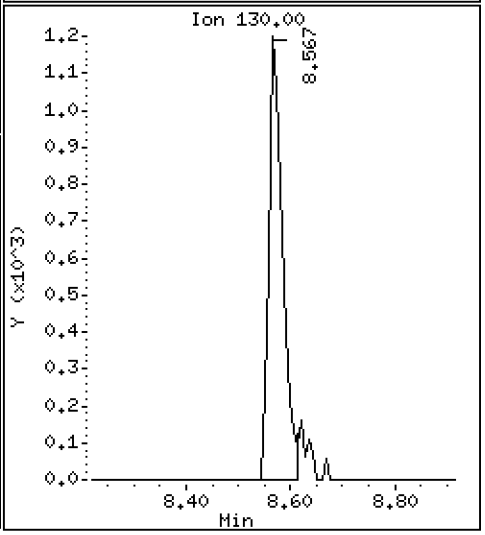


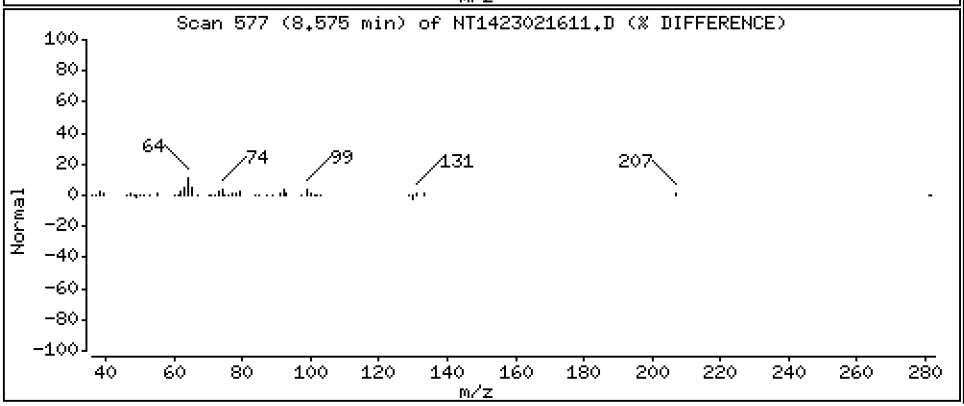












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

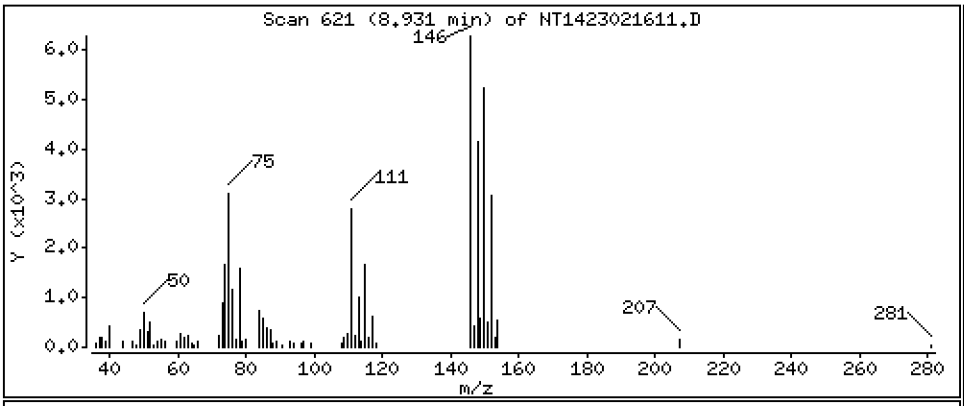
Operator: DSD

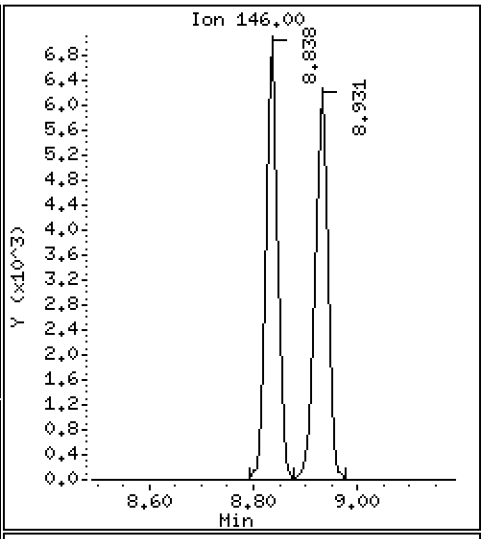
Column phase: ZB-5msi

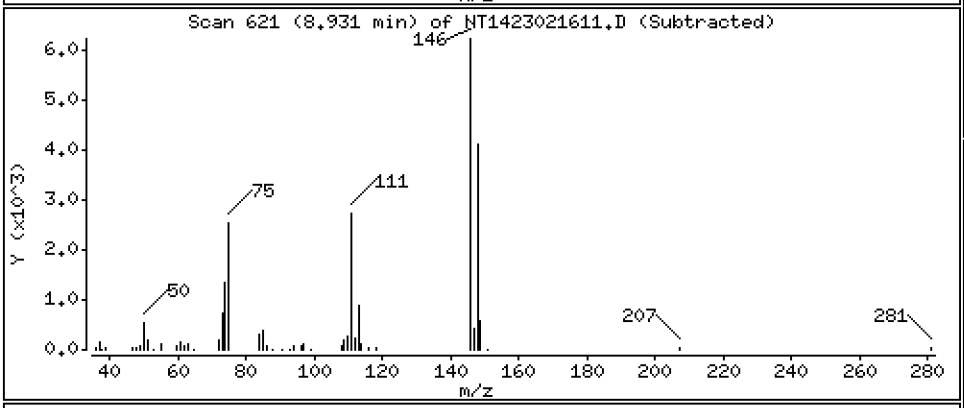
Column diameter: 0.25

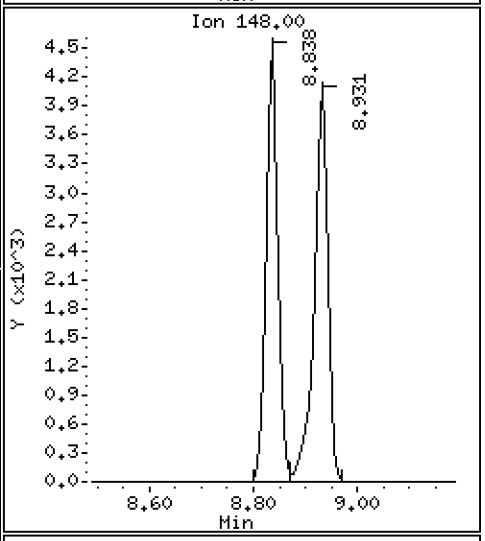
7 1,3-Dichlorobenzene

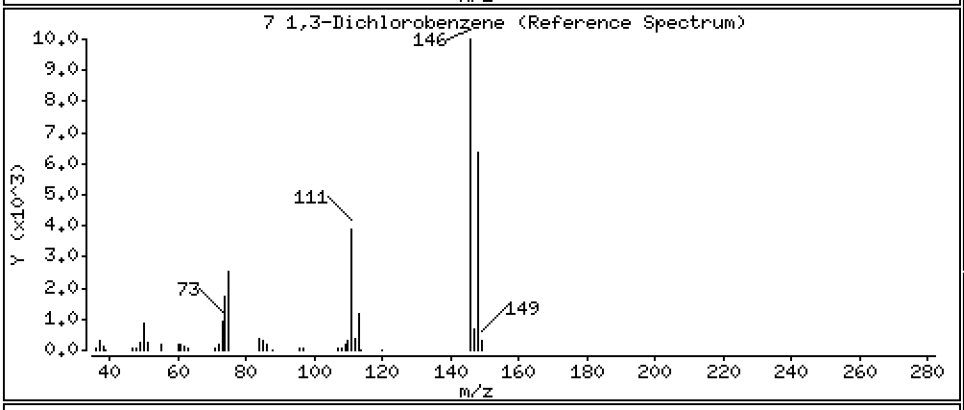
Concentration: 0.09212 ug/mL

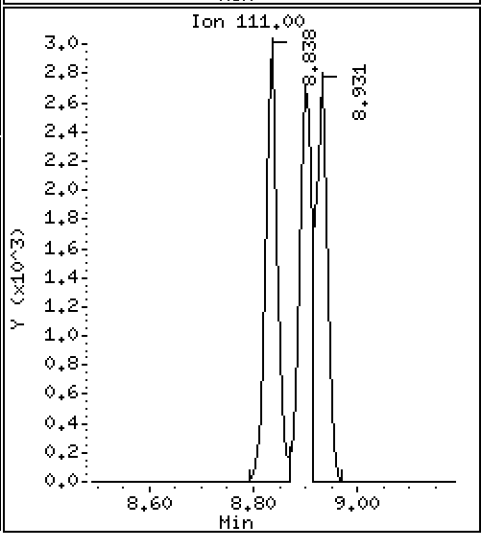


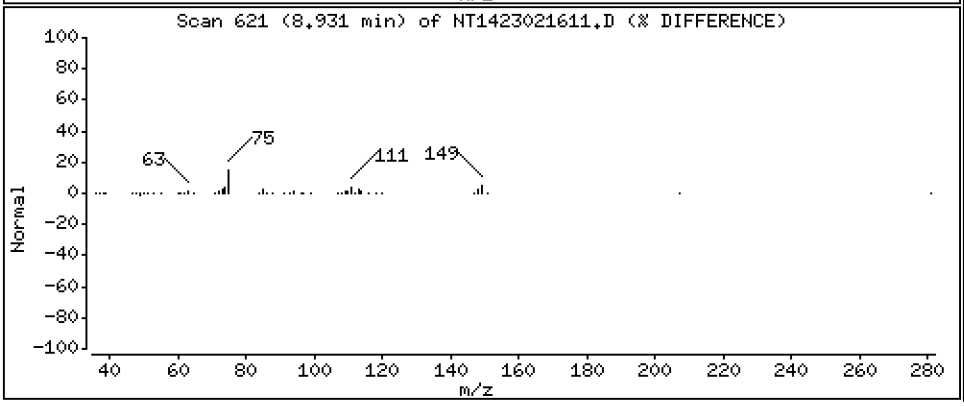












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

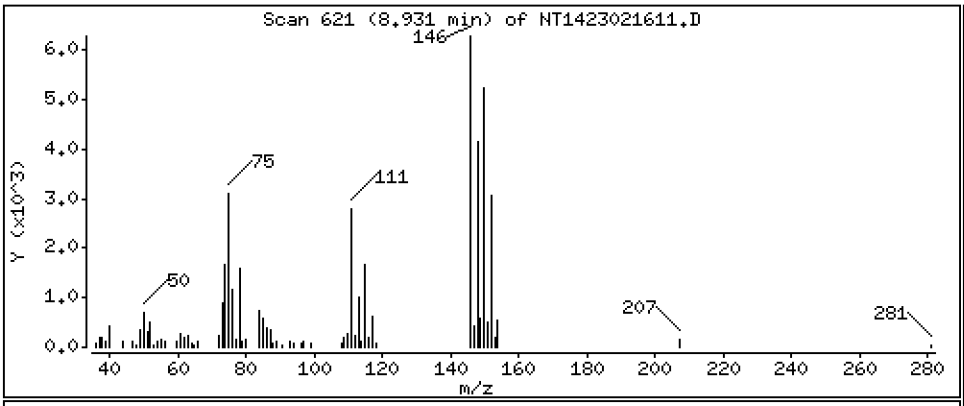
Operator: DSD

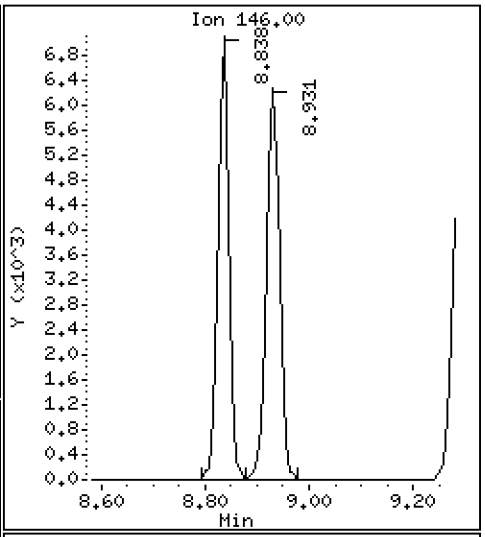
Column phase: ZB-5msi

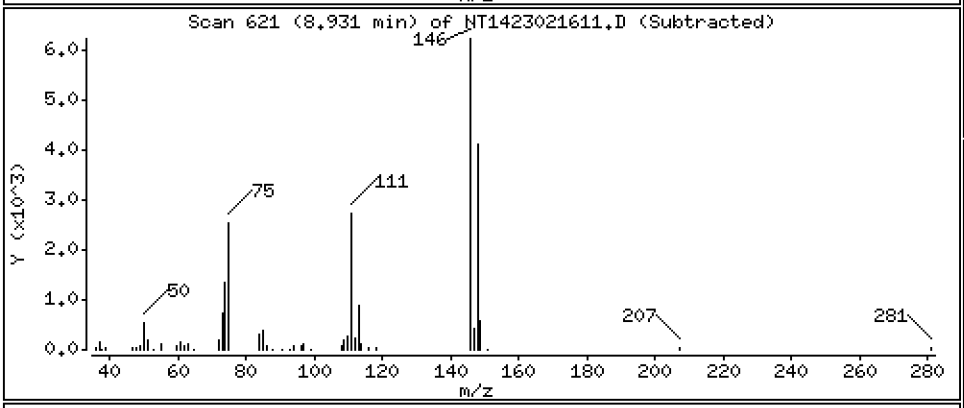
Column diameter: 0.25

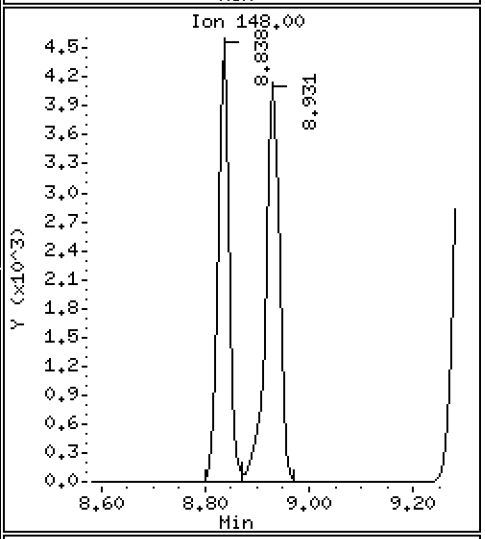
9 1,4-Dichlorobenzene

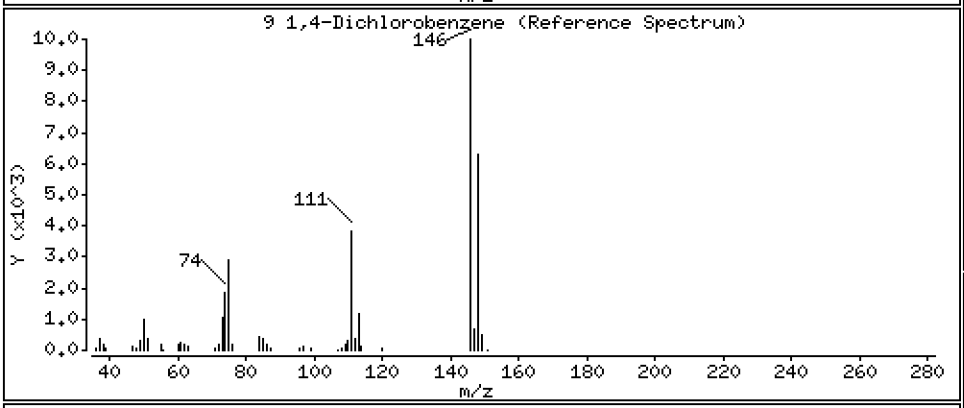
Concentration: 0.09707 ug/mL

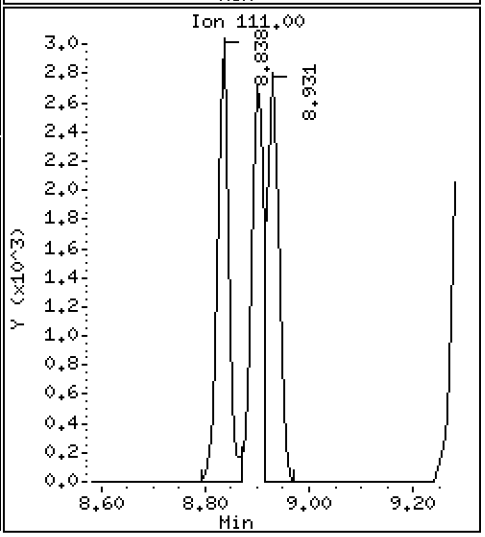


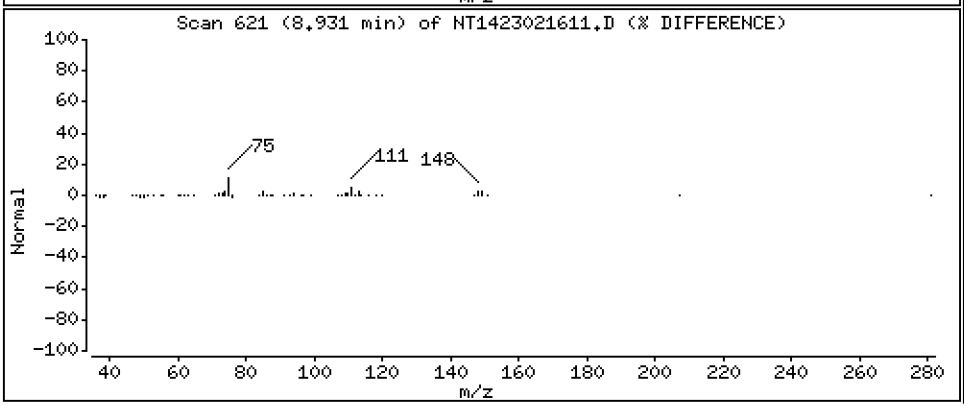












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

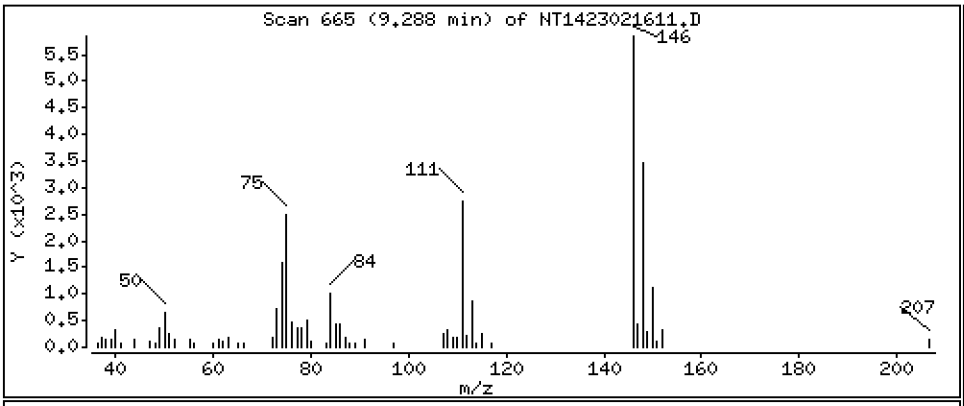
Operator: DSD

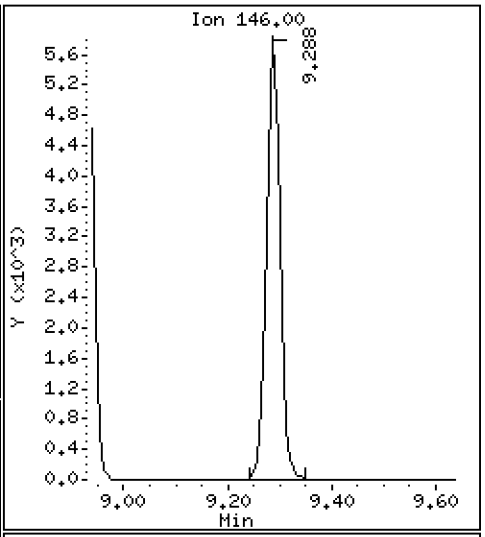
Column phase: ZB-5msi

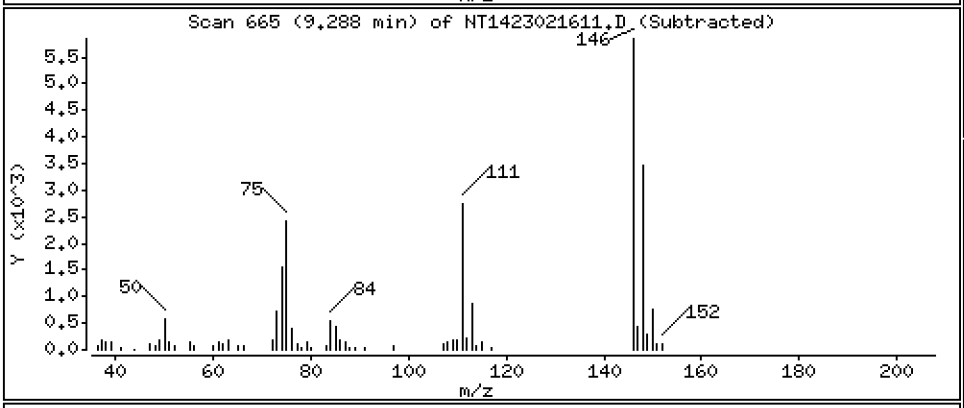
Column diameter: 0.25

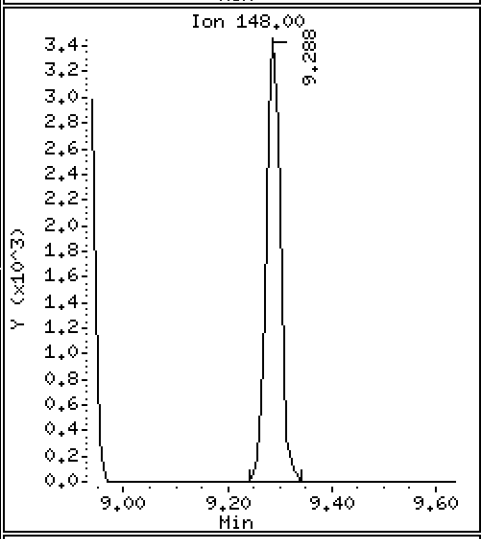
12 1,2-Dichlorobenzene

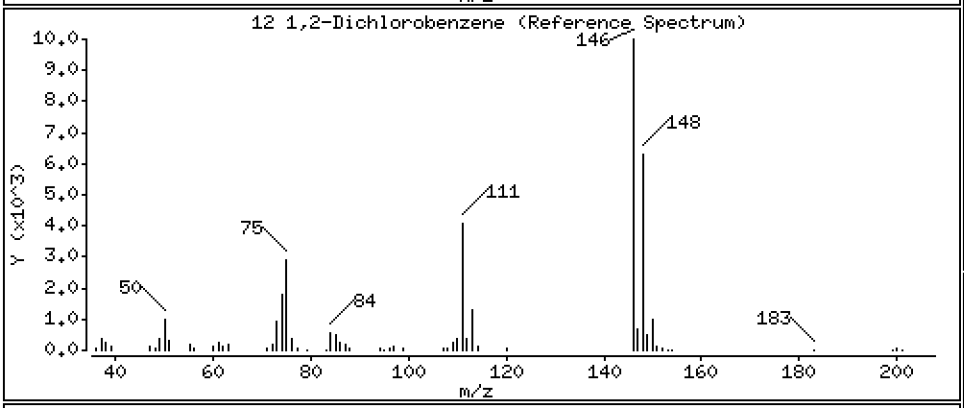
Concentration: 0.09276 ug/mL

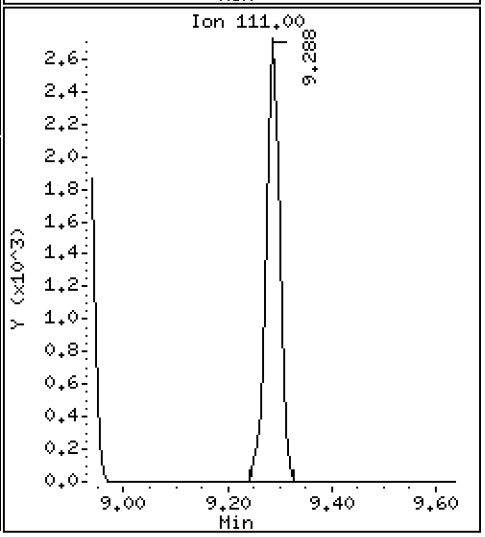


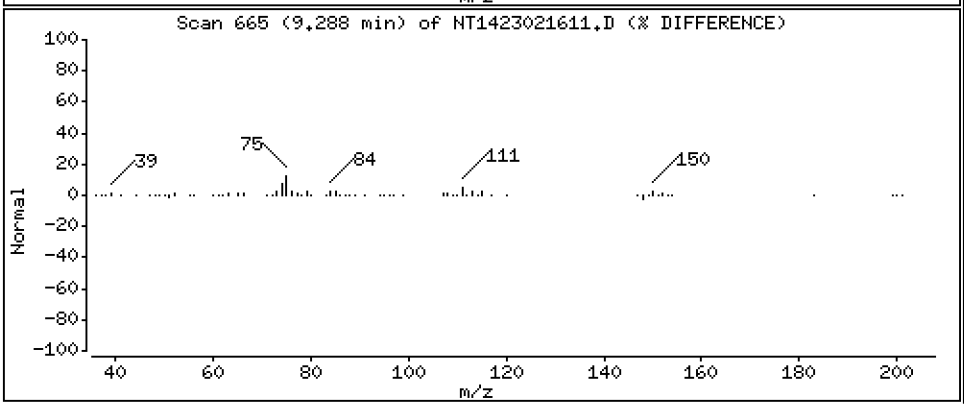












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

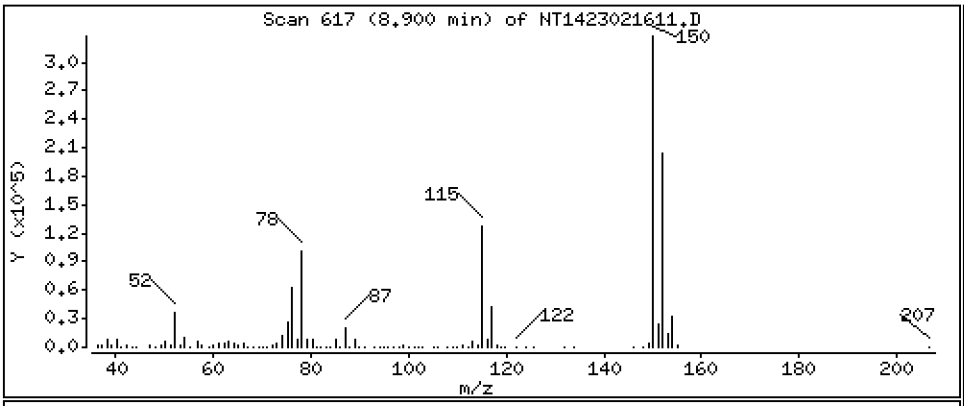
Operator: DSD

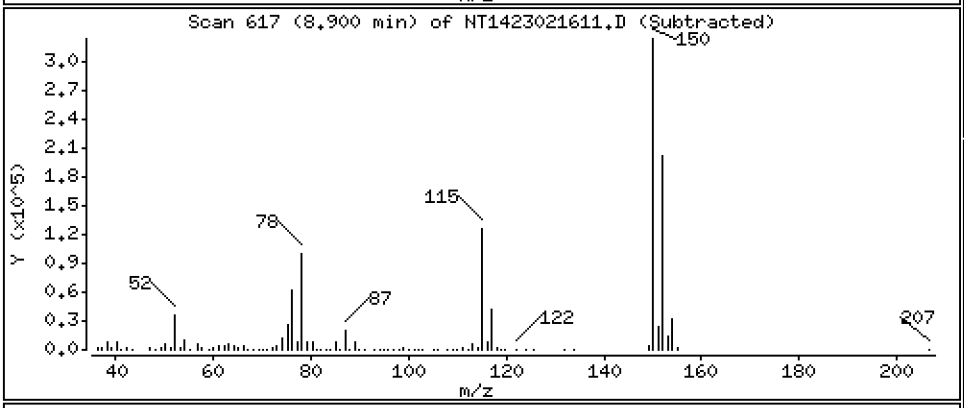
Column phase: ZB-5msi

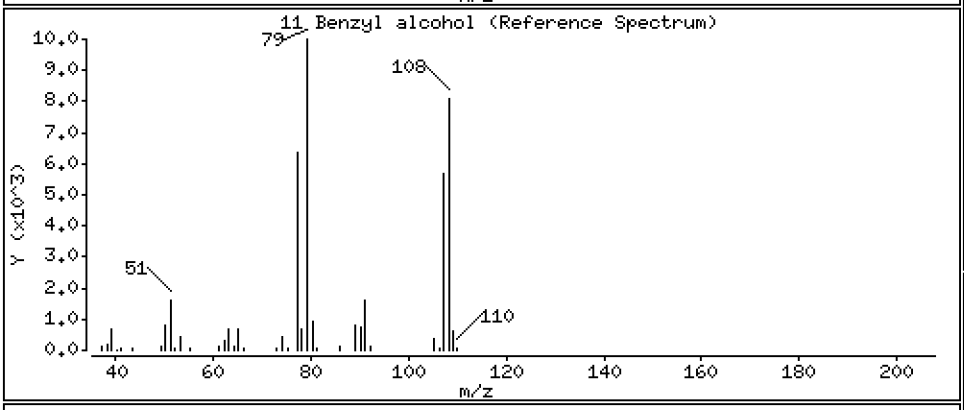
Column diameter: 0.25

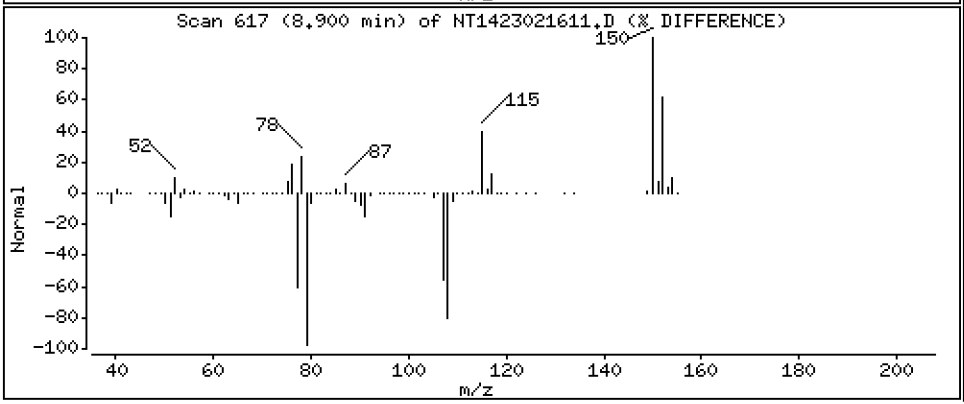
11 Benzyl alcohol

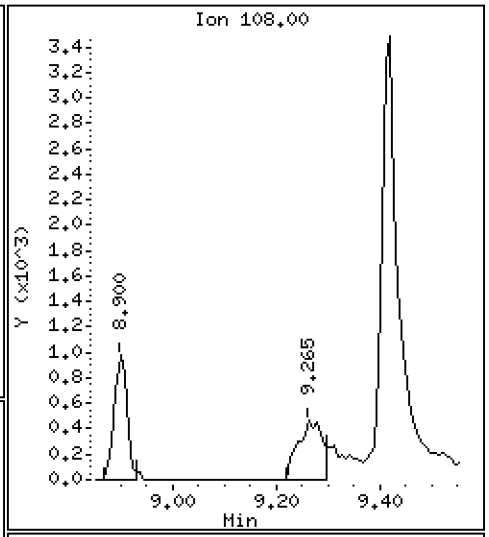
Concentration: 0.01970 ug/mL

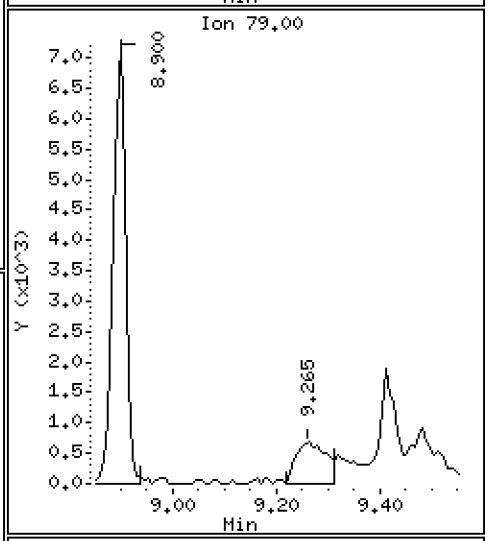


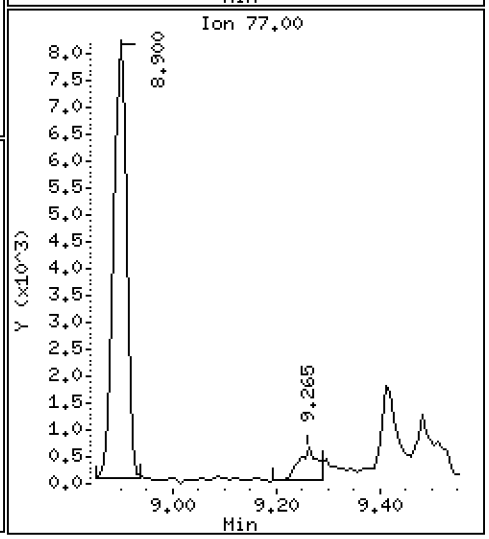












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

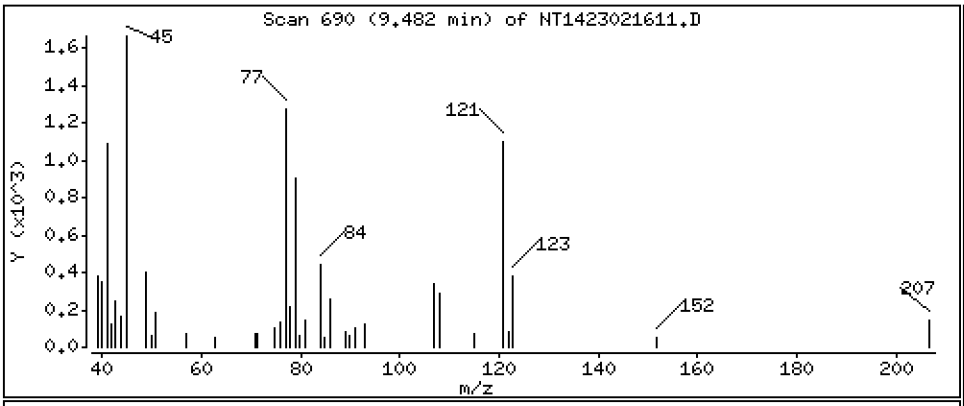
Operator: DSD

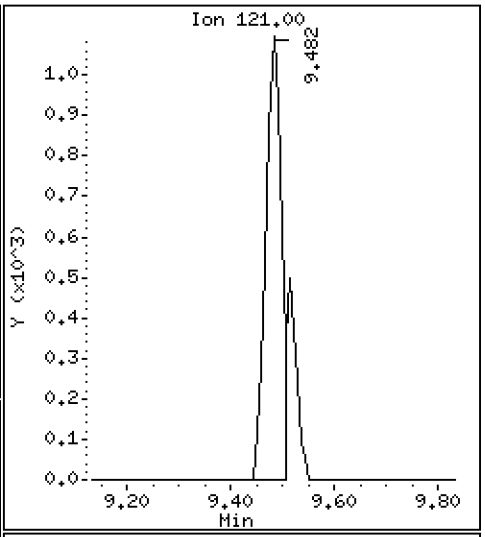
Column phase: ZB-5msi

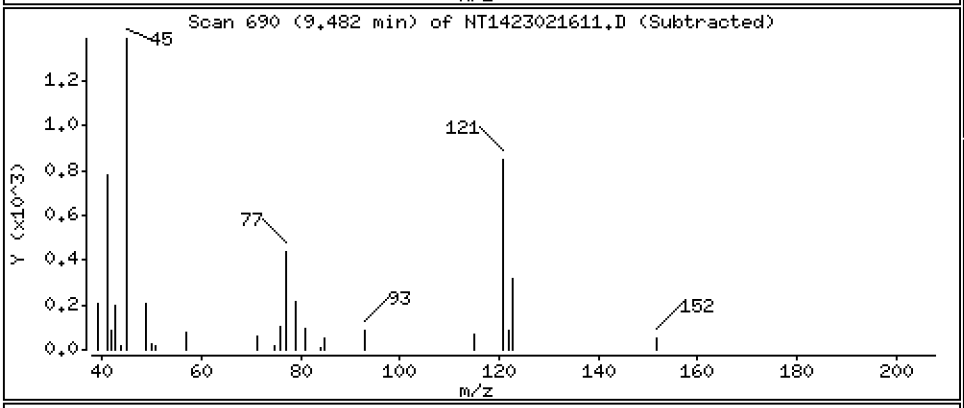
Column diameter: 0.25

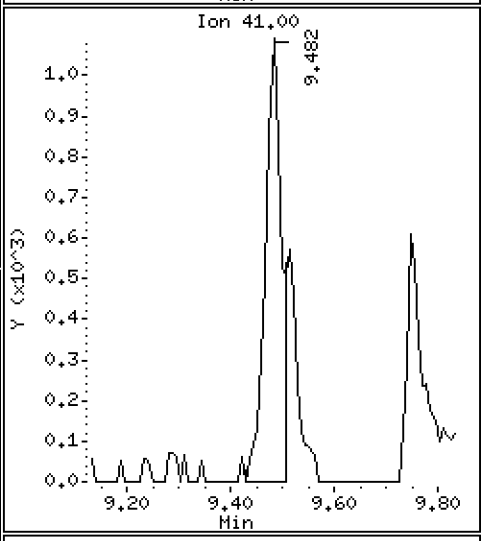
14 2,2'-oxybis(1-Chloropropane)

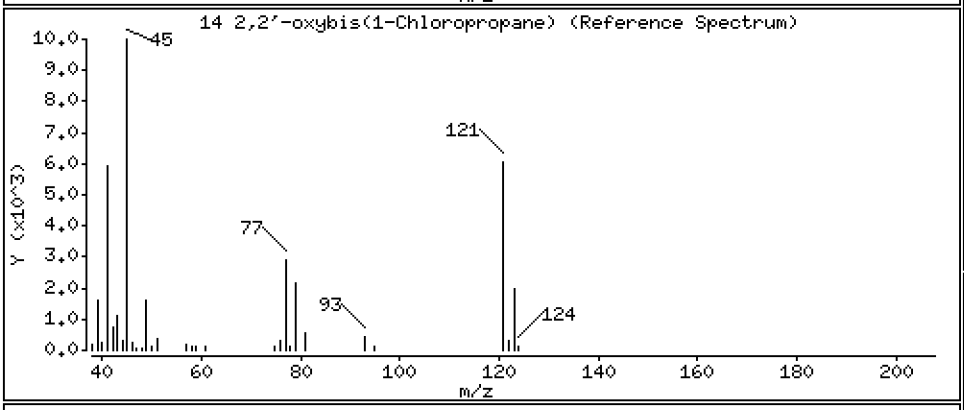
Concentration: 0.07216 ug/mL

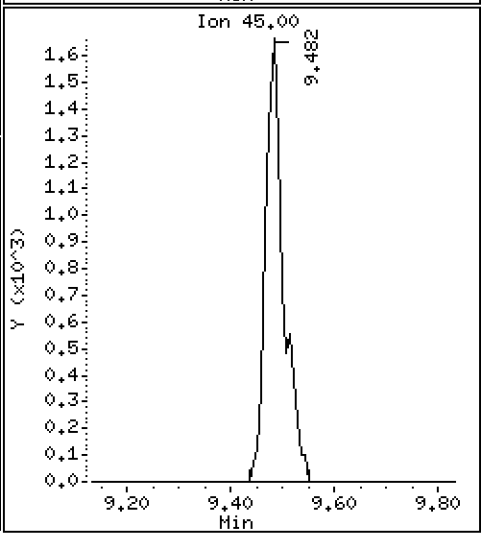


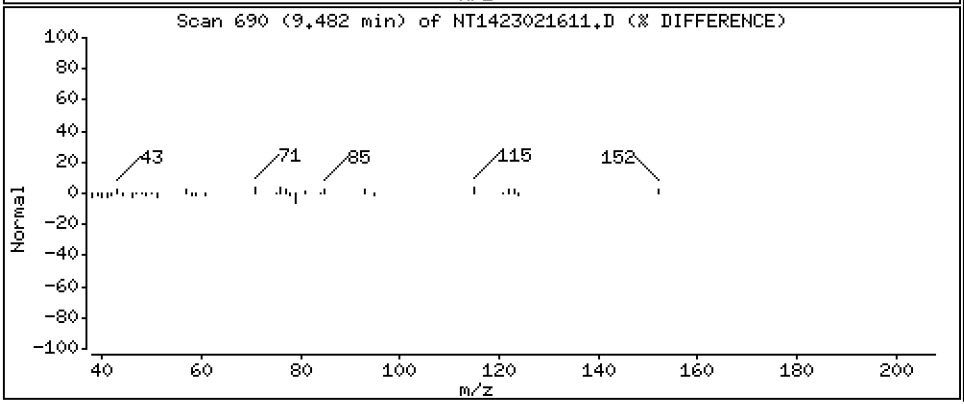












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

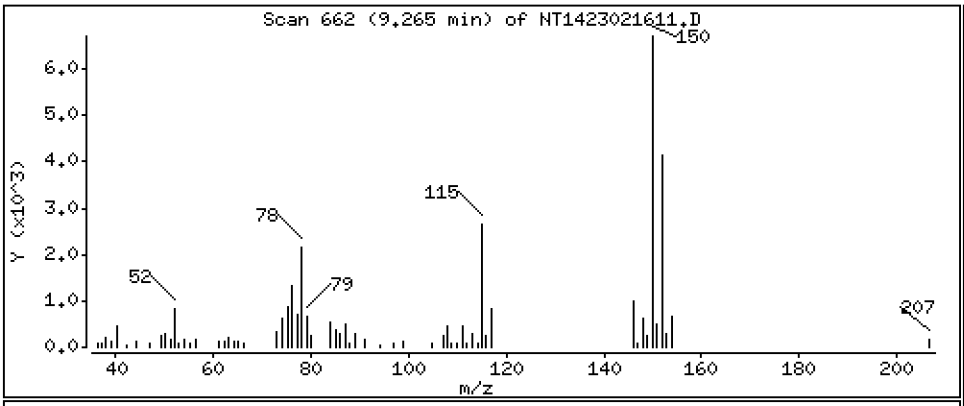
Operator: DSD

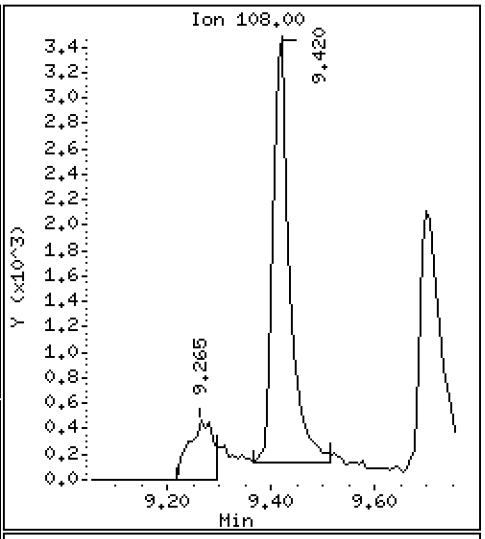
Column phase: ZB-5msi

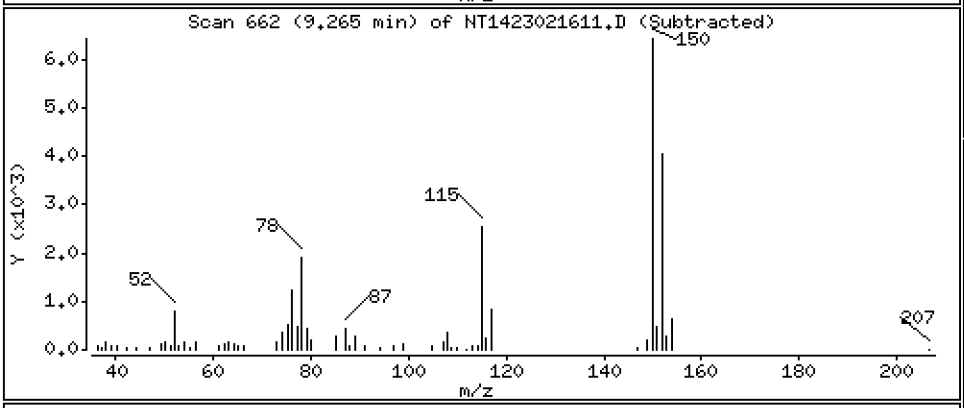
Column diameter: 0.25

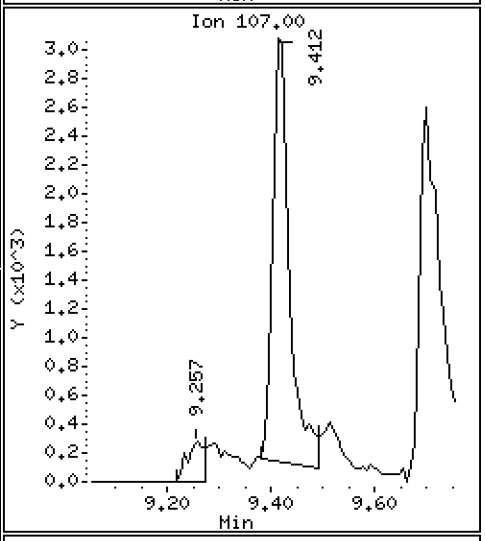
13 2-Methylphenol

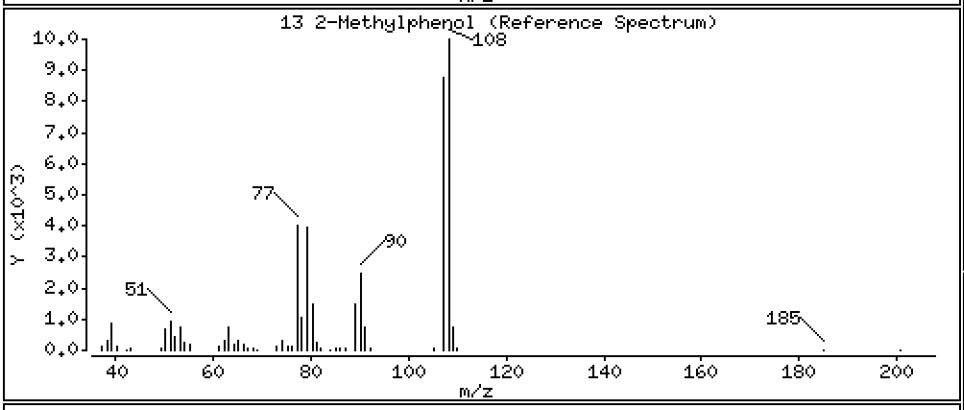
Concentration: 0.01503 ug/mL

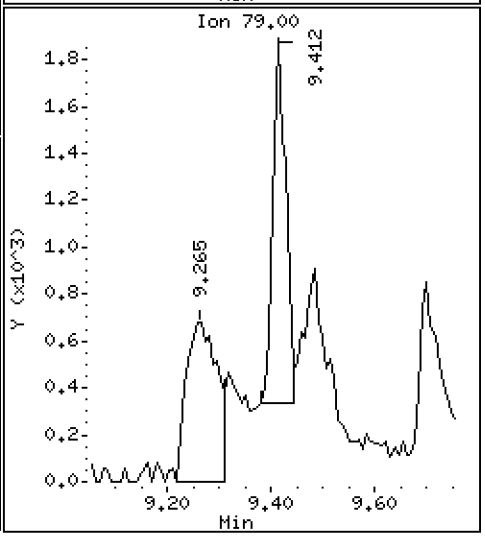


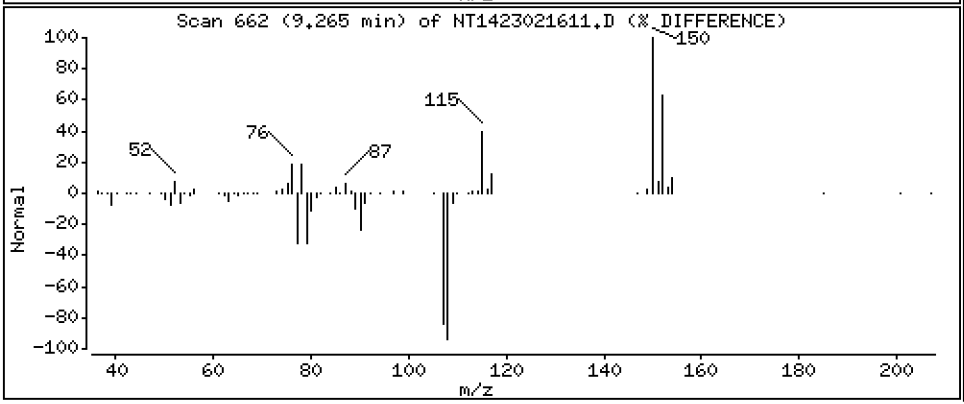












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

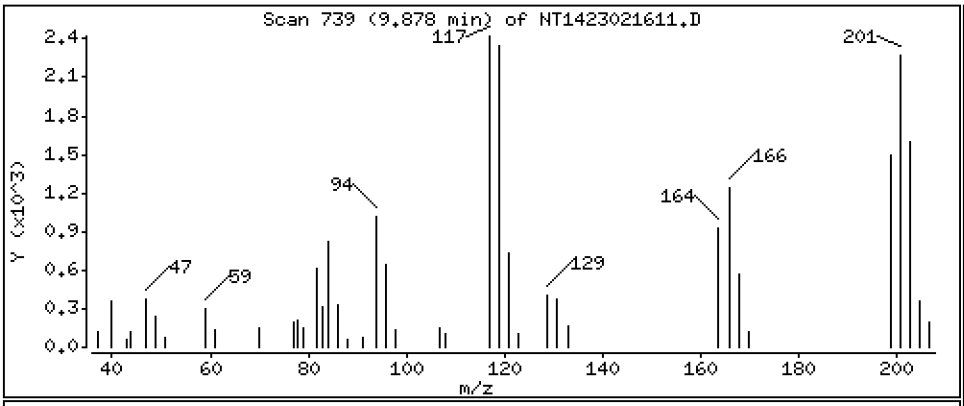
Operator: DSD

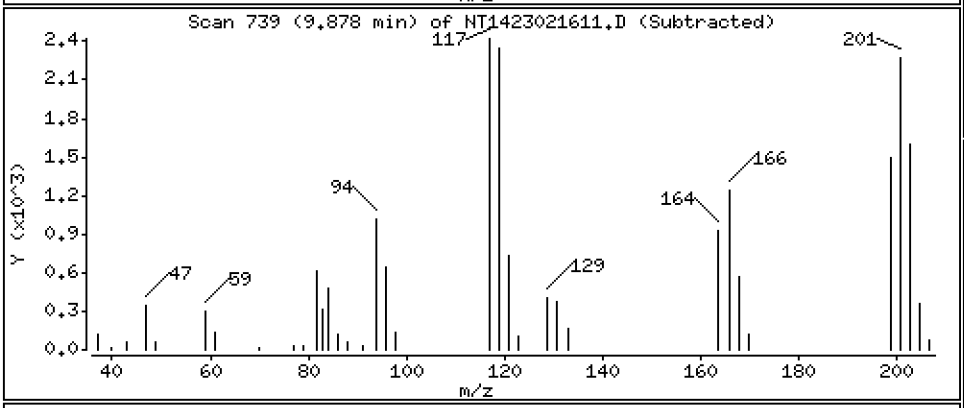
Column phase: ZB-5msi

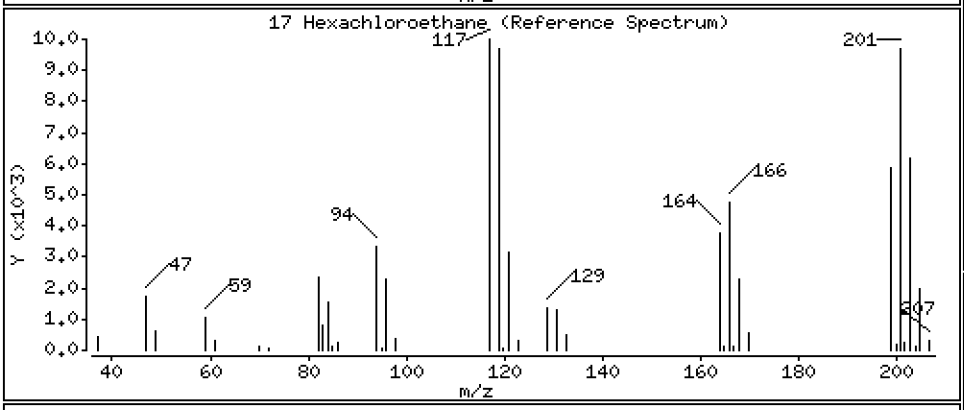
Column diameter: 0.25

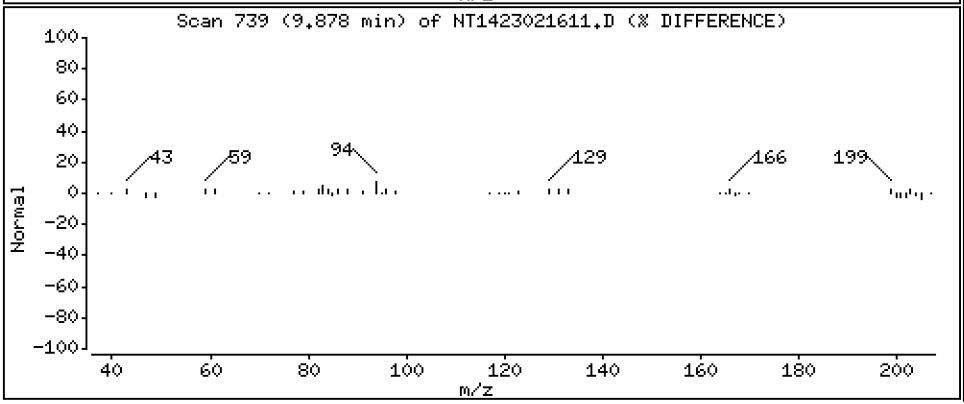
17 Hexachloroethane

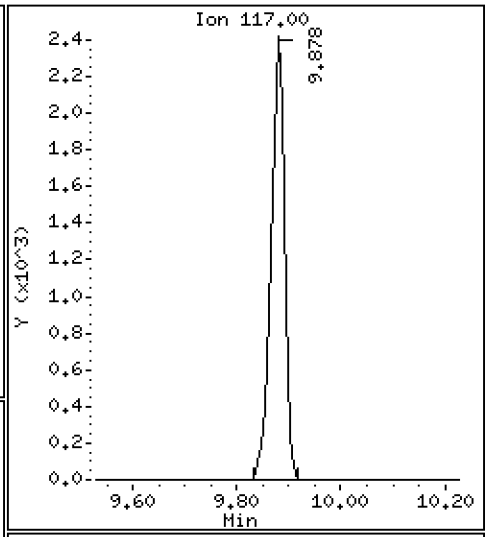
Concentration: 0.08822 ug/mL

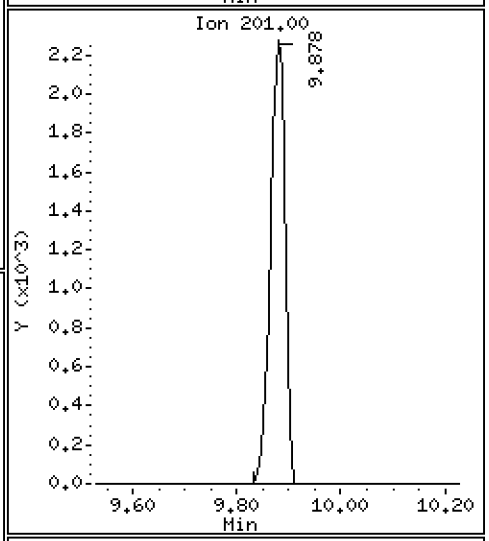


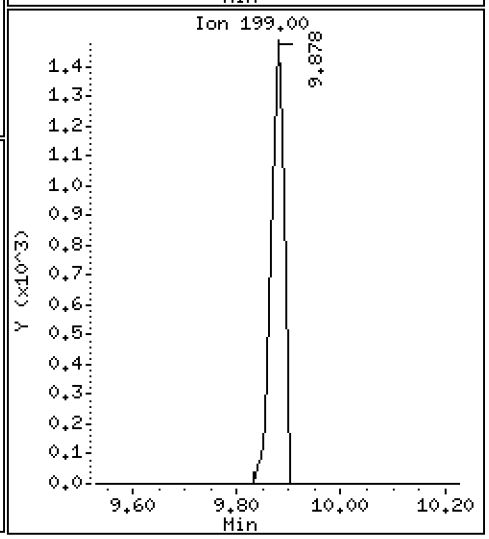












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

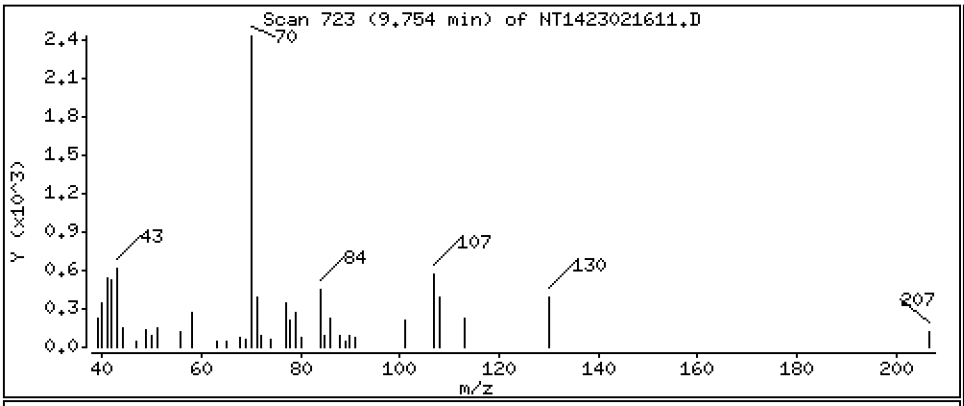
Operator: DSD

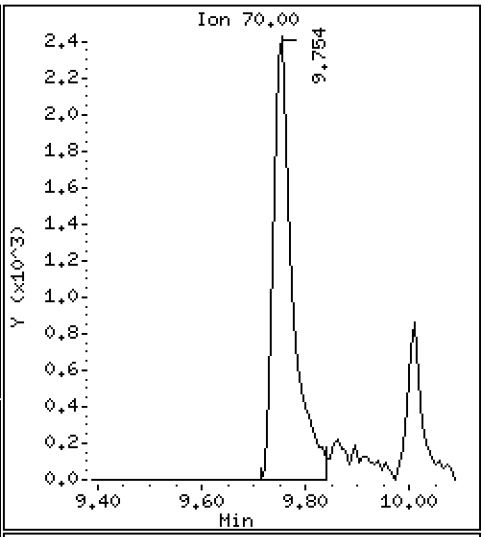
Column phase: ZB-5msi

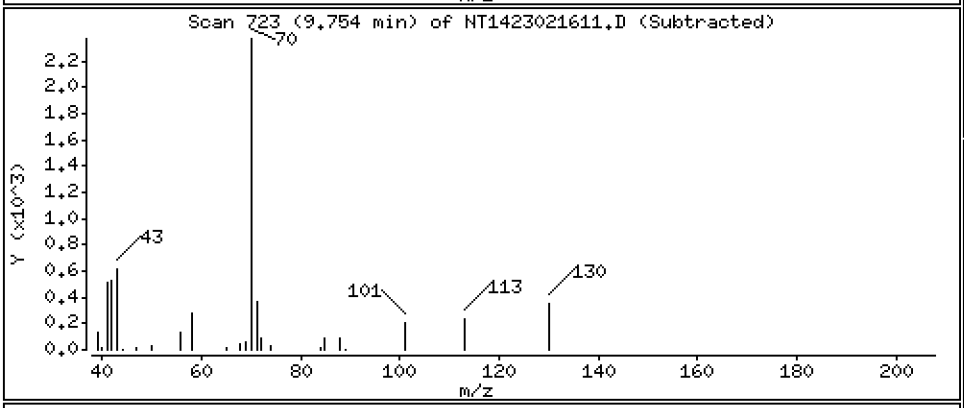
Column diameter: 0.25

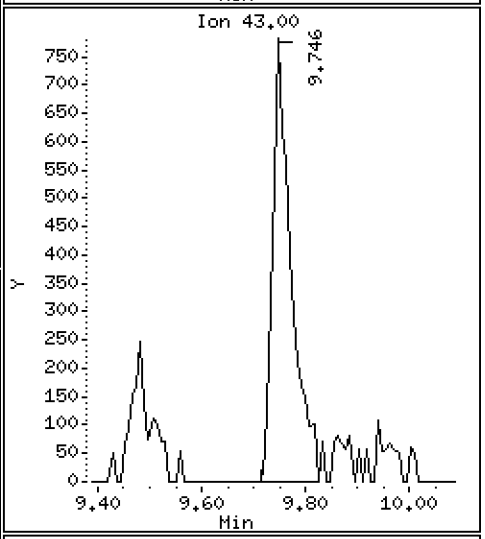
16 N-Nitroso-di-n-propylamine

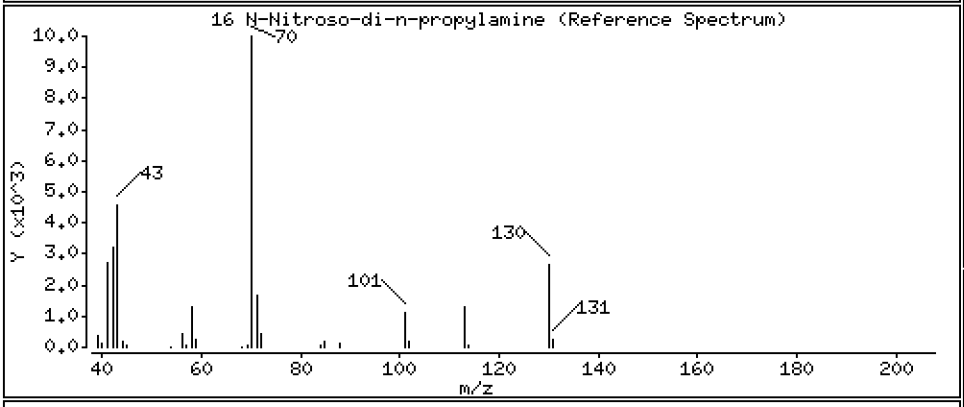
Concentration: 0.06806 ug/mL

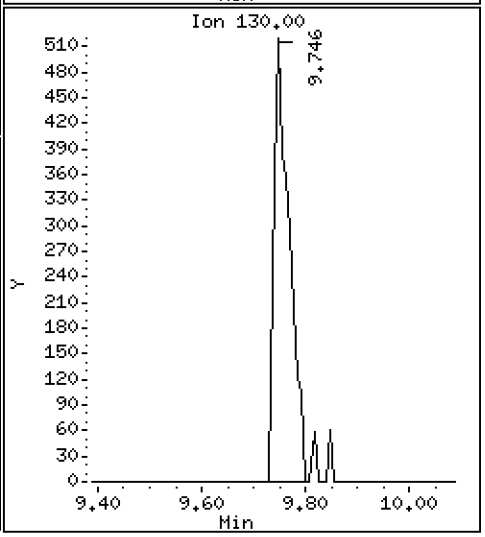


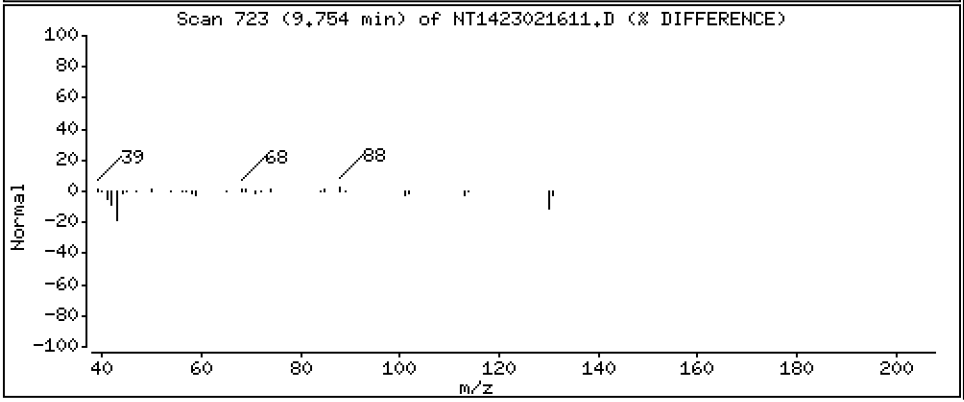












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

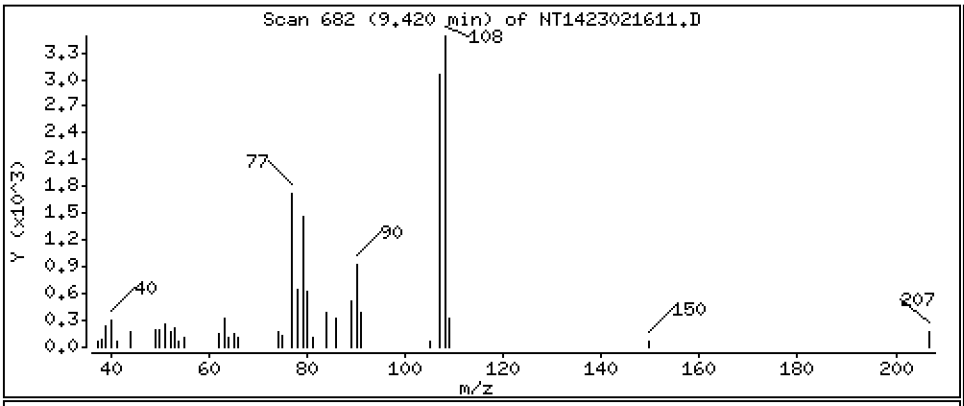
Operator: DSD

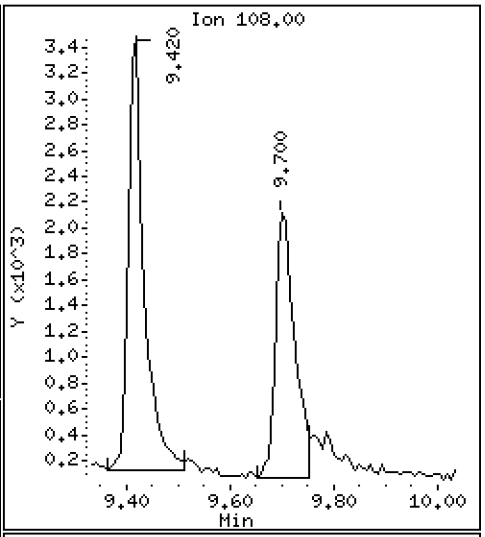
Column phase: ZB-5msi

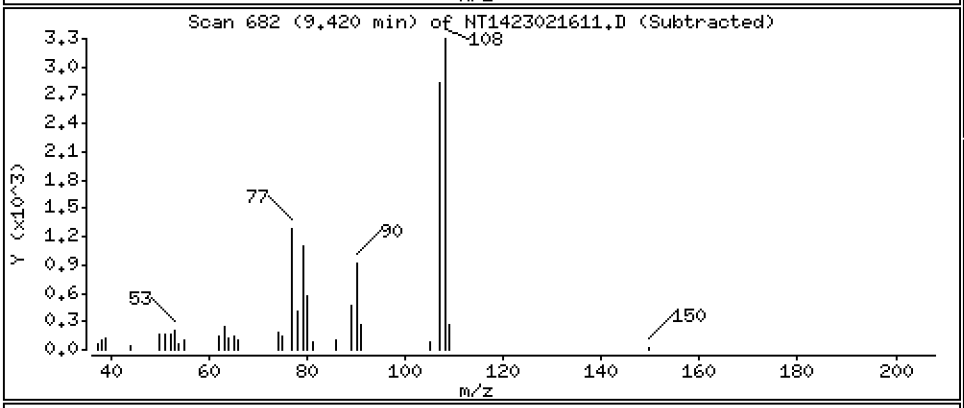
Column diameter: 0.25

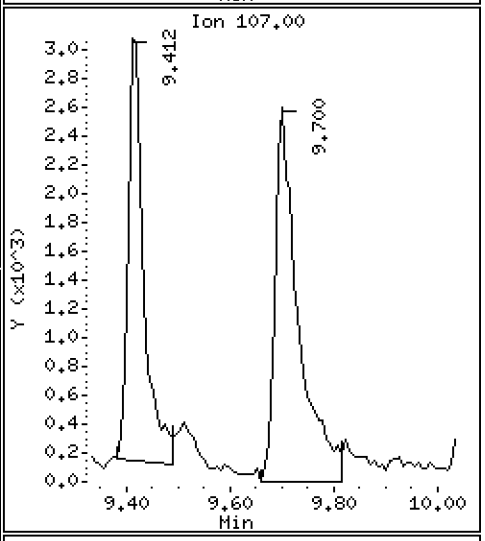
15 4-Methylphenol

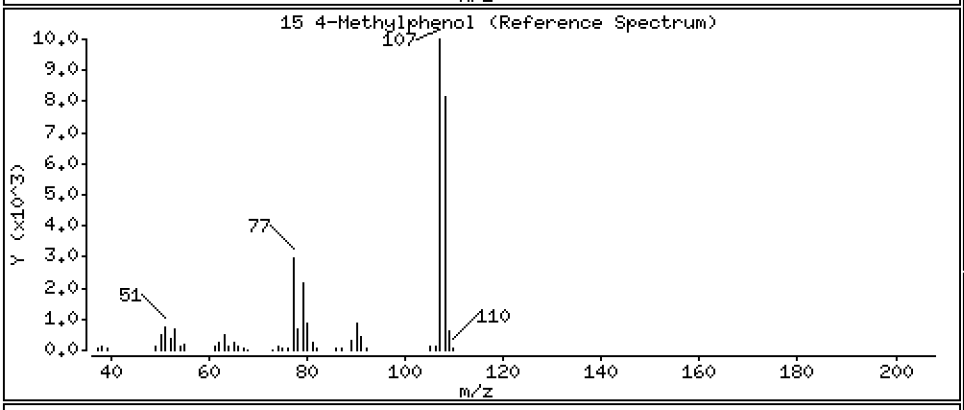
Concentration: 0.06809 ug/mL

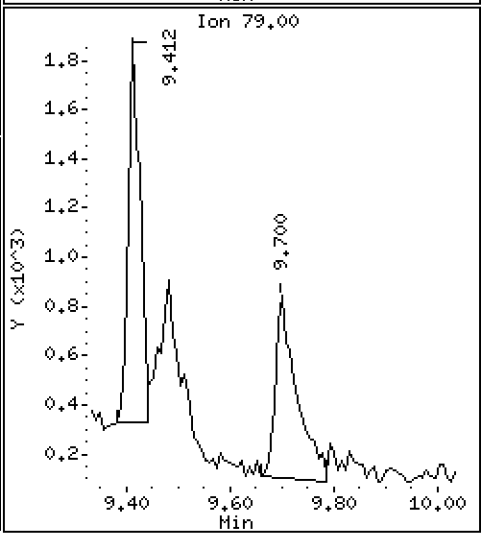


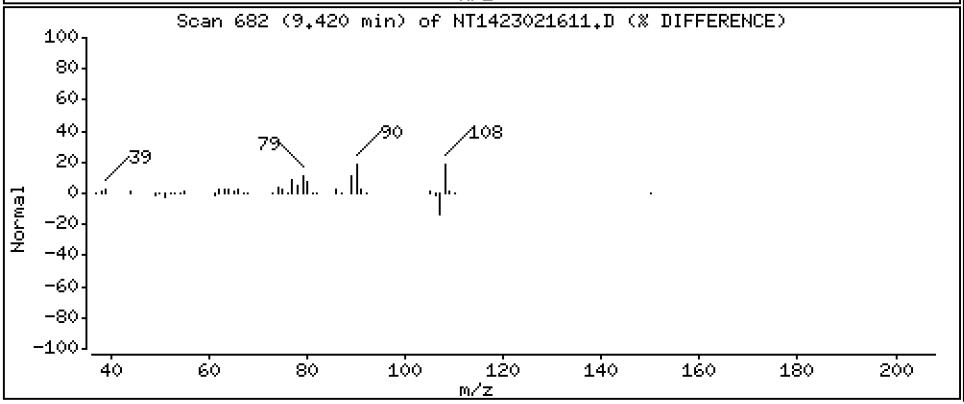












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

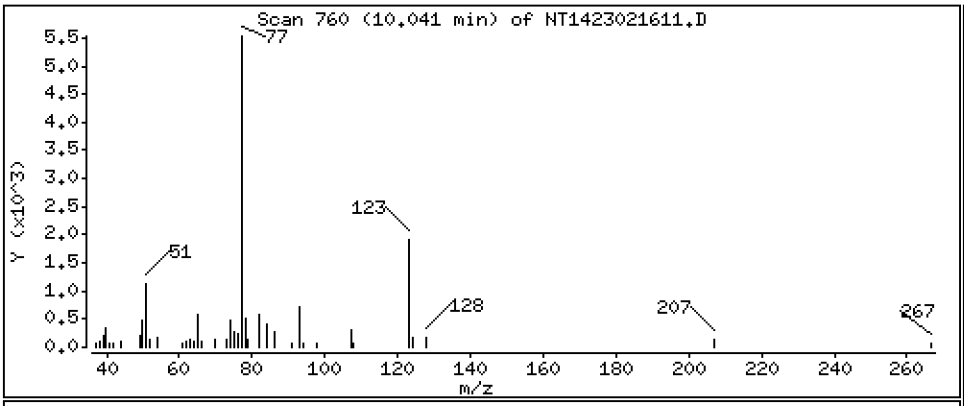
Operator: DSD

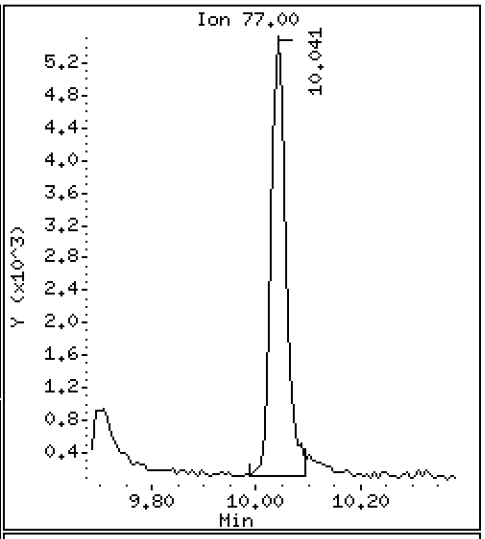
Column phase: ZB-5msi

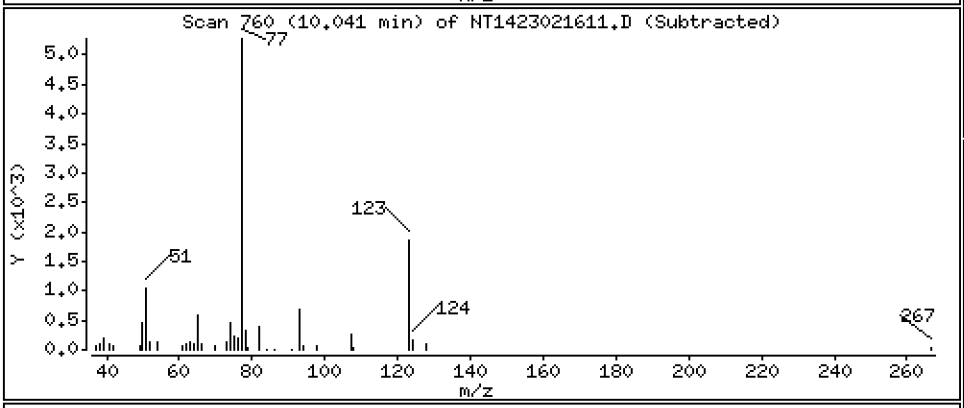
Column diameter: 0.25

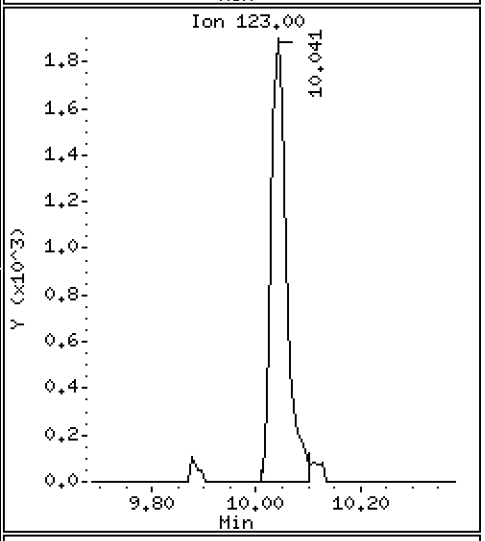
19 Nitrobenzene

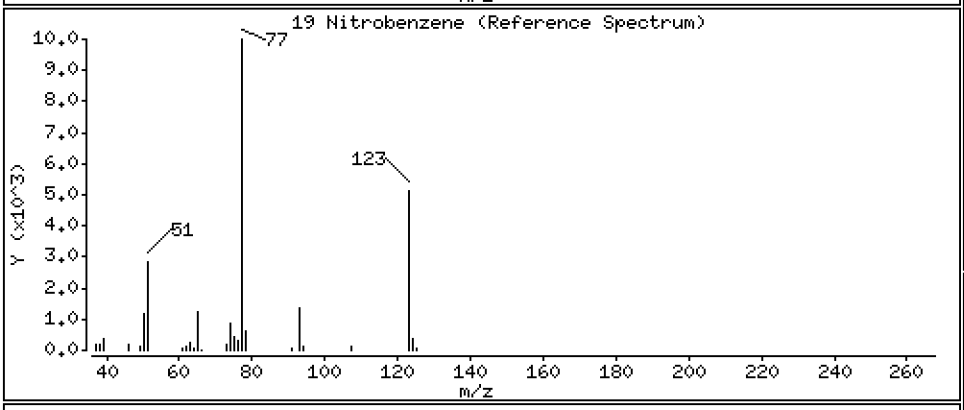
Concentration: 0.07780 ug/mL

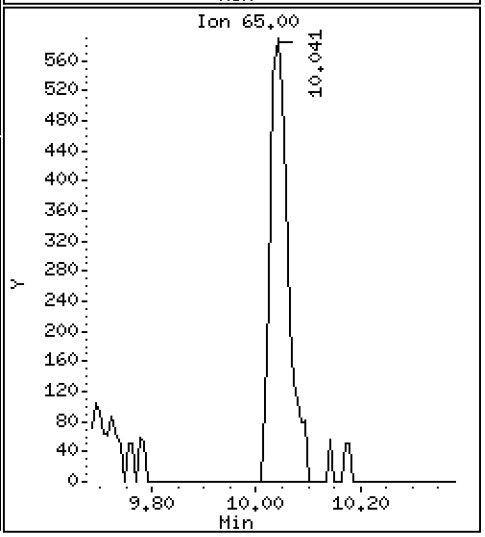


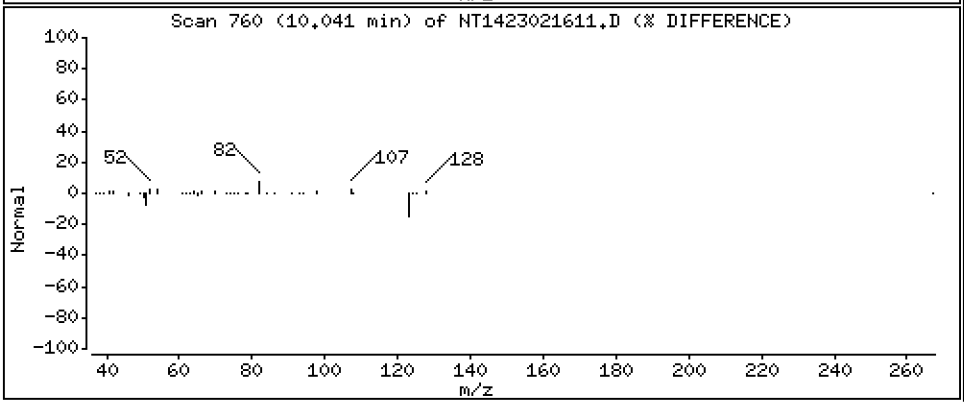












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

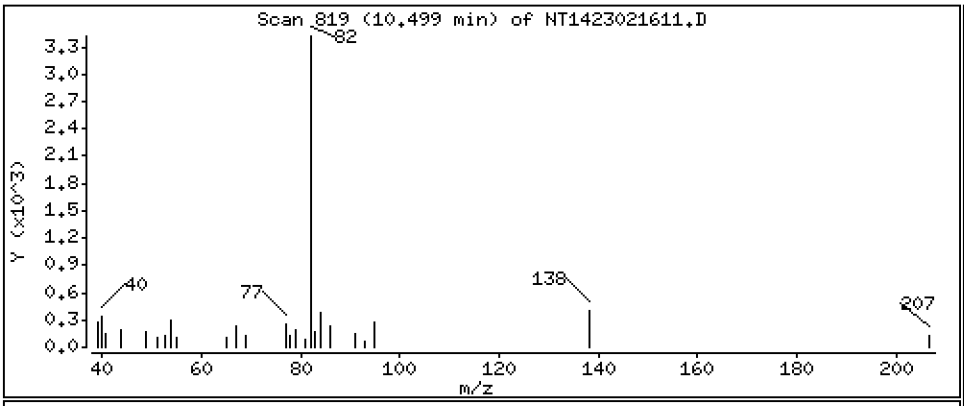
Operator: DSD

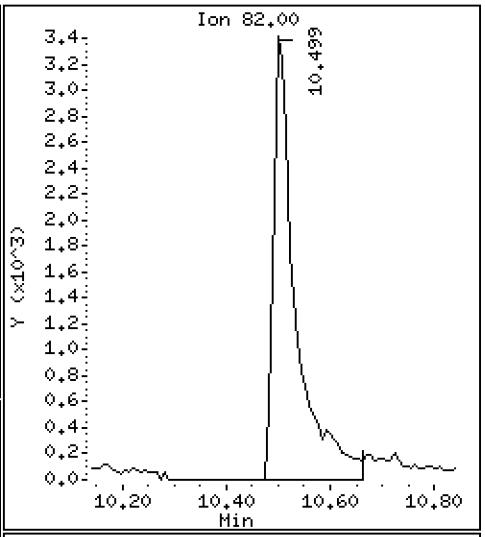
Column phase: ZB-5msi

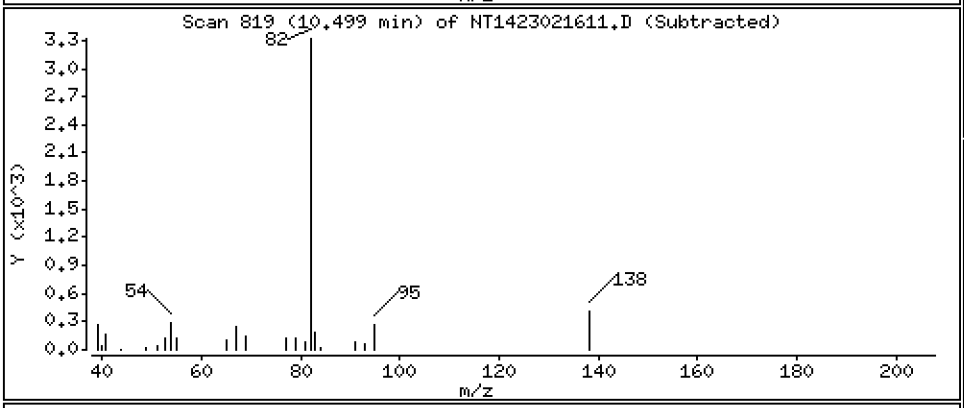
Column diameter: 0.25

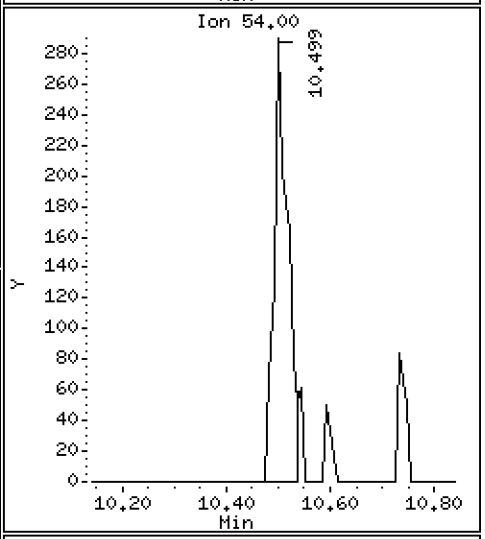
20 Isophorone

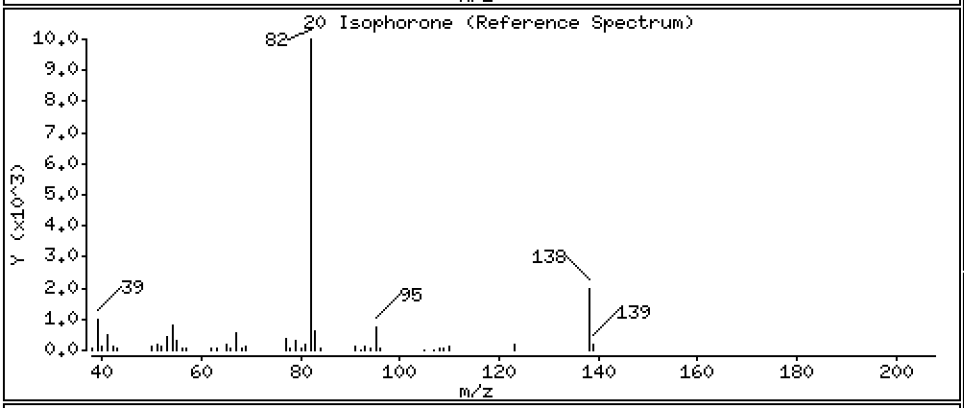
Concentration: 0.06126 ug/mL

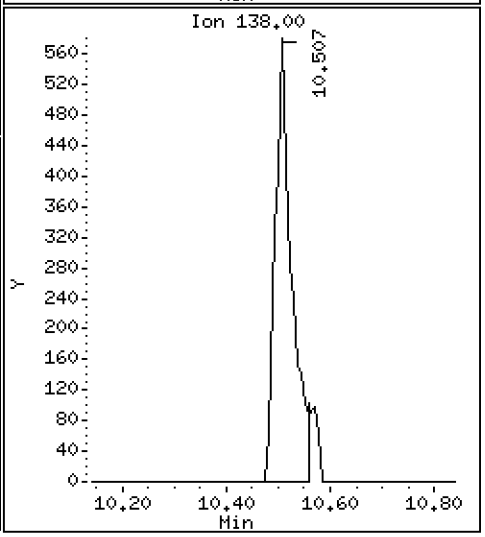


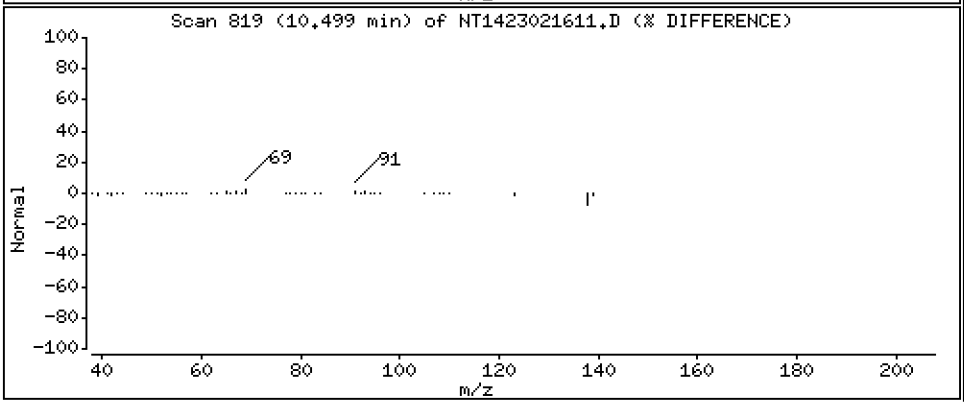












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

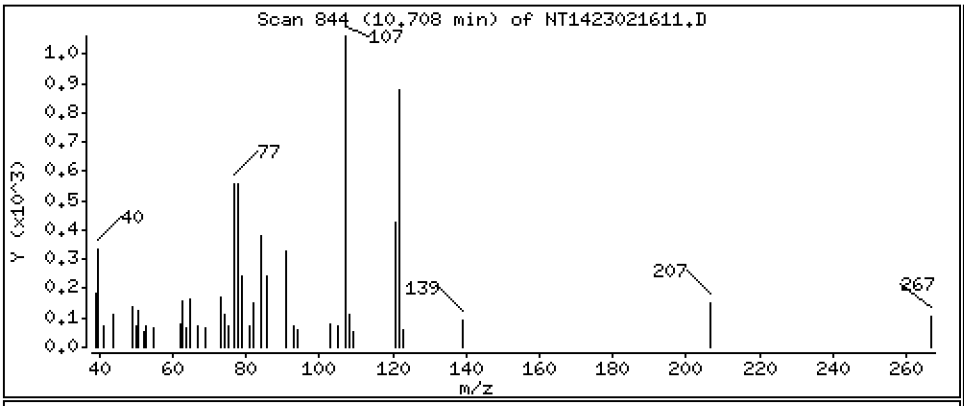
Operator: DSD

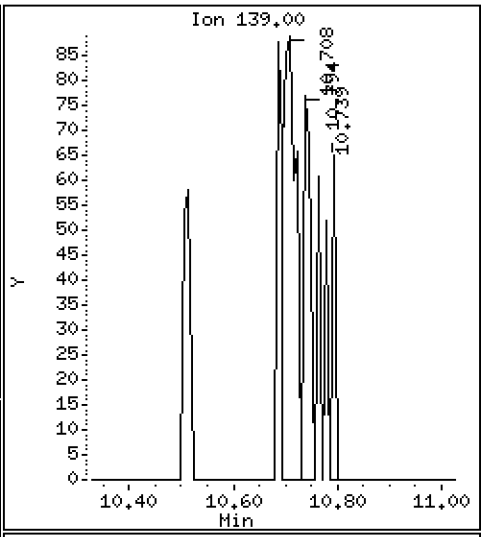
Column phase: ZB-5msi

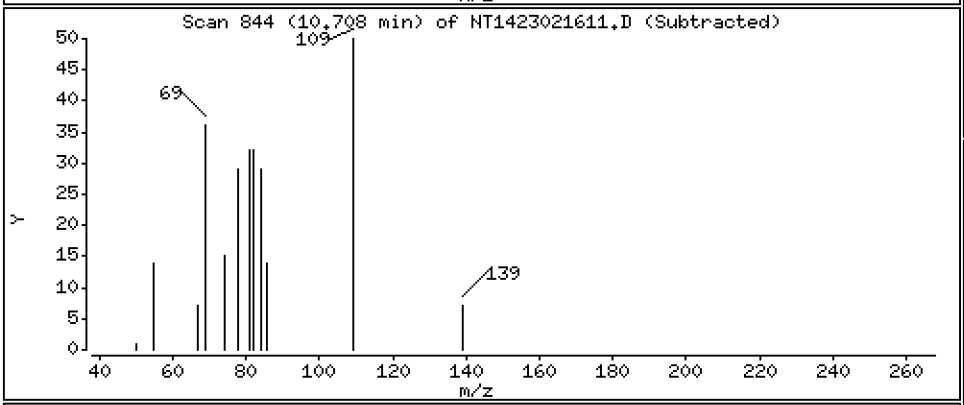
Column diameter: 0.25

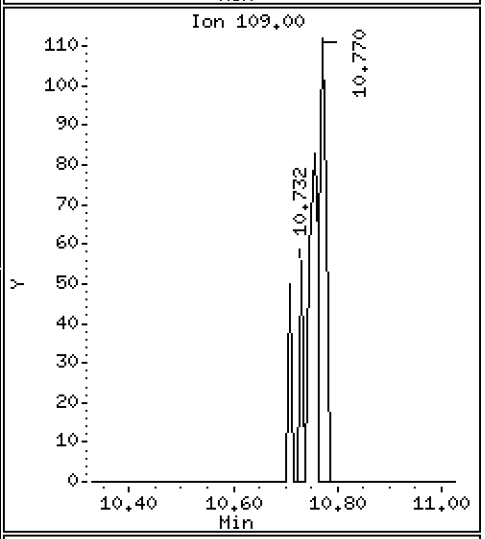
21 2-Nitrophenol

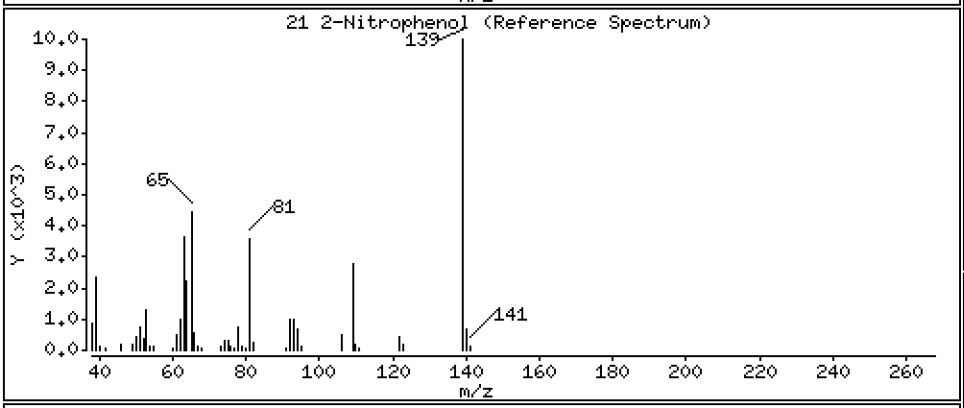
Concentration: 0.002847 ug/mL

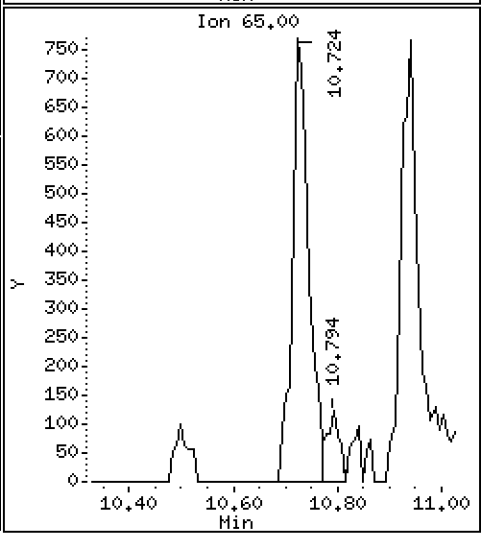


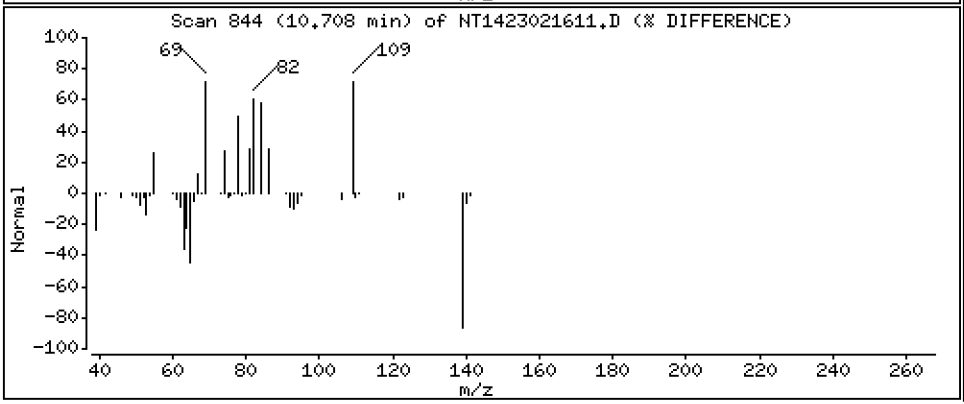












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

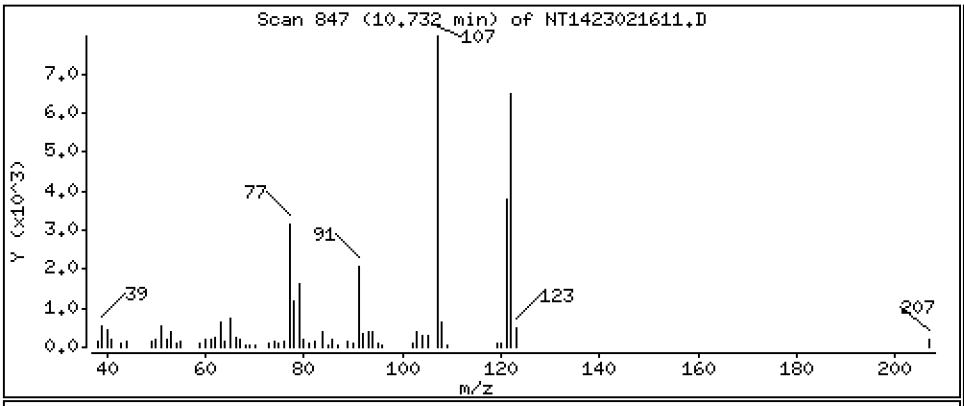
Operator: DSD

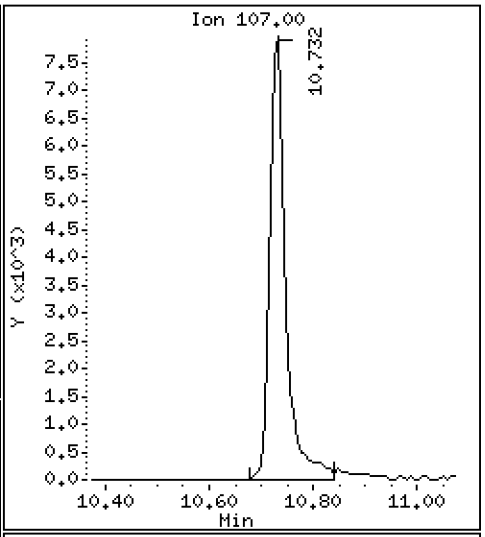
Column phase: ZB-5msi

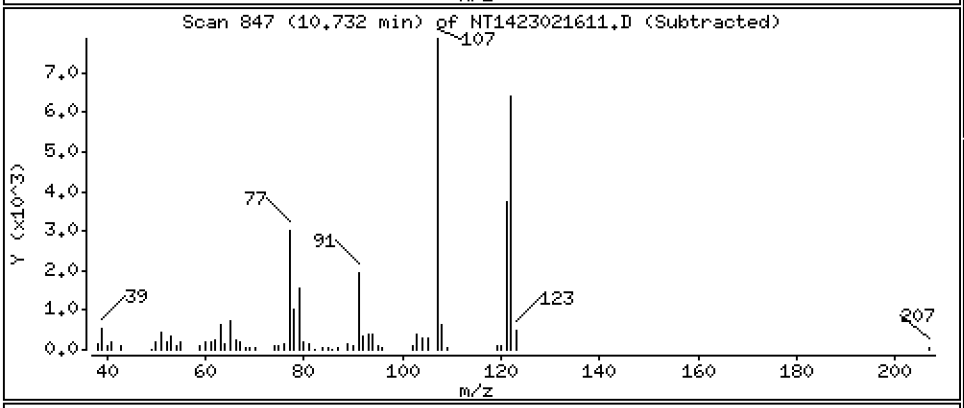
Column diameter: 0.25

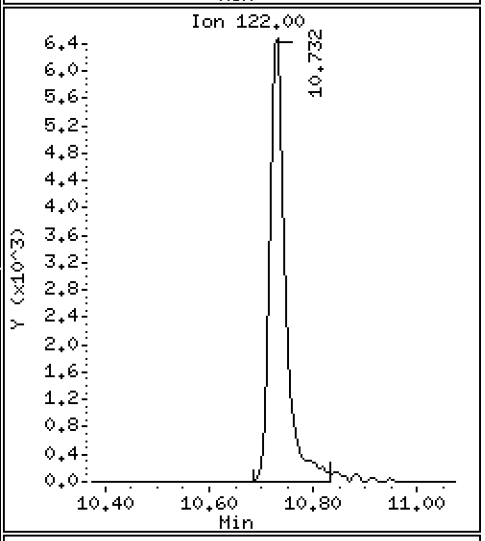
22 2,4-Dimethylphenol

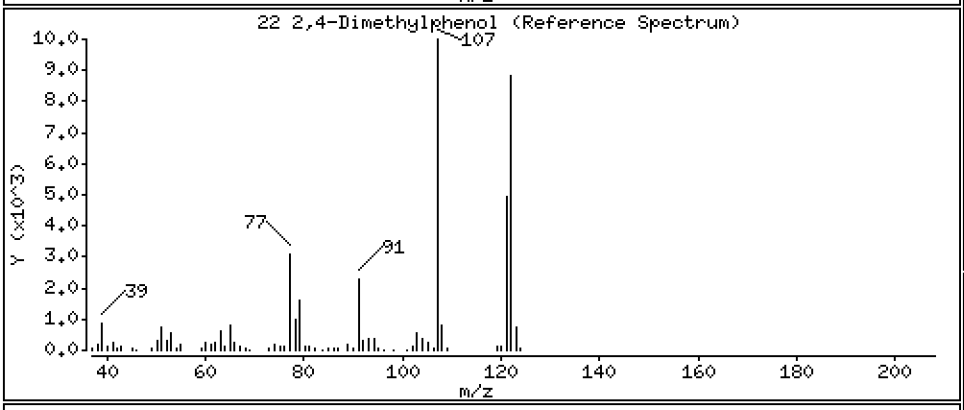
Concentration: 0.1635 ug/mL

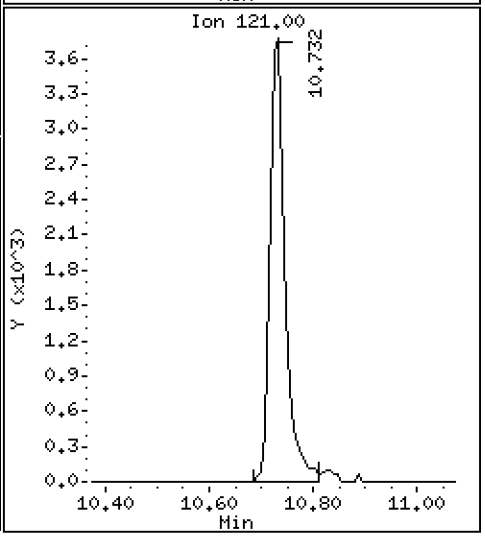


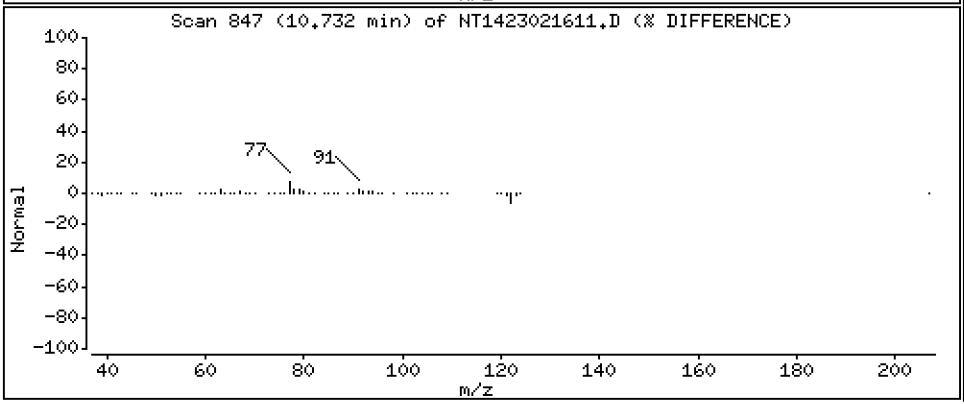












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

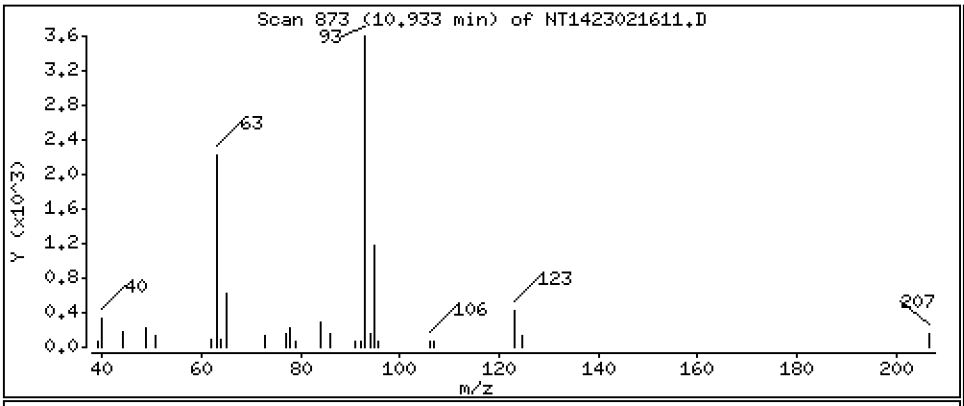
Operator: DSD

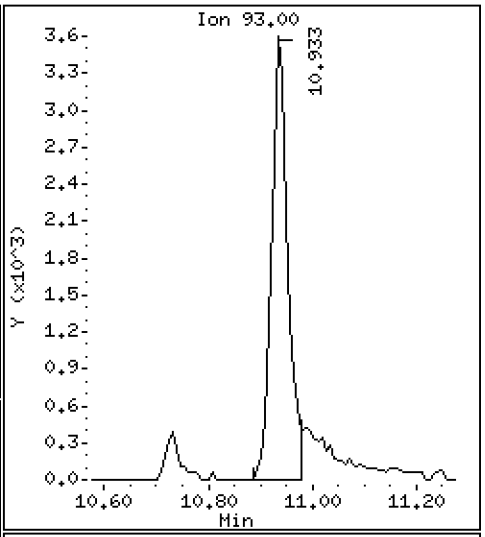
Column phase: ZB-5msi

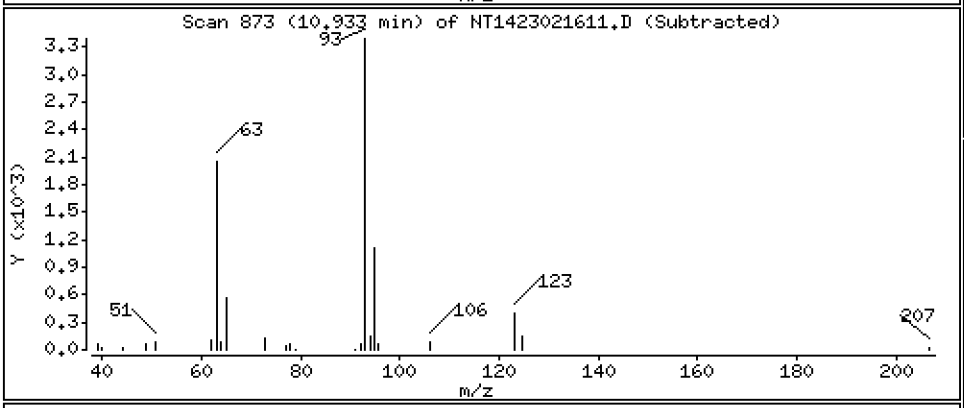
Column diameter: 0.25

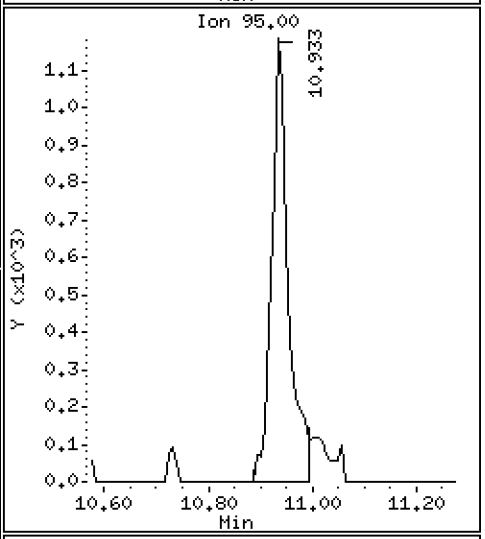
23 Bis(2-Chloroethoxy)methane

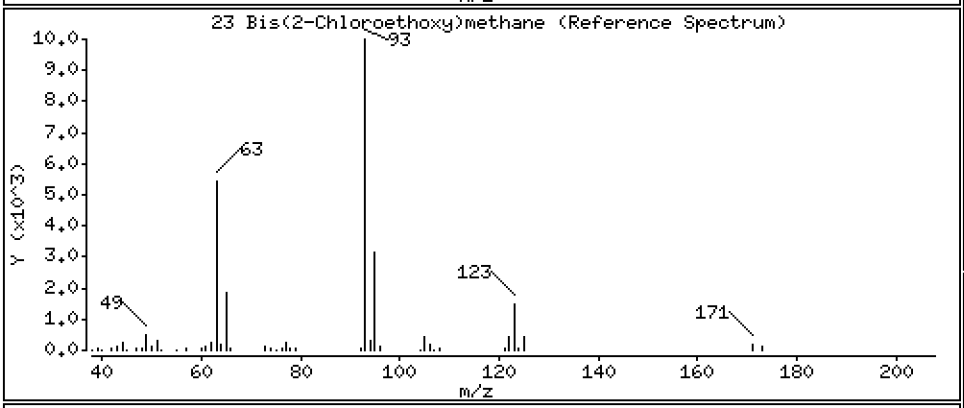
Concentration: 0.06793 ug/mL

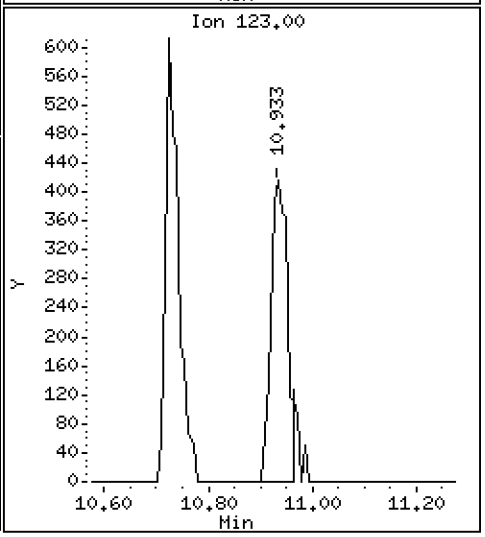


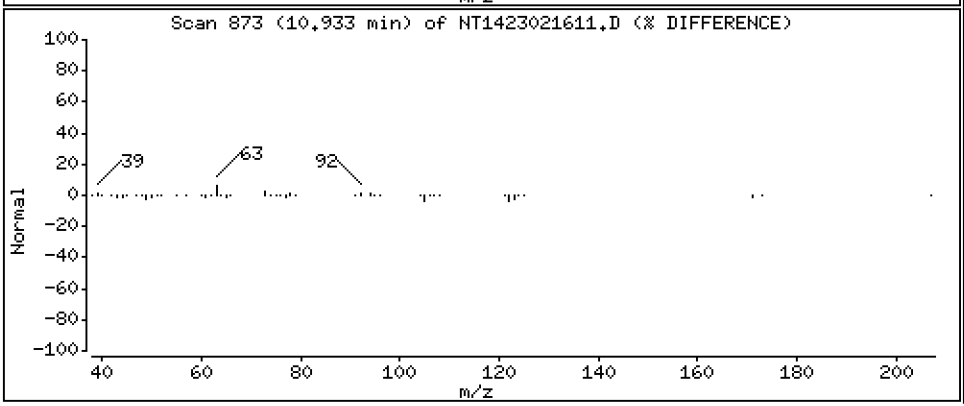












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

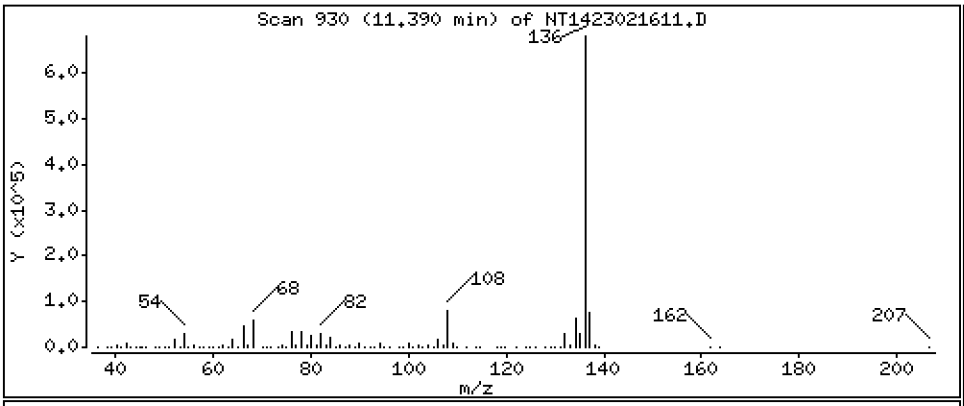
Operator: DSD

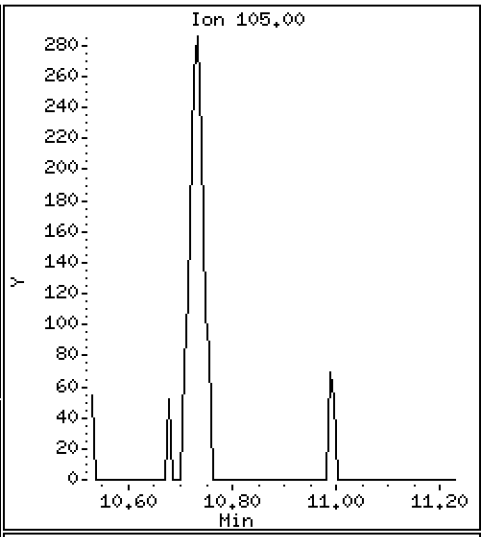
Column phase: ZB-5msi

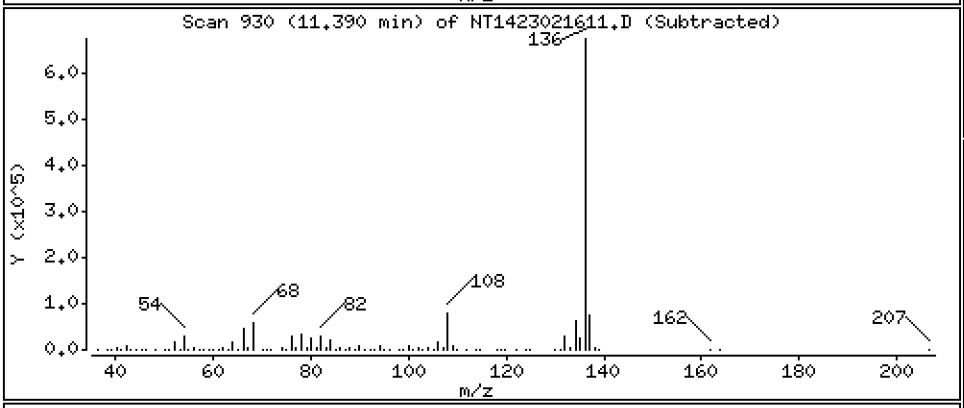
Column diameter: 0.25

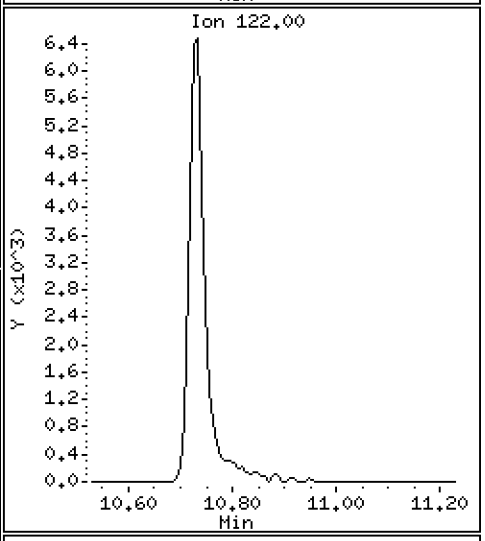
24 Benzoic acid

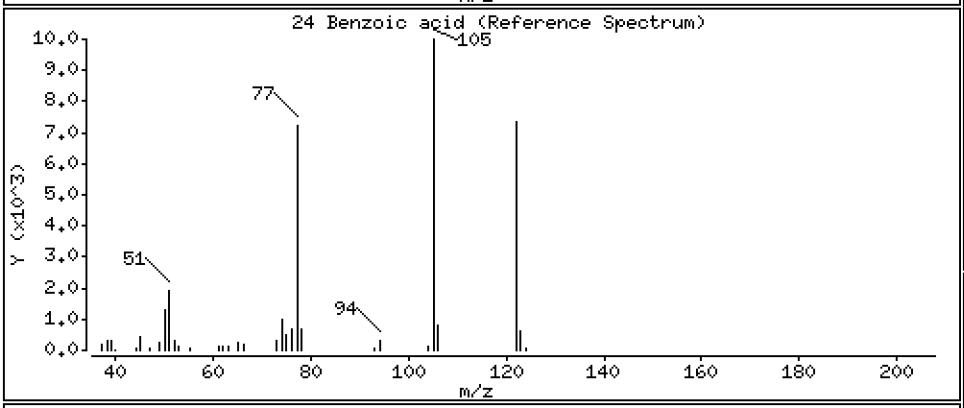
Concentration: 0.01812 ug/mL

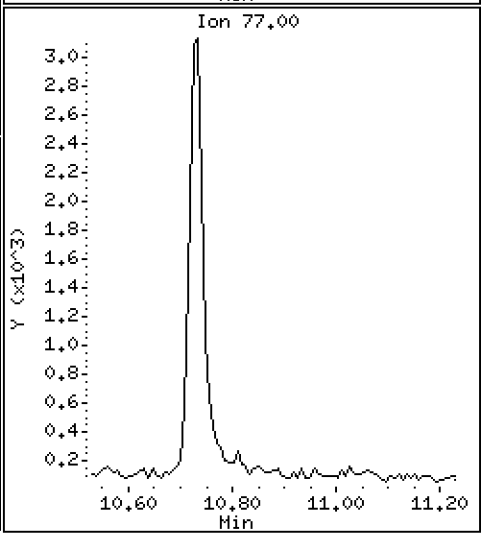


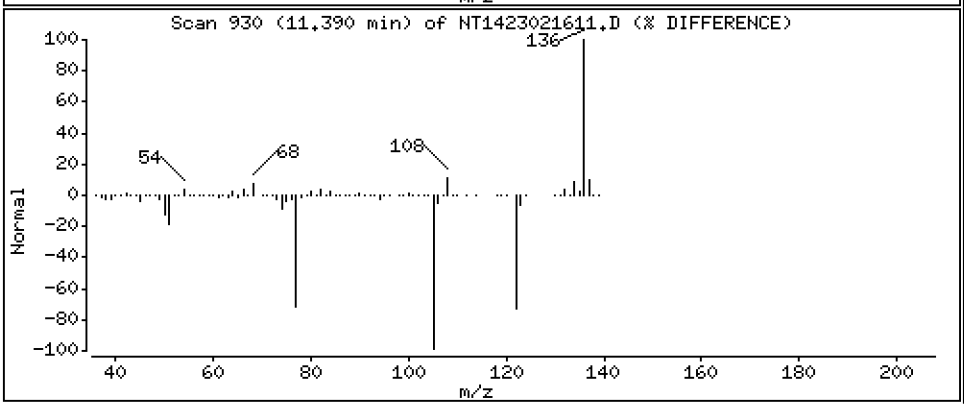












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021611.D

Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

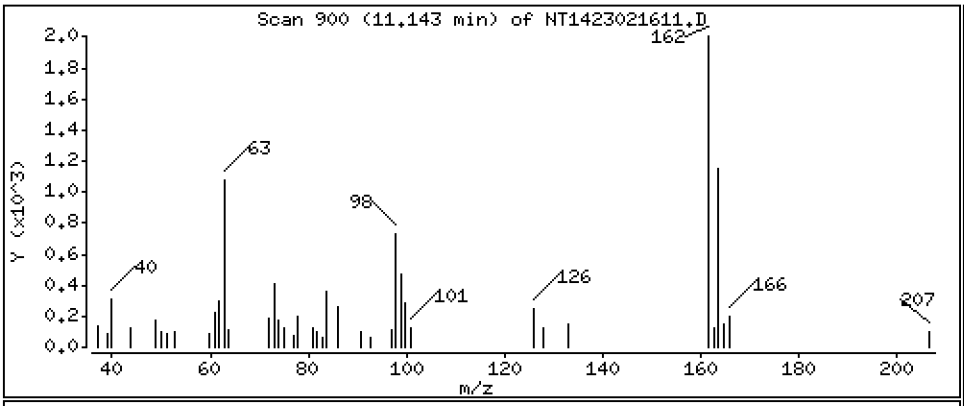
Operator: DSD

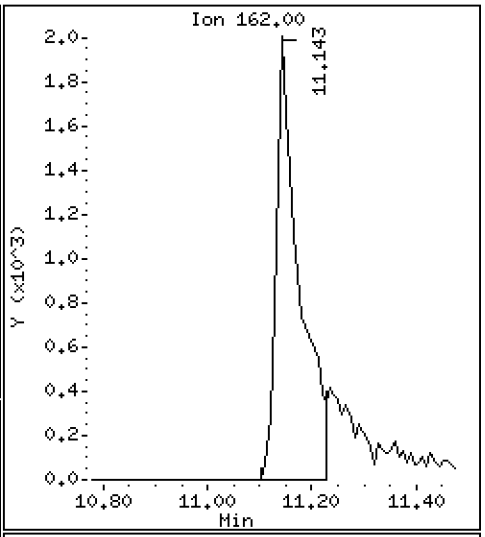
Column phase: ZB-5msi

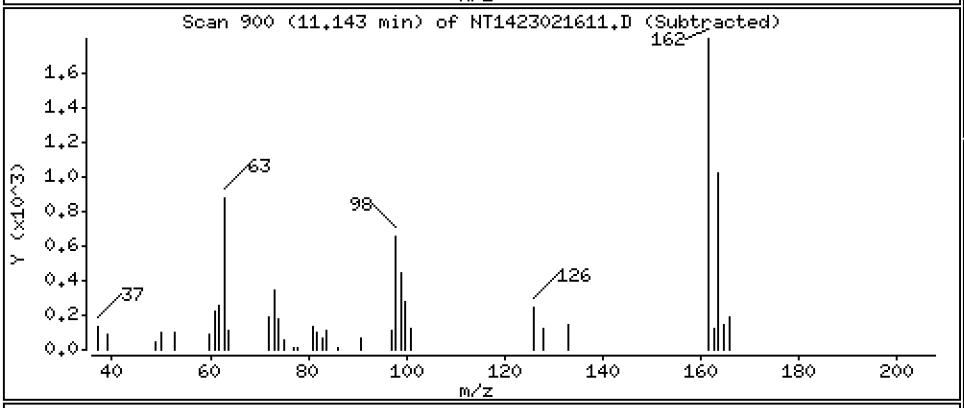
Column diameter: 0.25

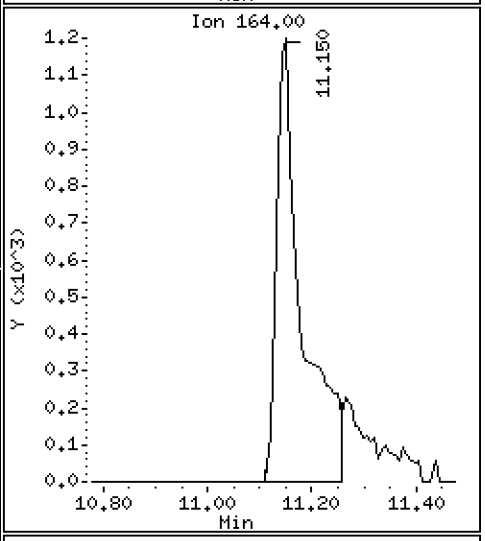
25 2,4-Dichlorophenol

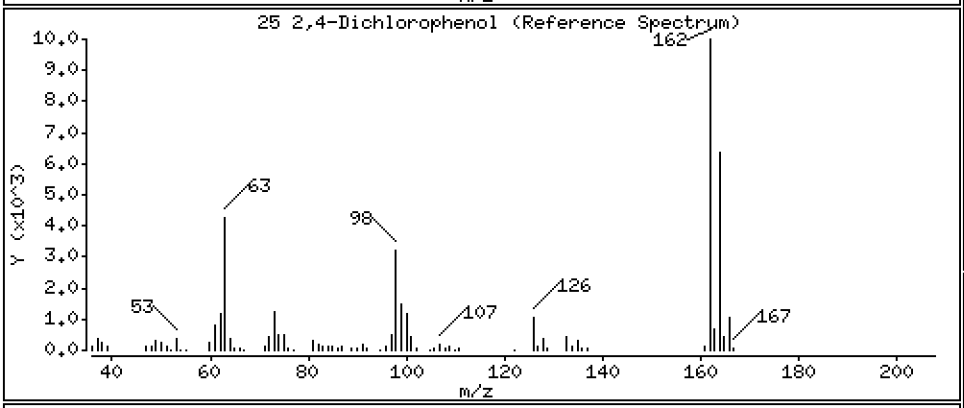
Concentration: 0.07562 ug/mL

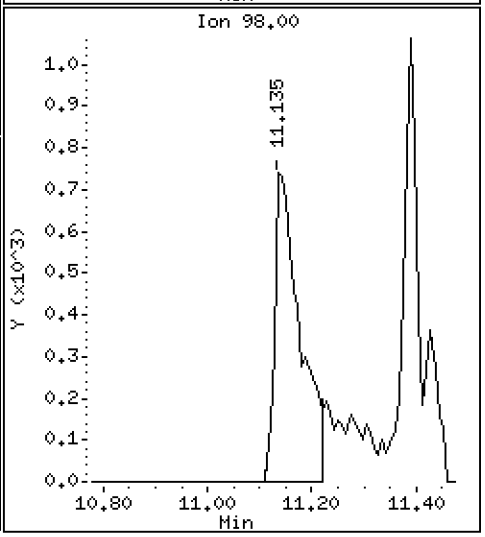


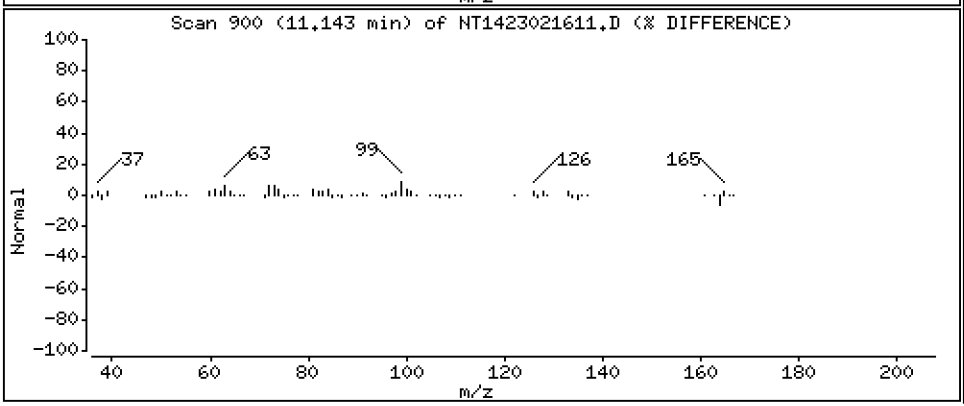












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

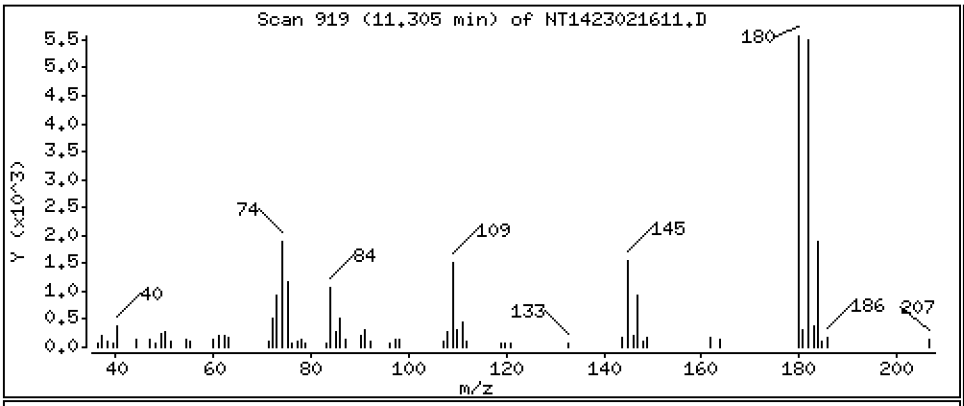
Operator: DSD

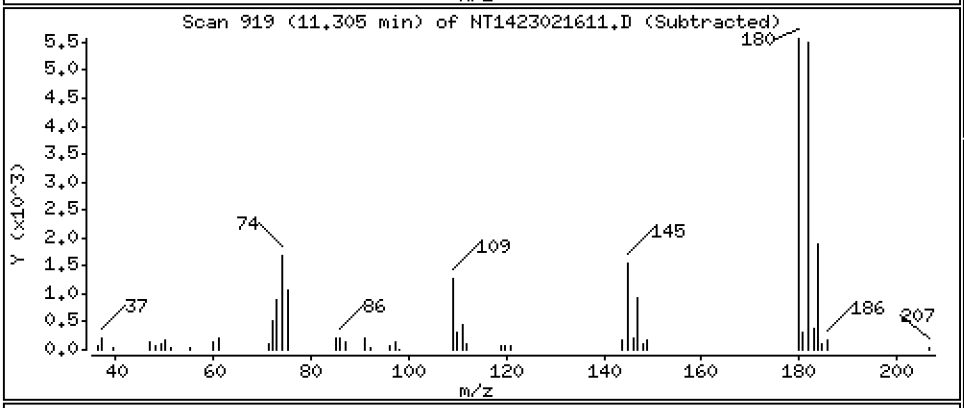
Column phase: ZB-5msi

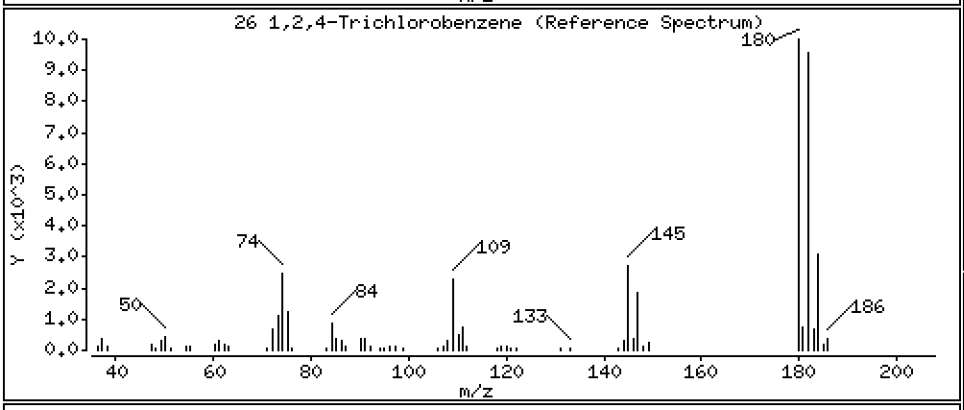
Column diameter: 0.25

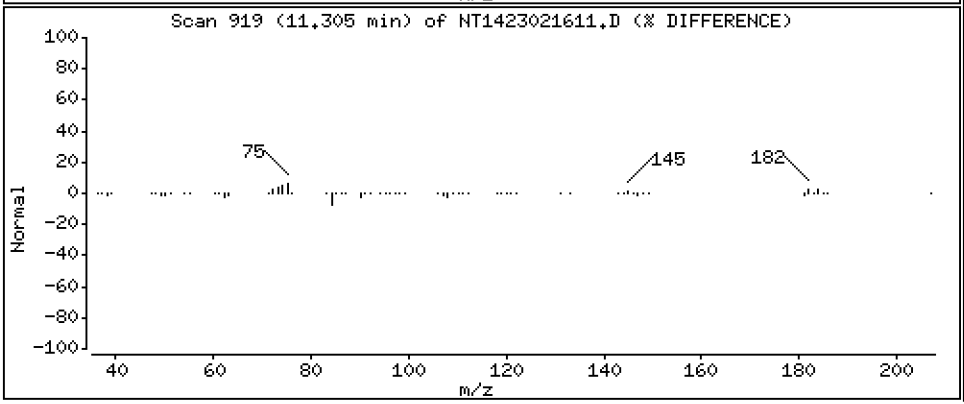
26 1,2,4-Trichlorobenzene

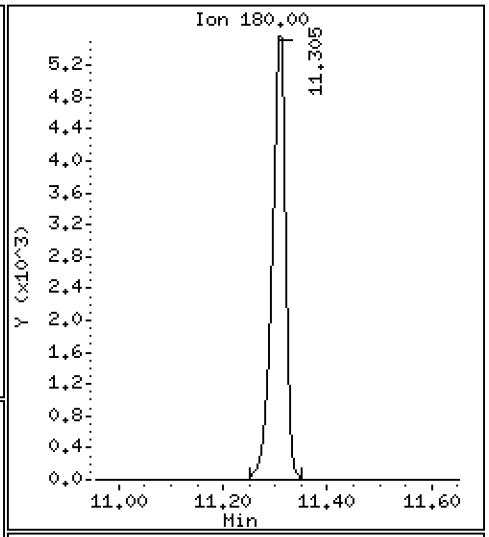
Concentration: 0.09472 ug/mL

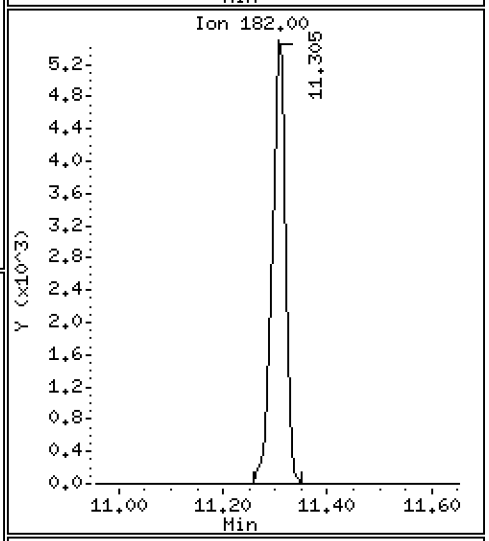


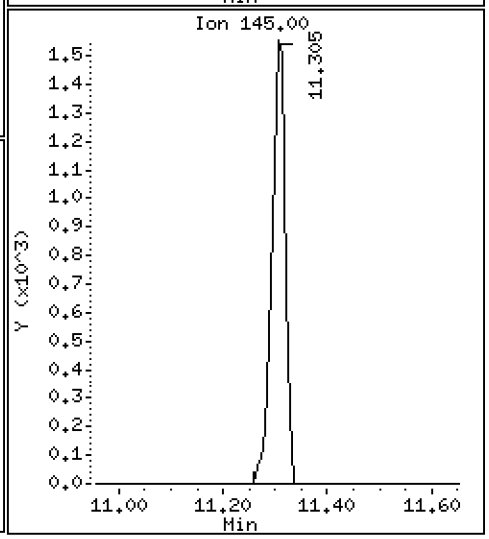












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

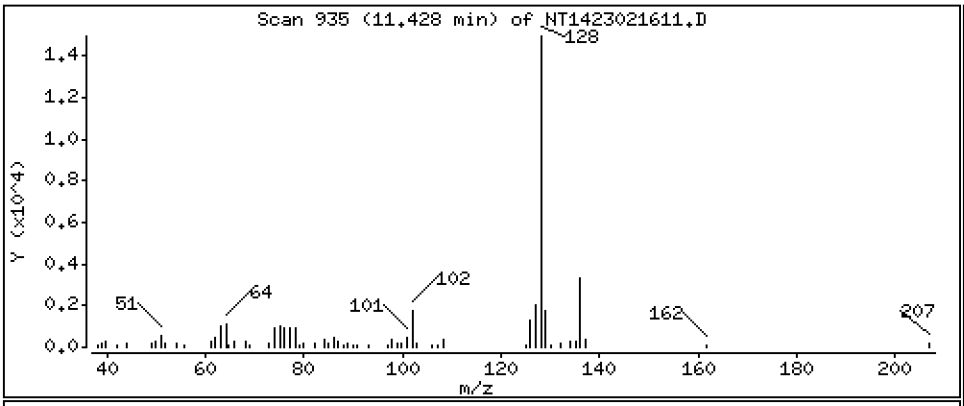
Operator: DSD

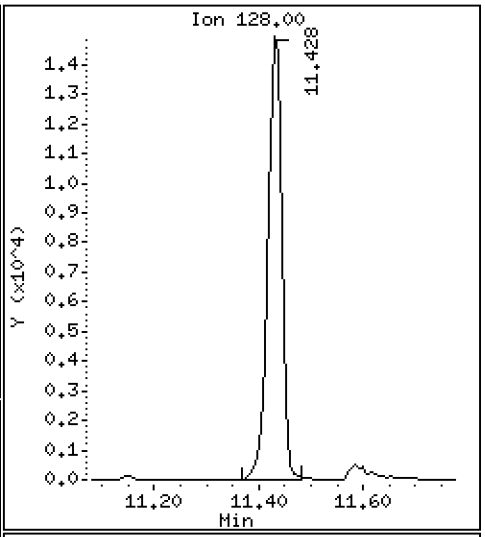
Column phase: ZB-5msi

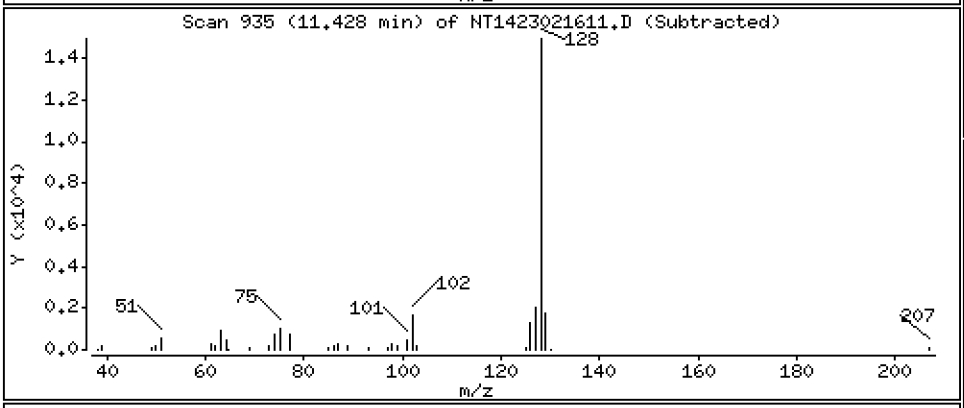
Column diameter: 0.25

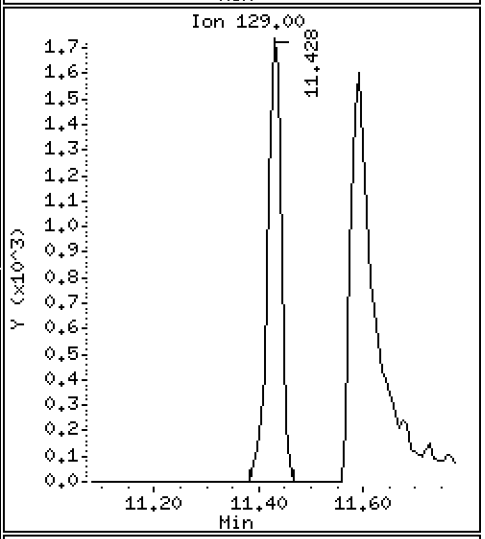
28 Naphthalene

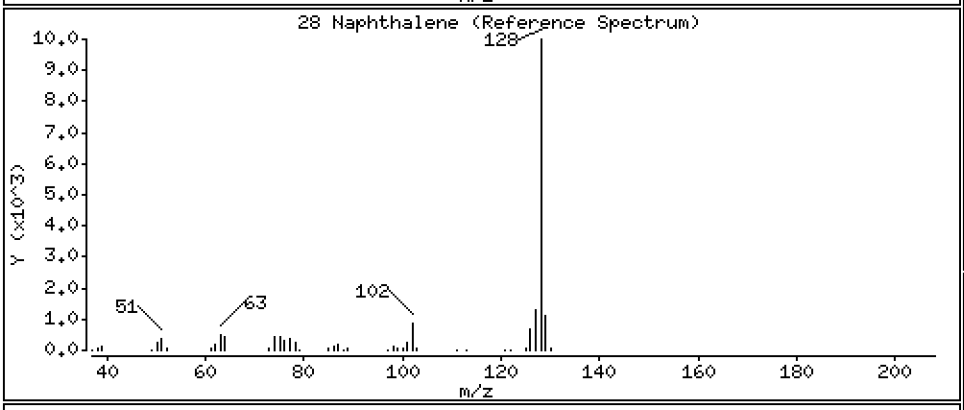
Concentration: 0.09375 ug/mL

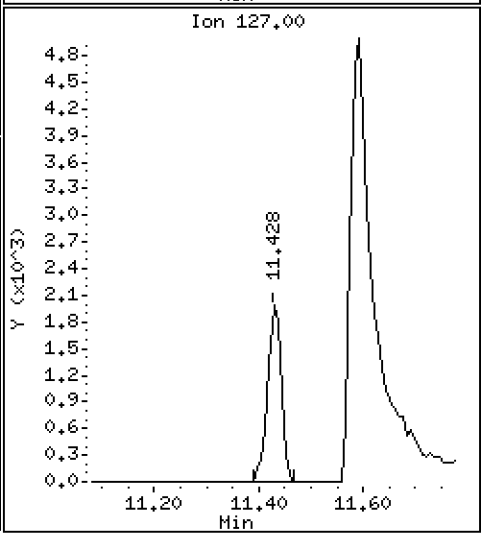


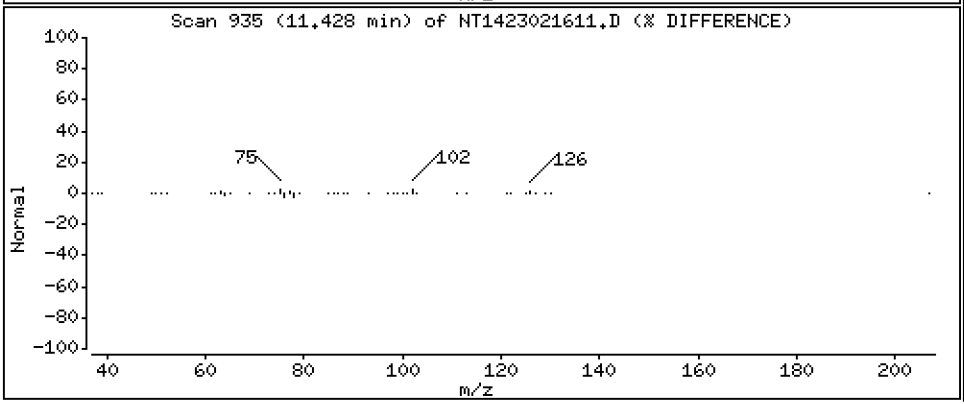












Date : 16-FEB-2023 20:06

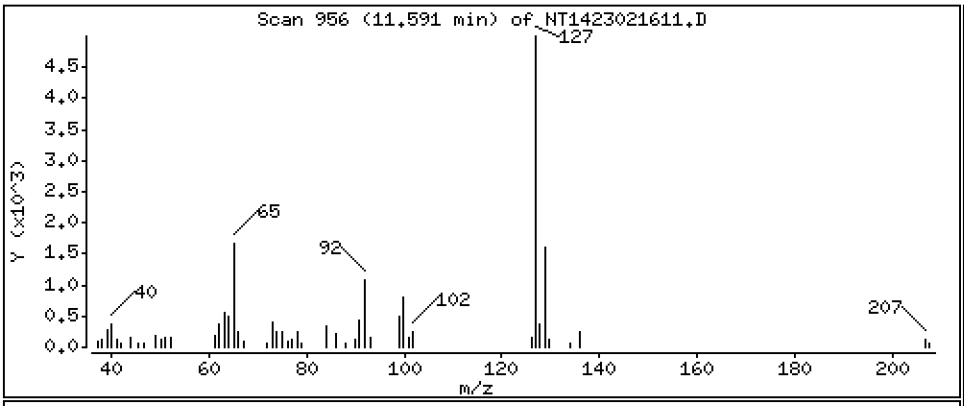
Client ID: Instrument: nt14.i

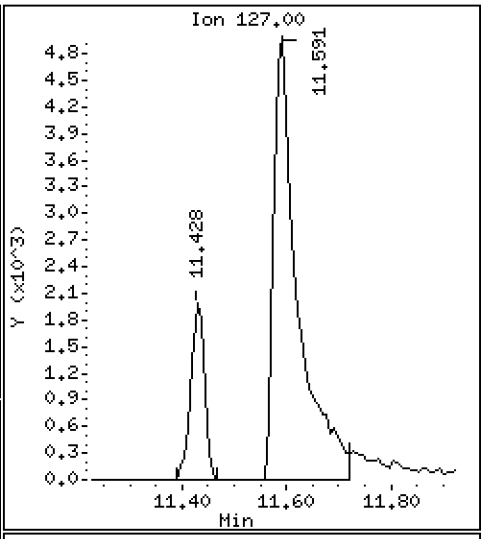
Sample Info: SIM 0.1

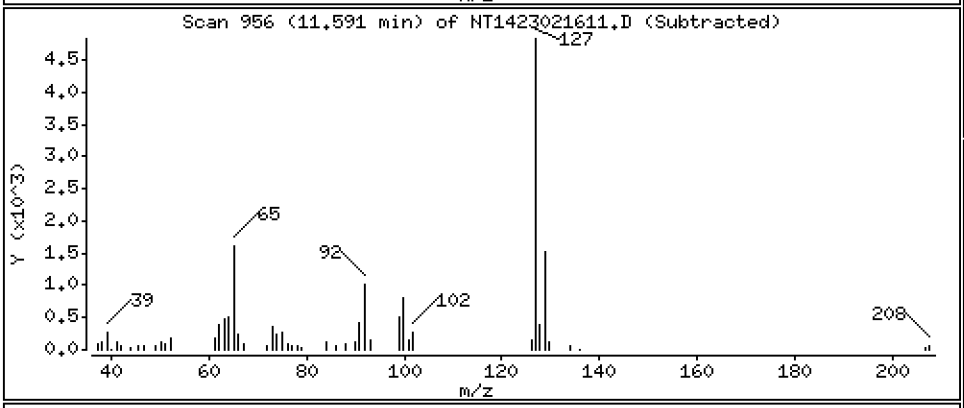
Operator: DSD

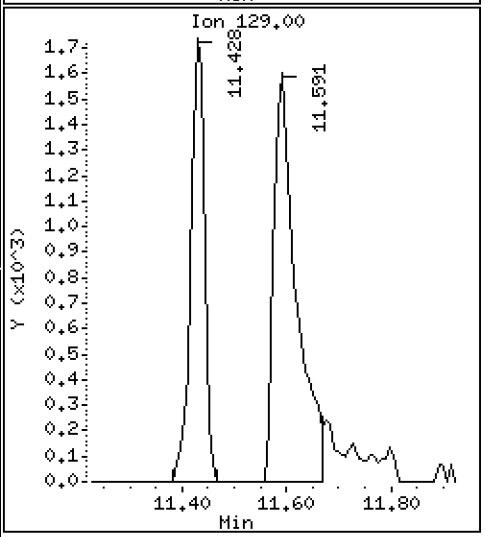
Column phase: ZB-5msi Column diameter: 0.25

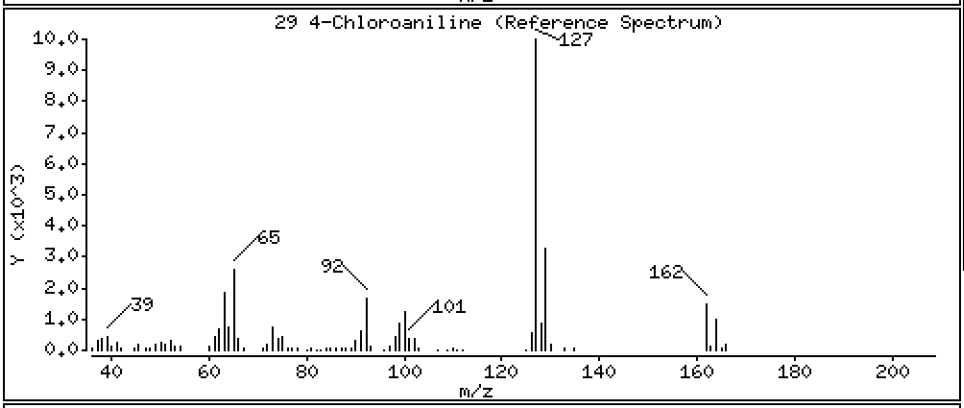
29 4-Chloroaniline Concentration: 0.1409 ug/mL

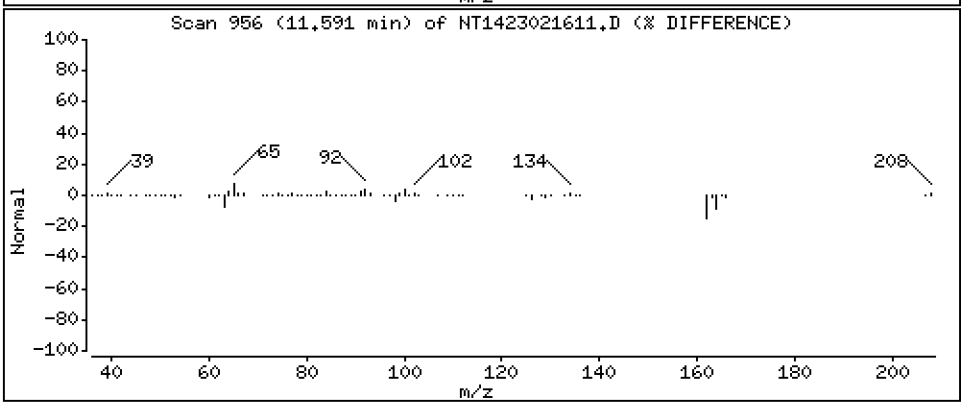












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

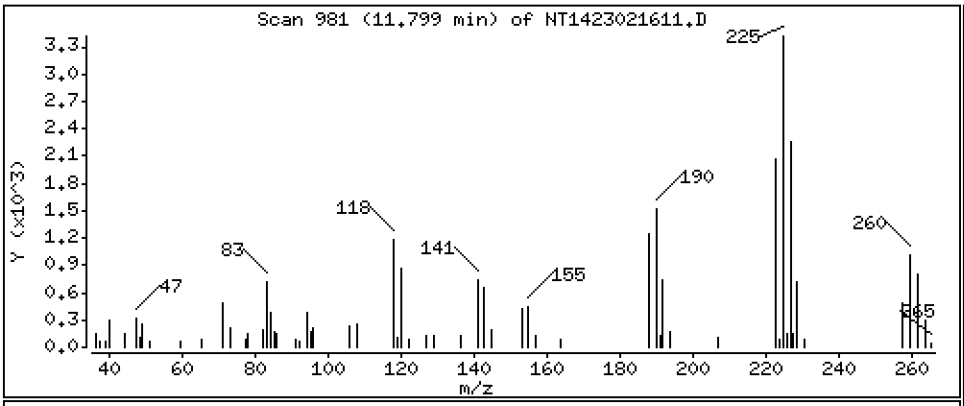
Operator: DSD

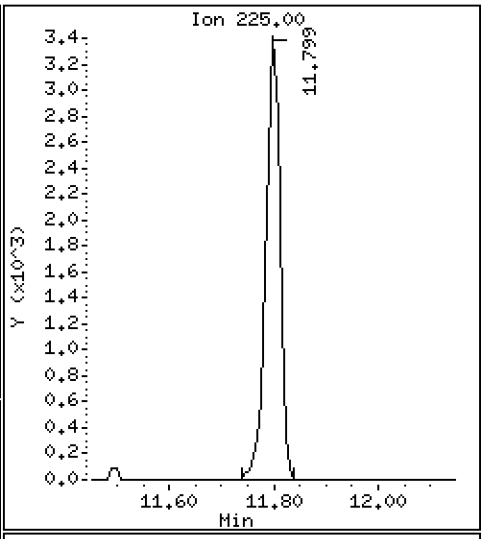
Column phase: ZB-5msi

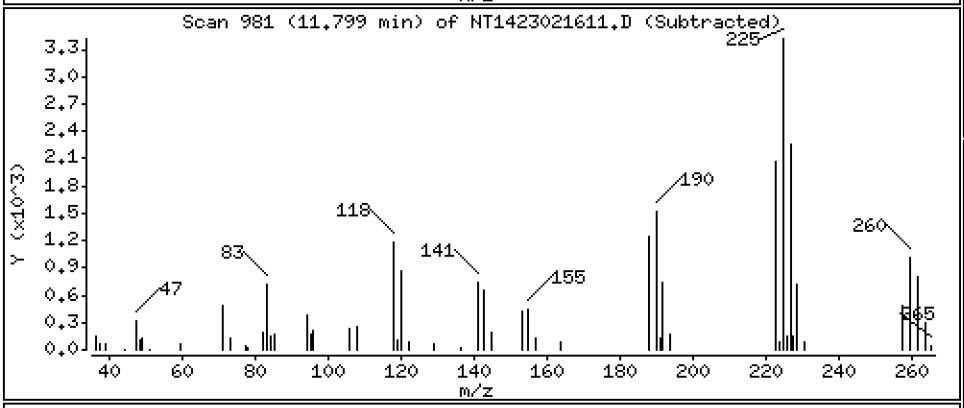
Column diameter: 0.25

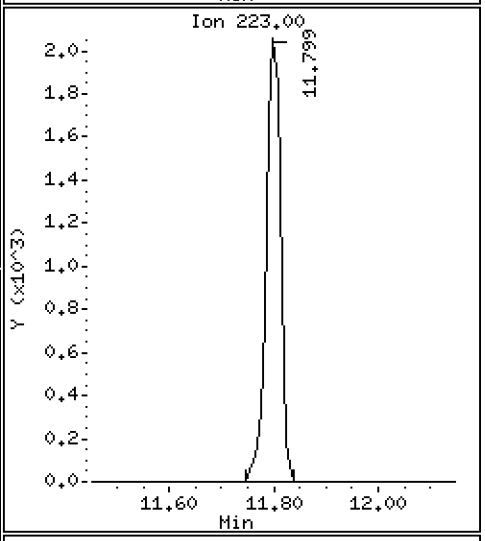
30 Hexachlorobutadiene

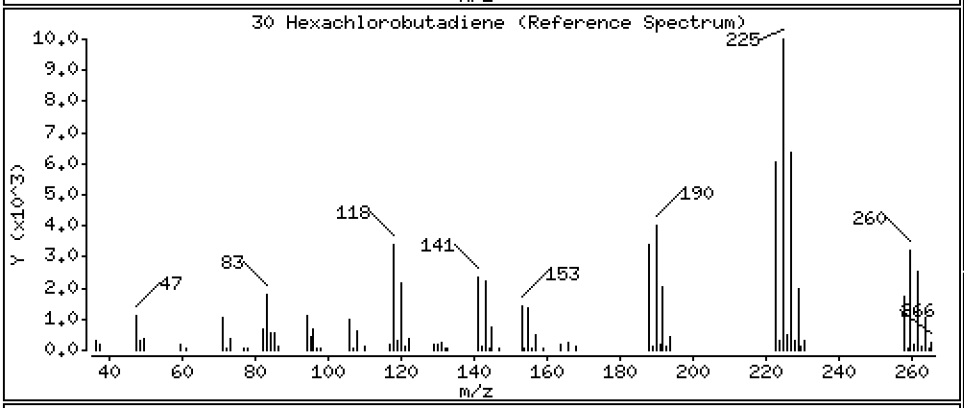
Concentration: 0.09510 ug/mL

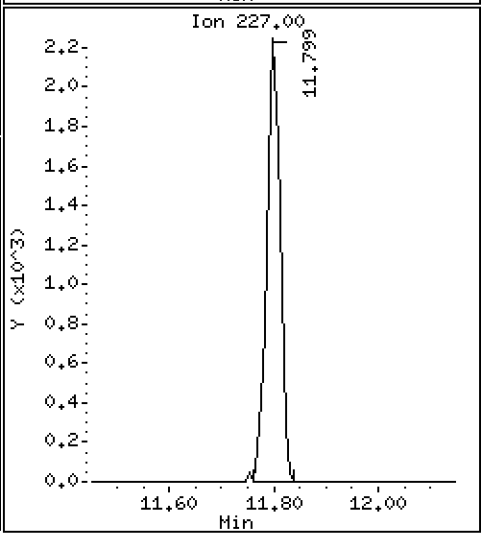


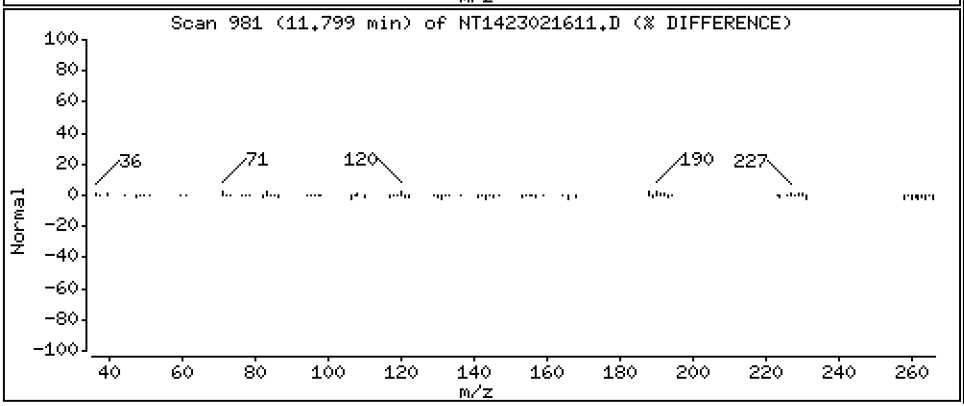












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

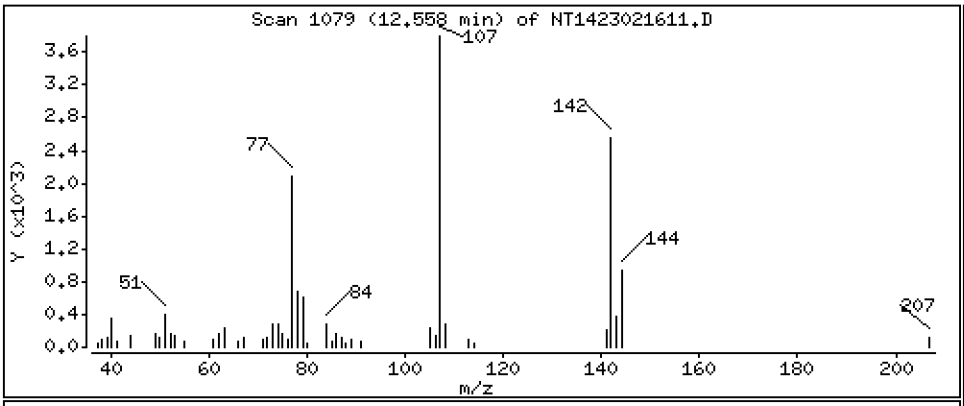
Operator: DSD

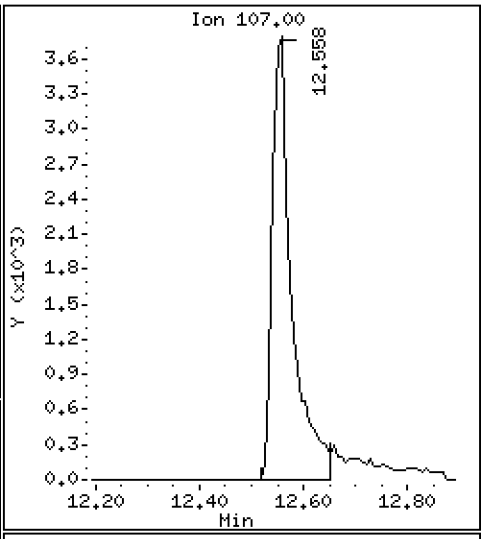
Column phase: ZB-5msi

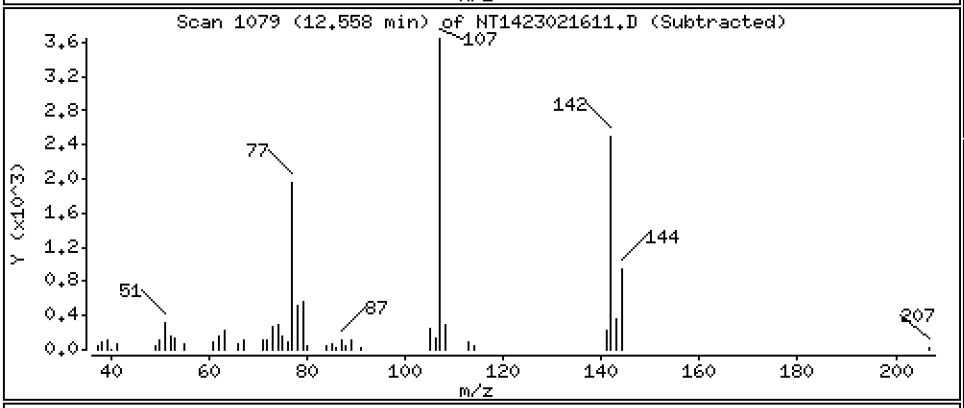
Column diameter: 0.25

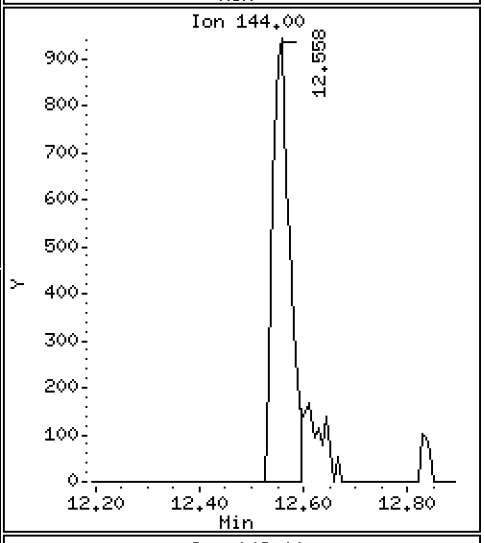
31 4-Chloro-3-methylphenol

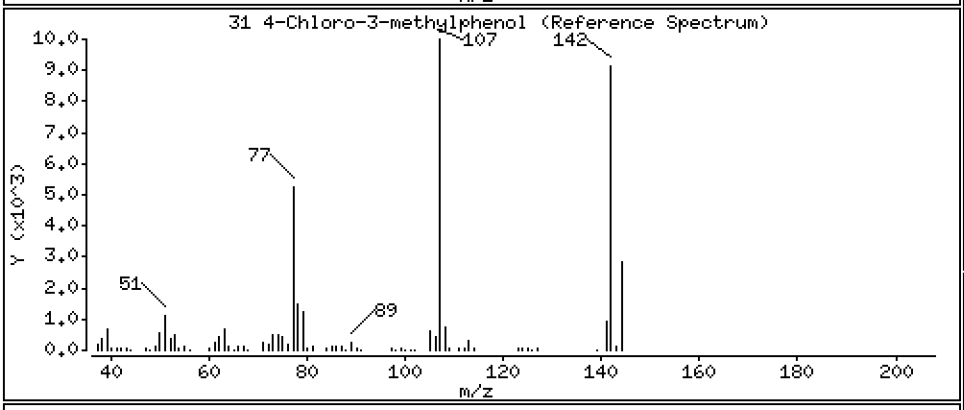
Concentration: 0.1035 ug/mL

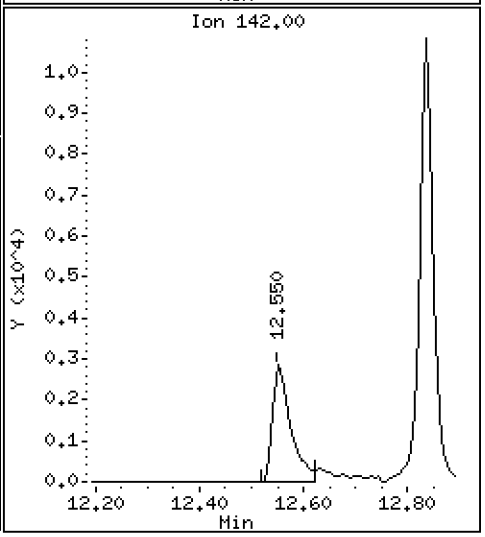


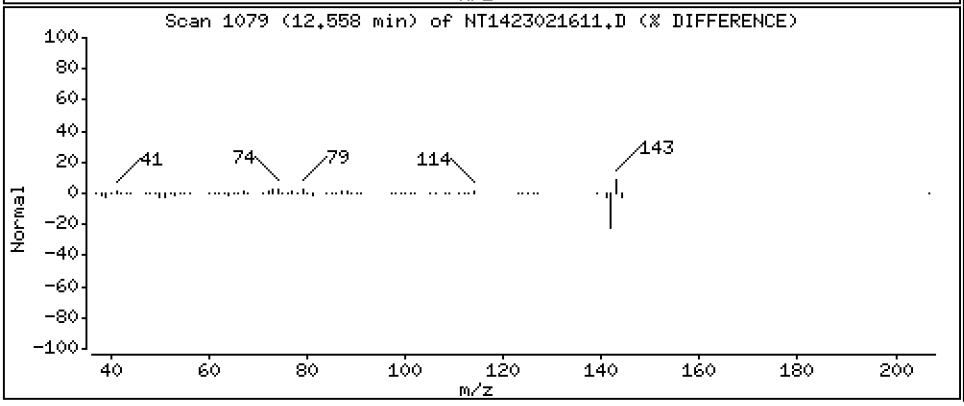












Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

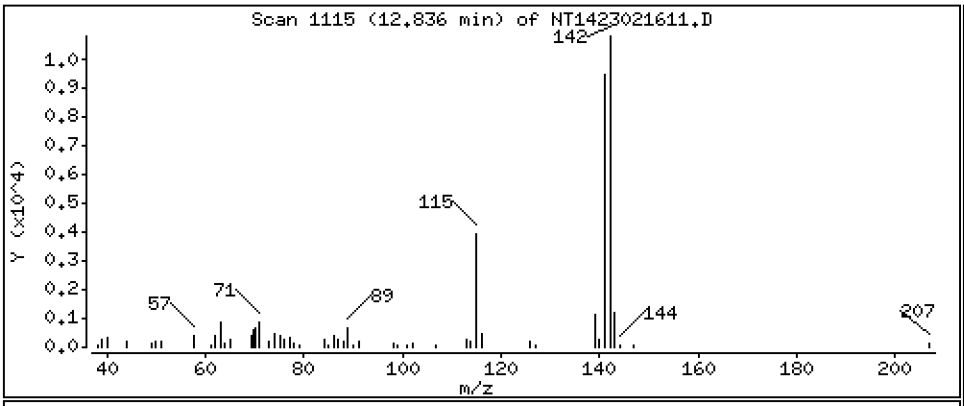
Operator: DSD

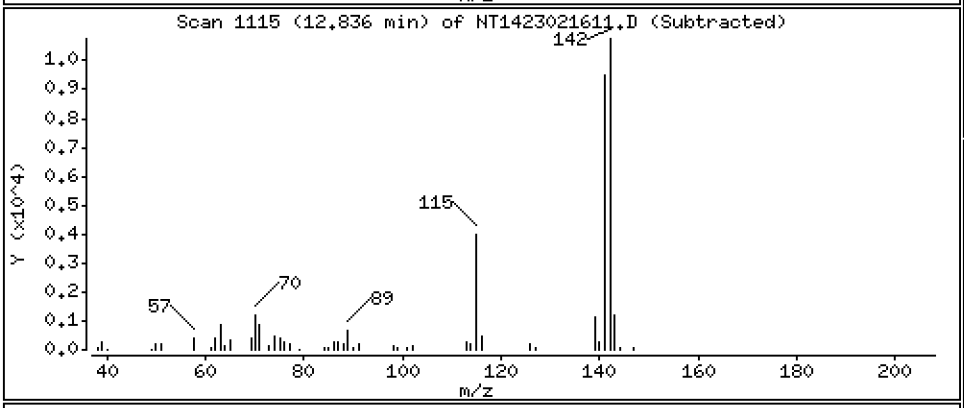
Column phase: ZB-5msi

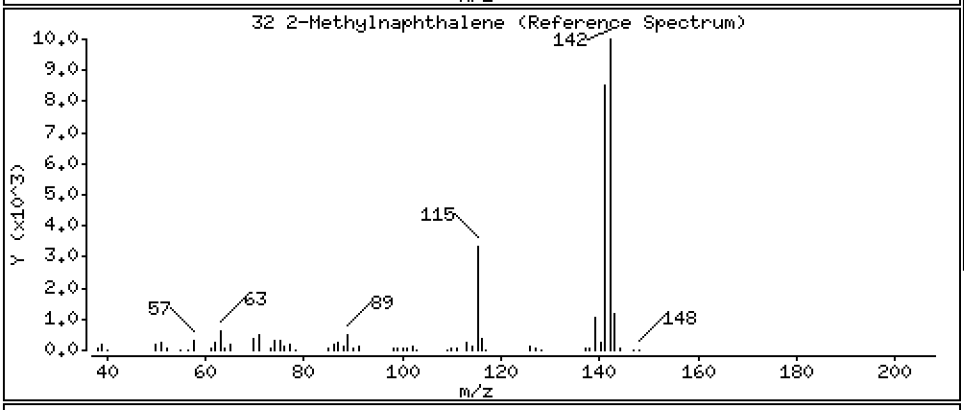
Column diameter: 0.25

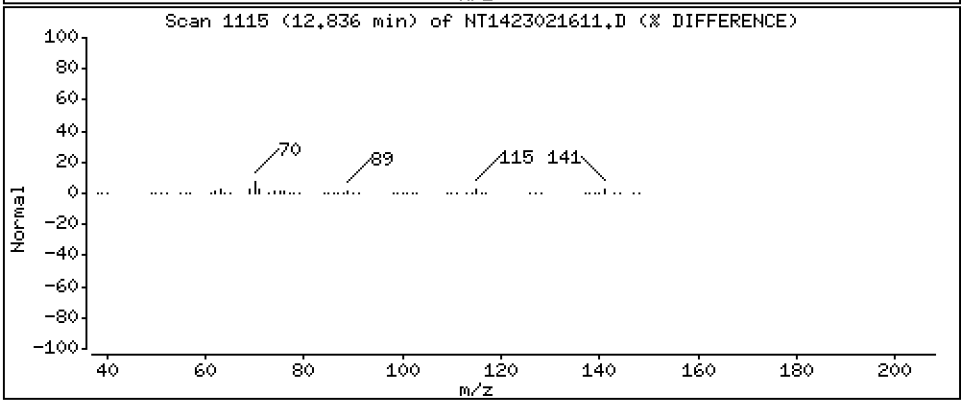
32 2-Methylnaphthalene

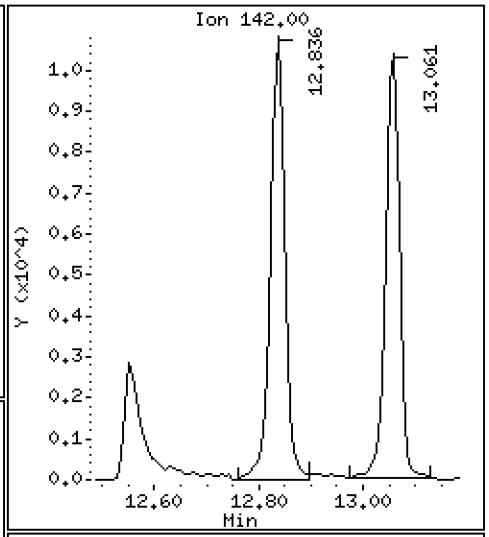
Concentration: 0.09397 ug/mL

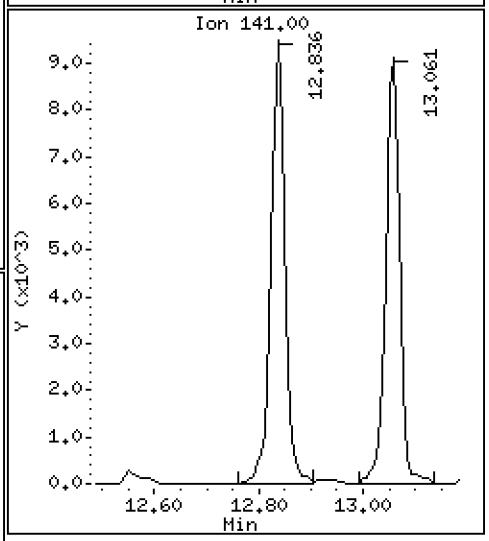












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

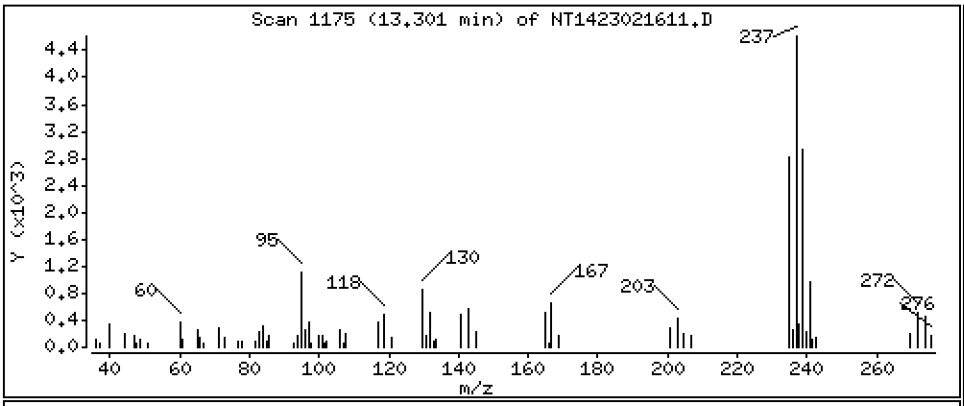
Operator: DSD

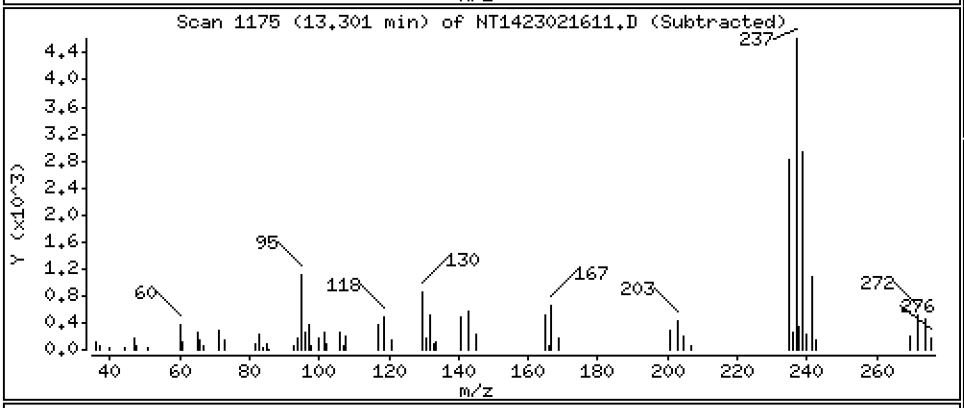
Column phase: ZB-5msi

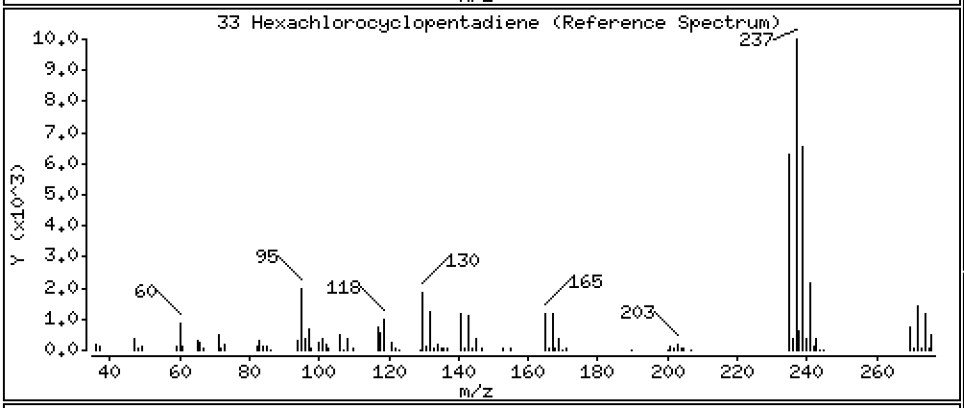
Column diameter: 0.25

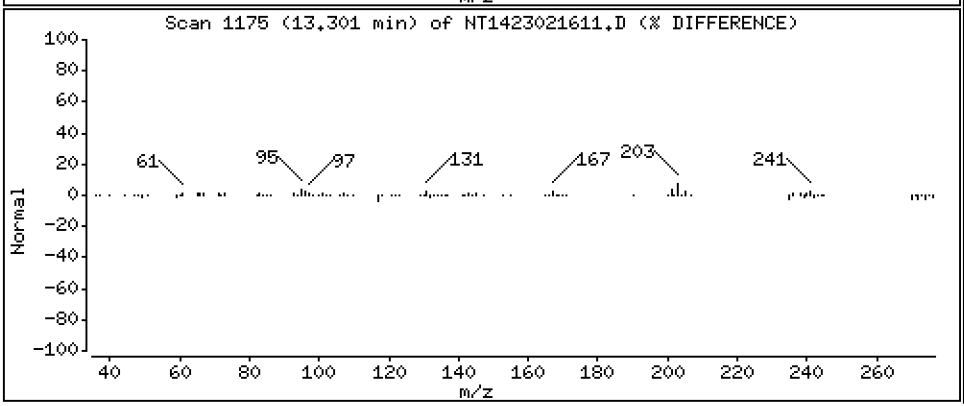
33 Hexachlorocyclopentadiene

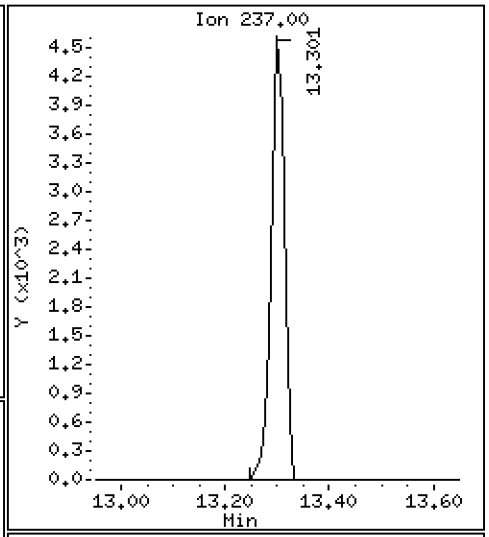
Concentration: 0.1146 ug/mL

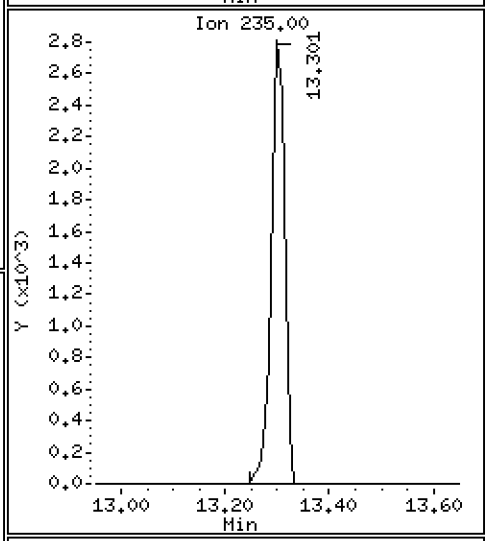


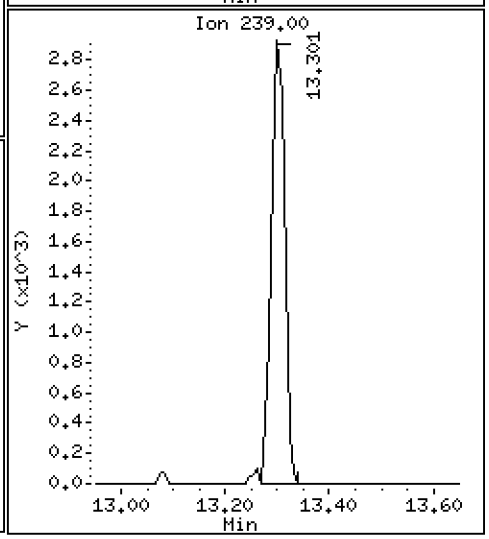












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

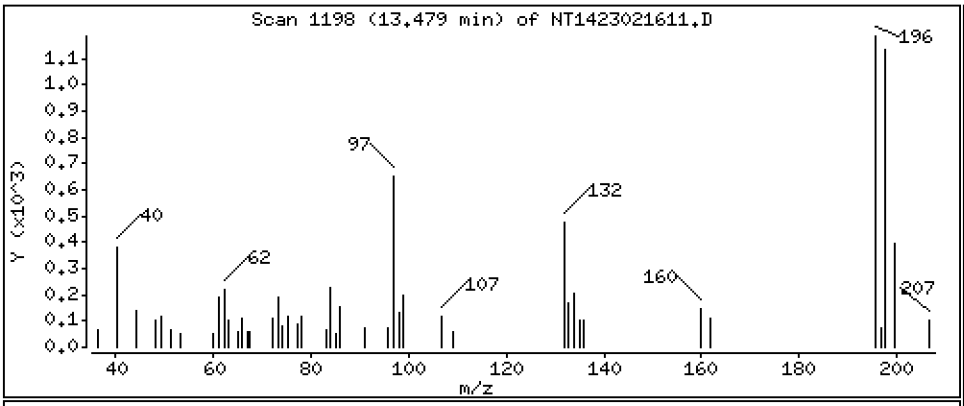
Operator: DSD

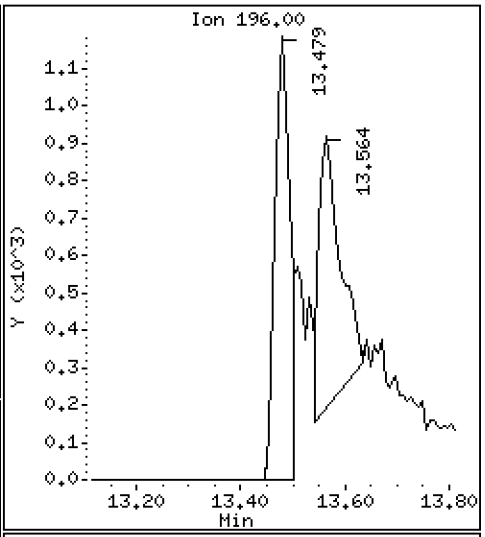
Column phase: ZB-5msi

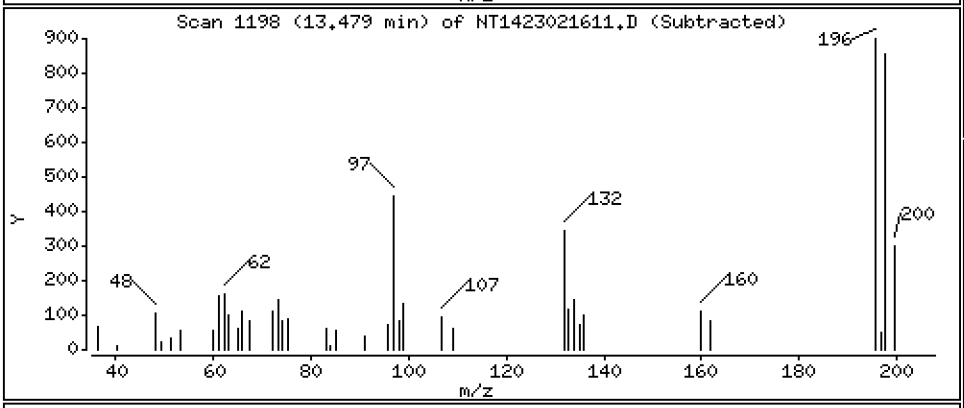
Column diameter: 0.25

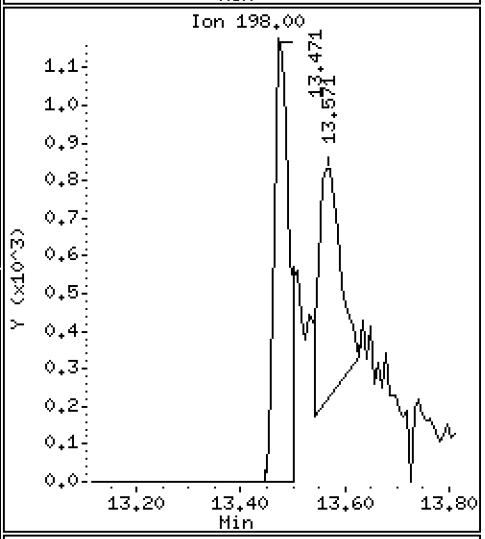
34 2,4,6-Trichlorophenol

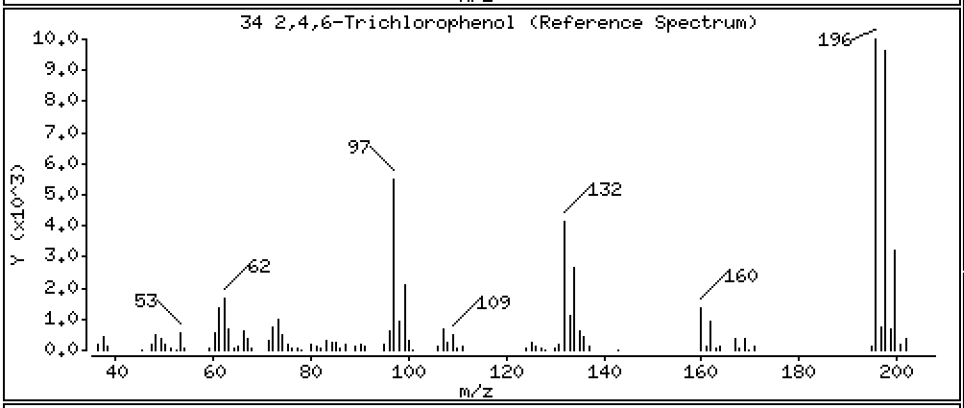
Concentration: 0.03568 ug/mL

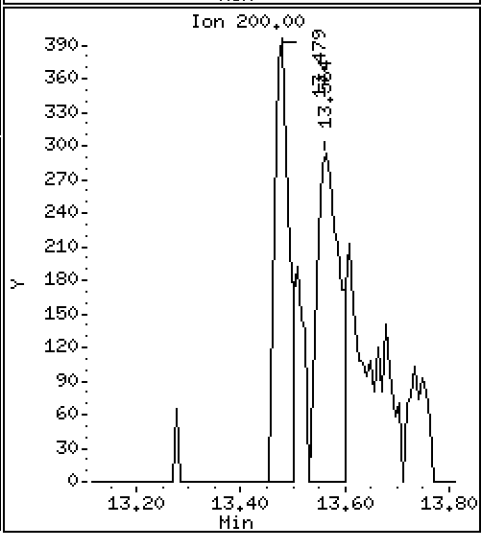


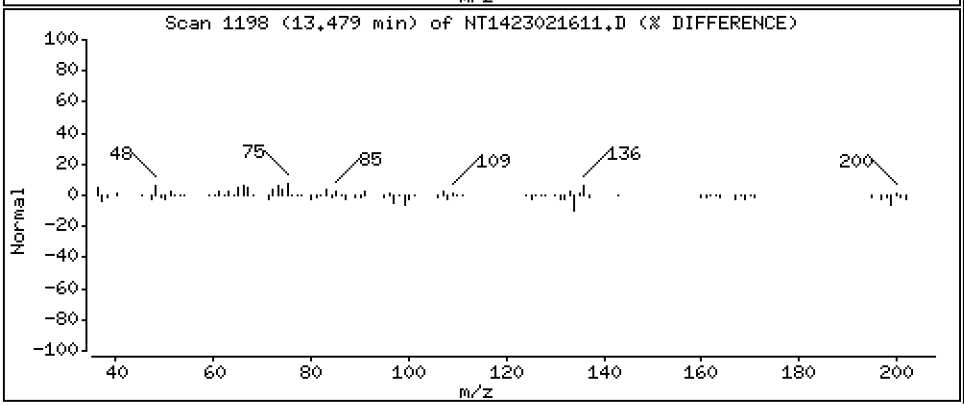












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

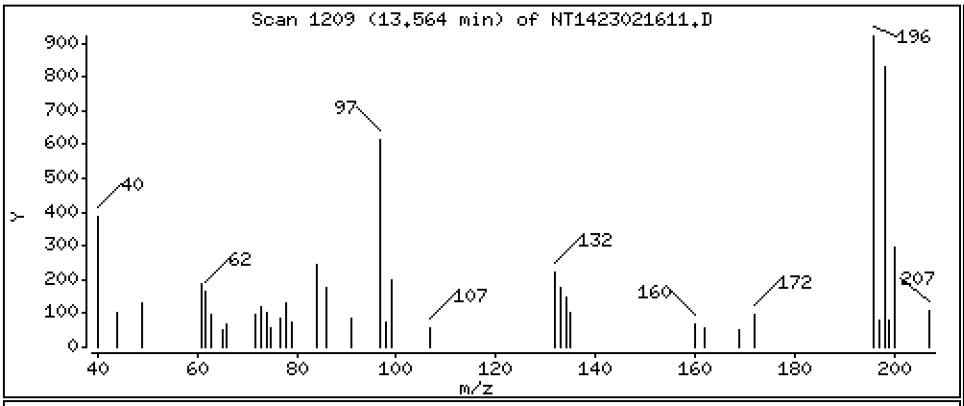
Operator: DSD

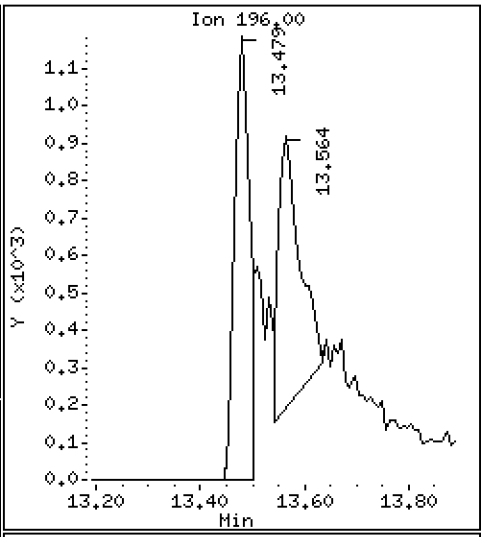
Column phase: ZB-5msi

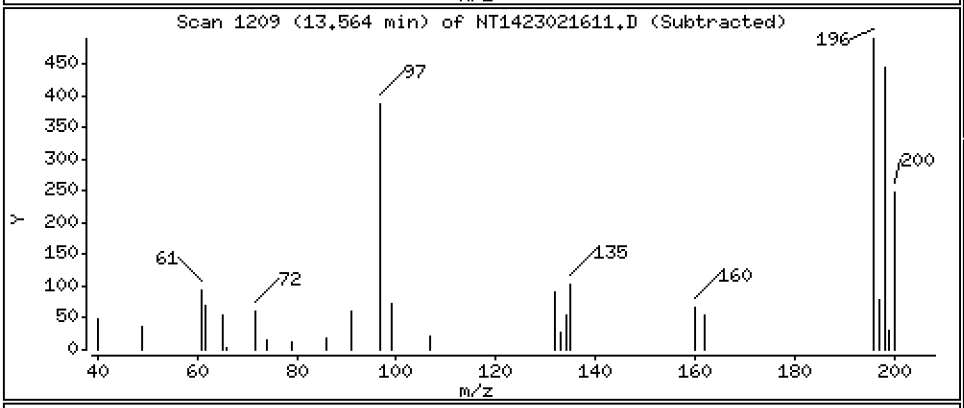
Column diameter: 0.25

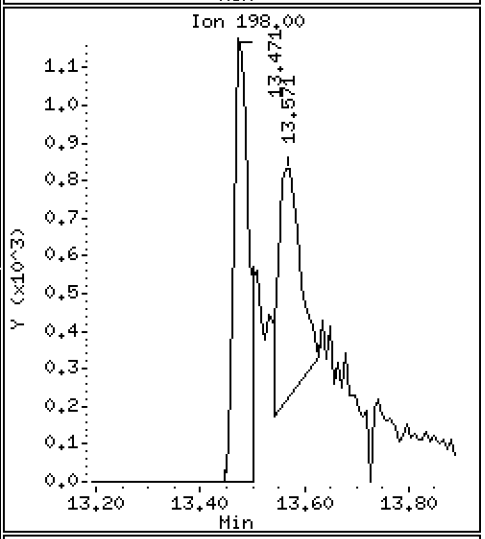
35 2,4,5-Trichlorophenol

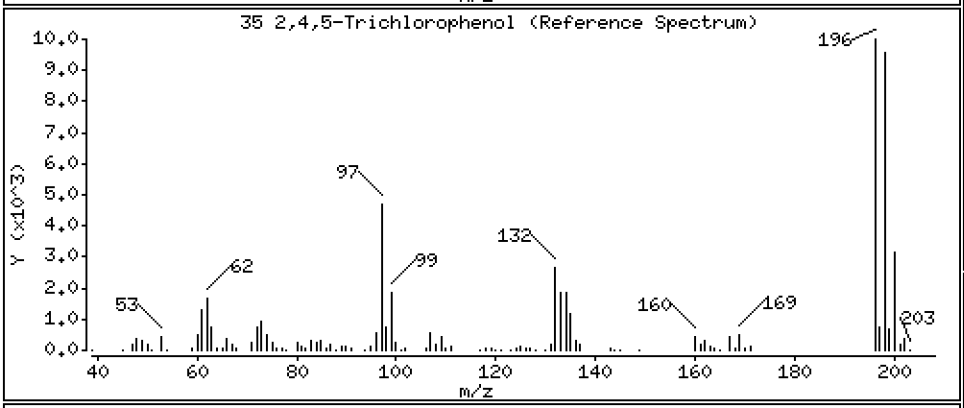
Concentration: 0.02933 ug/mL

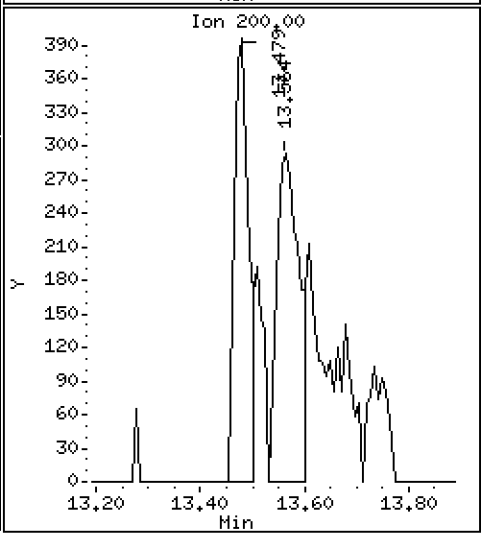


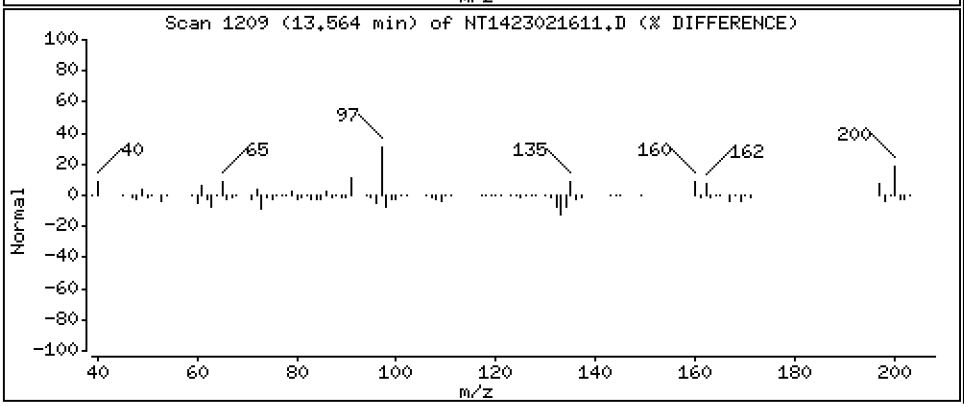












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

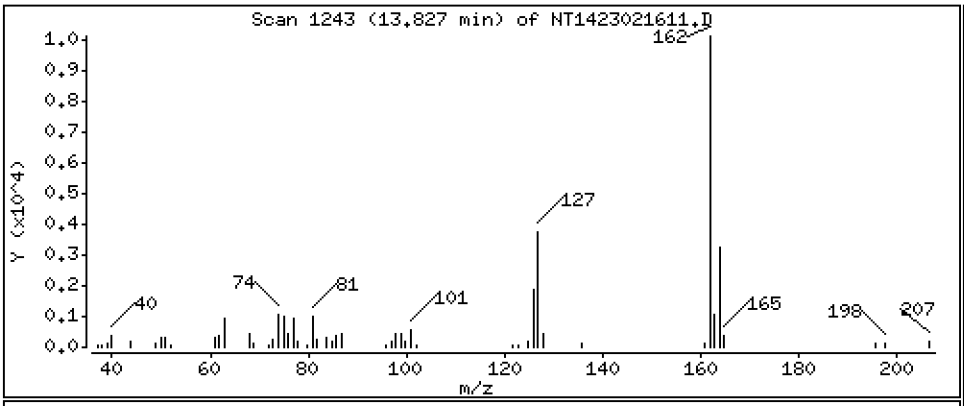
Operator: DSD

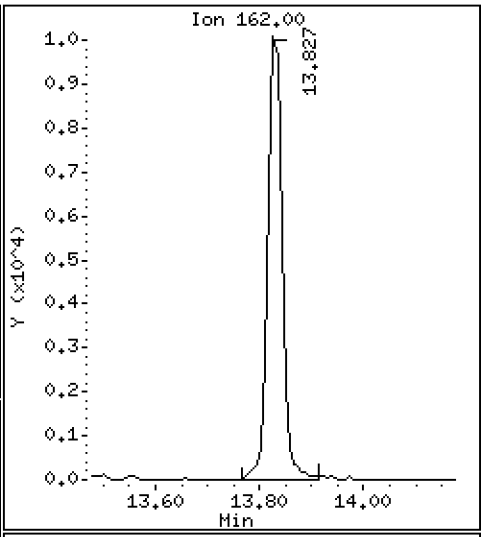
Column phase: ZB-5msi

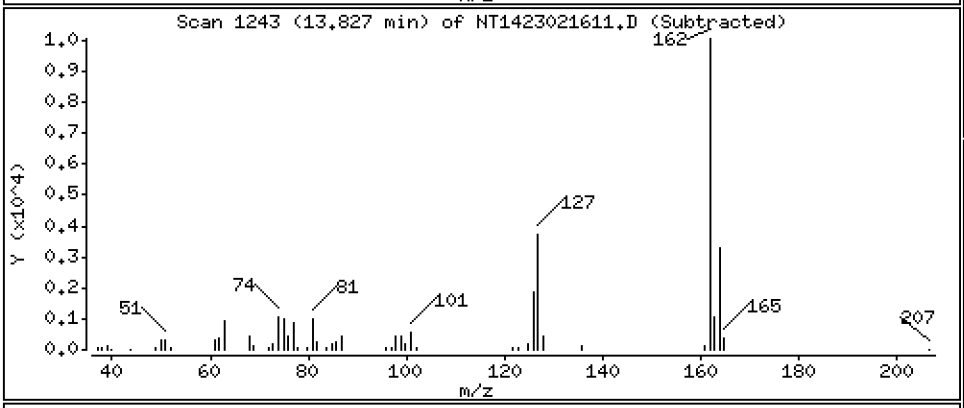
Column diameter: 0.25

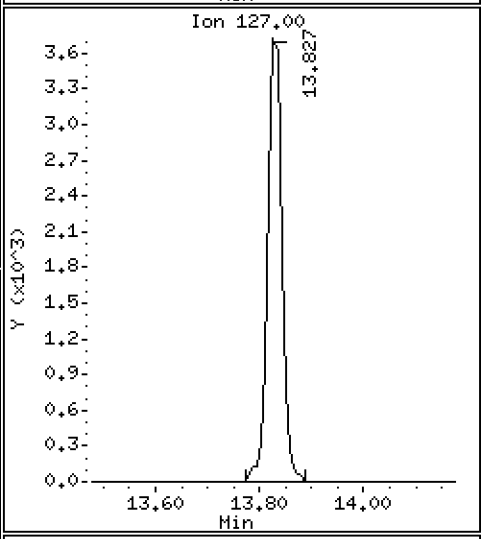
37 2-Chloronaphthalene

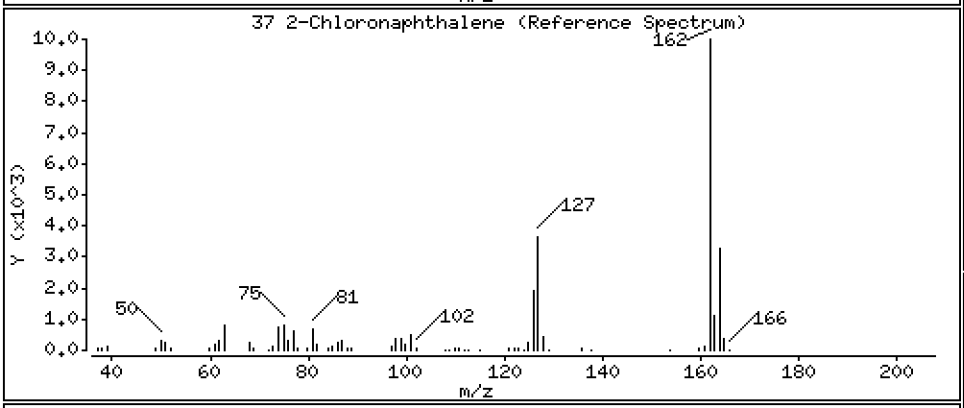
Concentration: 0.09217 ug/mL

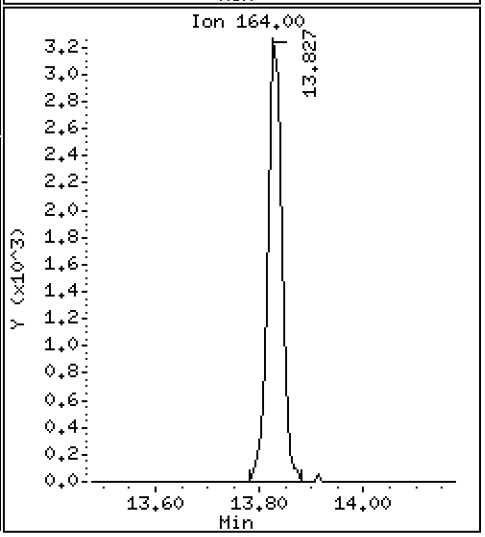


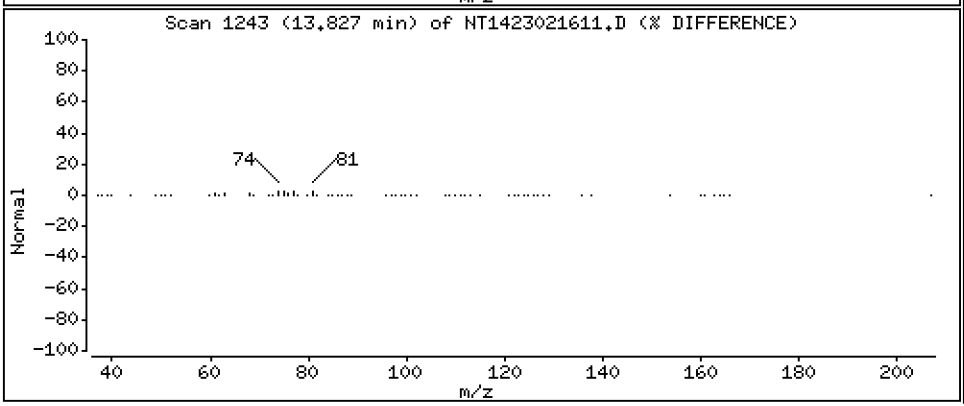












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

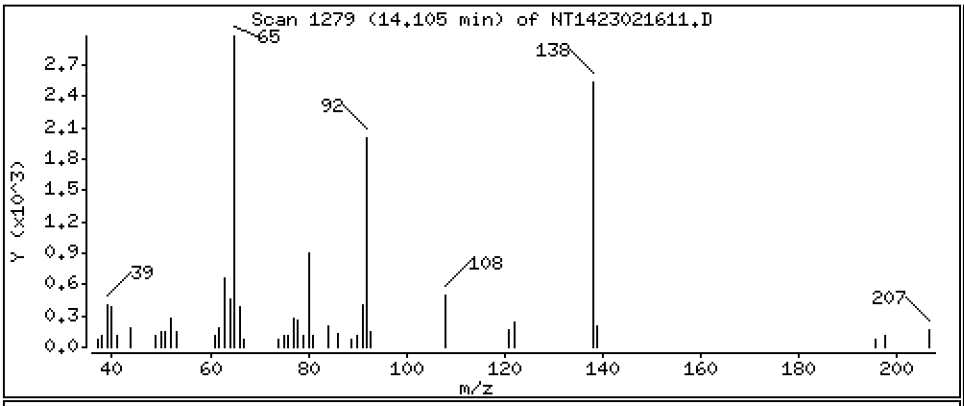
Operator: DSD

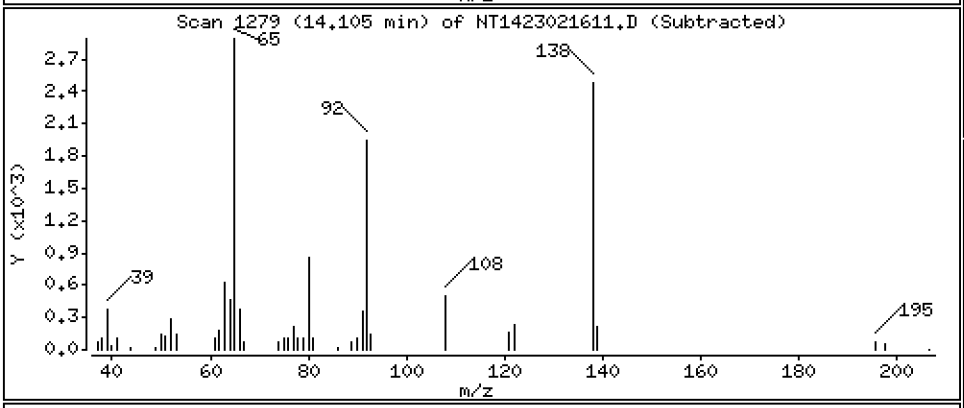
Column phase: ZB-5msi

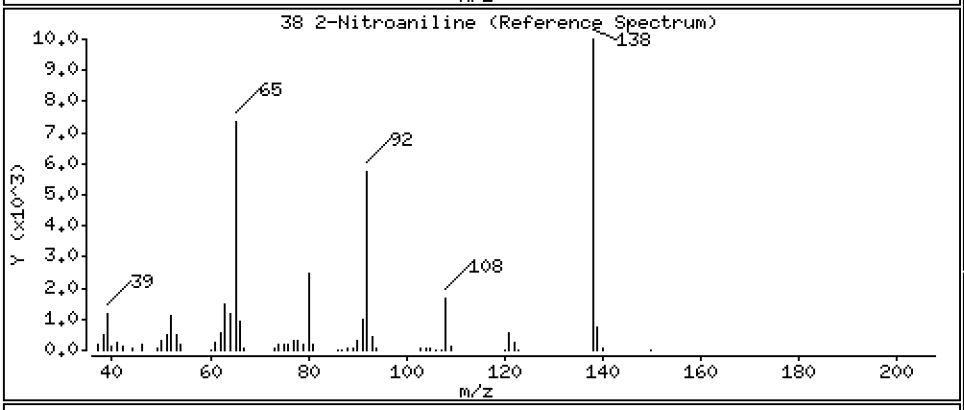
Column diameter: 0.25

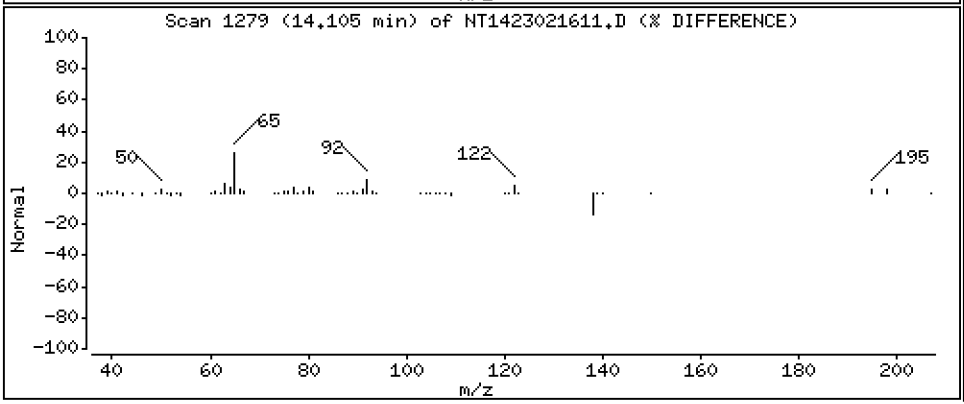
38 2-Nitroaniline

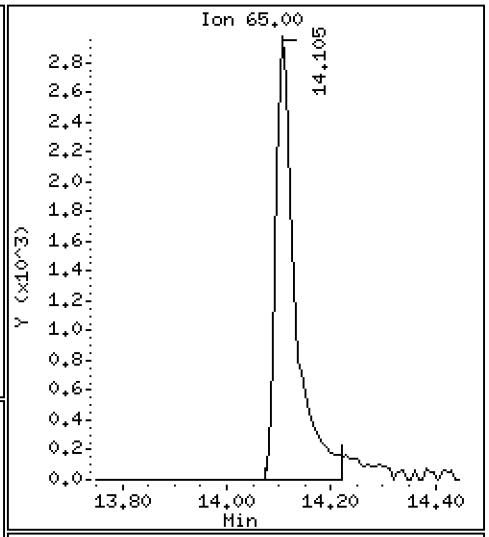
Concentration: 0.1154 ug/mL

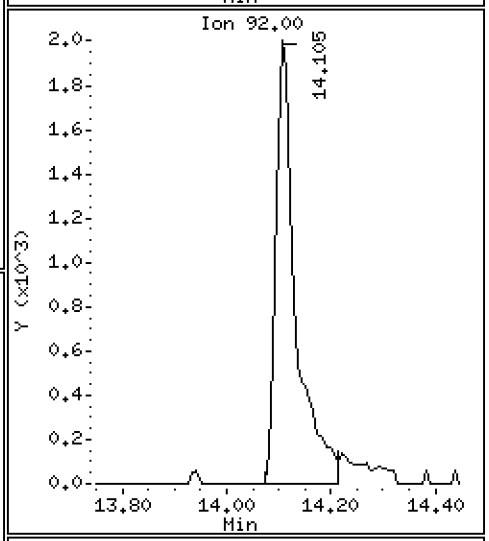


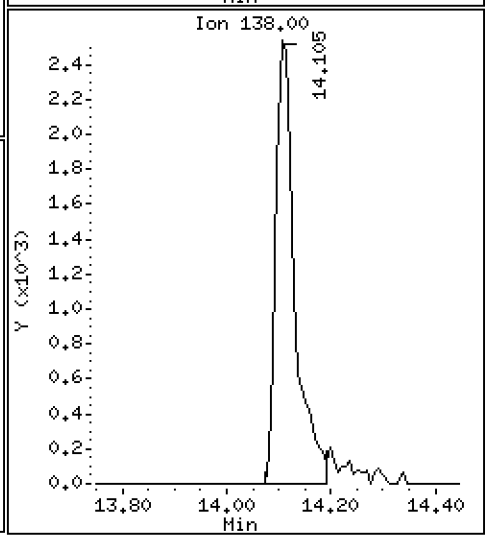












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

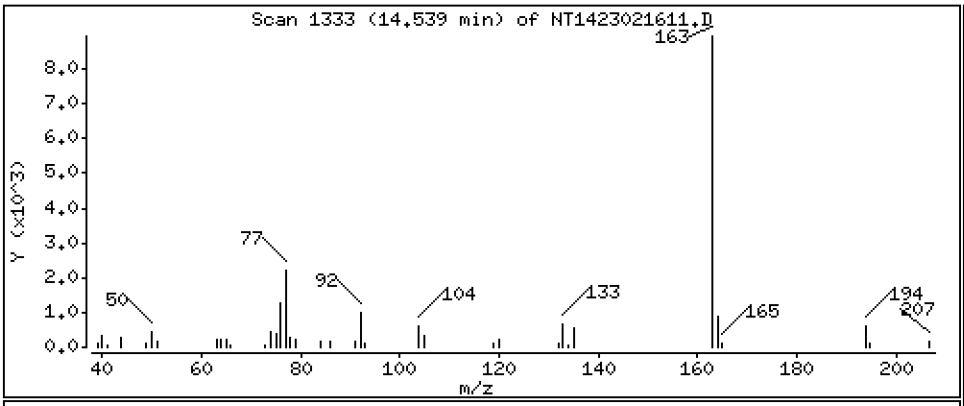
Operator: DSD

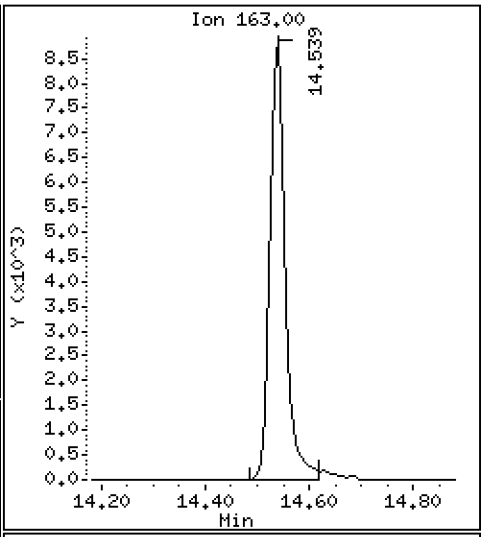
Column phase: ZB-5msi

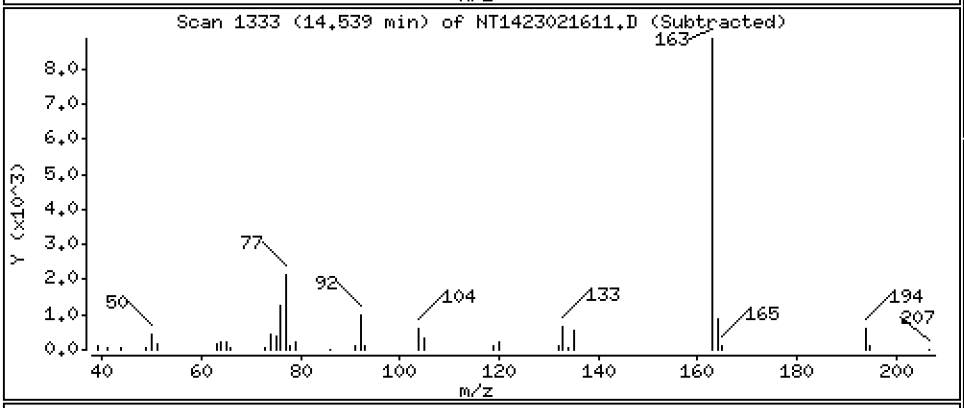
Column diameter: 0.25

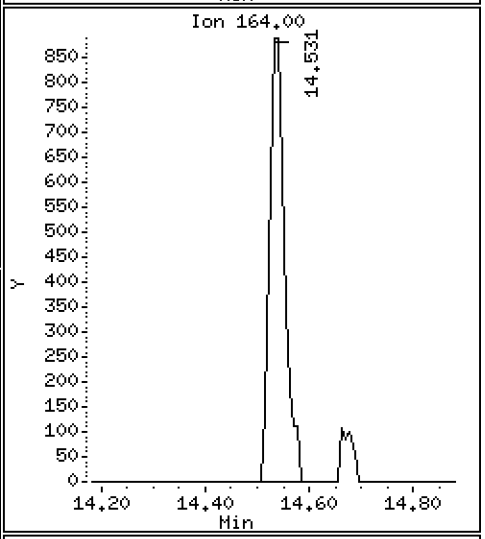
39 Dimethylphthalate

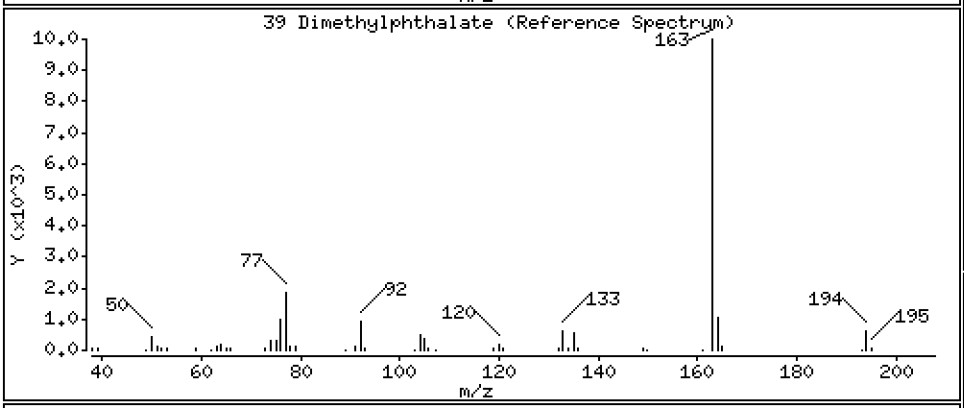
Concentration: 0.08312 ug/mL

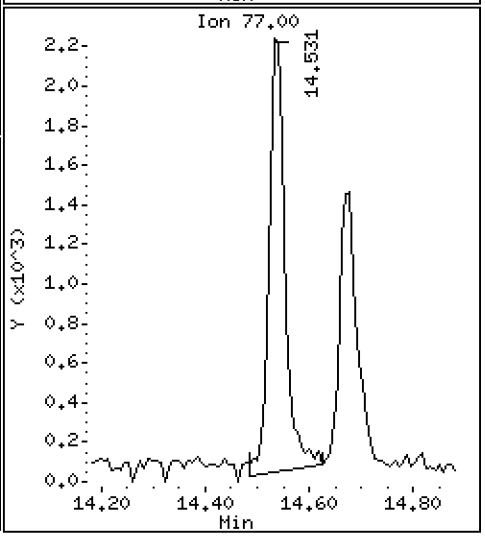


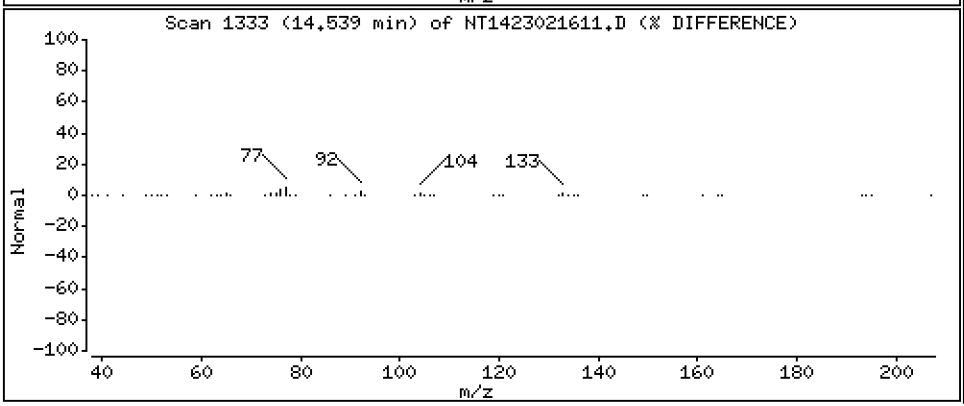












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

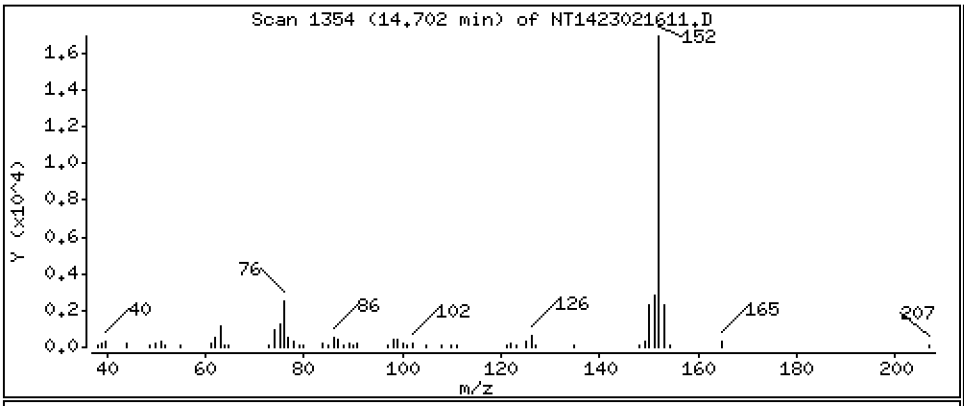
Operator: DSD

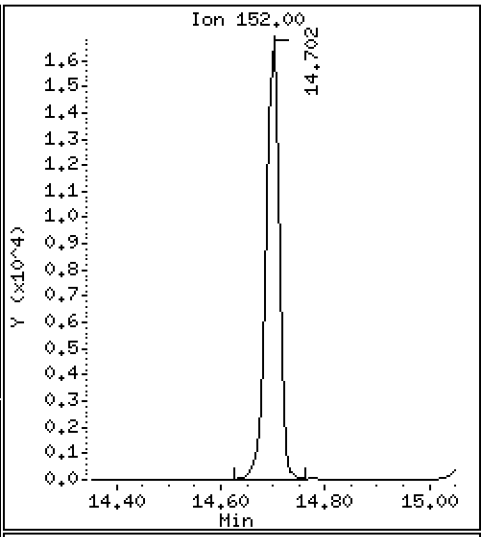
Column phase: ZB-5msi

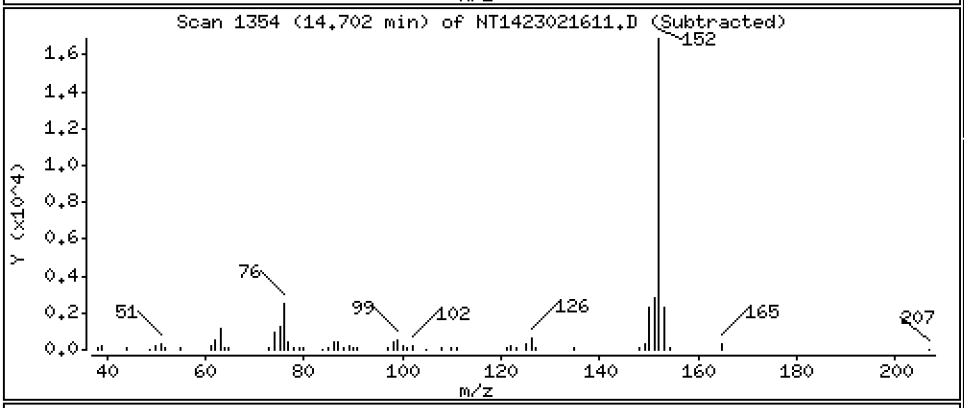
Column diameter: 0.25

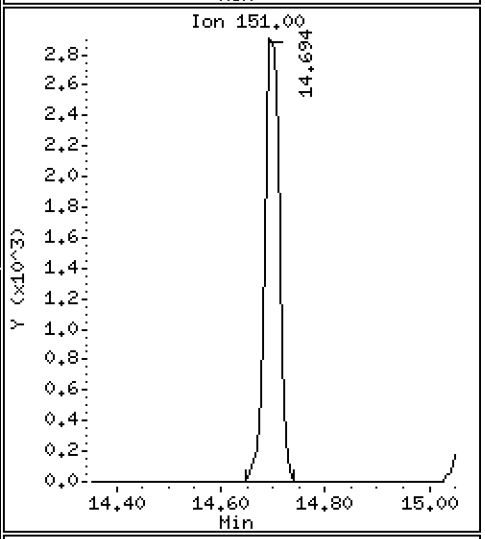
40 Acenaphthylene

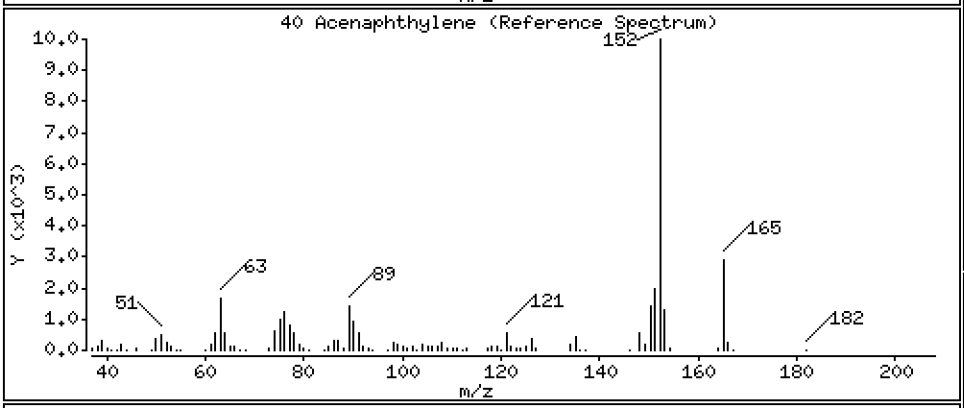
Concentration: 0.09160 ug/mL

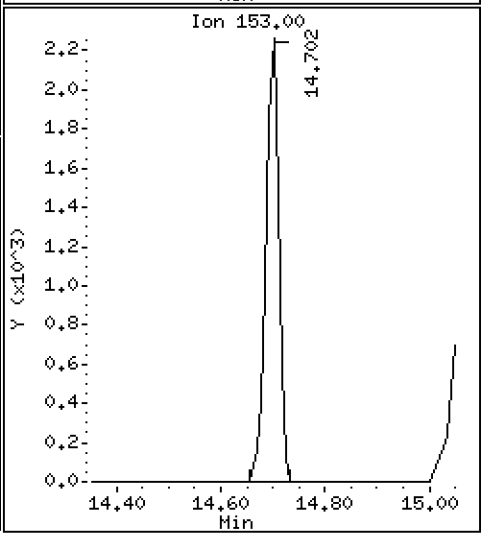


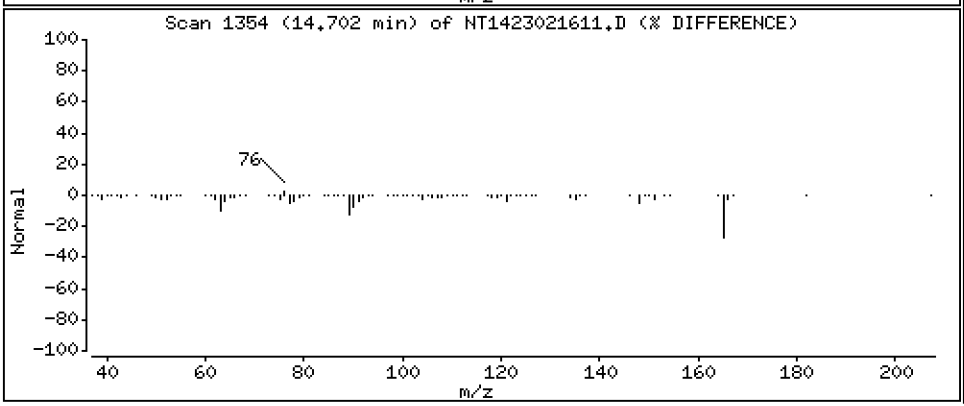












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021611.D

Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

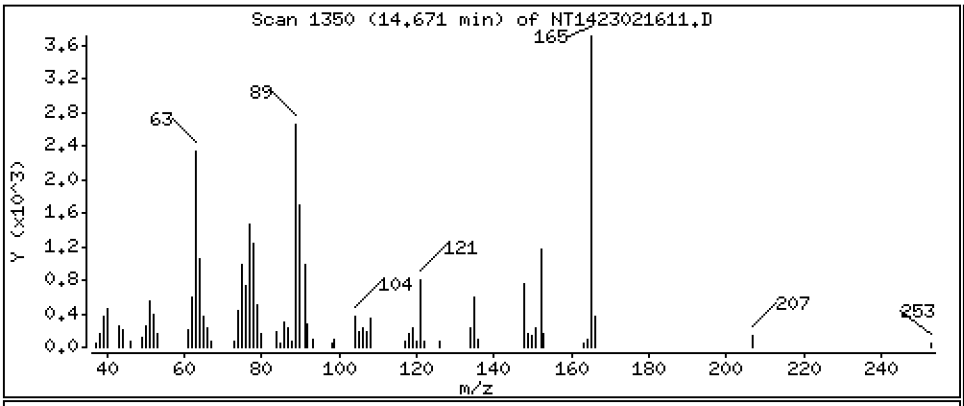
Operator: DSD

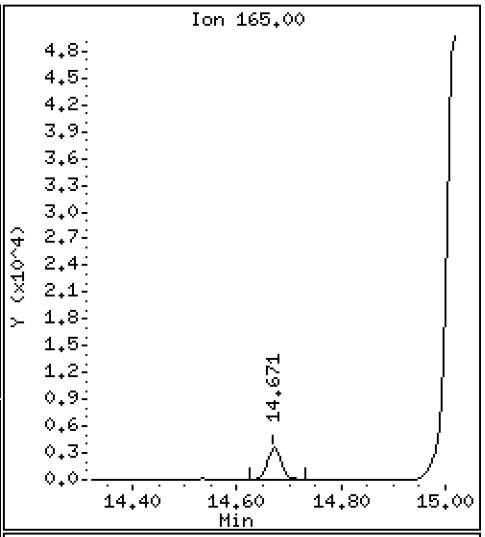
Column phase: ZB-5msi

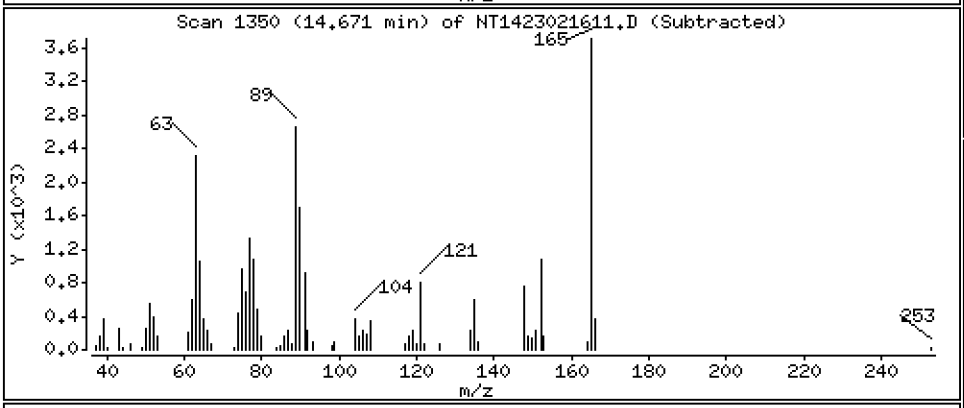
Column diameter: 0.25

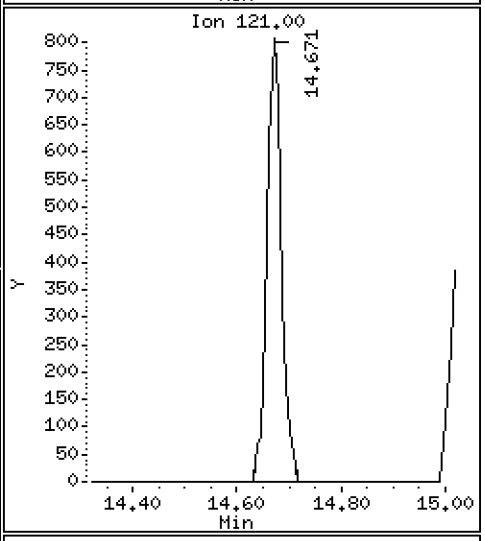
41 2,6-Dinitrotoluene

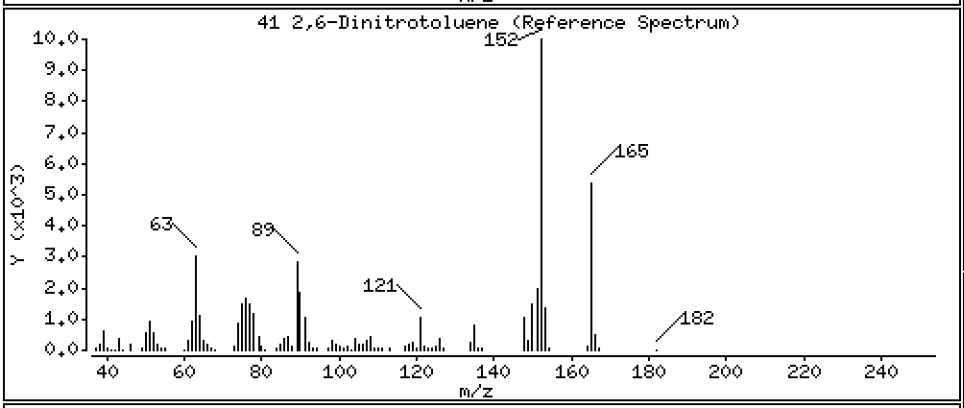
Concentration: 0.1313 ug/mL

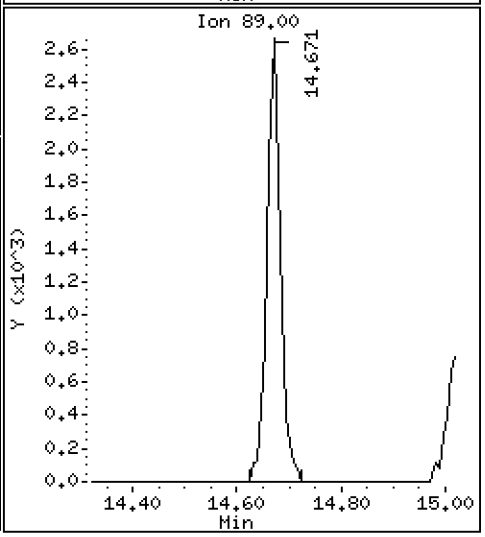


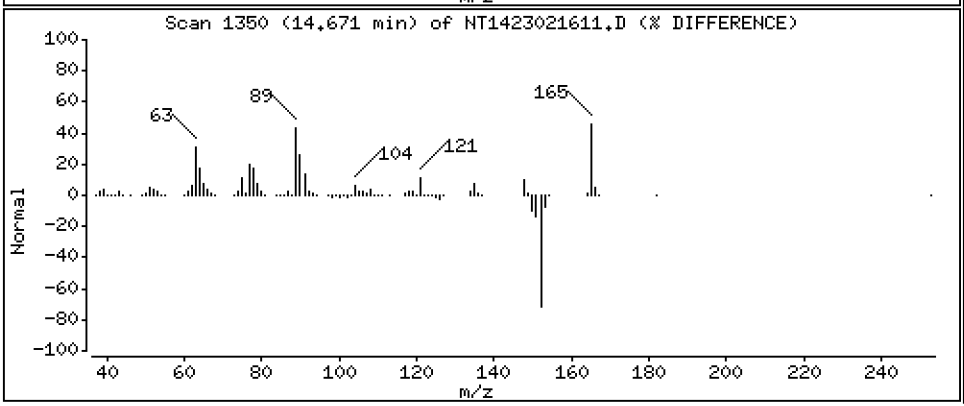












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

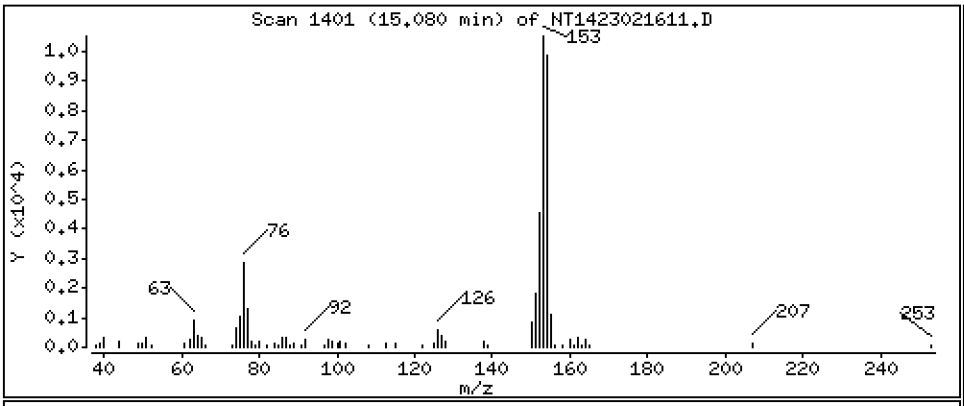
Operator: DSD

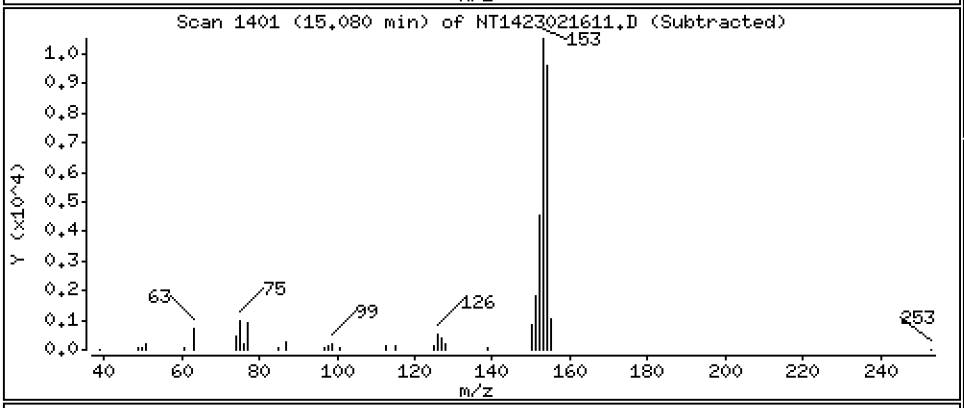
Column phase: ZB-5msi

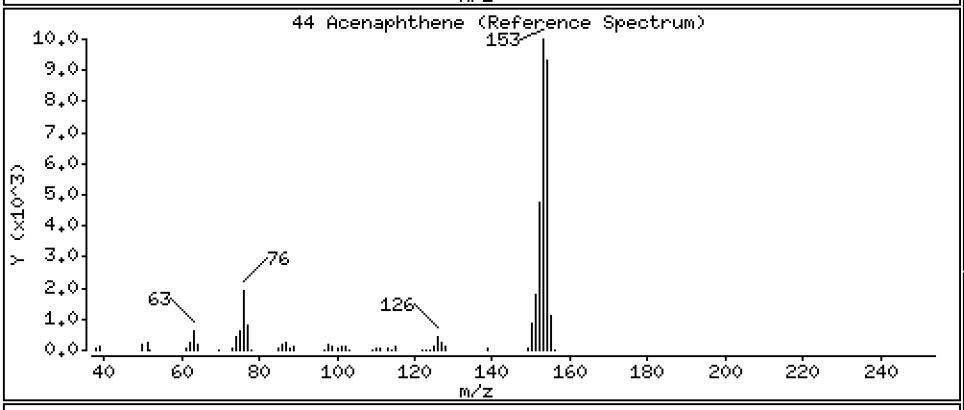
Column diameter: 0.25

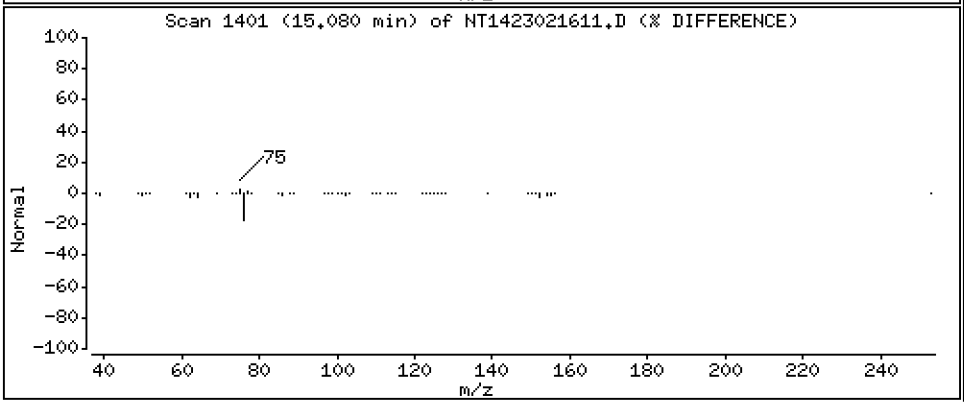
44 Acenaphthene

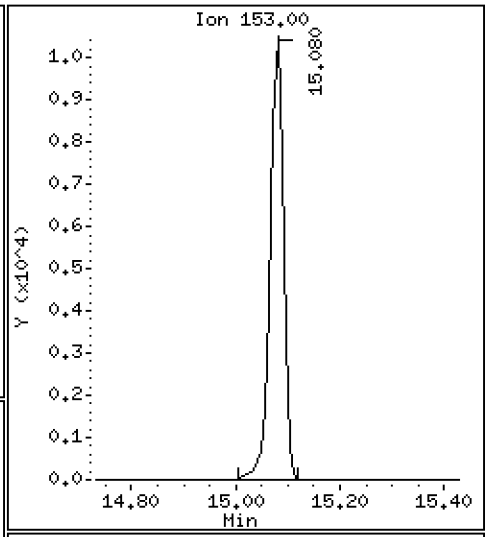
Concentration: 0.09618 ug/mL

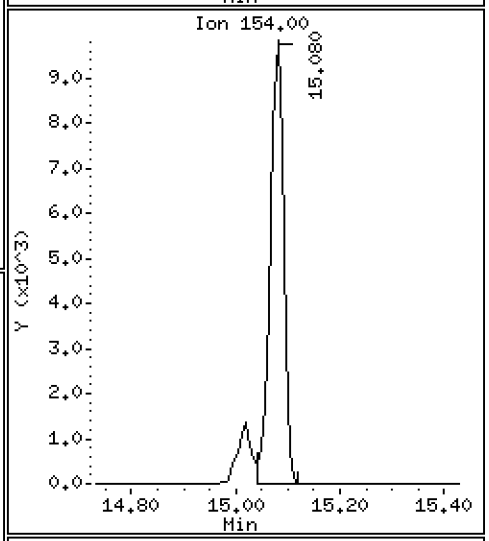


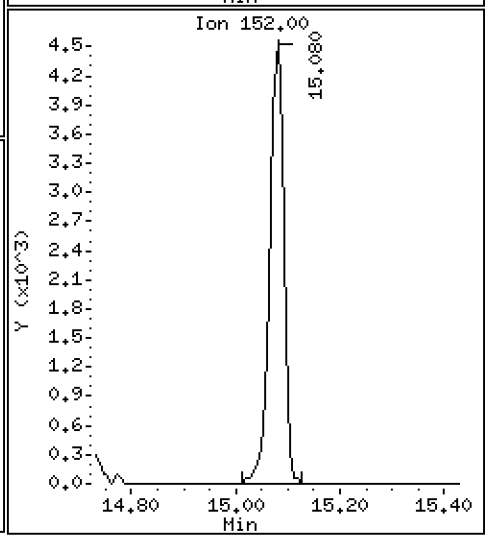












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

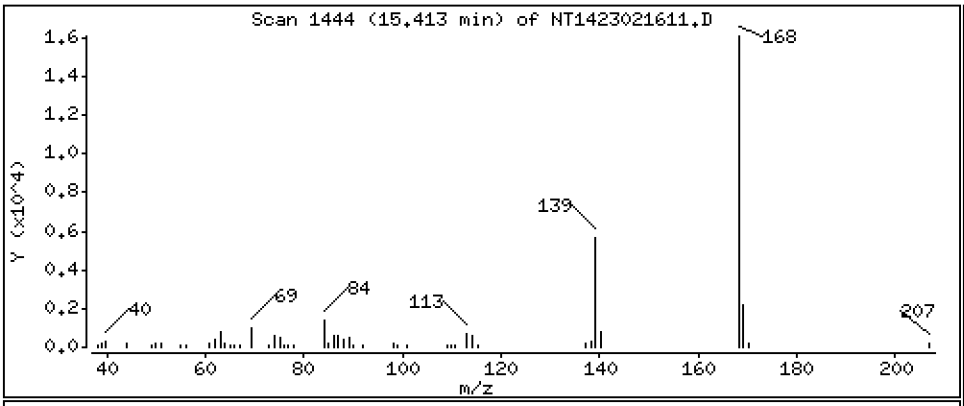
Operator: DSD

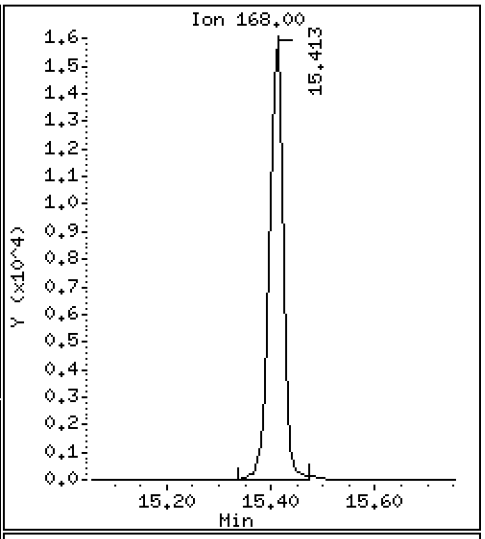
Column phase: ZB-5msi

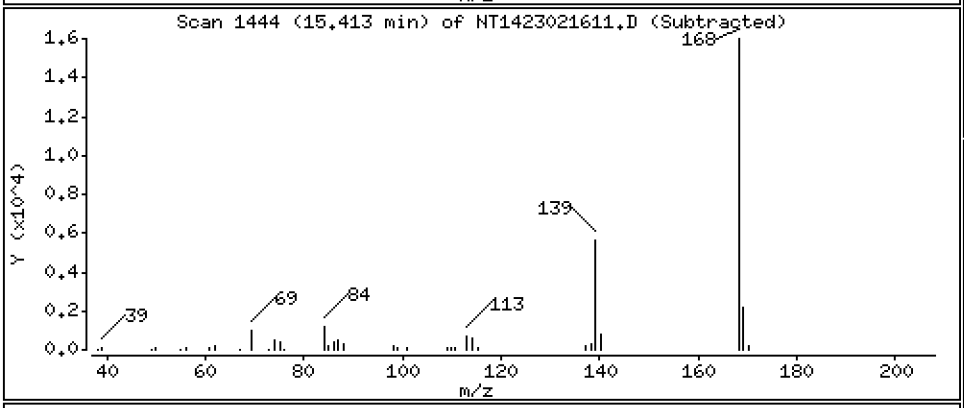
Column diameter: 0.25

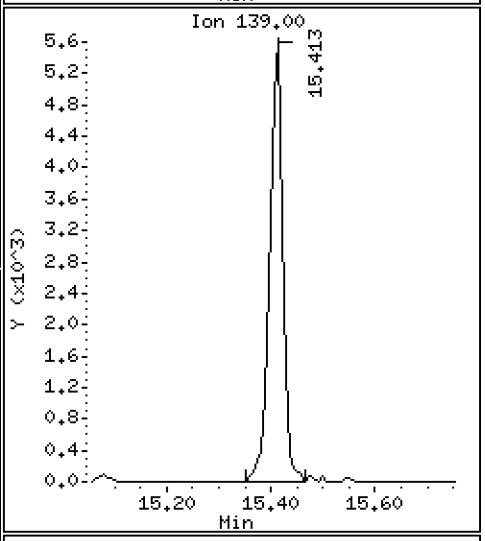
46 Dibenzofuran

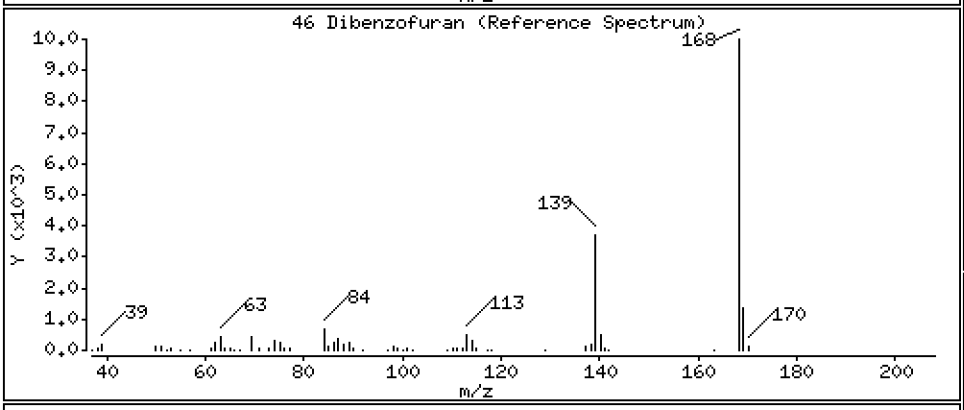
Concentration: 0.09458 ug/mL

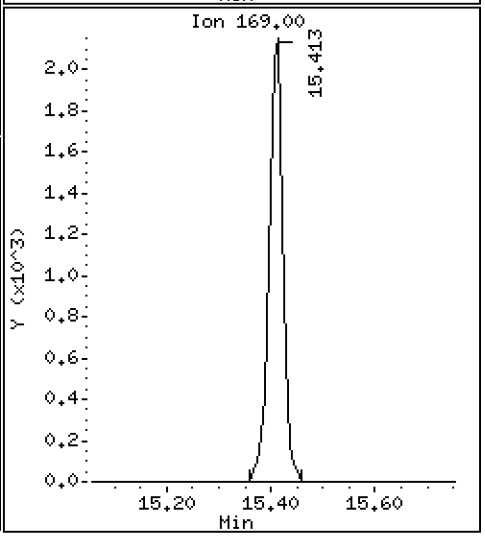


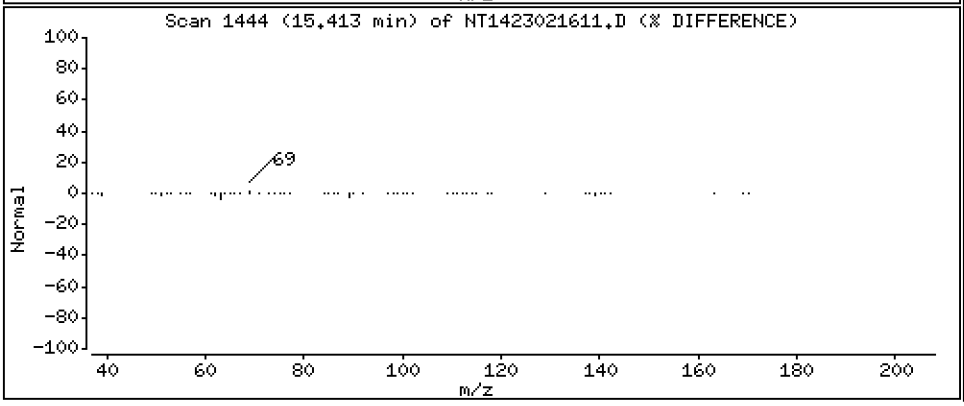












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

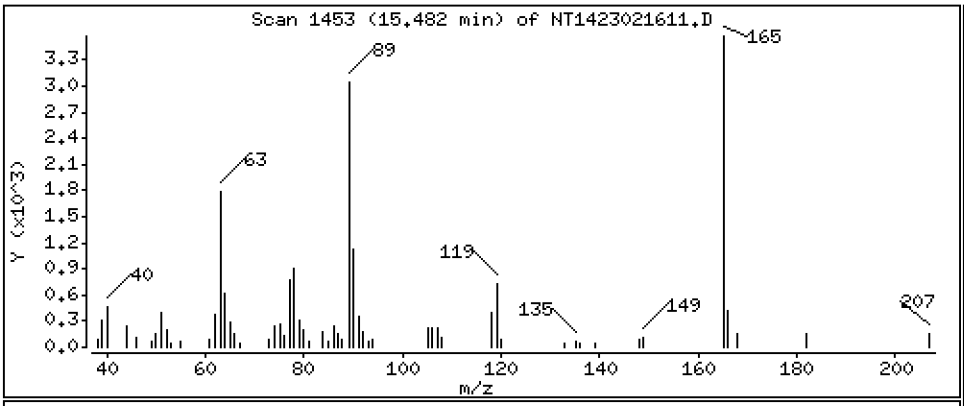
Operator: DSD

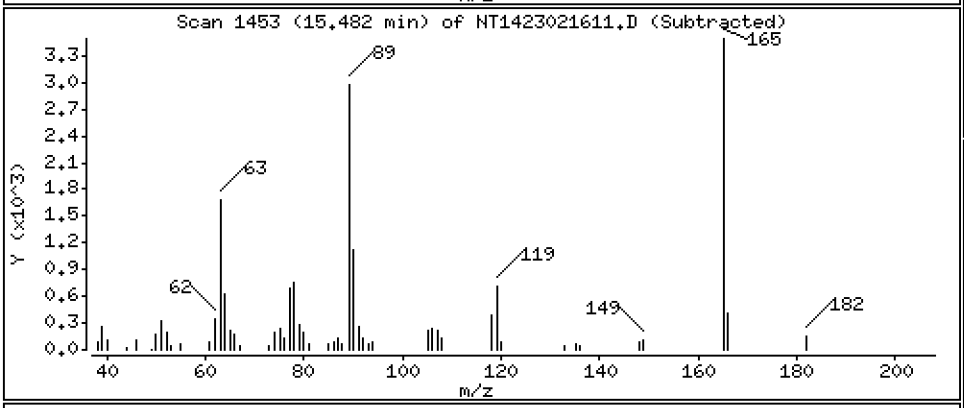
Column phase: ZB-5msi

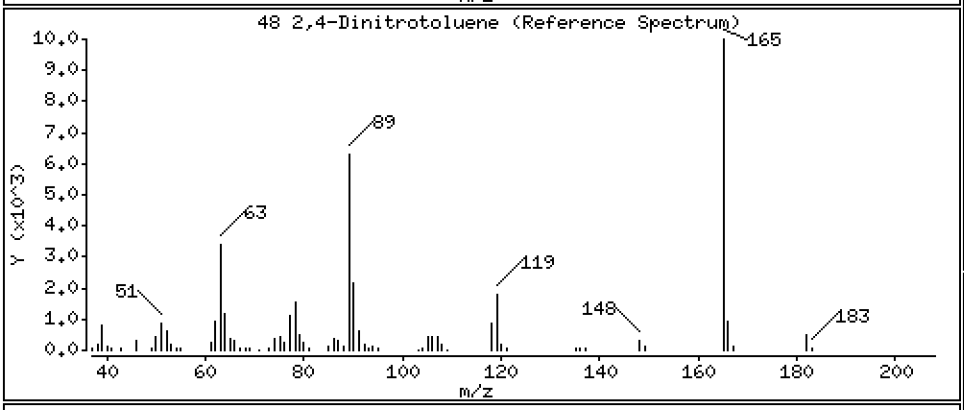
Column diameter: 0.25

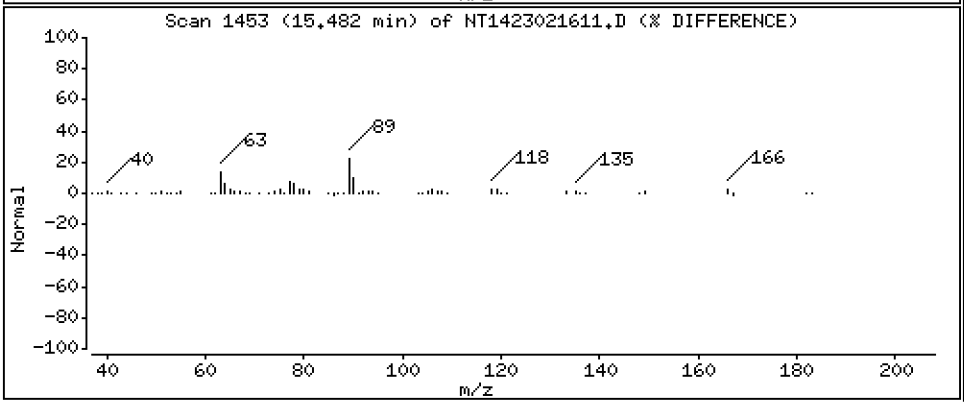
48 2,4-Dinitrotoluene

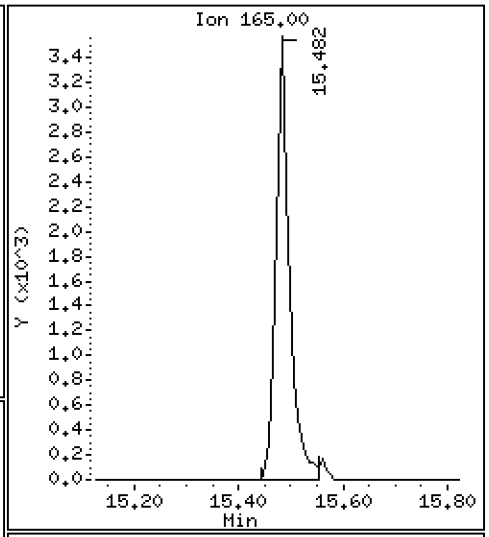
Concentration: 0.08952 ug/mL

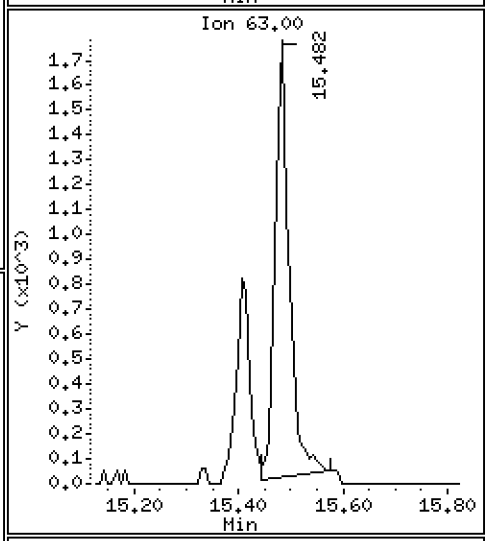


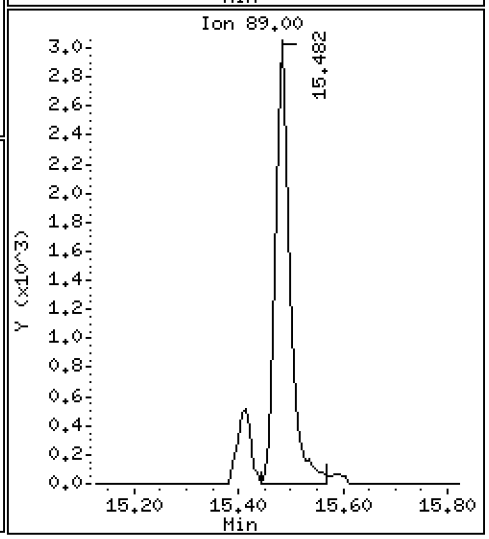












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

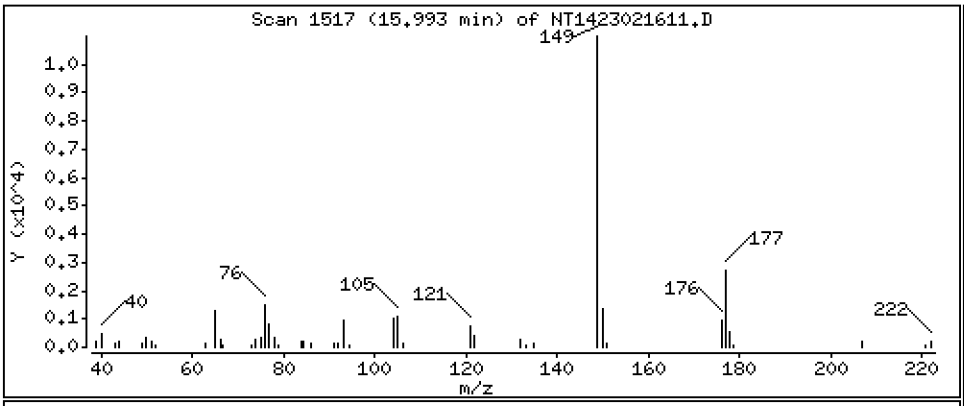
Operator: DSD

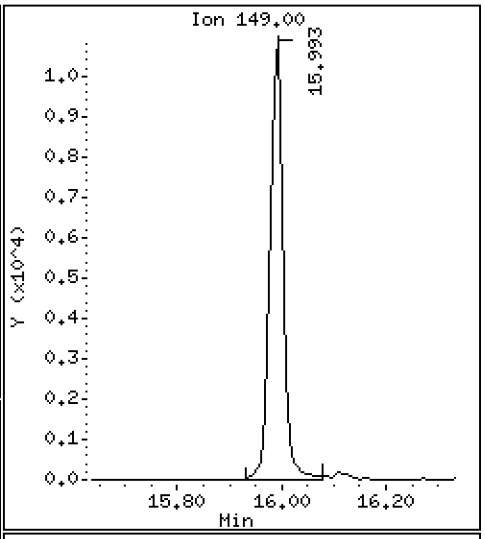
Column phase: ZB-5msi

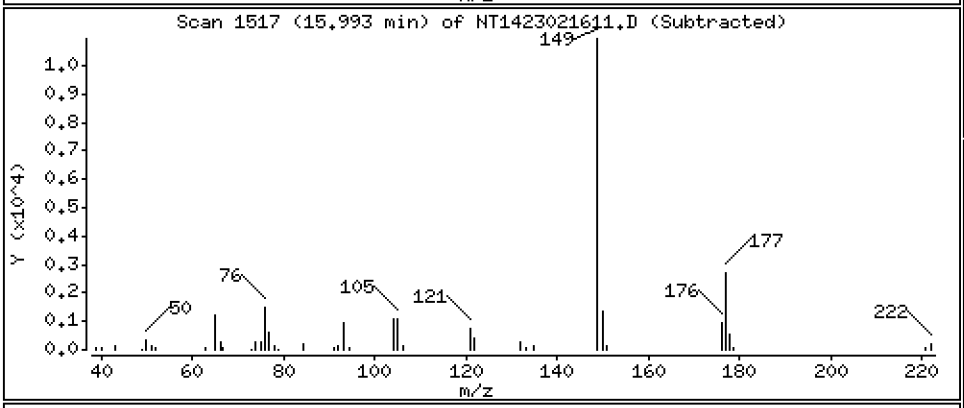
Column diameter: 0.25

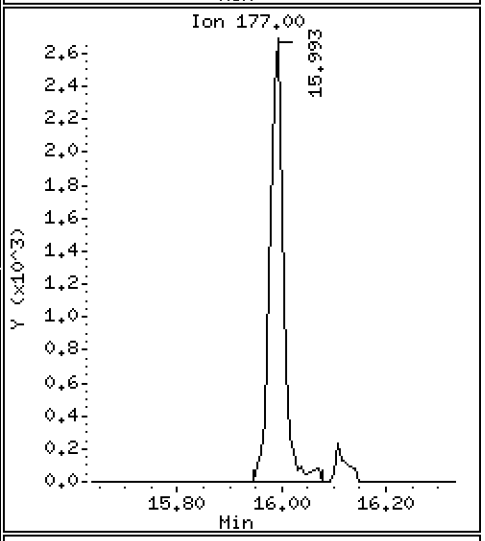
50 Diethylphthalate

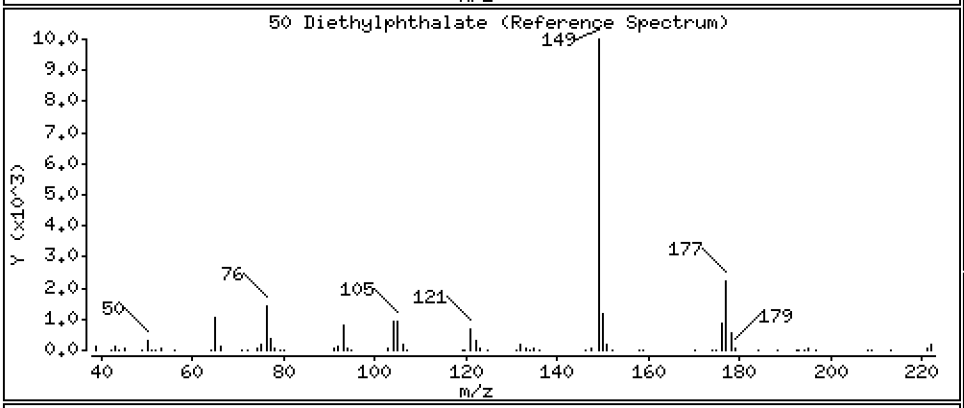
Concentration: 0.07328 ug/mL

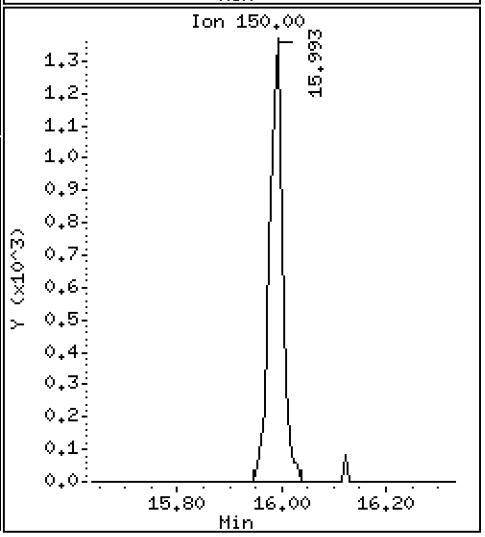


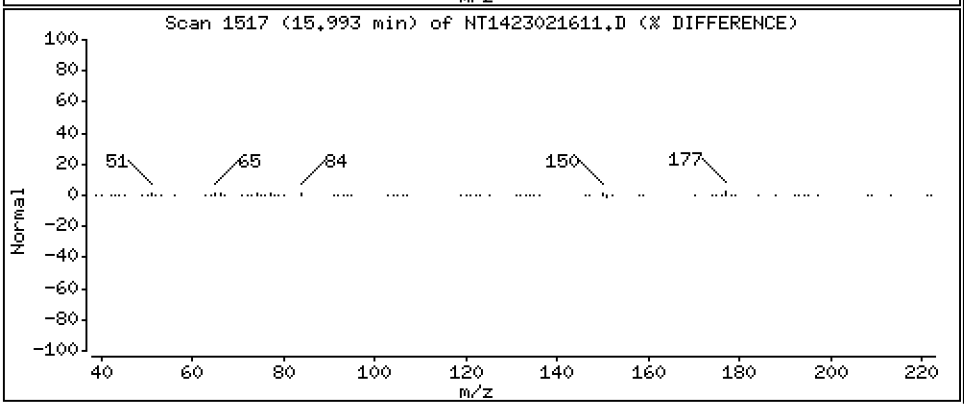












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

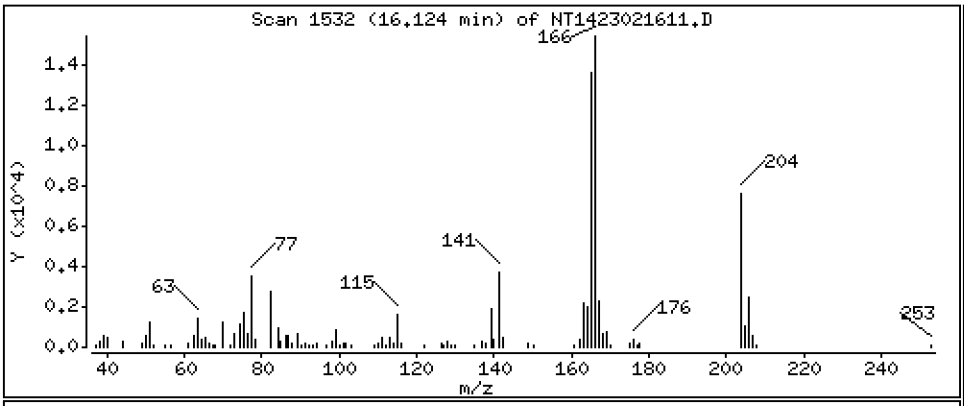
Operator: DSD

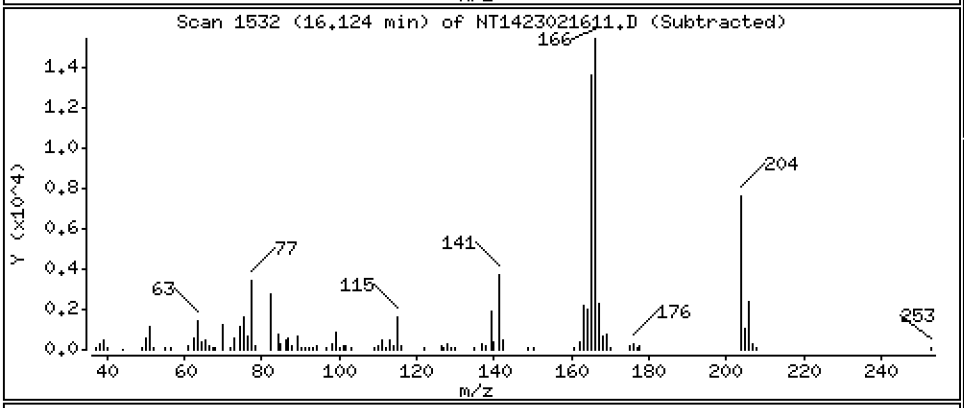
Column phase: ZB-5msi

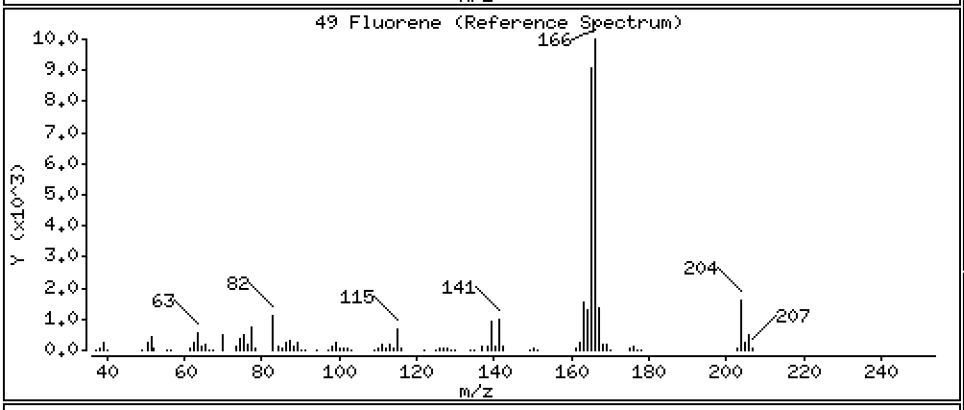
Column diameter: 0.25

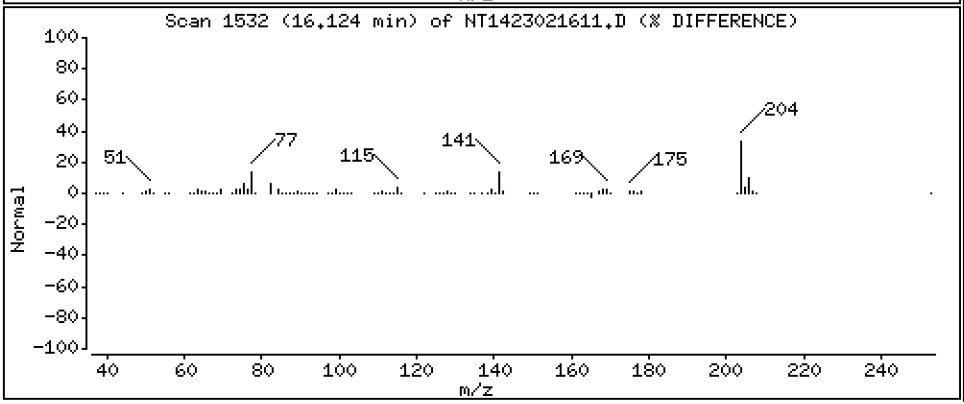
49 Fluorene

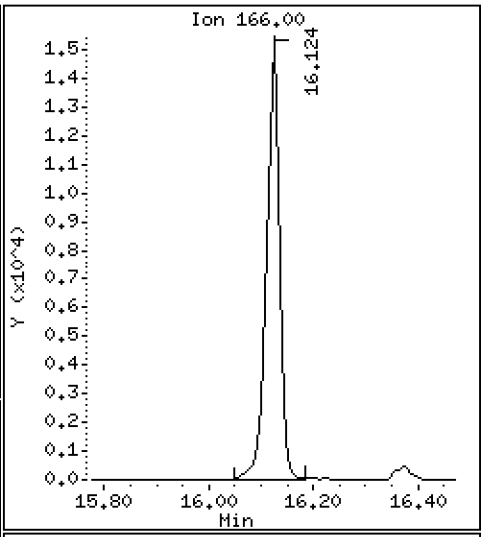
Concentration: 0.09099 ug/mL

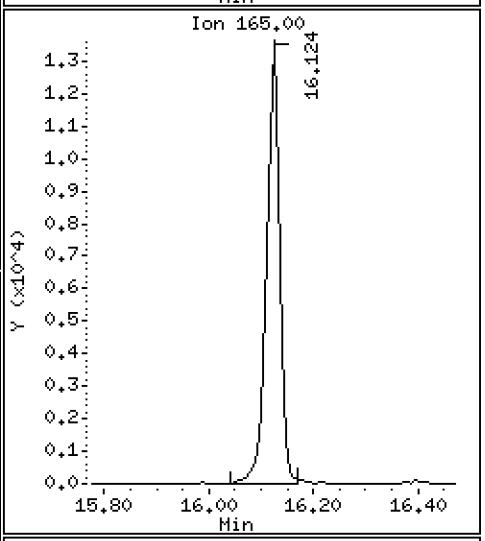


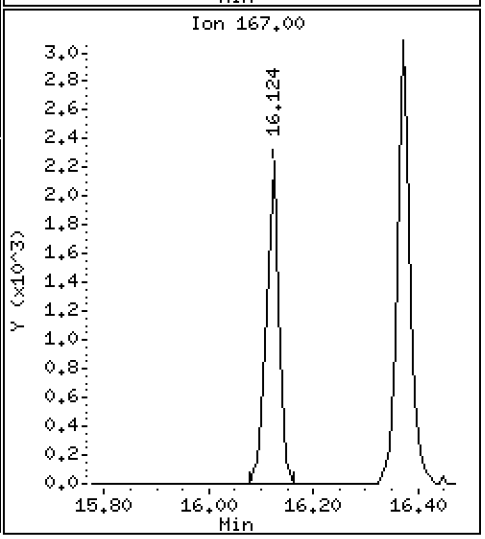












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

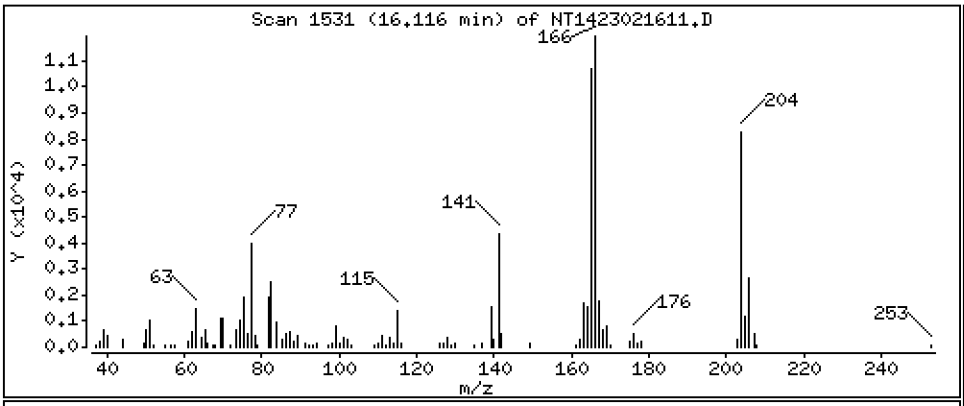
Operator: DSD

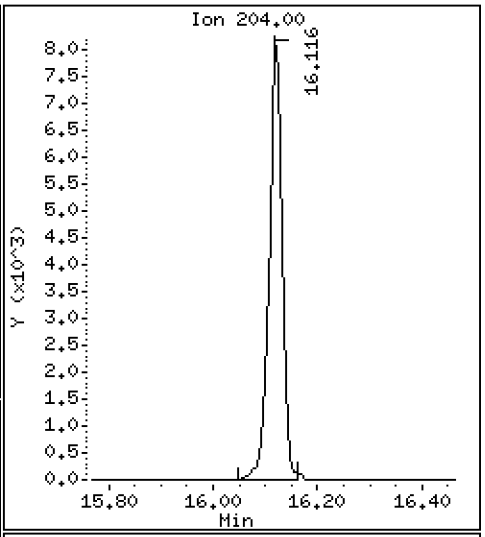
Column phase: ZB-5msi

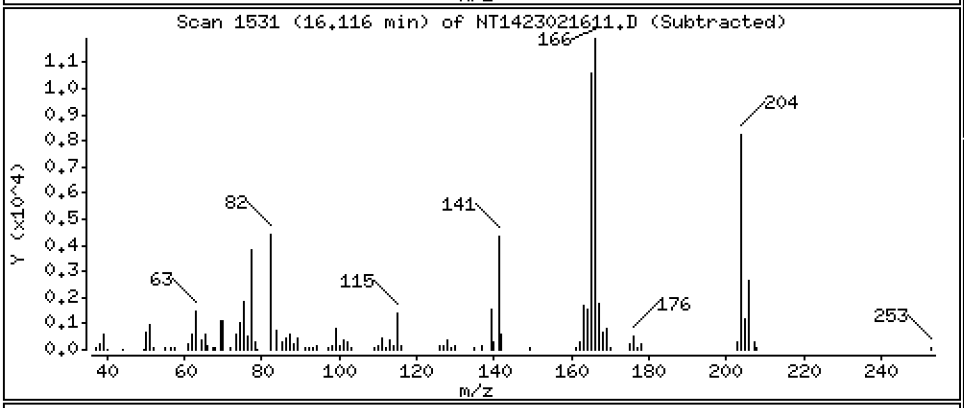
Column diameter: 0.25

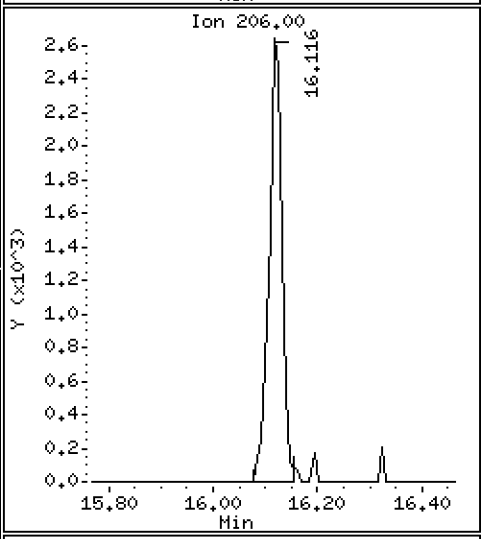
51 4-Chlorophenyl-phenylether

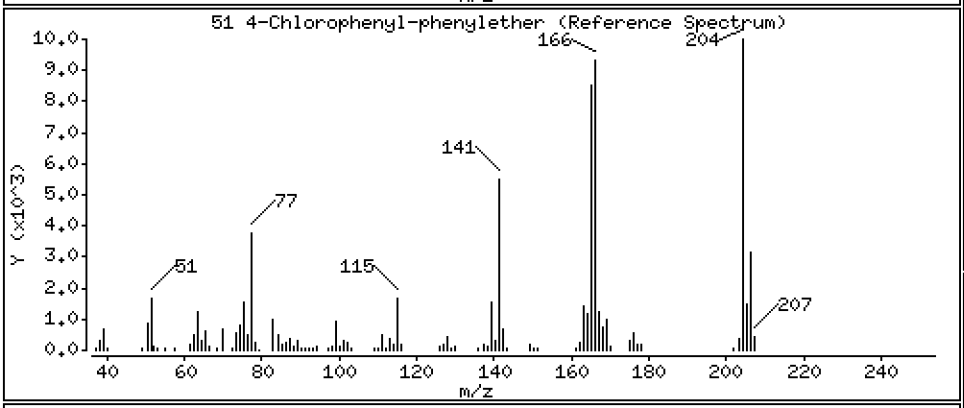
Concentration: 0.09547 ug/mL

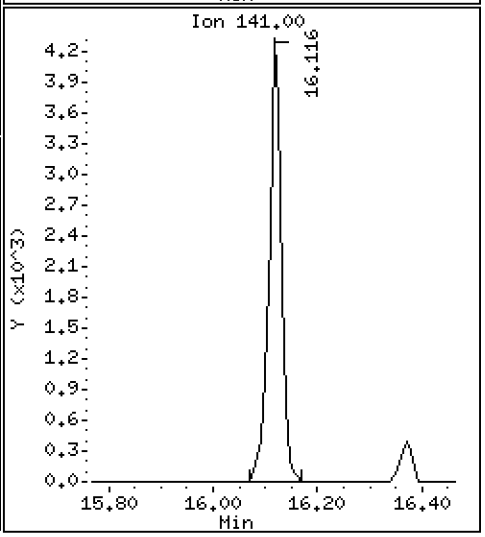


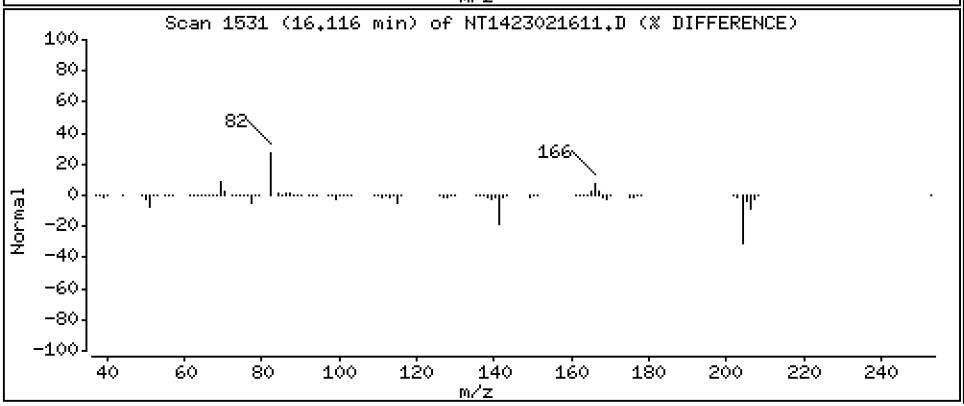












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021611.D

Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

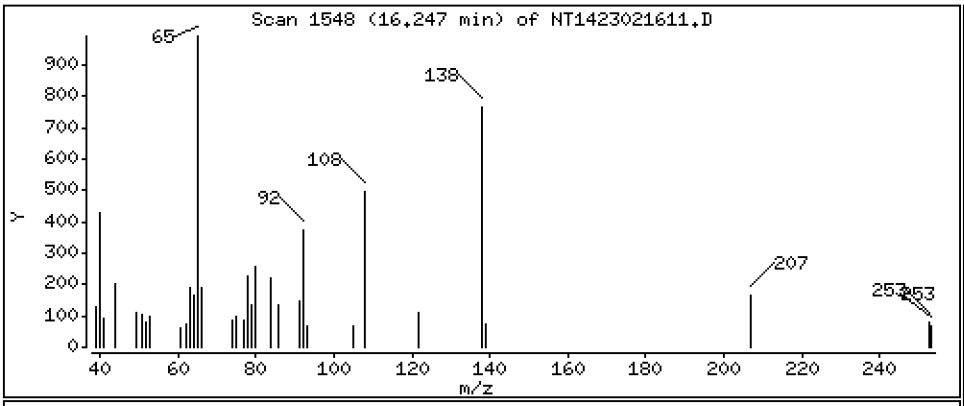
Operator: DSD

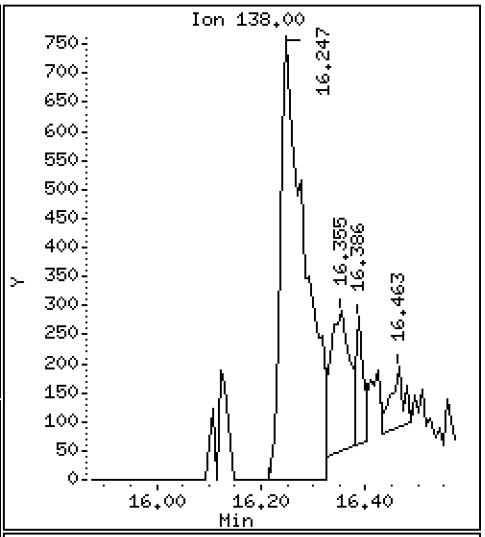
Column phase: ZB-5msi

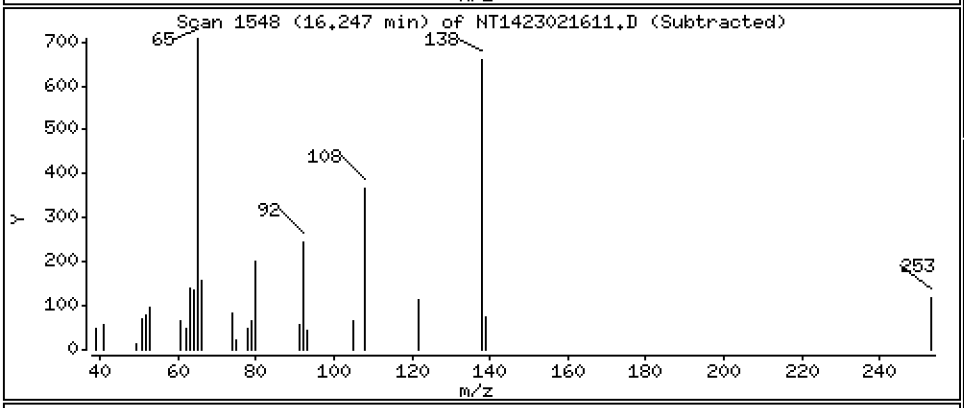
Column diameter: 0.25

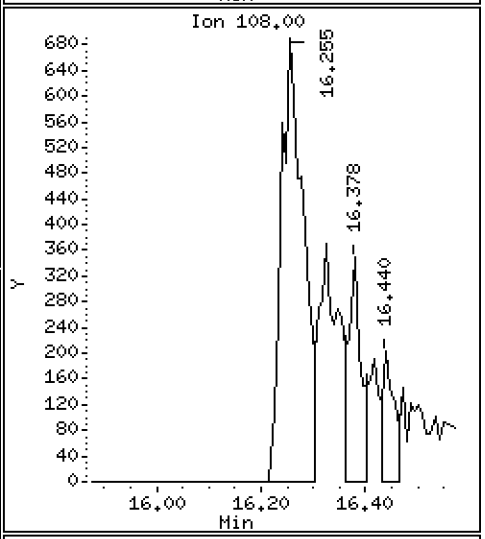
52 4-Nitroaniline

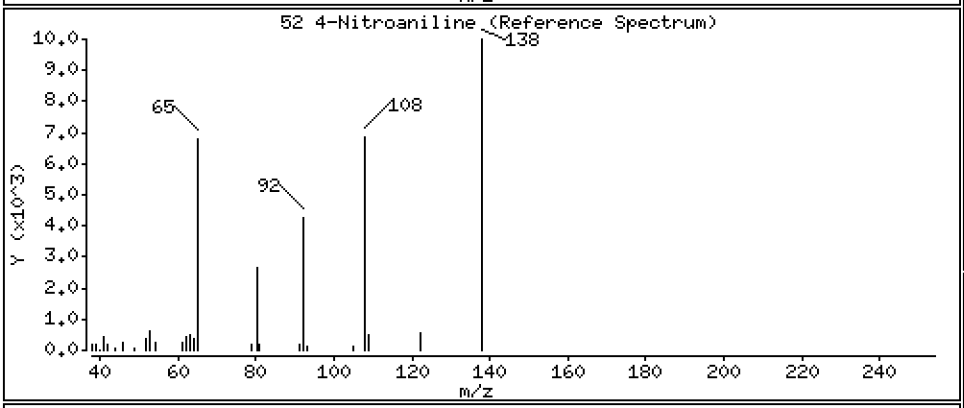
Concentration: 0.04197 ug/mL

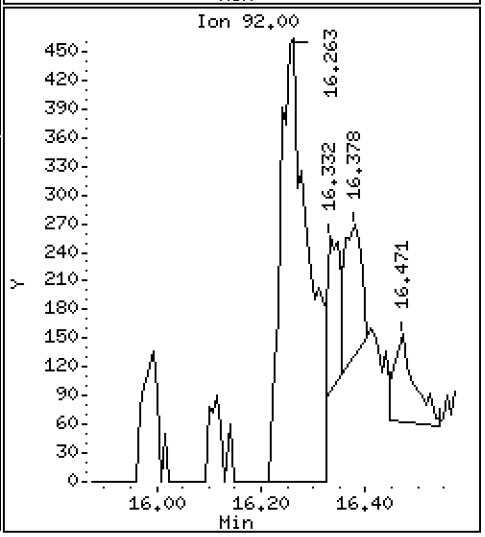


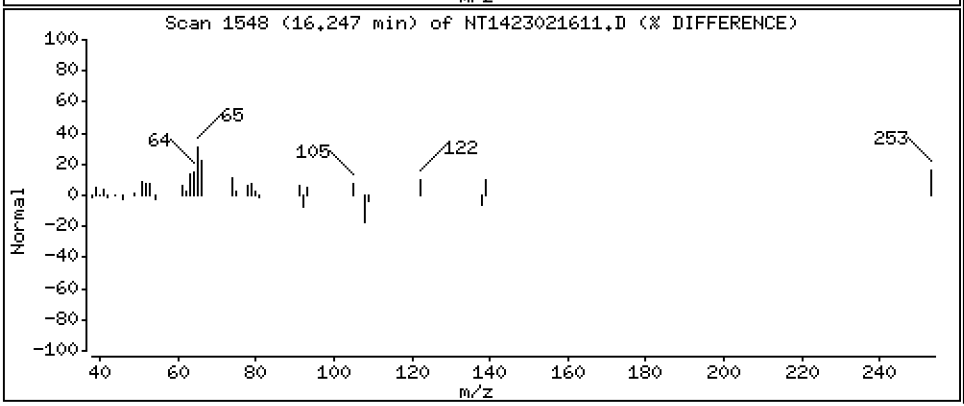












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

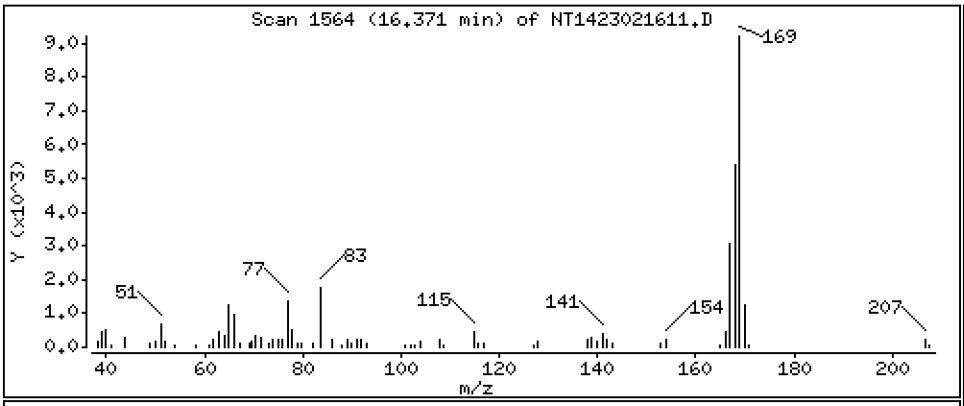
Operator: DSD

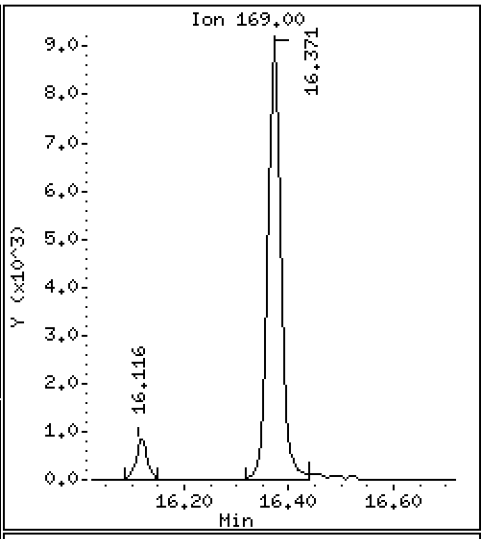
Column phase: ZB-5msi

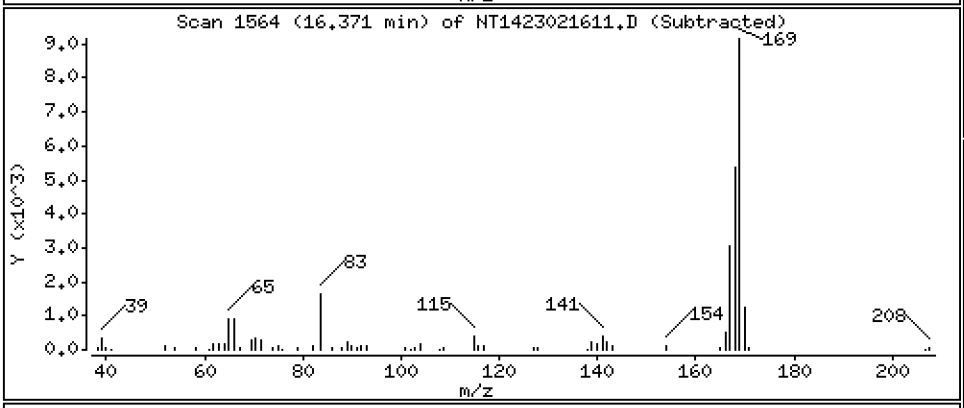
Column diameter: 0.25

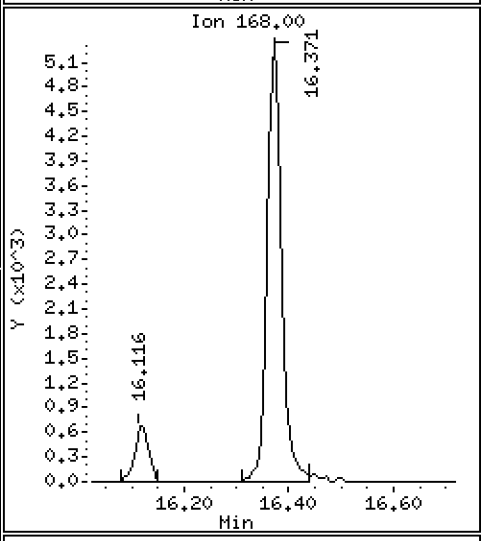
54 N-Nitrosodiphenylamine

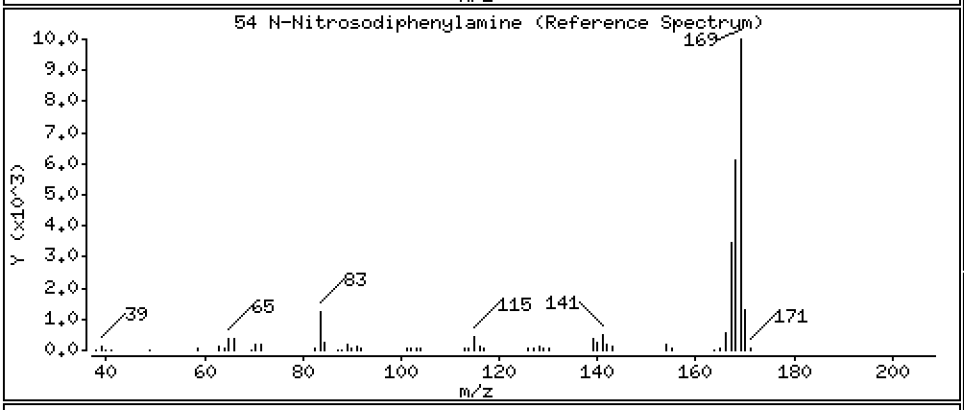
Concentration: 0.07580 ug/mL

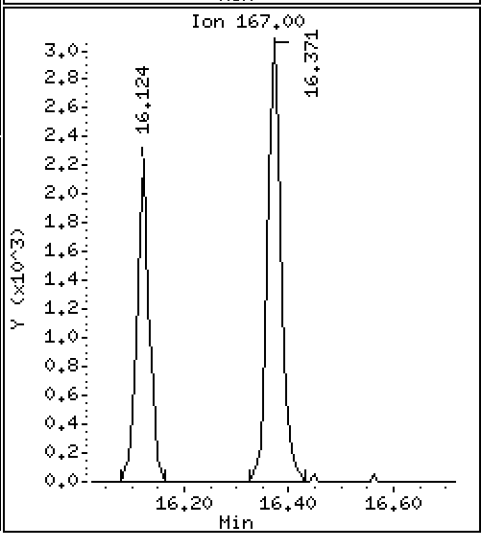


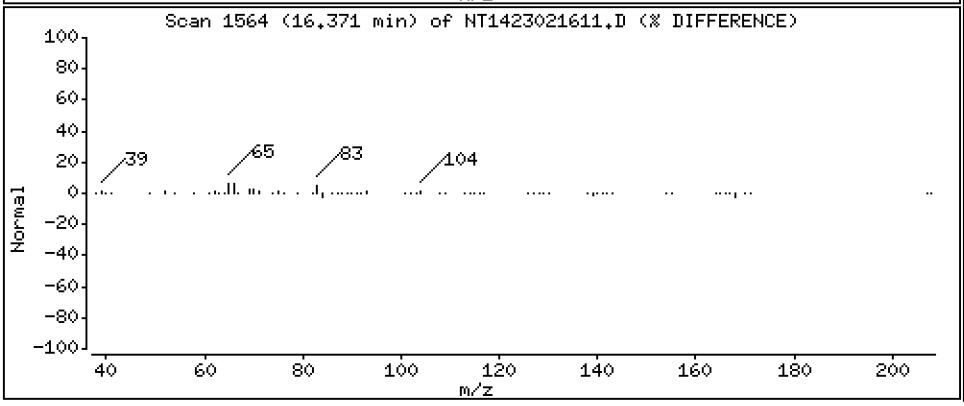












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

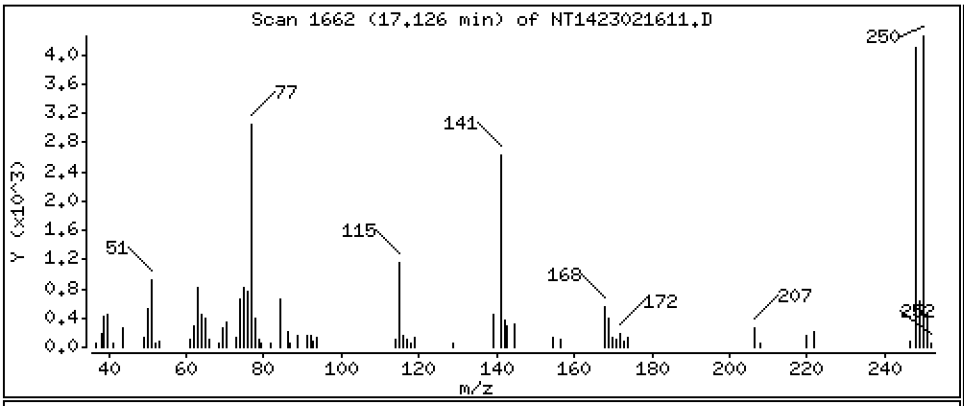
Operator: DSD

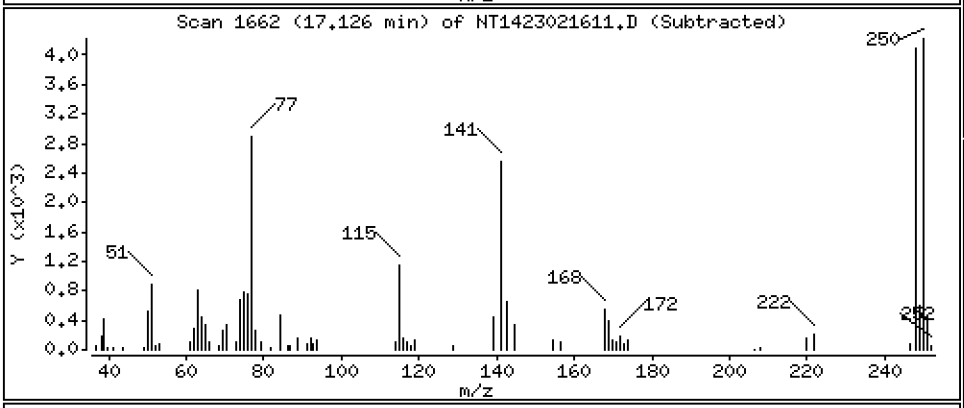
Column phase: ZB-5msi

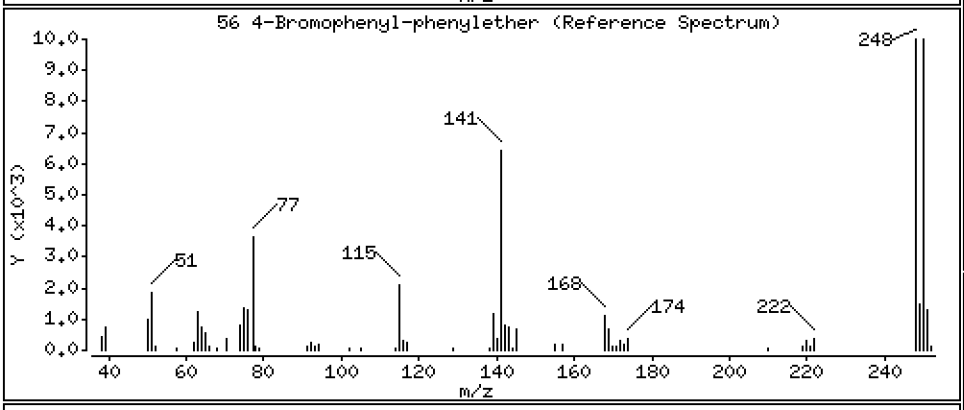
Column diameter: 0.25

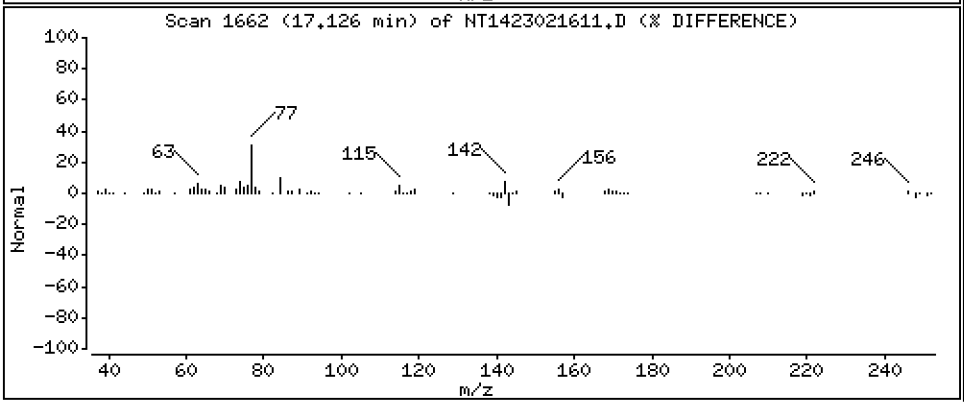
56 4-Bromophenyl-phenylether

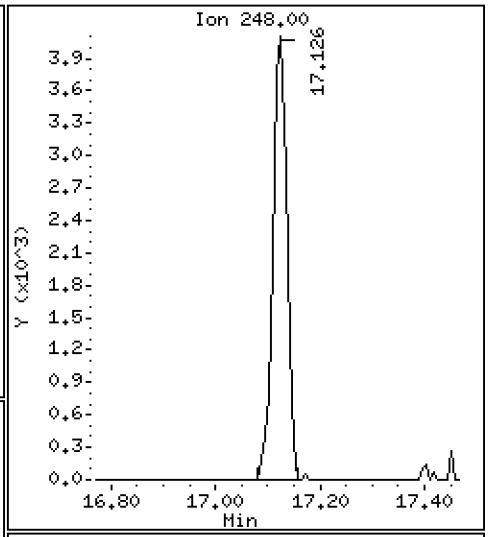
Concentration: 0.08111 ug/mL

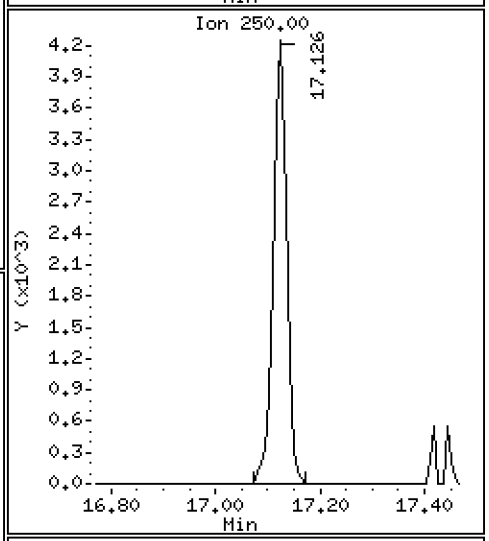


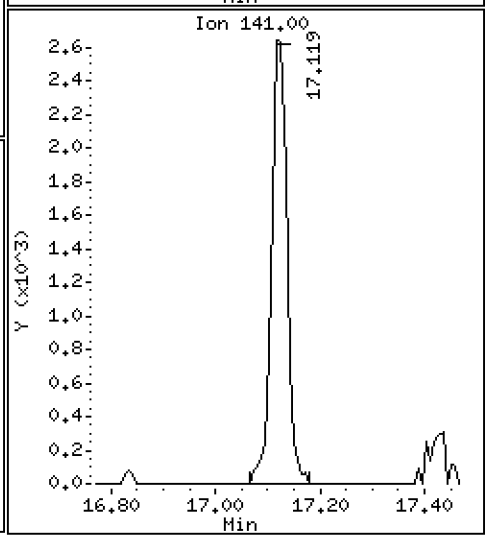












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

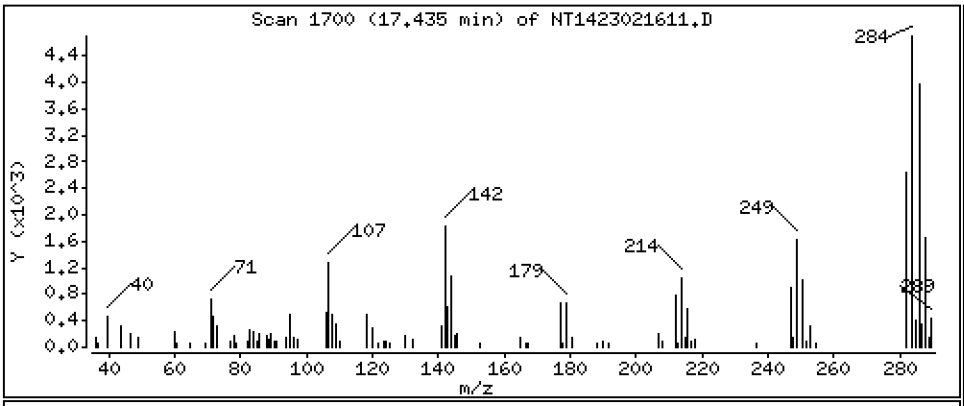
Operator: DSD

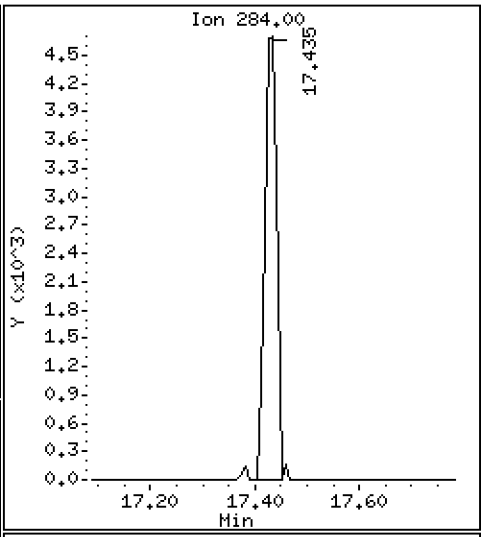
Column phase: ZB-5msi

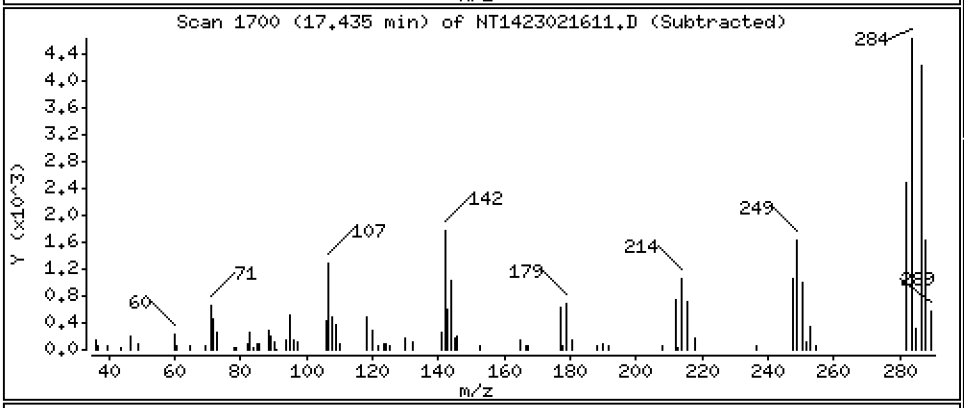
Column diameter: 0.25

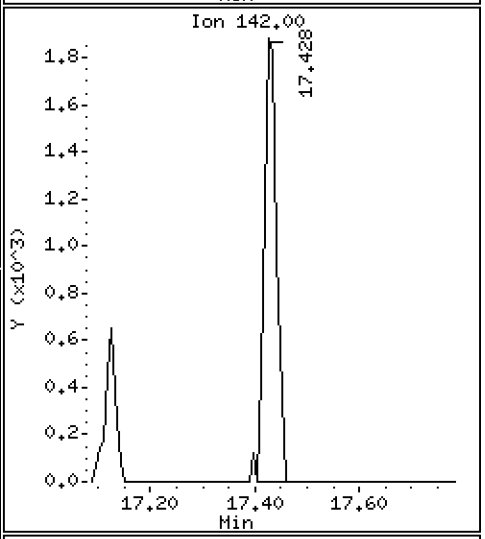
57 Hexachlorobenzene

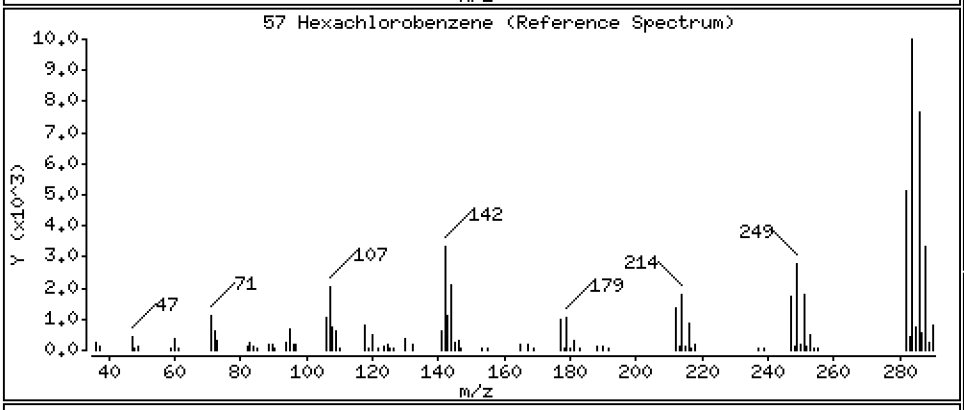
Concentration: 0.08291 ug/mL

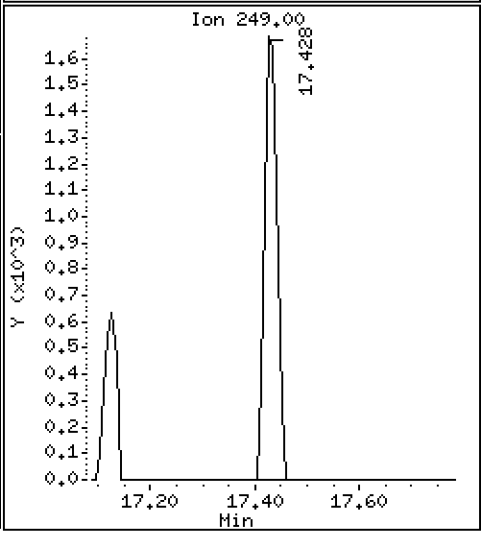


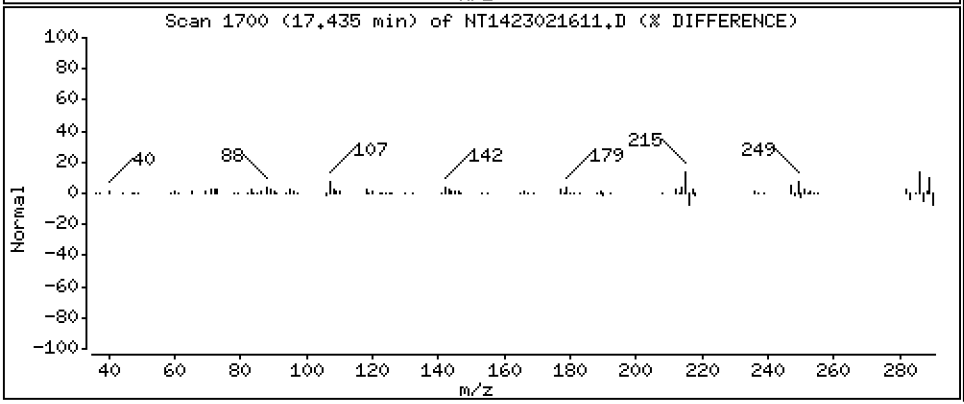












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

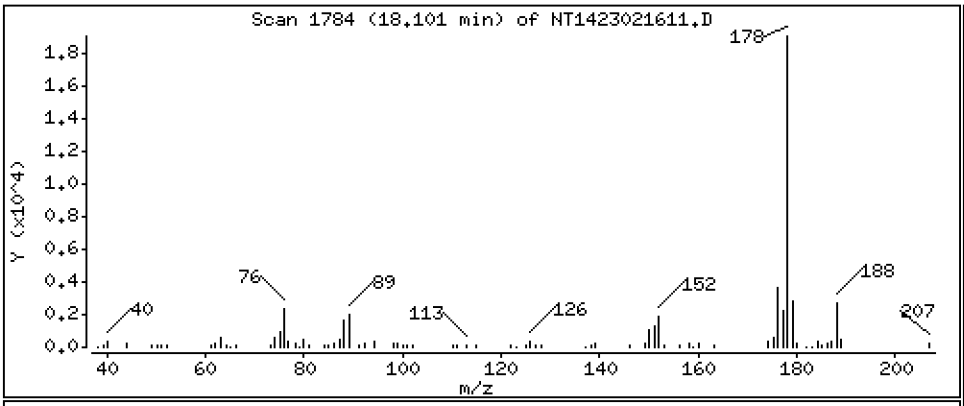
Operator: DSD

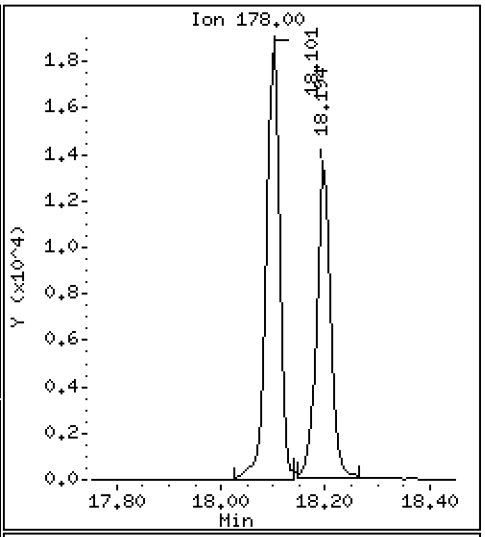
Column phase: ZB-5msi

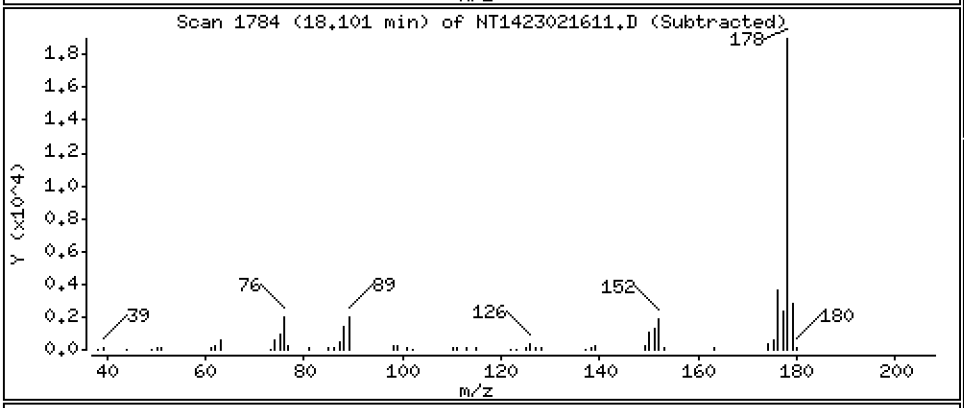
Column diameter: 0.25

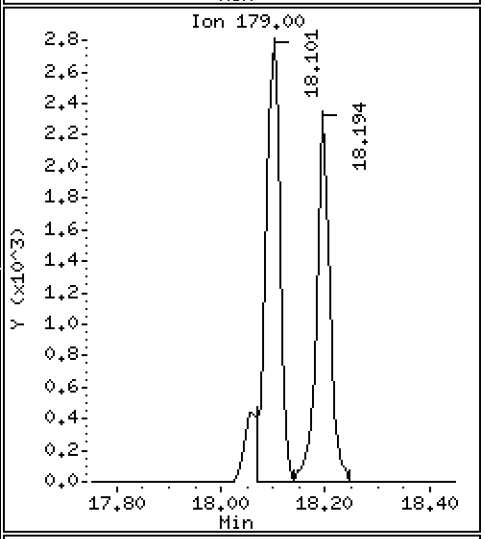
60 Phenanthrene

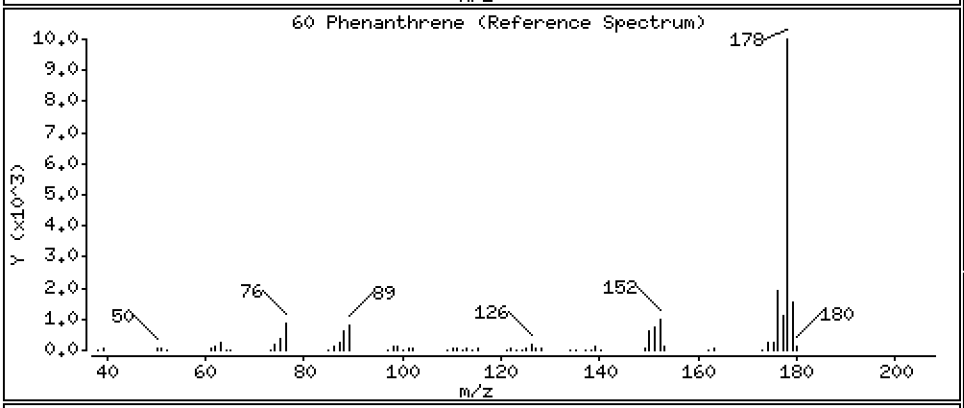
Concentration: 0.09512 ug/mL

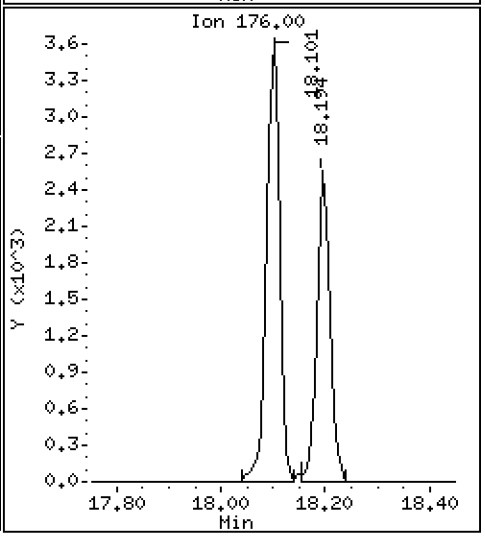


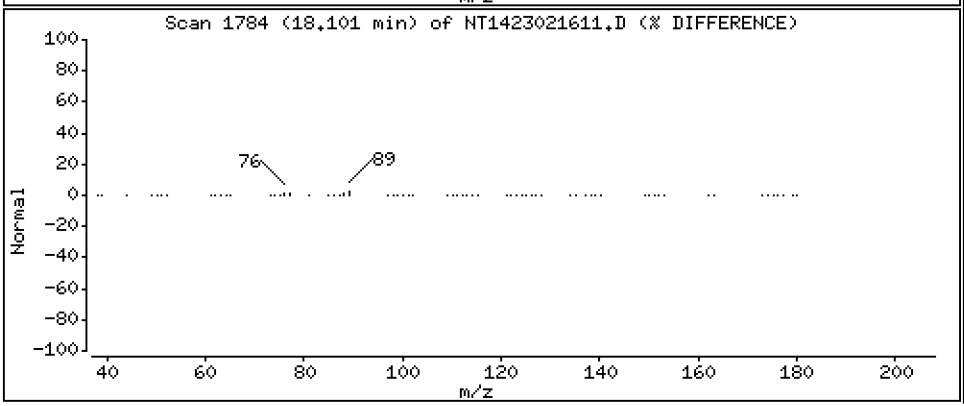












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

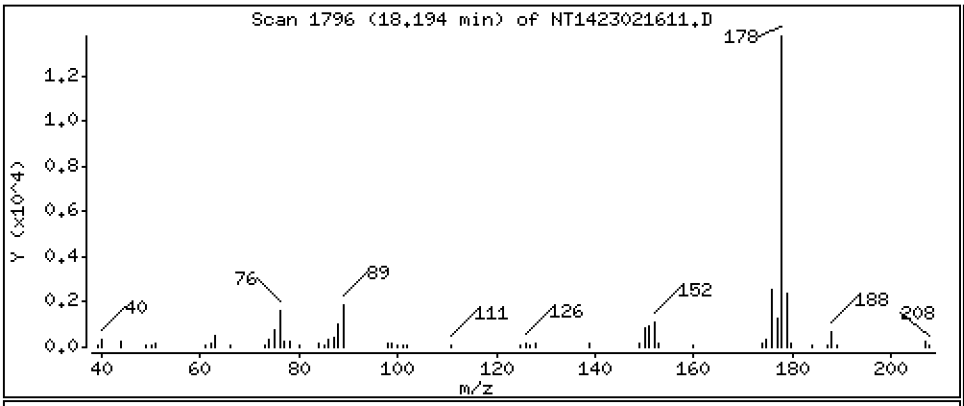
Operator: DSD

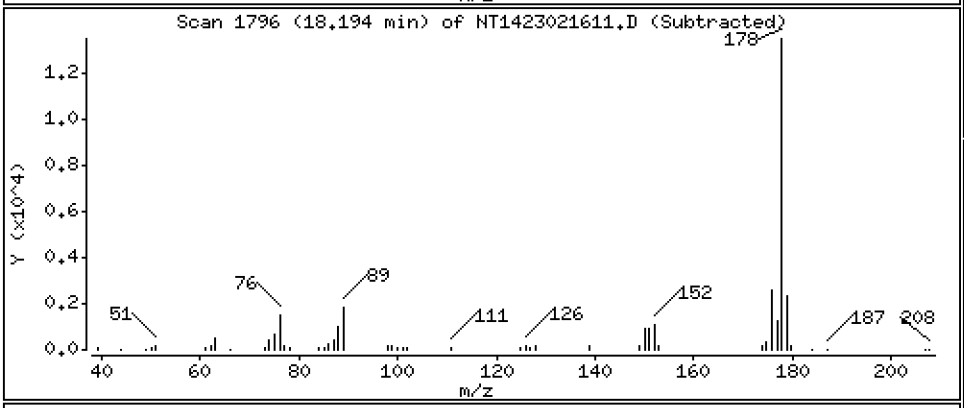
Column phase: ZB-5msi

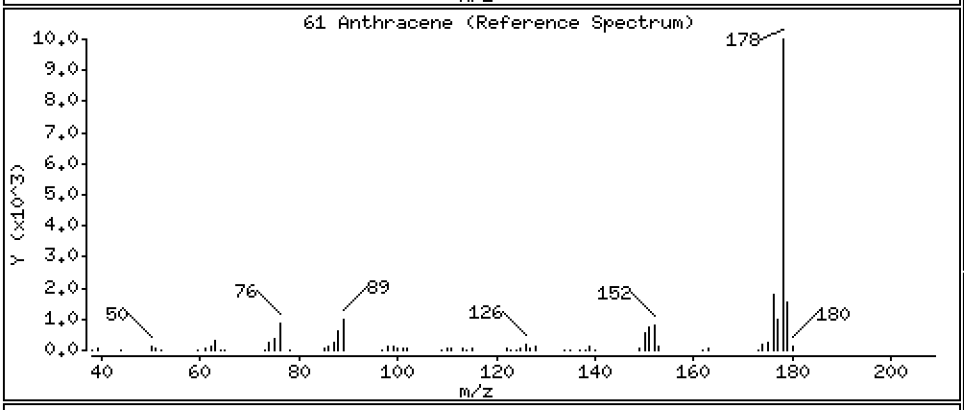
Column diameter: 0.25

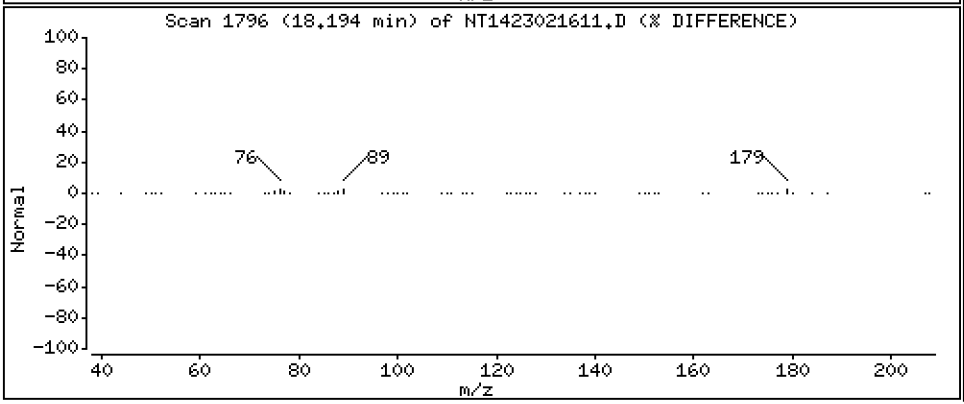
61 Anthracene

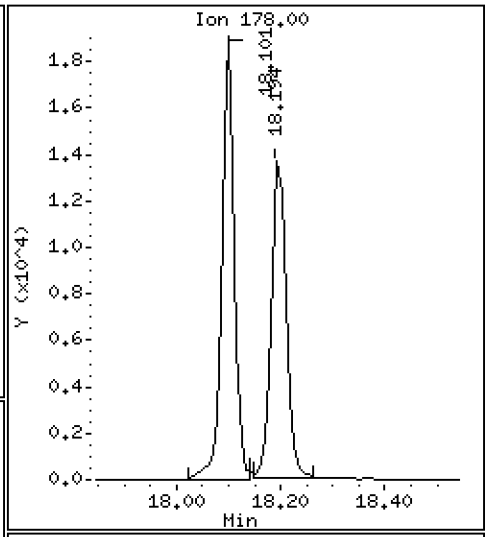
Concentration: 0.07794 ug/mL

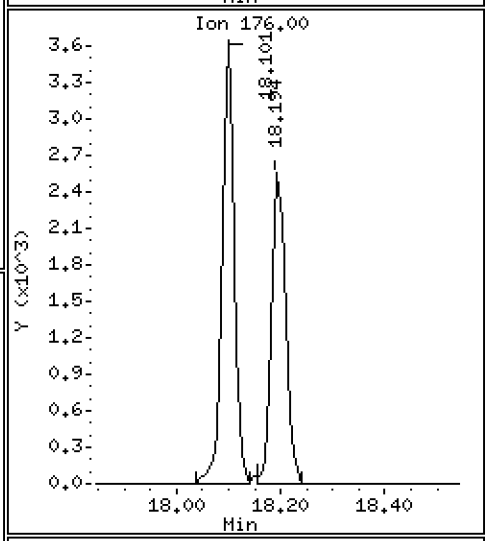


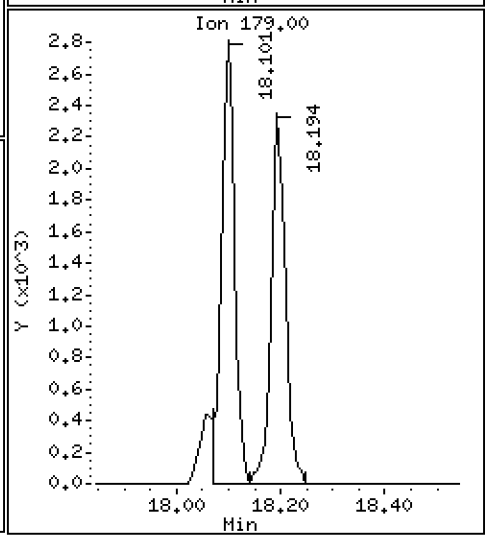












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

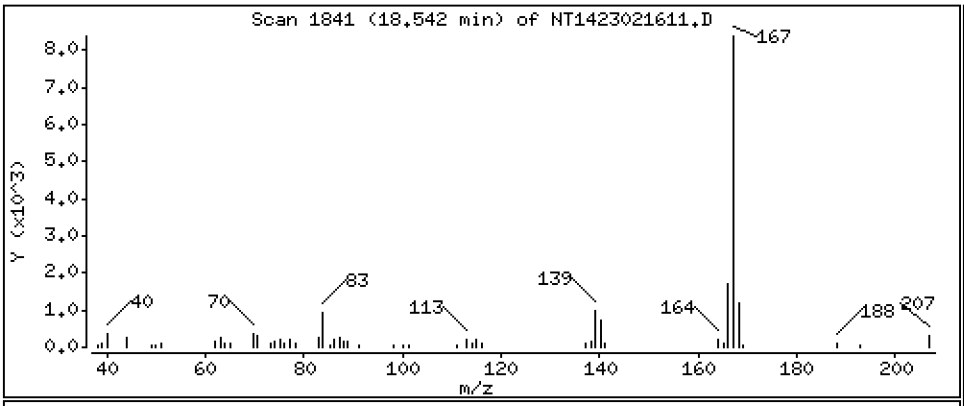
Operator: DSD

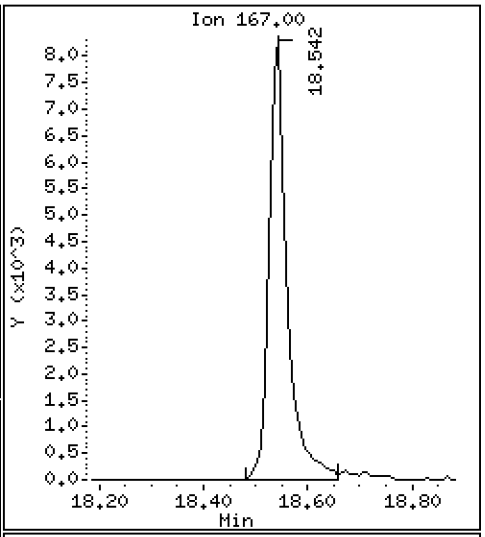
Column phase: ZB-5msi

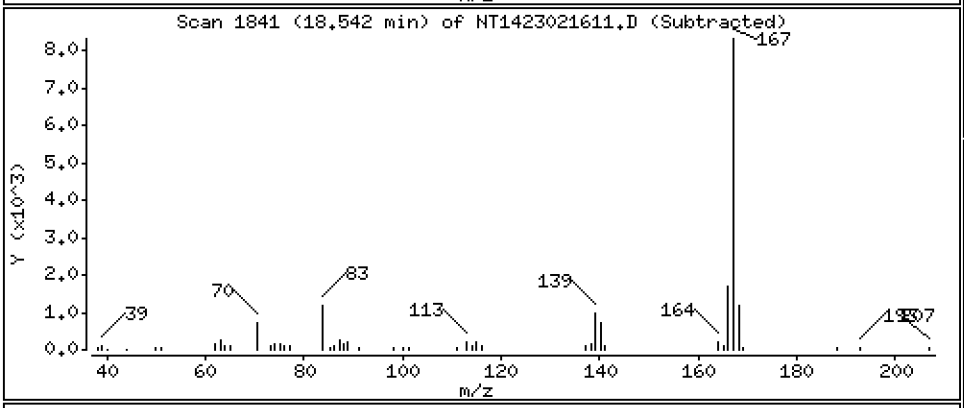
Column diameter: 0.25

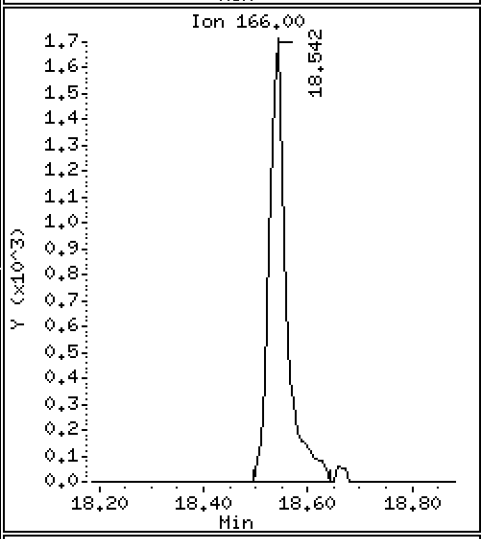
62 Carbazole

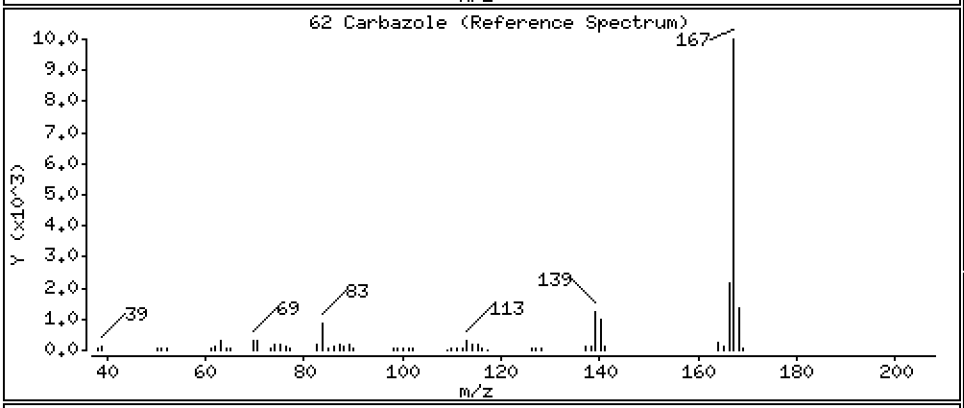
Concentration: 0.06512 ug/mL

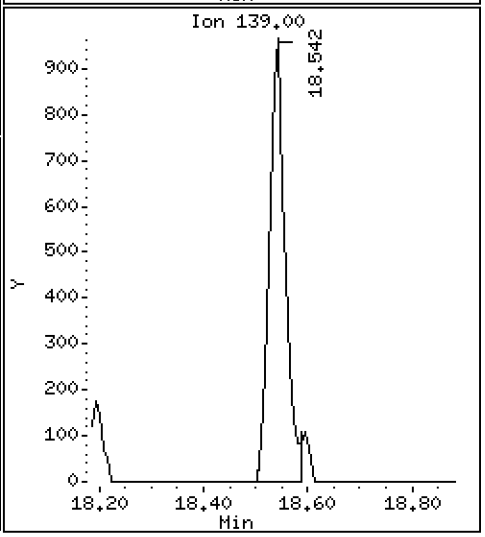


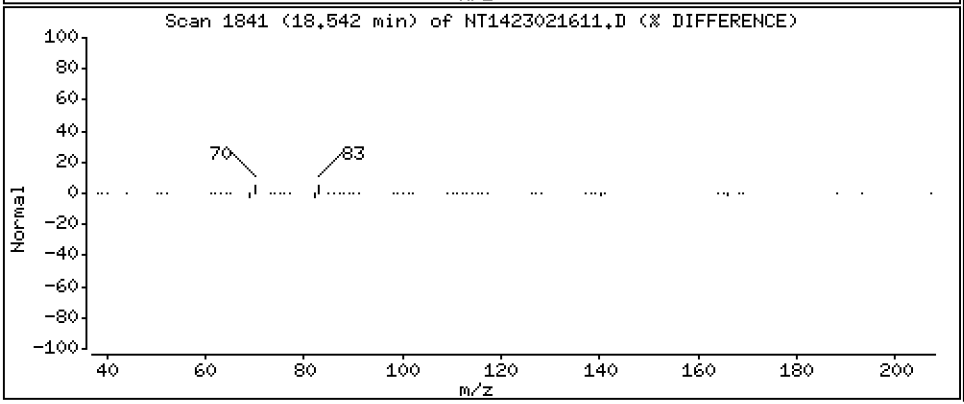












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021611.D

Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

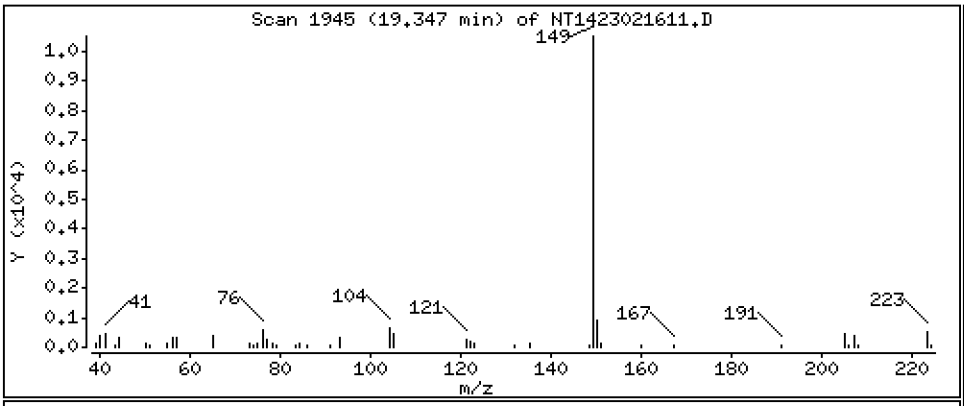
Operator: DSD

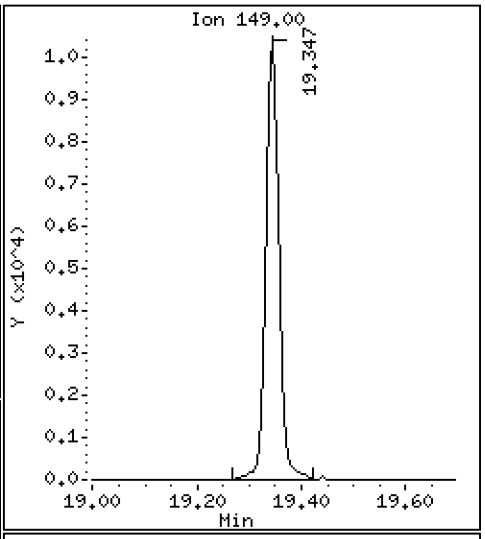
Column phase: ZB-5msi

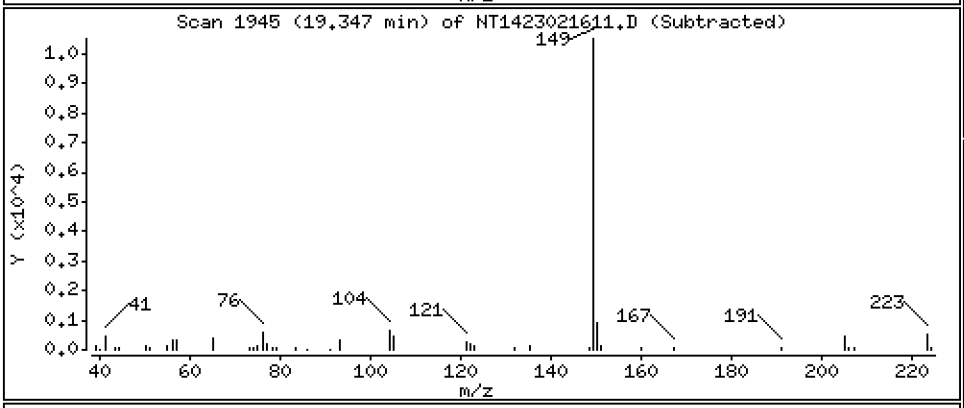
Column diameter: 0.25

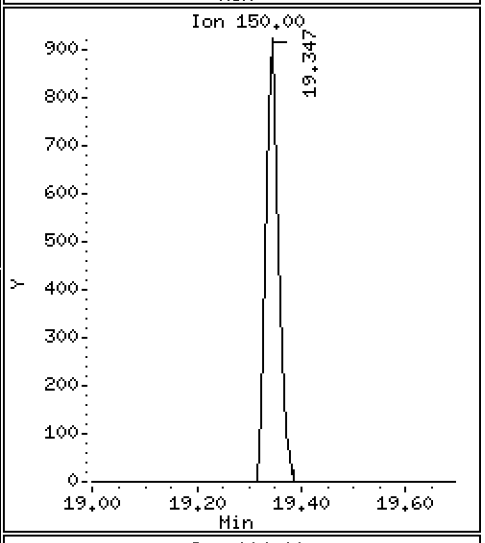
63 Di-n-butylphthalate

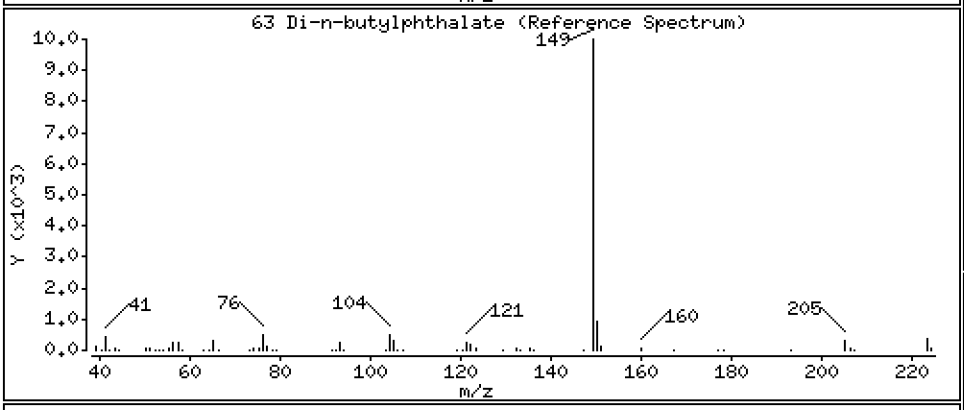
Concentration: 0.05157 ug/mL

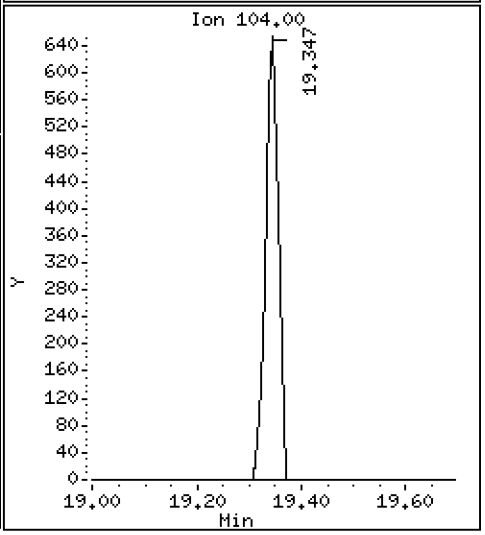


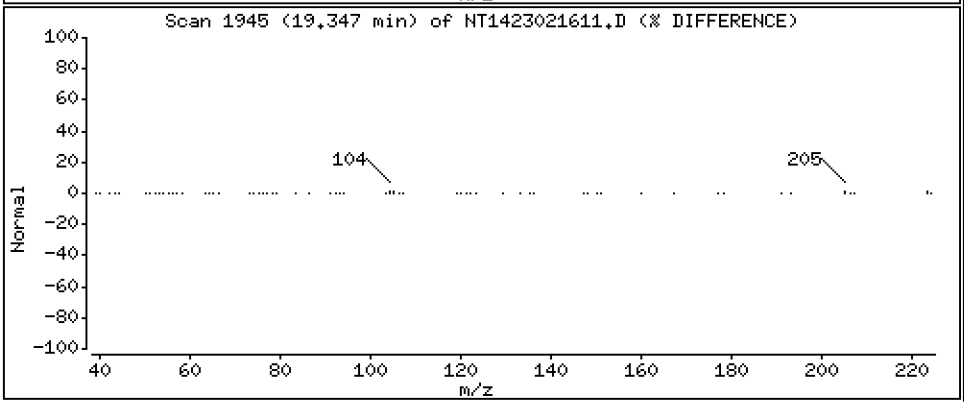












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

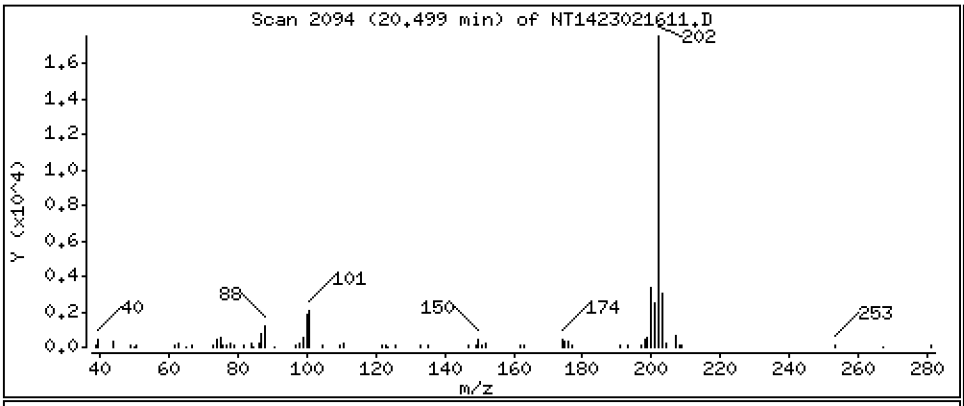
Operator: DSD

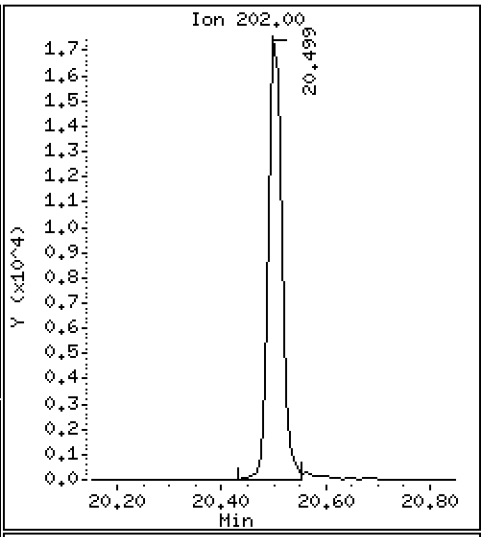
Column phase: ZB-5msi

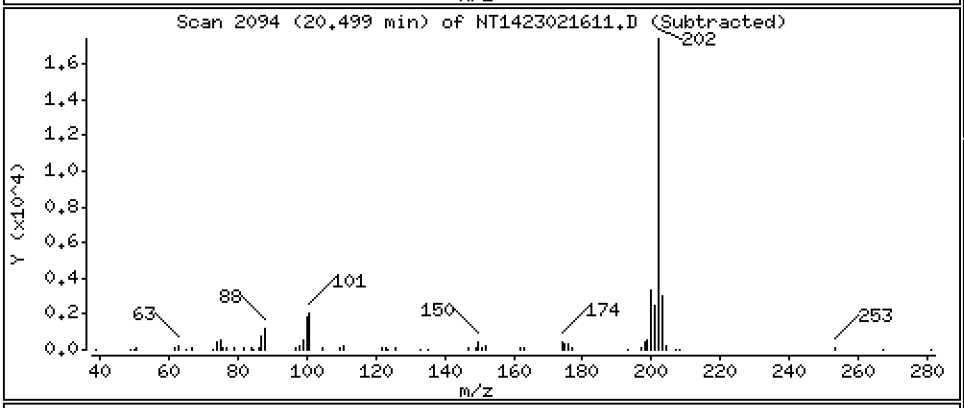
Column diameter: 0.25

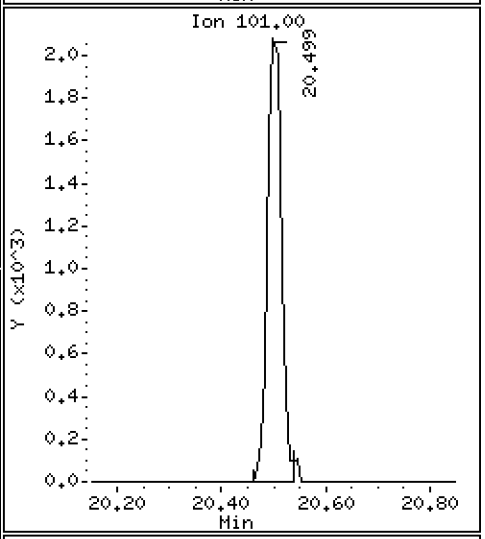
64 Fluoranthene

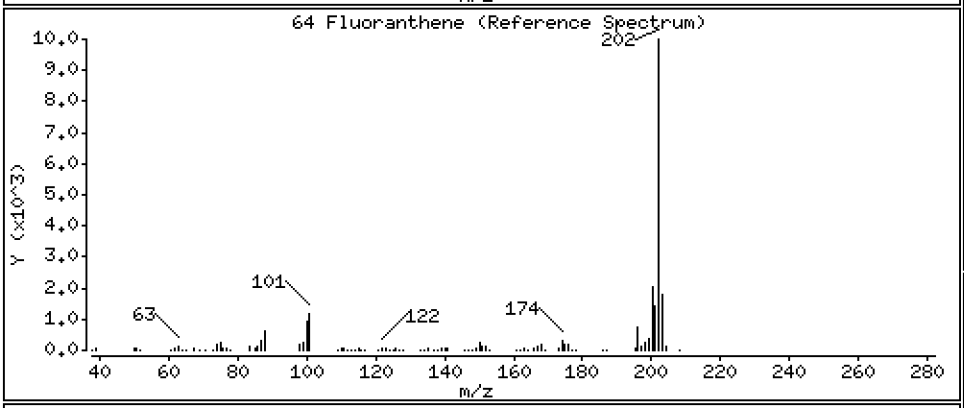
Concentration: 0.07893 ug/mL

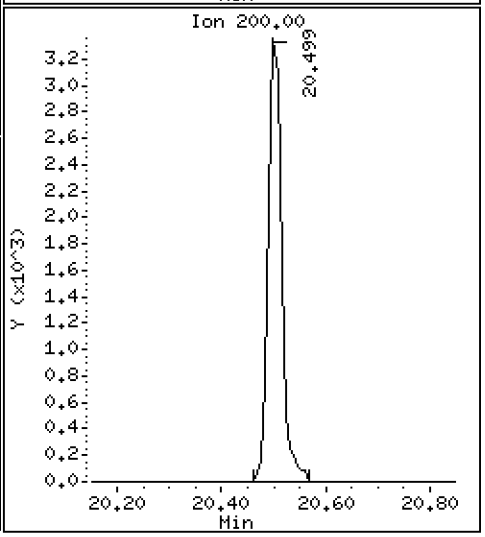


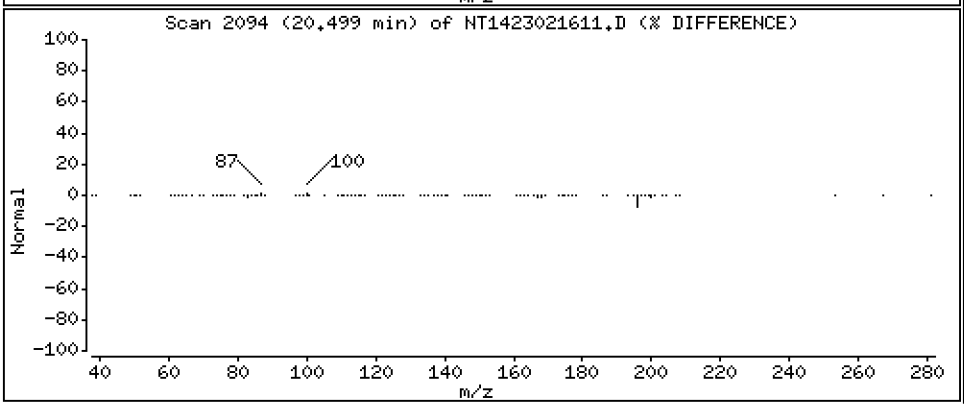












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

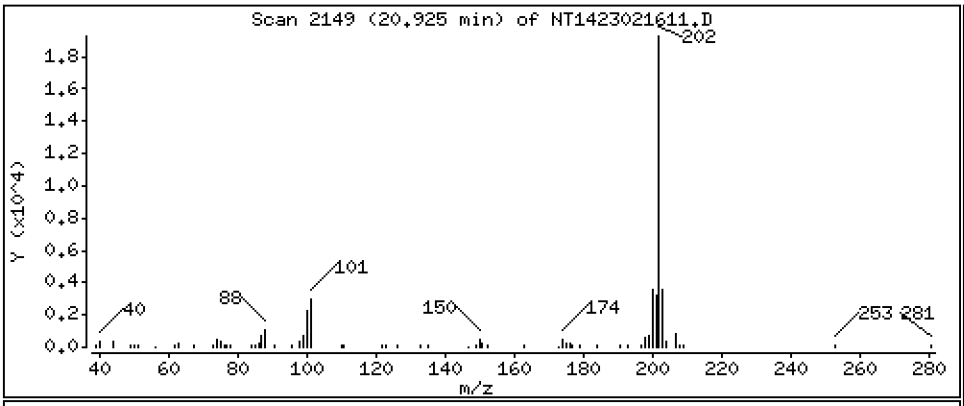
Operator: DSD

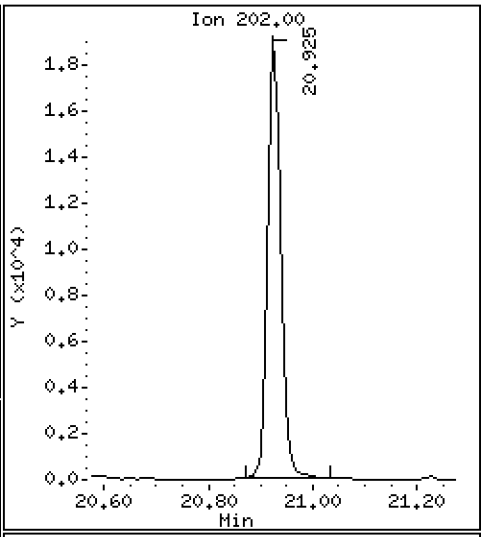
Column phase: ZB-5msi

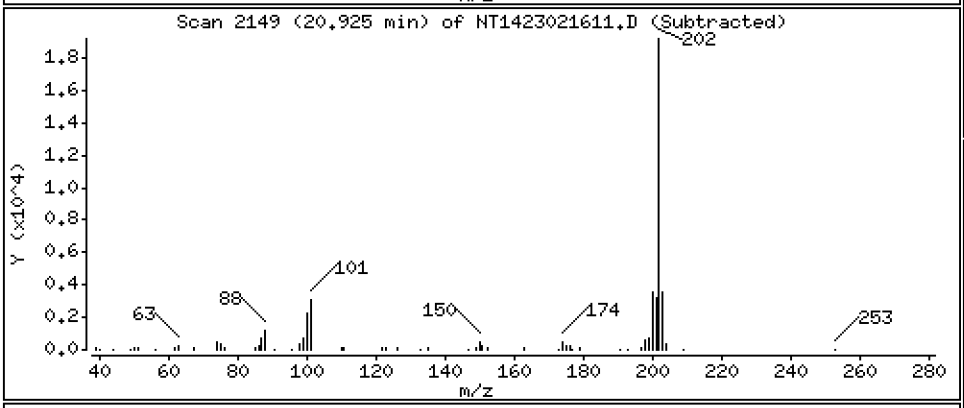
Column diameter: 0.25

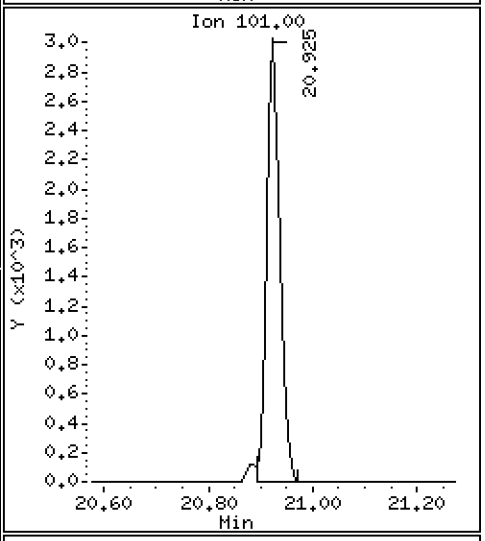
65 Pyrene

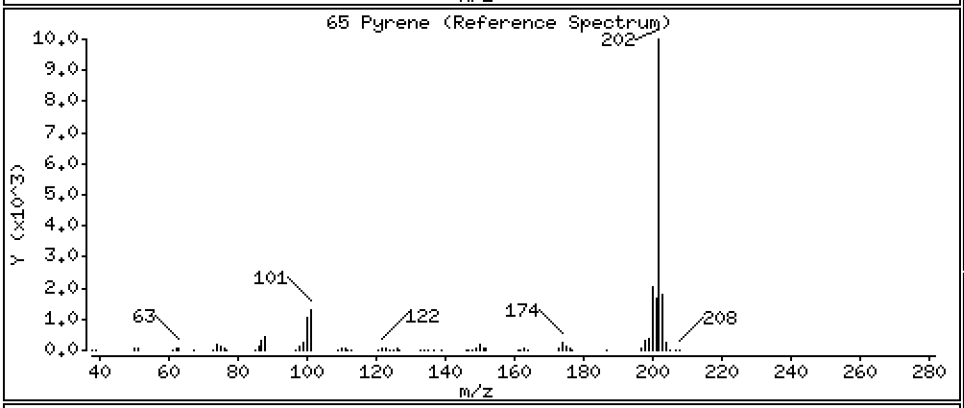
Concentration: 0.08653 ug/mL

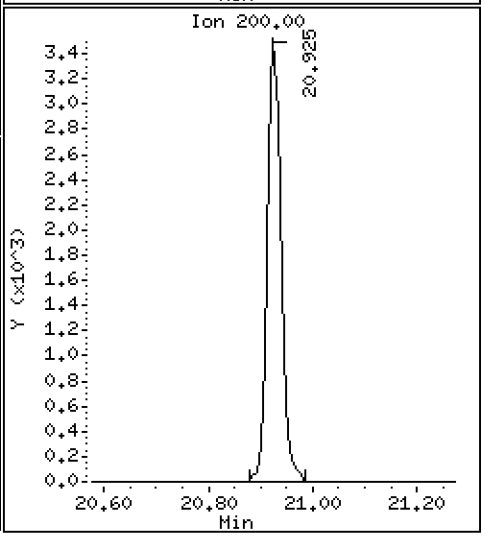


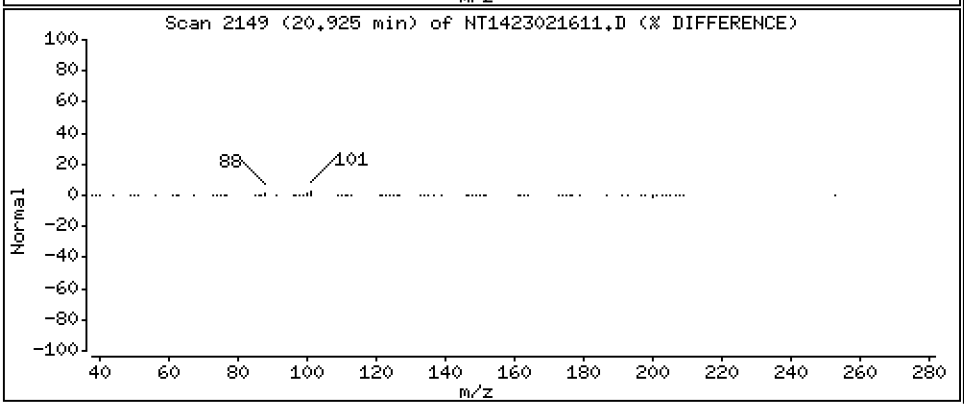












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021611.D

Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

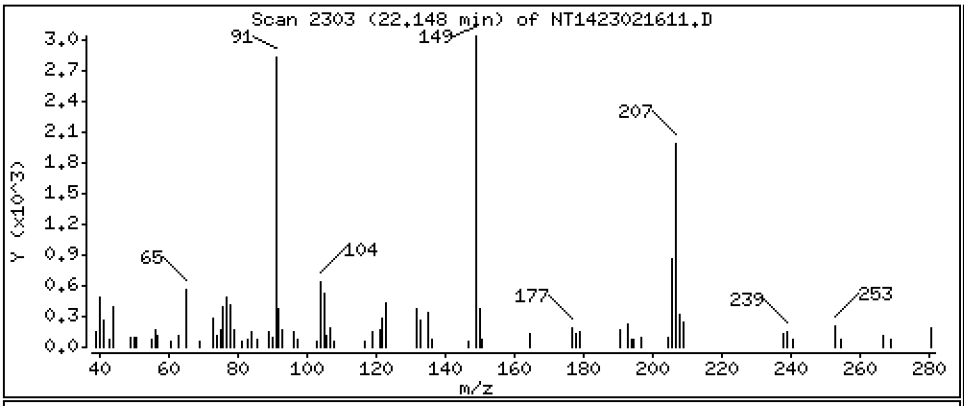
Operator: DSD

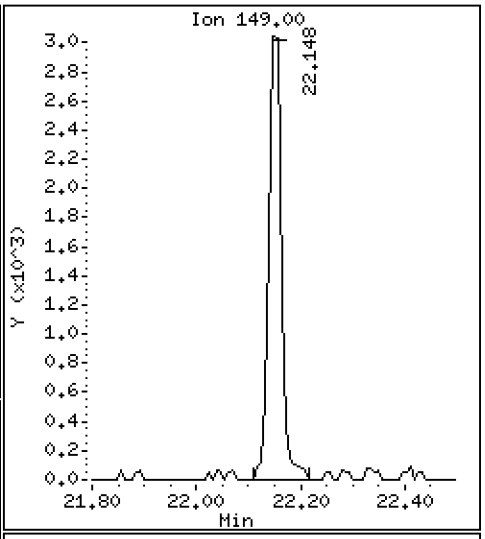
Column phase: ZB-5msi

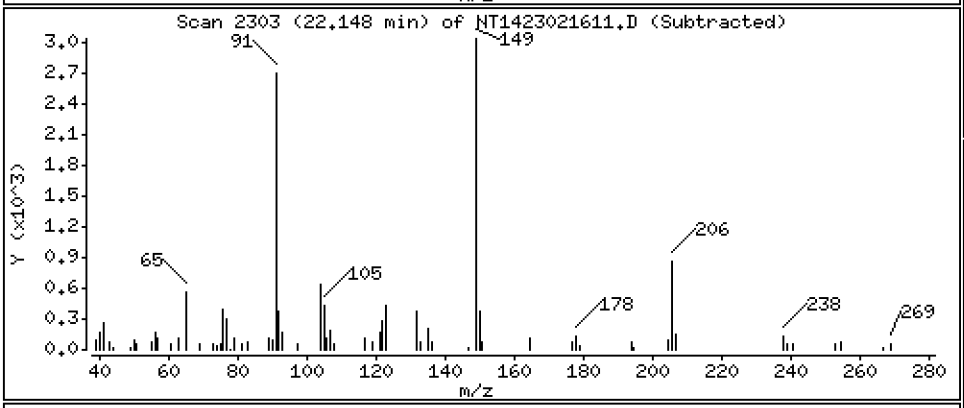
Column diameter: 0.25

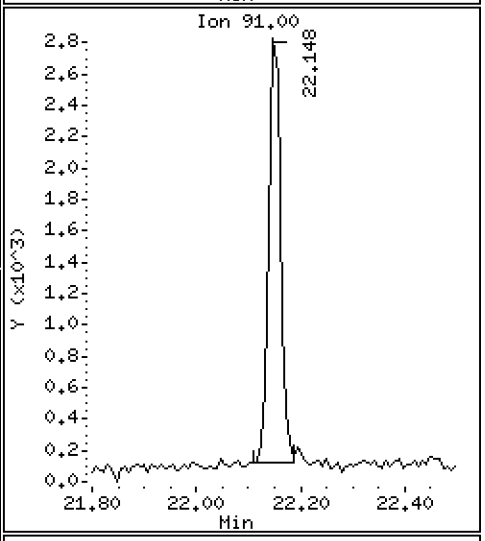
67 Butylbenzylphthalate

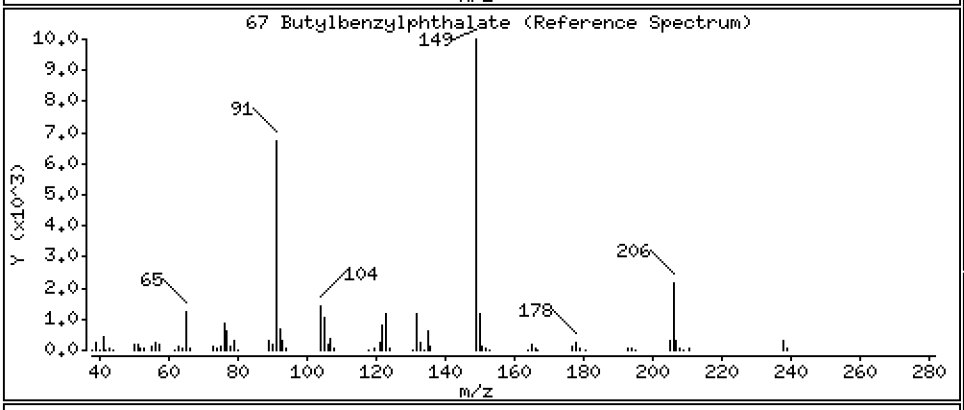
Concentration: 0.03658 ug/mL

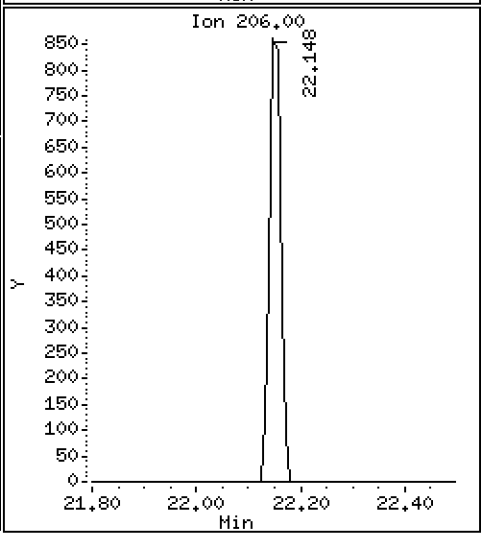


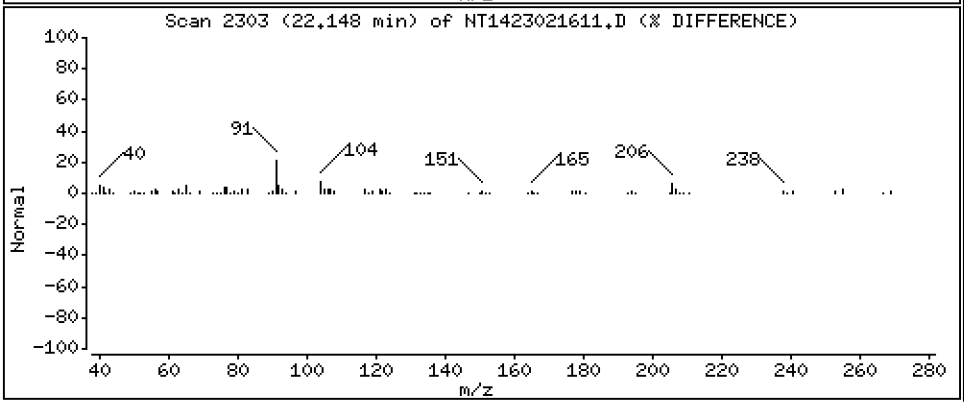












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

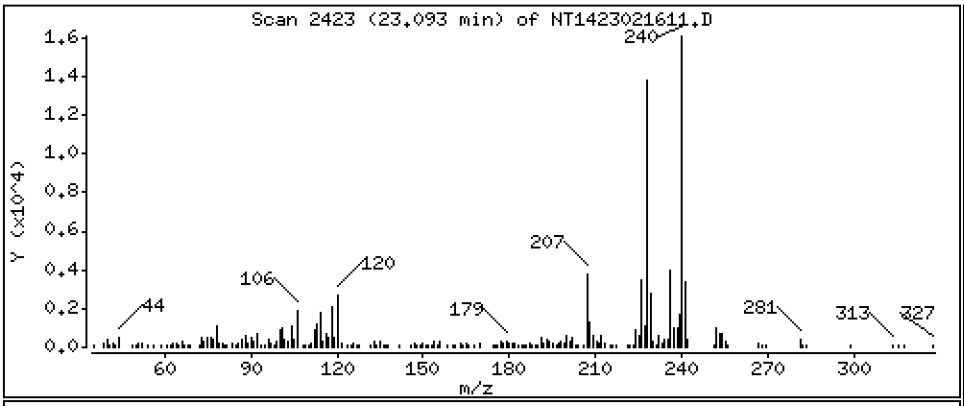
Operator: DSD

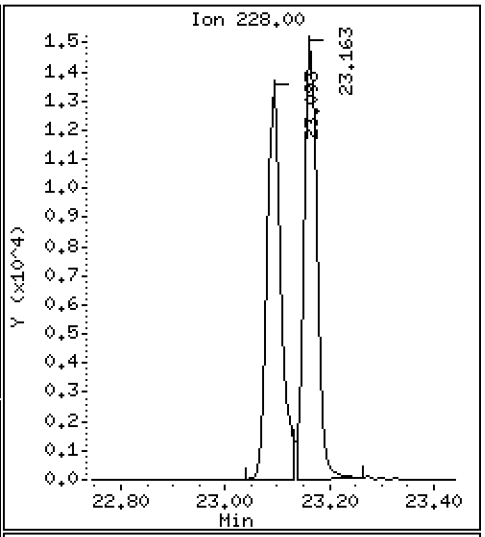
Column phase: ZB-5msi

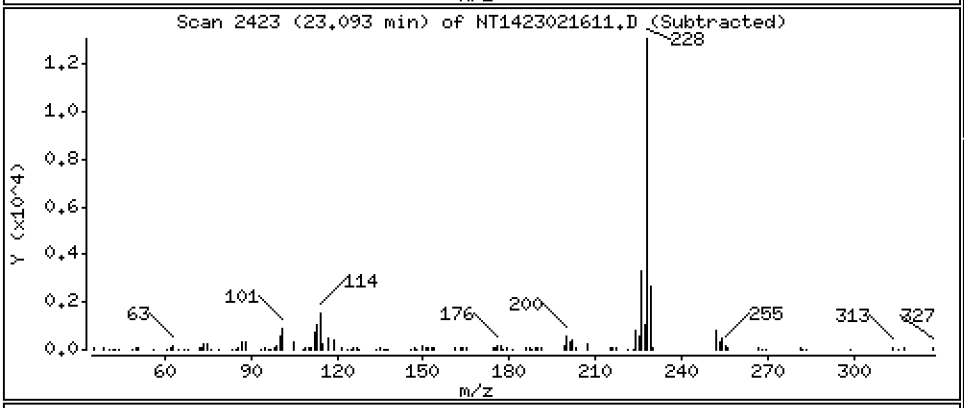
Column diameter: 0.25

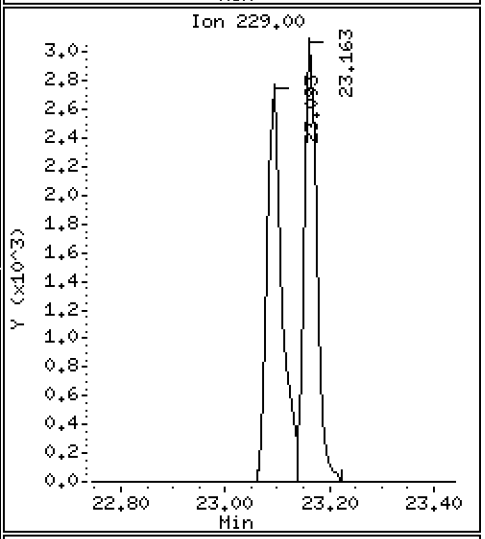
68 Benzo(a)anthracene

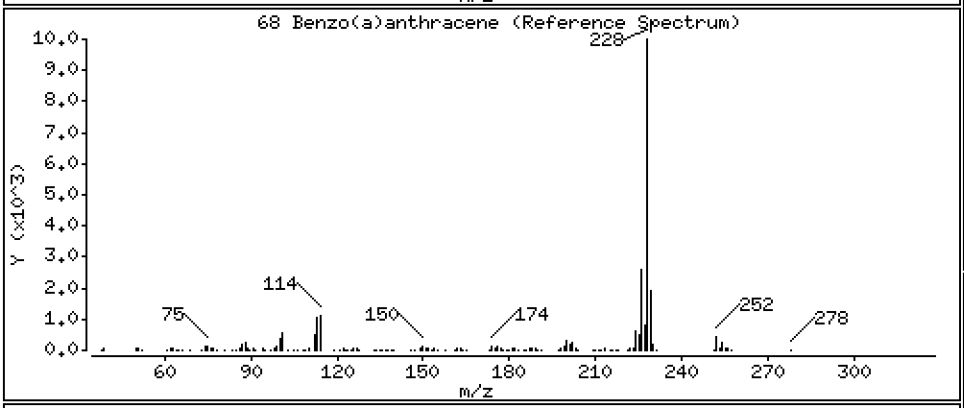
Concentration: 0.08484 ug/mL

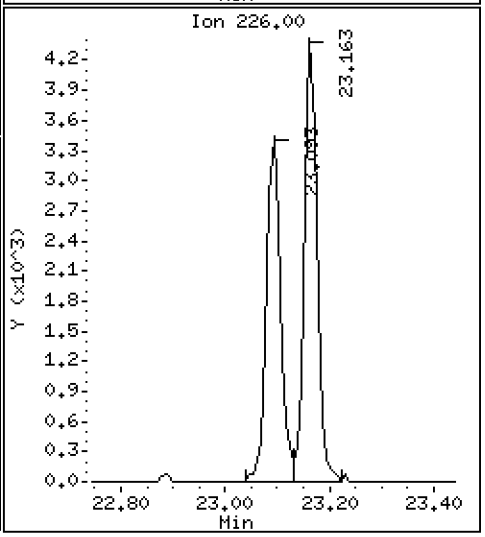


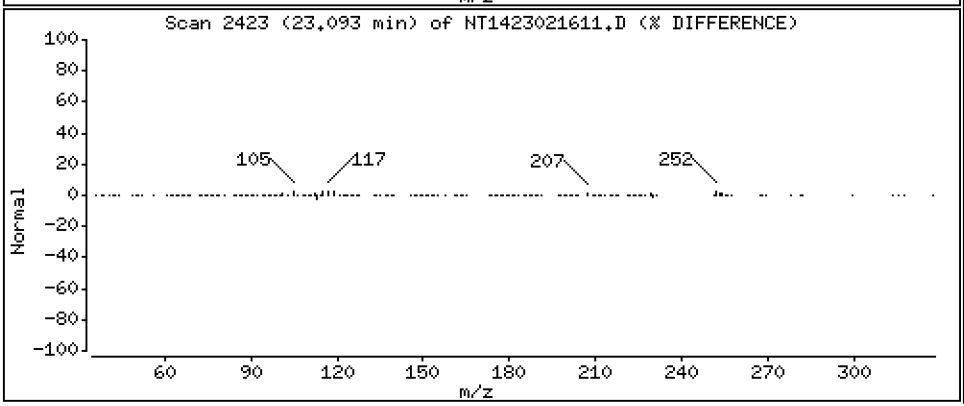












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

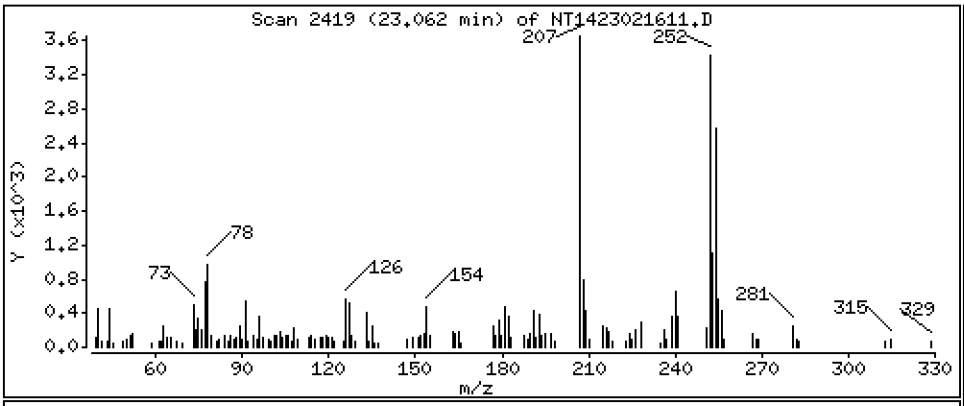
Operator: DSD

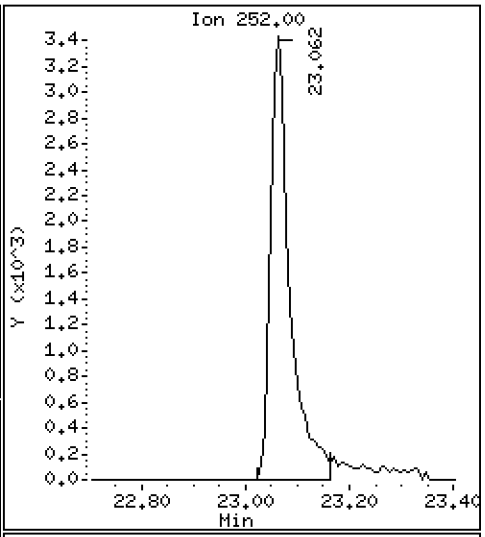
Column phase: ZB-5msi

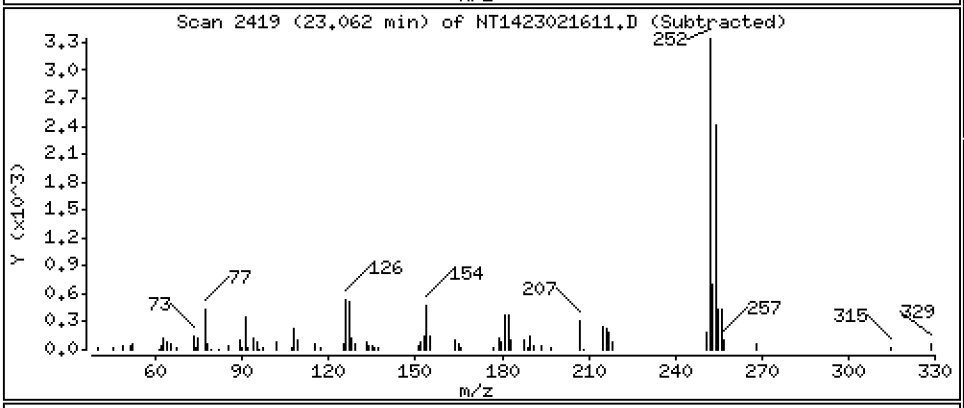
Column diameter: 0.25

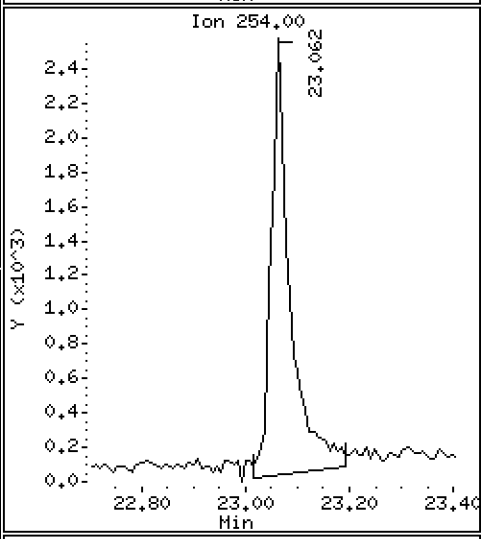
70 3,3'-Dichlorobenzidine

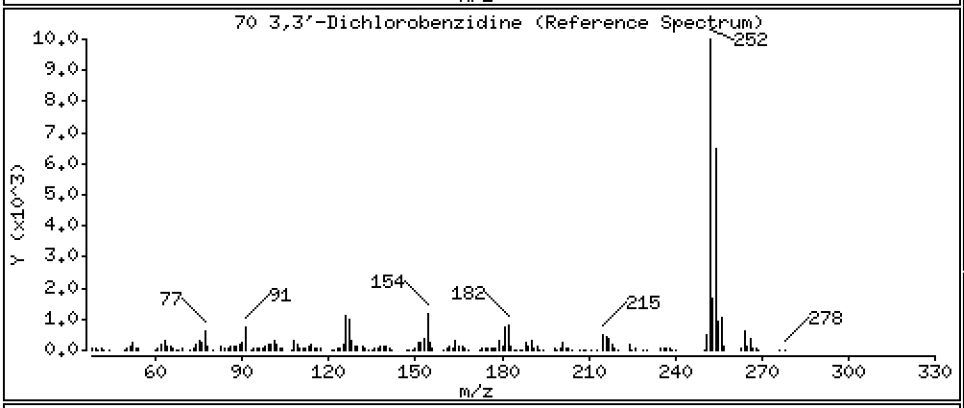
Concentration: 0.1016 ug/mL

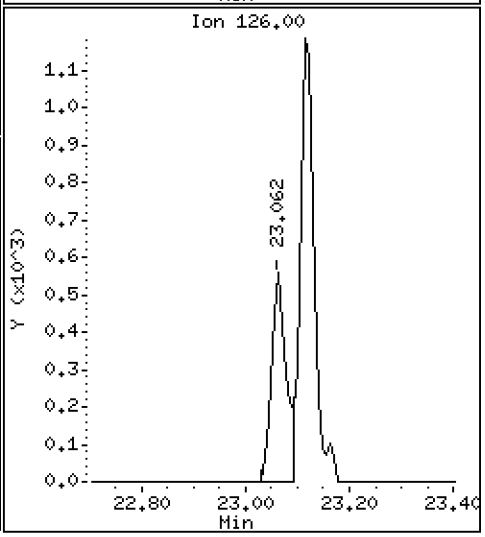


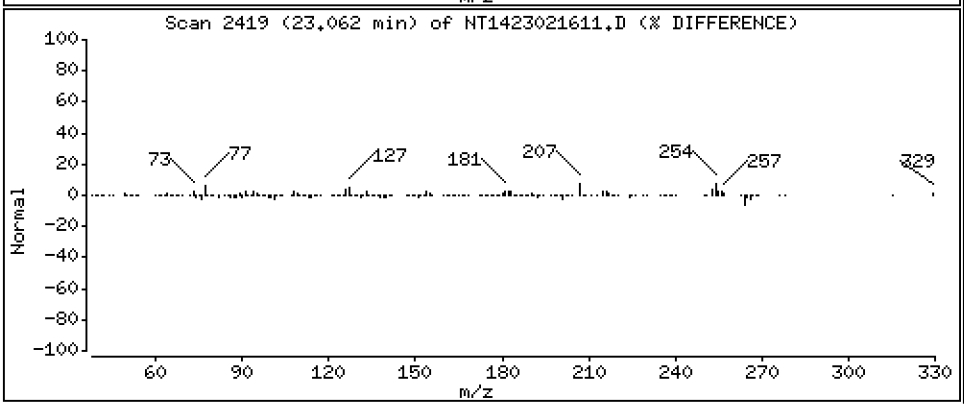












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021611.D

Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

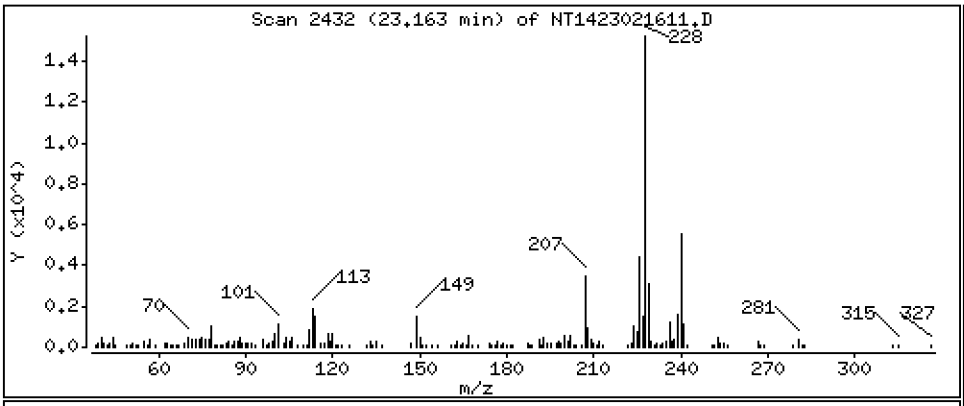
Operator: DSD

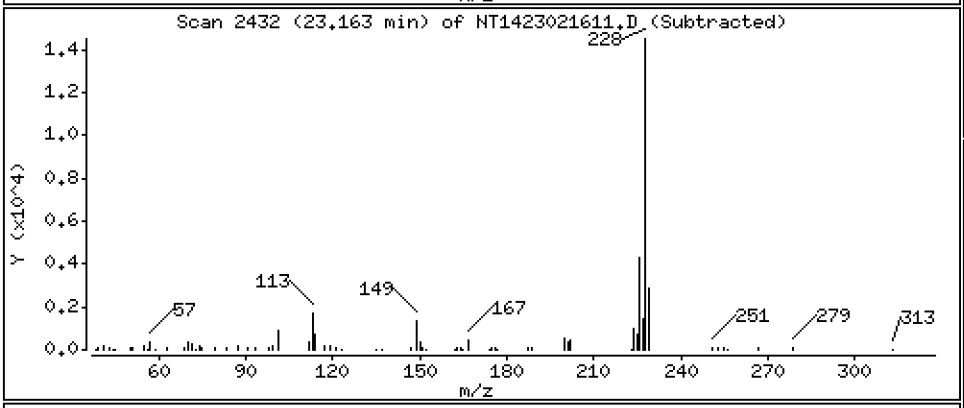
Column phase: ZB-5msi

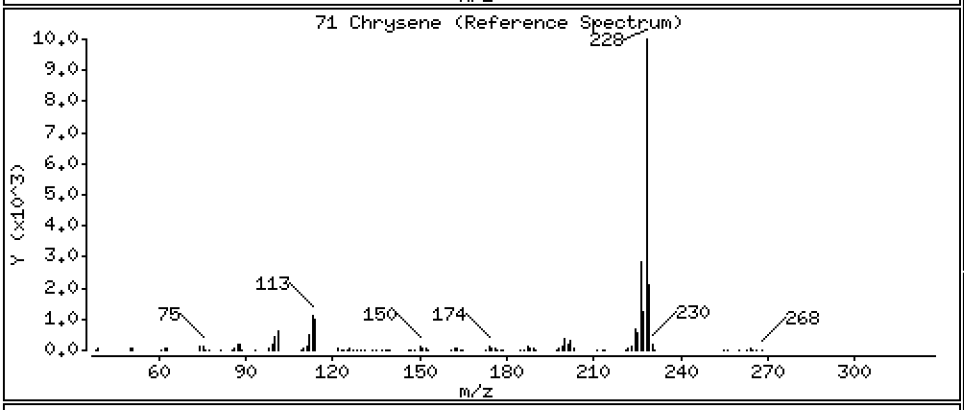
Column diameter: 0.25

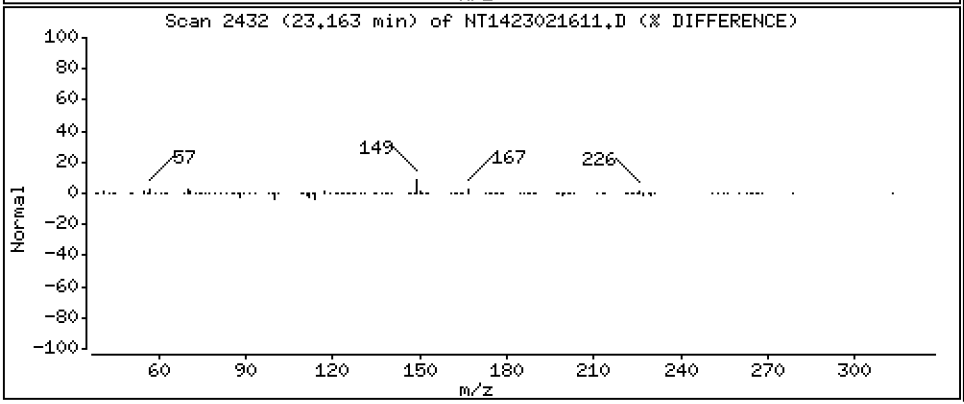
71 Chrysene

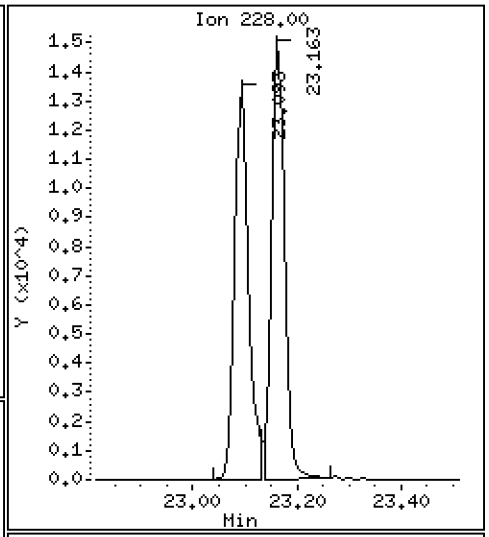
Concentration: 0.09597 ug/mL

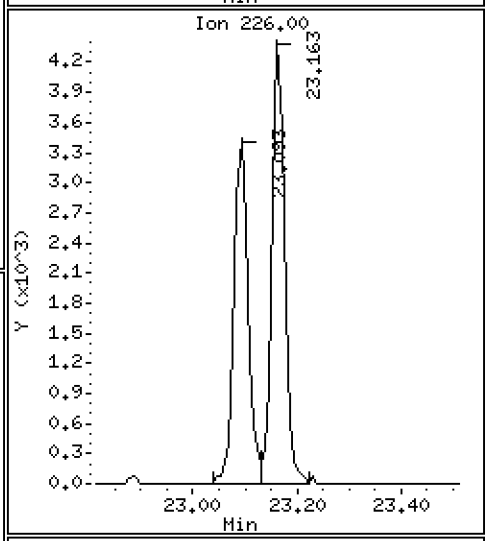


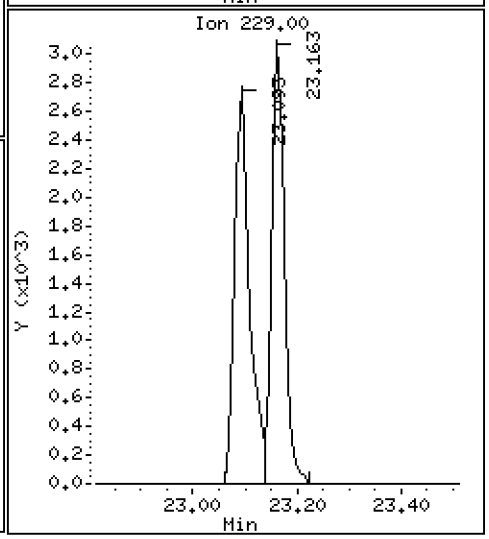












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

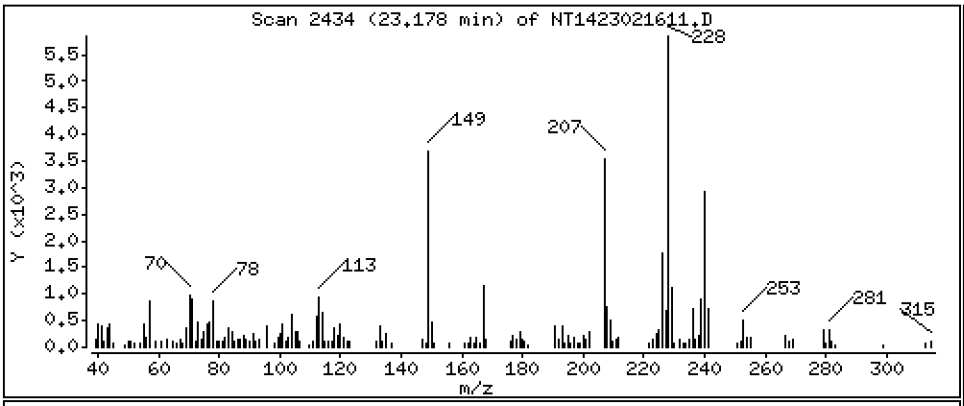
Operator: DSD

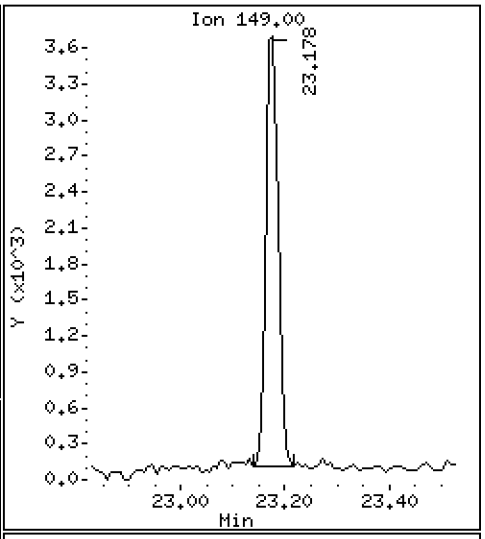
Column phase: ZB-5msi

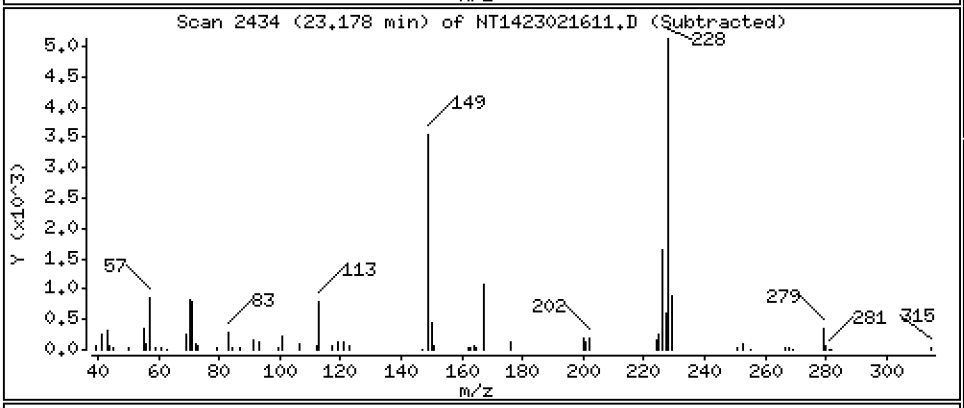
Column diameter: 0.25

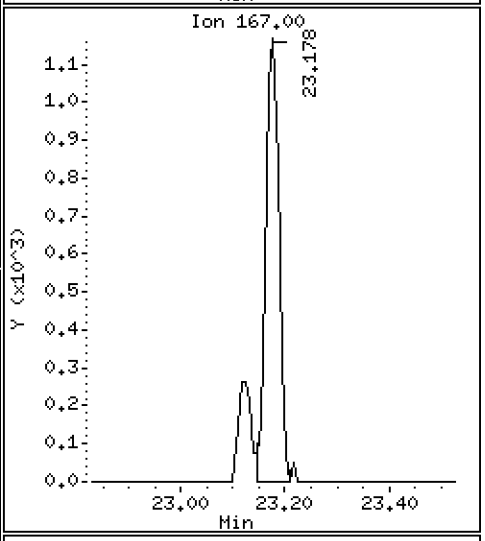
72 bis(2-Ethylhexyl)phthalate

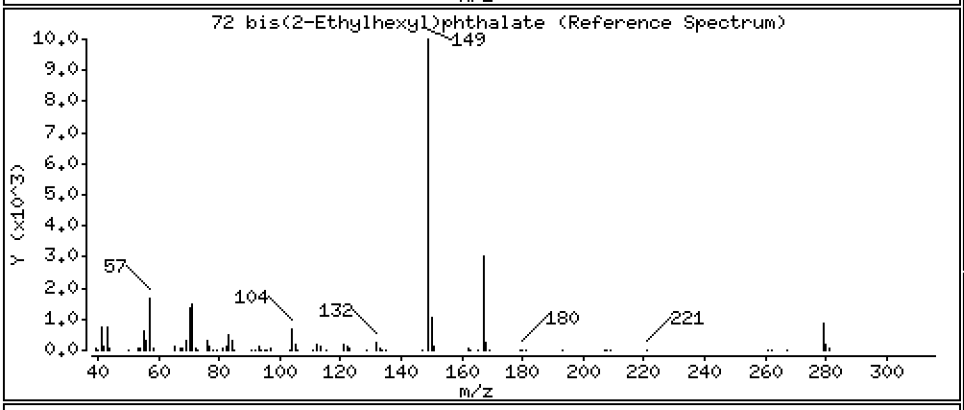
Concentration: 0.03459 ug/mL

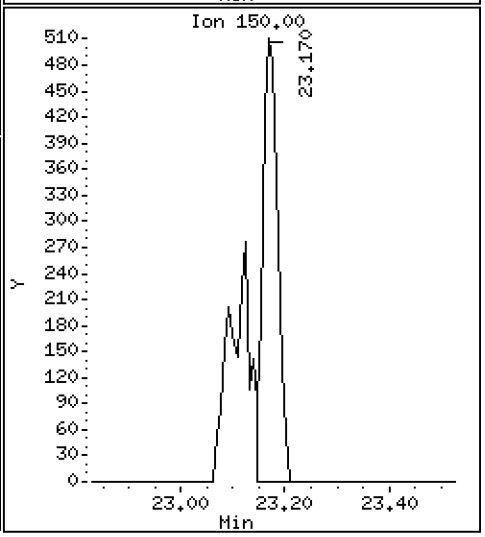


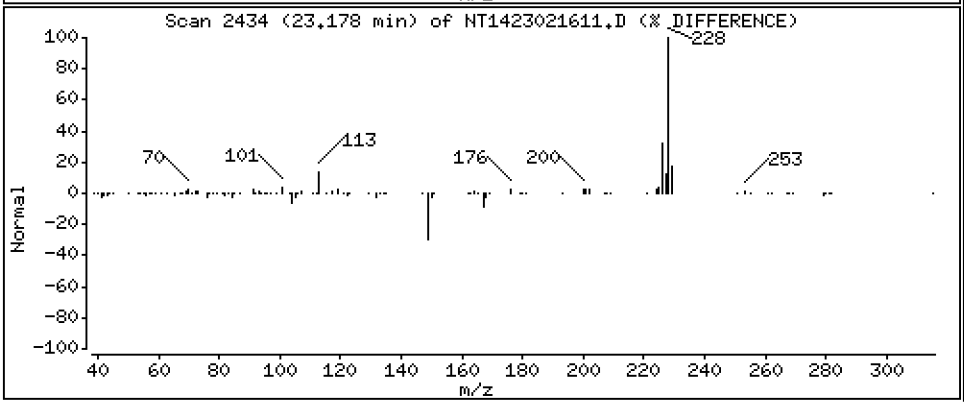












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

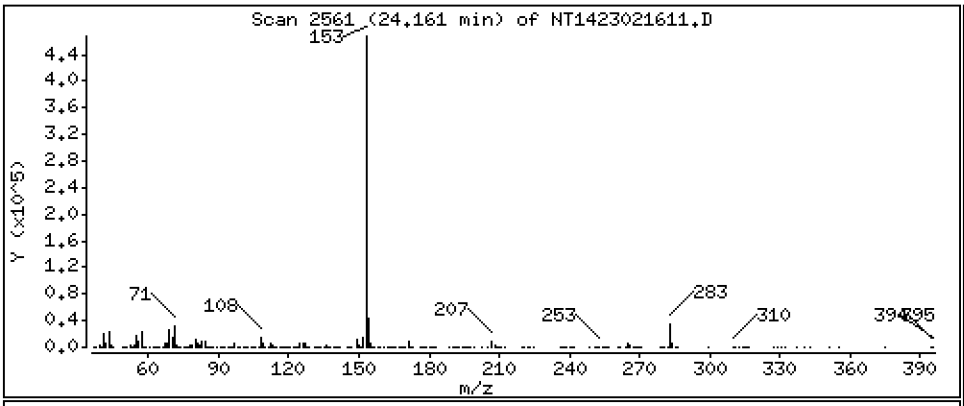
Operator: DSD

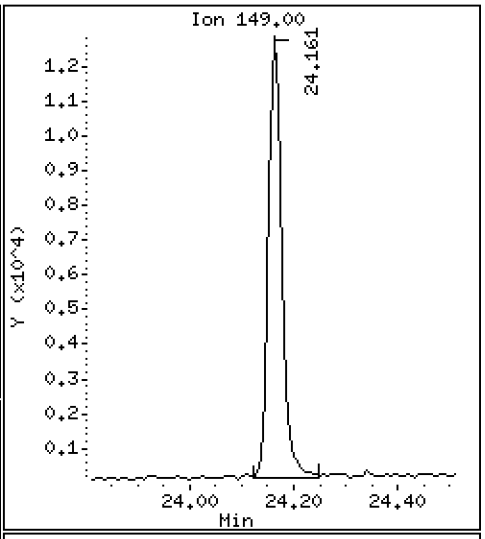
Column phase: ZB-5msi

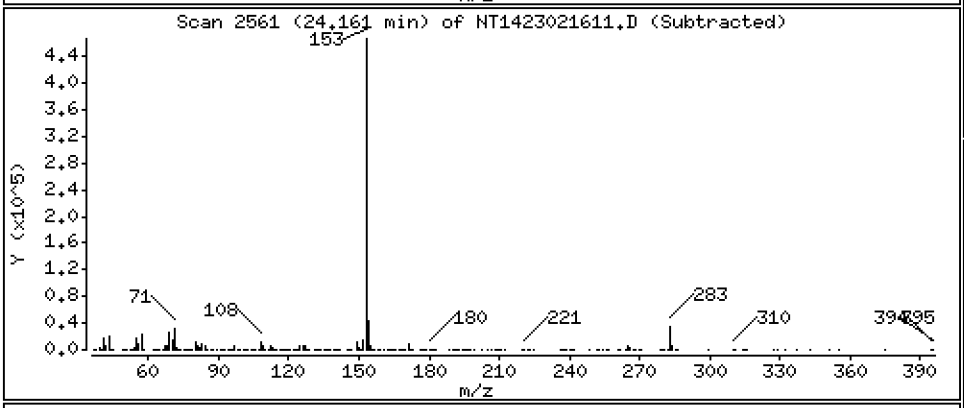
Column diameter: 0.25

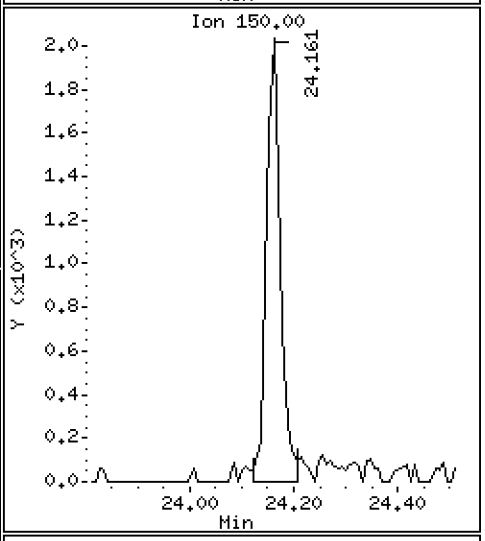
73 Di-n-octylphthalate

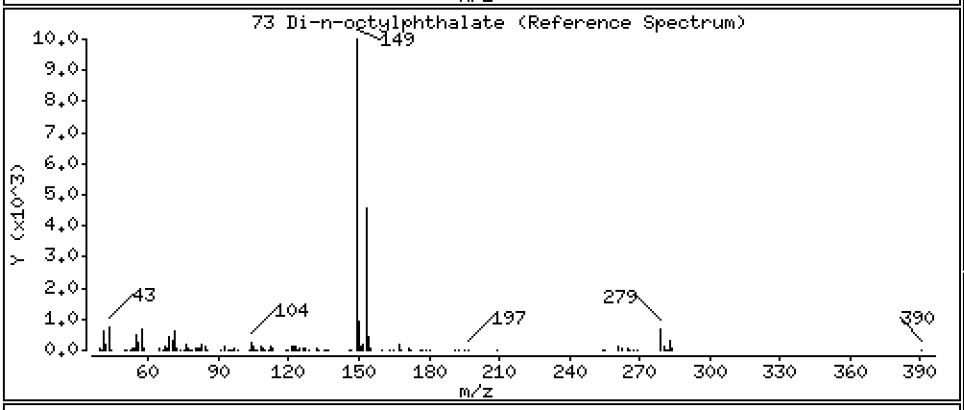
Concentration: 0.09801 ug/mL

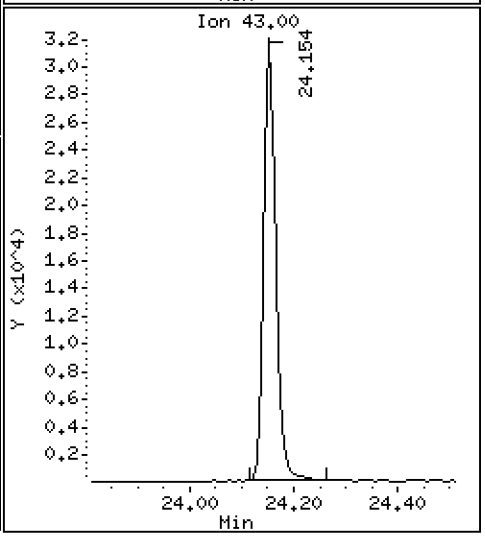


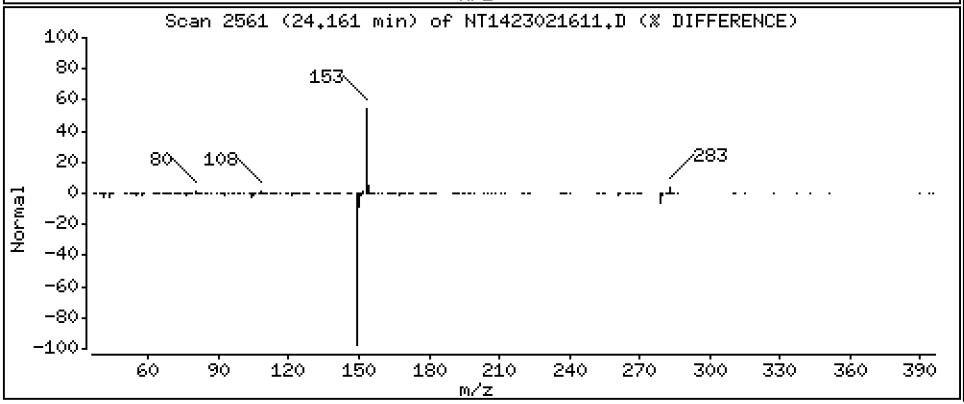












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

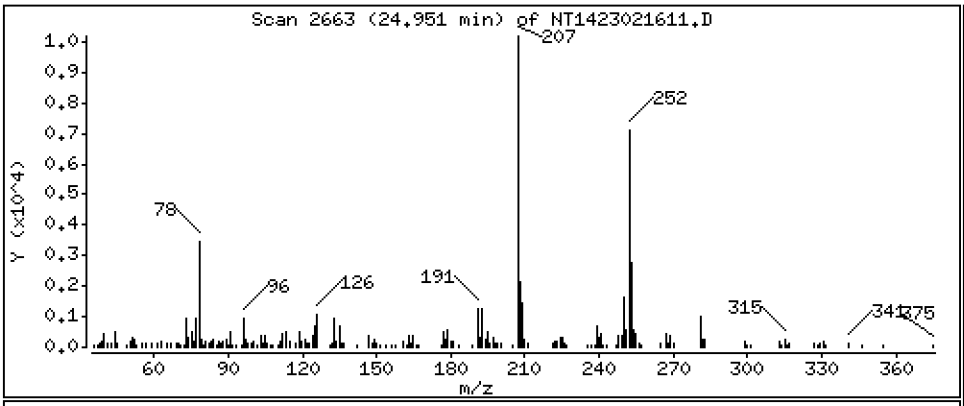
Operator: DSD

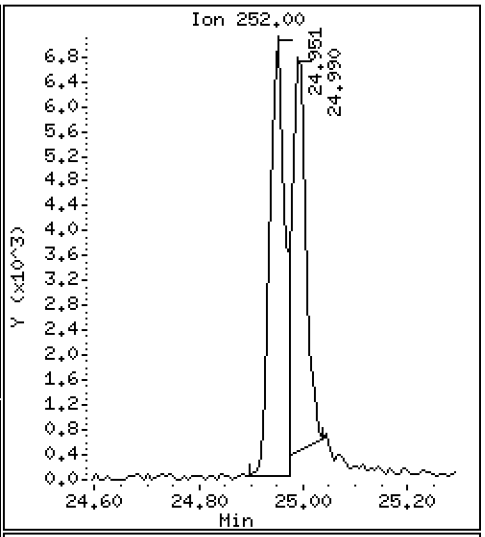
Column phase: ZB-5msi

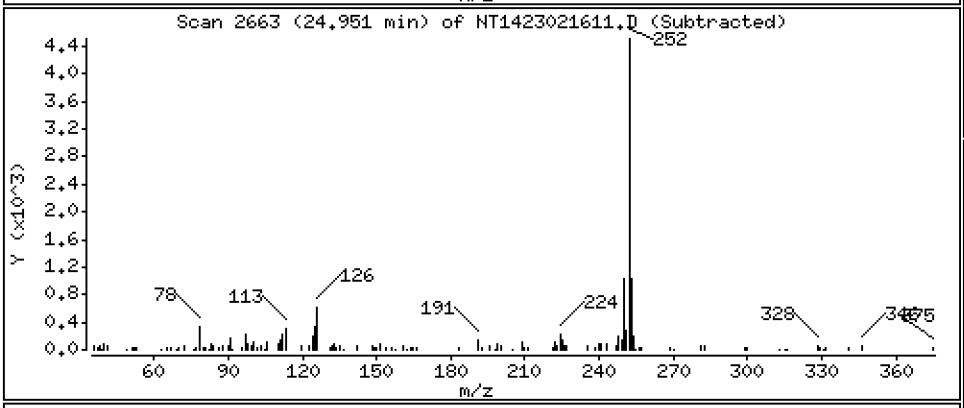
Column diameter: 0.25

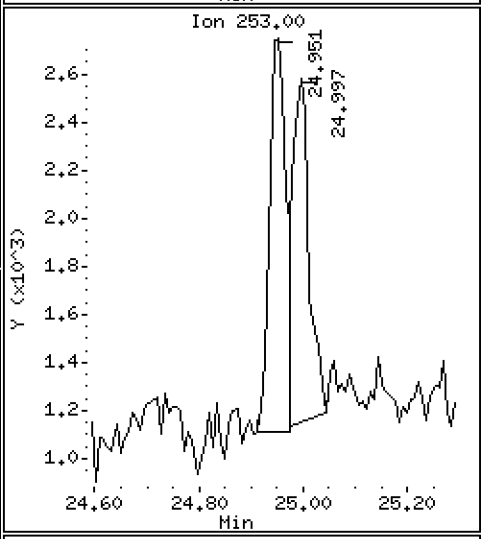
74 Benzo(b)fluoranthene

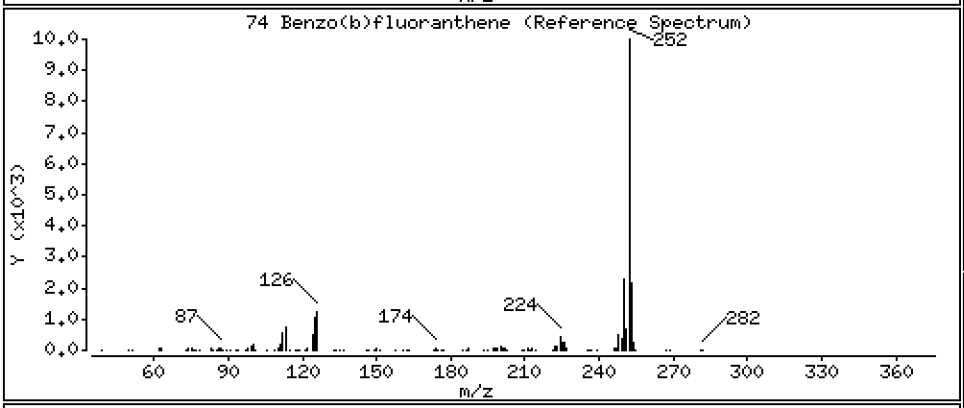
Concentration: 0.07678 ug/mL

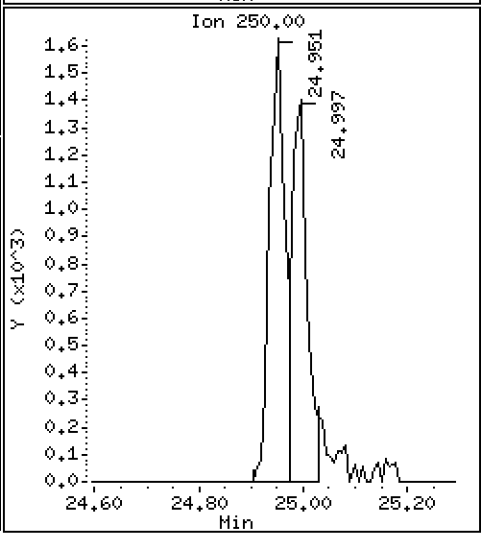


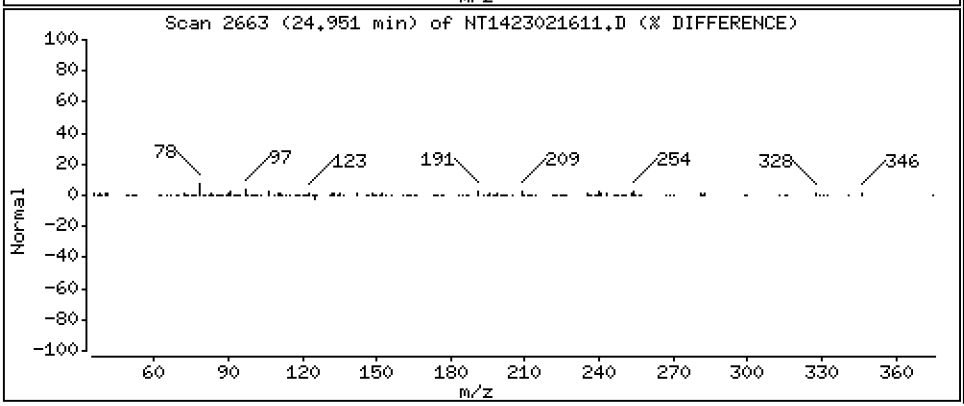












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

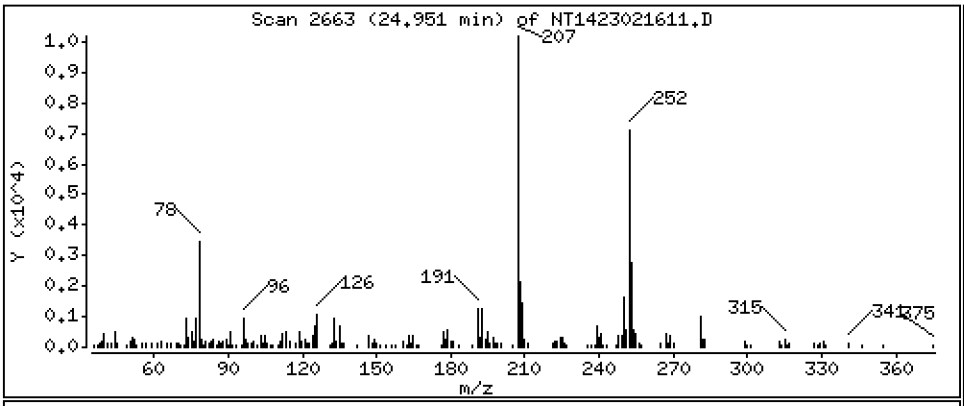
Operator: DSD

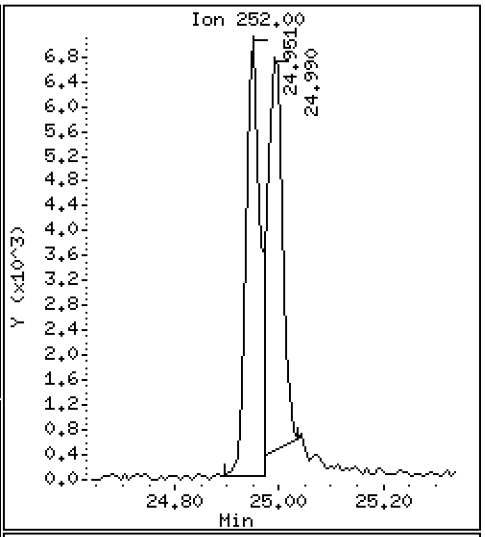
Column phase: ZB-5msi

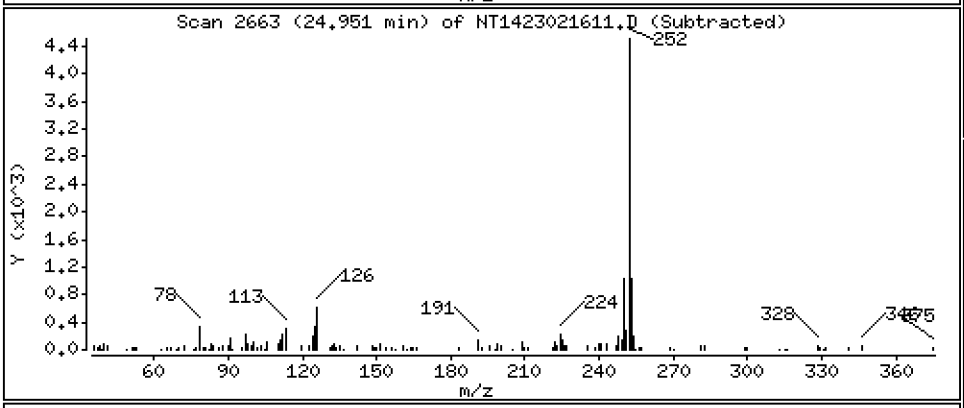
Column diameter: 0.25

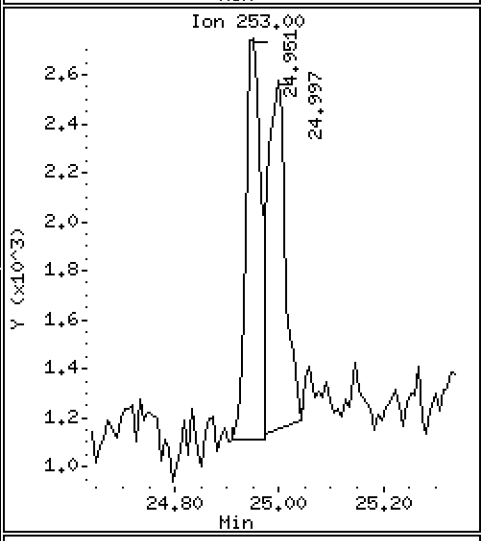
75 Benzo(k)fluoranthene

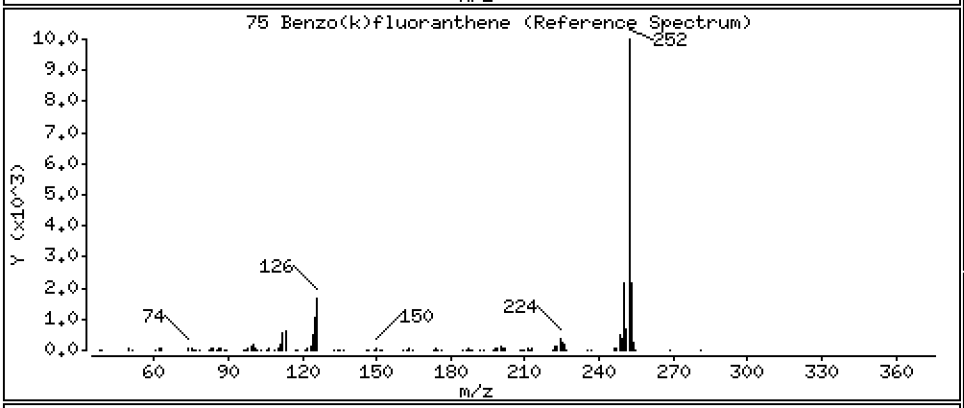
Concentration: 0.07185 ug/mL

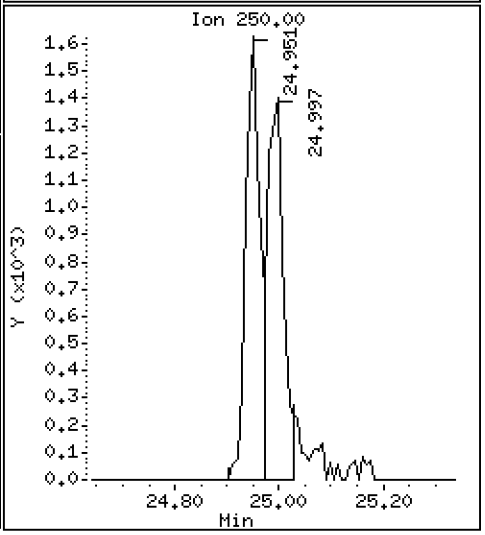


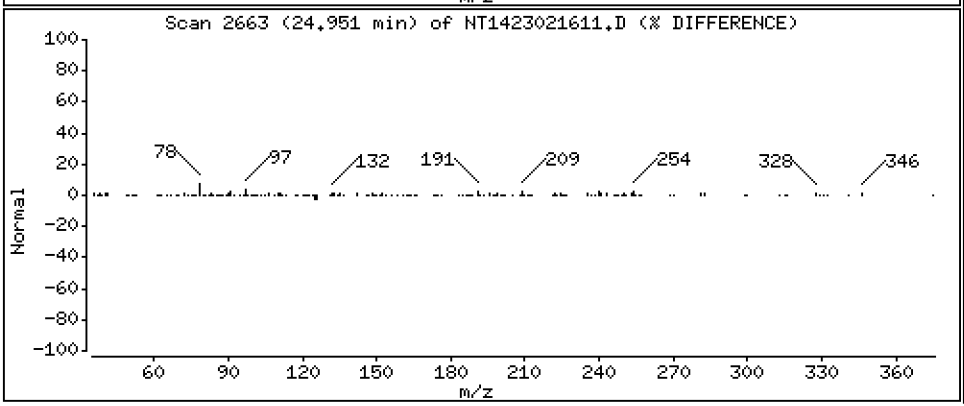












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

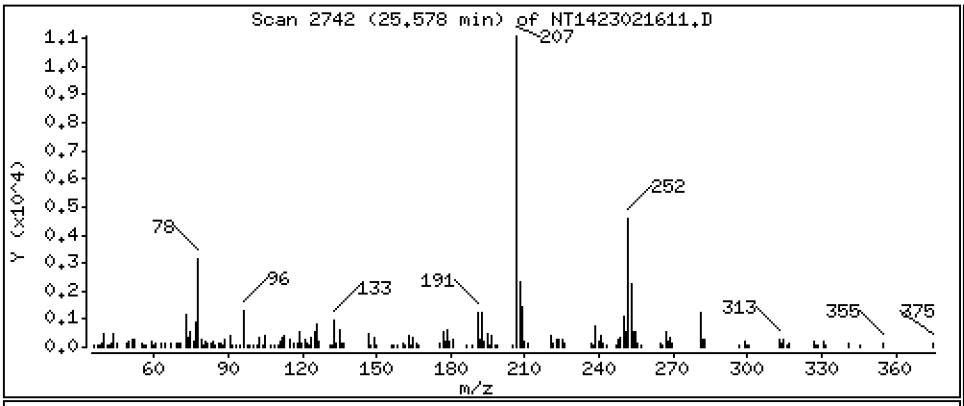
Operator: DSD

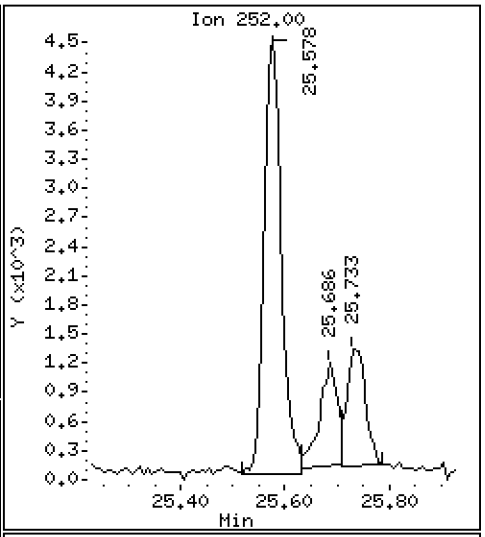
Column phase: ZB-5msi

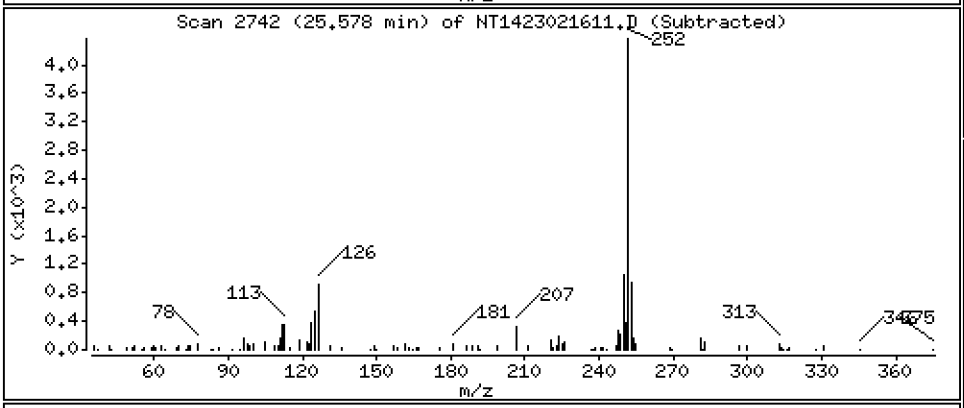
Column diameter: 0.25

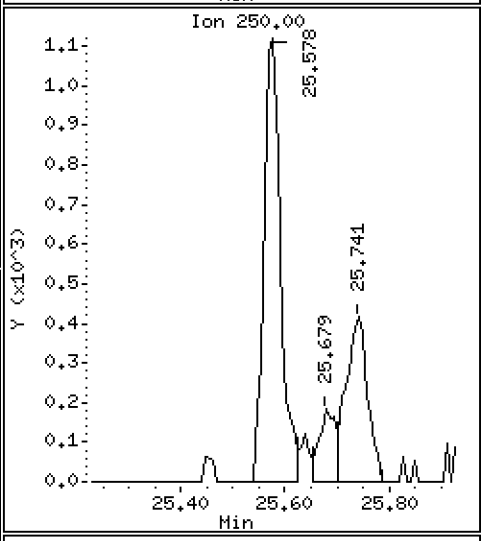
76 Benzo(a)pyrene

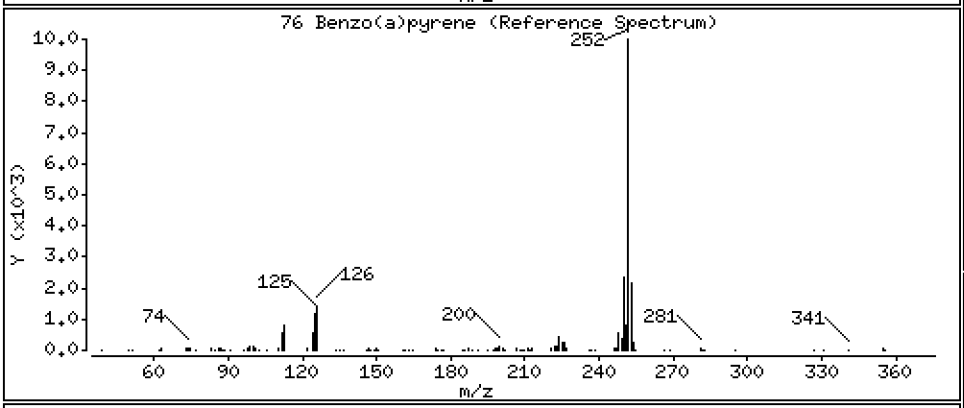
Concentration: 0.05649 ug/mL

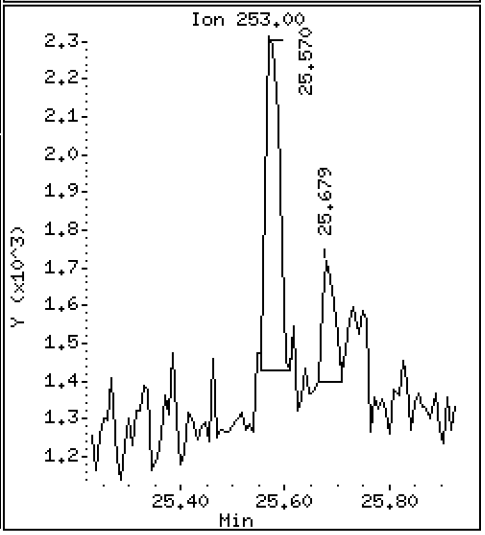


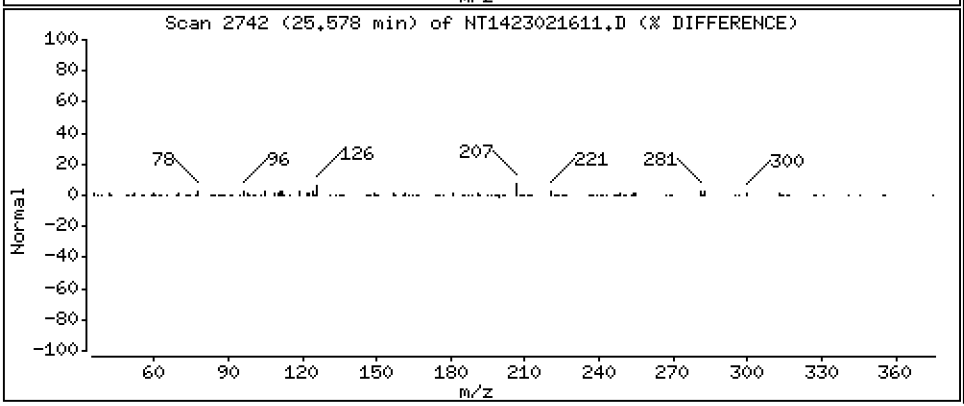












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

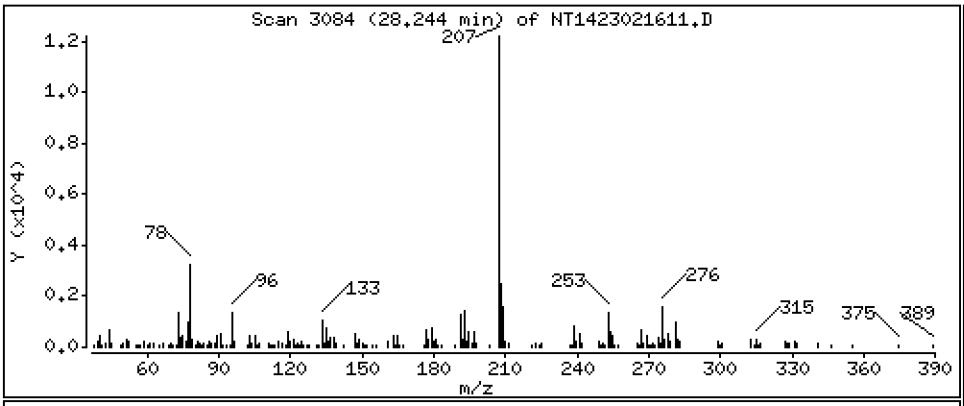
Operator: DSD

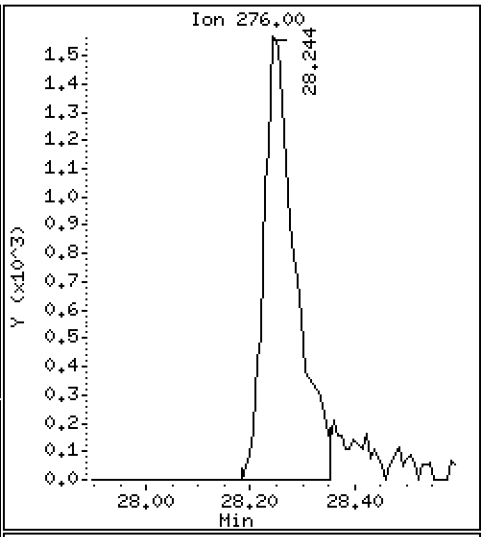
Column phase: ZB-5msi

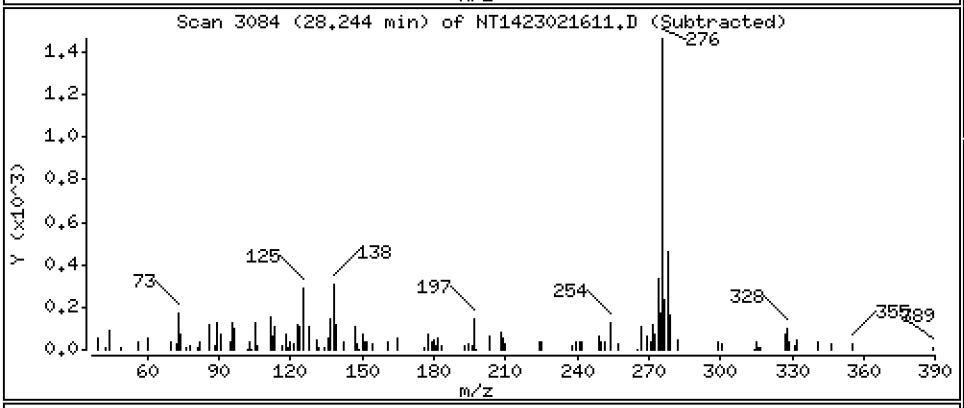
Column diameter: 0.25

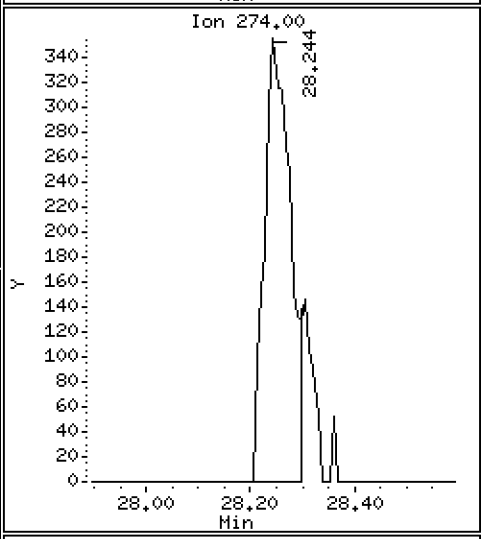
78 Indeno(1,2,3-cd)pyrene

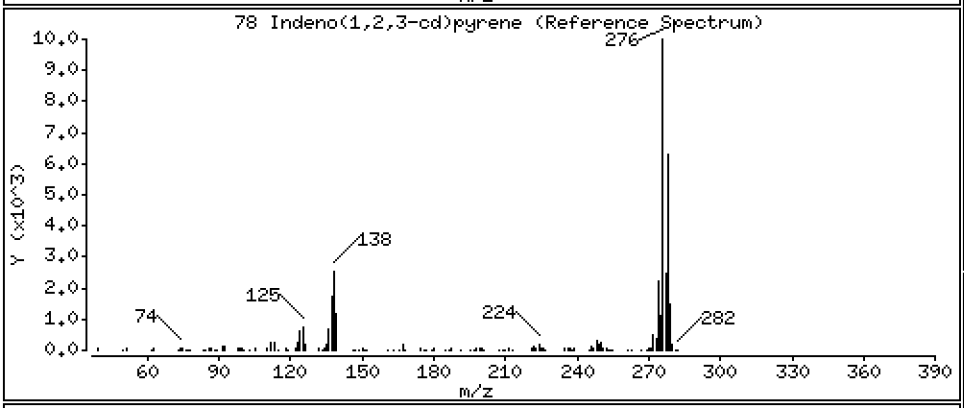
Concentration: 0.04483 ug/mL

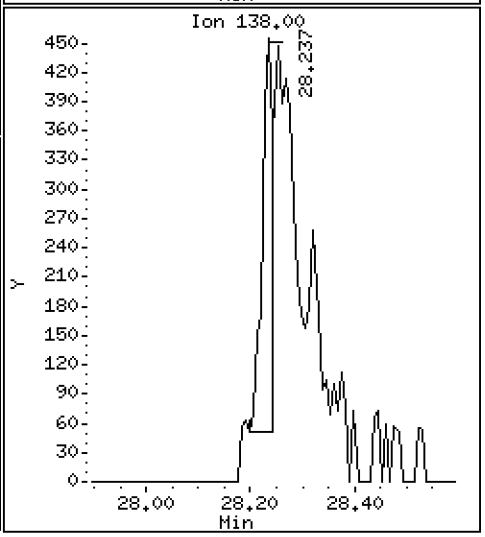


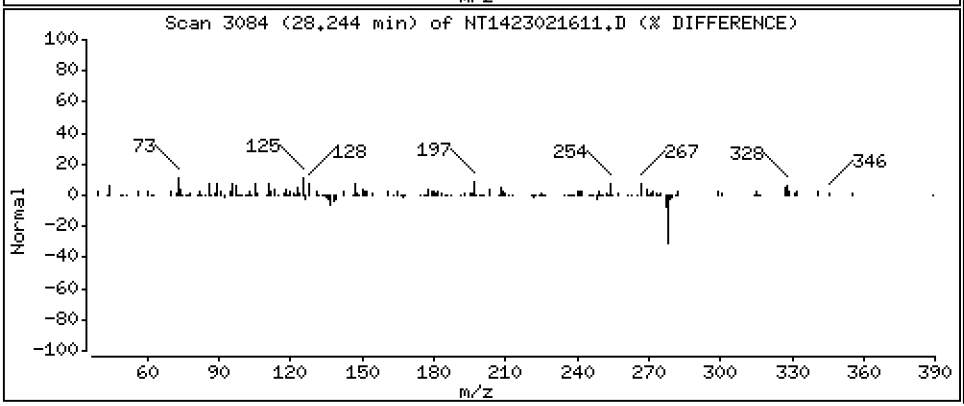












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

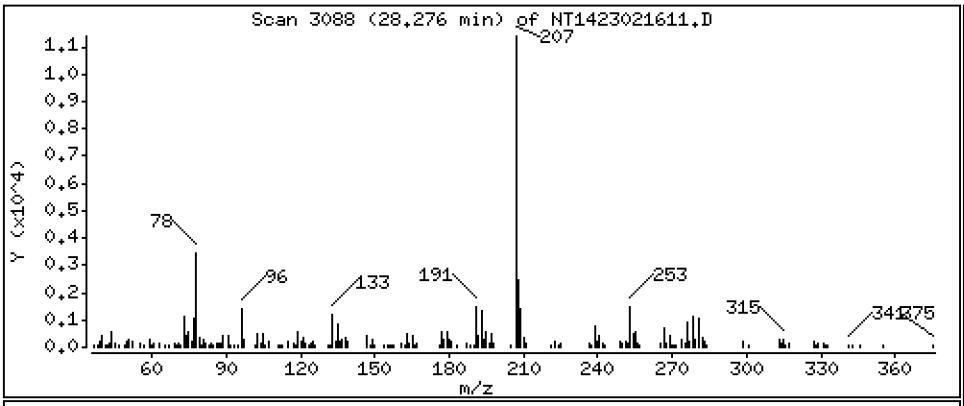
Operator: DSD

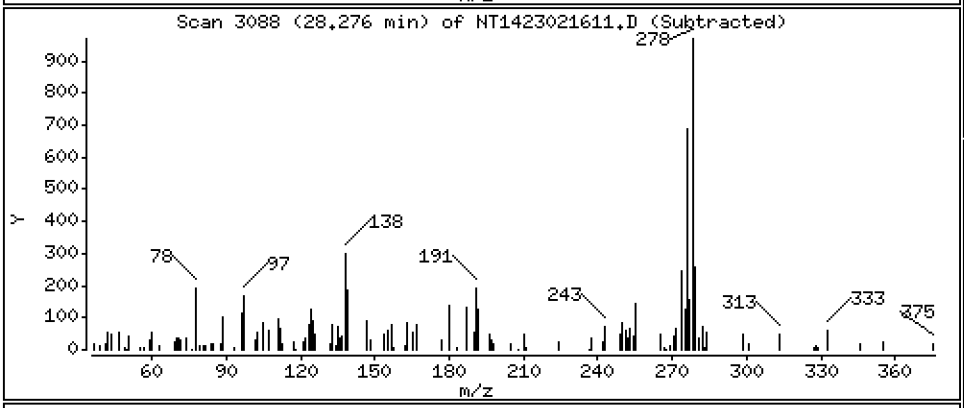
Column phase: ZB-5msi

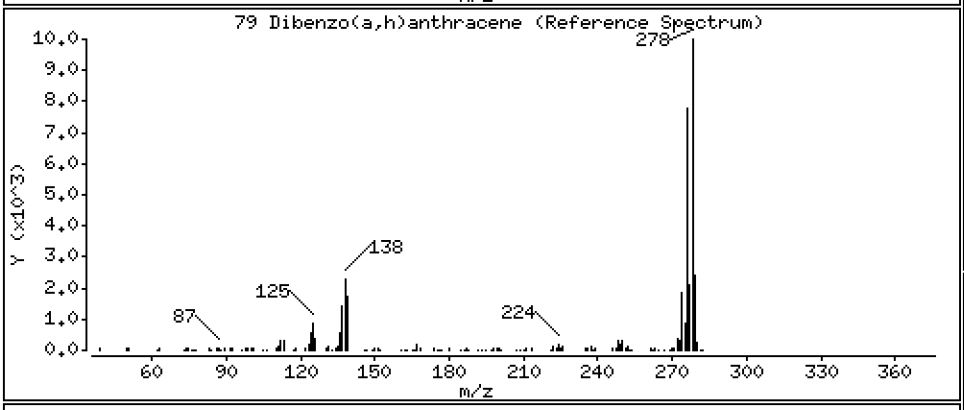
Column diameter: 0.25

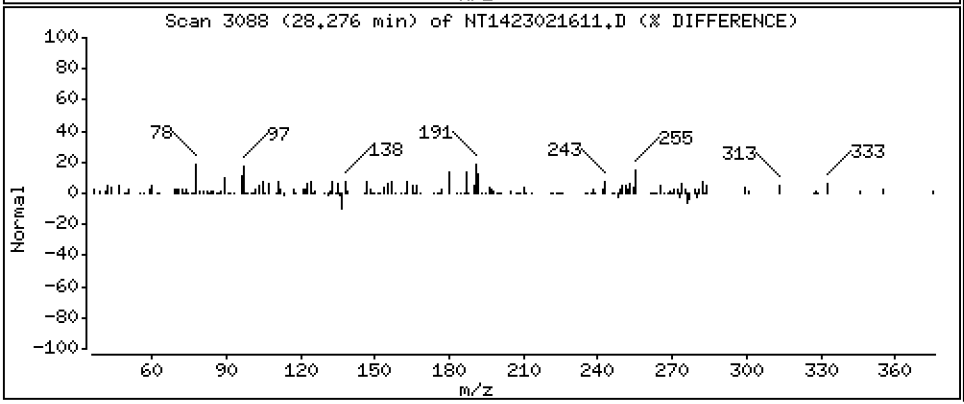
79 Dibenzo(a,h)anthracene

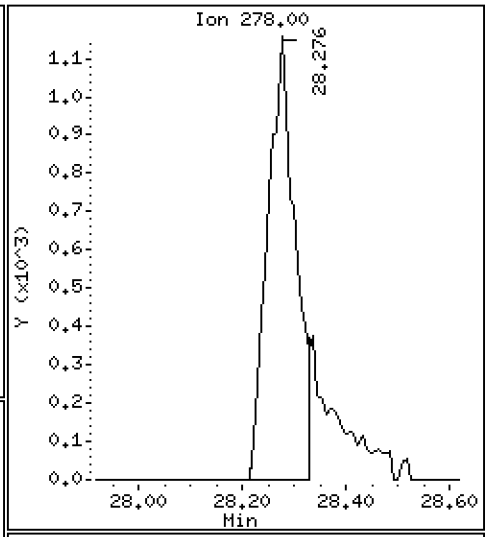
Concentration: 0.03572 ug/mL

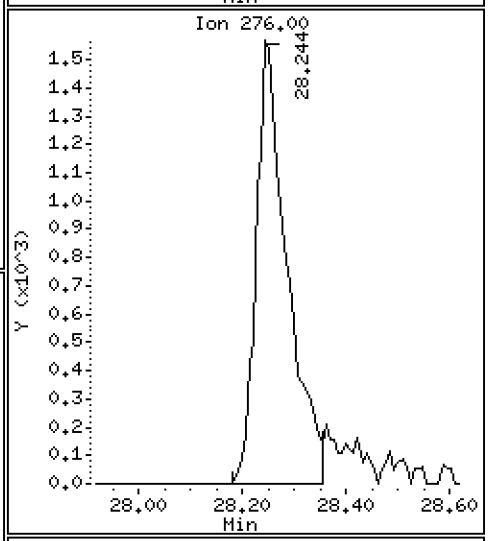


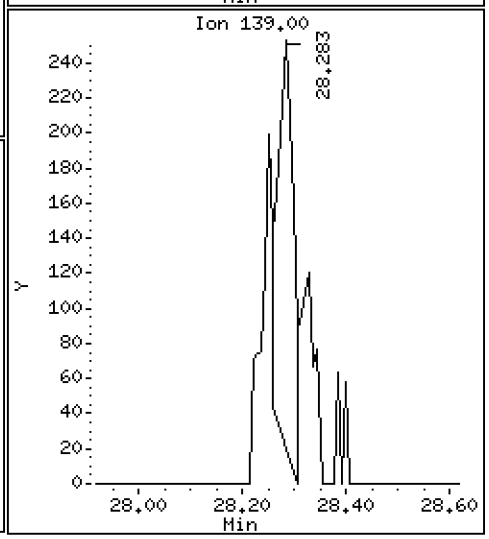












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021611.D

Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

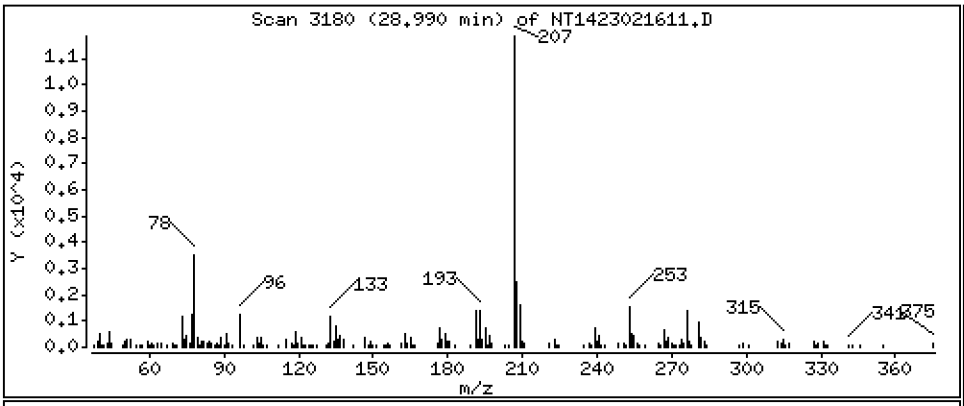
Operator: DSD

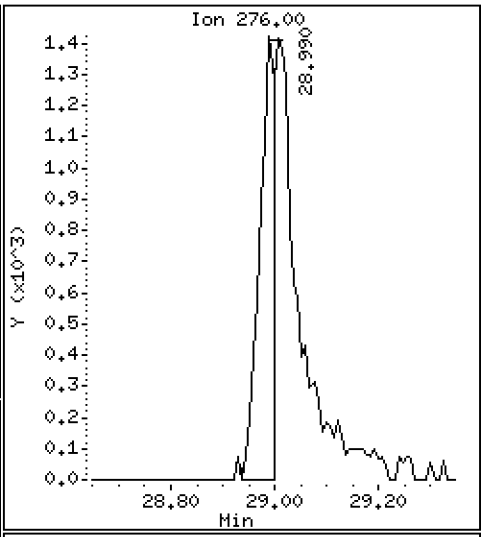
Column phase: ZB-5msi

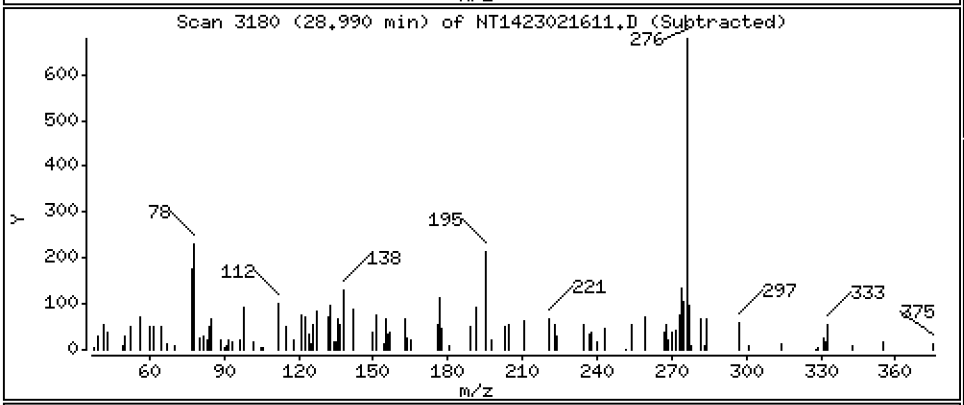
Column diameter: 0.25

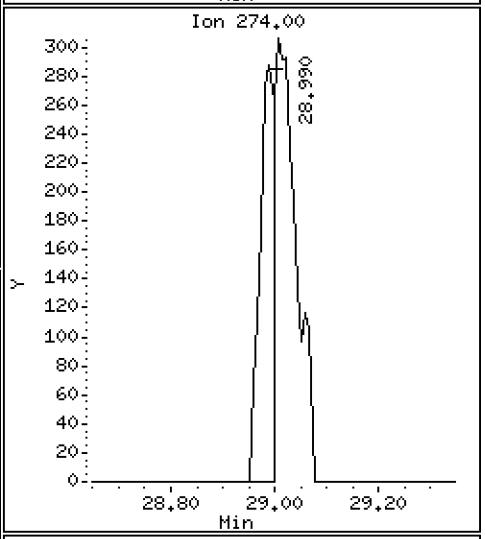
80 Benzo(g,h,i)perylene

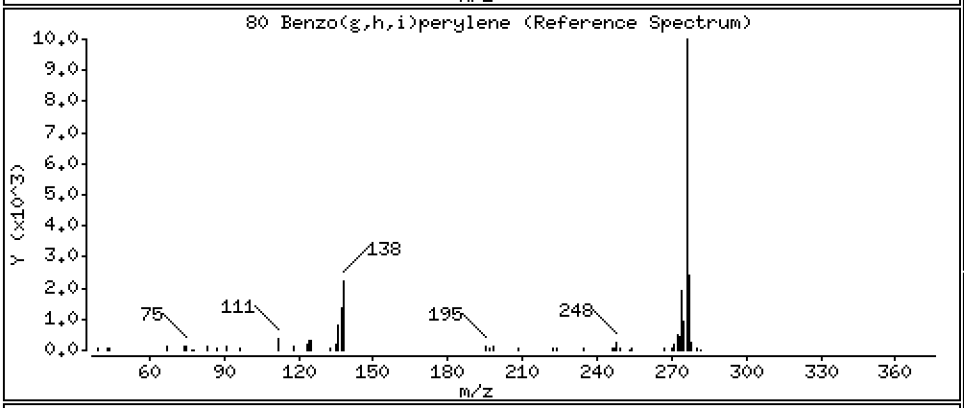
Concentration: 0.02333 ug/mL

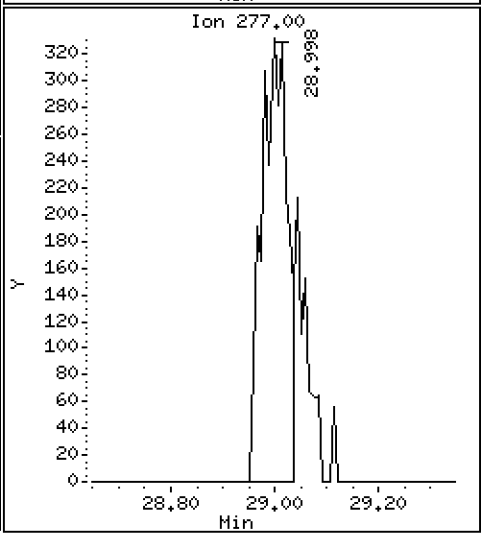


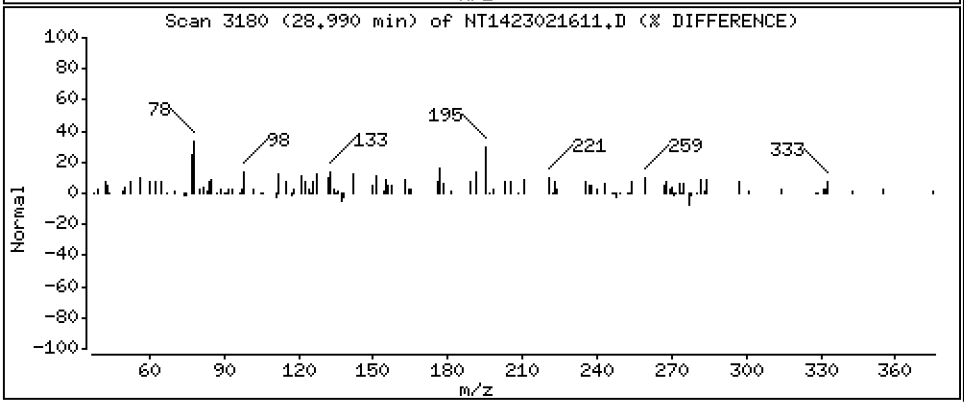












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

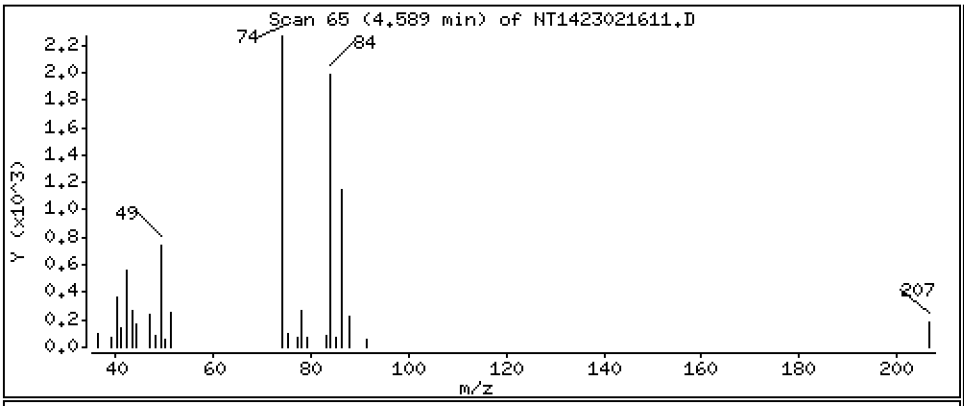
Operator: DSD

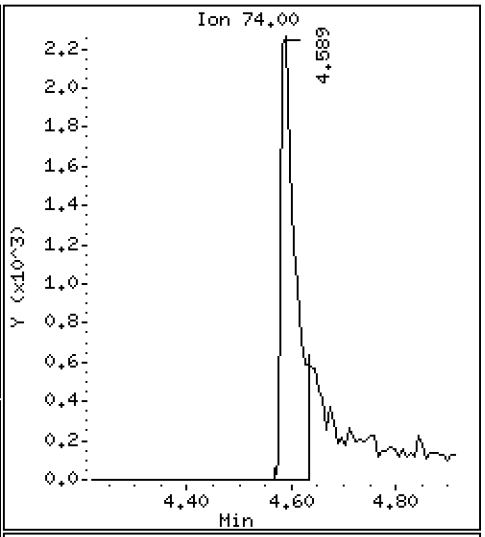
Column phase: ZB-5msi

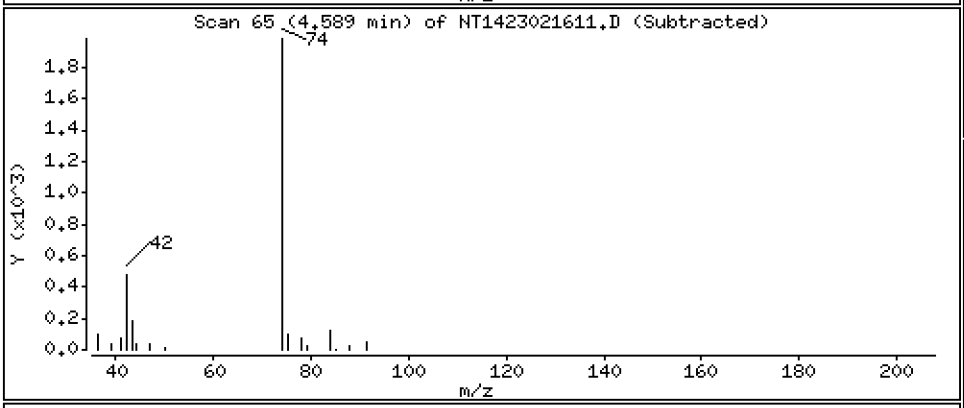
Column diameter: 0.25

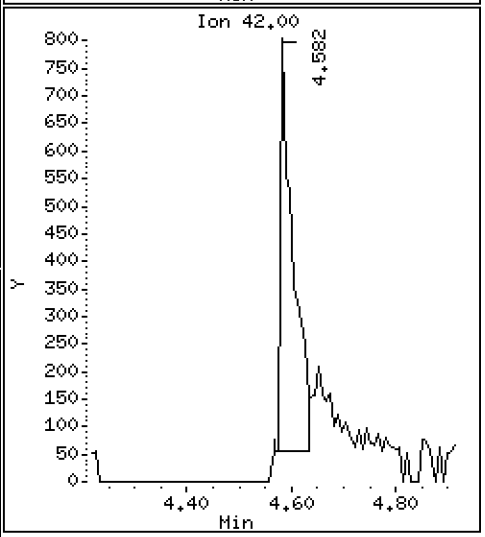
90 N-Nitrosodimethylamine

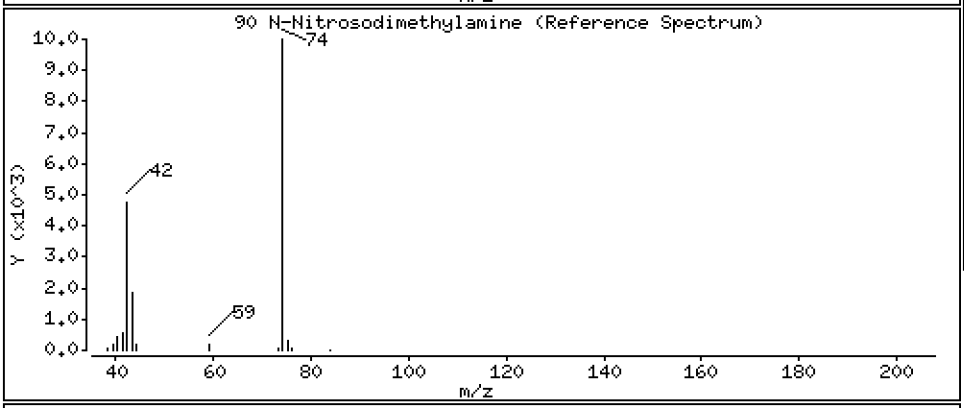
Concentration: 0.07113 ug/mL

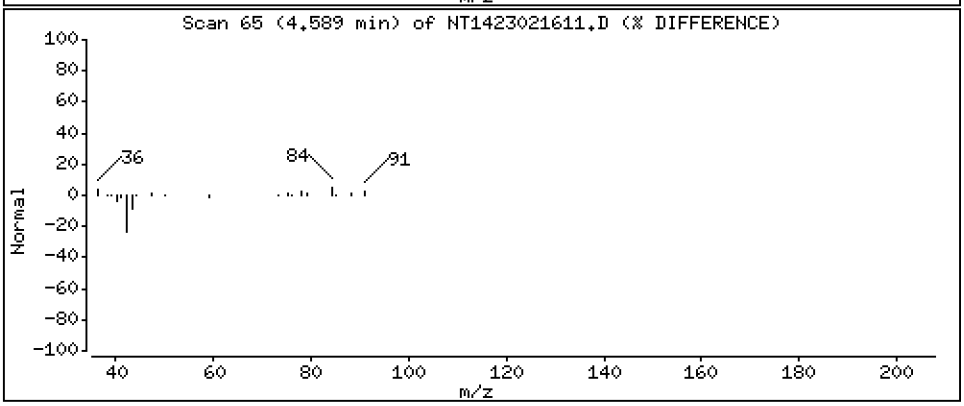












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021611.D

Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

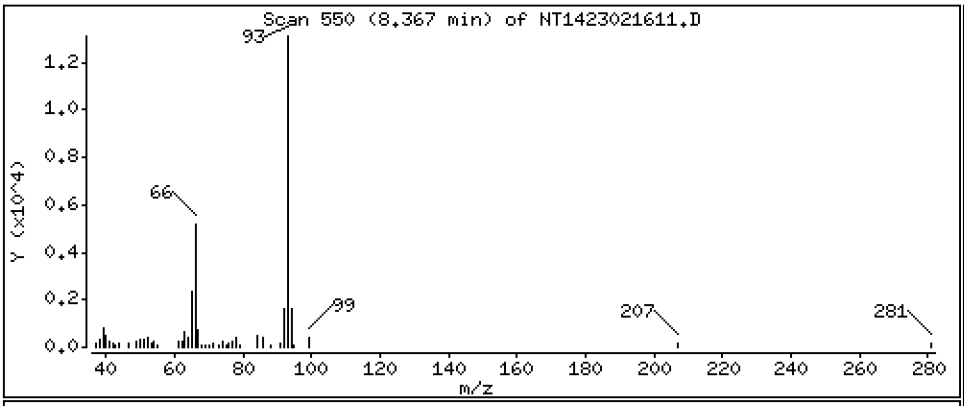
Operator: DSD

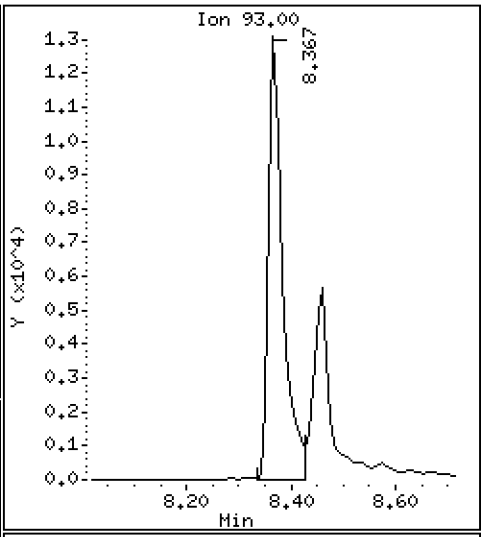
Column phase: ZB-5msi

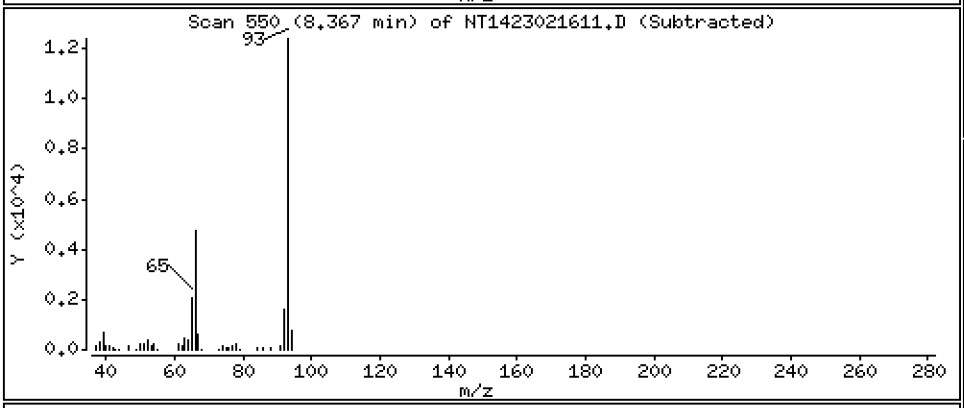
Column diameter: 0.25

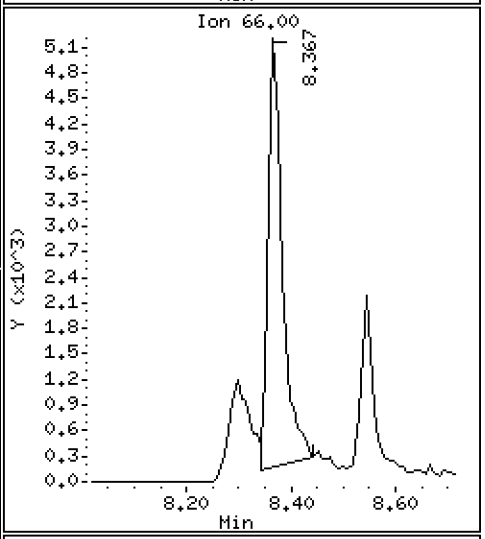
91 Aniline

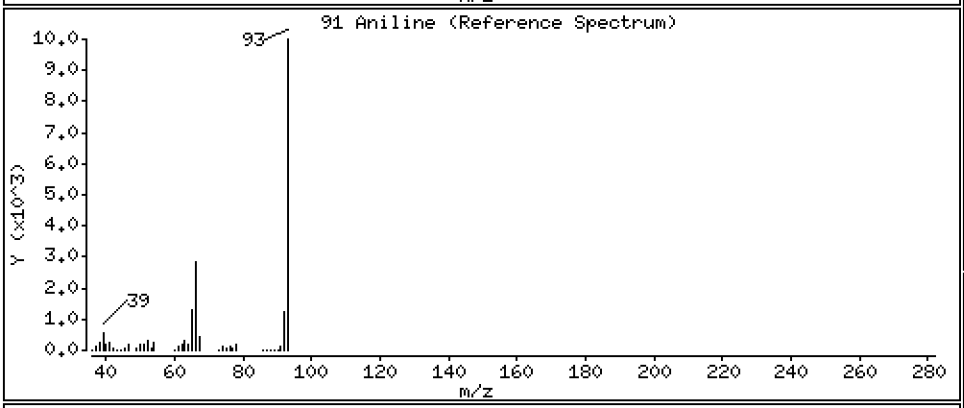
Concentration: 0.1543 ug/mL

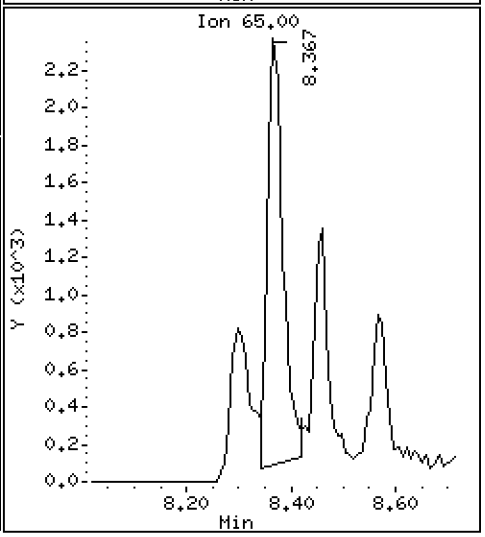


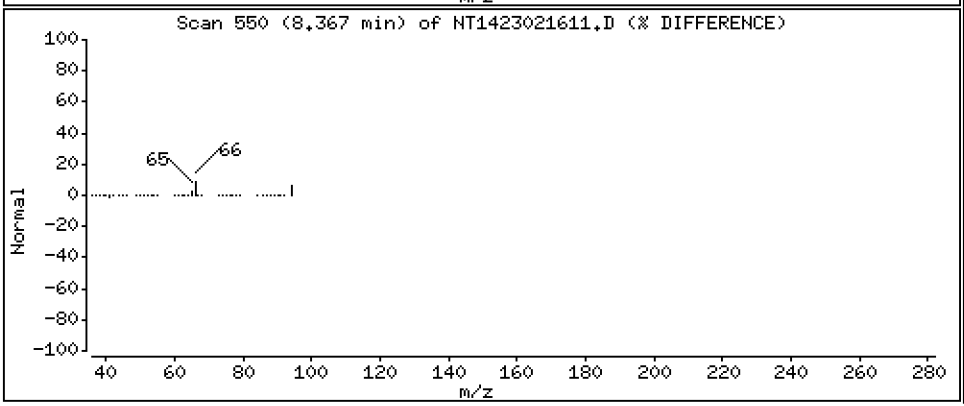












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021611.D

Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

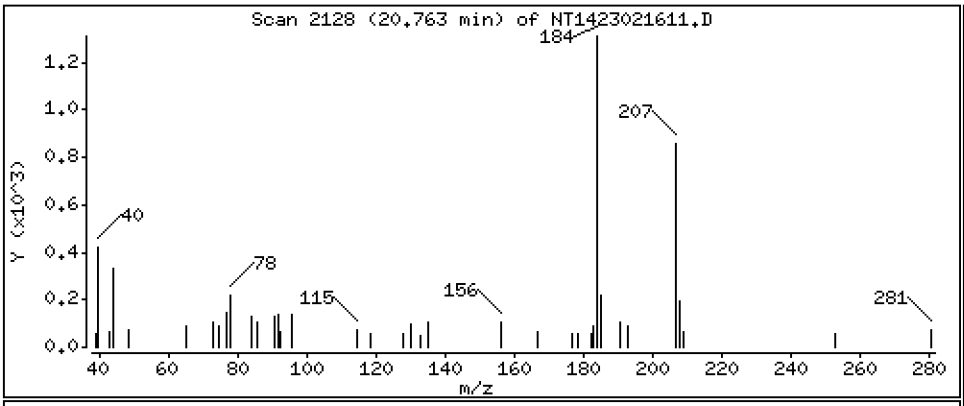
Operator: DSD

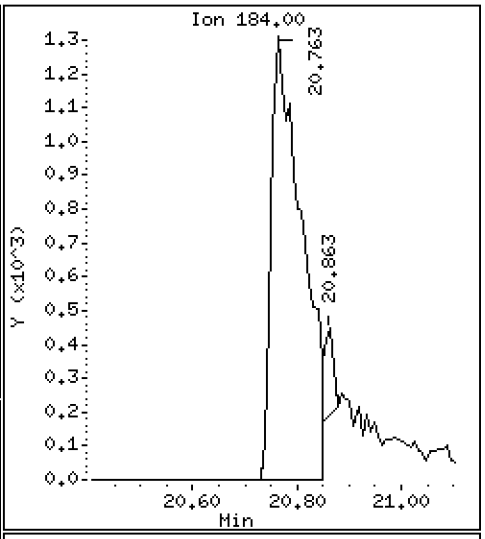
Column phase: ZB-5msi

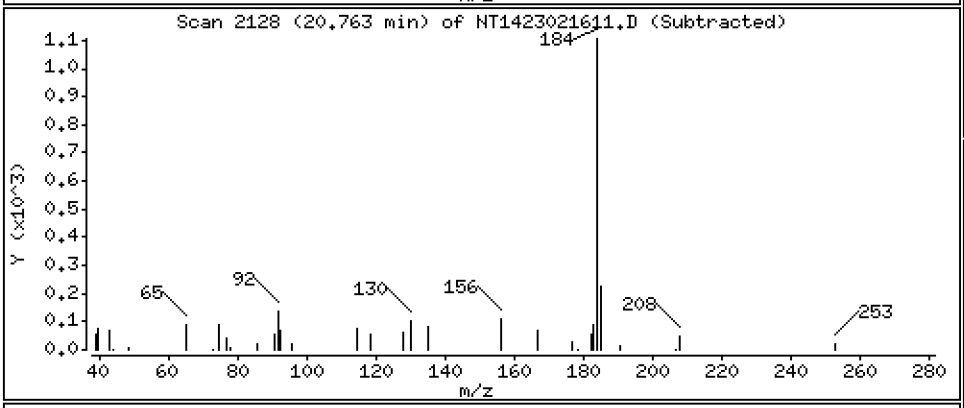
Column diameter: 0.25

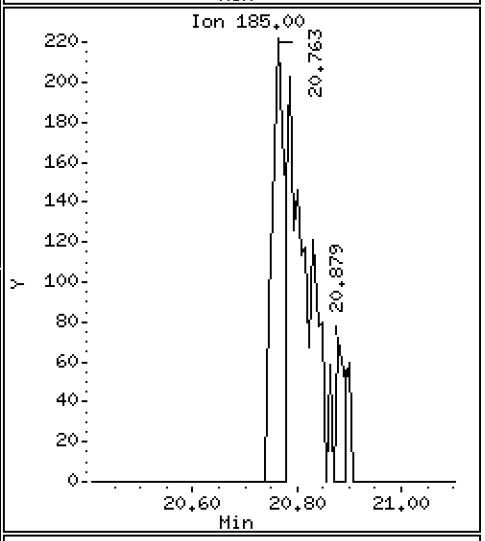
93 Benzidine

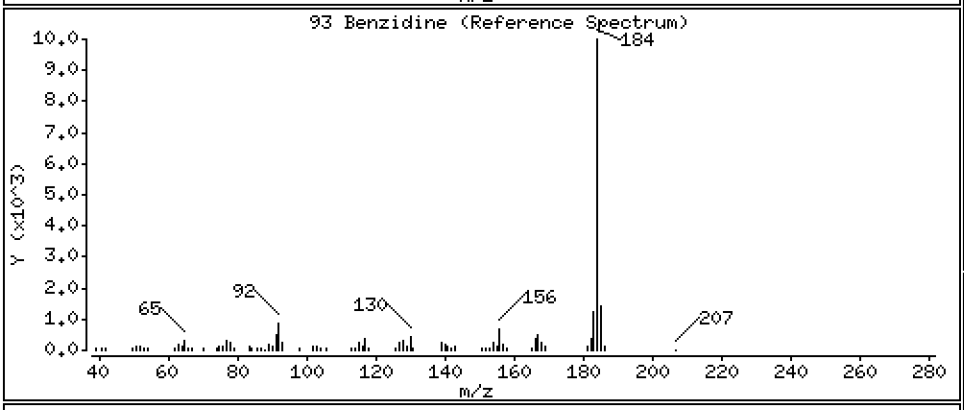
Concentration: 0.05115 ug/mL

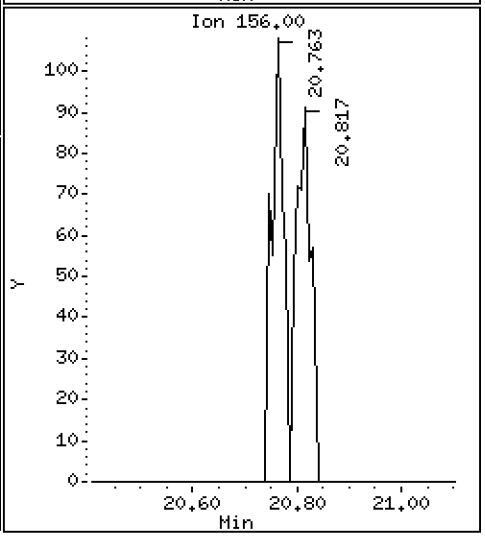


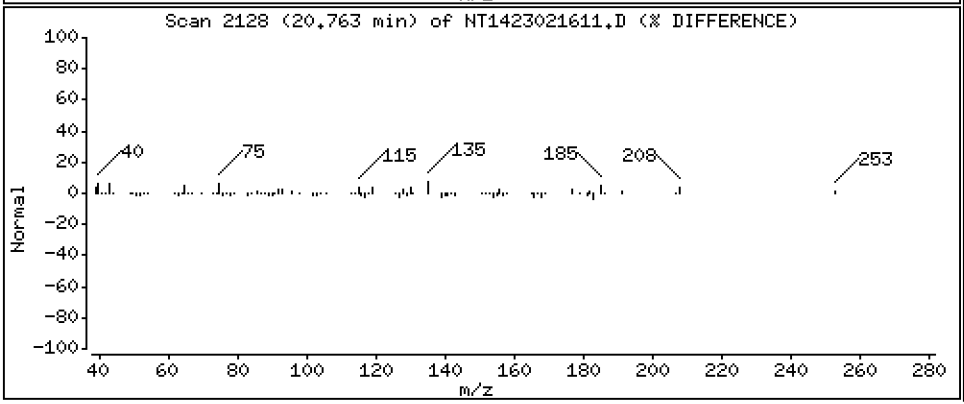












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021611.D

Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

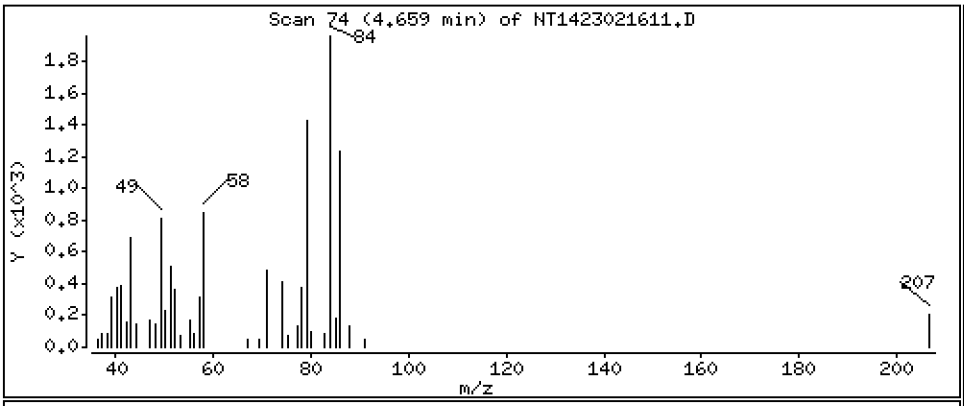
Operator: DSD

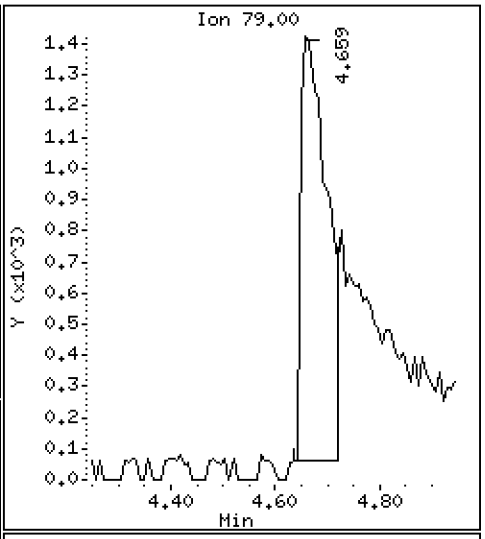
Column phase: ZB-5msi

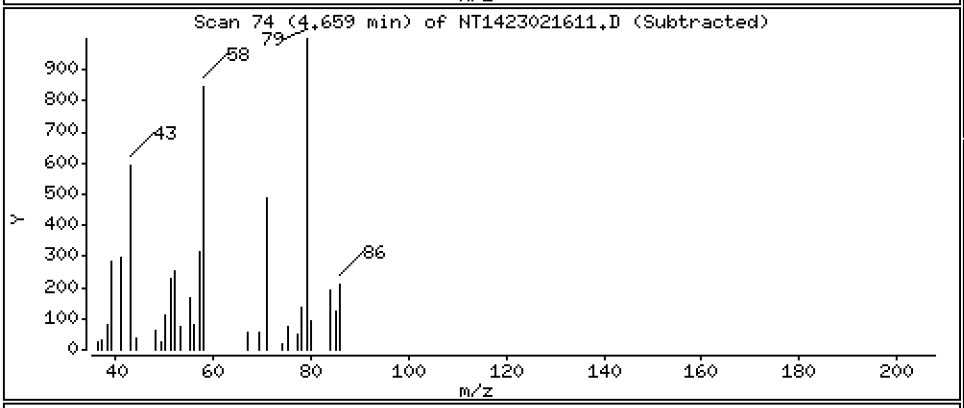
Column diameter: 0.25

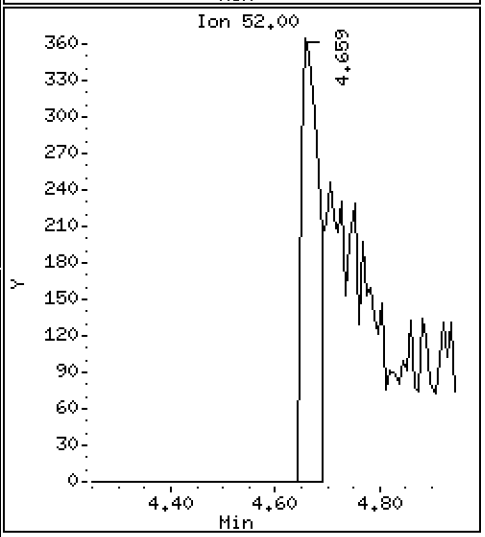
103 Pyridine

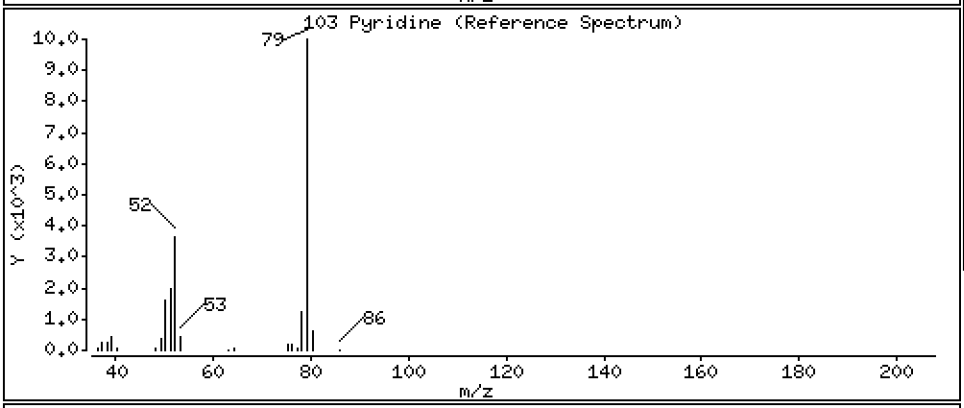
Concentration: 0.04452 ug/mL

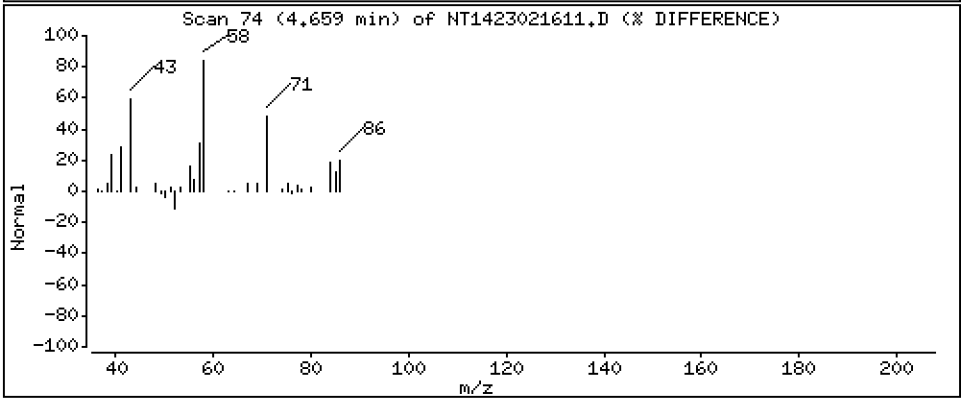












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021611.D

Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

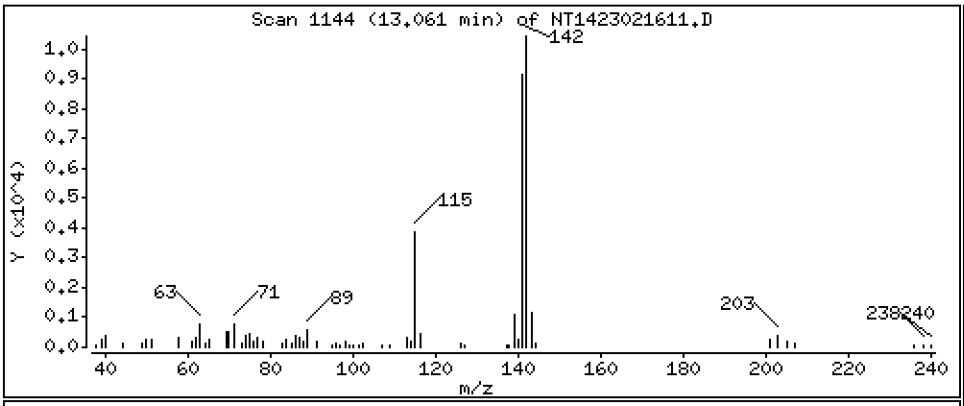
Operator: DSD

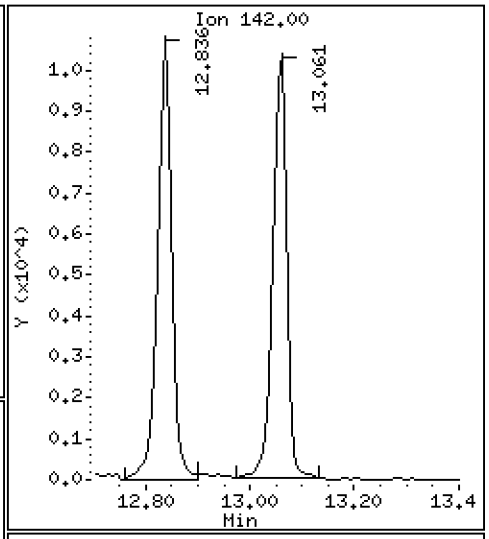
Column phase: ZB-5msi

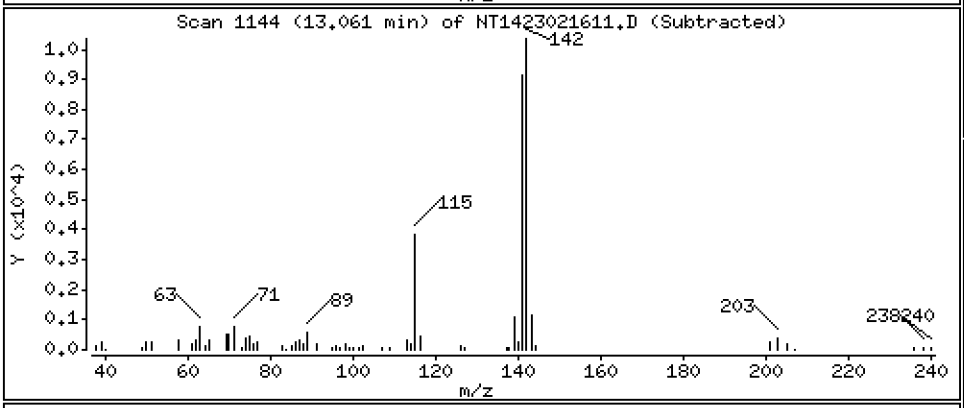
Column diameter: 0.25

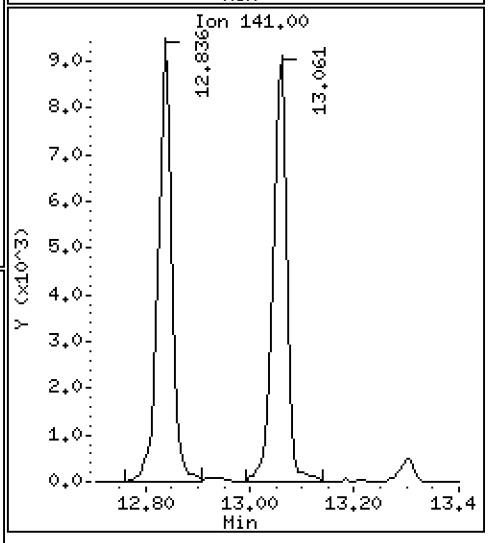
105 1-methylnaphthalene

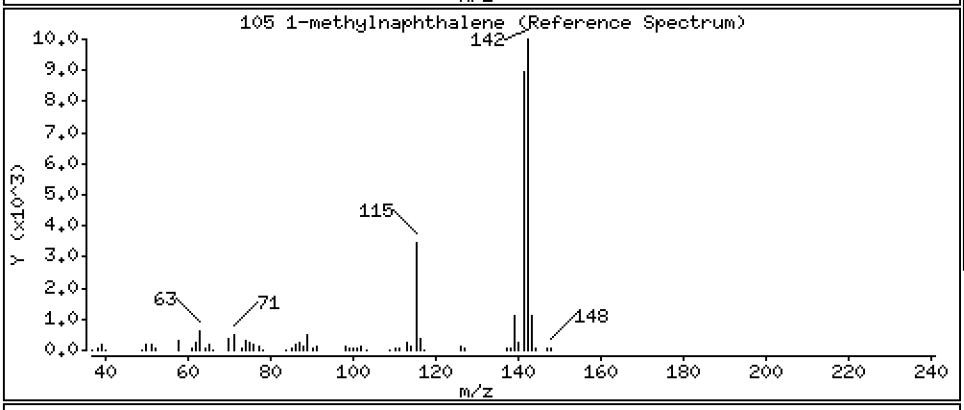
Concentration: 0.09171 ug/mL

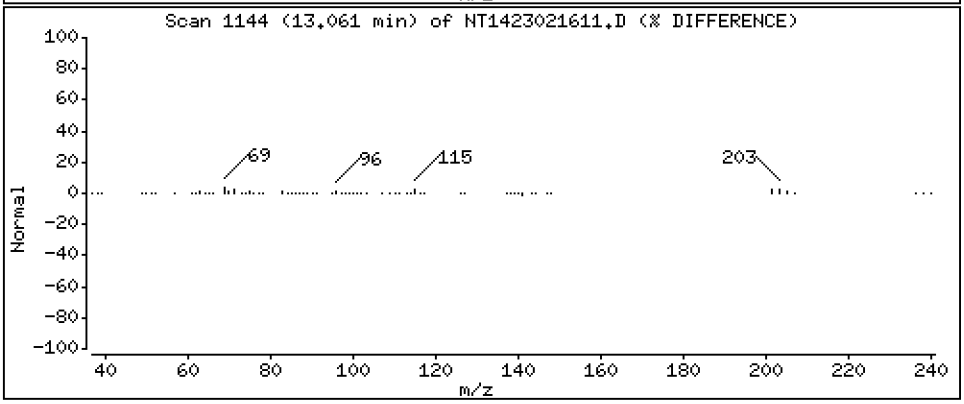












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021611.D

Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

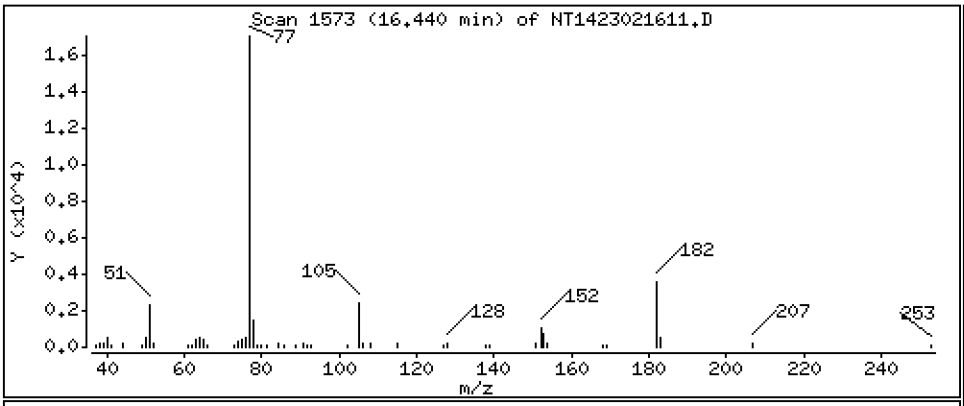
Operator: DSD

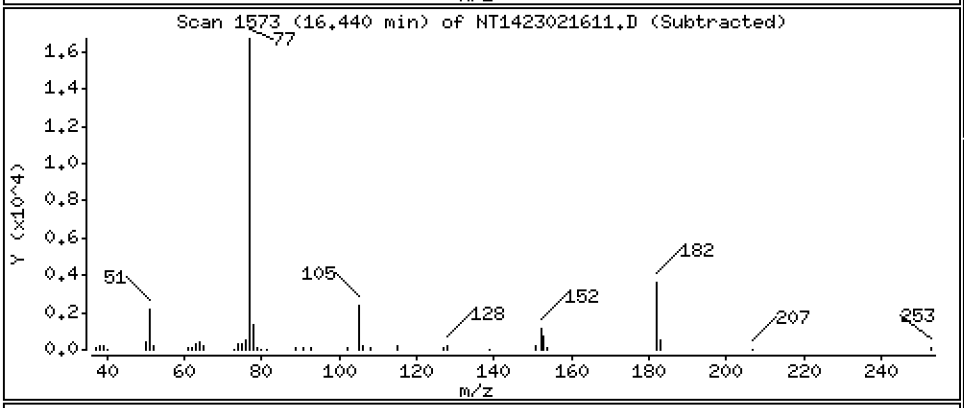
Column phase: ZB-5msi

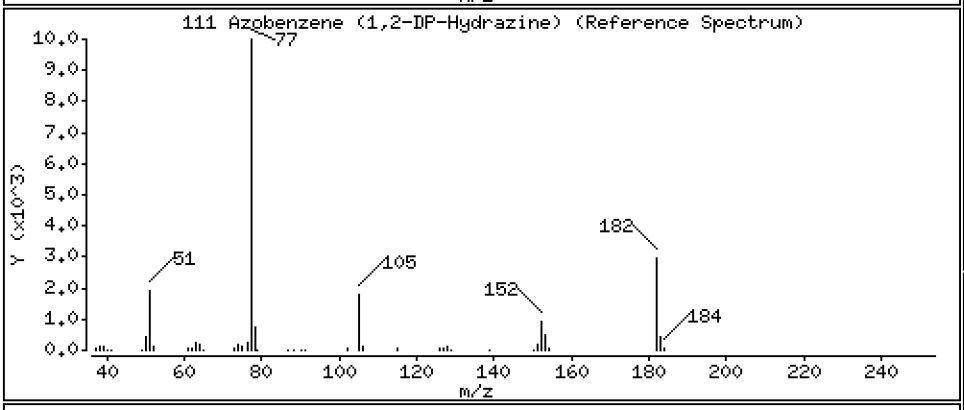
Column diameter: 0.25

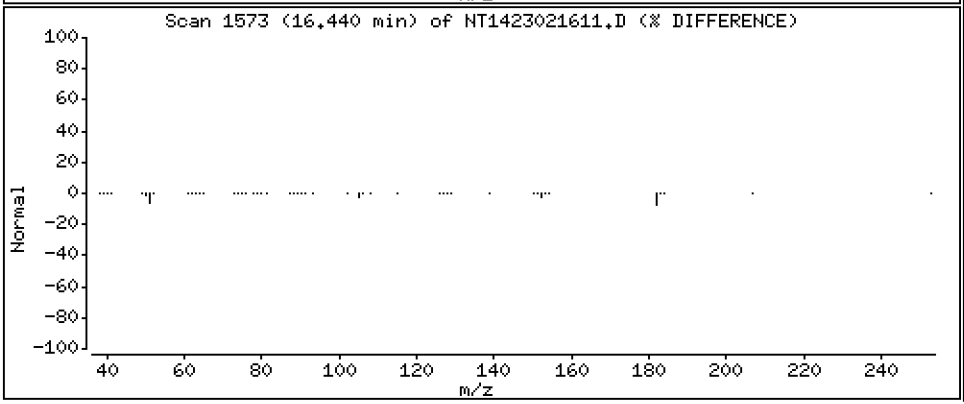
111 Azobenzene (1,2-DP-Hydrazine)

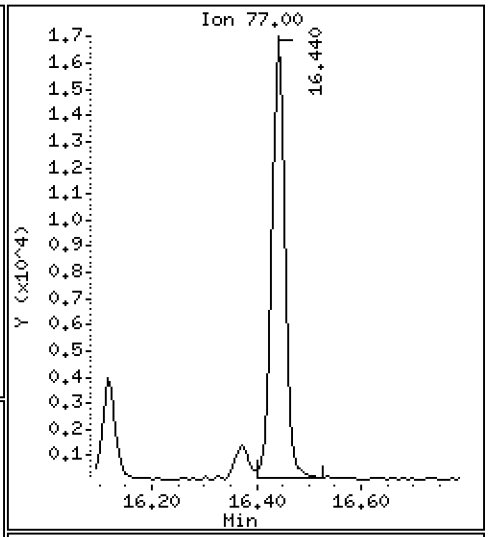
Concentration: 0.08155 ug/mL

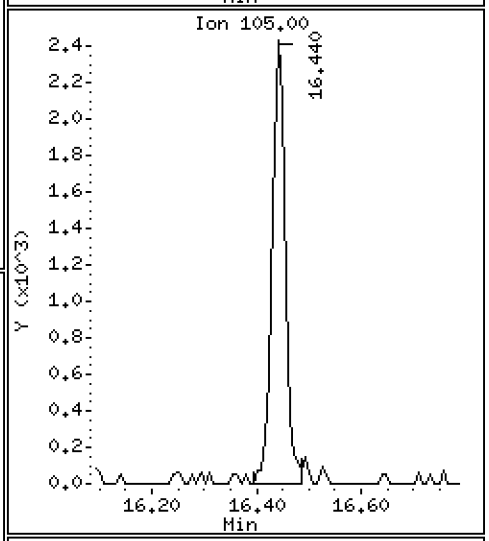


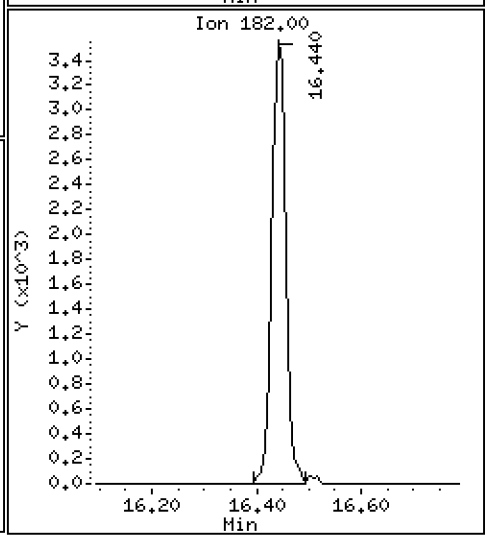












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Date : 16-FEB-2023 20:06

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.1

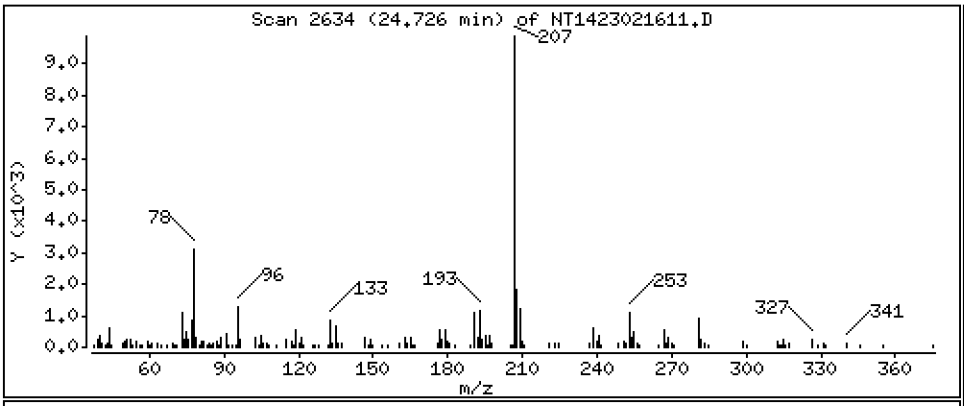
Operator: DSD

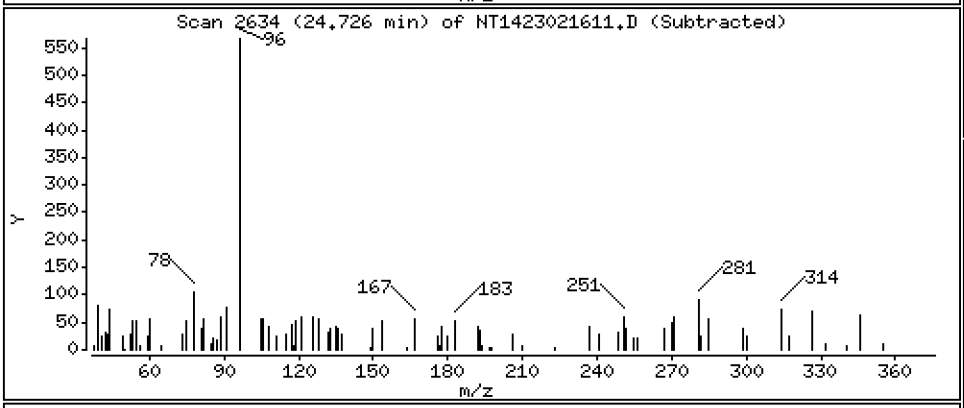
Column phase: ZB-5msi

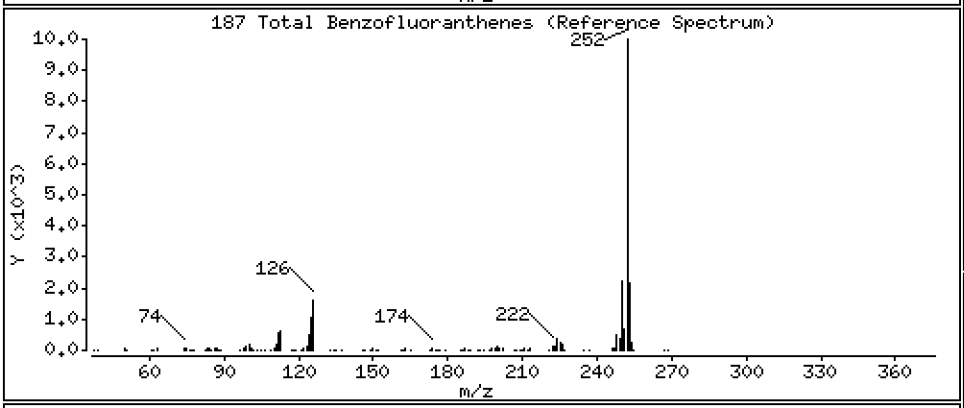
Column diameter: 0.25

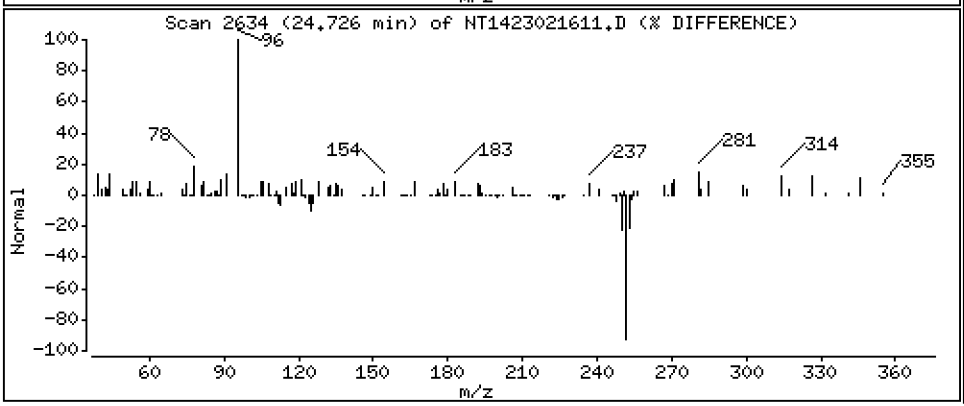
187 Total Benzofluoranthenes

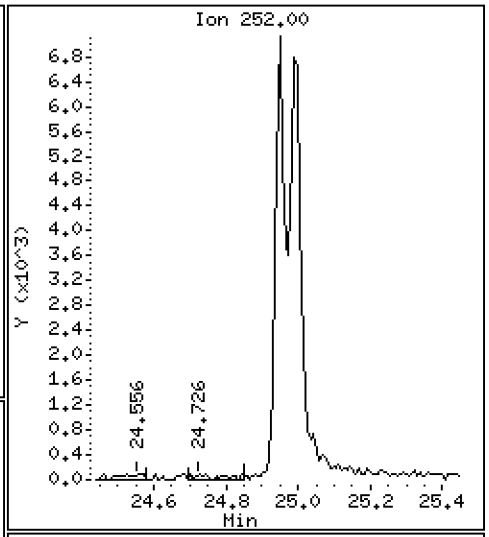
Concentration: 0.002374 ug/mL

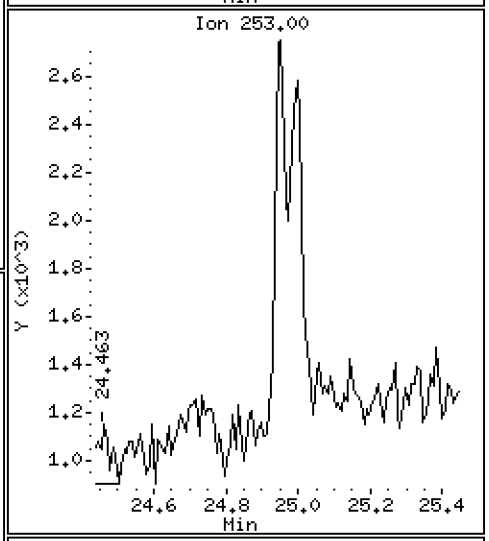


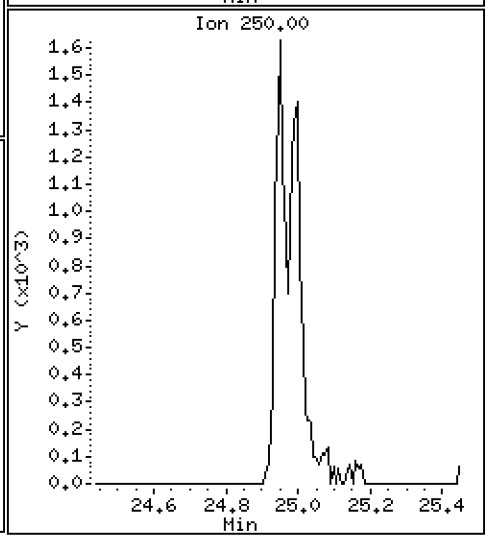












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

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Operator : DSD Inst ID: nt14.i
Smp Info : SIM 0.1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Meth Date : 17-Feb-2023 15:05 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.705	6.682	(0.753)	2102	0.02433	0.02433
$	2 Phenol-d5	99	8.273	8.266	(0.930)	12864	0.09385	0.09385
	3 Phenol	94	8.297	8.289	(0.932)	8569	0.05905	0.05905
$	5 2-Chlorophenol-d4	132	8.544	8.536	(0.960)	9624	0.09840	0.09840
	4 Bis(2-Chloroethyl)ether	93	8.459	8.451	(0.950)	9594	0.08655	0.08655
	6 2-Chlorophenol	128	8.575	8.567	(0.963)	7047	0.06896	0.06896
	7 1,3-Dichlorobenzene	146	8.931	8.838	(1.003)	10480	0.09212	0.09212
*	8 1,4-Dichlorobenzene-d4	152	8.900	8.900	(1.000)	323228	4.00000	
	9 1,4-Dichlorobenzene	146	8.931	8.931	(1.003)	10480	0.09707	0.09707
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	9.288	9.288	(1.044)	10012	0.09276	0.09276
	11 Benzyl alcohol	108	8.900	9.202	(1.000)	1605	0.01970	0.01970
	14 2,2'-oxybis(1-Chloropropane)	121	9.482	9.482	(1.065)	2228	0.07216	0.07216
	13 2-Methylphenol	108	9.264	9.404	(1.041)	1523	0.01503	0.01503
	17 Hexachloroethane	117	9.878	9.878	(1.110)	4141	0.08822	0.08822
	16 N-Nitroso-di-n-propylamine	70	9.754	9.738	(1.096)	6278	0.06806	0.06806
	15 4-Methylphenol	108	9.420	9.684	(1.058)	7285	0.06809	0.06809
$	18 Nitrobenzene-d5	82	10.010	10.002	(0.879)	10667	0.08007	0.08007
	19 Nitrobenzene	77	10.041	10.033	(0.882)	10401	0.07780	0.07780
	20 Isophorone	82	10.499	10.491	(0.922)	10805	0.06126	0.06126
	21 2-Nitrophenol	139	10.708	10.677	(0.940)	170	0.00285	0.002847
	22 2,4-Dimethylphenol	107	10.731	10.724	(0.942)	16506	0.16350	0.1635
	23 Bis(2-Chloroethoxy)methane	93	10.933	10.925	(0.960)	7794	0.06793	0.06793
	24 Benzoic acid	105	11.389	10.879	(1.000)	1148	0.01812	0.01812
	25 2,4-Dichlorophenol	162	11.142	11.127	(0.978)	6534	0.07562	0.07562
	26 1,2,4-Trichlorobenzene	180	11.304	11.305	(0.993)	9914	0.09472	0.09472
*	27 Naphthalene-d8	136	11.389	11.389	(1.000)	1153158	4.00000	
	28 Naphthalene	128	11.428	11.428	(1.003)	26657	0.09375	0.09375
	29 4-Chloroaniline	127	11.590	11.575	(1.018)	17115	0.14089	0.1409
	30 Hexachlorobutadiene	225	11.799	11.799	(1.036)	6136	0.09510	0.09510
	31 4-Chloro-3-methylphenol	107	12.557	12.542	(1.103)	9681	0.10352	0.1035
	32 2-Methylnaphthalene	142	12.836	12.836	(1.127)	20011	0.09397	0.09397
	33 Hexachlorocyclopentadiene	237	13.300	13.301	(0.886)	7697	0.11458	0.1146
	34 2,4,6-Trichlorophenol	196	13.478	13.463	(0.897)	2437	0.03568	0.03568

		QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	35 2,4,5-Trichlorophenol	196	13.563	13.541	(0.903)	2169	0.02933	0.02933
$	36 2-Fluorobiphenyl	172	13.625	13.617	(0.907)	24607	0.09919	0.09919
	37 2-Chloronaphthalene	162	13.826	13.826	(0.921)	18663	0.09217	0.09217
	38 2-Nitroaniline	65	14.105	14.097	(0.939)	7597	0.11539	0.1154
	39 Dimethylphthalate	163	14.538	14.531	(0.968)	17605	0.08312	0.08312
	40 Acenaphthylene	152	14.701	14.701	(0.979)	28290	0.09160	0.09160
	41 2,6-Dinitrotoluene	165	14.670	14.670	(0.977)	6543	0.13128	0.1313
*	42 Acenaphthene-d10	164	15.018	15.018	(1.000)	693417	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	15.080	15.080	(1.004)	17785	0.09618	0.09618
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	15.412	15.405	(1.026)	28716	0.09458	0.09458
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	15.482	15.475	(1.031)	6308	0.08952	0.08952
	50 Diethylphthalate	149	15.992	15.984	(1.065)	20633	0.07328	0.07328
	49 Fluorene	166	16.123	16.124	(1.074)	28890	0.09099	0.09099
	51 4-Chlorophenyl-phenylether	204	16.116	16.116	(1.073)	16208	0.09547	0.09547
	52 4-Nitroaniline	138	16.247	16.224	(1.082)	2547	0.04197	0.04197
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	16.370	16.370	(0.907)	15202	0.07580	0.07580
$	55 2,4,6-Tribromophenol	330	16.671	16.663	(1.110)	464	0.01166	0.01166
	56 4-Bromophenyl-phenylether	248	17.126	17.118	(0.949)	7245	0.08111	0.08111
	57 Hexachlorobenzene	284	17.435	17.434	(0.966)	7525	0.08291	0.08291
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.054	18.054	(1.000)	1395554	4.00000	
	60 Phenanthrene	178	18.101	18.101	(1.003)	31898	0.09512	0.09512
	61 Anthracene	178	18.193	18.193	(1.008)	25896	0.07794	0.07794
	62 Carbazole	167	18.542	18.534	(1.027)	19634	0.06512	0.06512
	63 Di-n-butylphthalate	149	19.346	19.346	(1.072)	17366	0.05157	0.05157
	64 Fluoranthene	202	20.499	20.499	(0.887)	30258	0.07893	0.07893
	65 Pyrene	202	20.925	20.925	(0.905)	35075	0.08653	0.08653
$	66 Terphenyl-d14	244	21.219	21.219	(0.918)	25821	0.08972	0.08972
	67 Butylbenzylphthalate	149	22.148	22.148	(0.958)	4887	0.03658	0.03658
	68 Benzo(a)anthracene	228	23.092	23.092	(0.999)	24122	0.08484	0.08484
*	69 Chrysene-d12	240	23.123	23.123	(1.000)	888516	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.061	23.054	(0.997)	8840	0.10156	0.1016
	71 Chrysene	228	23.162	23.162	(1.002)	24543	0.09597	0.09597
	72 bis(2-Ethylhexyl)phthalate	149	23.178	23.178	(0.960)	5615	0.03459	0.03459
*	134 Di-n-octylphthalate-d4	153	24.153	24.153	(1.000)	942766	4.00000	
	73 Di-n-octylphthalate	149	24.161	24.161	(1.000)	21606	0.09801	0.09801
	74 Benzo(b)fluoranthene	252	24.950	24.943	(0.971)	14379	0.07678	0.07678
	75 Benzo(k)fluoranthene	252	24.950	24.989	(0.971)	14379	0.07185	0.07185
	76 Benzo(a)pyrene	252	25.578	25.578	(0.996)	10018	0.05649	0.05649
*	77 Perylene-d12	264	25.686	25.686	(1.000)	590195	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.244	28.244	(1.100)	6537	0.04483	0.04483
	79 Dibenzo(a,h)anthracene	278	28.275	28.267	(1.101)	4292	0.03572	0.03572
	80 Benzo(g,h,i)perylene	276	28.990	28.997	(1.129)	2758	0.02333	0.02333
	90 N-Nitrosodimethylamine	74	4.589	4.566	(0.516)	4759	0.07113	0.07113
	91 Aniline	93	8.366	8.358	(0.940)	23947	0.15428	0.1543
	93 Benzidine	184	20.762	20.754	(0.898)	5299	0.05115	0.05115
	103 Pyridine	79	4.658	4.597	(0.523)	4713	0.04452	0.04452
	105 1-methylnaphthalene	142	13.060	13.053	(1.147)	18334	0.09171	0.09171
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.440	16.440	(1.095)	27906	0.08155	0.08155
	187 Total Benzofluoranthenes	252	24.726	24.943	(0.963)	434	0.00237	0.002374
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021611.D
Lab Smp Id: SIM 0.1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 17:06
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	375798	187899	751596	323228	-13.99
27 Naphthalene-d8	1378169	689085	2756338	1153158	-16.33
42 Acenaphthene-d10	847135	423568	1694270	693417	-18.15
59 Phenanthrene-d10	1675180	837590	3350360	1395554	-16.69
69 Chrysene-d12	1073562	536781	2147124	888516	-17.24
134 Di-n-octylphthala	1344129	672065	2688258	942766	-29.86
77 Perylene-d12	721978	360989	1443956	590195	-18.25

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.90	8.40	9.40	8.90	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.07
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	-0.00
59 Phenanthrene-d10	18.05	17.55	18.55	18.05	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	-0.00
134 Di-n-octylphthala	24.15	23.65	24.65	24.15	-0.00
77 Perylene-d12	25.69	25.19	26.19	25.69	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021611.D

Lab ID: SIM 0.1
nt14.i, ABN.m, 16-FEB-2023 20:06

RT	CO-ELUTION COMPOUNDS
8.900	1,4-Dichlorobenzene-d4 and Benzyl alcohol
8.931	1,4-Dichlorobenzene and 1,3-Dichlorobenzene
24.951	Benzo(k)fluoranthene and Benzo(b)fluoranthene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.003	0.993	0.0105	1,3-Dichlorobenzene
1.000	1.034	-0.0340	Benzyl alcohol
1.041	1.057	-0.0157	2-Methylphenol
1.058	1.088	-0.0297	4-Methylphenol
1.000	0.000	1.0000	Benzoic acid
0.523	0.516	0.0069	Pyridine
0.963	0.971	-0.0084	Total Benzofluoranthenes

RRT check based on Ccal File: NT1423021610.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021612.D

Page 1

Date : 16-FEB-2023 20:42

Client ID:

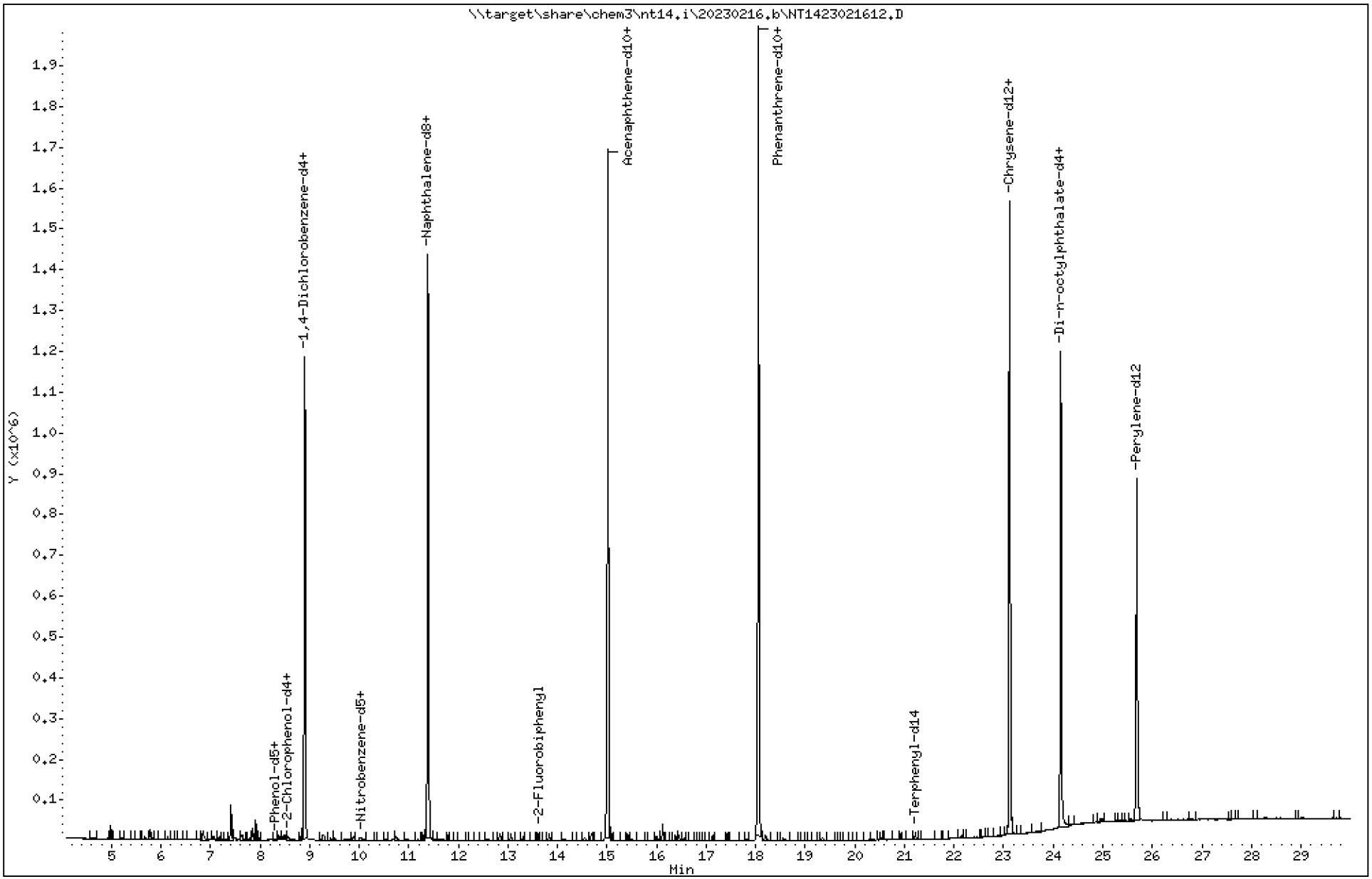
Instrument: nt14.i

Sample Info: SIM 0.05

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

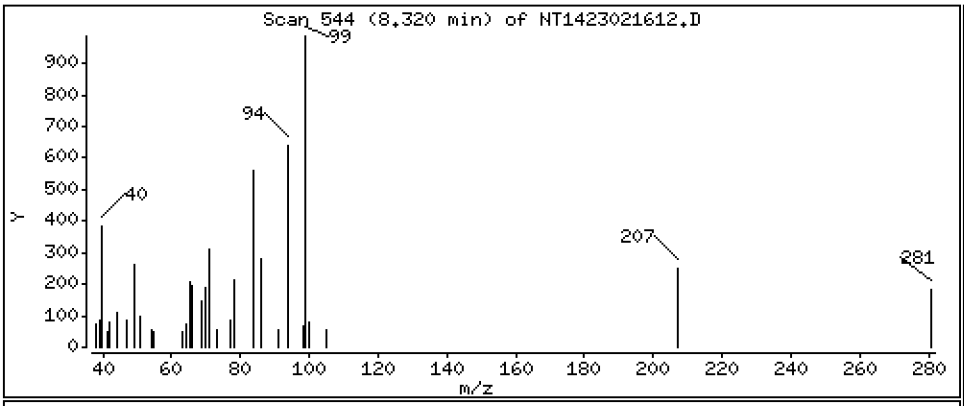
Operator: DSD

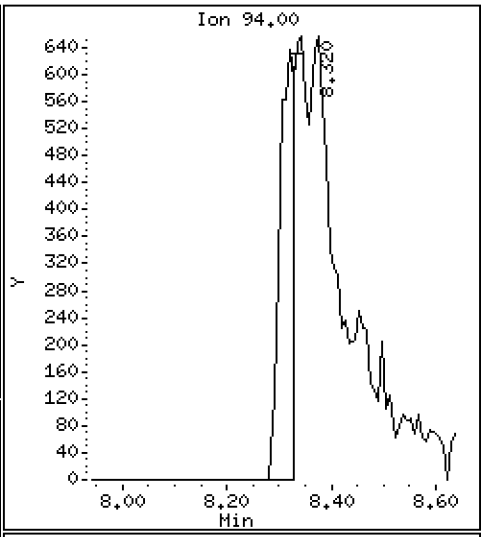
Column phase: ZB-5msi

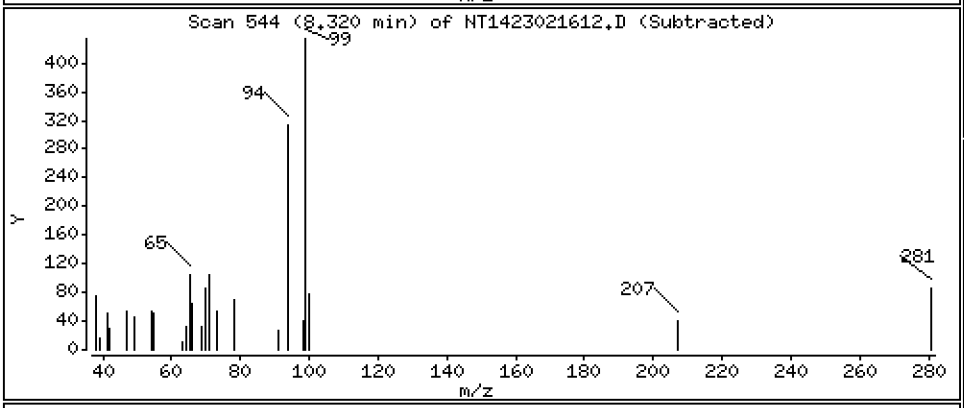
Column diameter: 0.25

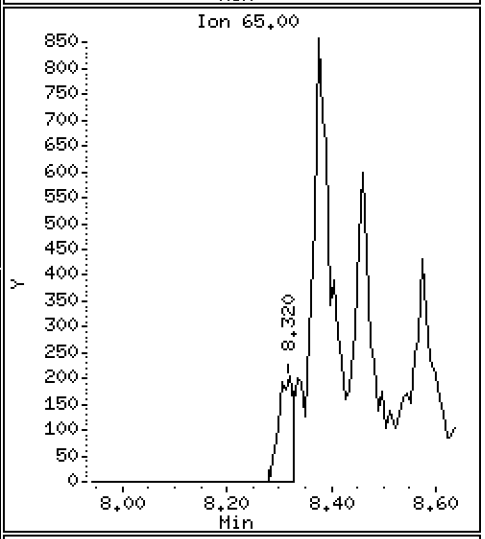
3 Phenol

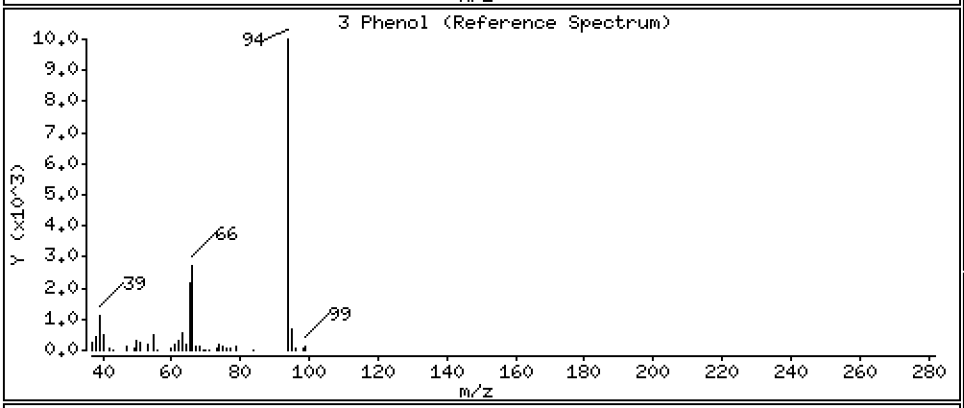
Concentration: 0.008833 ug/mL

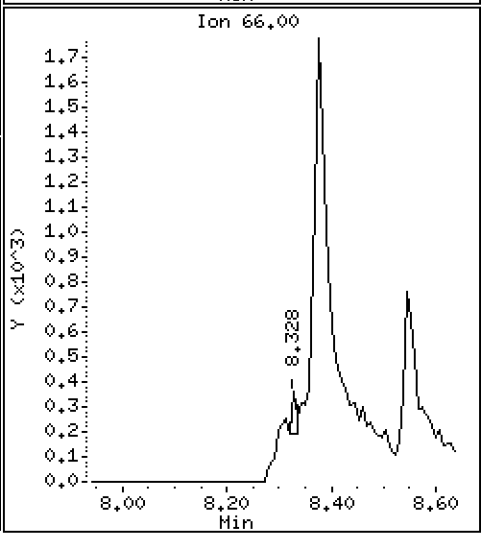


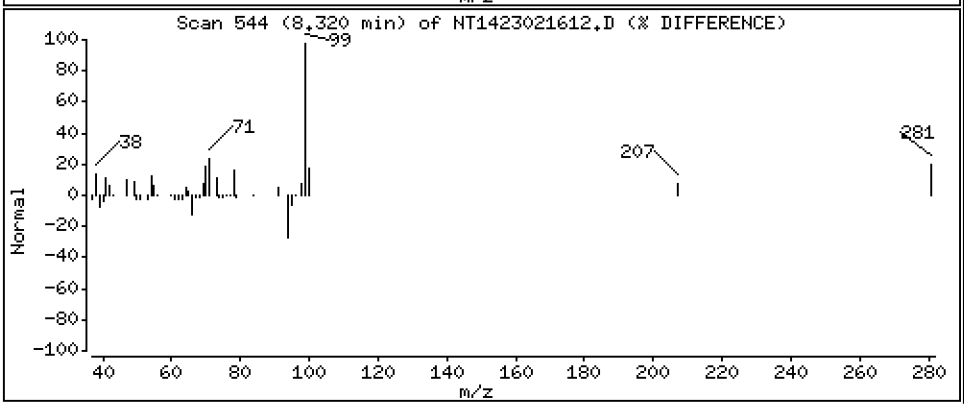












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

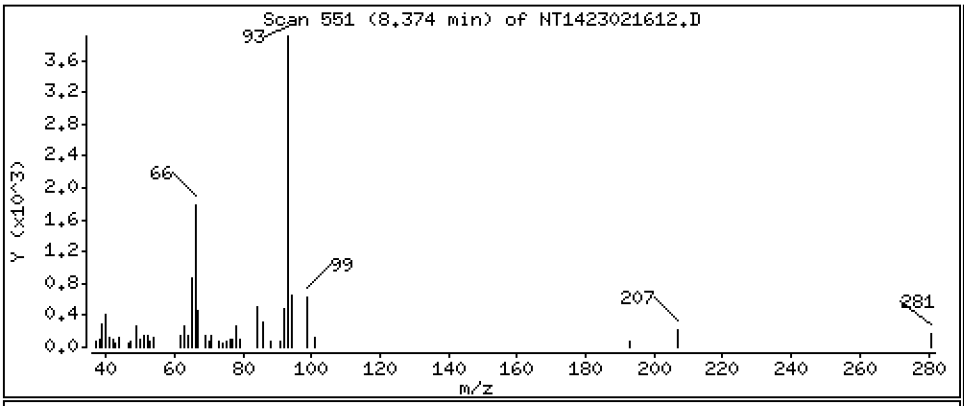
Operator: DSD

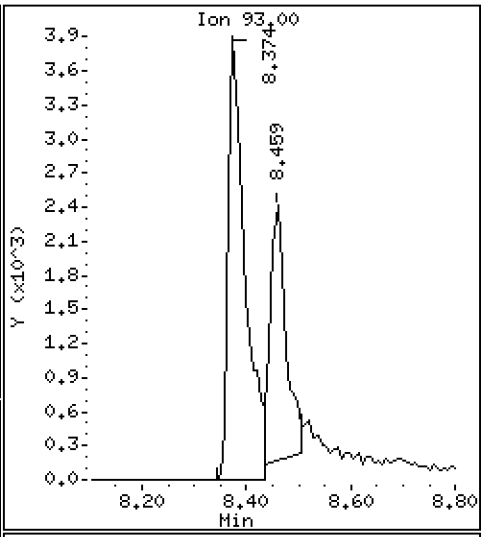
Column phase: ZB-5msi

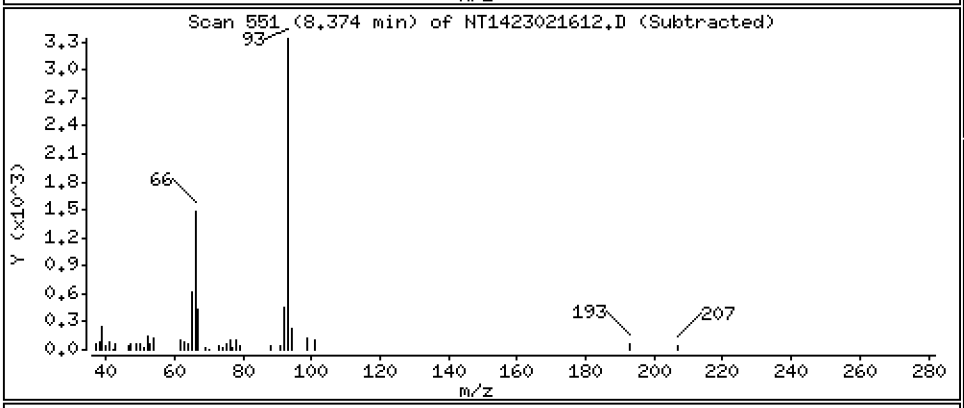
Column diameter: 0.25

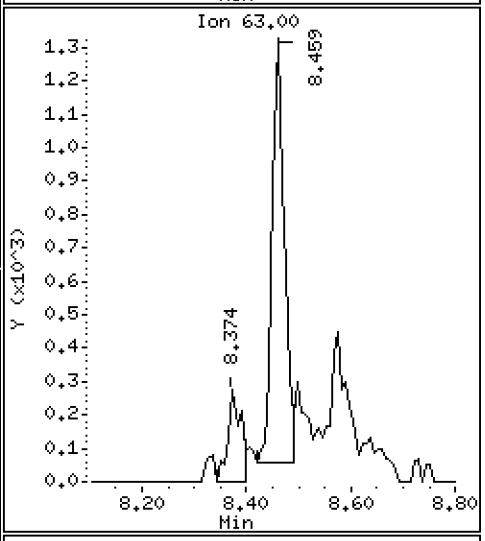
4 Bis(2-Chloroethyl)ether

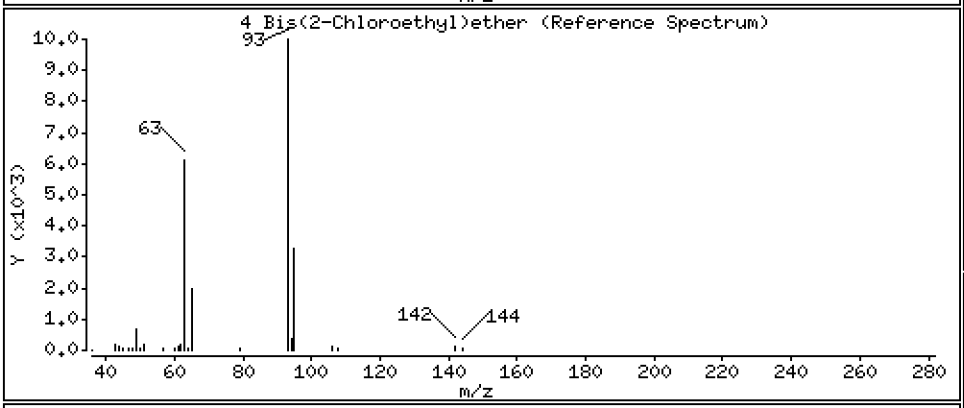
Concentration: 0.07728 ug/mL

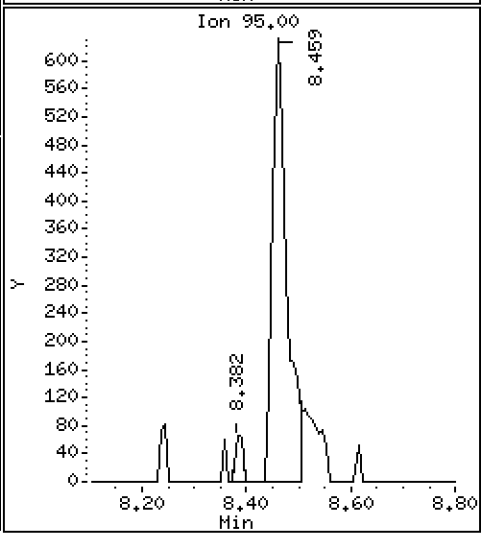


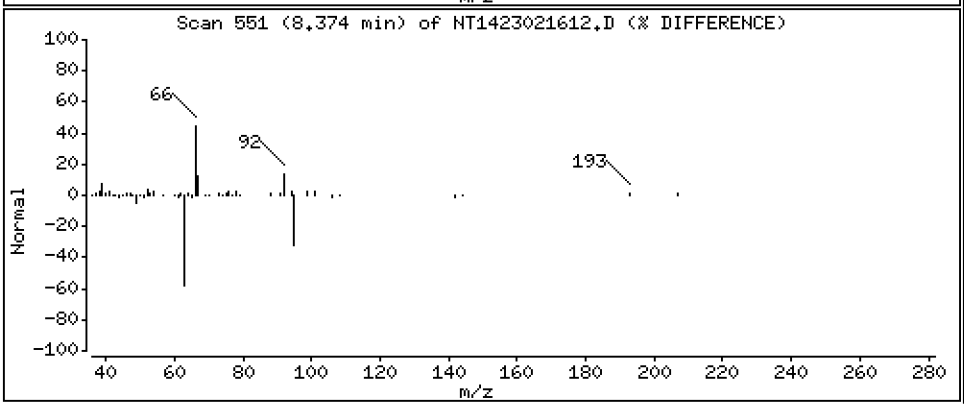












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

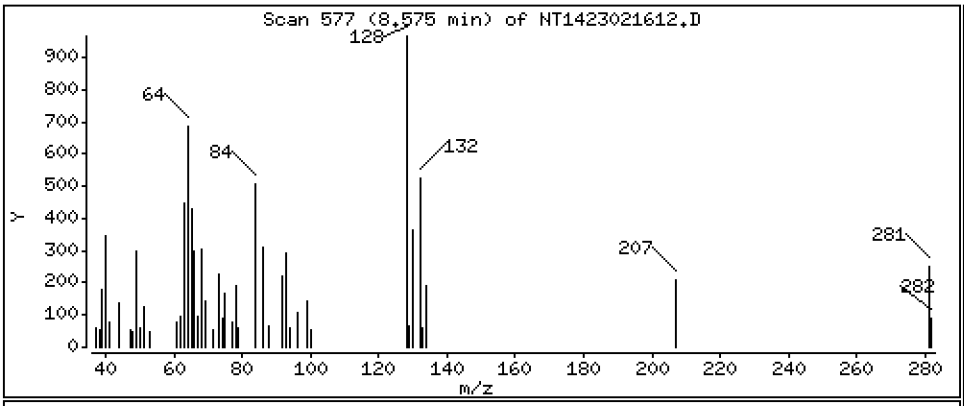
Operator: DSD

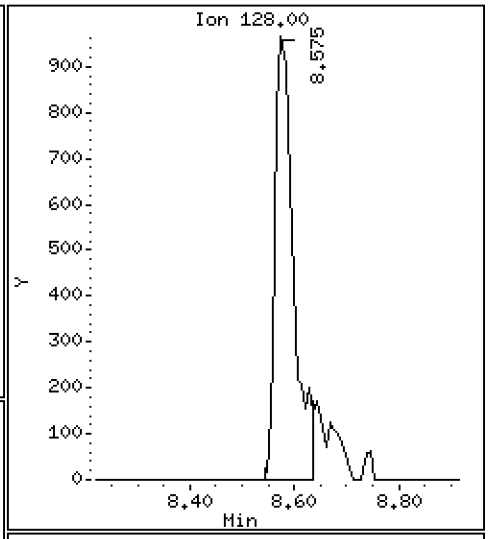
Column phase: ZB-5msi

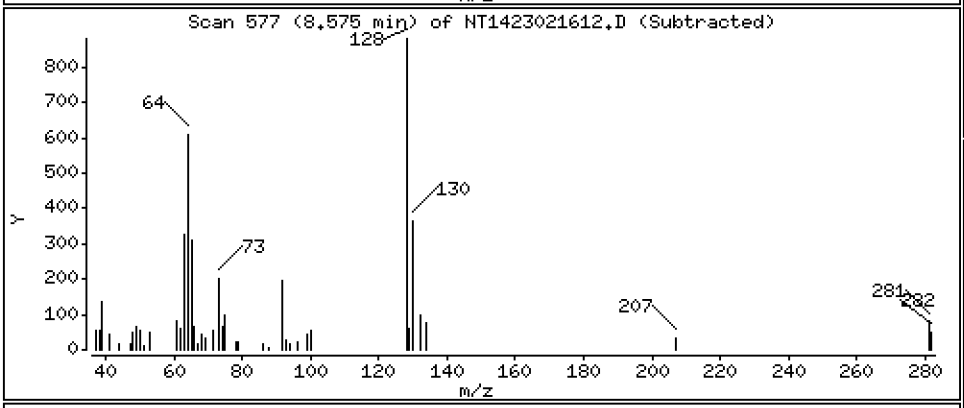
Column diameter: 0.25

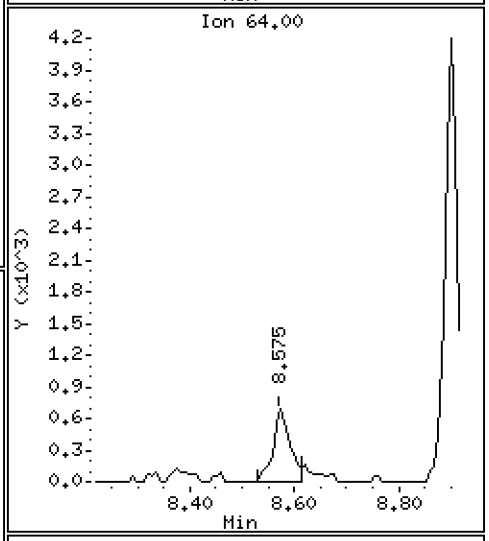
6 2-Chlorophenol

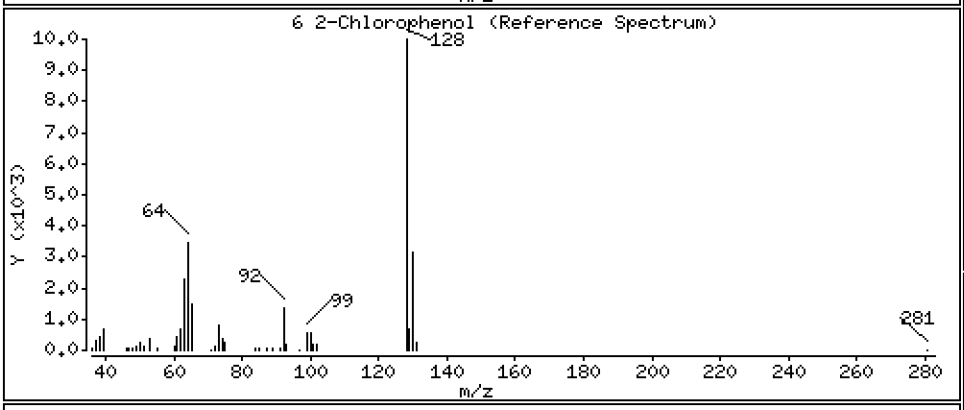
Concentration: 0.02252 ug/mL

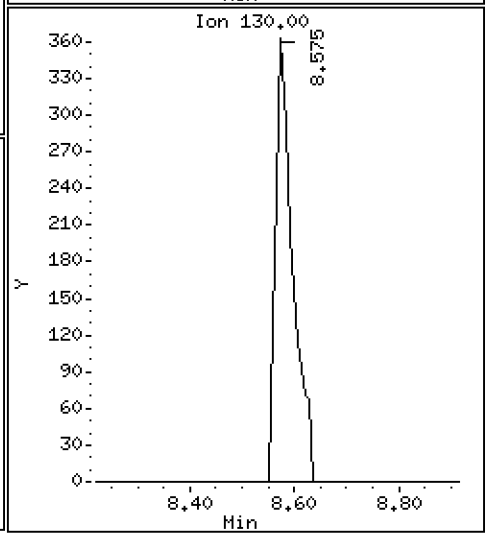


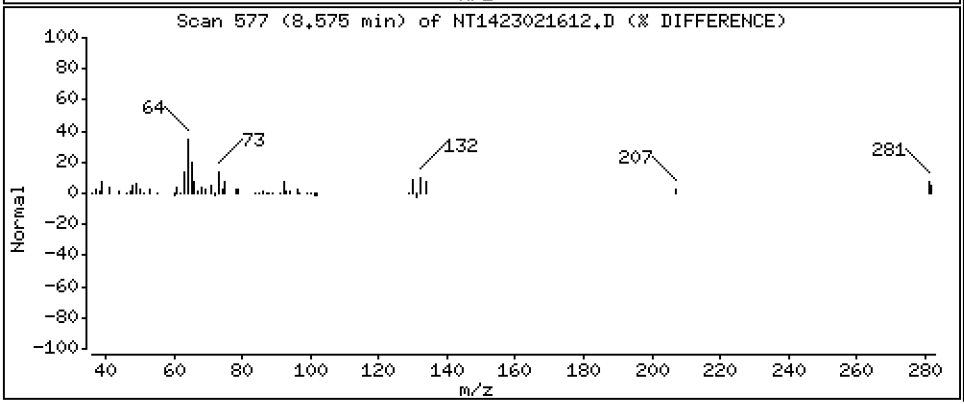












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

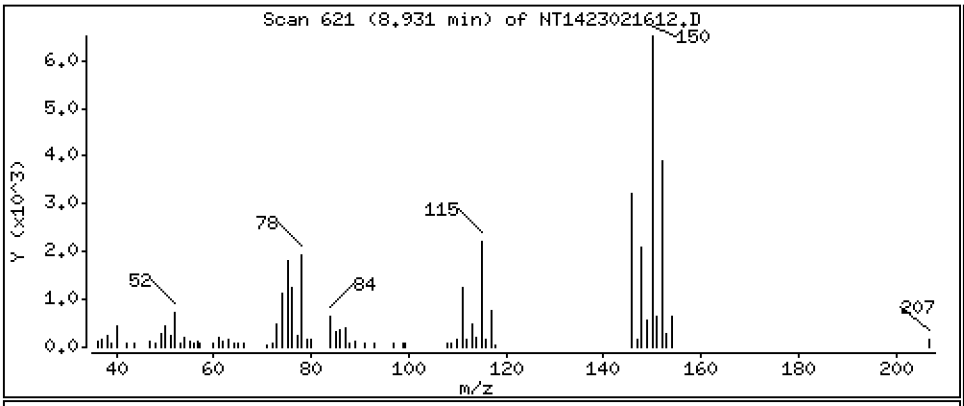
Operator: DSD

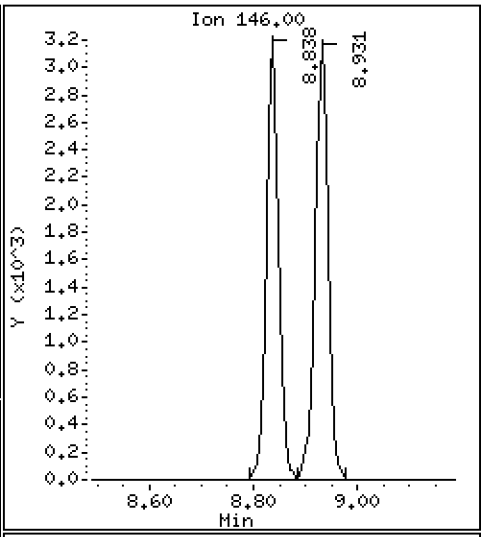
Column phase: ZB-5msi

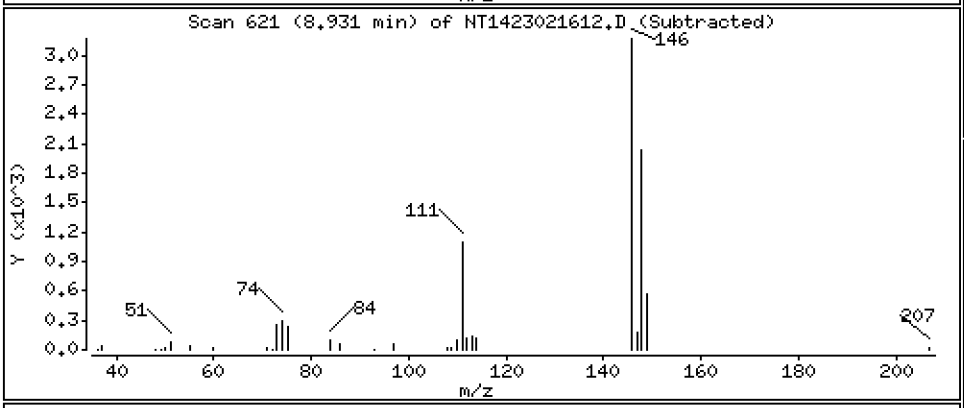
Column diameter: 0.25

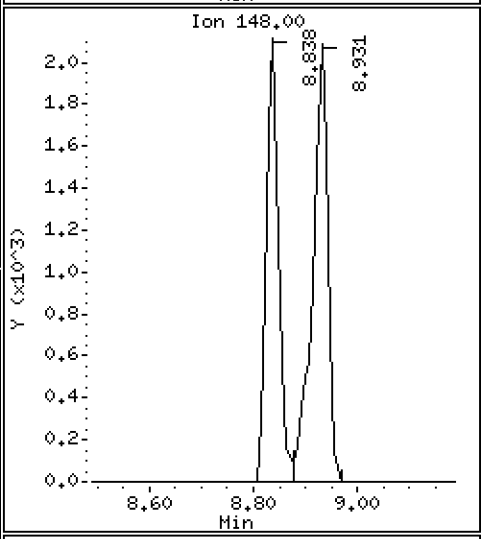
7 1,3-Dichlorobenzene

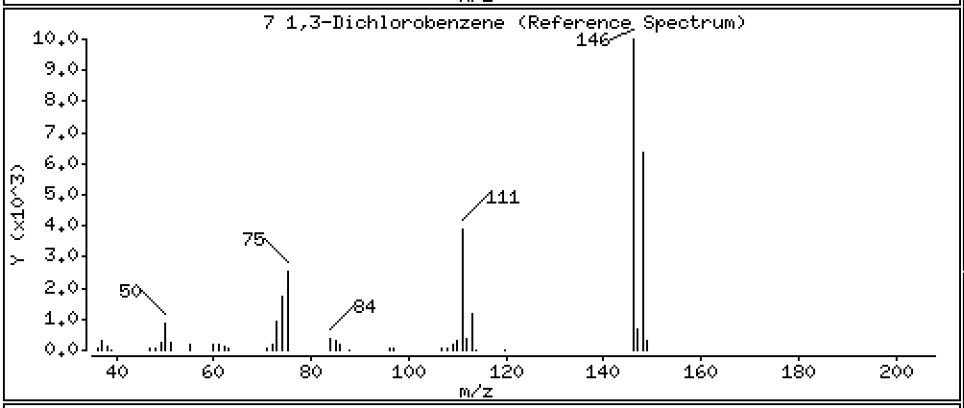
Concentration: 0.04564 ug/mL

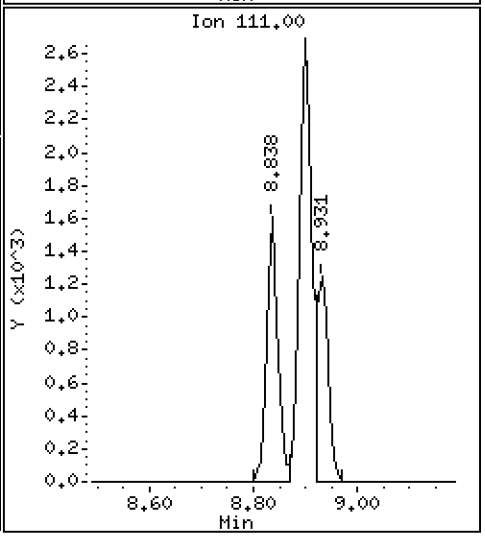


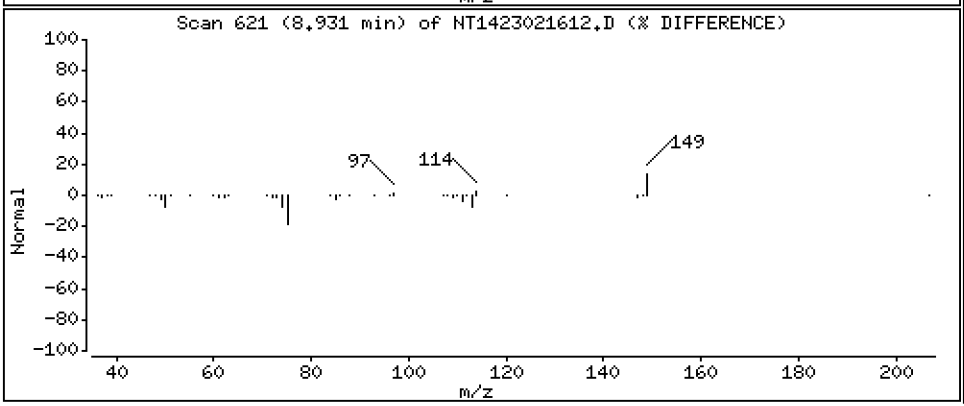












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

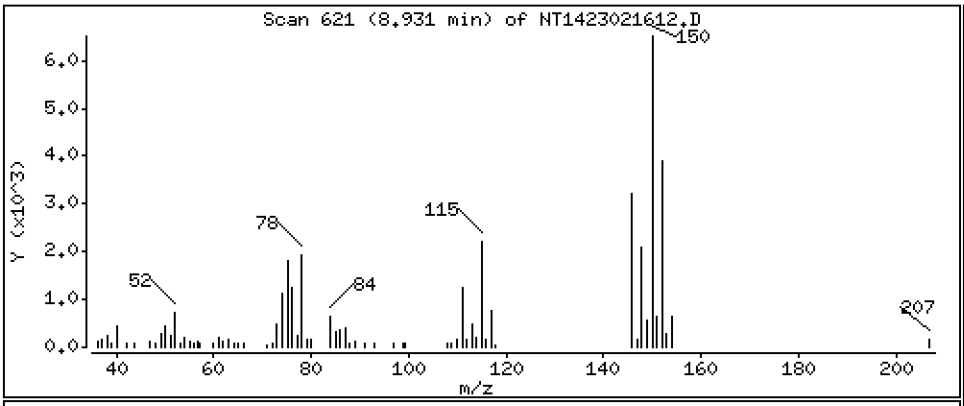
Operator: DSD

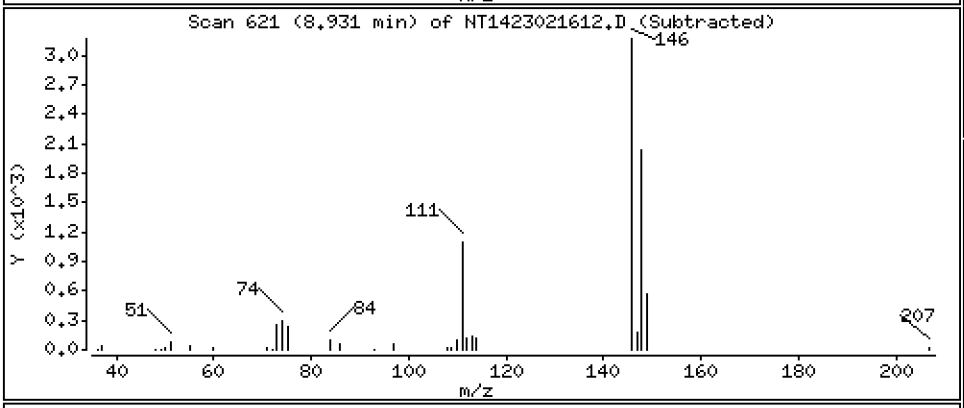
Column phase: ZB-5msi

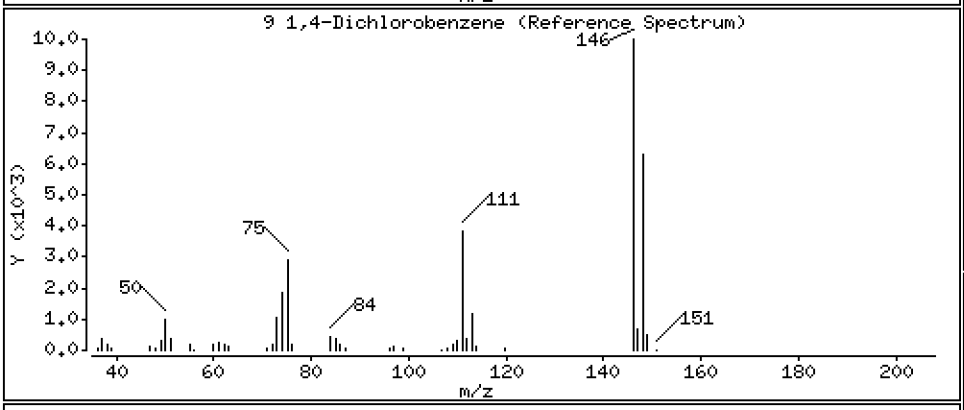
Column diameter: 0.25

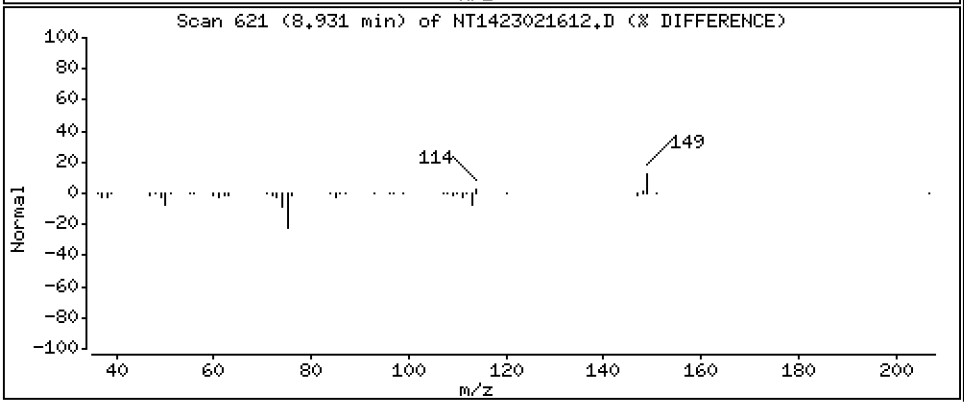
9 1,4-Dichlorobenzene

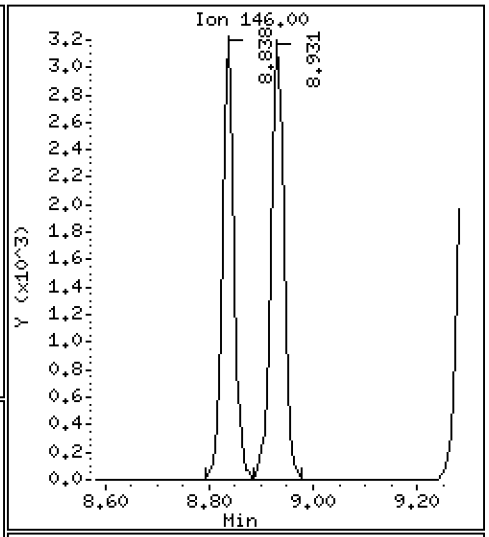
Concentration: 0.04809 ug/mL

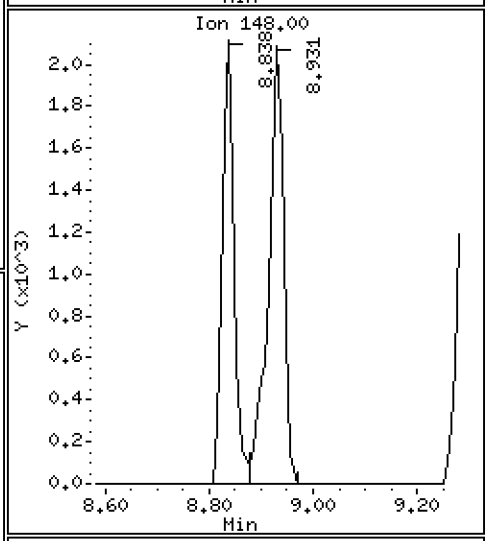


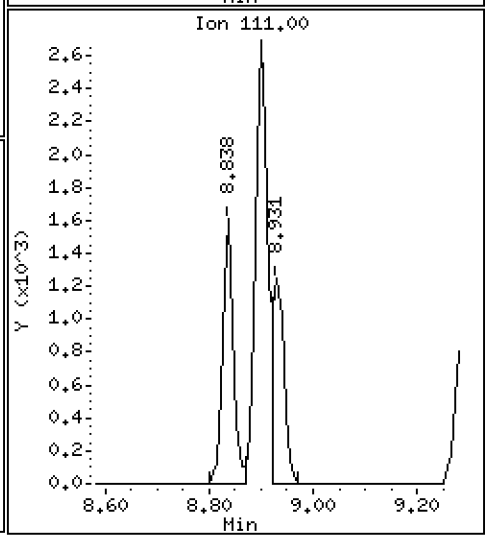












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

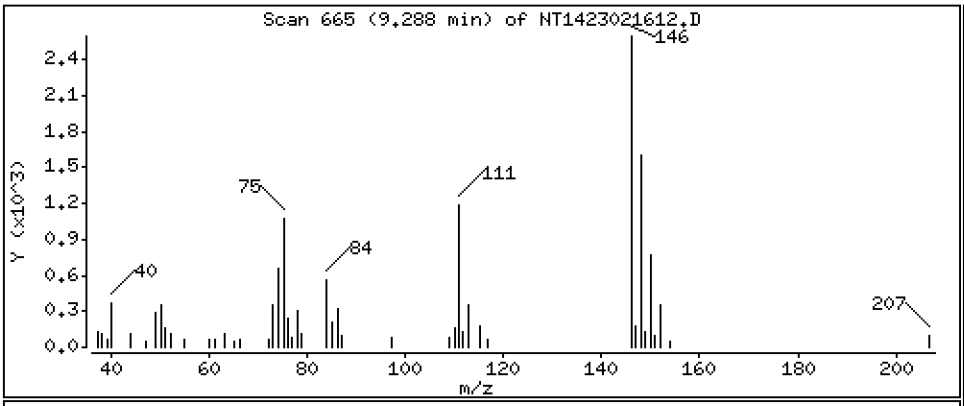
Operator: DSD

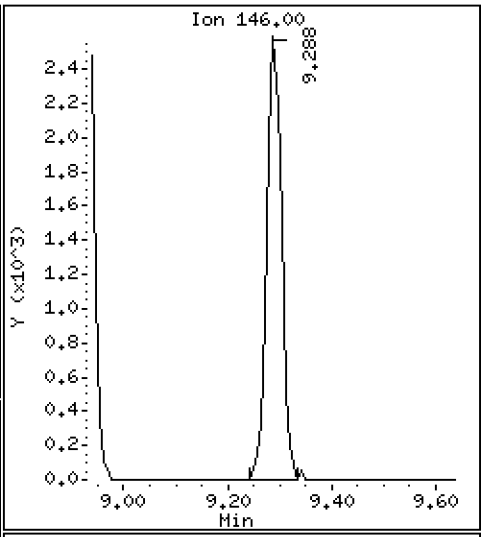
Column phase: ZB-5msi

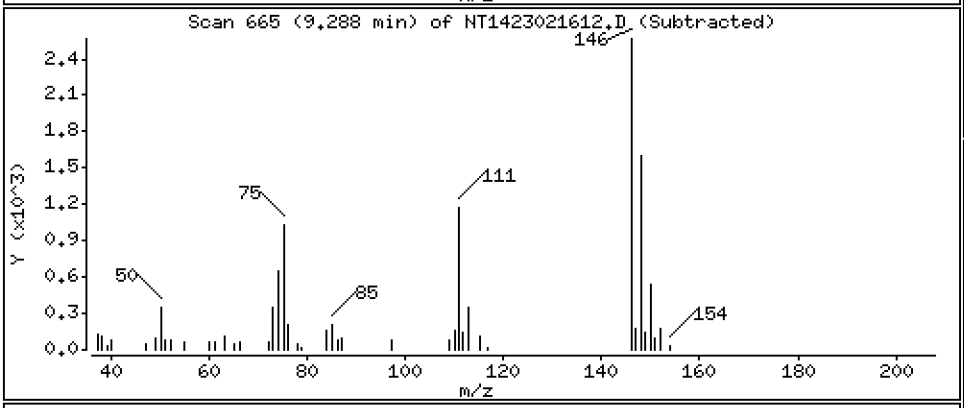
Column diameter: 0.25

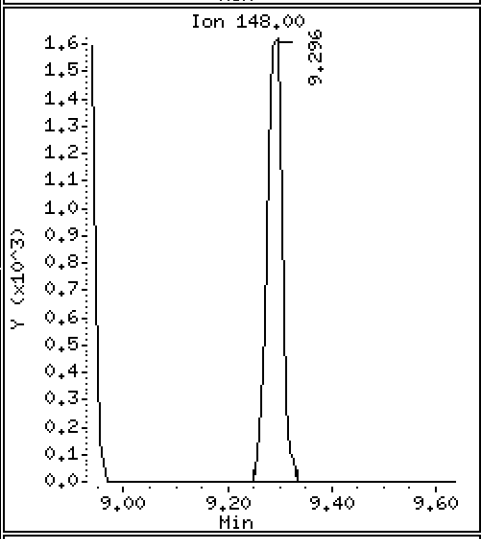
12 1,2-Dichlorobenzene

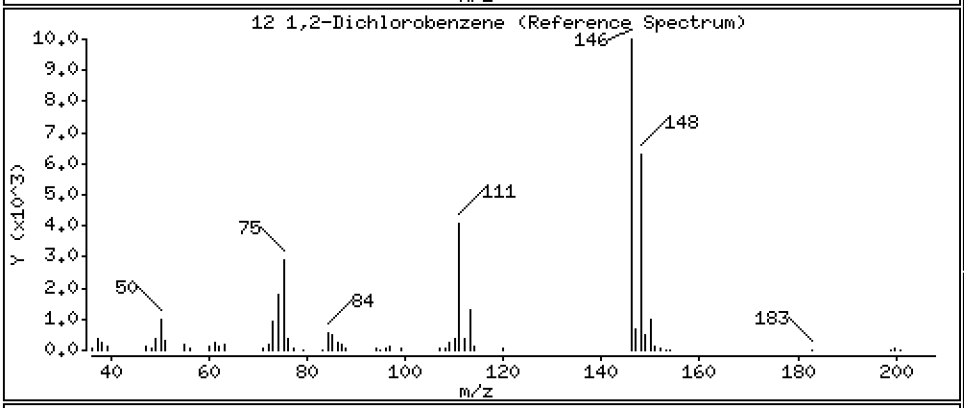
Concentration: 0.04512 ug/mL

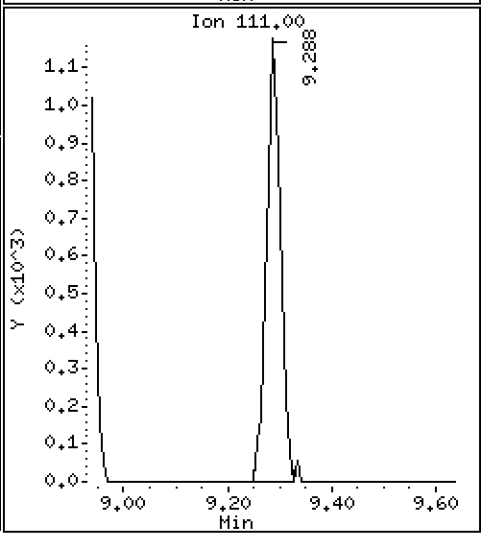


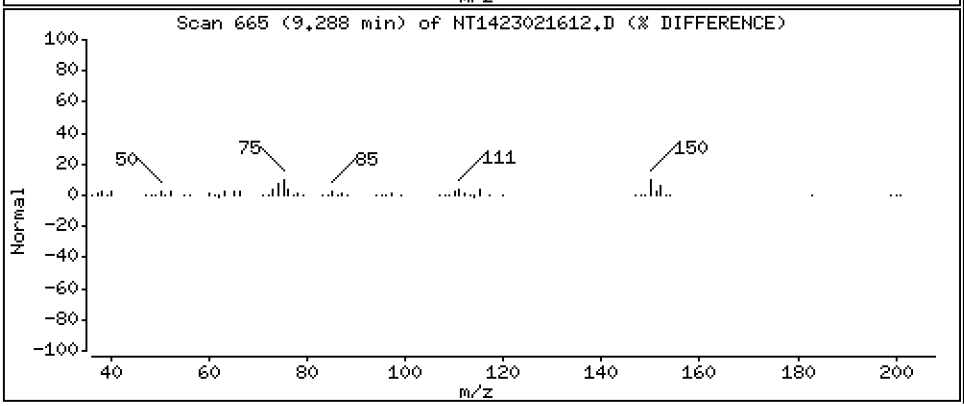












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

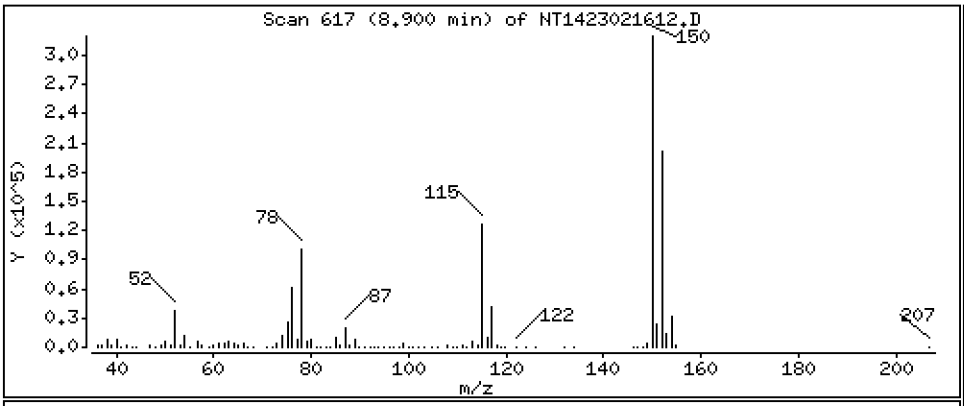
Operator: DSD

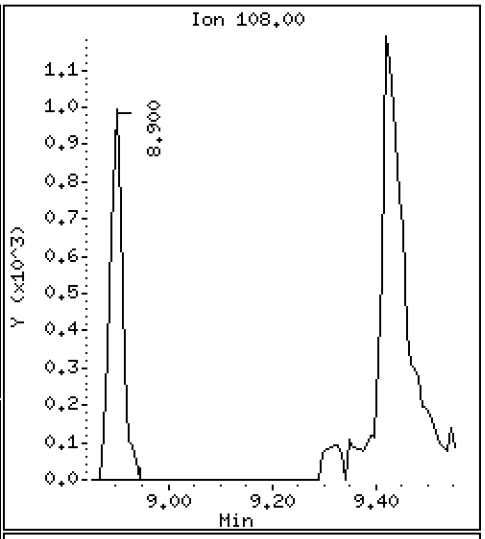
Column phase: ZB-5msi

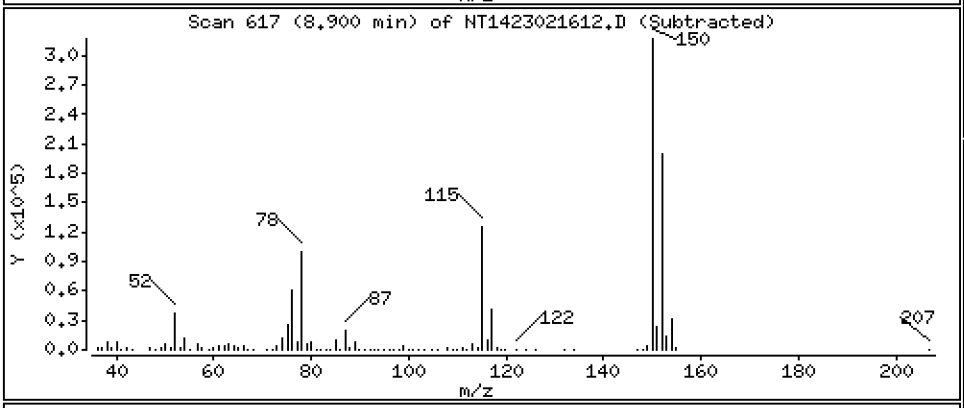
Column diameter: 0.25

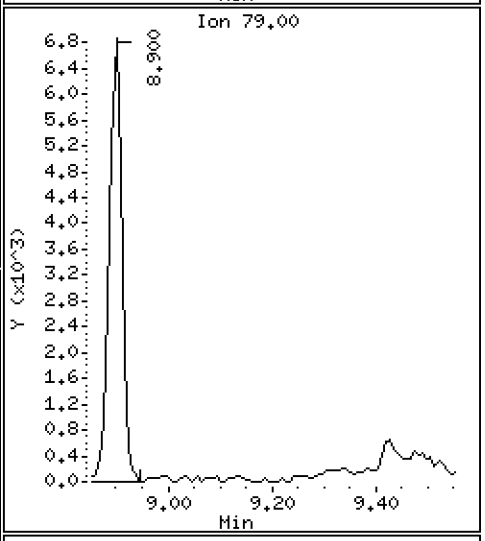
11 Benzyl alcohol

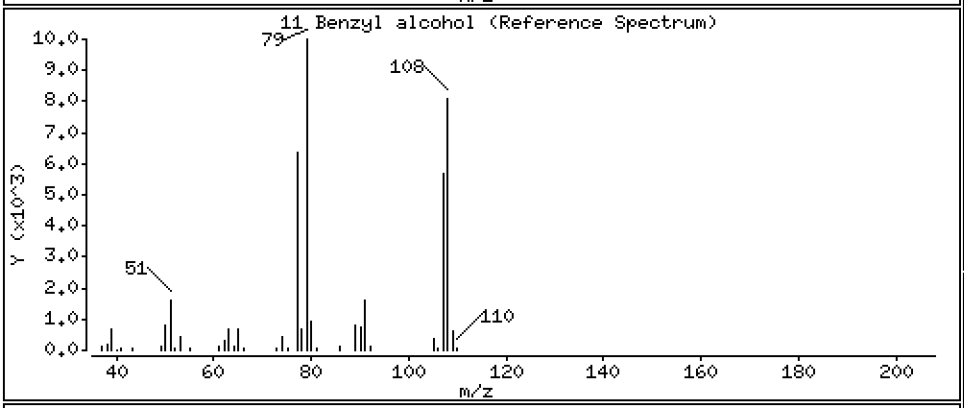
Concentration: 0.01927 ug/mL

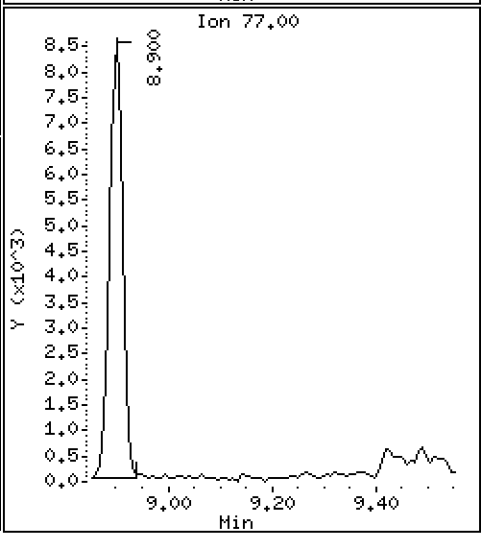


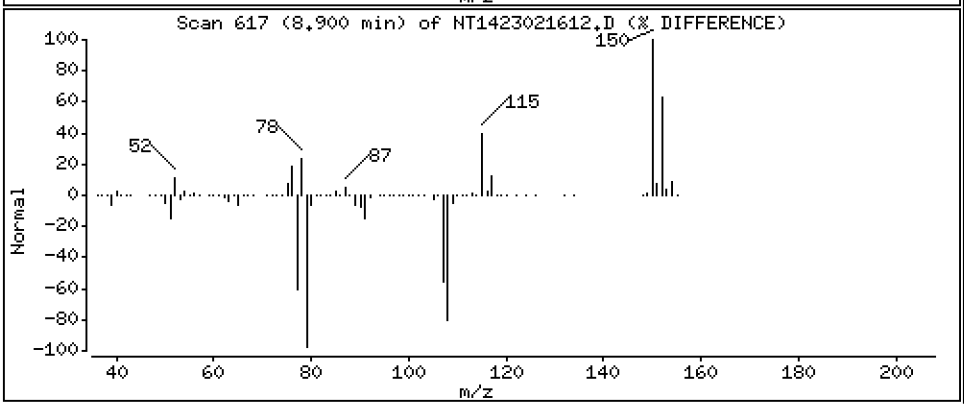












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

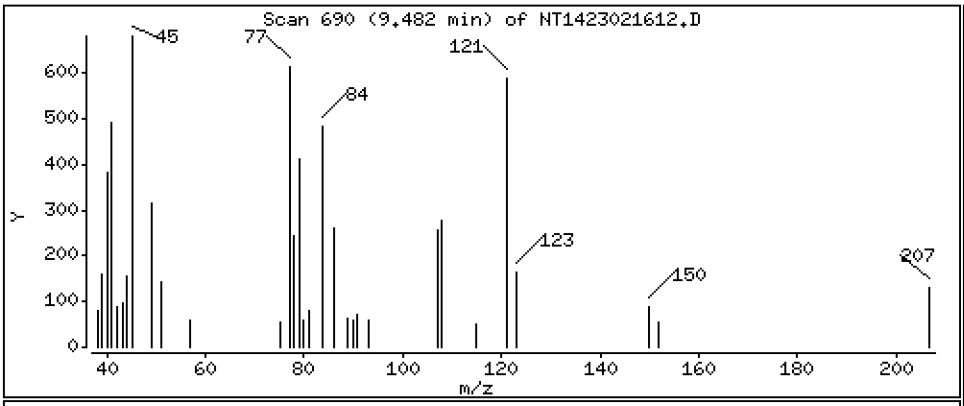
Operator: DSD

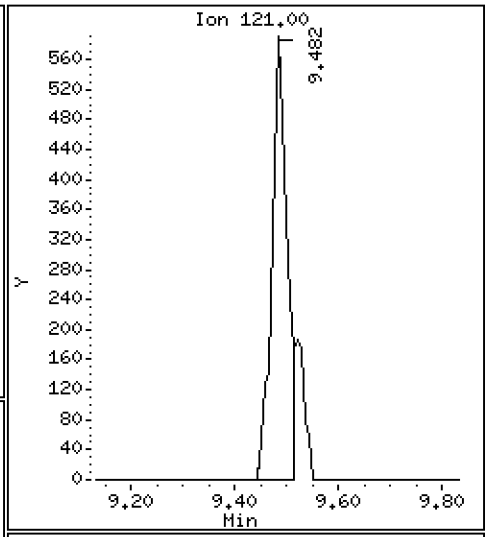
Column phase: ZB-5msi

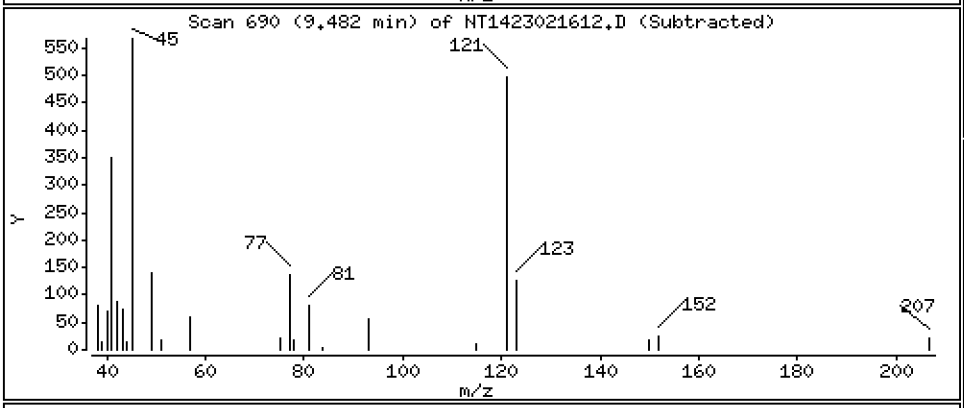
Column diameter: 0.25

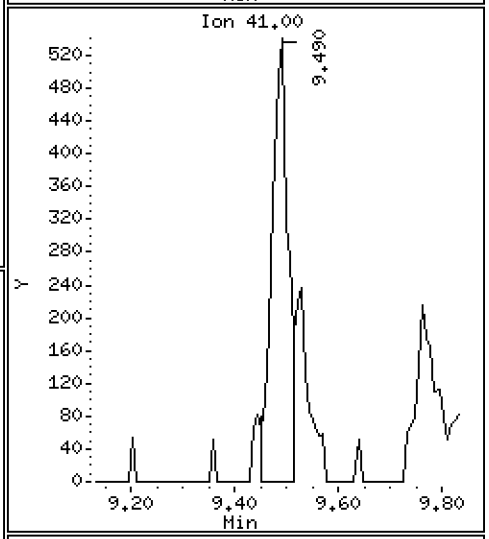
14 2,2'-oxybis(1-Chloropropane)

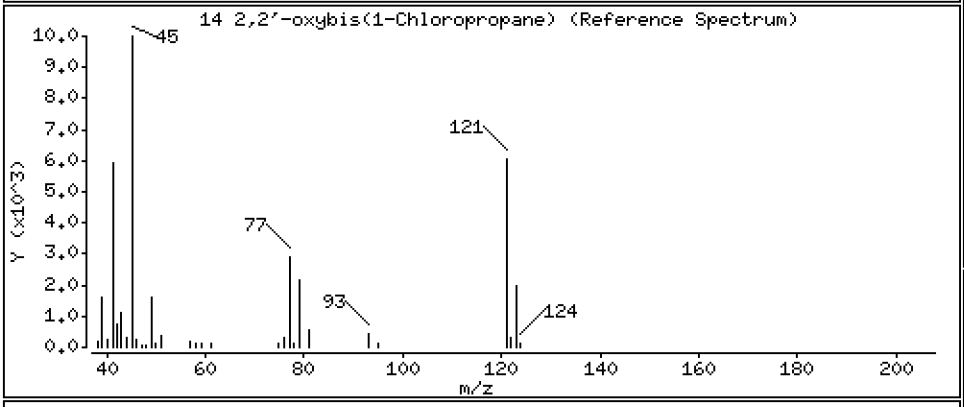
Concentration: 0.03727 ug/mL

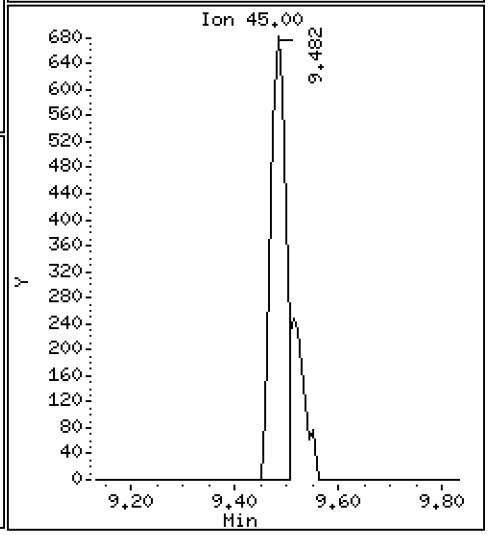


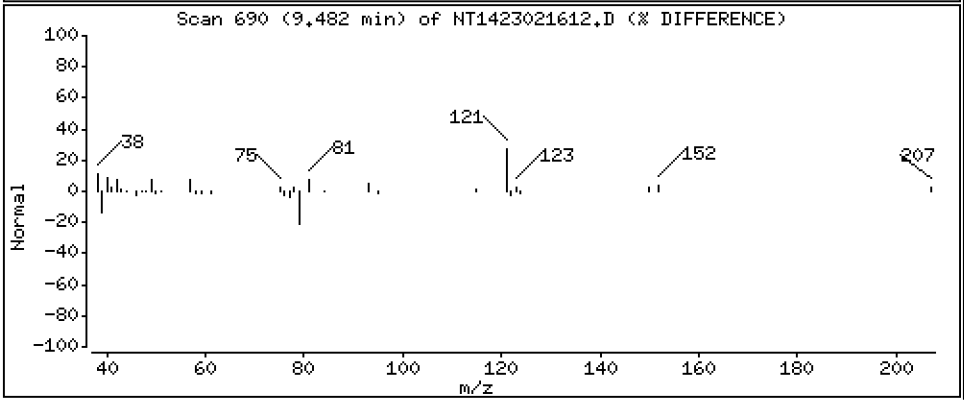












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

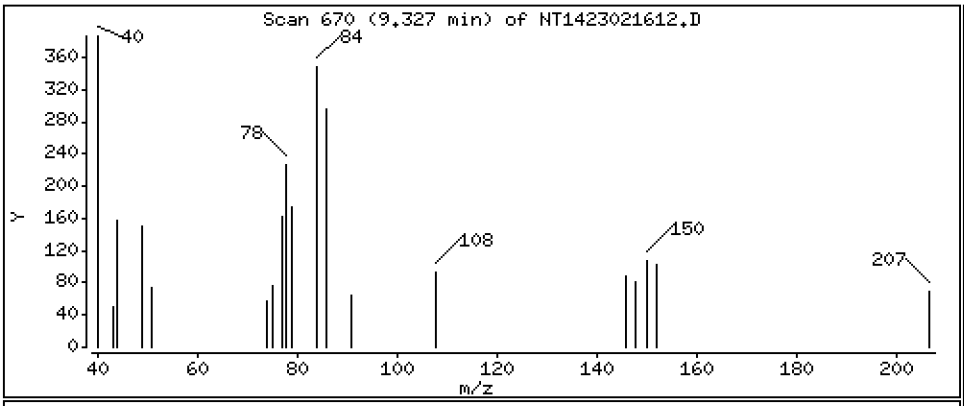
Operator: DSD

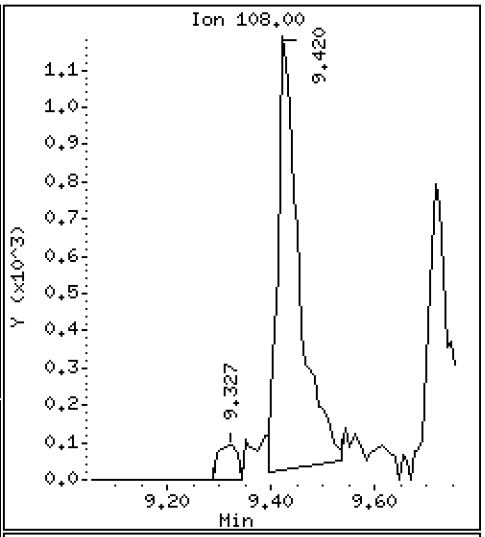
Column phase: ZB-5msi

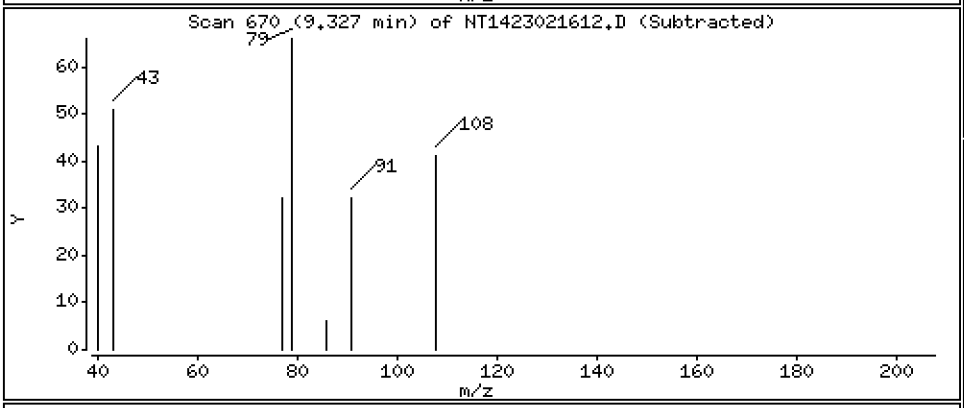
Column diameter: 0.25

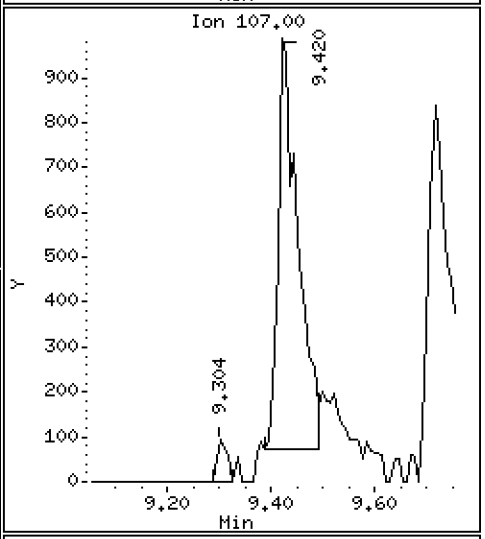
13 2-Methylphenol

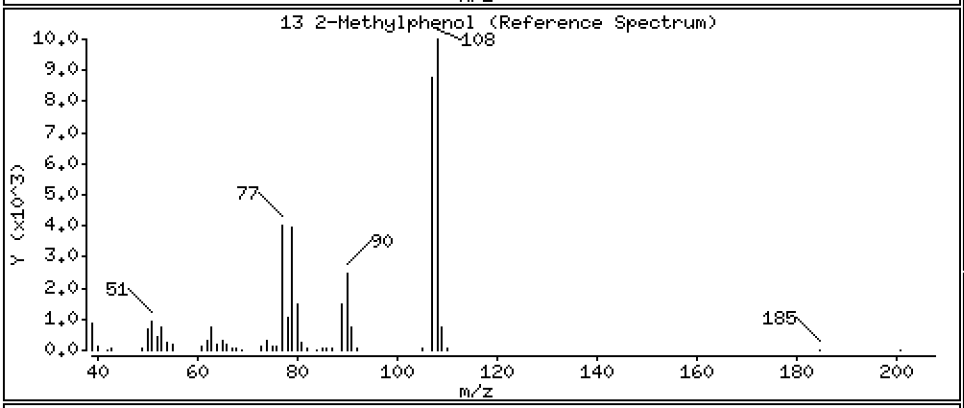
Concentration: 0.002272 ug/mL

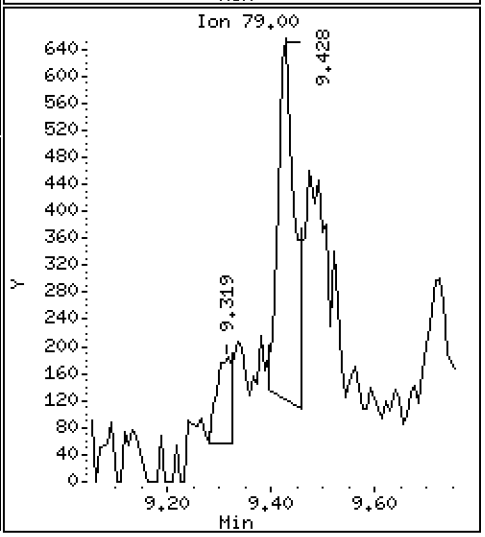


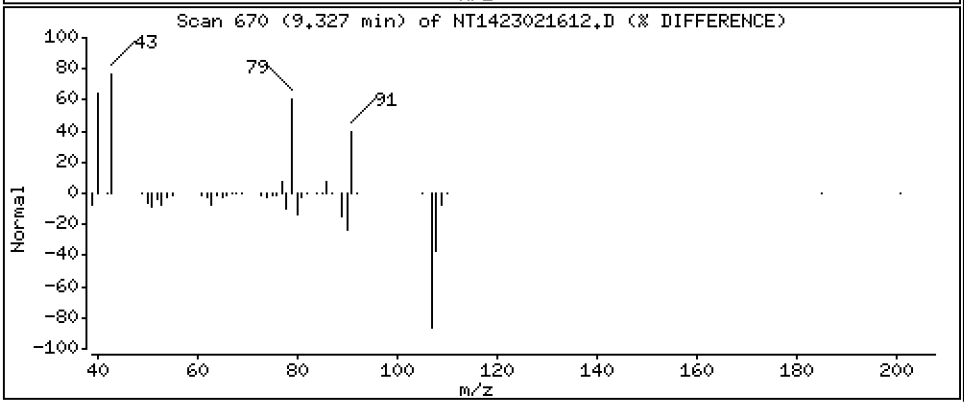












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021612.D

Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

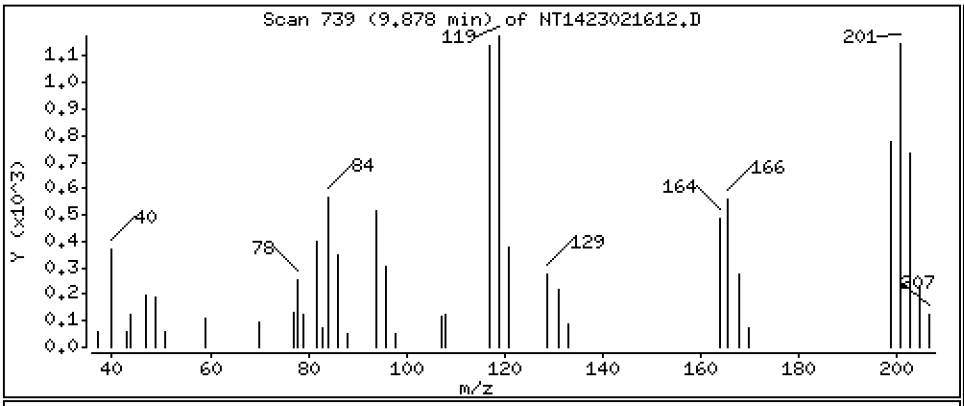
Operator: DSD

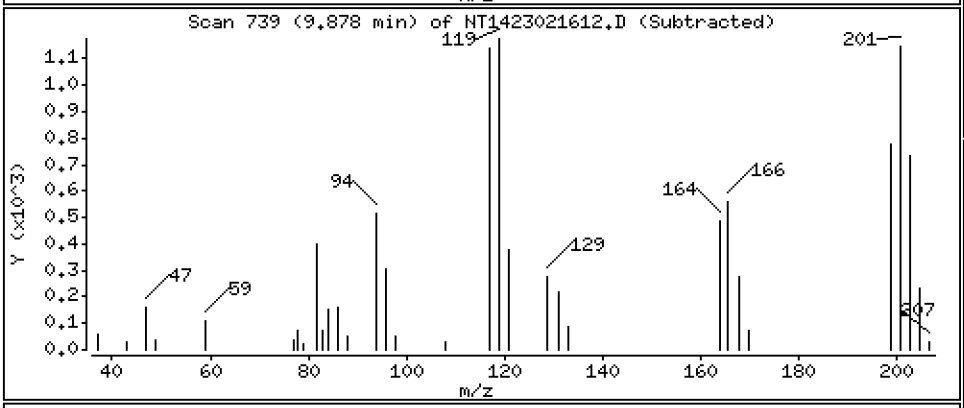
Column phase: ZB-5msi

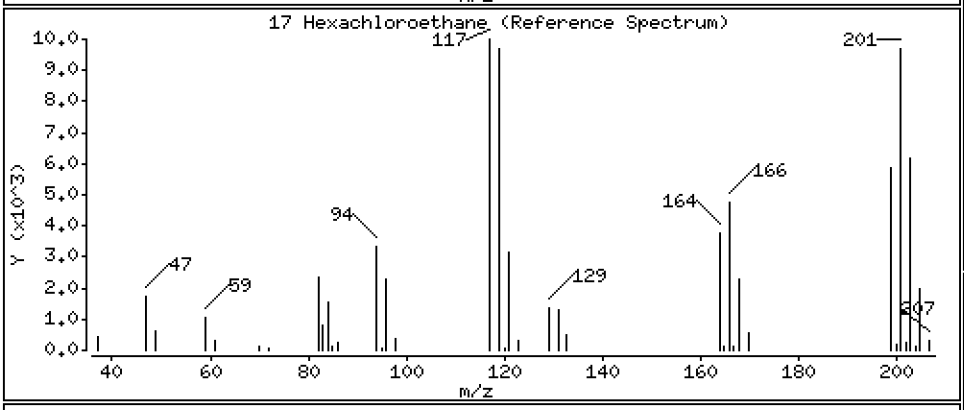
Column diameter: 0.25

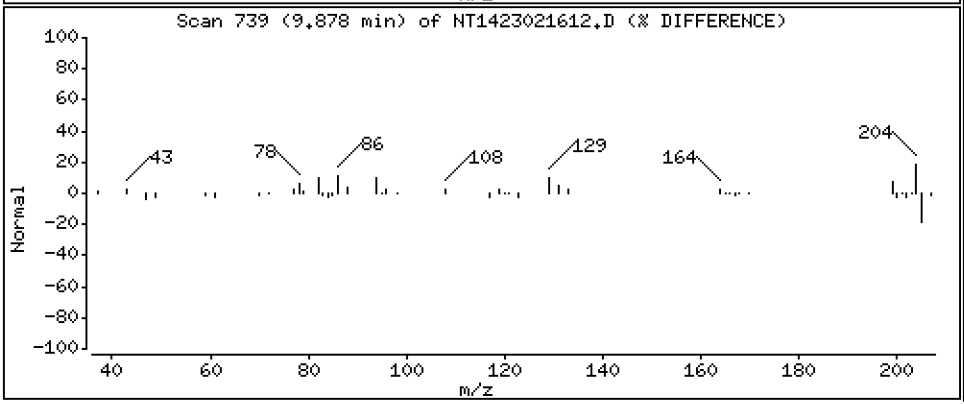
17 Hexachloroethane

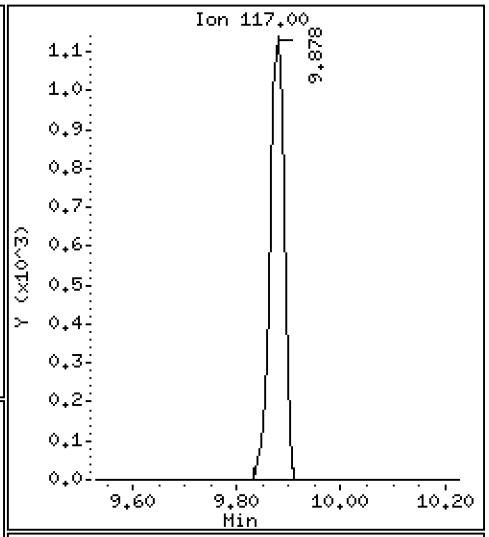
Concentration: 0.04396 ug/mL

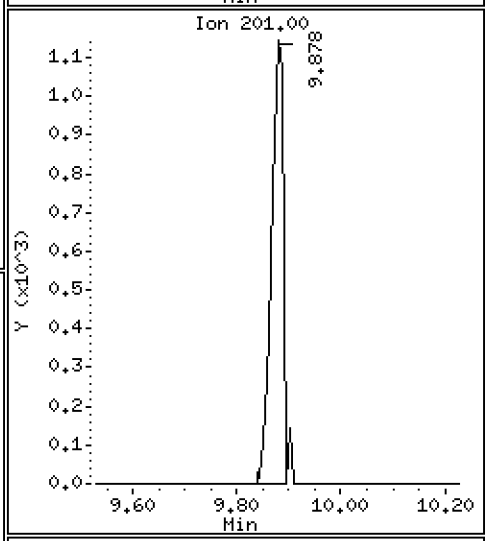


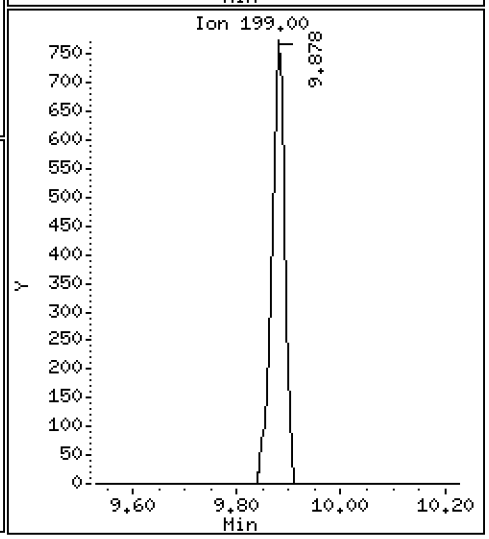












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

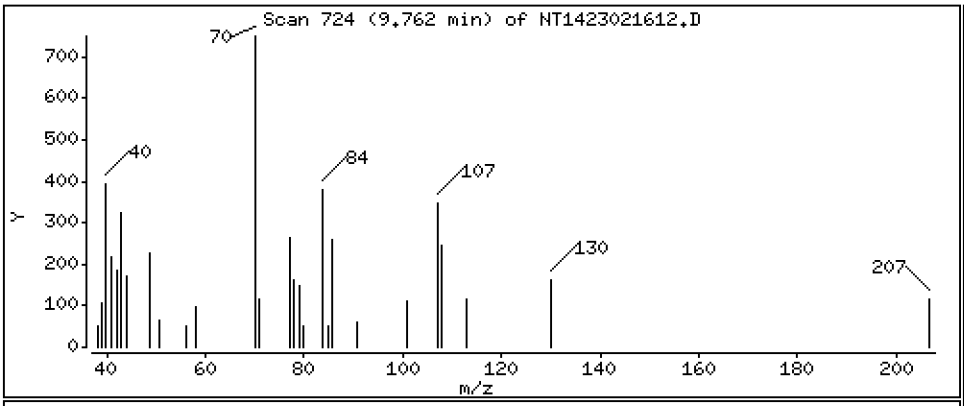
Operator: DSD

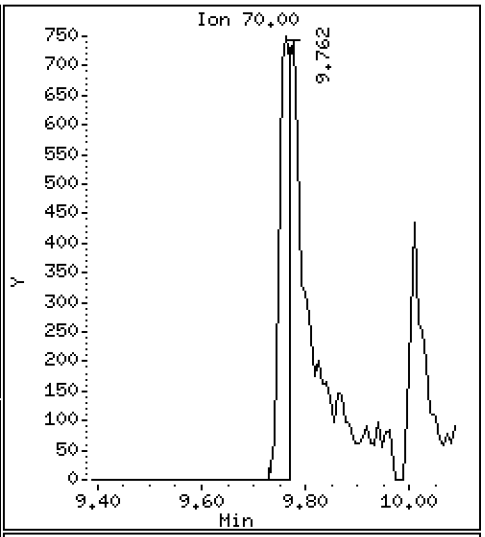
Column phase: ZB-5msi

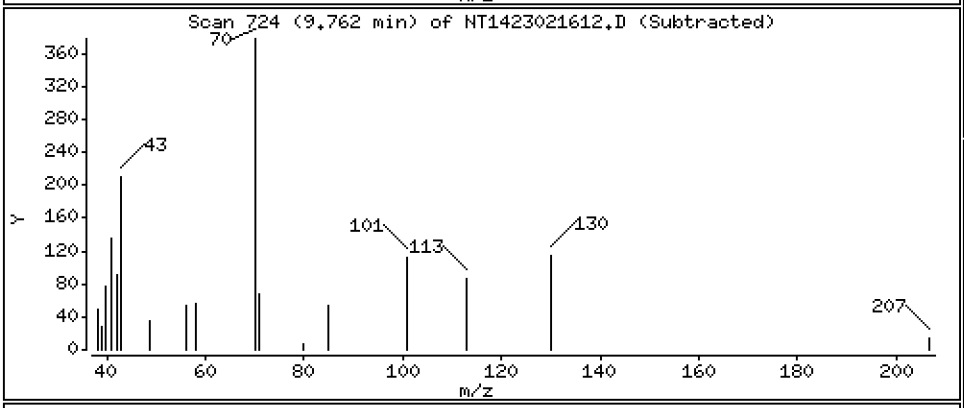
Column diameter: 0.25

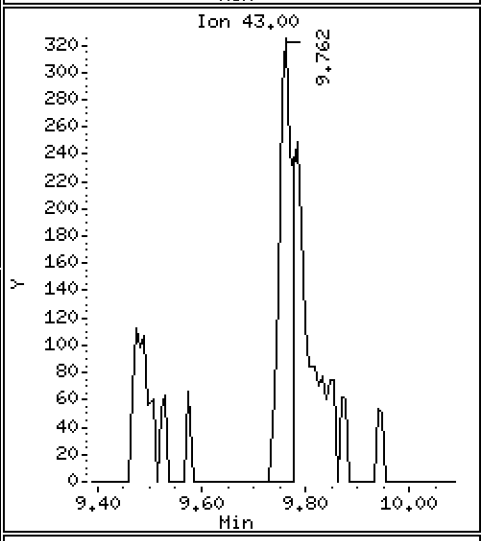
16 N-Nitroso-di-n-propylamine

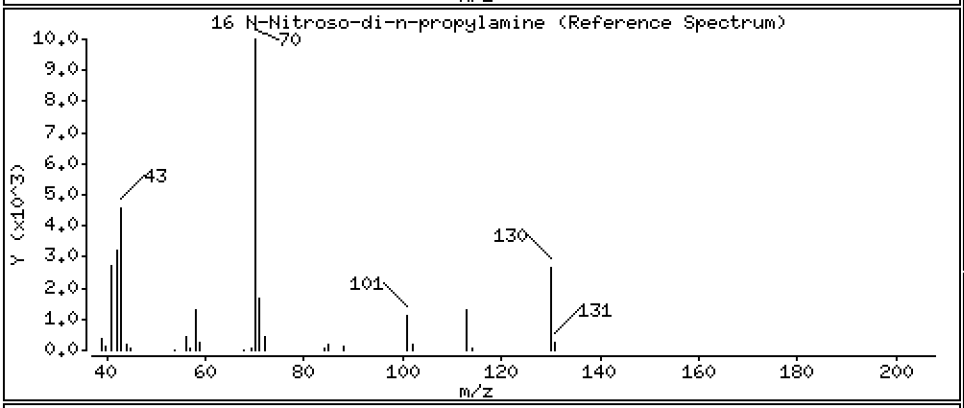
Concentration: 0.01282 ug/mL

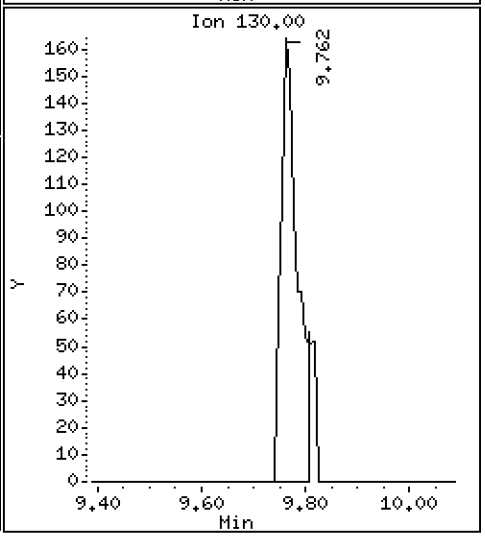


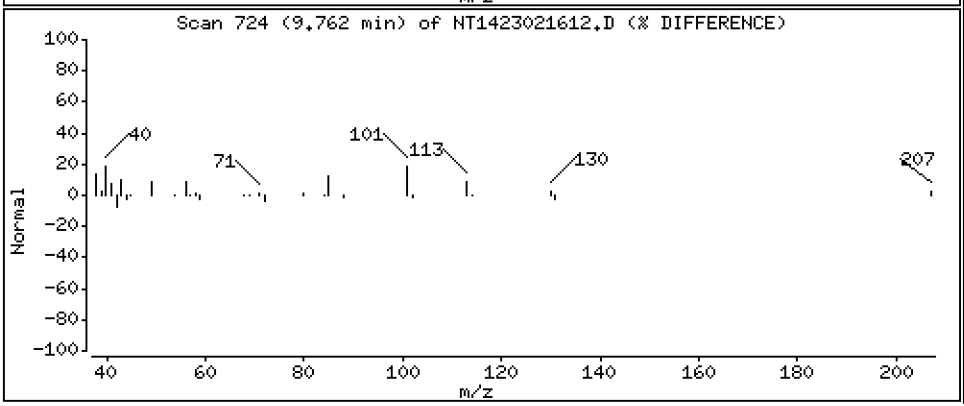












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

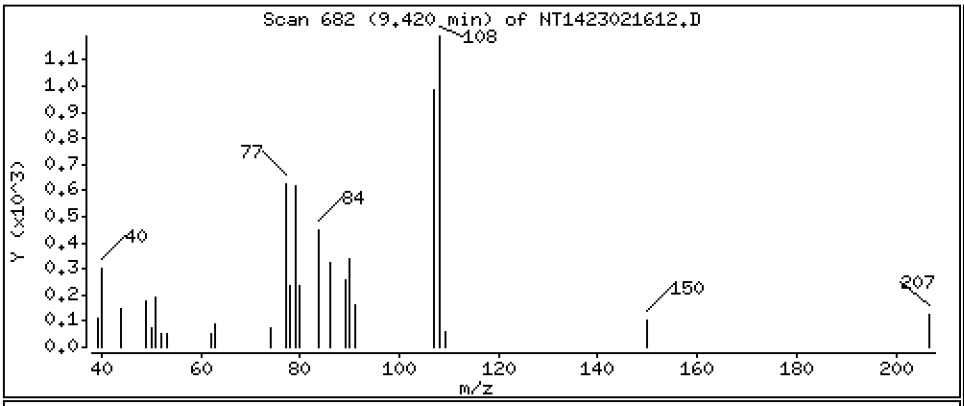
Operator: DSD

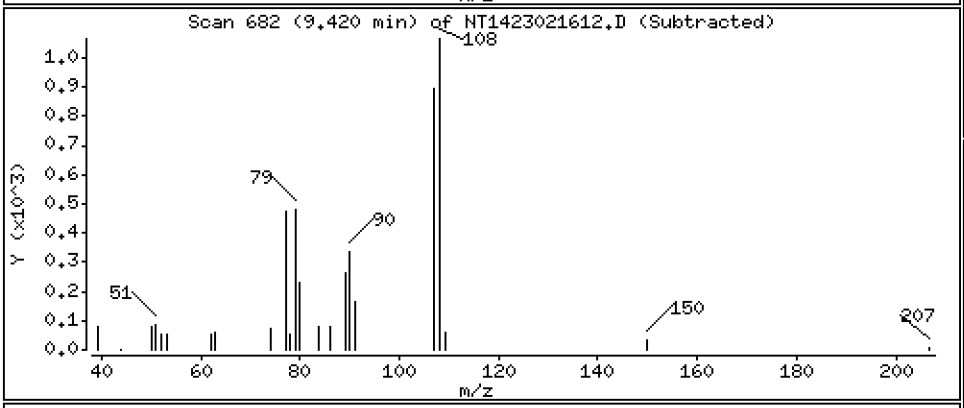
Column phase: ZB-5msi

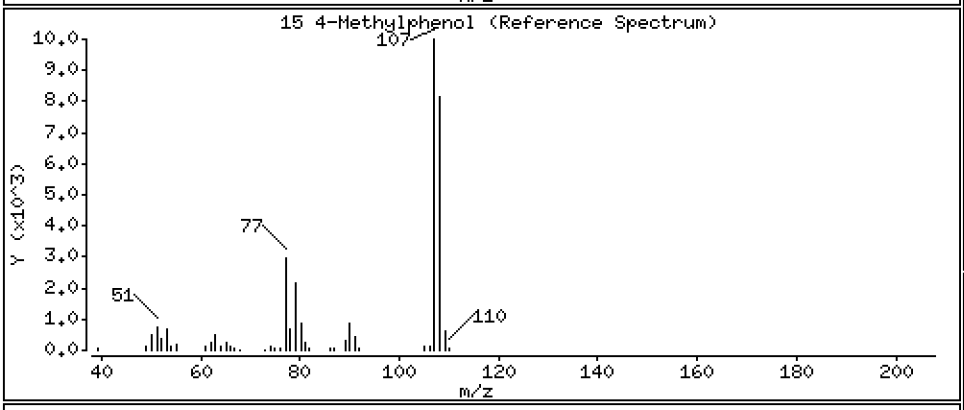
Column diameter: 0.25

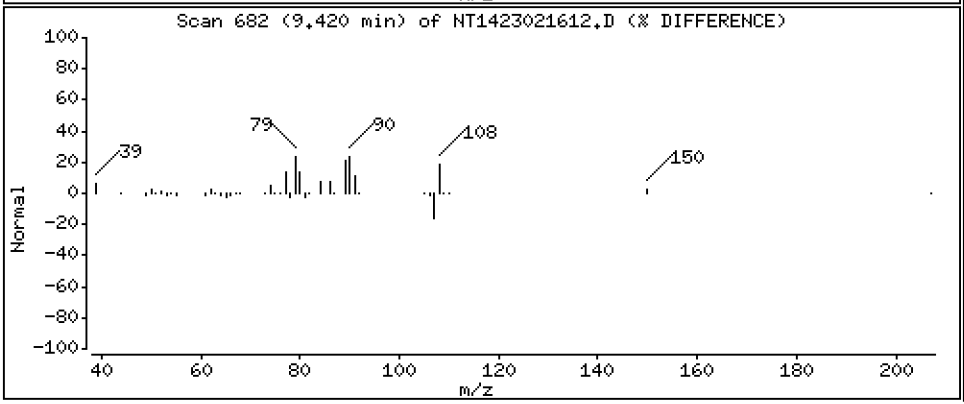
15 4-Methylphenol

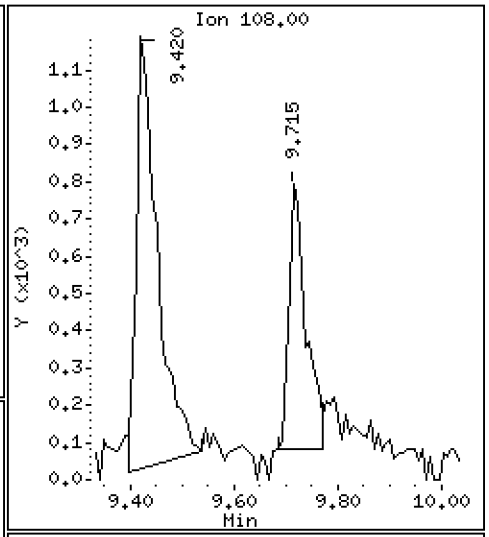
Concentration: 0.03035 ug/mL

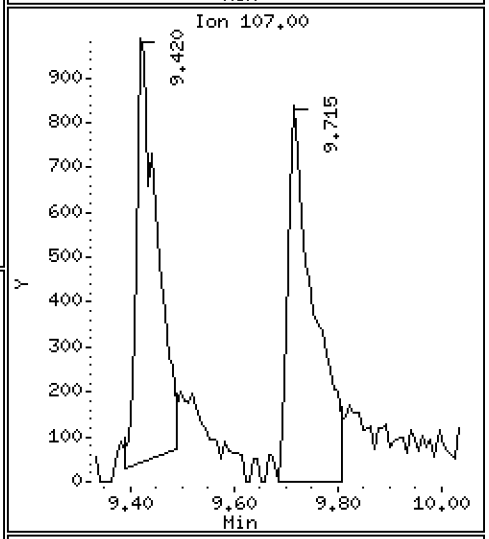


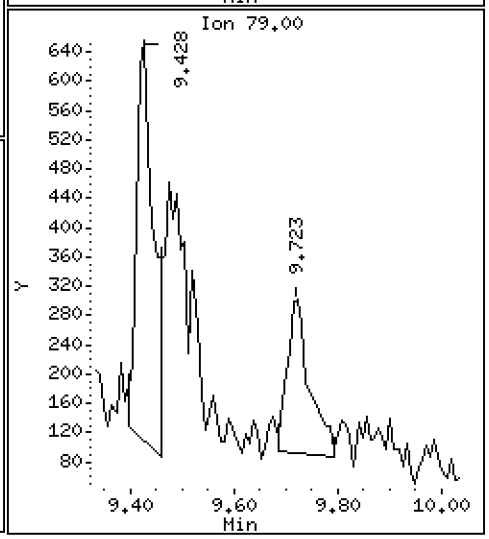












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

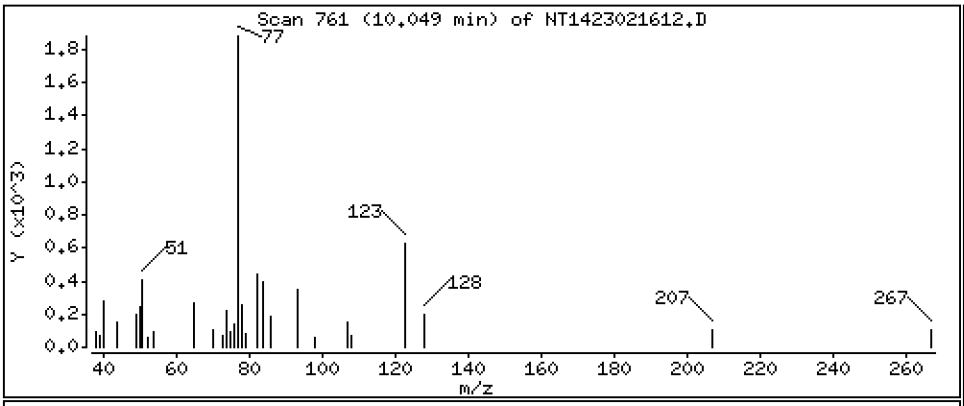
Operator: DSD

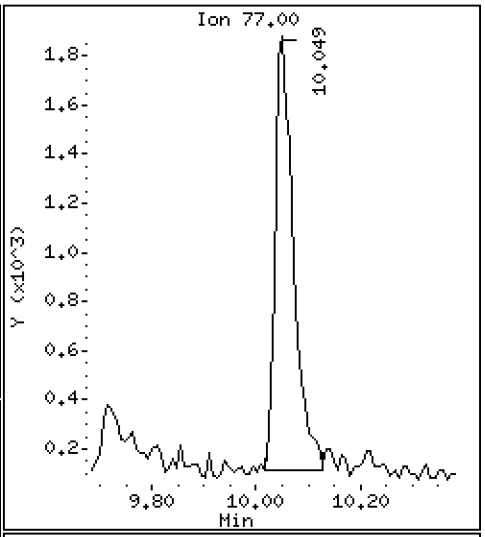
Column phase: ZB-5msi

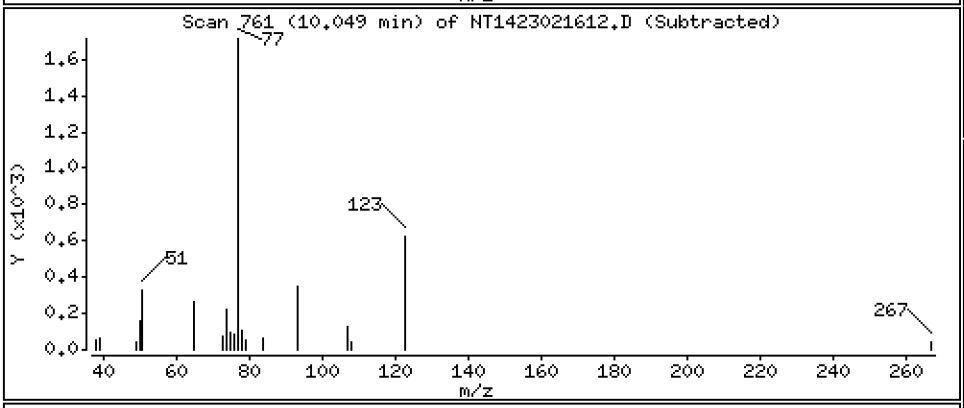
Column diameter: 0.25

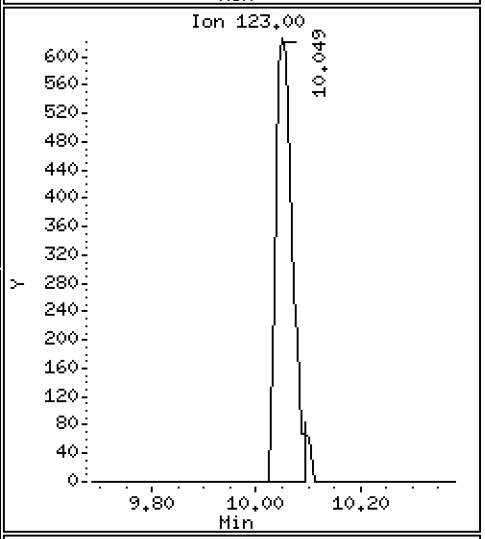
19 Nitrobenzene

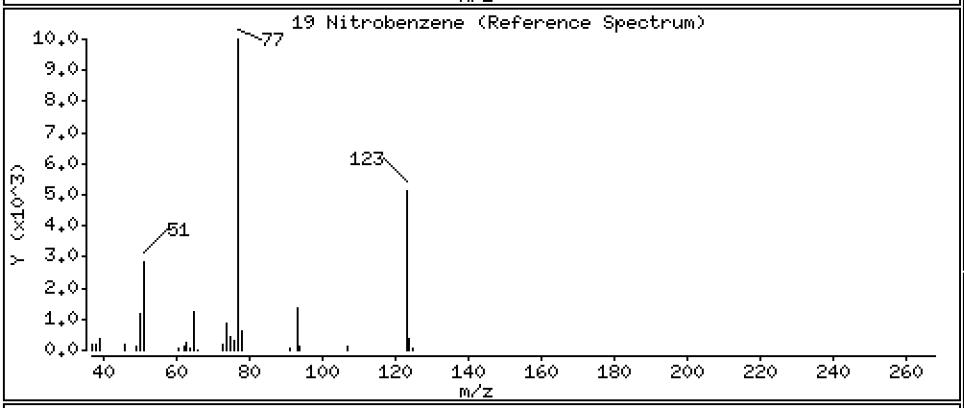
Concentration: 0.03254 ug/mL

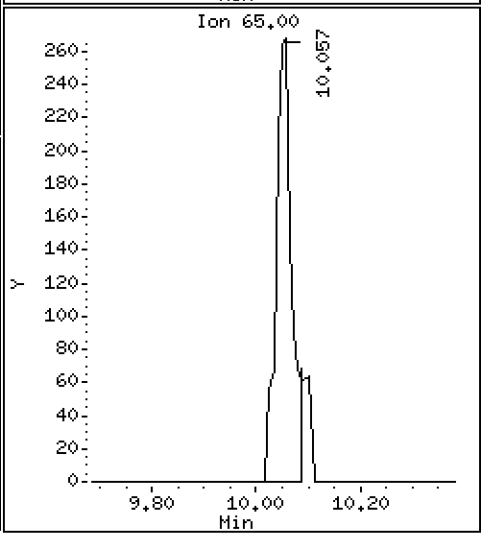


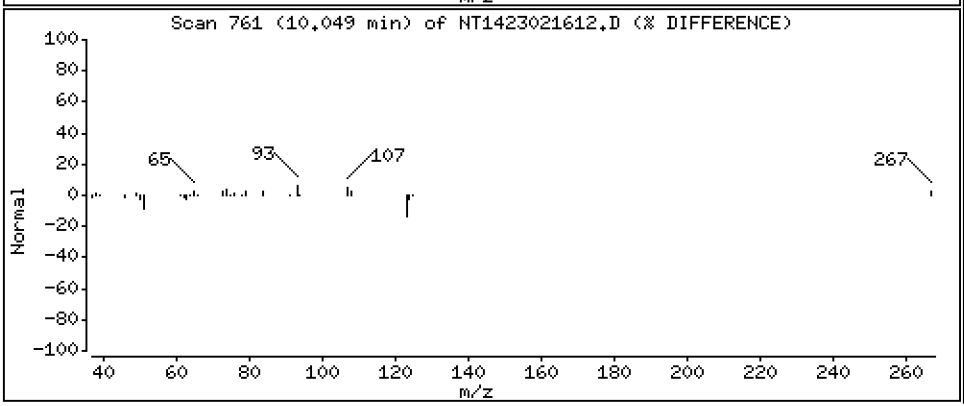












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

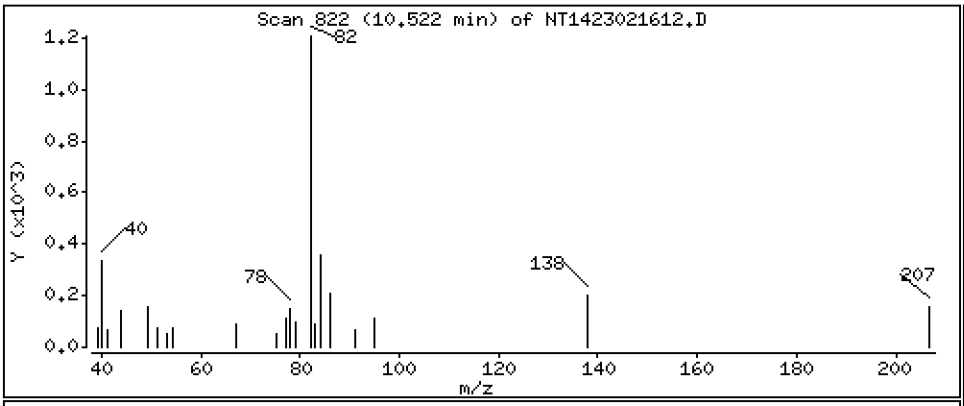
Operator: DSD

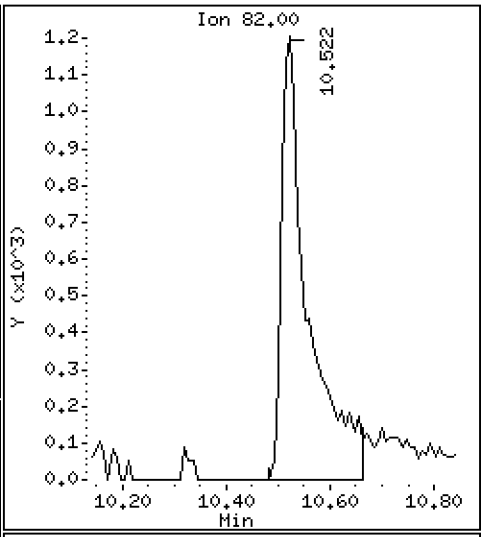
Column phase: ZB-5msi

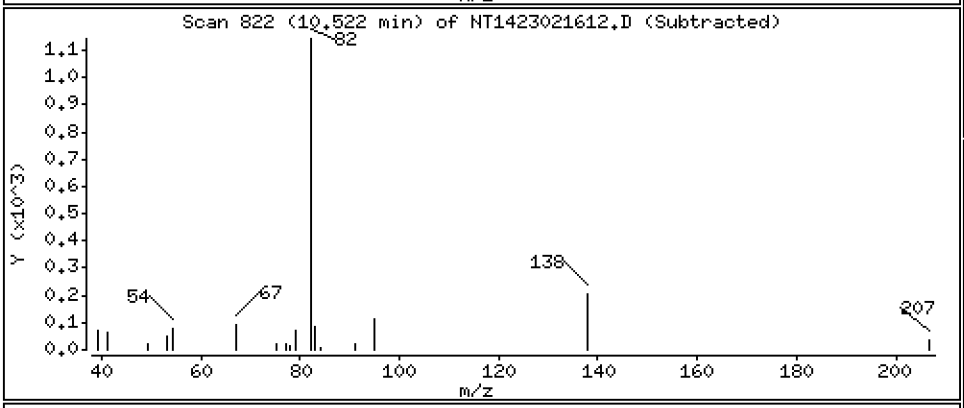
Column diameter: 0.25

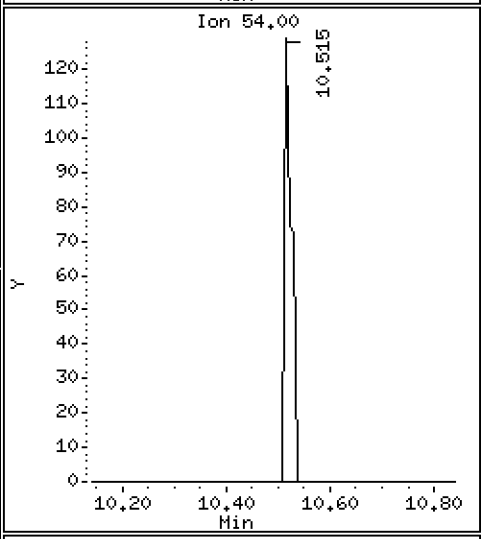
20 Isophorone

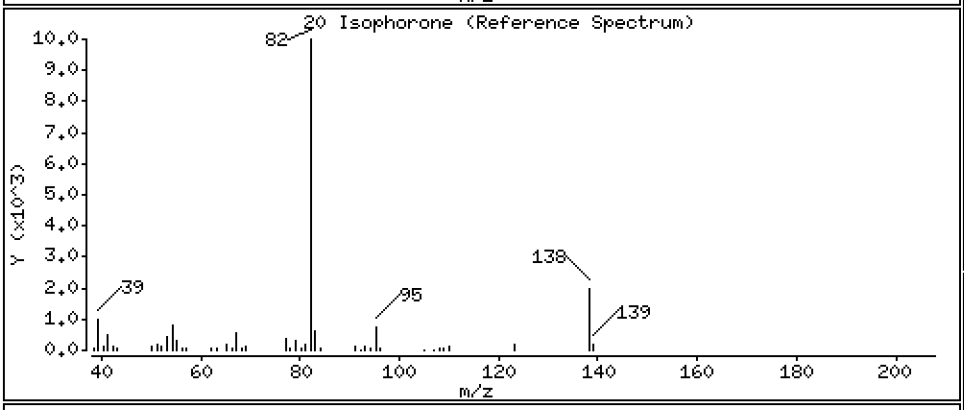
Concentration: 0.02541 ug/mL

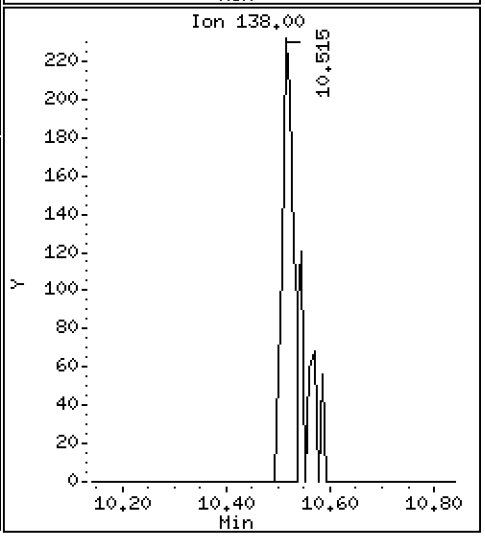


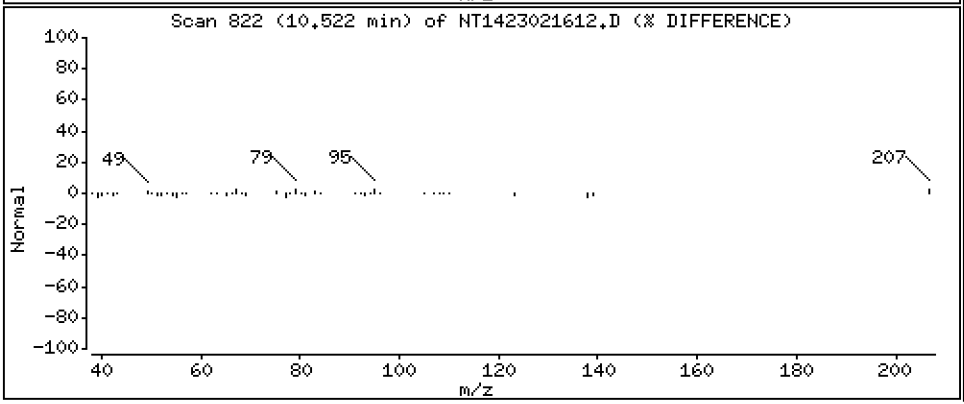












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

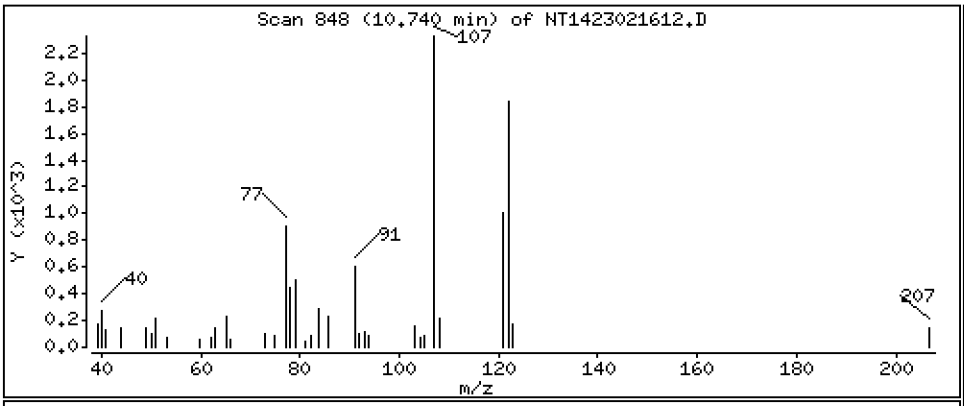
Operator: DSD

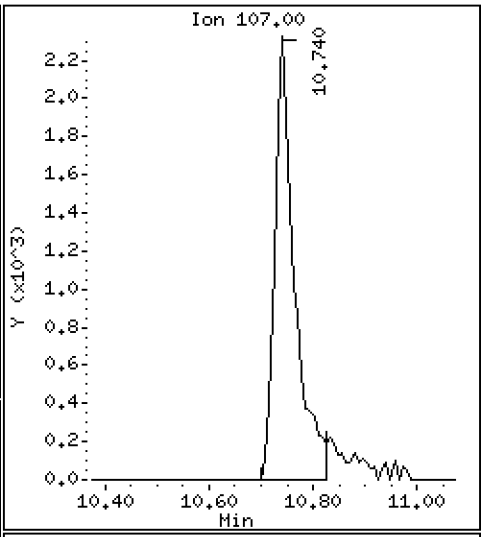
Column phase: ZB-5msi

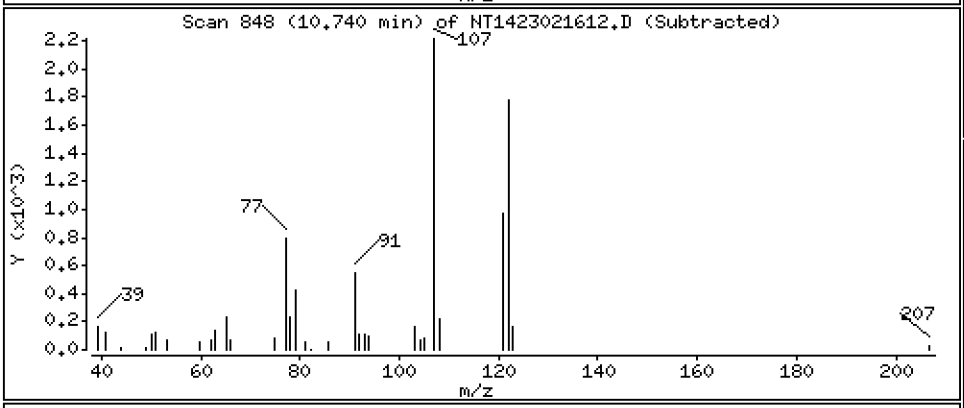
Column diameter: 0.25

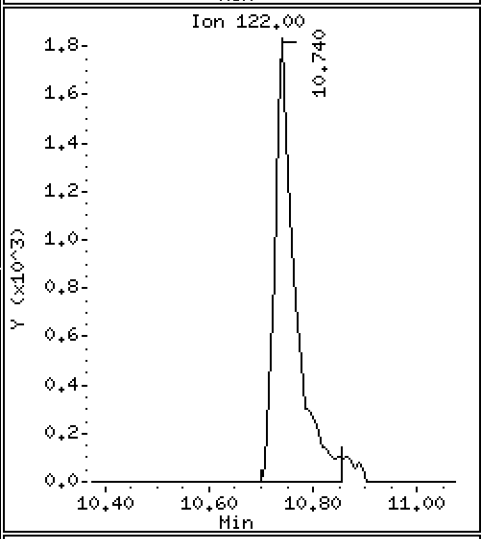
22 2,4-Dimethylphenol

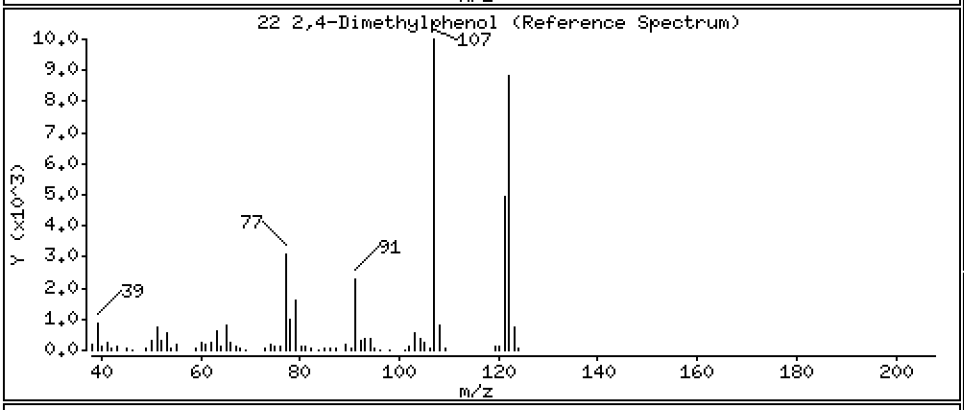
Concentration: 0.06022 ug/mL

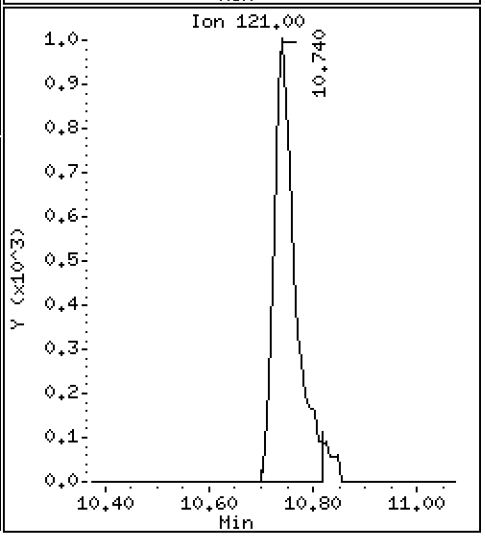


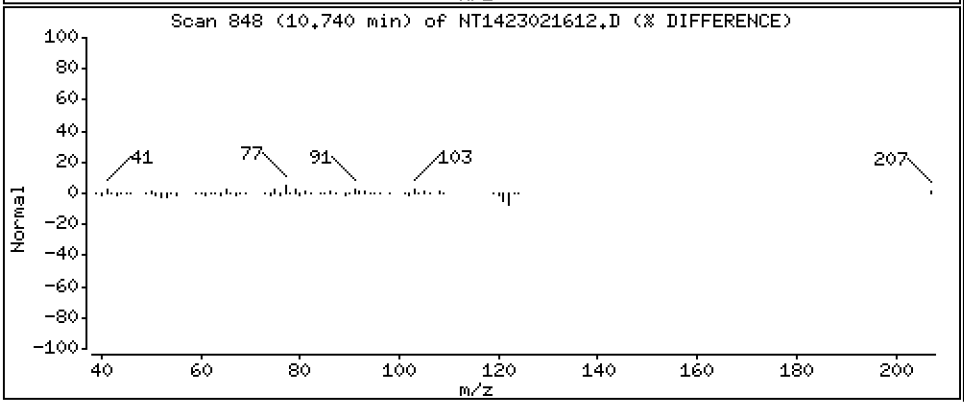












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

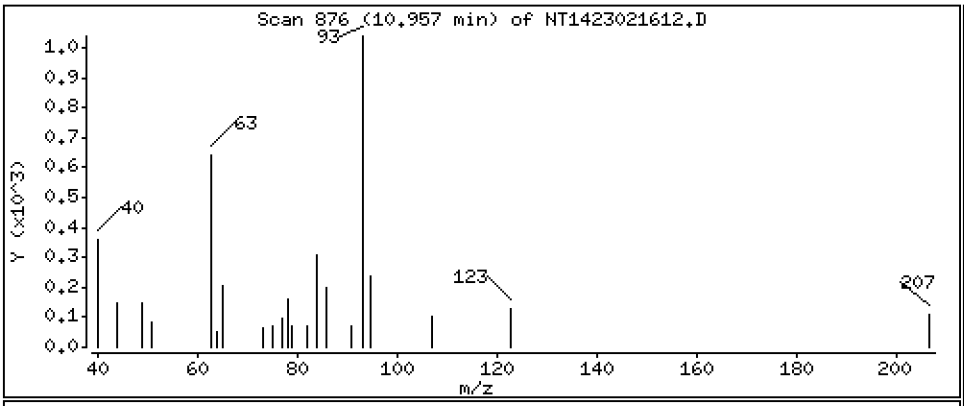
Operator: DSD

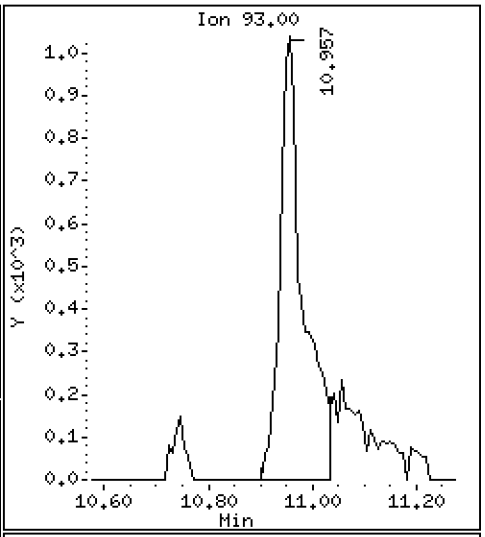
Column phase: ZB-5msi

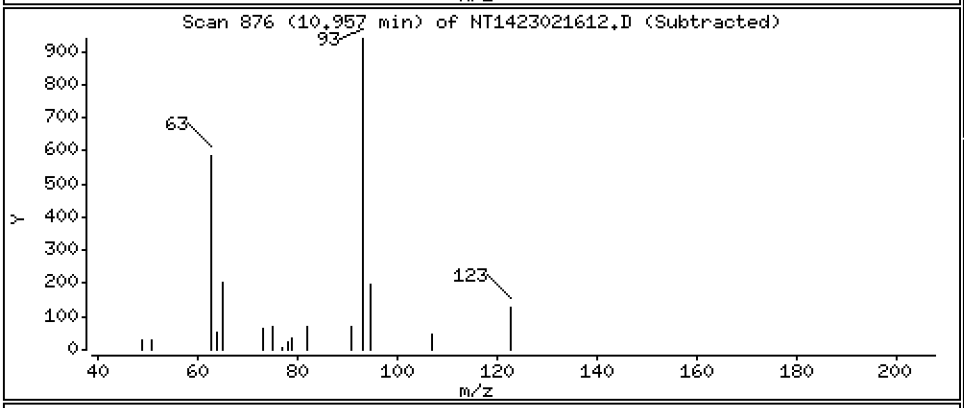
Column diameter: 0.25

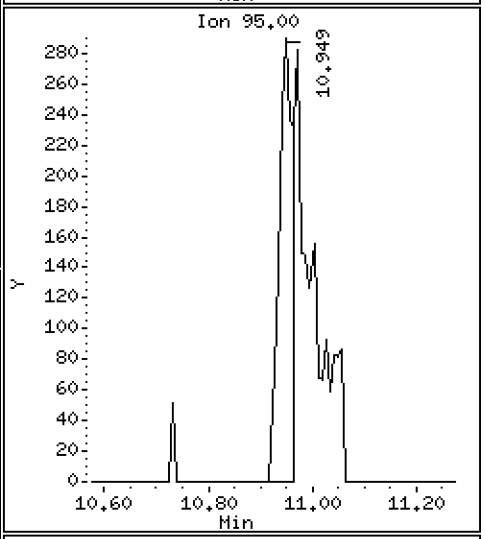
23 Bis(2-Chloroethoxy)methane

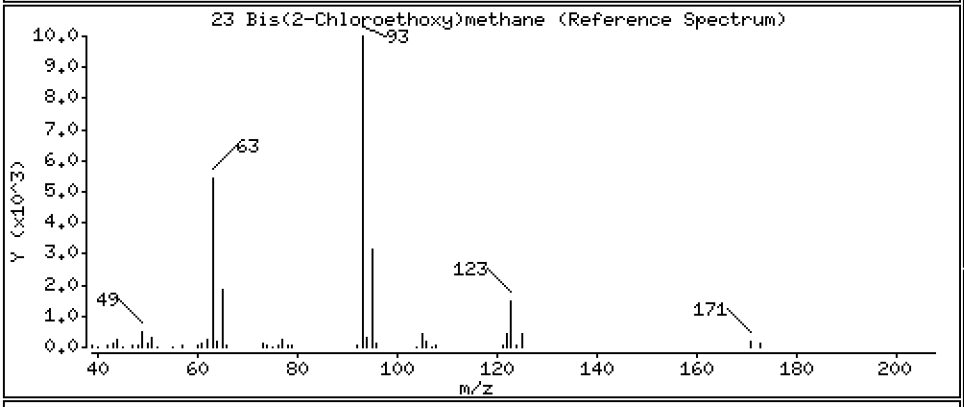
Concentration: 0.02825 ug/mL

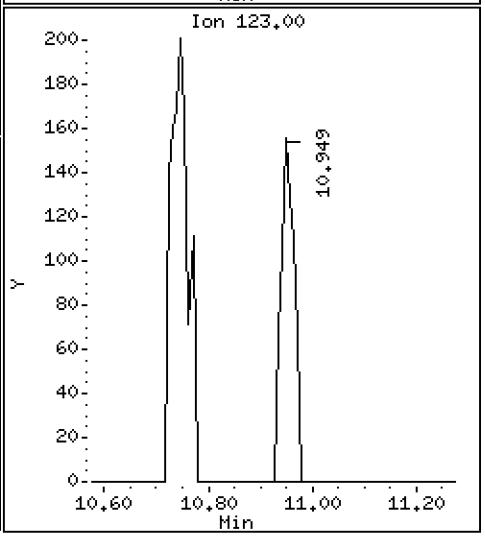


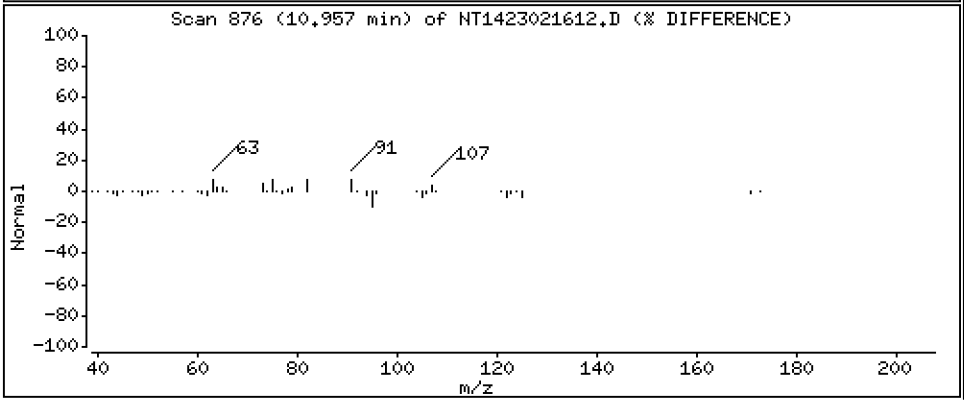












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021612.D

Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

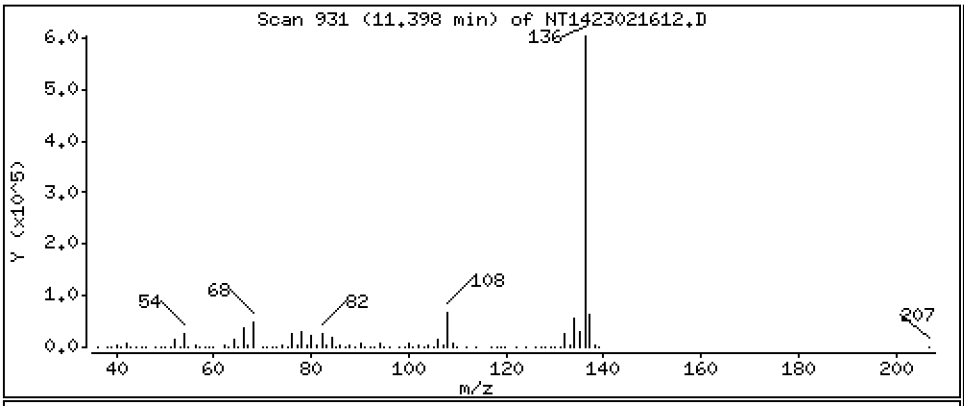
Operator: DSD

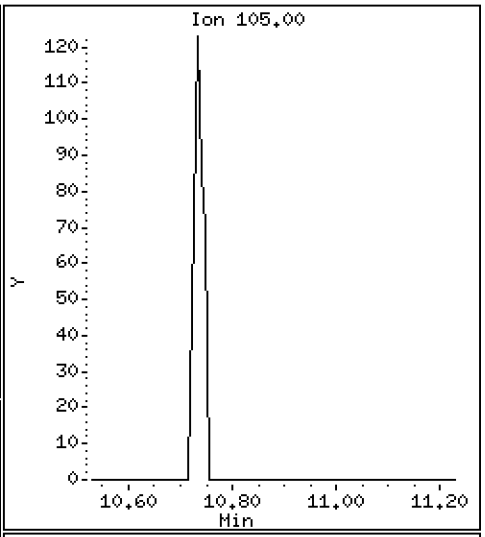
Column phase: ZB-5msi

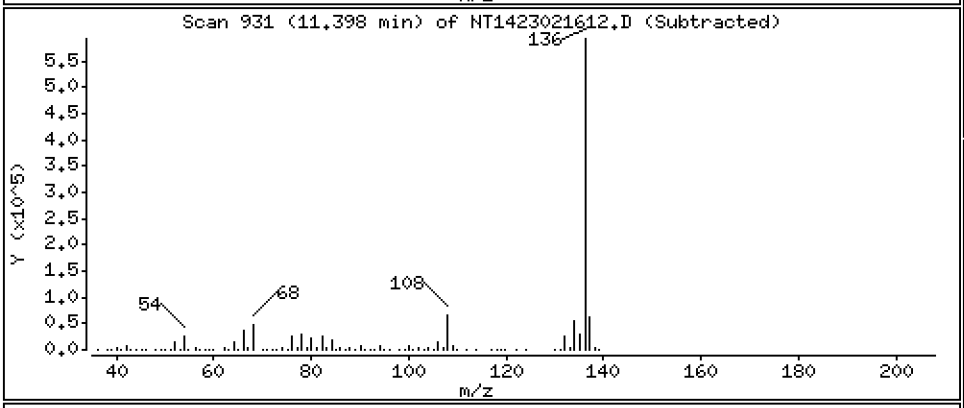
Column diameter: 0.25

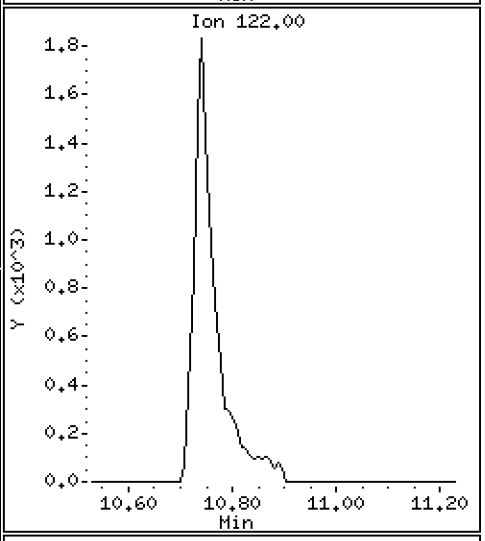
24 Benzoic acid

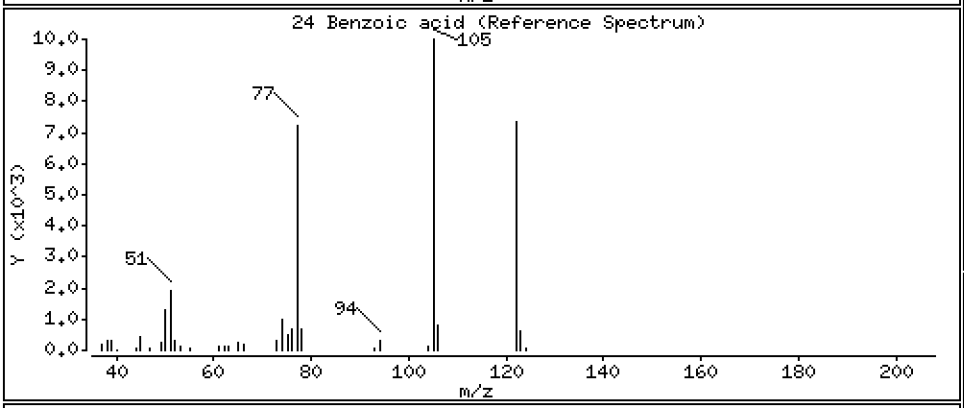
Concentration: 0.01862 ug/mL

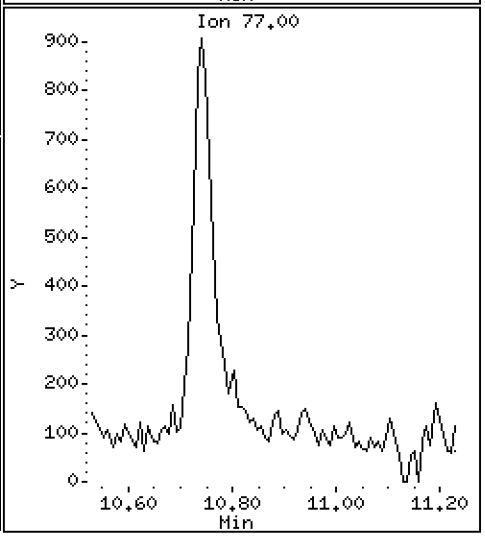


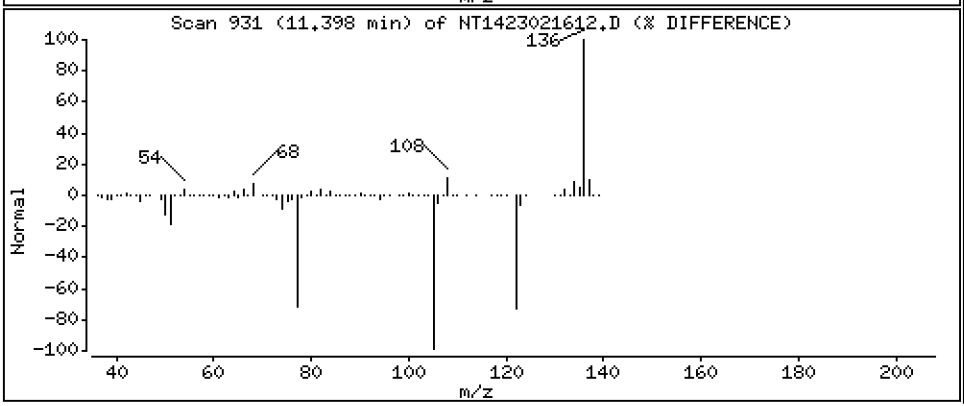












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

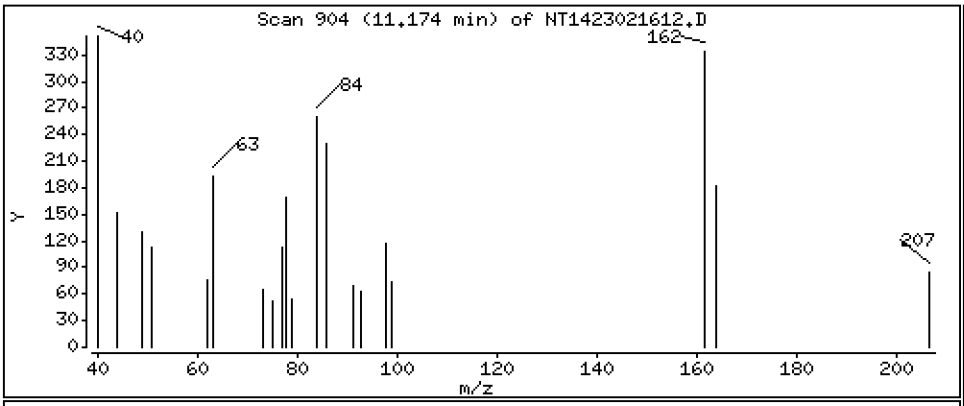
Operator: DSD

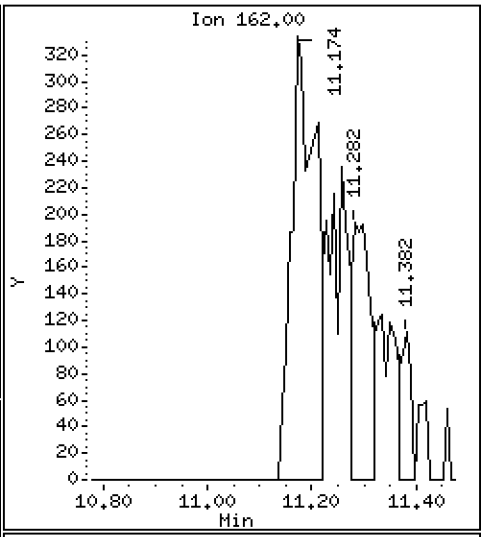
Column phase: ZB-5msi

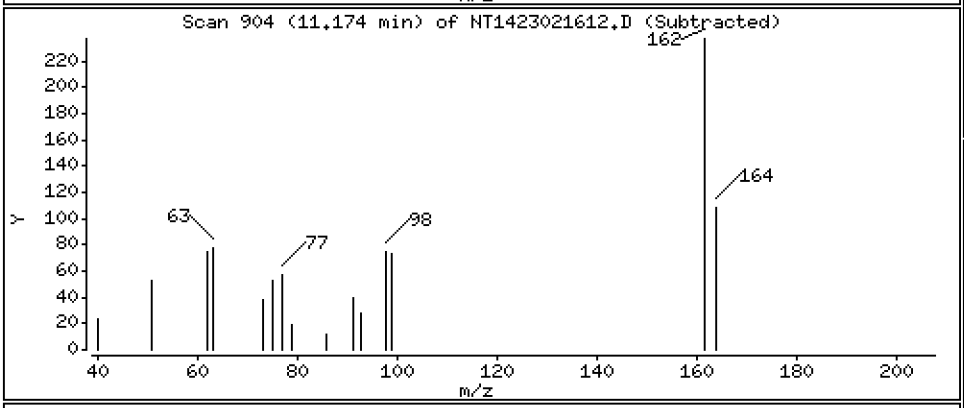
Column diameter: 0.25

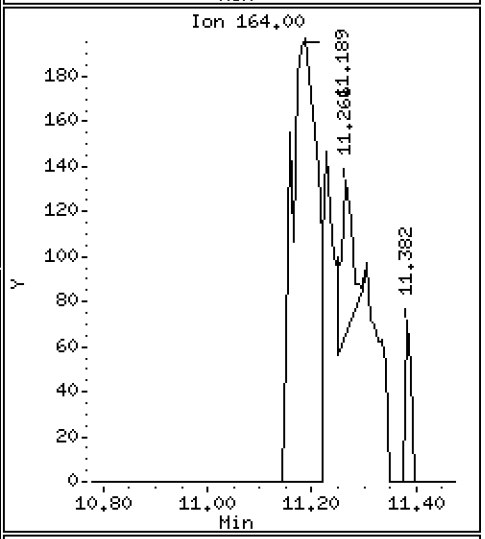
25 2,4-Dichlorophenol

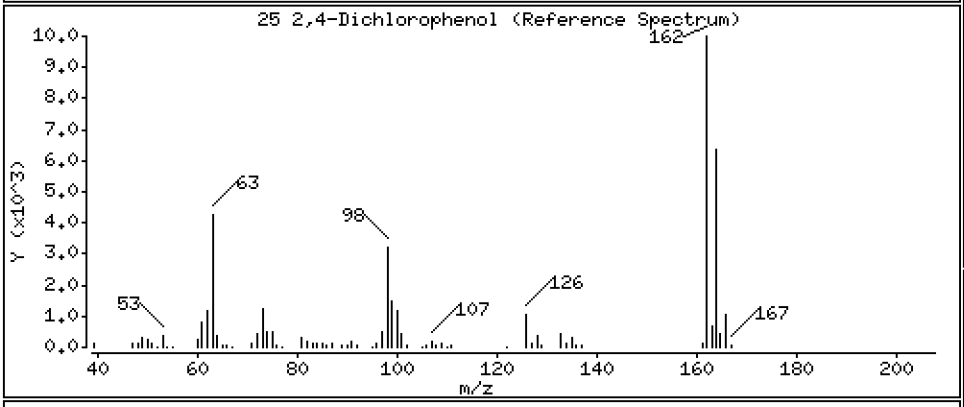
Concentration: 0.01179 ug/mL

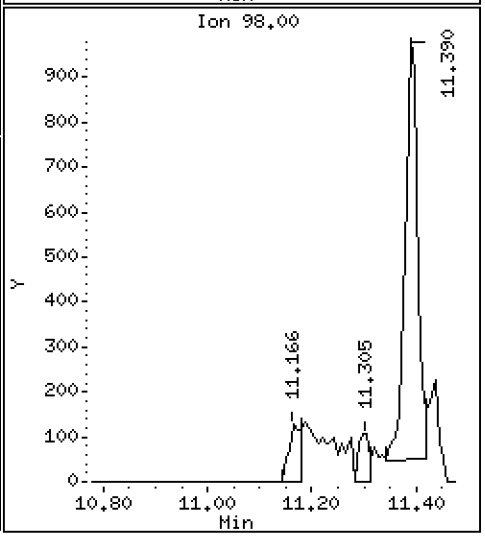


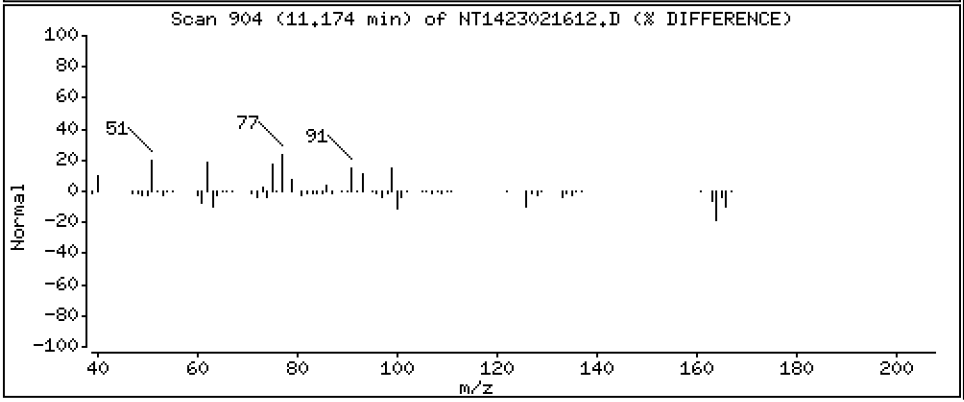












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

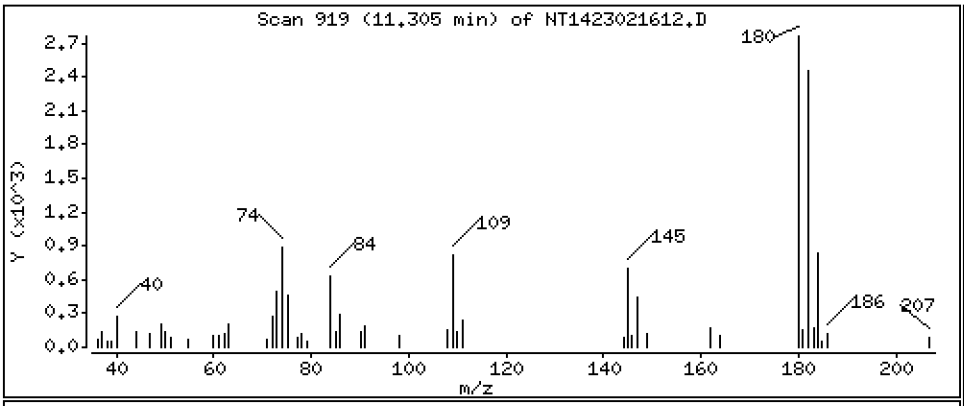
Operator: DSD

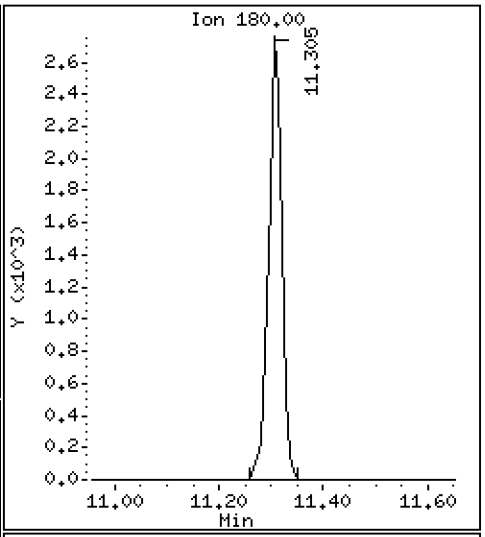
Column phase: ZB-5msi

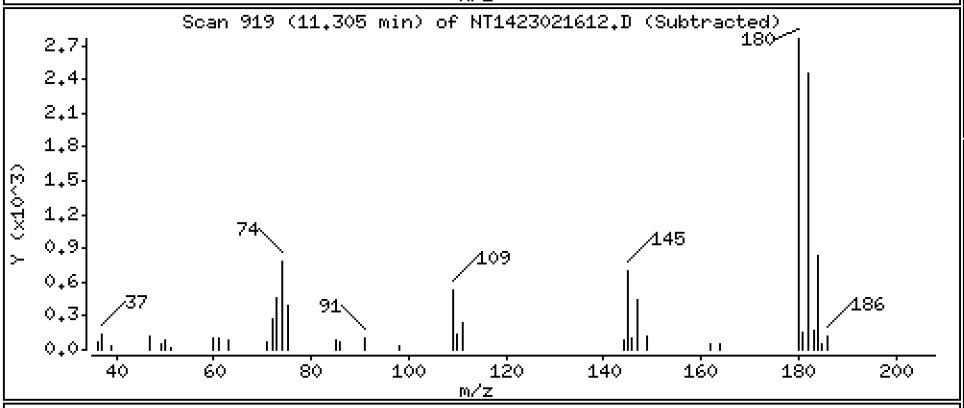
Column diameter: 0.25

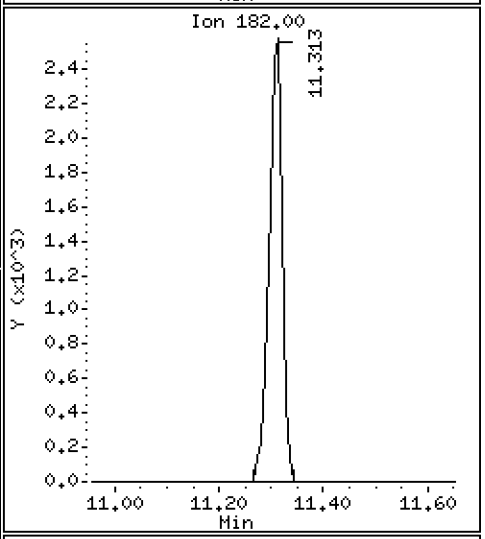
26 1,2,4-Trichlorobenzene

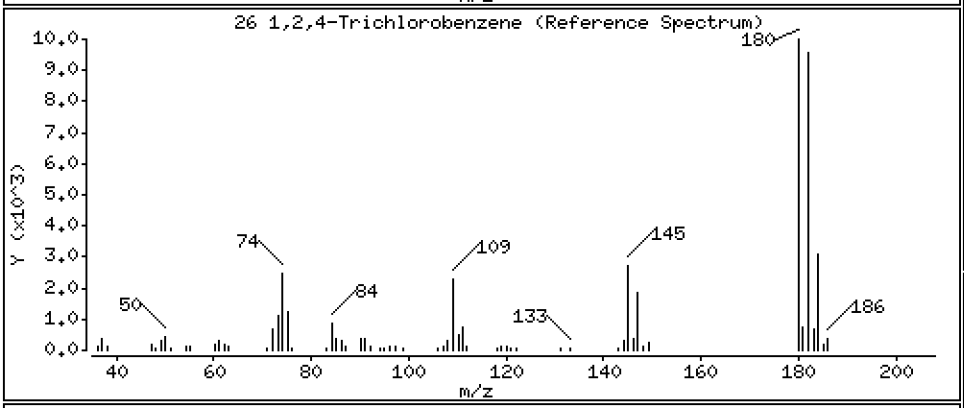
Concentration: 0.04503 ug/mL

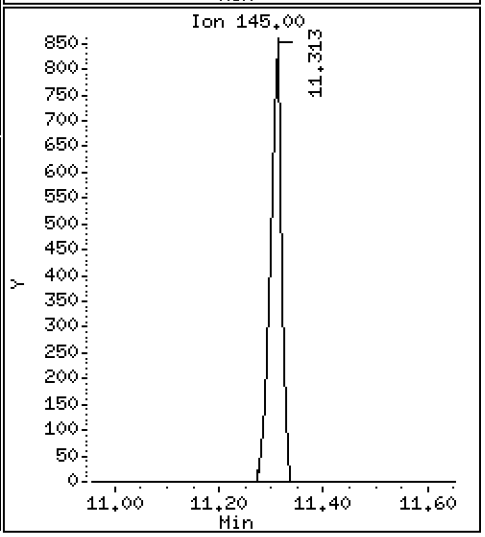


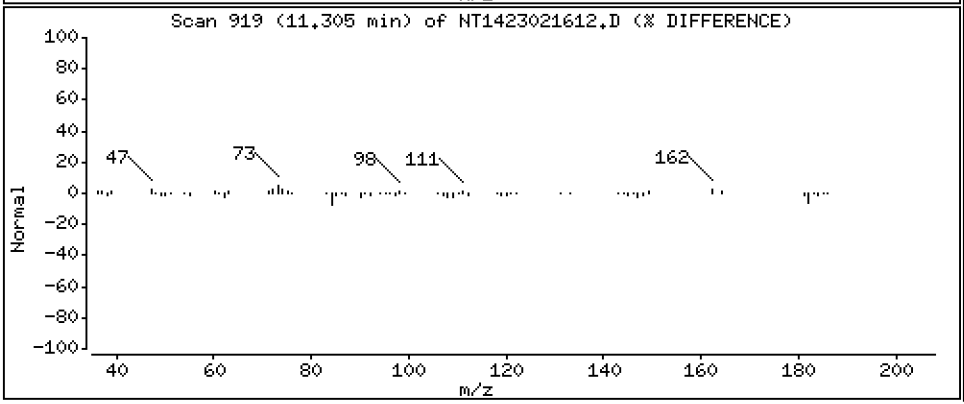












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

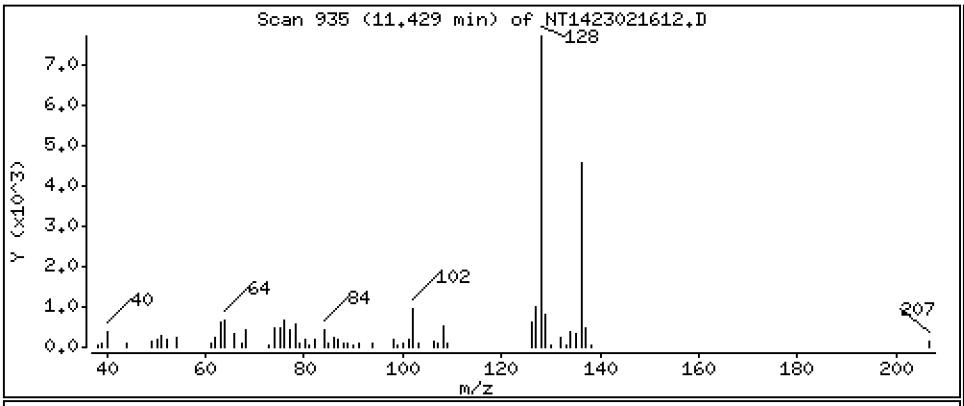
Operator: DSD

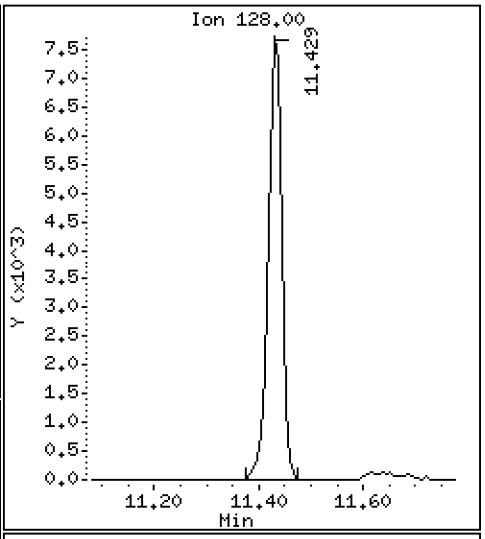
Column phase: ZB-5msi

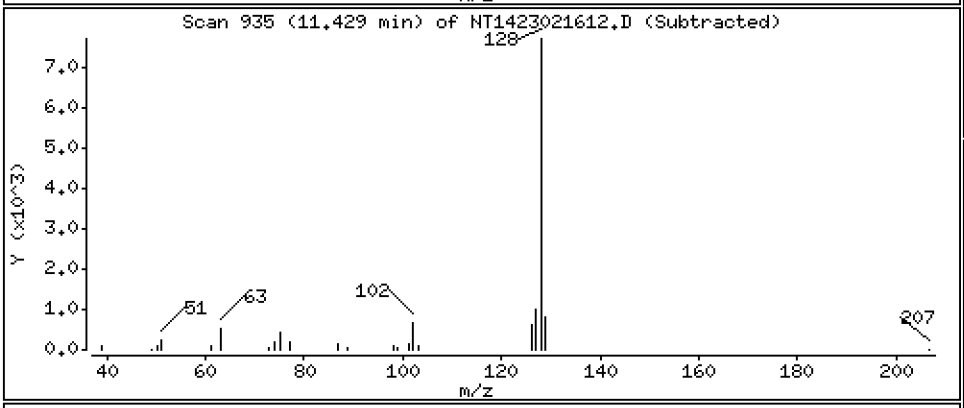
Column diameter: 0.25

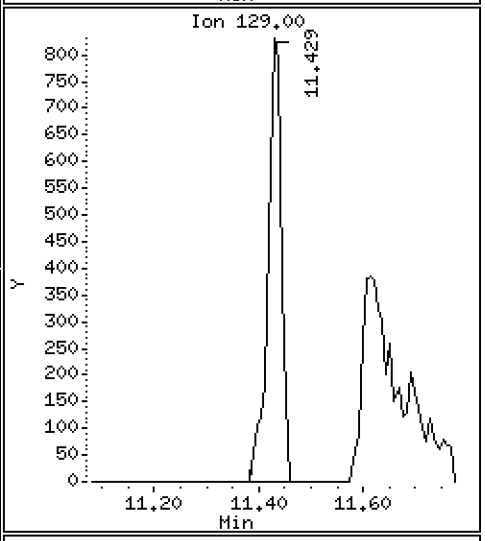
28 Naphthalene

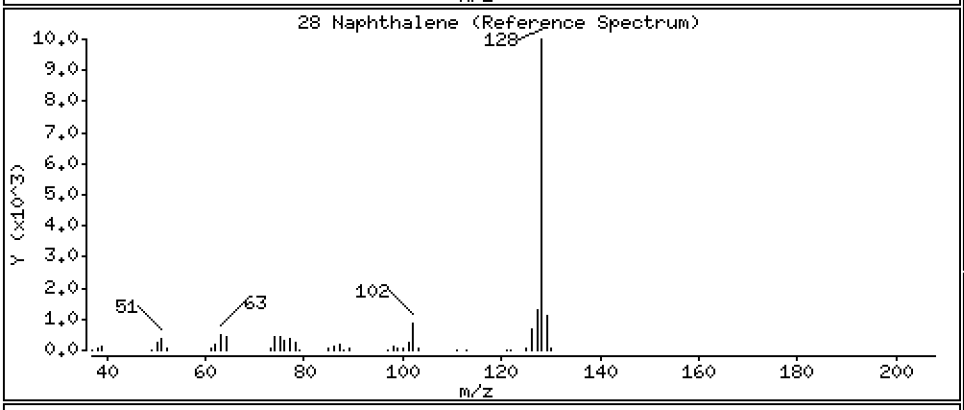
Concentration: 0.04580 ug/mL

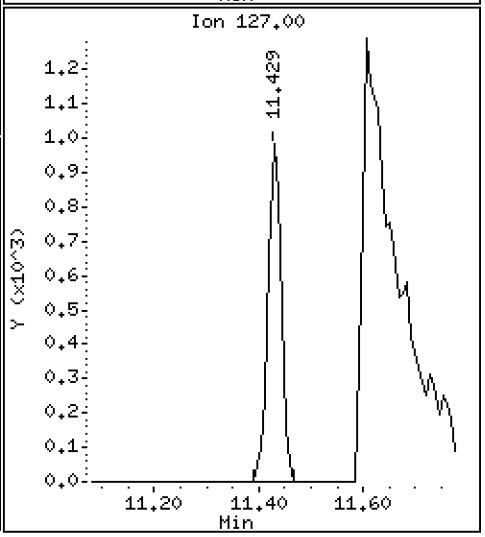


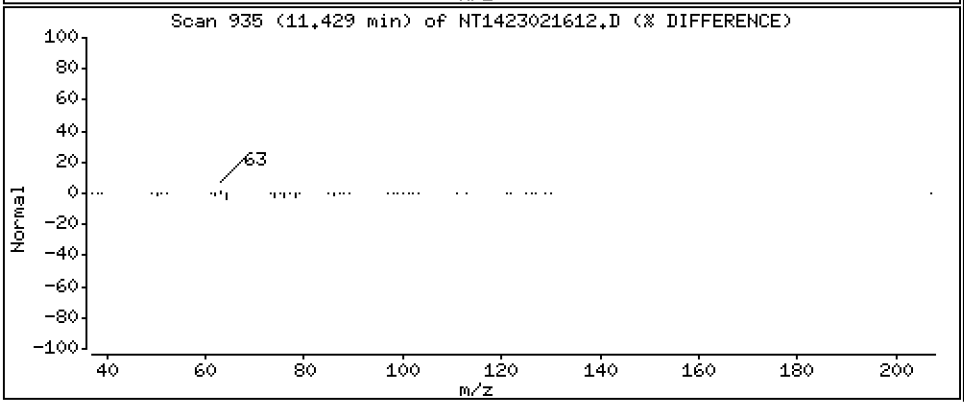












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

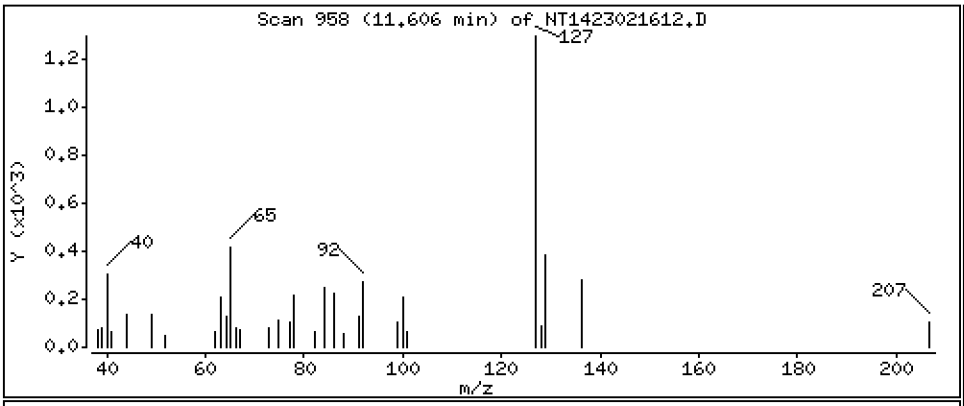
Operator: DSD

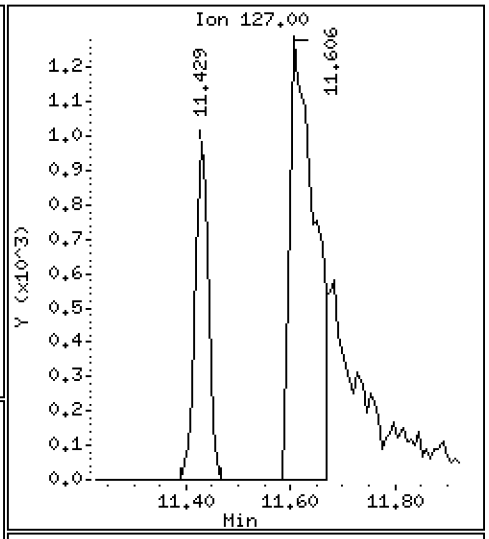
Column phase: ZB-5msi

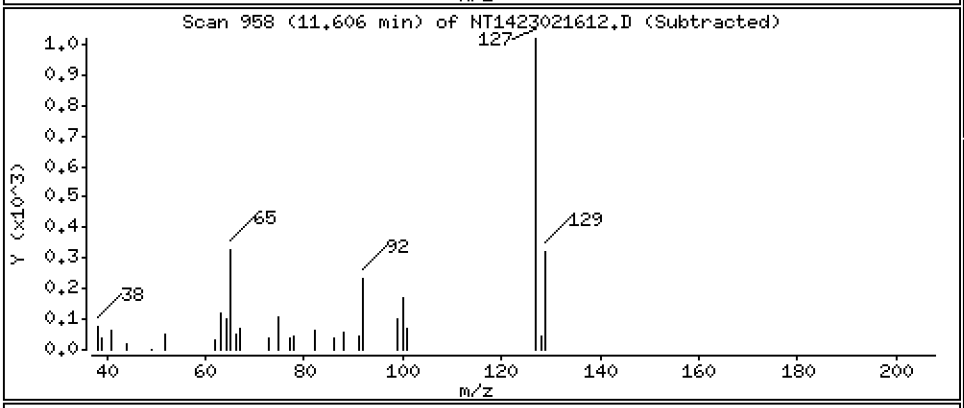
Column diameter: 0.25

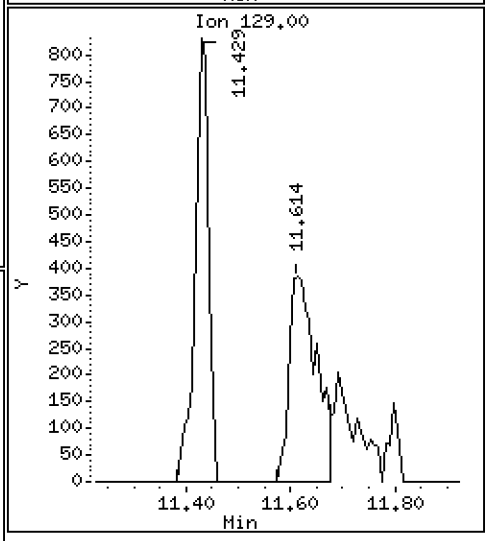
29 4-Chloroaniline

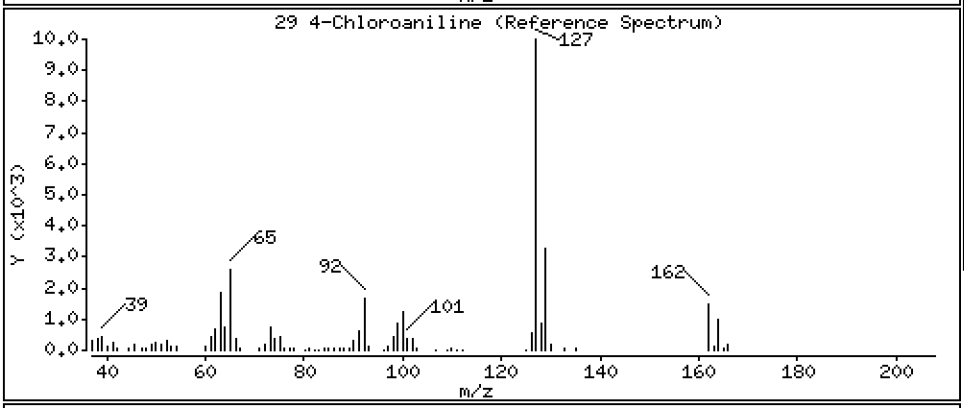
Concentration: 0.03498 ug/mL

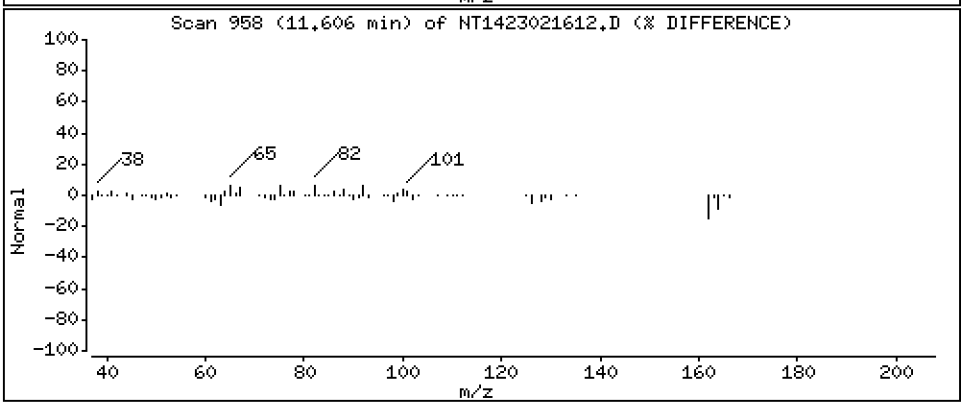












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

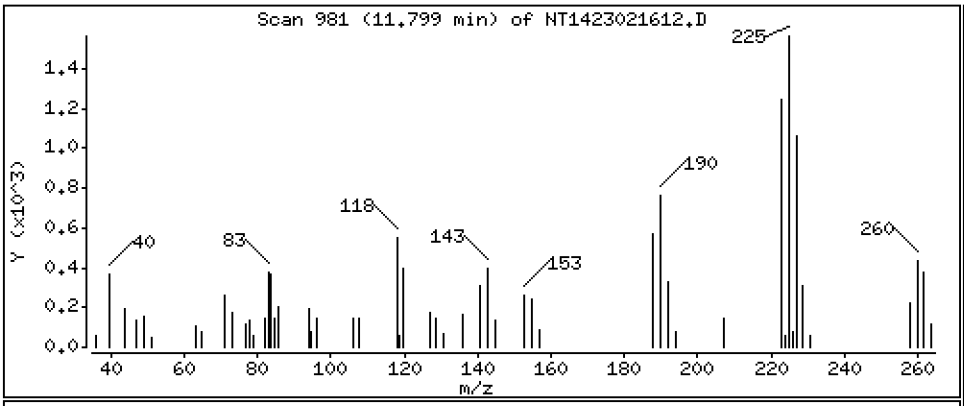
Operator: DSD

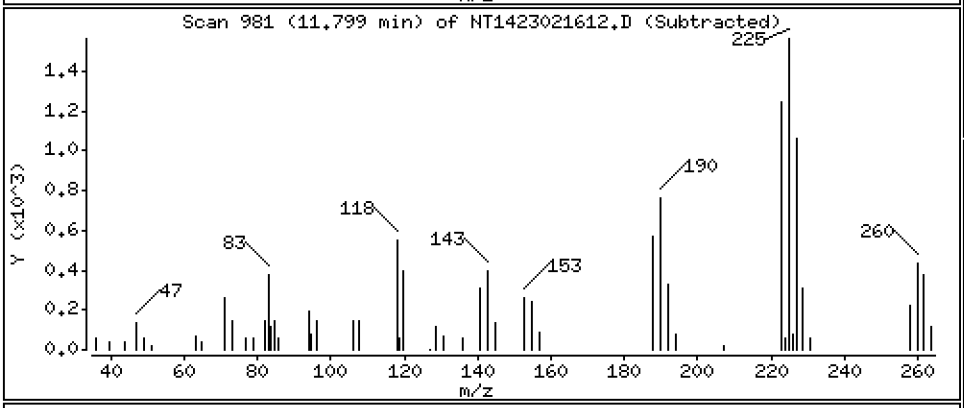
Column phase: ZB-5msi

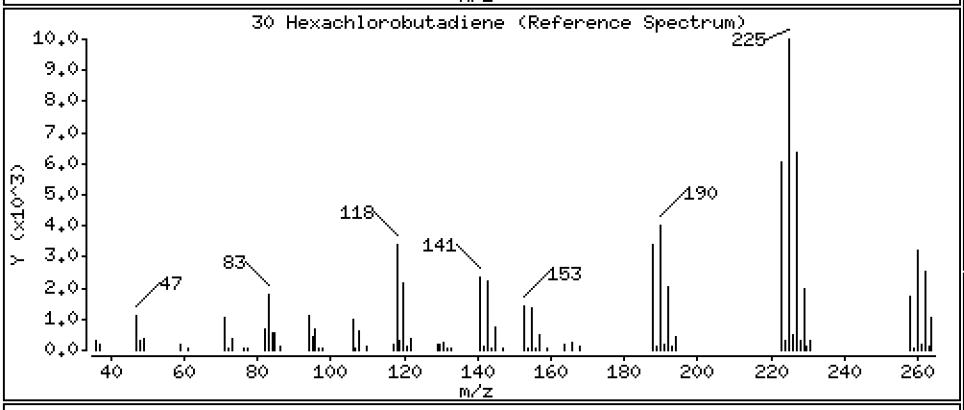
Column diameter: 0.25

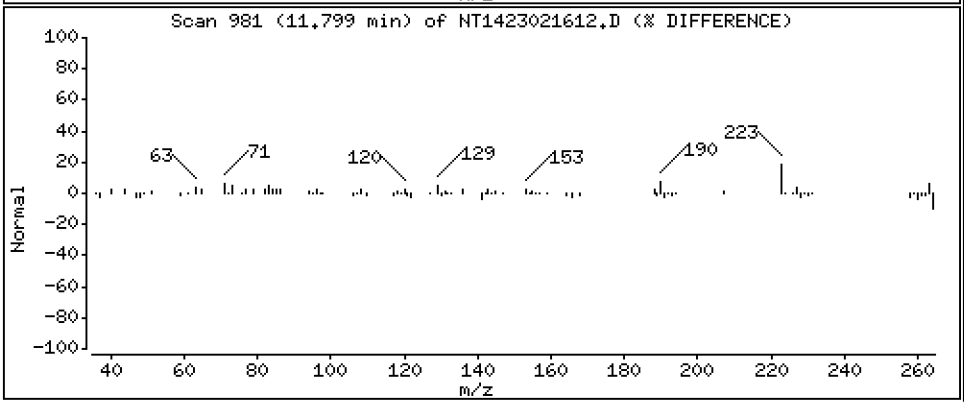
30 Hexachlorobutadiene

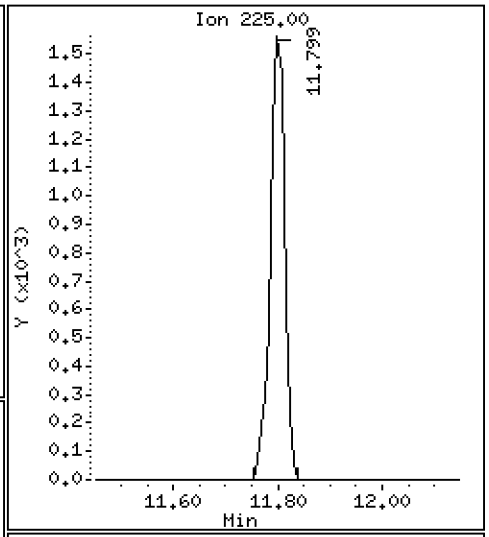
Concentration: 0.04366 ug/mL

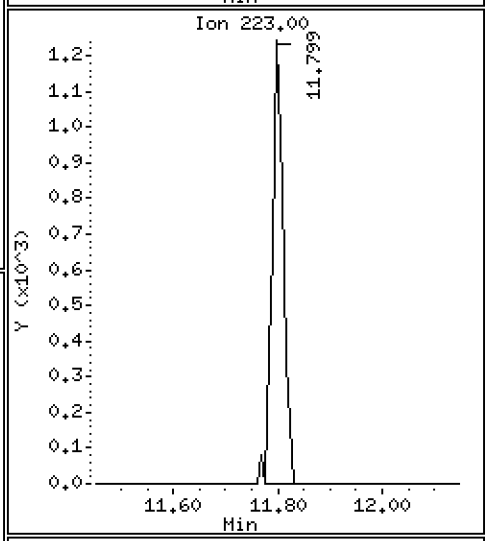


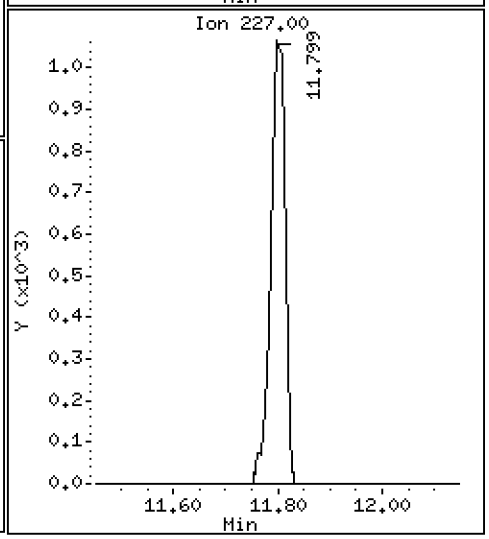












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021612.D

Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

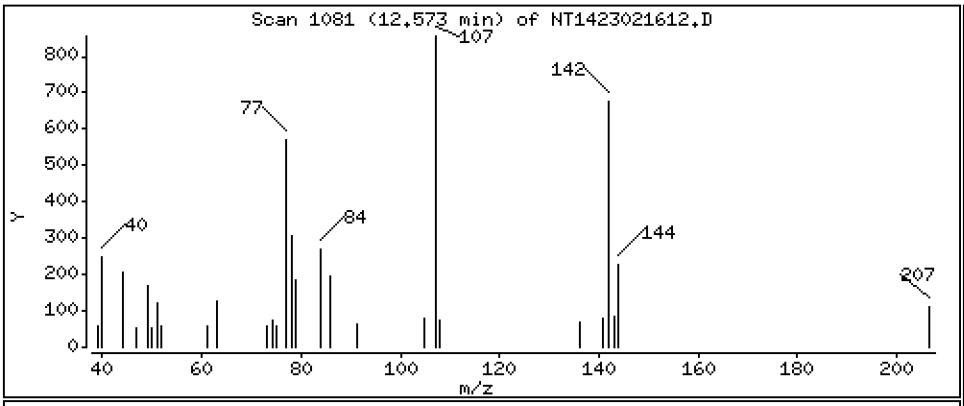
Operator: DSD

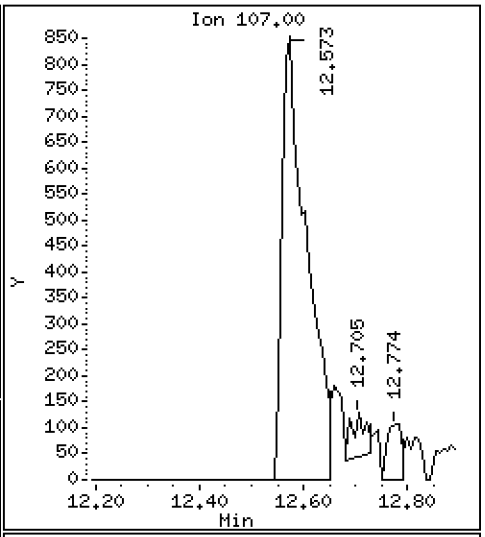
Column phase: ZB-5msi

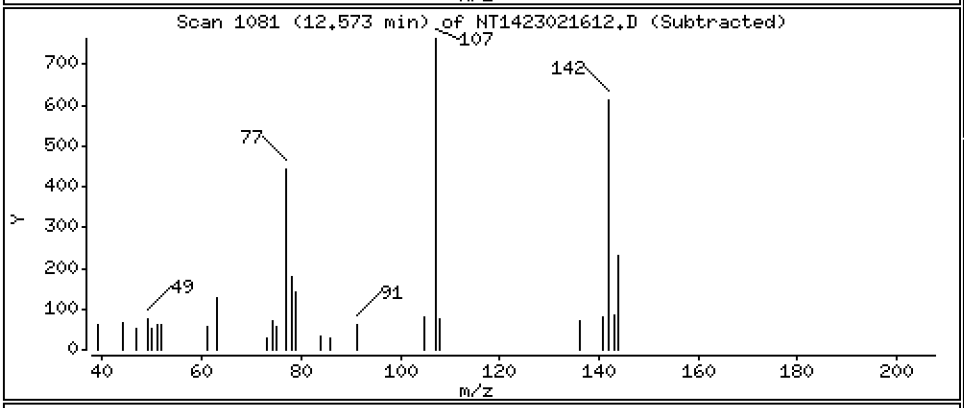
Column diameter: 0.25

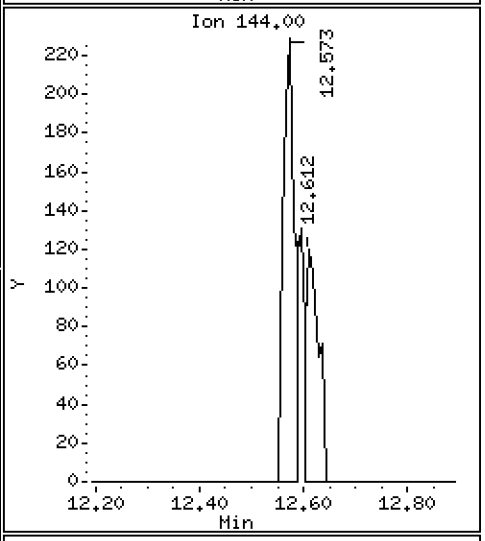
31 4-Chloro-3-methylphenol

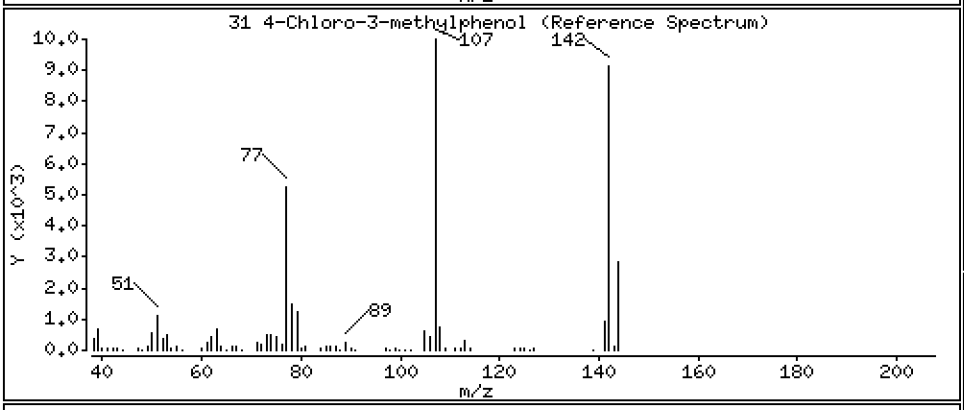
Concentration: 0.03058 ug/mL

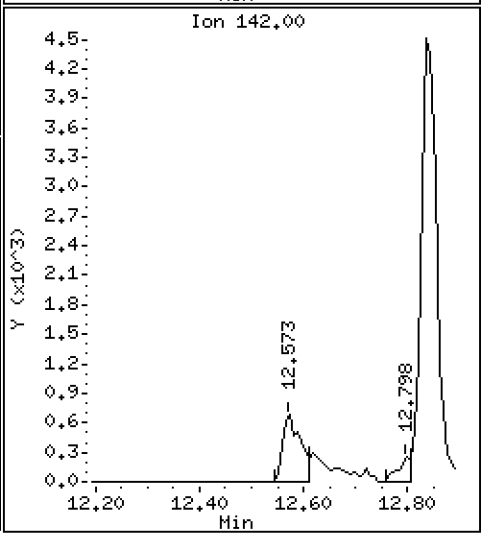


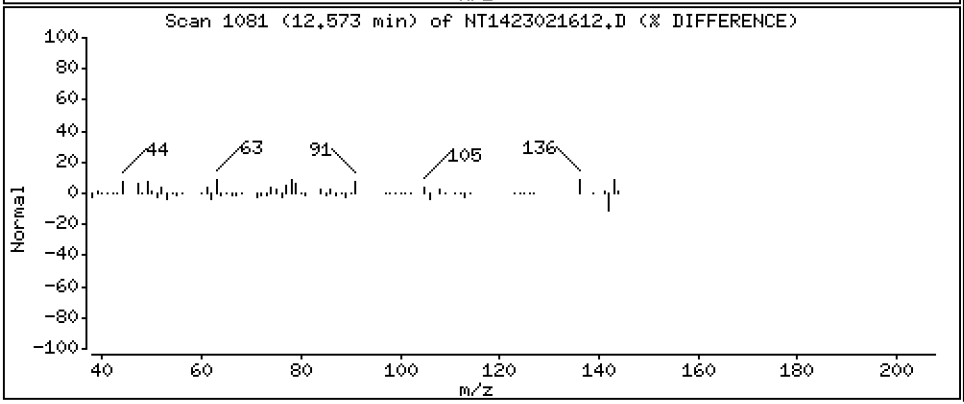












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021612.D

Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

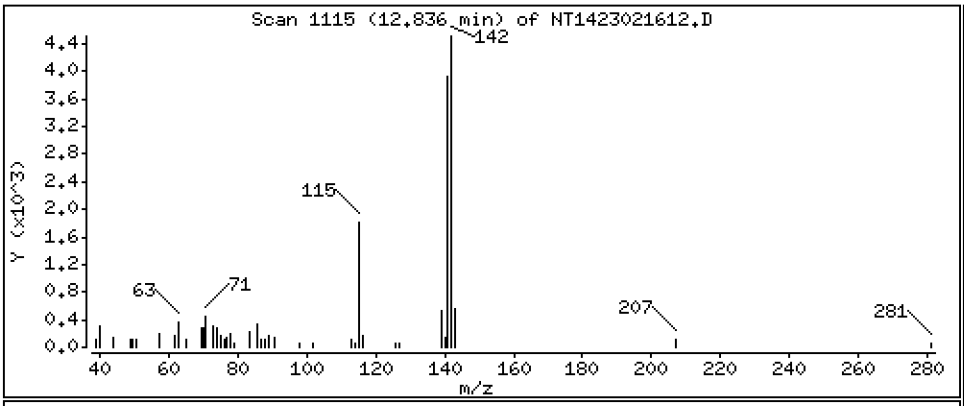
Operator: DSD

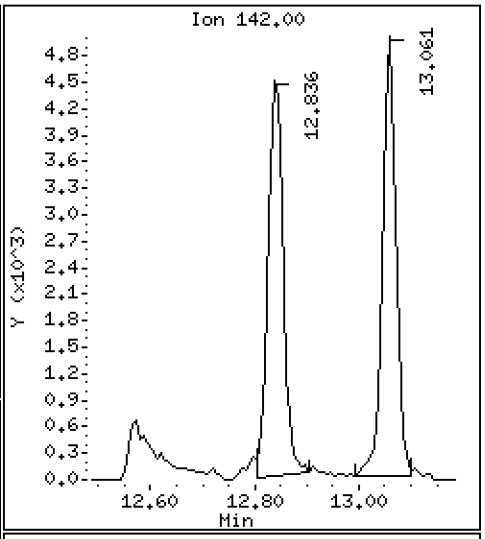
Column phase: ZB-5msi

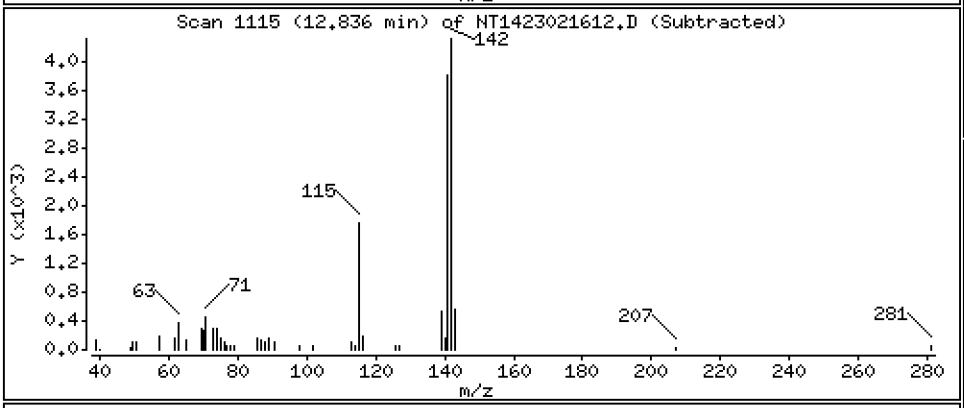
Column diameter: 0.25

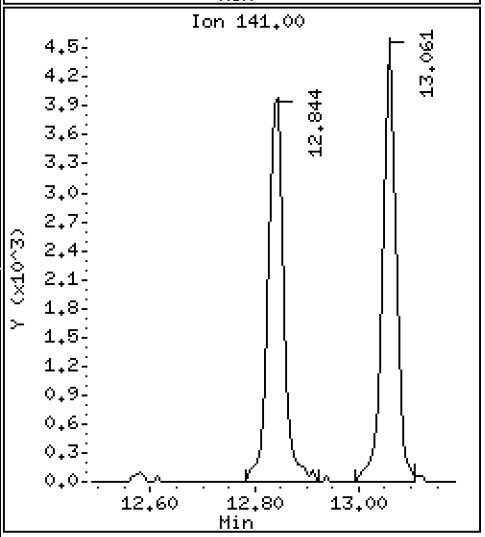
32 2-Methylnaphthalene

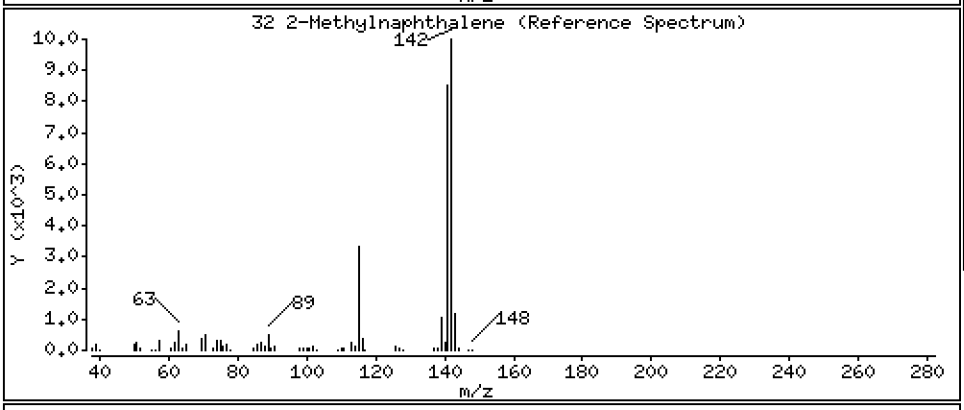
Concentration: 0.04033 ug/mL

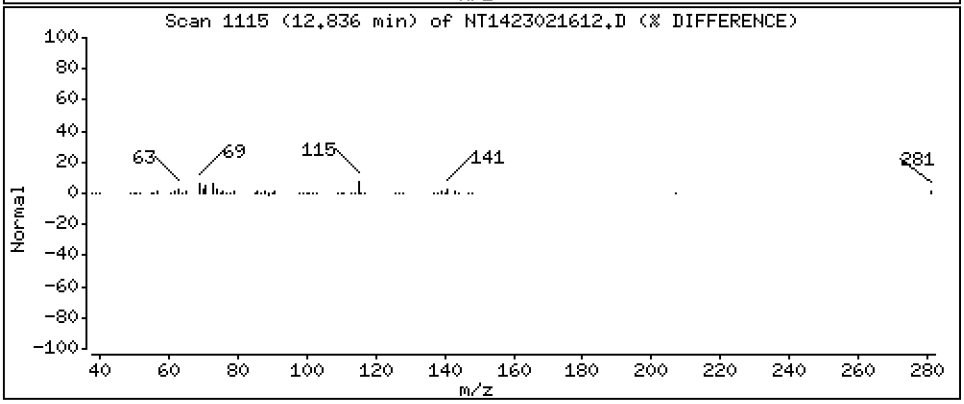












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

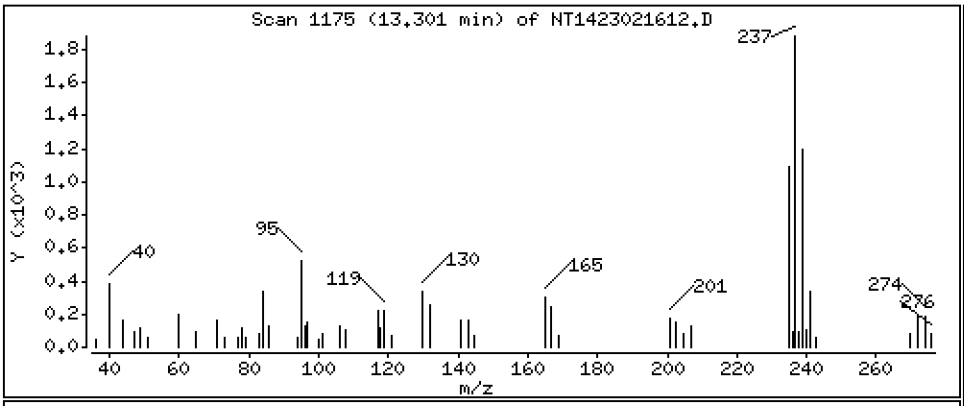
Operator: DSD

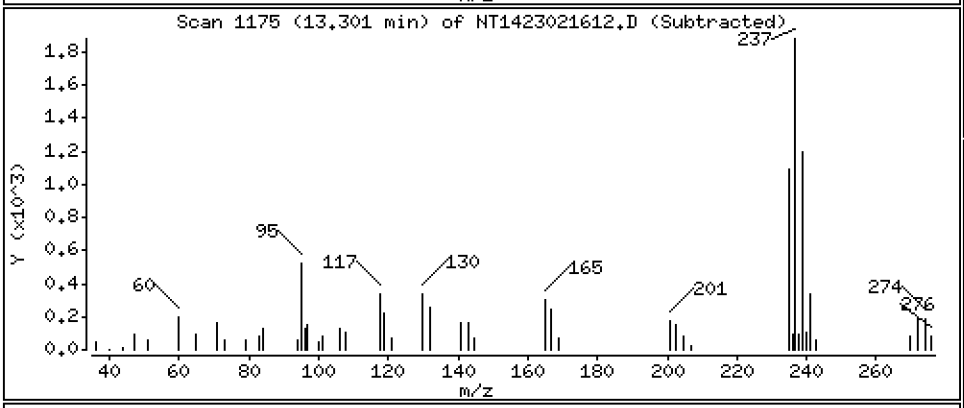
Column phase: ZB-5msi

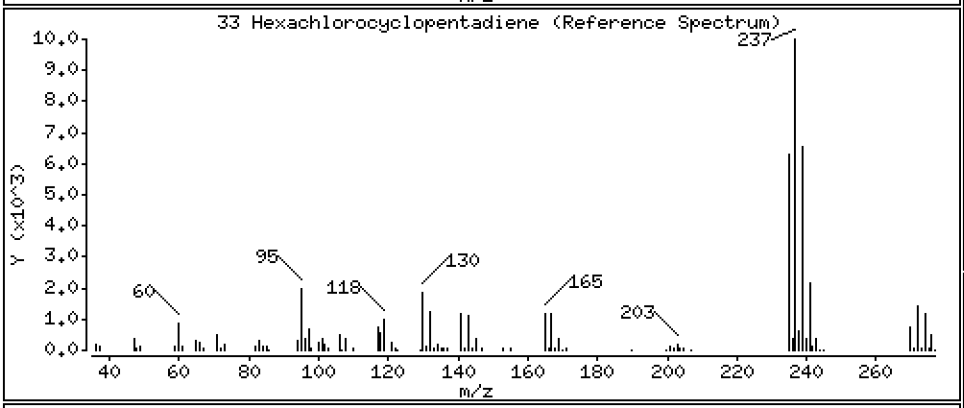
Column diameter: 0.25

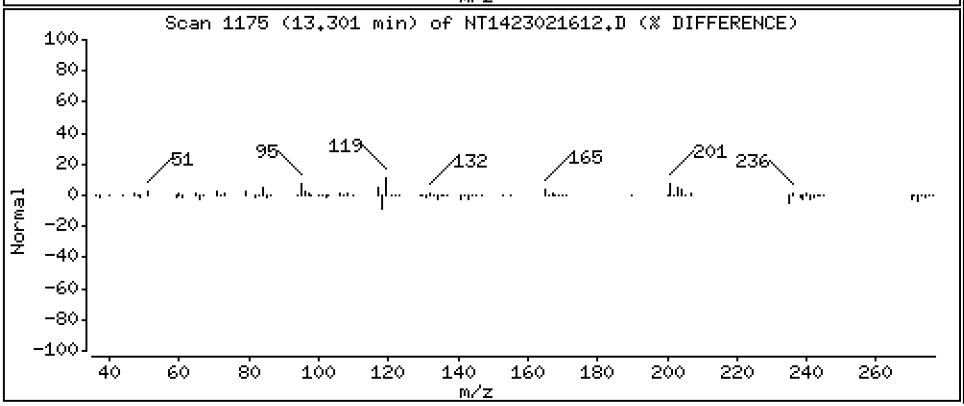
33 Hexachlorocyclopentadiene

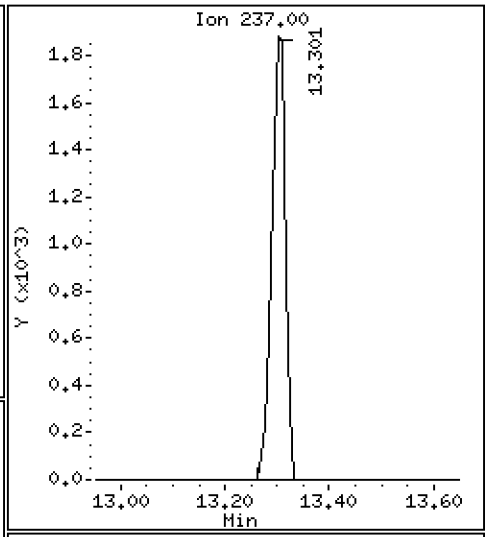
Concentration: 0.04822 ug/mL

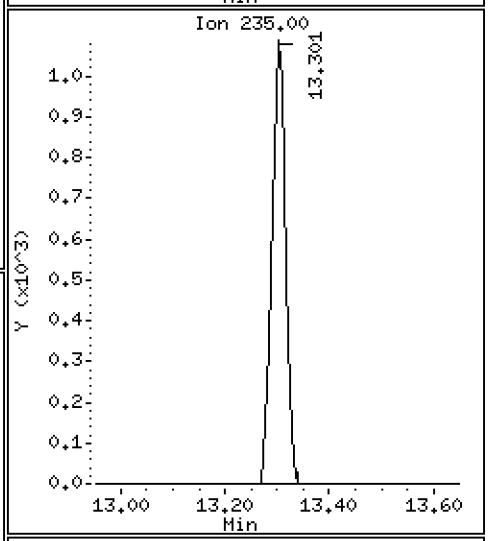


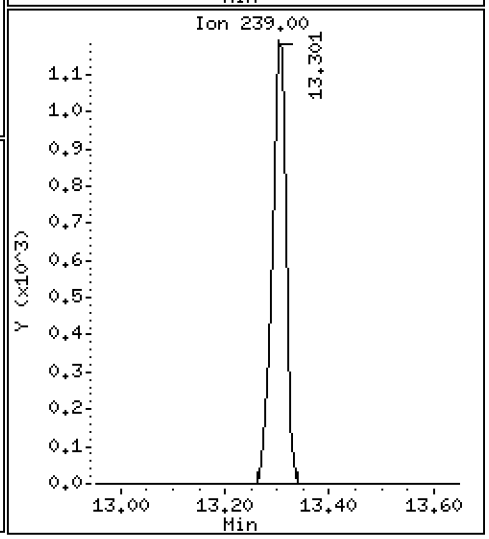












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

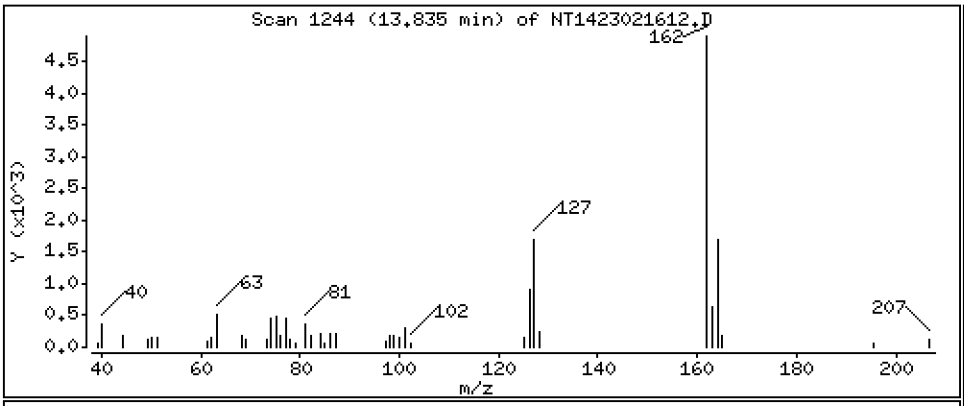
Operator: DSD

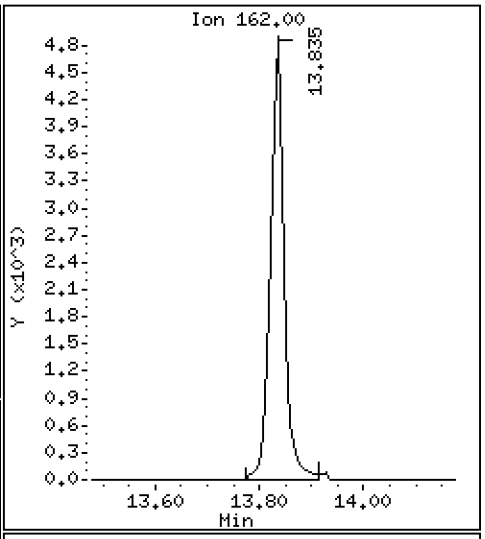
Column phase: ZB-5msi

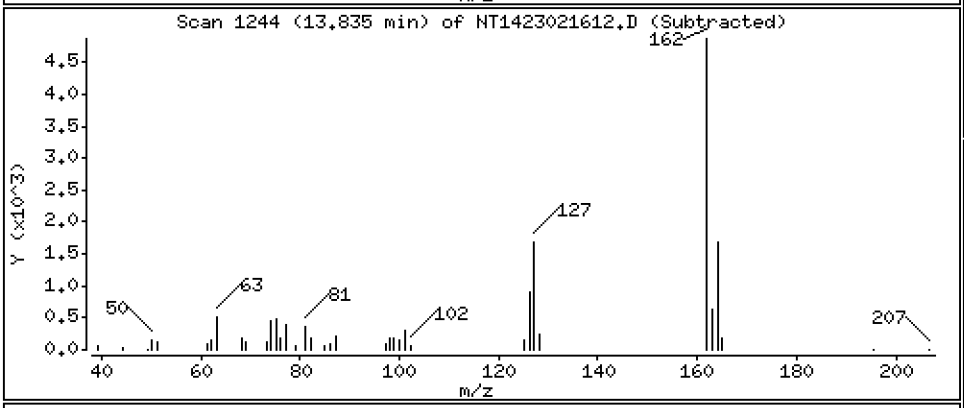
Column diameter: 0.25

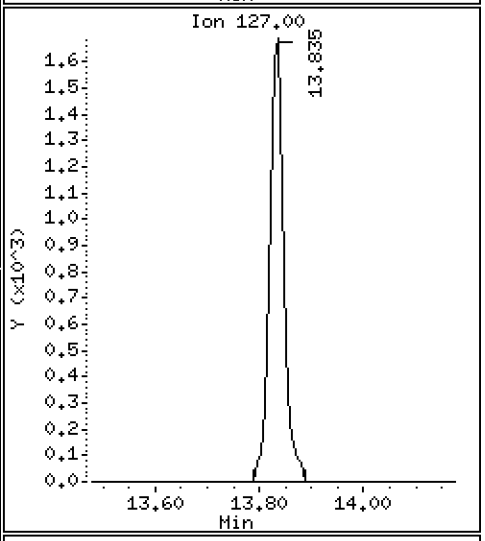
37 2-Chloronaphthalene

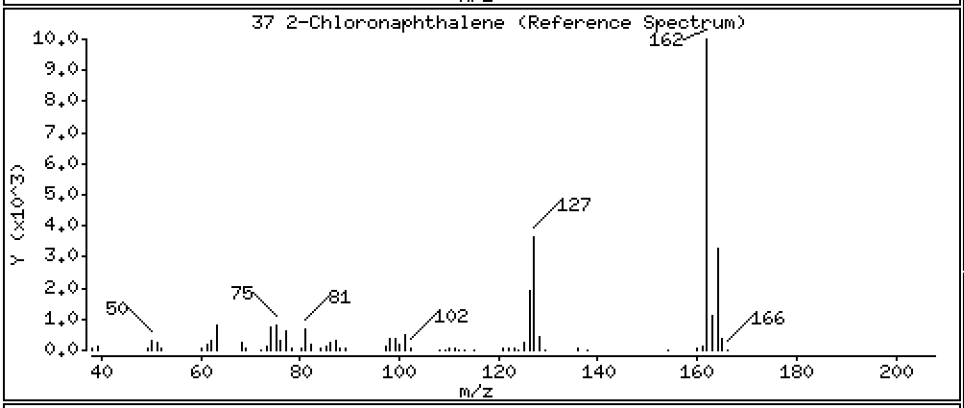
Concentration: 0.04237 ug/mL

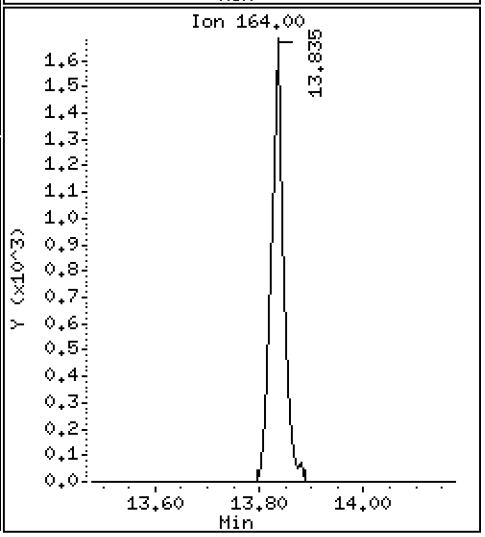


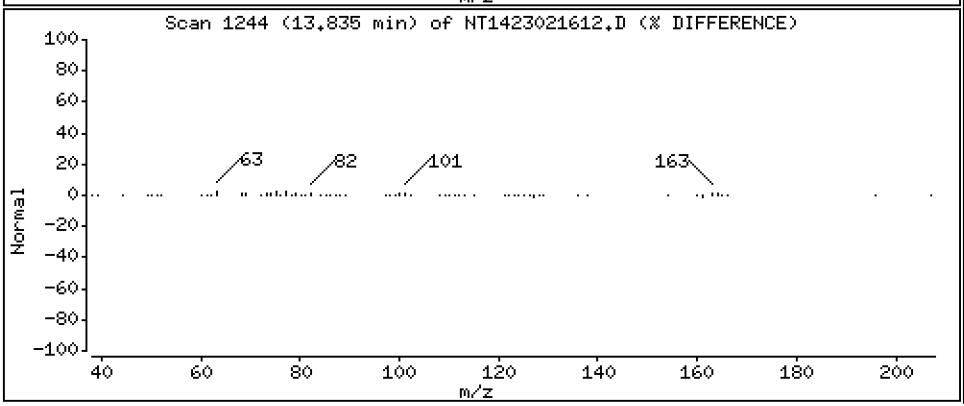












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

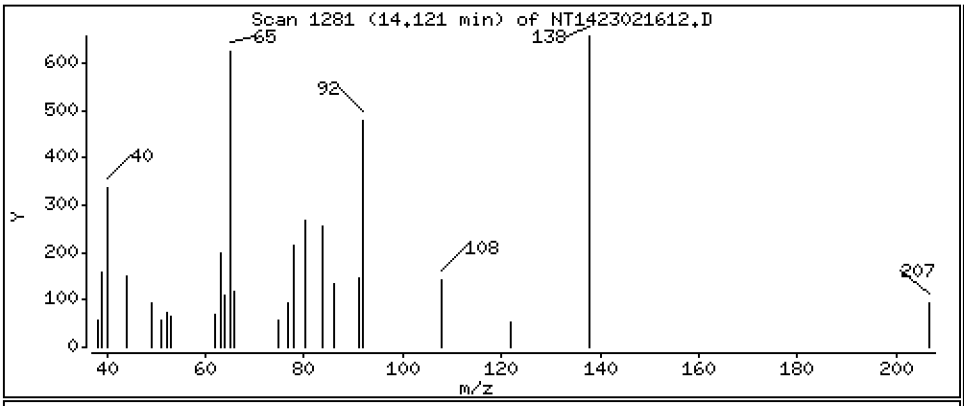
Operator: DSD

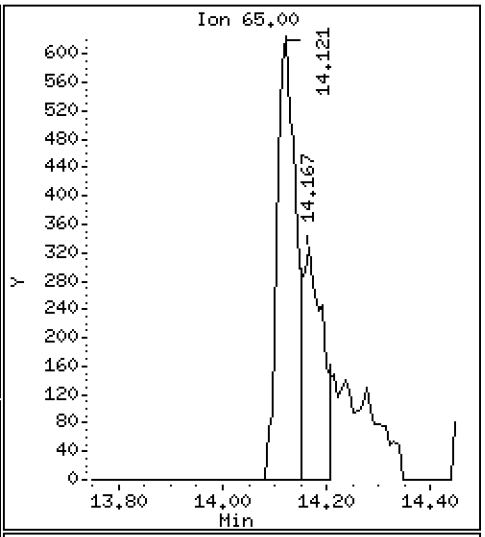
Column phase: ZB-5msi

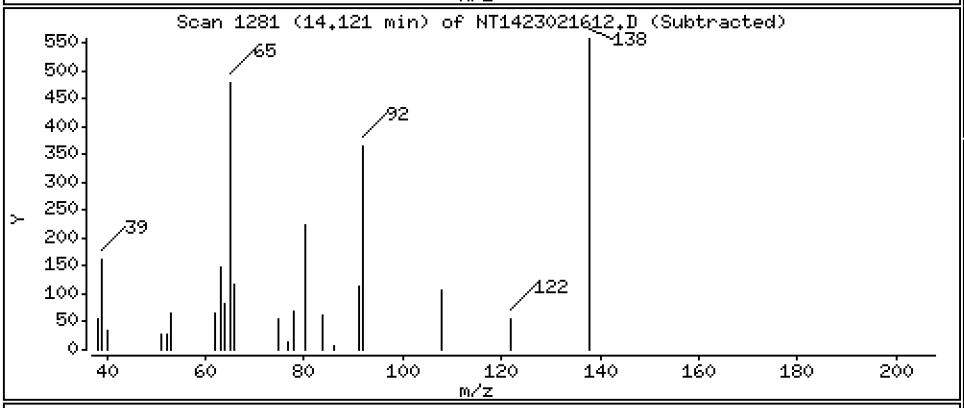
Column diameter: 0.25

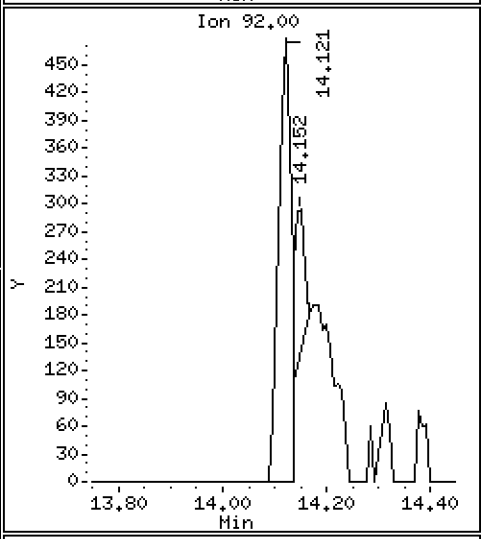
38 2-Nitroaniline

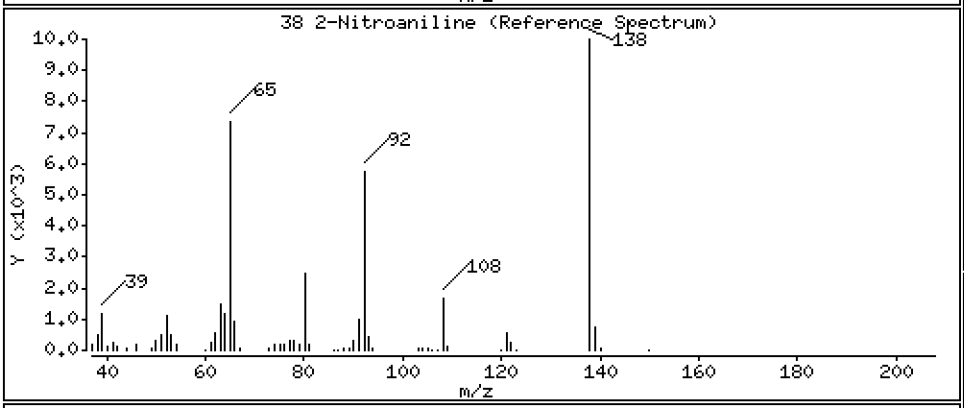
Concentration: 0.02402 ug/mL

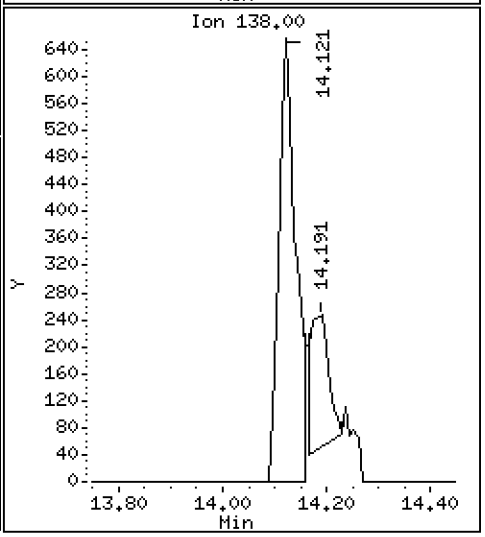


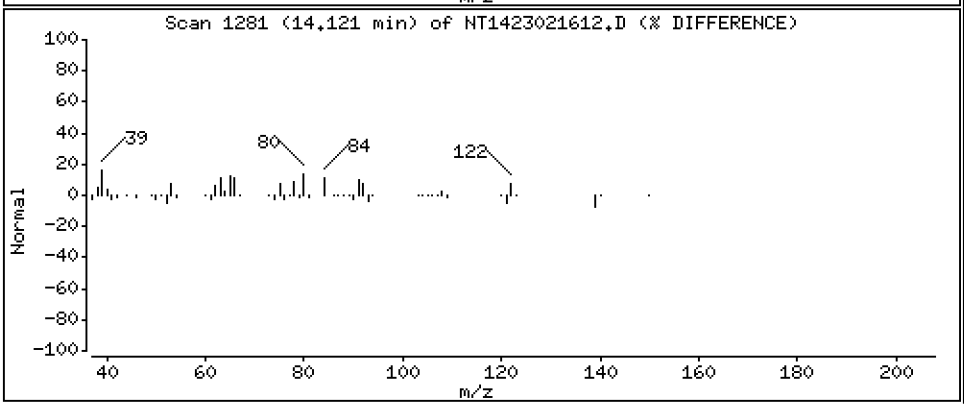












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

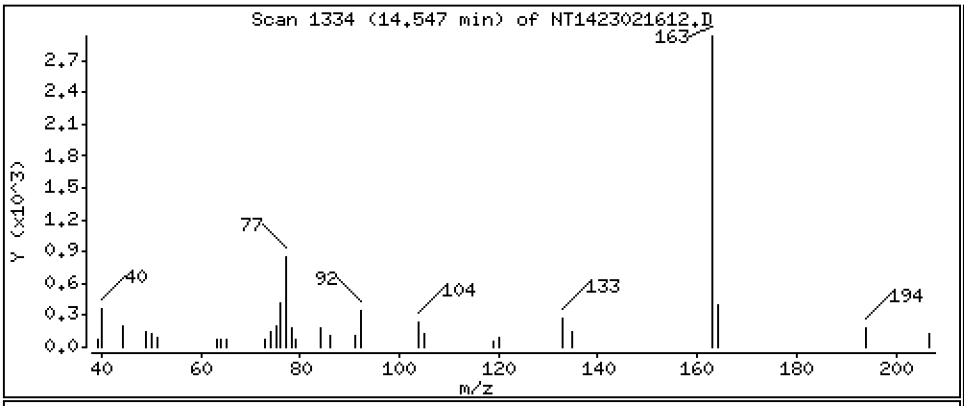
Operator: DSD

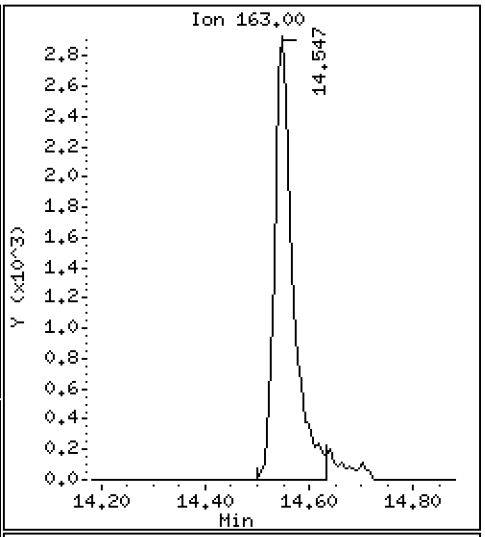
Column phase: ZB-5msi

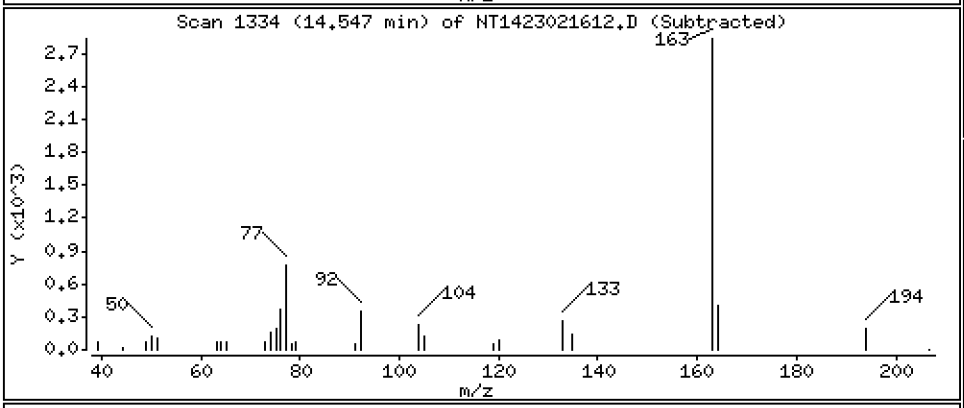
Column diameter: 0.25

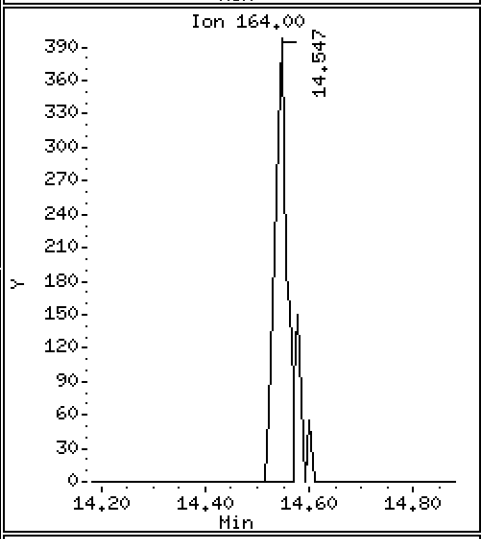
39 Dimethylphthalate

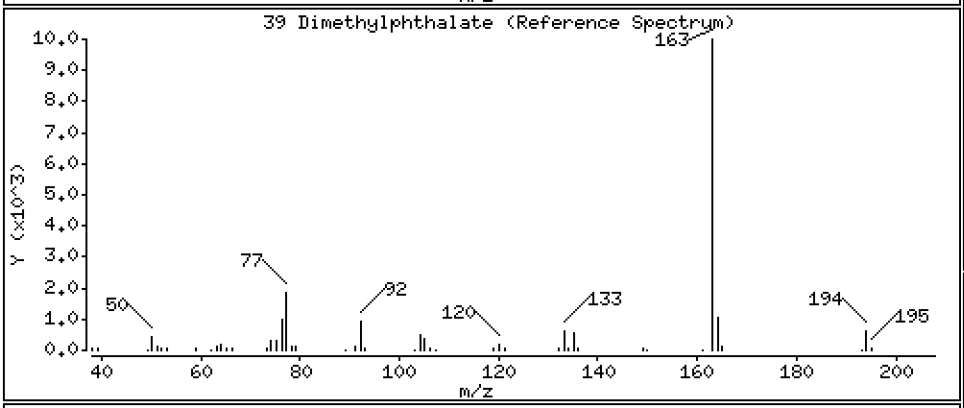
Concentration: 0.03477 ug/mL

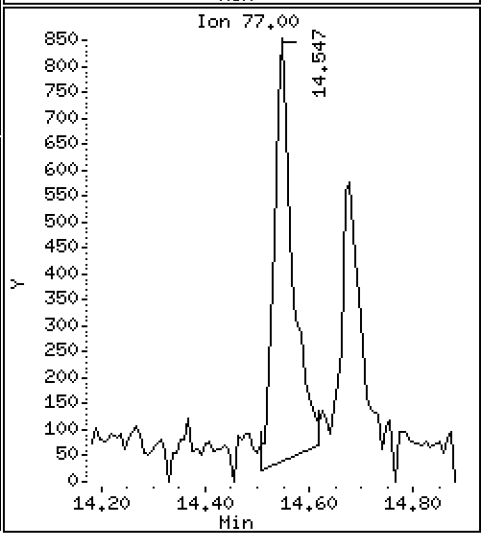


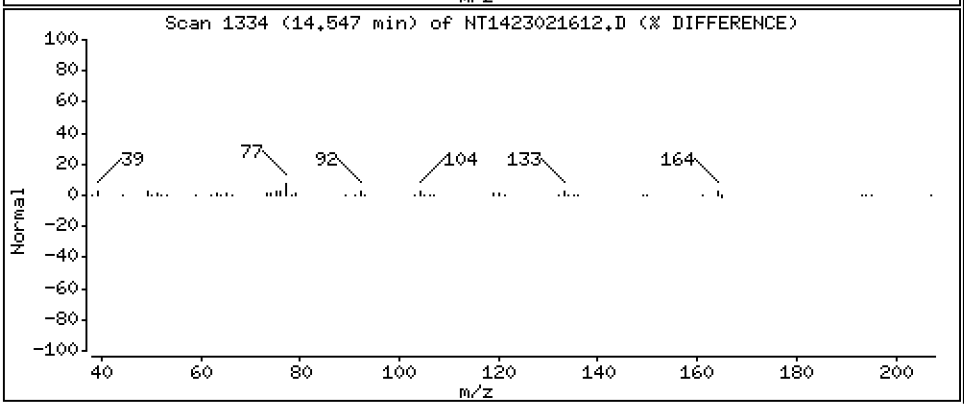












Date : 16-FEB-2023 20:42

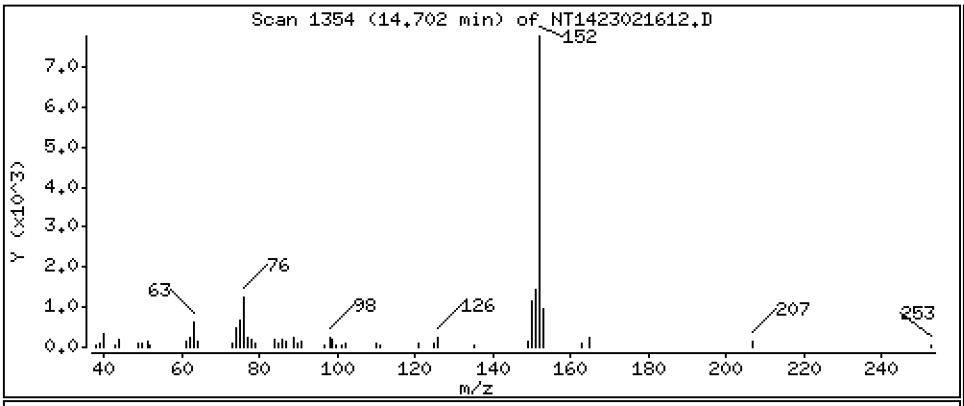
Client ID: Instrument: nt14.i

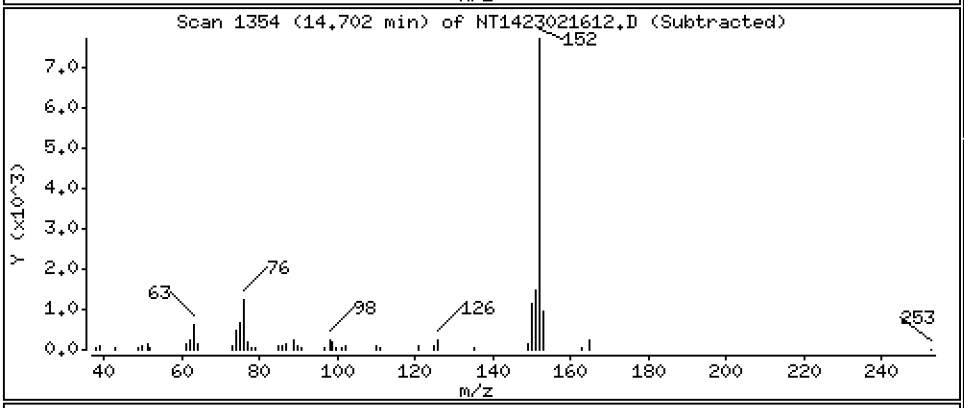
Sample Info: SIM 0.05

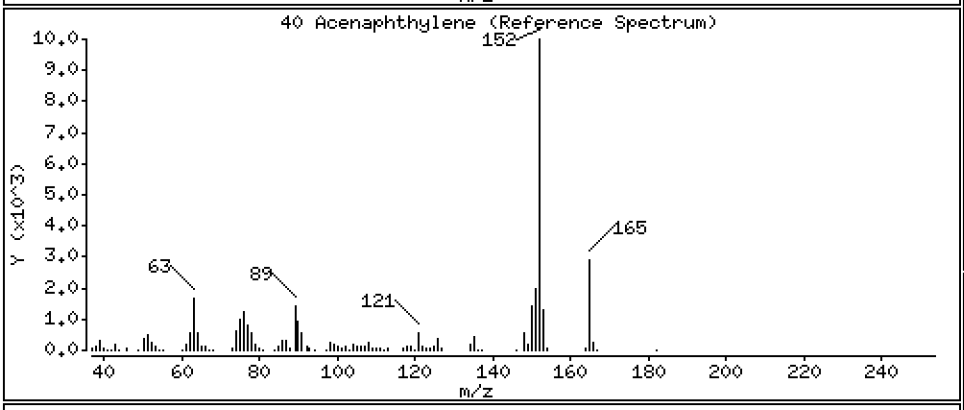
Operator: DSD

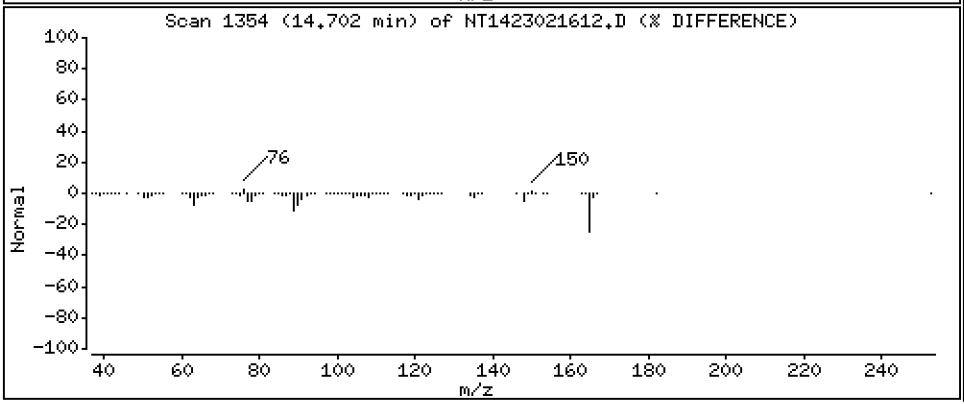
Column phase: ZB-5msi Column diameter: 0.25

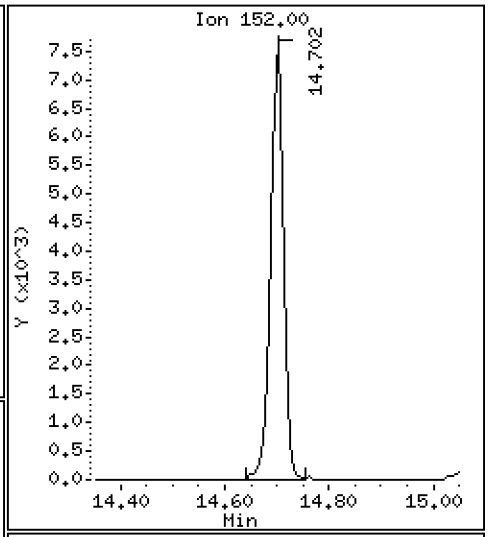
40 Acenaphthylene Concentration: 0.03959 ug/mL

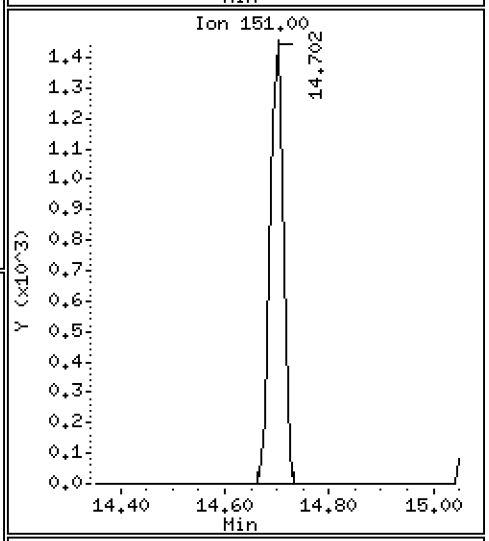


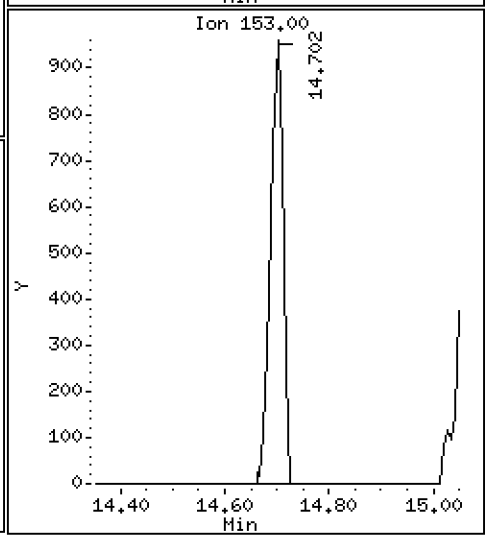












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021612.D

Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

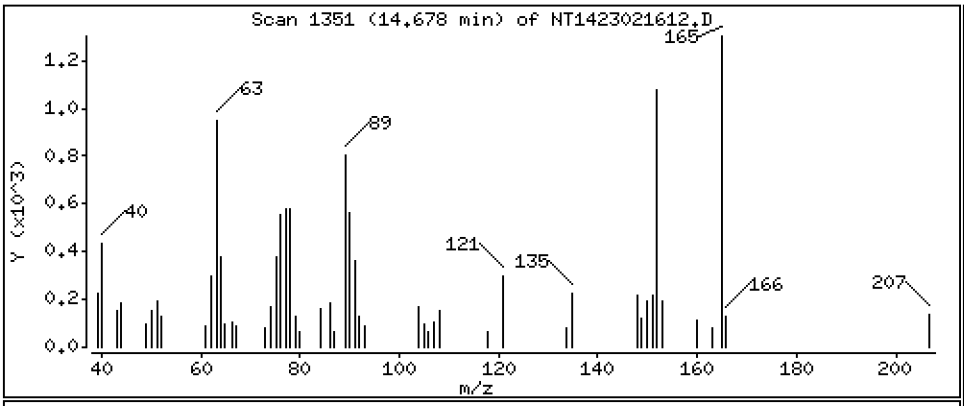
Operator: DSD

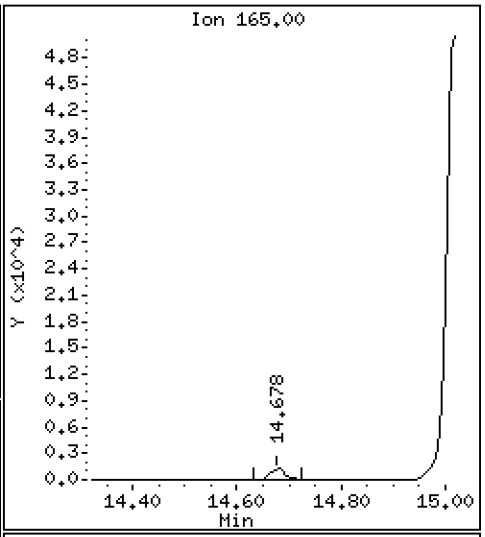
Column phase: ZB-5msi

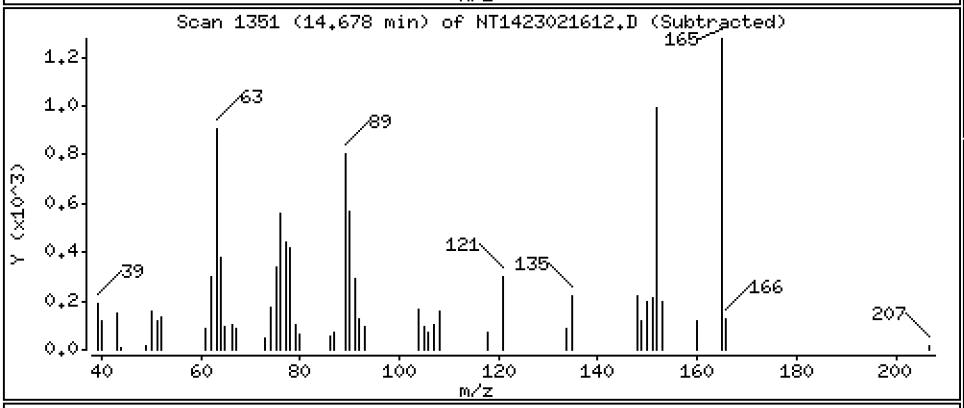
Column diameter: 0.25

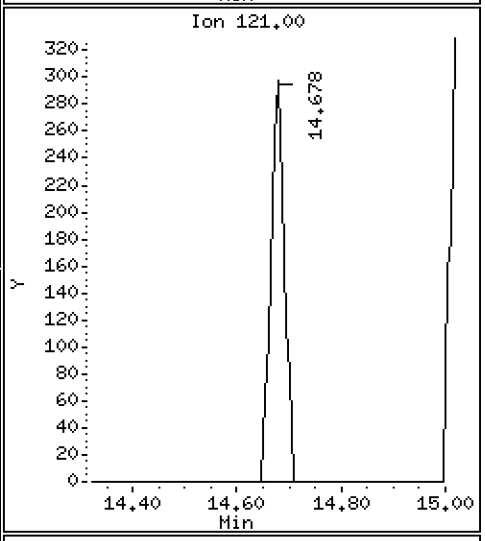
41 2,6-Dinitrotoluene

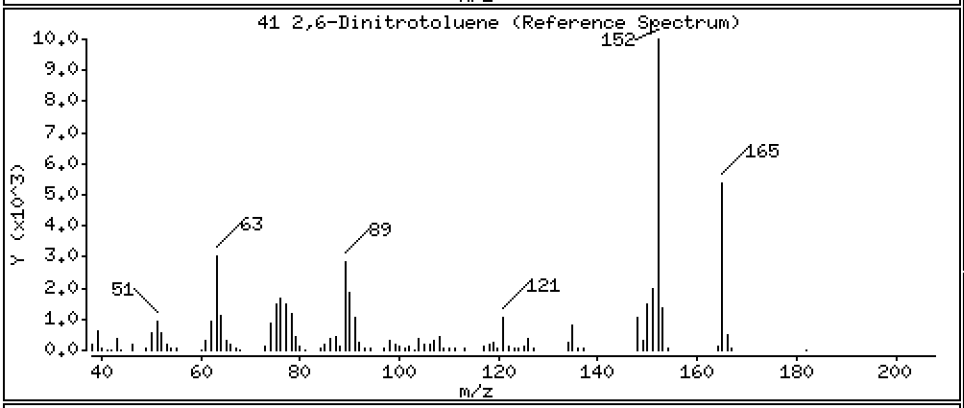
Concentration: 0.05056 ug/mL

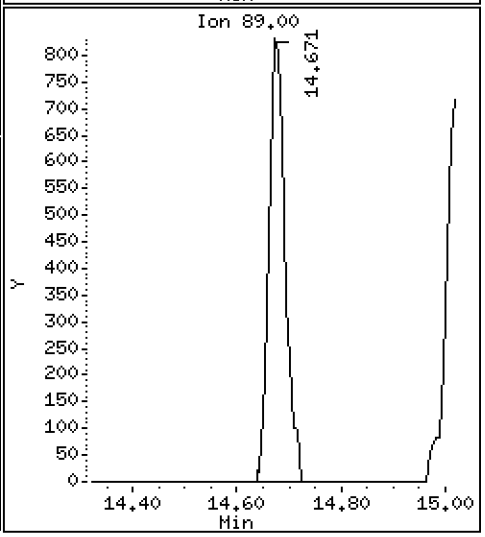


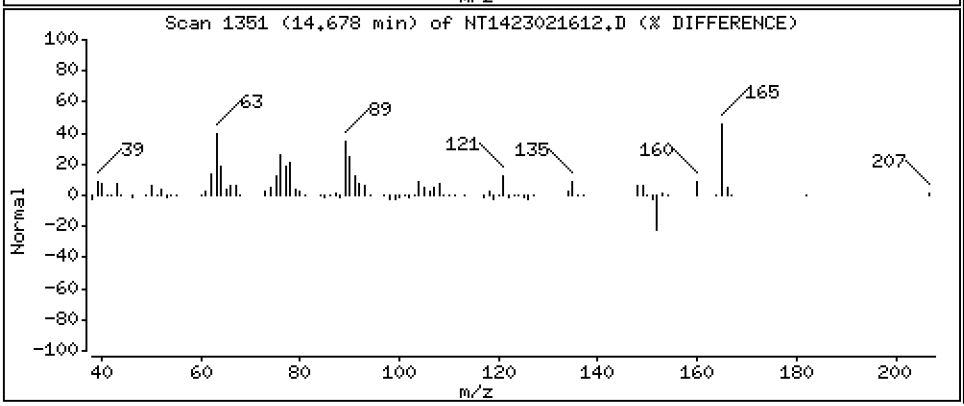












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021612.D

Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

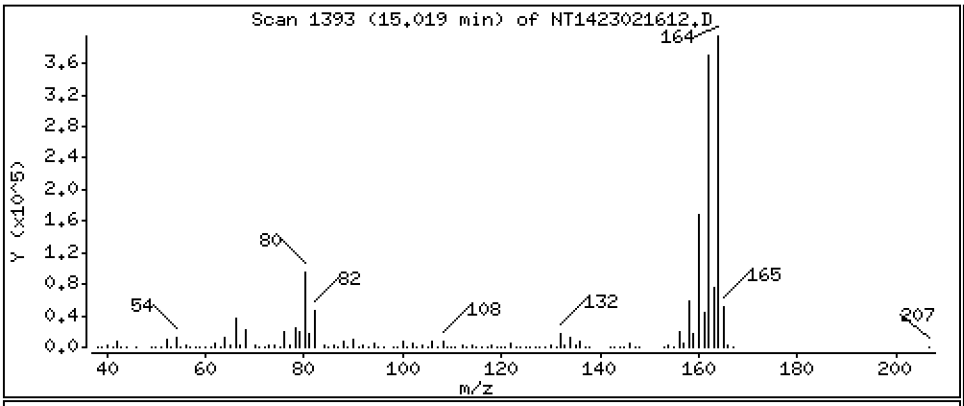
Operator: DSD

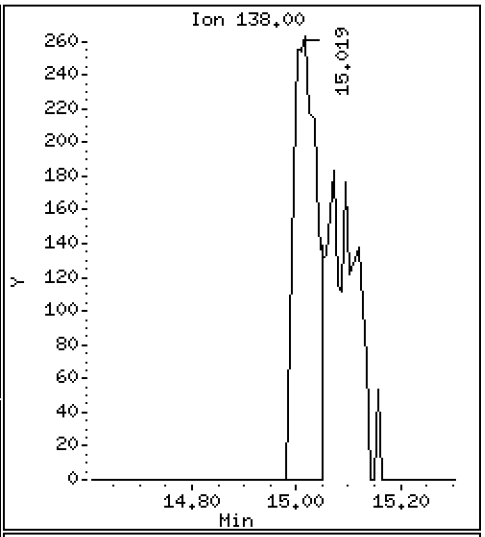
Column phase: ZB-5msi

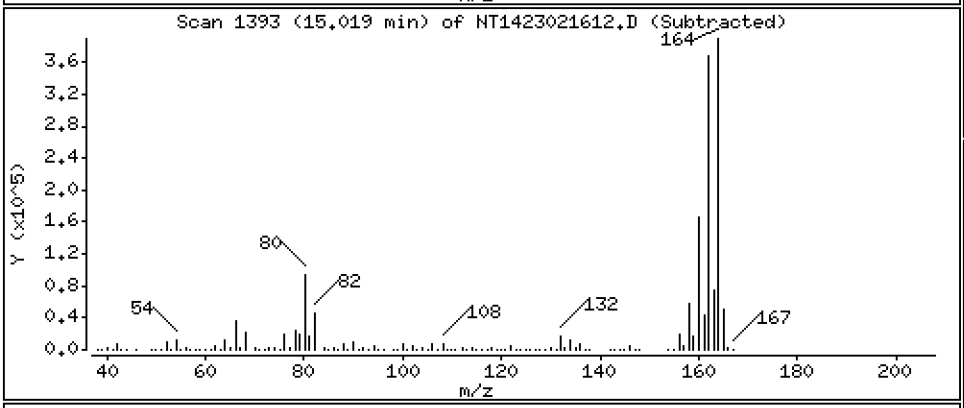
Column diameter: 0.25

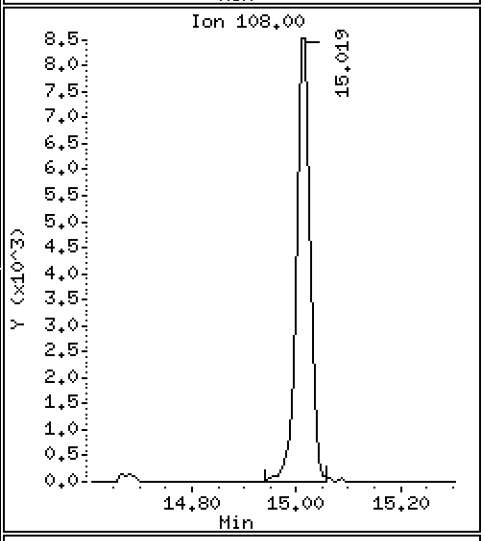
43 3-Nitroaniline

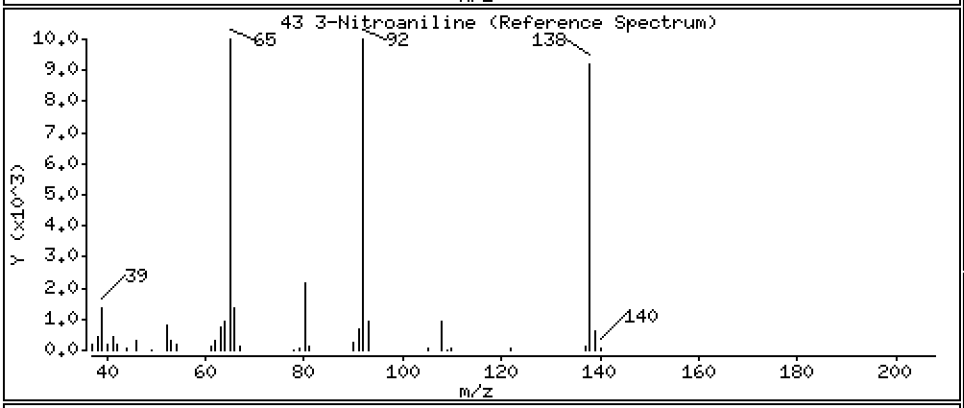
Concentration: 0.01517 ug/mL

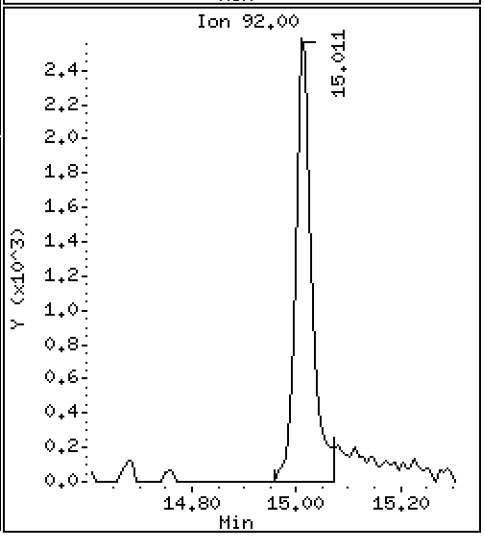


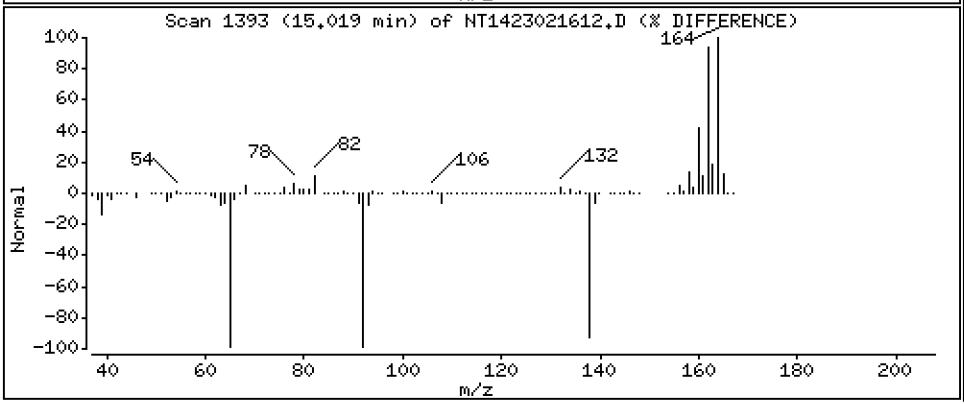












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

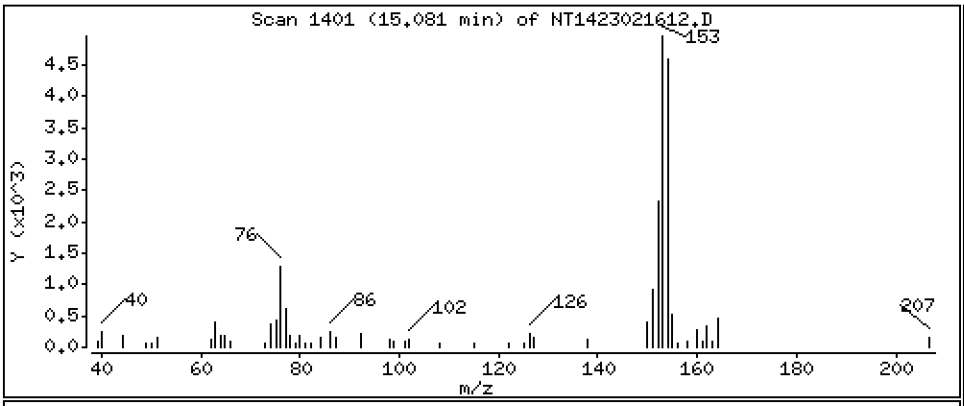
Operator: DSD

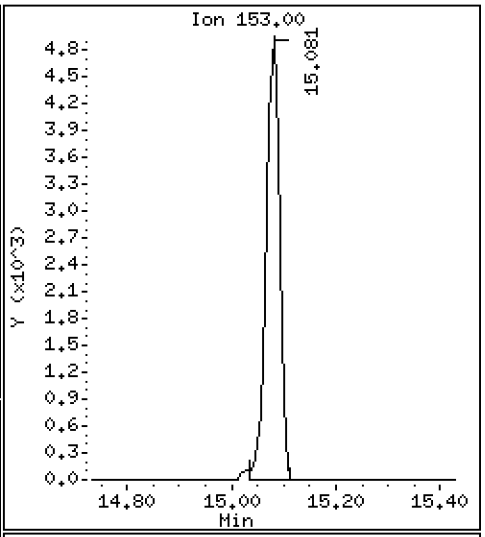
Column phase: ZB-5msi

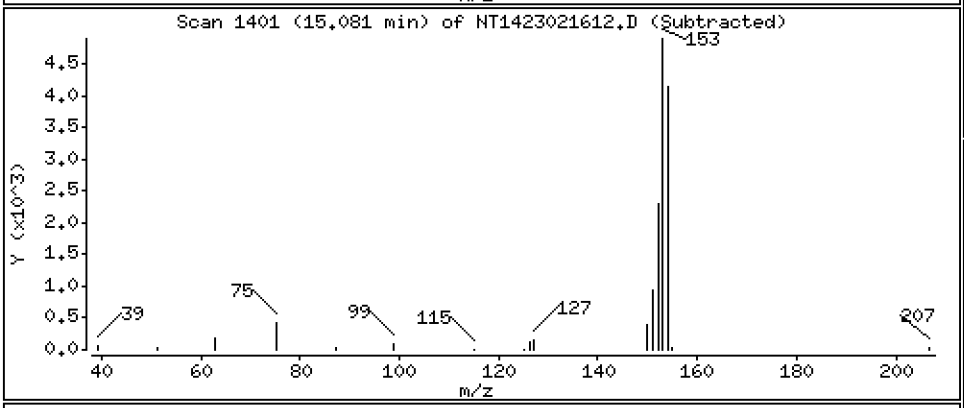
Column diameter: 0.25

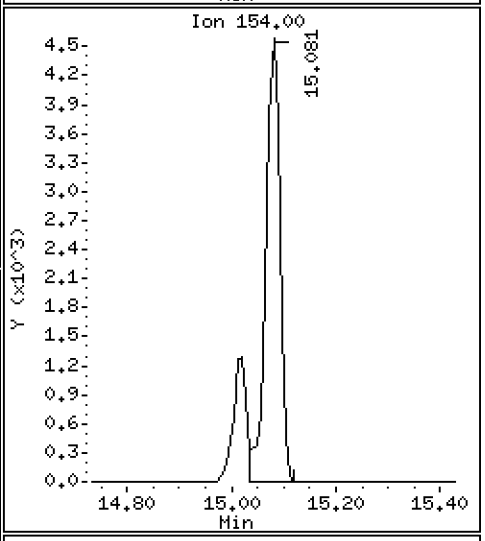
44 Acenaphthene

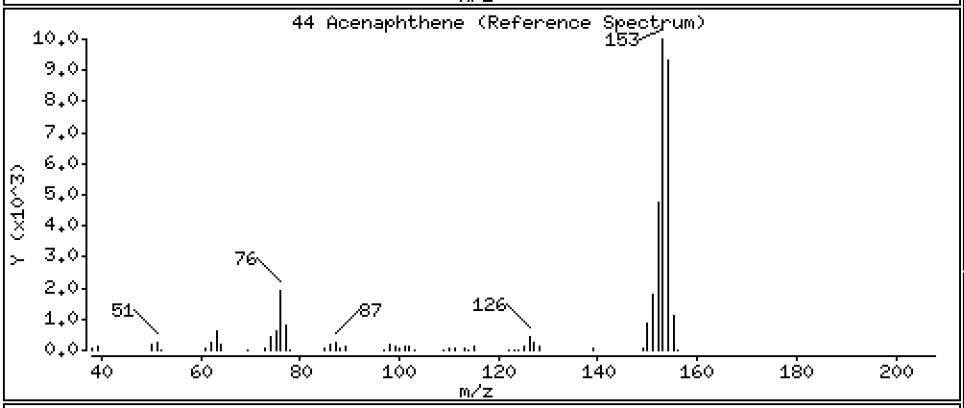
Concentration: 0.04509 ug/mL

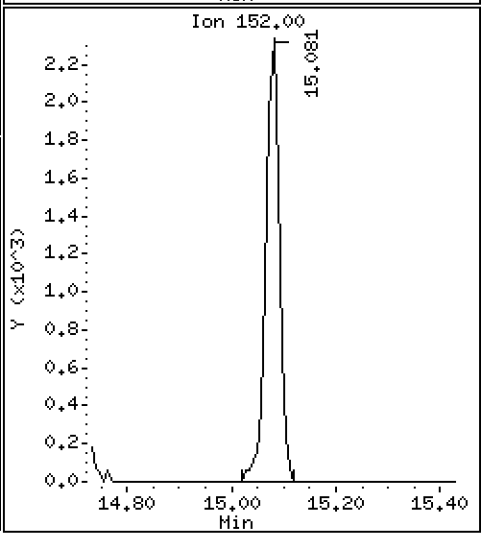


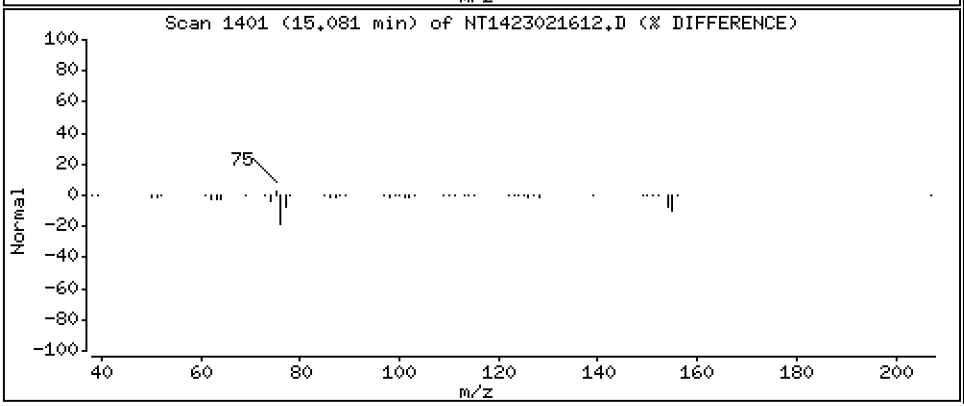












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

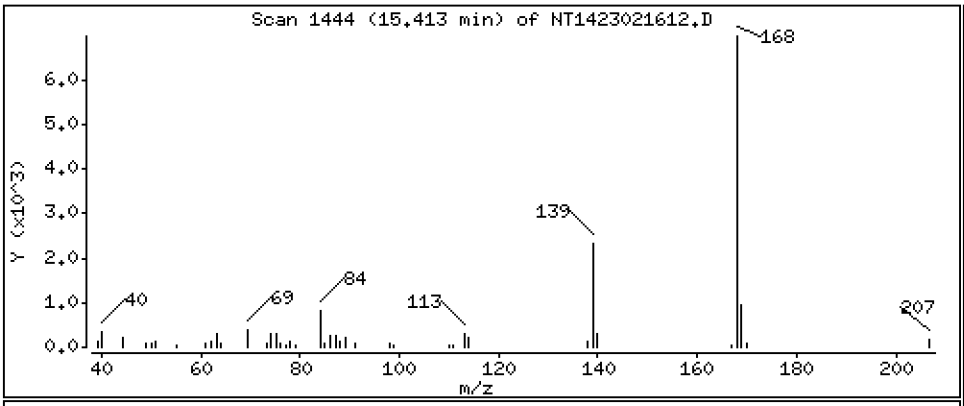
Operator: DSD

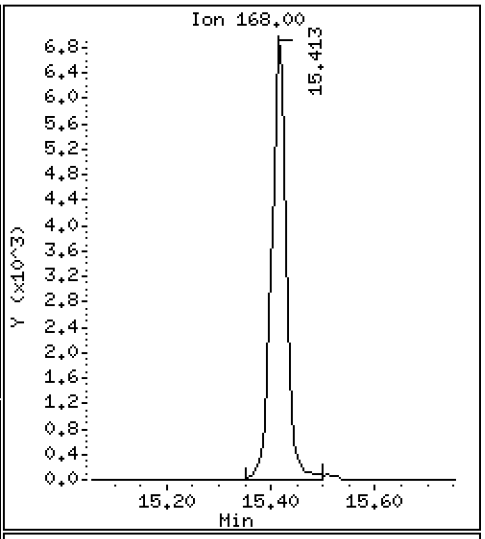
Column phase: ZB-5msi

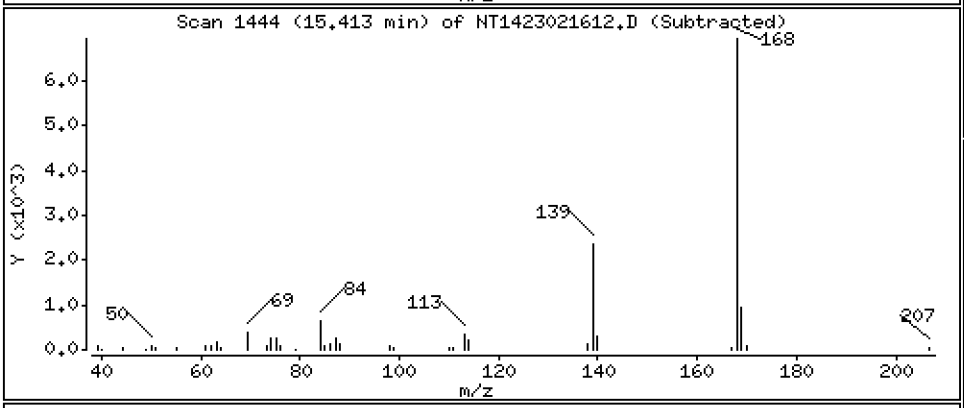
Column diameter: 0.25

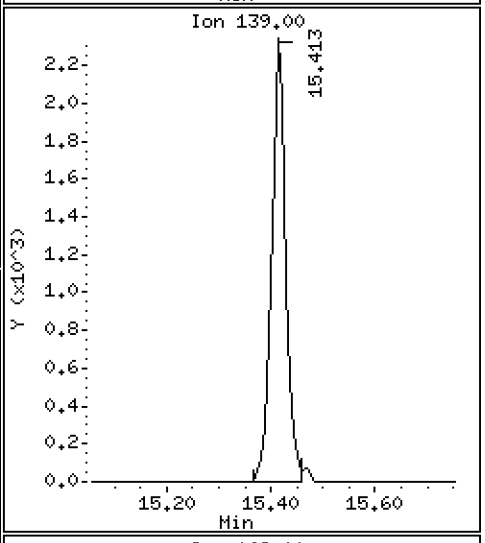
46 Dibenzofuran

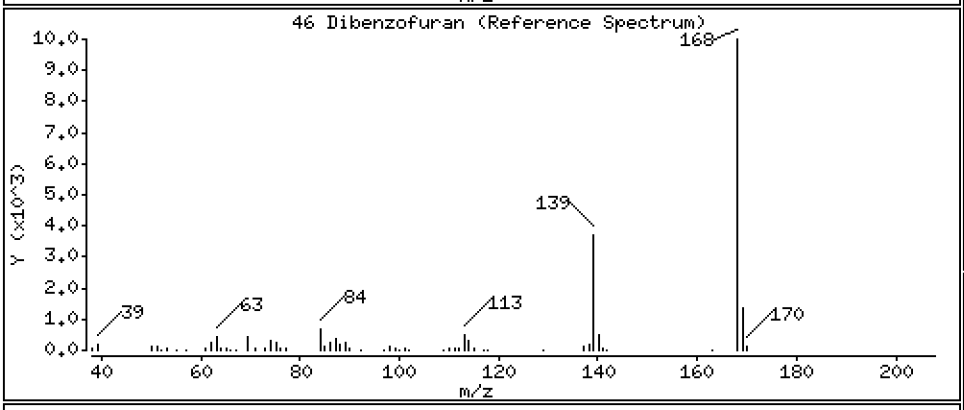
Concentration: 0.04435 ug/mL

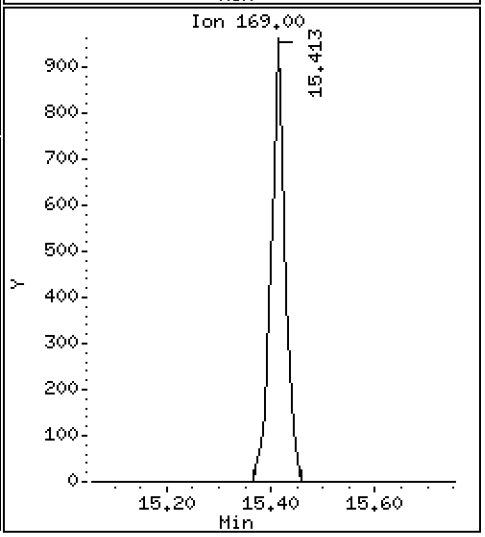


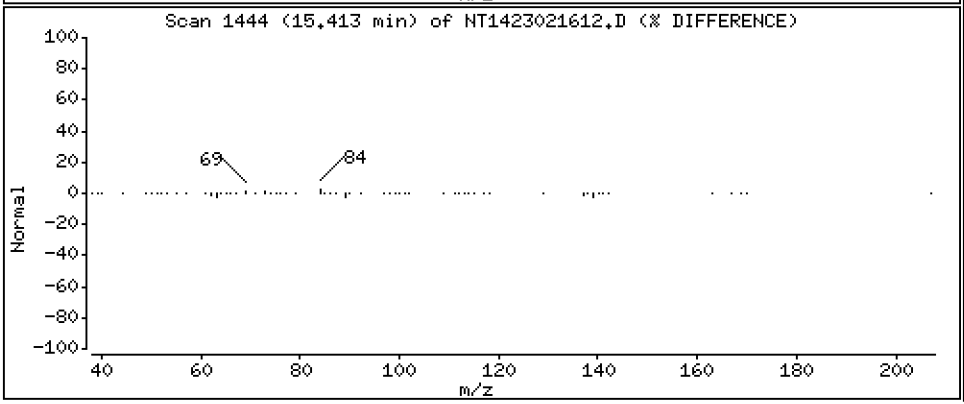












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

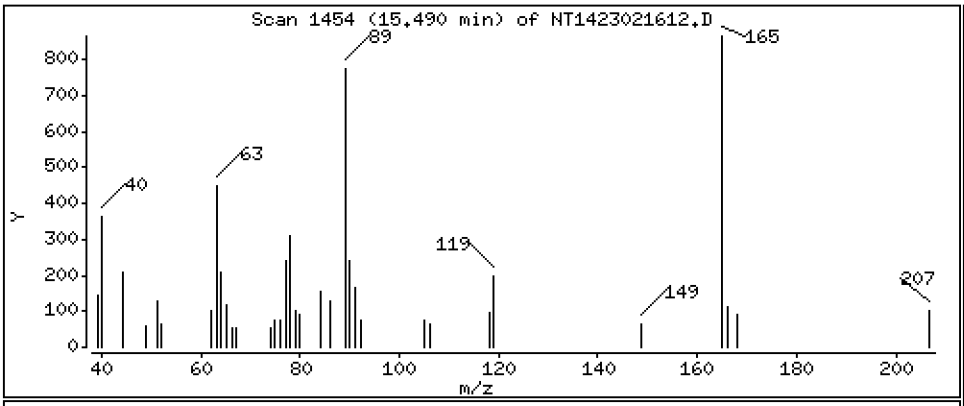
Operator: DSD

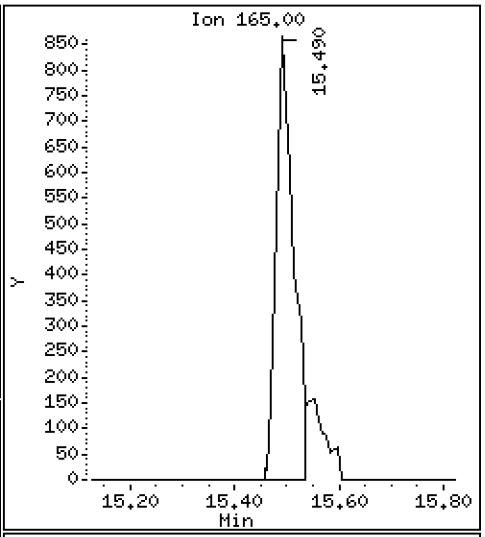
Column phase: ZB-5msi

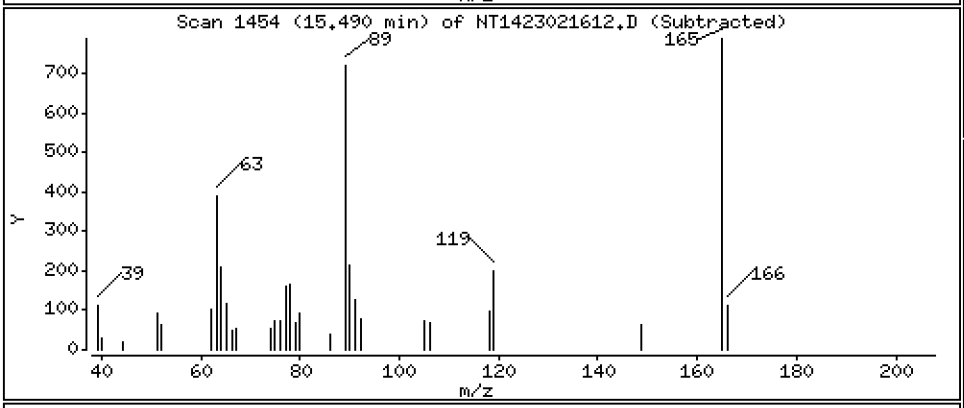
Column diameter: 0.25

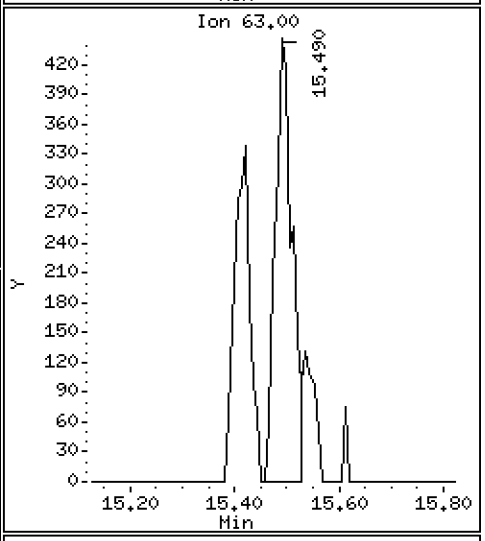
48 2,4-Dinitrotoluene

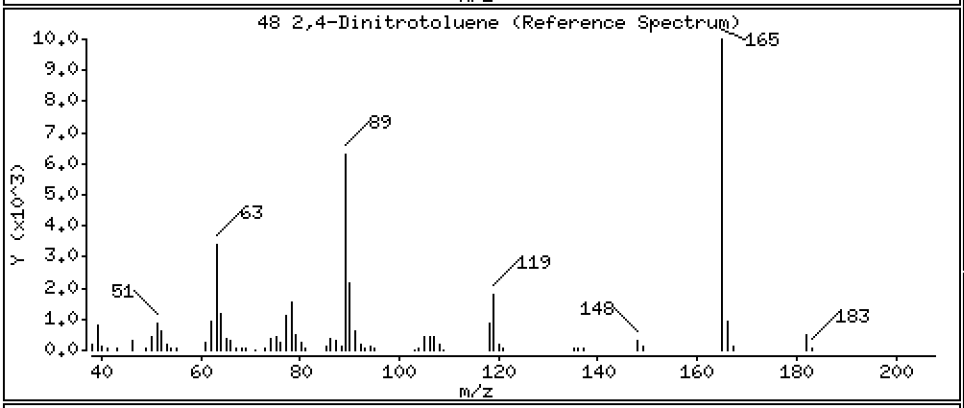
Concentration: 0.02839 ug/mL

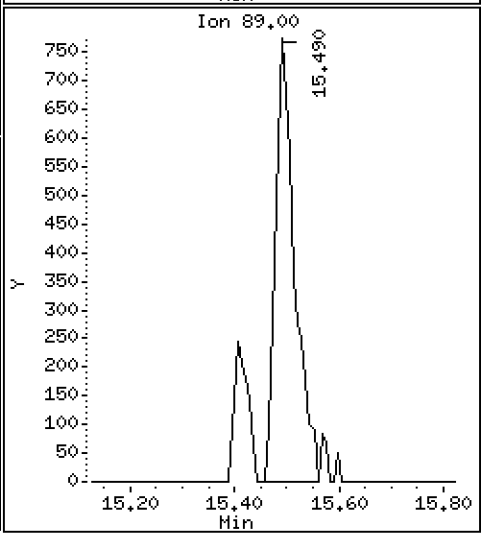


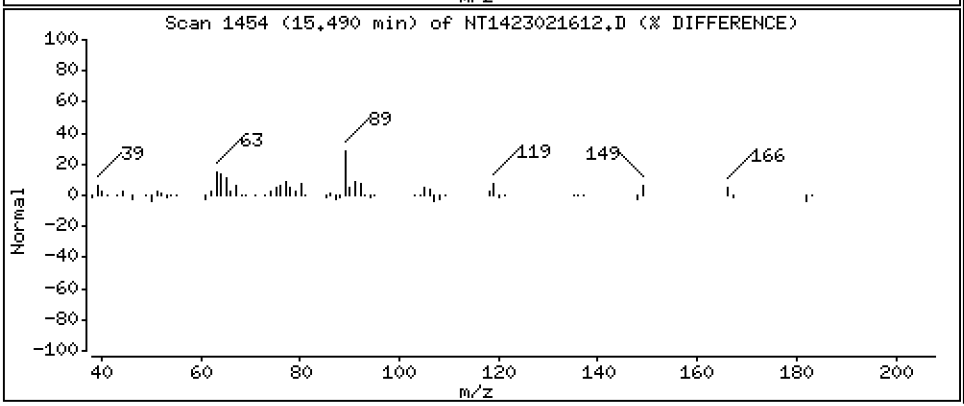












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

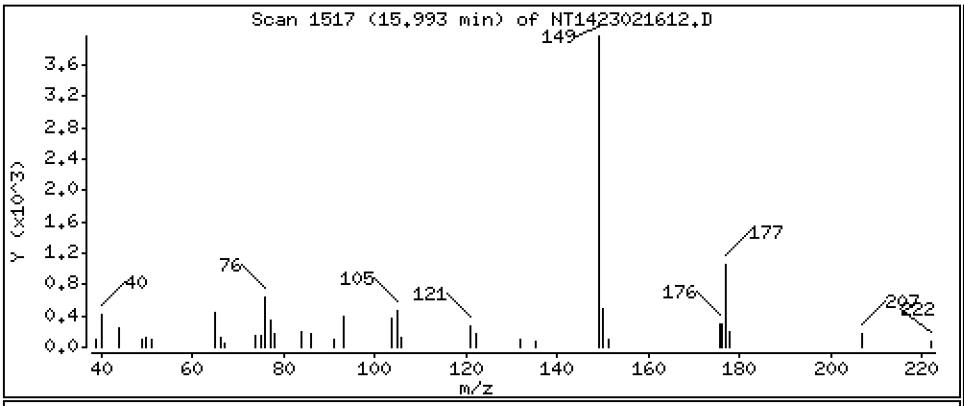
Operator: DSD

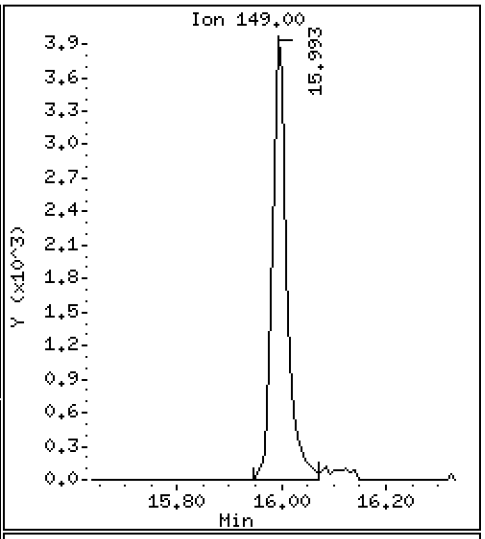
Column phase: ZB-5msi

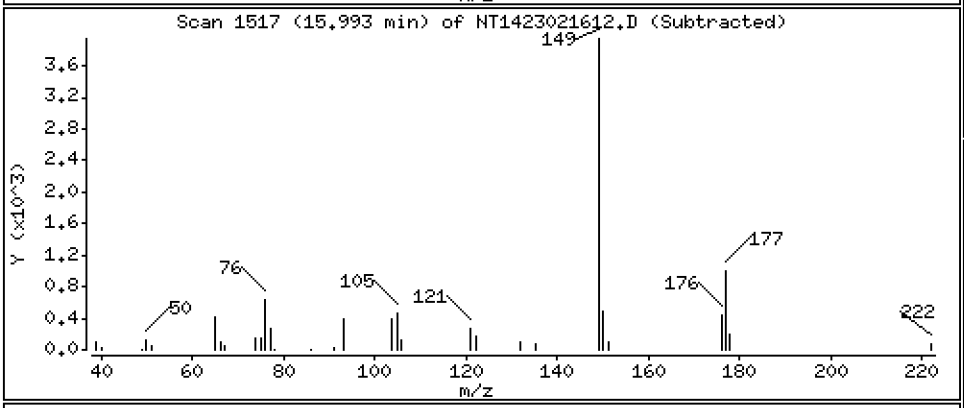
Column diameter: 0.25

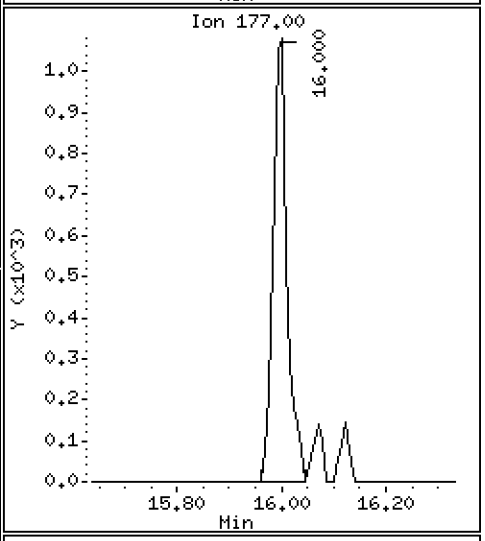
50 Diethylphthalate

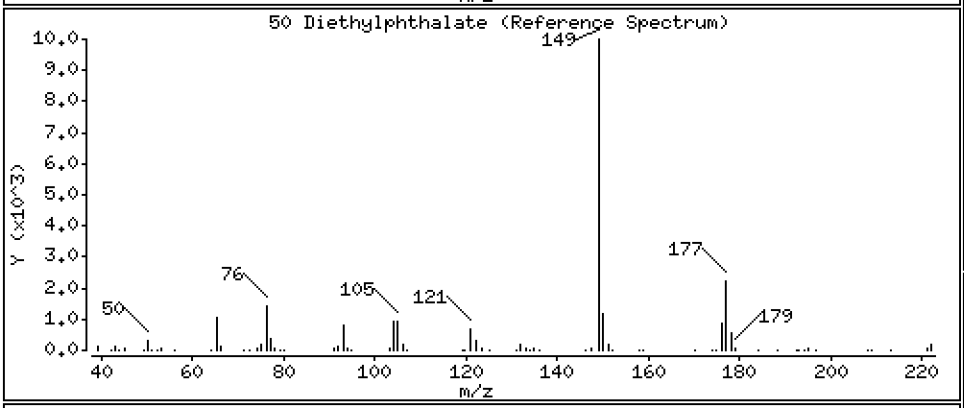
Concentration: 0.03033 ug/mL

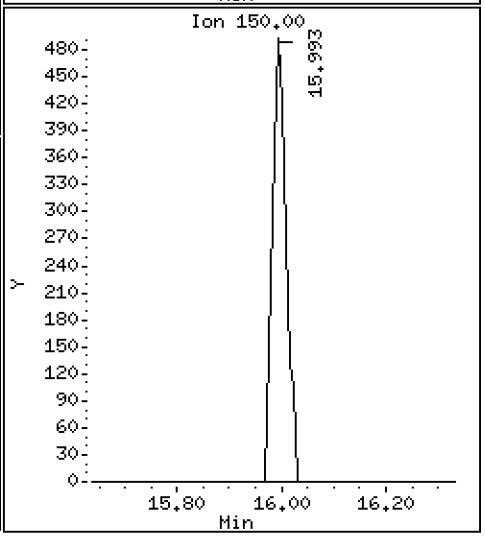


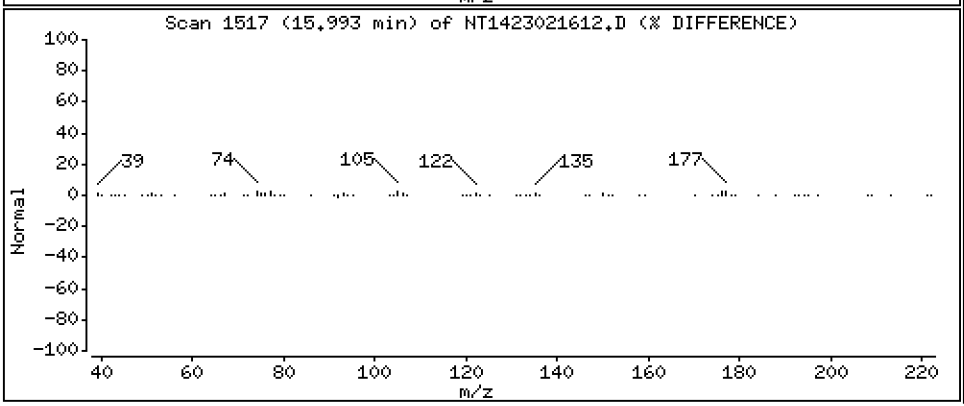












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

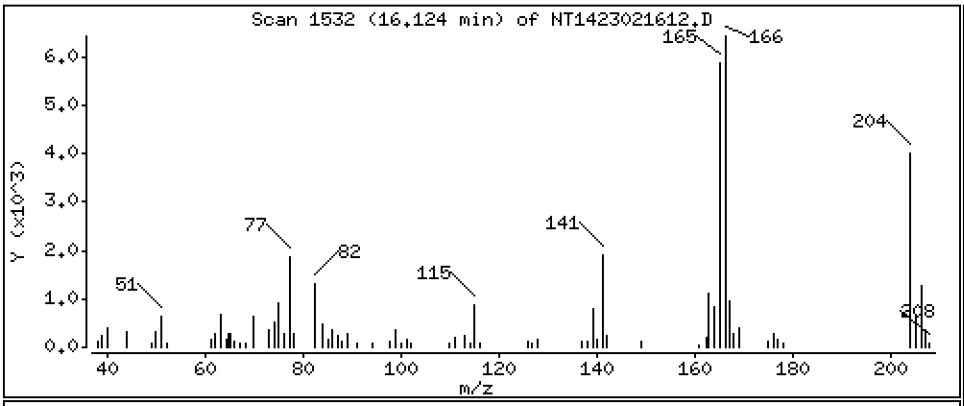
Operator: DSD

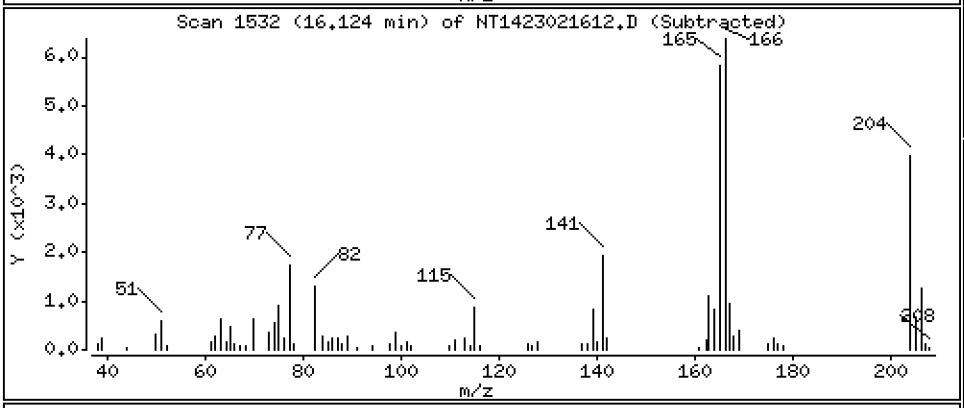
Column phase: ZB-5msi

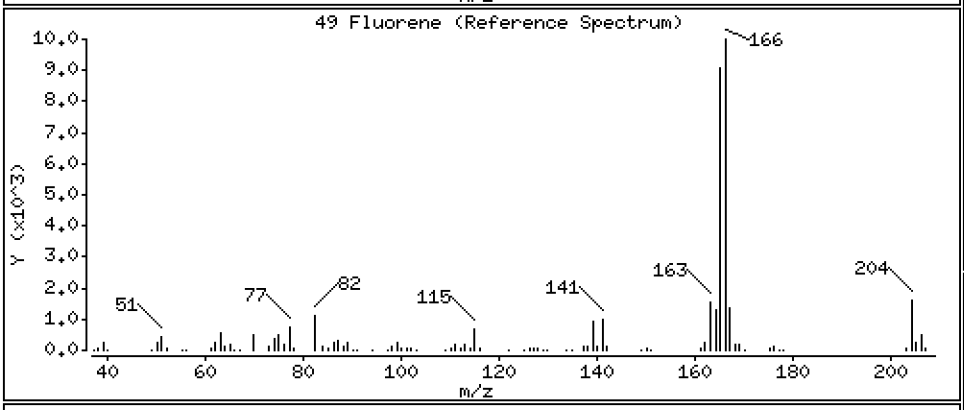
Column diameter: 0.25

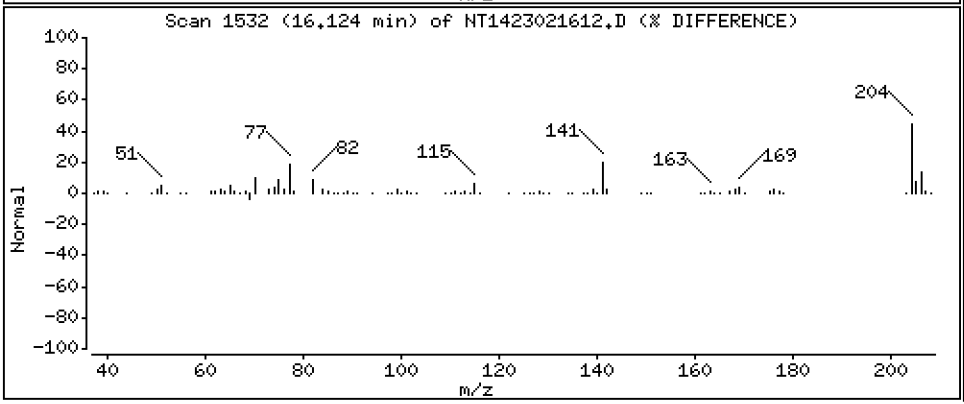
49 Fluorene

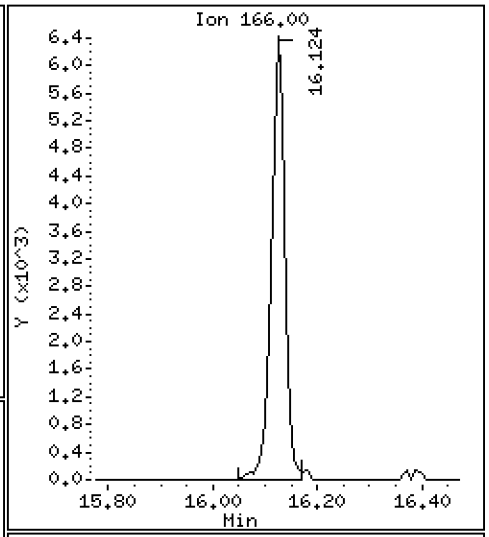
Concentration: 0.04014 ug/mL

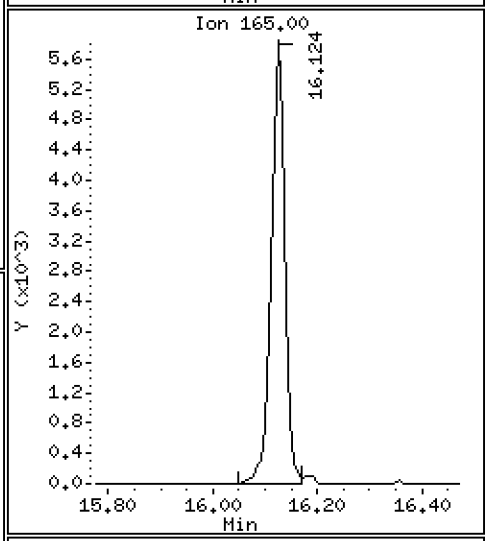


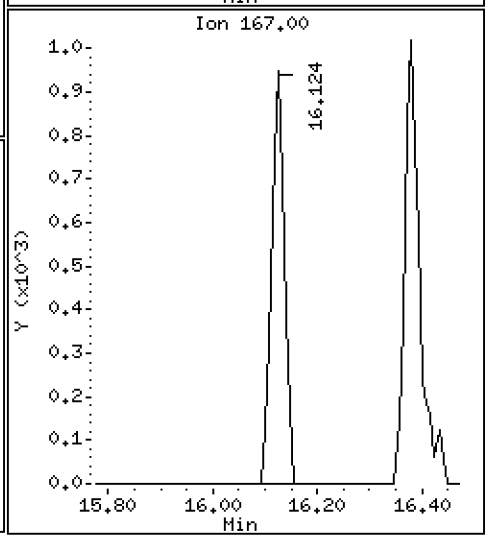












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

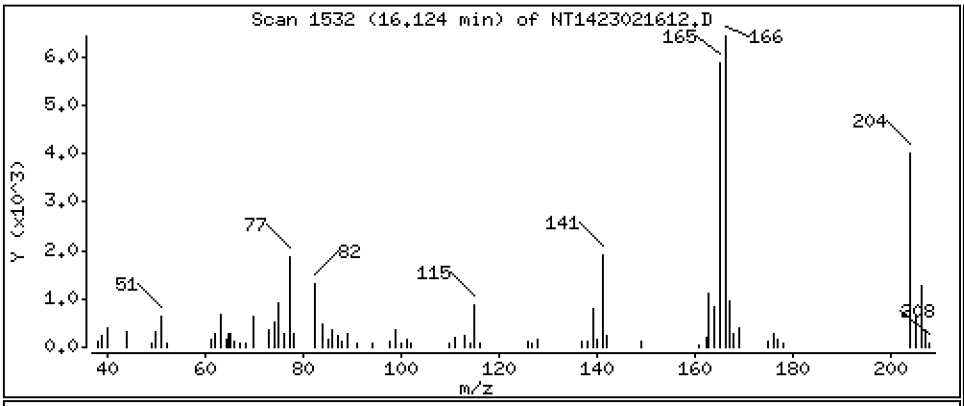
Operator: DSD

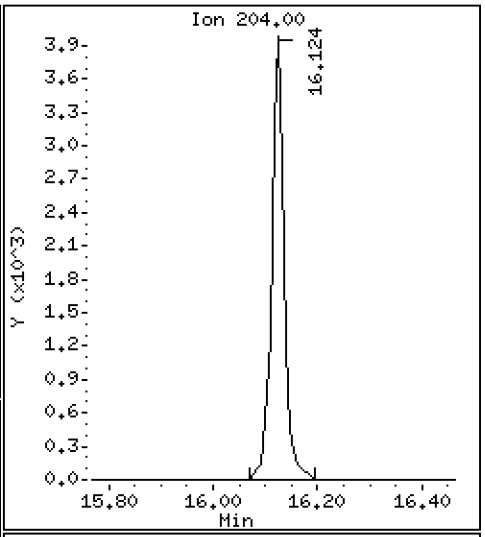
Column phase: ZB-5msi

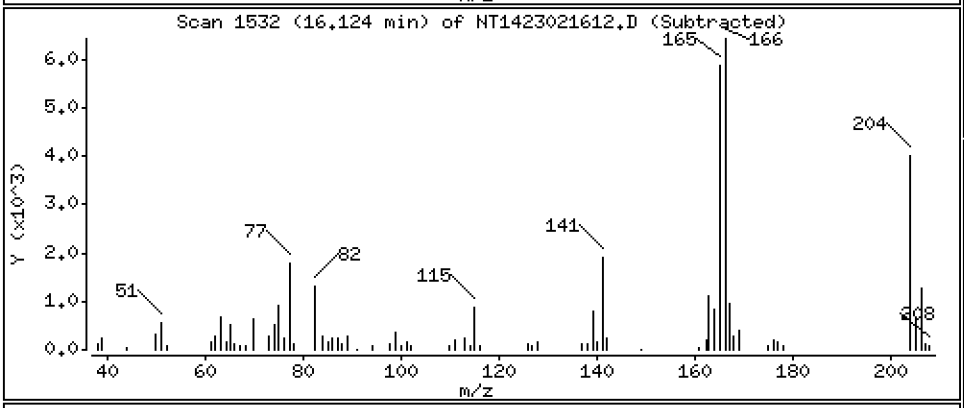
Column diameter: 0.25

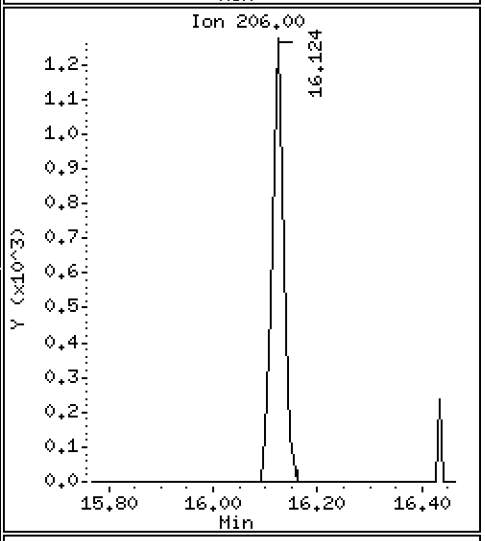
51 4-Chlorophenyl-phenylether

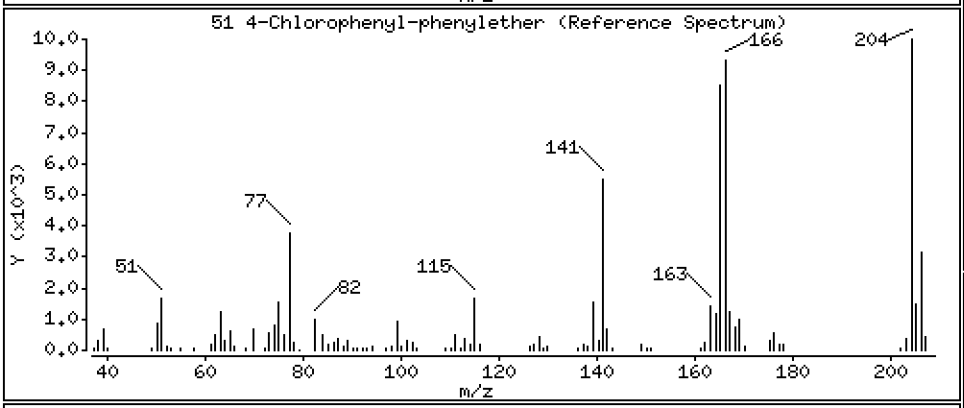
Concentration: 0.03875 ug/mL

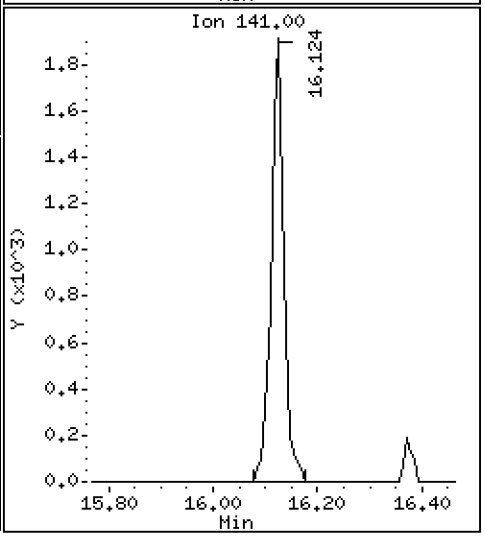


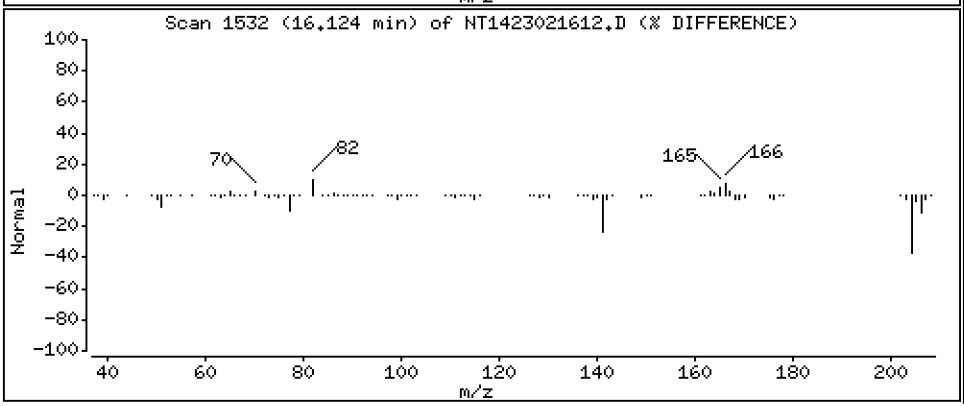












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021612.D

Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

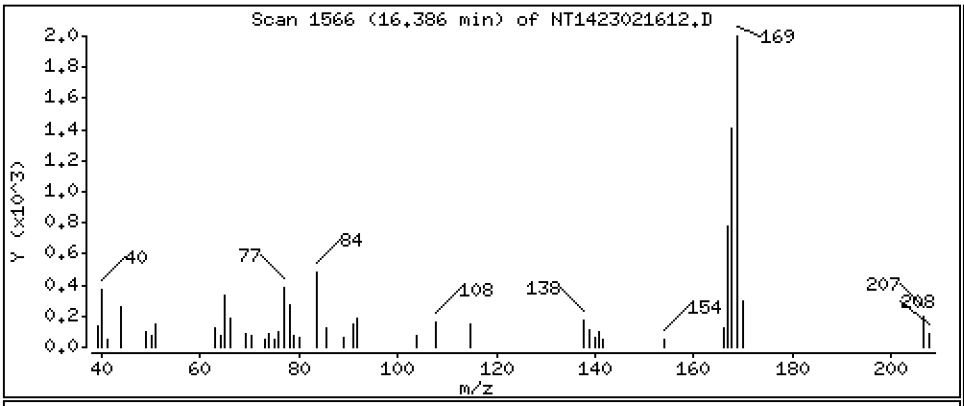
Operator: DSD

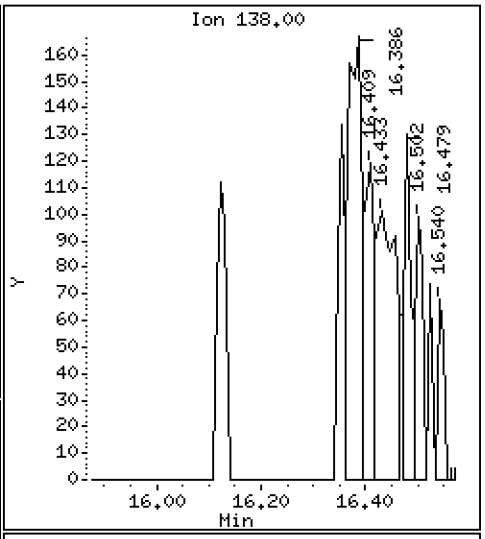
Column phase: ZB-5msi

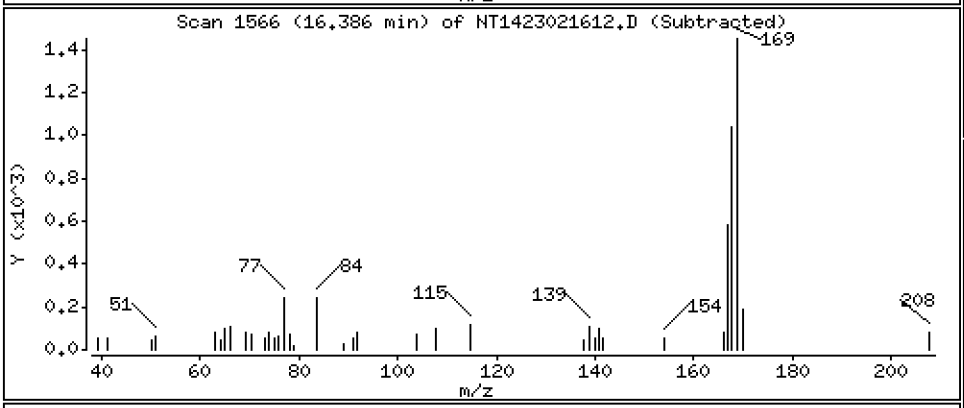
Column diameter: 0.25

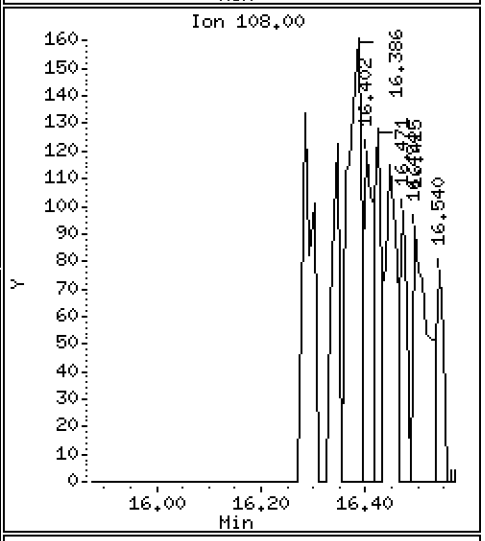
52 4-Nitroaniline

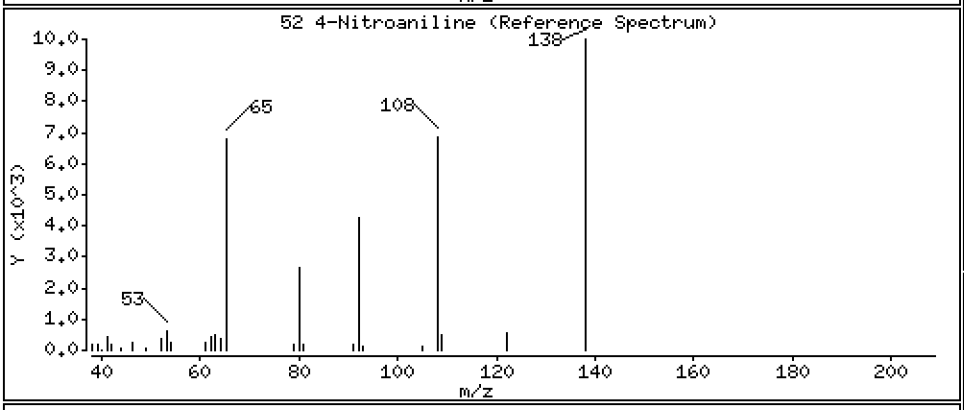
Concentration: 0.004996 ug/mL

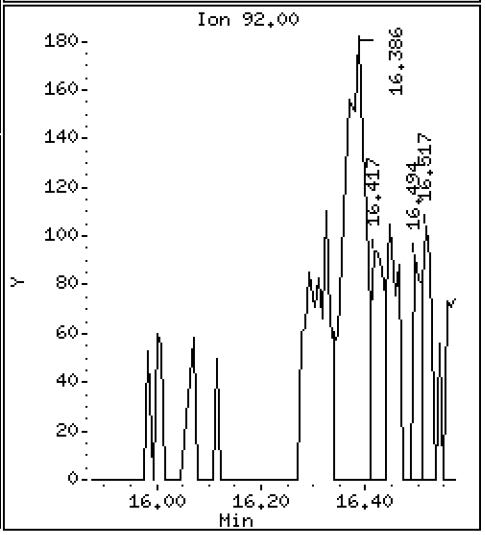


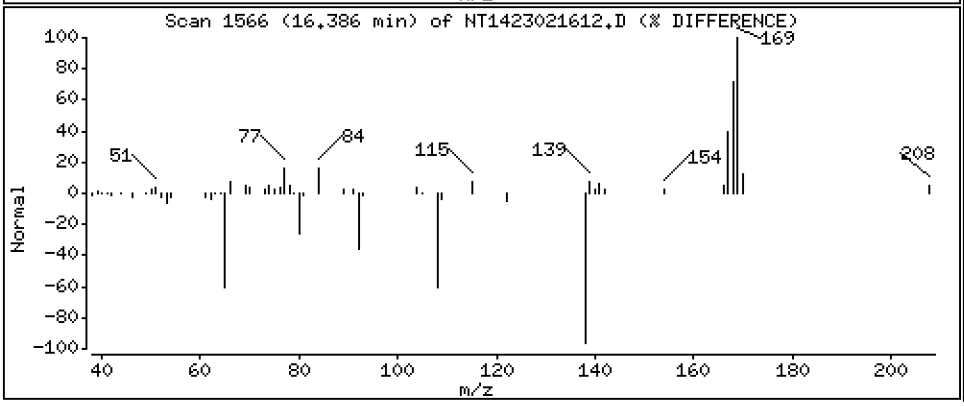












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

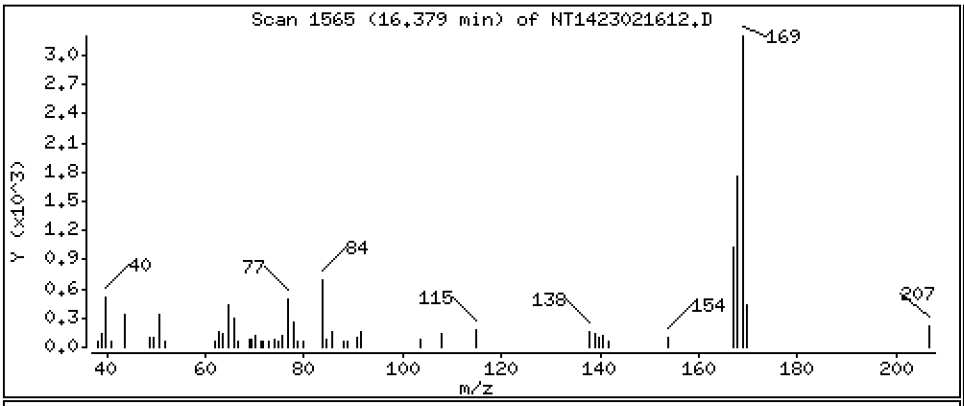
Operator: DSD

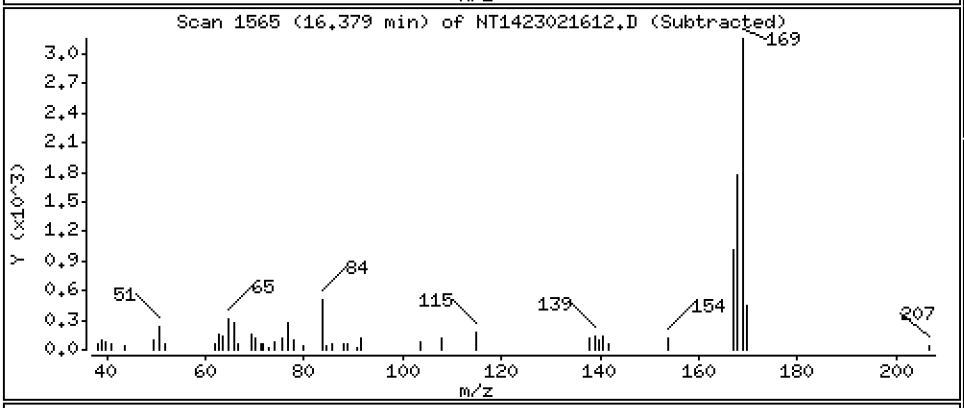
Column phase: ZB-5msi

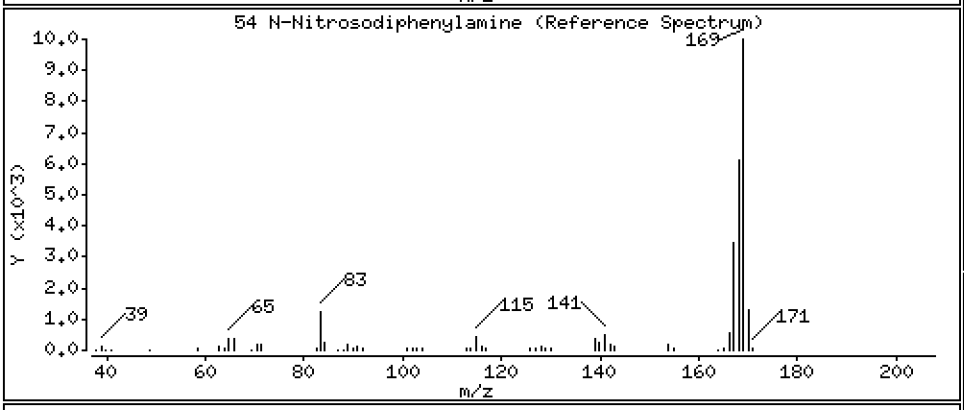
Column diameter: 0.25

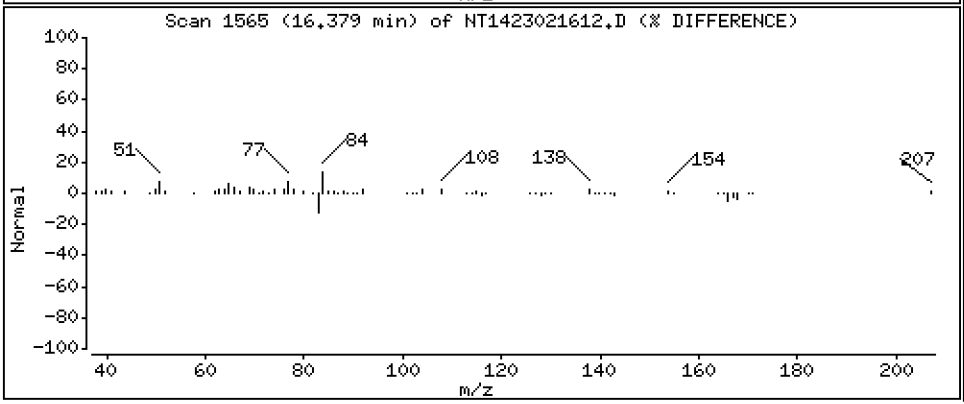
54 N-Nitrosodiphenylamine

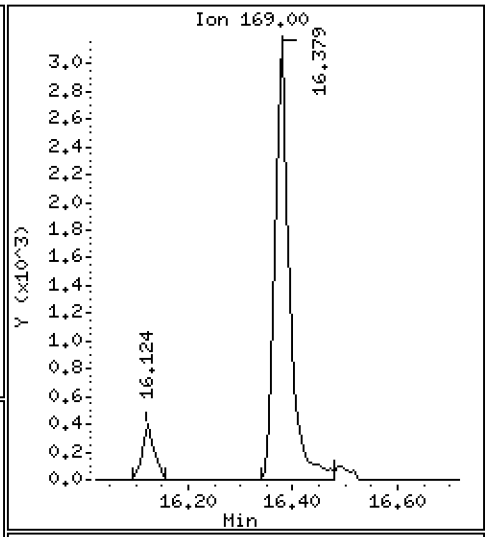
Concentration: 0.02942 ug/mL

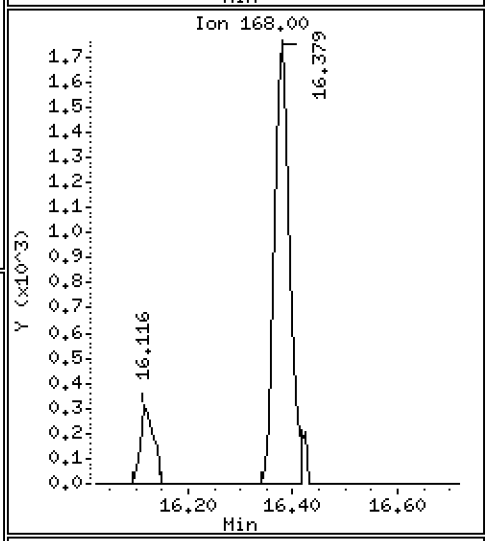


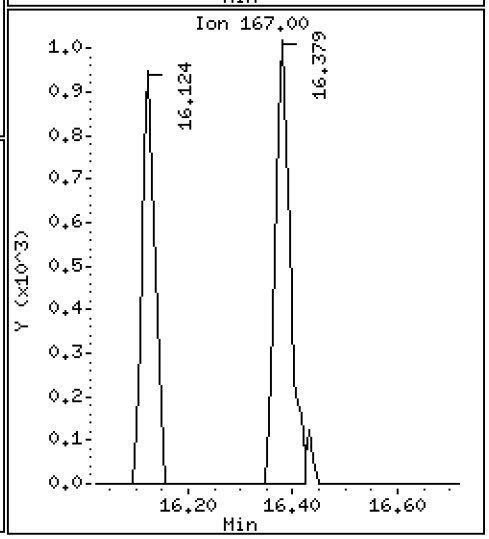












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

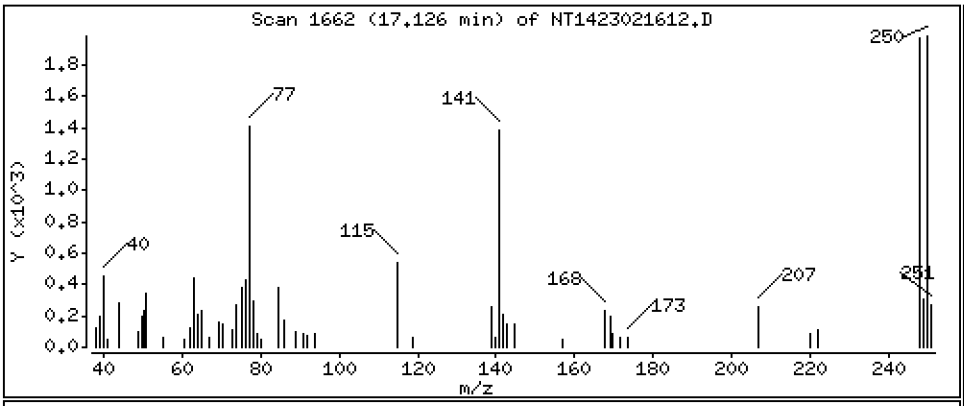
Operator: DSD

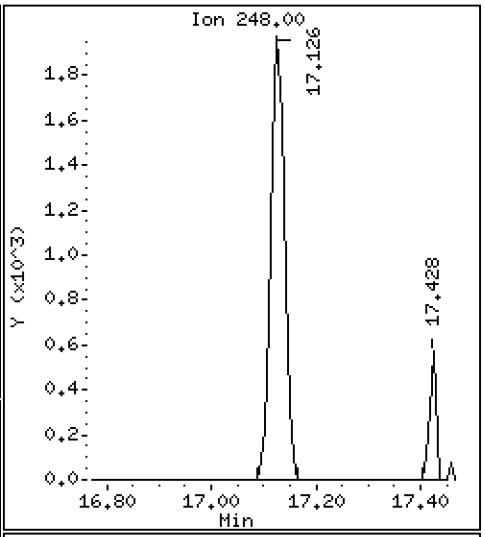
Column phase: ZB-5msi

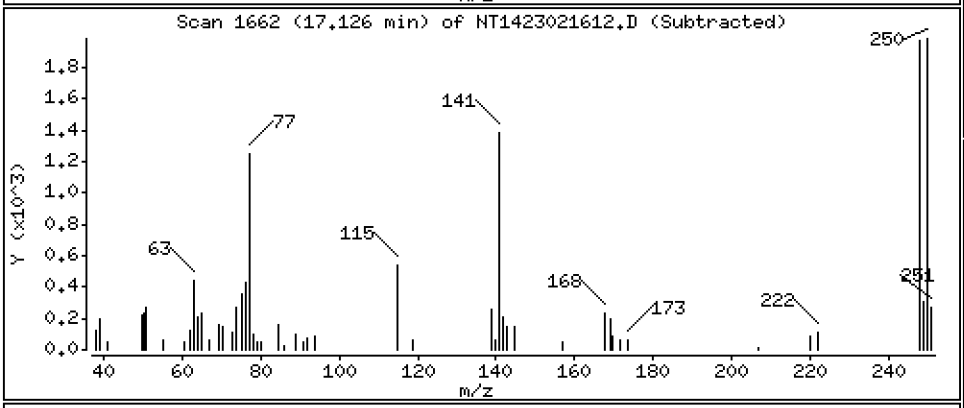
Column diameter: 0.25

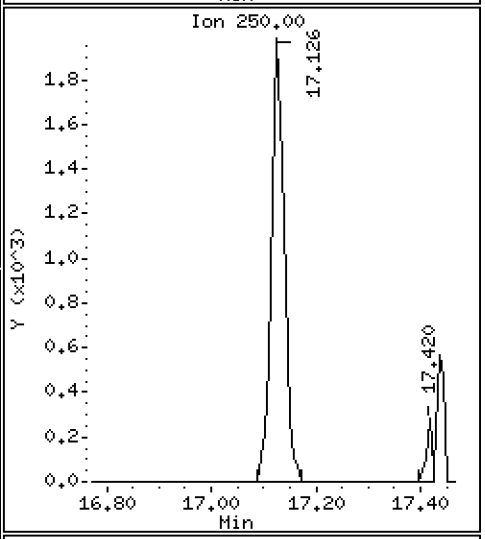
56 4-Bromophenyl-phenylether

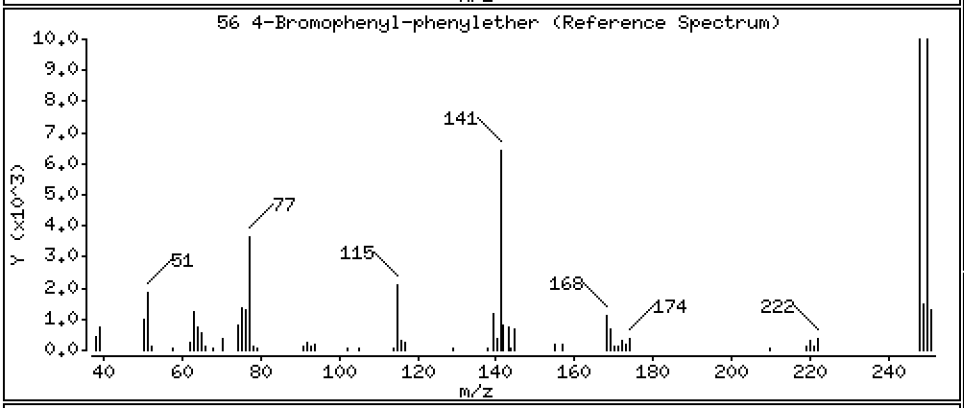
Concentration: 0.03762 ug/mL

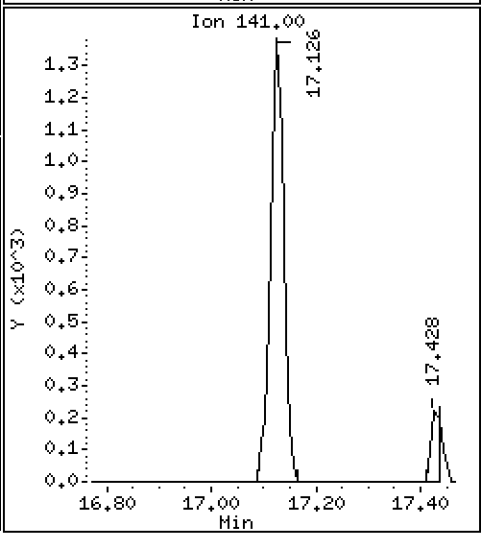


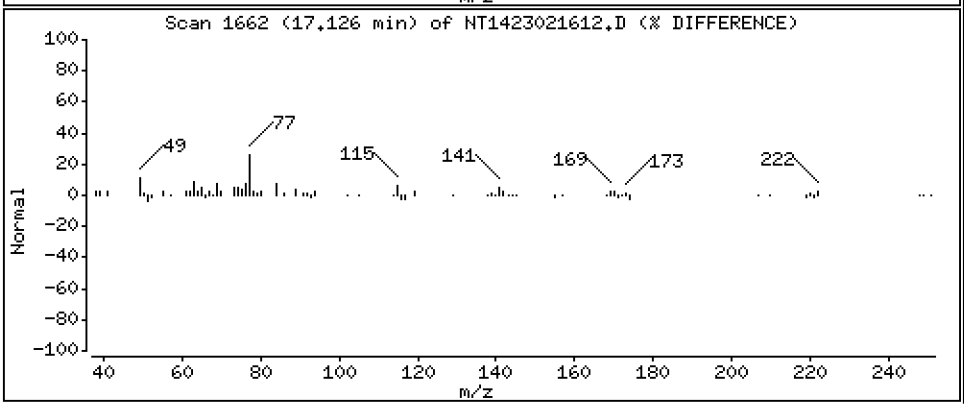












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

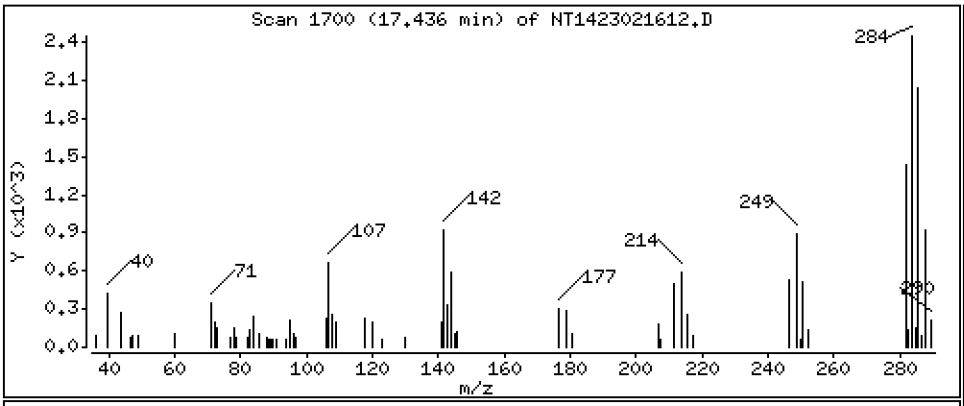
Operator: DSD

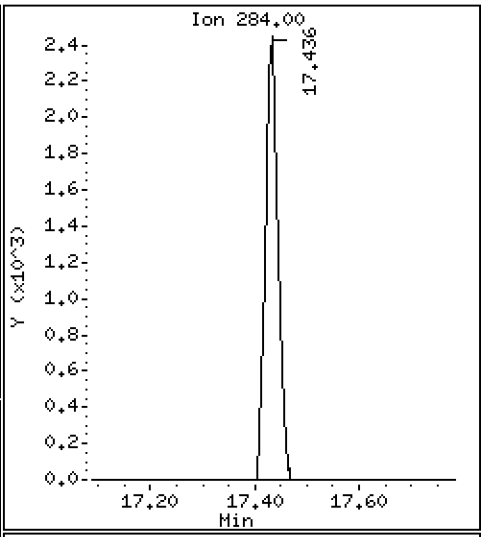
Column phase: ZB-5msi

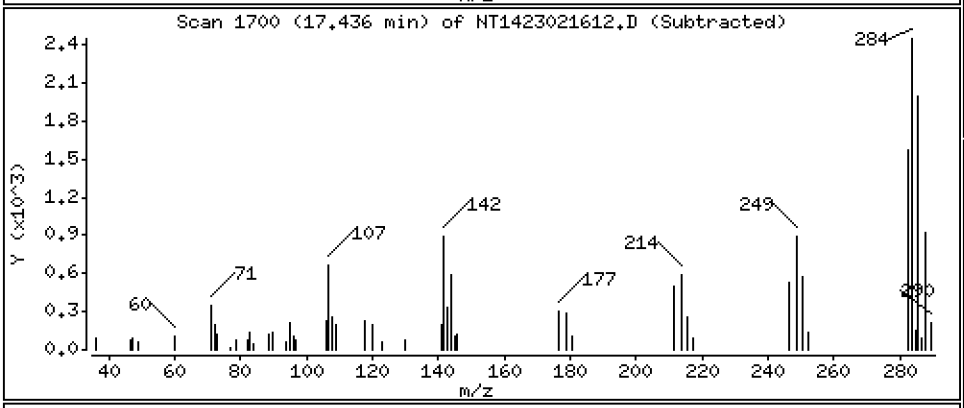
Column diameter: 0.25

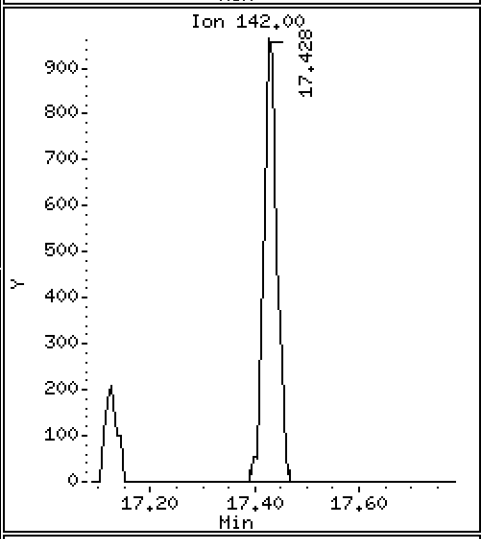
57 Hexachlorobenzene

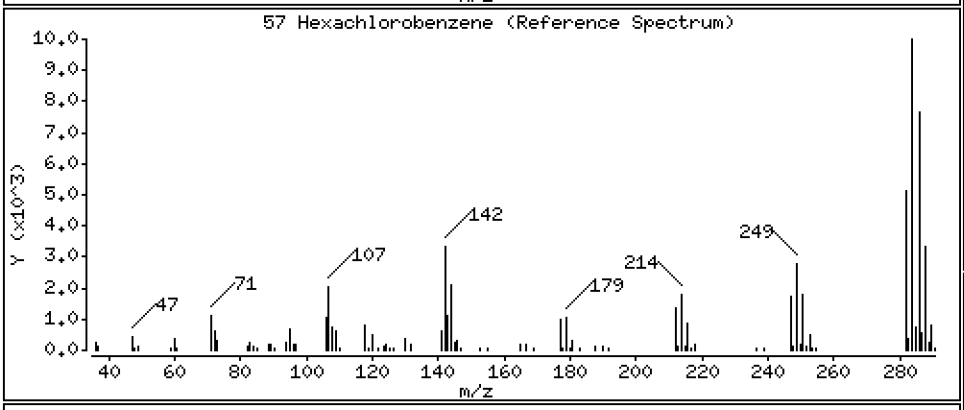
Concentration: 0.04400 ug/mL

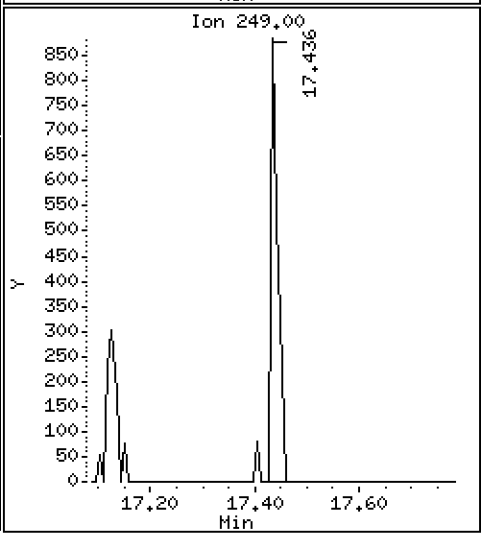


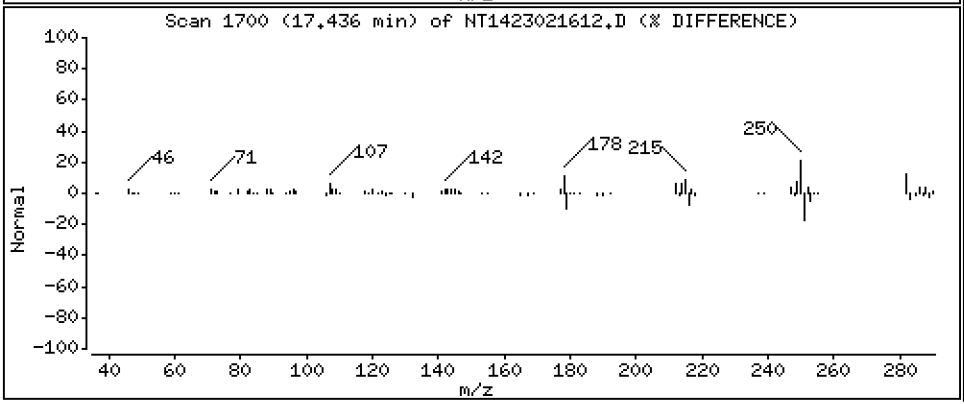












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

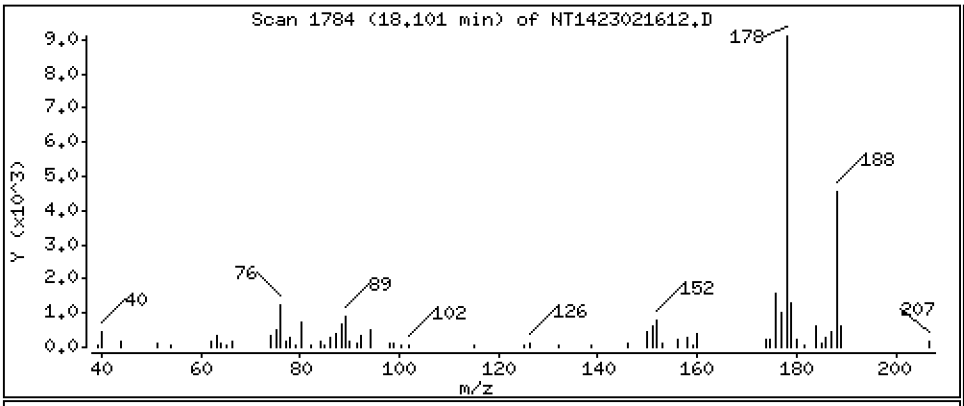
Operator: DSD

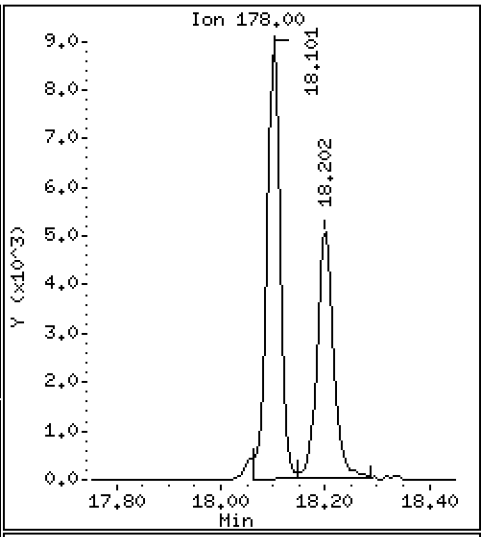
Column phase: ZB-5msi

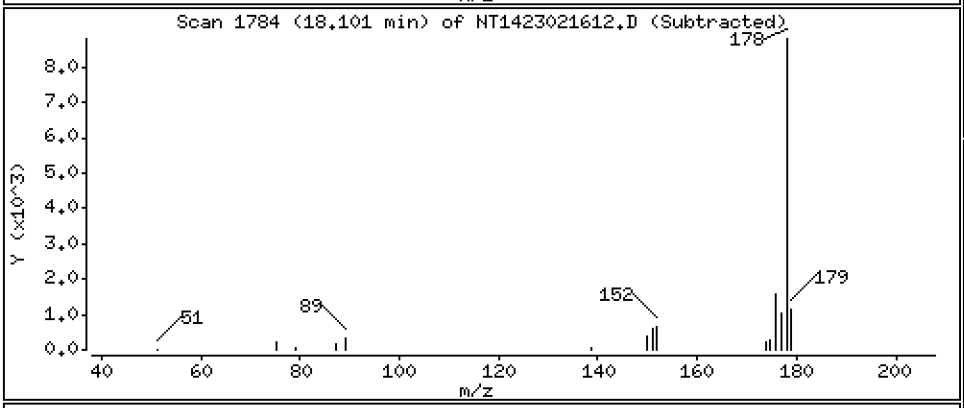
Column diameter: 0.25

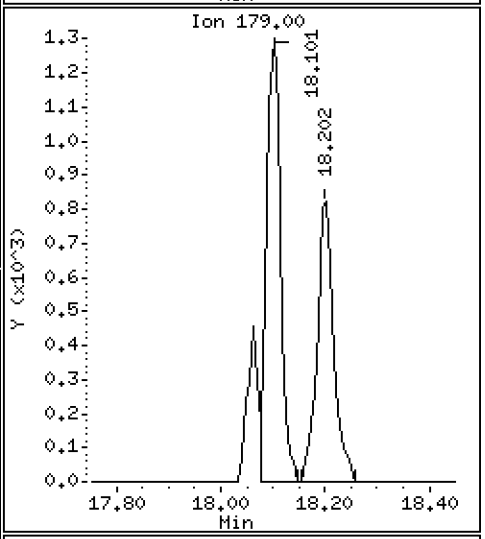
60 Phenanthrene

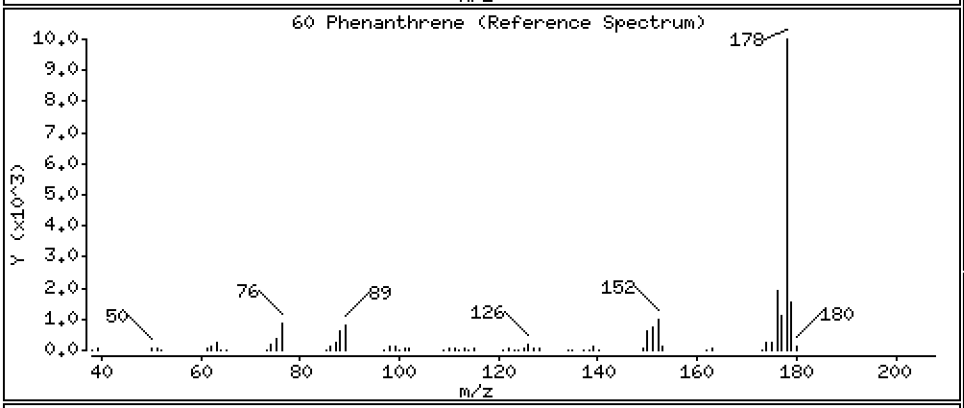
Concentration: 0.04396 ug/mL

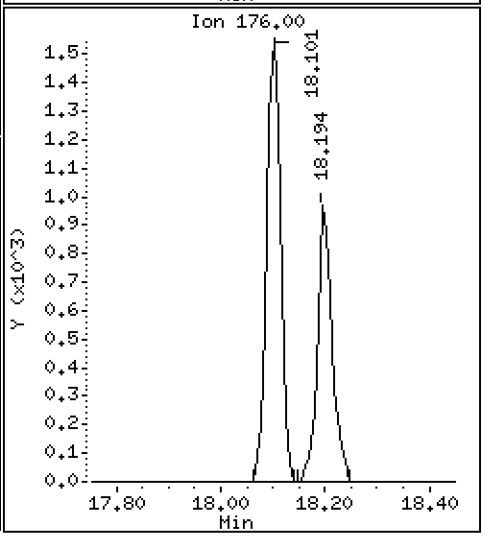


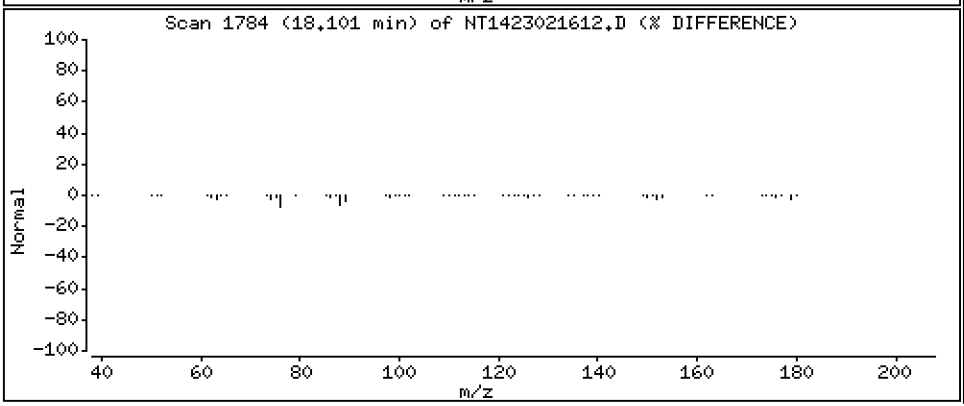












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

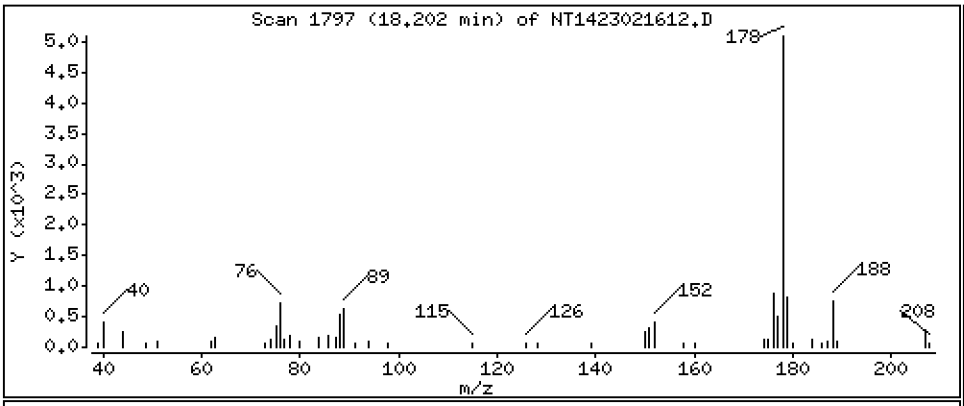
Operator: DSD

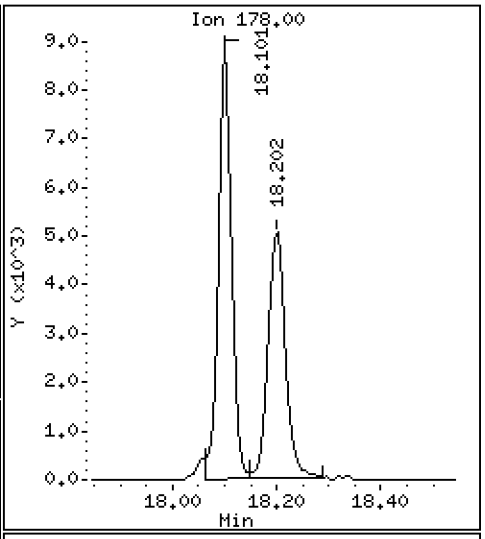
Column phase: ZB-5msi

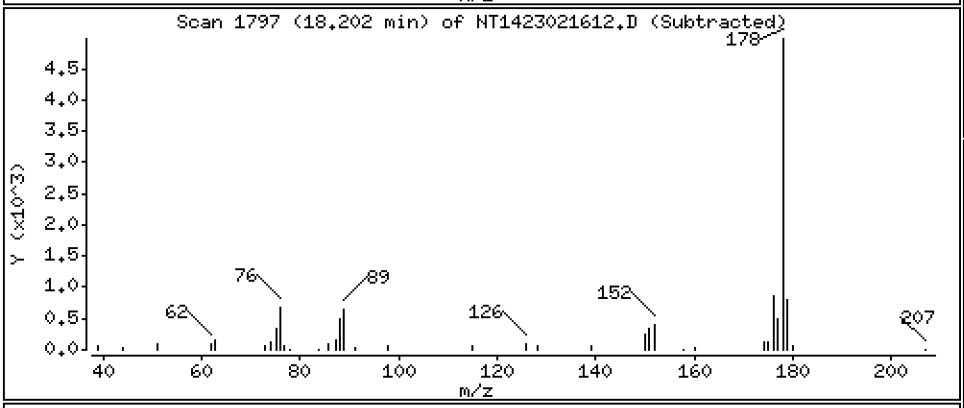
Column diameter: 0.25

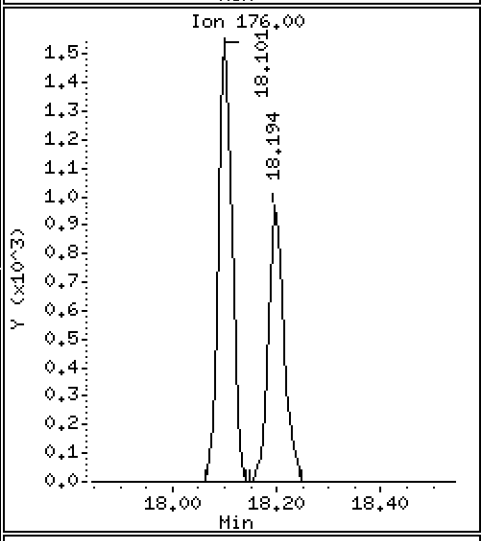
61 Anthracene

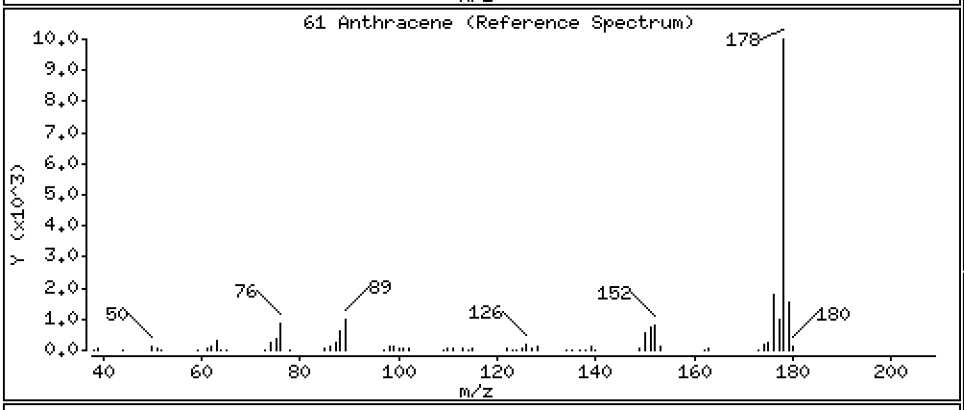
Concentration: 0.03388 ug/mL

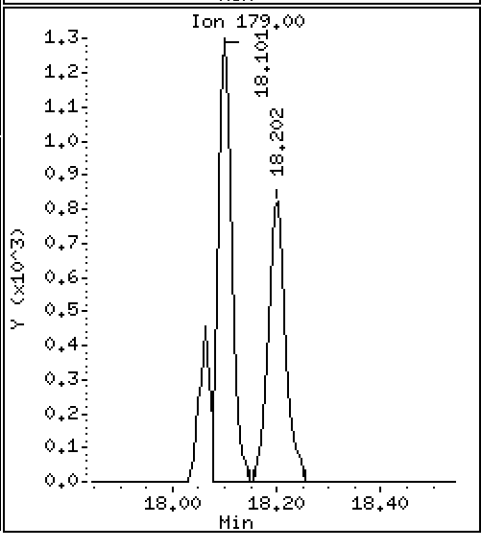


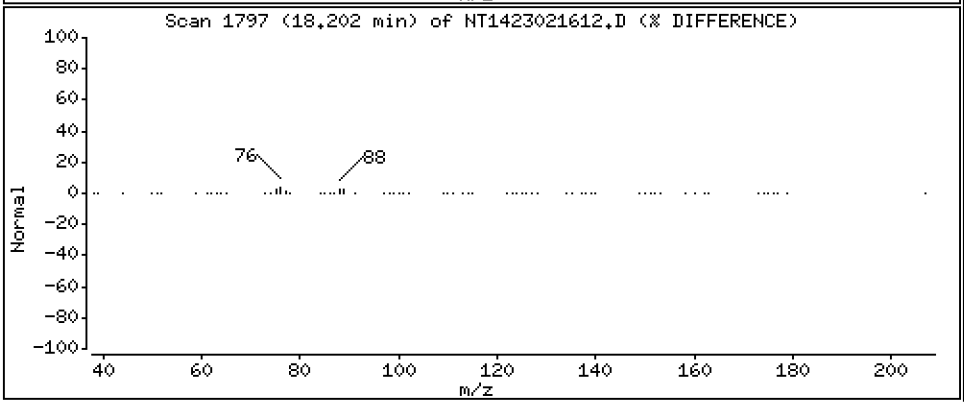












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

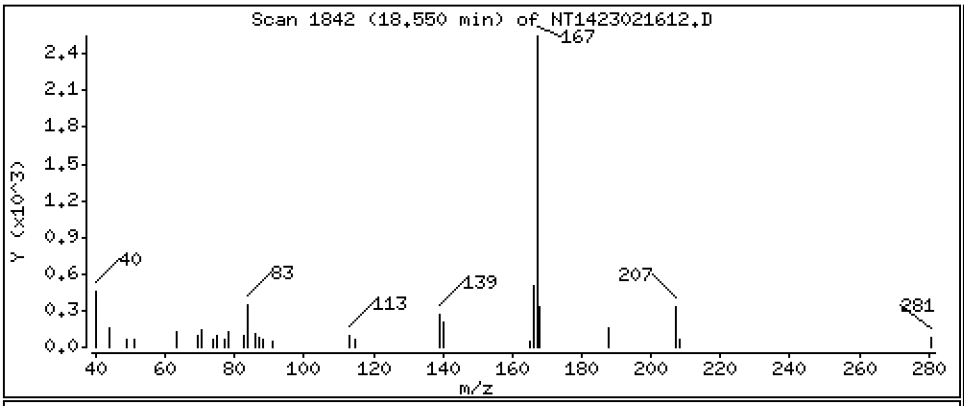
Operator: DSD

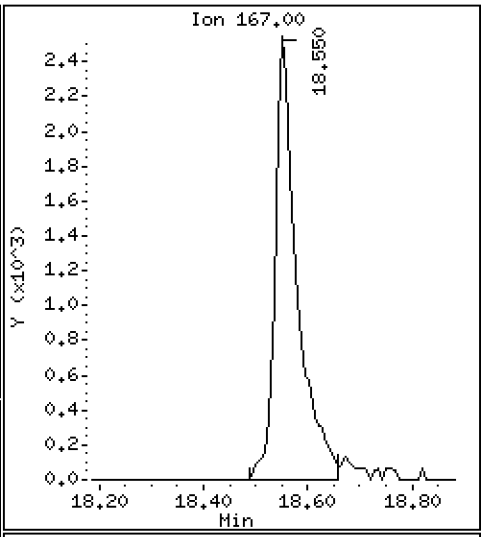
Column phase: ZB-5msi

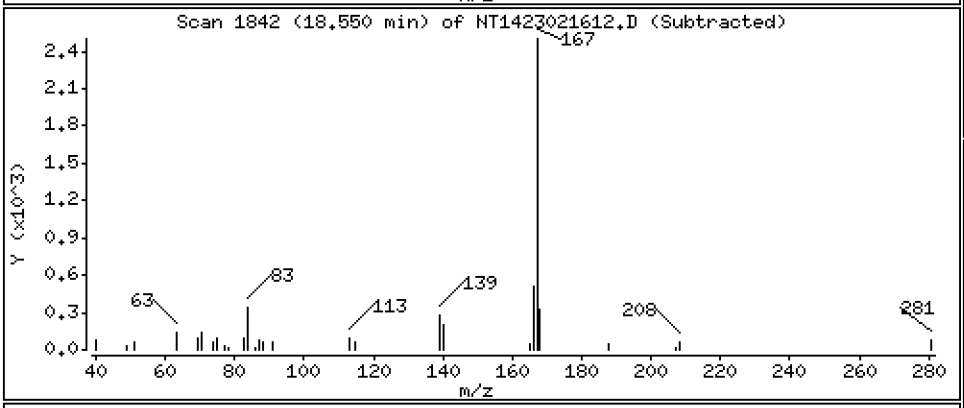
Column diameter: 0.25

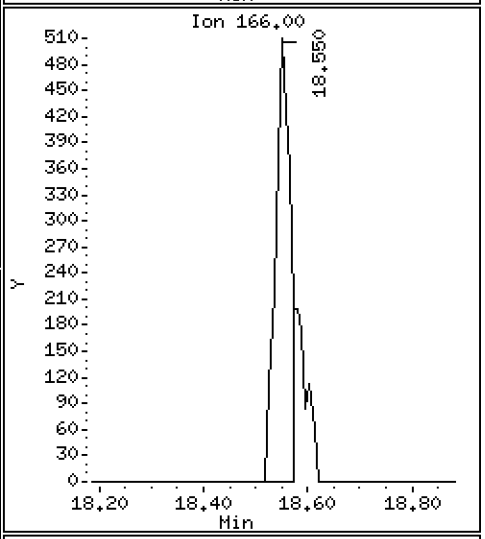
62 Carbazole

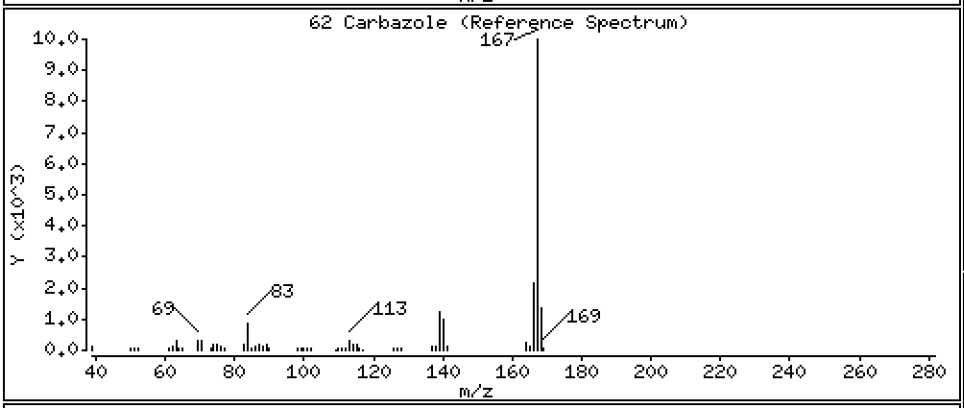
Concentration: 0.02482 ug/mL

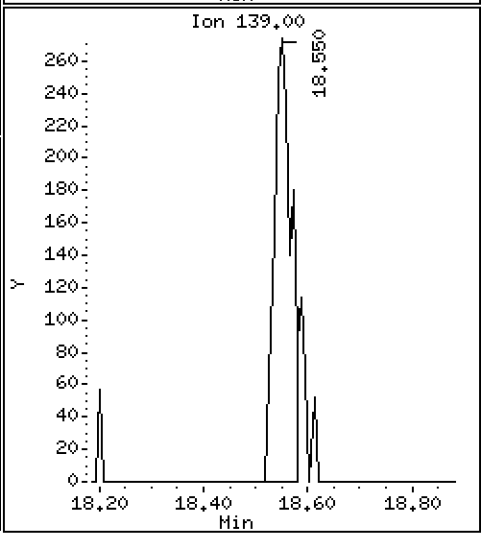


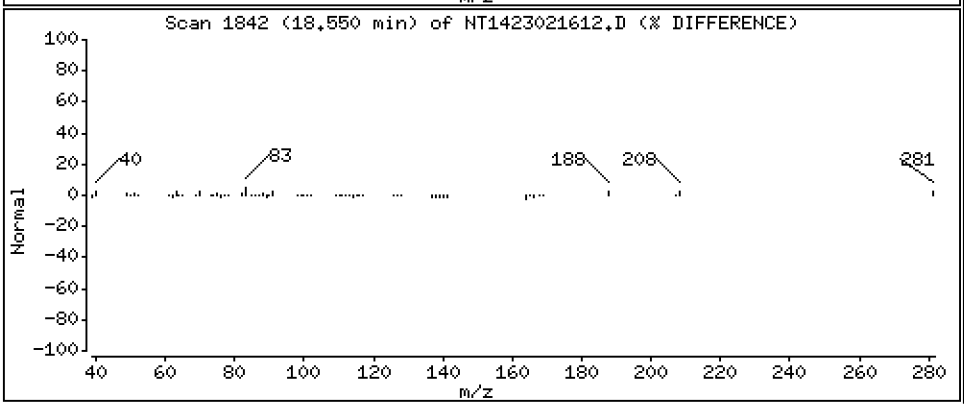












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021612.D

Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

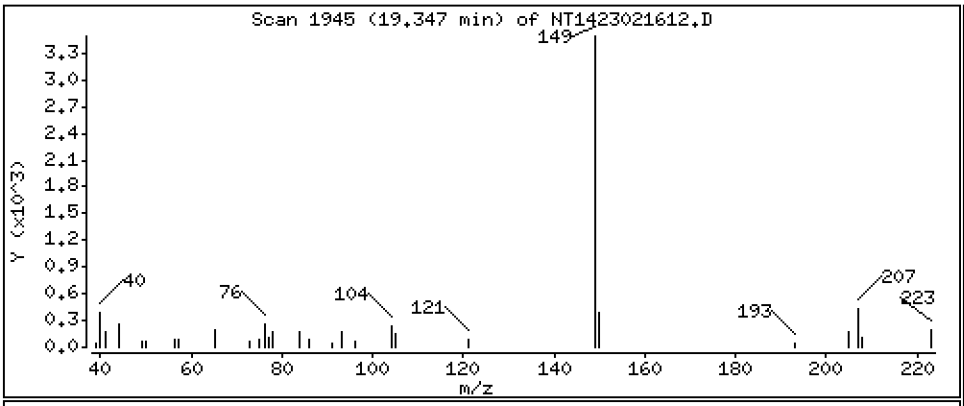
Operator: DSD

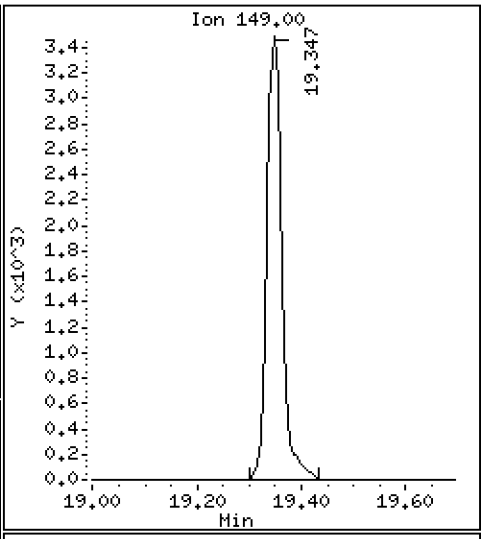
Column phase: ZB-5msi

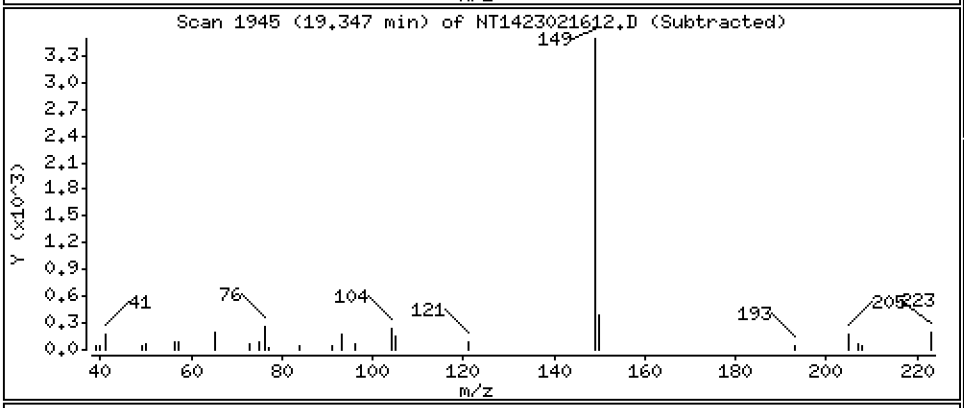
Column diameter: 0.25

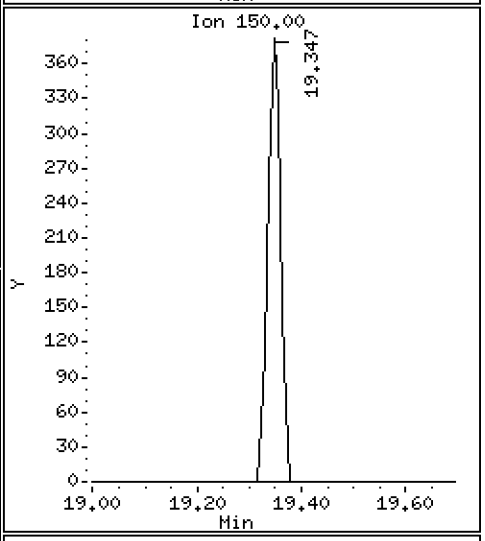
63 Di-n-butylphthalate

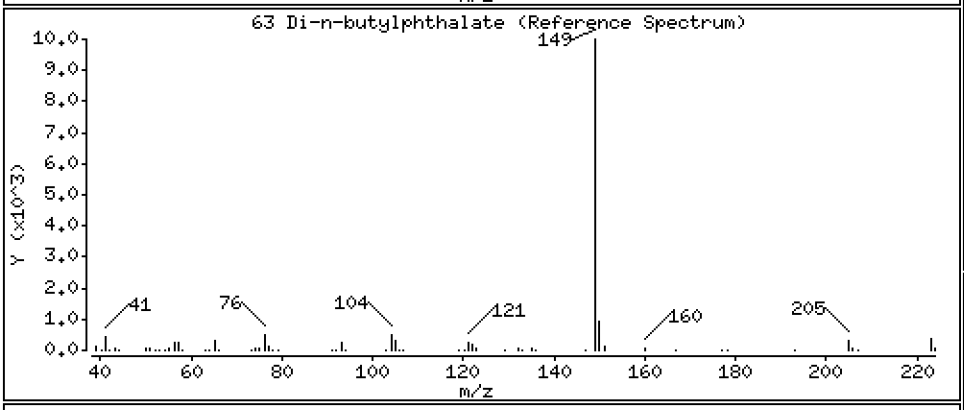
Concentration: 0.01955 ug/mL

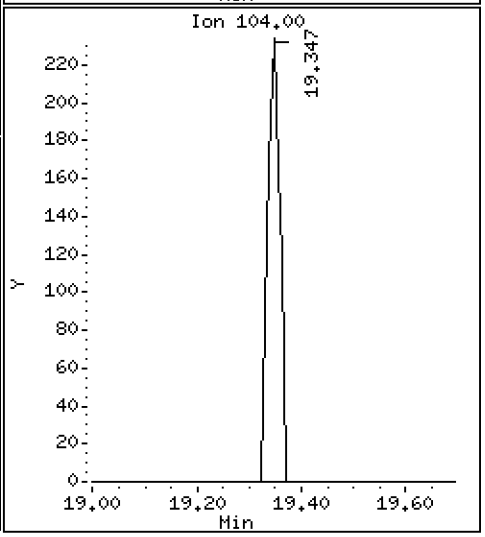


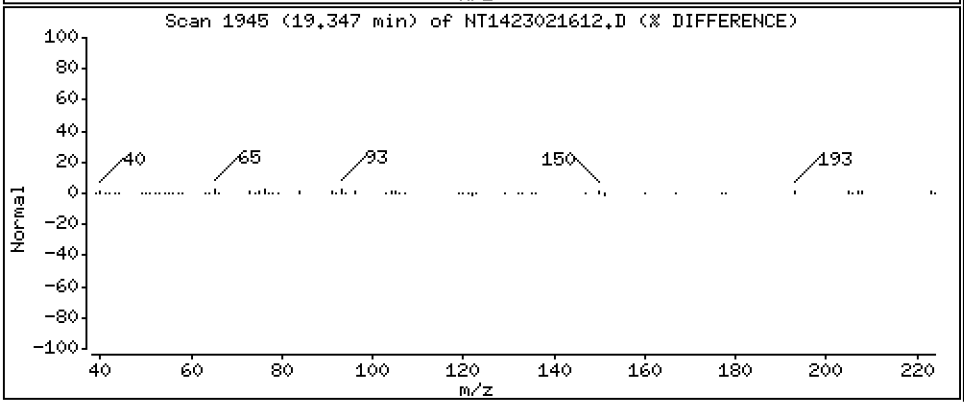












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

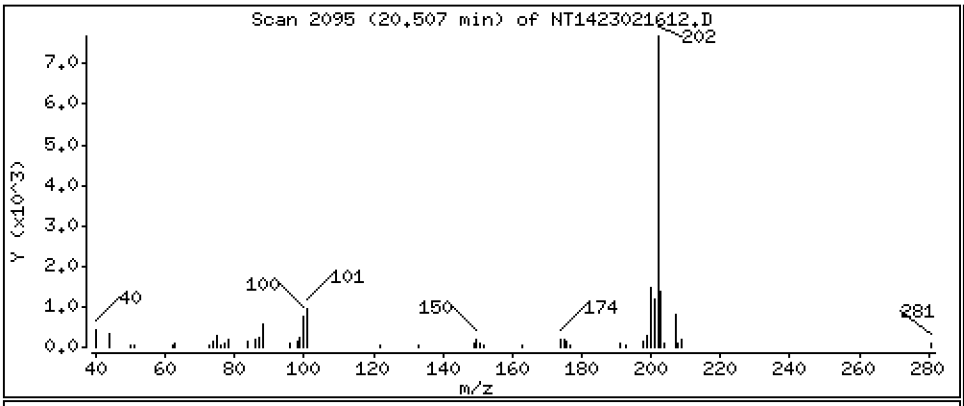
Operator: DSD

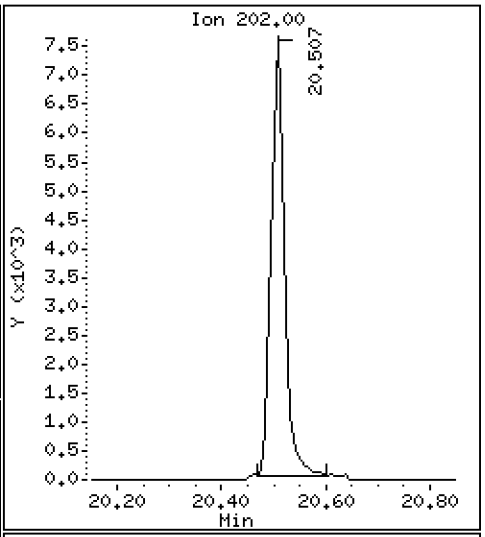
Column phase: ZB-5msi

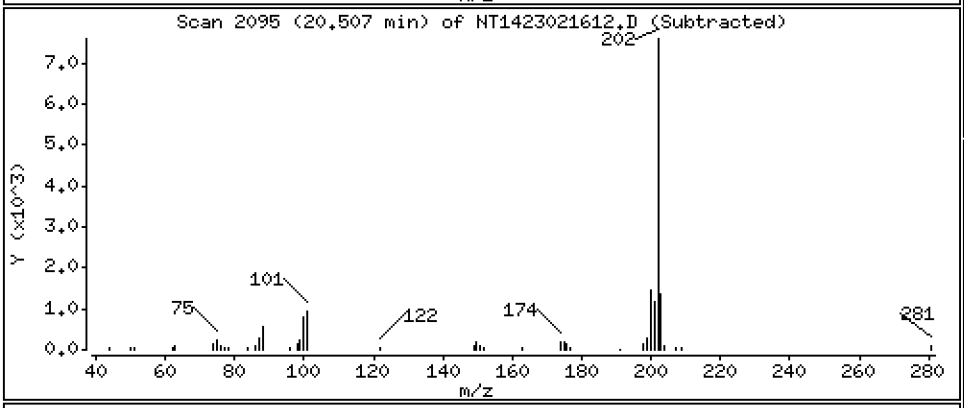
Column diameter: 0.25

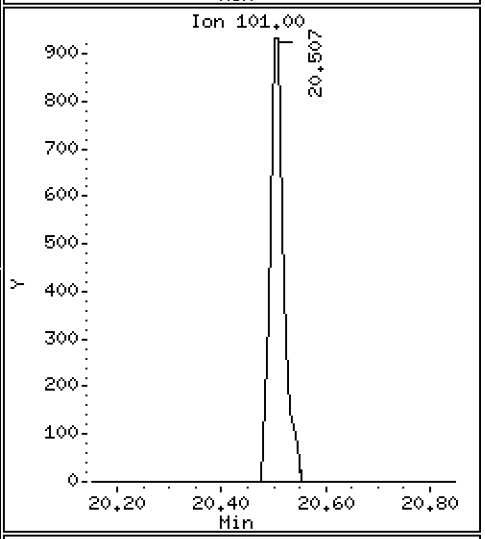
64 Fluoranthene

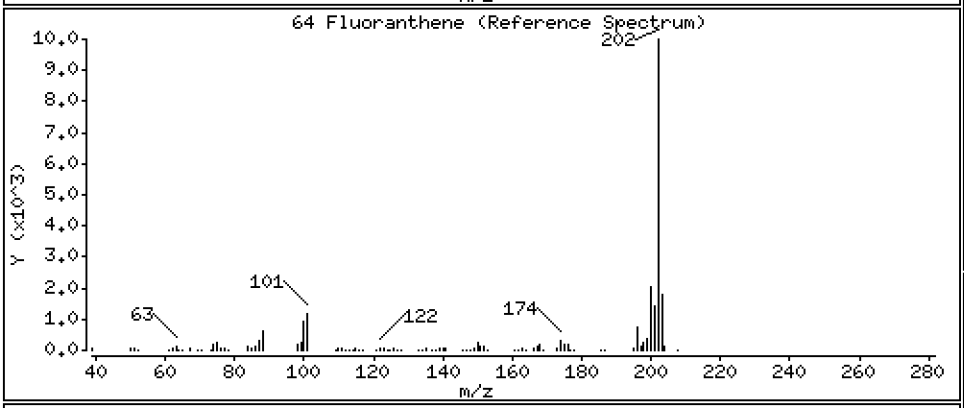
Concentration: 0.03425 ug/mL

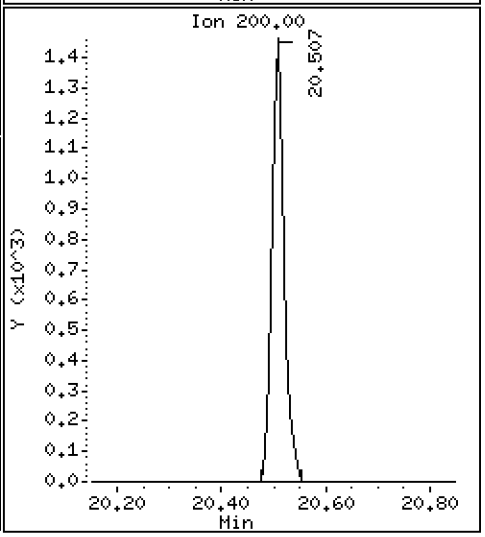


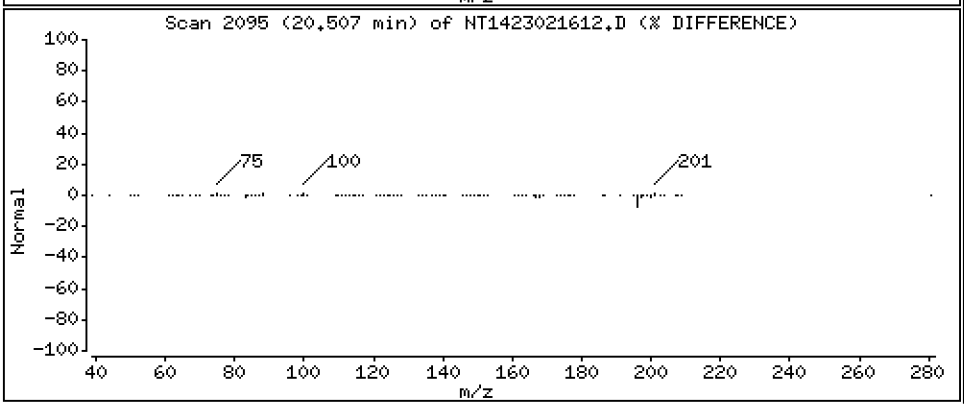












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

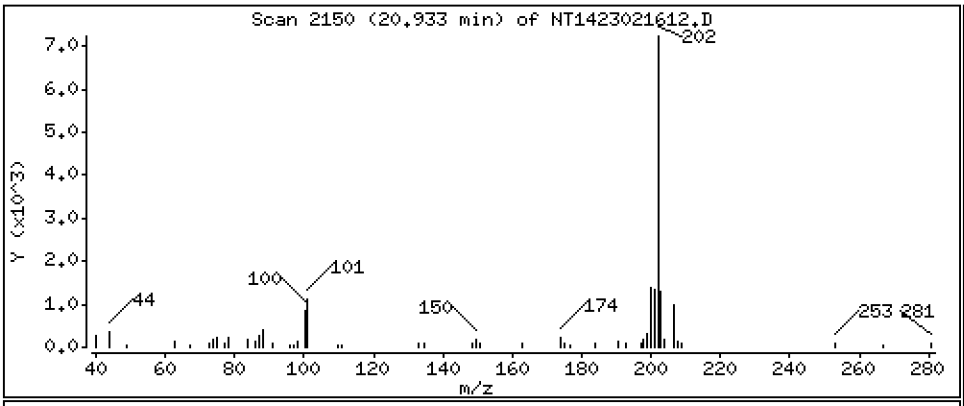
Operator: DSD

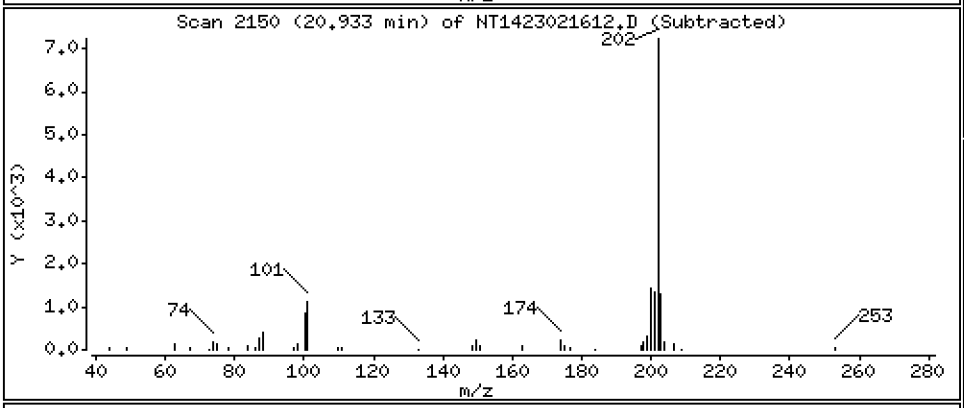
Column phase: ZB-5msi

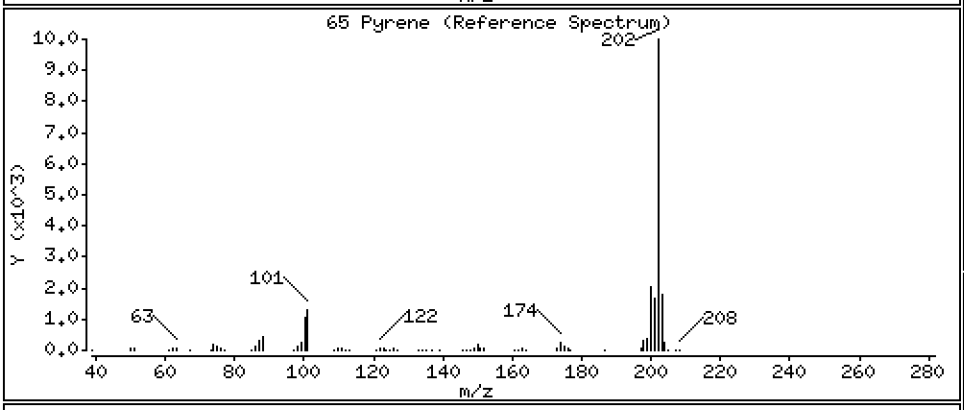
Column diameter: 0.25

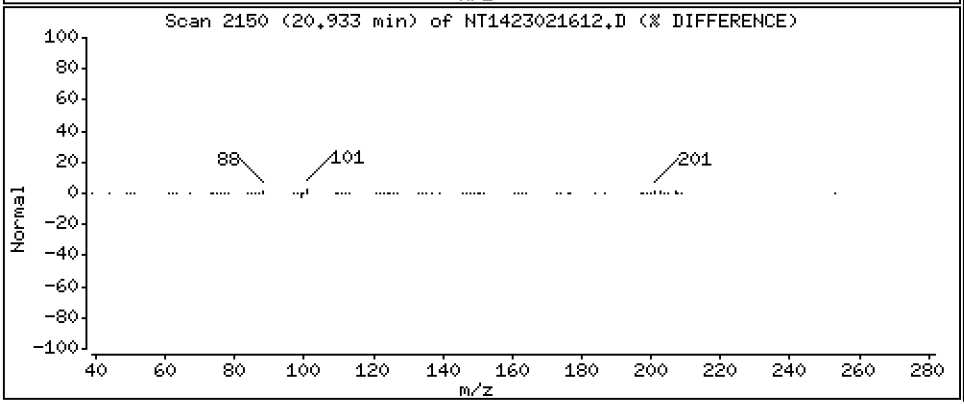
65 Pyrene

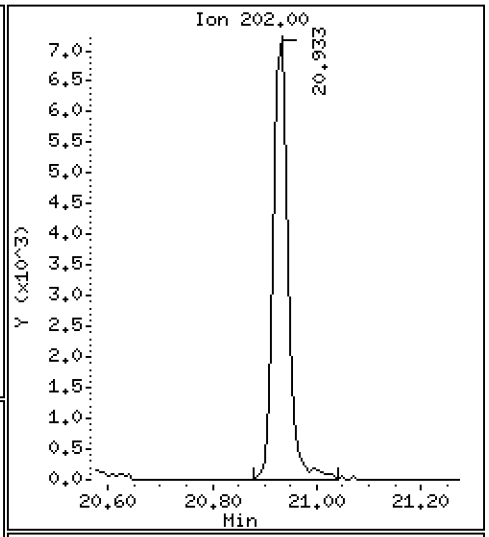
Concentration: 0.03664 ug/mL

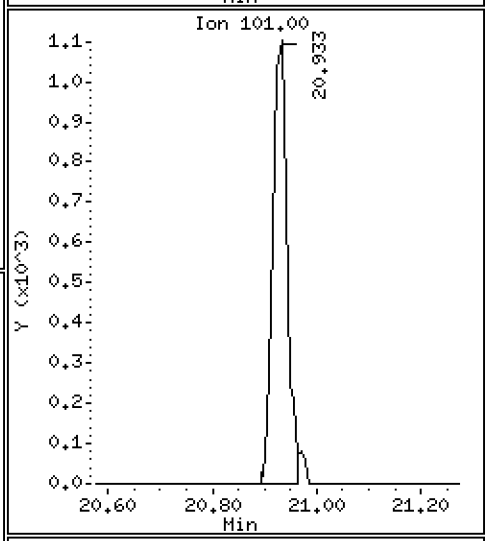


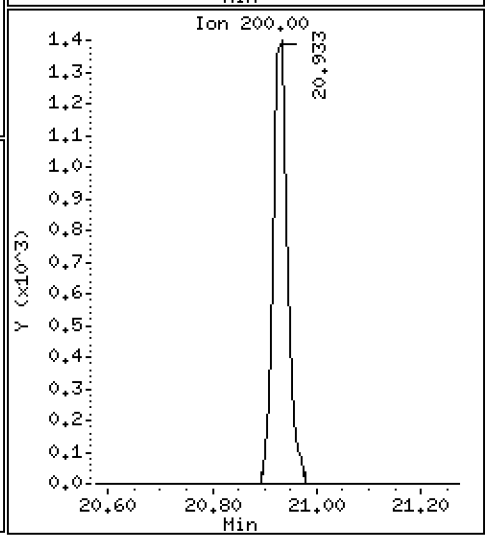












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

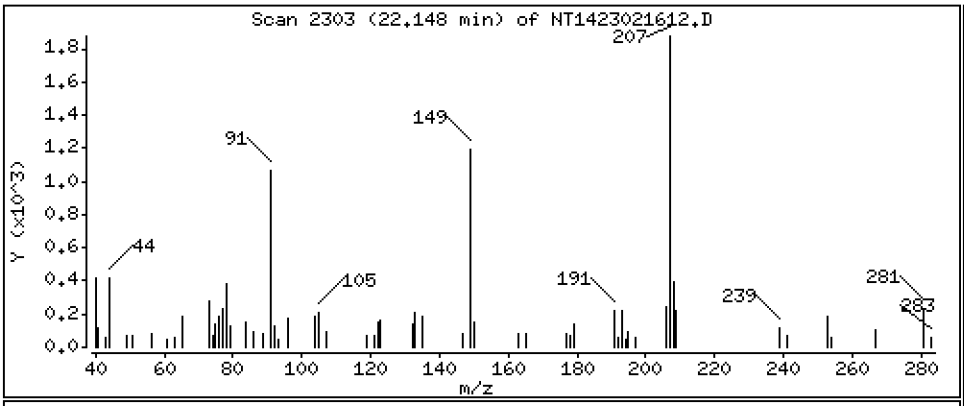
Operator: DSD

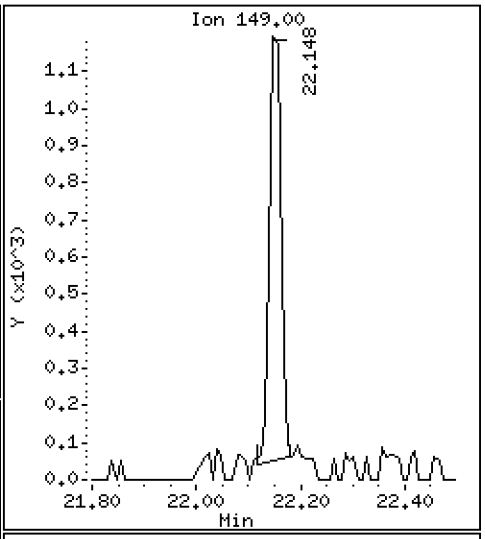
Column phase: ZB-5msi

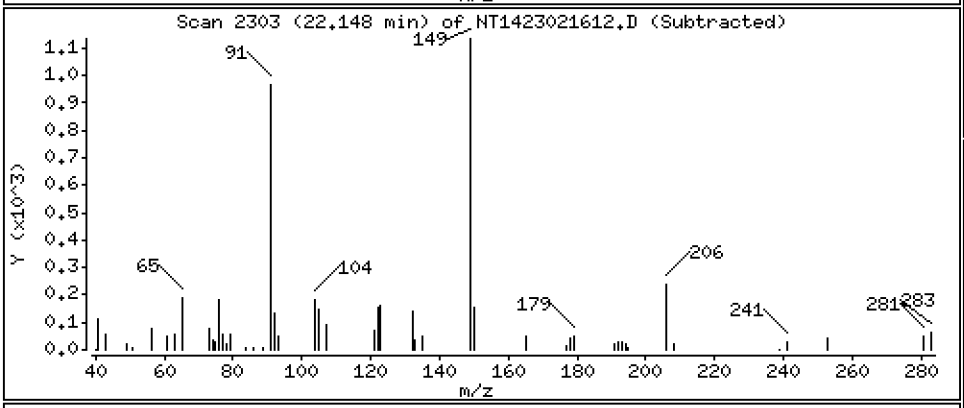
Column diameter: 0.25

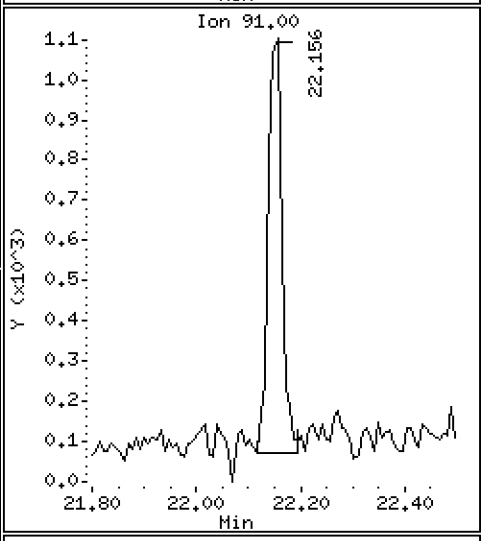
67 Butylbenzylphthalate

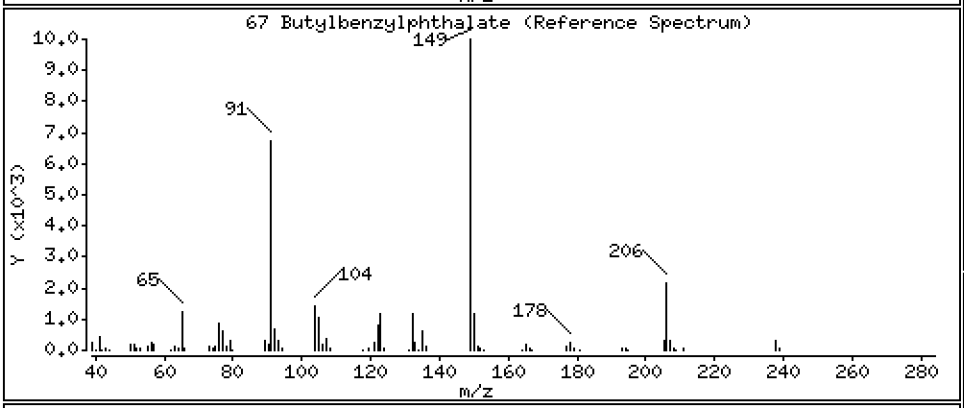
Concentration: 0.01240 ug/mL

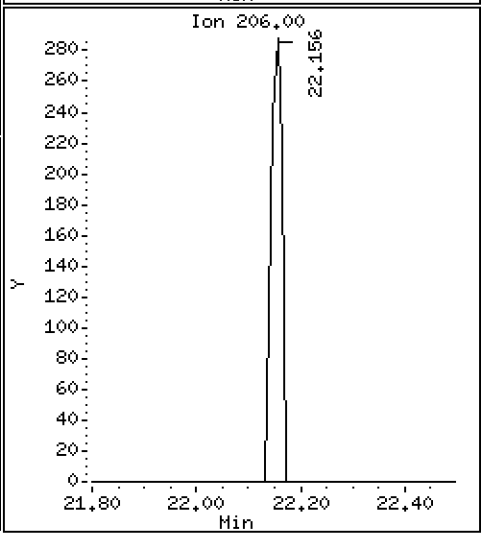


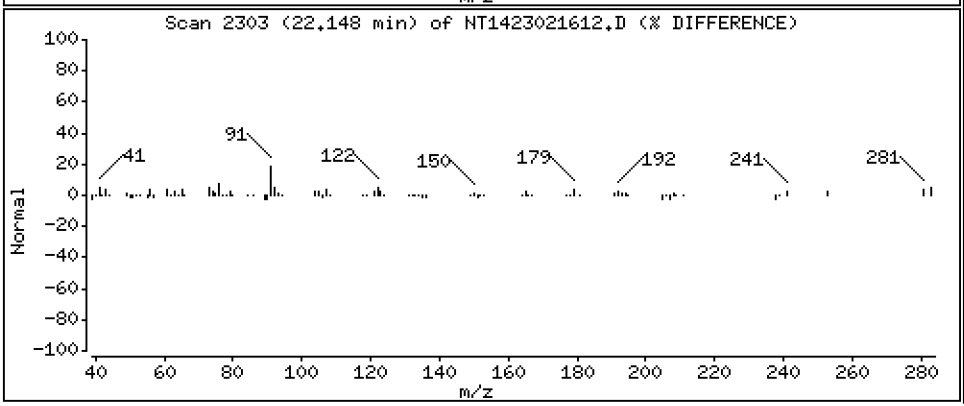












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

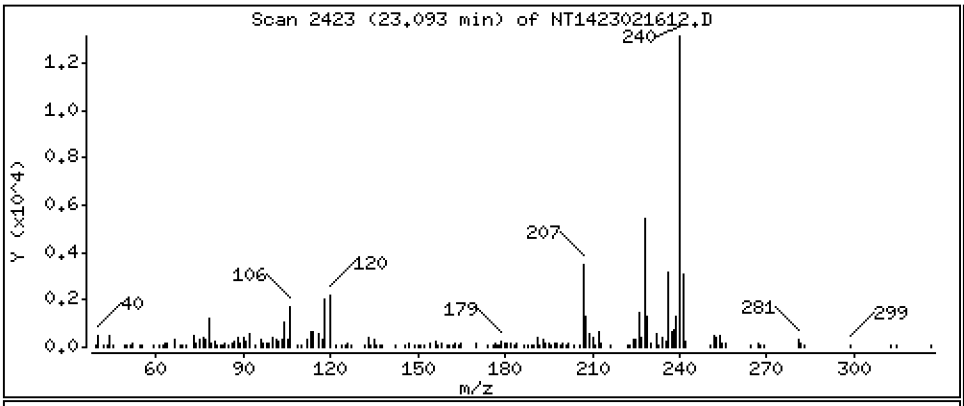
Operator: DSD

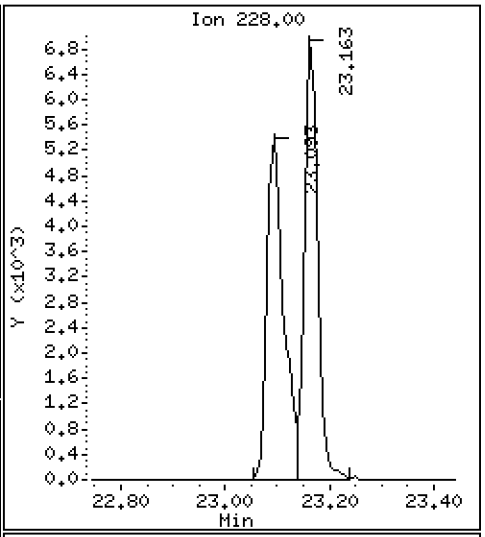
Column phase: ZB-5msi

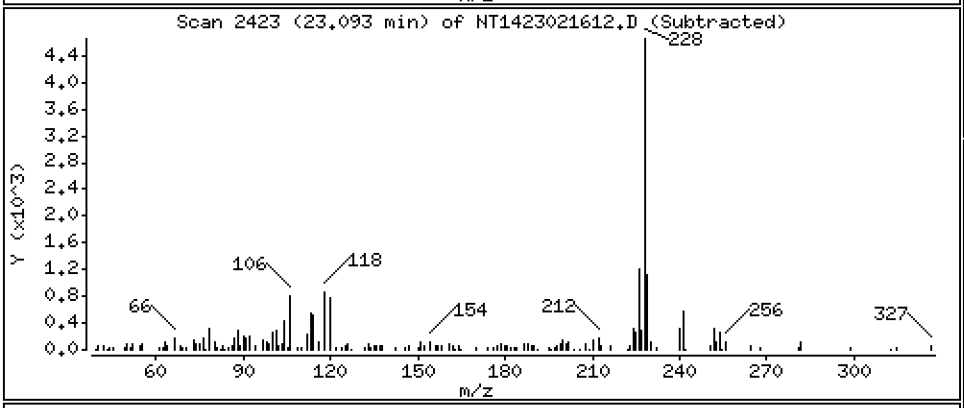
Column diameter: 0.25

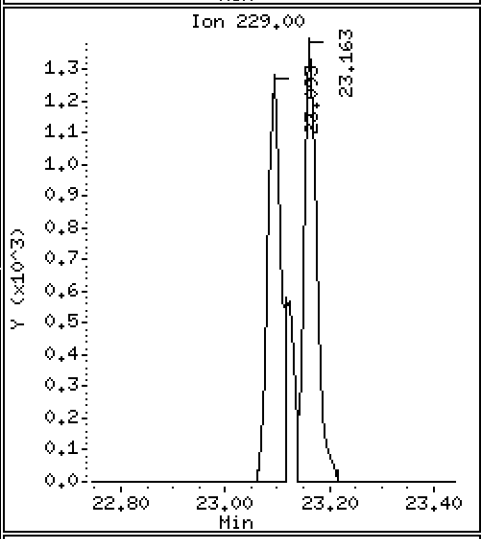
68 Benzo(a)anthracene

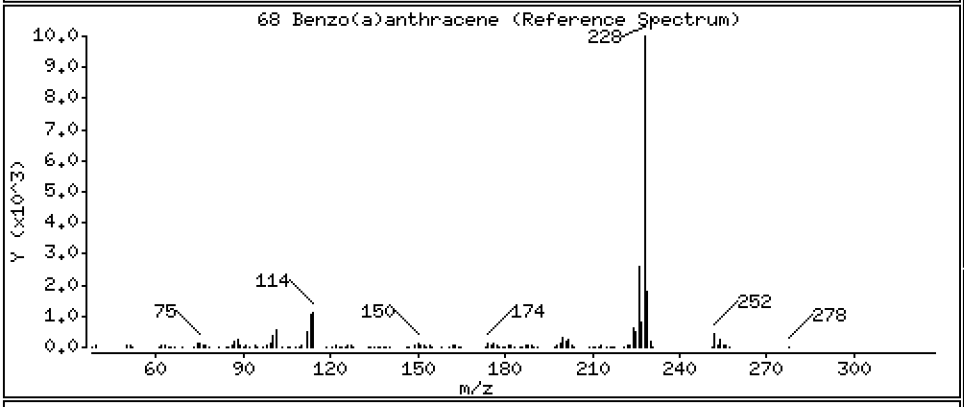
Concentration: 0.04158 ug/mL

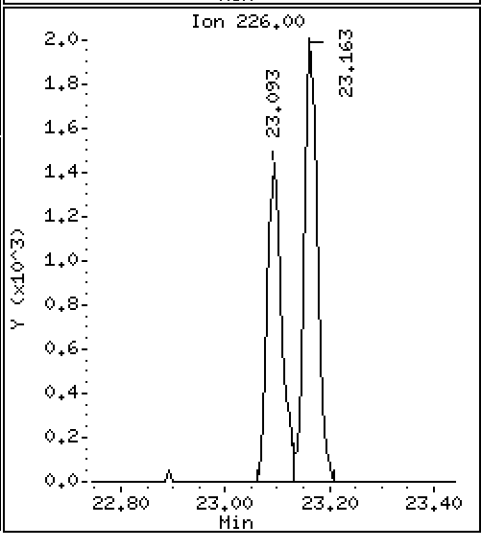


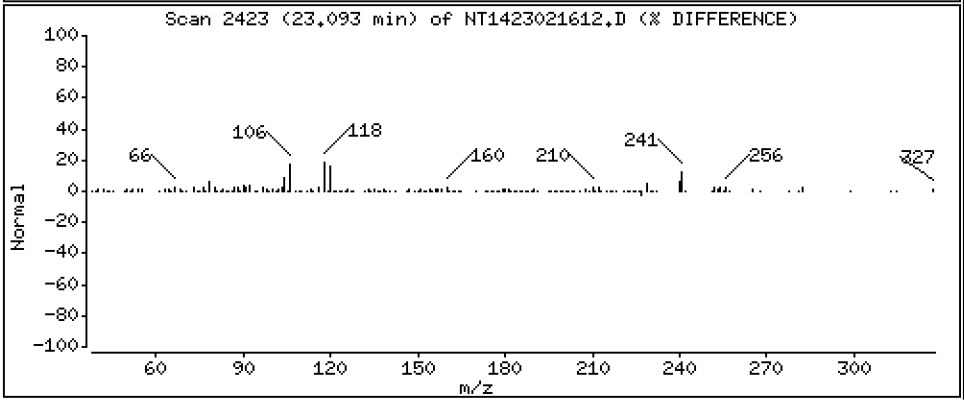












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

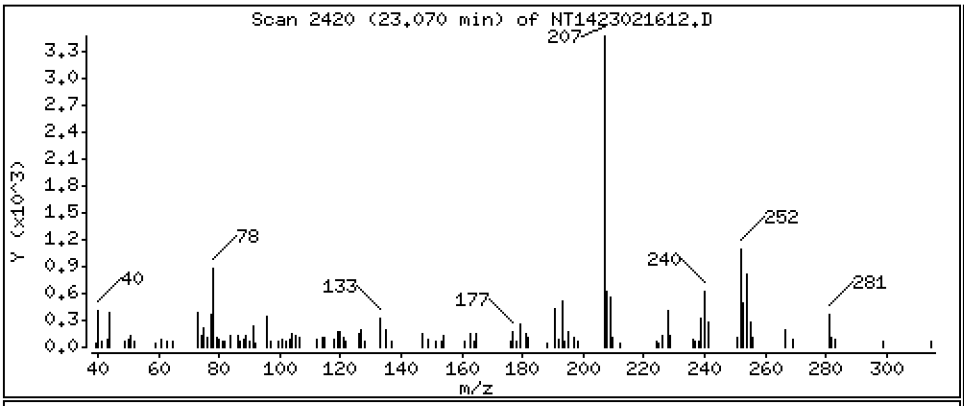
Operator: DSD

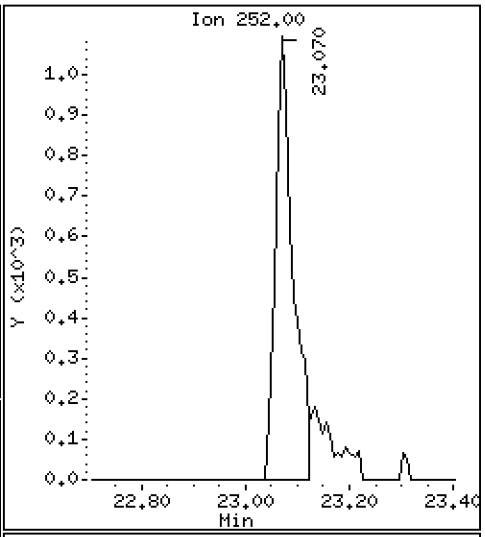
Column phase: ZB-5msi

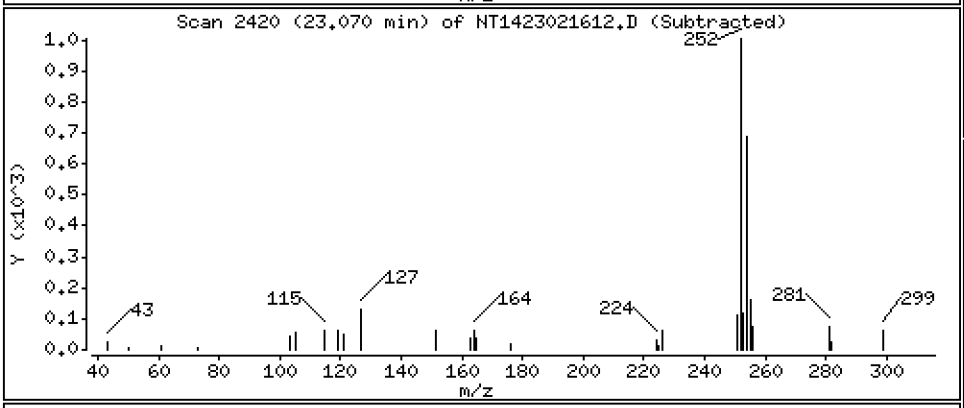
Column diameter: 0.25

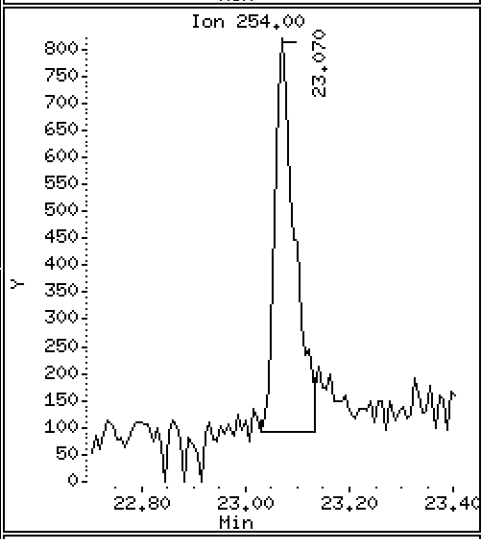
70 3,3'-Dichlorobenzidine

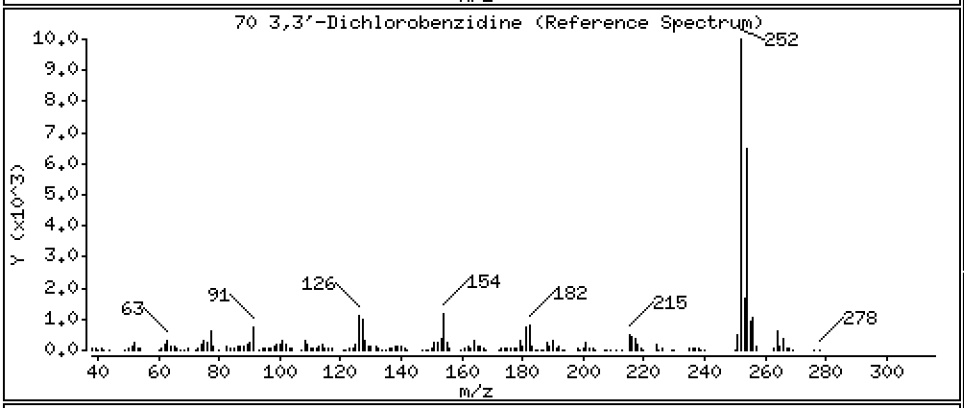
Concentration: 0.03036 ug/mL

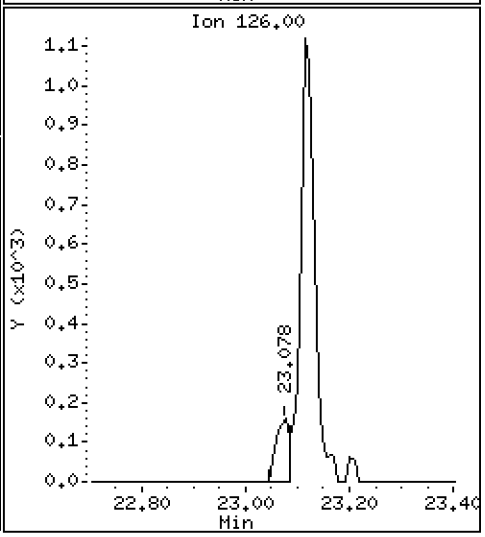


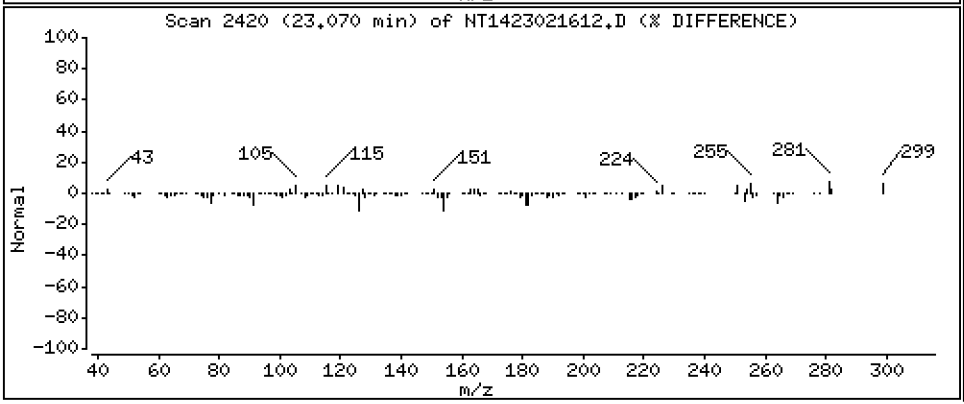












Date : 16-FEB-2023 20:42

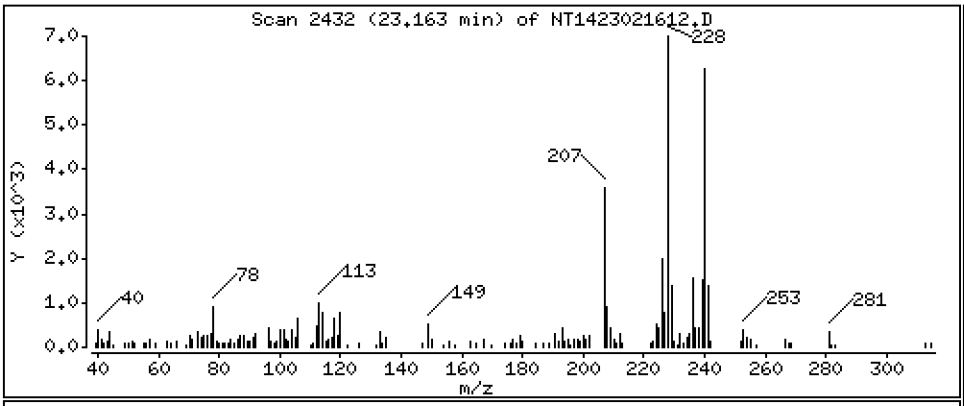
Client ID: Instrument: nt14.i

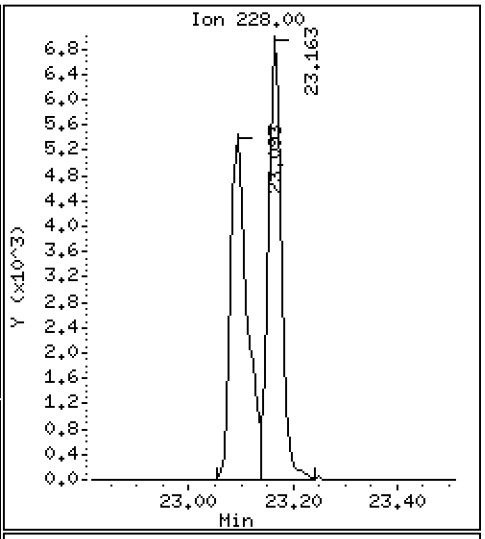
Sample Info: SIM 0.05

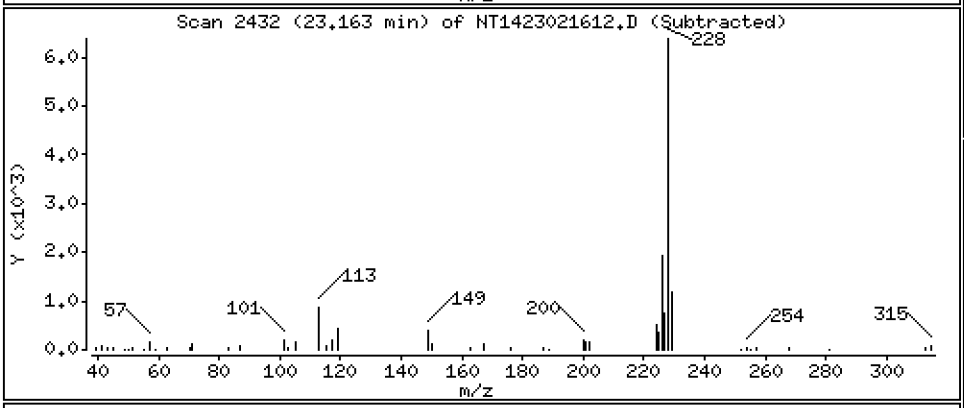
Operator: DSD

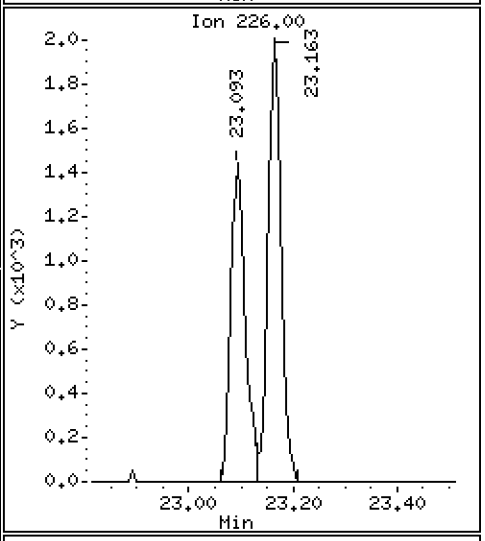
Column phase: ZB-5msi Column diameter: 0.25

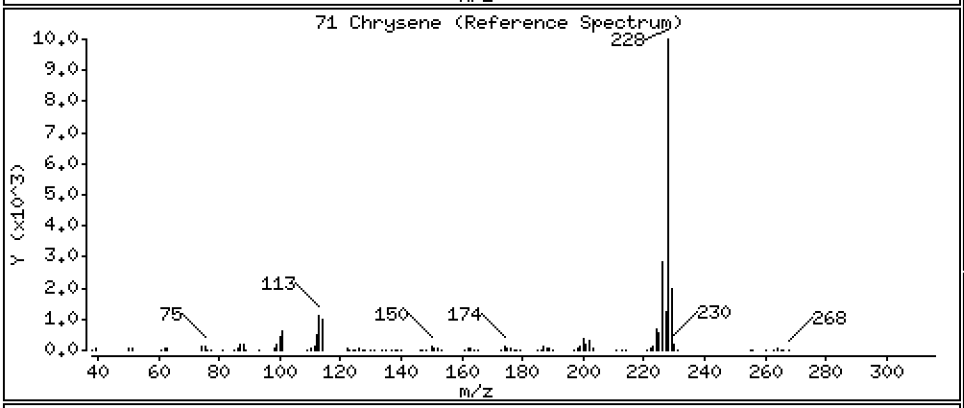
71 Chrysene Concentration: 0.04530 ug/mL

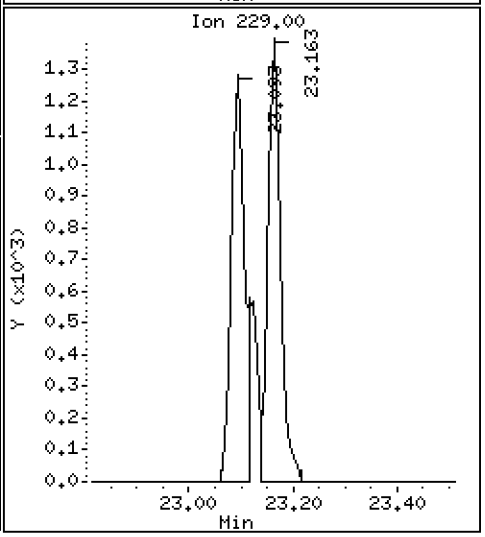


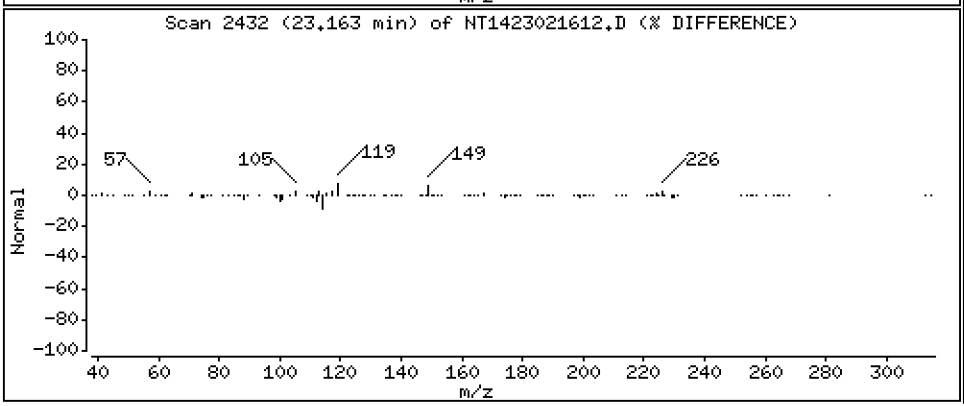












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021612.D

Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

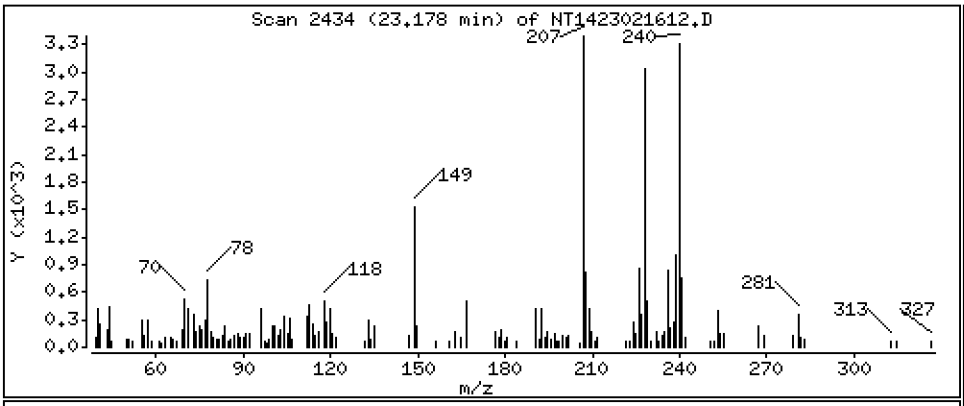
Operator: DSD

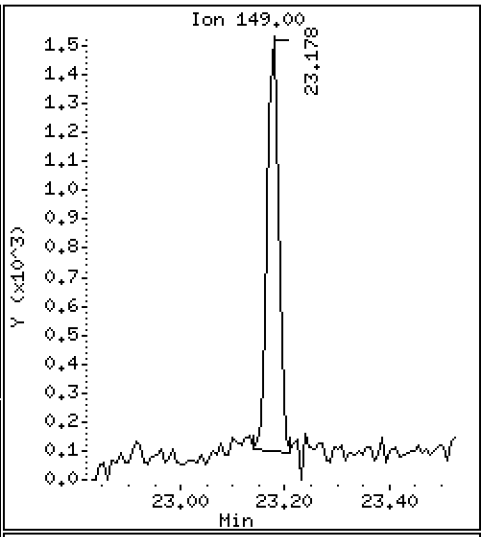
Column phase: ZB-5msi

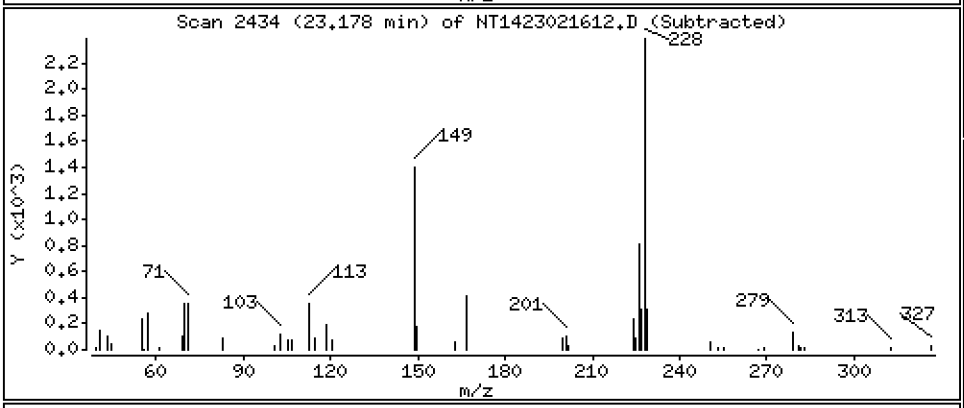
Column diameter: 0.25

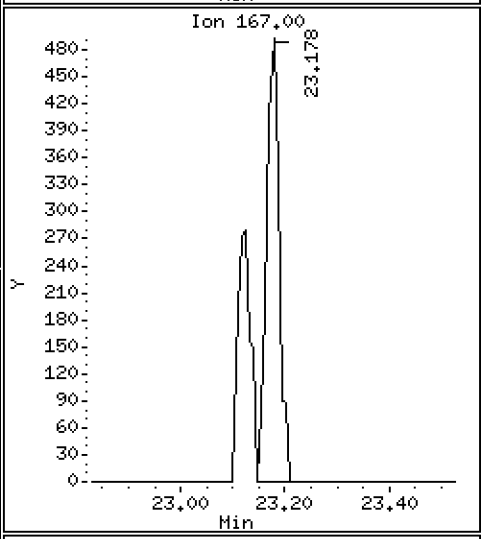
72 bis(2-Ethylhexyl)phthalate

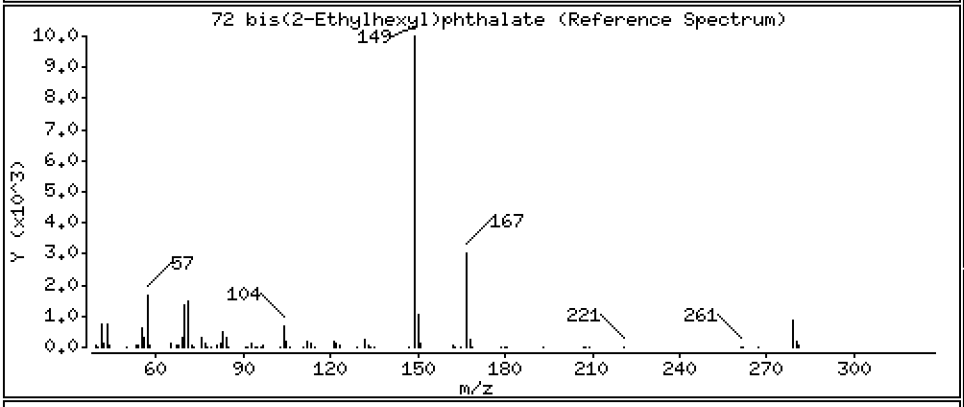
Concentration: 0.01298 ug/mL

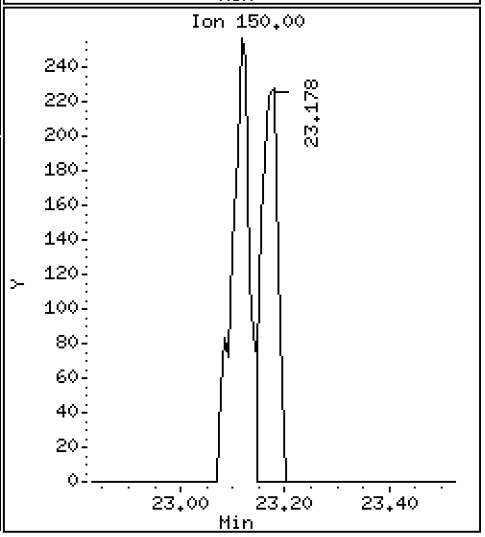


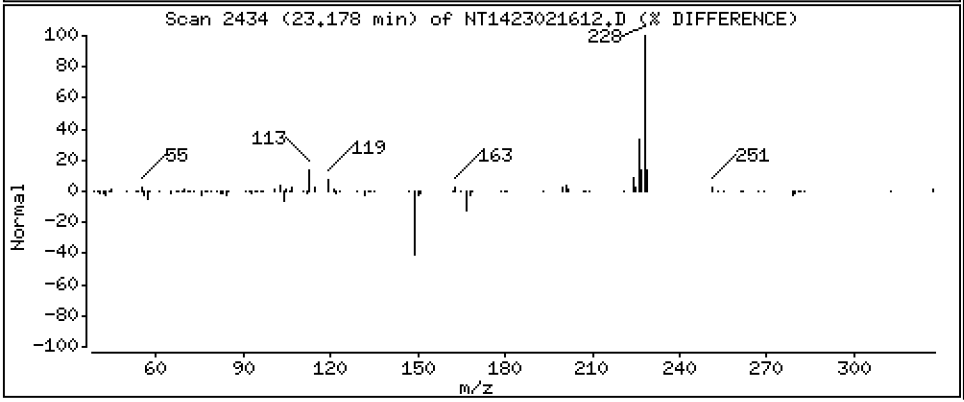












Date : 16-FEB-2023 20:42

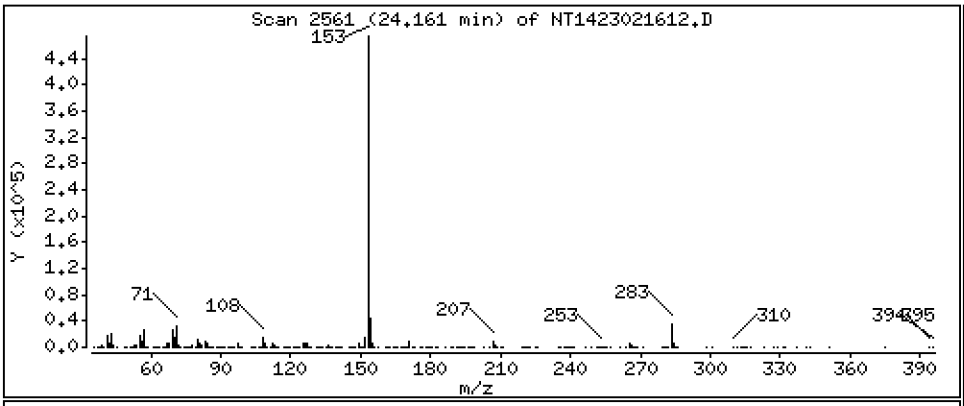
Client ID: Instrument: nt14.i

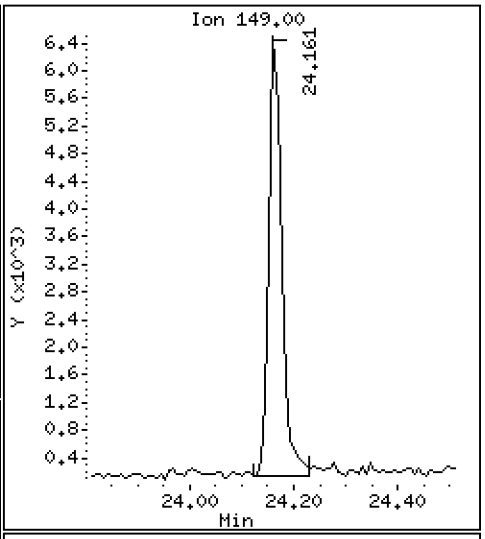
Sample Info: SIM 0.05

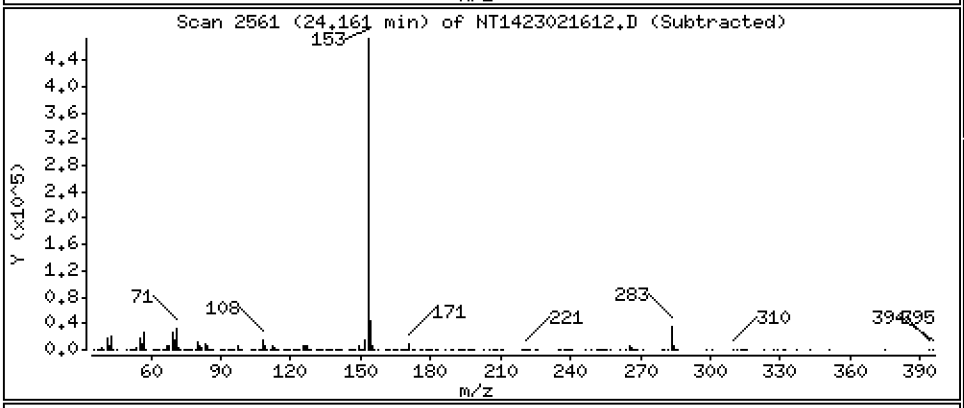
Operator: DSD

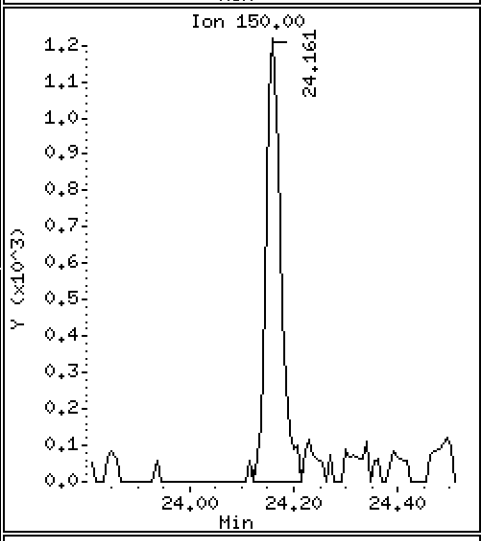
Column phase: ZB-5msi Column diameter: 0.25

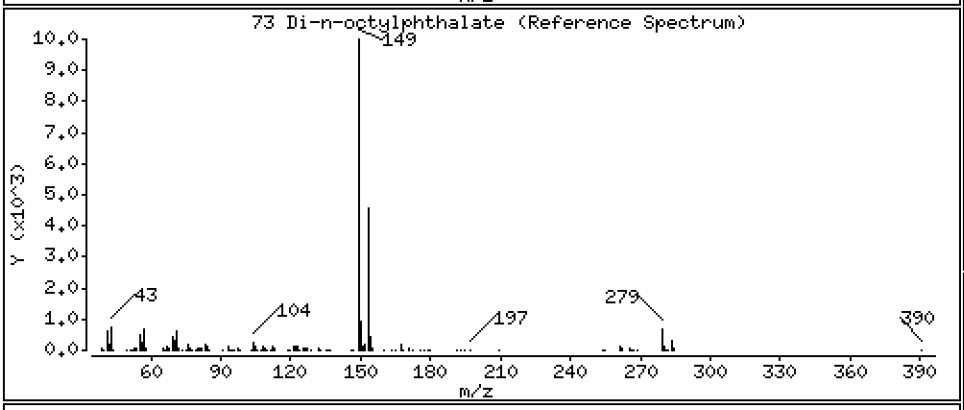
73 Di-n-octylphthalate Concentration: 0.04810 ug/mL

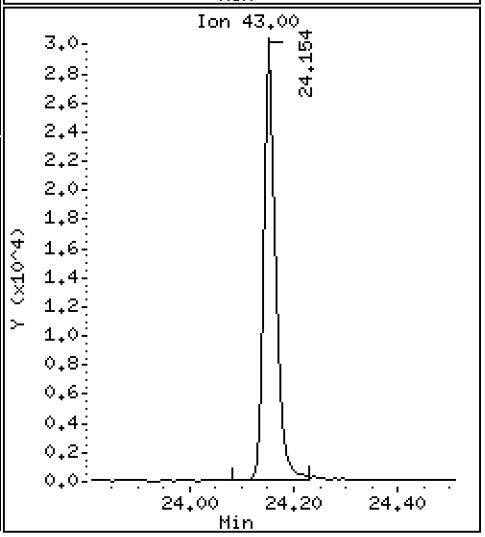


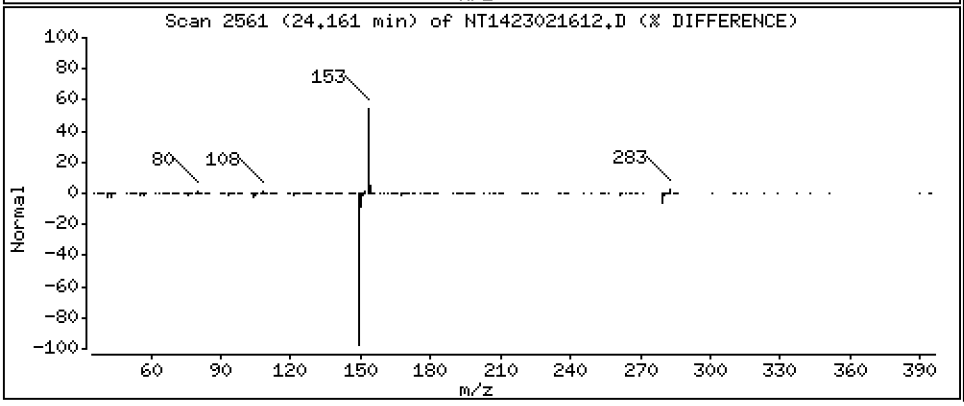












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

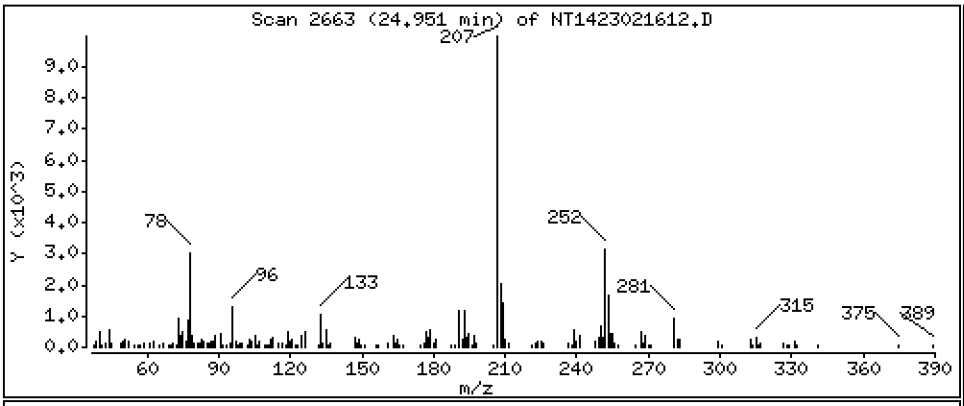
Operator: DSD

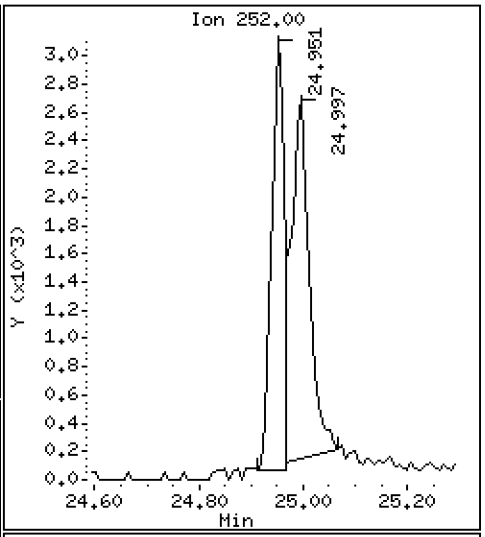
Column phase: ZB-5msi

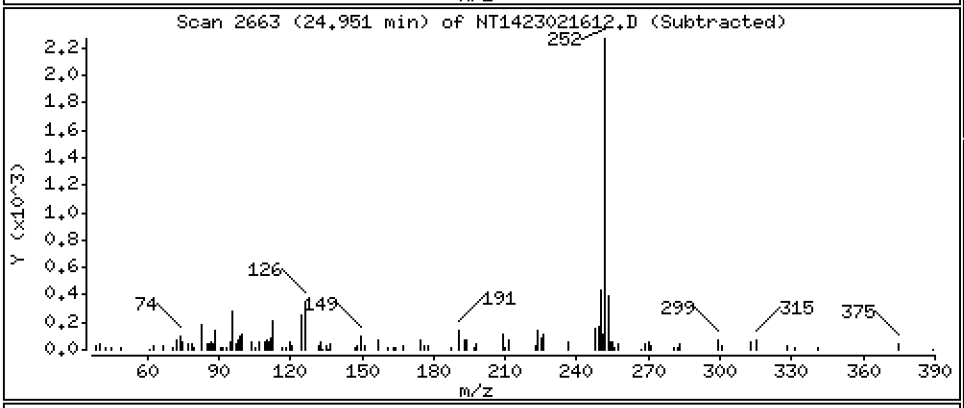
Column diameter: 0.25

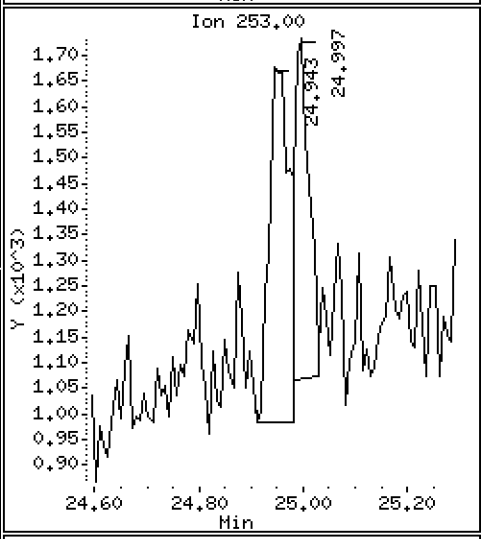
74 Benzo(b)fluoranthene

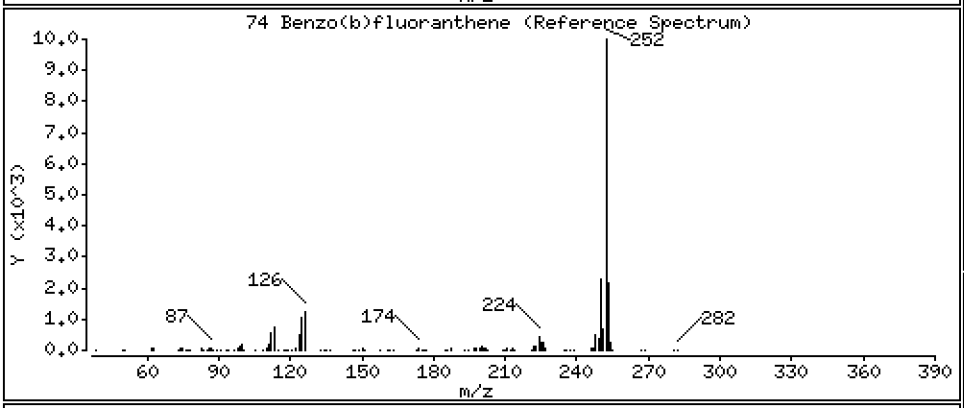
Concentration: 0.02738 ug/mL

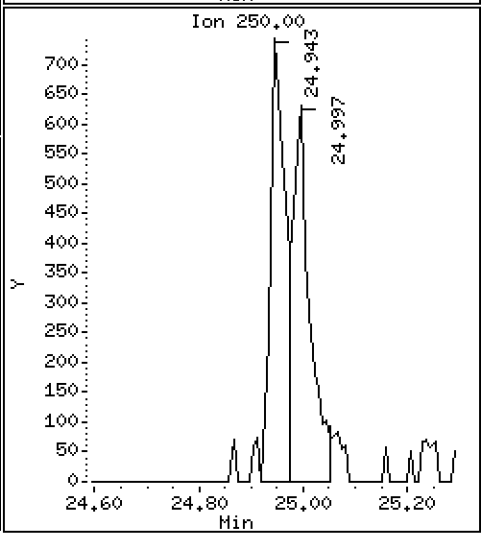


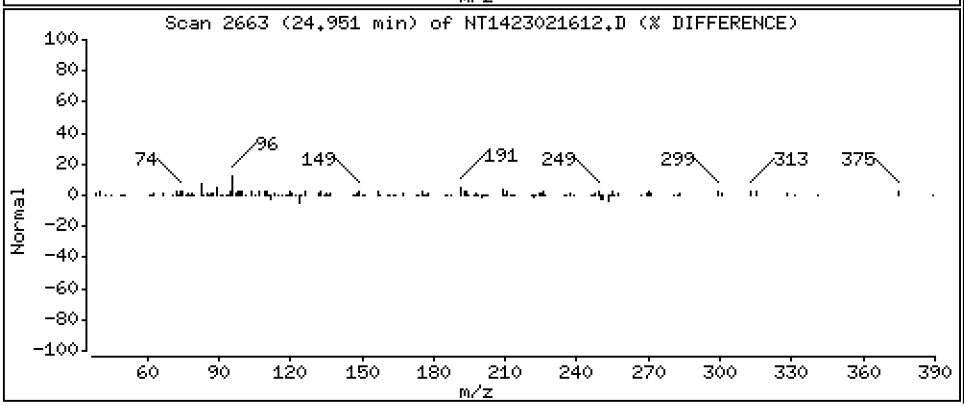












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

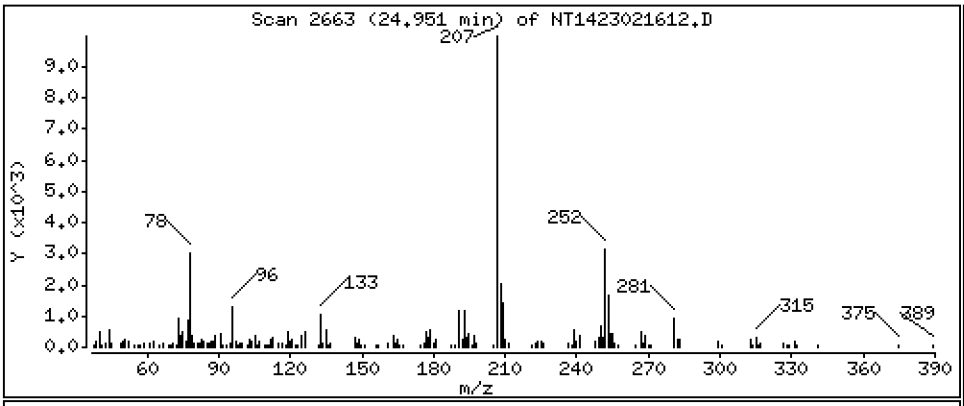
Operator: DSD

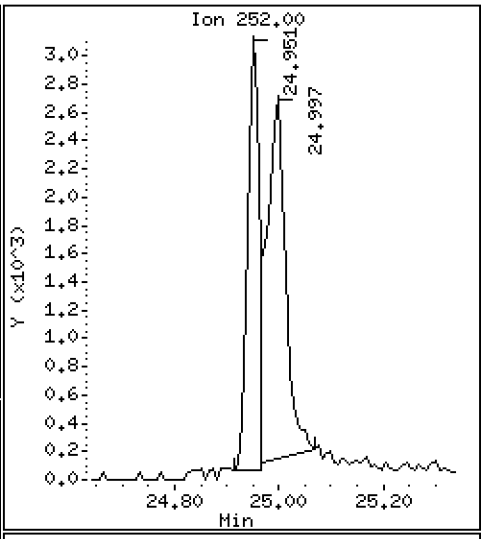
Column phase: ZB-5msi

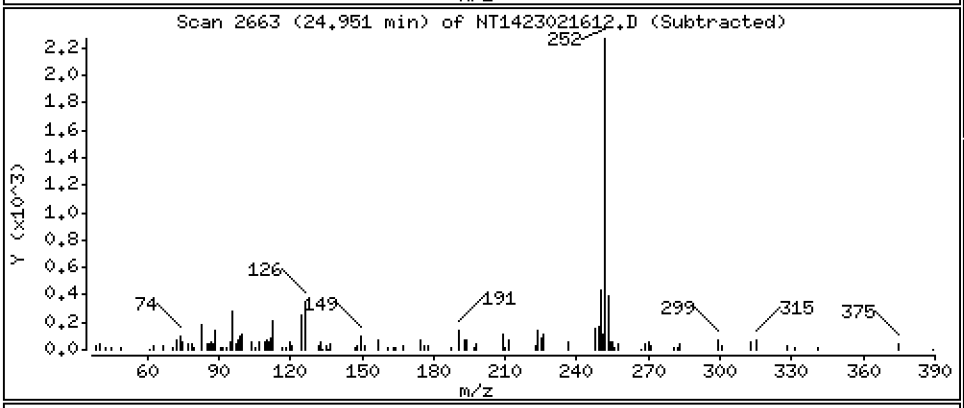
Column diameter: 0.25

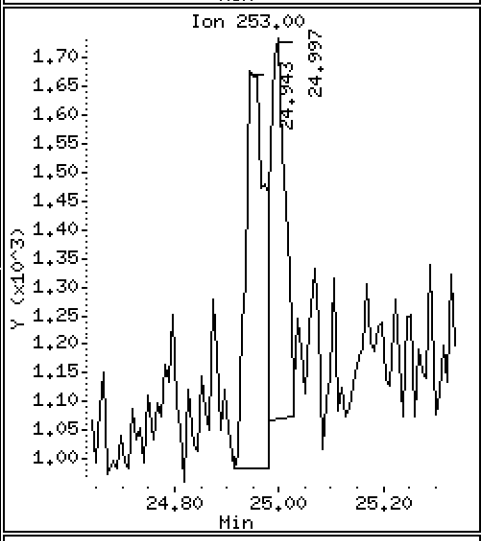
75 Benzo(k)fluoranthene

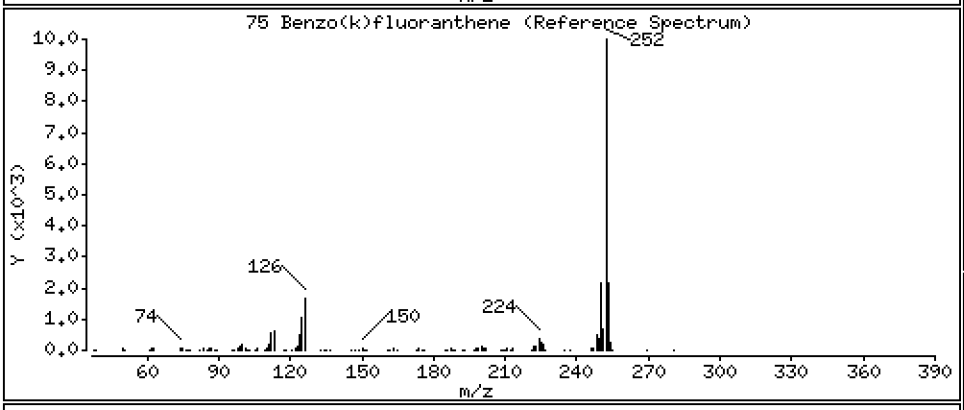
Concentration: 0.02562 ug/mL

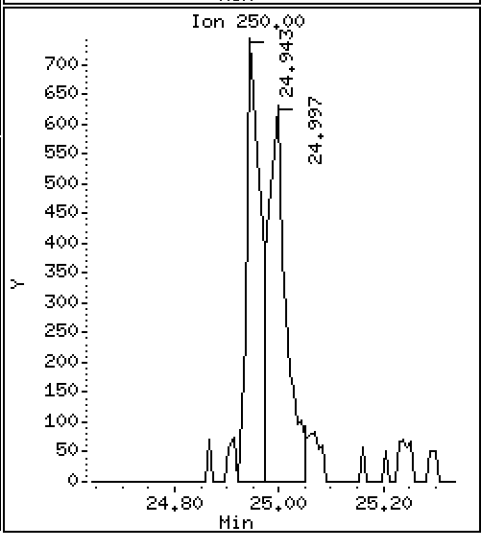


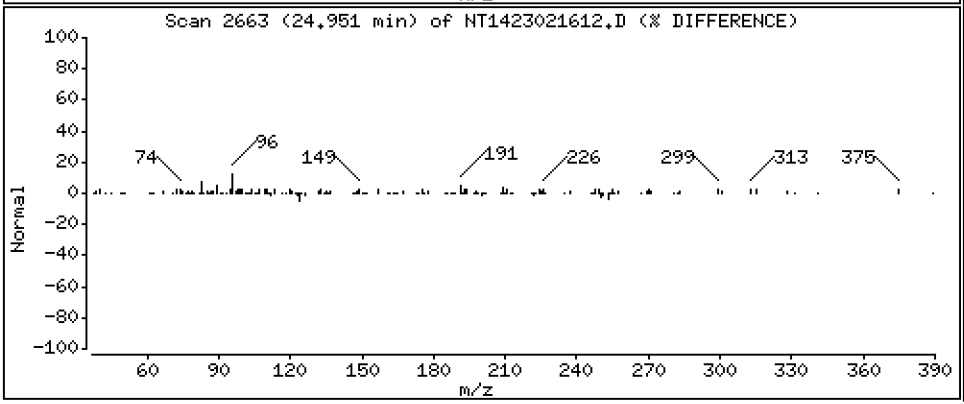












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

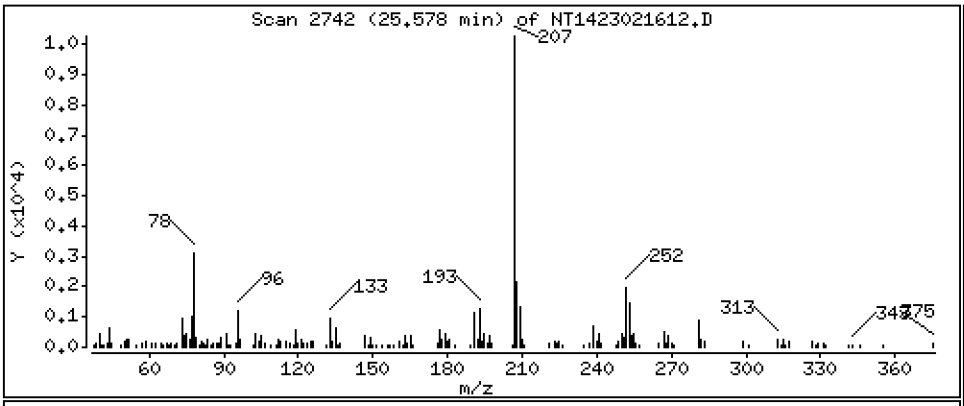
Operator: DSD

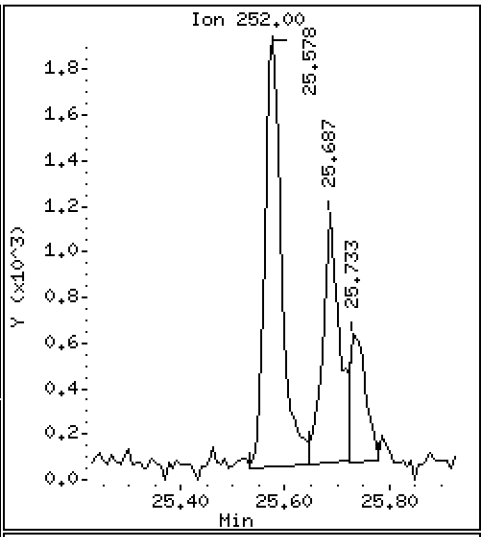
Column phase: ZB-5msi

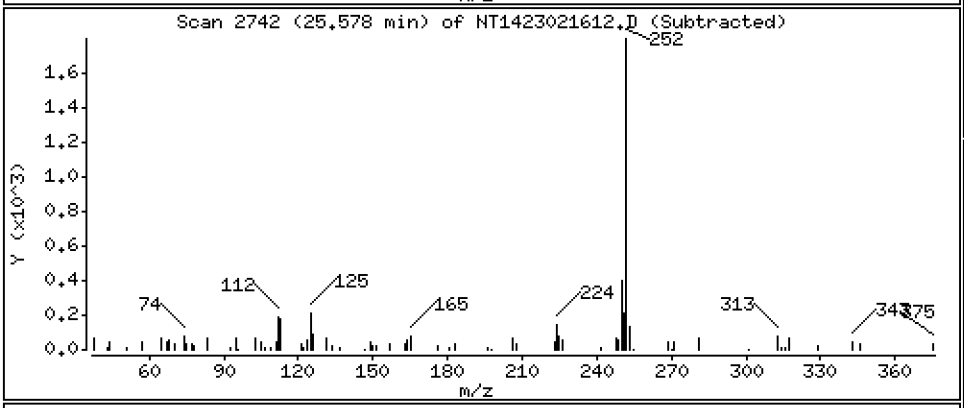
Column diameter: 0.25

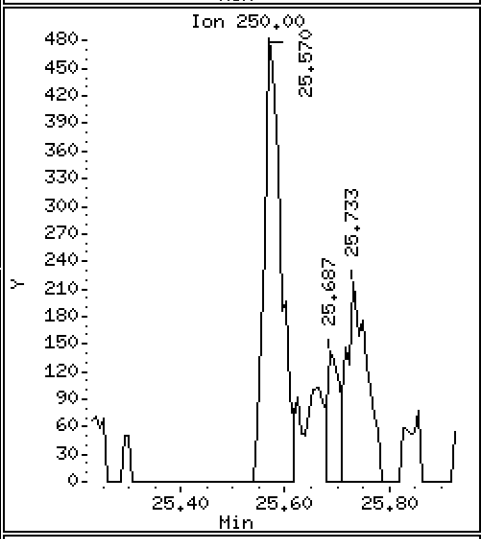
76 Benzo(a)pyrene

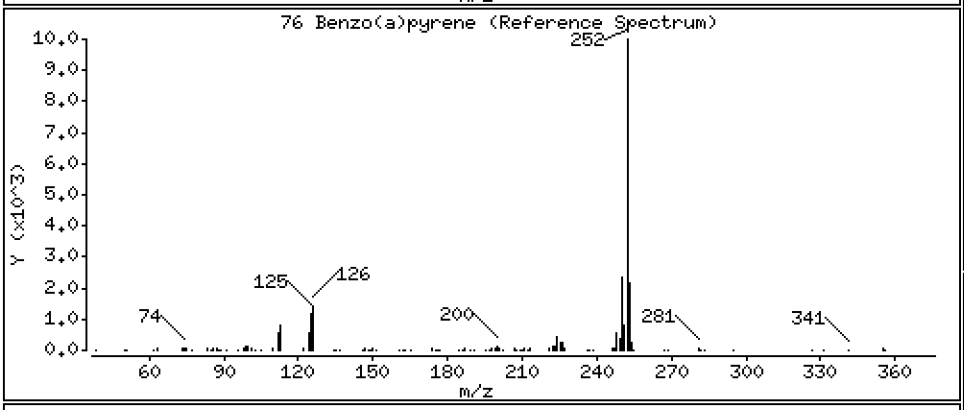
Concentration: 0.02343 ug/mL

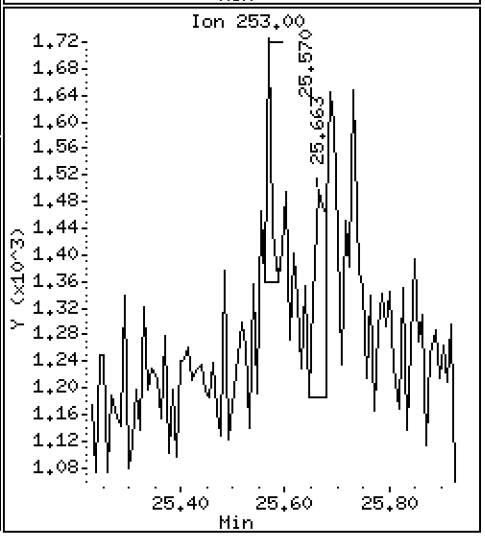


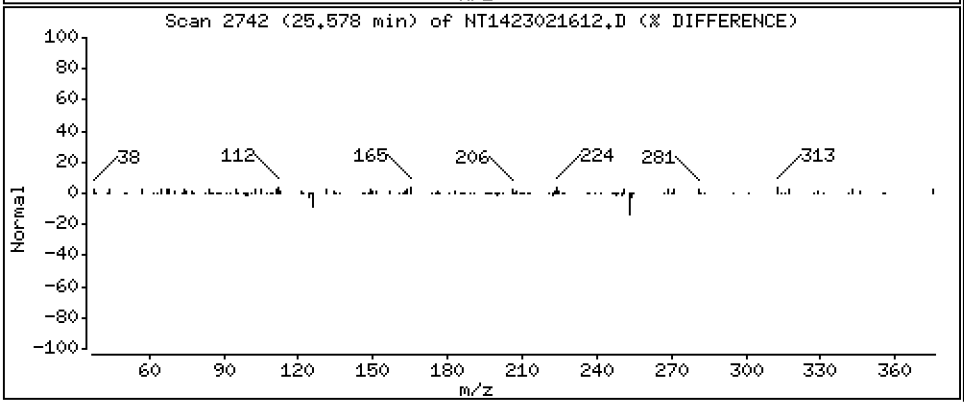












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

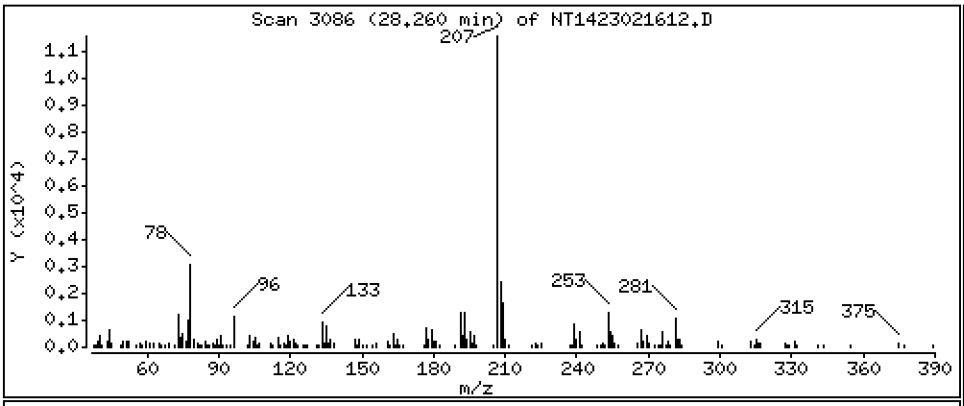
Operator: DSD

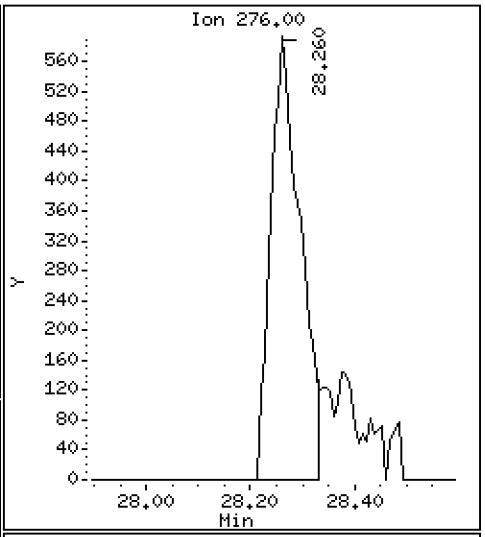
Column phase: ZB-5msi

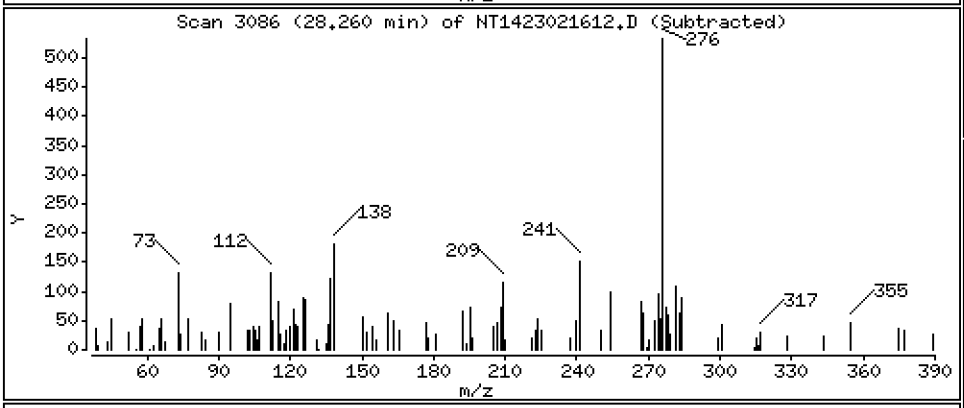
Column diameter: 0.25

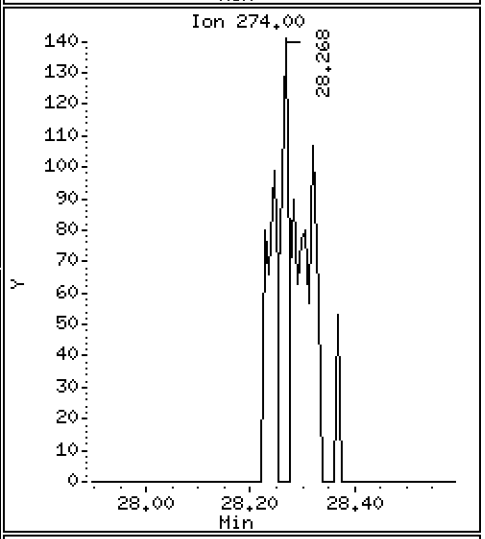
78 Indeno(1,2,3-cd)pyrene

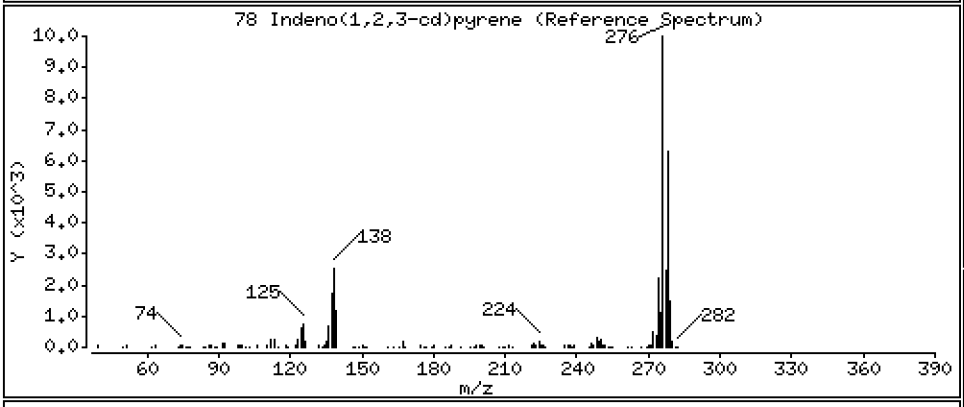
Concentration: 0.01631 ug/mL

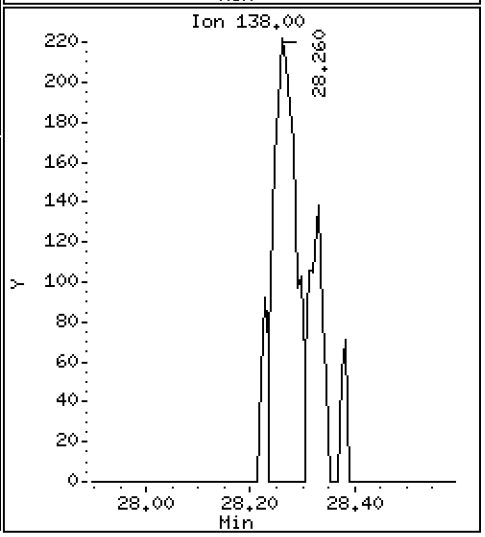


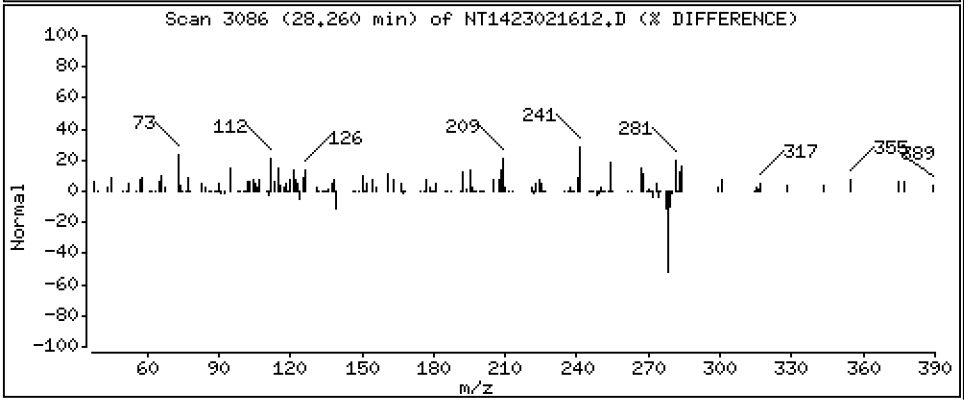












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

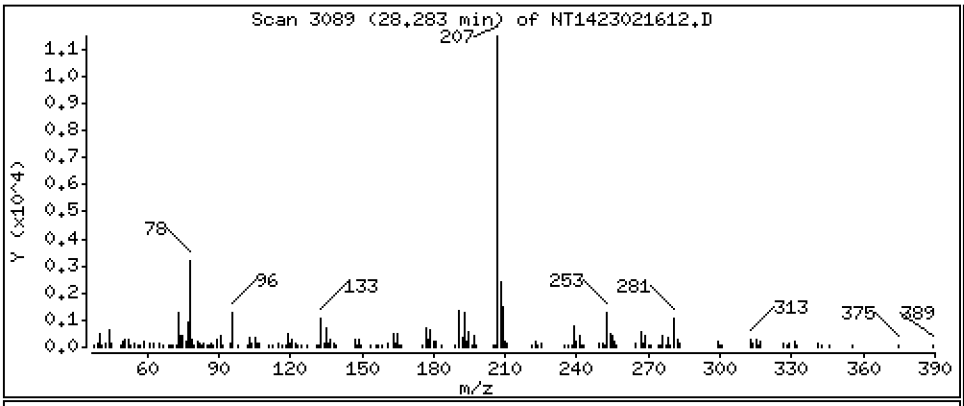
Operator: DSD

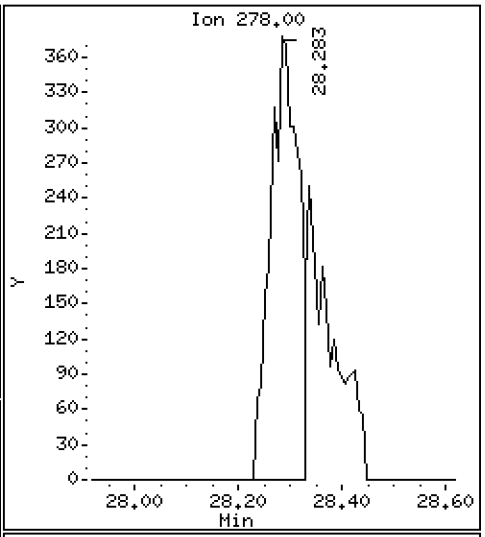
Column phase: ZB-5msi

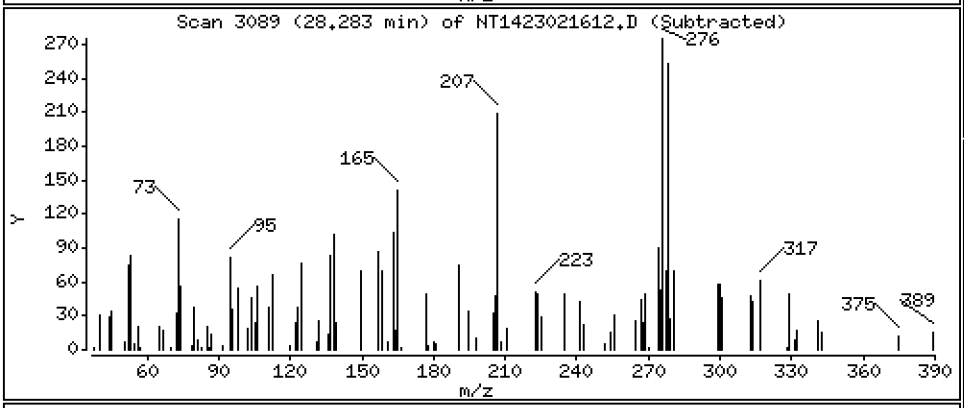
Column diameter: 0.25

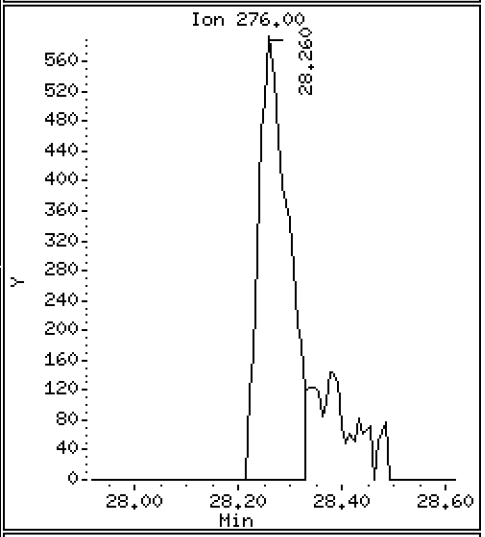
79 Dibenzo(a,h)anthracene

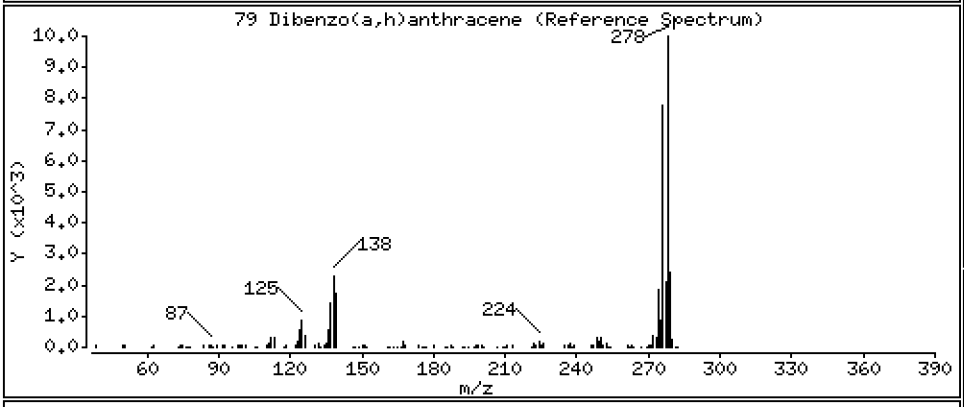
Concentration: 0.01227 ug/mL

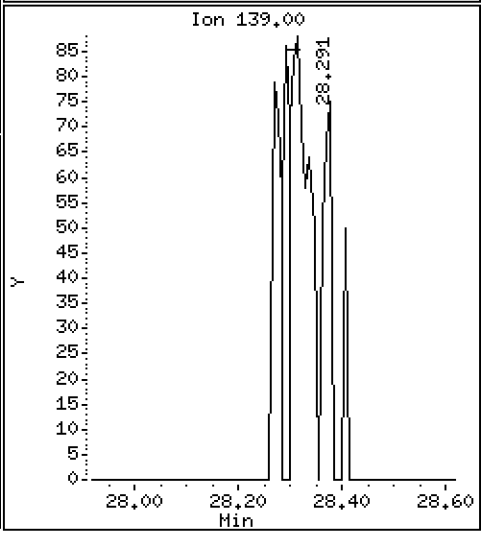


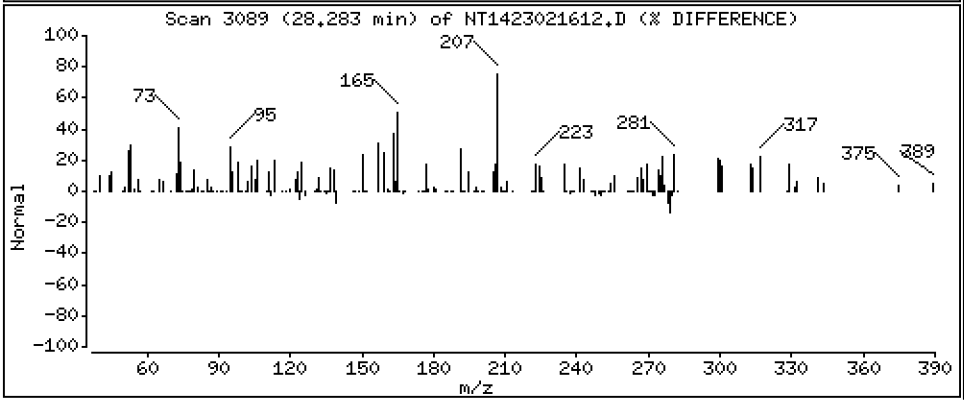












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021612.D

Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

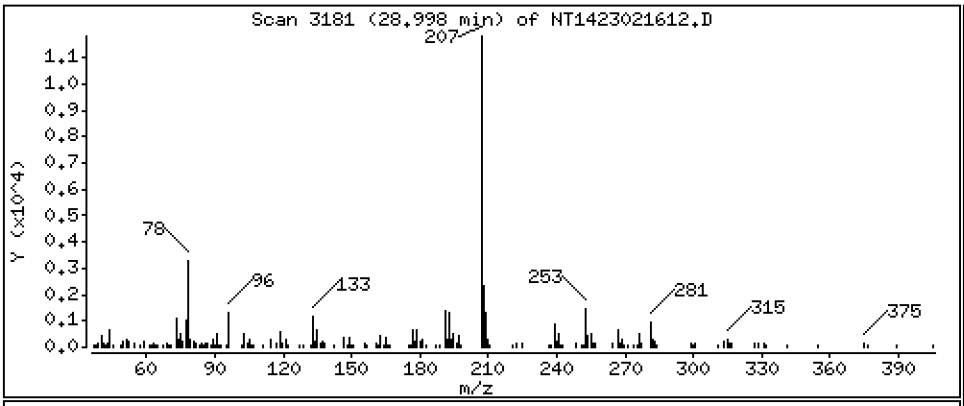
Operator: DSD

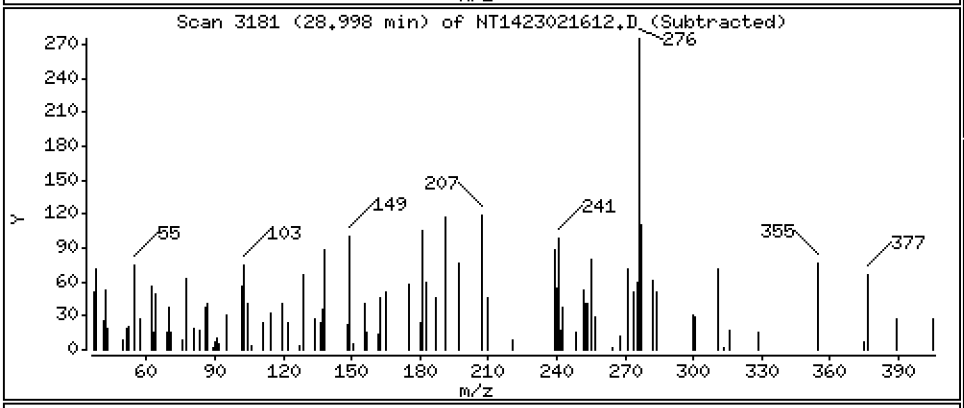
Column phase: ZB-5msi

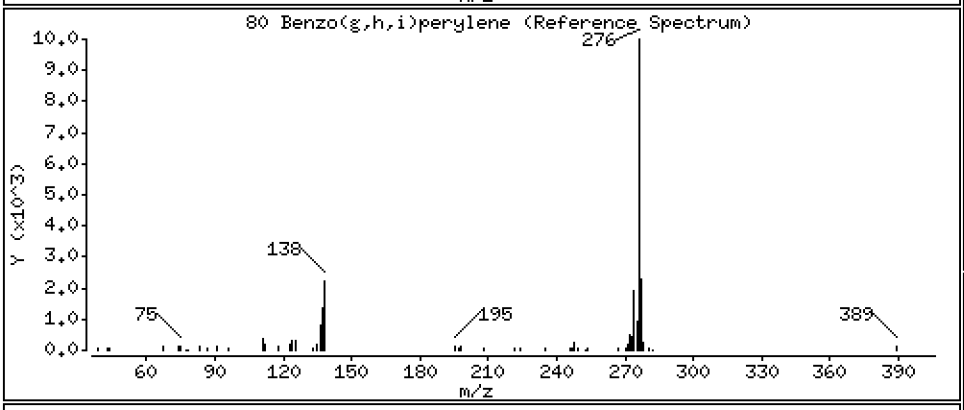
Column diameter: 0.25

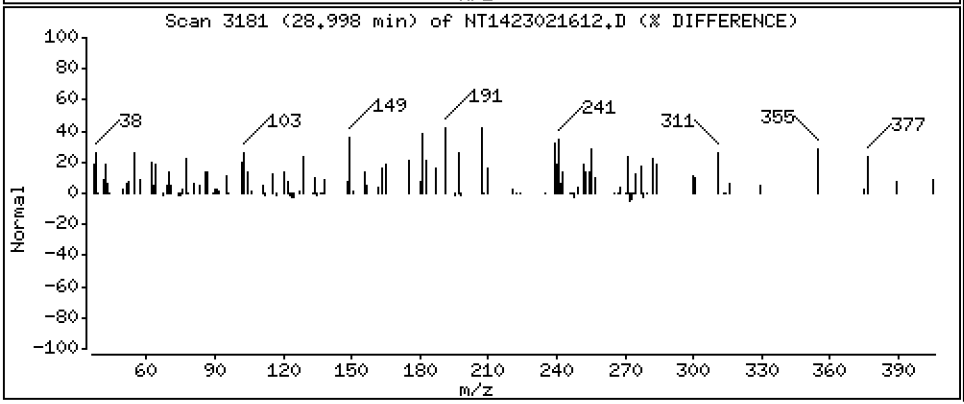
80 Benzo(g,h,i)perylene

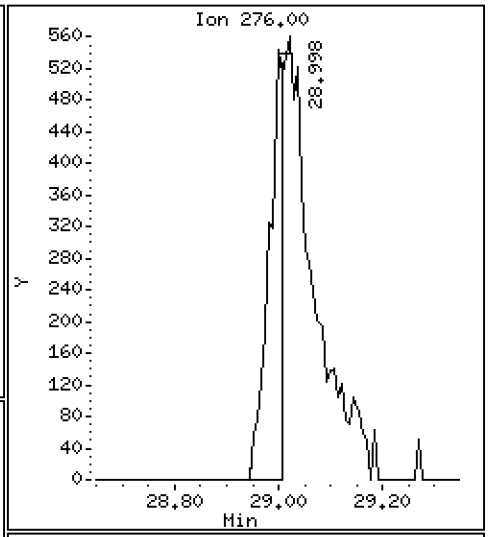
Concentration: 0.008544 ug/mL

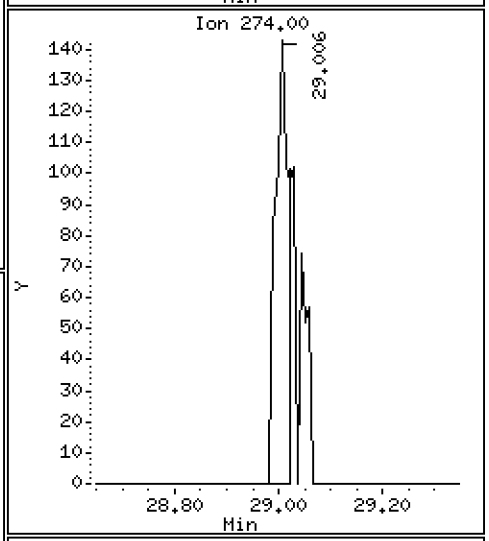


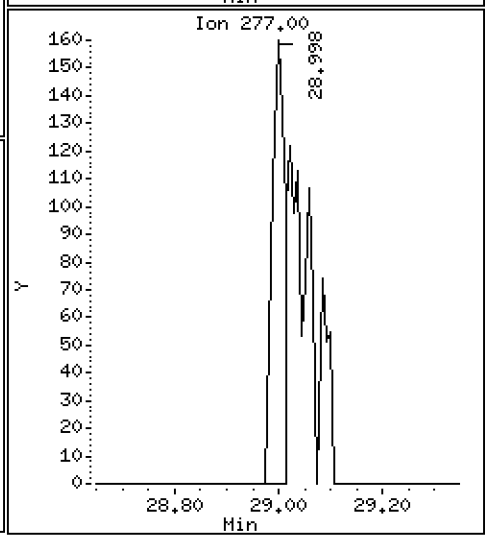












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

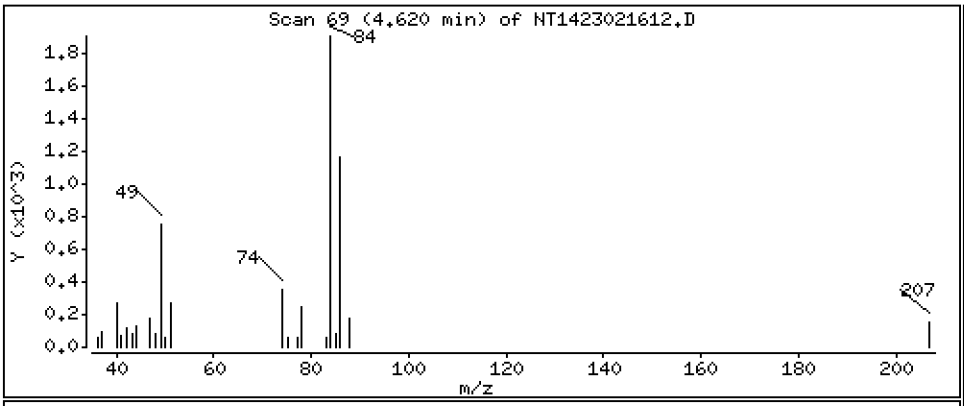
Operator: DSD

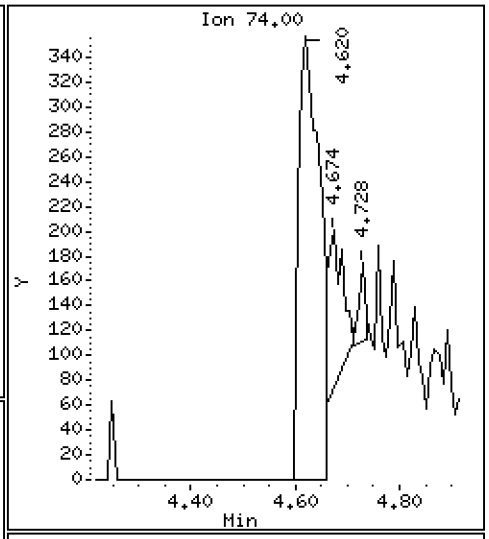
Column phase: ZB-5msi

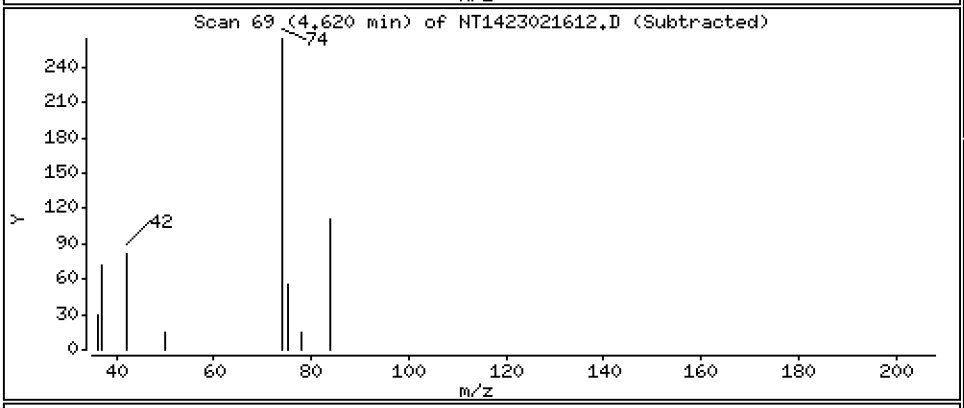
Column diameter: 0.25

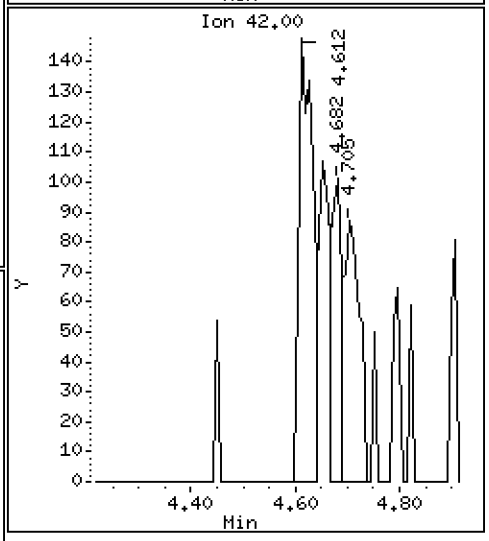
90 N-Nitrosodimethylamine

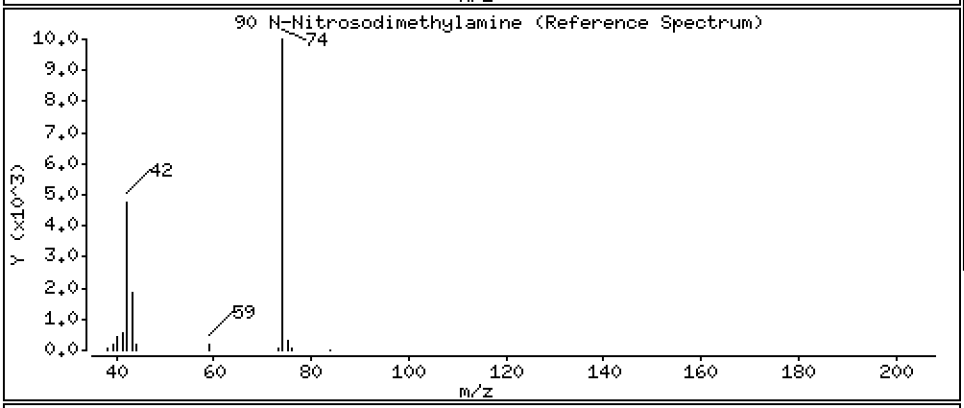
Concentration: 0.01496 ug/mL

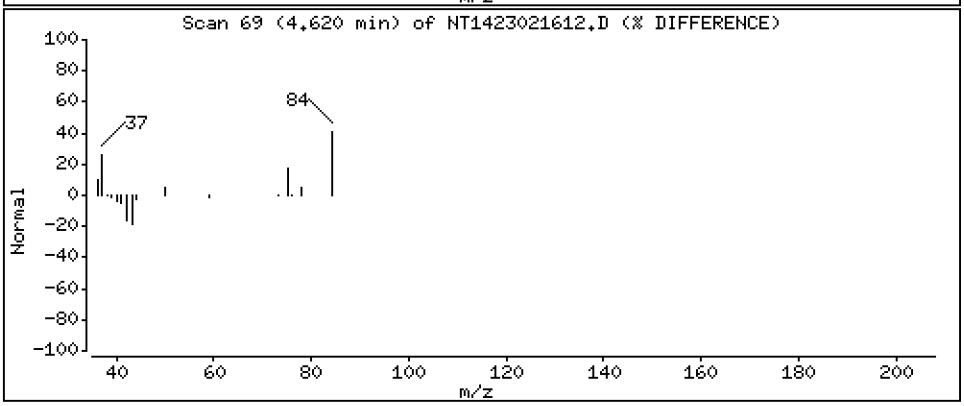












Date : 16-FEB-2023 20:42

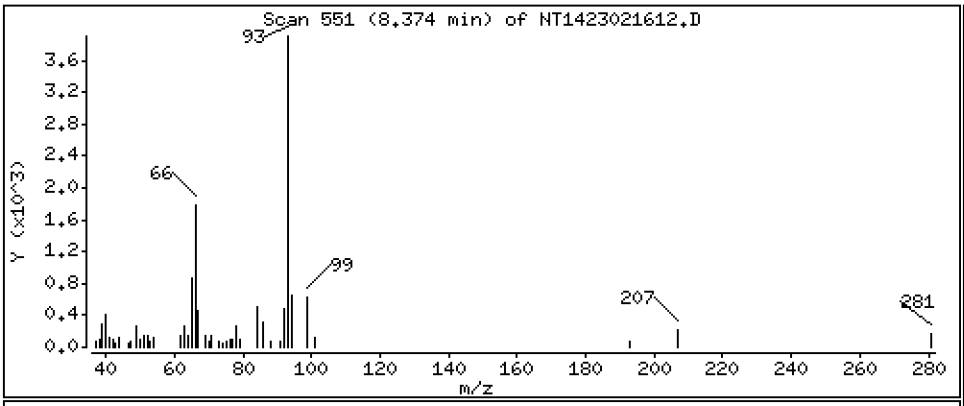
Client ID: Instrument: nt14.i

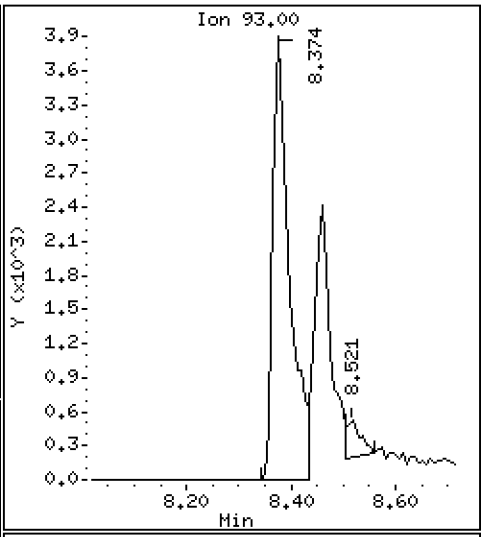
Sample Info: SIM 0.05

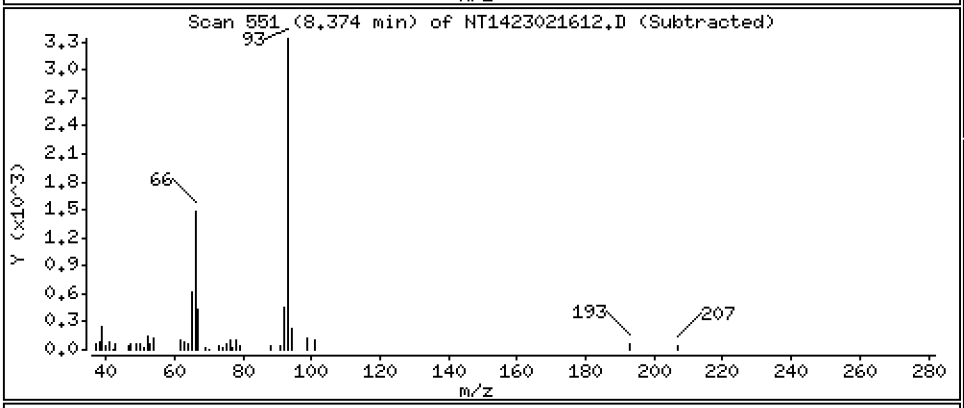
Operator: DSD

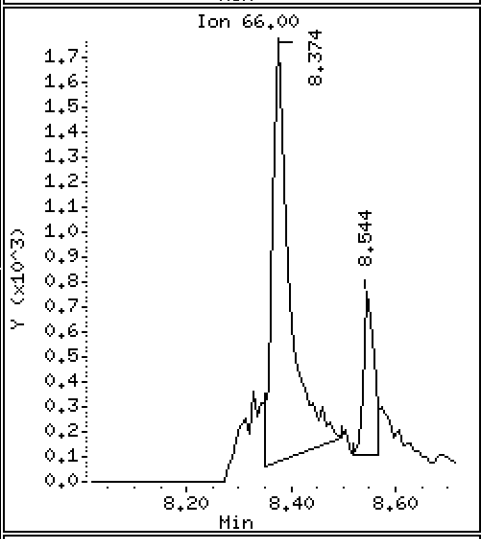
Column phase: ZB-5msi Column diameter: 0.25

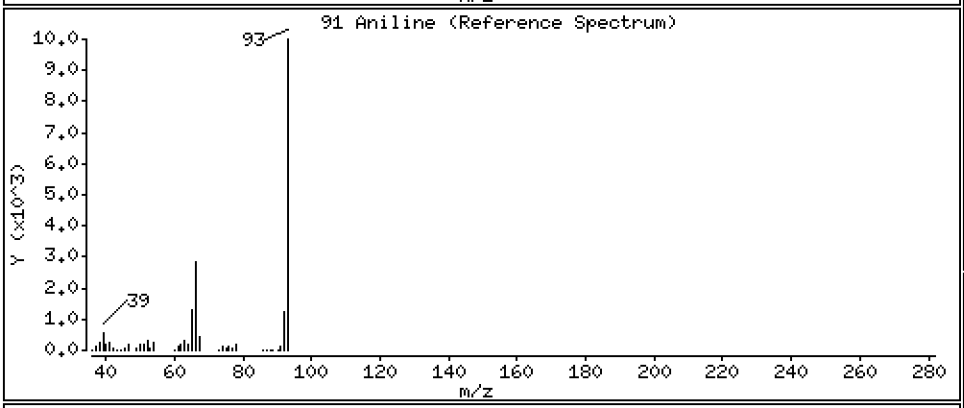
91 Aniline Concentration: 0.05519 ug/mL

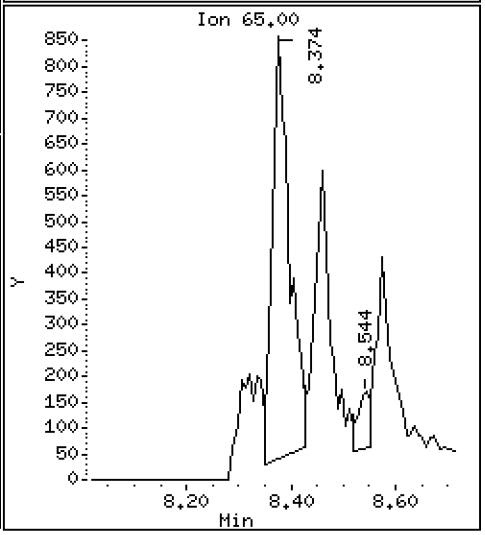


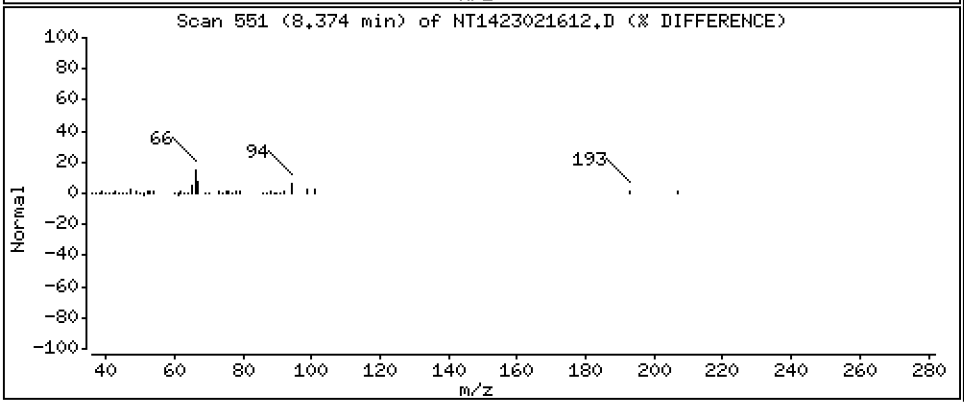












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021612.D

Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

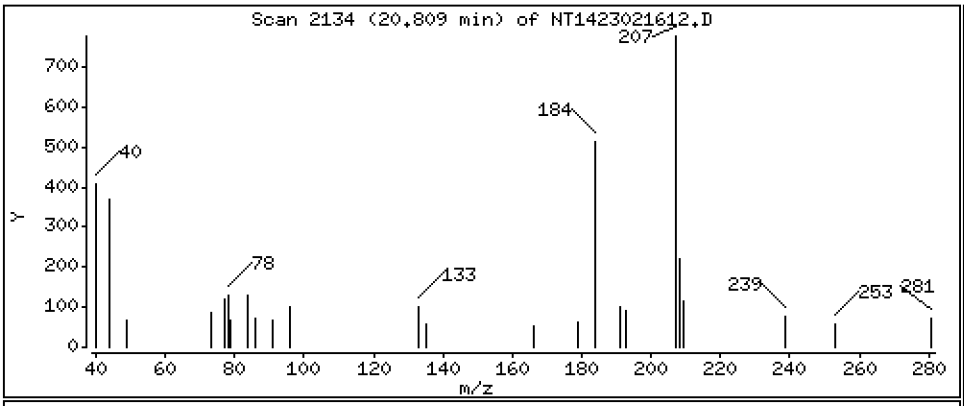
Operator: DSD

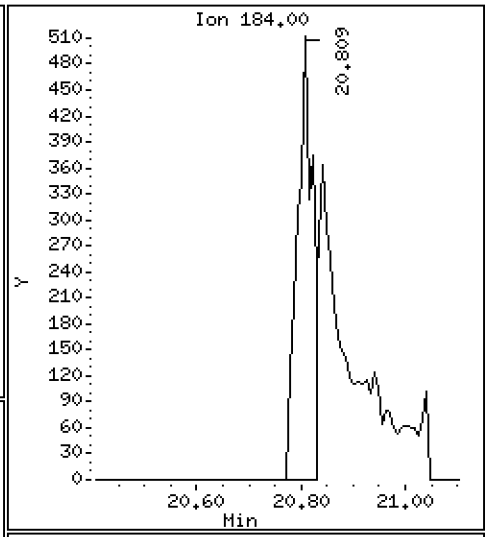
Column phase: ZB-5msi

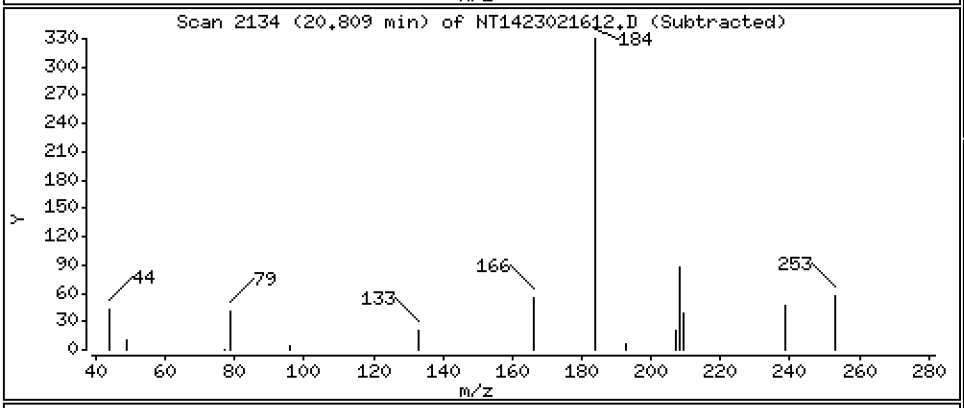
Column diameter: 0.25

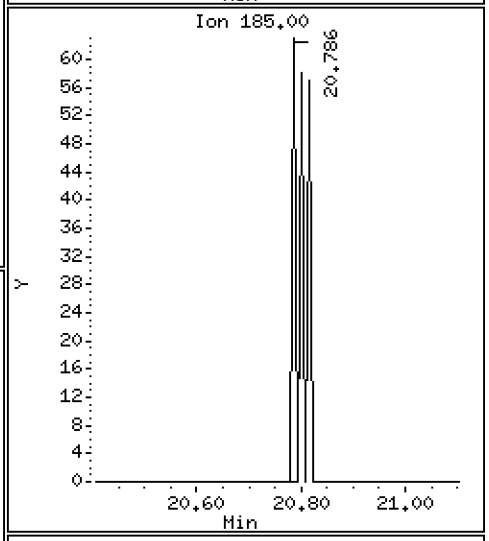
93 Benzidine

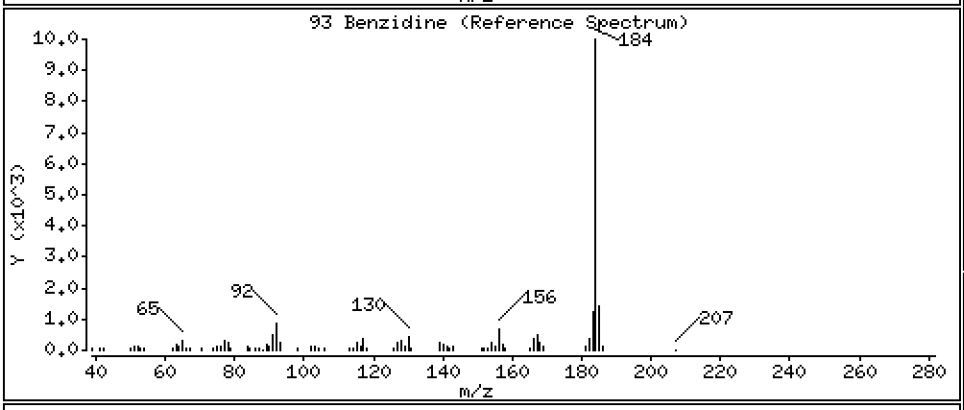
Concentration: 0.01080 ug/mL

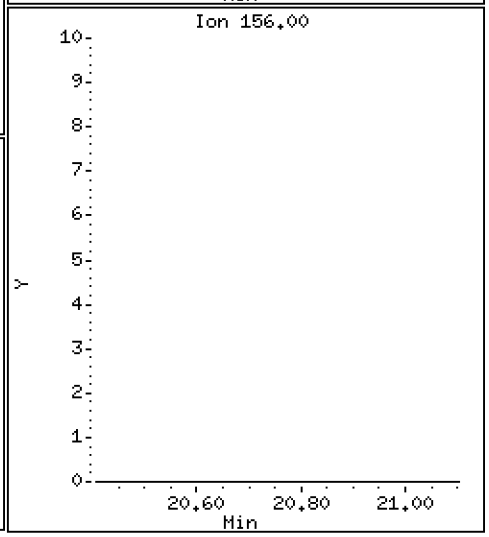


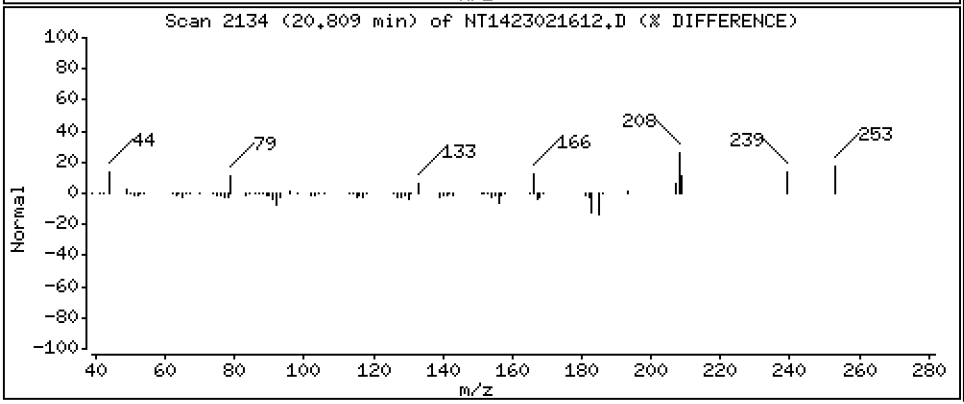












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Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

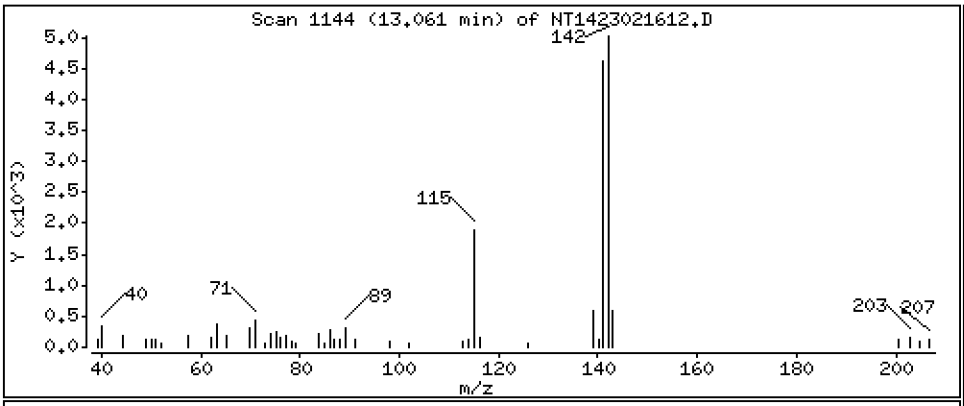
Operator: DSD

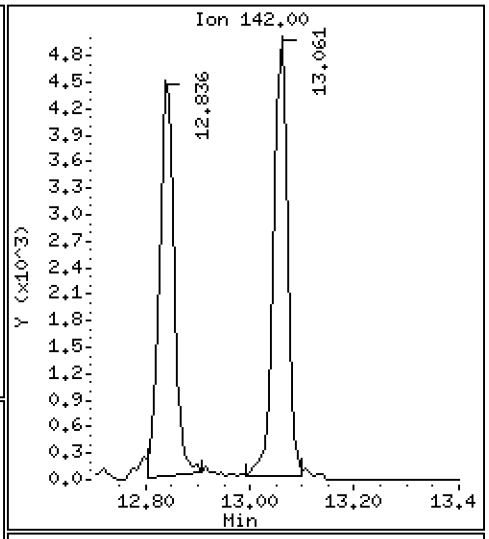
Column phase: ZB-5msi

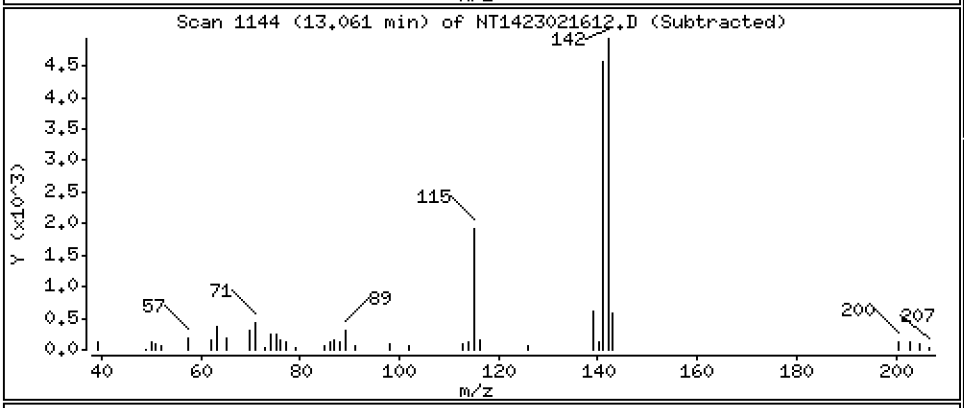
Column diameter: 0.25

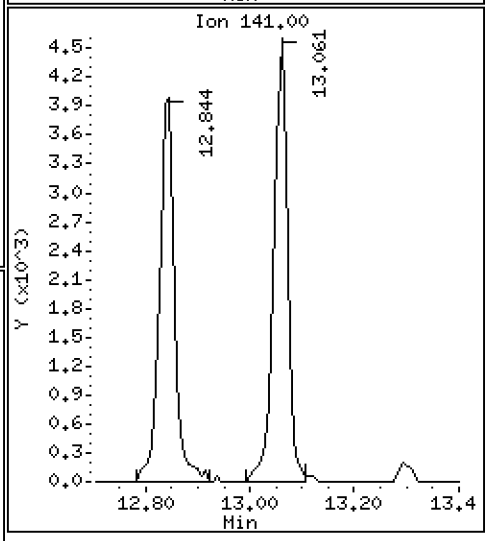
105 1-methylnaphthalene

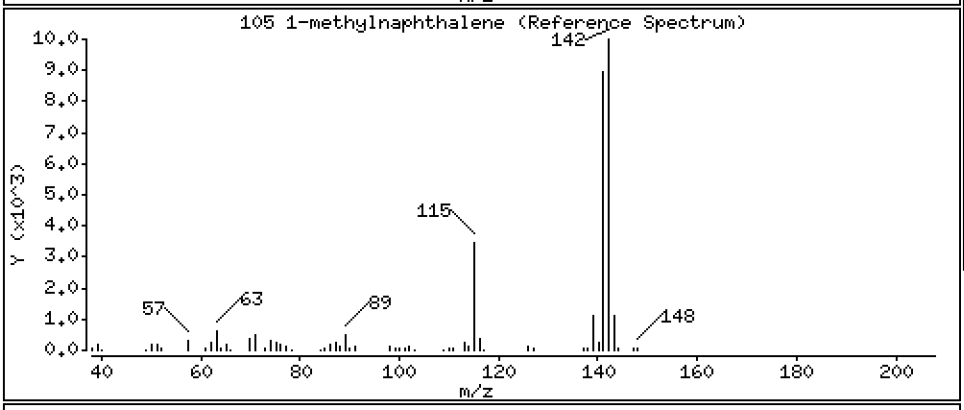
Concentration: 0.04316 ug/mL

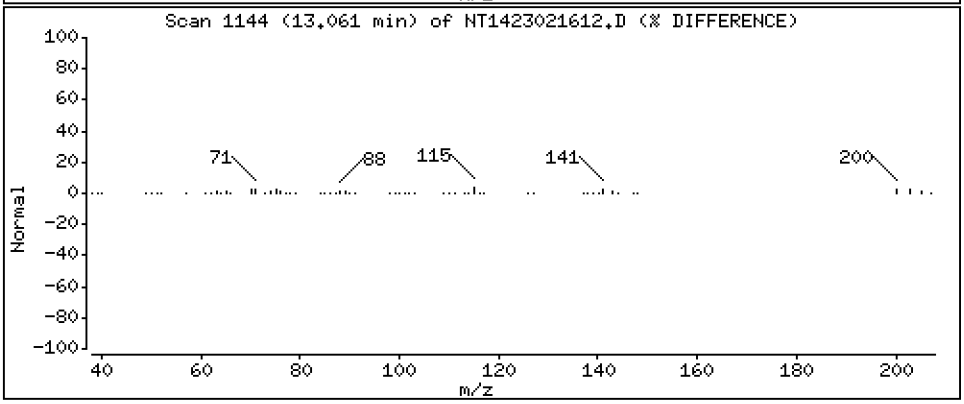












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021612.D

Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

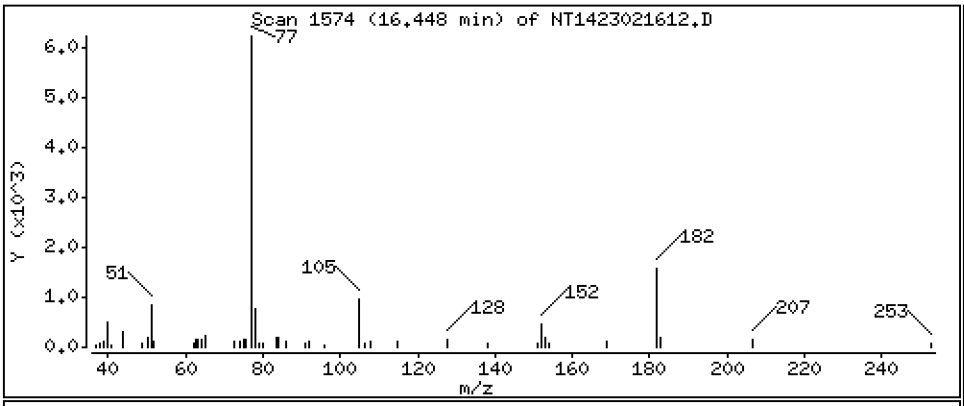
Operator: DSD

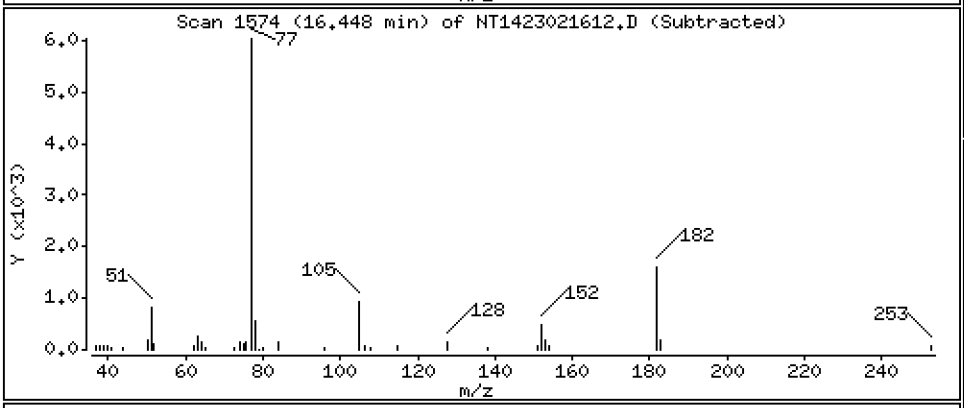
Column phase: ZB-5msi

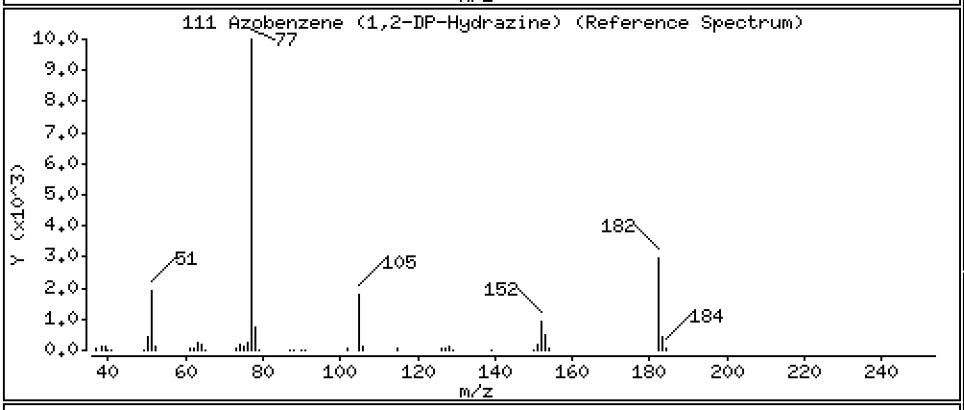
Column diameter: 0.25

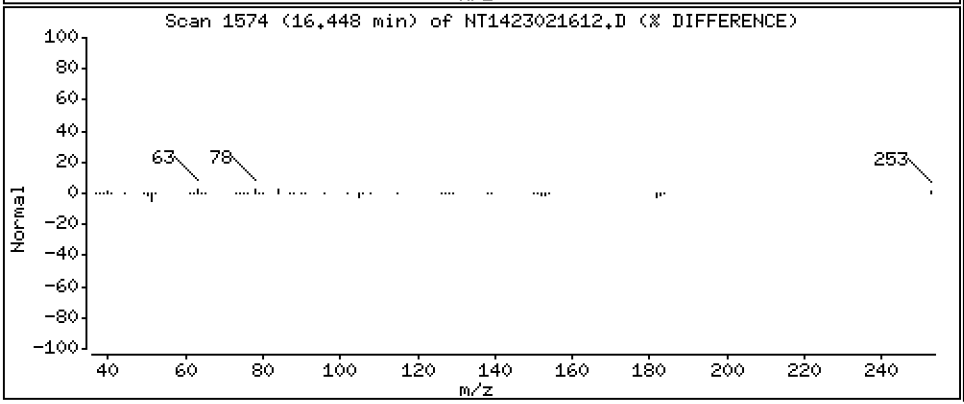
111 Azobenzene (1,2-DP-Hydrazine)

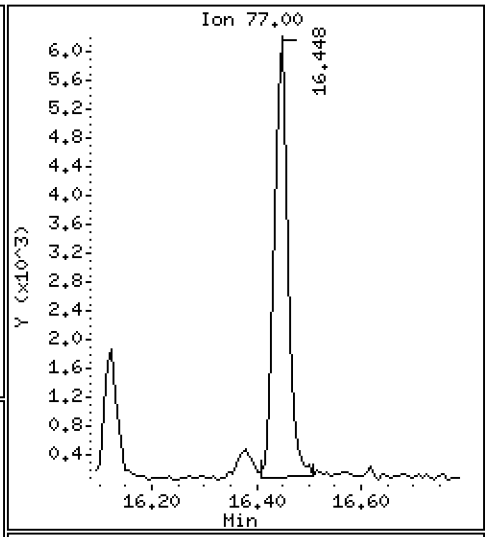
Concentration: 0.03113 ug/mL

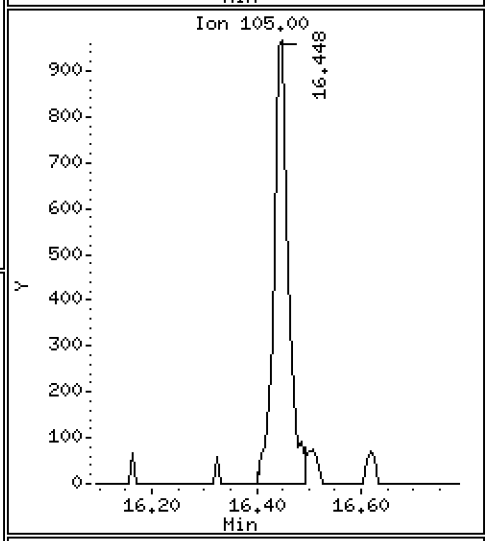


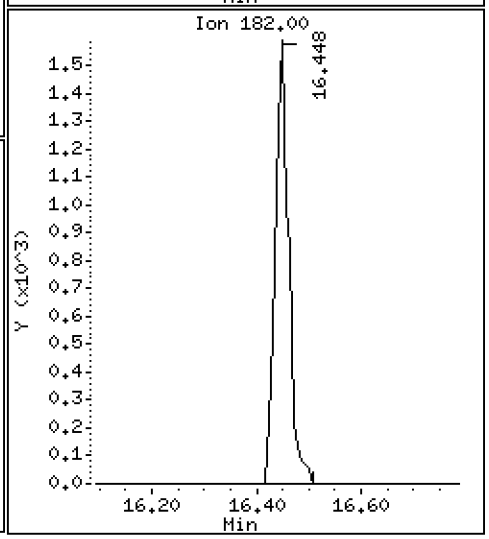












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021612.D

Date : 16-FEB-2023 20:42

Client ID:

Instrument: nt14.i

Sample Info: SIM 0.05

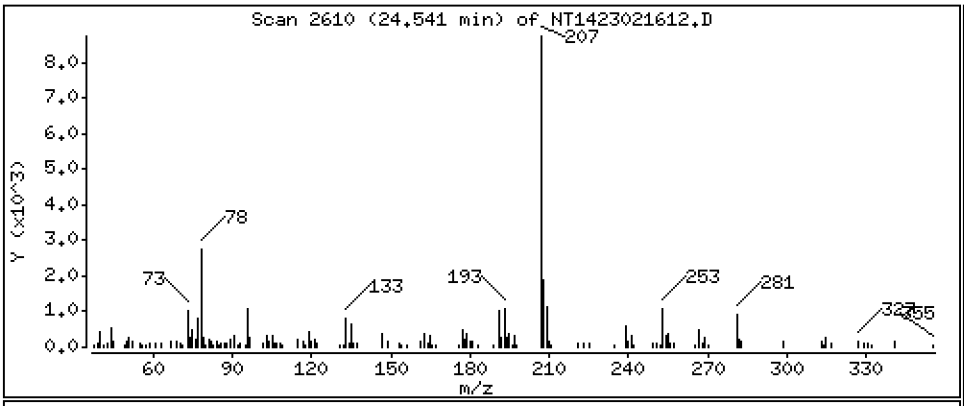
Operator: DSD

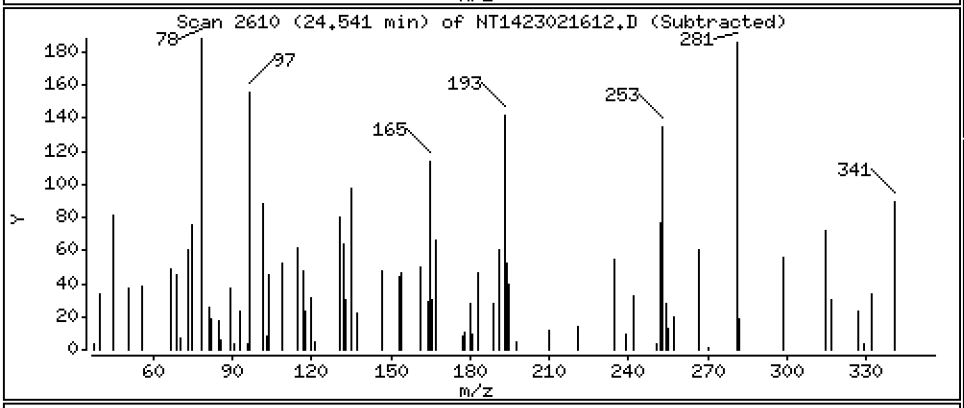
Column phase: ZB-5msi

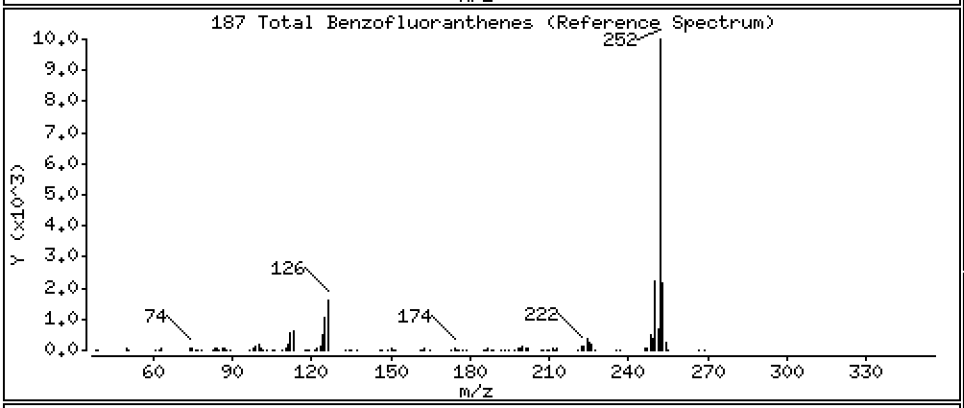
Column diameter: 0.25

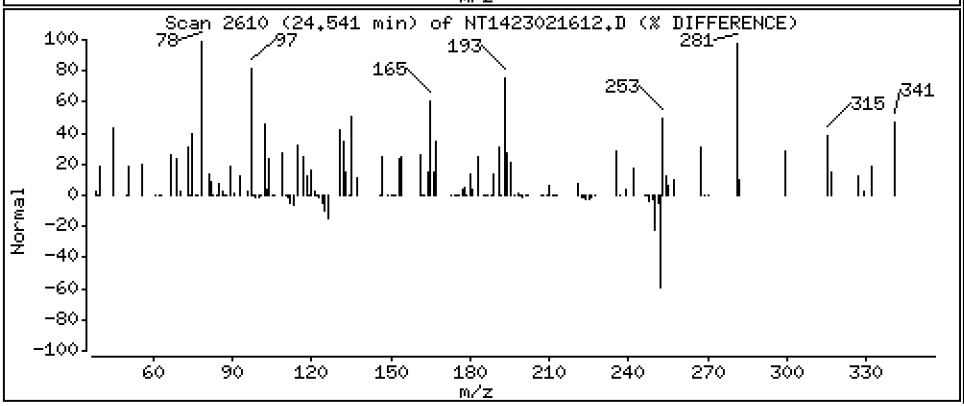
187 Total Benzofluoranthenes

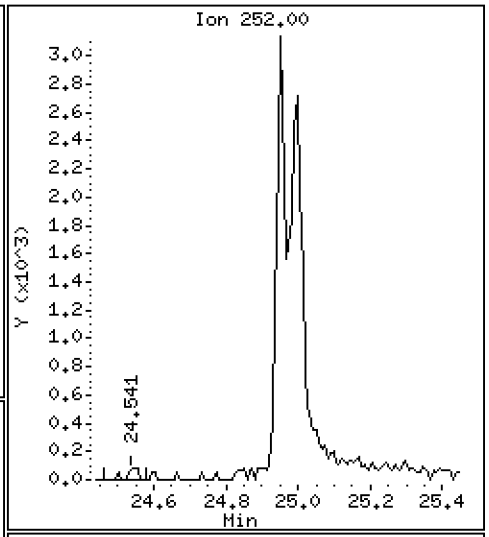
Concentration: 0.0008735 ug/mL

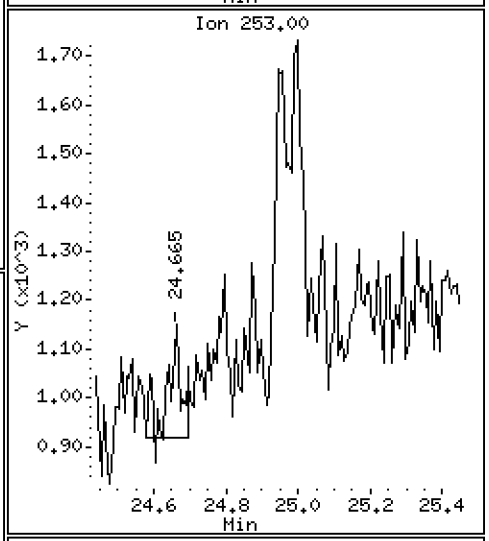


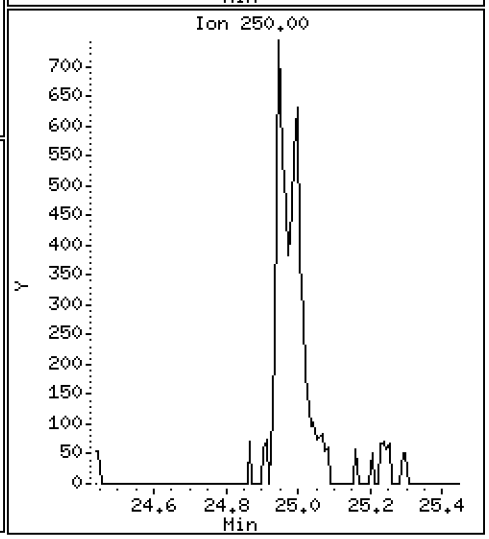












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

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Inj Date : 16-FEB-2023 20:42 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SIM 0.05
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Meth Date : 17-Feb-2023 15:05 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	Compound Not Detected.					
$	2 Phenol-d5	99	8.297	8.266	(0.932)	2228	0.01613	0.01613
	3 Phenol	94	8.320	8.289	(0.935)	1292	0.00883	0.008833
$	5 2-Chlorophenol-d4	132	8.552	8.536	(0.961)	3614	0.03666	0.03666
	4 Bis(2-Chloroethyl)ether	93	8.374	8.451	(0.941)	8635	0.07728	0.07728
	6 2-Chlorophenol	128	8.575	8.567	(0.963)	2320	0.02252	0.02252
	7 1,3-Dichlorobenzene	146	8.931	8.838	(1.003)	5234	0.04564	0.04564
*	8 1,4-Dichlorobenzene-d4	152	8.900	8.900	(1.000)	325804	4.00000	
	9 1,4-Dichlorobenzene	146	8.931	8.931	(1.003)	5234	0.04809	0.04809
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	9.288	9.288	(1.044)	4909	0.04512	0.04512
	11 Benzyl alcohol	108	8.900	9.202	(1.000)	1582	0.01927	0.01927
	14 2,2'-oxybis(1-Chloropropane)	121	9.482	9.482	(1.065)	1160	0.03727	0.03727
	13 2-Methylphenol	108	9.327	9.404	(1.048)	232	0.00227	0.002272
	17 Hexachloroethane	117	9.878	9.878	(1.110)	2080	0.04396	0.04396
	16 N-Nitroso-di-n-propylamine	70	9.761	9.738	(1.097)	1192	0.01282	0.01282
	15 4-Methylphenol	108	9.420	9.684	(1.058)	3273	0.03035	0.03035
$	18 Nitrobenzene-d5	82	10.010	10.002	(0.879)	5476	0.04019	0.04019
	19 Nitrobenzene	77	10.049	10.033	(0.882)	4450	0.03254	0.03254
	20 Isophorone	82	10.522	10.491	(0.924)	4585	0.02541	0.02541
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.739	10.724	(0.943)	6218	0.06022	0.06022
	23 Bis(2-Chloroethoxy)methane	93	10.956	10.925	(0.962)	3315	0.02825	0.02825
	24 Benzoic acid	105	11.397	10.879	(1.001)	1206	0.01862	0.01862
	25 2,4-Dichlorophenol	162	11.173	11.127	(0.981)	1042	0.01179	0.01179
	26 1,2,4-Trichlorobenzene	180	11.305	11.305	(0.993)	4820	0.04503	0.04503
*	27 Naphthalene-d8	136	11.389	11.389	(1.000)	1179450	4.00000	
	28 Naphthalene	128	11.428	11.428	(1.003)	13320	0.04580	0.04580
	29 4-Chloroaniline	127	11.606	11.575	(1.019)	4346	0.03498	0.03498
	30 Hexachlorobutadiene	225	11.799	11.799	(1.036)	2881	0.04366	0.04366
	31 4-Chloro-3-methylphenol	107	12.573	12.542	(1.104)	2925	0.03058	0.03058
	32 2-Methylnaphthalene	142	12.836	12.836	(1.127)	8783	0.04033	0.04033
	33 Hexachlorocyclopentadiene	237	13.300	13.301	(0.886)	3269	0.04822	0.04822
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.625	13.617	(0.907)	11124	0.04443	0.04443
	37	2-Chloronaphthalene	162	13.834	13.826	(0.921)	8657	0.04237	0.04237
	38	2-Nitroaniline	65	14.121	14.097	(0.940)	1596	0.02402	0.02402
	39	Dimethylphthalate	163	14.546	14.531	(0.969)	7432	0.03477	0.03477
	40	Acenaphthylene	152	14.701	14.701	(0.979)	12340	0.03959	0.03959
	41	2,6-Dinitrotoluene	165	14.678	14.670	(0.977)	2543	0.05056	0.05056
*	42	Acenaphthene-d10	164	15.018	15.018	(1.000)	699735	4.00000	
	43	3-Nitroaniline	138	15.018	14.957	(1.000)	810	0.01517	0.01517
	44	Acenaphthene	153	15.080	15.080	(1.004)	8413	0.04509	0.04509
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.412	15.405	(1.026)	13589	0.04435	0.04435
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	15.490	15.475	(1.031)	2019	0.02839	0.02839
	50	Diethylphthalate	149	15.992	15.984	(1.065)	8617	0.03033	0.03033
	49	Fluorene	166	16.124	16.124	(1.074)	12861	0.04014	0.04014
	51	4-Chlorophenyl-phenylether	204	16.124	16.116	(1.074)	6638	0.03875	0.03875
	52	4-Nitroaniline	138	16.386	16.224	(1.091)	306	0.00500	0.004996
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	16.378	16.370	(0.907)	6002	0.02942	0.02942
$	55	2,4,6-Tribromophenol	330	Compound Not Detected.					
	56	4-Bromophenyl-phenylether	248	17.126	17.118	(0.949)	3418	0.03762	0.03762
	57	Hexachlorobenzene	284	17.435	17.434	(0.966)	4063	0.04400	0.04400
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.054	18.054	(1.000)	1419663	4.00000	
	60	Phenanthrene	178	18.101	18.101	(1.003)	14996	0.04396	0.04396
	61	Anthracene	178	18.201	18.193	(1.008)	11452	0.03388	0.03388
	62	Carbazole	167	18.549	18.534	(1.027)	7614	0.02482	0.02482
	63	Di-n-butylphthalate	149	19.346	19.346	(1.072)	6698	0.01955	0.01955
	64	Fluoranthene	202	20.507	20.499	(0.887)	13196	0.03425	0.03425
	65	Pyrene	202	20.932	20.925	(0.905)	14925	0.03664	0.03664
$	66	Terphenyl-d14	244	21.219	21.219	(0.918)	11139	0.03851	0.03851
	67	Butylbenzylphthalate	149	22.148	22.148	(0.958)	1665	0.01240	0.01240
	68	Benzo(a)anthracene	228	23.092	23.092	(0.999)	11881	0.04158	0.04158
*	69	Chrysene-d12	240	23.123	23.123	(1.000)	892941	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.069	23.054	(0.998)	2656	0.03036	0.03036
	71	Chrysene	228	23.162	23.162	(1.002)	11642	0.04530	0.04530
	72	bis(2-Ethylhexyl)phthalate	149	23.178	23.178	(0.960)	2063	0.01298	0.01298
*	134	Di-n-octylphthalate-d4	153	24.153	24.153	(1.000)	922711	4.00000	
	73	Di-n-octylphthalate	149	24.161	24.161	(1.000)	10377	0.04810	0.04810
	74	Benzo(b)fluoranthene	252	24.950	24.943	(0.971)	5072	0.02738	0.02738
	75	Benzo(k)fluoranthene	252	24.950	24.989	(0.971)	5072	0.02562	0.02562
	76	Benzo(a)pyrene	252	25.578	25.578	(0.996)	4111	0.02343	0.02343
*	77	Perylene-d12	264	25.686	25.686	(1.000)	583873	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.260	28.244	(1.100)	2352	0.01631	0.01631
	79	Dibenzo(a,h)anthracene	278	28.283	28.267	(1.101)	1458	0.01227	0.01227
	80	Benzo(g,h,i)perylene	276	28.997	28.997	(1.129)	999	0.00854	0.008544
	90	N-Nitrosodimethylamine	74	4.620	4.566	(0.519)	1009	0.01496	0.01496
	91	Aniline	93	8.374	8.358	(0.941)	8635	0.05519	0.05519
	93	Benzidine	184	20.809	20.754	(0.900)	1125	0.01080	0.01080
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	13.060	13.053	(1.147)	8825	0.04316	0.04316
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.447	16.440	(1.095)	10750	0.03113	0.03113
	187	Total Benzofluoranthenes	252	24.540	24.943	(0.955)	158	9e-004	0.0008735
	120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021612.D
Lab Smp Id: SIM 0.05
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 17:06
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	375798	187899	751596	325804	-13.30
27 Naphthalene-d8	1378169	689085	2756338	1179450	-14.42
42 Acenaphthene-d10	847135	423568	1694270	699735	-17.40
59 Phenanthrene-d10	1675180	837590	3350360	1419663	-15.25
69 Chrysene-d12	1073562	536781	2147124	892941	-16.82
134 Di-n-octylphthala	1344129	672065	2688258	922711	-31.35
77 Perylene-d12	721978	360989	1443956	583873	-19.13

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.90	8.40	9.40	8.90	0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.07
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	0.00
59 Phenanthrene-d10	18.05	17.55	18.55	18.05	0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	0.00
134 Di-n-octylphthala	24.15	23.65	24.65	24.15	0.00
77 Perylene-d12	25.69	25.19	26.19	25.69	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021612.D

Lab ID: SIM 0.05
nt14.i, ABN.m, 16-FEB-2023 20:42

RT	CO-ELUTION COMPOUNDS
8.900	1,4-Dichlorobenzene-d4 and Benzyl alcohol
8.931	1,4-Dichlorobenzene and 1,3-Dichlorobenzene
15.019	Acenaphthene-d10 and 3-Nitroaniline
24.951	Benzo(k)fluoranthene and Benzo(b)fluoranthene

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.941	0.950	-0.0087	Bis(2-Chloroethyl)ether
1.003	0.993	0.0105	1,3-Dichlorobenzene
1.000	1.034	-0.0340	Benzyl alcohol
1.048	1.057	-0.0087	2-Methylphenol
1.058	1.088	-0.0297	4-Methylphenol
1.001	0.000	1.0007	Benzoic acid
1.091	1.080	0.0108	4-Nitroaniline
0.519	0.513	0.0061	N-Nitrosodimethylamine
0.955	0.971	-0.0157	Total Benzofluoranthenes

RRT check based on Ccal File: NT1423021610.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

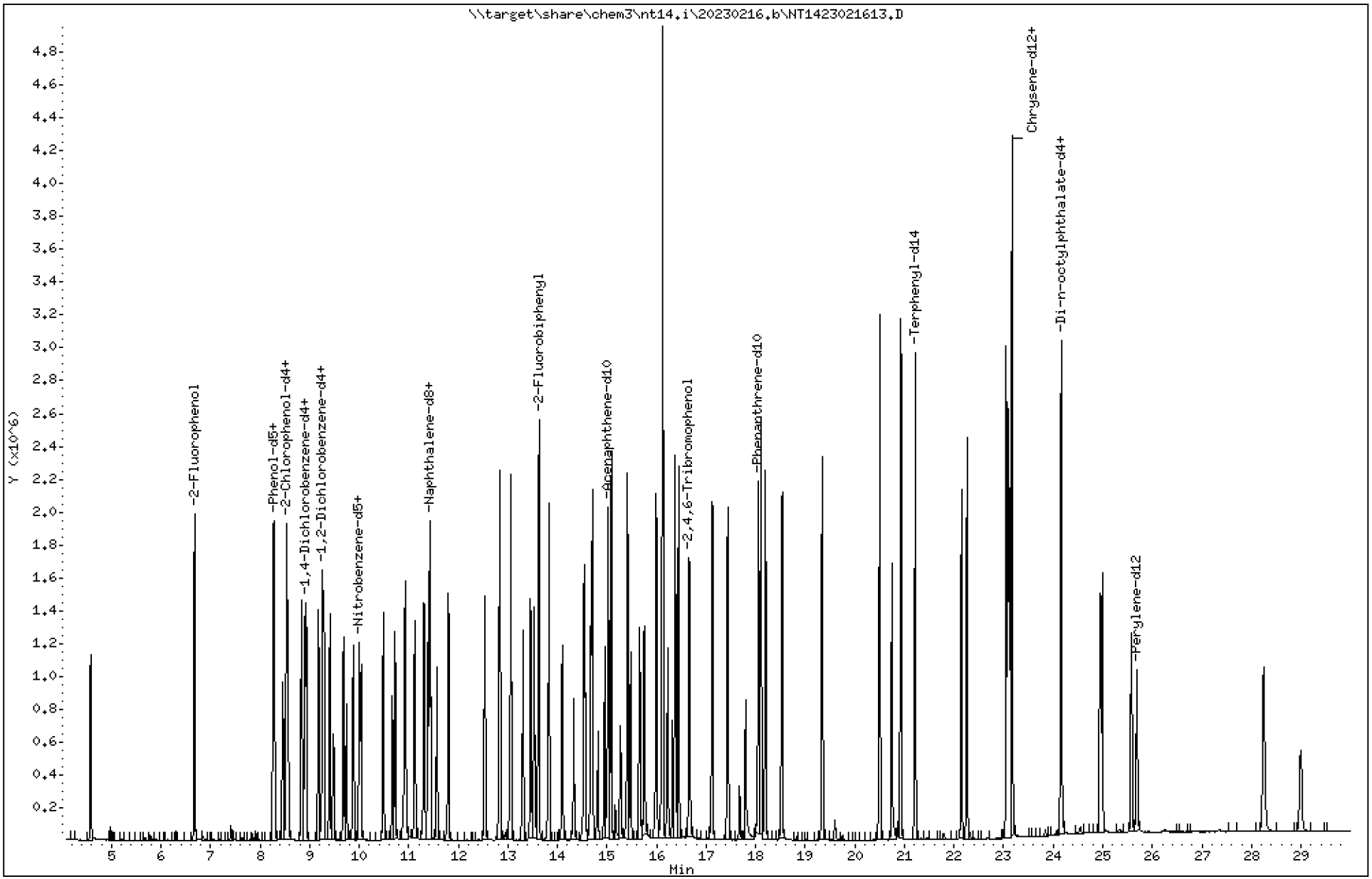
Sample Info: SLB0234-SCV1

Column phase: ZB-5msi

Instrument: nt14.i

Operator: DSD

Column diameter: 0.25



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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

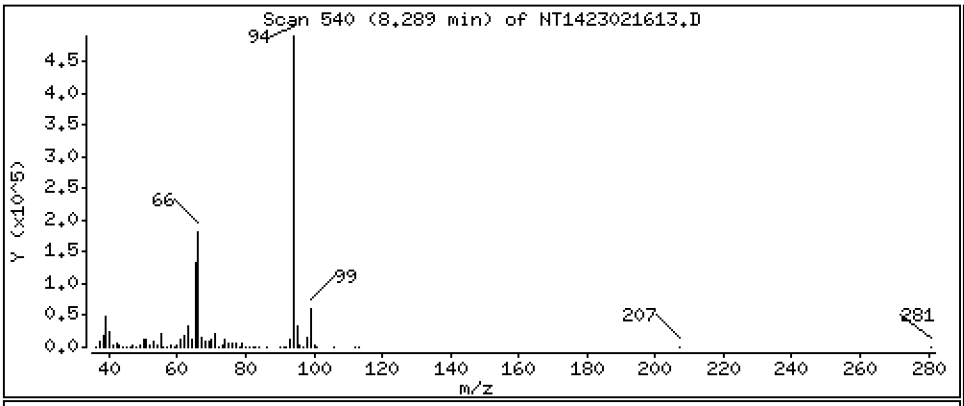
Operator: DSD

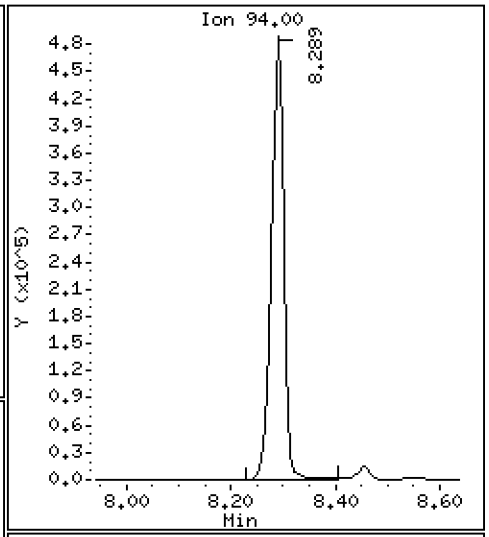
Column phase: ZB-5msi

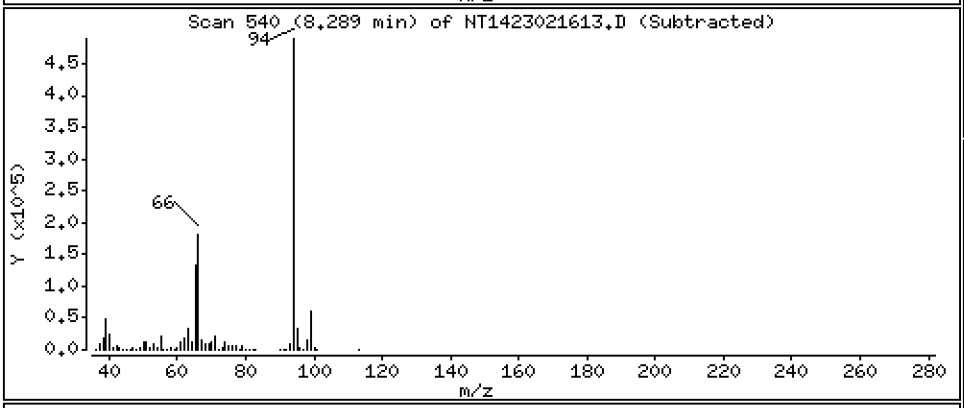
Column diameter: 0.25

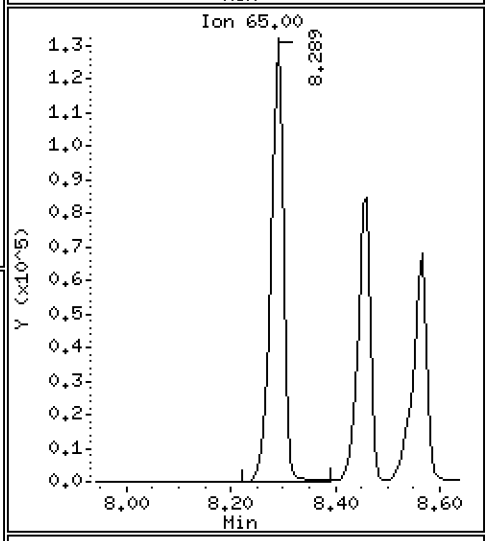
3 Phenol

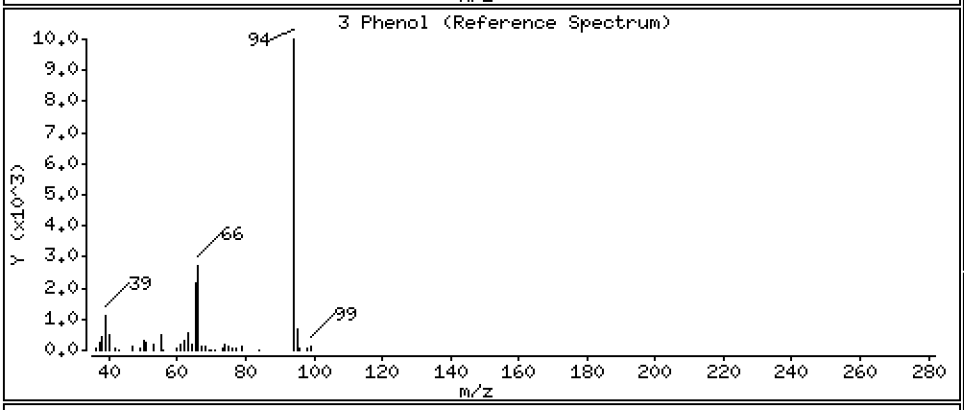
Concentration: 4.627 ug/mL

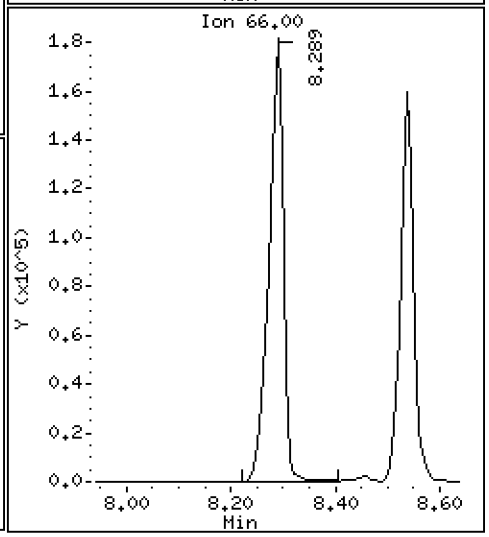


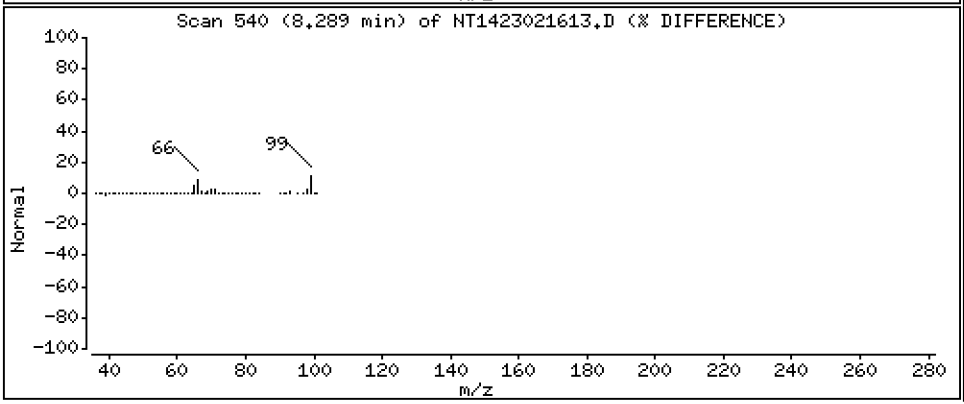












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

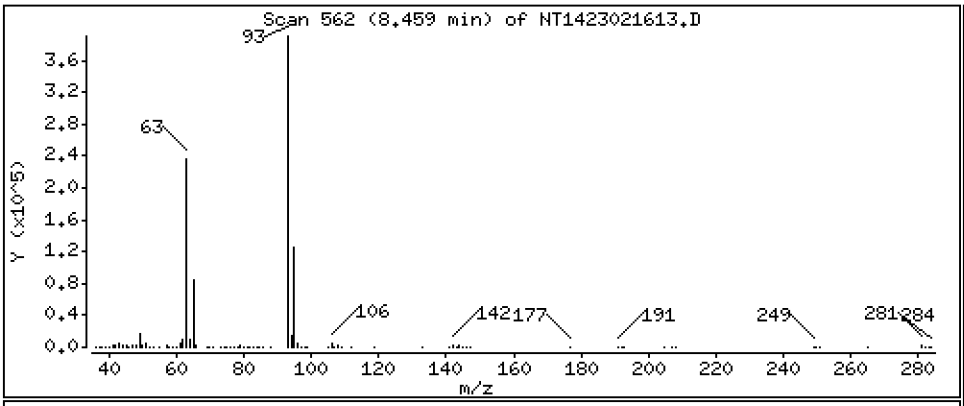
Operator: DSD

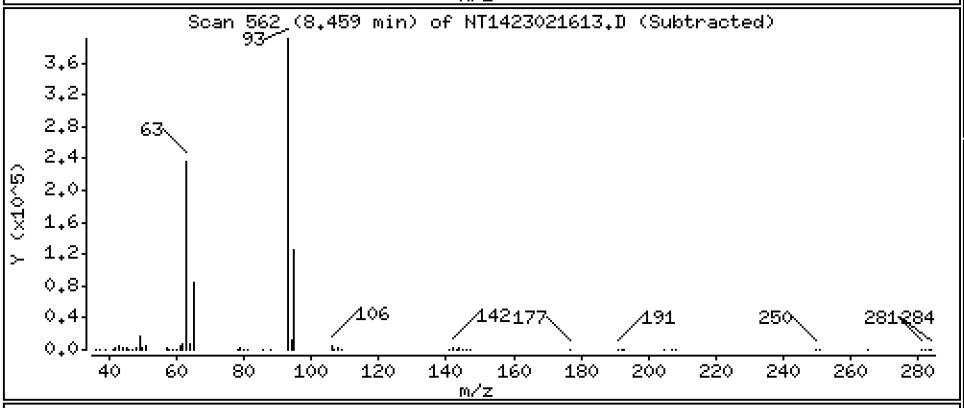
Column phase: ZB-5msi

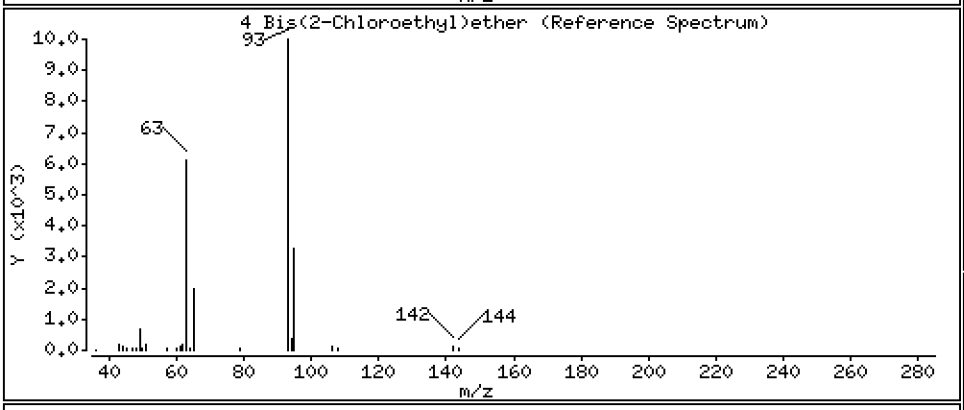
Column diameter: 0.25

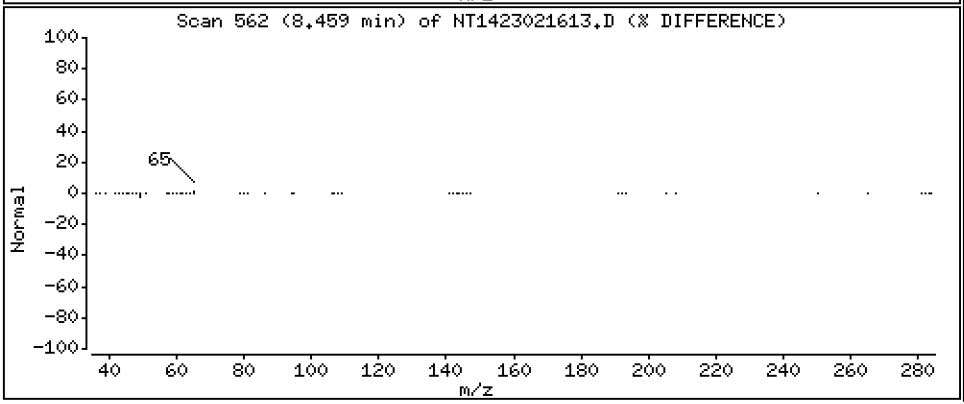
4 Bis(2-Chloroethyl)ether

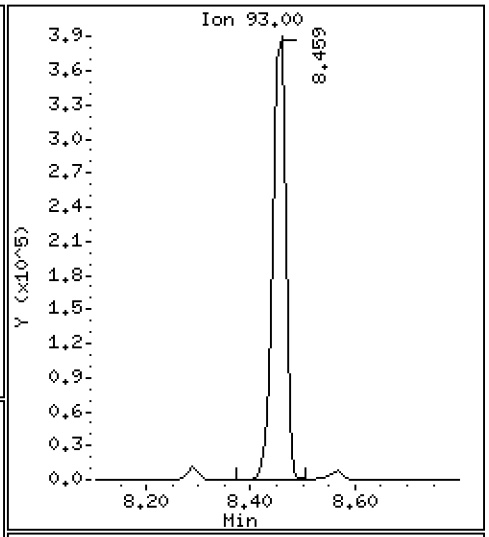
Concentration: 5.159 ug/mL

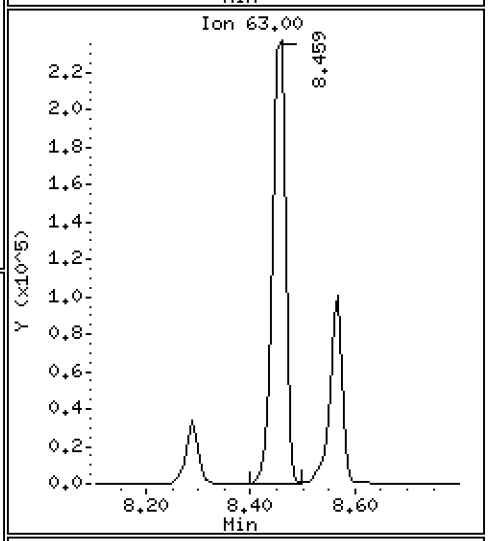


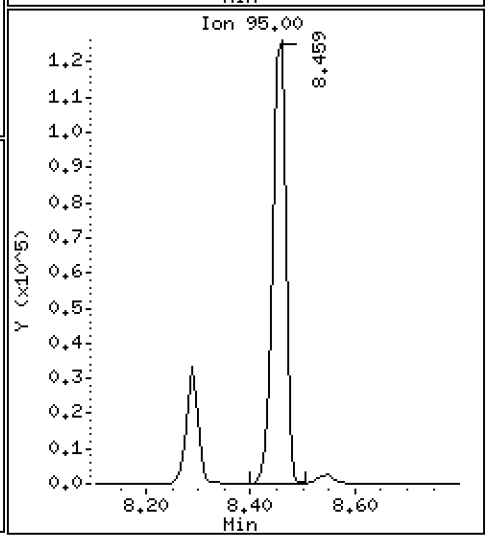












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

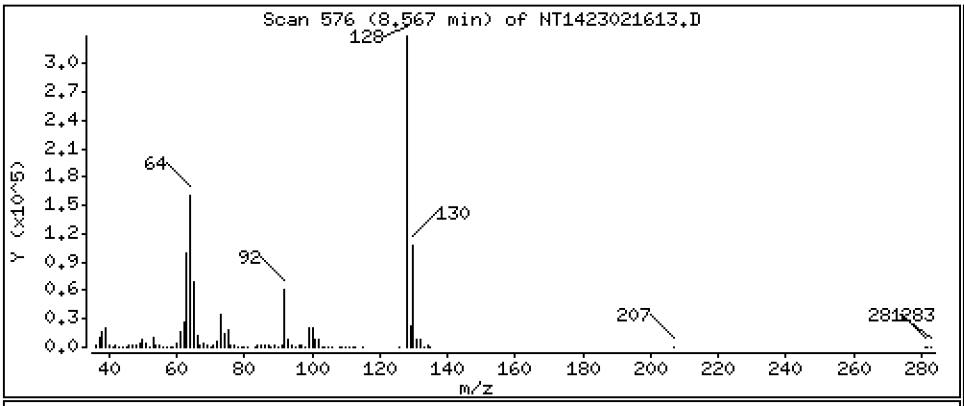
Operator: DSD

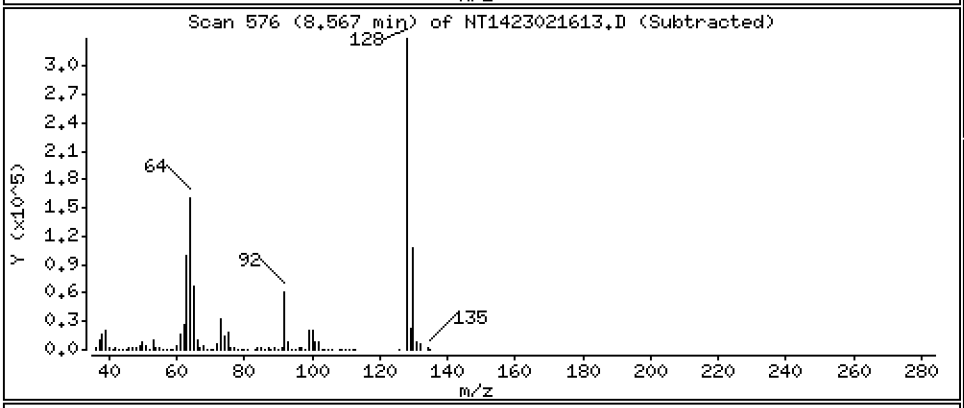
Column phase: ZB-5msi

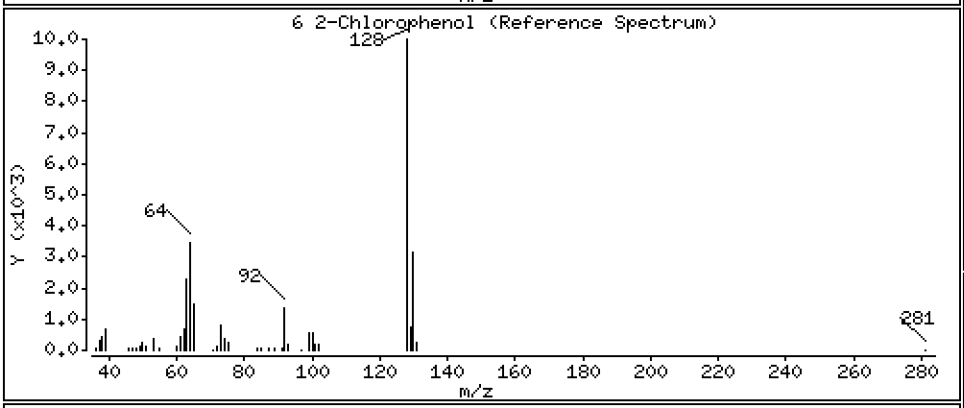
Column diameter: 0.25

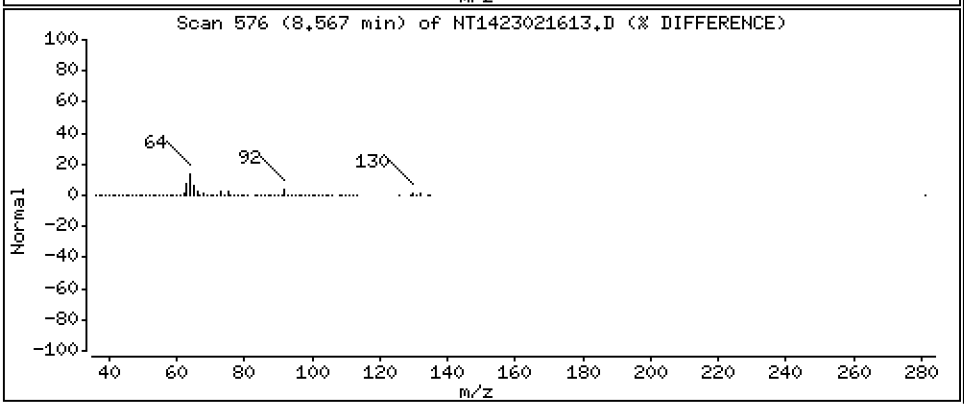
6 2-Chlorophenol

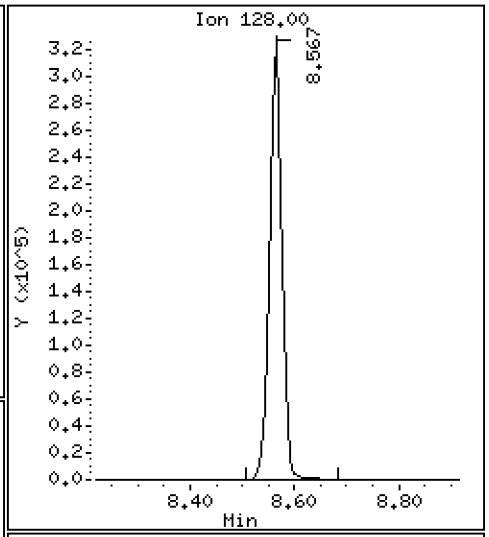
Concentration: 4.617 ug/mL

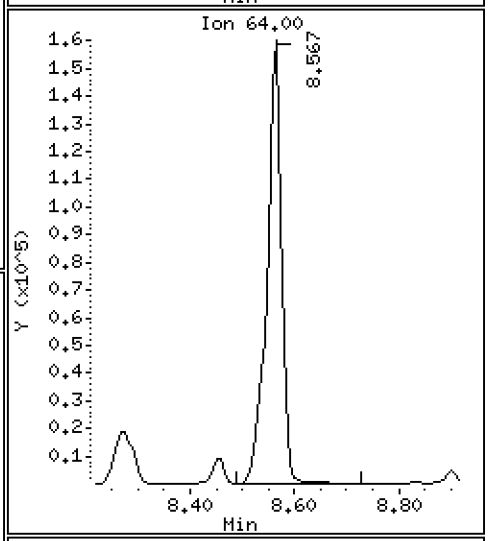


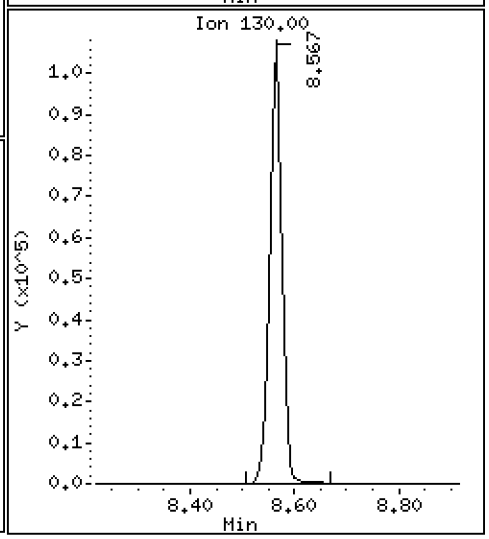












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

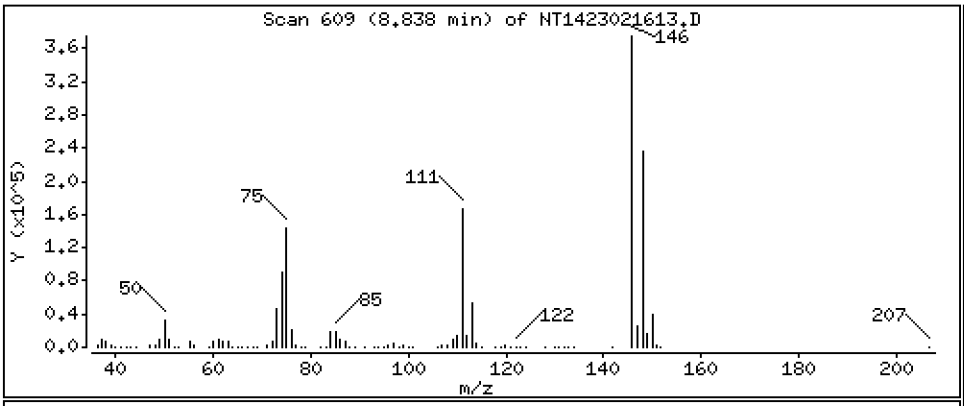
Operator: DSD

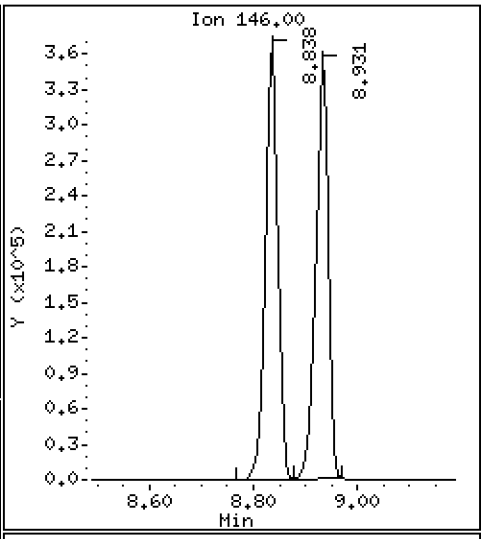
Column phase: ZB-5msi

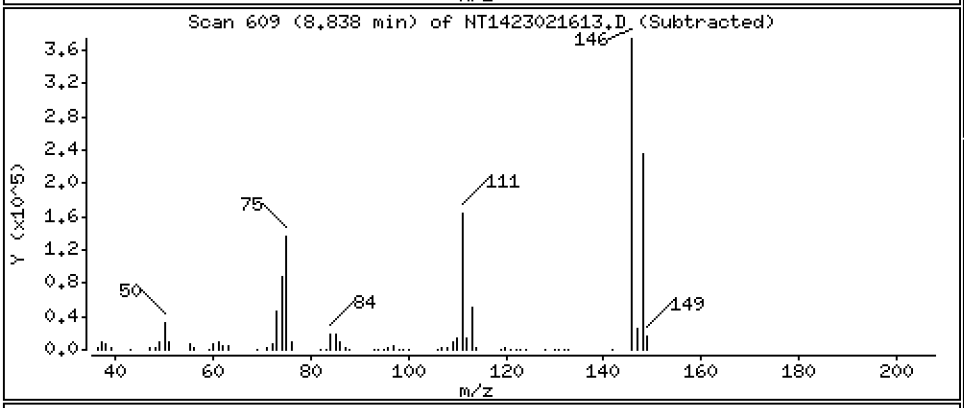
Column diameter: 0.25

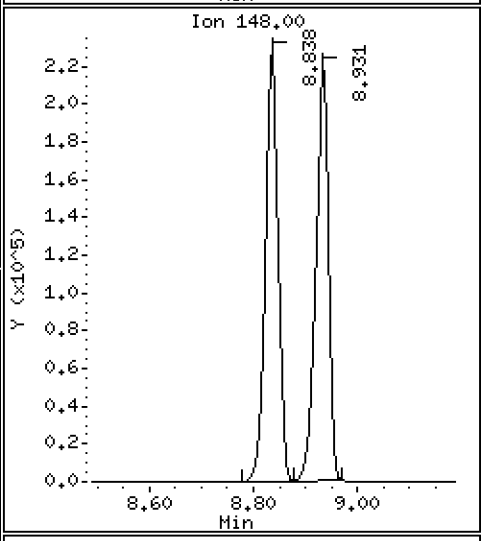
7 1,3-Dichlorobenzene

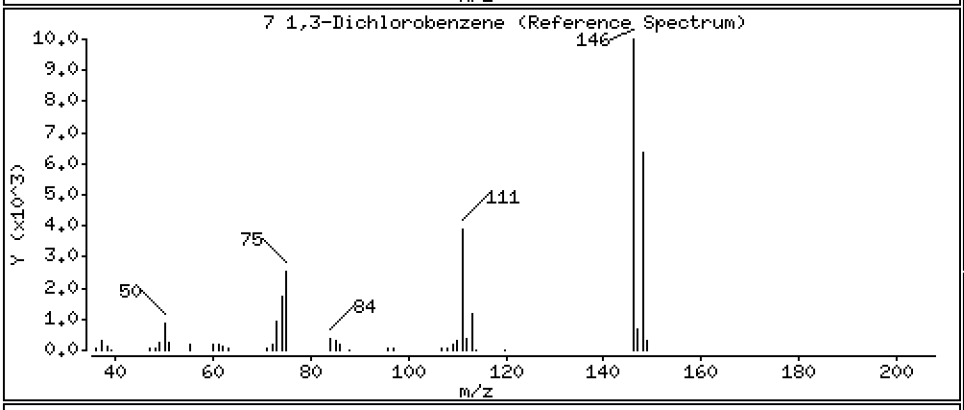
Concentration: 4.770 ug/mL

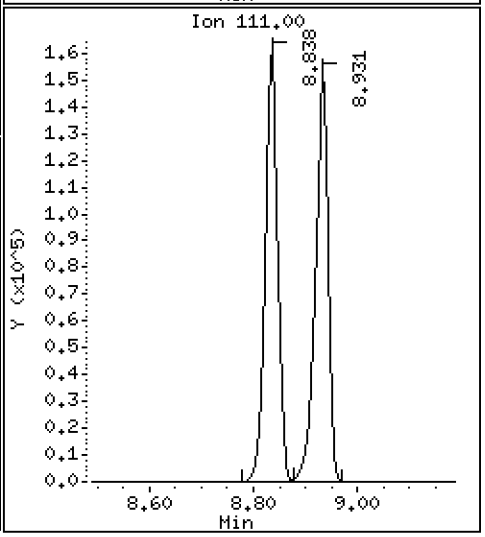


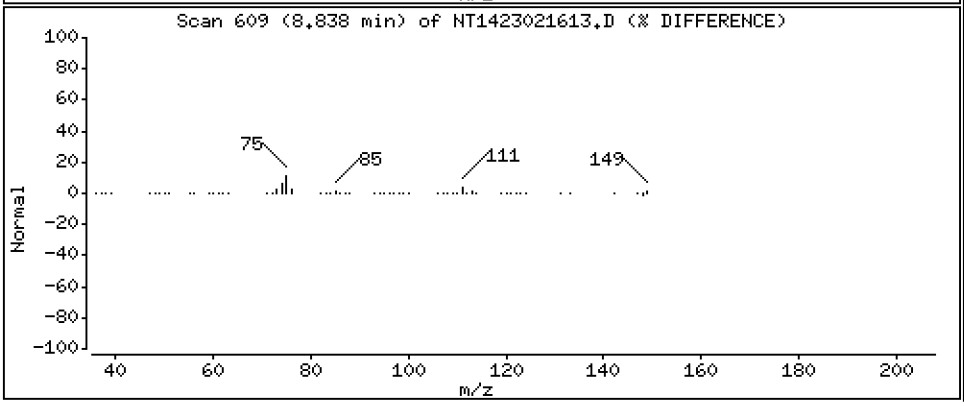












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

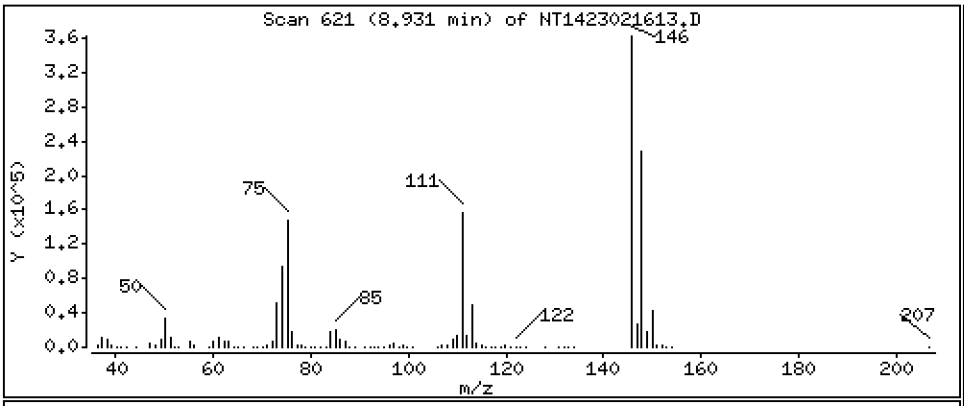
Operator: DSD

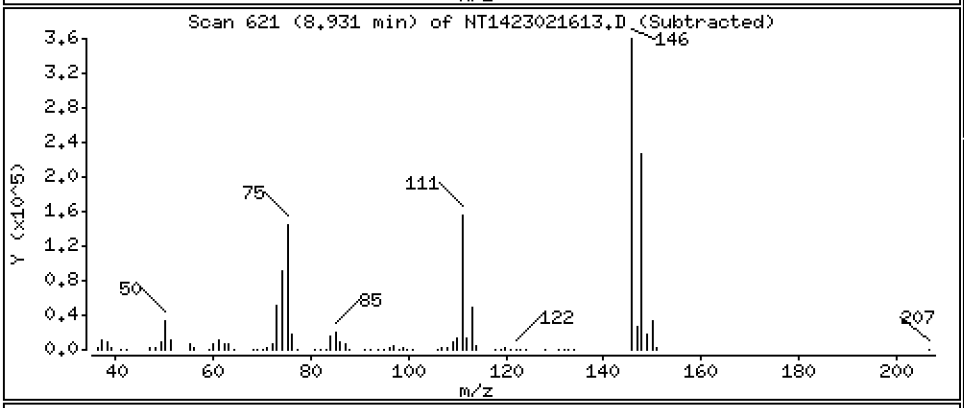
Column phase: ZB-5msi

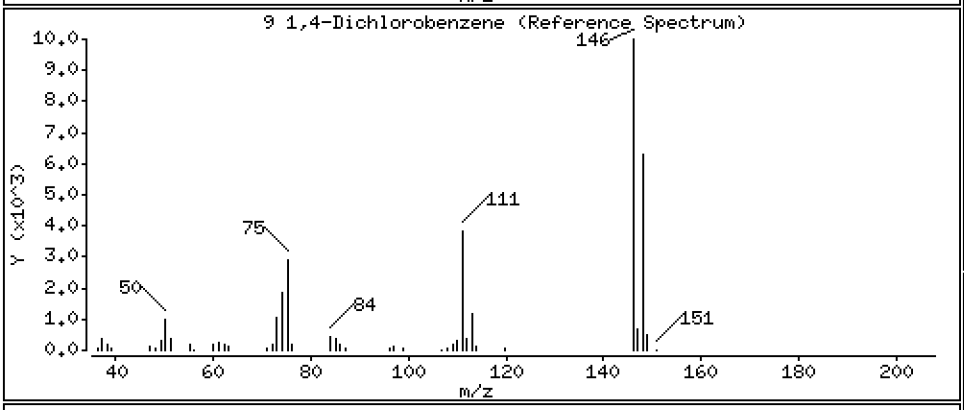
Column diameter: 0.25

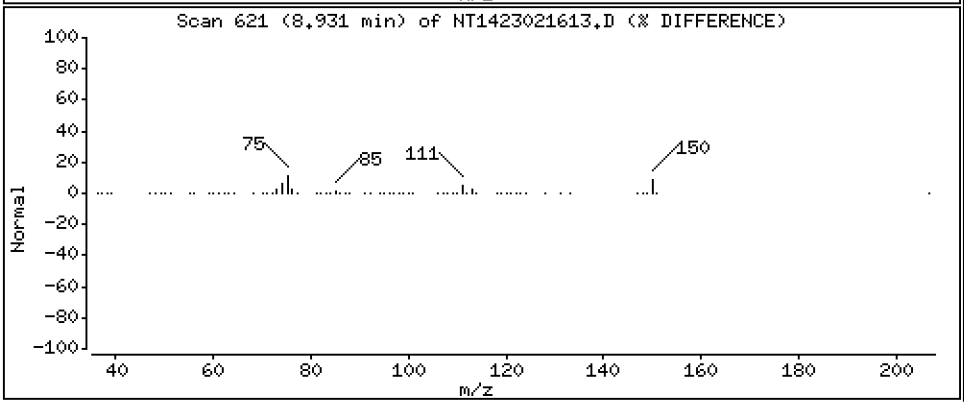
9 1,4-Dichlorobenzene

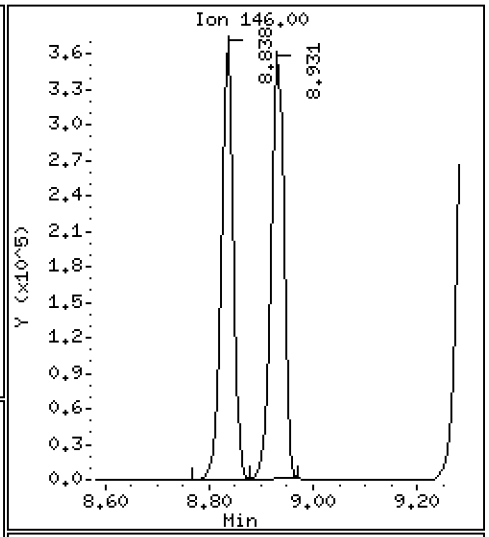
Concentration: 4.791 ug/mL

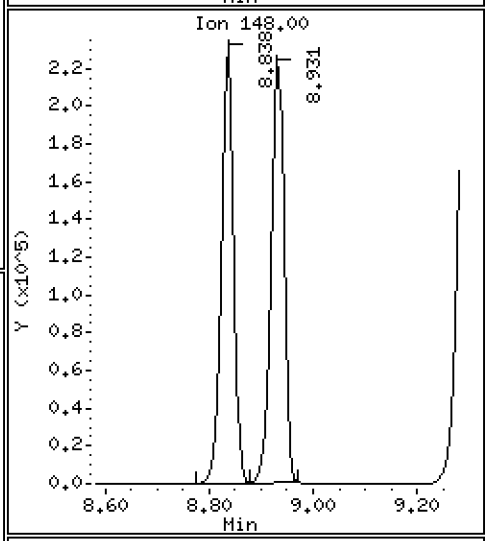


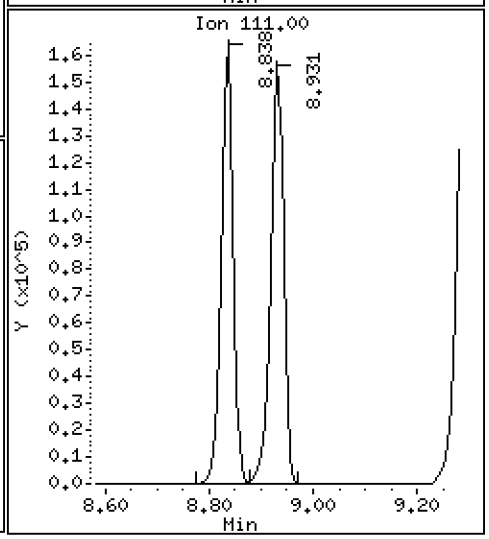












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

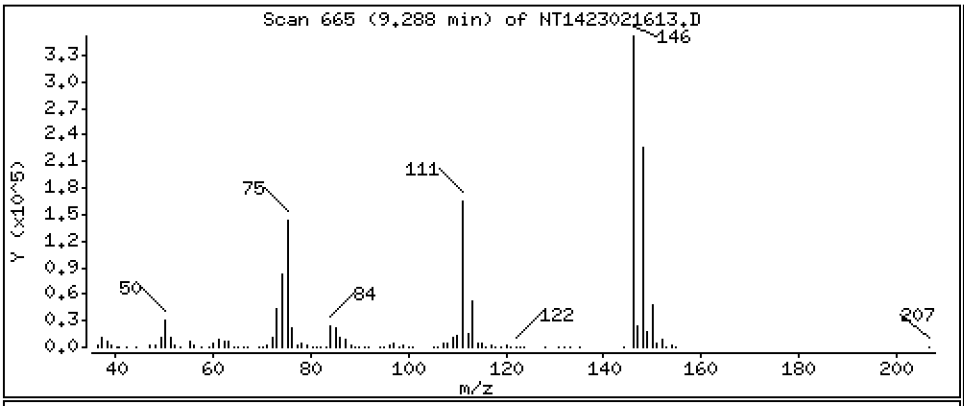
Operator: DSD

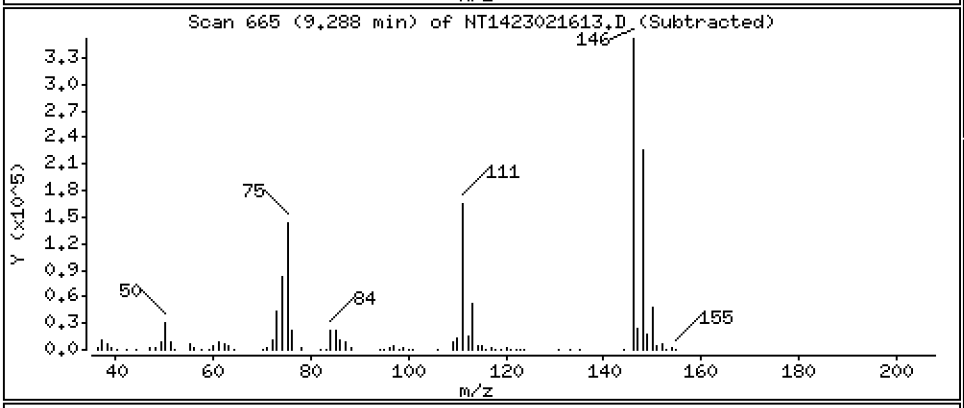
Column phase: ZB-5msi

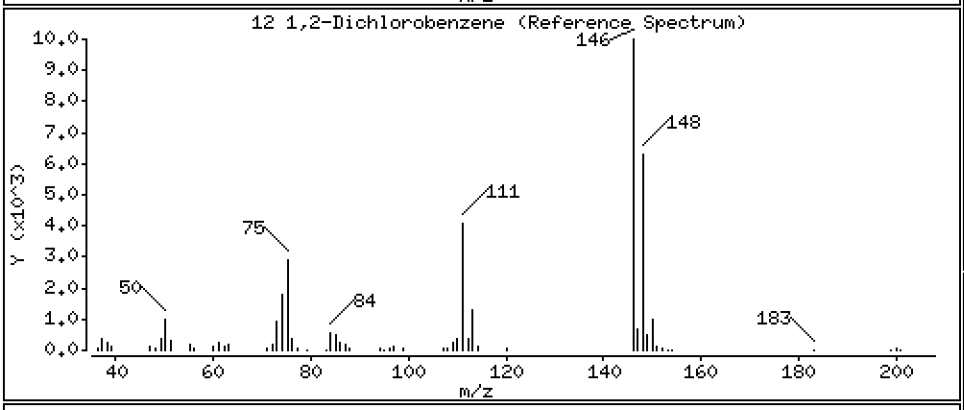
Column diameter: 0.25

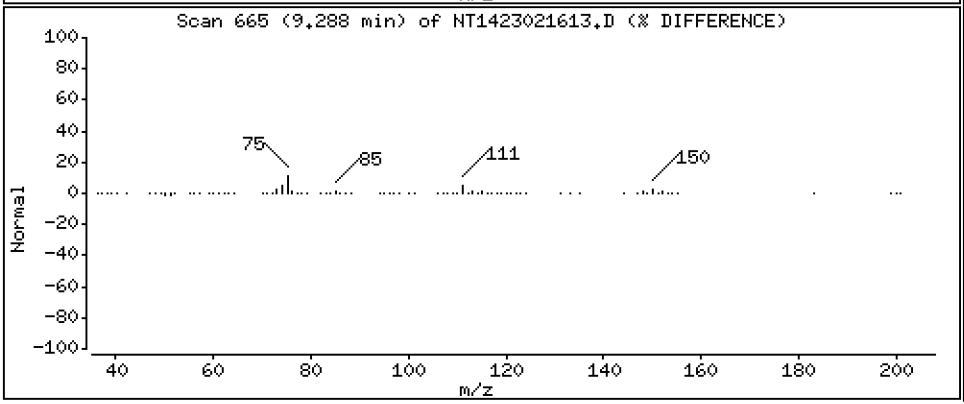
12 1,2-Dichlorobenzene

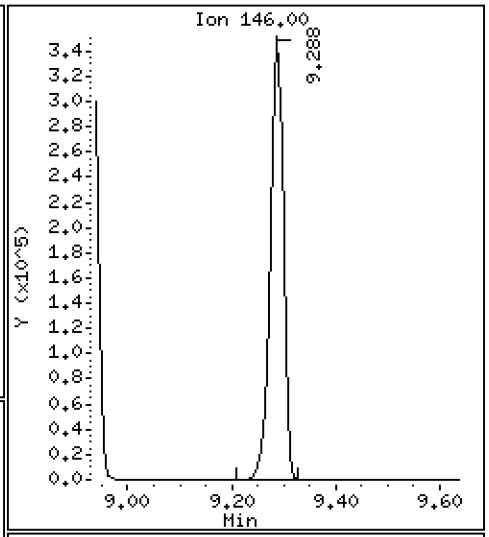
Concentration: 4.758 ug/mL

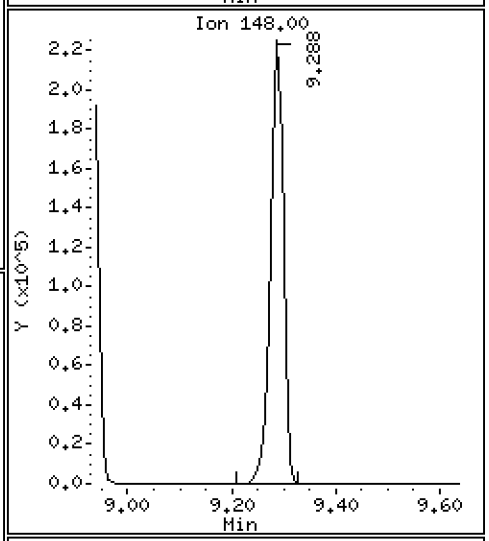


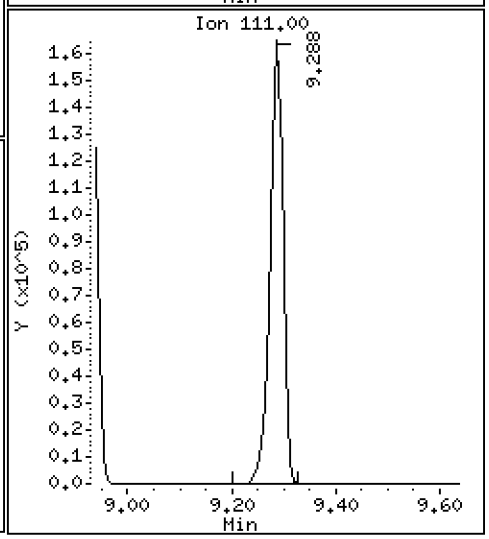












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

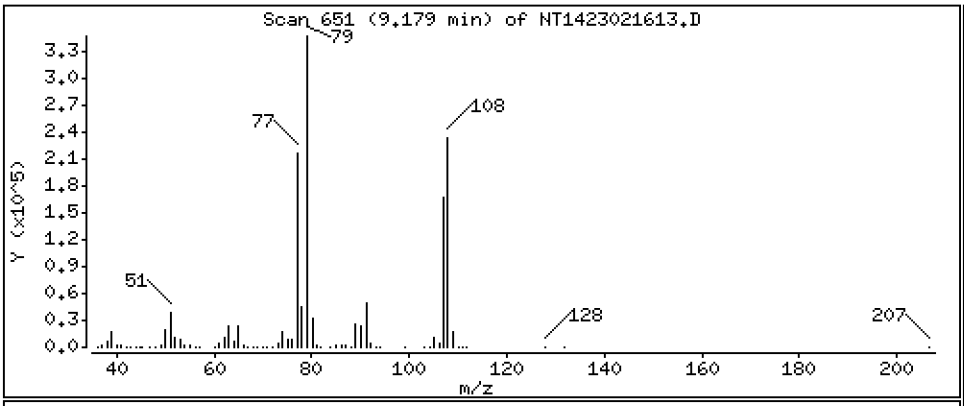
Operator: DSD

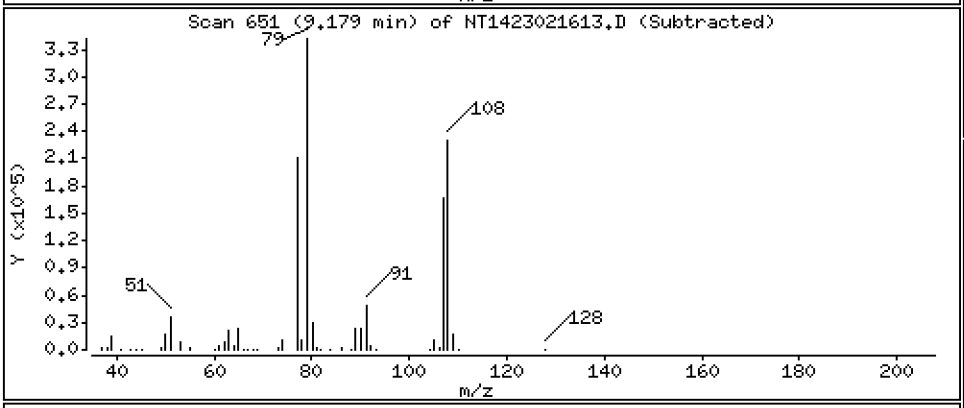
Column phase: ZB-5msi

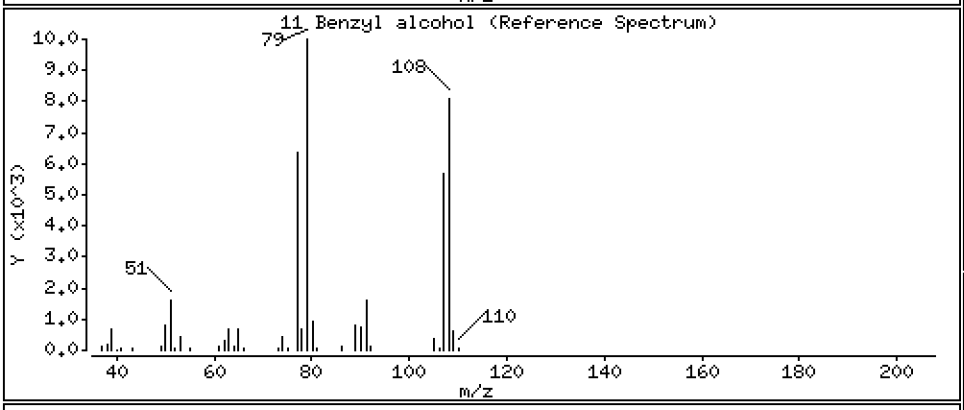
Column diameter: 0.25

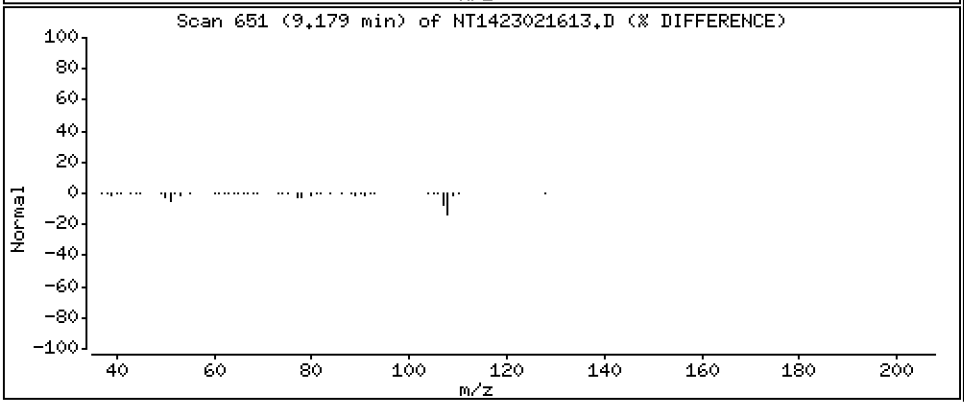
11 Benzyl alcohol

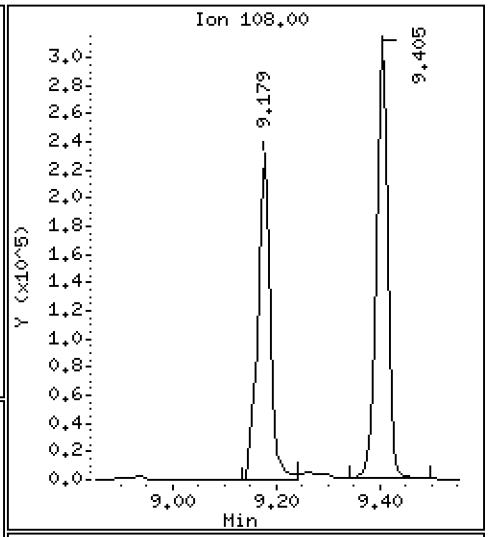
Concentration: 4.625 ug/mL

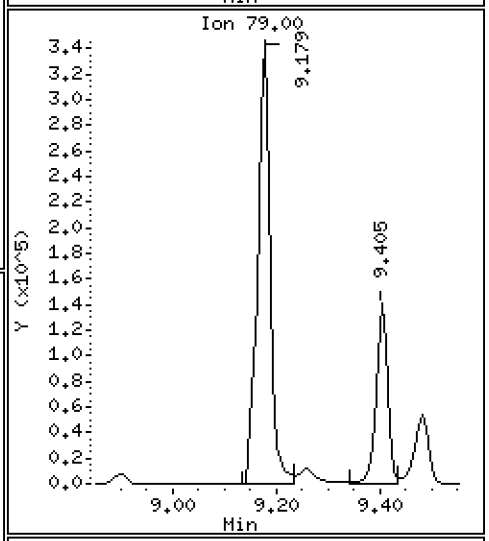


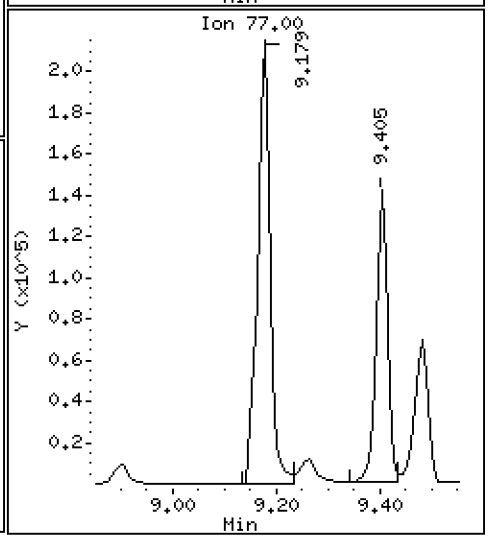












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

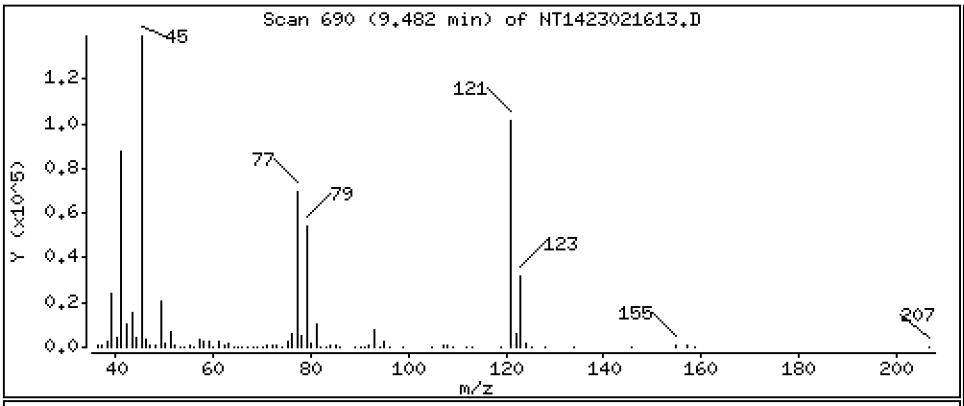
Operator: DSD

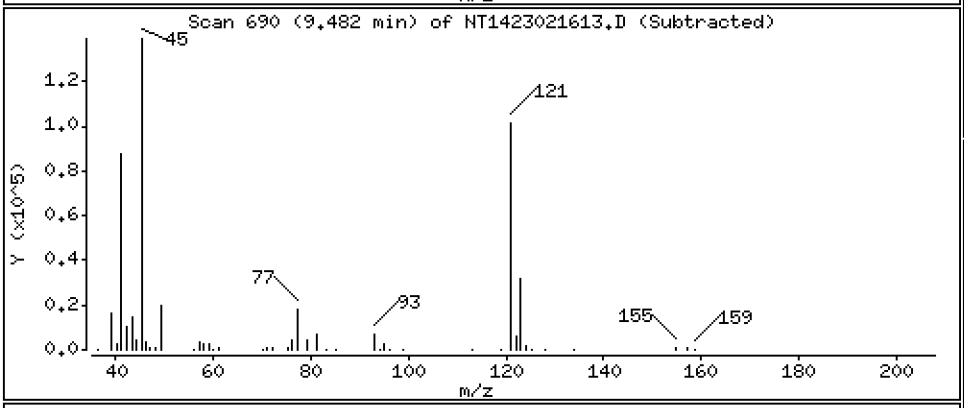
Column phase: ZB-5msi

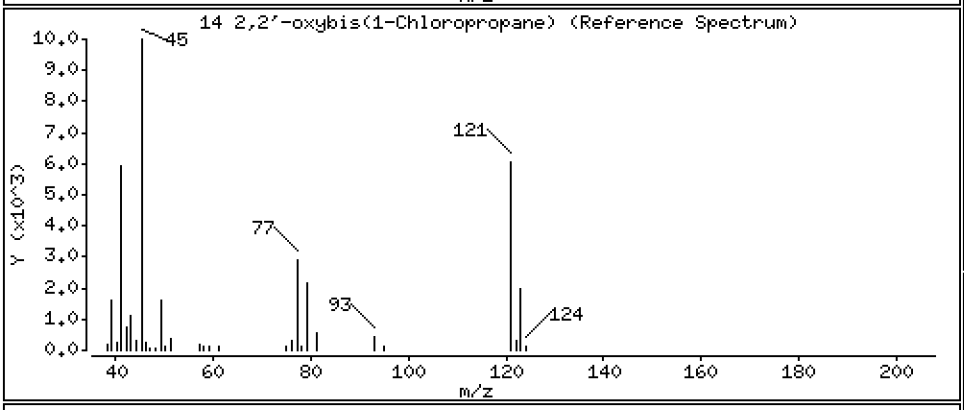
Column diameter: 0.25

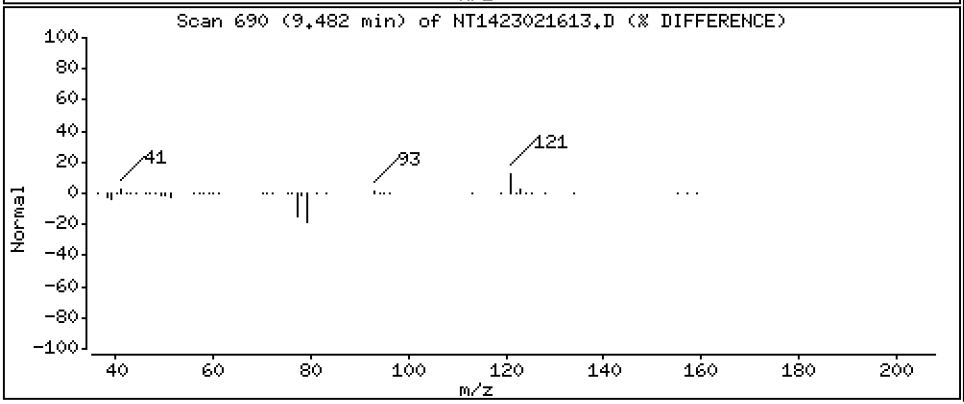
14 2,2'-oxybis(1-Chloropropane)

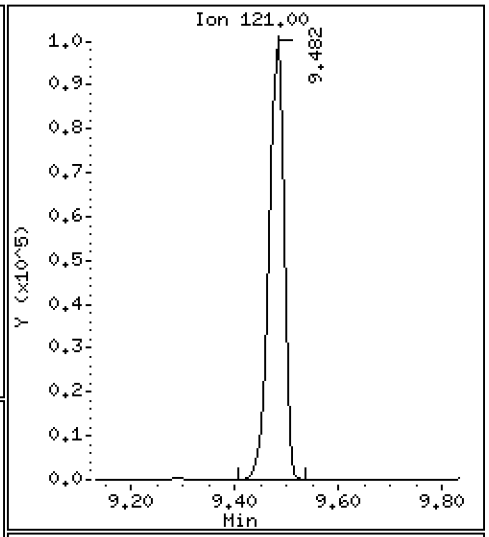
Concentration: 5.567 ug/mL

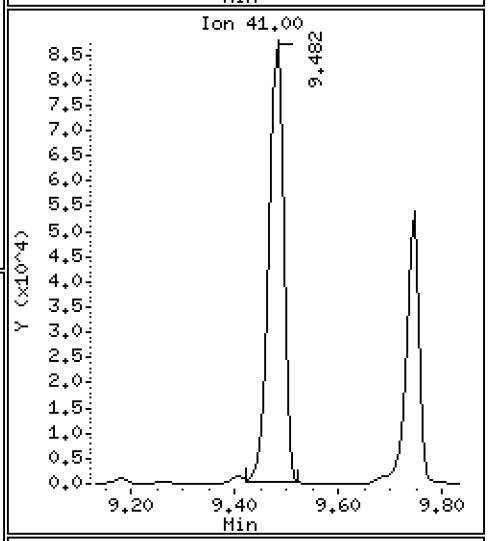


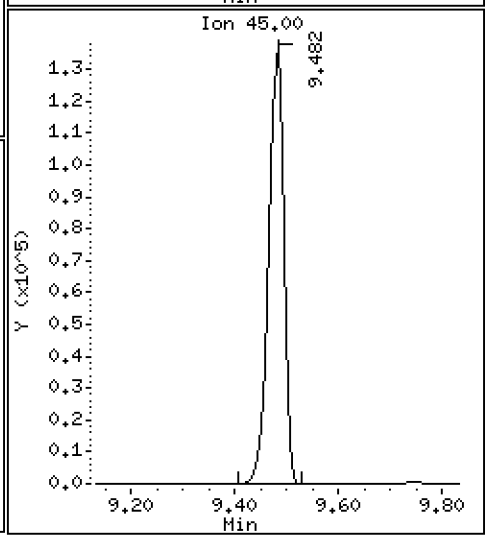












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

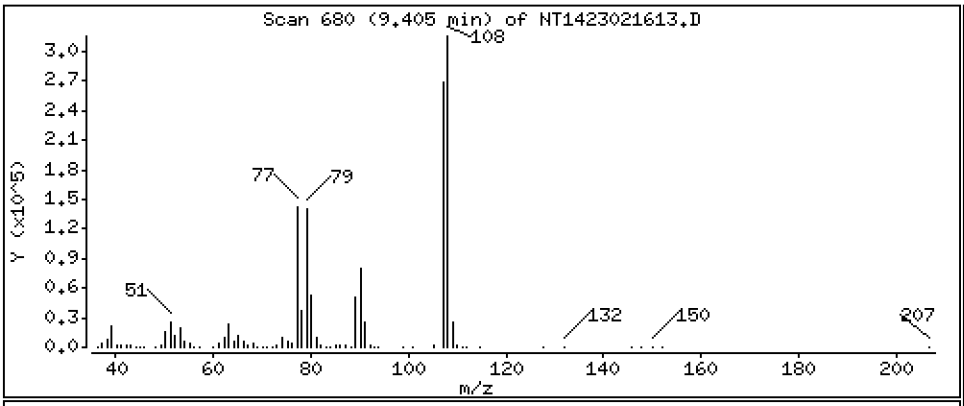
Operator: DSD

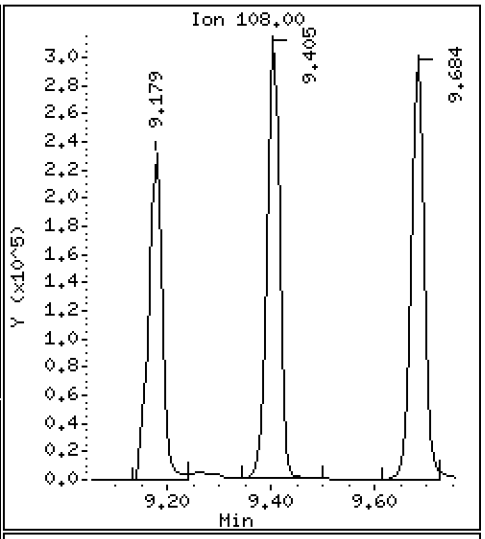
Column phase: ZB-5msi

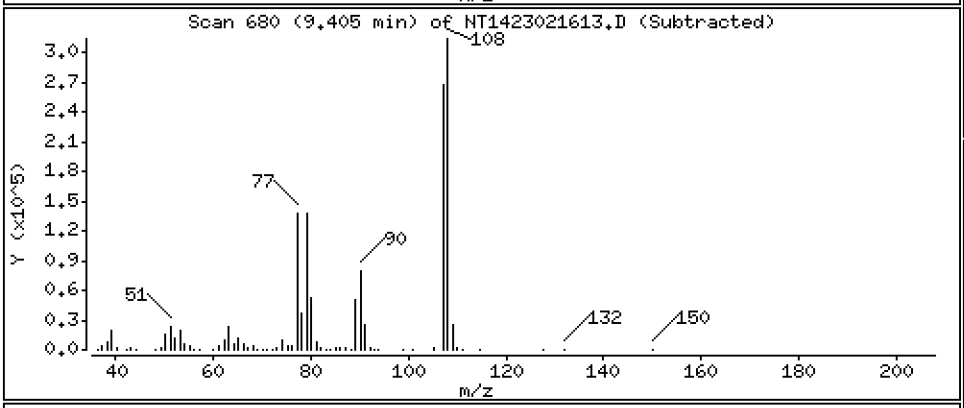
Column diameter: 0.25

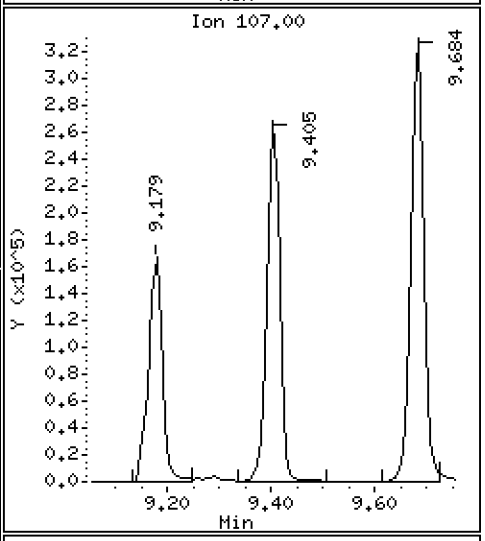
13 2-Methylphenol

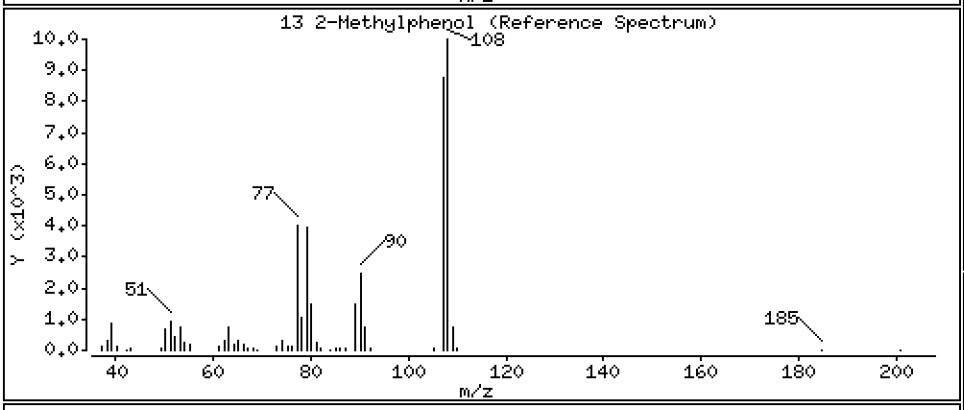
Concentration: 4.368 ug/mL

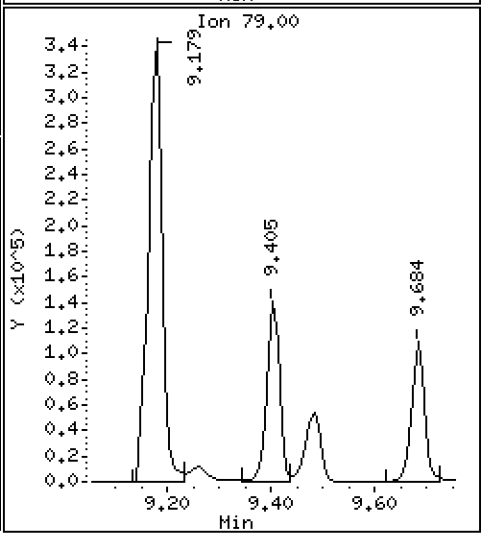


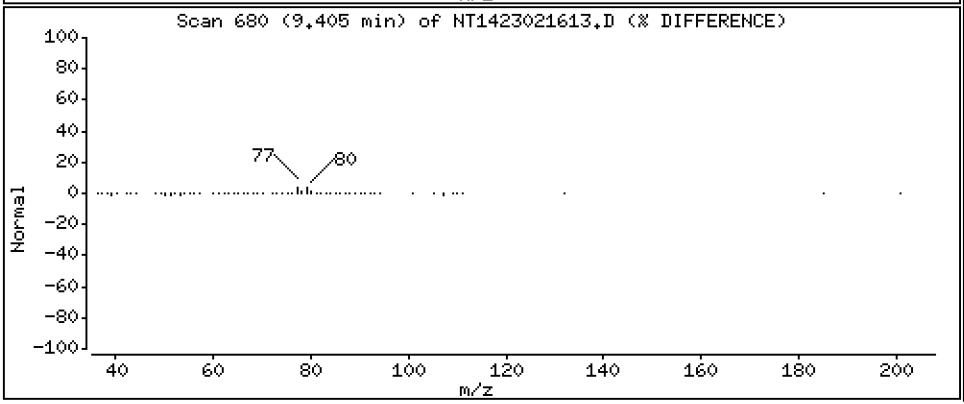












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

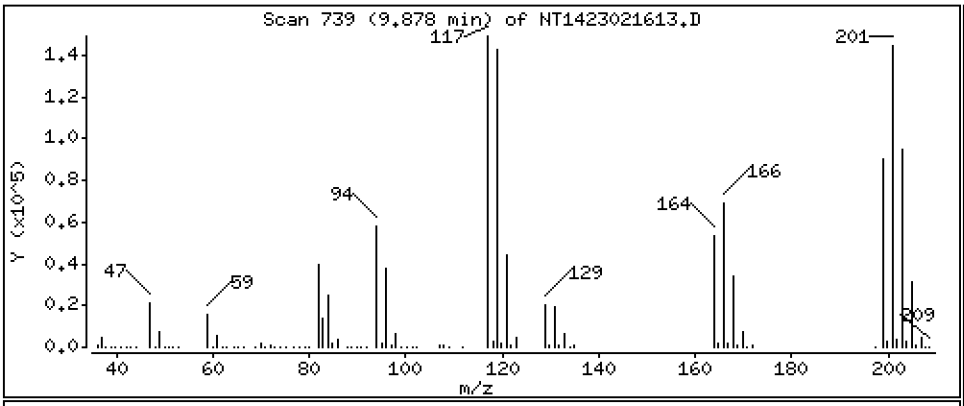
Operator: DSD

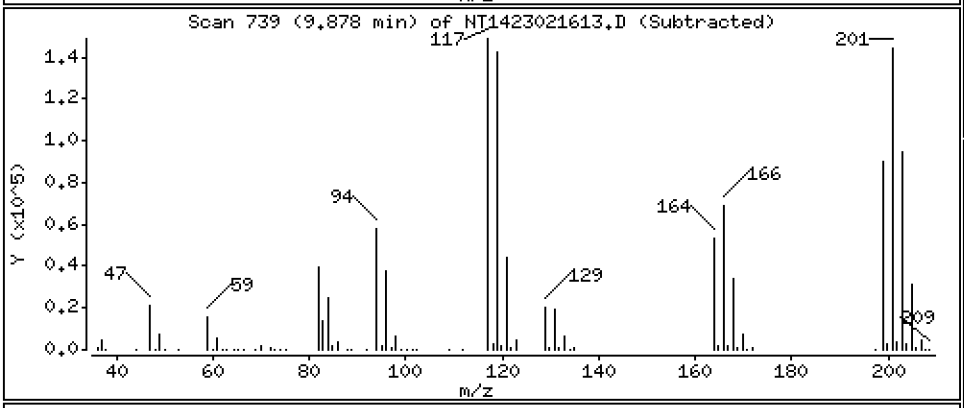
Column phase: ZB-5msi

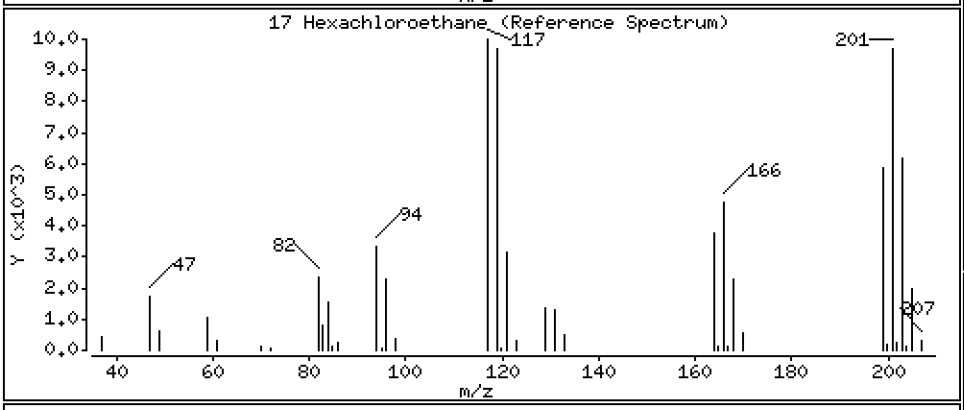
Column diameter: 0.25

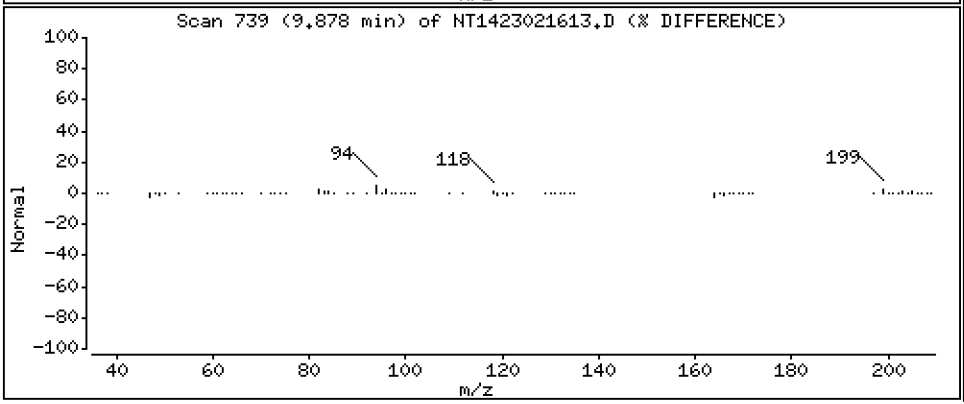
17 Hexachloroethane

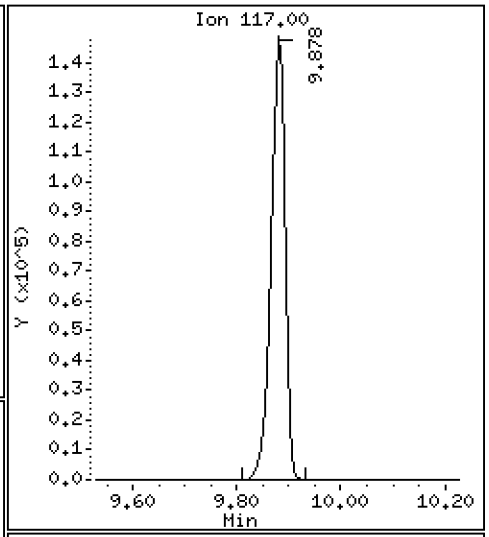
Concentration: 5.037 ug/mL

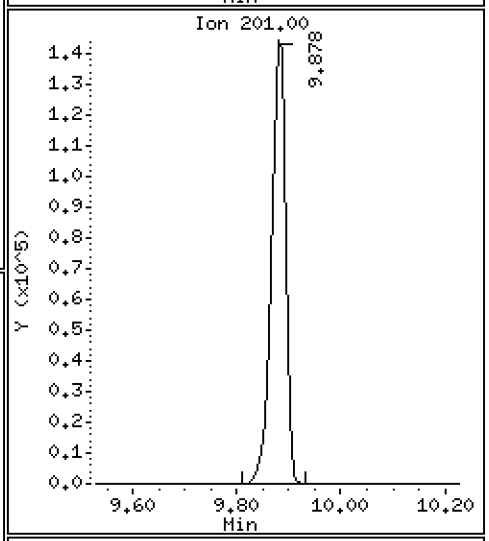


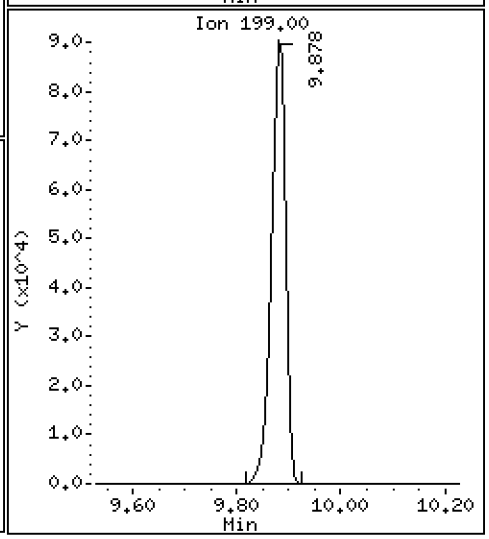












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

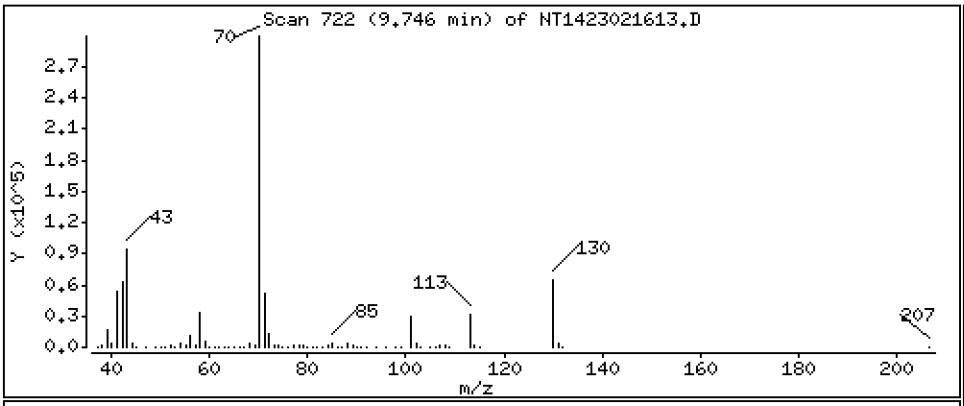
Operator: DSD

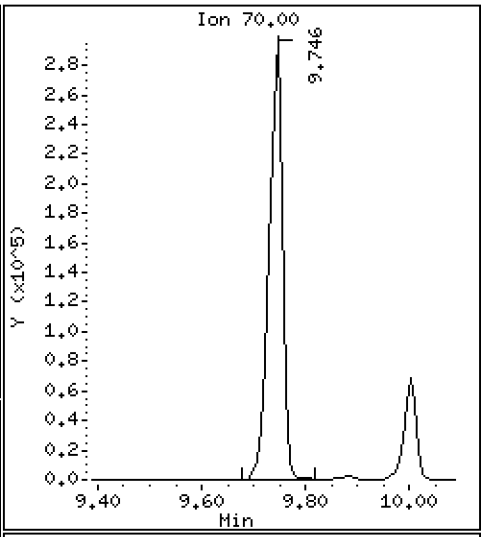
Column phase: ZB-5msi

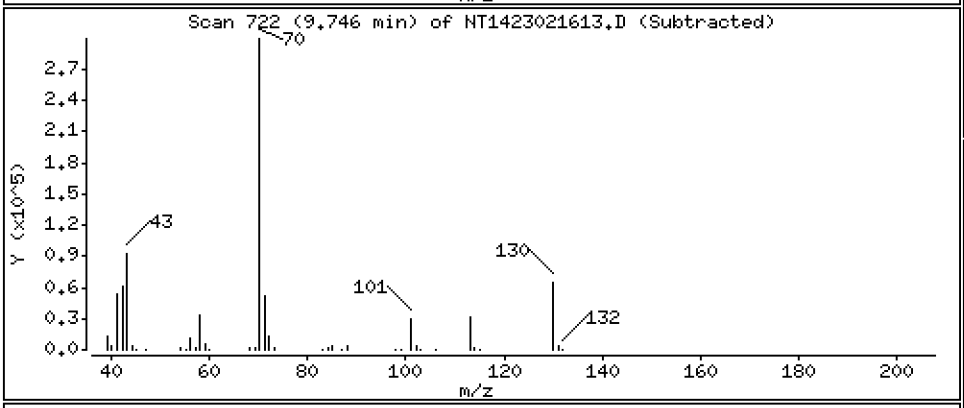
Column diameter: 0.25

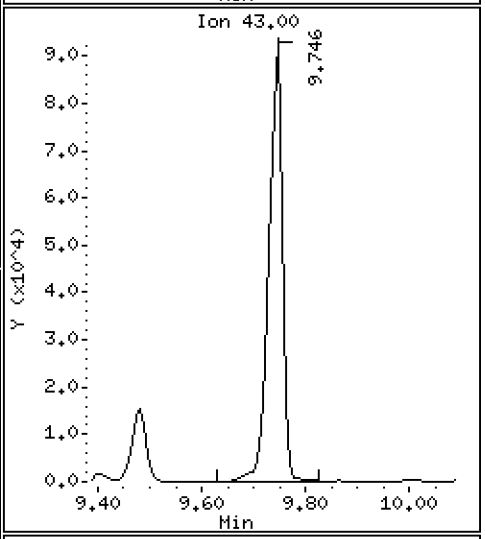
16 N-Nitroso-di-n-propylamine

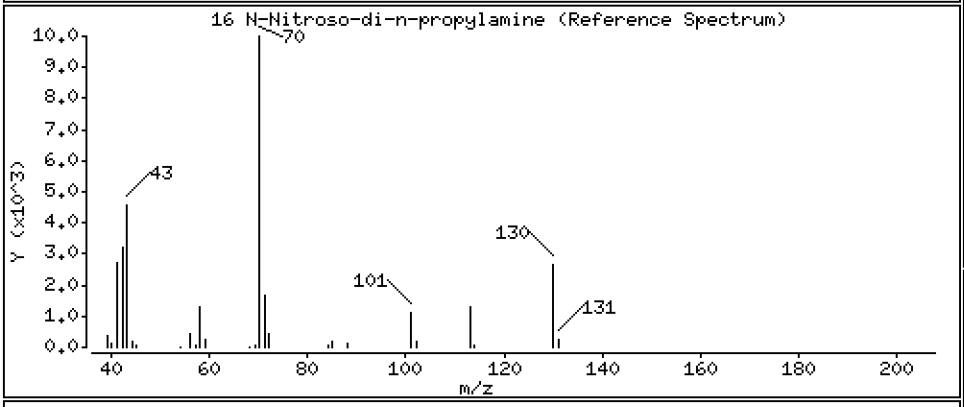
Concentration: 4.988 ug/mL

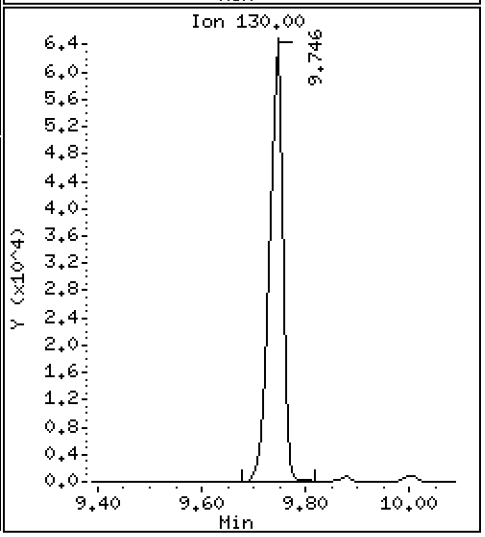


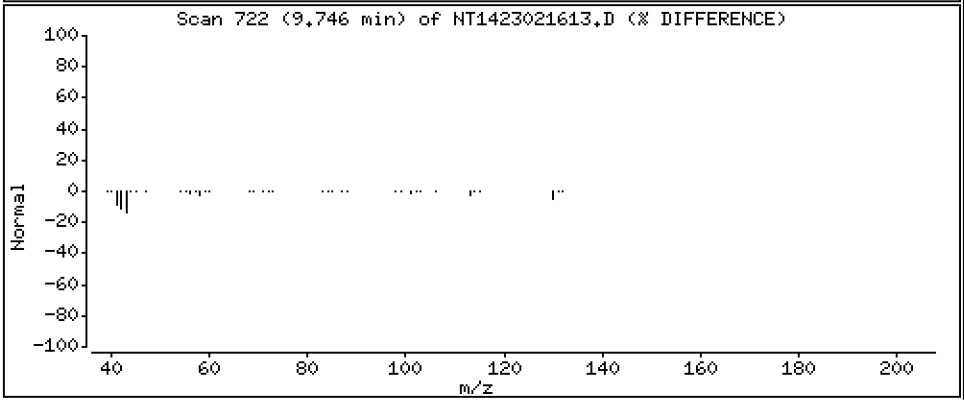












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

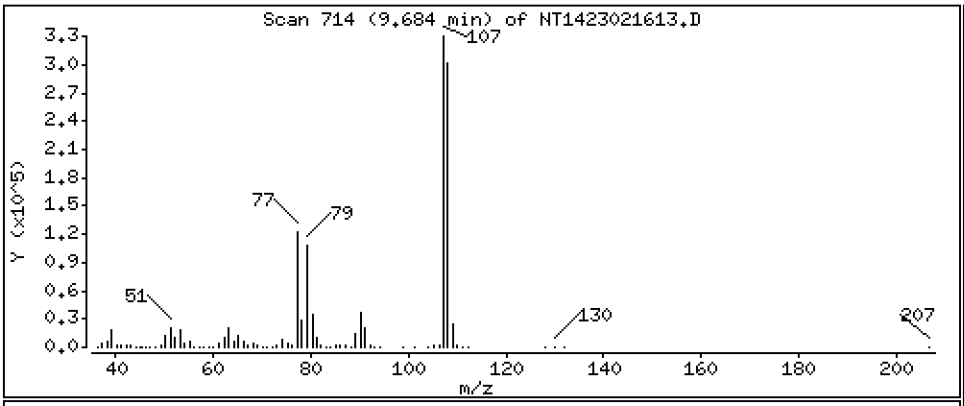
Operator: DSD

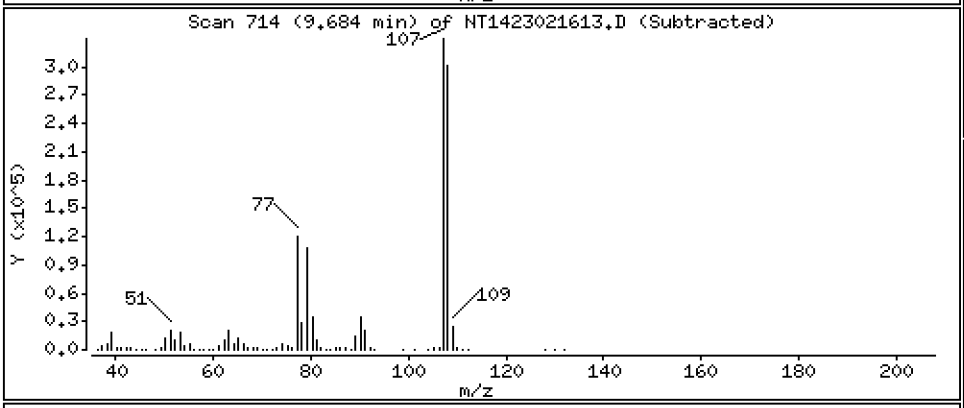
Column phase: ZB-5msi

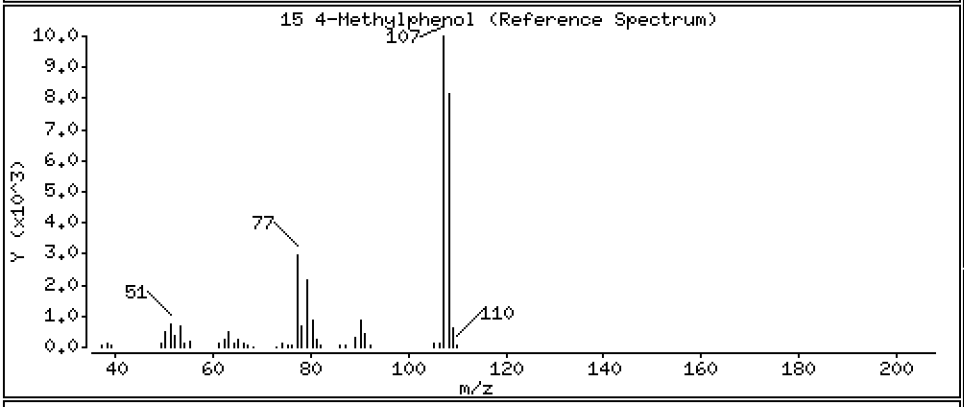
Column diameter: 0.25

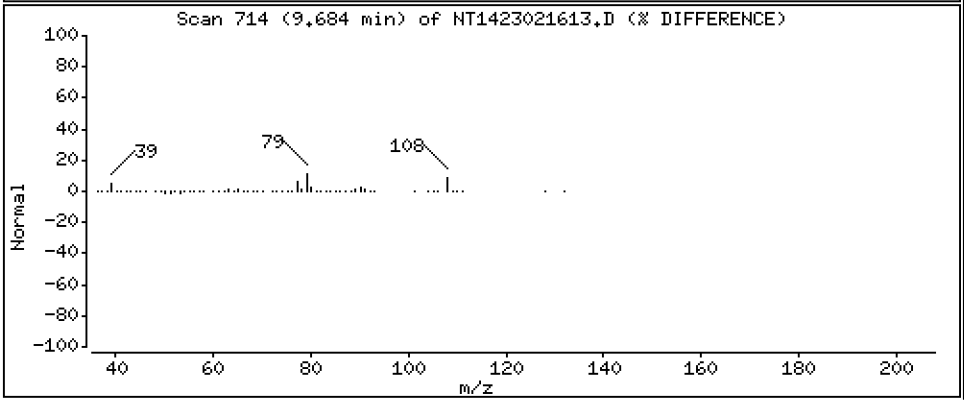
15 4-Methylphenol

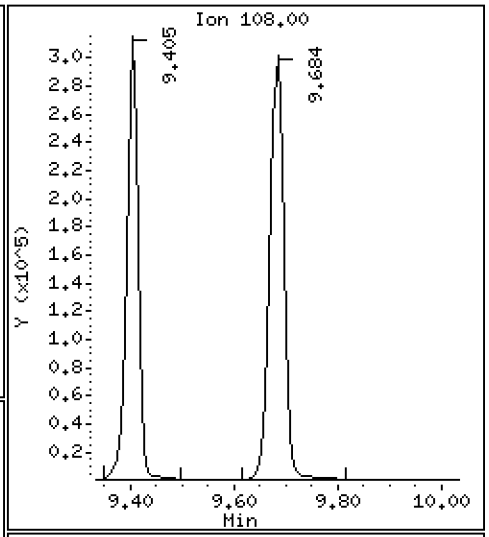
Concentration: 4.591 ug/mL

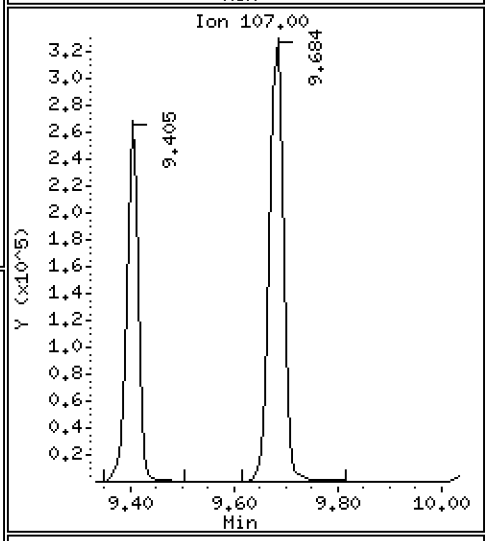


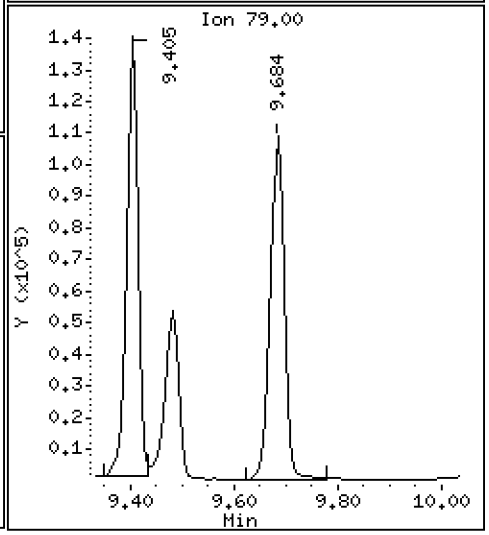












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

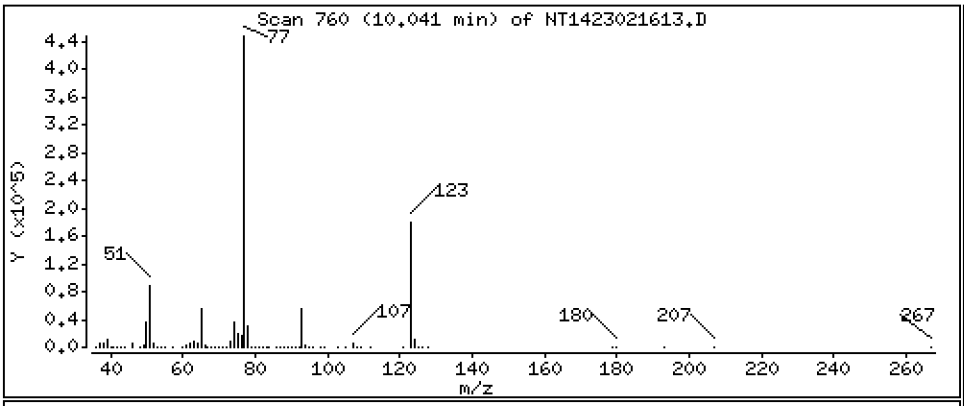
Operator: DSD

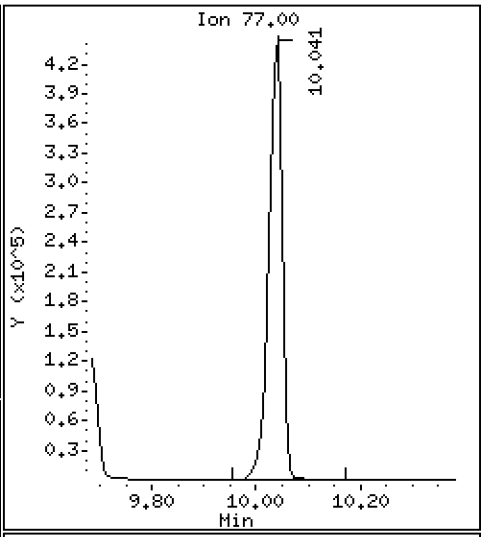
Column phase: ZB-5msi

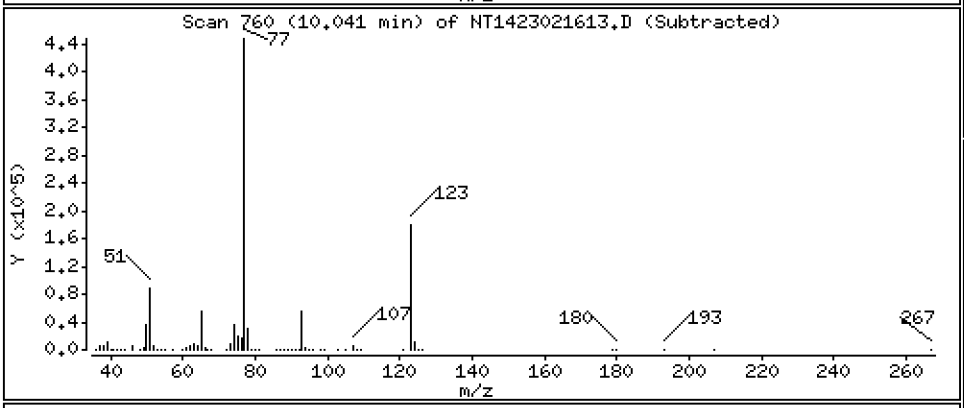
Column diameter: 0.25

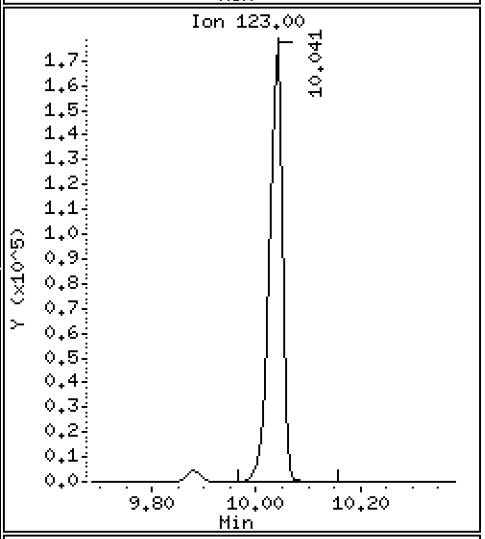
19 Nitrobenzene

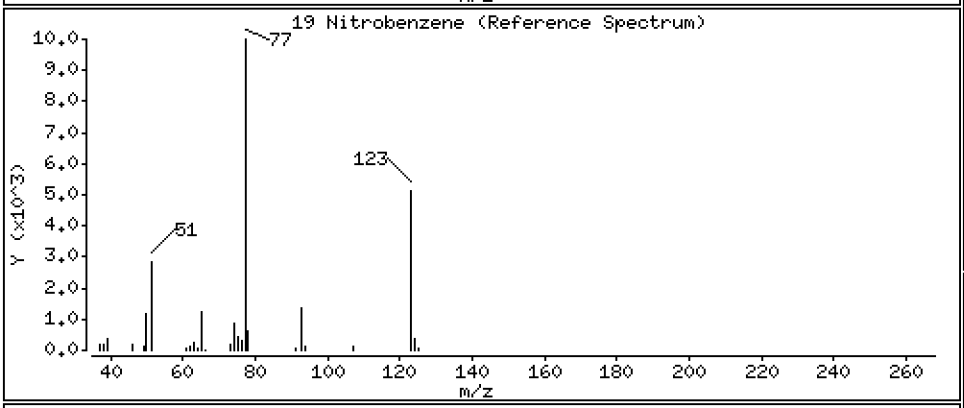
Concentration: 4.949 ug/mL

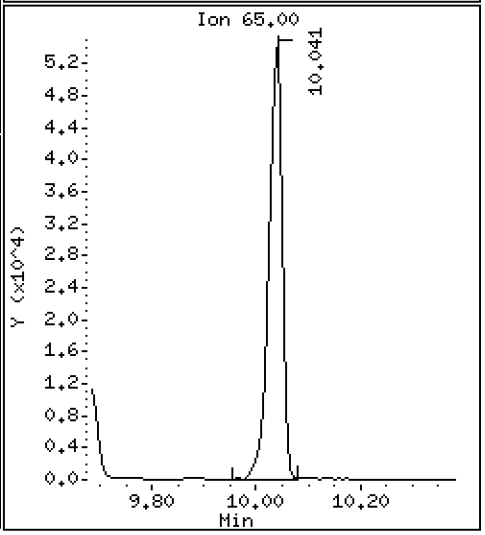


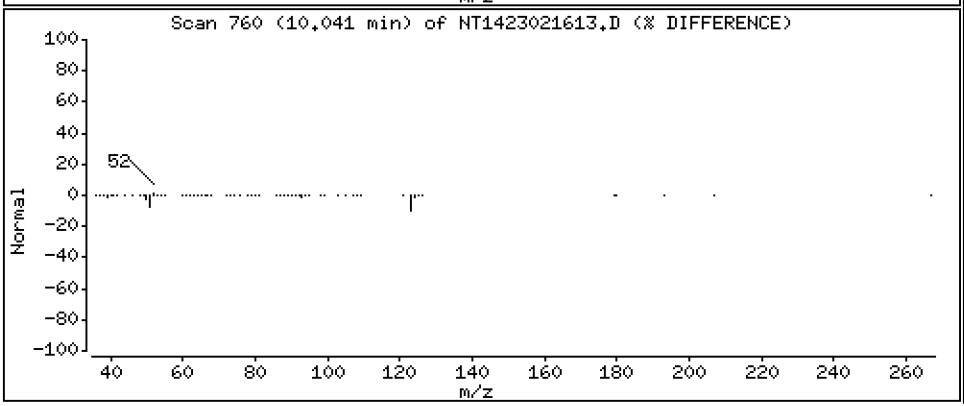












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

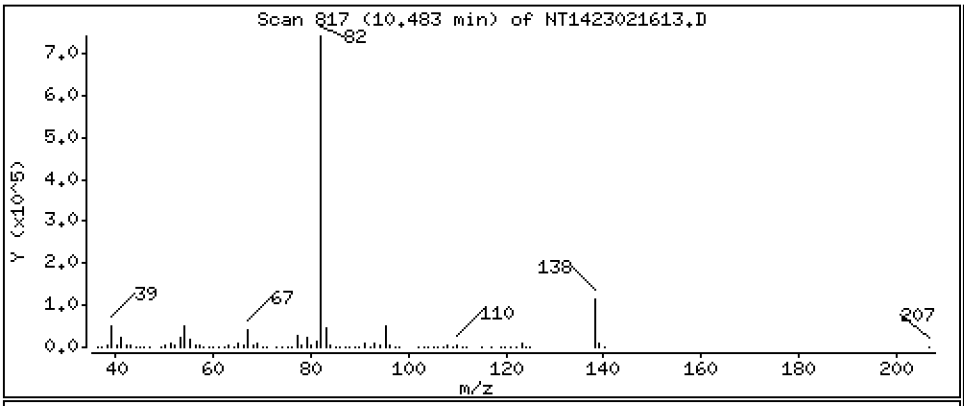
Operator: DSD

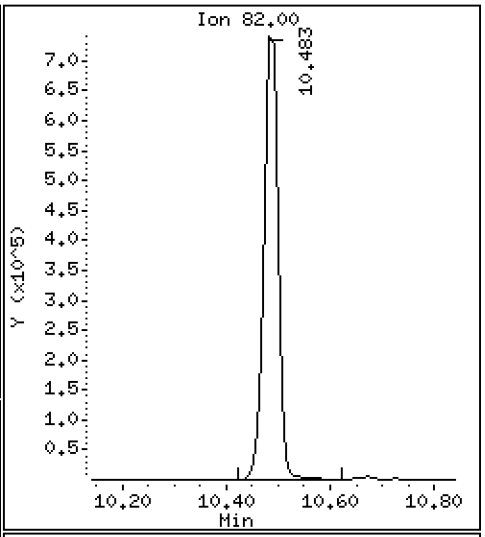
Column phase: ZB-5msi

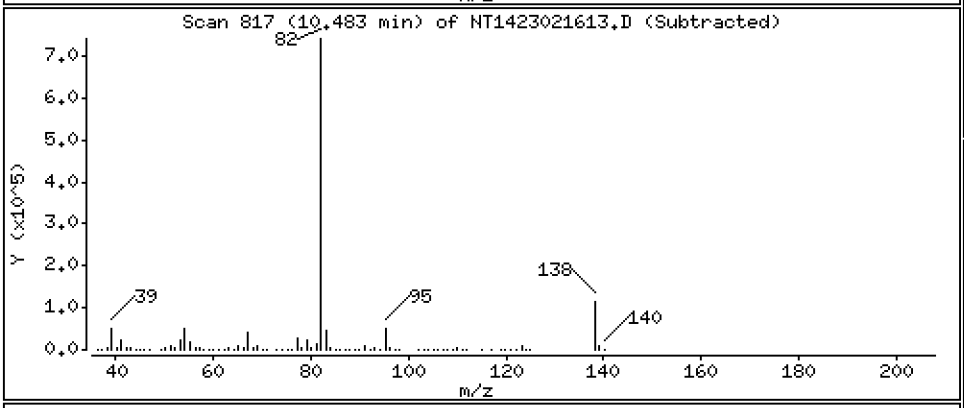
Column diameter: 0.25

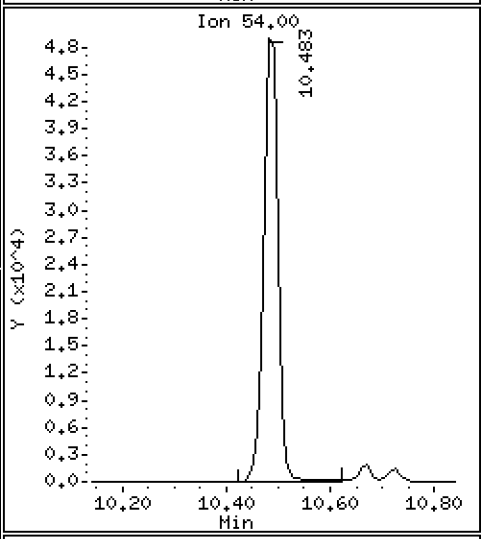
20 Isophorone

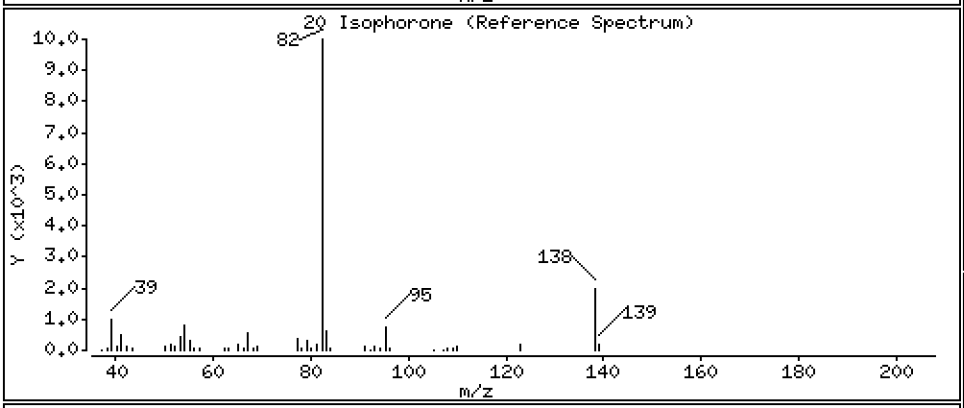
Concentration: 7.094 ug/mL

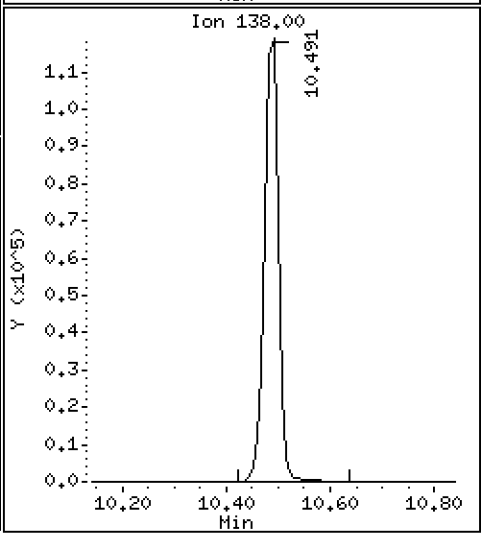


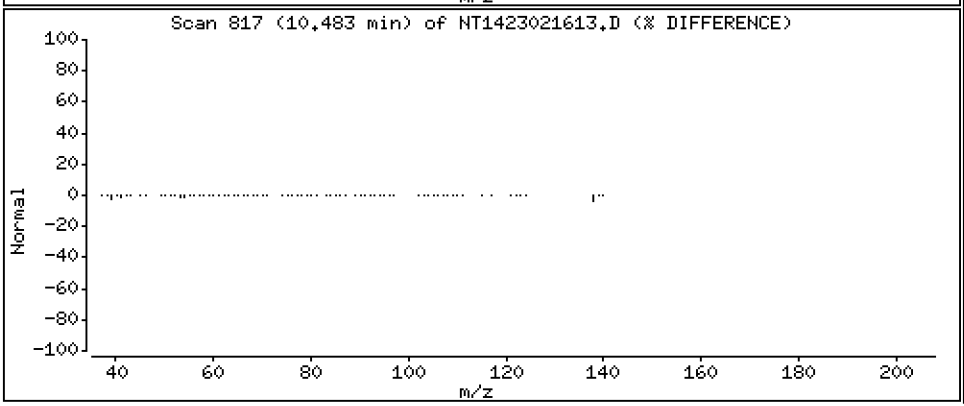












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

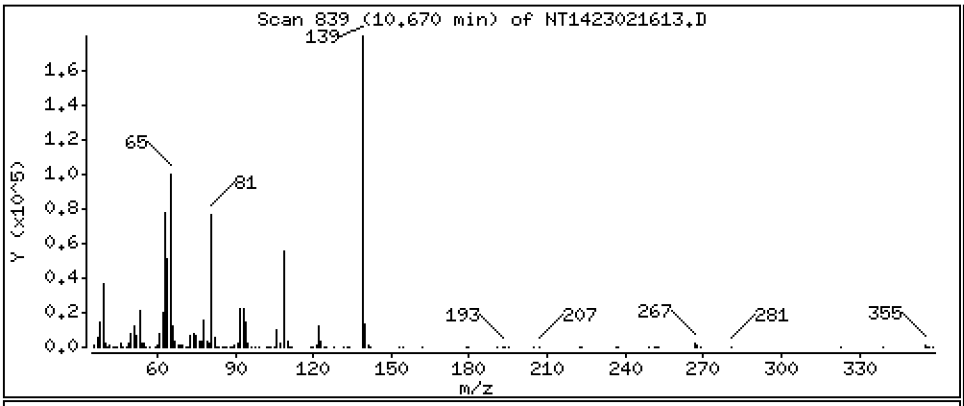
Operator: DSD

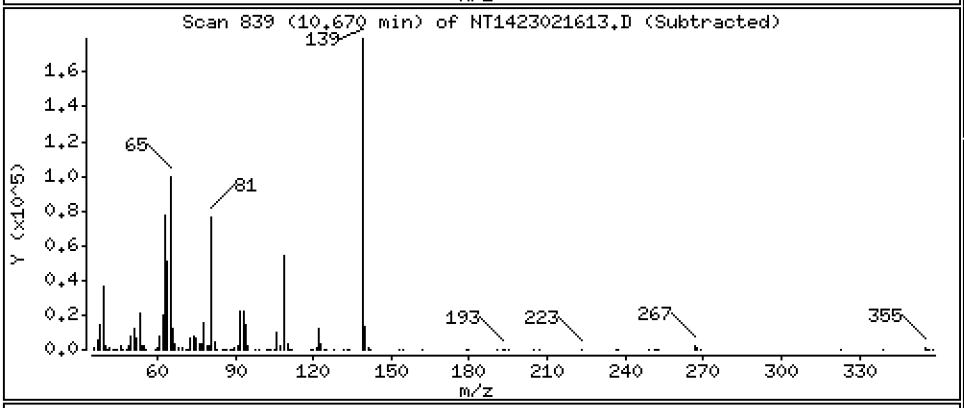
Column phase: ZB-5msi

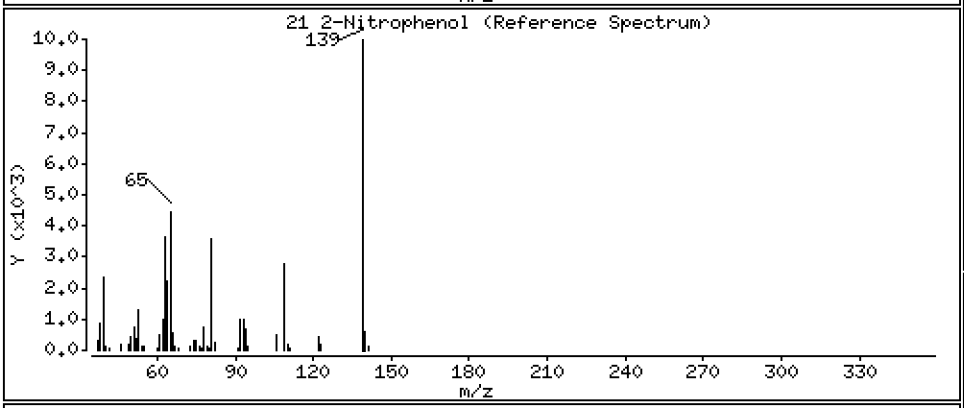
Column diameter: 0.25

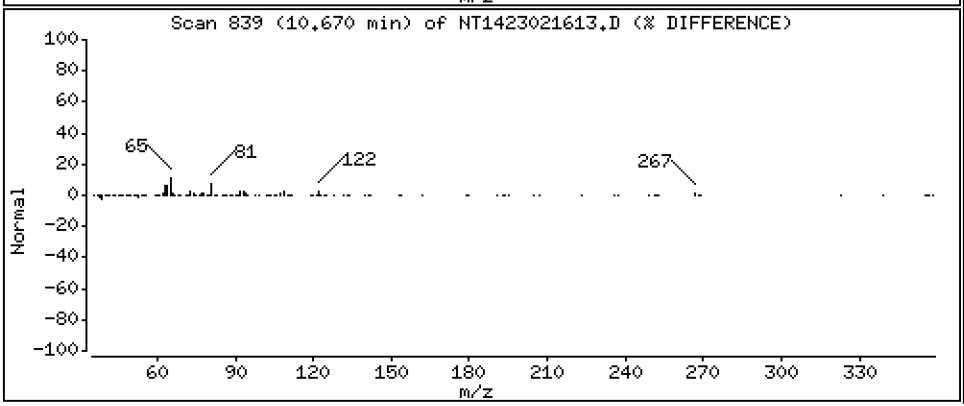
21 2-Nitrophenol

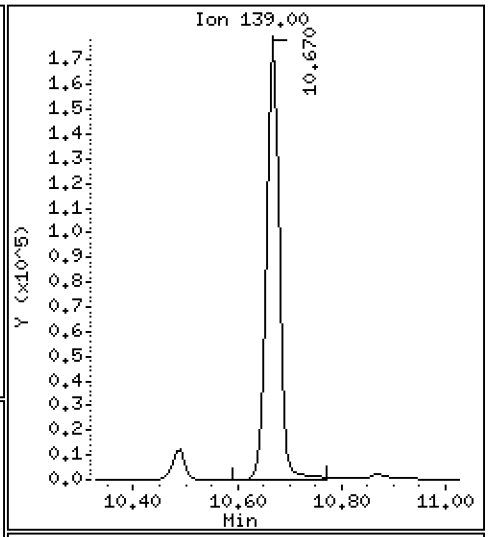
Concentration: 4.453 ug/mL

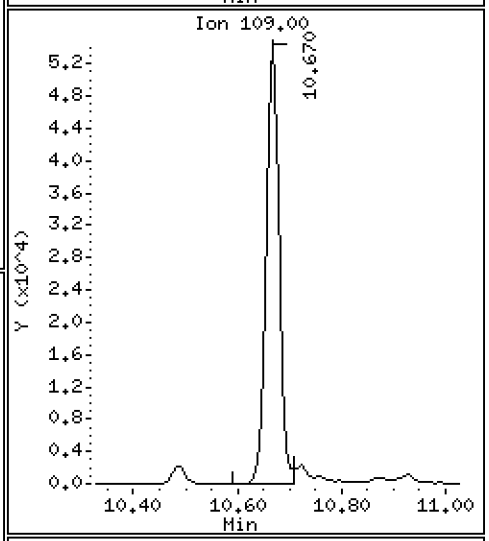


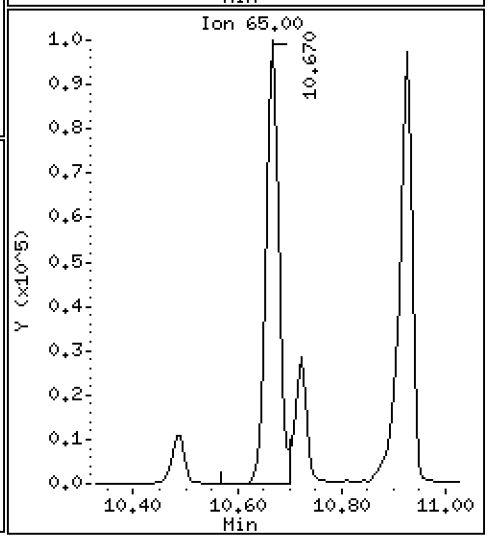












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

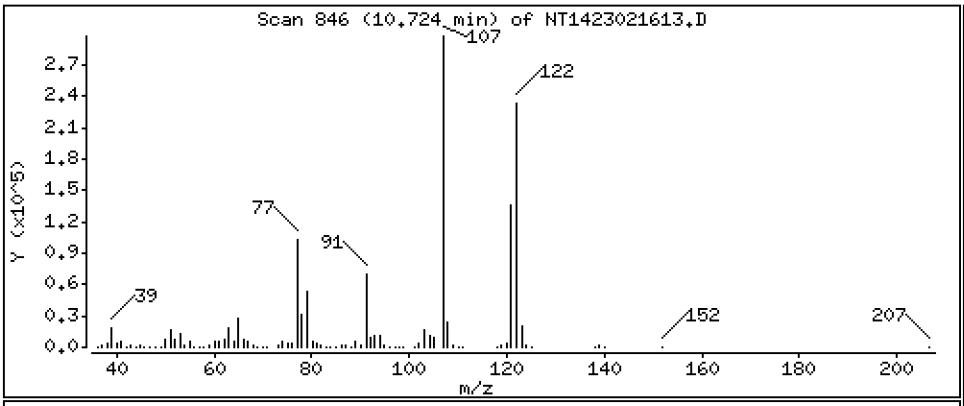
Operator: DSD

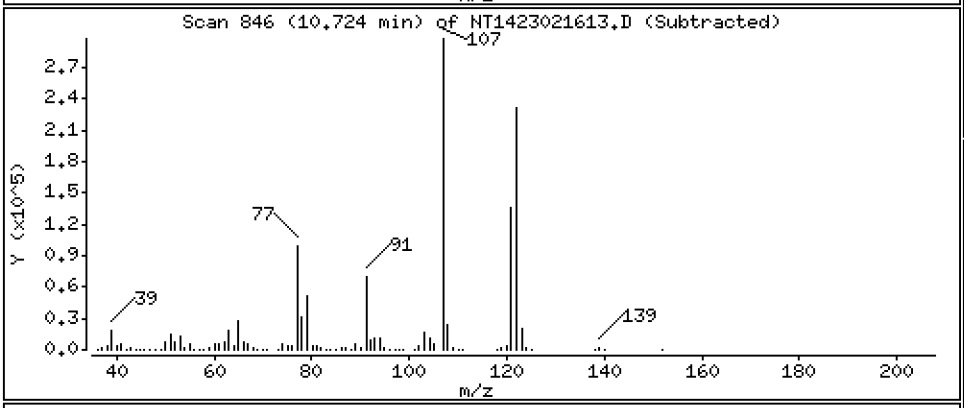
Column phase: ZB-5msi

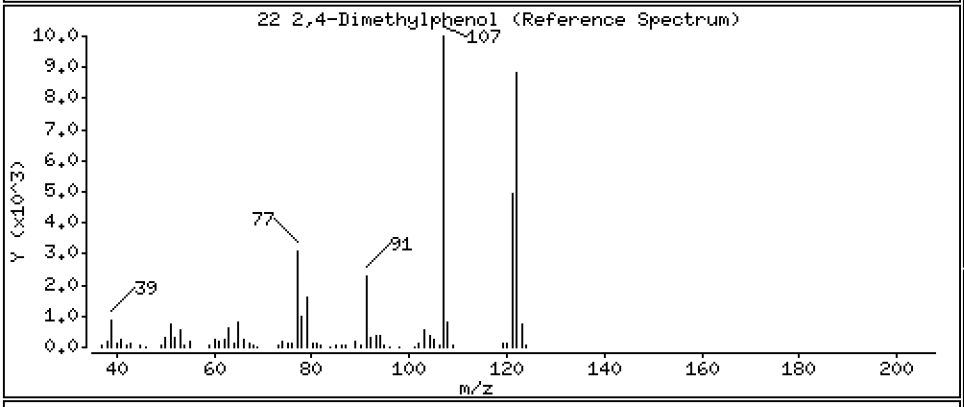
Column diameter: 0.25

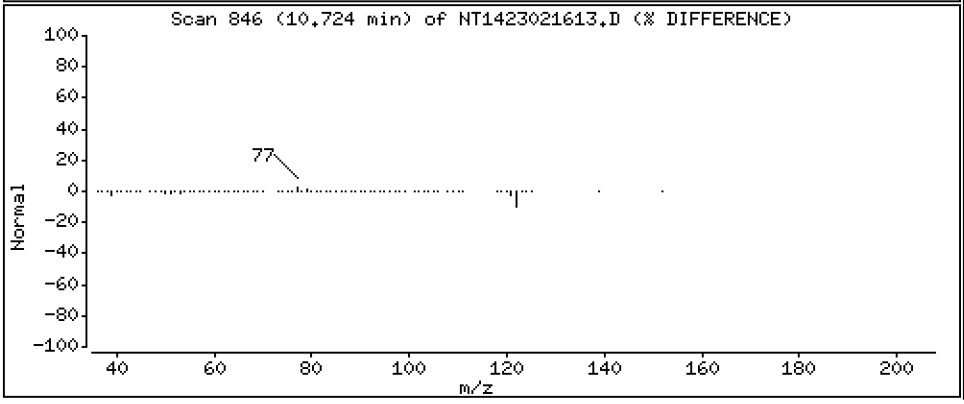
22 2,4-Dimethylphenol

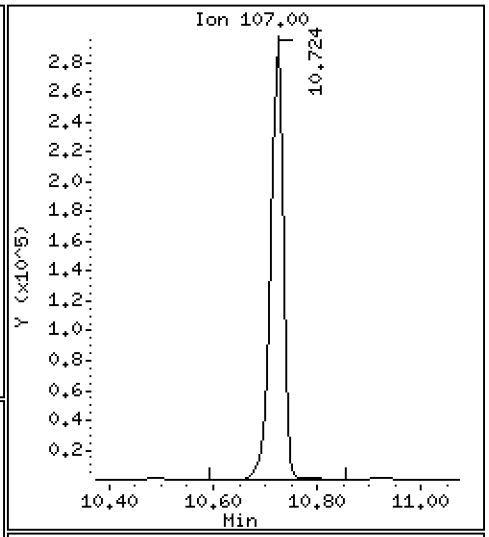
Concentration: 4.274 ug/mL

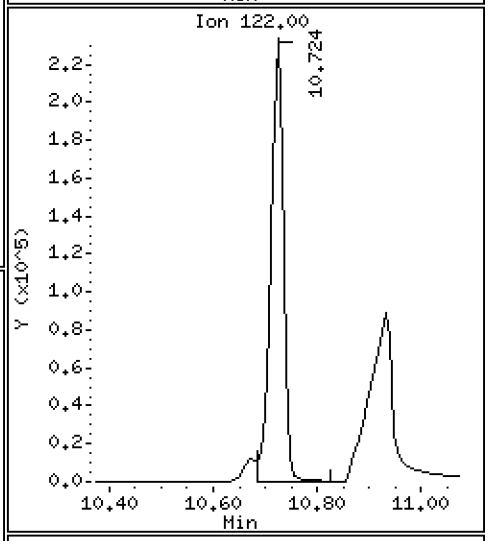


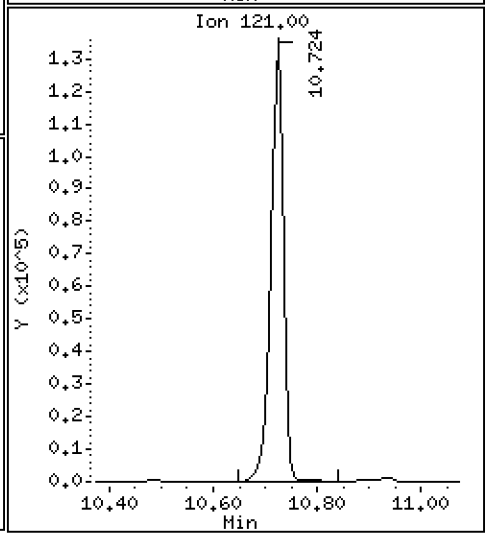












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

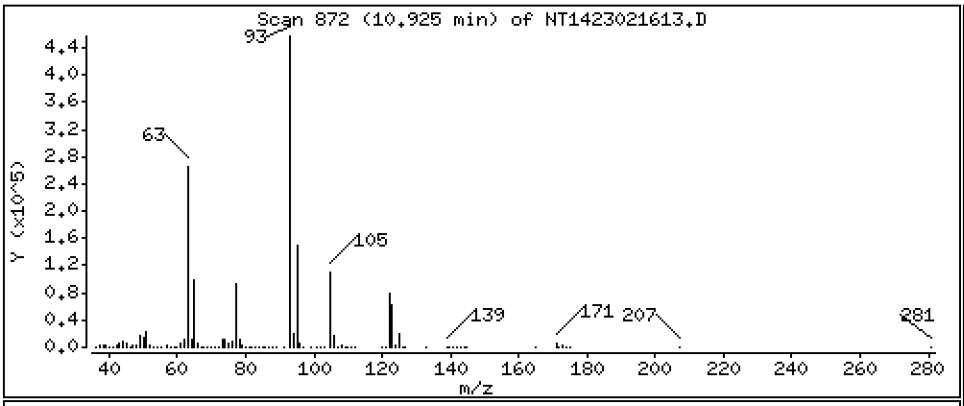
Operator: DSD

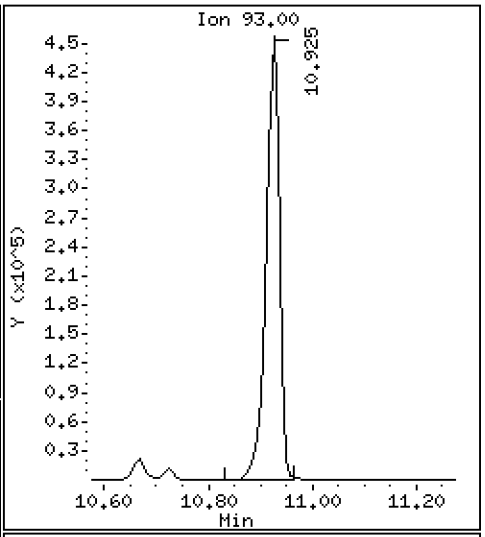
Column phase: ZB-5msi

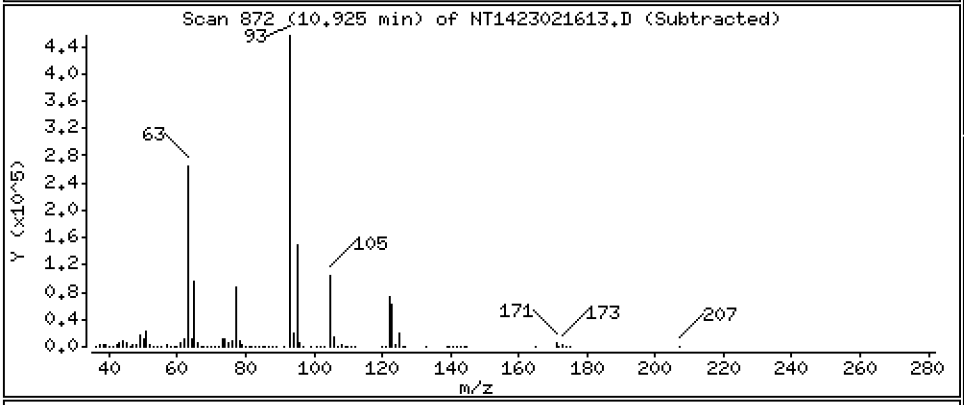
Column diameter: 0.25

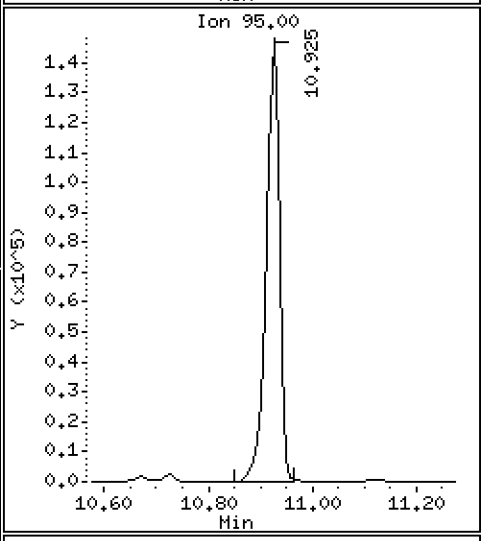
23 Bis(2-Chloroethoxy)methane

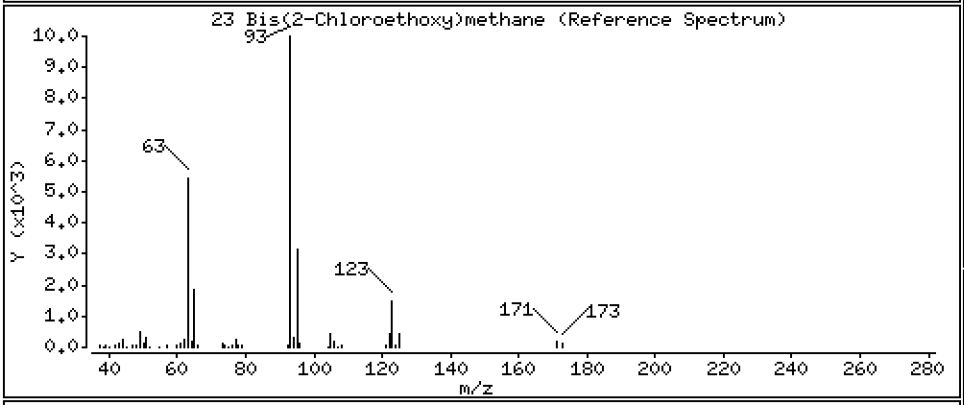
Concentration: 5.740 ug/mL

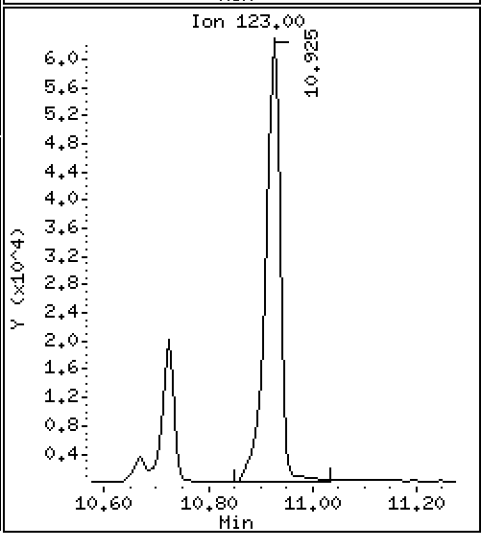


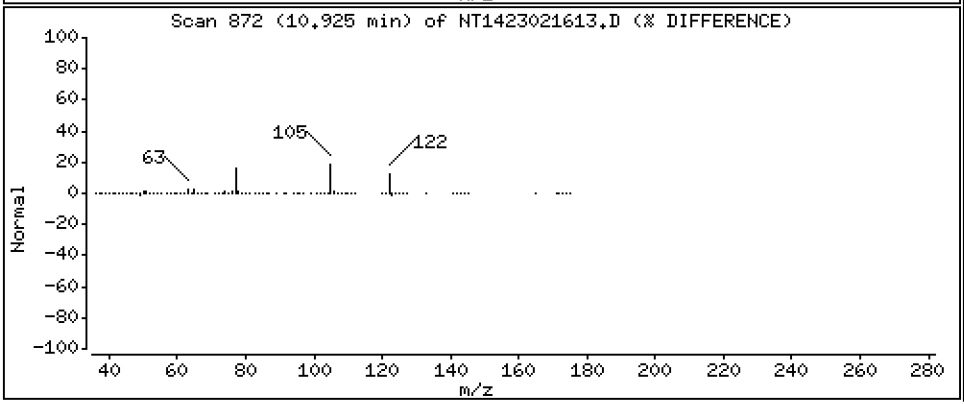












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

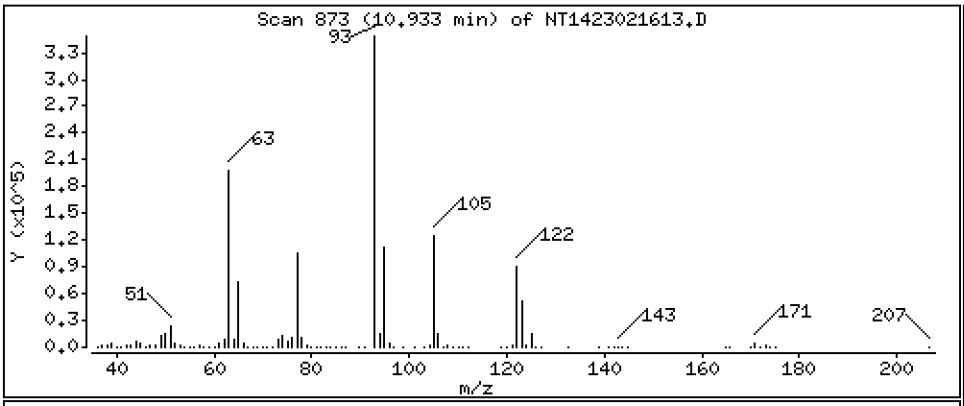
Operator: DSD

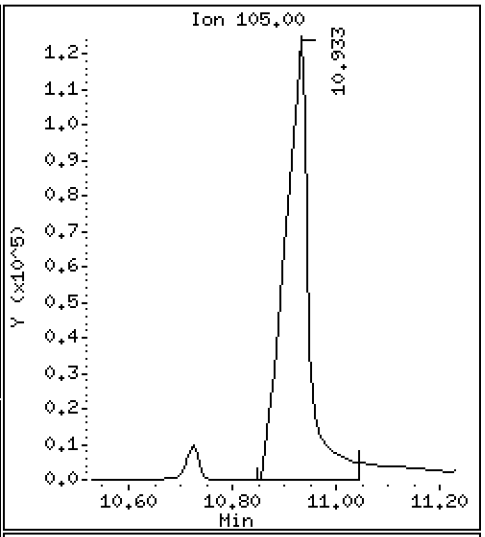
Column phase: ZB-5msi

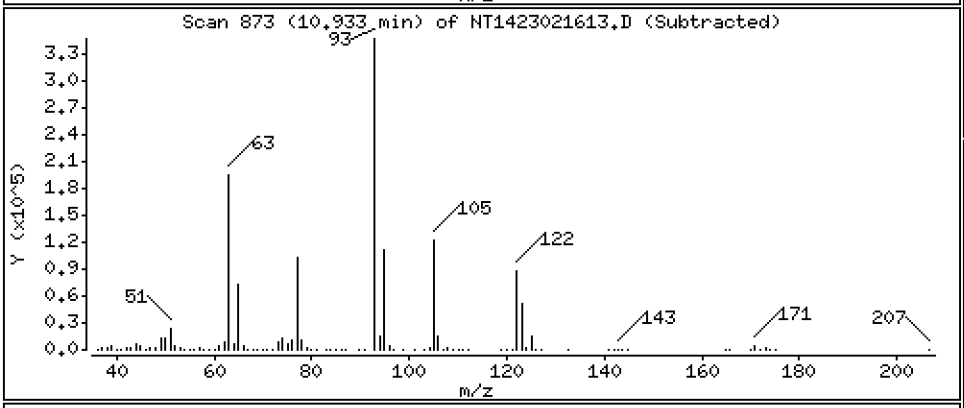
Column diameter: 0.25

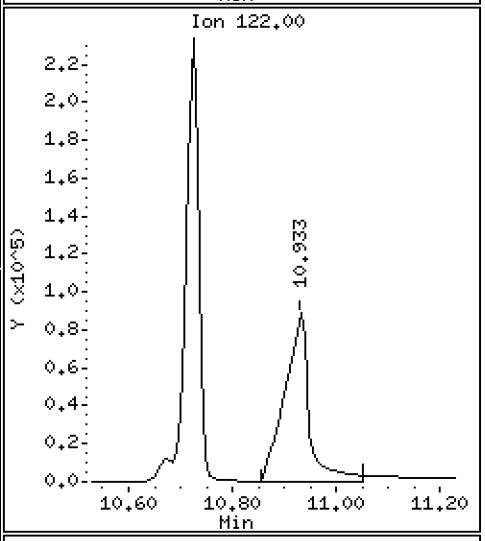
24 Benzoic acid

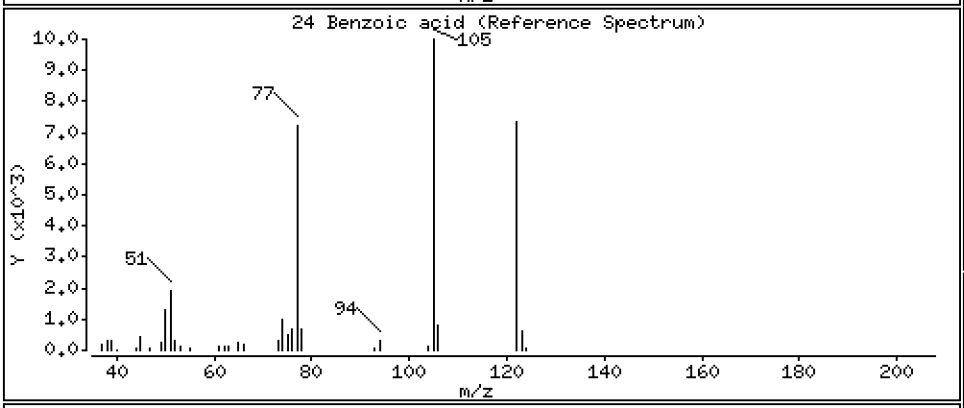
Concentration: 5.510 ug/mL

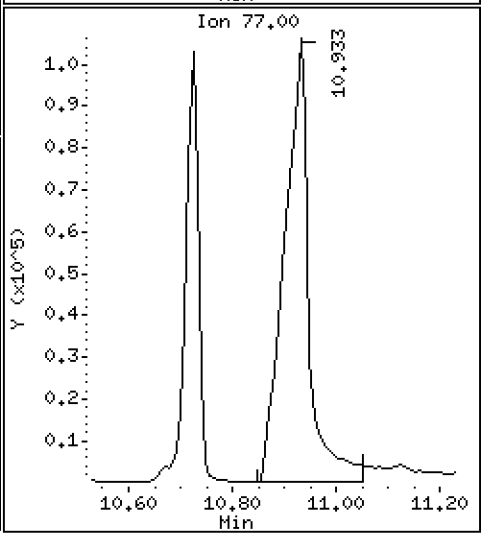


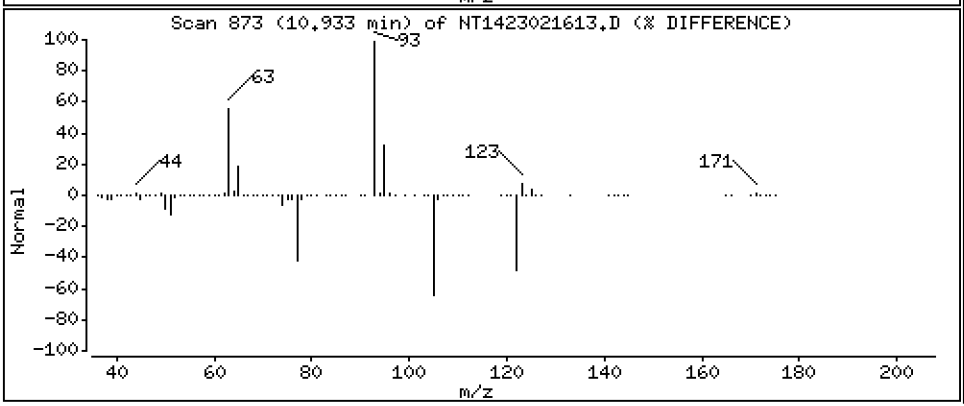












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

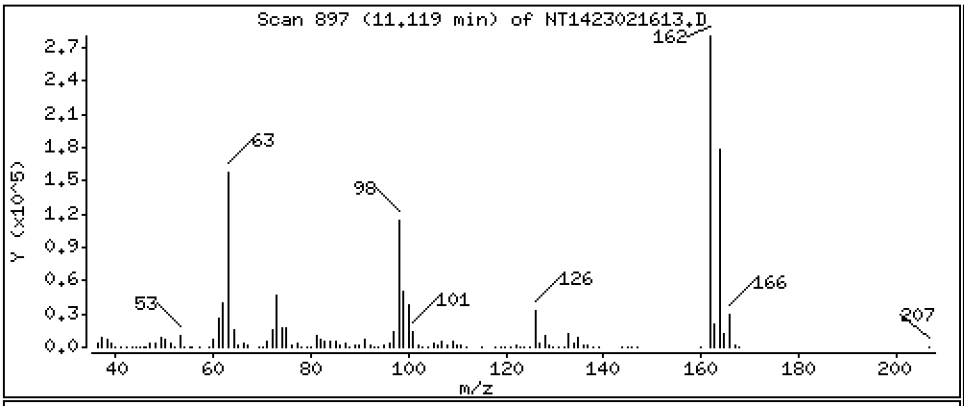
Operator: DSD

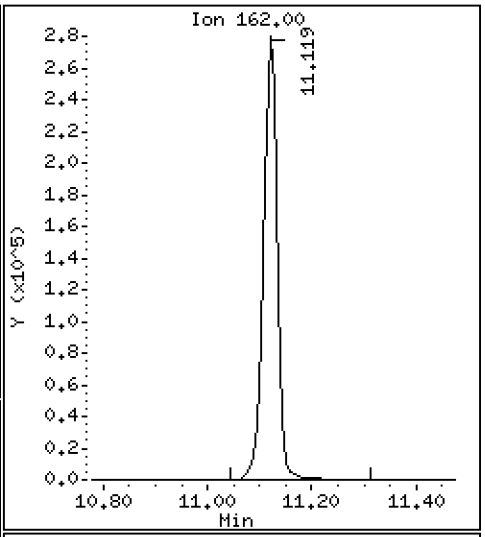
Column phase: ZB-5msi

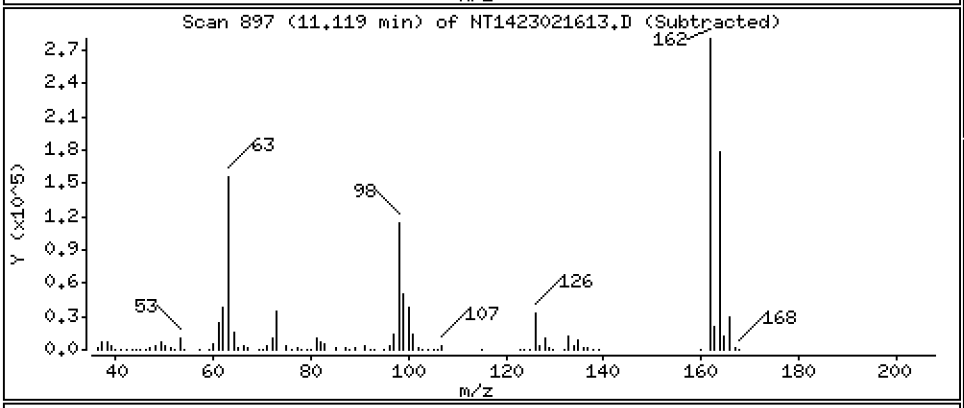
Column diameter: 0.25

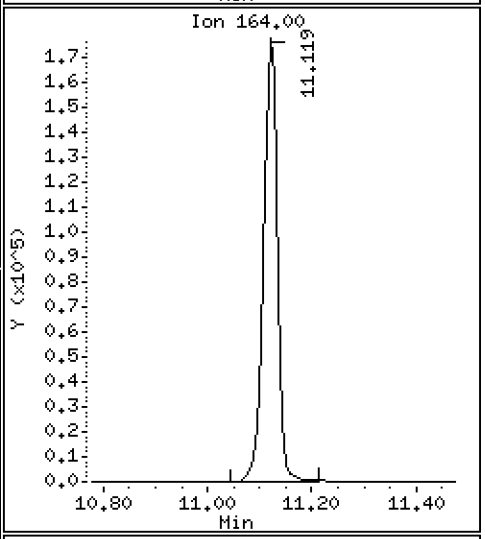
25 2,4-Dichlorophenol

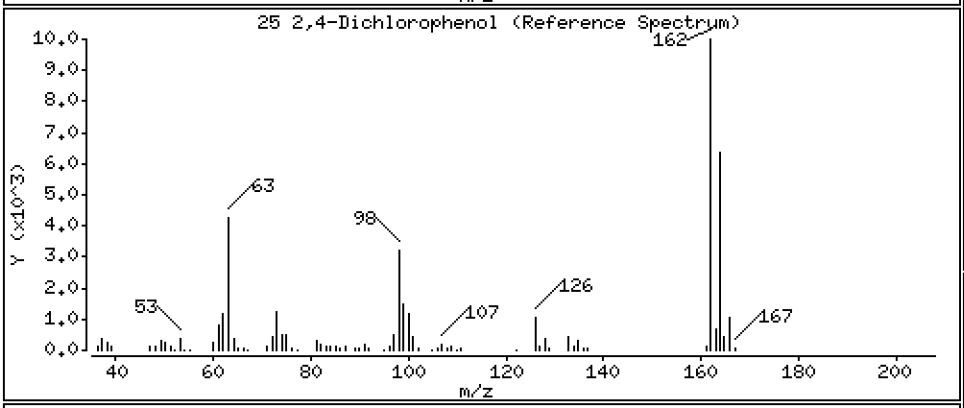
Concentration: 5.124 ug/mL

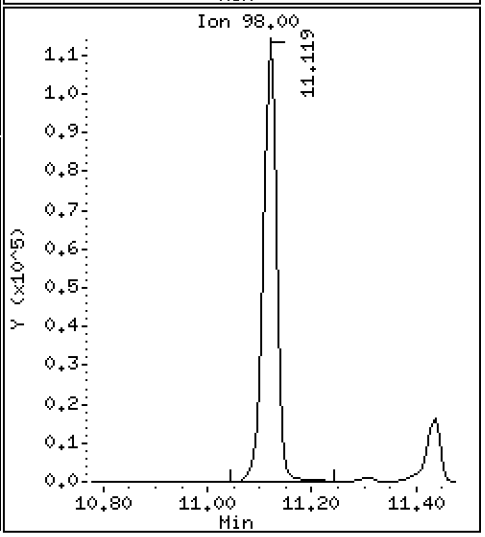


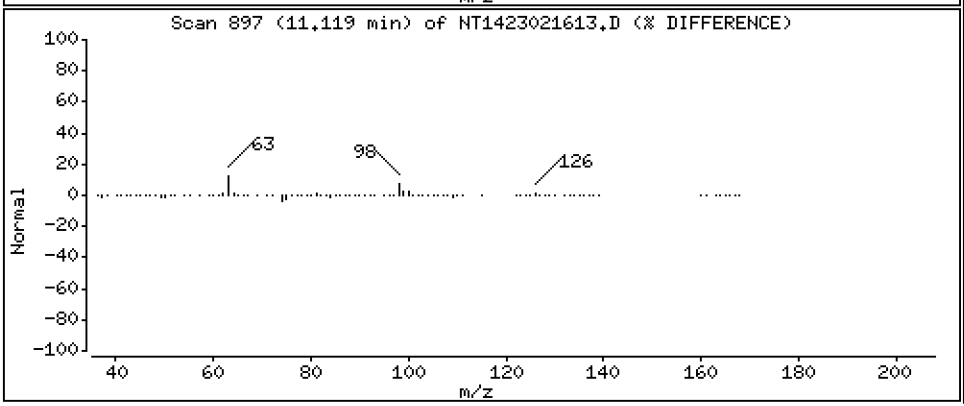












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

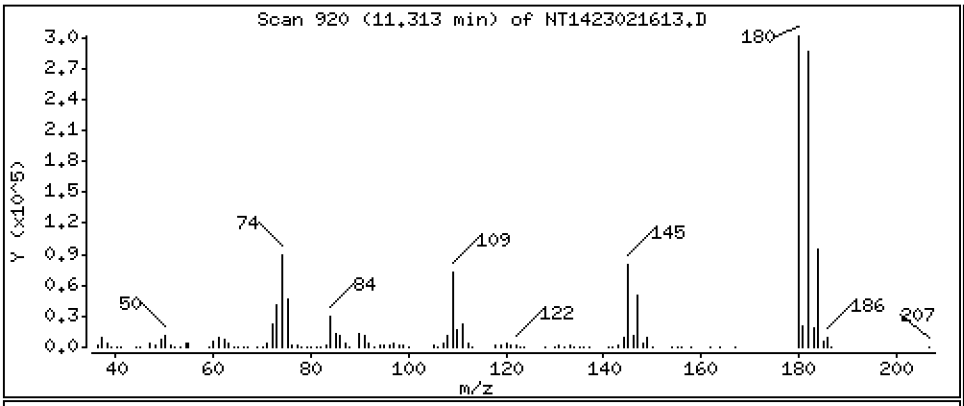
Operator: DSD

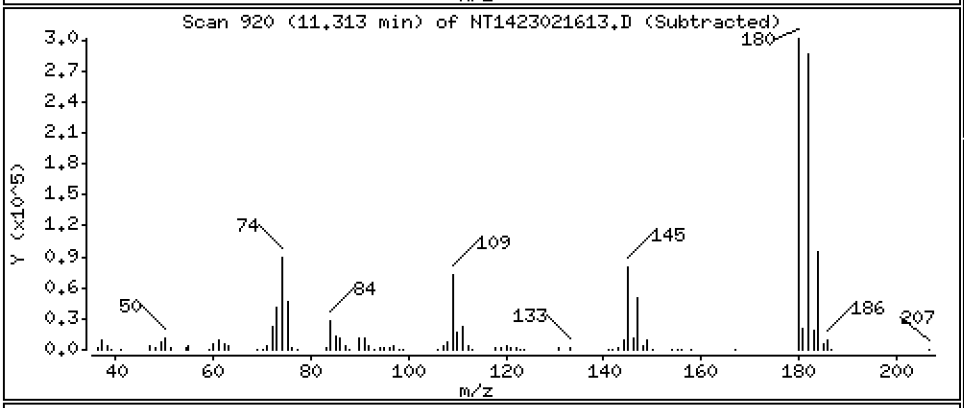
Column phase: ZB-5msi

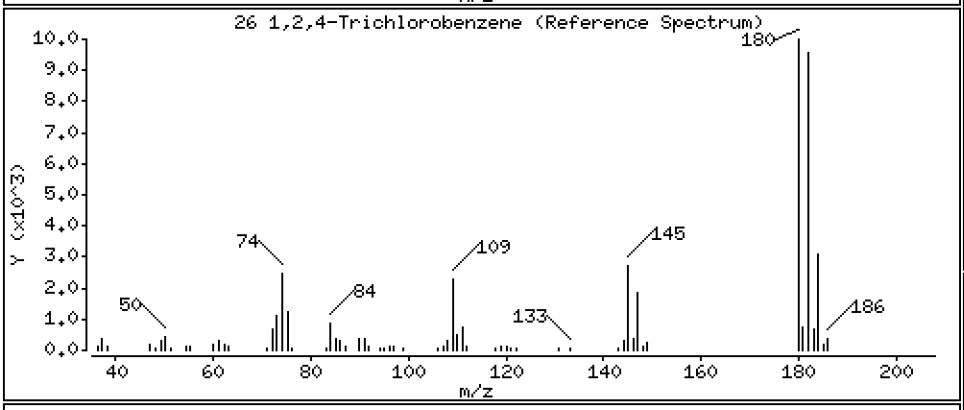
Column diameter: 0.25

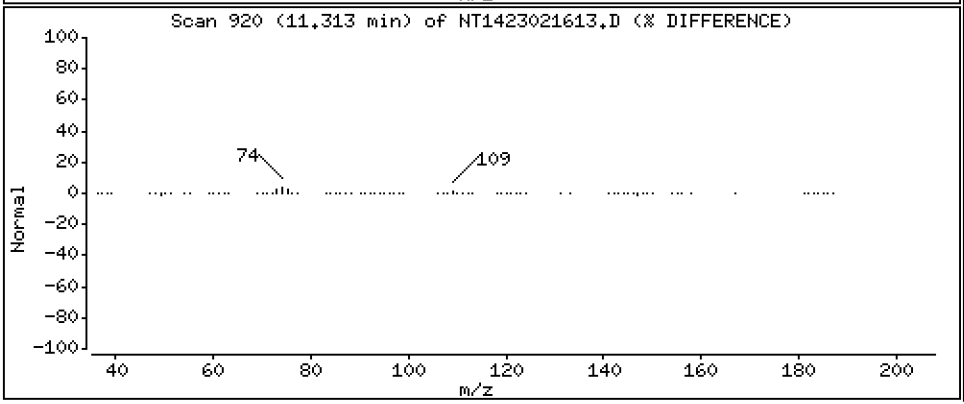
26 1,2,4-Trichlorobenzene

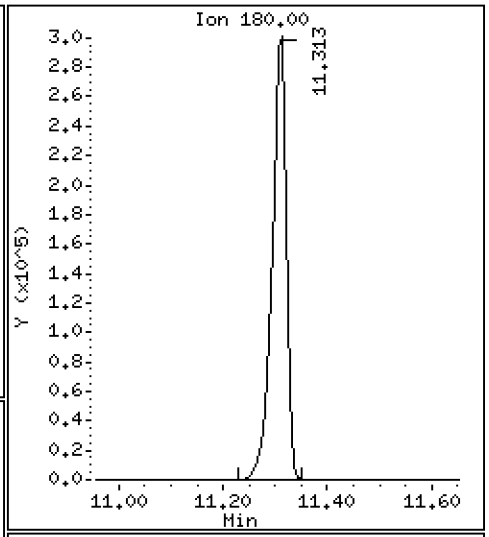
Concentration: 4.650 ug/mL

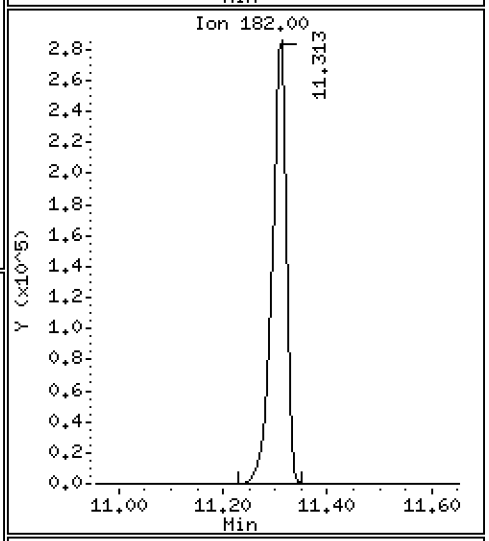


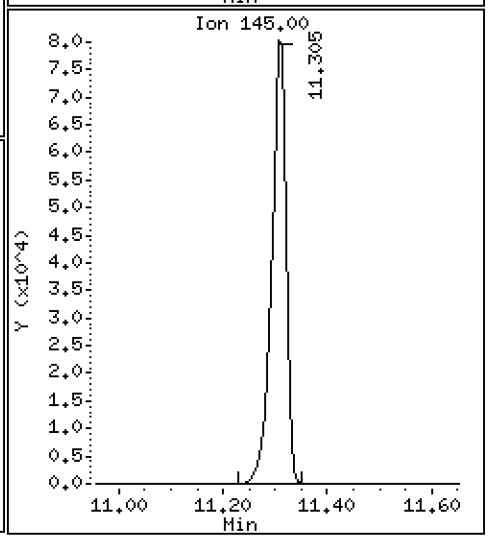












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

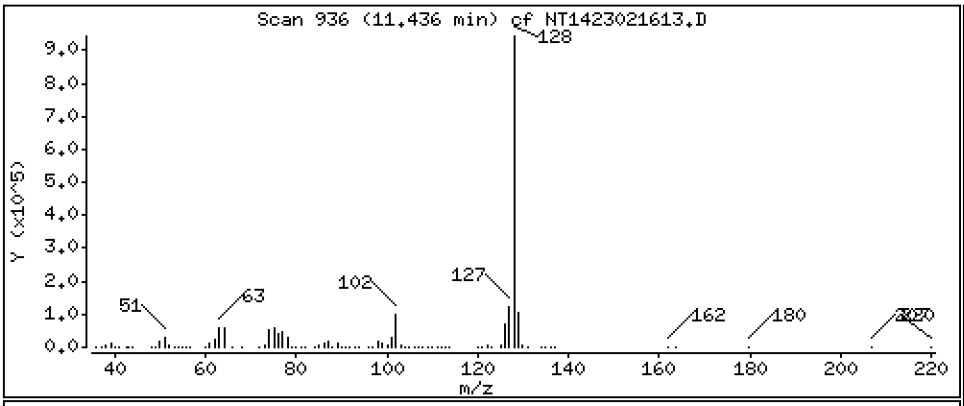
Operator: DSD

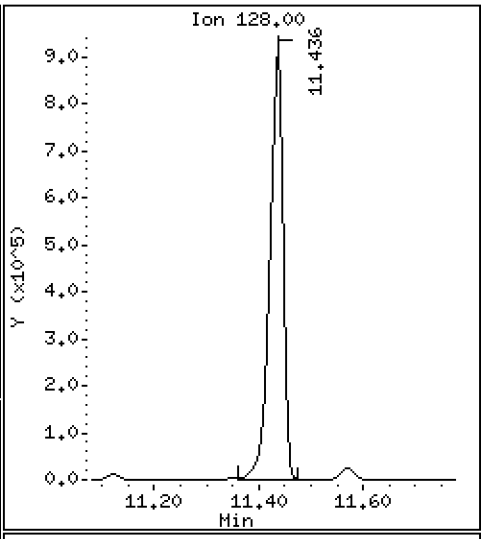
Column phase: ZB-5msi

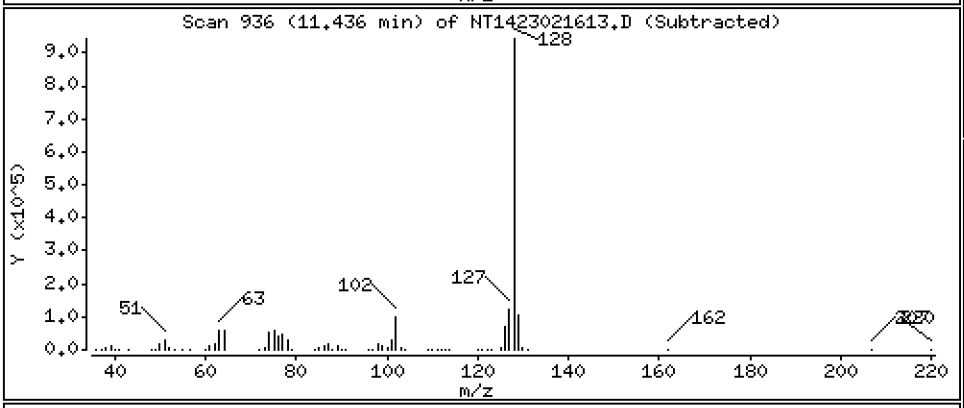
Column diameter: 0.25

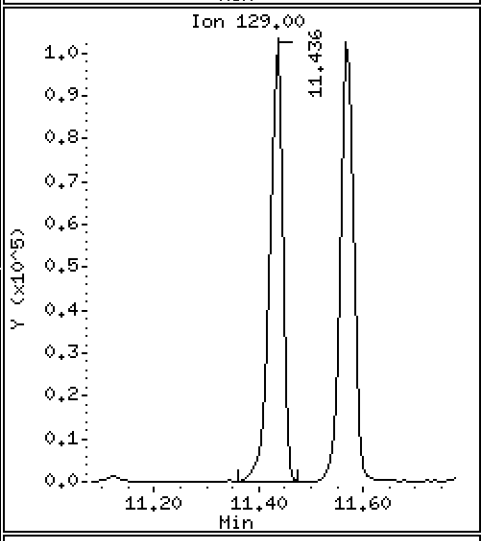
28 Naphthalene

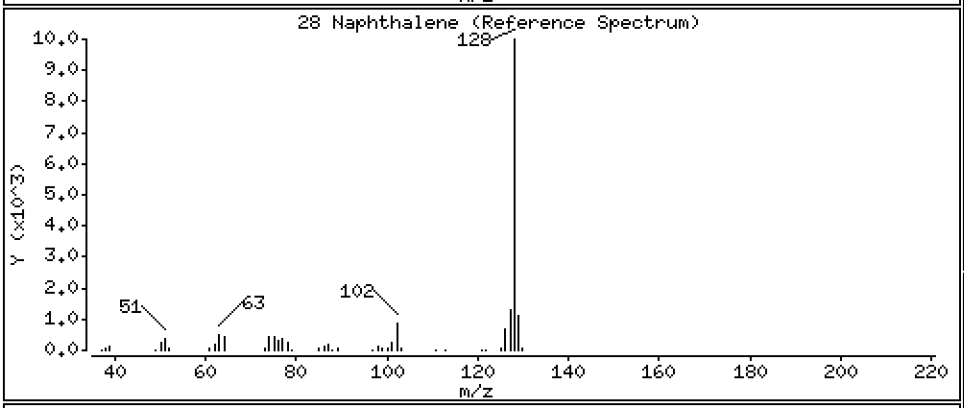
Concentration: 4.736 ug/mL

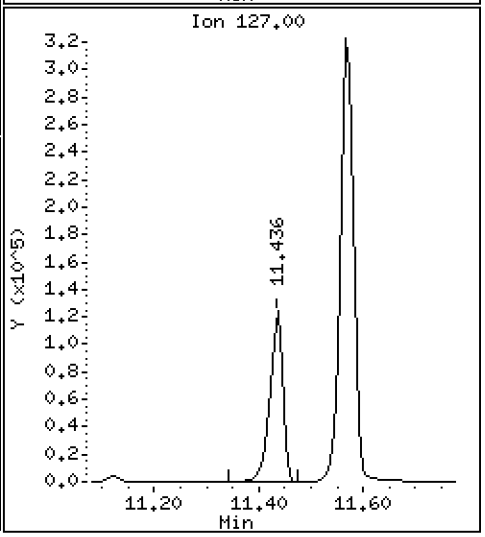


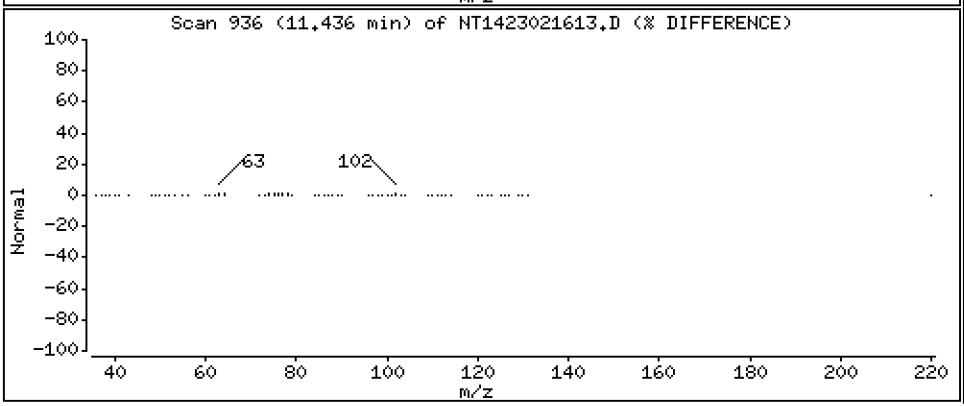












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

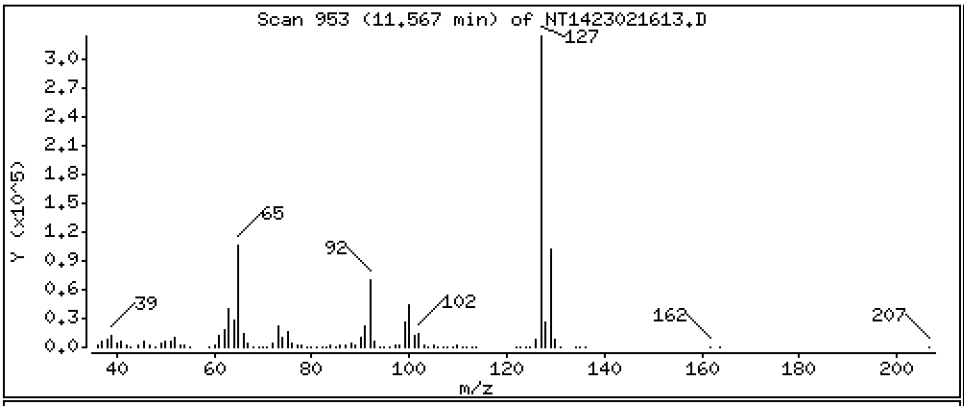
Operator: DSD

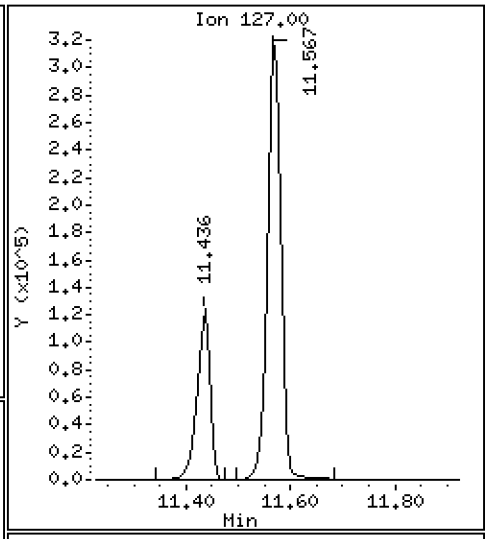
Column phase: ZB-5msi

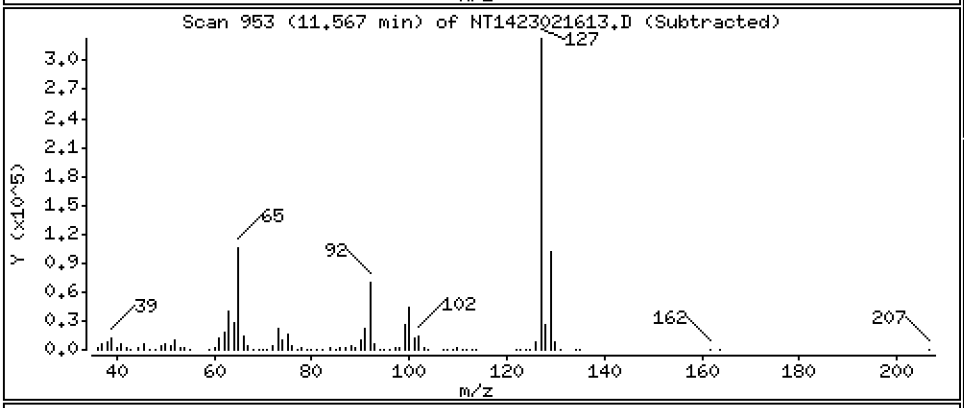
Column diameter: 0.25

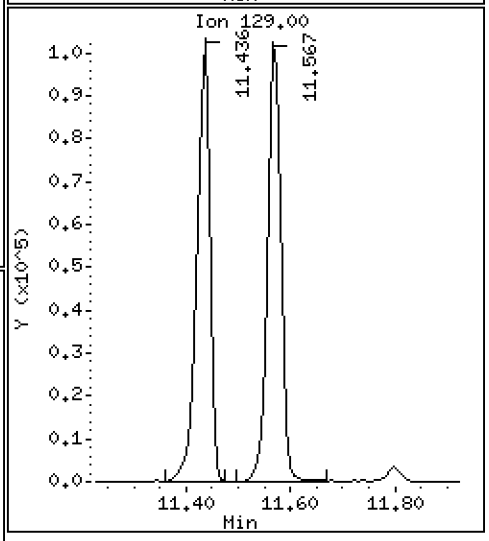
29 4-Chloroaniline

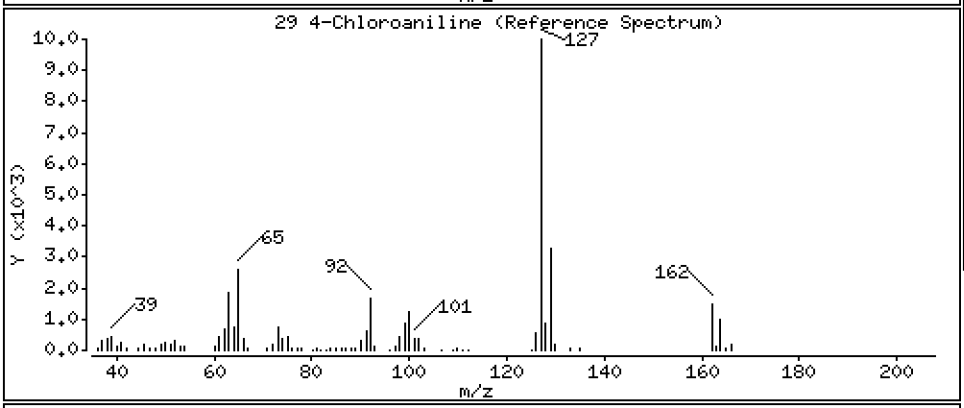
Concentration: 3.911 ug/mL

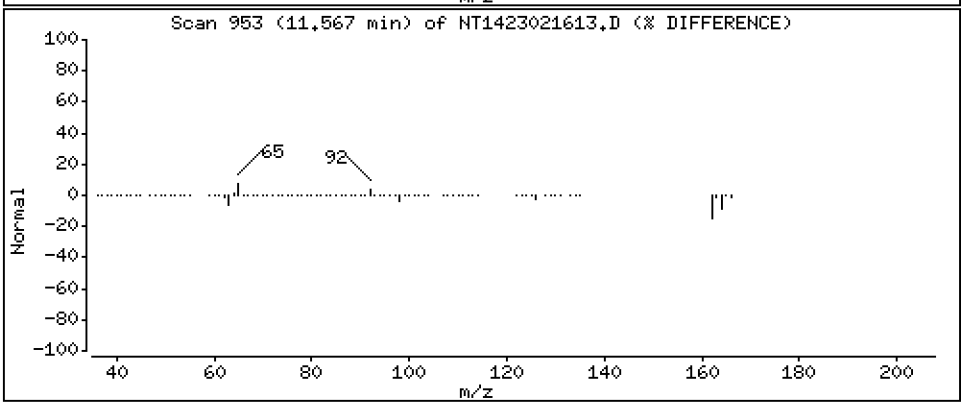












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

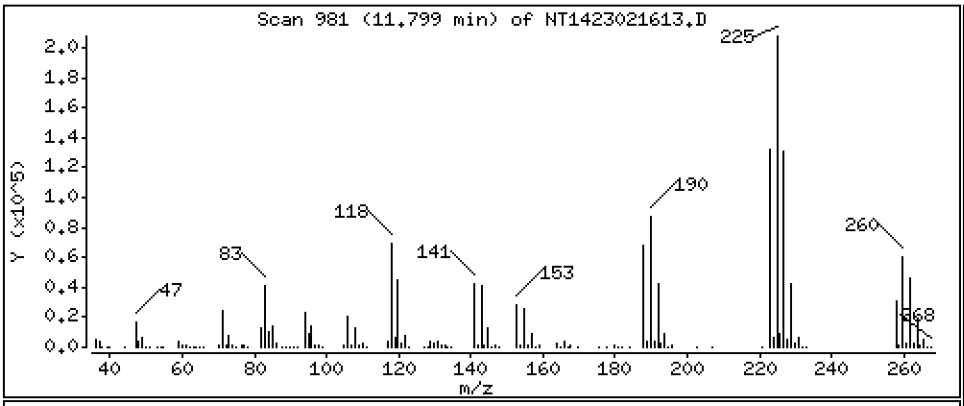
Operator: DSD

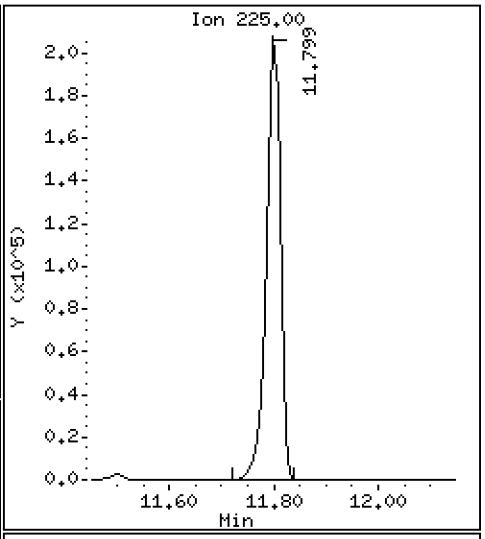
Column phase: ZB-5msi

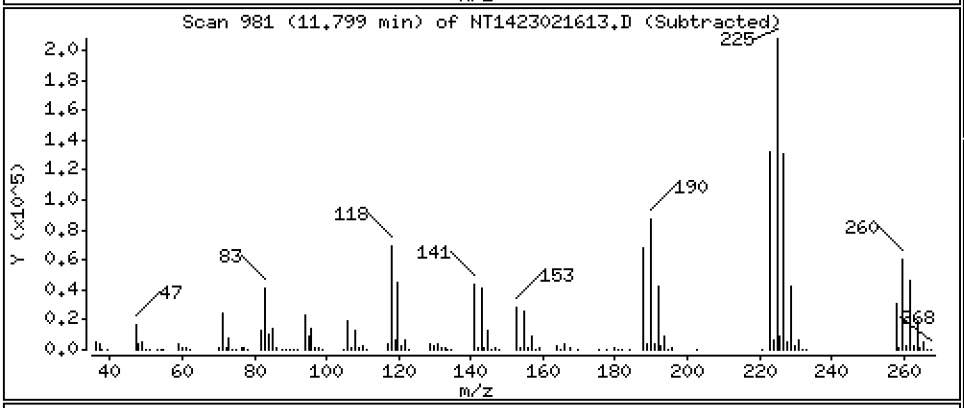
Column diameter: 0.25

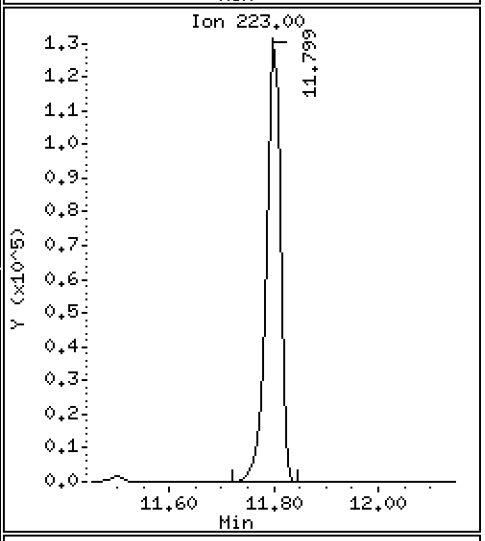
30 Hexachlorobutadiene

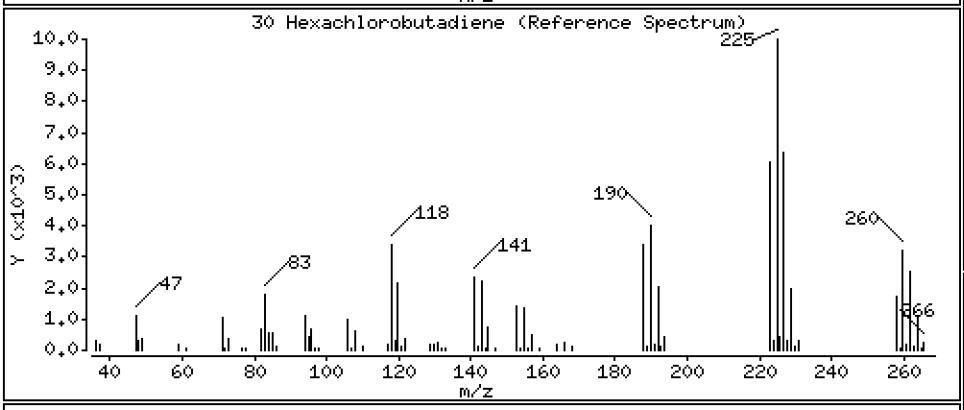
Concentration: 4.917 ug/mL

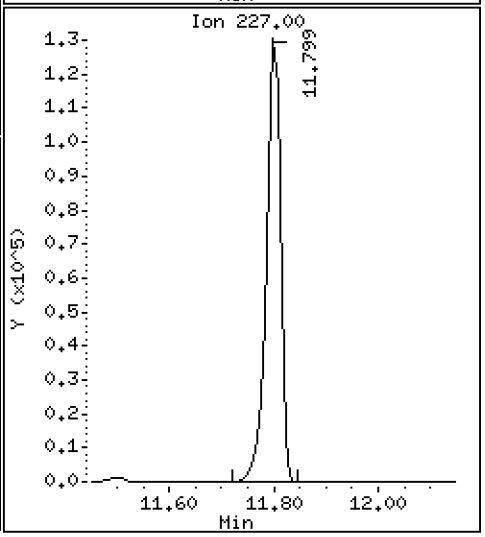


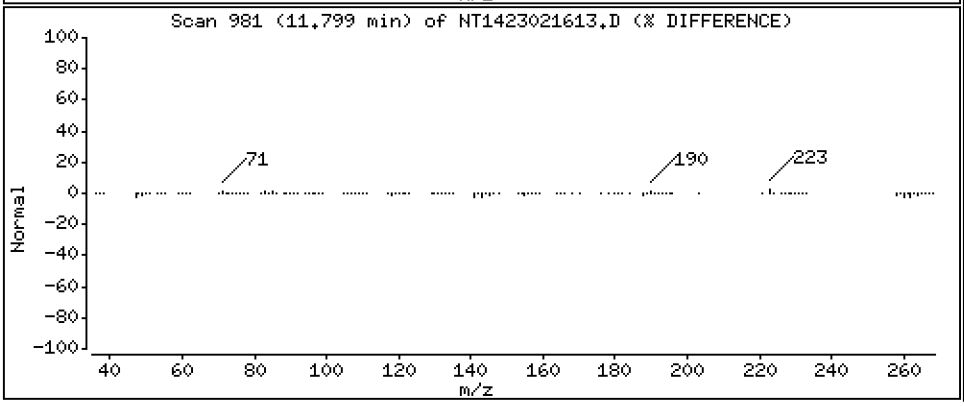












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

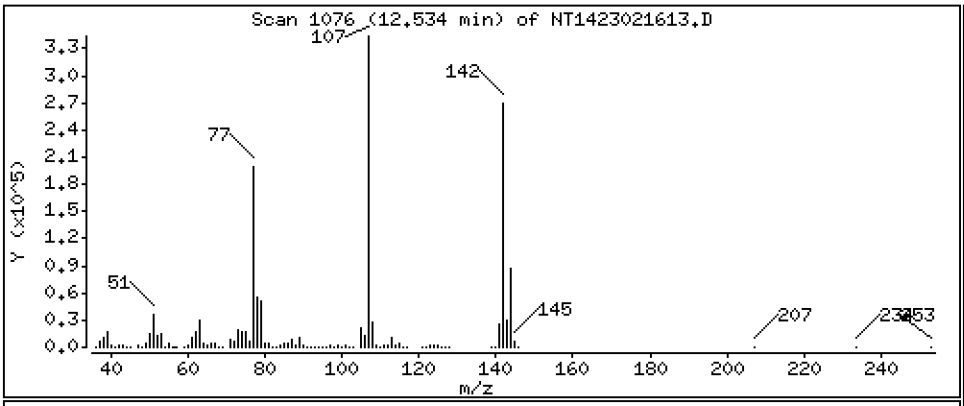
Operator: DSD

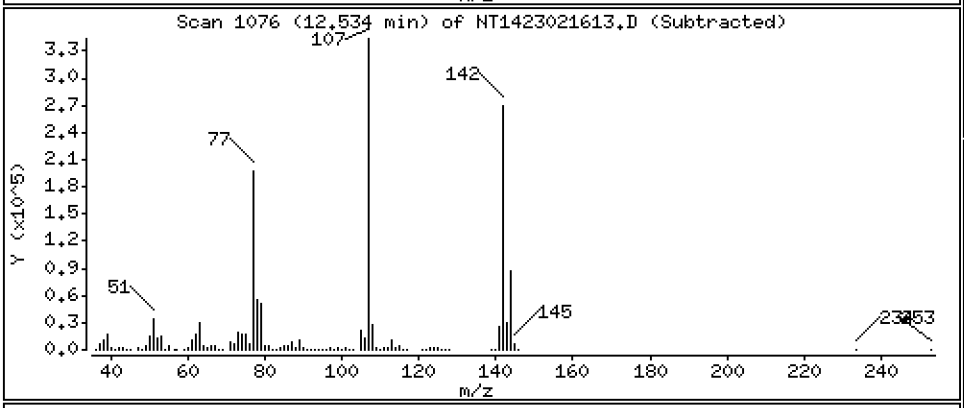
Column phase: ZB-5msi

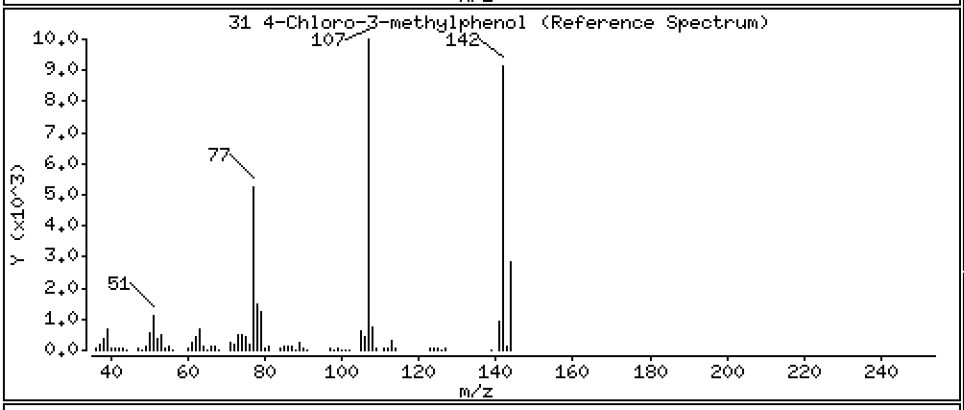
Column diameter: 0.25

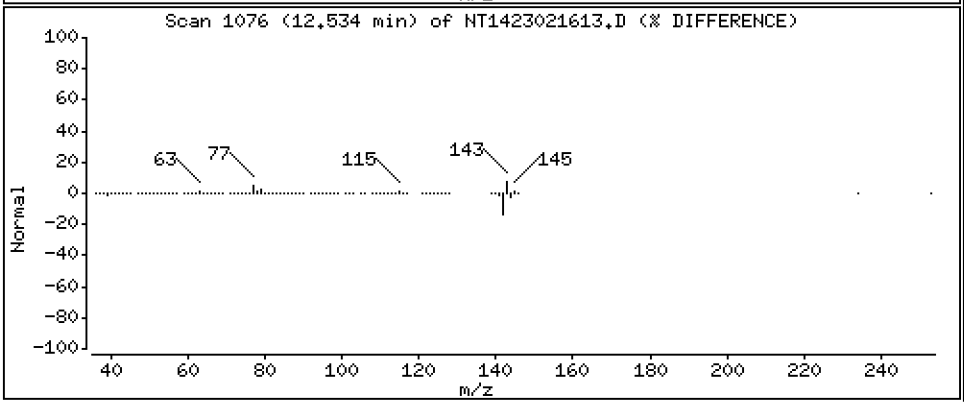
31 4-Chloro-3-methylphenol

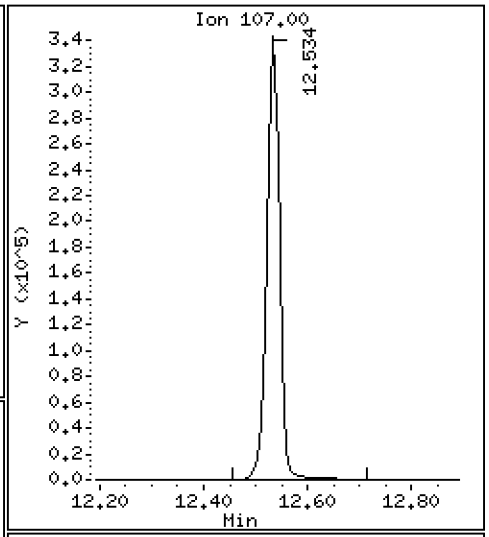
Concentration: 5.045 ug/mL

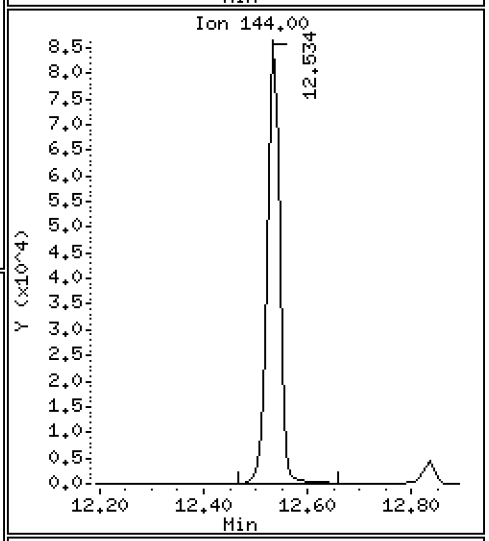


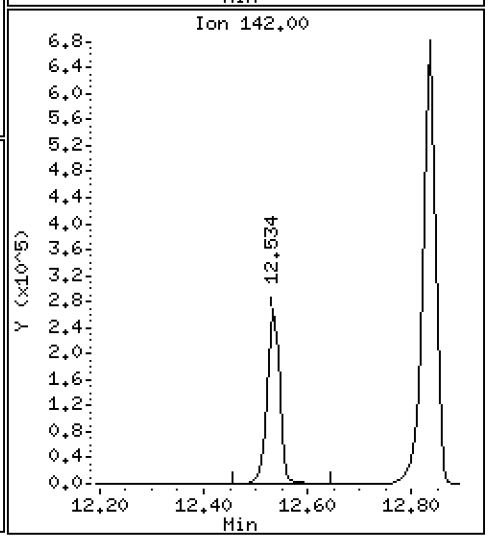












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

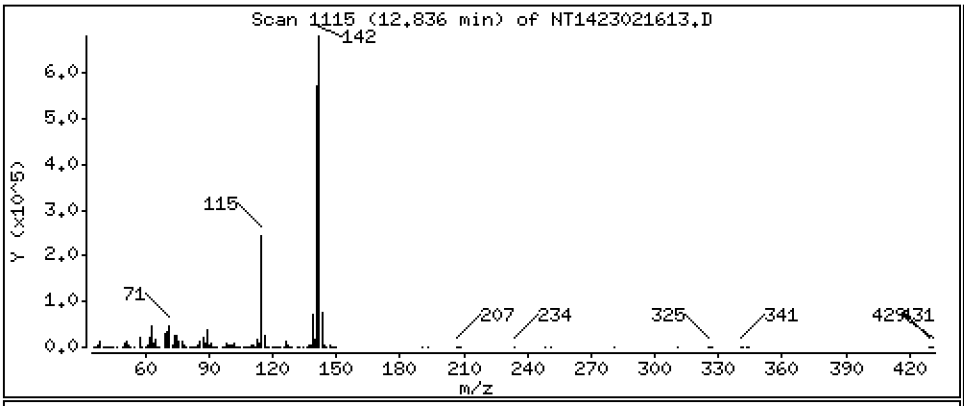
Operator: DSD

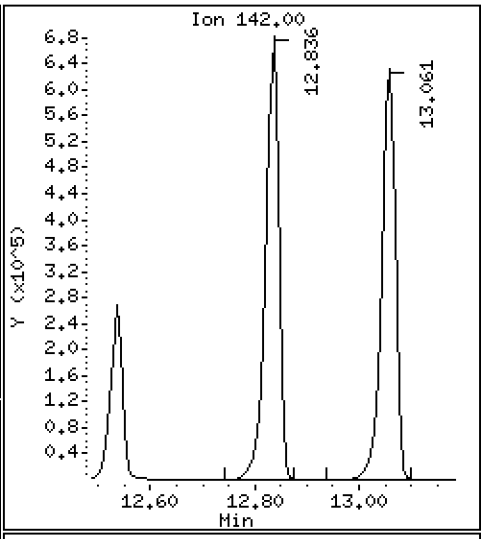
Column phase: ZB-5msi

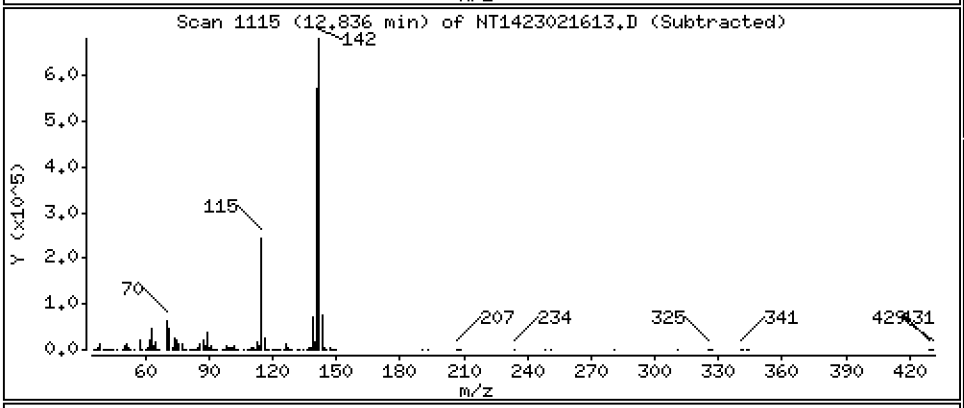
Column diameter: 0.25

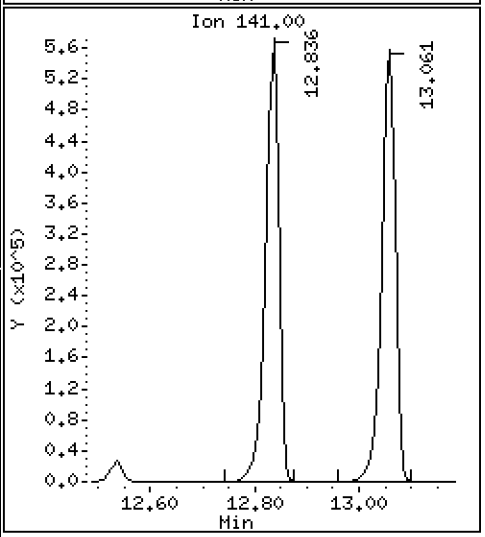
32 2-Methylnaphthalene

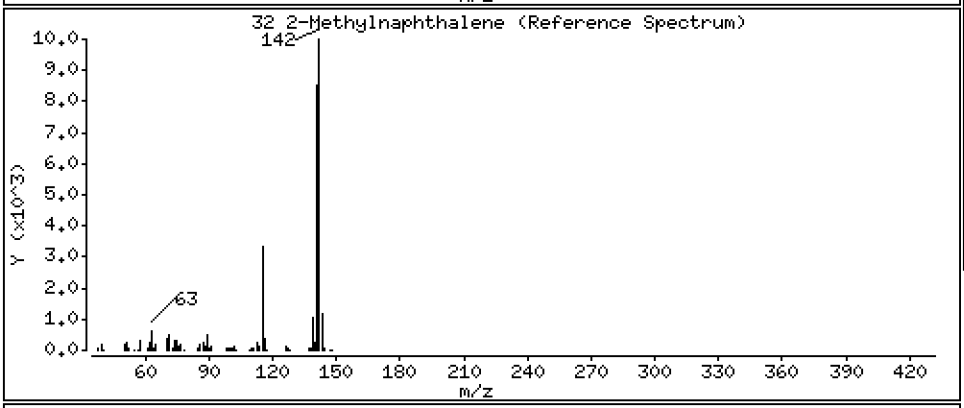
Concentration: 4.606 ug/mL

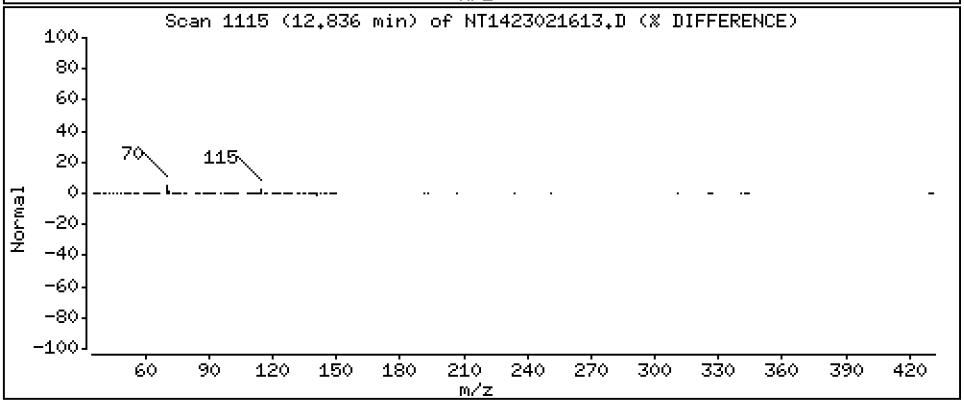












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

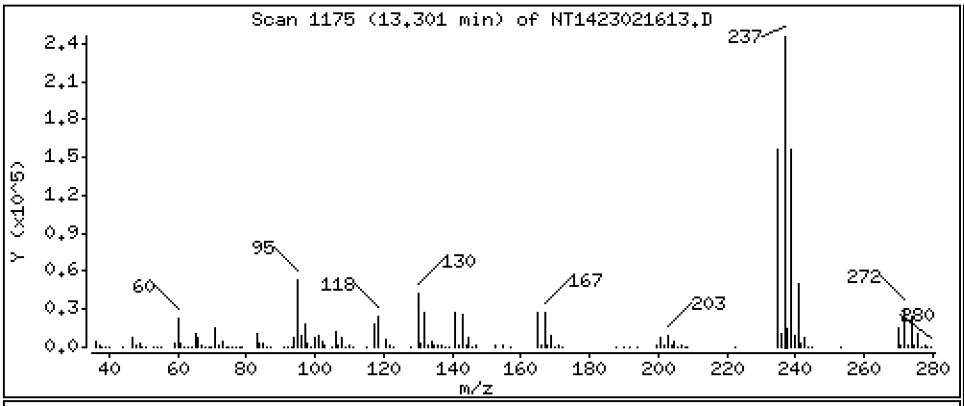
Operator: DSD

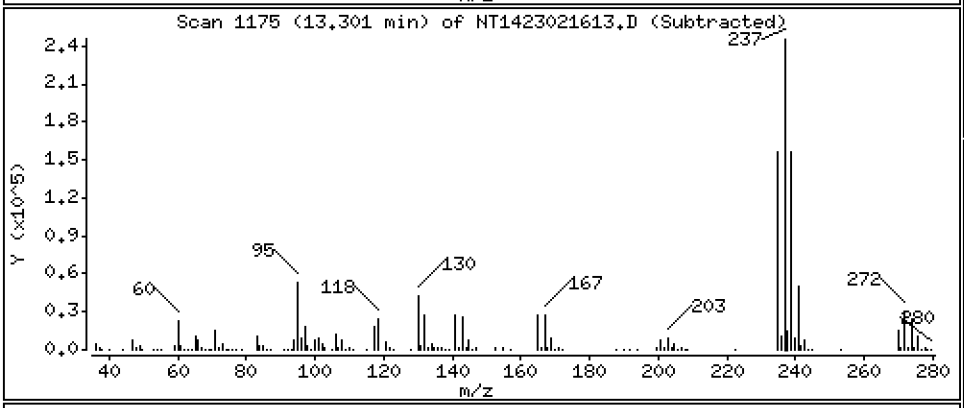
Column phase: ZB-5msi

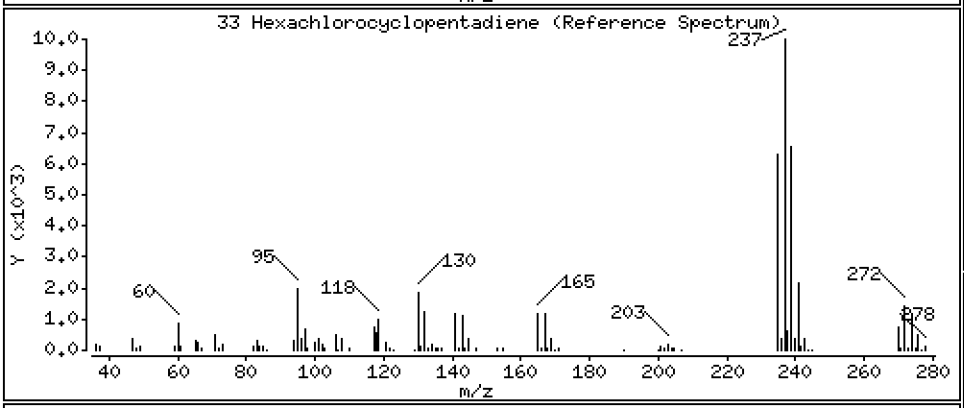
Column diameter: 0.25

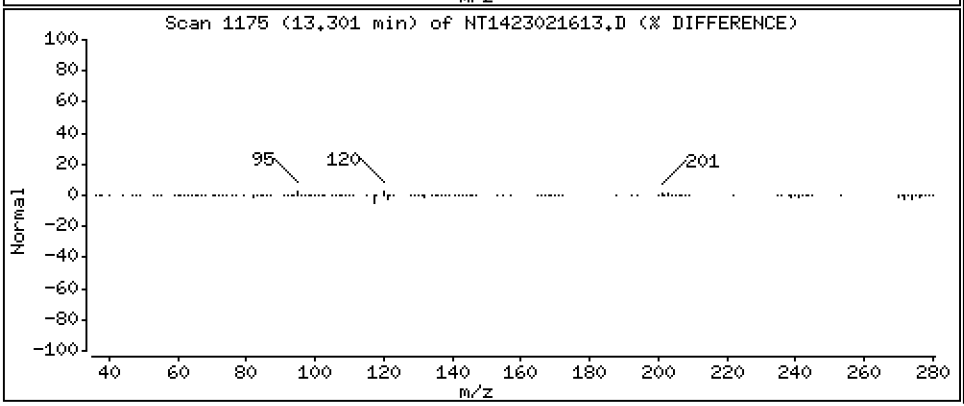
33 Hexachlorocyclopentadiene

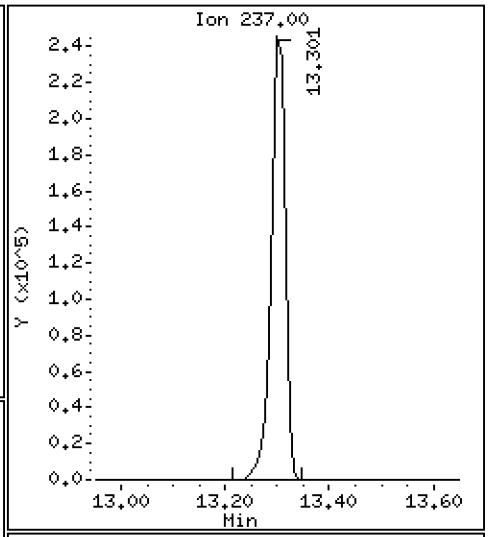
Concentration: 5.301 ug/mL

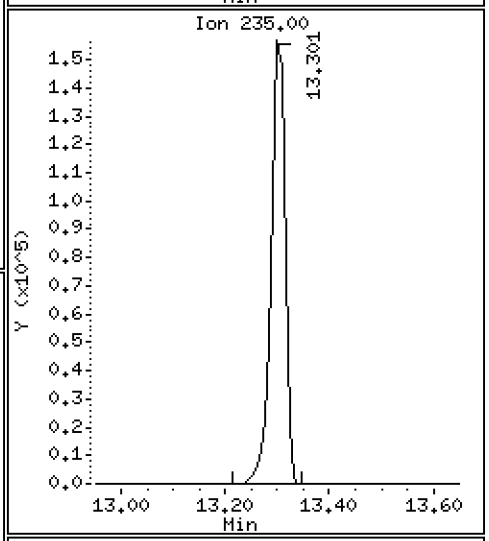


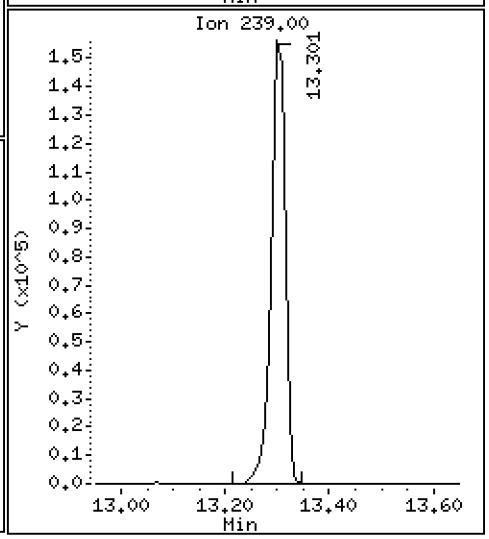












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

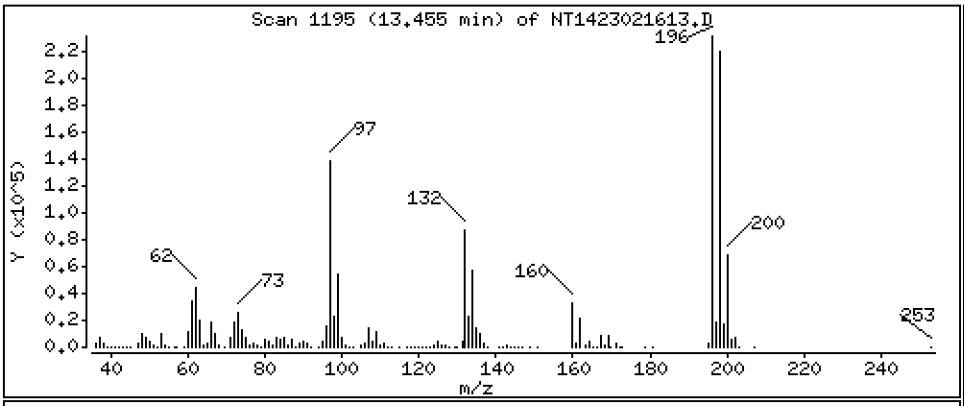
Operator: DSD

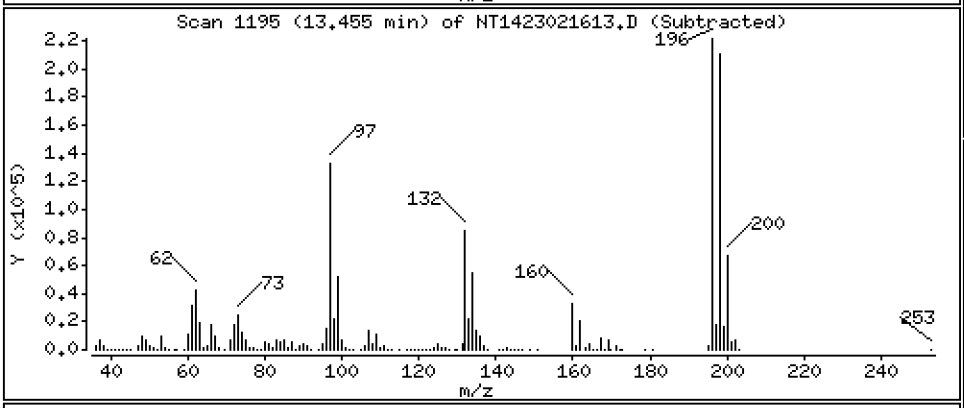
Column phase: ZB-5msi

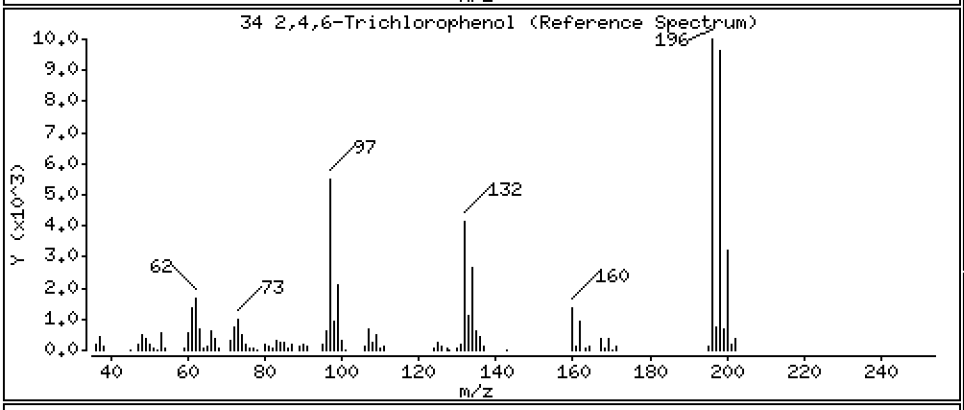
Column diameter: 0.25

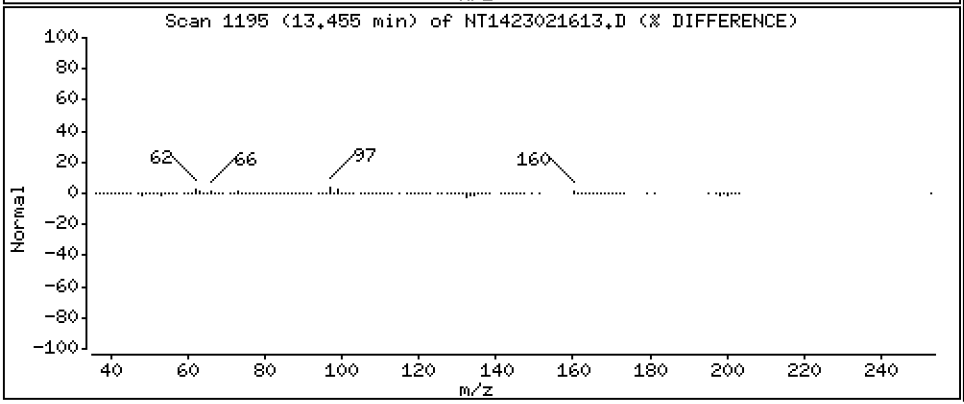
34 2,4,6-Trichlorophenol

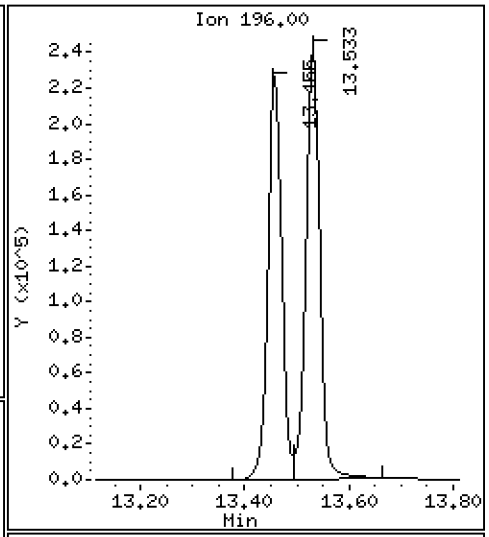
Concentration: 4.808 ug/mL

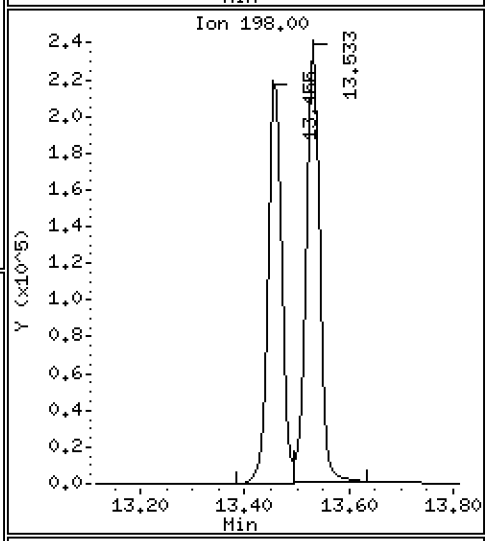


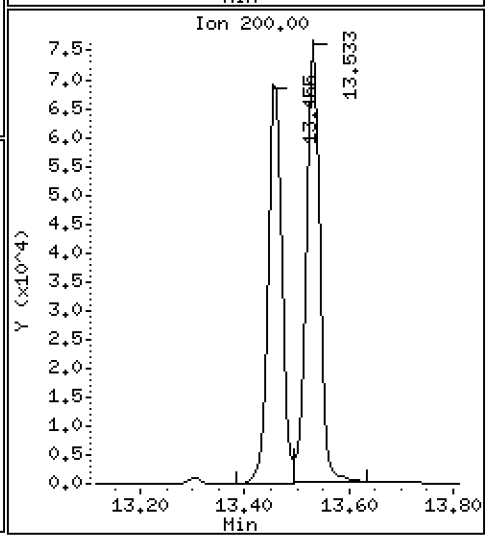












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

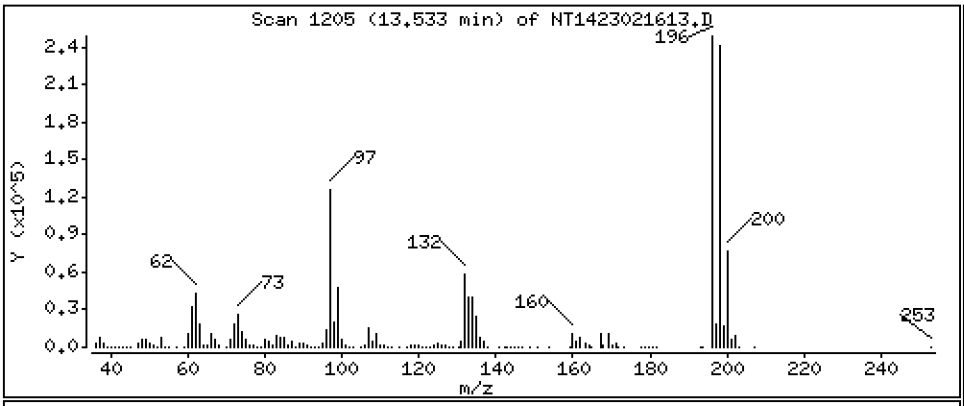
Operator: DSD

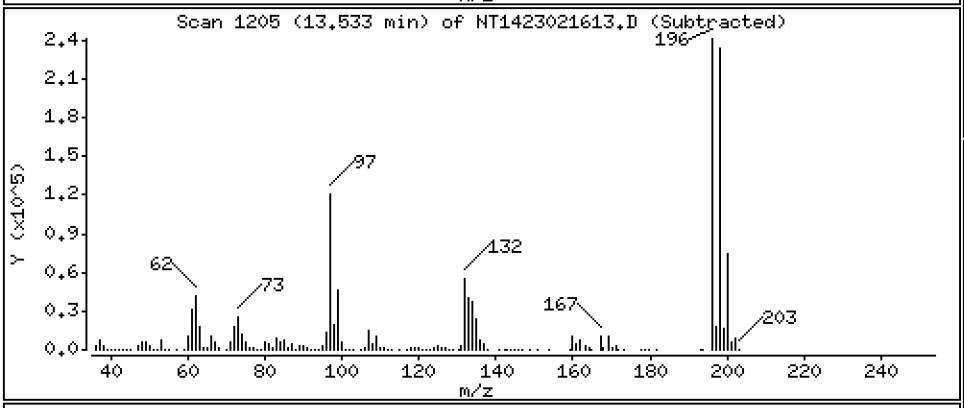
Column phase: ZB-5msi

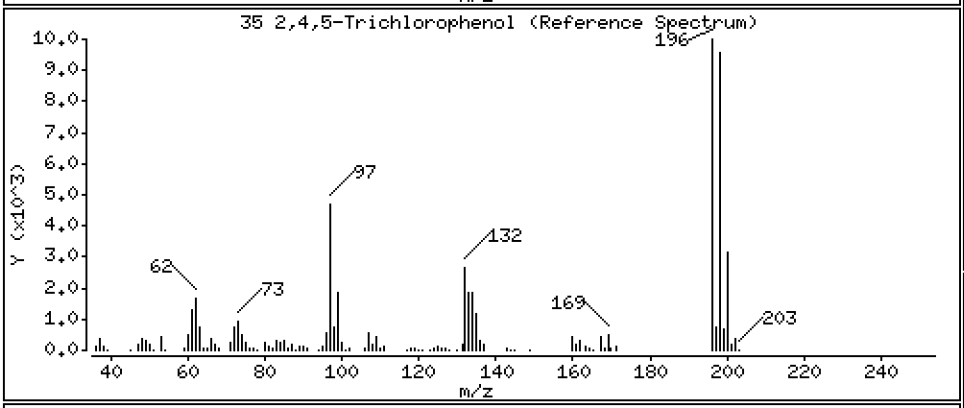
Column diameter: 0.25

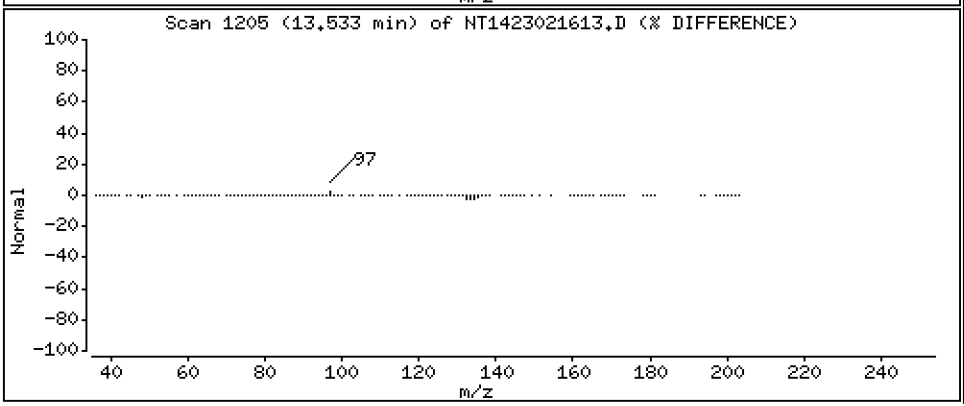
35 2,4,5-Trichlorophenol

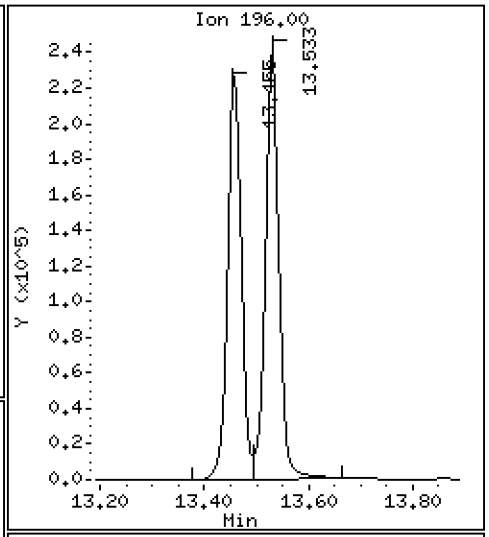
Concentration: 4.707 ug/mL

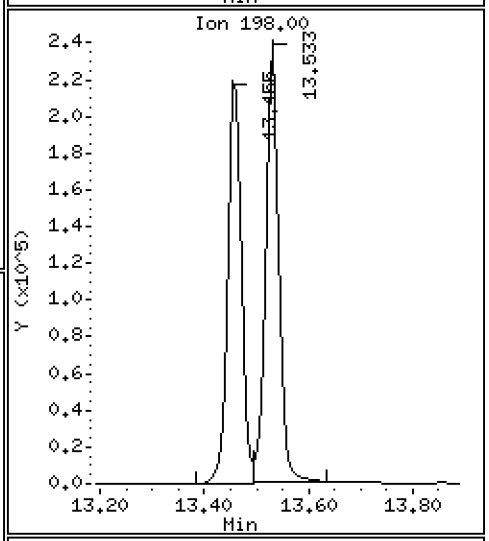


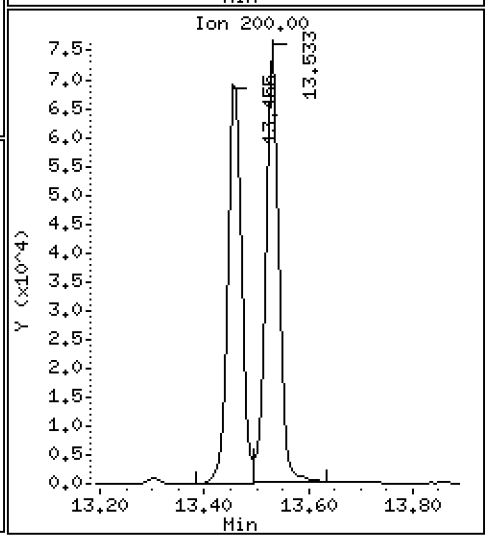












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

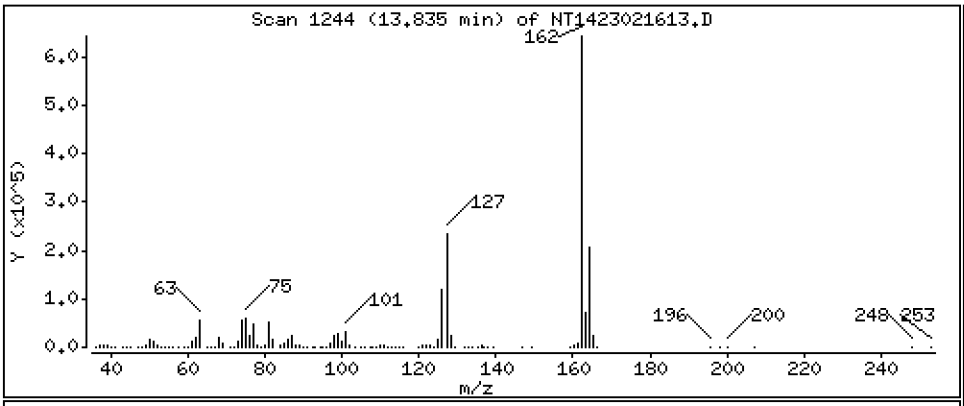
Operator: DSD

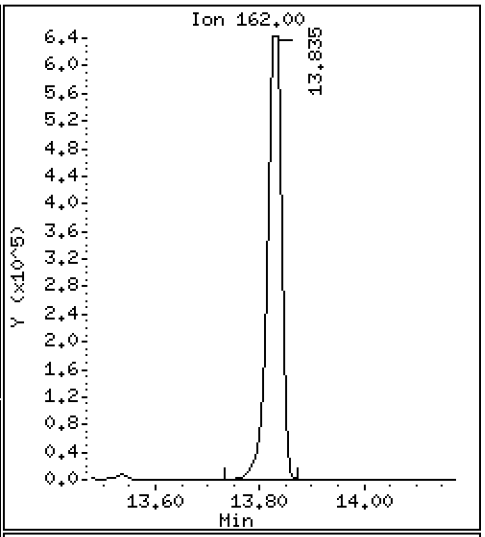
Column phase: ZB-5msi

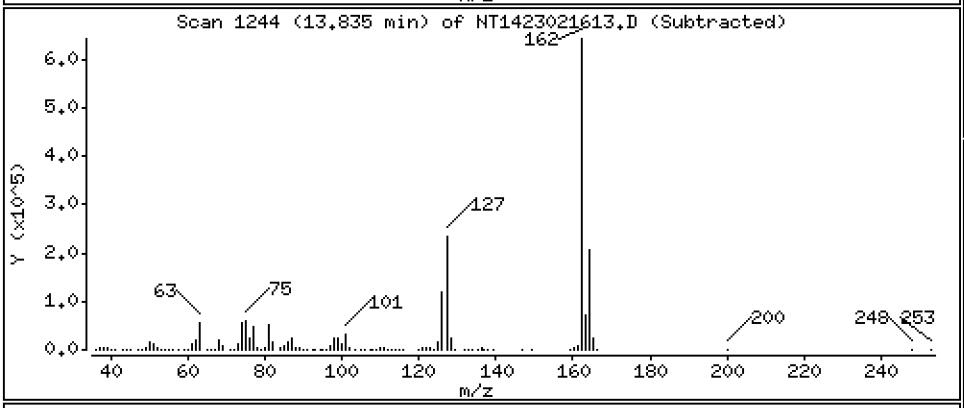
Column diameter: 0.25

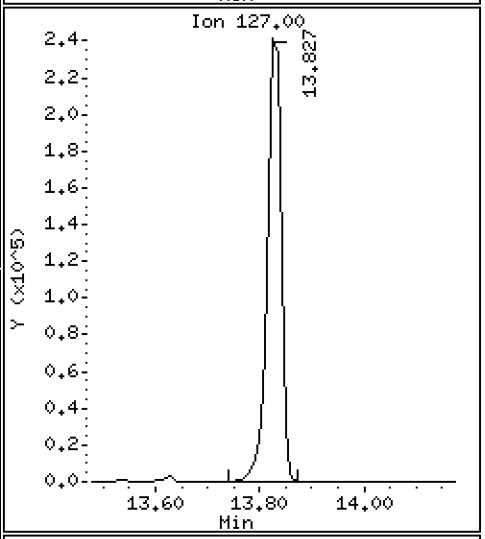
37 2-Chloronaphthalene

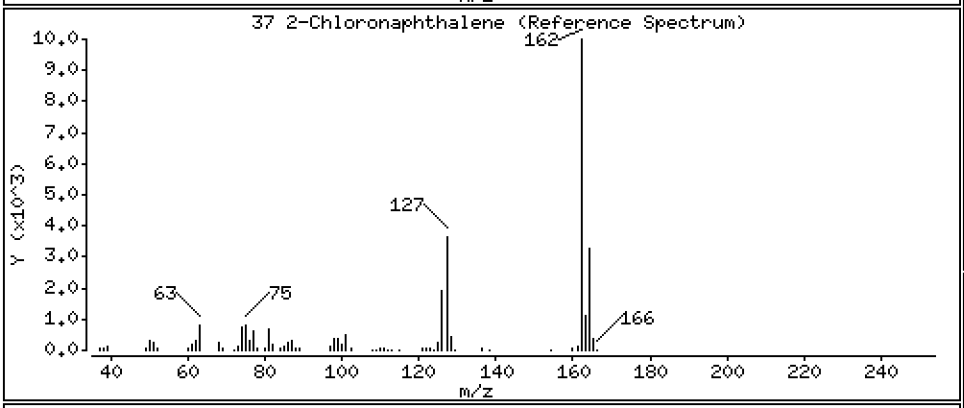
Concentration: 4.639 ug/mL

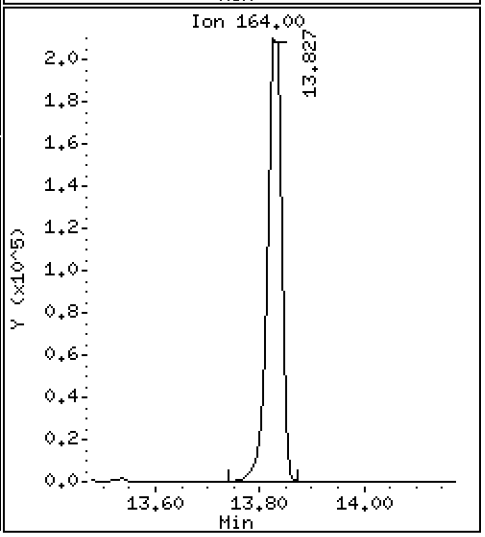


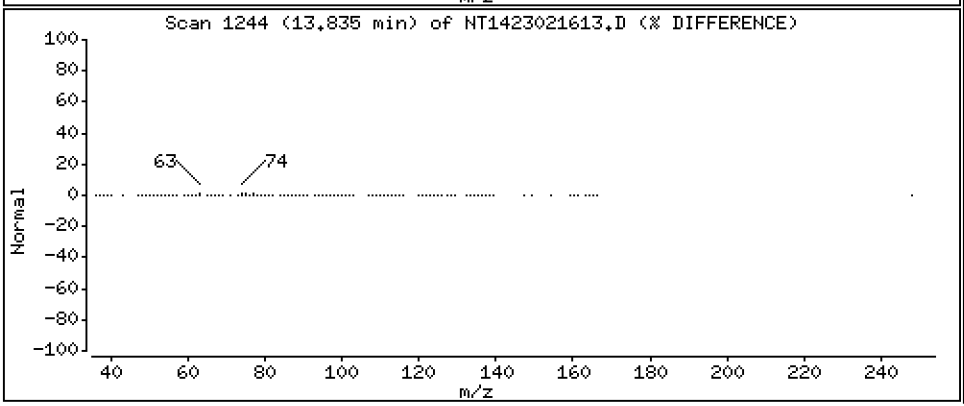












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

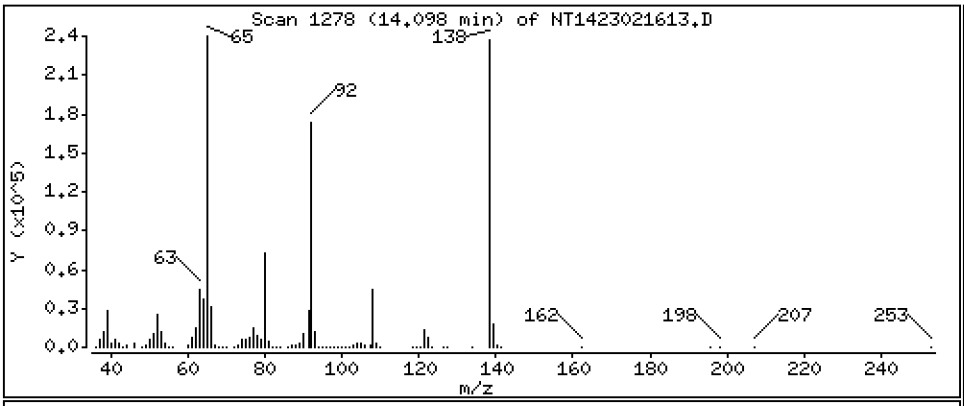
Operator: DSD

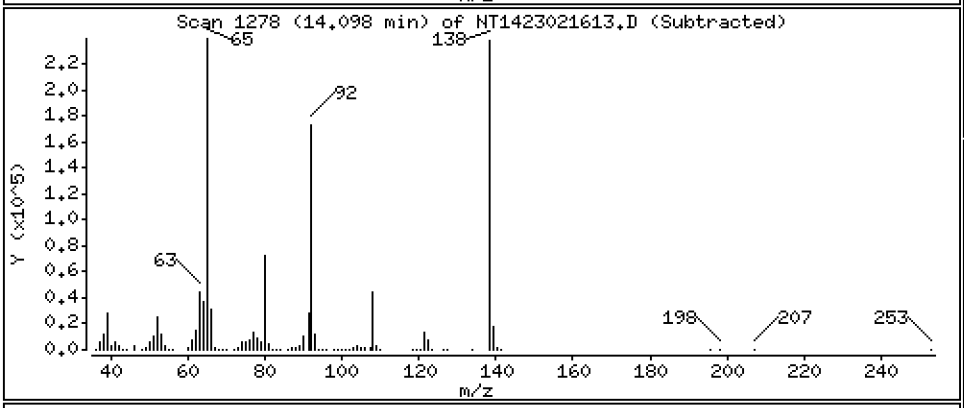
Column phase: ZB-5msi

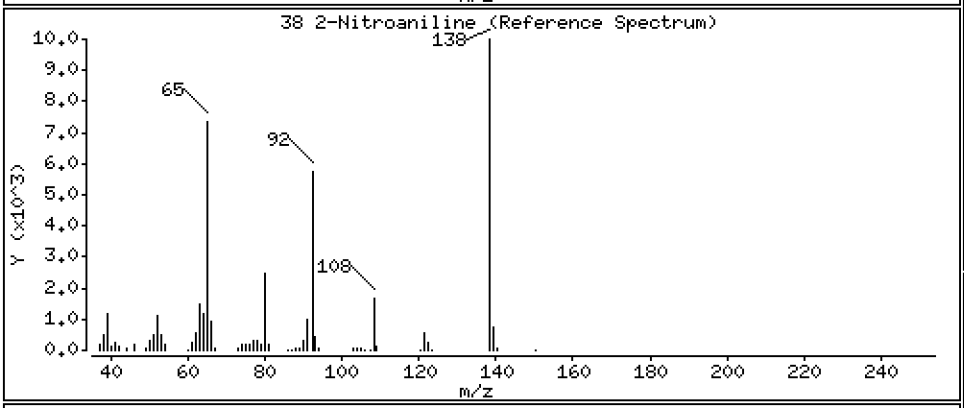
Column diameter: 0.25

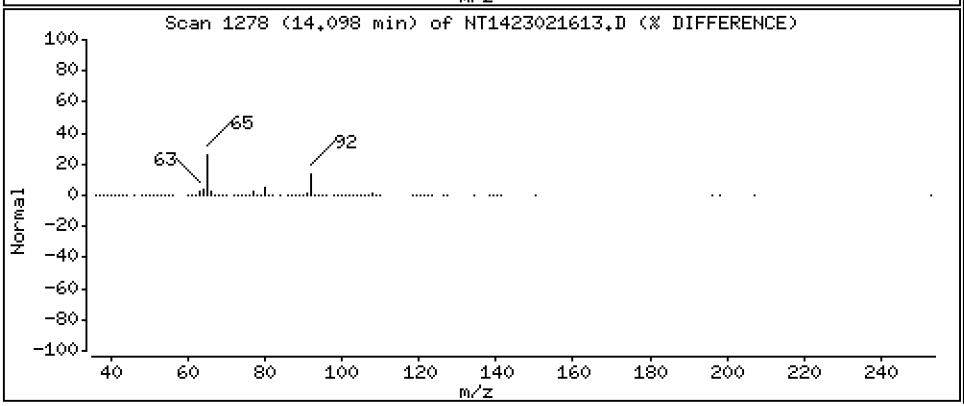
38 2-Nitroaniline

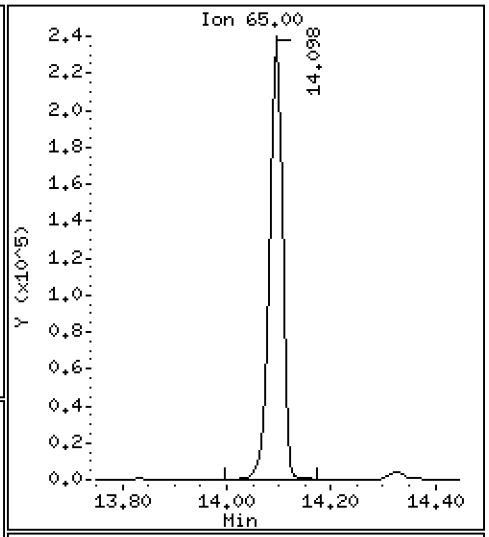
Concentration: 4.852 ug/mL

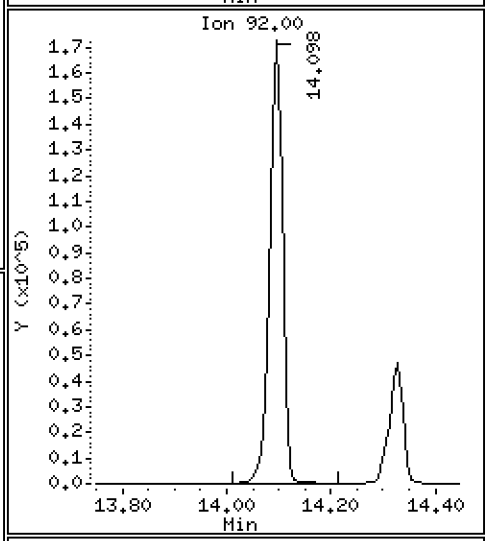


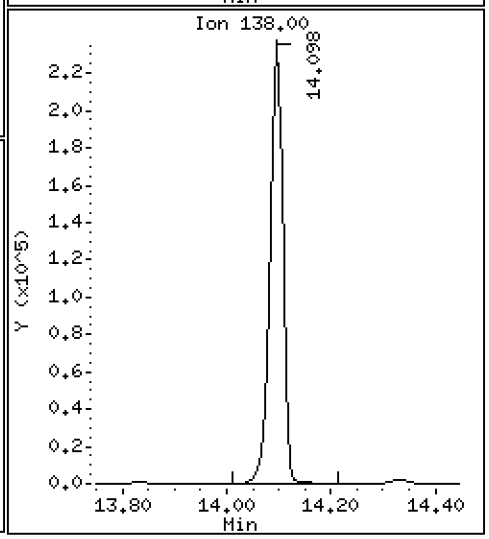












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

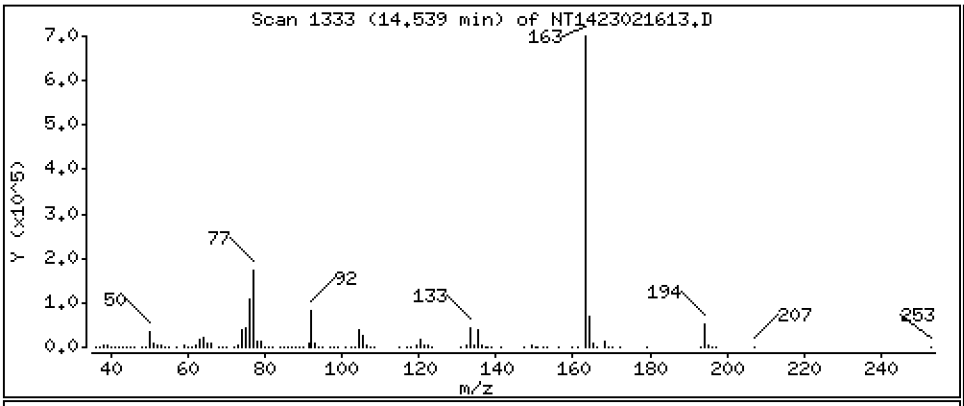
Operator: DSD

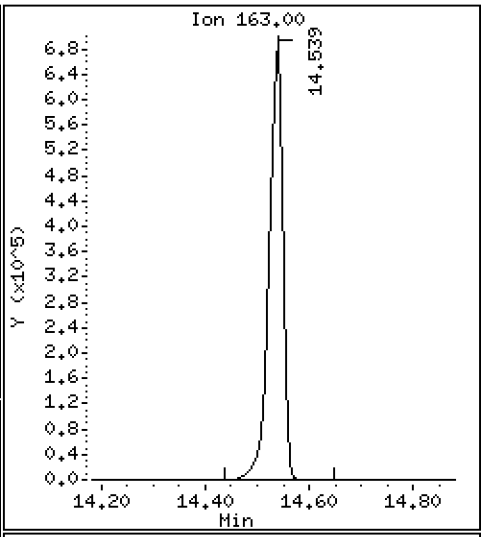
Column phase: ZB-5msi

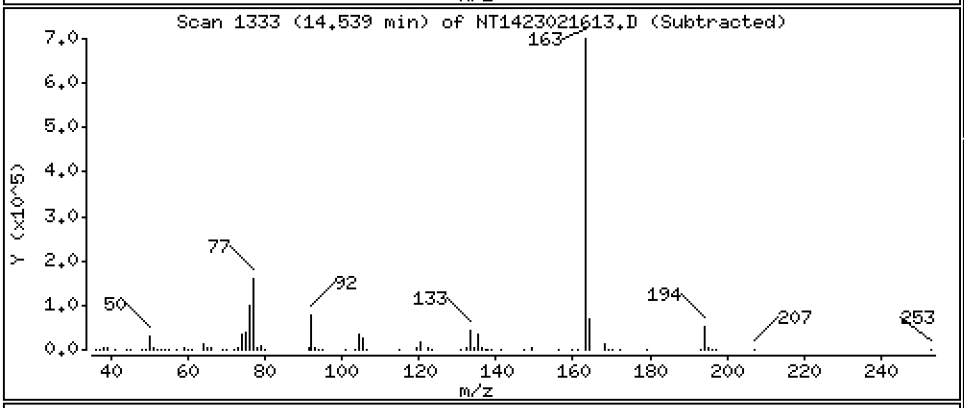
Column diameter: 0.25

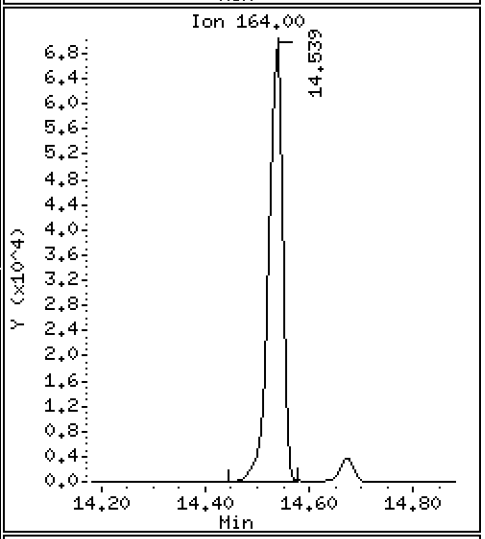
39 Dimethylphthalate

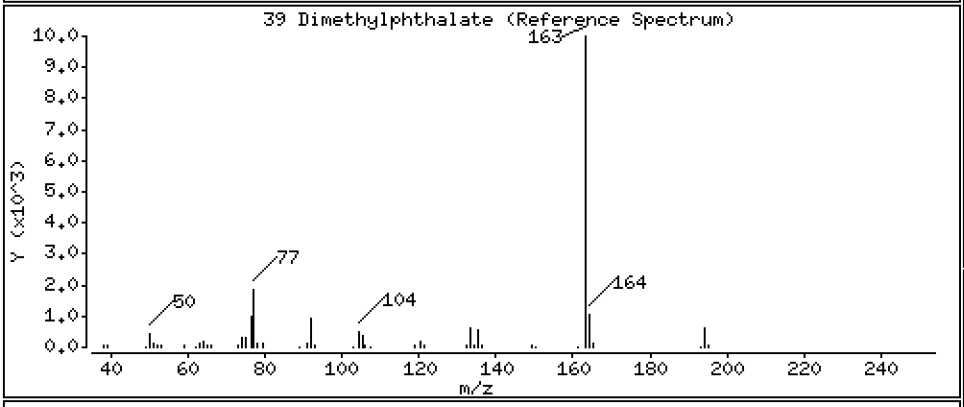
Concentration: 4.693 ug/mL

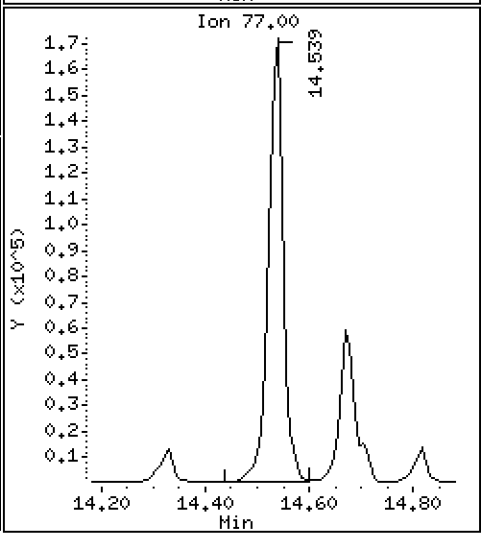


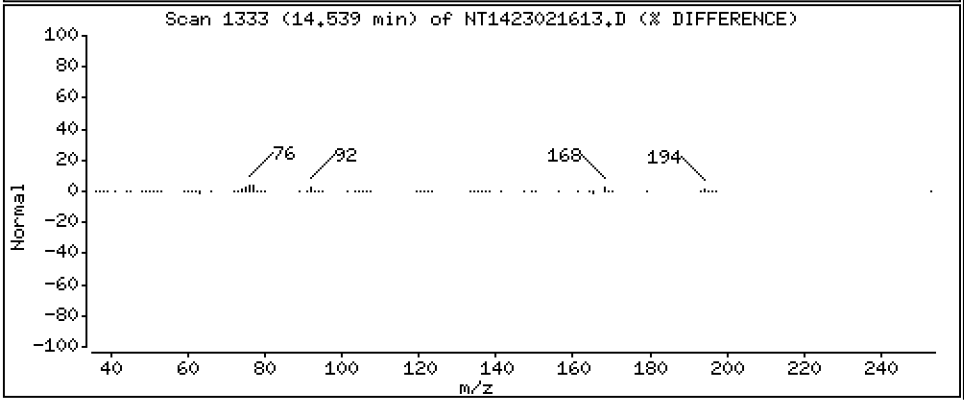












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

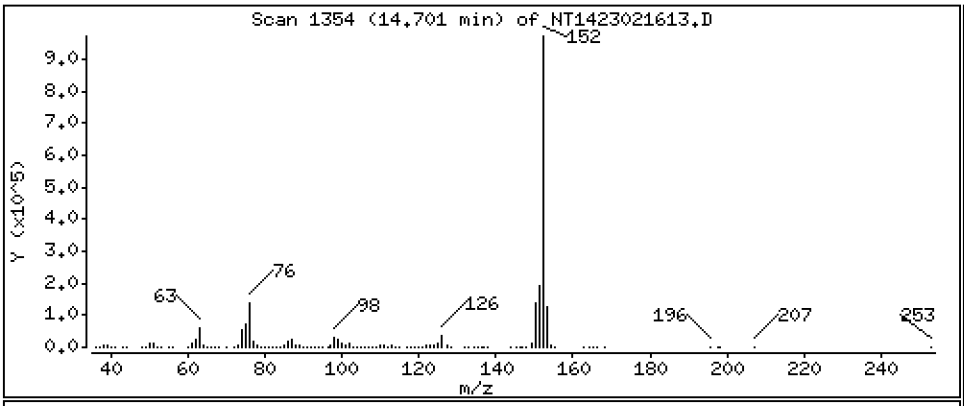
Operator: DSD

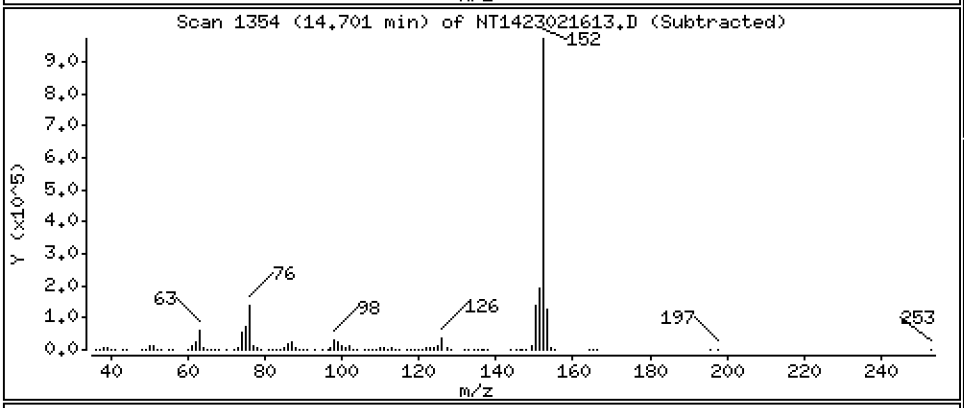
Column phase: ZB-5msi

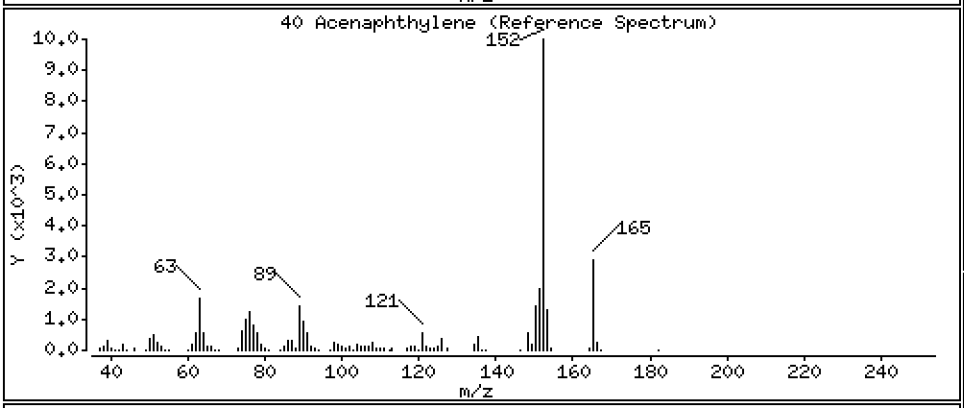
Column diameter: 0.25

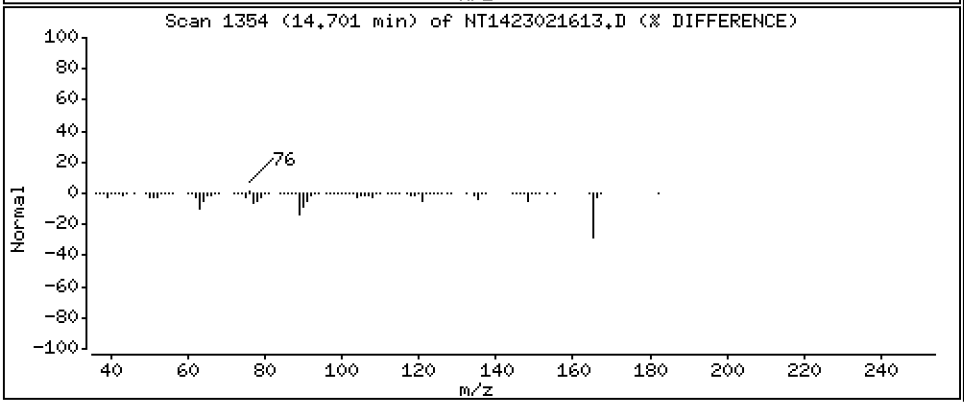
40 Acenaphthylene

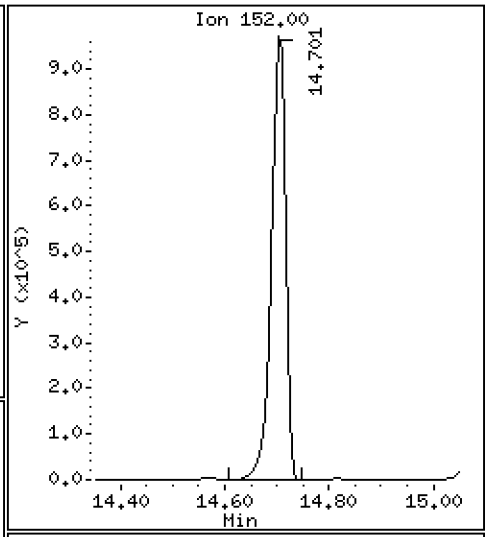
Concentration: 4.657 ug/mL

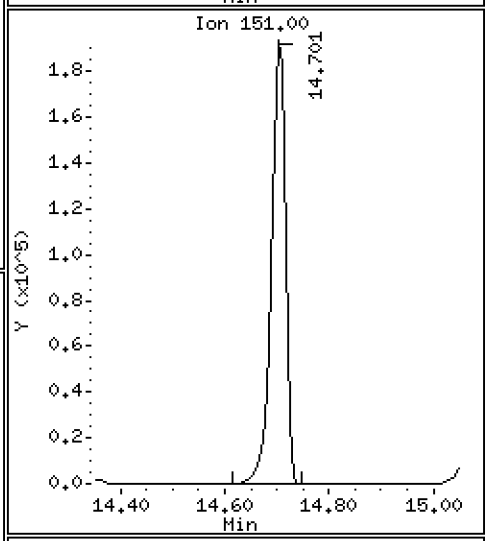


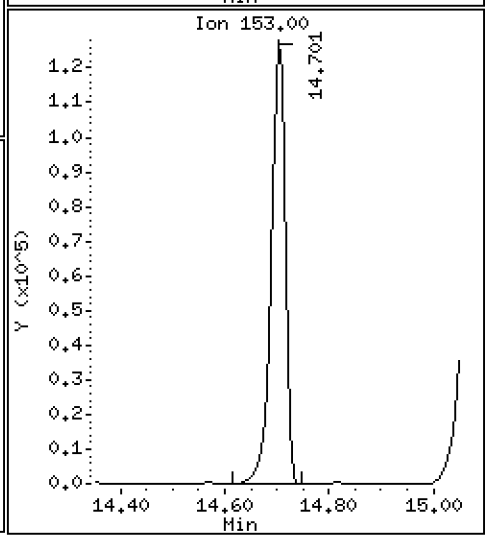












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

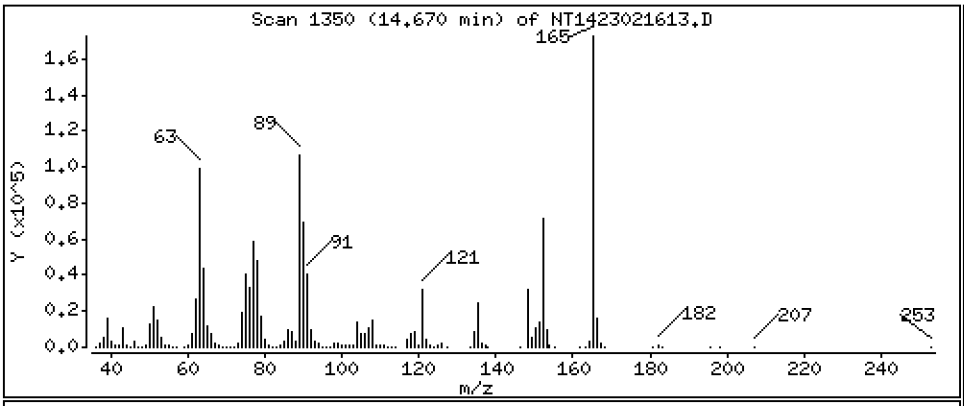
Operator: DSD

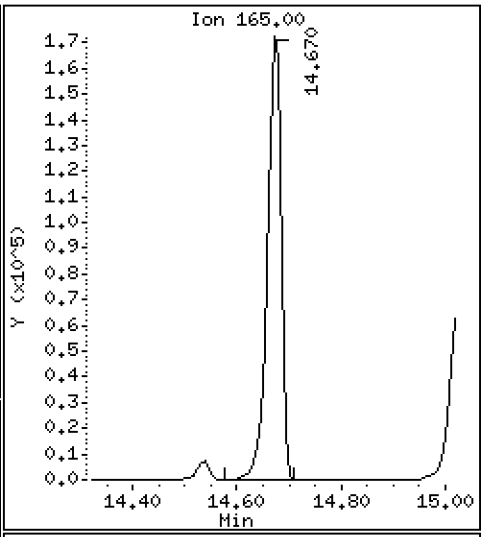
Column phase: ZB-5msi

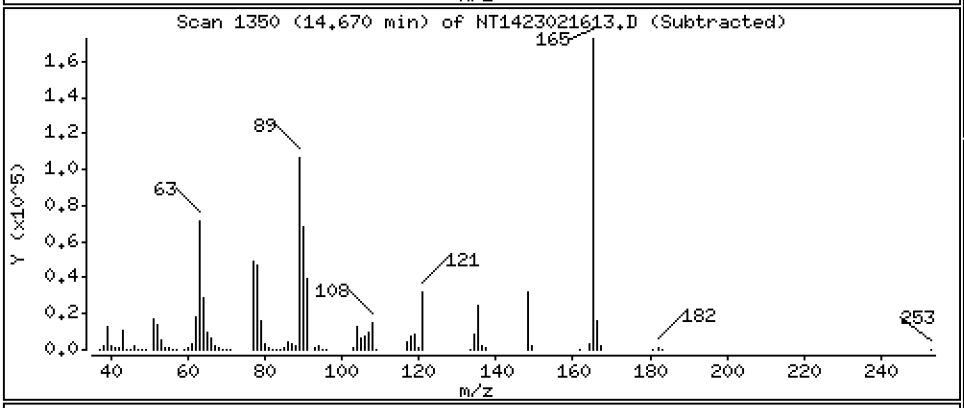
Column diameter: 0.25

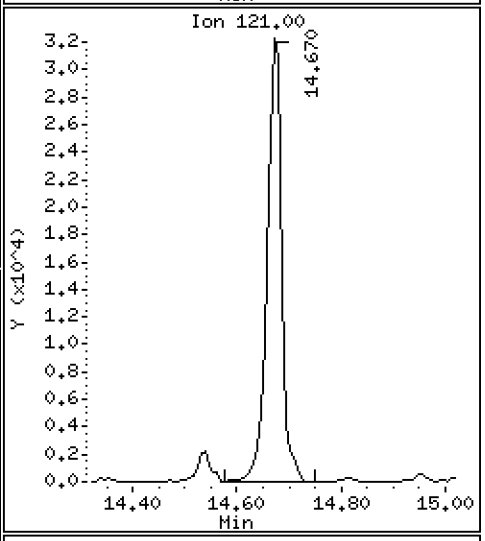
41 2,6-Dinitrotoluene

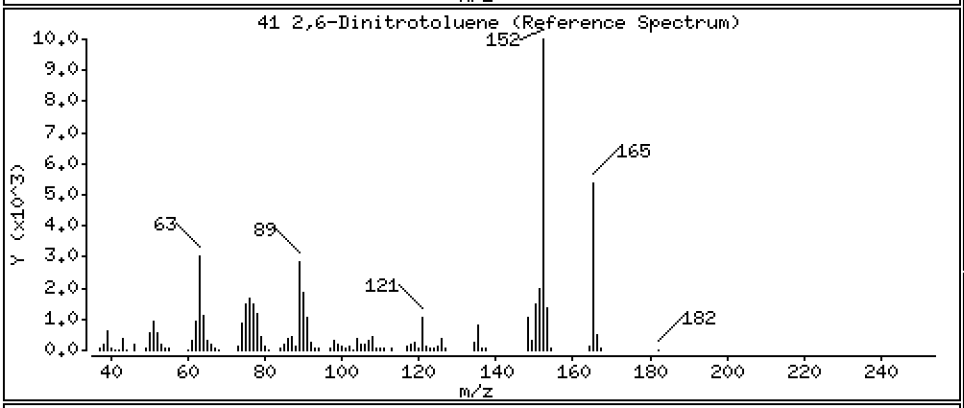
Concentration: 4.935 ug/mL

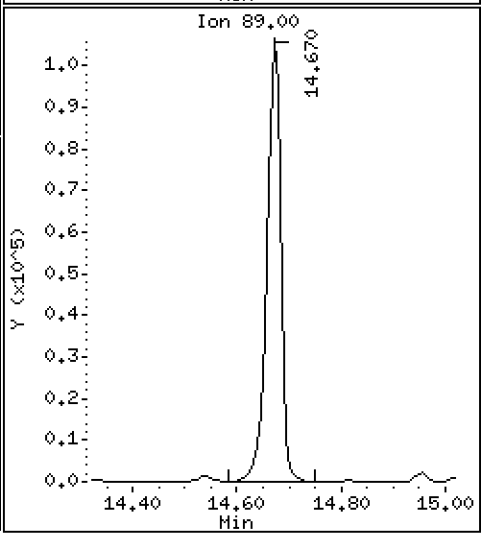


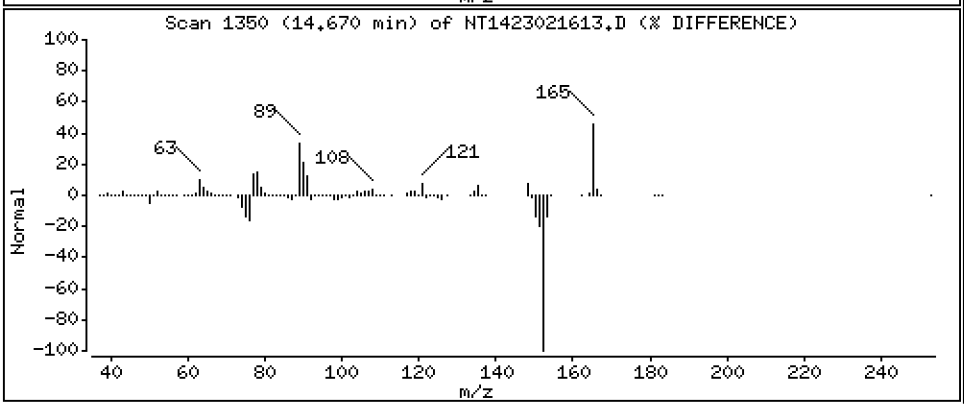












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

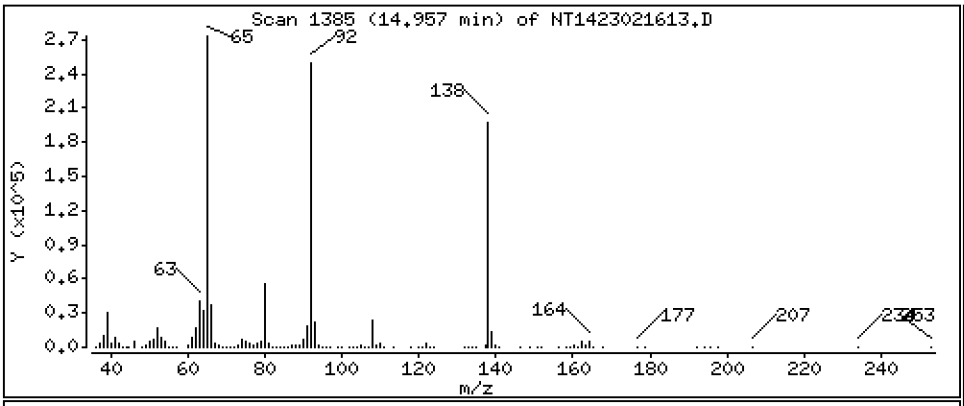
Operator: DSD

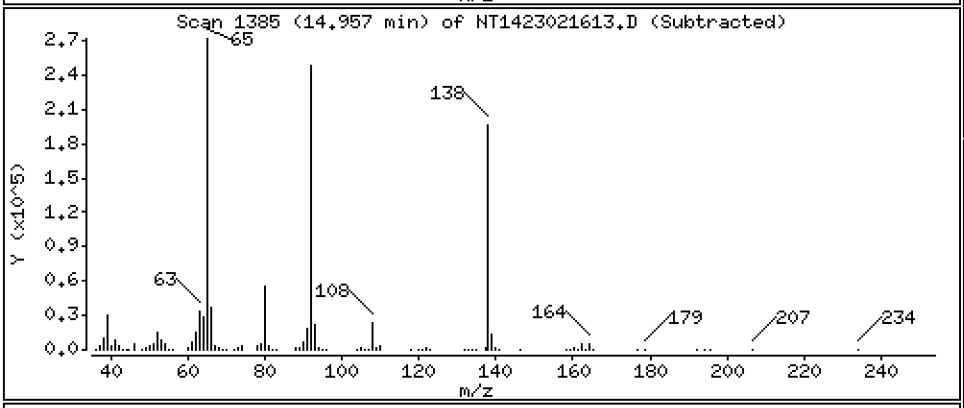
Column phase: ZB-5msi

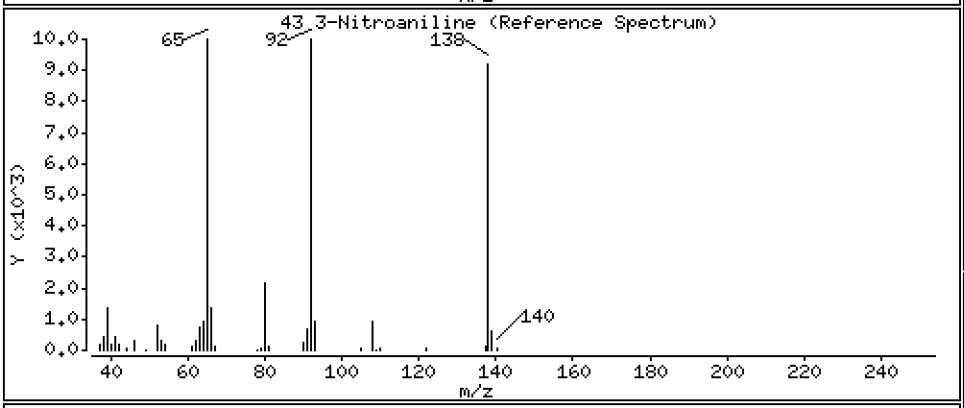
Column diameter: 0.25

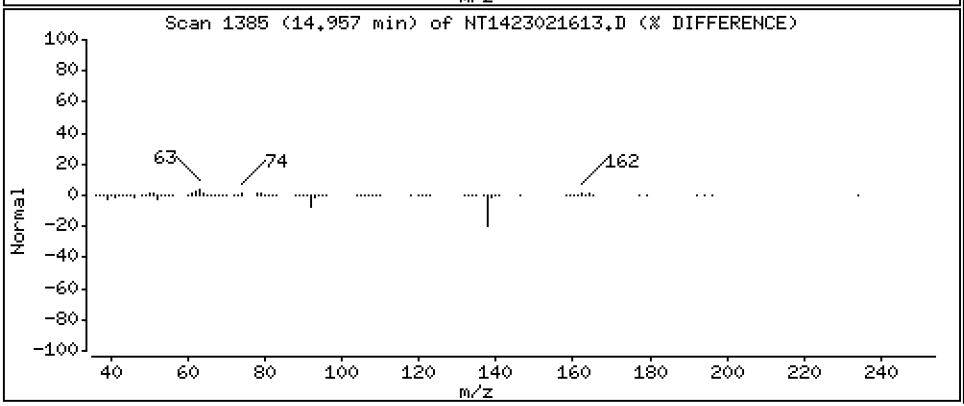
43 3-Nitroaniline

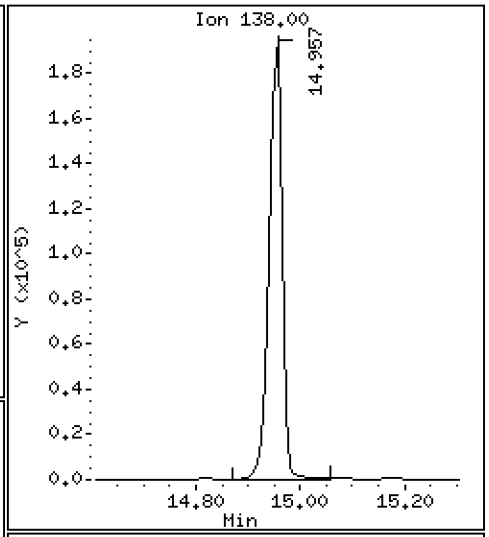
Concentration: 4.922 ug/mL

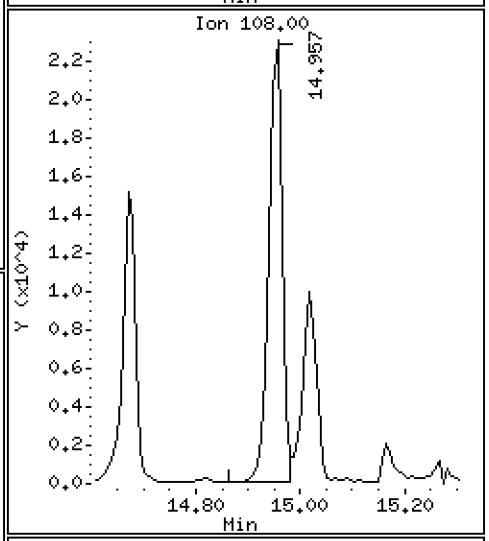


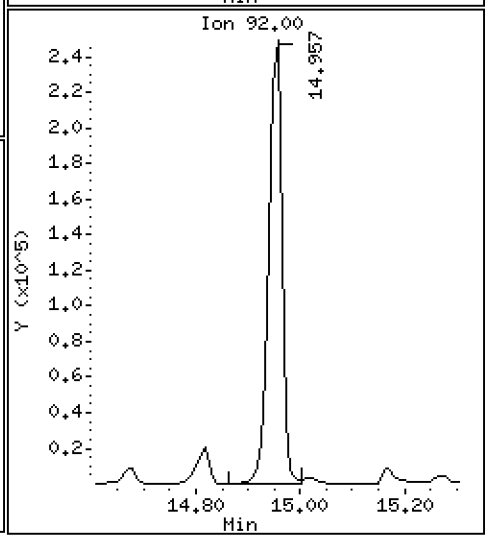












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

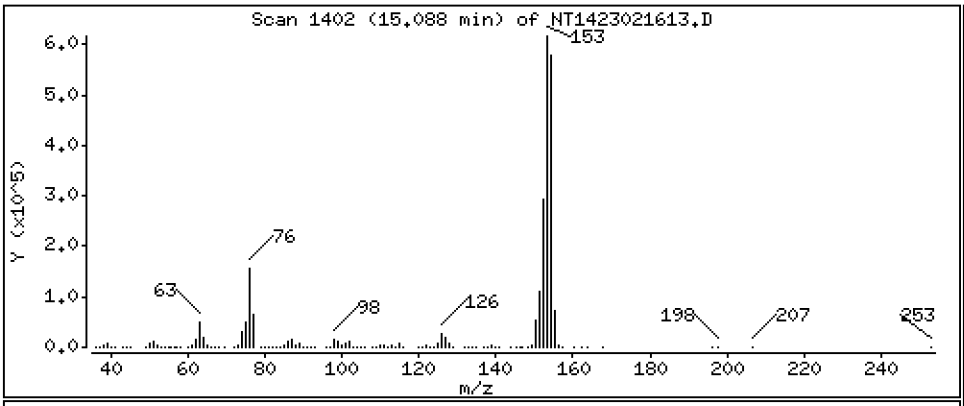
Operator: DSD

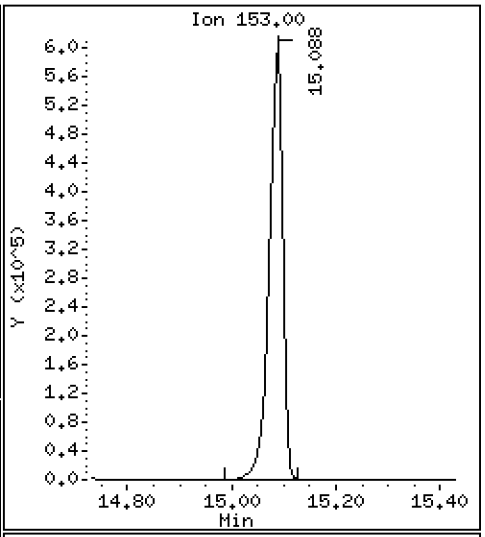
Column phase: ZB-5msi

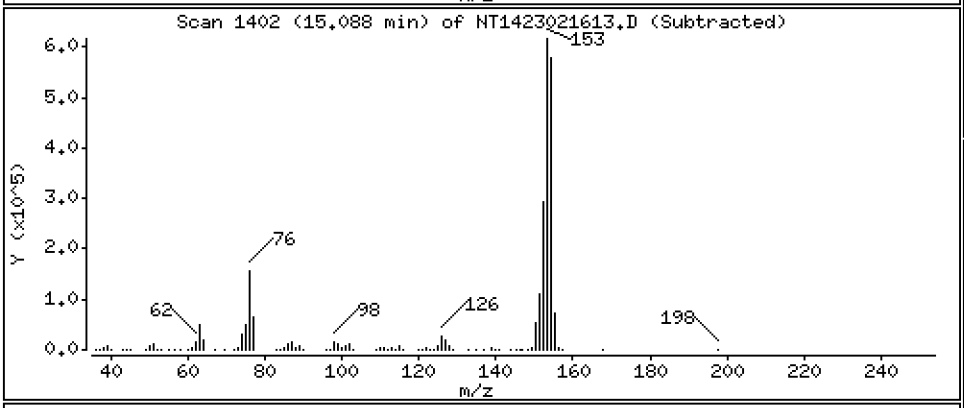
Column diameter: 0.25

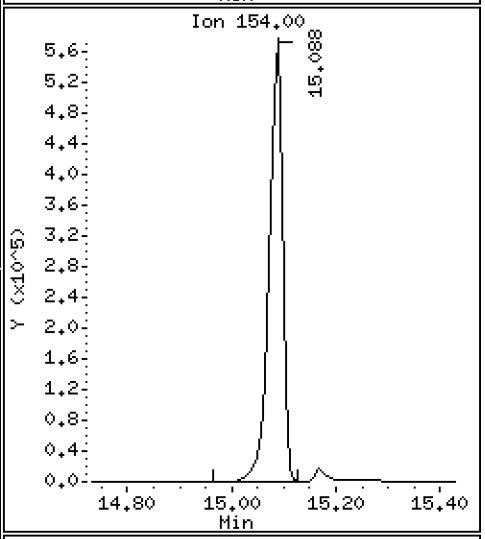
44 Acenaphthene

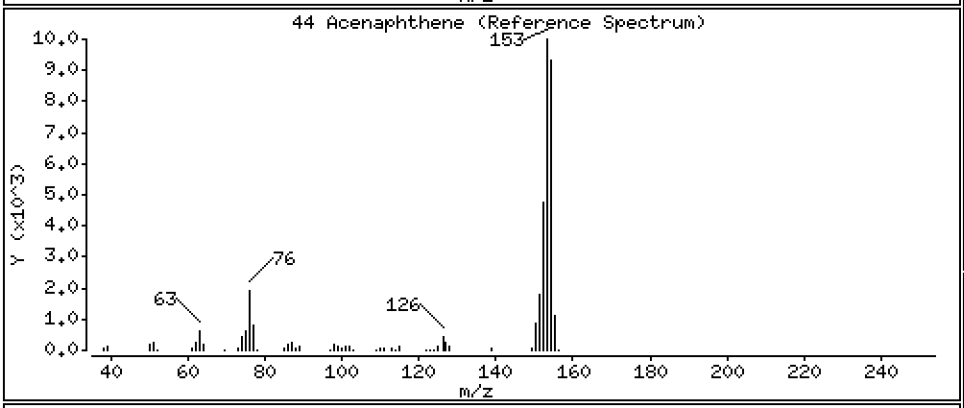
Concentration: 4.633 ug/mL

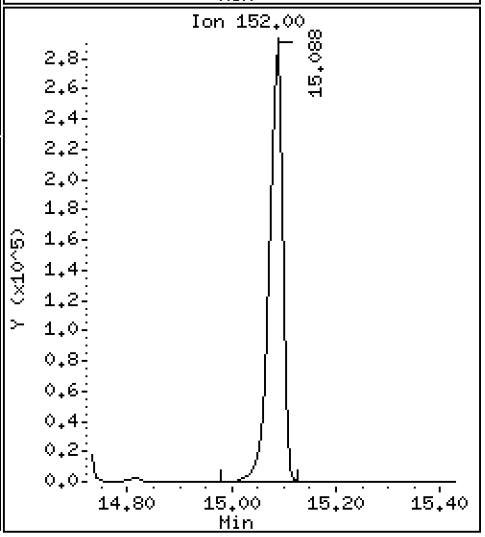


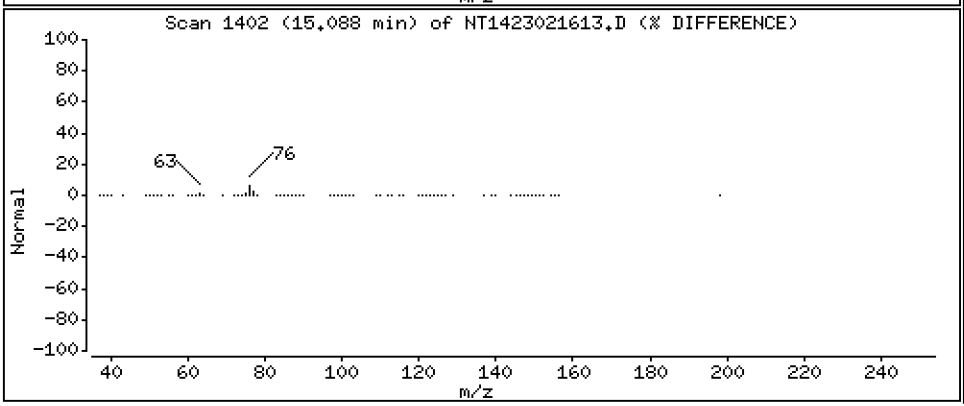












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

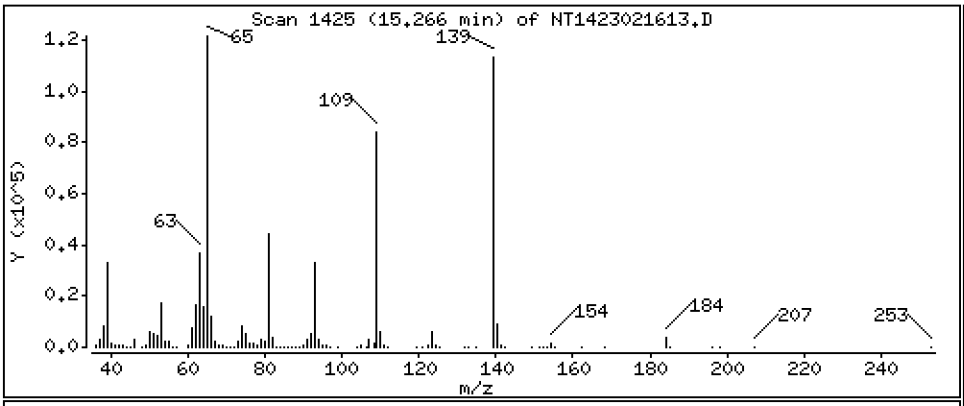
Operator: DSD

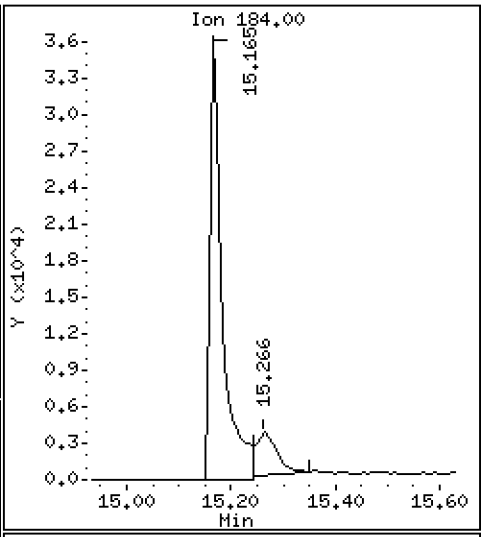
Column phase: ZB-5msi

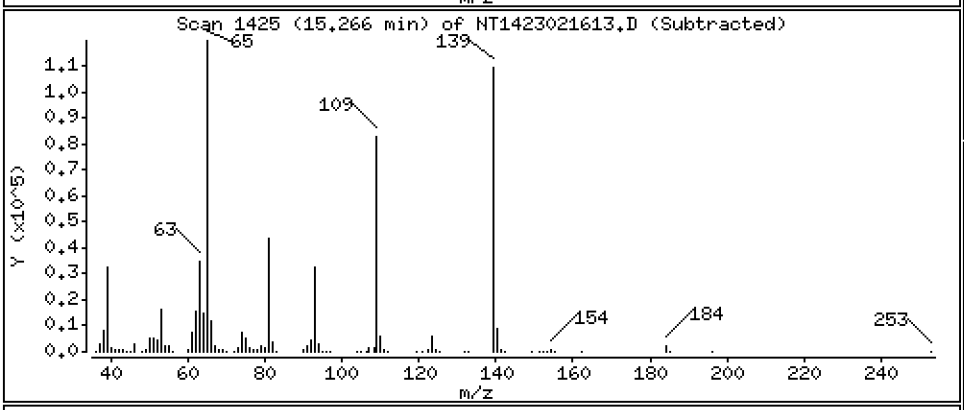
Column diameter: 0.25

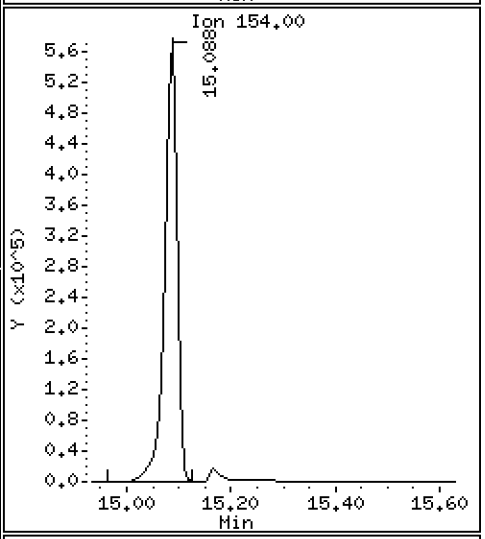
45 2,4-Dinitrophenol

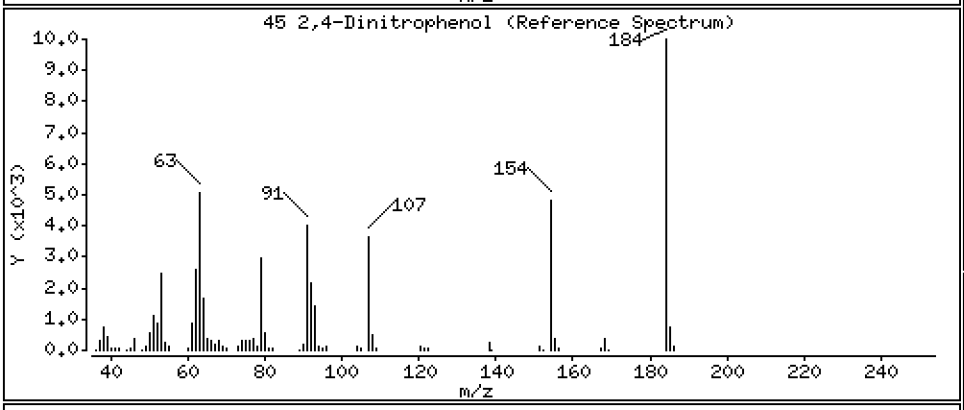
Concentration: 0.2502 ug/mL

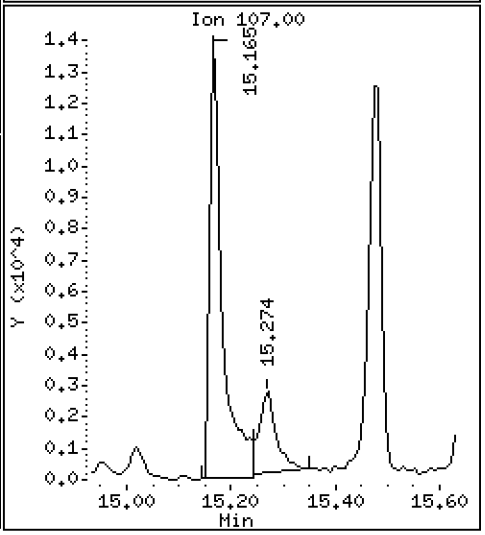


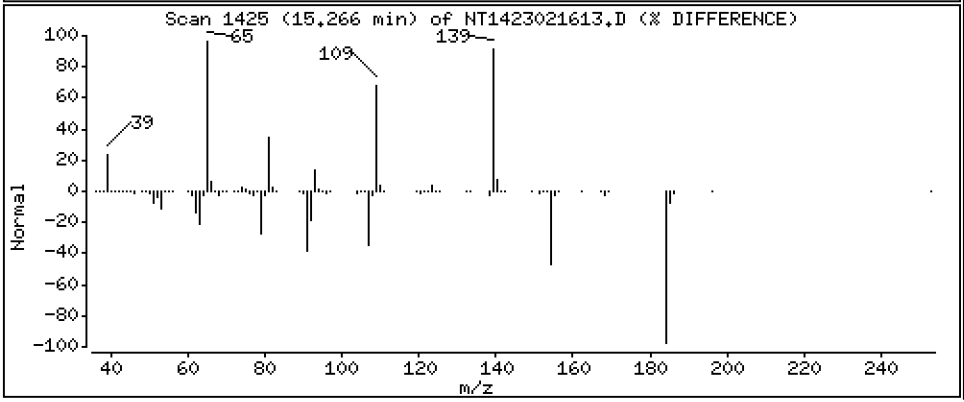












Date : 16-FEB-2023 21:18

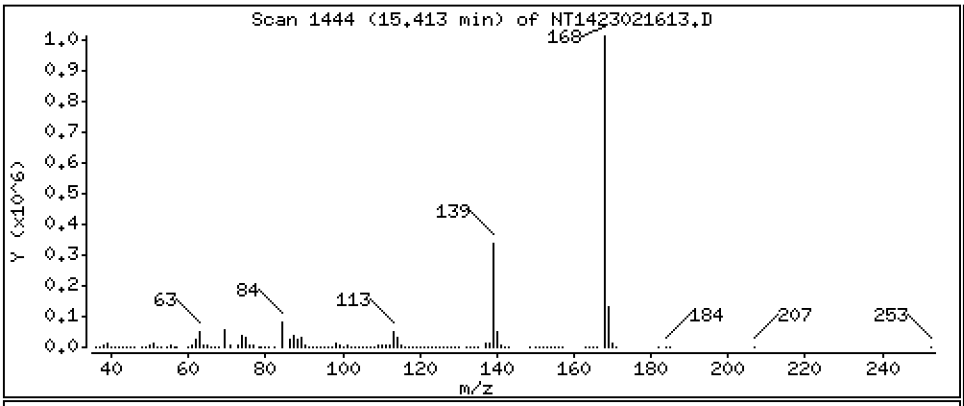
Client ID: Instrument: nt14.i

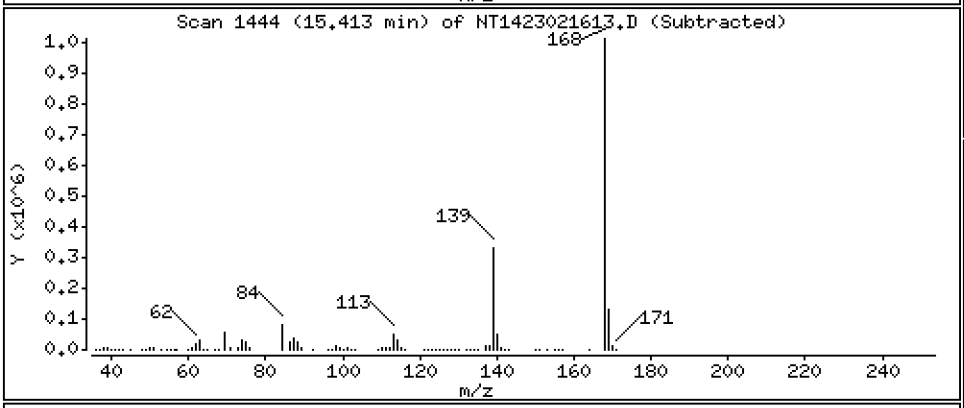
Sample Info: SLB0234-SCV1

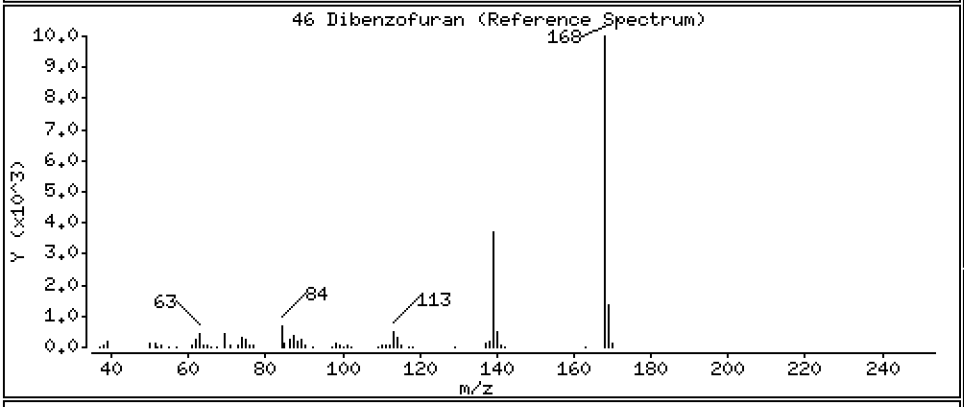
Operator: DSD

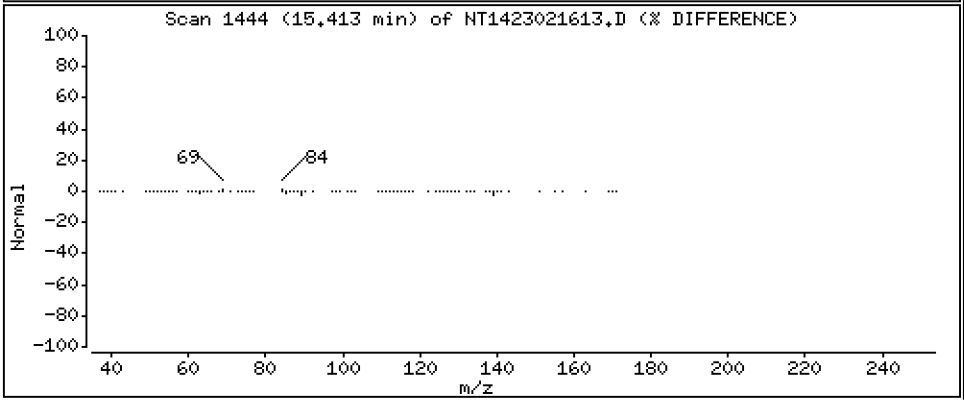
Column phase: ZB-5msi Column diameter: 0.25

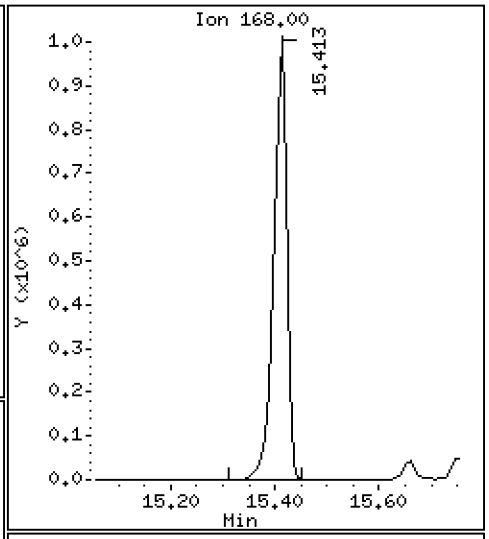
46 Dibenzofuran Concentration: 4.548 ug/mL

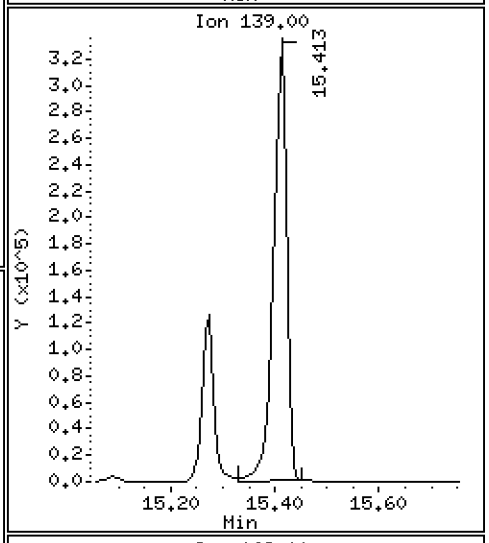


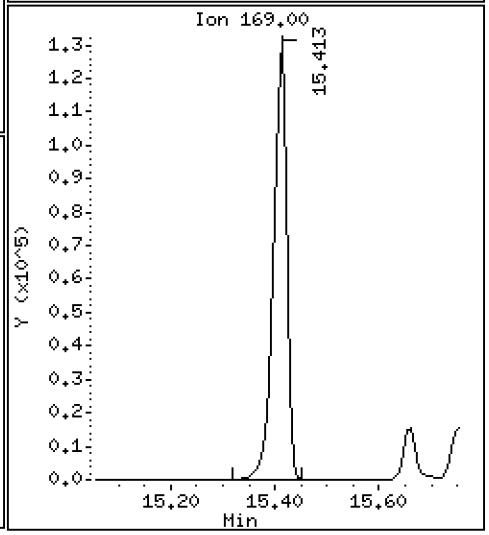












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

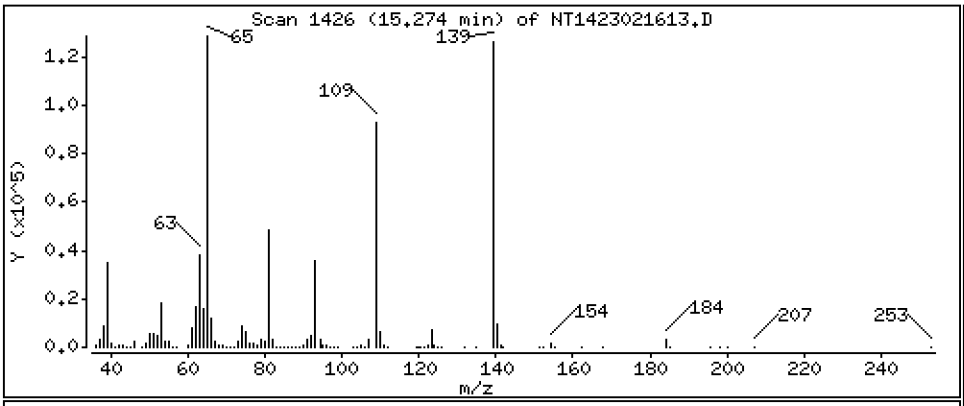
Operator: DSD

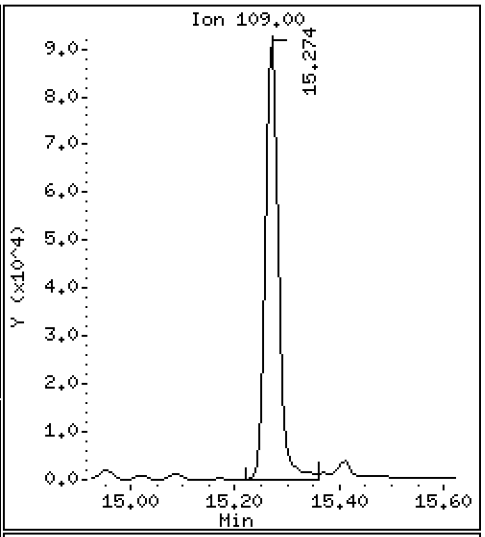
Column phase: ZB-5msi

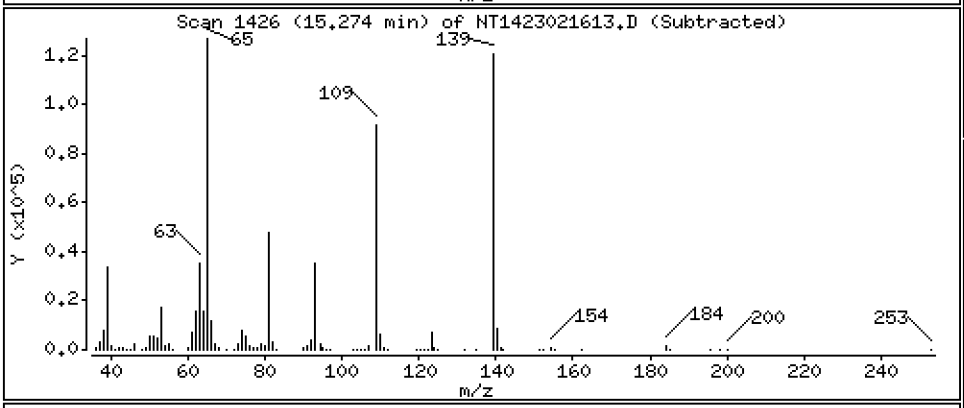
Column diameter: 0.25

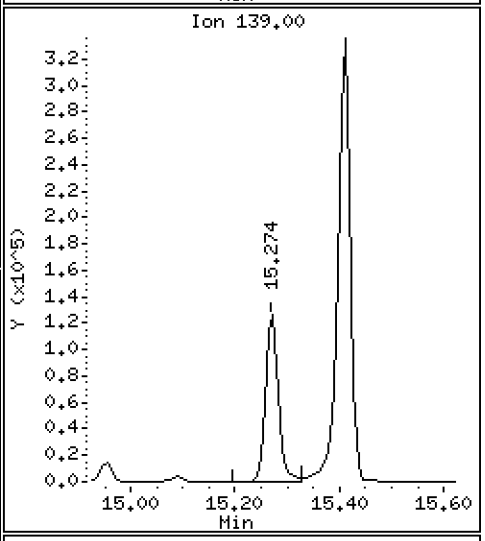
47 4-Nitrophenol

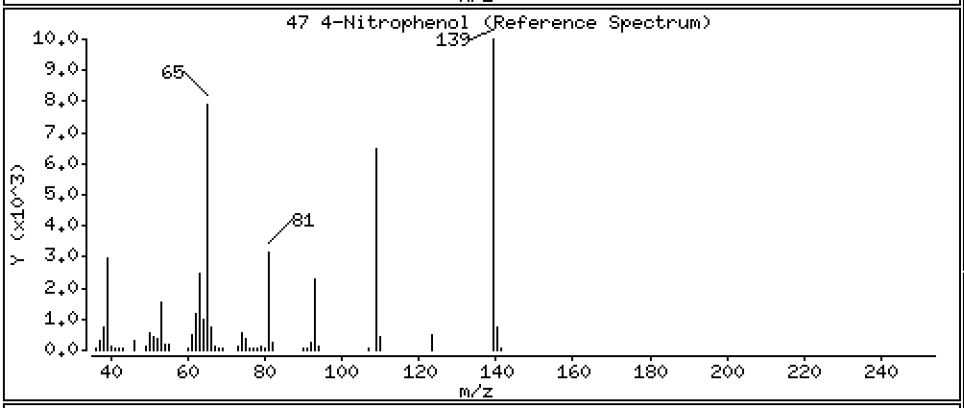
Concentration: 4.052 ug/mL

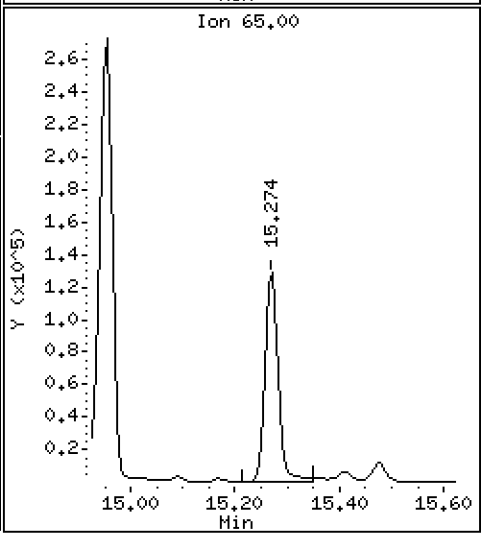


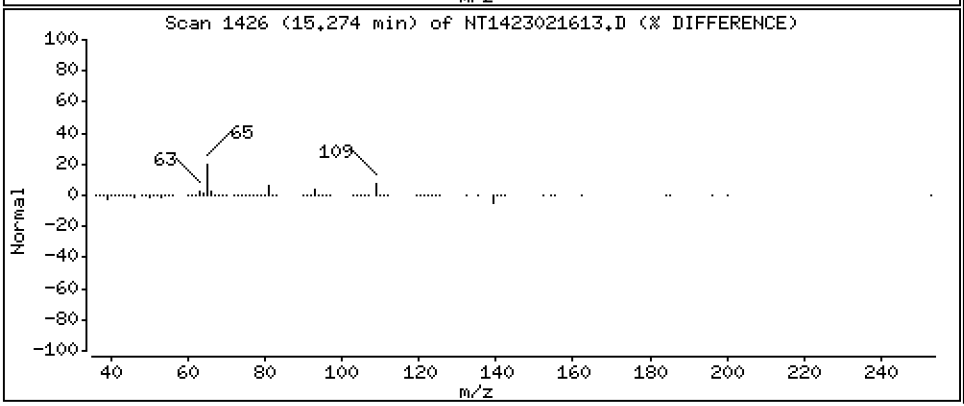












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

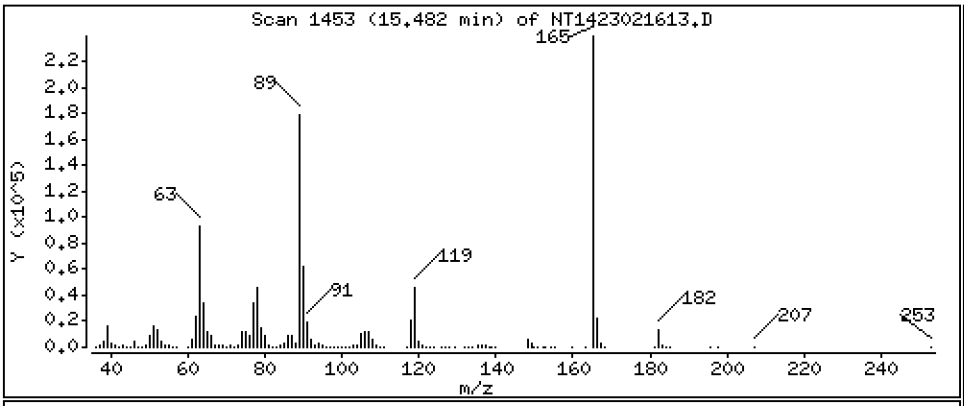
Operator: DSD

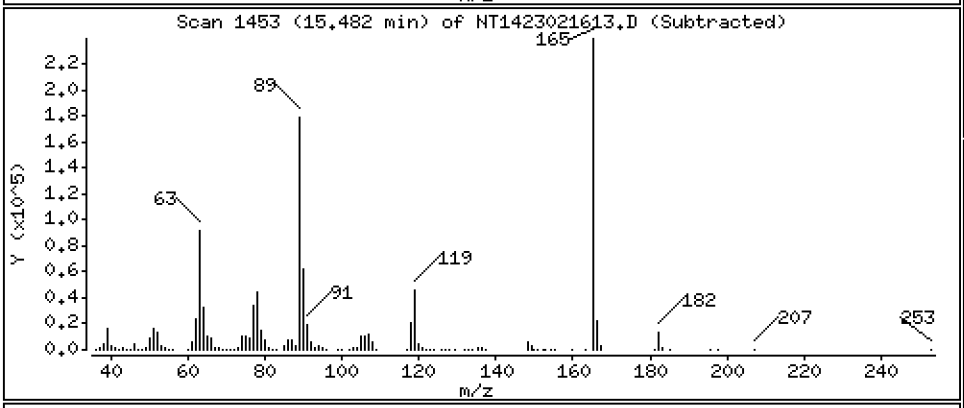
Column phase: ZB-5msi

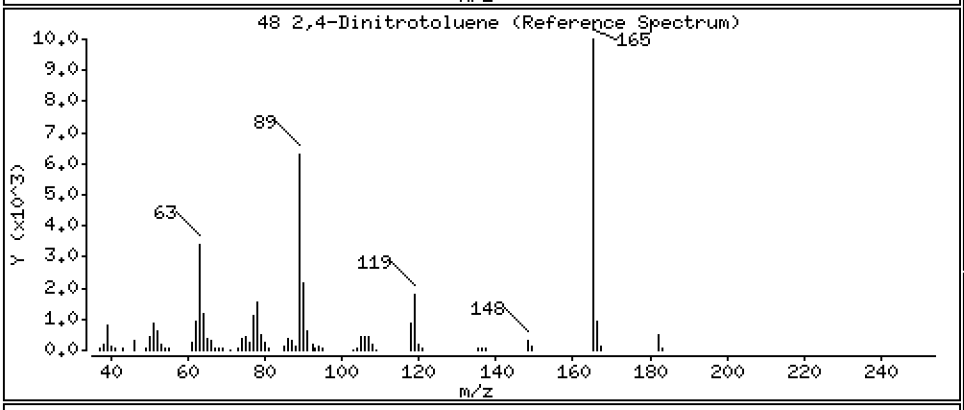
Column diameter: 0.25

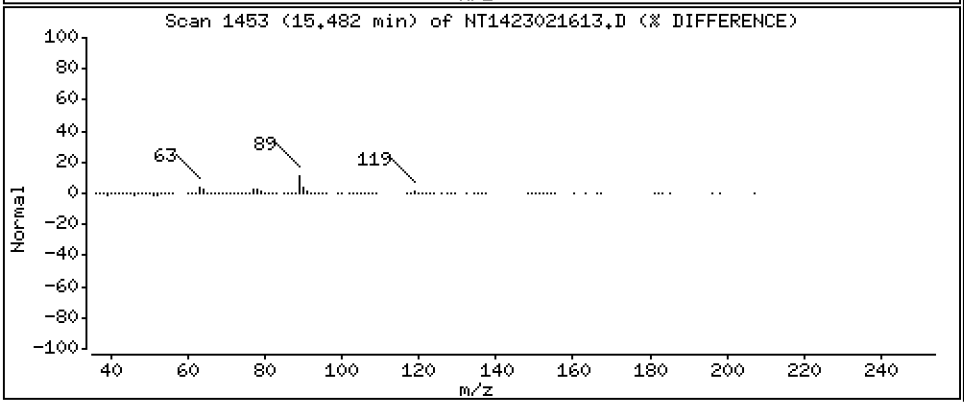
48 2,4-Dinitrotoluene

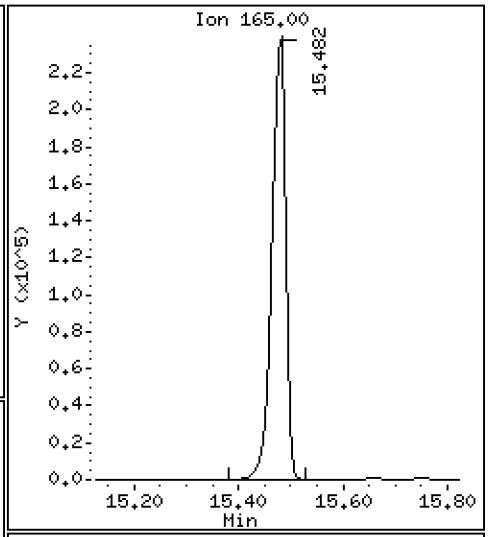
Concentration: 4.855 ug/mL

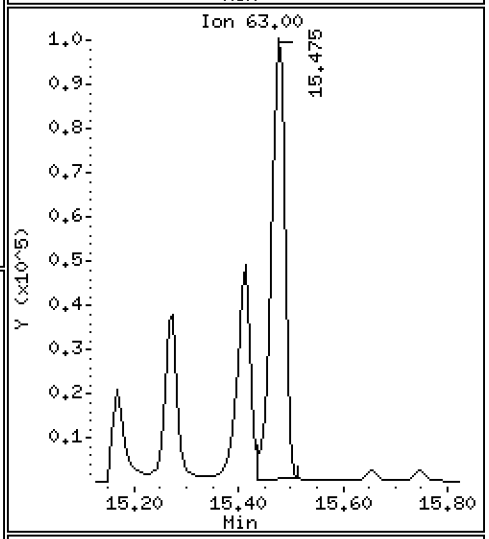


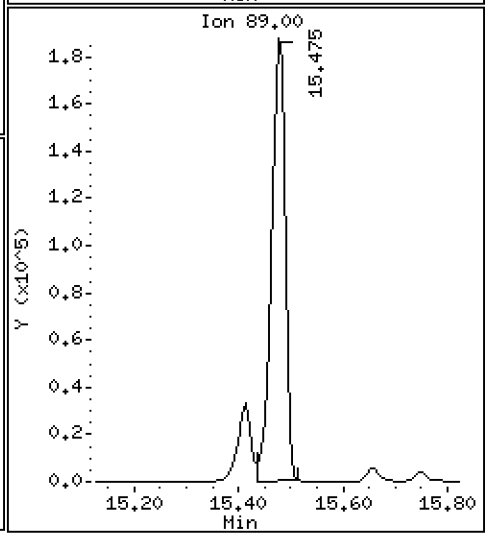












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

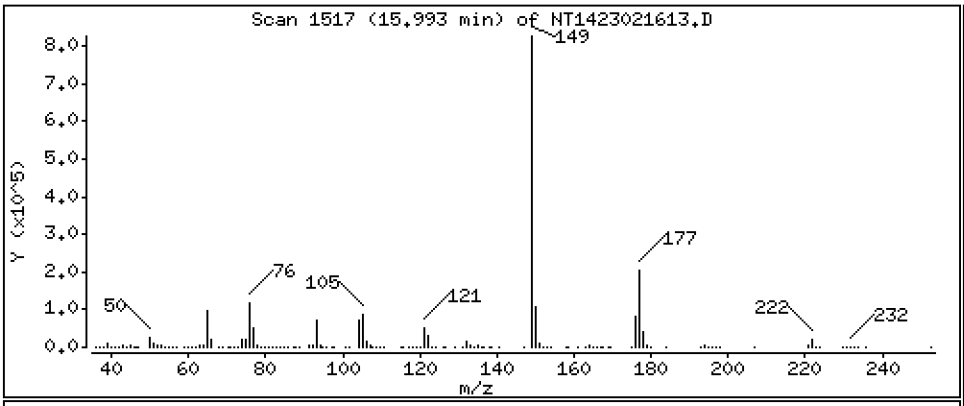
Operator: DSD

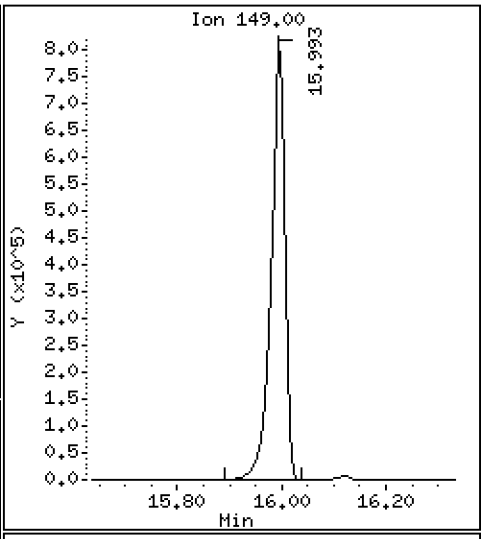
Column phase: ZB-5msi

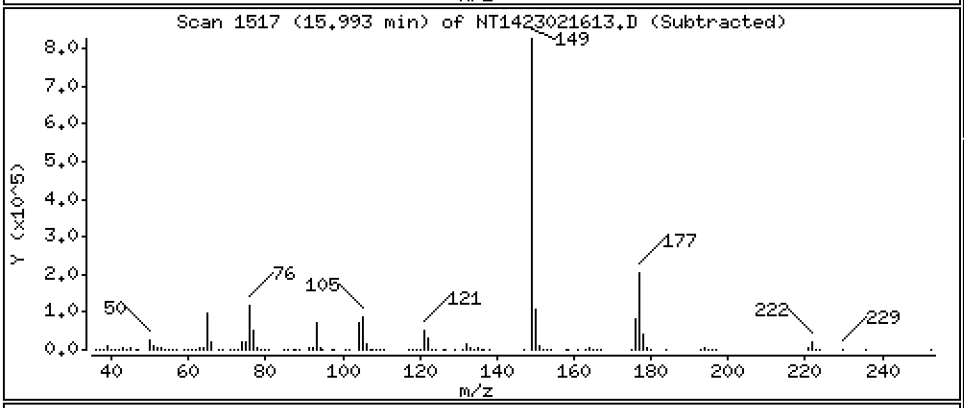
Column diameter: 0.25

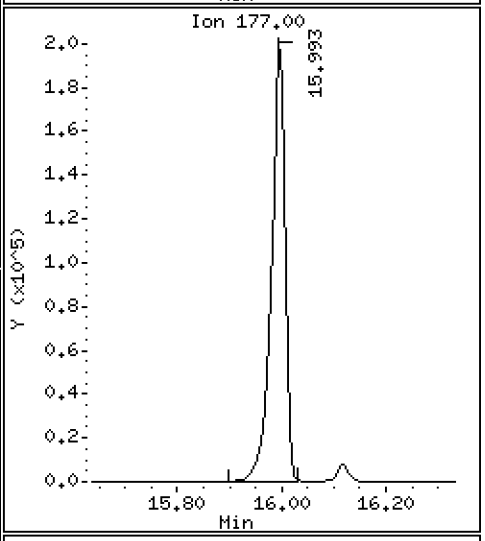
50 Diethylphthalate

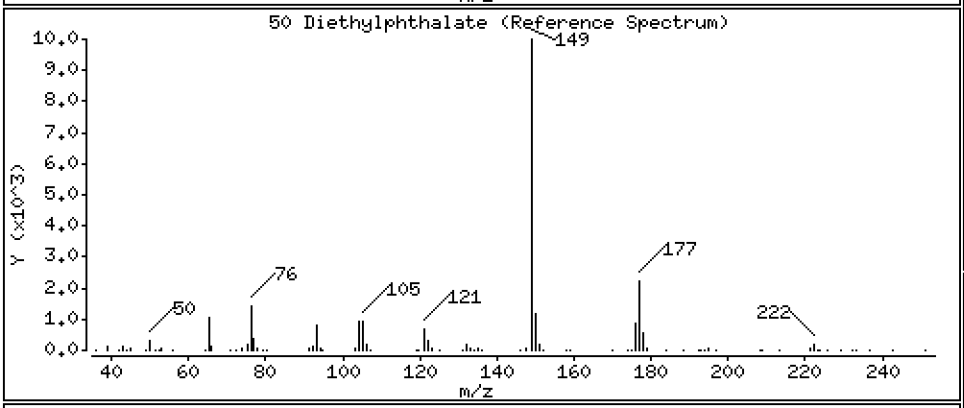
Concentration: 4.722 ug/mL

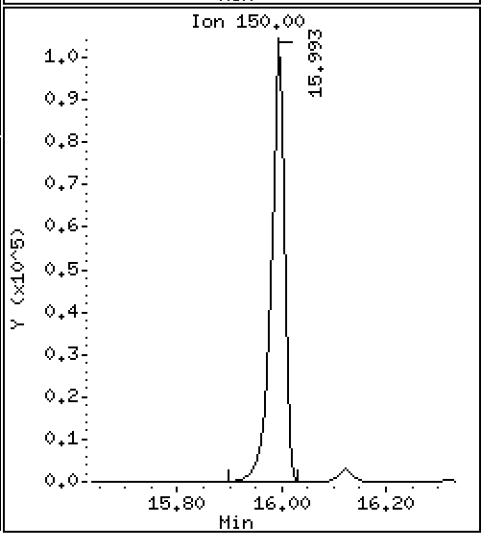


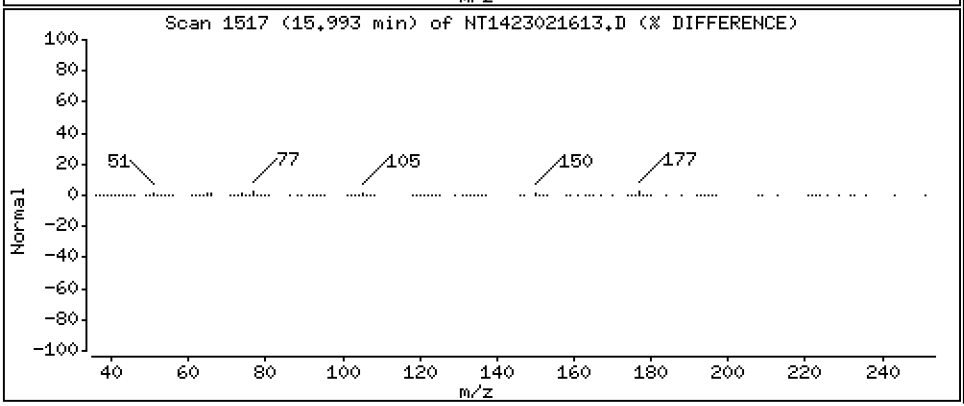












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

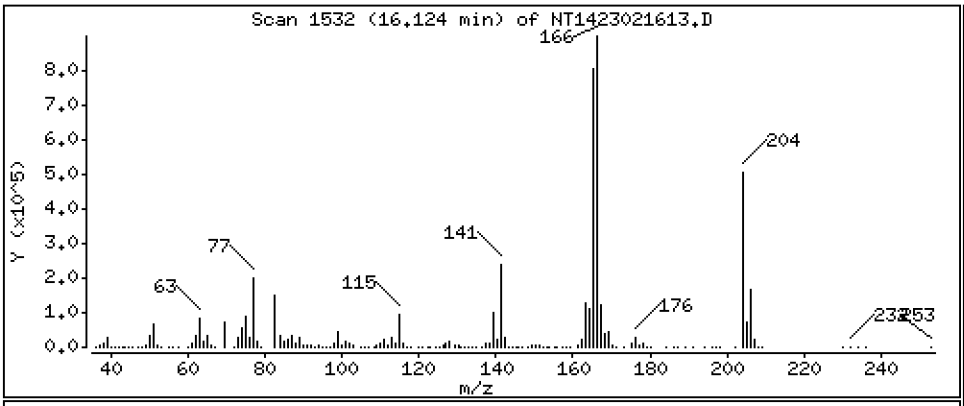
Operator: DSD

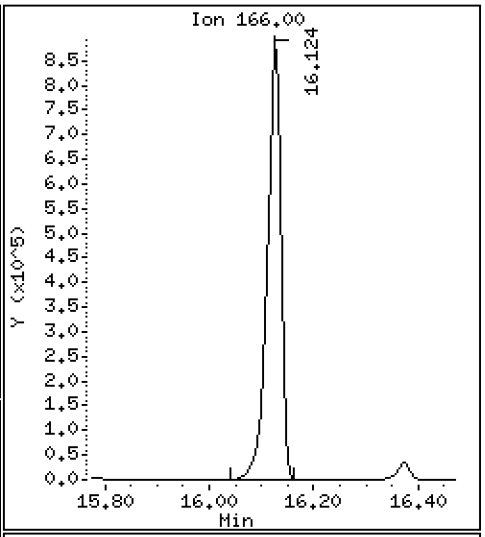
Column phase: ZB-5msi

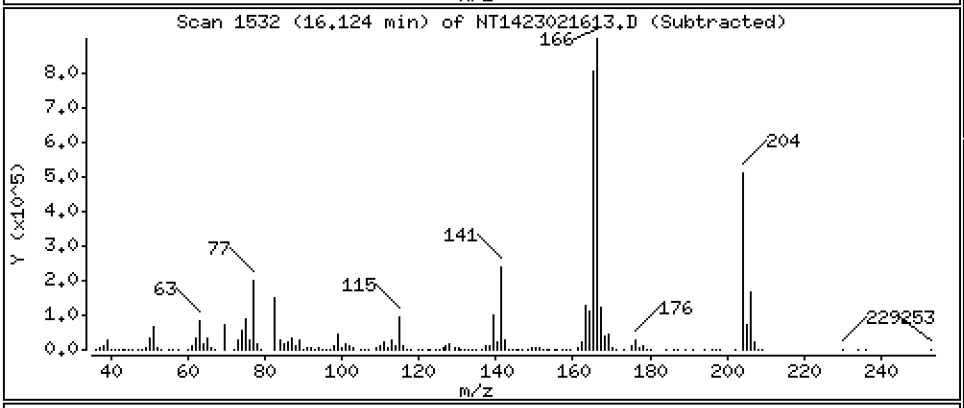
Column diameter: 0.25

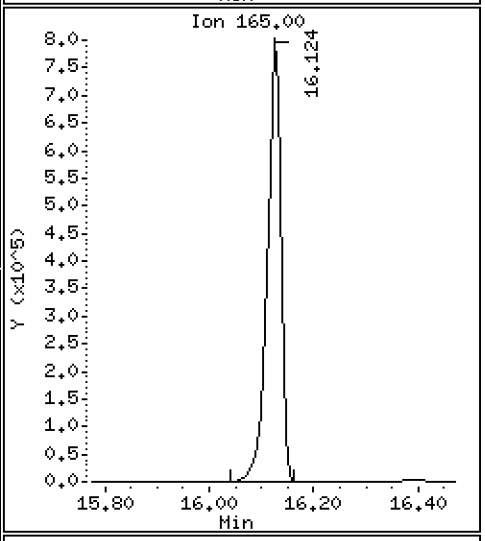
49 Fluorene

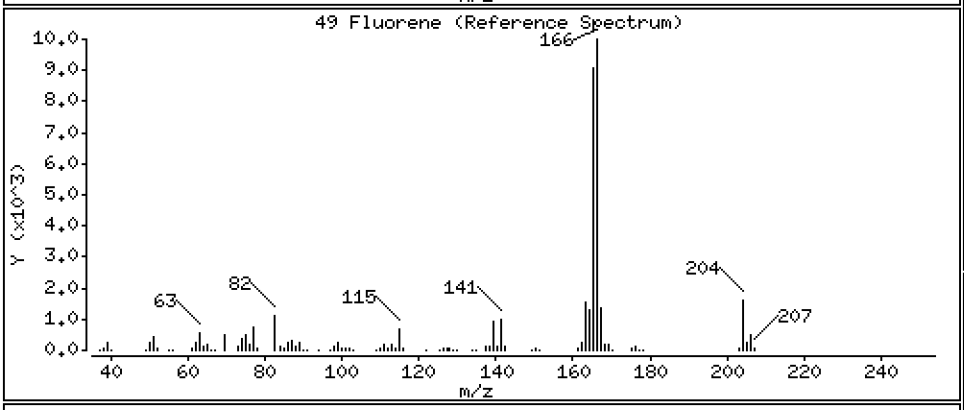
Concentration: 4.638 ug/mL

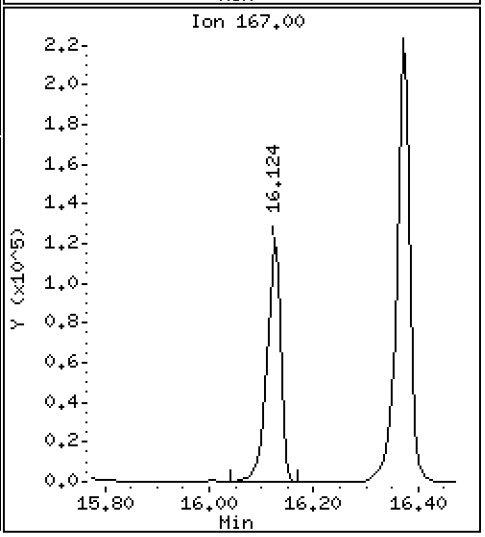


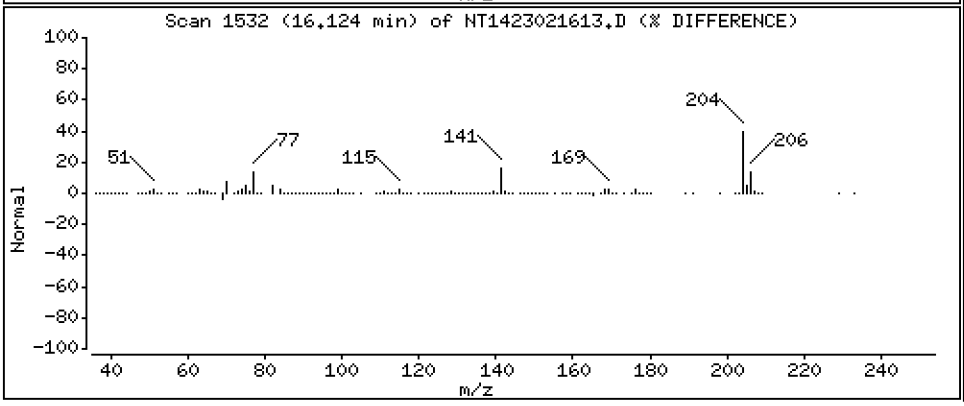












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

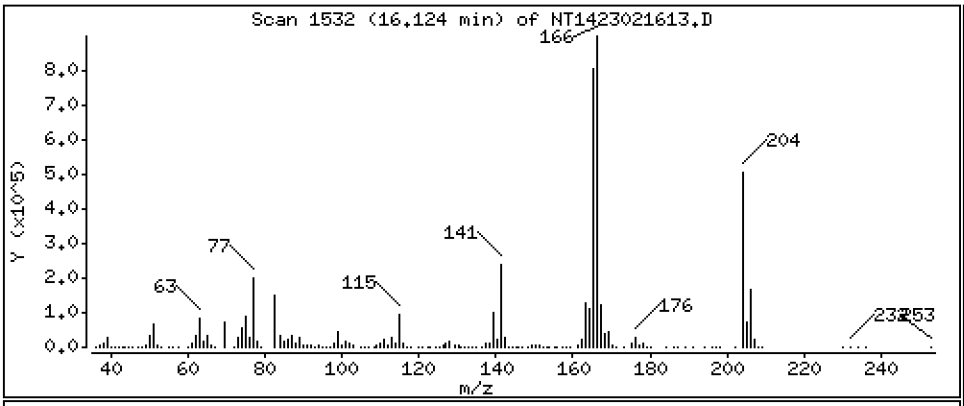
Operator: DSD

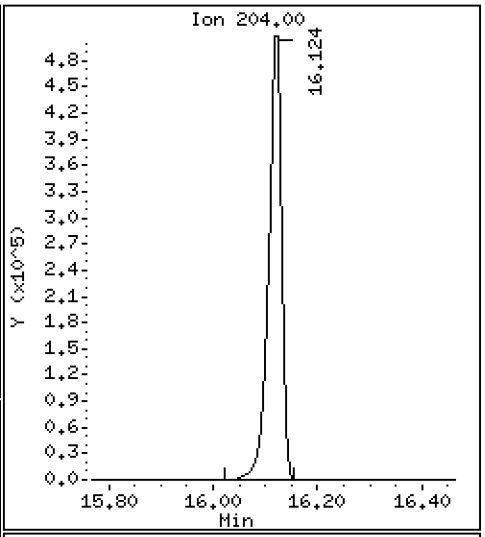
Column phase: ZB-5msi

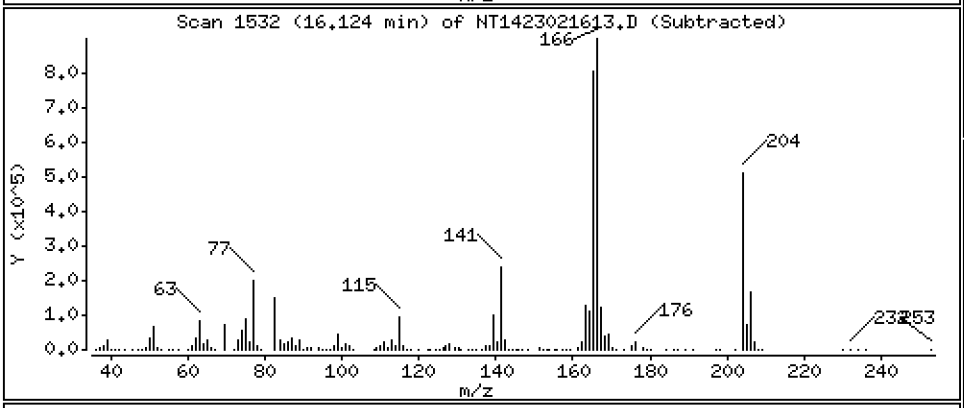
Column diameter: 0.25

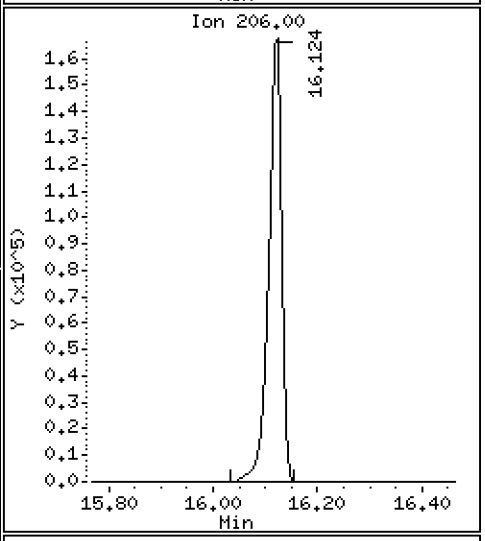
51 4-Chlorophenyl-phenylether

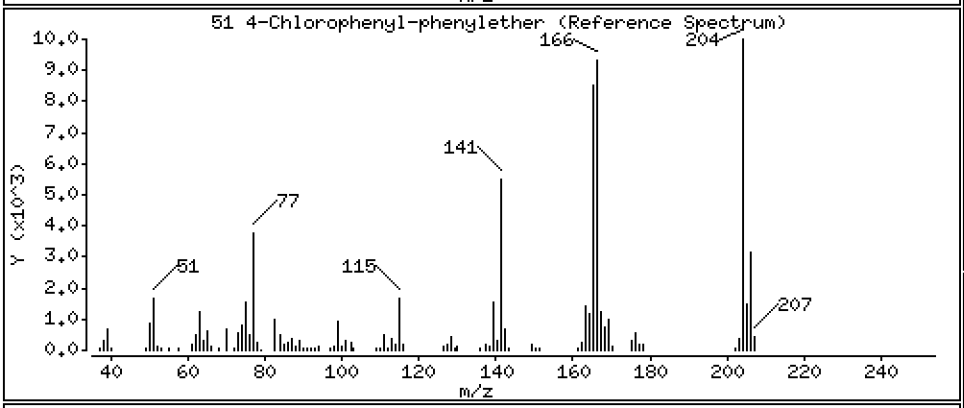
Concentration: 4.754 ug/mL

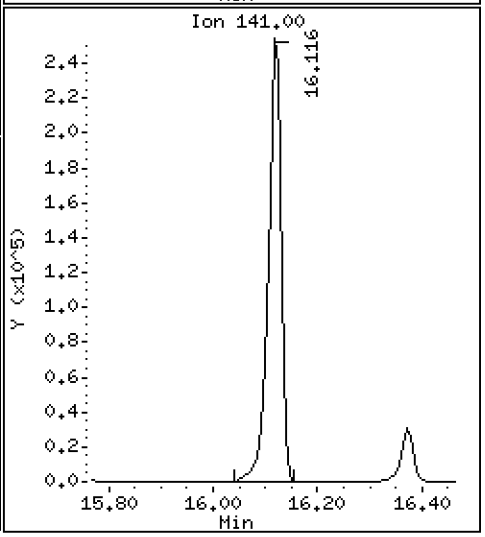


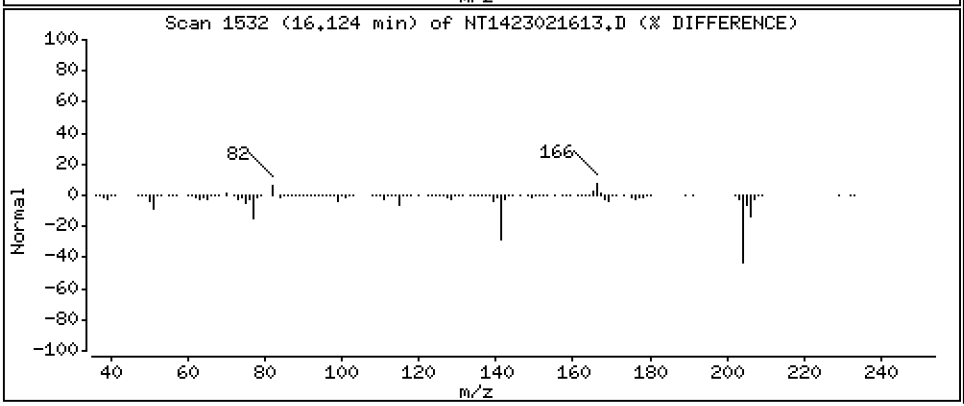












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

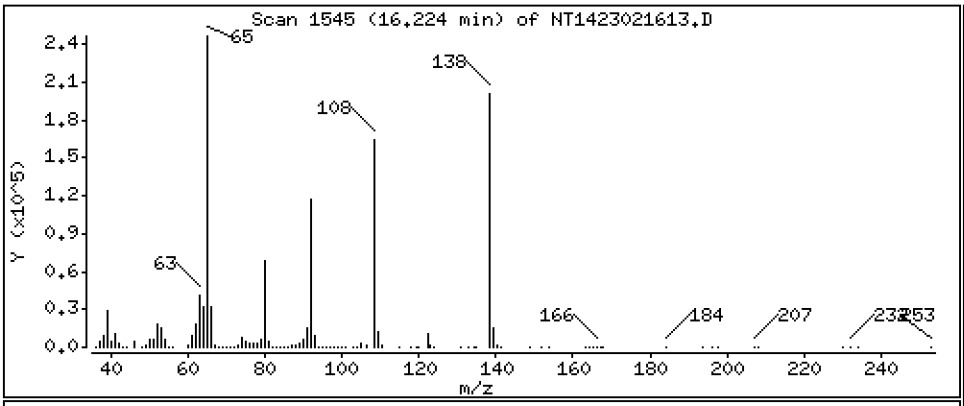
Operator: DSD

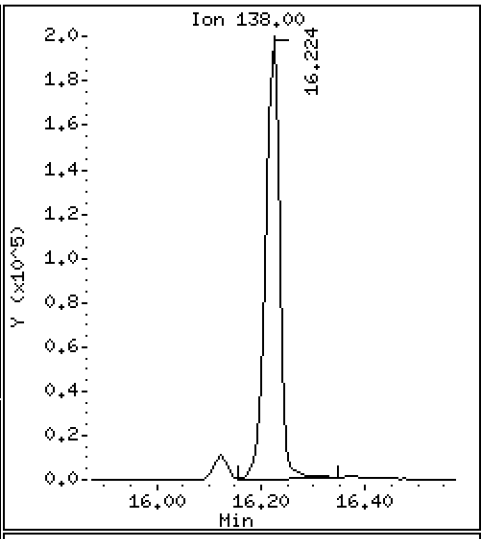
Column phase: ZB-5msi

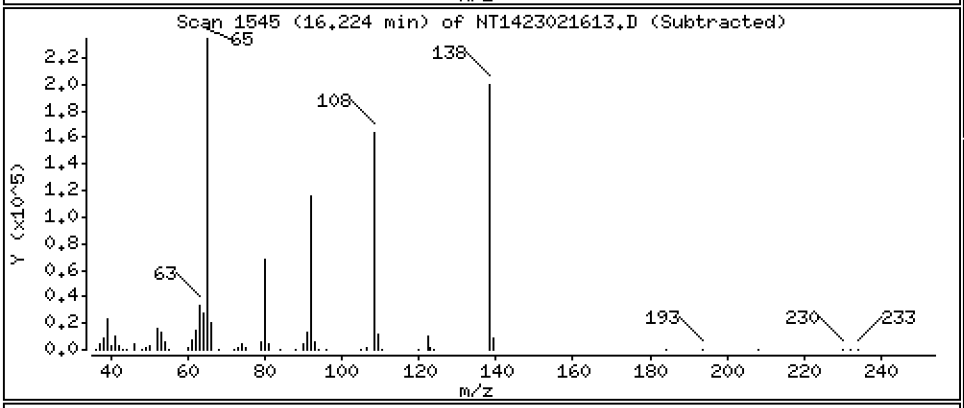
Column diameter: 0.25

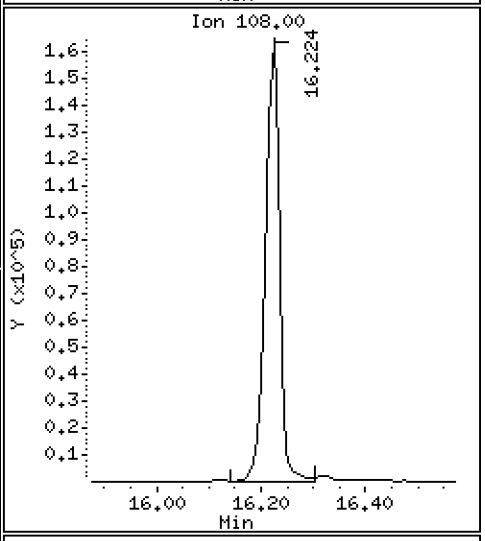
52 4-Nitroaniline

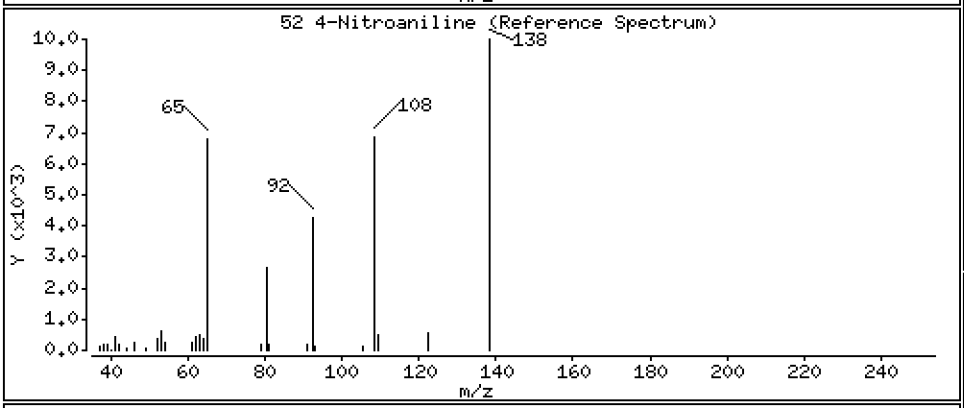
Concentration: 4.762 ug/mL

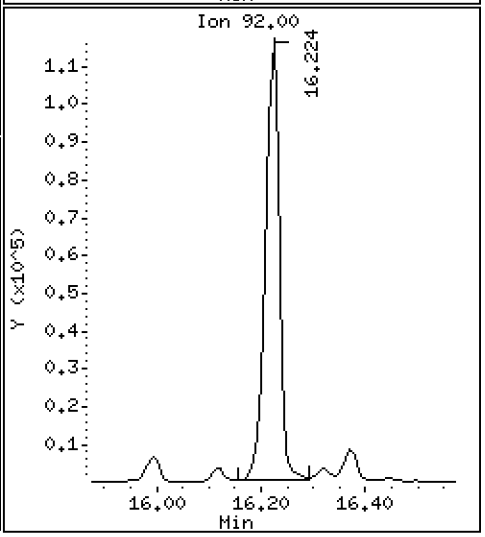


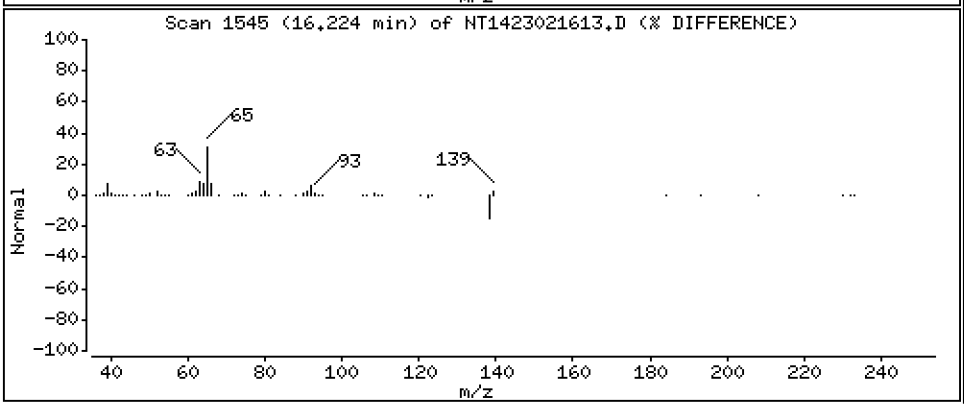












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

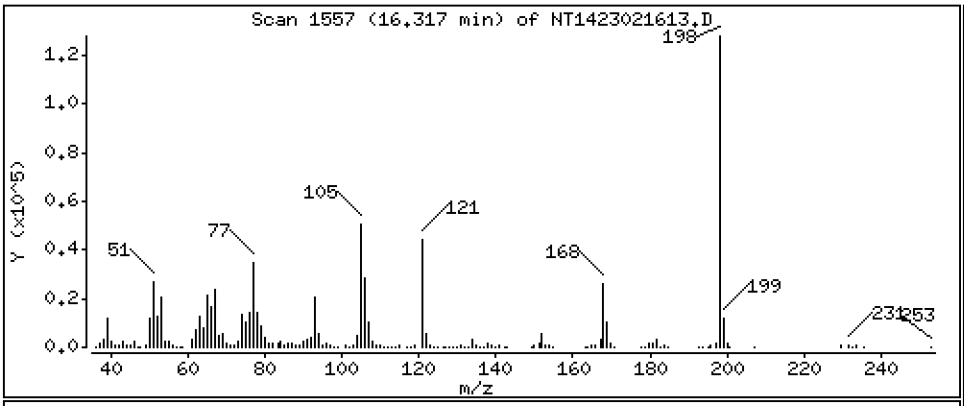
Operator: DSD

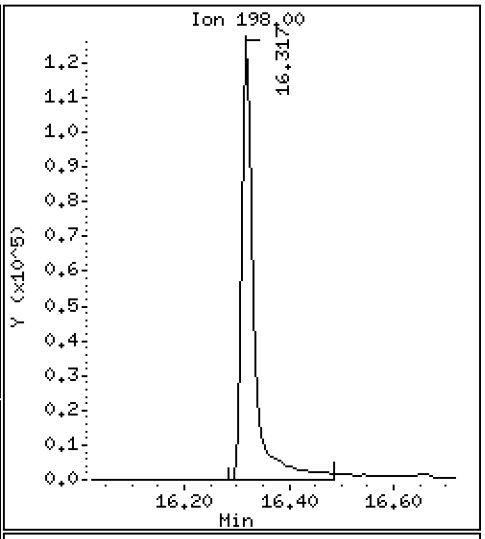
Column phase: ZB-5msi

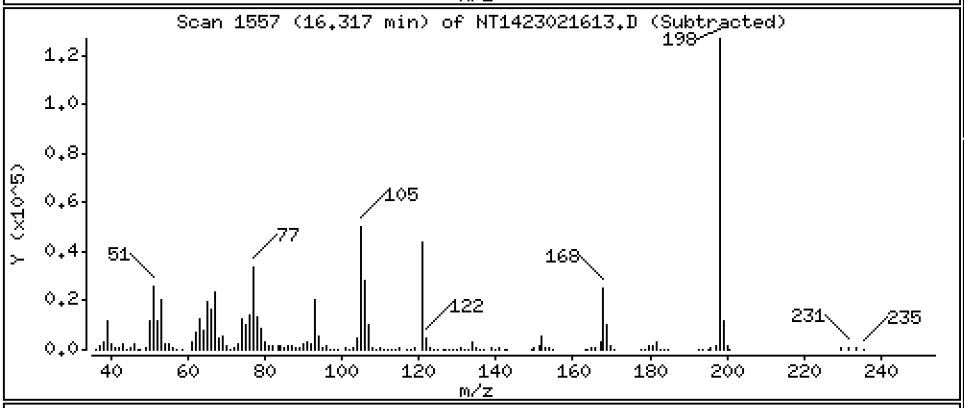
Column diameter: 0.25

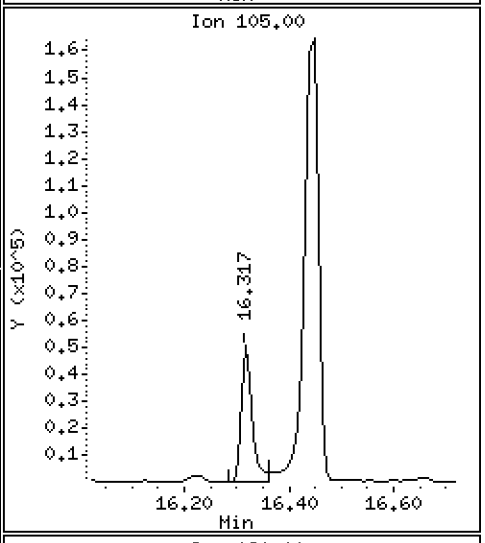
53 4,6-Dinitro-2-methylphenol

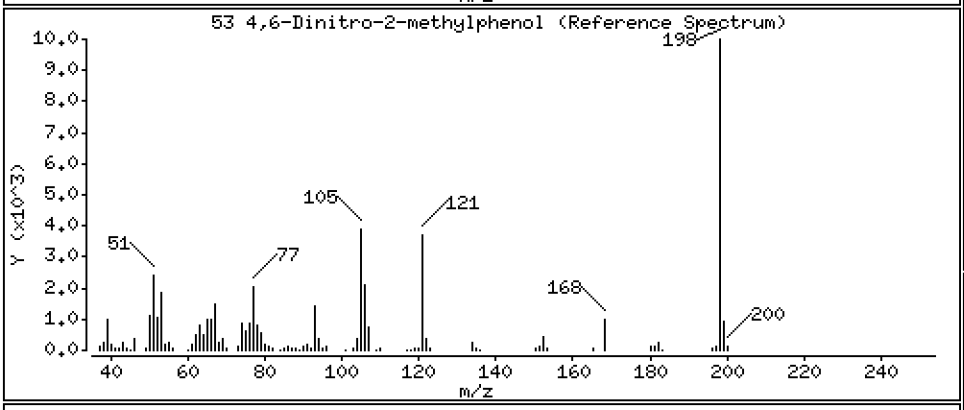
Concentration: 3.653 ug/mL

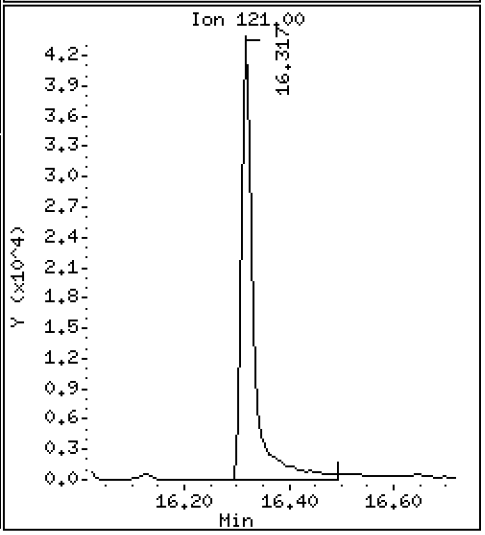


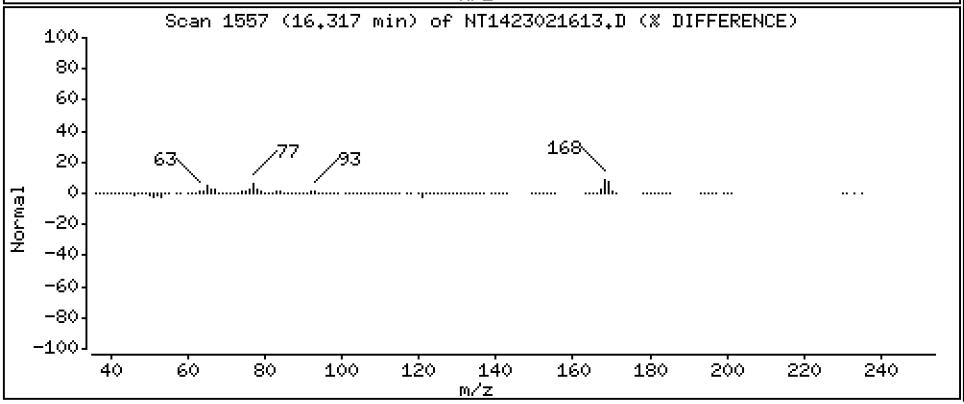












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

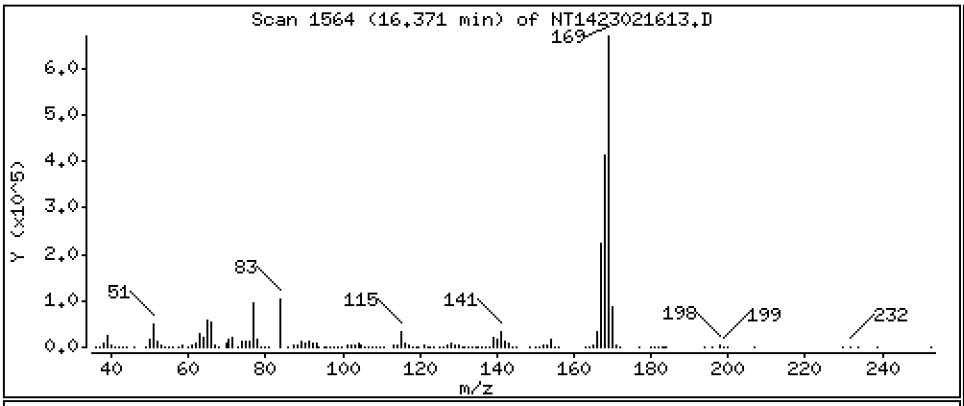
Operator: DSD

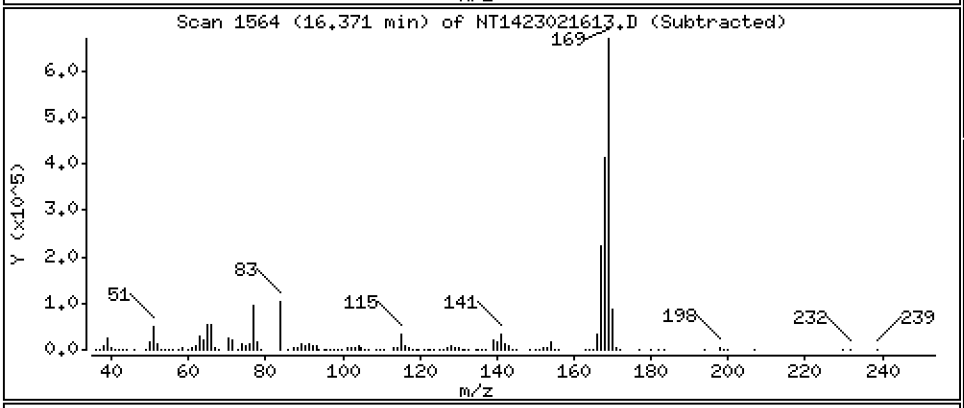
Column phase: ZB-5msi

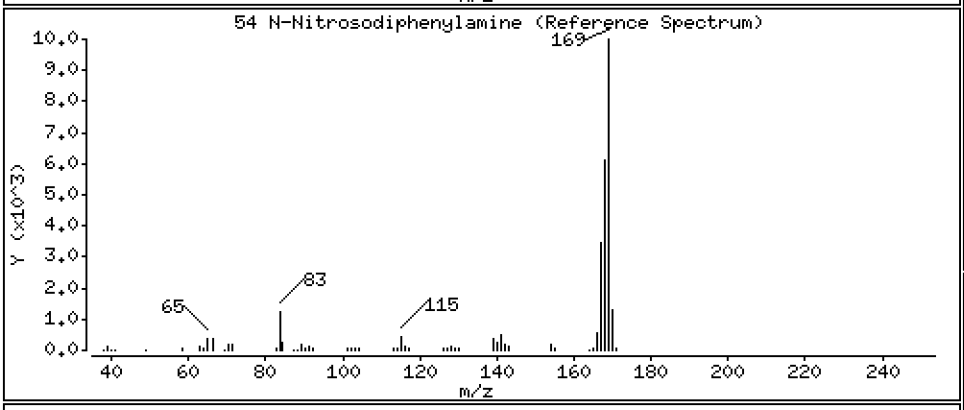
Column diameter: 0.25

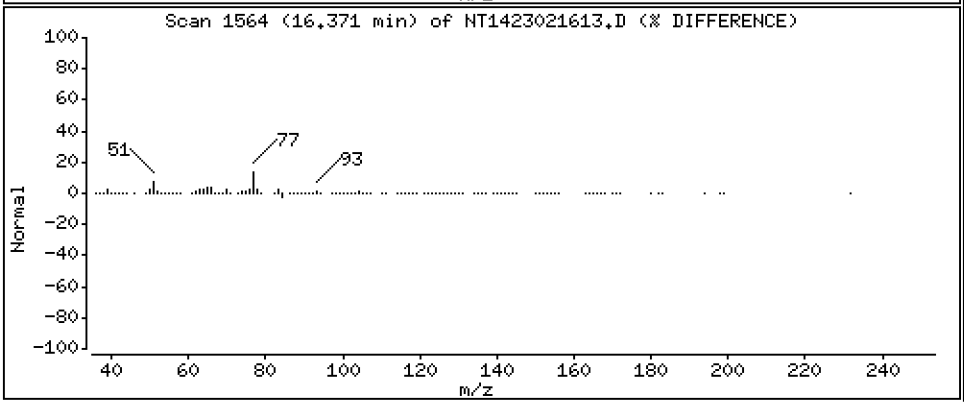
54 N-Nitrosodiphenylamine

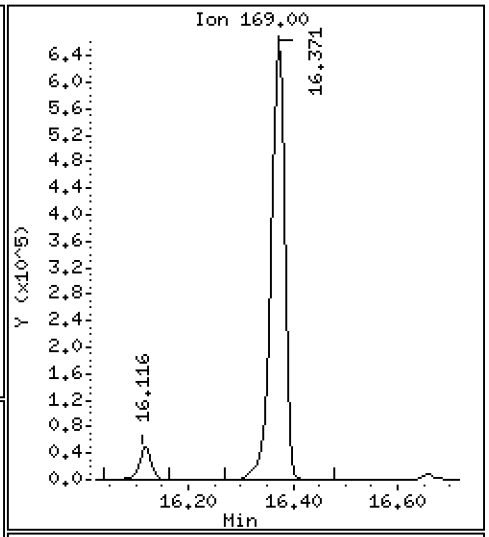
Concentration: 4.907 ug/mL

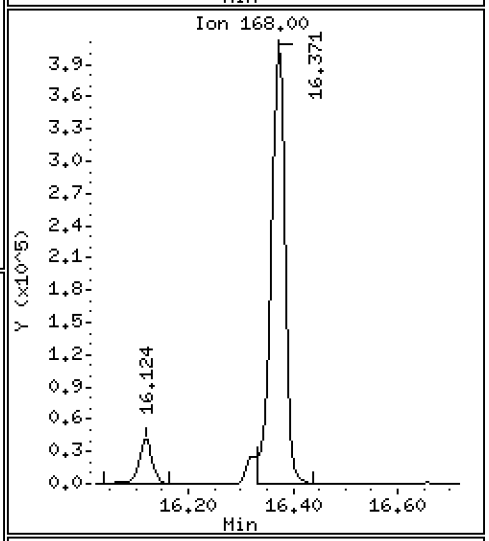


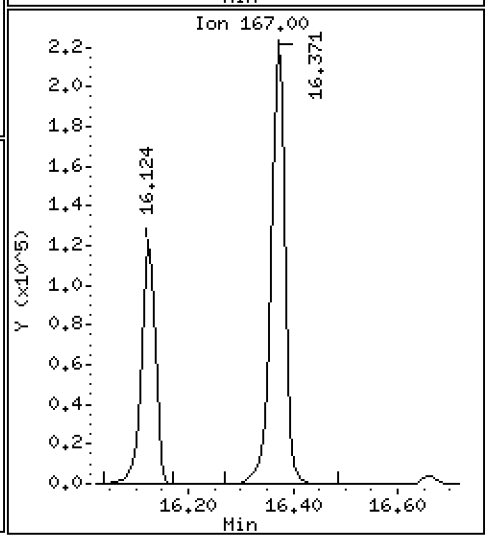












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

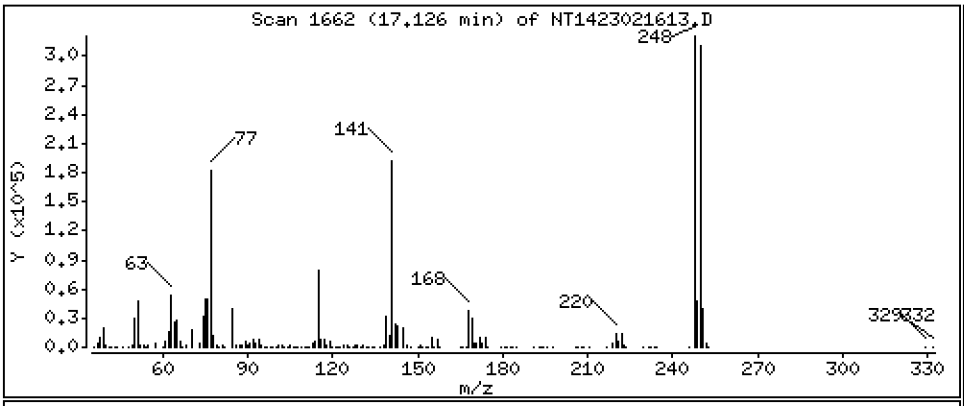
Operator: DSD

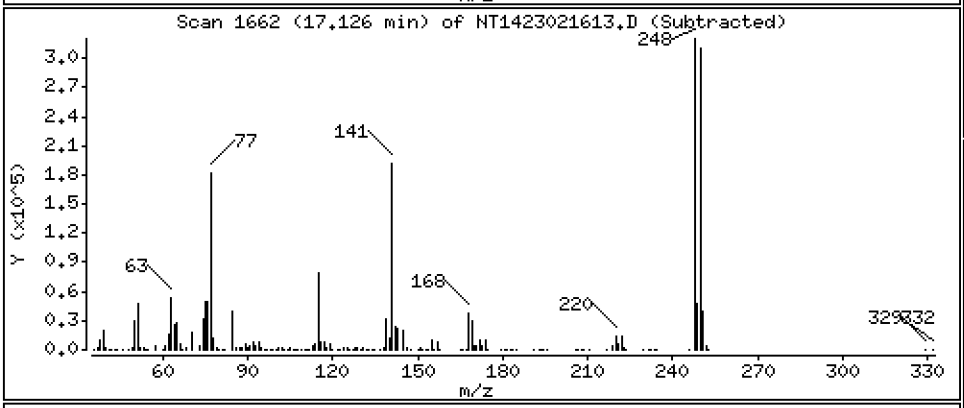
Column phase: ZB-5msi

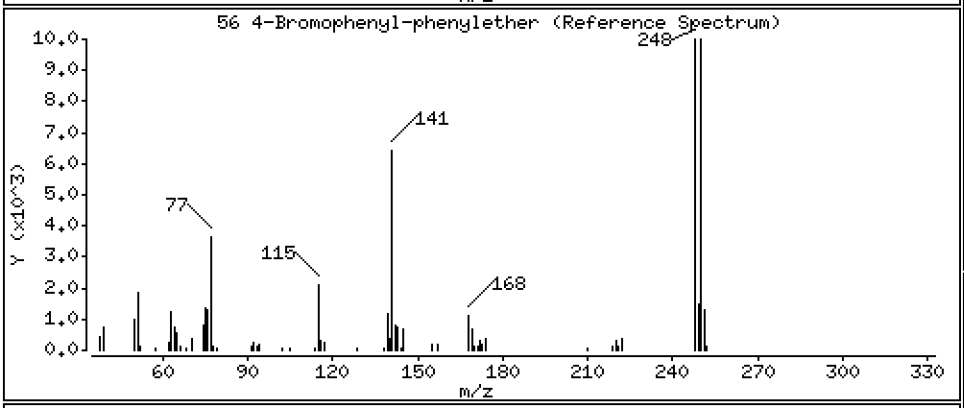
Column diameter: 0.25

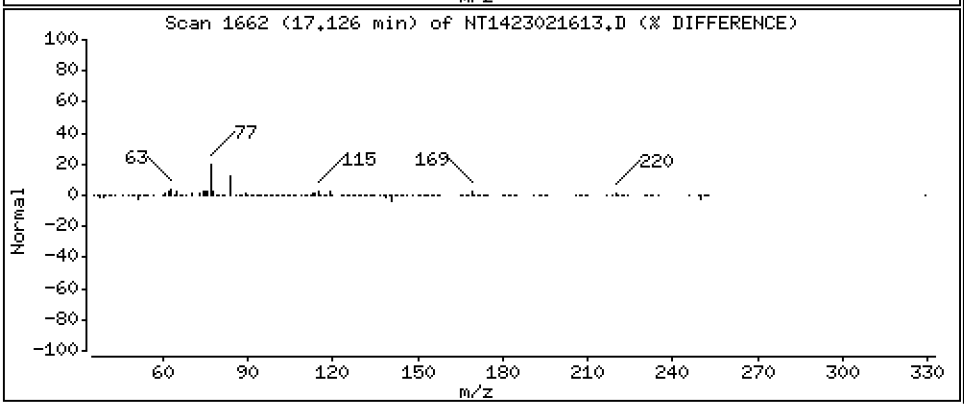
56 4-Bromophenyl-phenylether

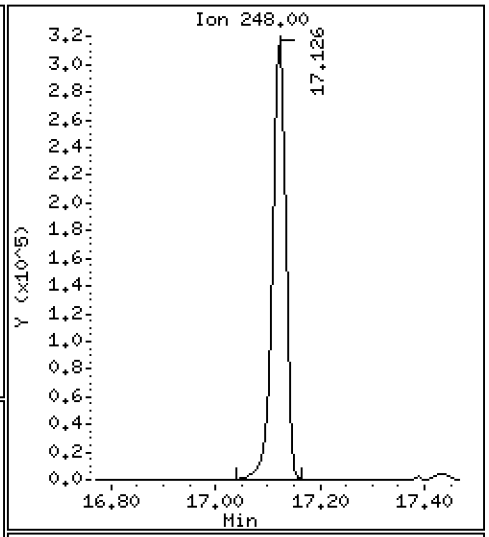
Concentration: 5.153 ug/mL

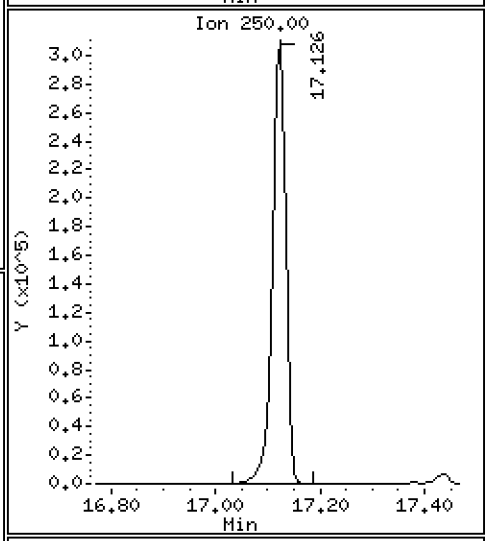


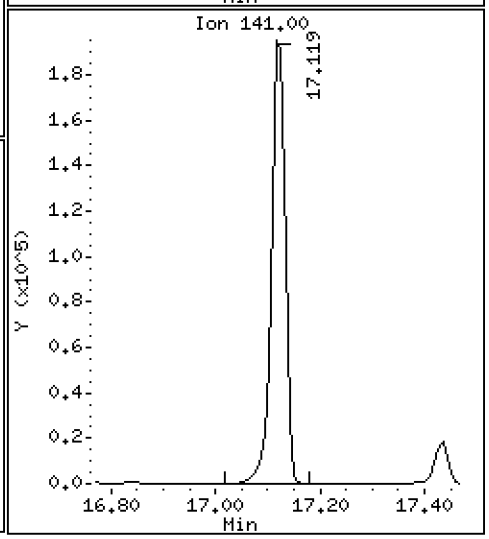












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

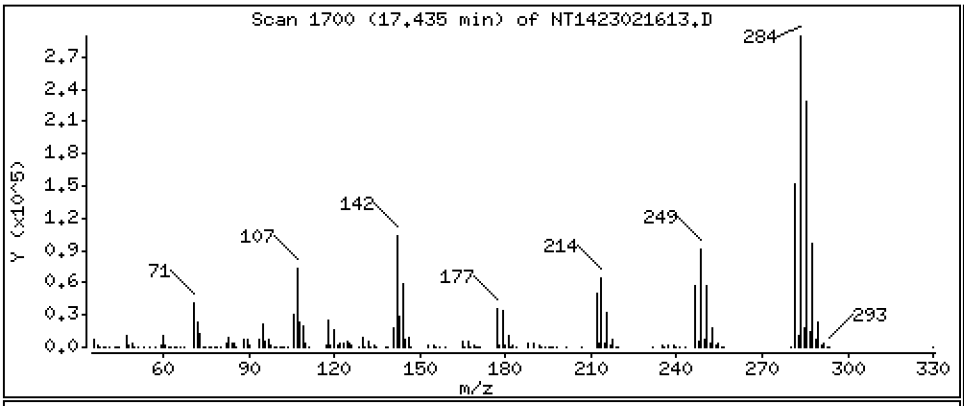
Operator: DSD

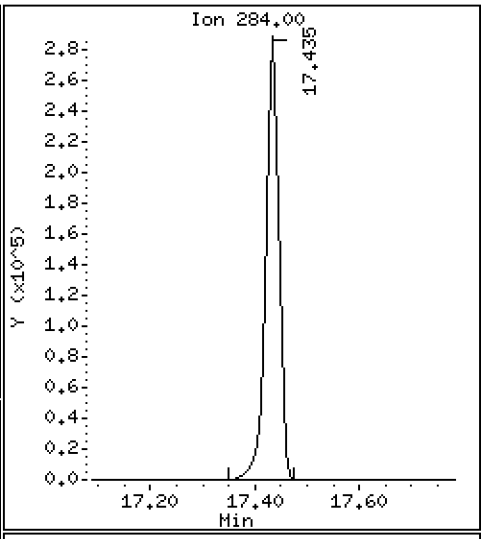
Column phase: ZB-5msi

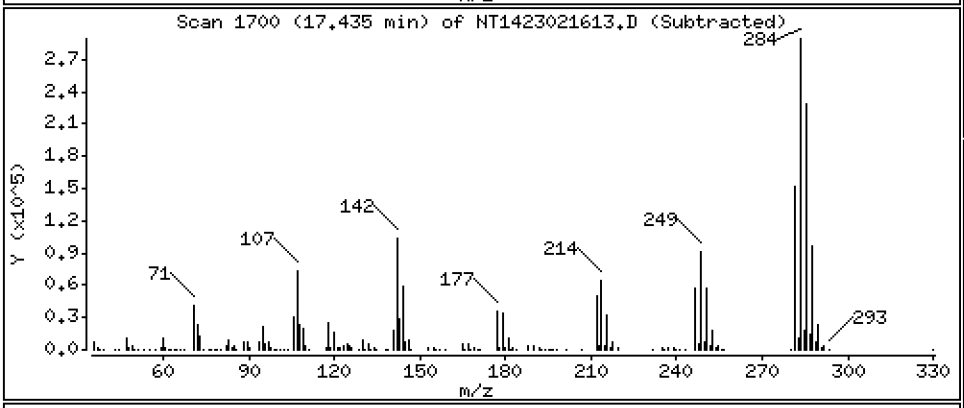
Column diameter: 0.25

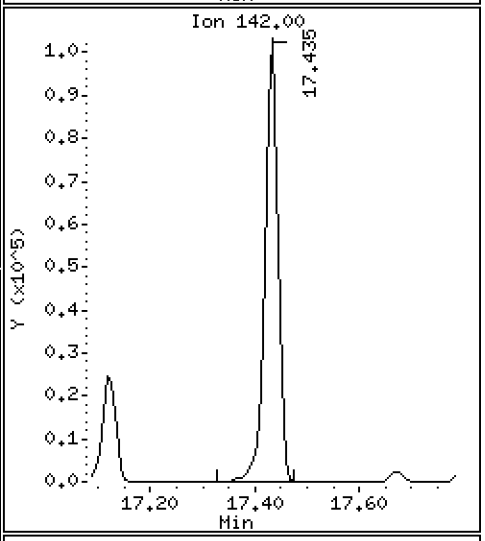
57 Hexachlorobenzene

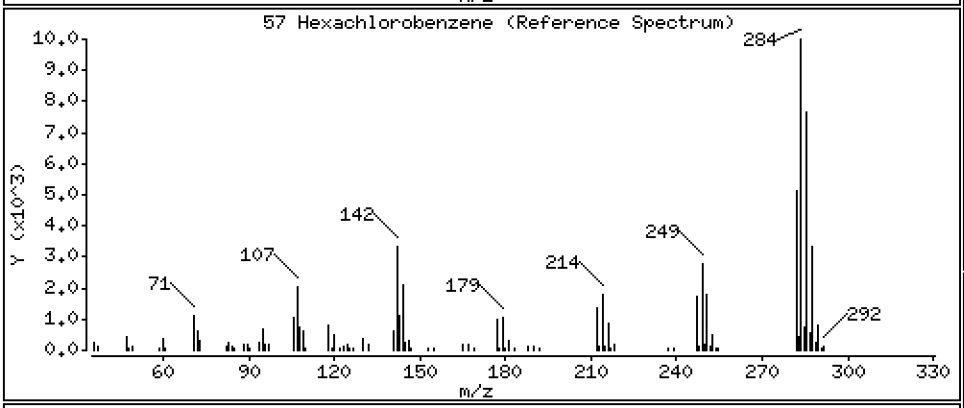
Concentration: 4.679 ug/mL

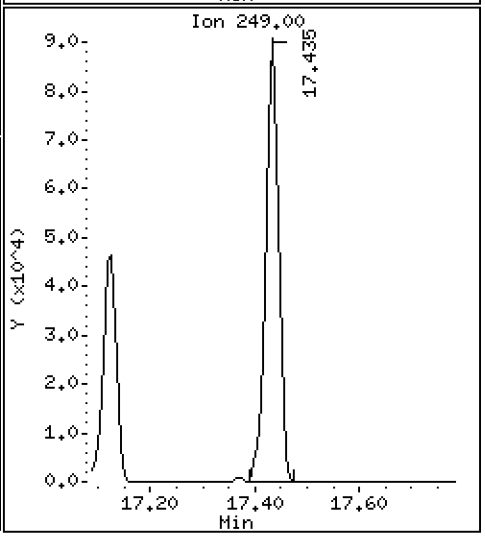


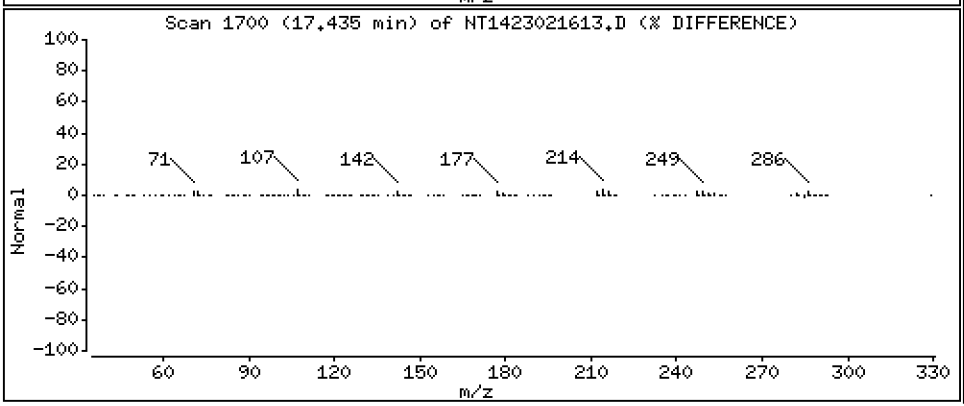












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

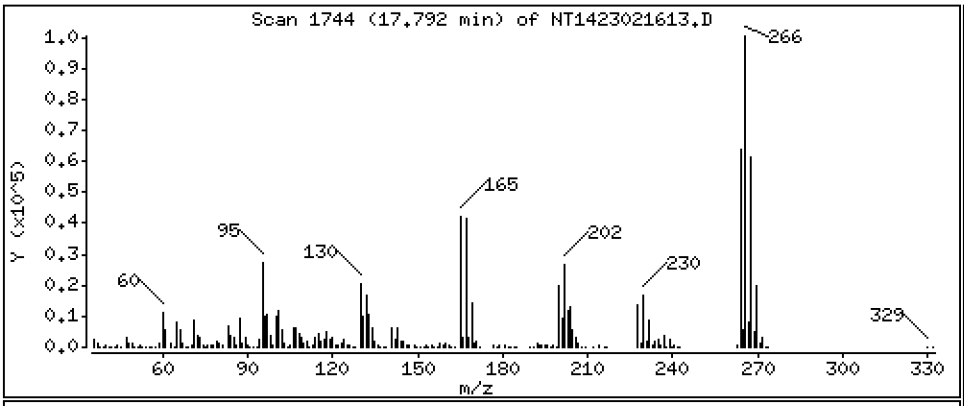
Operator: DSD

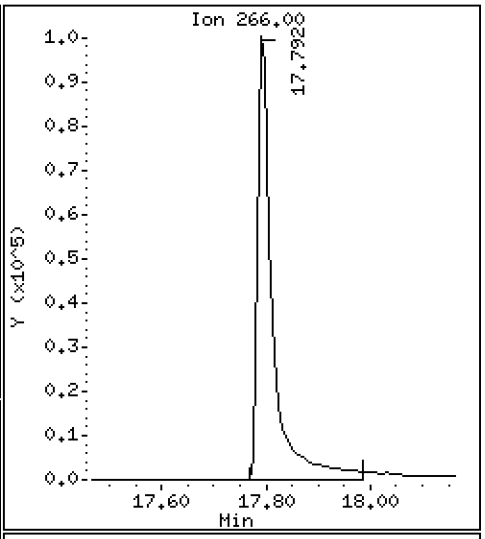
Column phase: ZB-5msi

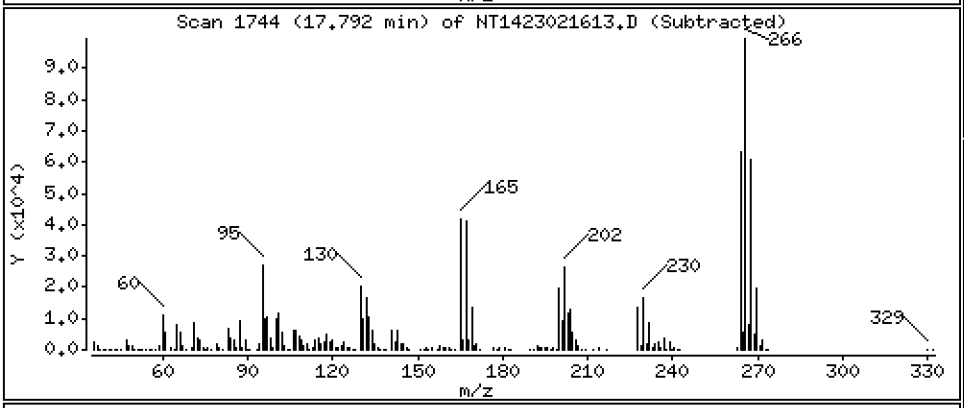
Column diameter: 0.25

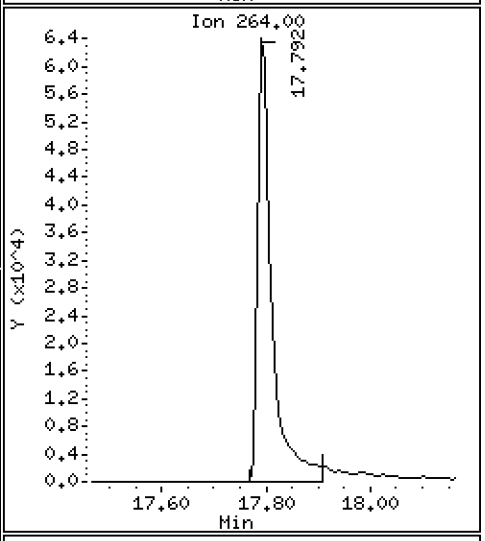
58 Pentachlorophenol

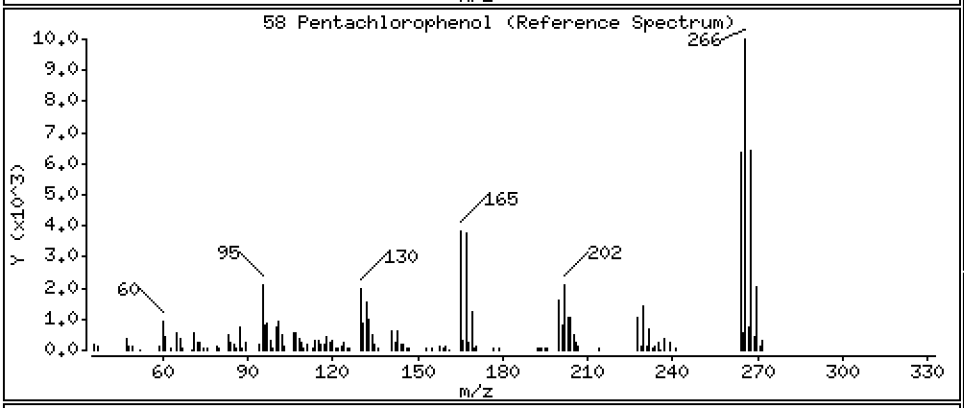
Concentration: 3.932 ug/mL

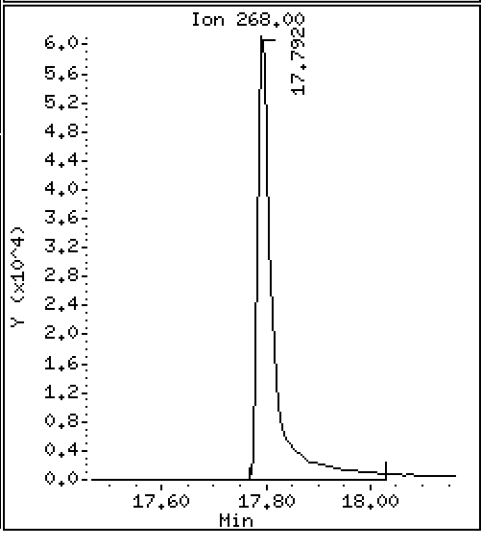


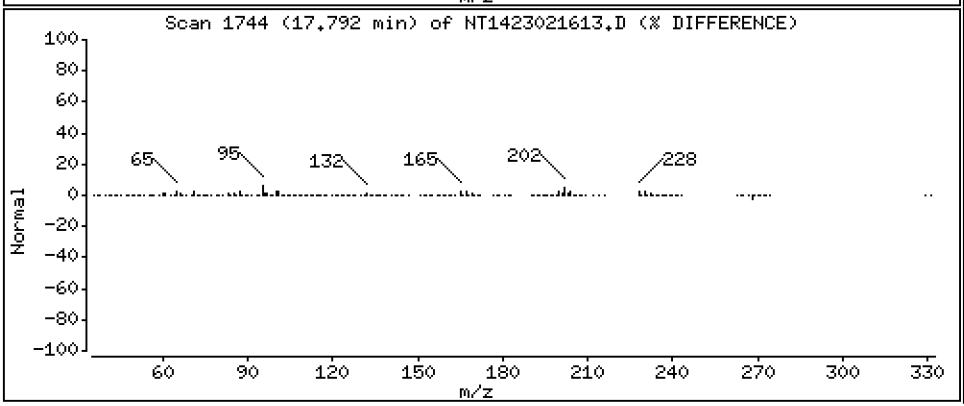












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

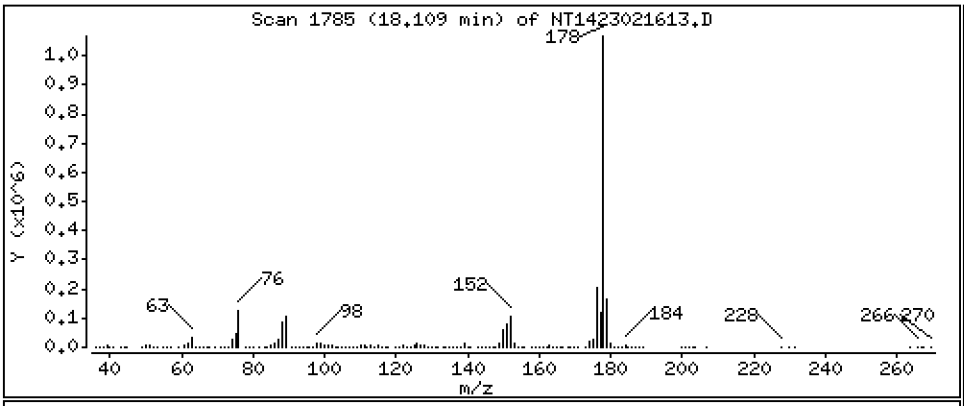
Operator: DSD

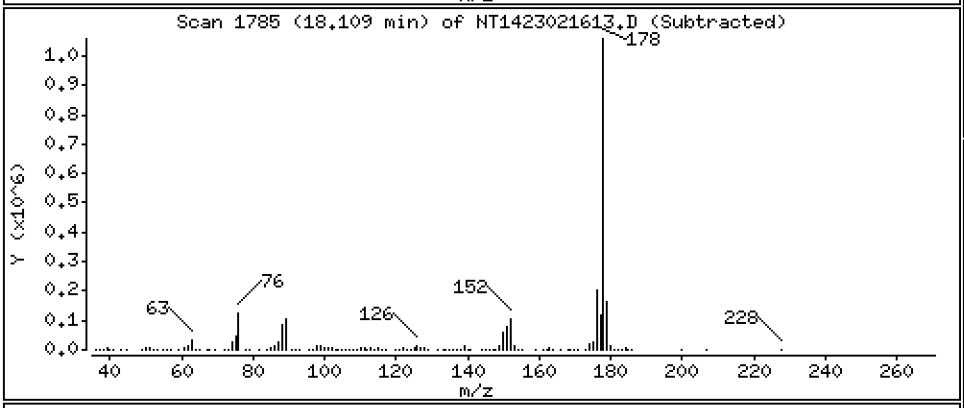
Column phase: ZB-5msi

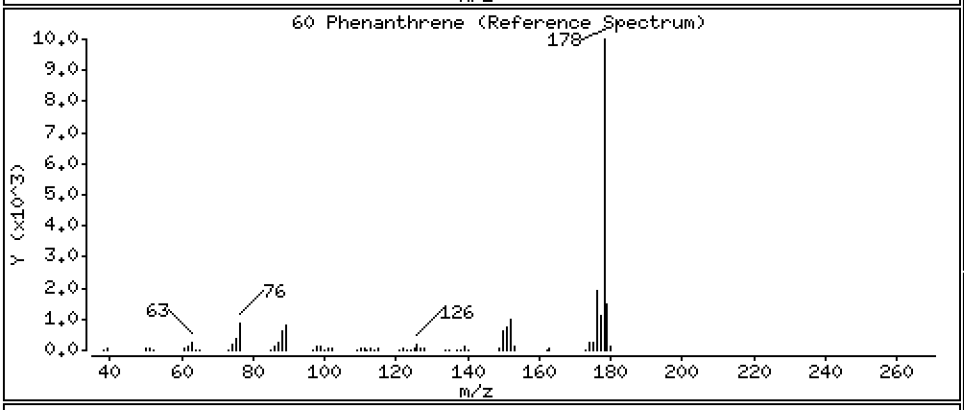
Column diameter: 0.25

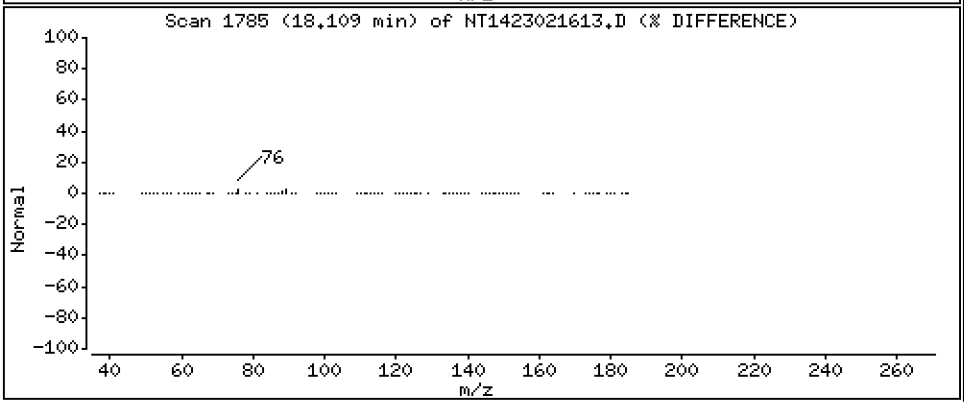
60 Phenanthrene

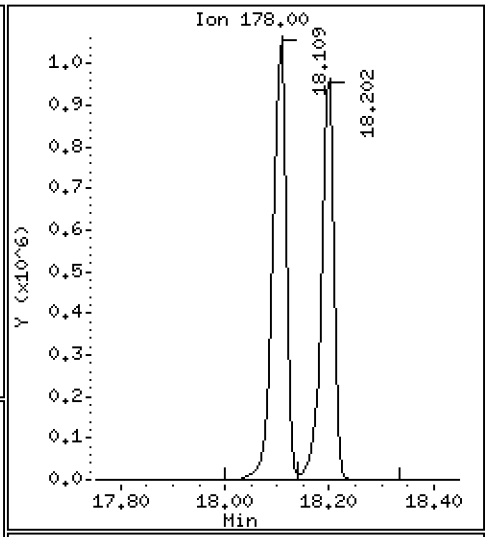
Concentration: 4.690 ug/mL

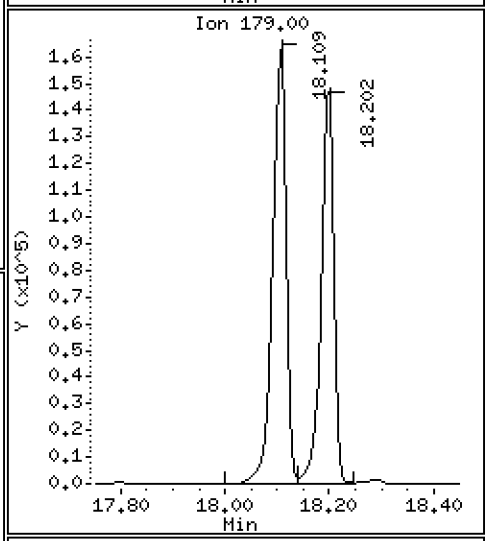


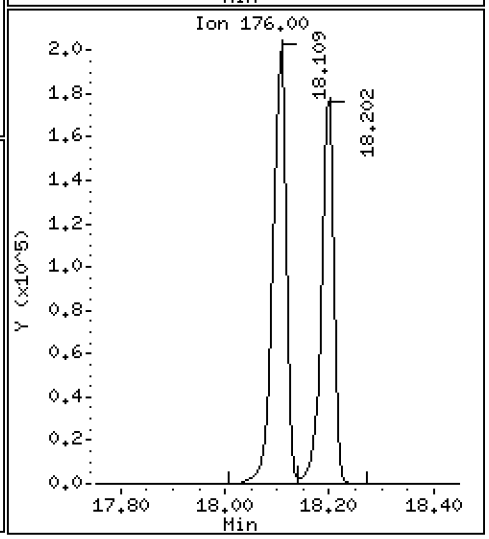












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

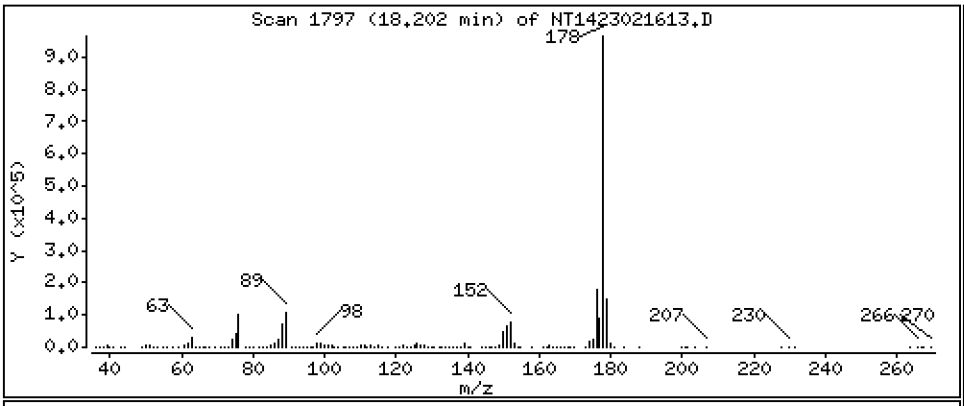
Operator: DSD

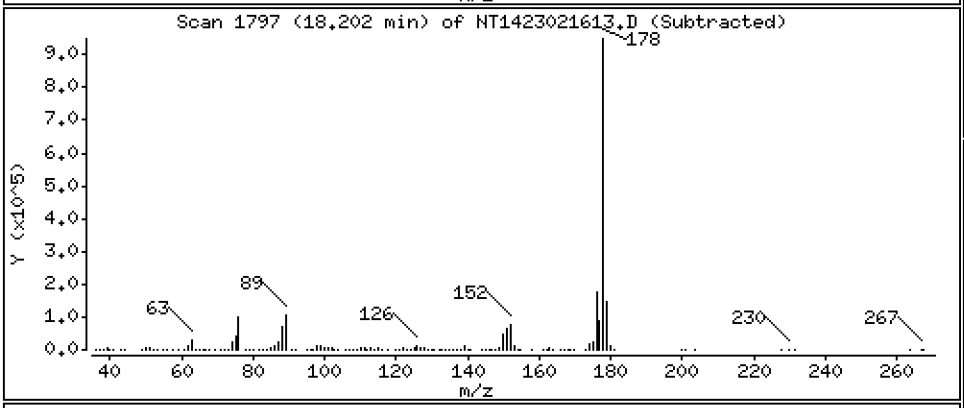
Column phase: ZB-5msi

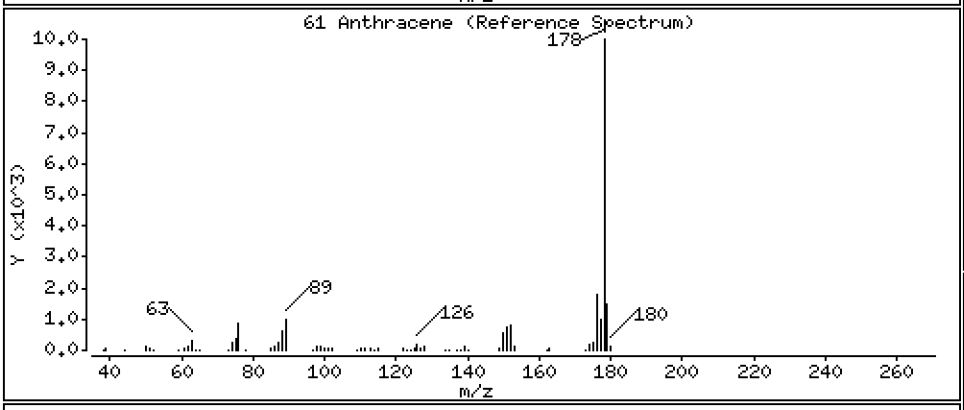
Column diameter: 0.25

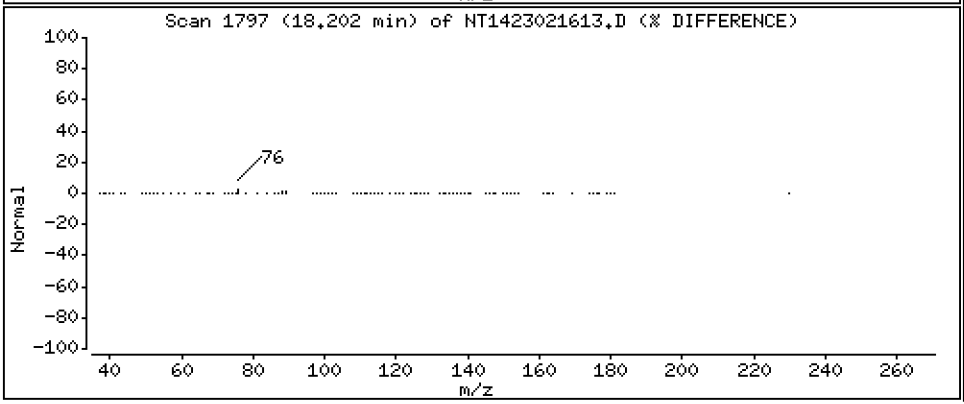
61 Anthracene

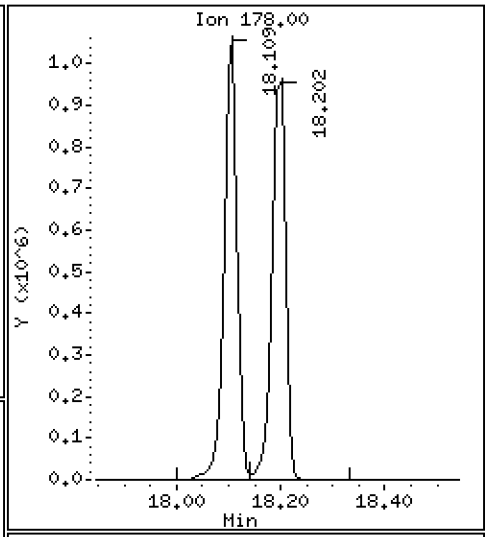
Concentration: 4.304 ug/mL

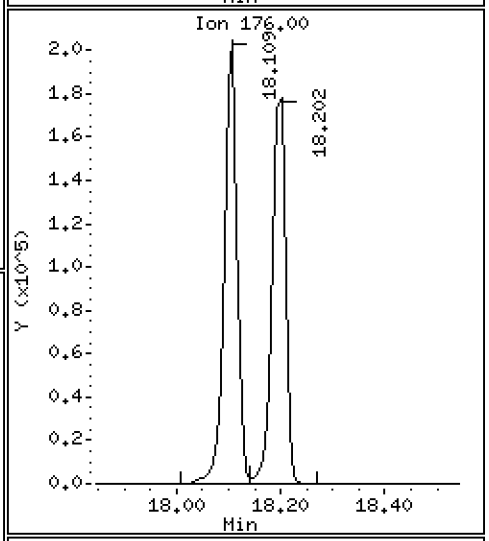


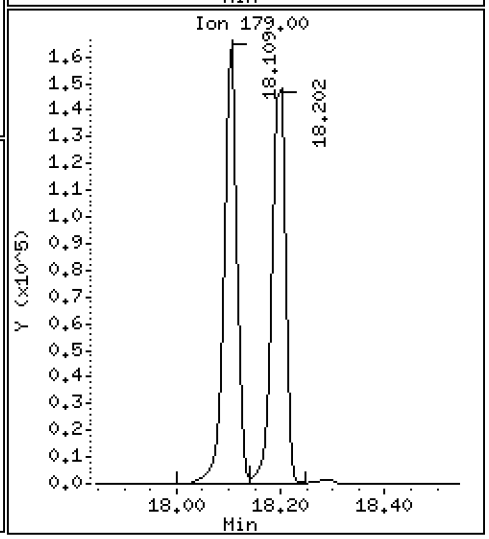












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

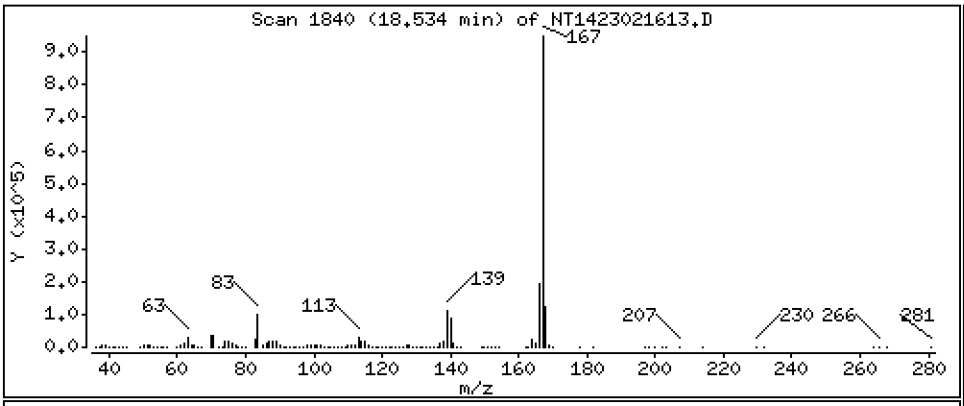
Operator: DSD

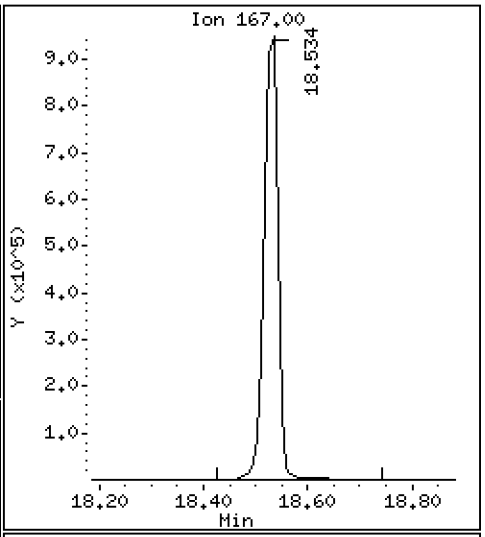
Column phase: ZB-5msi

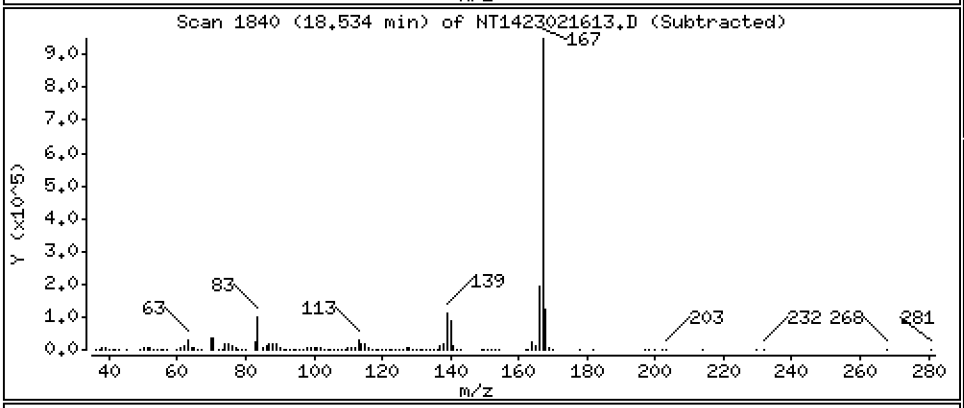
Column diameter: 0.25

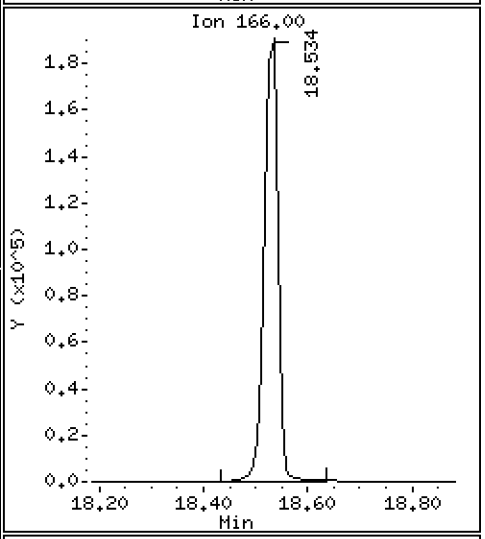
62 Carbazole

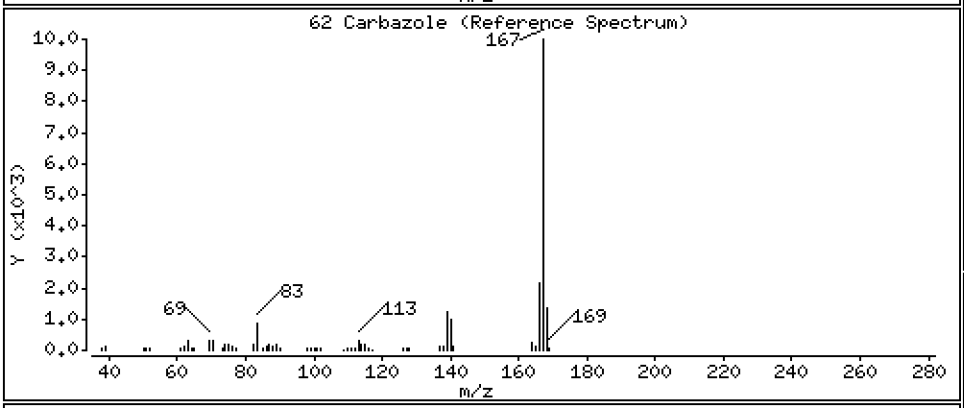
Concentration: 4.792 ug/mL

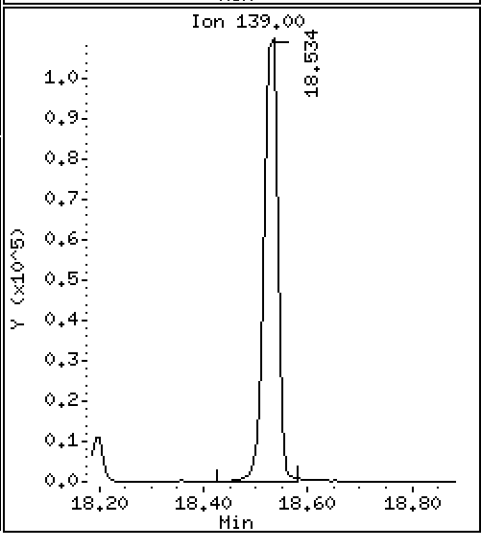


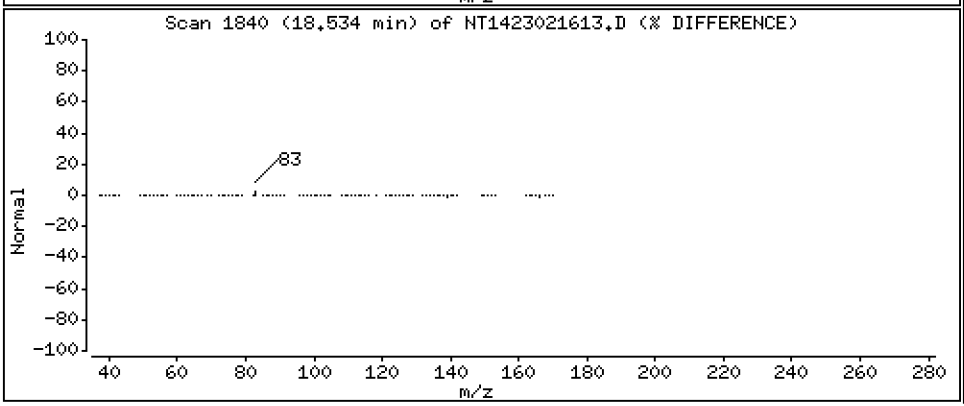












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

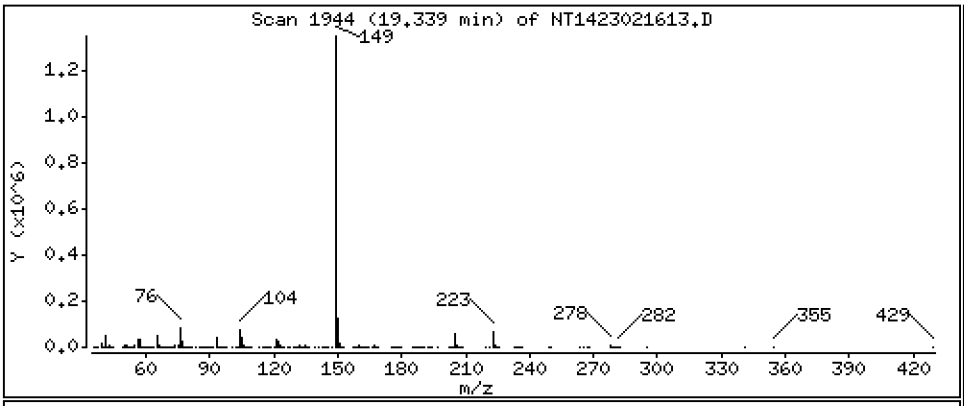
Operator: DSD

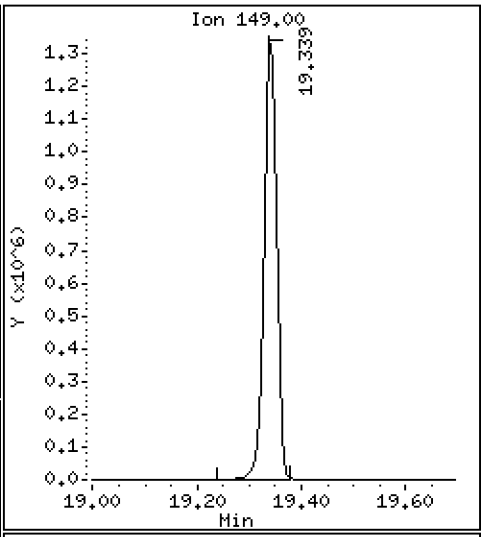
Column phase: ZB-5msi

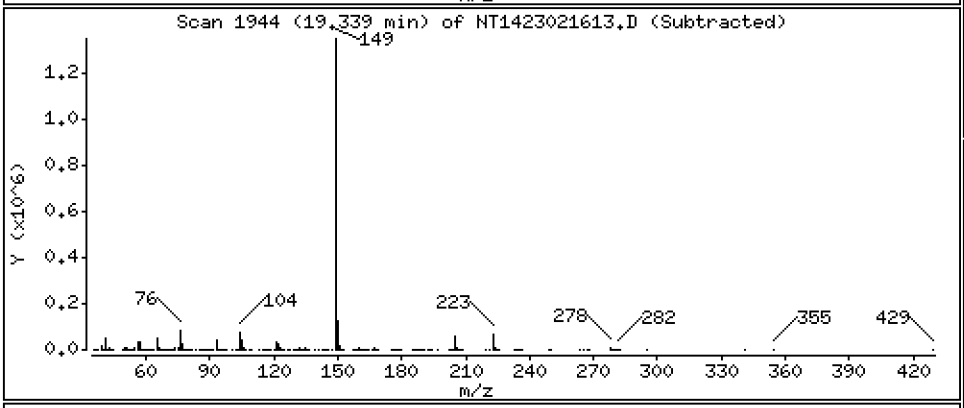
Column diameter: 0.25

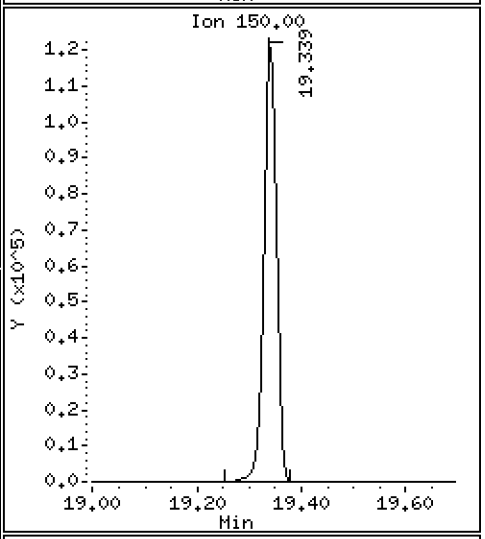
63 Di-n-butylphthalate

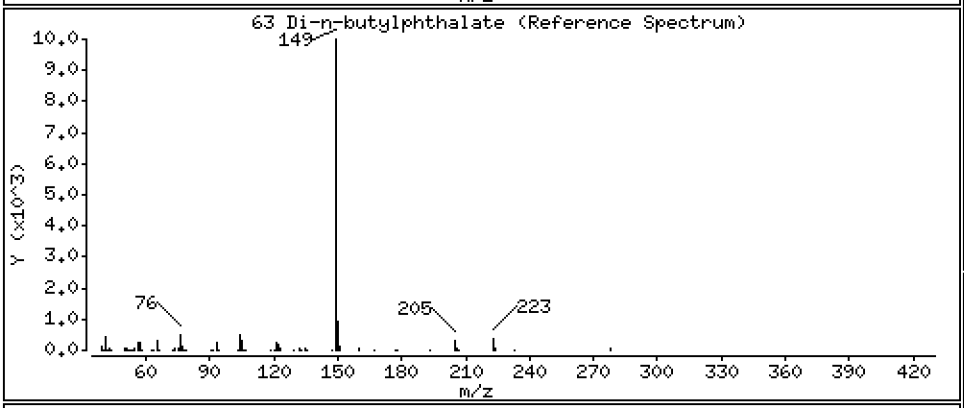
Concentration: 5.515 ug/mL

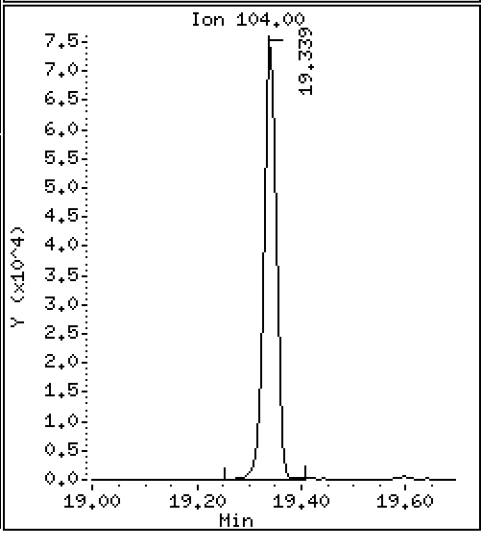


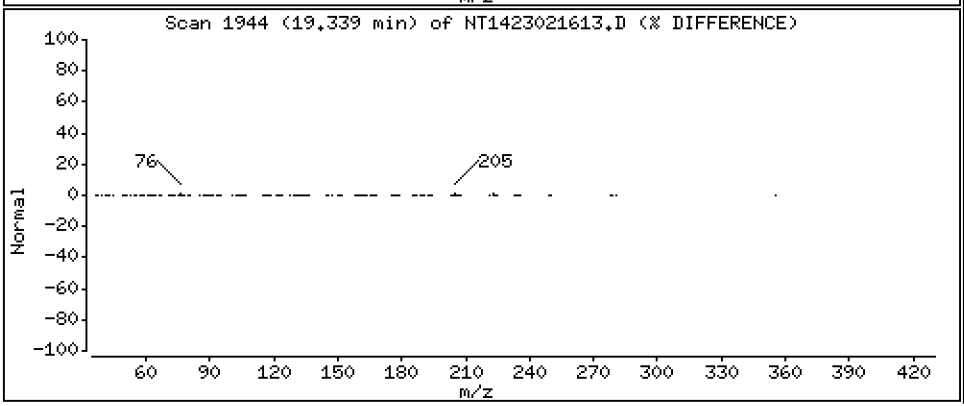












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

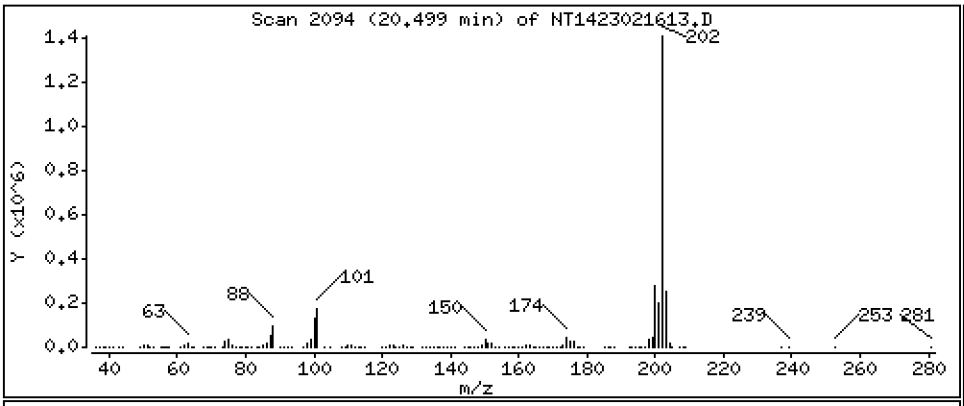
Operator: DSD

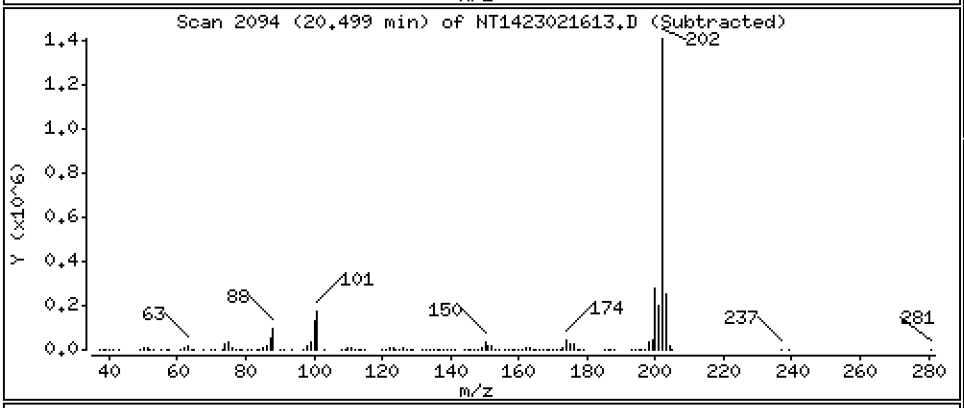
Column phase: ZB-5msi

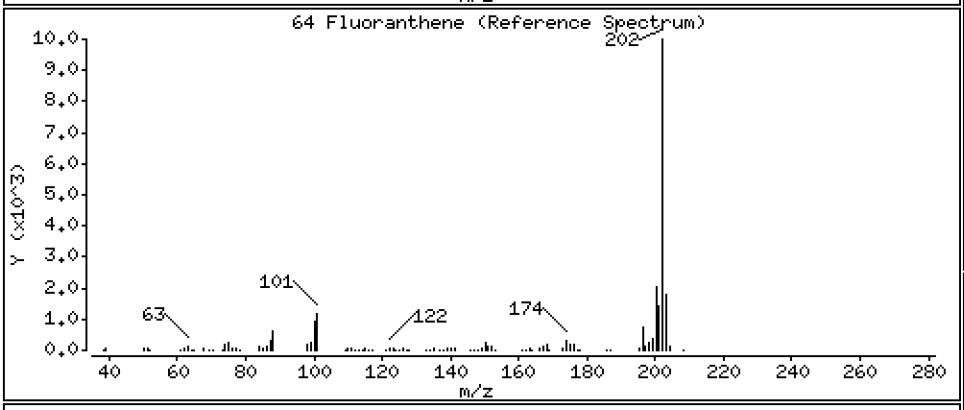
Column diameter: 0.25

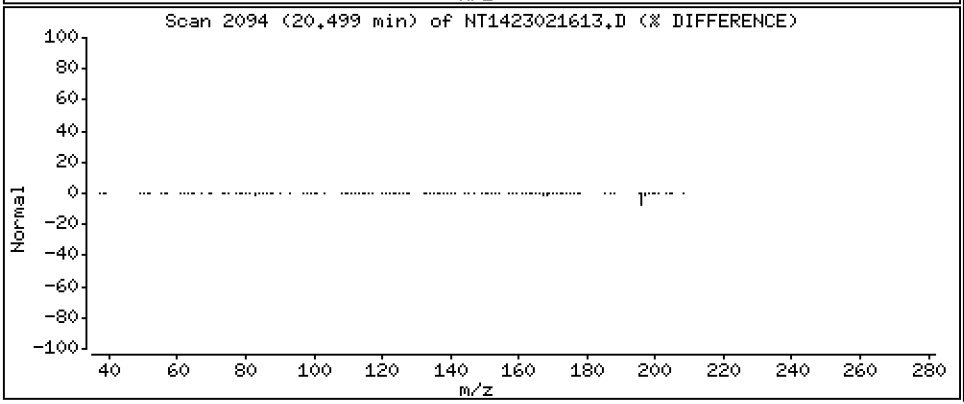
64 Fluoranthene

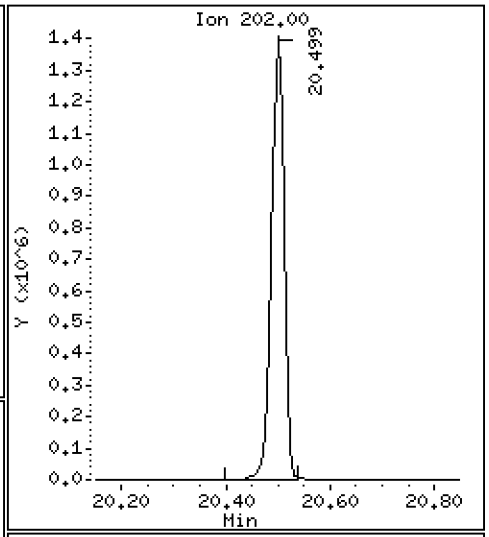
Concentration: 4.682 ug/mL

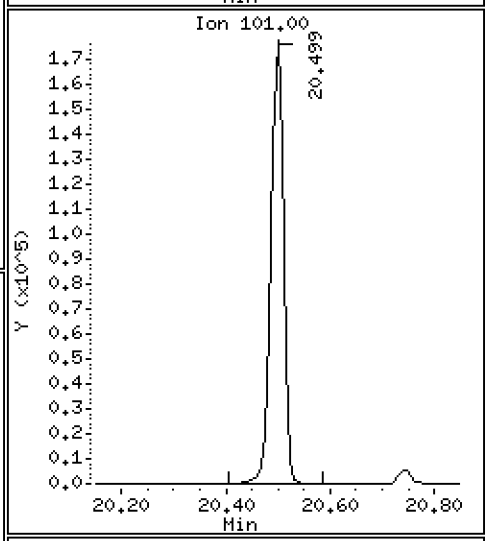


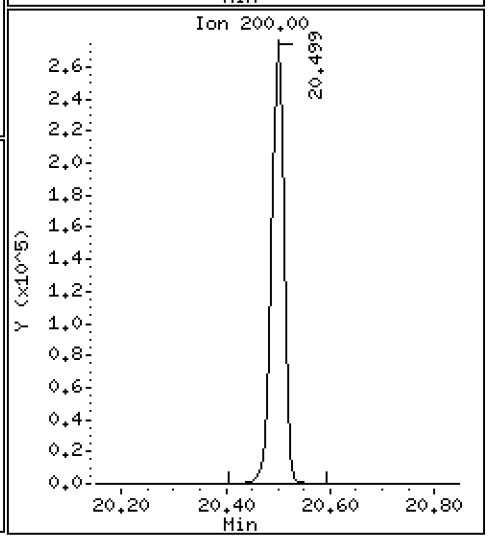












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

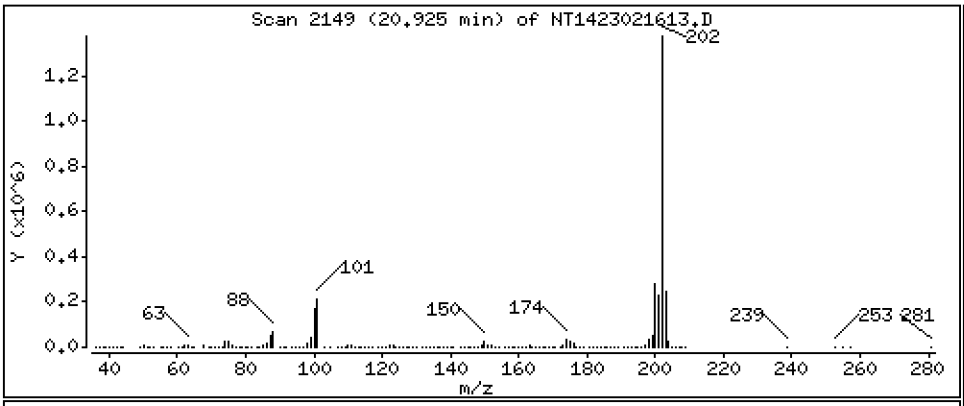
Operator: DSD

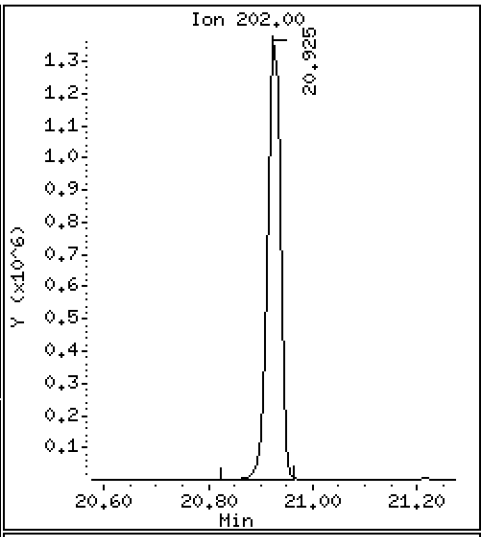
Column phase: ZB-5msi

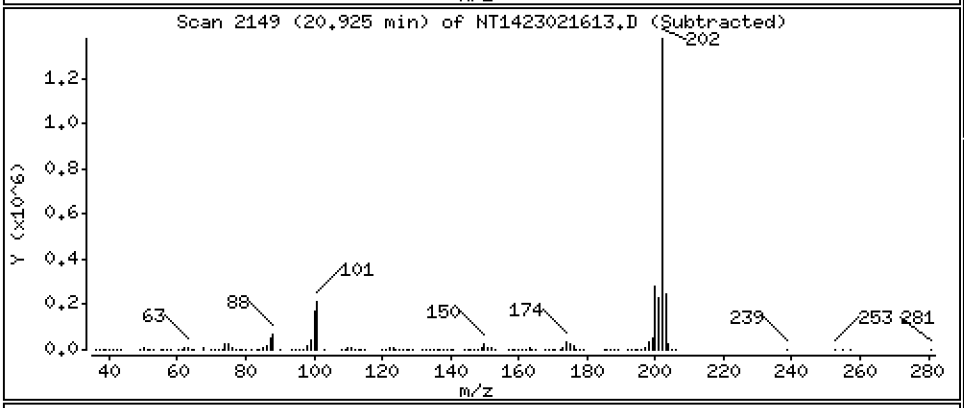
Column diameter: 0.25

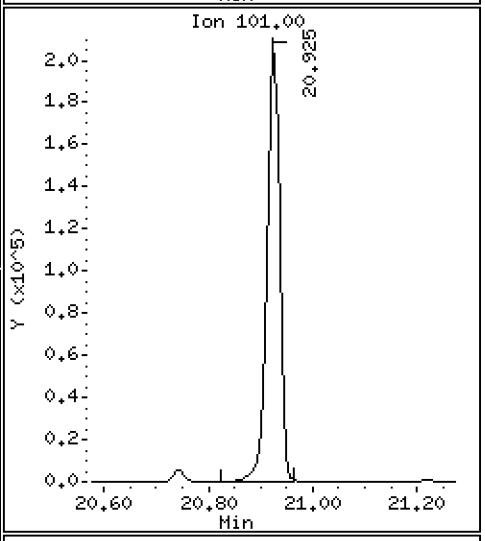
65 Pyrene

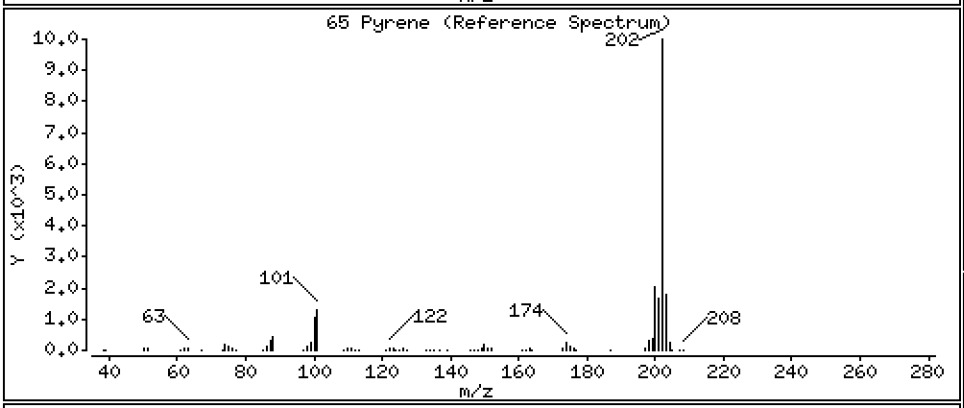
Concentration: 4.400 ug/mL

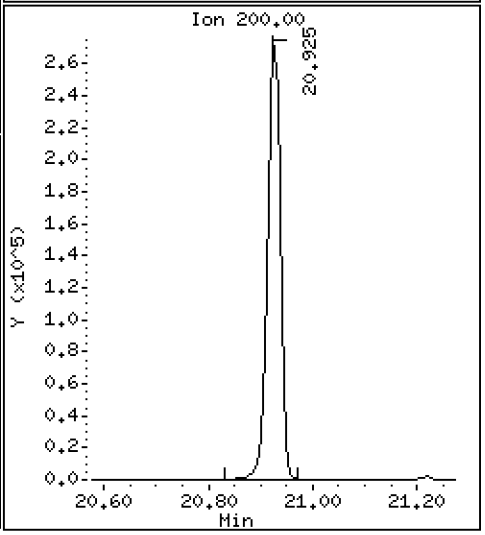


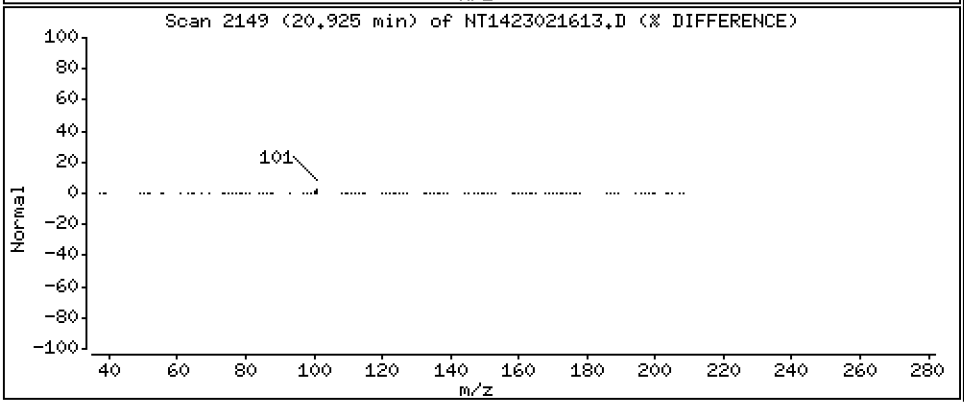












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

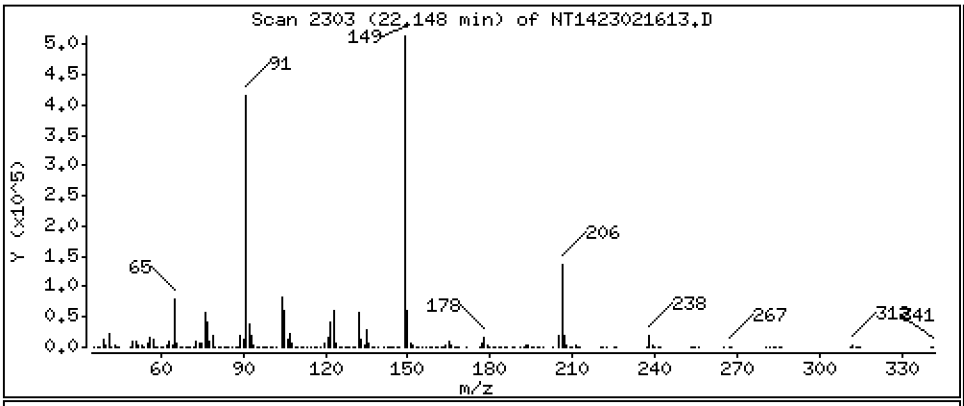
Operator: DSD

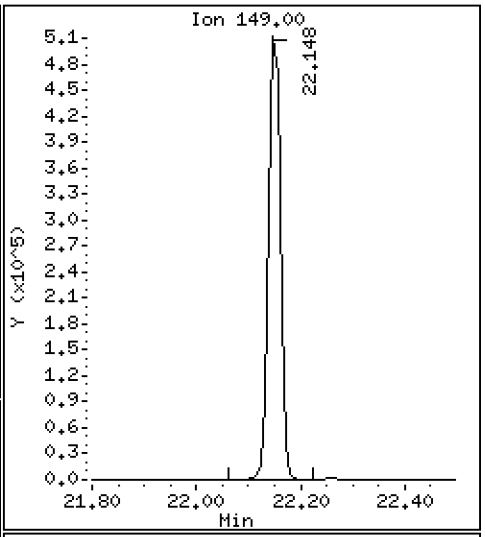
Column phase: ZB-5msi

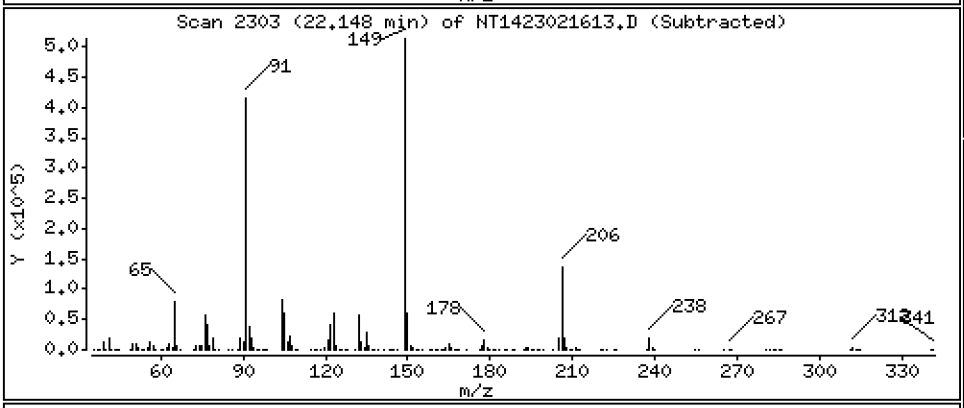
Column diameter: 0.25

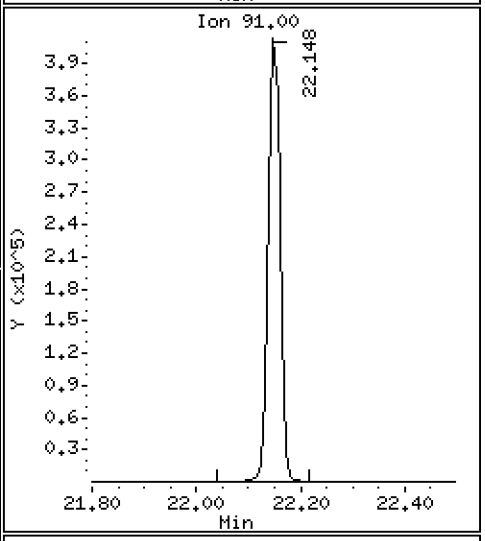
67 Butylbenzylphthalate

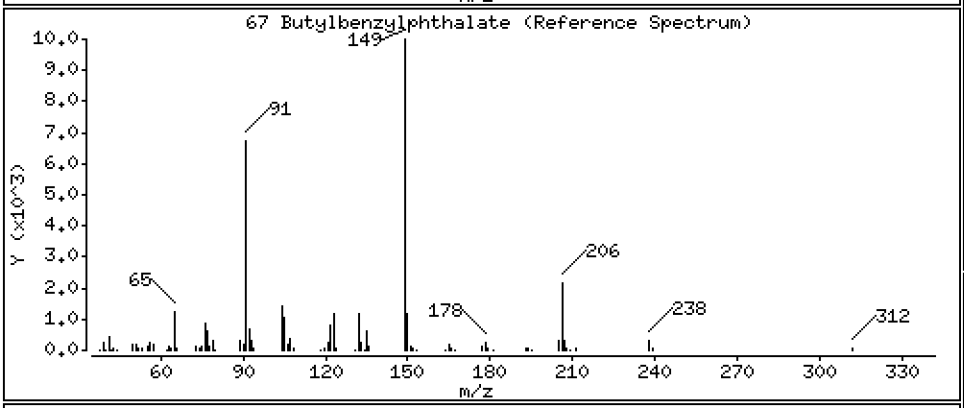
Concentration: 4.568 ug/mL

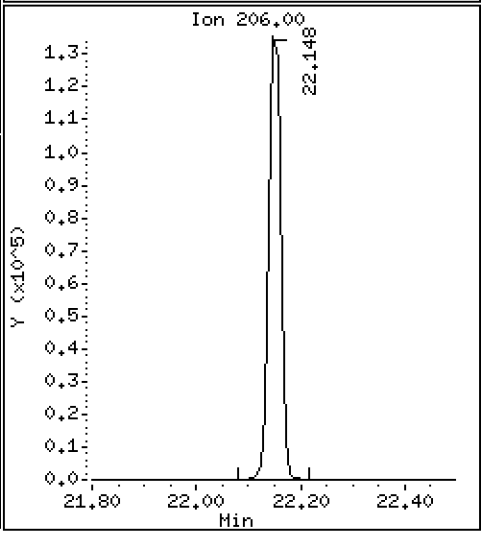


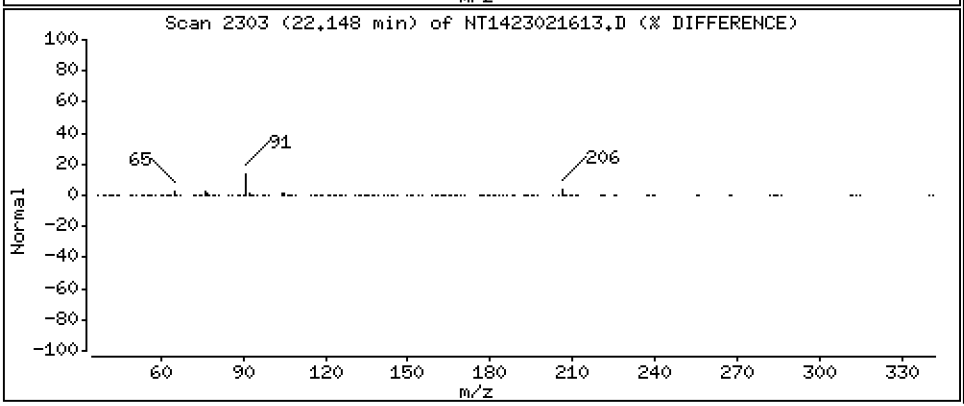












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

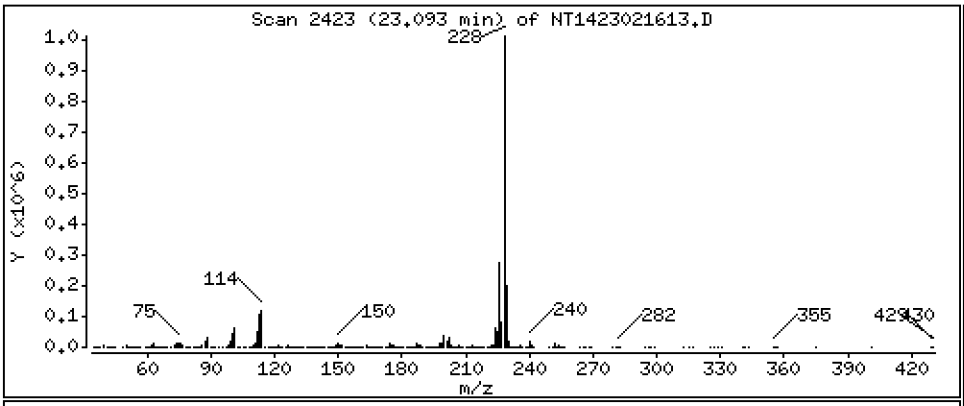
Operator: DSD

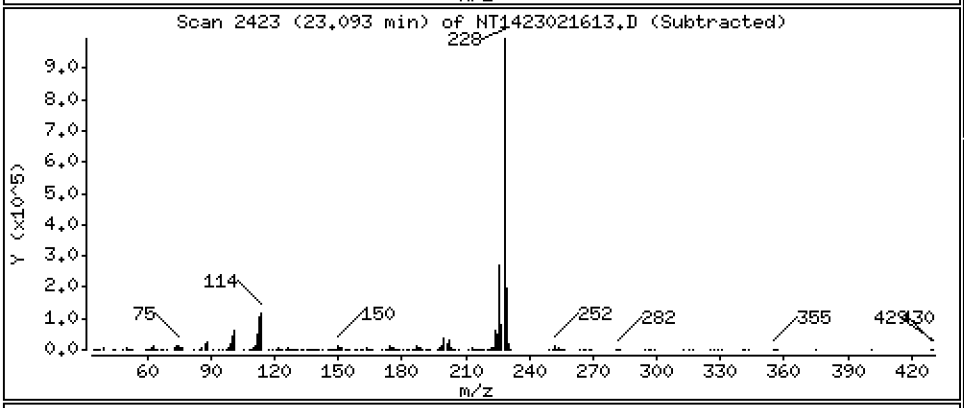
Column phase: ZB-5msi

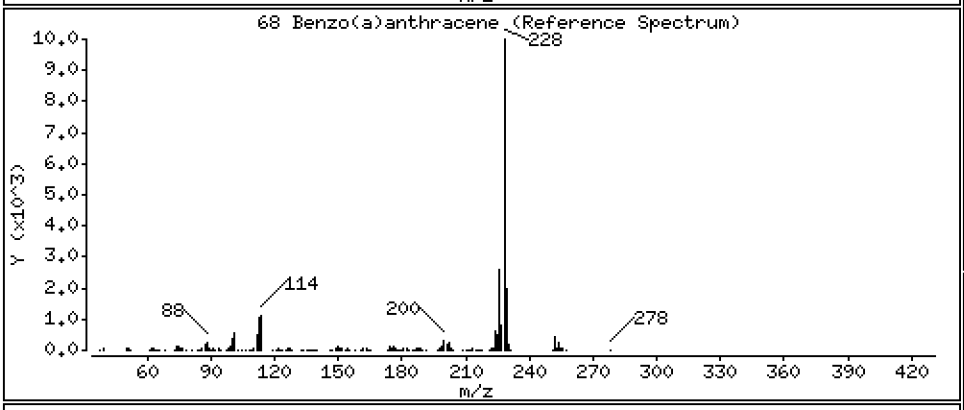
Column diameter: 0.25

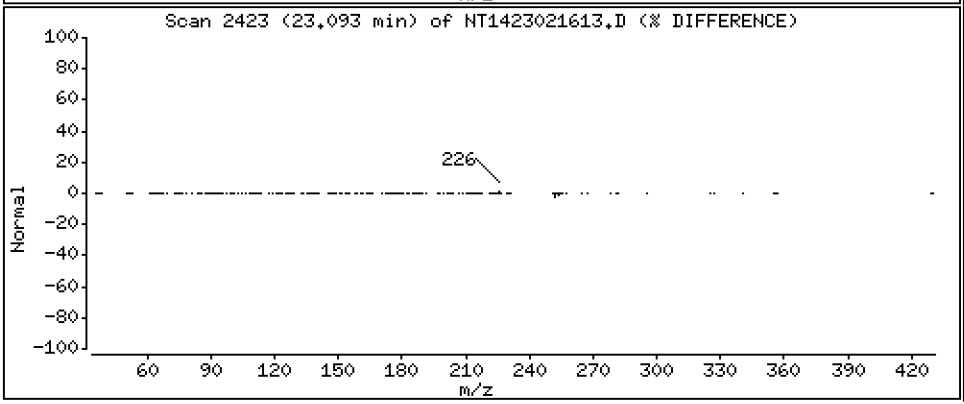
68 Benzo(a)anthracene

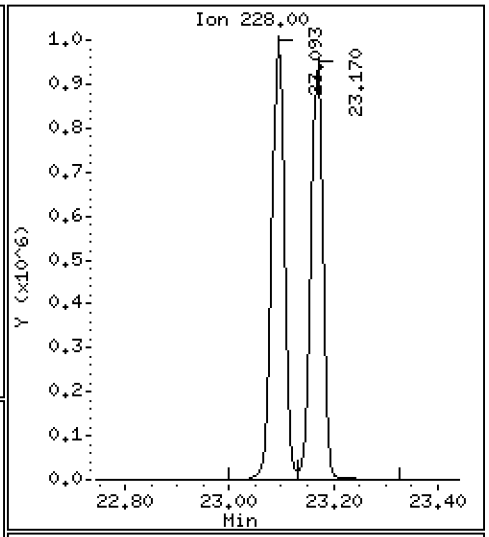
Concentration: 4.530 ug/mL

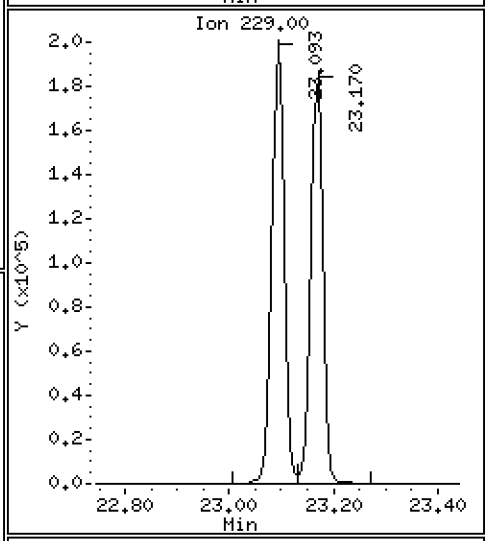


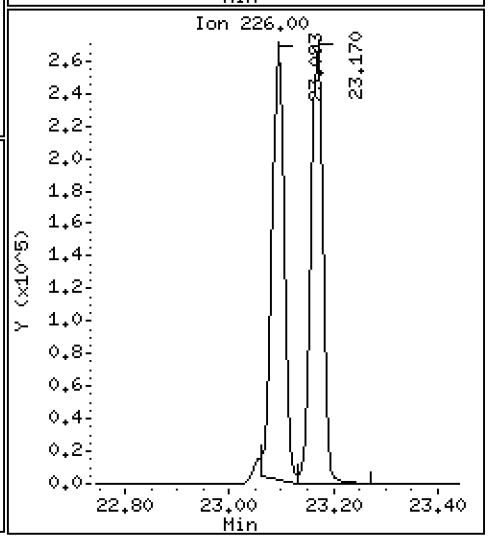












Date : 16-FEB-2023 21:18

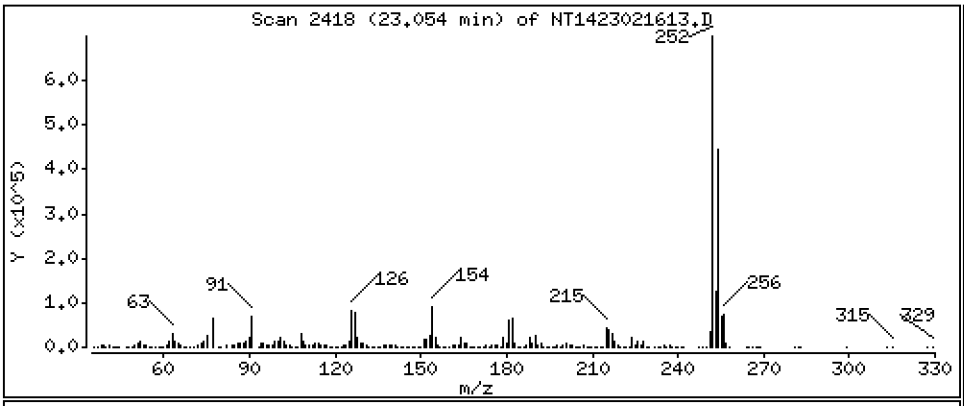
Client ID: Instrument: nt14.i

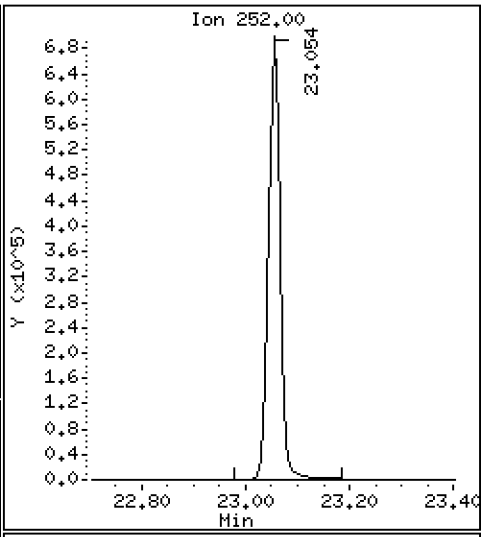
Sample Info: SLB0234-SCV1

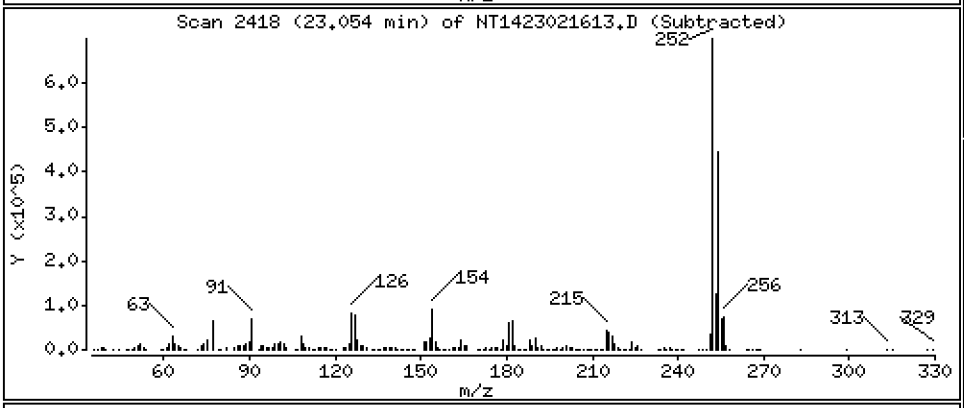
Operator: DSD

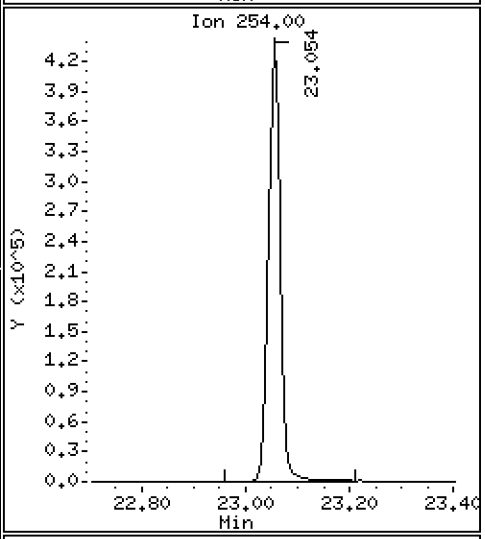
Column phase: ZB-5msi Column diameter: 0.25

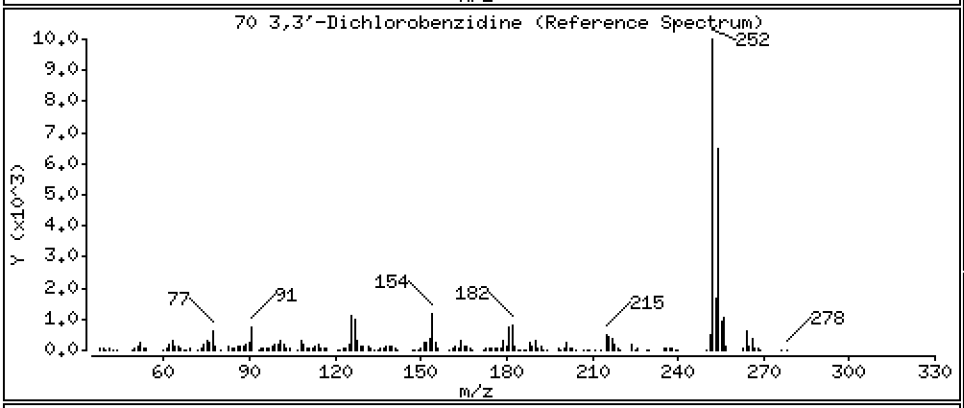
70 3,3'-Dichlorobenzidine Concentration: 9.328 ug/mL

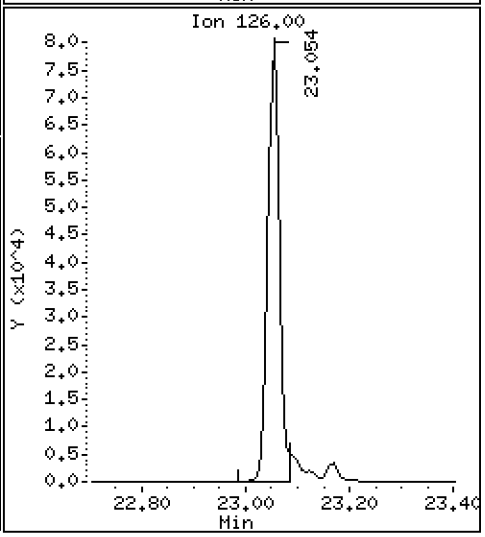


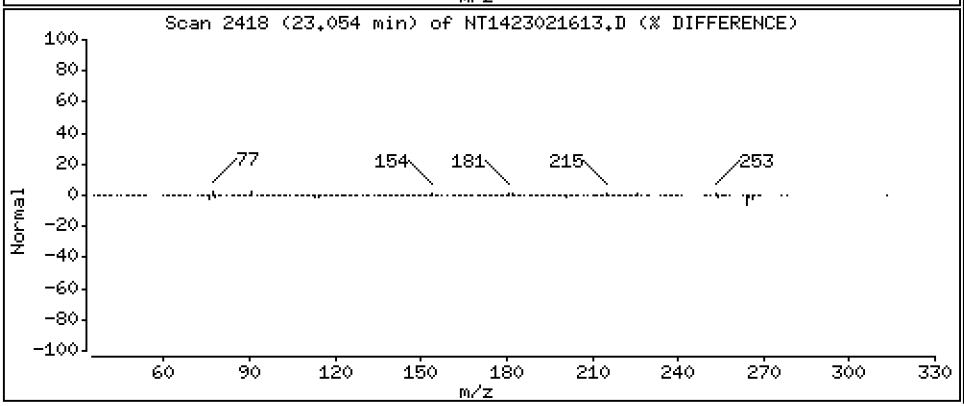












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

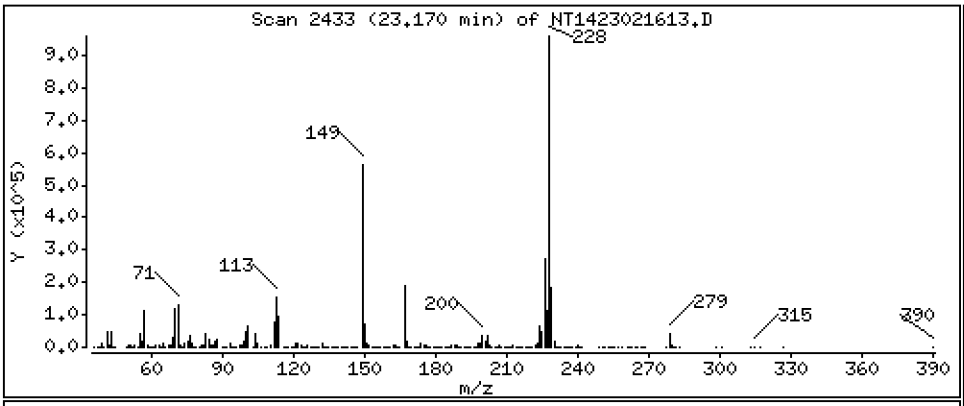
Operator: DSD

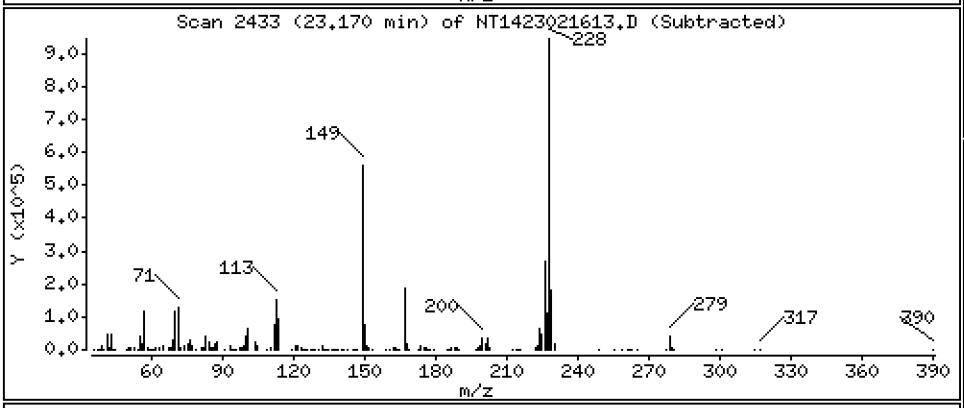
Column phase: ZB-5msi

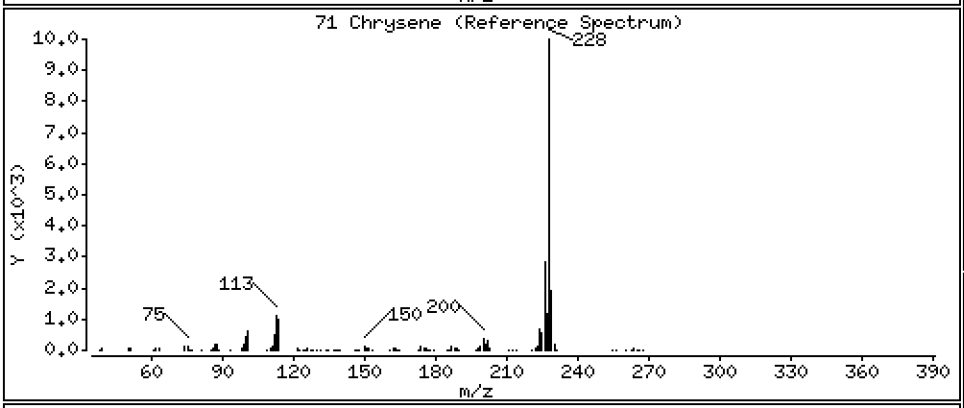
Column diameter: 0.25

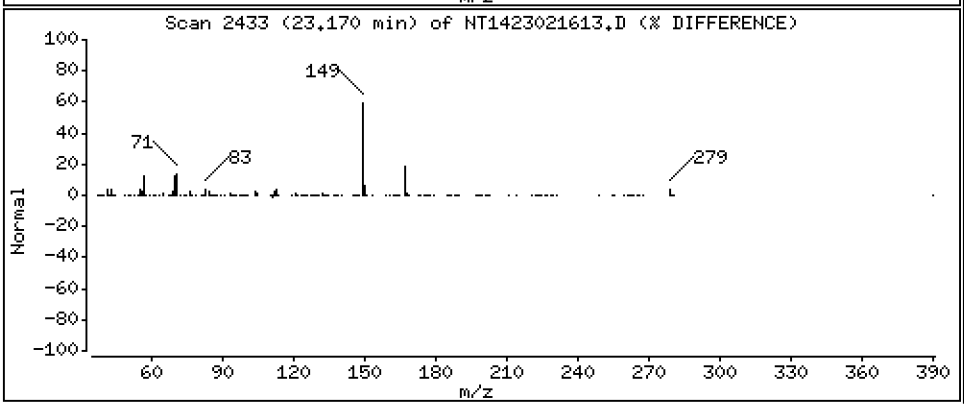
71 Chrysene

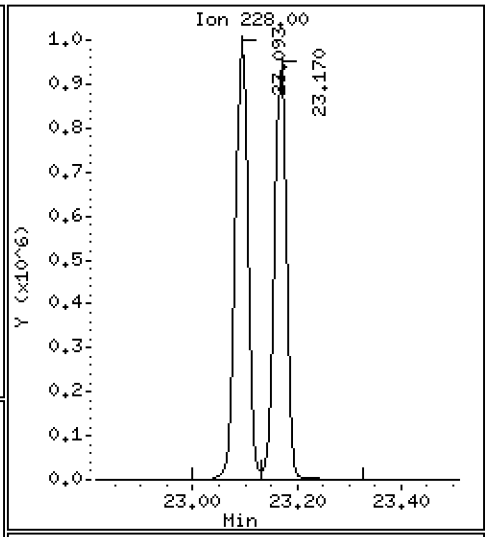
Concentration: 4.474 ug/mL

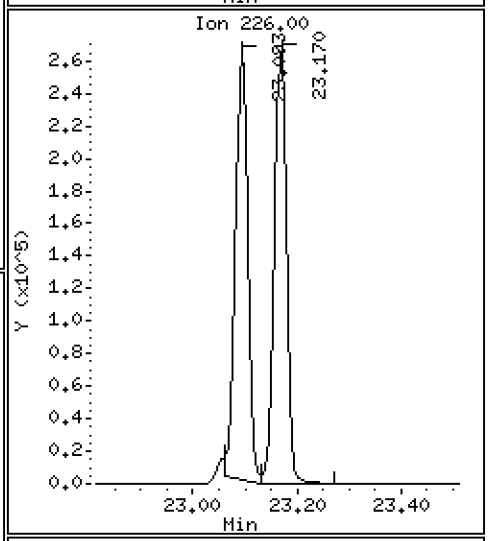


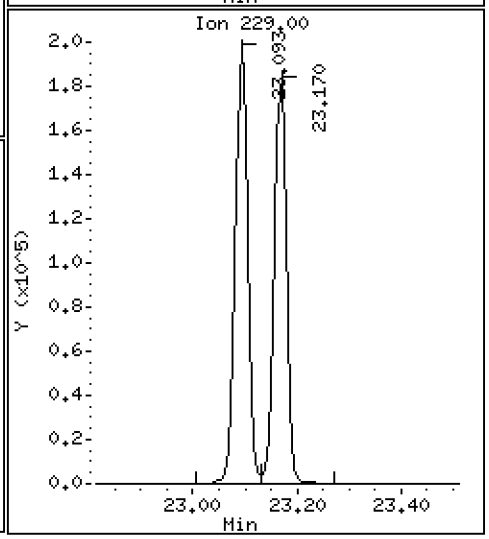












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

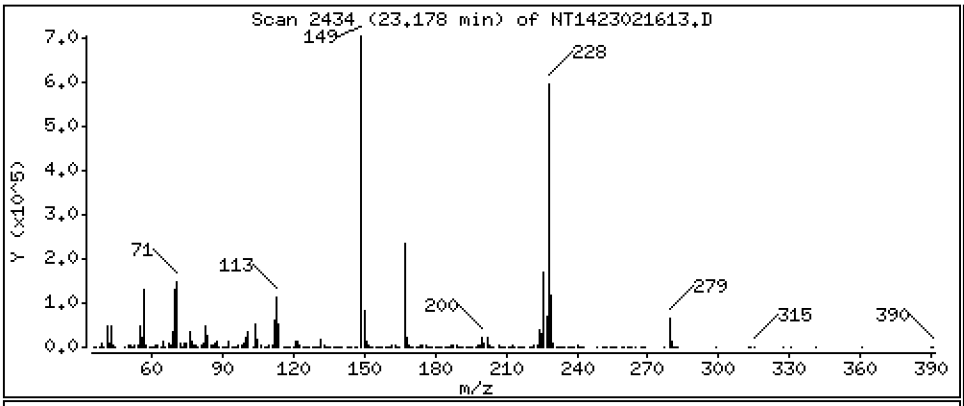
Operator: DSD

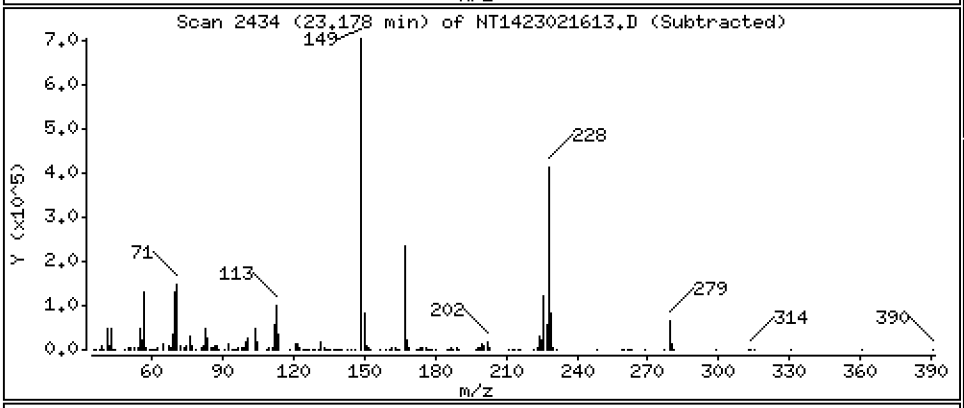
Column phase: ZB-5msi

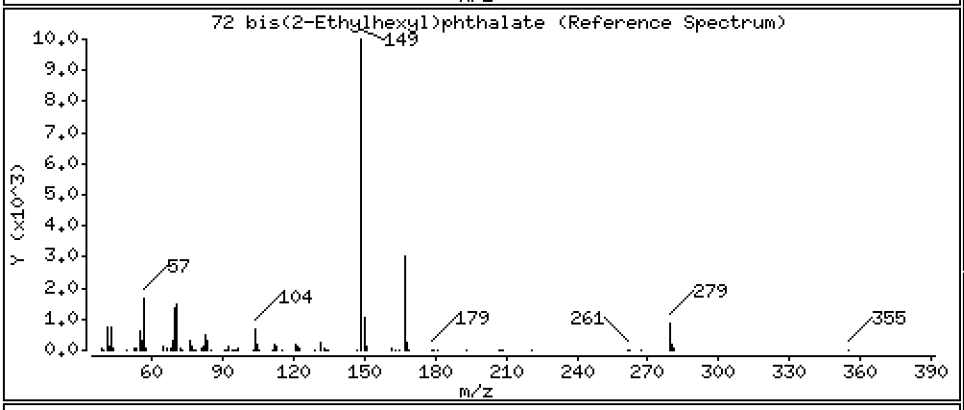
Column diameter: 0.25

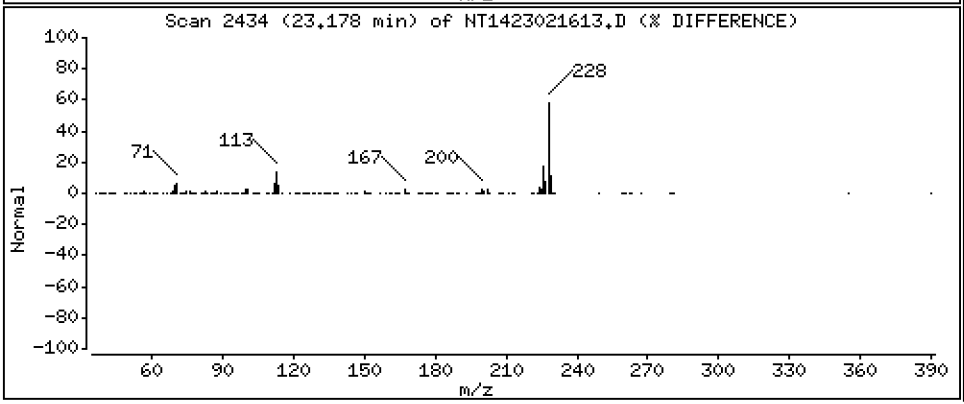
72 bis(2-Ethylhexyl)phthalate

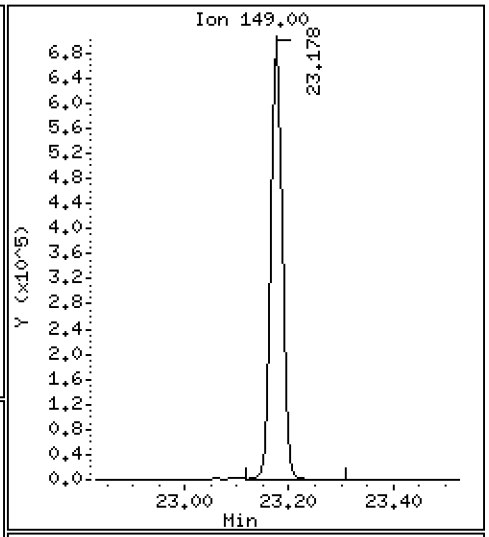
Concentration: 4.649 ug/mL

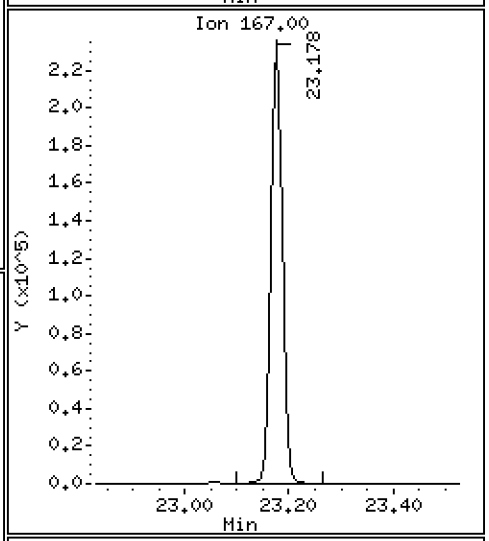


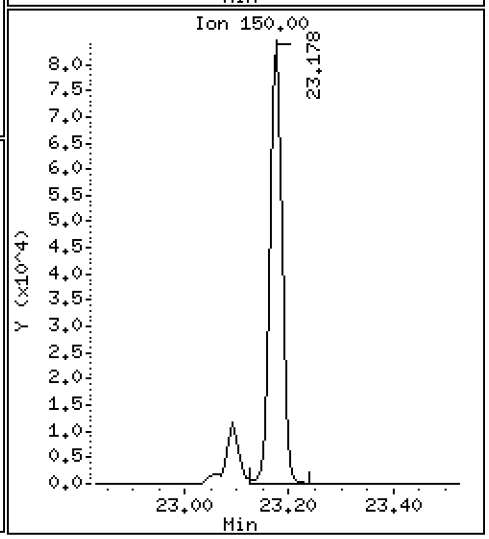












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

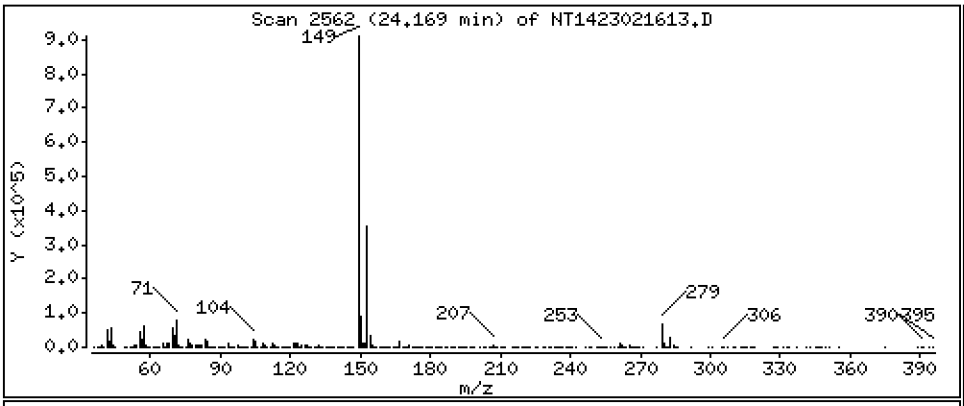
Operator: DSD

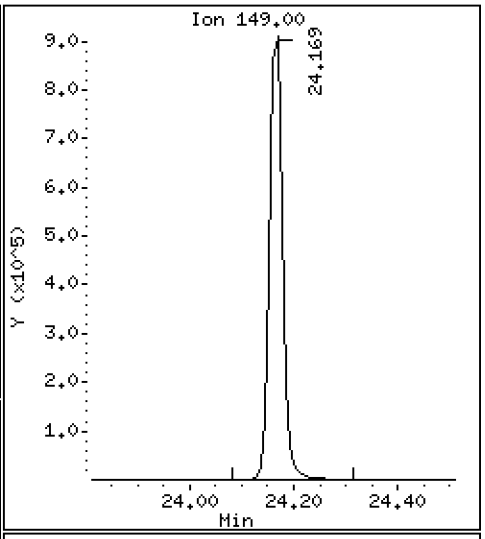
Column phase: ZB-5msi

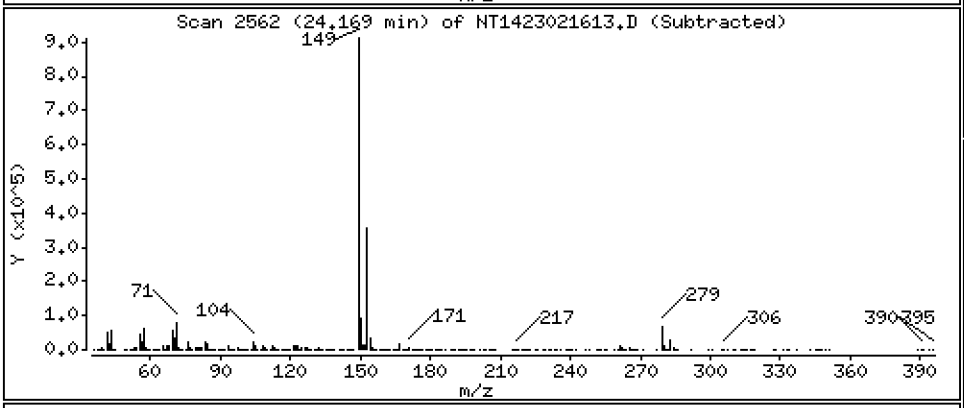
Column diameter: 0.25

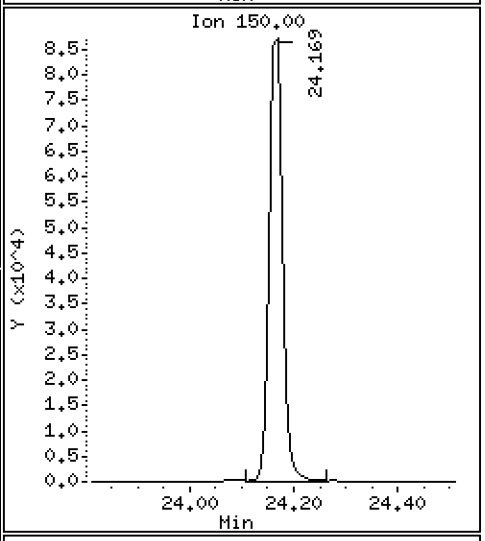
73 Di-n-octylphthalate

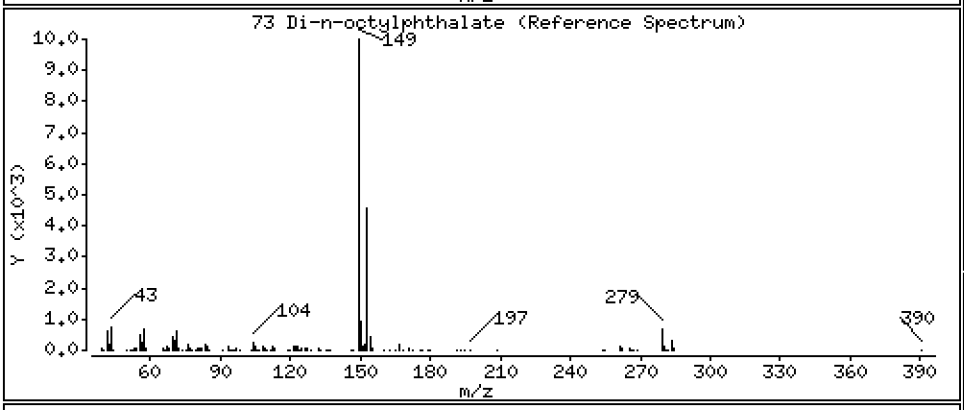
Concentration: 4.962 ug/mL

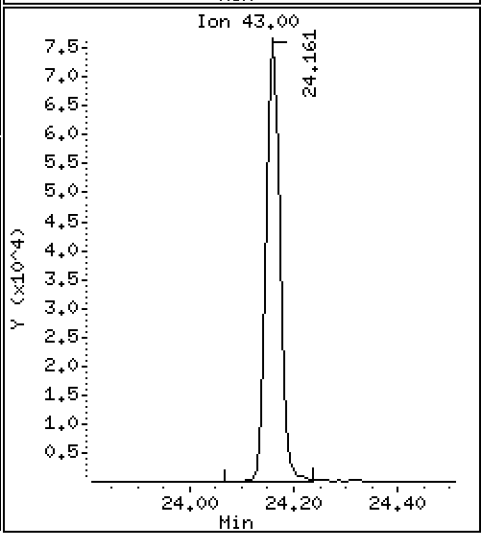


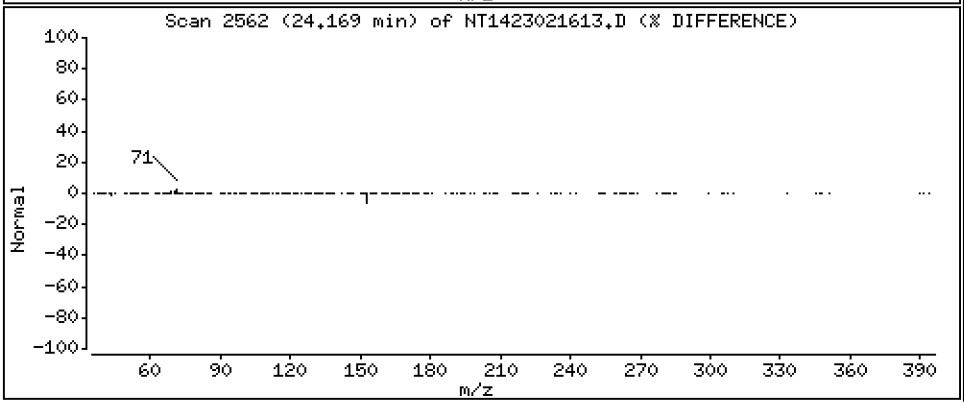












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

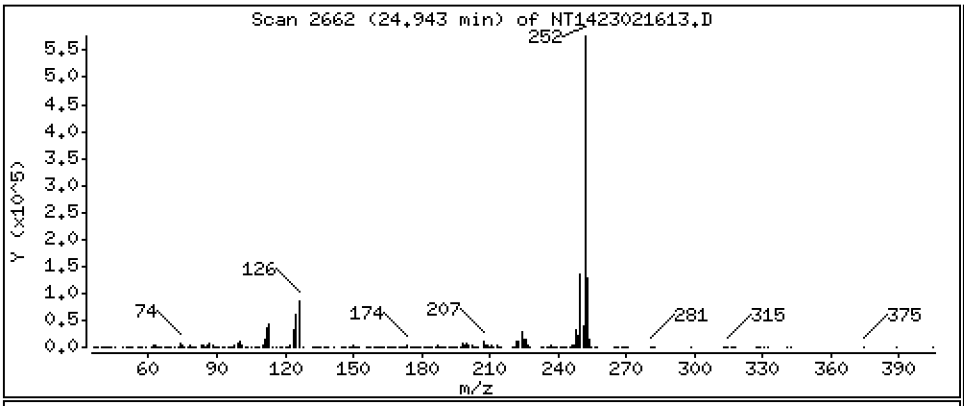
Operator: DSD

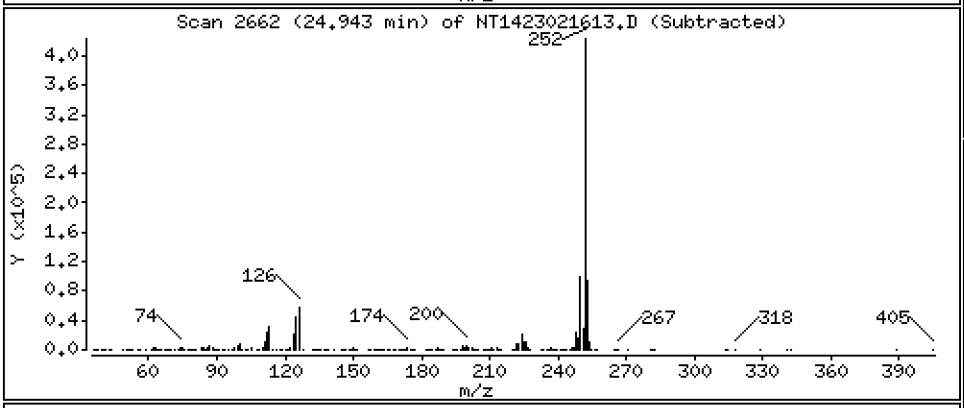
Column phase: ZB-5msi

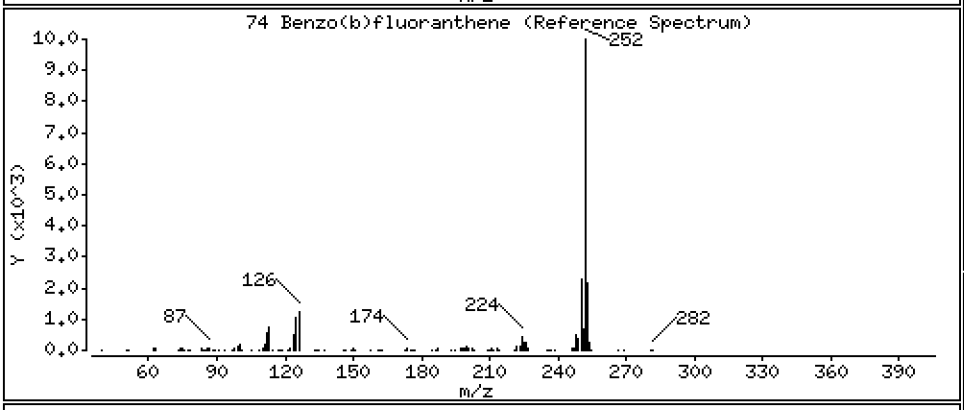
Column diameter: 0.25

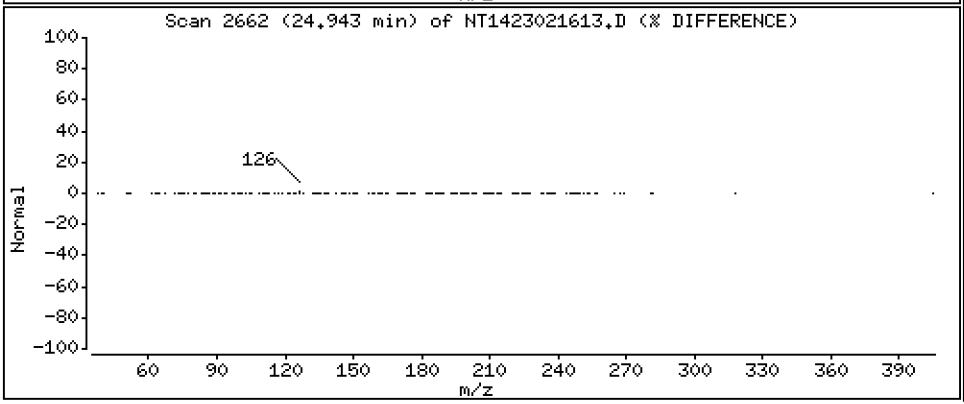
74 Benzo(b)fluoranthene

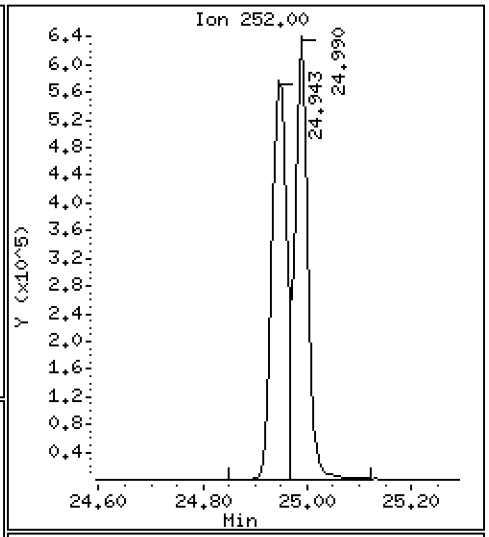
Concentration: 4.813 ug/mL

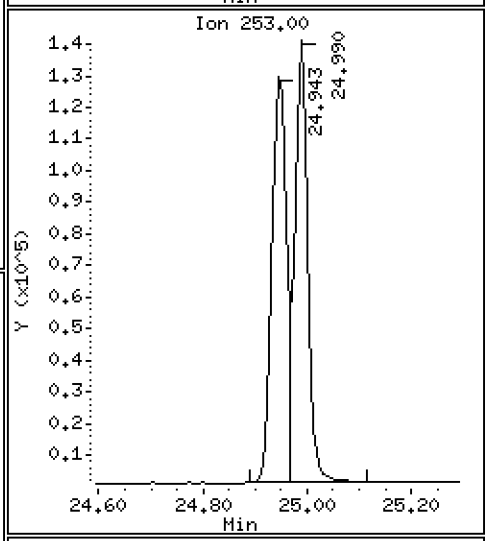


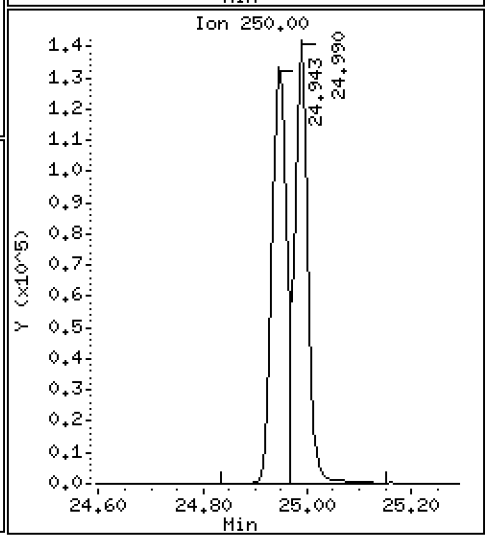












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

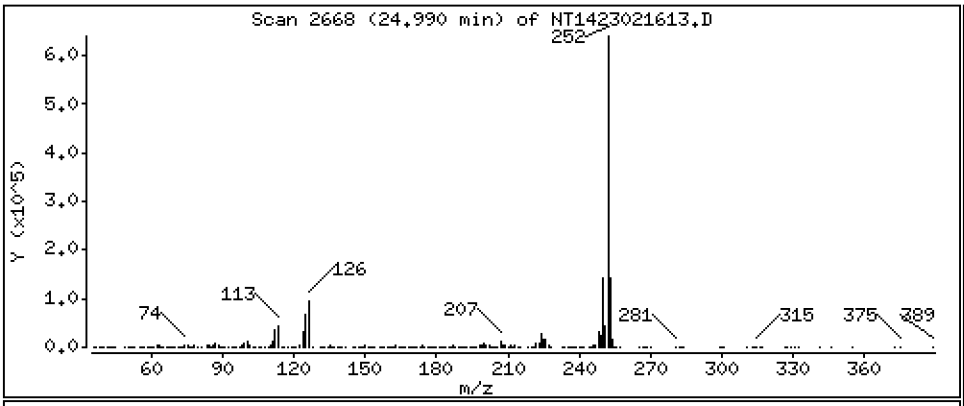
Operator: DSD

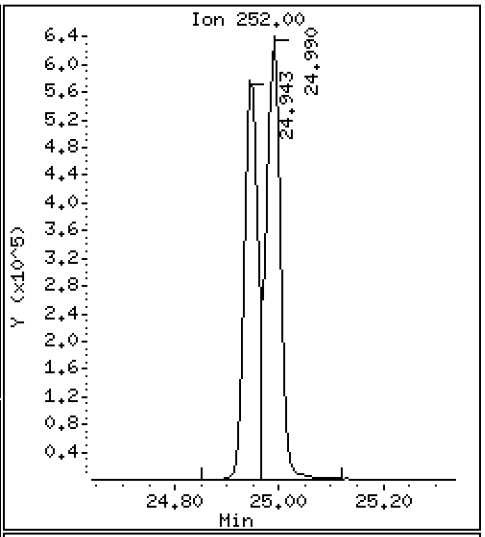
Column phase: ZB-5msi

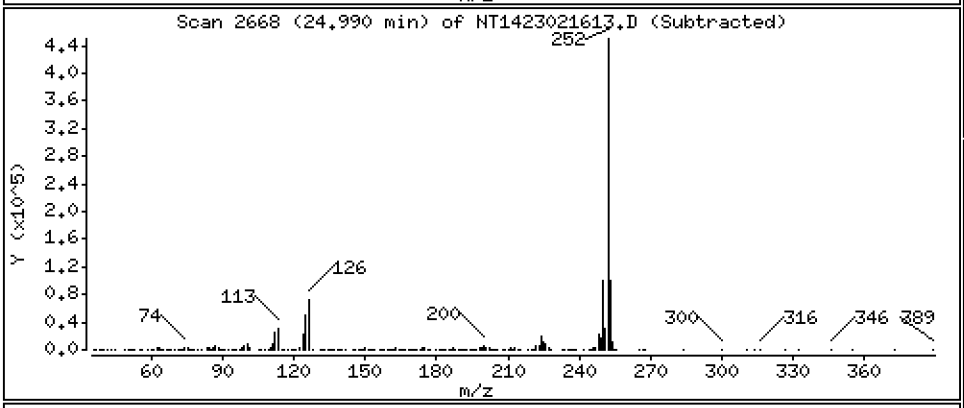
Column diameter: 0.25

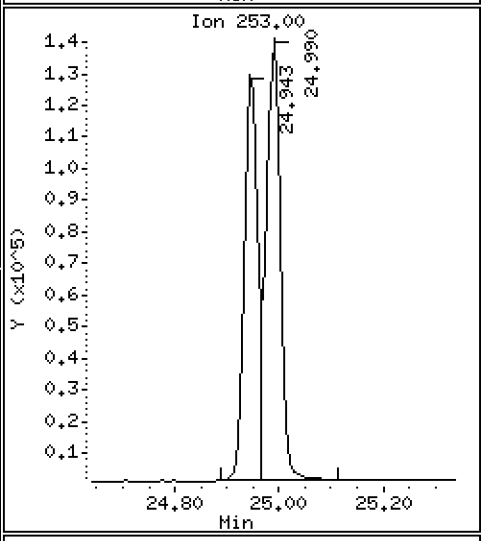
75 Benzo(k)fluoranthene

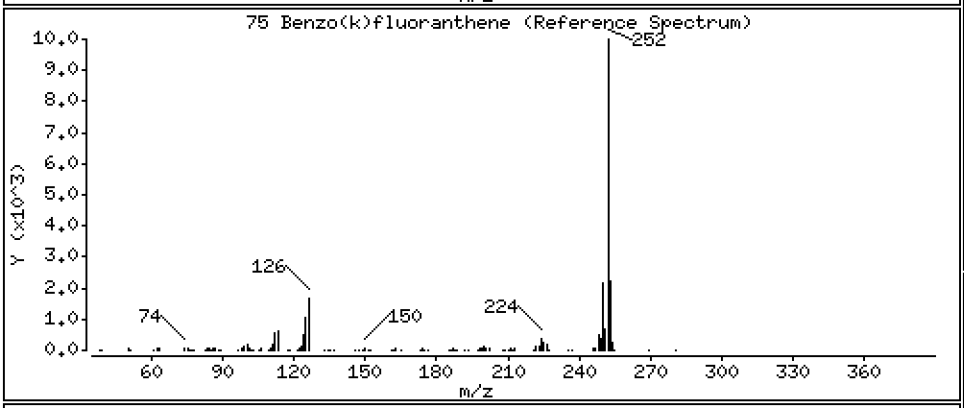
Concentration: 4.838 ug/mL

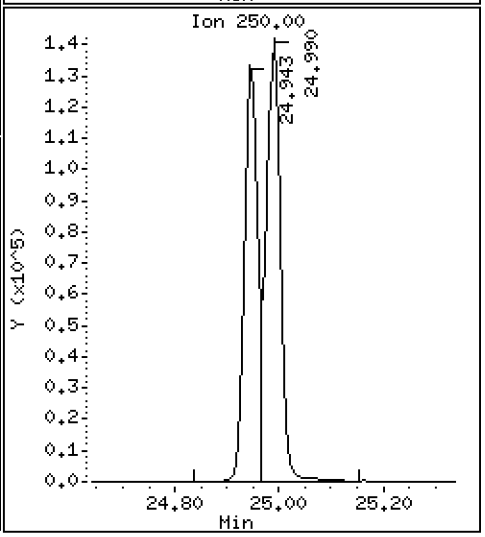


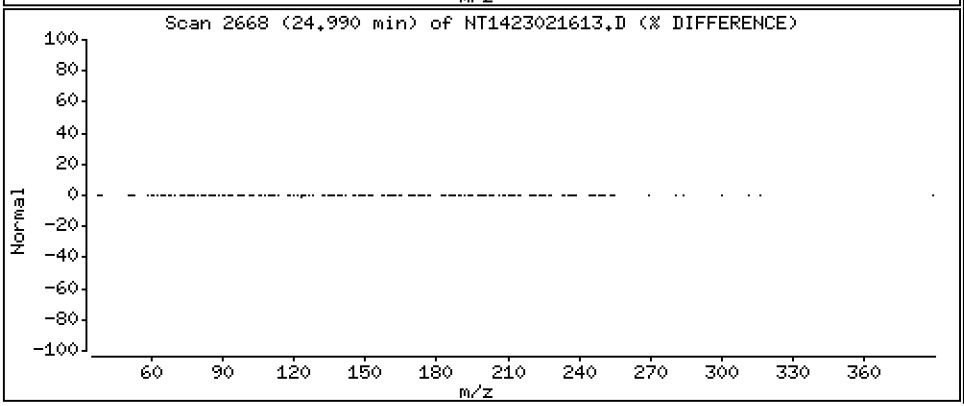












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

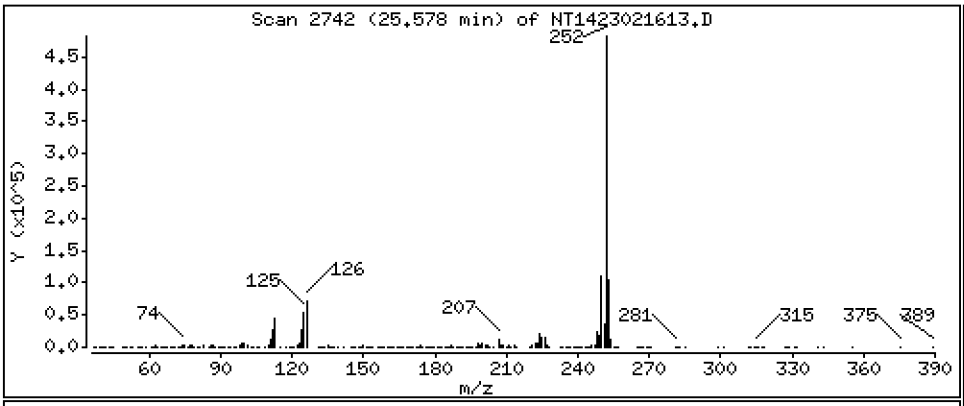
Operator: DSD

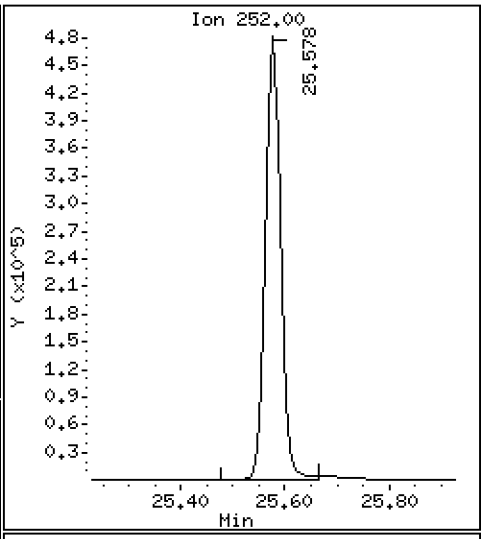
Column phase: ZB-5msi

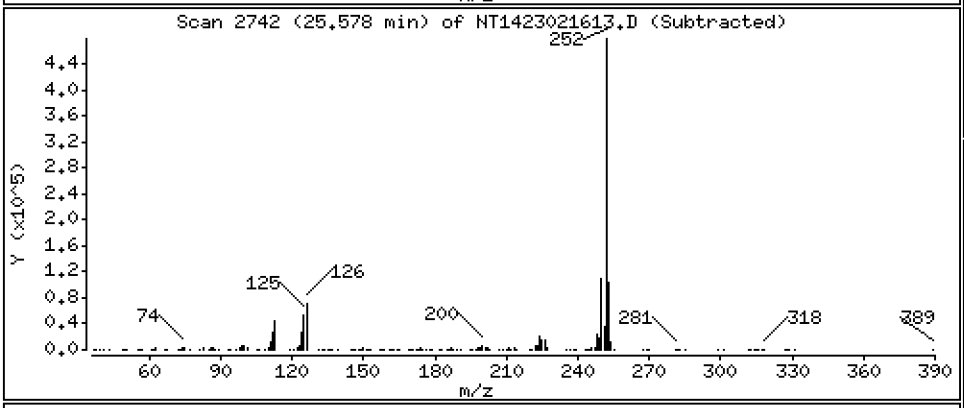
Column diameter: 0.25

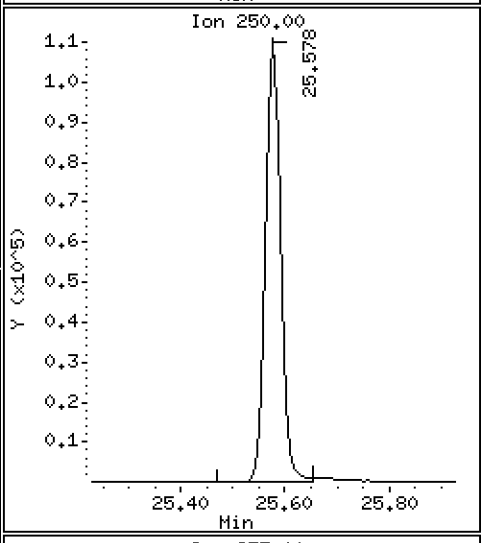
76 Benzo(a)pyrene

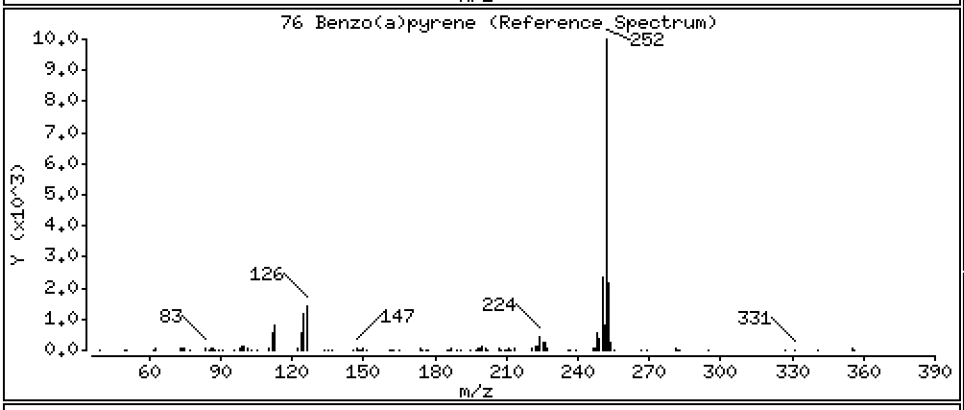
Concentration: 4.607 ug/mL

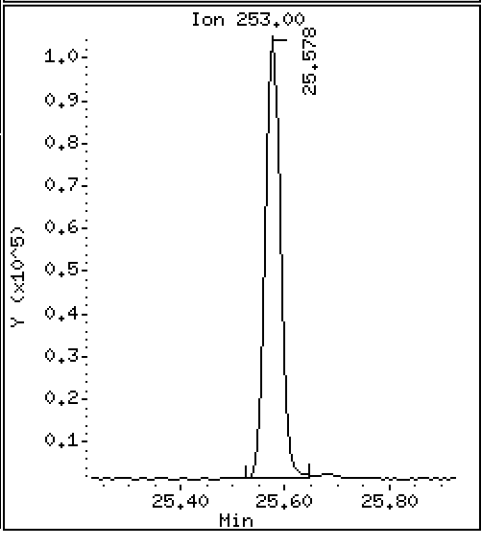


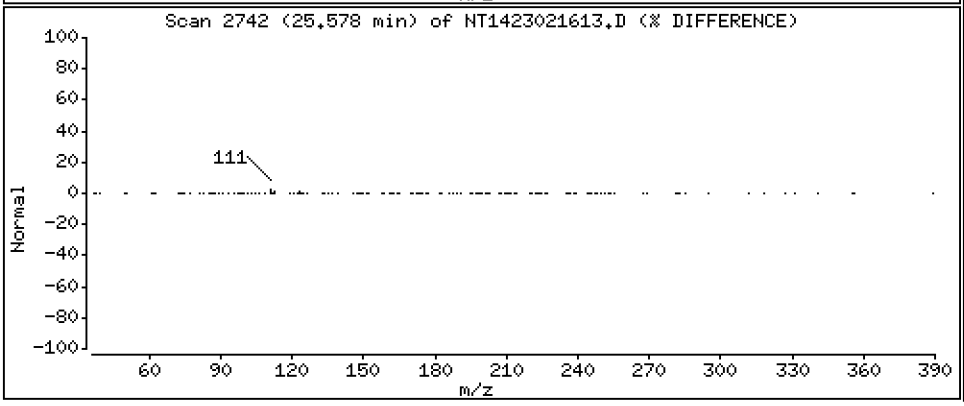












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

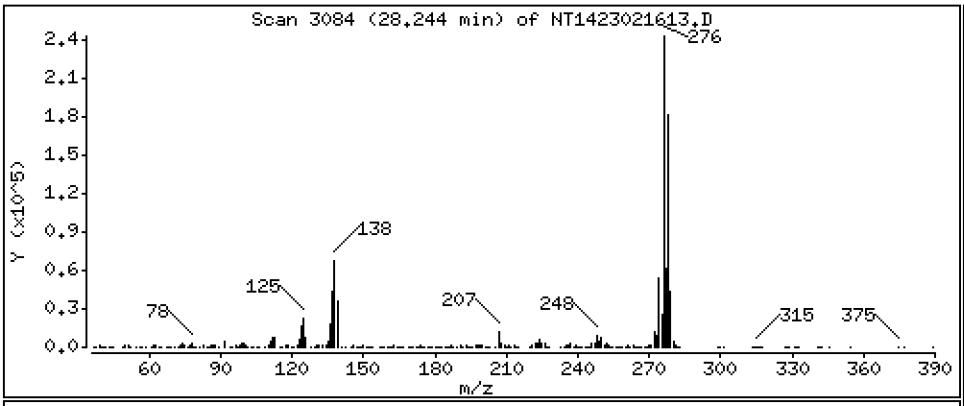
Operator: DSD

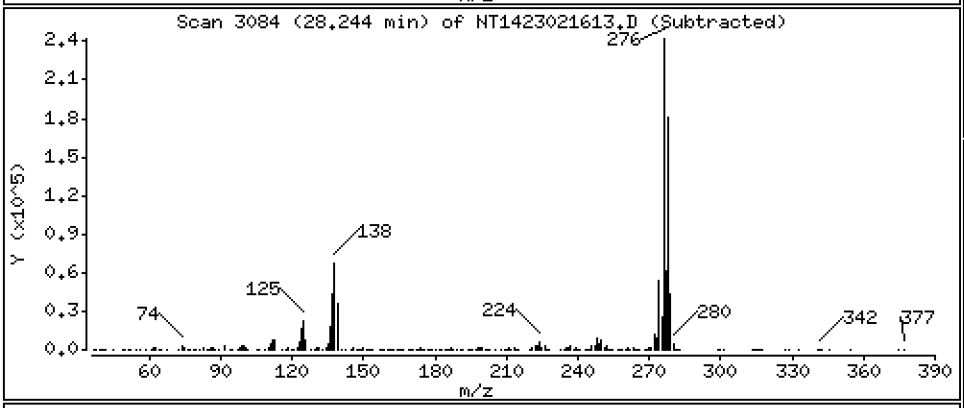
Column phase: ZB-5msi

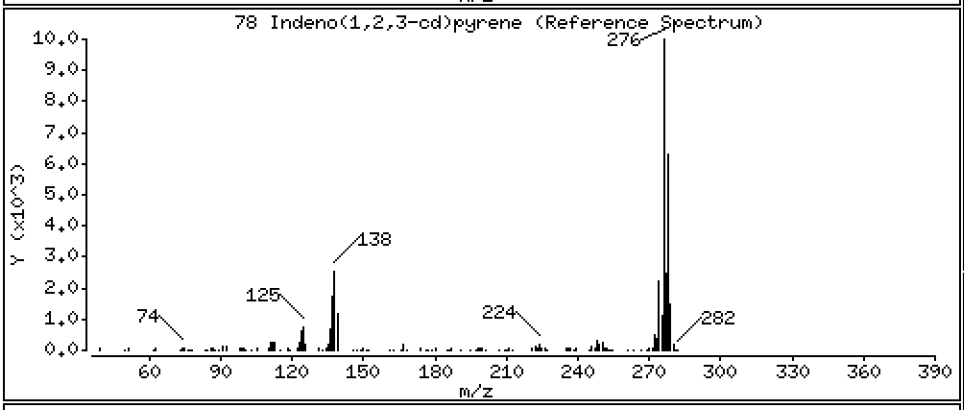
Column diameter: 0.25

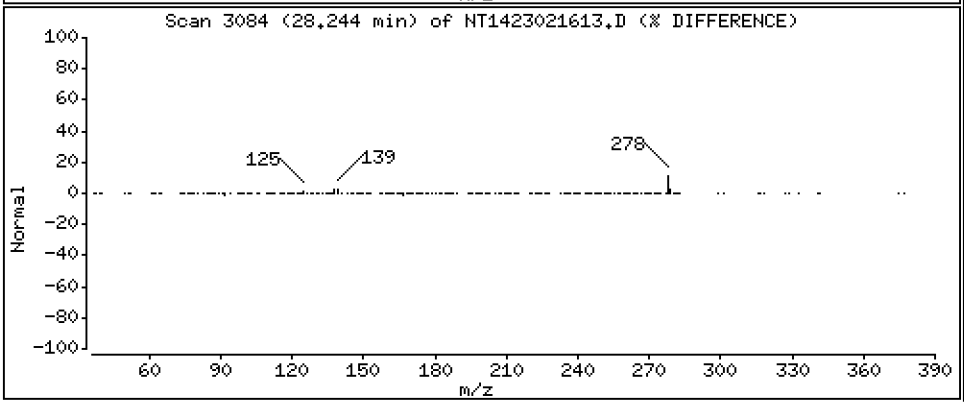
78 Indeno(1,2,3-cd)pyrene

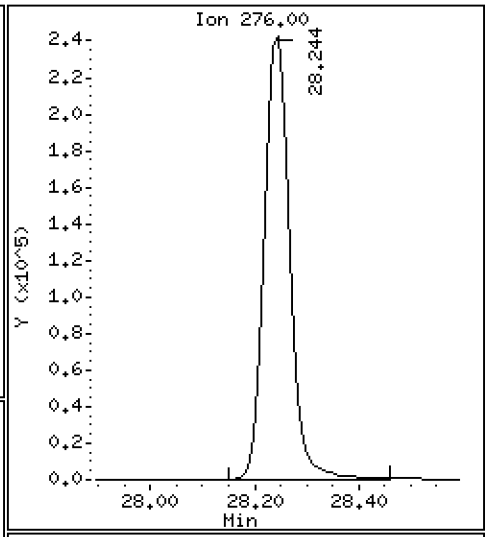
Concentration: 4.395 ug/mL

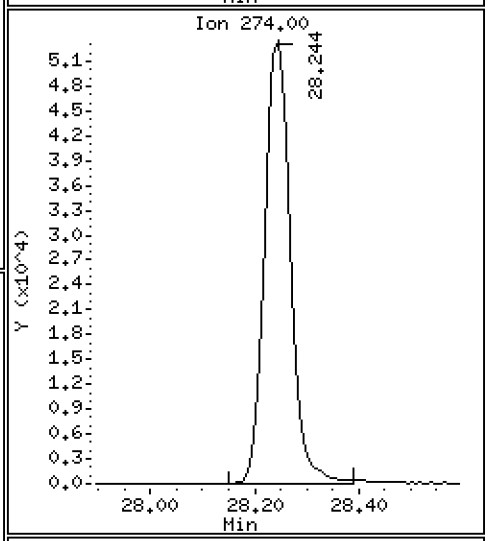


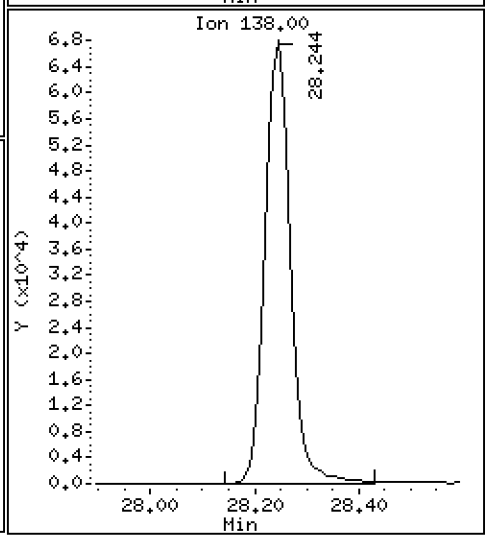












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

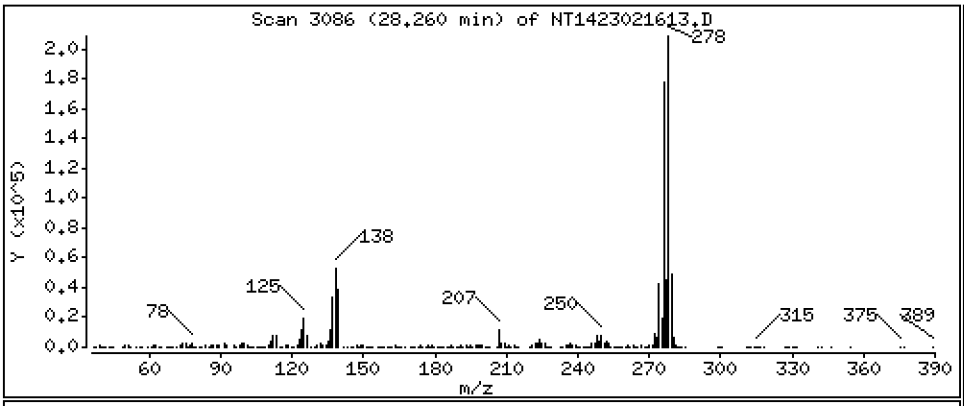
Operator: DSD

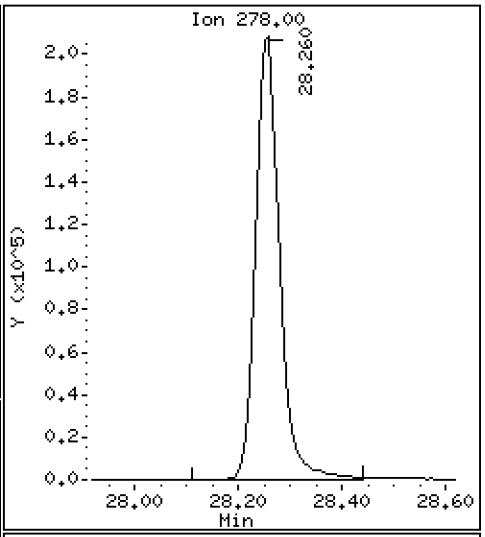
Column phase: ZB-5msi

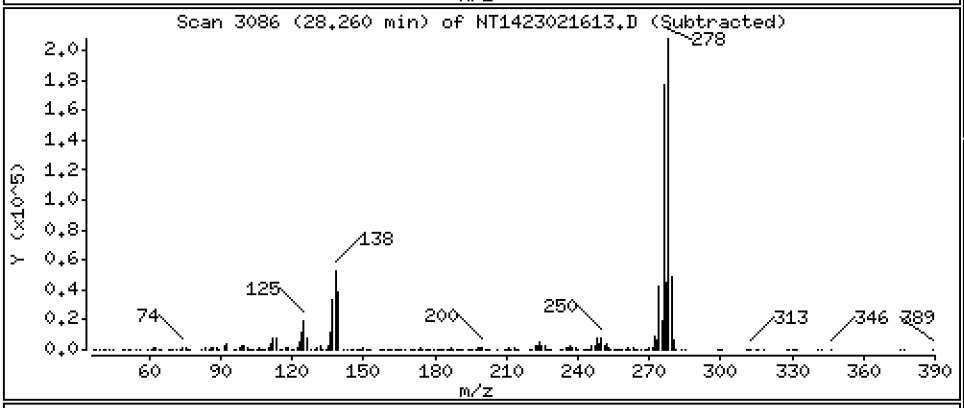
Column diameter: 0.25

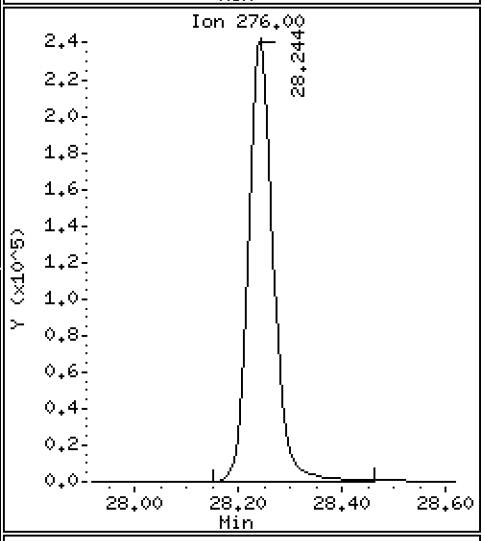
79 Dibenzo(a,h)anthracene

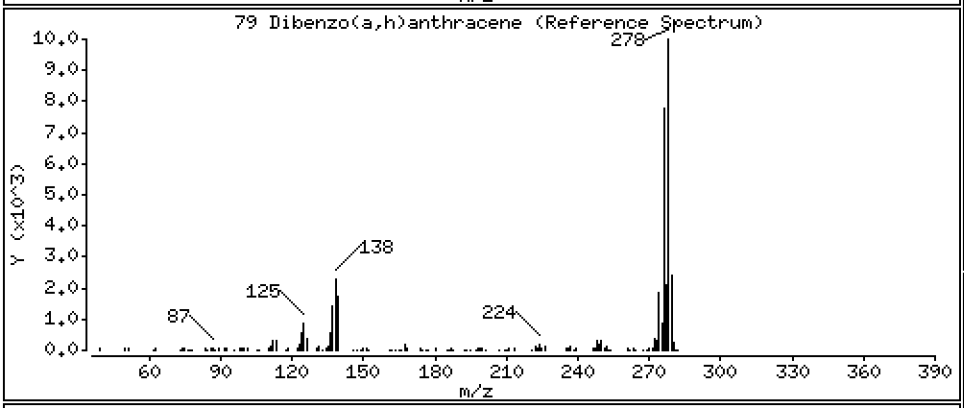
Concentration: 4.365 ug/mL

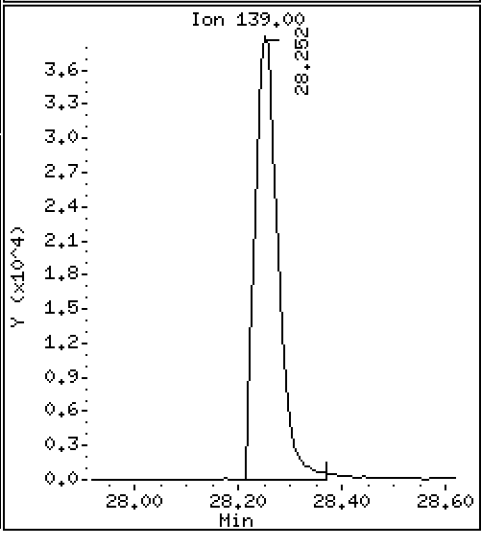


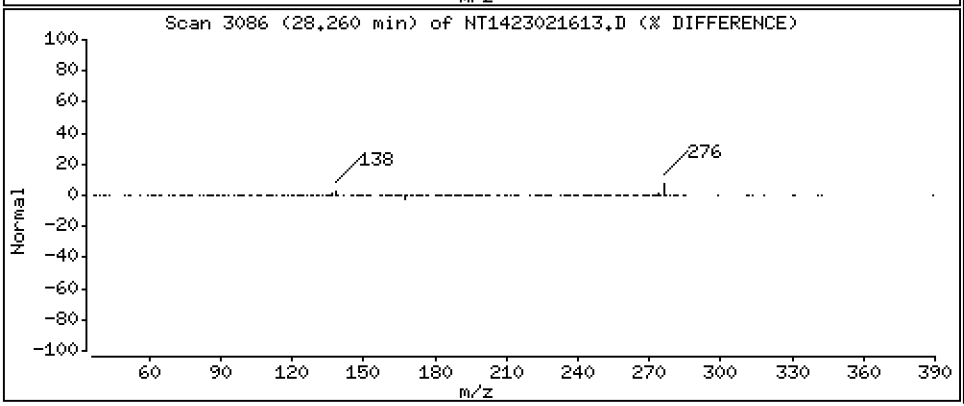












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

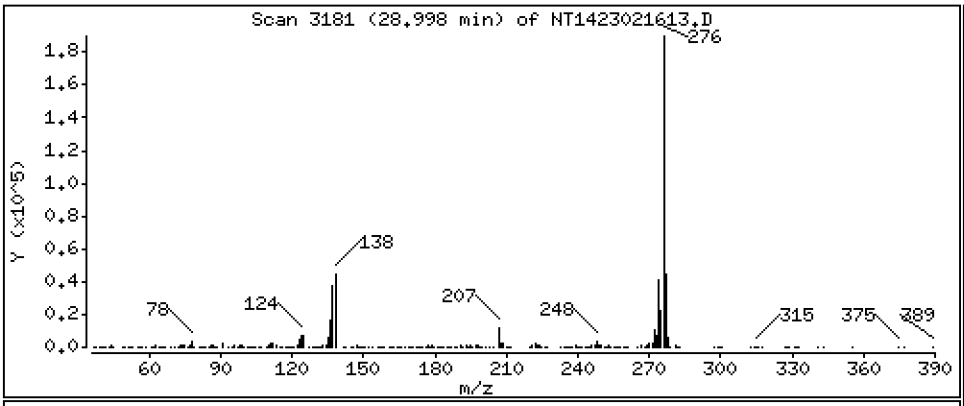
Operator: DSD

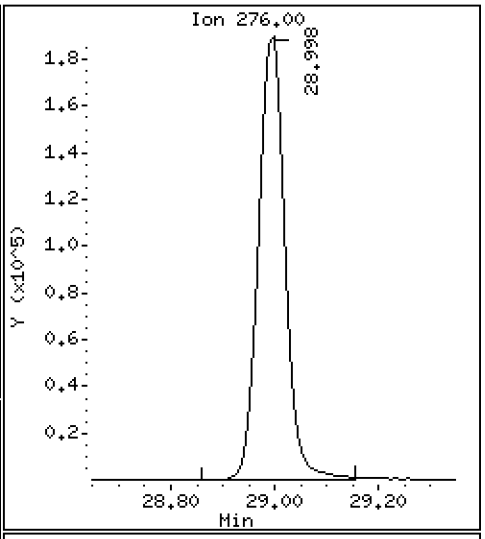
Column phase: ZB-5msi

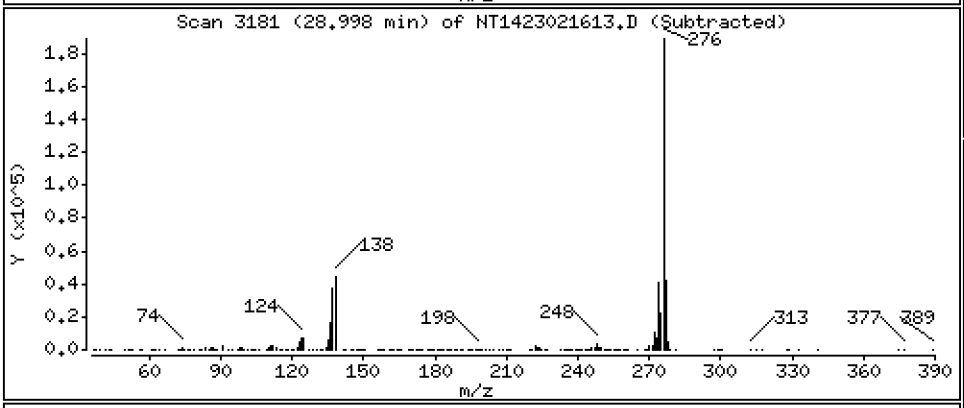
Column diameter: 0.25

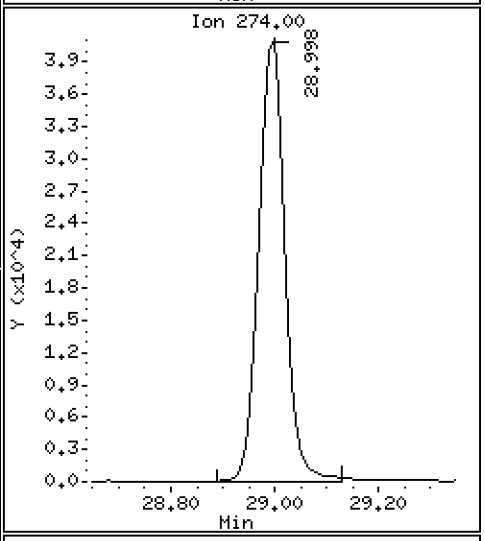
80 Benzo(g,h,i)perylene

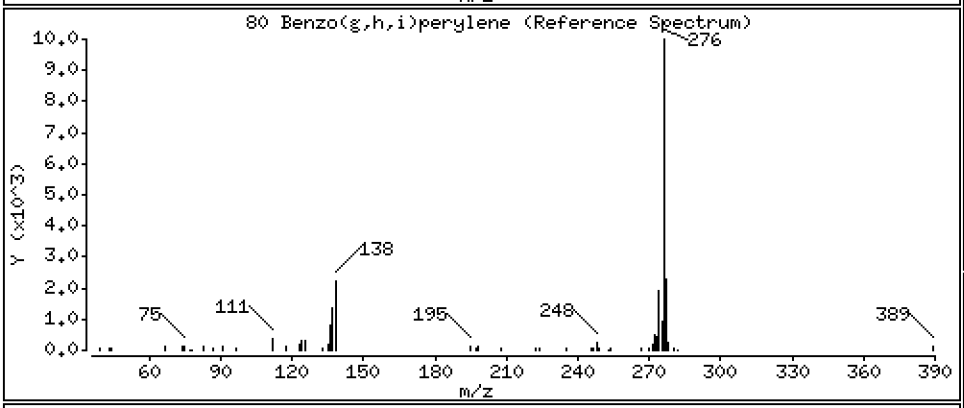
Concentration: 4.380 ug/mL

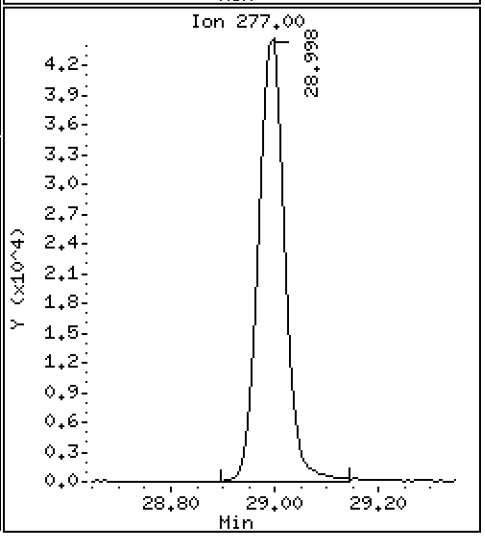


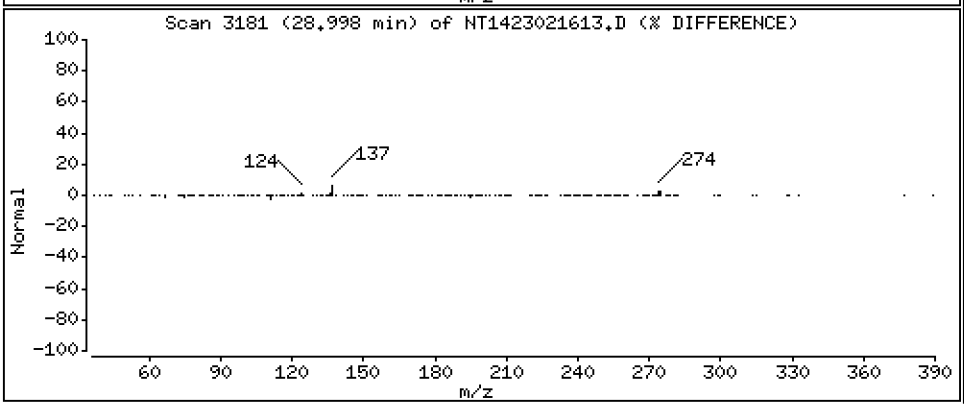












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

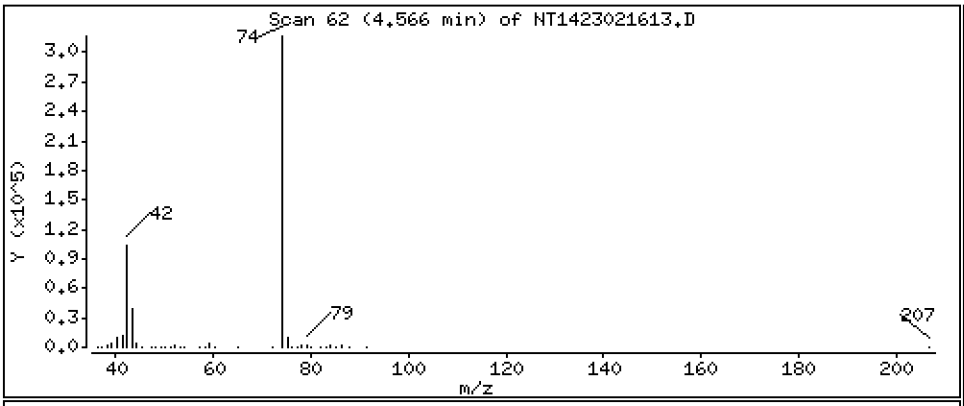
Operator: DSD

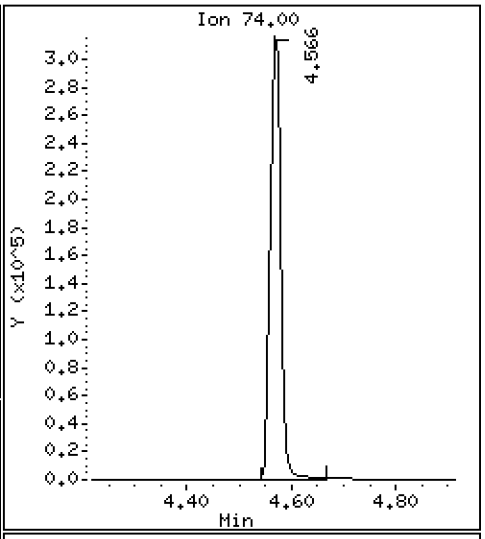
Column phase: ZB-5msi

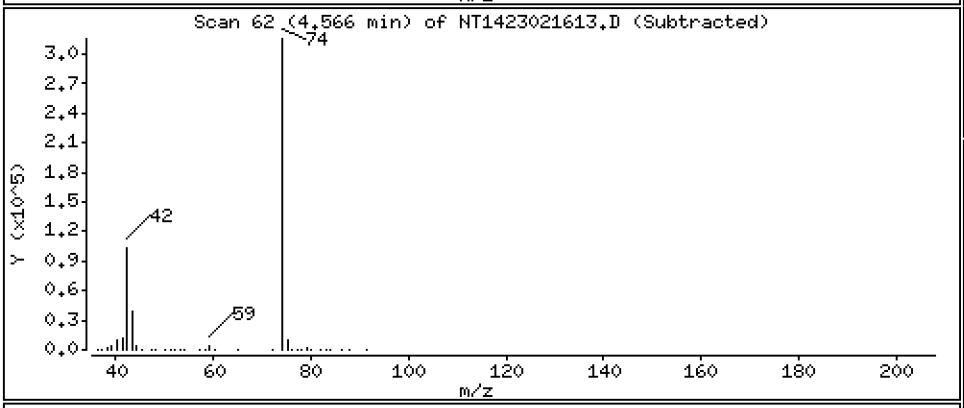
Column diameter: 0.25

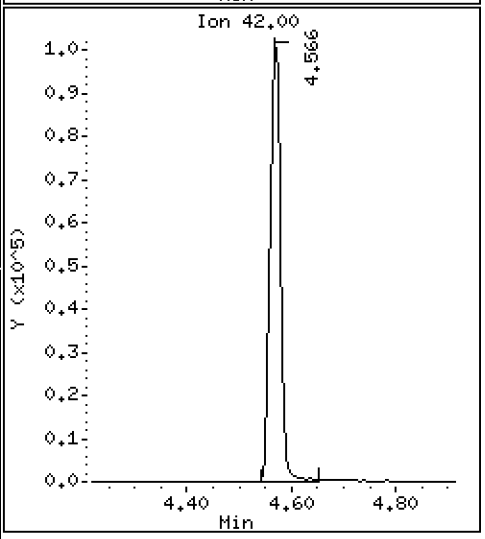
90 N-Nitrosodimethylamine

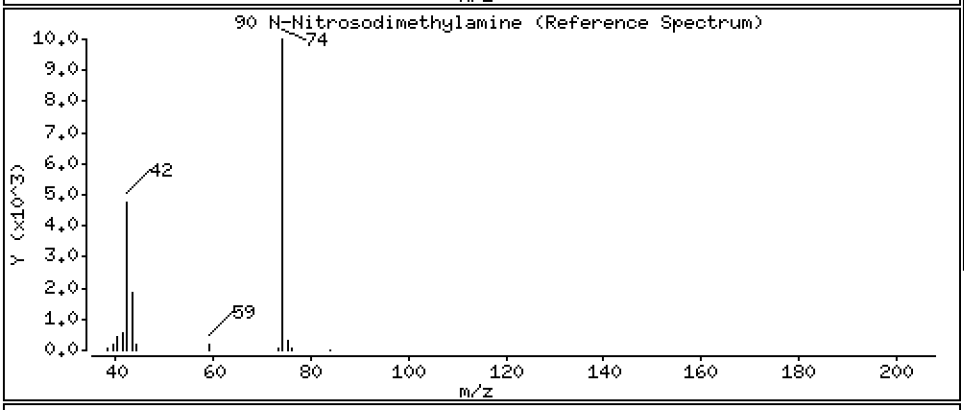
Concentration: 5.632 ug/mL

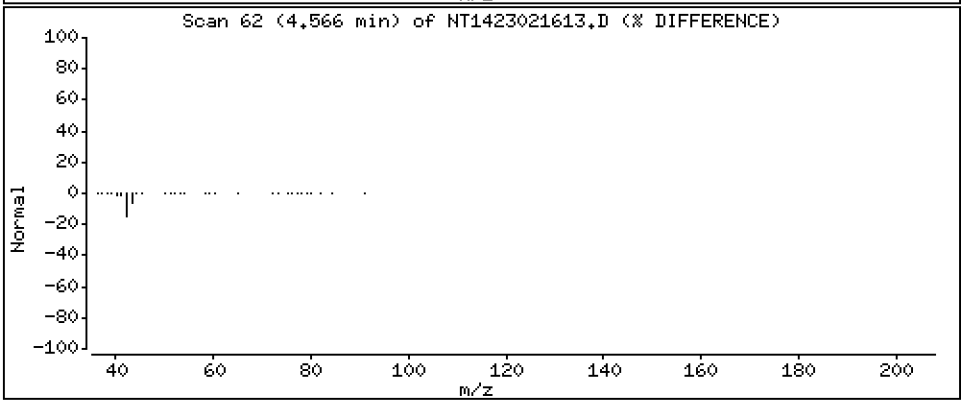












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

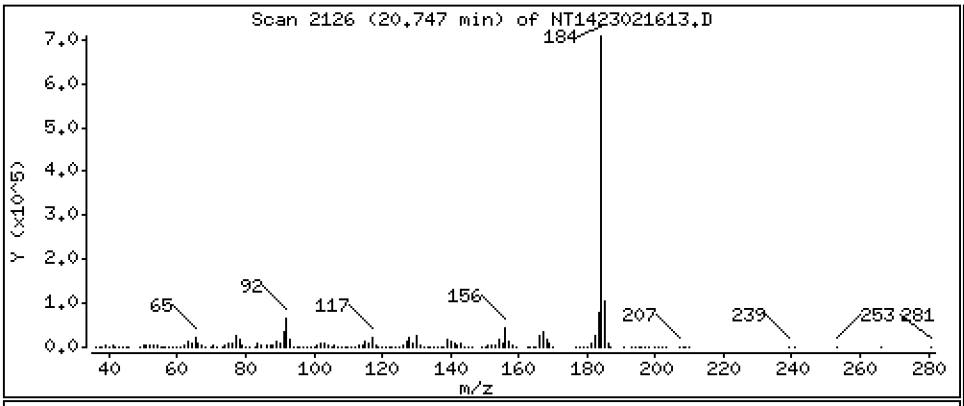
Operator: DSD

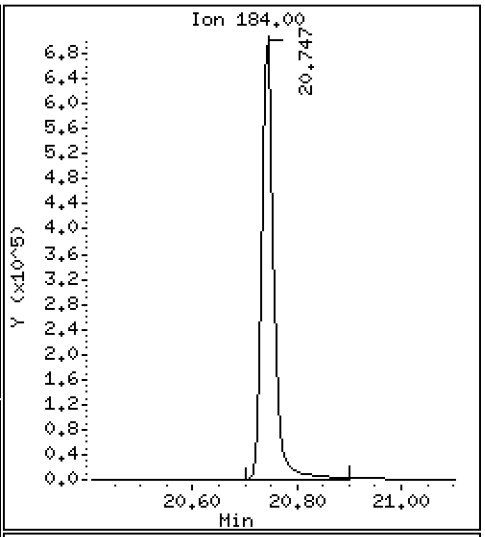
Column phase: ZB-5msi

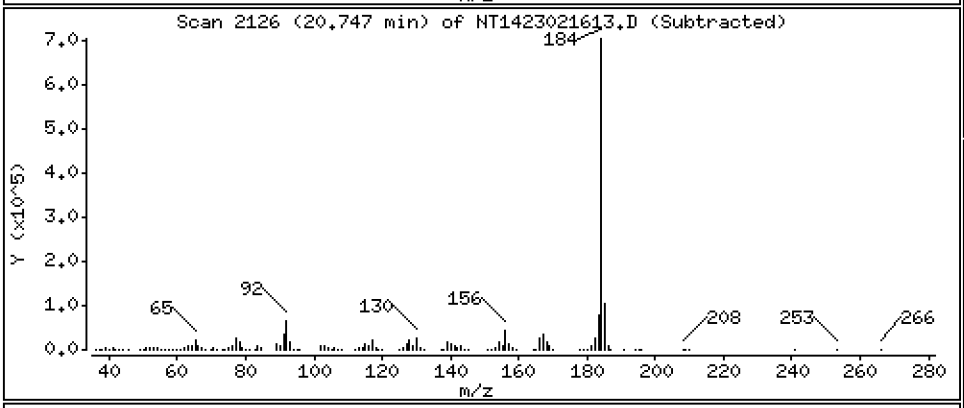
Column diameter: 0.25

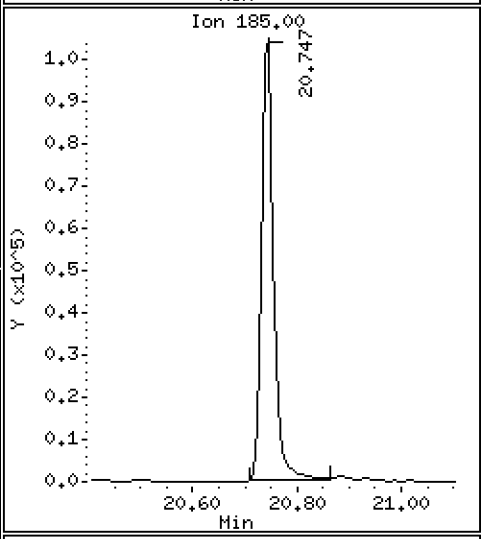
93 Benzidine

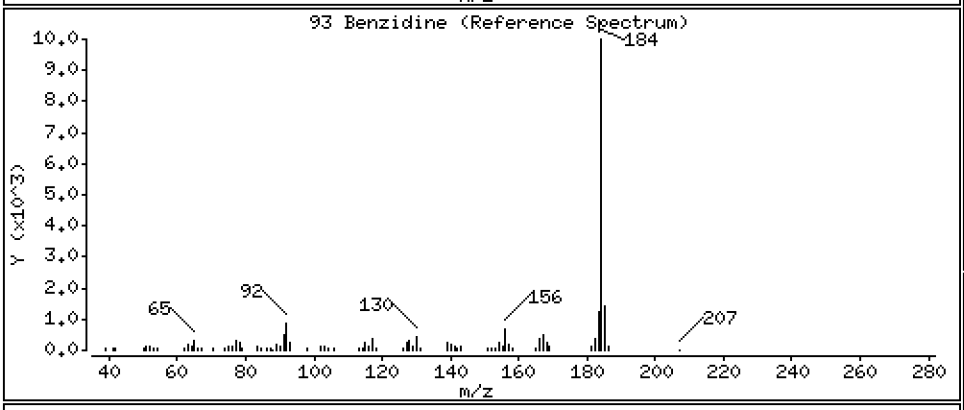
Concentration: 9.984 ug/mL

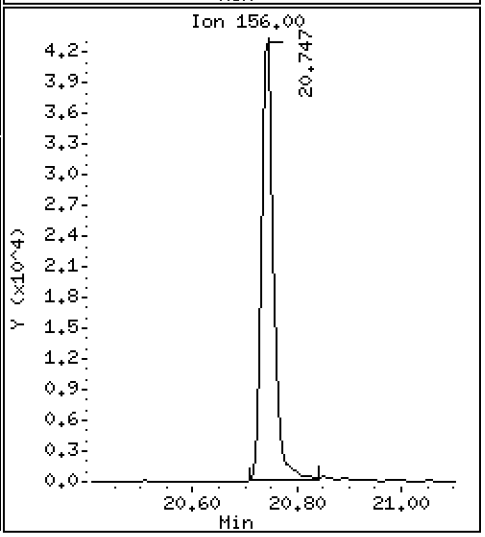


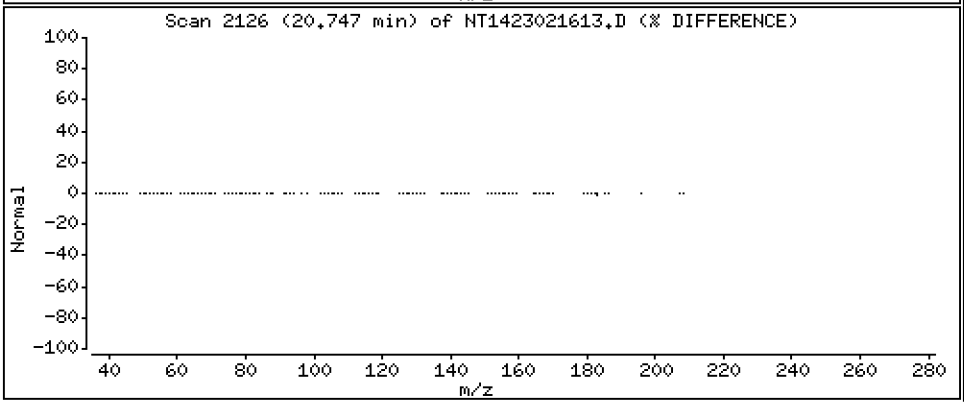












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

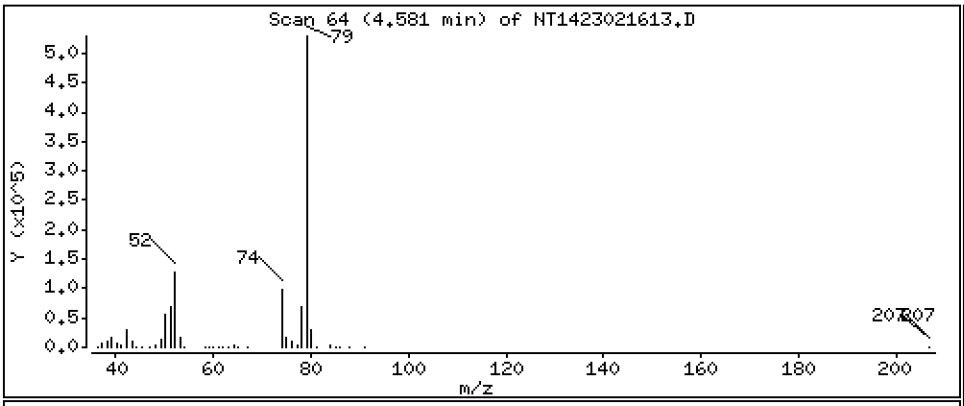
Operator: DSD

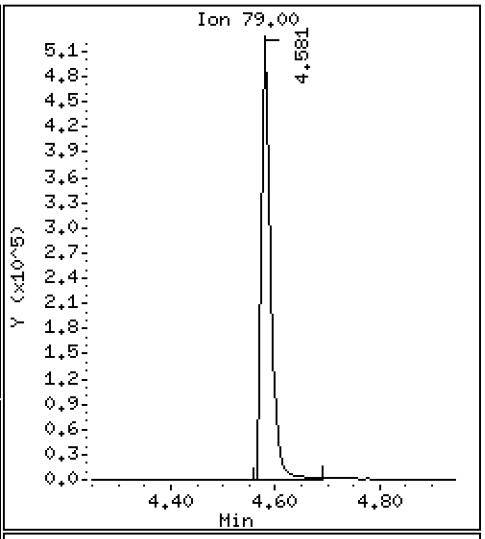
Column phase: ZB-5msi

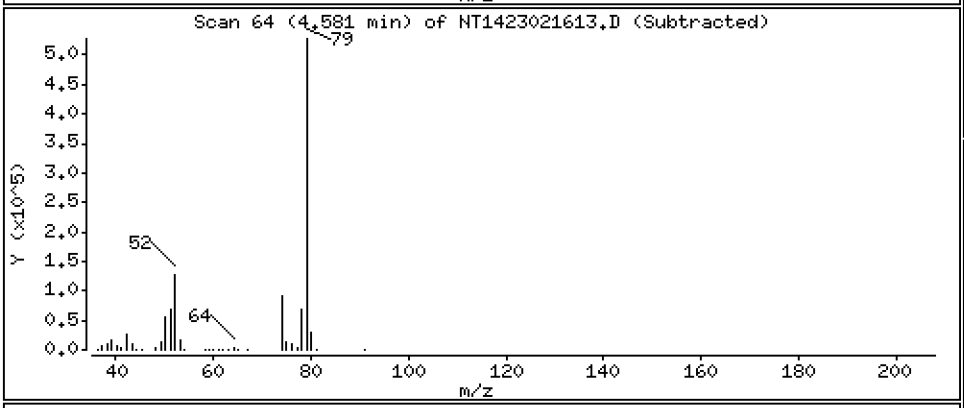
Column diameter: 0.25

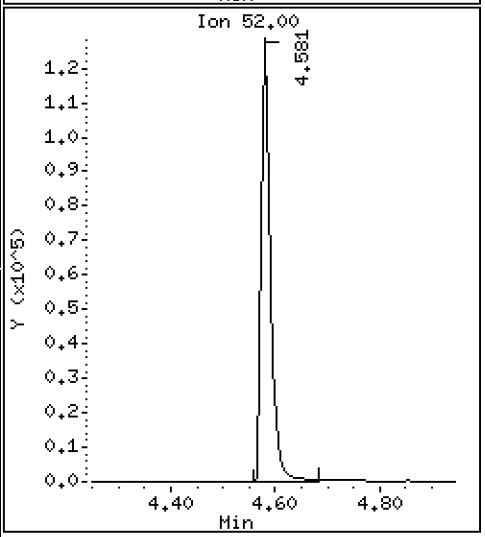
103 Pyridine

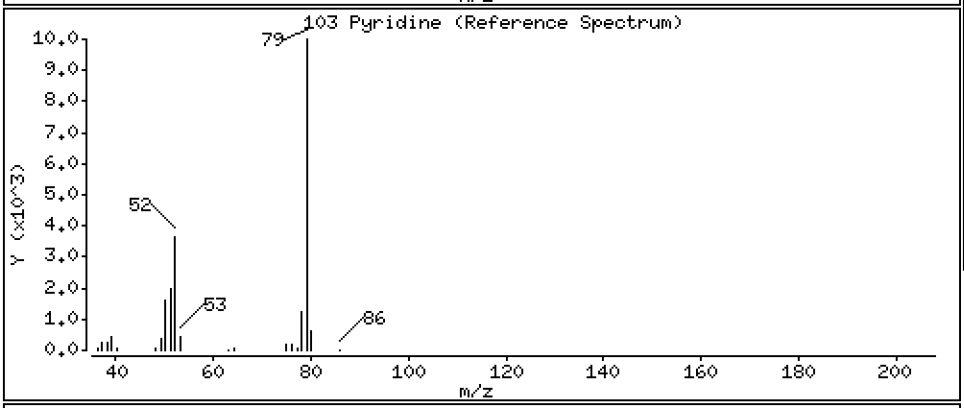
Concentration: 5.566 ug/mL

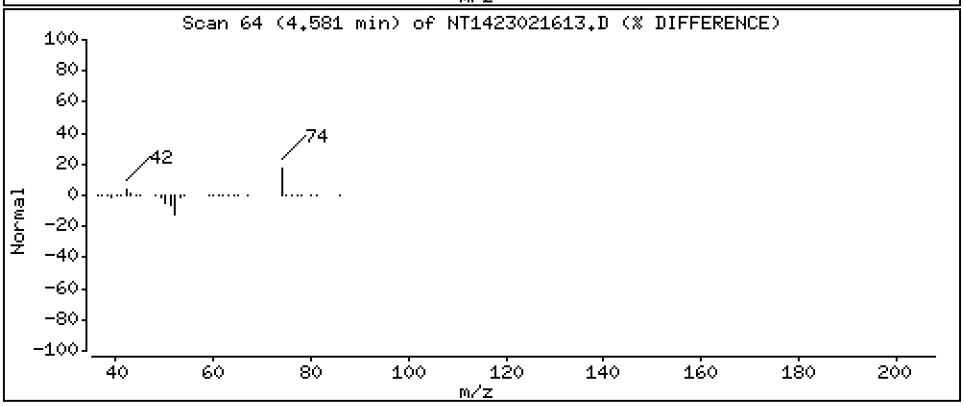












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

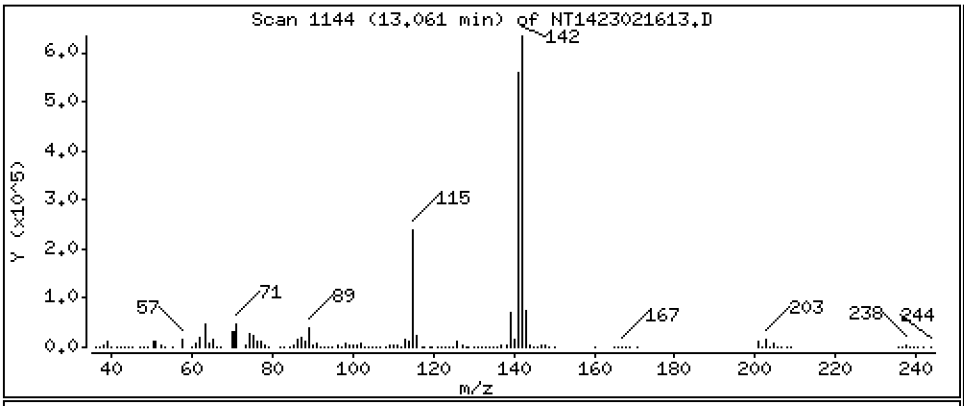
Operator: DSD

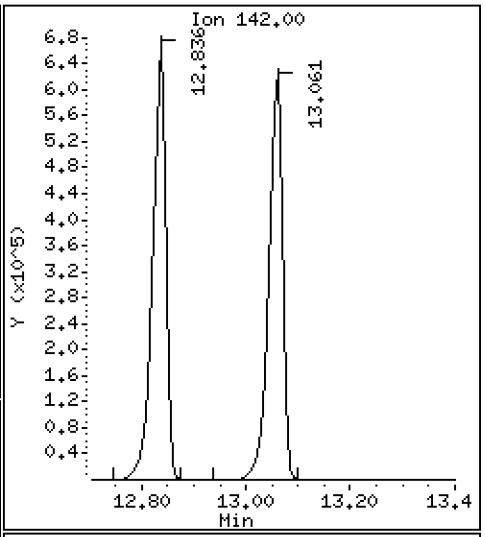
Column phase: ZB-5msi

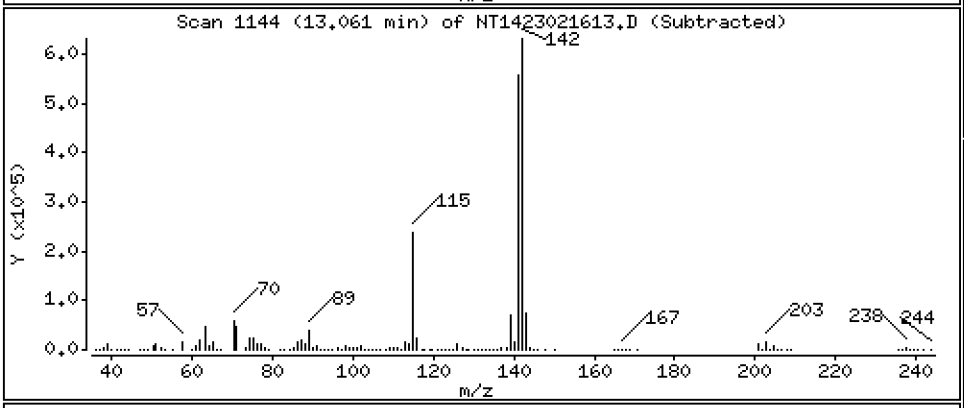
Column diameter: 0.25

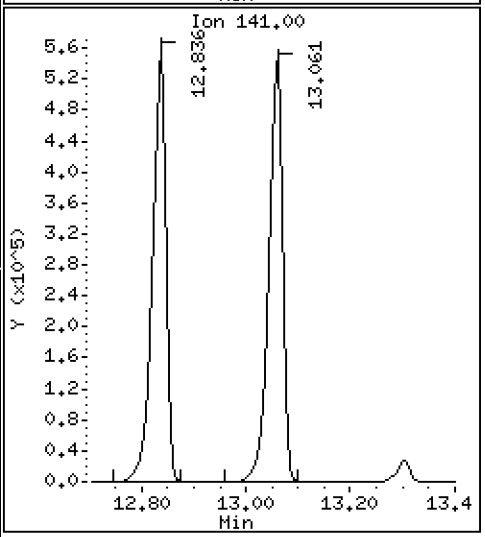
105 1-methylnaphthalene

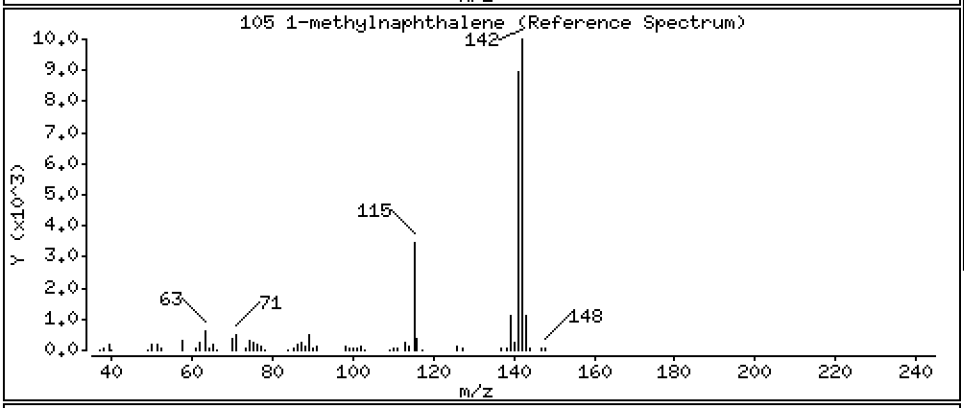
Concentration: 4.760 ug/mL

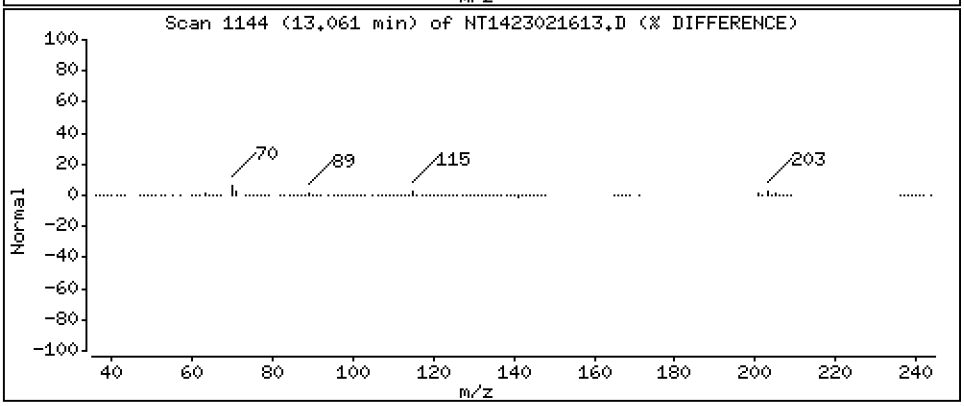












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

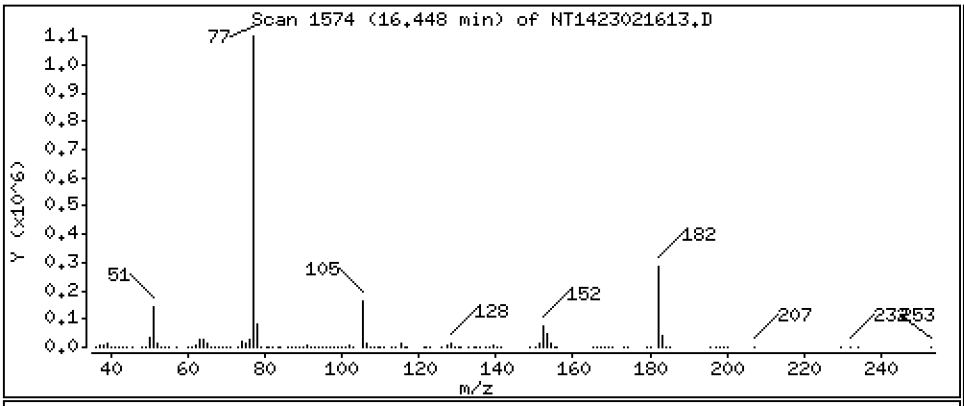
Operator: DSD

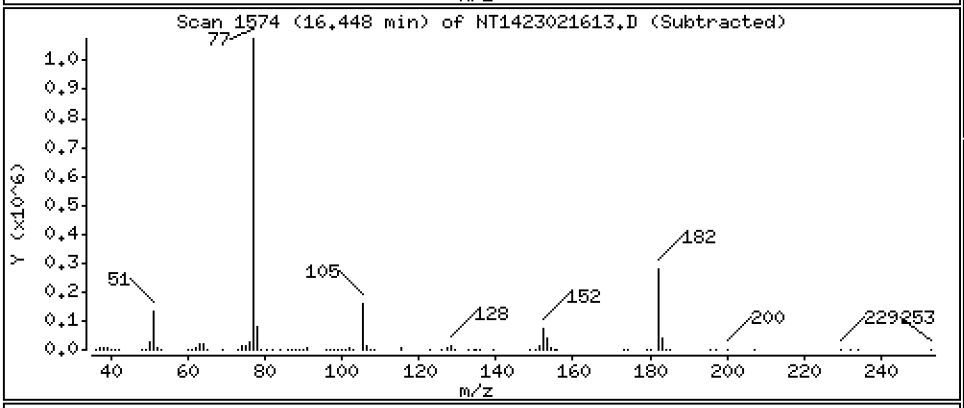
Column phase: ZB-5msi

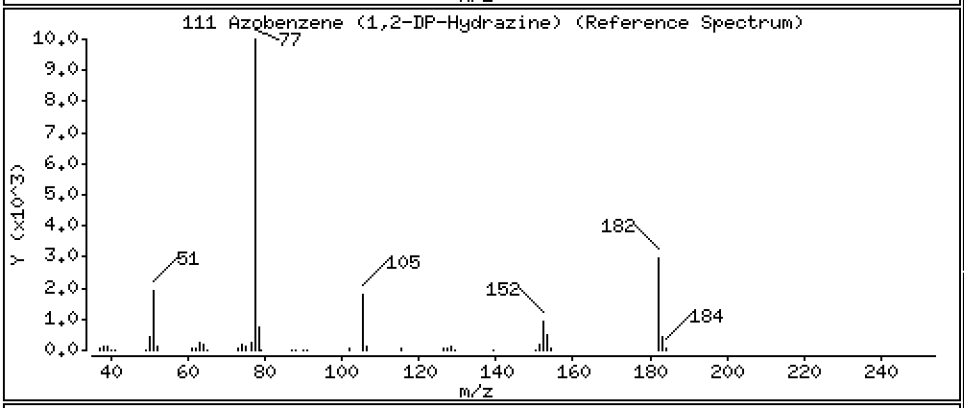
Column diameter: 0.25

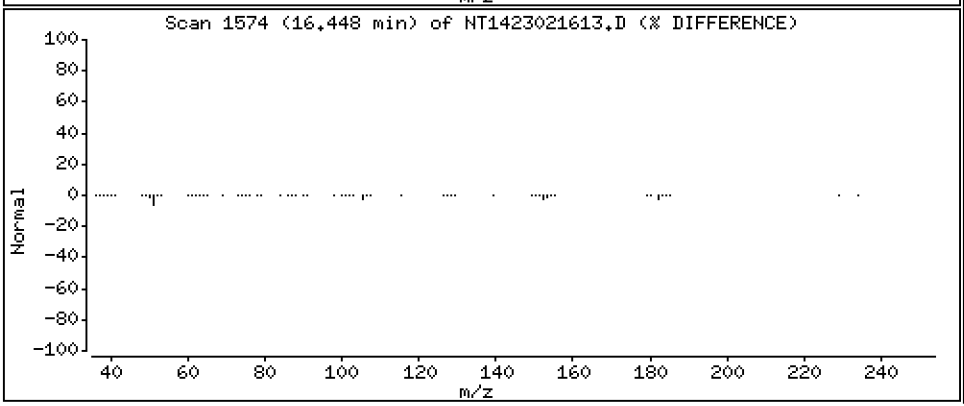
111 Azobenzene (1,2-DP-Hydrazine)

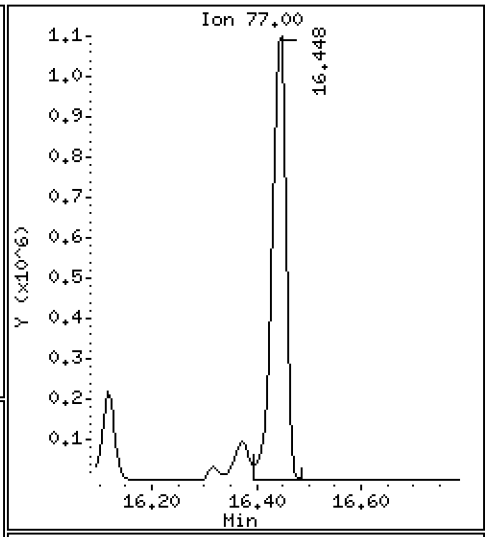
Concentration: 4.655 ug/mL

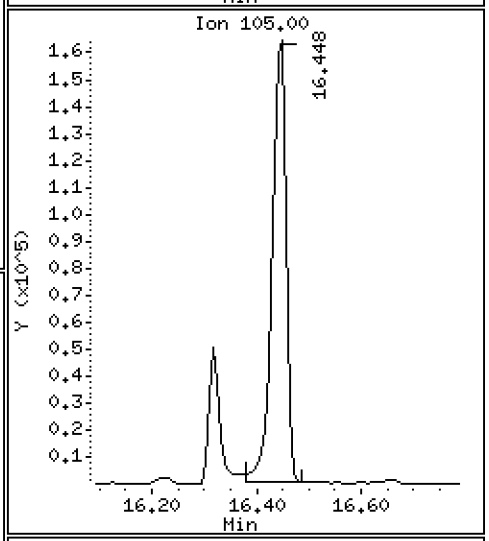


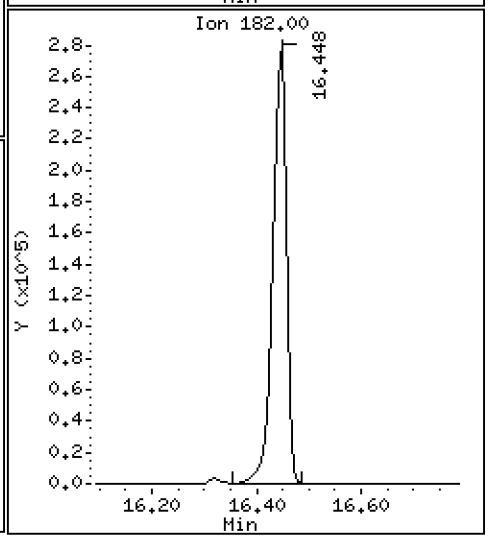












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

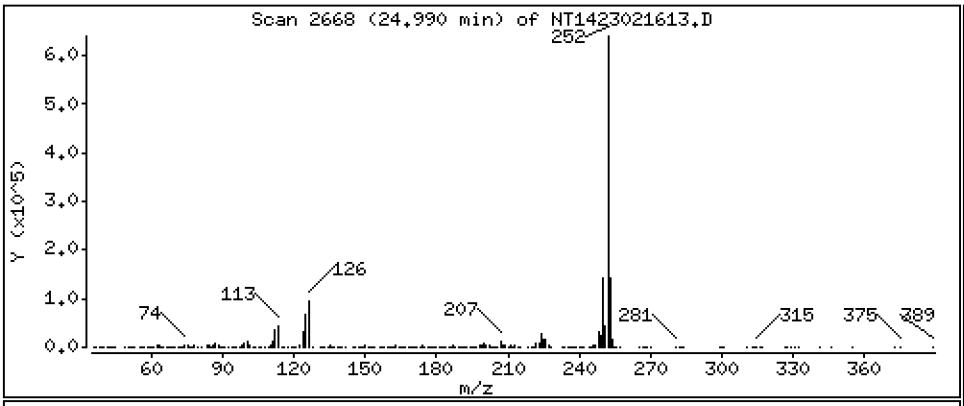
Operator: DSD

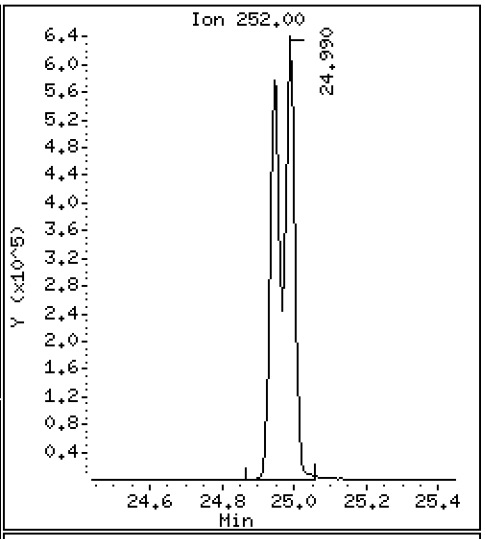
Column phase: ZB-5msi

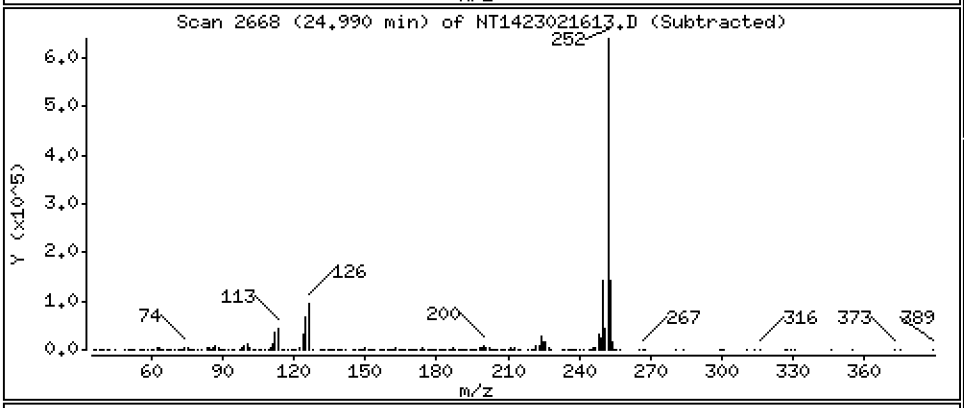
Column diameter: 0.25

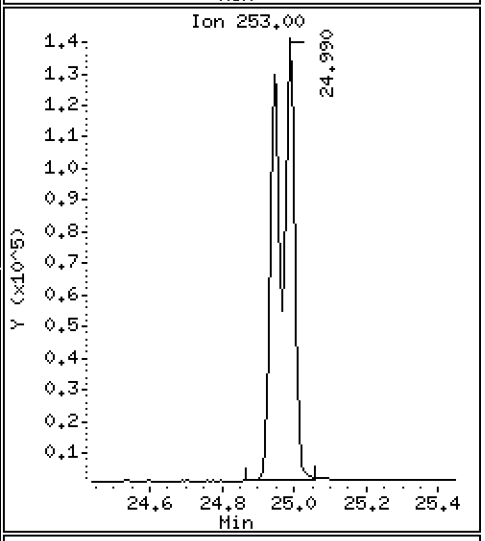
187 Total Benzofluoranthenes

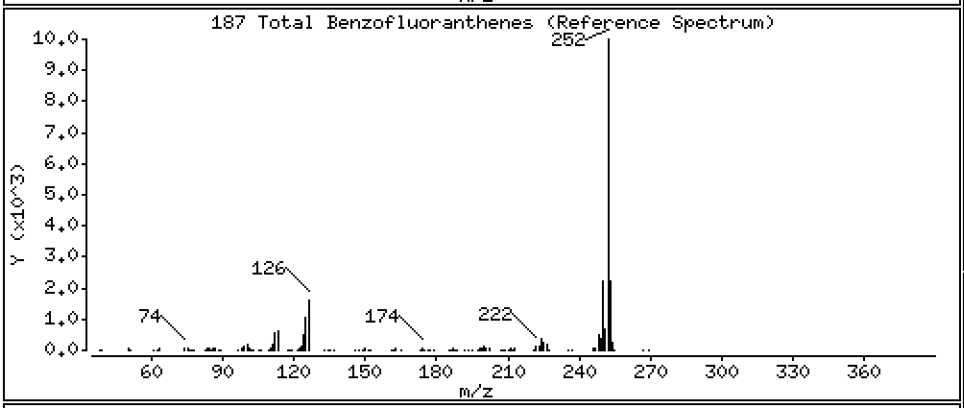
Concentration: 9.712 ug/mL

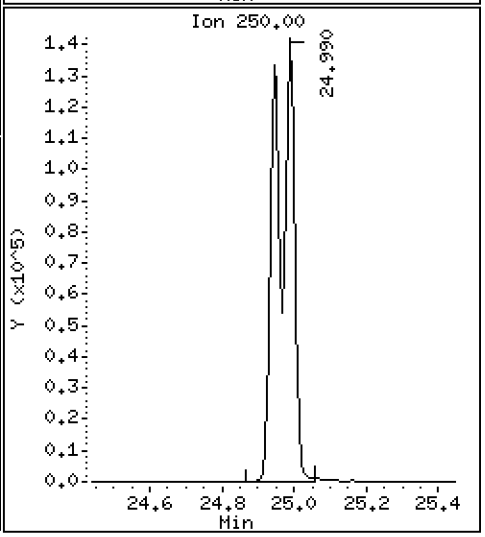


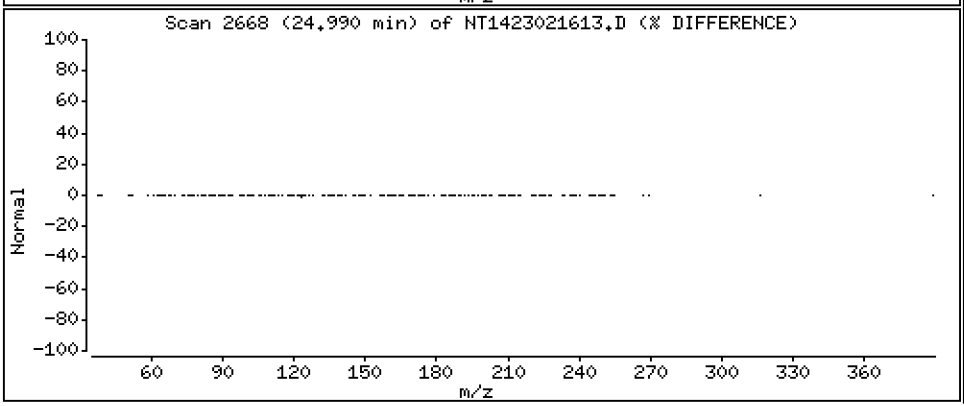












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

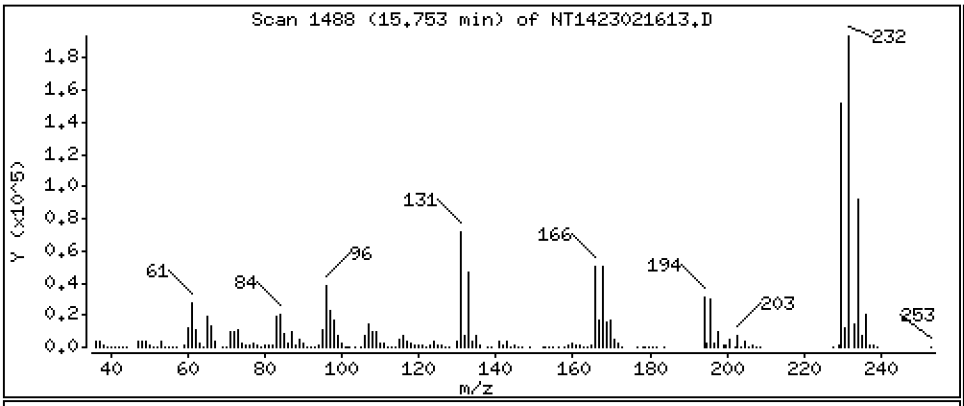
Operator: DSD

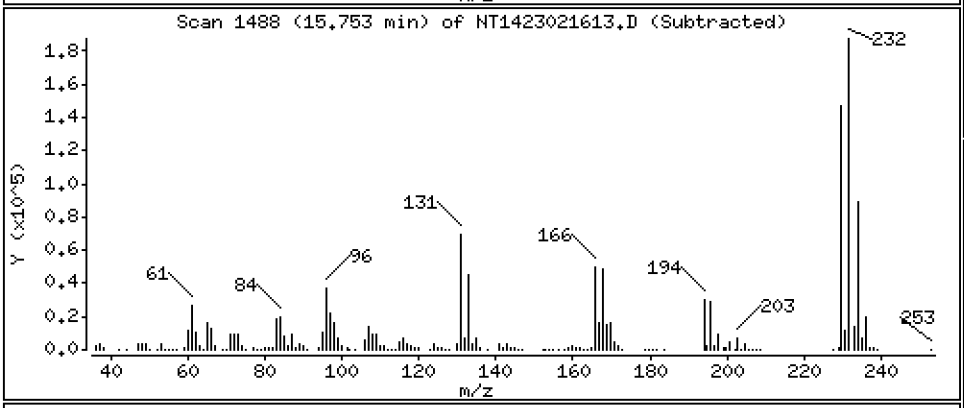
Column phase: ZB-5msi

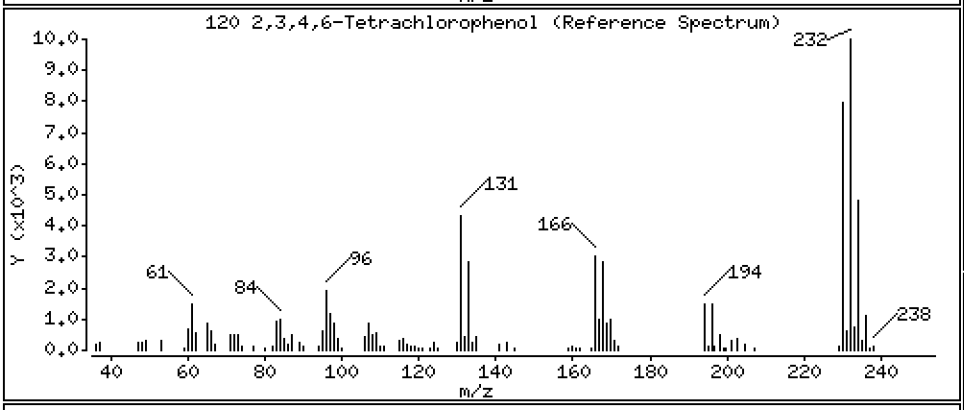
Column diameter: 0.25

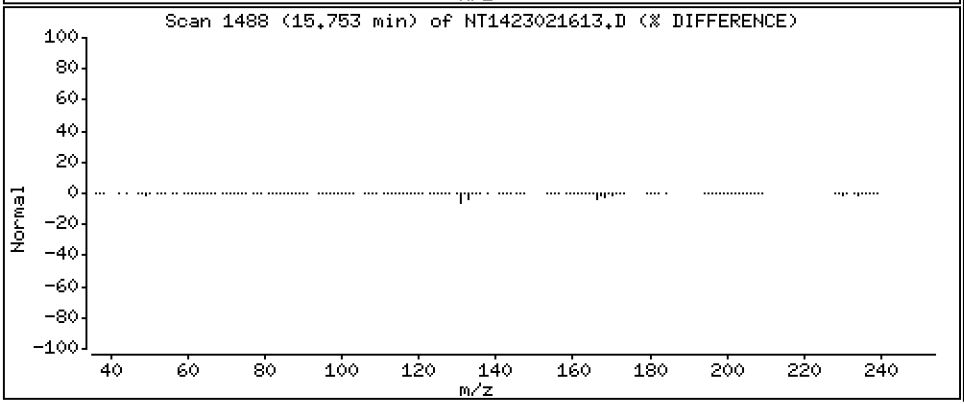
120 2,3,4,6-Tetrachlorophenol

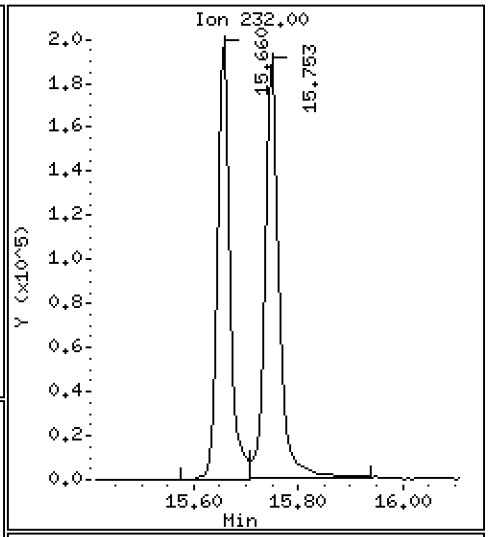
Concentration: 3.875 ug/mL

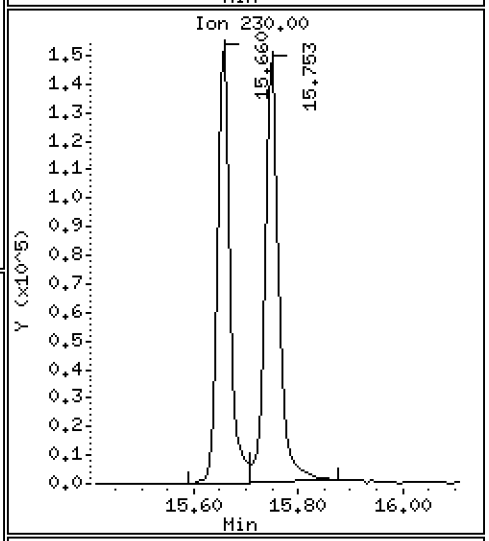


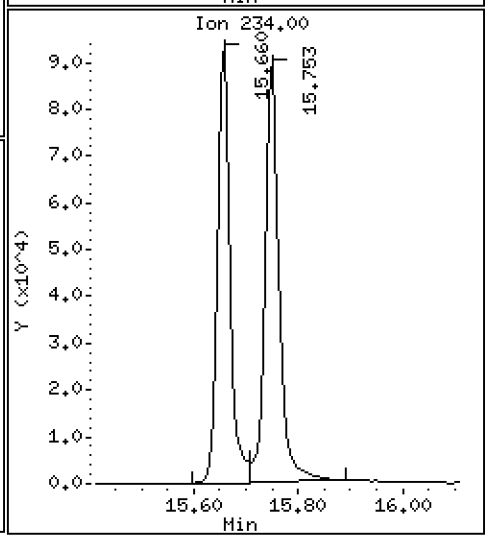












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D
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Inj Date : 16-FEB-2023 21:18 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0234-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Meth Date : 17-Feb-2023 15:05 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.674	6.682	(0.750)	812311	8.37324	8.373
$	2 Phenol-d5	99	8.266	8.266	(0.929)	1229645	7.99013	7.990
	3 Phenol	94	8.289	8.289	(0.931)	753865	4.62726	4.627
$	5 2-Chlorophenol-d4	132	8.536	8.536	(0.959)	852471	7.76321	7.763
	4 Bis(2-Chloroethyl)ether	93	8.459	8.451	(0.950)	642018	5.15867	5.159
	6 2-Chlorophenol	128	8.567	8.567	(0.963)	529676	4.61671	4.617
	7 1,3-Dichlorobenzene	146	8.838	8.838	(0.993)	609215	4.76976	4.770
*	8 1,4-Dichlorobenzene-d4	152	8.900	8.900	(1.000)	362894	4.00000	
	9 1,4-Dichlorobenzene	146	8.931	8.931	(1.003)	580699	4.79061	4.791
$	10 1,2-Dichlorobenzene-d4	152	9.264	9.257	(1.041)	410470	4.98694	4.987
	12 1,2-Dichlorobenzene	146	9.288	9.288	(1.044)	576549	4.75778	4.758
	11 Benzyl alcohol	108	9.179	9.202	(1.031)	425653	4.62539	4.625
	14 2,2'-oxybis(1-Chloropropane)	121	9.482	9.482	(1.065)	192988	5.56690	5.567
	13 2-Methylphenol	108	9.404	9.404	(1.057)	496864	4.36760	4.368
	17 Hexachloroethane	117	9.878	9.878	(1.110)	265463	5.03740	5.037
	16 N-Nitroso-di-n-propylamine	70	9.746	9.738	(1.095)	516514	4.98778	4.988
	15 4-Methylphenol	108	9.684	9.684	(1.088)	551454	4.59064	4.591
$	18 Nitrobenzene-d5	82	10.002	10.002	(0.878)	806144	5.19439	5.194
	19 Nitrobenzene	77	10.041	10.033	(0.881)	770727	4.94878	4.949
	20 Isophorone	82	10.483	10.491	(0.920)	1457561	7.09356	7.094
	21 2-Nitrophenol	139	10.669	10.677	(0.936)	316370	4.45322	4.453
	22 2,4-Dimethylphenol	107	10.723	10.724	(0.941)	502608	4.27378	4.274
	23 Bis(2-Chloroethoxy)methane	93	10.925	10.925	(0.959)	767264	5.74018	5.740
	24 Benzoic acid	105	10.933	10.879	(0.959)	412038	5.51023	5.510
	25 2,4-Dichlorophenol	162	11.119	11.127	(0.976)	515695	5.12362	5.124
	26 1,2,4-Trichlorobenzene	180	11.312	11.305	(0.993)	566926	4.64981	4.650
*	27 Naphthalene-d8	136	11.397	11.389	(1.000)	1343351	4.00000	
	28 Naphthalene	128	11.436	11.428	(1.003)	1568652	4.73587	4.736
	29 4-Chloroaniline	127	11.567	11.575	(1.015)	553475	3.91120	3.911
	30 Hexachlorobutadiene	225	11.799	11.799	(1.035)	369529	4.91651	4.917
	31 4-Chloro-3-methylphenol	107	12.534	12.542	(1.100)	549566	5.04457	5.045
	32 2-Methylnaphthalene	142	12.836	12.836	(1.126)	1142706	4.60635	4.606
	33 Hexachlorocyclopentadiene	237	13.300	13.301	(0.886)	438821	5.30111	5.301

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.455	13.463	(0.896)	404613	4.80795	4.808
	35	2,4,5-Trichlorophenol	196	13.532	13.541	(0.901)	428976	4.70685	4.707
$	36	2-Fluorobiphenyl	172	13.625	13.617	(0.907)	1488825	4.87017	4.870
	37	2-Chloronaphthalene	162	13.834	13.826	(0.921)	1157484	4.63882	4.639
	38	2-Nitroaniline	65	14.097	14.097	(0.939)	393653	4.85233	4.852
	39	Dimethylphthalate	163	14.538	14.531	(0.968)	1224849	4.69299	4.693
	40	Acenaphthylene	152	14.701	14.701	(0.979)	1772439	4.65722	4.657
	41	2,6-Dinitrotoluene	165	14.670	14.670	(0.977)	303057	4.93469	4.935
*	42	Acenaphthene-d10	164	15.018	15.018	(1.000)	854455	4.00000	
	43	3-Nitroaniline	138	14.956	14.957	(0.996)	320818	4.92163	4.922
	44	Acenaphthene	153	15.088	15.080	(1.005)	1055715	4.63322	4.633
	45	2,4-Dinitrophenol	184	15.265	15.282	(1.016)	10046	0.25021	0.2502
	46	Dibenzofuran	168	15.412	15.405	(1.026)	1701574	4.54830	4.548
	47	4-Nitrophenol	109	15.273	15.273	(1.017)	153415	4.05153	4.052
	48	2,4-Dinitrotoluene	165	15.482	15.475	(1.031)	421549	4.85479	4.855
	50	Diethylphthalate	149	15.992	15.984	(1.065)	1638308	4.72171	4.722
	49	Fluorene	166	16.123	16.124	(1.074)	1814406	4.63777	4.638
	51	4-Chlorophenyl-phenylether	204	16.123	16.116	(1.074)	994538	4.75422	4.754
	52	4-Nitroaniline	138	16.224	16.224	(1.080)	356106	4.76155	4.762
	53	4,6-Dinitro-2-methylphenol	198	16.316	16.370	(0.904)	216522	3.65299	3.653
	54	N-Nitrosodiphenylamine	169	16.370	16.370	(0.907)	1149631	4.90725	4.907
$	55	2,4,6-Tribromophenol	330	16.663	16.663	(1.110)	357193	7.14108	7.141
	56	4-Bromophenyl-phenylether	248	17.126	17.118	(0.949)	537640	5.15255	5.153
	57	Hexachlorobenzene	284	17.435	17.434	(0.966)	496114	4.67908	4.679
	58	Pentachlorophenol	266	17.791	17.814	(0.985)	204787	3.93169	3.932
*	59	Phenanthrene-d10	188	18.054	18.054	(1.000)	1630237	4.00000	
	60	Phenanthrene	178	18.108	18.101	(1.003)	1837237	4.68992	4.690
	61	Anthracene	178	18.201	18.193	(1.008)	1670411	4.30397	4.304
	62	Carbazole	167	18.534	18.534	(1.027)	1687690	4.79185	4.792
	63	Di-n-butylphthalate	149	19.338	19.346	(1.071)	2169531	5.51497	5.515
	64	Fluoranthene	202	20.499	20.499	(0.887)	2246209	4.68180	4.682
	65	Pyrene	202	20.924	20.925	(0.905)	2232282	4.40013	4.400
$	66	Terphenyl-d14	244	21.219	21.219	(0.918)	1704165	4.73097	4.731
	67	Butylbenzylphthalate	149	22.148	22.148	(0.958)	770848	4.56767	4.568
	68	Benzo(a)anthracene	228	23.092	23.092	(0.999)	1612232	4.53042	4.530
*	69	Chrysene-d12	240	23.123	23.123	(1.000)	1112056	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.054	23.054	(0.997)	1021005	9.32793	9.328
	71	Chrysene	228	23.170	23.162	(1.002)	1432188	4.47430	4.474
	72	bis(2-Ethylhexyl)phthalate	149	23.178	23.178	(0.960)	1007189	4.64885	4.649
*	134	Di-n-octylphthalate-d4	153	24.153	24.153	(1.000)	1298332	4.00000	
	73	Di-n-octylphthalate	149	24.168	24.161	(1.001)	1506391	4.96217	4.962
	74	Benzo(b)fluoranthene	252	24.943	24.943	(0.971)	1120169	4.81299	4.813
	75	Benzo(k)fluoranthene	252	24.989	24.989	(0.973)	1203272	4.83840	4.838
	76	Benzo(a)pyrene	252	25.577	25.578	(0.996)	1024300	4.60711	4.607
*	77	Perylene-d12	264	25.686	25.686	(1.000)	733476	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.244	28.244	(1.100)	816683	4.39546	4.395
	79	Dibenzo(a,h)anthracene	278	28.259	28.267	(1.100)	668295	4.36484	4.365
	80	Benzo(g,h,i)perylene	276	28.997	28.997	(1.129)	664180	4.38025	4.380
	90	N-Nitrosodimethylamine	74	4.566	4.566	(0.513)	423038	5.63216	5.632
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	20.747	20.754	(0.897)	1133759	9.98385	9.984
	103	Pyridine	79	4.581	4.597	(0.515)	661518	5.56593	5.566
	105	1-methylnaphthalene	142	13.060	13.053	(1.146)	1108498	4.75965	4.760
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.447	16.440	(1.095)	1962985	4.65510	4.655

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.989	24.943	(0.973)	2206870	9.71223	9.712
120 2,3,4,6-Tetrachlorophenol	232	15.752	15.760	(1.049)	382367	3.87456	3.875

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021613.D
Lab Smp Id: SLB0234-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 17:06
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	375798	187899	751596	362894	-3.43
27 Naphthalene-d8	1378169	689085	2756338	1343351	-2.53
42 Acenaphthene-d10	847135	423568	1694270	854455	0.86
59 Phenanthrene-d10	1675180	837590	3350360	1630237	-2.68
69 Chrysene-d12	1073562	536781	2147124	1112056	3.59
134 Di-n-octylphthala	1344129	672065	2688258	1298332	-3.41
77 Perylene-d12	721978	360989	1443956	733476	1.59

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.90	8.40	9.40	8.90	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.40	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	-0.00
59 Phenanthrene-d10	18.05	17.55	18.55	18.05	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	-0.00
134 Di-n-octylphthala	24.15	23.65	24.65	24.15	-0.00
77 Perylene-d12	25.69	25.19	26.19	25.69	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021613.D

Lab ID: SLB0234-SCV1
nt14.i, ABN.m, 16-FEB-2023 21:18

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.959	0.000	0.9593	Benzoic acid
1.016	0.000	1.0165	2,4-Dinitrophenol
1.017	0.000	1.0170	4-Nitrophenol
0.985	0.000	0.9854	Pentachlorophenol

RRT check based on Ccal File: NT1423021610.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021618.D

Date : 17-FEB-2023 00:17

Client ID:

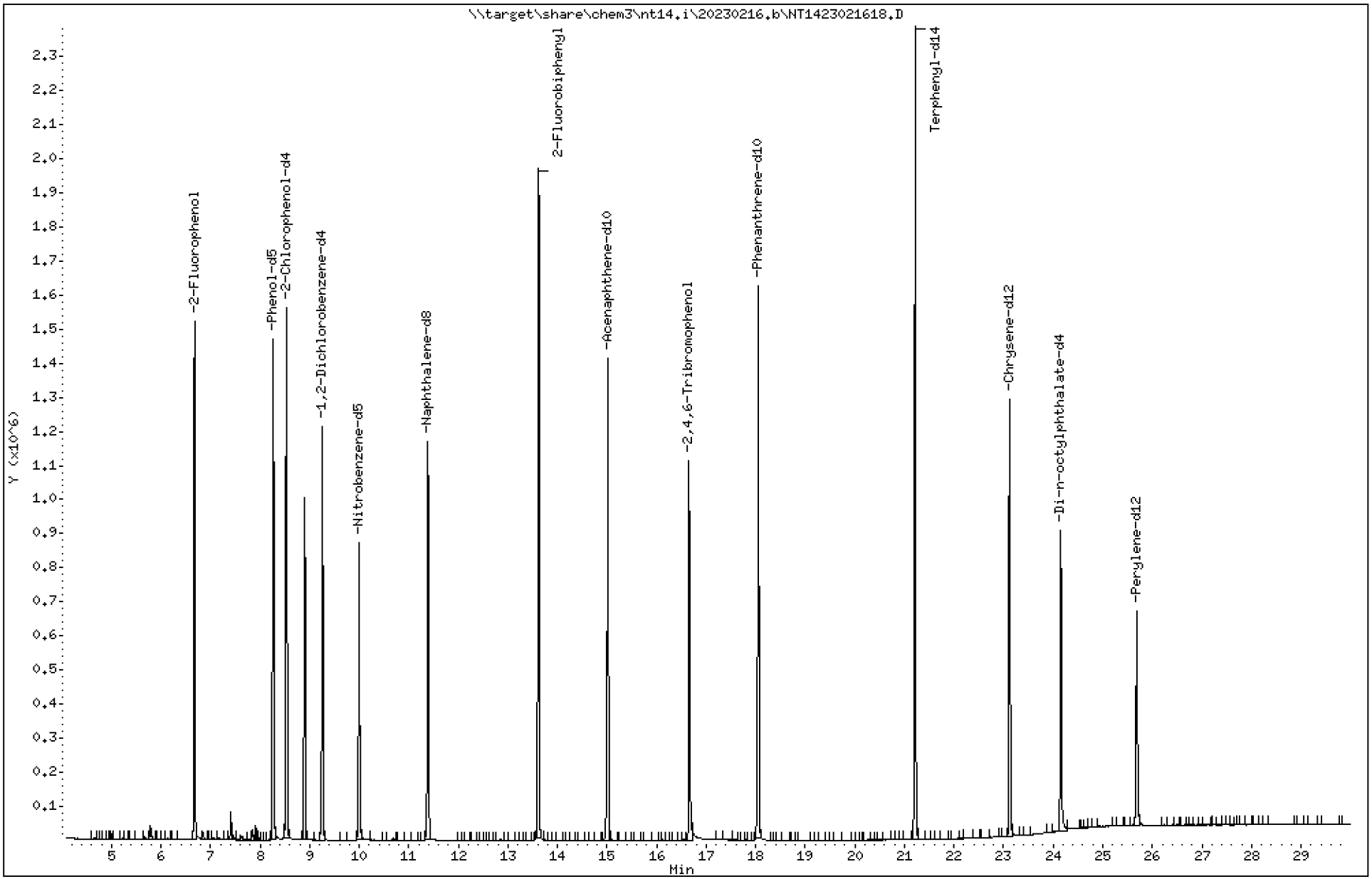
Instrument: nt14.i

Sample Info: SLB0234-ICB1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230216.b\NT1423021618.D
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Inj Date : 17-FEB-2023 00:17 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0234-ICB1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Meth Date : 17-Feb-2023 15:05 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 15:54 Cal File: NT1423021604.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	6.674	6.682	(0.721)	643925	8.76574	8.766
$ 2	Phenol-d5	99	8.266	8.266	(0.893)	948703	8.14116	8.141(M)
3	Phenol	94	Compound Not Detected.					
$ 5	2-Chlorophenol-d4	132	8.536	8.536	(0.922)	693874	8.34496	8.345(M)
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	8.900	8.900	(1.000)	274788	4.00000	(H)
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	9.257	9.257	(1.040)	340214	5.45867	5.459(M)
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
17	Hexachloroethane	117	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
15	4-Methylphenol	108	Compound Not Detected.					
$ 18	Nitrobenzene-d5	82	10.002	10.002	(0.878)	638078	5.65976	5.660
19	Nitrobenzene	77	Compound Not Detected.					
20	Isophorone	82	Compound Not Detected.					
21	2-Nitrophenol	139	Compound Not Detected.					
22	2,4-Dimethylphenol	107	Compound Not Detected.					
23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
24	Benzoic acid	105	Compound Not Detected.					
25	2,4-Dichlorophenol	162	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.389	11.389	(1.000)	975858	4.00000	
28	Naphthalene	128	Compound Not Detected.					
29	4-Chloroaniline	127	Compound Not Detected.					
30	Hexachlorobutadiene	225	Compound Not Detected.					
31	4-Chloro-3-methylphenol	107	Compound Not Detected.					
32	2-Methylnaphthalene	142	Compound Not Detected.					
33	Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.617	13.617	(0.907)	1161650	5.62895	5.629
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	Compound Not Detected.					
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.010	15.018	(1.000)	576816	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	Compound Not Detected.					
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	Compound Not Detected.					
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	Compound Not Detected.					
	49	Fluorene	166	Compound Not Detected.					
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.656	16.663	(1.110)	194797	5.79155	5.792
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.054	18.054	(1.000)	1140272	4.00000	
	60	Phenanthrene	178	Compound Not Detected.					
	61	Anthracene	178	Compound Not Detected.					
	62	Carbazole	167	Compound Not Detected.					
	63	Di-n-butylphthalate	149	Compound Not Detected.					
	64	Fluoranthene	202	Compound Not Detected.					
	65	Pyrene	202	Compound Not Detected.					
$	66	Terphenyl-d14	244	21.219	21.219	(0.918)	1370199	5.91906	5.919
	67	Butylbenzylphthalate	149	Compound Not Detected.					
	68	Benzo(a)anthracene	228	Compound Not Detected.					
*	69	Chrysene-d12	240	23.116	23.123	(1.000)	714655	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	Compound Not Detected.					
	72	bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
*	134	Di-n-octylphthalate-d4	153	24.153	24.153	(1.000)	689415	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	Compound Not Detected.					
	75	Benzo(k)fluoranthene	252	Compound Not Detected.					
	76	Benzo(a)pyrene	252	Compound Not Detected.					
*	77	Perylene-d12	264	25.686	25.686	(1.000)	466173	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80	Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	Compound Not Detected.					
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	Compound Not Detected.					
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021618.D
Lab Smp Id: SLB0234-ICB1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 17:06
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	375798	187899	751596	274788	-26.88
27 Naphthalene-d8	1378169	689085	2756338	975858	-29.19
42 Acenaphthene-d10	847135	423568	1694270	576816	-31.91
59 Phenanthrene-d10	1675180	837590	3350360	1140272	-31.93
69 Chrysene-d12	1073562	536781	2147124	714655	-33.43
134 Di-n-octylphthala	1344129	672065	2688258	689415	-48.71
77 Perylene-d12	721978	360989	1443956	466173	-35.43

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.90	8.40	9.40	8.90	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.07
42 Acenaphthene-d10	15.02	14.52	15.52	15.01	-0.05
59 Phenanthrene-d10	18.05	17.55	18.55	18.05	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	-0.03
134 Di-n-octylphthala	24.15	23.65	24.65	24.15	-0.00
77 Perylene-d12	25.69	25.19	26.19	25.69	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021618.D

Lab ID: SLB0234-ICB1
nt14.i, ABN.m, 17-FEB-2023 00:17

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.721	0.751	-0.0298	2-Fluorophenol
0.893	0.929	-0.0358	Phenol-d5
0.922	0.959	-0.0370	2-Chlorophenol-d4

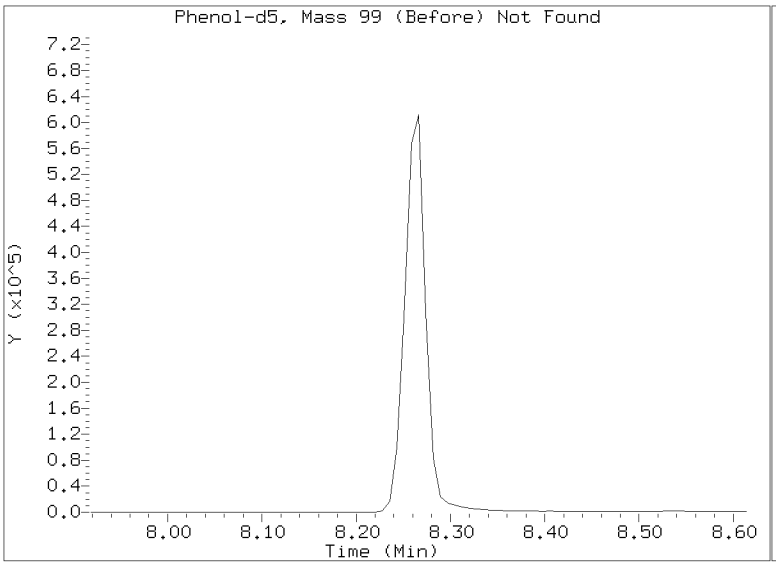
RRT check based on Ccal File: NT1423021610.D

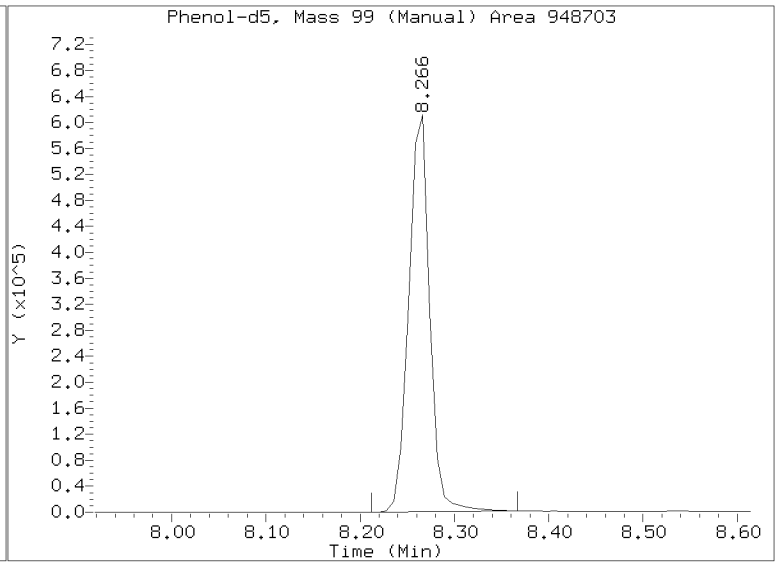
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

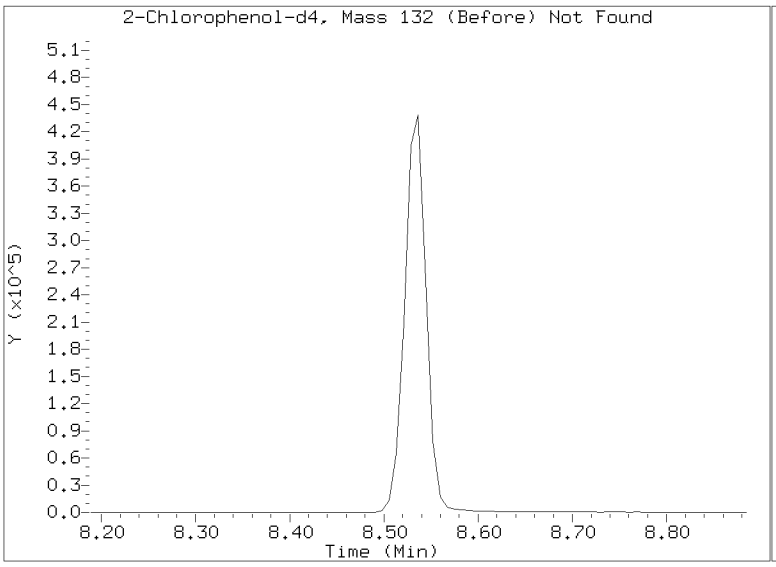
* Only compounds listed in the work order have been verified by the analyst *

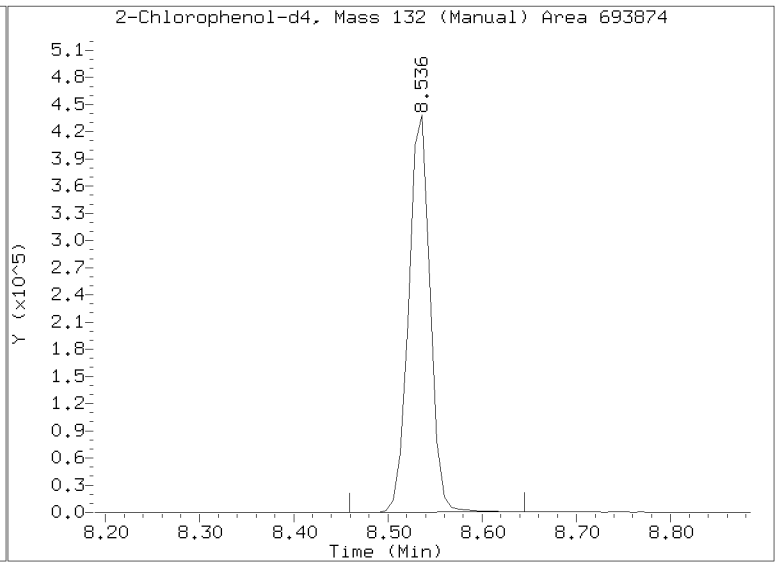
Quant Ion Manual Peak Adjustment Report

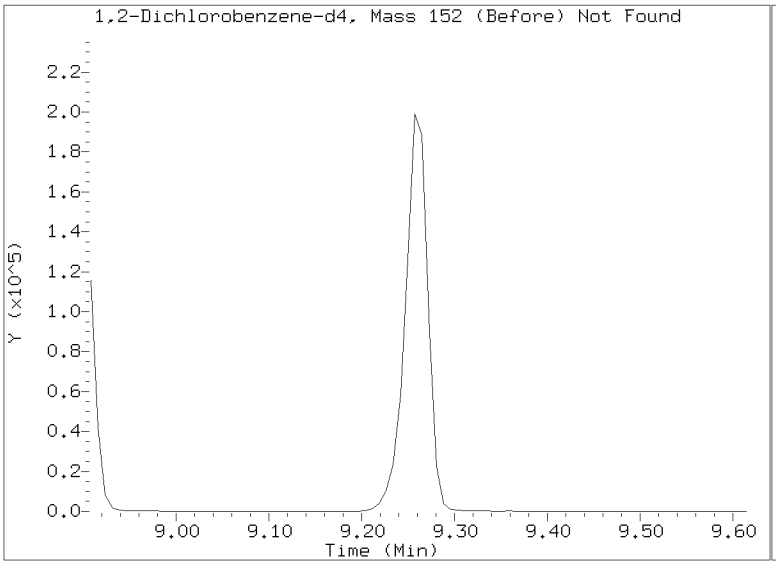
Datafile: //target/share/chem3/nt14.i/20230216.b/NT1423021618.D
Injection Date: 17-FEB-2023 00:17
Lab ID:SLB0234-ICB1 Client ID:
Report Date: 02/28/2023 14:49

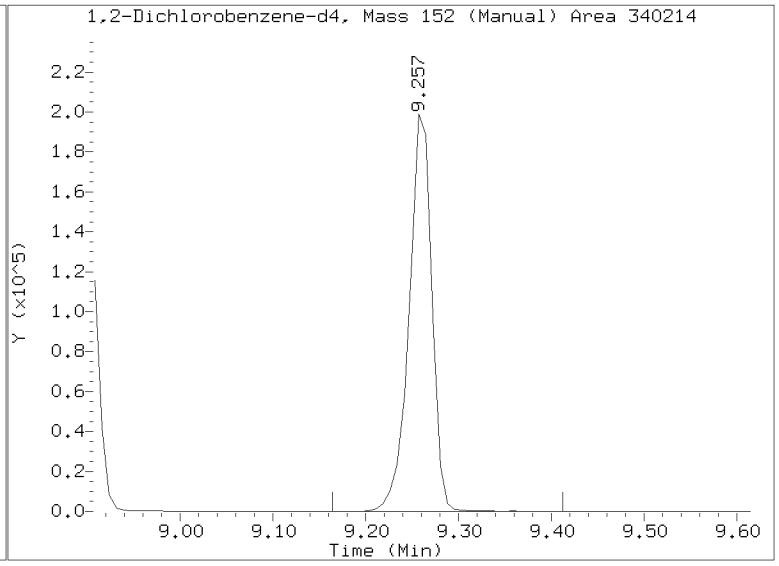












SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00046
Laboratory ID: SLB0234-SCV1
Sequence: SLB0234
Sequence Name: SCV 5.0
Standard ID: K010066

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	5.0000	4.6	-7.5	20.00
bis(2-chloroethyl) ether	5.0000	5.2	3.2	20.00
2-Chlorophenol	5.0000	4.6	-7.7	20.00
1,3-Dichlorobenzene	5.0000	4.8	-4.6	20.00
1,4-Dichlorobenzene	5.0000	4.8	-4.2	20.00
1,2-Dichlorobenzene	5.0000	4.8	-4.8	20.00
Benzyl Alcohol	5.0000	4.6	-7.5	20.00
2,2'-Oxybis(1-chloropropane)	5.0000	5.6	11.3	20.00
2-Methylphenol	5.0000	4.4	-12.6	20.00
Hexachloroethane	5.0000	5.0	0.7	20.00
N-Nitroso-di-n-Propylamine	5.0000	5.0	-0.2	20.00
4-Methylphenol	5.0000	4.6	-8.2	20.00
Nitrobenzene	5.0000	4.9	-1.0	20.00
Isophorone	5.0000	7.1	41.9 *	20.00
2-Nitrophenol	5.0000	4.5	-10.9	20.00
2,4-Dimethylphenol	5.0000	4.3	-14.5	20.00
Bis(2-Chloroethoxy)methane	5.0000	5.7	14.8	20.00
2,4-Dichlorophenol	5.0000	5.1	2.5	20.00
1,2,4-Trichlorobenzene	5.0000	4.6	-7.0	20.00
Naphthalene	5.0000	4.7	-5.3	20.00
Benzoic acid	10.000	5.5	-44.9 *	20.00
4-Chloroaniline	5.0000	3.9	-21.8 *	20.00
Hexachlorobutadiene	5.0000	4.9	-1.7	20.00
4-Chloro-3-Methylphenol	5.0000	5.0	0.9	20.00
2-Methylnaphthalene	5.0000	4.6	-7.9	20.00
Hexachlorocyclopentadiene	5.0000	5.3	6.0	20.00
2,4,6-Trichlorophenol	5.0000	4.8	-3.8	20.00
2,4,5-Trichlorophenol	5.0000	4.7	-5.9	20.00
2-Chloronaphthalene	5.0000	4.6	-7.2	20.00
2-Nitroaniline	5.0000	4.9	-3.0	20.00
Acenaphthylene	5.0000	4.7	-6.9	20.00
Dimethylphthalate	5.0000	4.7	-6.1	20.00
2,6-Dinitrotoluene	5.0000	4.9	-1.3	20.00
Acenaphthene	5.0000	4.6	-7.3	20.00

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00046
Laboratory ID: SLB0234-SCV1
Sequence: SLB0234
Sequence Name: SCV 5.0
Standard ID: K010066

3-Nitroaniline	5.0000	4.9	-1.6	20.00
2,4-Dinitrophenol	5.0000	0.3	-95.0 *	20.00
Dibenzofuran	5.0000	4.5	-9.0	20.00
4-Nitrophenol	5.0000	4.1	-19.0	20.00
2,4-Dinitrotoluene	5.0000	4.9	-2.9	20.00
Fluorene	5.0000	4.6	-7.2	20.00
4-Chlorophenylphenyl ether	5.0000	4.8	-4.9	20.00
Diethyl phthalate	5.0000	4.7	-5.6	20.00
4-Nitroaniline	5.0000	4.8	-4.8	20.00
4,6-Dinitro-2-methylphenol	5.0000	3.7	-26.9 *	20.00
N-Nitrosodiphenylamine	5.0000	4.9	-1.9	20.00
4-Bromophenyl phenyl ether	5.0000	5.2	3.1	20.00
Hexachlorobenzene	5.0000	4.7	-6.4	20.00
Pentachlorophenol	5.0000	3.9	-21.4 *	20.00
Phenanthrene	5.0000	4.7	-6.2	20.00
Anthracene	5.0000	4.3	-13.9	20.00
Carbazole	5.0000	4.8	-4.2	20.00
Di-n-Butylphthalate	5.0000	5.5	10.3	20.00
Fluoranthene	5.0000	4.7	-6.4	20.00
Pyrene	5.0000	4.4	-12.0	20.00
Butylbenzylphthalate	5.0000	4.6	-8.6	20.00
Benzo(a)anthracene	5.0000	4.5	-9.4	20.00
3,3'-Dichlorobenzidine	10.000	9.3	-6.7	20.00
Chrysene	5.0000	4.5	-10.5	20.00
bis(2-Ethylhexyl)phthalate	5.0000	4.6	-7.0	20.00
Di-n-Octylphthalate	5.0000	5.0	-0.8	20.00
Benzofluoranthenes, Total	10.000	9.7	-2.9	20.00
Benzo(a)pyrene	5.0000	4.6	-7.9	20.00
Indeno(1,2,3-cd)pyrene	5.0000	4.4	-12.1	20.00
Dibenzo(a,h)anthracene	5.0000	4.4	-12.7	20.00
Benzo(g,h,i)perylene	5.0000	4.4	-12.4	20.00
1-Methylnaphthalene	5.0000	4.8	-4.8	20.00
2-Fluorophenol	7.5000	8.37	11.6	20.00
Phenol-d5	7.5000	7.99	6.5	20.00
2-Chlorophenol-d4	7.5000	7.76	3.5	20.00
1,2-Dichlorobenzene-d4	5.0000	4.99	-0.3	20.00
Nitrobenzene-d5	5.0000	5.19	3.9	20.00

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00046
Laboratory ID: SLB0234-SCV1
Sequence: SLB0234
Sequence Name: SCV 5.0
Standard ID: K010066

2-Fluorobiphenyl	5.0000	4.87	-2.6	20.00
2,4,6-Tribromophenol	7.5000	7.14	-4.8	20.00
p-Terphenyl-d14	5.0000	4.73	-5.4	20.00

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

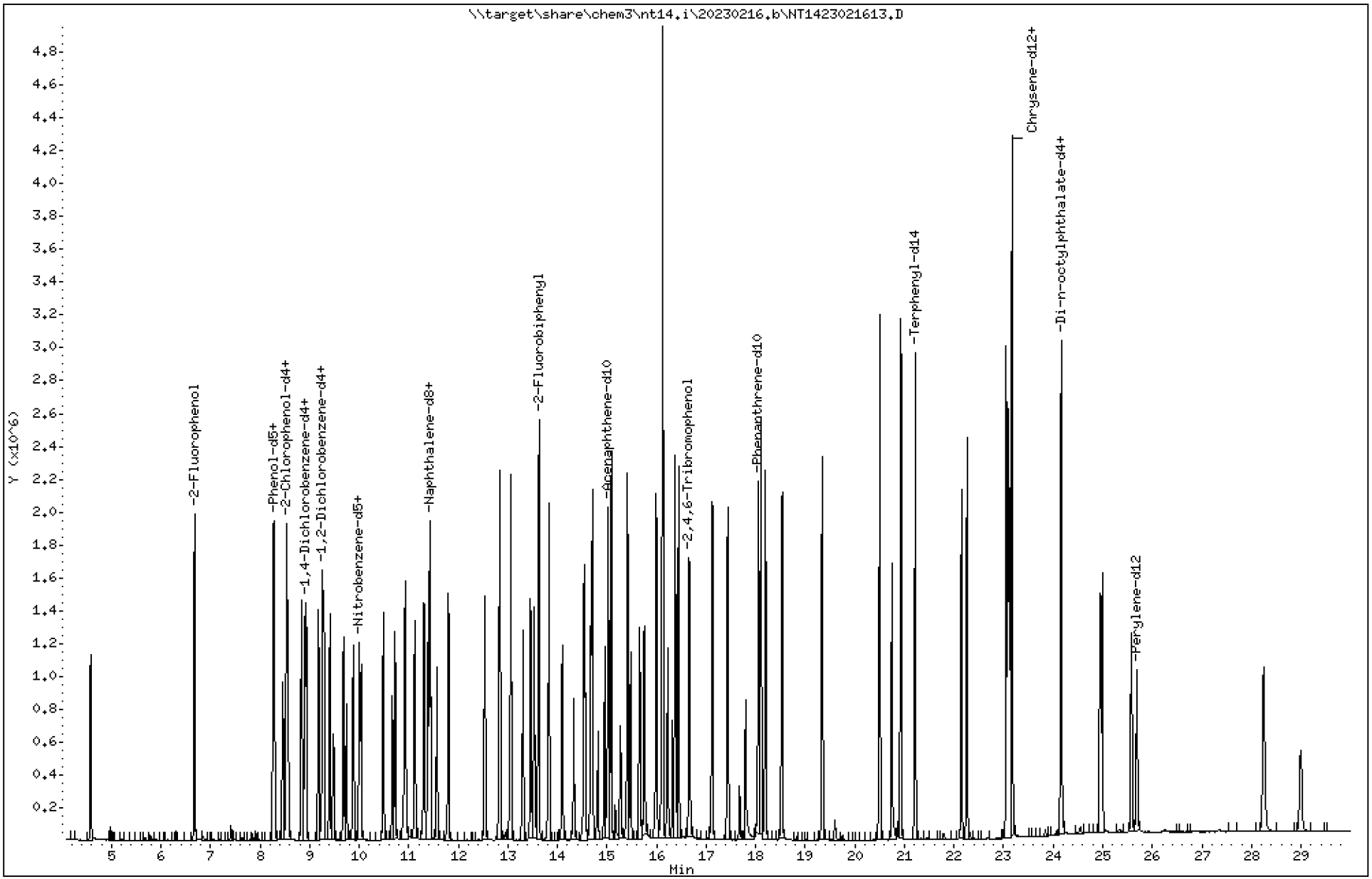
Sample Info: SLB0234-SCV1

Column phase: ZB-5msi

Instrument: nt14.i

Operator: DSD

Column diameter: 0.25



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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

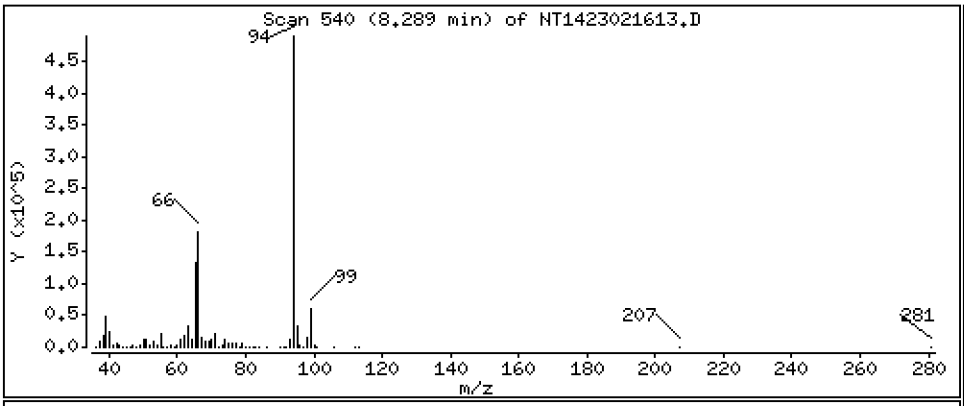
Operator: DSD

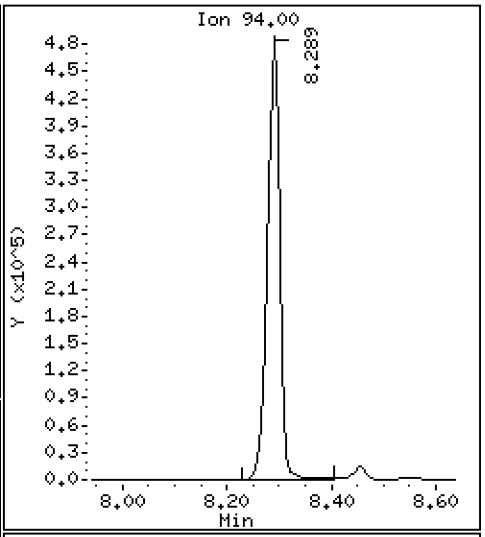
Column phase: ZB-5msi

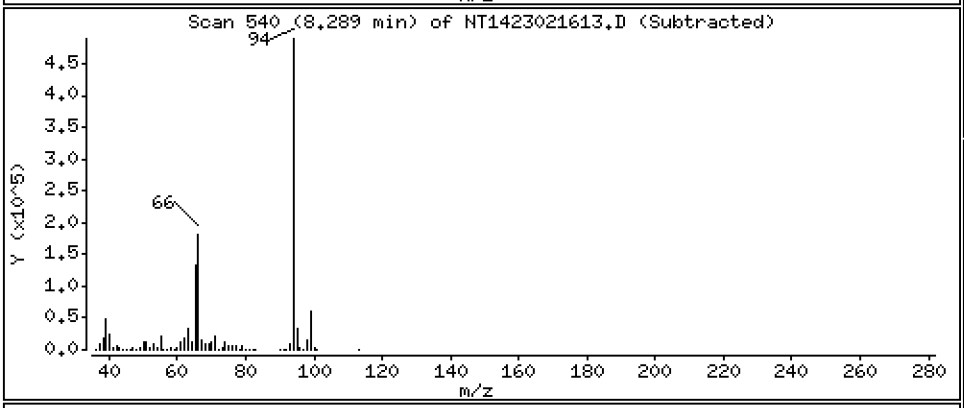
Column diameter: 0.25

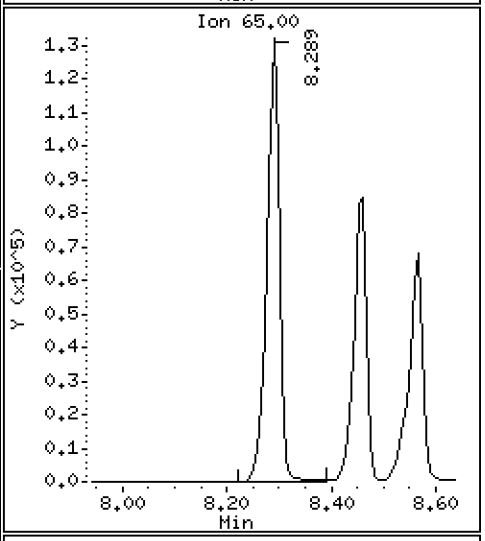
3 Phenol

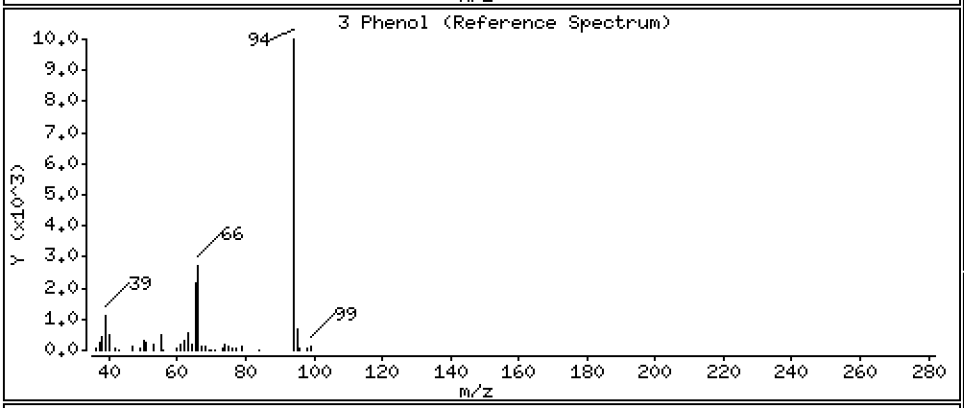
Concentration: 4.627 ug/mL

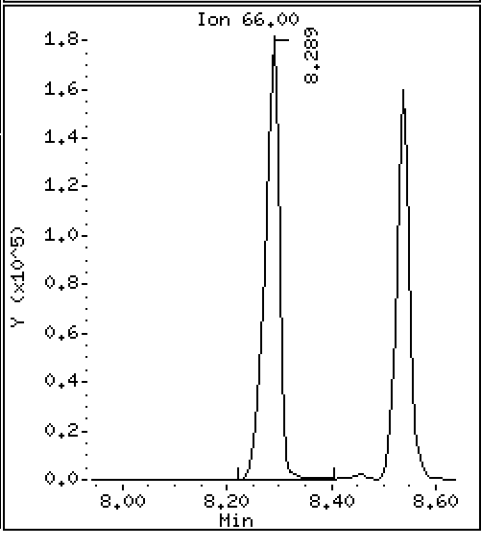


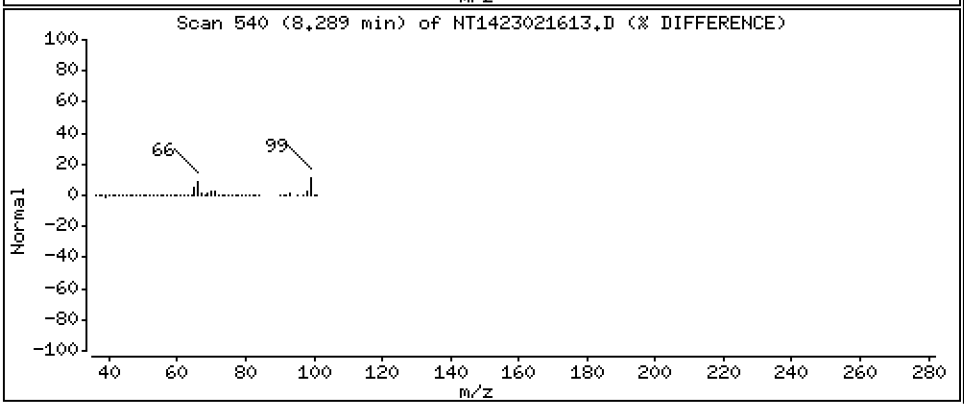












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

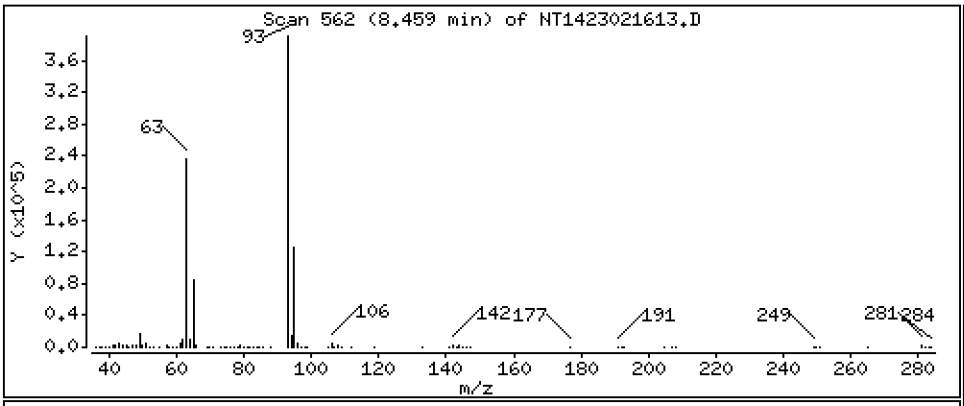
Operator: DSD

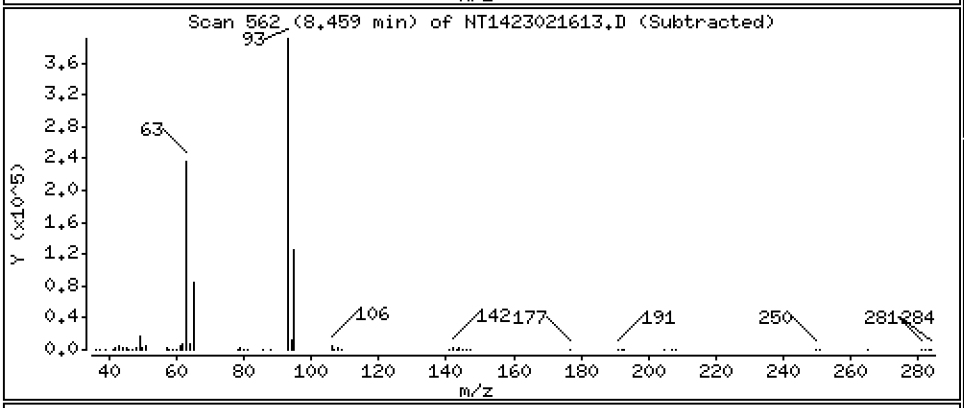
Column phase: ZB-5msi

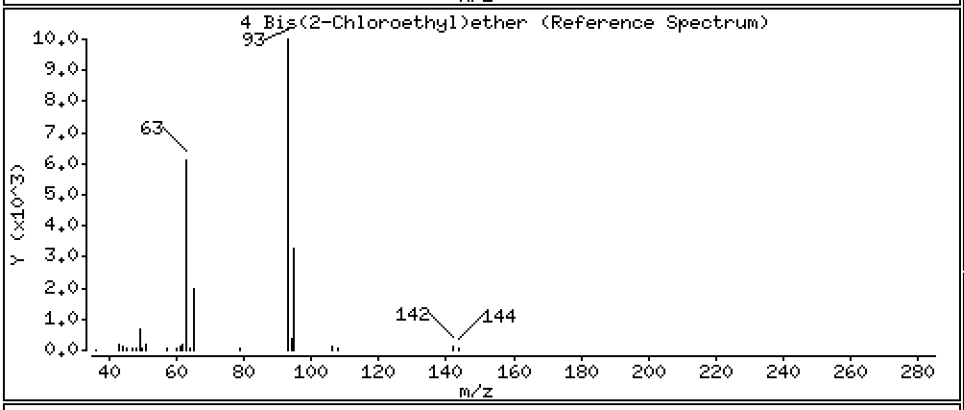
Column diameter: 0.25

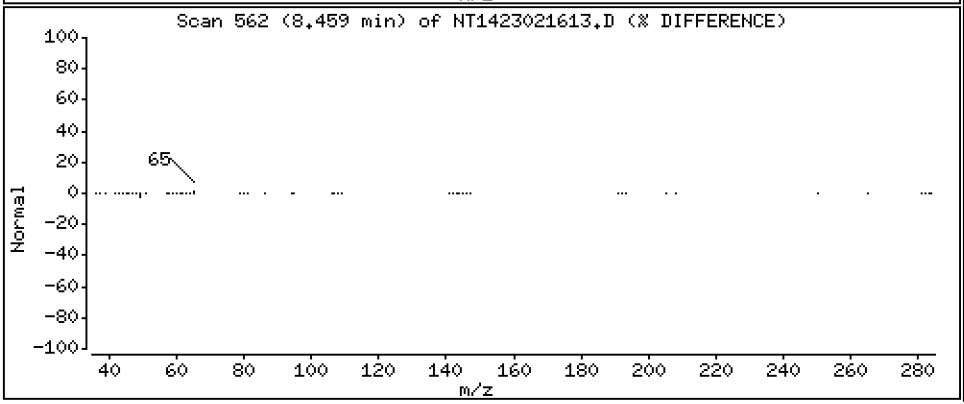
4 Bis(2-Chloroethyl)ether

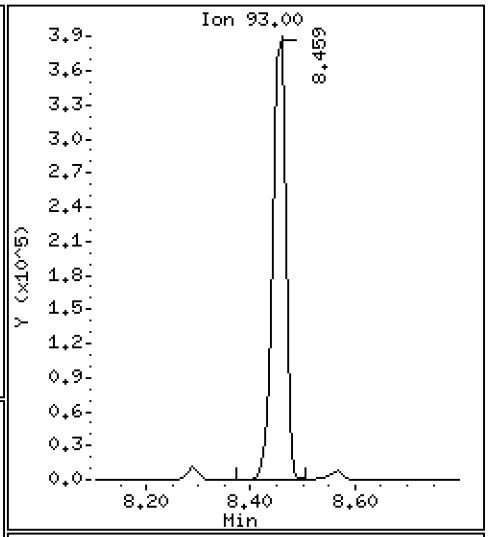
Concentration: 5.159 ug/mL

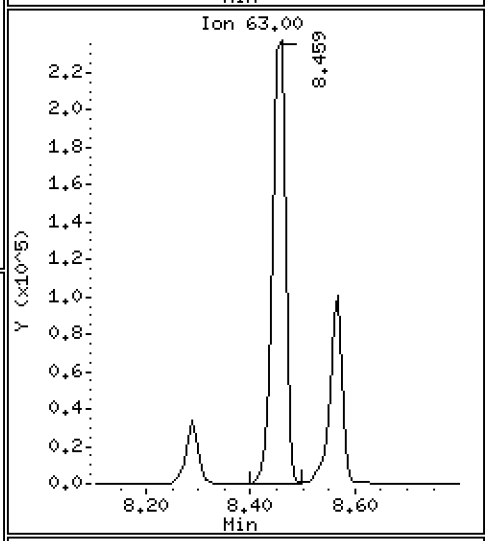


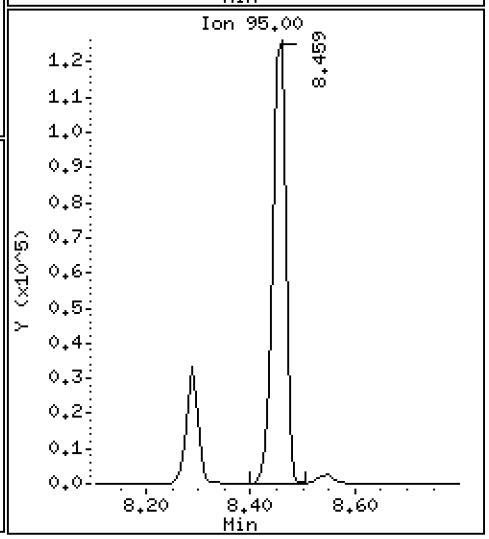












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

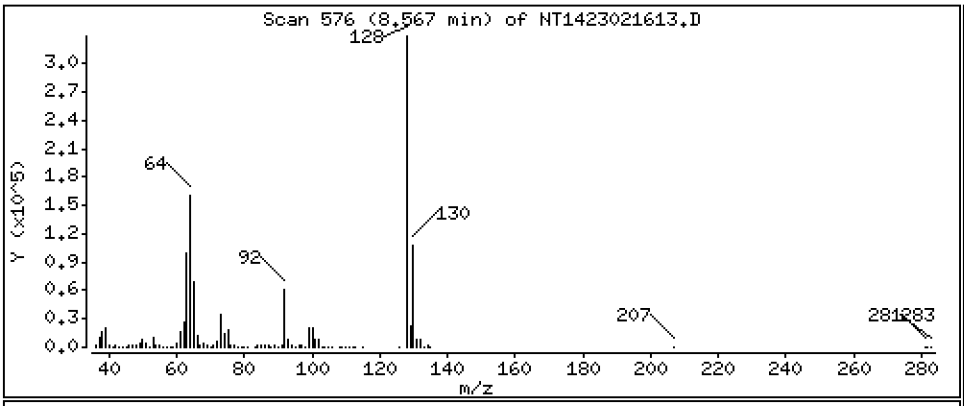
Operator: DSD

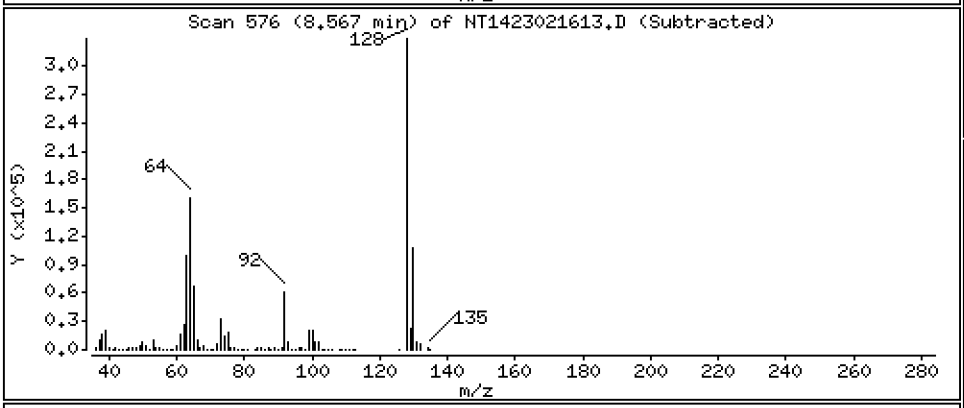
Column phase: ZB-5msi

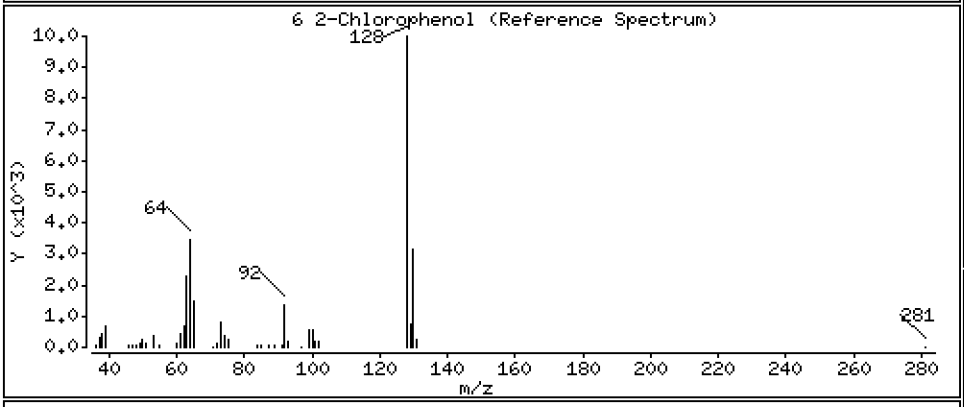
Column diameter: 0.25

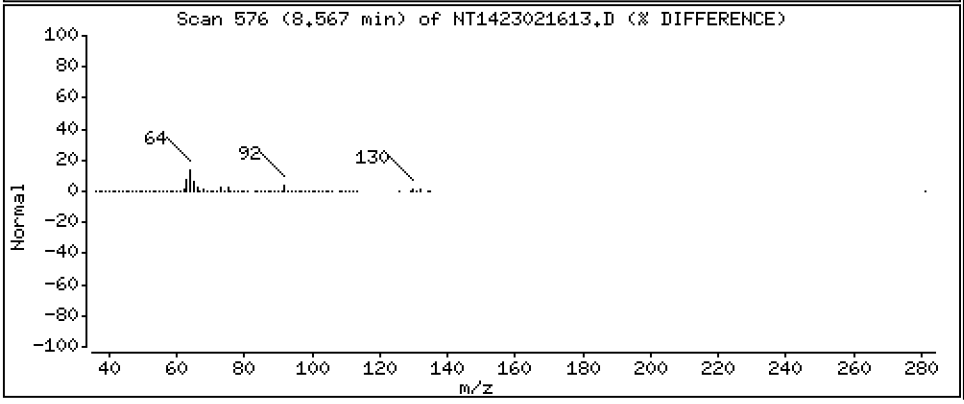
6 2-Chlorophenol

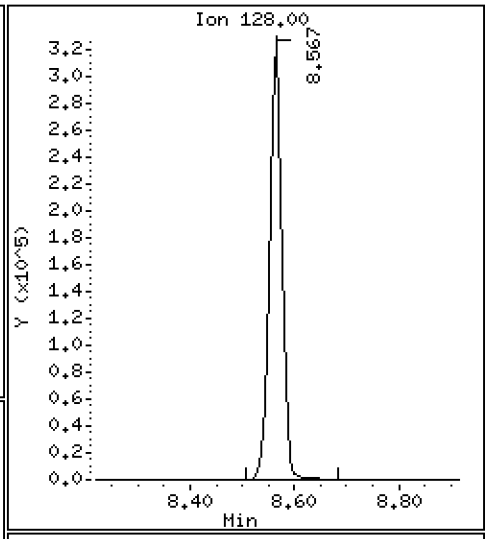
Concentration: 4.617 ug/mL

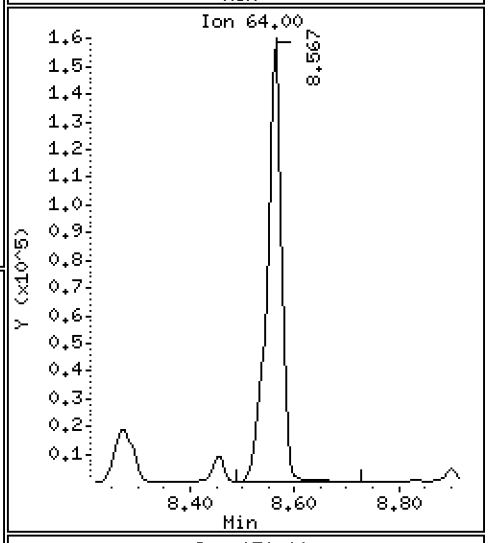


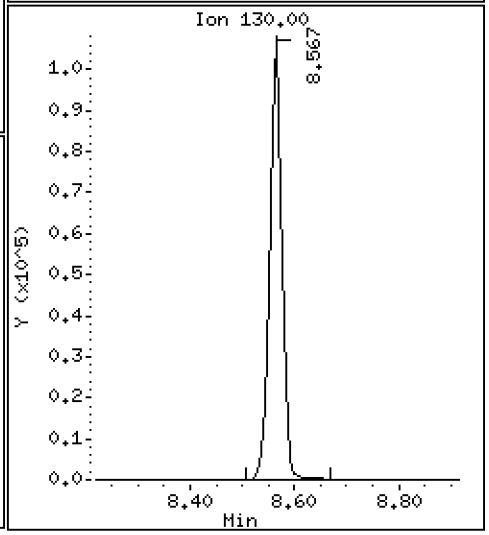












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

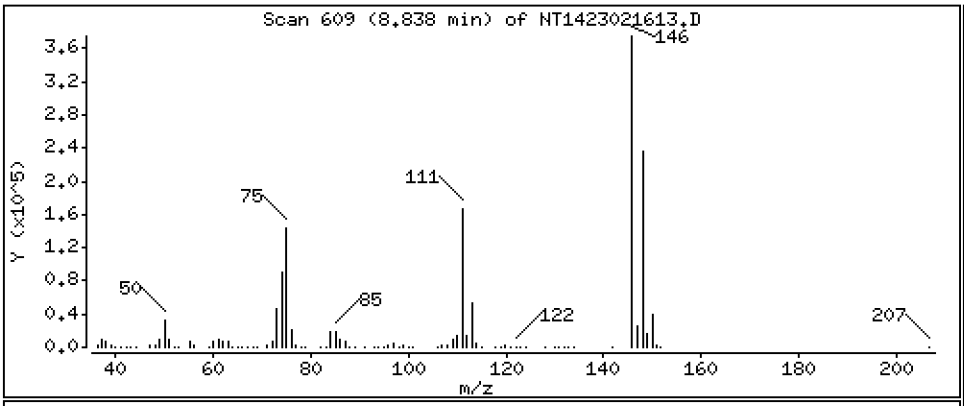
Operator: DSD

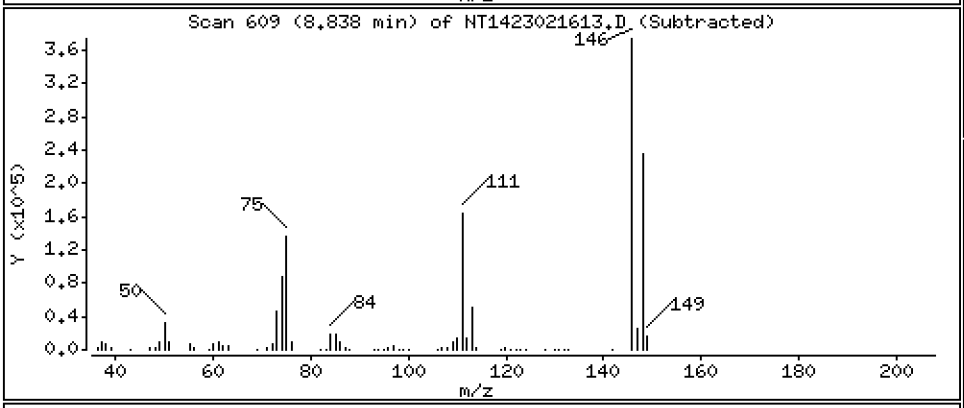
Column phase: ZB-5msi

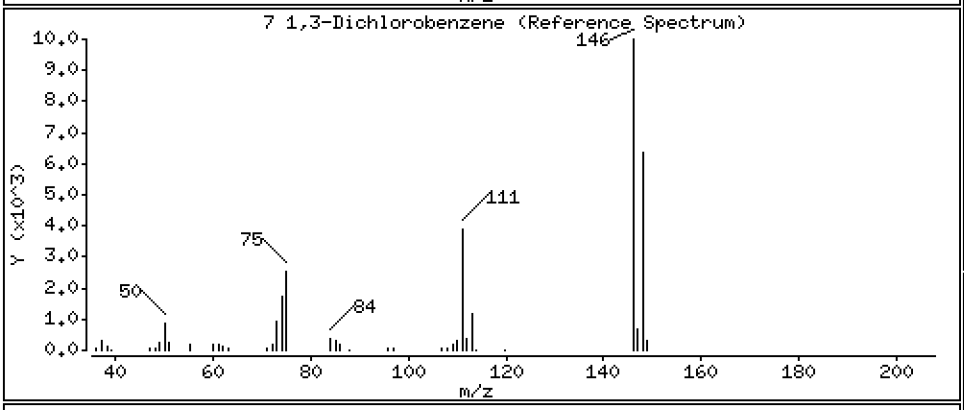
Column diameter: 0.25

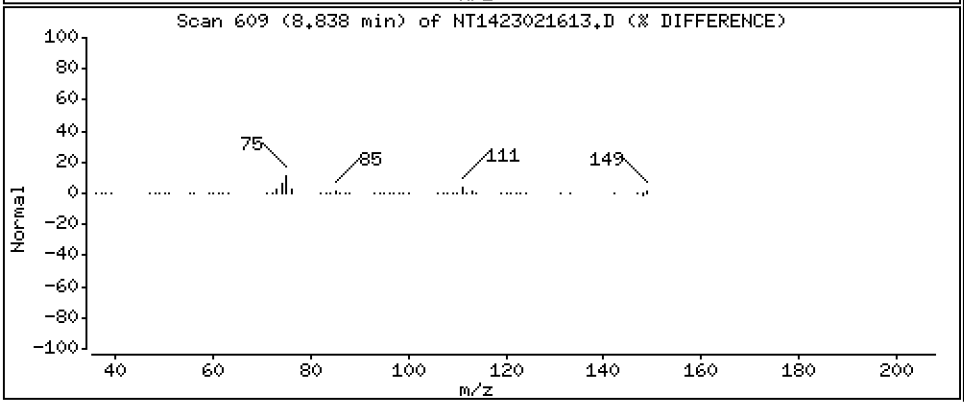
7 1,3-Dichlorobenzene

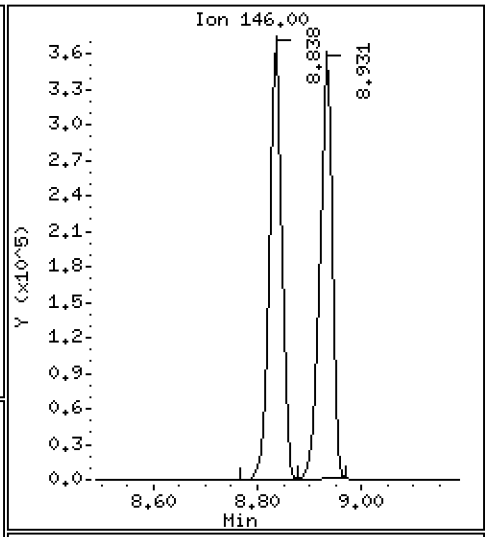
Concentration: 4.770 ug/mL

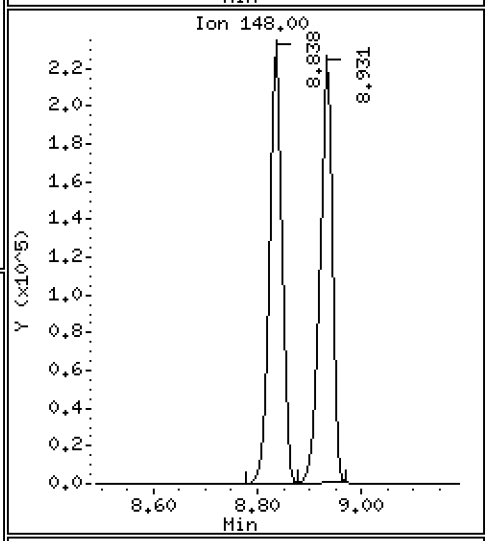


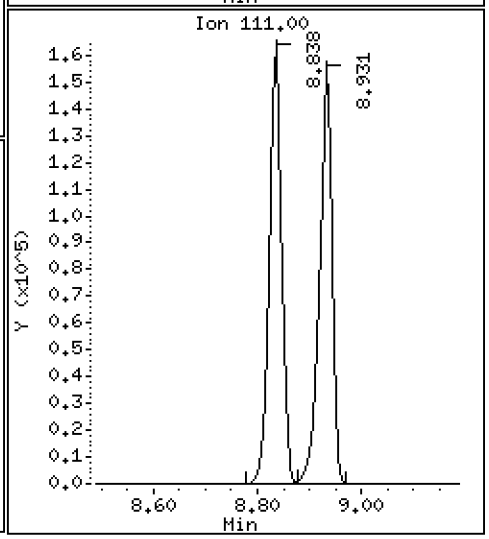












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

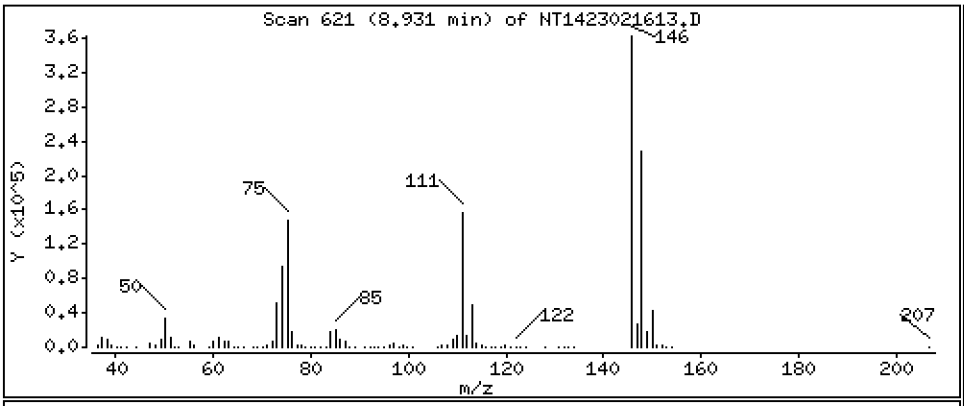
Operator: DSD

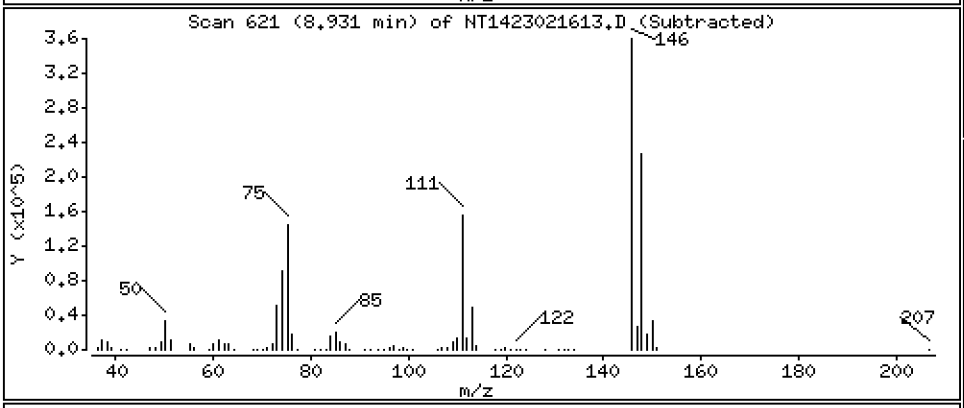
Column phase: ZB-5msi

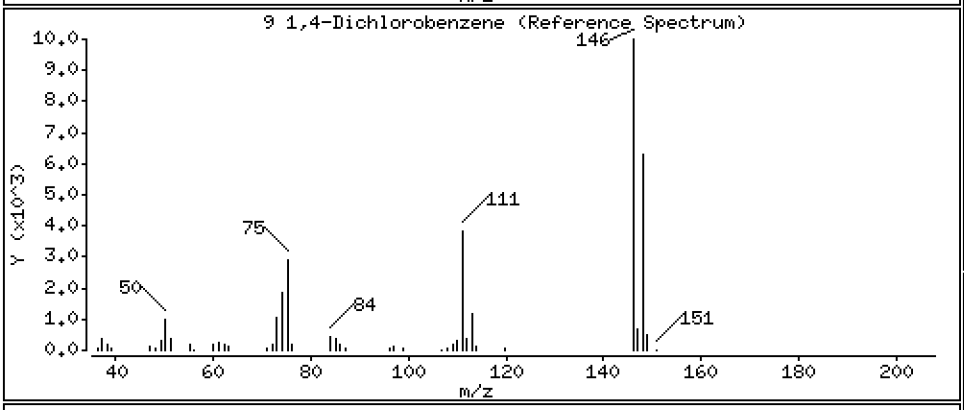
Column diameter: 0.25

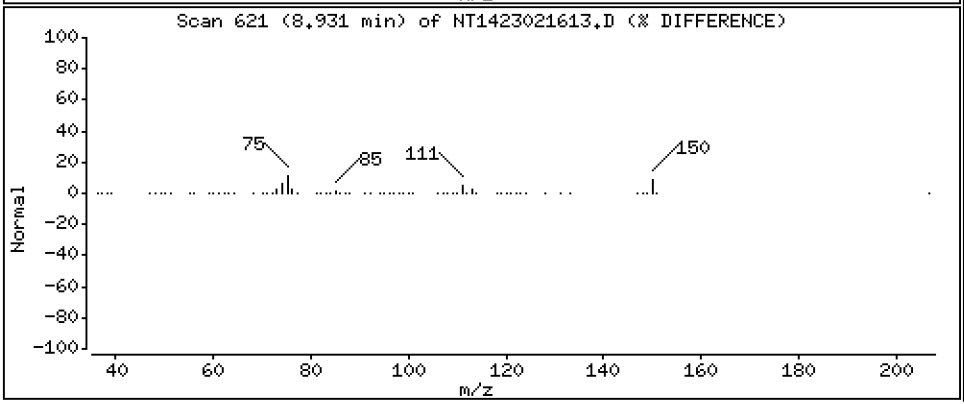
9 1,4-Dichlorobenzene

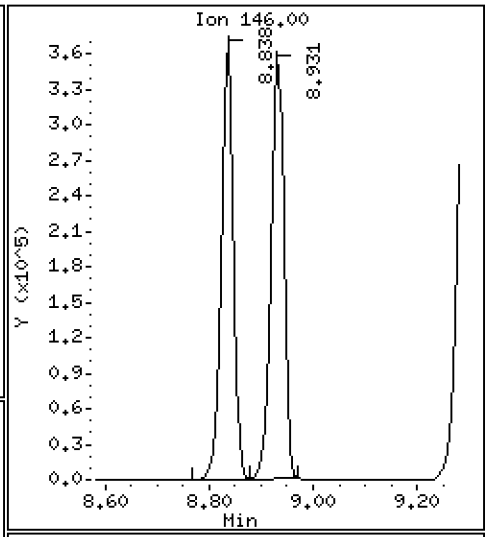
Concentration: 4.791 ug/mL

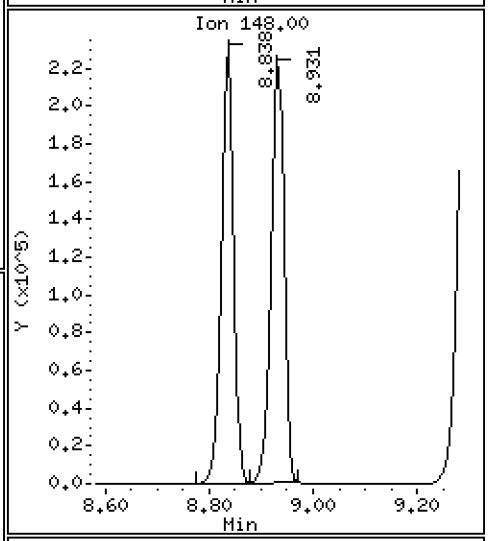


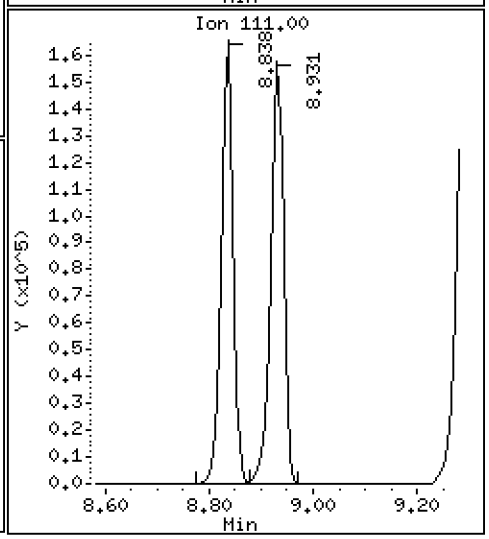












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

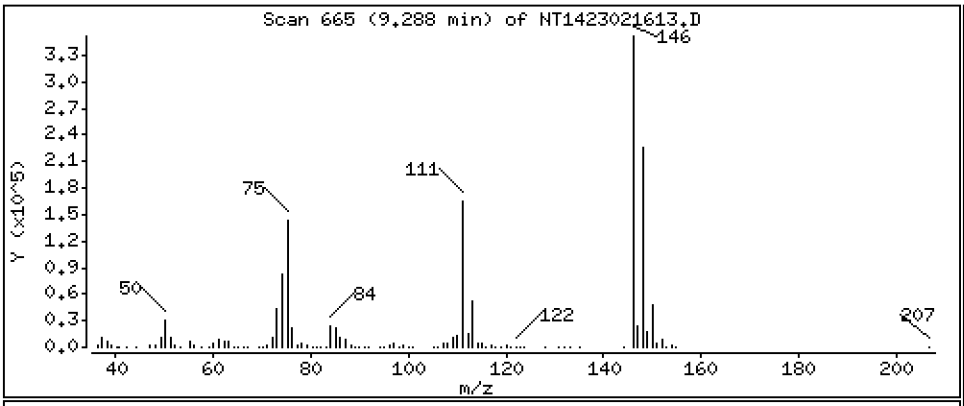
Operator: DSD

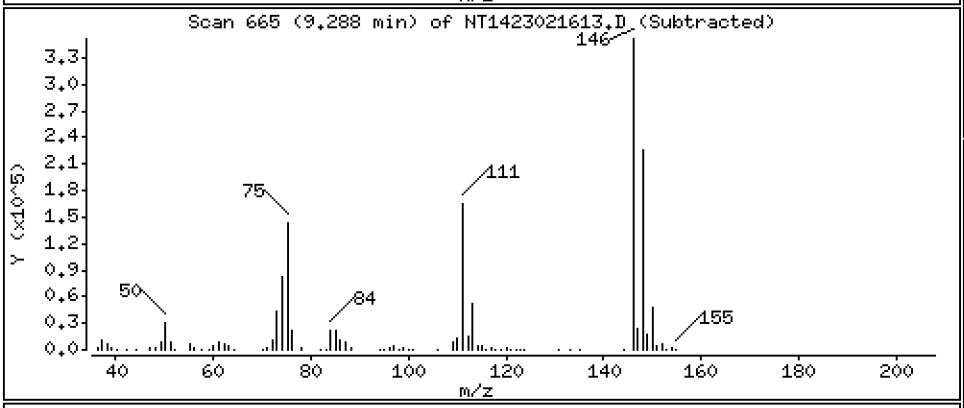
Column phase: ZB-5msi

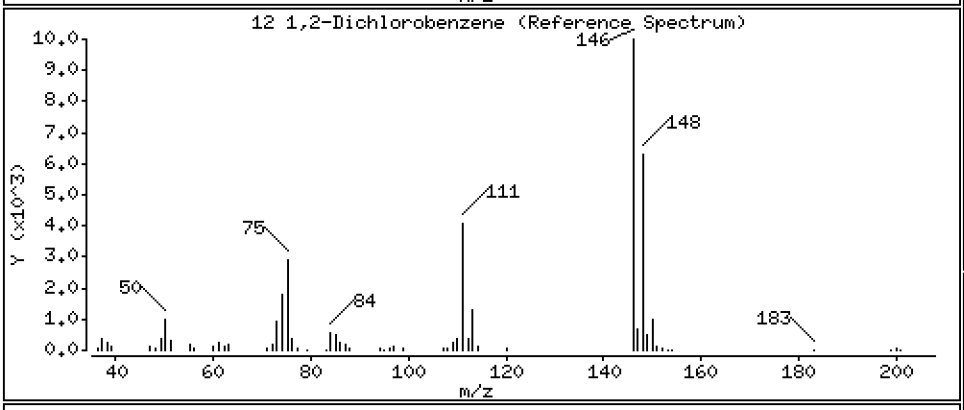
Column diameter: 0.25

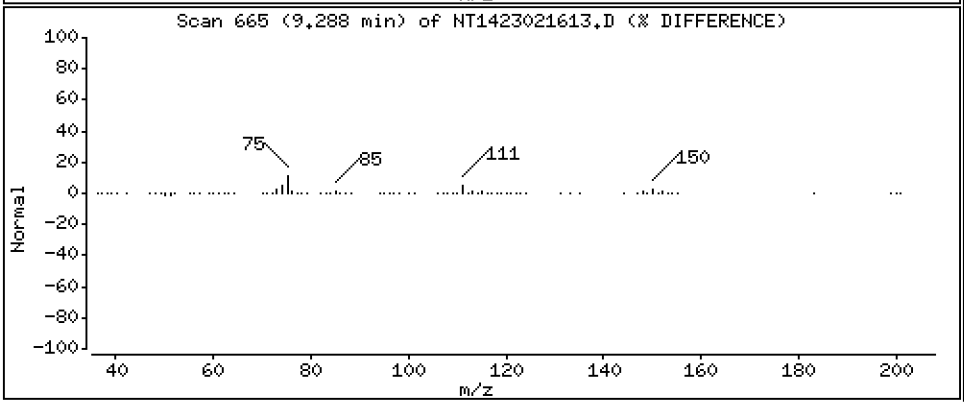
12 1,2-Dichlorobenzene

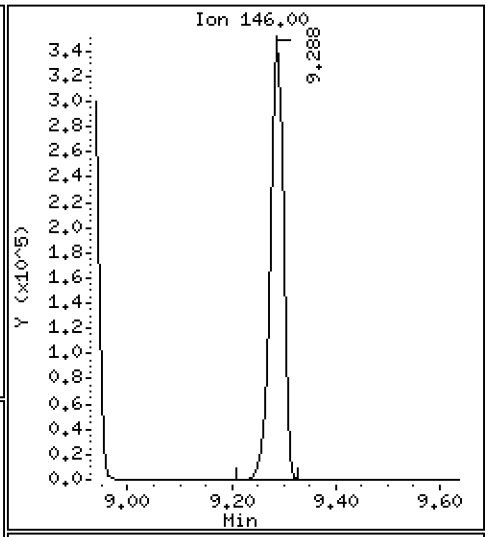
Concentration: 4.758 ug/mL

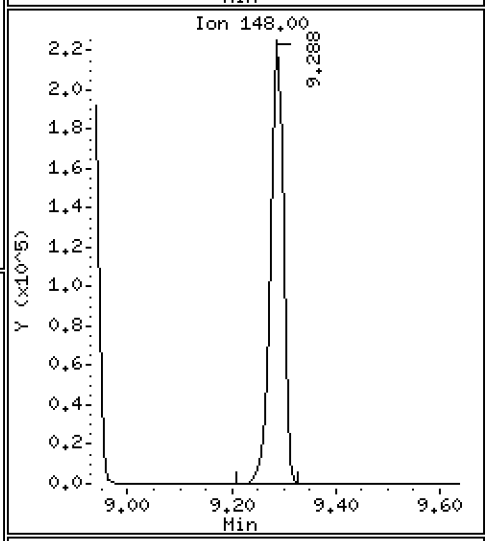


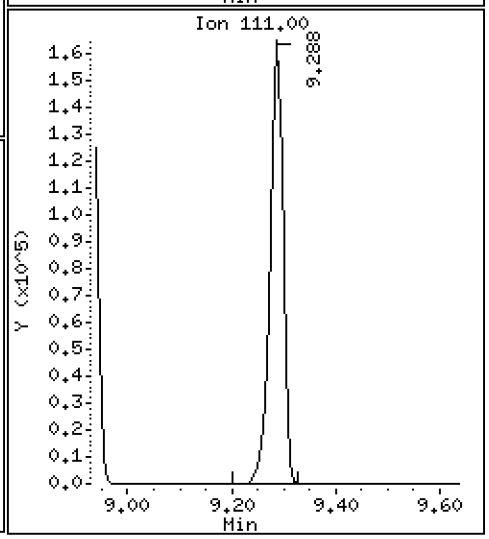












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

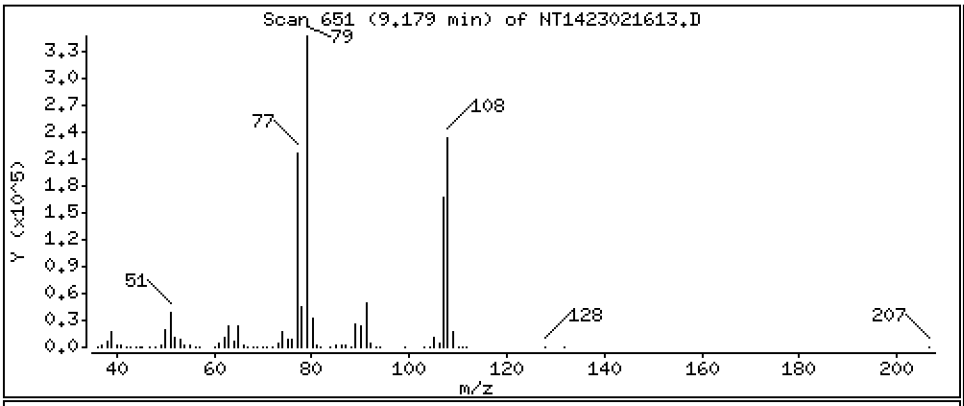
Operator: DSD

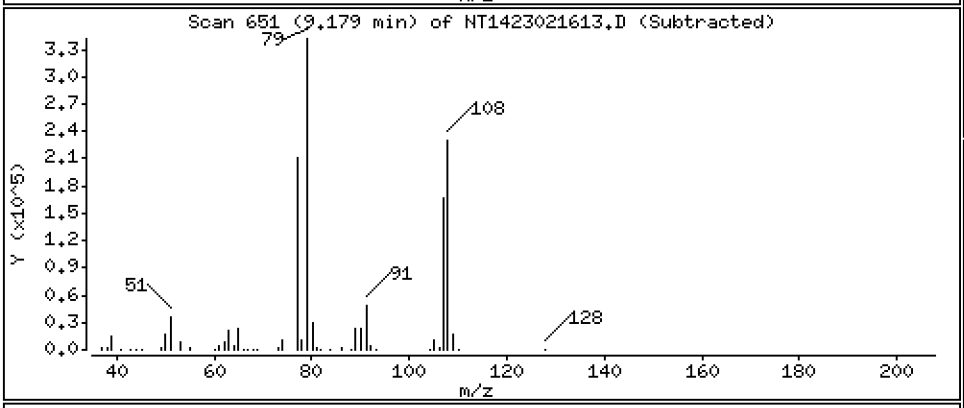
Column phase: ZB-5msi

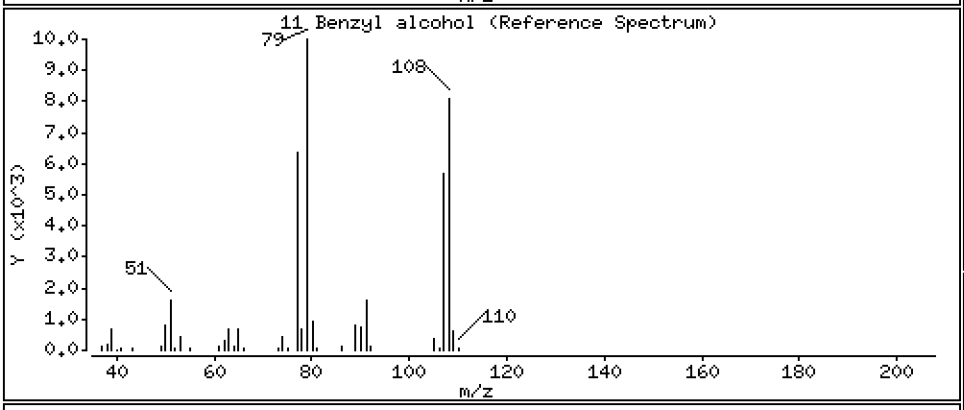
Column diameter: 0.25

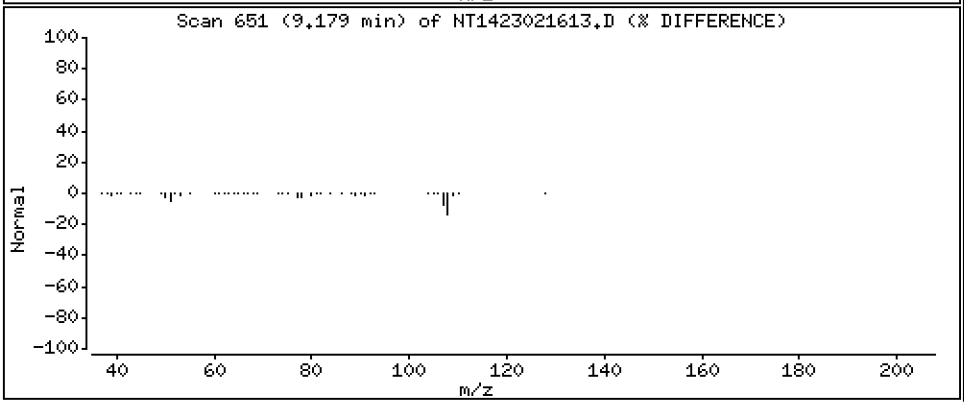
11 Benzyl alcohol

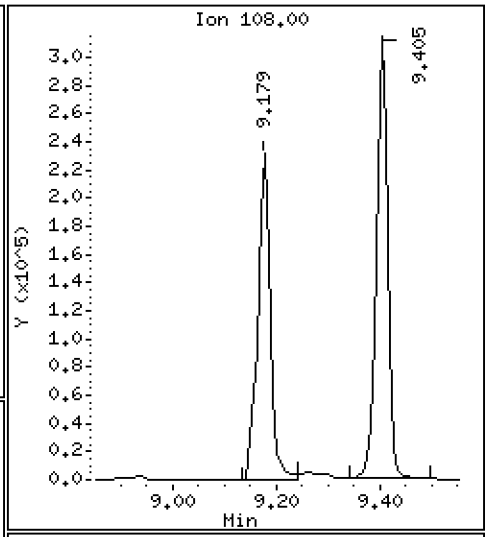
Concentration: 4.625 ug/mL

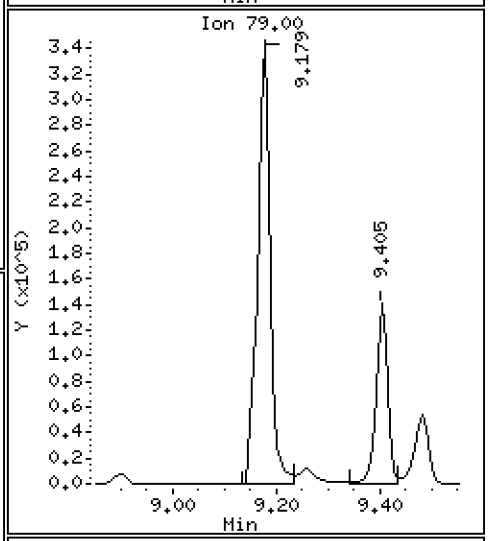


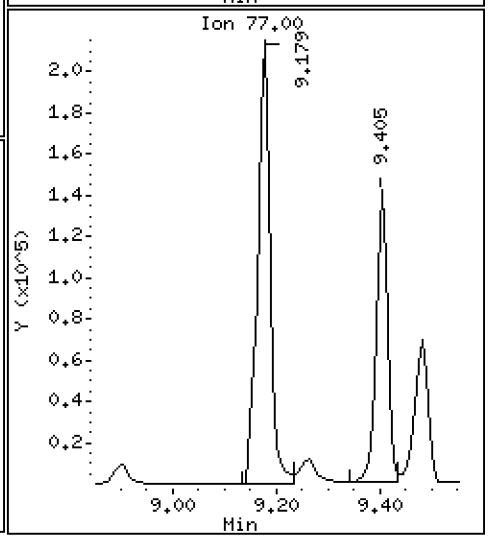












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

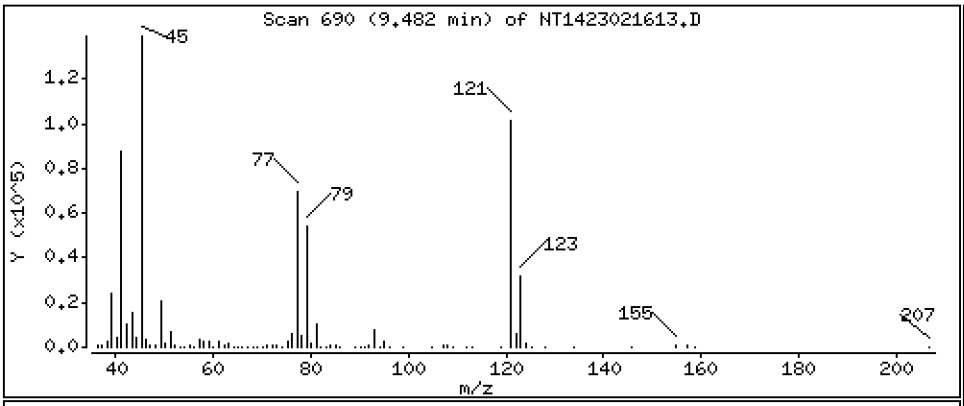
Operator: DSD

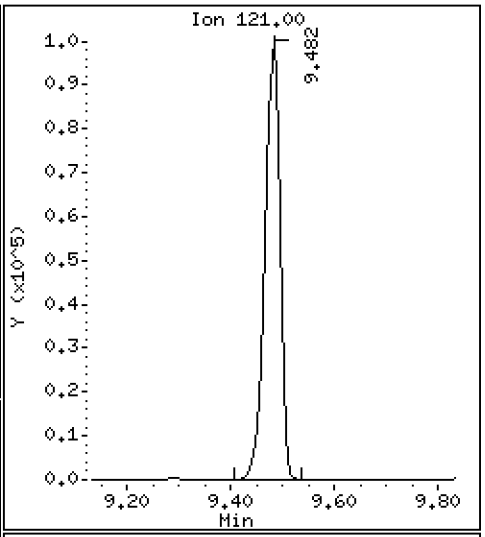
Column phase: ZB-5msi

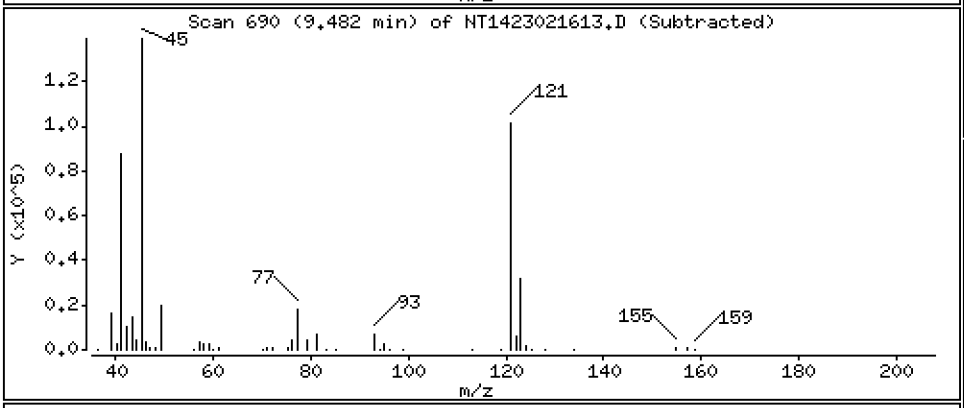
Column diameter: 0.25

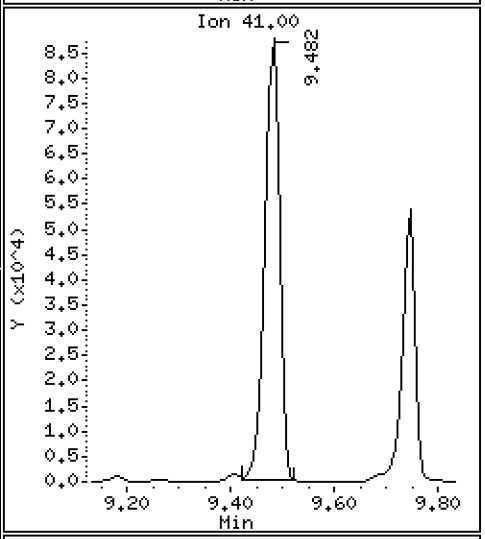
14 2,2'-oxybis(1-Chloropropane)

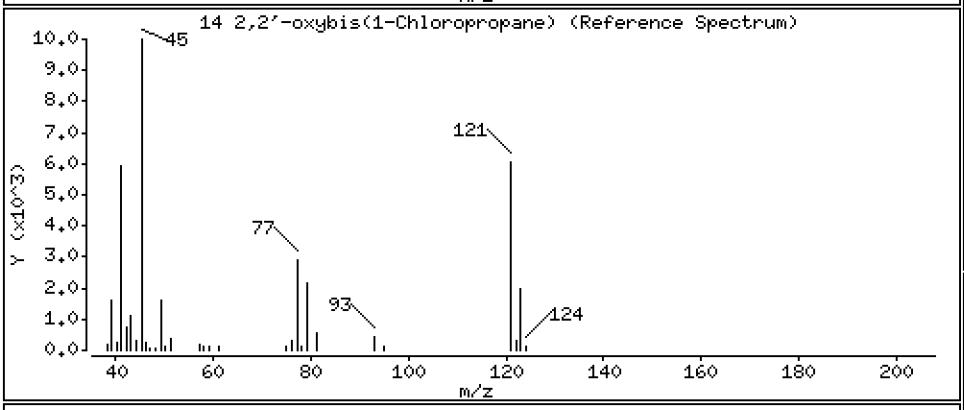
Concentration: 5.567 ug/mL

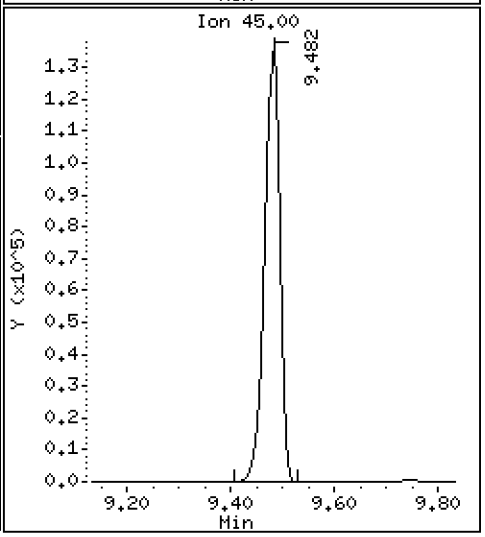


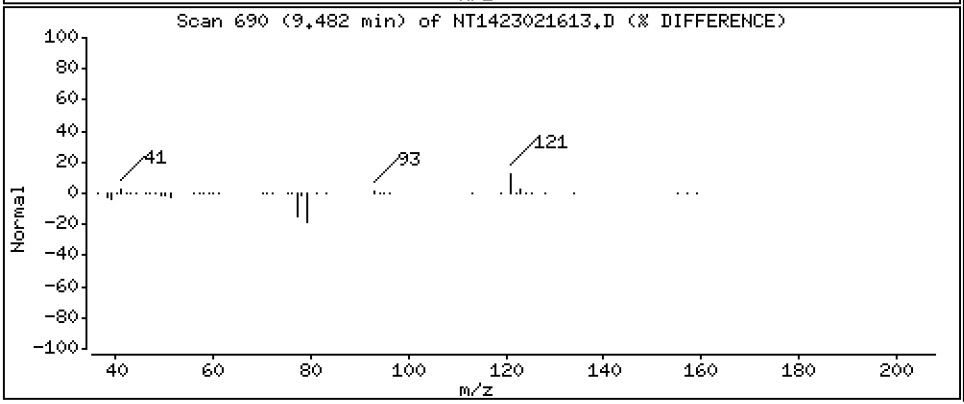












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

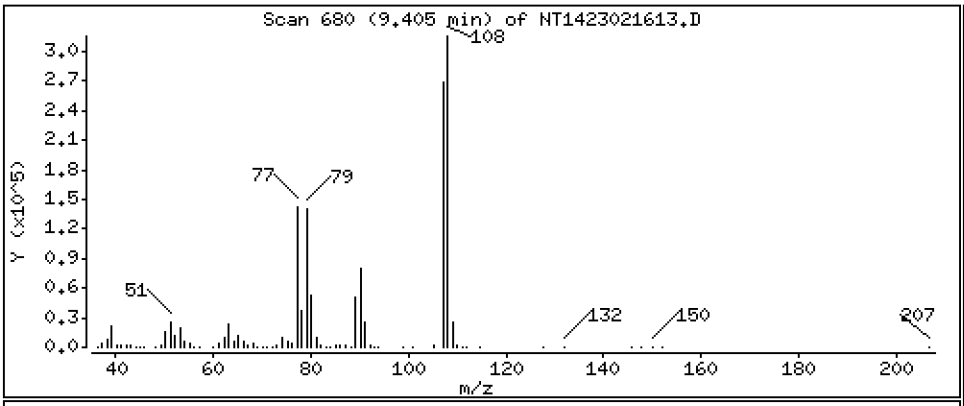
Operator: DSD

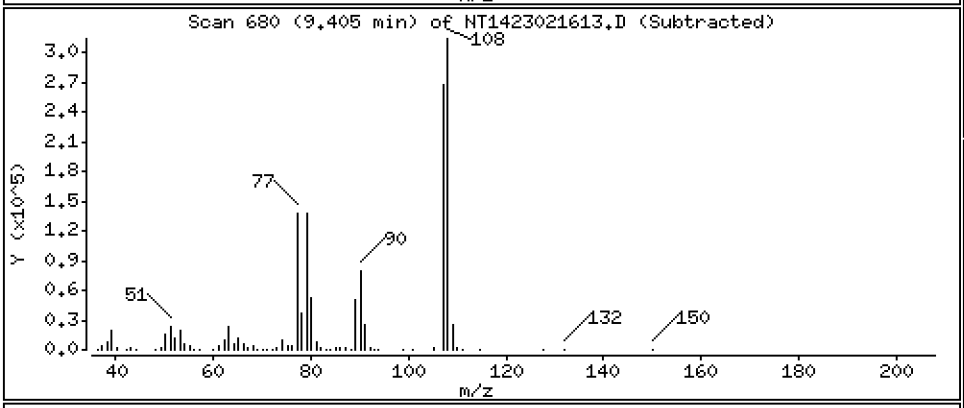
Column phase: ZB-5msi

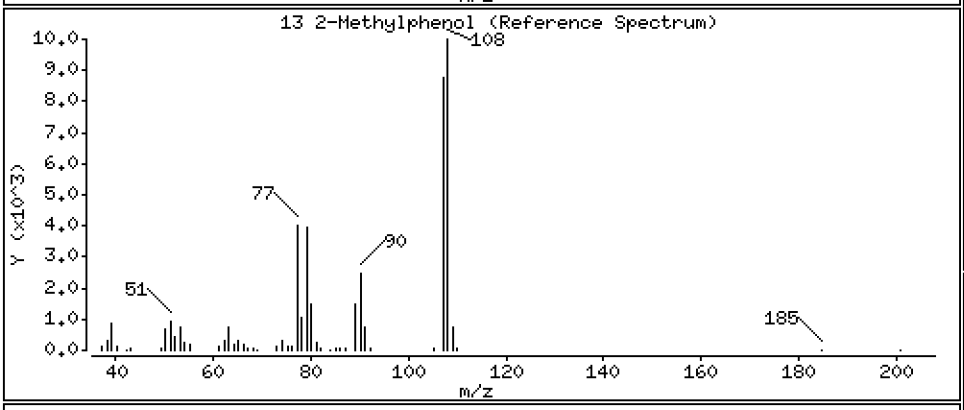
Column diameter: 0.25

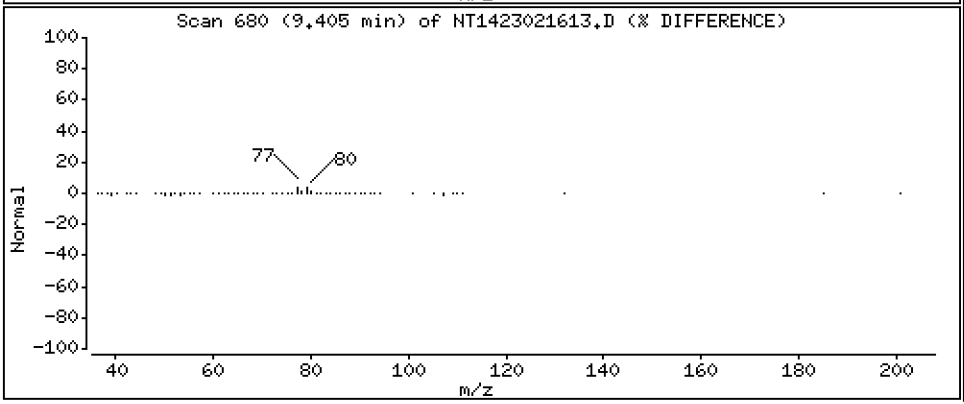
13 2-Methylphenol

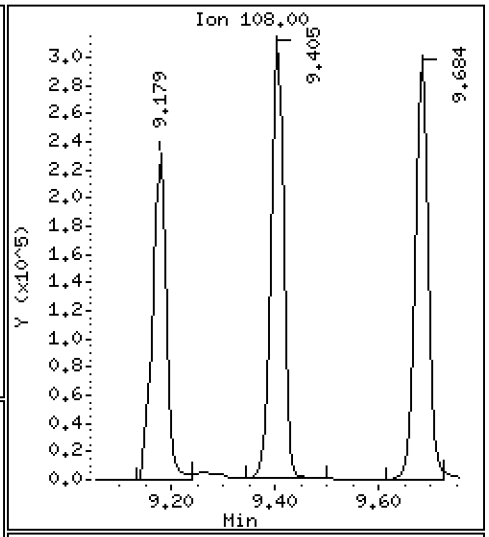
Concentration: 4.368 ug/mL

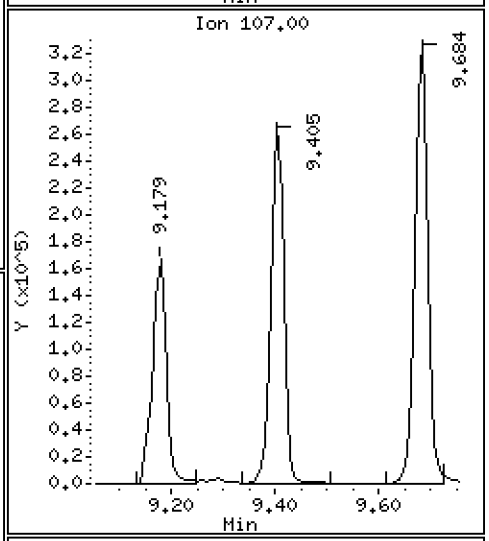


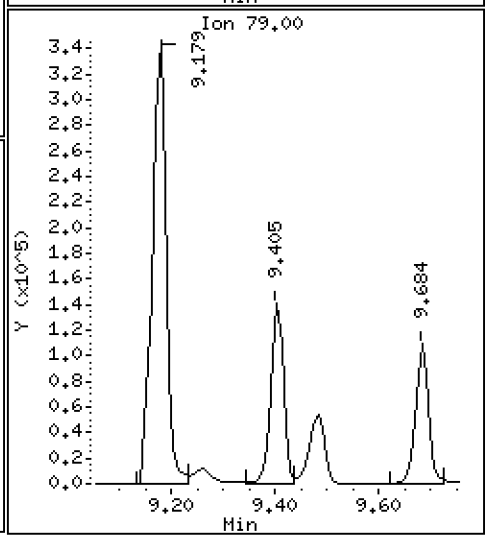












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

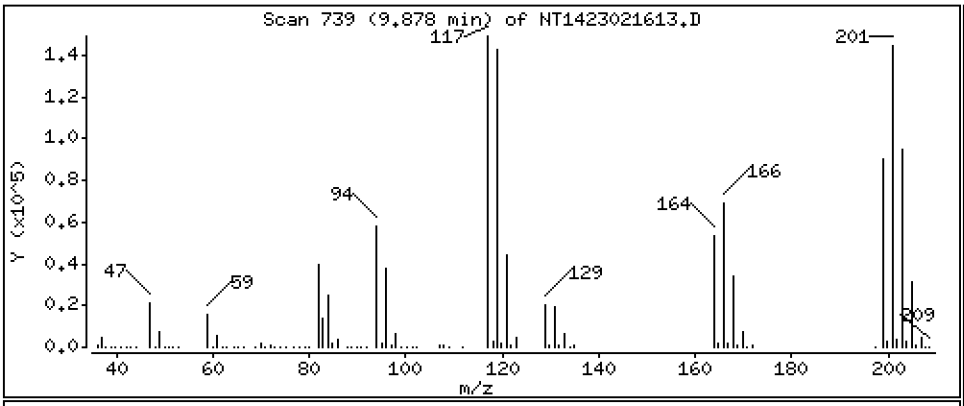
Operator: DSD

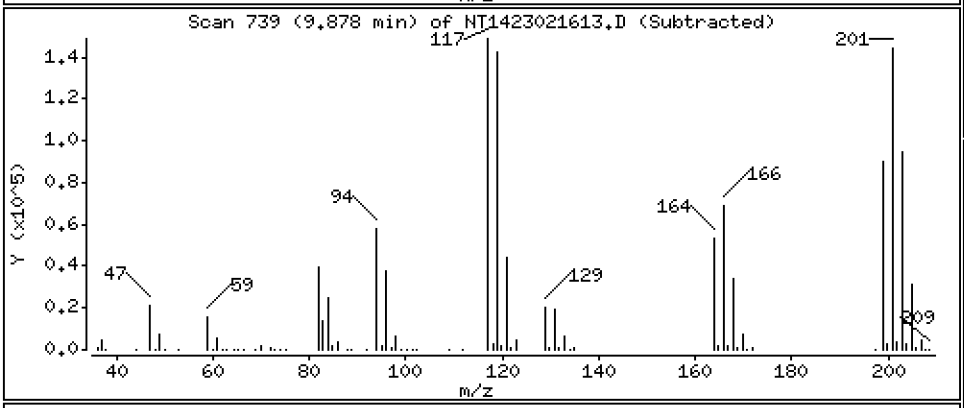
Column phase: ZB-5msi

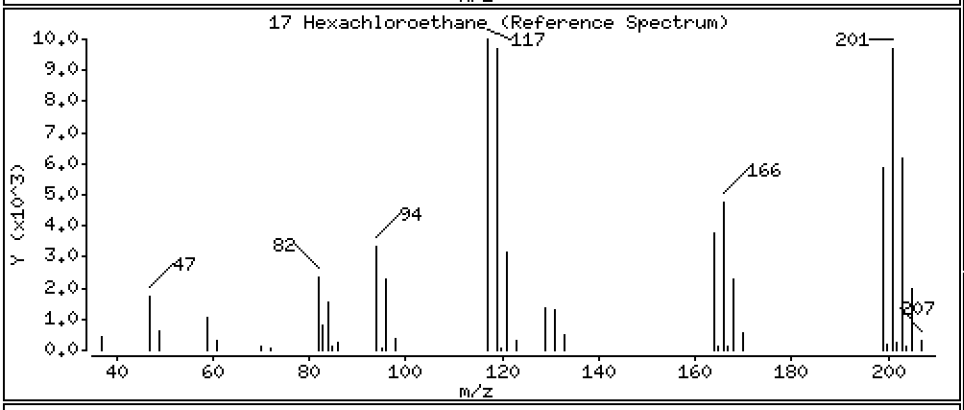
Column diameter: 0.25

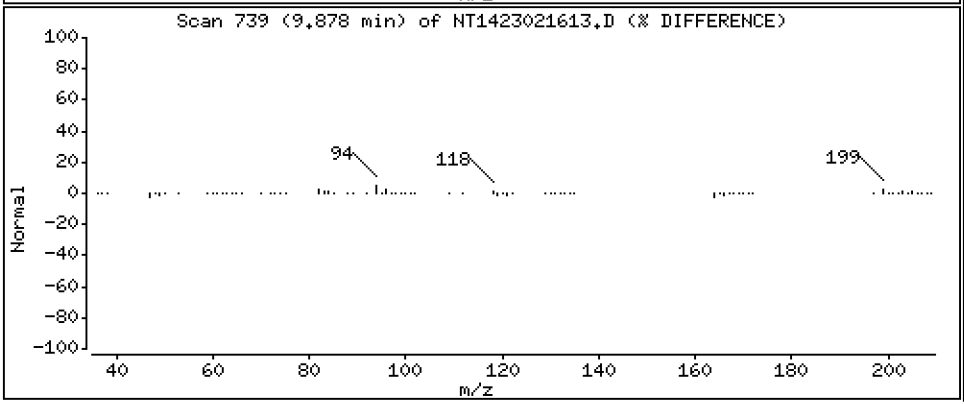
17 Hexachloroethane

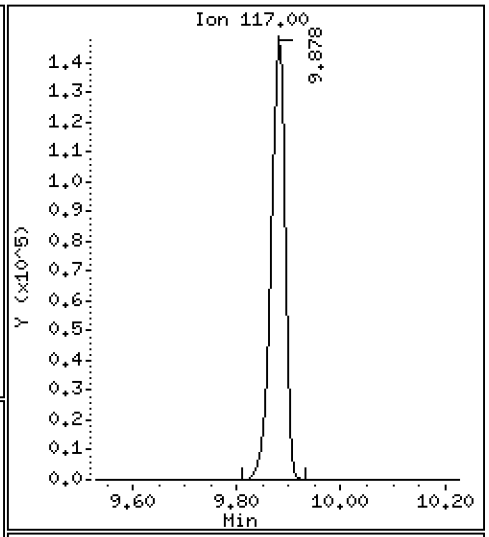
Concentration: 5.037 ug/mL

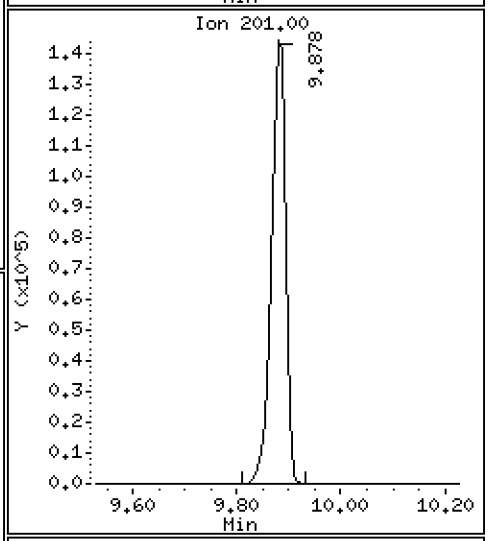


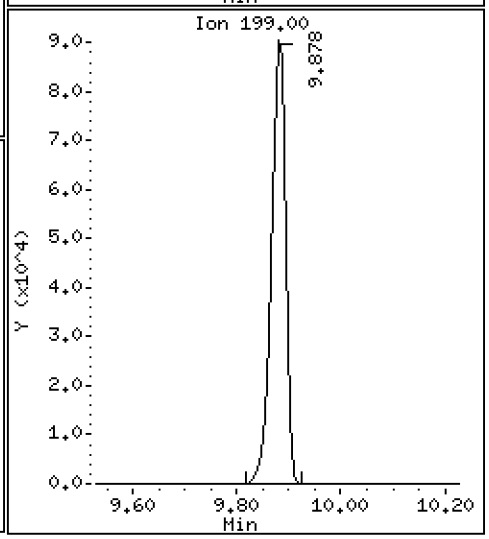












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

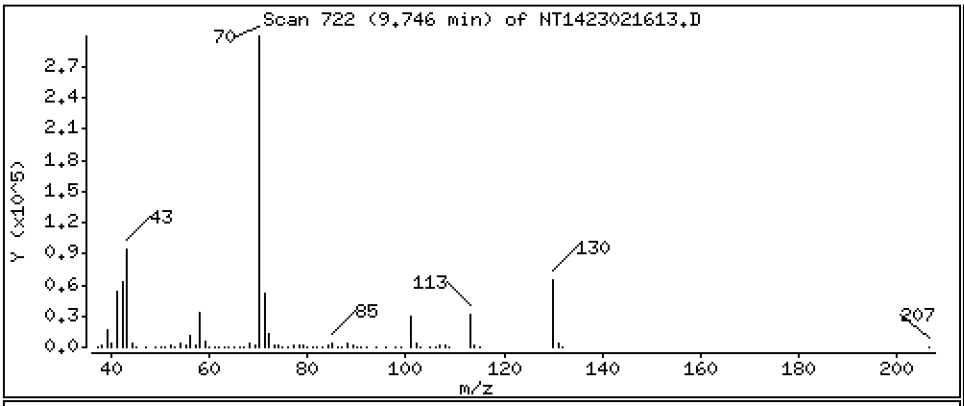
Operator: DSD

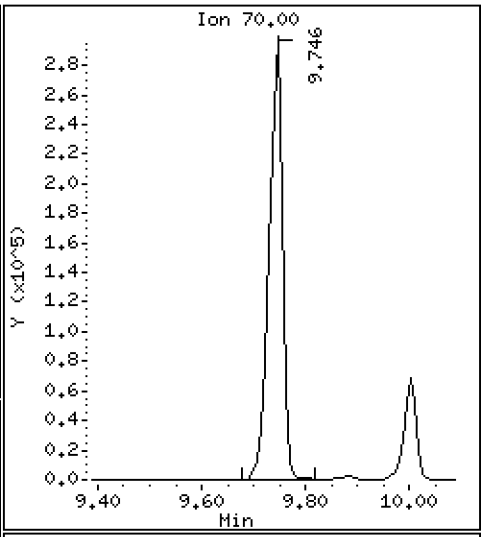
Column phase: ZB-5msi

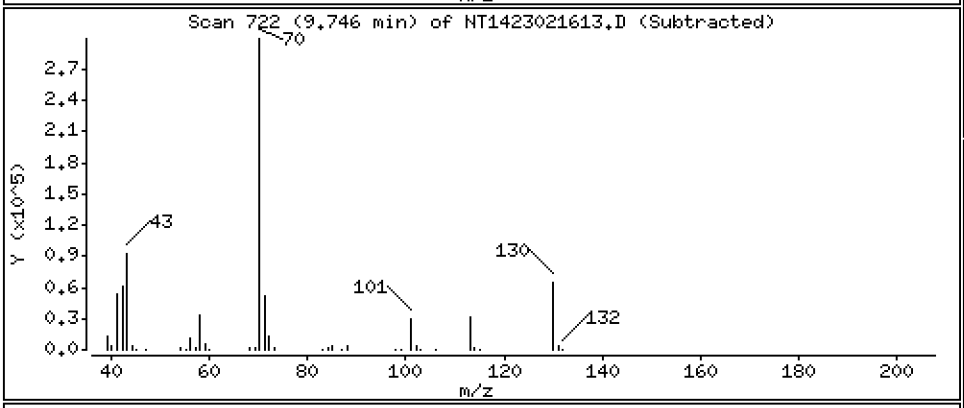
Column diameter: 0.25

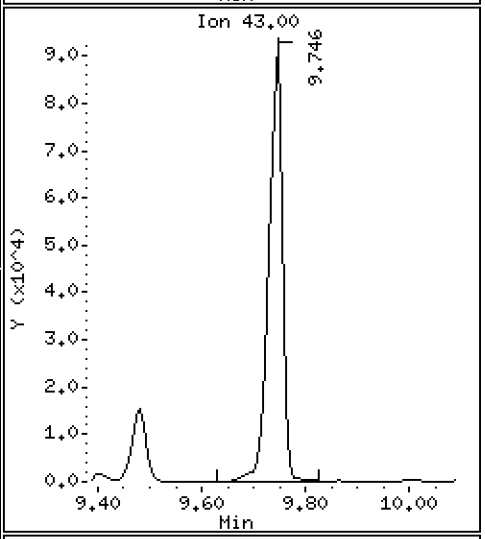
16 N-Nitroso-di-n-propylamine

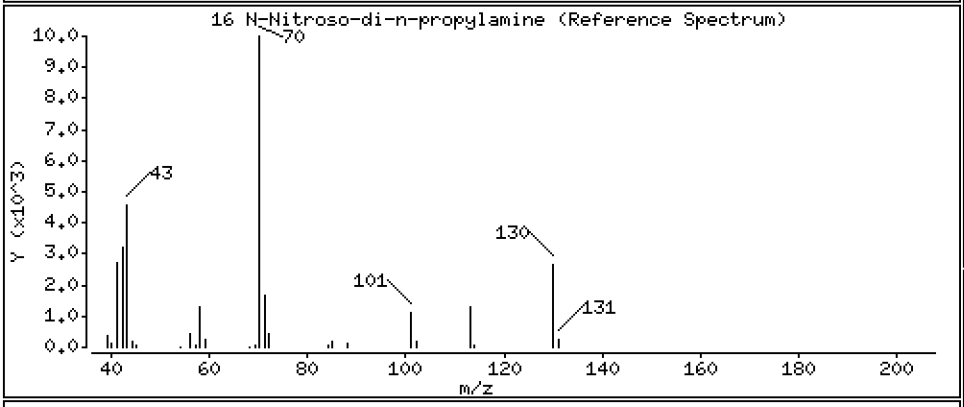
Concentration: 4.988 ug/mL

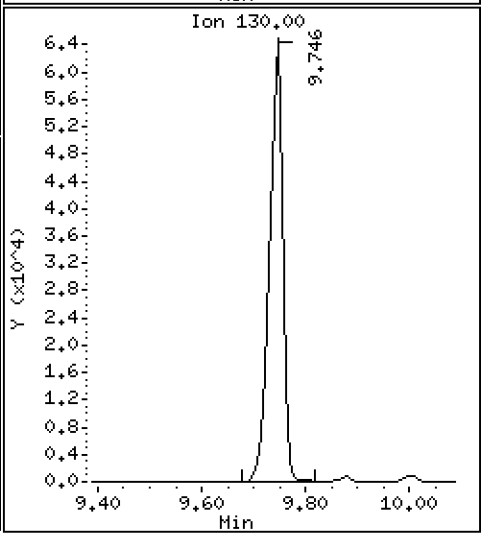


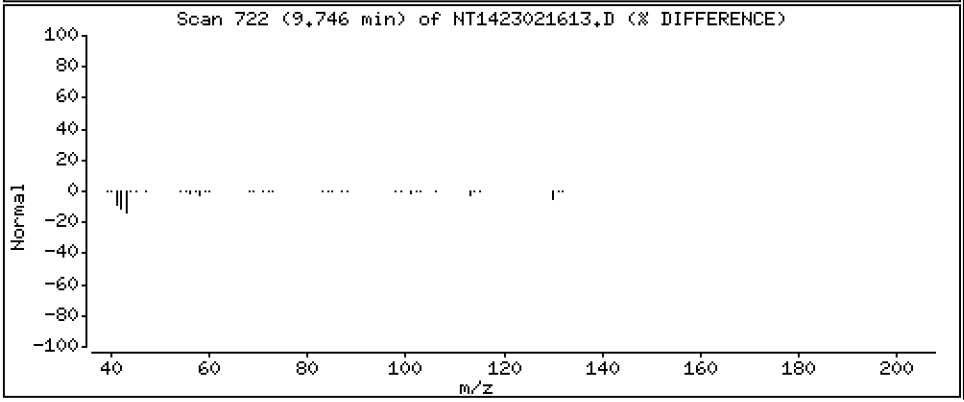












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

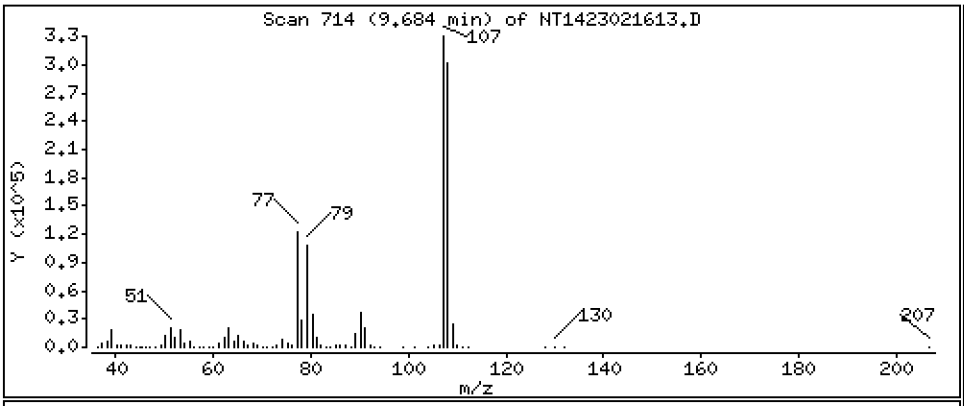
Operator: DSD

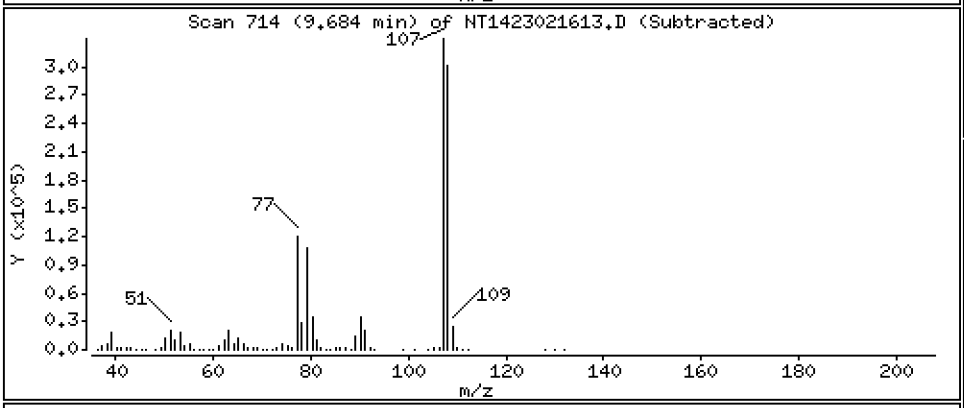
Column phase: ZB-5msi

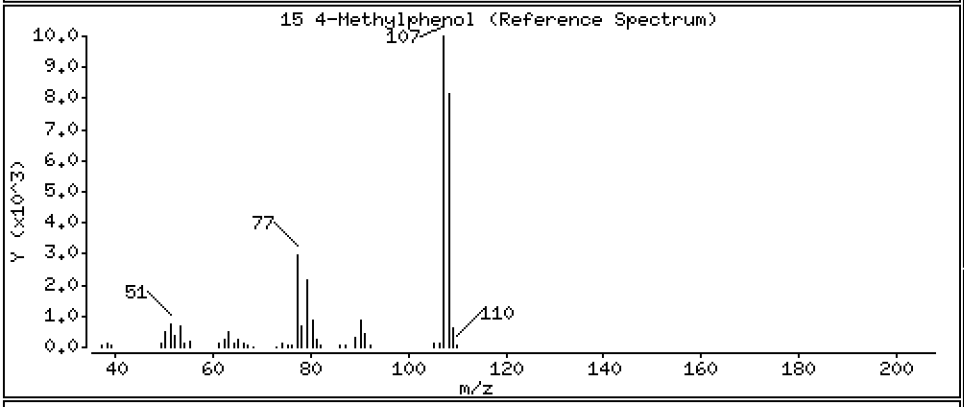
Column diameter: 0.25

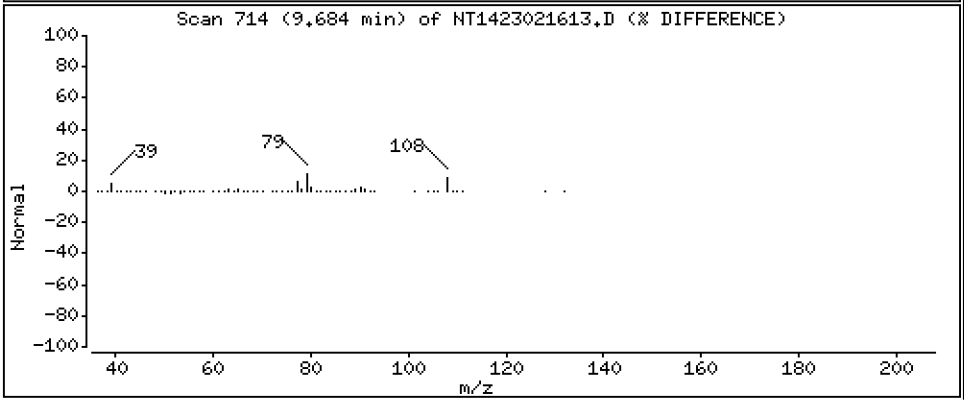
15 4-Methylphenol

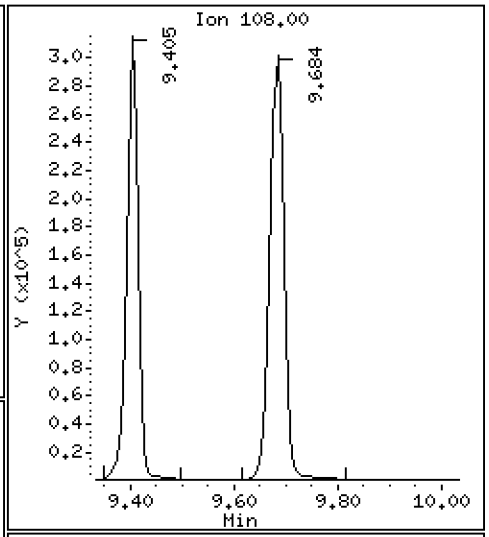
Concentration: 4.591 ug/mL

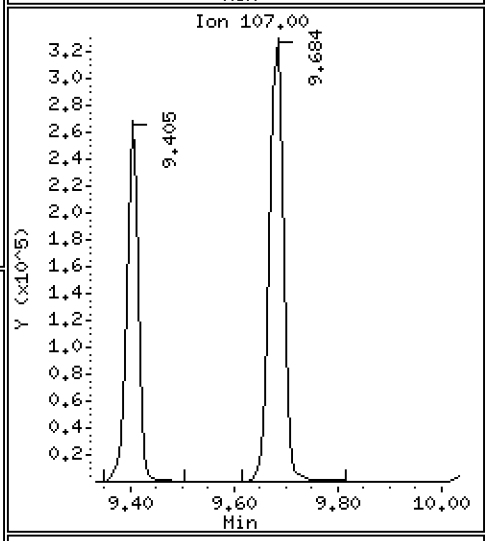


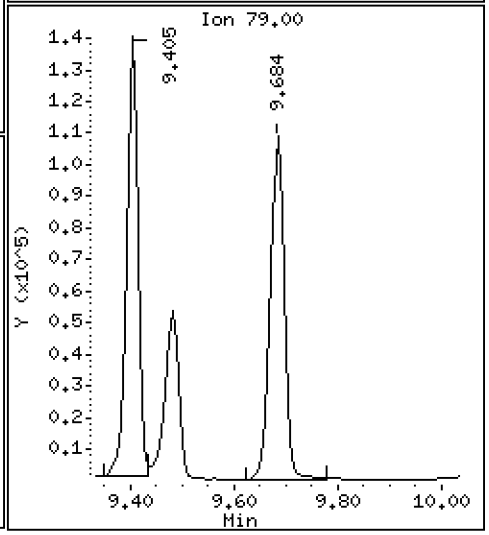












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

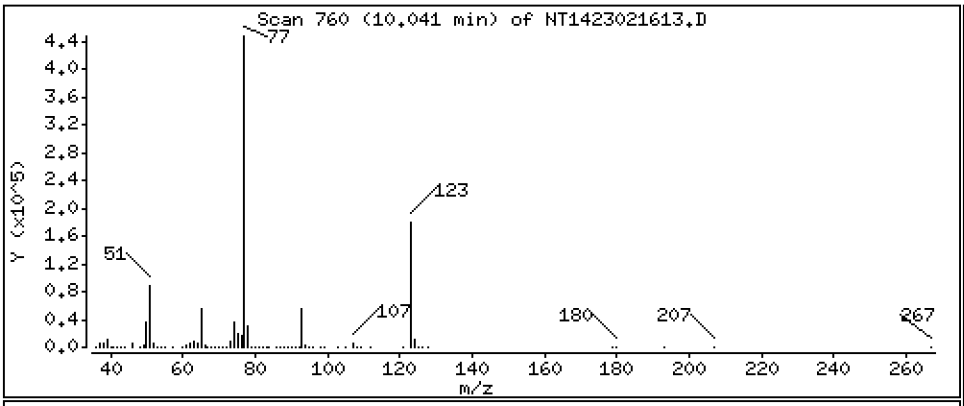
Operator: DSD

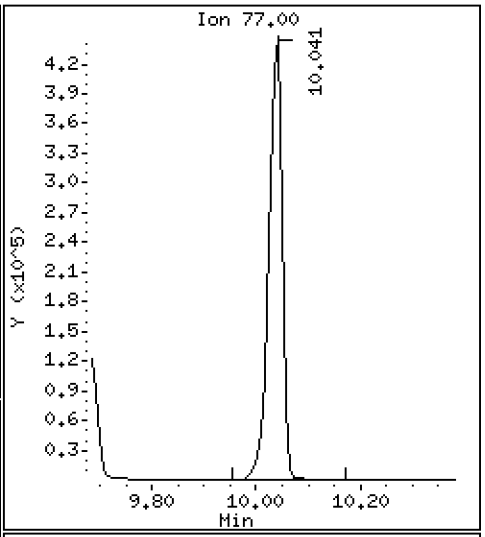
Column phase: ZB-5msi

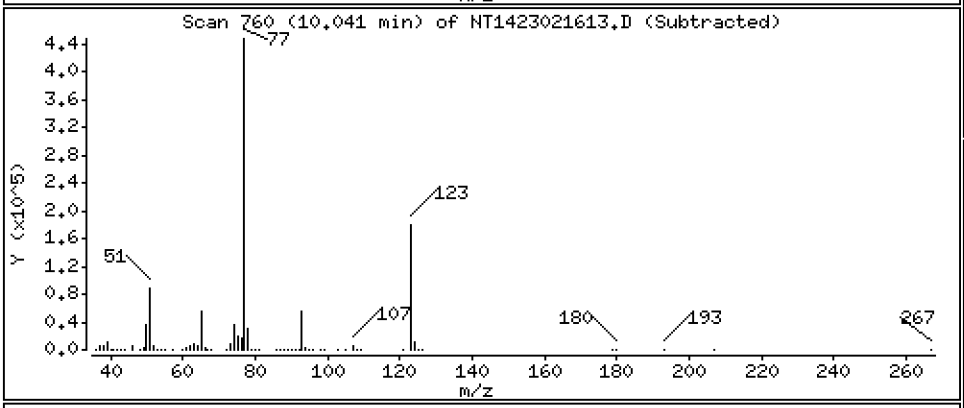
Column diameter: 0.25

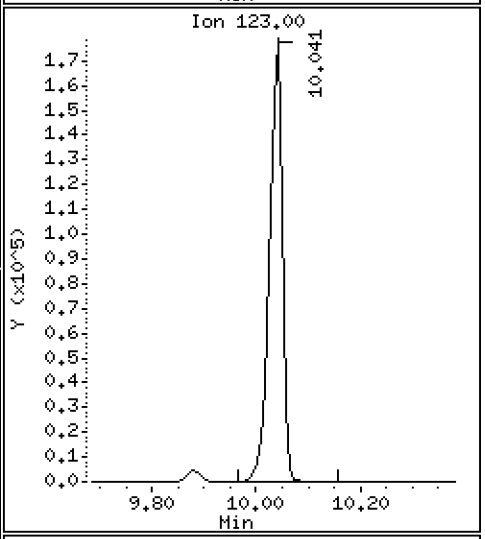
19 Nitrobenzene

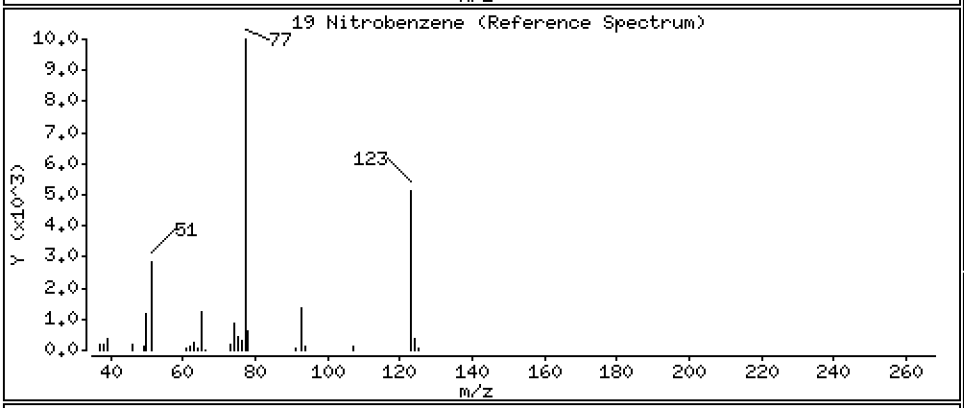
Concentration: 4.949 ug/mL

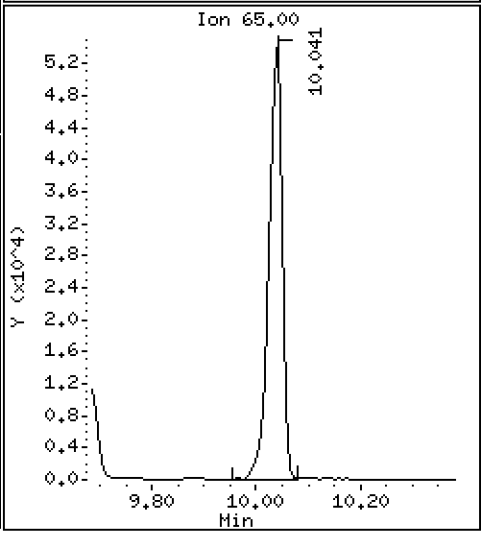


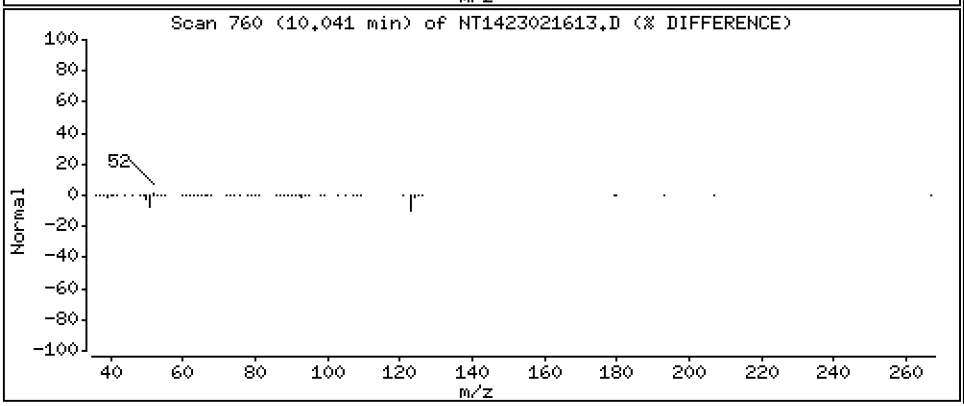












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

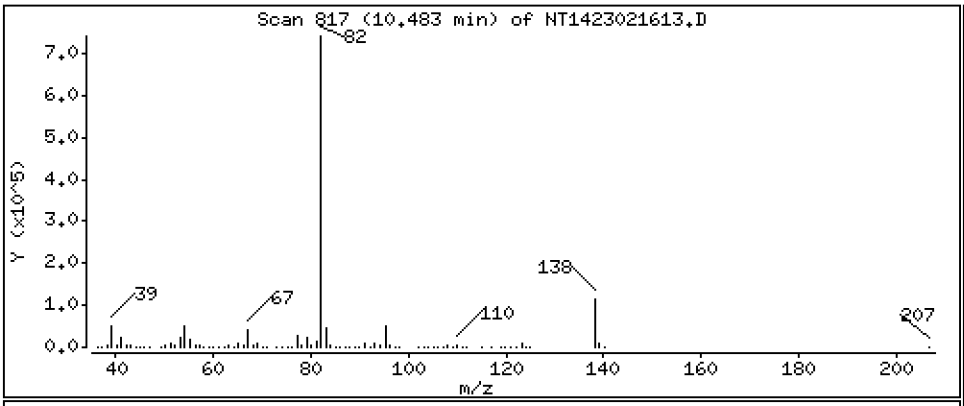
Operator: DSD

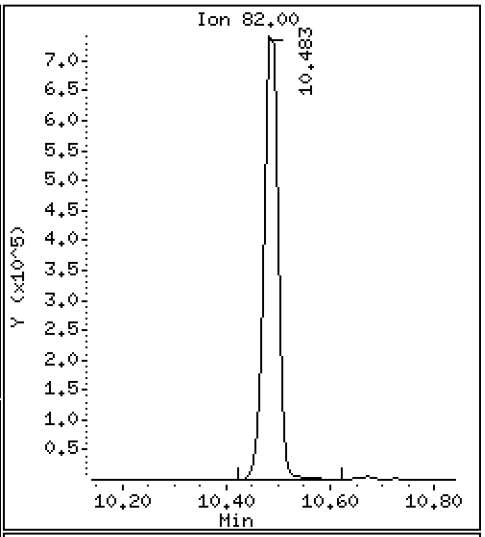
Column phase: ZB-5msi

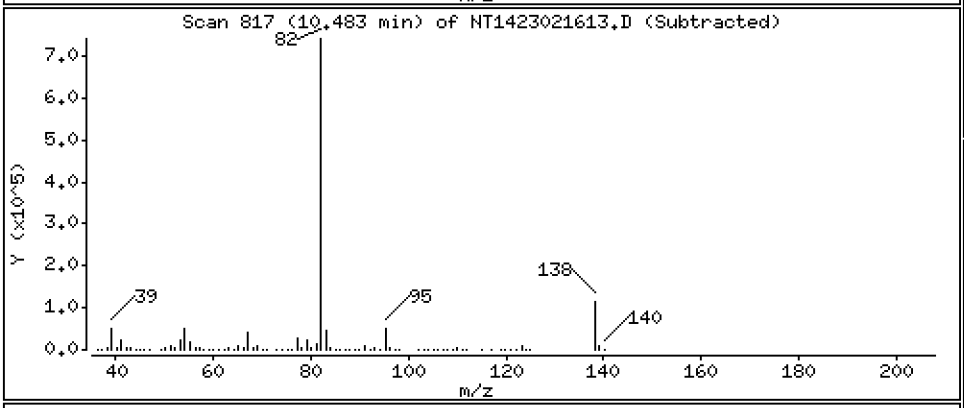
Column diameter: 0.25

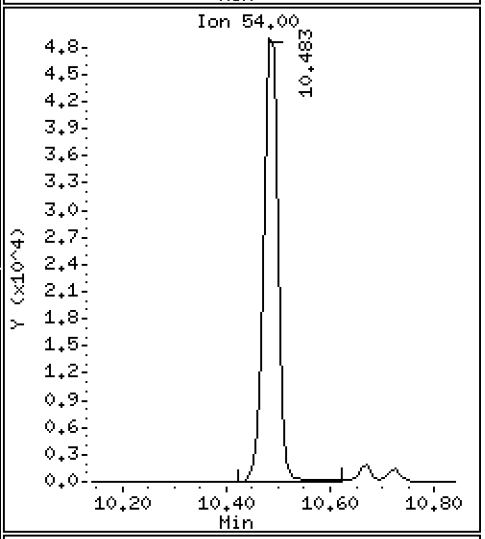
20 Isophorone

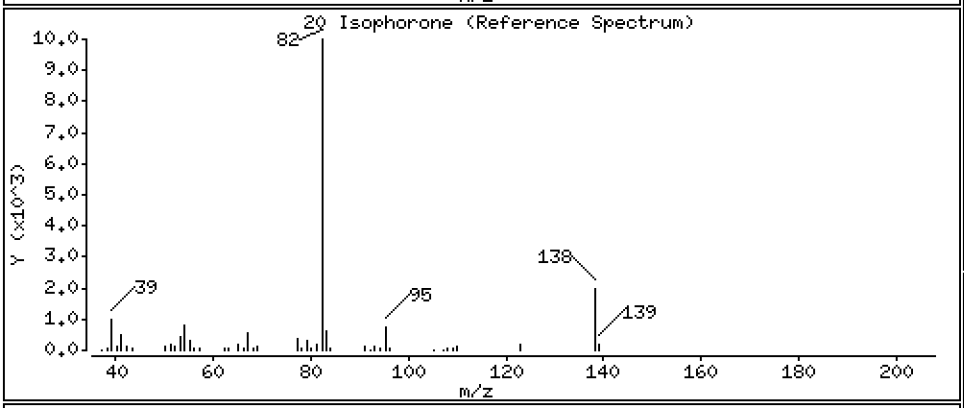
Concentration: 7.094 ug/mL

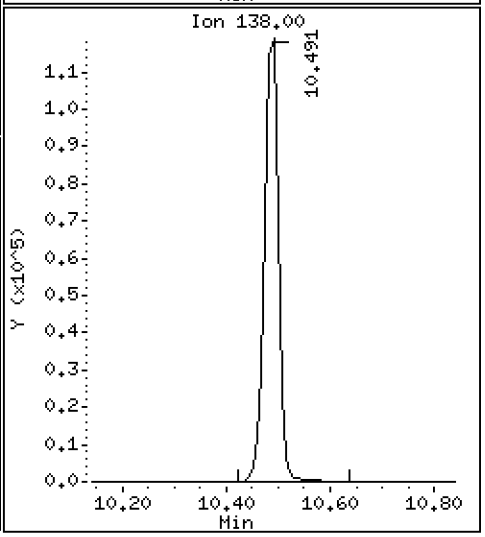


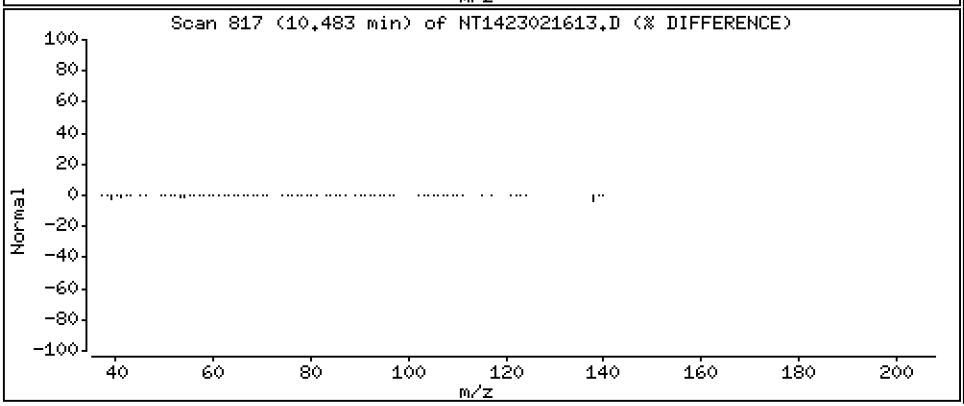












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

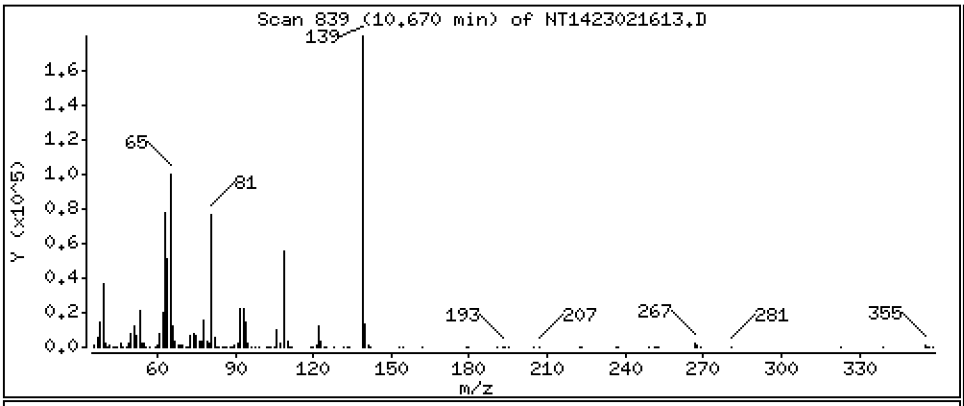
Operator: DSD

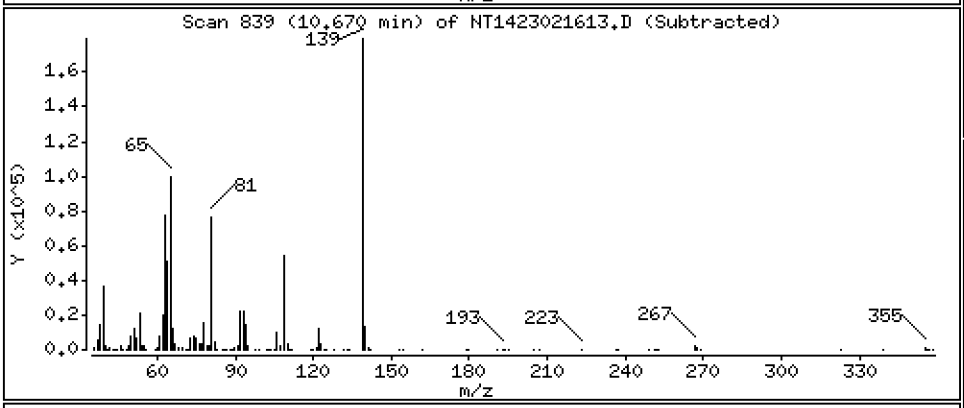
Column phase: ZB-5msi

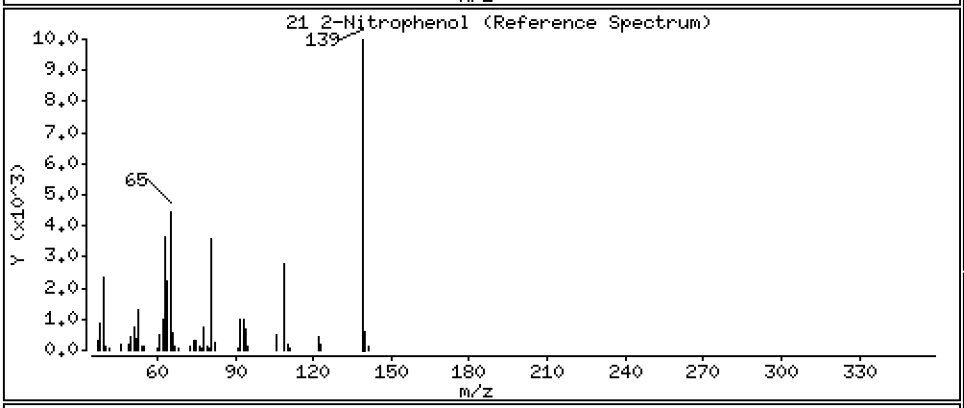
Column diameter: 0.25

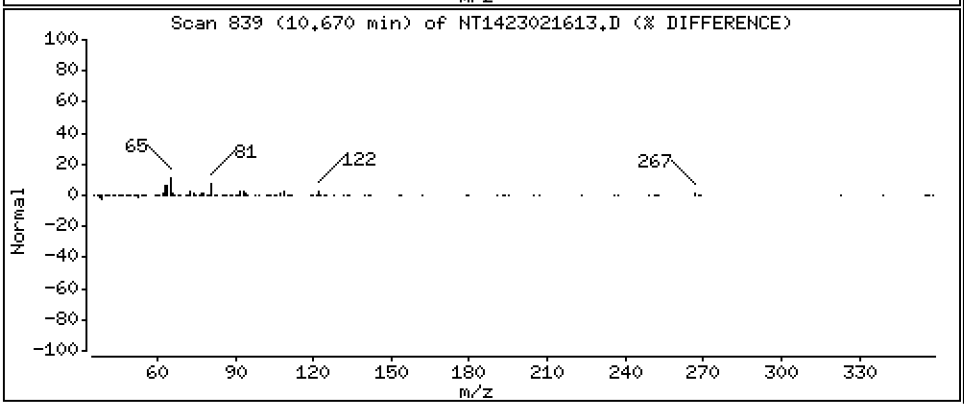
21 2-Nitrophenol

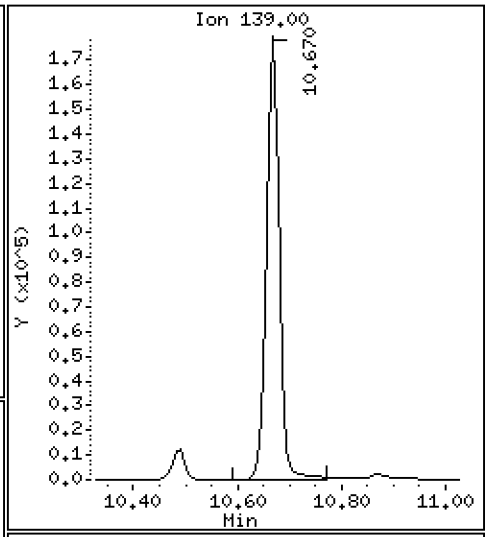
Concentration: 4.453 ug/mL

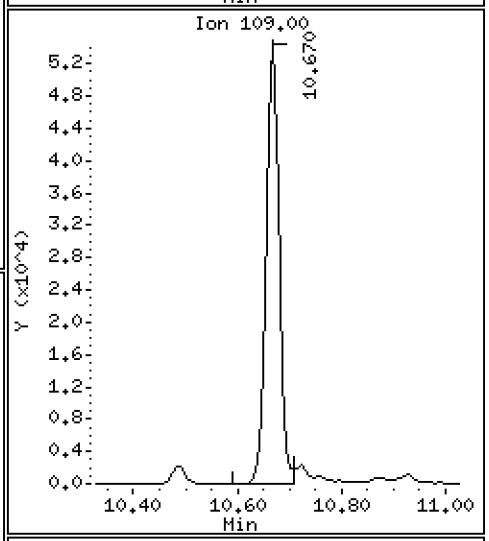


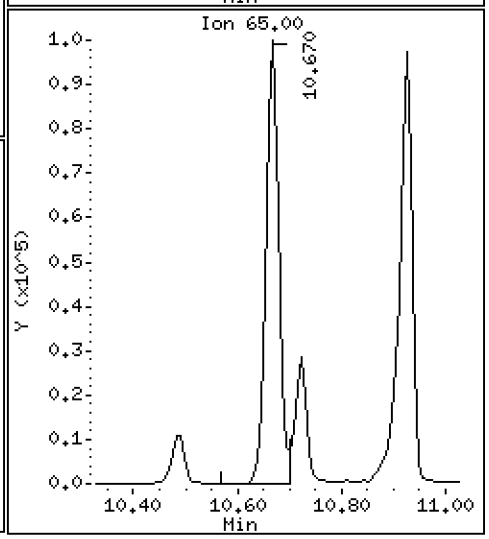












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

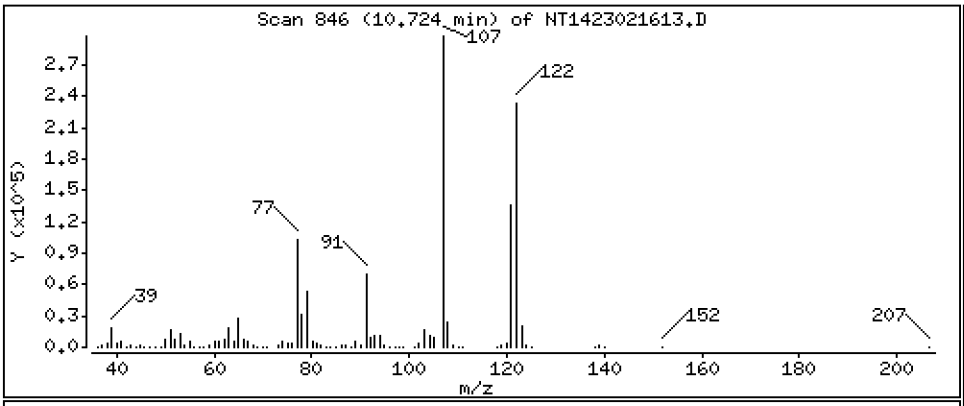
Operator: DSD

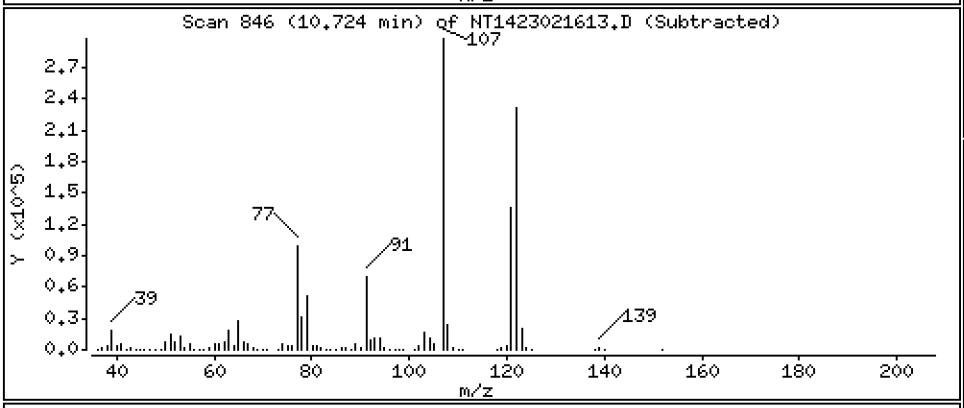
Column phase: ZB-5msi

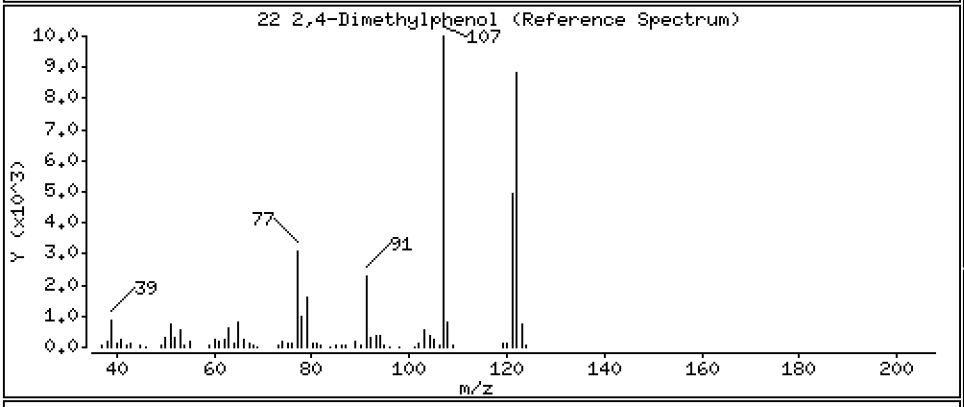
Column diameter: 0.25

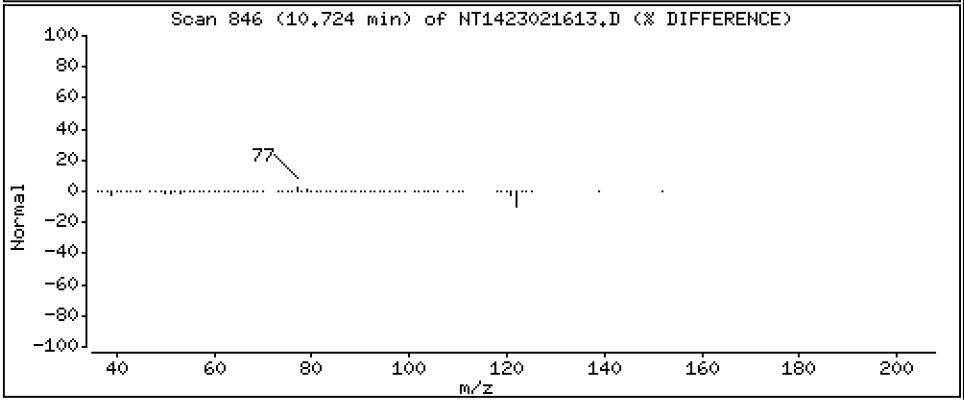
22 2,4-Dimethylphenol

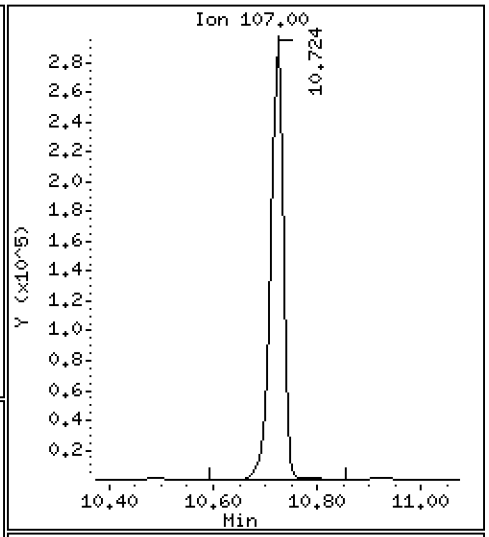
Concentration: 4.274 ug/mL

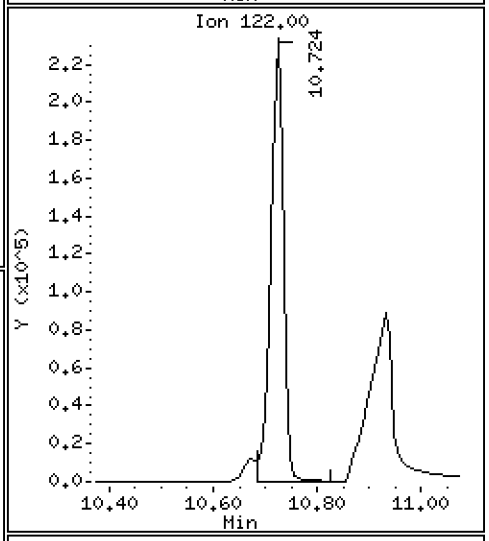


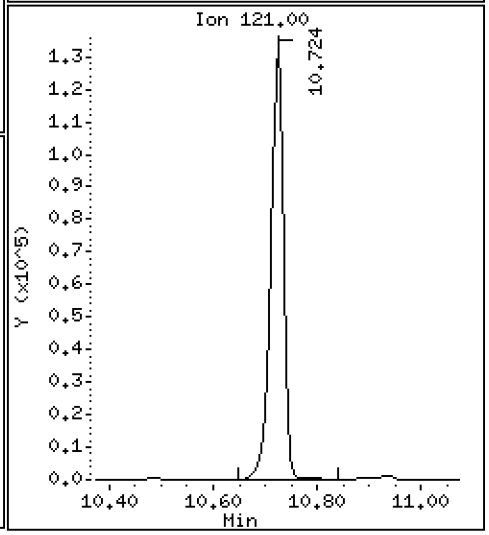












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

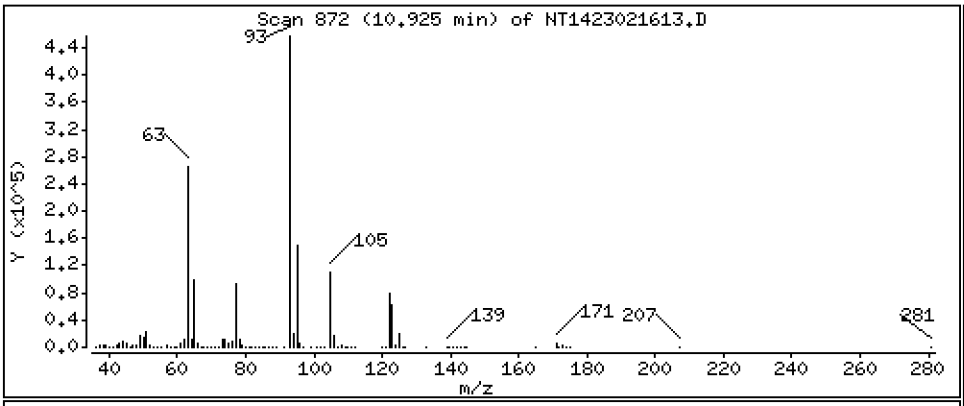
Operator: DSD

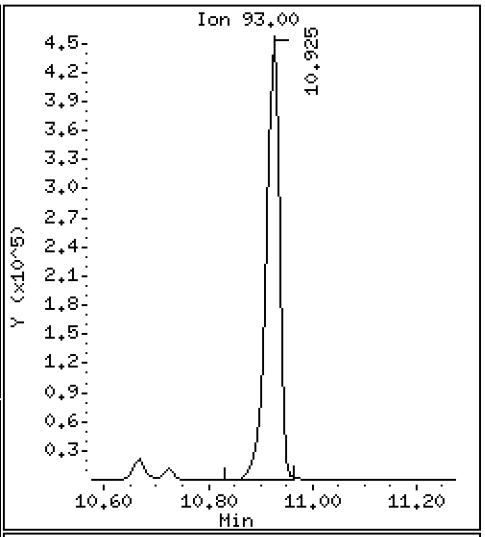
Column phase: ZB-5msi

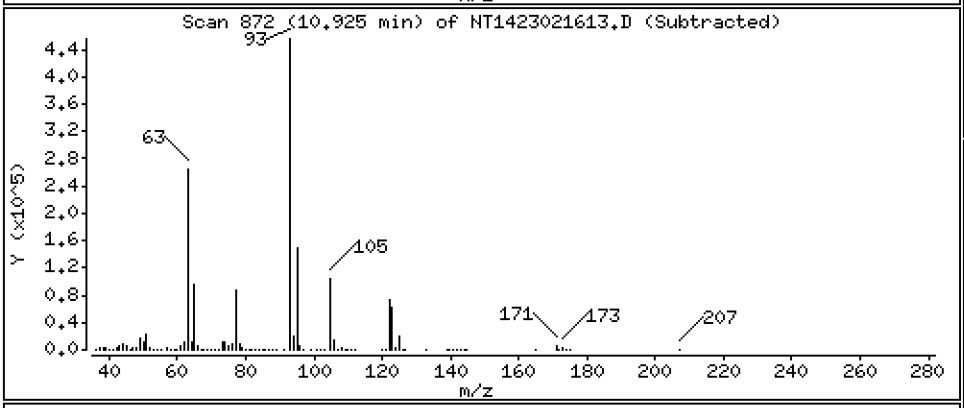
Column diameter: 0.25

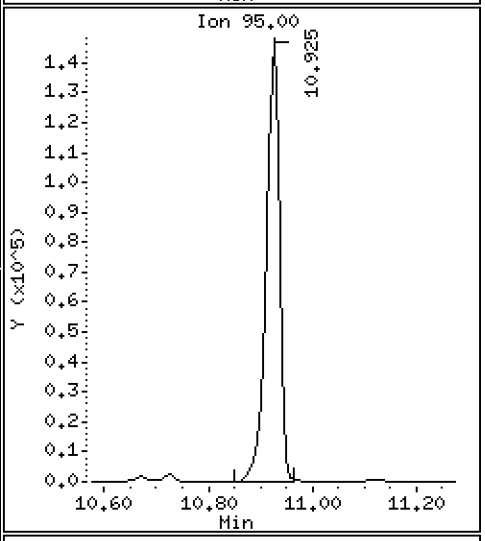
23 Bis(2-Chloroethoxy)methane

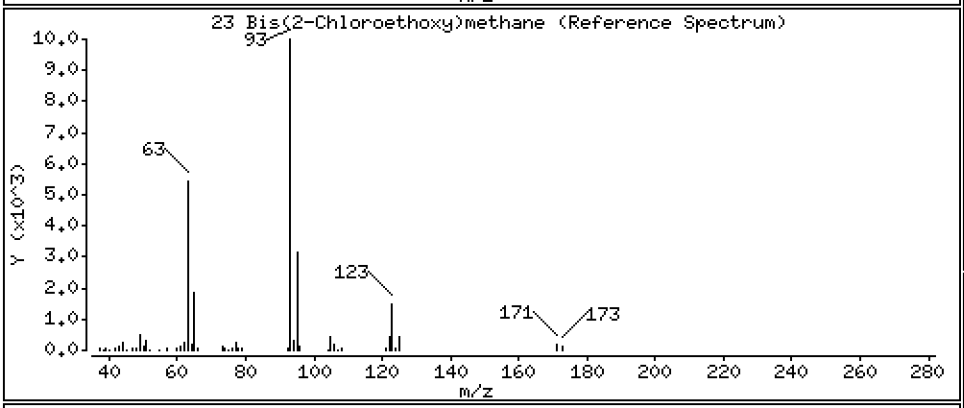
Concentration: 5.740 ug/mL

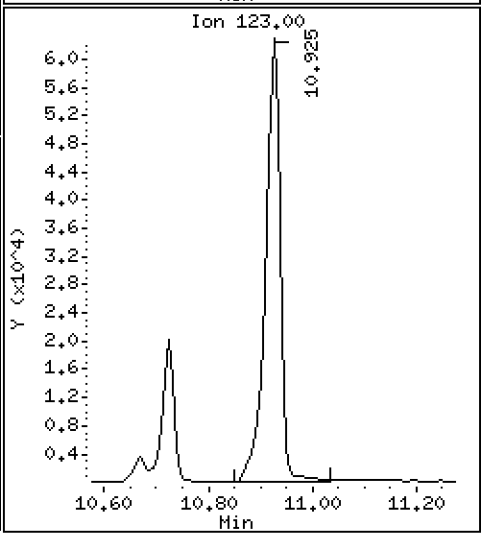


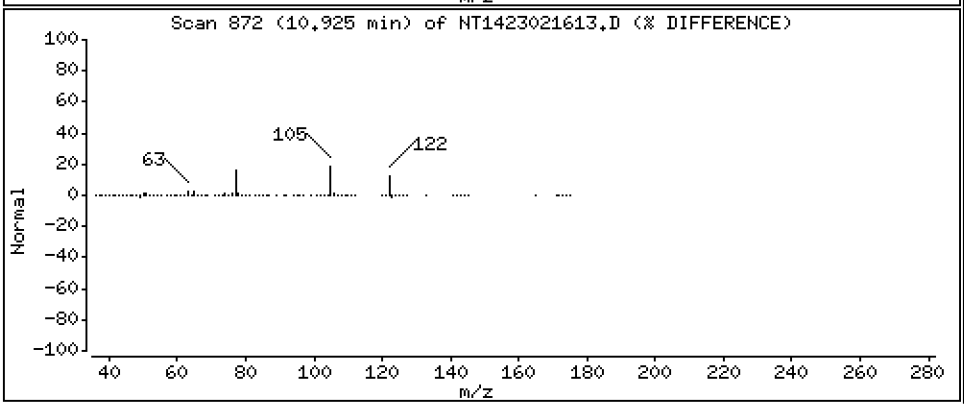












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

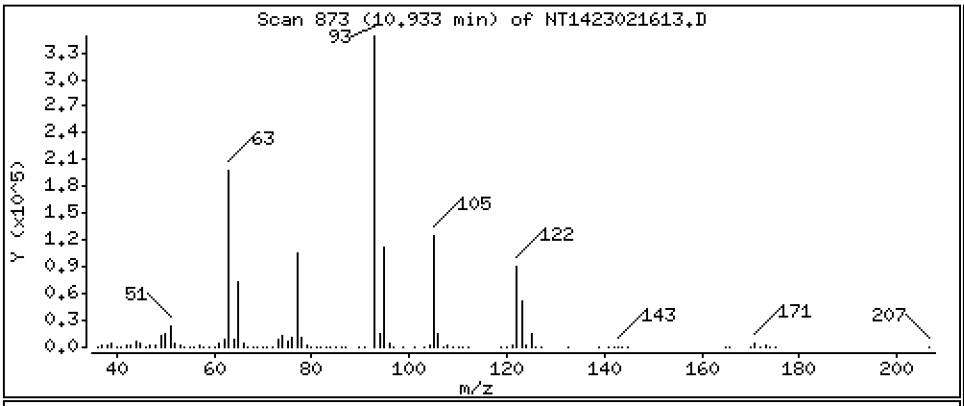
Operator: DSD

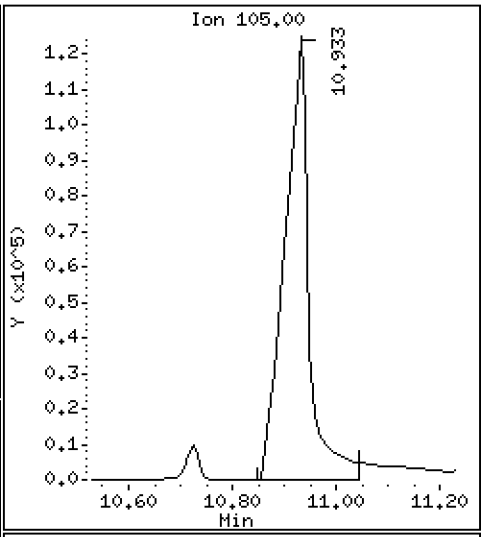
Column phase: ZB-5msi

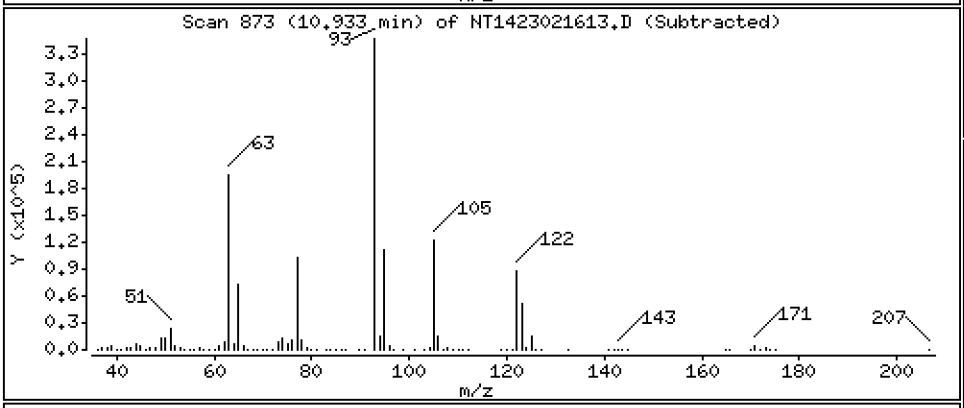
Column diameter: 0.25

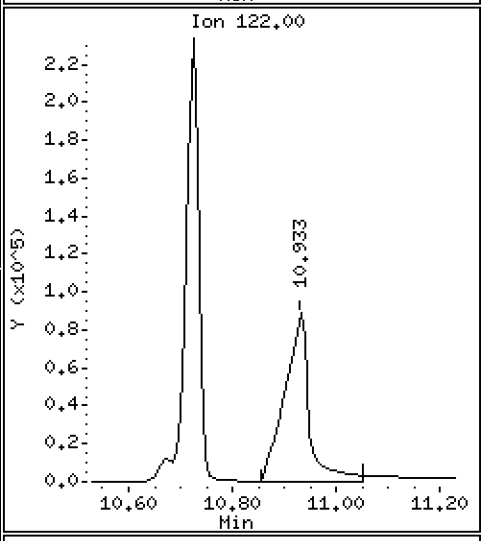
24 Benzoic acid

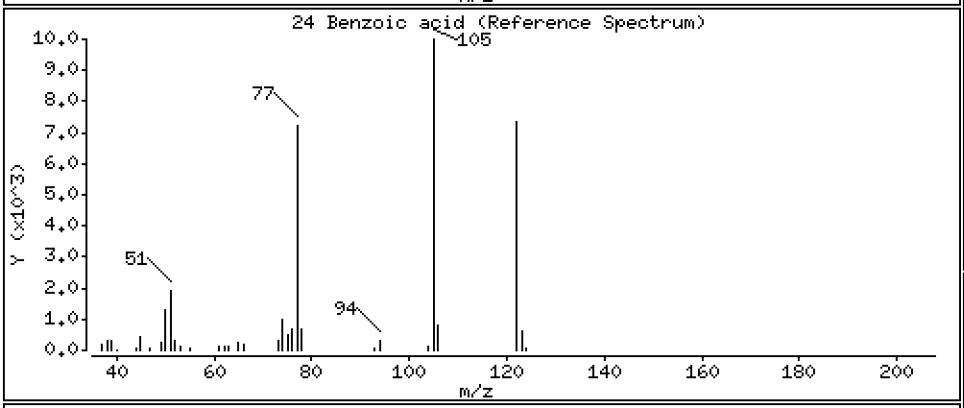
Concentration: 5.510 ug/mL

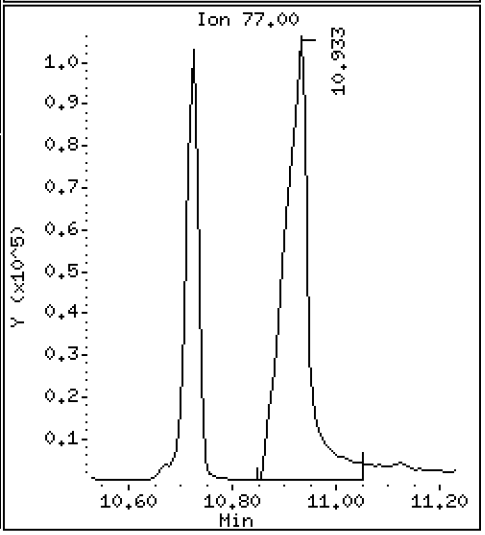


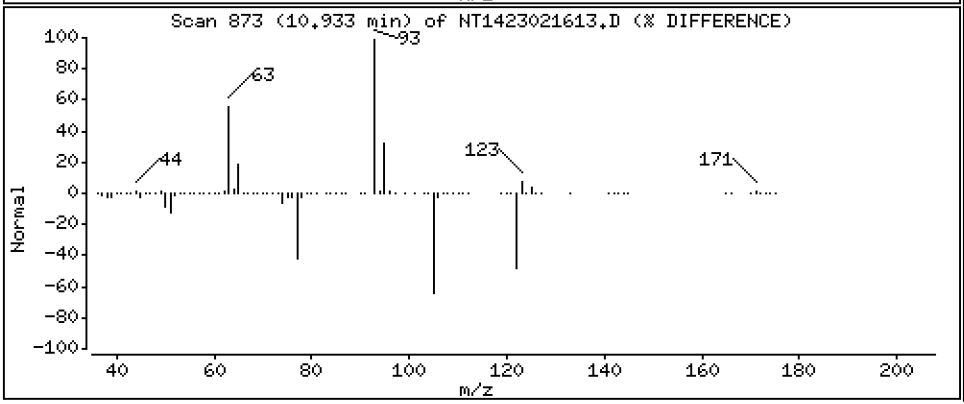












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

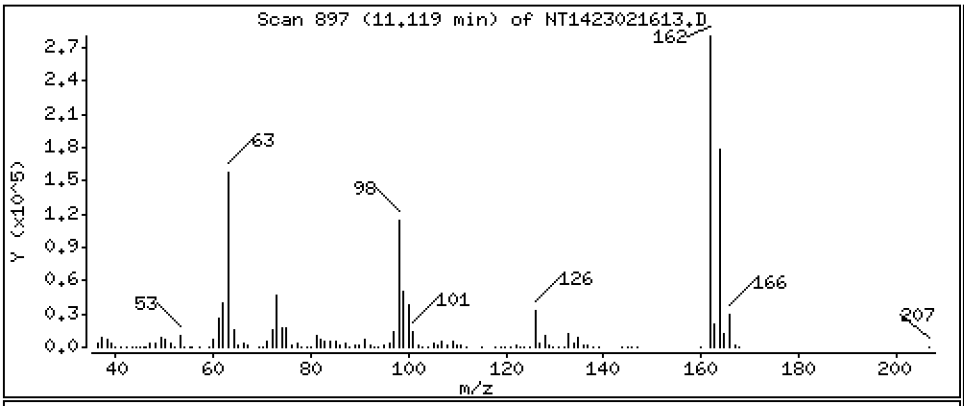
Operator: DSD

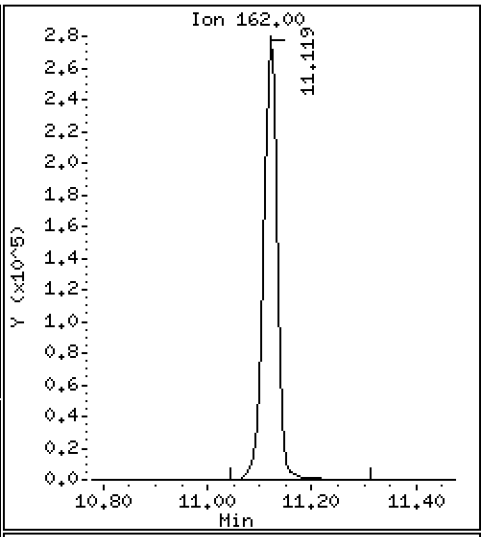
Column phase: ZB-5msi

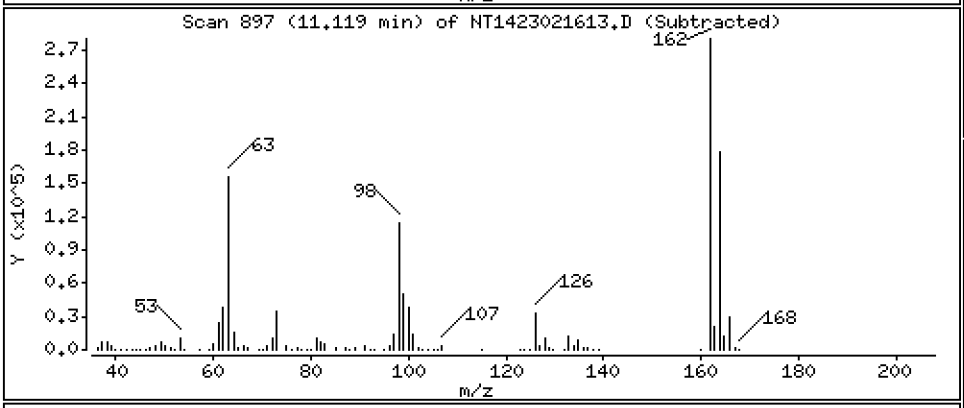
Column diameter: 0.25

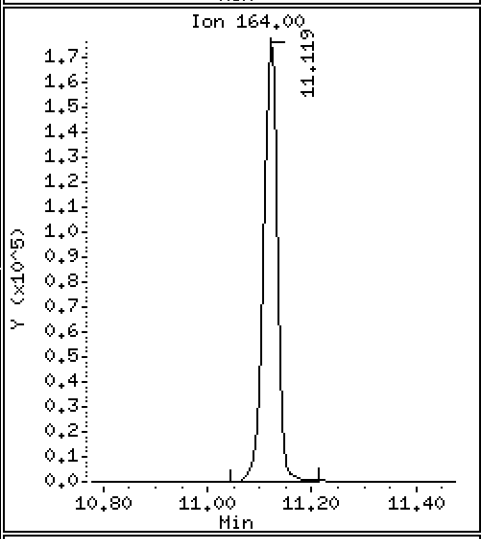
25 2,4-Dichlorophenol

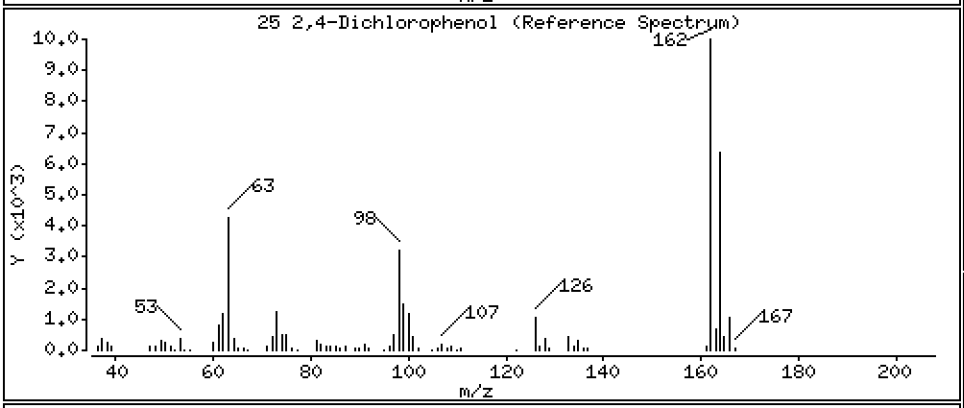
Concentration: 5.124 ug/mL

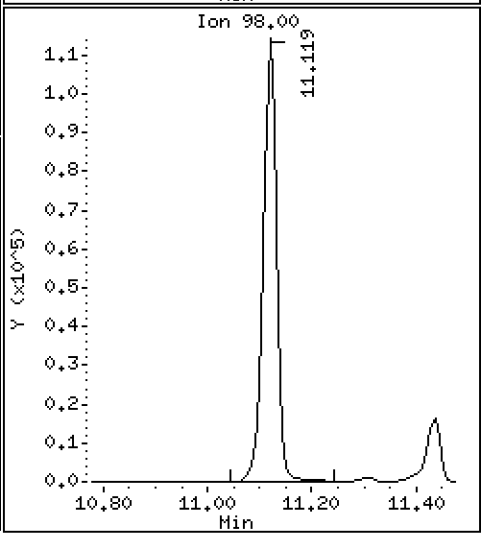


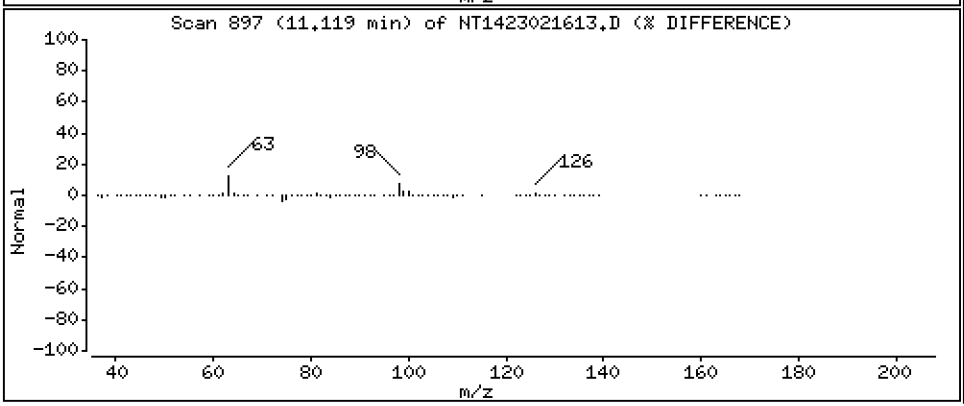












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

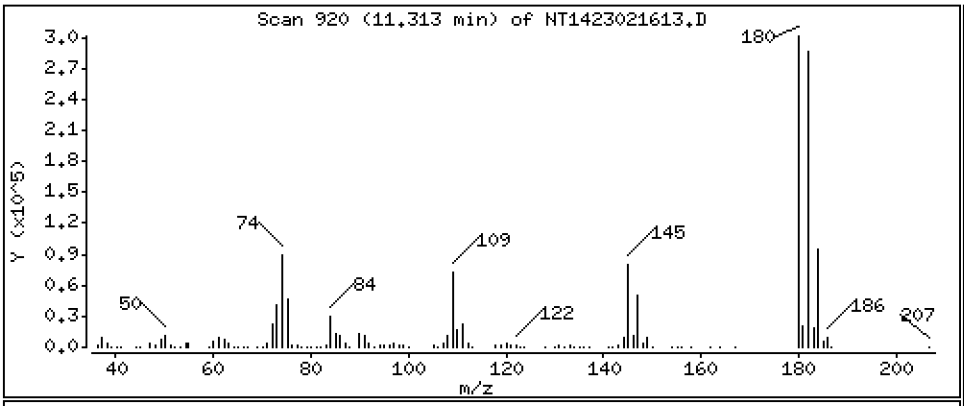
Operator: DSD

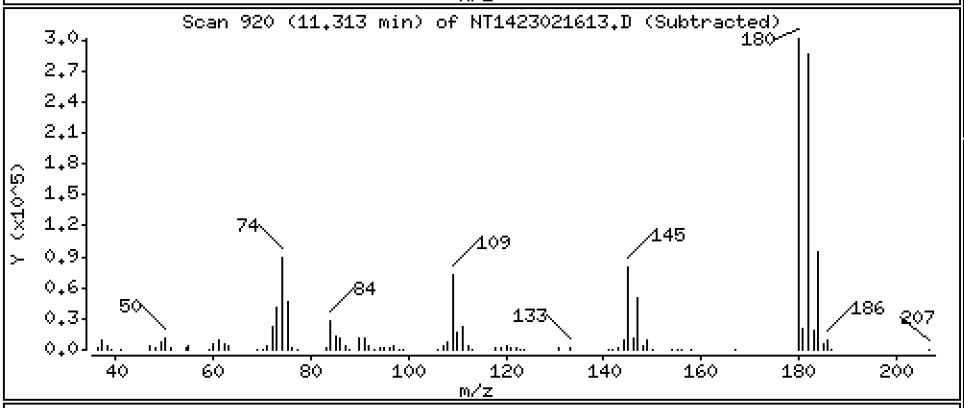
Column phase: ZB-5msi

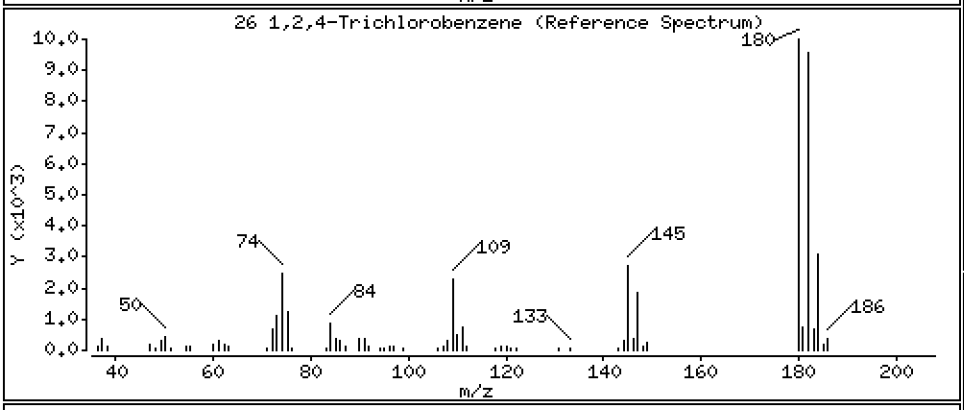
Column diameter: 0.25

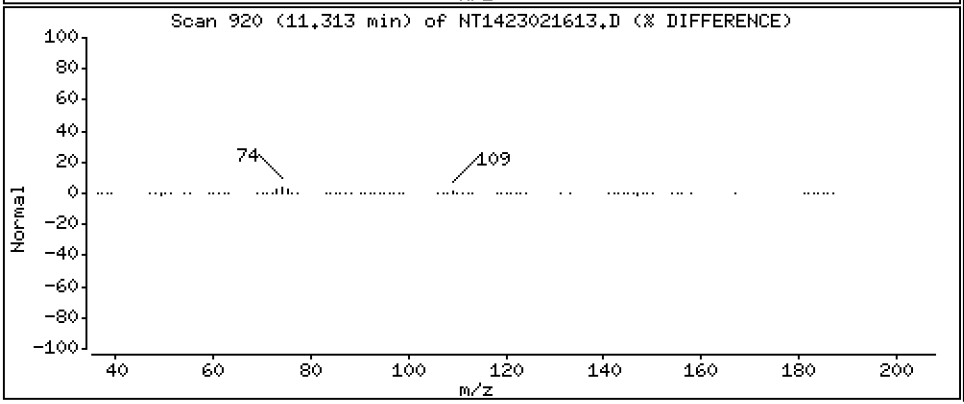
26 1,2,4-Trichlorobenzene

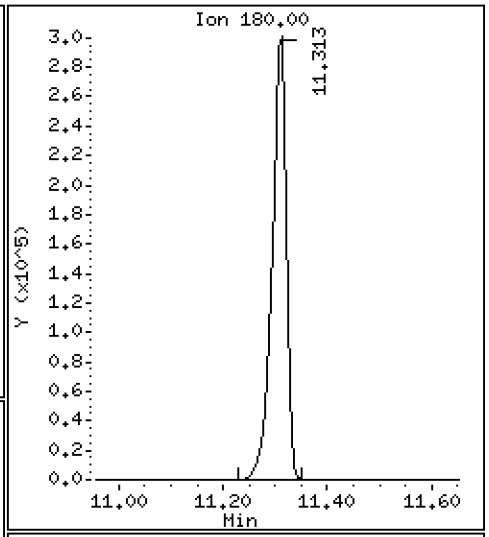
Concentration: 4.650 ug/mL

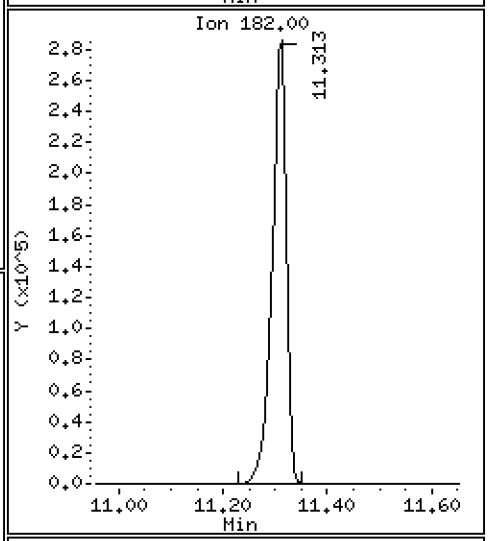


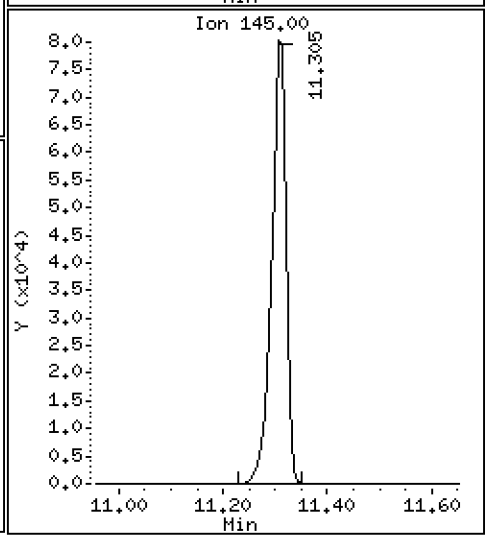












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

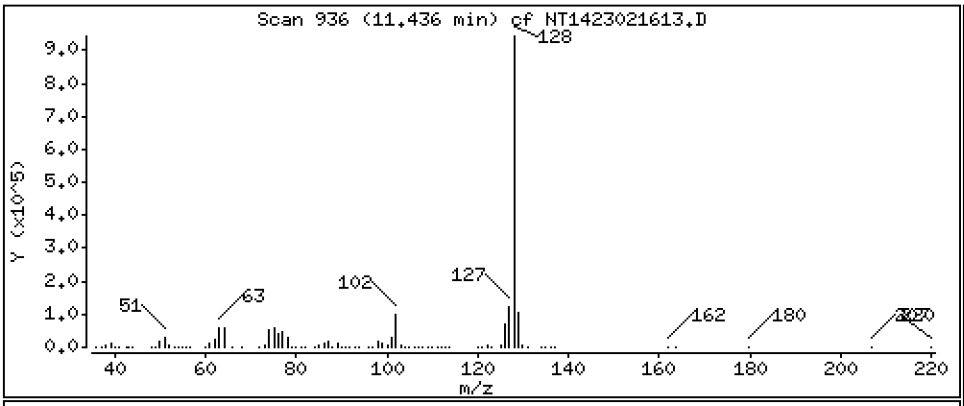
Operator: DSD

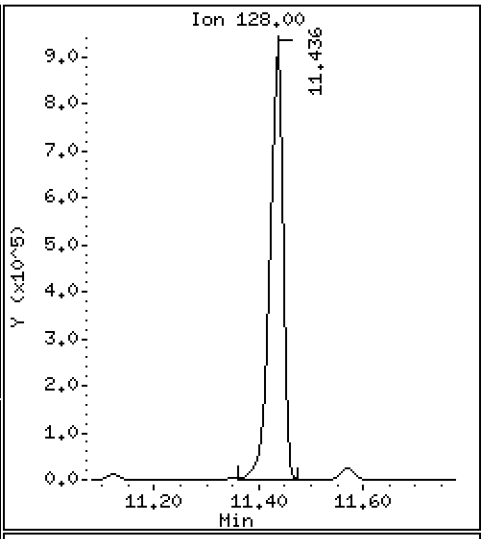
Column phase: ZB-5msi

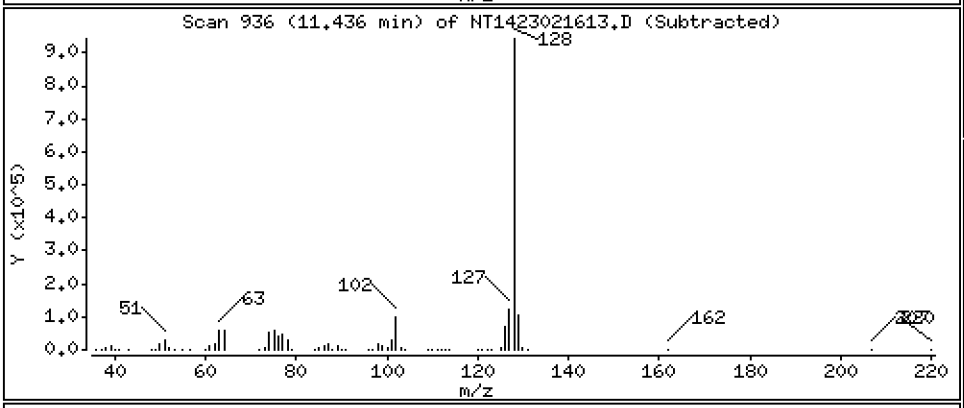
Column diameter: 0.25

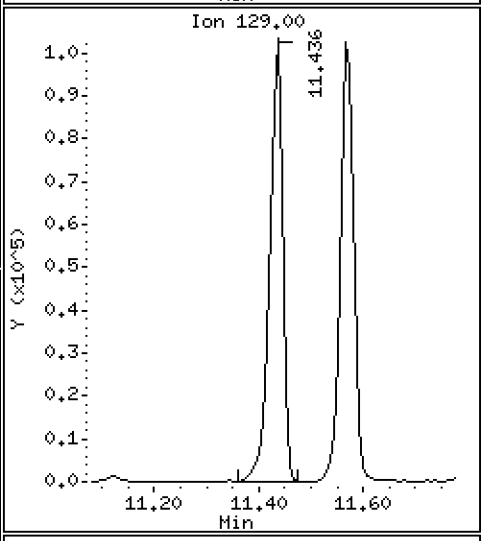
28 Naphthalene

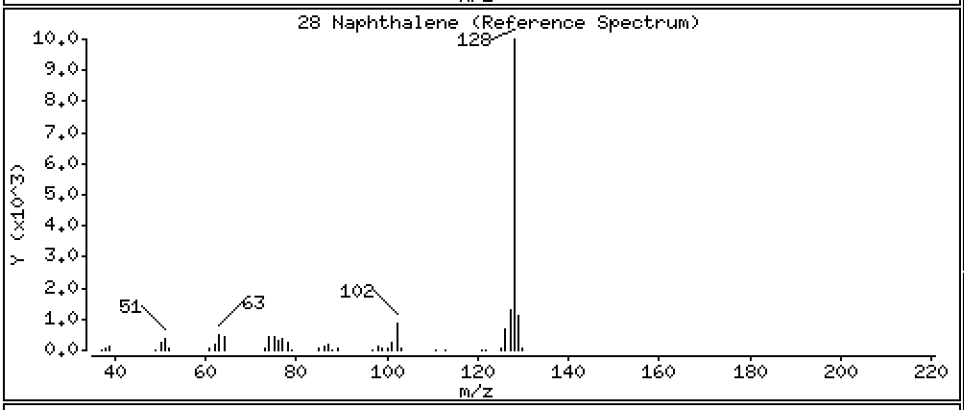
Concentration: 4.736 ug/mL

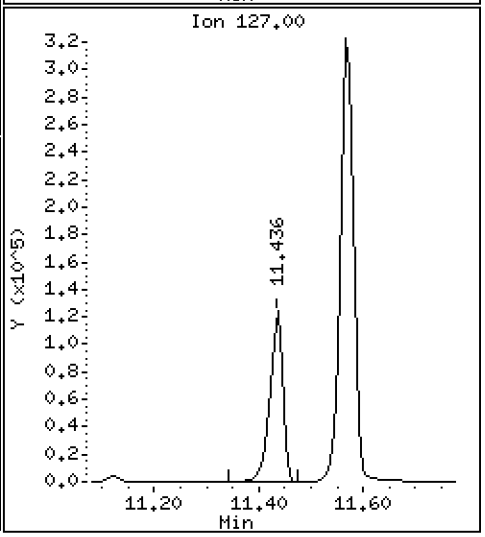


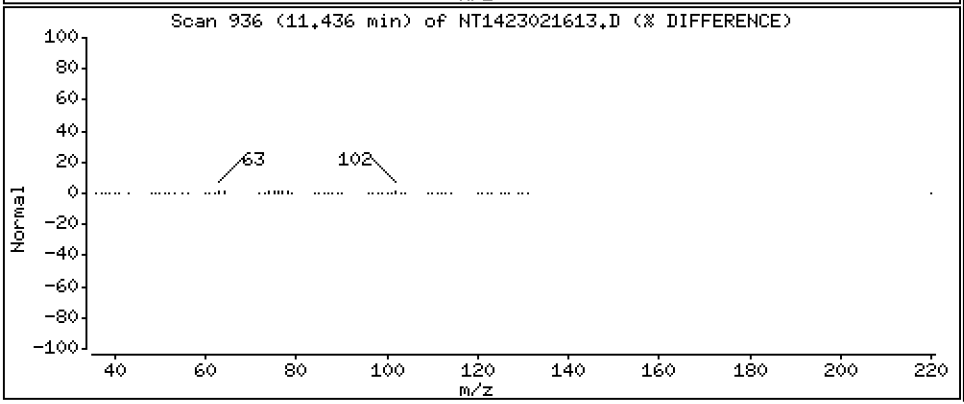












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

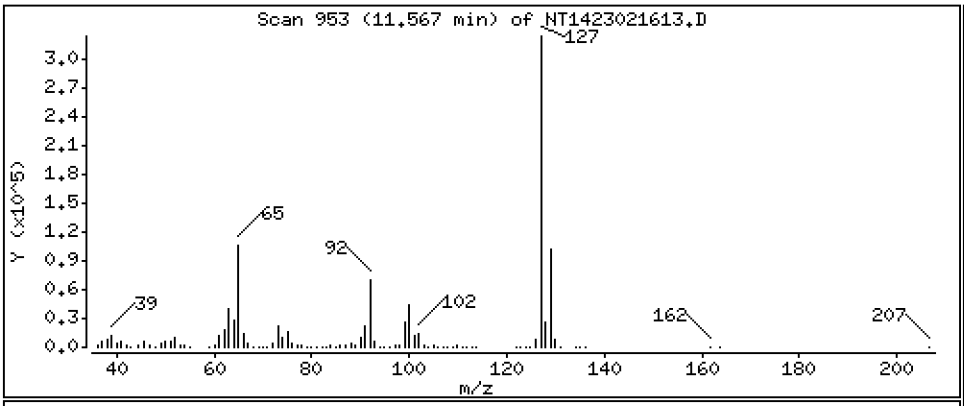
Operator: DSD

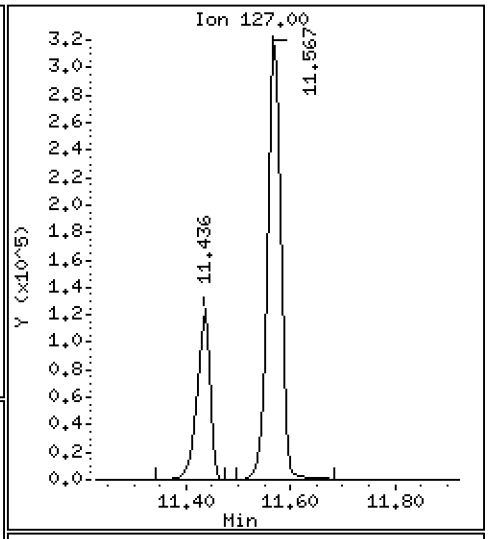
Column phase: ZB-5msi

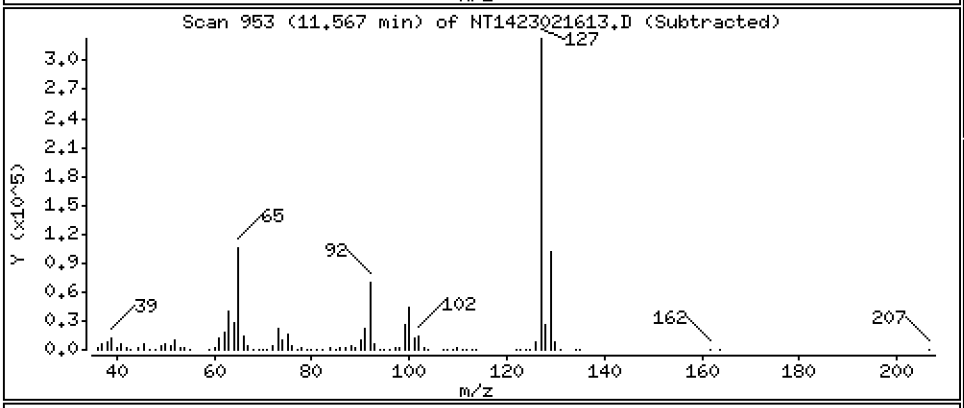
Column diameter: 0.25

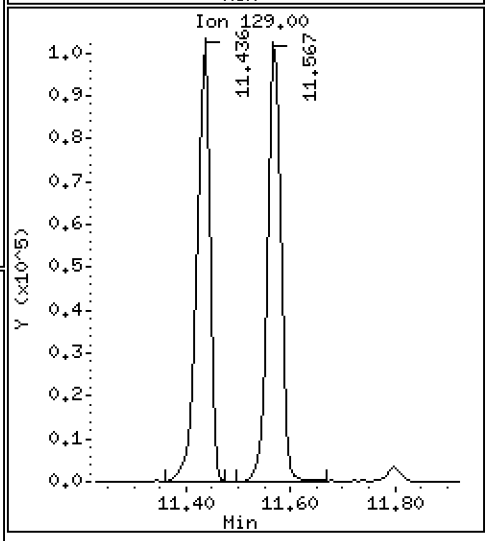
29 4-Chloroaniline

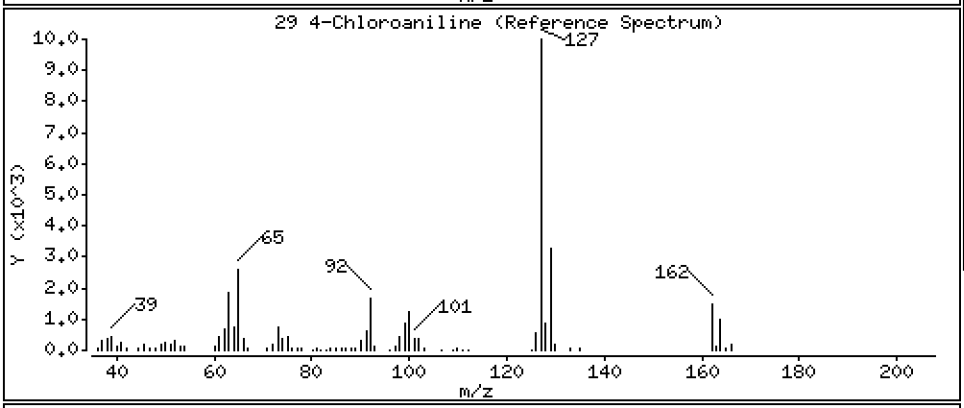
Concentration: 3.911 ug/mL

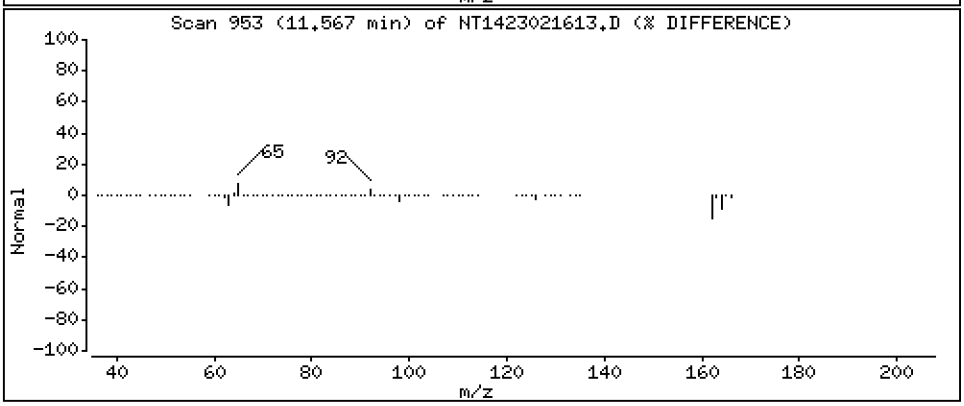












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

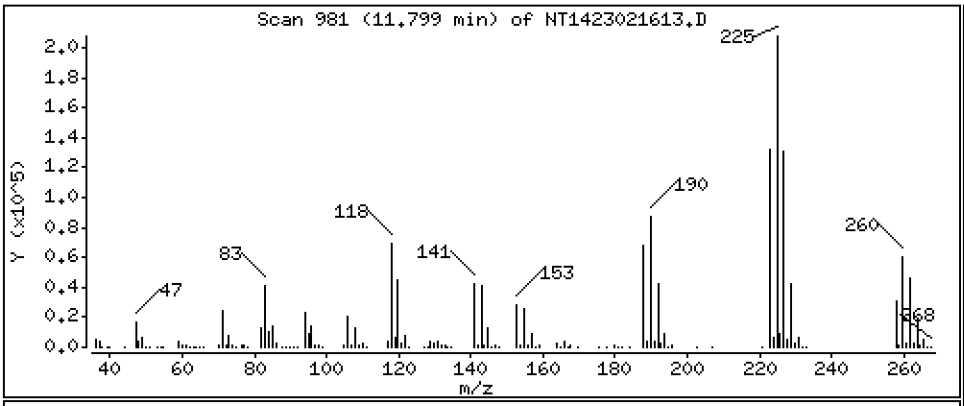
Operator: DSD

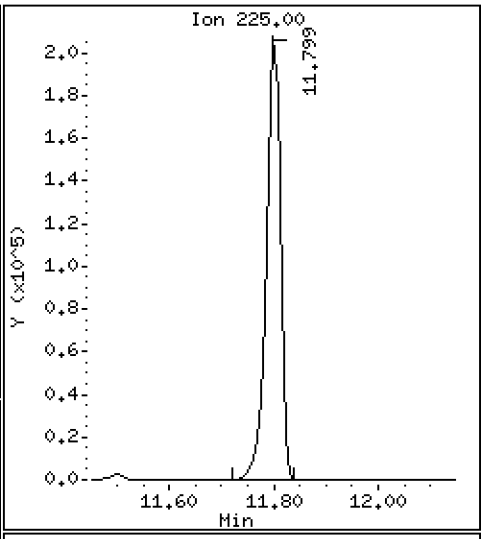
Column phase: ZB-5msi

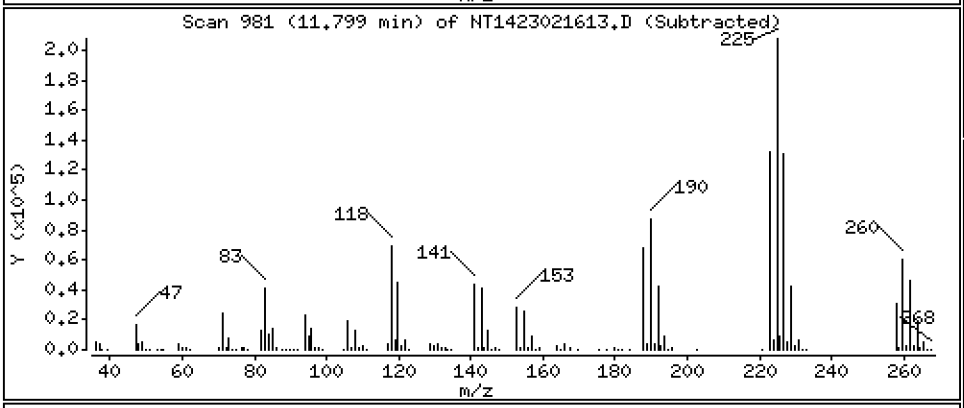
Column diameter: 0.25

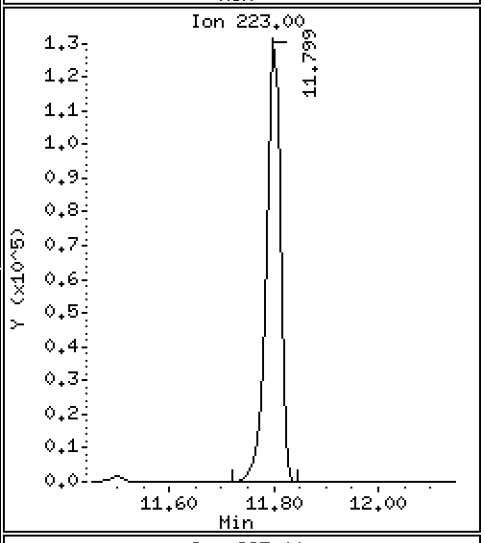
30 Hexachlorobutadiene

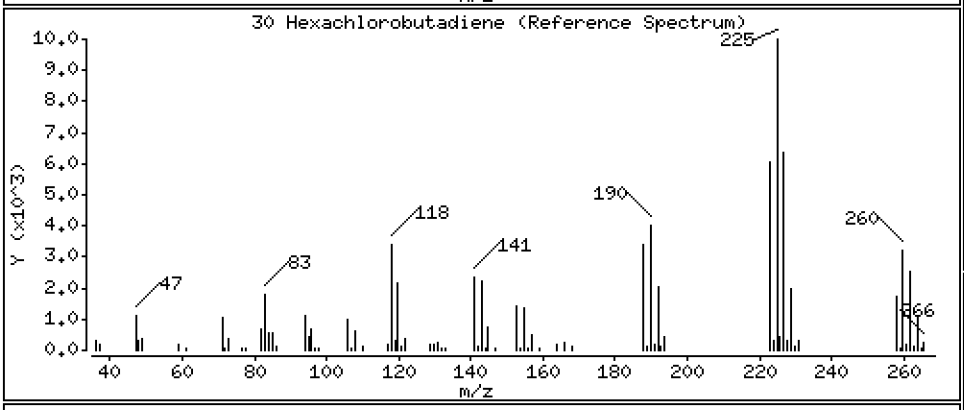
Concentration: 4.917 ug/mL

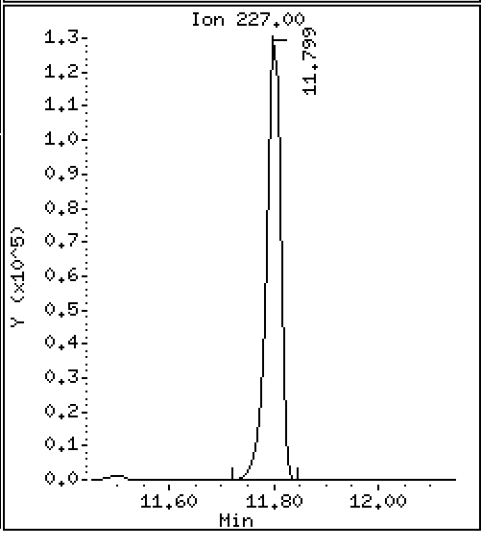


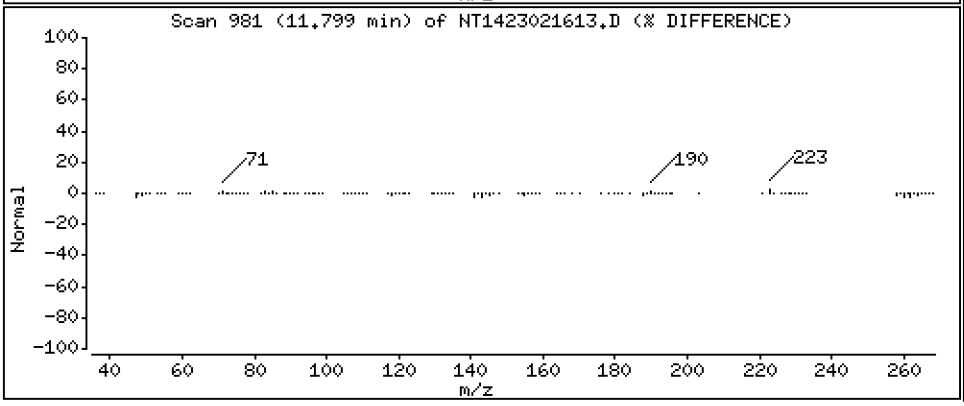












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

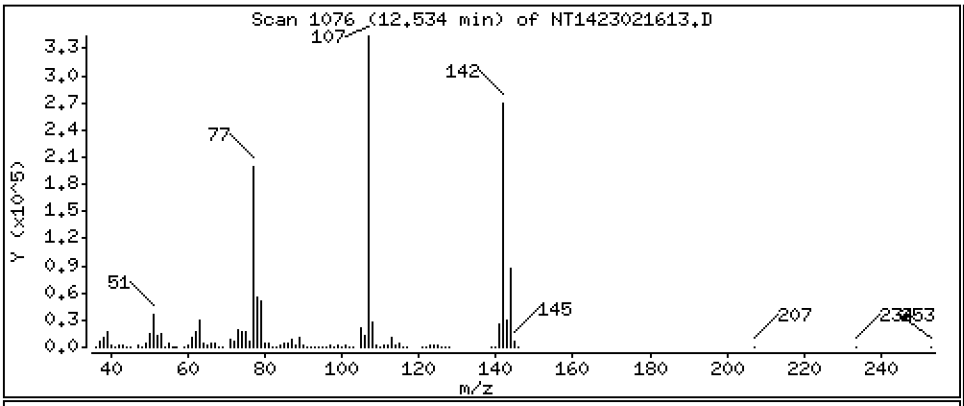
Operator: DSD

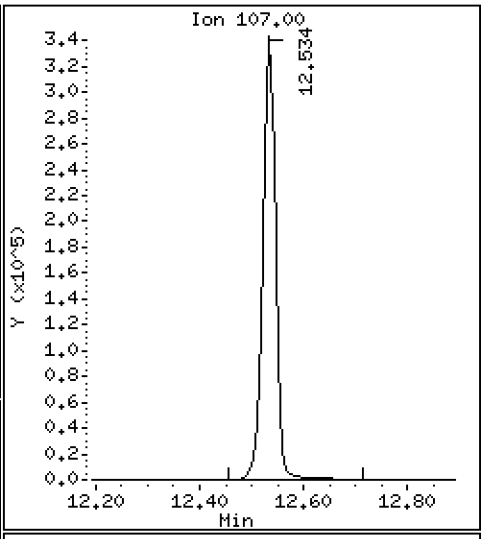
Column phase: ZB-5msi

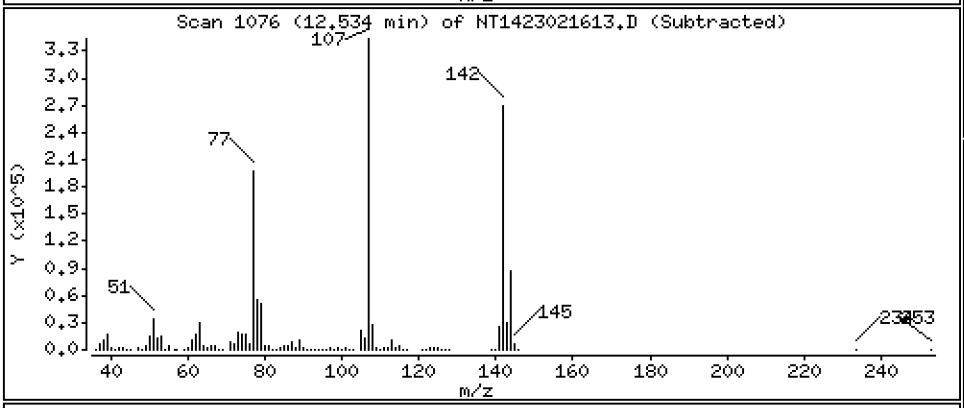
Column diameter: 0.25

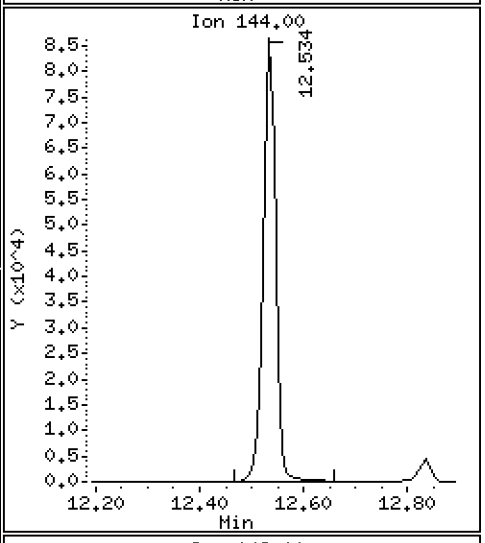
31 4-Chloro-3-methylphenol

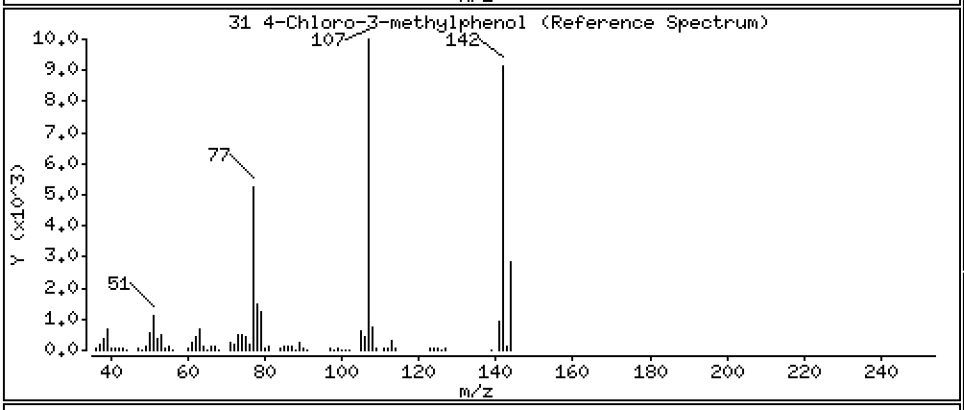
Concentration: 5.045 ug/mL

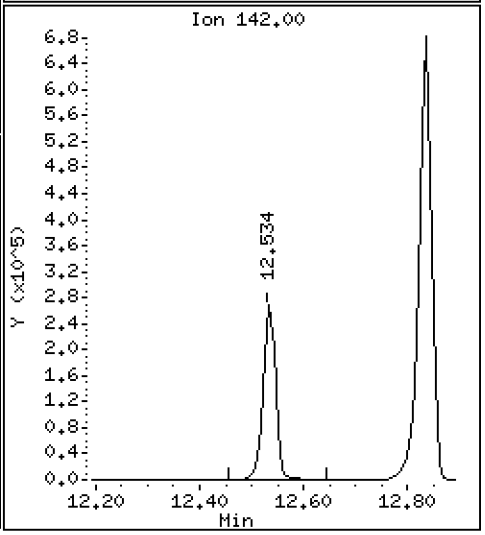


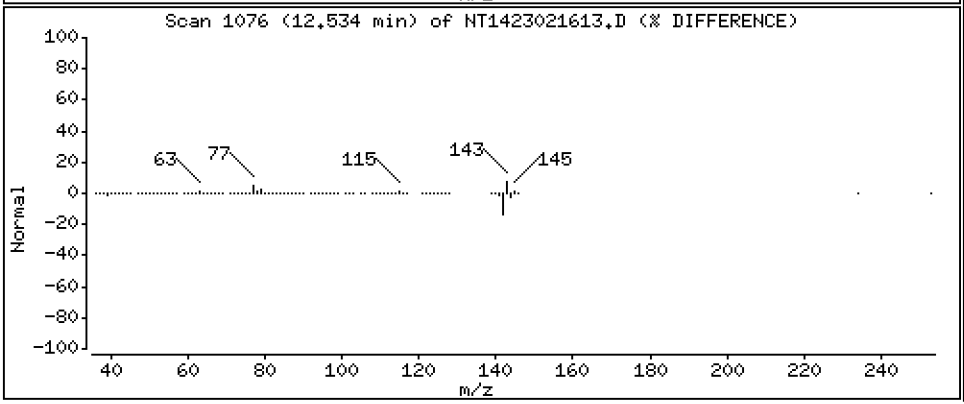












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

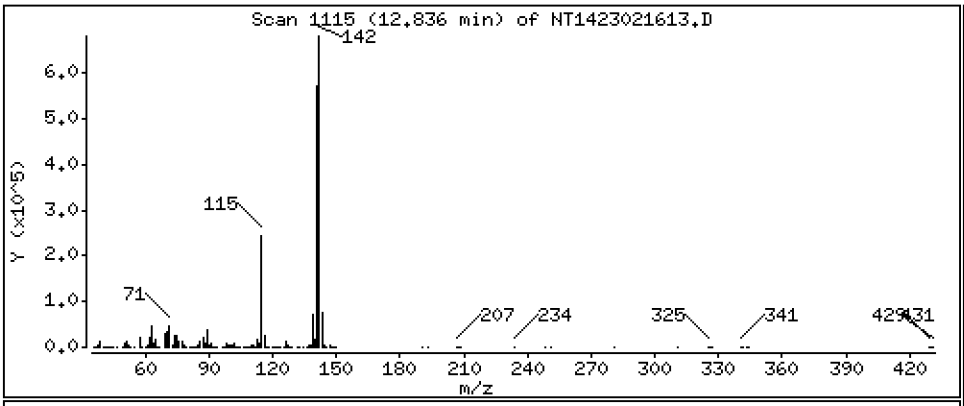
Operator: DSD

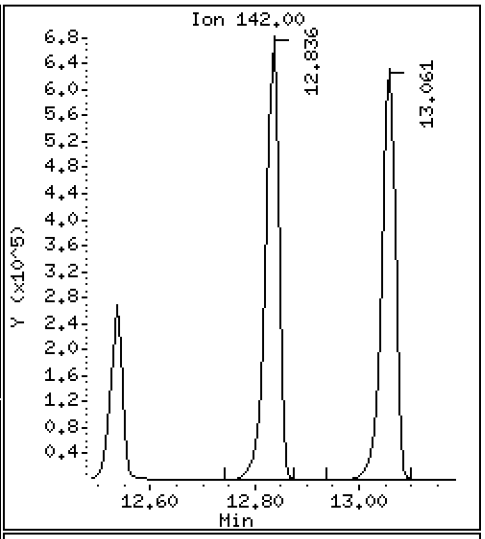
Column phase: ZB-5msi

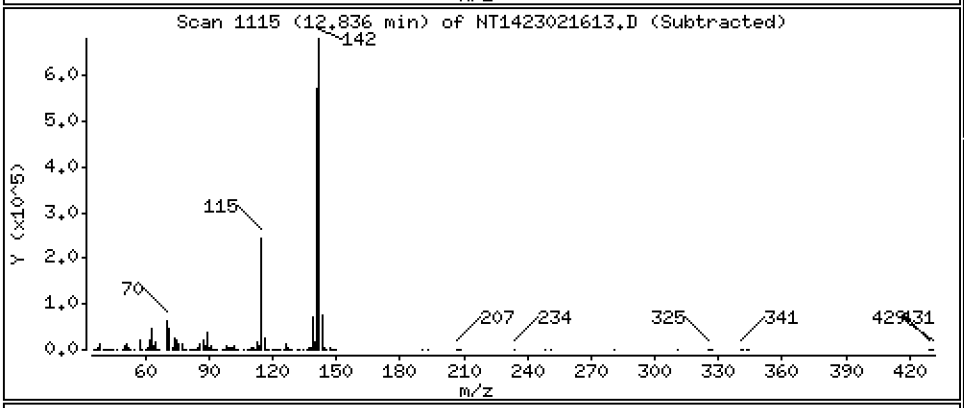
Column diameter: 0.25

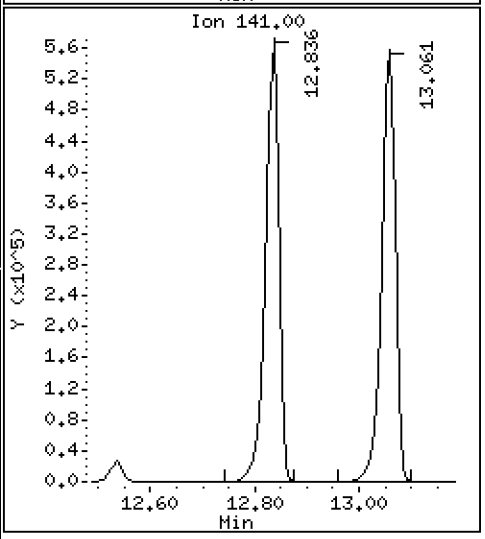
32 2-Methylnaphthalene

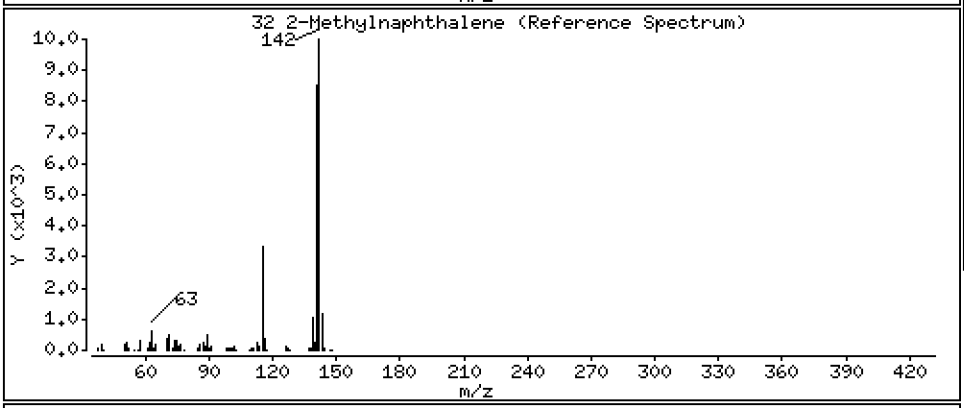
Concentration: 4.606 ug/mL

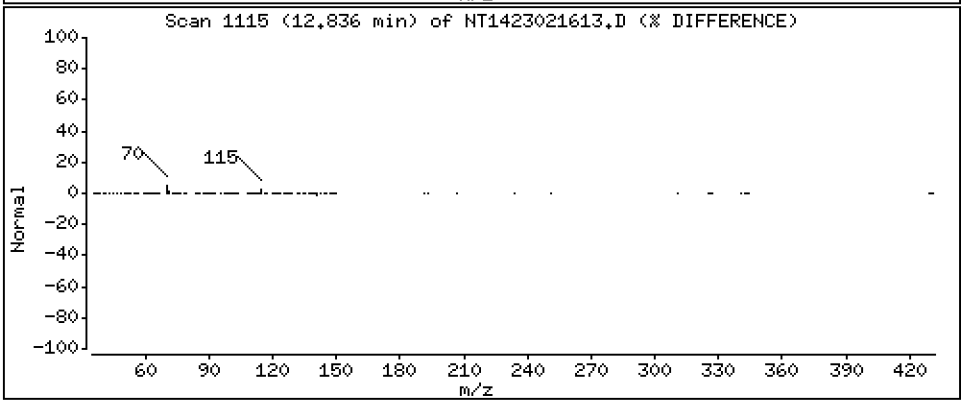












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

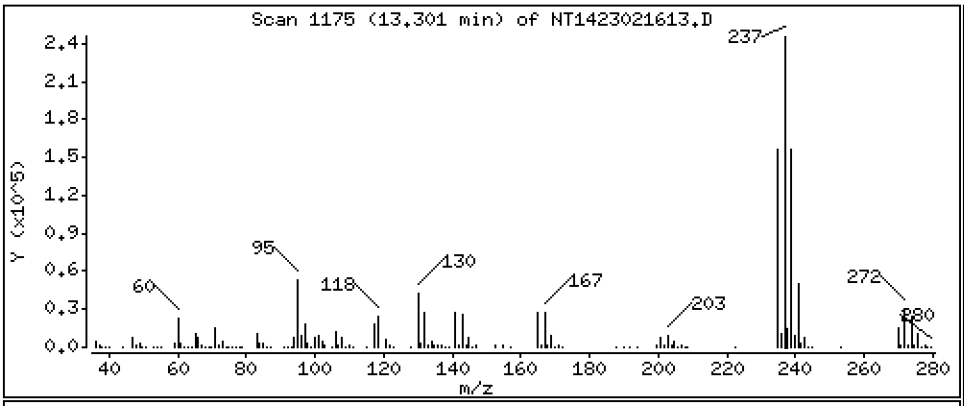
Operator: DSD

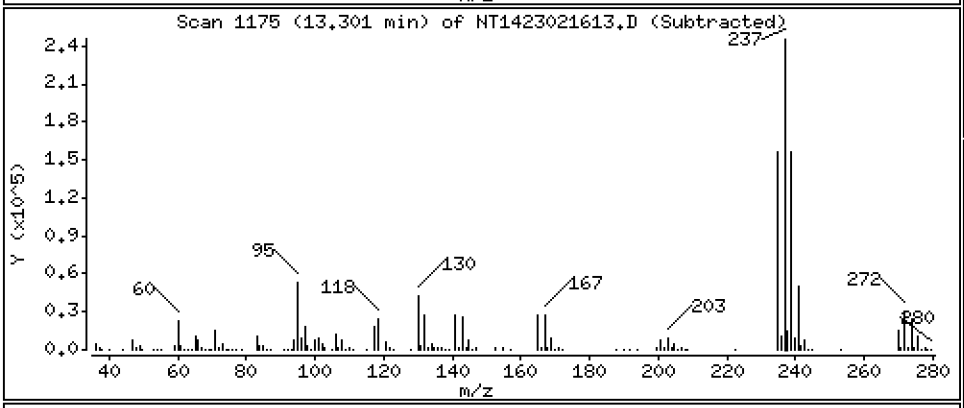
Column phase: ZB-5msi

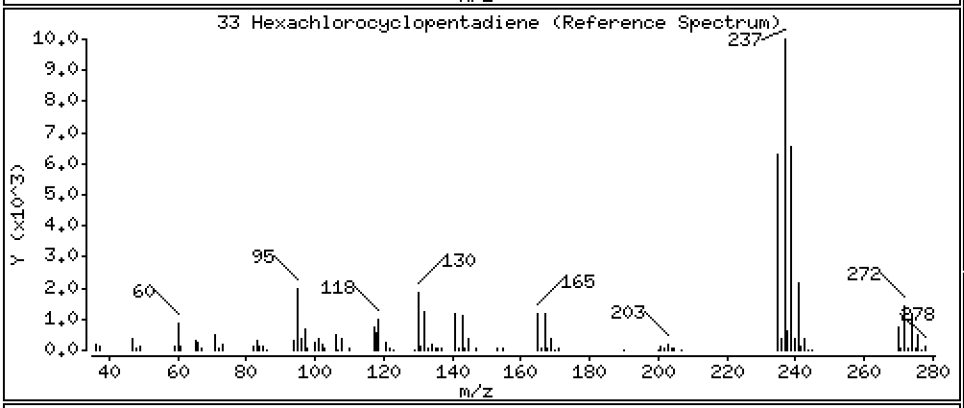
Column diameter: 0.25

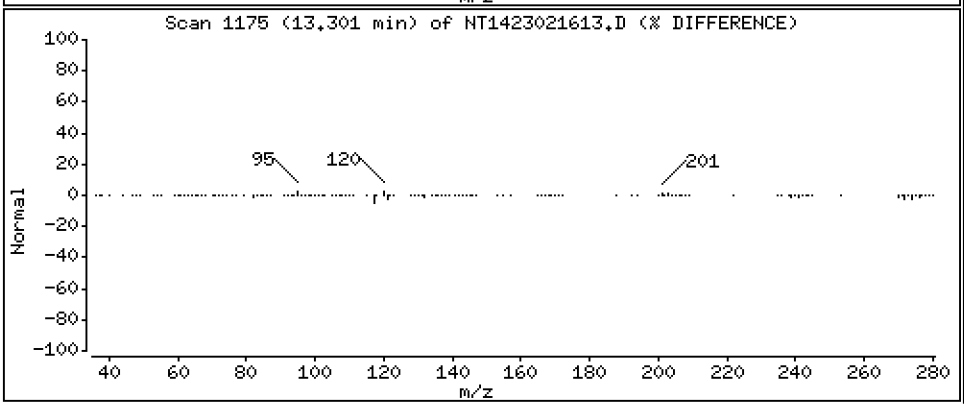
33 Hexachlorocyclopentadiene

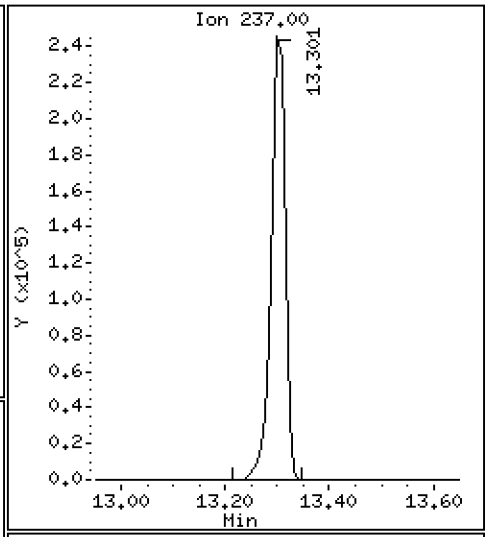
Concentration: 5.301 ug/mL

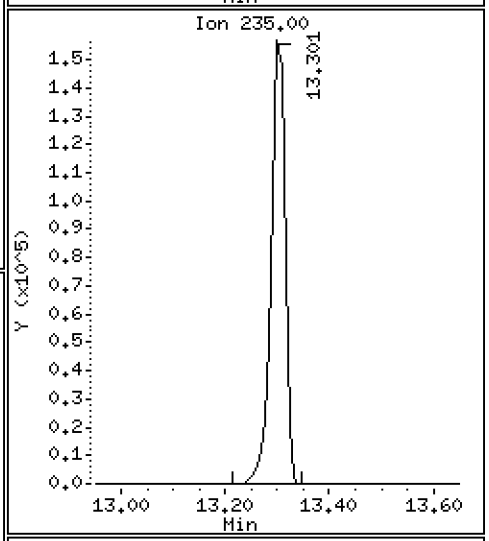


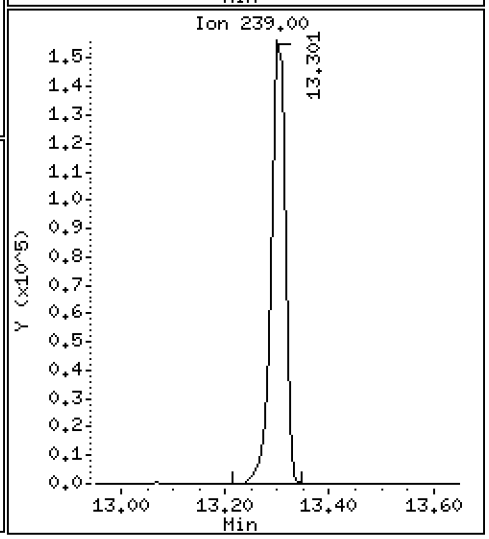












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

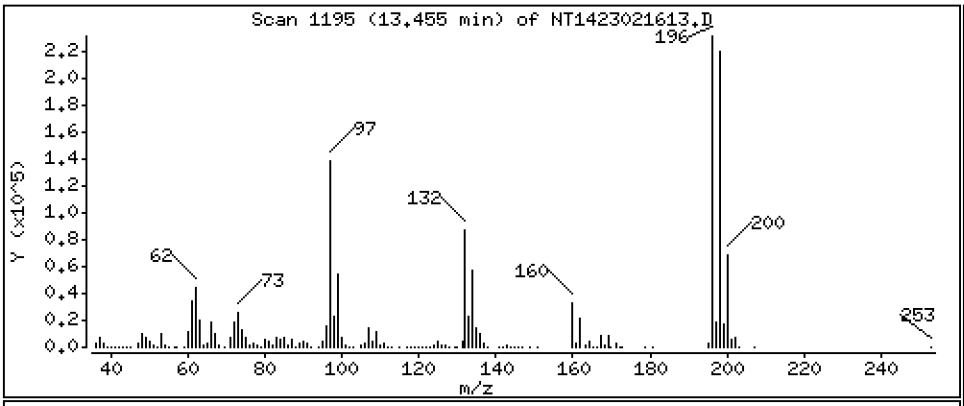
Operator: DSD

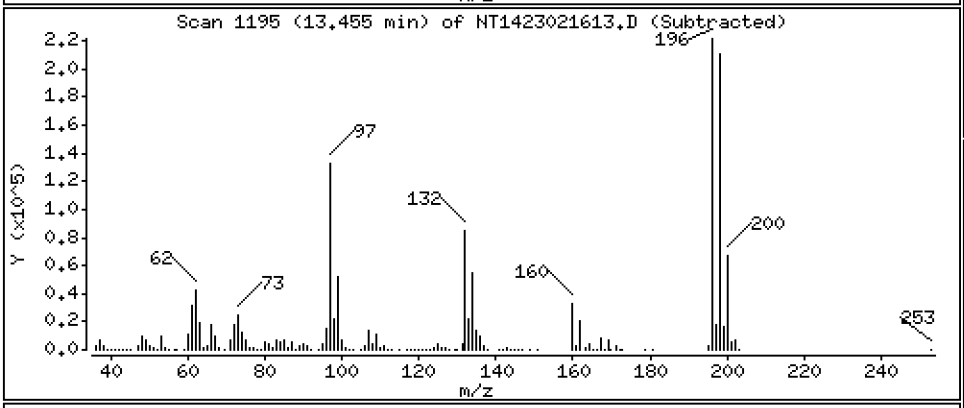
Column phase: ZB-5msi

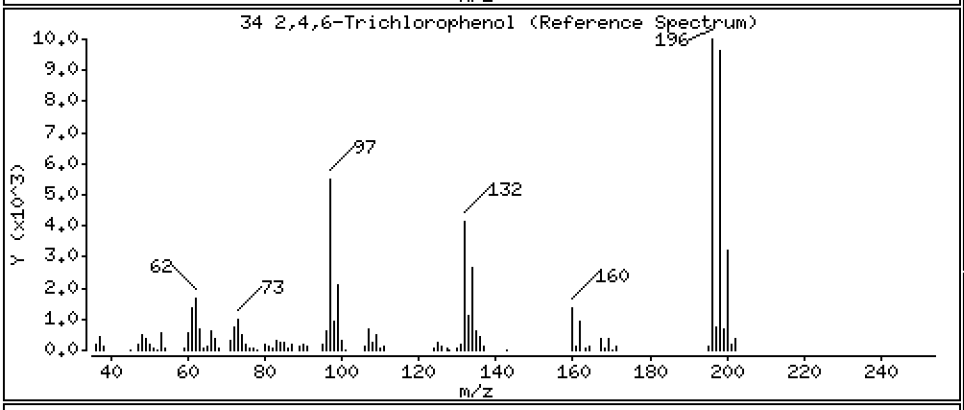
Column diameter: 0.25

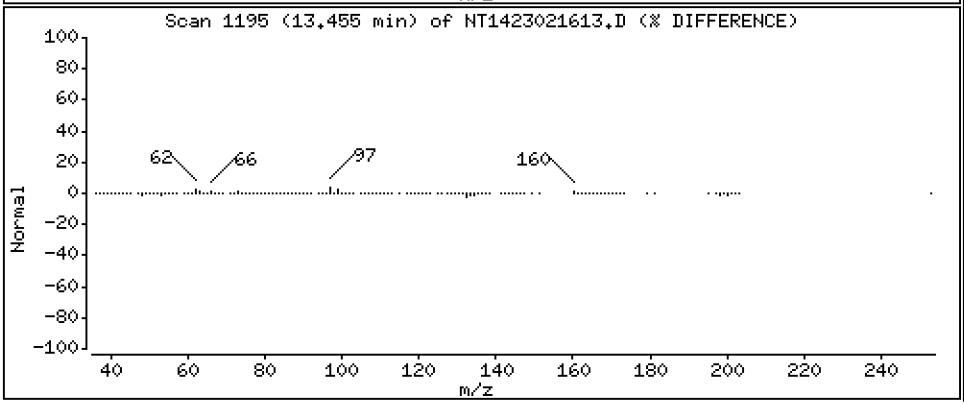
34 2,4,6-Trichlorophenol

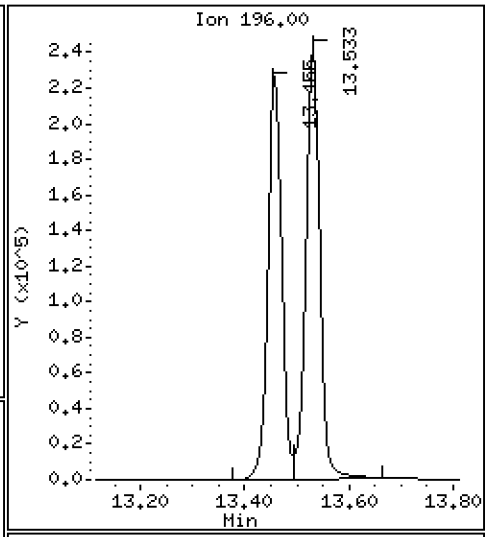
Concentration: 4.808 ug/mL

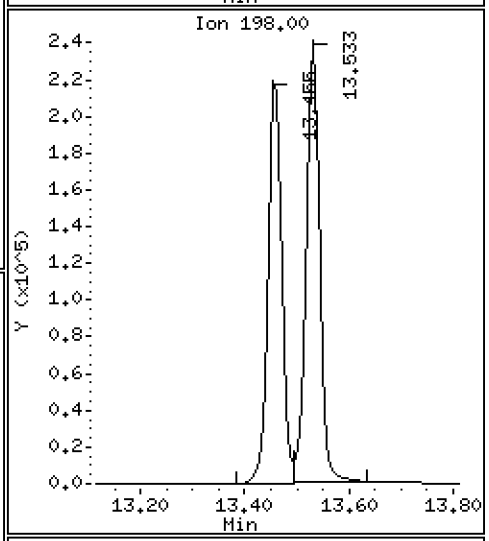


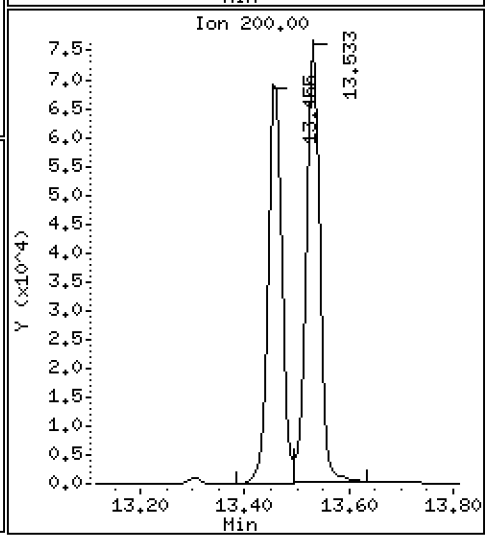












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

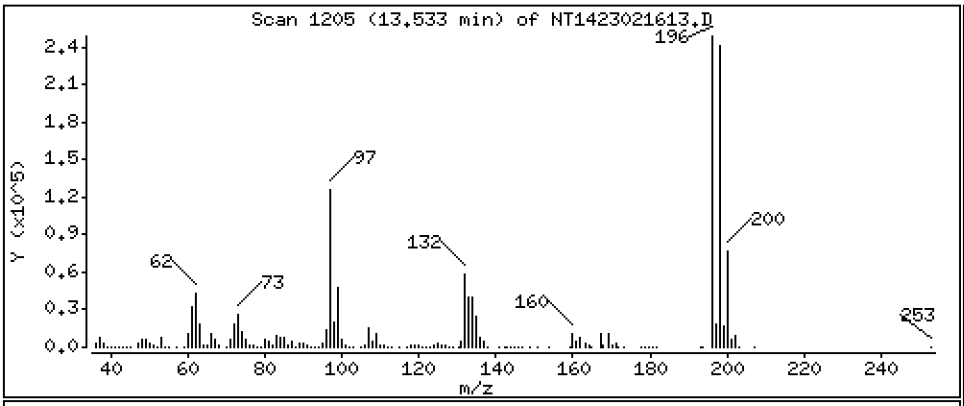
Operator: DSD

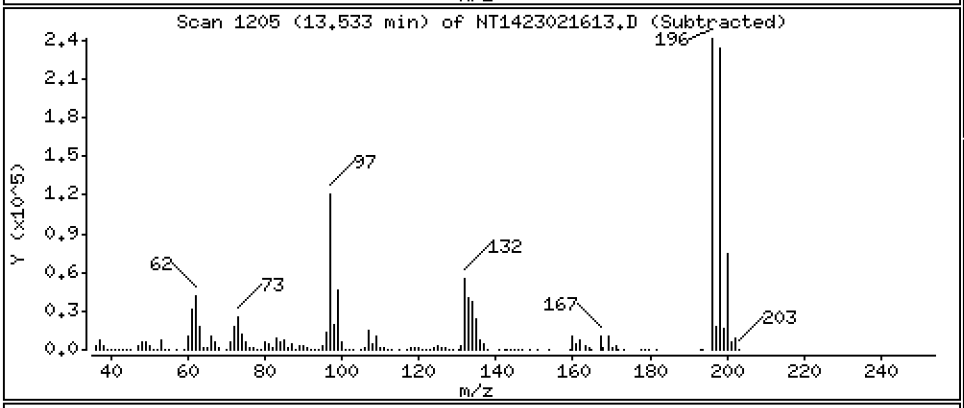
Column phase: ZB-5msi

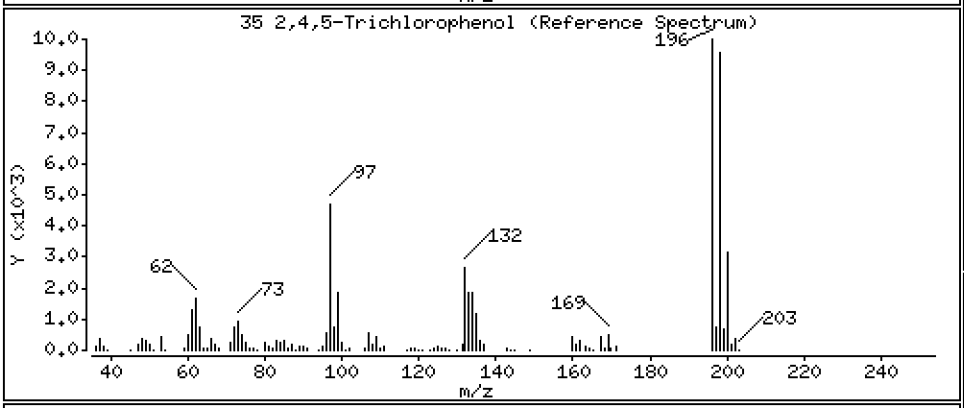
Column diameter: 0.25

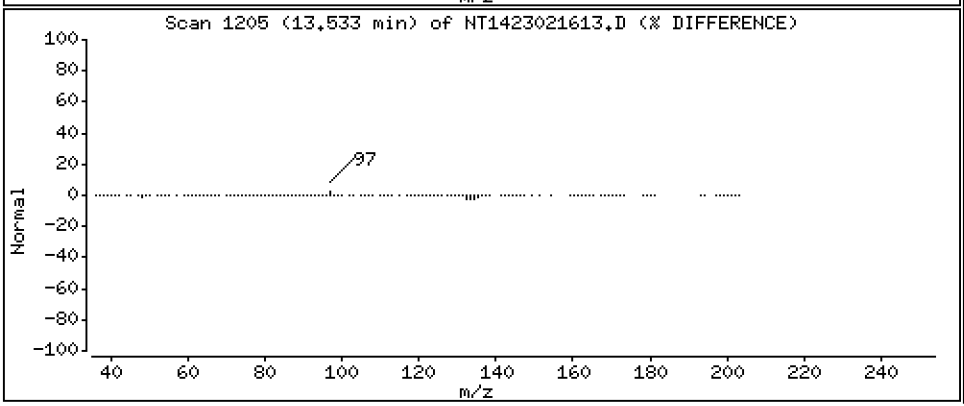
35 2,4,5-Trichlorophenol

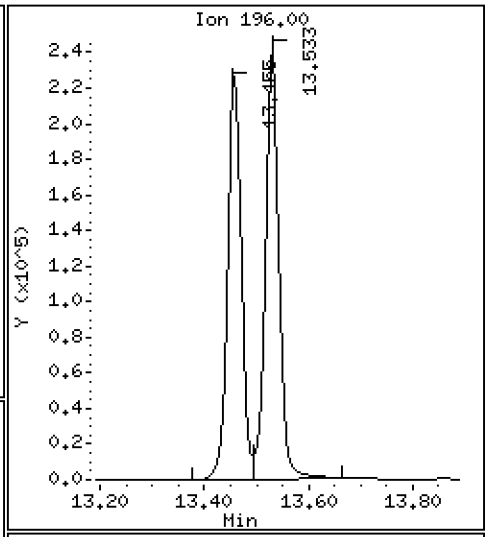
Concentration: 4.707 ug/mL

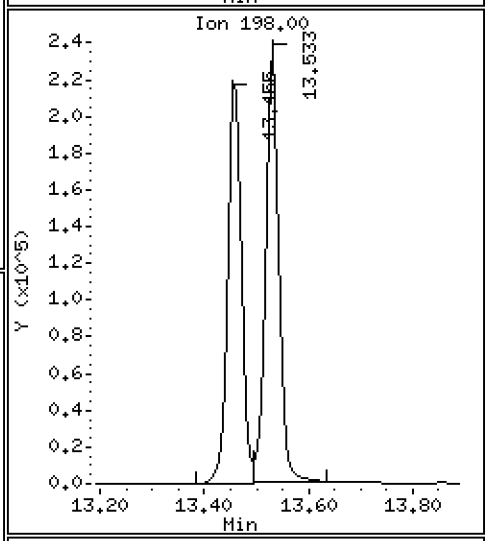


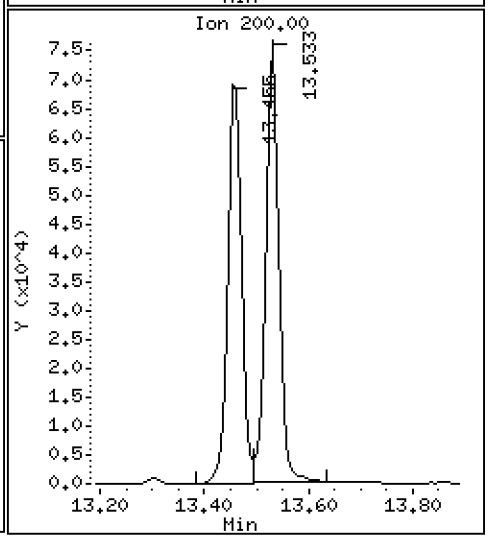












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

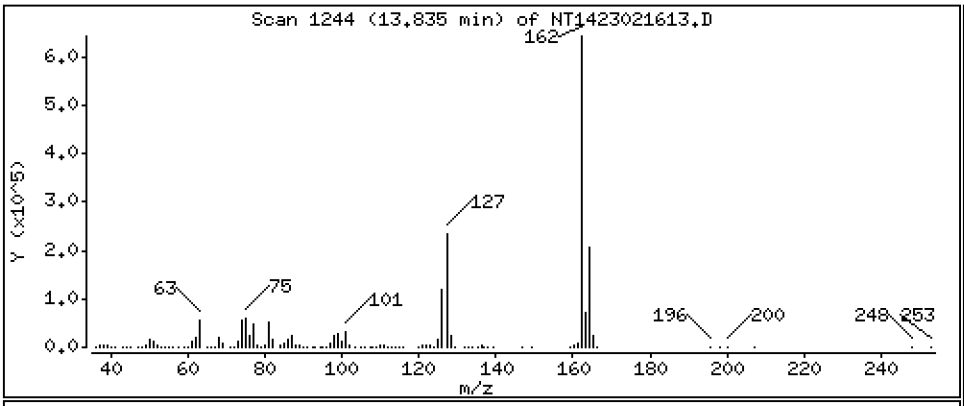
Operator: DSD

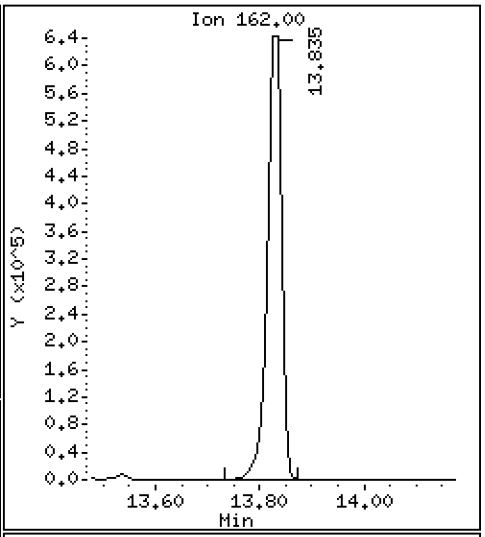
Column phase: ZB-5msi

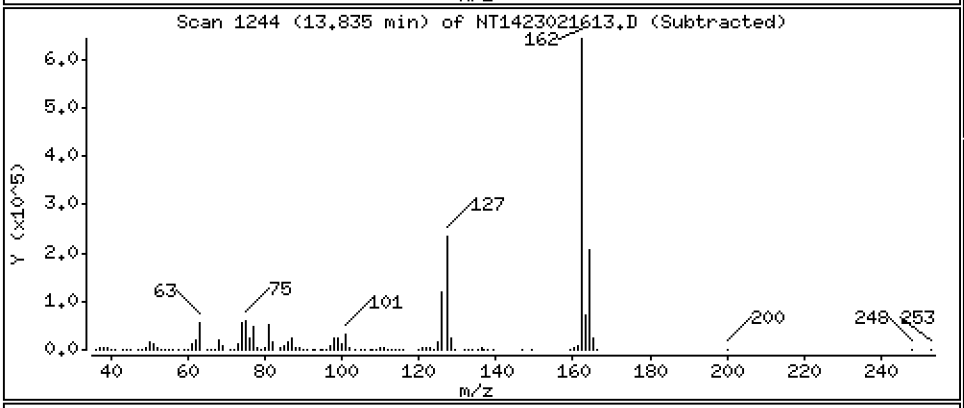
Column diameter: 0.25

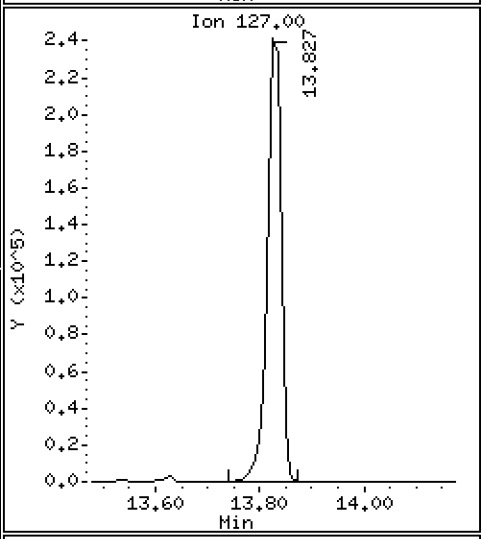
37 2-Chloronaphthalene

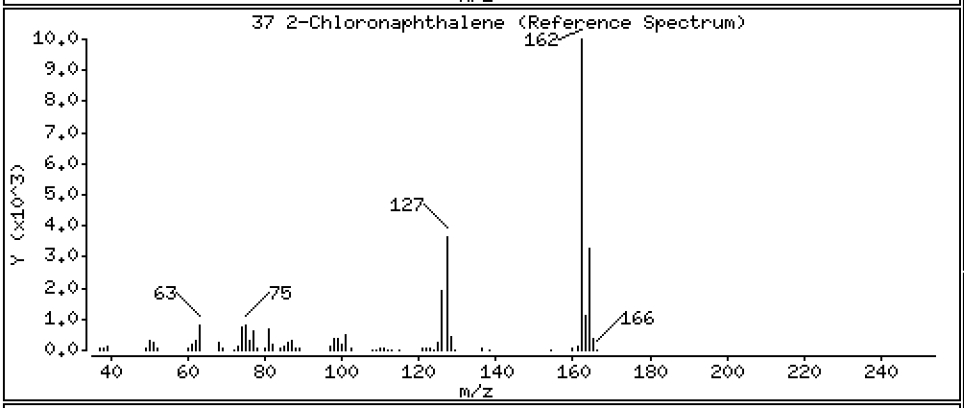
Concentration: 4.639 ug/mL

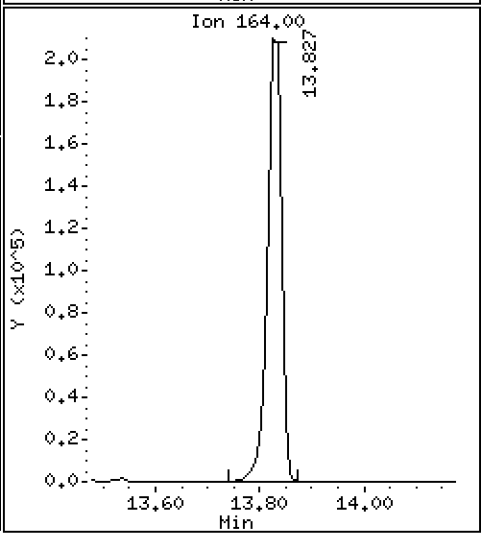


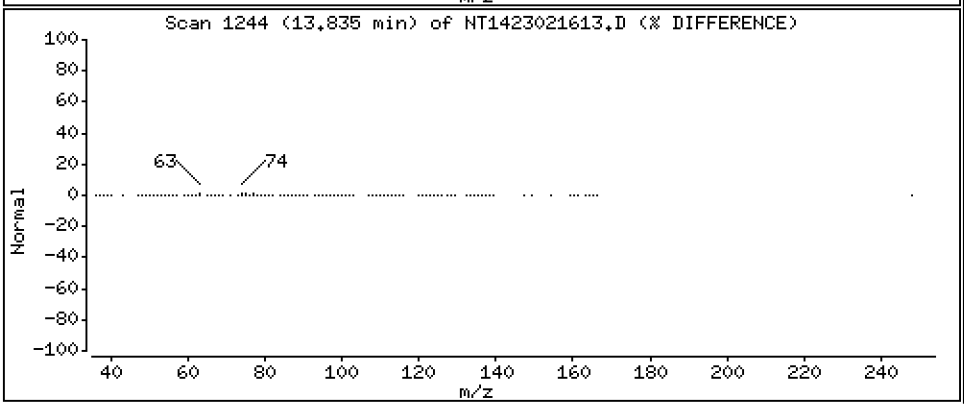












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

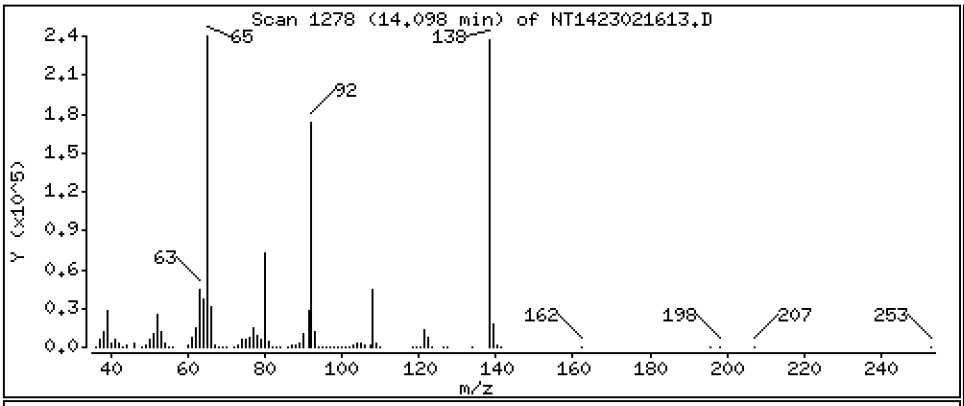
Operator: DSD

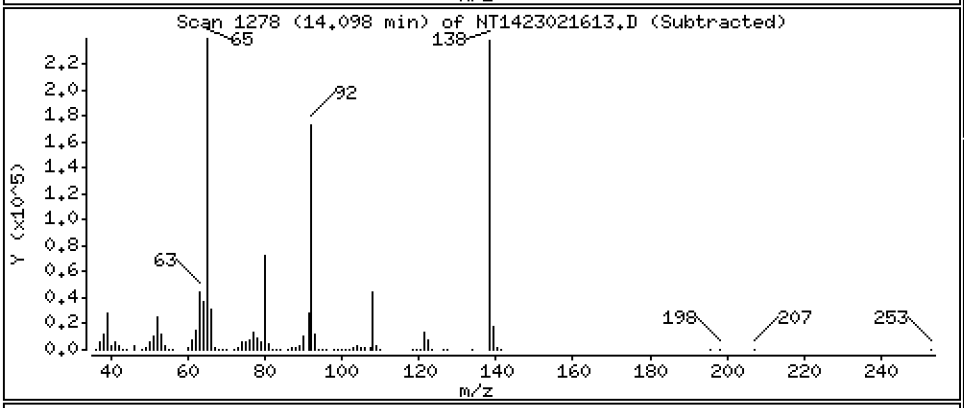
Column phase: ZB-5msi

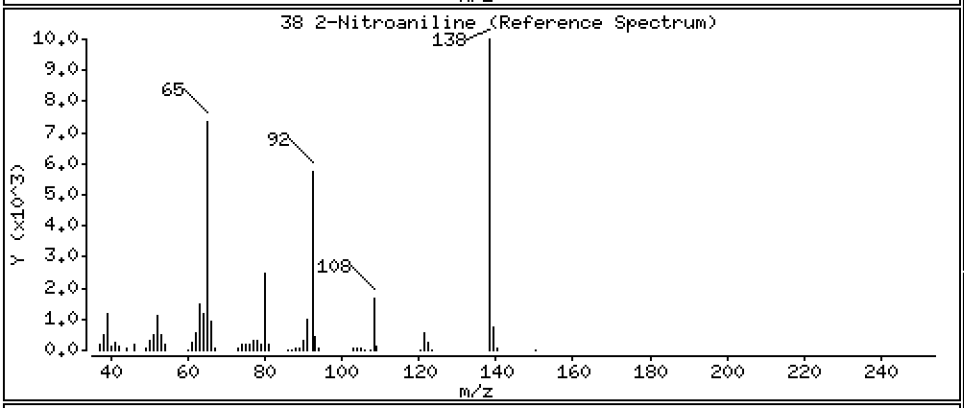
Column diameter: 0.25

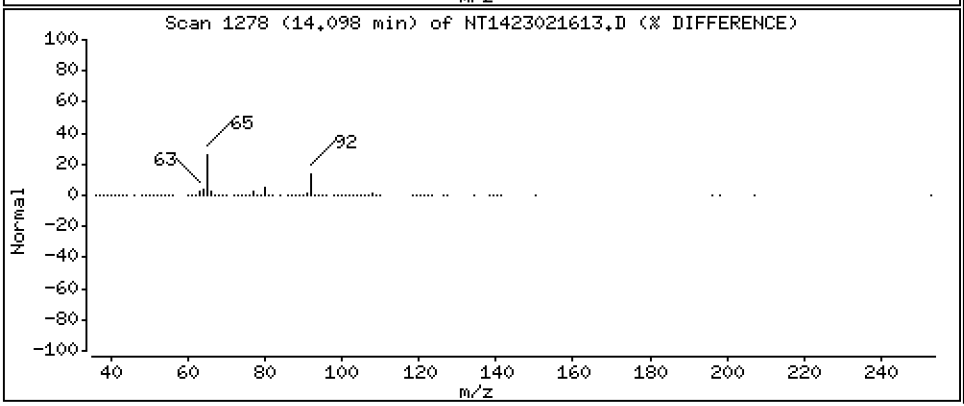
38 2-Nitroaniline

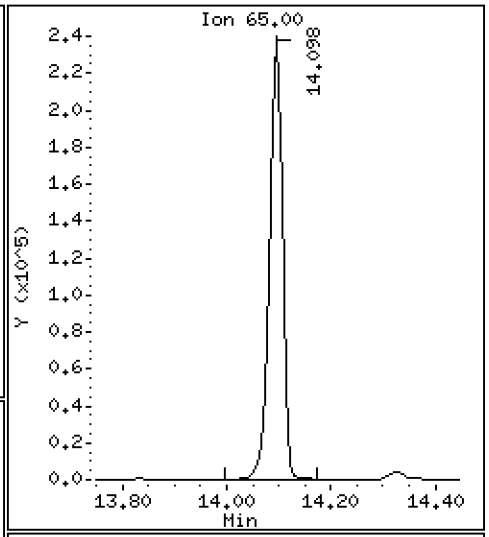
Concentration: 4.852 ug/mL

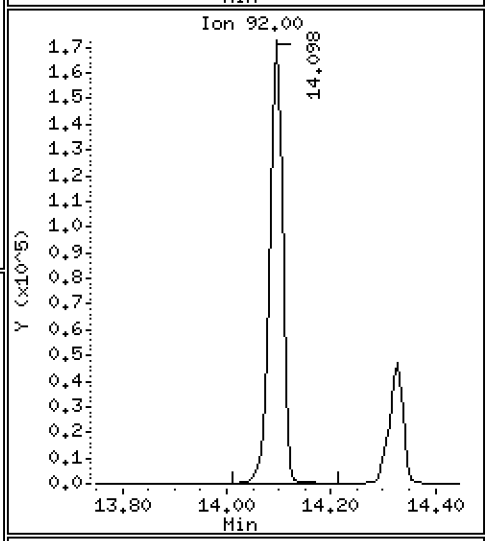


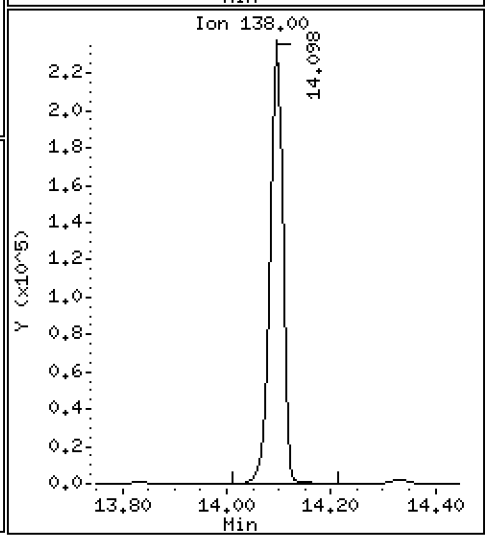












Date : 16-FEB-2023 21:18

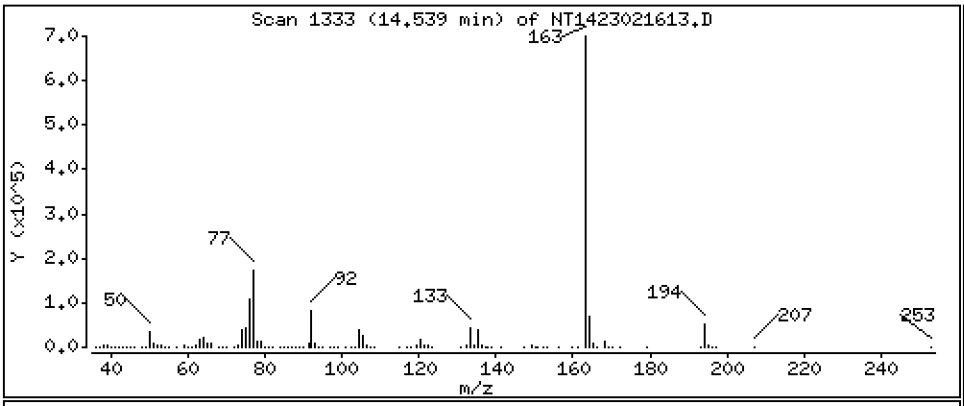
Client ID: Instrument: nt14.i

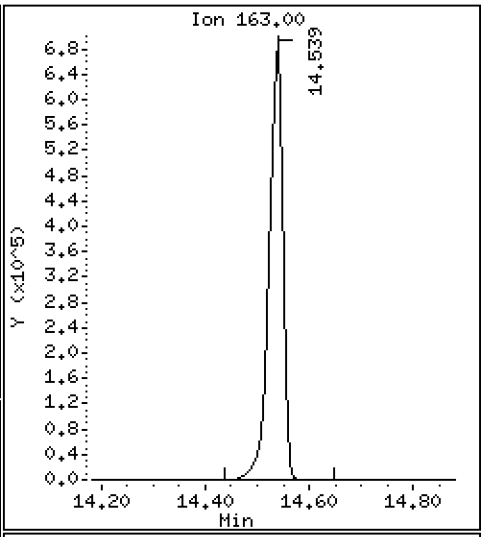
Sample Info: SLB0234-SCV1

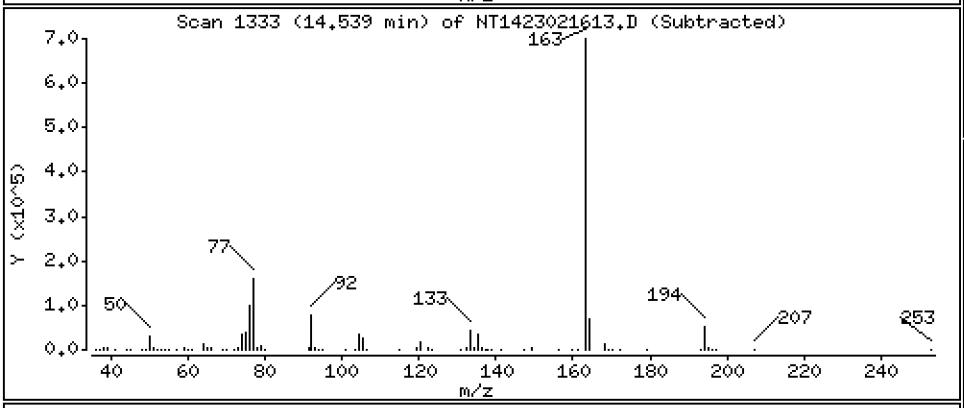
Operator: DSD

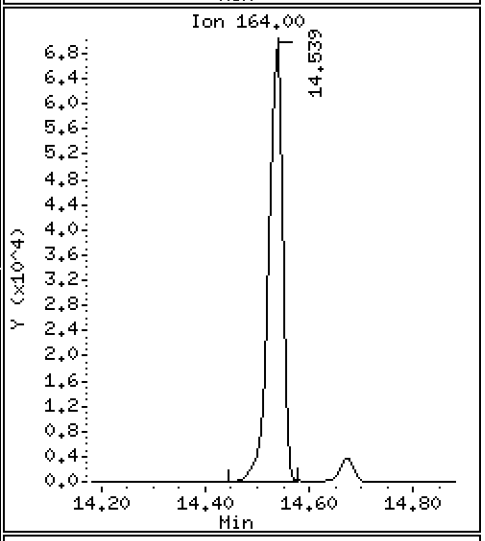
Column phase: ZB-5msi Column diameter: 0.25

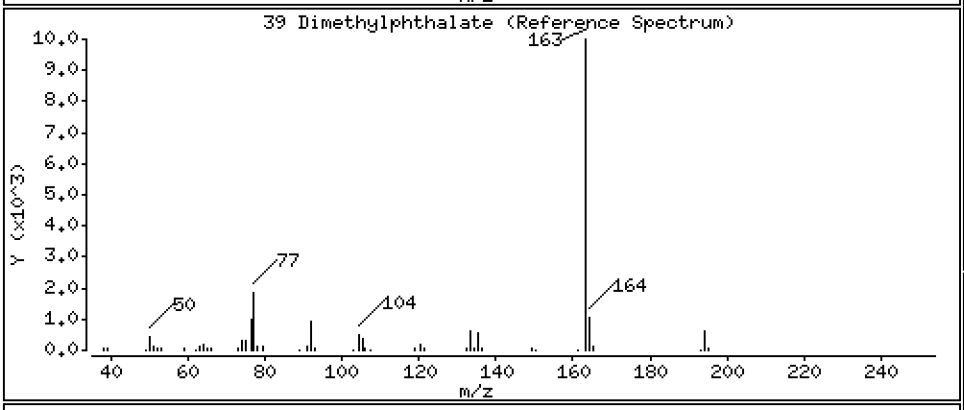
39 Dimethylphthalate Concentration: 4.693 ug/mL

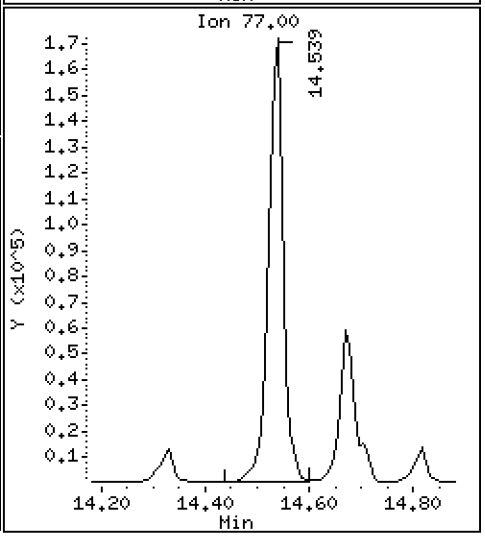


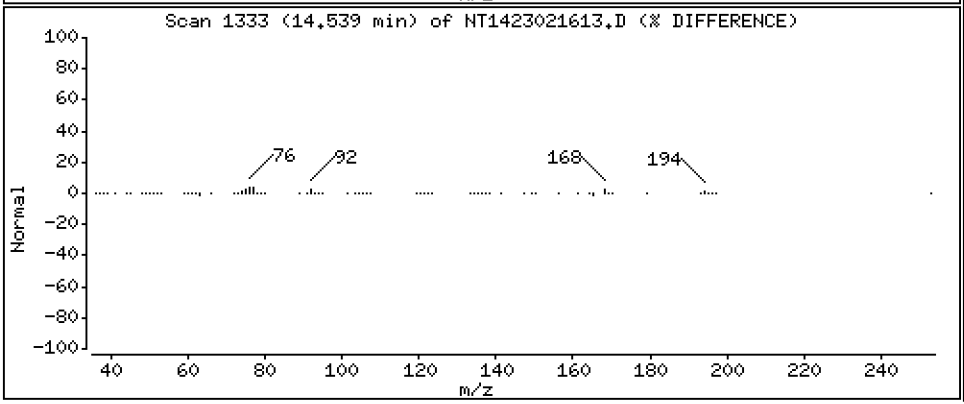












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

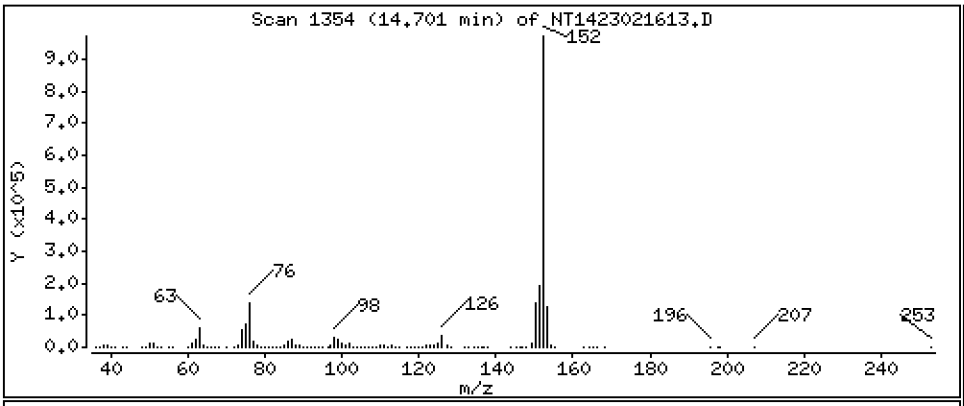
Operator: DSD

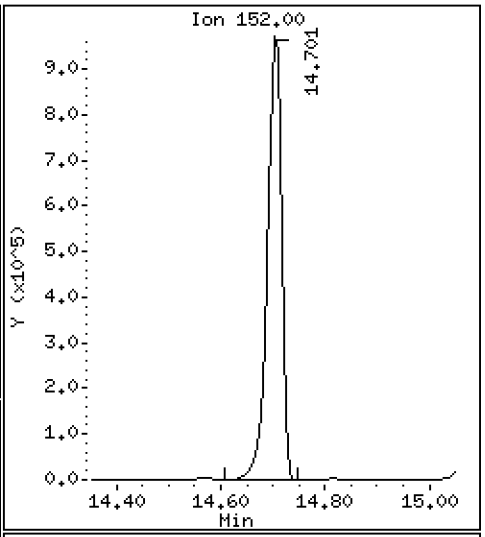
Column phase: ZB-5msi

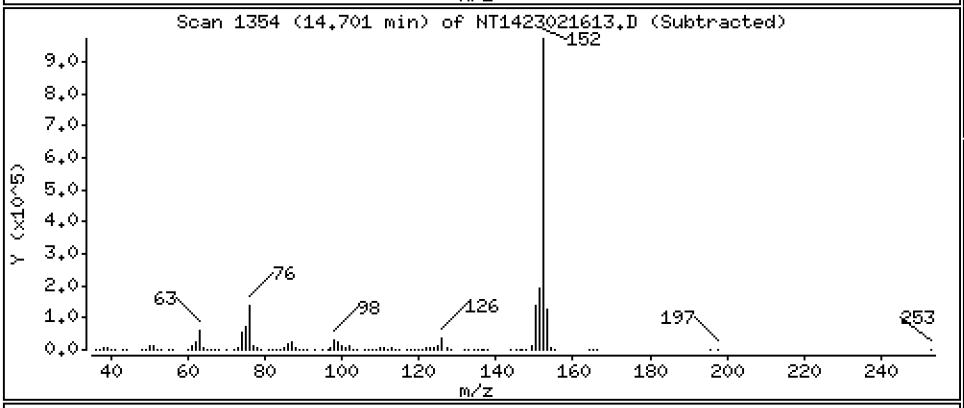
Column diameter: 0.25

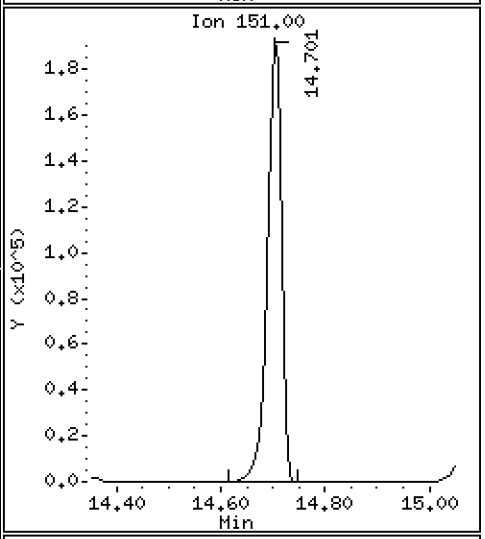
40 Acenaphthylene

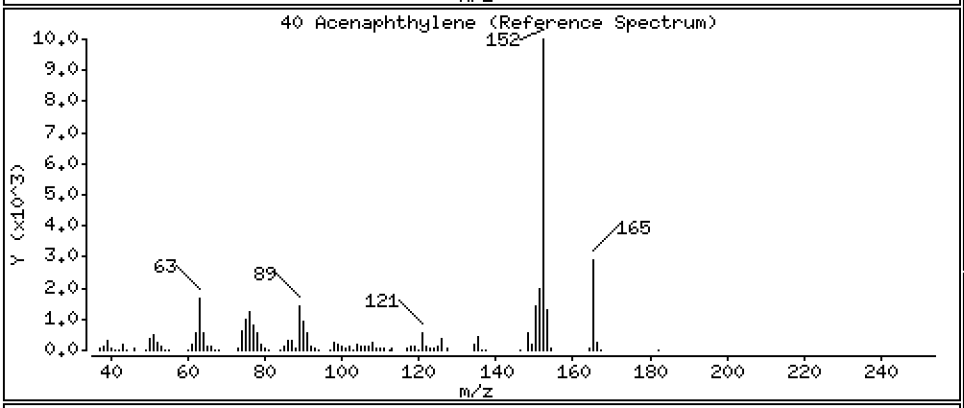
Concentration: 4.657 ug/mL

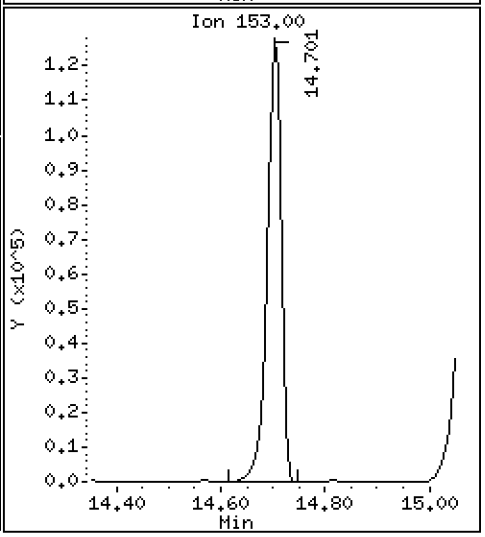


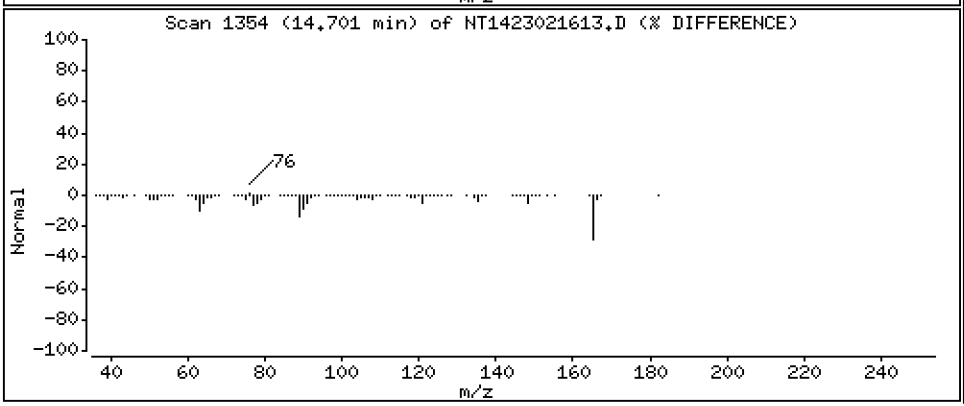












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

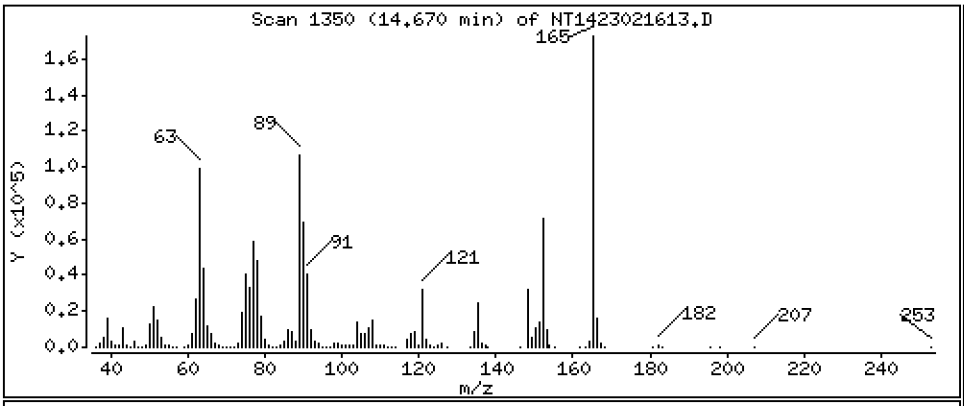
Operator: DSD

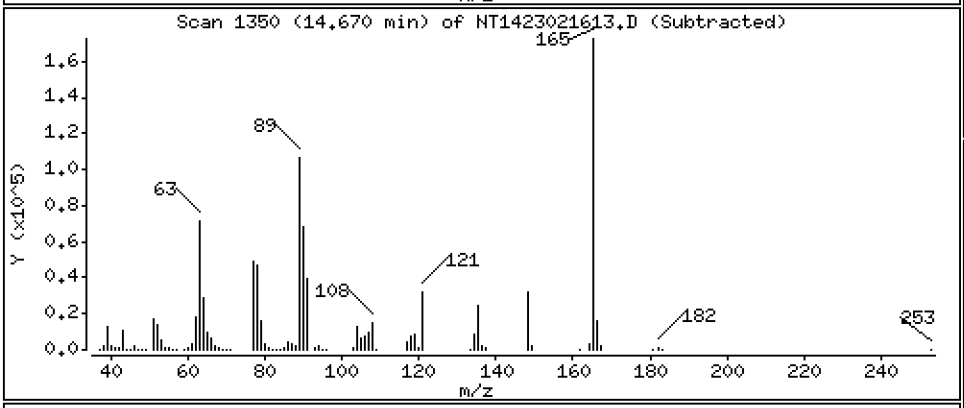
Column phase: ZB-5msi

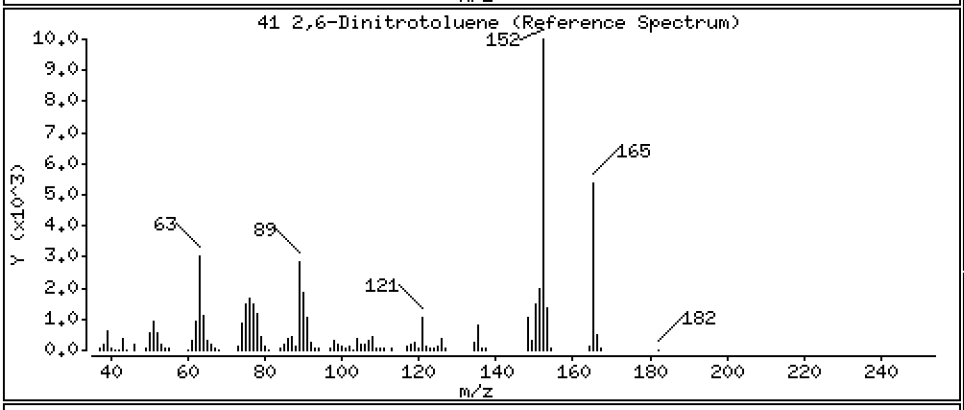
Column diameter: 0.25

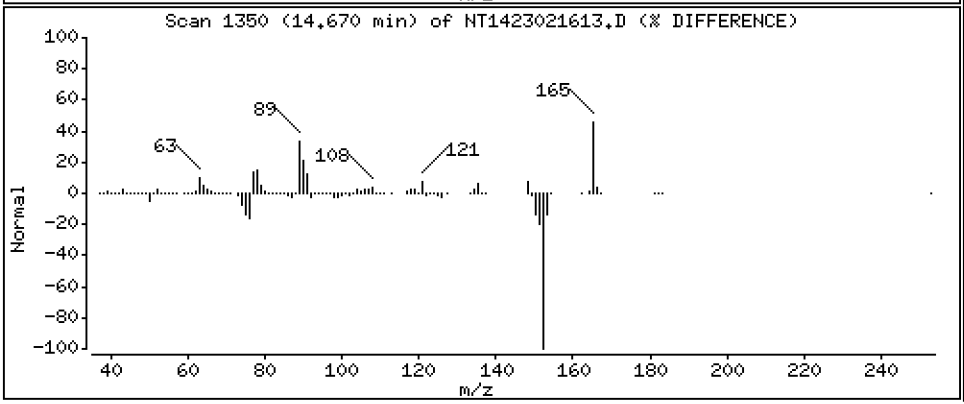
41 2,6-Dinitrotoluene

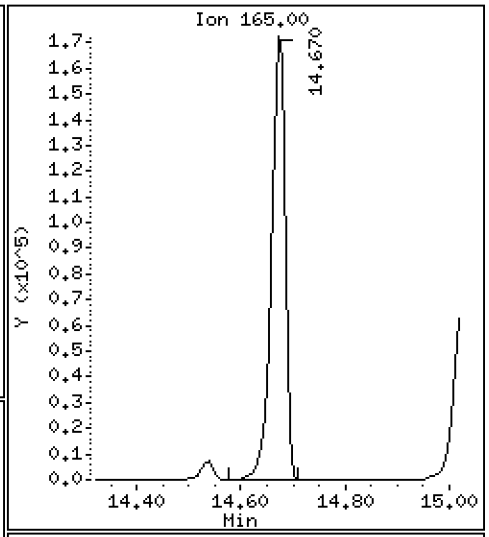
Concentration: 4.935 ug/mL

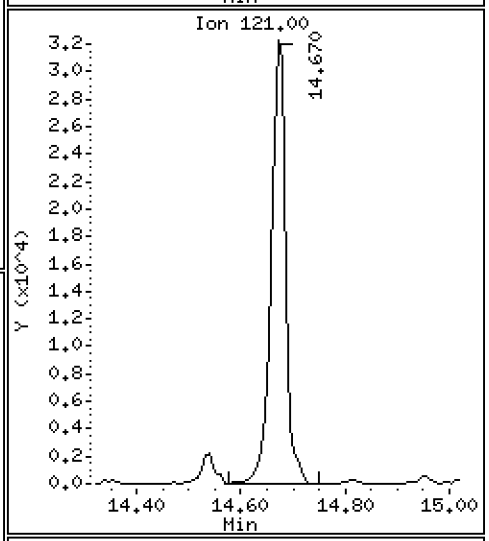


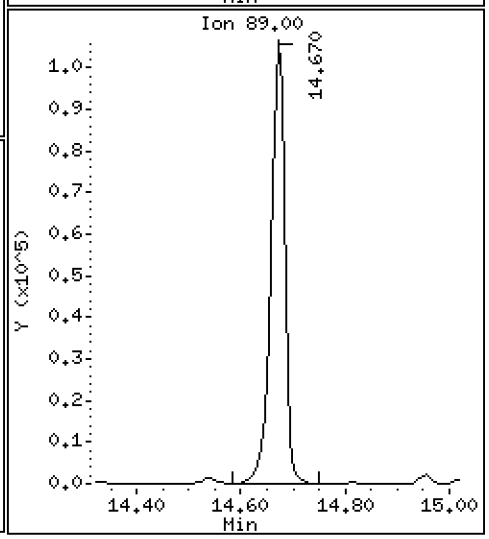












Date : 16-FEB-2023 21:18

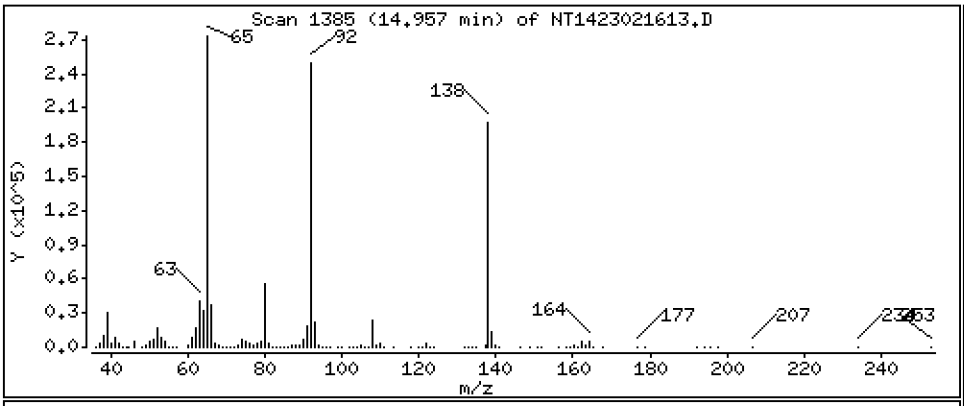
Client ID: Instrument: nt14.i

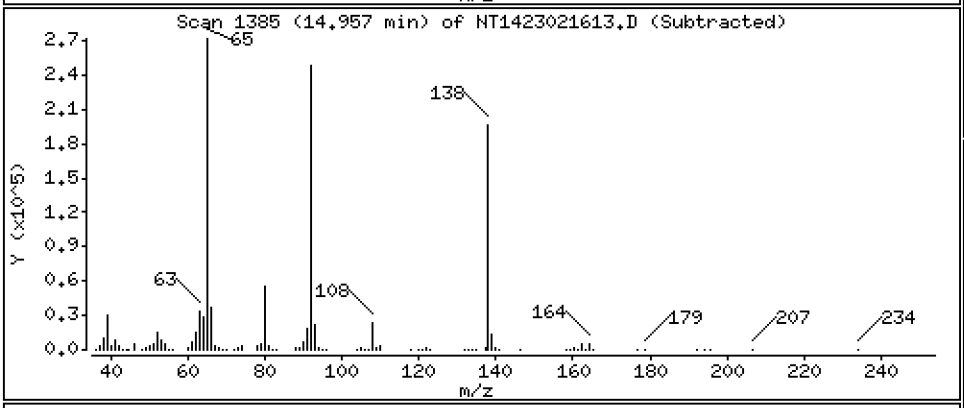
Sample Info: SLB0234-SCV1

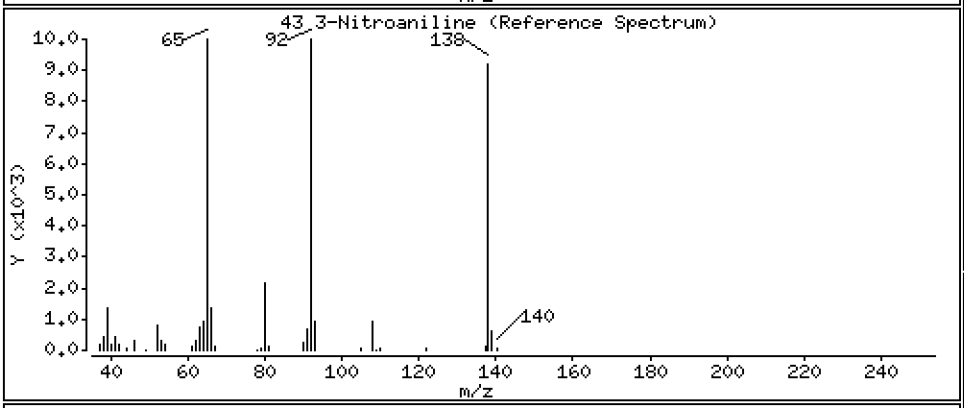
Operator: DSD

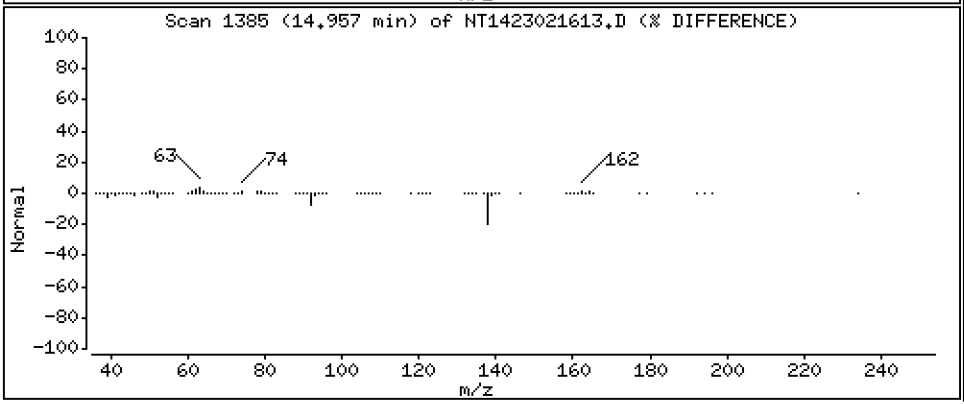
Column phase: ZB-5msi Column diameter: 0.25

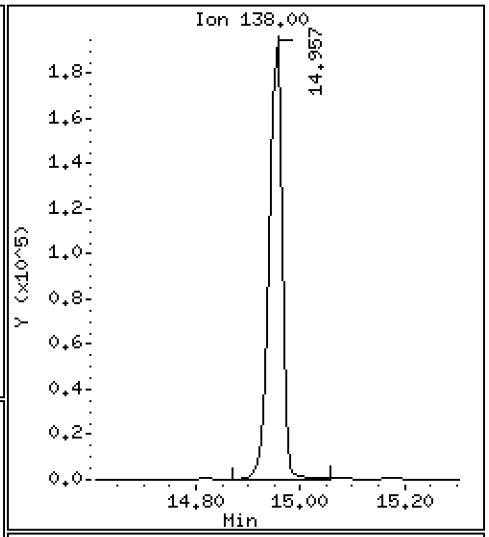
43 3-Nitroaniline Concentration: 4.922 ug/mL

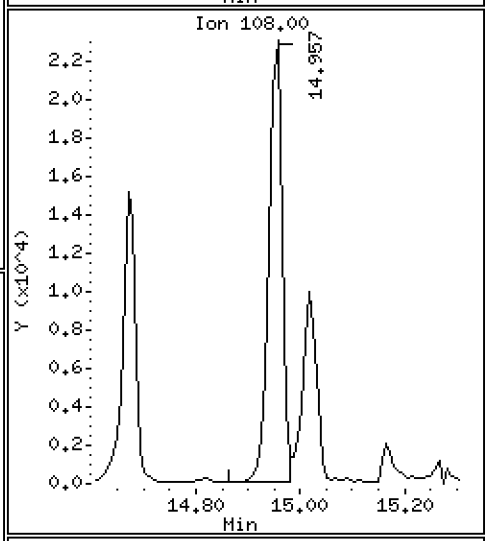


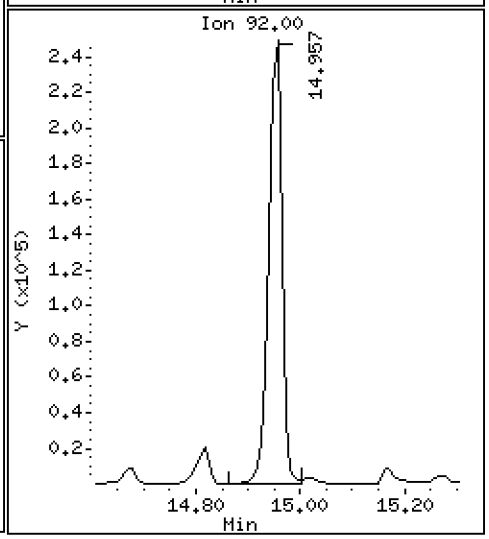












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

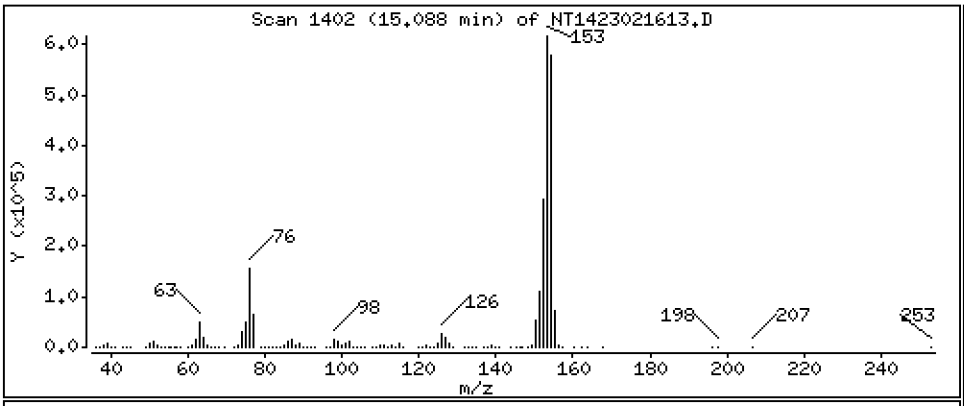
Operator: DSD

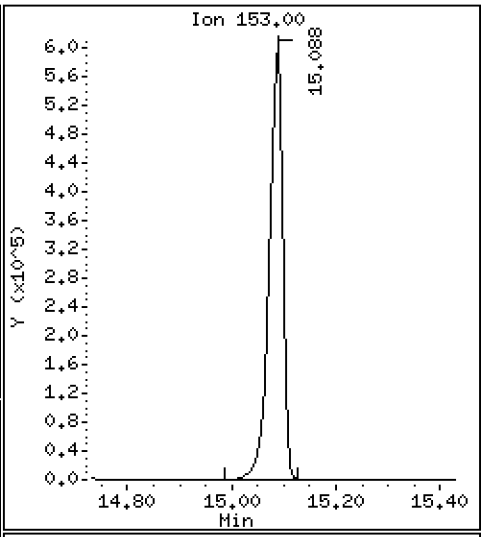
Column phase: ZB-5msi

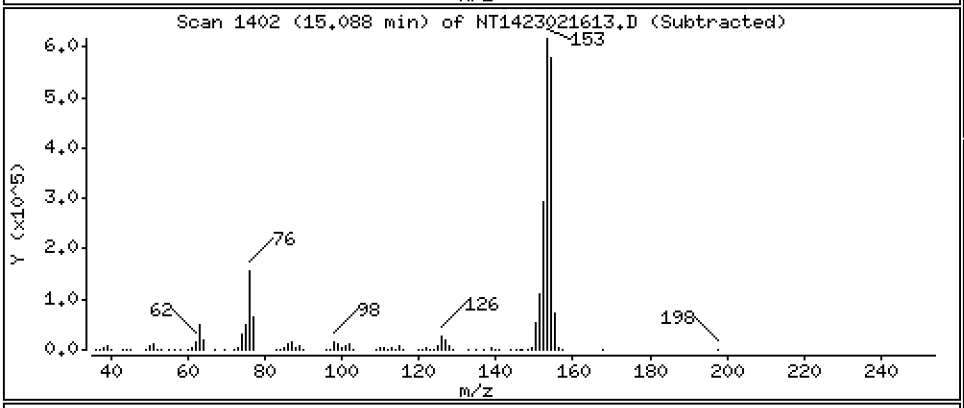
Column diameter: 0.25

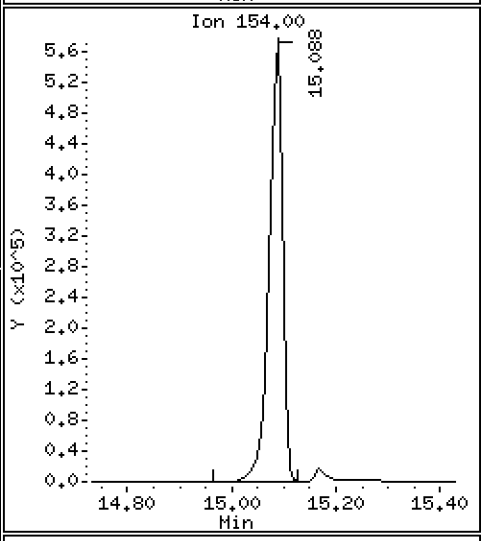
44 Acenaphthene

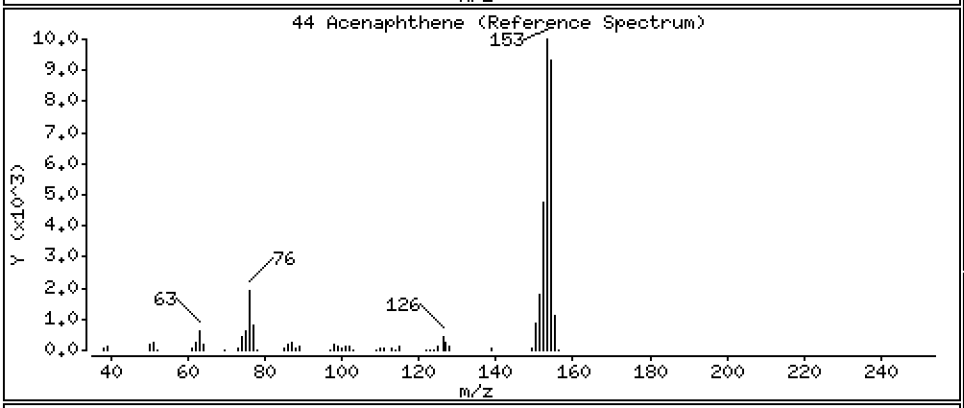
Concentration: 4.633 ug/mL

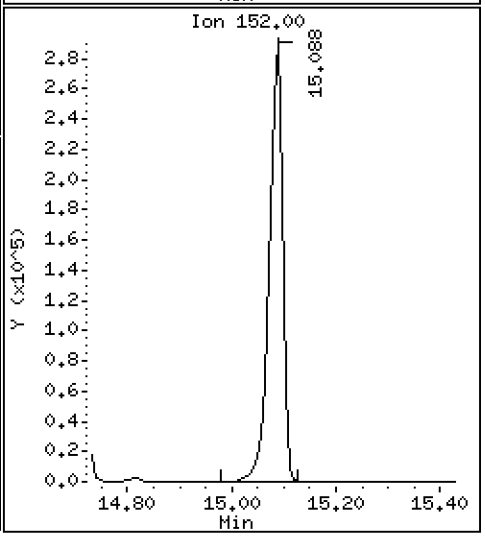


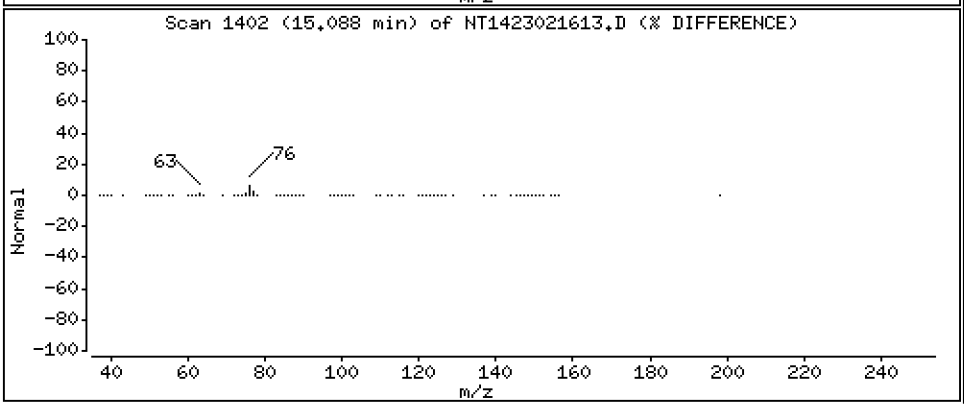












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

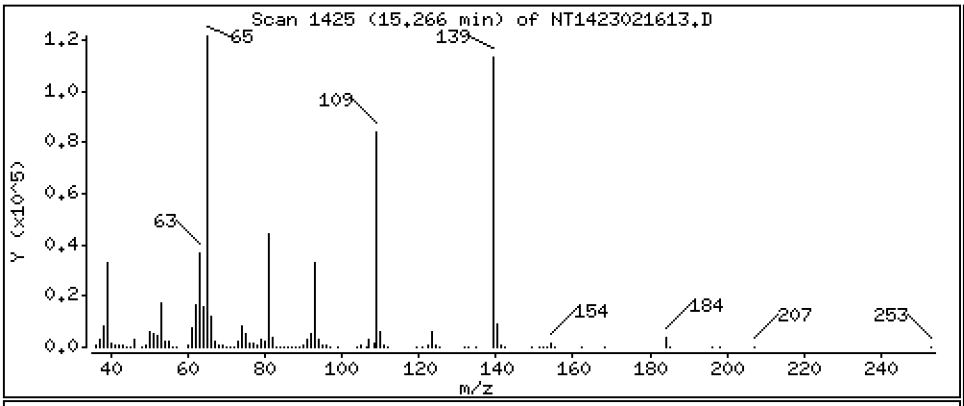
Operator: DSD

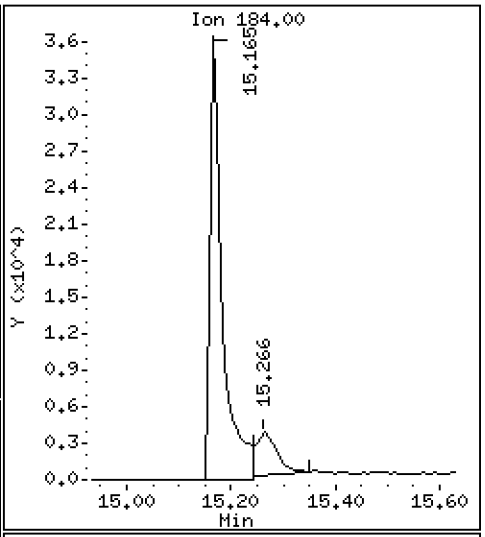
Column phase: ZB-5msi

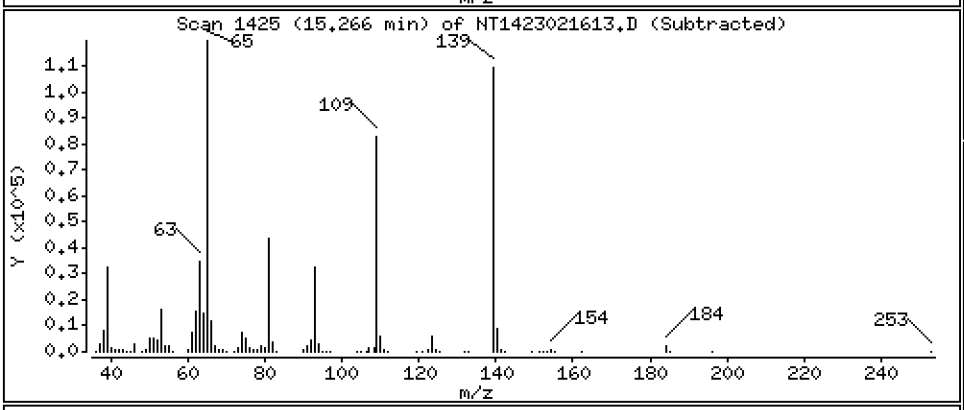
Column diameter: 0.25

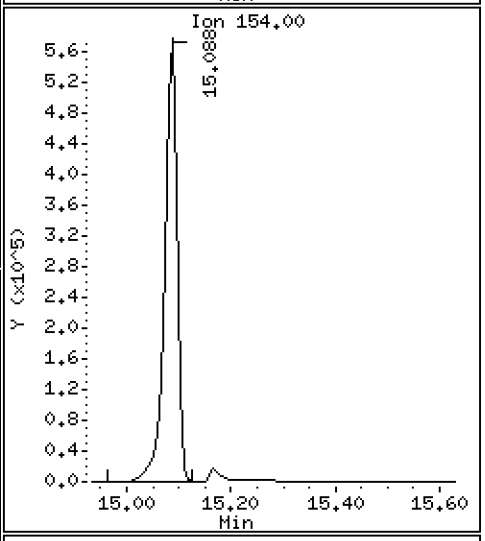
45 2,4-Dinitrophenol

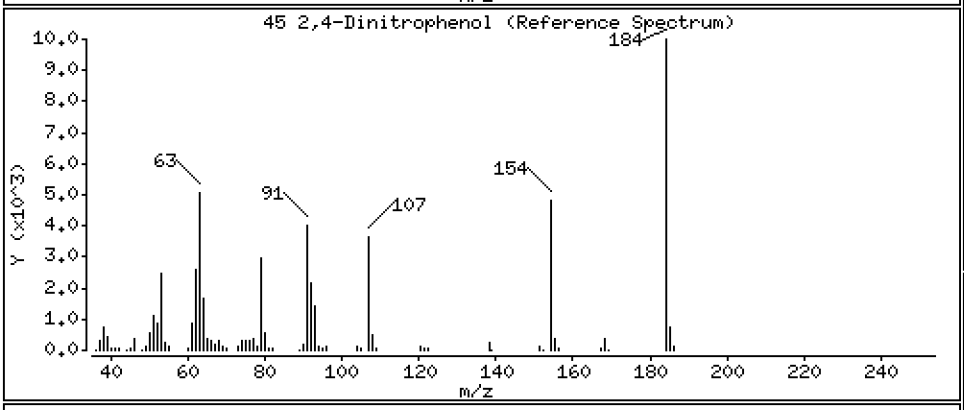
Concentration: 0.2502 ug/mL

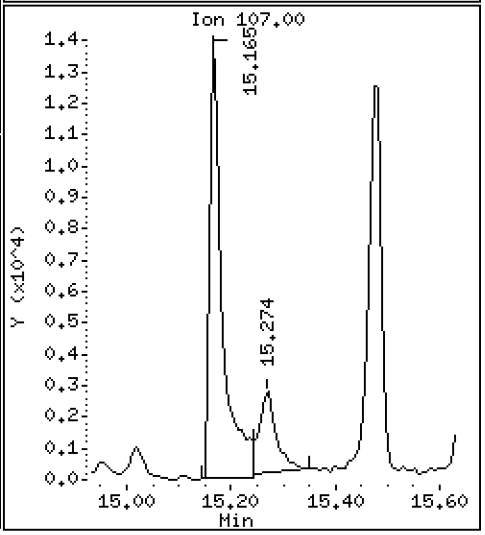


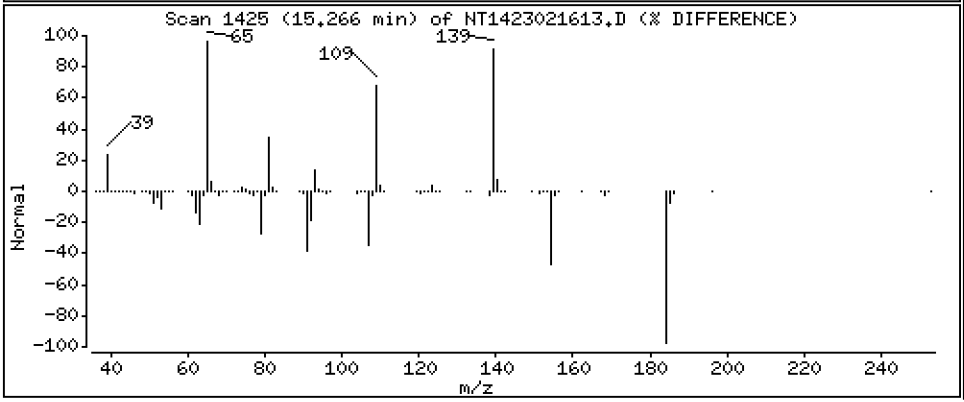












Date : 16-FEB-2023 21:18

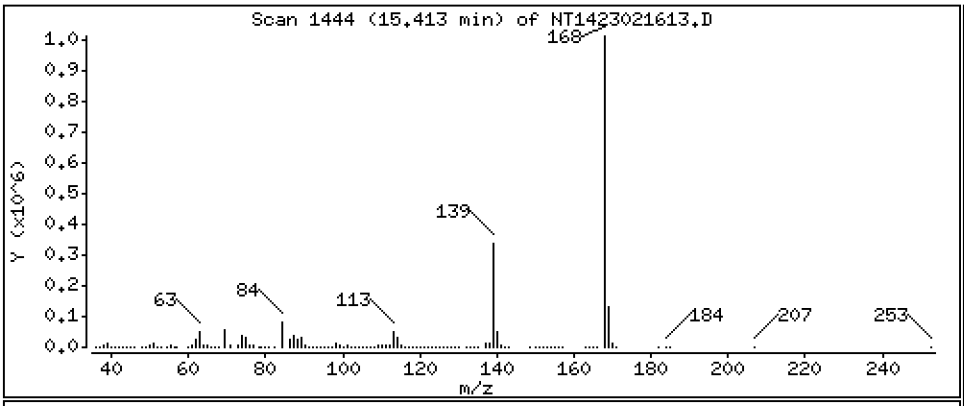
Client ID: Instrument: nt14.i

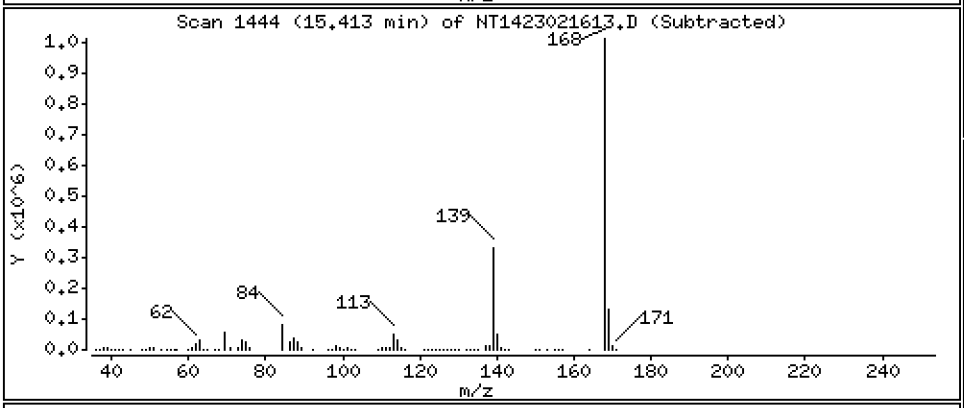
Sample Info: SLB0234-SCV1

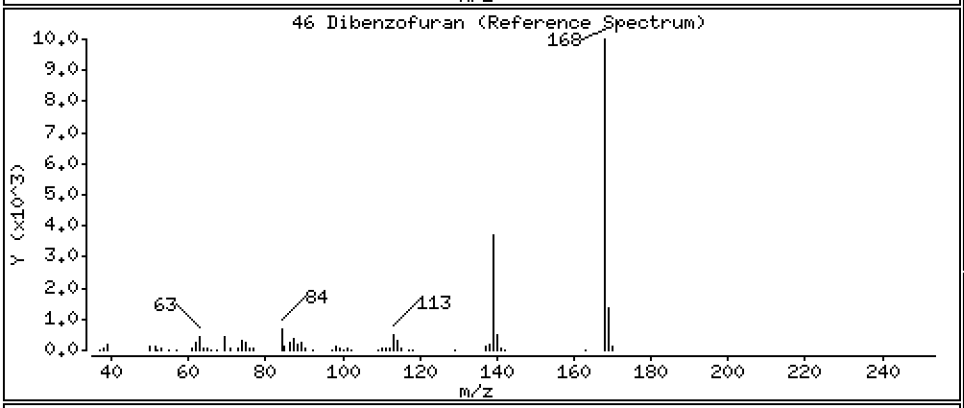
Operator: DSD

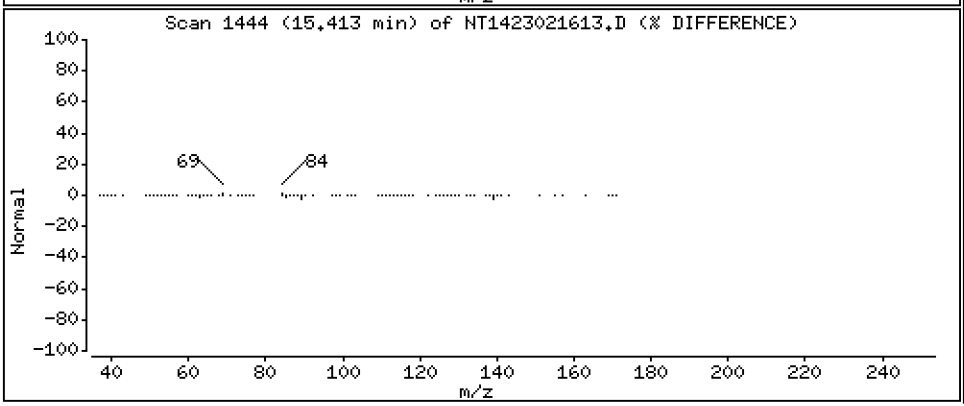
Column phase: ZB-5msi Column diameter: 0.25

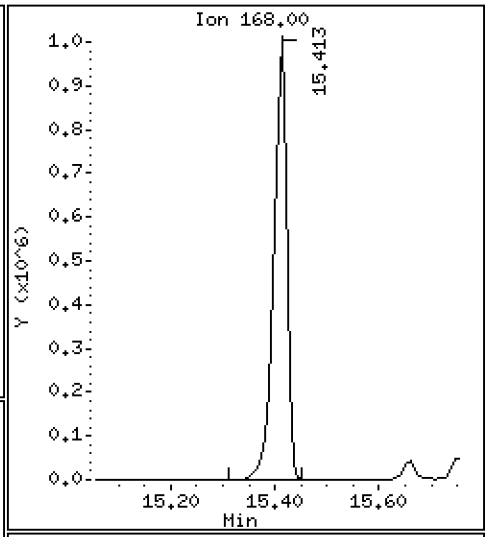
46 Dibenzofuran Concentration: 4.548 ug/mL

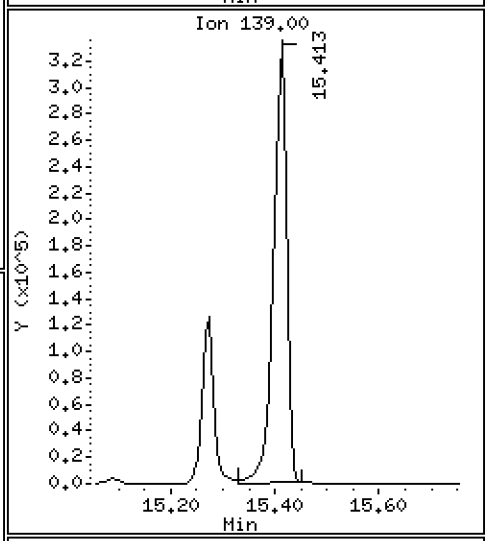


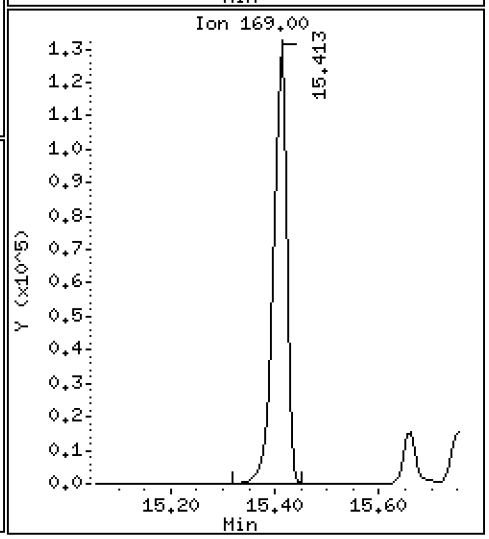












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

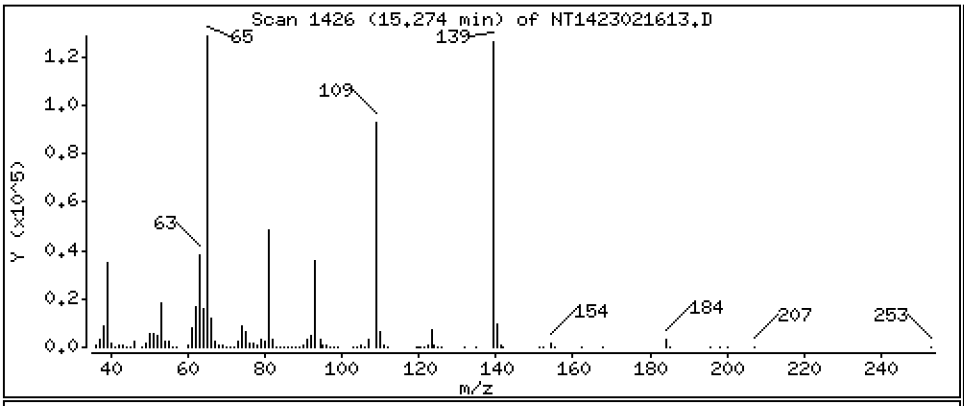
Operator: DSD

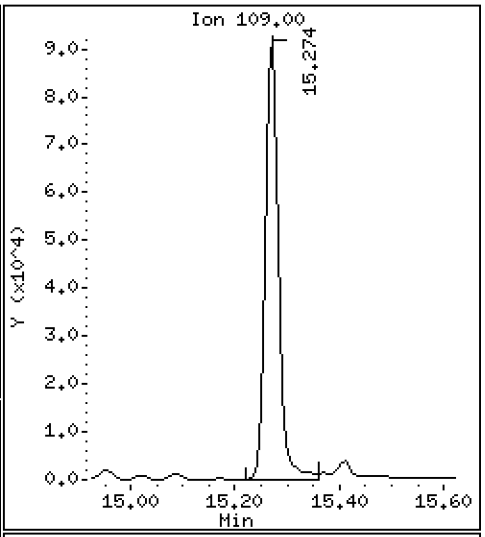
Column phase: ZB-5msi

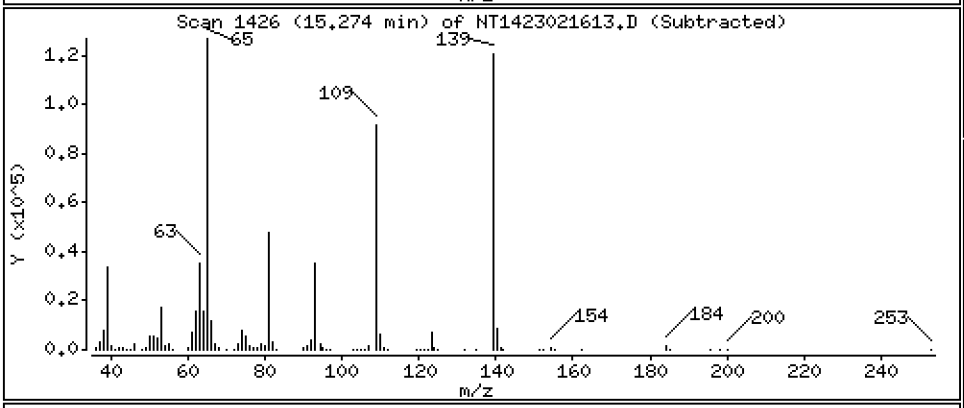
Column diameter: 0.25

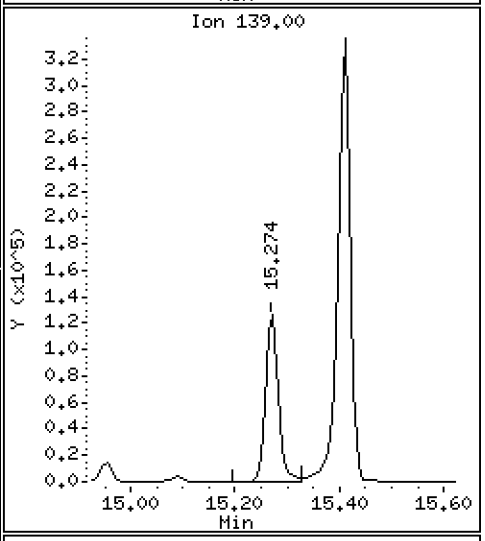
47 4-Nitrophenol

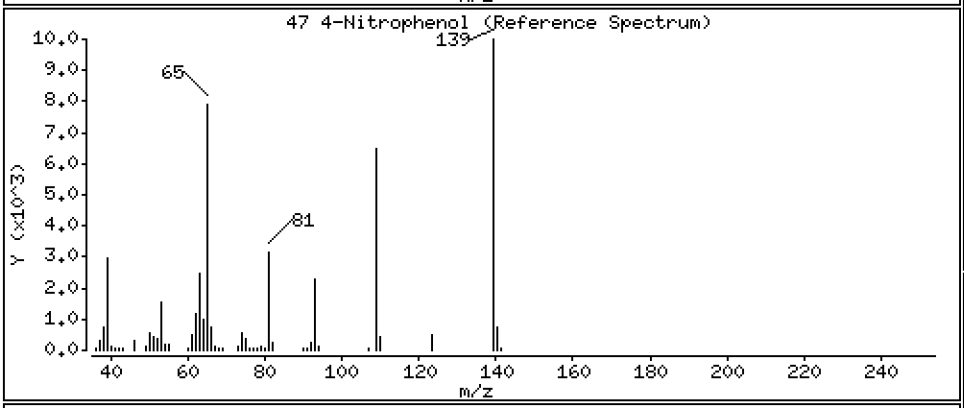
Concentration: 4.052 ug/mL

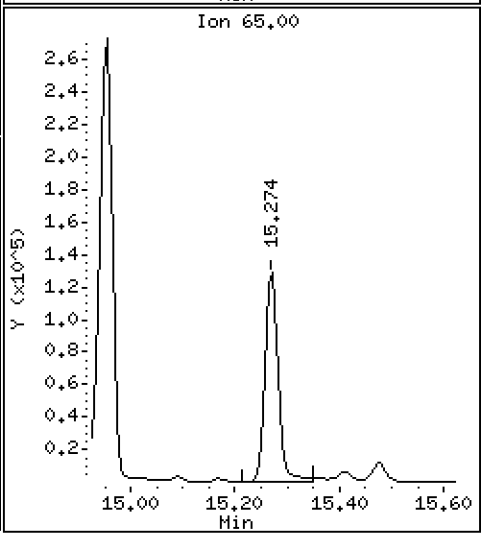


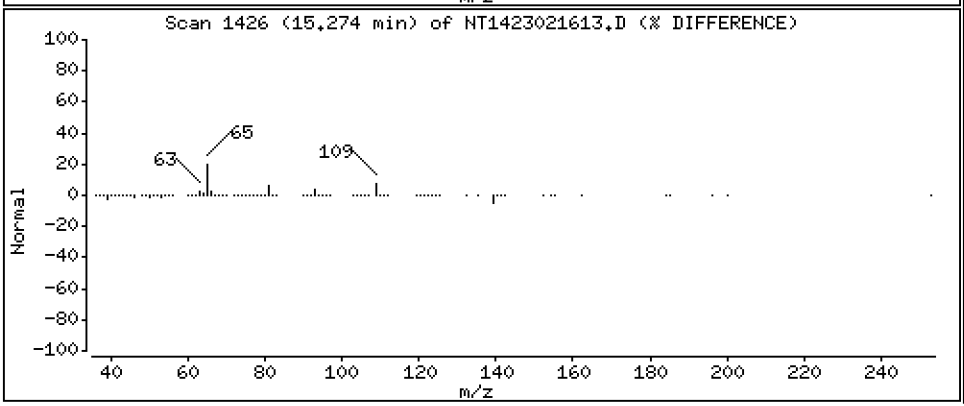












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

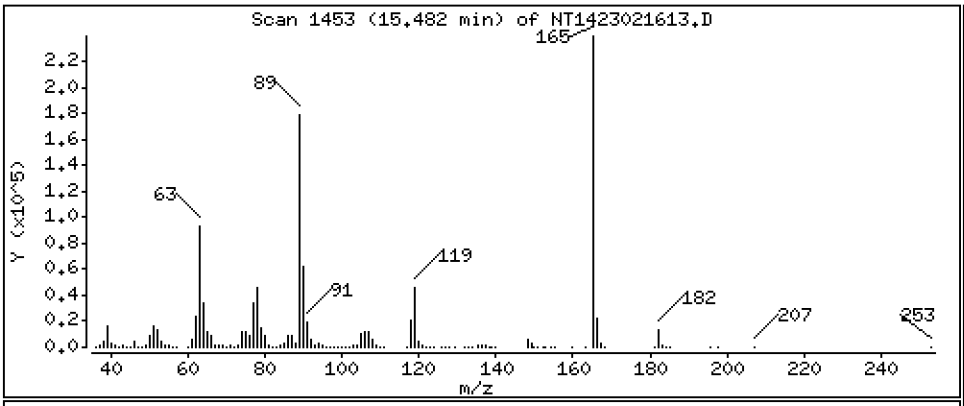
Operator: DSD

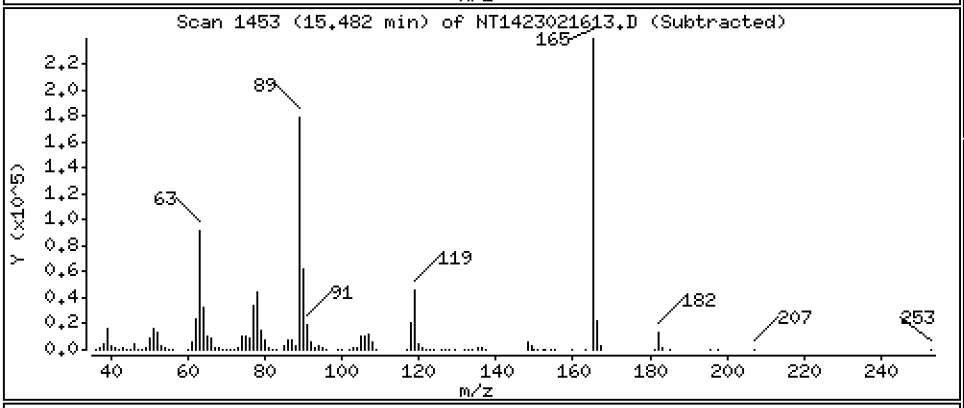
Column phase: ZB-5msi

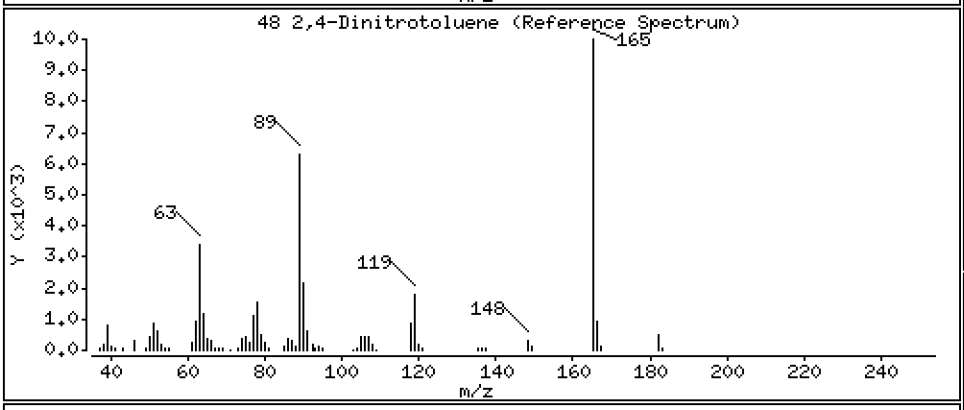
Column diameter: 0.25

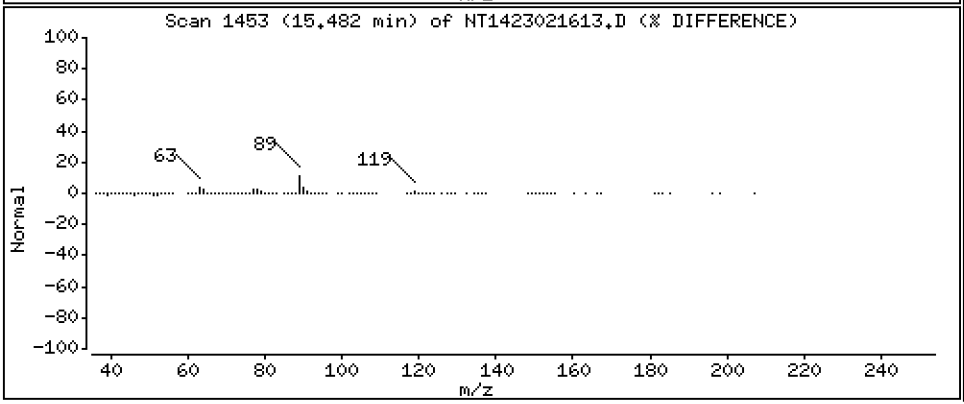
48 2,4-Dinitrotoluene

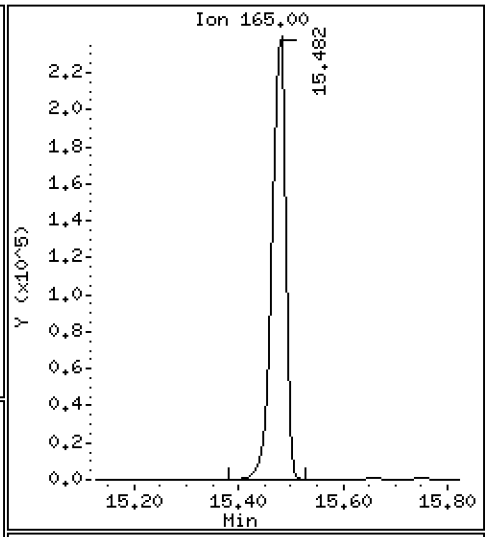
Concentration: 4.855 ug/mL

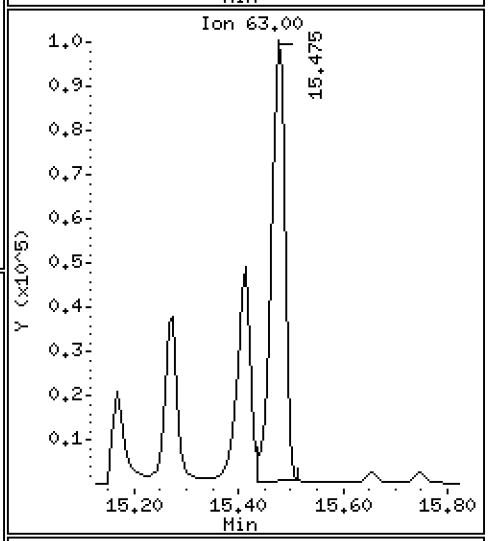


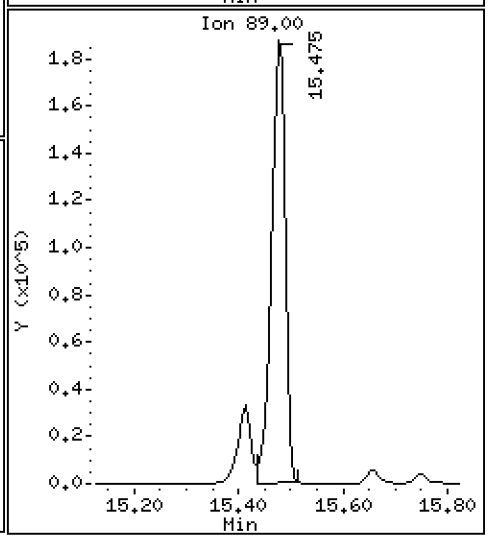












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

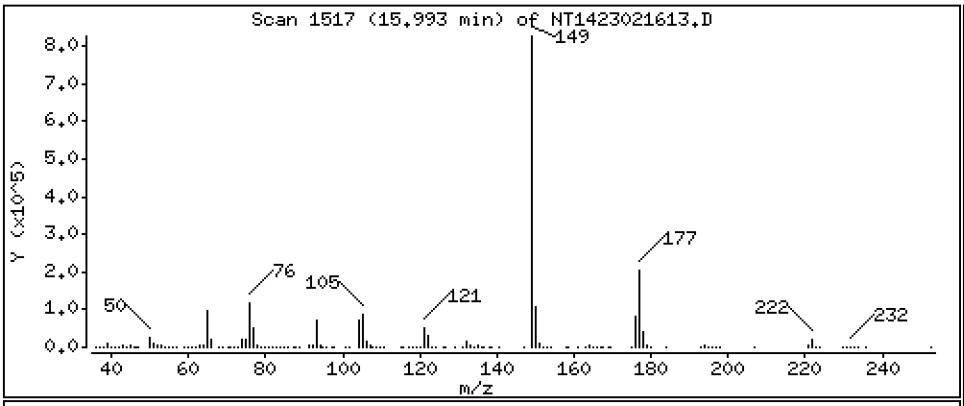
Operator: DSD

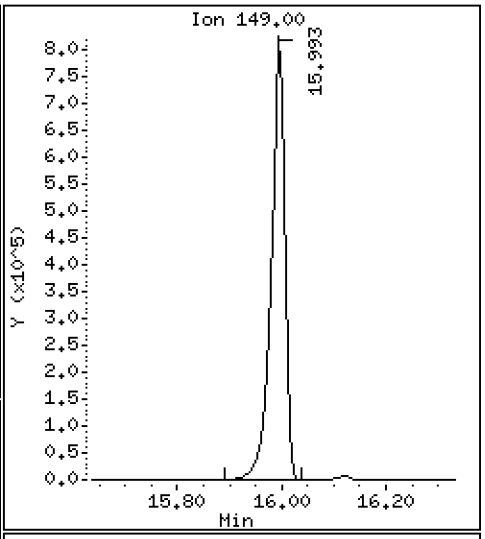
Column phase: ZB-5msi

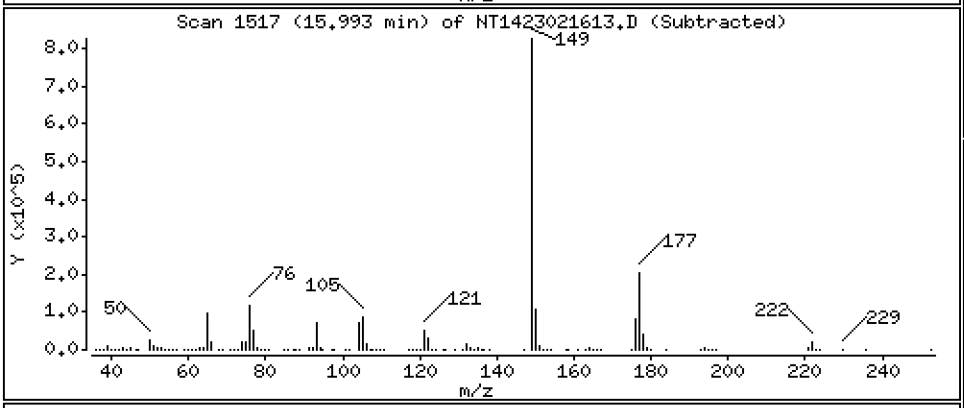
Column diameter: 0.25

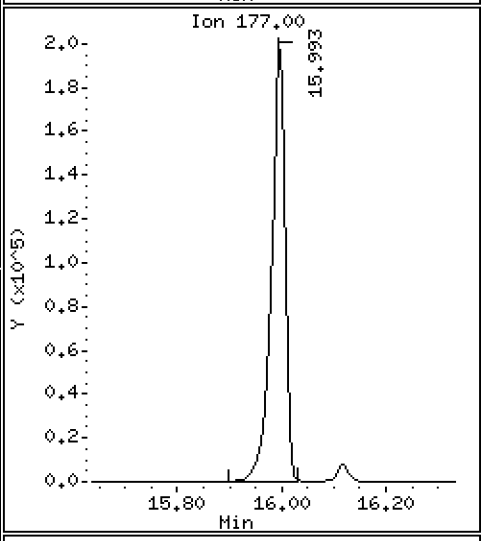
50 Diethylphthalate

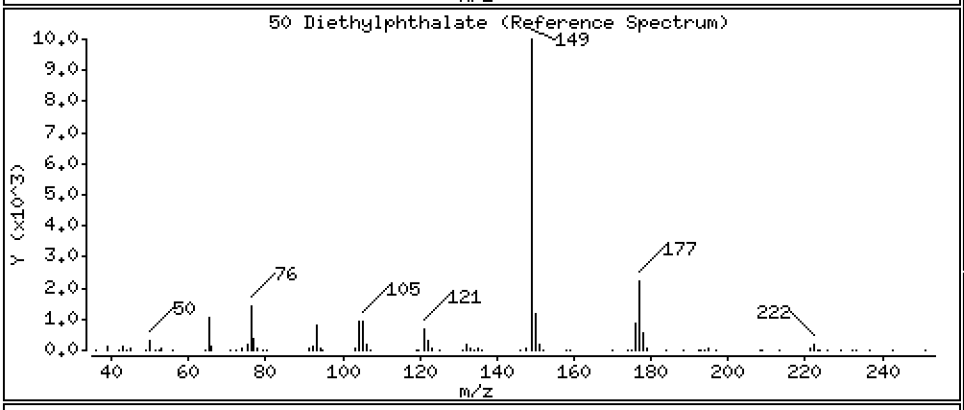
Concentration: 4.722 ug/mL

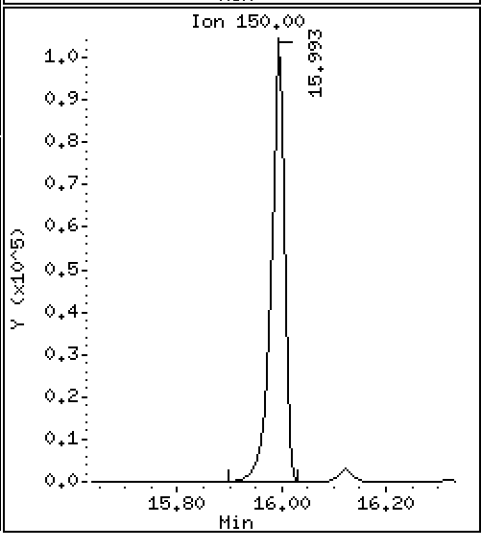


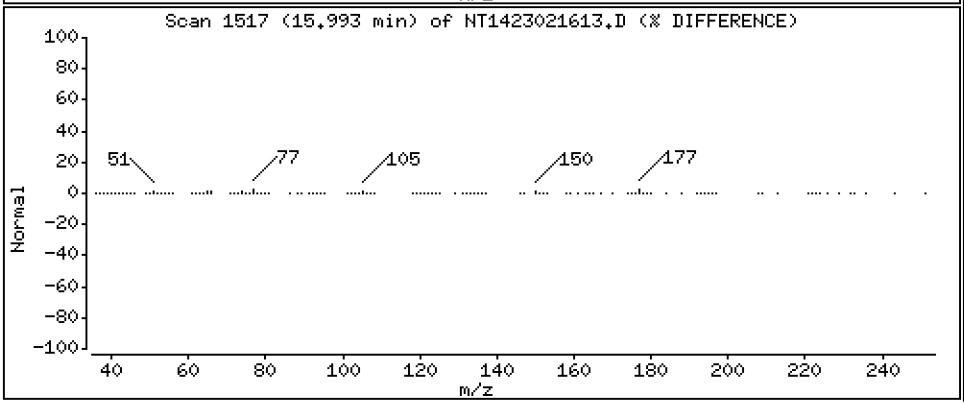












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

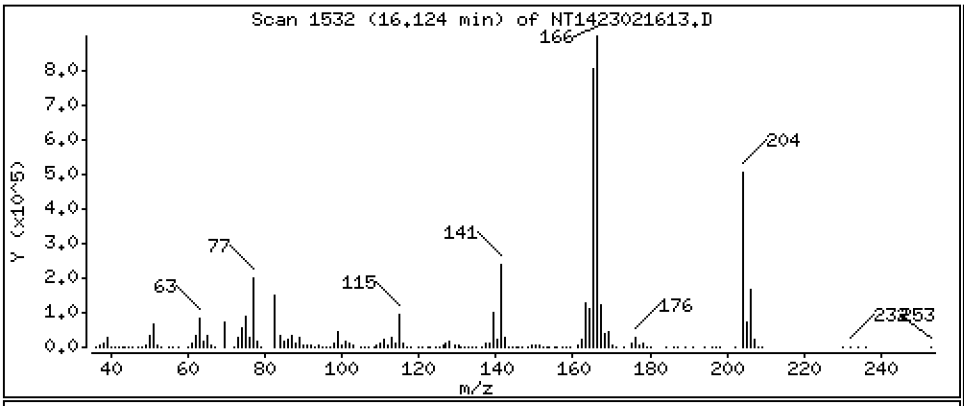
Operator: DSD

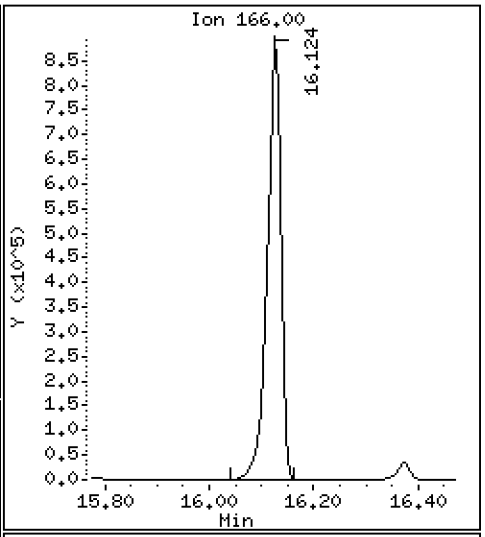
Column phase: ZB-5msi

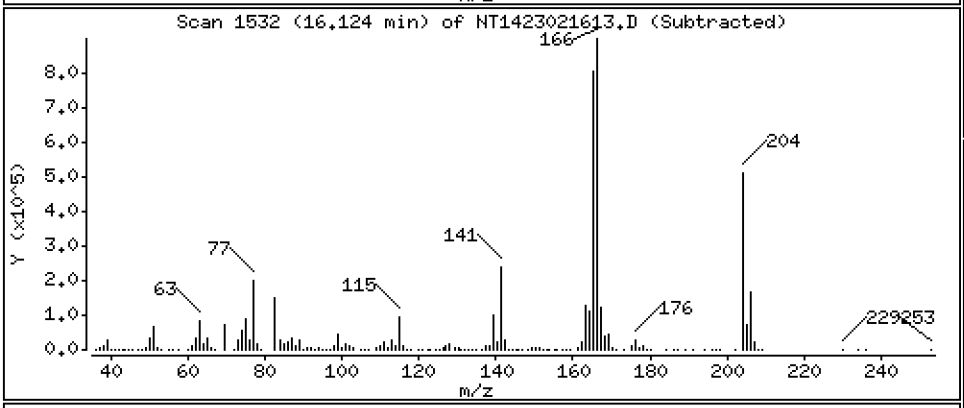
Column diameter: 0.25

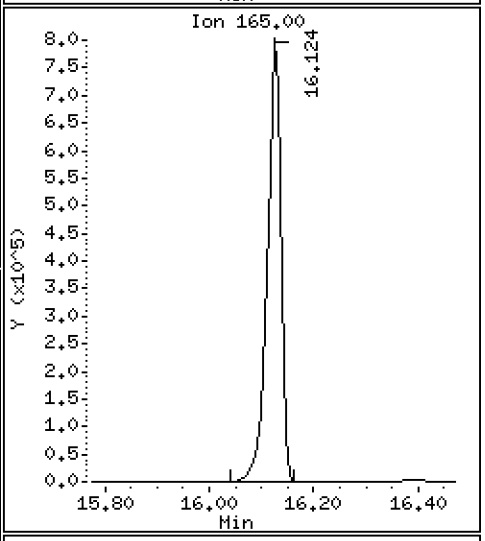
49 Fluorene

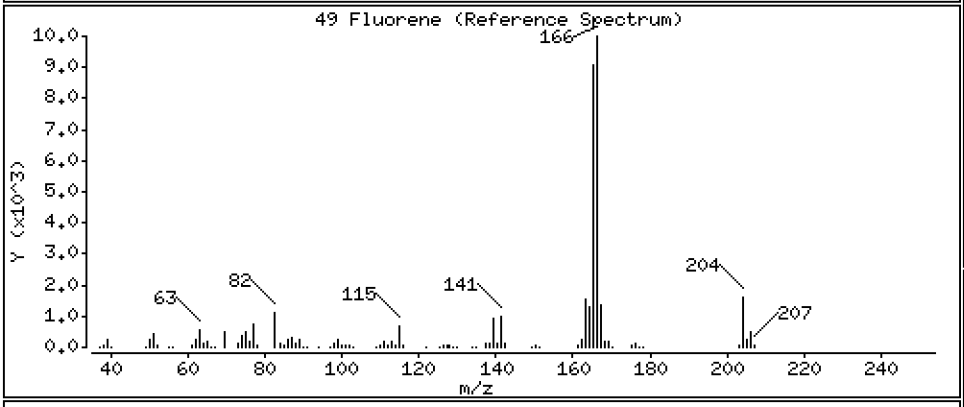
Concentration: 4.638 ug/mL

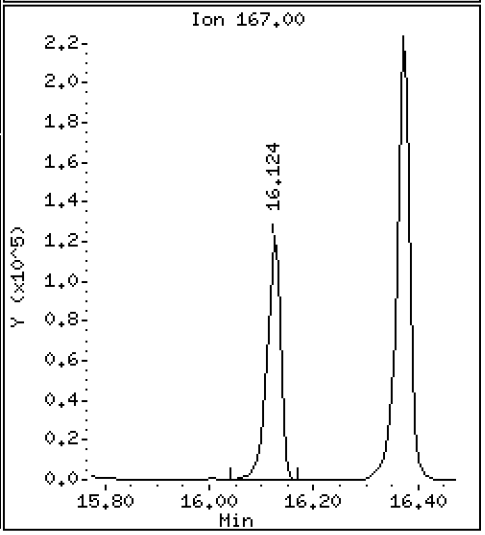


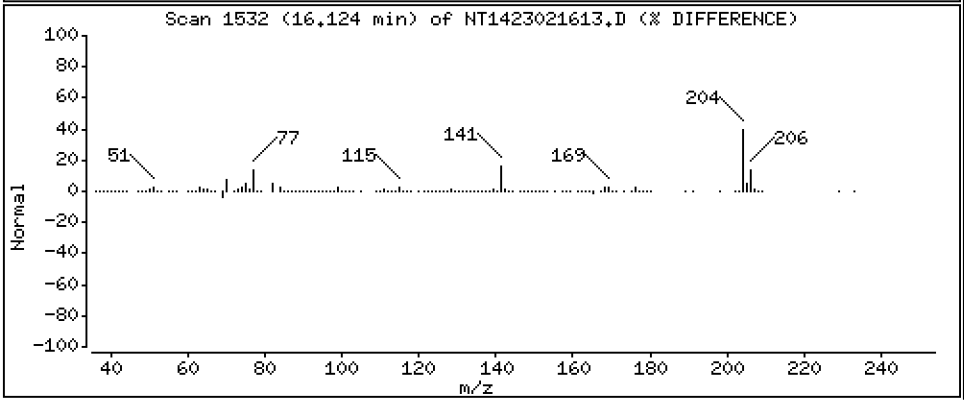












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

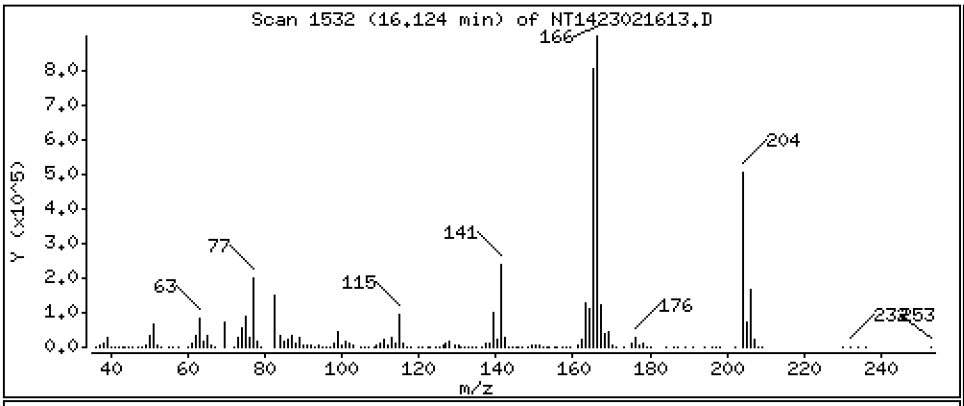
Operator: DSD

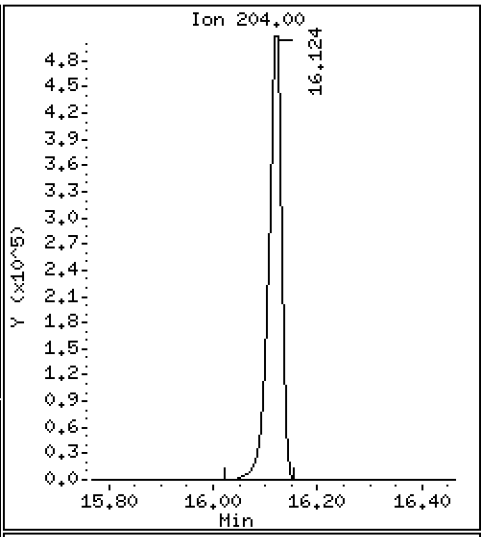
Column phase: ZB-5msi

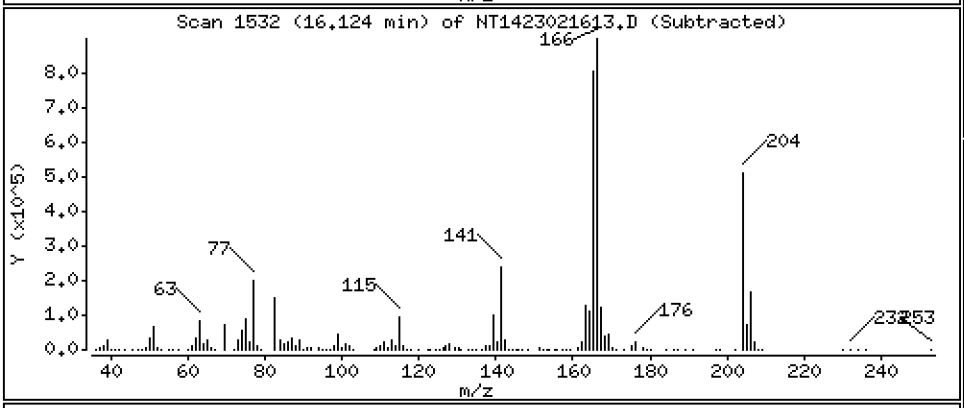
Column diameter: 0.25

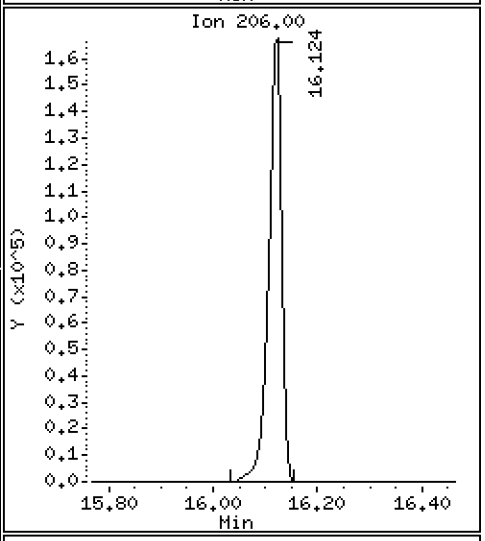
51 4-Chlorophenyl-phenylether

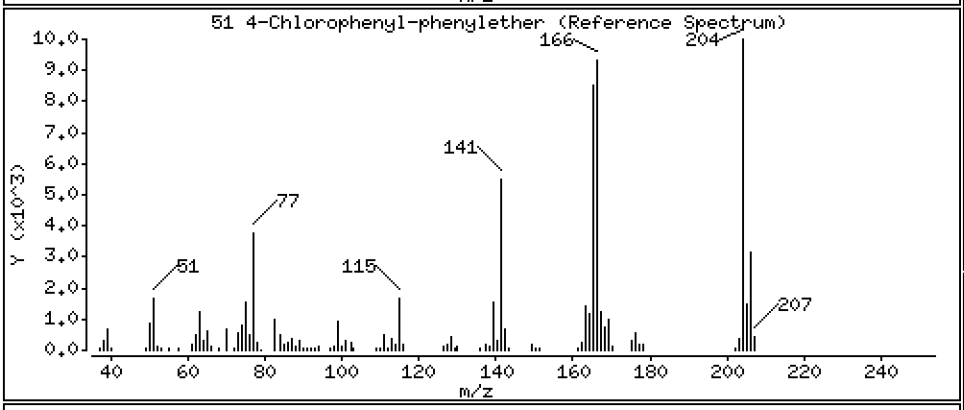
Concentration: 4.754 ug/mL

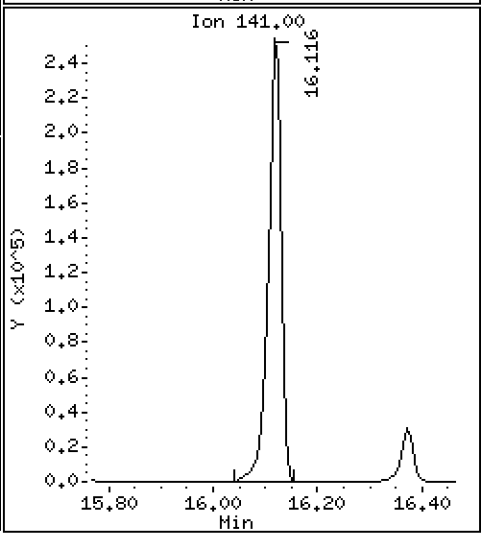


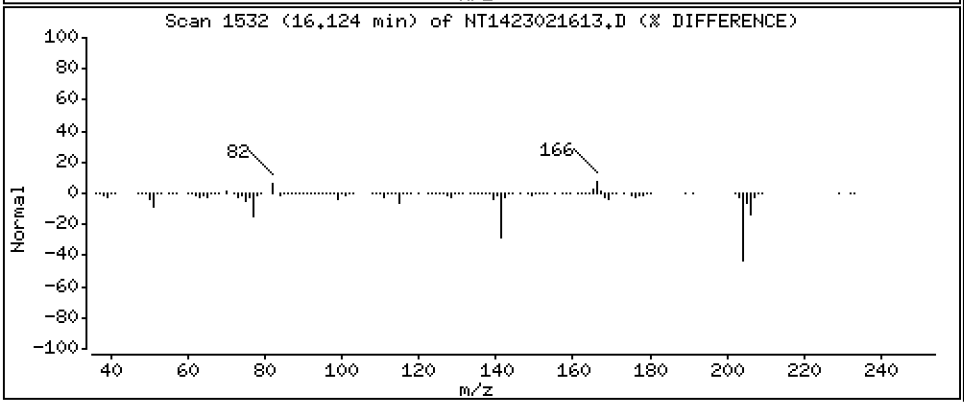












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

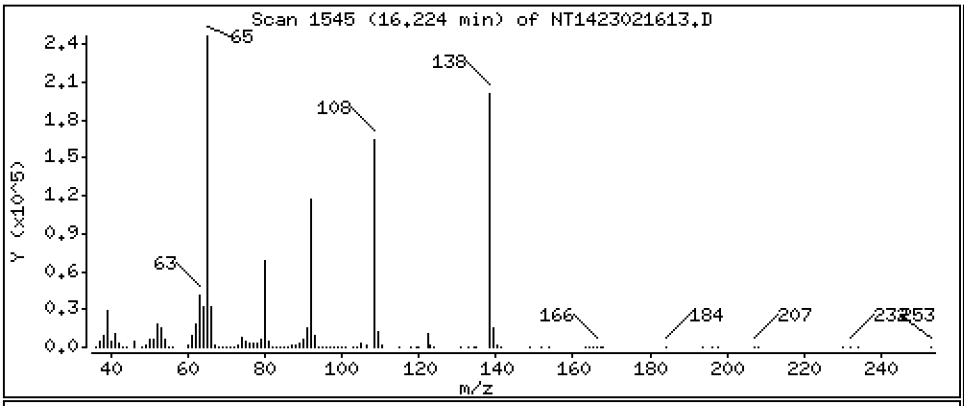
Operator: DSD

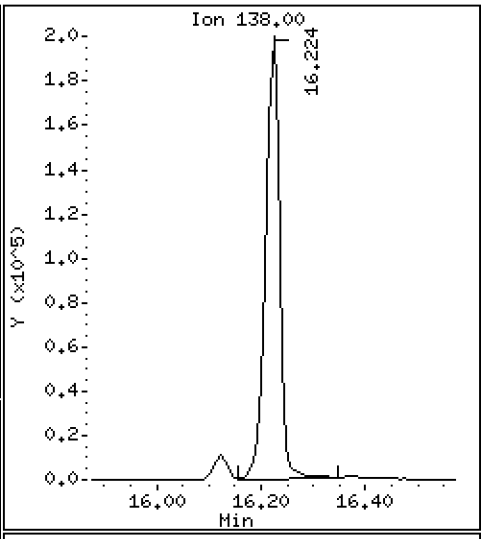
Column phase: ZB-5msi

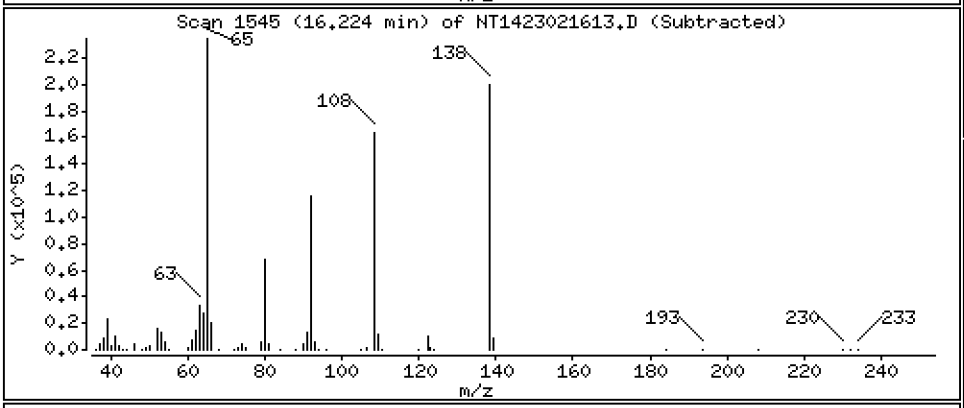
Column diameter: 0.25

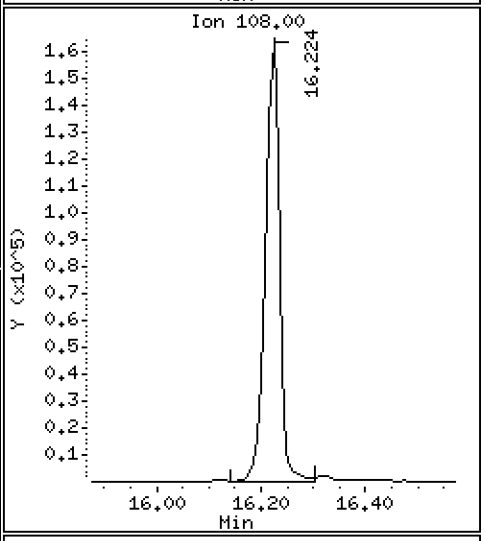
52 4-Nitroaniline

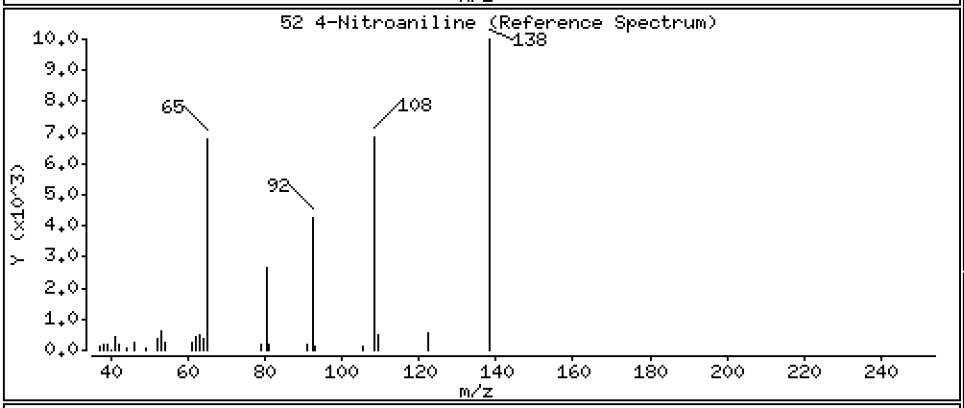
Concentration: 4.762 ug/mL

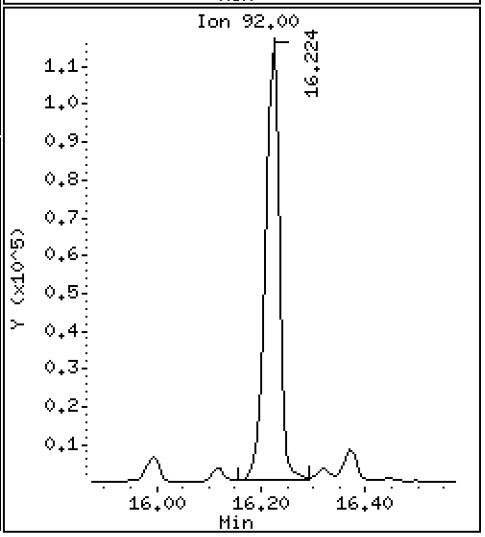


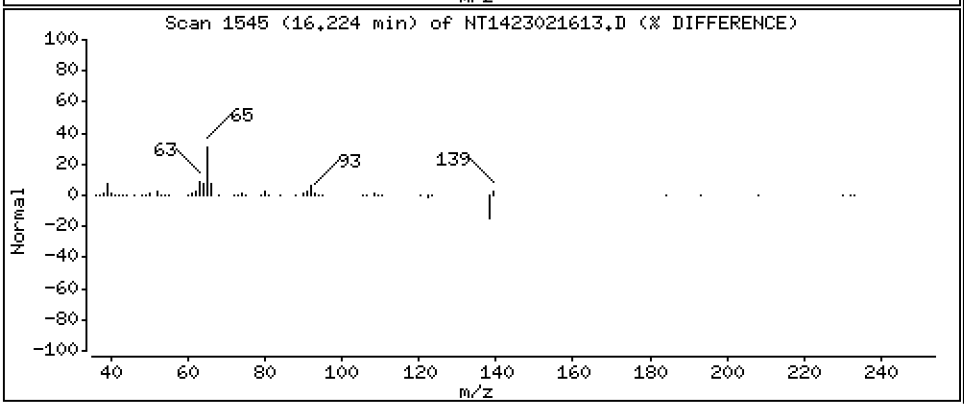












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

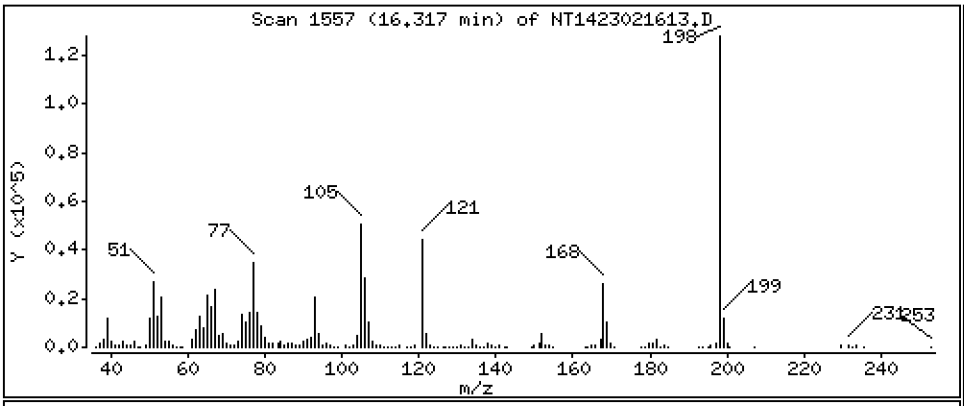
Operator: DSD

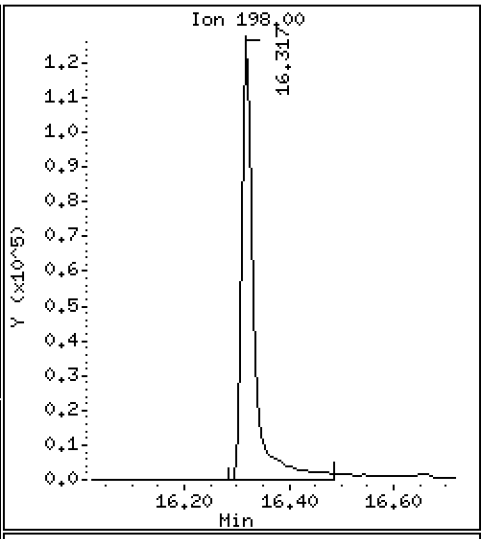
Column phase: ZB-5msi

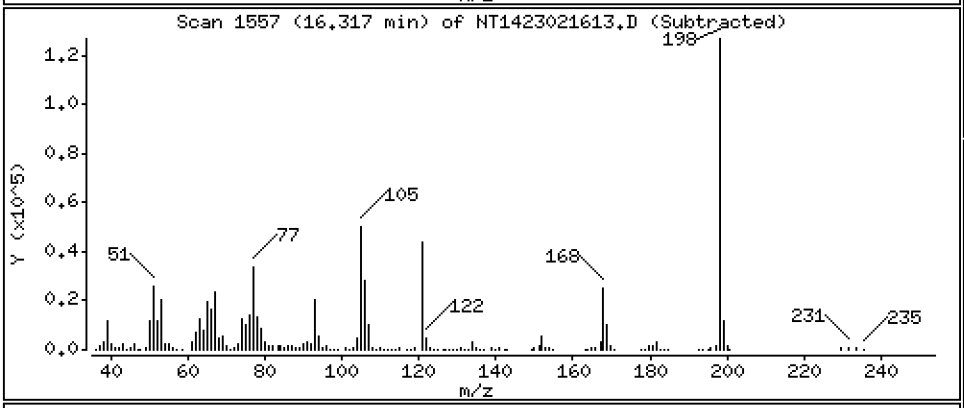
Column diameter: 0.25

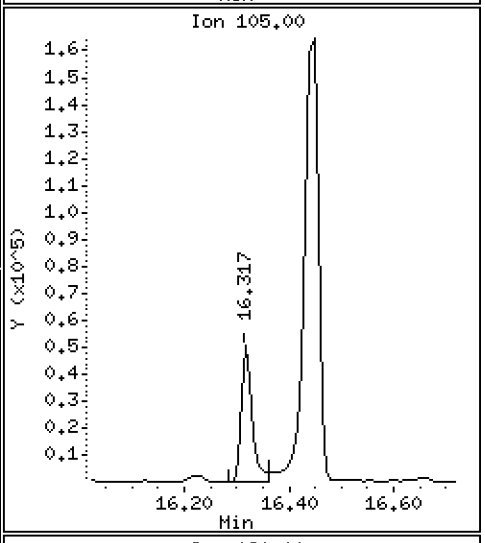
53 4,6-Dinitro-2-methylphenol

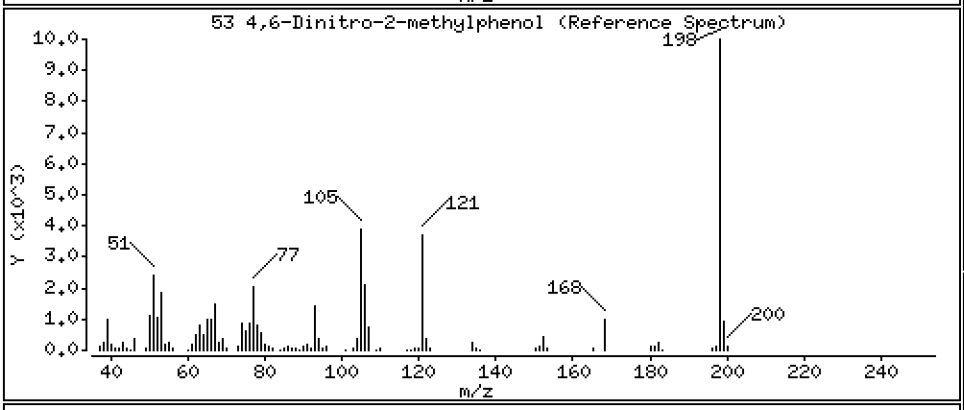
Concentration: 3.653 ug/mL

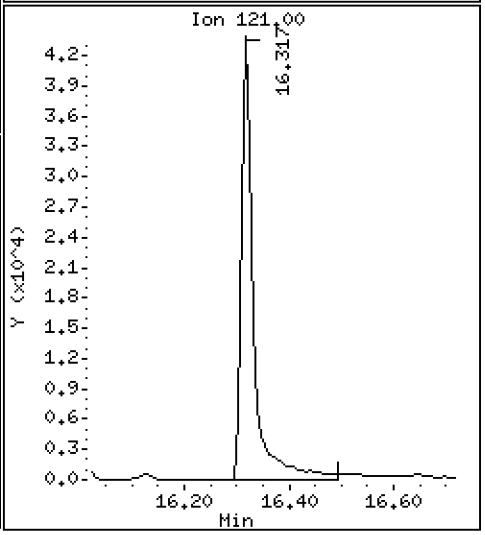


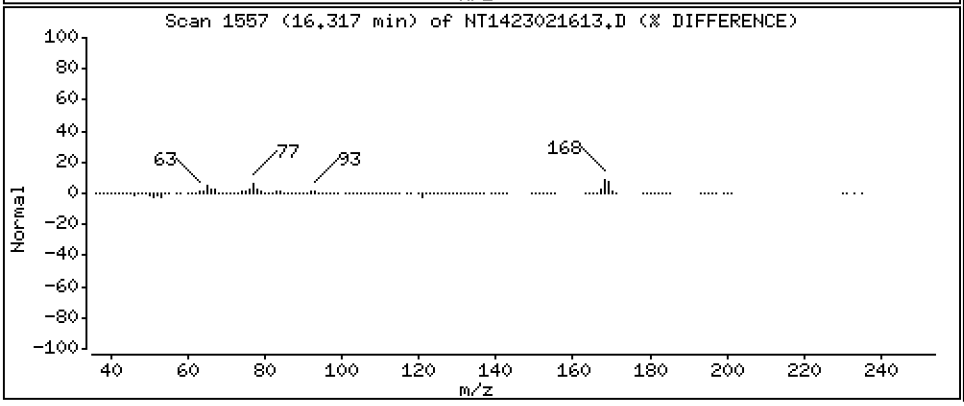












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

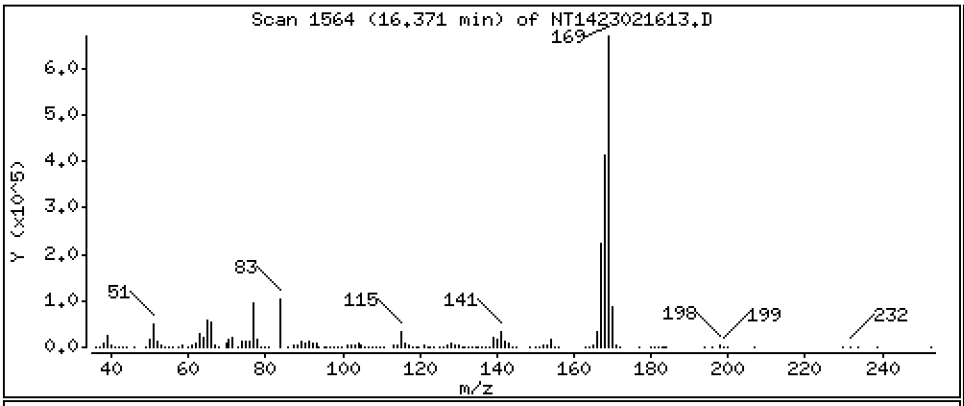
Operator: DSD

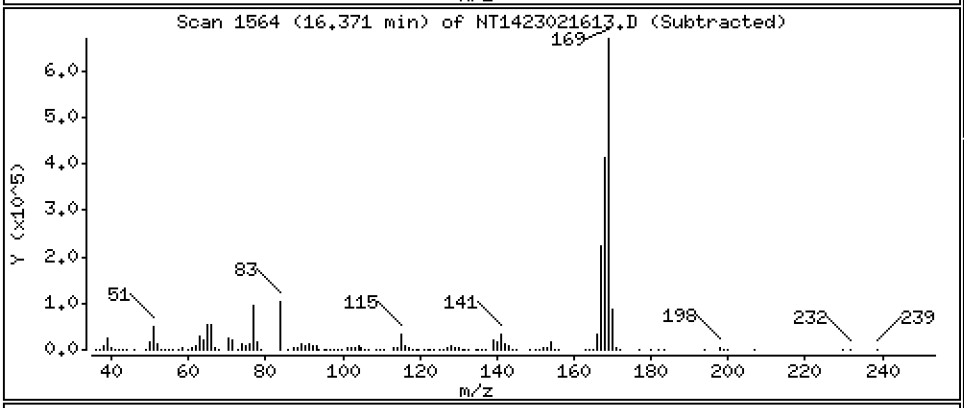
Column phase: ZB-5msi

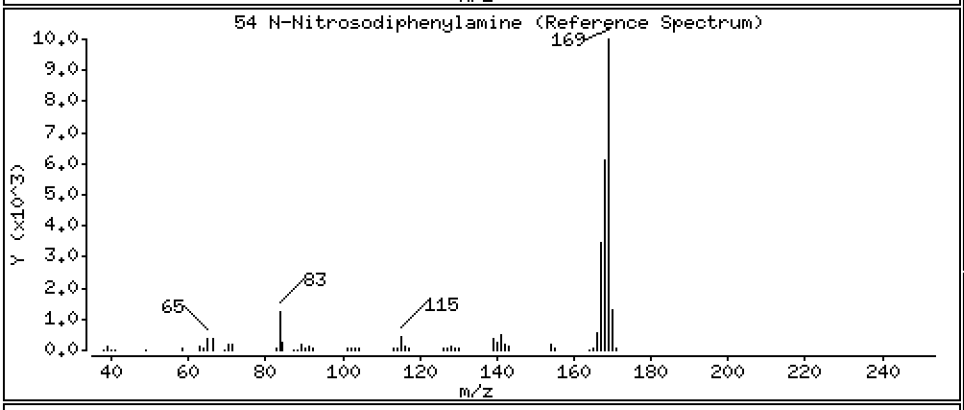
Column diameter: 0.25

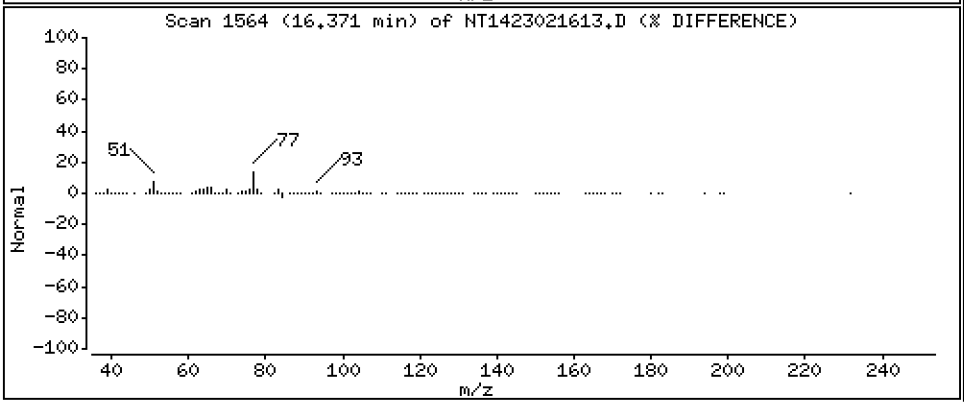
54 N-Nitrosodiphenylamine

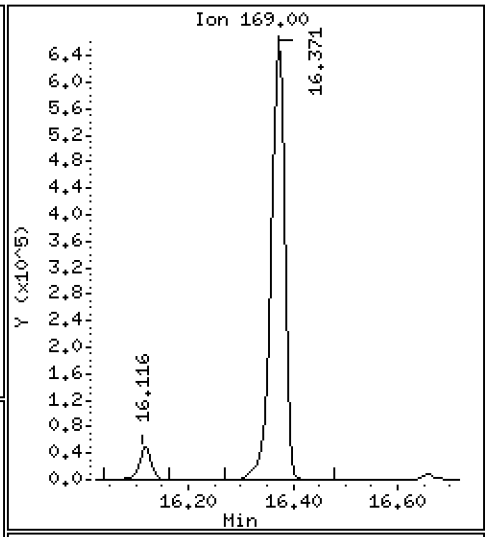
Concentration: 4.907 ug/mL

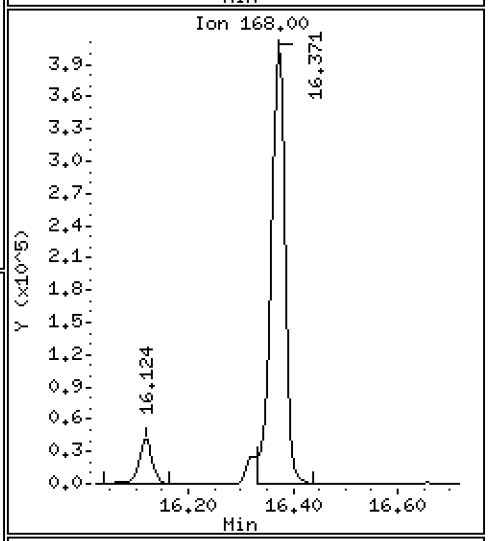


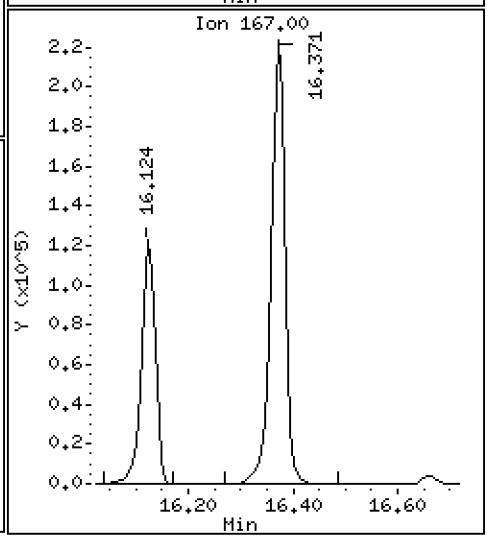












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

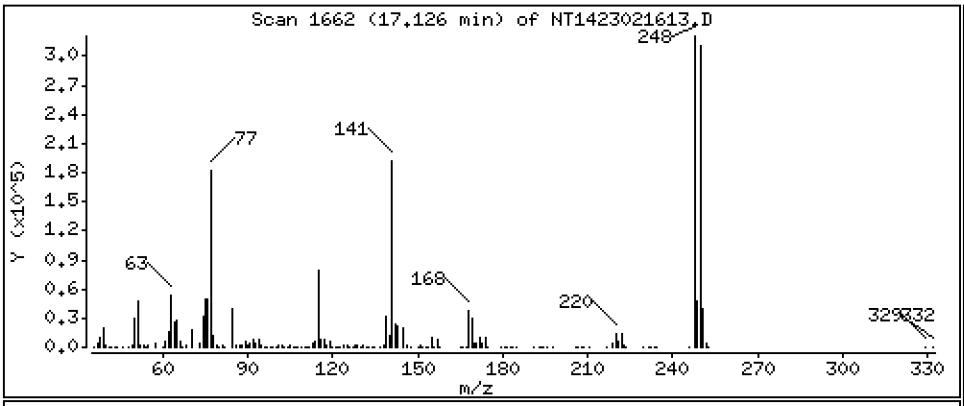
Operator: DSD

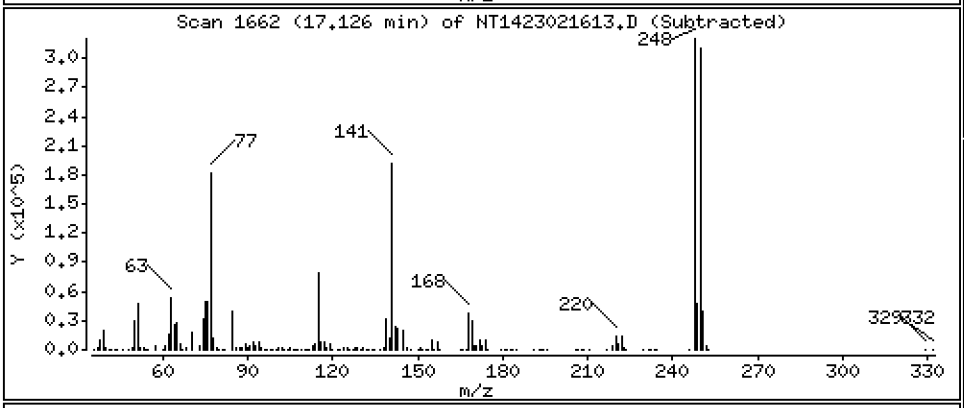
Column phase: ZB-5msi

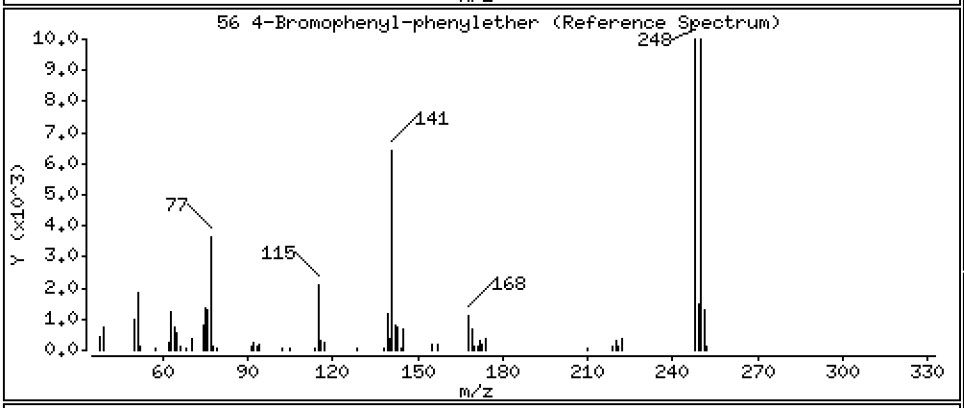
Column diameter: 0.25

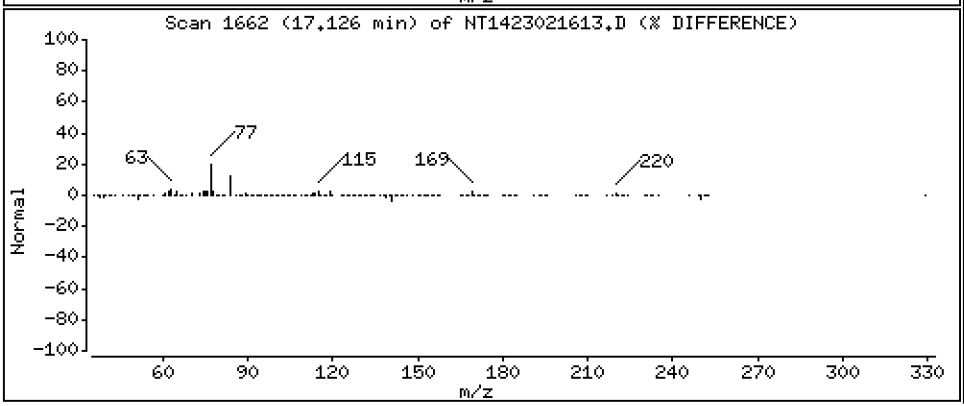
56 4-Bromophenyl-phenylether

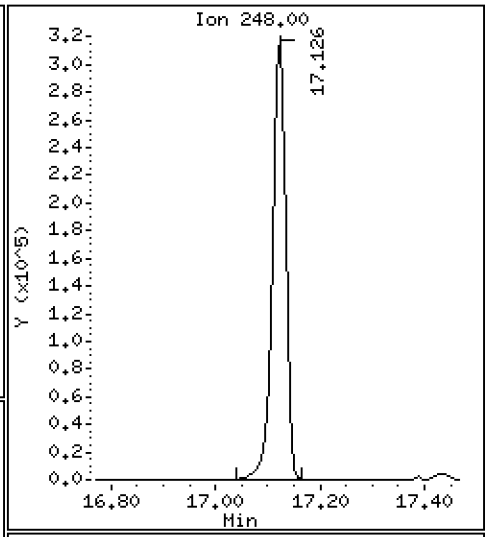
Concentration: 5.153 ug/mL

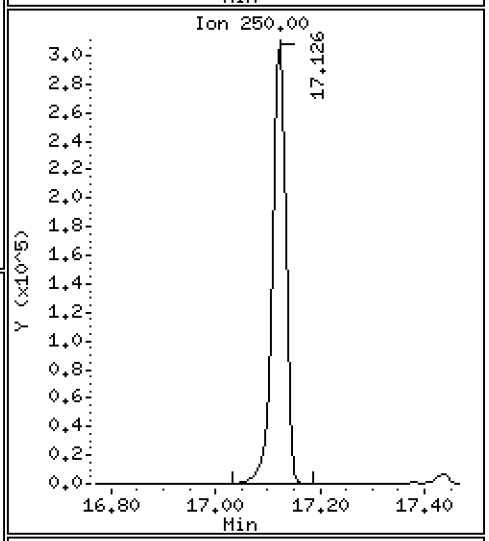


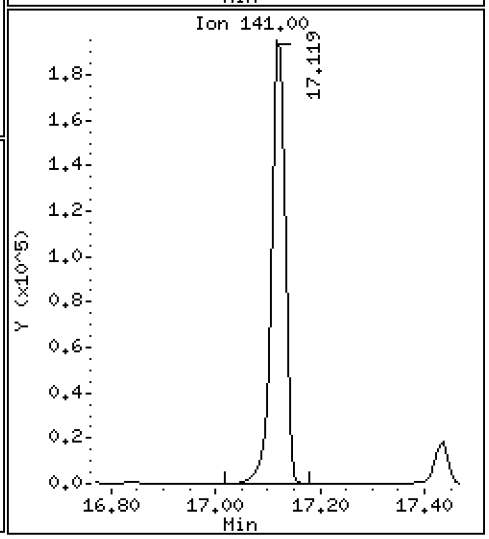












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

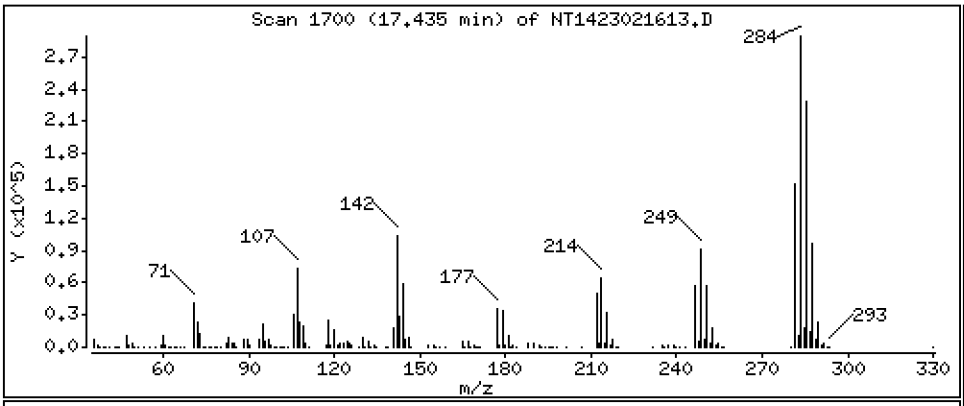
Operator: DSD

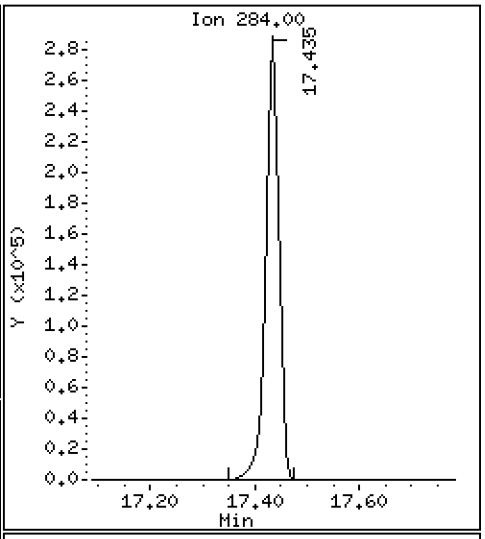
Column phase: ZB-5msi

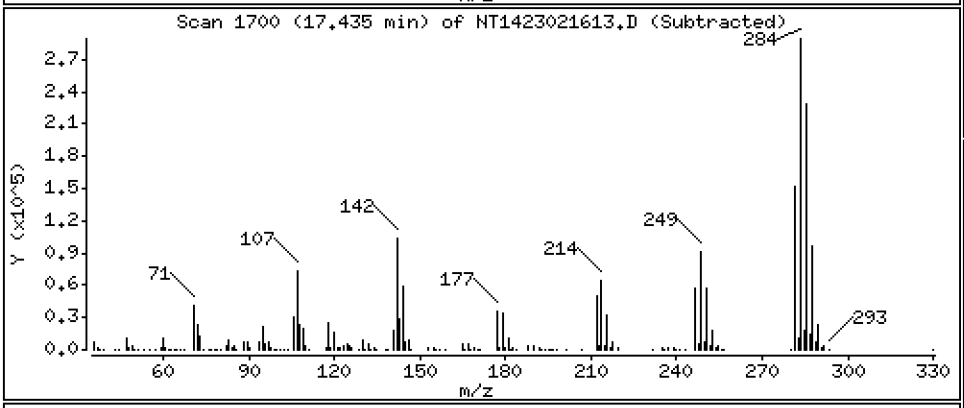
Column diameter: 0.25

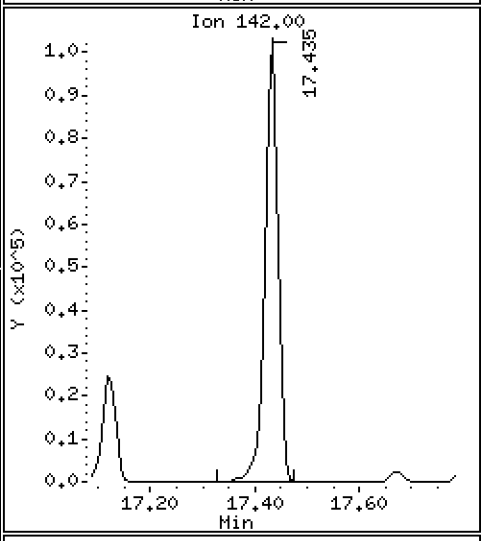
57 Hexachlorobenzene

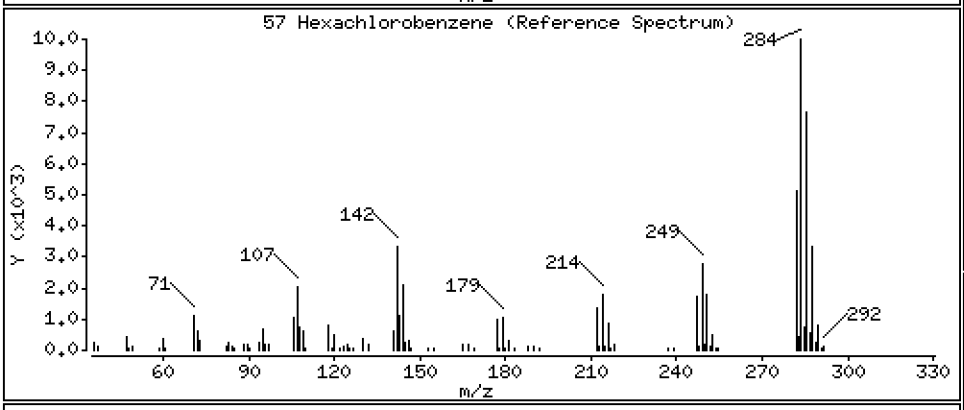
Concentration: 4.679 ug/mL

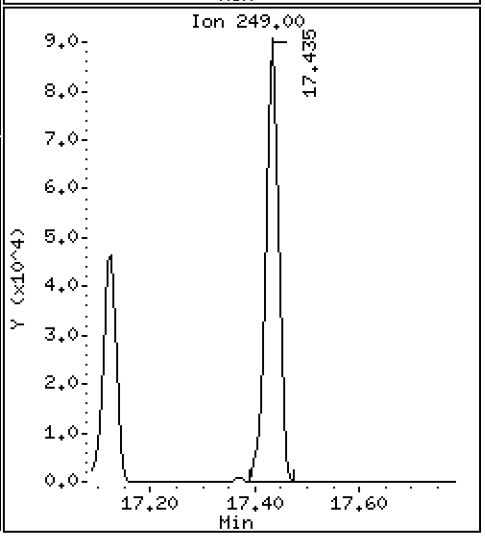


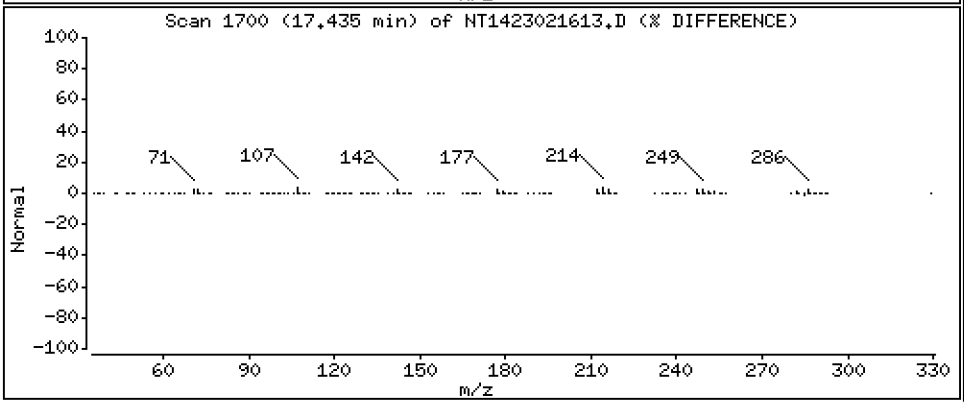












Date : 16-FEB-2023 21:18

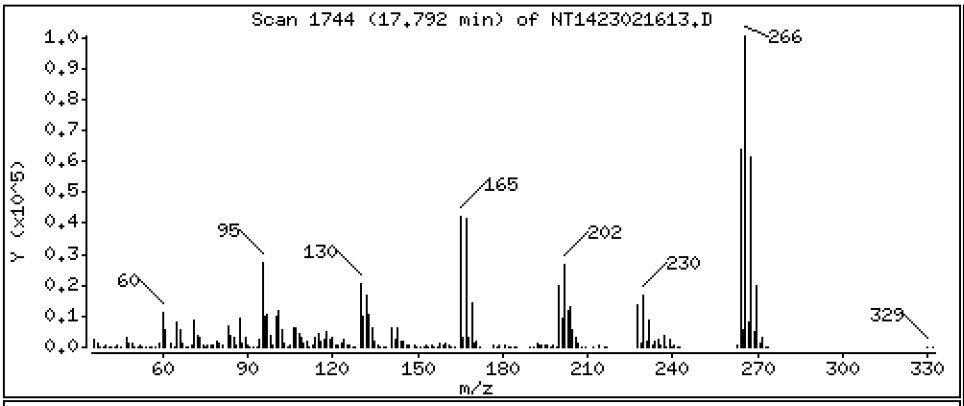
Client ID: Instrument: nt14.i

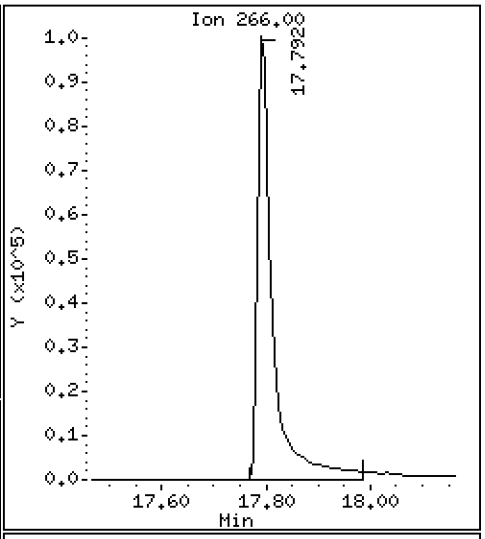
Sample Info: SLB0234-SCV1

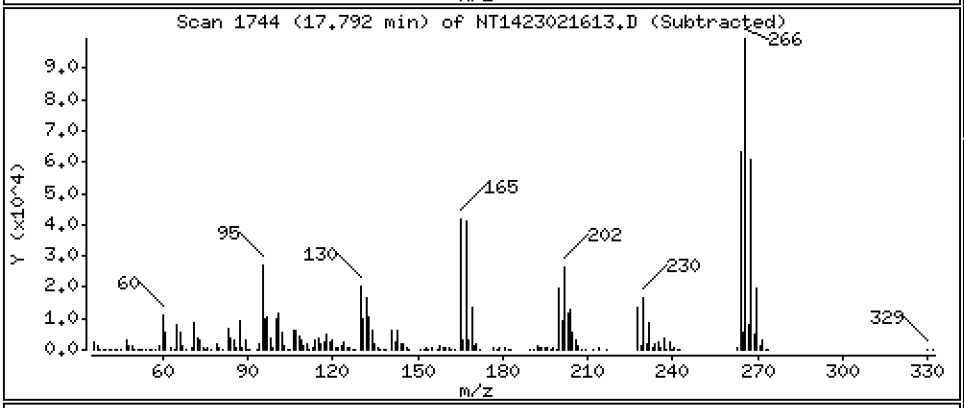
Operator: DSD

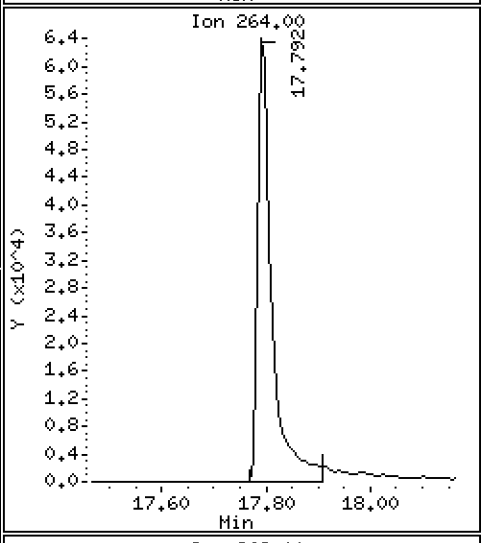
Column phase: ZB-5msi Column diameter: 0.25

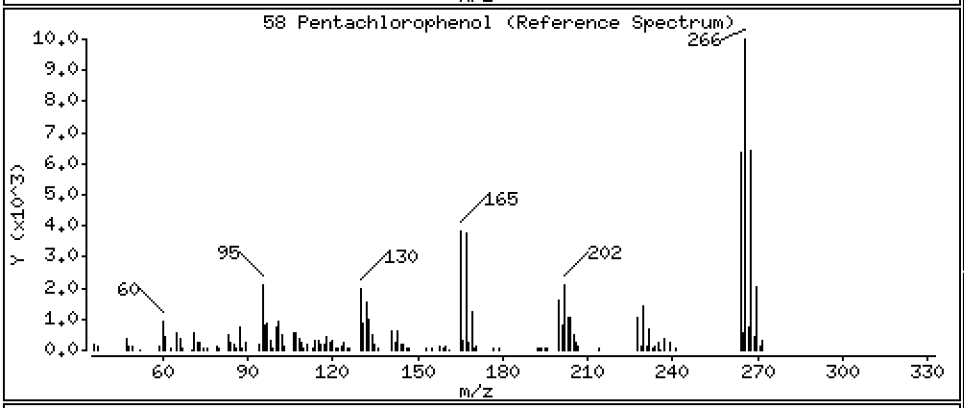
58 Pentachlorophenol Concentration: 3.932 ug/mL

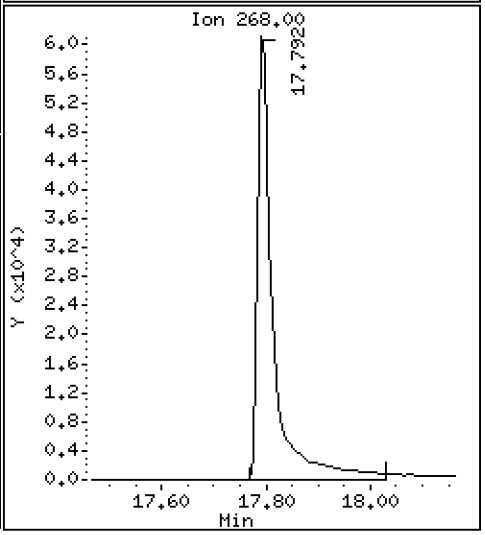


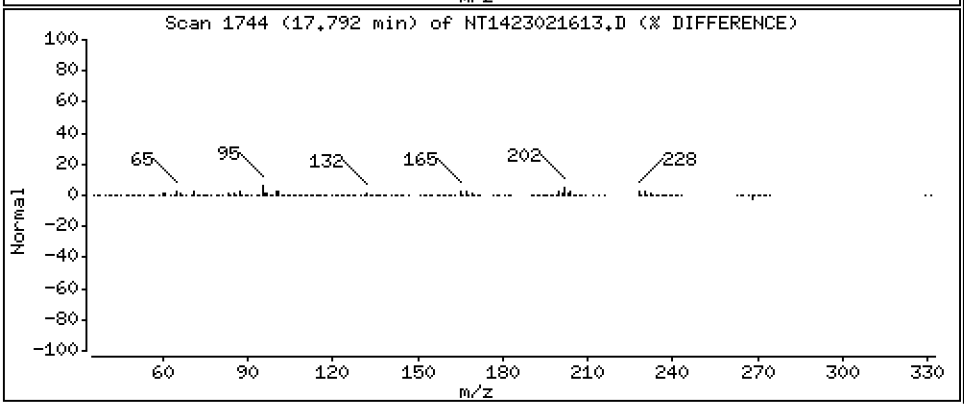












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

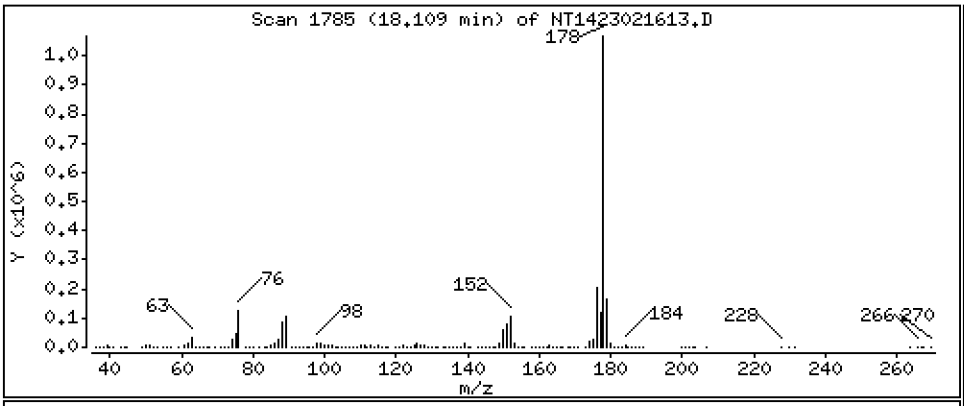
Operator: DSD

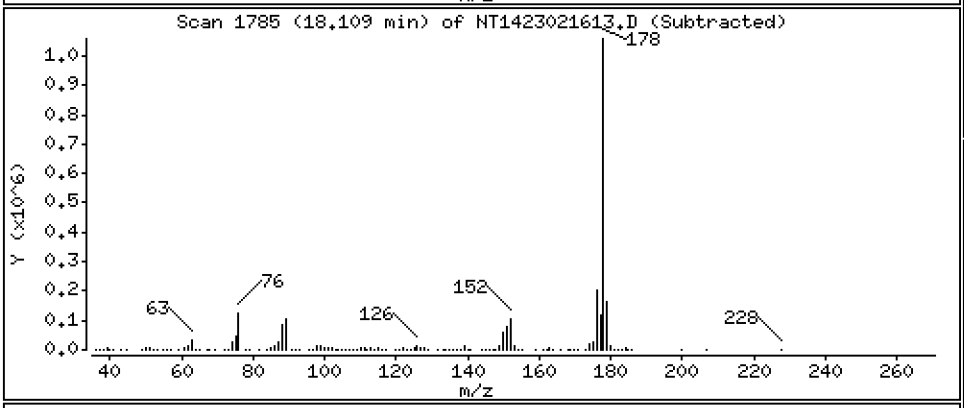
Column phase: ZB-5msi

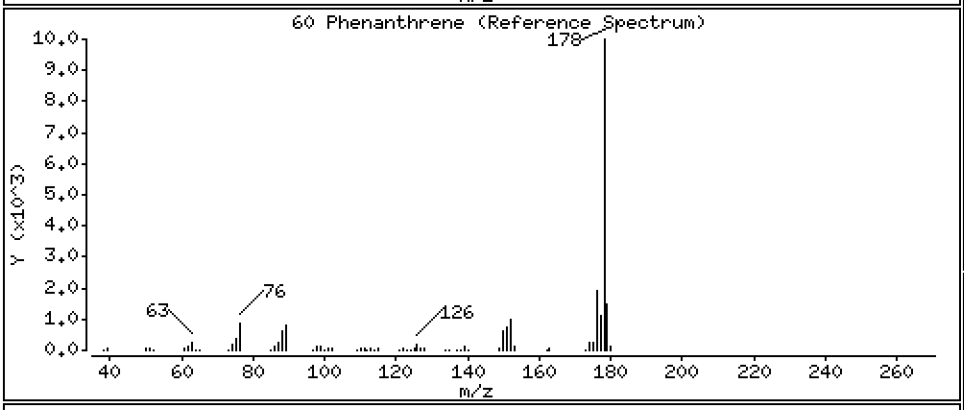
Column diameter: 0.25

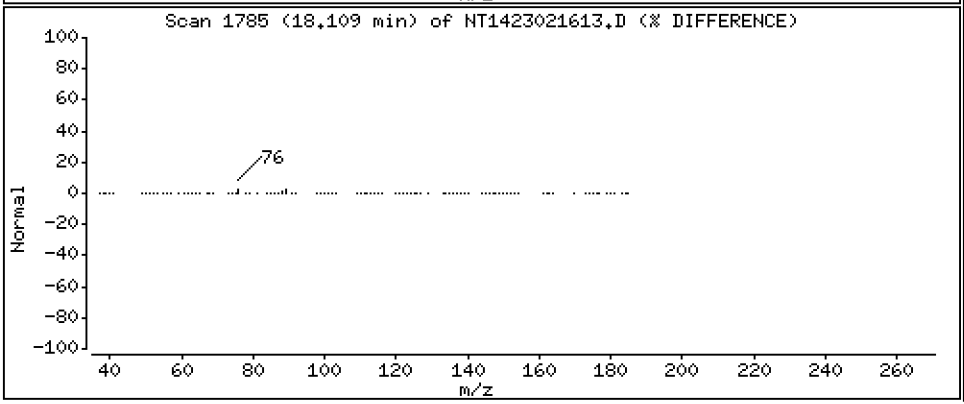
60 Phenanthrene

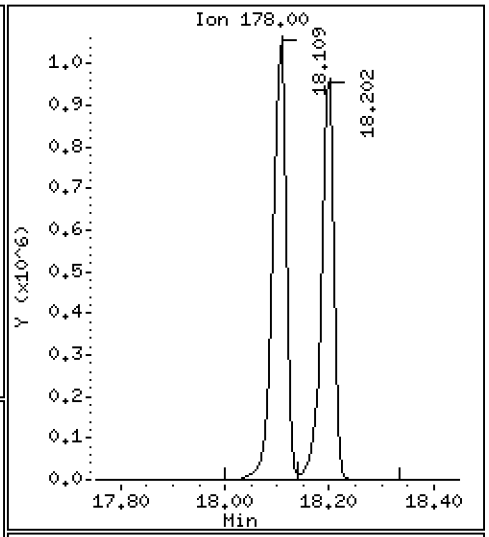
Concentration: 4.690 ug/mL

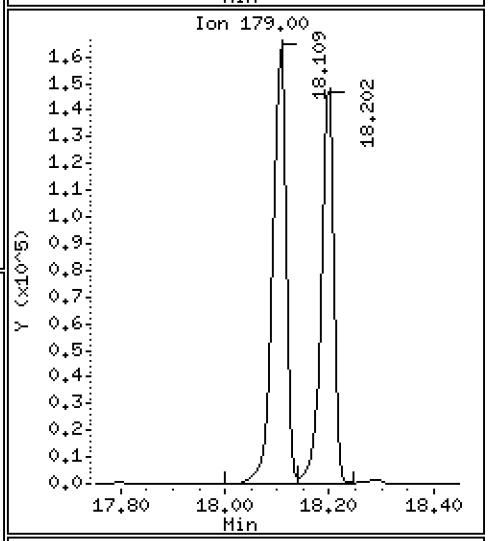


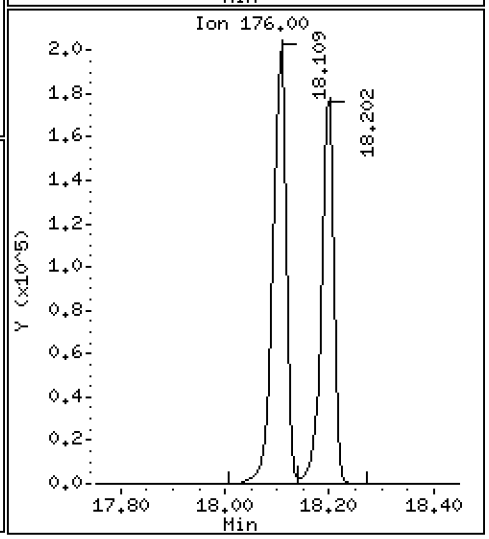












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

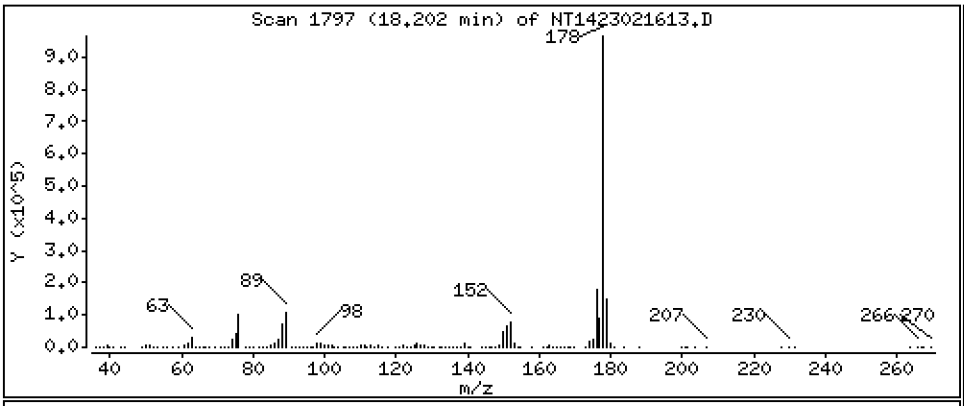
Operator: DSD

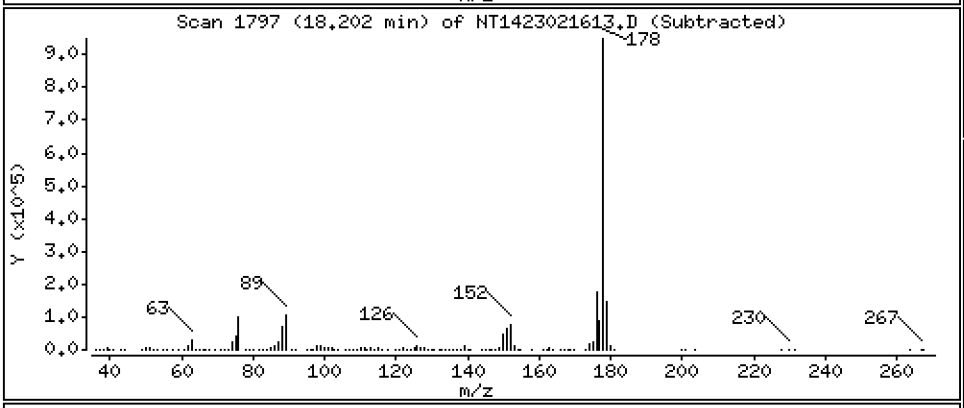
Column phase: ZB-5msi

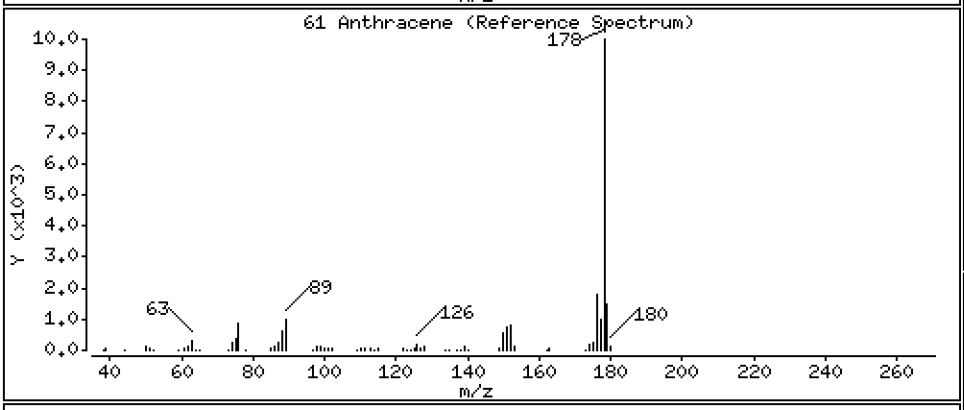
Column diameter: 0.25

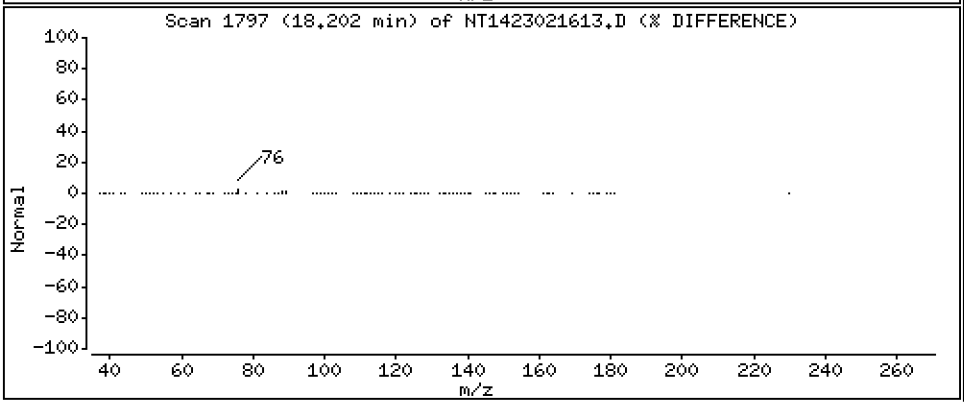
61 Anthracene

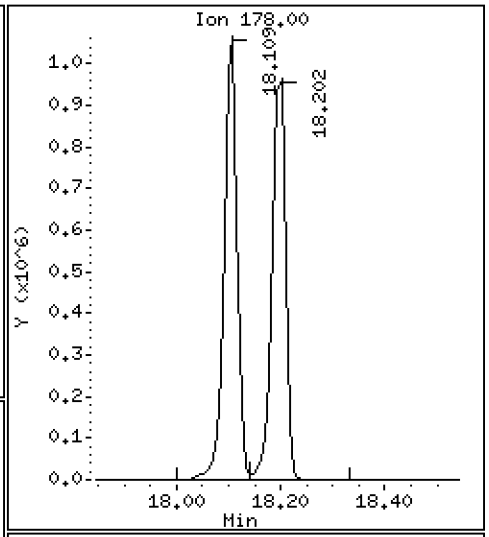
Concentration: 4.304 ug/mL

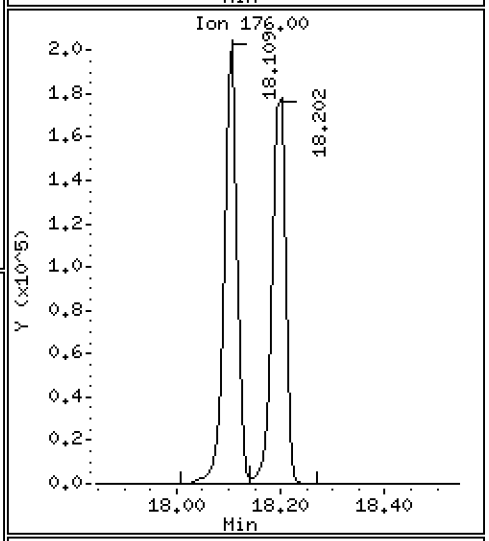


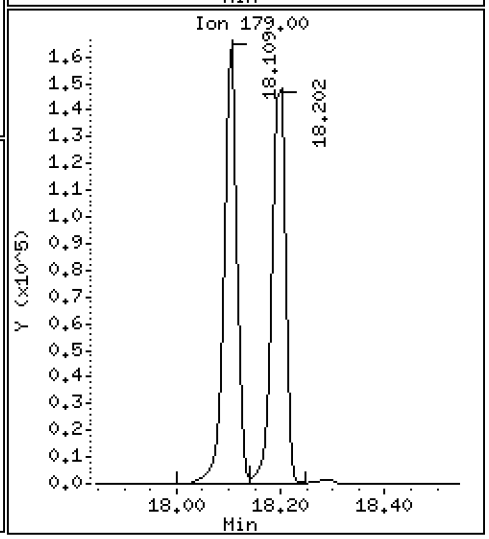












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

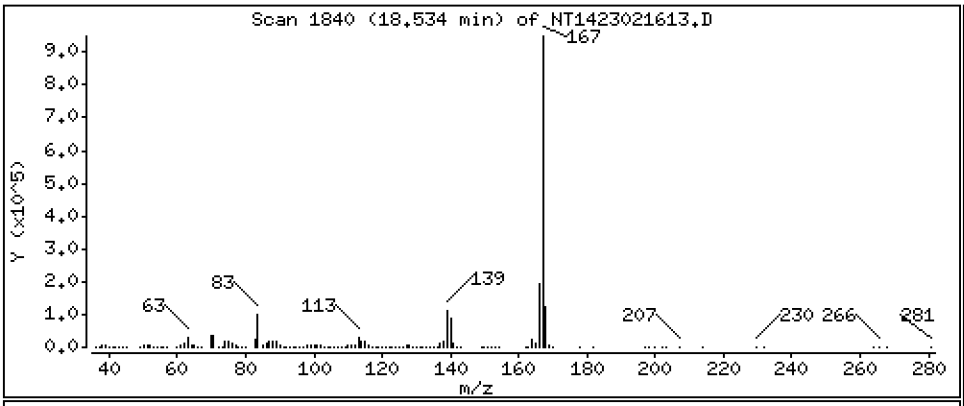
Operator: DSD

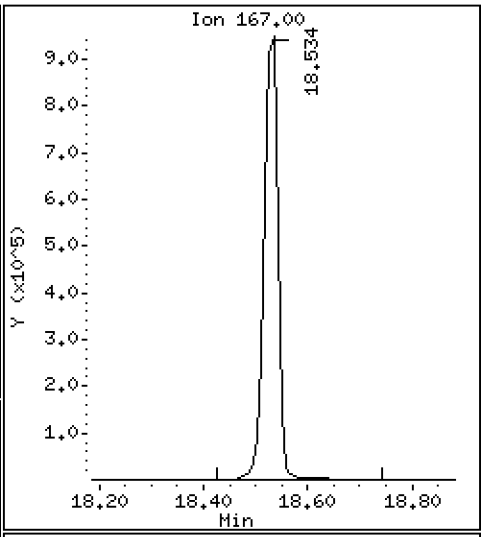
Column phase: ZB-5msi

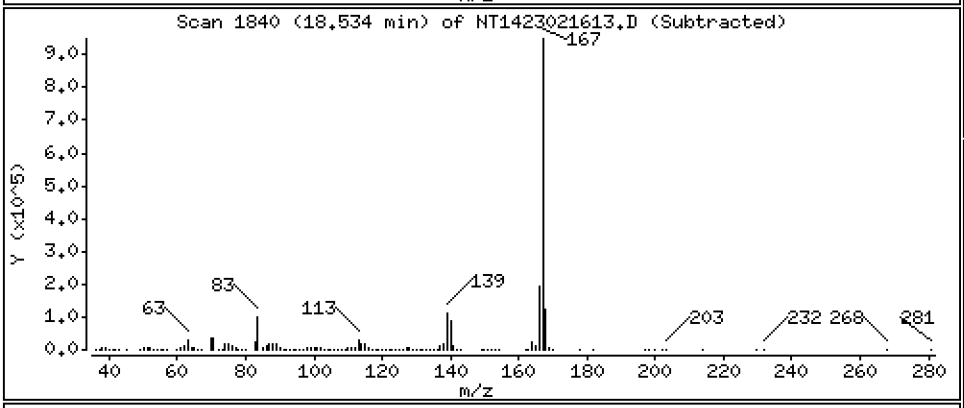
Column diameter: 0.25

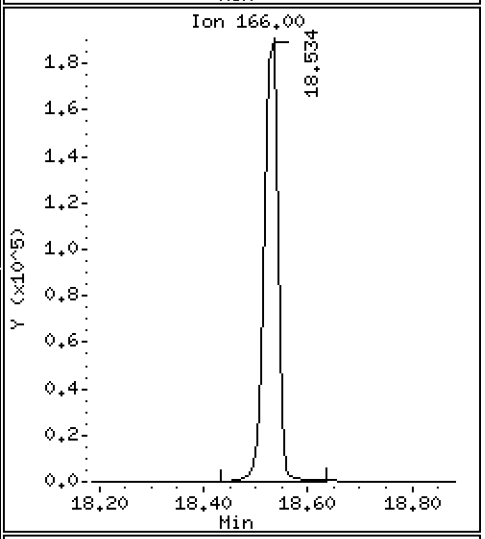
62 Carbazole

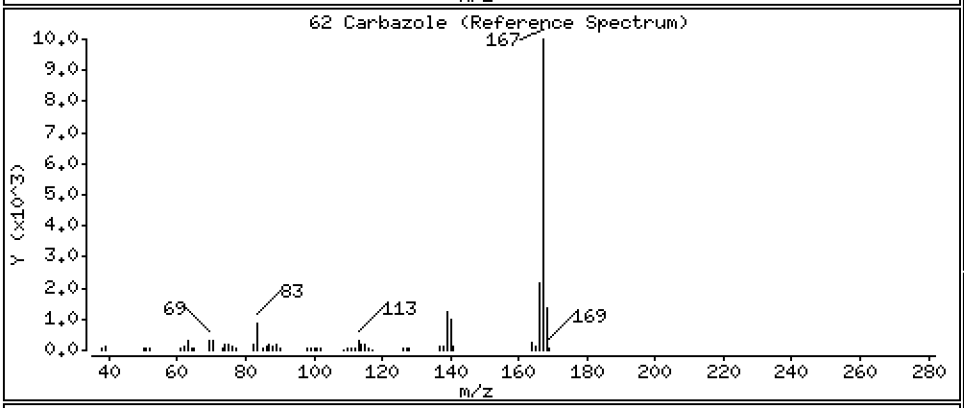
Concentration: 4.792 ug/mL

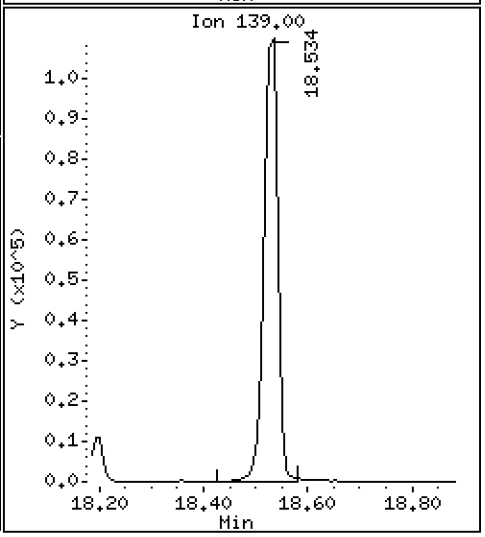


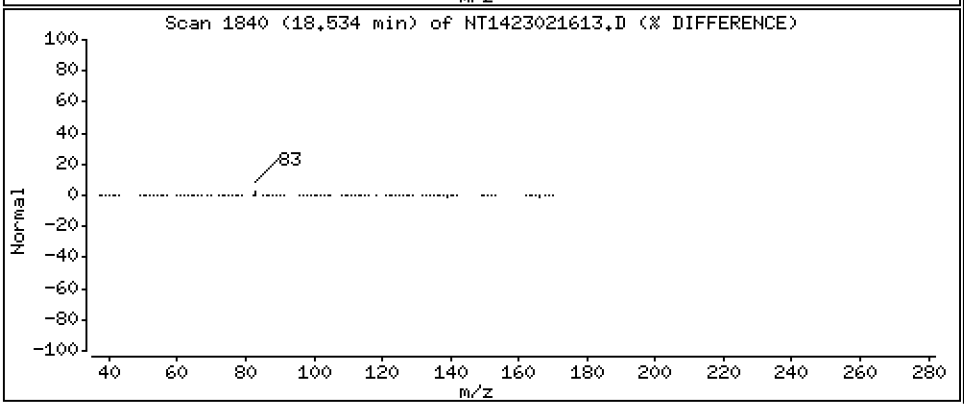












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

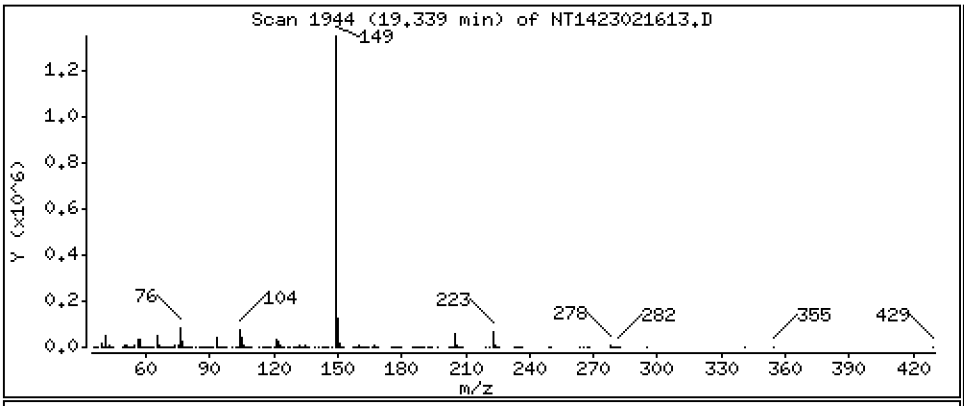
Operator: DSD

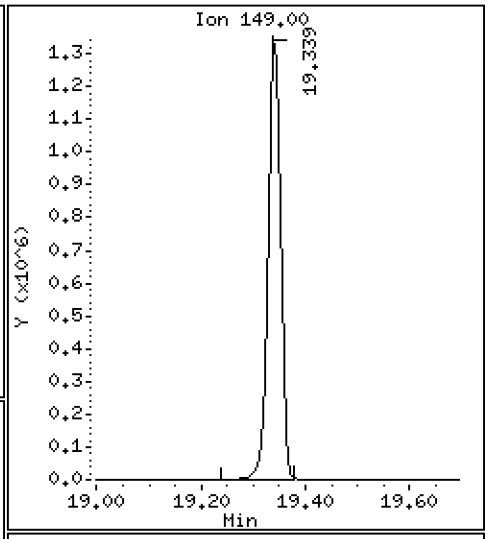
Column phase: ZB-5msi

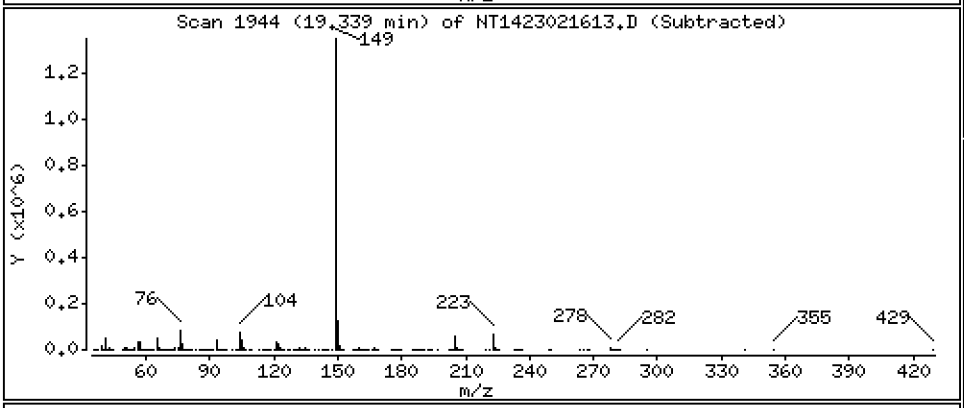
Column diameter: 0.25

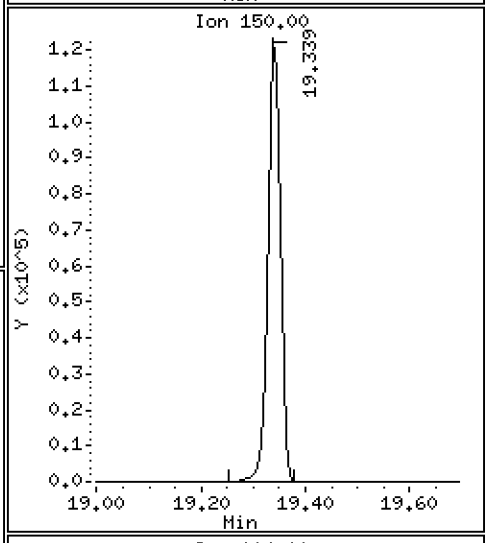
63 Di-n-butylphthalate

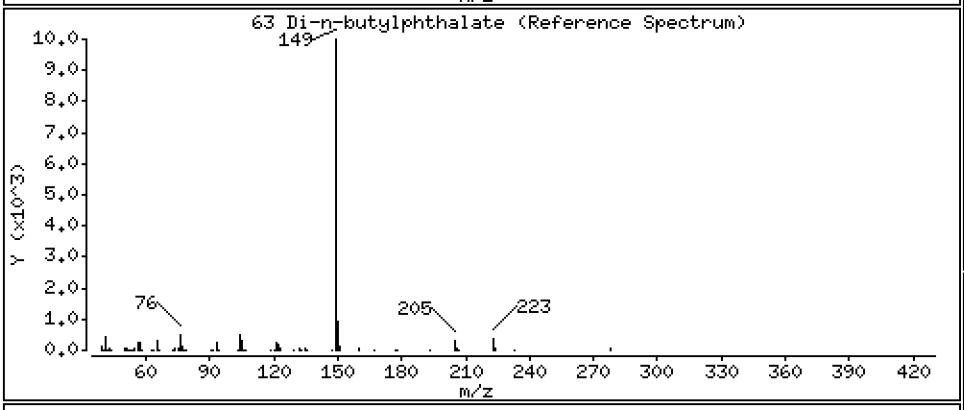
Concentration: 5.515 ug/mL

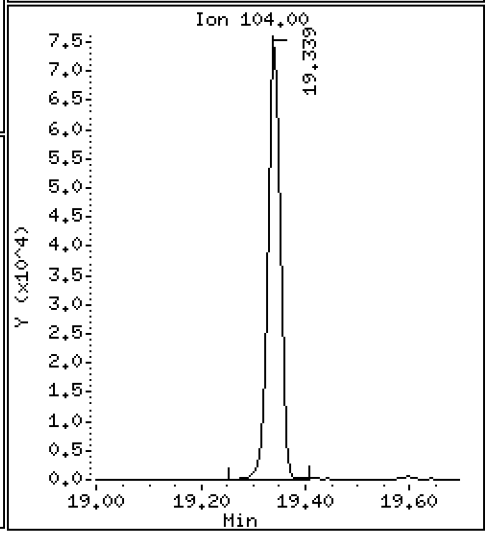


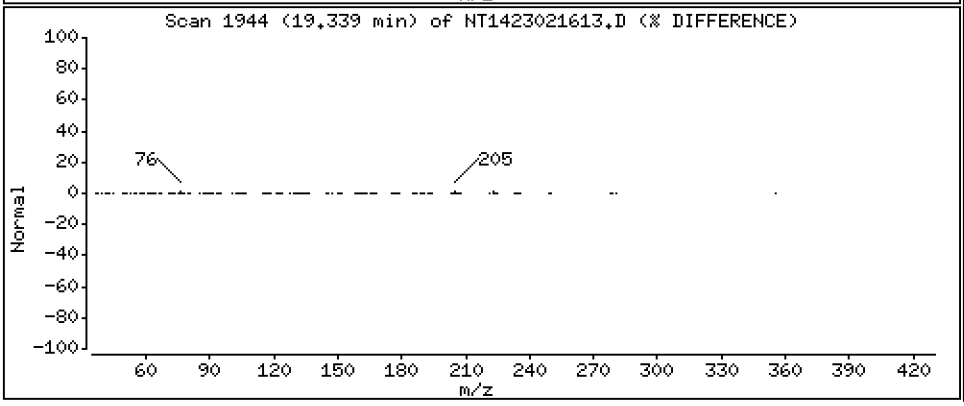












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

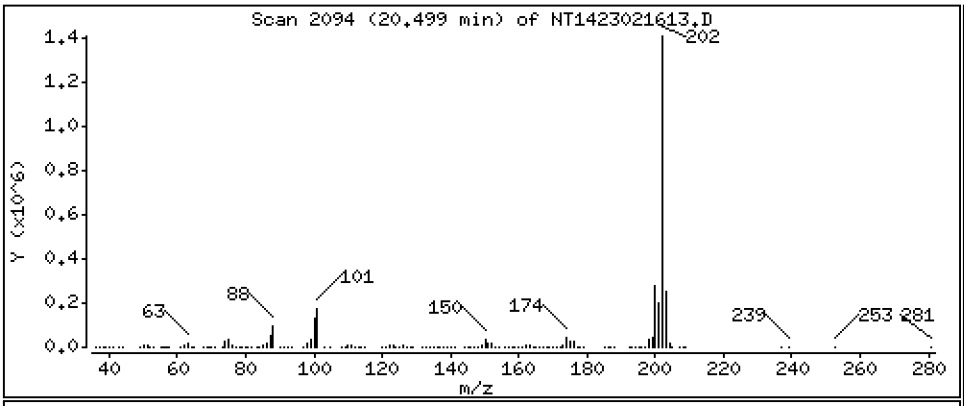
Operator: DSD

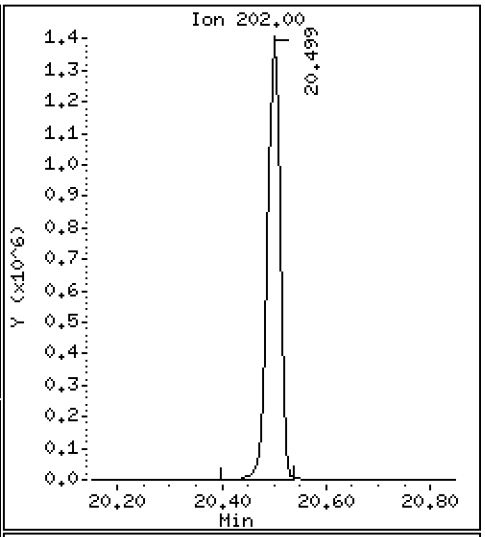
Column phase: ZB-5msi

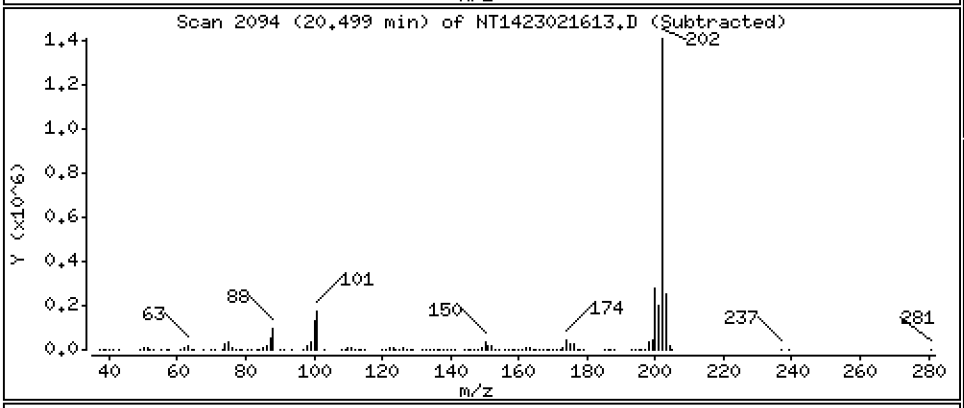
Column diameter: 0.25

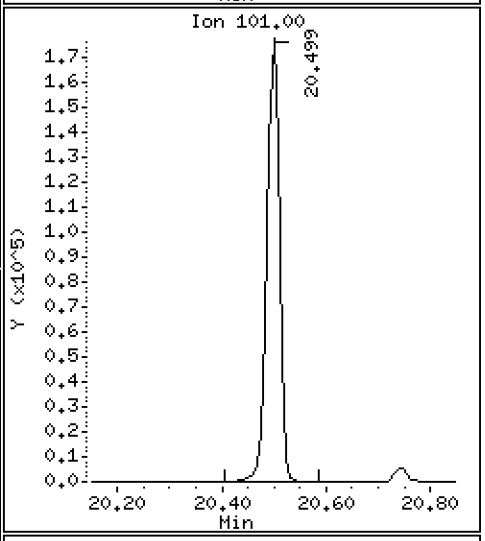
64 Fluoranthene

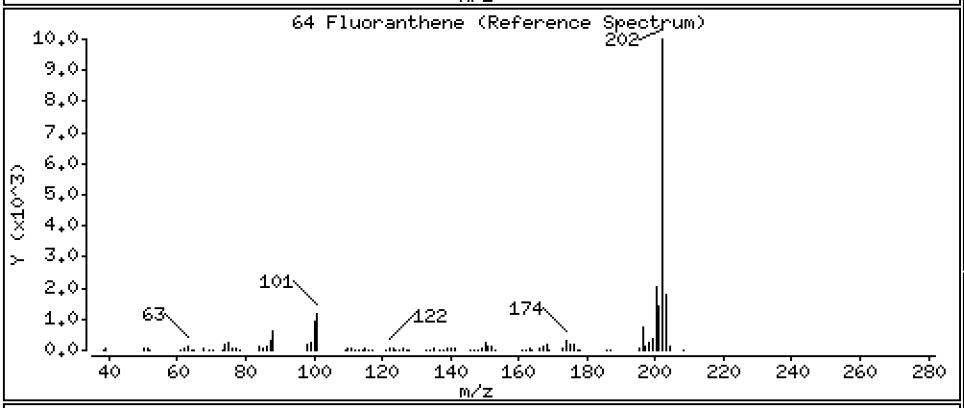
Concentration: 4.682 ug/mL

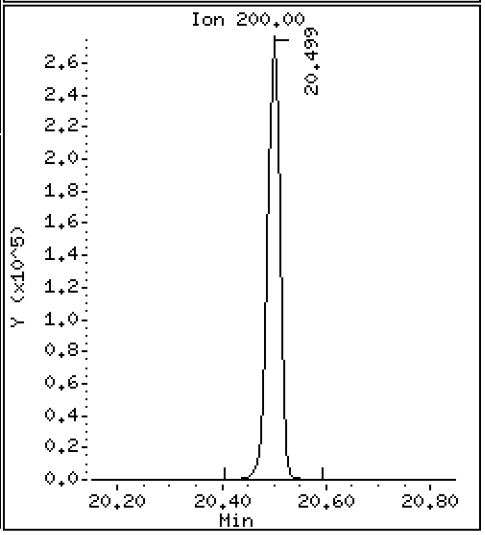


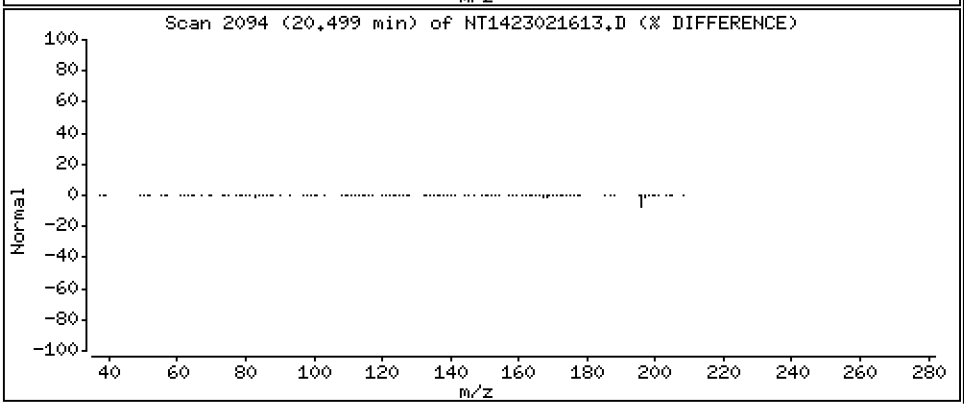












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

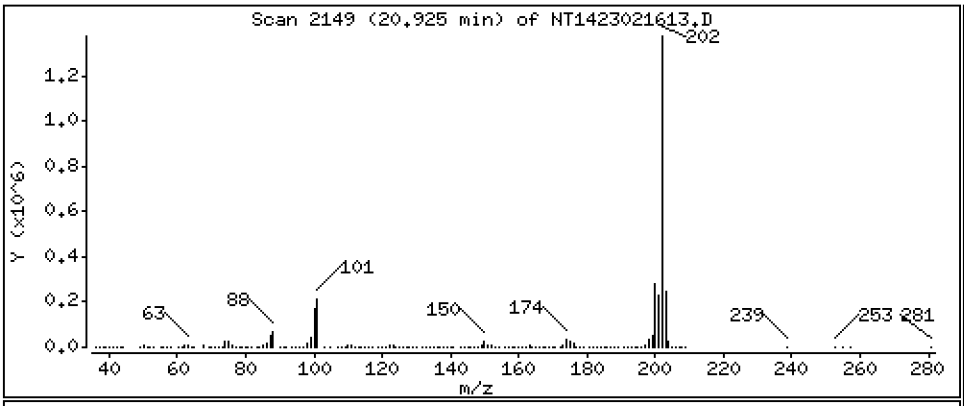
Operator: DSD

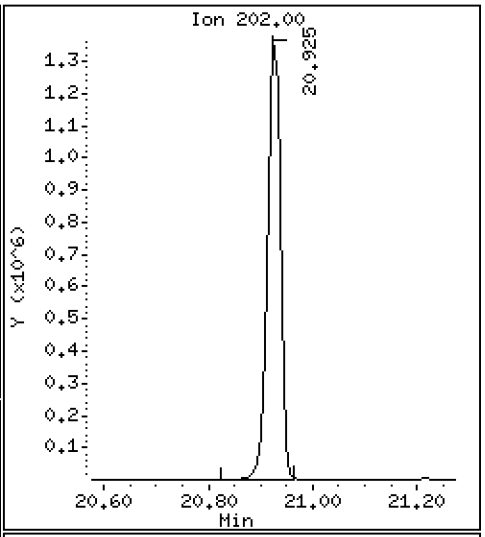
Column phase: ZB-5msi

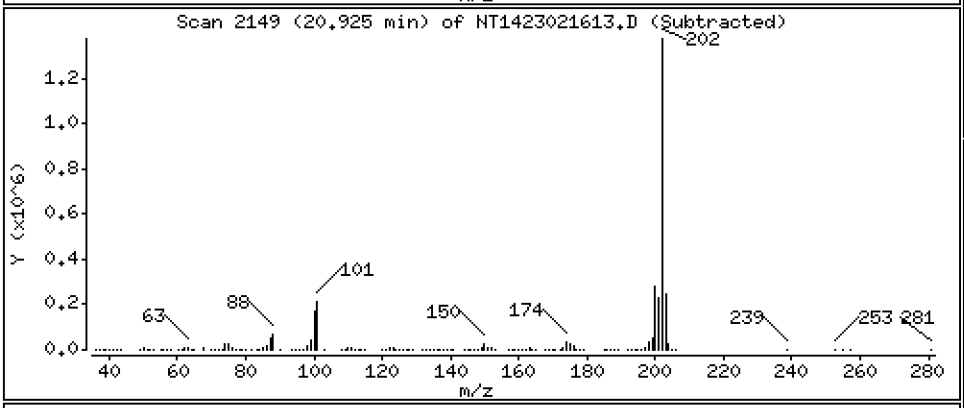
Column diameter: 0.25

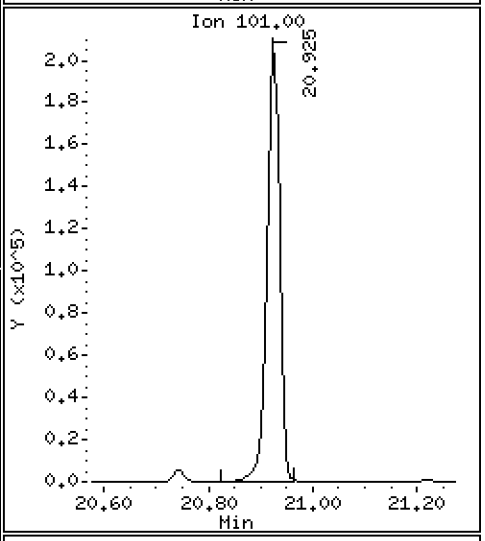
65 Pyrene

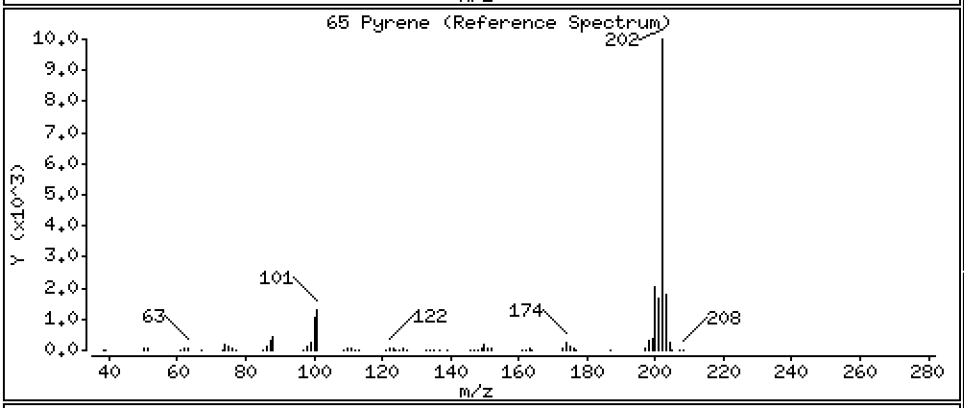
Concentration: 4.400 ug/mL

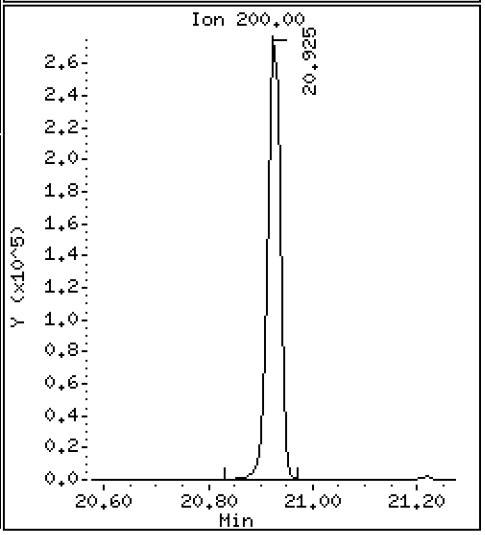


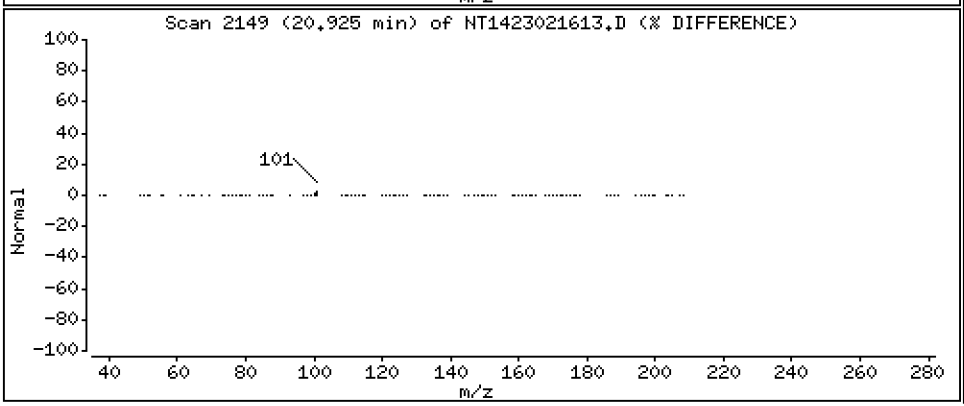












Date : 16-FEB-2023 21:18

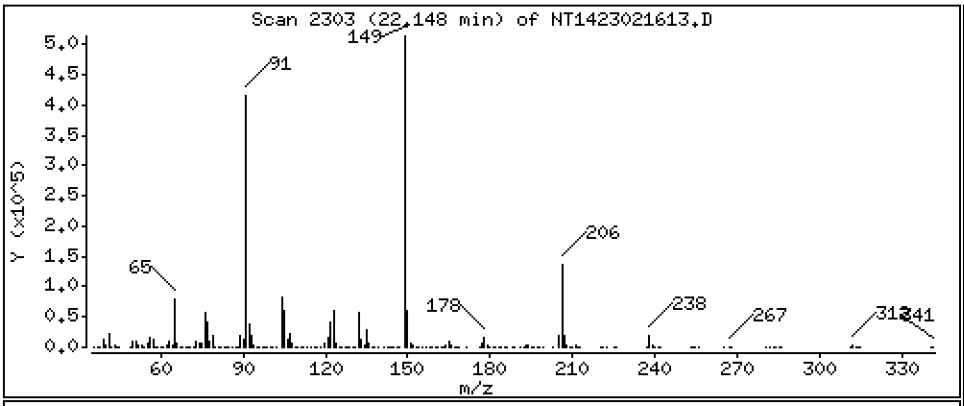
Client ID: Instrument: nt14.i

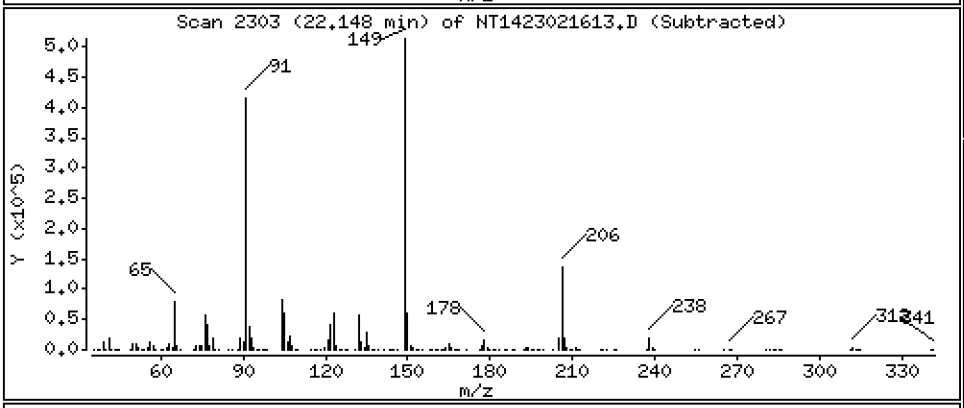
Sample Info: SLB0234-SCV1

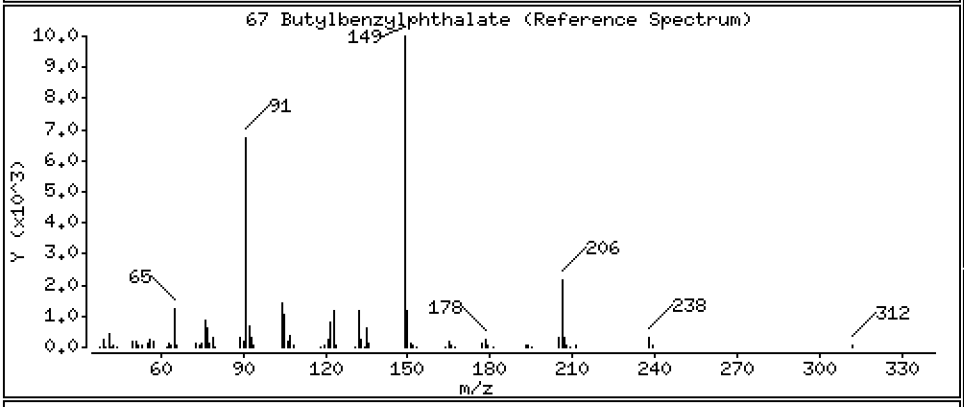
Operator: DSD

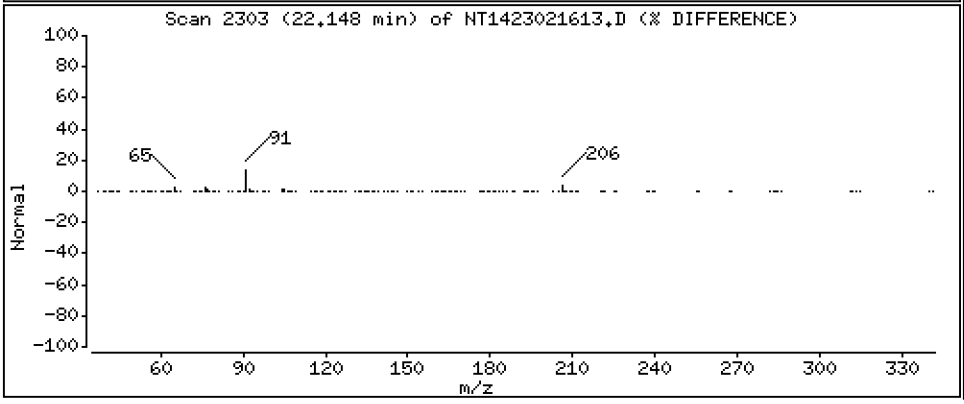
Column phase: ZB-5msi Column diameter: 0.25

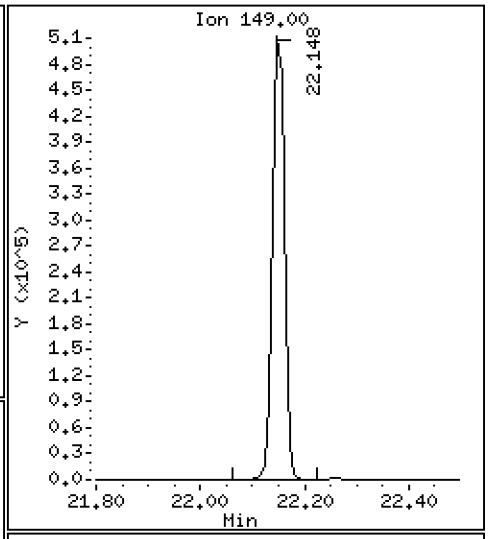
67 Butylbenzylphthalate Concentration: 4.568 ug/mL

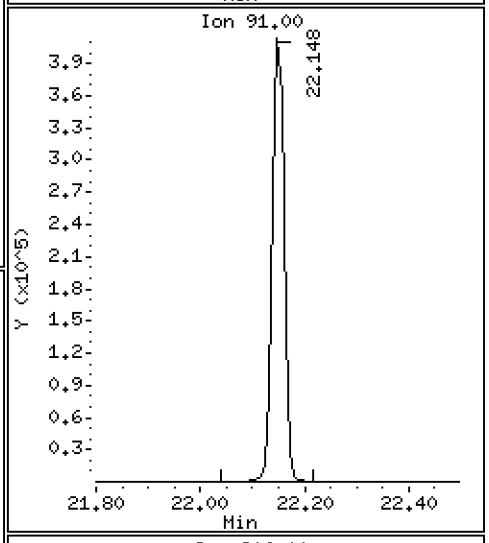


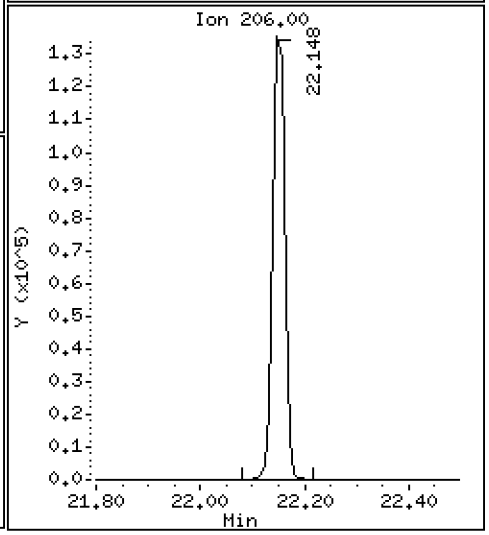












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

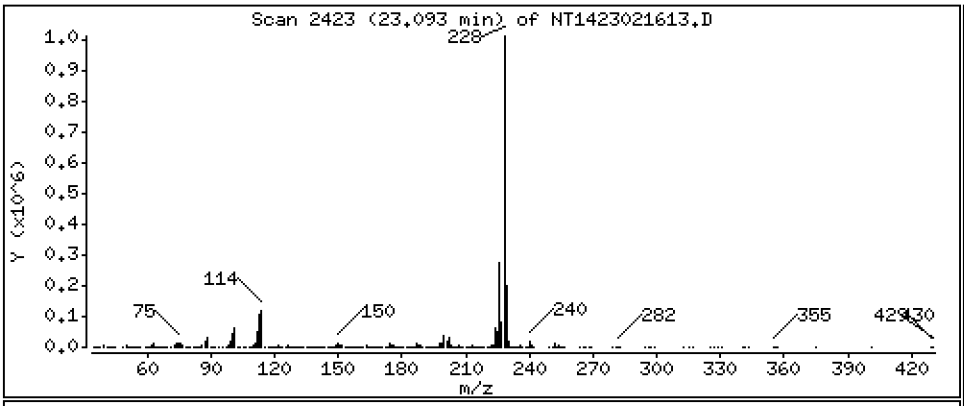
Operator: DSD

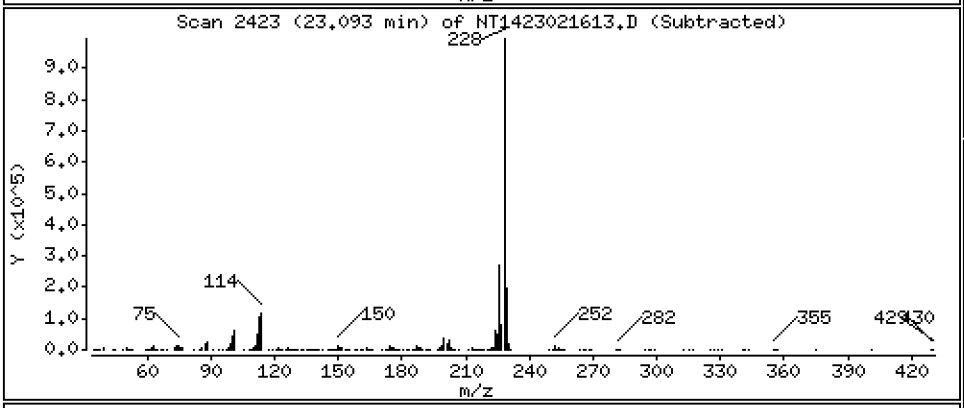
Column phase: ZB-5msi

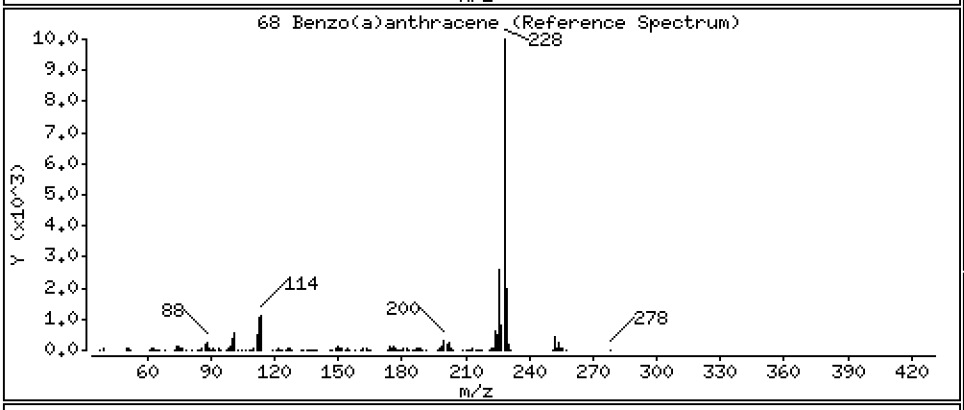
Column diameter: 0.25

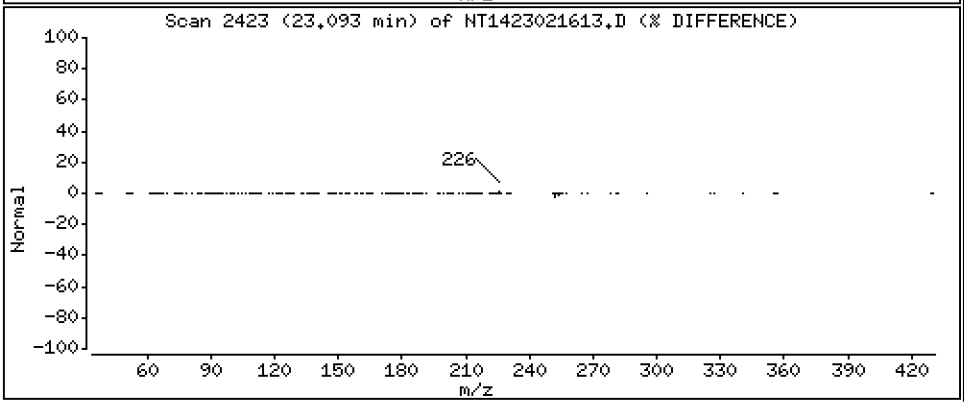
68 Benzo(a)anthracene

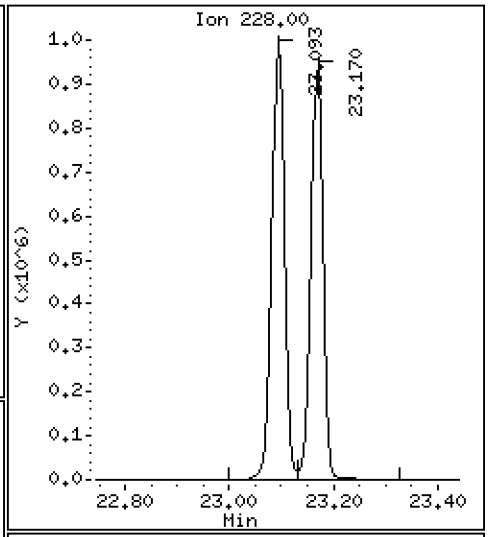
Concentration: 4.530 ug/mL

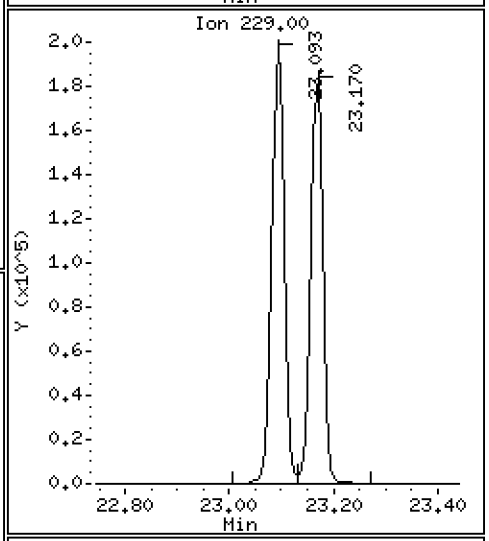


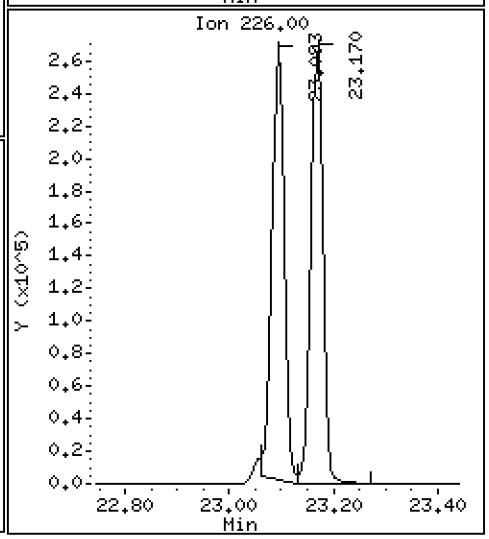












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

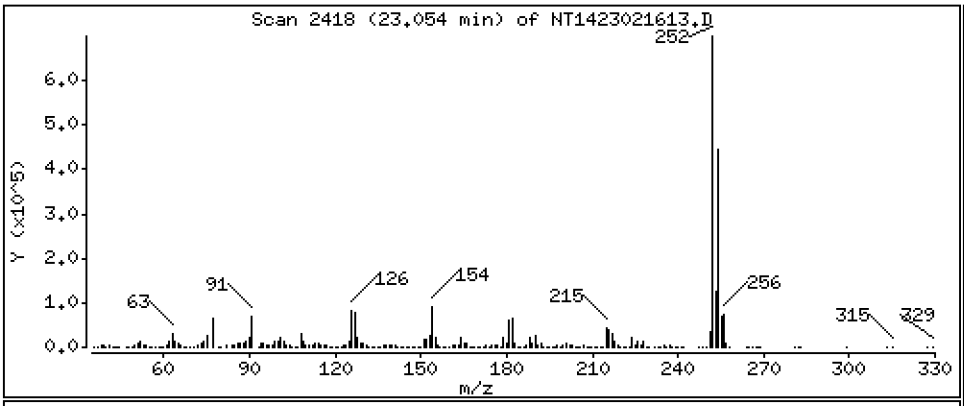
Operator: DSD

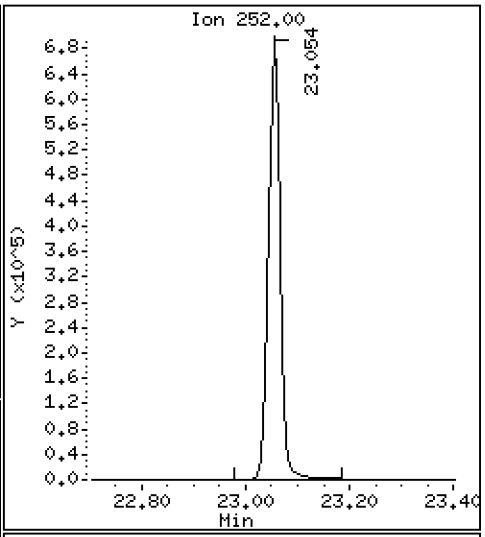
Column phase: ZB-5msi

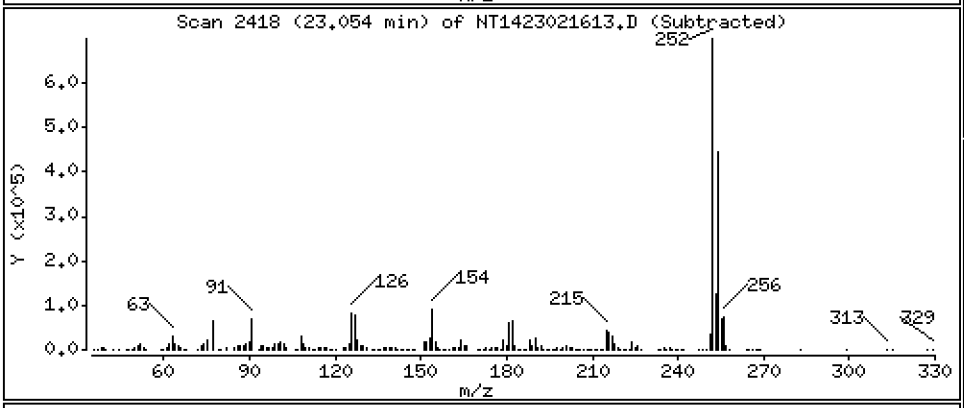
Column diameter: 0.25

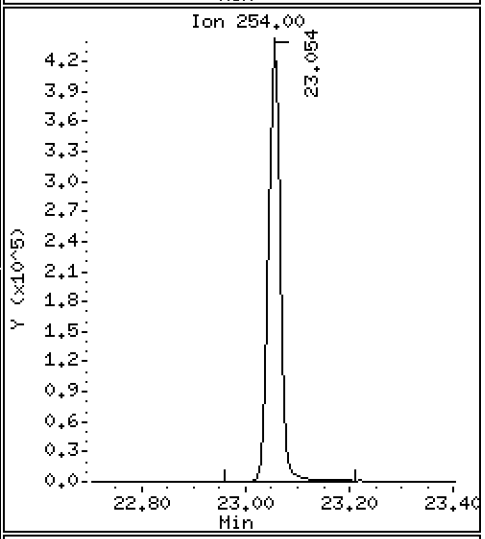
70 3,3'-Dichlorobenzidine

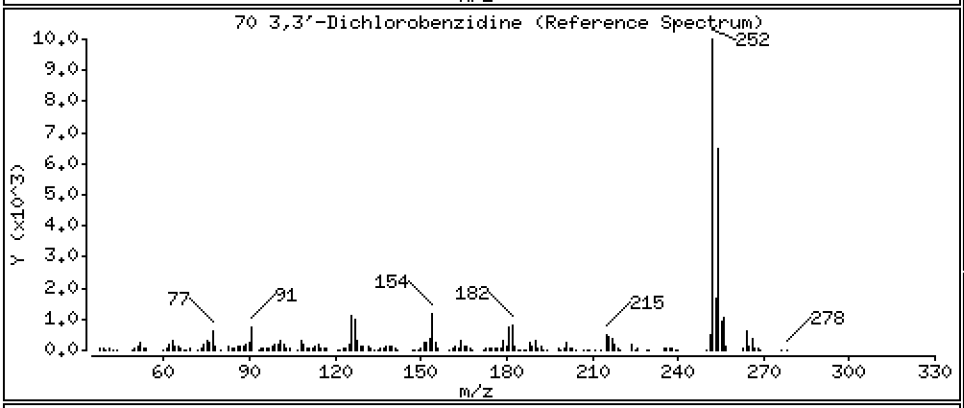
Concentration: 9.328 ug/mL

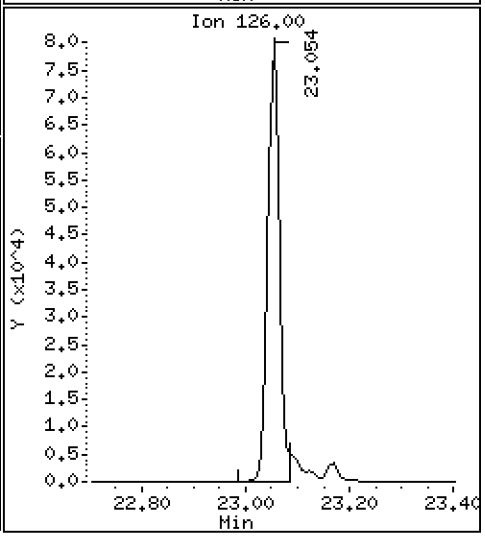


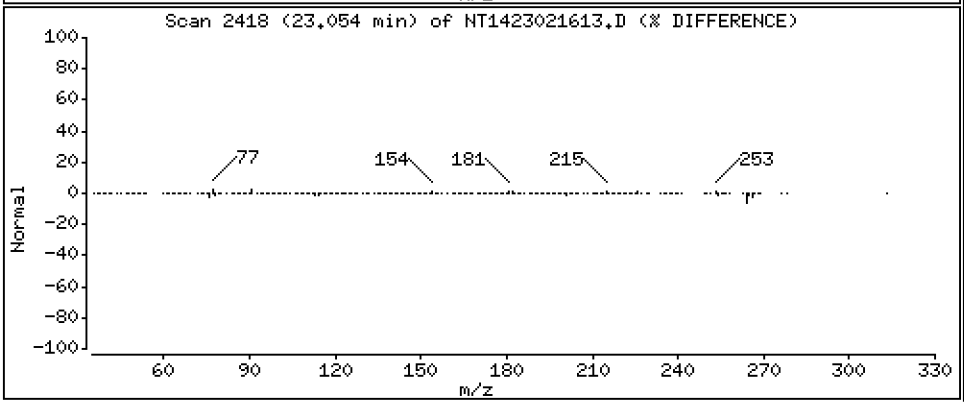












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

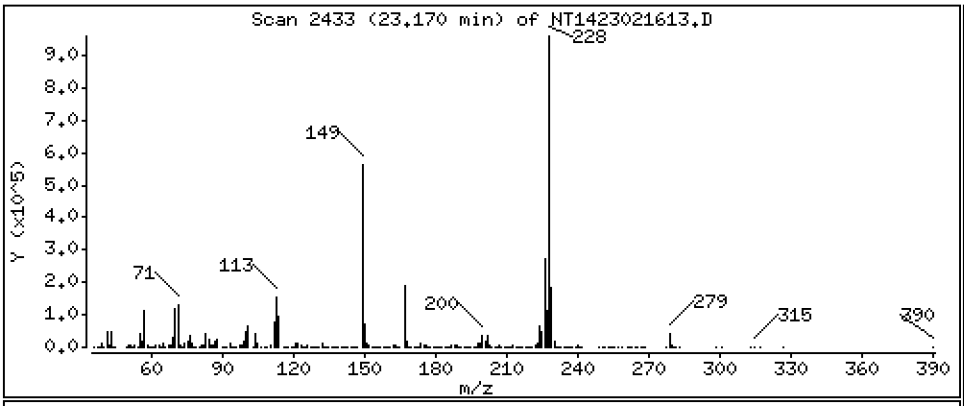
Operator: DSD

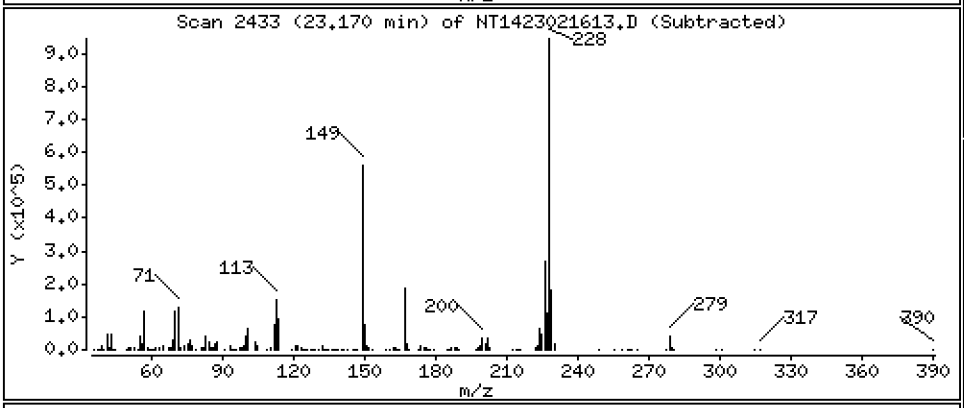
Column phase: ZB-5msi

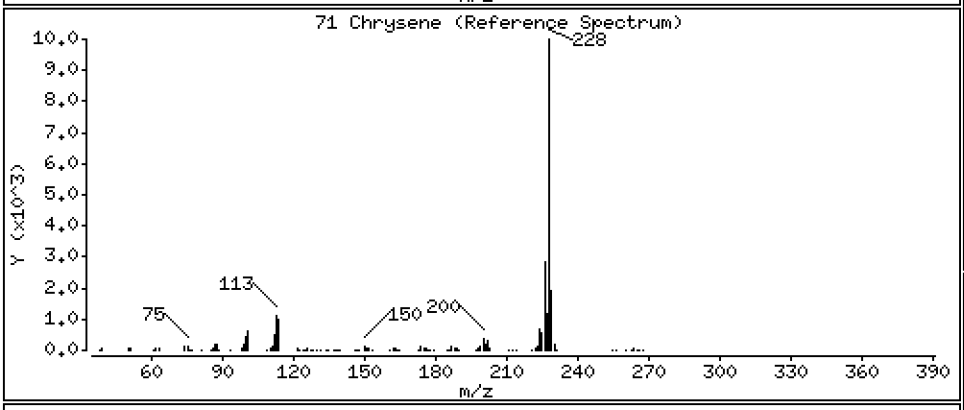
Column diameter: 0.25

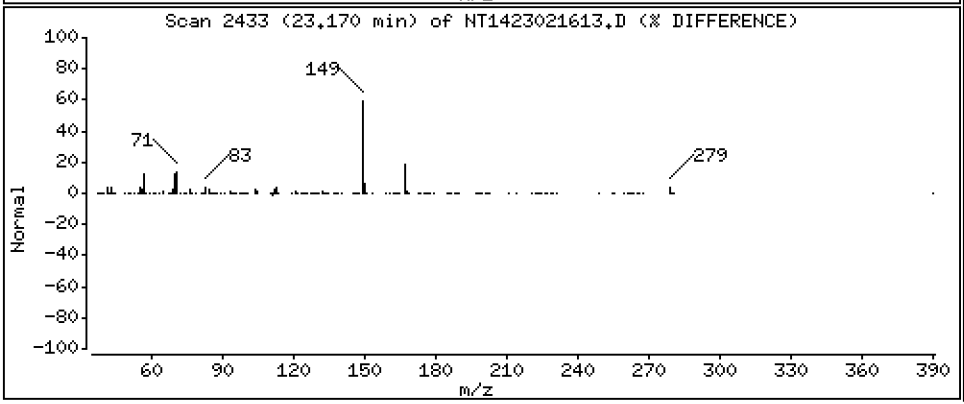
71 Chrysene

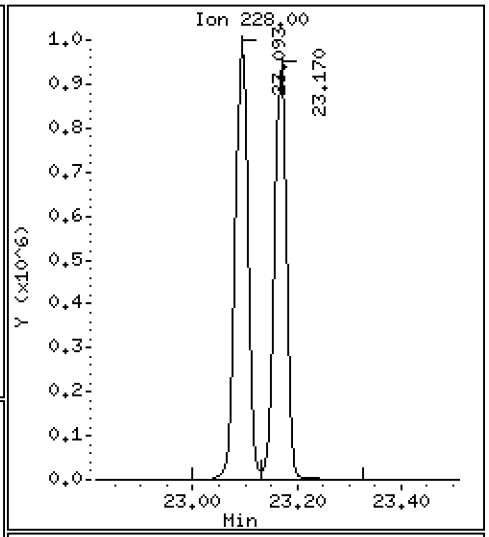
Concentration: 4.474 ug/mL

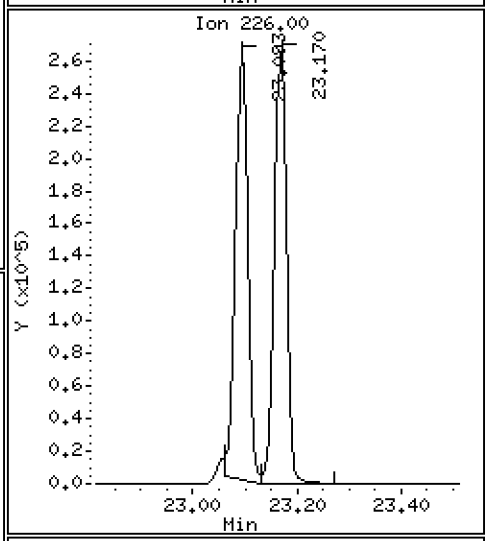


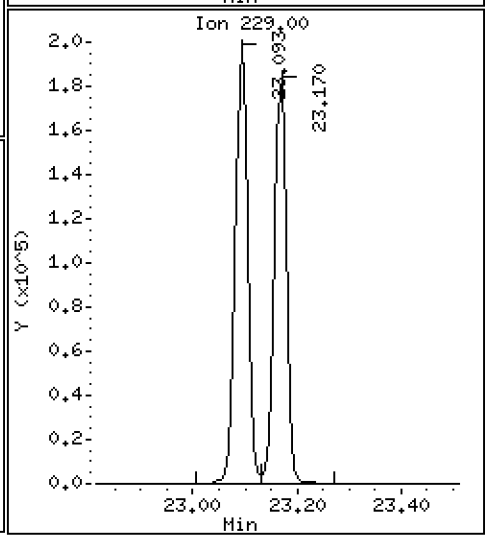












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

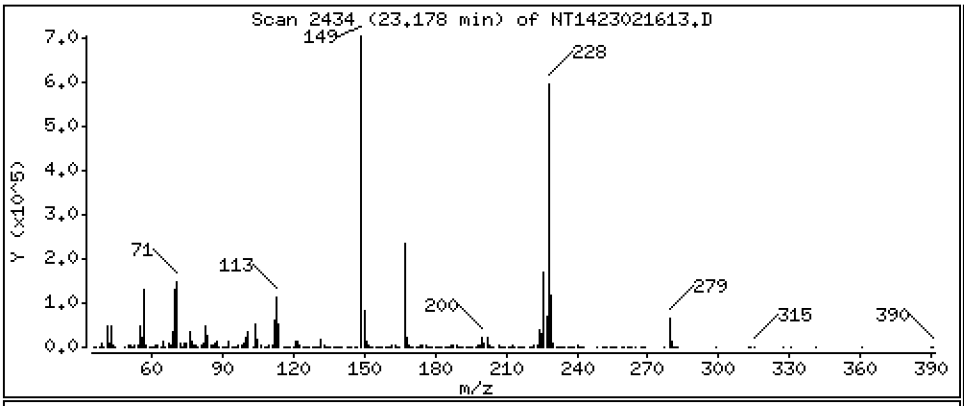
Operator: DSD

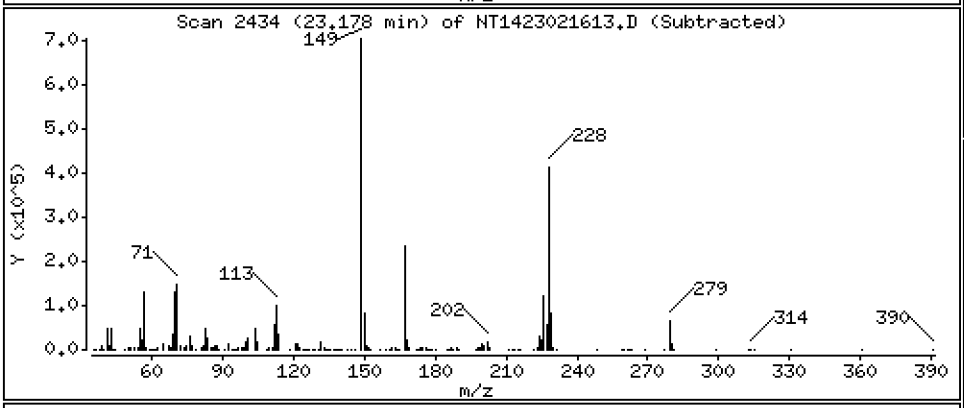
Column phase: ZB-5msi

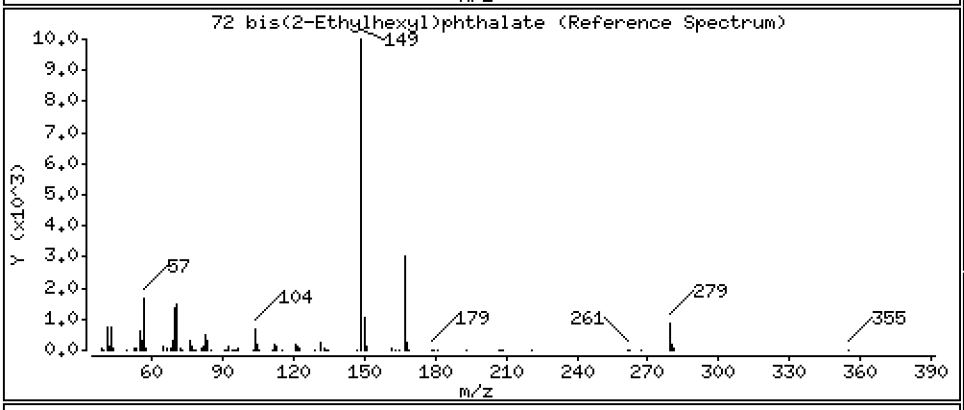
Column diameter: 0.25

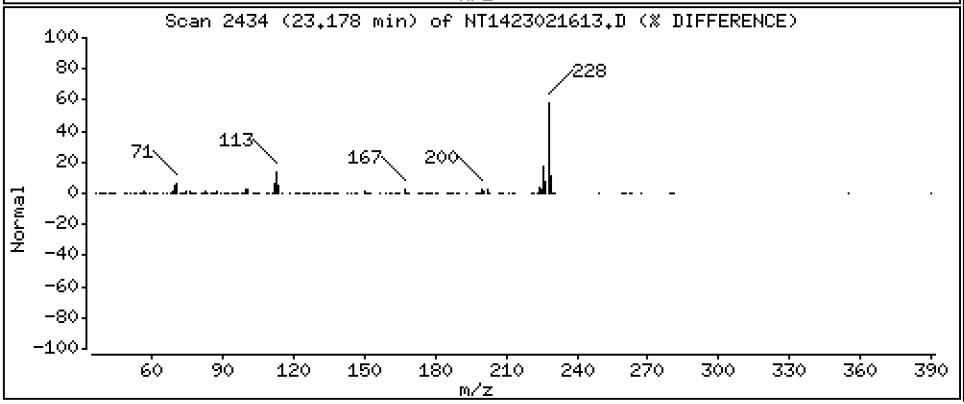
72 bis(2-Ethylhexyl)phthalate

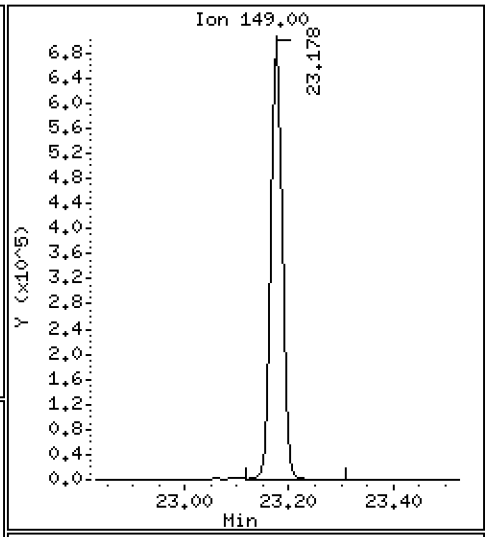
Concentration: 4.649 ug/mL

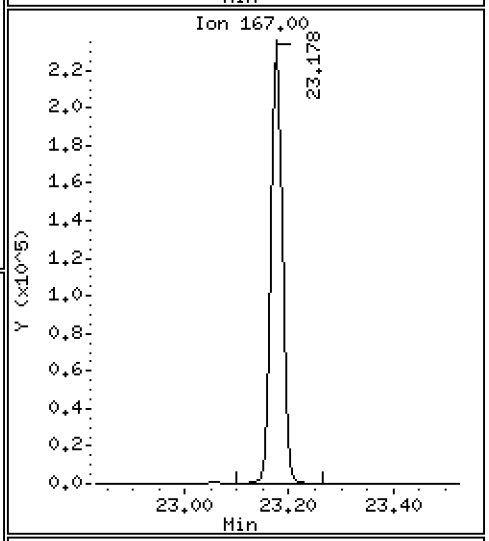


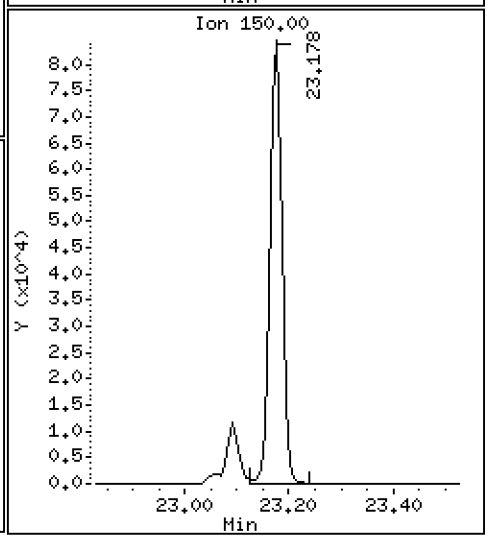












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

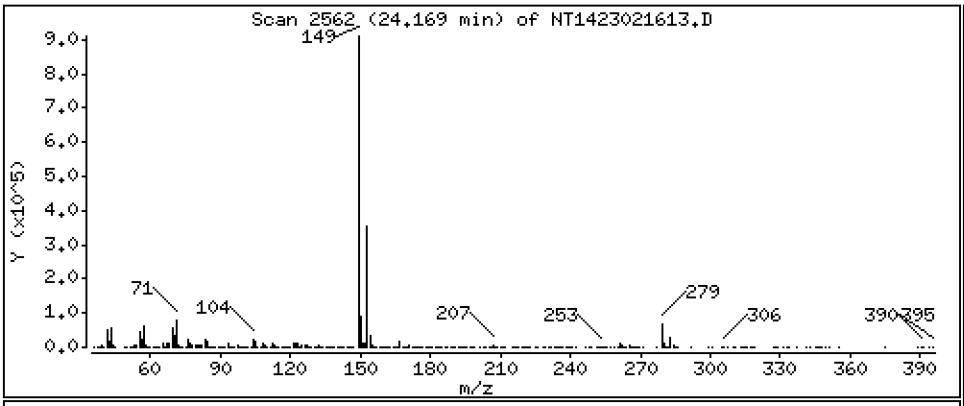
Operator: DSD

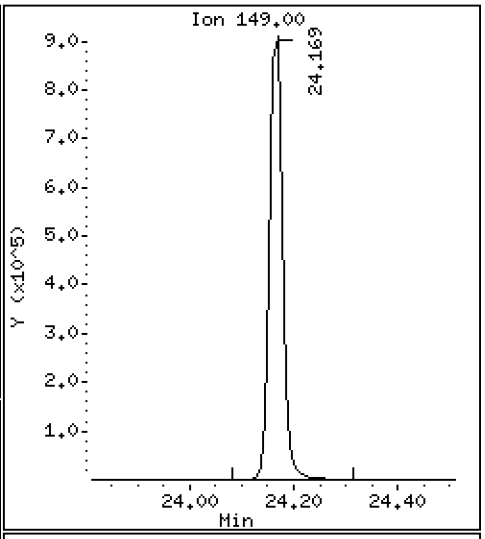
Column phase: ZB-5msi

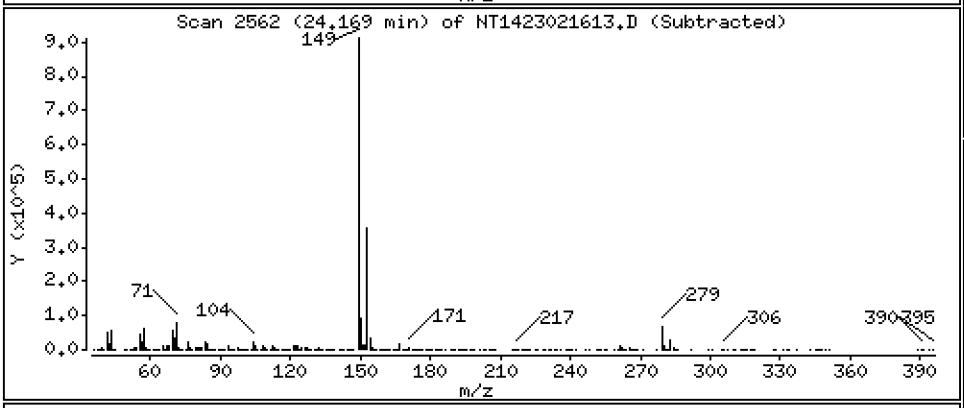
Column diameter: 0.25

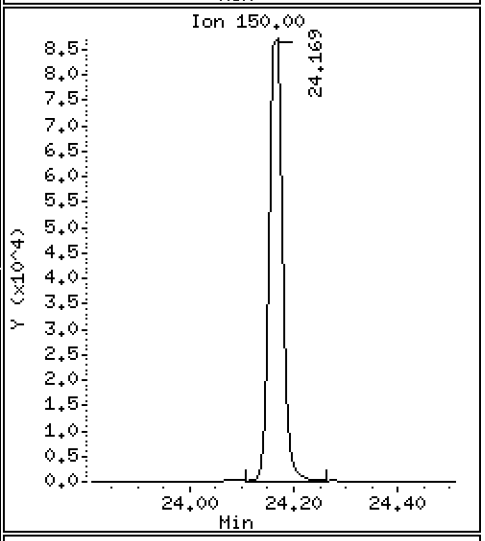
73 Di-n-octylphthalate

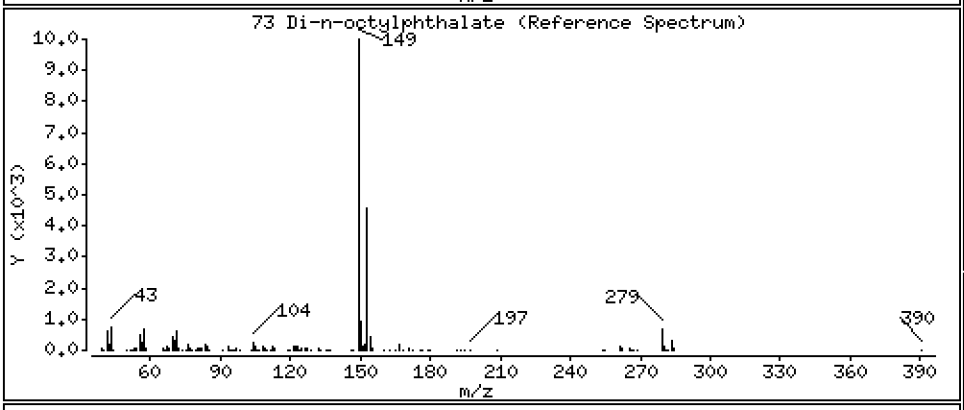
Concentration: 4.962 ug/mL

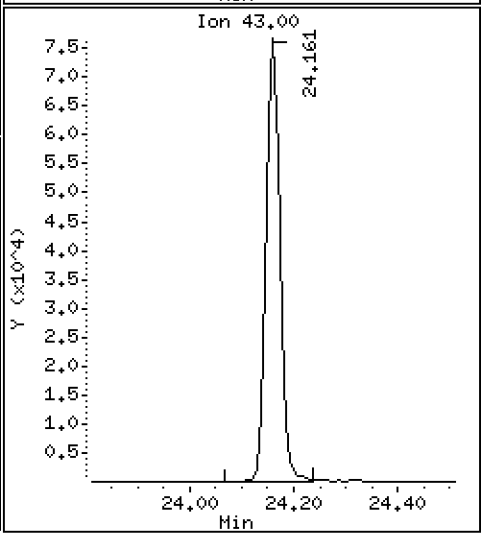


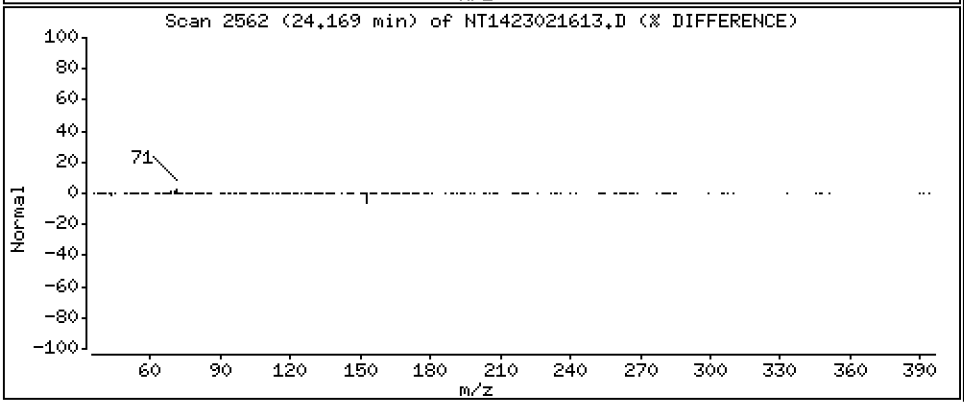












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

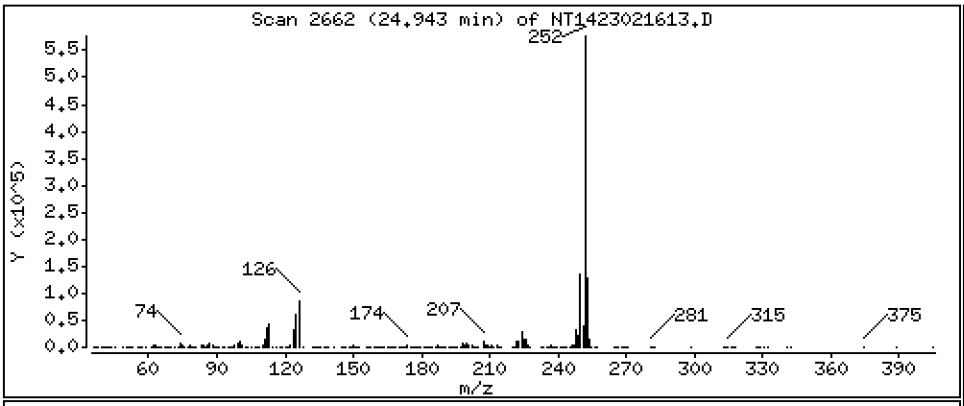
Operator: DSD

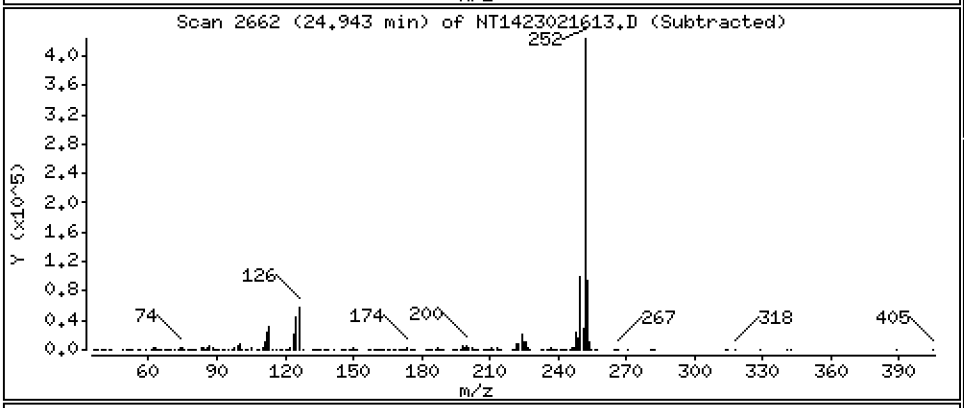
Column phase: ZB-5msi

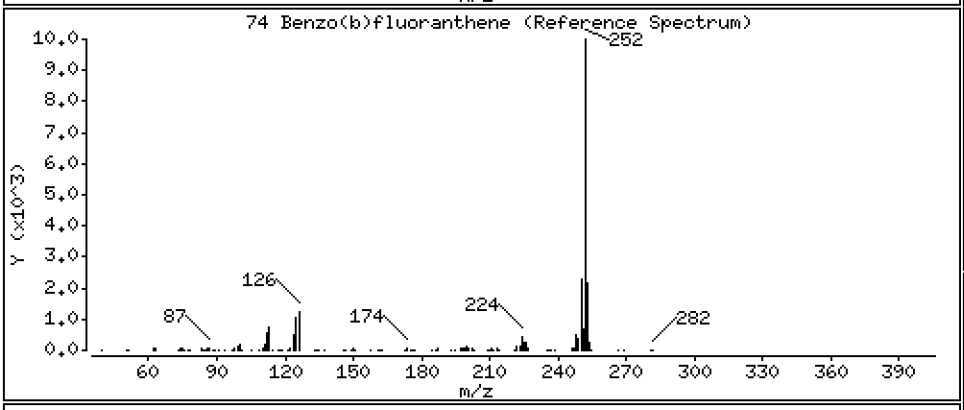
Column diameter: 0.25

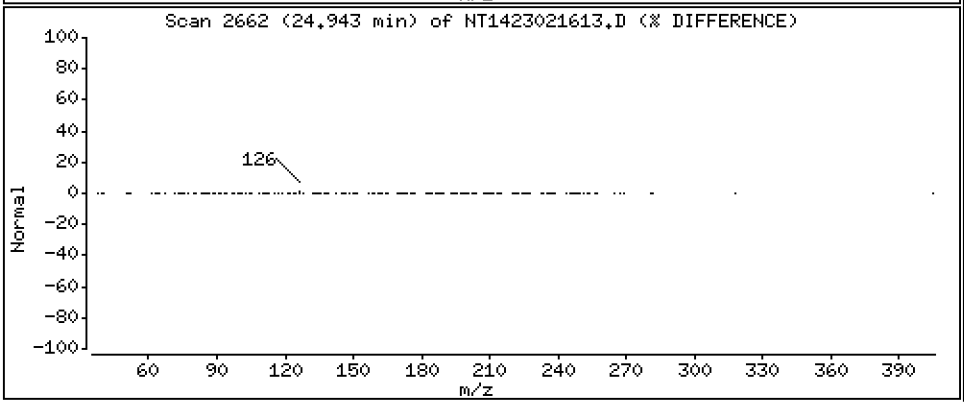
74 Benzo(b)fluoranthene

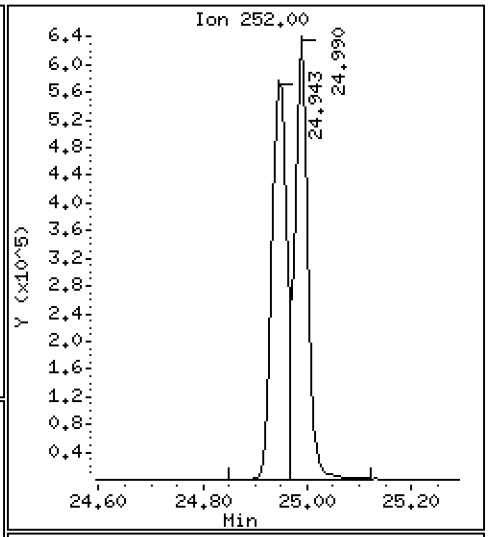
Concentration: 4.813 ug/mL

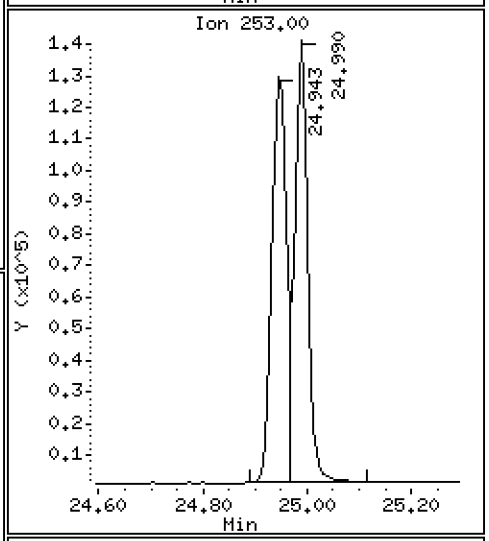


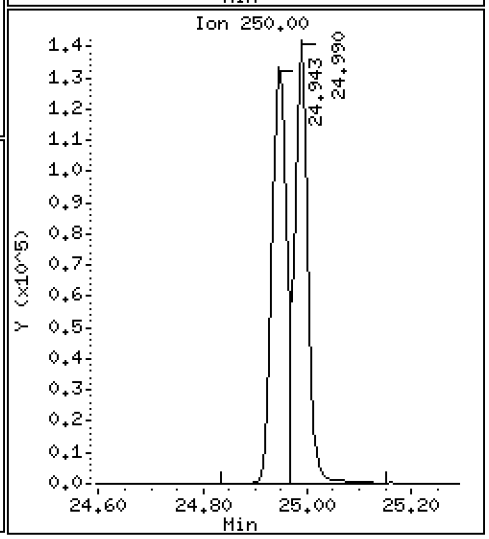












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

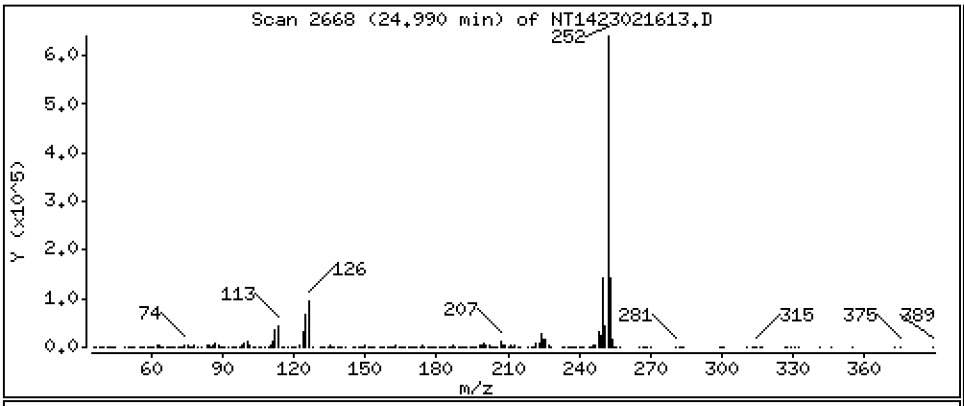
Operator: DSD

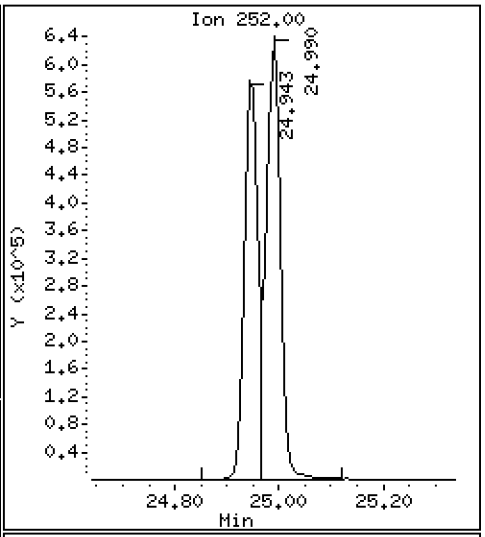
Column phase: ZB-5msi

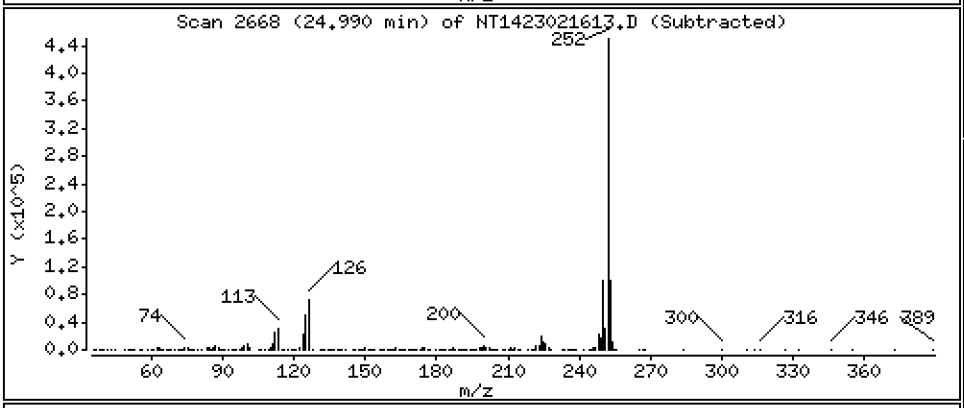
Column diameter: 0.25

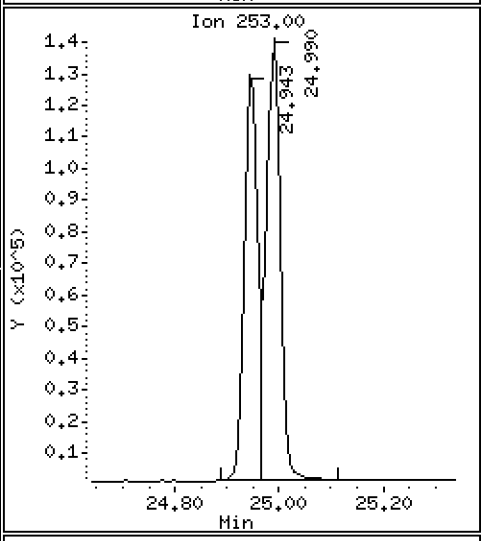
75 Benzo(k)fluoranthene

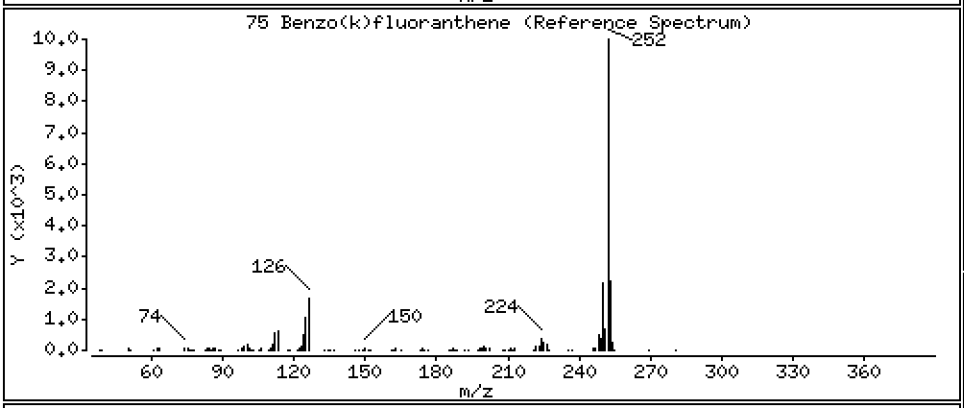
Concentration: 4.838 ug/mL

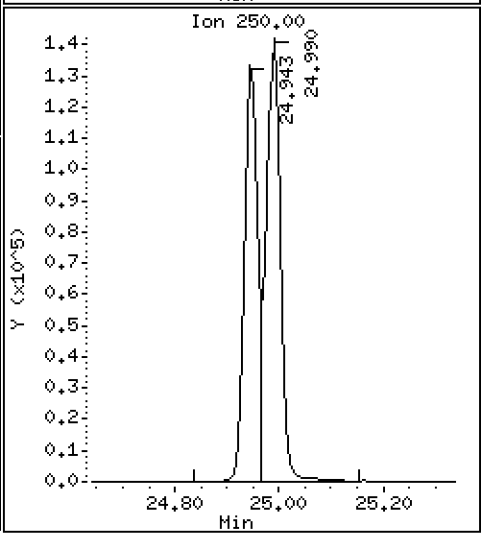


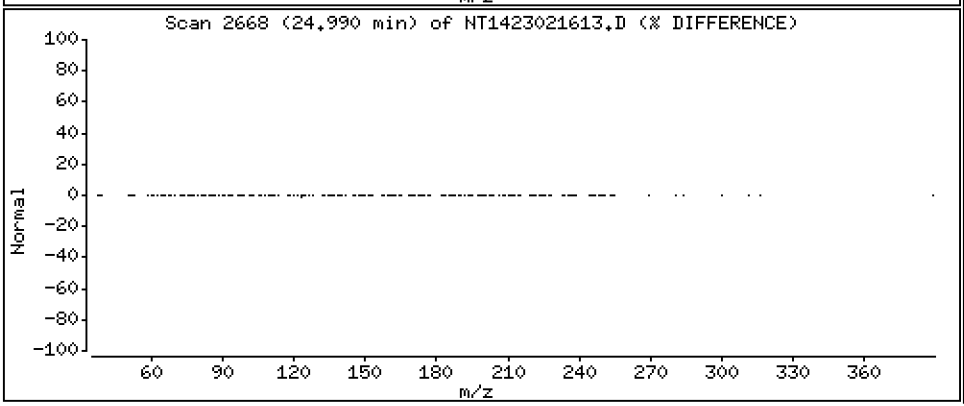












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

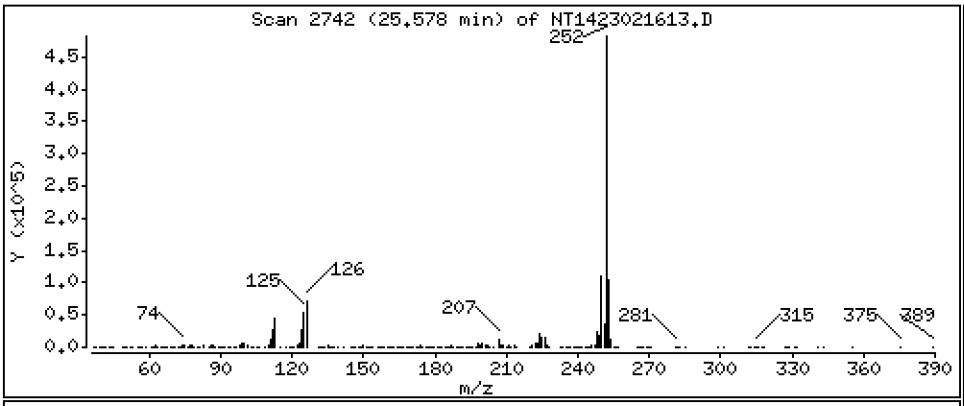
Operator: DSD

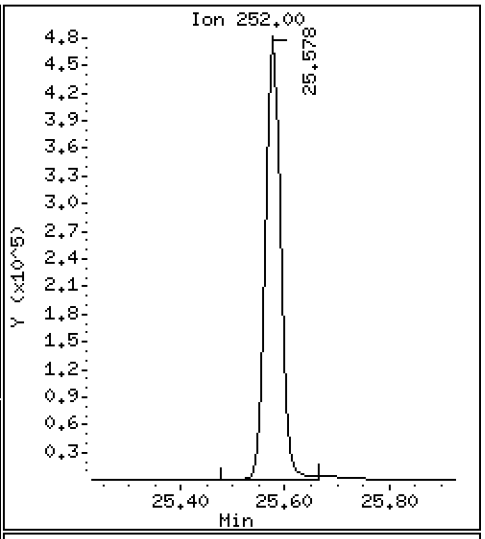
Column phase: ZB-5msi

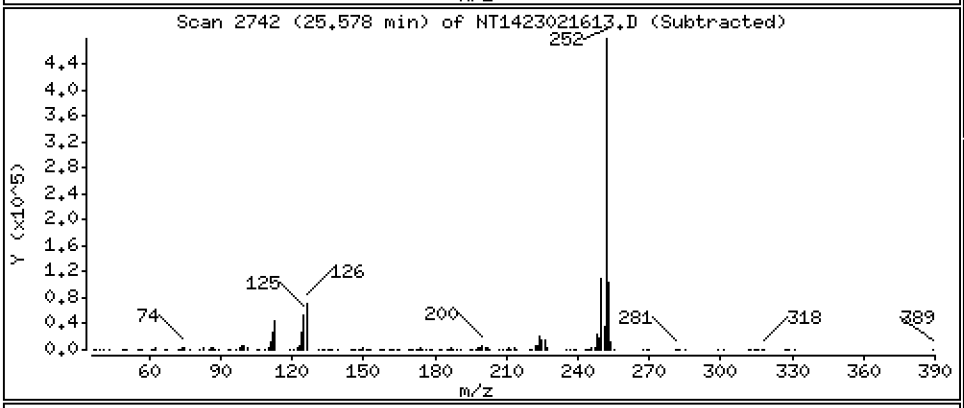
Column diameter: 0.25

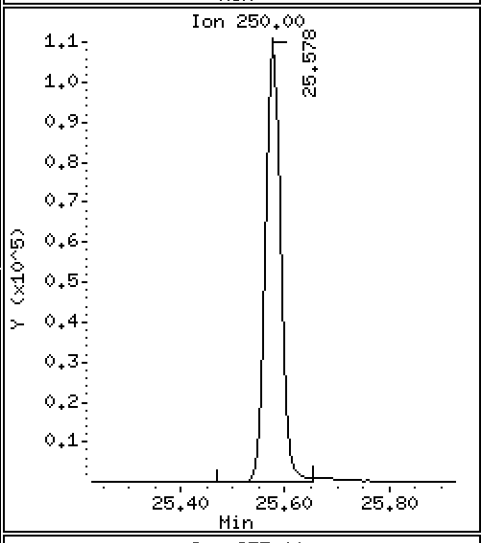
76 Benzo(a)pyrene

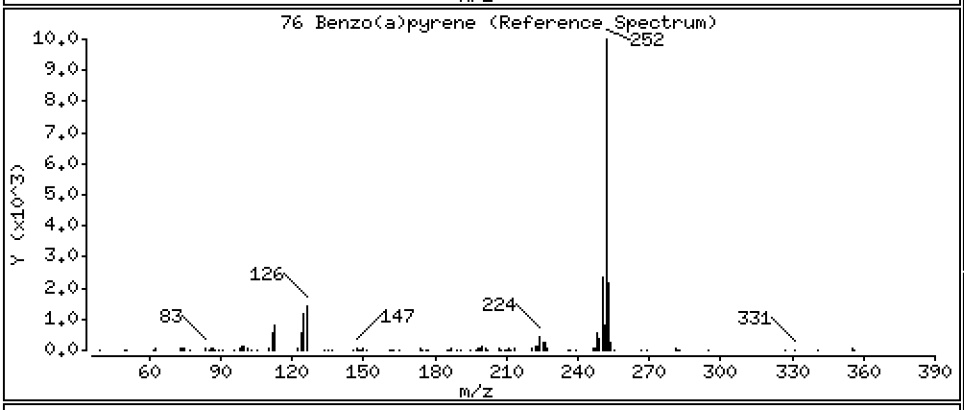
Concentration: 4.607 ug/mL

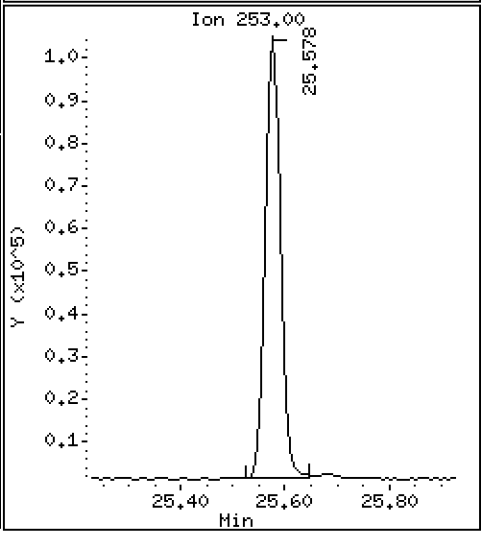


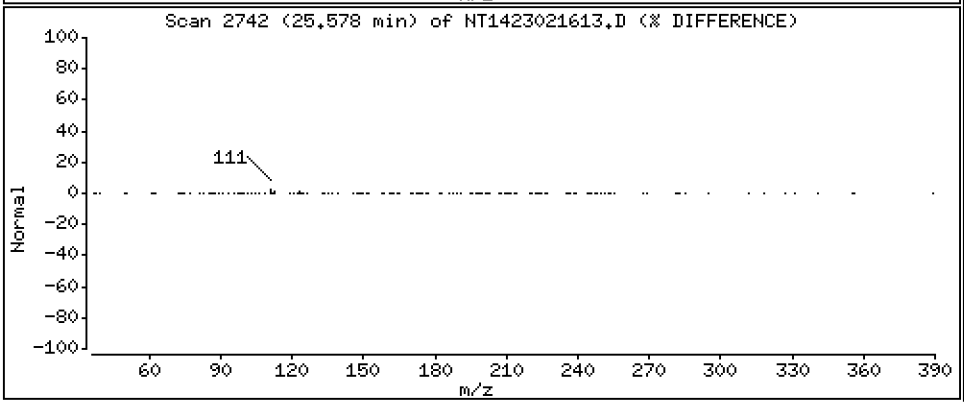












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

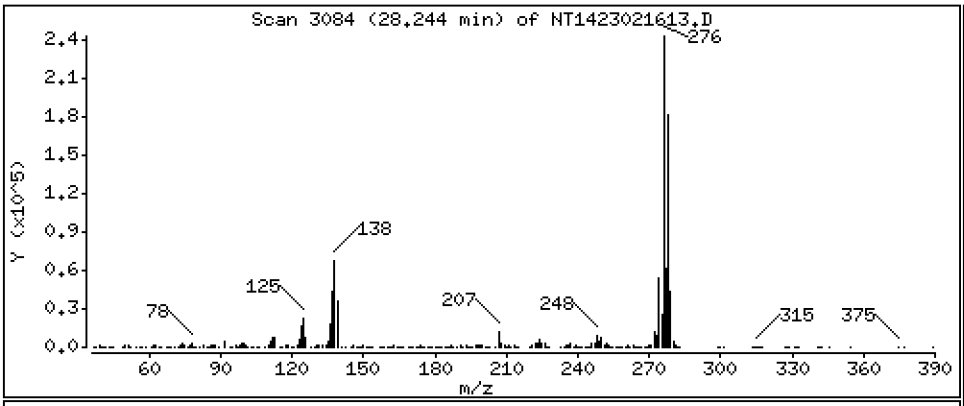
Operator: DSD

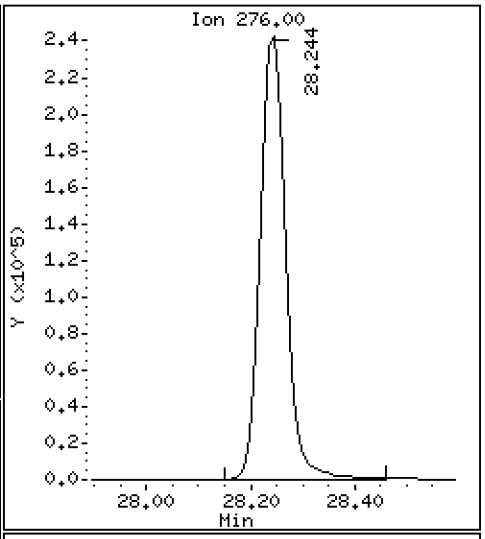
Column phase: ZB-5msi

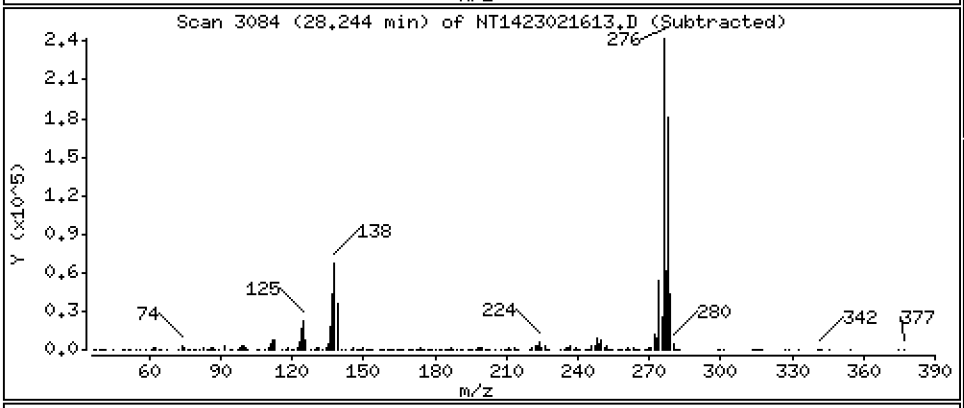
Column diameter: 0.25

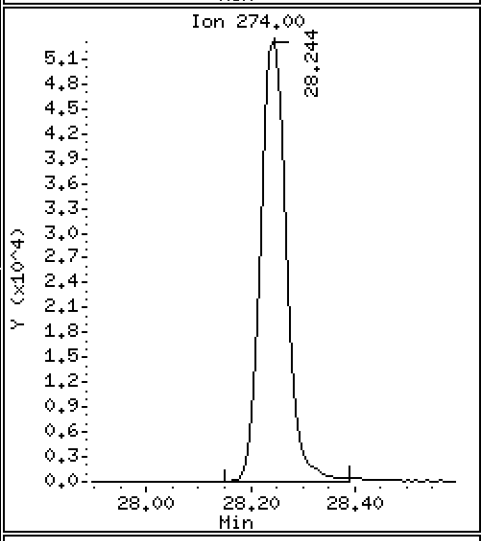
78 Indeno(1,2,3-cd)pyrene

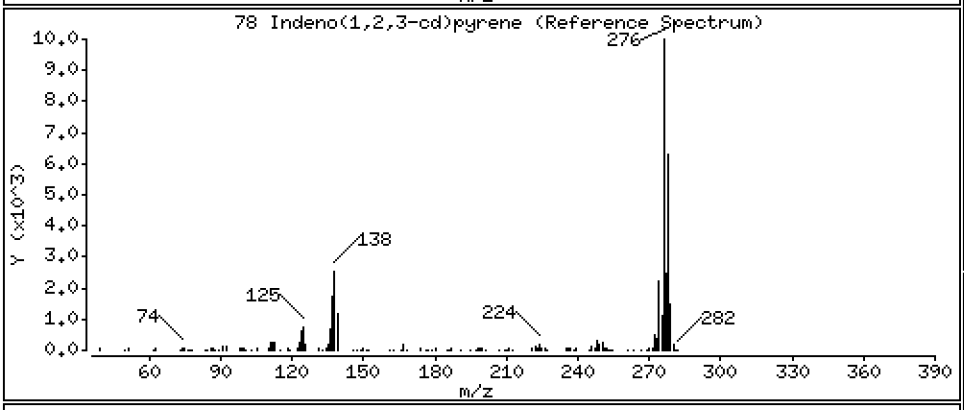
Concentration: 4.395 ug/mL

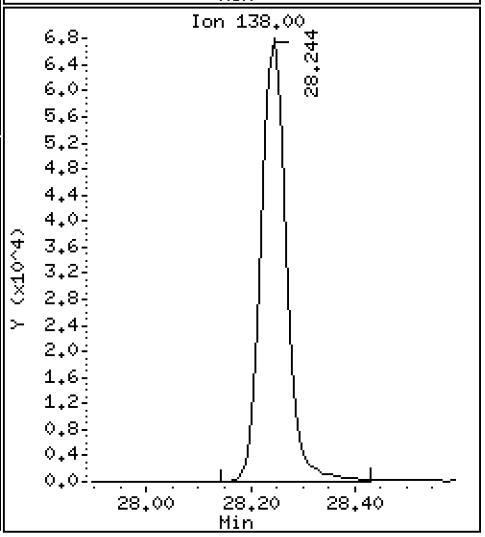


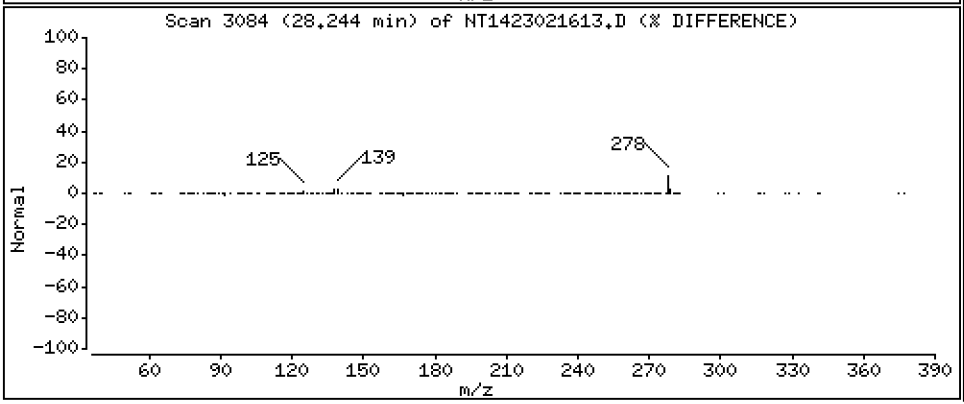












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

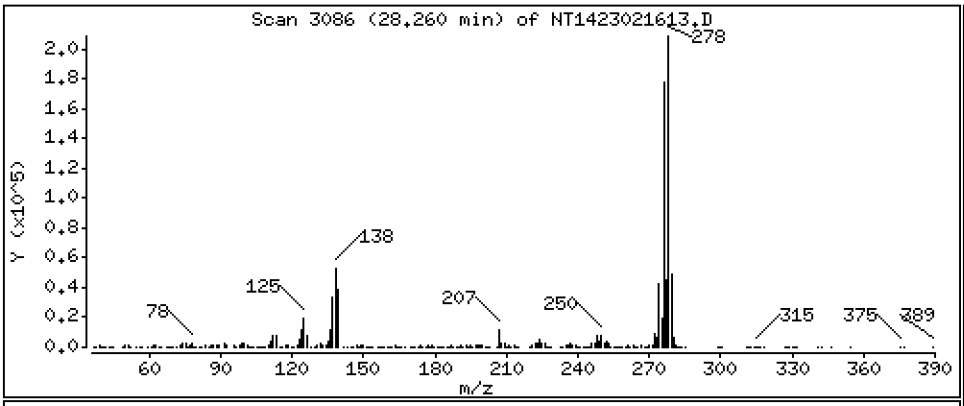
Operator: DSD

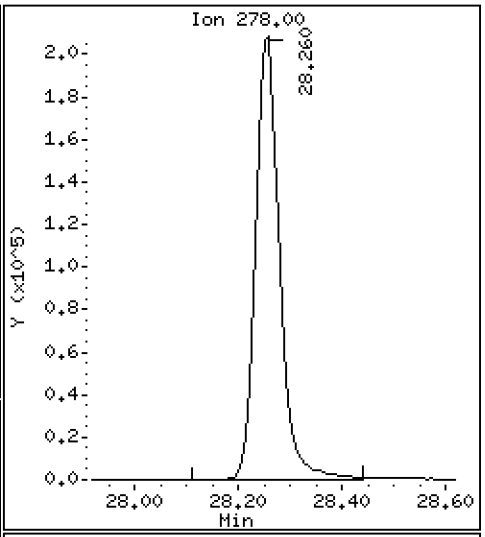
Column phase: ZB-5msi

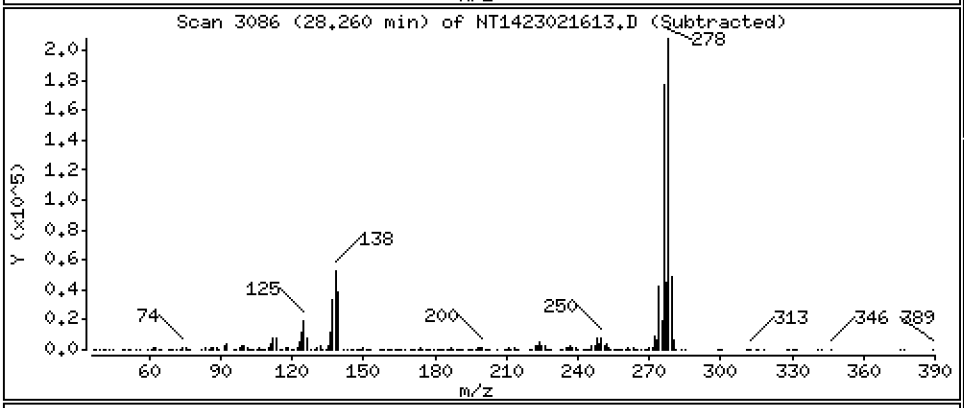
Column diameter: 0.25

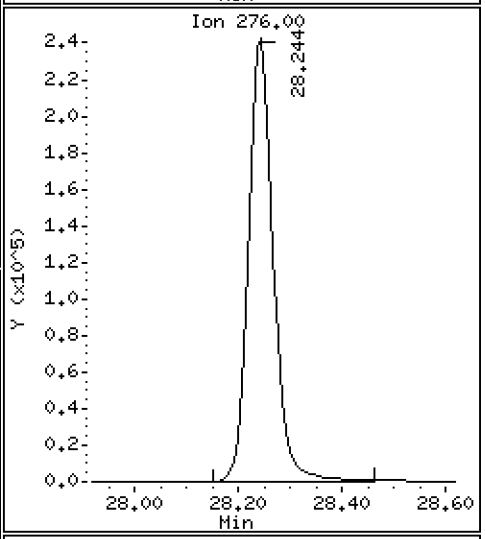
79 Dibenzo(a,h)anthracene

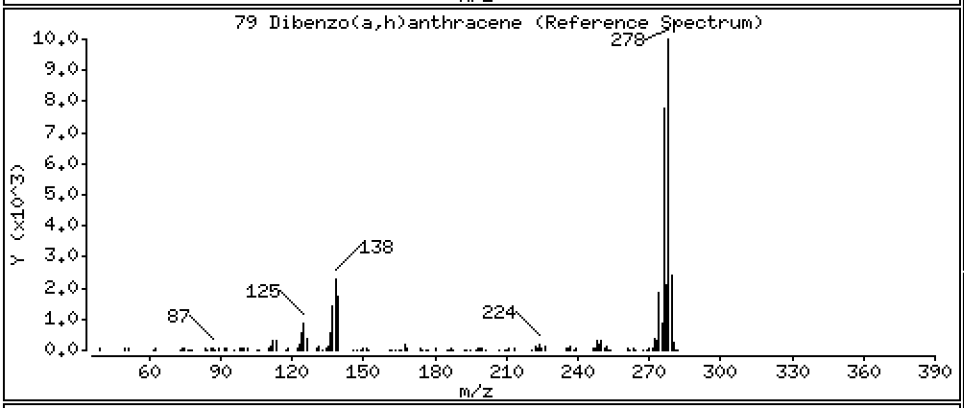
Concentration: 4.365 ug/mL

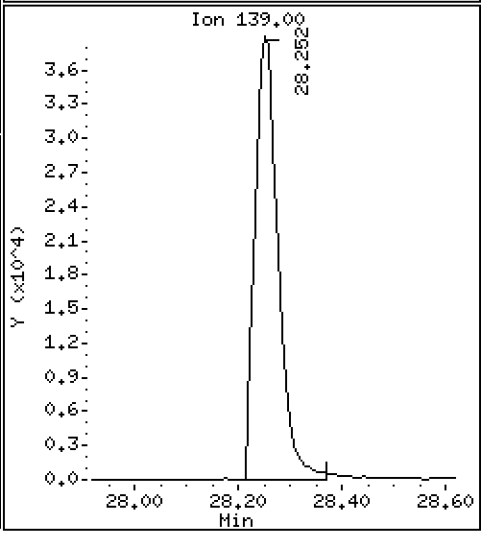


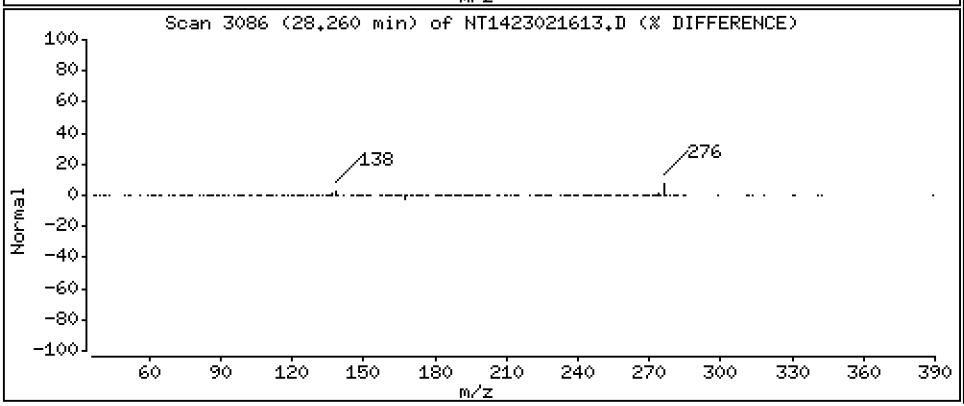












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

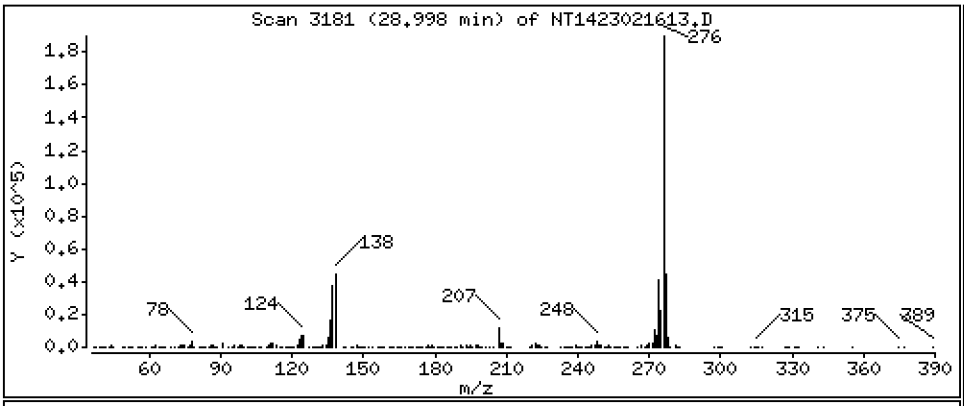
Operator: DSD

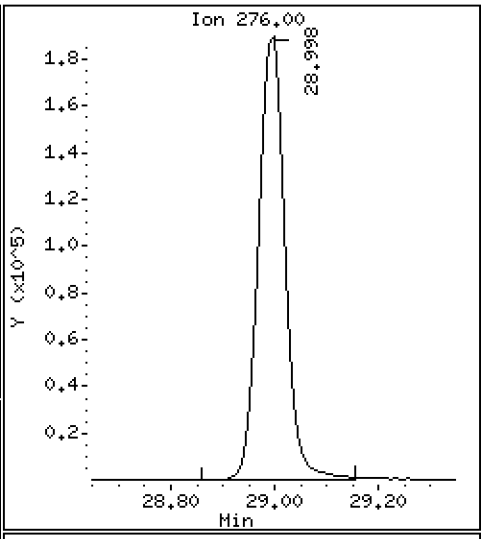
Column phase: ZB-5msi

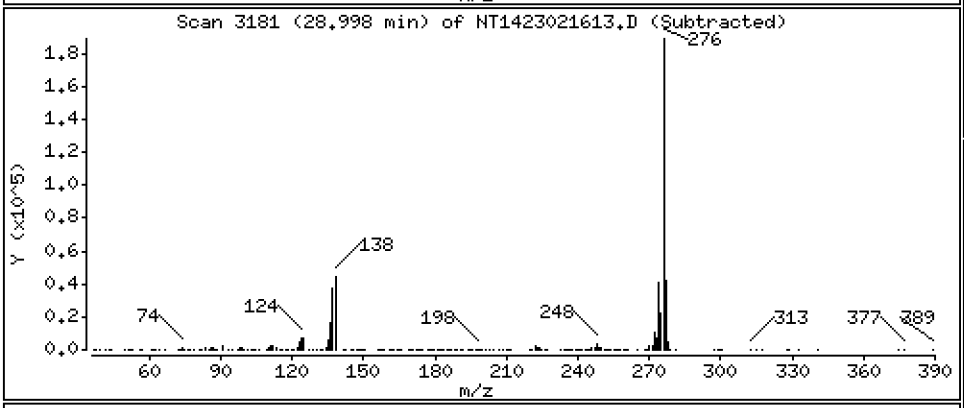
Column diameter: 0.25

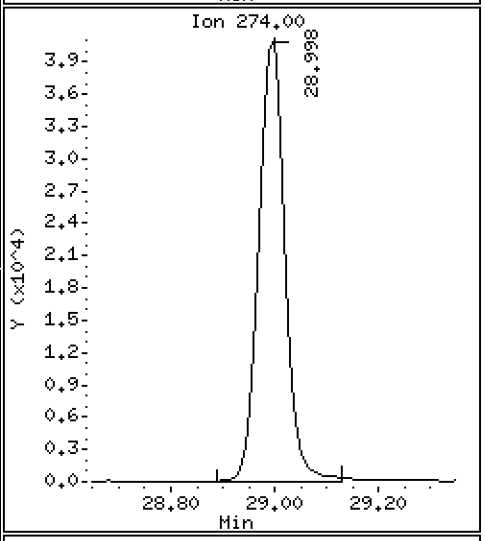
80 Benzo(g,h,i)perylene

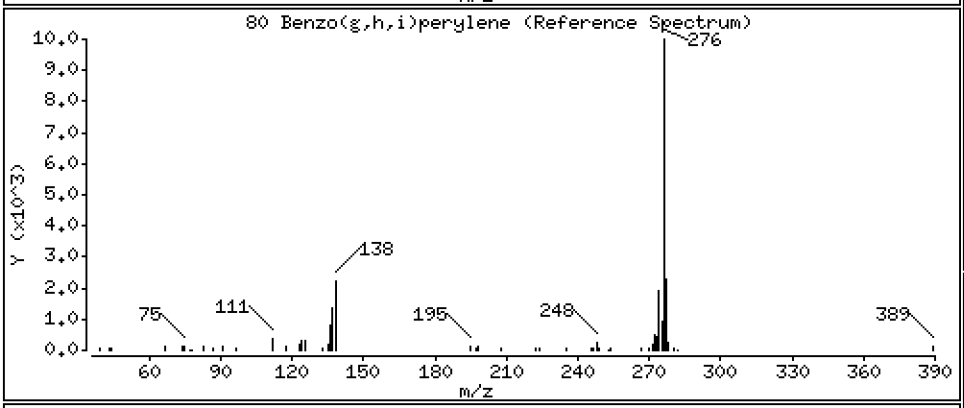
Concentration: 4.380 ug/mL

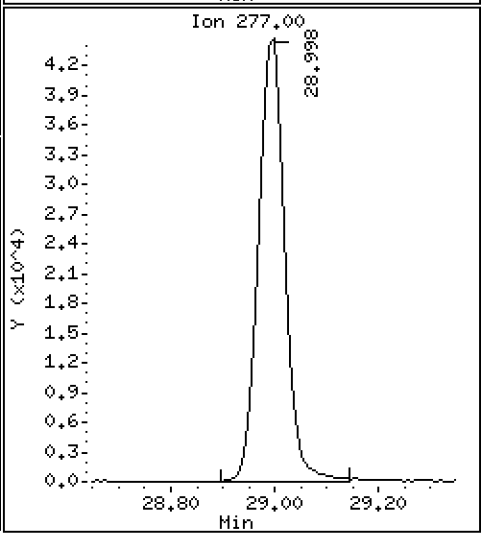


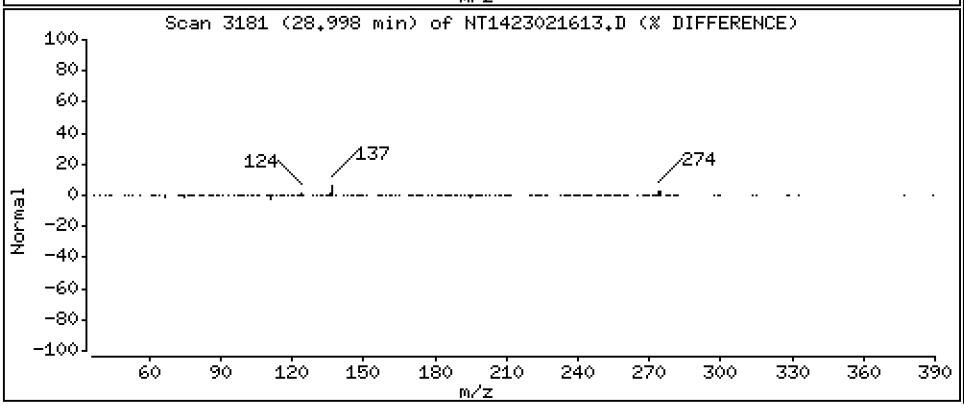












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

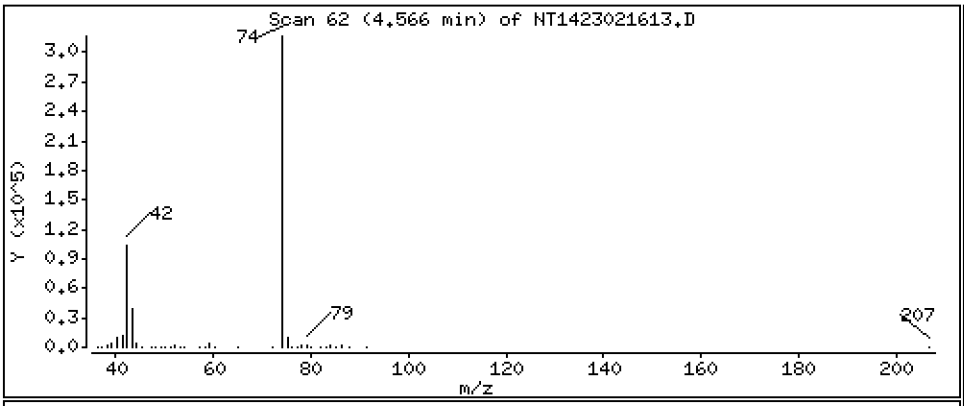
Operator: DSD

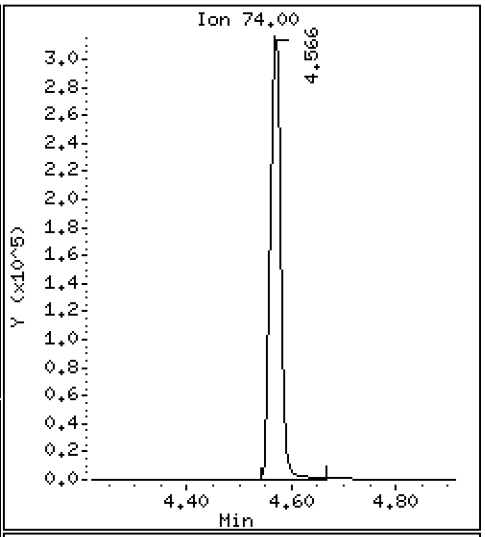
Column phase: ZB-5msi

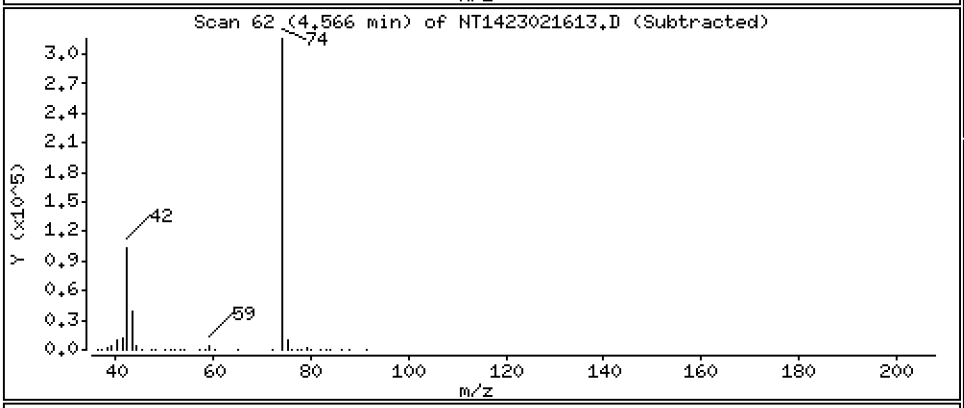
Column diameter: 0.25

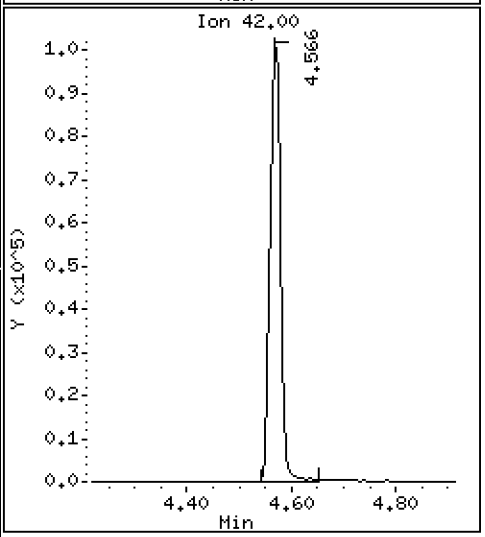
90 N-Nitrosodimethylamine

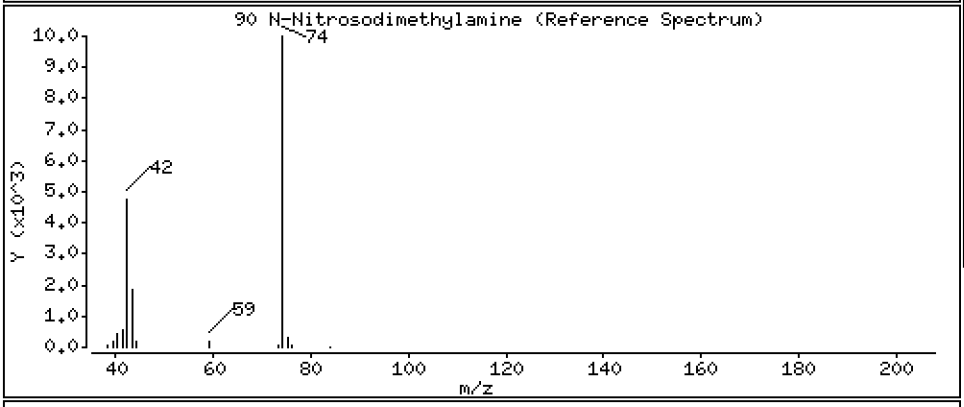
Concentration: 5.632 ug/mL

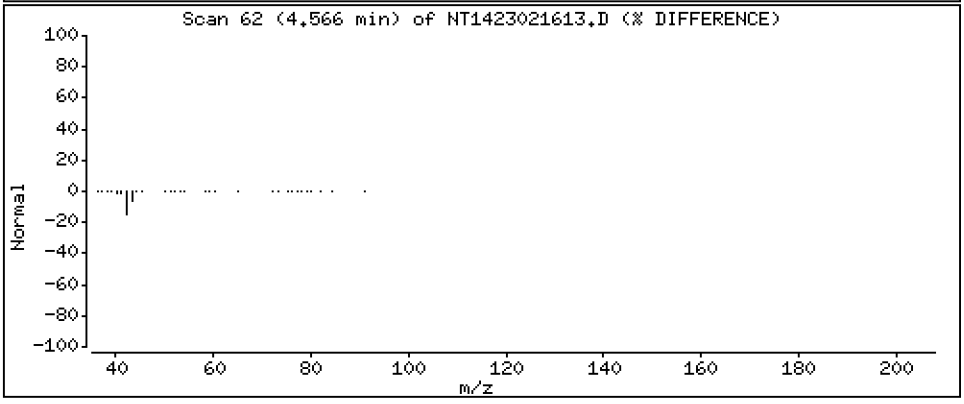












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

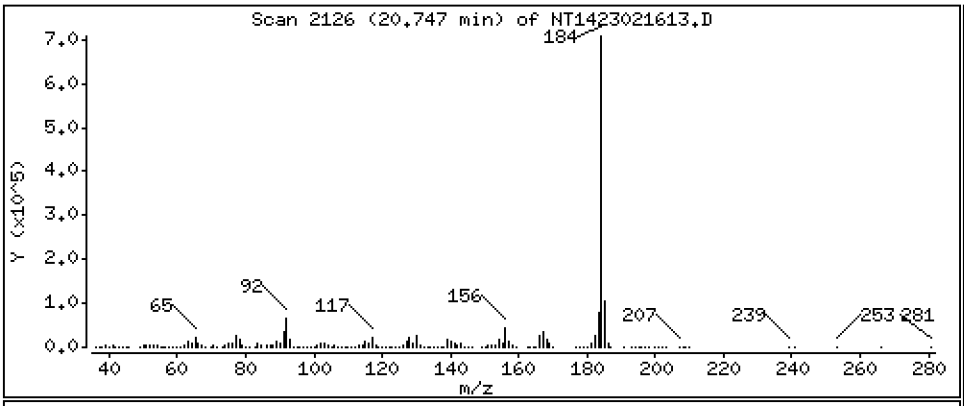
Operator: DSD

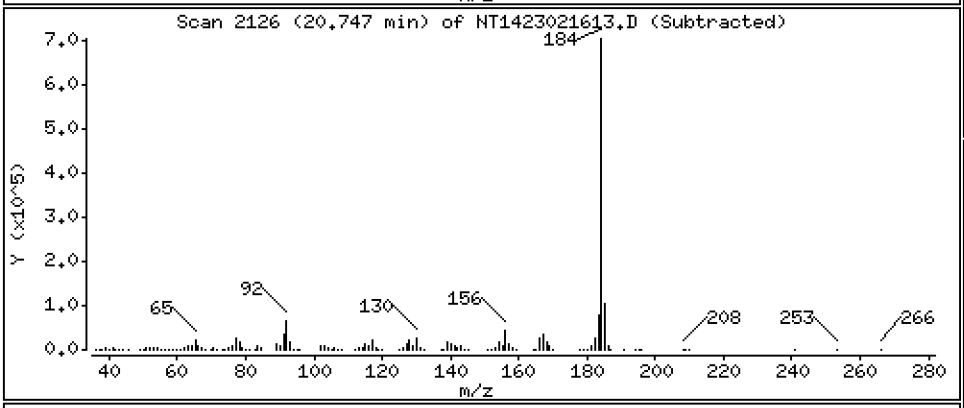
Column phase: ZB-5msi

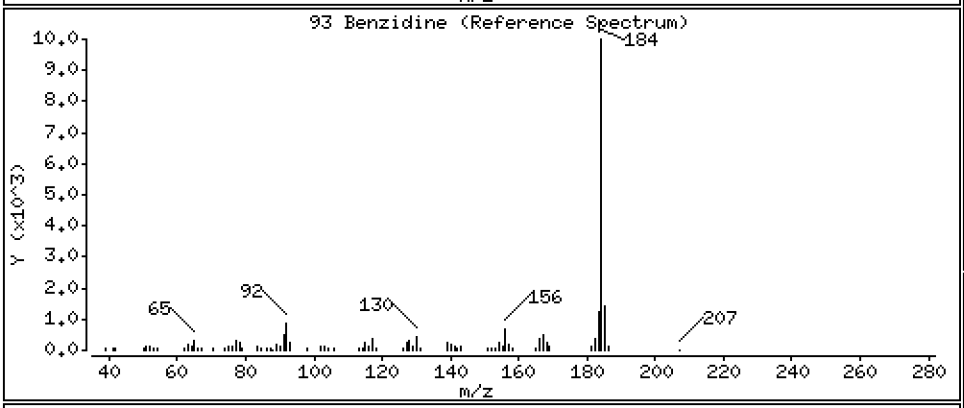
Column diameter: 0.25

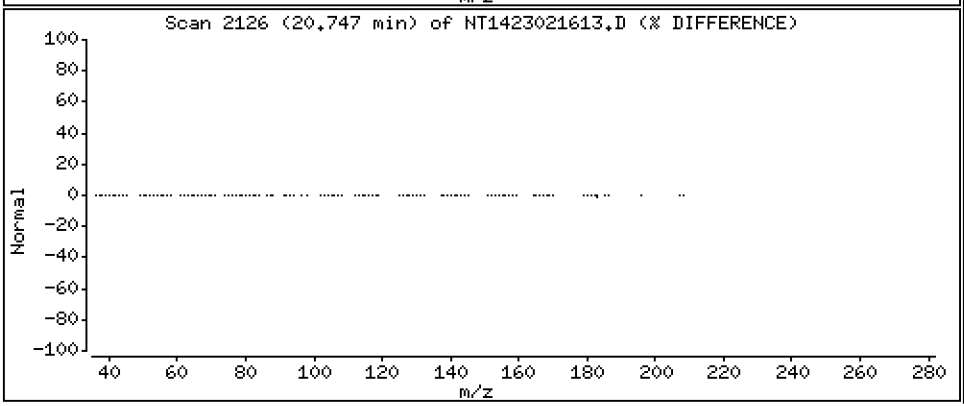
93 Benzidine

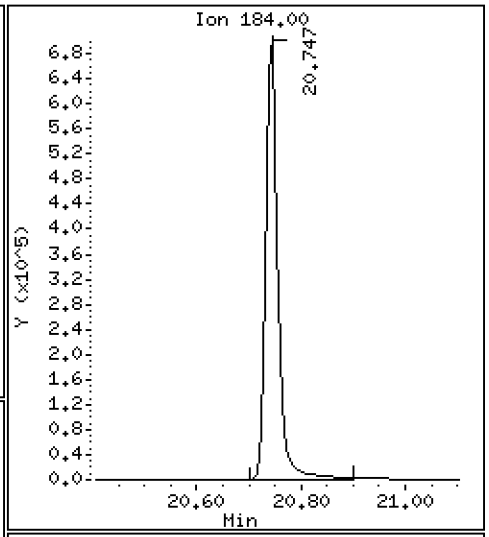
Concentration: 9.984 ug/mL

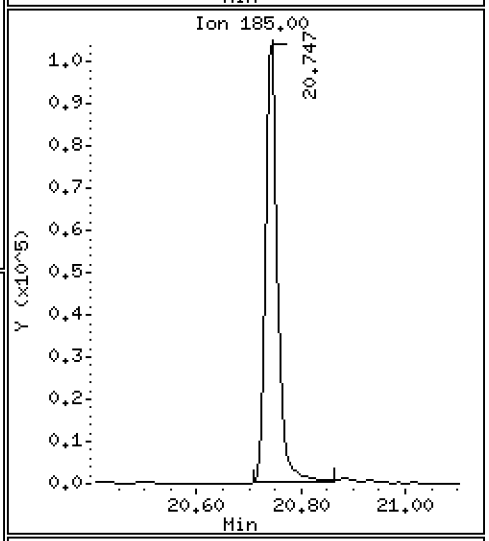


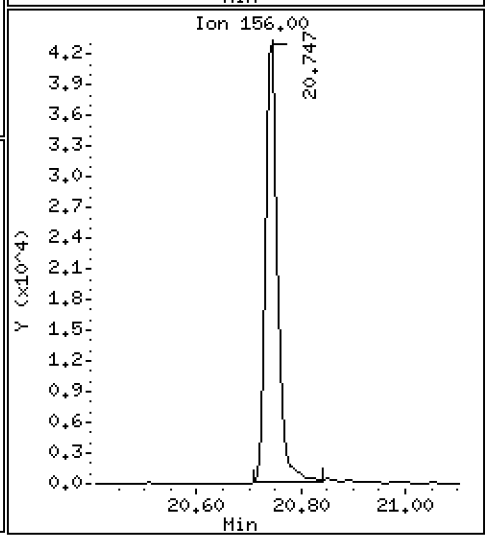












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

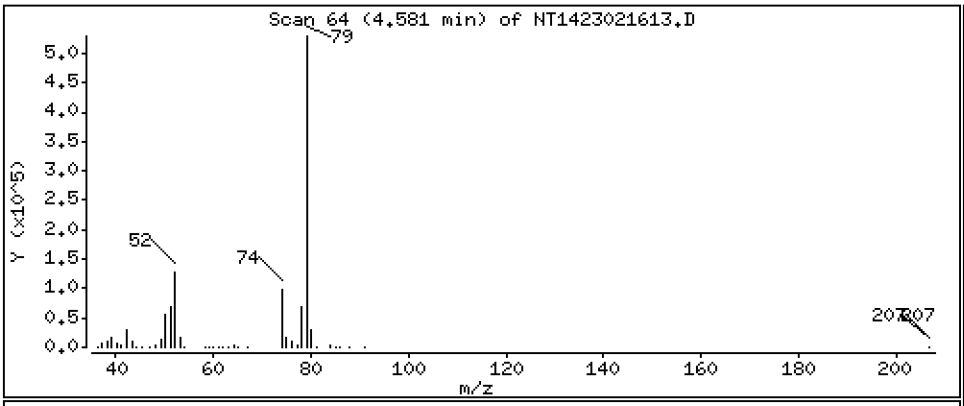
Operator: DSD

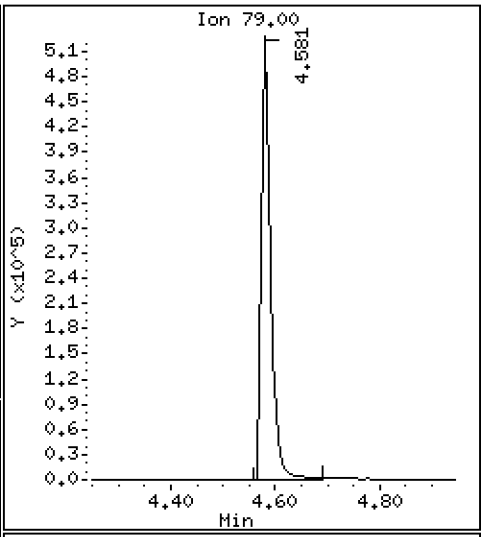
Column phase: ZB-5msi

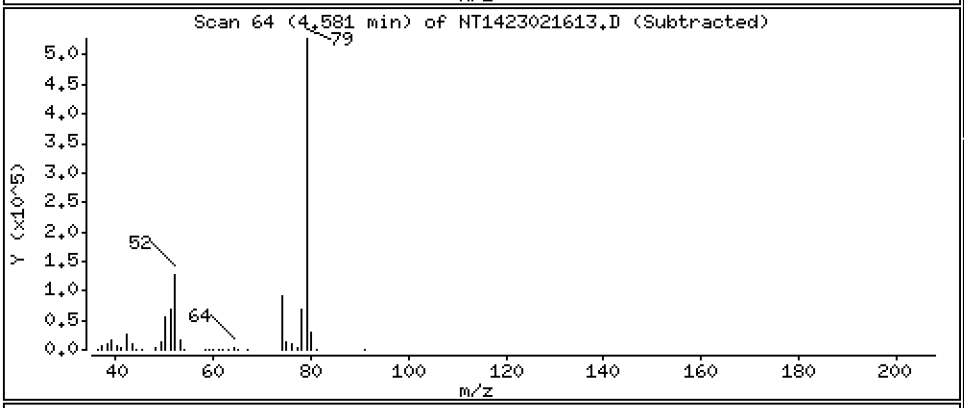
Column diameter: 0.25

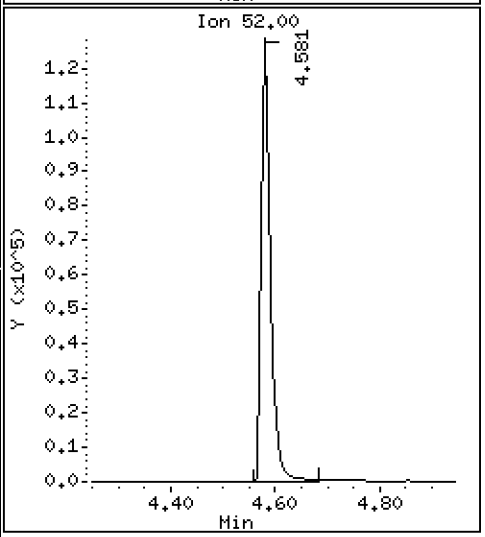
103 Pyridine

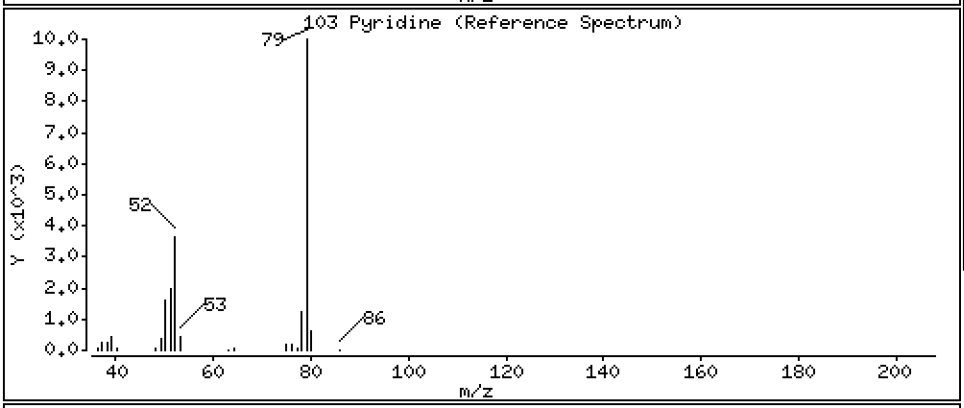
Concentration: 5.566 ug/mL

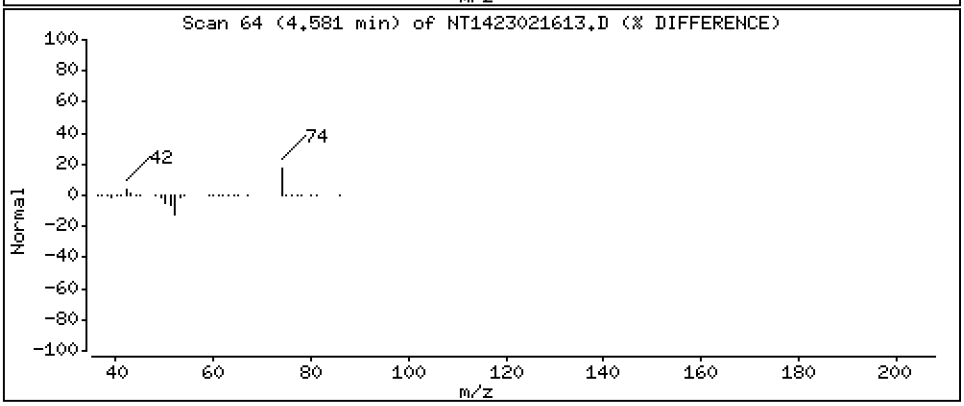












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

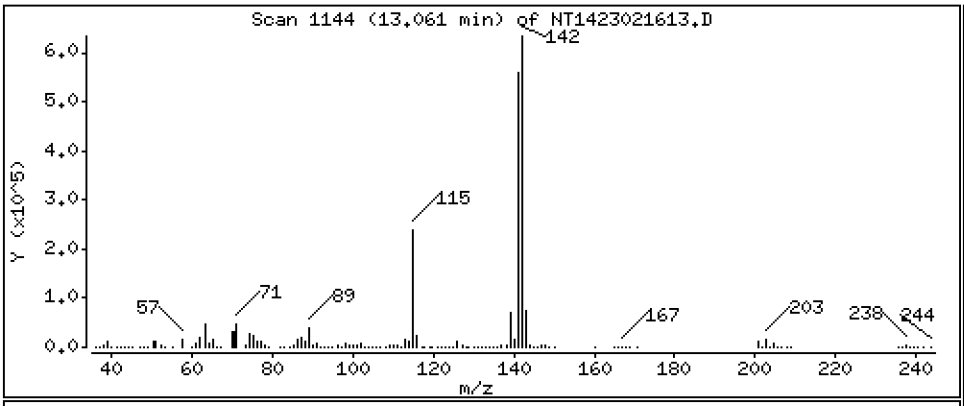
Operator: DSD

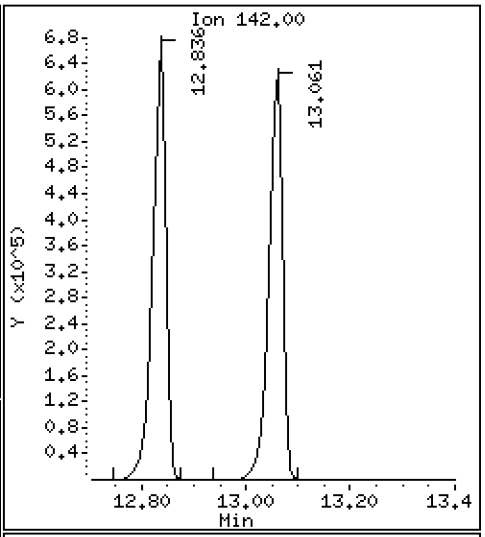
Column phase: ZB-5msi

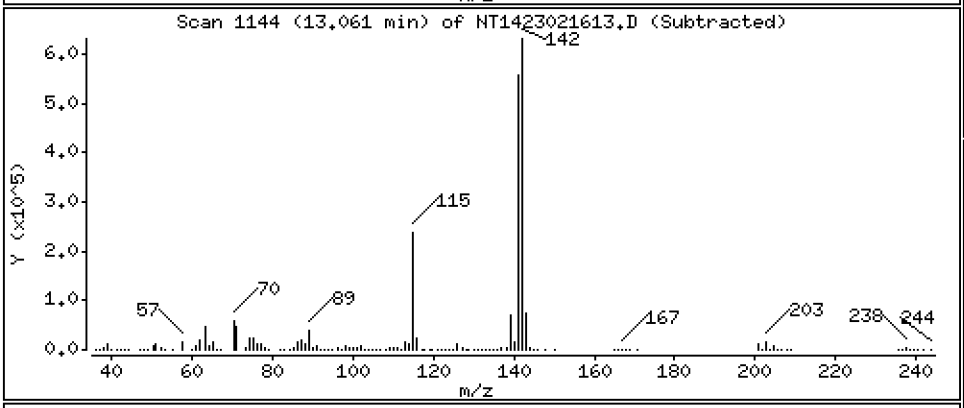
Column diameter: 0.25

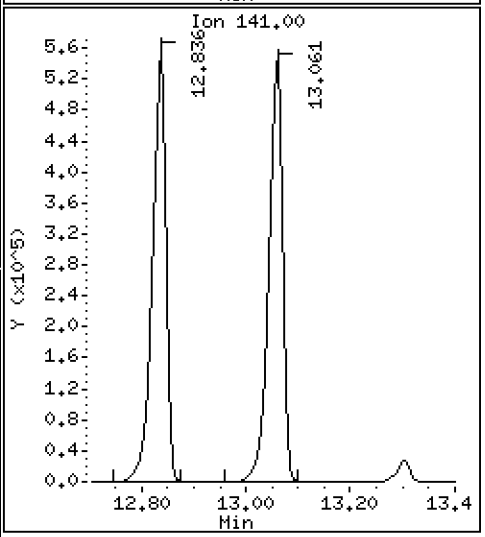
105 1-methylnaphthalene

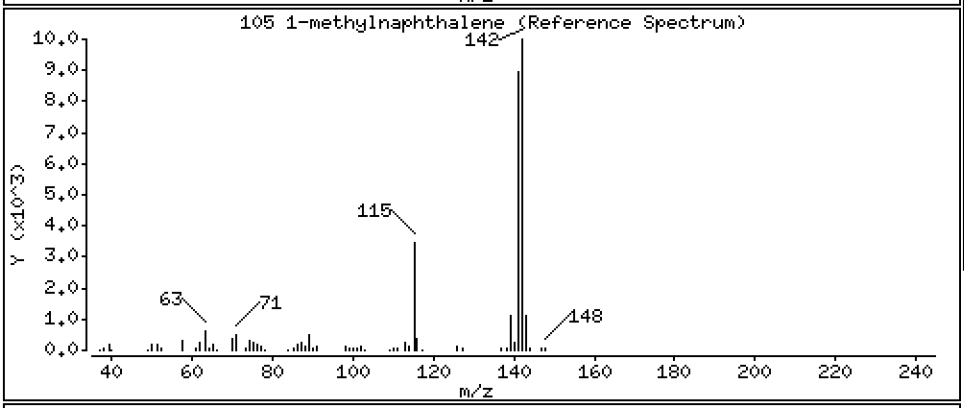
Concentration: 4.760 ug/mL

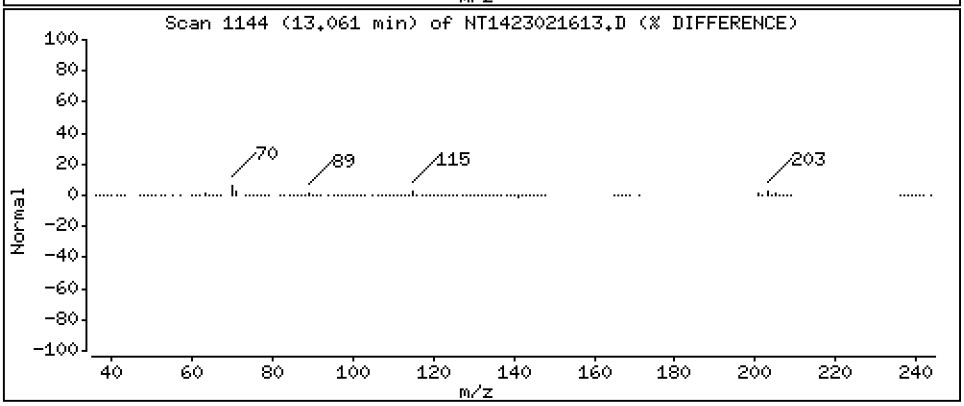












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

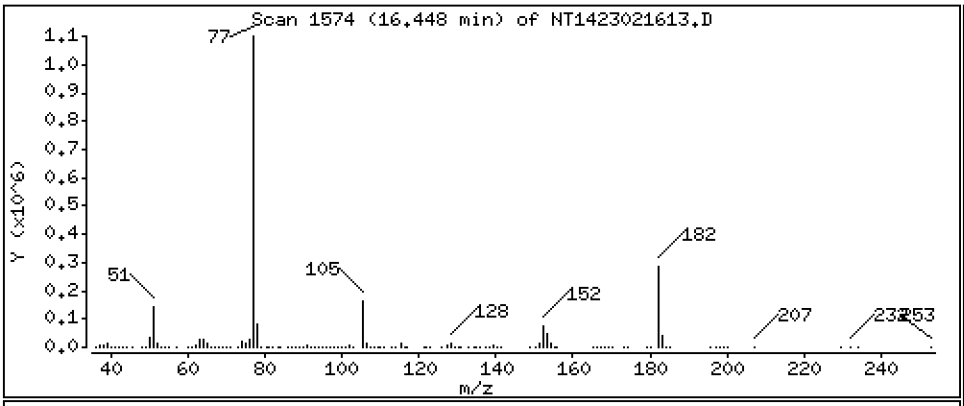
Operator: DSD

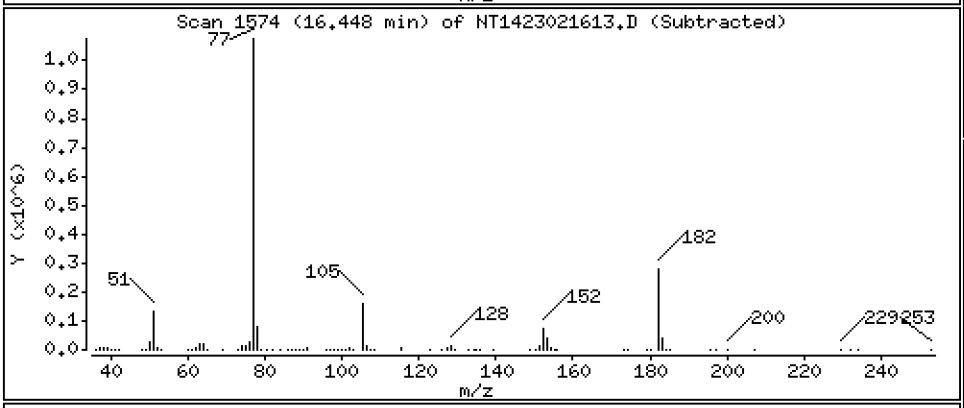
Column phase: ZB-5msi

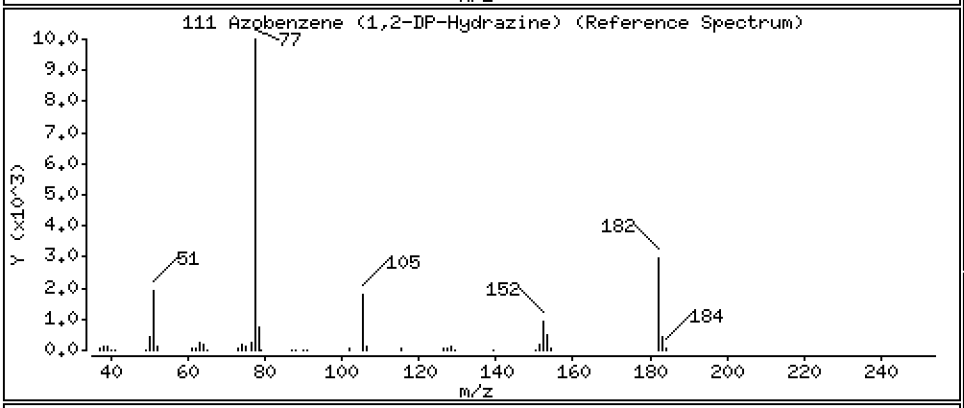
Column diameter: 0.25

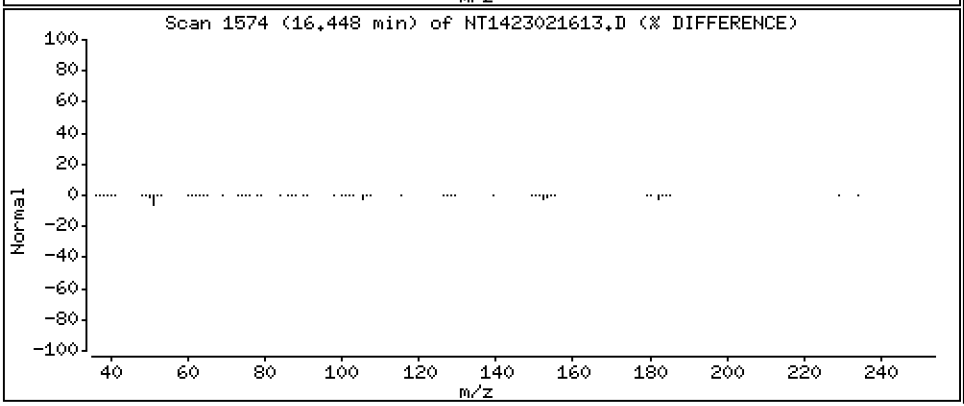
111 Azobenzene (1,2-DP-Hydrazine)

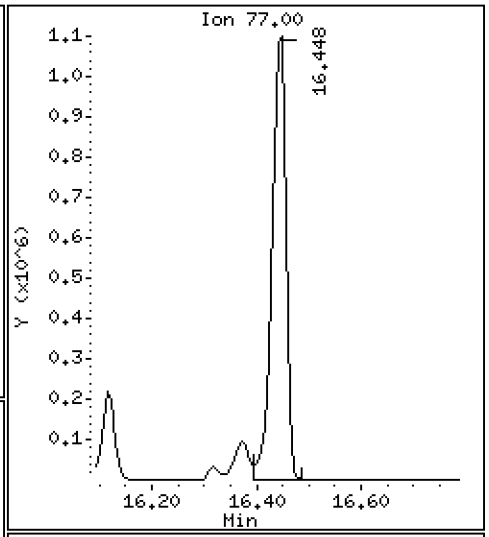
Concentration: 4.655 ug/mL

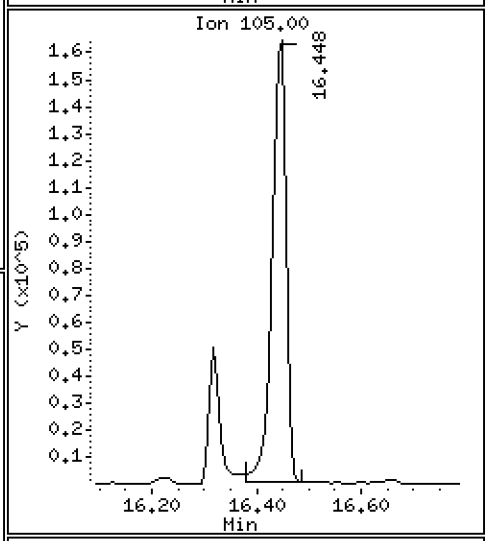


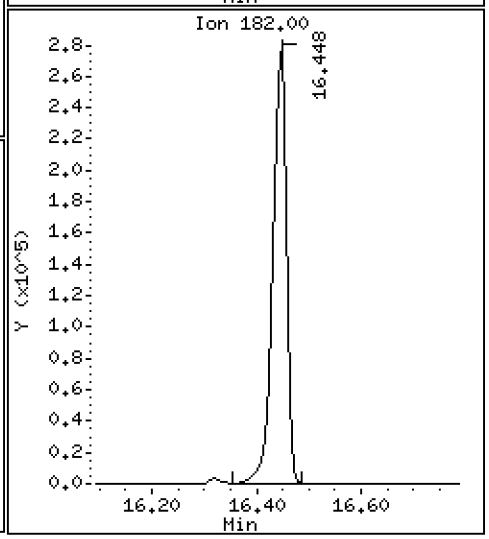












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

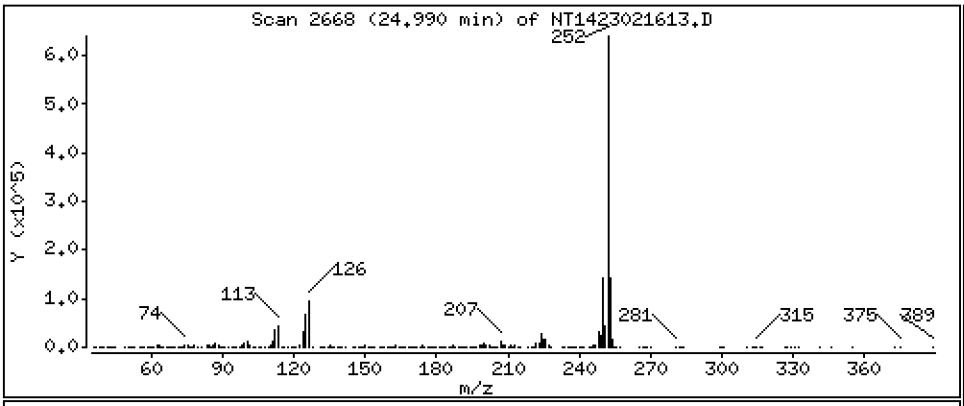
Operator: DSD

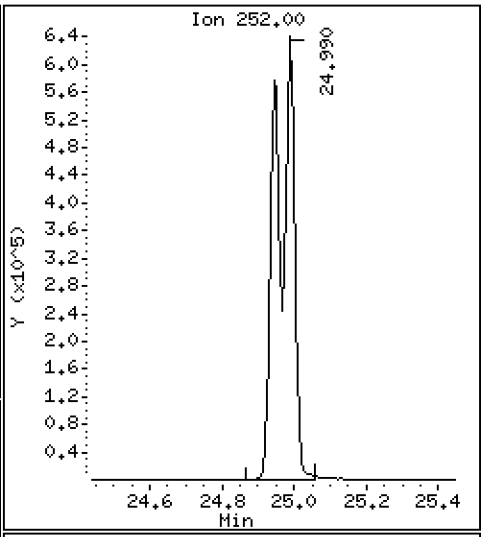
Column phase: ZB-5msi

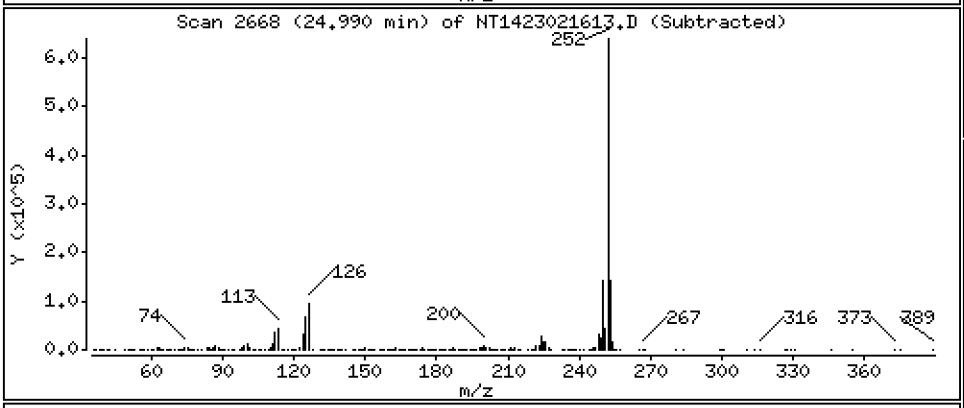
Column diameter: 0.25

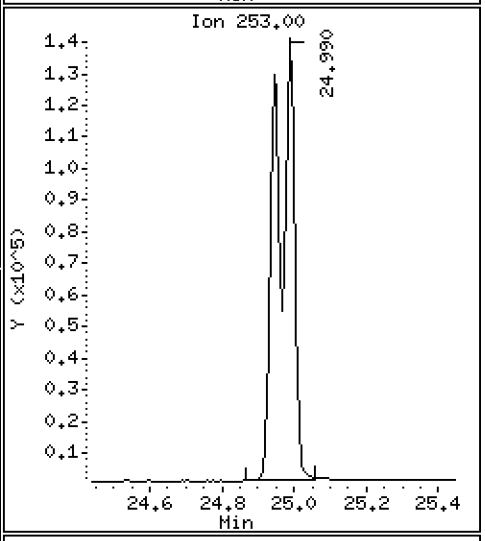
187 Total Benzofluoranthenes

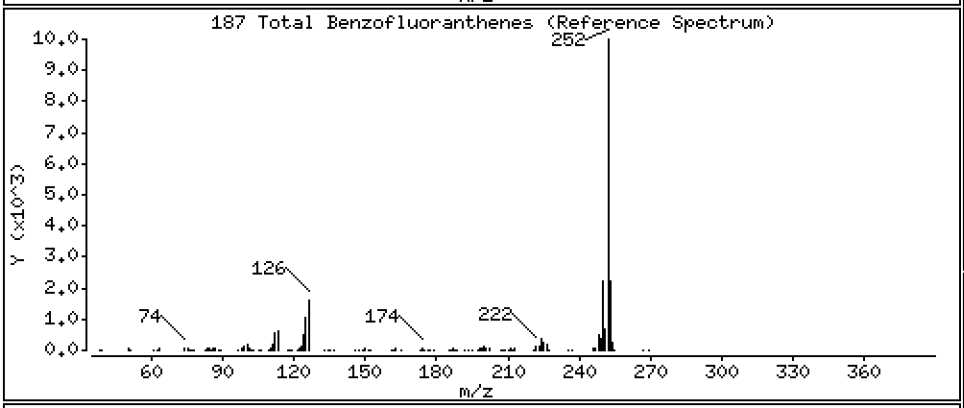
Concentration: 9.712 ug/mL

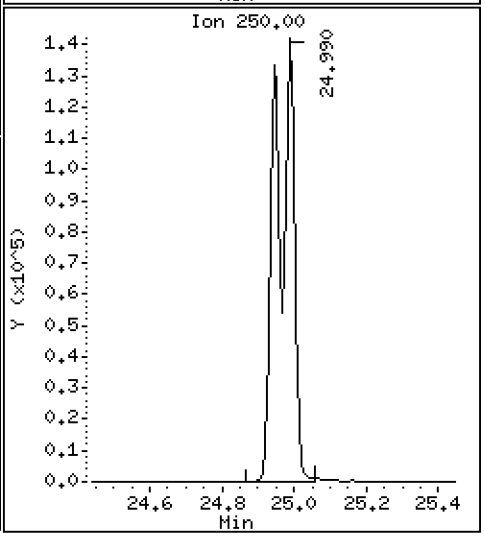


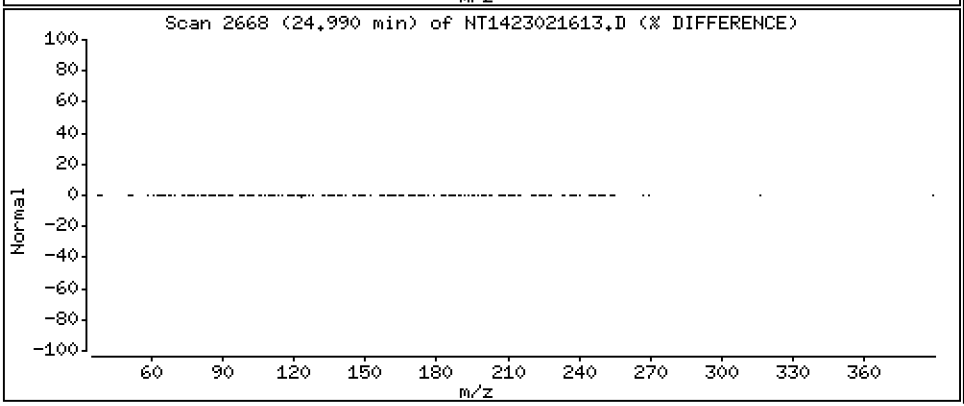












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

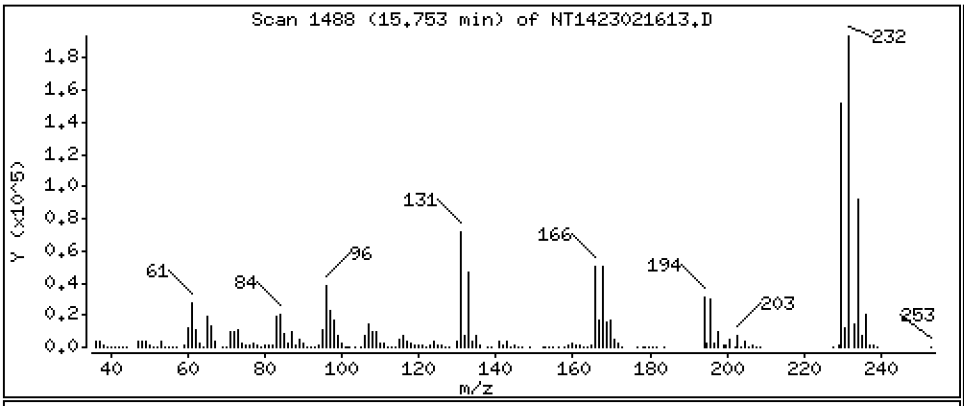
Operator: DSD

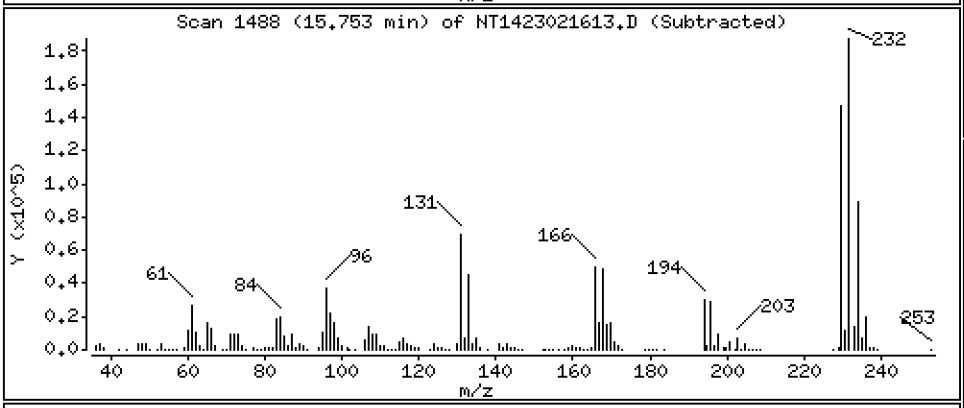
Column phase: ZB-5msi

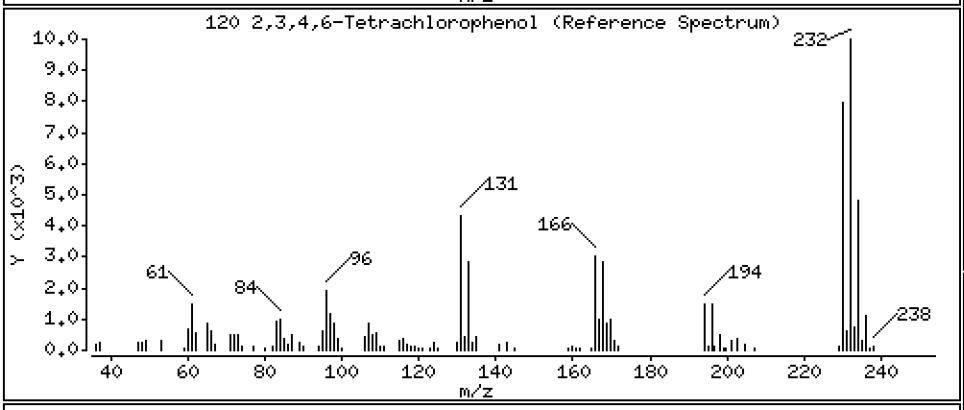
Column diameter: 0.25

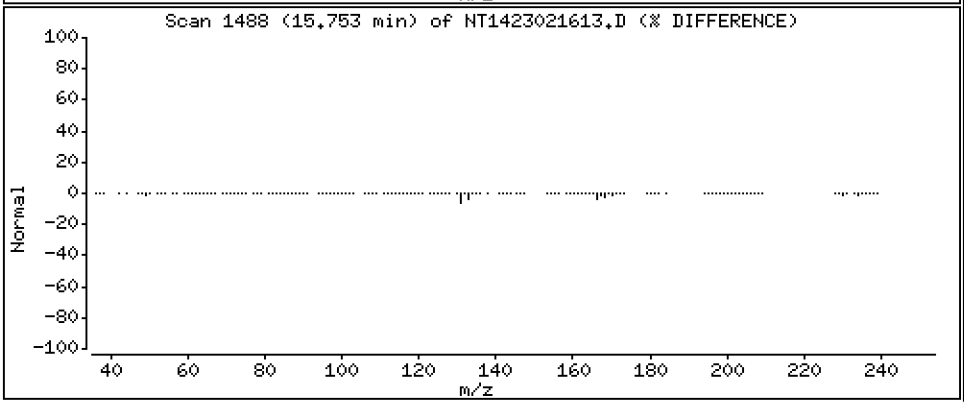
120 2,3,4,6-Tetrachlorophenol

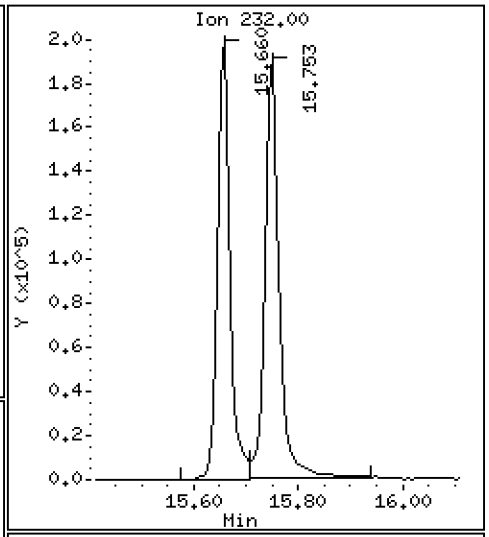
Concentration: 3.875 ug/mL

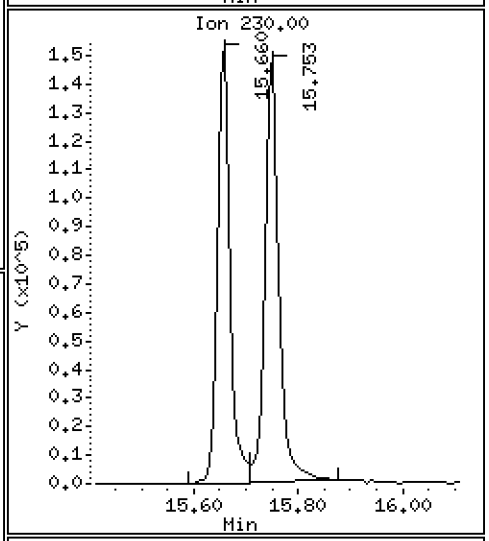


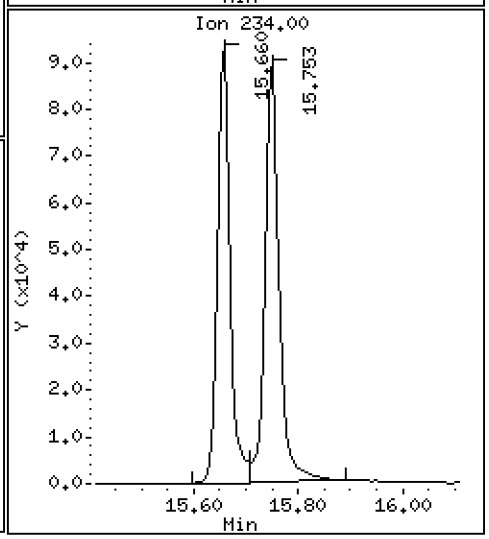












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D
Lab Smp Id: SLB0234-SCV1
Inj Date : 16-FEB-2023 21:18 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0234-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Meth Date : 17-Feb-2023 15:05 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.674	6.682	(0.750)	812311	8.37324	8.373
$	2 Phenol-d5	99	8.266	8.266	(0.929)	1229645	7.99013	7.990
	3 Phenol	94	8.289	8.289	(0.931)	753865	4.62726	4.627
$	5 2-Chlorophenol-d4	132	8.536	8.536	(0.959)	852471	7.76321	7.763
	4 Bis(2-Chloroethyl)ether	93	8.459	8.451	(0.950)	642018	5.15867	5.159
	6 2-Chlorophenol	128	8.567	8.567	(0.963)	529676	4.61671	4.617
	7 1,3-Dichlorobenzene	146	8.838	8.838	(0.993)	609215	4.76976	4.770
*	8 1,4-Dichlorobenzene-d4	152	8.900	8.900	(1.000)	362894	4.00000	
	9 1,4-Dichlorobenzene	146	8.931	8.931	(1.003)	580699	4.79061	4.791
$	10 1,2-Dichlorobenzene-d4	152	9.264	9.257	(1.041)	410470	4.98694	4.987
	12 1,2-Dichlorobenzene	146	9.288	9.288	(1.044)	576549	4.75778	4.758
	11 Benzyl alcohol	108	9.179	9.202	(1.031)	425653	4.62539	4.625
	14 2,2'-oxybis(1-Chloropropane)	121	9.482	9.482	(1.065)	192988	5.56690	5.567
	13 2-Methylphenol	108	9.404	9.404	(1.057)	496864	4.36760	4.368
	17 Hexachloroethane	117	9.878	9.878	(1.110)	265463	5.03740	5.037
	16 N-Nitroso-di-n-propylamine	70	9.746	9.738	(1.095)	516514	4.98778	4.988
	15 4-Methylphenol	108	9.684	9.684	(1.088)	551454	4.59064	4.591
$	18 Nitrobenzene-d5	82	10.002	10.002	(0.878)	806144	5.19439	5.194
	19 Nitrobenzene	77	10.041	10.033	(0.881)	770727	4.94878	4.949
	20 Isophorone	82	10.483	10.491	(0.920)	1457561	7.09356	7.094
	21 2-Nitrophenol	139	10.669	10.677	(0.936)	316370	4.45322	4.453
	22 2,4-Dimethylphenol	107	10.723	10.724	(0.941)	502608	4.27378	4.274
	23 Bis(2-Chloroethoxy)methane	93	10.925	10.925	(0.959)	767264	5.74018	5.740
	24 Benzoic acid	105	10.933	10.879	(0.959)	412038	5.51023	5.510
	25 2,4-Dichlorophenol	162	11.119	11.127	(0.976)	515695	5.12362	5.124
	26 1,2,4-Trichlorobenzene	180	11.312	11.305	(0.993)	566926	4.64981	4.650
*	27 Naphthalene-d8	136	11.397	11.389	(1.000)	1343351	4.00000	
	28 Naphthalene	128	11.436	11.428	(1.003)	1568652	4.73587	4.736
	29 4-Chloroaniline	127	11.567	11.575	(1.015)	553475	3.91120	3.911
	30 Hexachlorobutadiene	225	11.799	11.799	(1.035)	369529	4.91651	4.917
	31 4-Chloro-3-methylphenol	107	12.534	12.542	(1.100)	549566	5.04457	5.045
	32 2-Methylnaphthalene	142	12.836	12.836	(1.126)	1142706	4.60635	4.606
	33 Hexachlorocyclopentadiene	237	13.300	13.301	(0.886)	438821	5.30111	5.301

		QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
34	2,4,6-Trichlorophenol	196	13.455	13.463	(0.896)	404613	4.80795	4.808
35	2,4,5-Trichlorophenol	196	13.532	13.541	(0.901)	428976	4.70685	4.707
$ 36	2-Fluorobiphenyl	172	13.625	13.617	(0.907)	1488825	4.87017	4.870
37	2-Chloronaphthalene	162	13.834	13.826	(0.921)	1157484	4.63882	4.639
38	2-Nitroaniline	65	14.097	14.097	(0.939)	393653	4.85233	4.852
39	Dimethylphthalate	163	14.538	14.531	(0.968)	1224849	4.69299	4.693
40	Acenaphthylene	152	14.701	14.701	(0.979)	1772439	4.65722	4.657
41	2,6-Dinitrotoluene	165	14.670	14.670	(0.977)	303057	4.93469	4.935
* 42	Acenaphthene-d10	164	15.018	15.018	(1.000)	854455	4.00000	
43	3-Nitroaniline	138	14.956	14.957	(0.996)	320818	4.92163	4.922
44	Acenaphthene	153	15.088	15.080	(1.005)	1055715	4.63322	4.633
45	2,4-Dinitrophenol	184	15.265	15.282	(1.016)	10046	0.25021	0.2502
46	Dibenzofuran	168	15.412	15.405	(1.026)	1701574	4.54830	4.548
47	4-Nitrophenol	109	15.273	15.273	(1.017)	153415	4.05153	4.052
48	2,4-Dinitrotoluene	165	15.482	15.475	(1.031)	421549	4.85479	4.855
50	Diethylphthalate	149	15.992	15.984	(1.065)	1638308	4.72171	4.722
49	Fluorene	166	16.123	16.124	(1.074)	1814406	4.63777	4.638
51	4-Chlorophenyl-phenylether	204	16.123	16.116	(1.074)	994538	4.75422	4.754
52	4-Nitroaniline	138	16.224	16.224	(1.080)	356106	4.76155	4.762
53	4,6-Dinitro-2-methylphenol	198	16.316	16.370	(0.904)	216522	3.65299	3.653
54	N-Nitrosodiphenylamine	169	16.370	16.370	(0.907)	1149631	4.90725	4.907
$ 55	2,4,6-Tribromophenol	330	16.663	16.663	(1.110)	357193	7.14108	7.141
56	4-Bromophenyl-phenylether	248	17.126	17.118	(0.949)	537640	5.15255	5.153
57	Hexachlorobenzene	284	17.435	17.434	(0.966)	496114	4.67908	4.679
58	Pentachlorophenol	266	17.791	17.814	(0.985)	204787	3.93169	3.932
* 59	Phenanthrene-d10	188	18.054	18.054	(1.000)	1630237	4.00000	
60	Phenanthrene	178	18.108	18.101	(1.003)	1837237	4.68992	4.690
61	Anthracene	178	18.201	18.193	(1.008)	1670411	4.30397	4.304
62	Carbazole	167	18.534	18.534	(1.027)	1687690	4.79185	4.792
63	Di-n-butylphthalate	149	19.338	19.346	(1.071)	2169531	5.51497	5.515
64	Fluoranthene	202	20.499	20.499	(0.887)	2246209	4.68180	4.682
65	Pyrene	202	20.924	20.925	(0.905)	2232282	4.40013	4.400
$ 66	Terphenyl-d14	244	21.219	21.219	(0.918)	1704165	4.73097	4.731
67	Butylbenzylphthalate	149	22.148	22.148	(0.958)	770848	4.56767	4.568
68	Benzo(a)anthracene	228	23.092	23.092	(0.999)	1612232	4.53042	4.530
* 69	Chrysene-d12	240	23.123	23.123	(1.000)	1112056	4.00000	
70	3,3'-Dichlorobenzidine	252	23.054	23.054	(0.997)	1021005	9.32793	9.328
71	Chrysene	228	23.170	23.162	(1.002)	1432188	4.47430	4.474
72	bis(2-Ethylhexyl)phthalate	149	23.178	23.178	(0.960)	1007189	4.64885	4.649
* 134	Di-n-octylphthalate-d4	153	24.153	24.153	(1.000)	1298332	4.00000	
73	Di-n-octylphthalate	149	24.168	24.161	(1.001)	1506391	4.96217	4.962
74	Benzo(b)fluoranthene	252	24.943	24.943	(0.971)	1120169	4.81299	4.813
75	Benzo(k)fluoranthene	252	24.989	24.989	(0.973)	1203272	4.83840	4.838
76	Benzo(a)pyrene	252	25.577	25.578	(0.996)	1024300	4.60711	4.607
* 77	Perylene-d12	264	25.686	25.686	(1.000)	733476	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.244	28.244	(1.100)	816683	4.39546	4.395
79	Dibenzo(a,h)anthracene	278	28.259	28.267	(1.100)	668295	4.36484	4.365
80	Benzo(g,h,i)perylene	276	28.997	28.997	(1.129)	664180	4.38025	4.380
90	N-Nitrosodimethylamine	74	4.566	4.566	(0.513)	423038	5.63216	5.632
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	20.747	20.754	(0.897)	1133759	9.98385	9.984
103	Pyridine	79	4.581	4.597	(0.515)	661518	5.56593	5.566
105	1-methylnaphthalene	142	13.060	13.053	(1.146)	1108498	4.75965	4.760
111	Azobenzene (1,2-DP-Hydrazine)	77	16.447	16.440	(1.095)	1962985	4.65510	4.655

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.989	24.943	(0.973)	2206870	9.71223	9.712
120 2,3,4,6-Tetrachlorophenol	232	15.752	15.760	(1.049)	382367	3.87456	3.875

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021613.D
Lab Smp Id: SLB0234-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 17:06
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	375798	187899	751596	362894	-3.43
27 Naphthalene-d8	1378169	689085	2756338	1343351	-2.53
42 Acenaphthene-d10	847135	423568	1694270	854455	0.86
59 Phenanthrene-d10	1675180	837590	3350360	1630237	-2.68
69 Chrysene-d12	1073562	536781	2147124	1112056	3.59
134 Di-n-octylphthala	1344129	672065	2688258	1298332	-3.41
77 Perylene-d12	721978	360989	1443956	733476	1.59

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.90	8.40	9.40	8.90	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.40	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	-0.00
59 Phenanthrene-d10	18.05	17.55	18.55	18.05	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	-0.00
134 Di-n-octylphthala	24.15	23.65	24.65	24.15	-0.00
77 Perylene-d12	25.69	25.19	26.19	25.69	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021613.D

Lab ID: SLB0234-SCV1
nt14.i, ABN.m, 16-FEB-2023 21:18

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.959	0.000	0.9593	Benzoic acid
1.016	0.000	1.0165	2,4-Dinitrophenol
1.017	0.000	1.0170	4-Nitrophenol
0.985	0.000	0.9854	Pentachlorophenol

RRT check based on Ccal File: NT1423021610.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00046
Laboratory ID: SLB0234-SCV1
Sequence: SLB0234
Standard ID: K010066

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	5.0000	4.6	-7.5	20.00
bis(2-chloroethyl) ether	5.0000	5.2	3.2	20.00
2-Chlorophenol	5.0000	4.6	-7.7	20.00
1,3-Dichlorobenzene	5.0000	4.8	-4.6	20.00
1,4-Dichlorobenzene	5.0000	4.8	-4.2	20.00
1,2-Dichlorobenzene	5.0000	4.8	-4.8	20.00
Benzyl Alcohol	5.0000	4.6	-7.5	20.00
2,2'-Oxybis(1-chloropropane)	5.0000	5.6	11.3	20.00
2-Methylphenol	5.0000	4.4	-12.6	20.00
Hexachloroethane	5.0000	5.0	0.7	20.00
N-Nitroso-di-n-Propylamine	5.0000	5.0	-0.2	20.00
4-Methylphenol	5.0000	4.6	-8.2	20.00
Nitrobenzene	5.0000	4.9	-1.0	20.00
Isophorone	5.0000	7.1	41.9 *	20.00
2-Nitrophenol	5.0000	4.5	-10.9	20.00
2,4-Dimethylphenol	5.0000	4.3	-14.5	20.00
Bis(2-Chloroethoxy)methane	5.0000	5.7	14.8	20.00
2,4-Dichlorophenol	5.0000	5.1	2.5	20.00
1,2,4-Trichlorobenzene	5.0000	4.6	-7.0	20.00
Naphthalene	5.0000	4.7	-5.3	20.00
Benzoic acid	10.000	5.5	-44.9 *	20.00
4-Chloroaniline	5.0000	3.9	-21.8 *	20.00
Hexachlorobutadiene	5.0000	4.9	-1.7	20.00
4-Chloro-3-Methylphenol	5.0000	5.0	0.9	20.00
2-Methylnaphthalene	5.0000	4.6	-7.9	20.00
Hexachlorocyclopentadiene	5.0000	5.3	6.0	20.00
2,4,6-Trichlorophenol	5.0000	4.8	-3.8	20.00
2,4,5-Trichlorophenol	5.0000	4.7	-5.9	20.00
2-Chloronaphthalene	5.0000	4.6	-7.2	20.00
2-Nitroaniline	5.0000	4.9	-3.0	20.00
Acenaphthylene	5.0000	4.7	-6.9	20.00
Dimethylphthalate	5.0000	4.7	-6.1	20.00

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00046
Laboratory ID: SLB0234-SCV1
Sequence: SLB0234
Standard ID: K010066

2,6-Dinitrotoluene	5.0000	4.9	-1.3	20.00
Acenaphthene	5.0000	4.6	-7.3	20.00
3-Nitroaniline	5.0000	4.9	-1.6	20.00
2,4-Dinitrophenol	5.0000	0.3	-95.0 *	20.00
Dibenzofuran	5.0000	4.5	-9.0	20.00
4-Nitrophenol	5.0000	4.1	-19.0	20.00
2,4-Dinitrotoluene	5.0000	4.9	-2.9	20.00
Fluorene	5.0000	4.6	-7.2	20.00
4-Chlorophenylphenyl ether	5.0000	4.8	-4.9	20.00
Diethyl phthalate	5.0000	4.7	-5.6	20.00
4-Nitroaniline	5.0000	4.8	-4.8	20.00
4,6-Dinitro-2-methylphenol	5.0000	3.7	-26.9 *	20.00
N-Nitrosodiphenylamine	5.0000	4.9	-1.9	20.00
4-Bromophenyl phenyl ether	5.0000	5.2	3.1	20.00
Hexachlorobenzene	5.0000	4.7	-6.4	20.00
Pentachlorophenol	5.0000	3.9	-21.4 *	20.00
Phenanthrene	5.0000	4.7	-6.2	20.00
Anthracene	5.0000	4.3	-13.9	20.00
Carbazole	5.0000	4.8	-4.2	20.00
Di-n-Butylphthalate	5.0000	5.5	10.3	20.00
Fluoranthene	5.0000	4.7	-6.4	20.00
Pyrene	5.0000	4.4	-12.0	20.00
Butylbenzylphthalate	5.0000	4.6	-8.6	20.00
Benzo(a)anthracene	5.0000	4.5	-9.4	20.00
3,3'-Dichlorobenzidine	10.000	9.3	-6.7	20.00
Chrysene	5.0000	4.5	-10.5	20.00
bis(2-Ethylhexyl)phthalate	5.0000	4.6	-7.0	20.00
Di-n-Octylphthalate	5.0000	5.0	-0.8	20.00
Benzofluoranthenes, Total	10.000	9.7	-2.9	20.00
Benzo(a)pyrene	5.0000	4.6	-7.9	20.00
Indeno(1,2,3-cd)pyrene	5.0000	4.4	-12.1	20.00
Dibenzo(a,h)anthracene	5.0000	4.4	-12.7	20.00
Benzo(g,h,i)perylene	5.0000	4.4	-12.4	20.00
1-Methylnaphthalene	5.0000	4.8	-4.8	20.00
2-Fluorophenol	7.5000	8.37	11.6	20.00

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00046
Laboratory ID: SLB0234-SCV1
Sequence: SLB0234
Standard ID: K010066

Phenol-d5	7.5000	7.99	6.5	20.00
2-Chlorophenol-d4	7.5000	7.76	3.5	20.00
1,2-Dichlorobenzene-d4	5.0000	4.99	-0.3	20.00
Nitrobenzene-d5	5.0000	5.19	3.9	20.00
2-Fluorobiphenyl	5.0000	4.87	-2.6	20.00
2,4,6-Tribromophenol	7.5000	7.14	-4.8	20.00
p-Terphenyl-d14	5.0000	4.73	-5.4	20.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

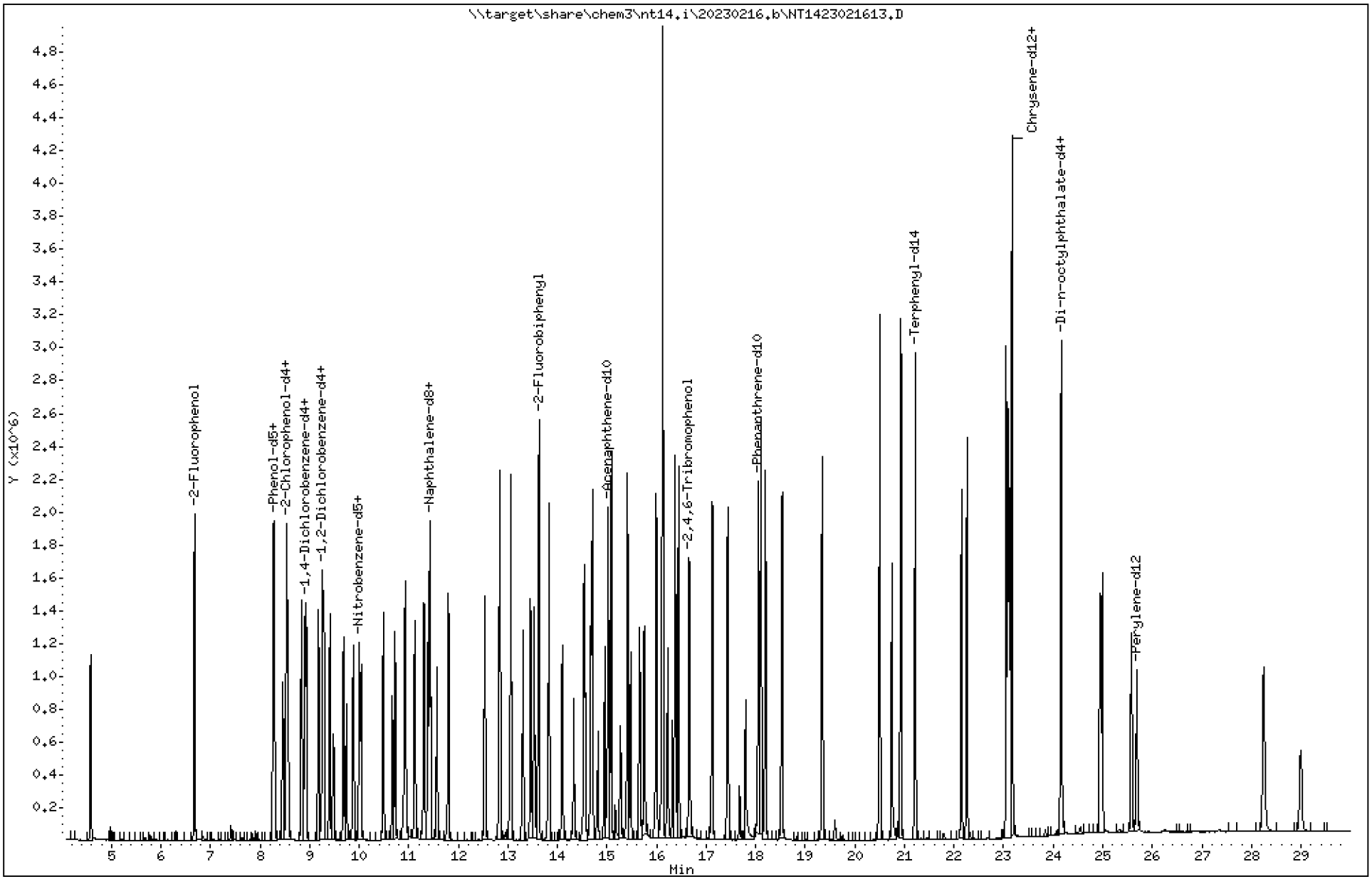
Sample Info: SLB0234-SCV1

Column phase: ZB-5msi

Instrument: nt14.i

Operator: DSD

Column diameter: 0.25



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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

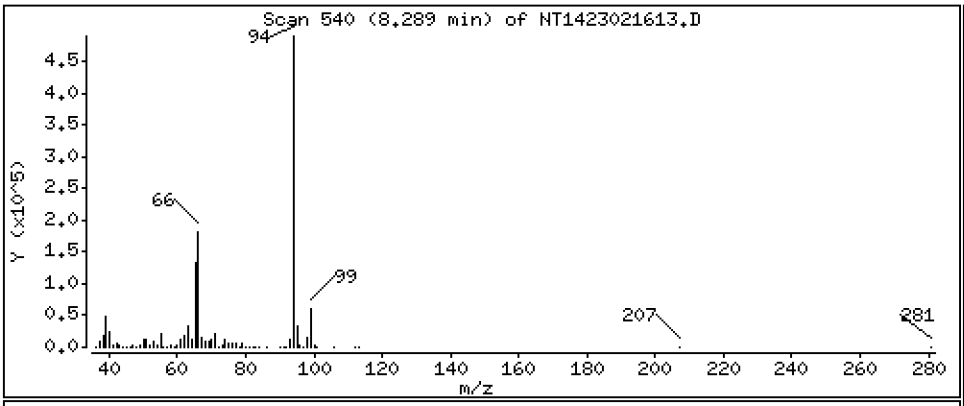
Operator: DSD

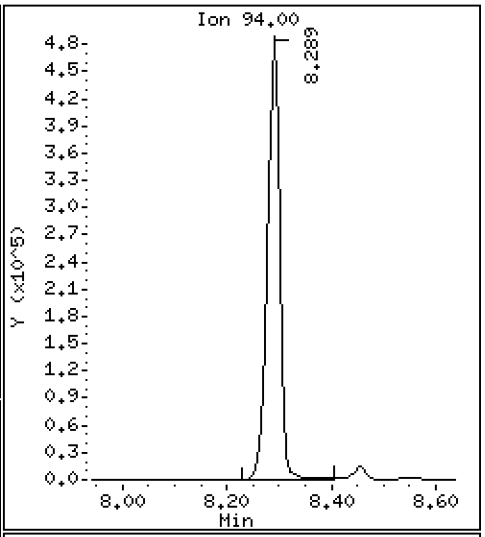
Column phase: ZB-5msi

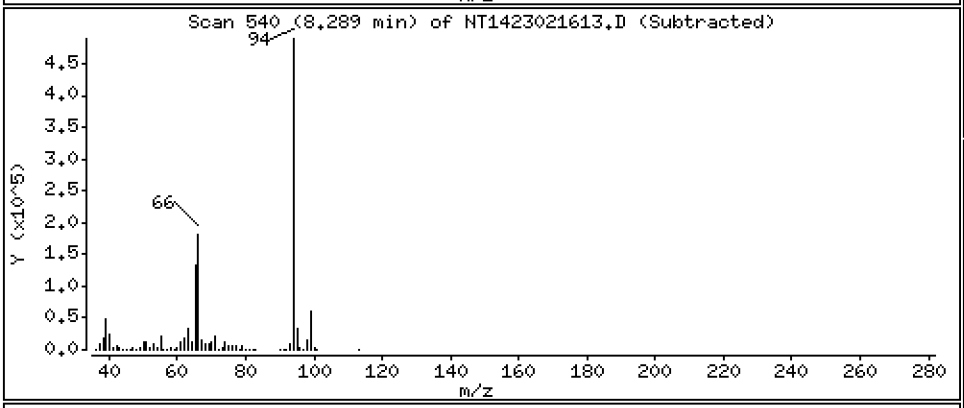
Column diameter: 0.25

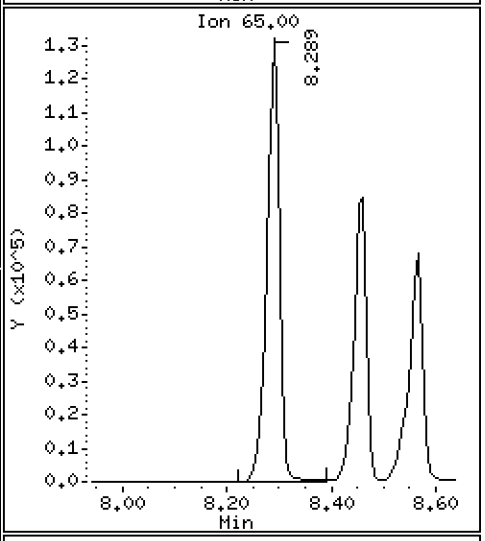
3 Phenol

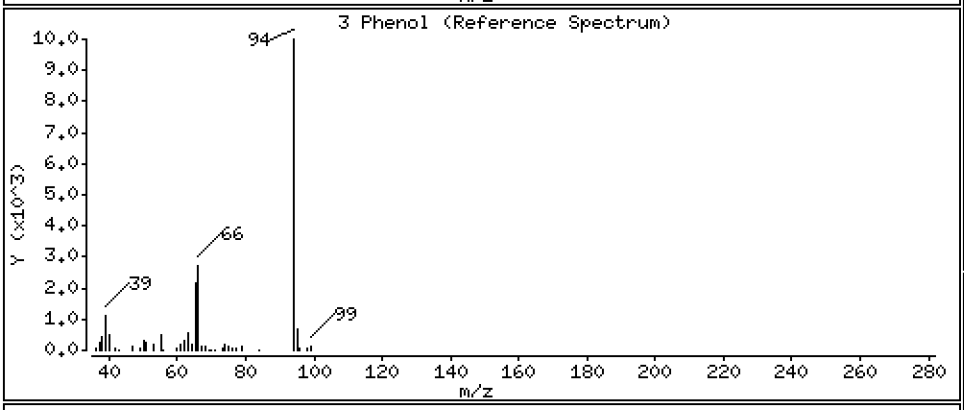
Concentration: 4.627 ug/mL

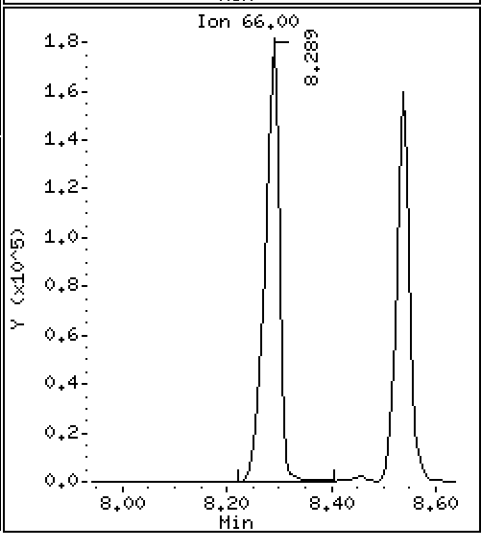


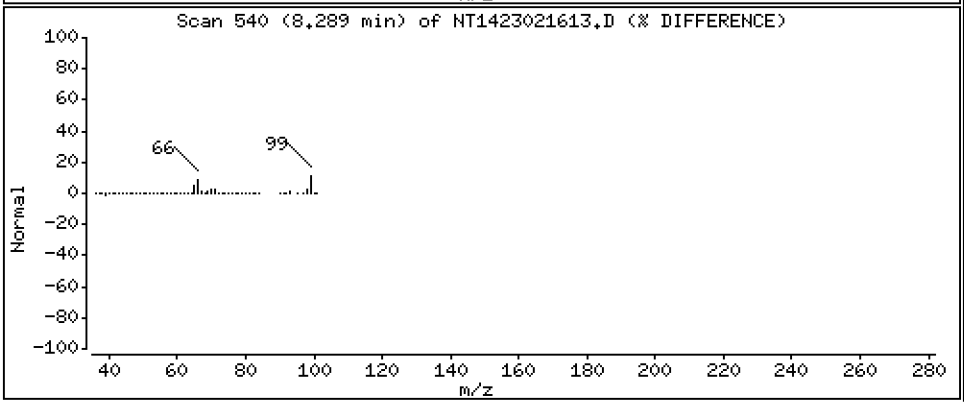












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

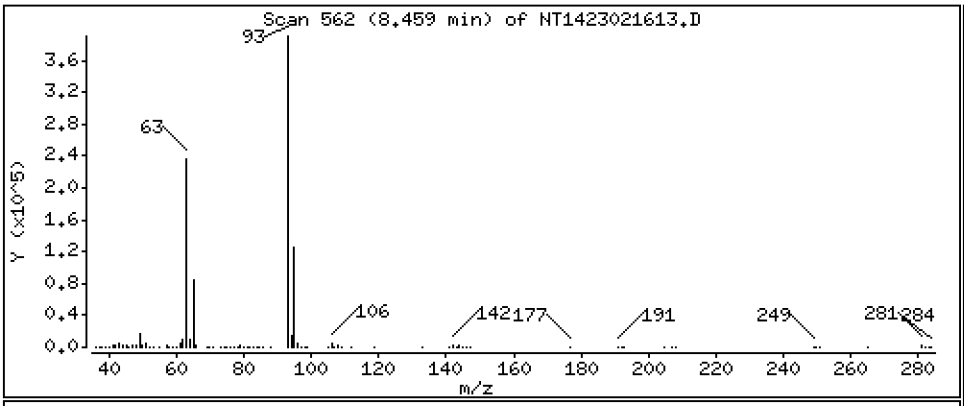
Operator: DSD

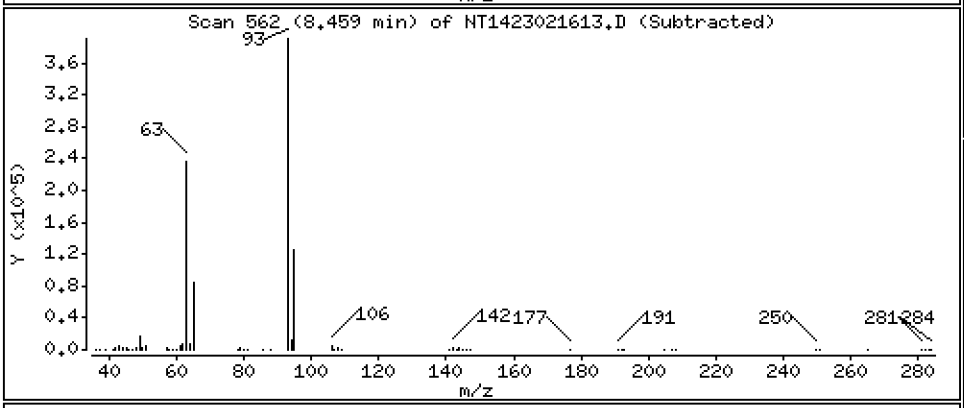
Column phase: ZB-5msi

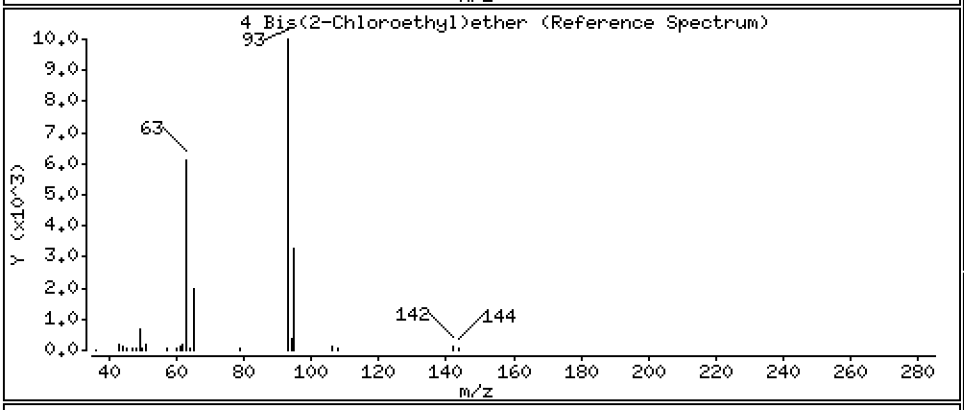
Column diameter: 0.25

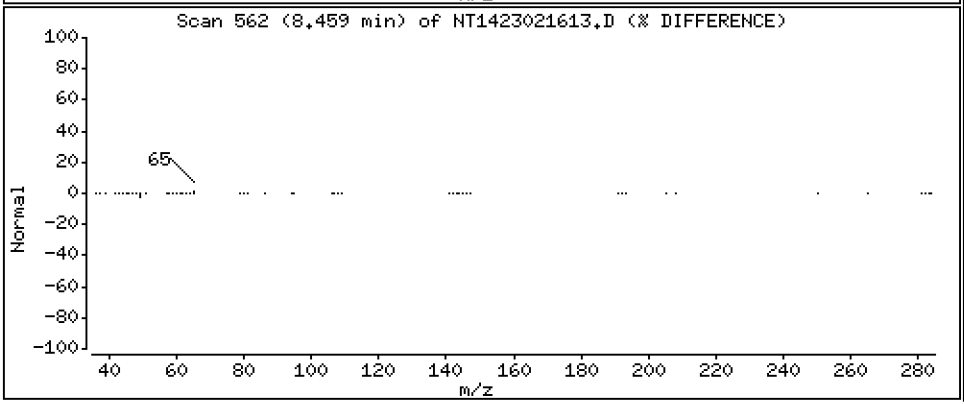
4 Bis(2-Chloroethyl)ether

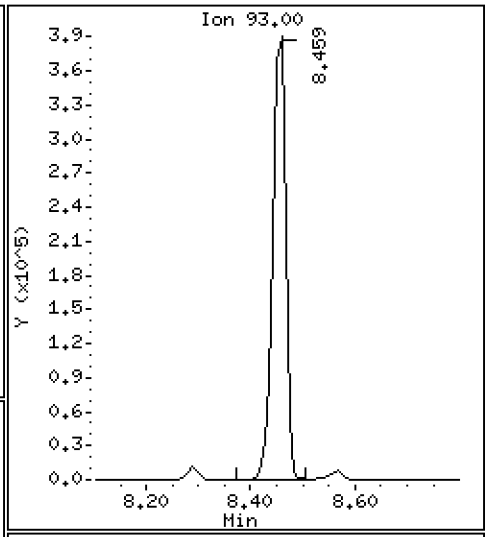
Concentration: 5.159 ug/mL

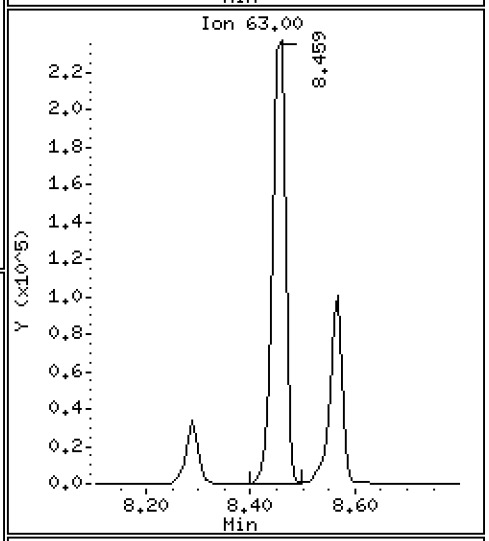


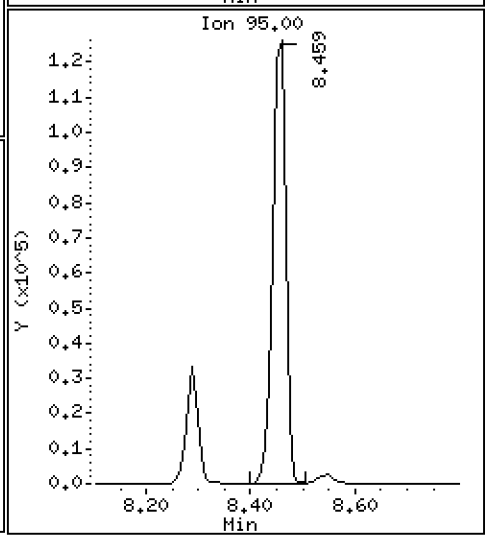












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

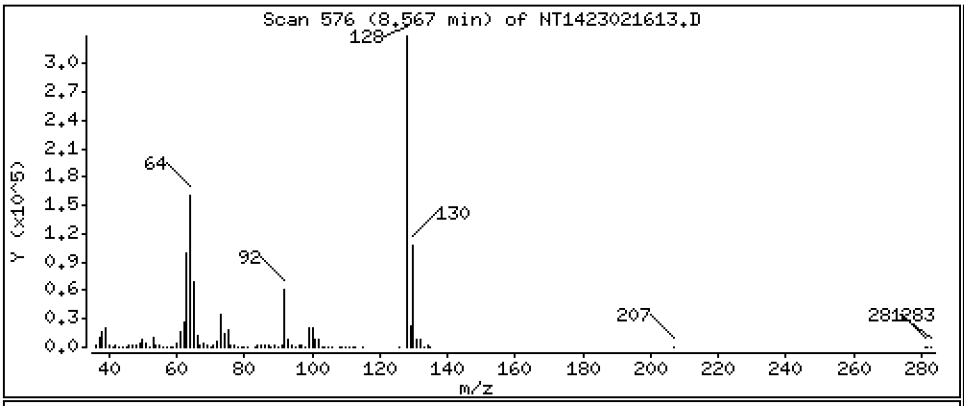
Operator: DSD

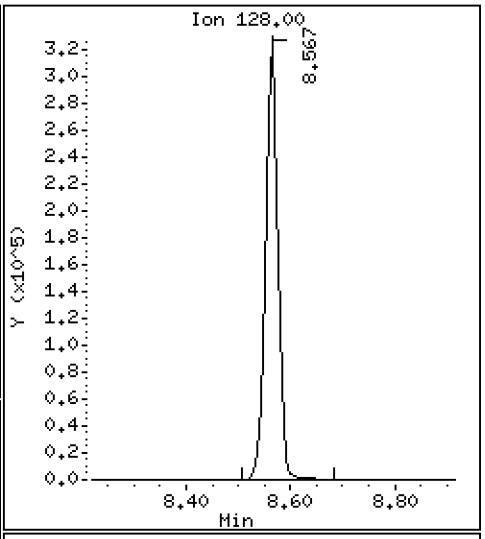
Column phase: ZB-5msi

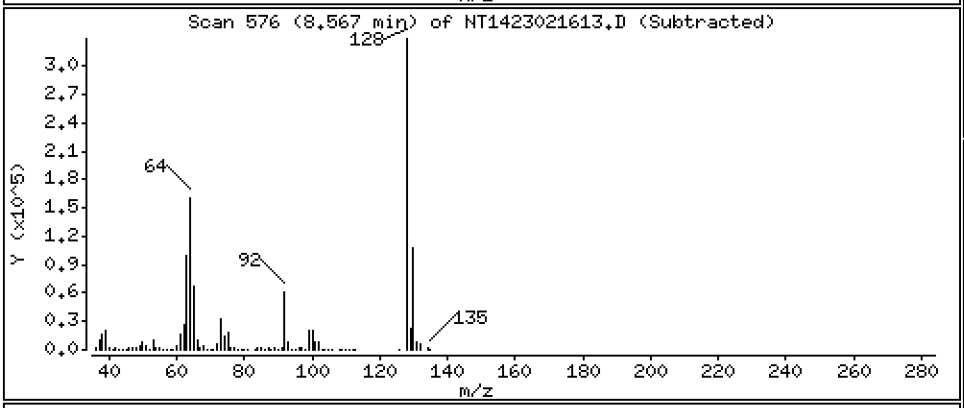
Column diameter: 0.25

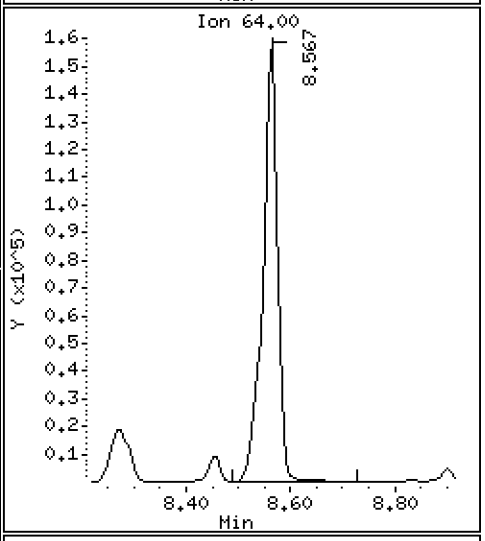
6 2-Chlorophenol

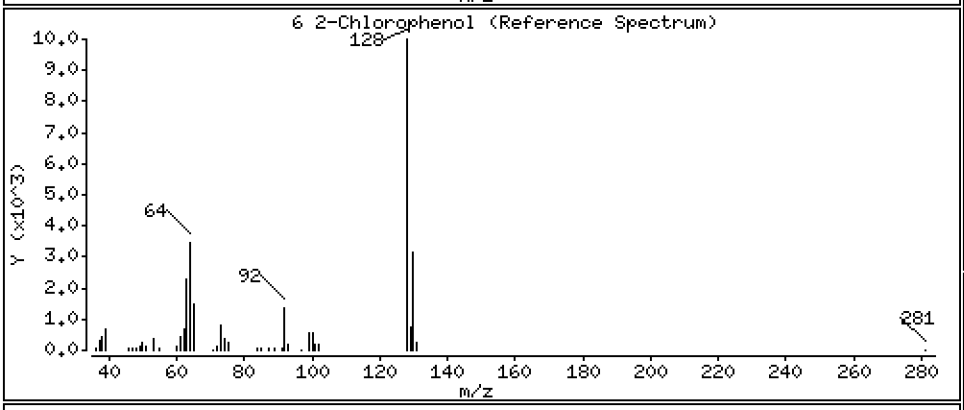
Concentration: 4.617 ug/mL

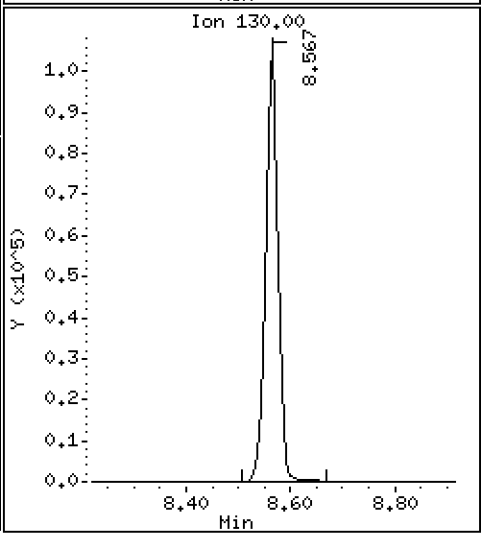


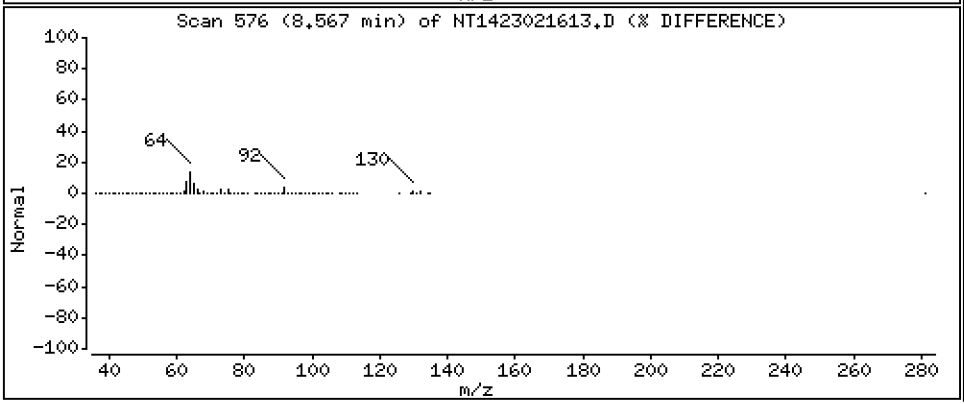












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

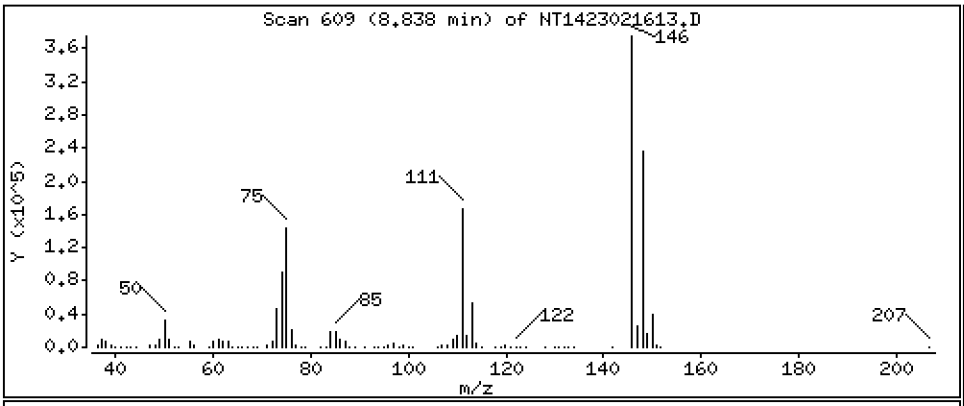
Operator: DSD

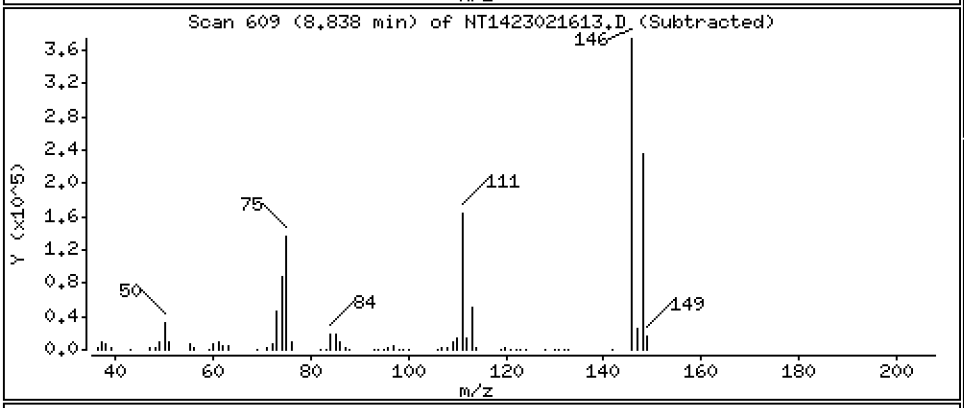
Column phase: ZB-5msi

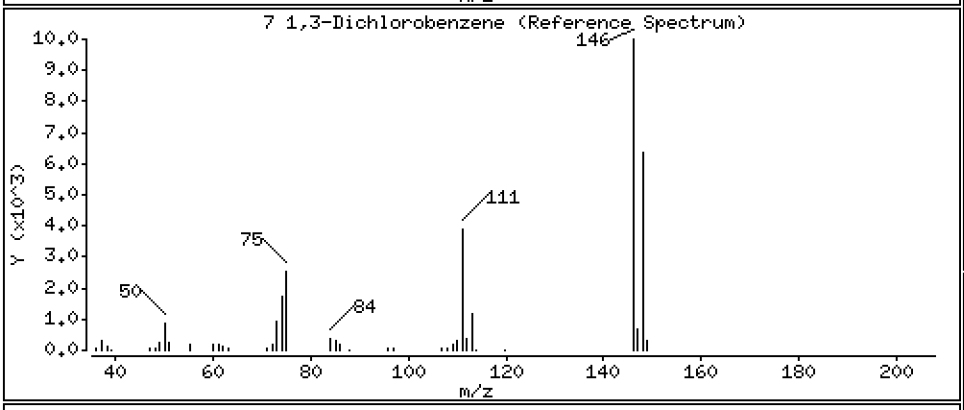
Column diameter: 0.25

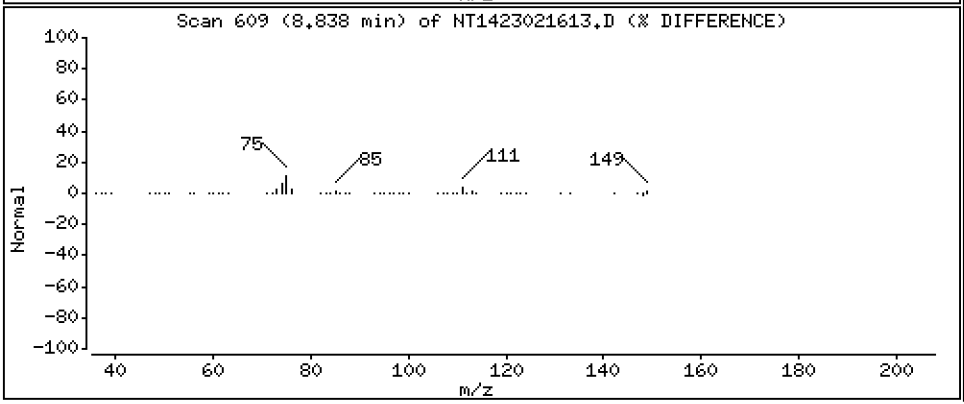
7 1,3-Dichlorobenzene

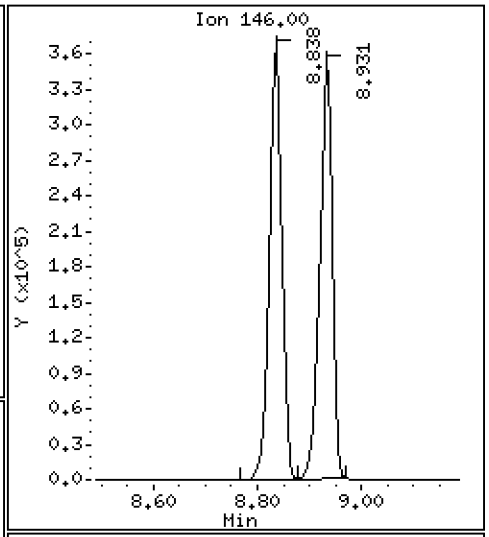
Concentration: 4.770 ug/mL

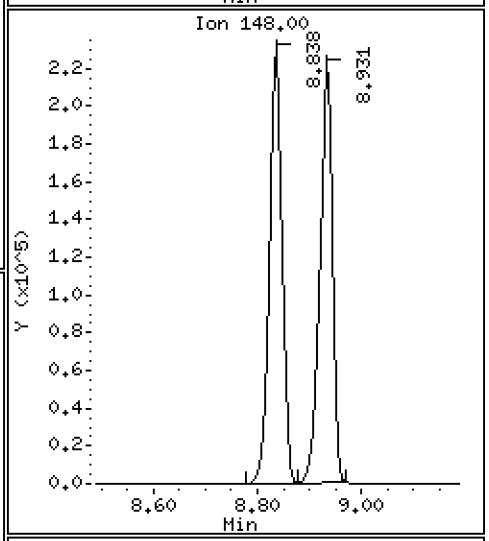


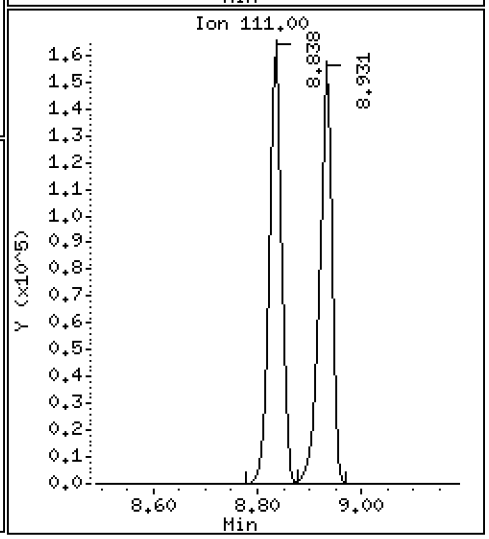












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

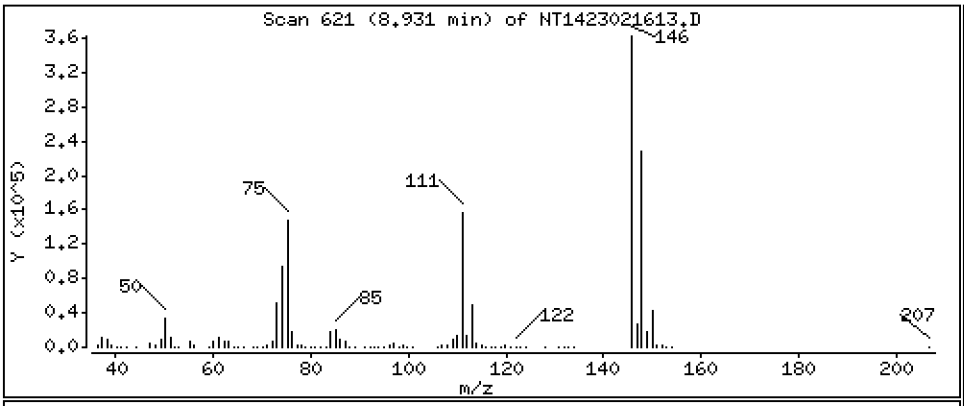
Operator: DSD

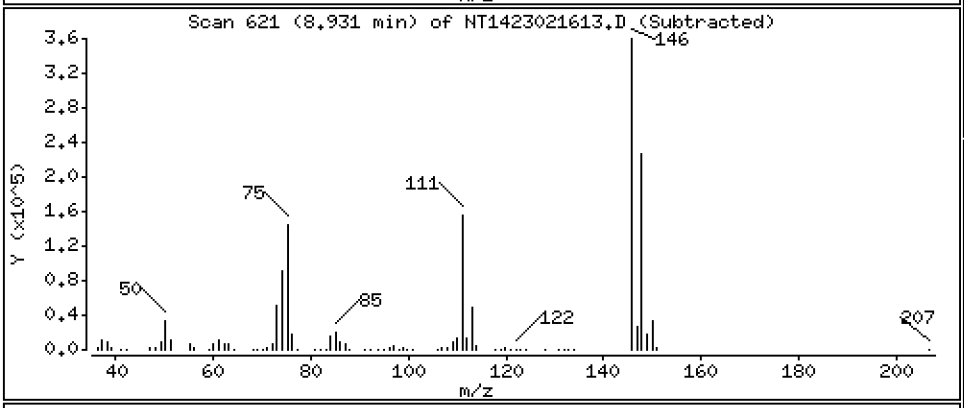
Column phase: ZB-5msi

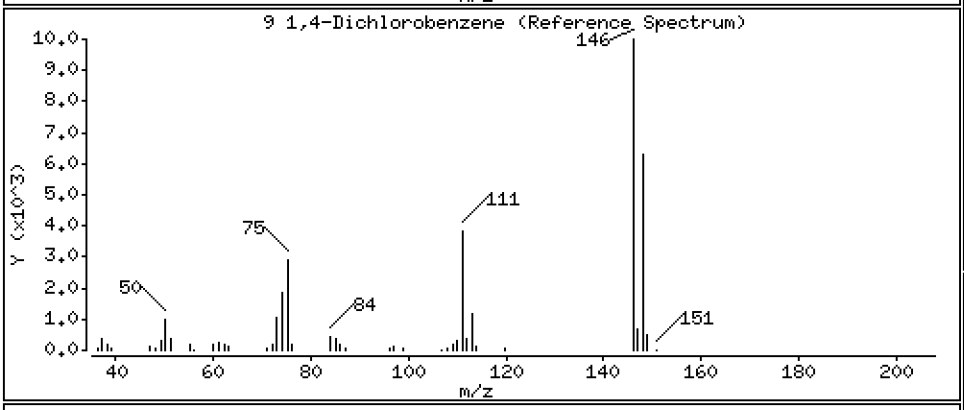
Column diameter: 0.25

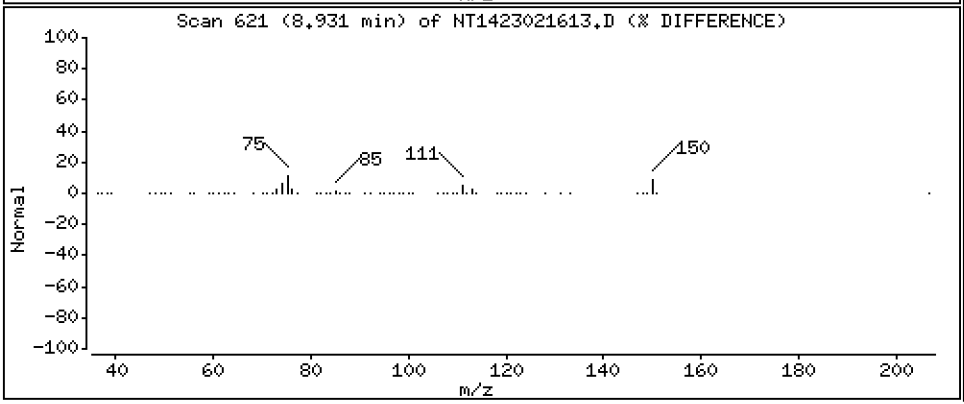
9 1,4-Dichlorobenzene

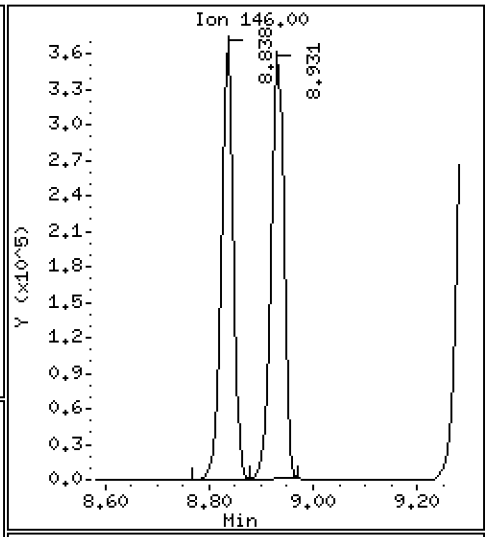
Concentration: 4.791 ug/mL

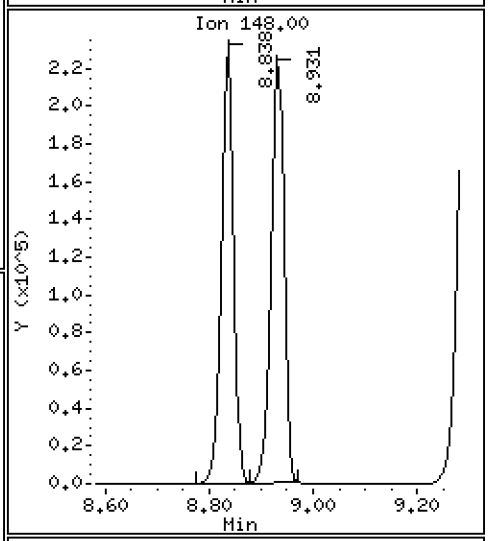


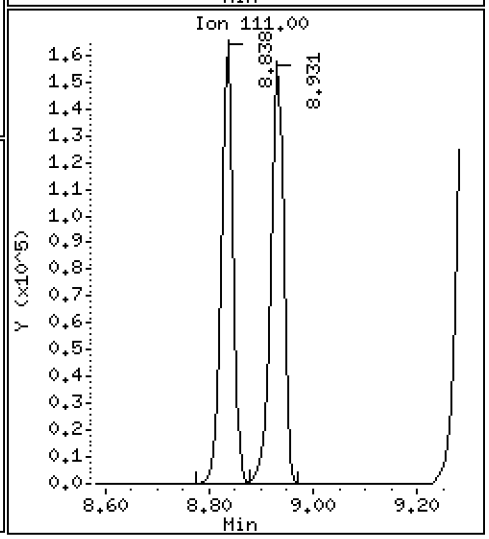












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

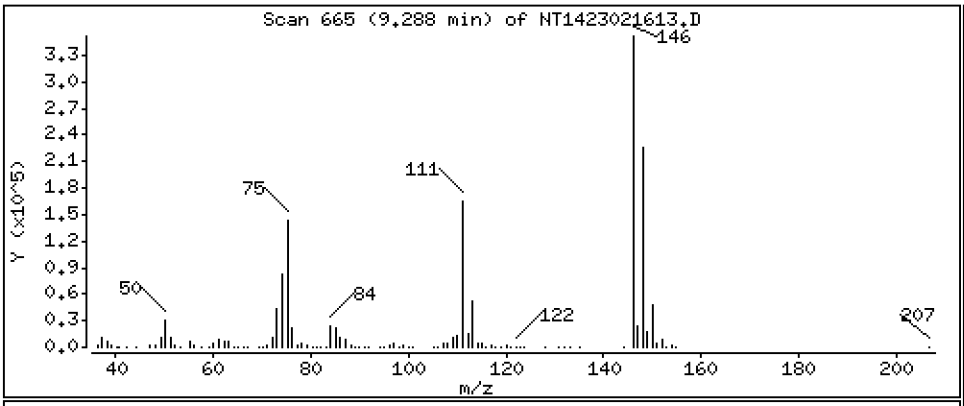
Operator: DSD

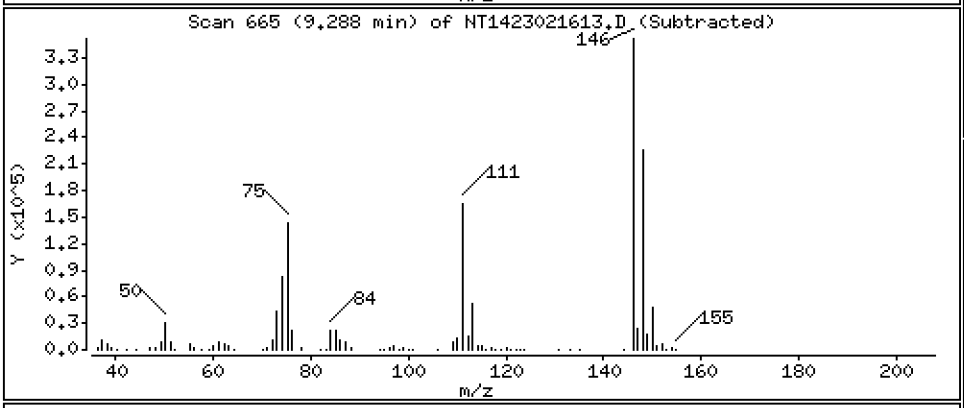
Column phase: ZB-5msi

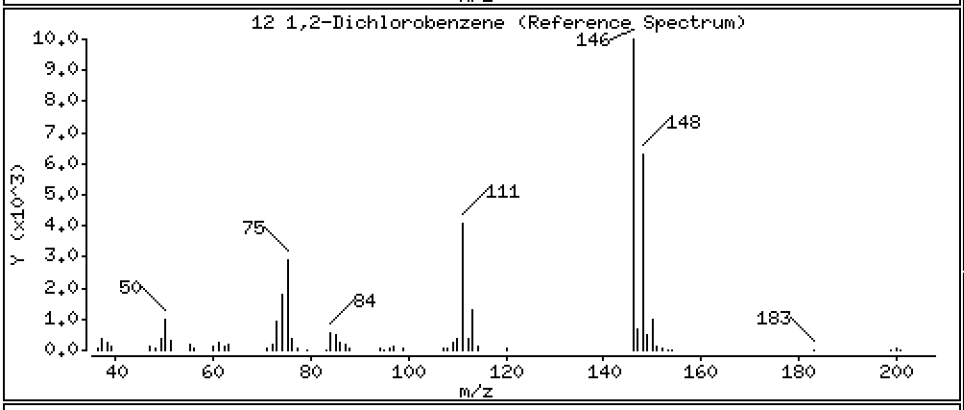
Column diameter: 0.25

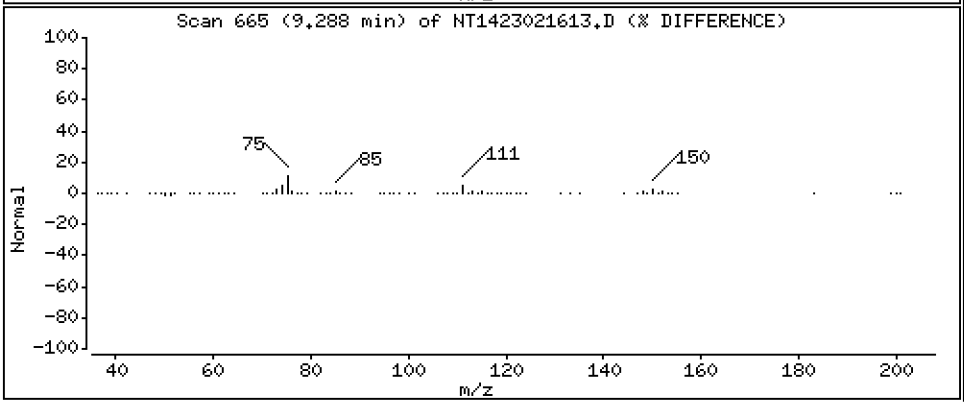
12 1,2-Dichlorobenzene

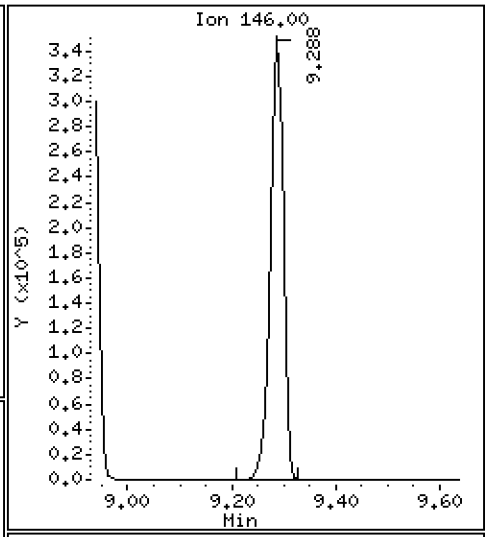
Concentration: 4.758 ug/mL

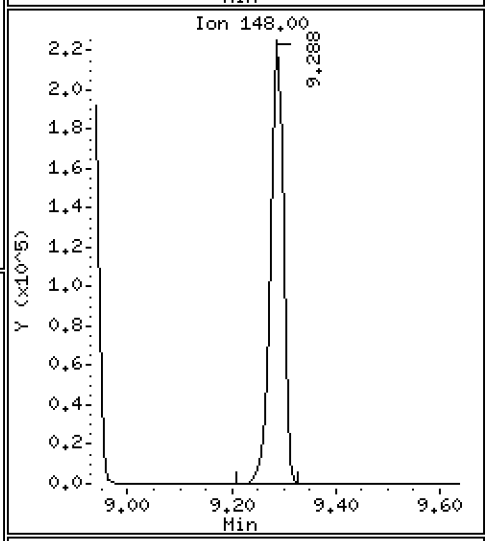


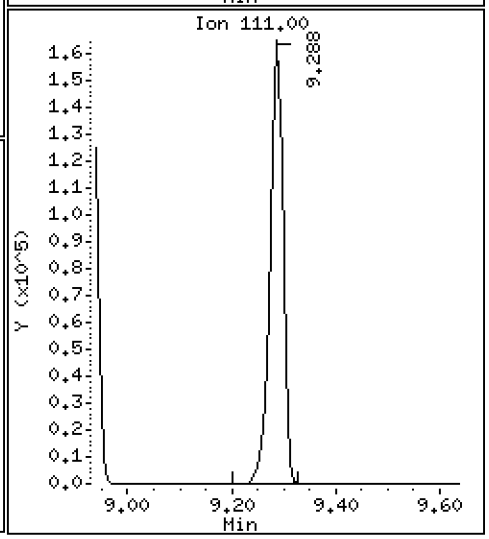












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

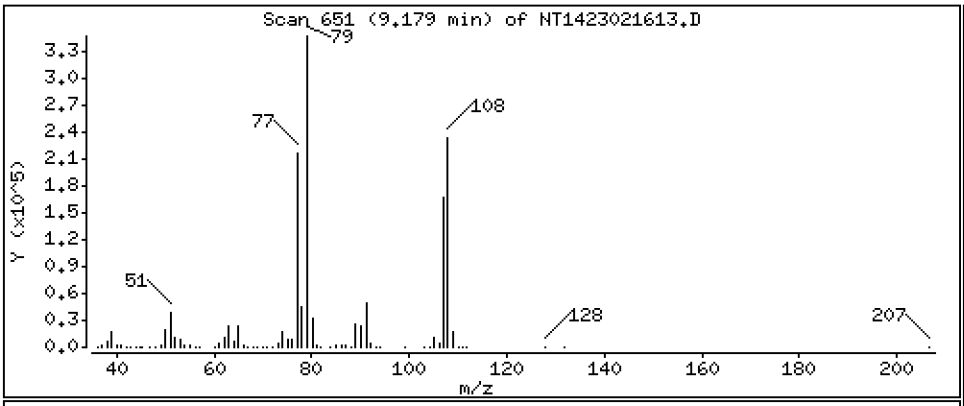
Operator: DSD

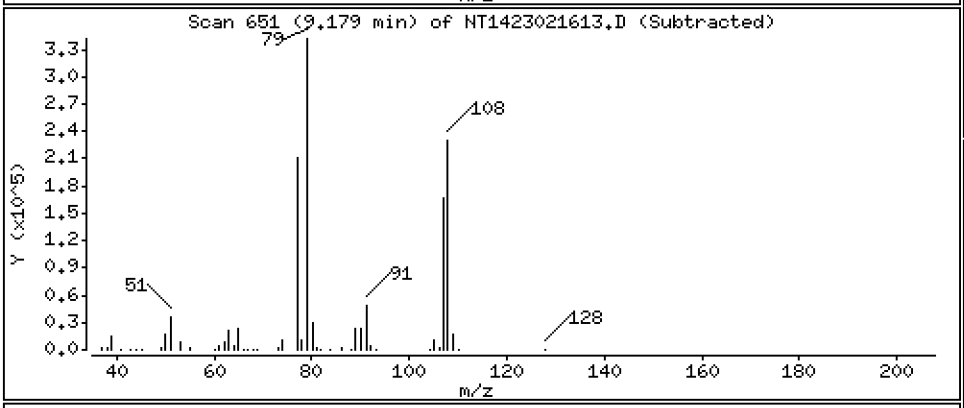
Column phase: ZB-5msi

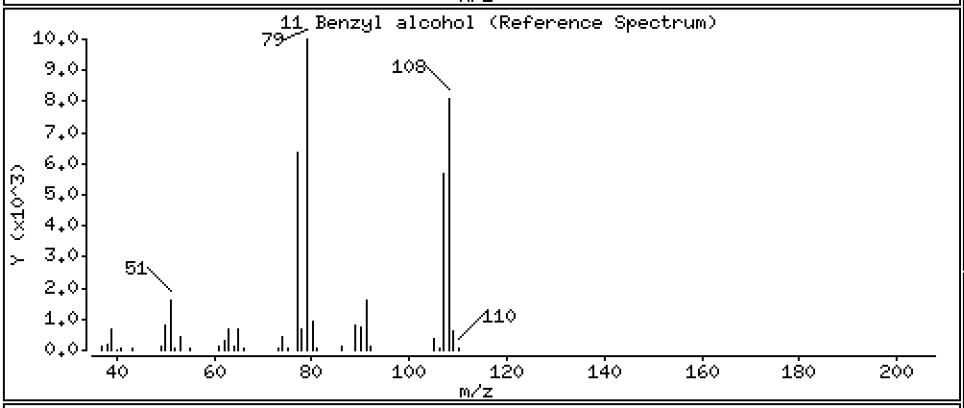
Column diameter: 0.25

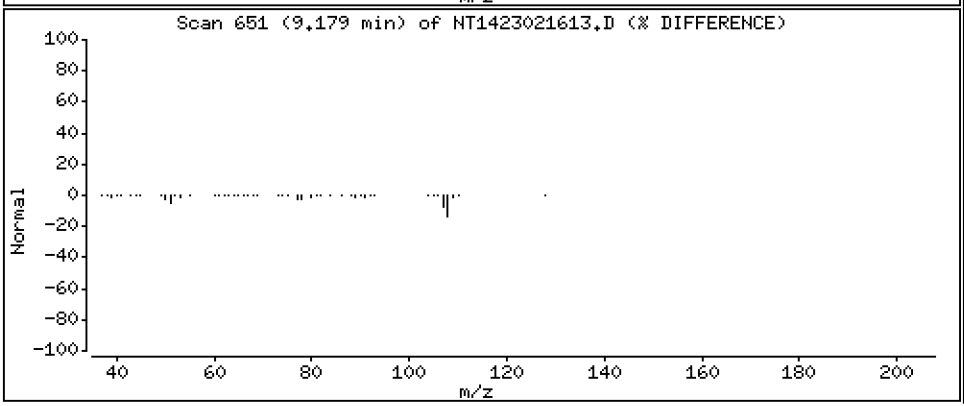
11 Benzyl alcohol

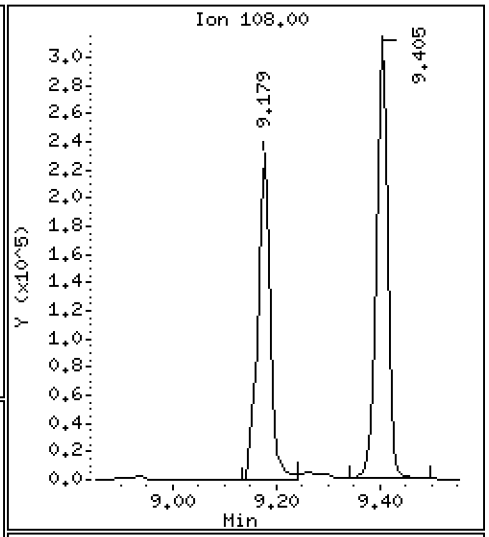
Concentration: 4.625 ug/mL

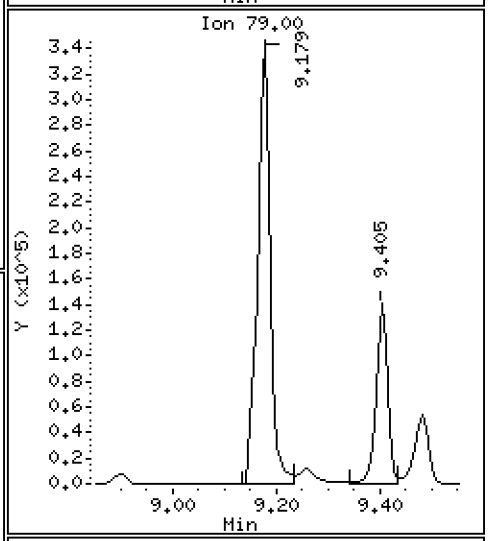


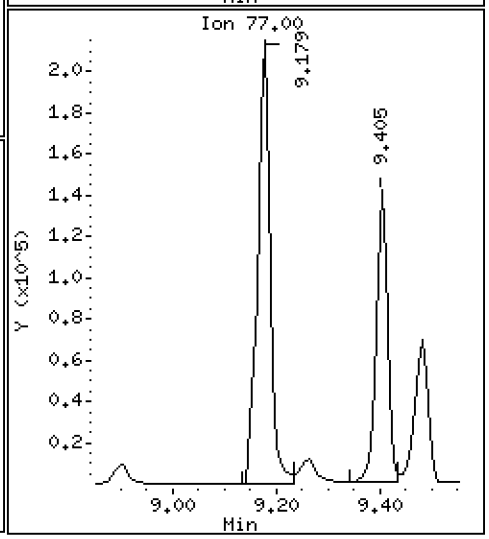












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

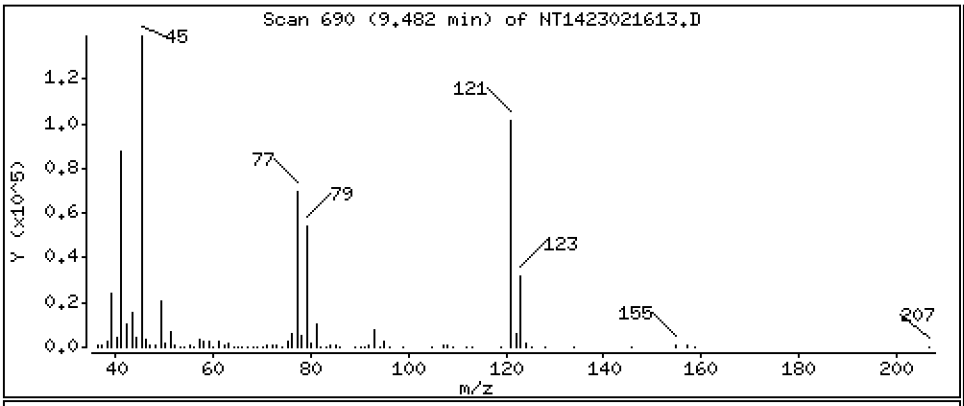
Operator: DSD

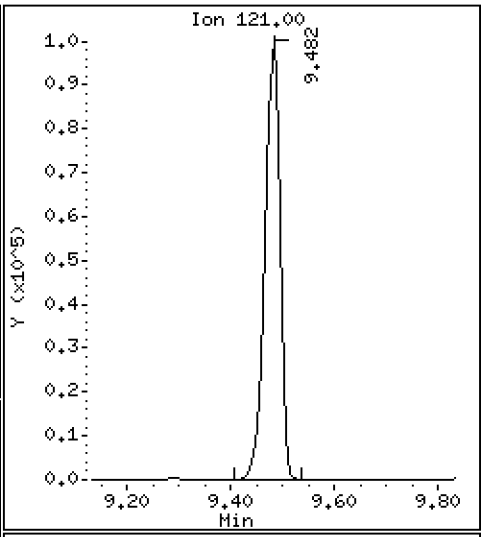
Column phase: ZB-5msi

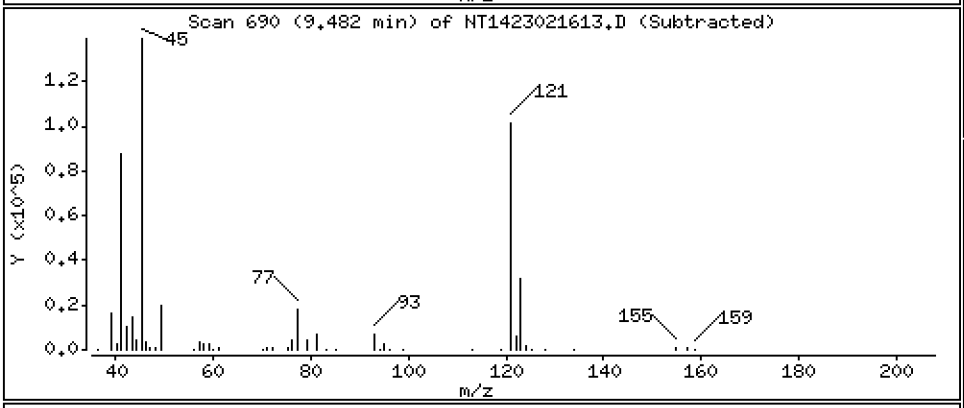
Column diameter: 0.25

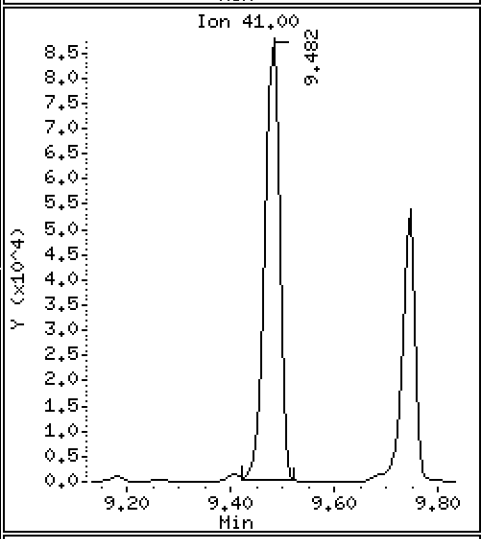
14 2,2'-oxybis(1-Chloropropane)

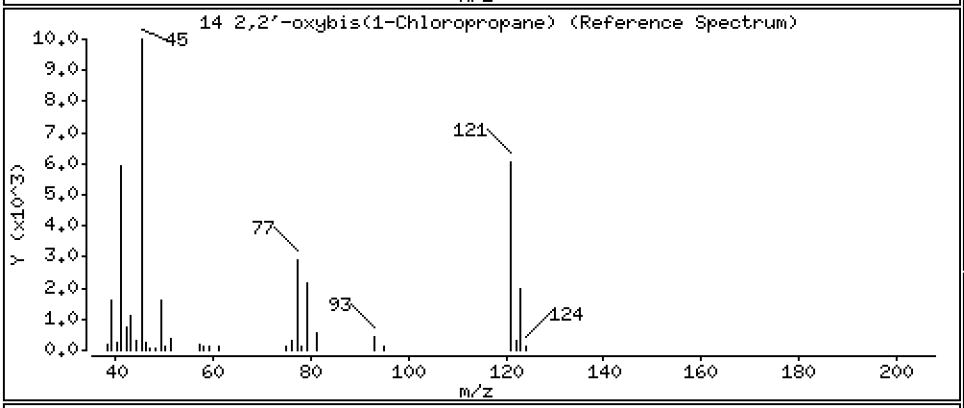
Concentration: 5.567 ug/mL

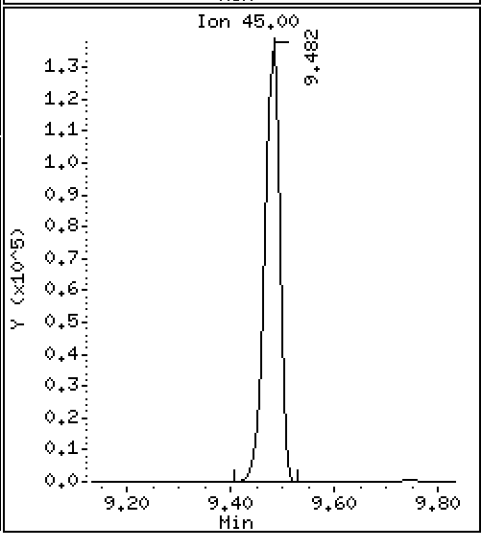


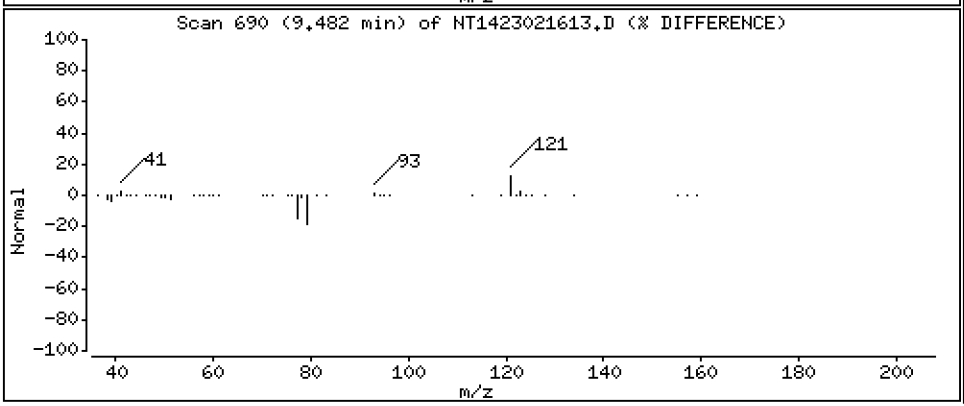












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

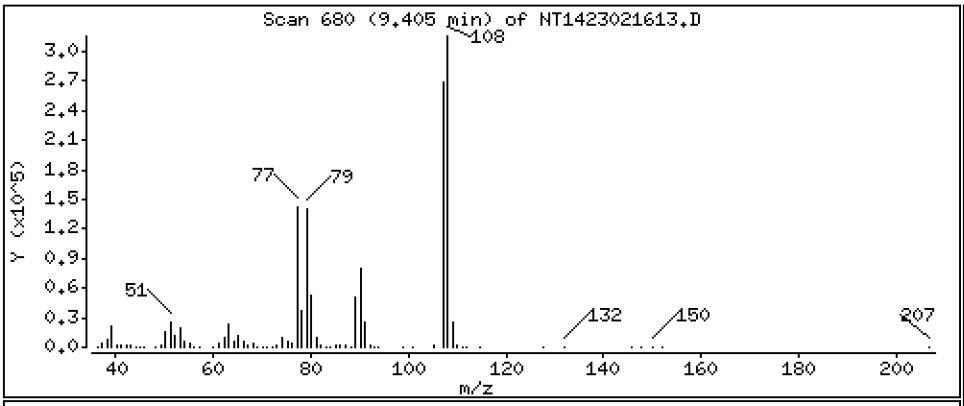
Operator: DSD

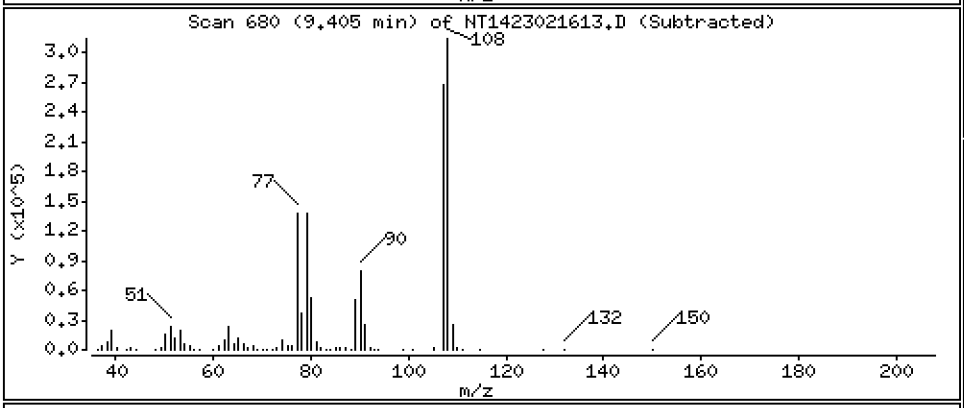
Column phase: ZB-5msi

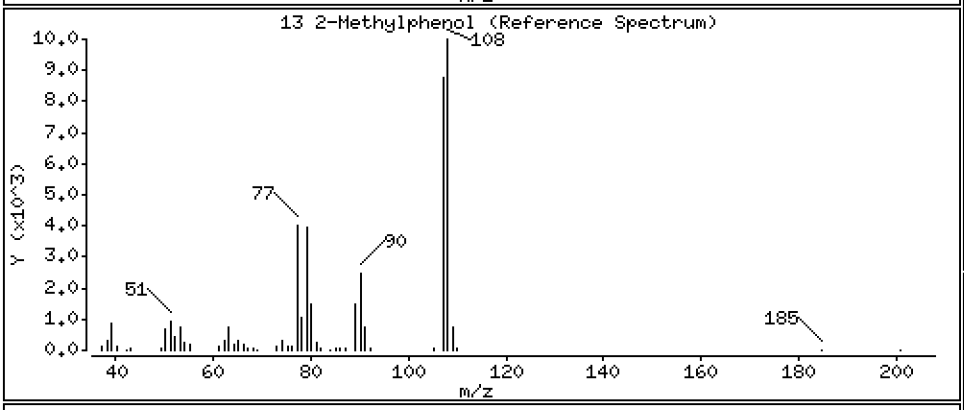
Column diameter: 0.25

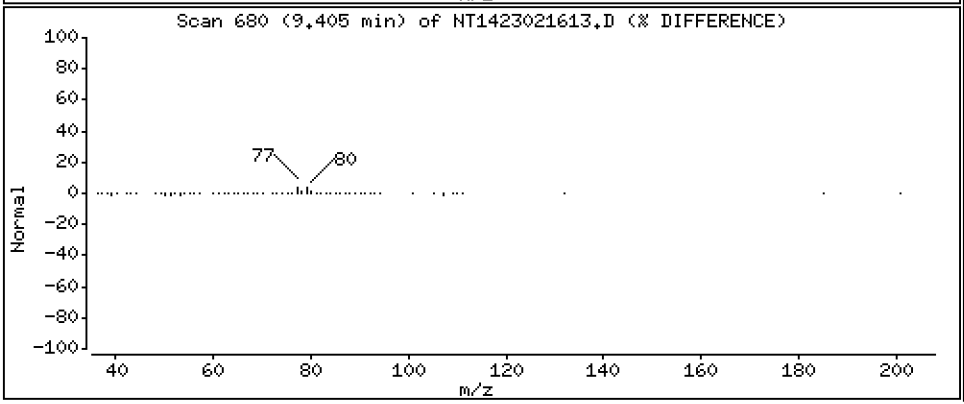
13 2-Methylphenol

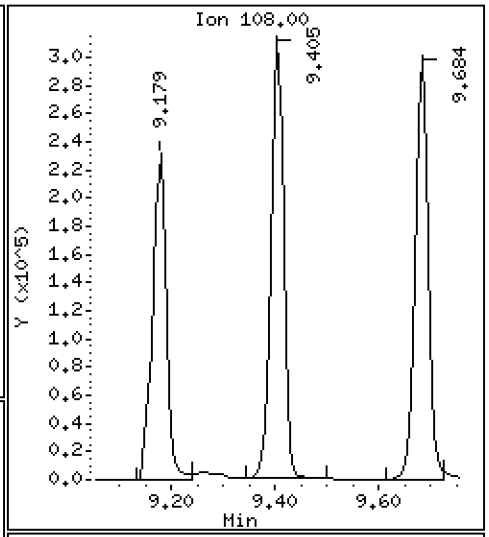
Concentration: 4.368 ug/mL

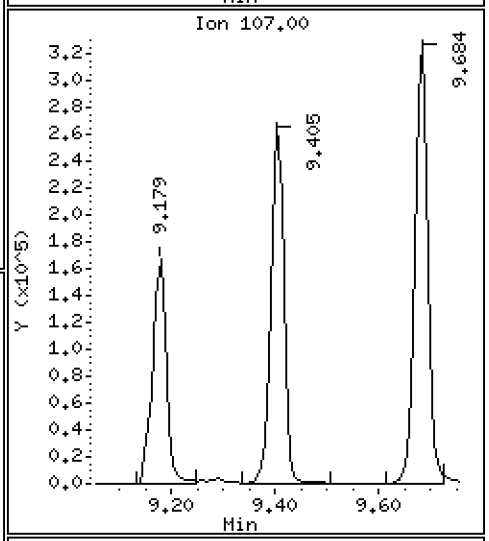


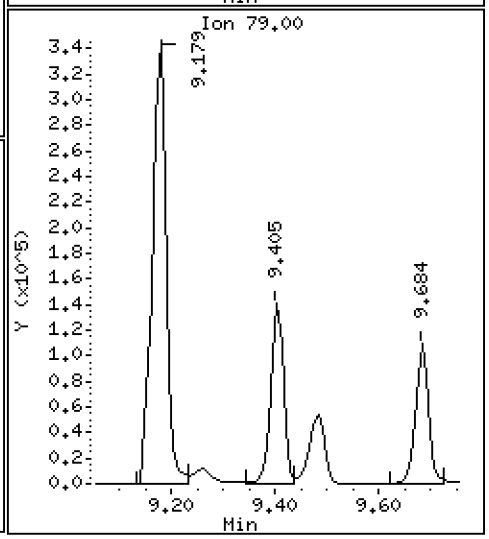












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

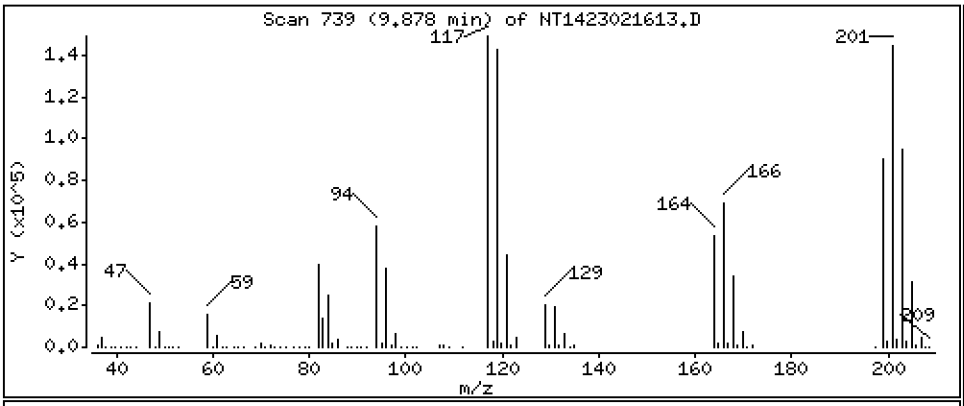
Operator: DSD

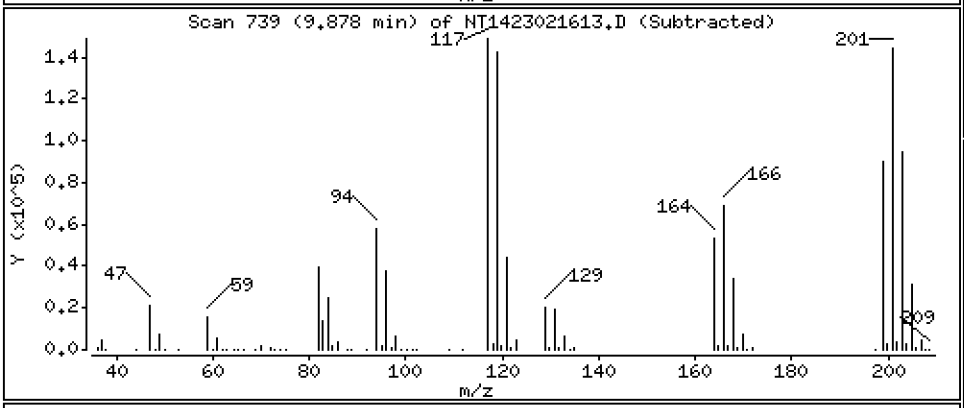
Column phase: ZB-5msi

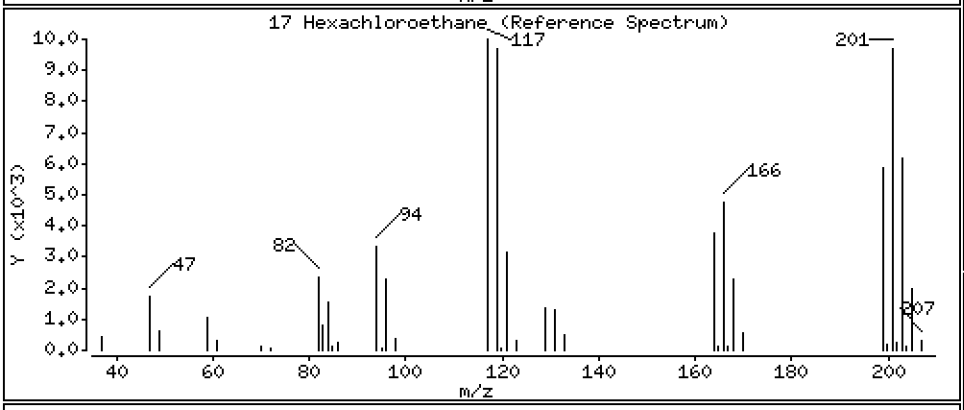
Column diameter: 0.25

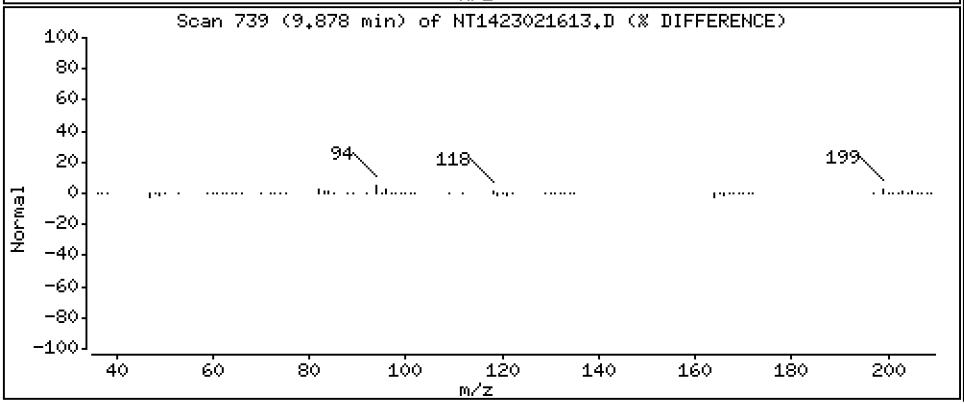
17 Hexachloroethane

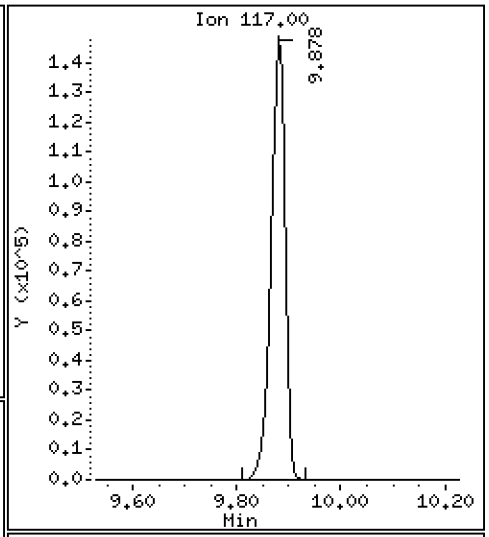
Concentration: 5.037 ug/mL

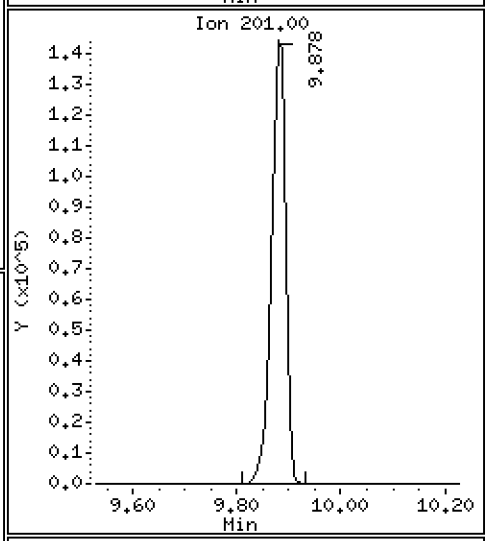


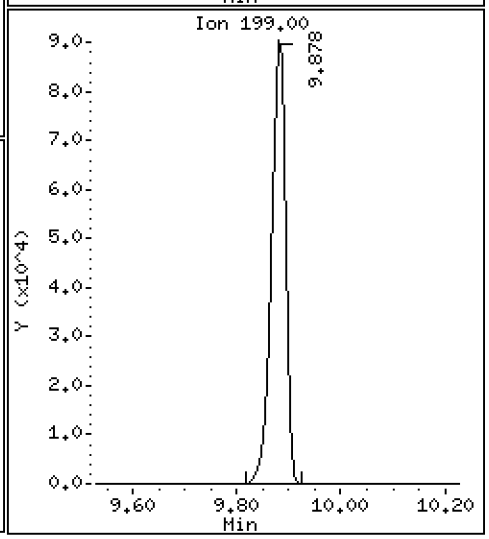












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

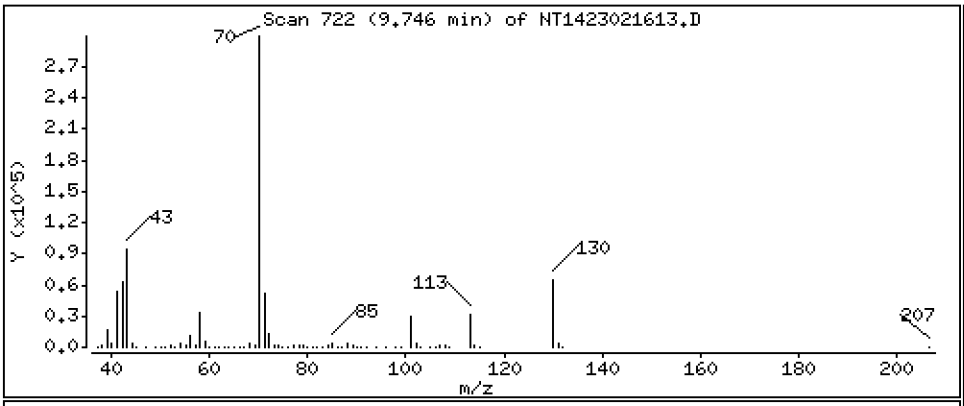
Operator: DSD

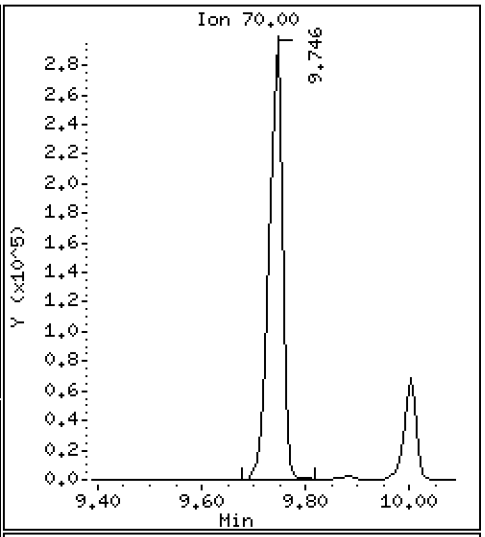
Column phase: ZB-5msi

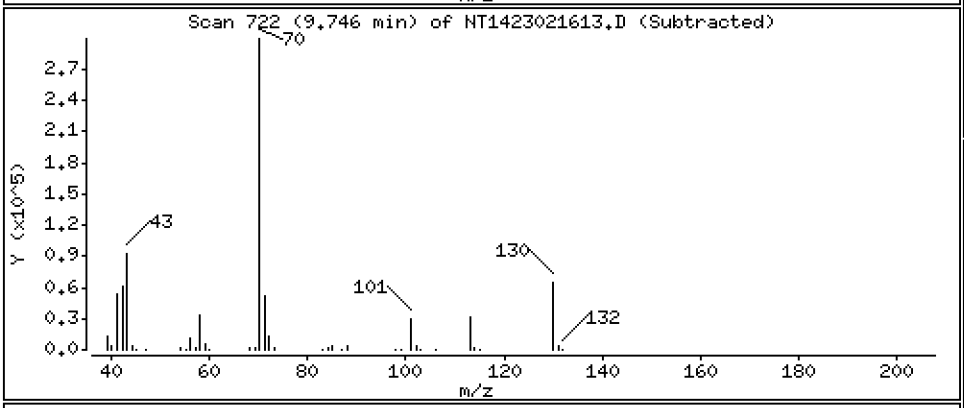
Column diameter: 0.25

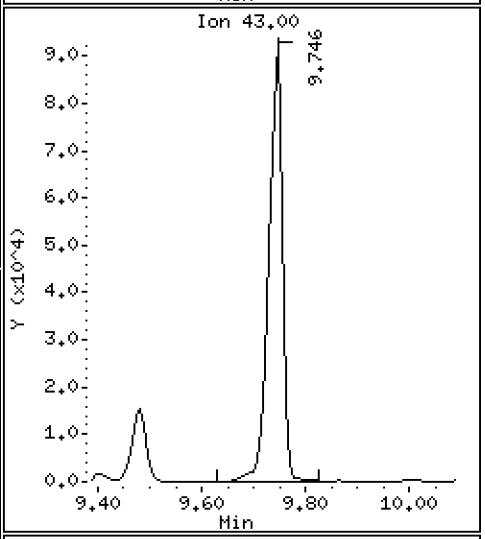
16 N-Nitroso-di-n-propylamine

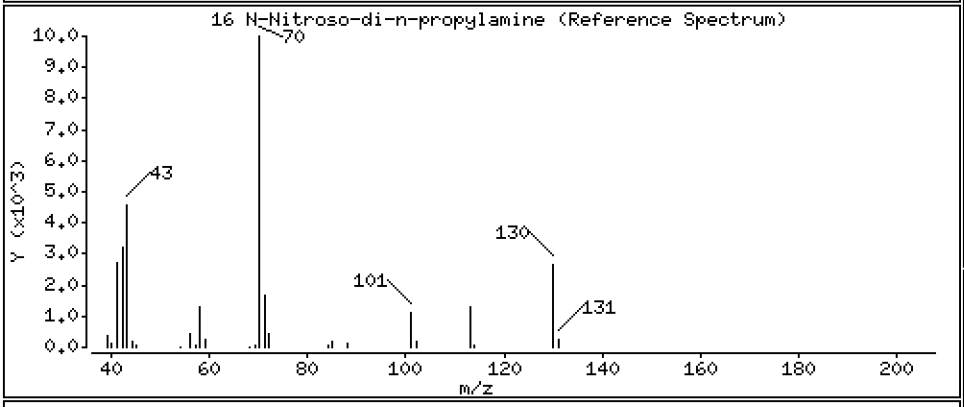
Concentration: 4.988 ug/mL

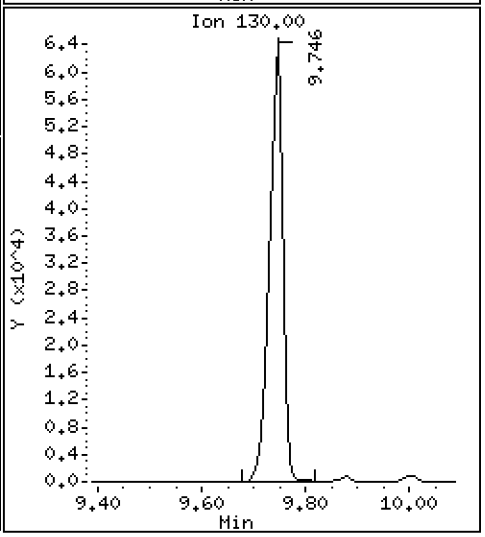


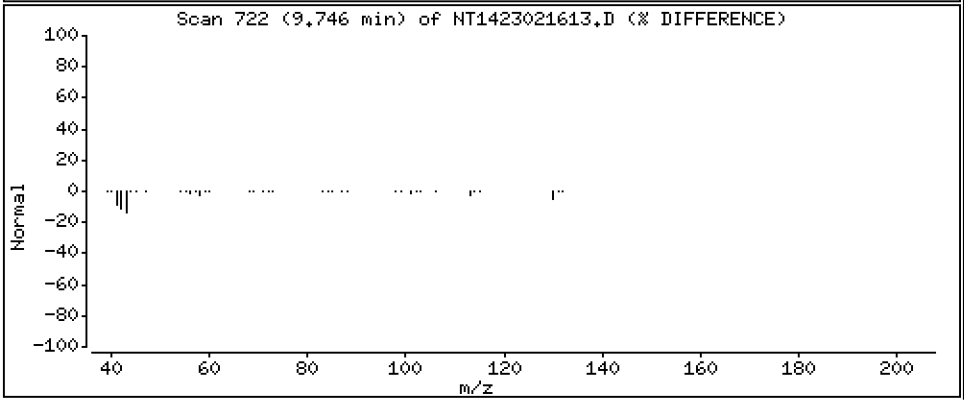












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

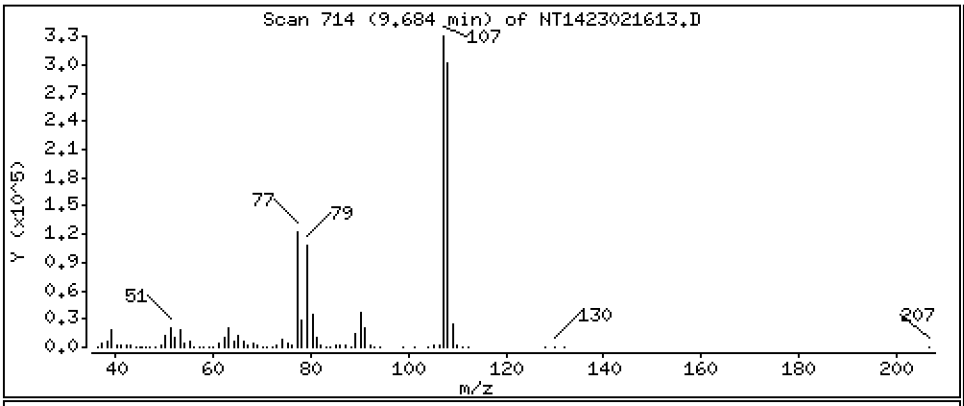
Operator: DSD

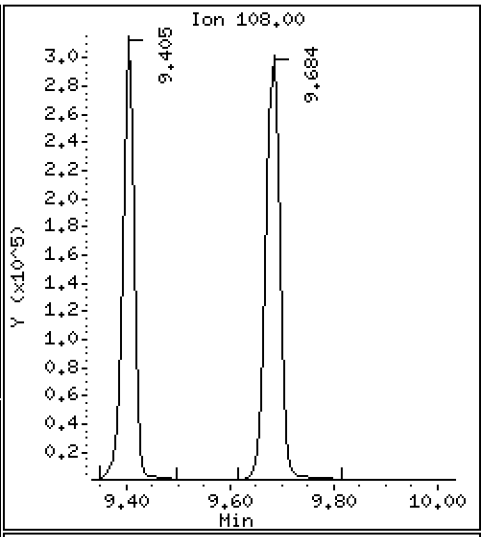
Column phase: ZB-5msi

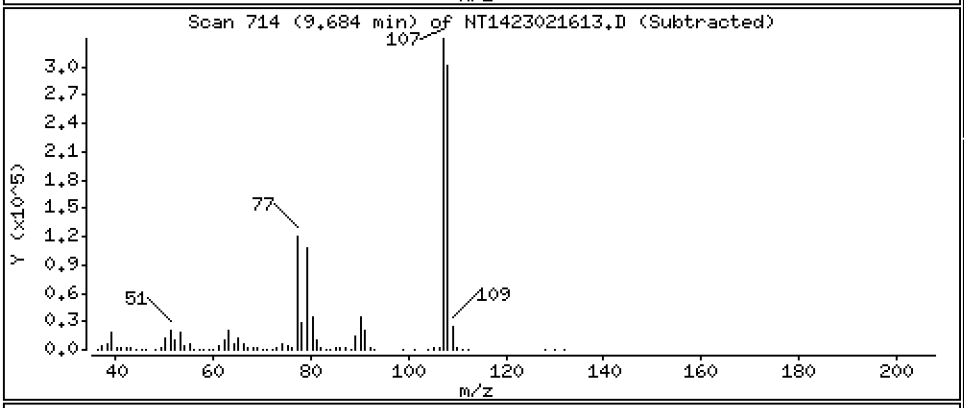
Column diameter: 0.25

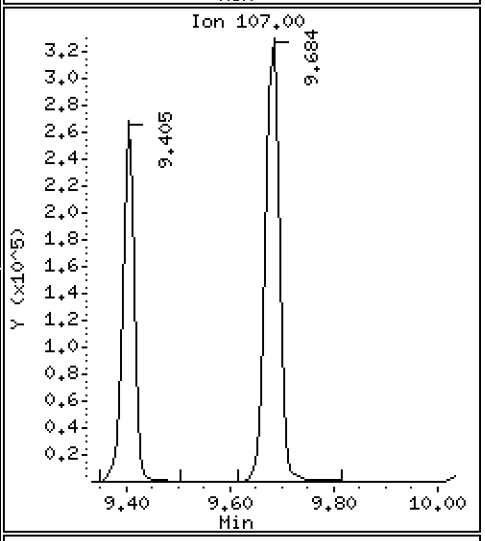
15 4-Methylphenol

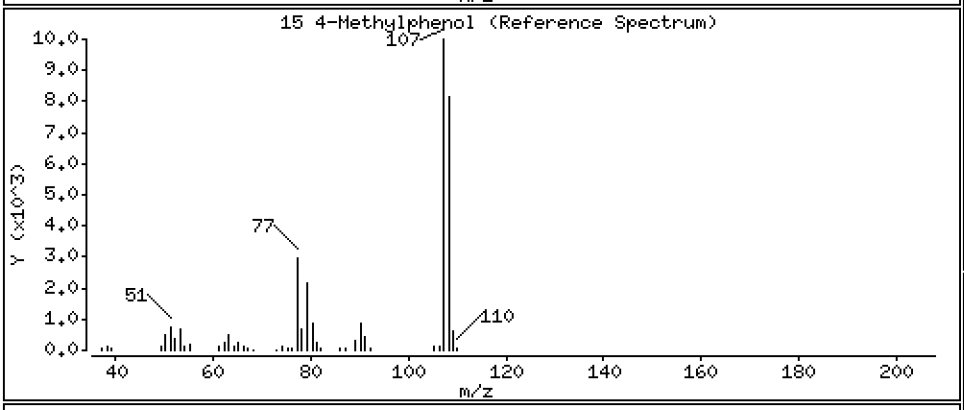
Concentration: 4.591 ug/mL

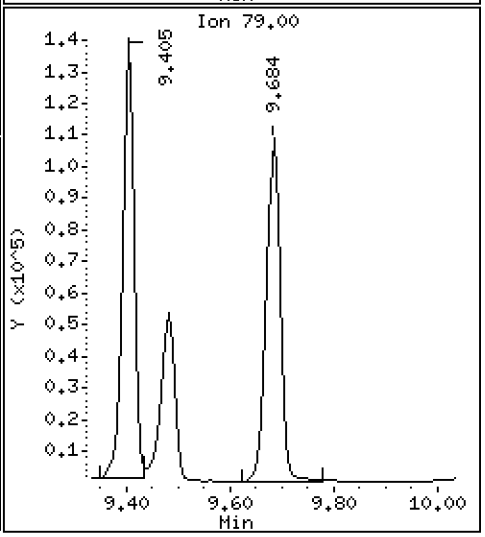


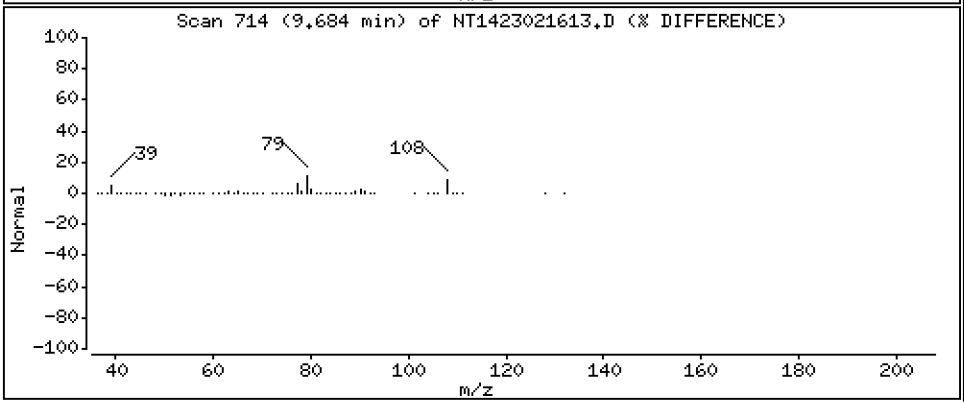












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

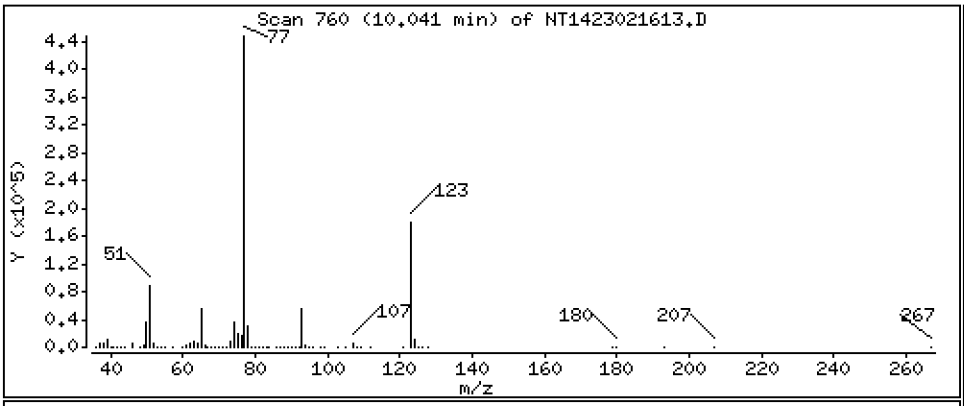
Operator: DSD

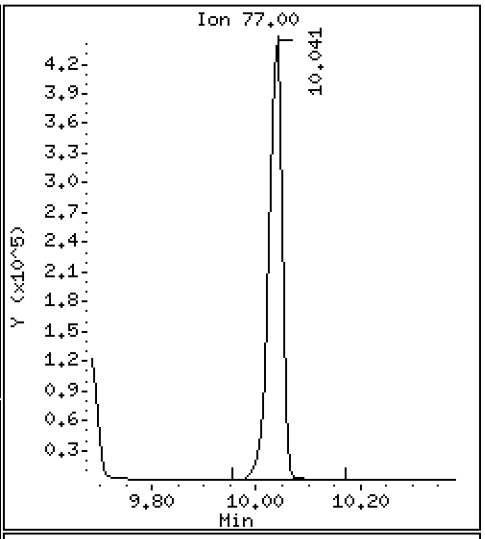
Column phase: ZB-5msi

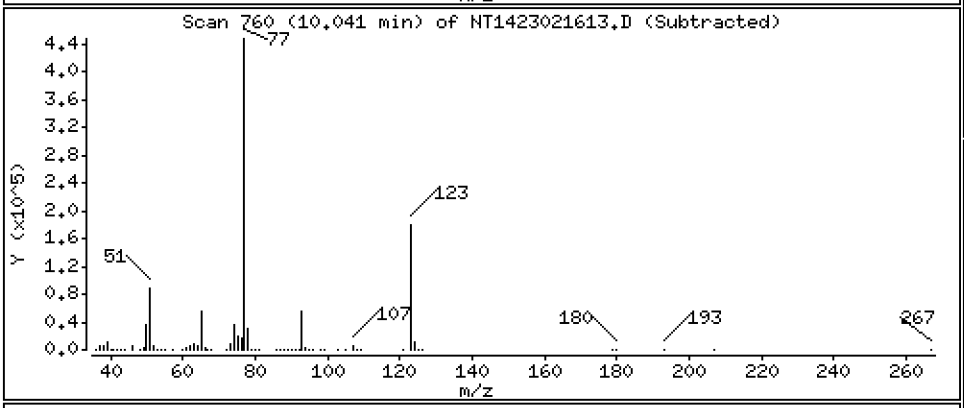
Column diameter: 0.25

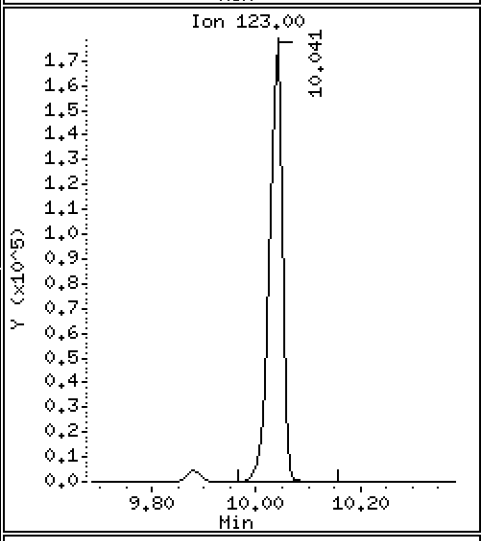
19 Nitrobenzene

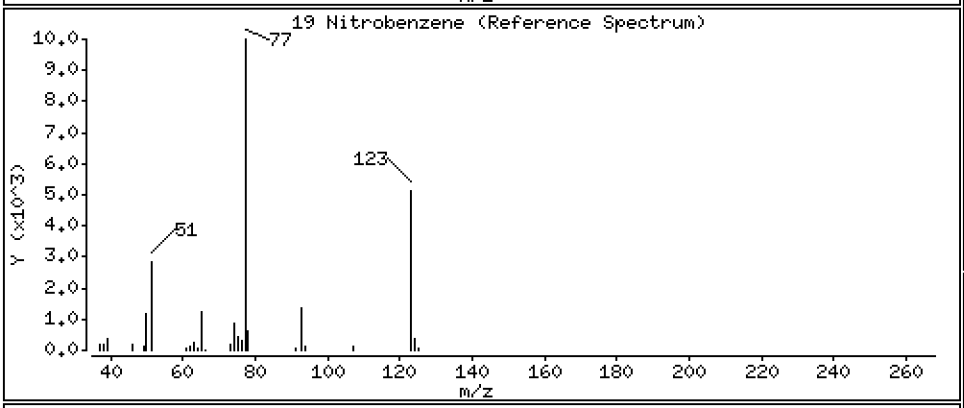
Concentration: 4.949 ug/mL

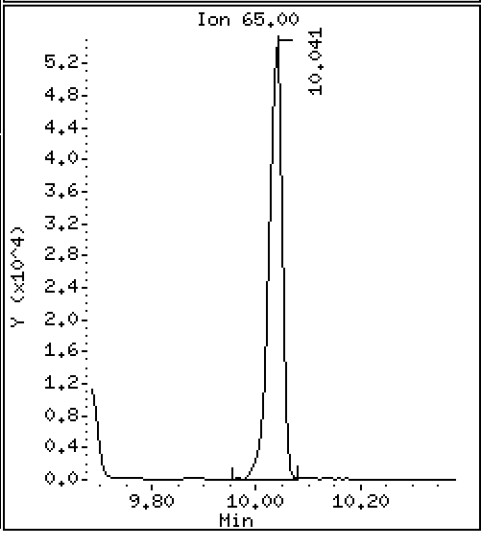


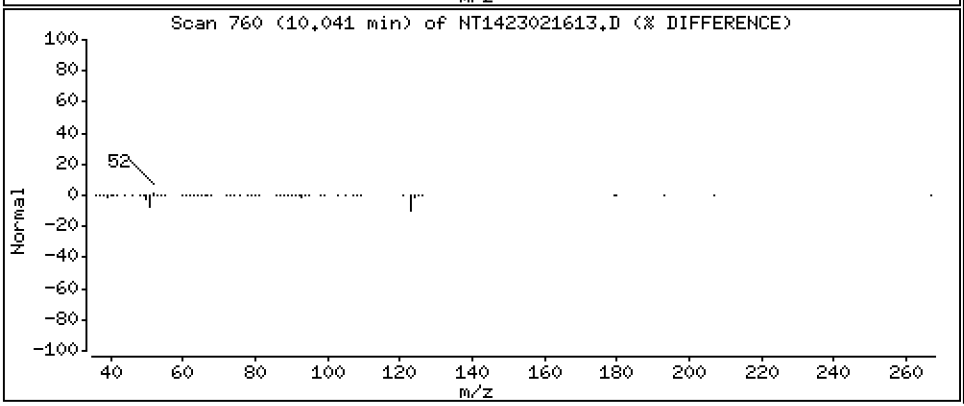












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

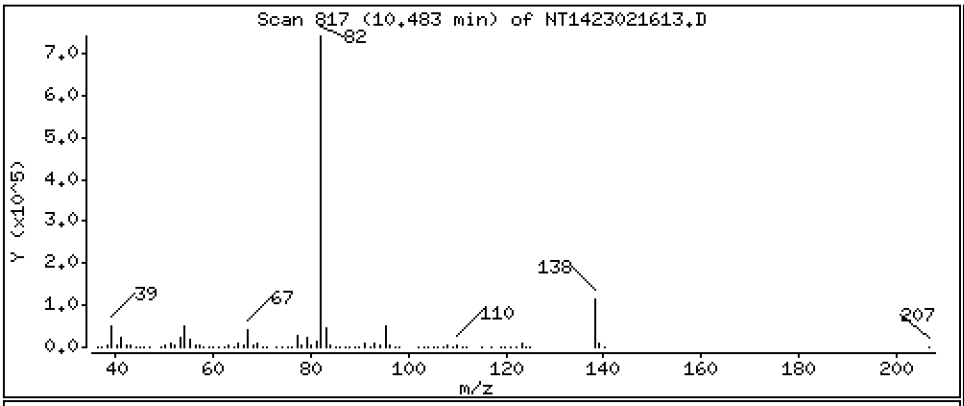
Operator: DSD

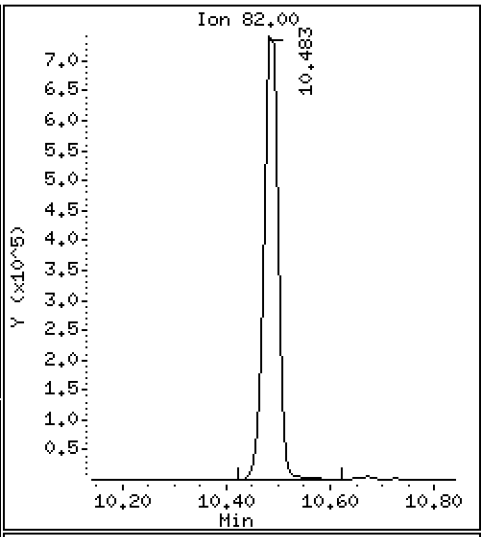
Column phase: ZB-5msi

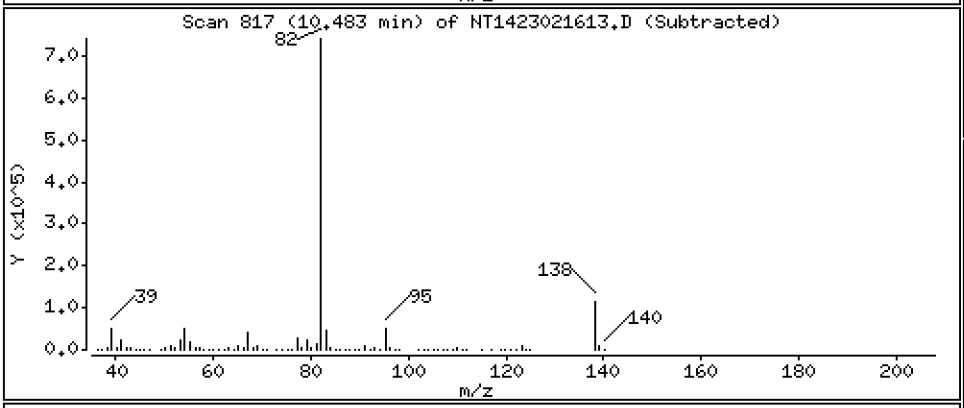
Column diameter: 0.25

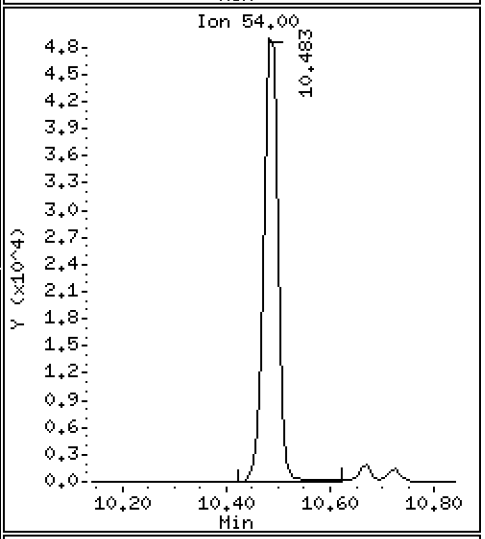
20 Isophorone

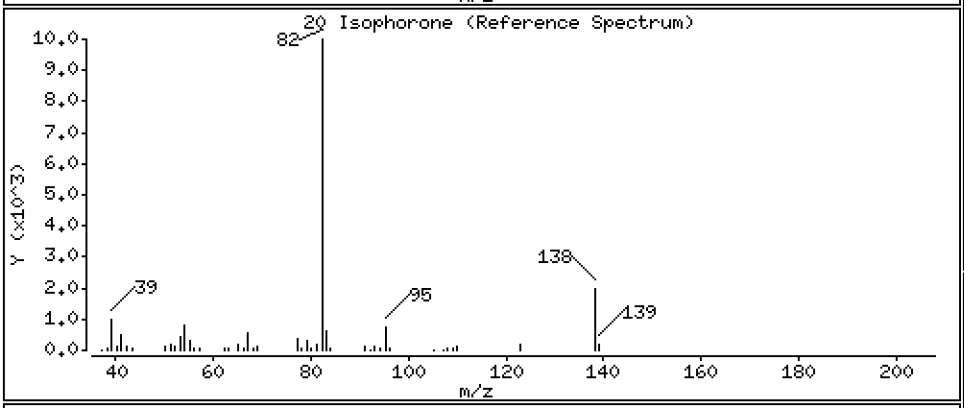
Concentration: 7.094 ug/mL

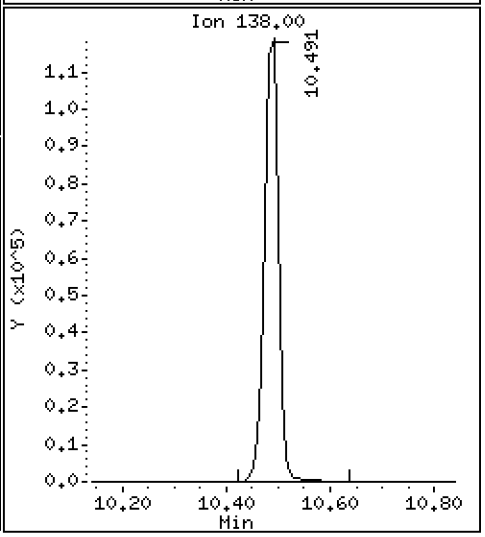


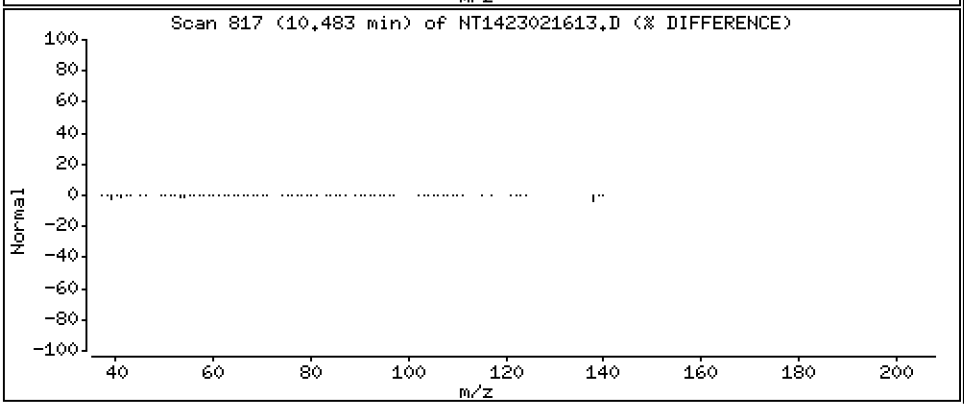












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

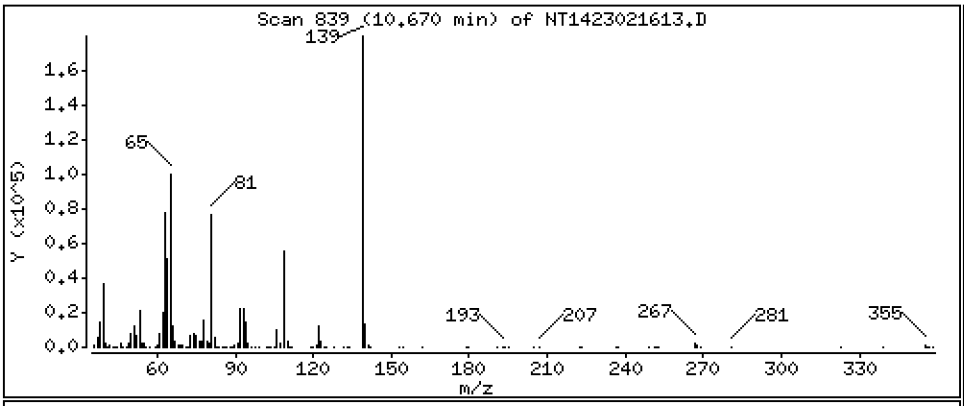
Operator: DSD

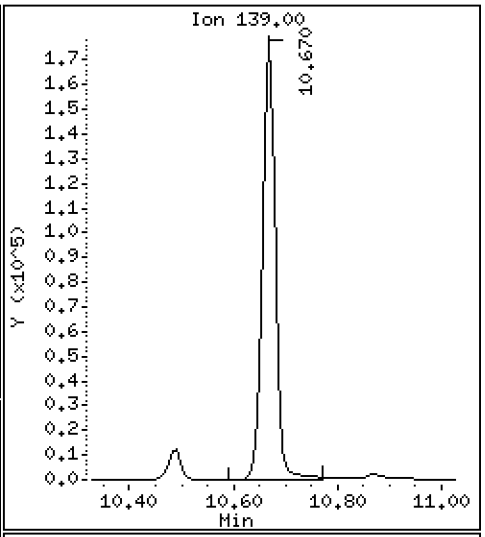
Column phase: ZB-5msi

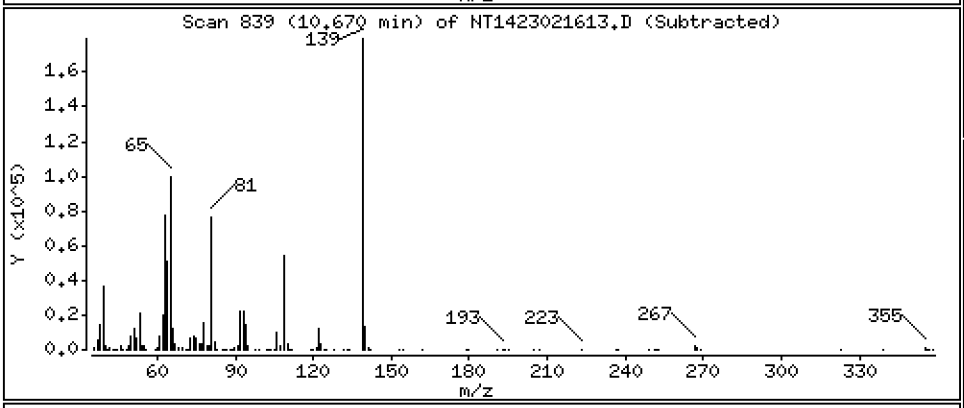
Column diameter: 0.25

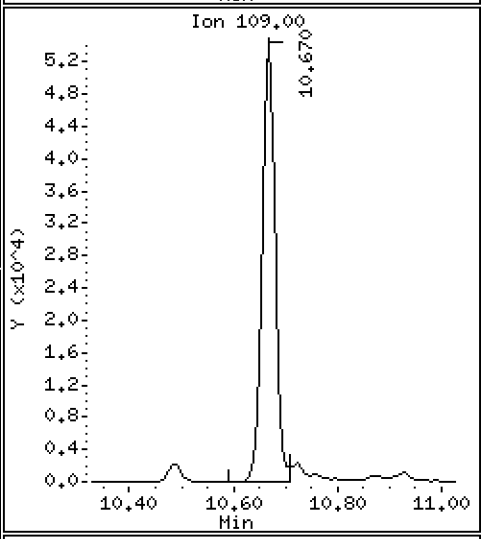
21 2-Nitrophenol

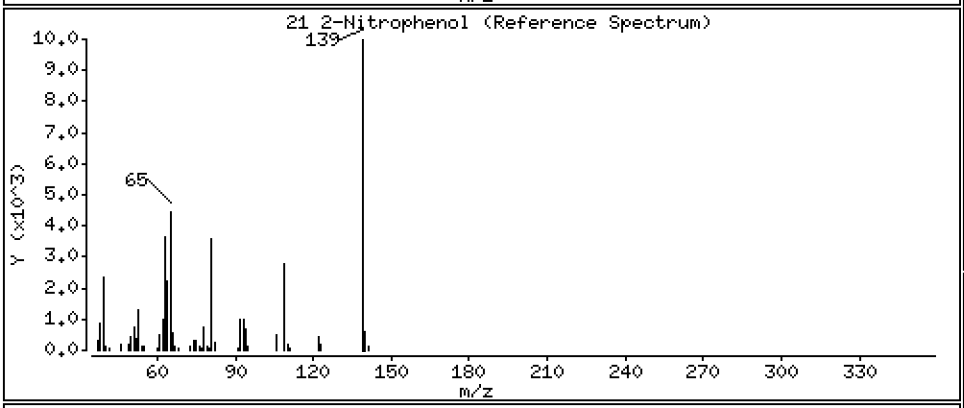
Concentration: 4.453 ug/mL

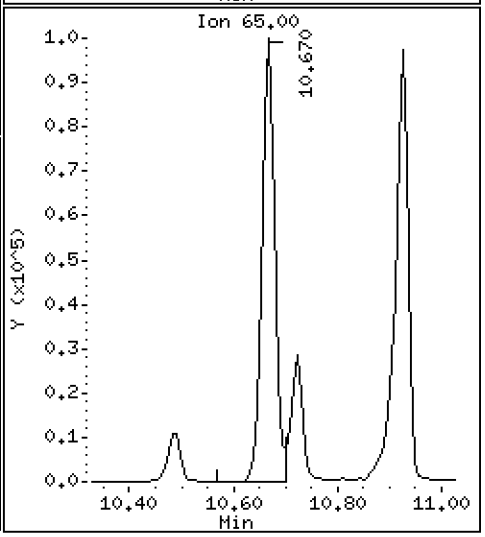


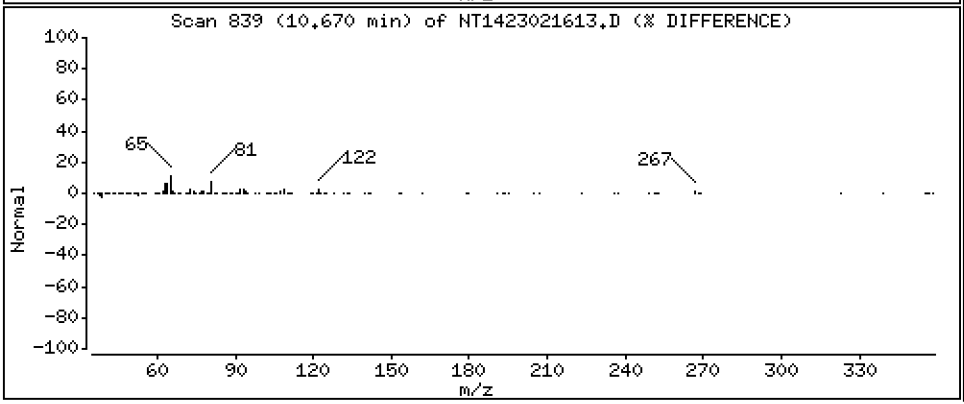












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

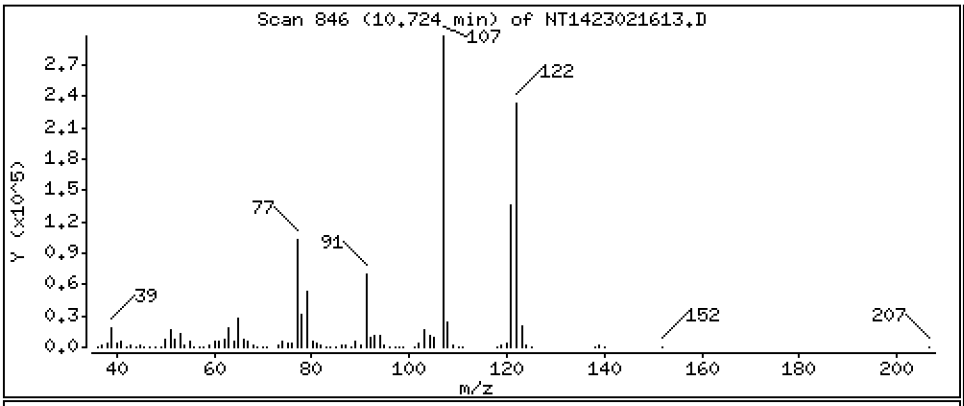
Operator: DSD

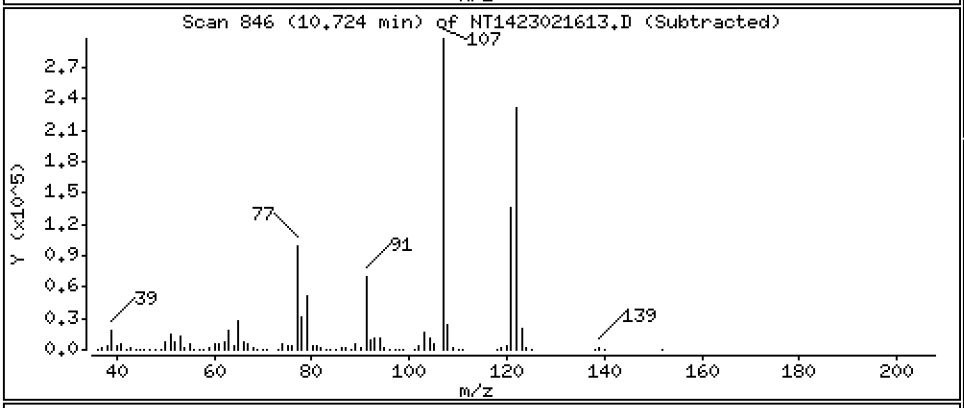
Column phase: ZB-5msi

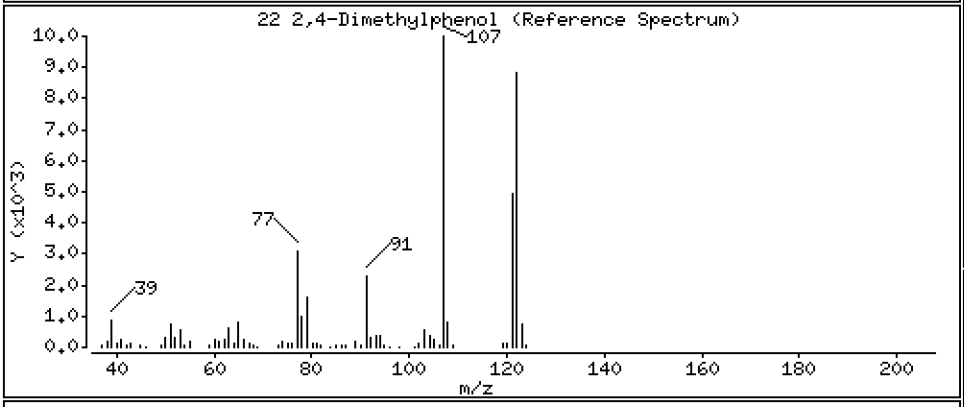
Column diameter: 0.25

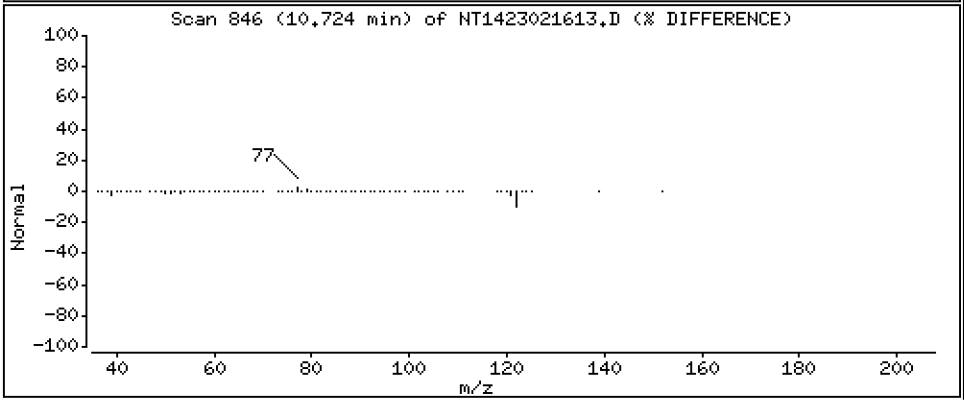
22 2,4-Dimethylphenol

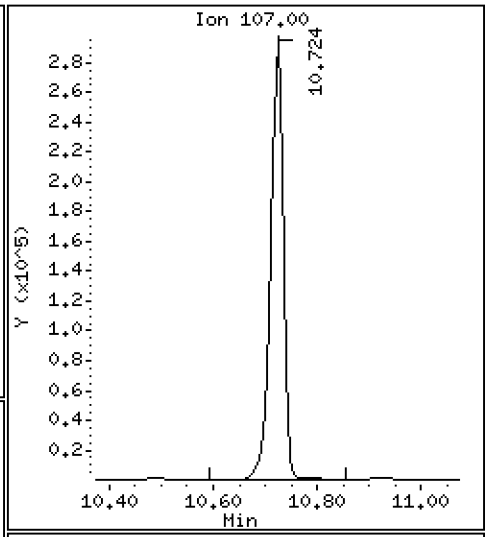
Concentration: 4.274 ug/mL

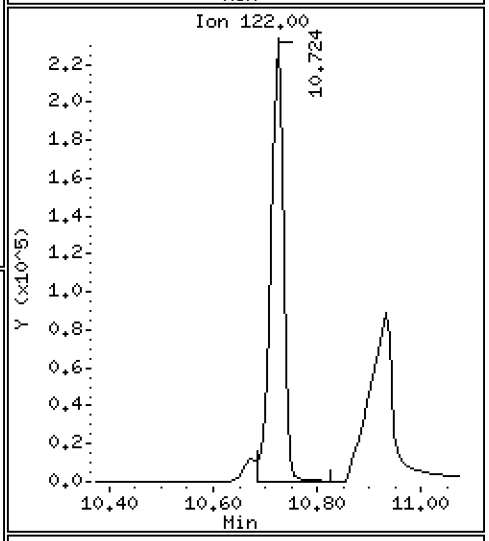


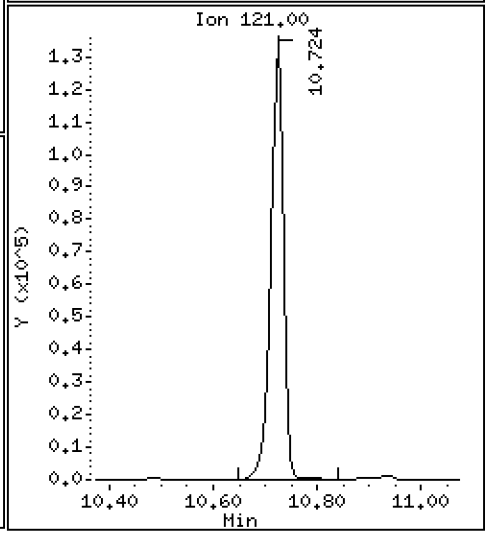












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

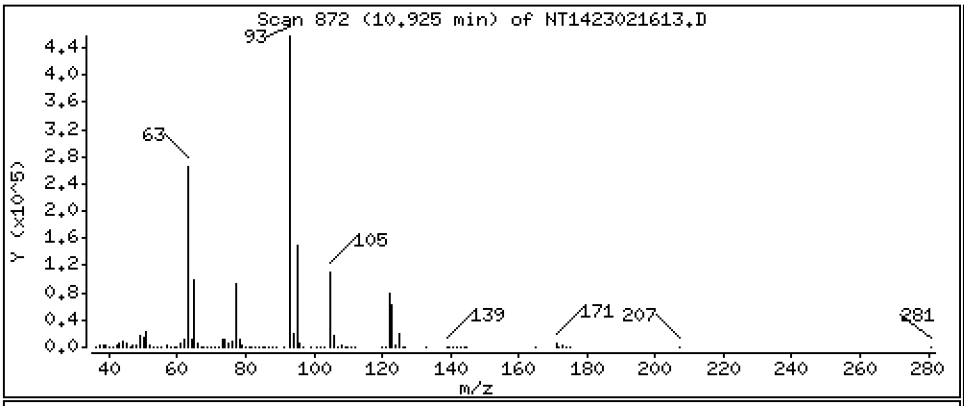
Operator: DSD

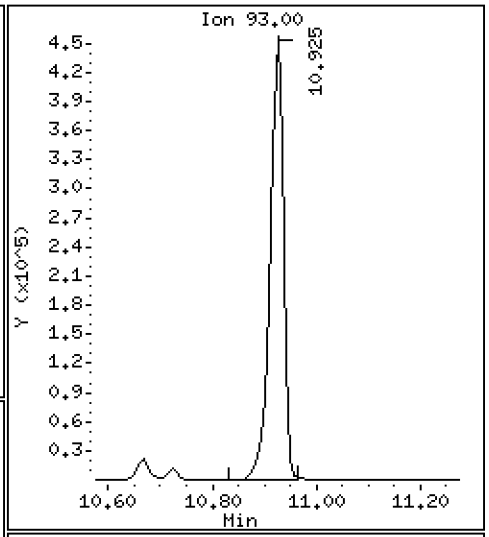
Column phase: ZB-5msi

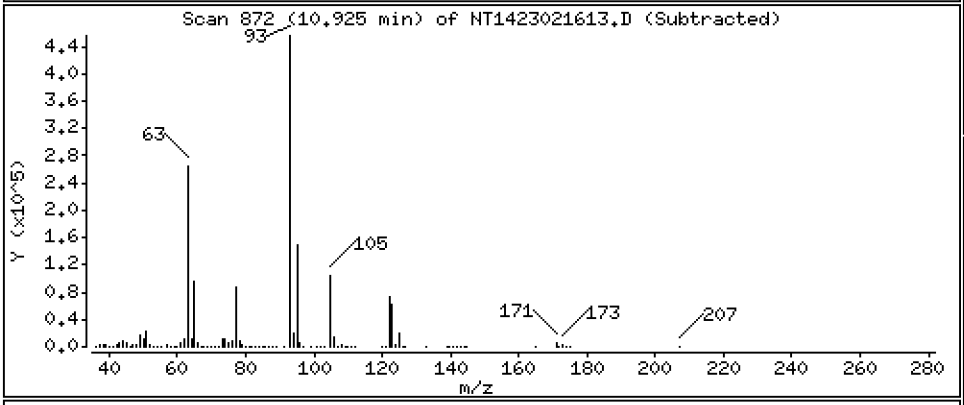
Column diameter: 0.25

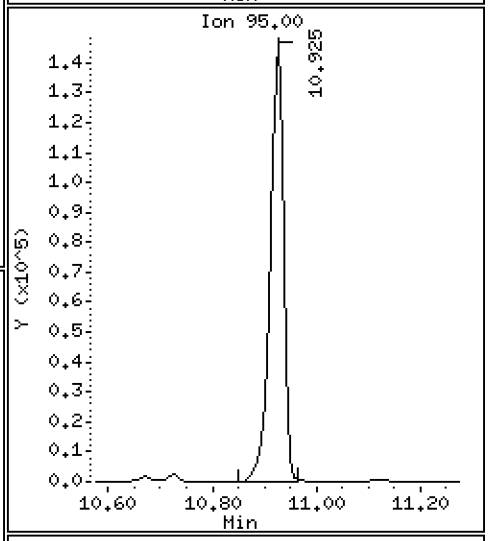
23 Bis(2-Chloroethoxy)methane

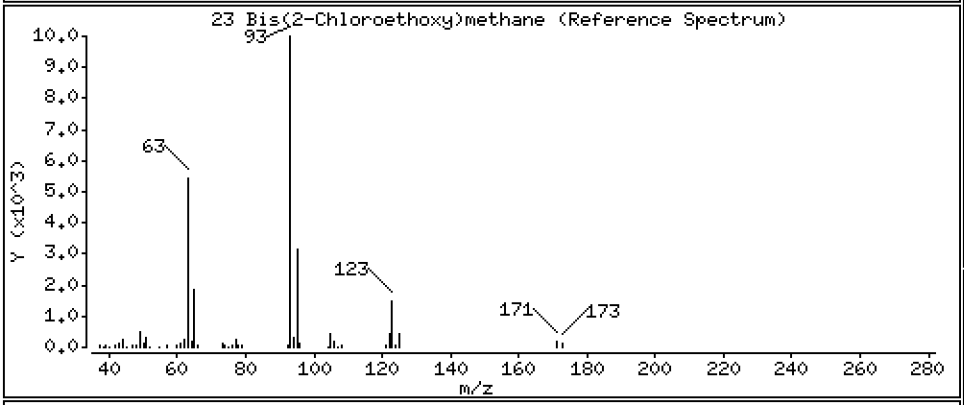
Concentration: 5.740 ug/mL

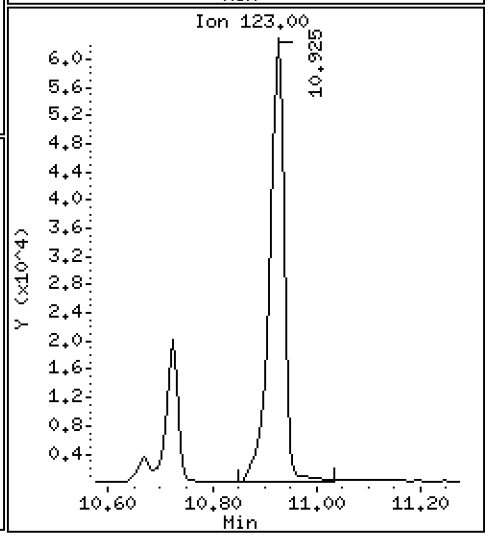


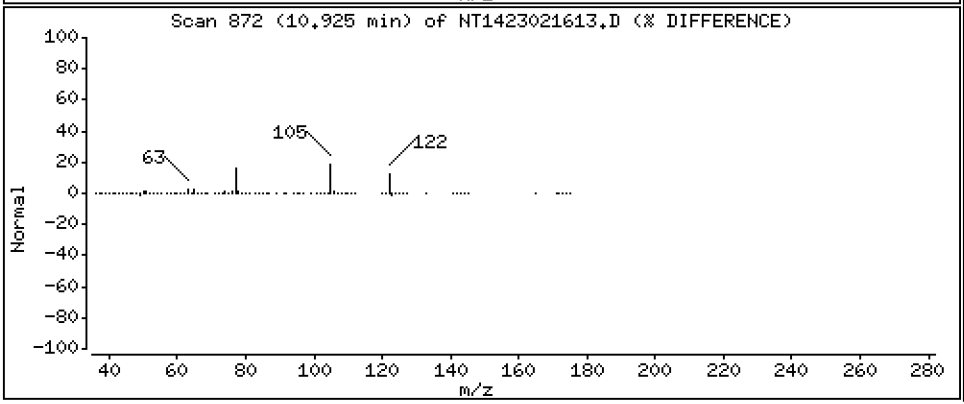












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

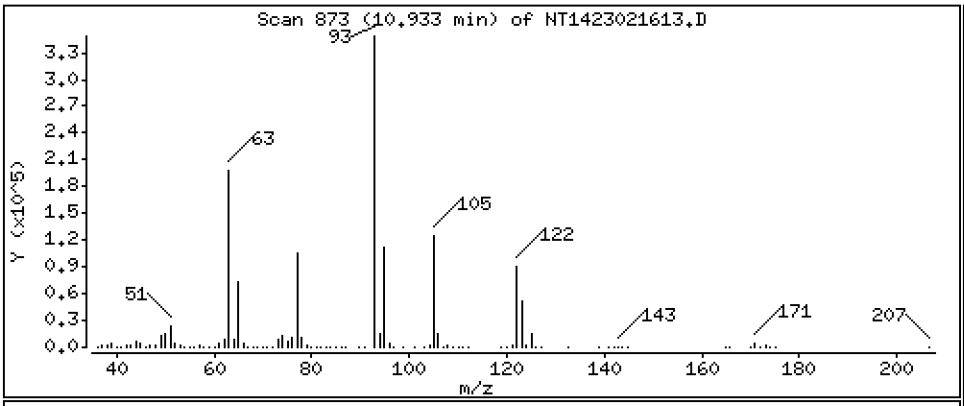
Operator: DSD

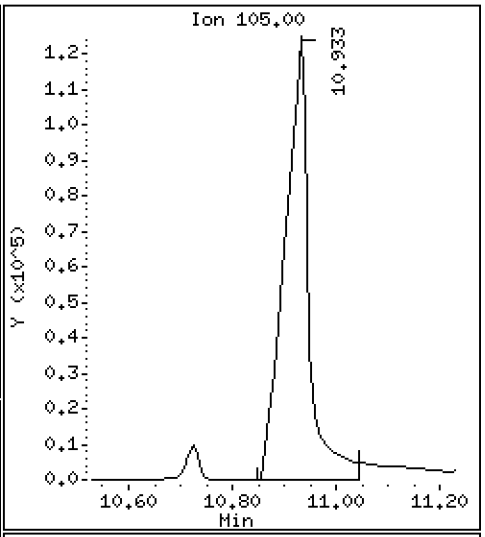
Column phase: ZB-5msi

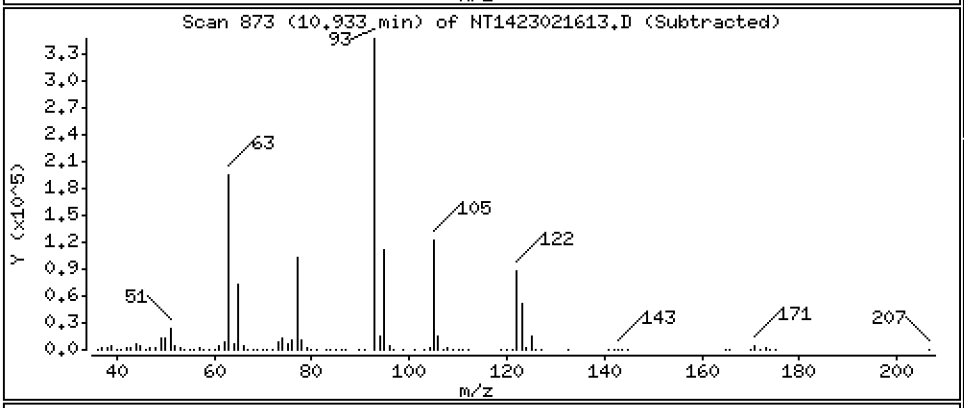
Column diameter: 0.25

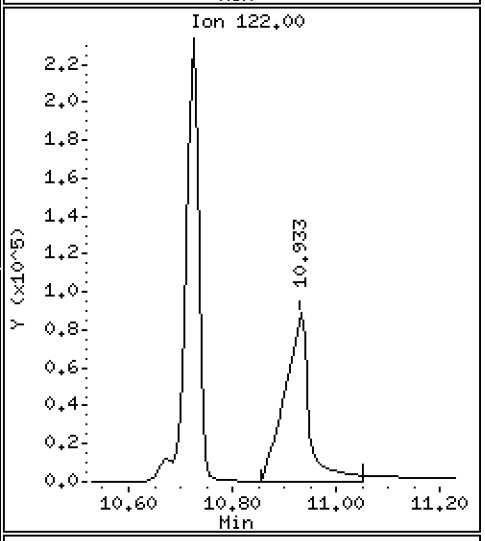
24 Benzoic acid

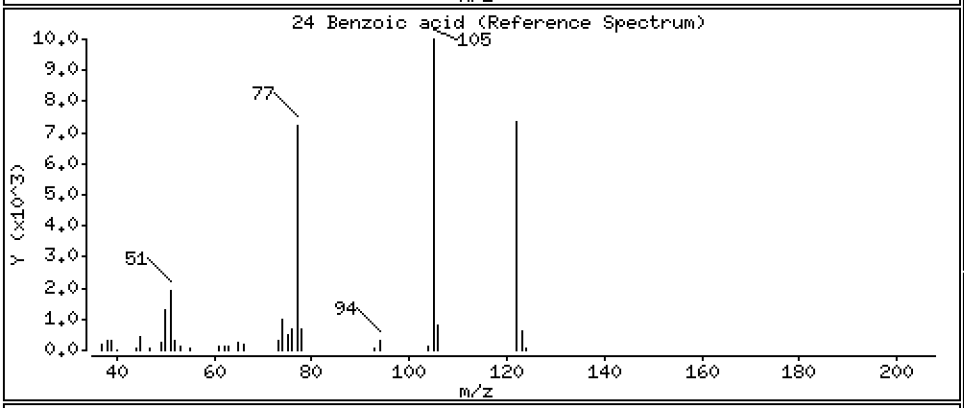
Concentration: 5.510 ug/mL

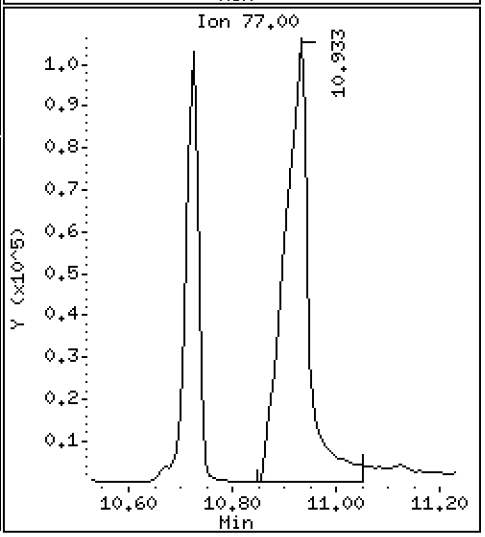


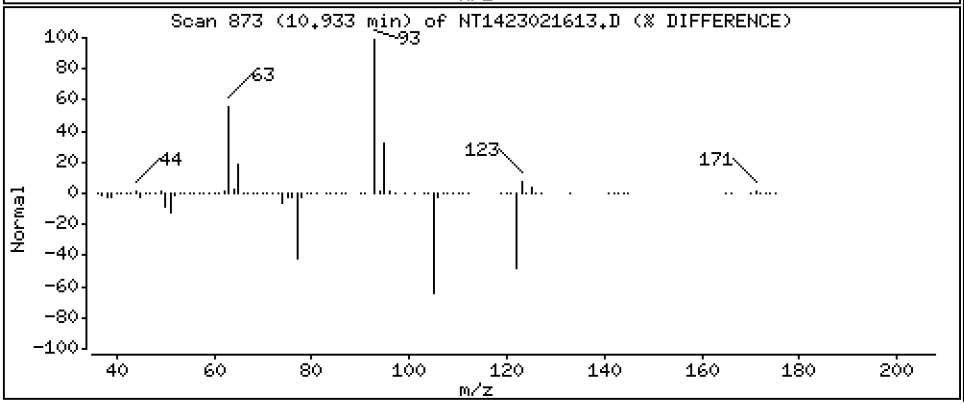












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

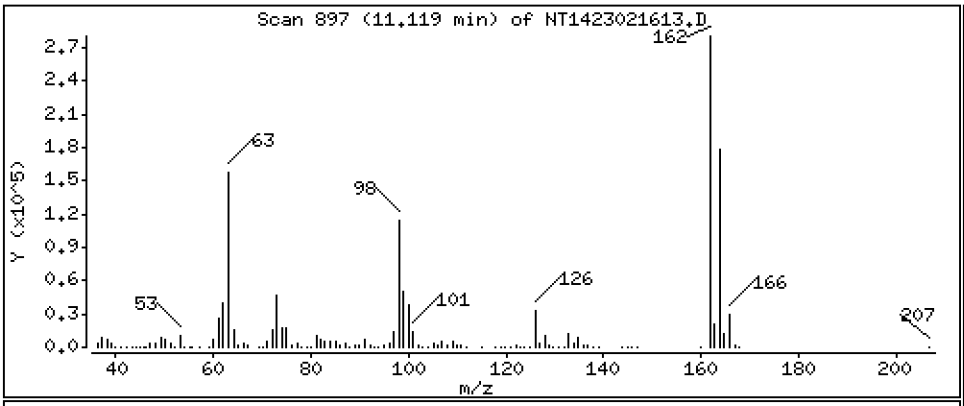
Operator: DSD

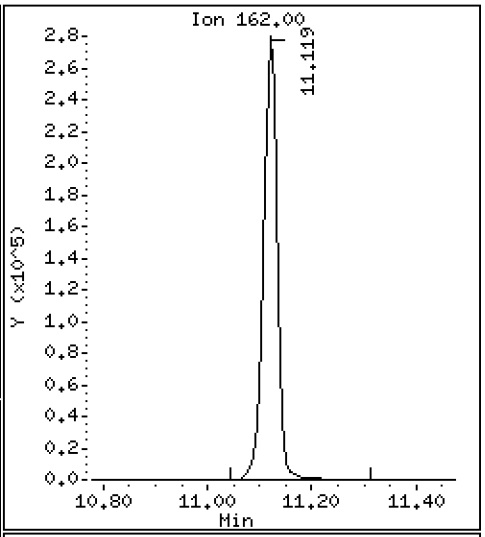
Column phase: ZB-5msi

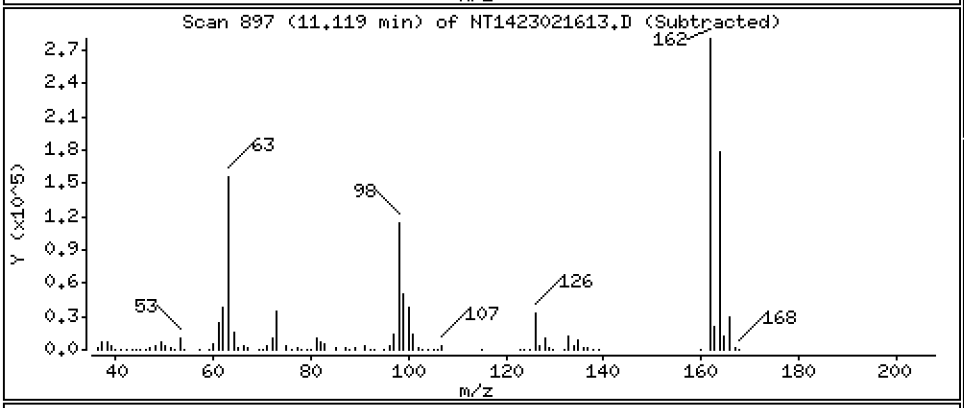
Column diameter: 0.25

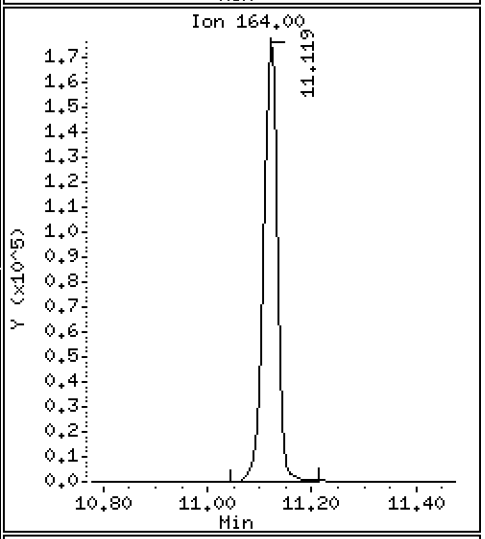
25 2,4-Dichlorophenol

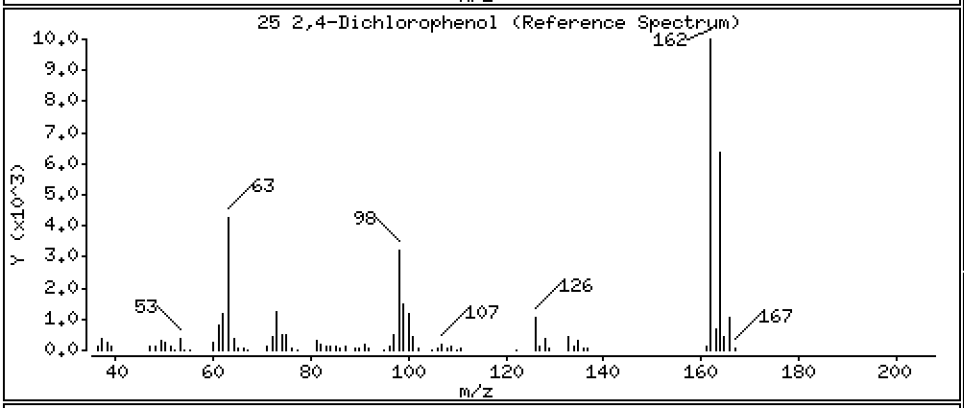
Concentration: 5.124 ug/mL

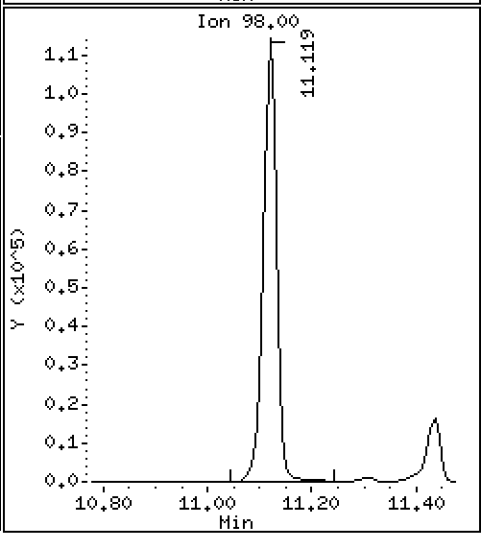


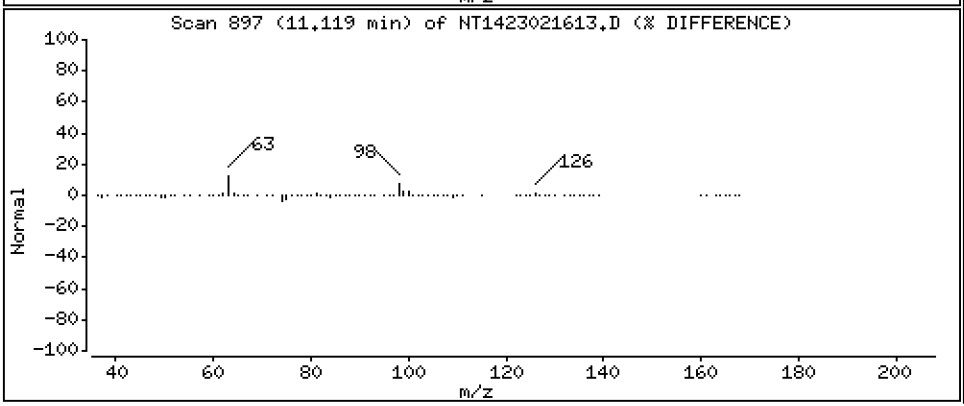












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

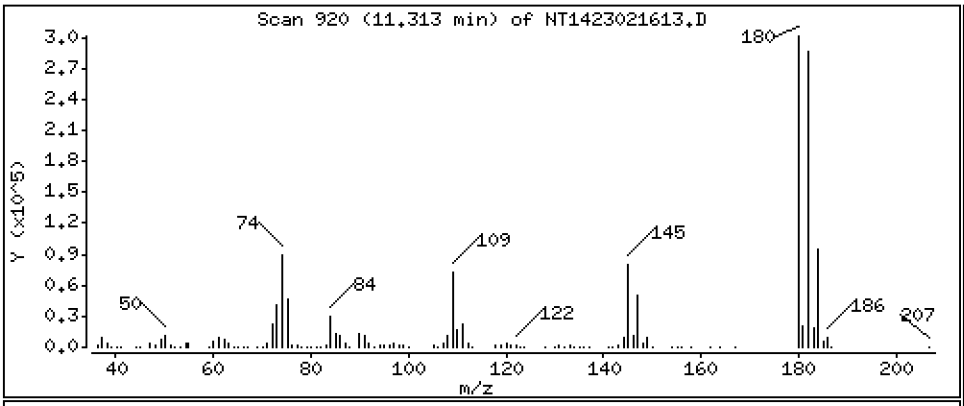
Operator: DSD

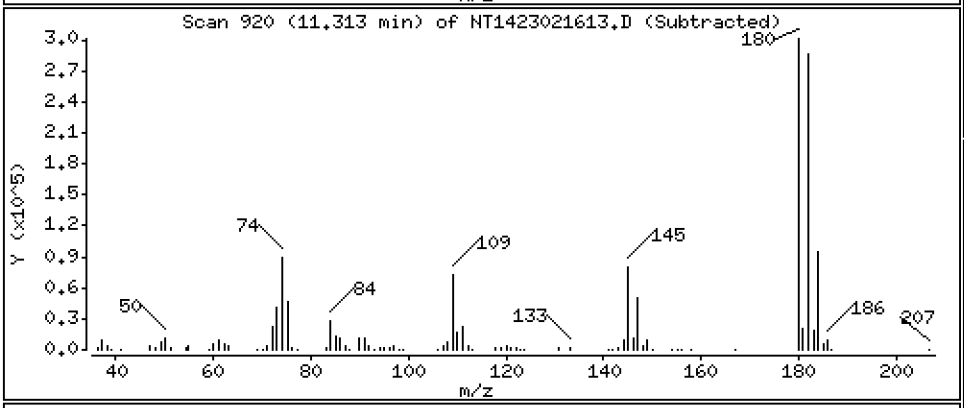
Column phase: ZB-5msi

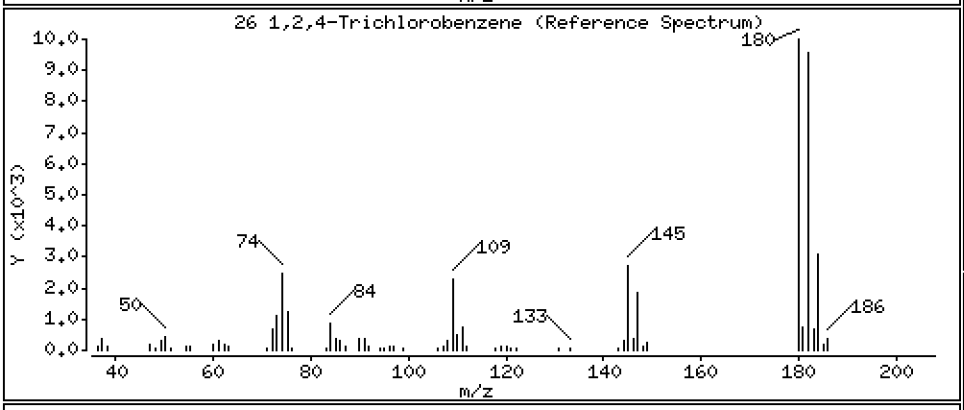
Column diameter: 0.25

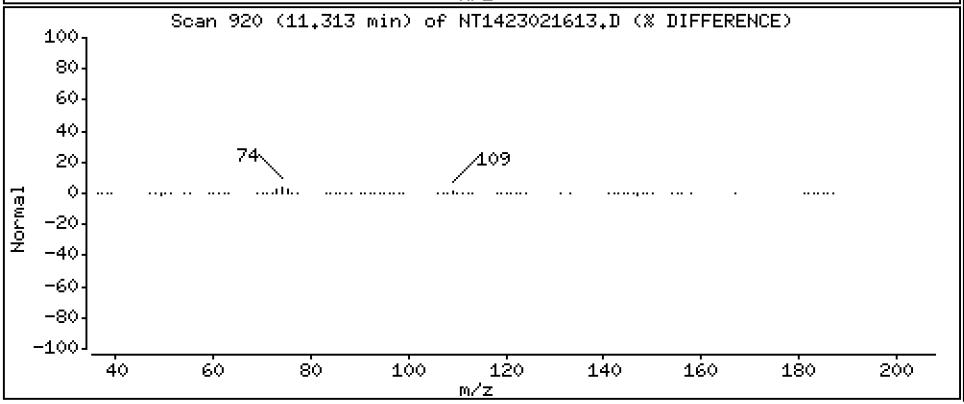
26 1,2,4-Trichlorobenzene

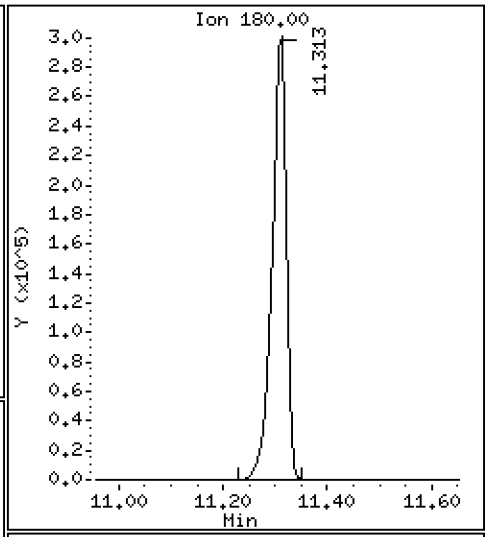
Concentration: 4.650 ug/mL

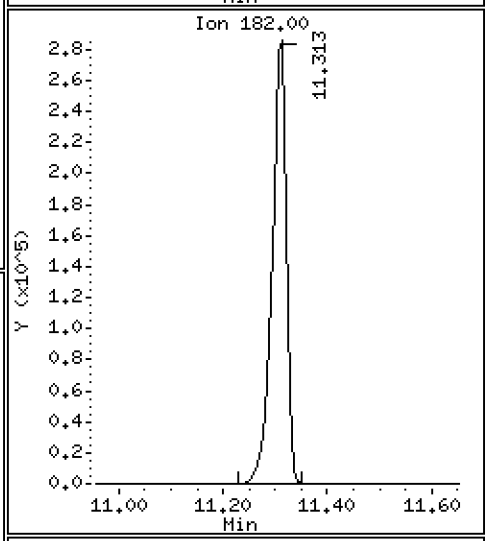


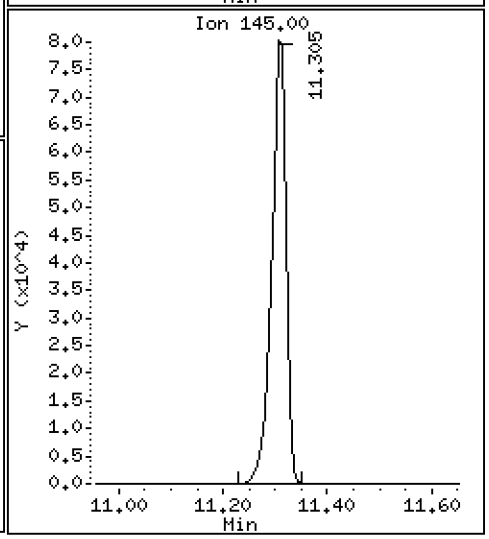












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

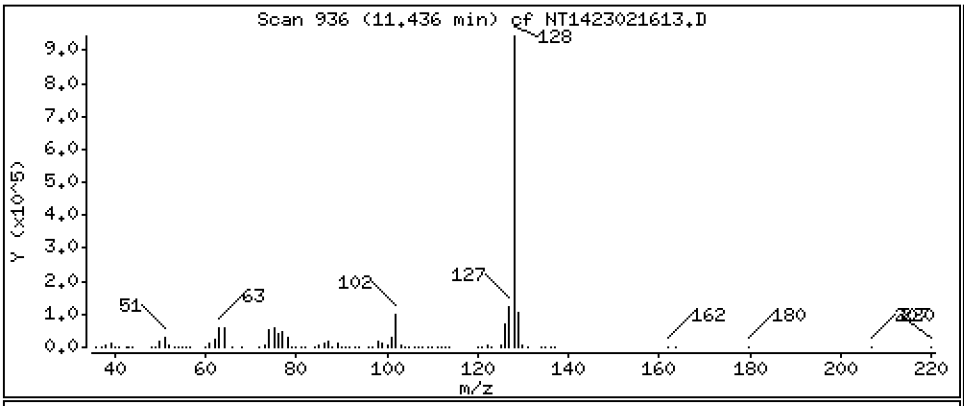
Operator: DSD

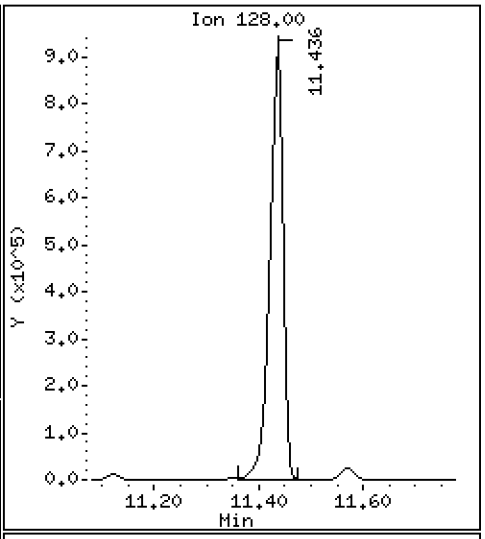
Column phase: ZB-5msi

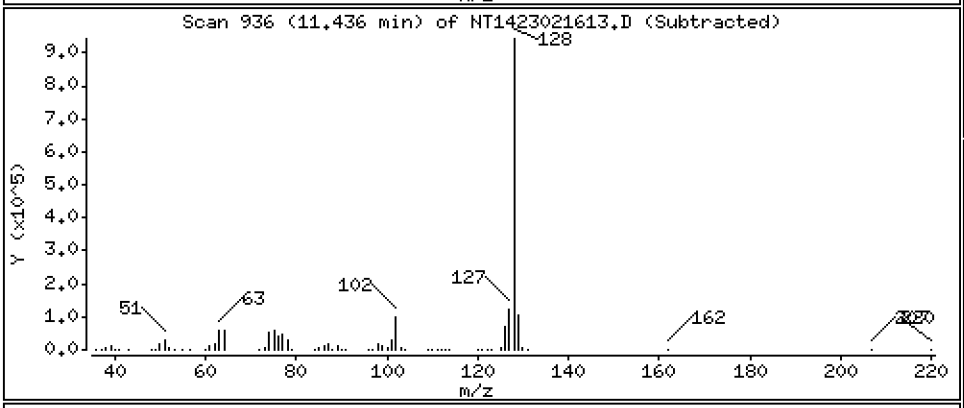
Column diameter: 0.25

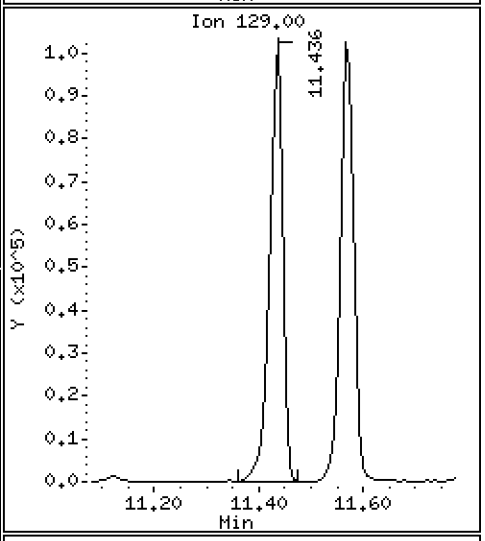
28 Naphthalene

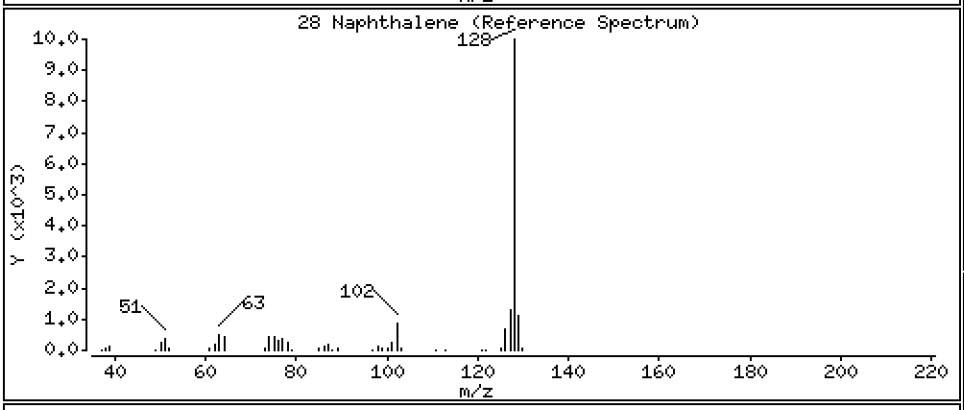
Concentration: 4.736 ug/mL

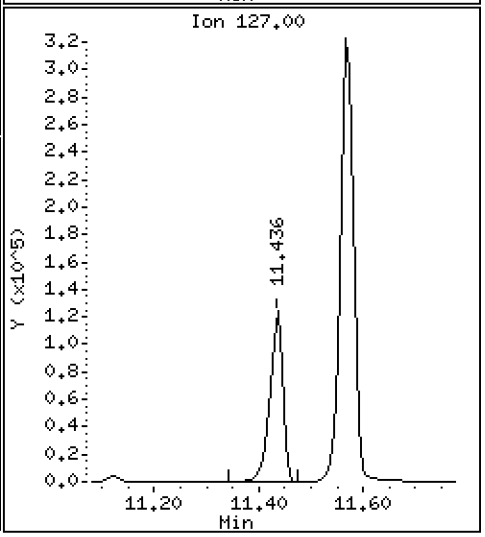


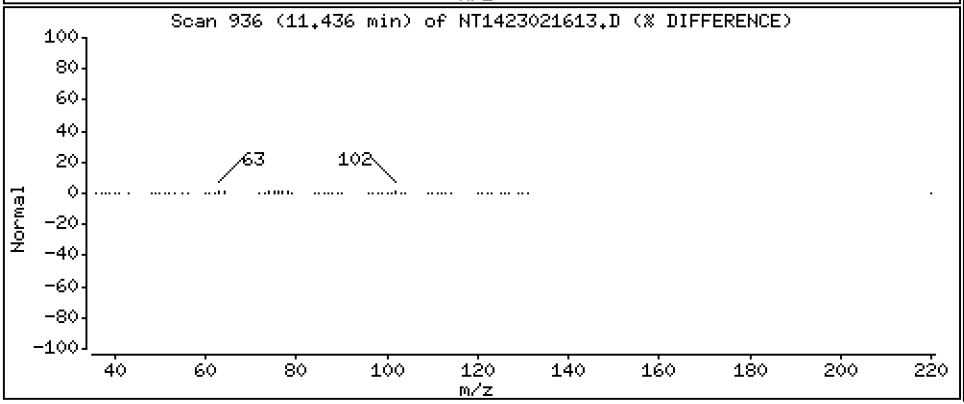












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

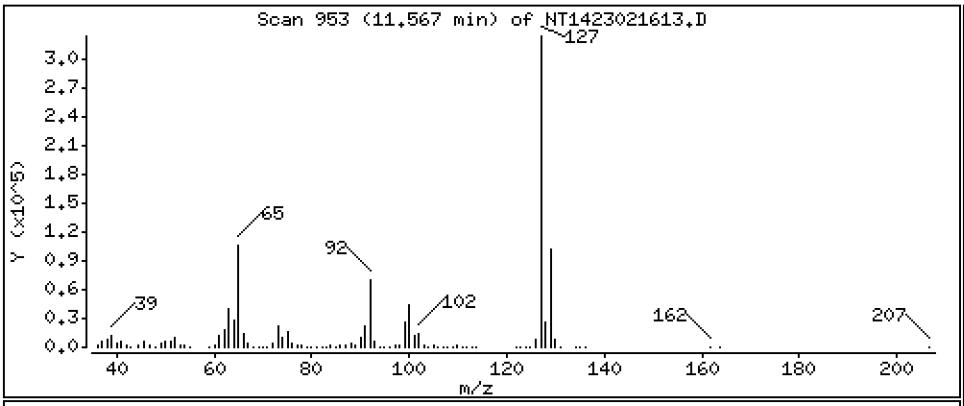
Operator: DSD

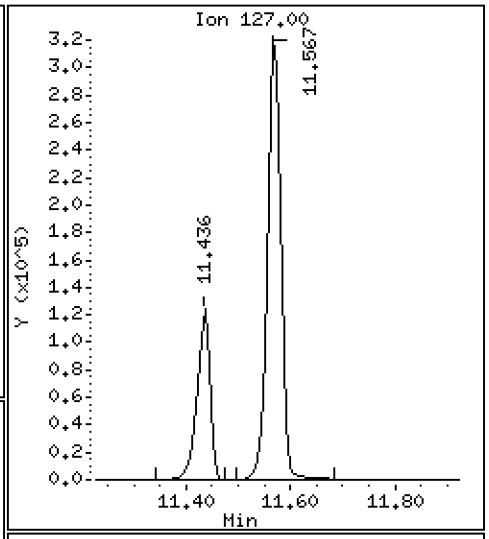
Column phase: ZB-5msi

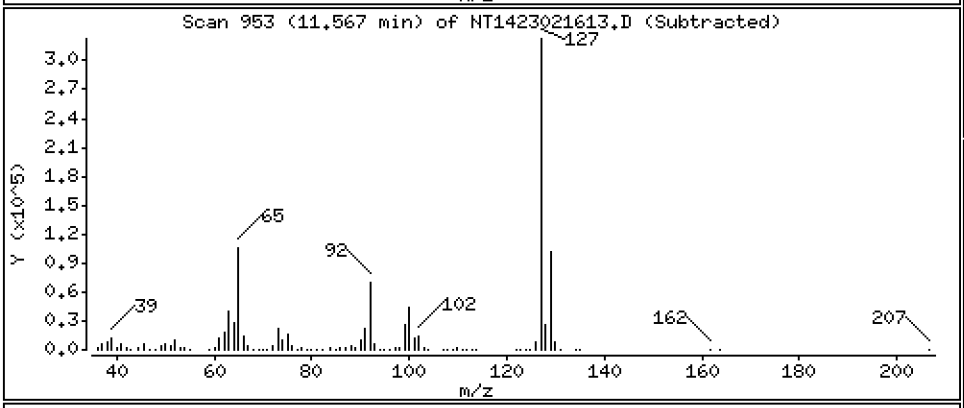
Column diameter: 0.25

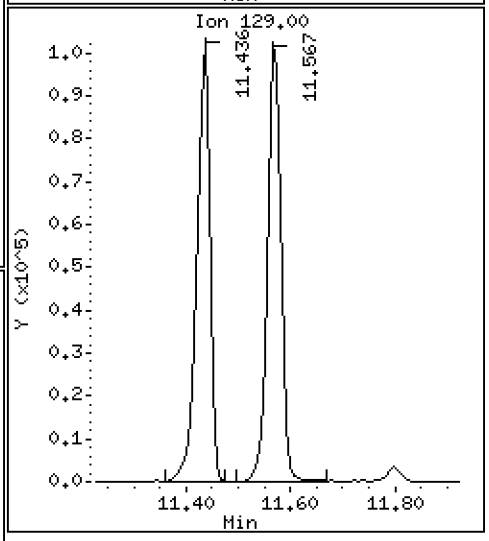
29 4-Chloroaniline

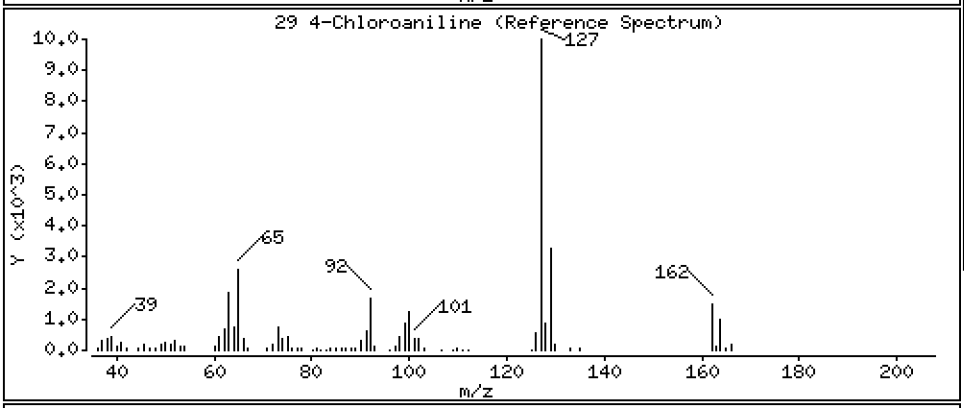
Concentration: 3.911 ug/mL

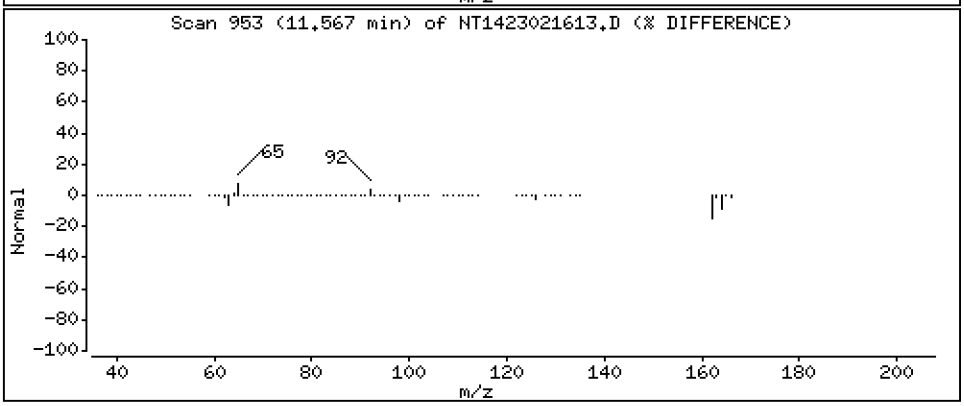












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

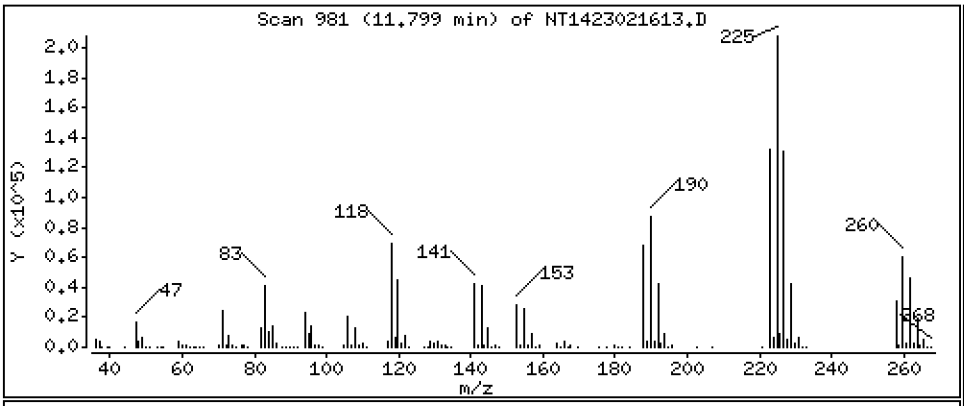
Operator: DSD

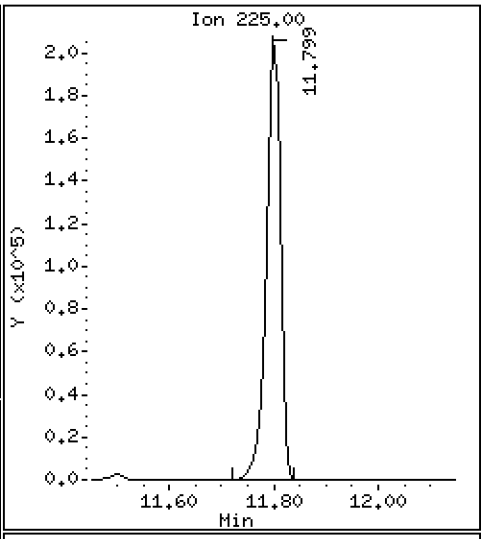
Column phase: ZB-5msi

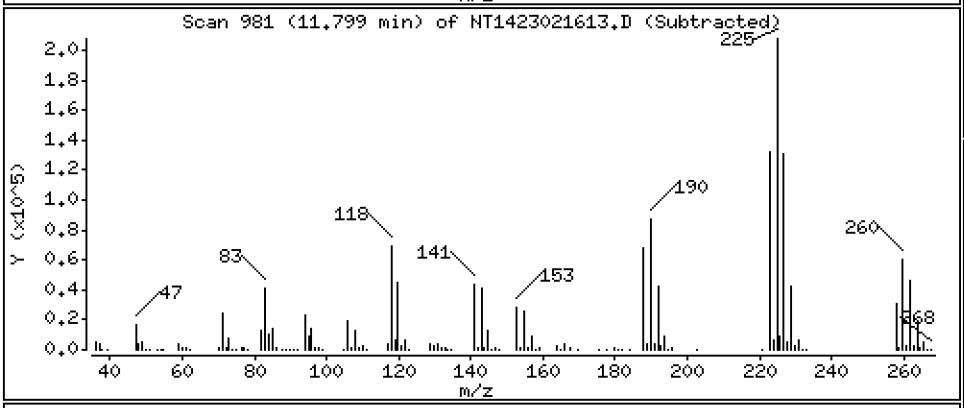
Column diameter: 0.25

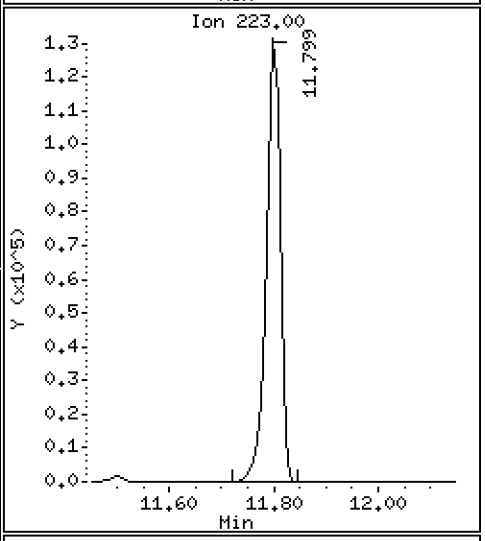
30 Hexachlorobutadiene

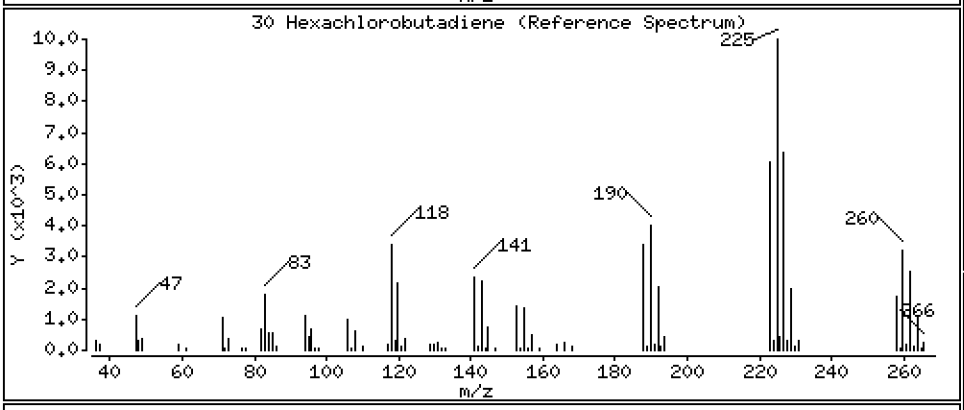
Concentration: 4.917 ug/mL

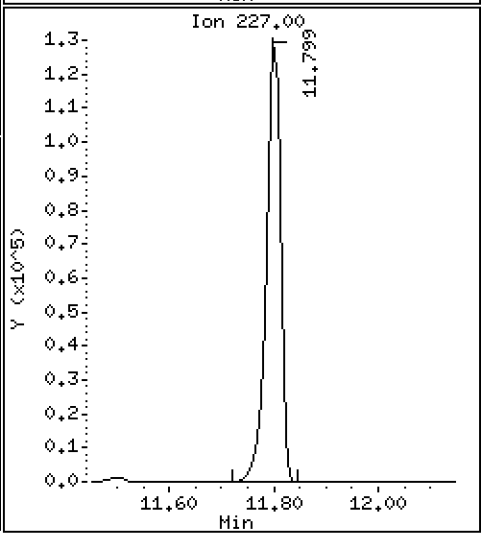


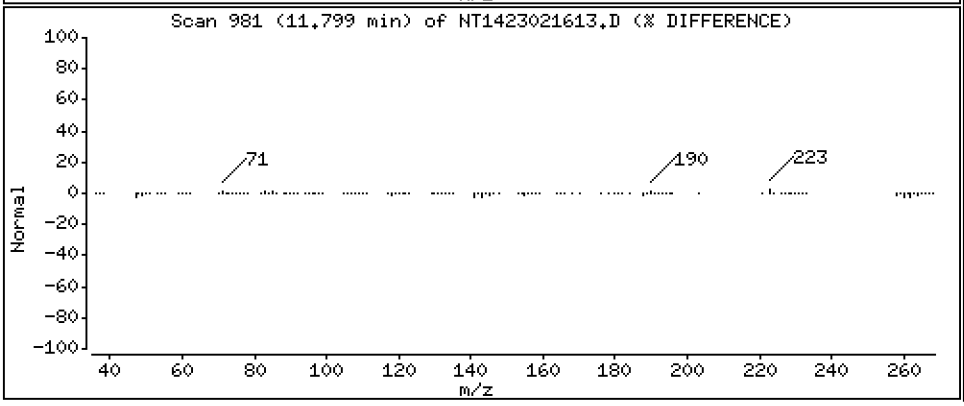












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

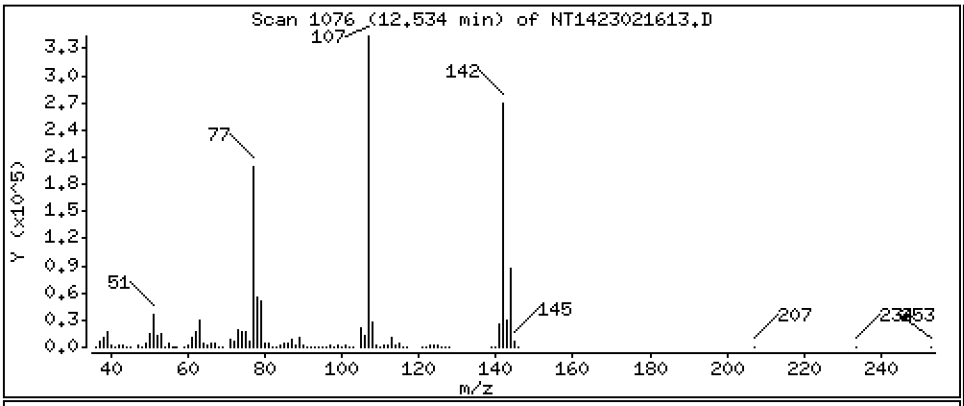
Operator: DSD

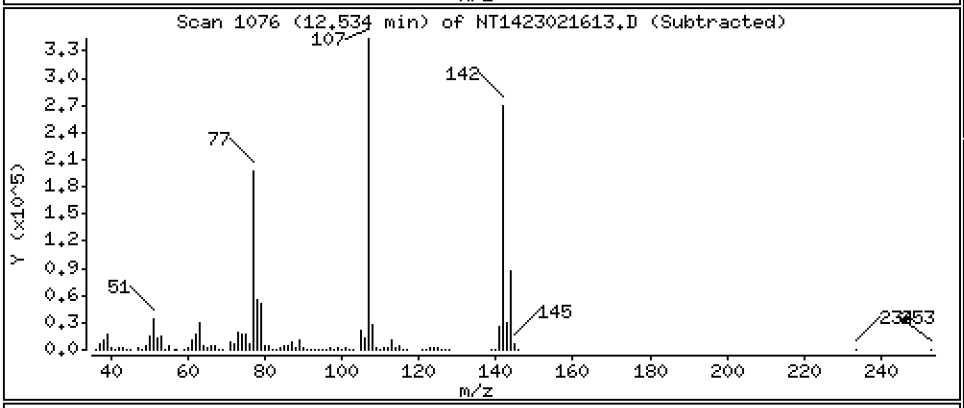
Column phase: ZB-5msi

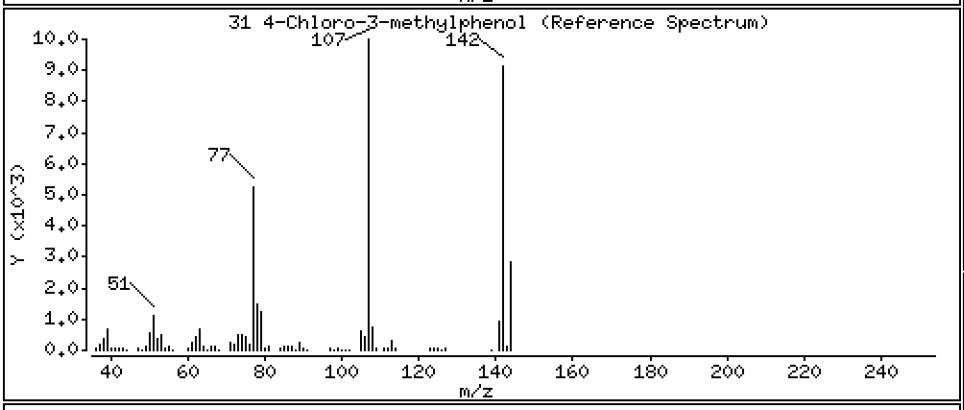
Column diameter: 0.25

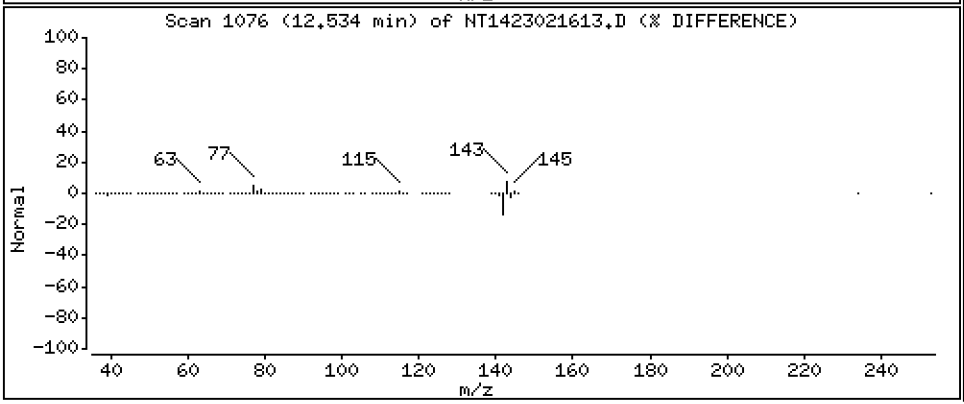
31 4-Chloro-3-methylphenol

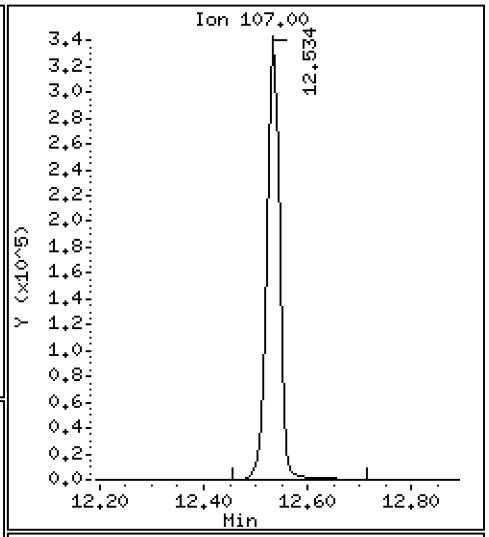
Concentration: 5.045 ug/mL

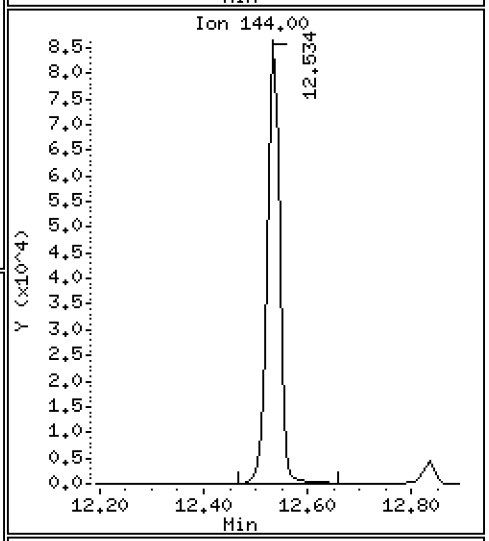


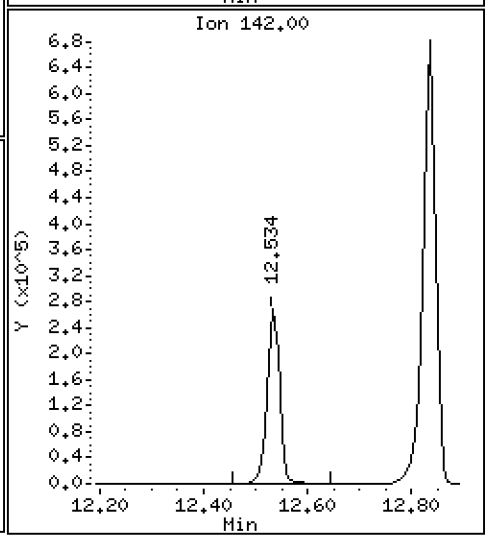












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

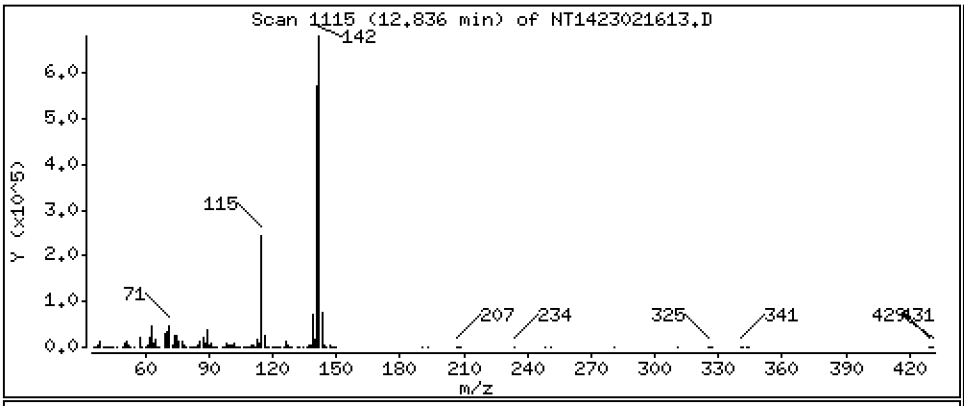
Operator: DSD

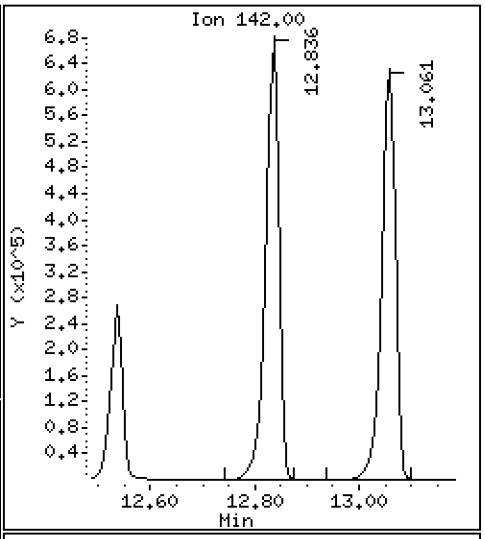
Column phase: ZB-5msi

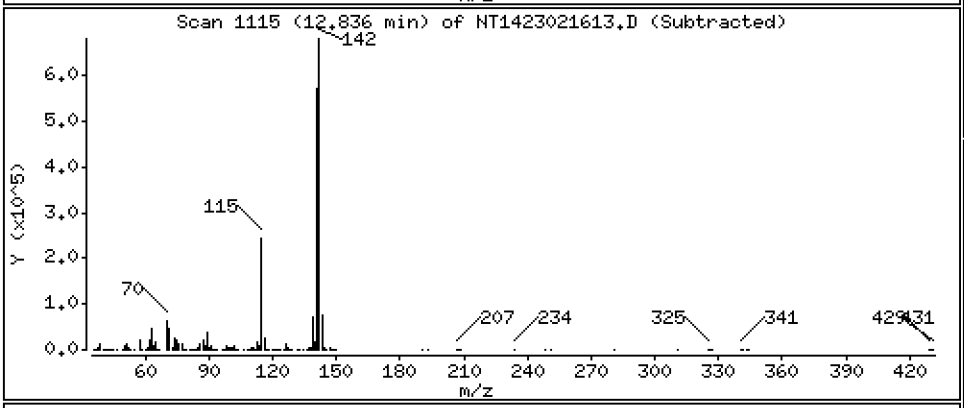
Column diameter: 0.25

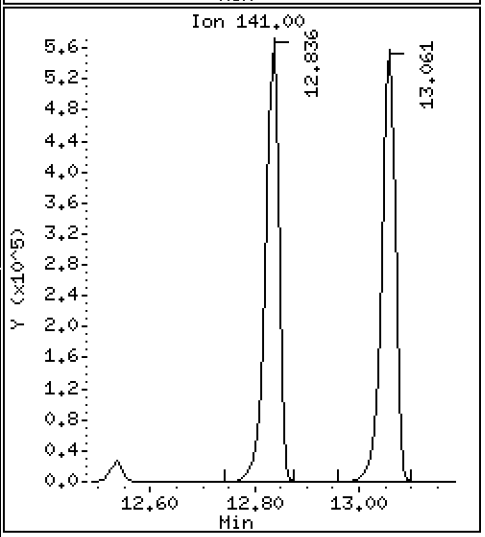
32 2-Methylnaphthalene

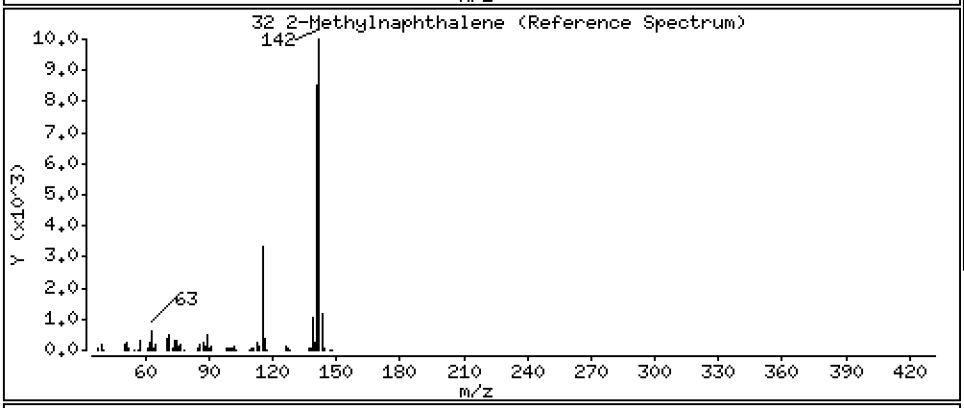
Concentration: 4.606 ug/mL

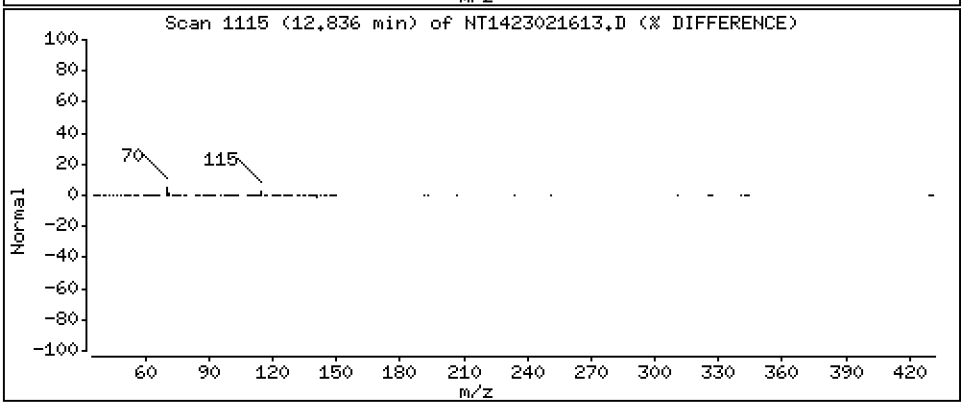












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

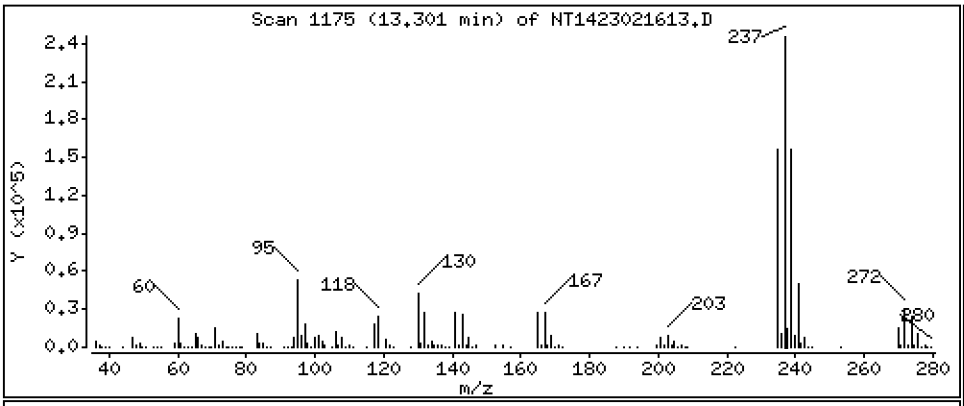
Operator: DSD

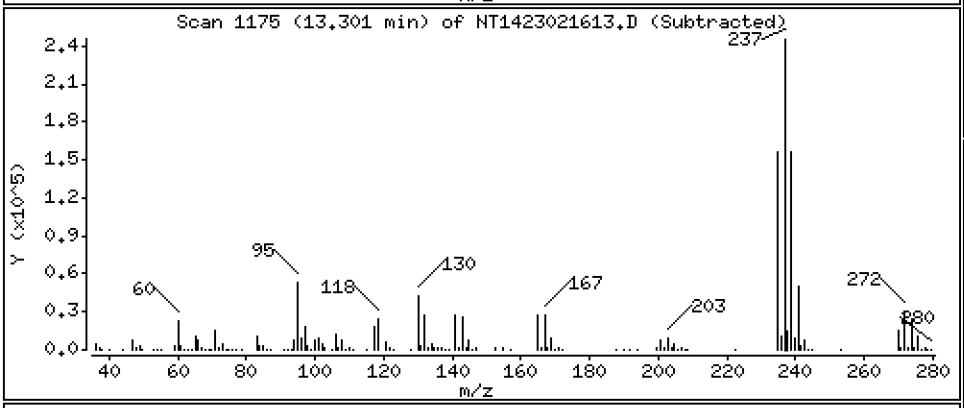
Column phase: ZB-5msi

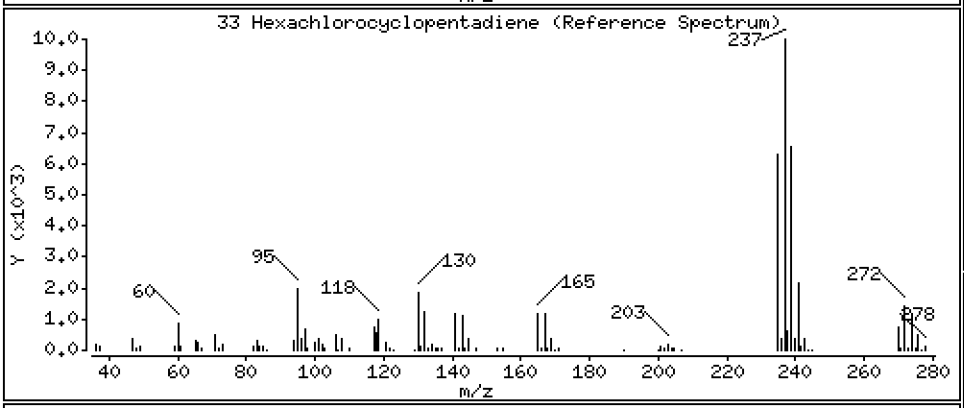
Column diameter: 0.25

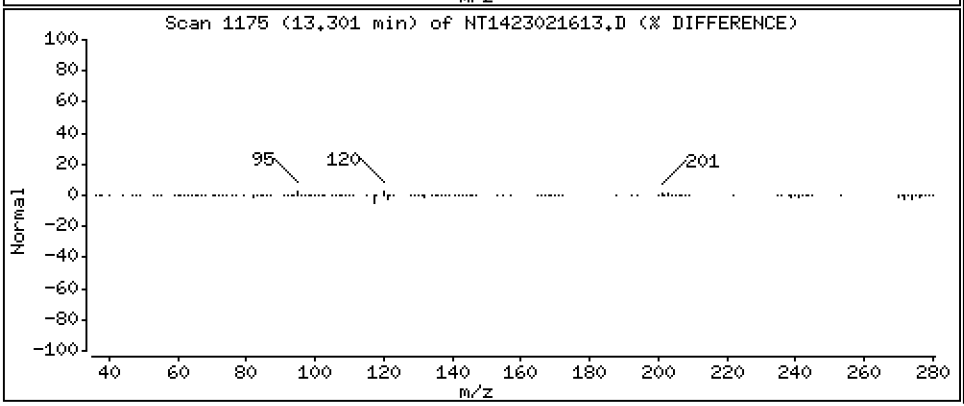
33 Hexachlorocyclopentadiene

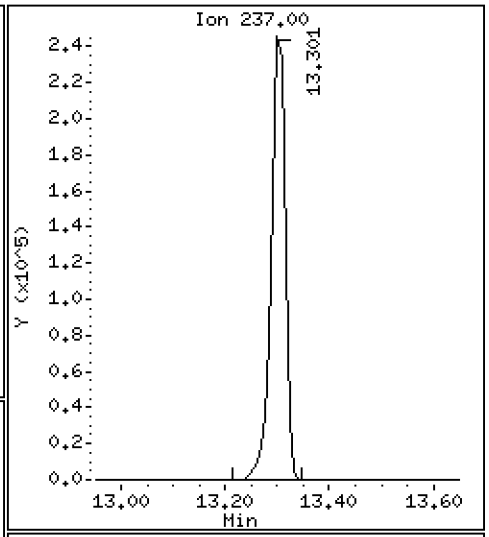
Concentration: 5.301 ug/mL

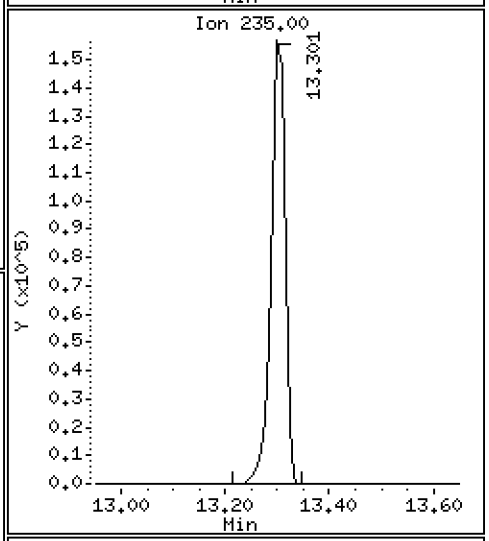


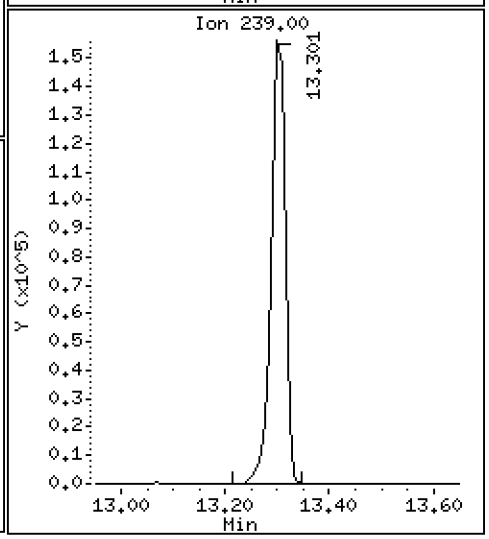












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

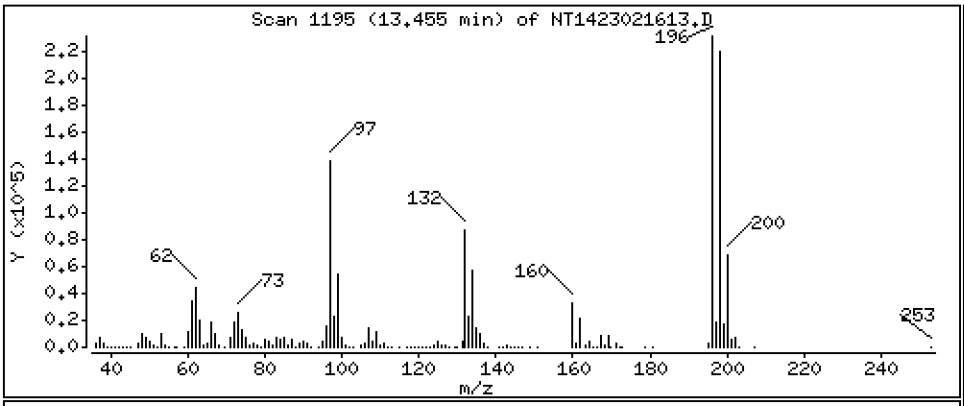
Operator: DSD

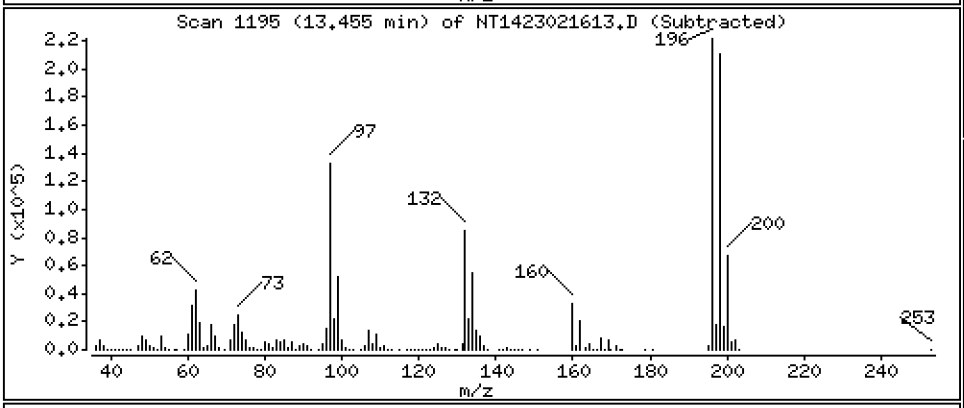
Column phase: ZB-5msi

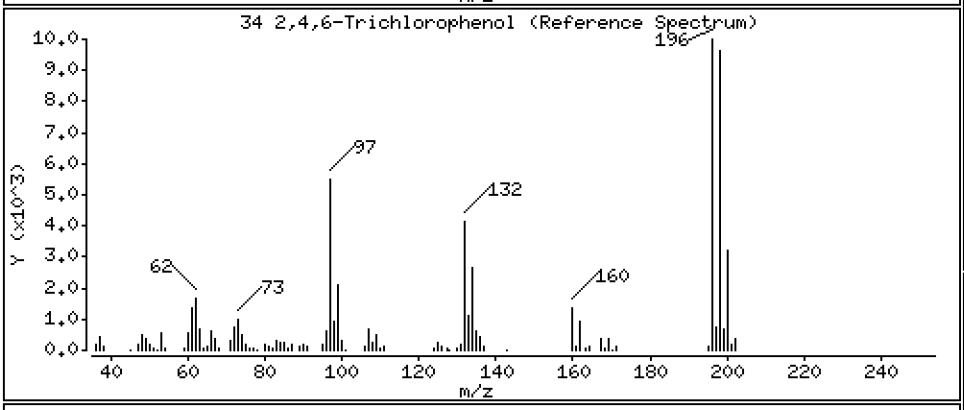
Column diameter: 0.25

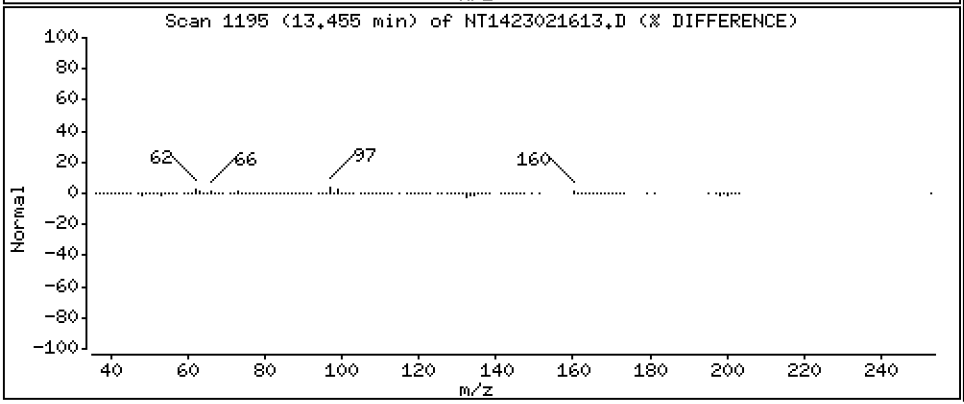
34 2,4,6-Trichlorophenol

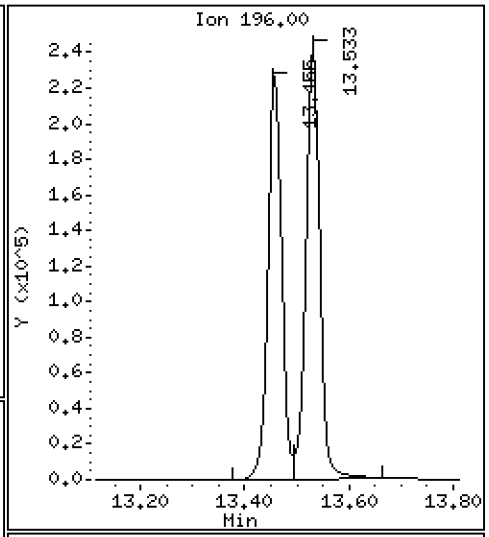
Concentration: 4.808 ug/mL

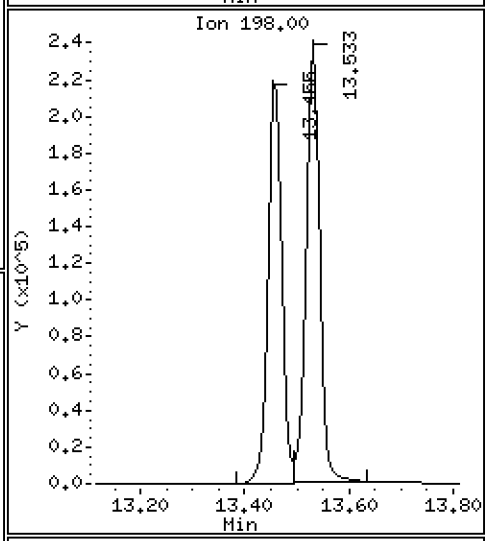


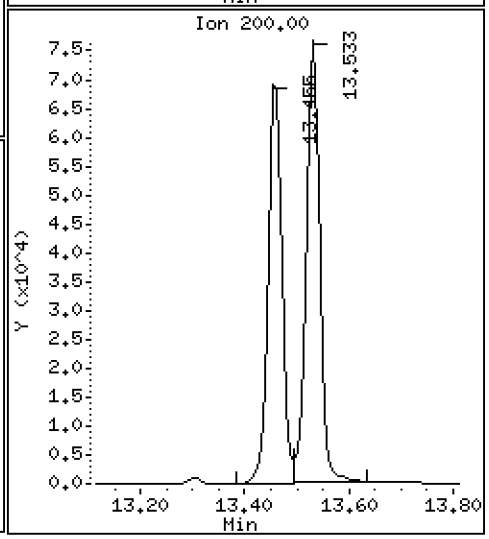












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

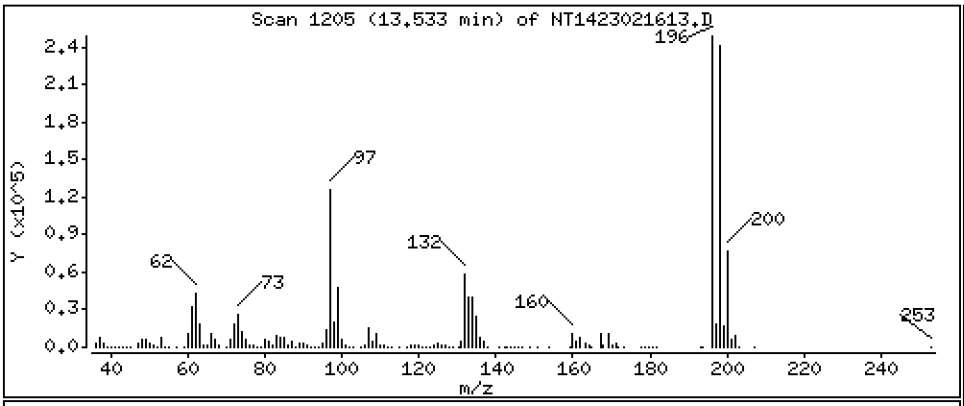
Operator: DSD

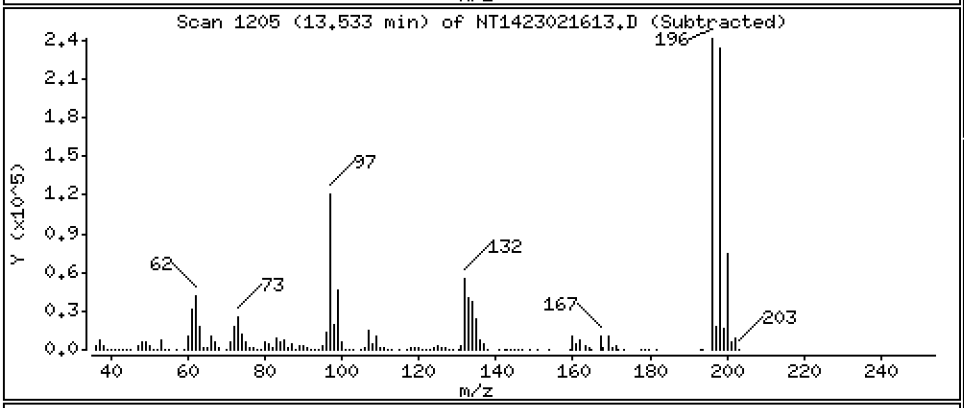
Column phase: ZB-5msi

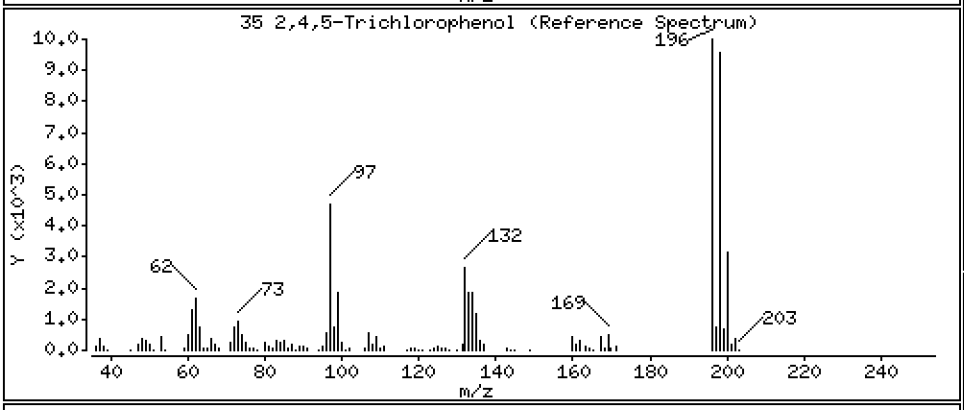
Column diameter: 0.25

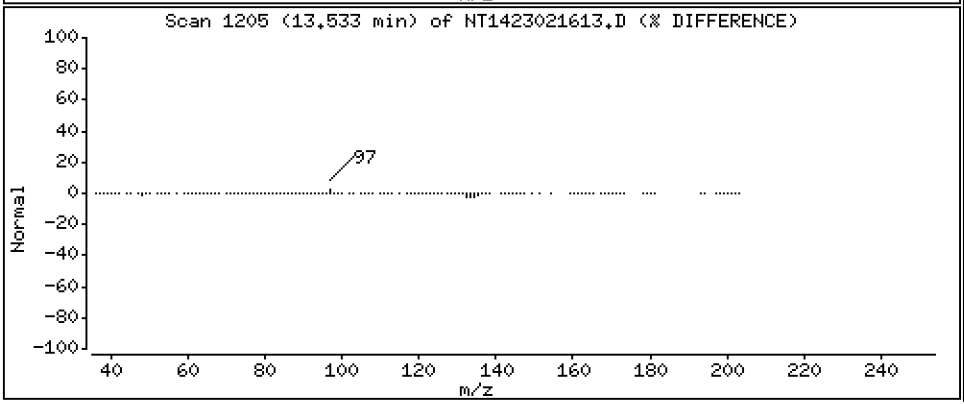
35 2,4,5-Trichlorophenol

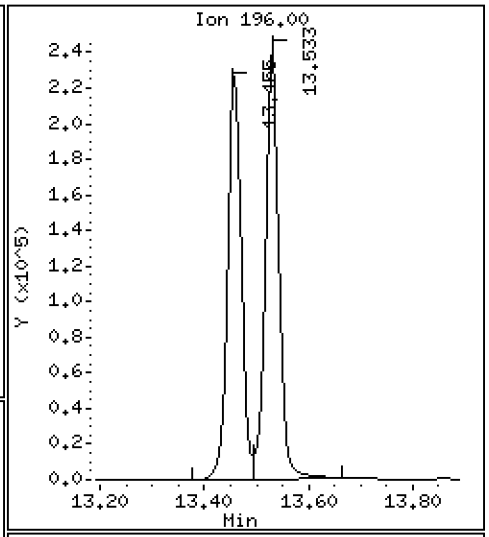
Concentration: 4.707 ug/mL

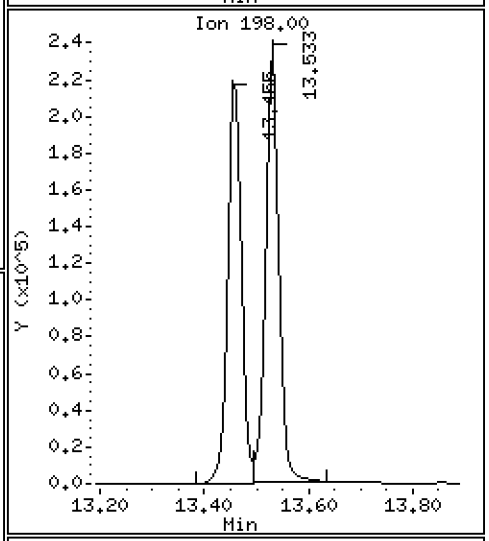


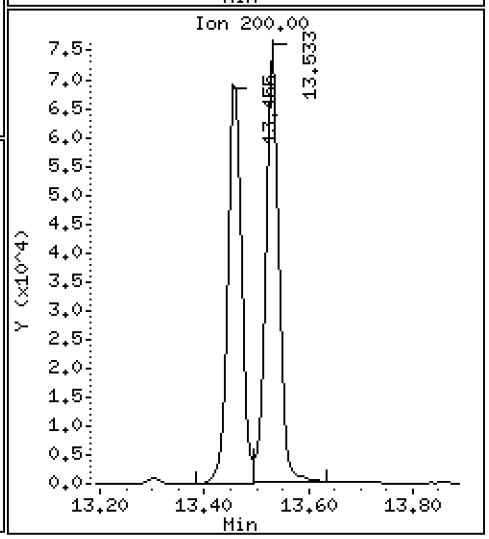












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

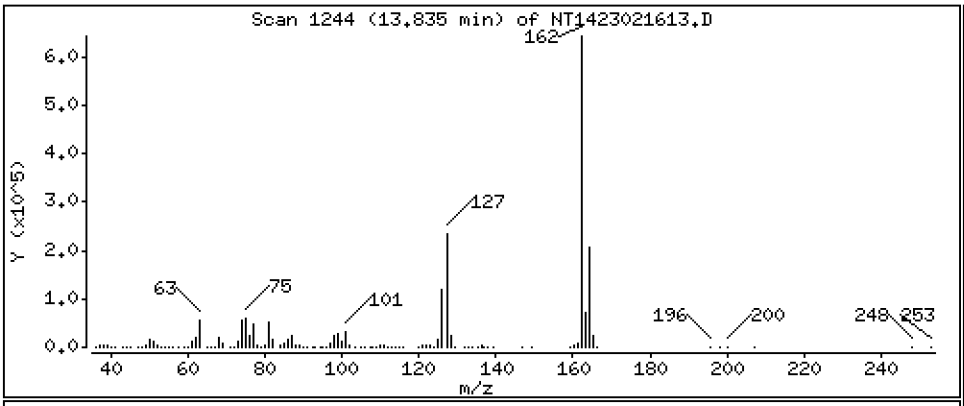
Operator: DSD

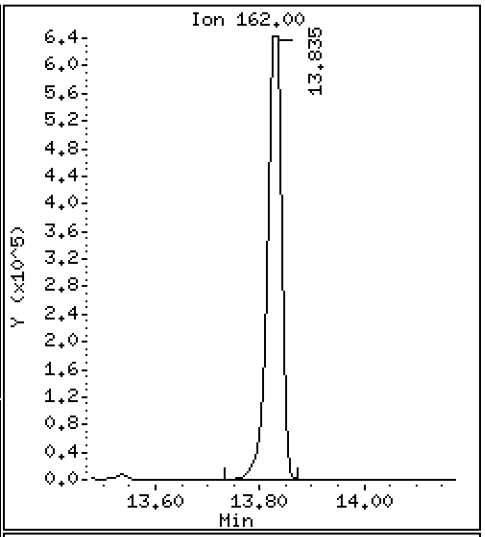
Column phase: ZB-5msi

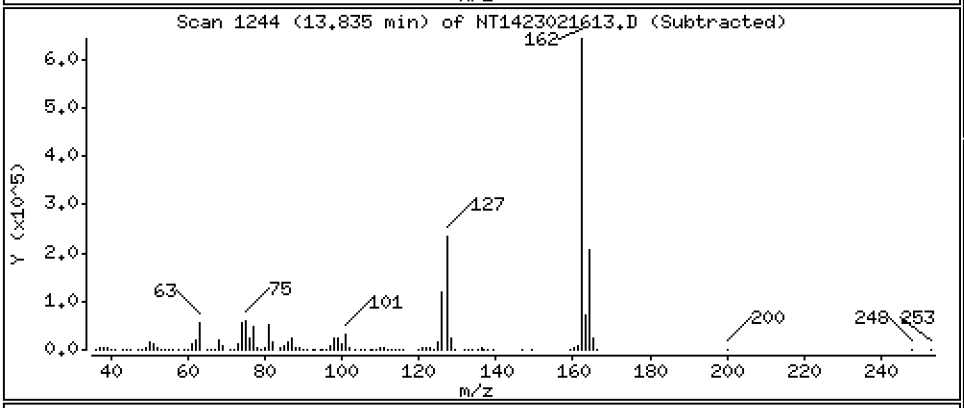
Column diameter: 0.25

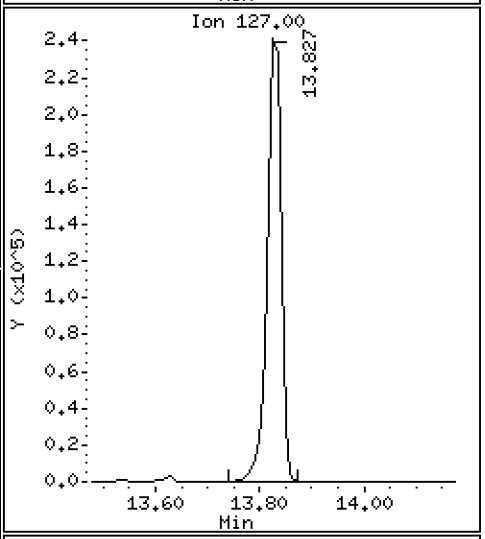
37 2-Chloronaphthalene

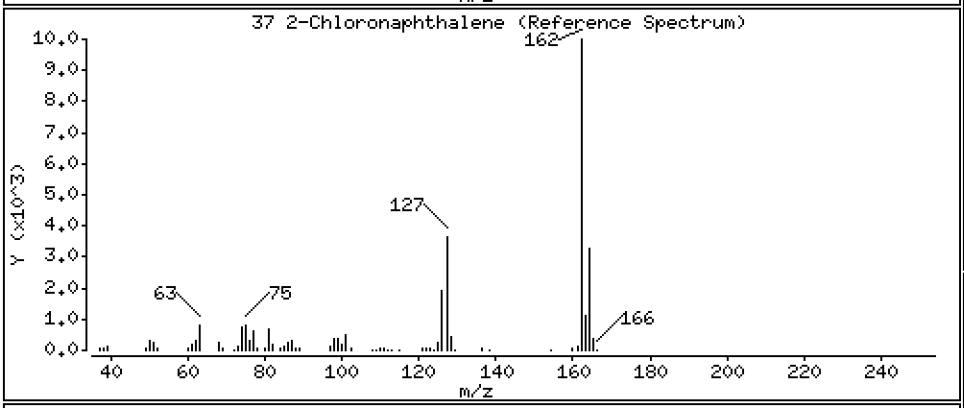
Concentration: 4.639 ug/mL

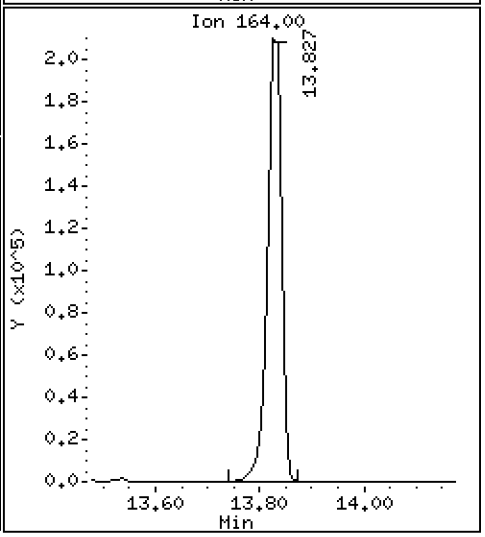


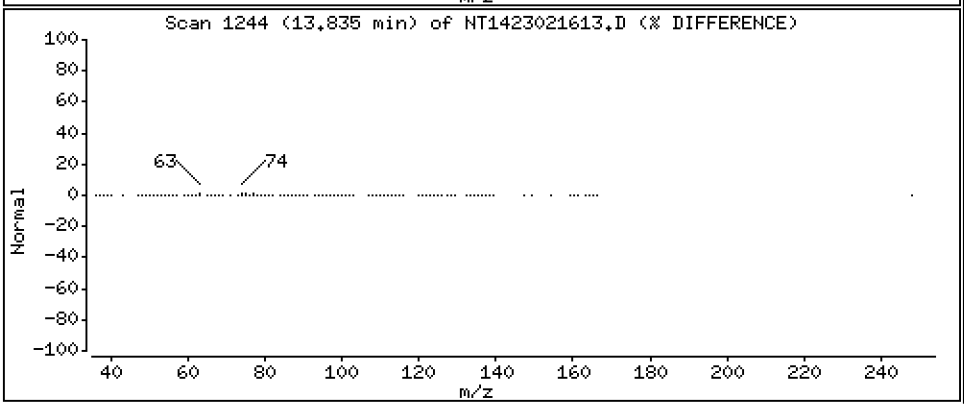












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

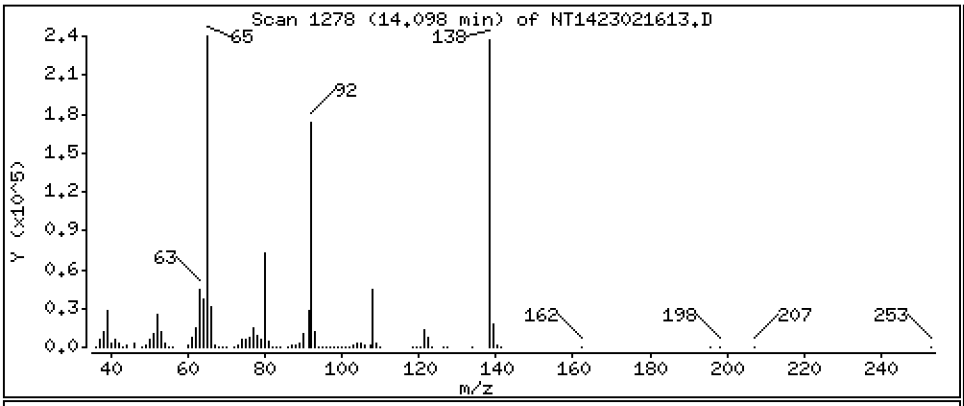
Operator: DSD

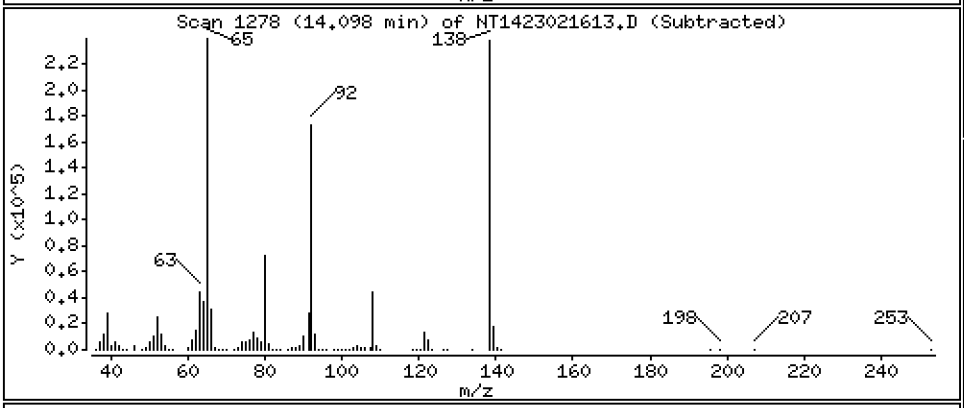
Column phase: ZB-5msi

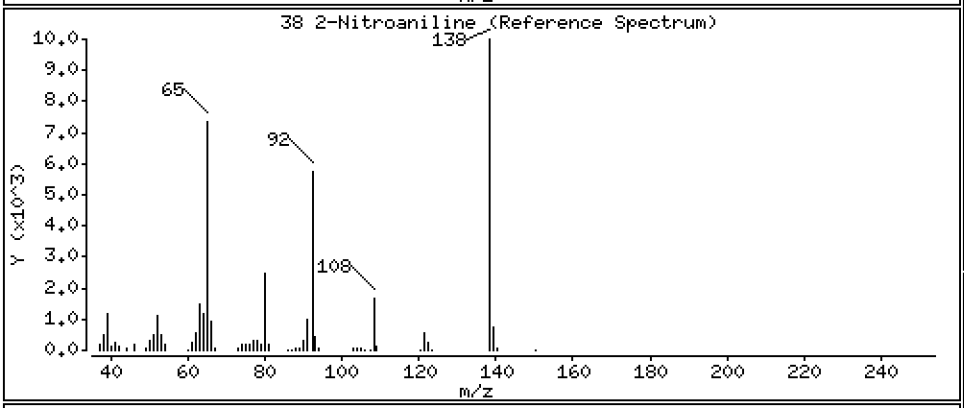
Column diameter: 0.25

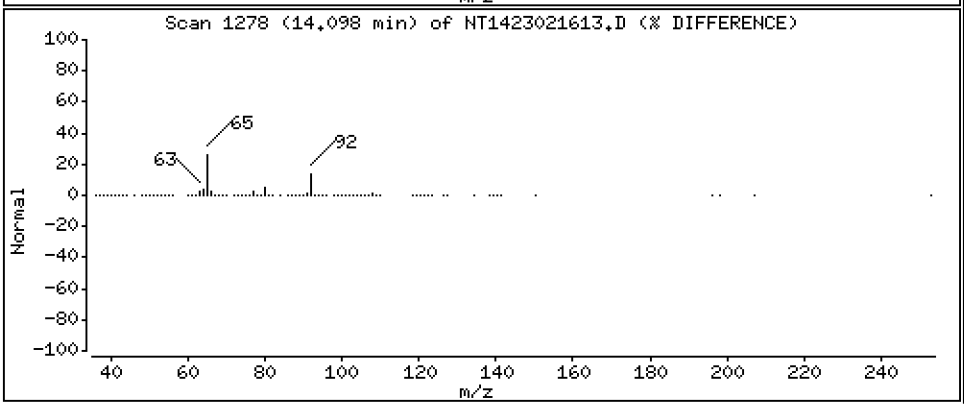
38 2-Nitroaniline

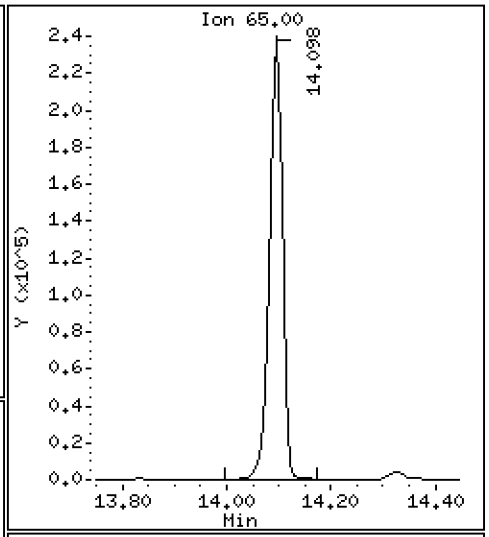
Concentration: 4.852 ug/mL

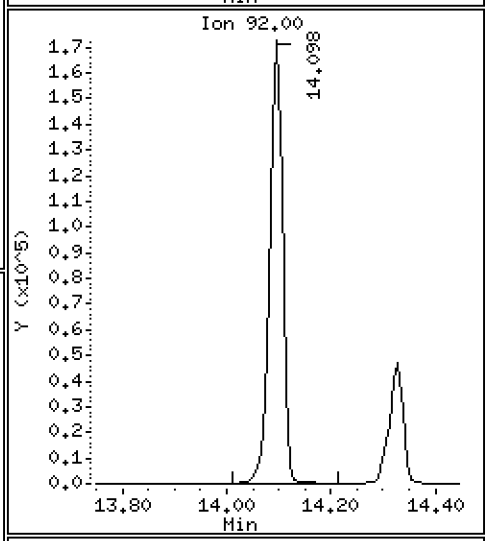


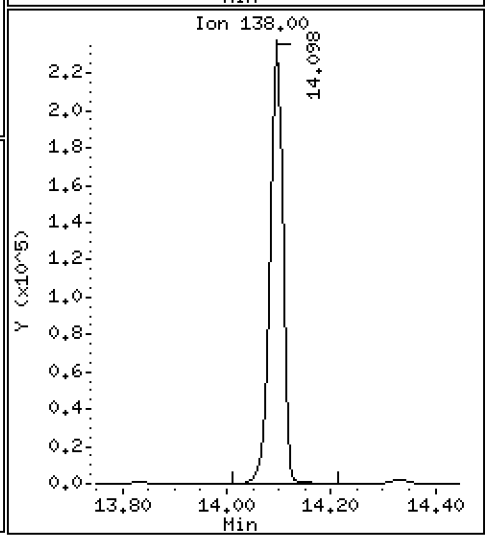












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

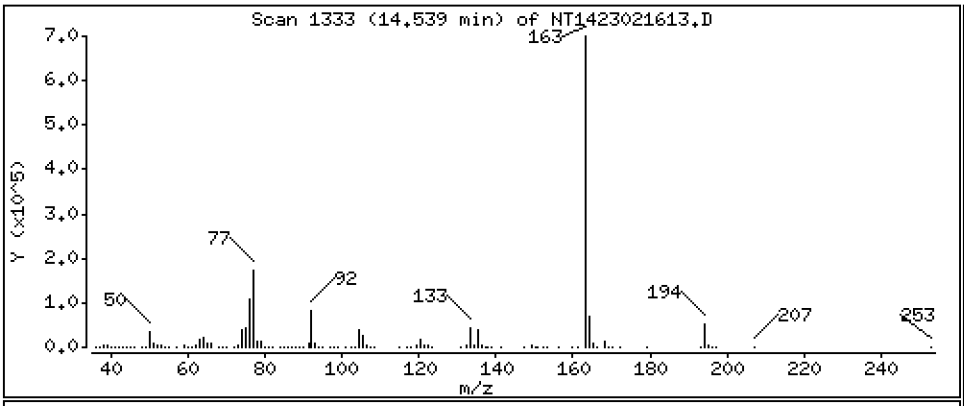
Operator: DSD

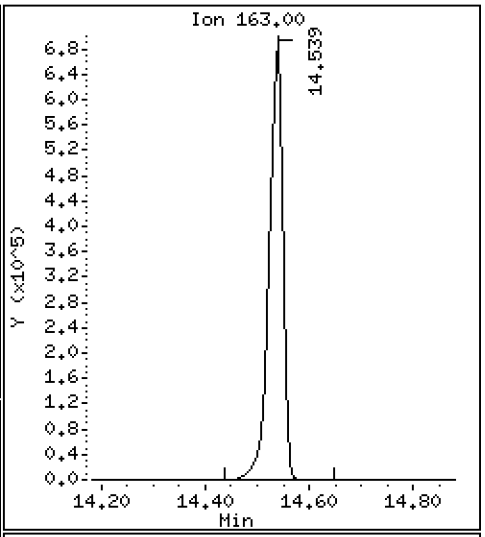
Column phase: ZB-5msi

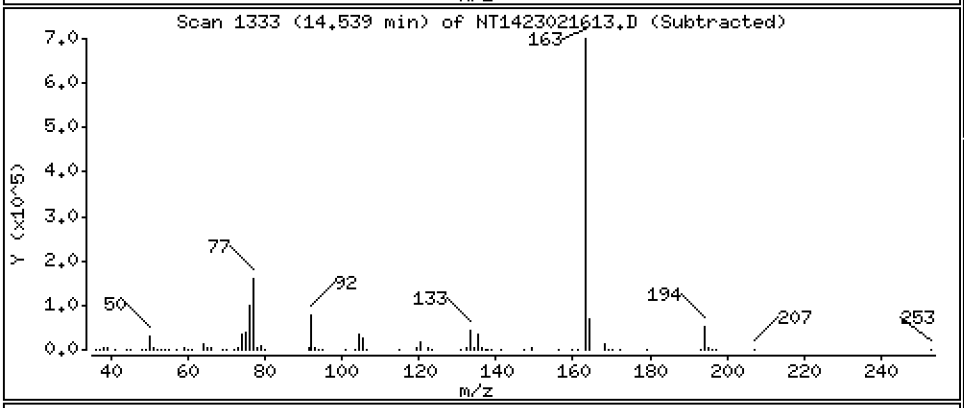
Column diameter: 0.25

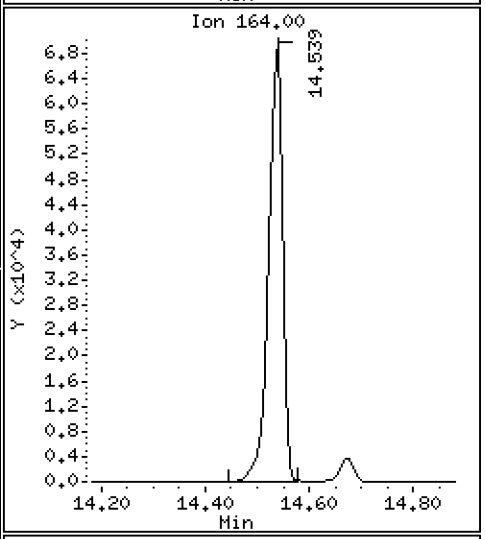
39 Dimethylphthalate

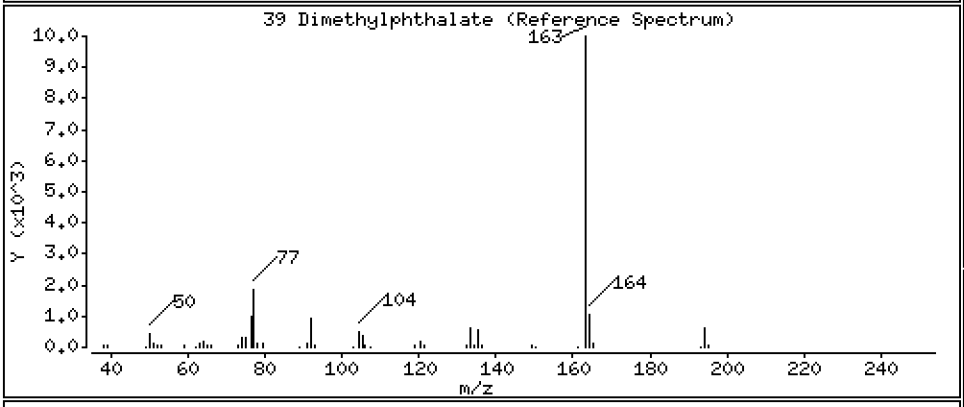
Concentration: 4.693 ug/mL

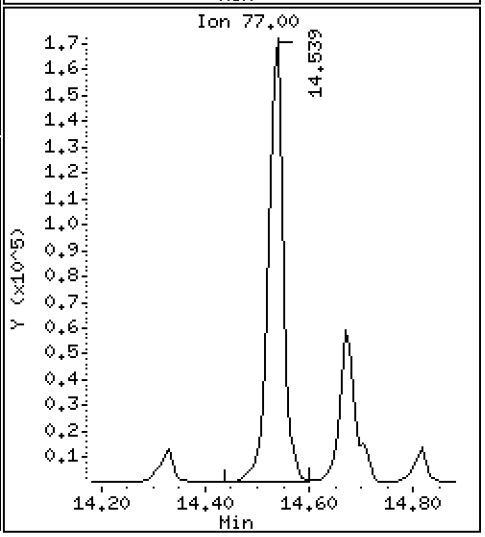


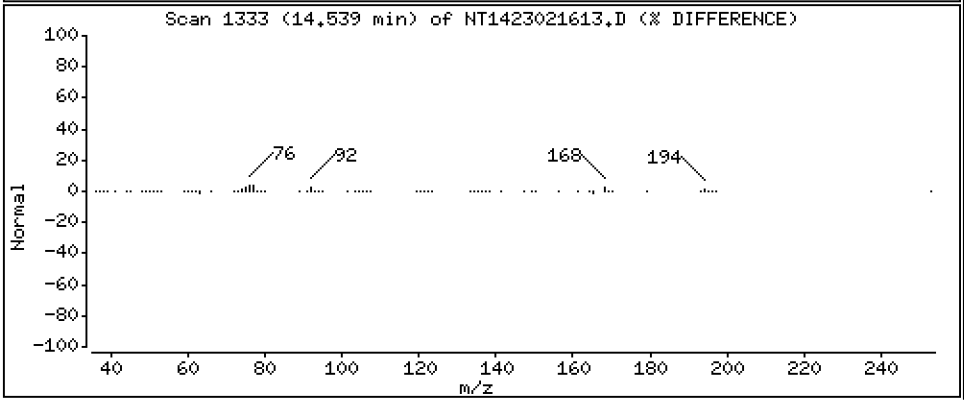












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

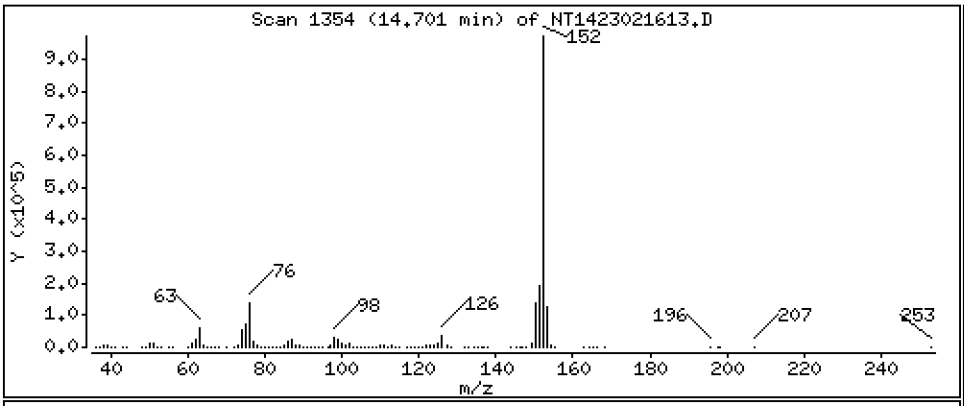
Operator: DSD

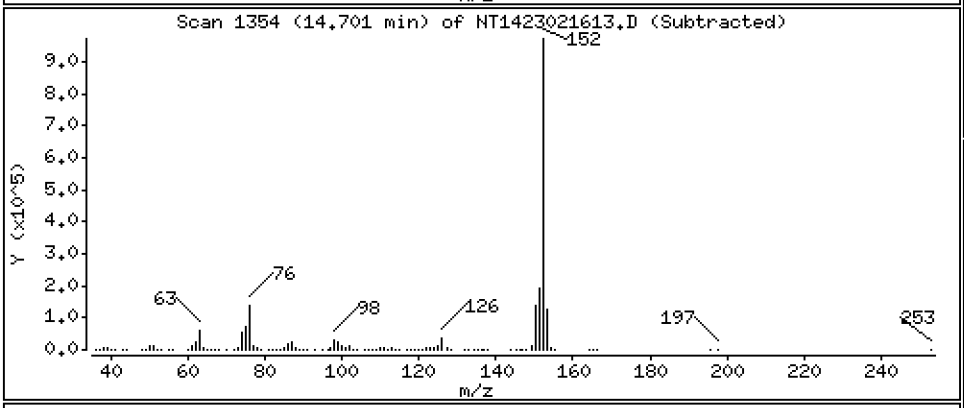
Column phase: ZB-5msi

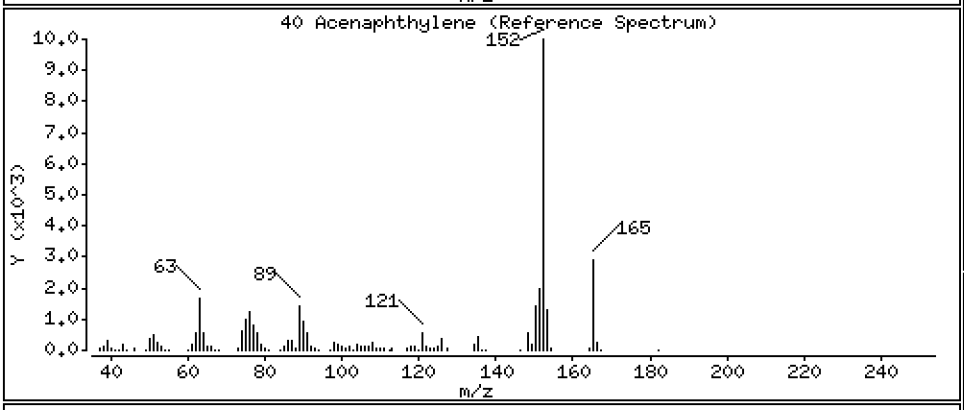
Column diameter: 0.25

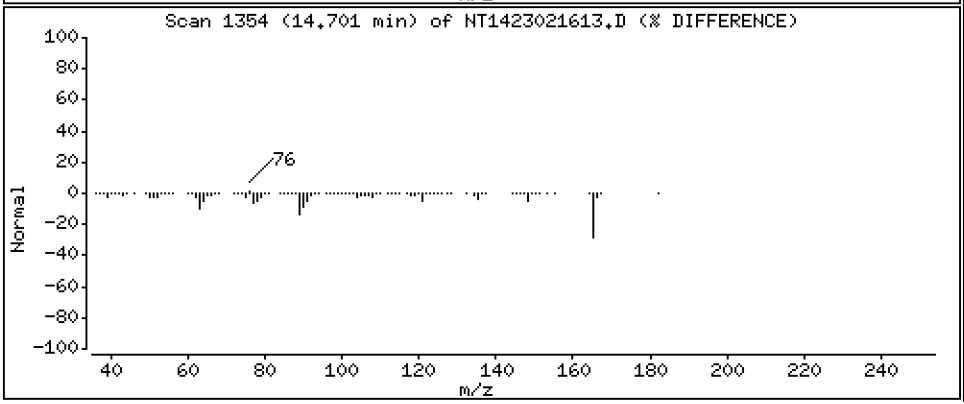
40 Acenaphthylene

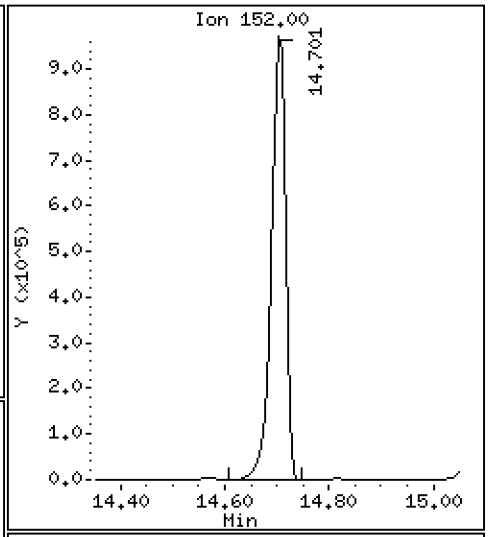
Concentration: 4.657 ug/mL

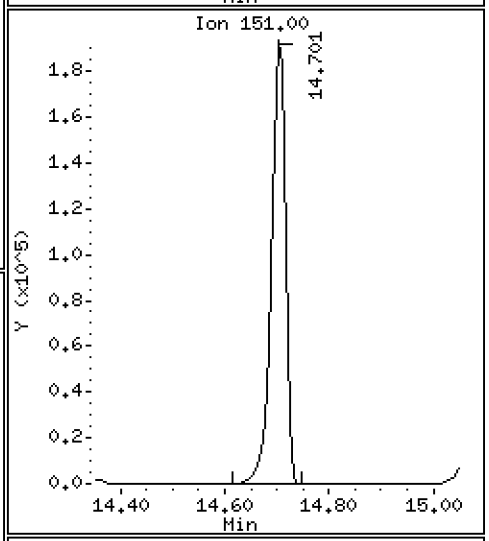


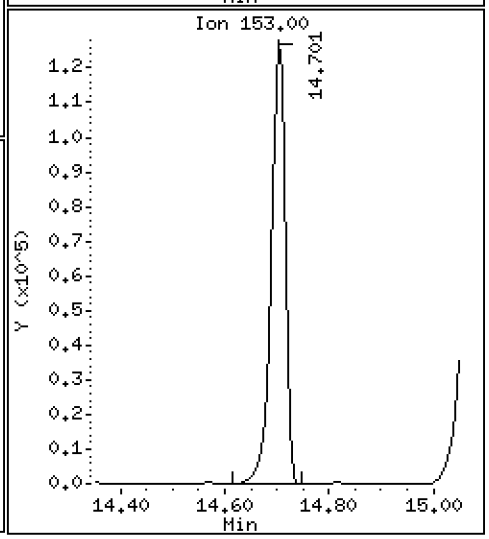












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

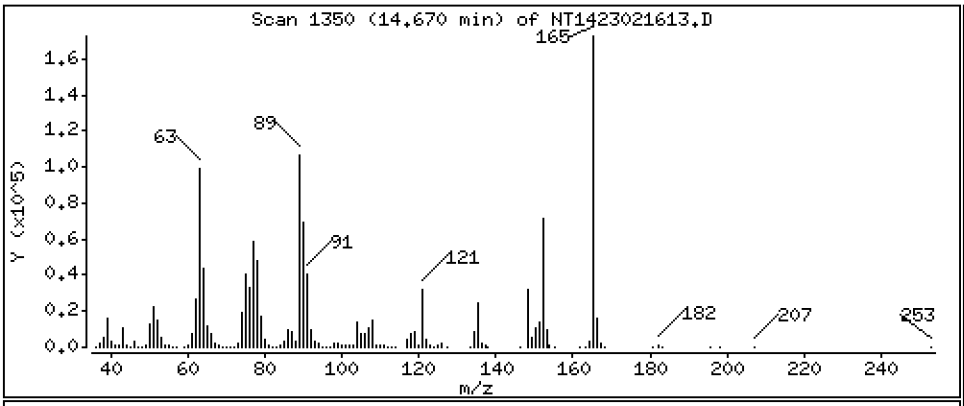
Operator: DSD

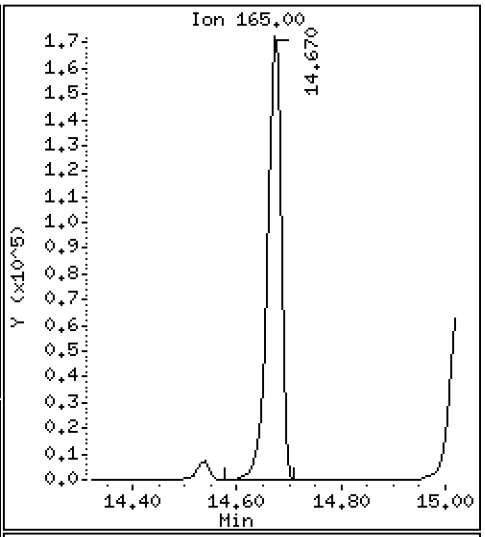
Column phase: ZB-5msi

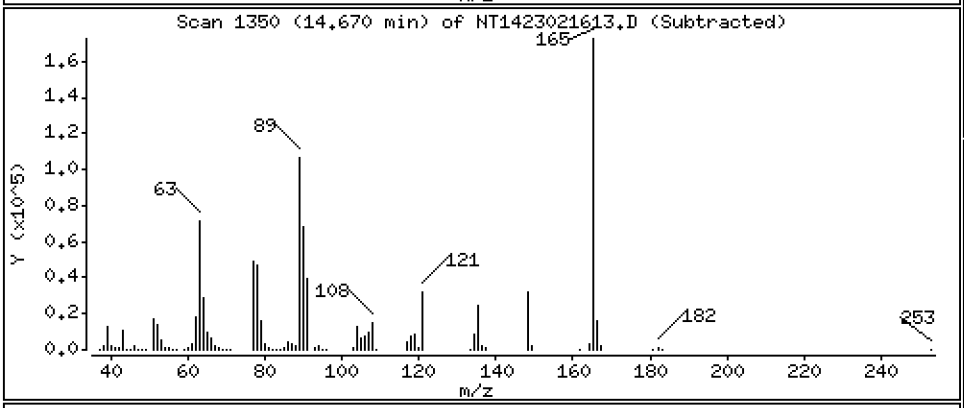
Column diameter: 0.25

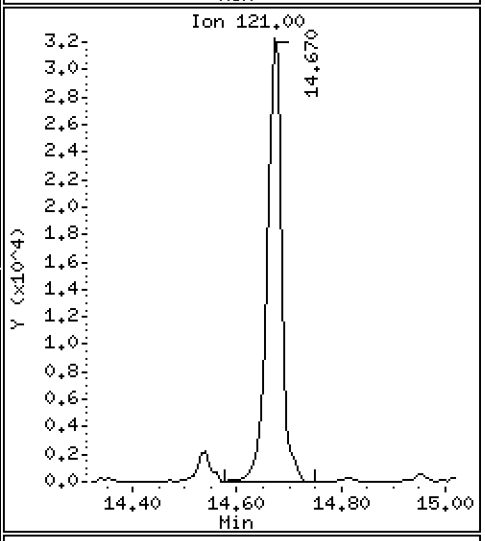
41 2,6-Dinitrotoluene

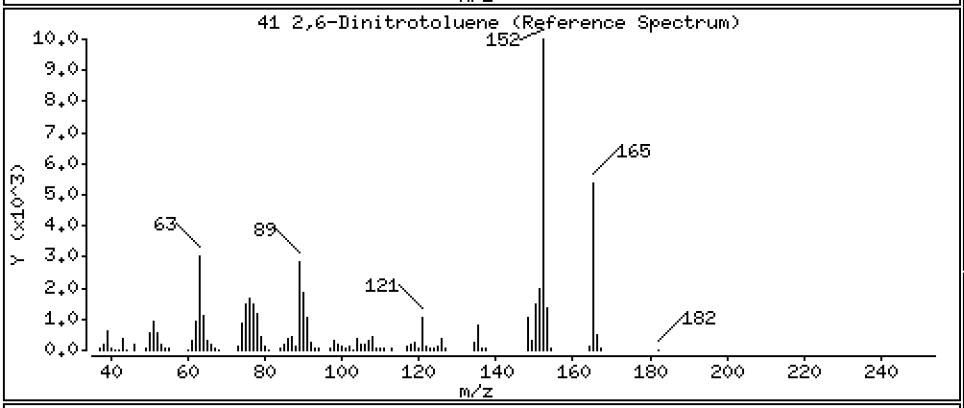
Concentration: 4.935 ug/mL

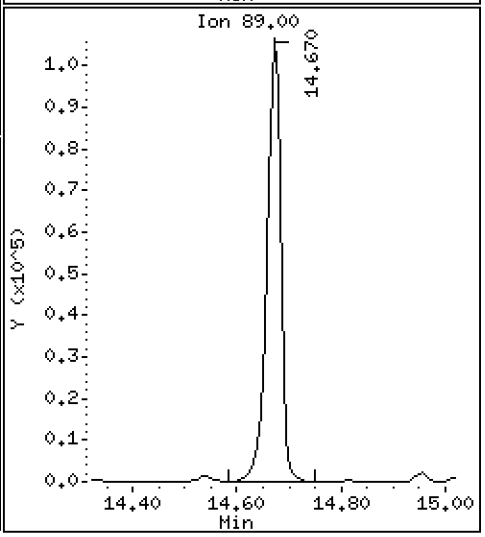


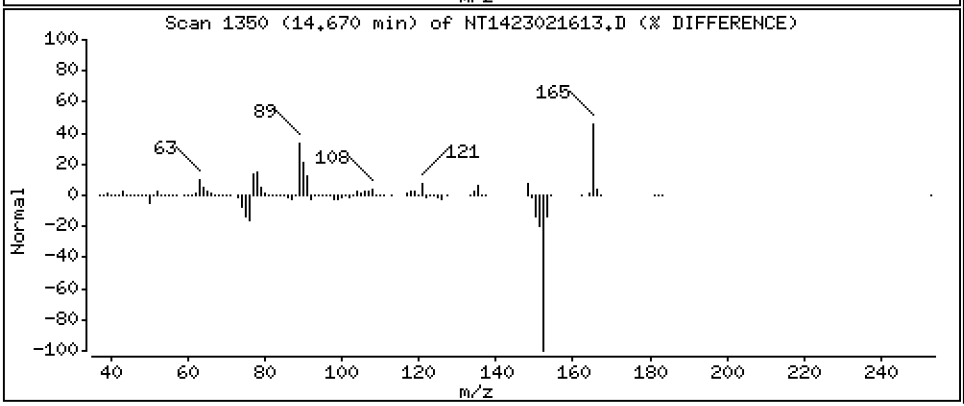












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

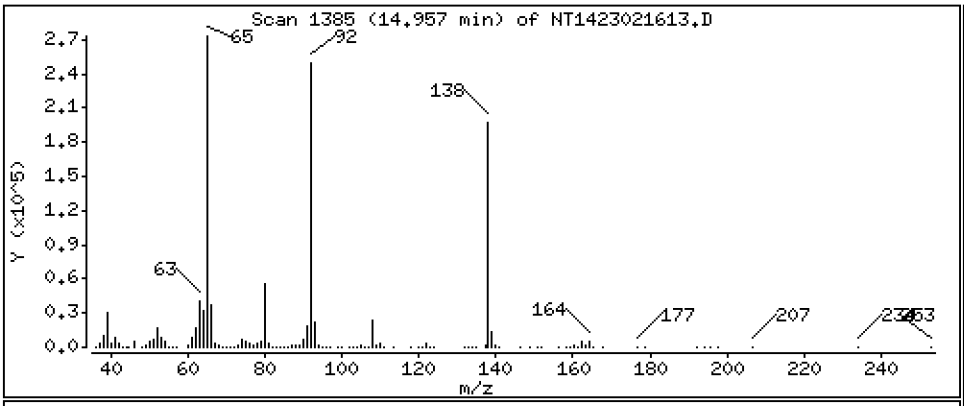
Operator: DSD

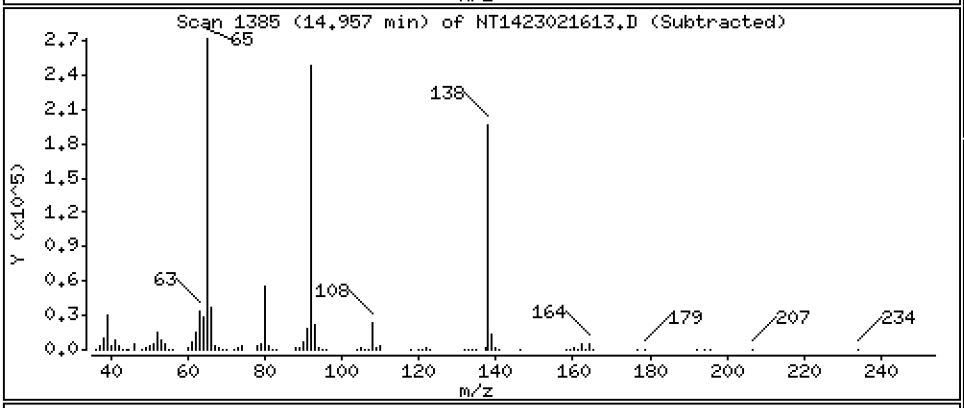
Column phase: ZB-5msi

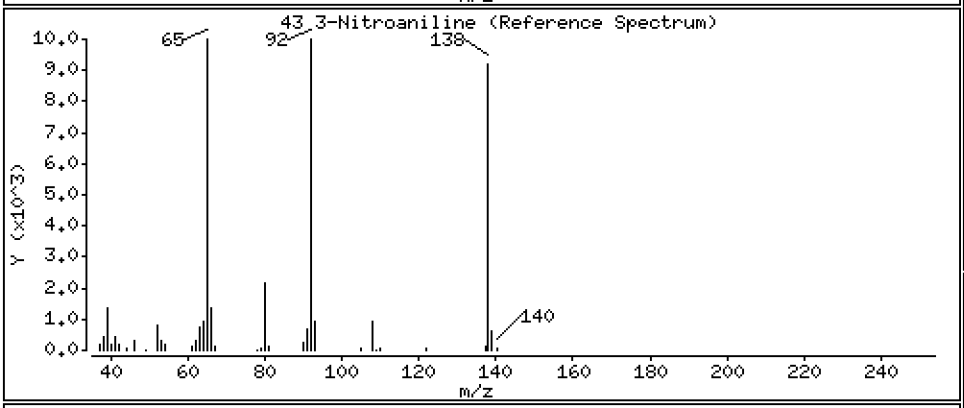
Column diameter: 0.25

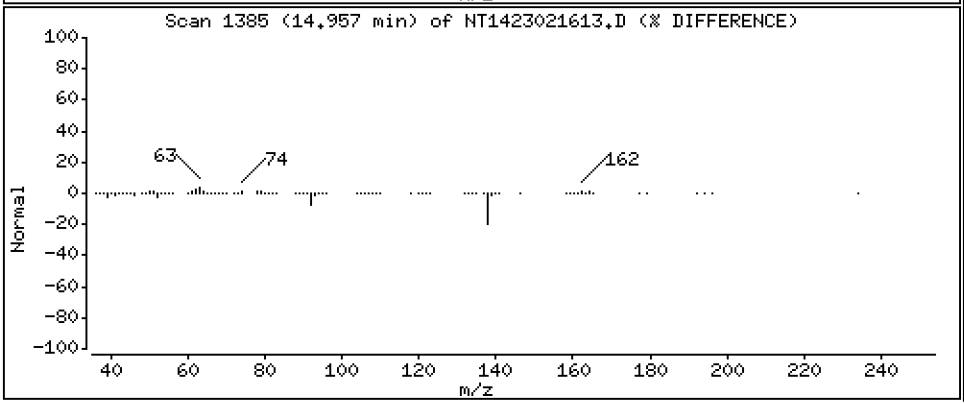
43 3-Nitroaniline

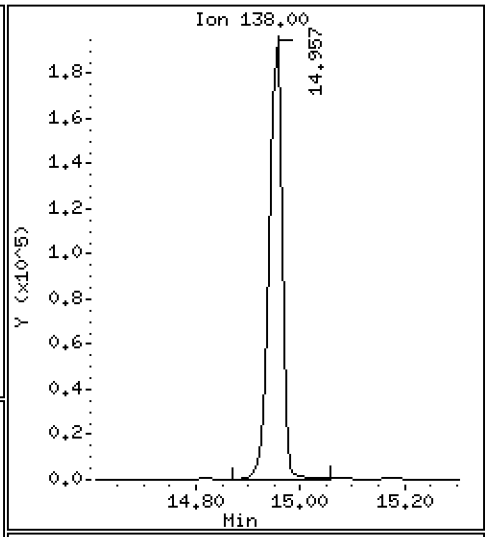
Concentration: 4.922 ug/mL

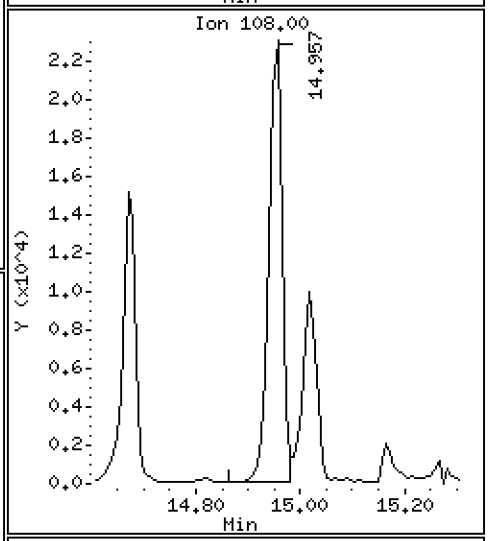


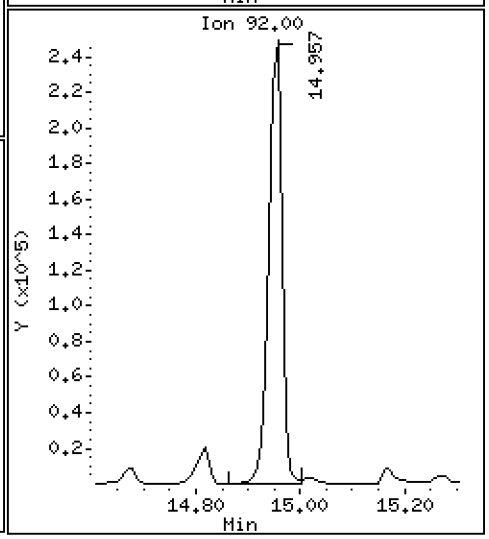












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

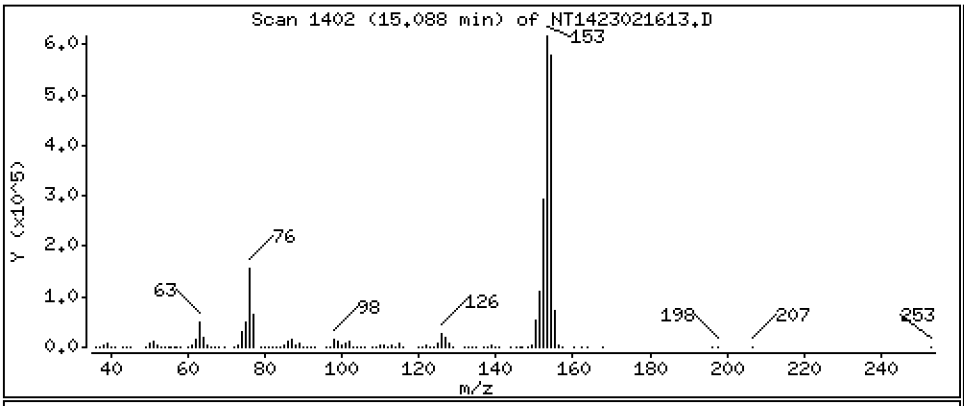
Operator: DSD

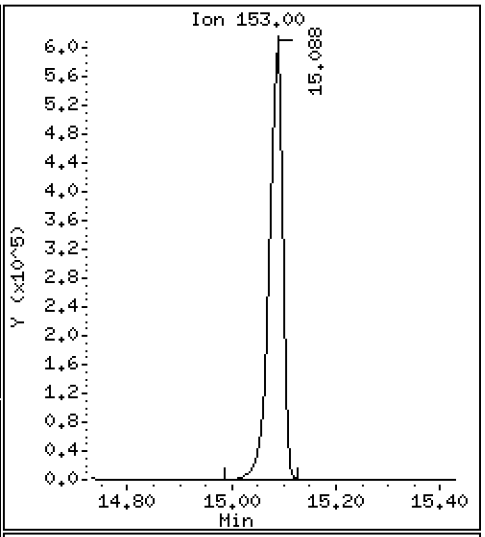
Column phase: ZB-5msi

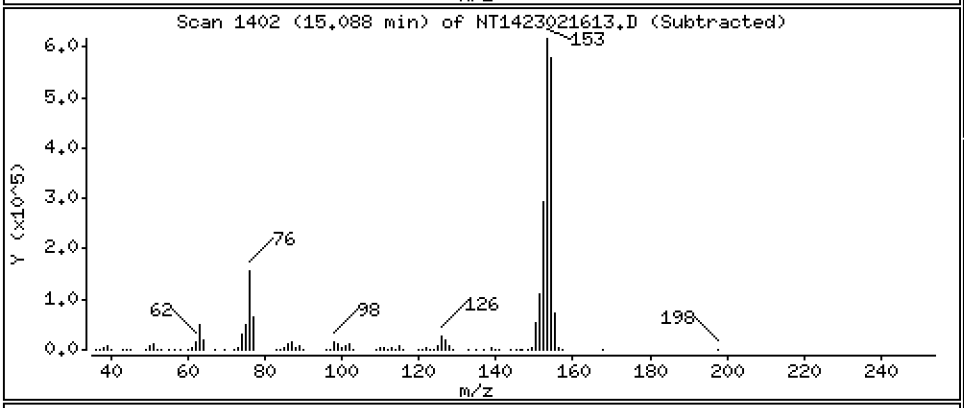
Column diameter: 0.25

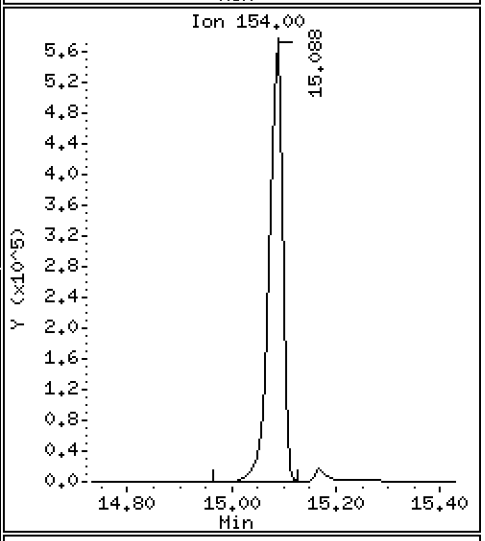
44 Acenaphthene

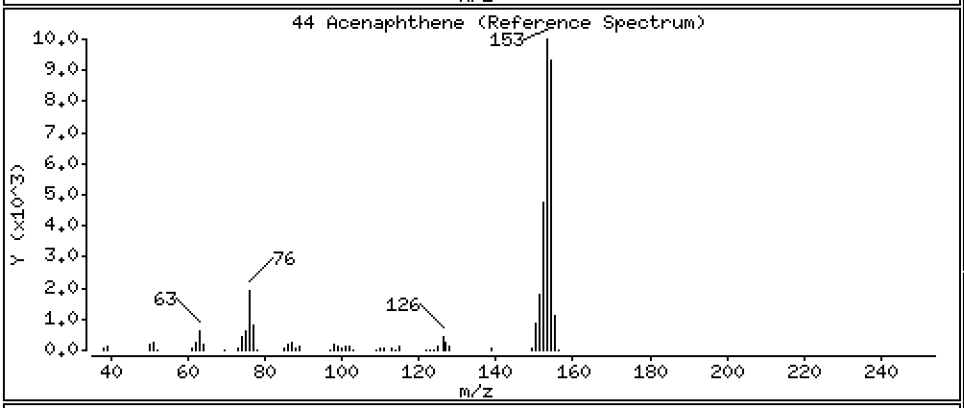
Concentration: 4.633 ug/mL

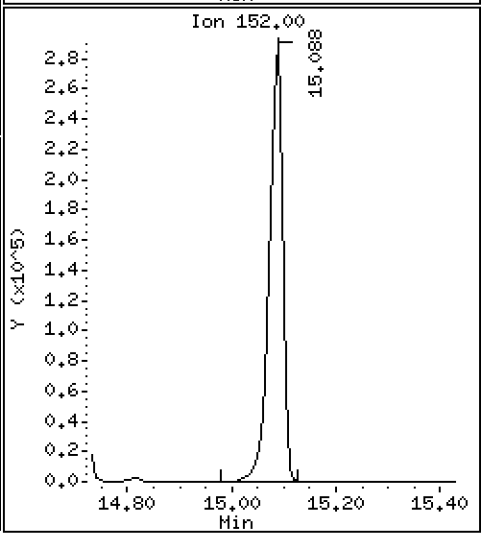


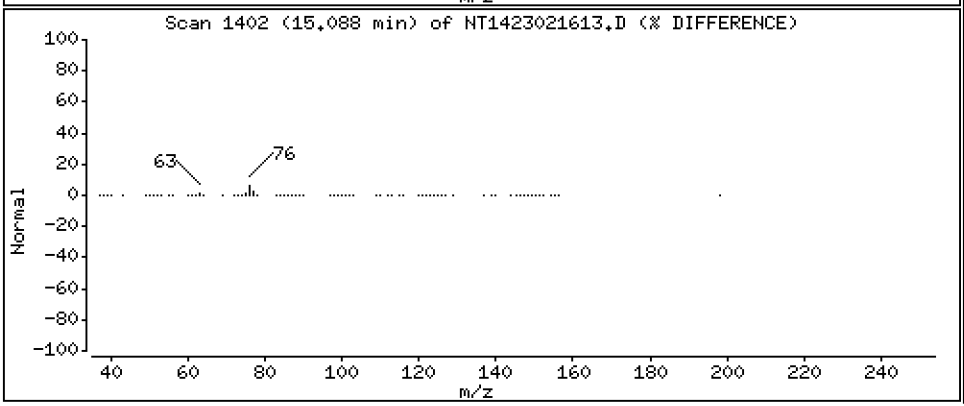












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

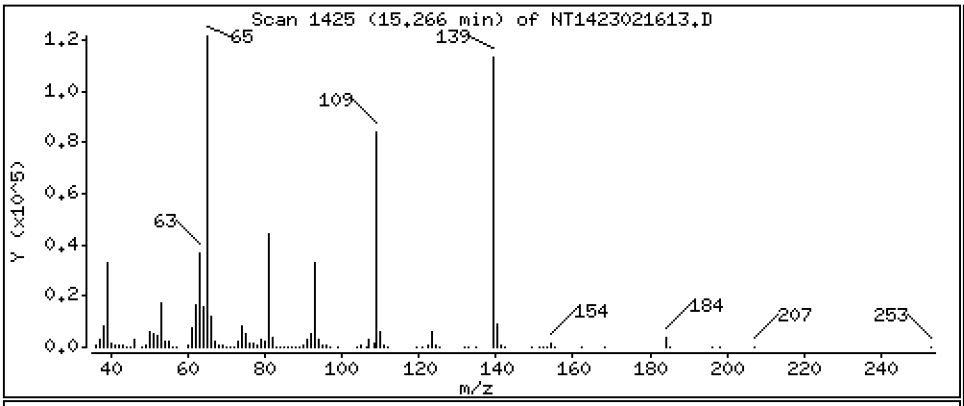
Operator: DSD

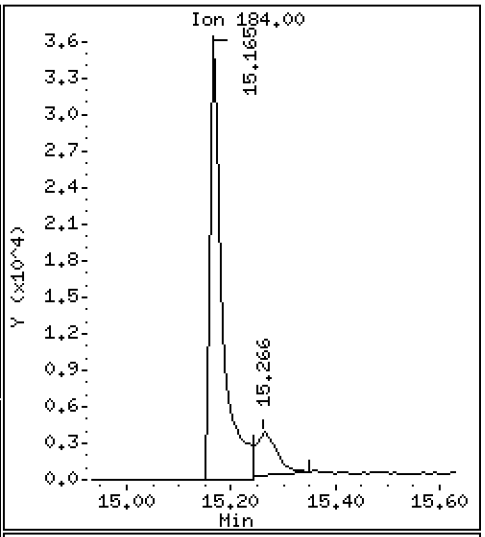
Column phase: ZB-5msi

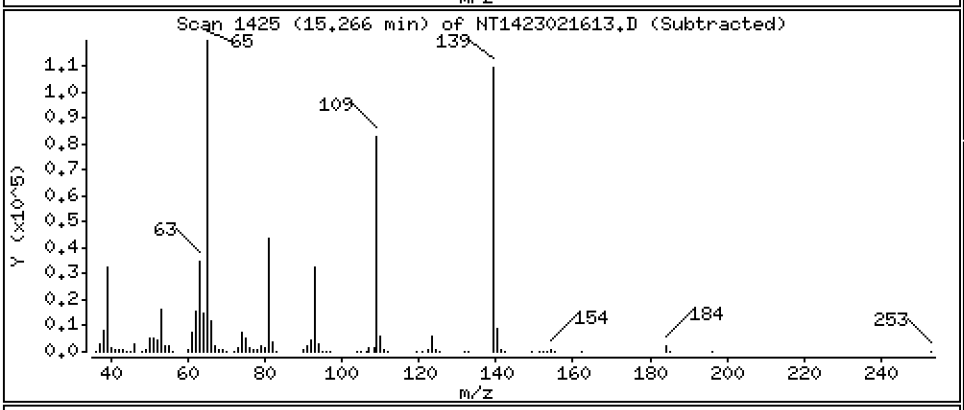
Column diameter: 0.25

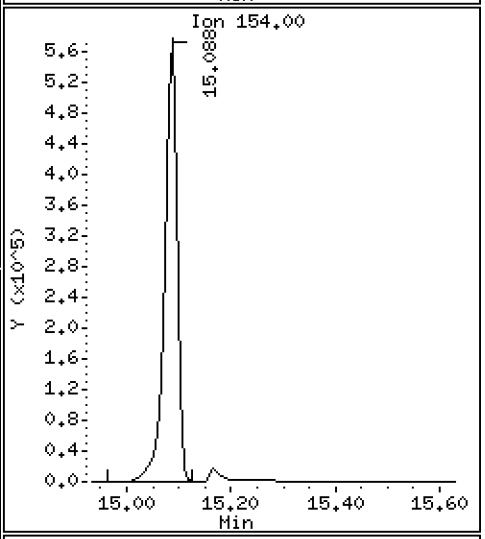
45 2,4-Dinitrophenol

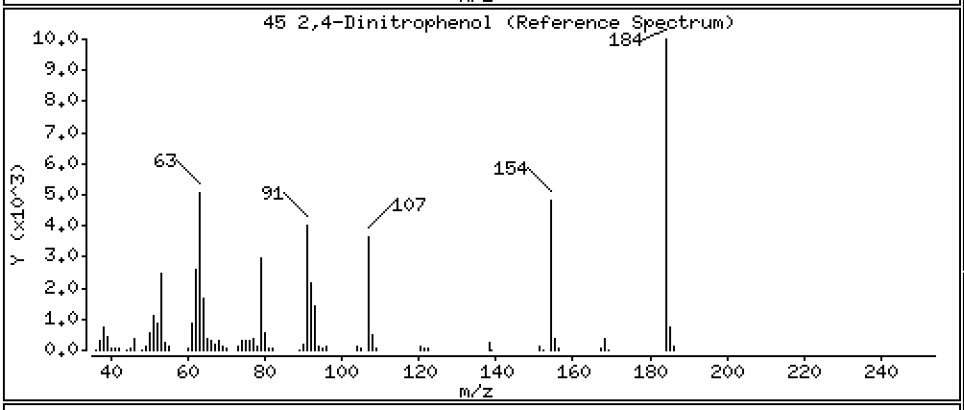
Concentration: 0.2502 ug/mL

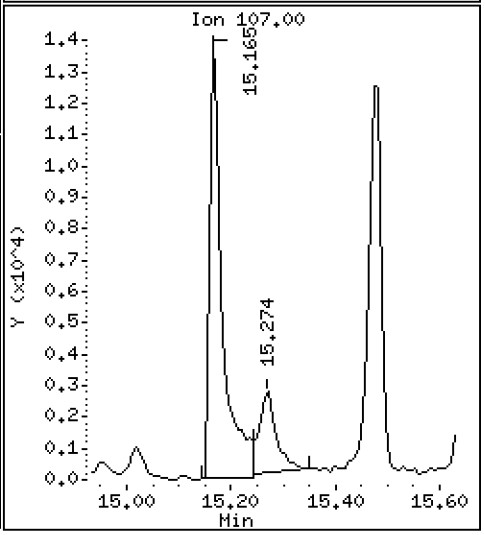


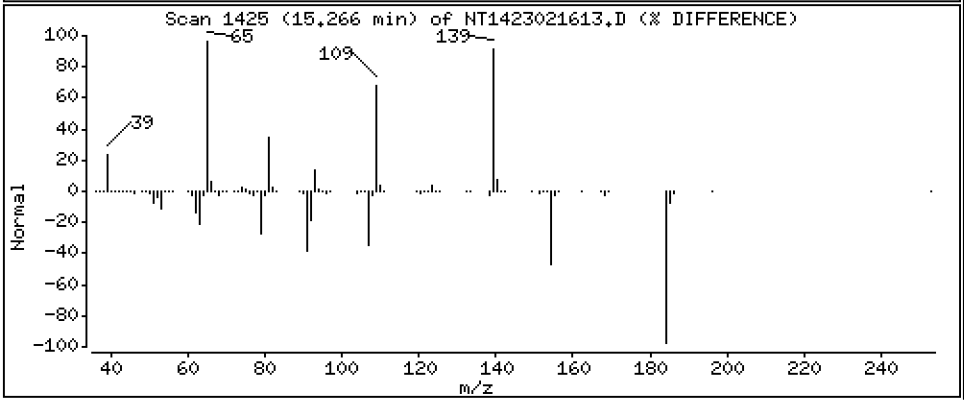












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

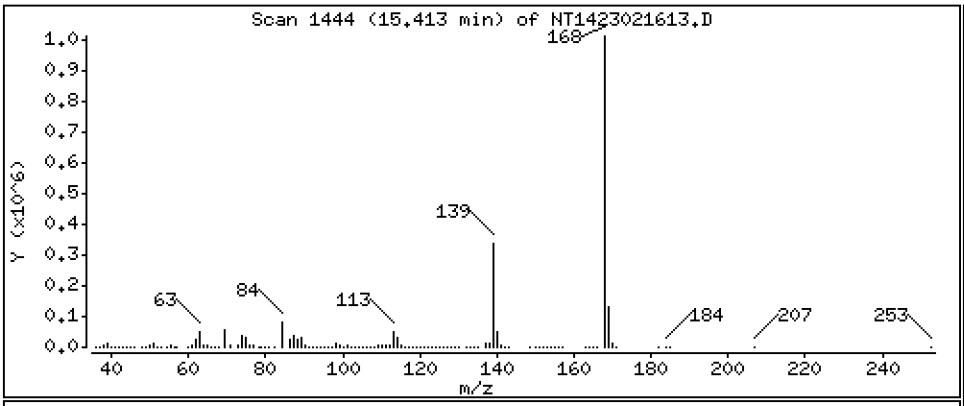
Operator: DSD

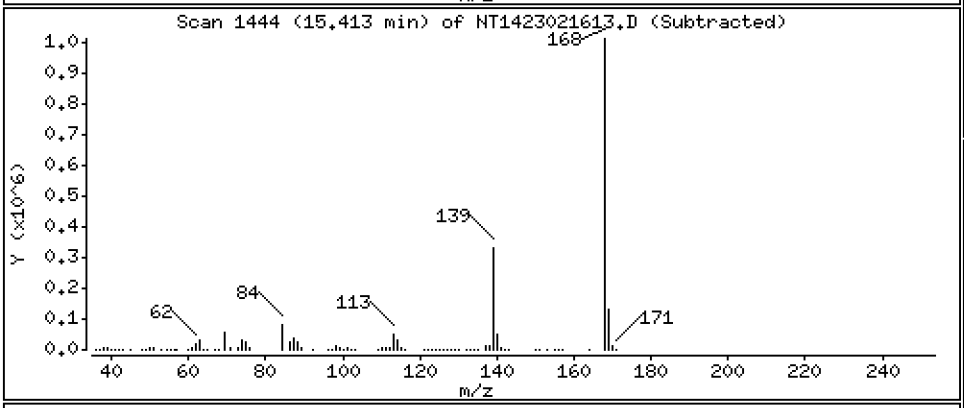
Column phase: ZB-5msi

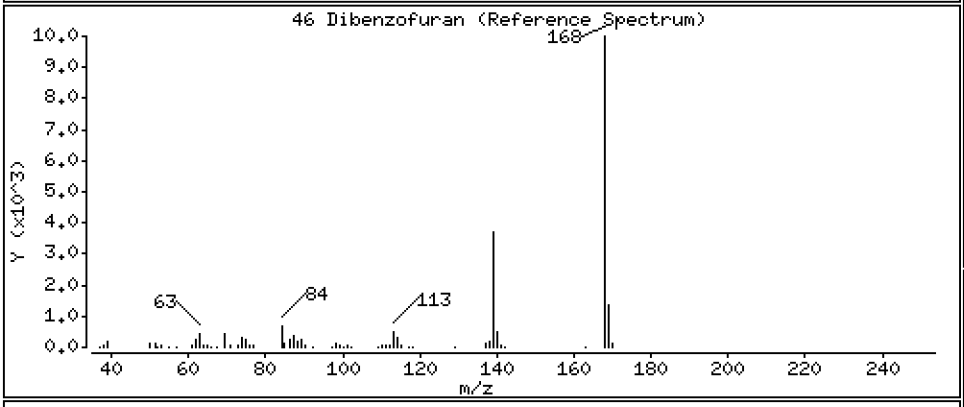
Column diameter: 0.25

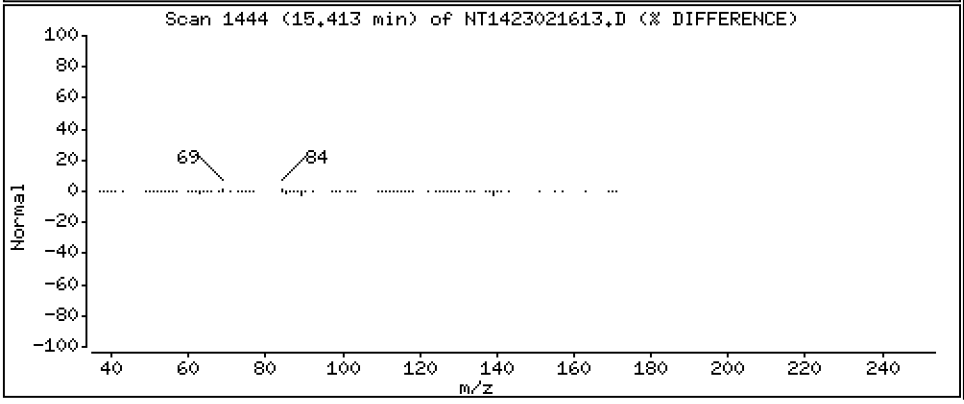
46 Dibenzofuran

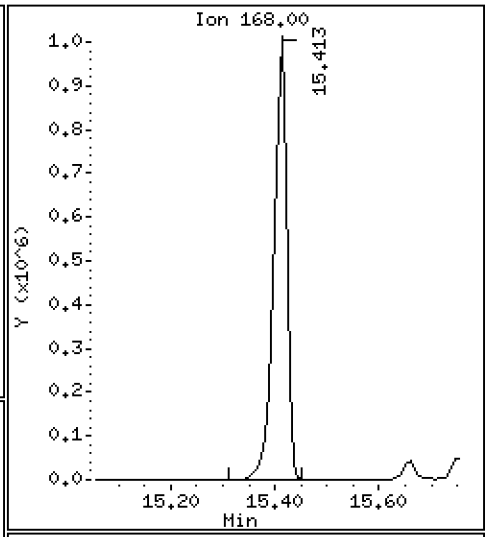
Concentration: 4.548 ug/mL

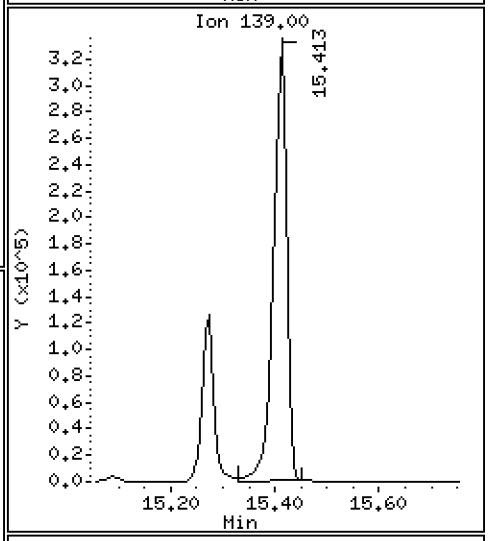


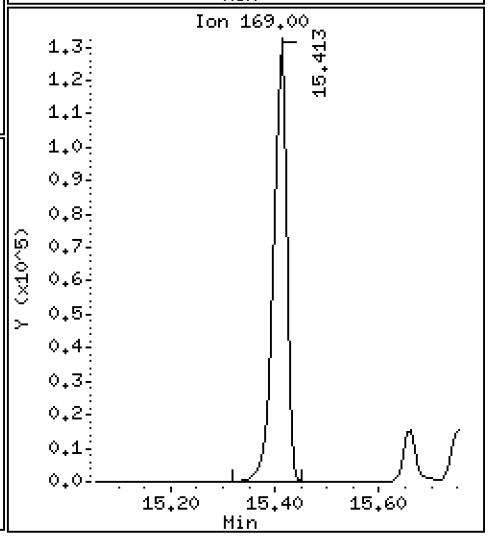












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

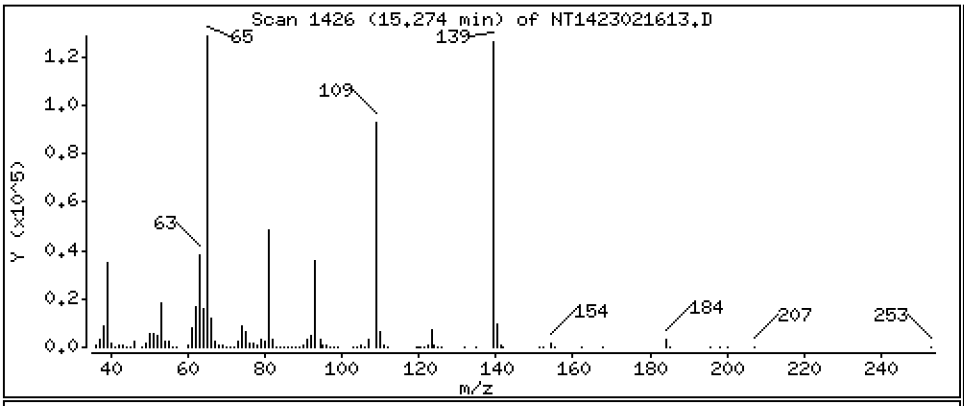
Operator: DSD

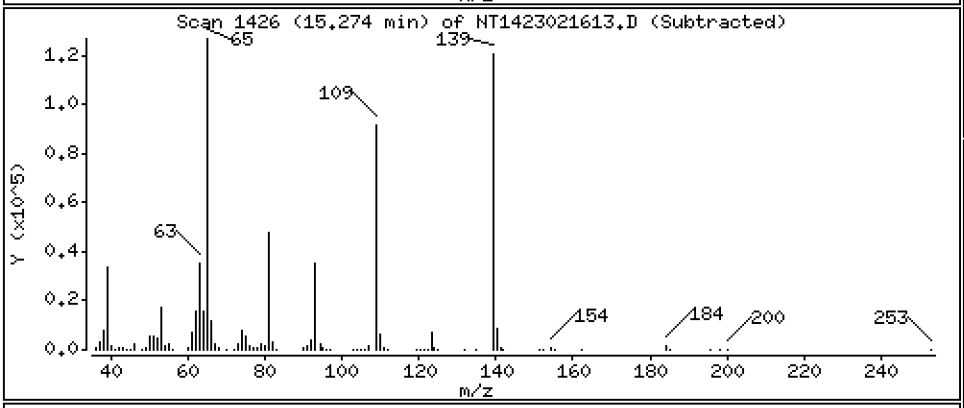
Column phase: ZB-5msi

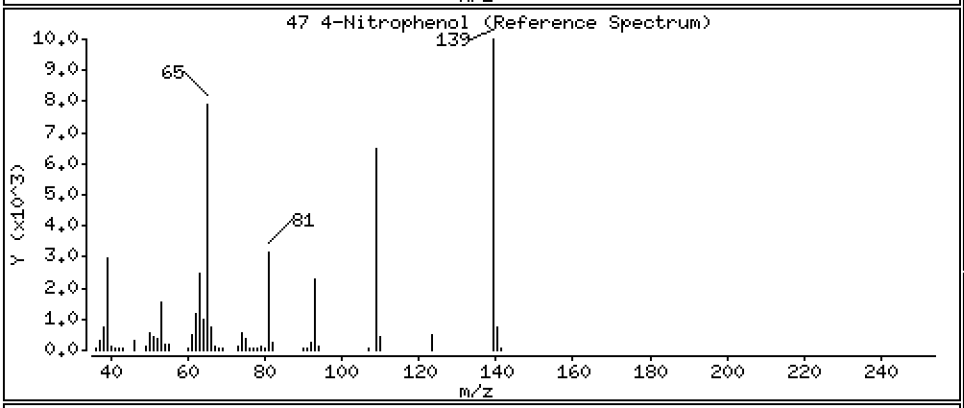
Column diameter: 0.25

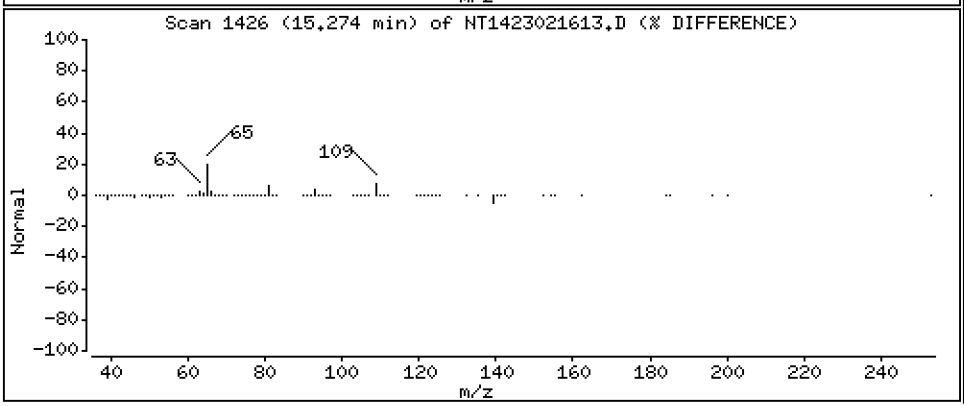
47 4-Nitrophenol

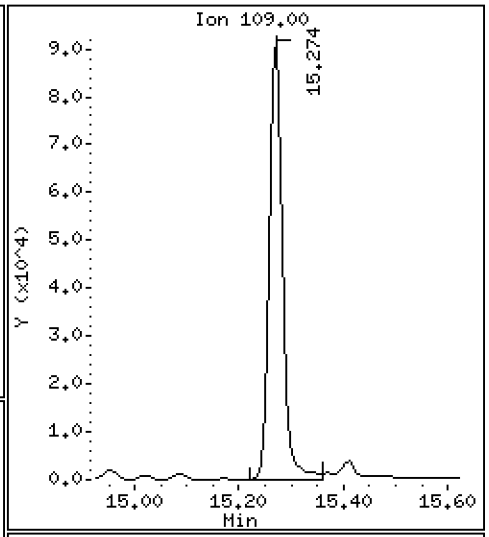
Concentration: 4.052 ug/mL

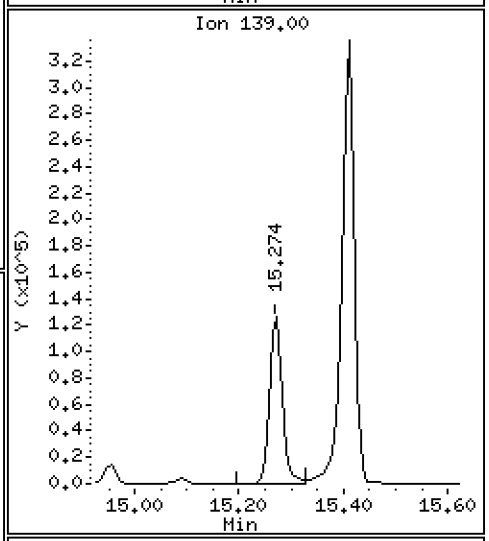


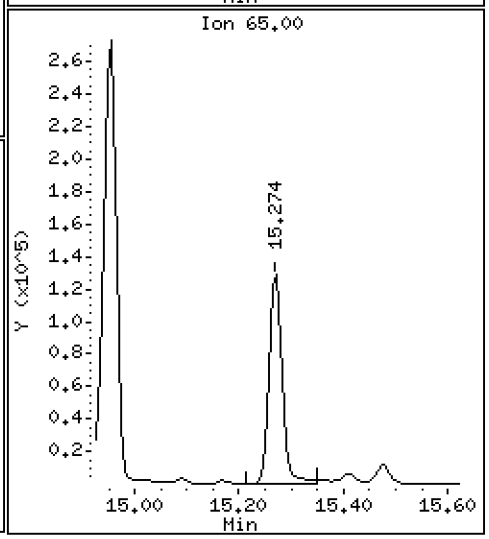












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

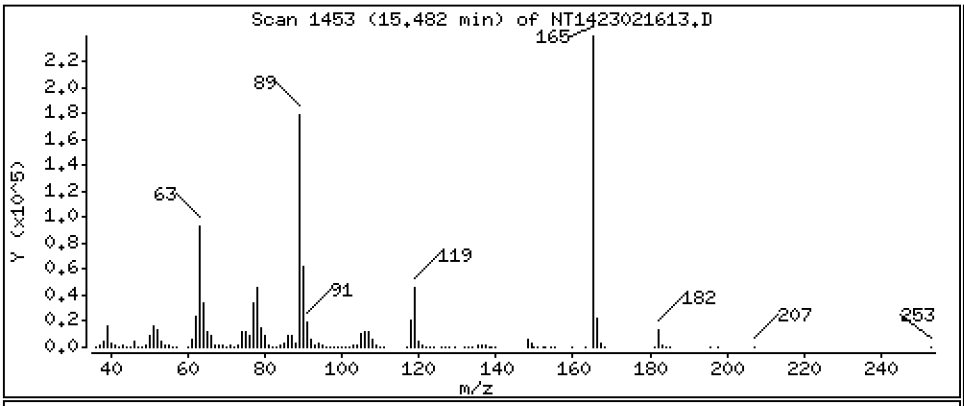
Operator: DSD

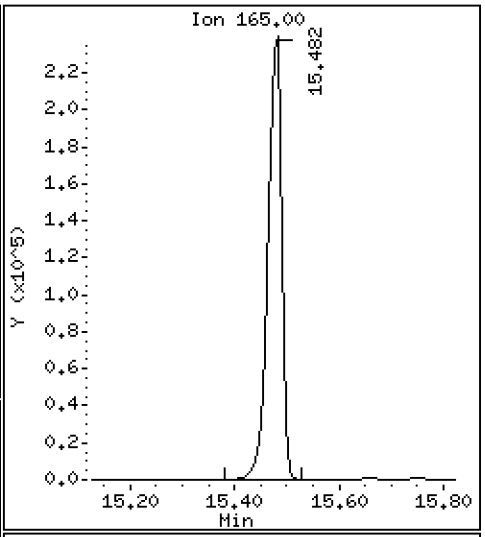
Column phase: ZB-5msi

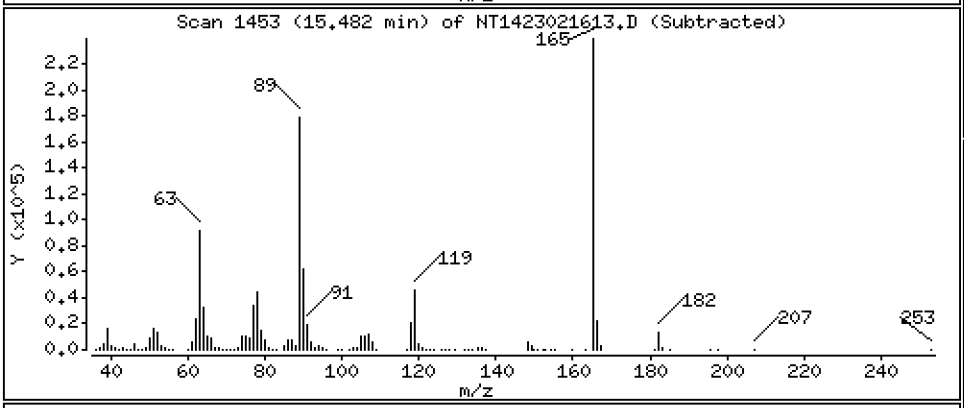
Column diameter: 0.25

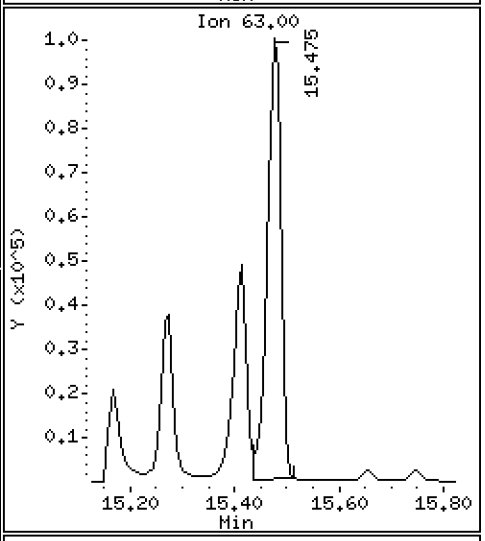
48 2,4-Dinitrotoluene

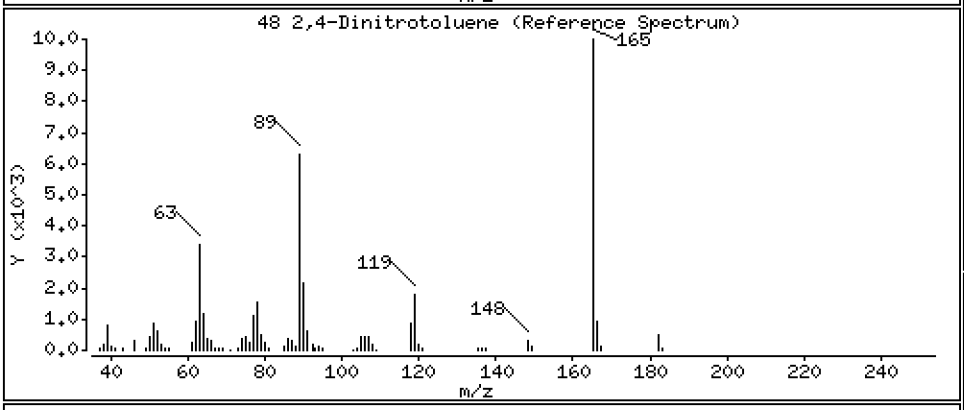
Concentration: 4.855 ug/mL

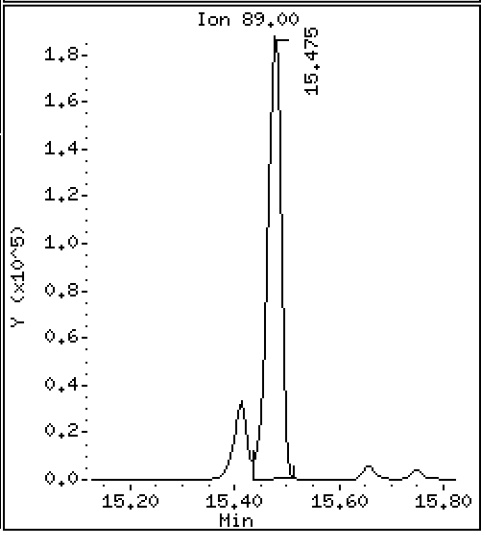


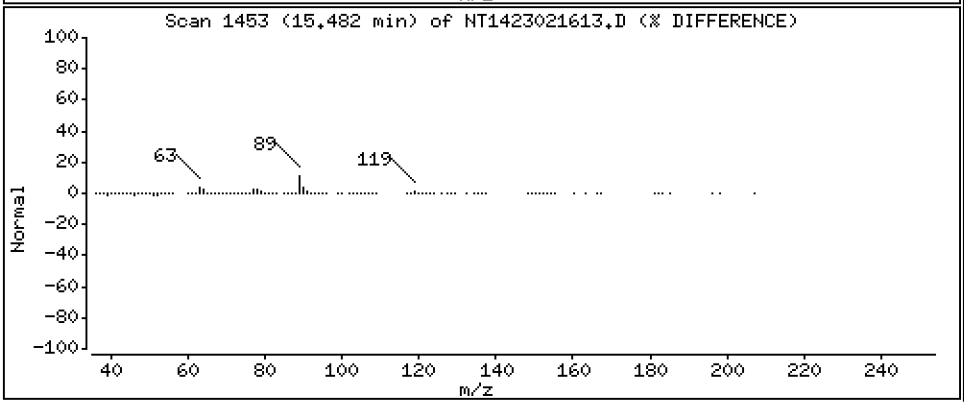












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

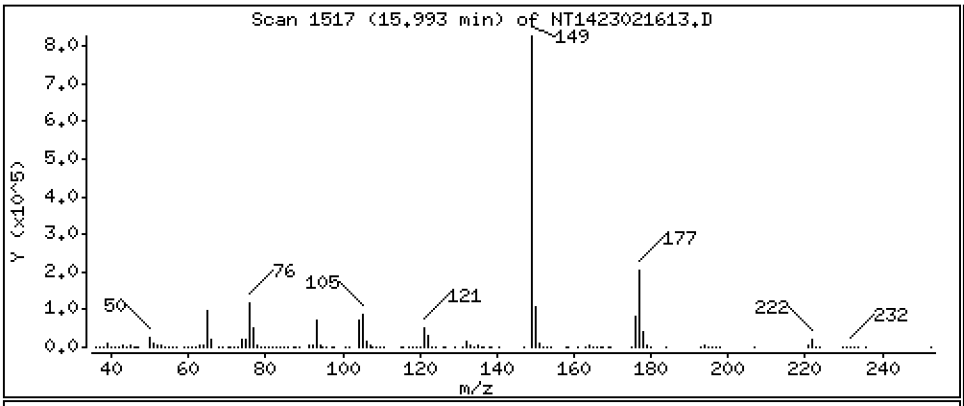
Operator: DSD

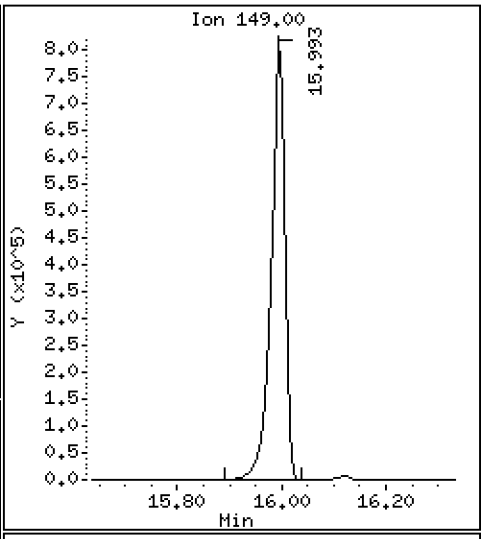
Column phase: ZB-5msi

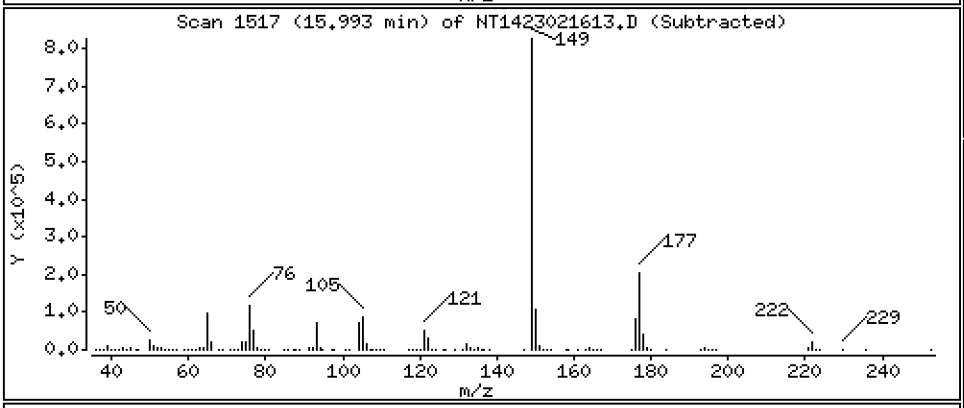
Column diameter: 0.25

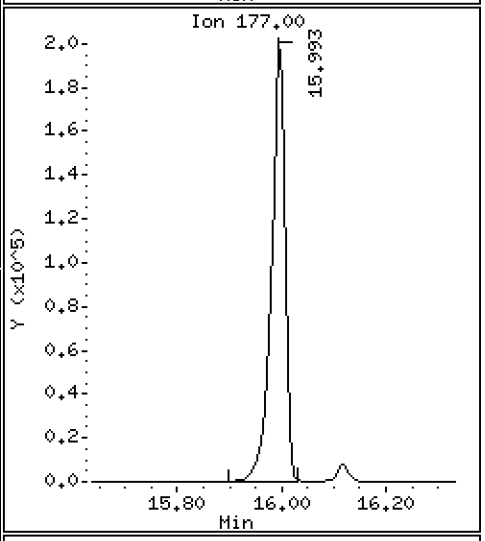
50 Diethylphthalate

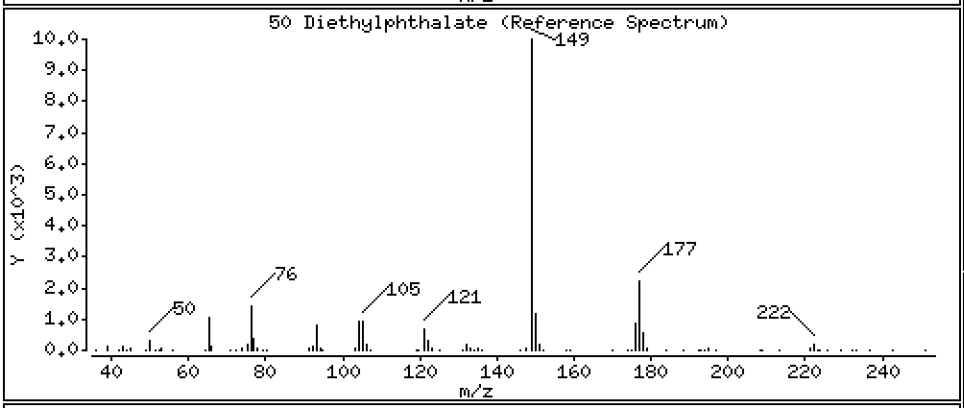
Concentration: 4.722 ug/mL

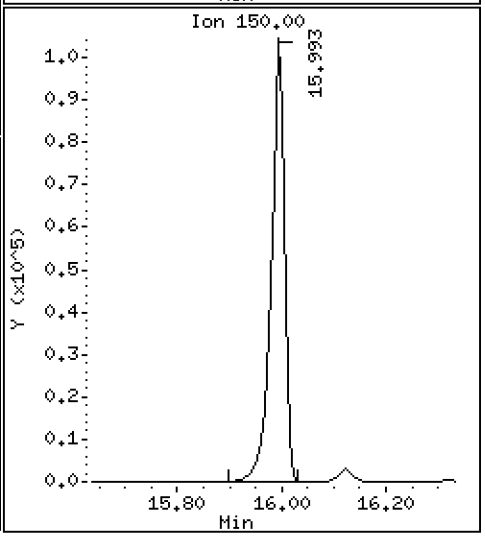


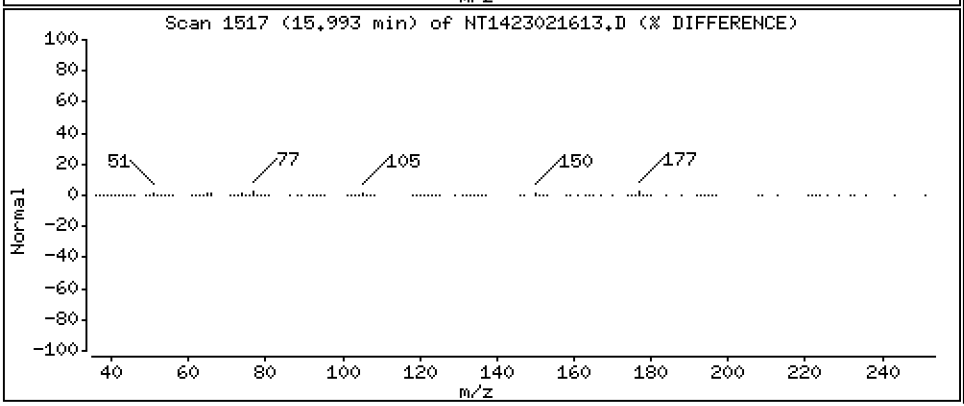












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

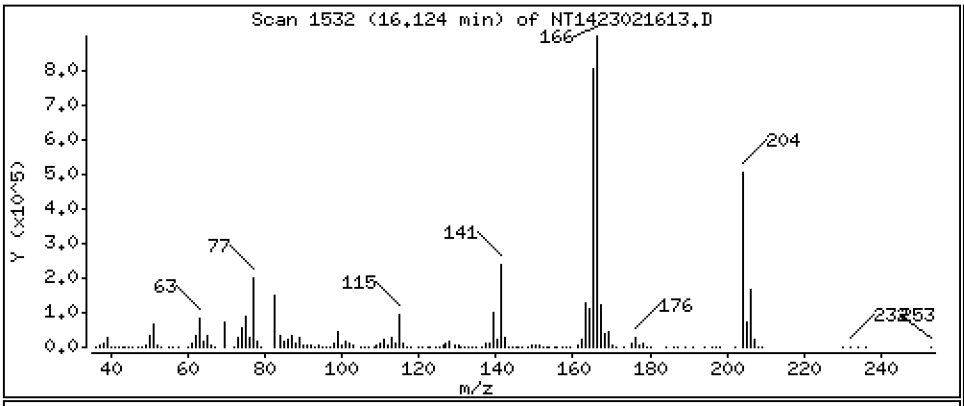
Operator: DSD

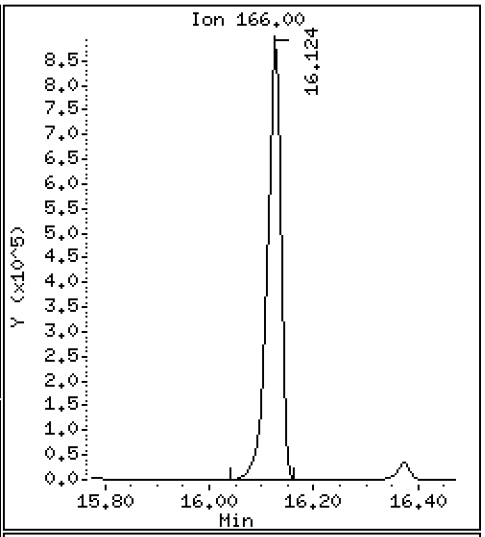
Column phase: ZB-5msi

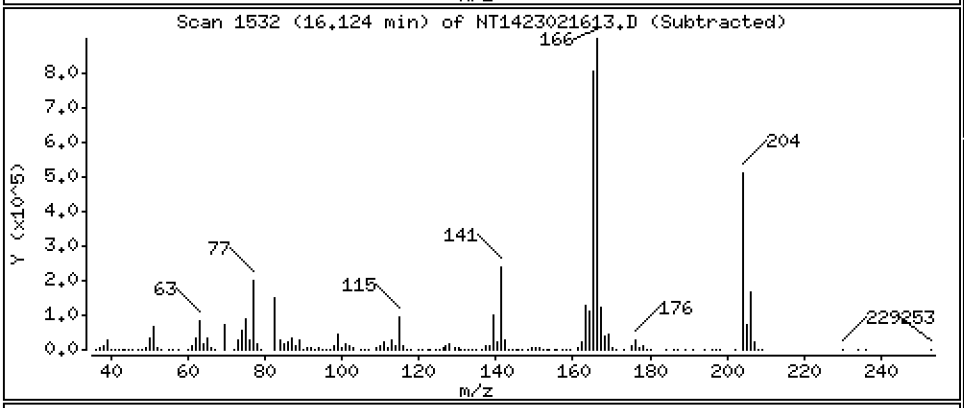
Column diameter: 0.25

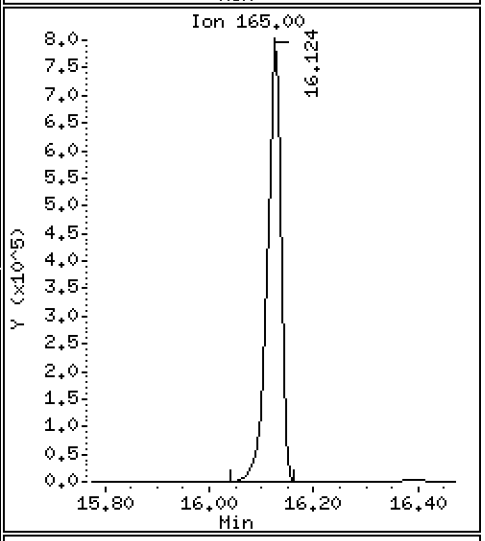
49 Fluorene

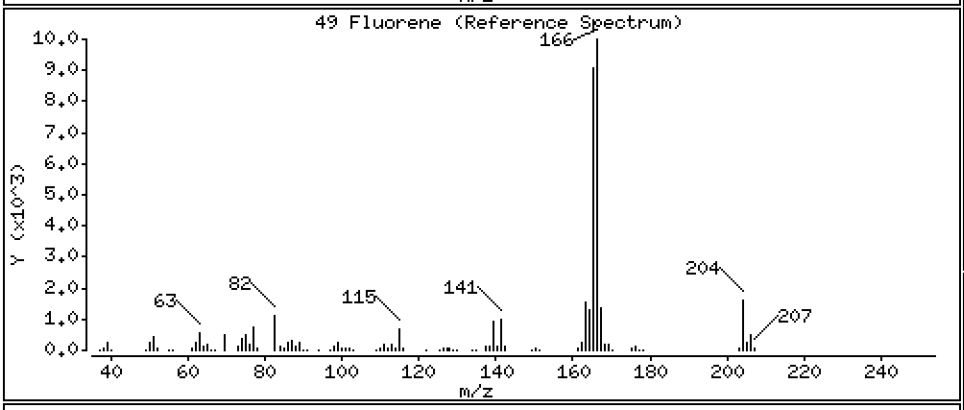
Concentration: 4.638 ug/mL

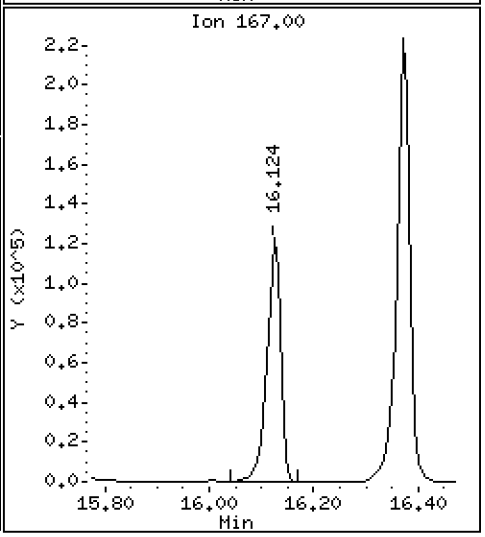


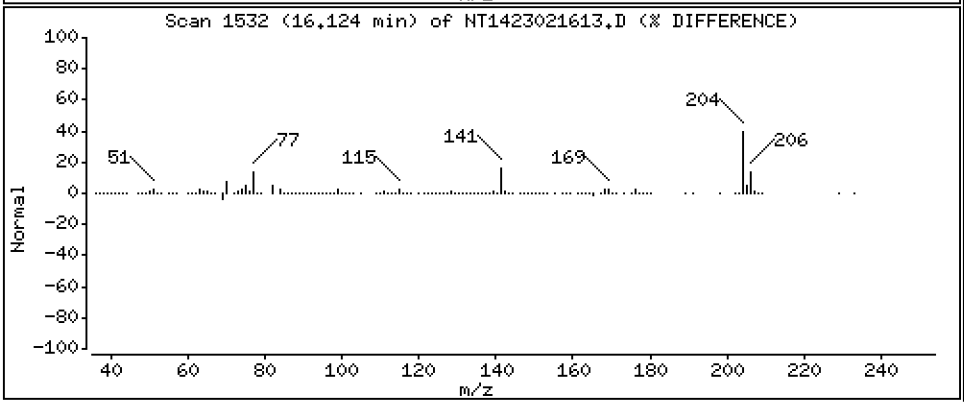












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

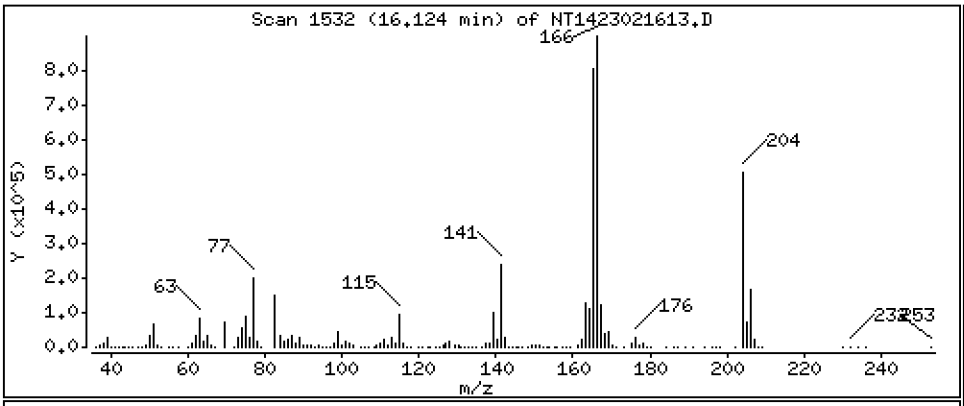
Operator: DSD

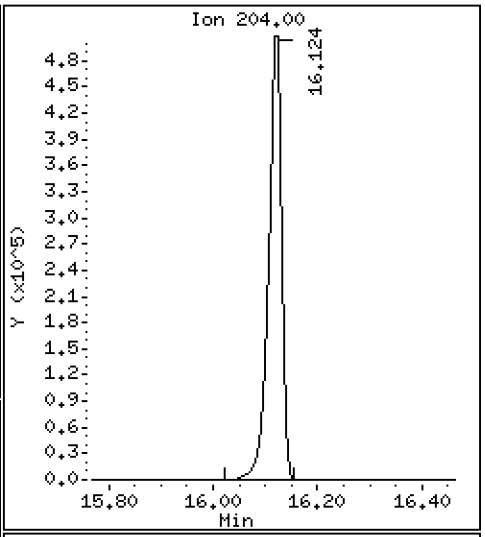
Column phase: ZB-5msi

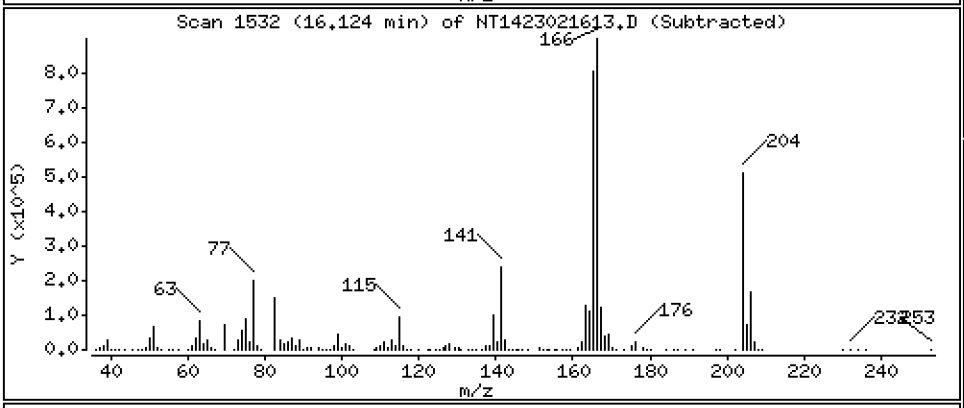
Column diameter: 0.25

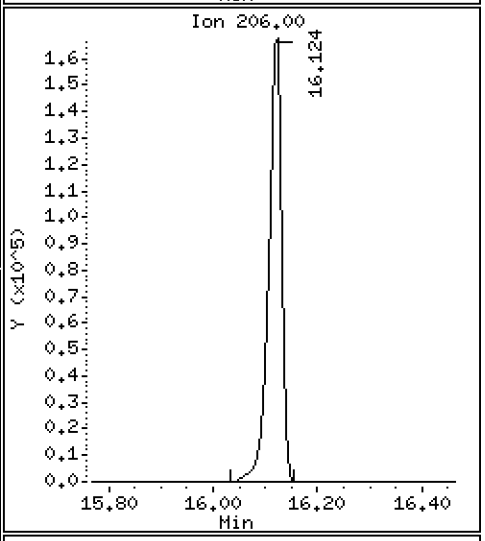
51 4-Chlorophenyl-phenylether

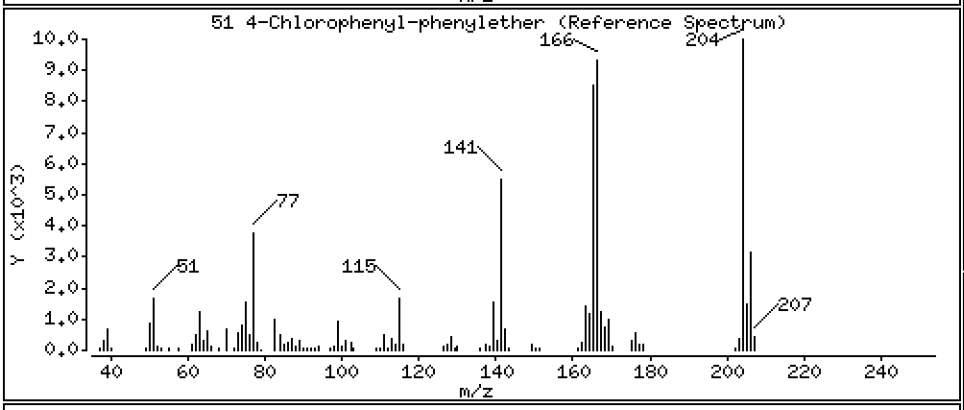
Concentration: 4.754 ug/mL

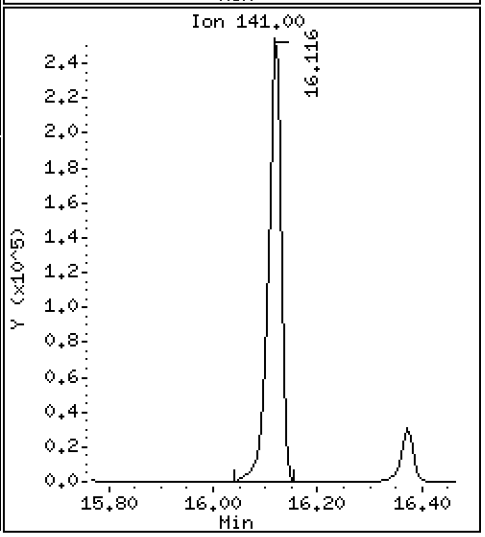


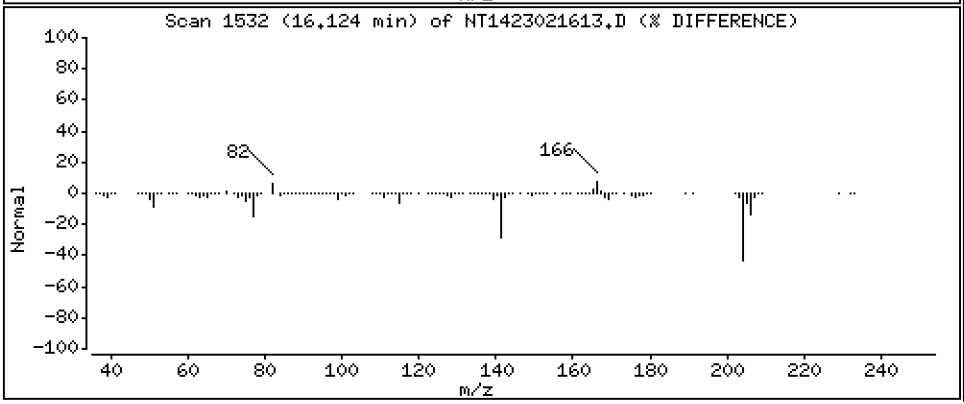












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

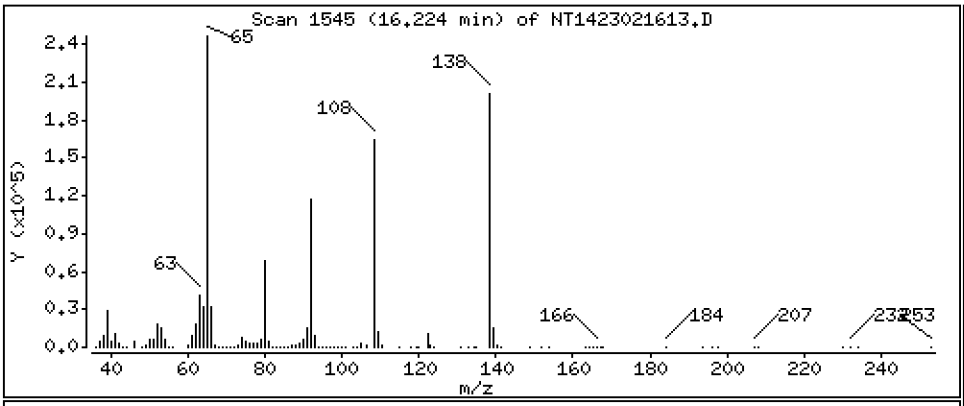
Operator: DSD

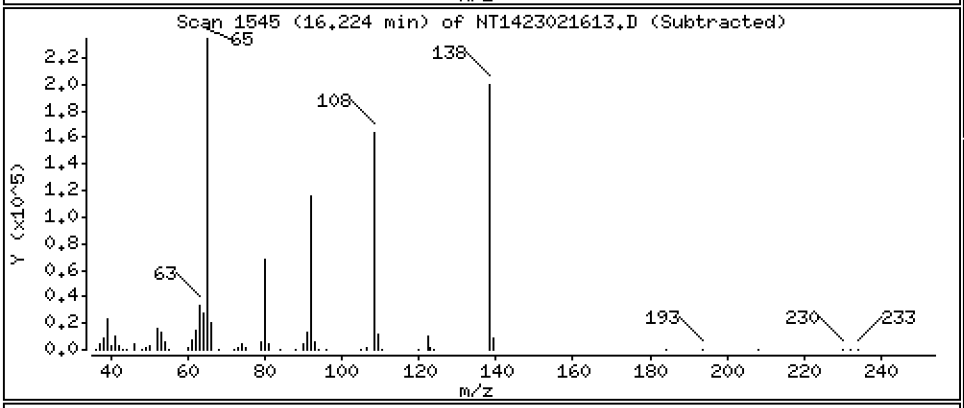
Column phase: ZB-5msi

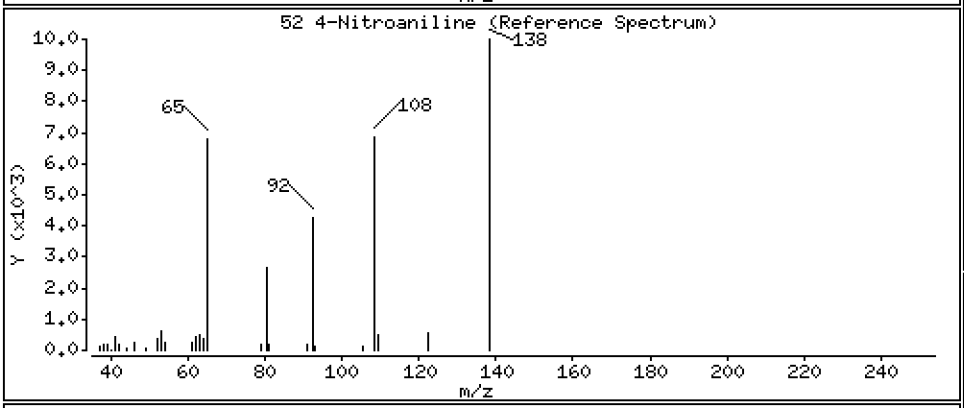
Column diameter: 0.25

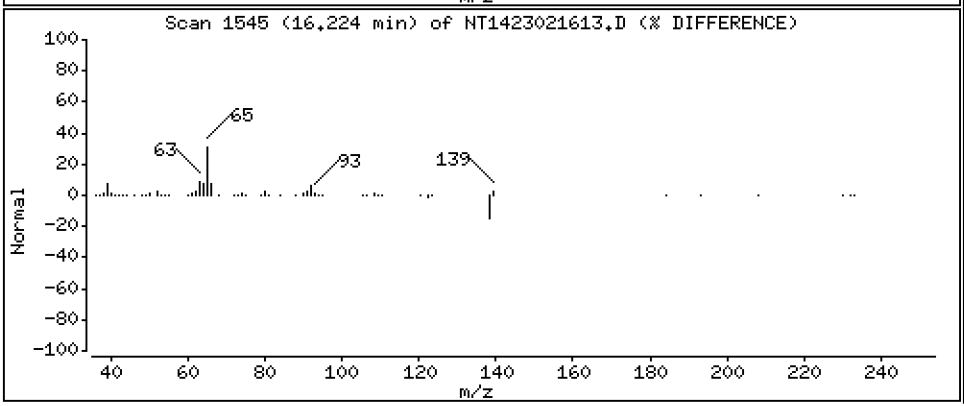
52 4-Nitroaniline

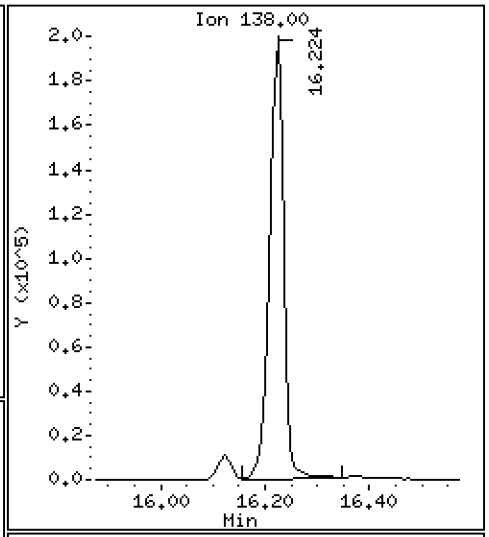
Concentration: 4.762 ug/mL

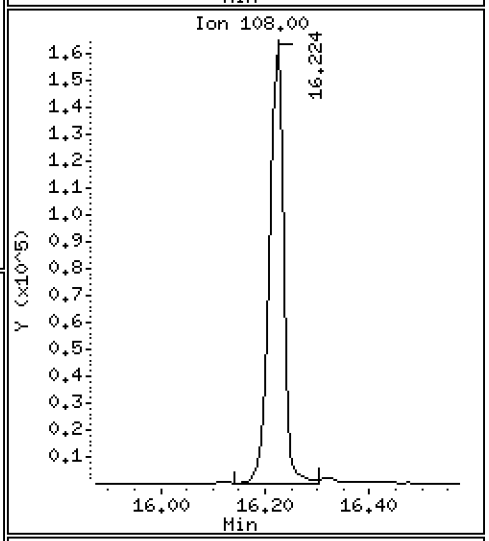


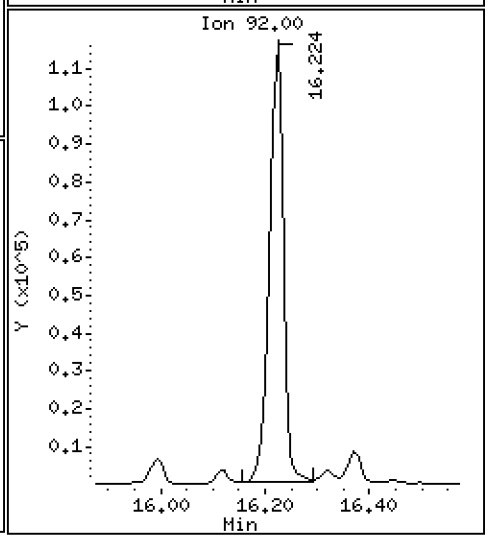












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

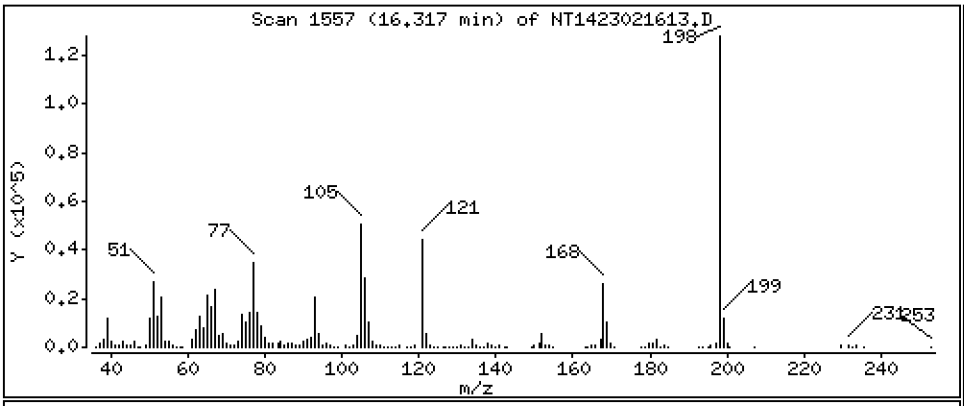
Operator: DSD

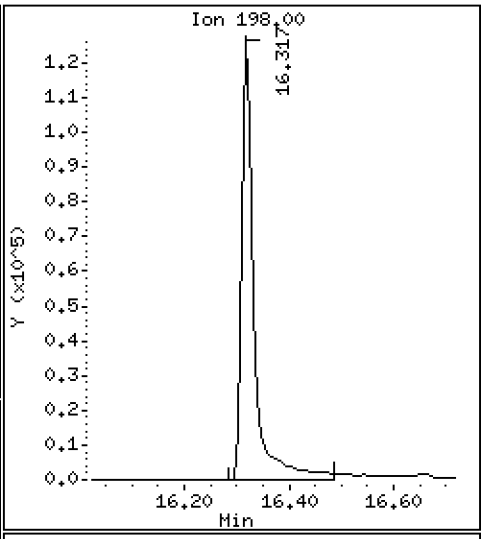
Column phase: ZB-5msi

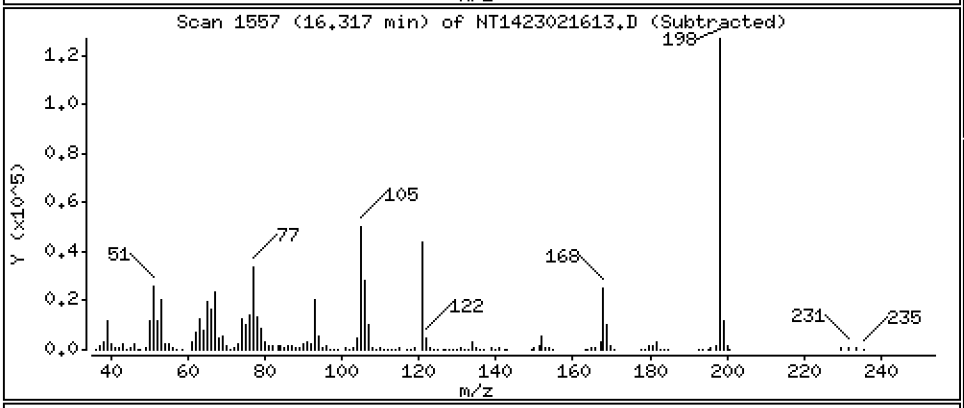
Column diameter: 0.25

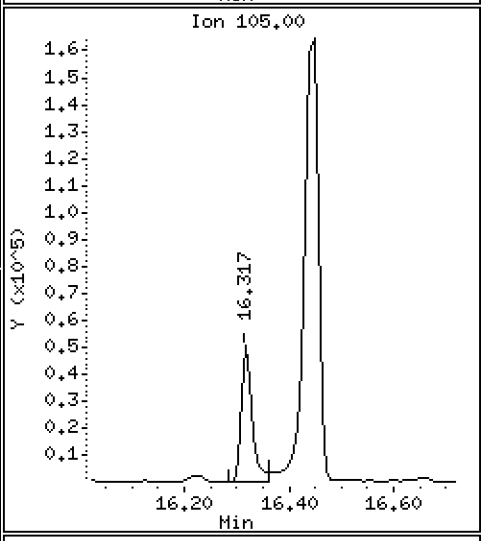
53 4,6-Dinitro-2-methylphenol

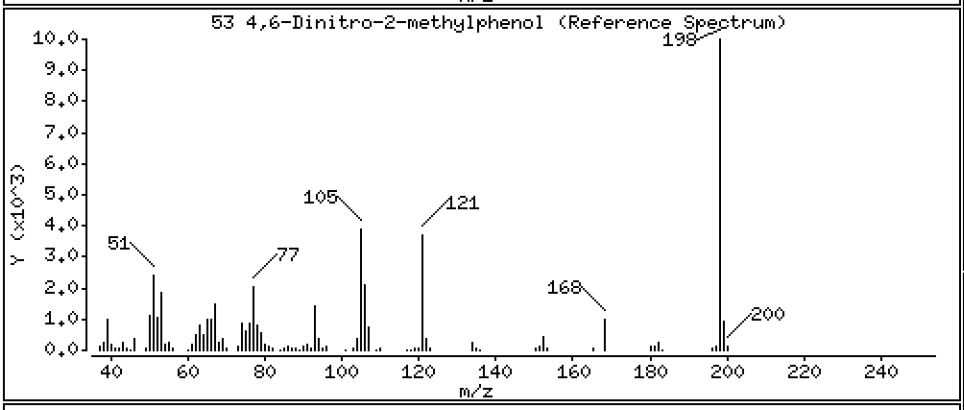
Concentration: 3.653 ug/mL

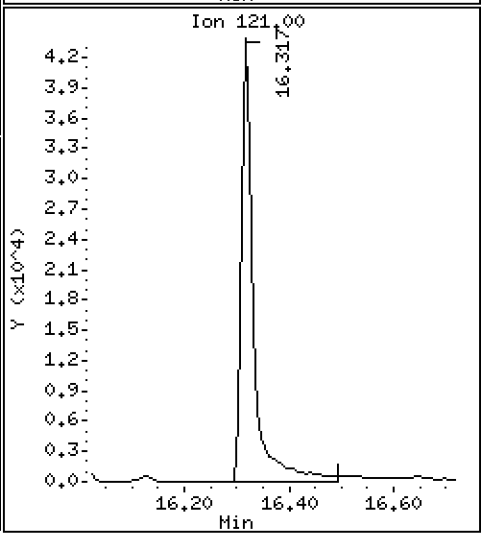


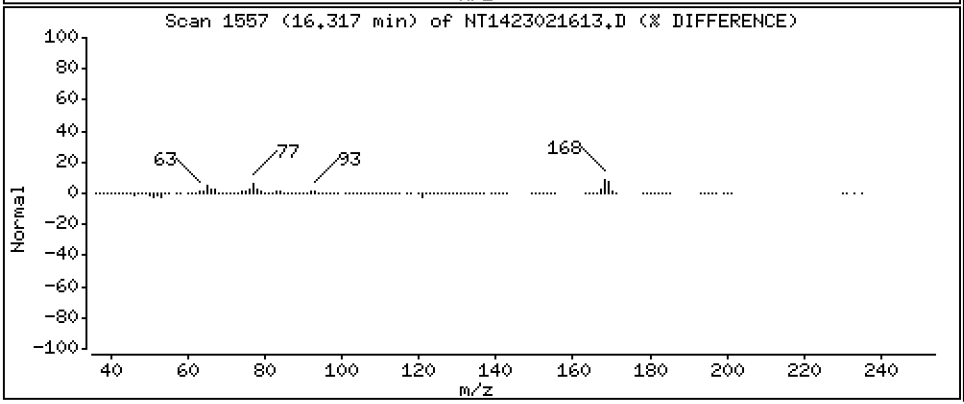












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

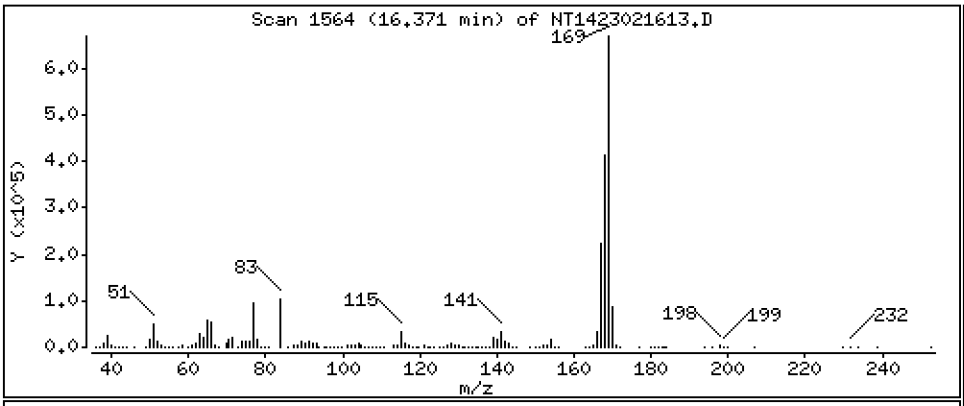
Operator: DSD

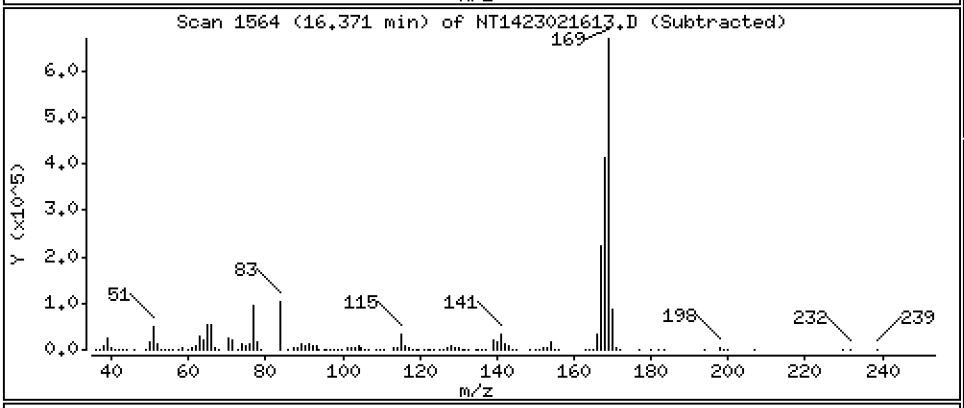
Column phase: ZB-5msi

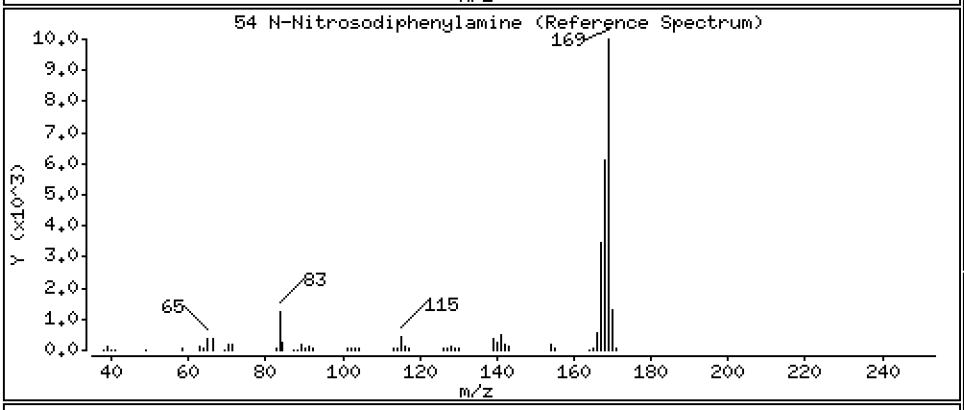
Column diameter: 0.25

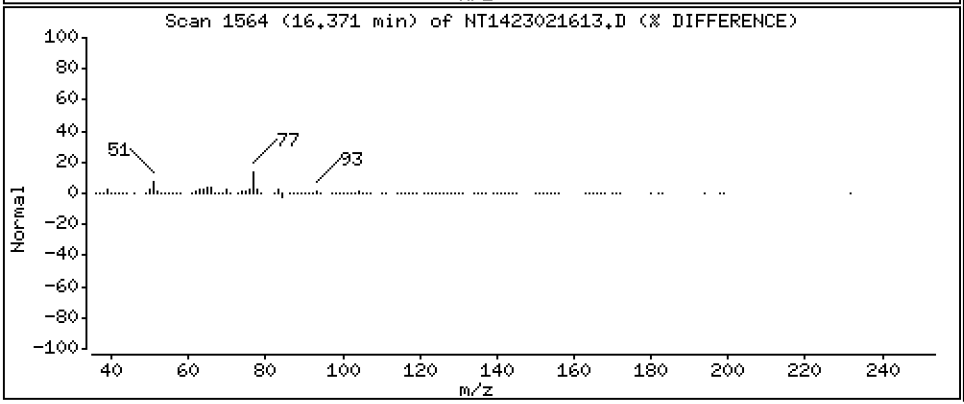
54 N-Nitrosodiphenylamine

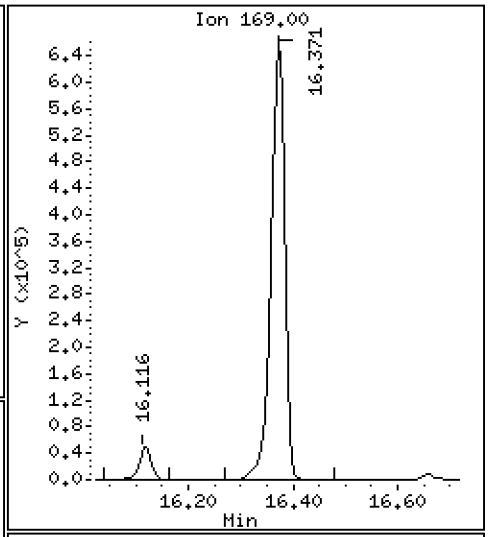
Concentration: 4.907 ug/mL

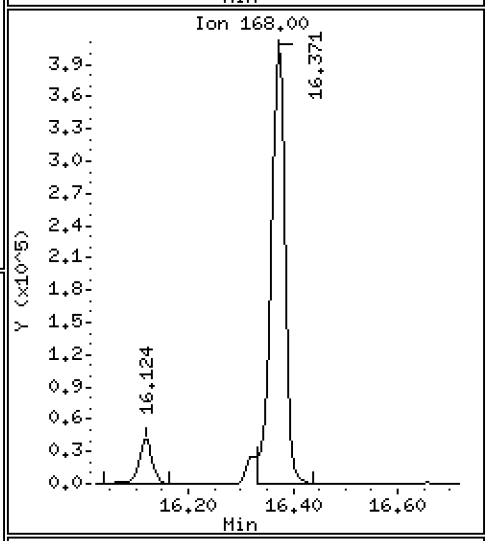


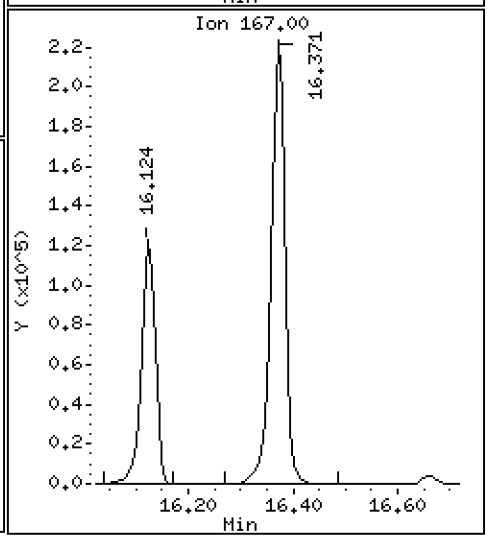












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

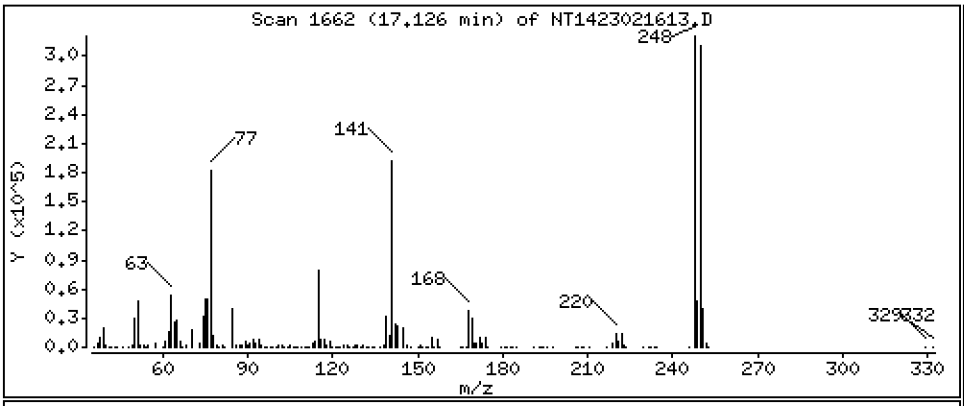
Operator: DSD

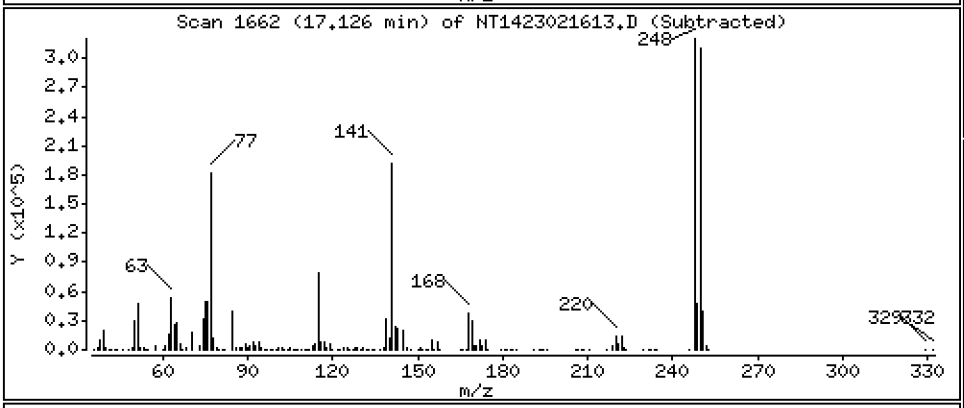
Column phase: ZB-5msi

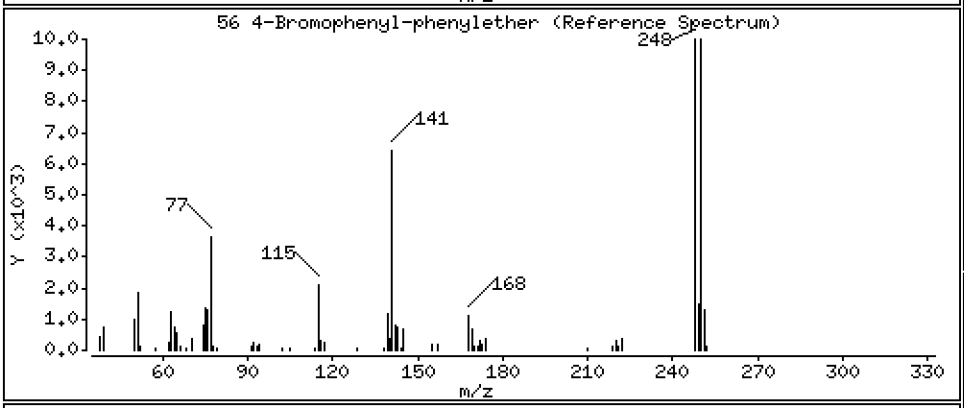
Column diameter: 0.25

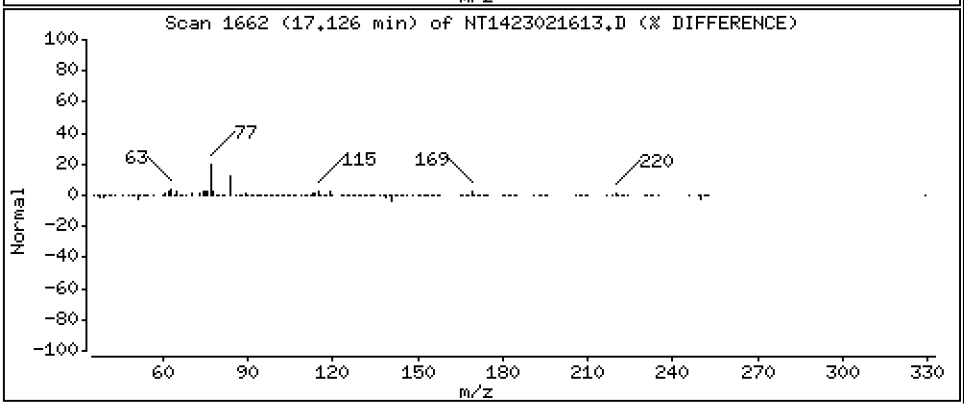
56 4-Bromophenyl-phenylether

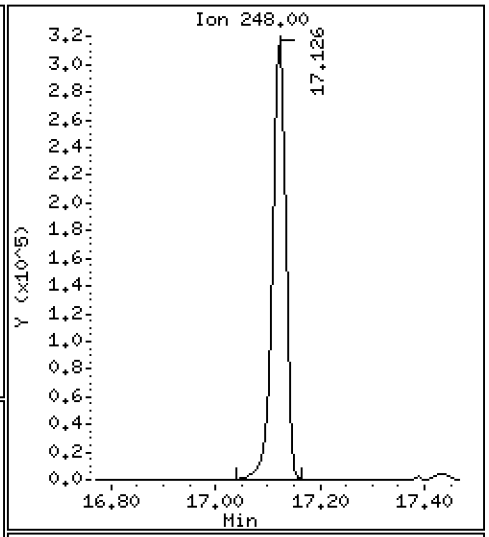
Concentration: 5.153 ug/mL

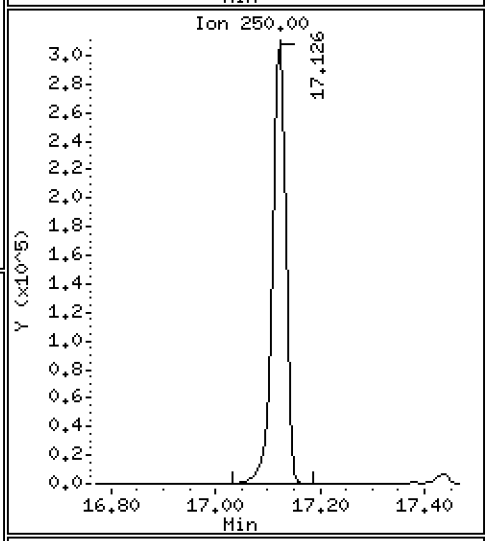


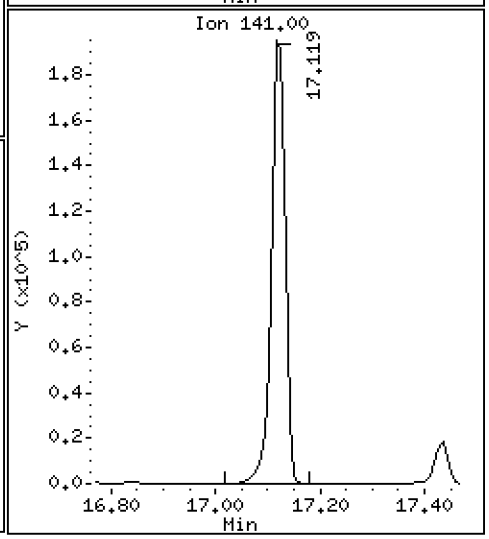












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

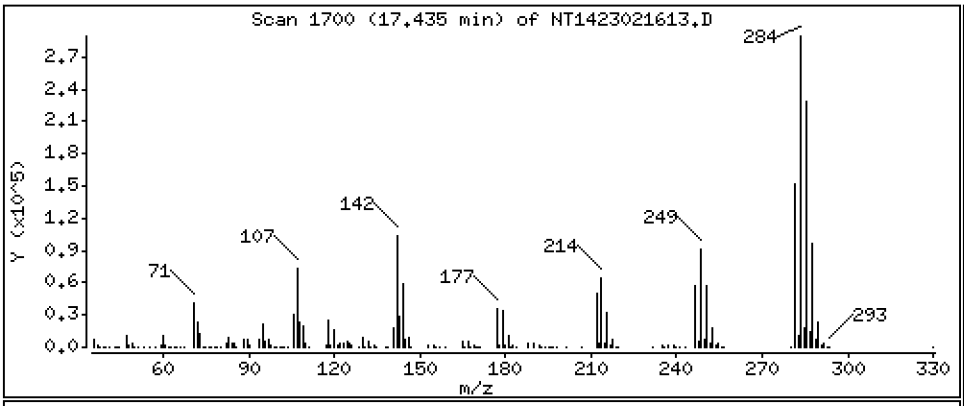
Operator: DSD

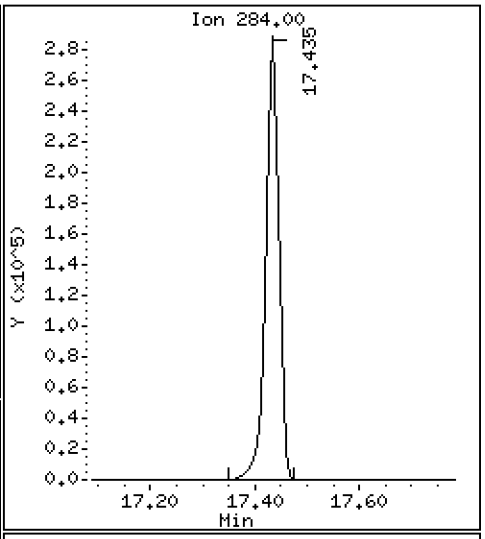
Column phase: ZB-5msi

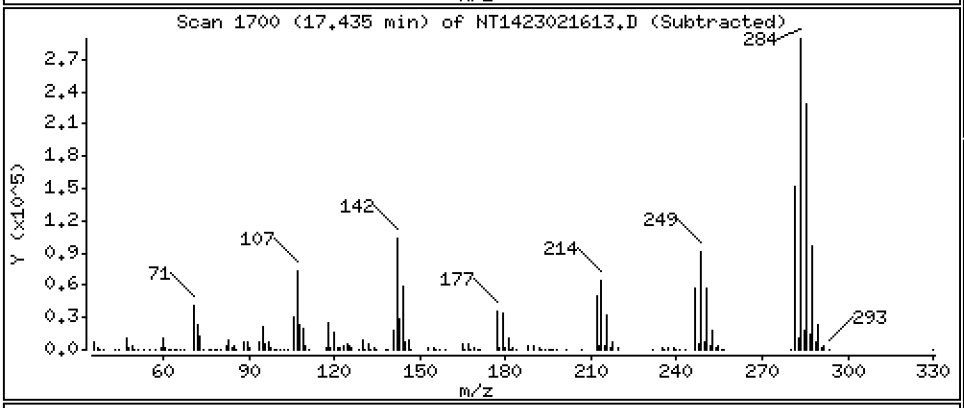
Column diameter: 0.25

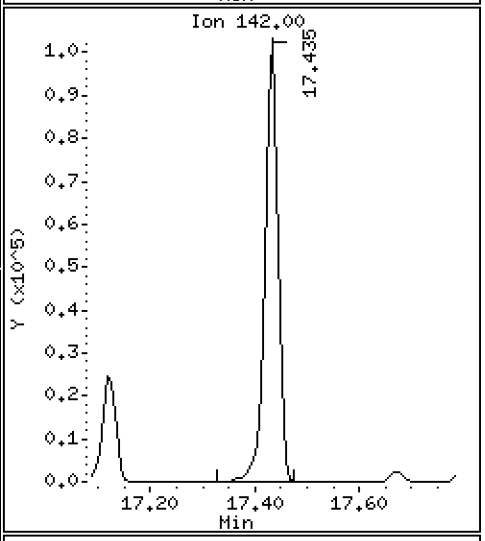
57 Hexachlorobenzene

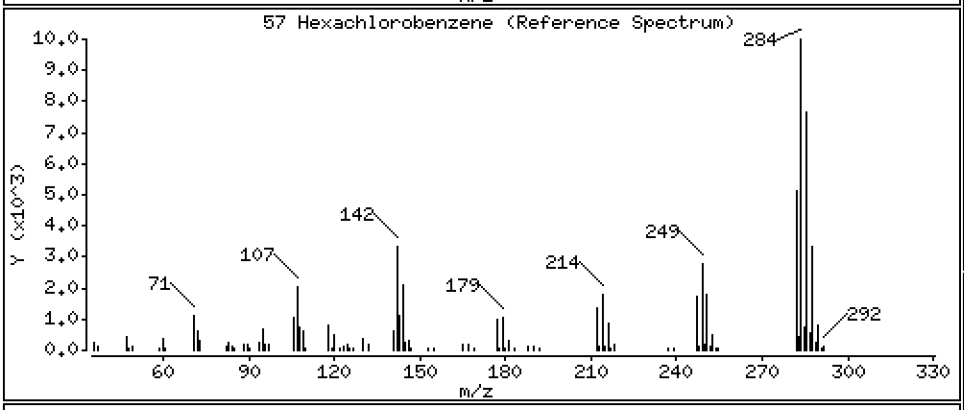
Concentration: 4.679 ug/mL

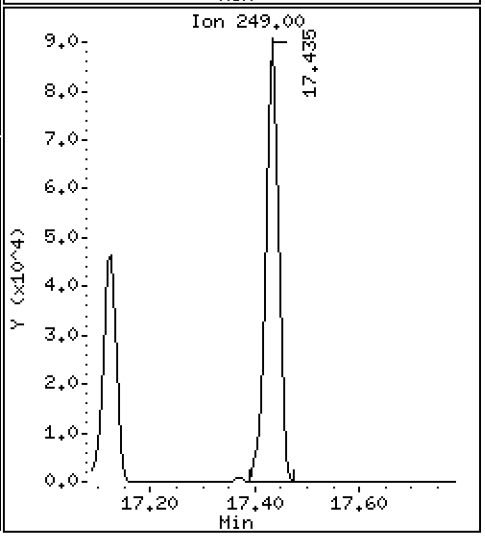


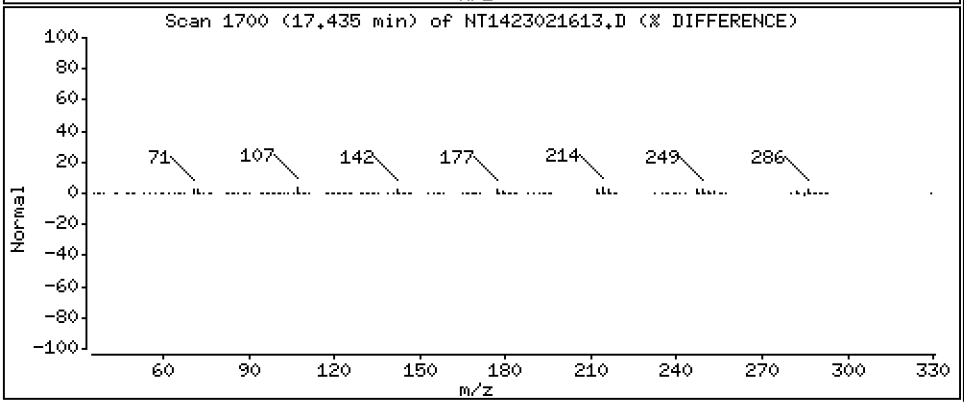












Date : 16-FEB-2023 21:18

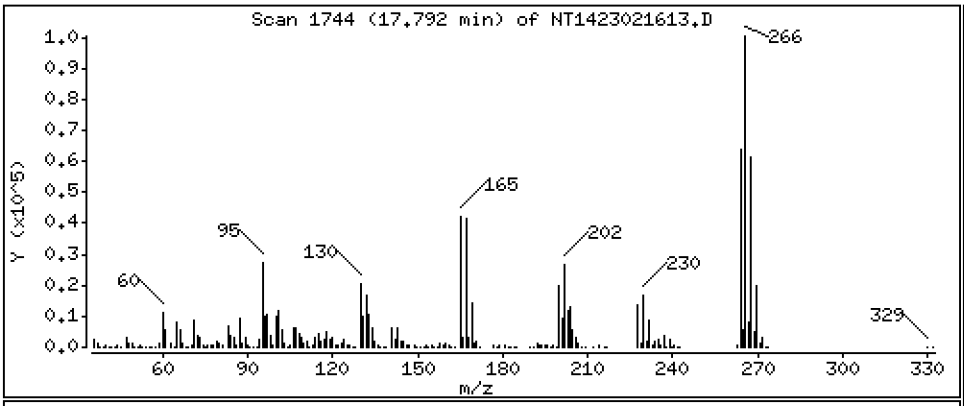
Client ID: Instrument: nt14.i

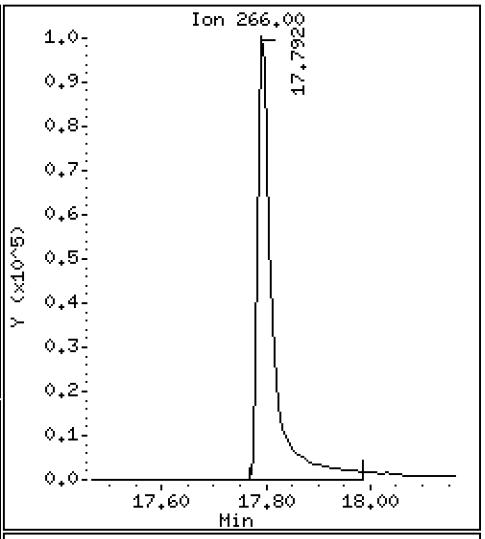
Sample Info: SLB0234-SCV1

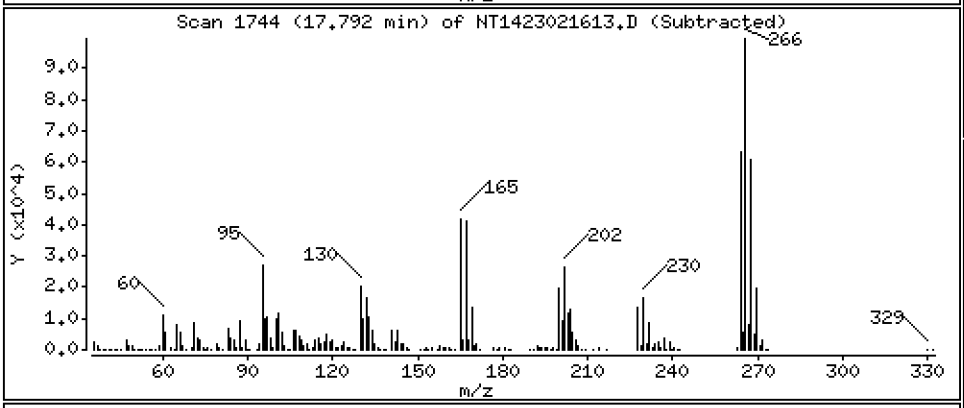
Operator: DSD

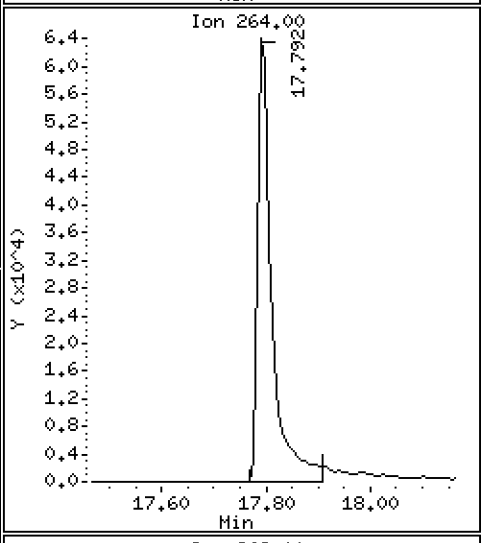
Column phase: ZB-5msi Column diameter: 0.25

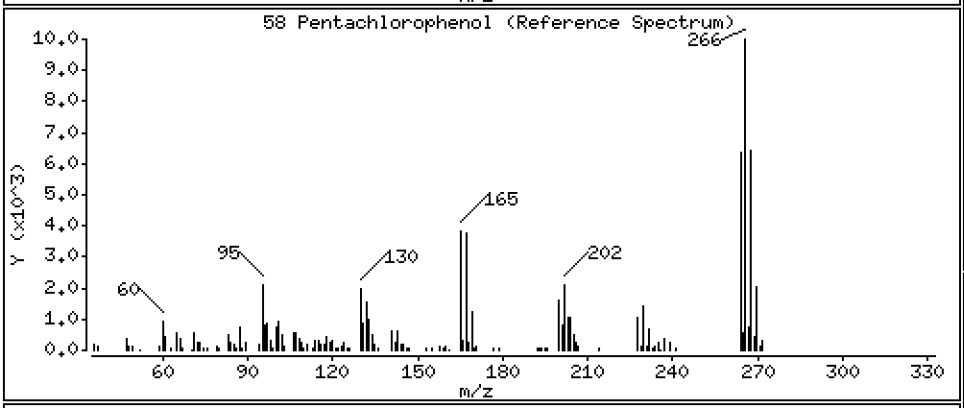
58 Pentachlorophenol Concentration: 3.932 ug/mL

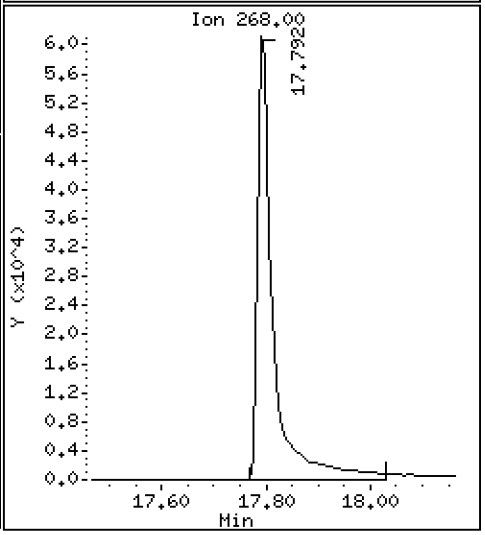


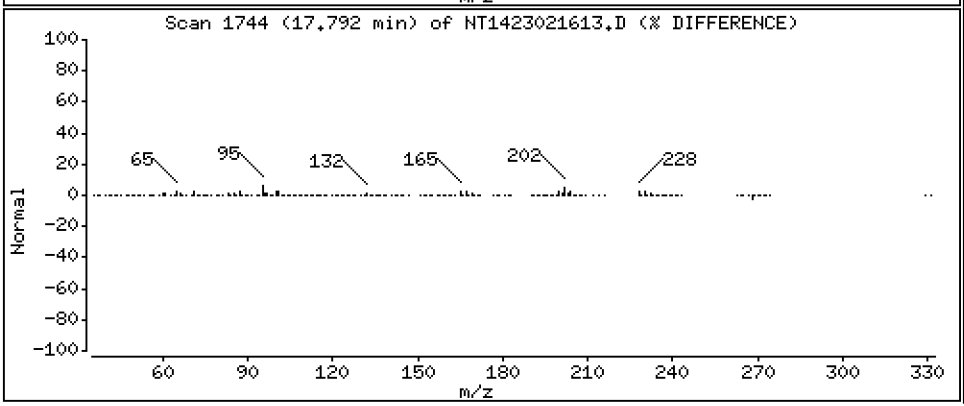












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

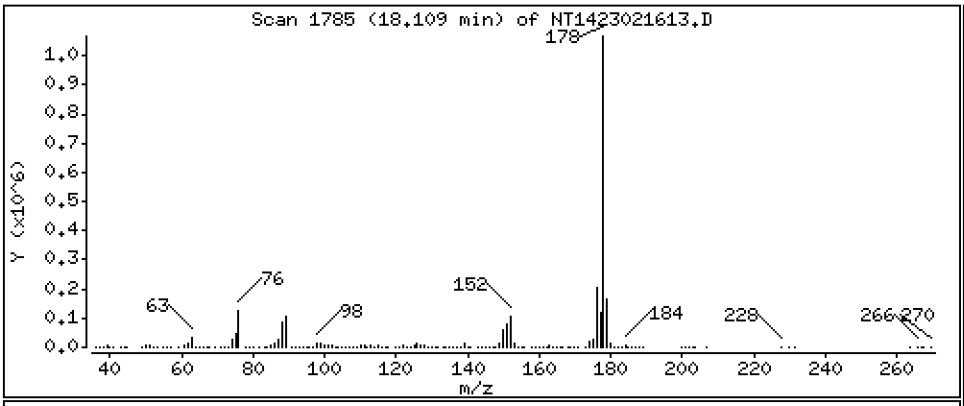
Operator: DSD

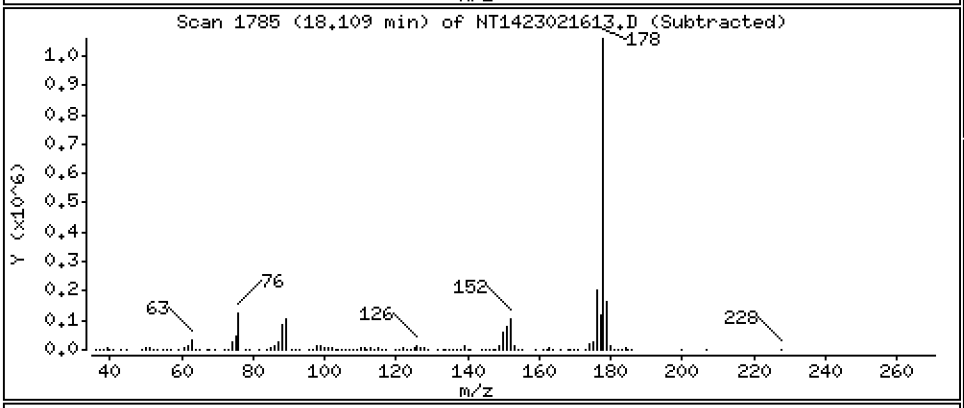
Column phase: ZB-5msi

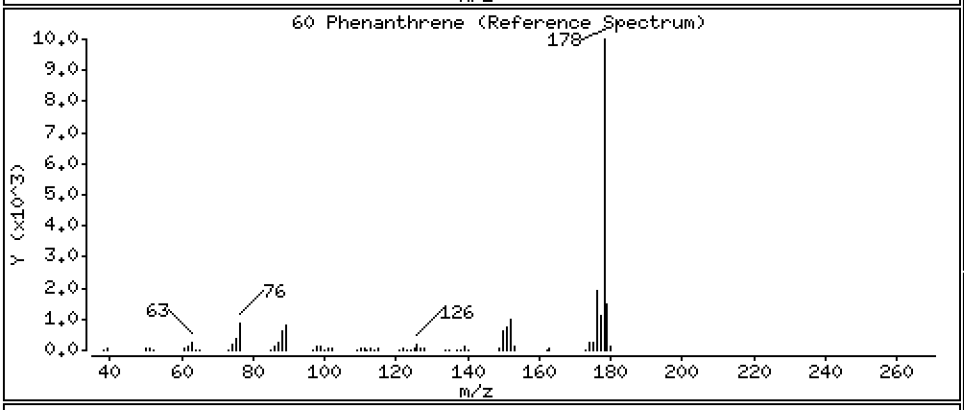
Column diameter: 0.25

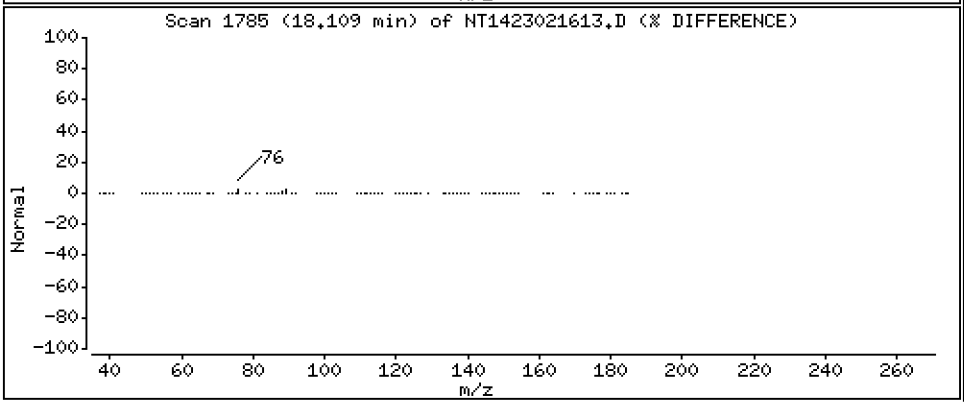
60 Phenanthrene

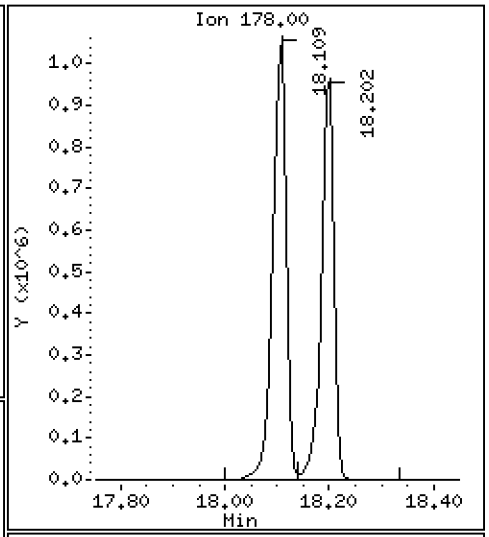
Concentration: 4.690 ug/mL

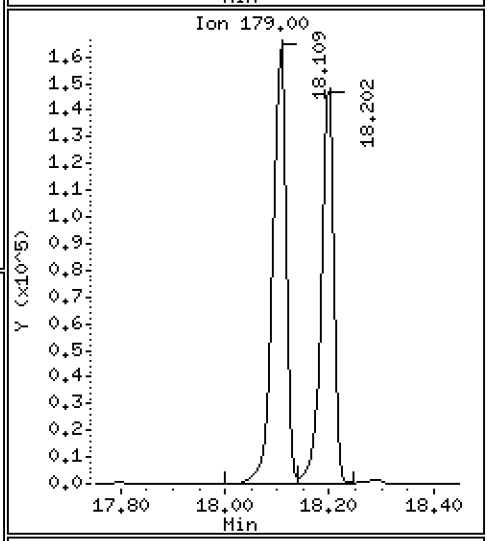


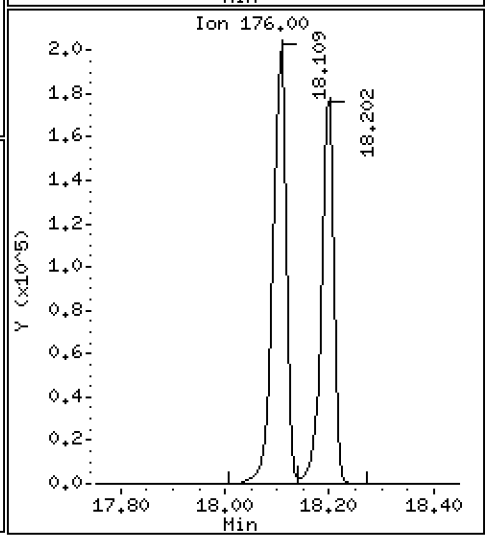












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

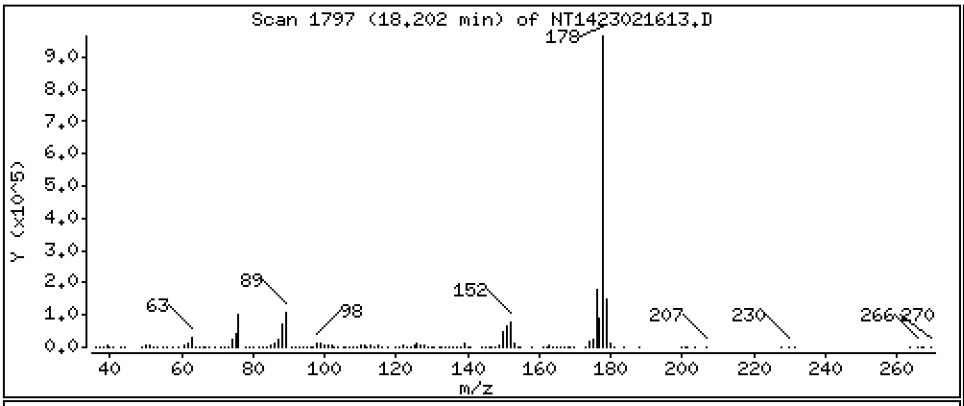
Operator: DSD

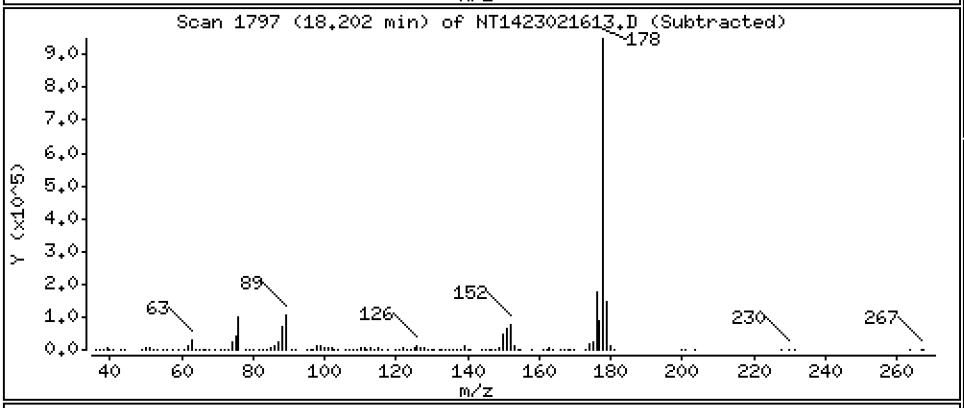
Column phase: ZB-5msi

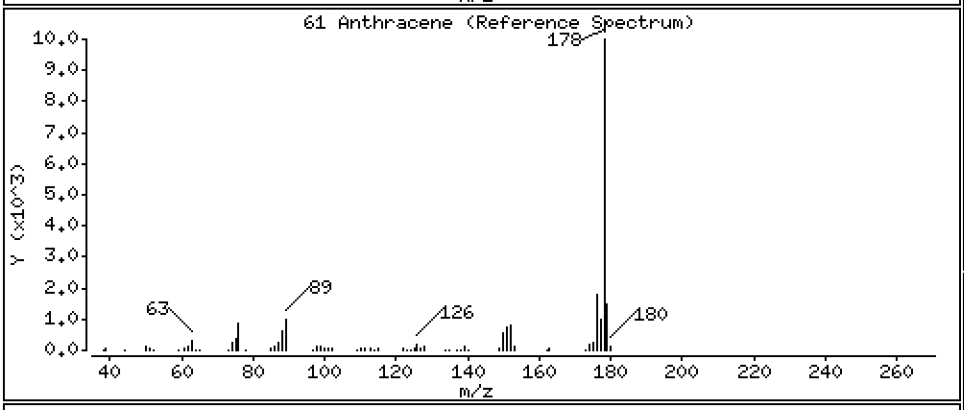
Column diameter: 0.25

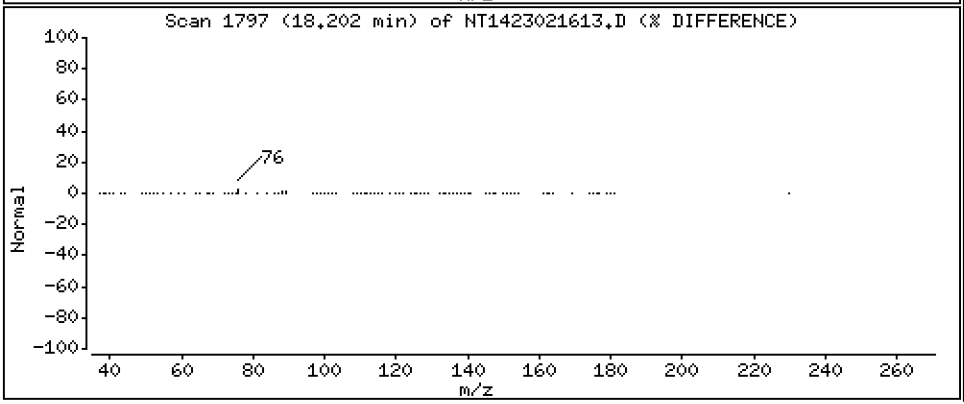
61 Anthracene

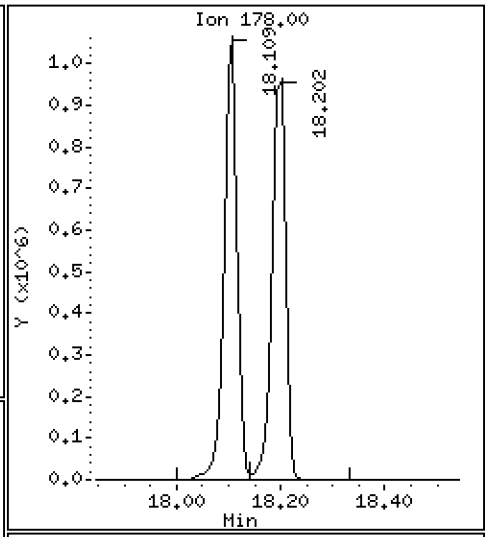
Concentration: 4.304 ug/mL

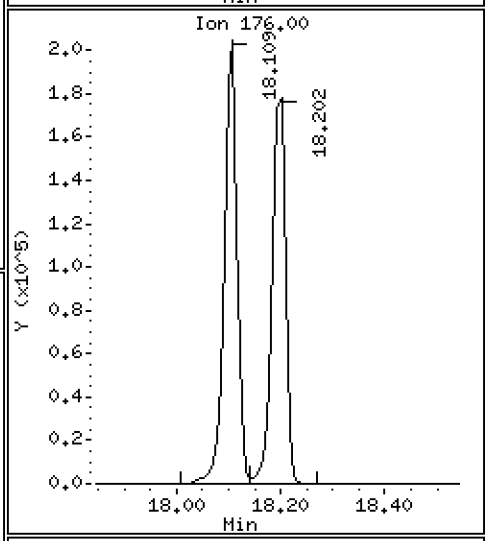


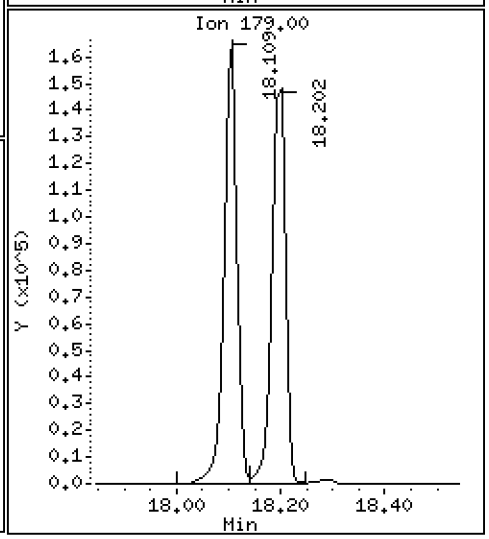












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

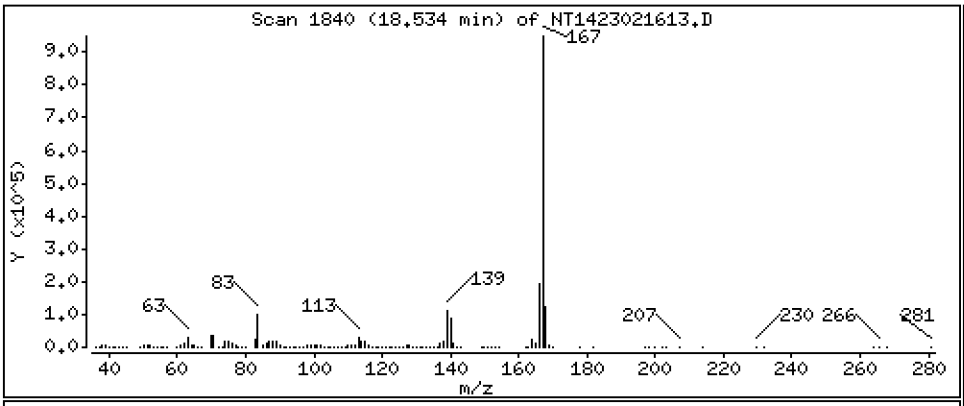
Operator: DSD

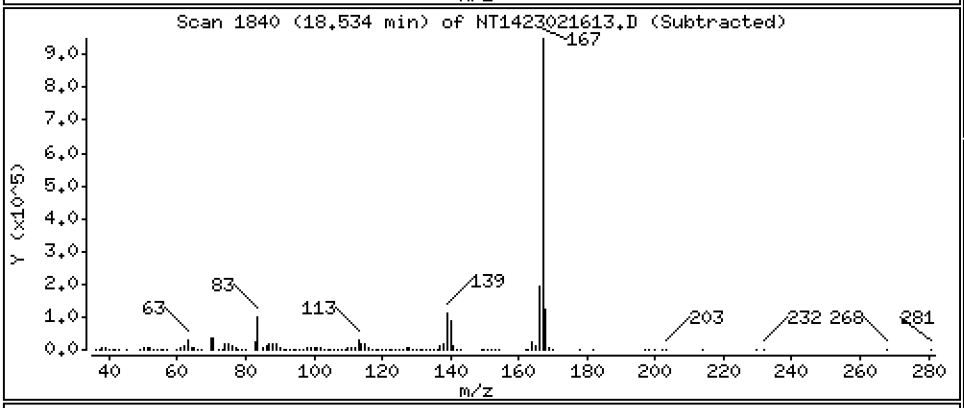
Column phase: ZB-5msi

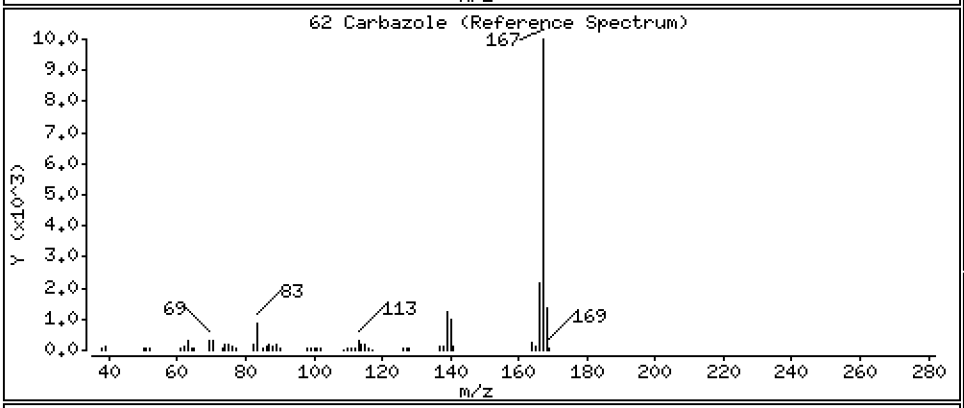
Column diameter: 0.25

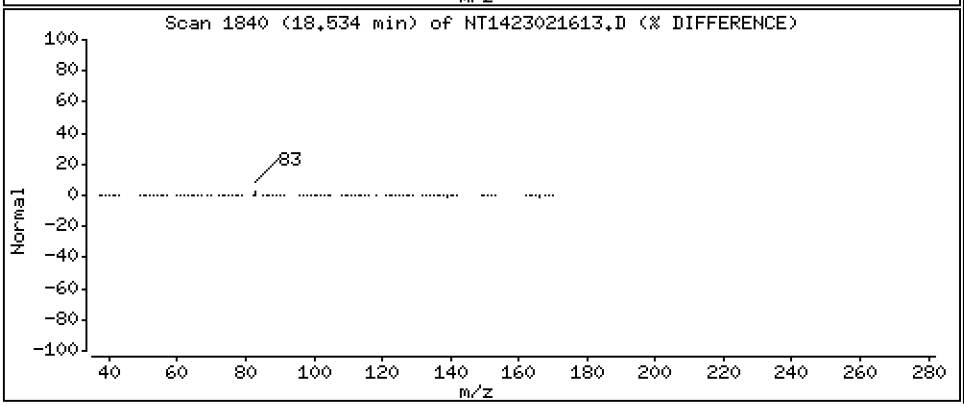
62 Carbazole

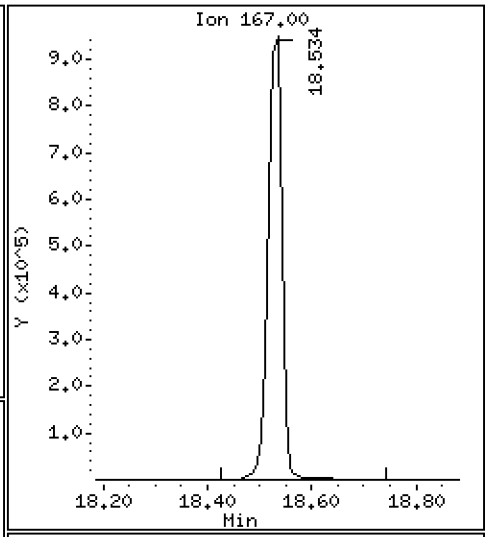
Concentration: 4.792 ug/mL

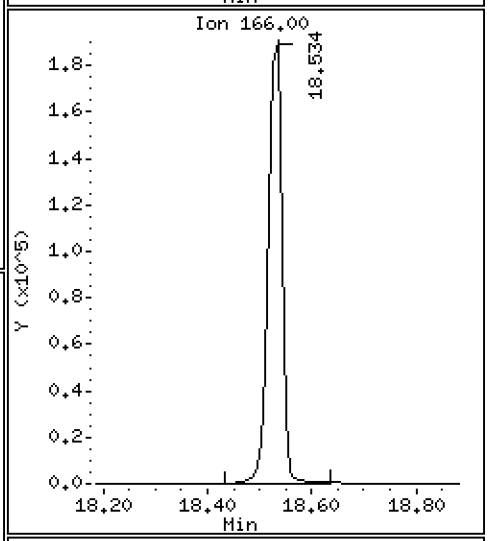


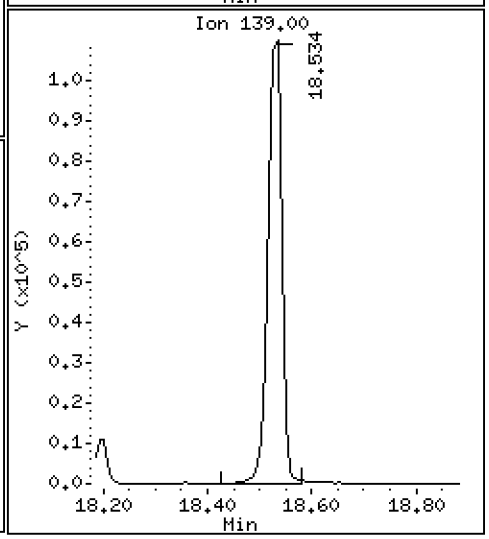












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

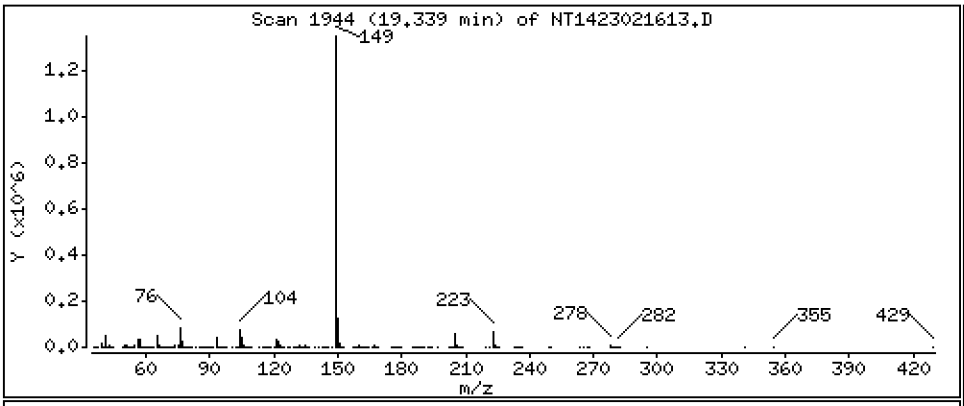
Operator: DSD

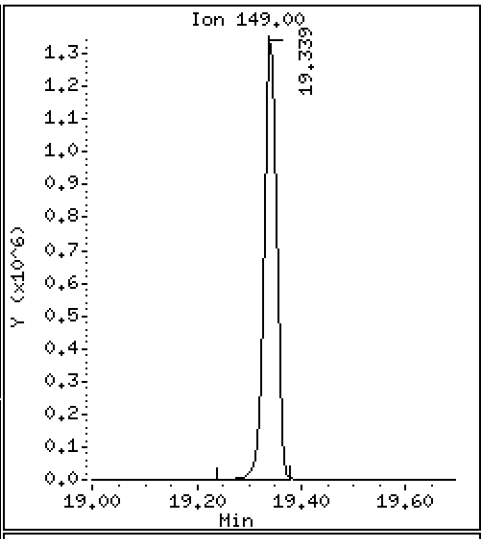
Column phase: ZB-5msi

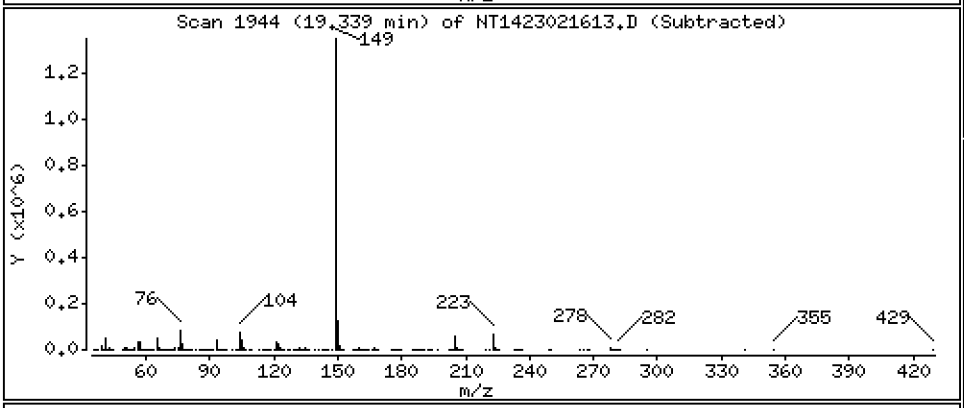
Column diameter: 0.25

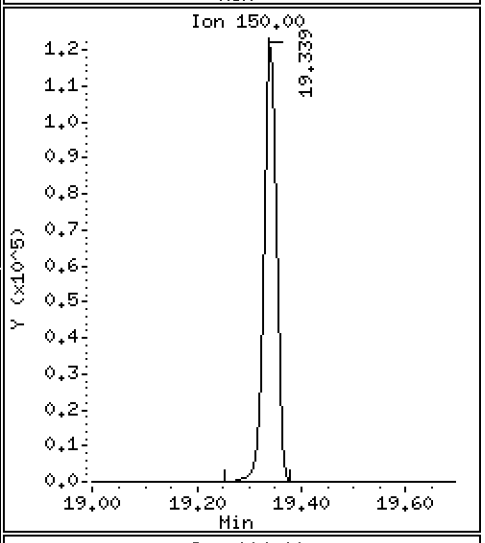
63 Di-n-butylphthalate

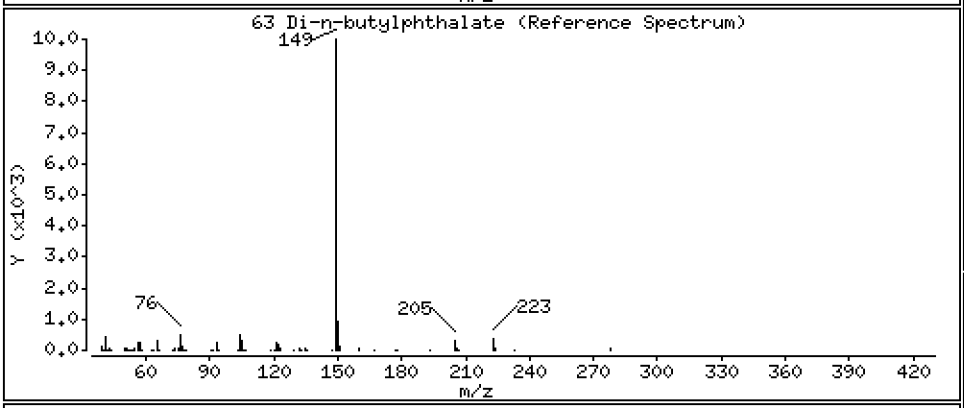
Concentration: 5.515 ug/mL

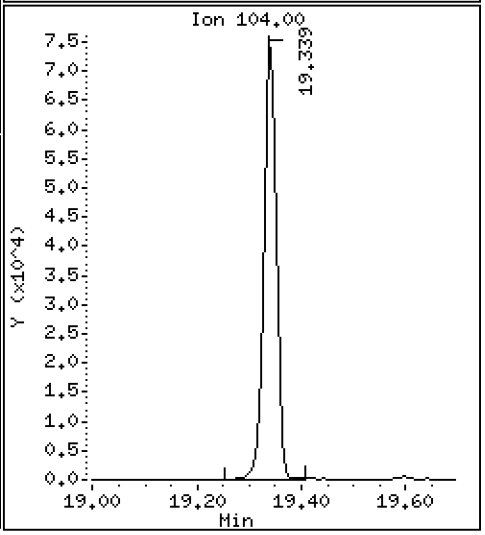


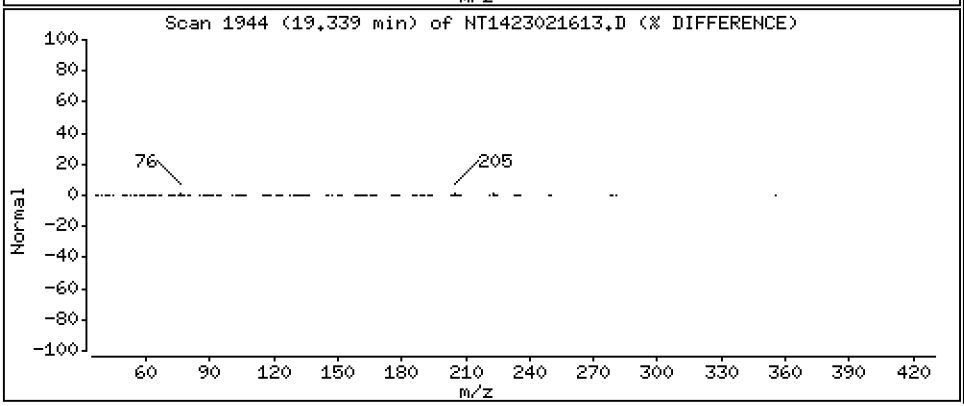












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

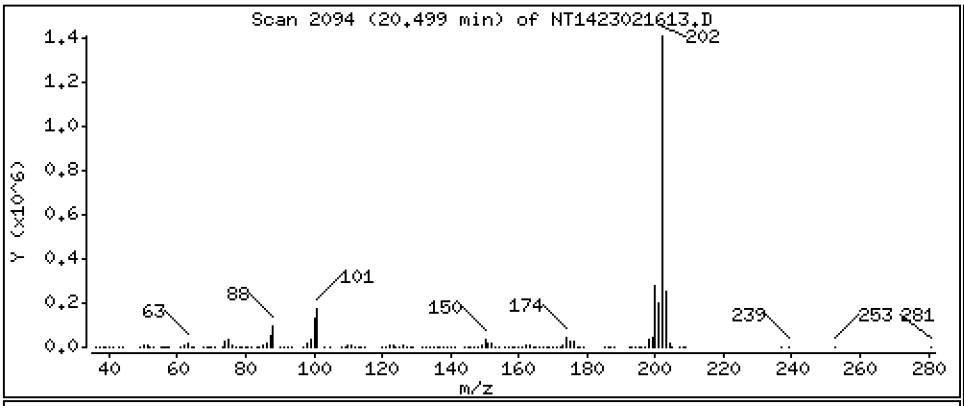
Operator: DSD

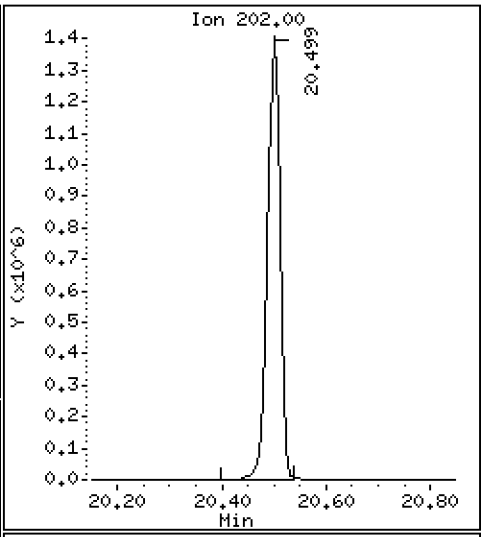
Column phase: ZB-5msi

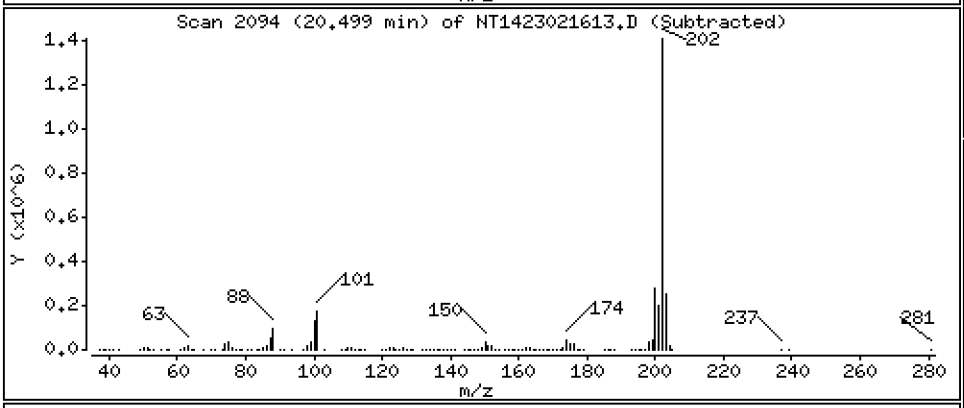
Column diameter: 0.25

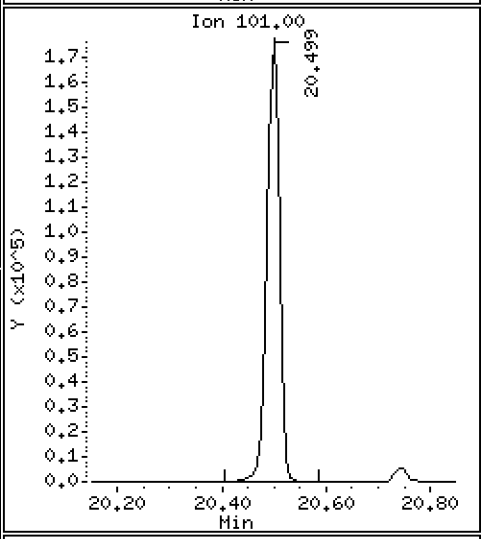
64 Fluoranthene

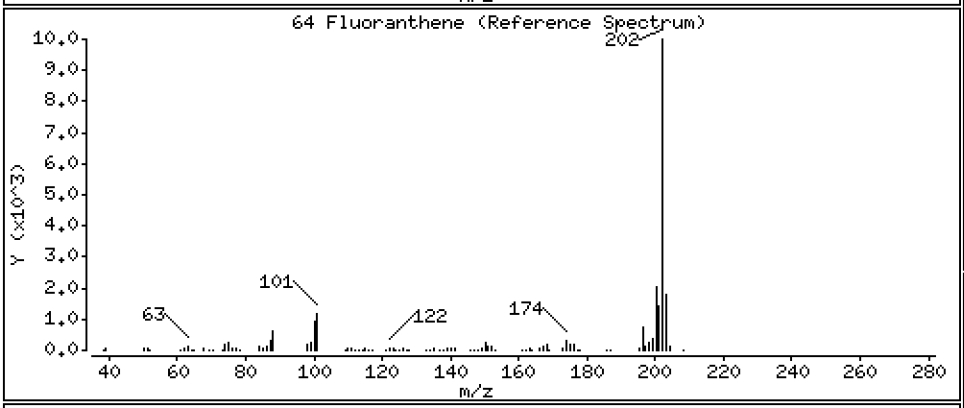
Concentration: 4.682 ug/mL

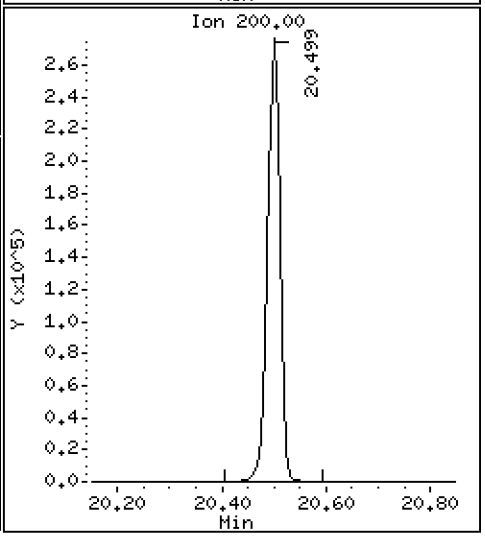


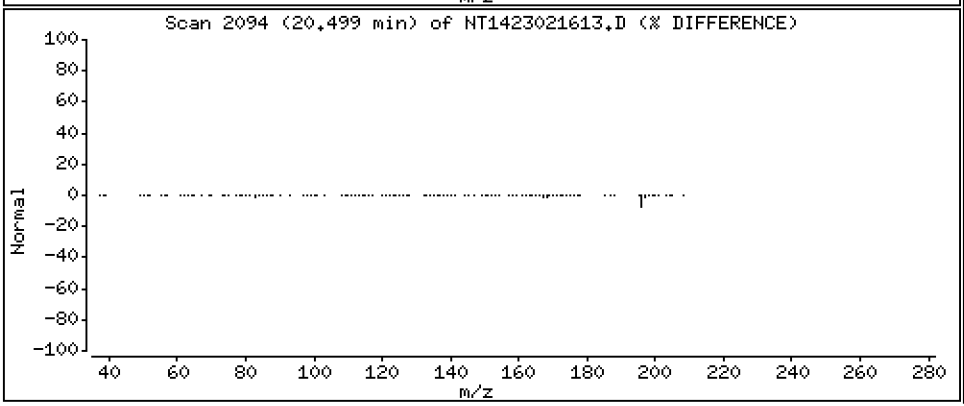












Date : 16-FEB-2023 21:18

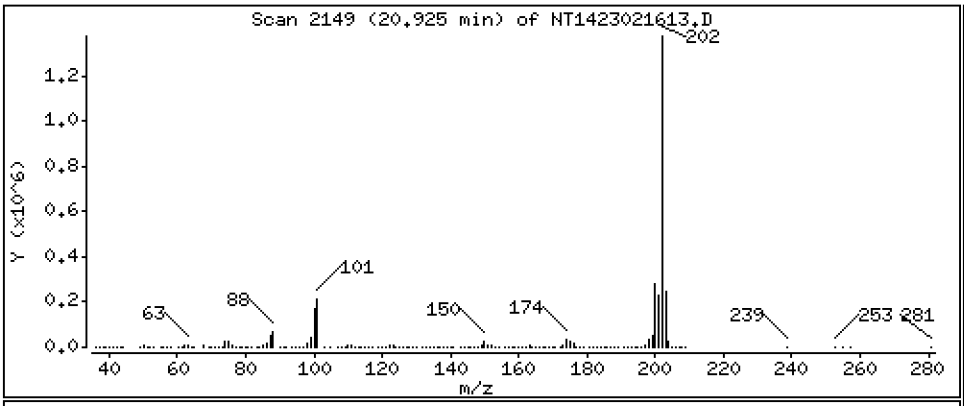
Client ID: Instrument: nt14.i

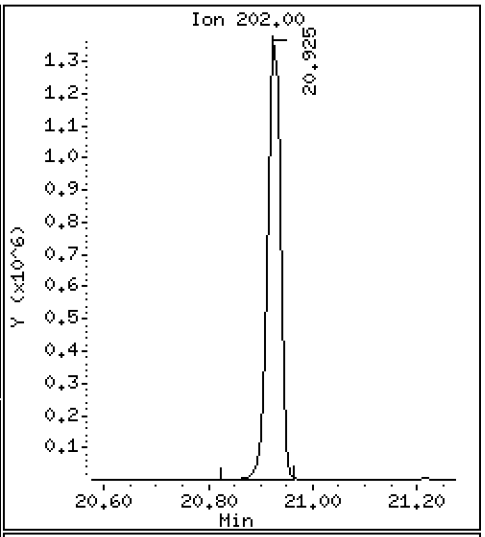
Sample Info: SLB0234-SCV1

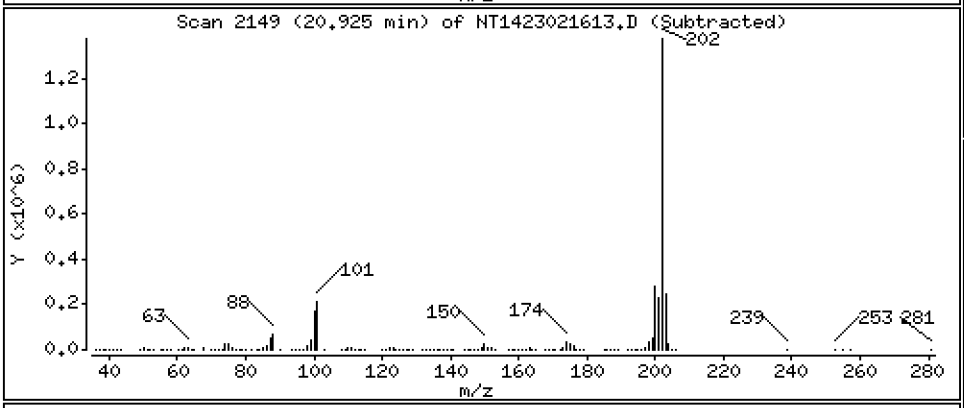
Operator: DSD

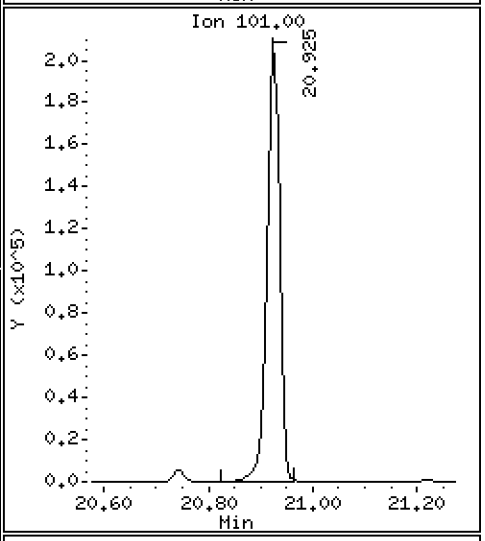
Column phase: ZB-5msi Column diameter: 0.25

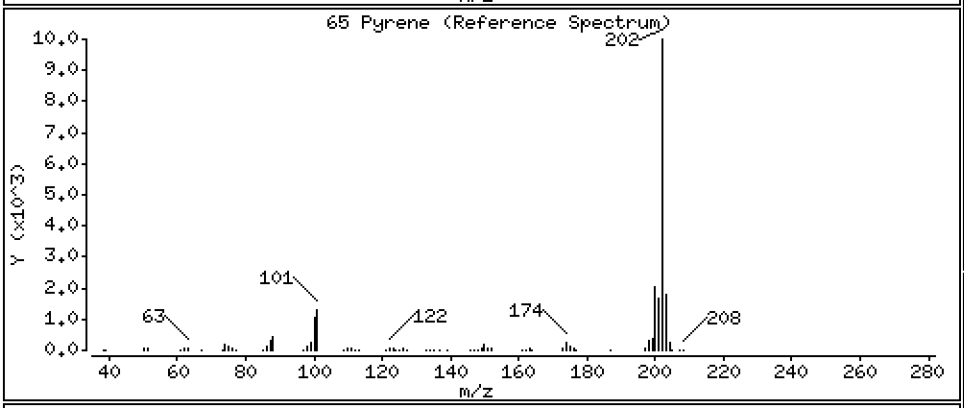
65 Pyrene Concentration: 4.400 ug/mL

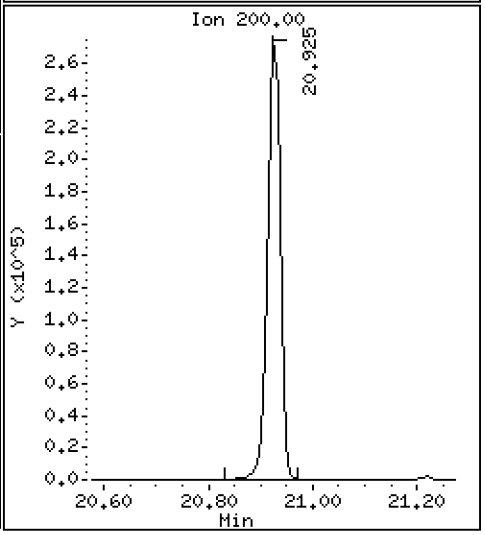


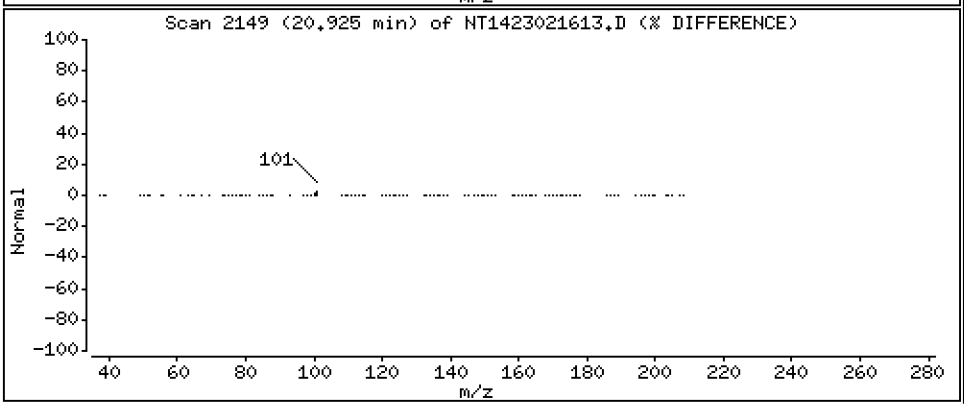












Date : 16-FEB-2023 21:18

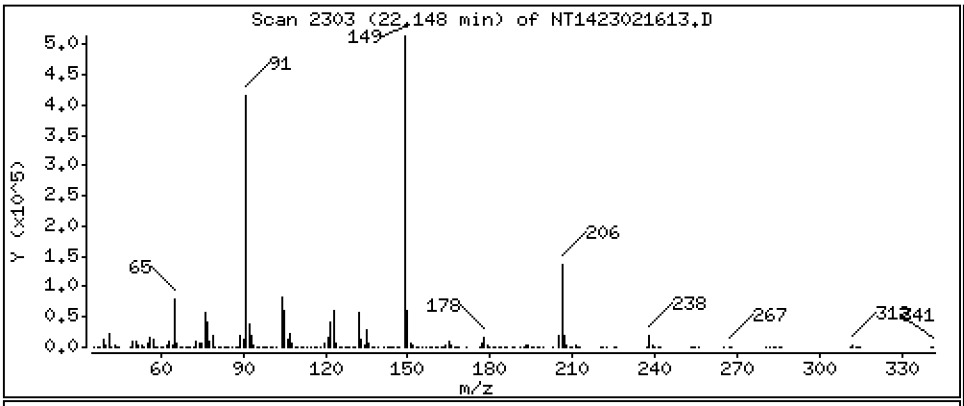
Client ID: Instrument: nt14.i

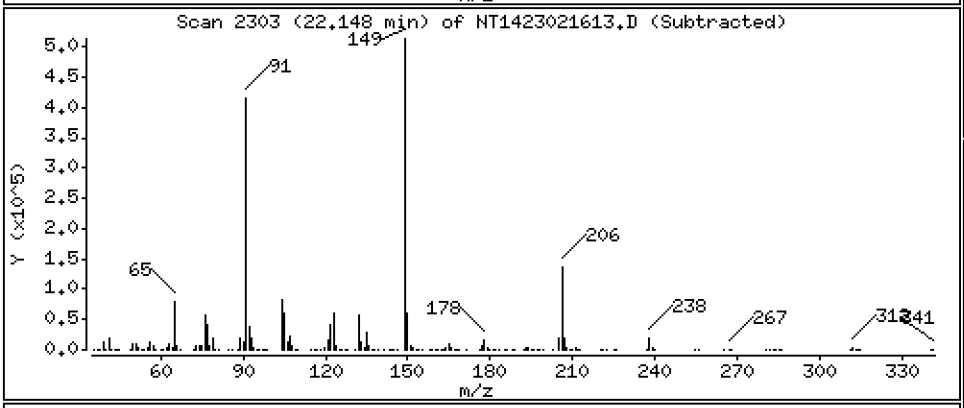
Sample Info: SLB0234-SCV1

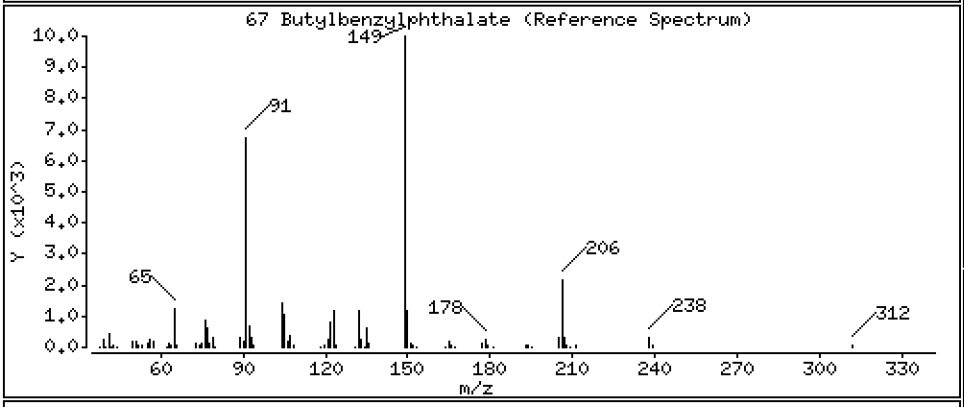
Operator: DSD

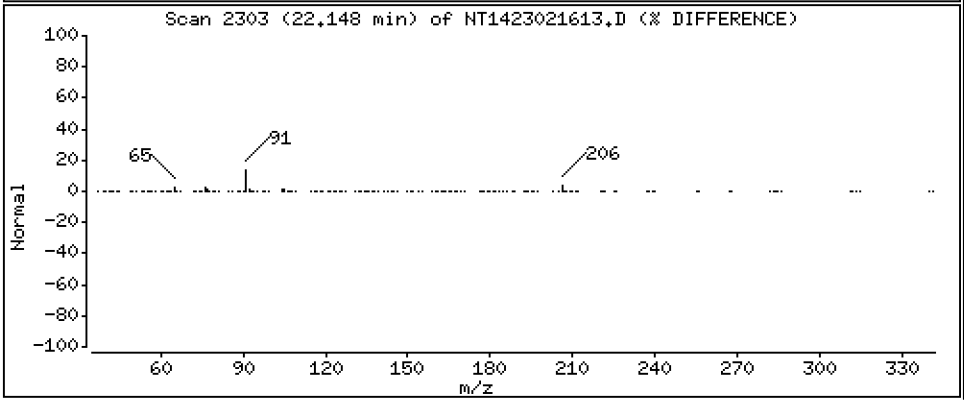
Column phase: ZB-5msi Column diameter: 0.25

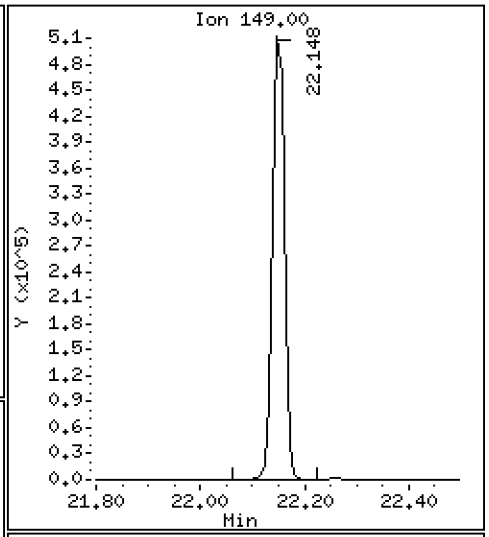
67 Butylbenzylphthalate Concentration: 4.568 ug/mL

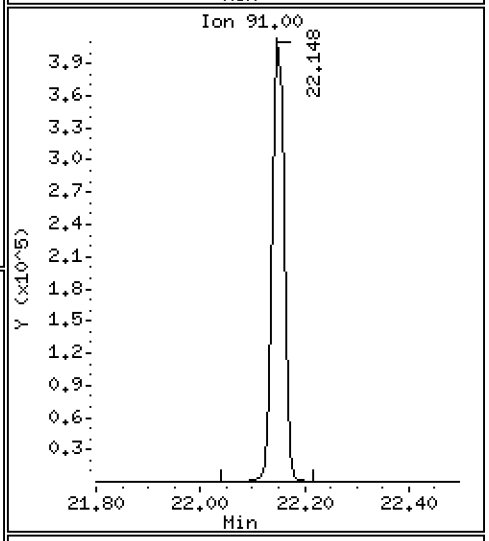


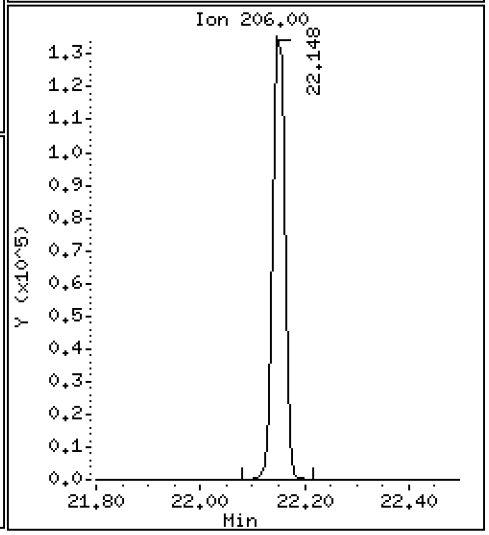












Date : 16-FEB-2023 21:18

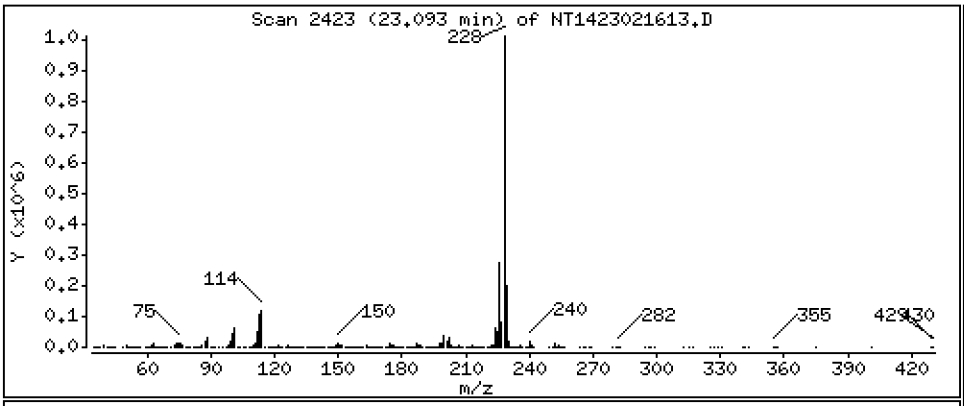
Client ID: Instrument: nt14.i

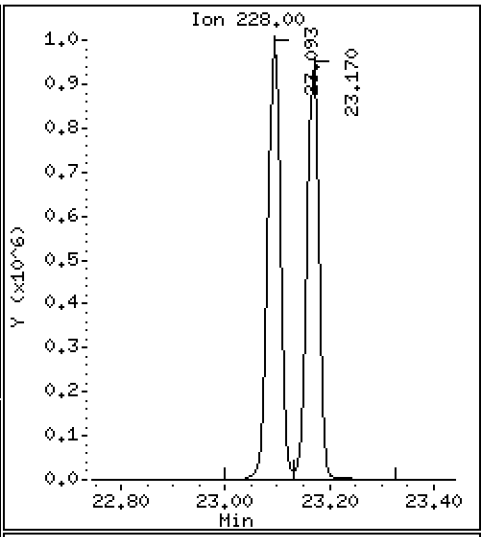
Sample Info: SLB0234-SCV1

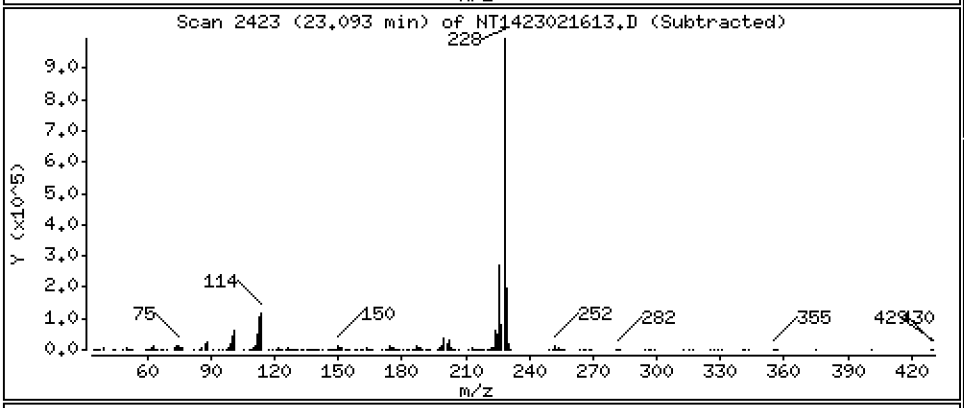
Operator: DSD

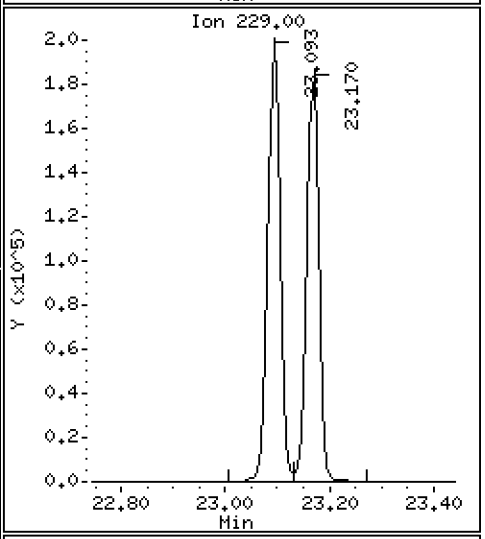
Column phase: ZB-5msi Column diameter: 0.25

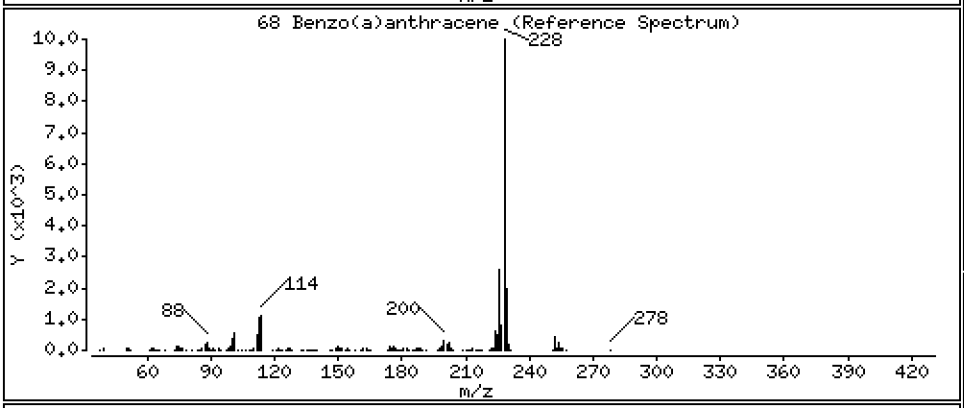
68 Benzo(a)anthracene Concentration: 4.530 ug/mL

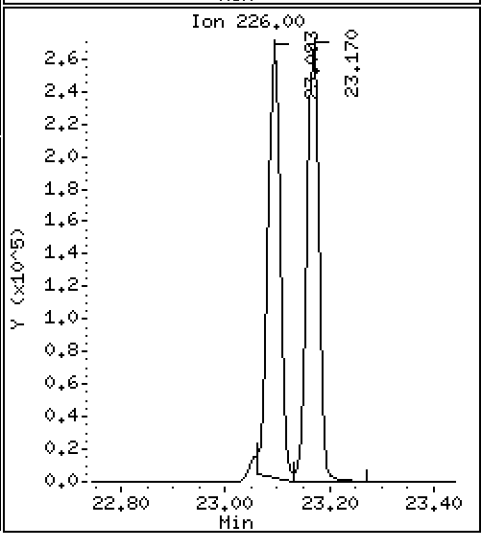


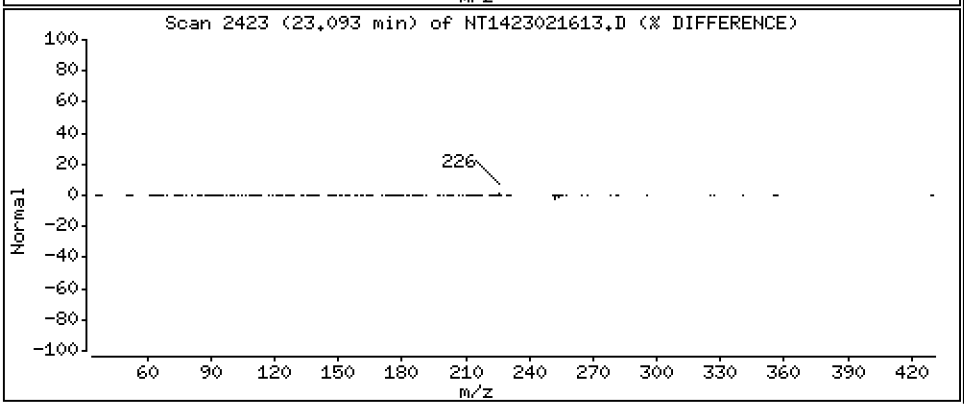












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

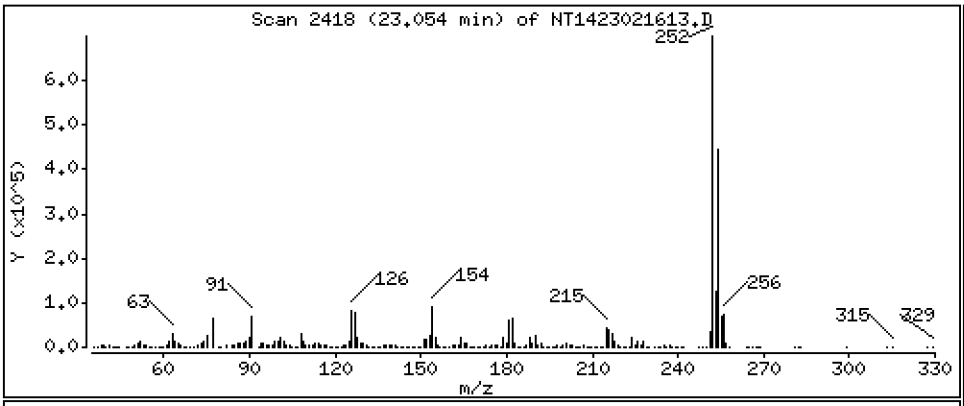
Operator: DSD

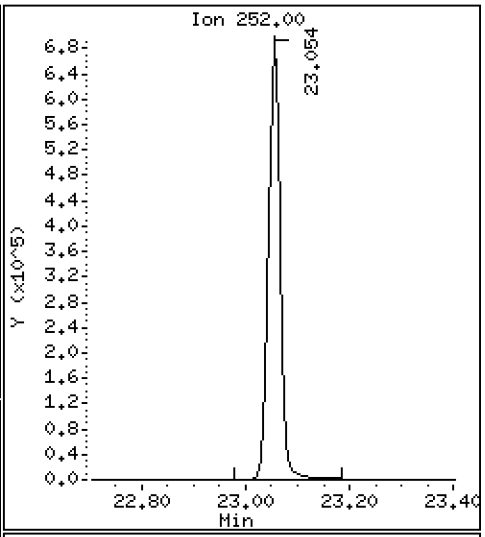
Column phase: ZB-5msi

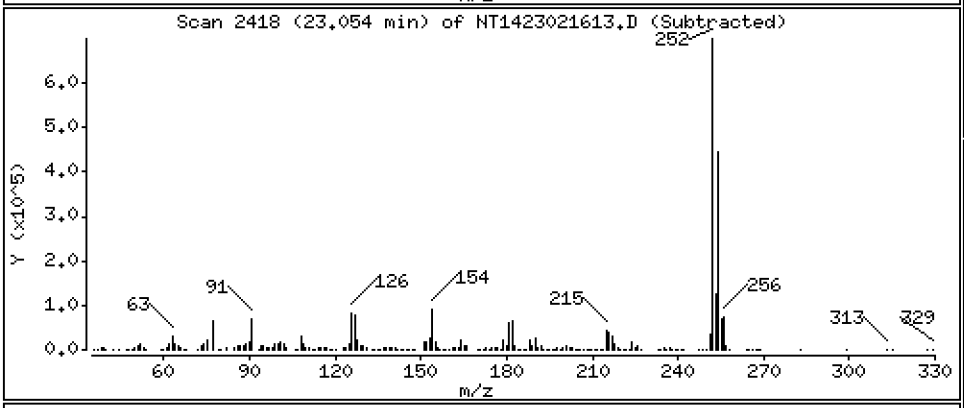
Column diameter: 0.25

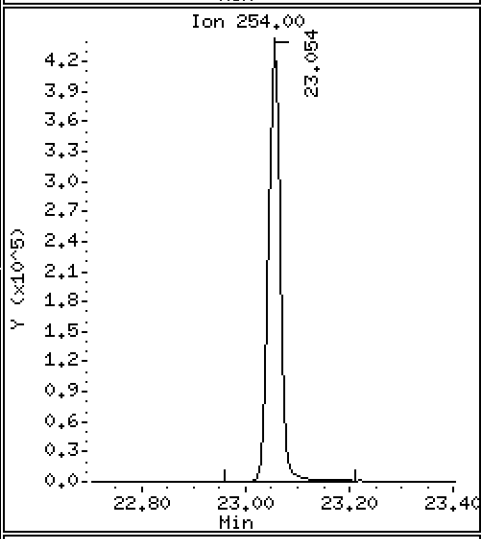
70 3,3'-Dichlorobenzidine

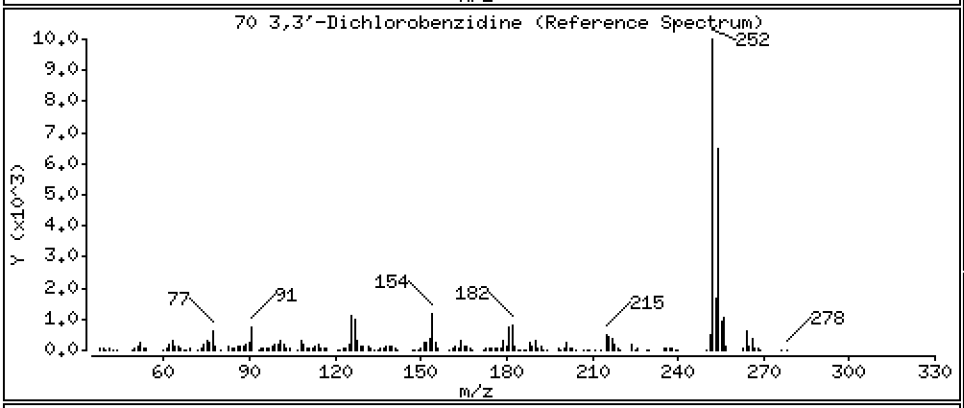
Concentration: 9.328 ug/mL

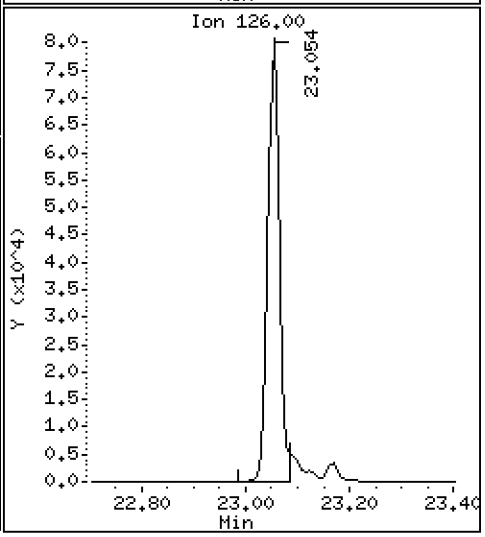


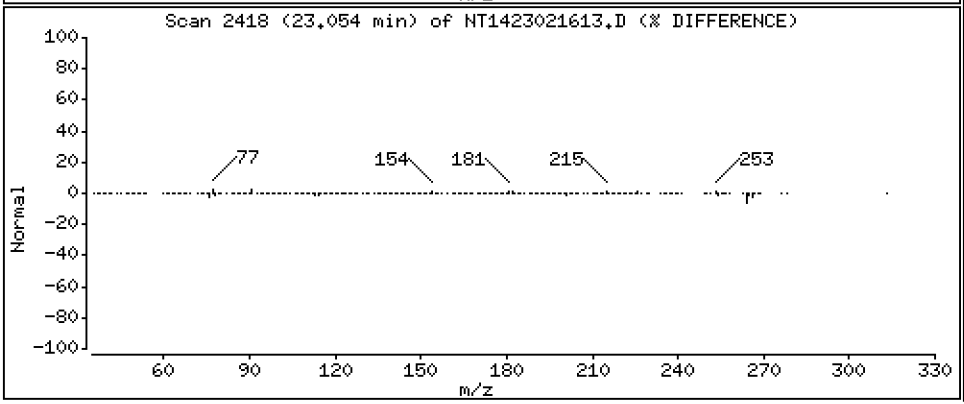












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

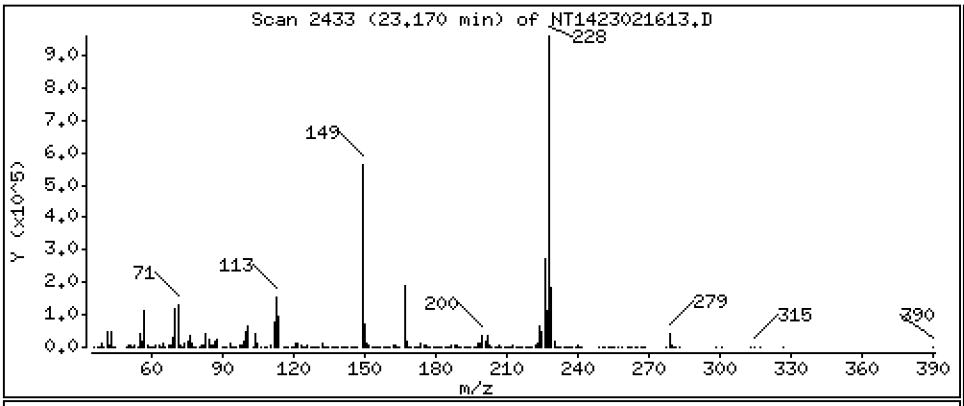
Operator: DSD

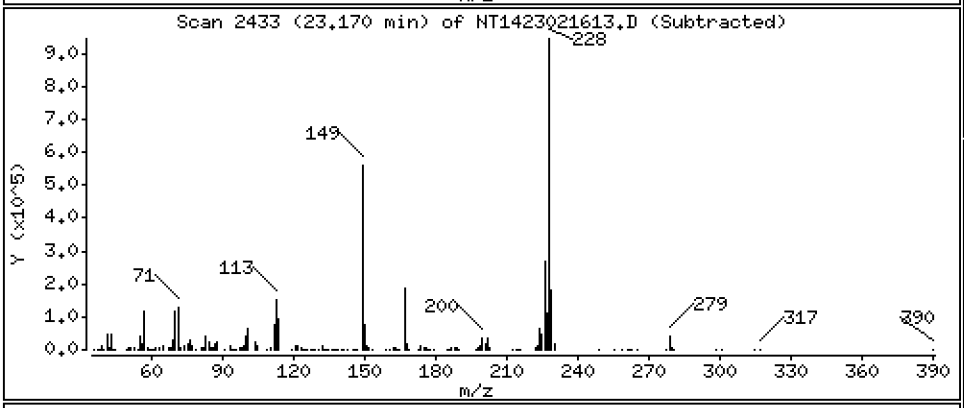
Column phase: ZB-5msi

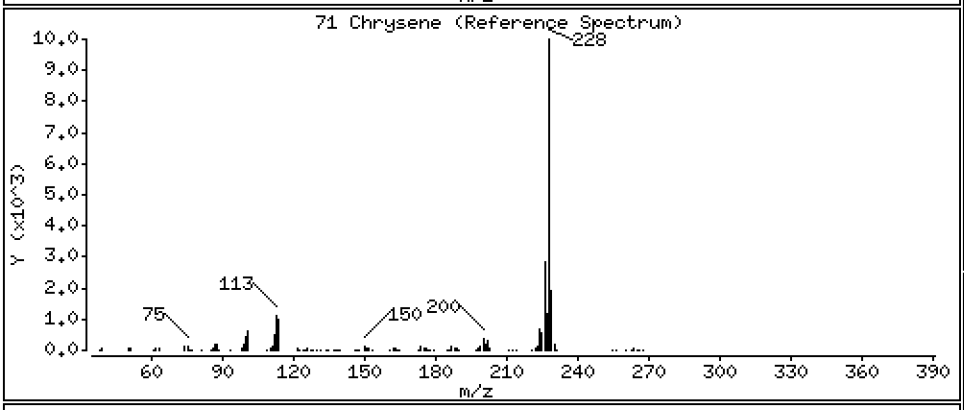
Column diameter: 0.25

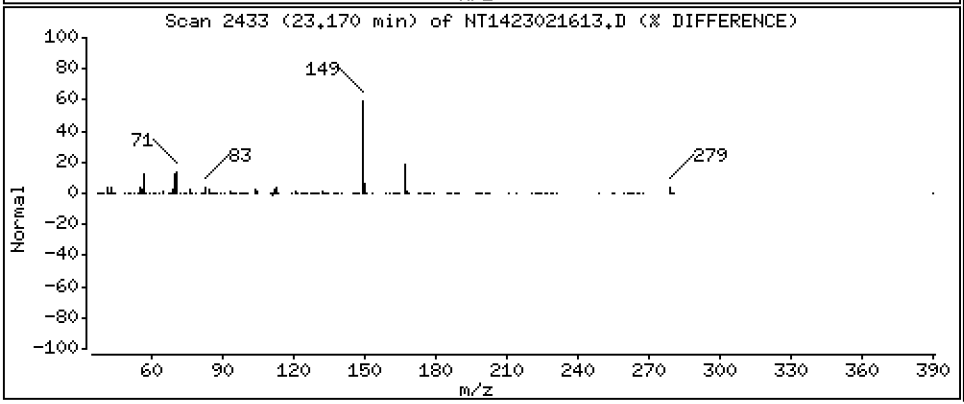
71 Chrysene

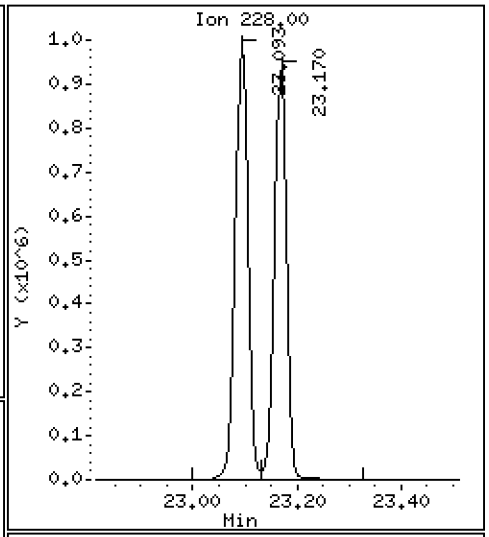
Concentration: 4.474 ug/mL

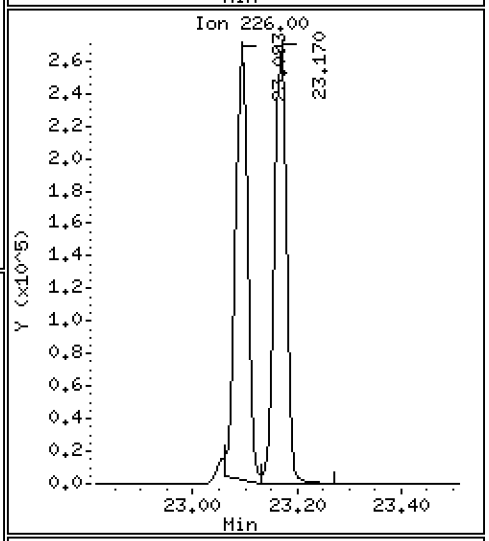


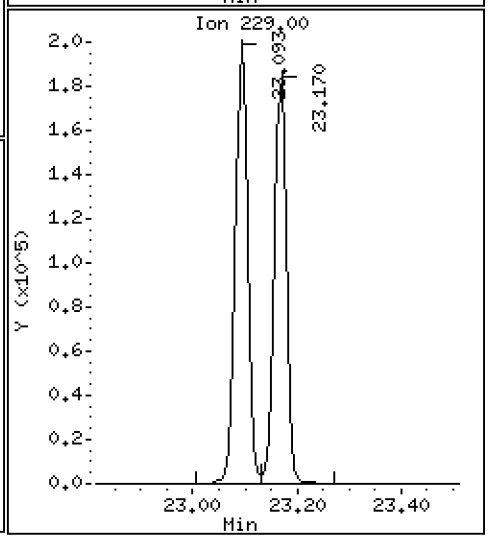












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

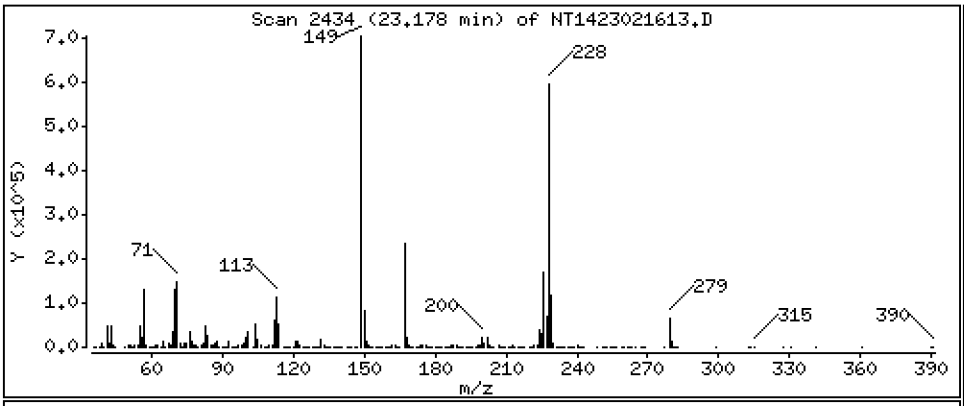
Operator: DSD

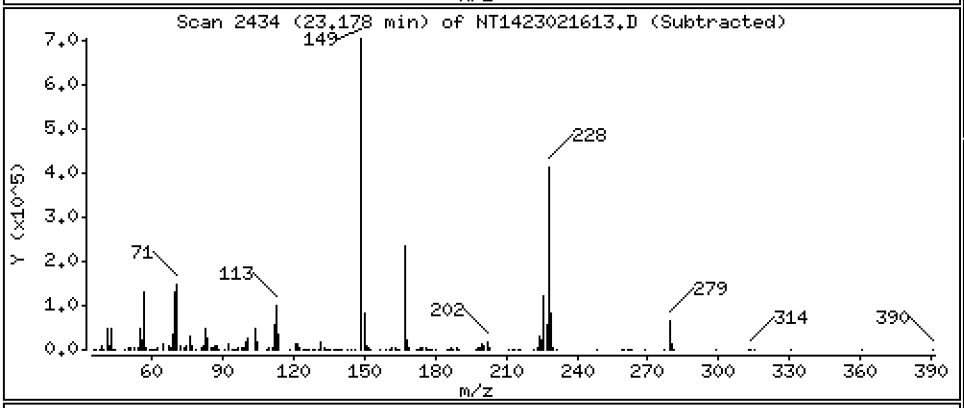
Column phase: ZB-5msi

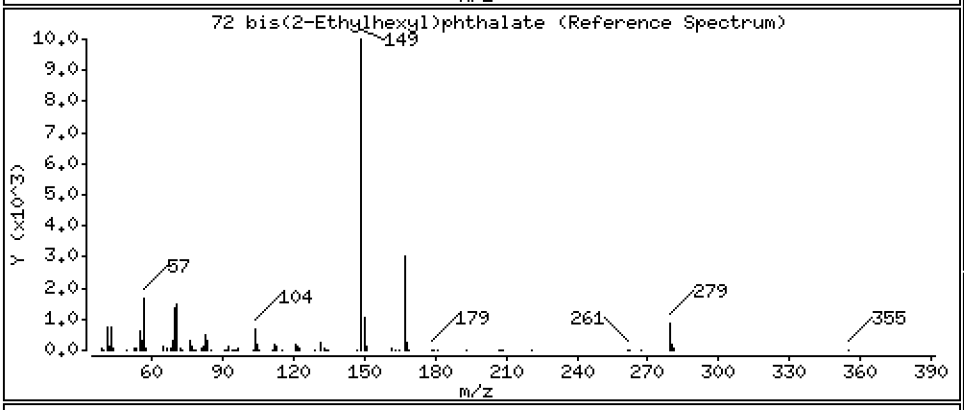
Column diameter: 0.25

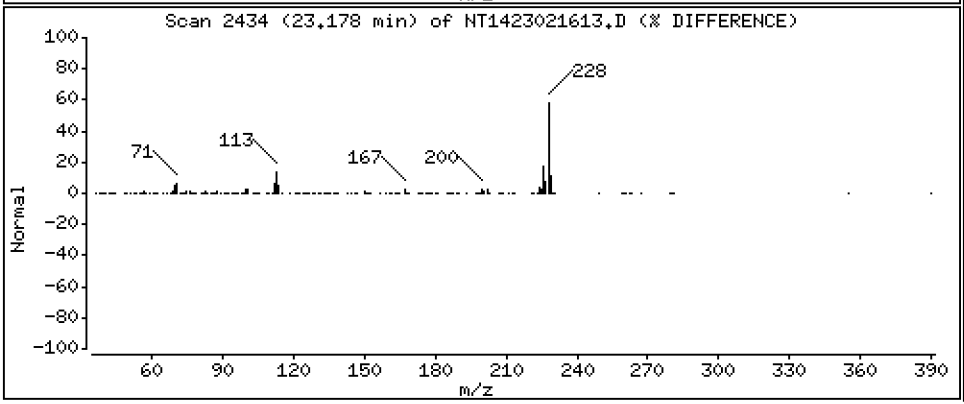
72 bis(2-Ethylhexyl)phthalate

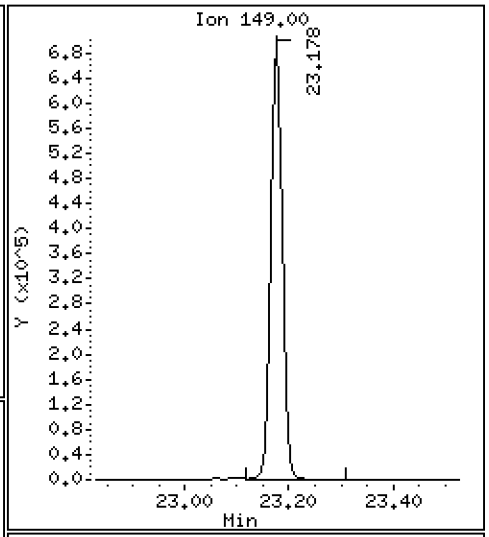
Concentration: 4.649 ug/mL

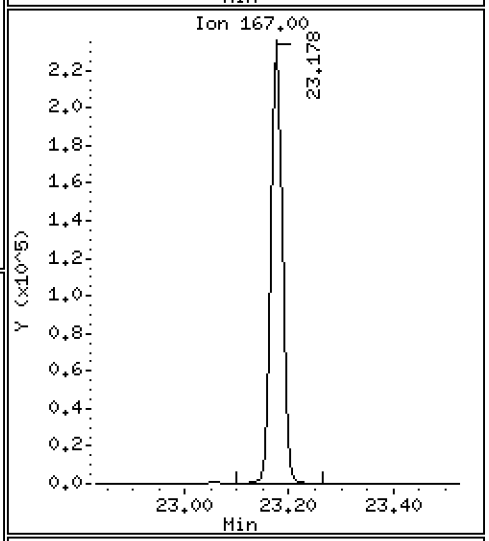


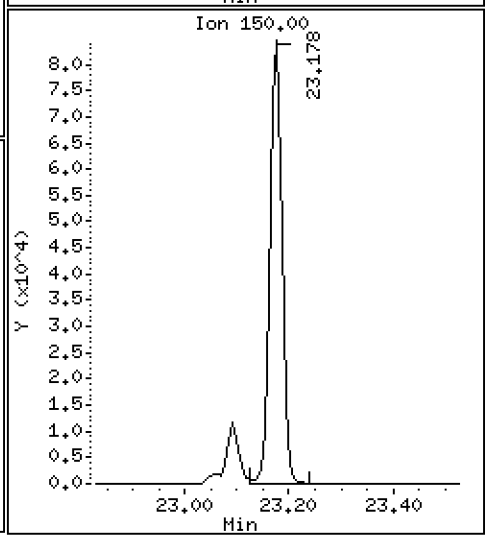












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

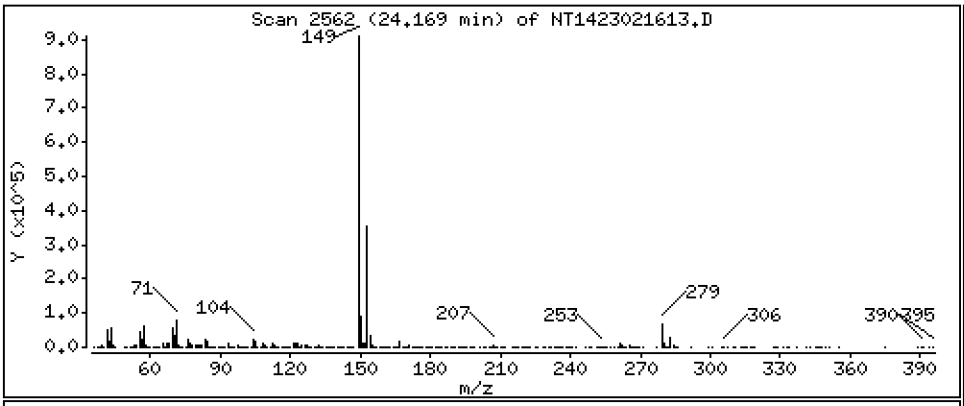
Operator: DSD

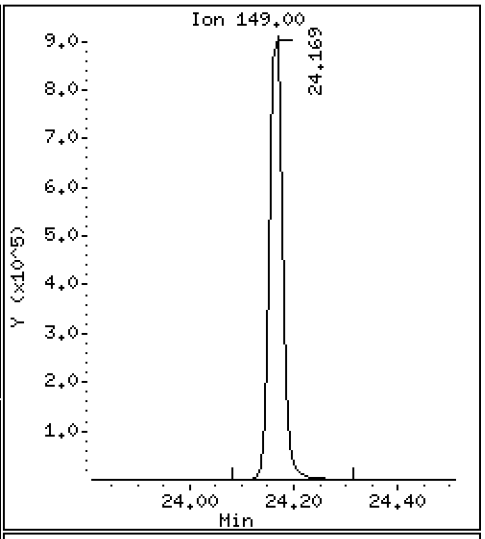
Column phase: ZB-5msi

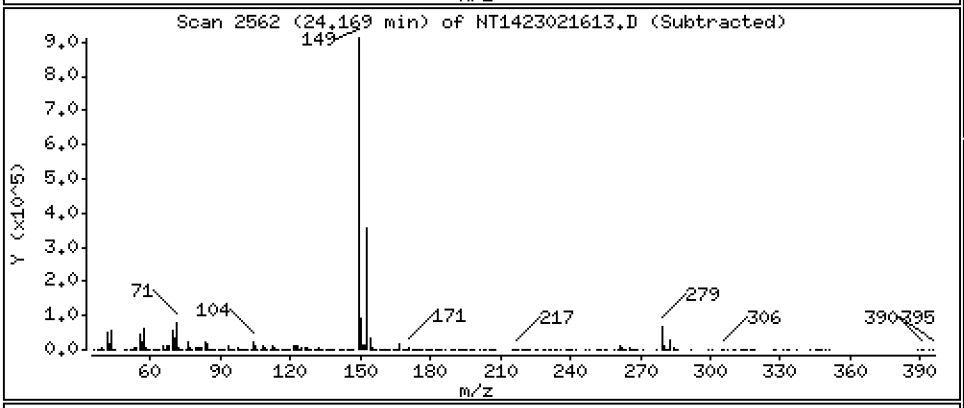
Column diameter: 0.25

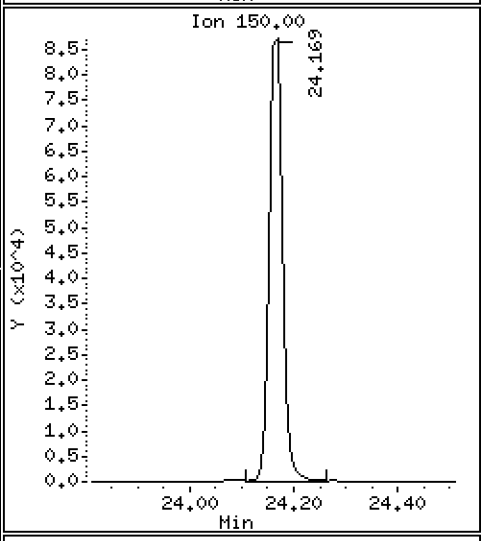
73 Di-n-octylphthalate

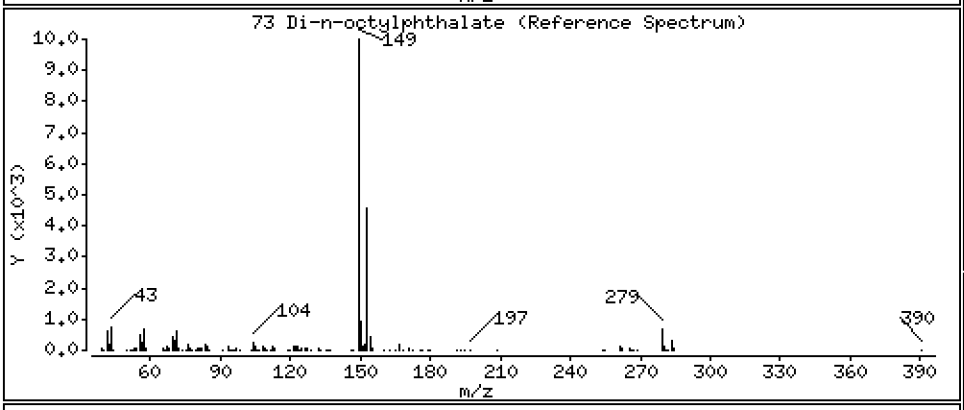
Concentration: 4.962 ug/mL

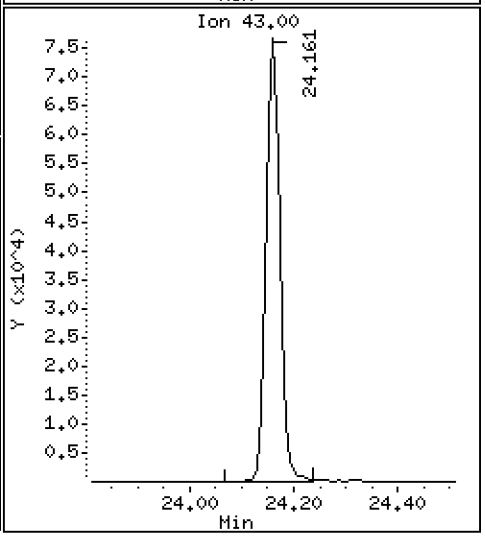


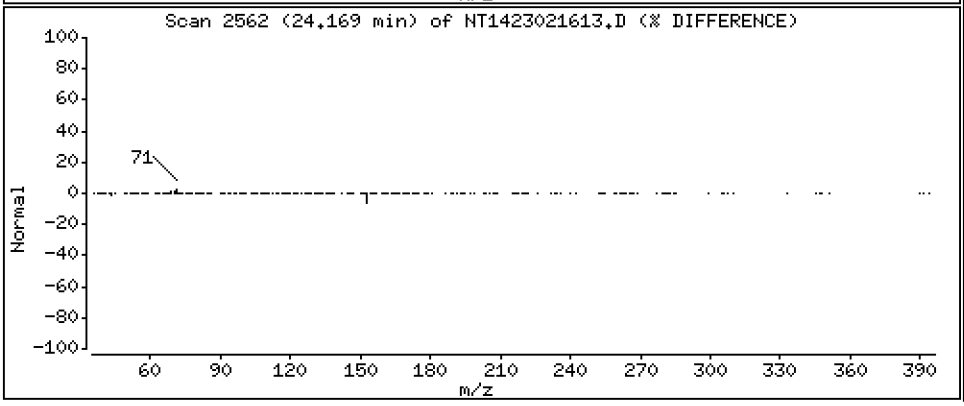












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

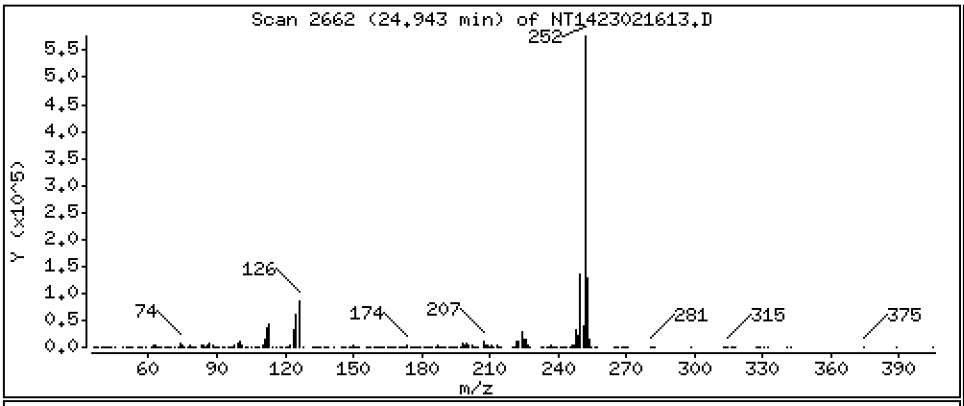
Operator: DSD

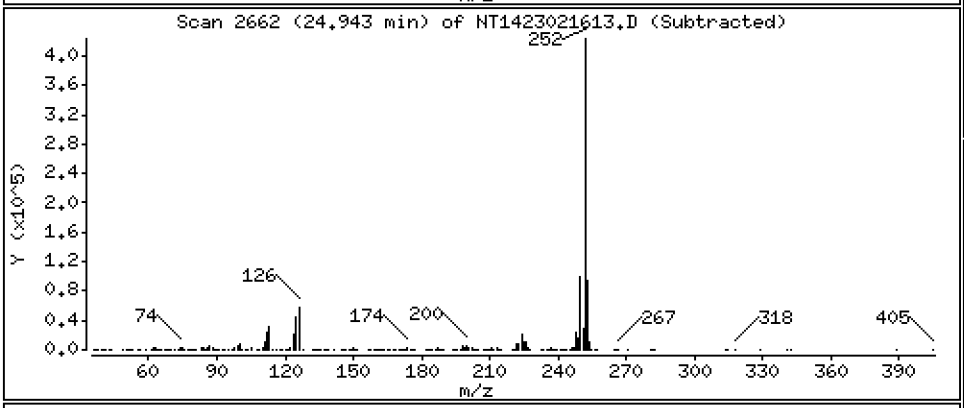
Column phase: ZB-5msi

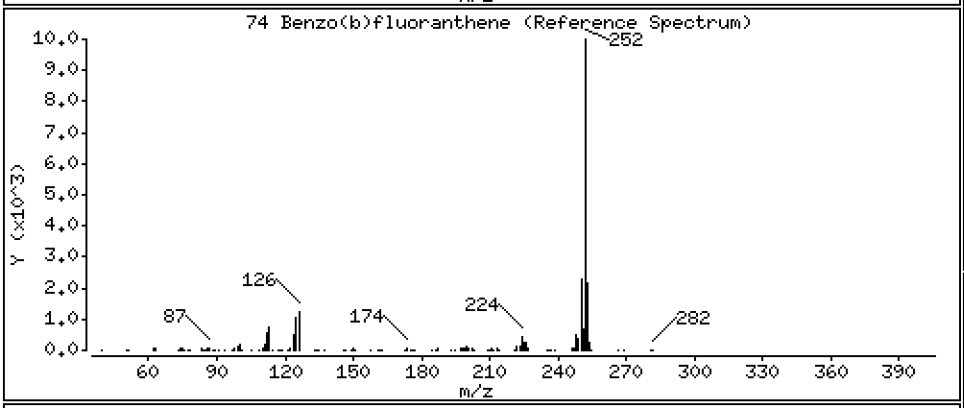
Column diameter: 0.25

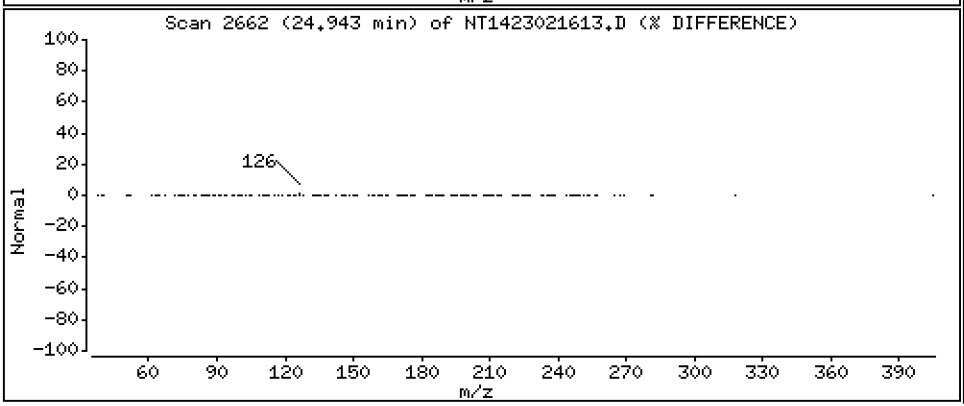
74 Benzo(b)fluoranthene

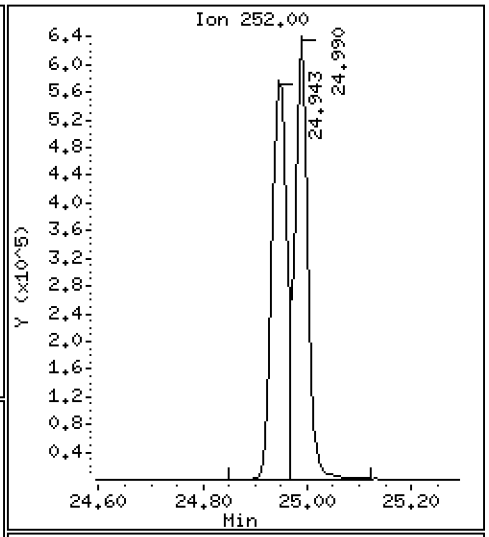
Concentration: 4.813 ug/mL

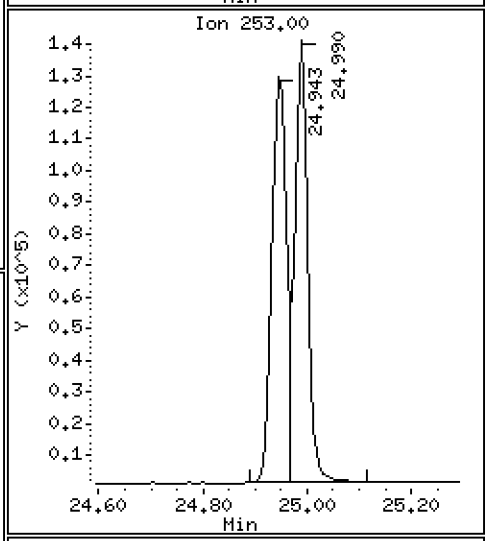


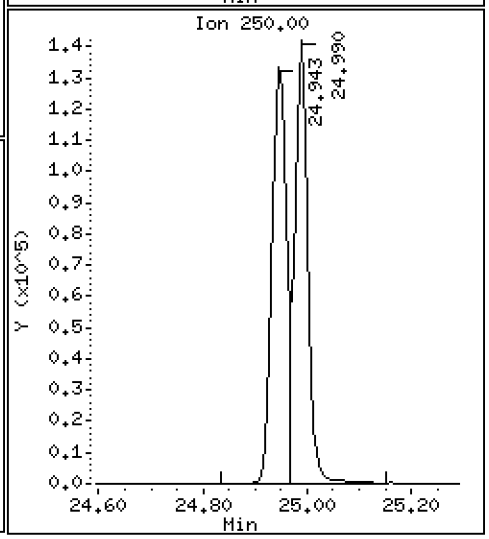












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

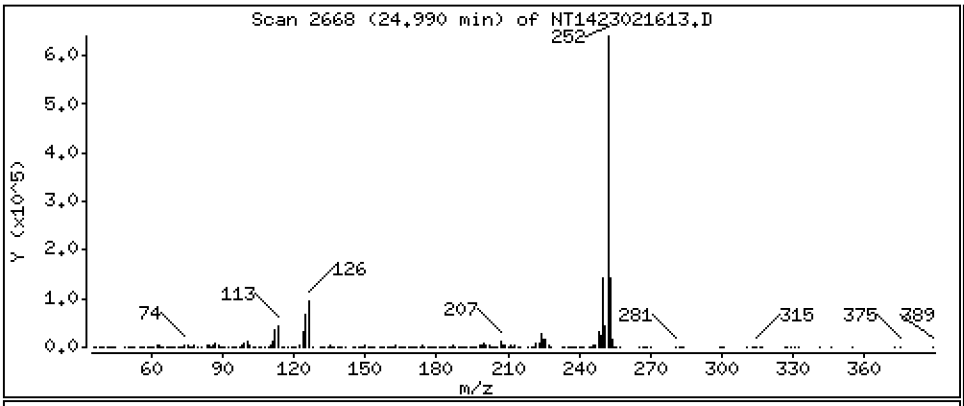
Operator: DSD

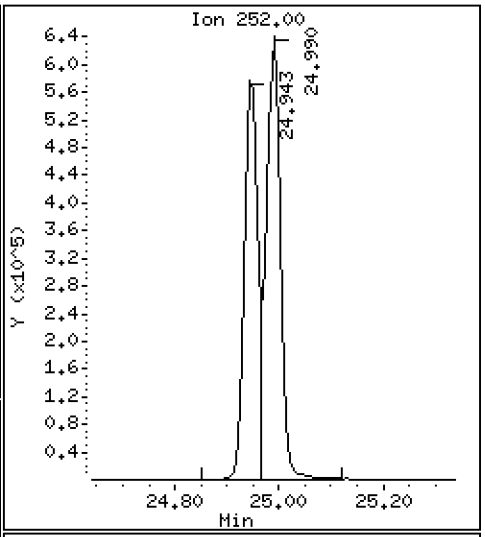
Column phase: ZB-5msi

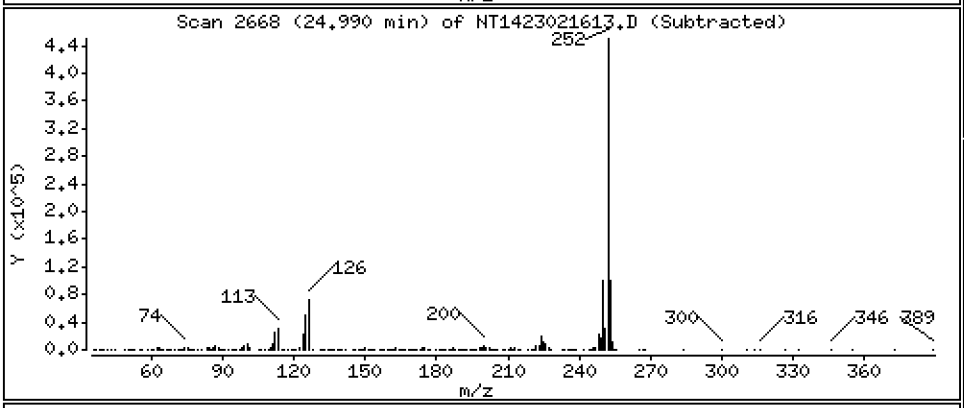
Column diameter: 0.25

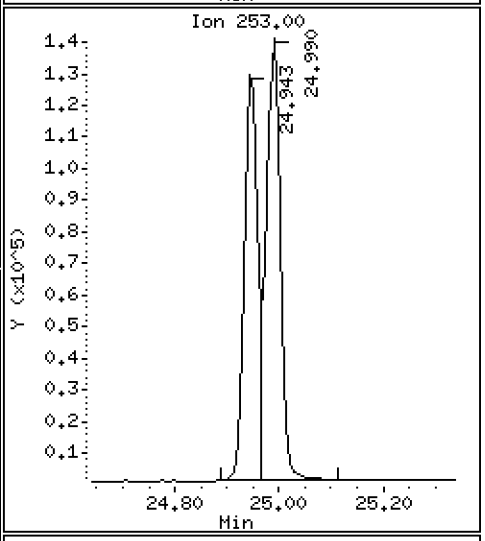
75 Benzo(k)fluoranthene

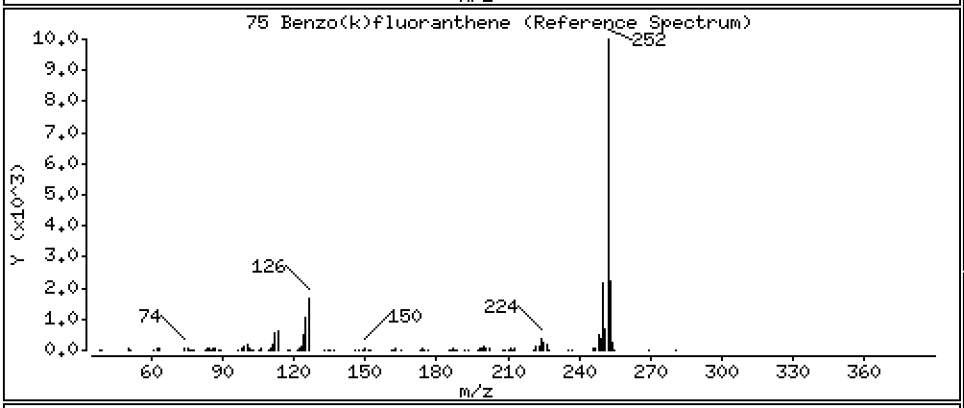
Concentration: 4.838 ug/mL

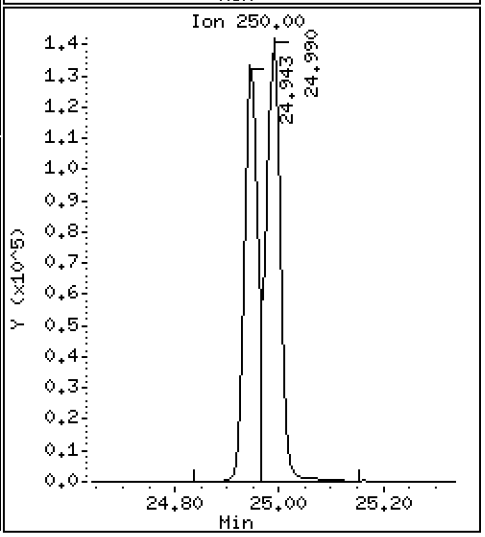


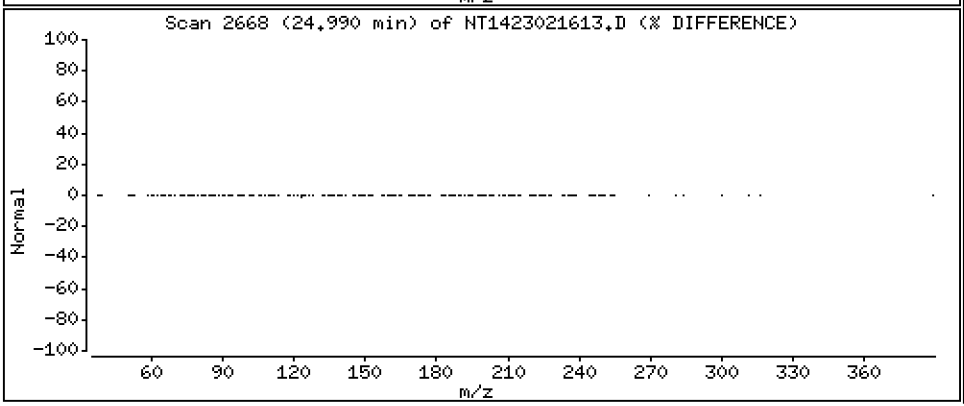












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

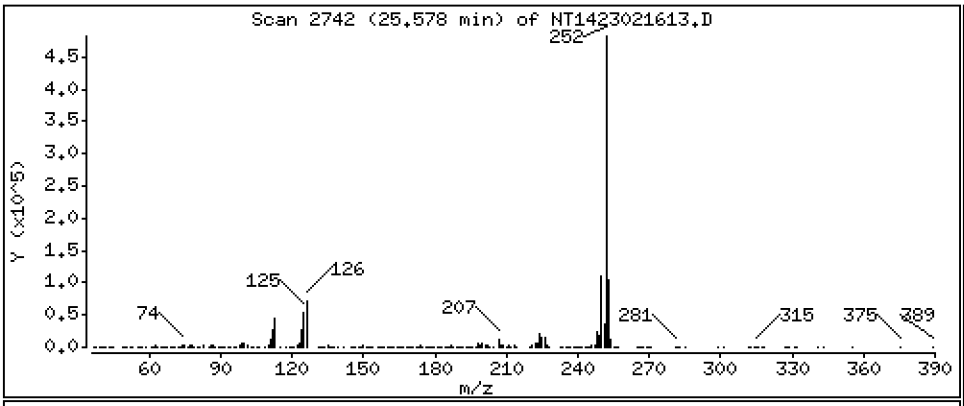
Operator: DSD

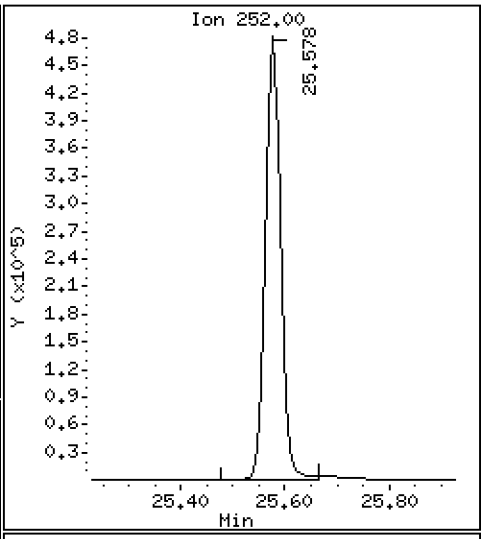
Column phase: ZB-5msi

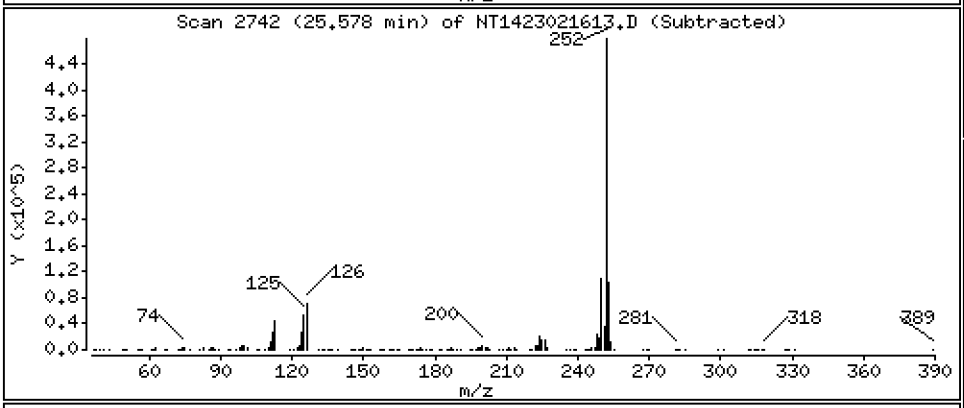
Column diameter: 0.25

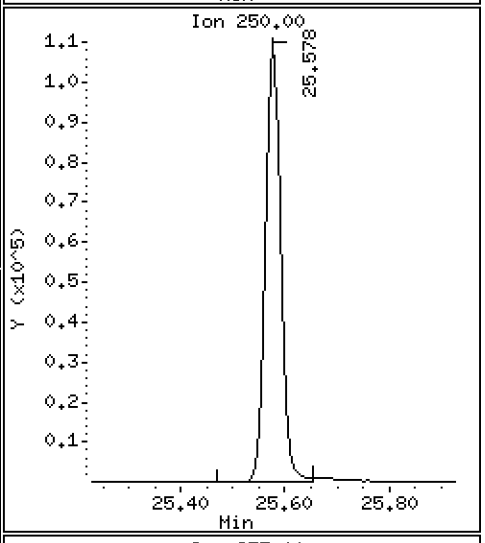
76 Benzo(a)pyrene

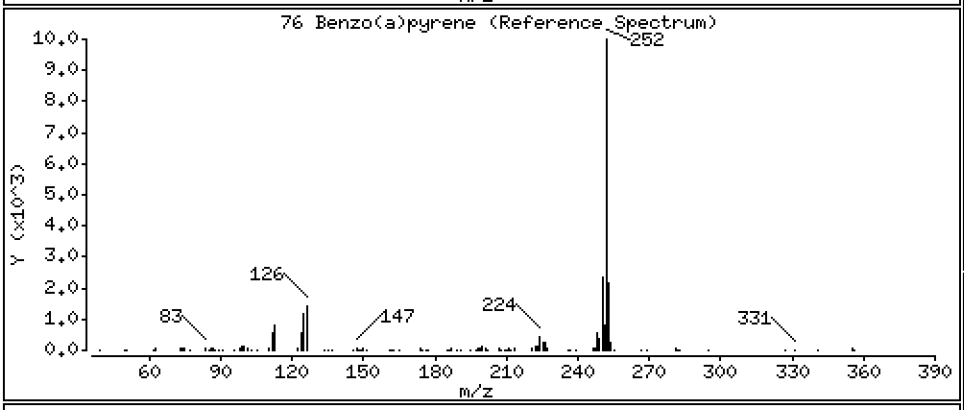
Concentration: 4.607 ug/mL

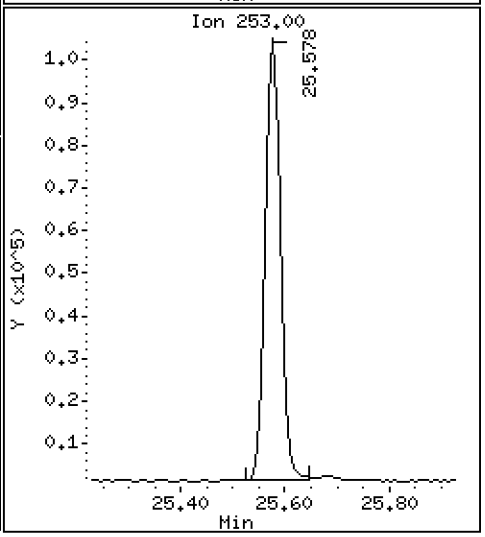


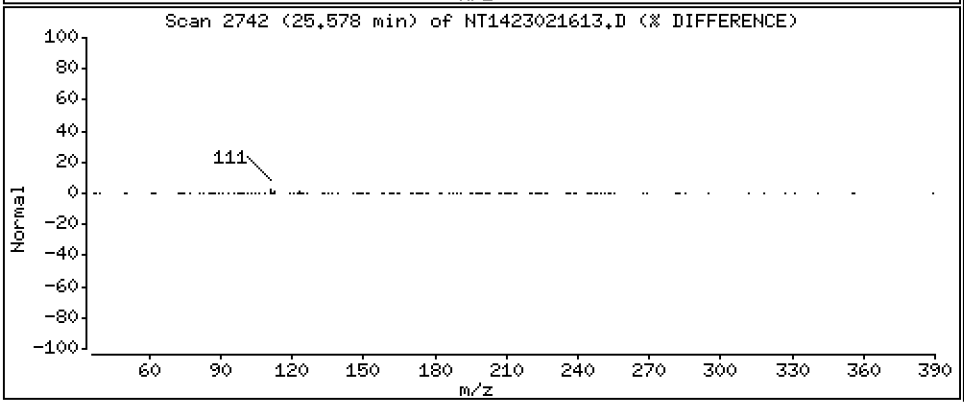












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

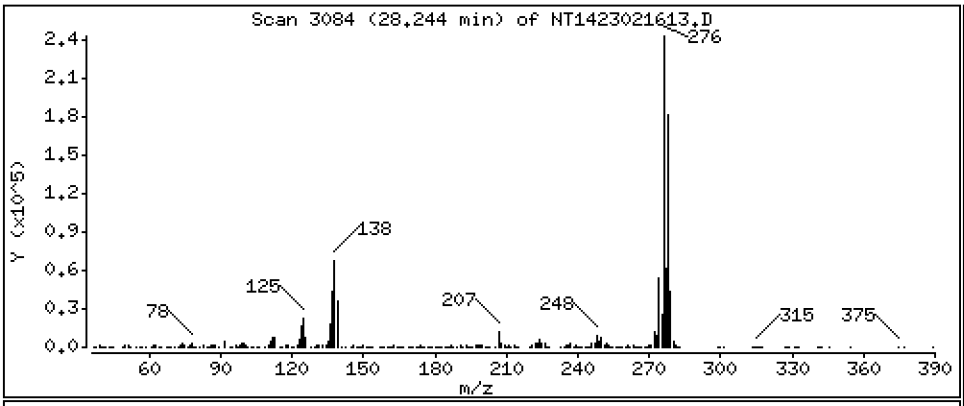
Operator: DSD

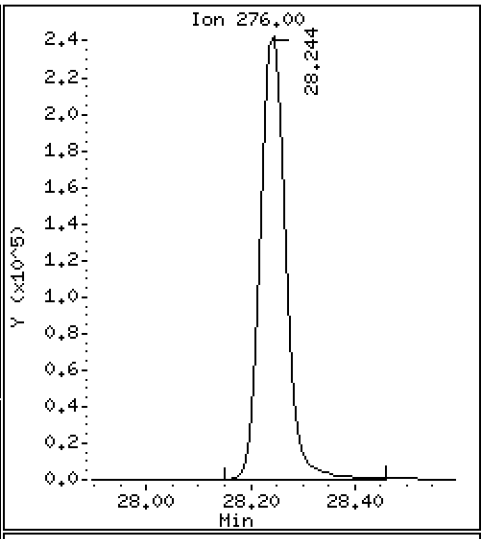
Column phase: ZB-5msi

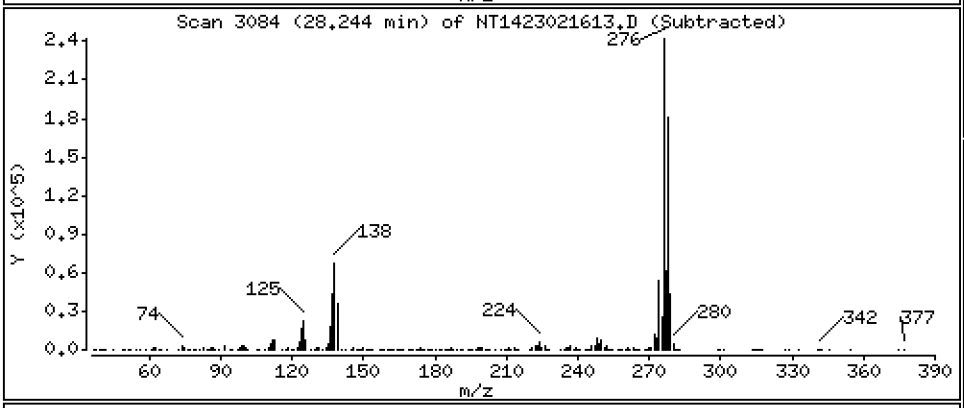
Column diameter: 0.25

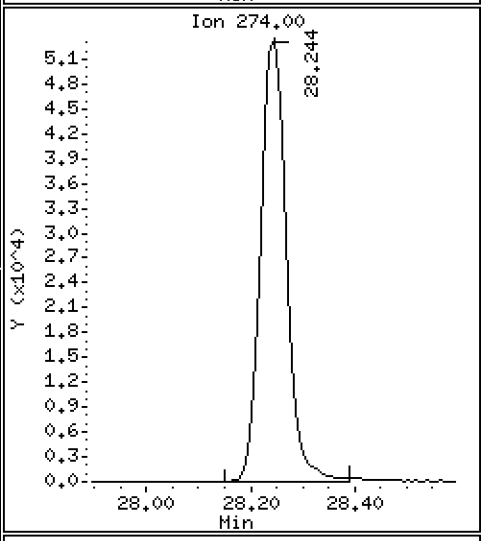
78 Indeno(1,2,3-cd)pyrene

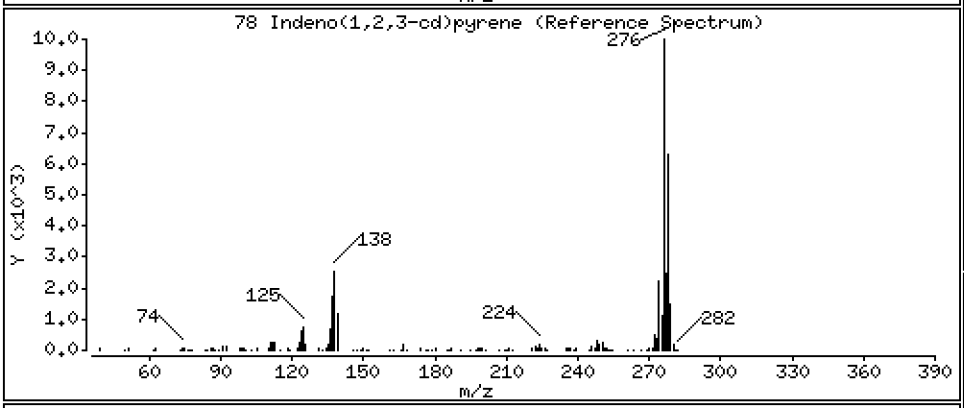
Concentration: 4.395 ug/mL

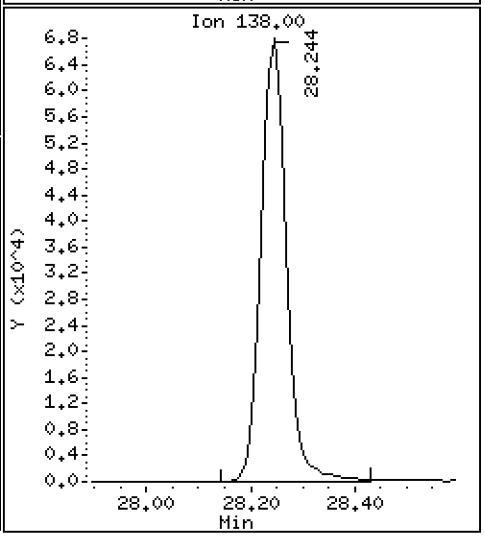


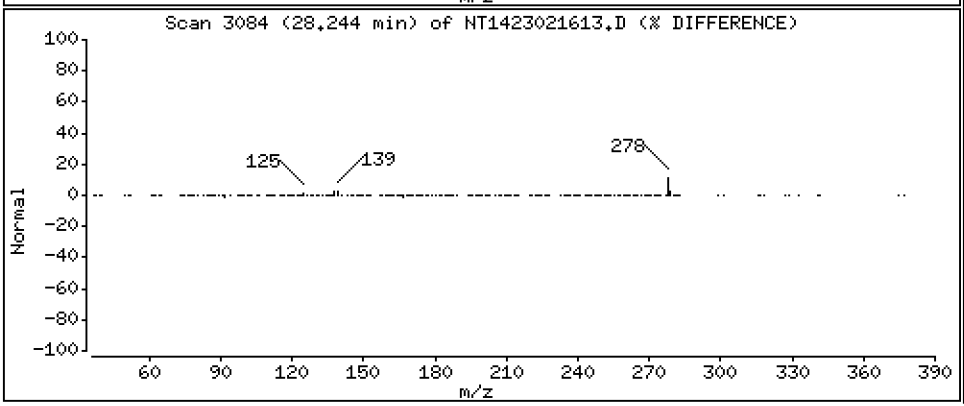












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

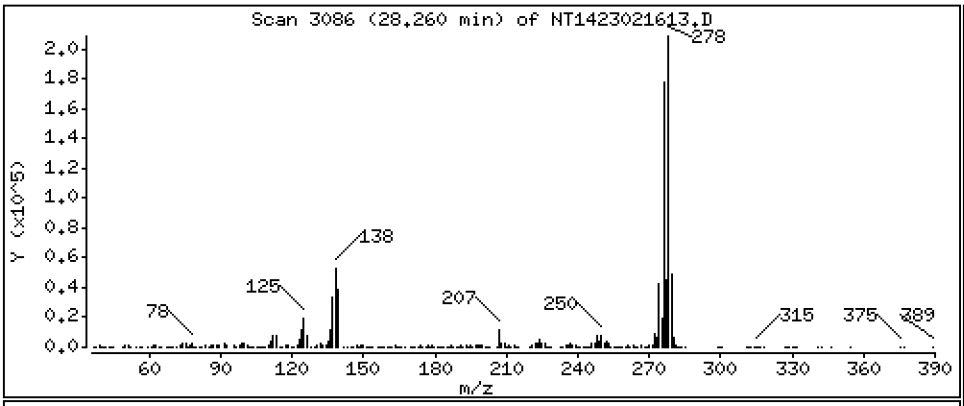
Operator: DSD

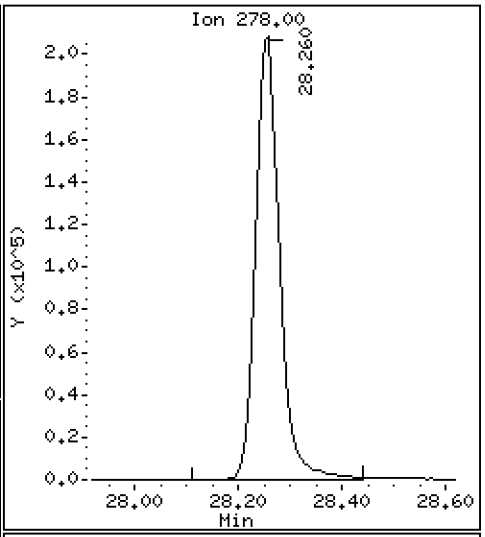
Column phase: ZB-5msi

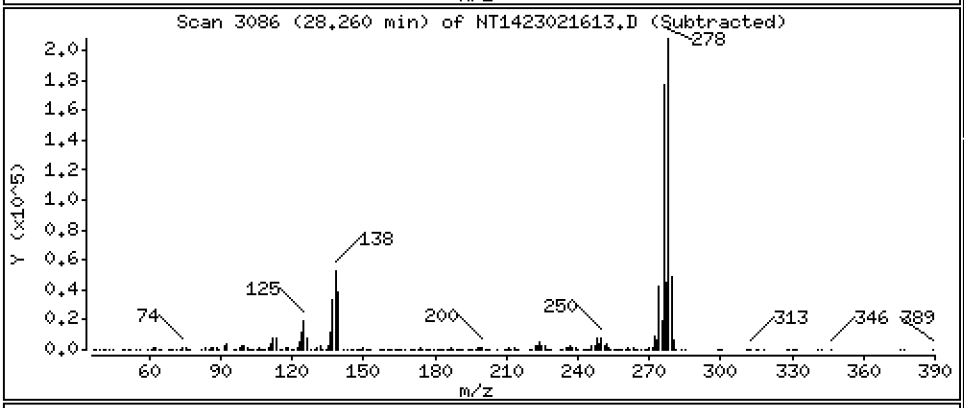
Column diameter: 0.25

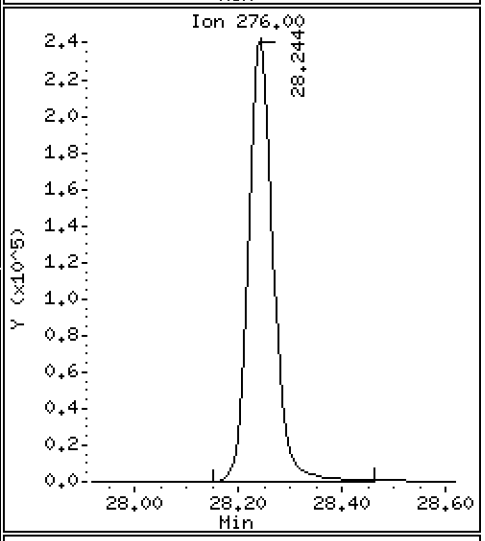
79 Dibenzo(a,h)anthracene

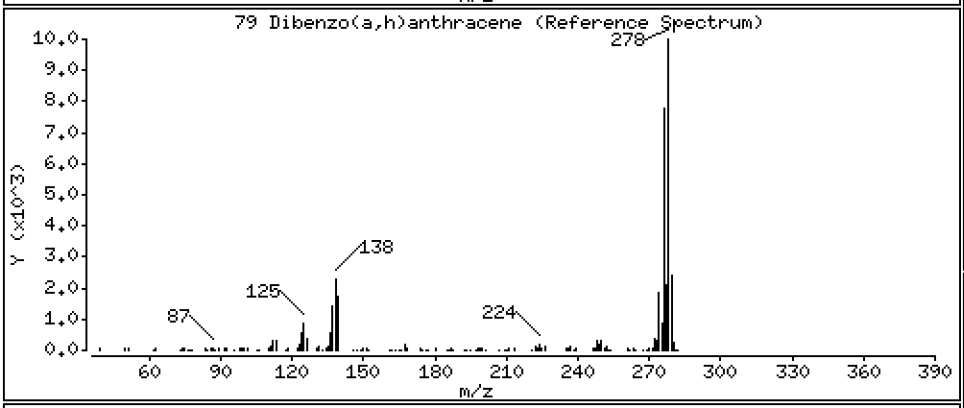
Concentration: 4.365 ug/mL

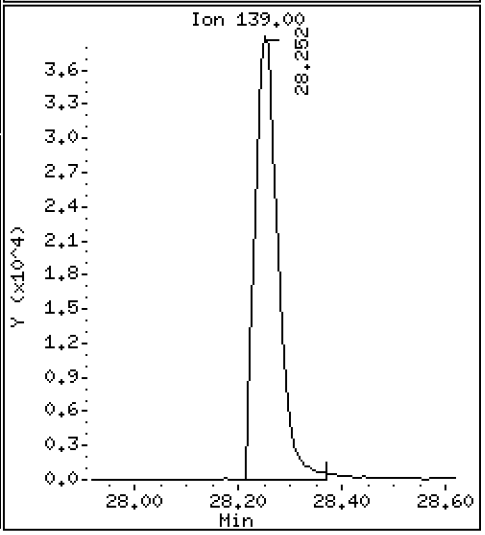


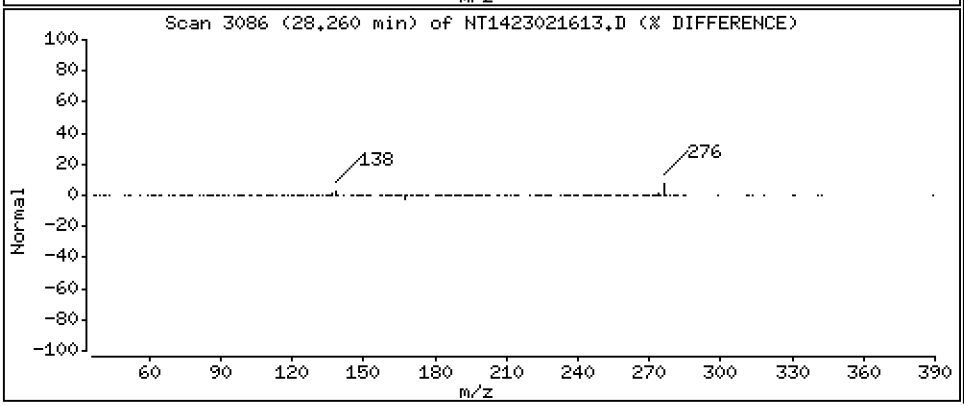












Date : 16-FEB-2023 21:18

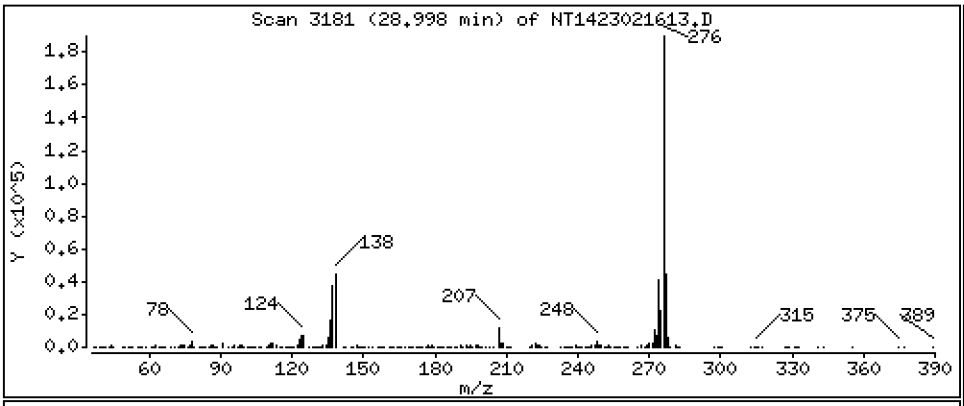
Client ID: Instrument: nt14.i

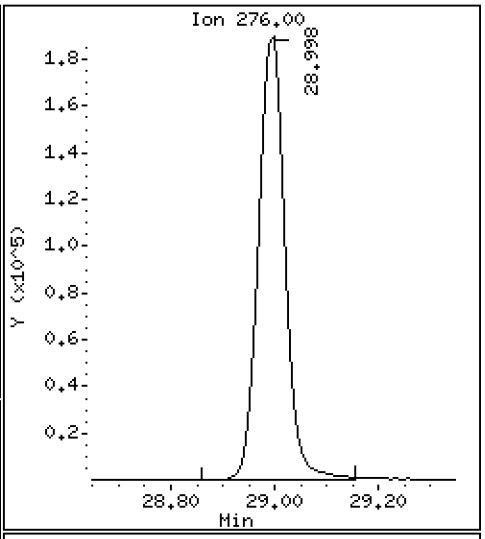
Sample Info: SLB0234-SCV1

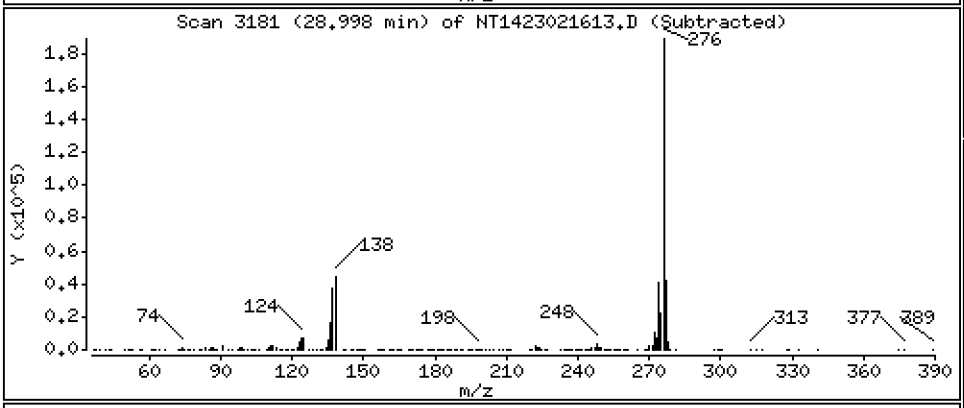
Operator: DSD

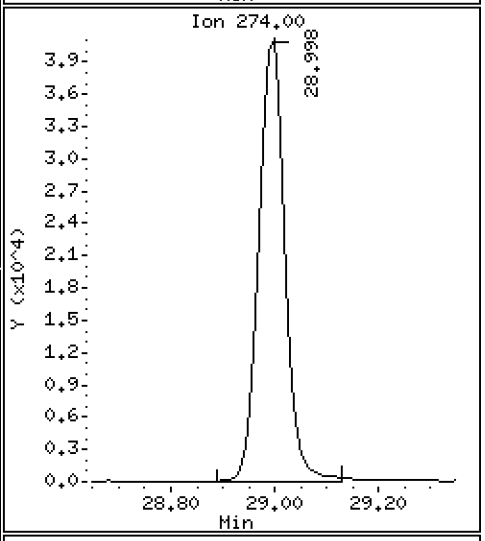
Column phase: ZB-5msi Column diameter: 0.25

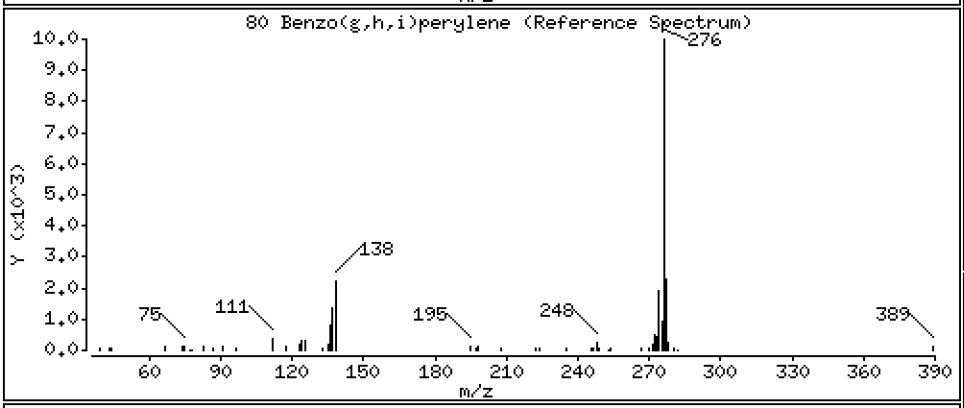
80 Benzo(g,h,i)perylene Concentration: 4.380 ug/mL

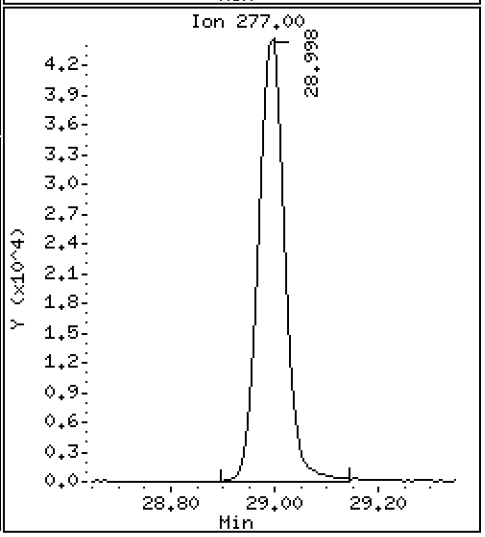


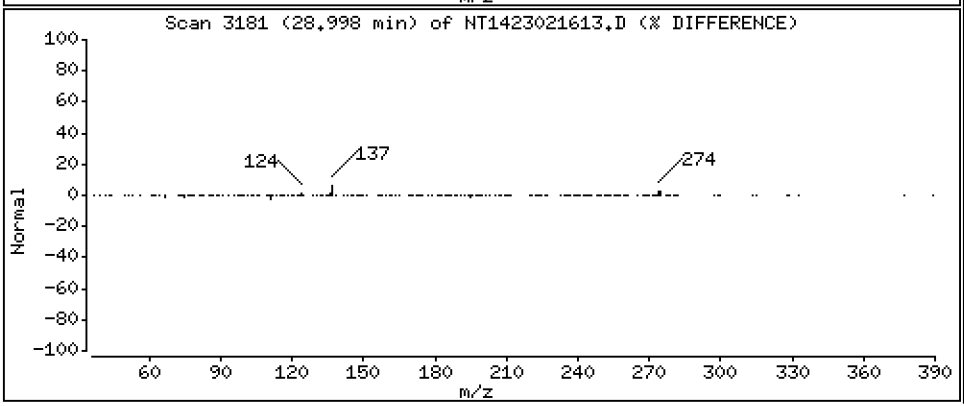












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

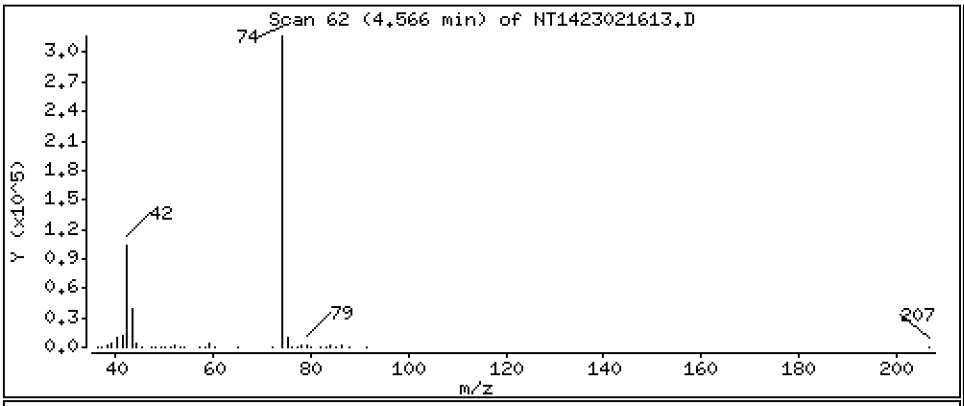
Operator: DSD

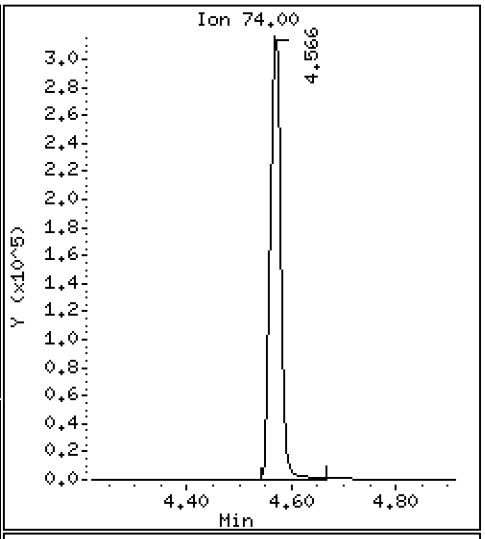
Column phase: ZB-5msi

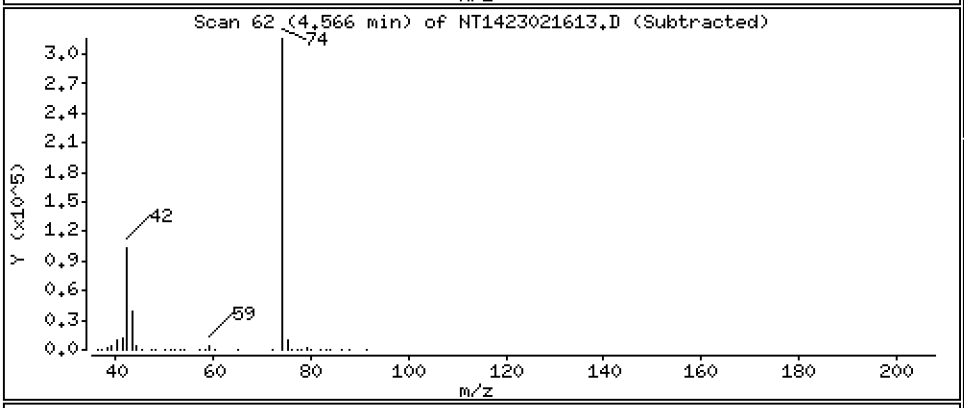
Column diameter: 0.25

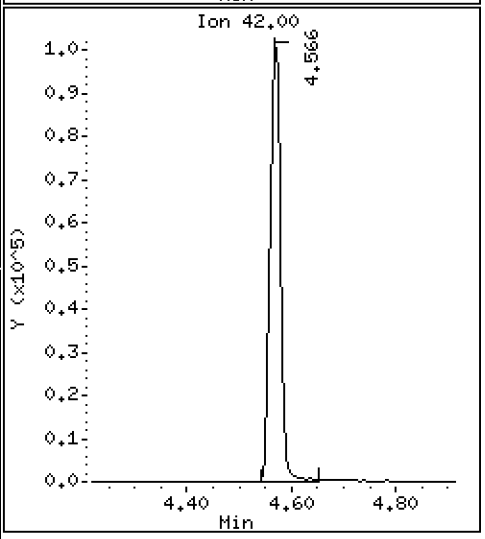
90 N-Nitrosodimethylamine

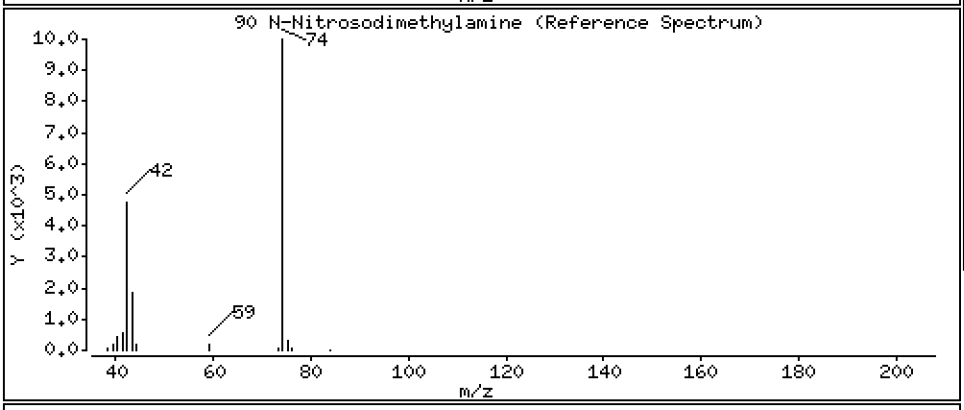
Concentration: 5.632 ug/mL

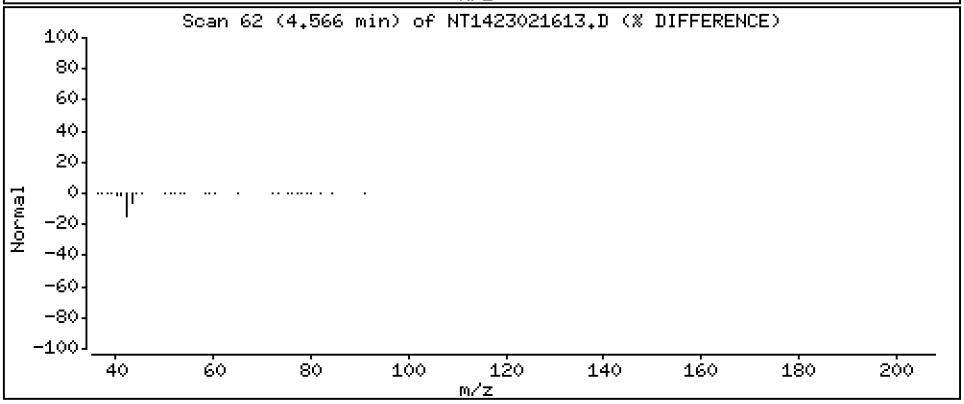












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

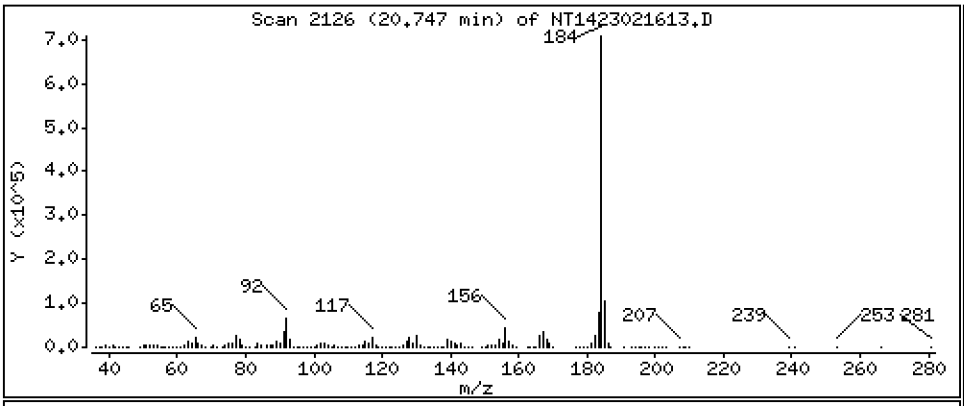
Operator: DSD

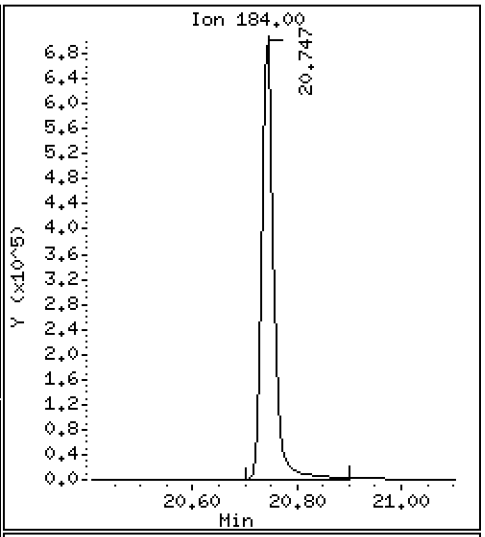
Column phase: ZB-5msi

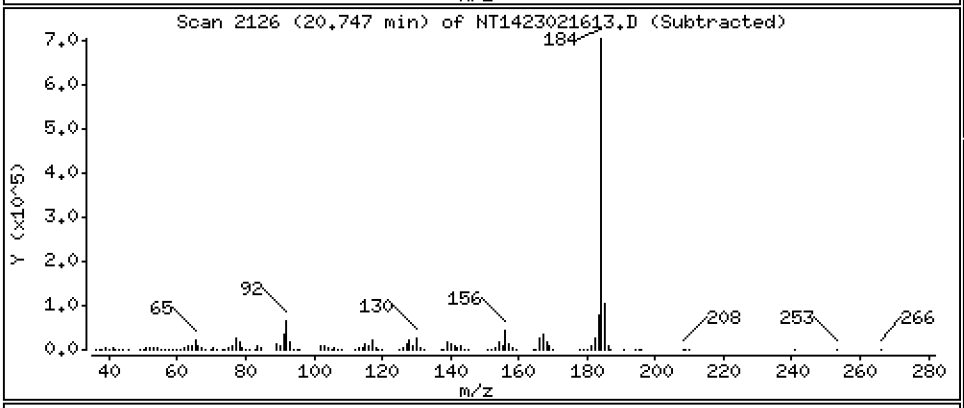
Column diameter: 0.25

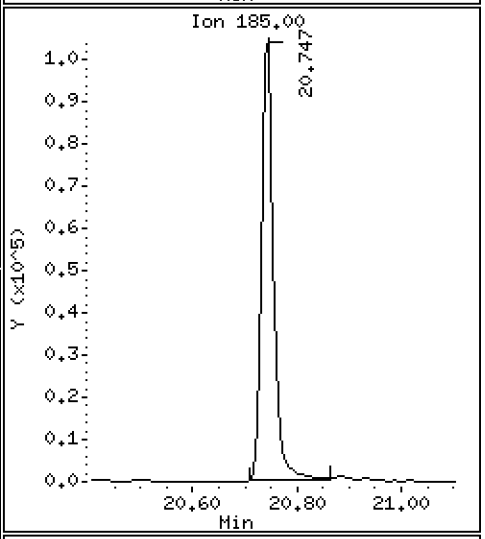
93 Benzidine

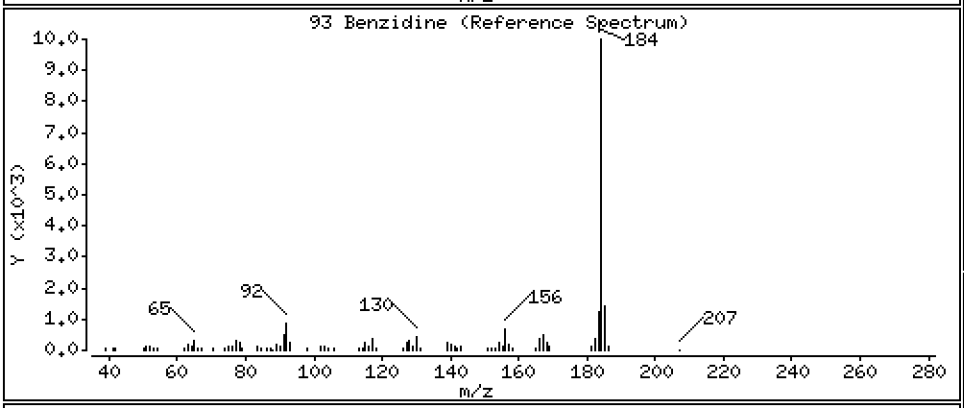
Concentration: 9.984 ug/mL

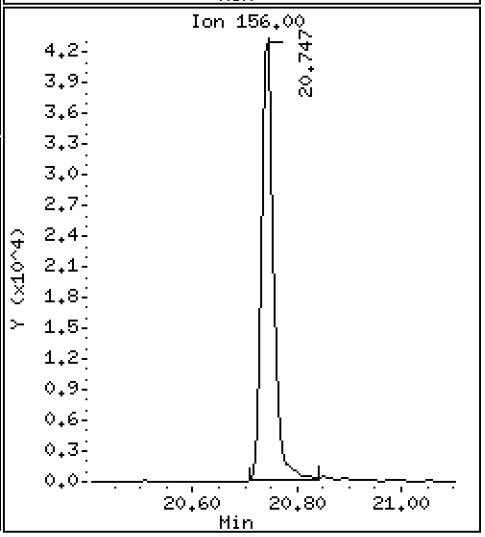


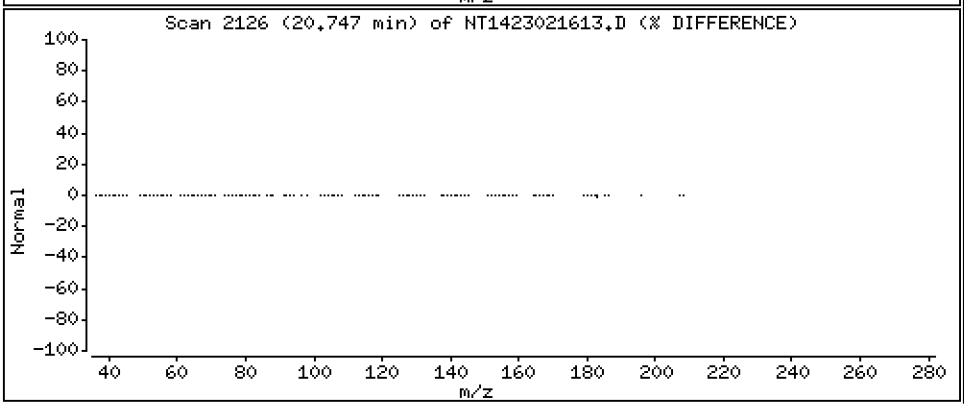












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

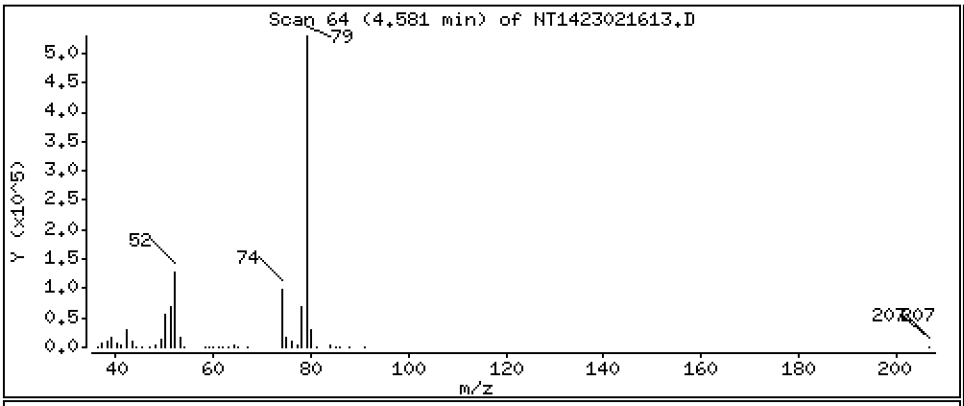
Operator: DSD

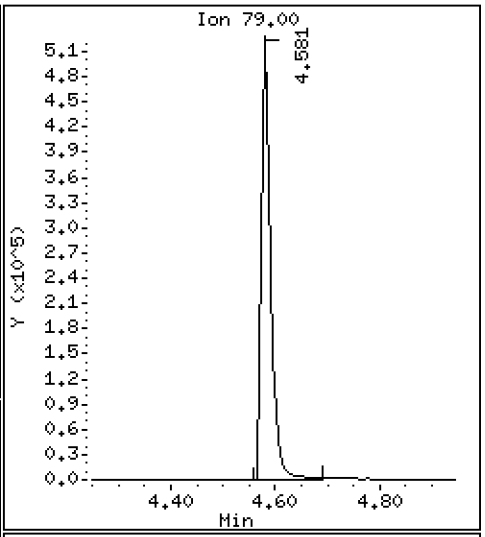
Column phase: ZB-5msi

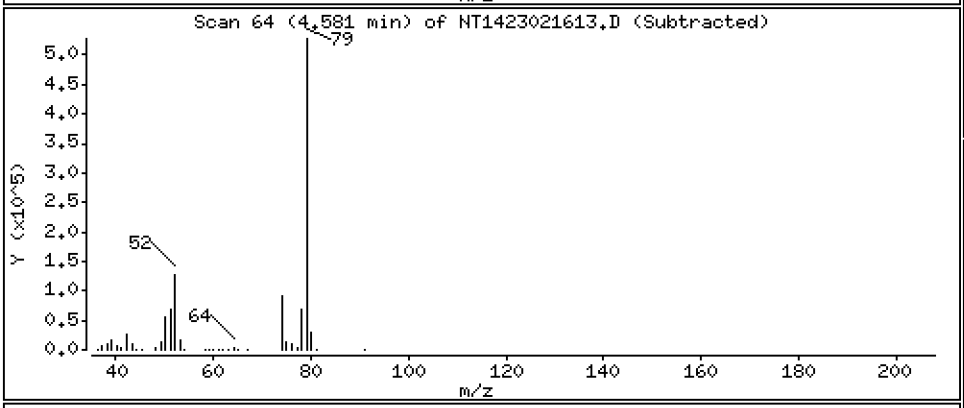
Column diameter: 0.25

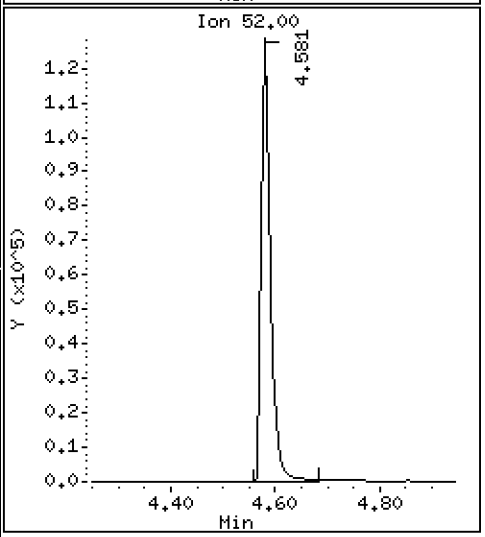
103 Pyridine

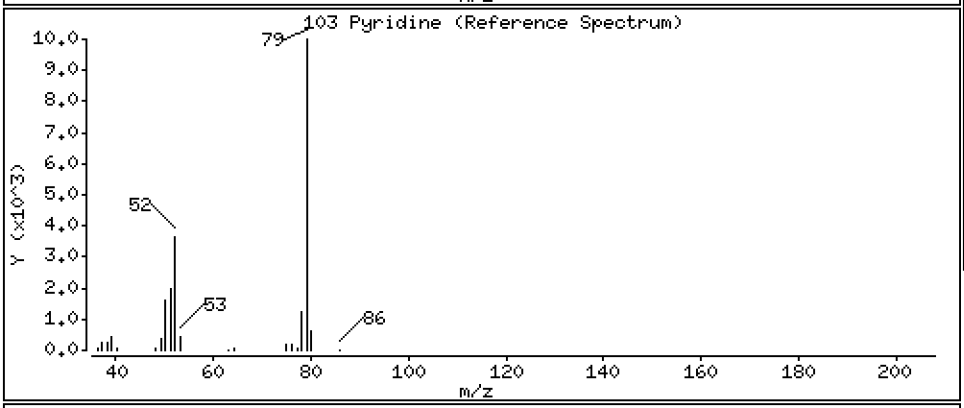
Concentration: 5.566 ug/mL

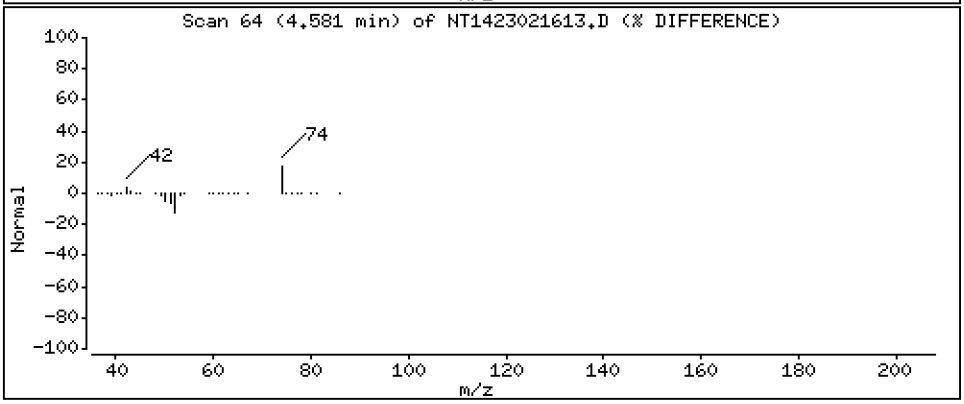












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

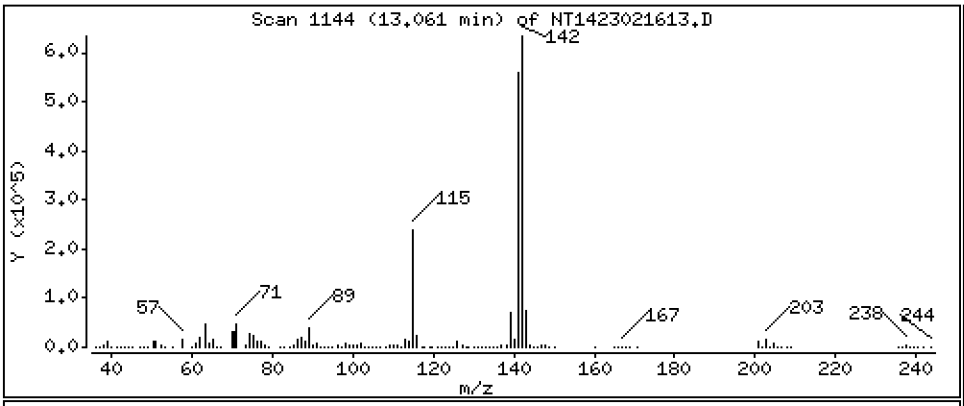
Operator: DSD

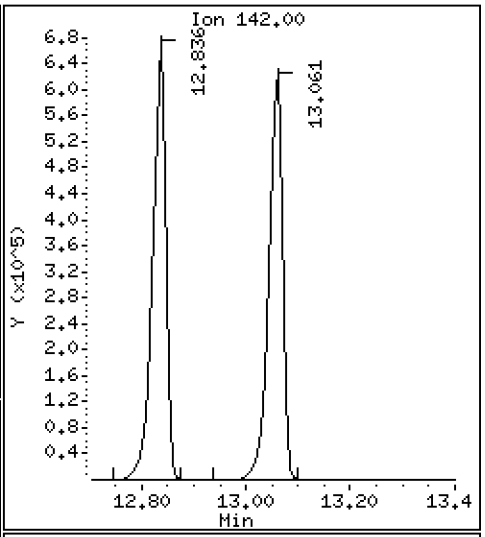
Column phase: ZB-5msi

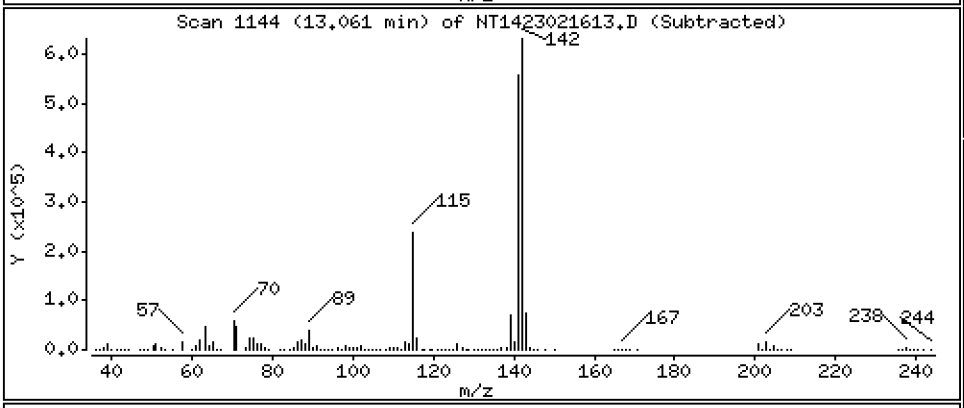
Column diameter: 0.25

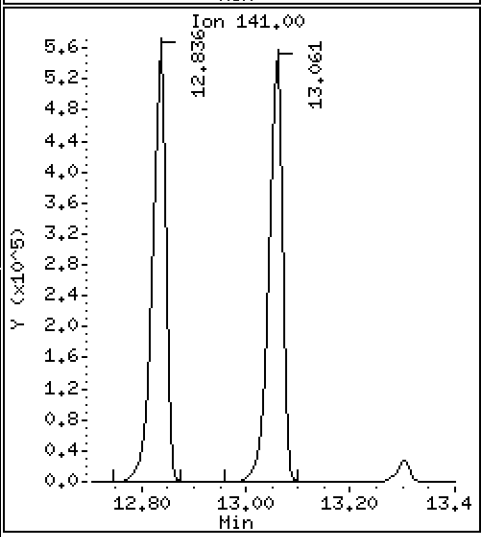
105 1-methylnaphthalene

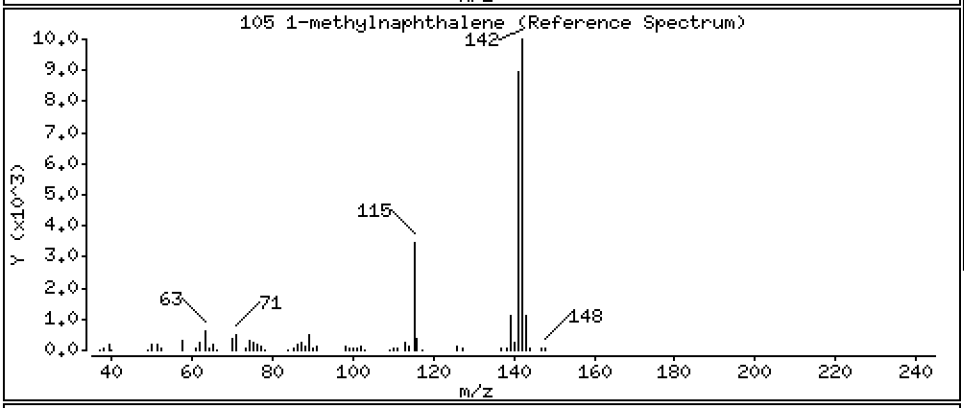
Concentration: 4.760 ug/mL

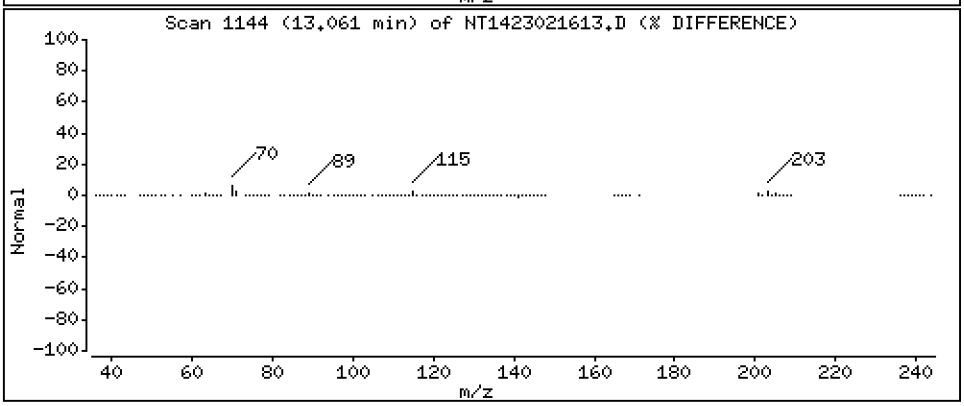












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

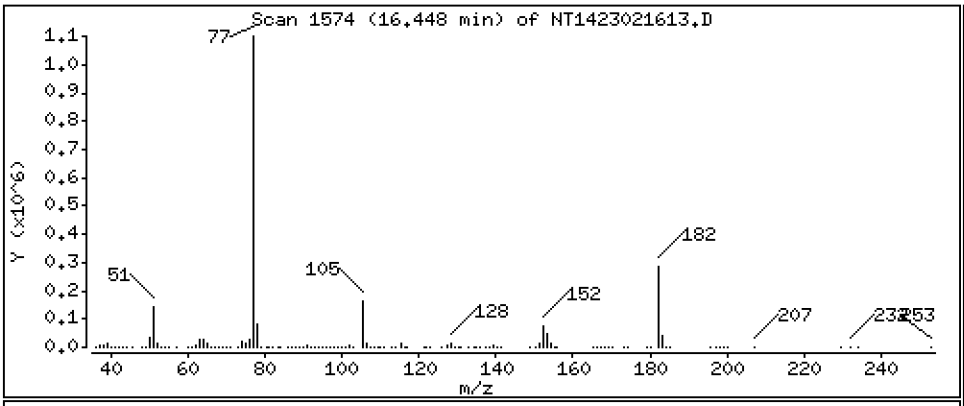
Operator: DSD

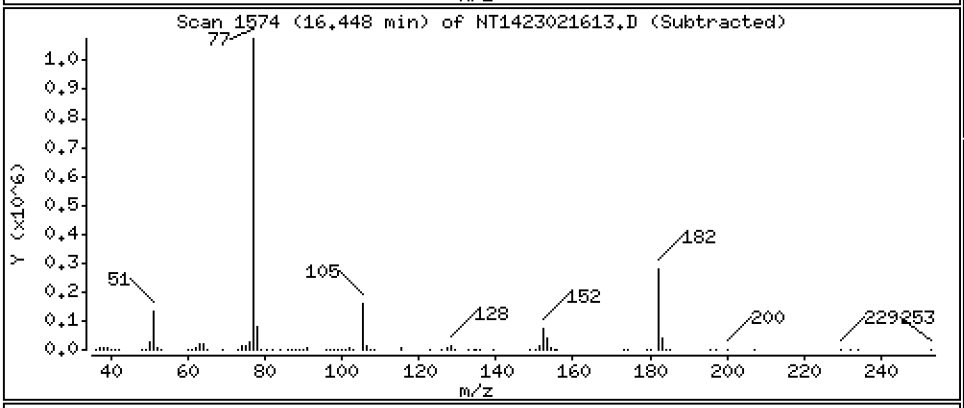
Column phase: ZB-5msi

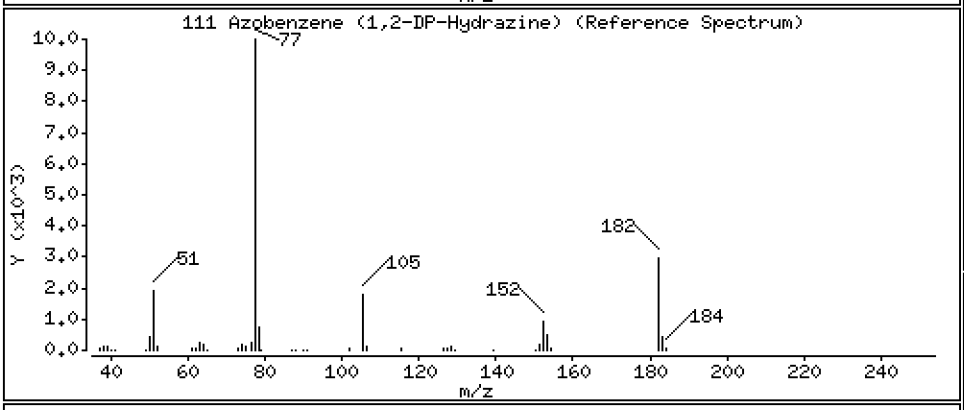
Column diameter: 0.25

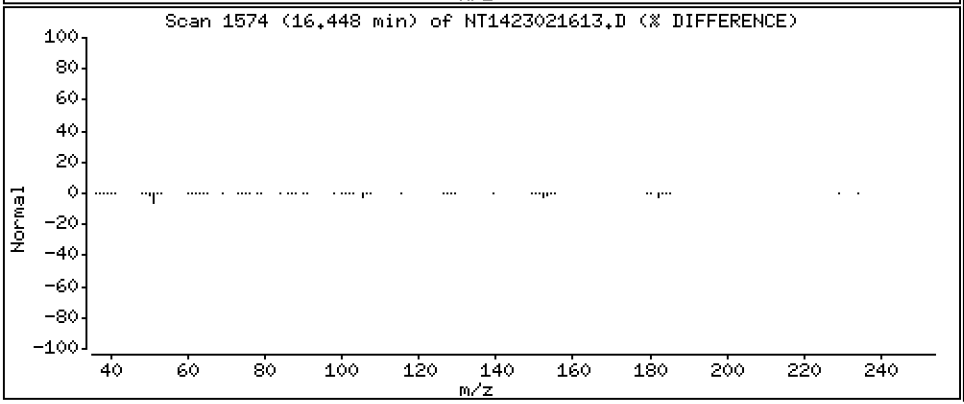
111 Azobenzene (1,2-DP-Hydrazine)

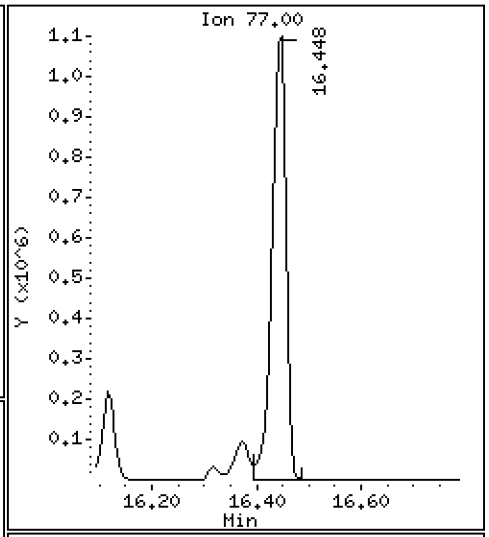
Concentration: 4.655 ug/mL

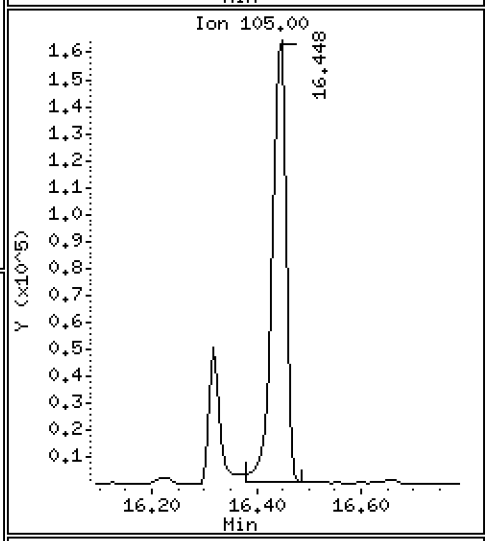


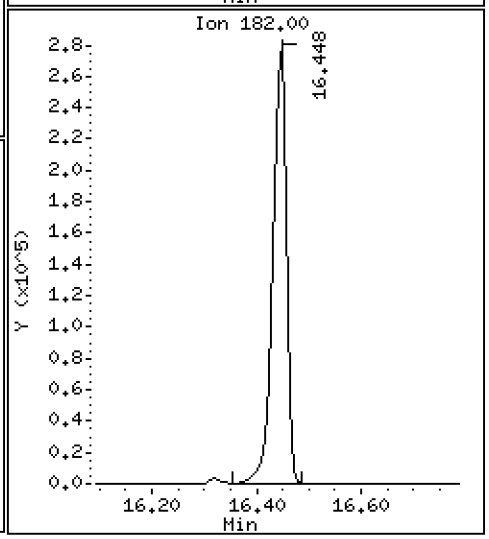












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

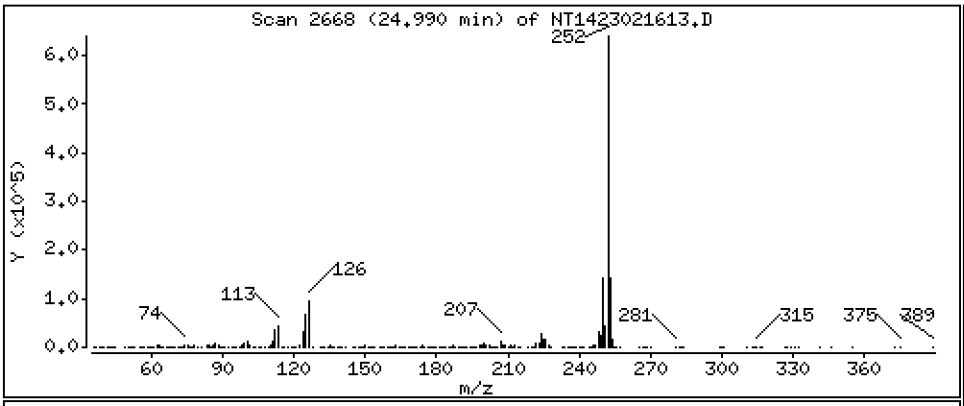
Operator: DSD

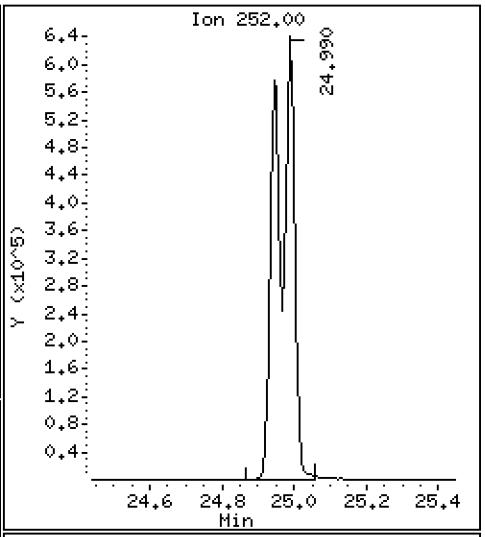
Column phase: ZB-5msi

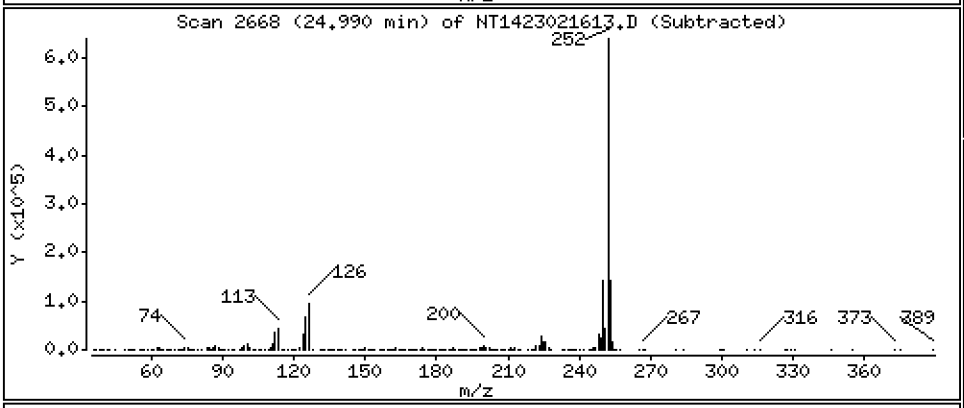
Column diameter: 0.25

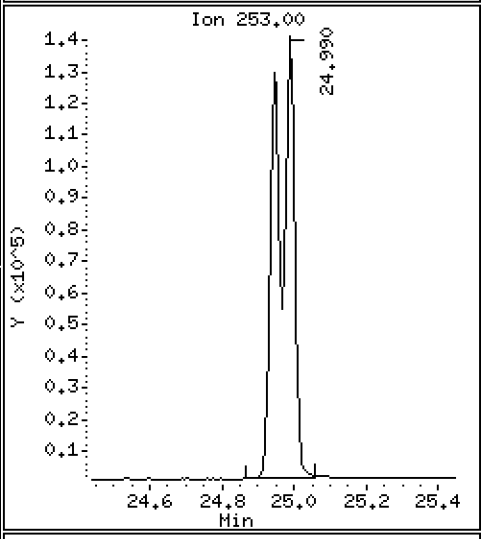
187 Total Benzofluoranthenes

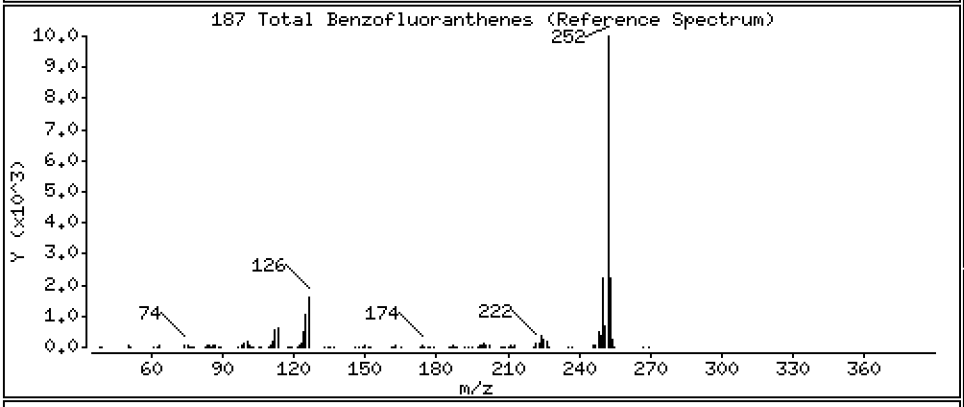
Concentration: 9.712 ug/mL

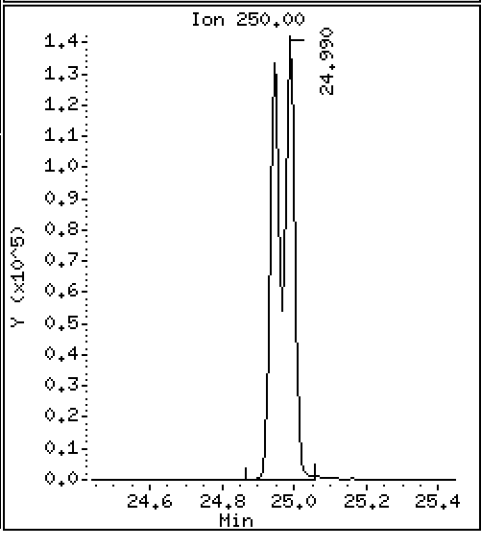


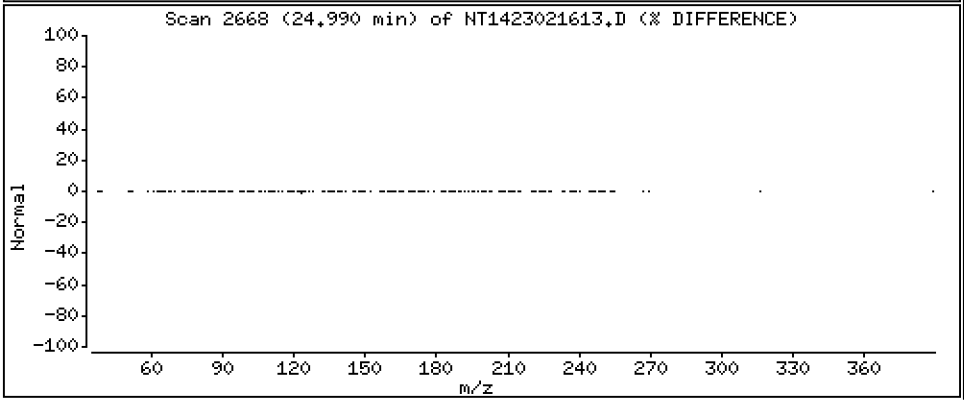












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

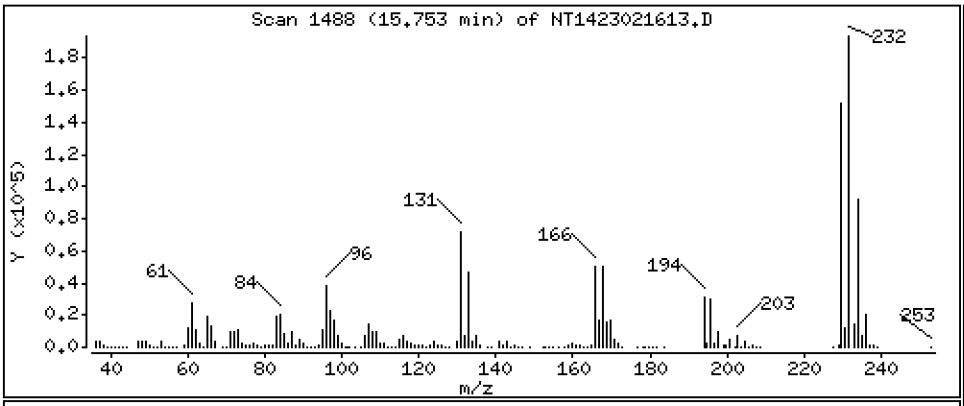
Operator: DSD

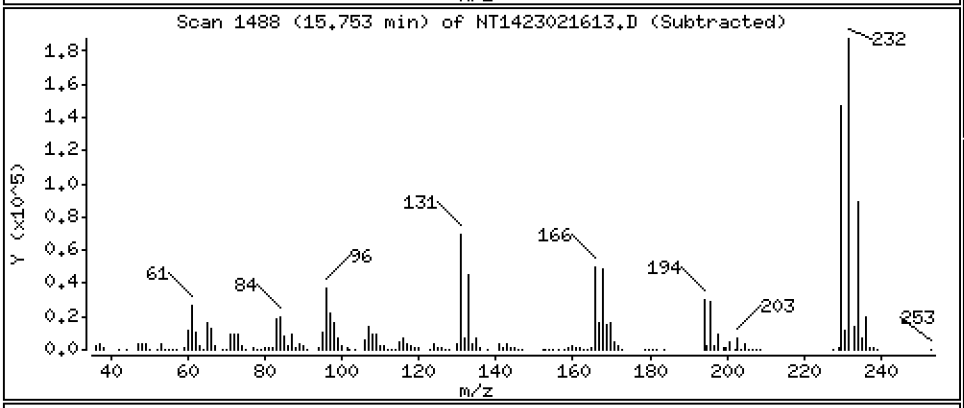
Column phase: ZB-5msi

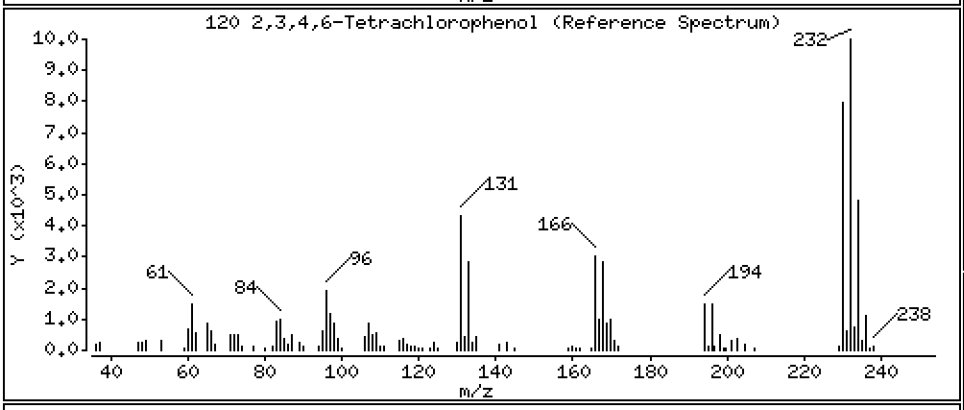
Column diameter: 0.25

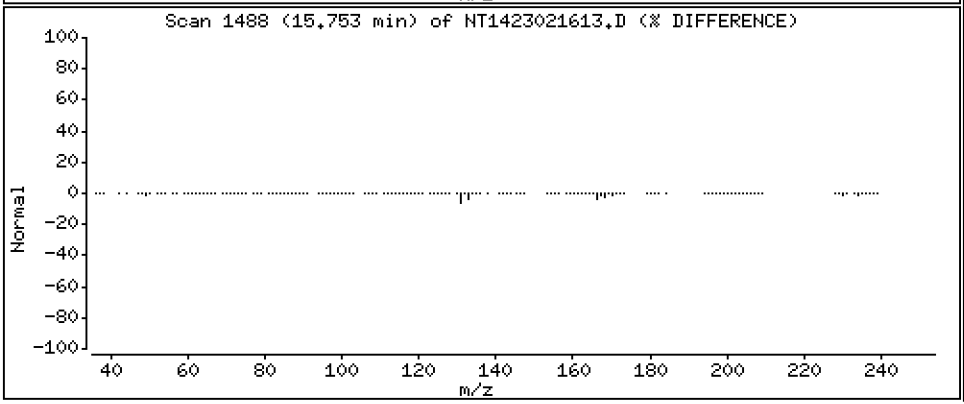
120 2,3,4,6-Tetrachlorophenol

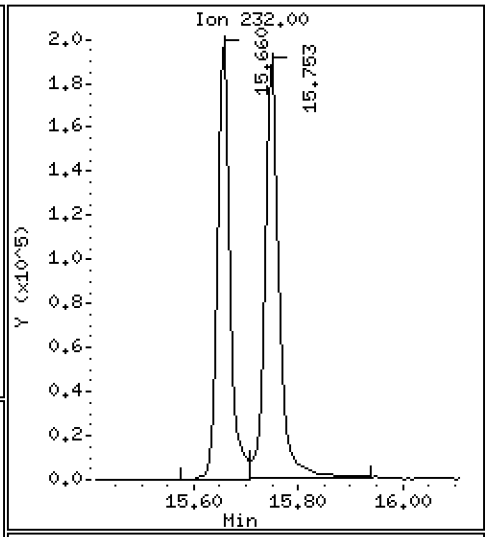
Concentration: 3.875 ug/mL

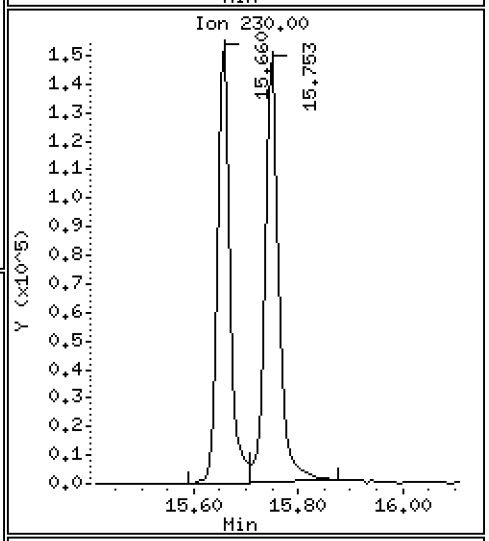


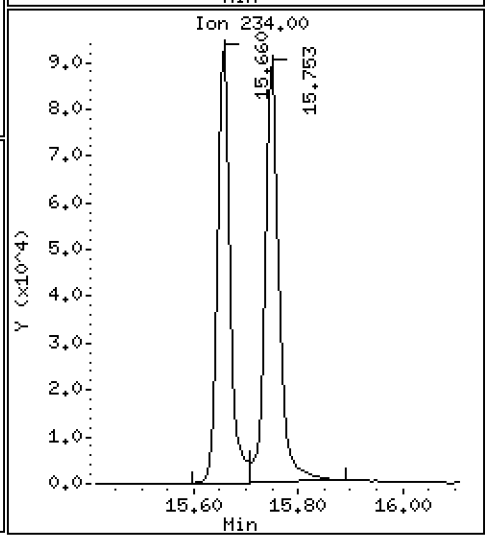












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

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Inj Date : 16-FEB-2023 21:18 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0234-SCV1
Misc Info :
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Method : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Meth Date : 17-Feb-2023 15:05 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.674	6.682	(0.750)	812311	8.37324	8.373
$	2 Phenol-d5	99	8.266	8.266	(0.929)	1229645	7.99013	7.990
	3 Phenol	94	8.289	8.289	(0.931)	753865	4.62726	4.627
$	5 2-Chlorophenol-d4	132	8.536	8.536	(0.959)	852471	7.76321	7.763
	4 Bis(2-Chloroethyl)ether	93	8.459	8.451	(0.950)	642018	5.15867	5.159
	6 2-Chlorophenol	128	8.567	8.567	(0.963)	529676	4.61671	4.617
	7 1,3-Dichlorobenzene	146	8.838	8.838	(0.993)	609215	4.76976	4.770
*	8 1,4-Dichlorobenzene-d4	152	8.900	8.900	(1.000)	362894	4.00000	
	9 1,4-Dichlorobenzene	146	8.931	8.931	(1.003)	580699	4.79061	4.791
$	10 1,2-Dichlorobenzene-d4	152	9.264	9.257	(1.041)	410470	4.98694	4.987
	12 1,2-Dichlorobenzene	146	9.288	9.288	(1.044)	576549	4.75778	4.758
	11 Benzyl alcohol	108	9.179	9.202	(1.031)	425653	4.62539	4.625
	14 2,2'-oxybis(1-Chloropropane)	121	9.482	9.482	(1.065)	192988	5.56690	5.567
	13 2-Methylphenol	108	9.404	9.404	(1.057)	496864	4.36760	4.368
	17 Hexachloroethane	117	9.878	9.878	(1.110)	265463	5.03740	5.037
	16 N-Nitroso-di-n-propylamine	70	9.746	9.738	(1.095)	516514	4.98778	4.988
	15 4-Methylphenol	108	9.684	9.684	(1.088)	551454	4.59064	4.591
$	18 Nitrobenzene-d5	82	10.002	10.002	(0.878)	806144	5.19439	5.194
	19 Nitrobenzene	77	10.041	10.033	(0.881)	770727	4.94878	4.949
	20 Isophorone	82	10.483	10.491	(0.920)	1457561	7.09356	7.094
	21 2-Nitrophenol	139	10.669	10.677	(0.936)	316370	4.45322	4.453
	22 2,4-Dimethylphenol	107	10.723	10.724	(0.941)	502608	4.27378	4.274
	23 Bis(2-Chloroethoxy)methane	93	10.925	10.925	(0.959)	767264	5.74018	5.740
	24 Benzoic acid	105	10.933	10.879	(0.959)	412038	5.51023	5.510
	25 2,4-Dichlorophenol	162	11.119	11.127	(0.976)	515695	5.12362	5.124
	26 1,2,4-Trichlorobenzene	180	11.312	11.305	(0.993)	566926	4.64981	4.650
*	27 Naphthalene-d8	136	11.397	11.389	(1.000)	1343351	4.00000	
	28 Naphthalene	128	11.436	11.428	(1.003)	1568652	4.73587	4.736
	29 4-Chloroaniline	127	11.567	11.575	(1.015)	553475	3.91120	3.911
	30 Hexachlorobutadiene	225	11.799	11.799	(1.035)	369529	4.91651	4.917
	31 4-Chloro-3-methylphenol	107	12.534	12.542	(1.100)	549566	5.04457	5.045
	32 2-Methylnaphthalene	142	12.836	12.836	(1.126)	1142706	4.60635	4.606
	33 Hexachlorocyclopentadiene	237	13.300	13.301	(0.886)	438821	5.30111	5.301

		QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
Compounds								
34	2,4,6-Trichlorophenol	196	13.455	13.463	(0.896)	404613	4.80795	4.808
35	2,4,5-Trichlorophenol	196	13.532	13.541	(0.901)	428976	4.70685	4.707
$ 36	2-Fluorobiphenyl	172	13.625	13.617	(0.907)	1488825	4.87017	4.870
37	2-Chloronaphthalene	162	13.834	13.826	(0.921)	1157484	4.63882	4.639
38	2-Nitroaniline	65	14.097	14.097	(0.939)	393653	4.85233	4.852
39	Dimethylphthalate	163	14.538	14.531	(0.968)	1224849	4.69299	4.693
40	Acenaphthylene	152	14.701	14.701	(0.979)	1772439	4.65722	4.657
41	2,6-Dinitrotoluene	165	14.670	14.670	(0.977)	303057	4.93469	4.935
* 42	Acenaphthene-d10	164	15.018	15.018	(1.000)	854455	4.00000	
43	3-Nitroaniline	138	14.956	14.957	(0.996)	320818	4.92163	4.922
44	Acenaphthene	153	15.088	15.080	(1.005)	1055715	4.63322	4.633
45	2,4-Dinitrophenol	184	15.265	15.282	(1.016)	10046	0.25021	0.2502
46	Dibenzofuran	168	15.412	15.405	(1.026)	1701574	4.54830	4.548
47	4-Nitrophenol	109	15.273	15.273	(1.017)	153415	4.05153	4.052
48	2,4-Dinitrotoluene	165	15.482	15.475	(1.031)	421549	4.85479	4.855
50	Diethylphthalate	149	15.992	15.984	(1.065)	1638308	4.72171	4.722
49	Fluorene	166	16.123	16.124	(1.074)	1814406	4.63777	4.638
51	4-Chlorophenyl-phenylether	204	16.123	16.116	(1.074)	994538	4.75422	4.754
52	4-Nitroaniline	138	16.224	16.224	(1.080)	356106	4.76155	4.762
53	4,6-Dinitro-2-methylphenol	198	16.316	16.370	(0.904)	216522	3.65299	3.653
54	N-Nitrosodiphenylamine	169	16.370	16.370	(0.907)	1149631	4.90725	4.907
$ 55	2,4,6-Tribromophenol	330	16.663	16.663	(1.110)	357193	7.14108	7.141
56	4-Bromophenyl-phenylether	248	17.126	17.118	(0.949)	537640	5.15255	5.153
57	Hexachlorobenzene	284	17.435	17.434	(0.966)	496114	4.67908	4.679
58	Pentachlorophenol	266	17.791	17.814	(0.985)	204787	3.93169	3.932
* 59	Phenanthrene-d10	188	18.054	18.054	(1.000)	1630237	4.00000	
60	Phenanthrene	178	18.108	18.101	(1.003)	1837237	4.68992	4.690
61	Anthracene	178	18.201	18.193	(1.008)	1670411	4.30397	4.304
62	Carbazole	167	18.534	18.534	(1.027)	1687690	4.79185	4.792
63	Di-n-butylphthalate	149	19.338	19.346	(1.071)	2169531	5.51497	5.515
64	Fluoranthene	202	20.499	20.499	(0.887)	2246209	4.68180	4.682
65	Pyrene	202	20.924	20.925	(0.905)	2232282	4.40013	4.400
$ 66	Terphenyl-d14	244	21.219	21.219	(0.918)	1704165	4.73097	4.731
67	Butylbenzylphthalate	149	22.148	22.148	(0.958)	770848	4.56767	4.568
68	Benzo(a)anthracene	228	23.092	23.092	(0.999)	1612232	4.53042	4.530
* 69	Chrysene-d12	240	23.123	23.123	(1.000)	1112056	4.00000	
70	3,3'-Dichlorobenzidine	252	23.054	23.054	(0.997)	1021005	9.32793	9.328
71	Chrysene	228	23.170	23.162	(1.002)	1432188	4.47430	4.474
72	bis(2-Ethylhexyl)phthalate	149	23.178	23.178	(0.960)	1007189	4.64885	4.649
* 134	Di-n-octylphthalate-d4	153	24.153	24.153	(1.000)	1298332	4.00000	
73	Di-n-octylphthalate	149	24.168	24.161	(1.001)	1506391	4.96217	4.962
74	Benzo(b)fluoranthene	252	24.943	24.943	(0.971)	1120169	4.81299	4.813
75	Benzo(k)fluoranthene	252	24.989	24.989	(0.973)	1203272	4.83840	4.838
76	Benzo(a)pyrene	252	25.577	25.578	(0.996)	1024300	4.60711	4.607
* 77	Perylene-d12	264	25.686	25.686	(1.000)	733476	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.244	28.244	(1.100)	816683	4.39546	4.395
79	Dibenzo(a,h)anthracene	278	28.259	28.267	(1.100)	668295	4.36484	4.365
80	Benzo(g,h,i)perylene	276	28.997	28.997	(1.129)	664180	4.38025	4.380
90	N-Nitrosodimethylamine	74	4.566	4.566	(0.513)	423038	5.63216	5.632
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	20.747	20.754	(0.897)	1133759	9.98385	9.984
103	Pyridine	79	4.581	4.597	(0.515)	661518	5.56593	5.566
105	1-methylnaphthalene	142	13.060	13.053	(1.146)	1108498	4.75965	4.760
111	Azobenzene (1,2-DP-Hydrazine)	77	16.447	16.440	(1.095)	1962985	4.65510	4.655

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.989	24.943	(0.973)	2206870	9.71223	9.712
120 2,3,4,6-Tetrachlorophenol	232	15.752	15.760	(1.049)	382367	3.87456	3.875

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021613.D
Lab Smp Id: SLB0234-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 17:06
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	375798	187899	751596	362894	-3.43
27 Naphthalene-d8	1378169	689085	2756338	1343351	-2.53
42 Acenaphthene-d10	847135	423568	1694270	854455	0.86
59 Phenanthrene-d10	1675180	837590	3350360	1630237	-2.68
69 Chrysene-d12	1073562	536781	2147124	1112056	3.59
134 Di-n-octylphthala	1344129	672065	2688258	1298332	-3.41
77 Perylene-d12	721978	360989	1443956	733476	1.59

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.90	8.40	9.40	8.90	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.40	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	-0.00
59 Phenanthrene-d10	18.05	17.55	18.55	18.05	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	-0.00
134 Di-n-octylphthala	24.15	23.65	24.65	24.15	-0.00
77 Perylene-d12	25.69	25.19	26.19	25.69	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021613.D

Lab ID: SLB0234-SCV1
nt14.i, ABN.m, 16-FEB-2023 21:18

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.959	0.000	0.9593	Benzoic acid
1.016	0.000	1.0165	2,4-Dinitrophenol
1.017	0.000	1.0170	4-Nitrophenol
0.985	0.000	0.9854	Pentachlorophenol

RRT check based on Ccal File: NT1423021610.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

LOW-CONCENTRATION CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00046
Laboratory ID: SLB0305-LCV1
Sequence: SLB0305
Standard ID: K011106

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	0.50000	0.4	-28.0	50.00
4-Methylphenol	0.50000	0.5	-8.3	50.00
Naphthalene	0.50000	0.5	6.9	50.00
2-Methylnaphthalene	0.50000	0.5	9.6	50.00
Acenaphthylene	0.50000	0.6	15.2	50.00
Dimethylphthalate	0.50000	0.6	11.6	50.00
Acenaphthene	0.50000	0.6	11.1	50.00
Dibenzofuran	0.50000	0.5	9.9	50.00
Fluorene	0.50000	0.6	10.3	50.00
Phenanthrene	0.50000	0.5	9.1	50.00
Anthracene	0.50000	0.6	12.5	50.00
Fluoranthene	0.50000	0.5	2.7	50.00
Pyrene	0.50000	0.5	-0.8	50.00
Butylbenzylphthalate	0.50000	0.6	10.8	50.00
Benzo(a)anthracene	0.50000	0.6	14.7	50.00
Chrysene	0.50000	0.6	14.6	50.00
bis(2-Ethylhexyl)phthalate	0.50000	0.4	-21.6	50.00
Benzofluoranthenes, Total	1.0000	1.1	12.6	50.00
Benzo(a)pyrene	0.50000	0.5	0.7	50.00
Indeno(1,2,3-cd)pyrene	0.50000	0.5	5.4	50.00
Dibenzo(a,h)anthracene	0.50000	0.6	11.9	50.00
Benzo(g,h,i)perylene	0.50000	0.5	-2.5	50.00
2-Fluorophenol	0.75000	0.597	-20.3	50.00
Phenol-d5	0.75000	0.711	-5.2	50.00
2-Chlorophenol-d4	0.75000	0.736	-1.8	50.00
1,2-Dichlorobenzene-d4	0.50000	0.517	3.3	50.00
Nitrobenzene-d5	0.50000	0.566	13.3	50.00
2-Fluorobiphenyl	0.50000	0.574	14.9	50.00
2,4,6-Tribromophenol	0.75000	0.315	-58.0 *	50.00

LOW-CONCENTRATION CALIBRATION VERIFICATION
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00046
Laboratory ID: SLB0305-LCV1
Sequence: SLB0305
Standard ID: K011106

p-Terphenyl-d14	0.50000	0.602	20.4	50.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022131.D

Page 1

Date : 22-FEB-2023 07:32

Client ID:

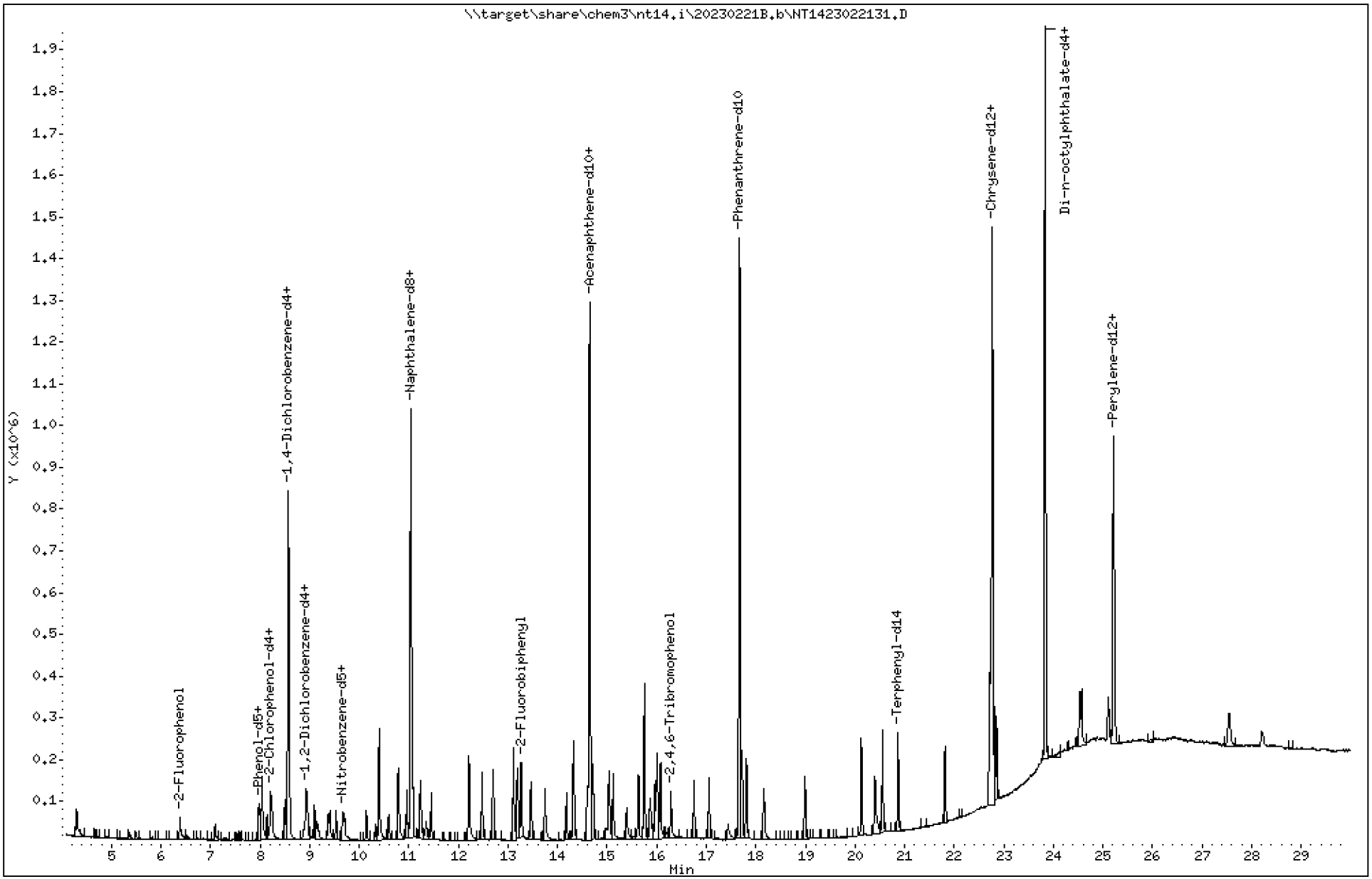
Instrument: nt14.i

Sample Info: SLB0305-LCV1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

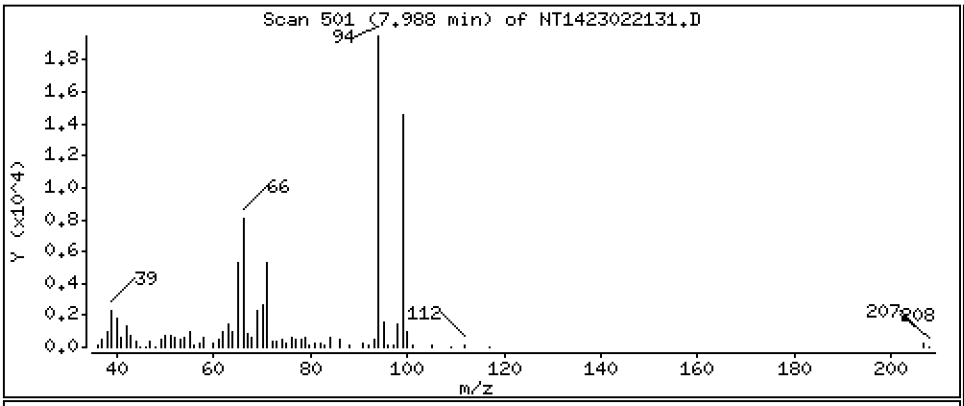
Operator: DSD

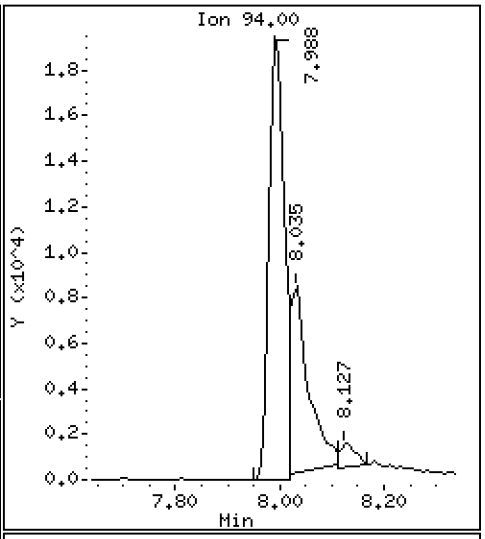
Column phase: ZB-5msi

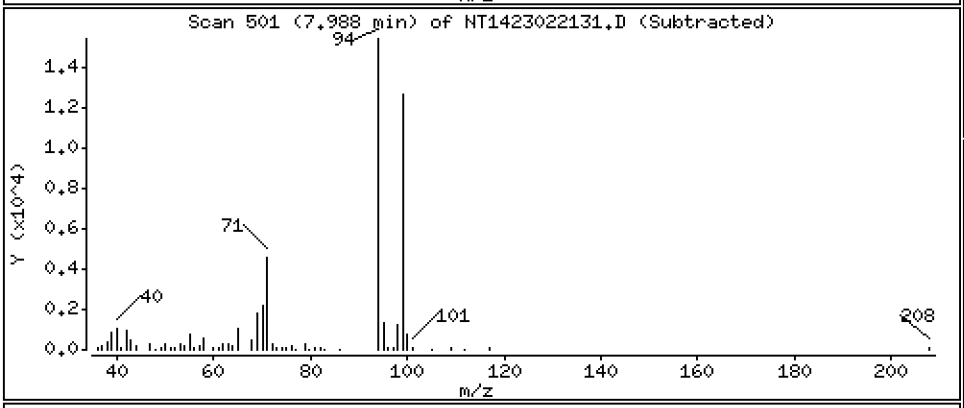
Column diameter: 0.25

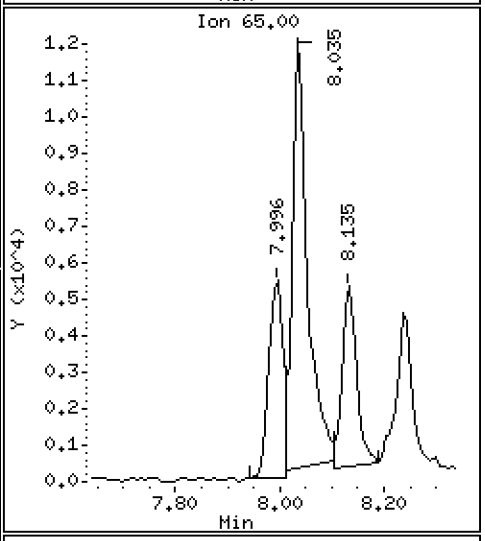
3 Phenol

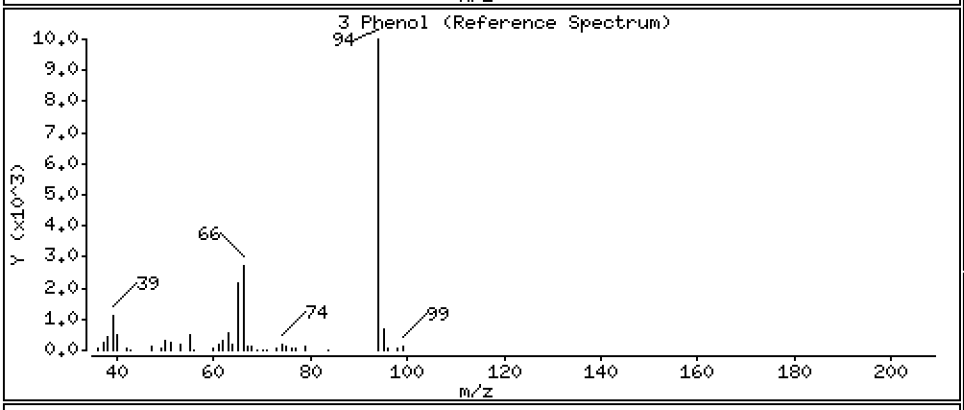
Concentration: 0.3601 ug/mL

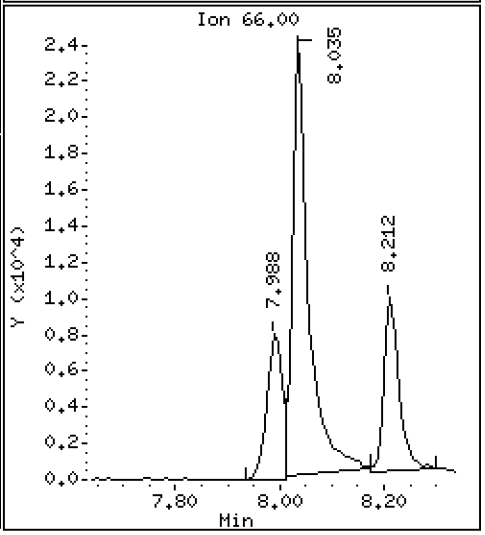


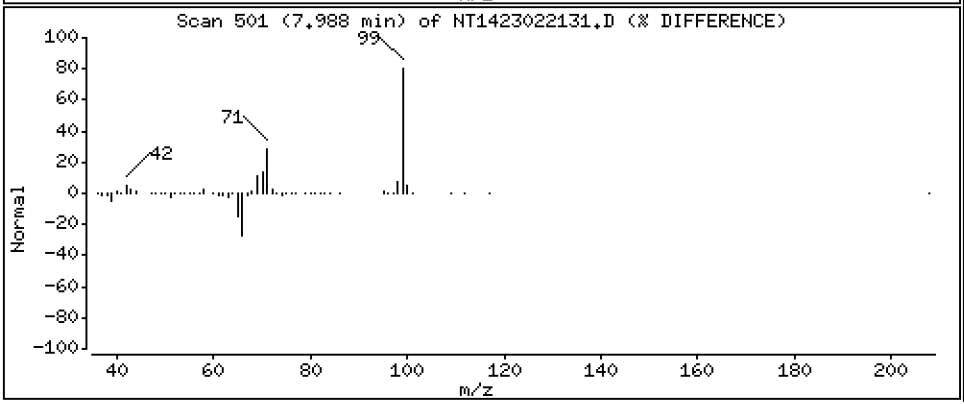












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

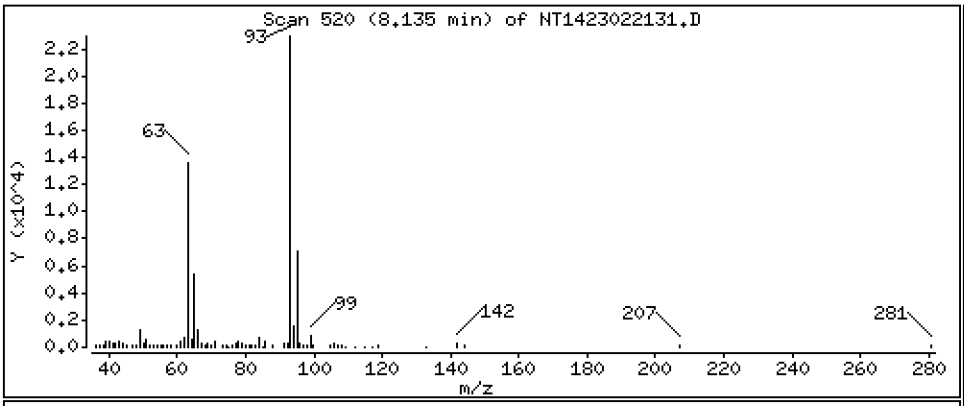
Operator: DSD

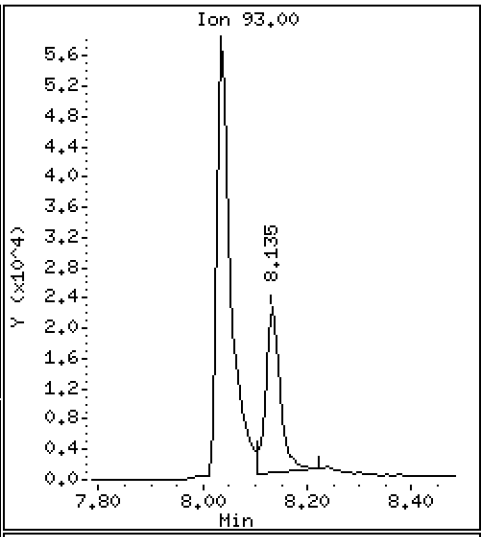
Column phase: ZB-5msi

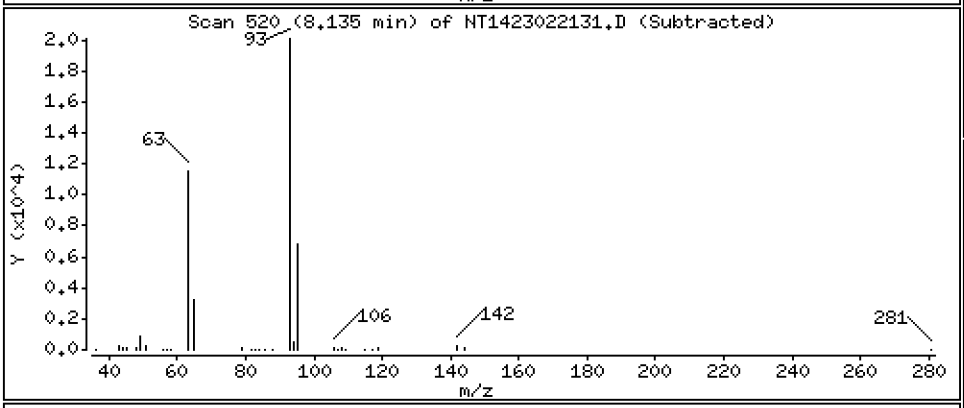
Column diameter: 0.25

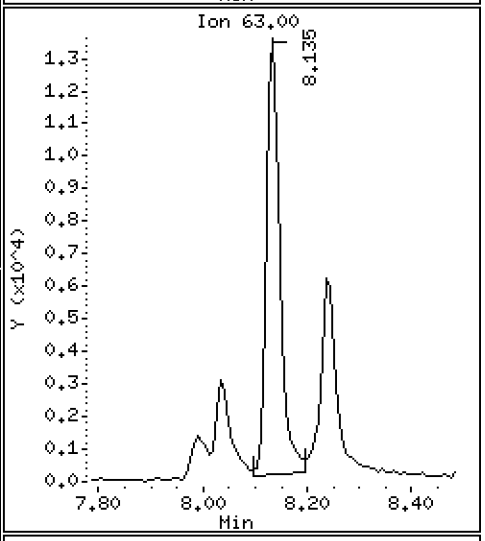
4 Bis(2-Chloroethyl)ether

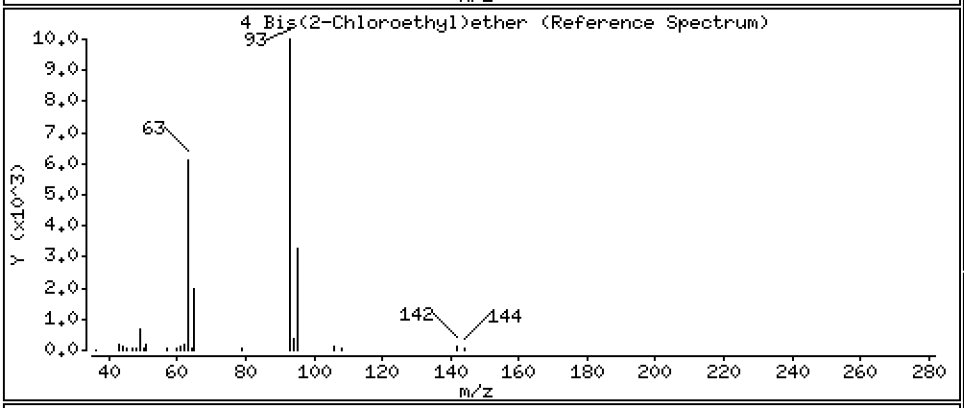
Concentration: 0.4688 ug/mL

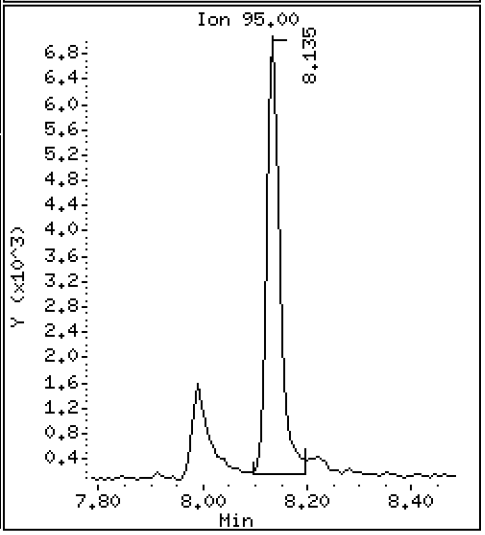


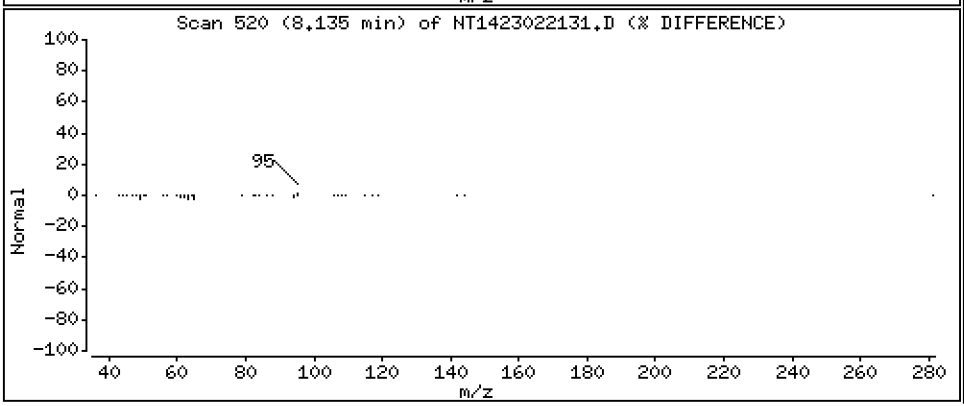












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

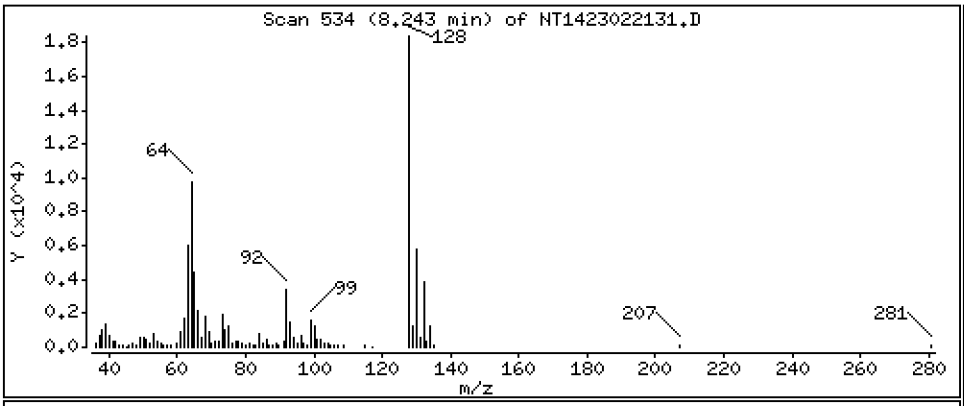
Operator: DSD

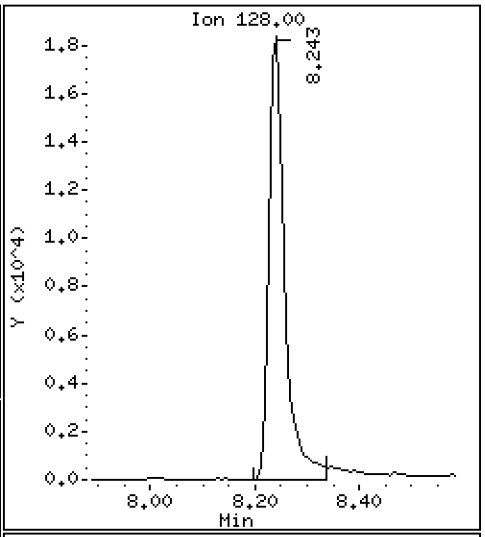
Column phase: ZB-5msi

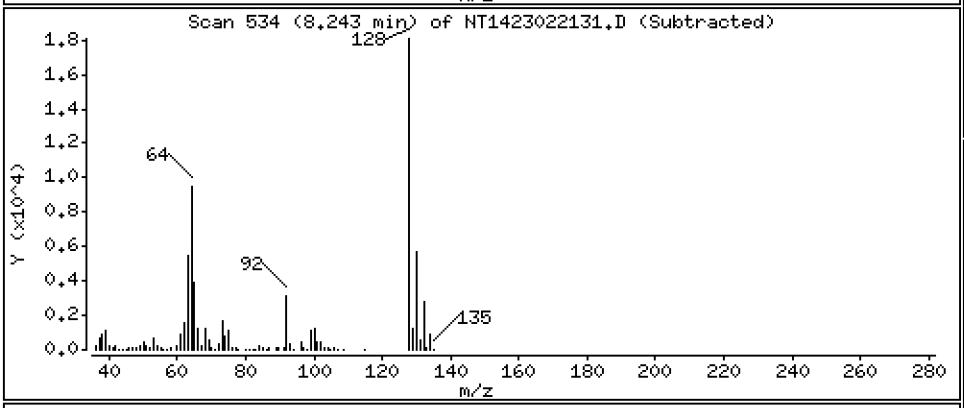
Column diameter: 0.25

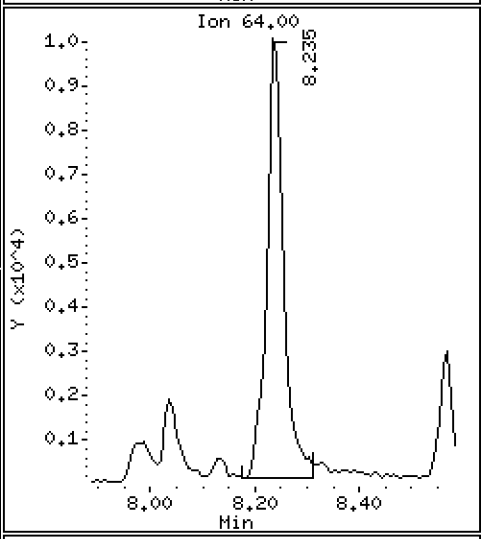
6 2-Chlorophenol

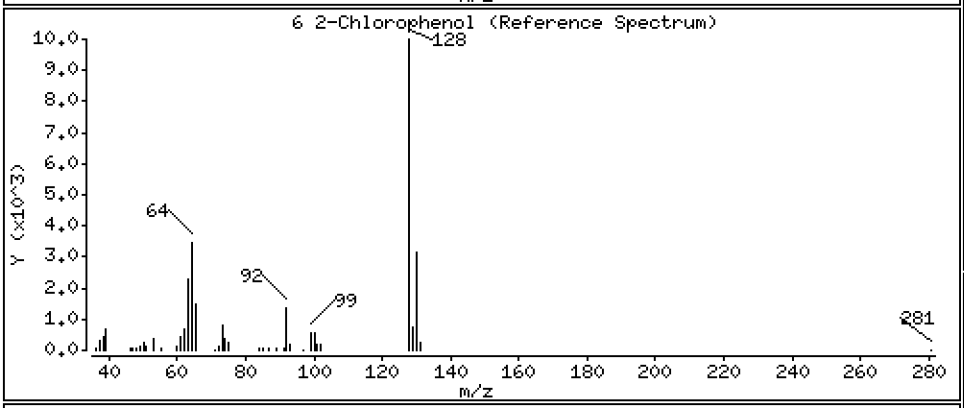
Concentration: 0.4826 ug/mL

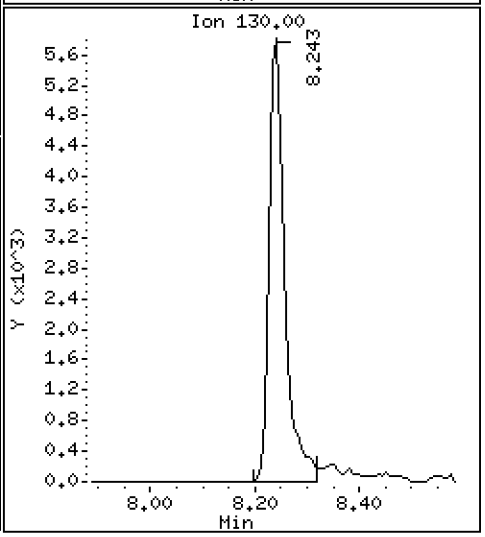


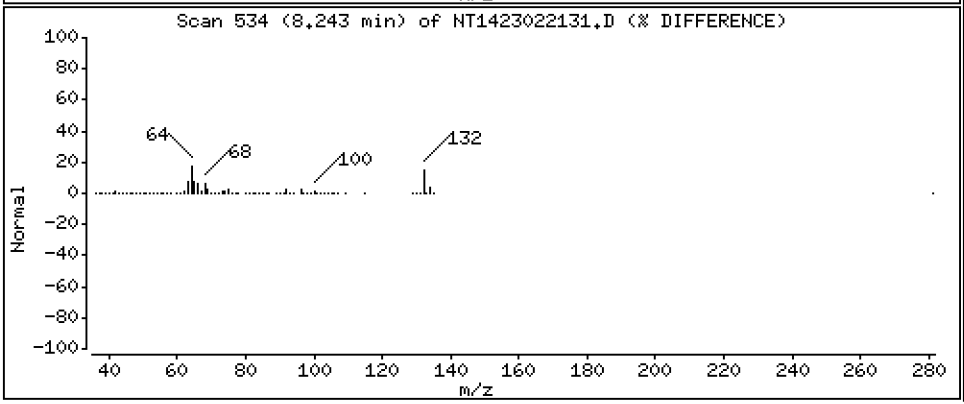












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

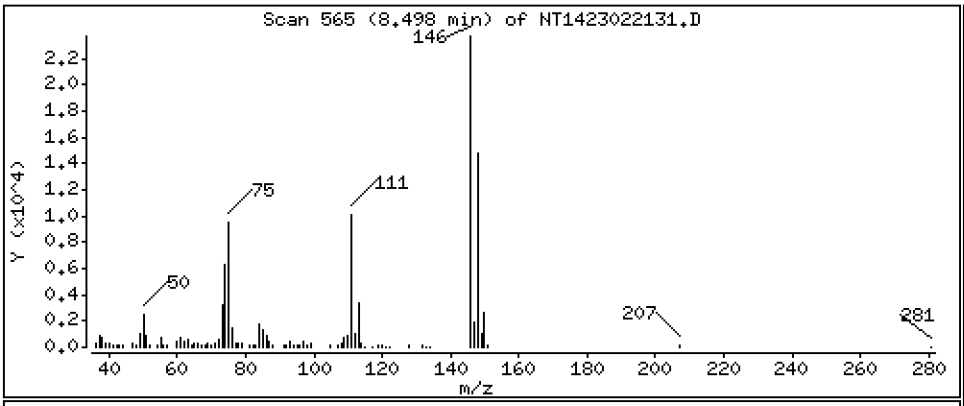
Operator: DSD

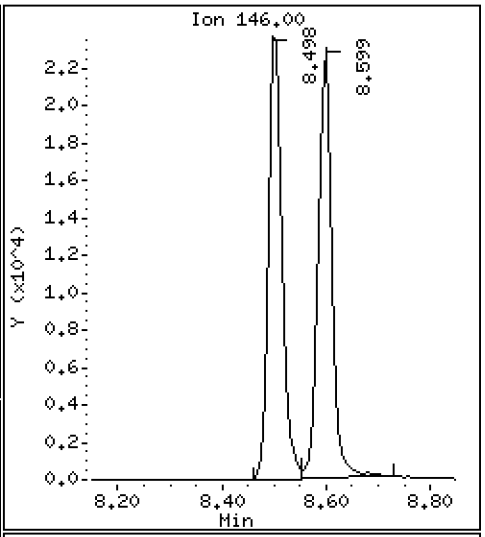
Column phase: ZB-5msi

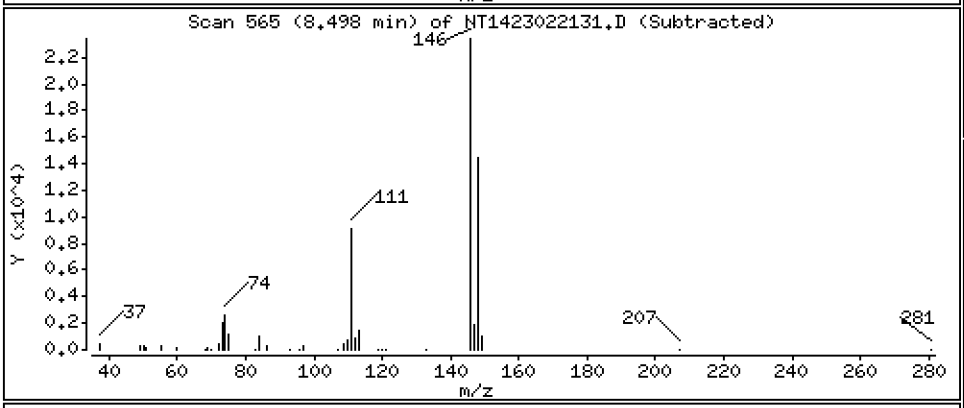
Column diameter: 0.25

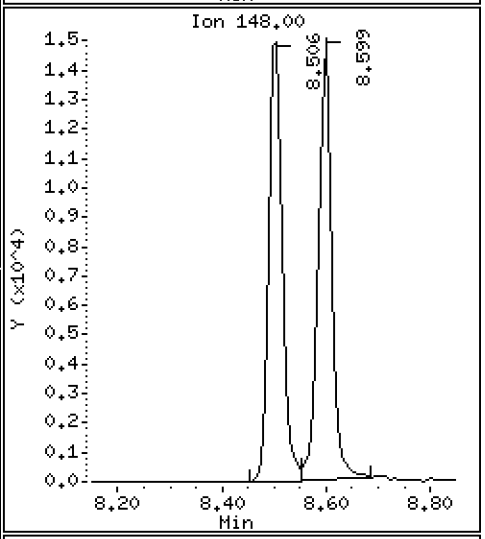
7 1,3-Dichlorobenzene

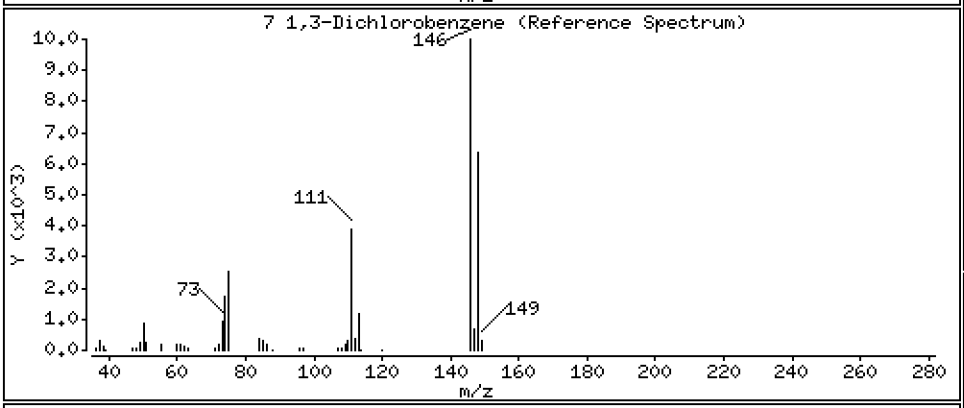
Concentration: 0.4824 ug/mL

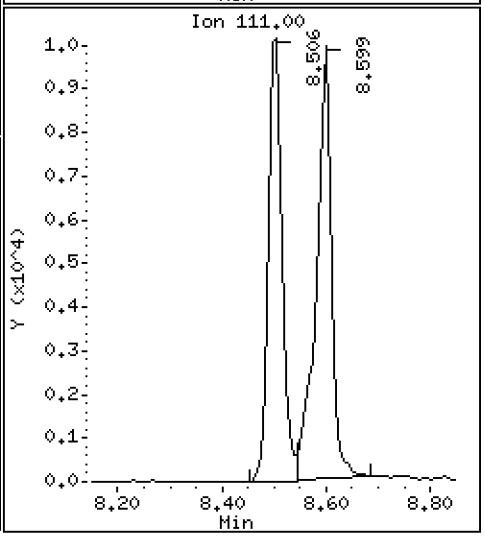


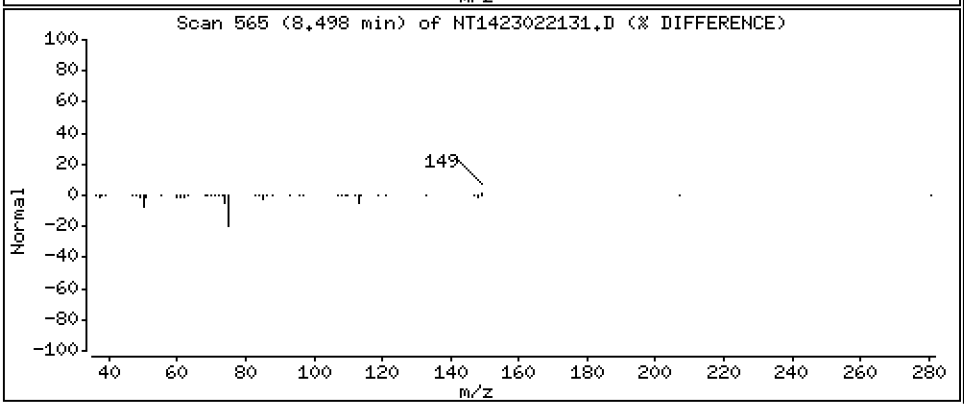












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

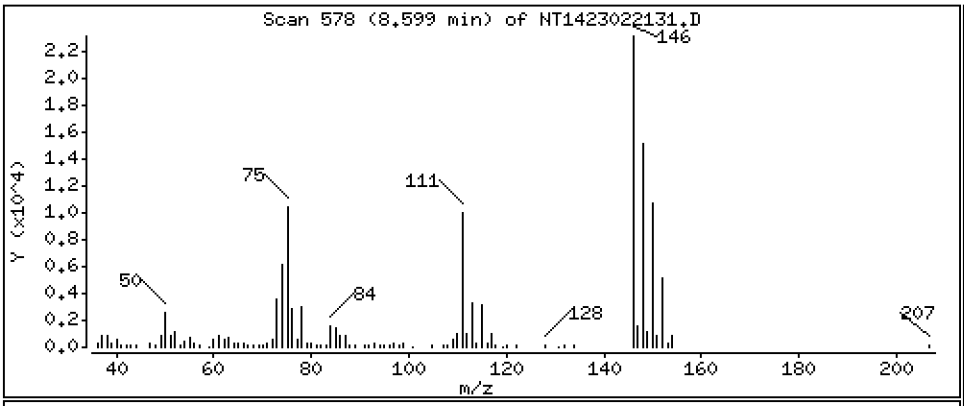
Operator: DSD

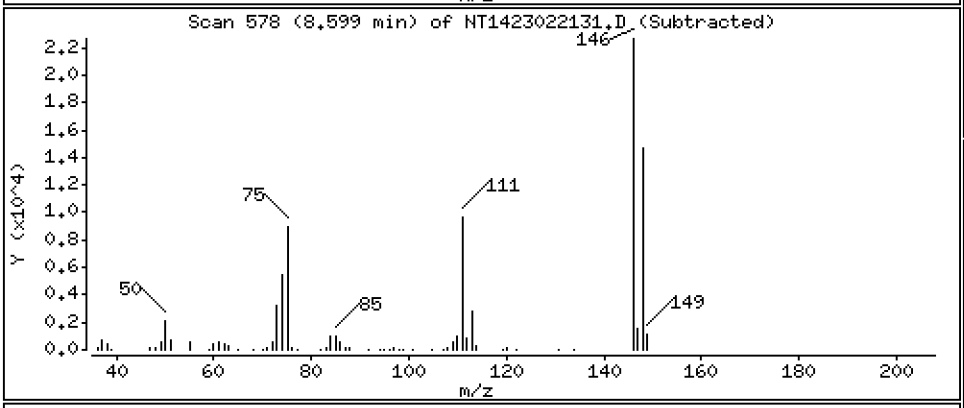
Column phase: ZB-5msi

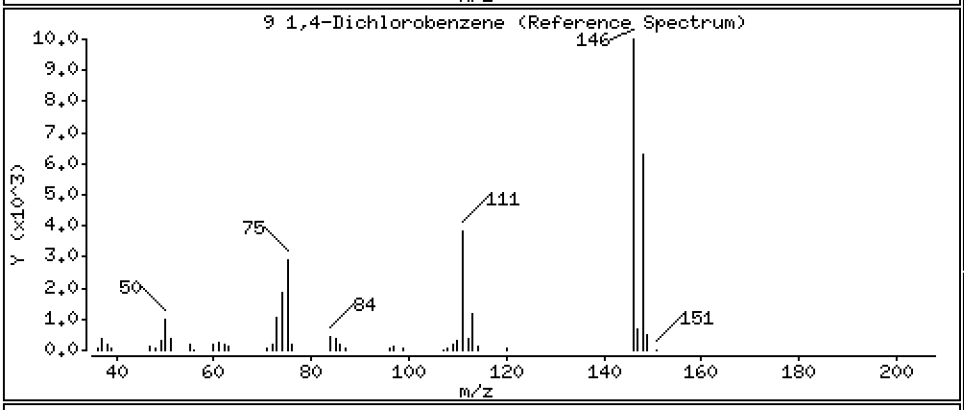
Column diameter: 0.25

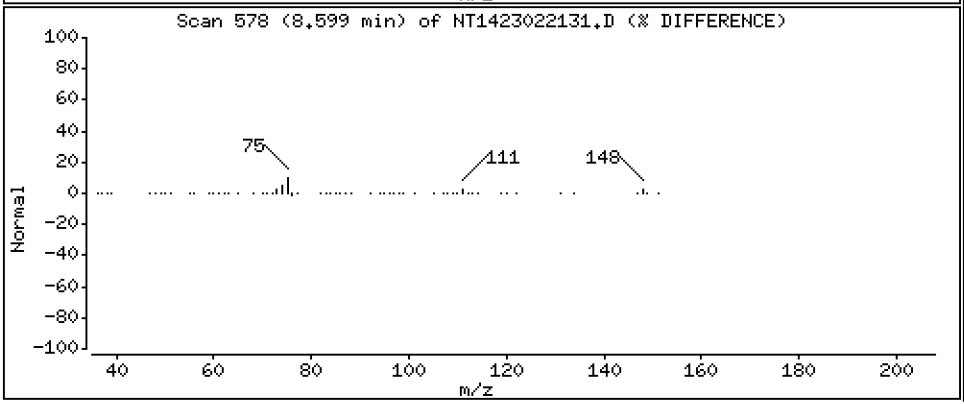
9 1,4-Dichlorobenzene

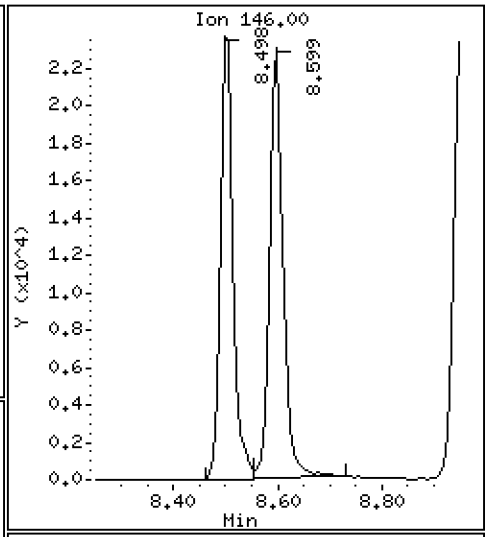
Concentration: 0.5449 ug/mL

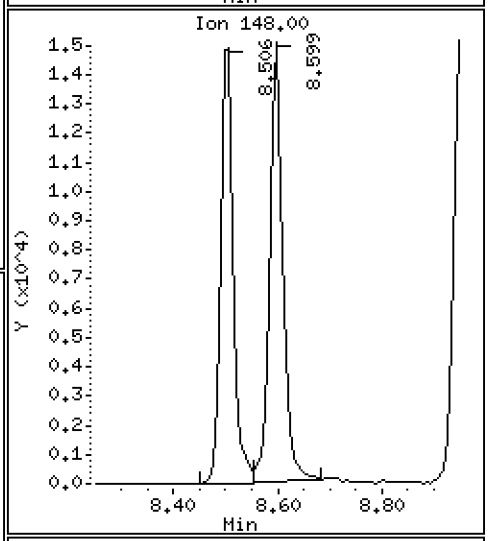


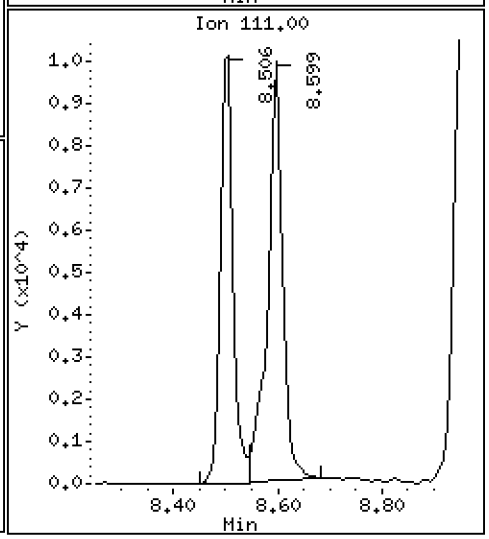












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

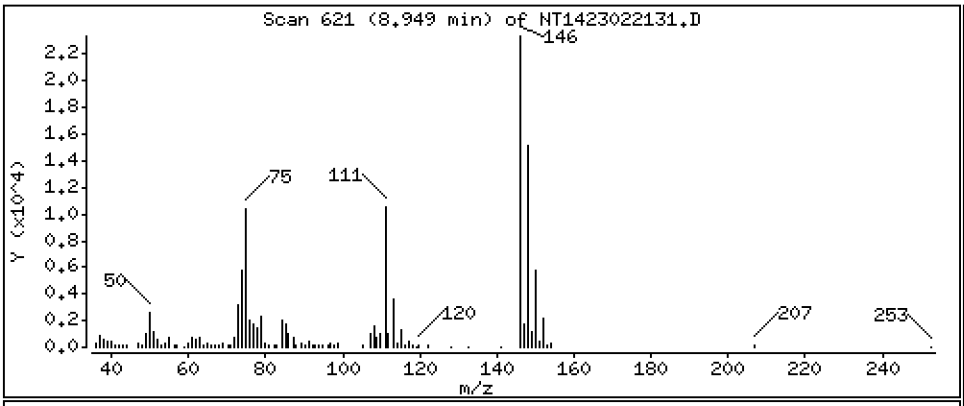
Operator: DSD

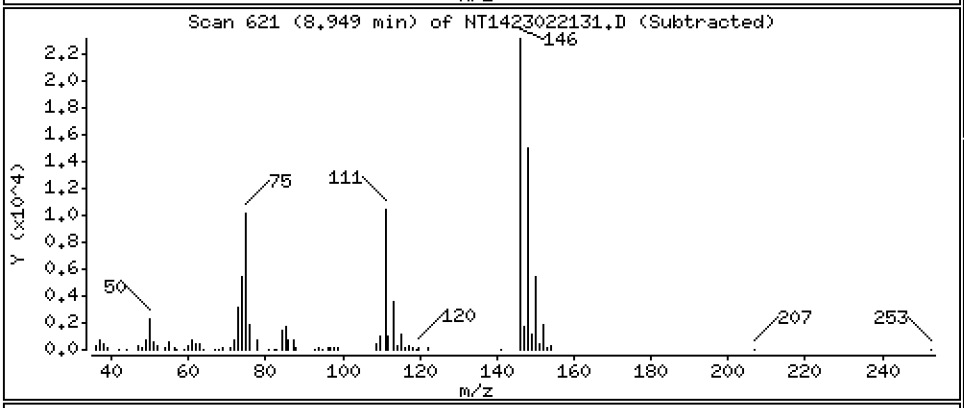
Column phase: ZB-5msi

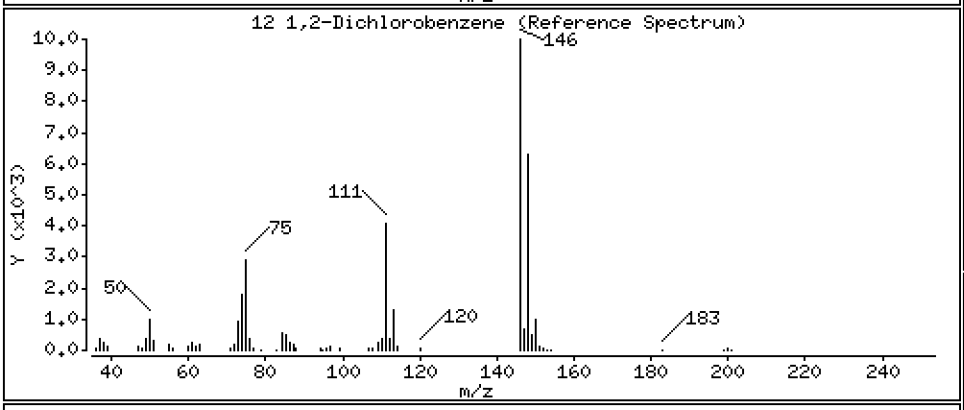
Column diameter: 0.25

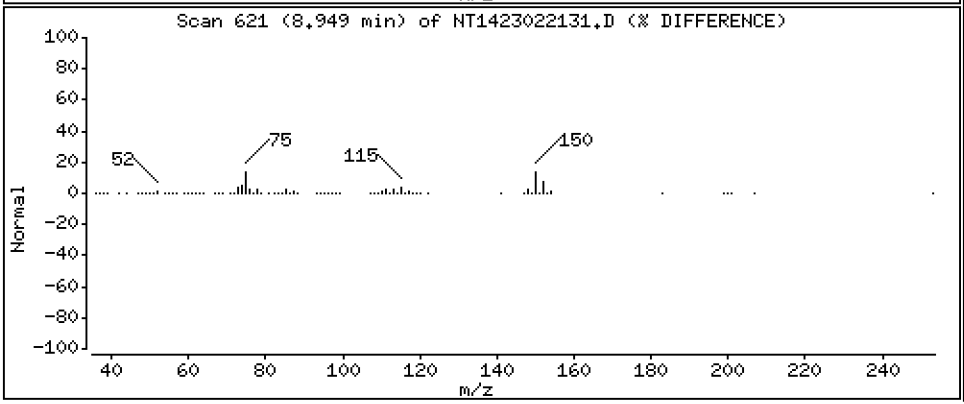
12 1,2-Dichlorobenzene

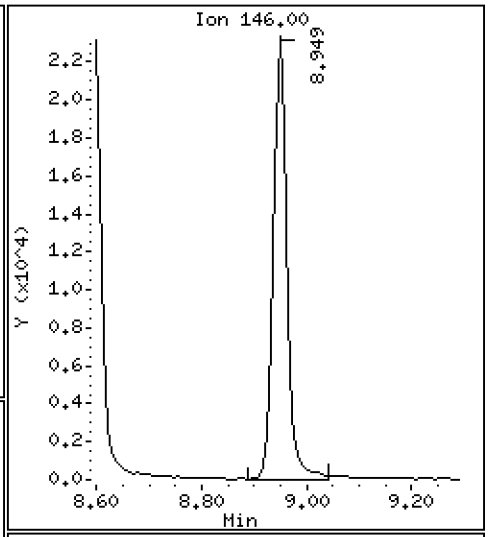
Concentration: 0.4898 ug/mL

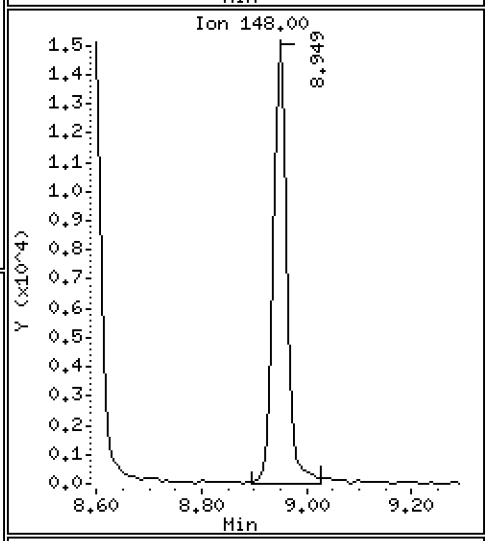


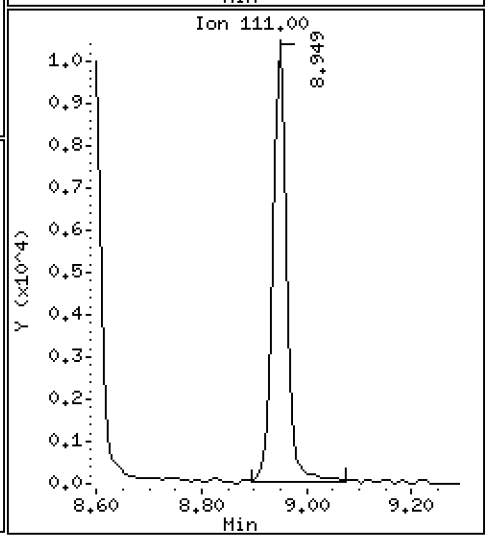












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

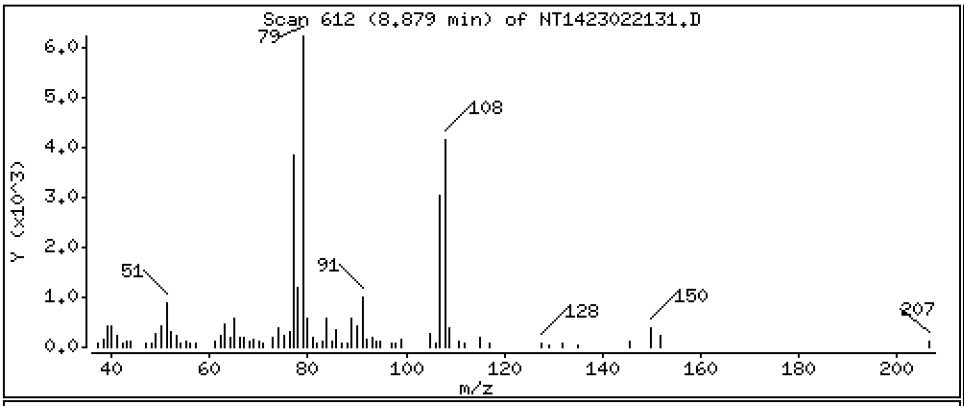
Operator: DSD

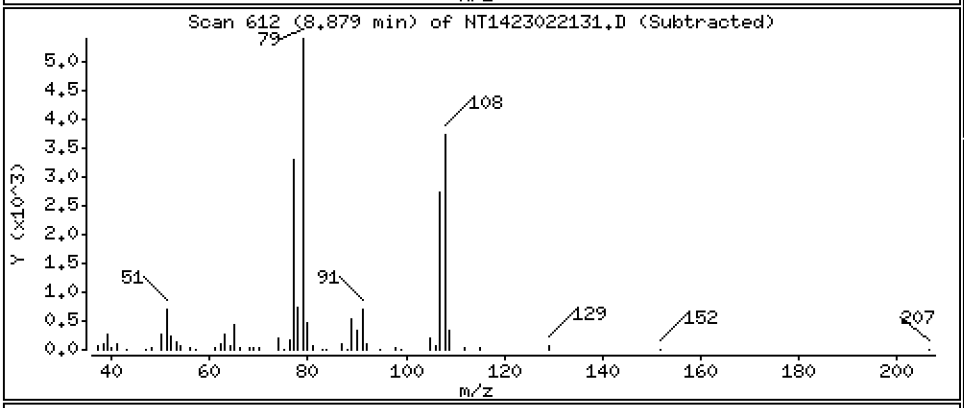
Column phase: ZB-5msi

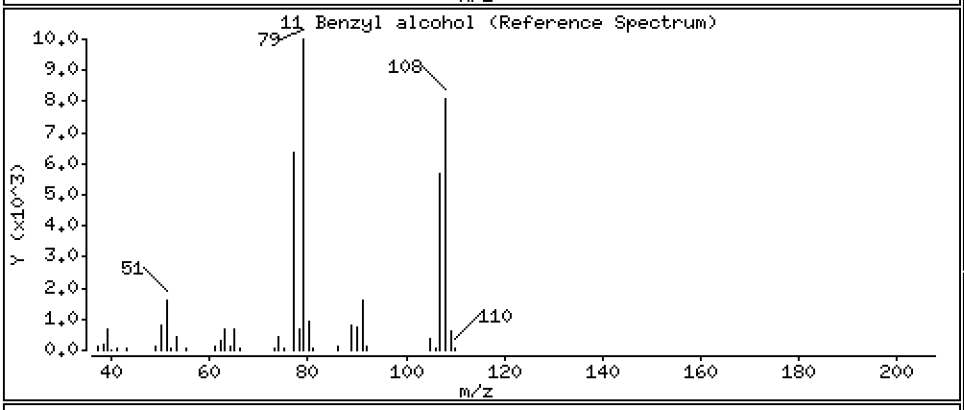
Column diameter: 0.25

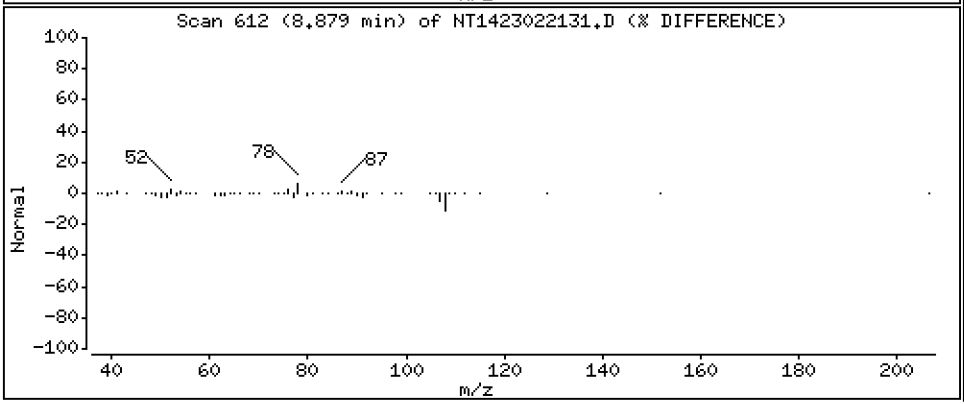
11 Benzyl alcohol

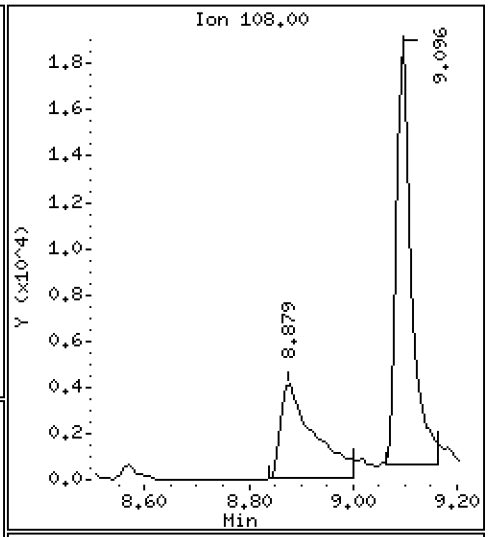
Concentration: 0.2966 ug/mL

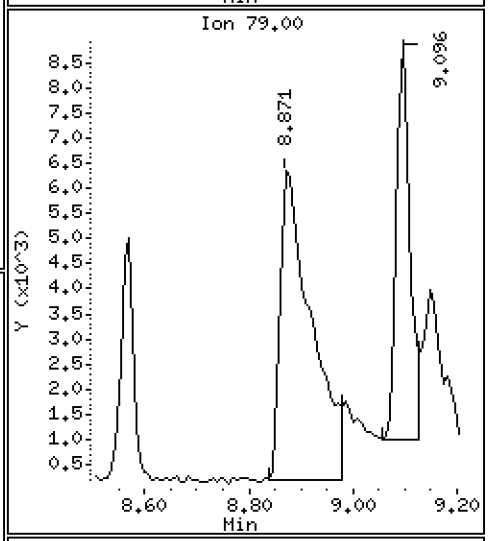


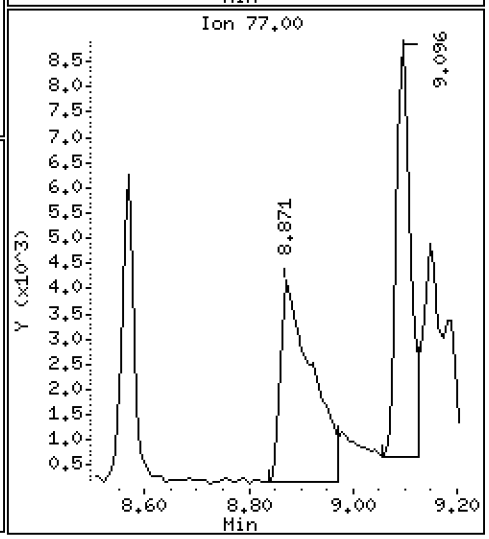












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

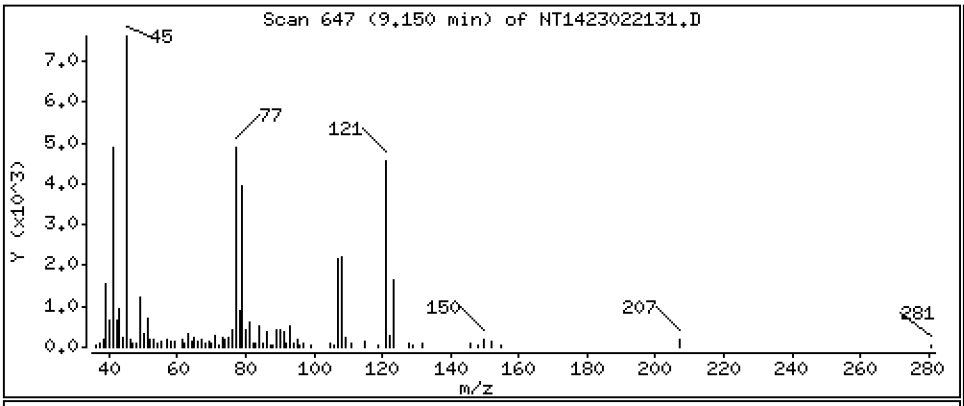
Operator: DSD

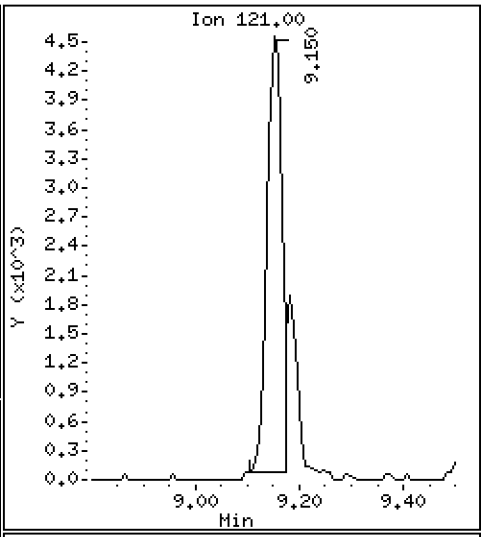
Column phase: ZB-5msi

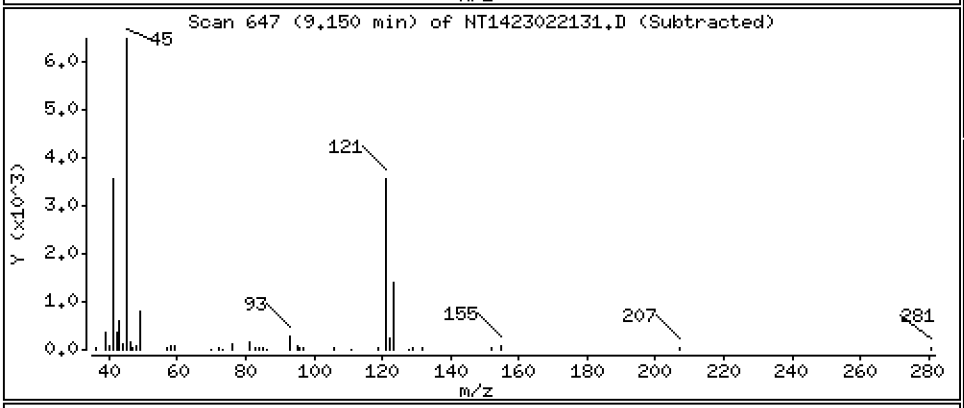
Column diameter: 0.25

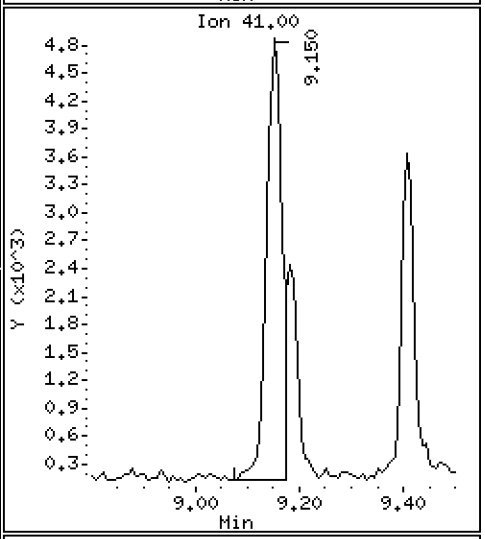
14 2,2'-oxybis(1-Chloropropane)

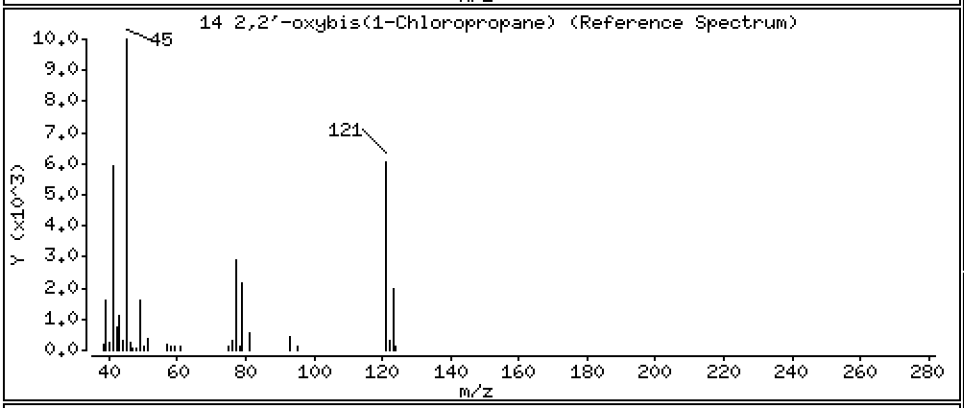
Concentration: 0.3701 ug/mL

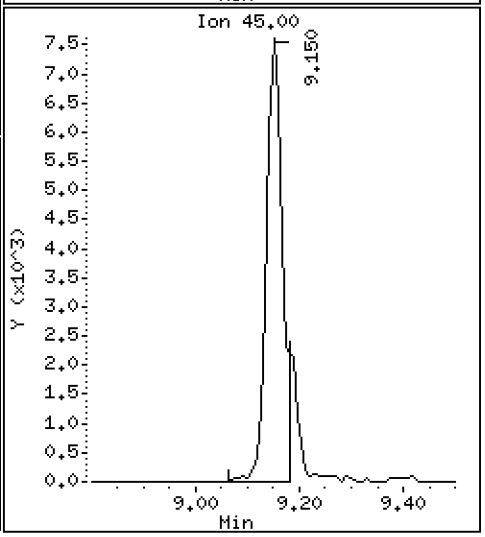


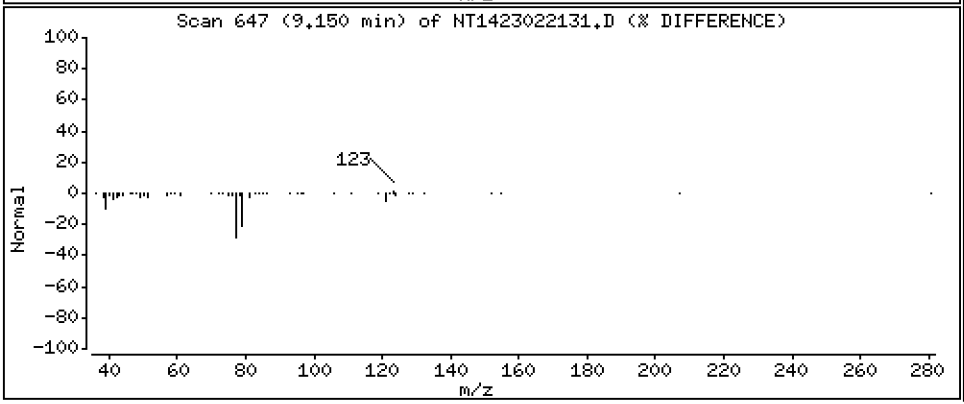












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

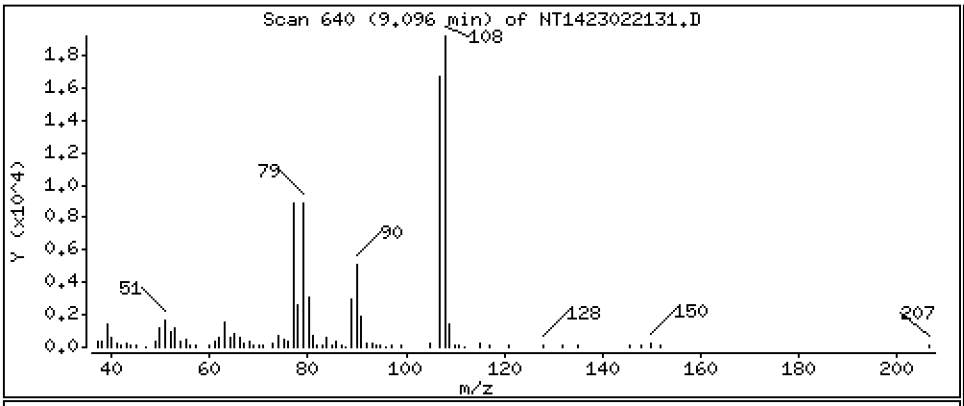
Operator: DSD

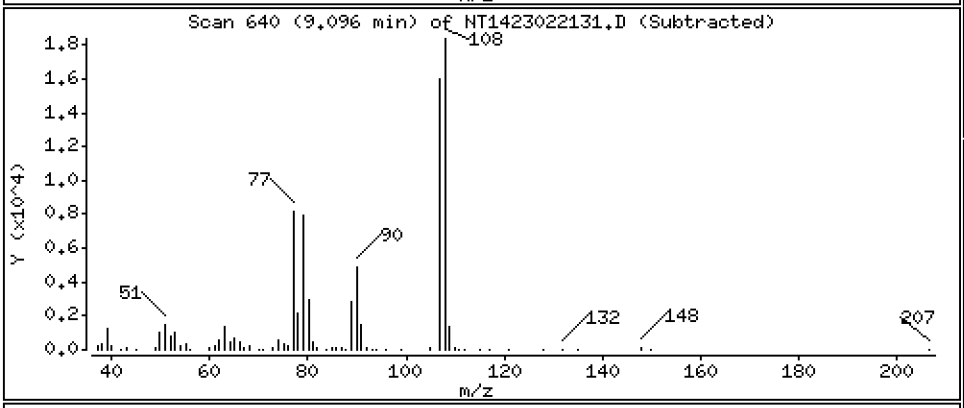
Column phase: ZB-5msi

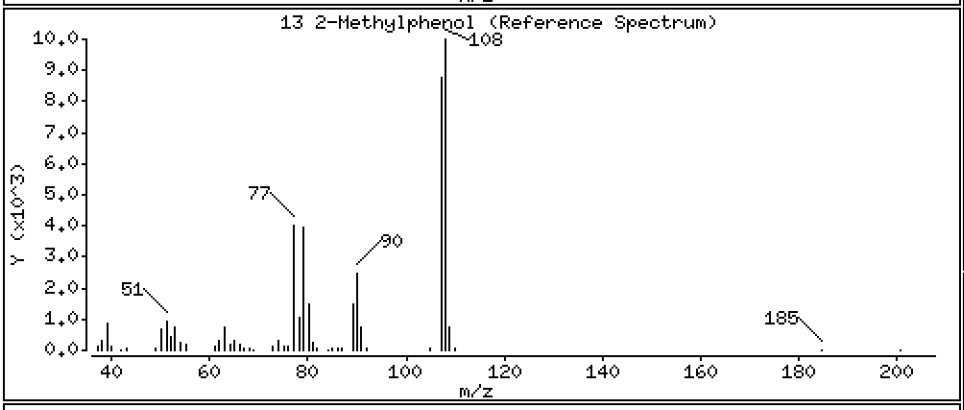
Column diameter: 0.25

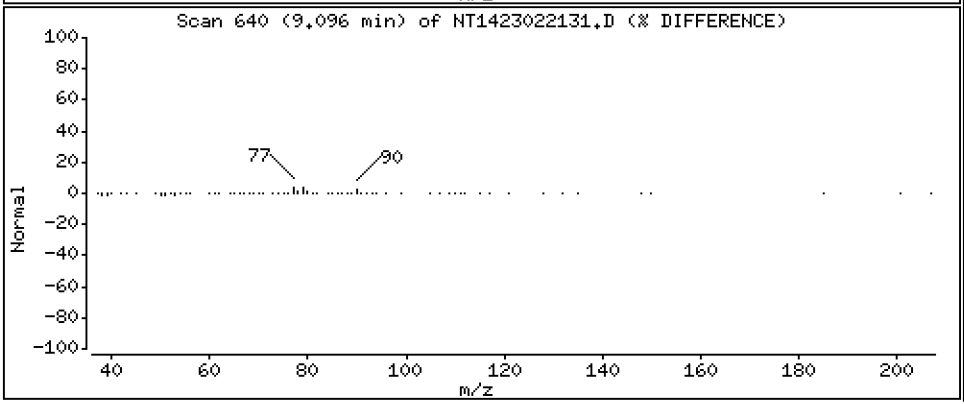
13 2-Methylphenol

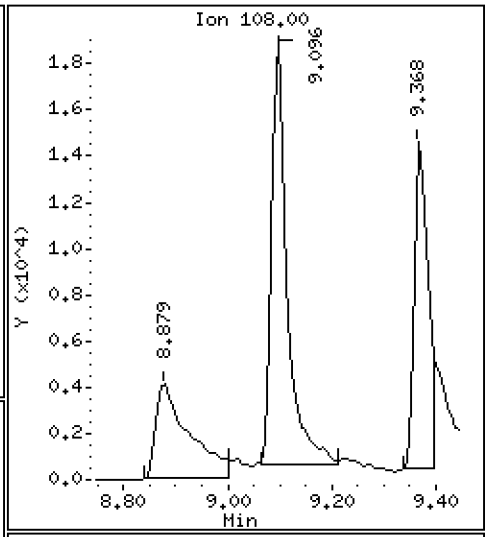
Concentration: 0.4720 ug/mL

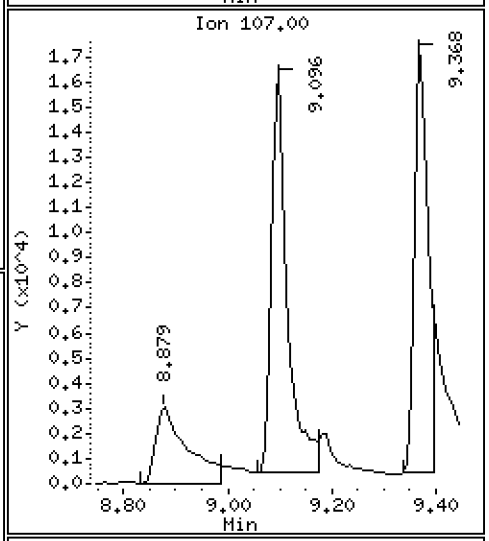


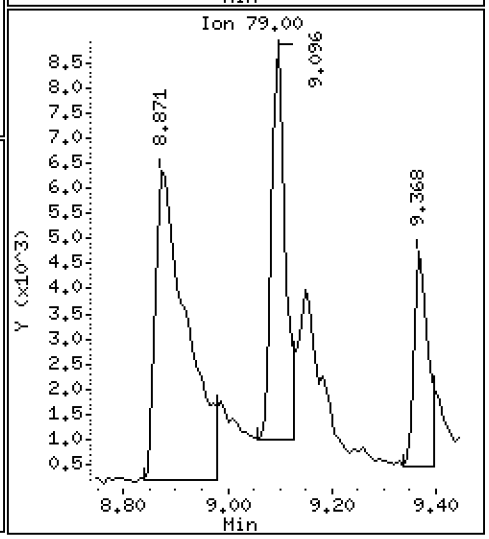












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

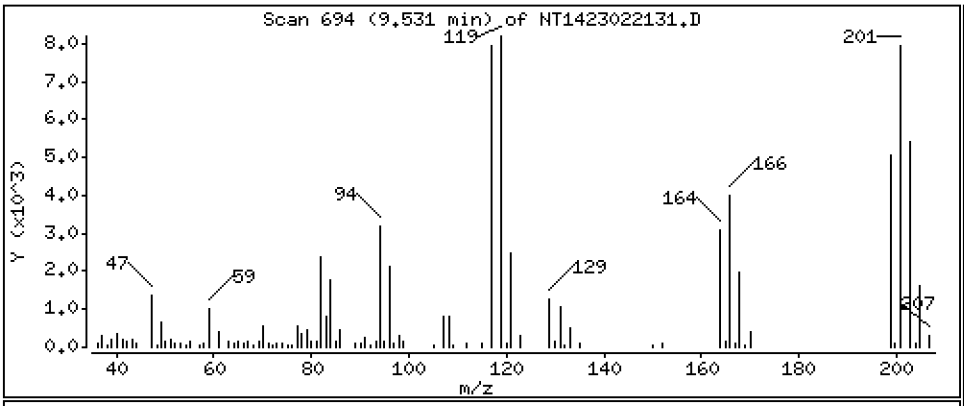
Operator: DSD

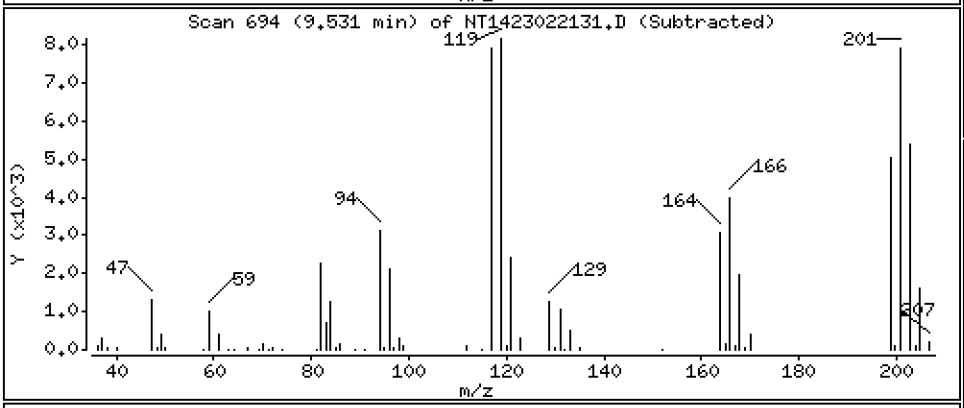
Column phase: ZB-5msi

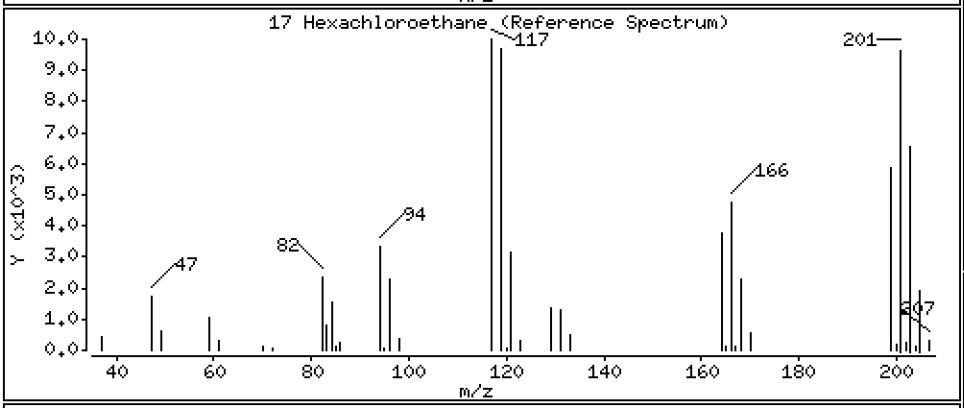
Column diameter: 0.25

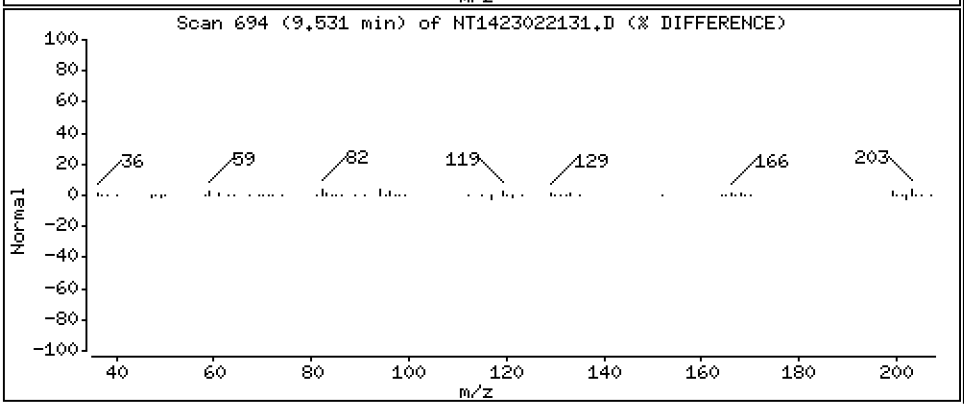
17 Hexachloroethane

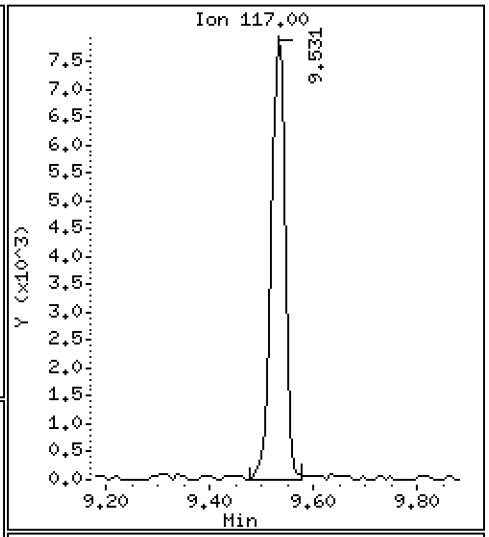
Concentration: 0.3941 ug/mL

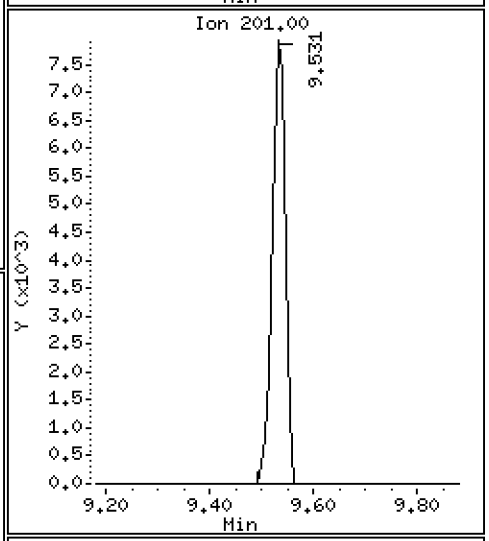


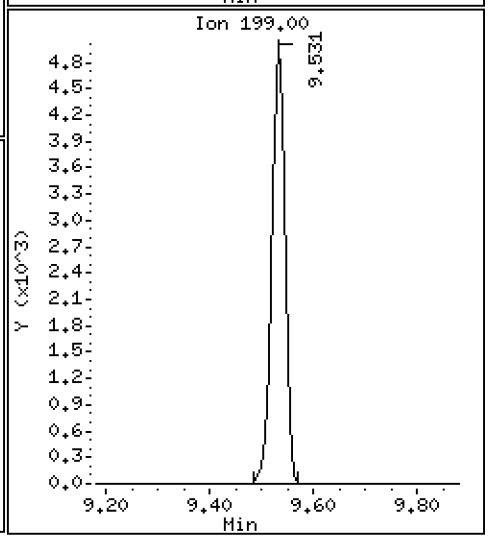












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

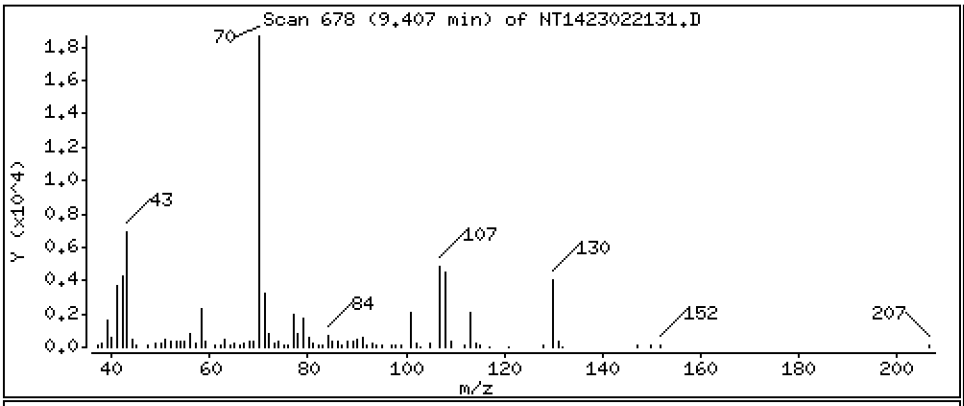
Operator: DSD

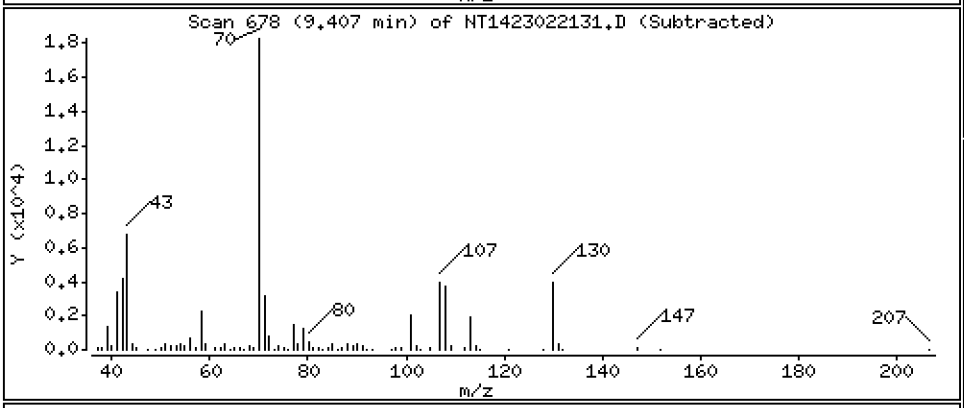
Column phase: ZB-5msi

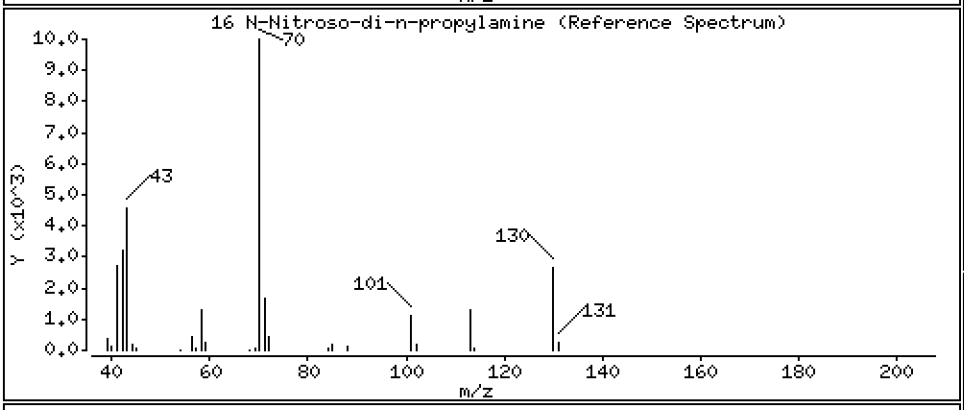
Column diameter: 0.25

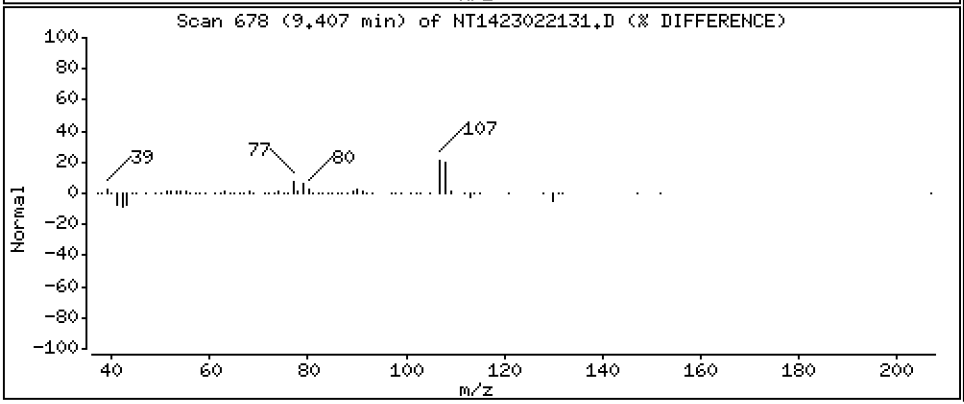
16 N-Nitroso-di-n-propylamine

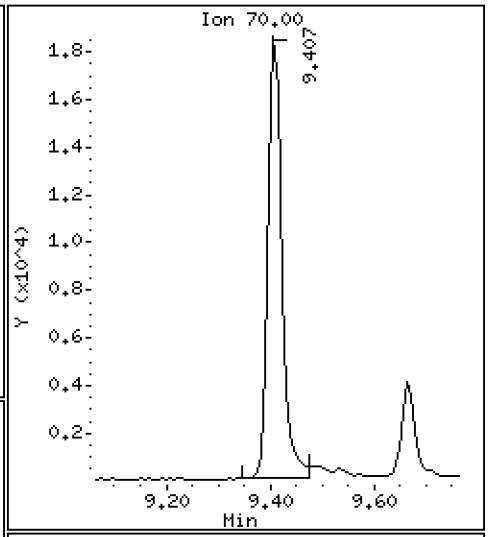
Concentration: 0.4706 ug/mL

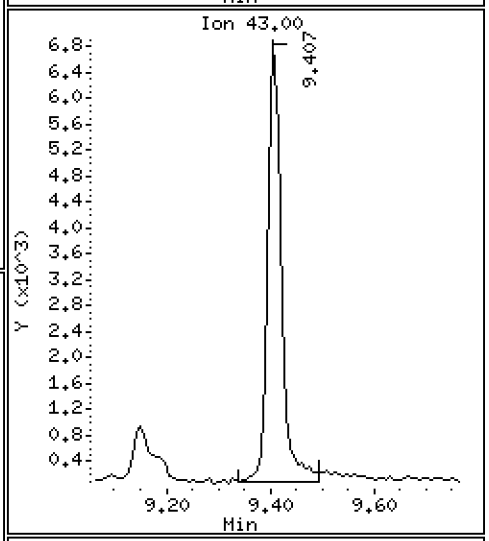


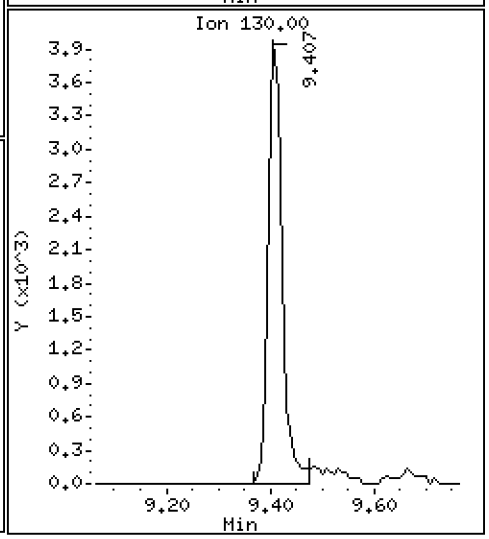












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

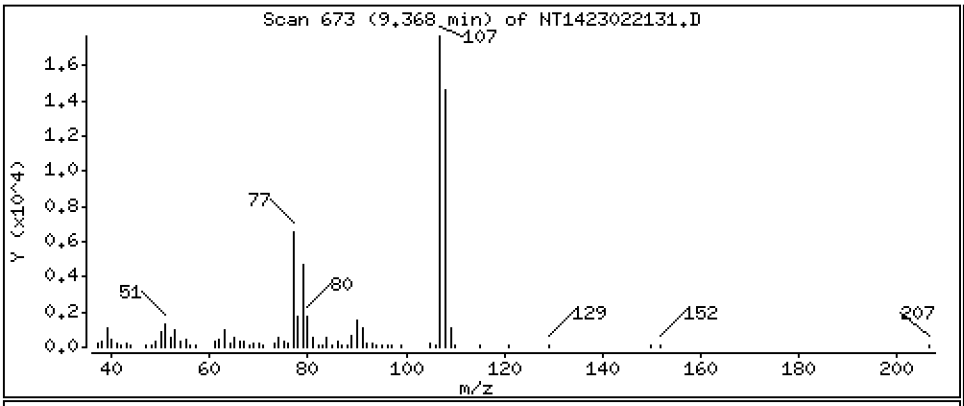
Operator: DSD

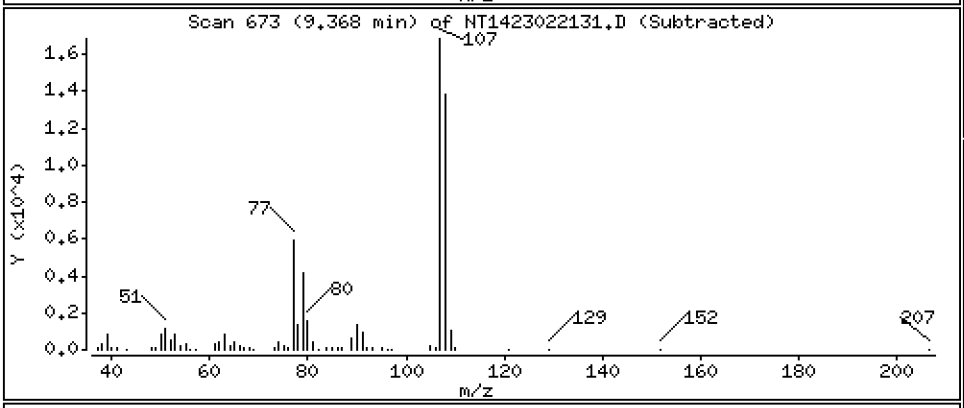
Column phase: ZB-5msi

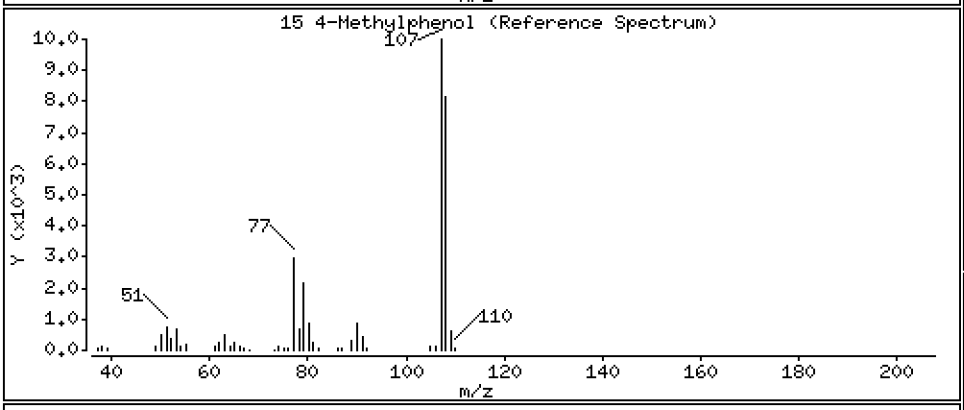
Column diameter: 0.25

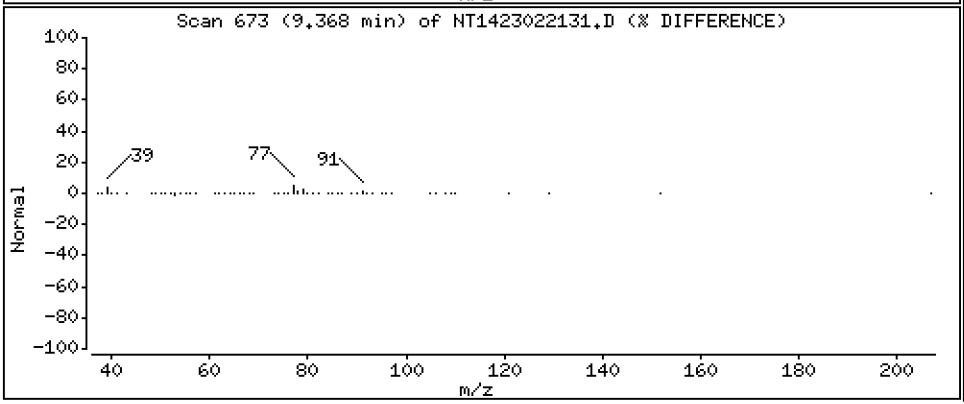
15 4-Methylphenol

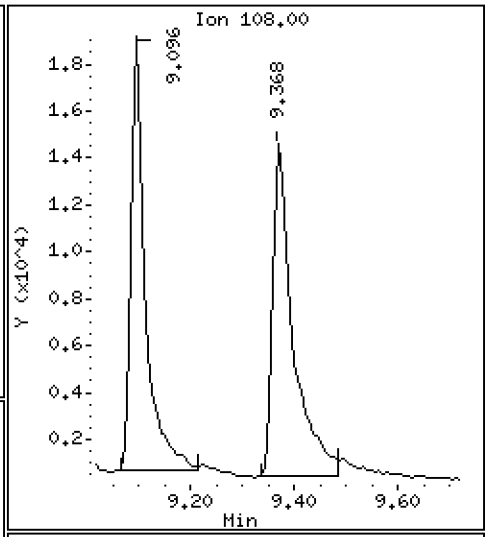
Concentration: 0.4588 ug/mL

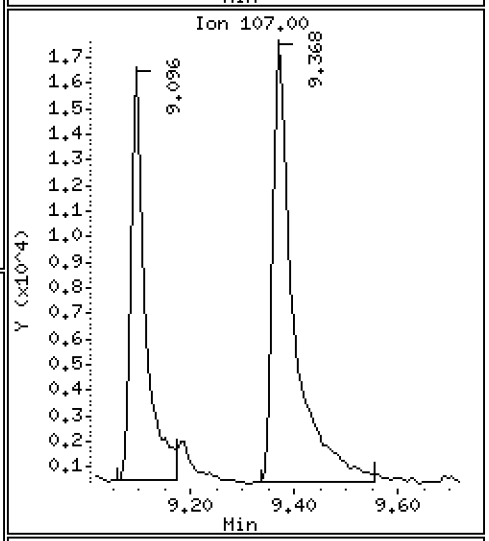


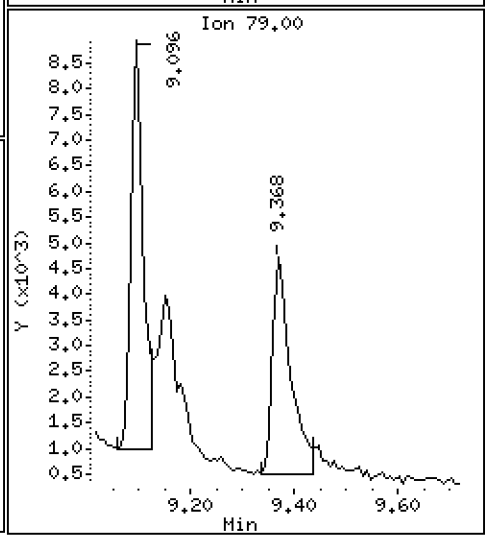












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

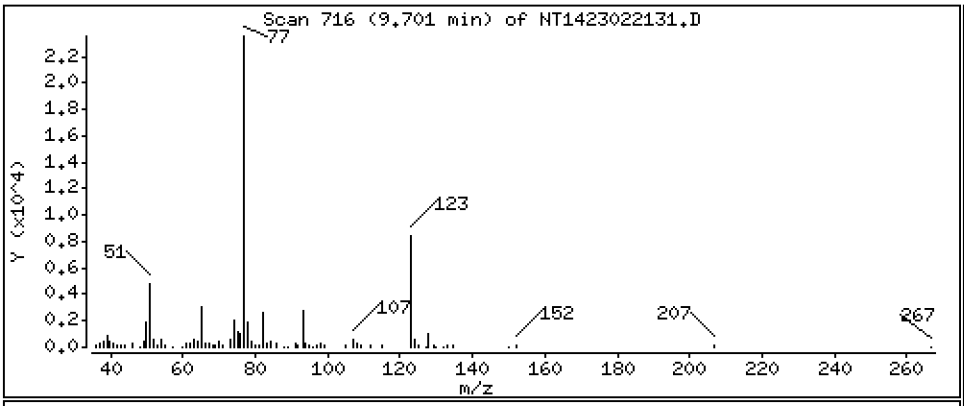
Operator: DSD

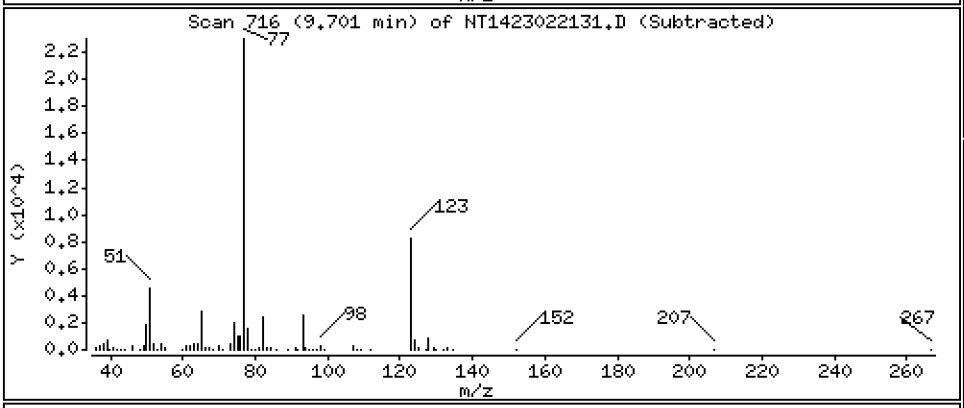
Column phase: ZB-5msi

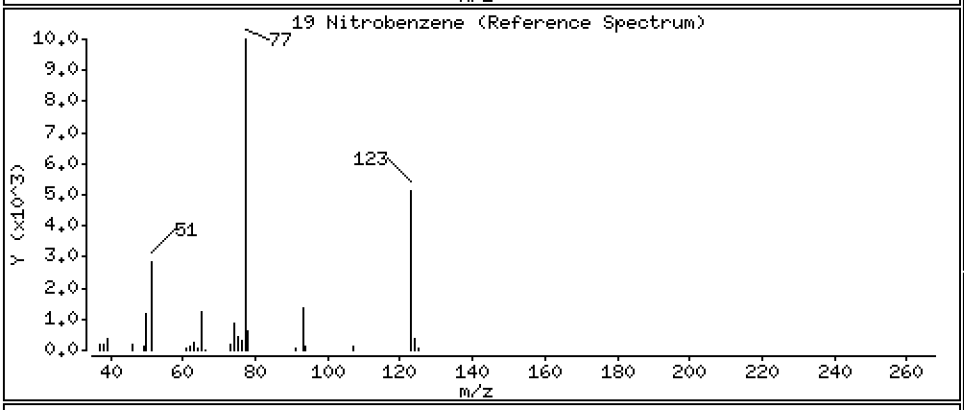
Column diameter: 0.25

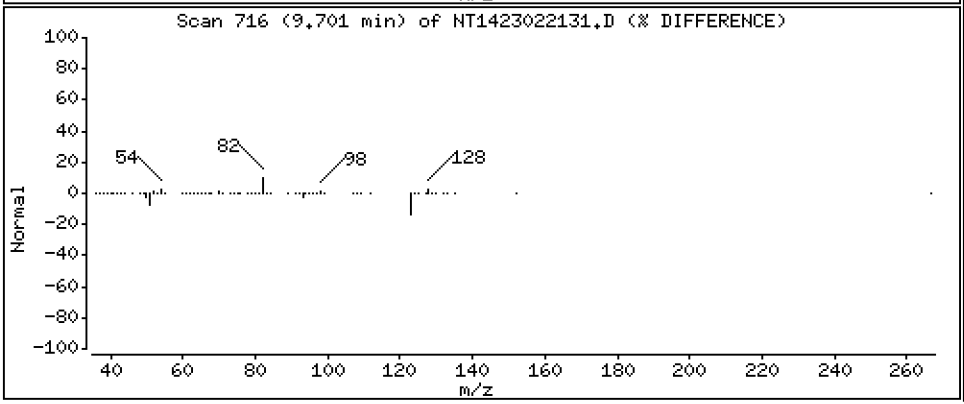
19 Nitrobenzene

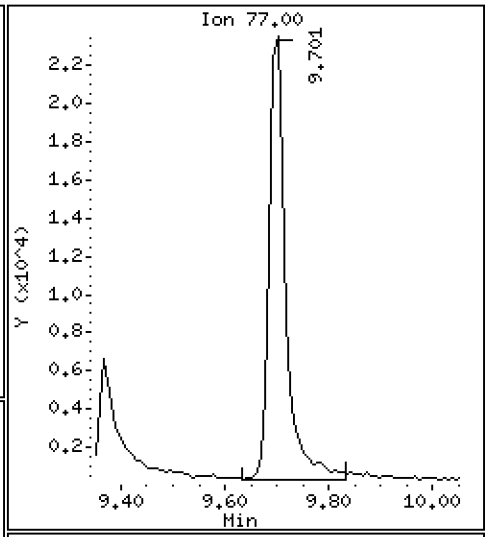
Concentration: 0.5041 ug/mL

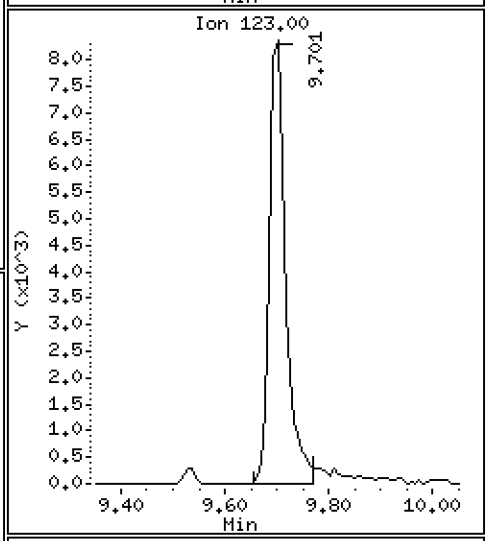


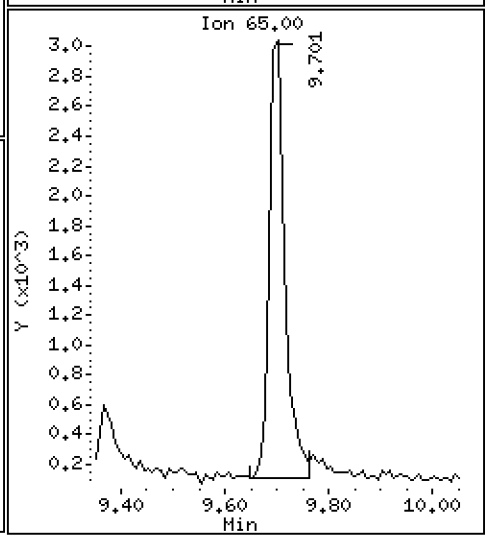












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

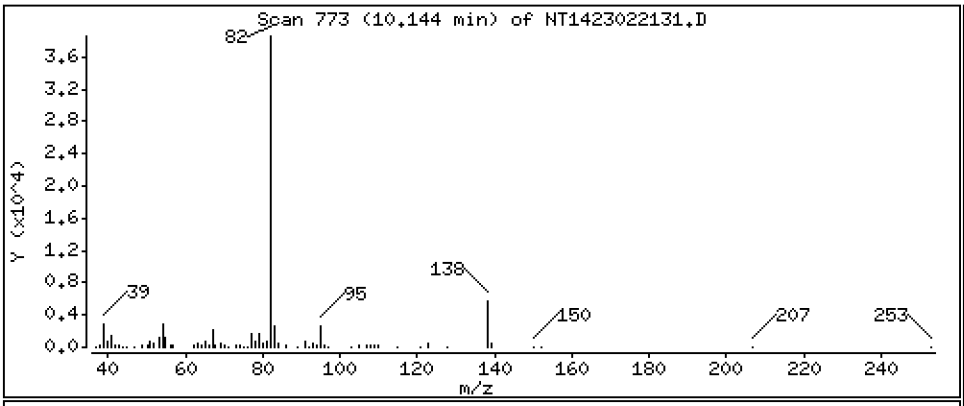
Operator: DSD

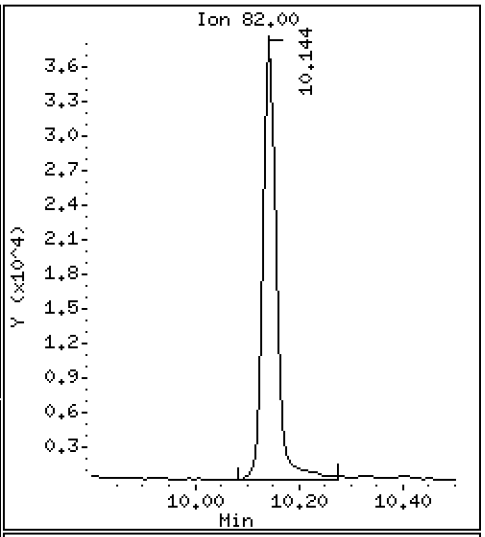
Column phase: ZB-5msi

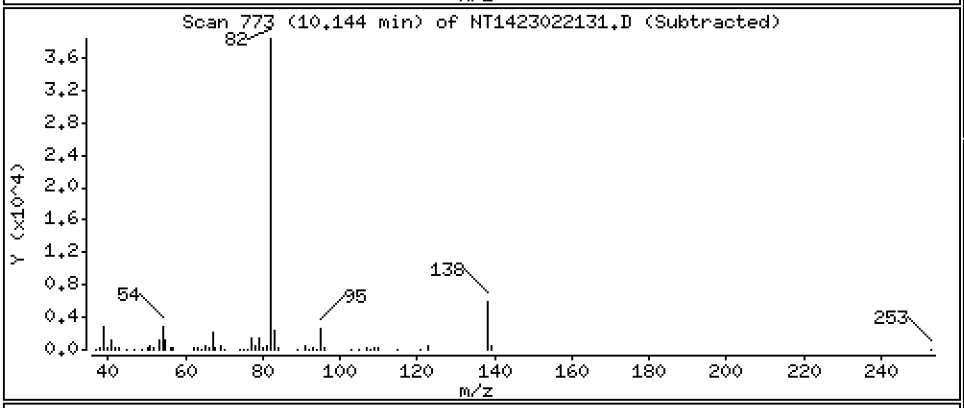
Column diameter: 0.25

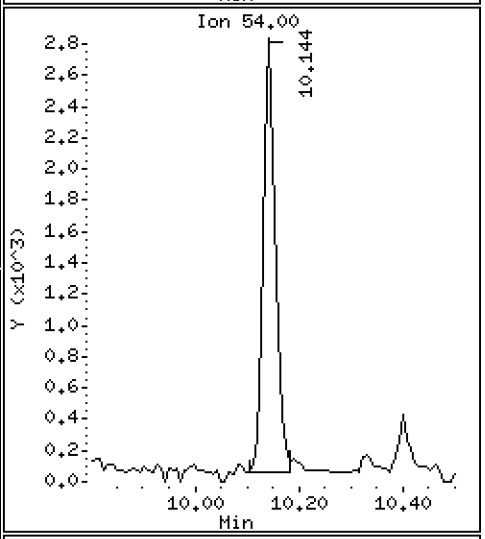
20 Isophorone

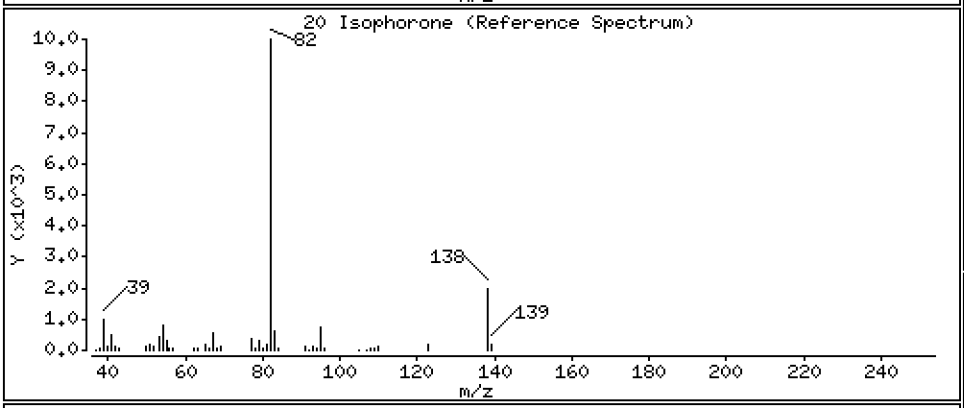
Concentration: 0.5461 ug/mL

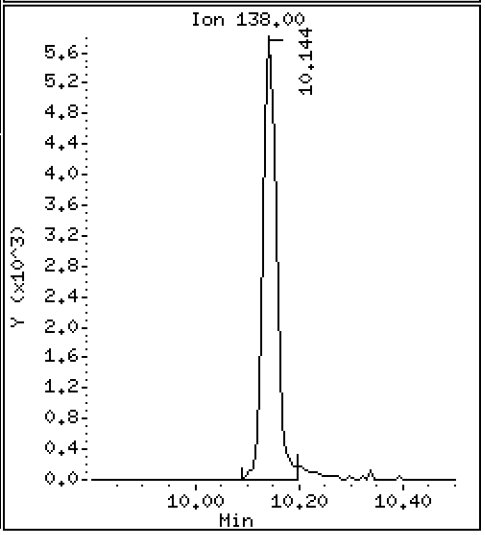


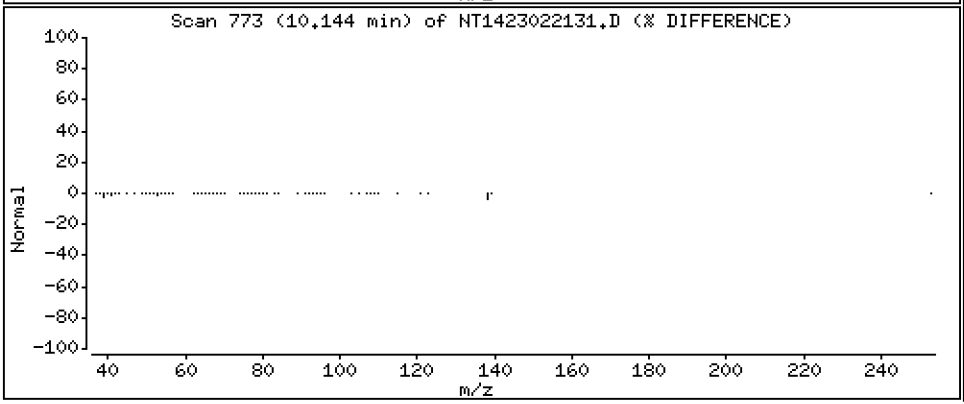












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

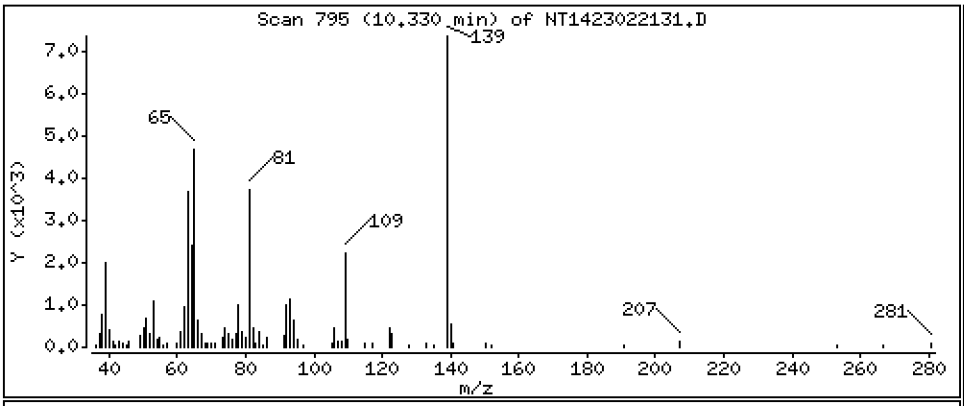
Operator: DSD

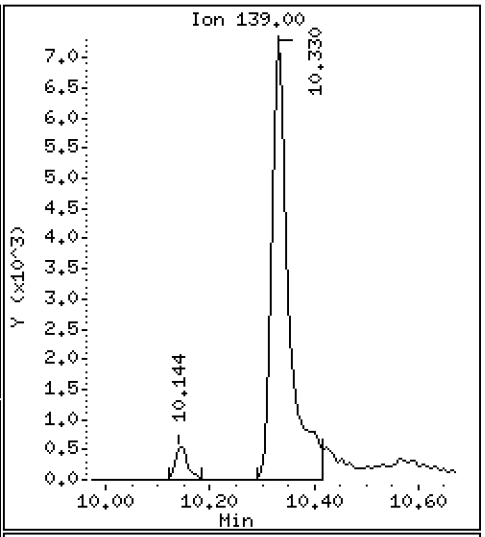
Column phase: ZB-5msi

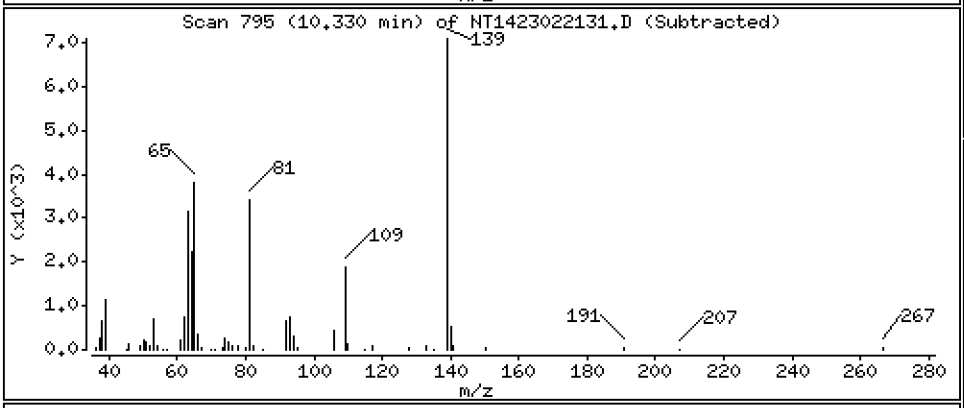
Column diameter: 0.25

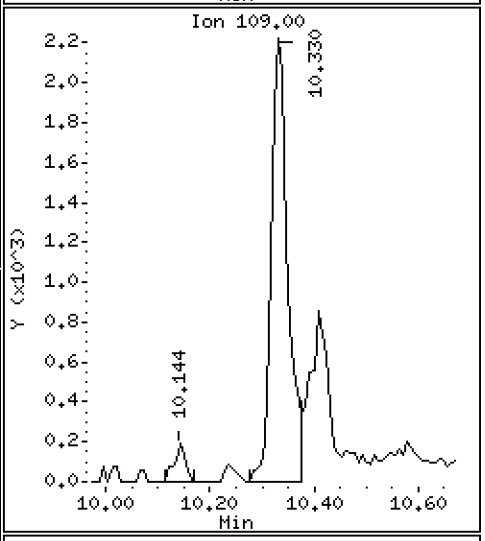
21 2-Nitrophenol

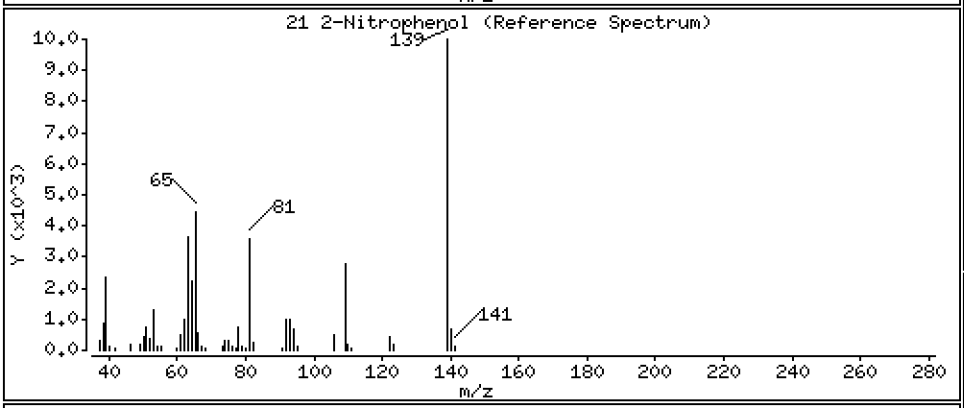
Concentration: 0.3736 ug/mL

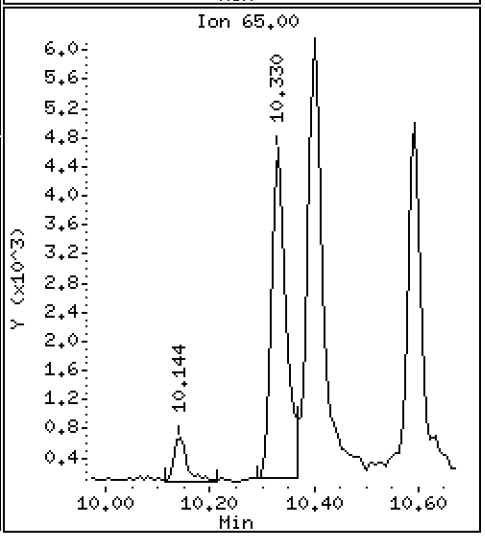


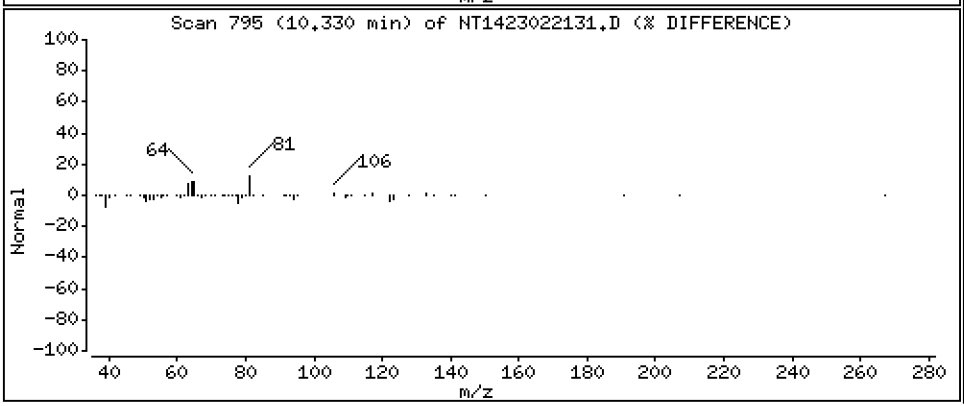












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

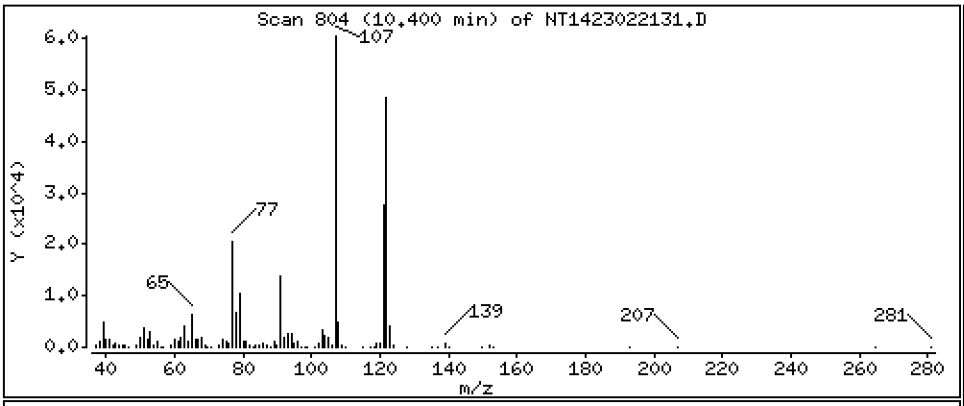
Operator: DSD

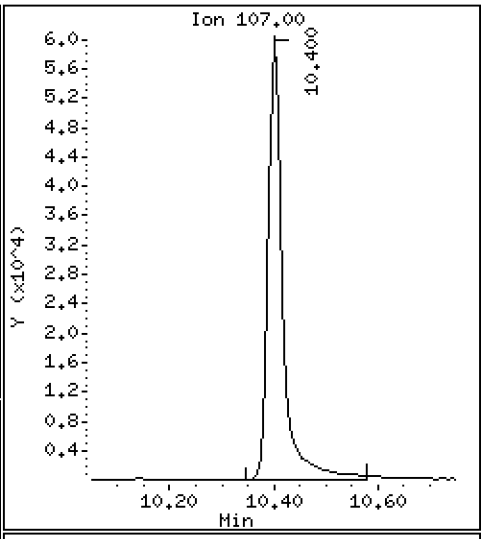
Column phase: ZB-5msi

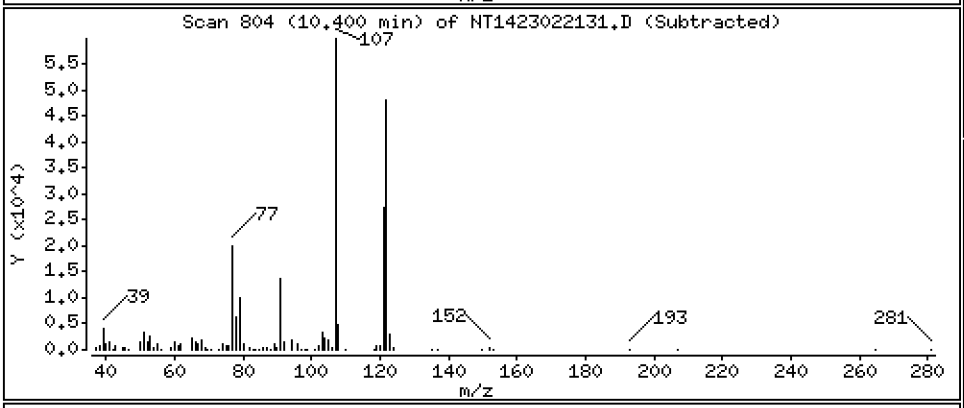
Column diameter: 0.25

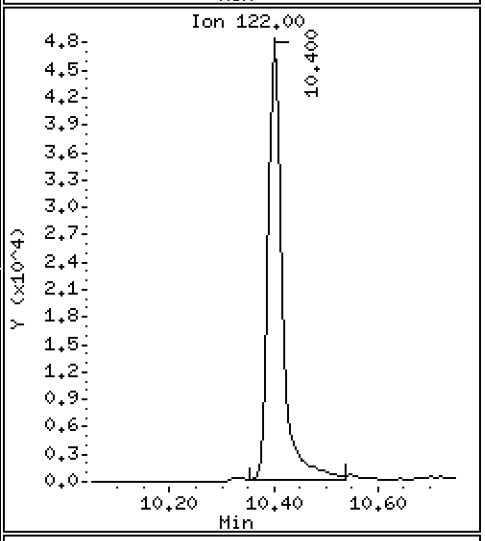
22 2,4-Dimethylphenol

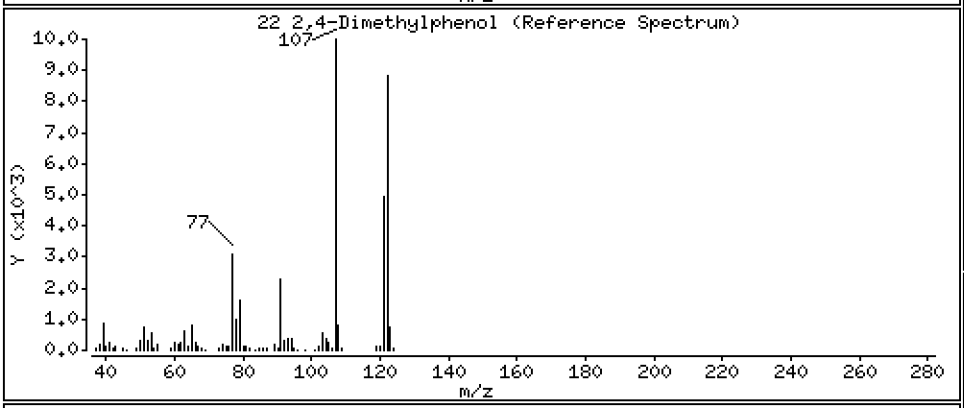
Concentration: 1.496 ug/mL

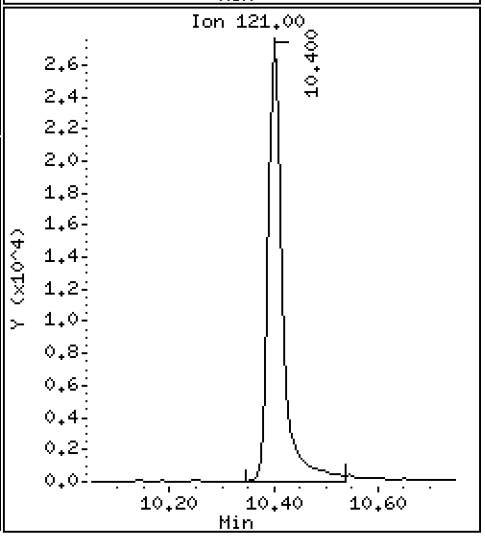


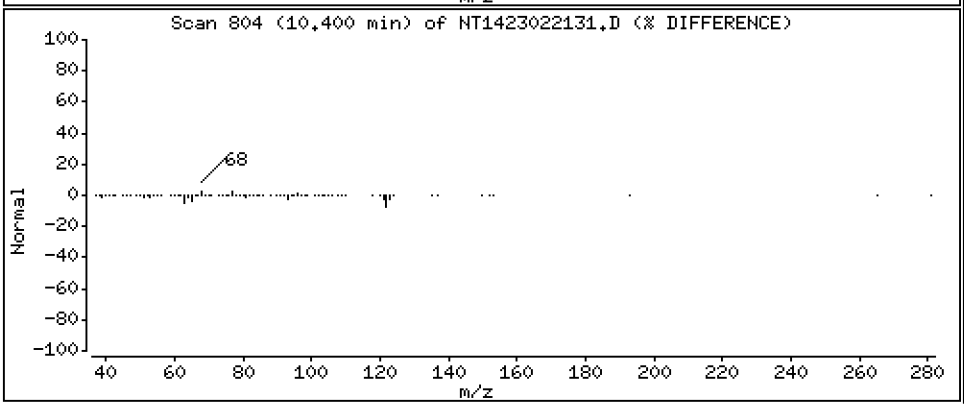












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

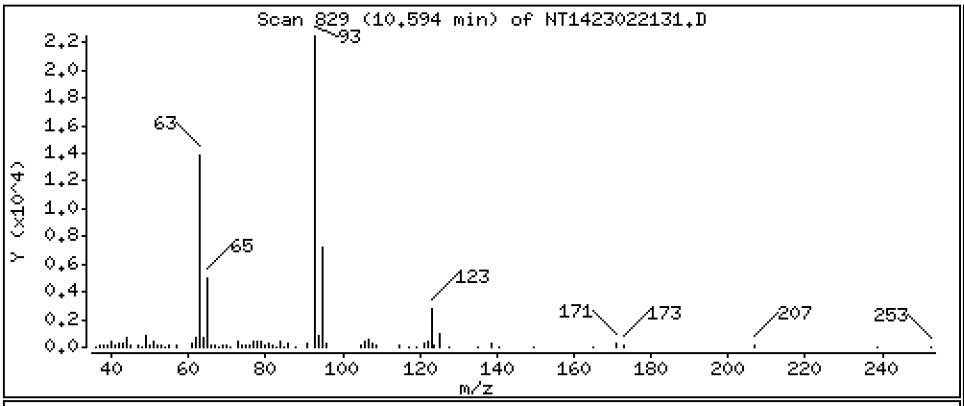
Operator: DSD

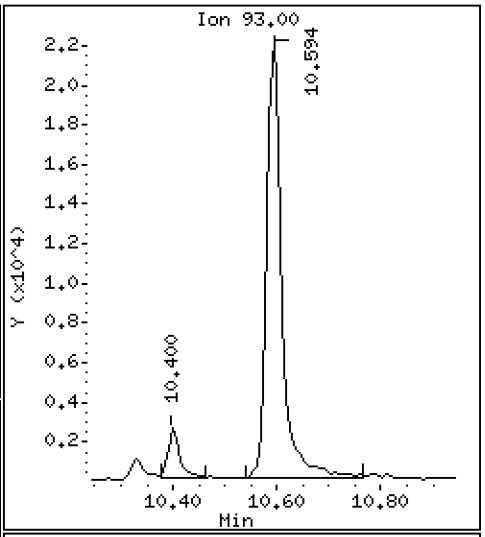
Column phase: ZB-5msi

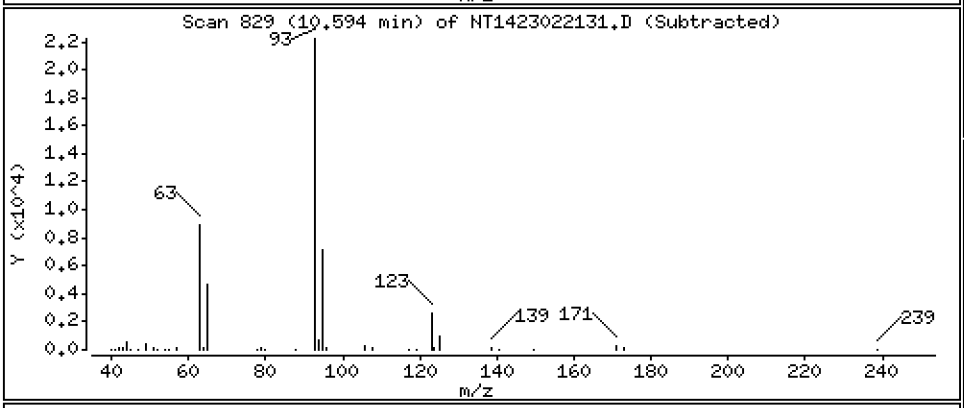
Column diameter: 0.25

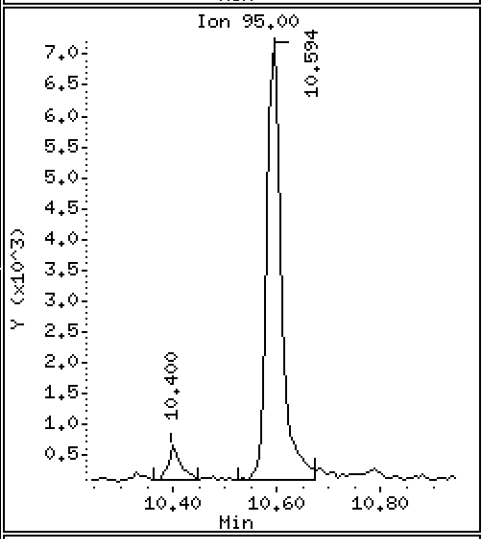
23 Bis(2-Chloroethoxy)methane

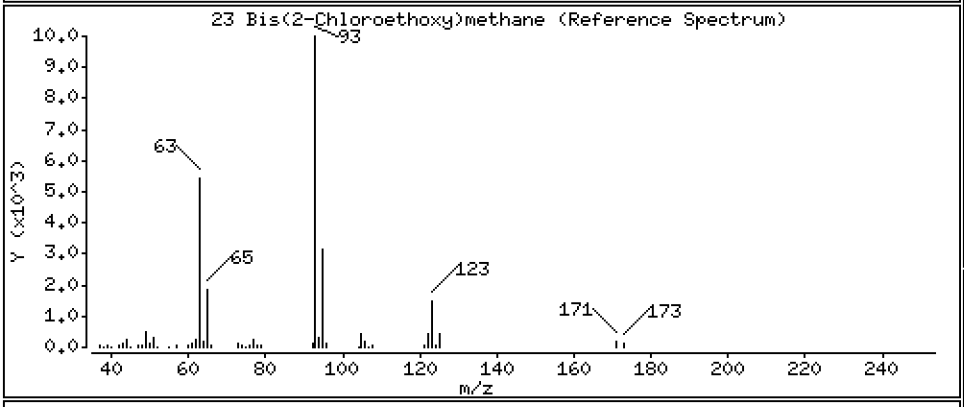
Concentration: 0.5084 ug/mL

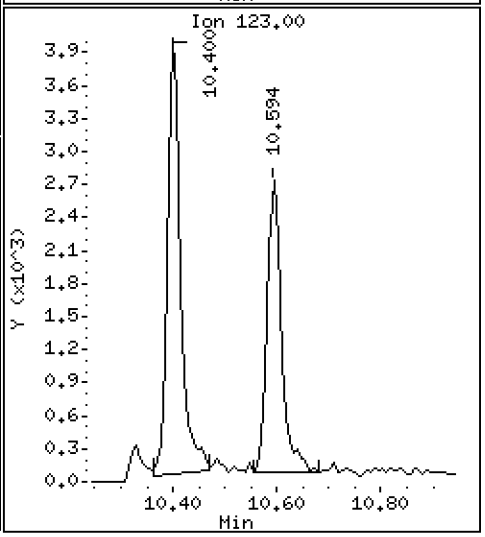


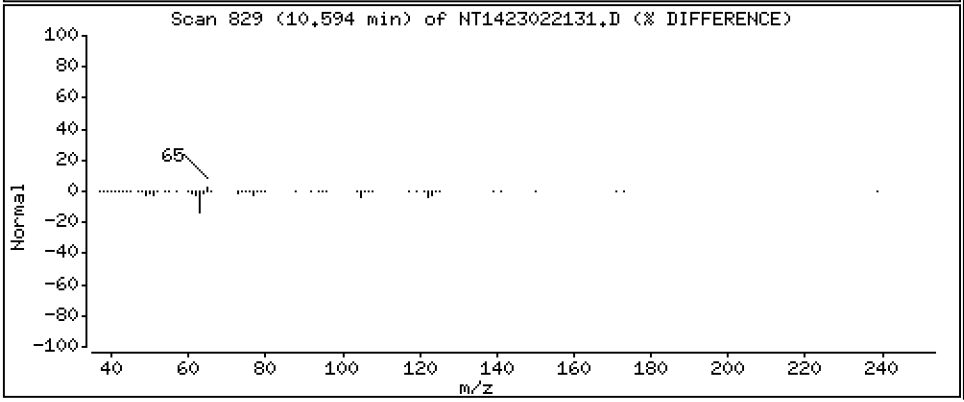












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

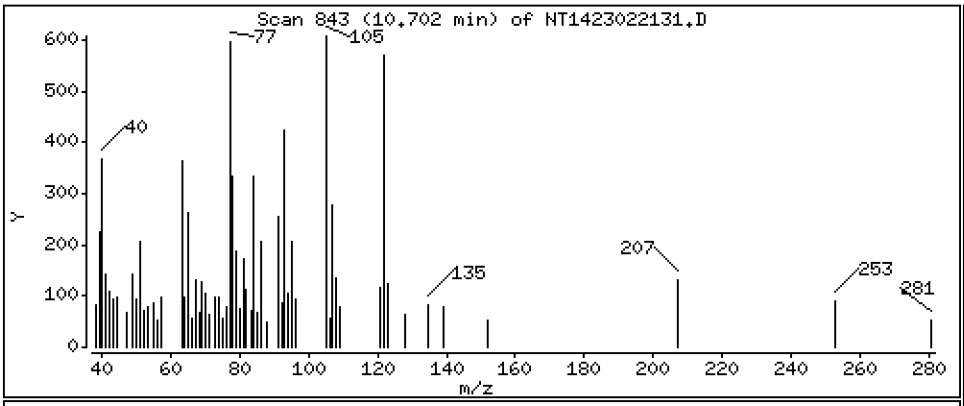
Operator: DSD

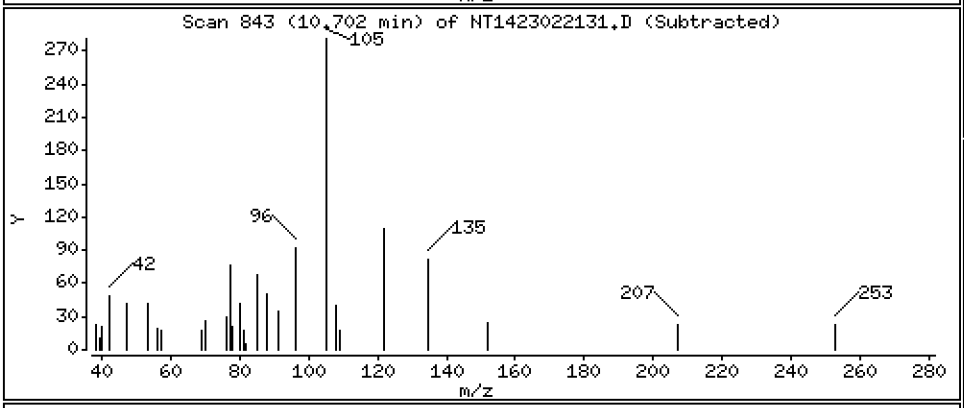
Column phase: ZB-5msi

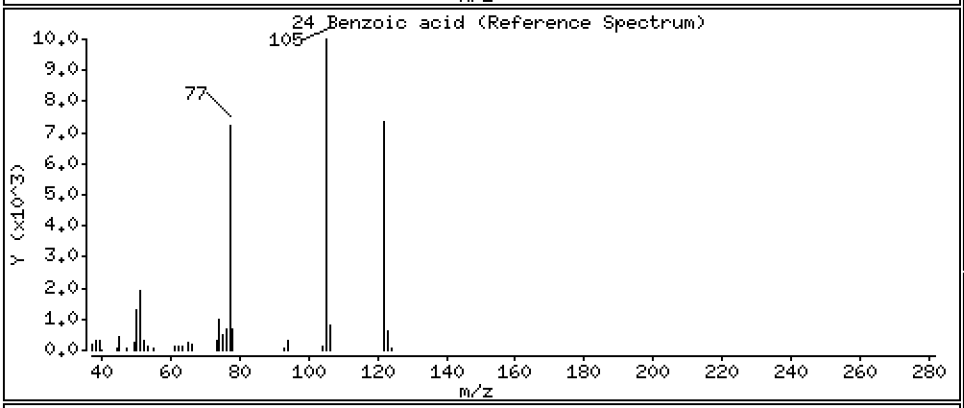
Column diameter: 0.25

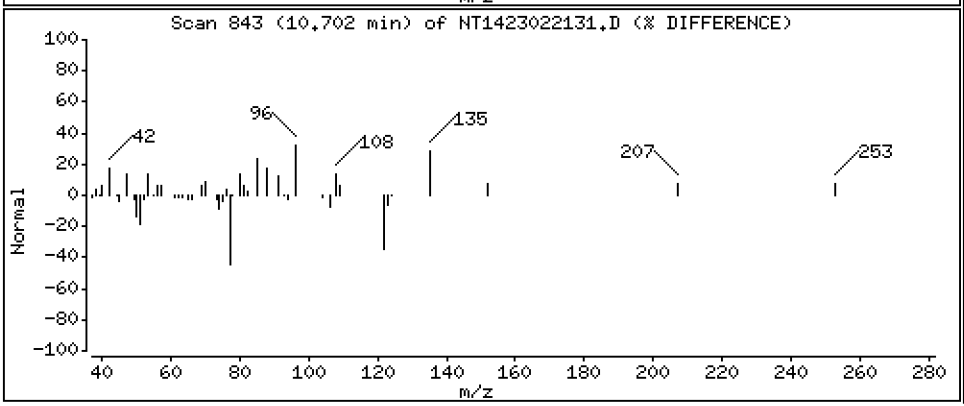
24 Benzoic acid

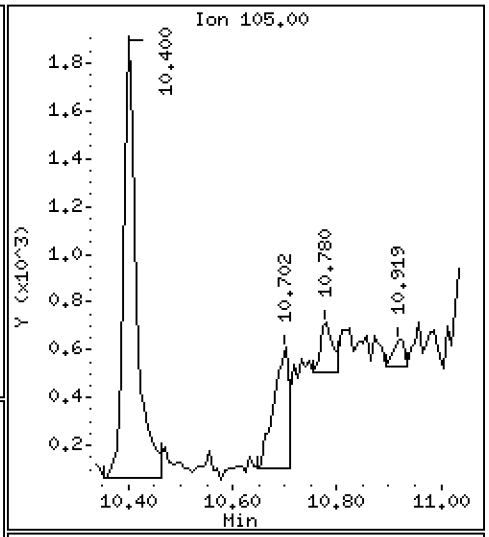
Concentration: 0.02226 ug/mL

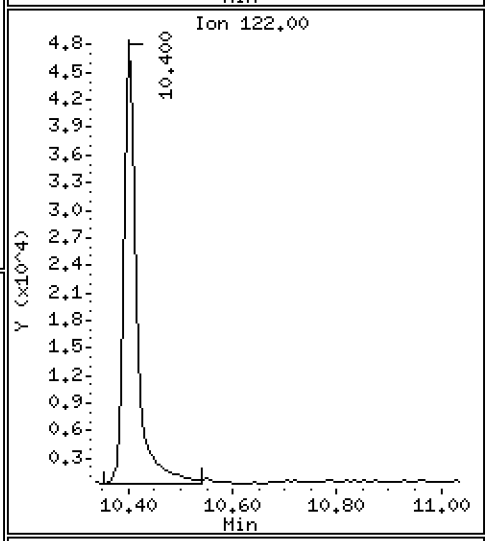


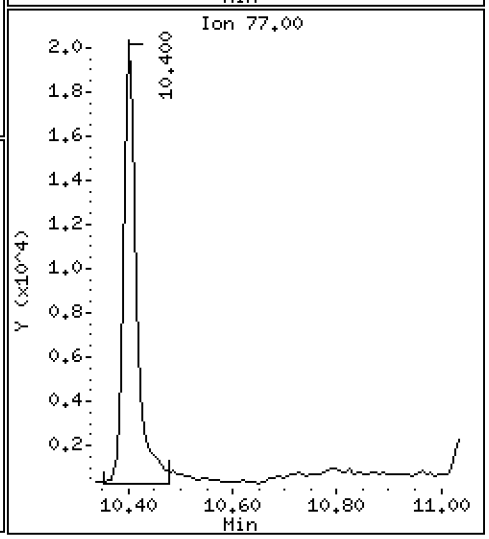












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

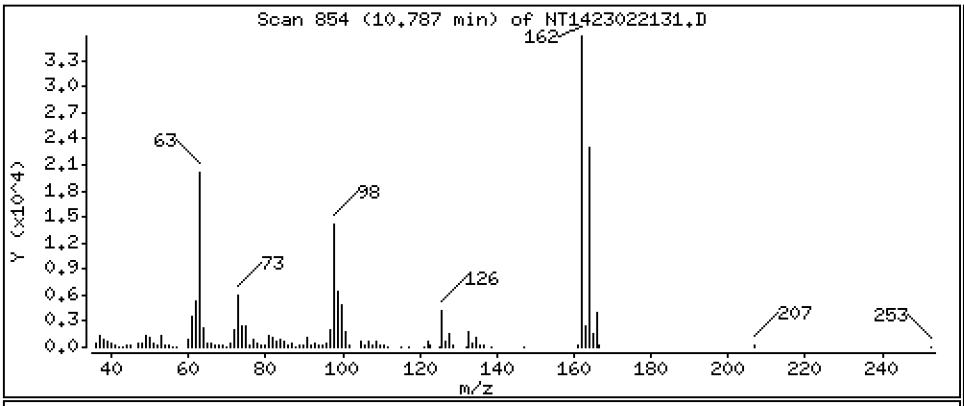
Operator: DSD

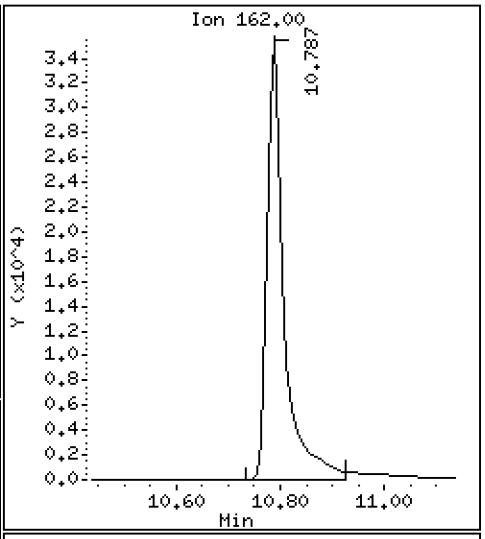
Column phase: ZB-5msi

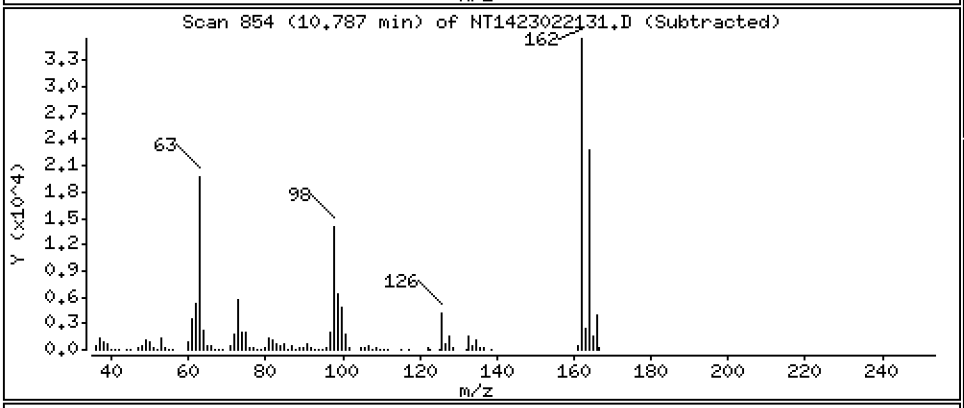
Column diameter: 0.25

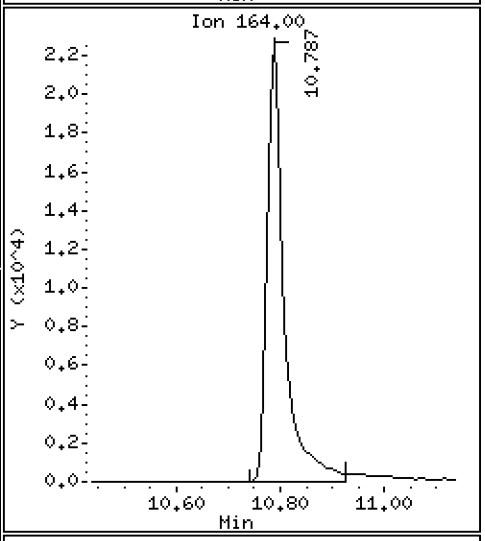
25 2,4-Dichlorophenol

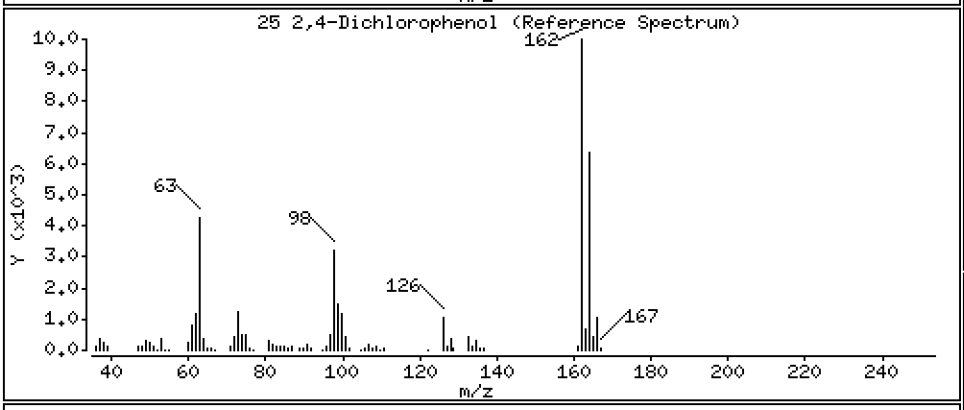
Concentration: 1.326 ug/mL

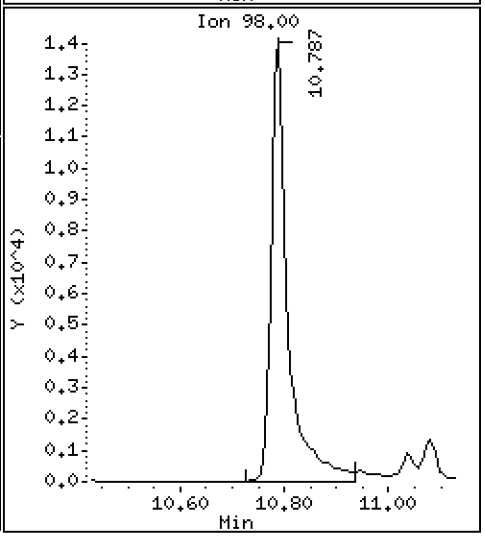


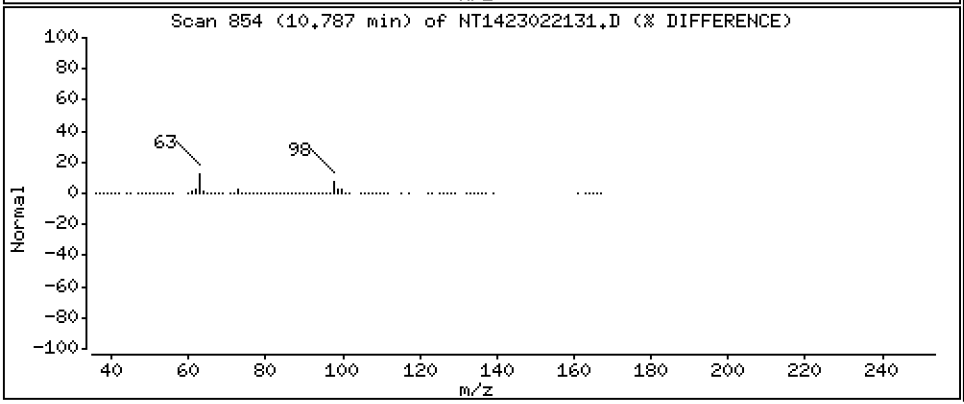












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

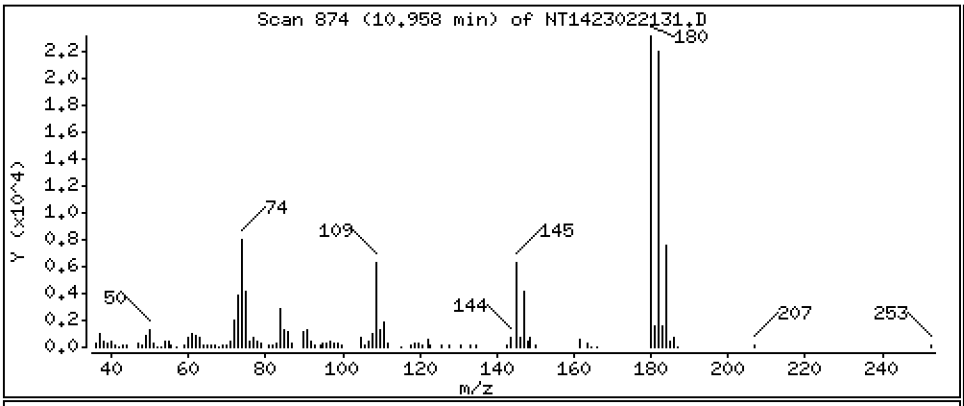
Operator: DSD

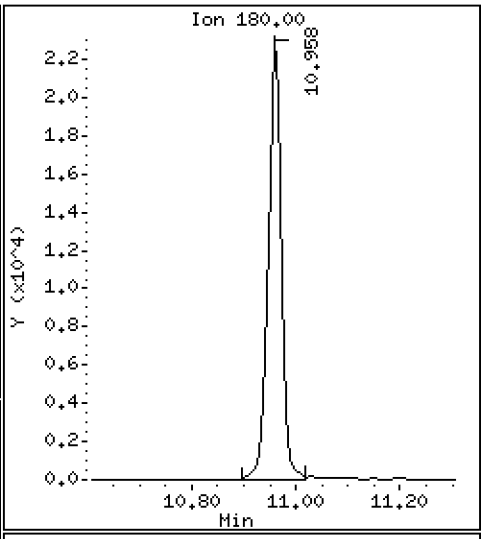
Column phase: ZB-5msi

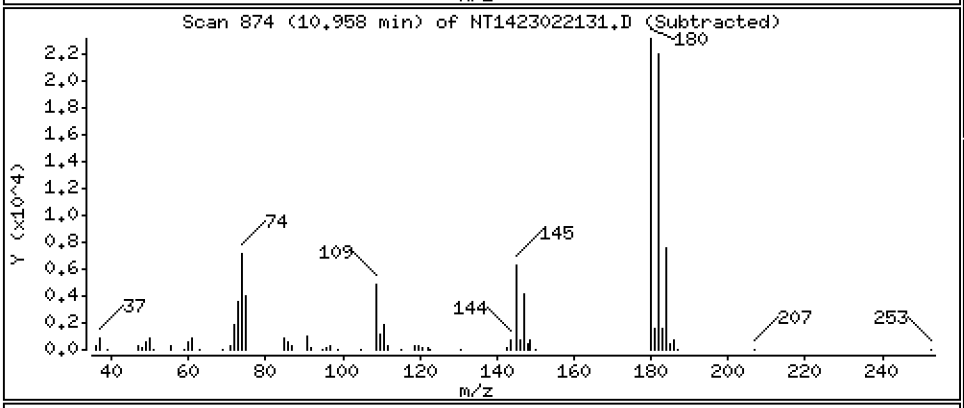
Column diameter: 0.25

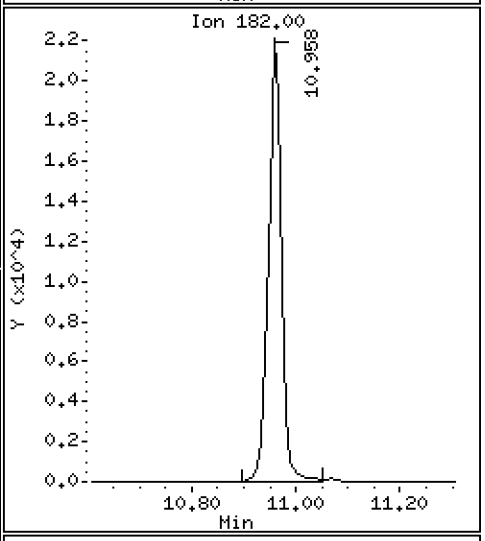
26 1,2,4-Trichlorobenzene

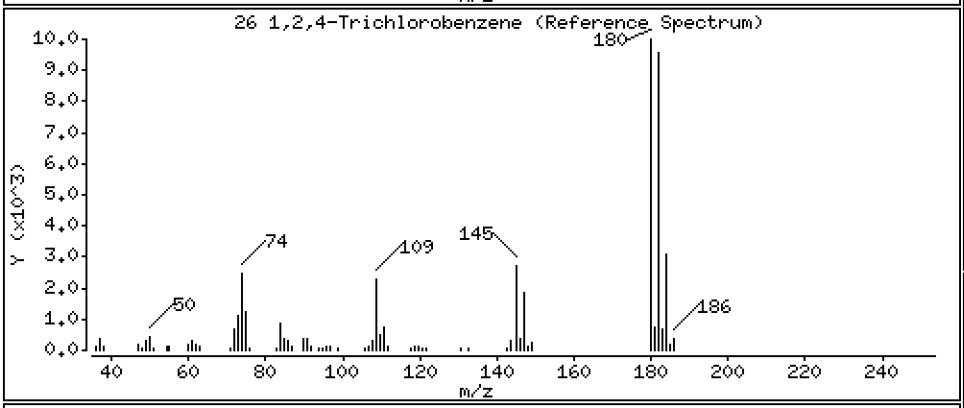
Concentration: 0.5821 ug/mL

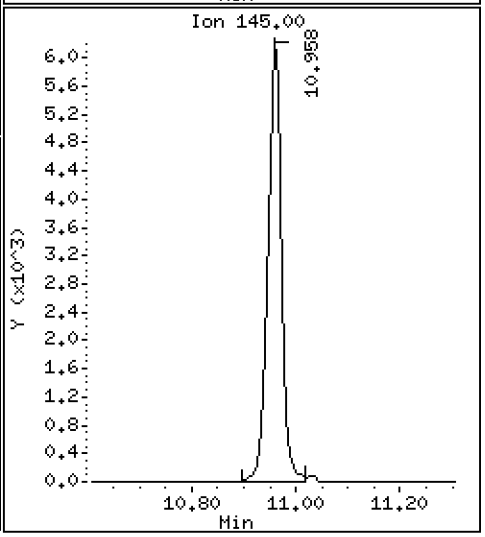


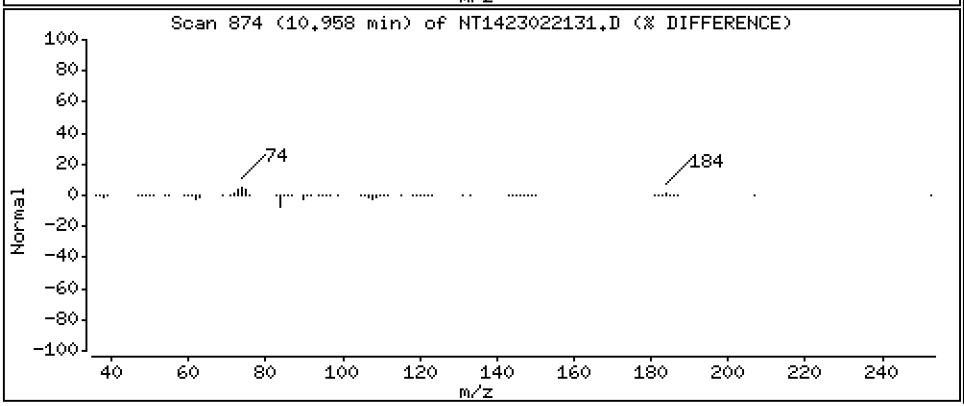












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022131.D

Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

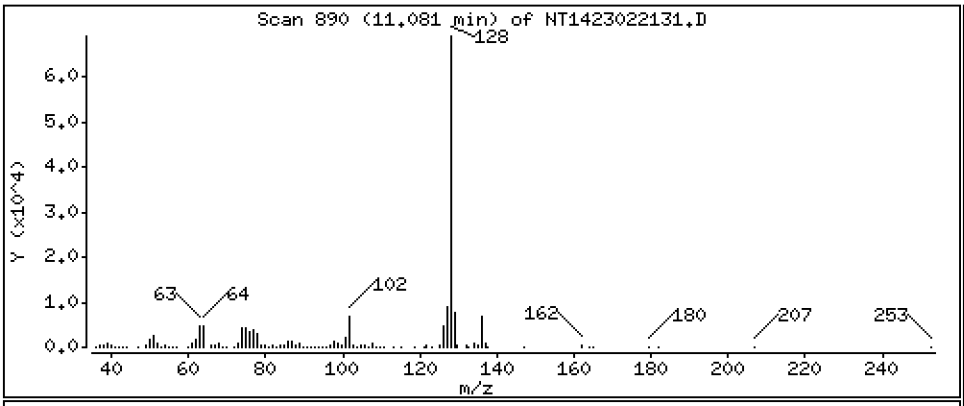
Operator: DSD

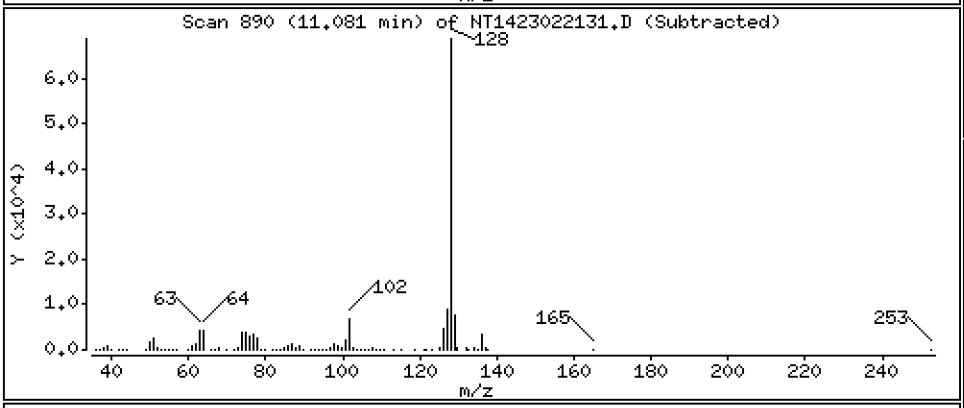
Column phase: ZB-5msi

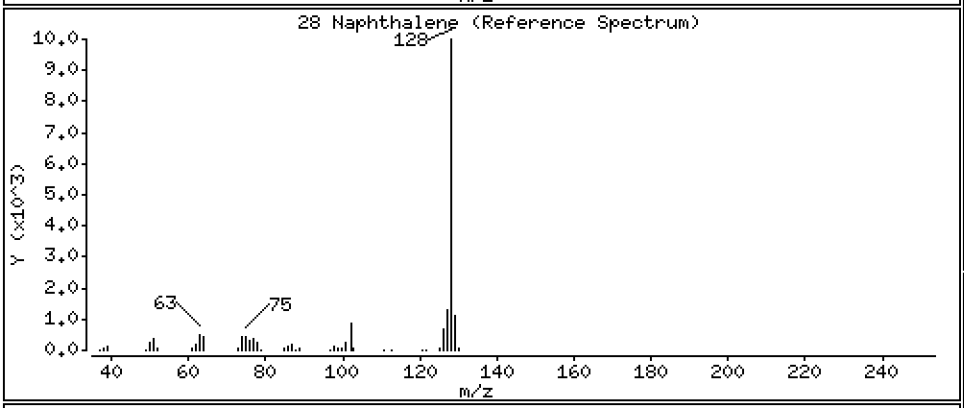
Column diameter: 0.25

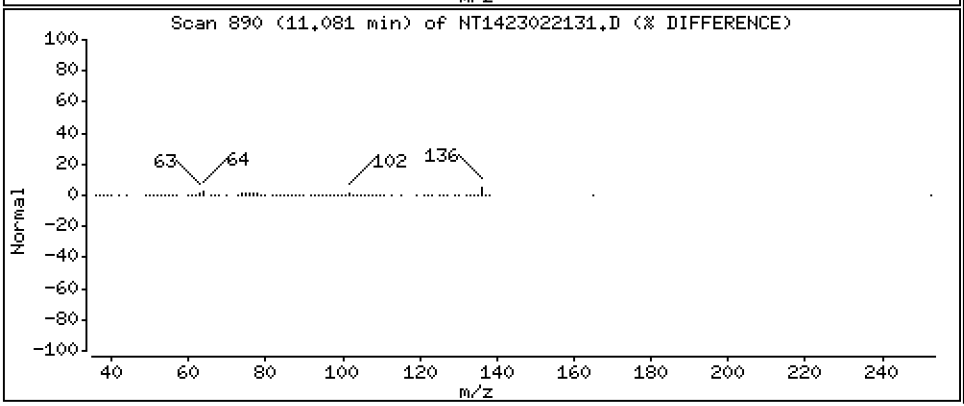
28 Naphthalene

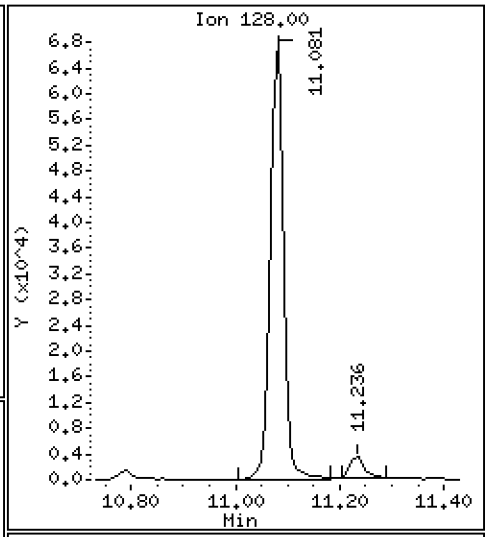
Concentration: 0.5344 ug/mL

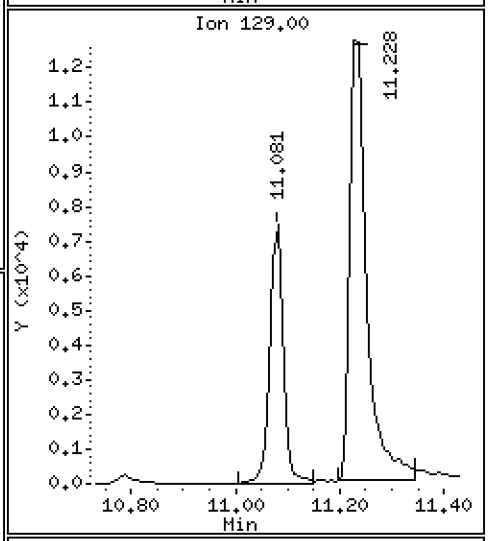


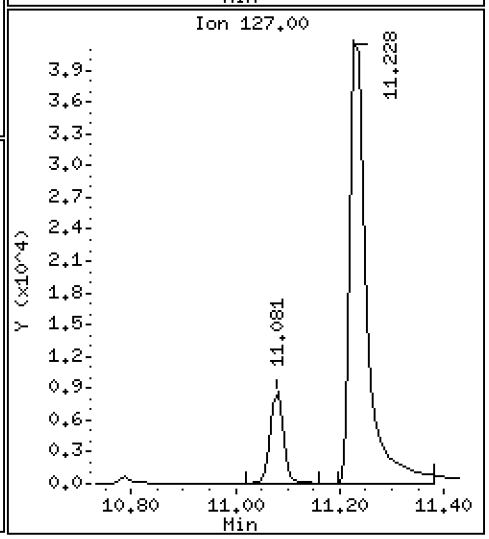












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

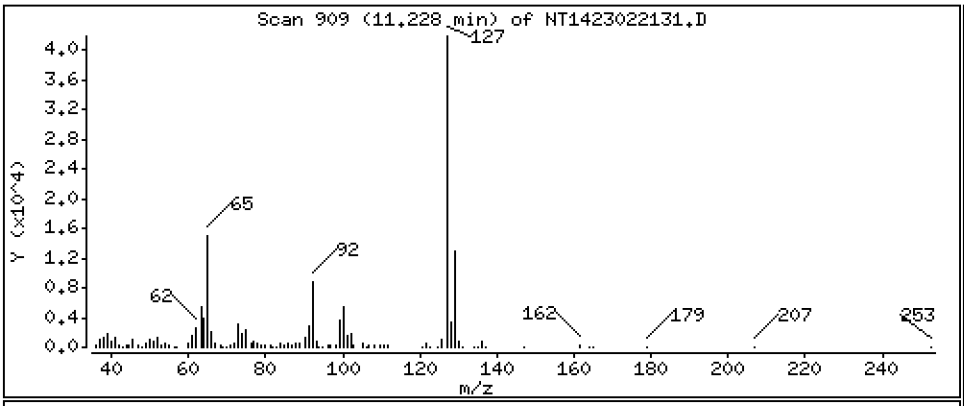
Operator: DSD

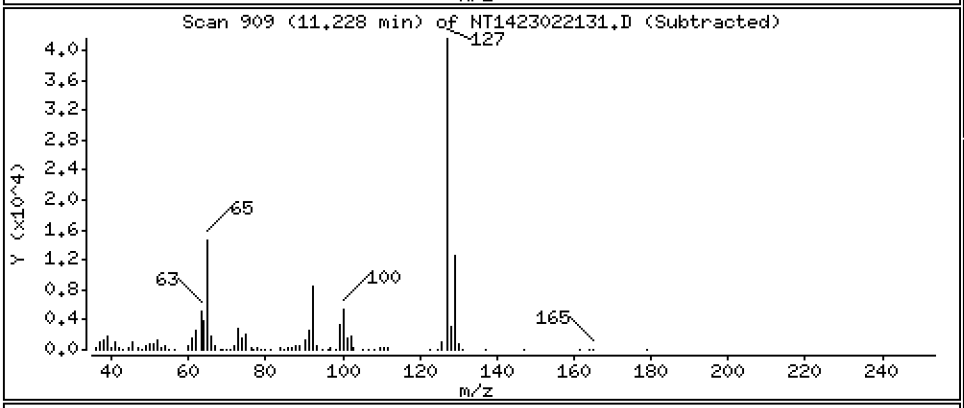
Column phase: ZB-5msi

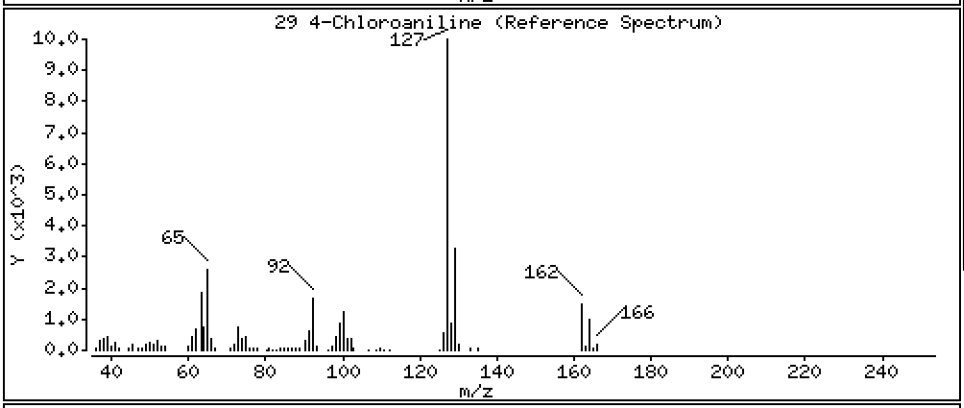
Column diameter: 0.25

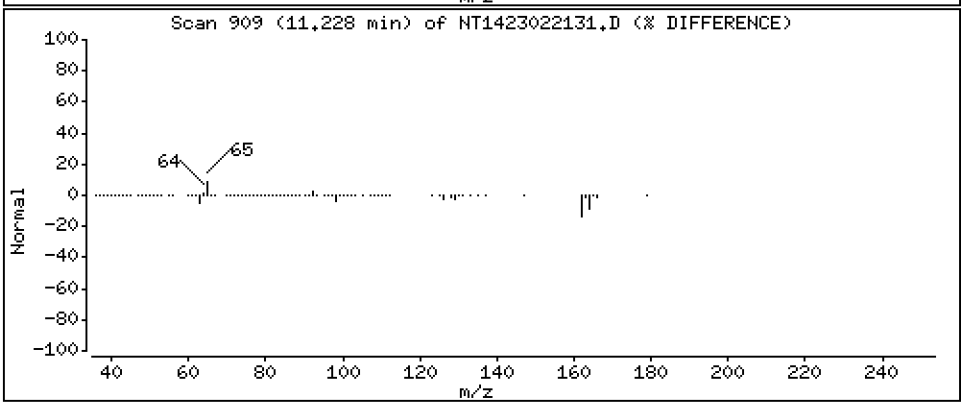
29 4-Chloroaniline

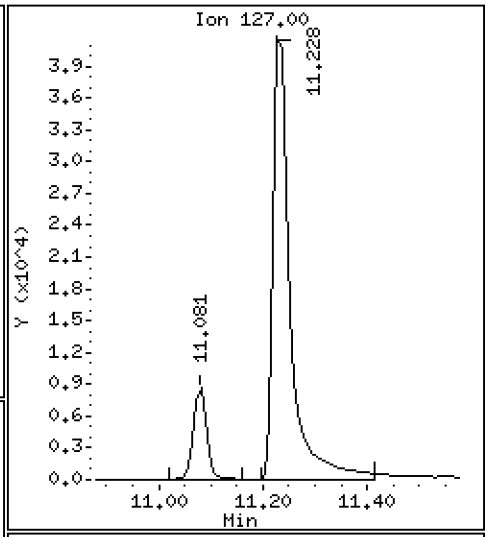
Concentration: 1.088 ug/mL

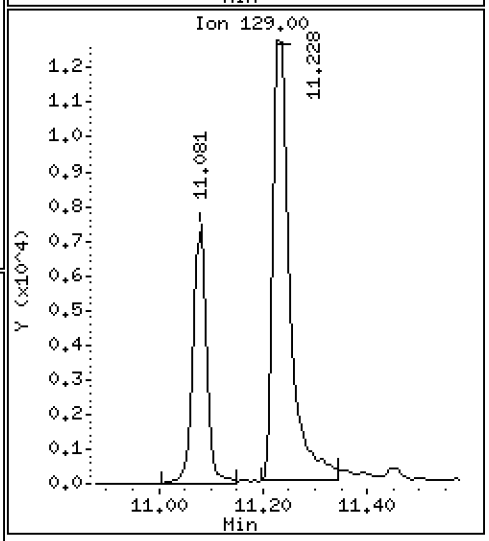












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

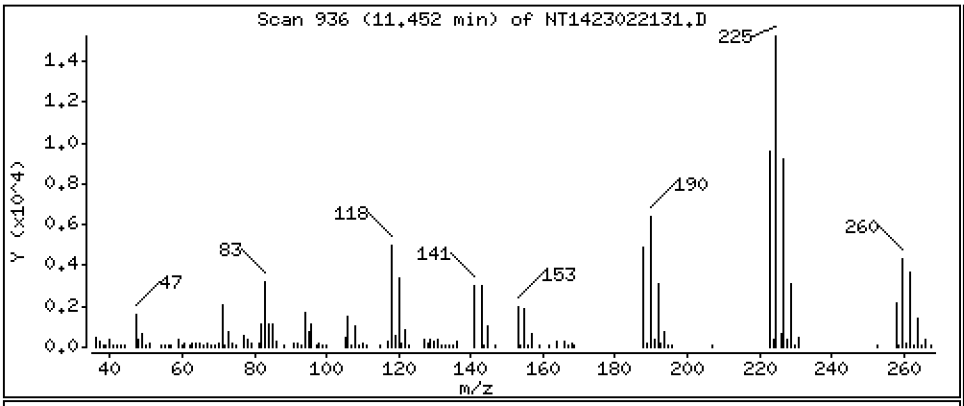
Operator: DSD

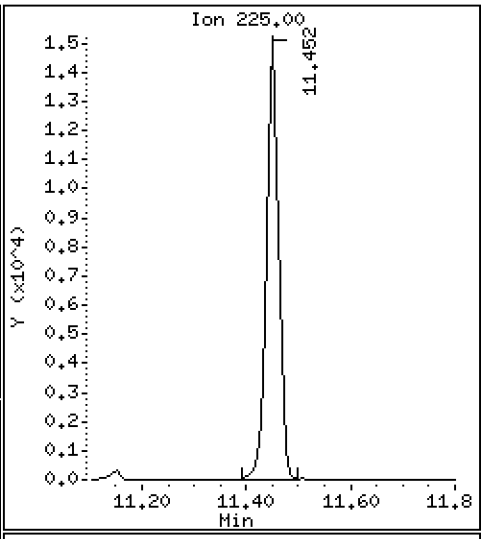
Column phase: ZB-5msi

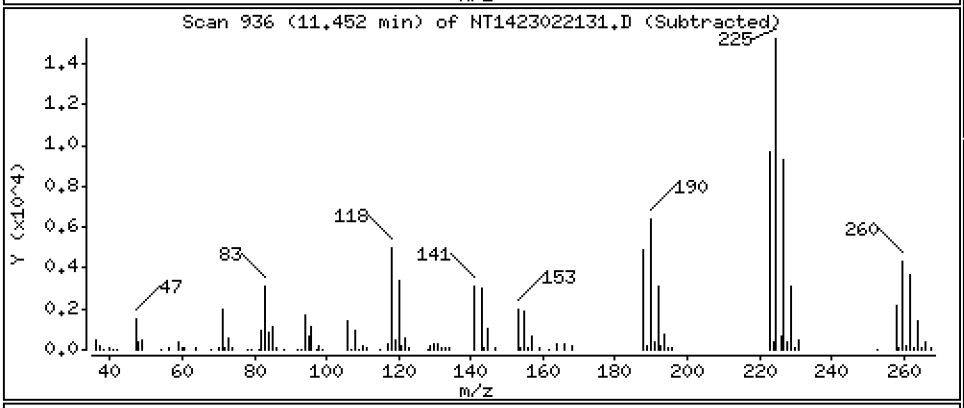
Column diameter: 0.25

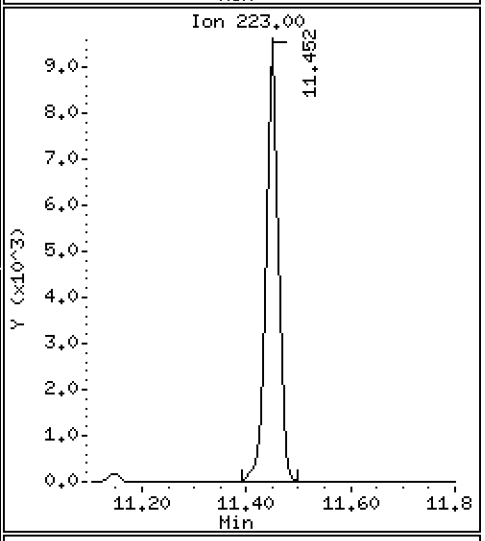
30 Hexachlorobutadiene

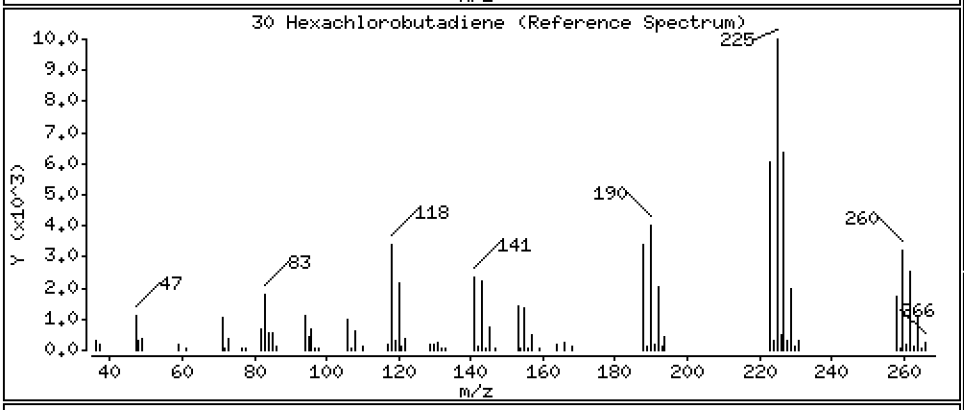
Concentration: 0.5814 ug/mL

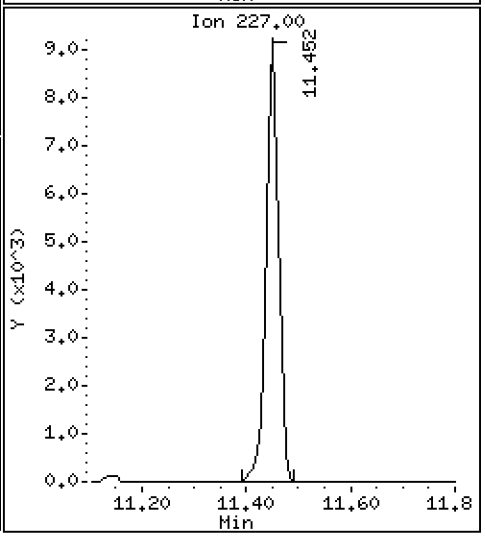


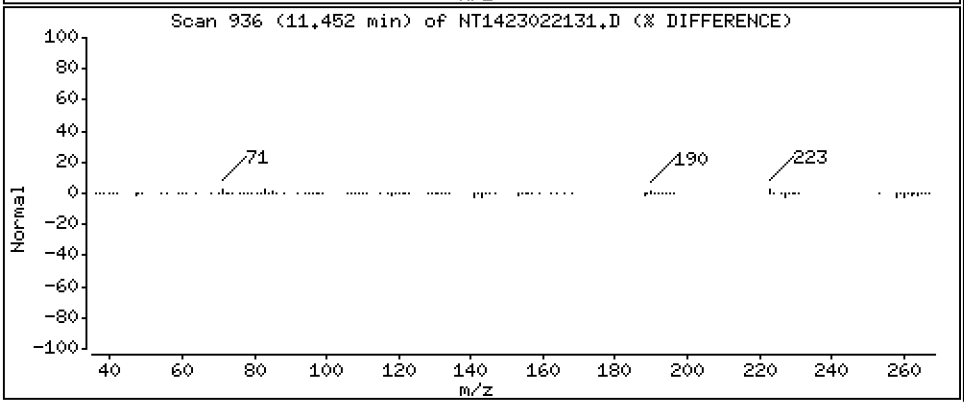












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

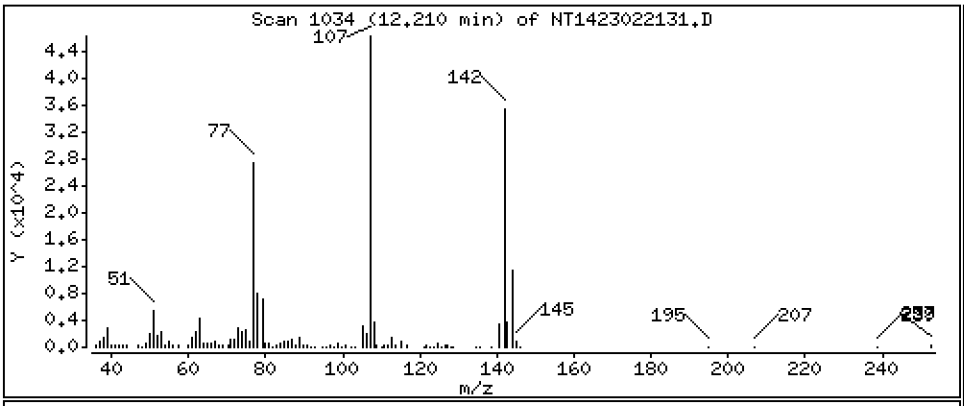
Operator: DSD

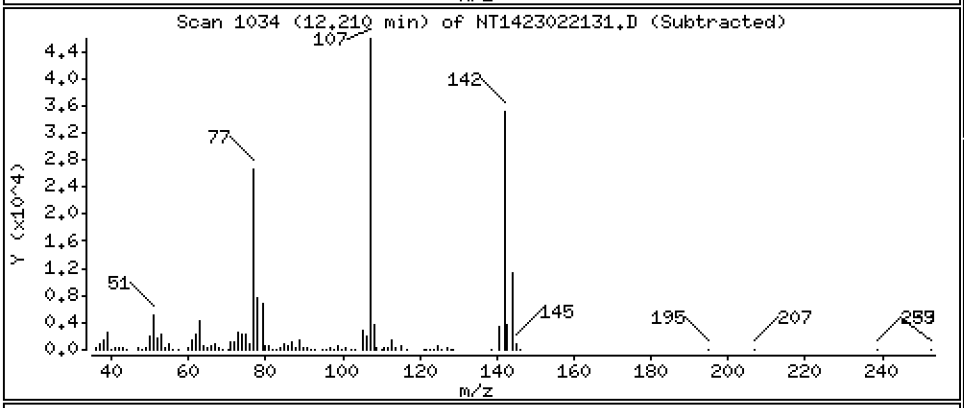
Column phase: ZB-5msi

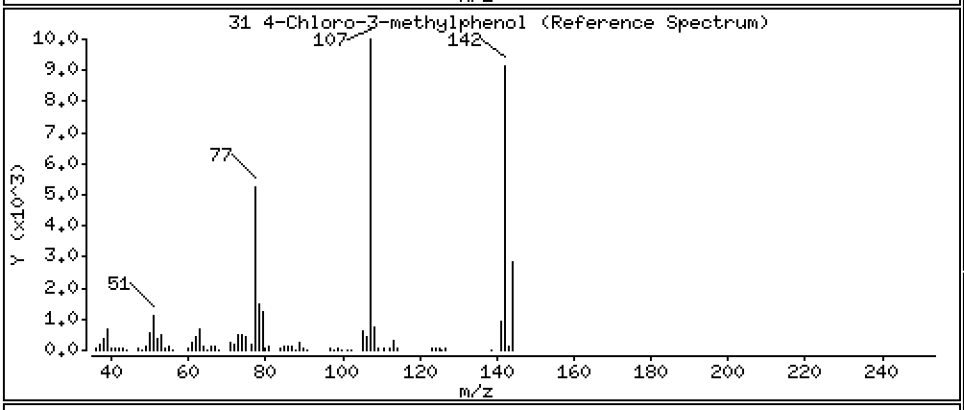
Column diameter: 0.25

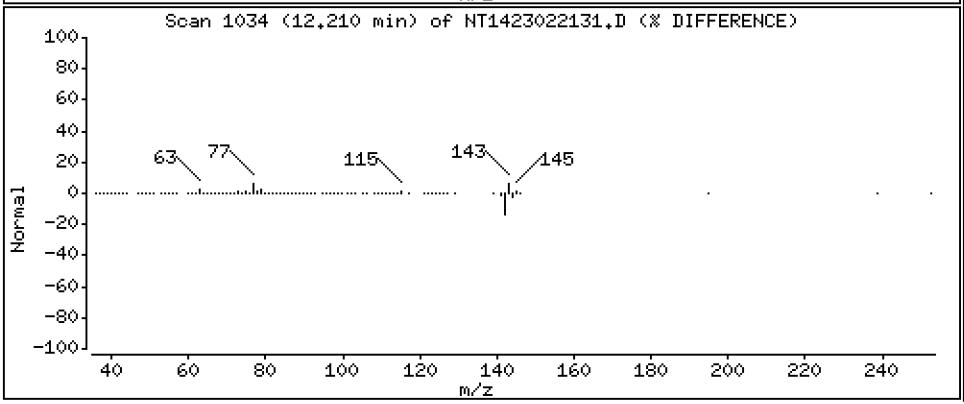
31 4-Chloro-3-methylphenol

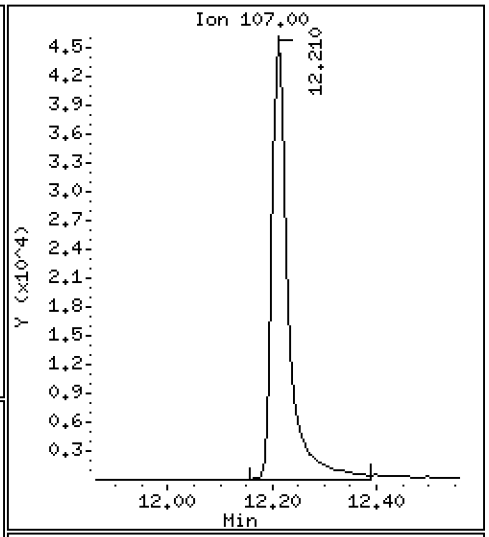
Concentration: 1.412 ug/mL

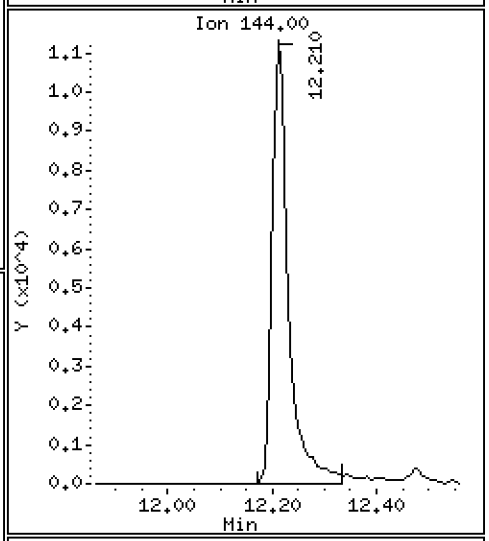


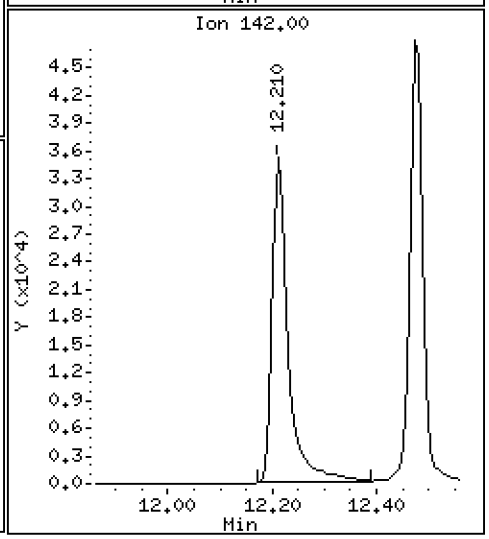












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

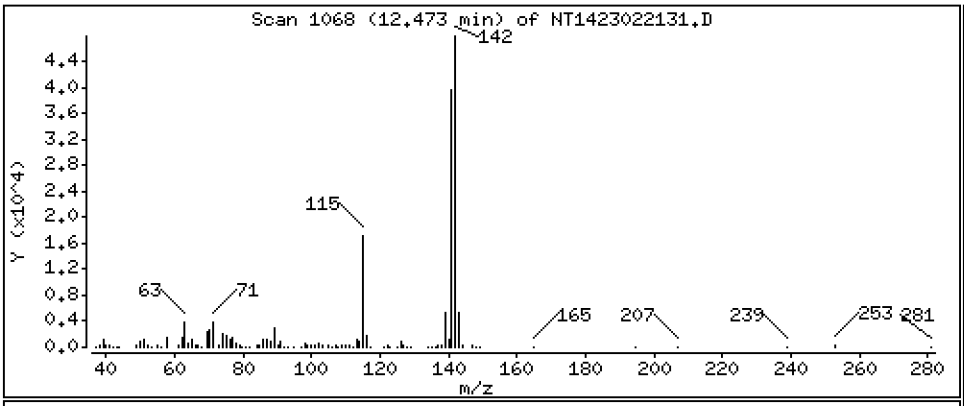
Operator: DSD

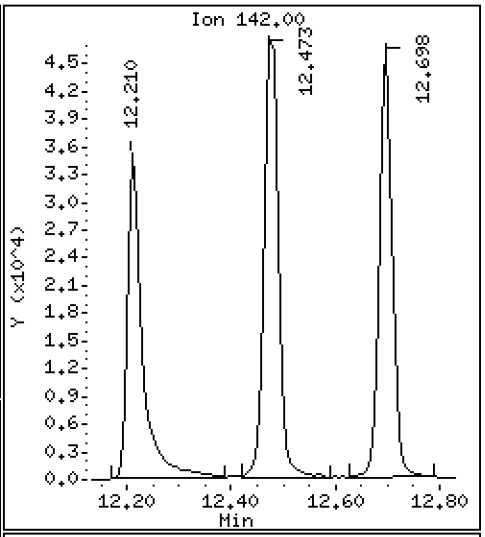
Column phase: ZB-5msi

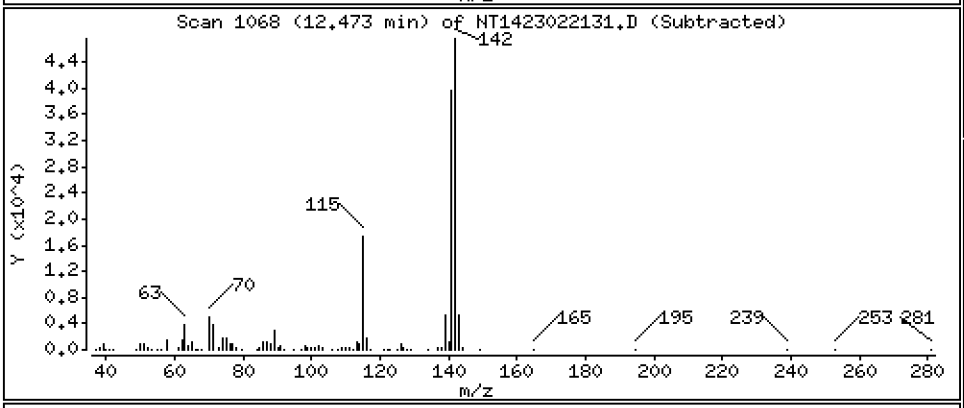
Column diameter: 0.25

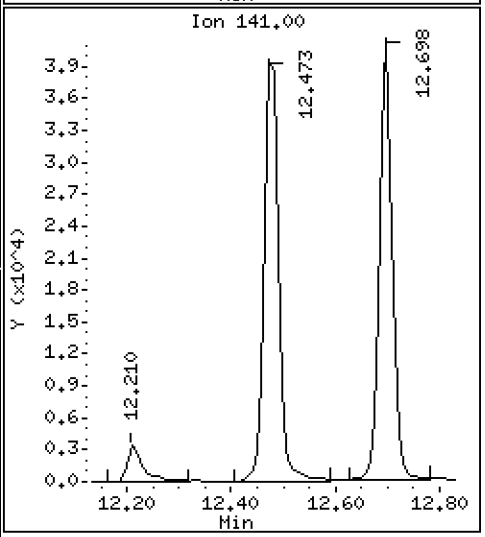
32 2-Methylnaphthalene

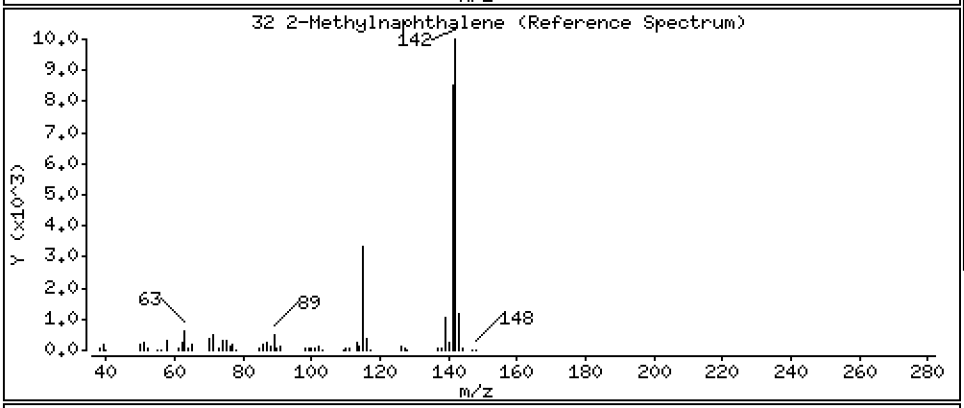
Concentration: 0.5480 ug/mL

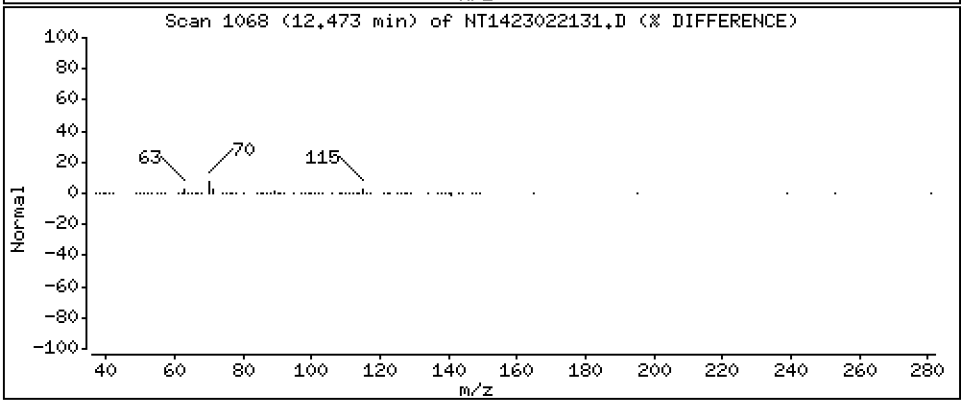












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022131.D

Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

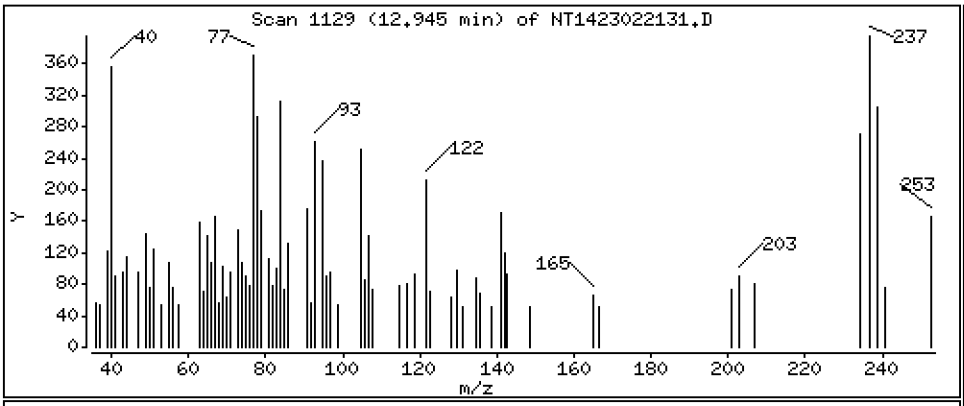
Operator: DSD

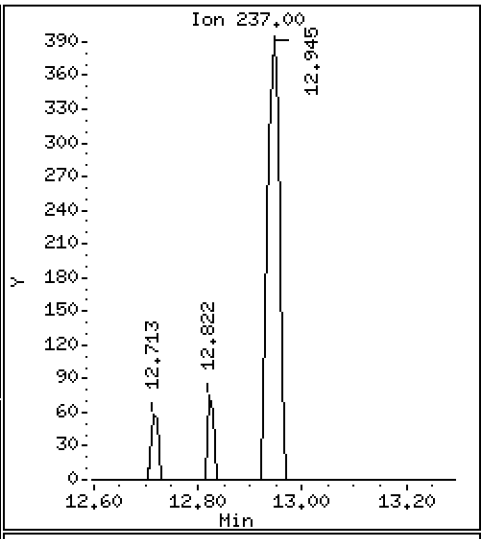
Column phase: ZB-5msi

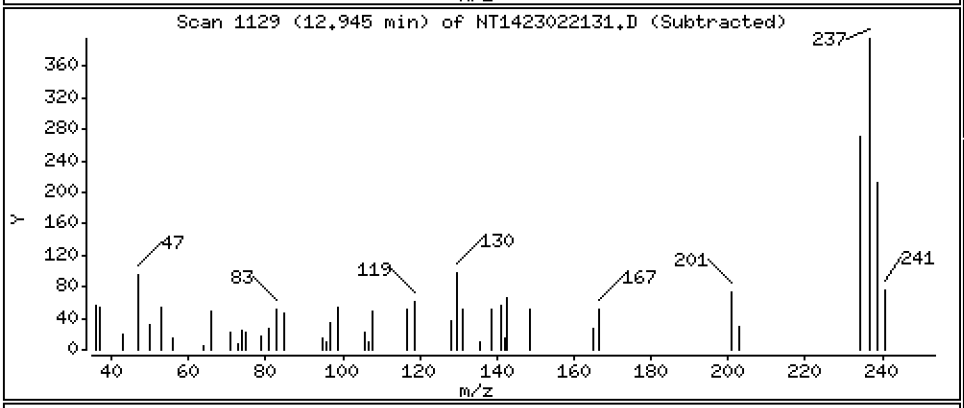
Column diameter: 0.25

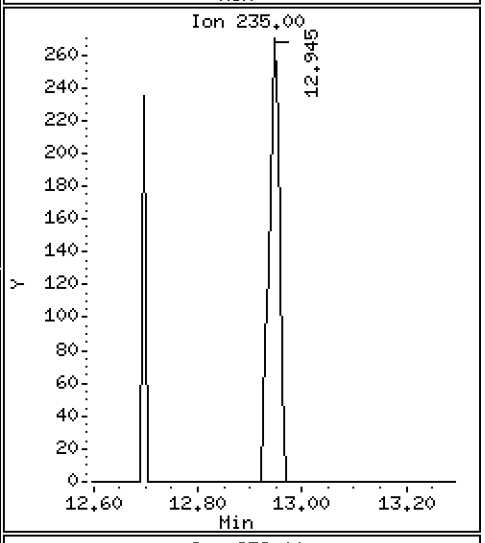
33 Hexachlorocyclopentadiene

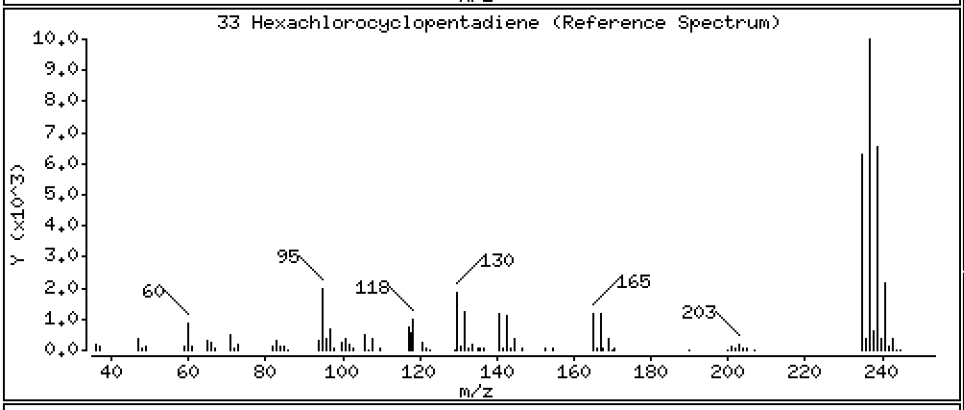
Concentration: 0.01179 ug/mL

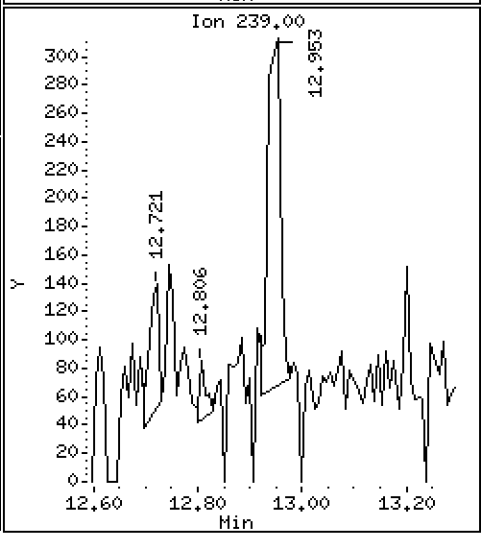


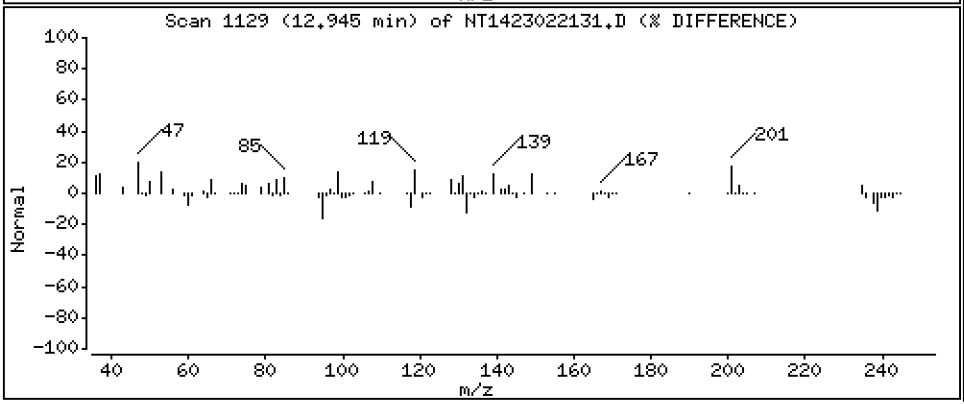












Date : 22-FEB-2023 07:32

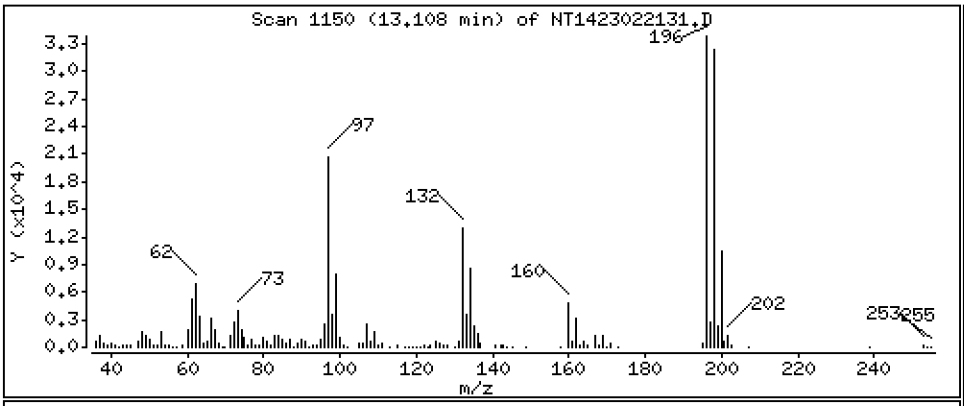
Client ID: Instrument: nt14.i

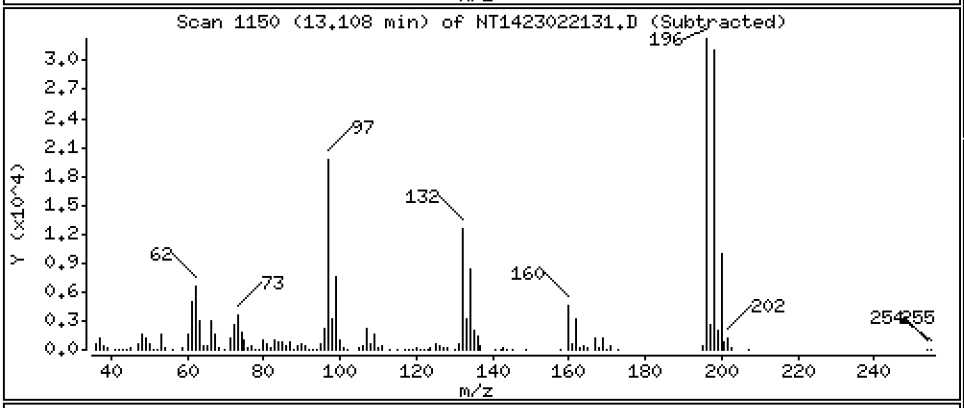
Sample Info: SLB0305-LCV1

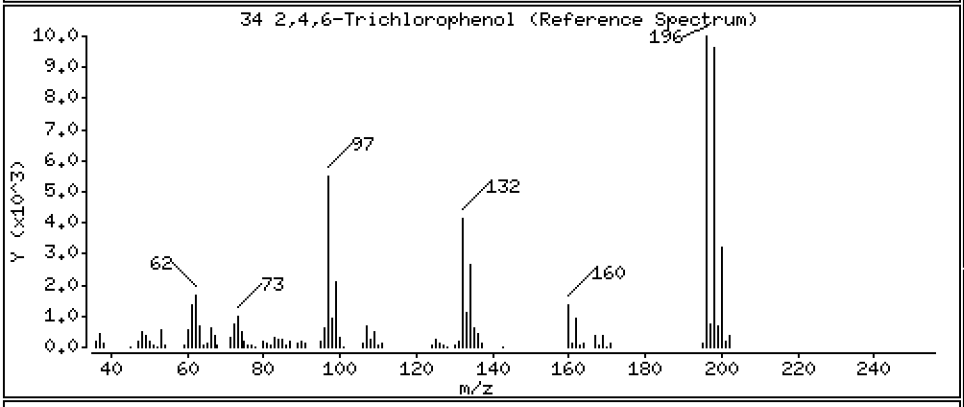
Operator: DSD

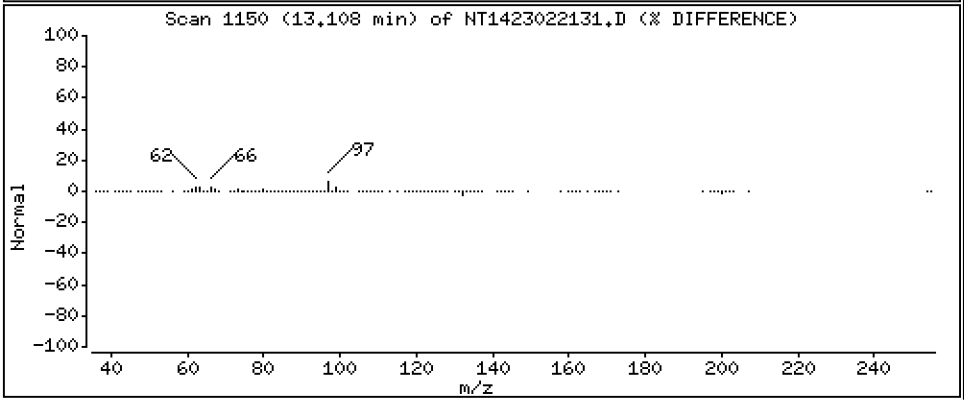
Column phase: ZB-5msi Column diameter: 0.25

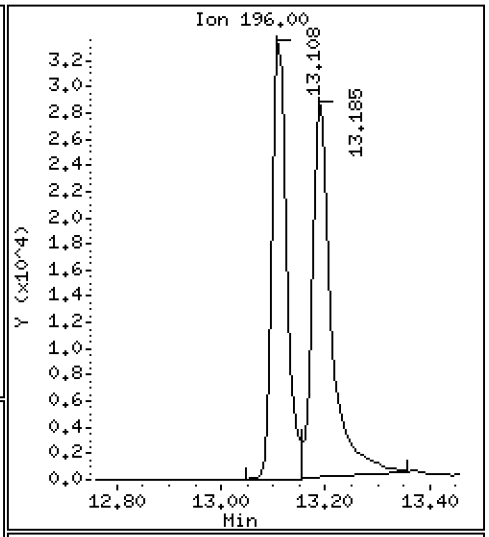
34 2,4,6-Trichlorophenol Concentration: 1.259 ug/mL

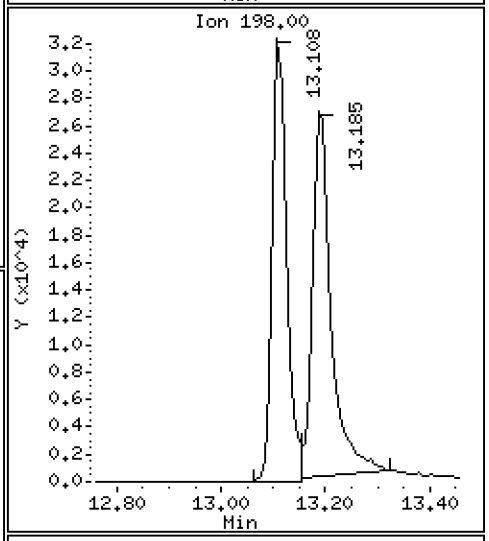


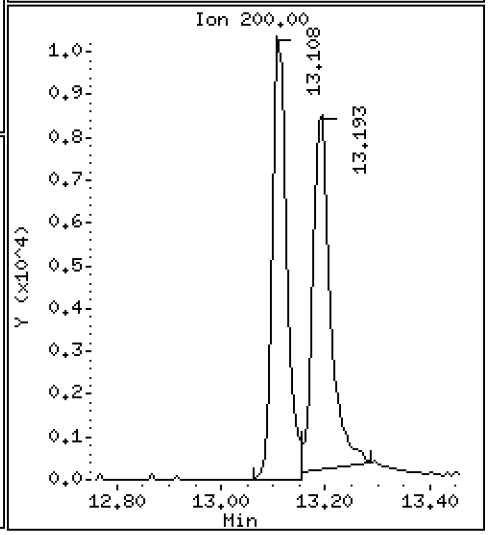












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

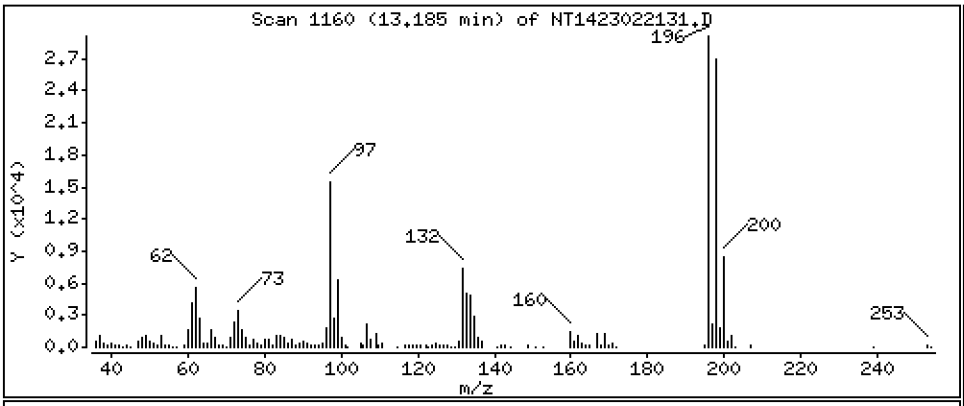
Operator: DSD

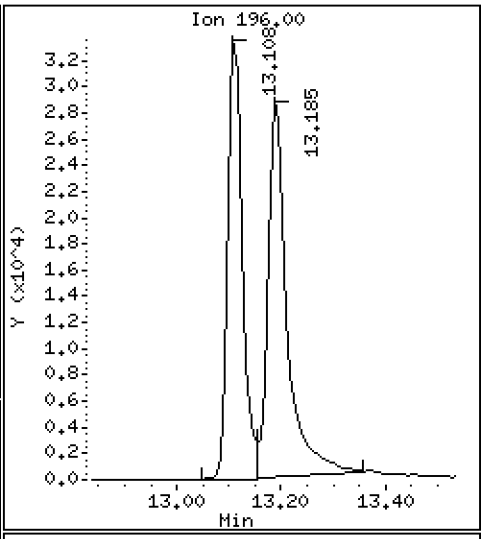
Column phase: ZB-5msi

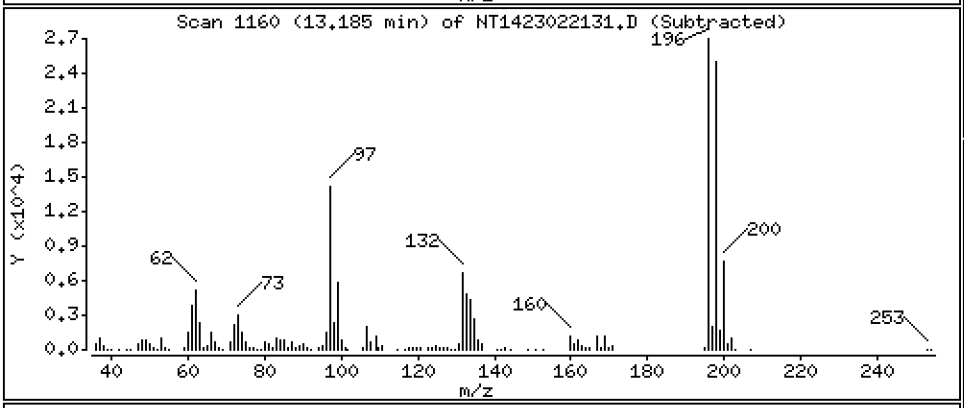
Column diameter: 0.25

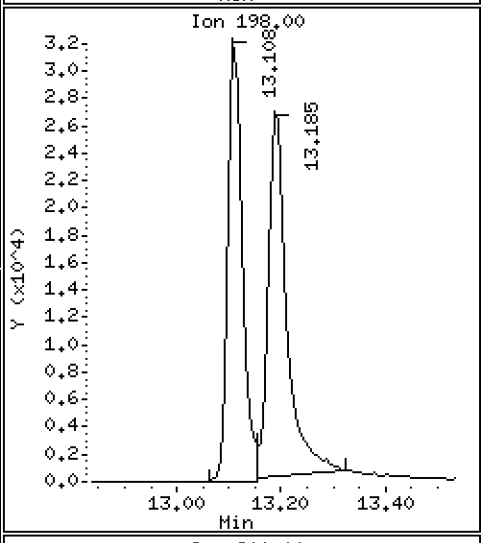
35 2,4,5-Trichlorophenol

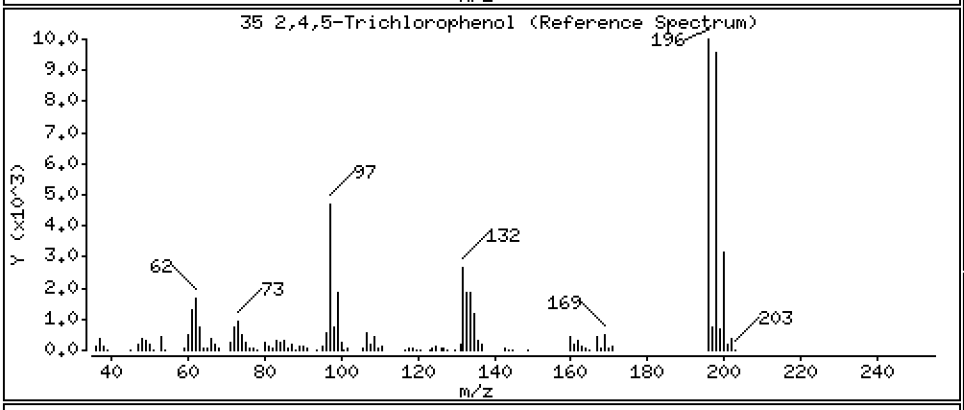
Concentration: 1.301 ug/mL

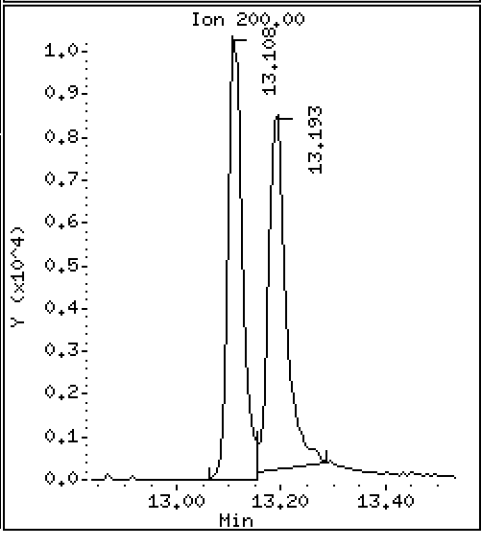


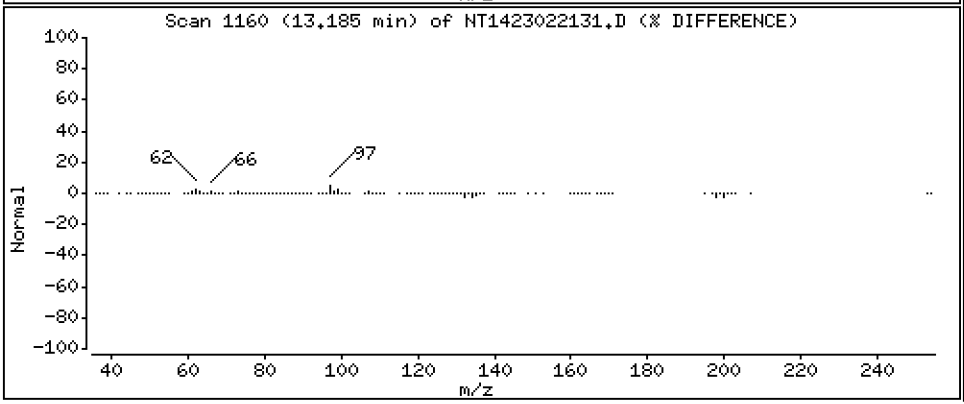












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

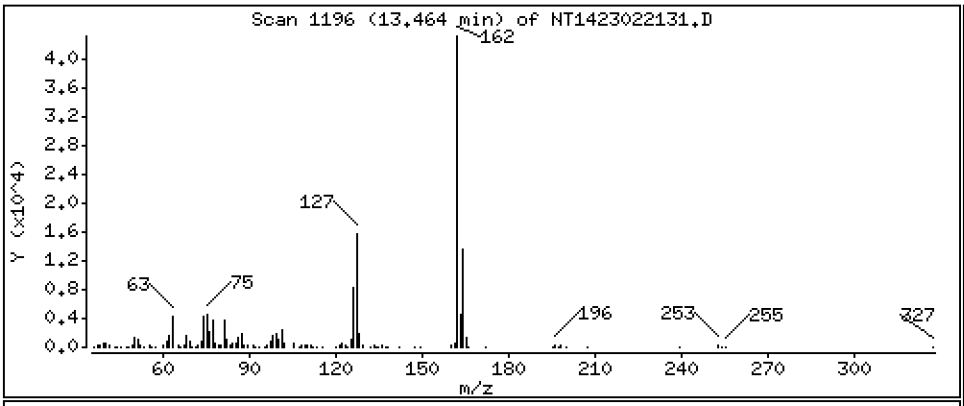
Operator: DSD

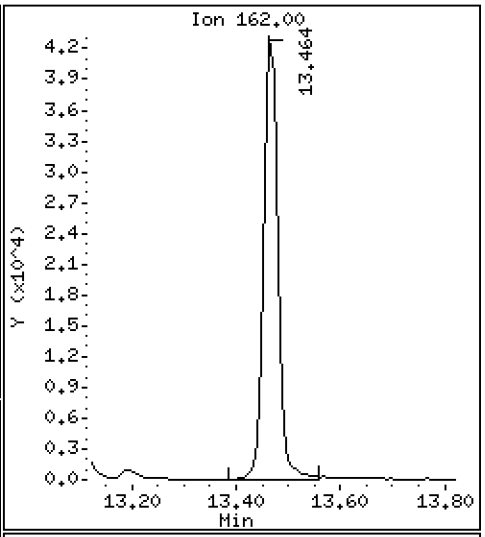
Column phase: ZB-5msi

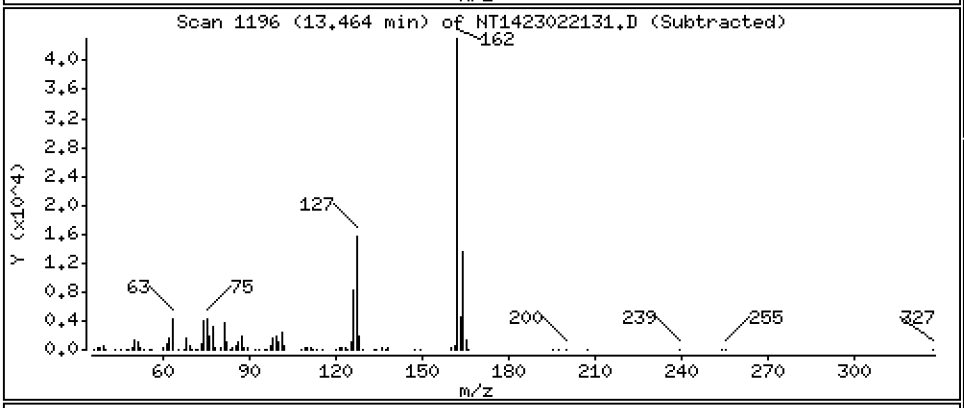
Column diameter: 0.25

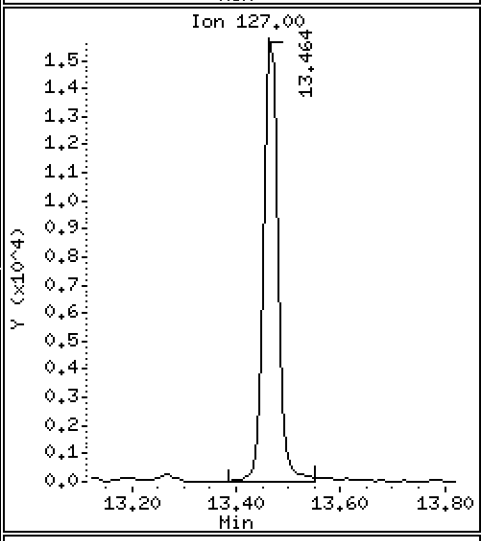
37 2-Chloronaphthalene

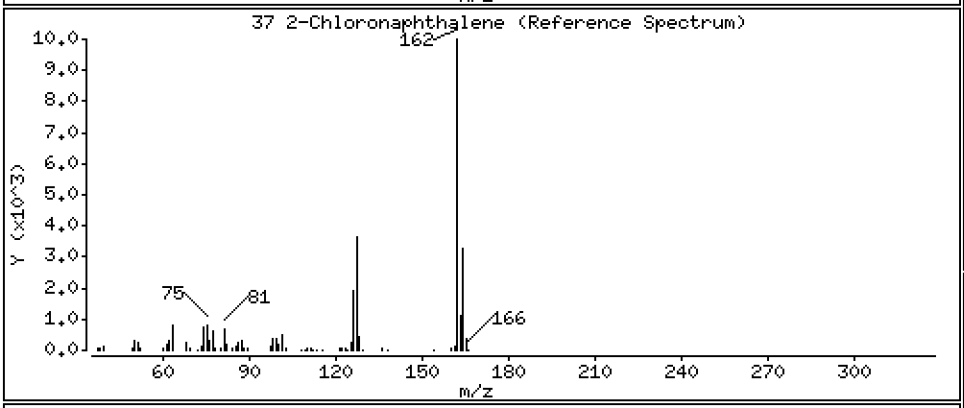
Concentration: 0.5255 ug/mL

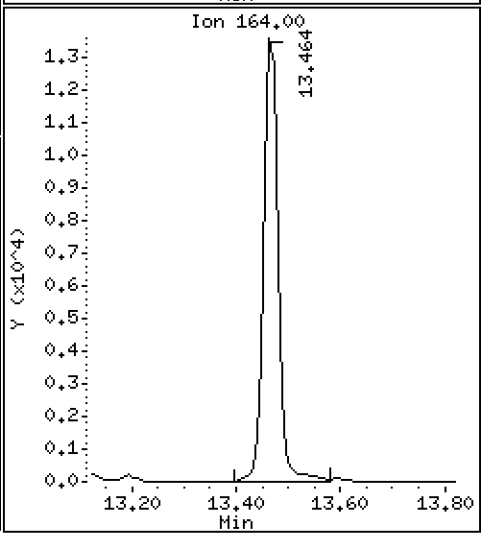


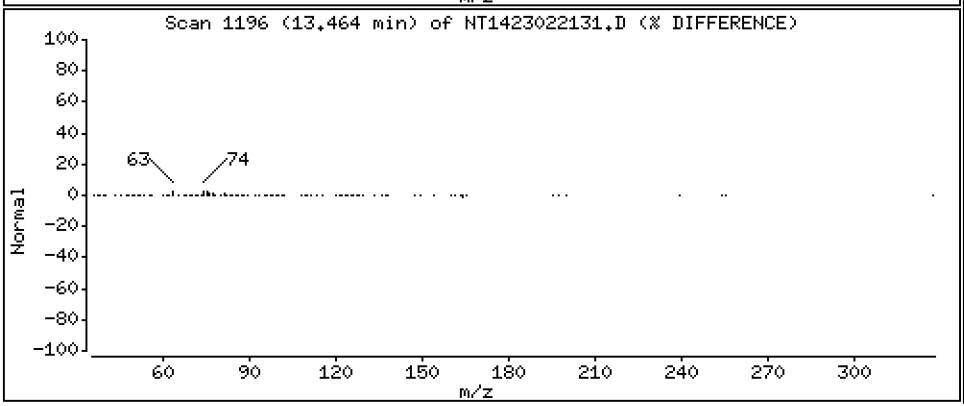












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

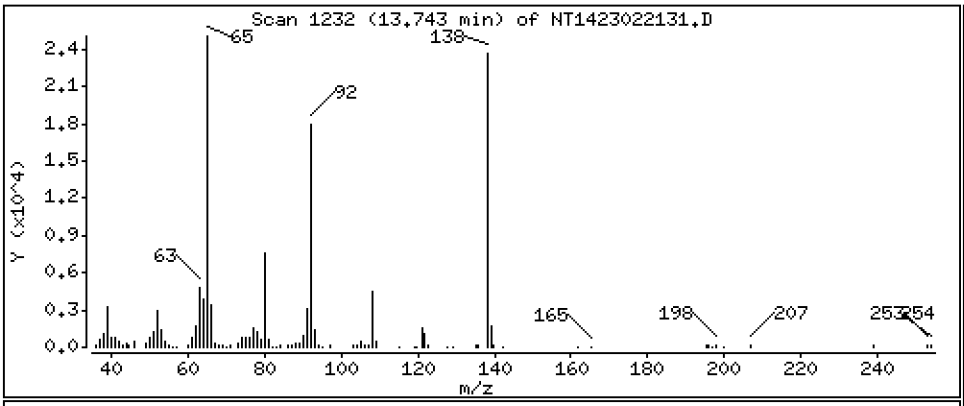
Operator: DSD

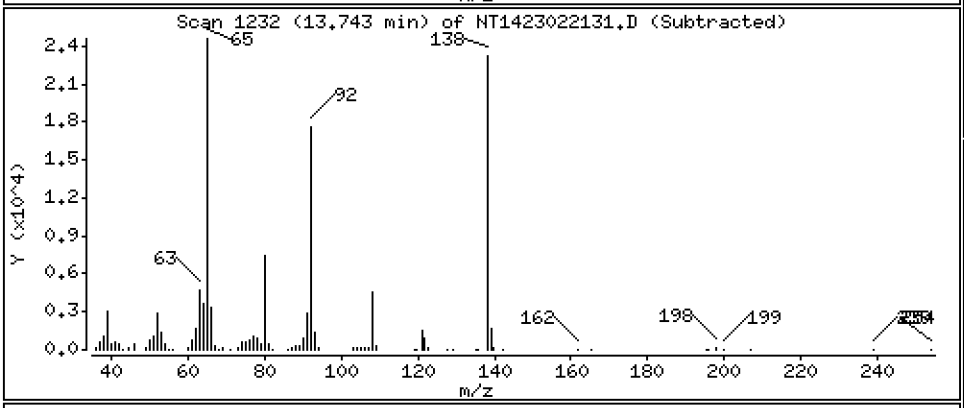
Column phase: ZB-5msi

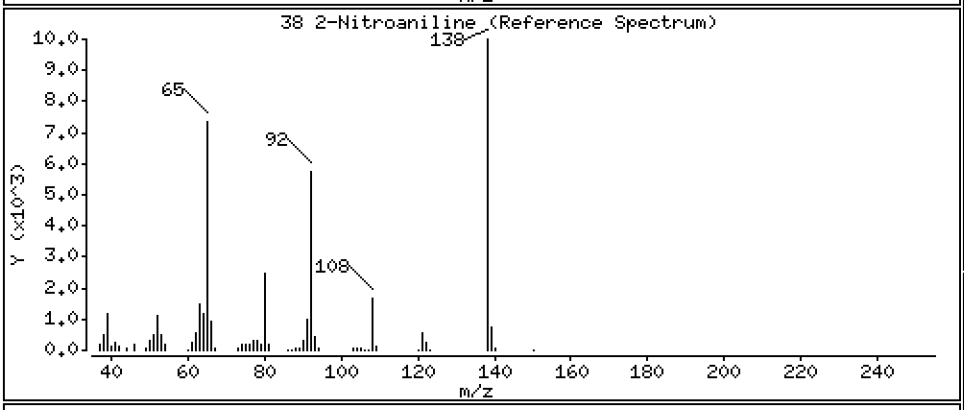
Column diameter: 0.25

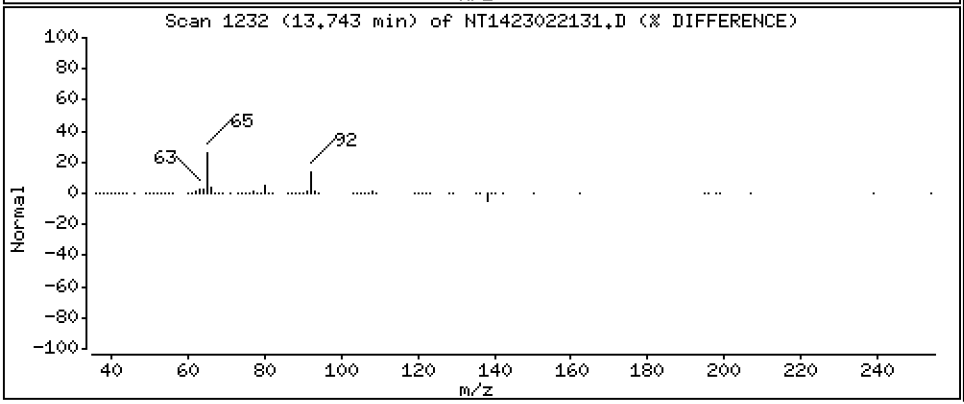
38 2-Nitroaniline

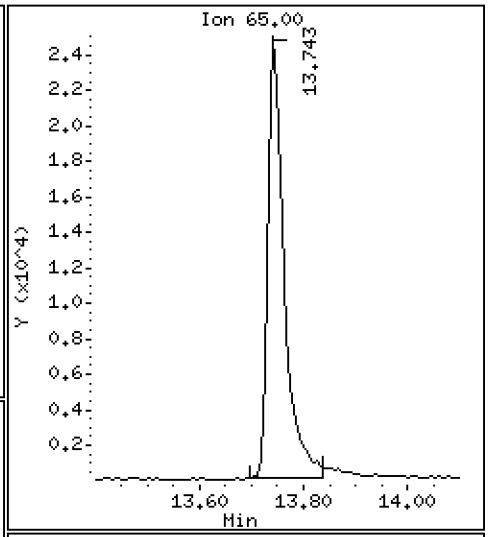
Concentration: 1.089 ug/mL

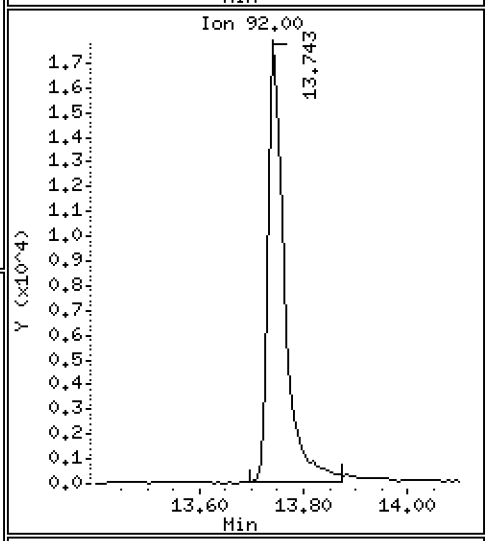


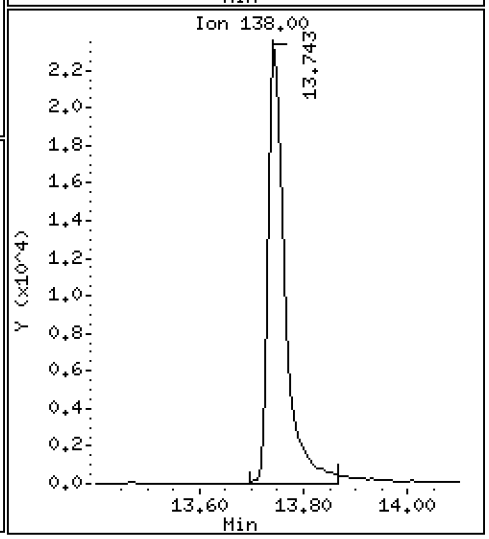












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

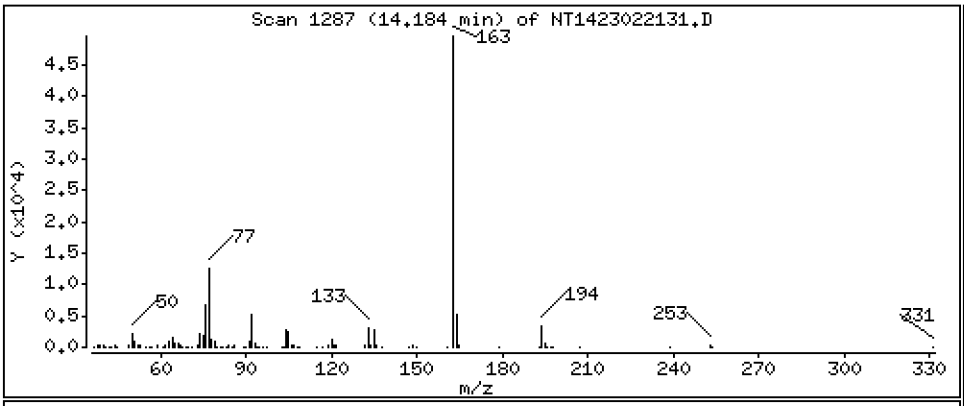
Operator: DSD

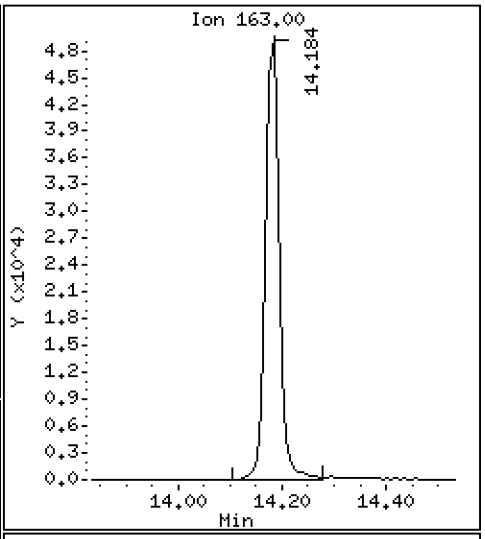
Column phase: ZB-5msi

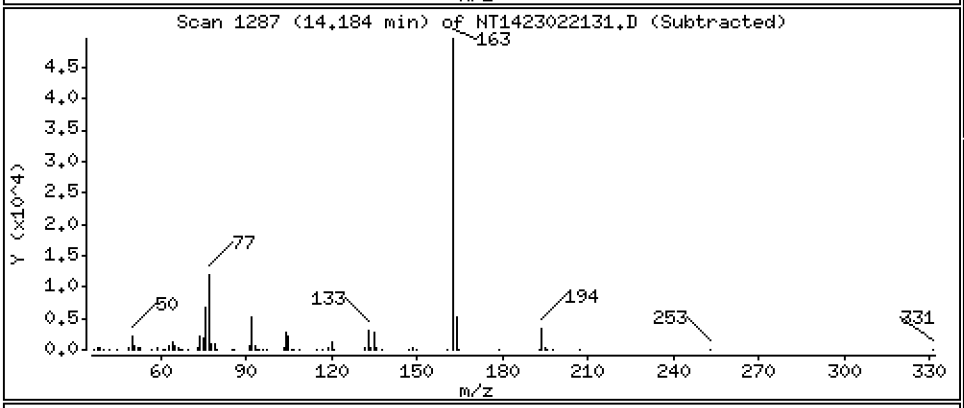
Column diameter: 0.25

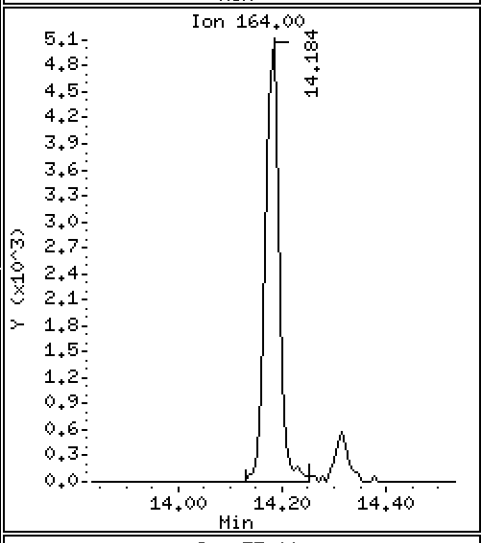
39 Dimethylphthalate

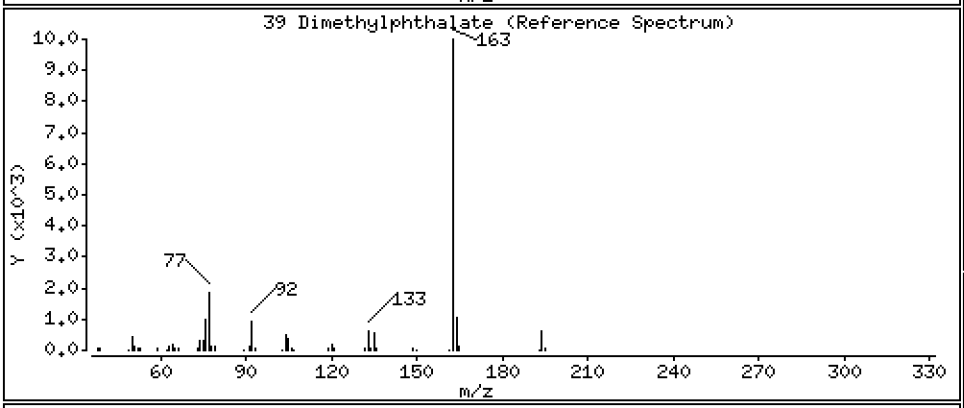
Concentration: 0.5578 ug/mL

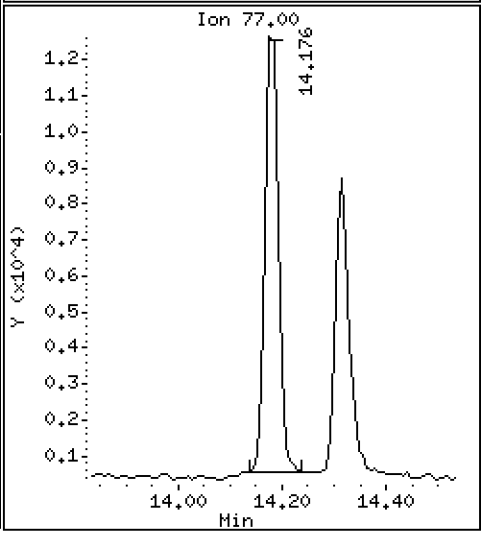


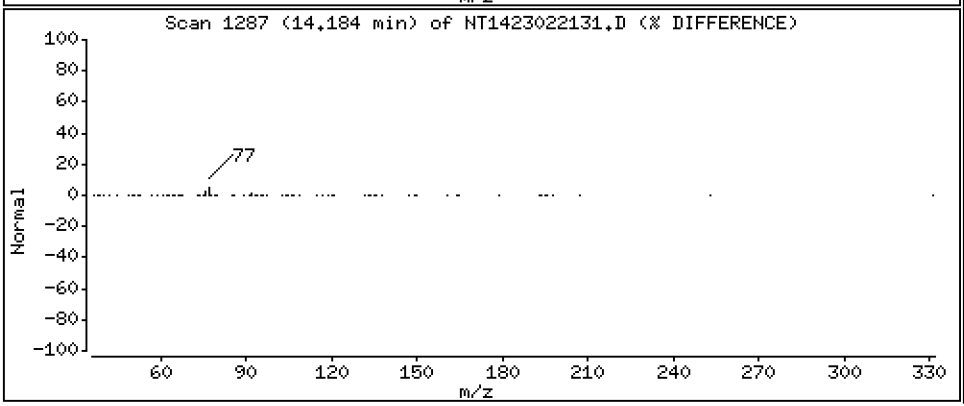












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

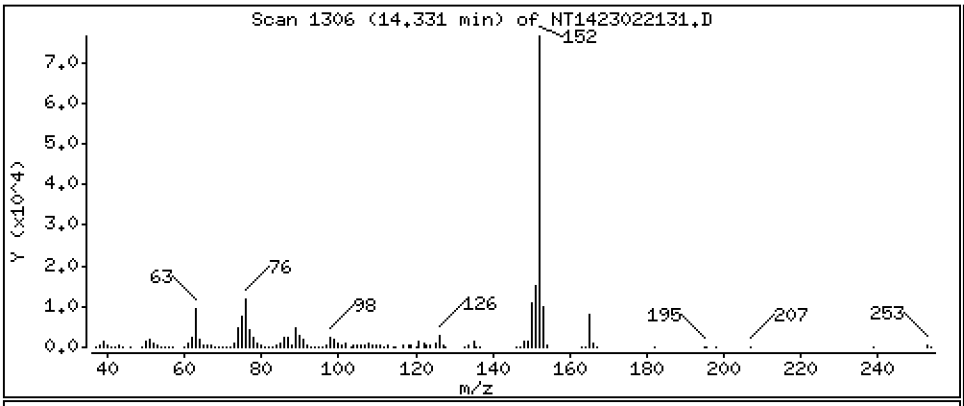
Operator: DSD

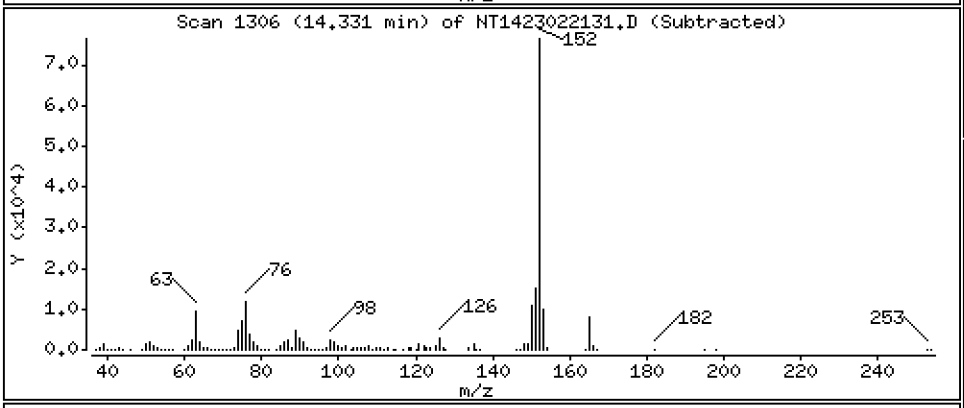
Column phase: ZB-5msi

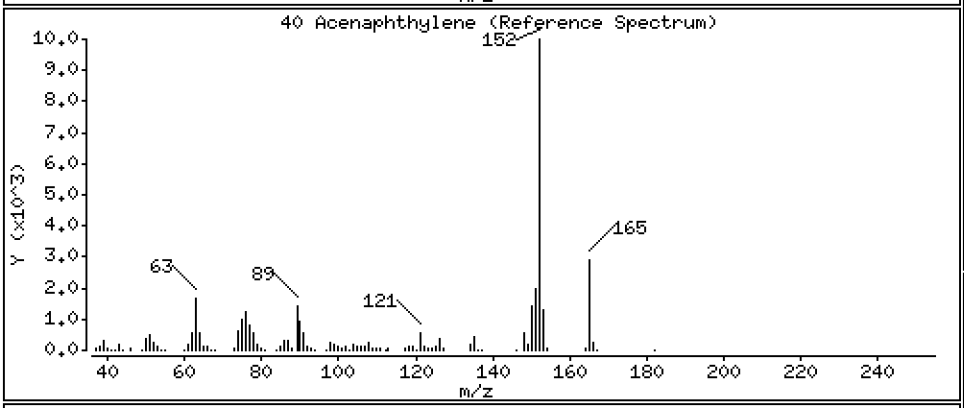
Column diameter: 0.25

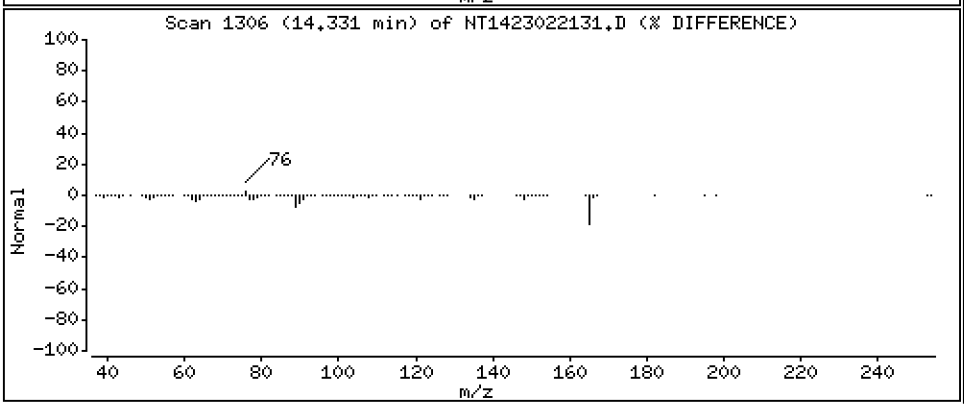
40 Acenaphthylene

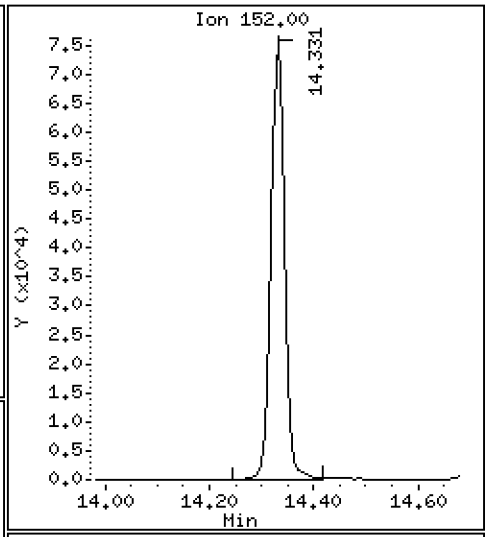
Concentration: 0.5758 ug/mL

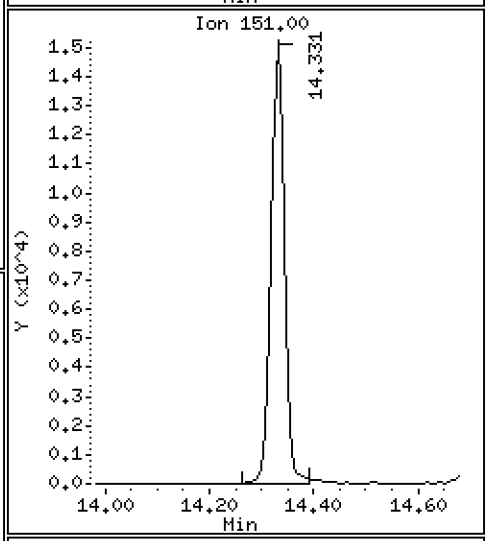


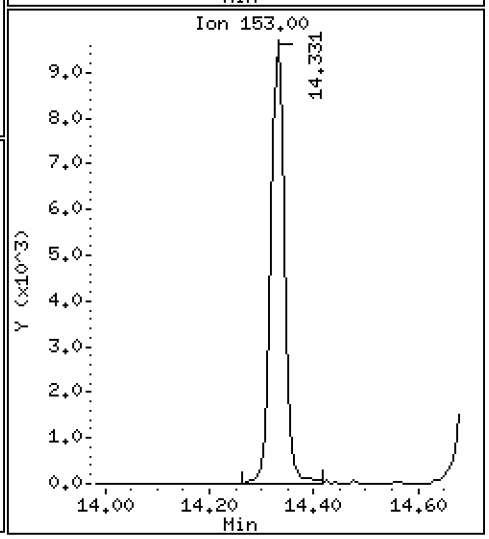












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

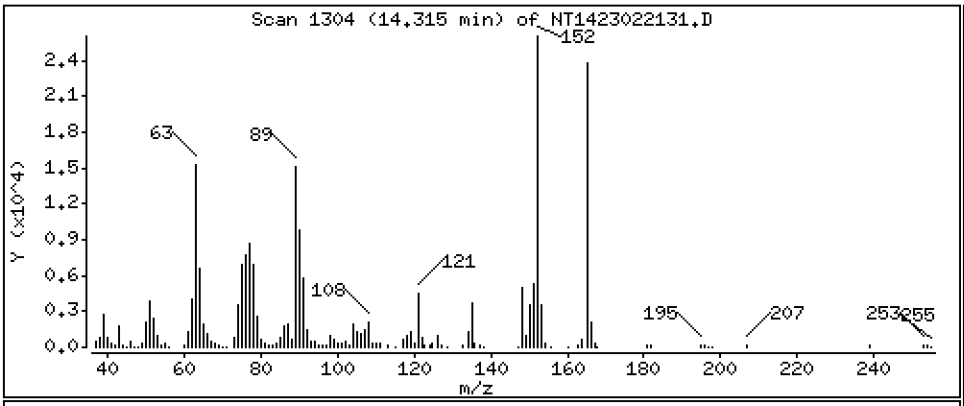
Operator: DSD

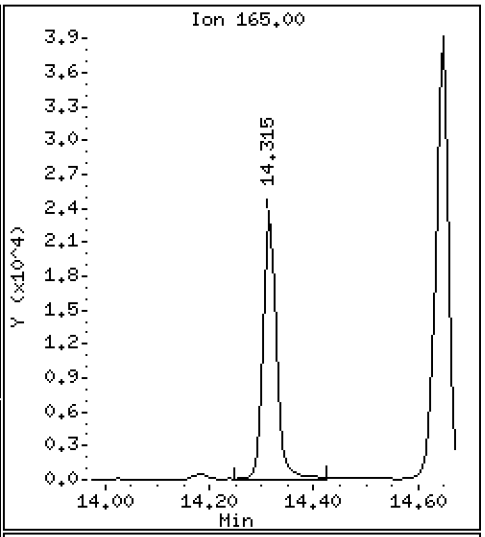
Column phase: ZB-5msi

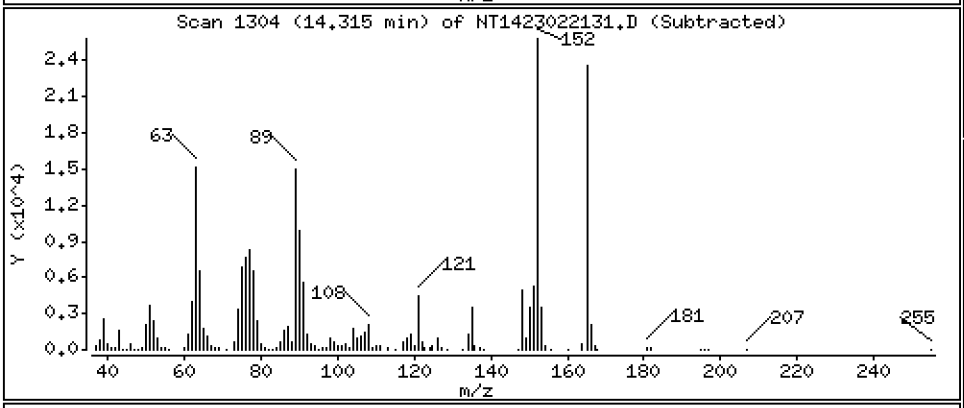
Column diameter: 0.25

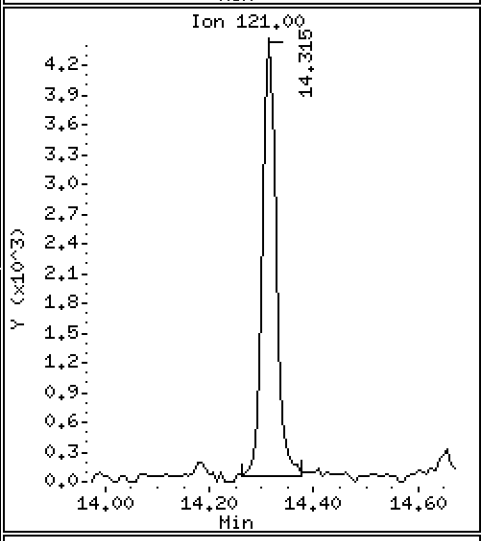
41 2,6-Dinitrotoluene

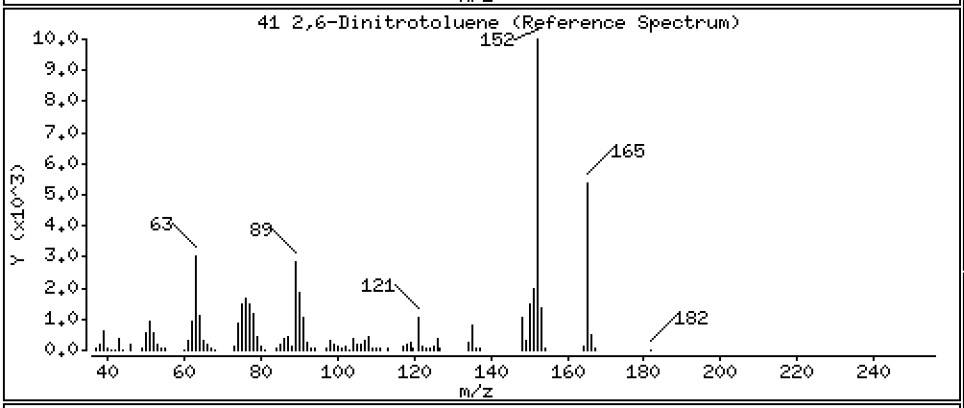
Concentration: 1.075 ug/mL

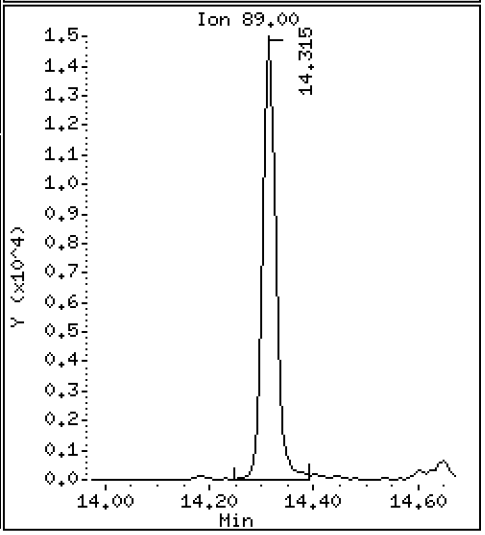


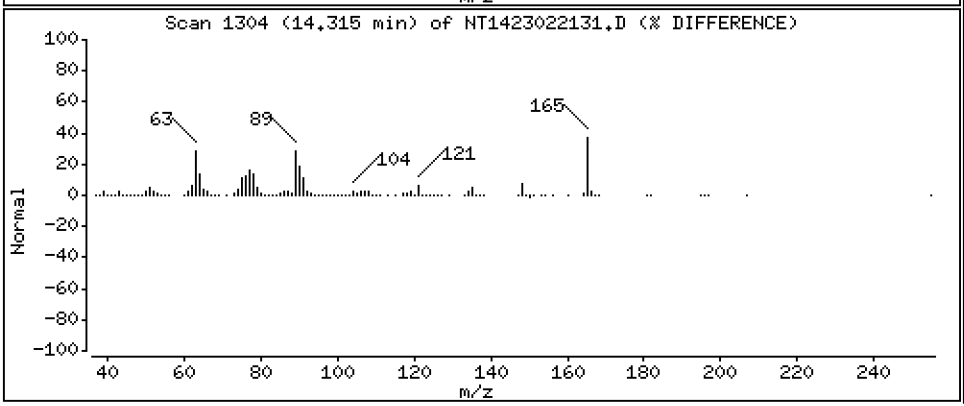












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

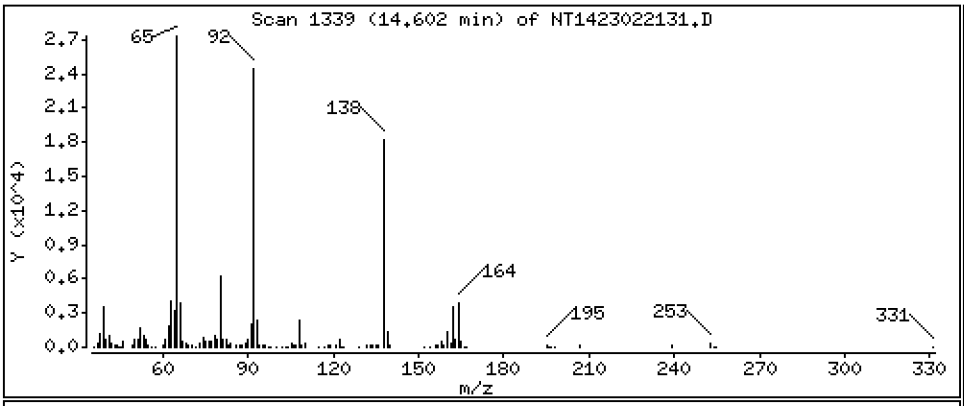
Operator: DSD

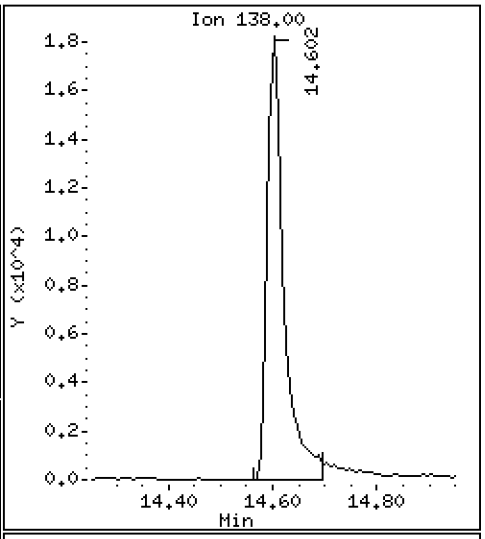
Column phase: ZB-5msi

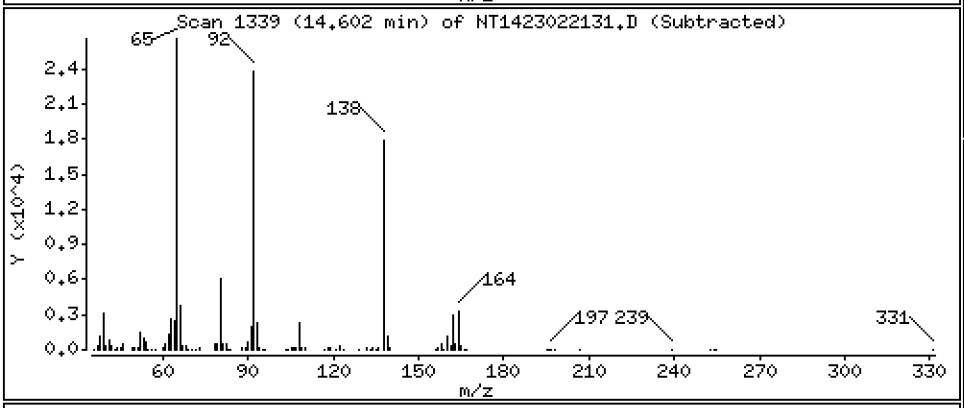
Column diameter: 0.25

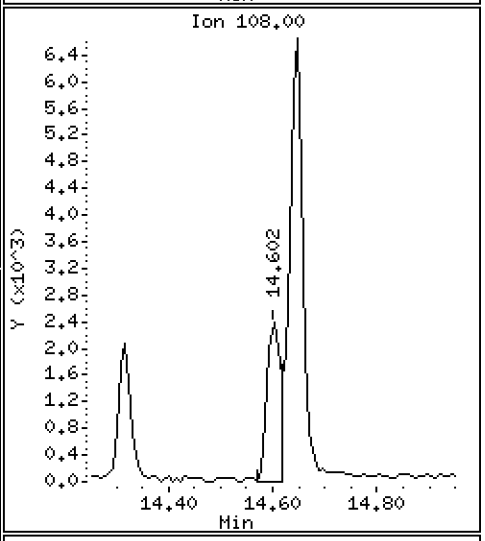
43 3-Nitroaniline

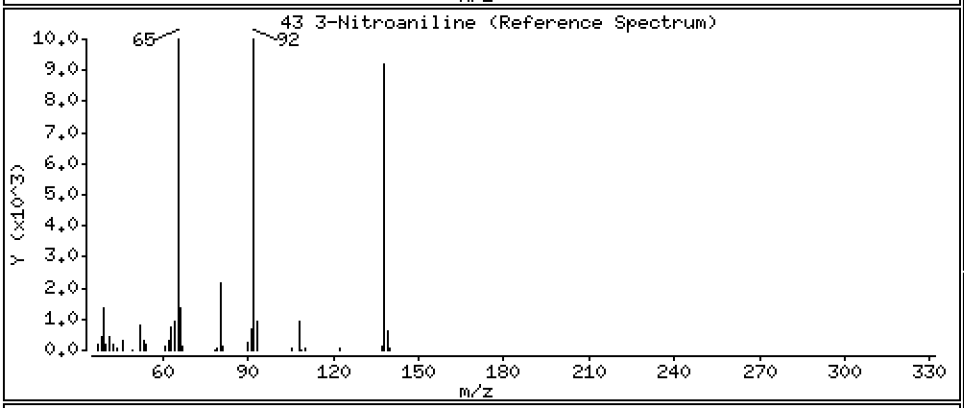
Concentration: 1.004 ug/mL

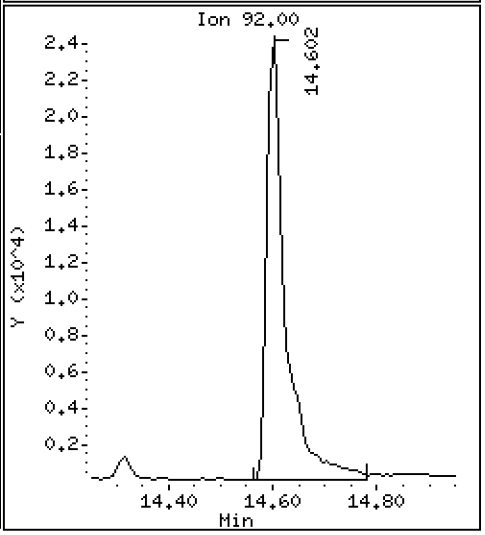


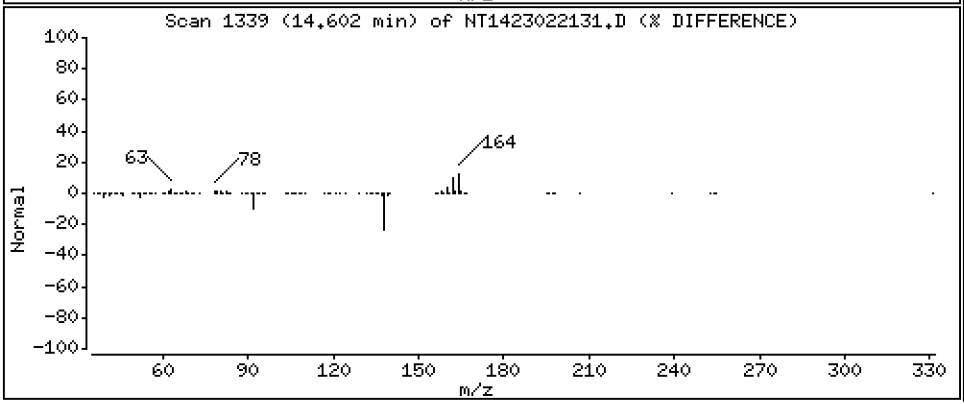












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

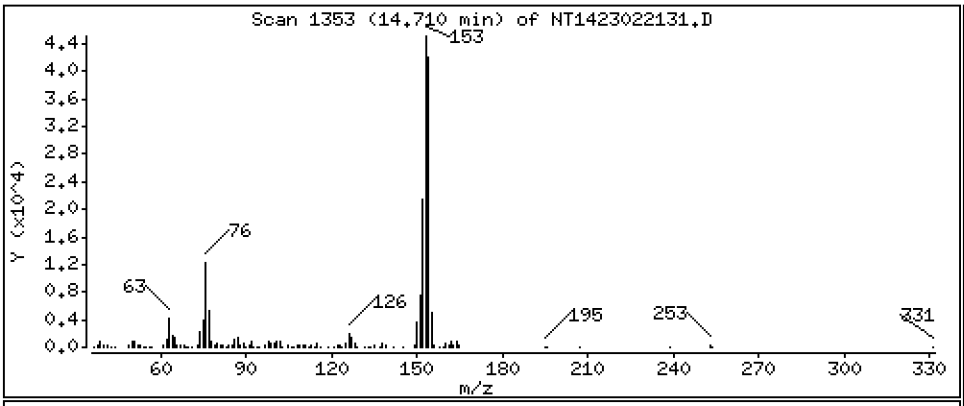
Operator: DSD

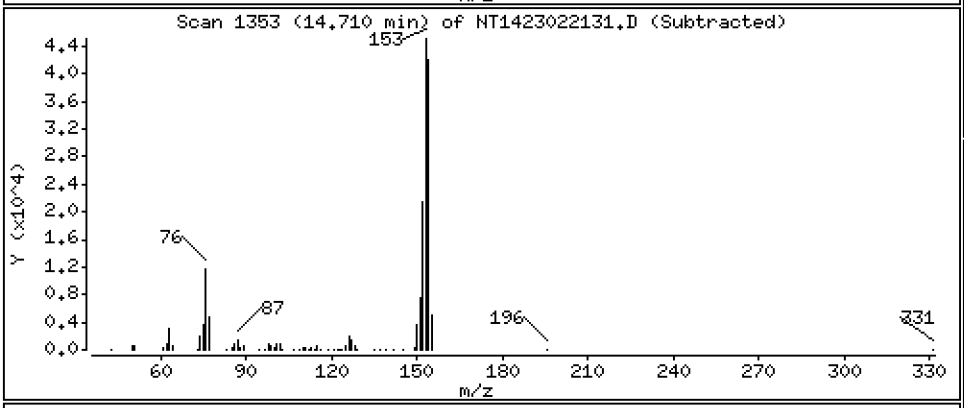
Column phase: ZB-5msi

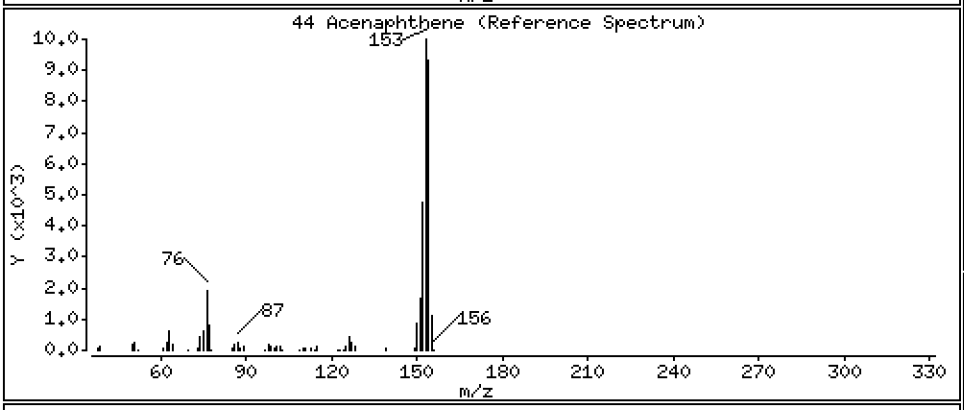
Column diameter: 0.25

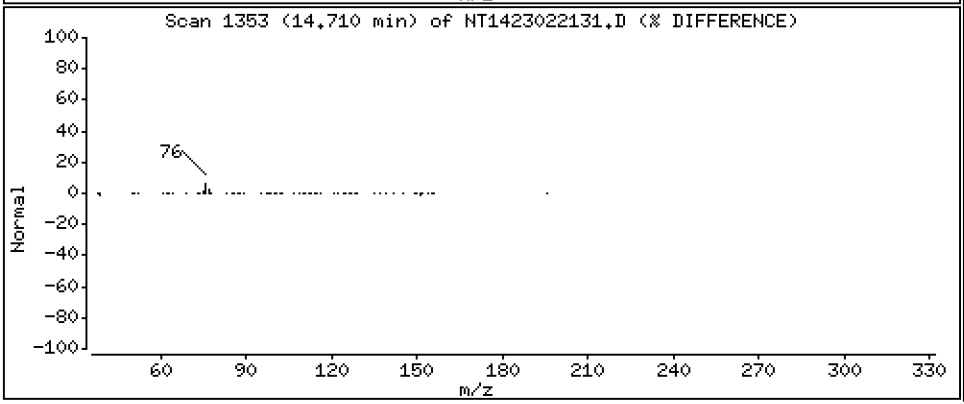
44 Acenaphthene

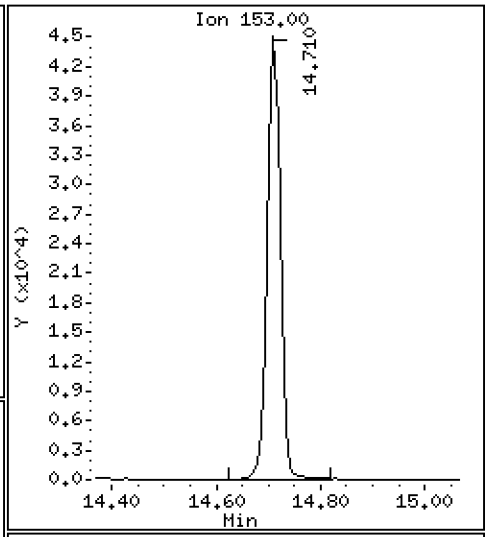
Concentration: 0.5557 ug/mL

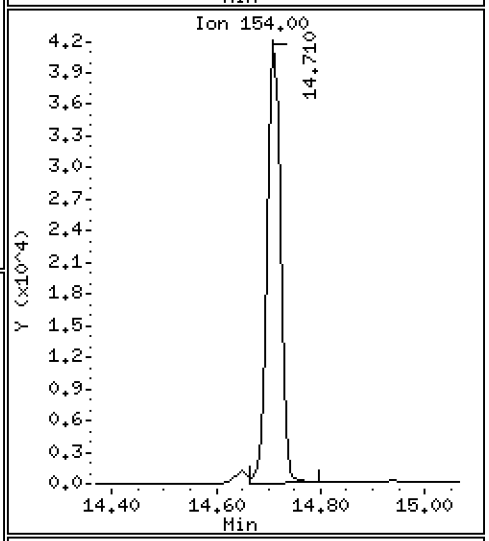


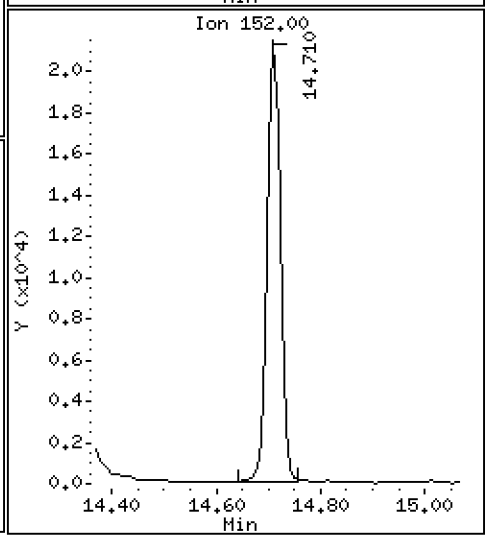












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

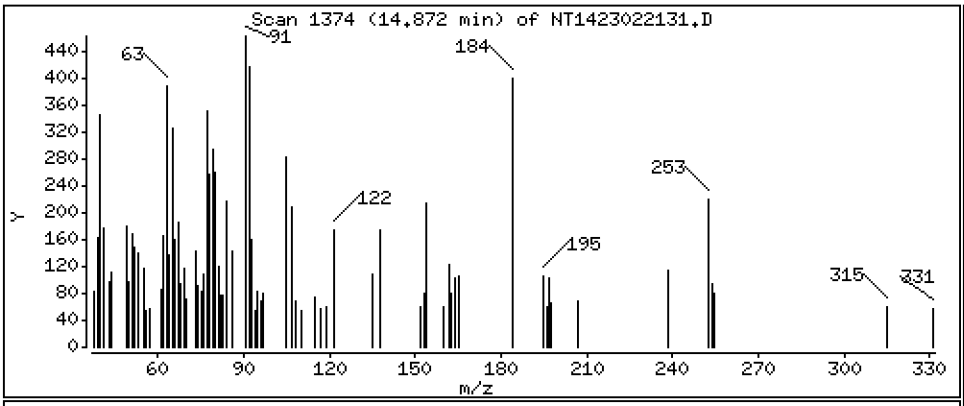
Operator: DSD

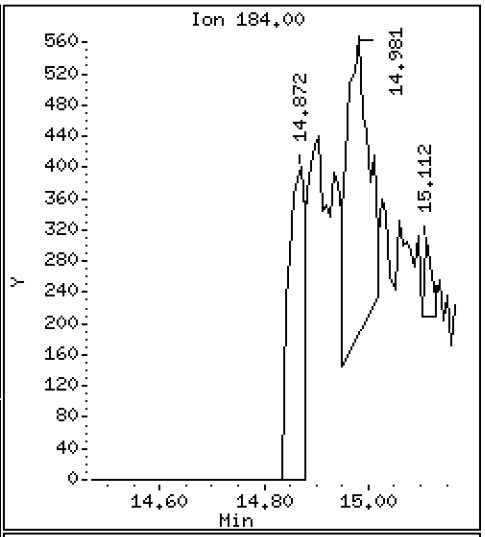
Column phase: ZB-5msi

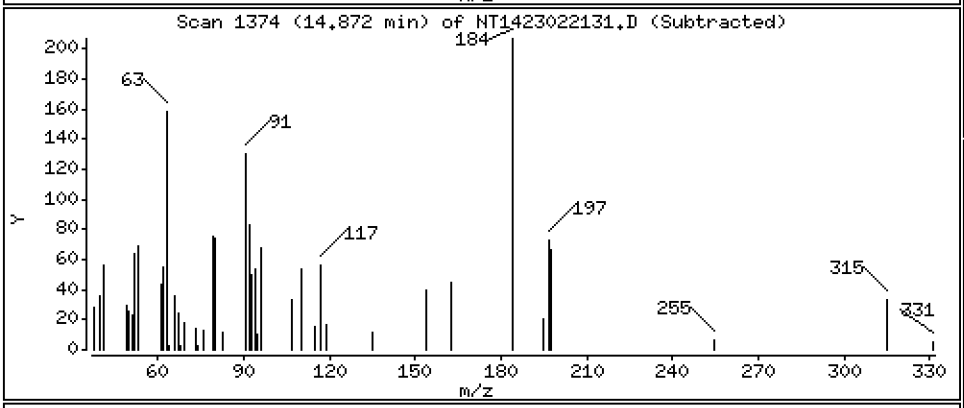
Column diameter: 0.25

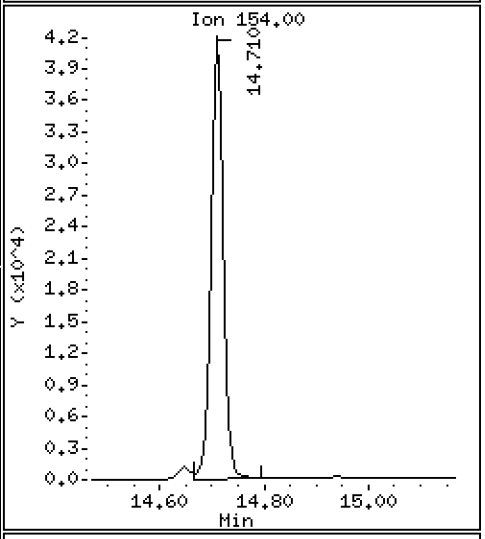
45 2,4-Dinitrophenol

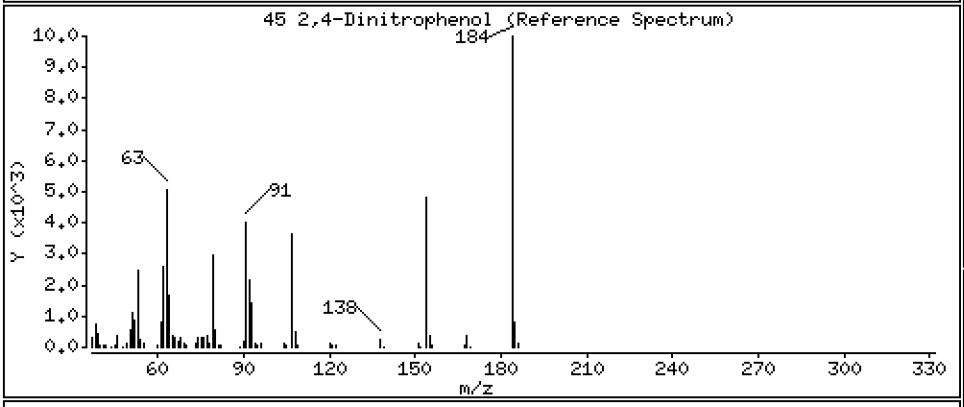
Concentration: 0.03884 ug/mL

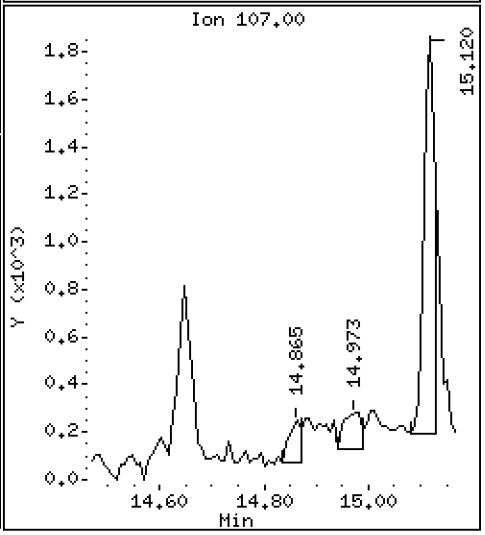


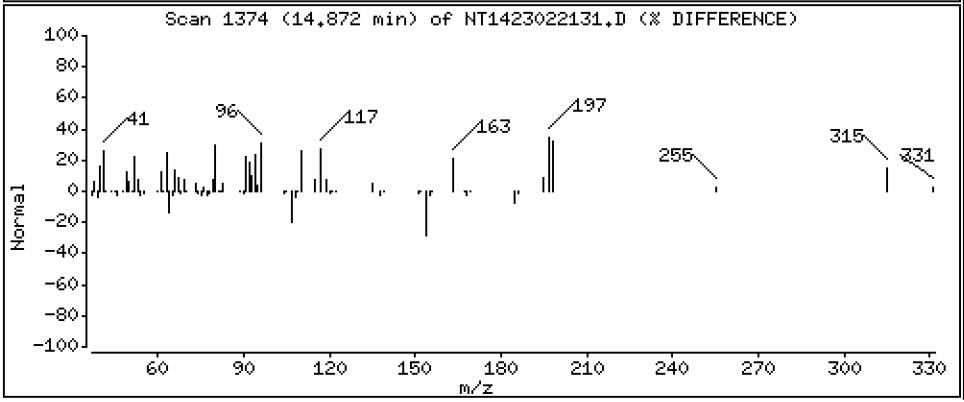












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

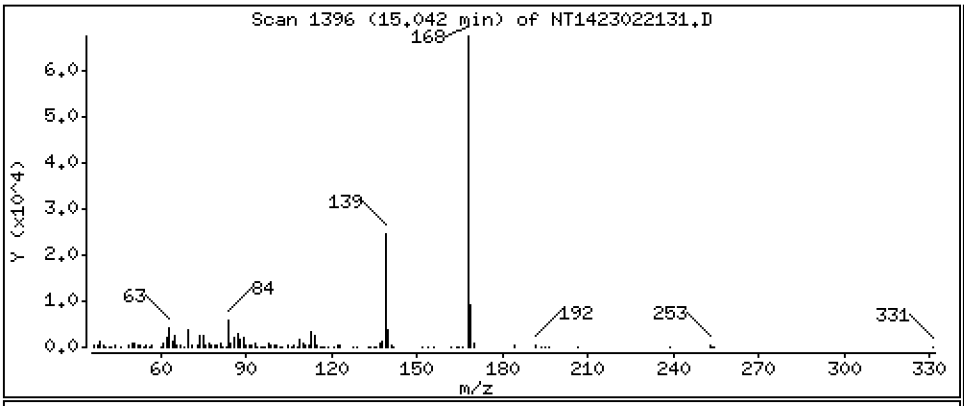
Operator: DSD

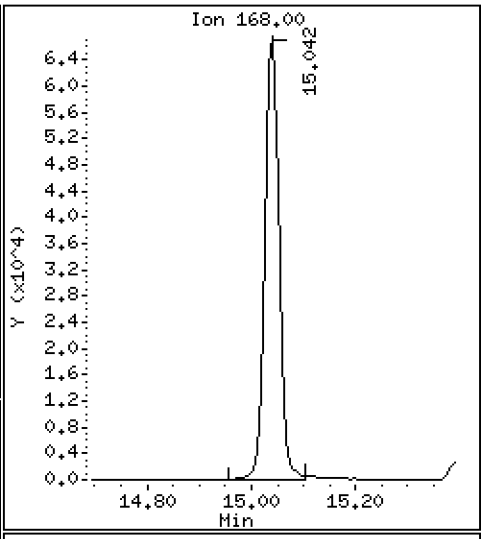
Column phase: ZB-5msi

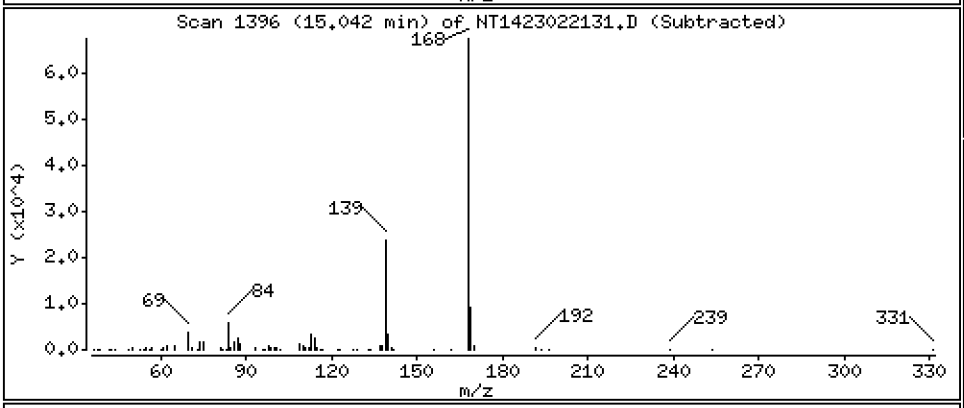
Column diameter: 0.25

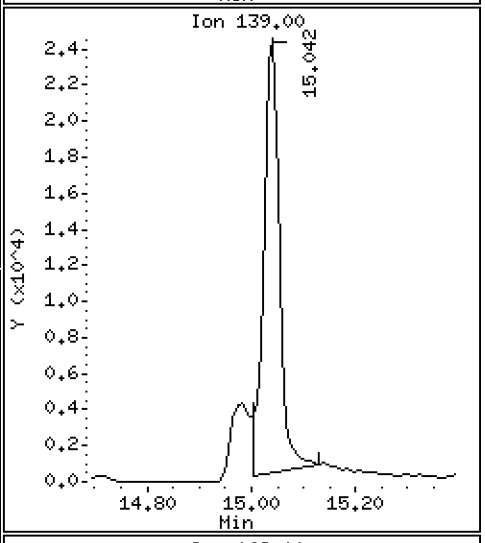
46 Dibenzofuran

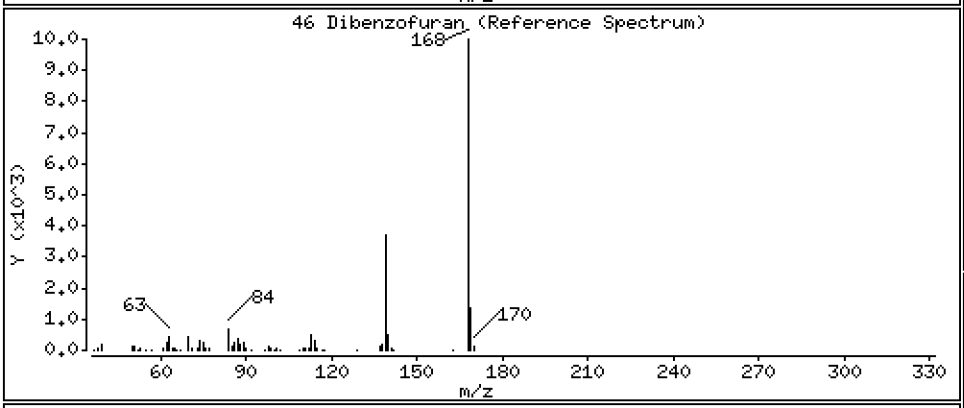
Concentration: 0.5494 ug/mL

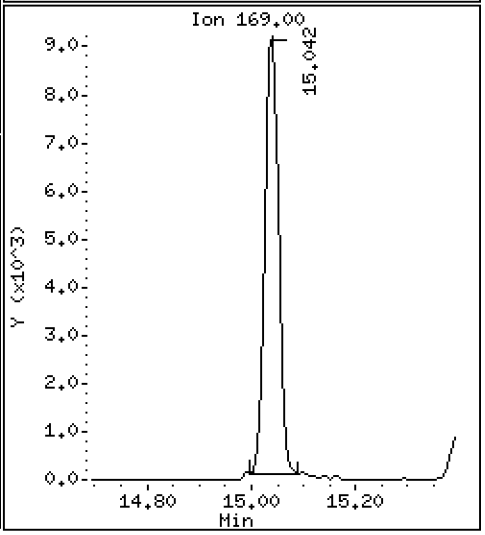


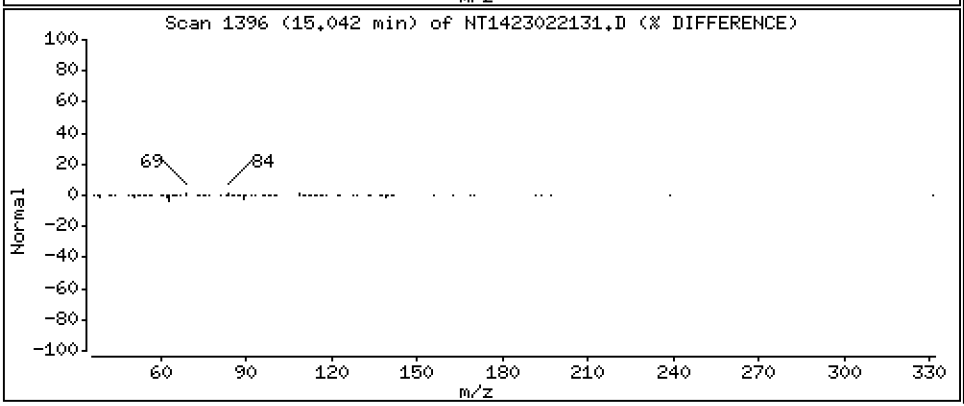












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

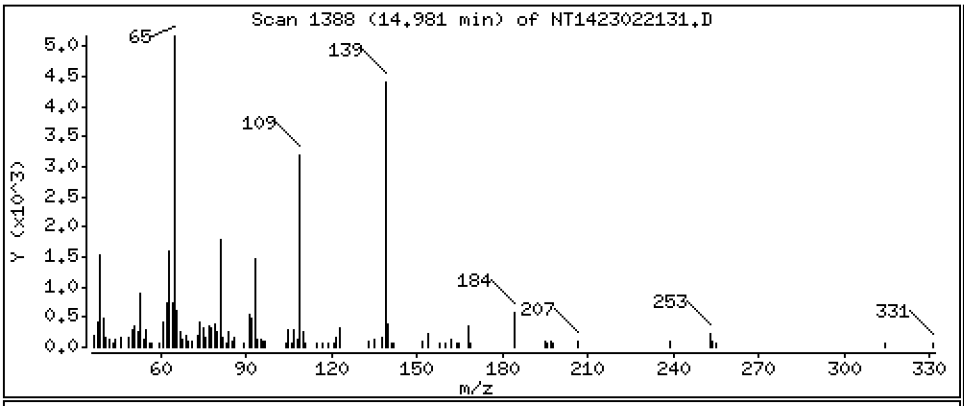
Operator: DSD

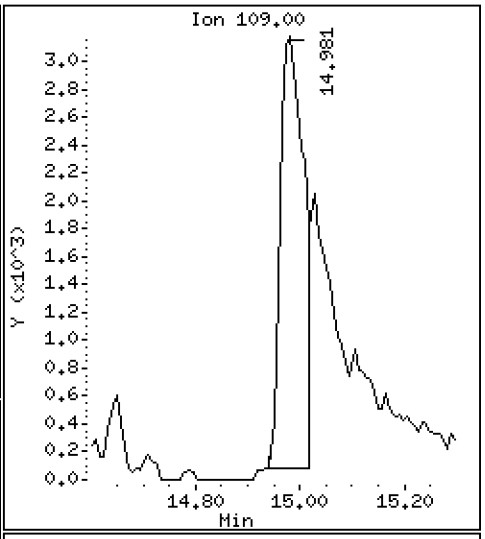
Column phase: ZB-5msi

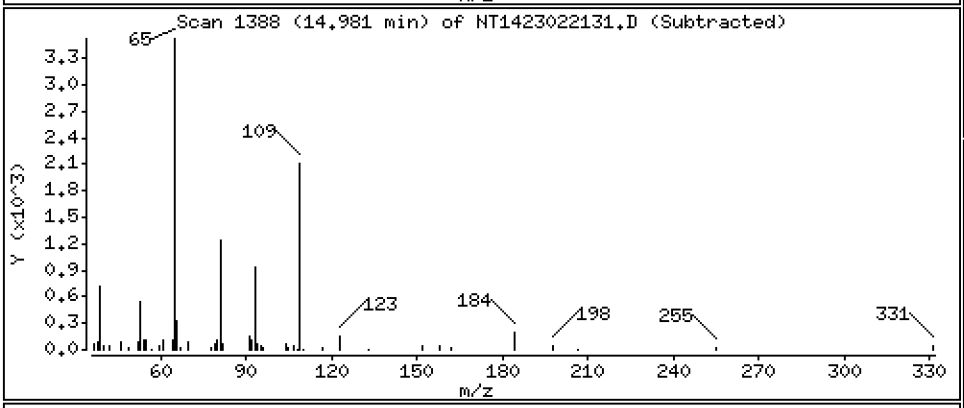
Column diameter: 0.25

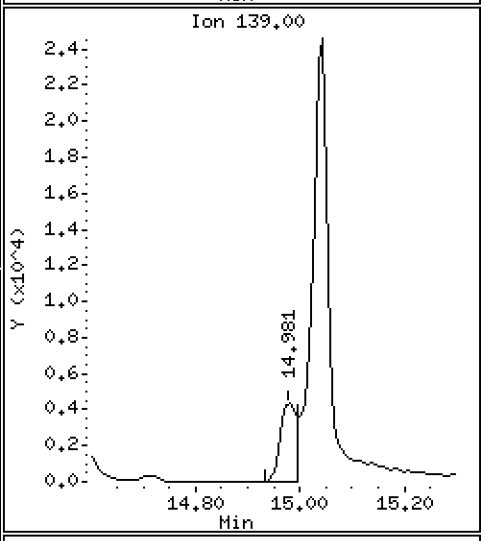
47 4-Nitrophenol

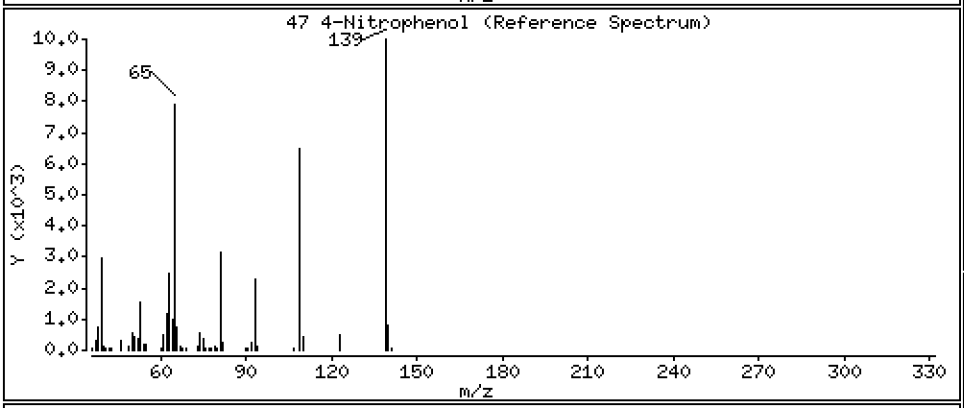
Concentration: 0.4520 ug/mL

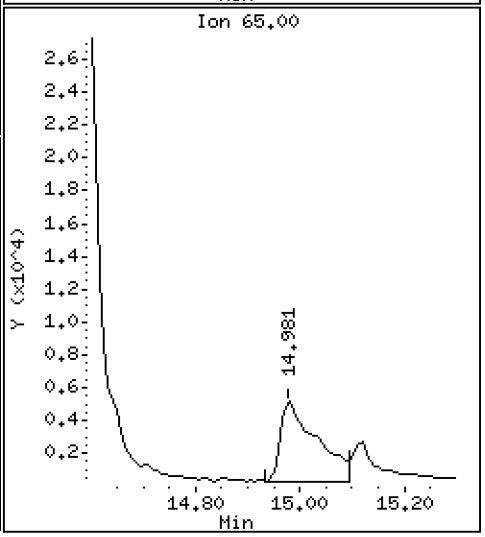


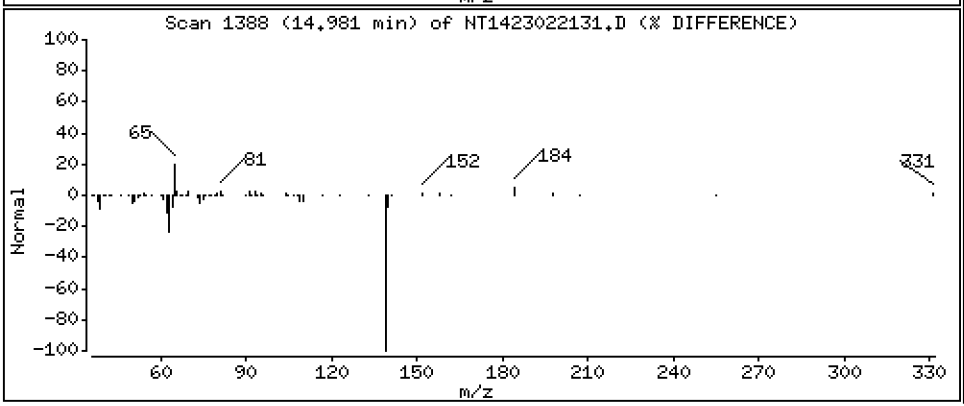












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

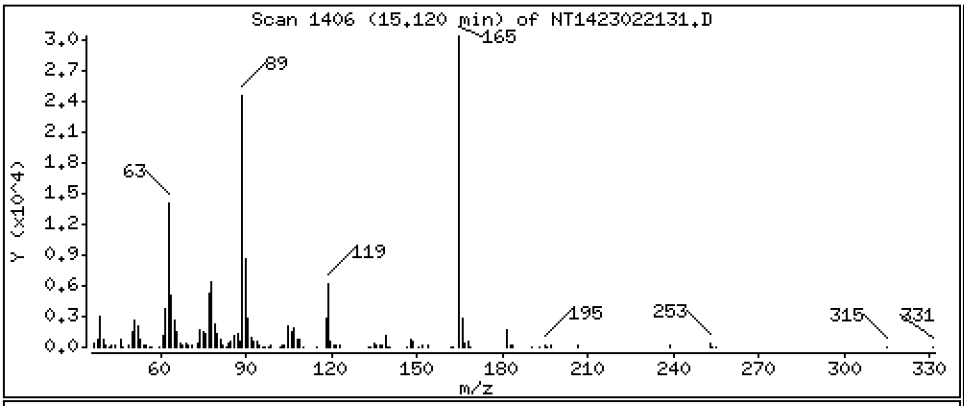
Operator: DSD

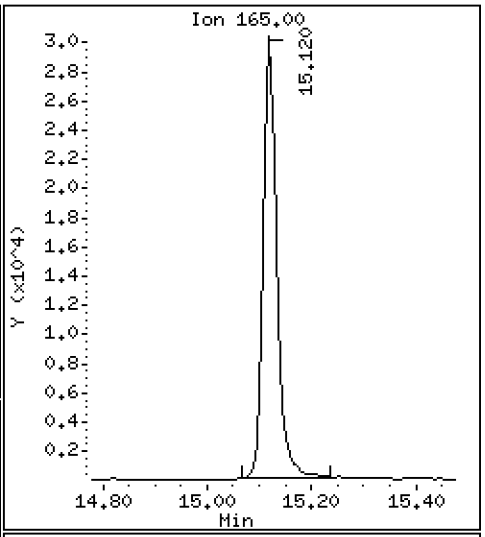
Column phase: ZB-5msi

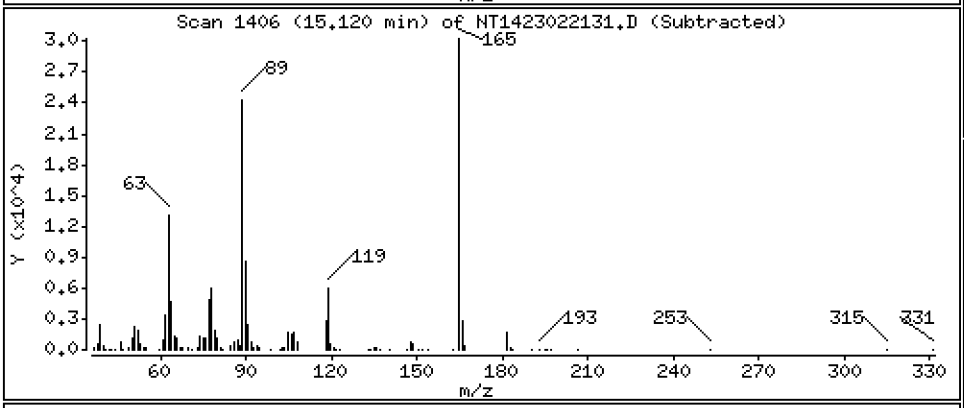
Column diameter: 0.25

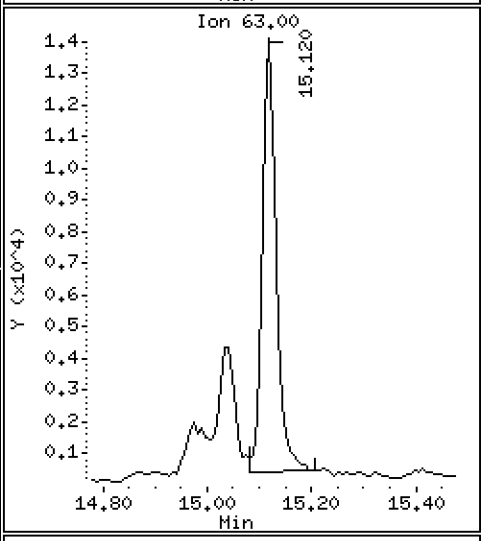
48 2,4-Dinitrotoluene

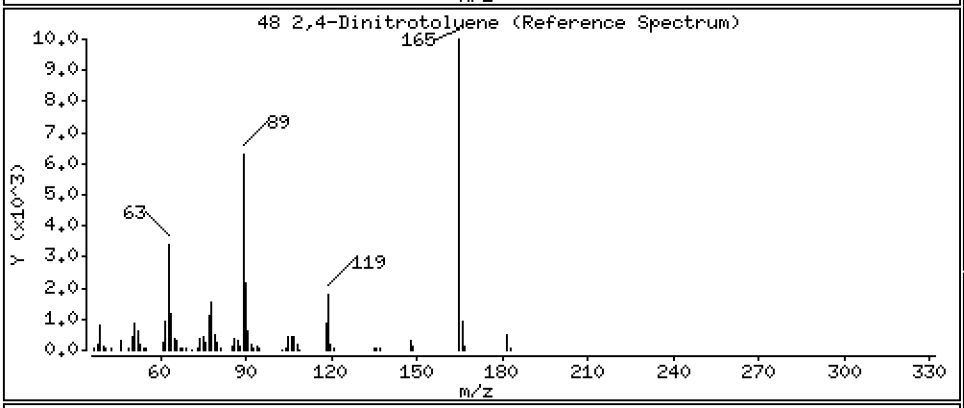
Concentration: 1.001 ug/mL

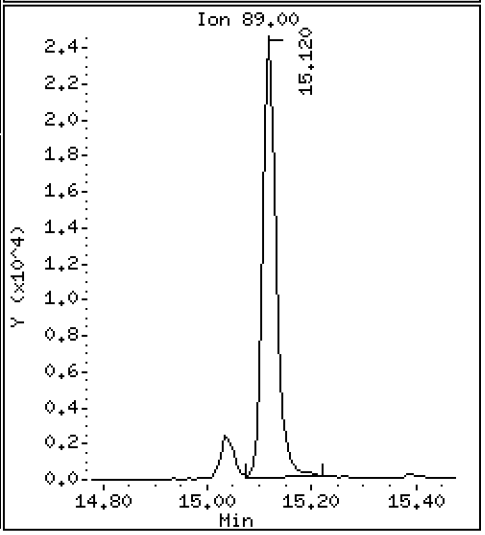


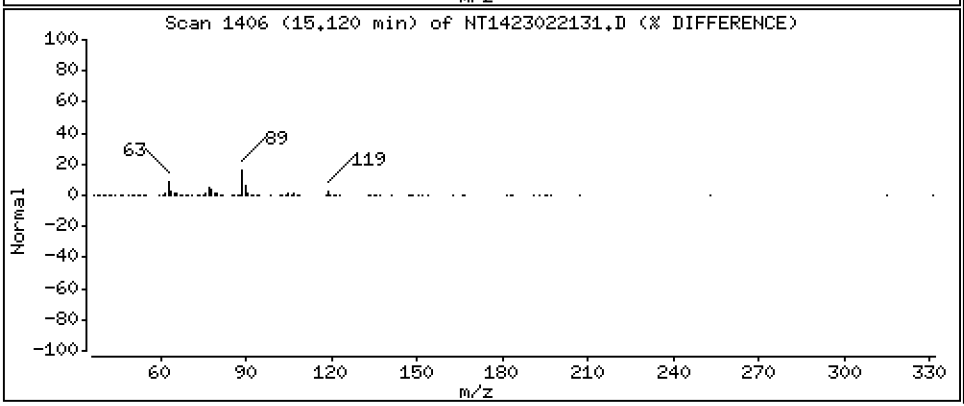












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

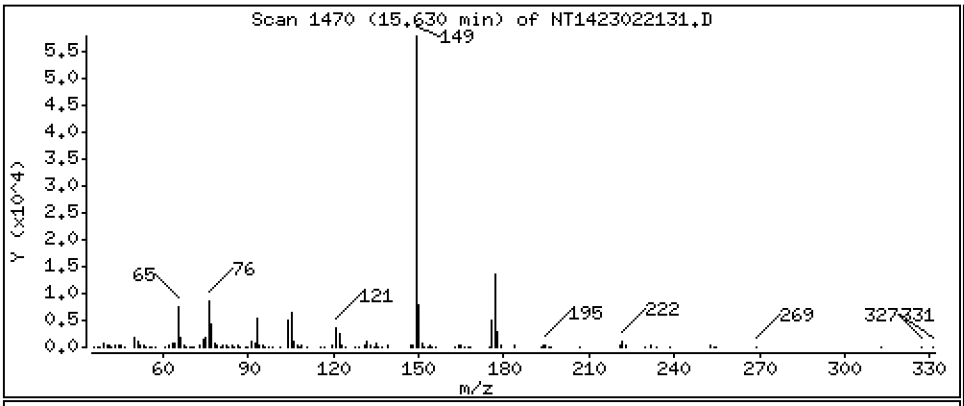
Operator: DSD

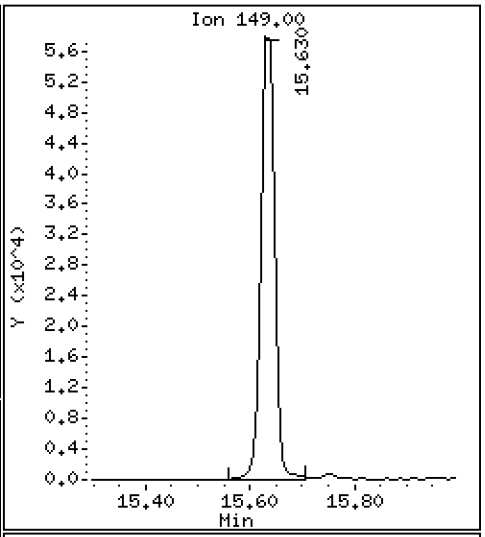
Column phase: ZB-5msi

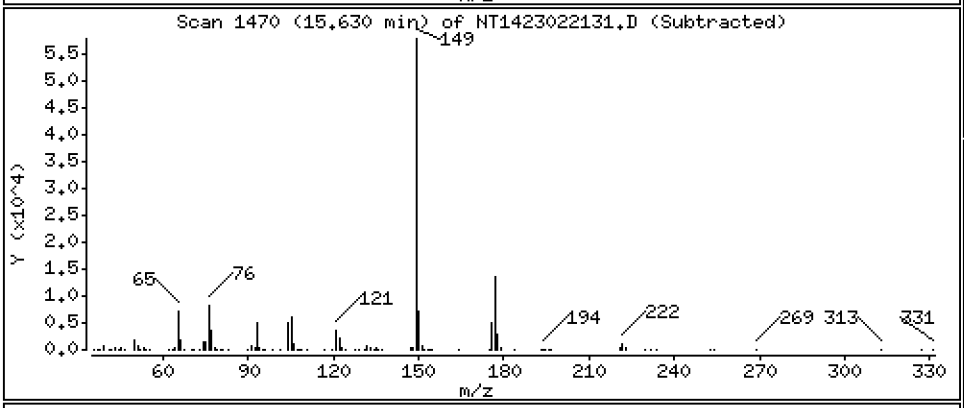
Column diameter: 0.25

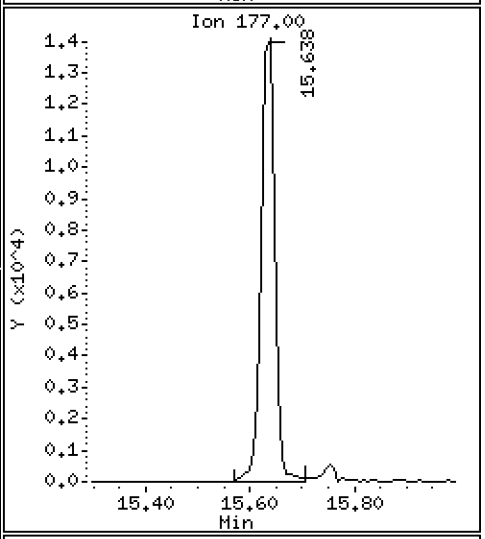
50 Diethylphthalate

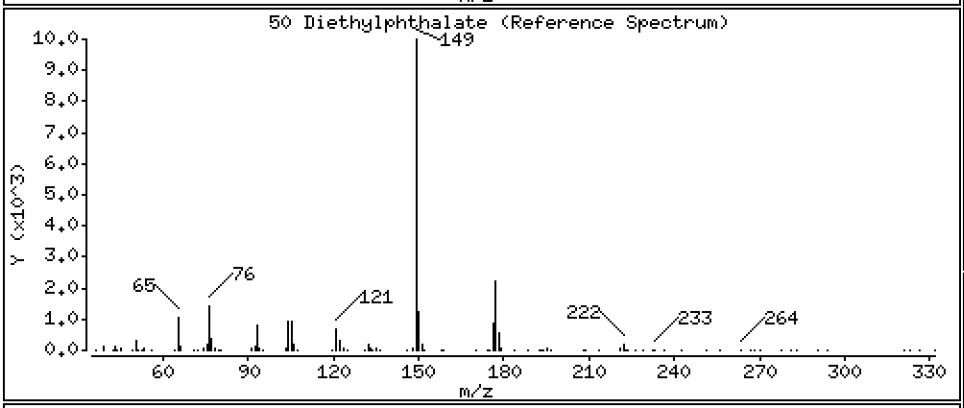
Concentration: 0.5353 ug/mL

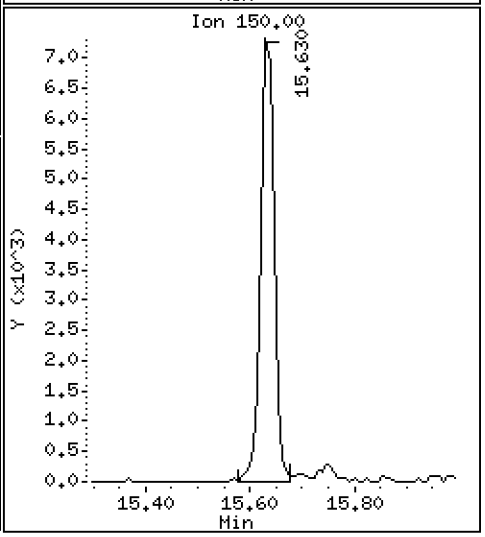


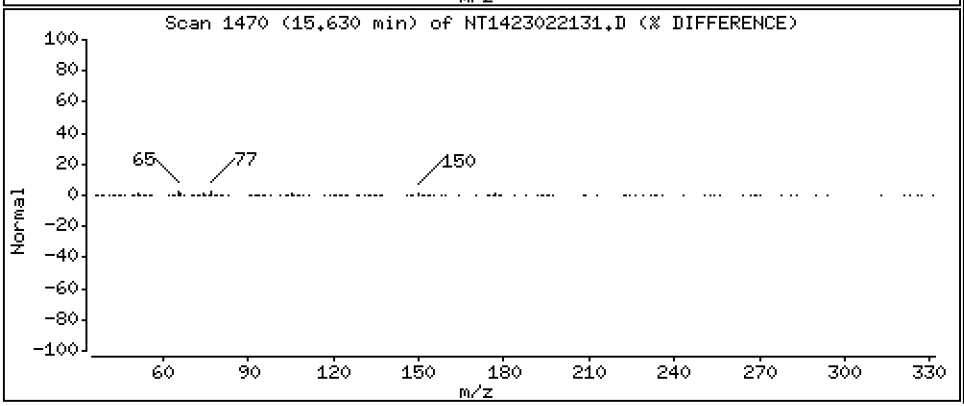












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

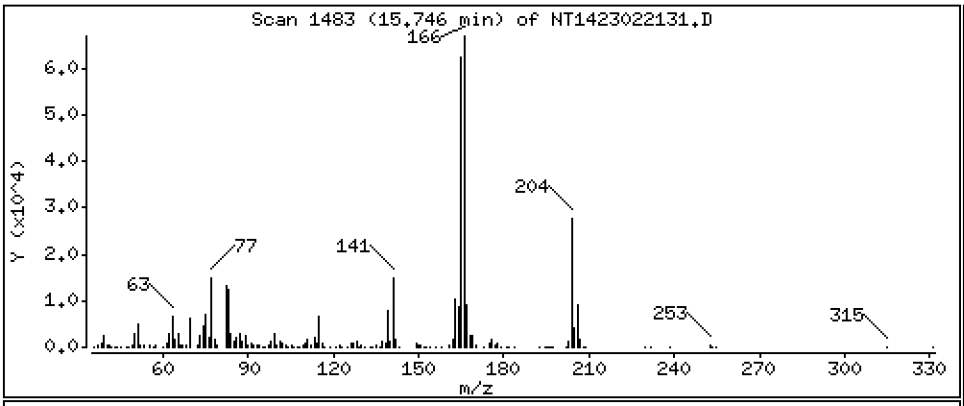
Operator: DSD

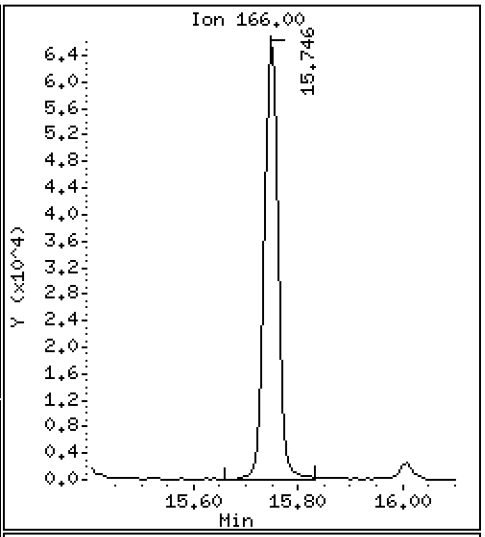
Column phase: ZB-5msi

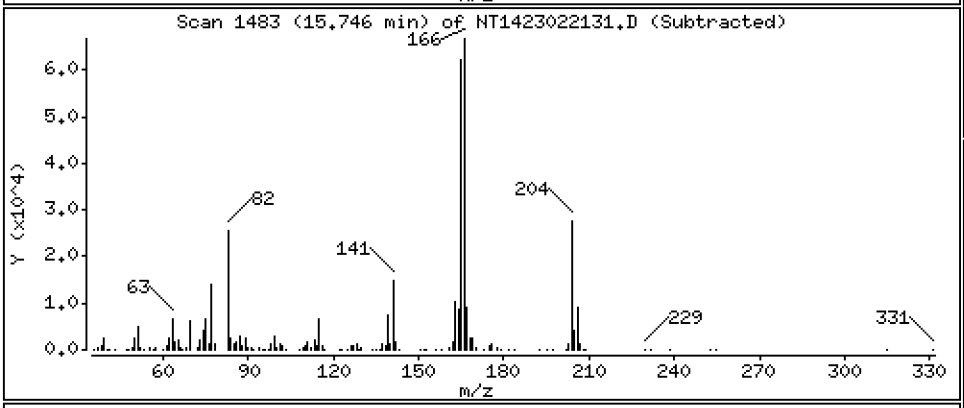
Column diameter: 0.25

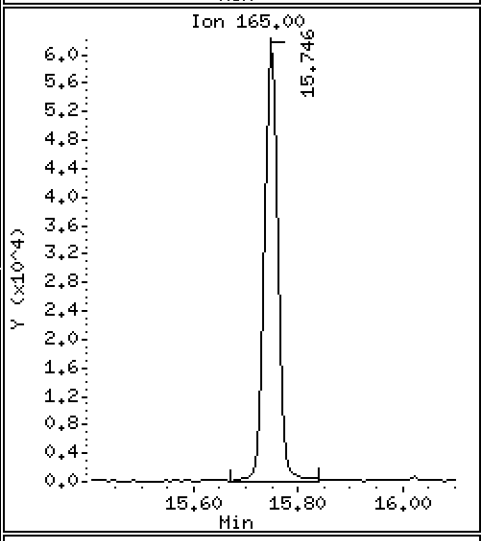
49 Fluorene

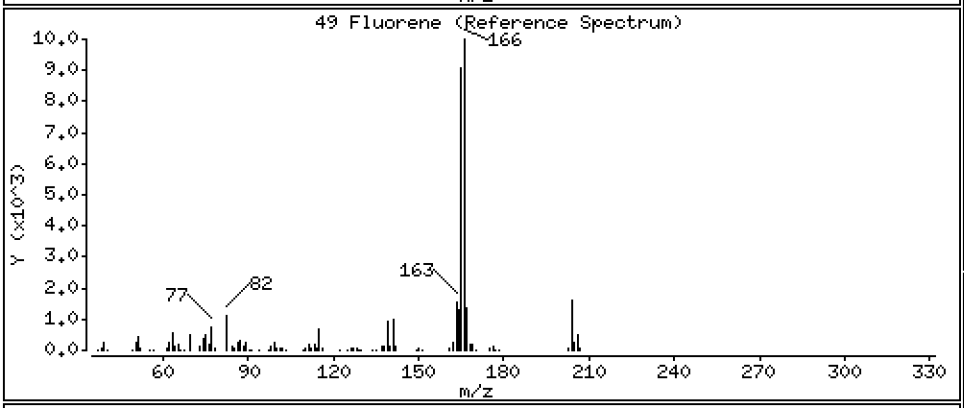
Concentration: 0.5516 ug/mL

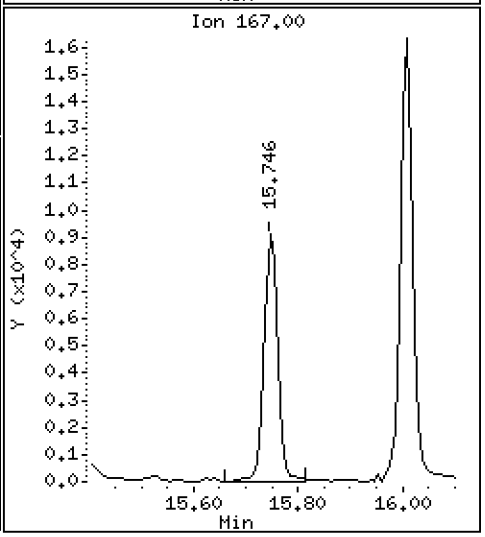


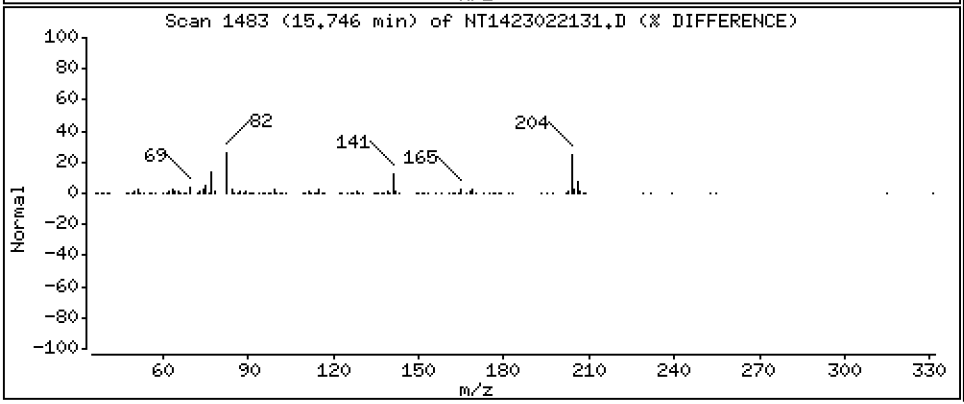












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

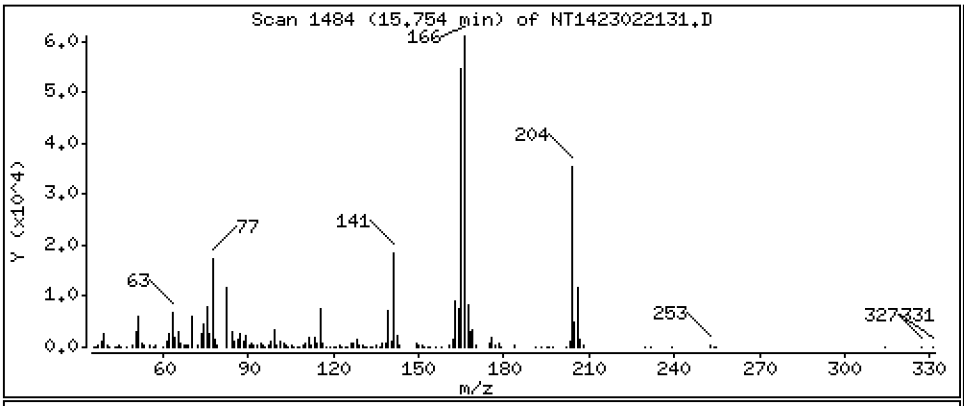
Operator: DSD

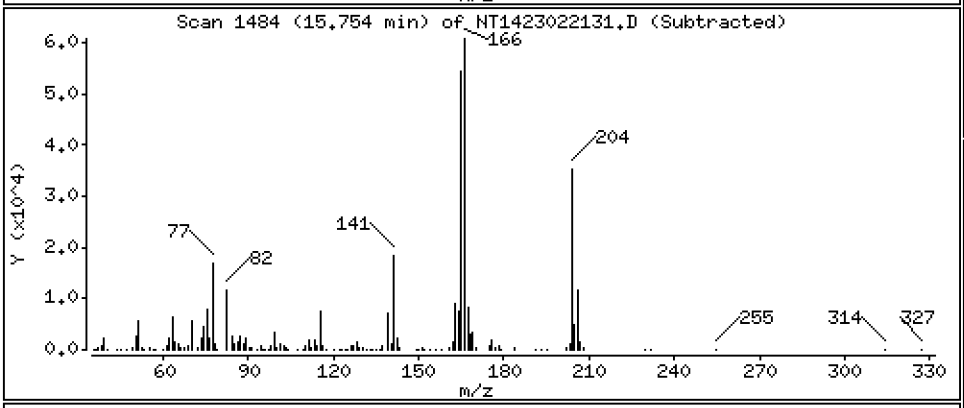
Column phase: ZB-5msi

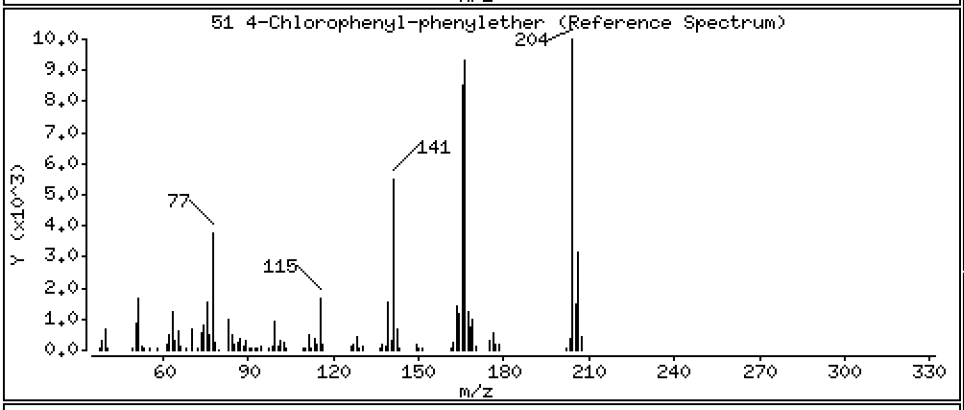
Column diameter: 0.25

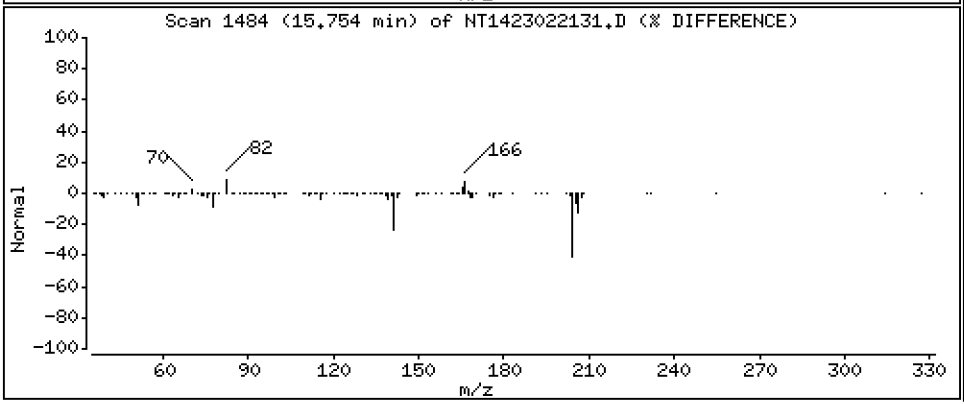
51 4-Chlorophenyl-phenylether

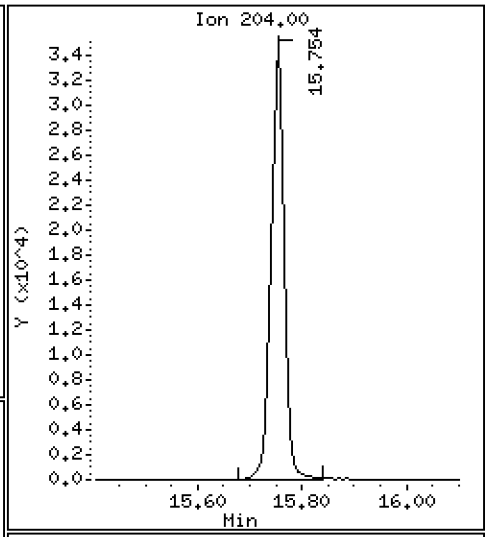
Concentration: 0.5235 ug/mL

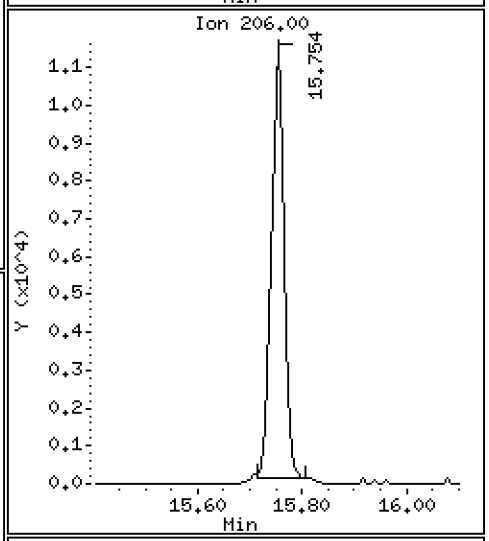


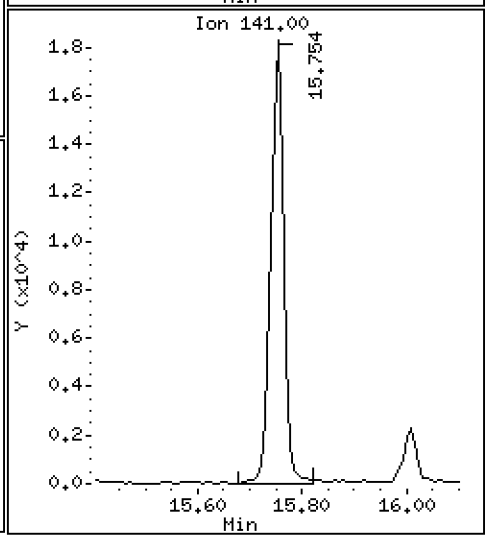












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

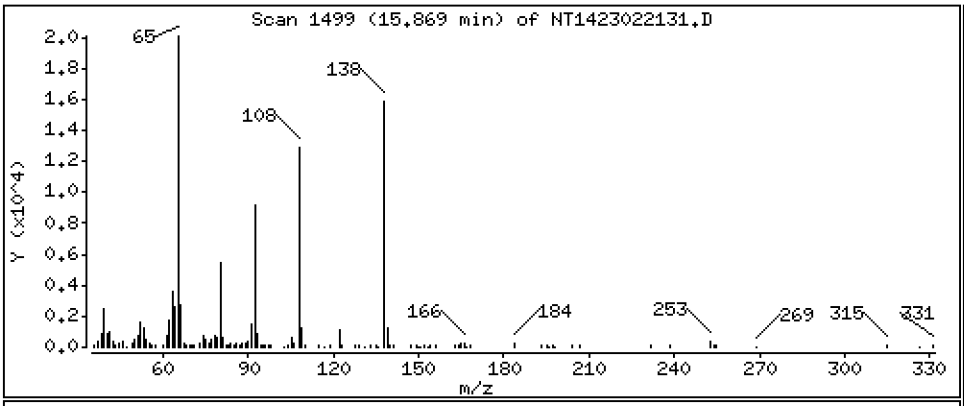
Operator: DSD

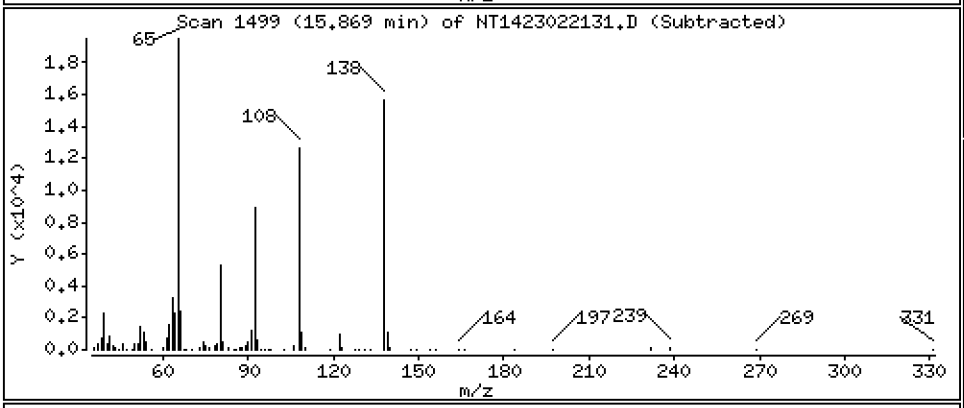
Column phase: ZB-5msi

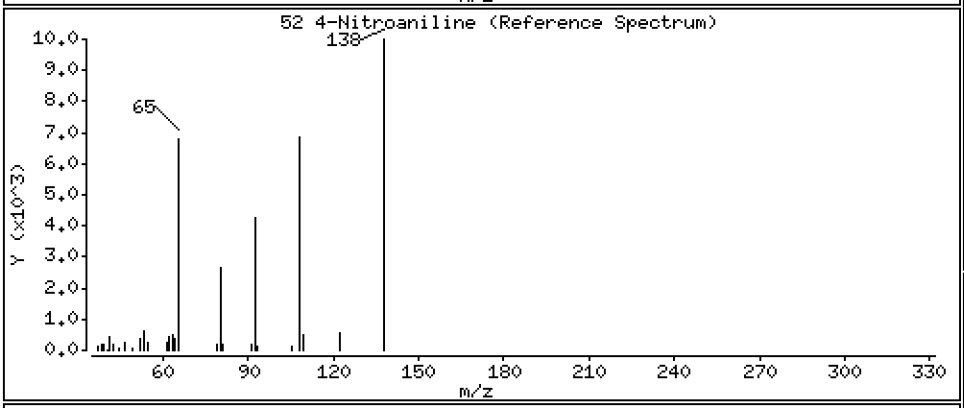
Column diameter: 0.25

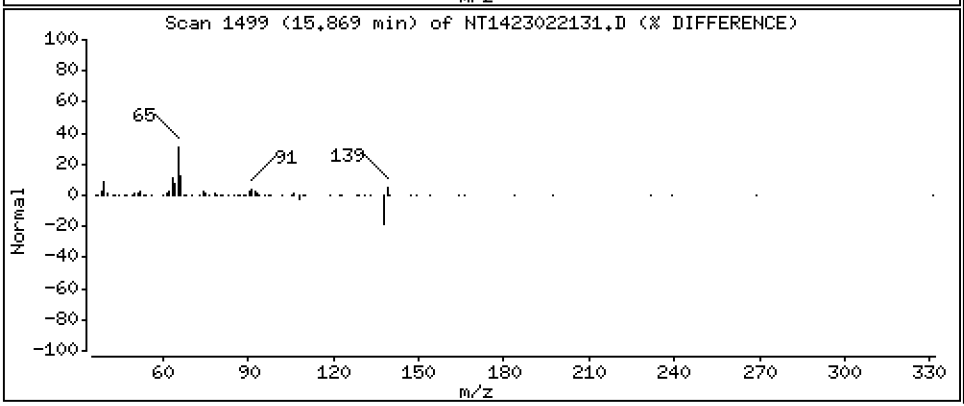
52 4-Nitroaniline

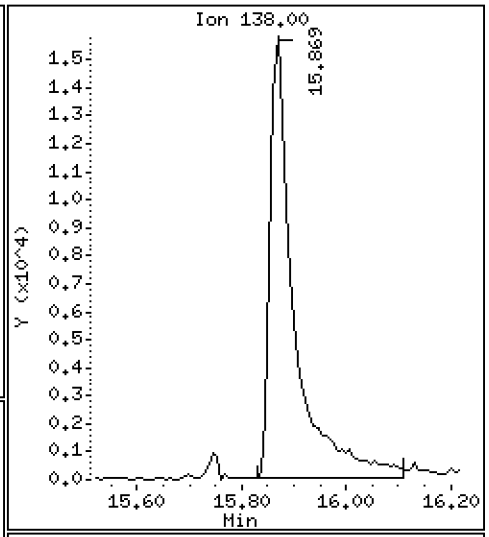
Concentration: 1.111 ug/mL

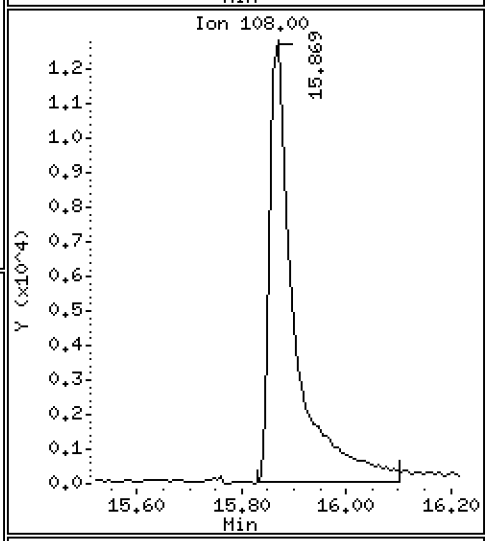


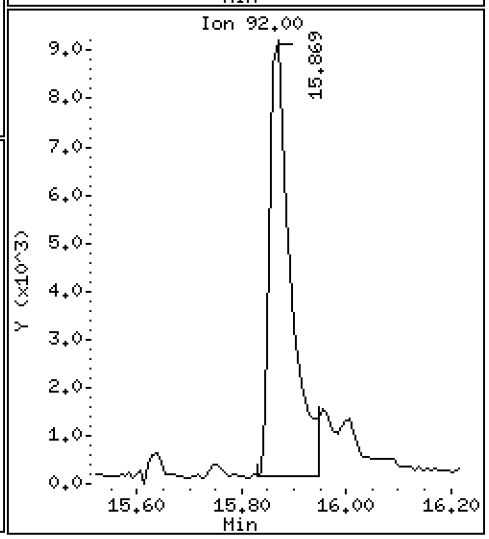












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

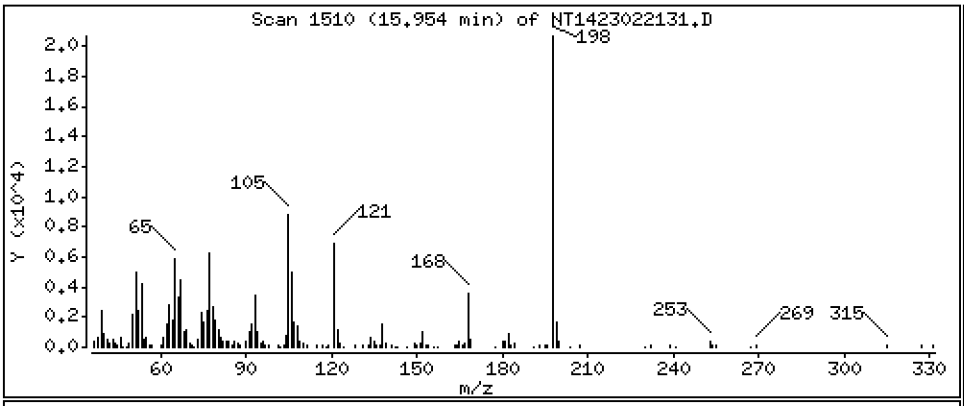
Operator: DSD

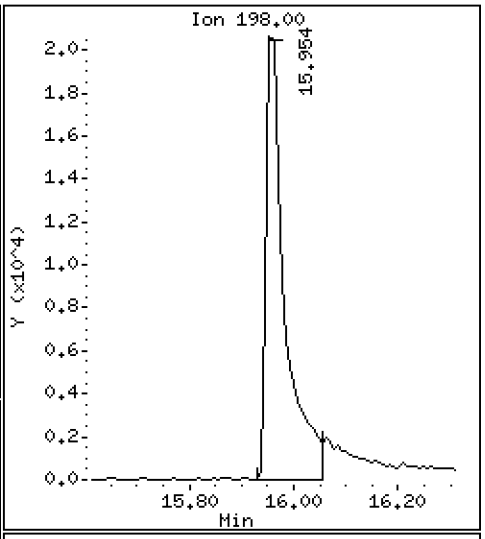
Column phase: ZB-5msi

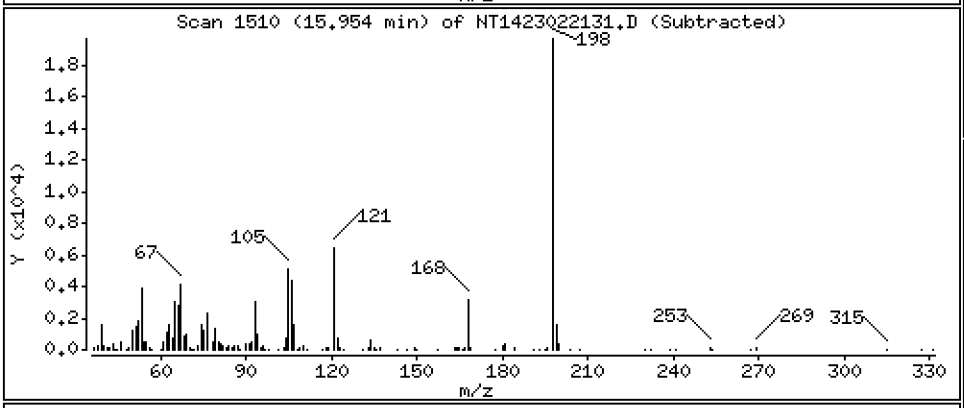
Column diameter: 0.25

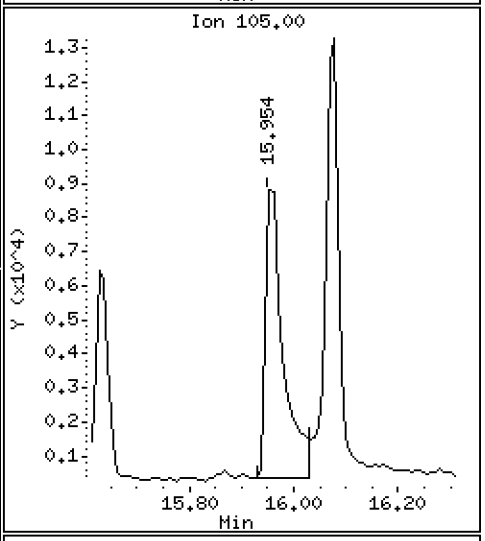
53 4,6-Dinitro-2-methylphenol

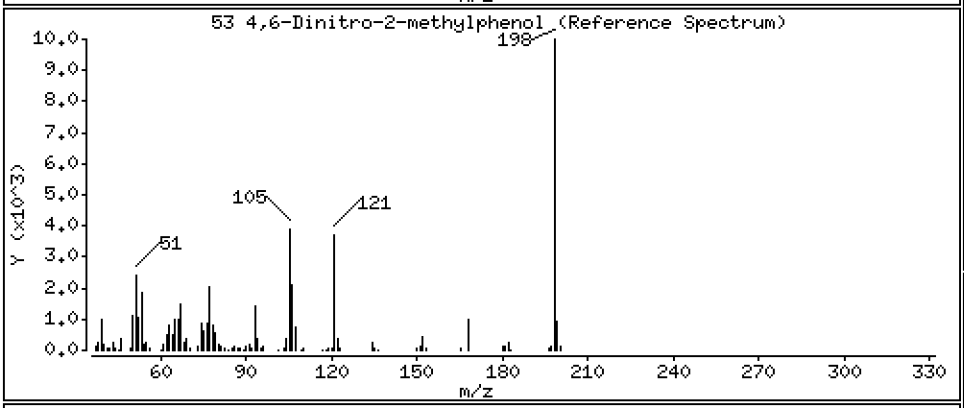
Concentration: 1.333 ug/mL

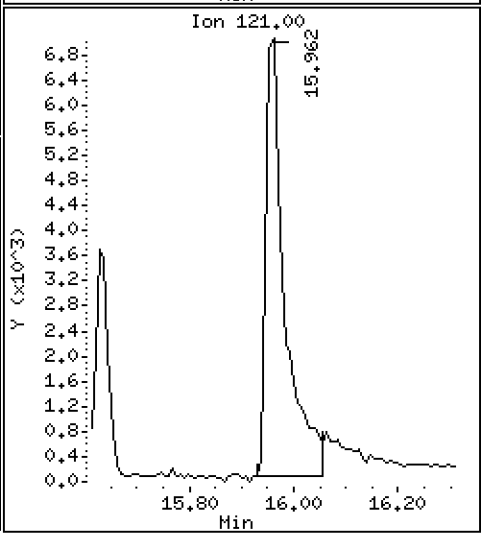


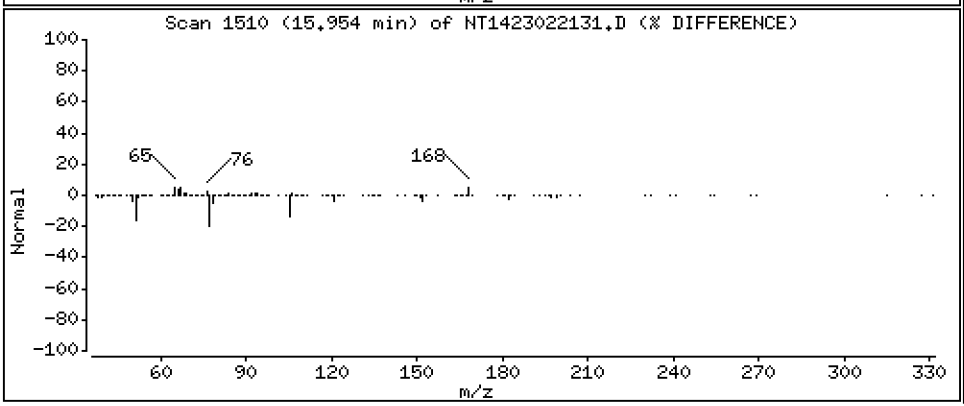












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

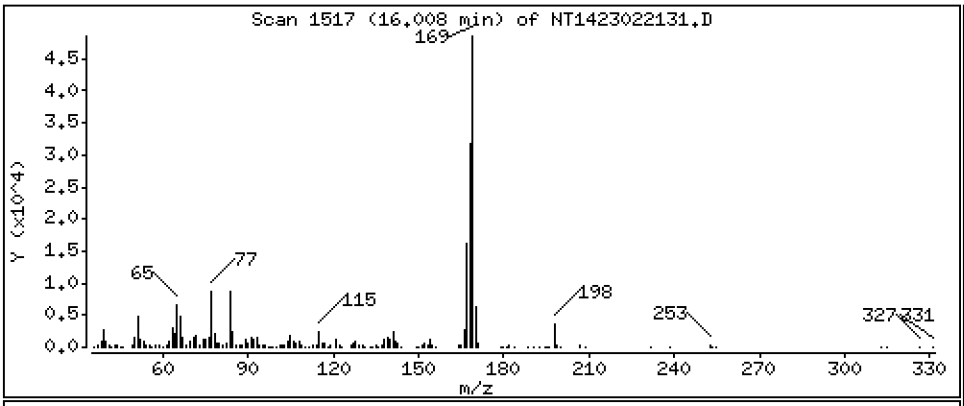
Operator: DSD

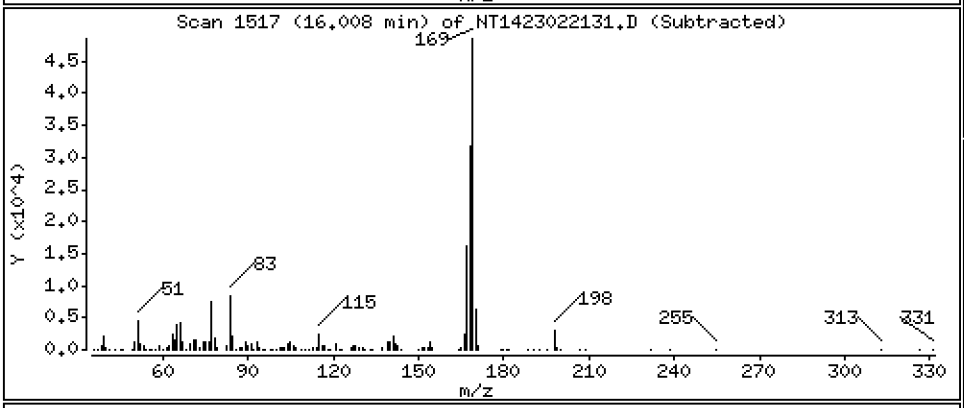
Column phase: ZB-5msi

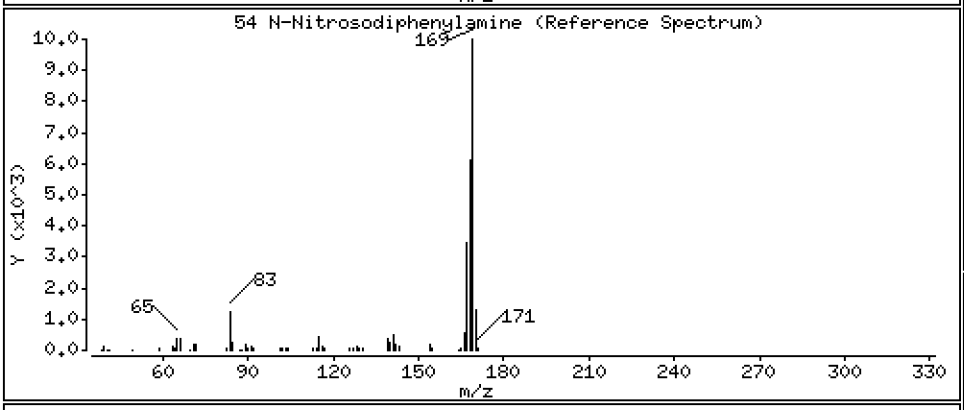
Column diameter: 0.25

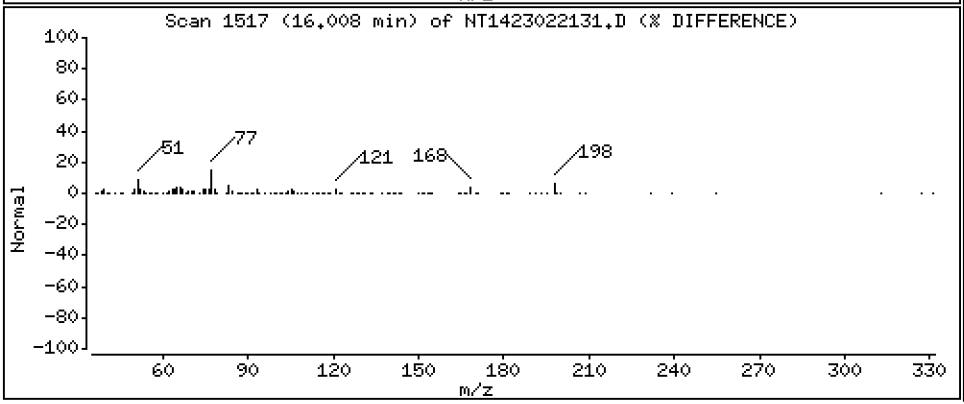
54 N-Nitrosodiphenylamine

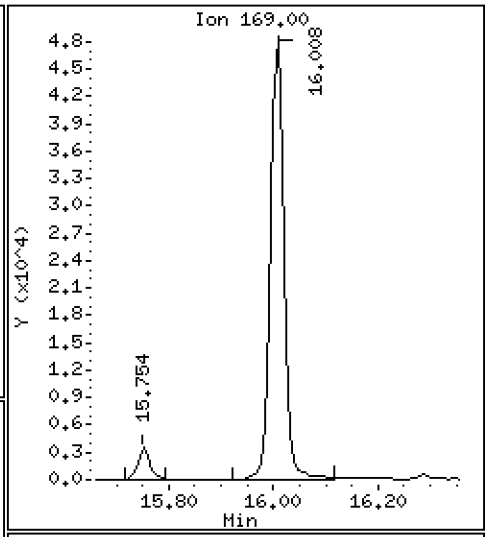
Concentration: 0.5601 ug/mL

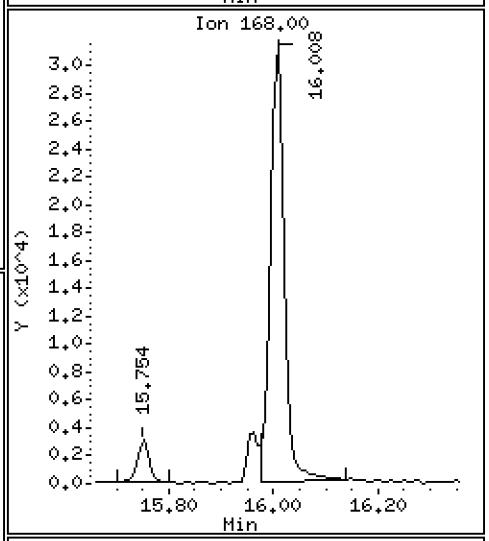


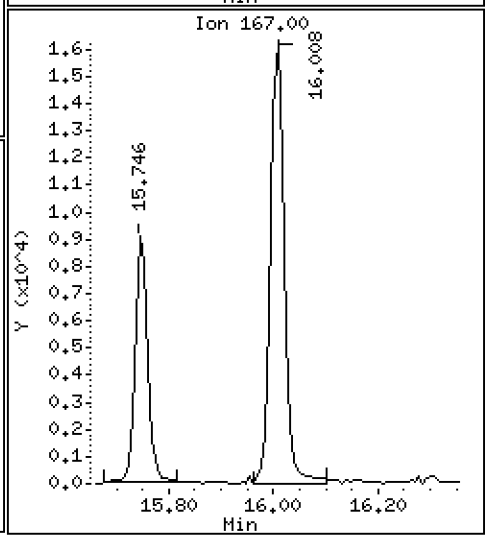












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

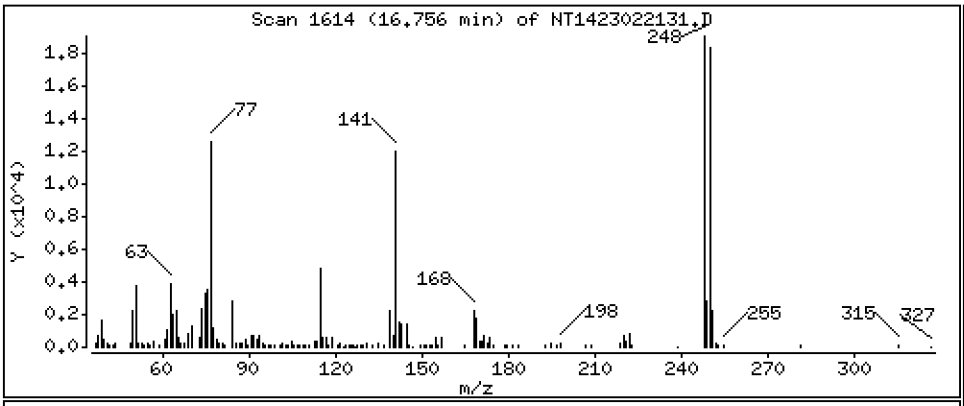
Operator: DSD

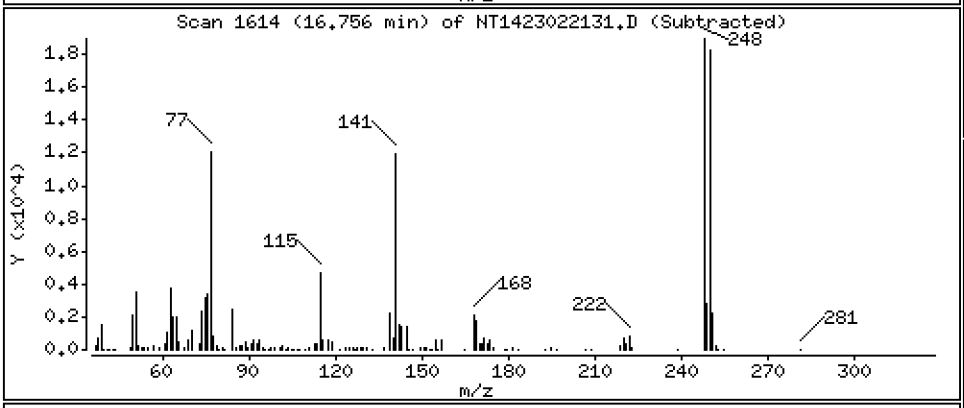
Column phase: ZB-5msi

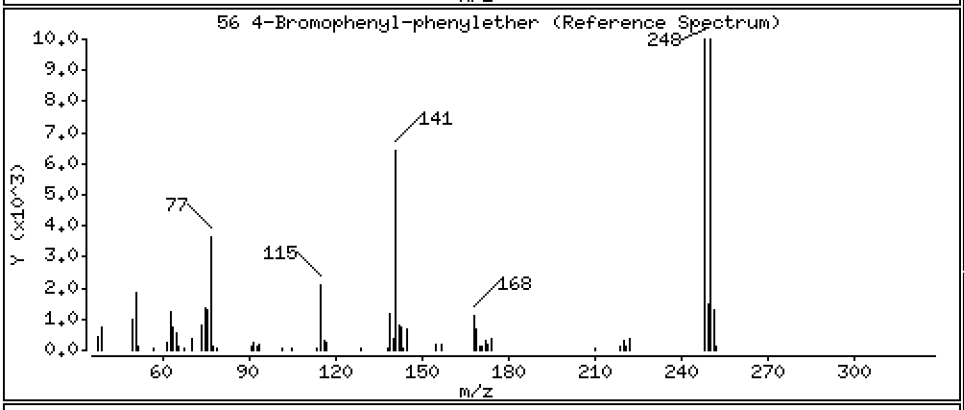
Column diameter: 0.25

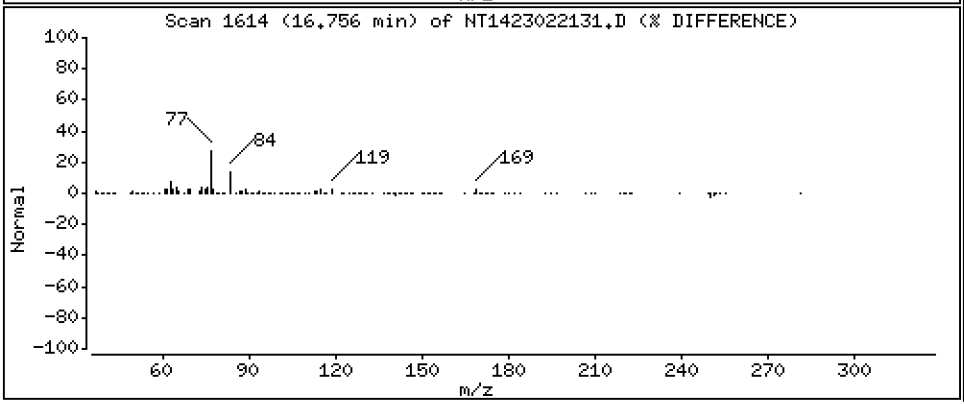
56 4-Bromophenyl-phenylether

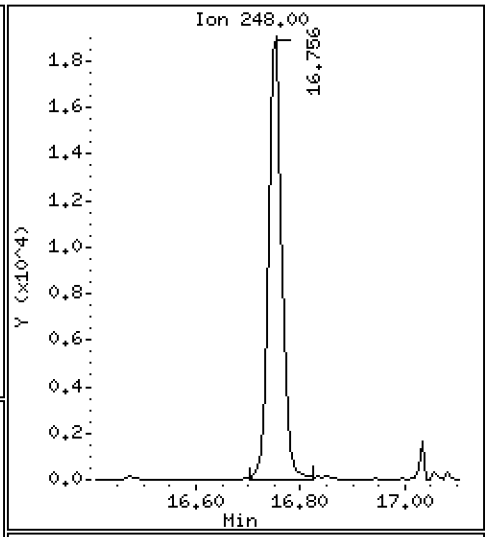
Concentration: 0.5084 ug/mL

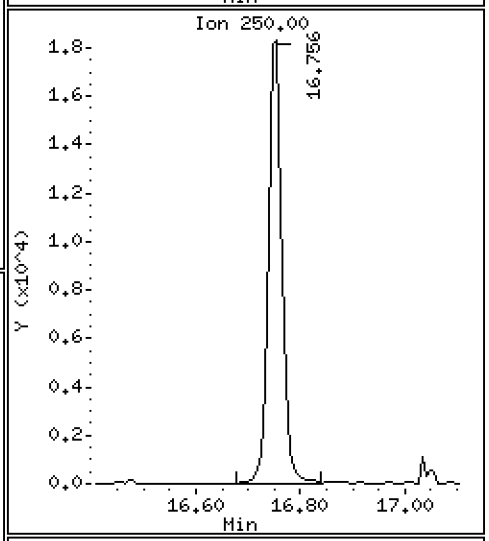


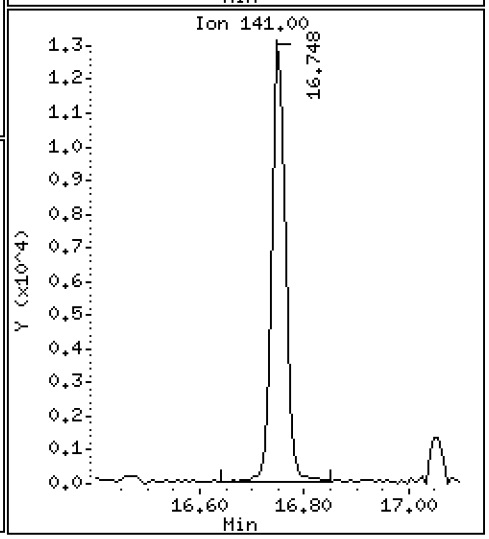












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

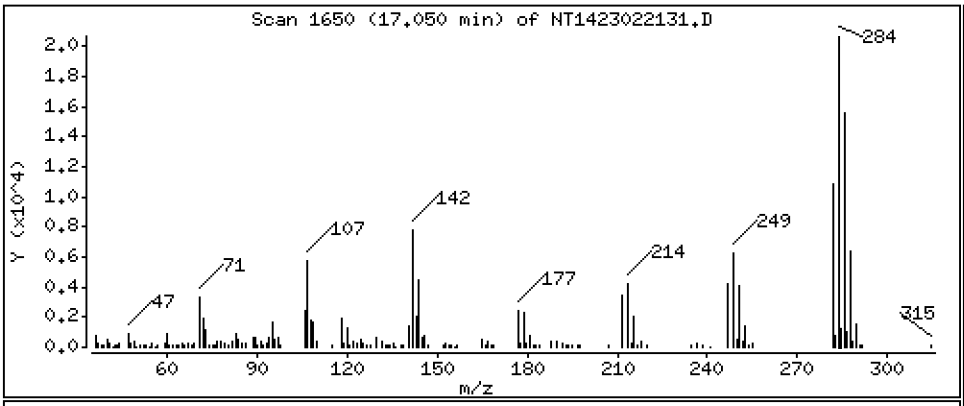
Operator: DSD

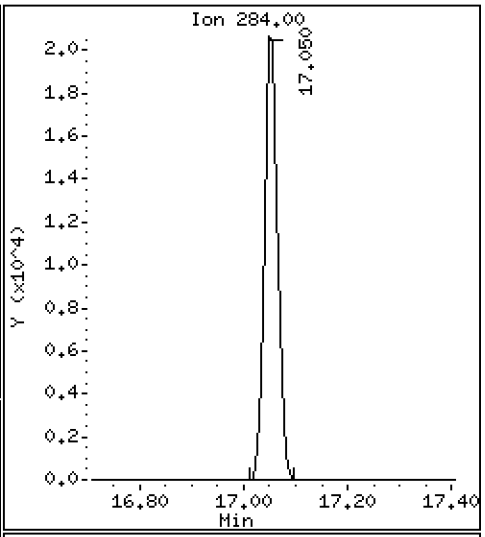
Column phase: ZB-5msi

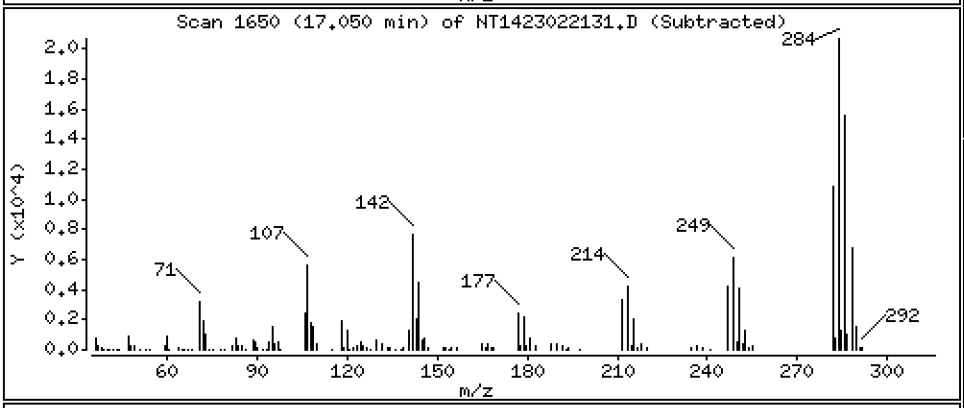
Column diameter: 0.25

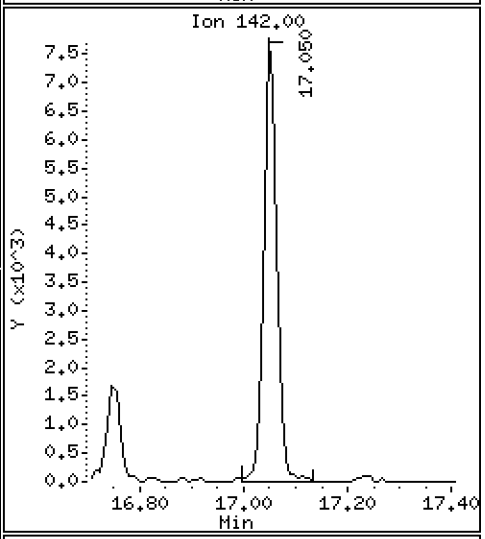
57 Hexachlorobenzene

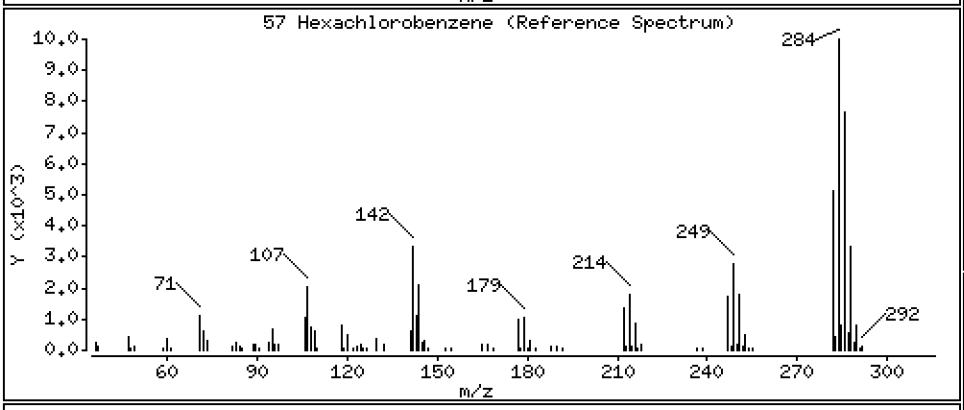
Concentration: 0.5386 ug/mL

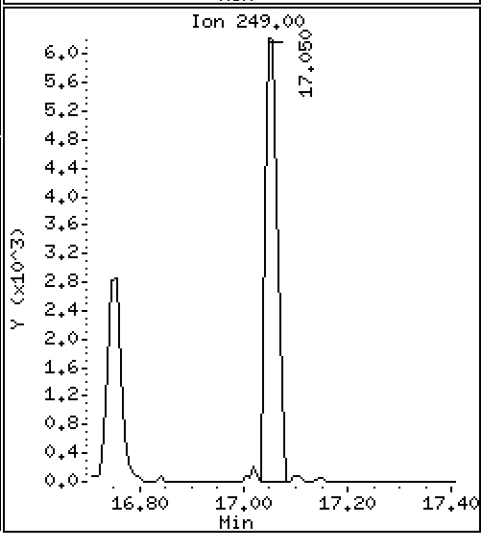


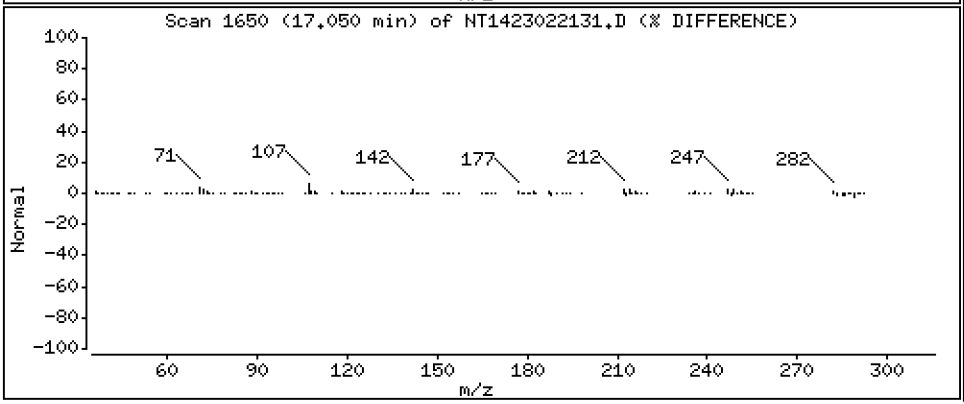












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

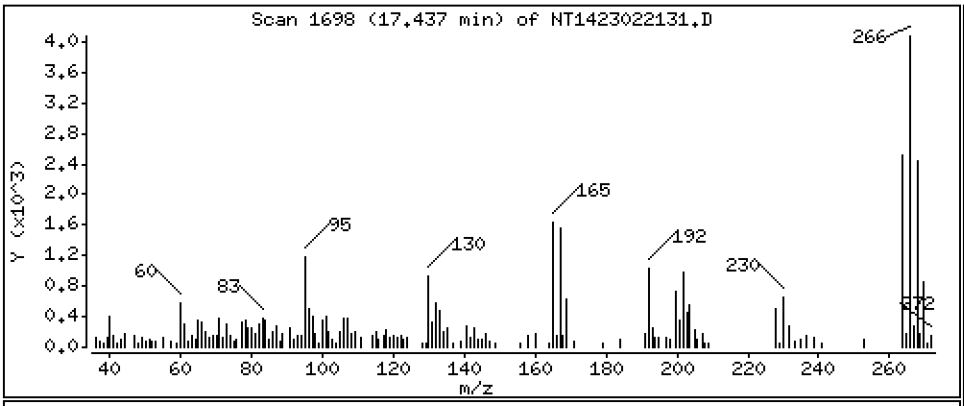
Operator: DSD

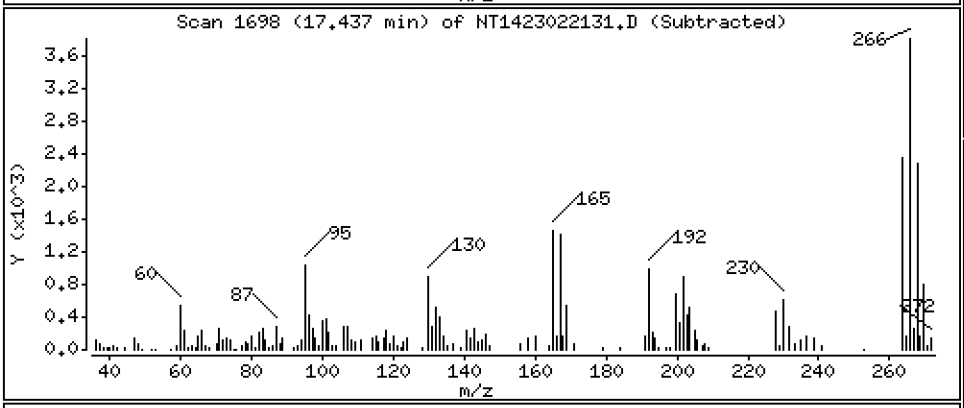
Column phase: ZB-5msi

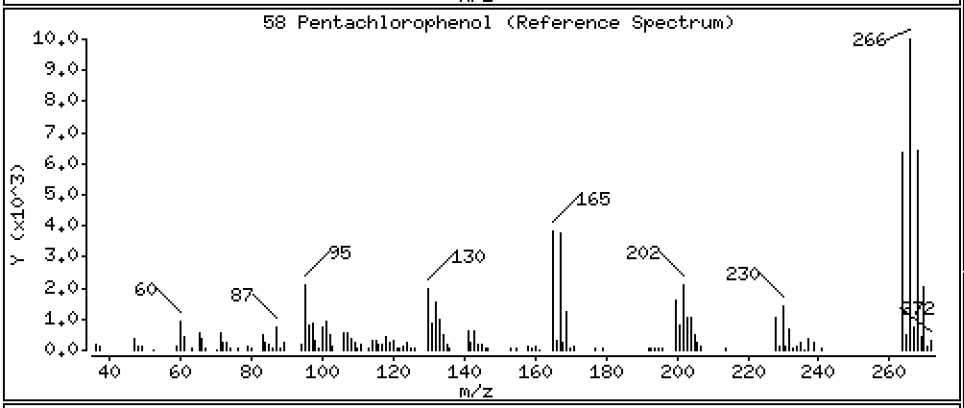
Column diameter: 0.25

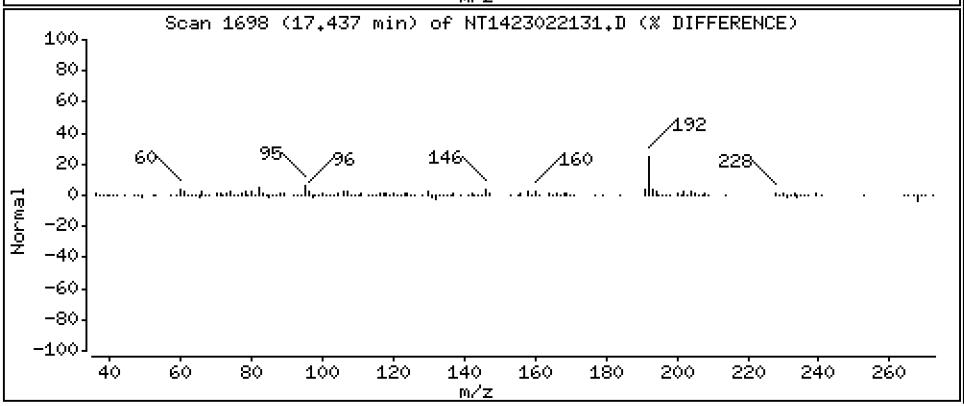
58 Pentachlorophenol

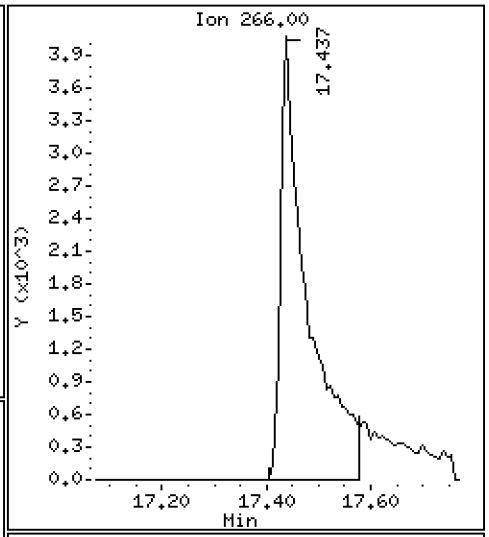
Concentration: 0.4510 ug/mL

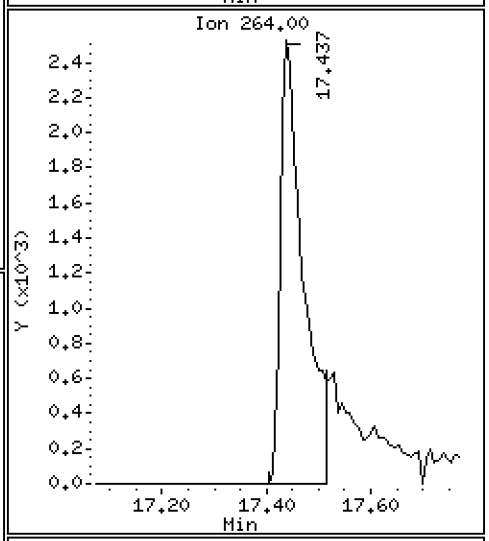


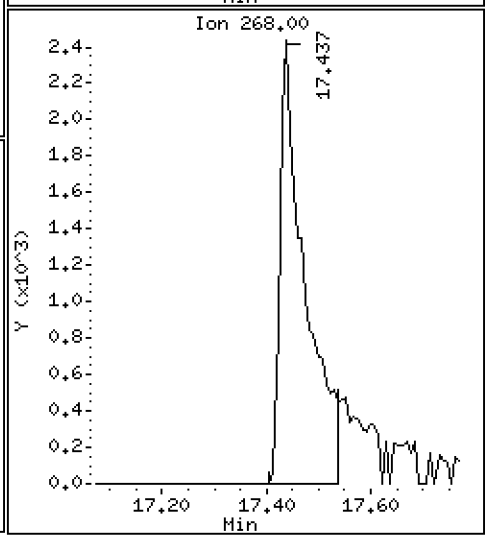












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

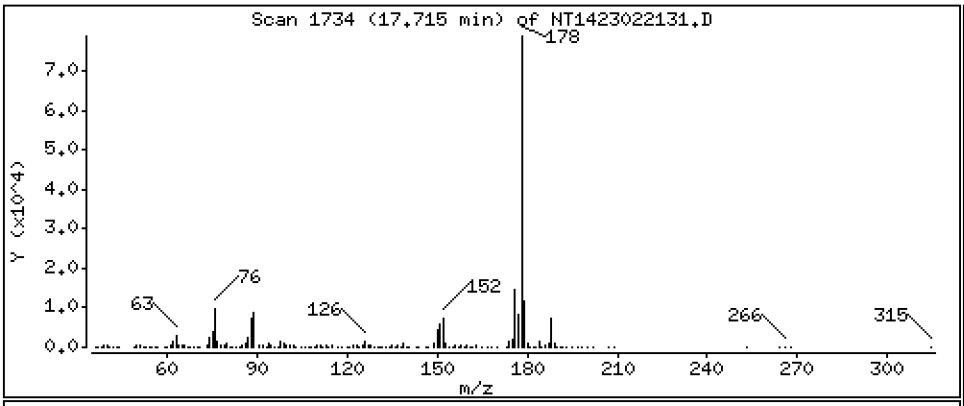
Operator: DSD

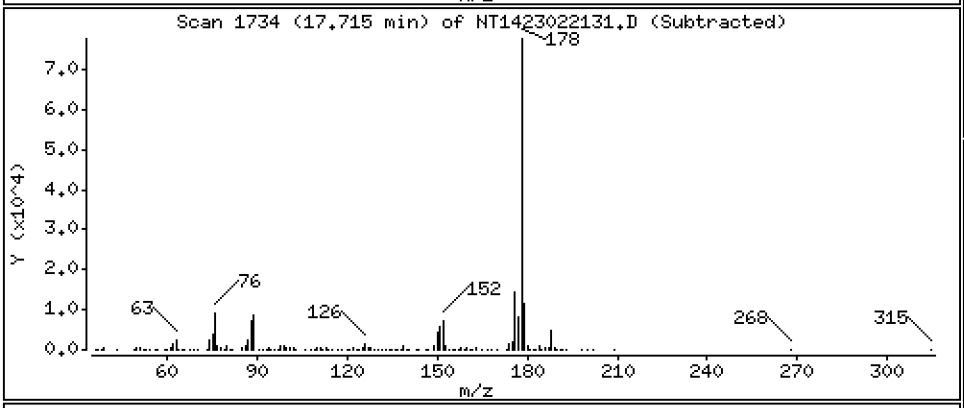
Column phase: ZB-5msi

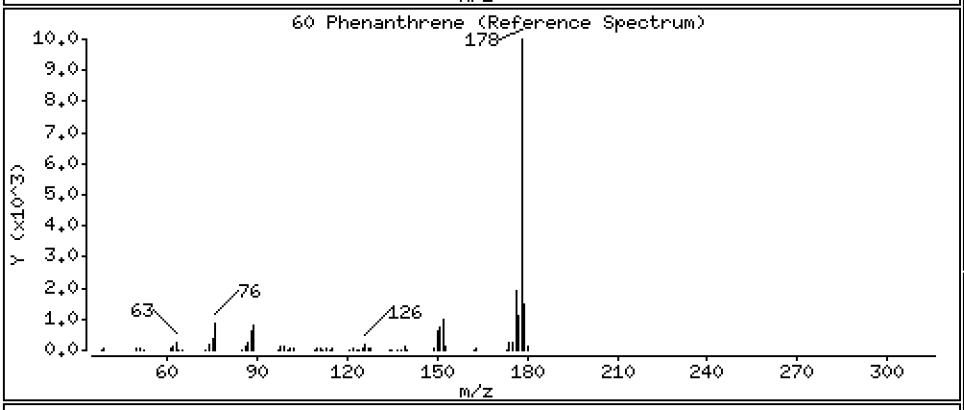
Column diameter: 0.25

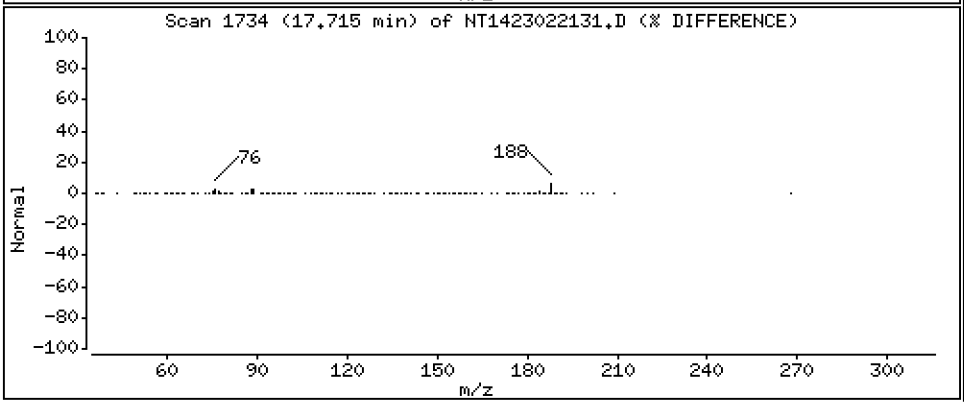
60 Phenanthrene

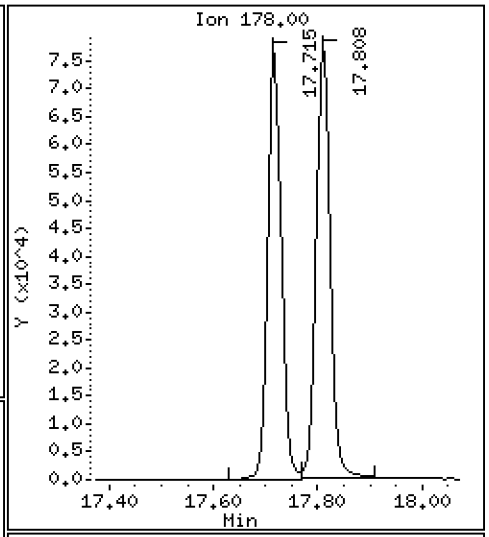
Concentration: 0.5456 ug/mL

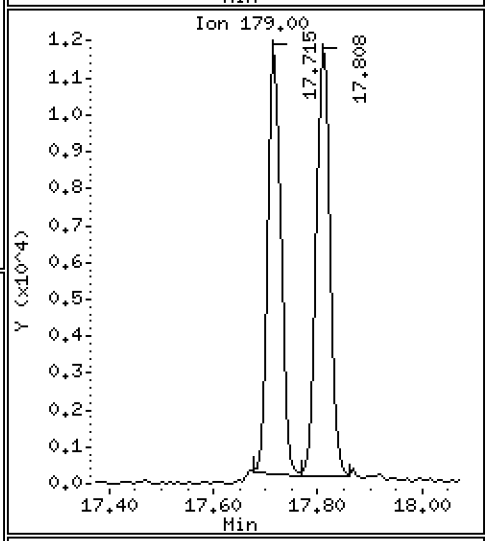


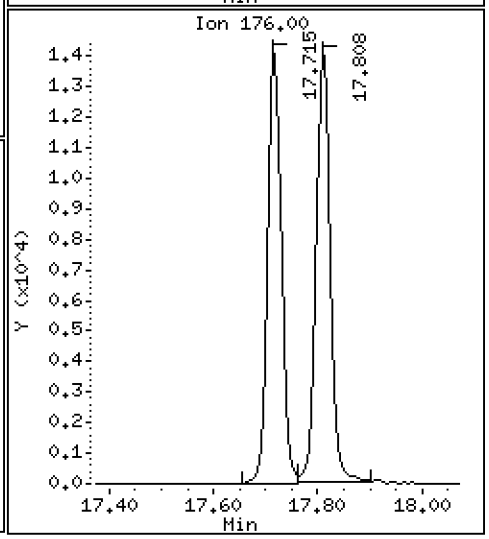












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

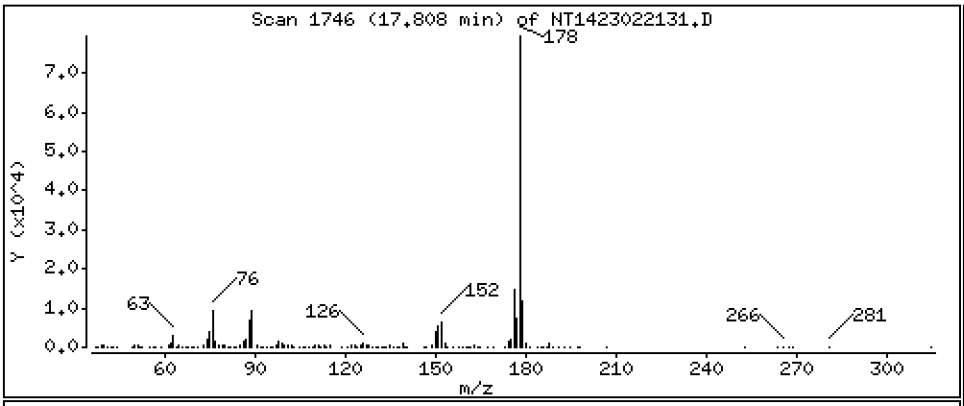
Operator: DSD

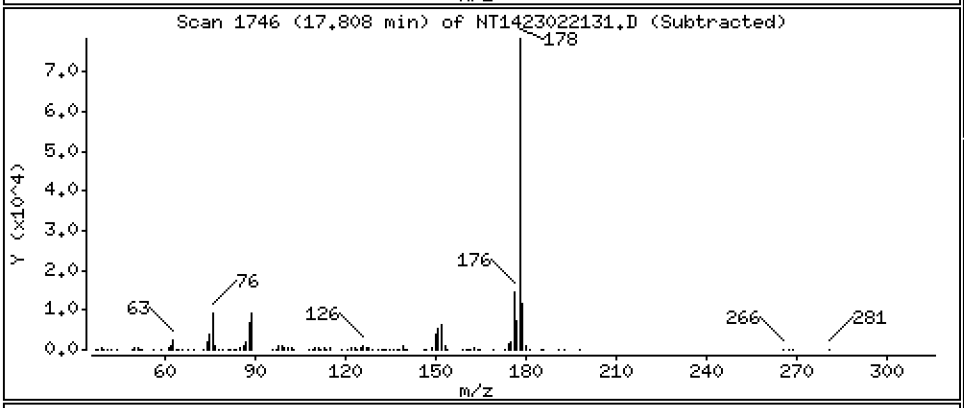
Column phase: ZB-5msi

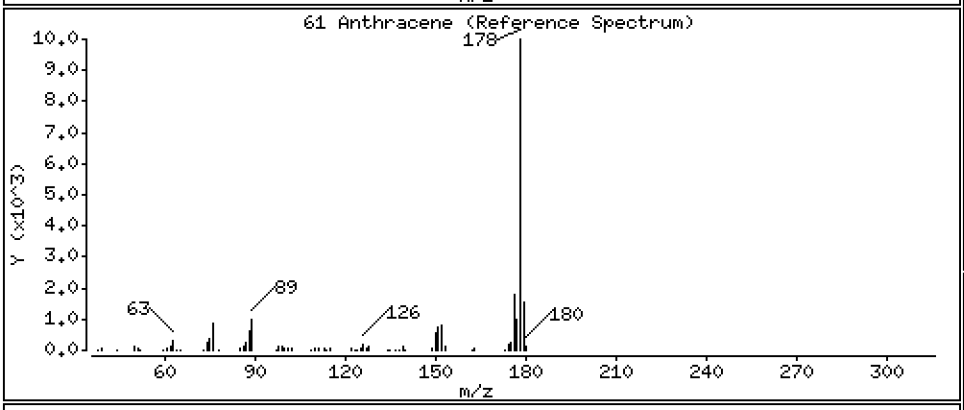
Column diameter: 0.25

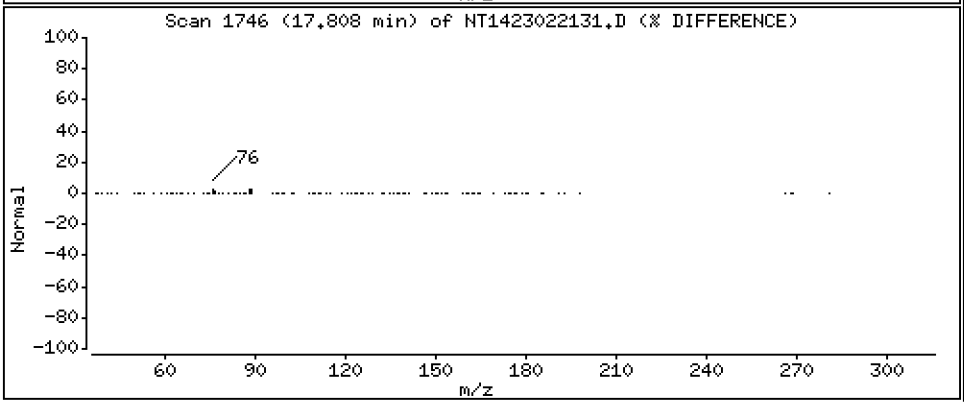
61 Anthracene

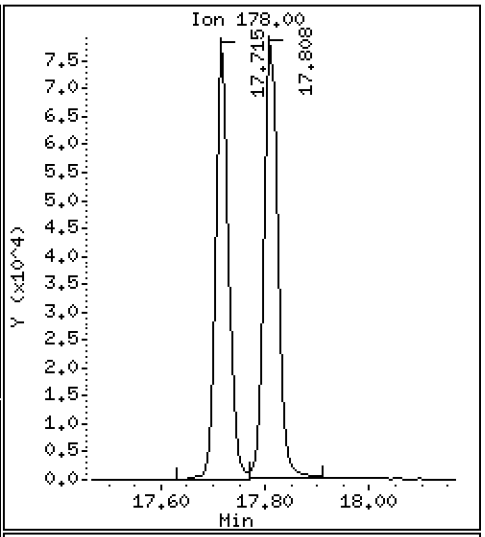
Concentration: 0.5625 ug/mL

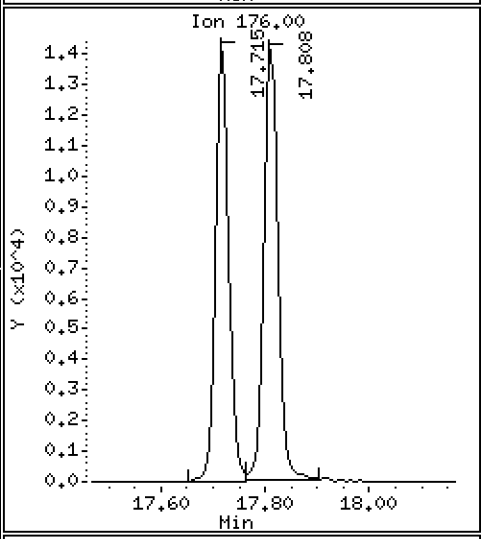


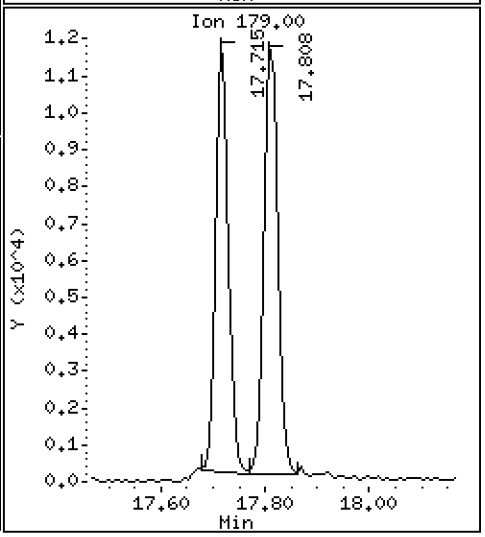












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

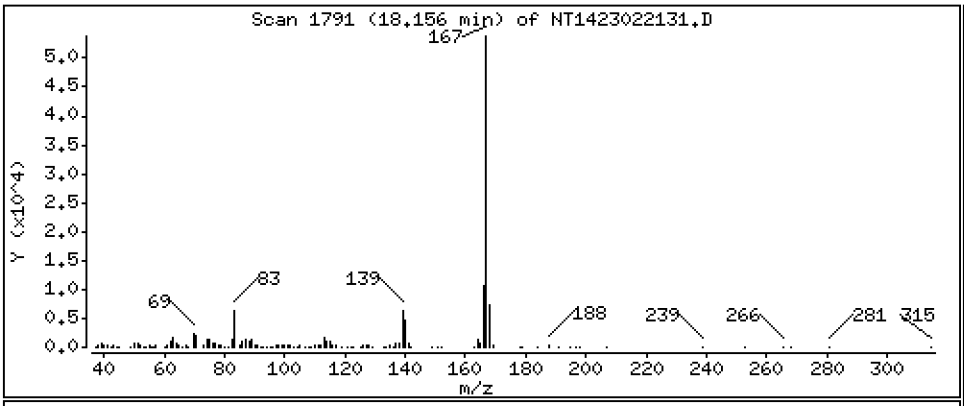
Operator: DSD

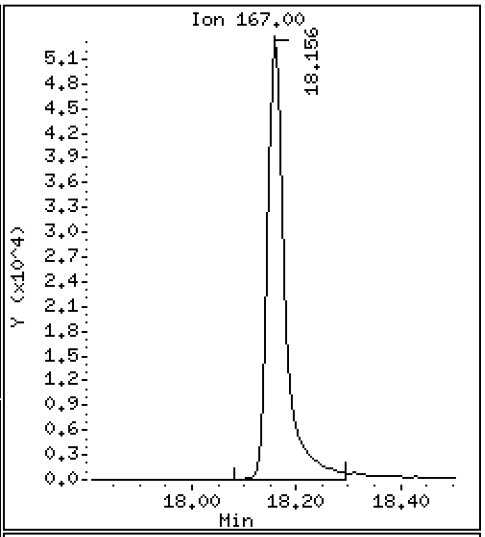
Column phase: ZB-5msi

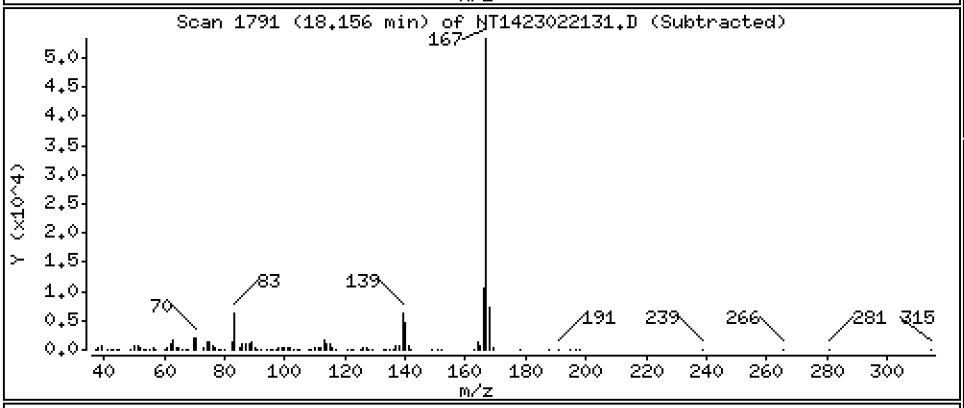
Column diameter: 0.25

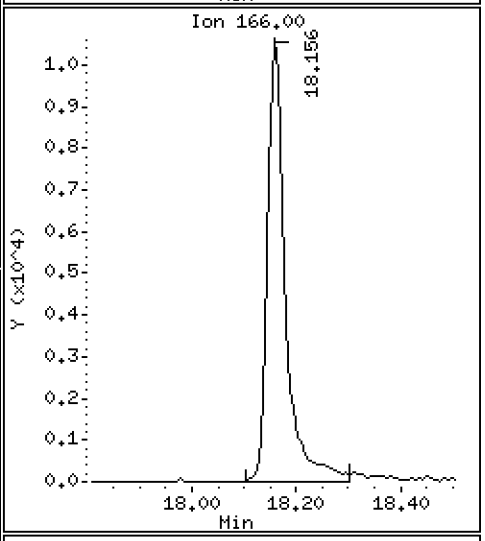
62 Carbazole

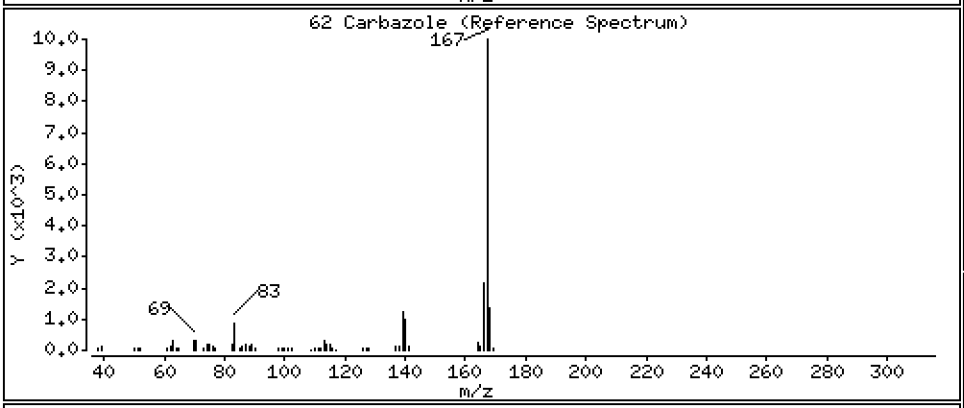
Concentration: 0.5494 ug/mL

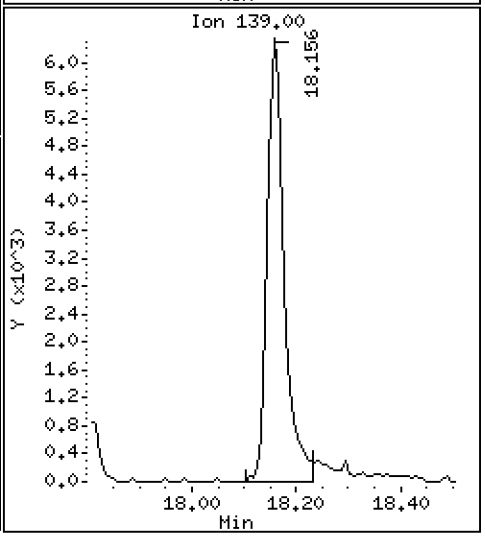


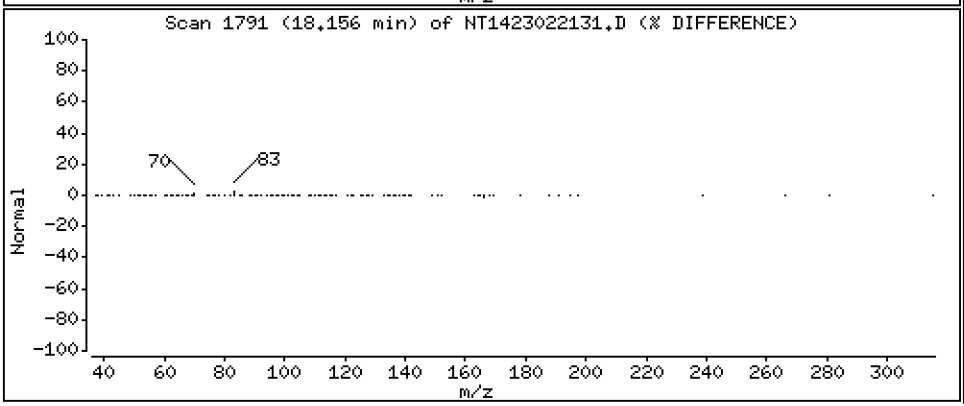












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

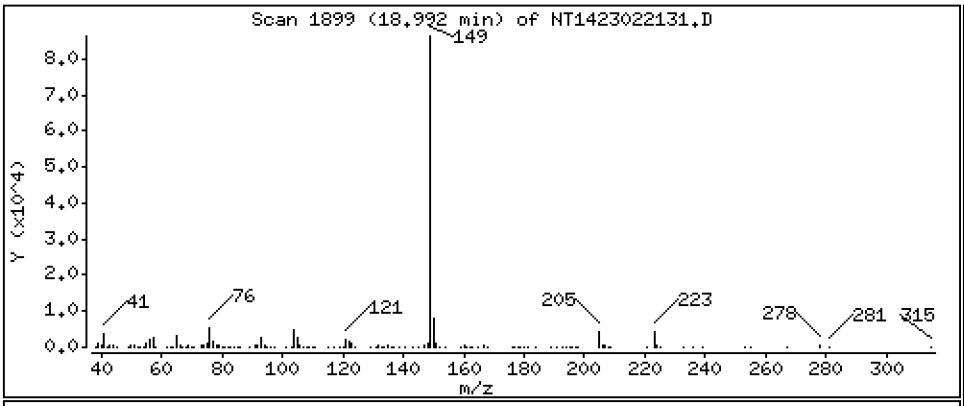
Operator: DSD

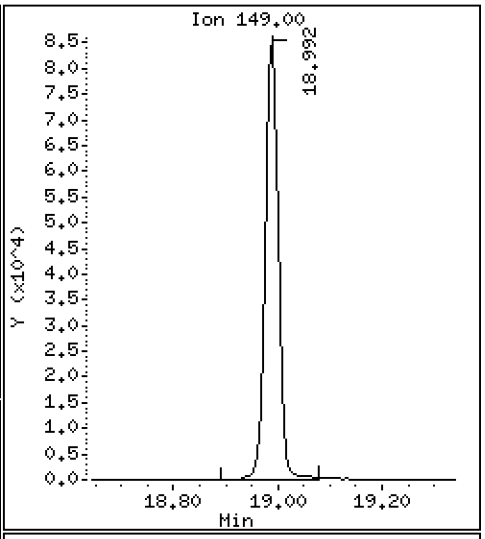
Column phase: ZB-5msi

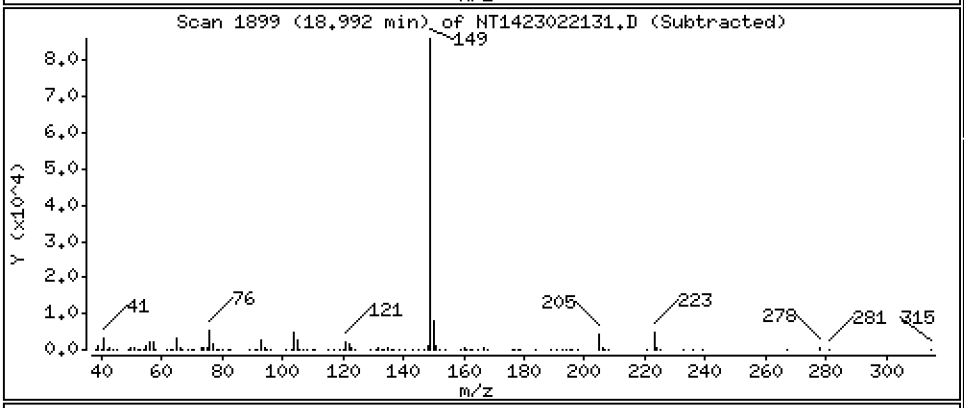
Column diameter: 0.25

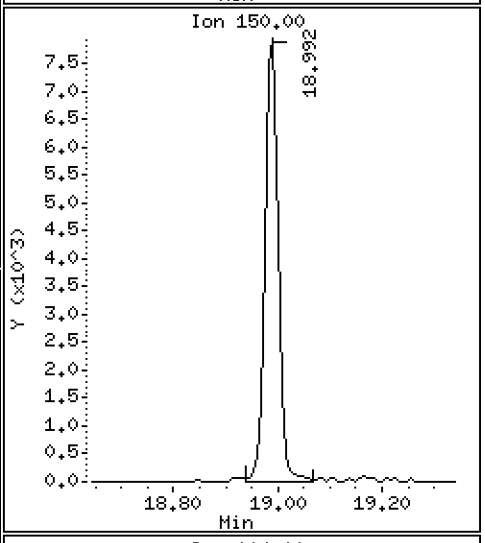
63 Di-n-butylphthalate

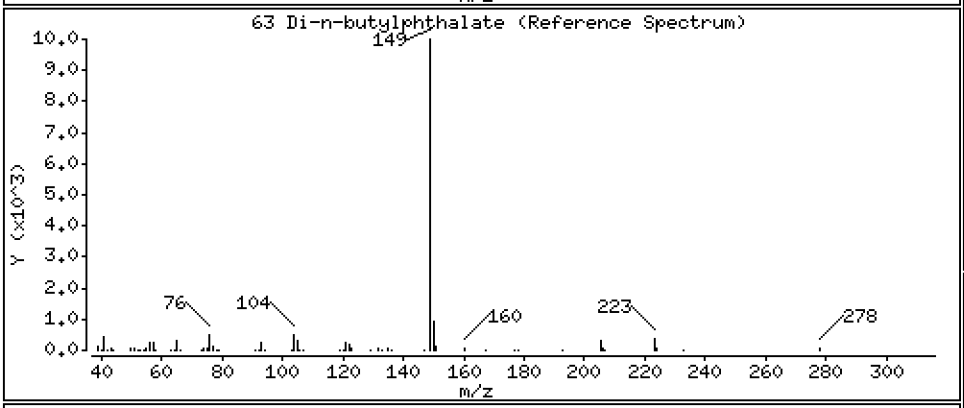
Concentration: 0.5733 ug/mL

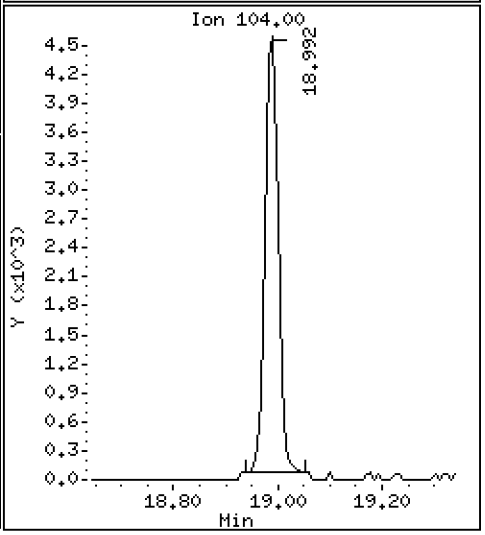


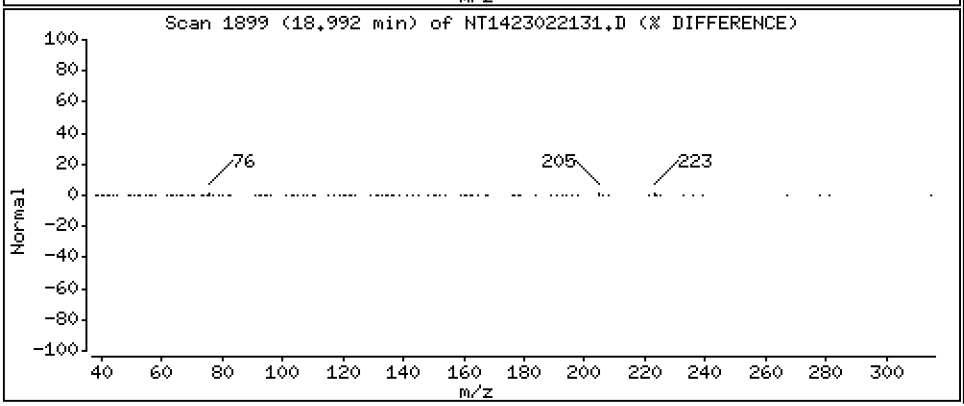












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

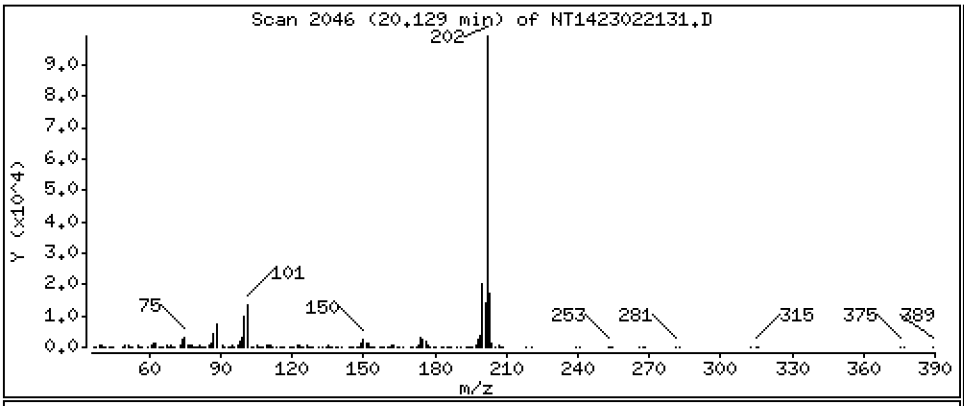
Operator: DSD

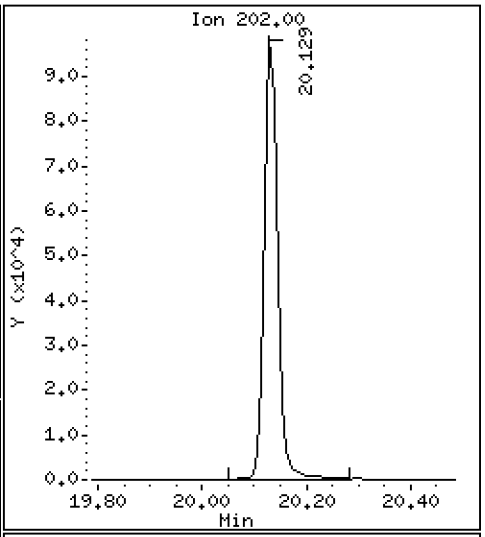
Column phase: ZB-5msi

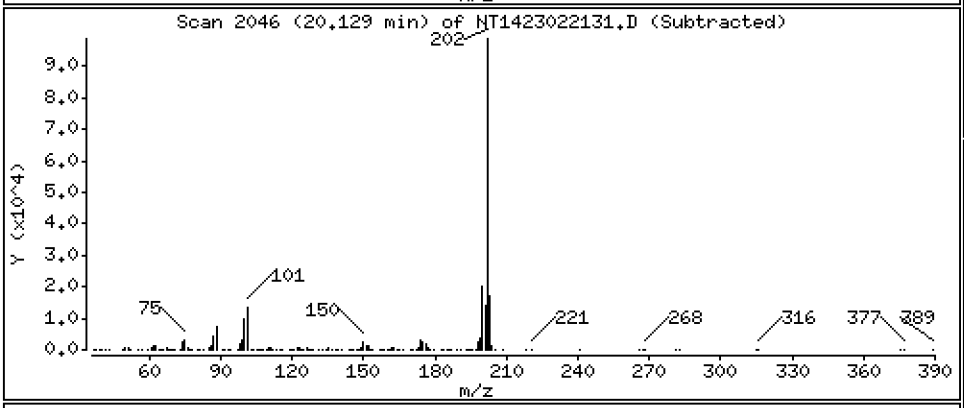
Column diameter: 0.25

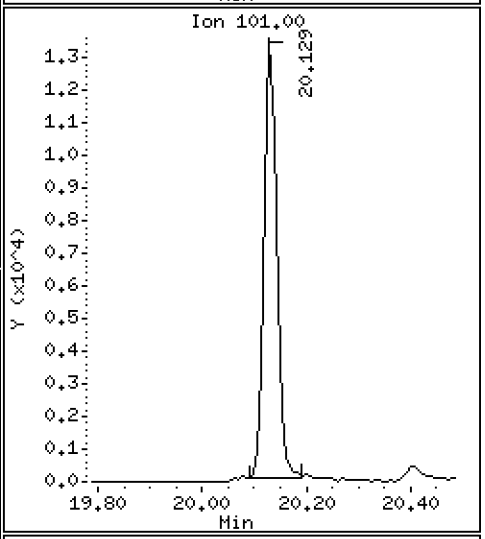
64 Fluoranthene

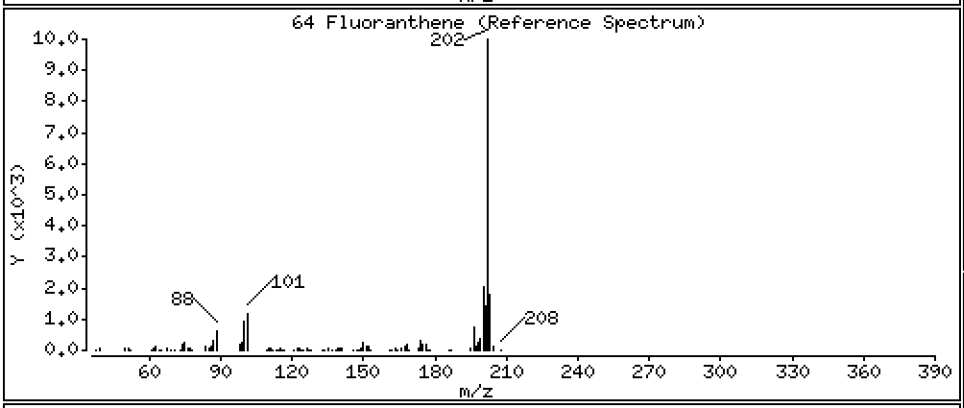
Concentration: 0.5136 ug/mL

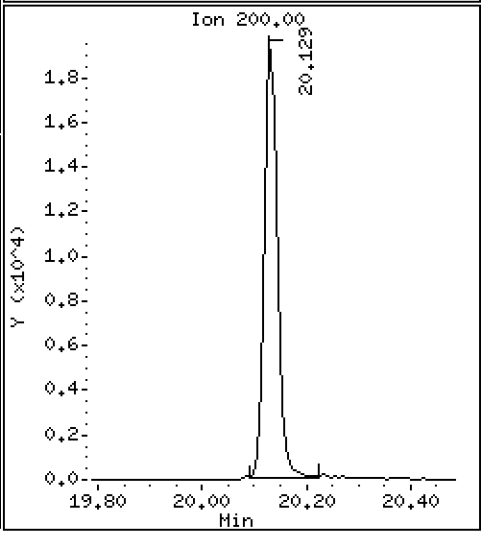


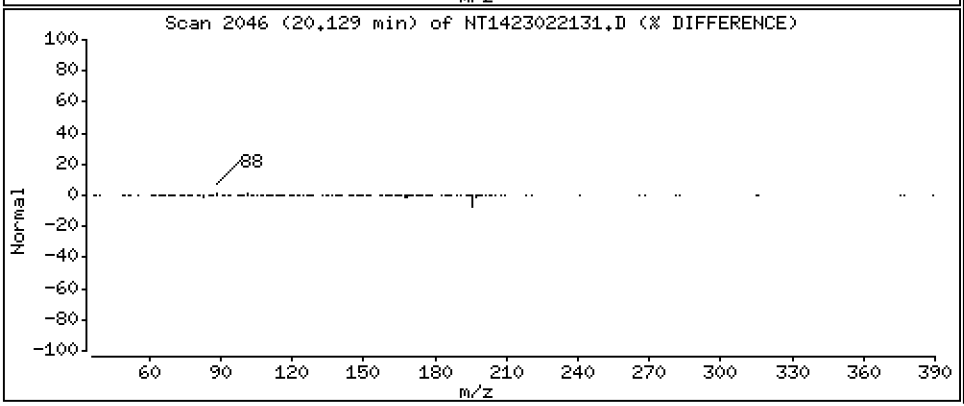












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

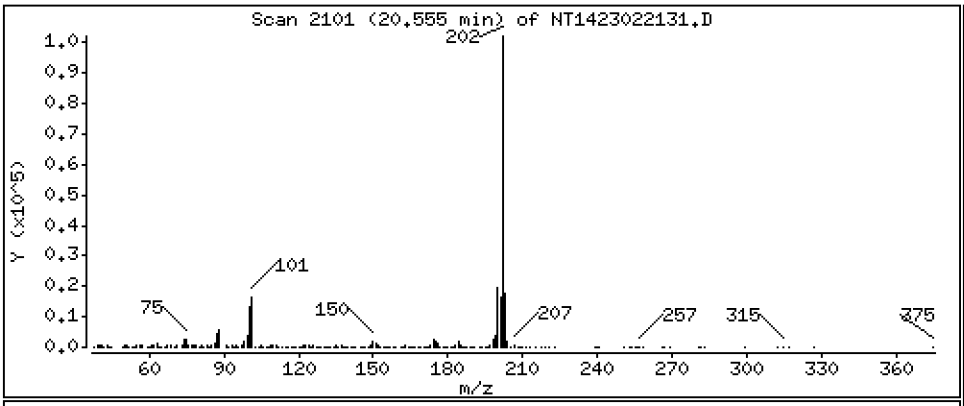
Operator: DSD

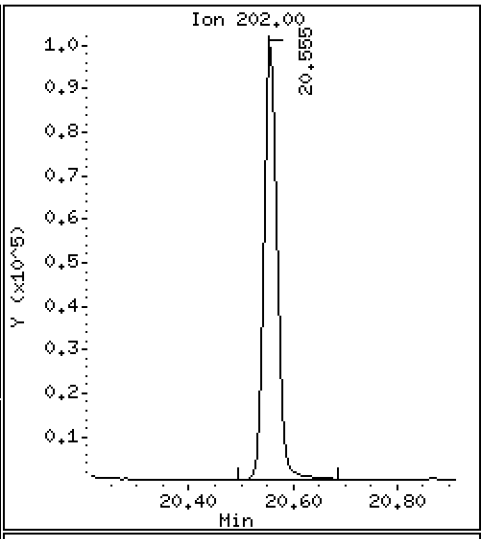
Column phase: ZB-5msi

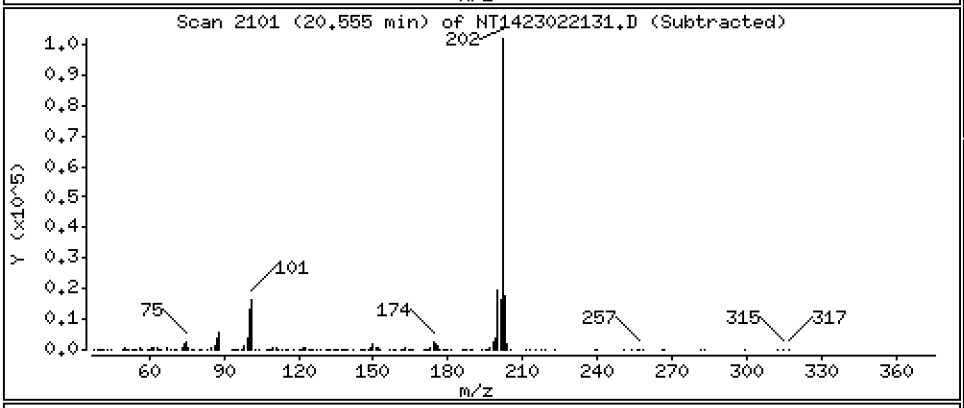
Column diameter: 0.25

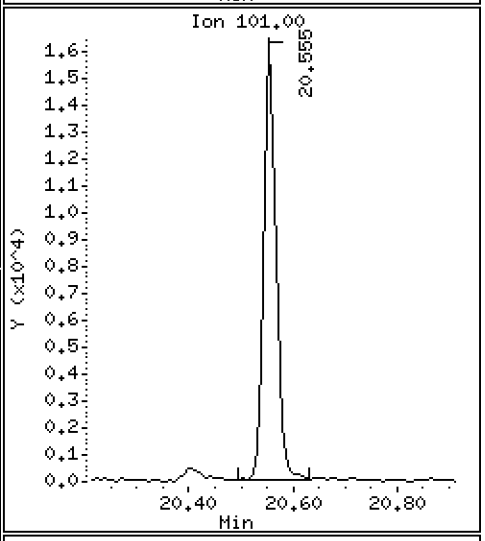
65 Pyrene

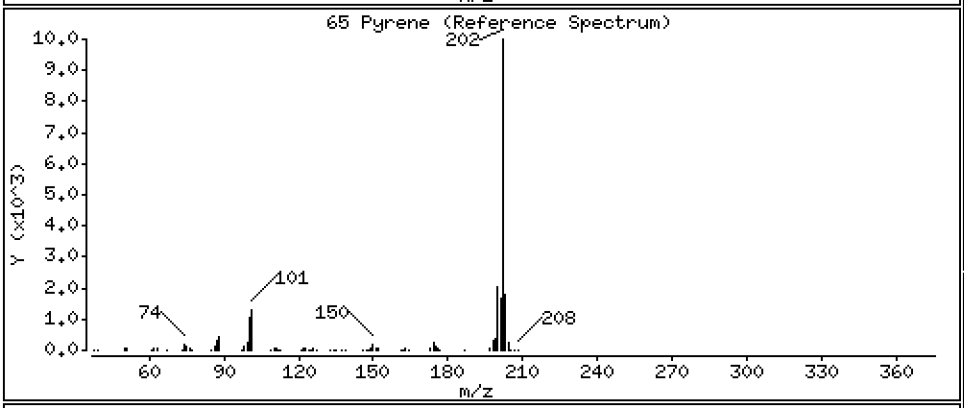
Concentration: 0.4958 ug/mL

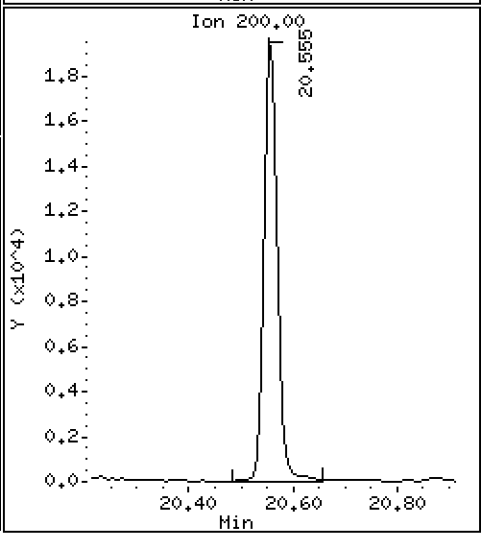


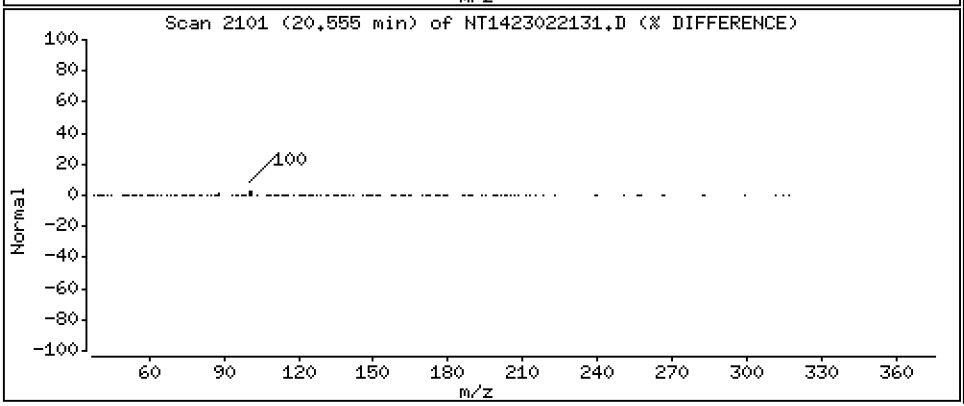












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

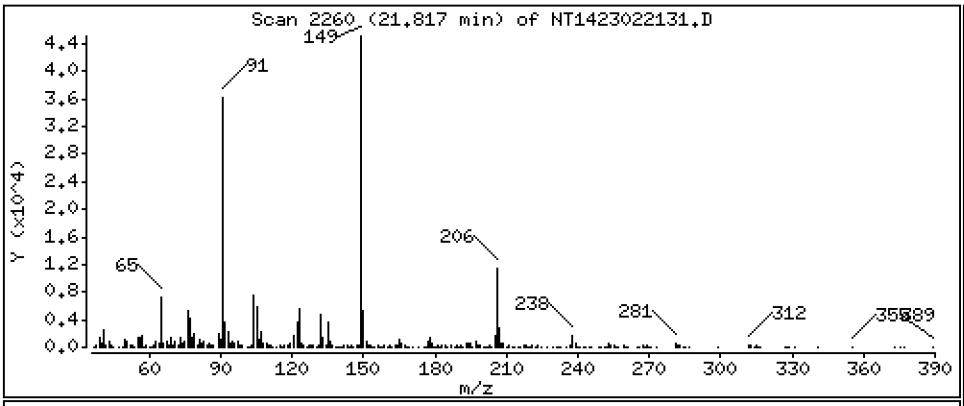
Operator: DSD

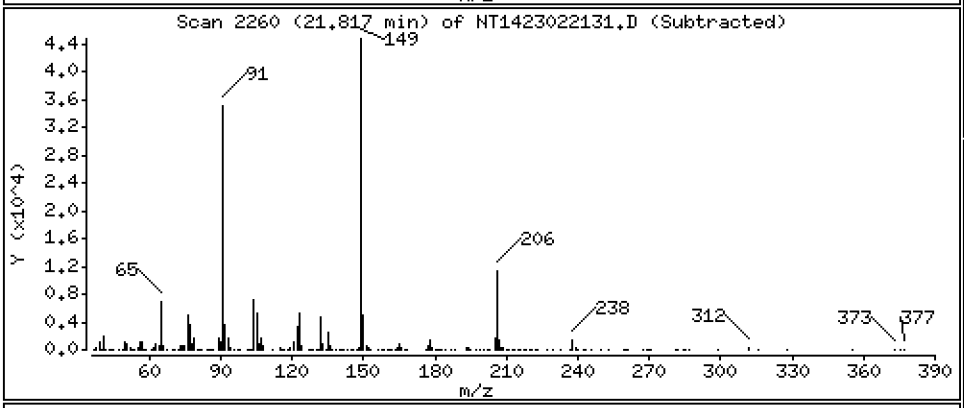
Column phase: ZB-5msi

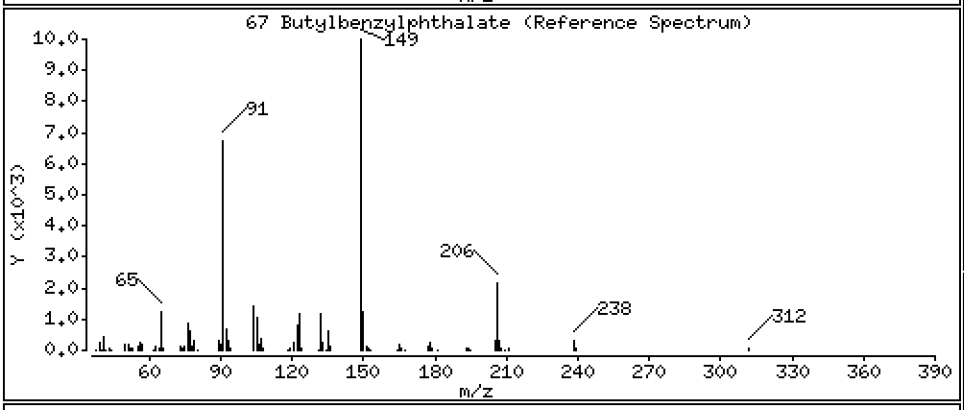
Column diameter: 0.25

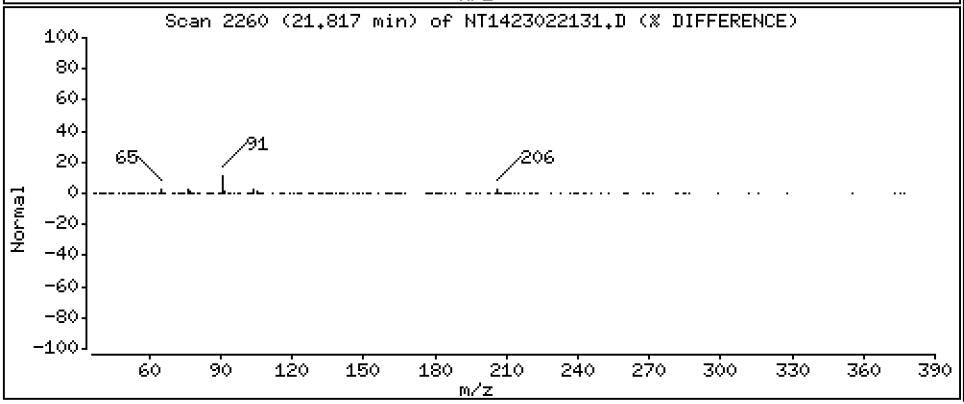
67 Butylbenzylphthalate

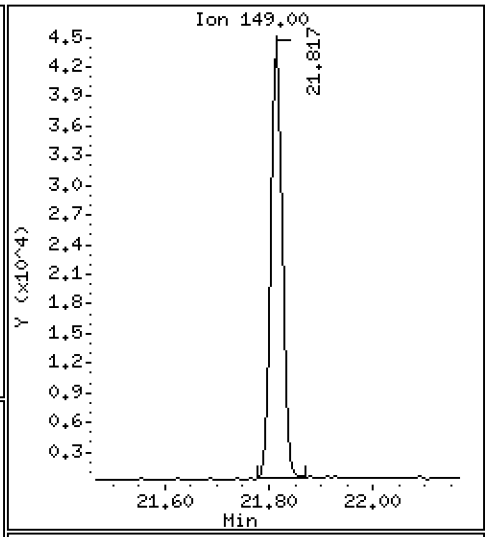
Concentration: 0.5538 ug/mL

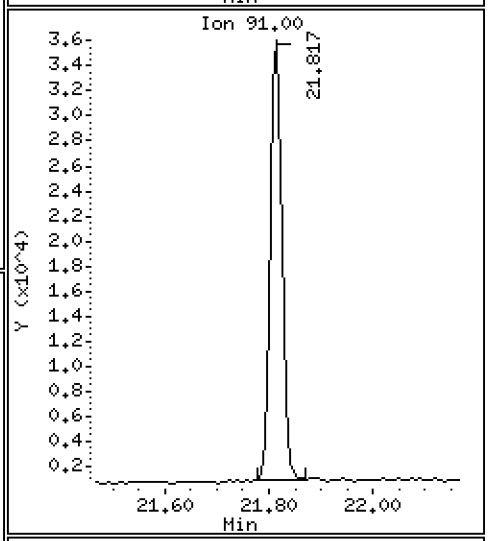


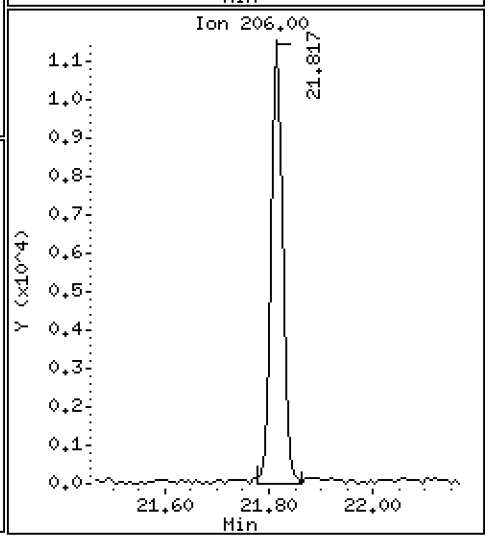












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

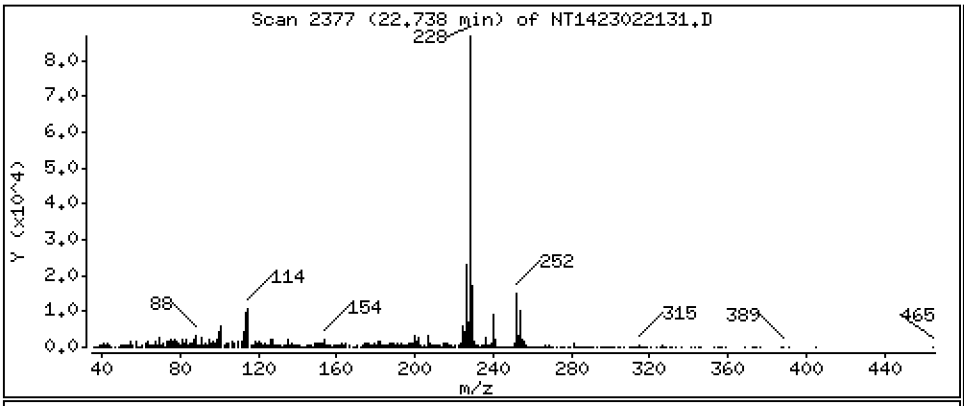
Operator: DSD

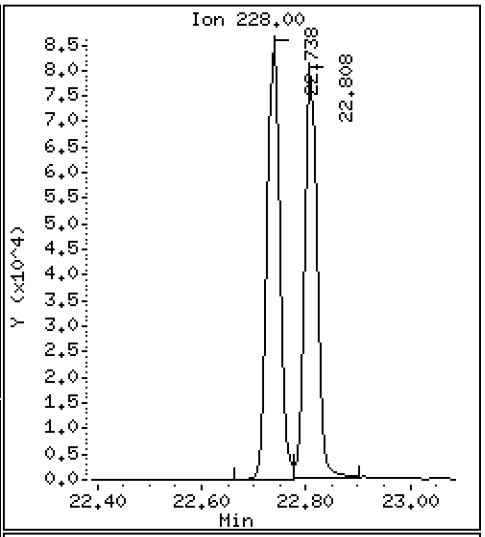
Column phase: ZB-5msi

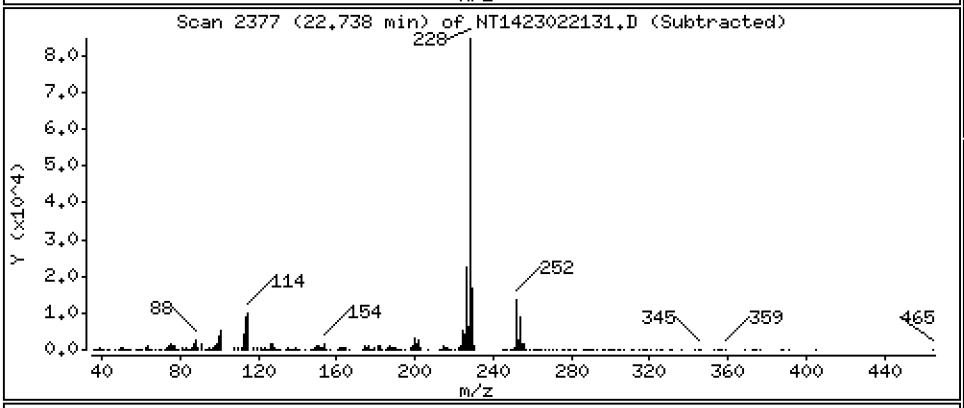
Column diameter: 0.25

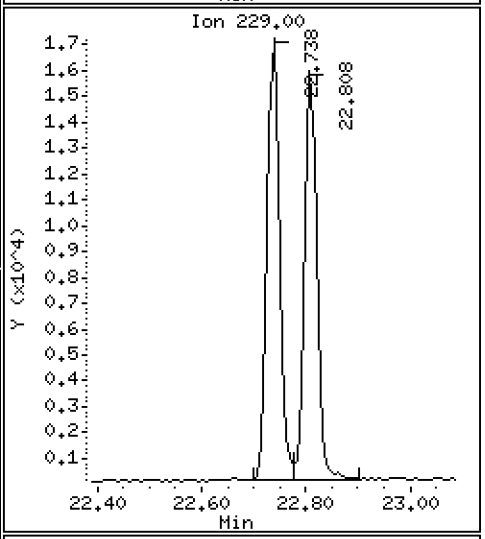
68 Benzo(a)anthracene

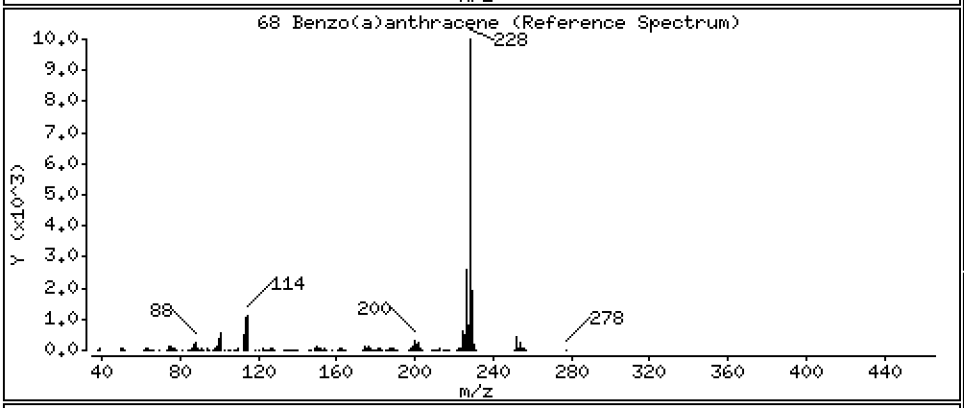
Concentration: 0.5733 ug/mL

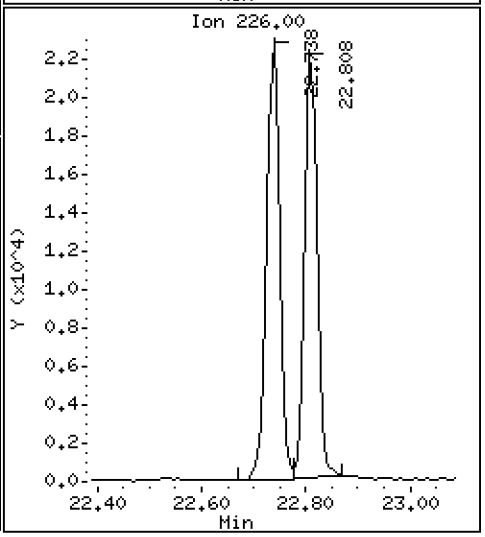


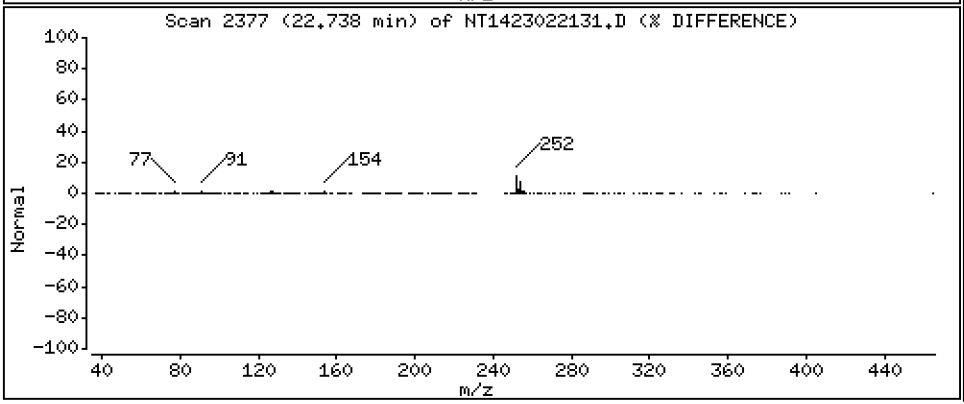












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

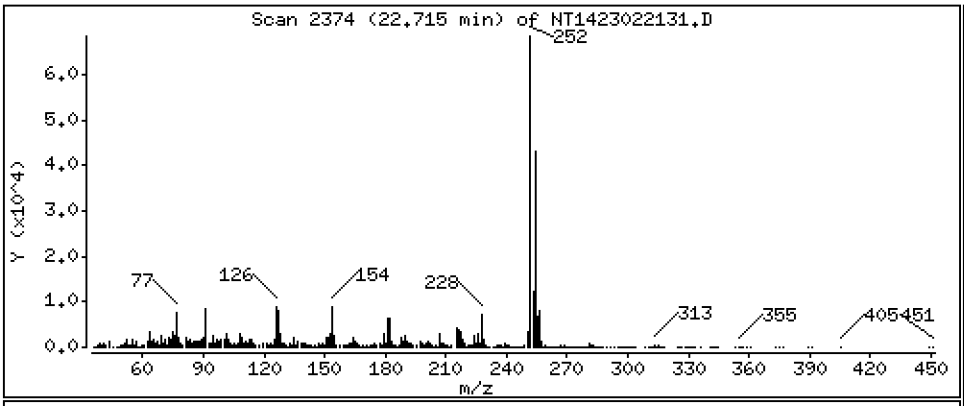
Operator: DSD

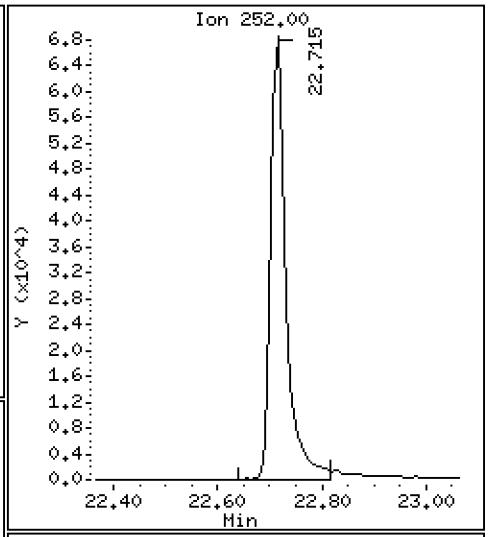
Column phase: ZB-5msi

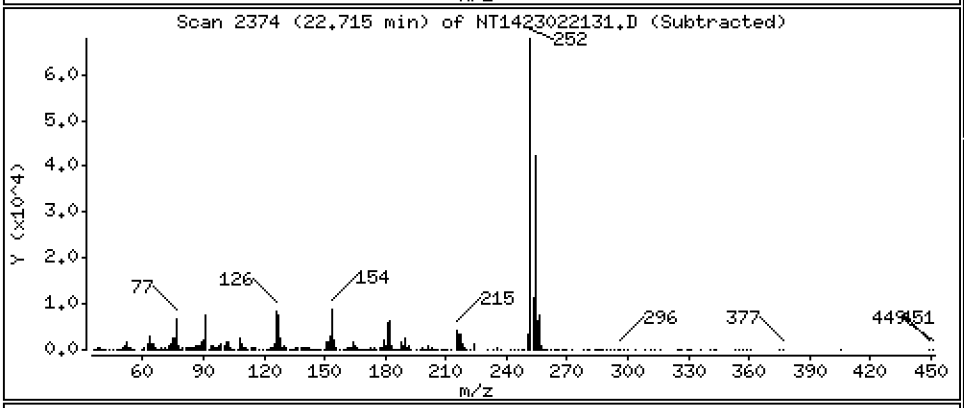
Column diameter: 0.25

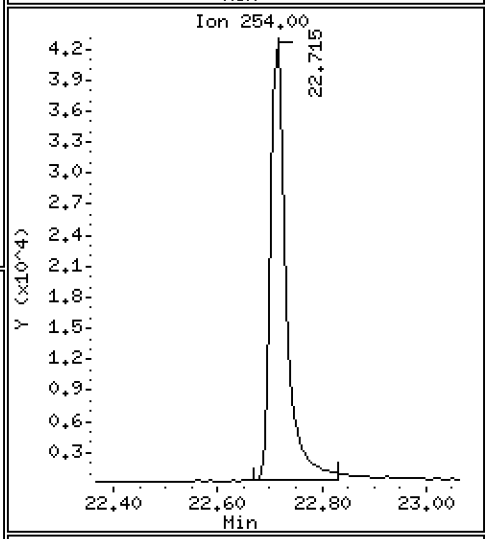
70 3,3'-Dichlorobenzidine

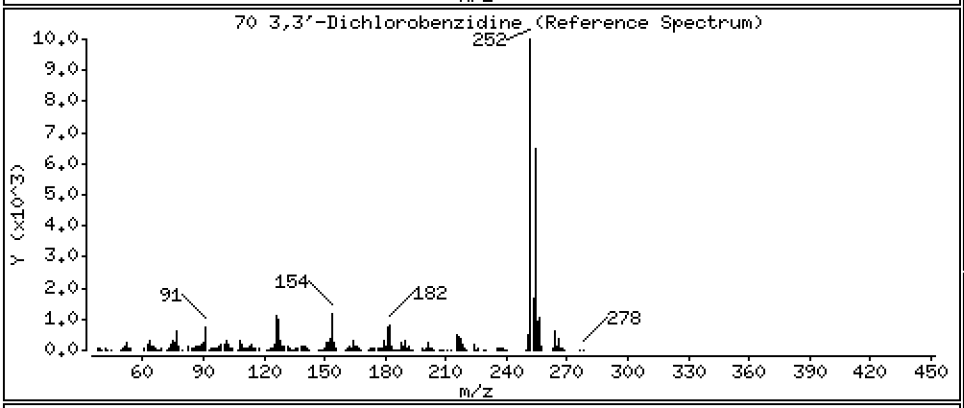
Concentration: 1.808 ug/mL

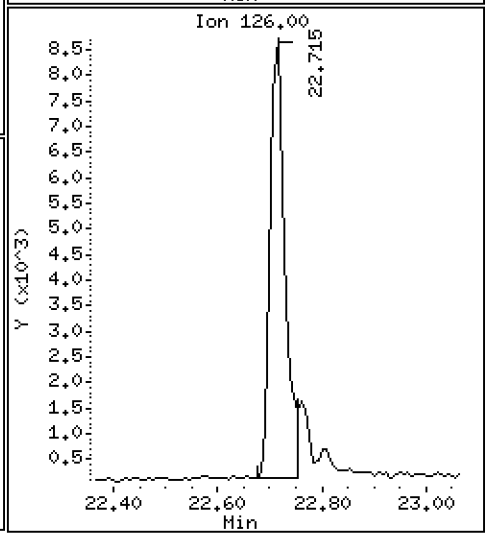


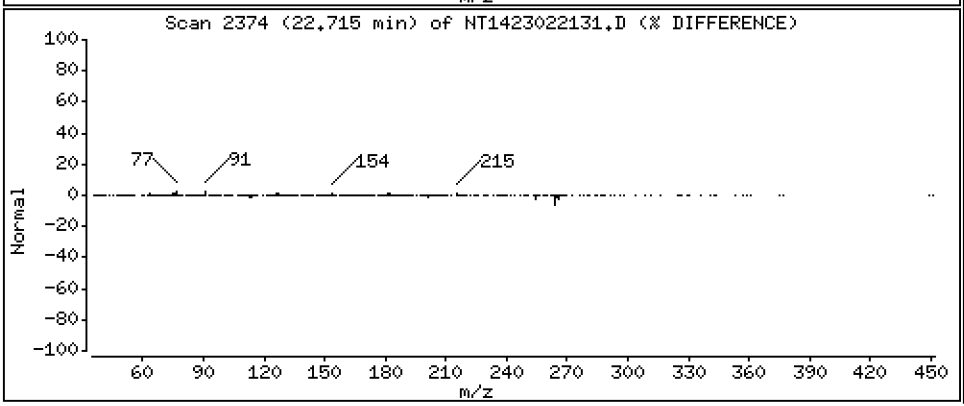












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

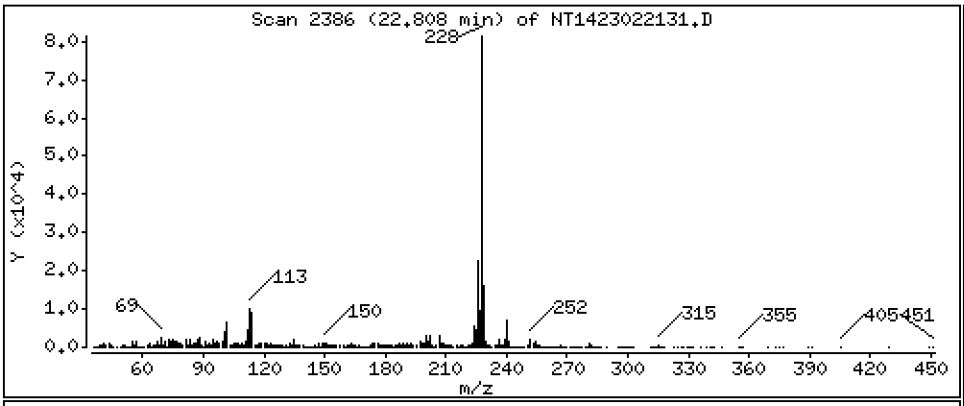
Operator: DSD

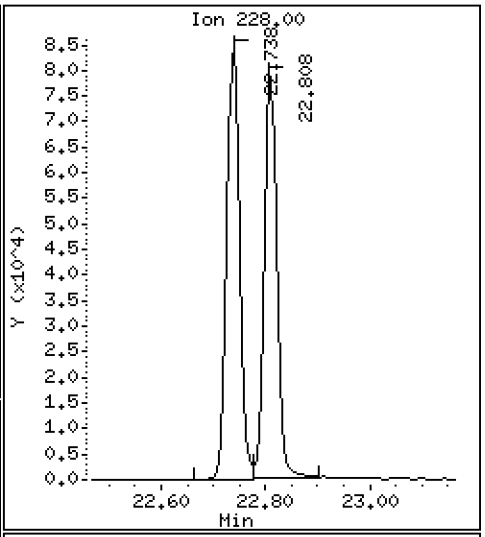
Column phase: ZB-5msi

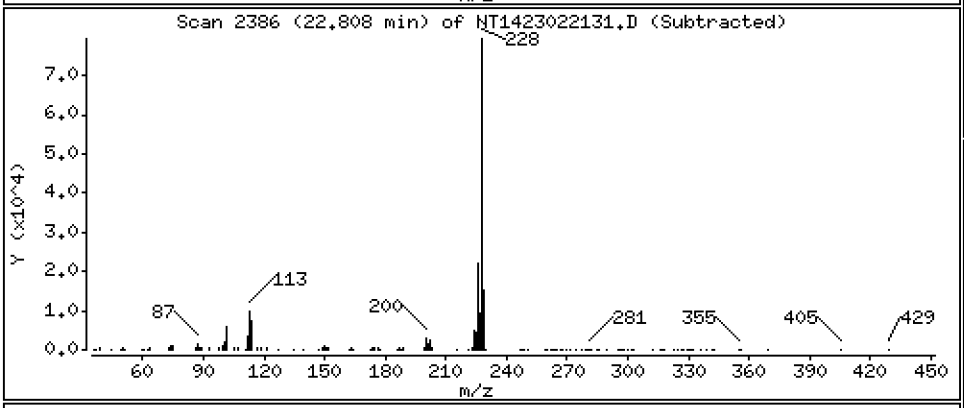
Column diameter: 0.25

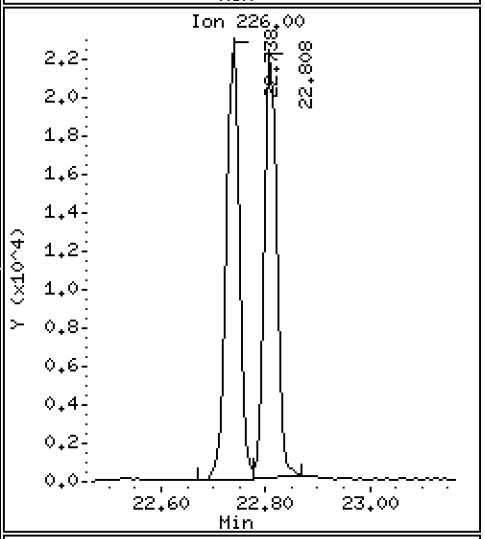
71 Chrysene

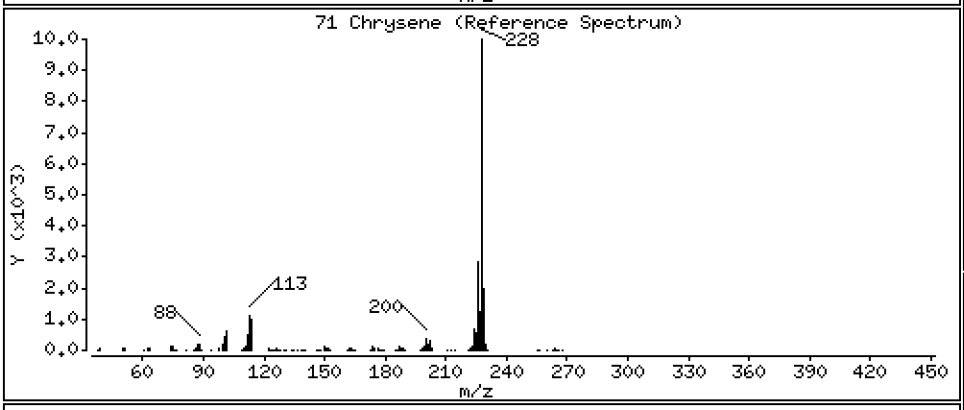
Concentration: 0.5729 ug/mL

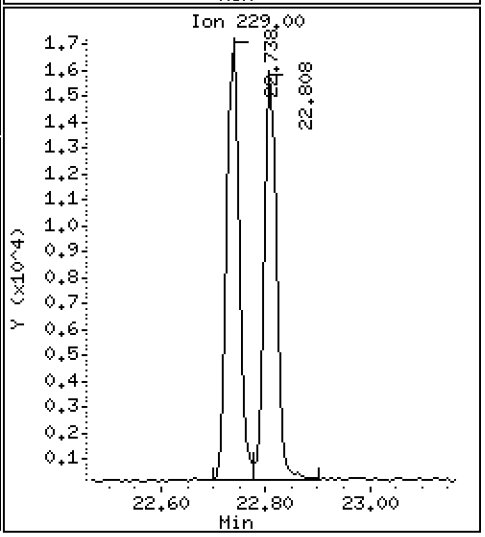


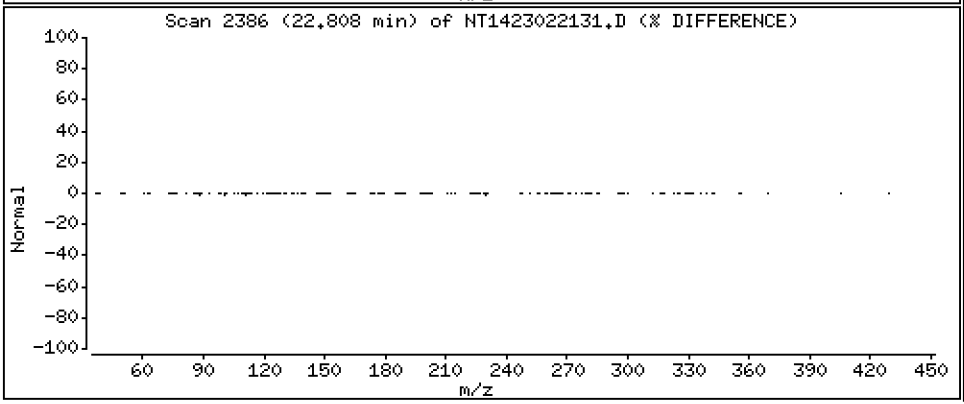












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

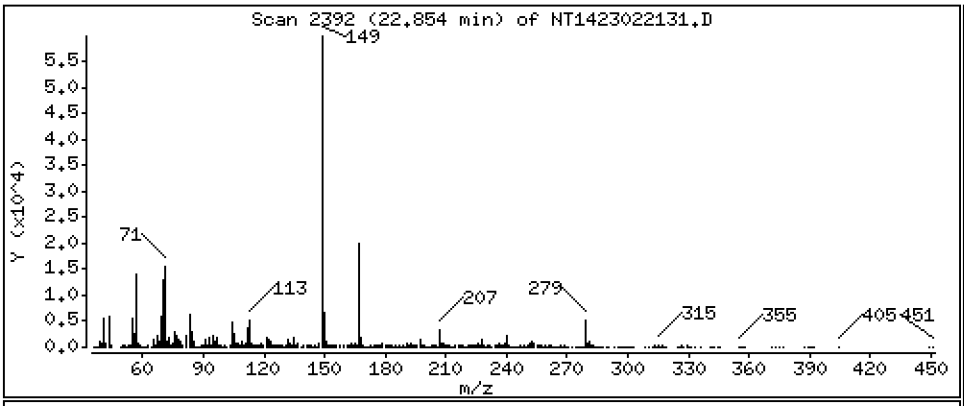
Operator: DSD

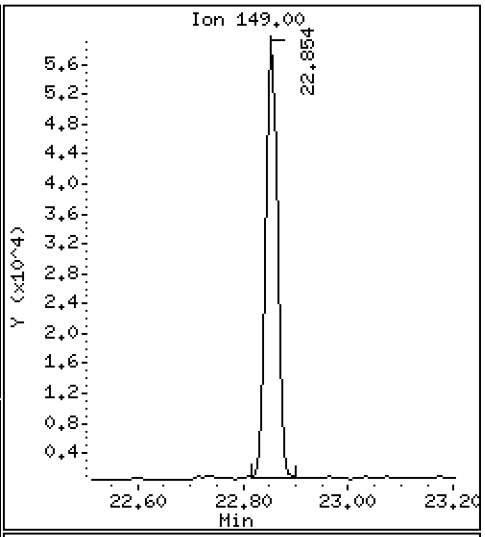
Column phase: ZB-5msi

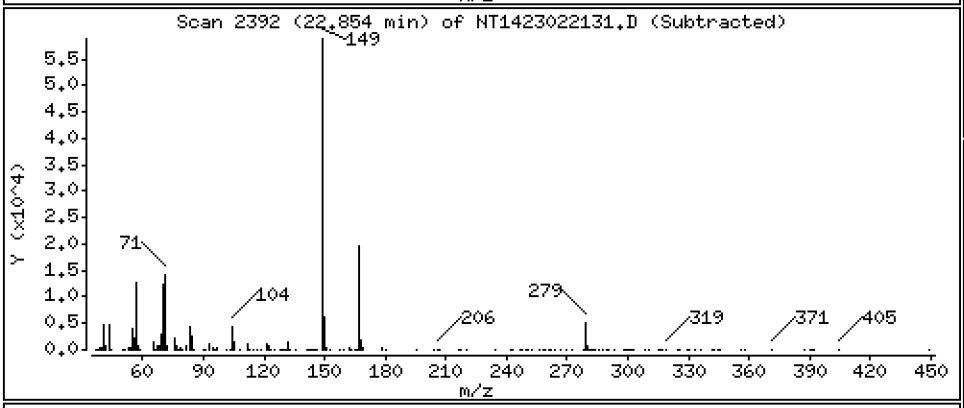
Column diameter: 0.25

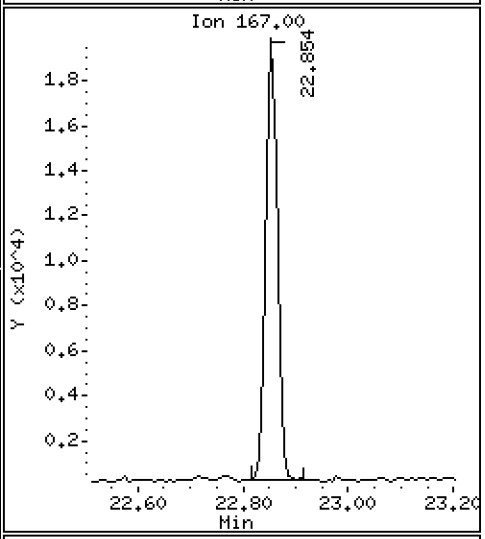
72 bis(2-Ethylhexyl)phthalate

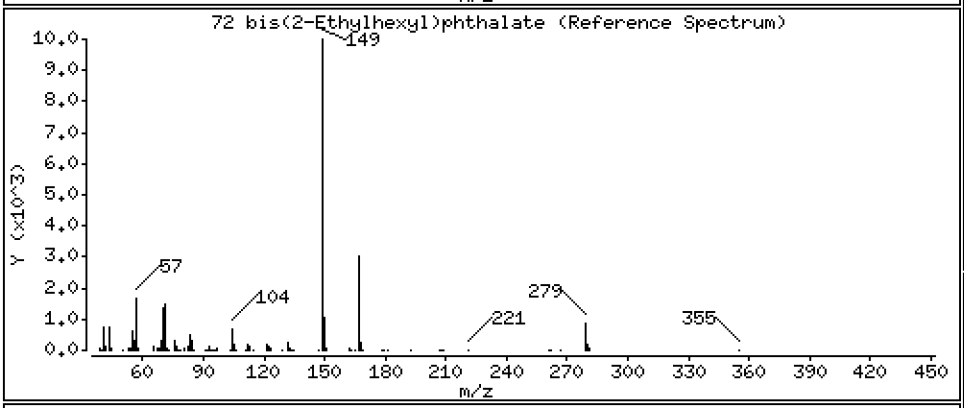
Concentration: 0.3918 ug/mL

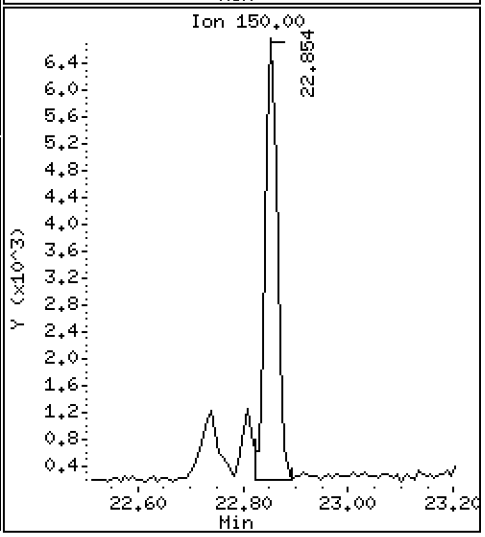


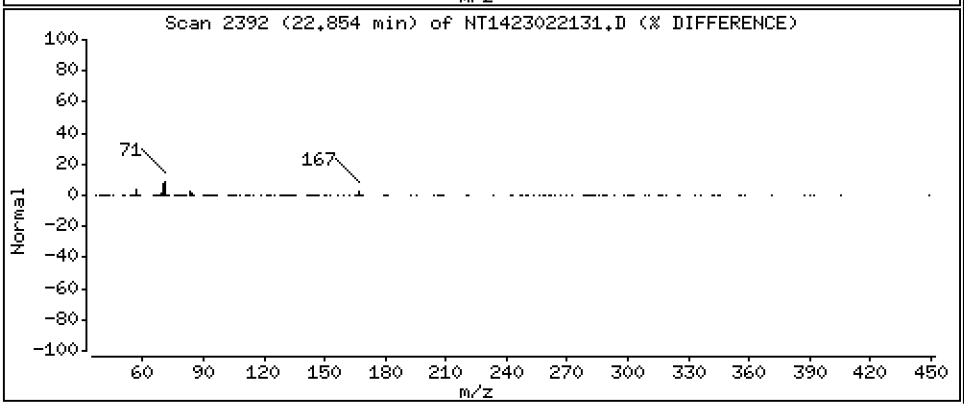












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

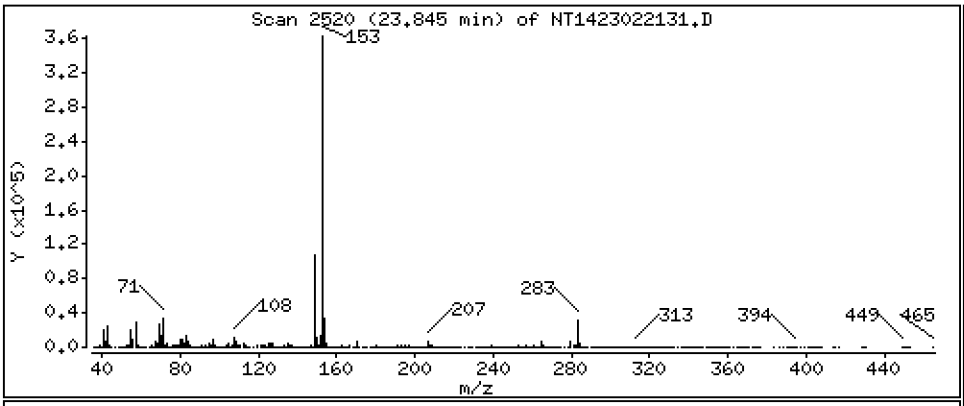
Operator: DSD

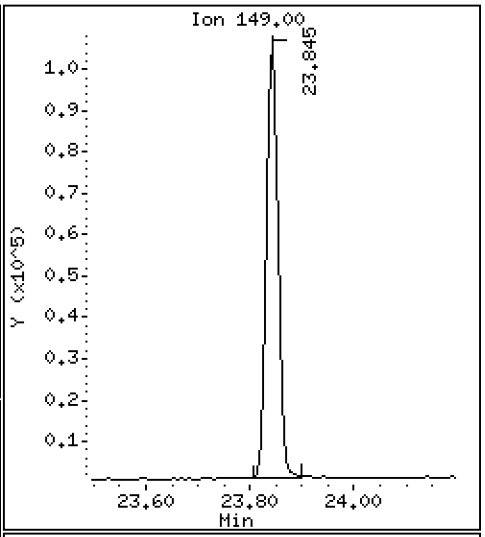
Column phase: ZB-5msi

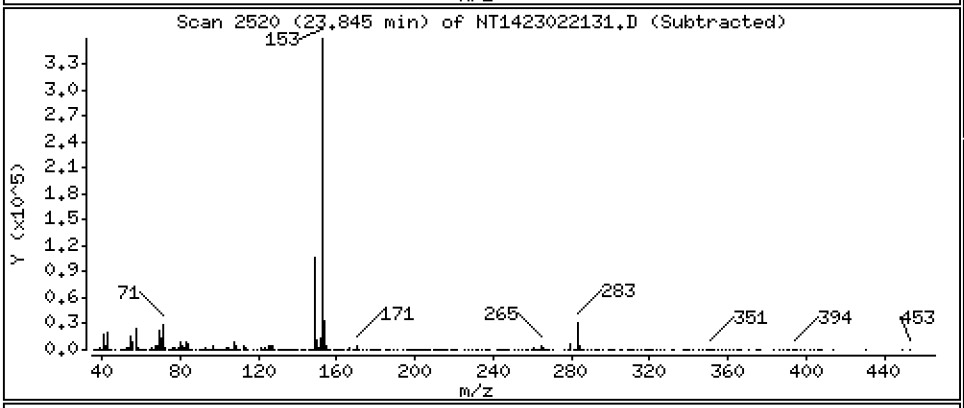
Column diameter: 0.25

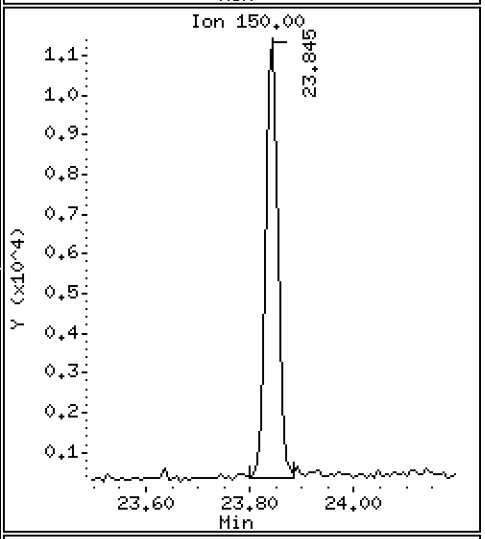
73 Di-n-octylphthalate

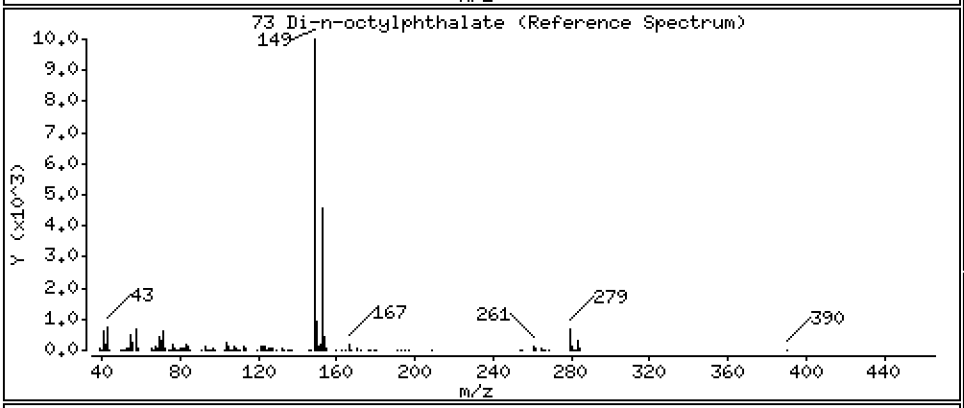
Concentration: 0.5126 ug/mL

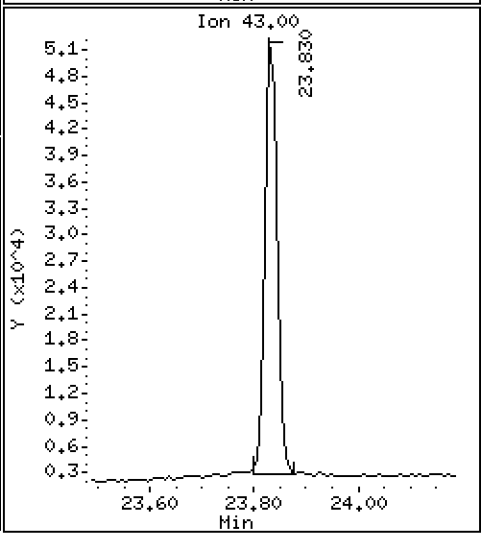


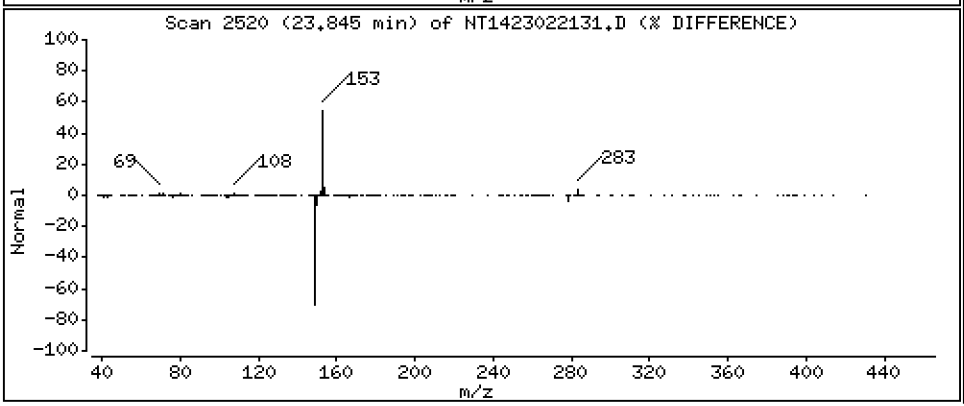












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

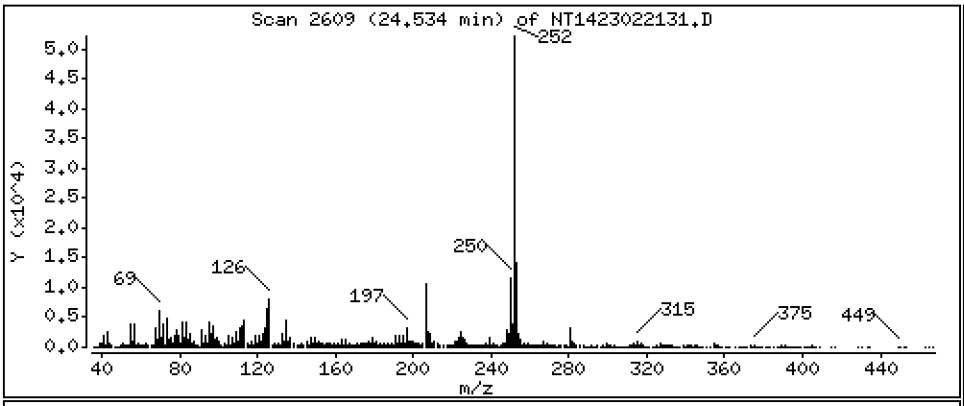
Operator: DSD

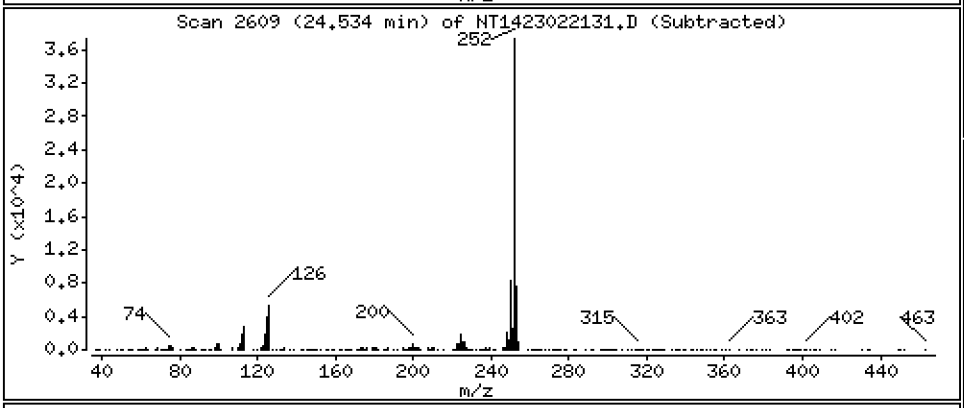
Column phase: ZB-5msi

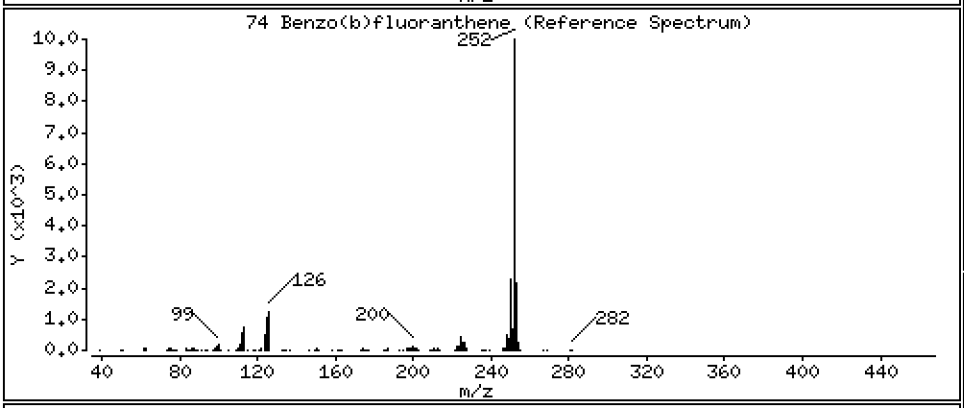
Column diameter: 0.25

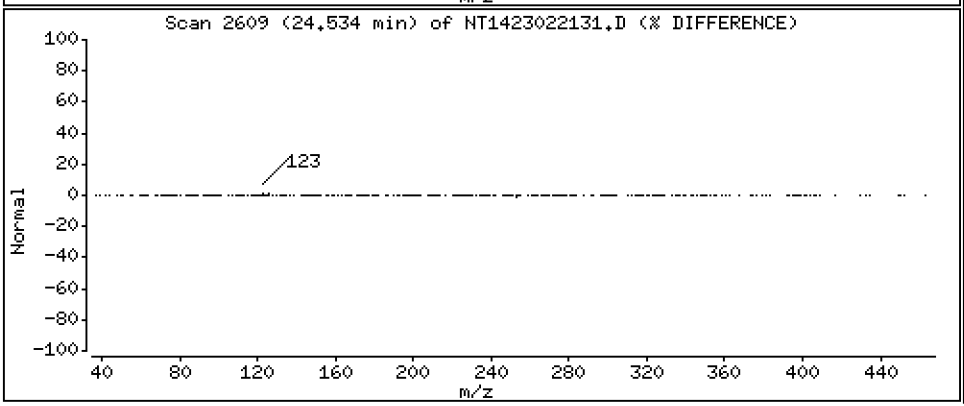
74 Benzo(b)fluoranthene

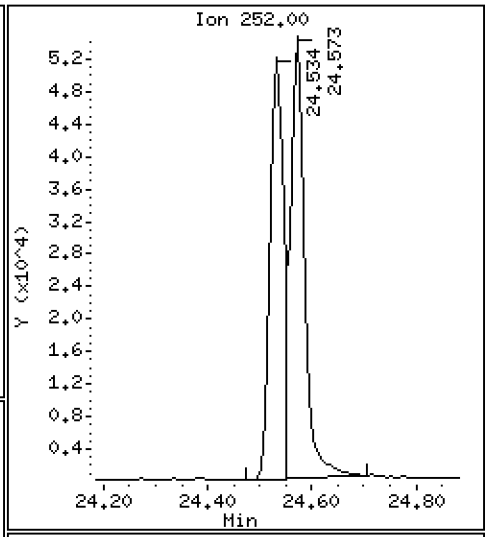
Concentration: 0.5145 ug/mL

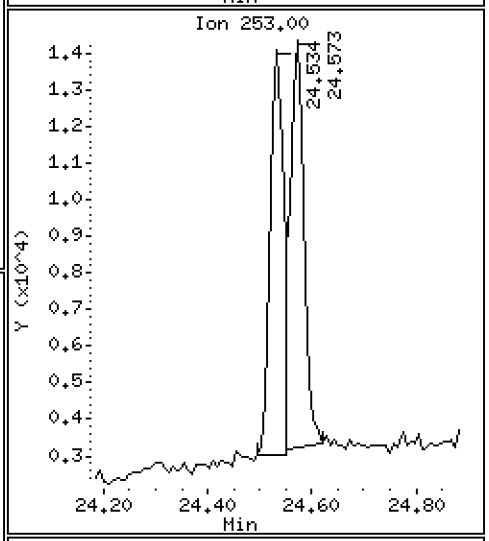


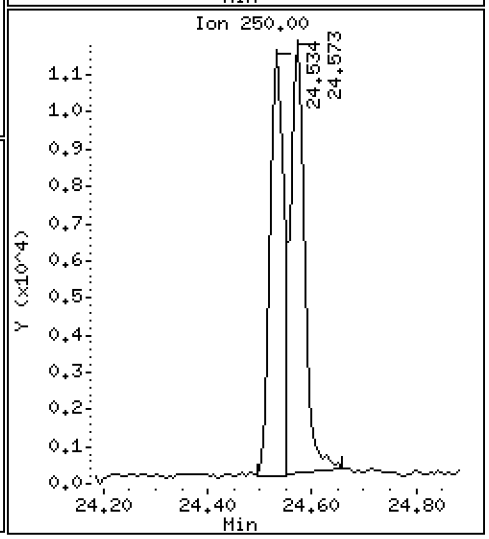












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

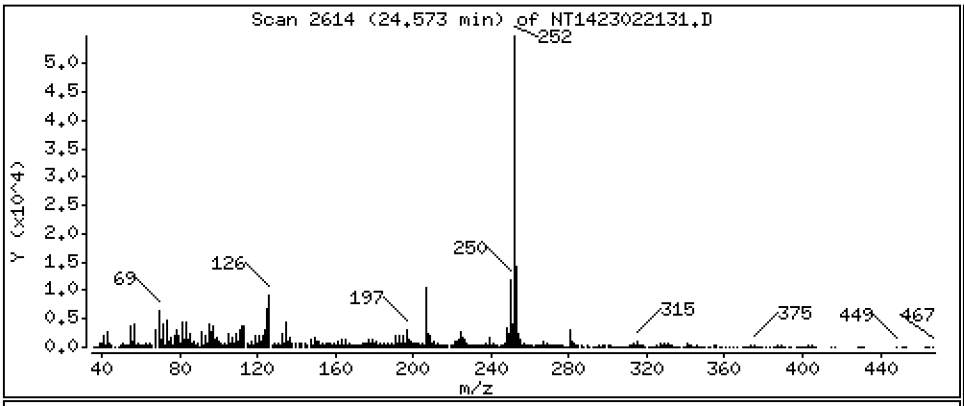
Operator: DSD

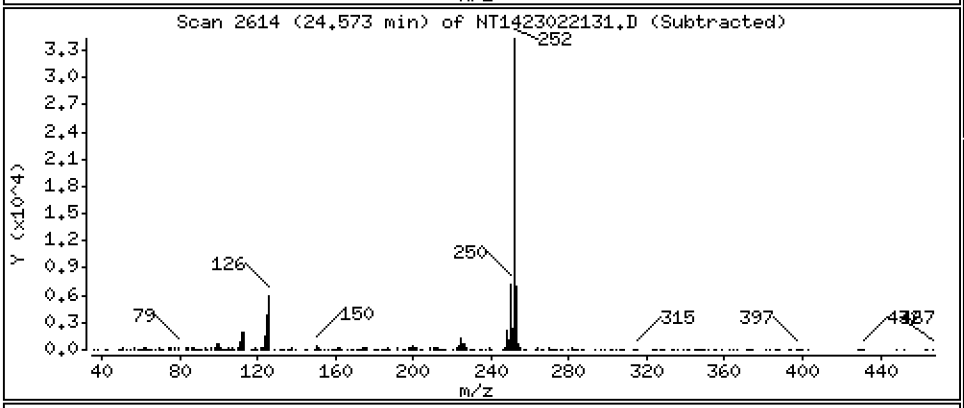
Column phase: ZB-5msi

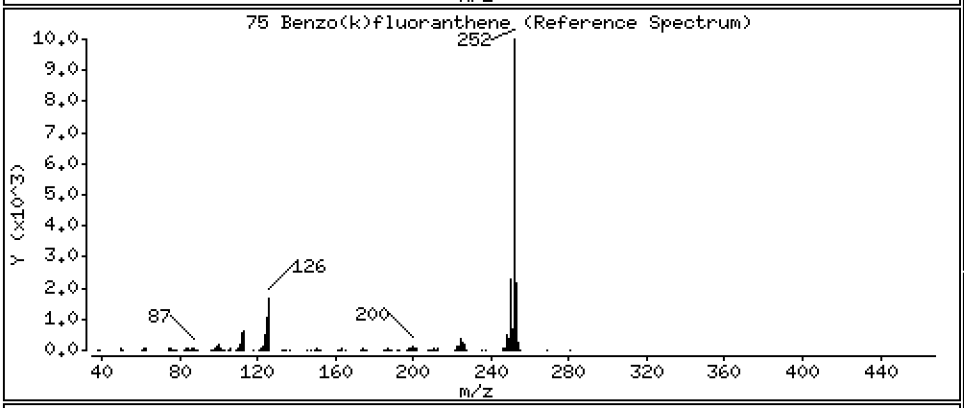
Column diameter: 0.25

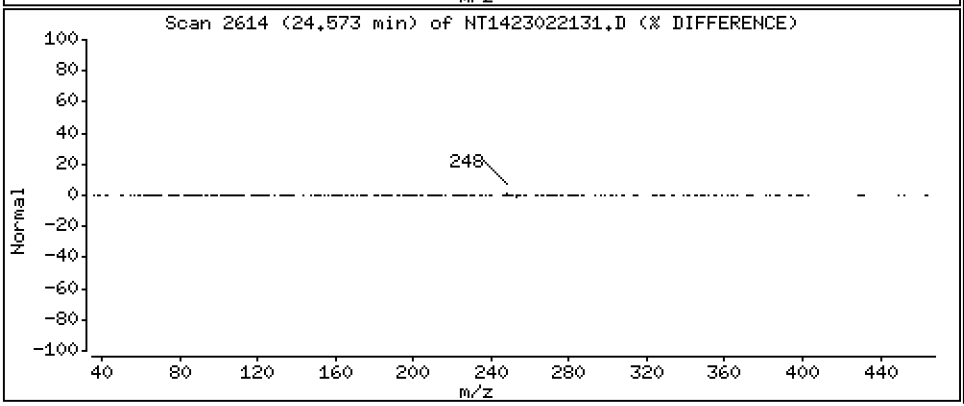
75 Benzo(k)fluoranthene

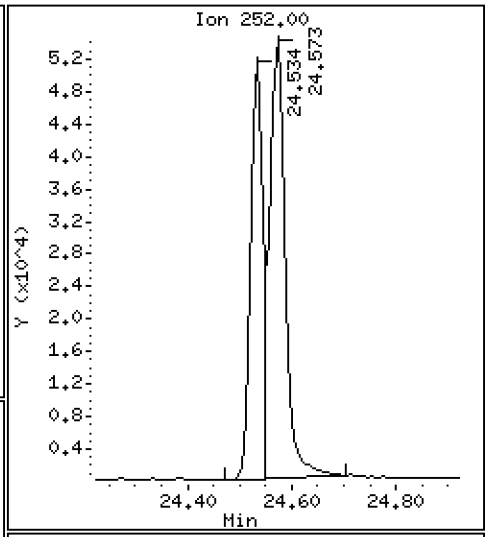
Concentration: 0.6072 ug/mL

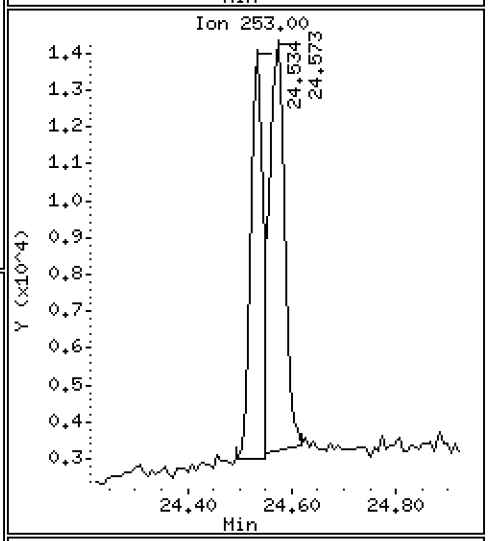


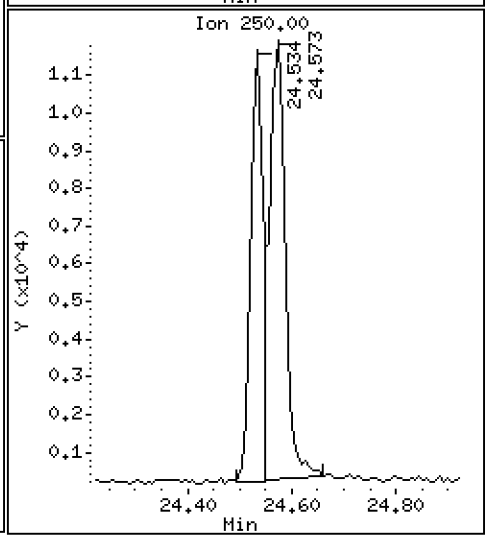












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

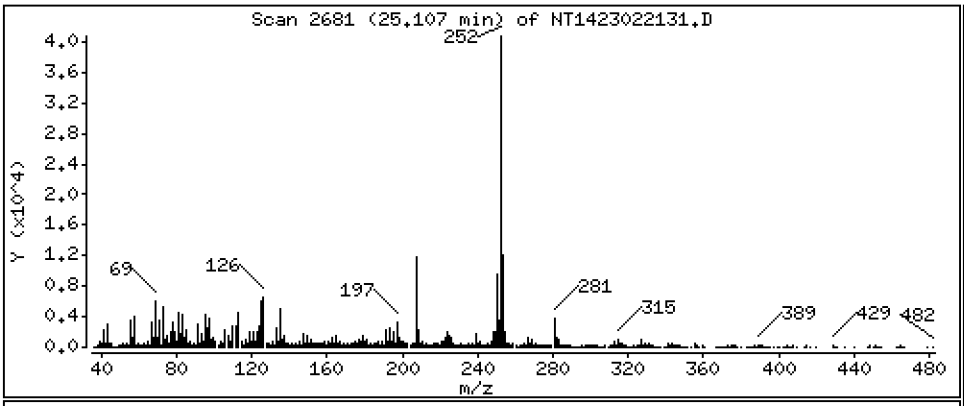
Operator: DSD

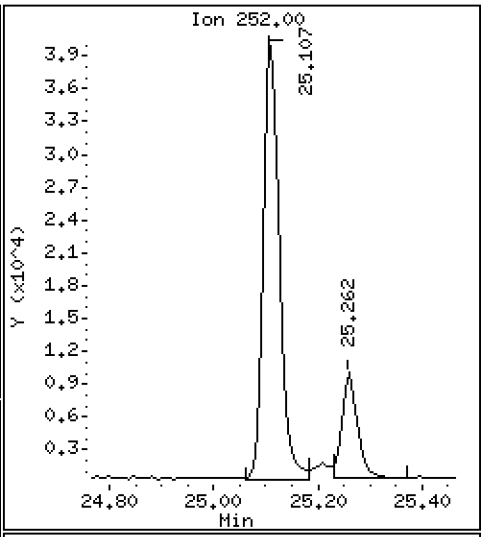
Column phase: ZB-5msi

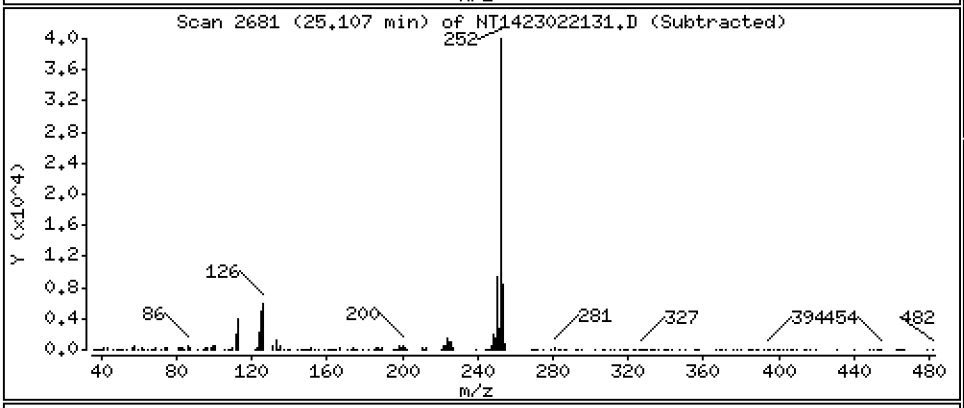
Column diameter: 0.25

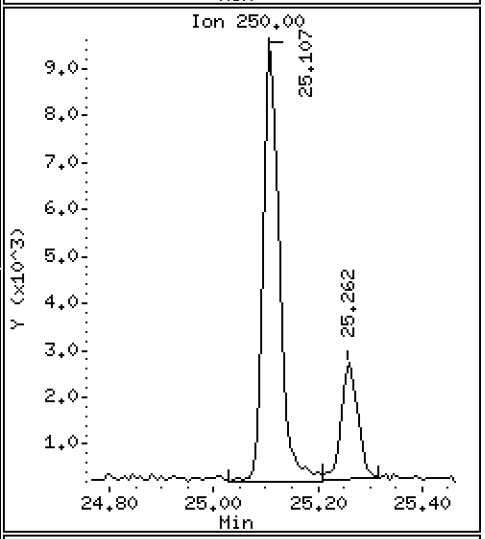
76 Benzo(a)pyrene

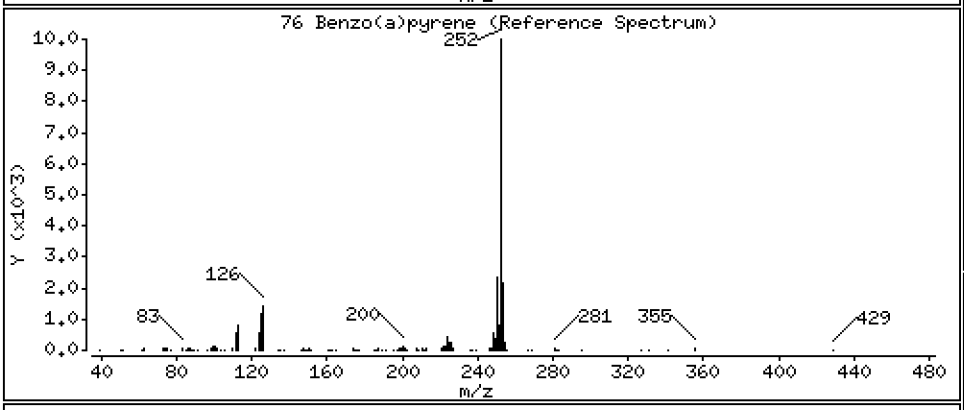
Concentration: 0.5034 ug/mL

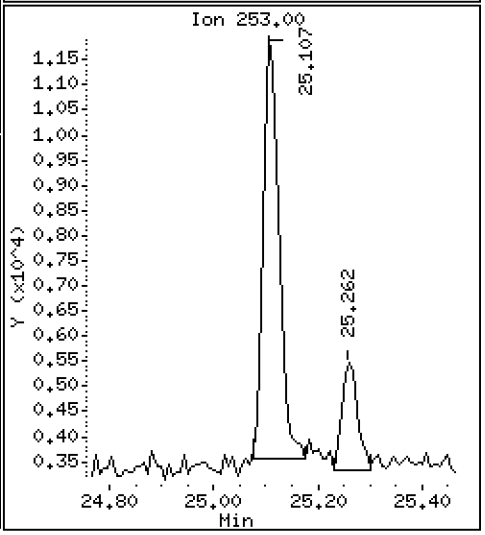


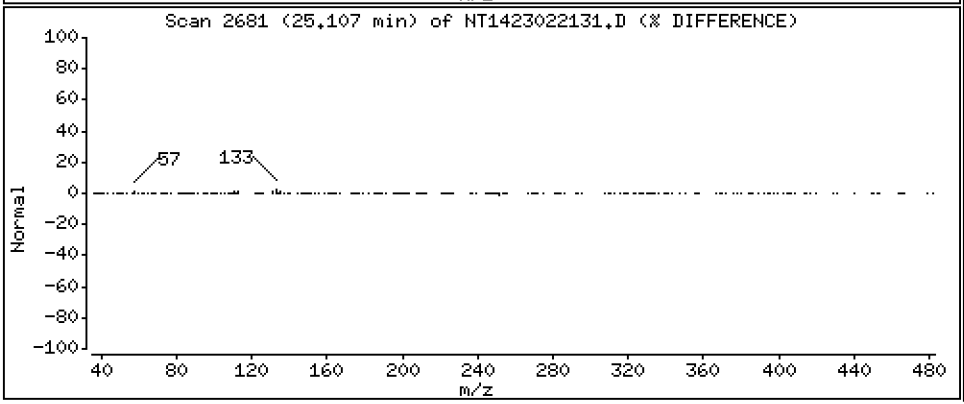












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

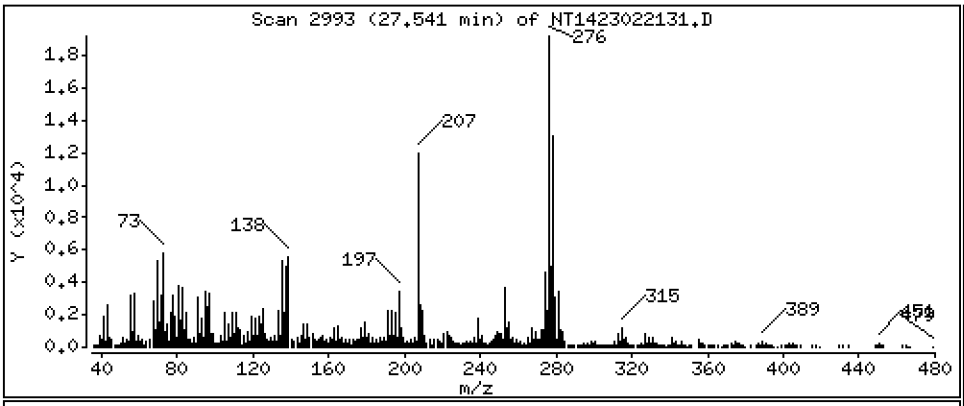
Operator: DSD

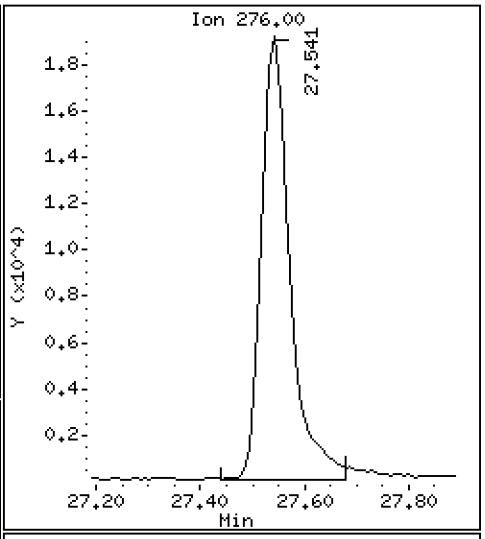
Column phase: ZB-5msi

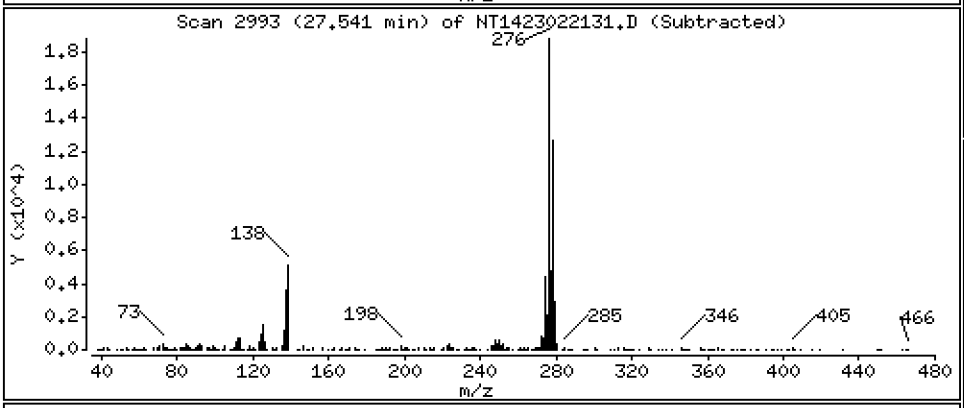
Column diameter: 0.25

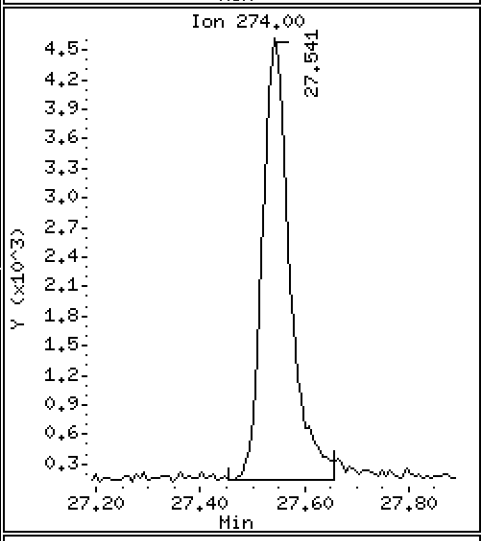
78 Indeno(1,2,3-cd)pyrene

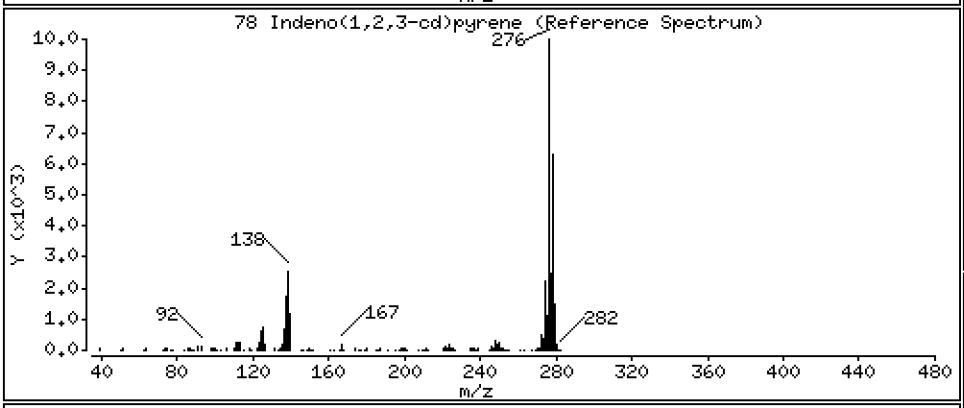
Concentration: 0.5269 ug/mL

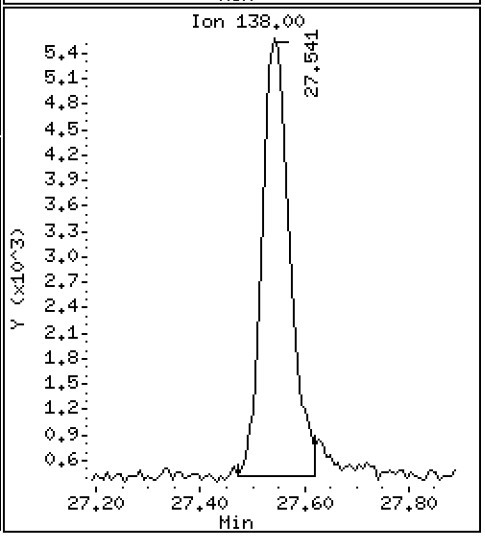


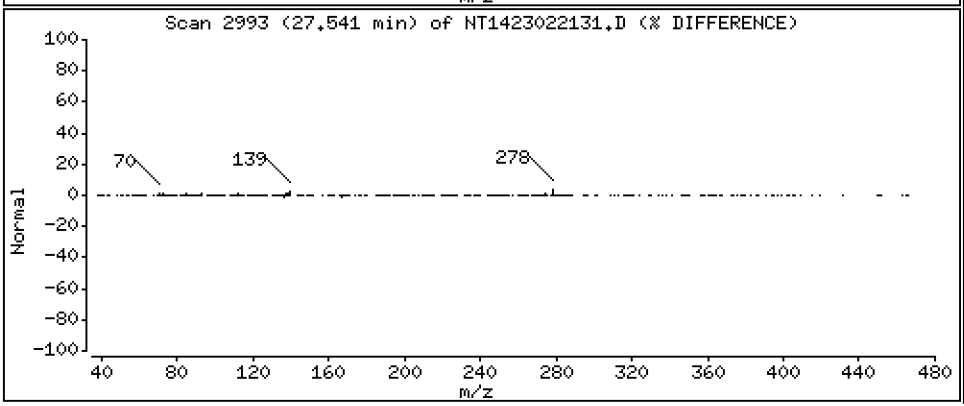












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

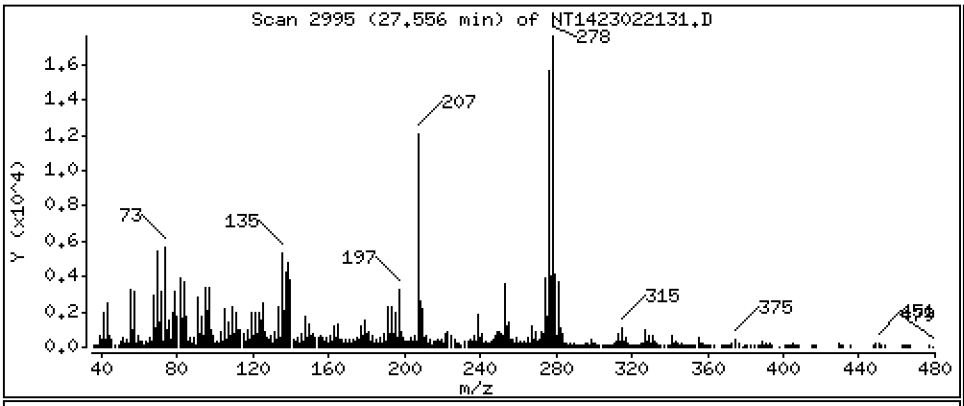
Operator: DSD

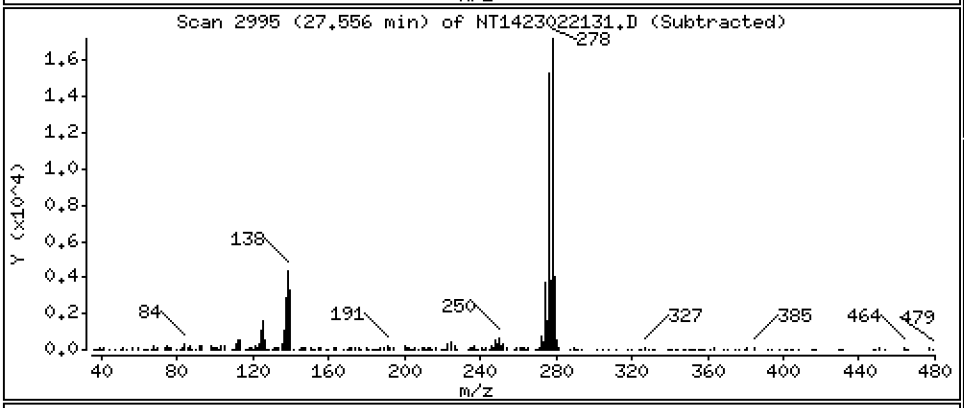
Column phase: ZB-5msi

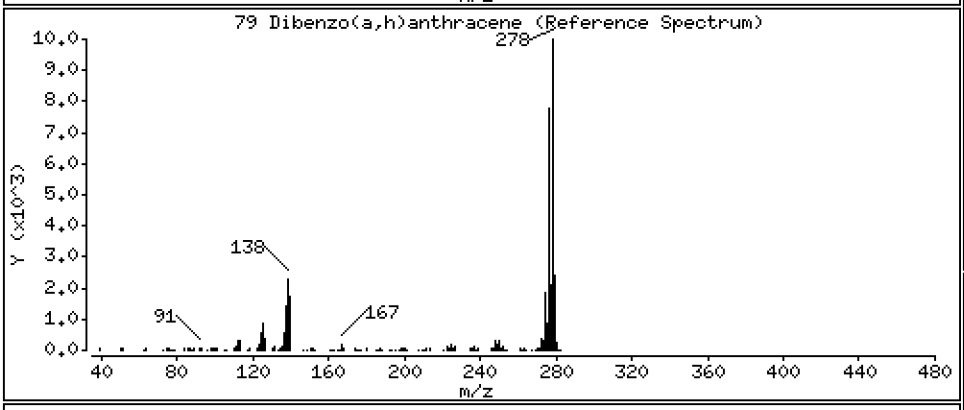
Column diameter: 0.25

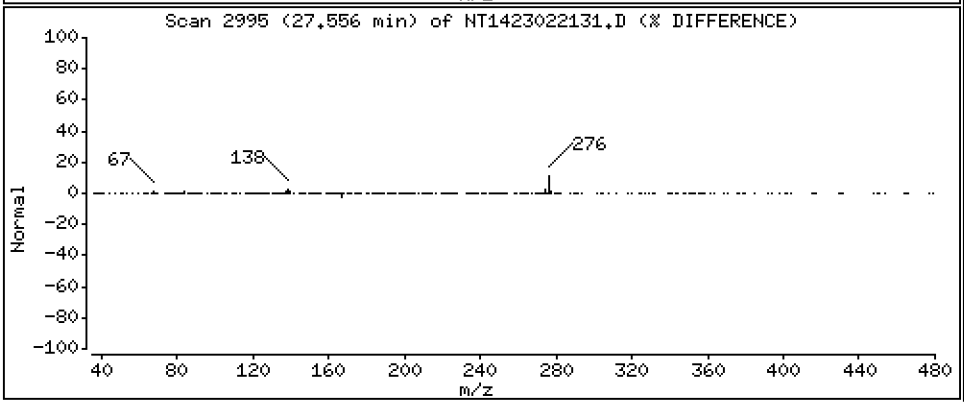
79 Dibenzo(a,h)anthracene

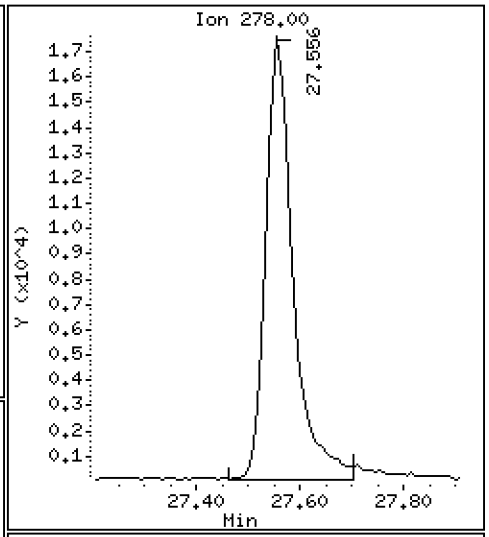
Concentration: 0.5597 ug/mL

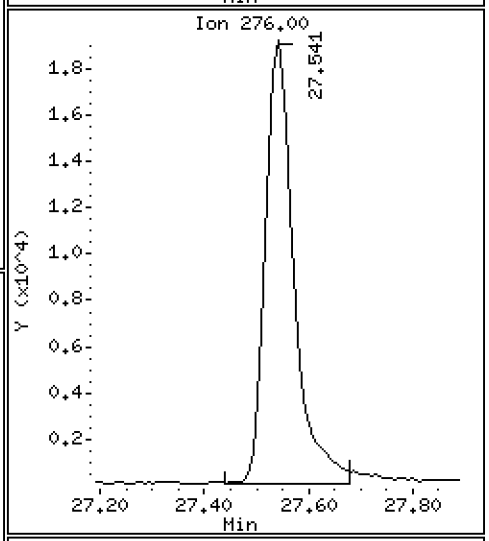


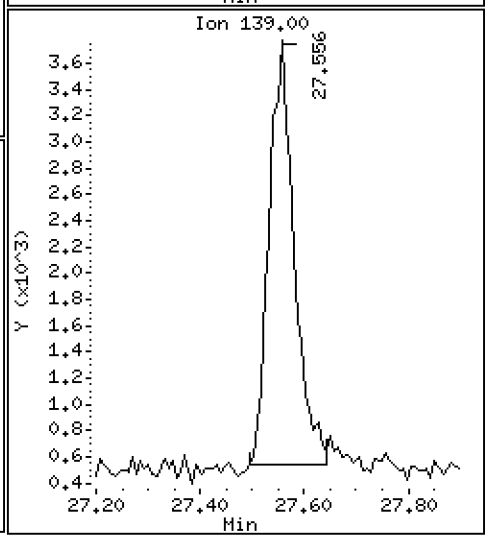












Date : 22-FEB-2023 07:32

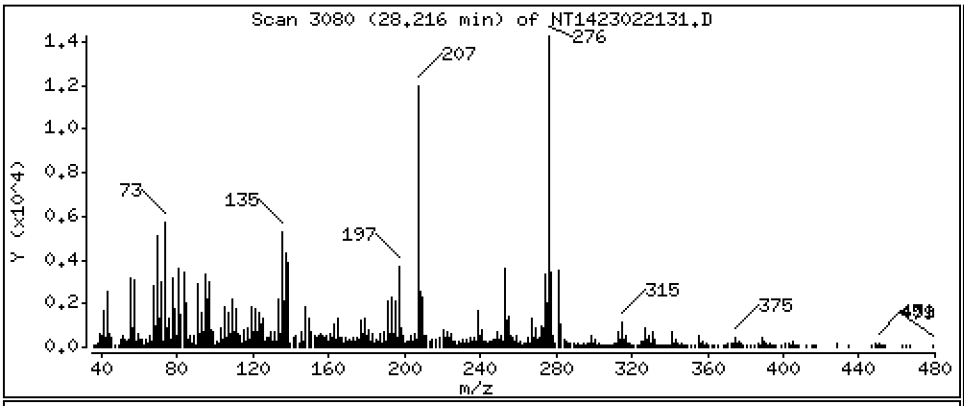
Client ID: Instrument: nt14.i

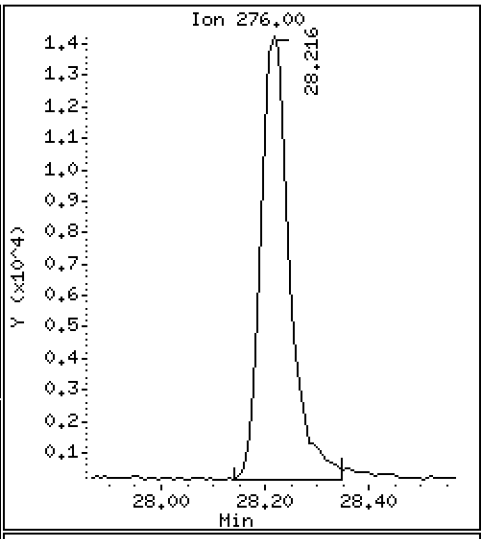
Sample Info: SLB0305-LCV1

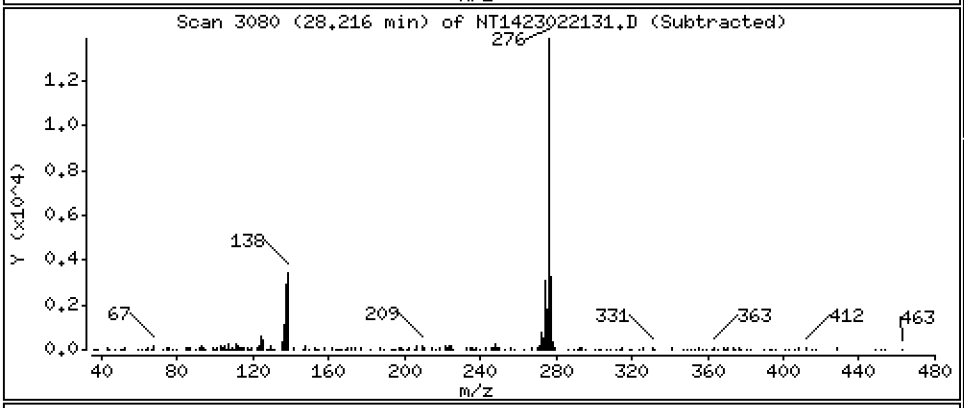
Operator: DSD

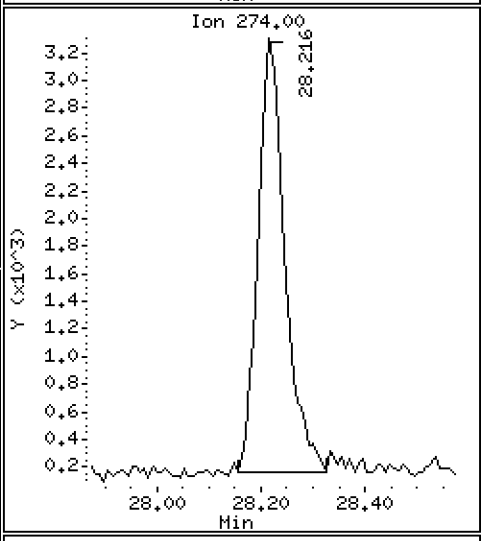
Column phase: ZB-5msi Column diameter: 0.25

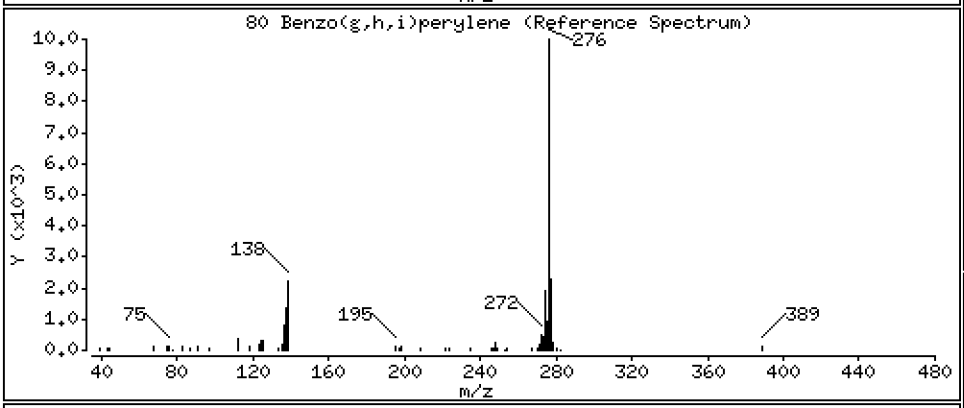
80 Benzo(g,h,i)perylene Concentration: 0.4876 ug/mL

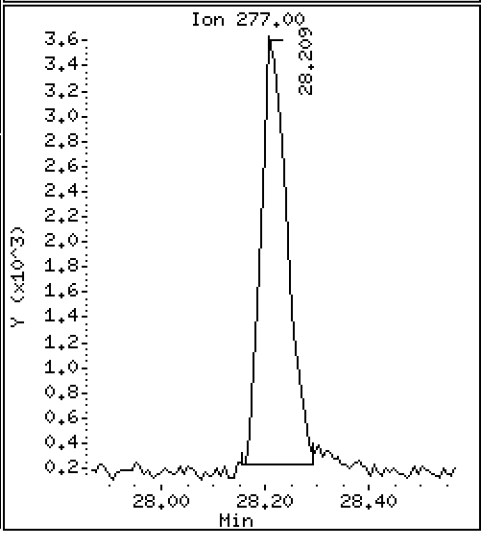


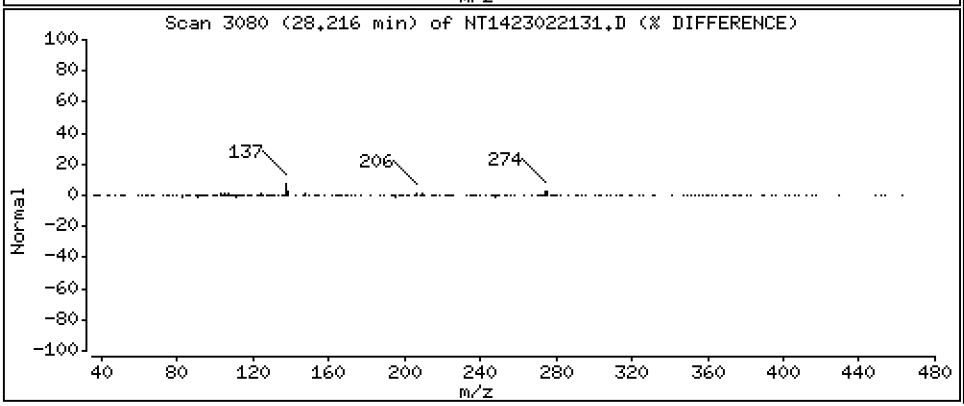












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

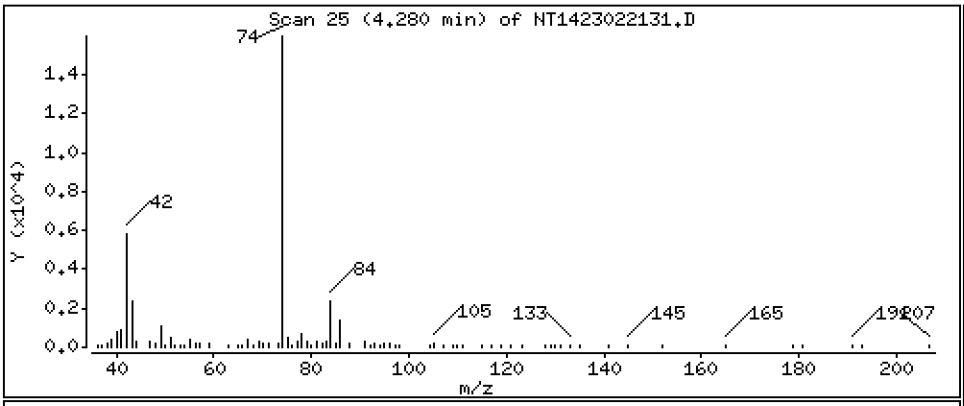
Operator: DSD

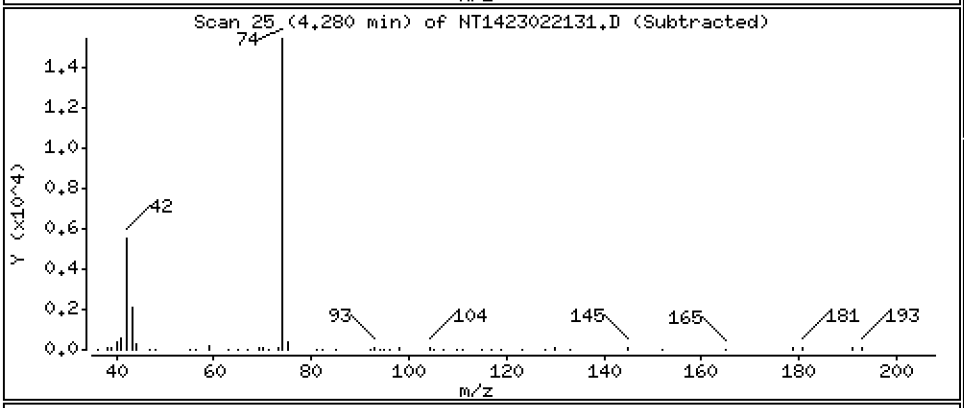
Column phase: ZB-5msi

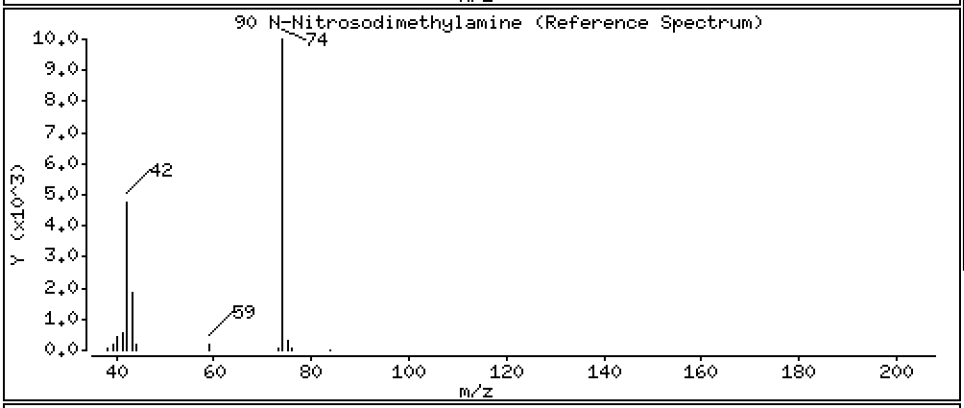
Column diameter: 0.25

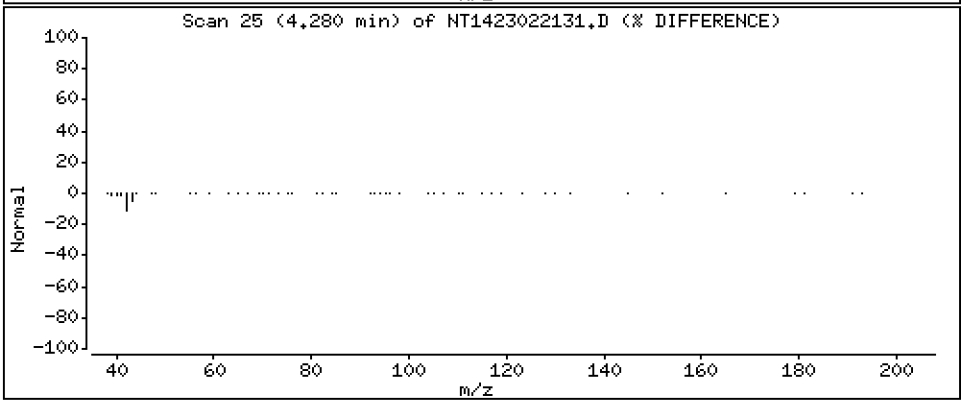
90 N-Nitrosodimethylamine

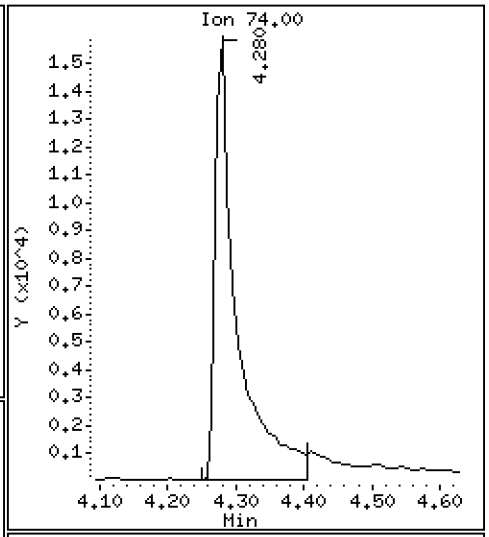
Concentration: 0.7001 ug/mL

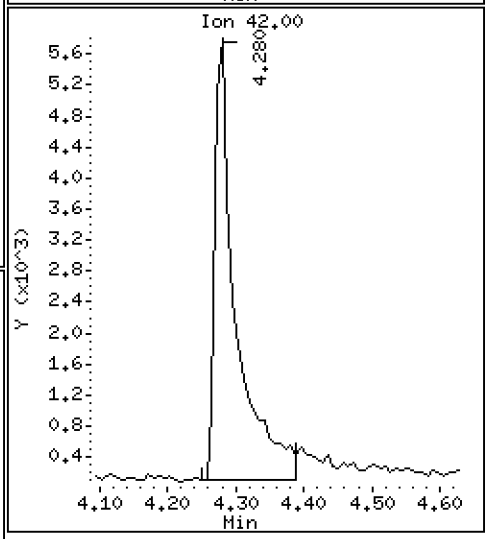












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

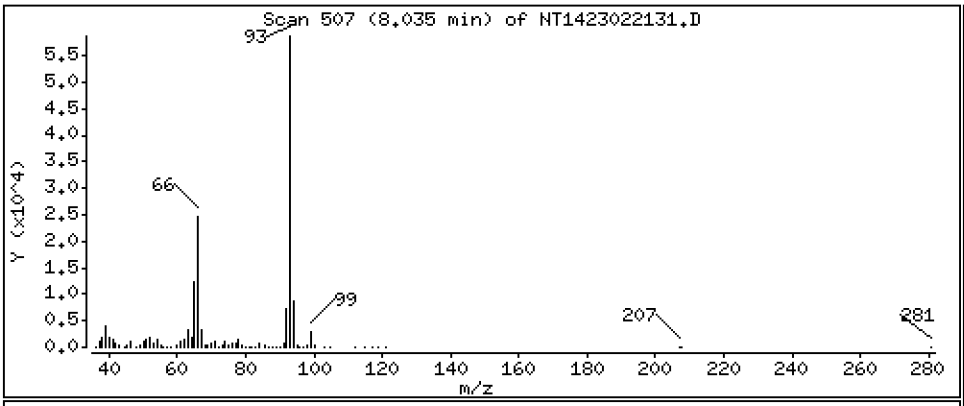
Operator: DSD

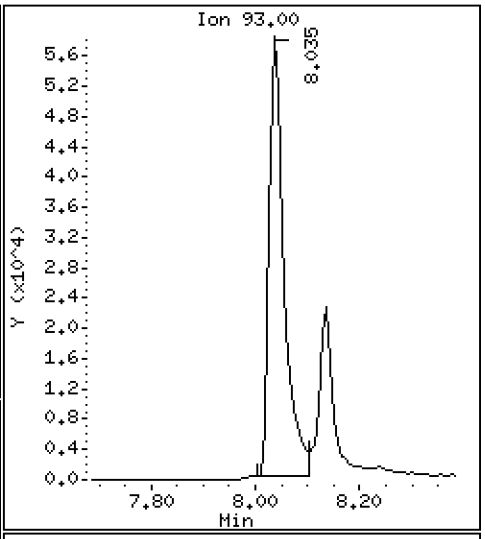
Column phase: ZB-5msi

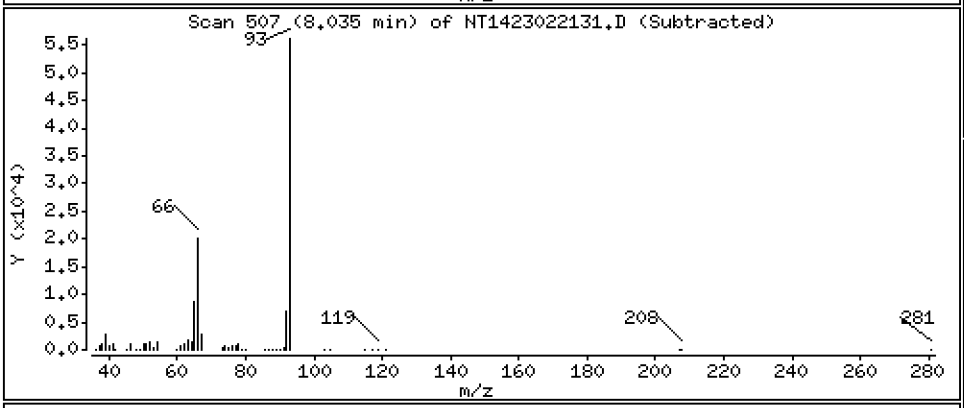
Column diameter: 0.25

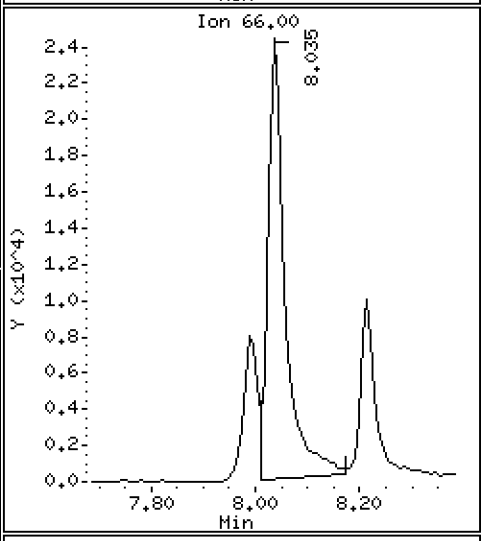
91 Aniline

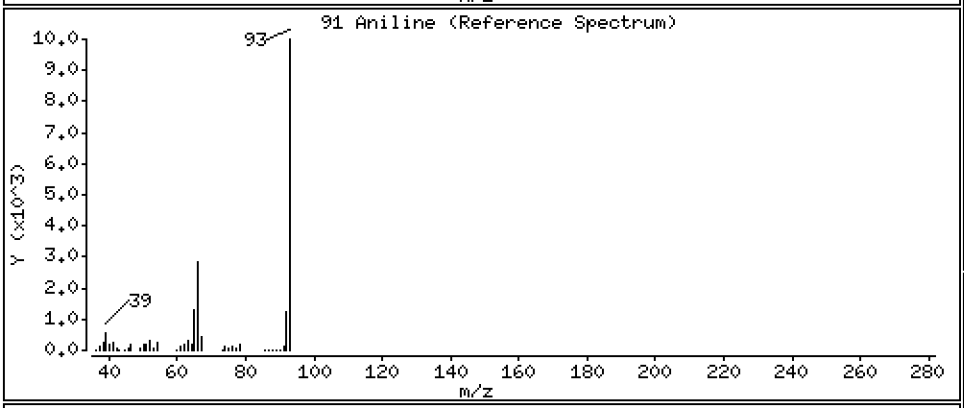
Concentration: 0.9507 ug/mL

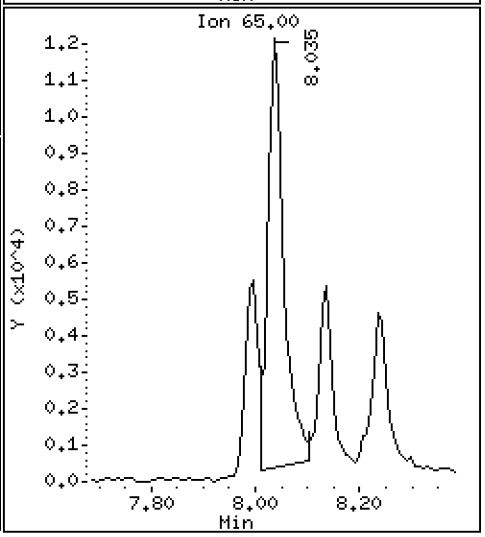


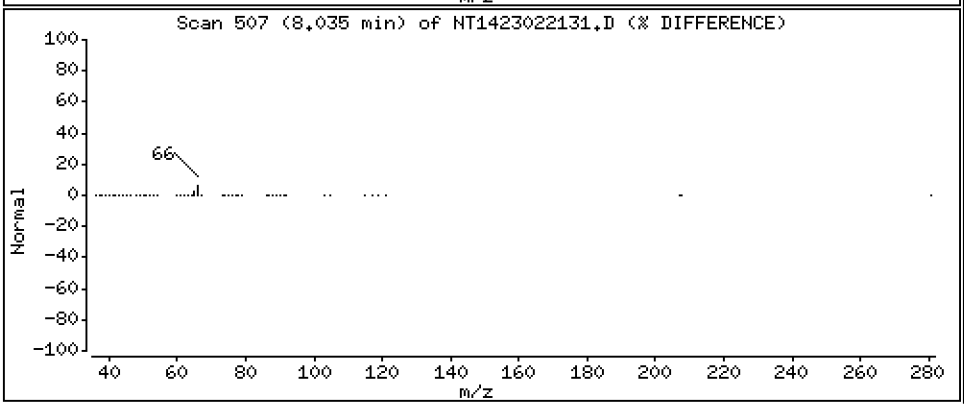












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

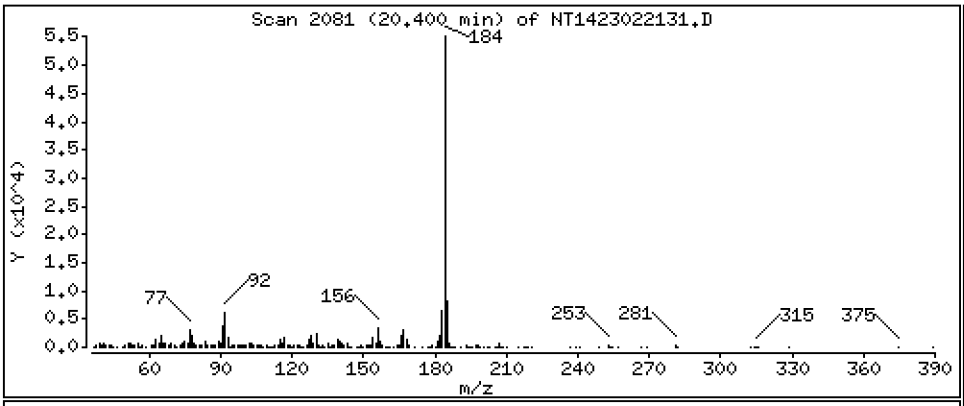
Operator: DSD

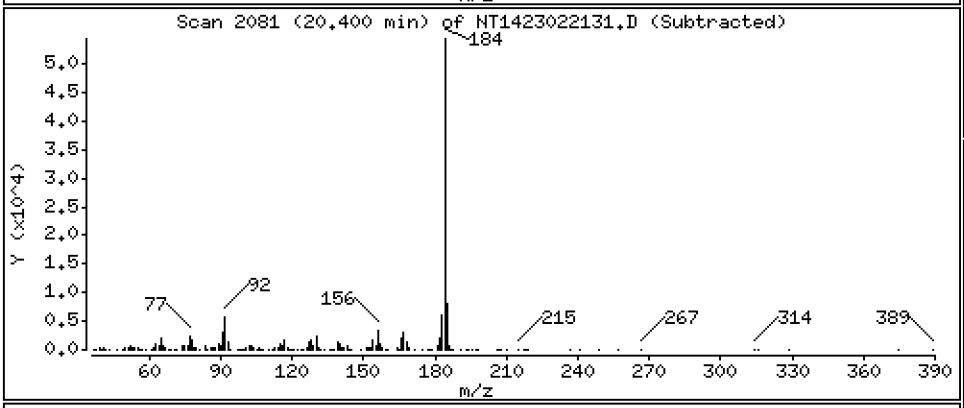
Column phase: ZB-5msi

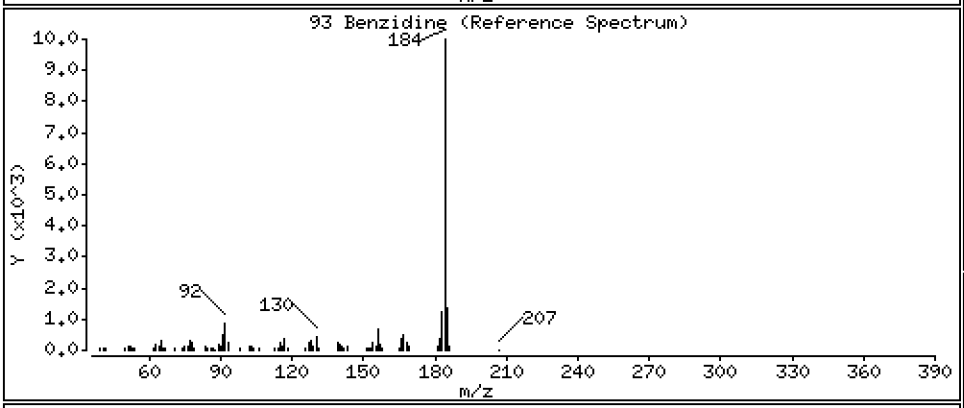
Column diameter: 0.25

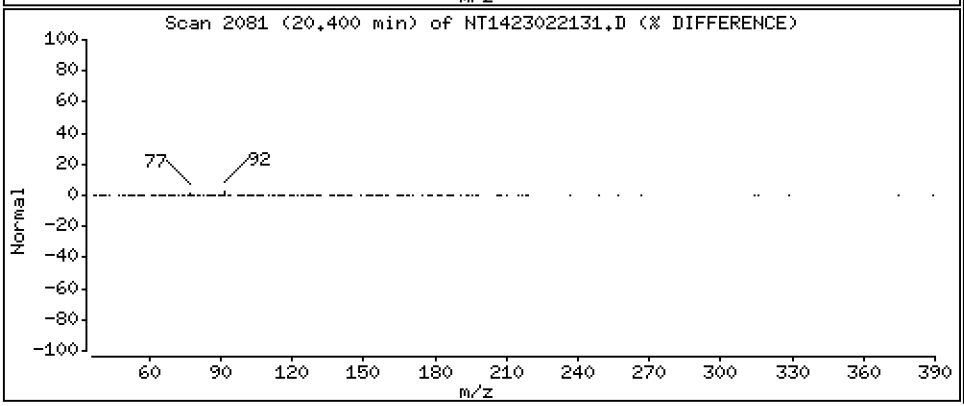
93 Benzidine

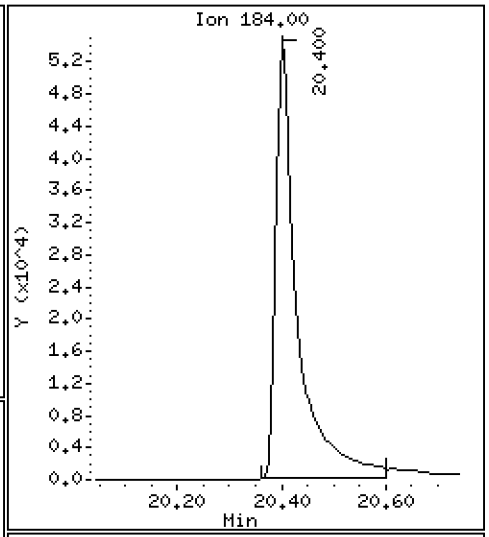
Concentration: 1.781 ug/mL

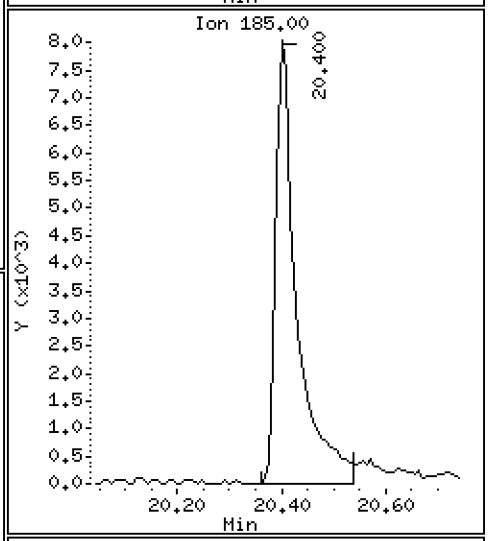


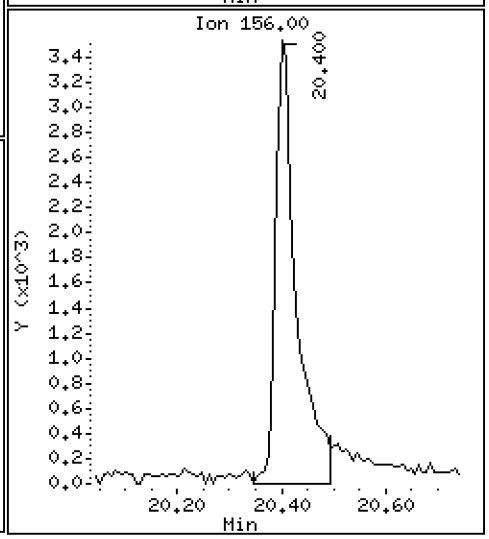












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

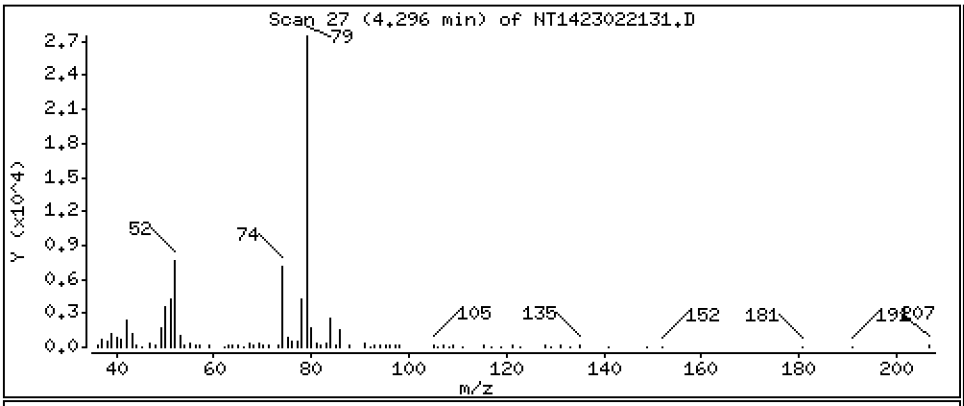
Operator: DSD

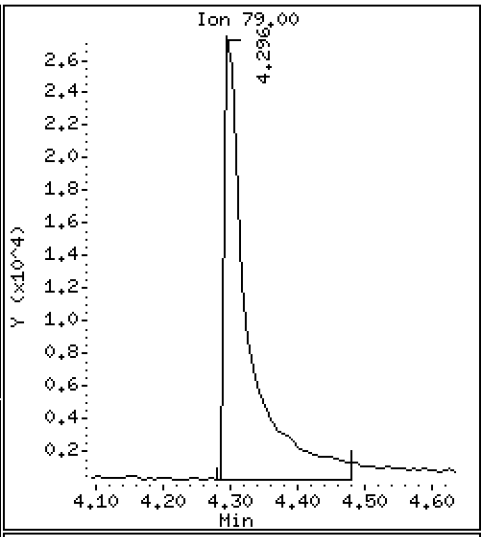
Column phase: ZB-5msi

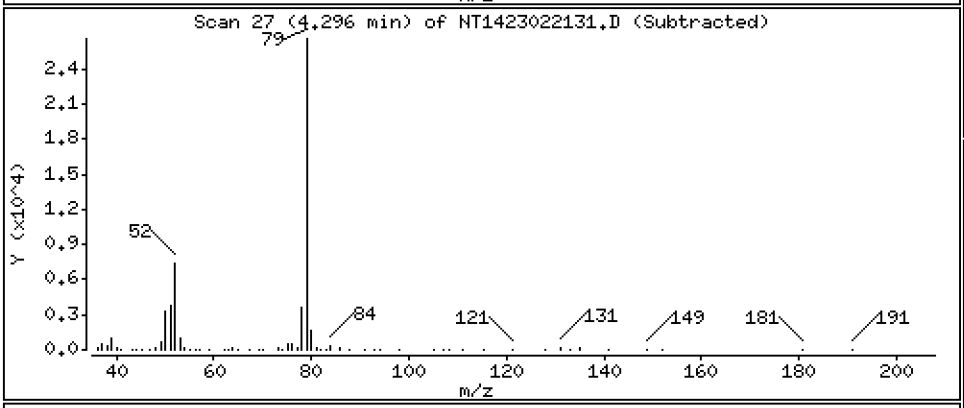
Column diameter: 0.25

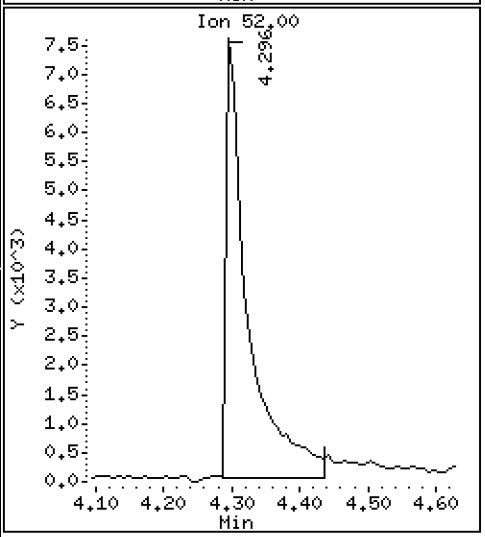
103 Pyridine

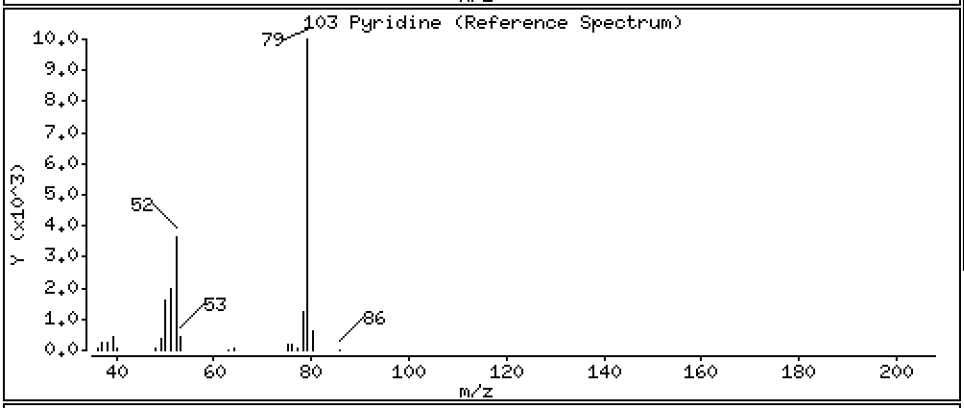
Concentration: 0.8116 ug/mL

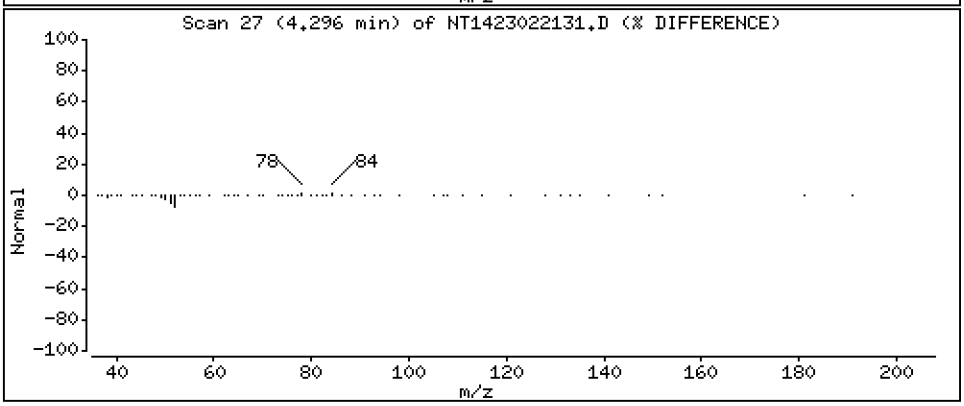












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

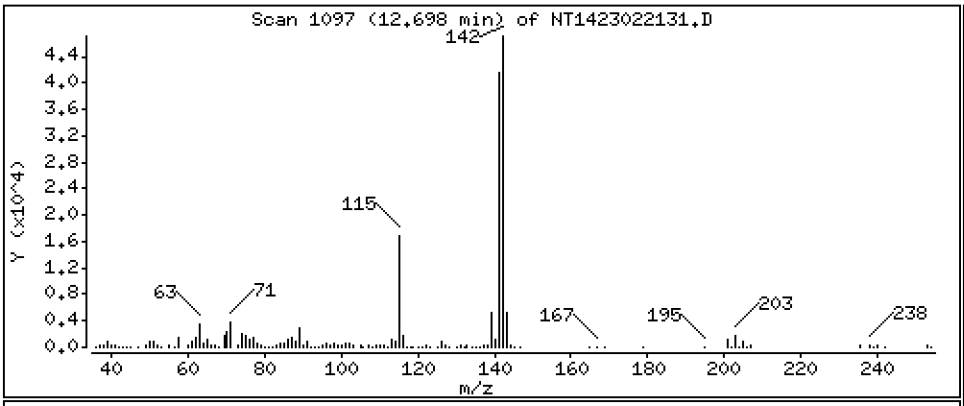
Operator: DSD

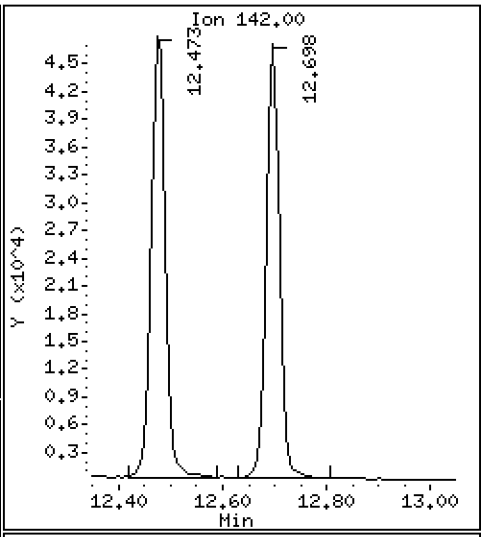
Column phase: ZB-5msi

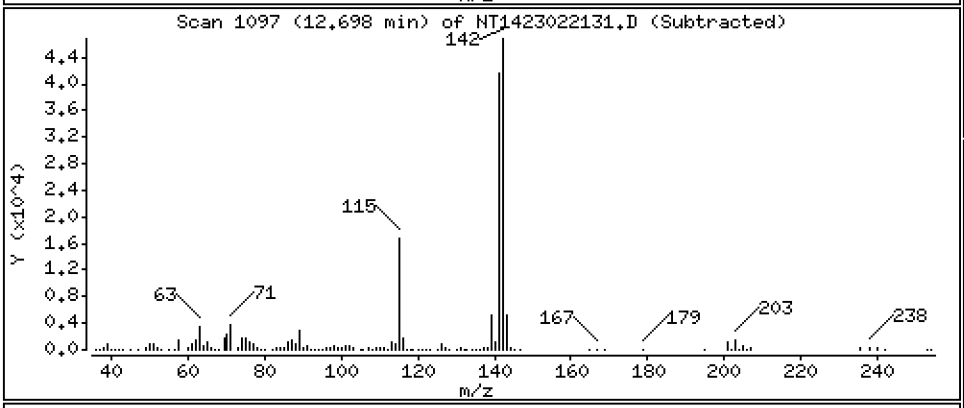
Column diameter: 0.25

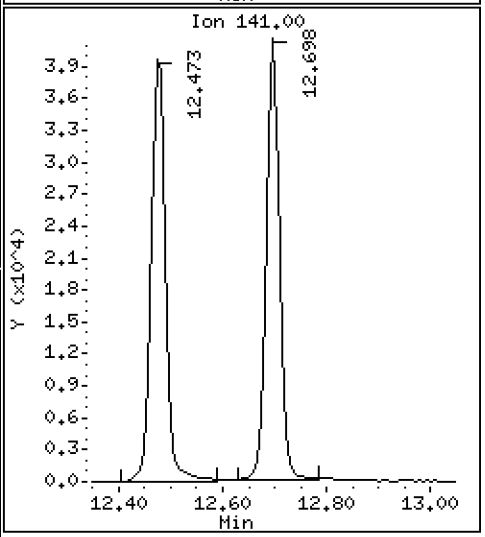
105 1-methylnaphthalene

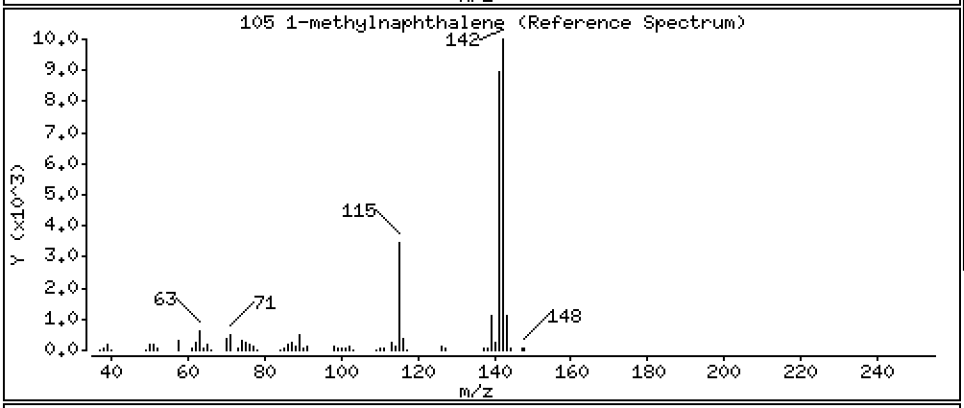
Concentration: 0.5338 ug/mL

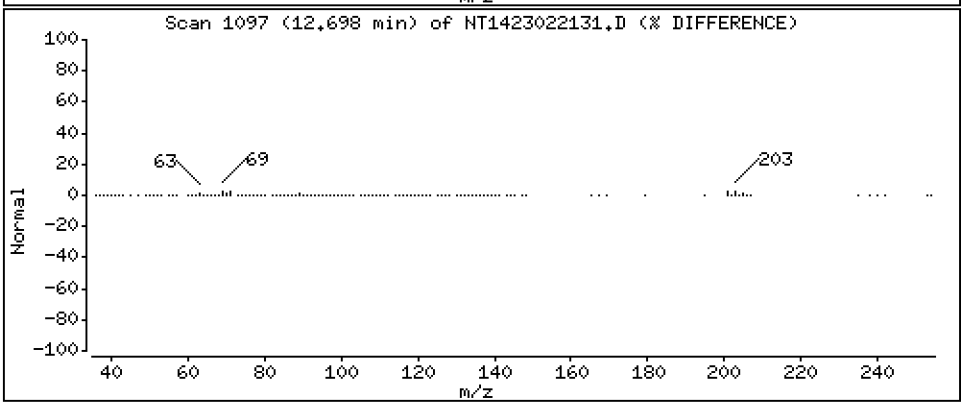












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

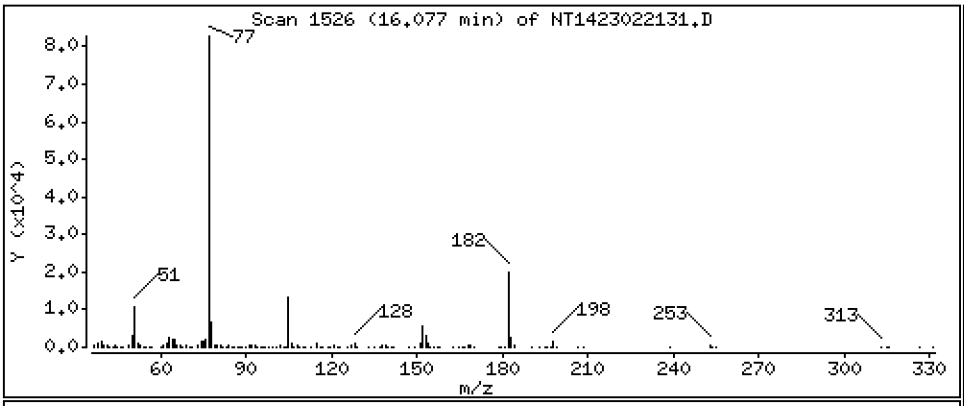
Operator: DSD

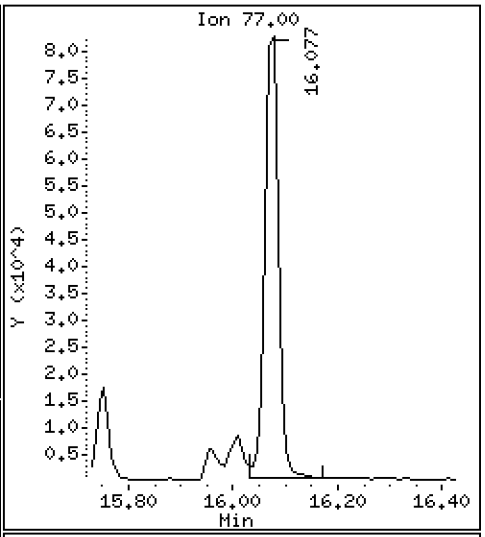
Column phase: ZB-5msi

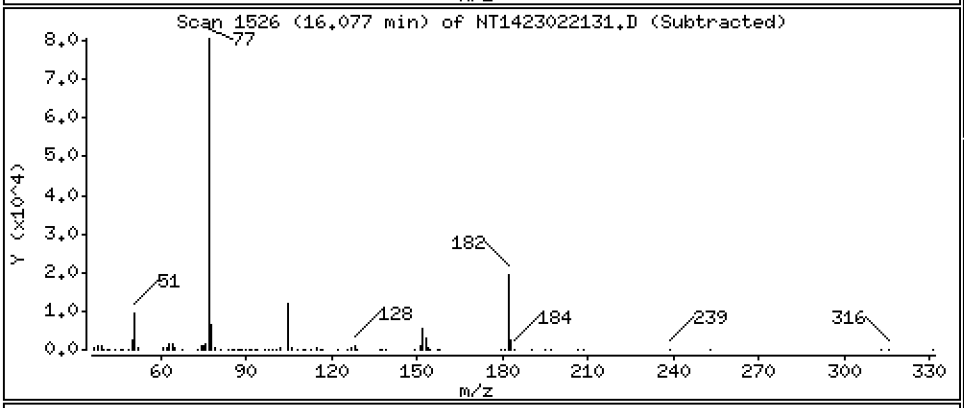
Column diameter: 0.25

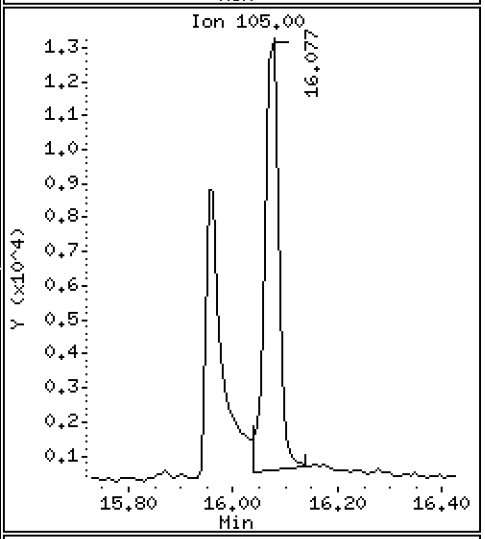
111 Azobenzene (1,2-DP-Hydrazine)

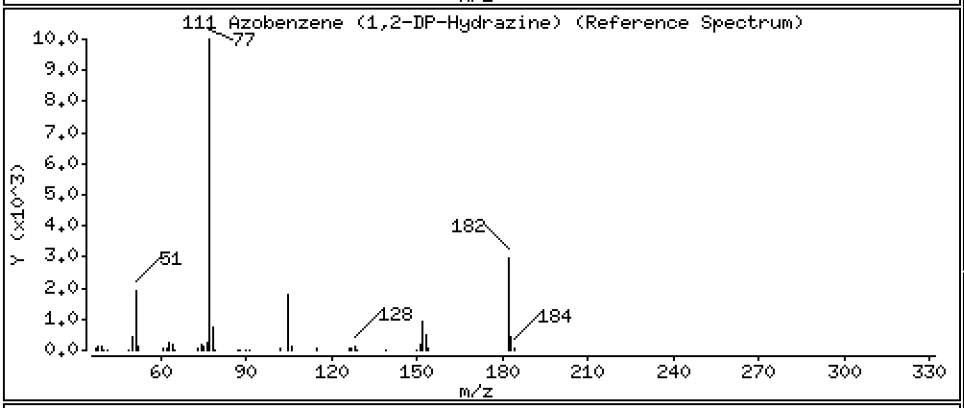
Concentration: 0.5636 ug/mL

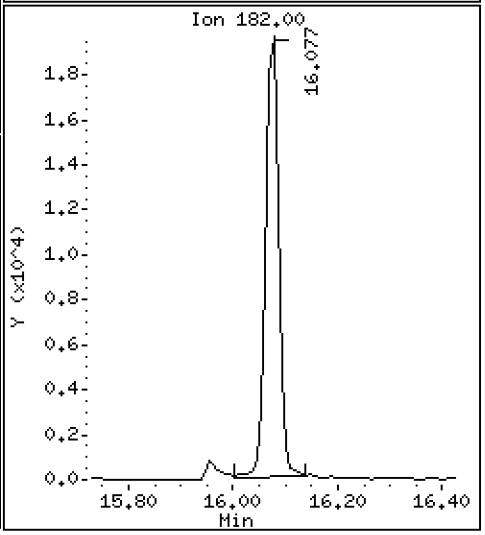


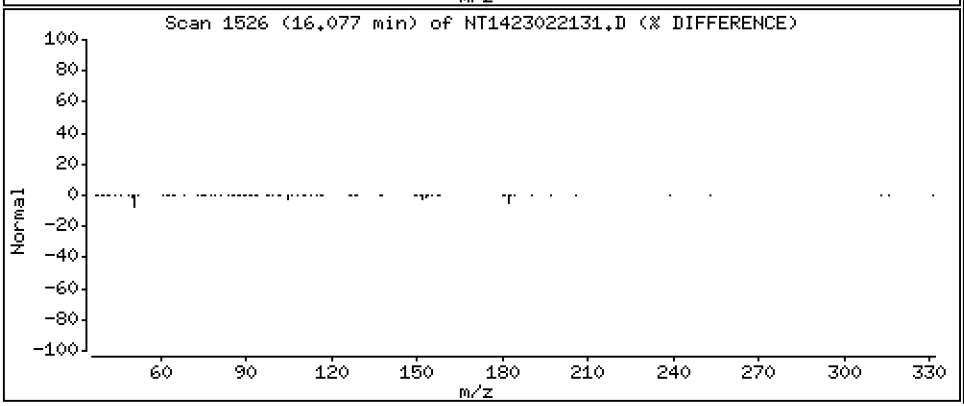












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

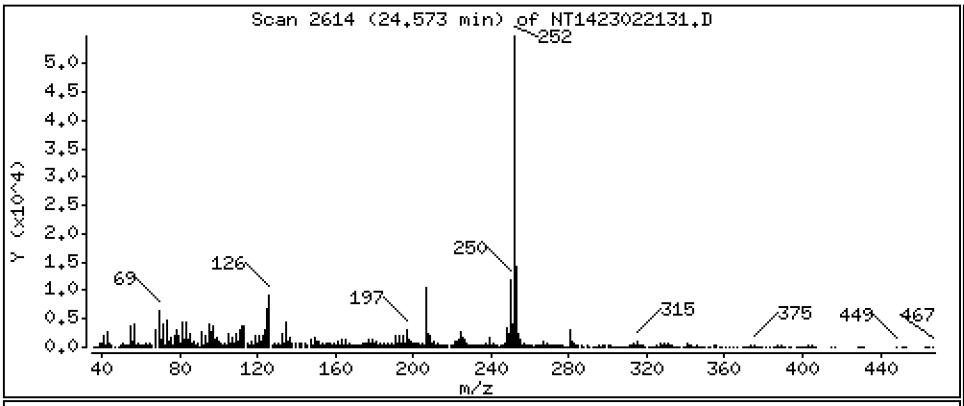
Operator: DSD

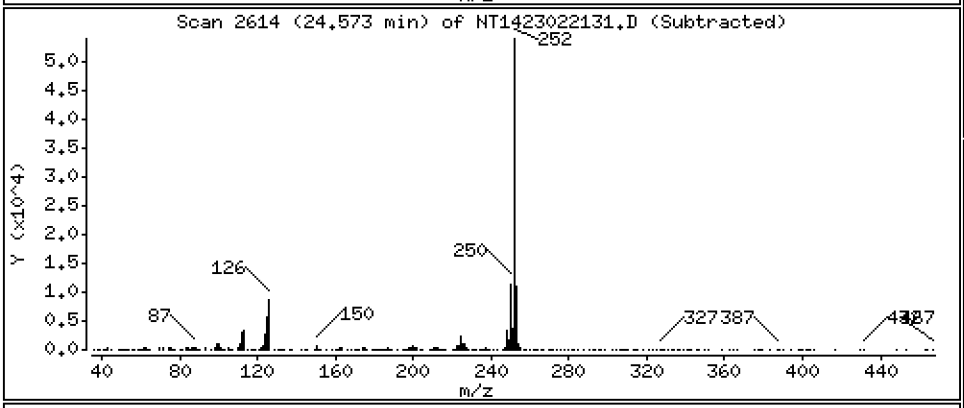
Column phase: ZB-5msi

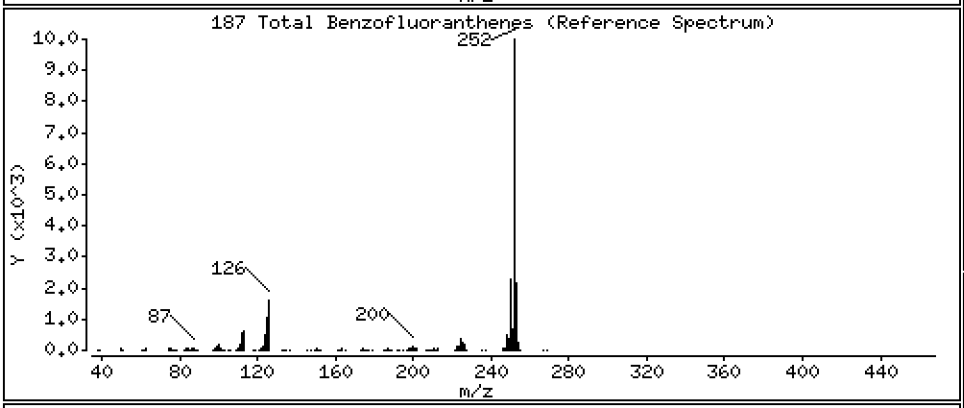
Column diameter: 0.25

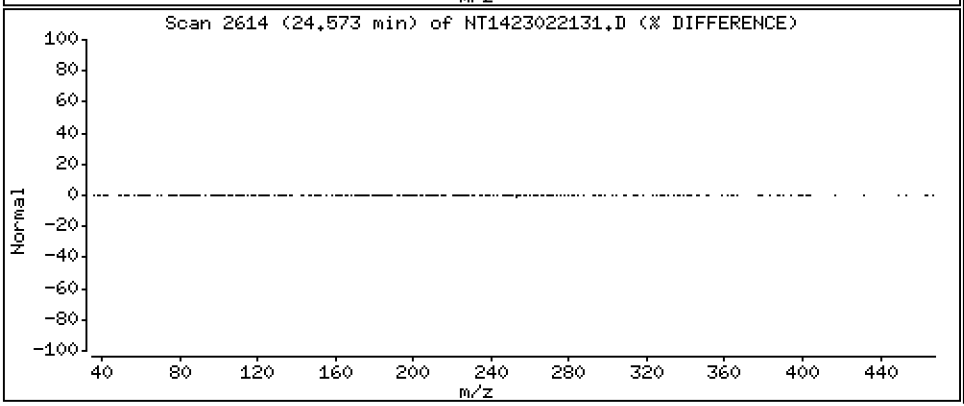
187 Total Benzofluoranthenes

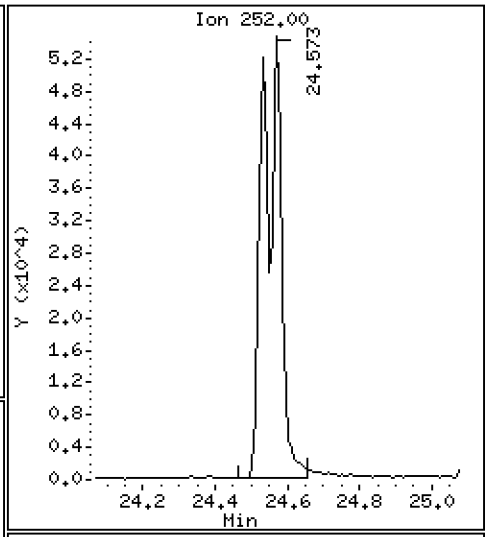
Concentration: 1.126 ug/mL

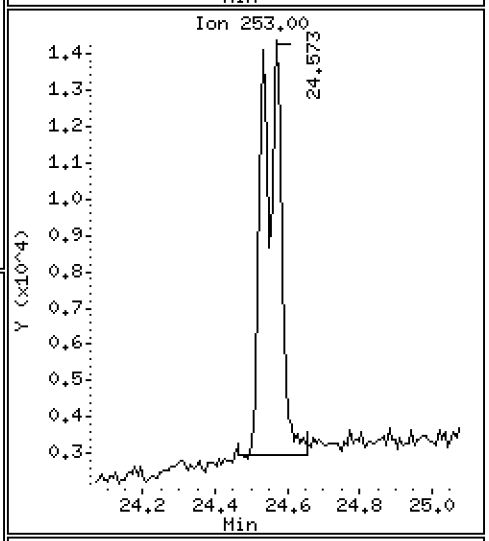


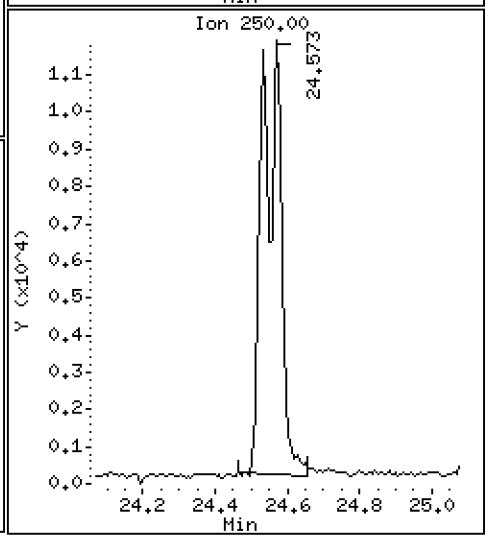












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

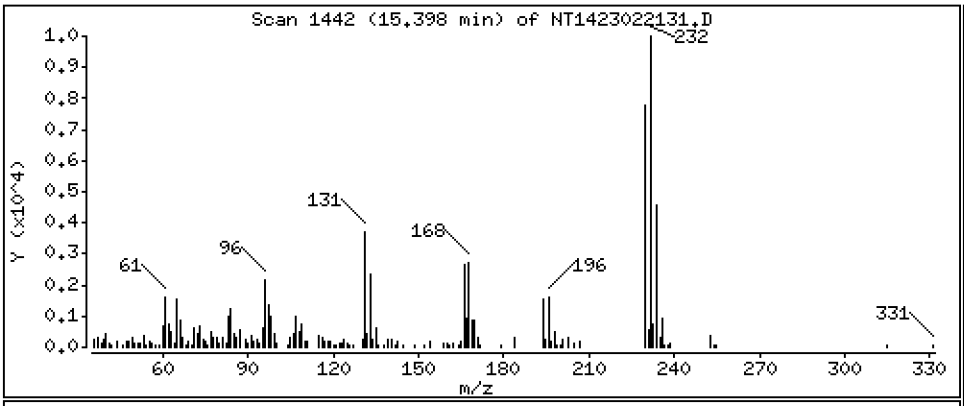
Operator: DSD

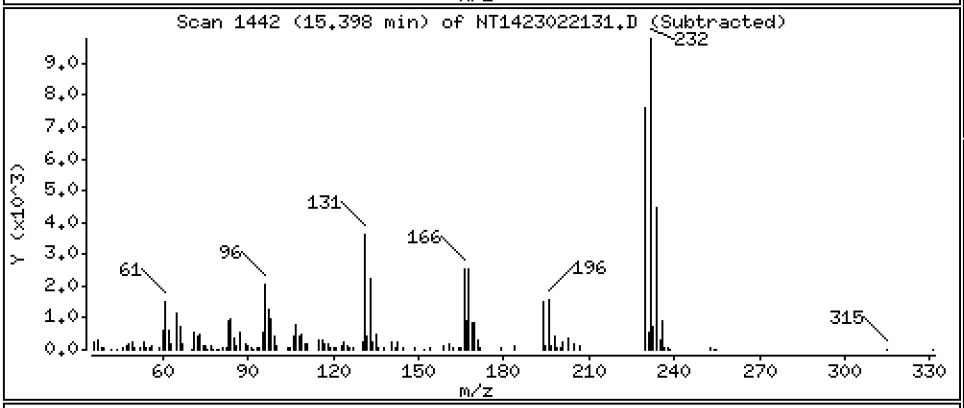
Column phase: ZB-5msi

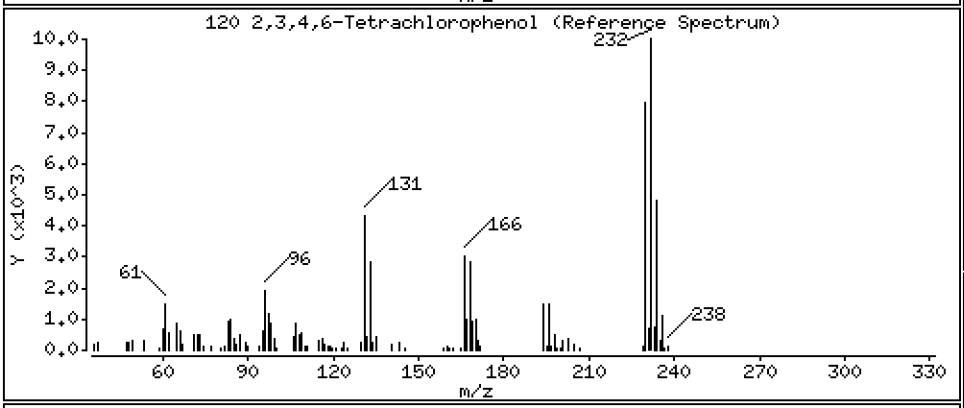
Column diameter: 0.25

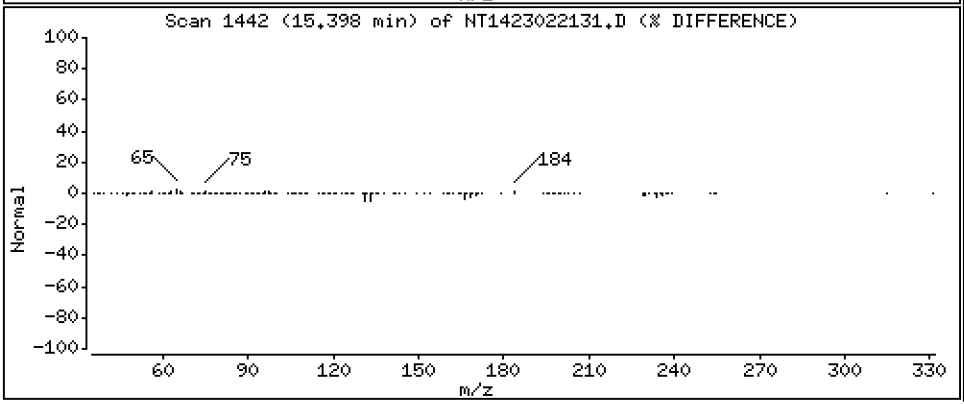
120 2,3,4,6-Tetrachlorophenol

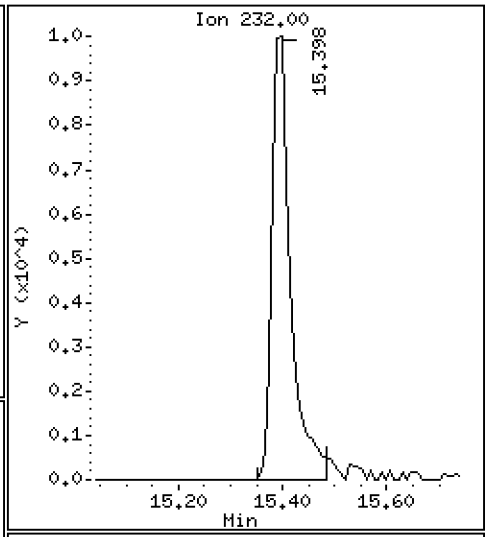
Concentration: 0.4181 ug/mL

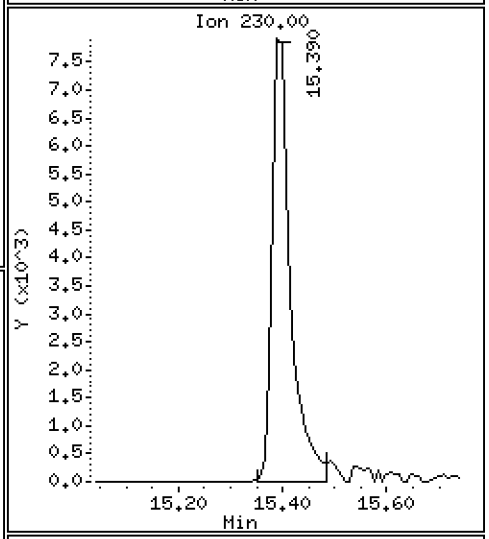


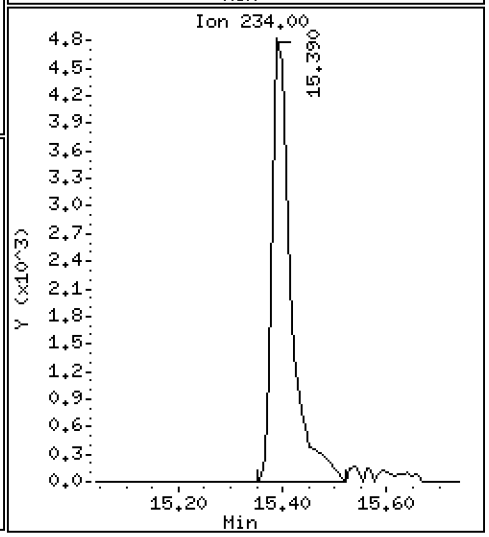












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

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Lab Smp Id: SLB0305-LCV1
Inj Date : 22-FEB-2023 07:32 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0305-LCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Meth Date : 23-Feb-2023 09:59 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.380	6.373	(0.745)	39286	0.59741	0.5974
$	2 Phenol-d5	99	7.972	7.965	(0.930)	74186	0.71115	0.7112
	3 Phenol	94	7.988	7.988	(0.932)	39762	0.36005	0.3601
$	5 2-Chlorophenol-d4	132	8.212	8.212	(0.958)	54815	0.73642	0.7364
	4 Bis(2-Chloroethyl)ether	93	8.135	8.135	(0.949)	39547	0.46878	0.4688
	6 2-Chlorophenol	128	8.243	8.235	(0.962)	37530	0.48258	0.4826
	7 1,3-Dichlorobenzene	146	8.498	8.498	(0.992)	41767	0.48242	0.4824
*	8 1,4-Dichlorobenzene-d4	152	8.568	8.568	(1.000)	245988	4.00000	
	9 1,4-Dichlorobenzene	146	8.599	8.599	(1.004)	44772	0.54489	0.5449
$	10 1,2-Dichlorobenzene-d4	152	8.925	8.925	(1.042)	28828	0.51669	0.5167
	12 1,2-Dichlorobenzene	146	8.948	8.948	(1.044)	40233	0.48980	0.4898
	11 Benzyl alcohol	108	8.878	8.855	(1.036)	18396	0.29661	0.2966
	14 2,2'-oxybis(1-Chloropropane)	121	9.150	9.150	(1.068)	8696	0.37006	0.3701
	13 2-Methylphenol	108	9.096	9.096	(1.062)	36394	0.47195	0.4720
	17 Hexachloroethane	117	9.530	9.530	(1.112)	14079	0.39413	0.3941
	16 N-Nitroso-di-n-propylamine	70	9.406	9.414	(1.098)	33033	0.47059	0.4706
	15 4-Methylphenol	108	9.367	9.367	(1.093)	37355	0.45875	0.4588
$	18 Nitrobenzene-d5	82	9.662	9.662	(0.875)	55872	0.56644	0.5664
	19 Nitrobenzene	77	9.701	9.701	(0.879)	49895	0.50407	0.5041
	20 Isophorone	82	10.143	10.151	(0.919)	71321	0.54613	0.5461
	21 2-Nitrophenol	139	10.329	10.322	(0.935)	16545	0.37356	0.3736
	22 2,4-Dimethylphenol	107	10.399	10.399	(0.942)	111792	1.49567	1.496
	23 Bis(2-Chloroethoxy)methane	93	10.593	10.593	(0.959)	43186	0.50835	0.5084
	24 Benzoic acid	105	10.702	10.686	(0.969)	1044	0.02226	0.02226
	25 2,4-Dichlorophenol	162	10.787	10.787	(0.977)	84793	1.32551	1.326
	26 1,2,4-Trichlorobenzene	180	10.957	10.957	(0.992)	45105	0.58207	0.5821
*	27 Naphthalene-d8	136	11.042	11.042	(1.000)	853786	4.00000	
	28 Naphthalene	128	11.081	11.081	(1.003)	112490	0.53435	0.5344
	29 4-Chloroaniline	127	11.227	11.228	(1.017)	97829	1.08773	1.088
	30 Hexachlorobutadiene	225	11.451	11.452	(1.037)	27775	0.58144	0.5814
	31 4-Chloro-3-methylphenol	107	12.210	12.210	(1.106)	97768	1.41202	1.412
	32 2-Methylnaphthalene	142	12.473	12.481	(1.130)	86397	0.54798	0.5480
	33 Hexachlorocyclopentadiene	237	12.945	12.945	(0.884)	583	0.01179	0.01179

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.108	13.108	(0.895)	63260	1.25854	1.259
	35	2,4,5-Trichlorophenol	196	13.185	13.185	(0.900)	70815	1.30089	1.301
$	36	2-Fluorobiphenyl	172	13.270	13.270	(0.906)	104893	0.57447	0.5745
	37	2-Chloronaphthalene	162	13.464	13.471	(0.919)	78319	0.52550	0.5255
	38	2-Nitroaniline	65	13.742	13.750	(0.938)	52757	1.08876	1.089
	39	Dimethylphthalate	163	14.183	14.184	(0.968)	86955	0.55780	0.5578
	40	Acenaphthylene	152	14.330	14.331	(0.978)	130886	0.57579	0.5758
	41	2,6-Dinitrotoluene	165	14.315	14.323	(0.977)	39416	1.07455	1.075
*	42	Acenaphthene-d10	164	14.648	14.648	(1.000)	510355	4.00000	
	43	3-Nitroaniline	138	14.601	14.601	(0.997)	39071	1.00351	1.004
	44	Acenaphthene	153	14.709	14.717	(1.004)	75625	0.55567	0.5557
	45	2,4-Dinitrophenol	184	14.872	14.818	(1.015)	931	0.03884	0.03884
	46	Dibenzofuran	168	15.042	15.042	(1.027)	122770	0.54942	0.5494
	47	4-Nitrophenol	109	14.980	14.949	(1.023)	10193	0.45200	0.4520
	48	2,4-Dinitrotoluene	165	15.119	15.127	(1.032)	51905	1.00080	1.001
	50	Diethylphthalate	149	15.629	15.645	(1.067)	110941	0.53532	0.5353
	49	Fluorene	166	15.745	15.753	(1.075)	128888	0.55157	0.5516
	51	4-Chlorophenyl-phenylether	204	15.753	15.753	(1.075)	65408	0.52349	0.5235
	52	4-Nitroaniline	138	15.869	15.869	(1.083)	49641	1.11129	1.111
	53	4,6-Dinitro-2-methylphenol	198	15.954	15.961	(0.903)	49913	1.33288	1.333
	54	N-Nitrosodiphenylamine	169	16.008	16.008	(0.906)	83184	0.56006	0.5601
$	55	2,4,6-Tribromophenol	330	16.285	16.293	(1.112)	9231	0.31501	0.3150
	56	4-Bromophenyl-phenylether	248	16.755	16.756	(0.948)	33635	0.50844	0.5084
	57	Hexachlorobenzene	284	17.049	17.057	(0.965)	36207	0.53863	0.5386
	58	Pentachlorophenol	266	17.436	17.421	(0.987)	14738	0.45099	0.4510
*	59	Phenanthrene-d10	188	17.668	17.676	(1.000)	1033553	4.00000	
	60	Phenanthrene	178	17.715	17.723	(1.003)	135515	0.54564	0.5456
	61	Anthracene	178	17.808	17.816	(1.008)	138398	0.56246	0.5625
	62	Carbazole	167	18.156	18.156	(1.028)	122679	0.54941	0.5494
	63	Di-n-butylphthalate	149	18.991	18.992	(1.075)	142980	0.57329	0.5733
	64	Fluoranthene	202	20.129	20.137	(0.884)	167418	0.51359	0.5136
	65	Pyrene	202	20.554	20.562	(0.903)	170903	0.49581	0.4958
$	66	Terphenyl-d14	244	20.864	20.872	(0.916)	147316	0.60192	0.6019
	67	Butylbenzylphthalate	149	21.816	21.816	(0.958)	62977	0.55379	0.5538
	68	Benzo(a)anthracene	228	22.738	22.738	(0.999)	138613	0.57328	0.5733
*	69	Chrysene-d12	240	22.769	22.769	(1.000)	755570	4.00000	
	70	3,3'-Dichlorobenzidine	252	22.714	22.715	(0.998)	133909	1.80761	1.808
	71	Chrysene	228	22.807	22.815	(1.002)	124589	0.57287	0.5729
	72	bis(2-Ethylhexyl)phthalate	149	22.854	22.854	(0.959)	85666	0.39185	0.3918
*	134	Di-n-octylphthalate-d4	153	23.829	23.837	(1.000)	1272969	4.00000	
	73	Di-n-octylphthalate	149	23.845	23.845	(1.001)	152581	0.51263	0.5126
	74	Benzo(b)fluoranthene	252	24.534	24.534	(0.973)	90355	0.51448	0.5145
	75	Benzo(k)fluoranthene	252	24.572	24.573	(0.975)	113957	0.60725	0.6072
	76	Benzo(a)pyrene	252	25.107	25.115	(0.996)	83795	0.50342	0.5034
*	77	Perylene-d12	264	25.215	25.215	(1.000)	553476	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.540	27.540	(1.092)	72252	0.52692	0.5269
	79	Dibenzo(a,h)anthracene	278	27.556	27.556	(1.093)	63256	0.55973	0.5597
	80	Benzo(g,h,i)perylene	276	28.216	28.216	(1.119)	54224	0.48759	0.4876
	90	N-Nitrosodimethylamine	74	4.280	4.280	(0.500)	35646	0.70012	0.7001
	91	Aniline	93	8.034	8.034	(0.938)	112299	0.95069	0.9507
	93	Benzidine	184	20.400	20.392	(0.896)	152718	1.78115	1.781
	103	Pyridine	79	4.295	4.288	(0.501)	65386	0.81161	0.8116
	105	1-methylnaphthalene	142	12.697	12.698	(1.150)	79012	0.53379	0.5338
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.077	16.077	(1.098)	141942	0.56356	0.5636

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.572	24.573	(0.975)	193055	1.12593	1.126
120 2,3,4,6-Tetrachlorophenol	232	15.397	15.390	(1.051)	24295	0.41807	0.4181

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022131.D
Lab Smp Id: SLB0305-LCV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 06:55
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	235125	117563	470250	245988	4.62
27 Naphthalene-d8	883104	441552	1766208	853786	-3.32
42 Acenaphthene-d10	537789	268895	1075578	510355	-5.10
59 Phenanthrene-d10	1079531	539766	2159062	1033553	-4.26
69 Chrysene-d12	826409	413205	1652818	755570	-8.57
134 Di-n-octylphthala	1339562	669781	2679124	1272969	-4.97
77 Perylene-d12	590325	295163	1180650	553476	-6.24

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.67	-0.04
69 Chrysene-d12	22.77	22.27	23.27	22.77	-0.00
134 Di-n-octylphthala	23.84	23.34	24.34	23.83	-0.03
77 Perylene-d12	25.22	24.72	25.72	25.22	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022131.D

Lab ID: SLB0305-LCV1
nt14.i, ABN.m, 22-FEB-2023 07:32

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: NT1423022130.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

LOW-CONCENTRATION CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00046
Laboratory ID: SLB0308-LCV1
Sequence: SLB0308
Standard ID: K011106

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	0.50000	0.6	13.3	50.00
4-Methylphenol	0.50000	0.5	-0.6	50.00
Naphthalene	0.50000	0.5	7.9	50.00
2-Methylnaphthalene	0.50000	0.5	6.6	50.00
Acenaphthylene	0.50000	0.6	14.7	50.00
Dimethylphthalate	0.50000	0.6	10.2	50.00
Acenaphthene	0.50000	0.5	9.9	50.00
Dibenzofuran	0.50000	0.5	8.1	50.00
Fluorene	0.50000	0.5	9.5	50.00
Phenanthrene	0.50000	0.5	7.8	50.00
Anthracene	0.50000	0.6	11.6	50.00
Fluoranthene	0.50000	0.5	9.5	50.00
Pyrene	0.50000	0.5	4.2	50.00
Butylbenzylphthalate	0.50000	0.6	18.4	50.00
Benzo(a)anthracene	0.50000	0.6	12.8	50.00
Chrysene	0.50000	0.6	12.2	50.00
bis(2-Ethylhexyl)phthalate	0.50000	0.4	-18.3	50.00
Benzofluoranthenes, Total	1.0000	1.1	11.2	50.00
Benzo(a)pyrene	0.50000	0.5	-2.6	50.00
Indeno(1,2,3-cd)pyrene	0.50000	0.5	-4.7	50.00
Dibenzo(a,h)anthracene	0.50000	0.5	0.9	50.00
Benzo(g,h,i)perylene	0.50000	0.4	-10.6	50.00
2-Fluorophenol	0.75000	0.619	-17.4	50.00
Phenol-d5	0.75000	0.734	-2.1	50.00
2-Chlorophenol-d4	0.75000	0.790	5.3	50.00
1,2-Dichlorobenzene-d4	0.50000	0.549	9.8	50.00
Nitrobenzene-d5	0.50000	0.541	8.3	50.00
2-Fluorobiphenyl	0.50000	0.572	14.5	50.00
2,4,6-Tribromophenol	0.75000	0.0831	-88.9 *	50.00

LOW-CONCENTRATION CALIBRATION VERIFICATION
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00046
Laboratory ID: SLB0308-LCV1
Sequence: SLB0308
Standard ID: K011106

p-Terphenyl-d14	0.50000	0.635	27.0	50.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022147.D

Page 1

Date : 22-FEB-2023 17:11

Client ID:

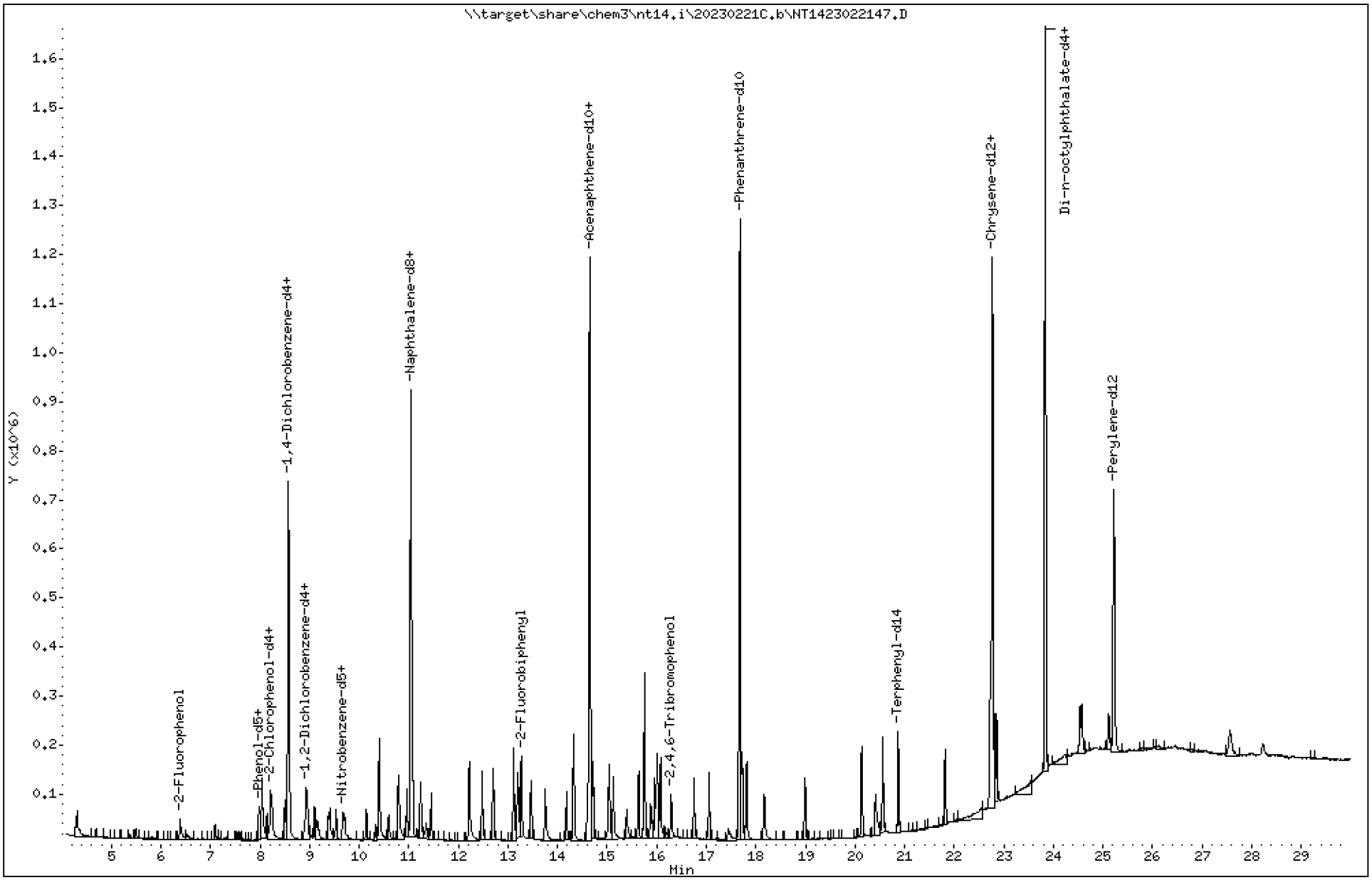
Instrument: nt14.i

Sample Info: SLB0308-LCV1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

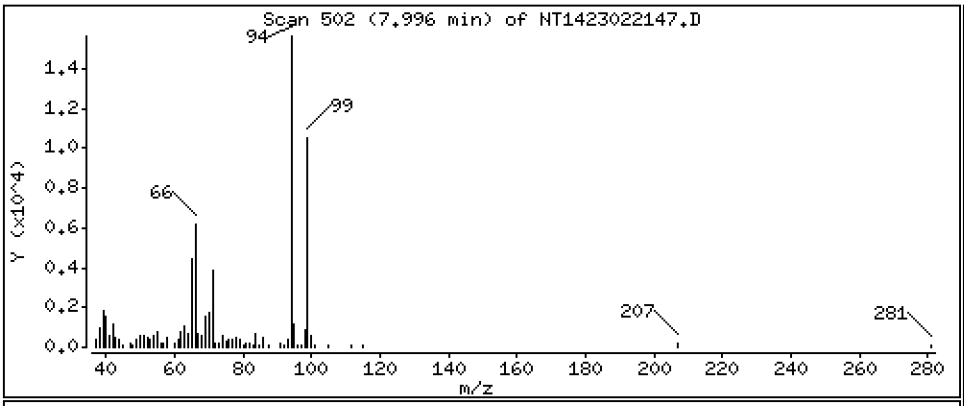
Operator: DSD

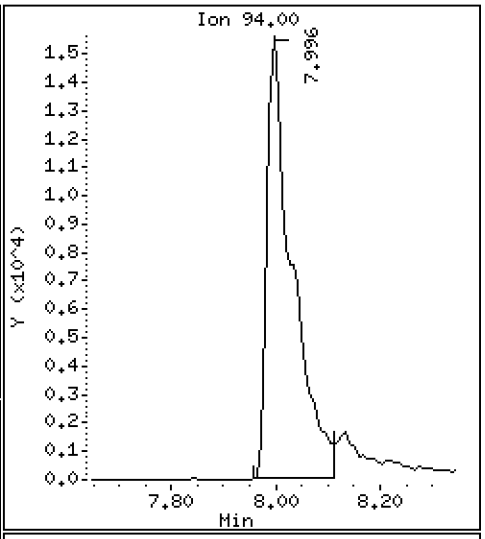
Column phase: ZB-5msi

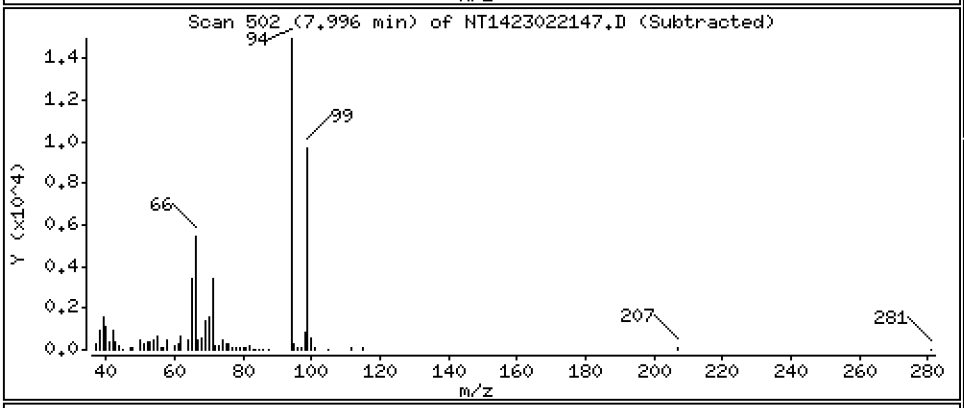
Column diameter: 0.25

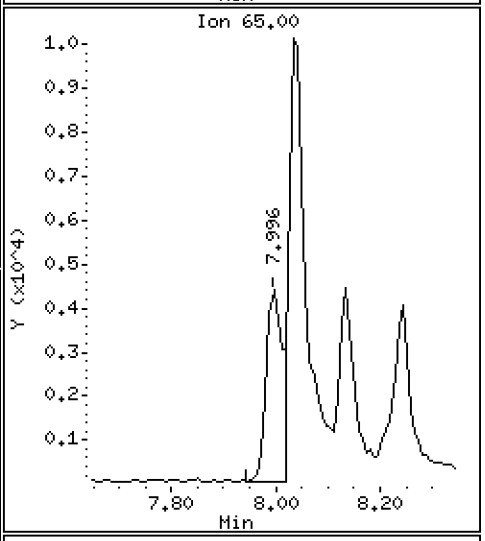
3 Phenol

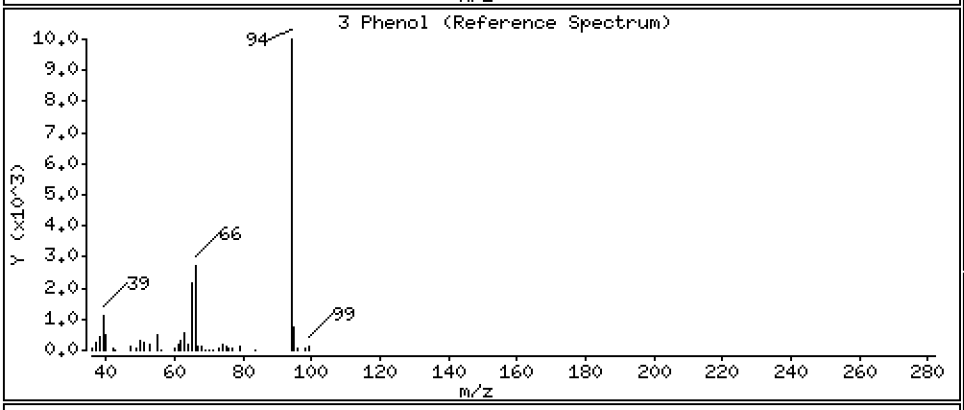
Concentration: 0.5665 ug/mL

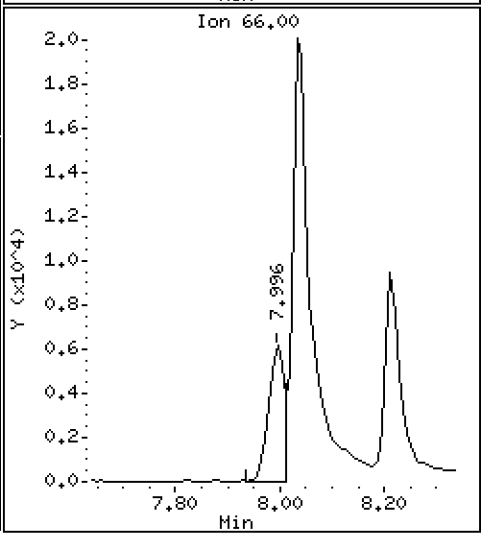


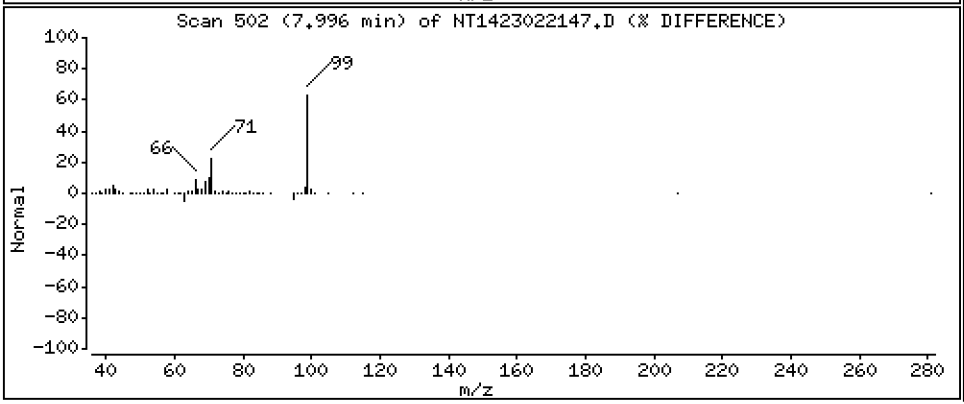












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

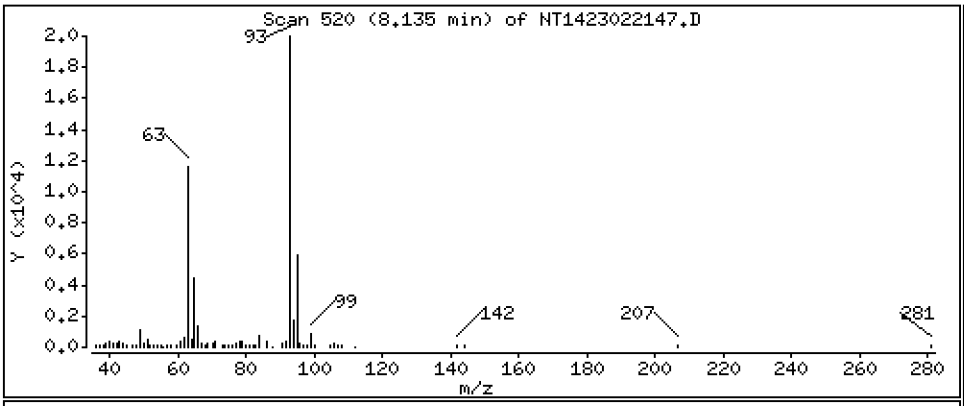
Operator: DSD

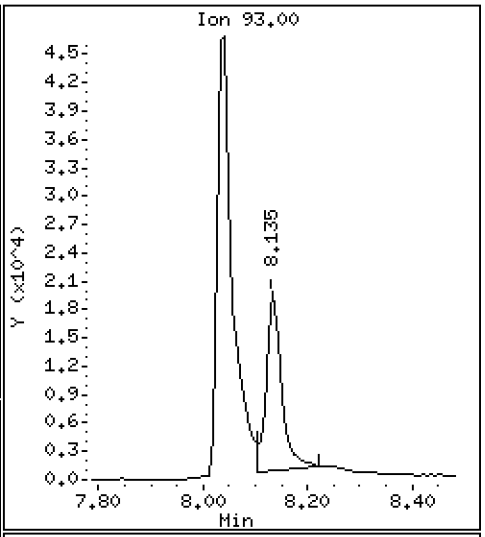
Column phase: ZB-5msi

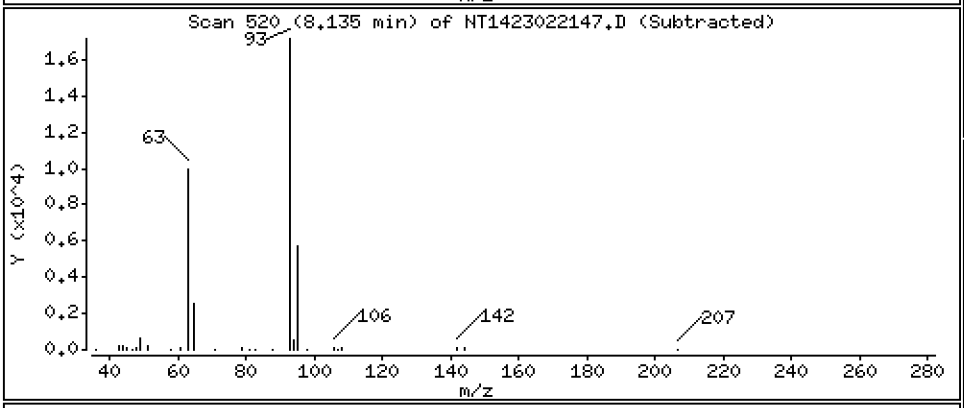
Column diameter: 0.25

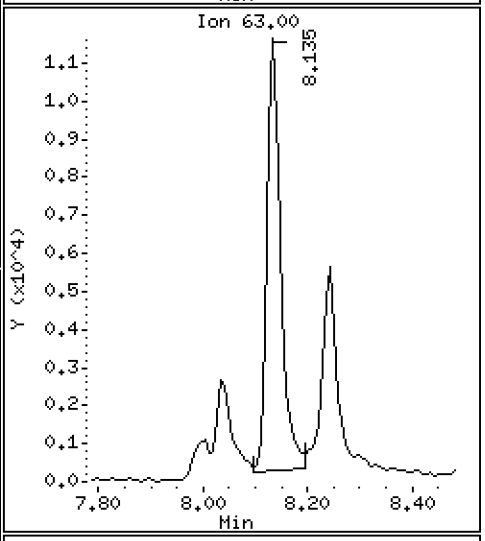
4 Bis(2-Chloroethyl)ether

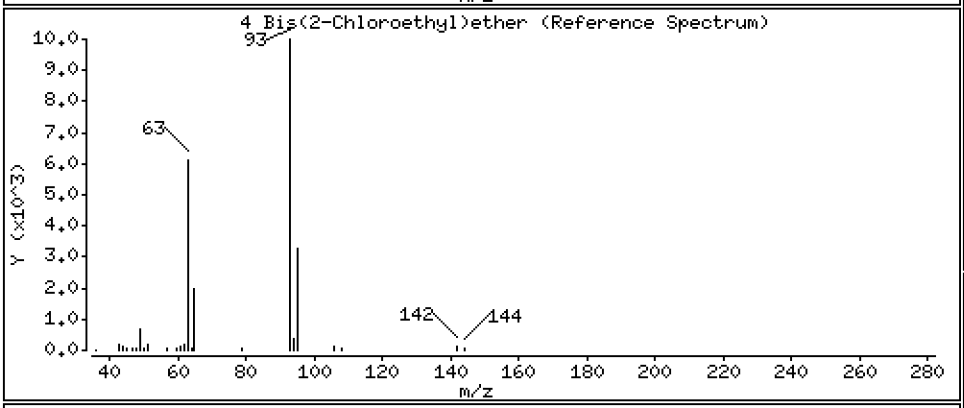
Concentration: 0.5245 ug/mL

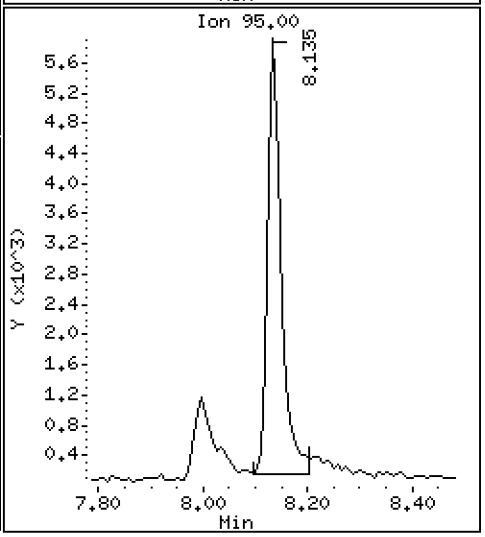


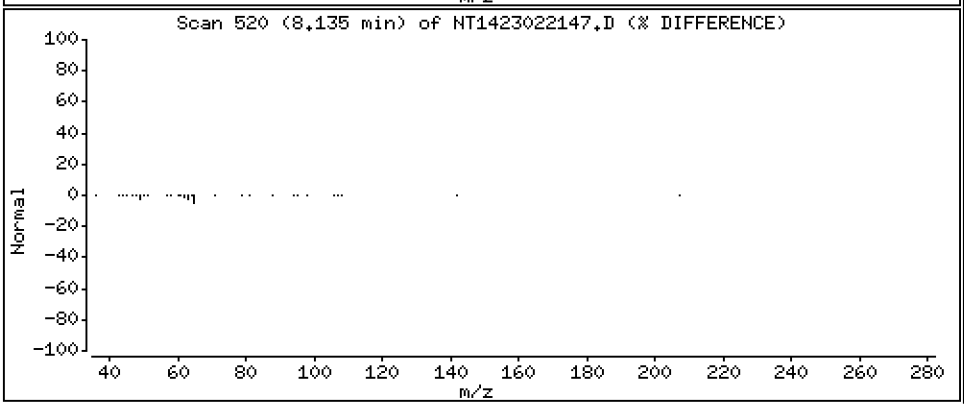












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

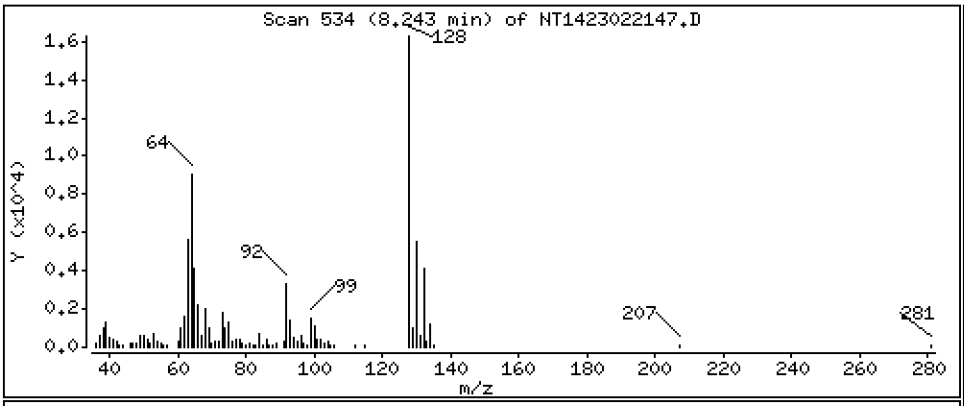
Operator: DSD

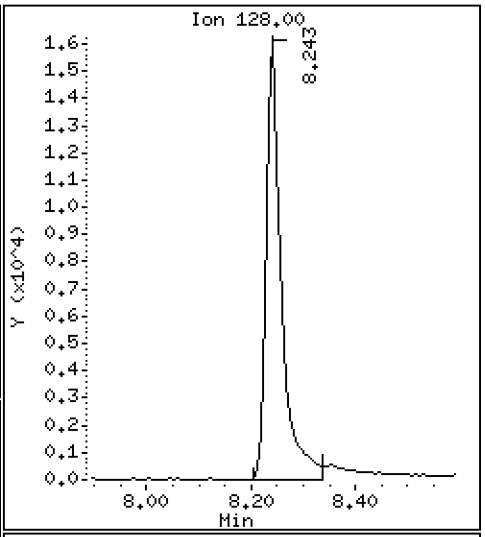
Column phase: ZB-5msi

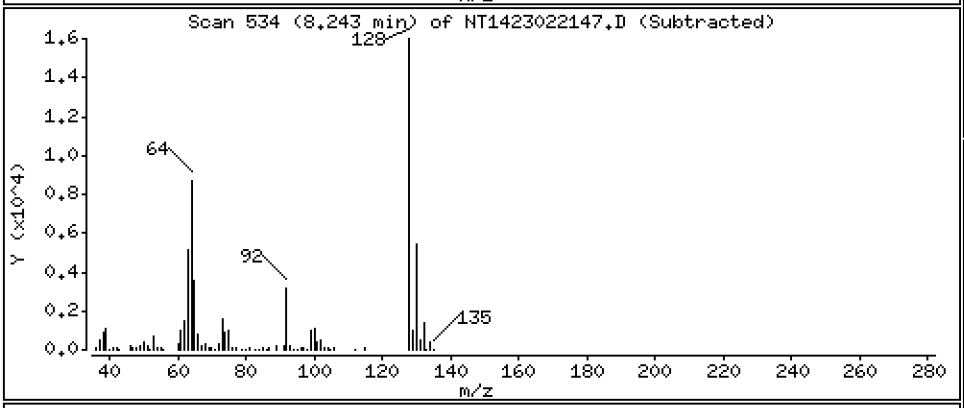
Column diameter: 0.25

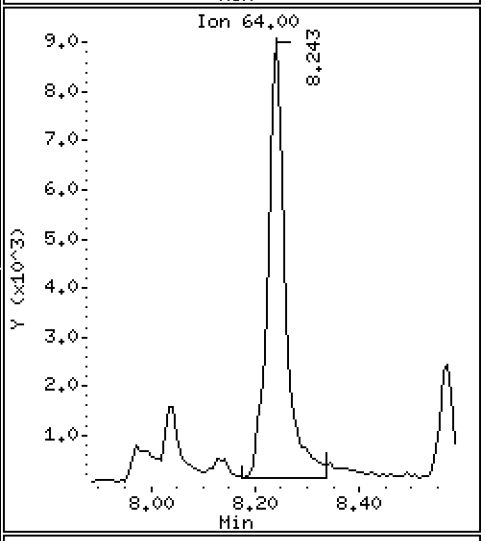
6 2-Chlorophenol

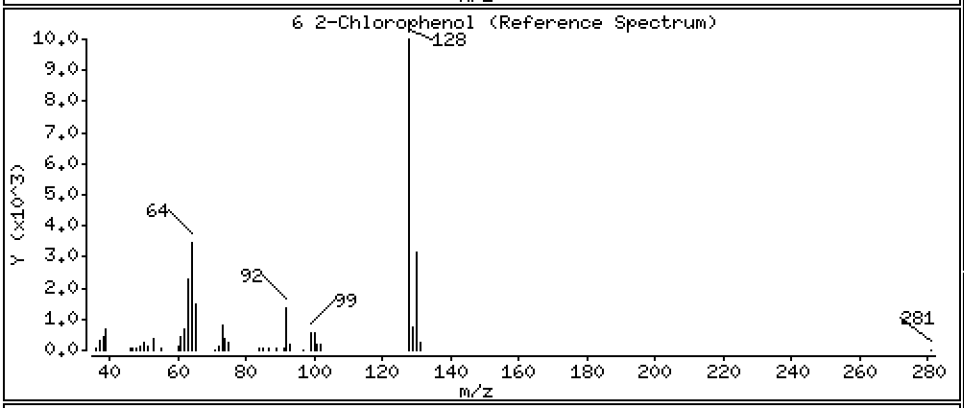
Concentration: 0.5053 ug/mL

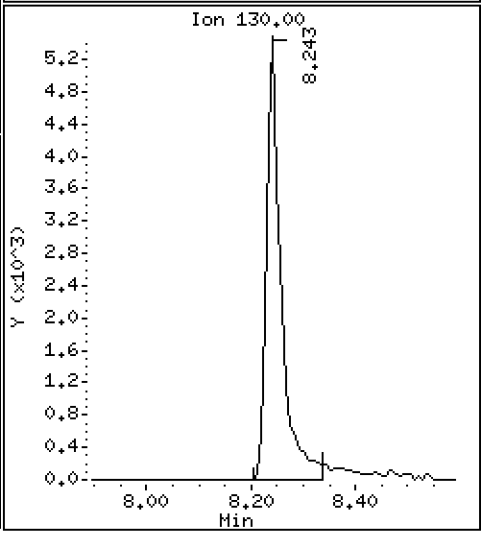


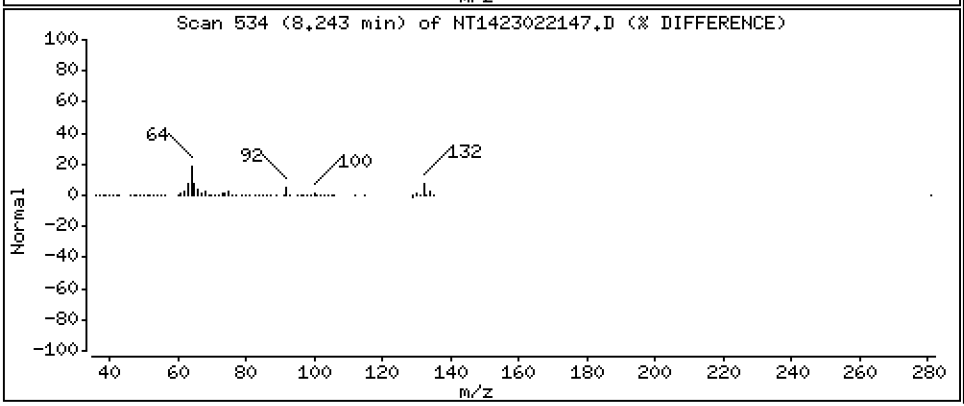












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

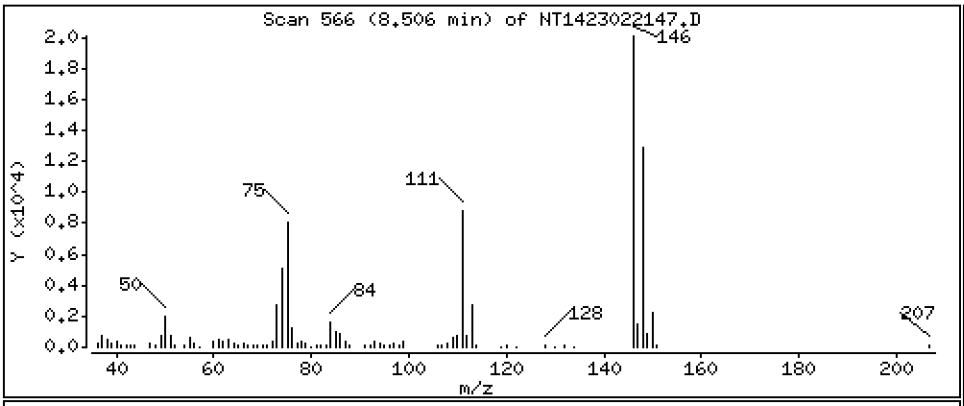
Operator: DSD

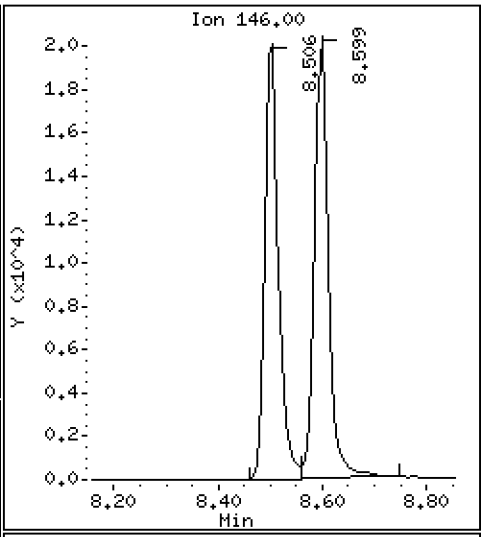
Column phase: ZB-5msi

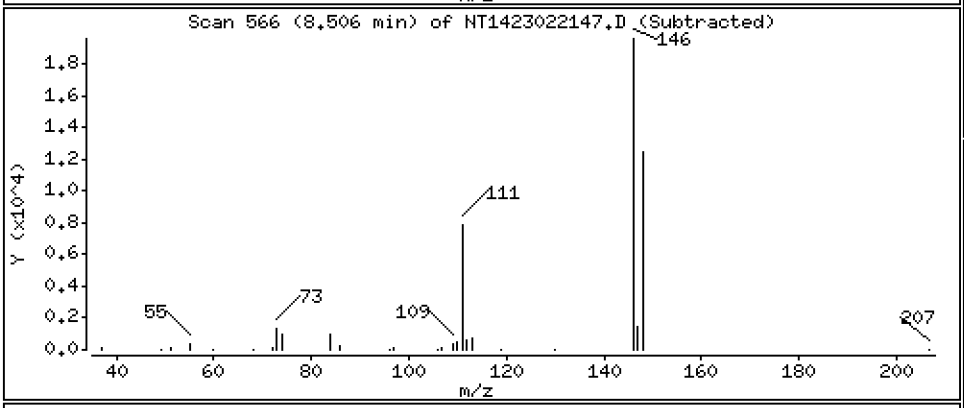
Column diameter: 0.25

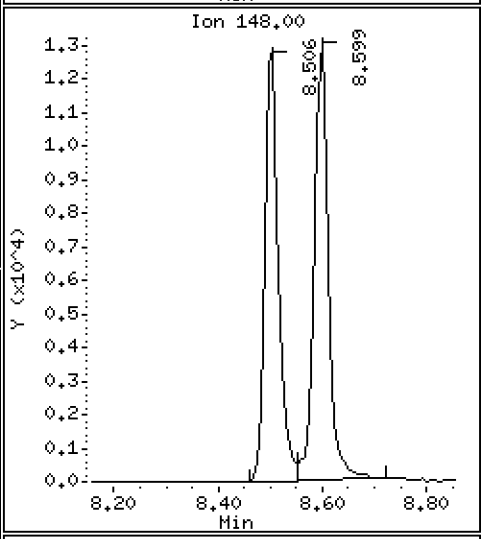
7 1,3-Dichlorobenzene

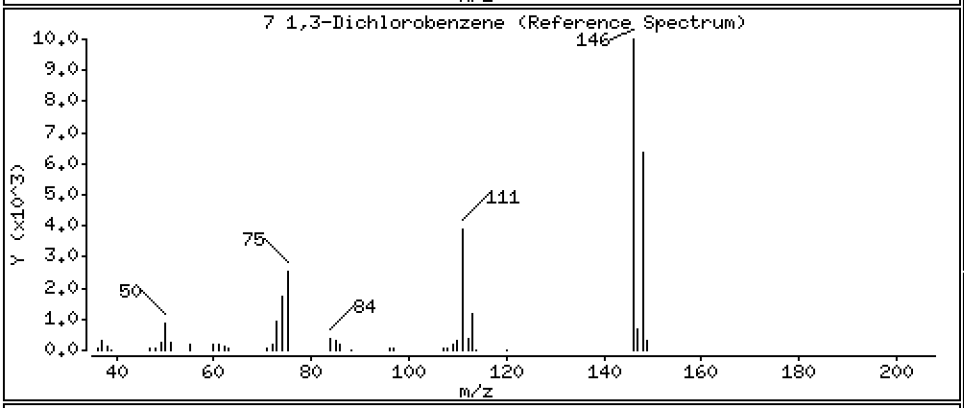
Concentration: 0.5172 ug/mL

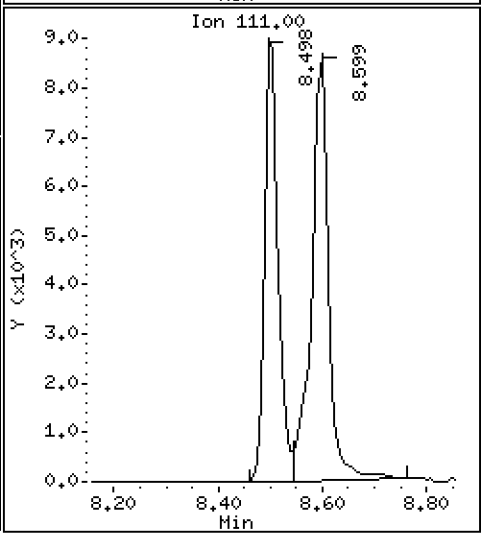


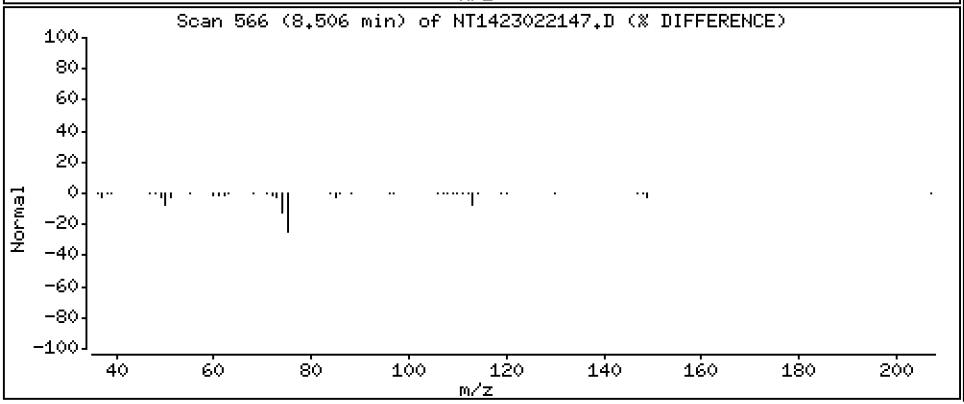












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

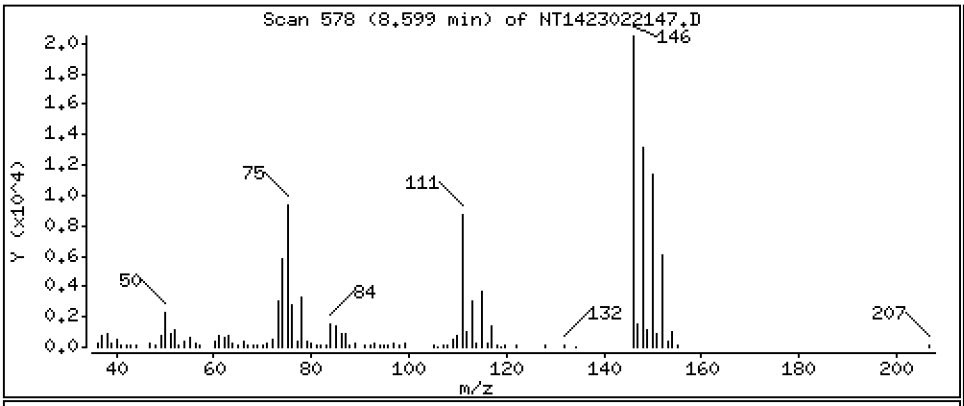
Operator: DSD

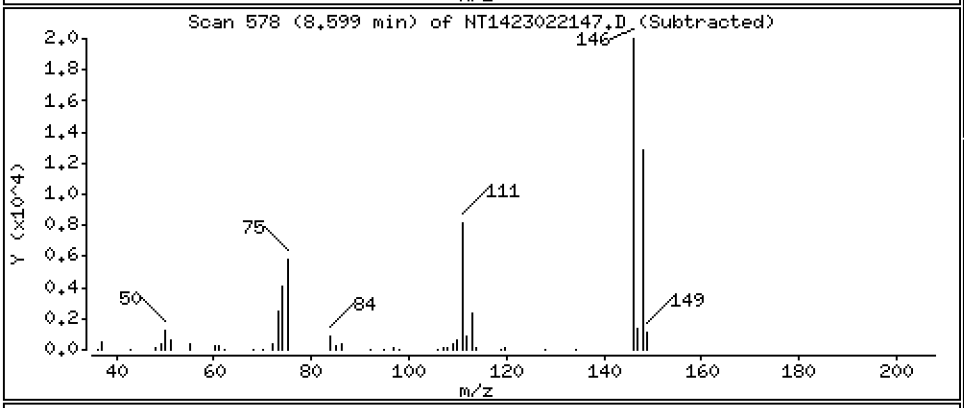
Column phase: ZB-5msi

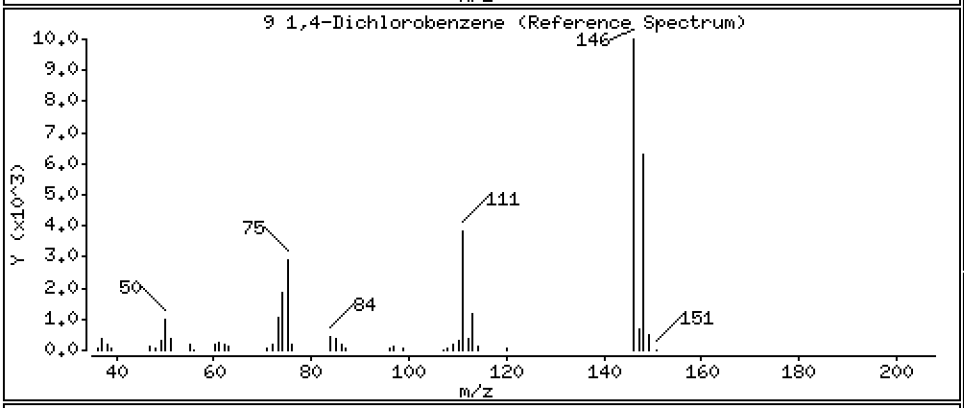
Column diameter: 0.25

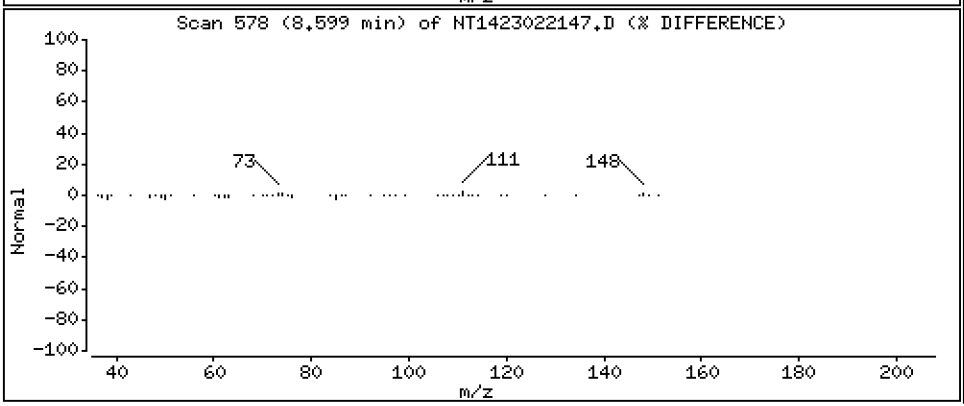
9 1,4-Dichlorobenzene

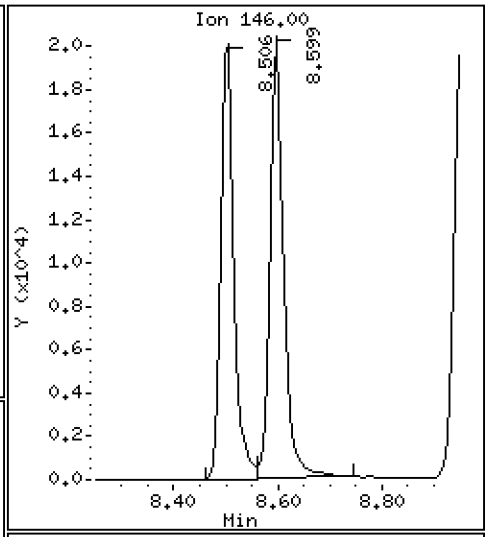
Concentration: 0.5839 ug/mL

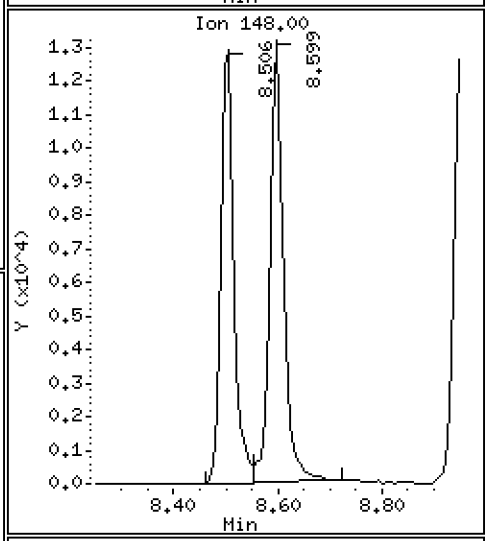


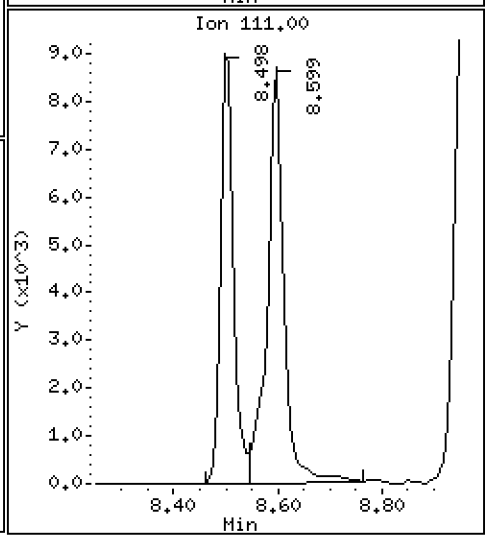












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

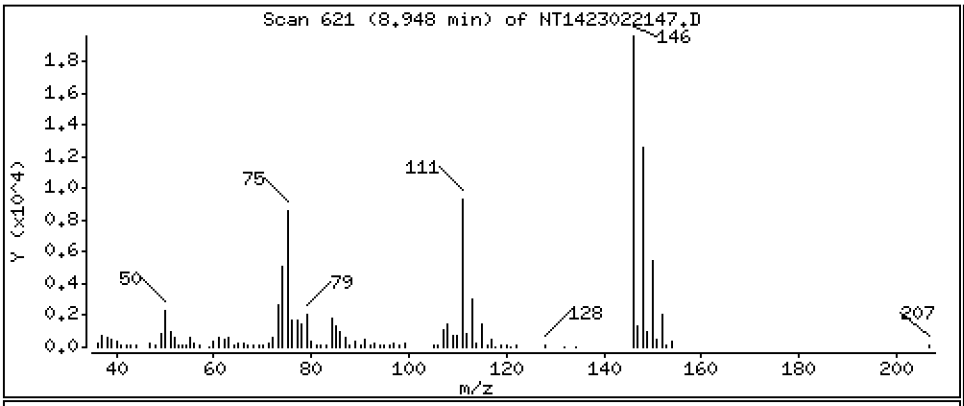
Operator: DSD

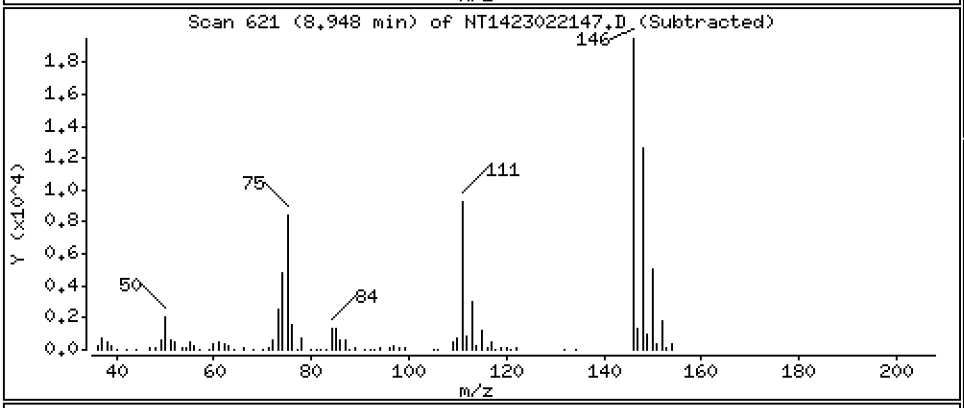
Column phase: ZB-5msi

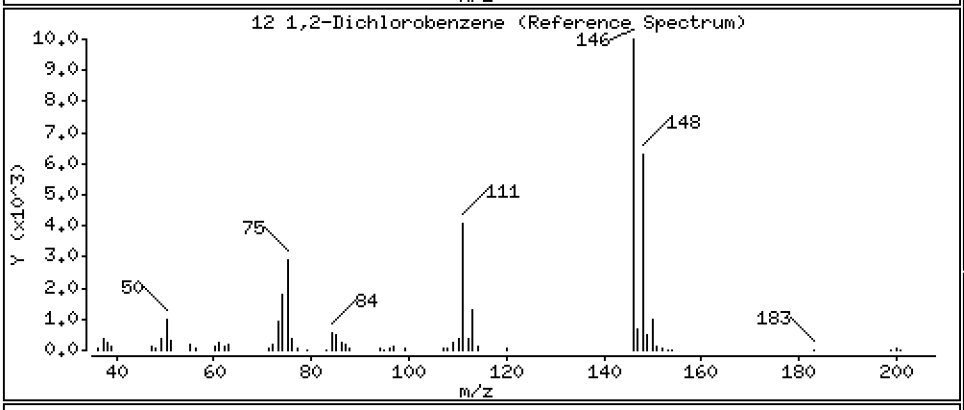
Column diameter: 0.25

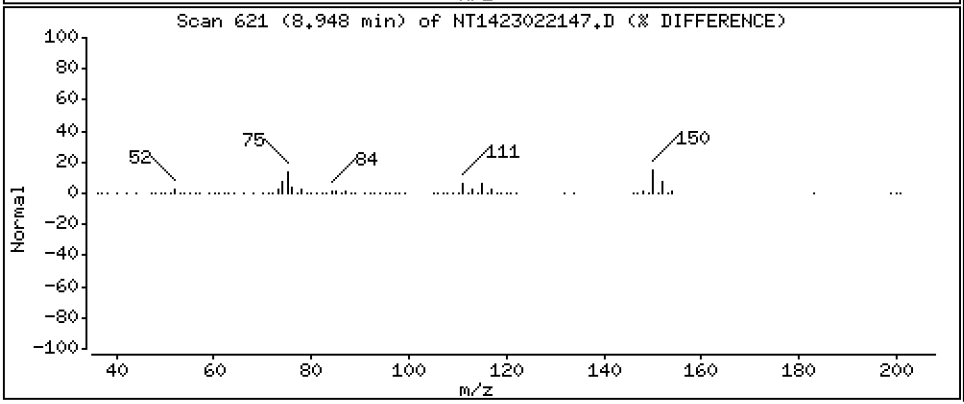
12 1,2-Dichlorobenzene

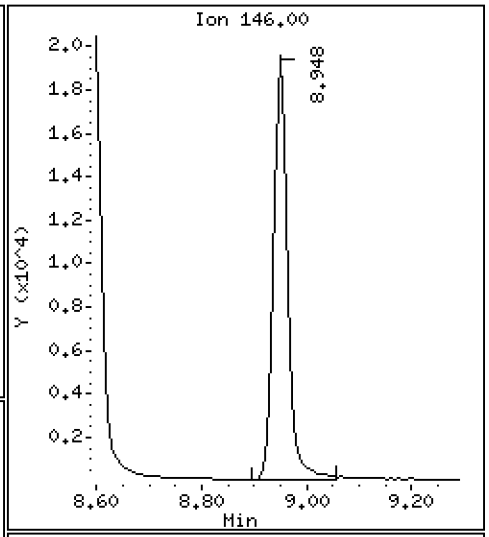
Concentration: 0.5203 ug/mL

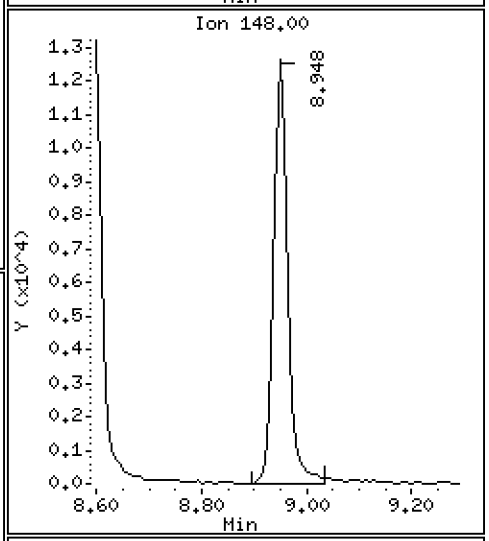


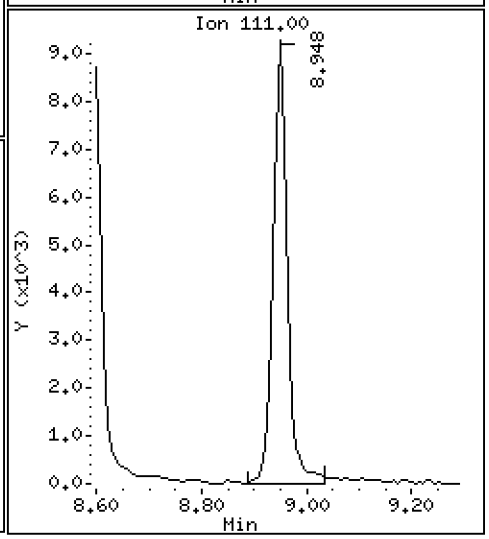












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

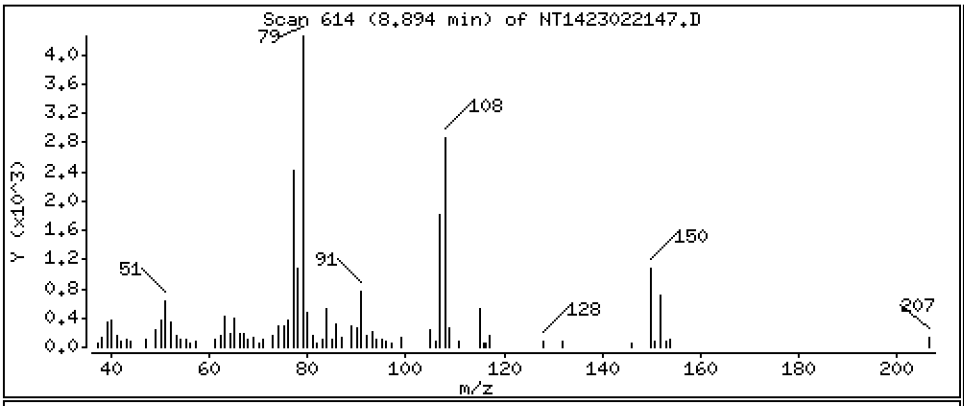
Operator: DSD

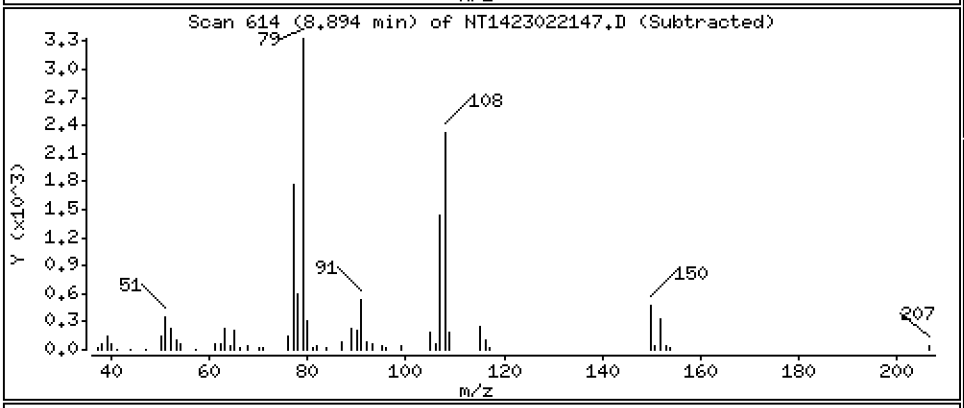
Column phase: ZB-5msi

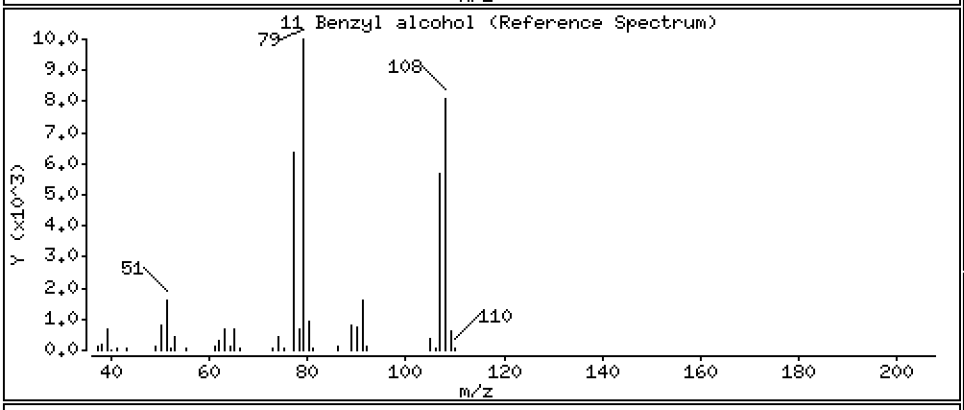
Column diameter: 0.25

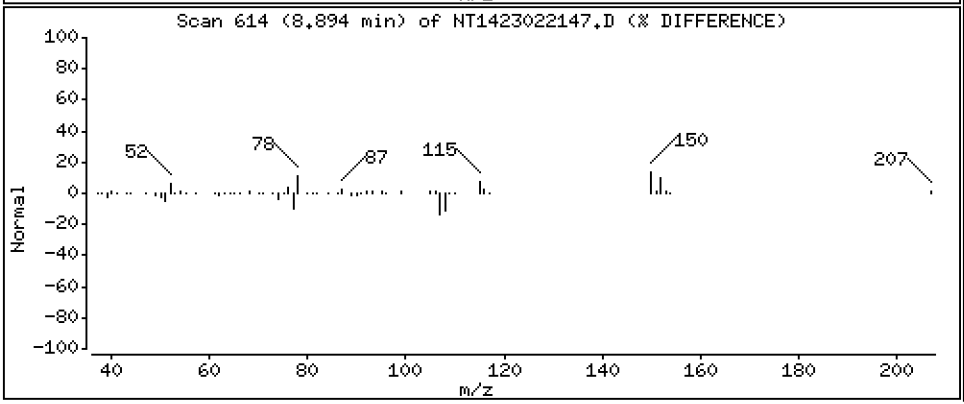
11 Benzyl alcohol

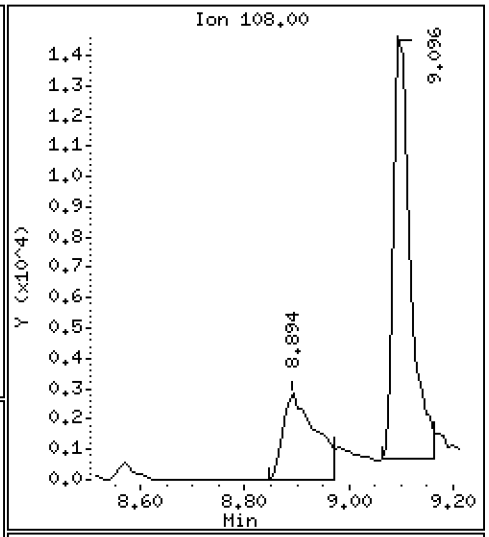
Concentration: 0.2468 ug/mL

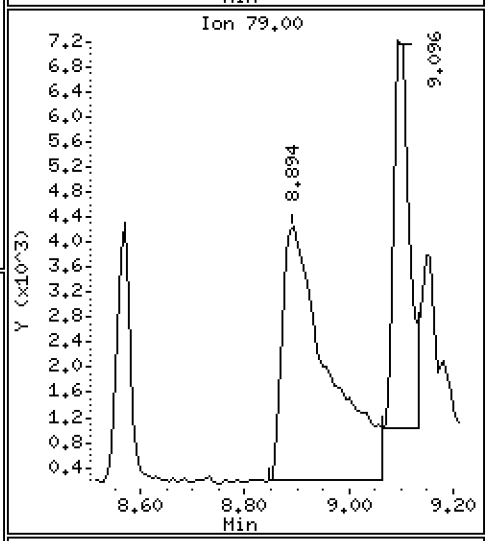


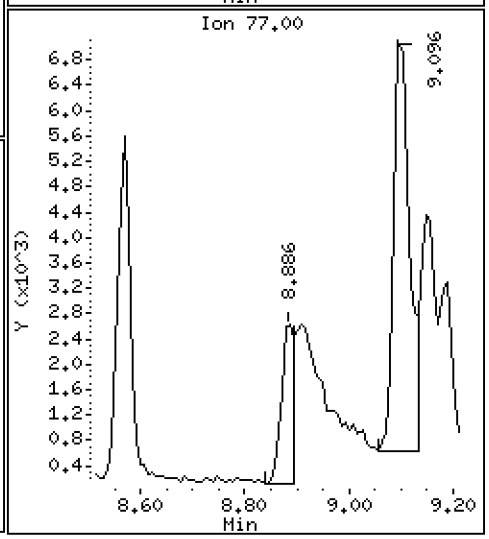












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

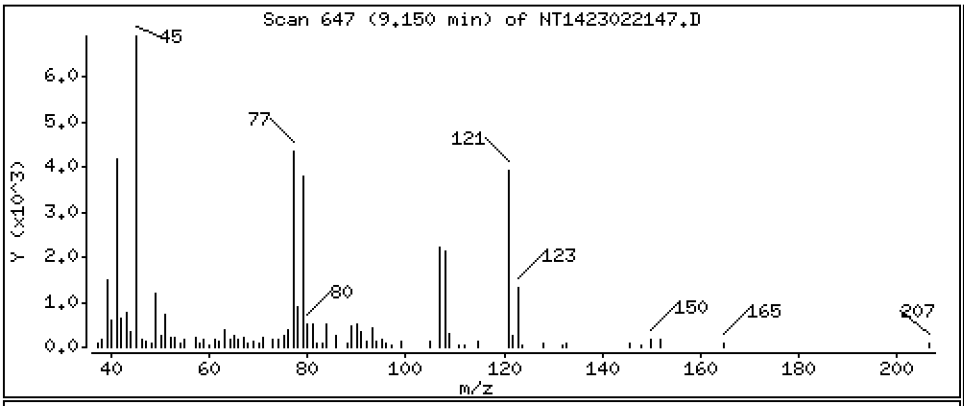
Operator: DSD

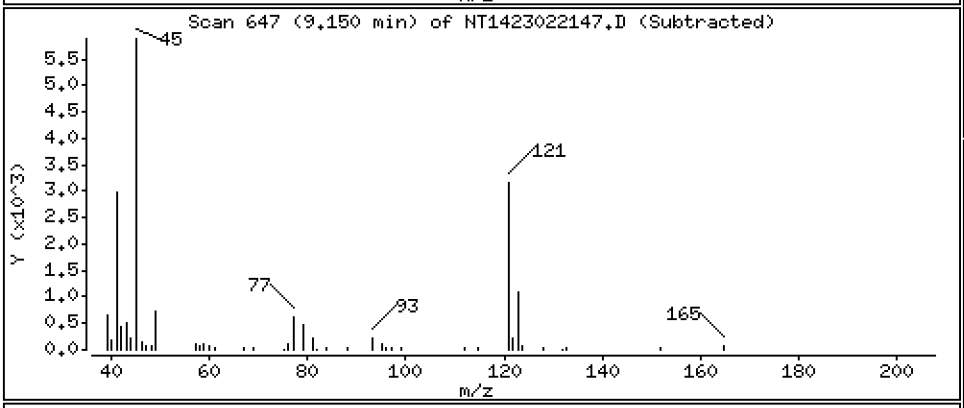
Column phase: ZB-5msi

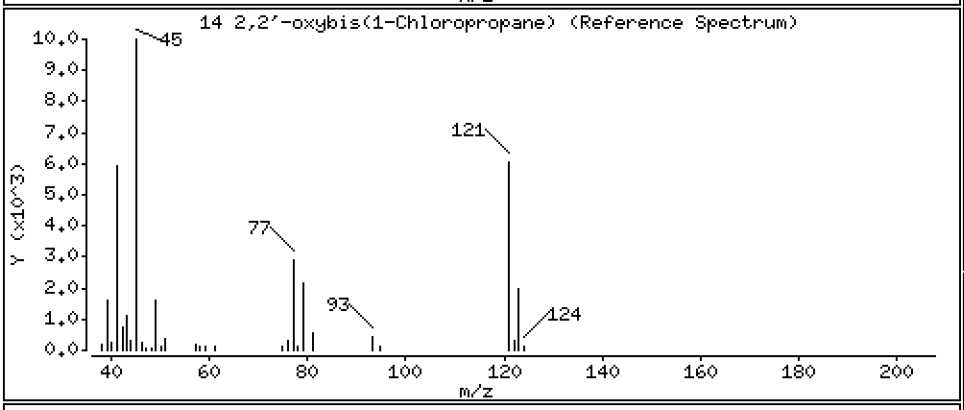
Column diameter: 0.25

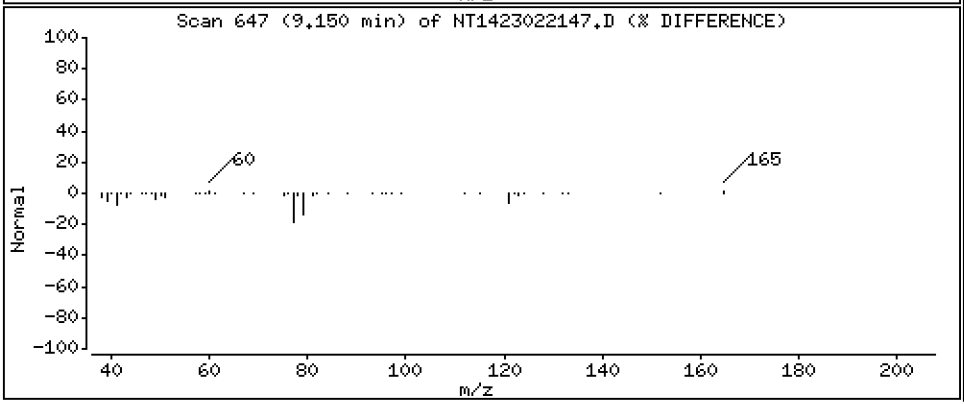
14 2,2'-oxybis(1-Chloropropane)

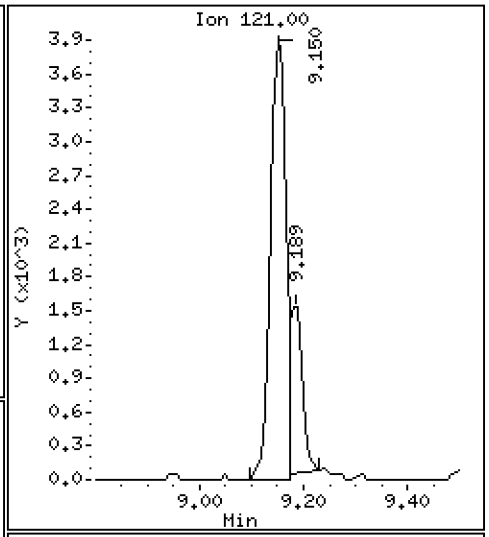
Concentration: 0.4121 ug/mL

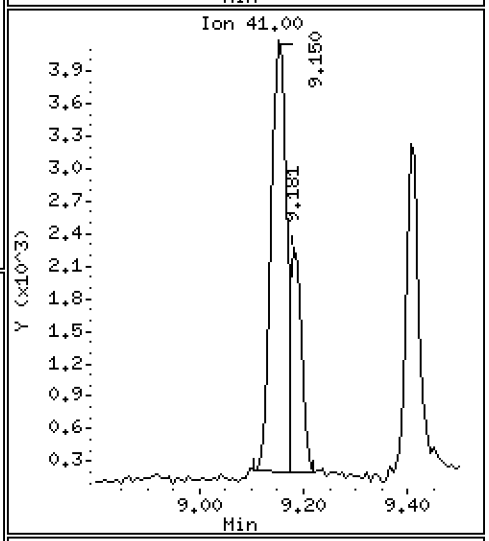


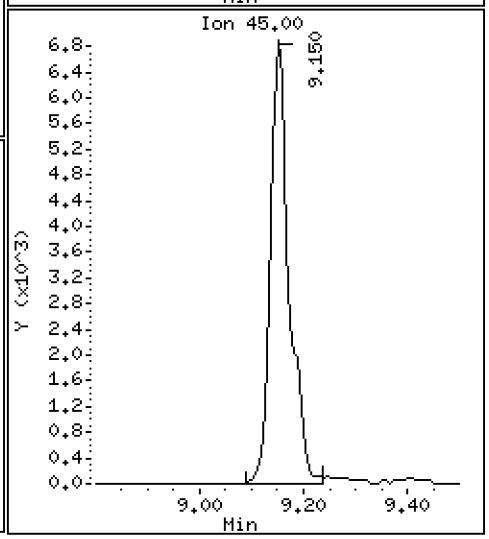












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

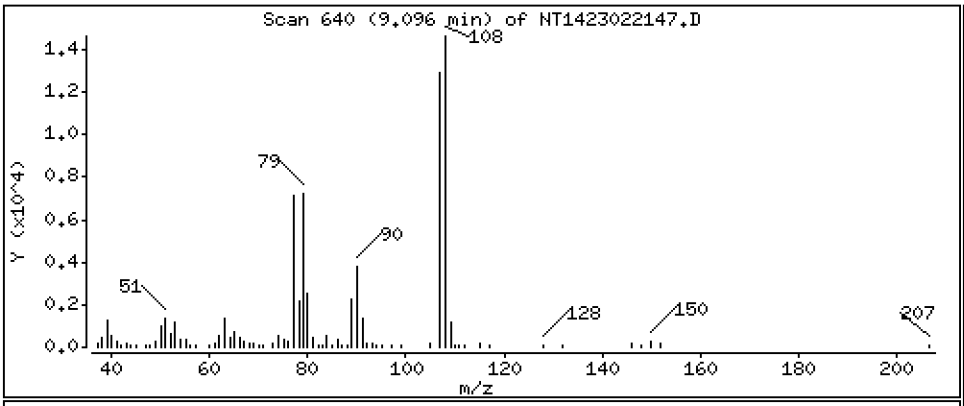
Operator: DSD

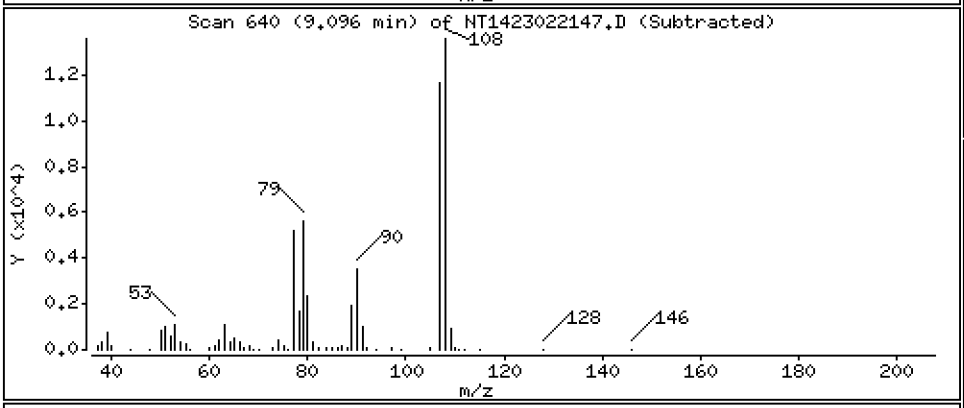
Column phase: ZB-5msi

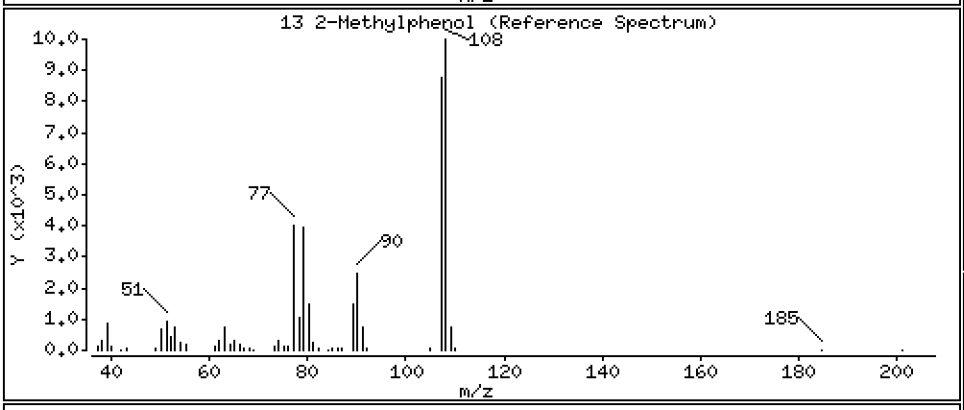
Column diameter: 0.25

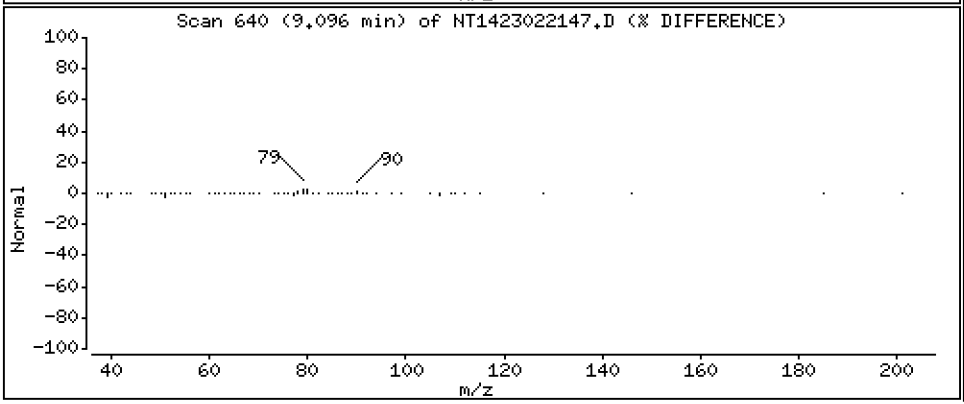
13 2-Methylphenol

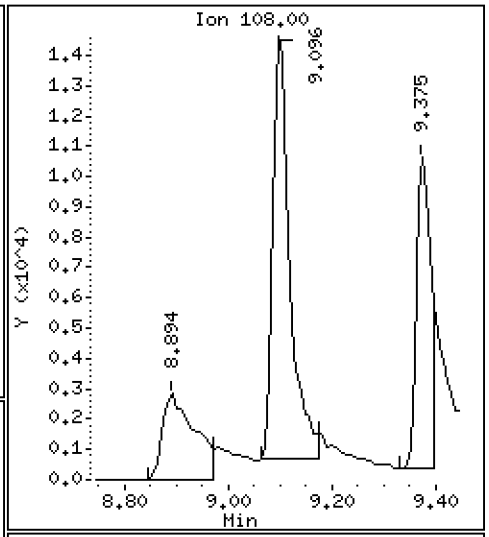
Concentration: 0.4889 ug/mL

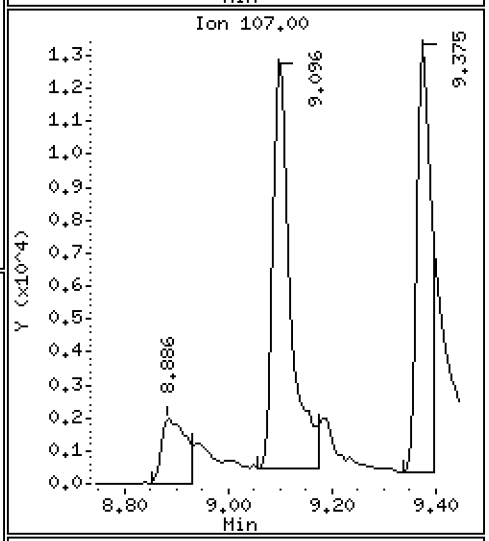


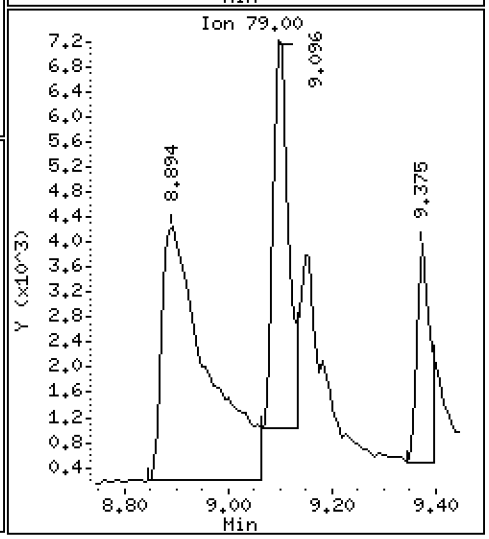












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

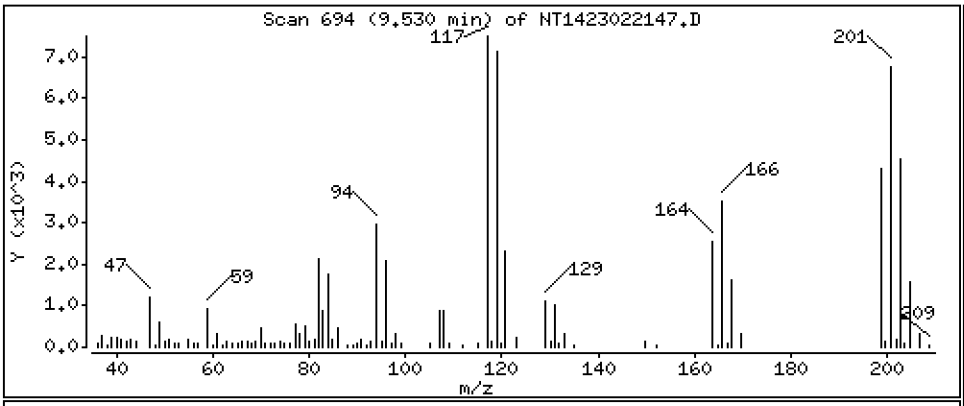
Operator: DSD

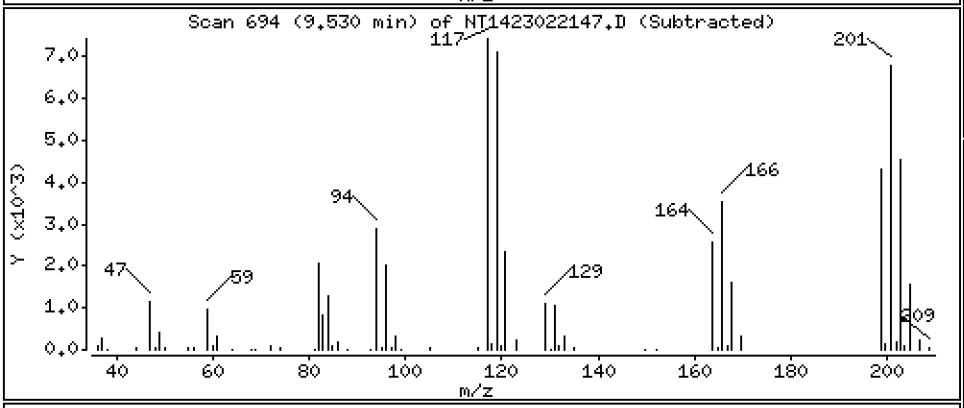
Column phase: ZB-5msi

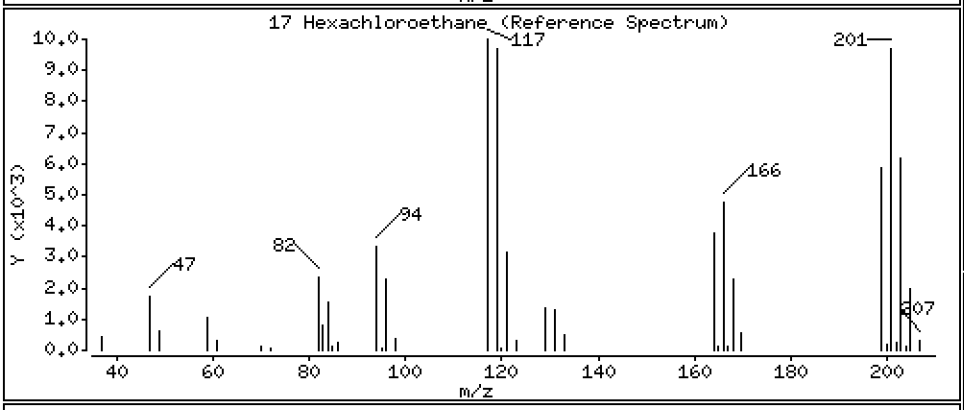
Column diameter: 0.25

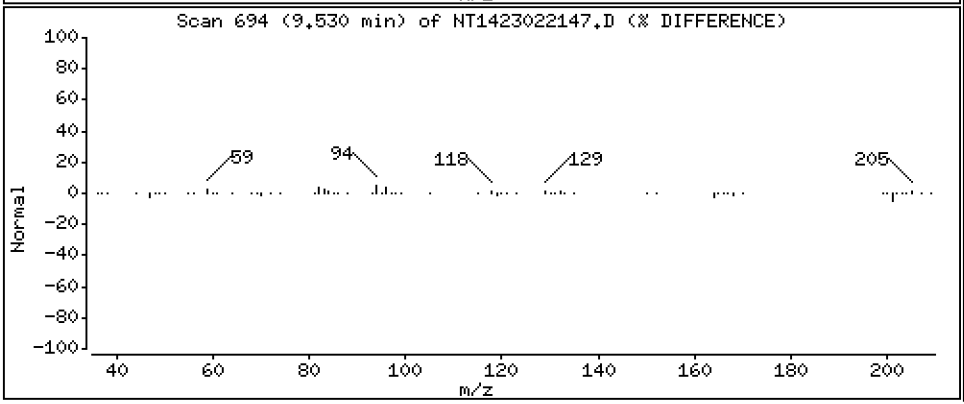
17 Hexachloroethane

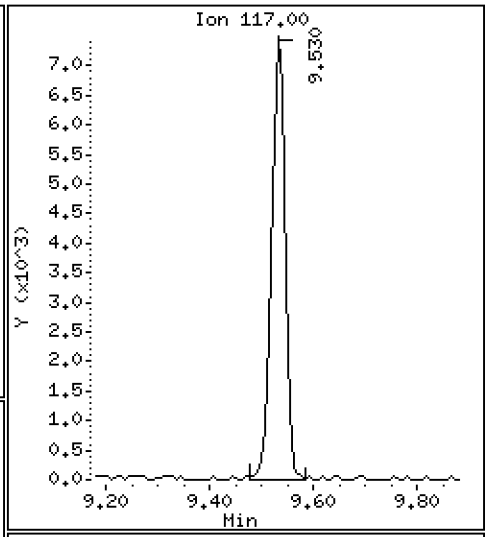
Concentration: 0.4425 ug/mL

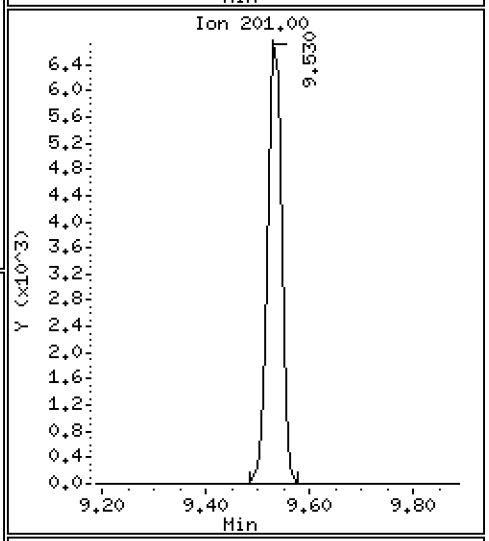


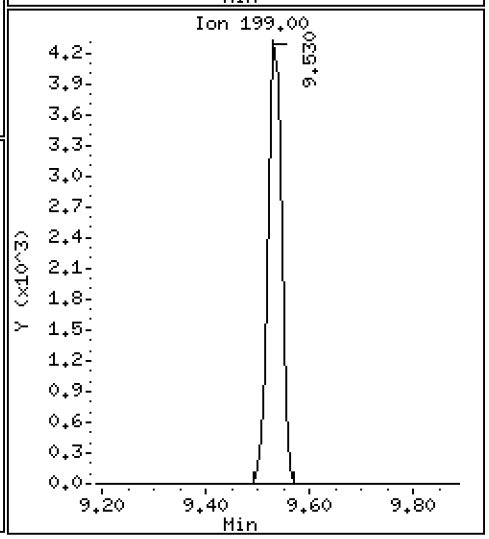












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

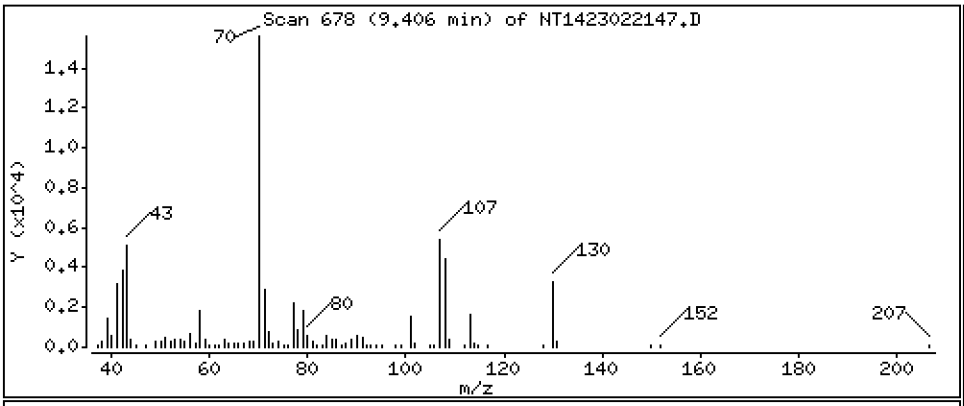
Operator: DSD

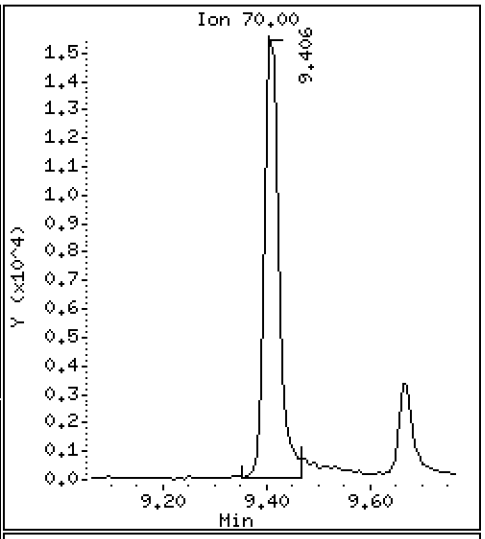
Column phase: ZB-5msi

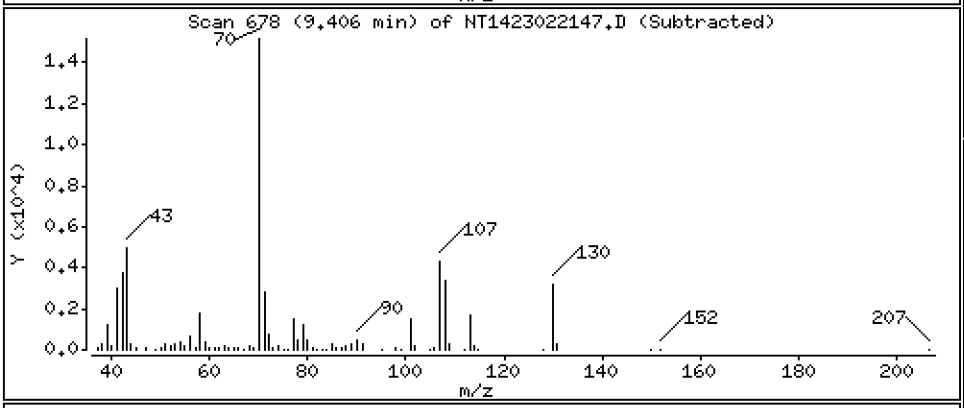
Column diameter: 0.25

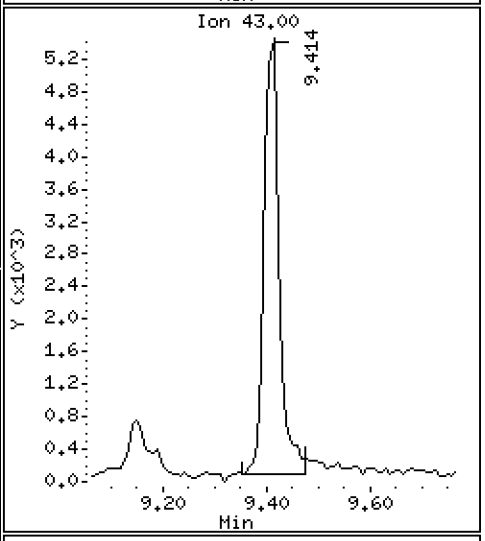
16 N-Nitroso-di-n-propylamine

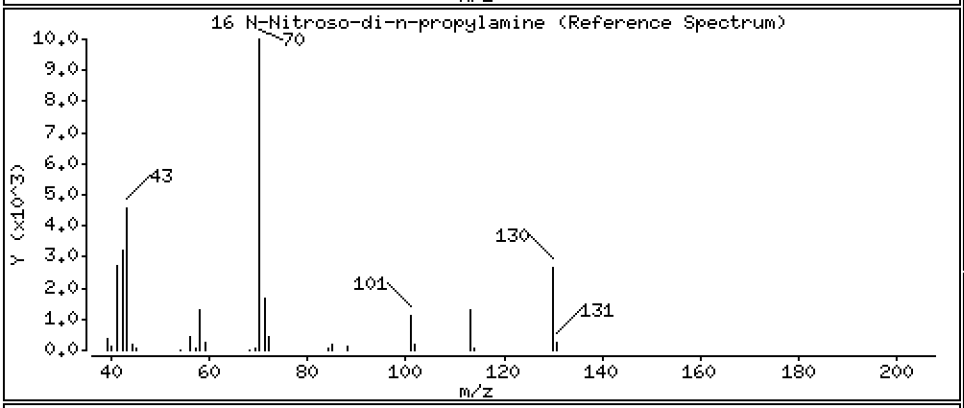
Concentration: 0.4993 ug/mL

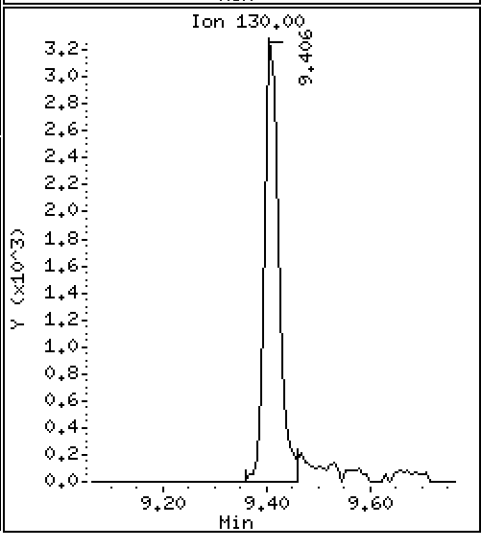


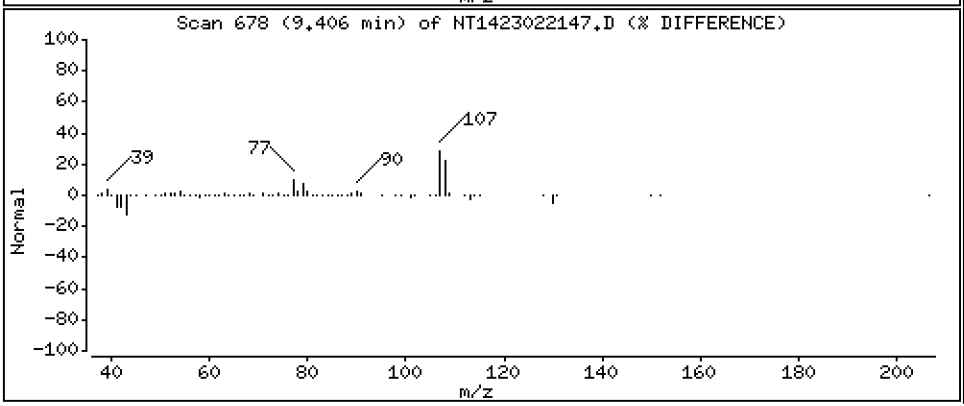












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

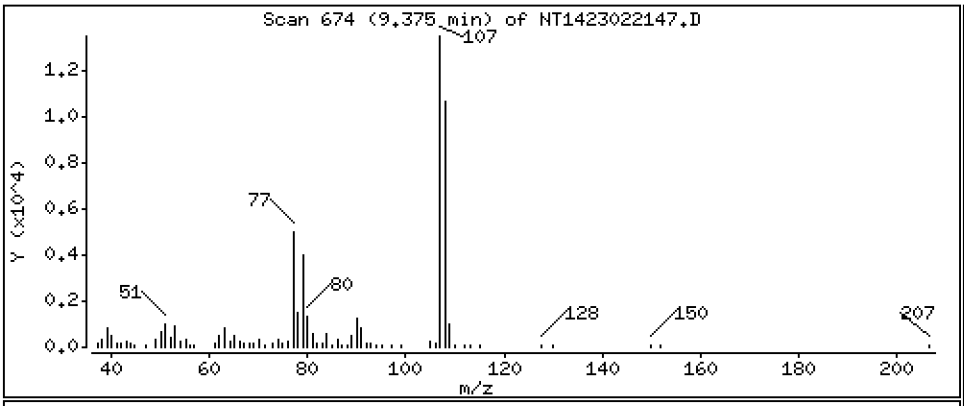
Operator: DSD

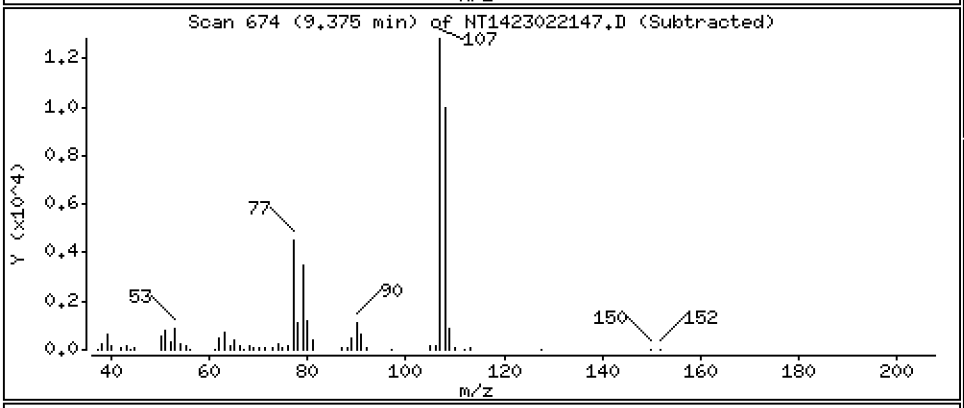
Column phase: ZB-5msi

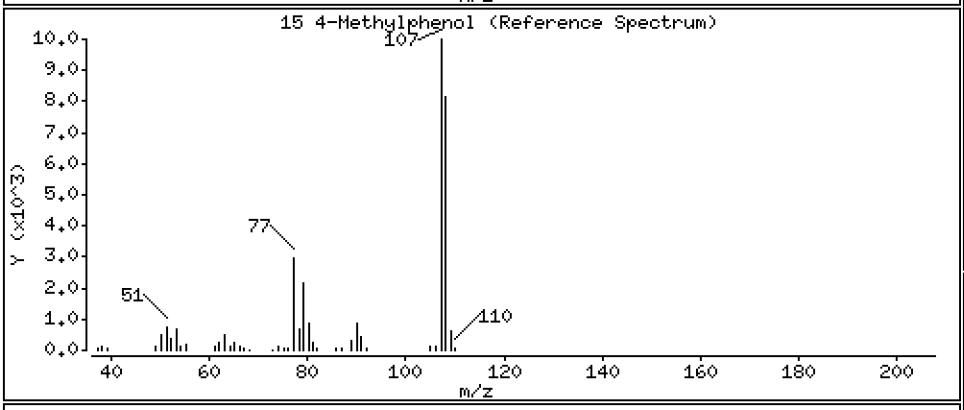
Column diameter: 0.25

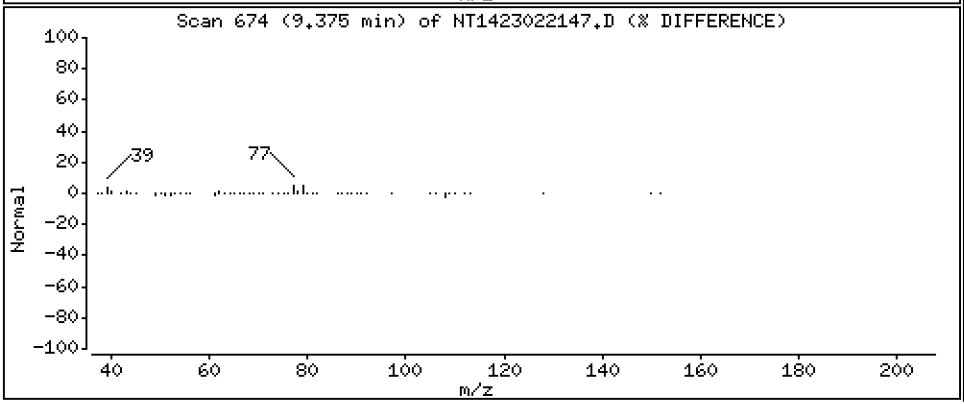
15 4-Methylphenol

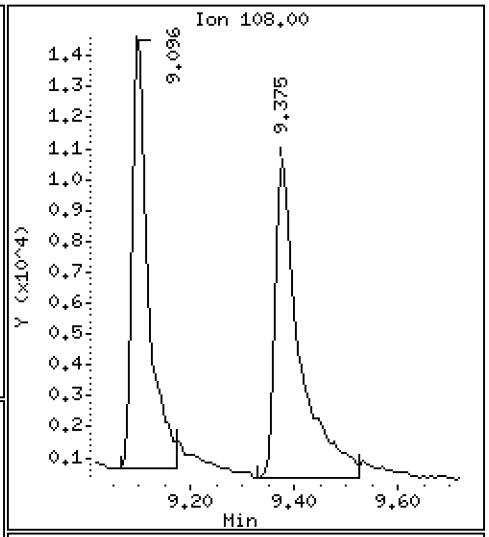
Concentration: 0.4970 ug/mL

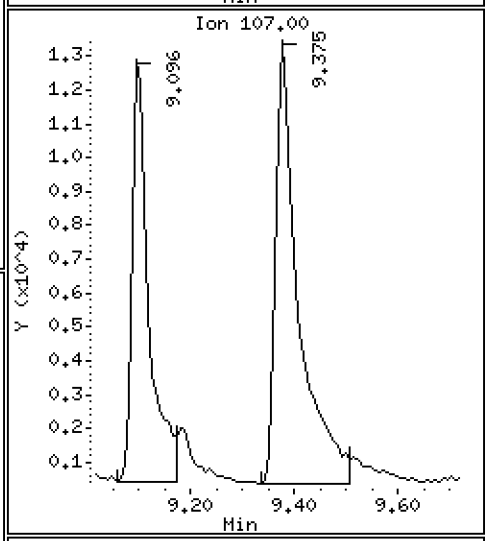


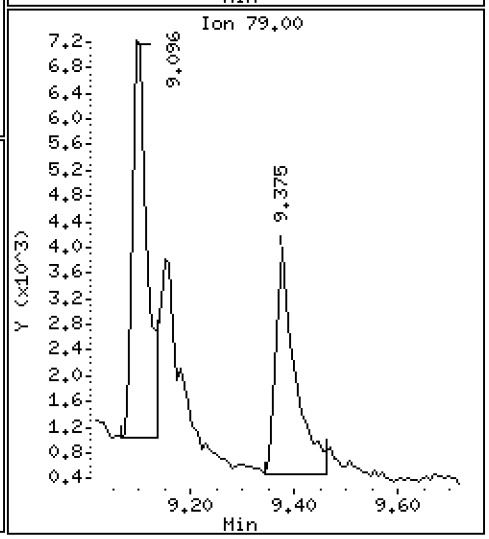












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

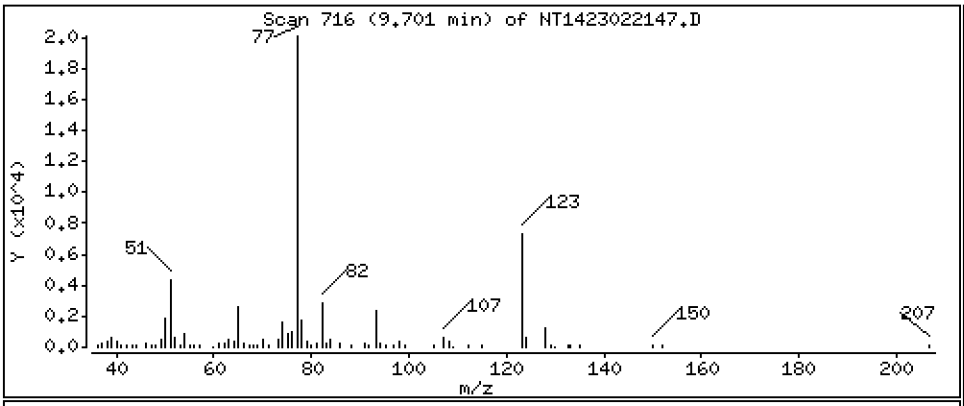
Operator: DSD

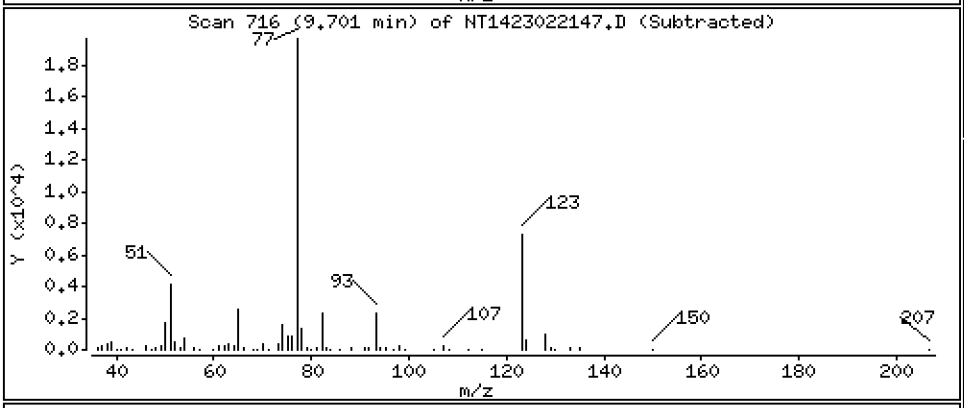
Column phase: ZB-5msi

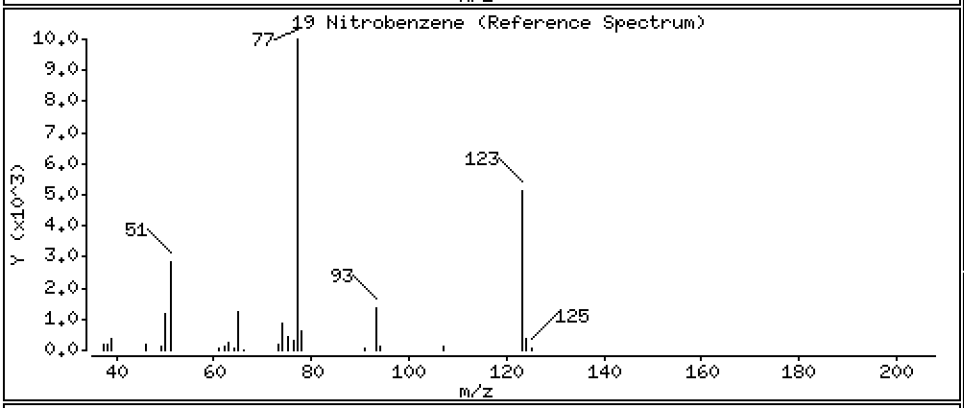
Column diameter: 0.25

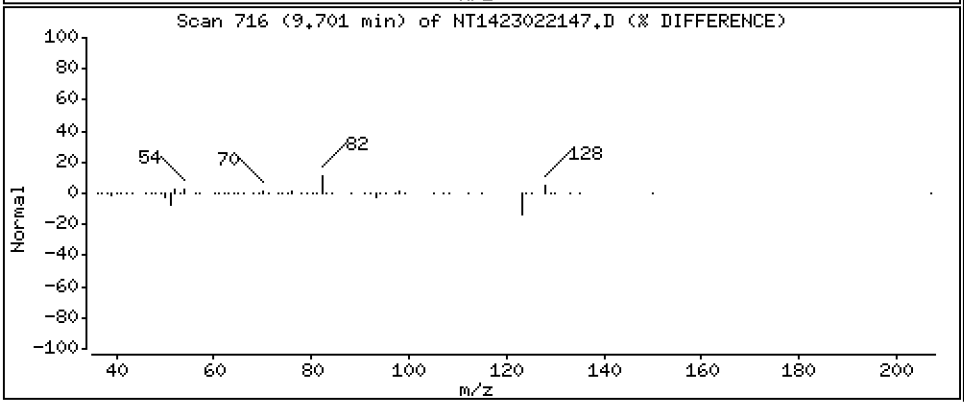
19 Nitrobenzene

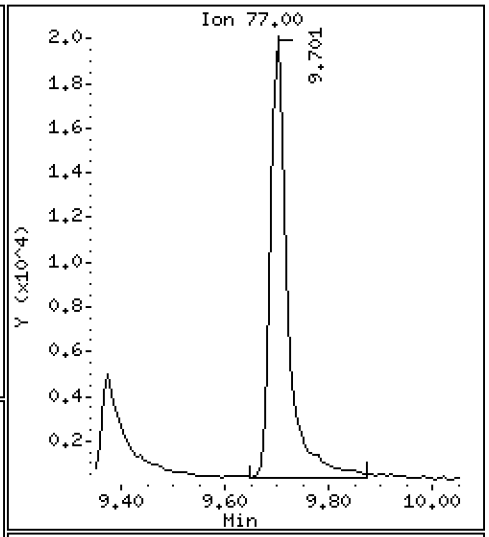
Concentration: 0.4997 ug/mL

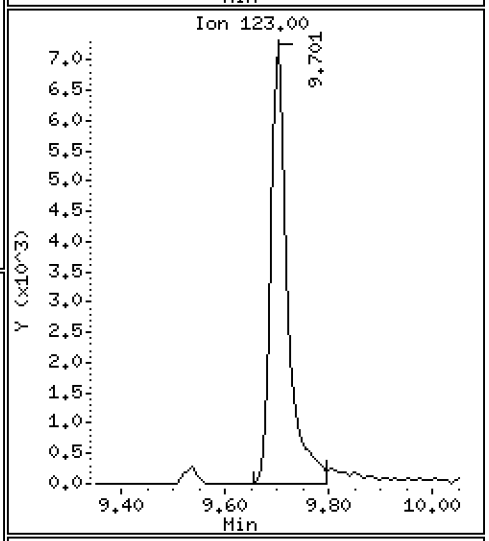


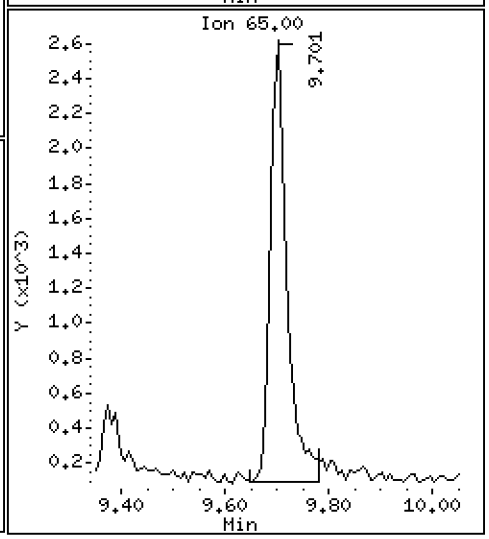












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

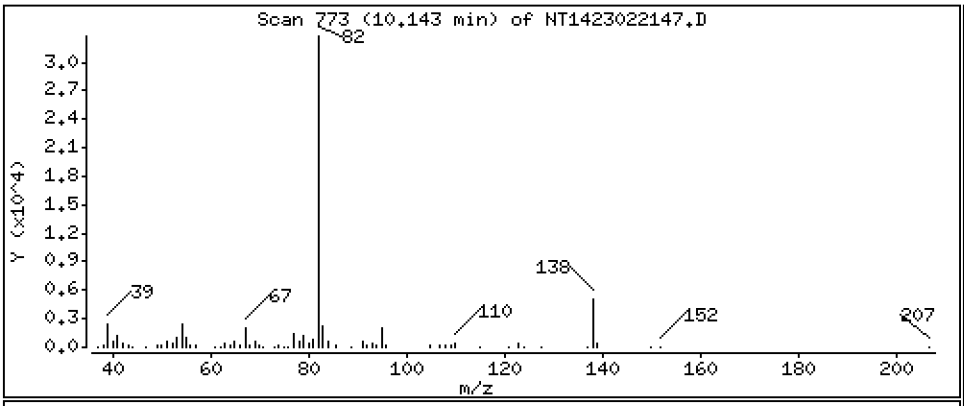
Operator: DSD

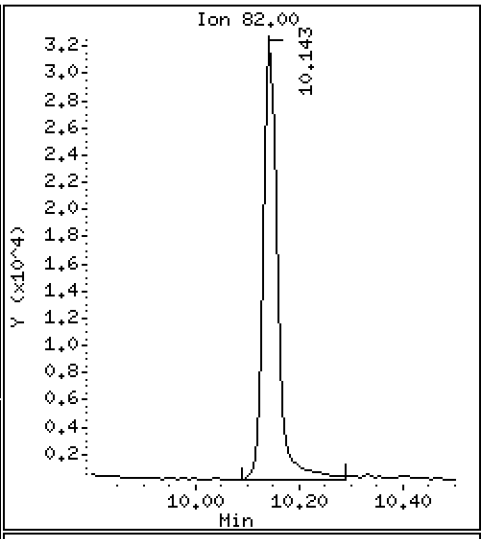
Column phase: ZB-5msi

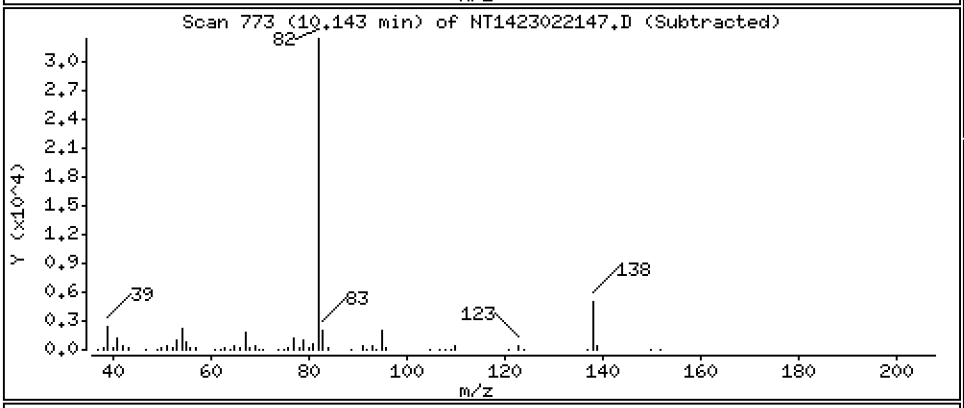
Column diameter: 0.25

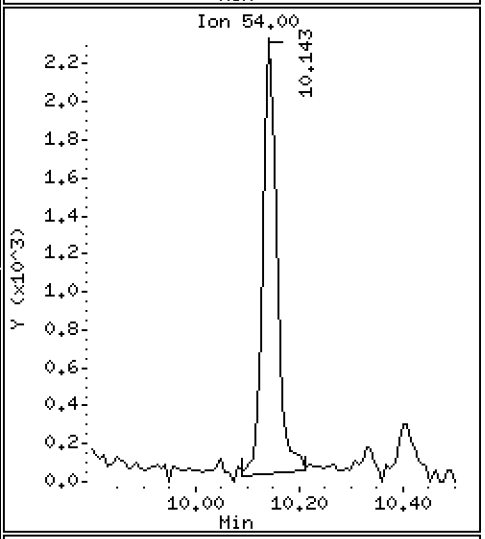
20 Isophorone

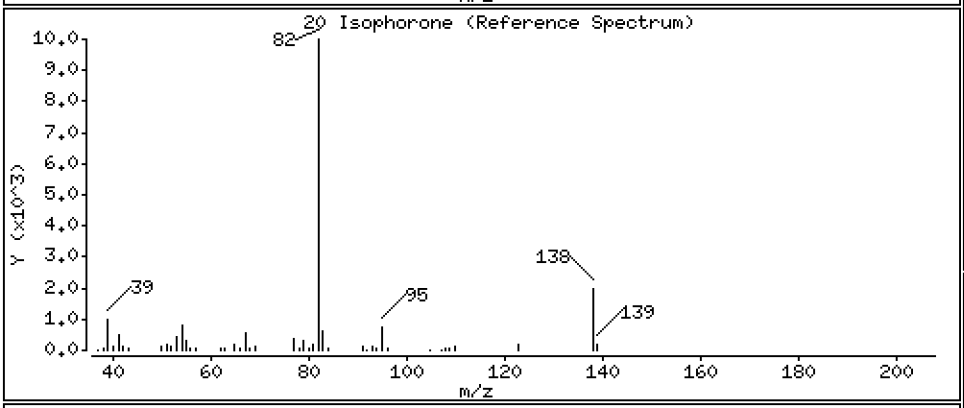
Concentration: 0.5498 ug/mL

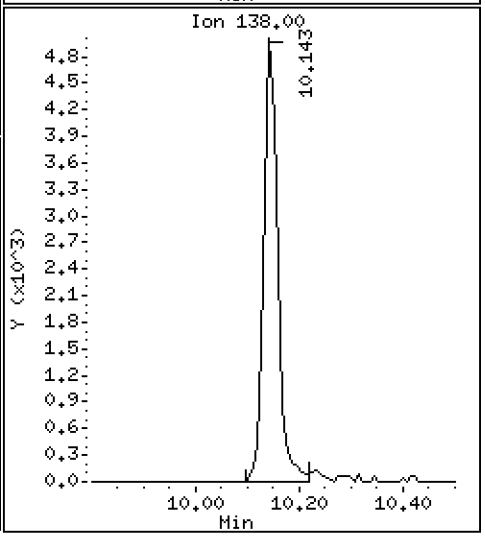


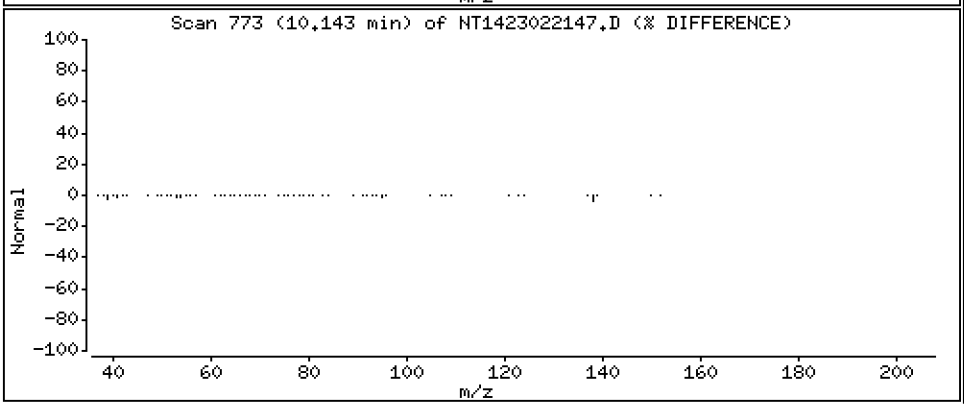












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

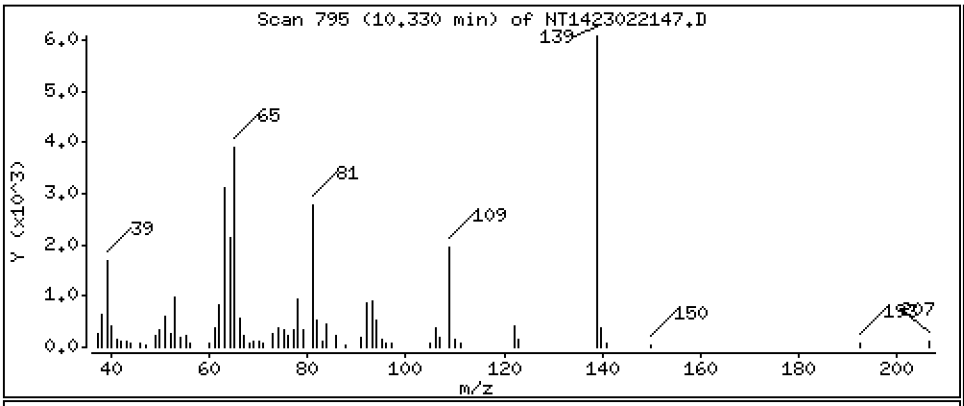
Operator: DSD

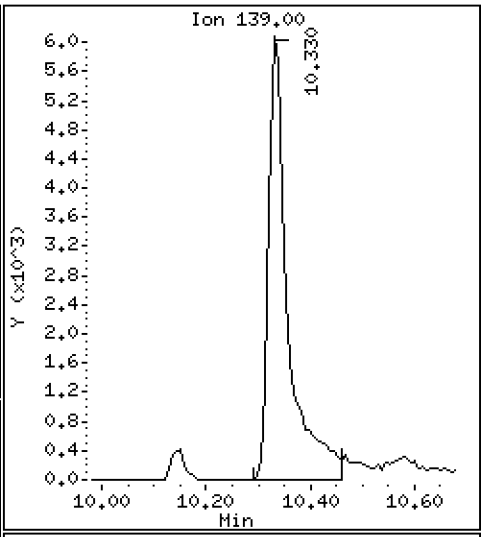
Column phase: ZB-5msi

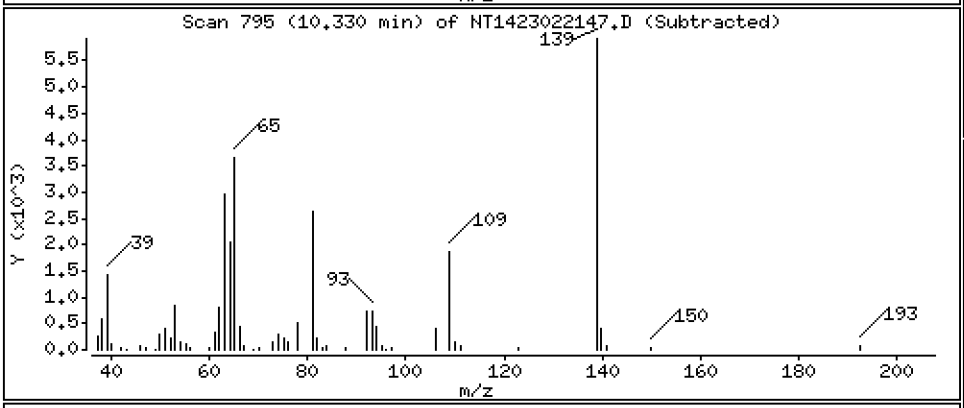
Column diameter: 0.25

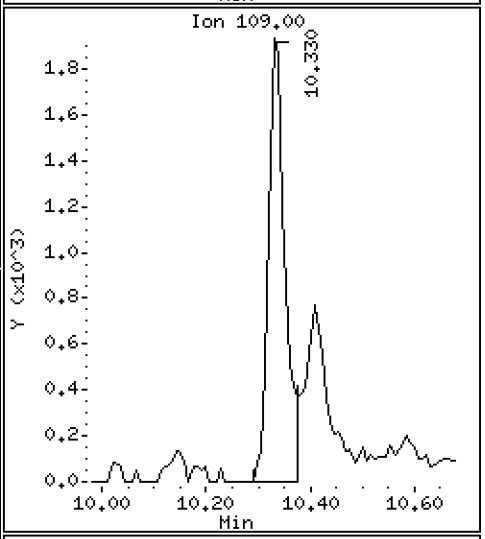
21 2-Nitrophenol

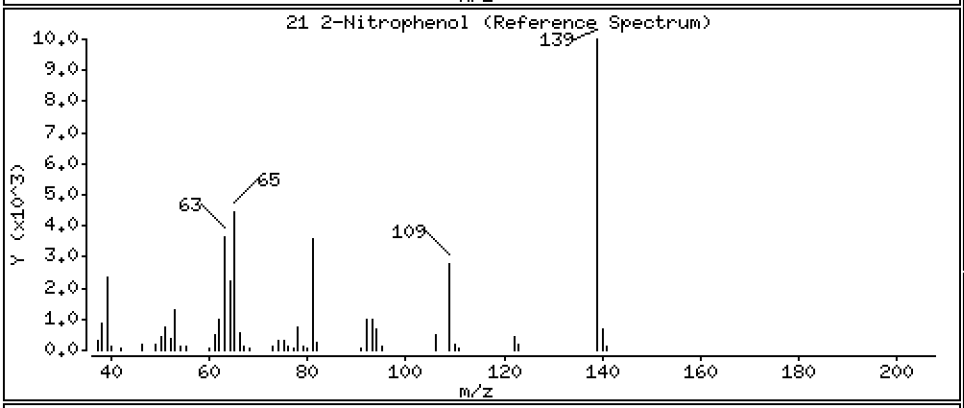
Concentration: 0.3934 ug/mL

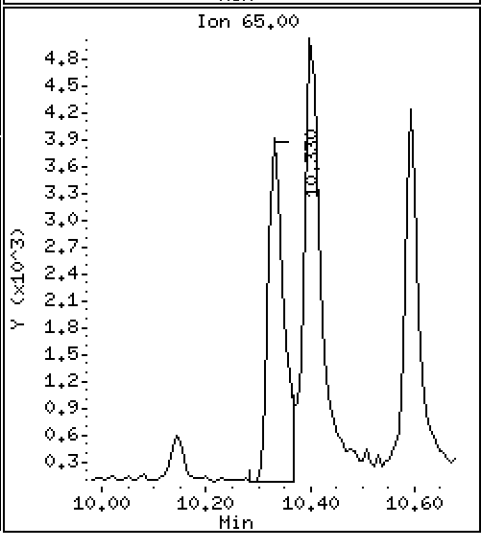


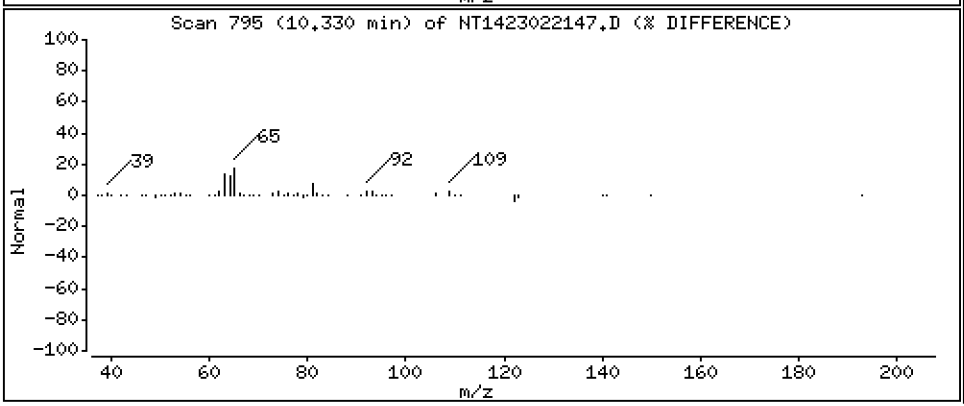












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

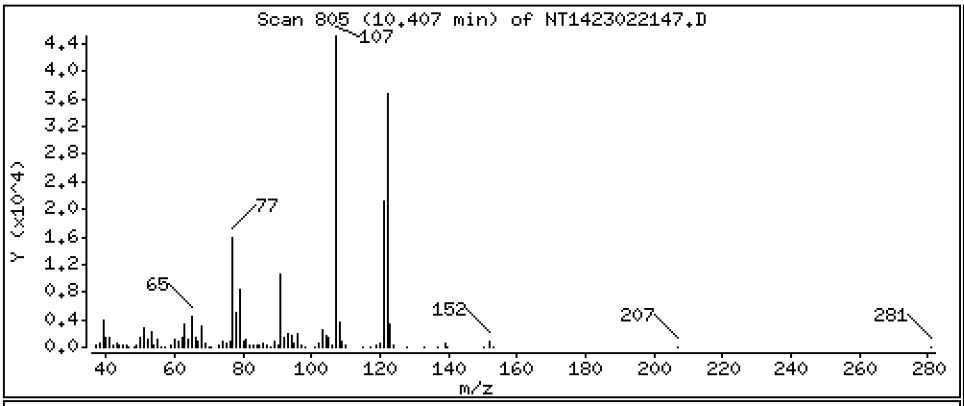
Operator: DSD

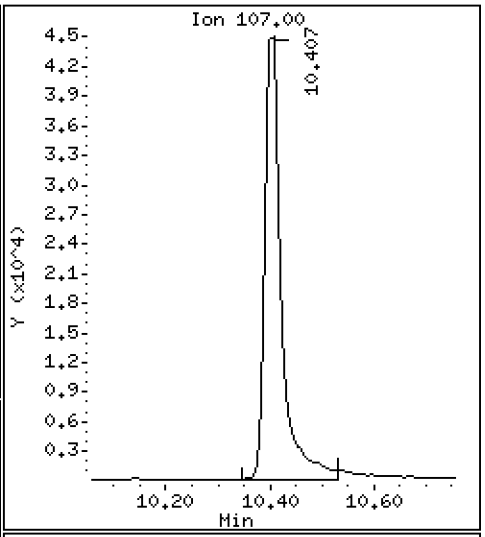
Column phase: ZB-5msi

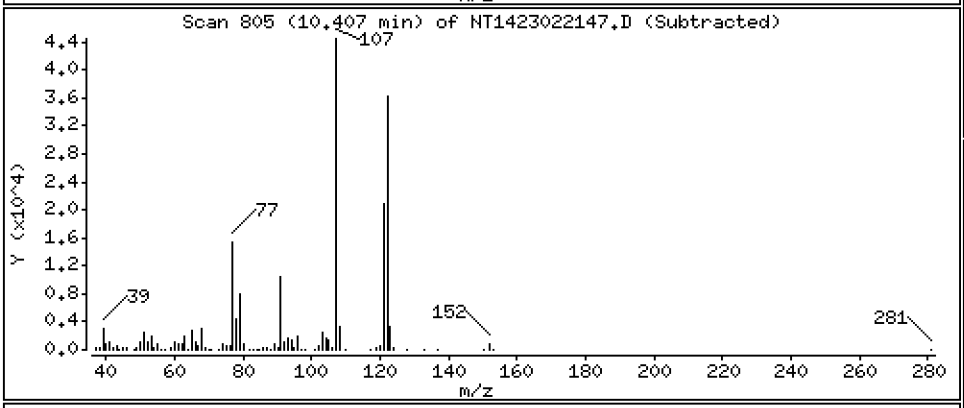
Column diameter: 0.25

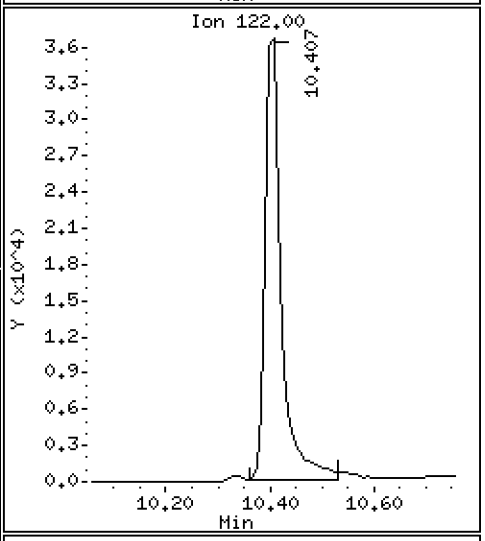
22 2,4-Dimethylphenol

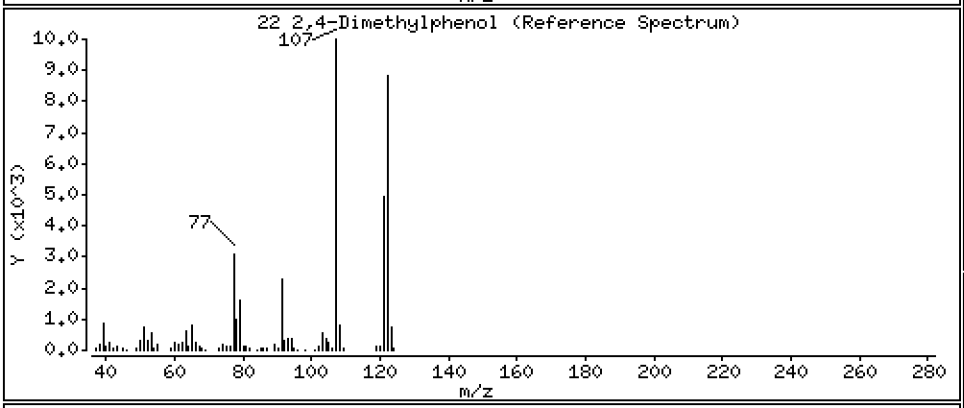
Concentration: 1.439 ug/mL

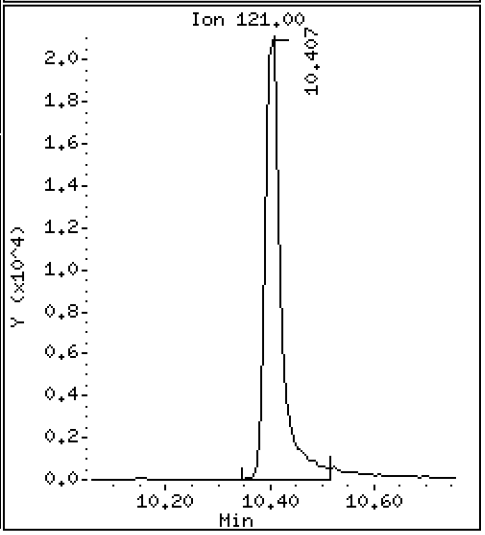


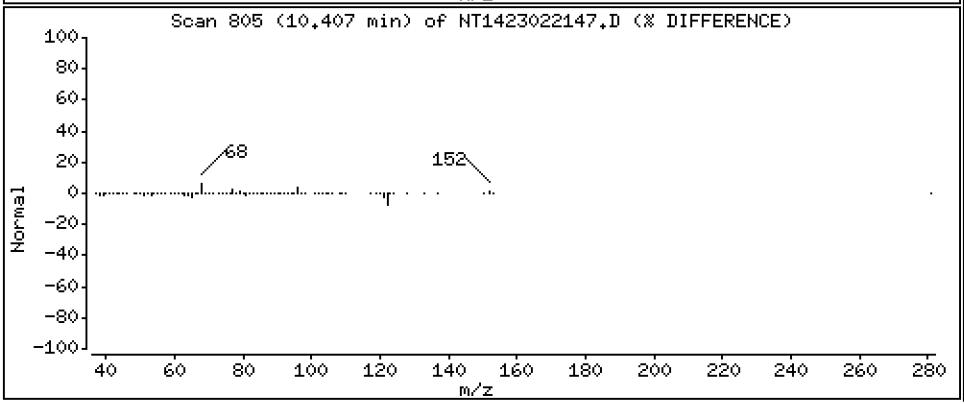












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

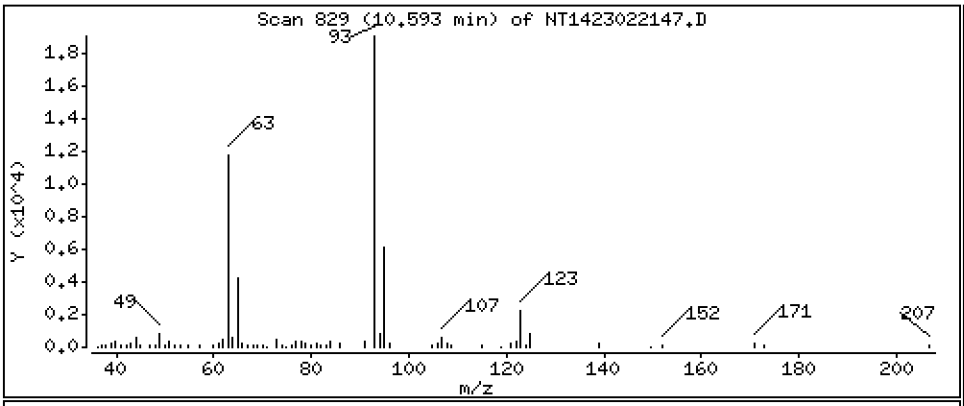
Operator: DSD

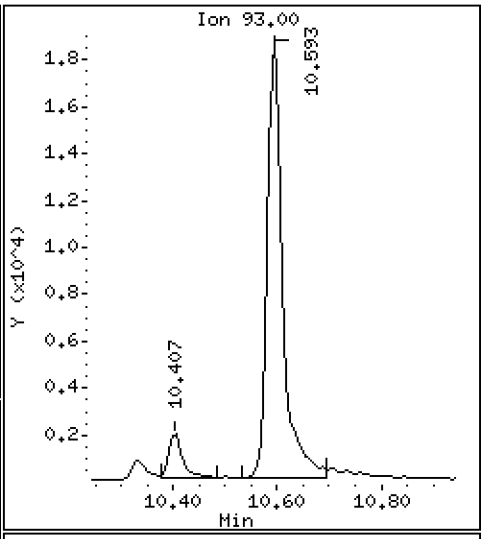
Column phase: ZB-5msi

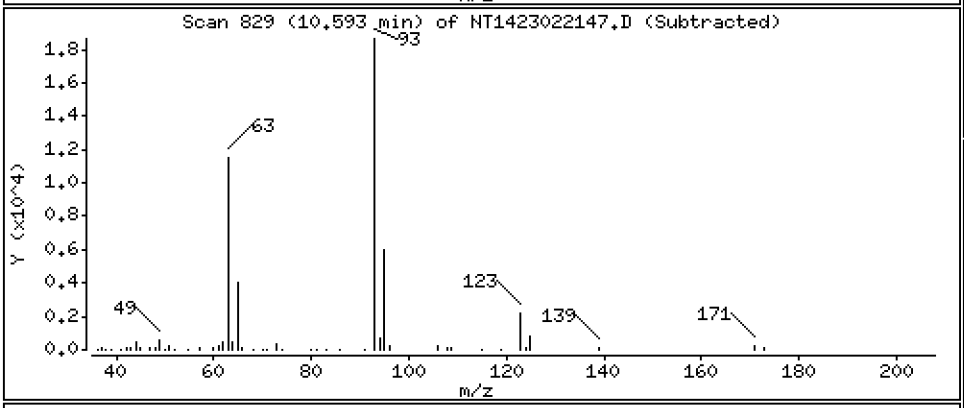
Column diameter: 0.25

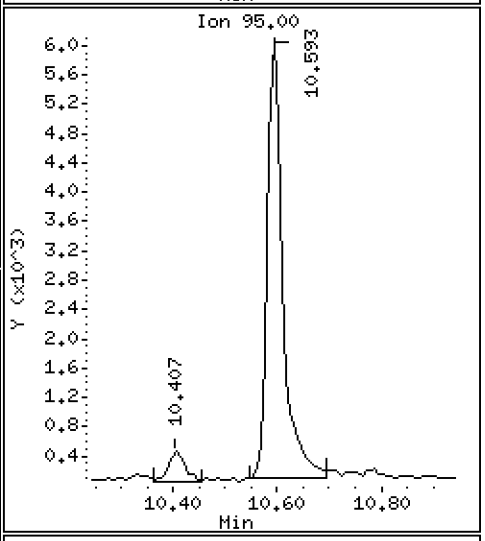
23 Bis(2-Chloroethoxy)methane

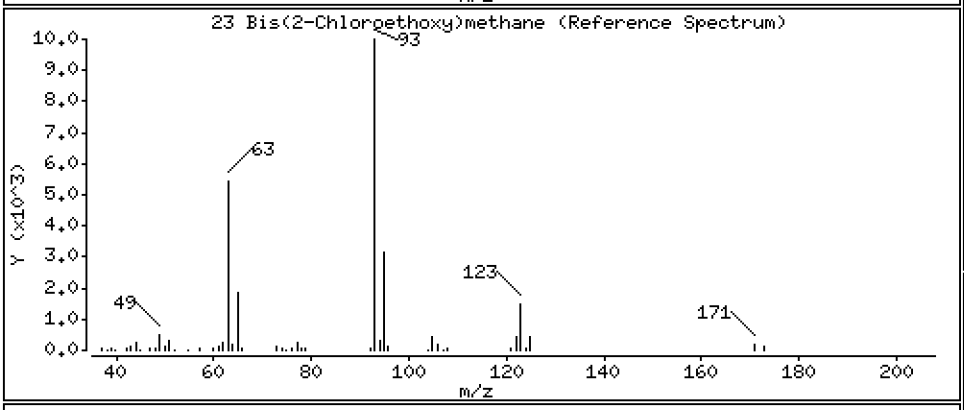
Concentration: 0.4951 ug/mL

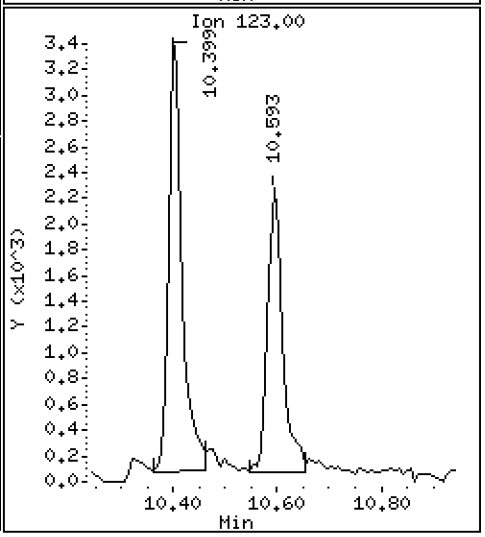


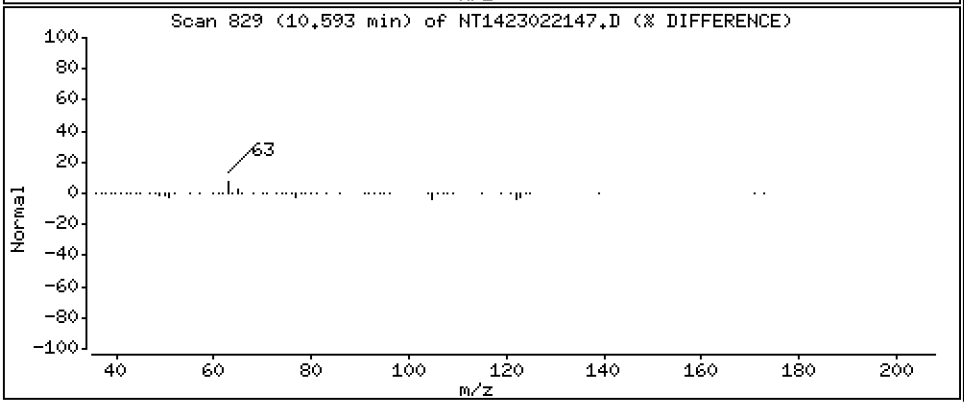












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

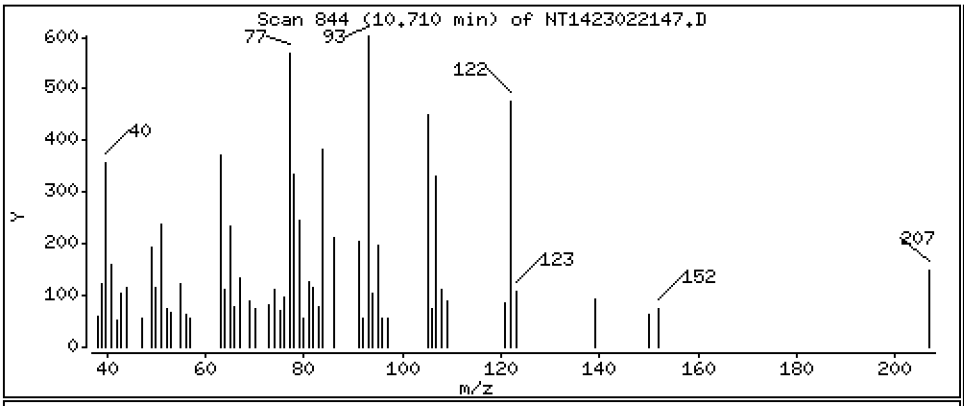
Operator: DSD

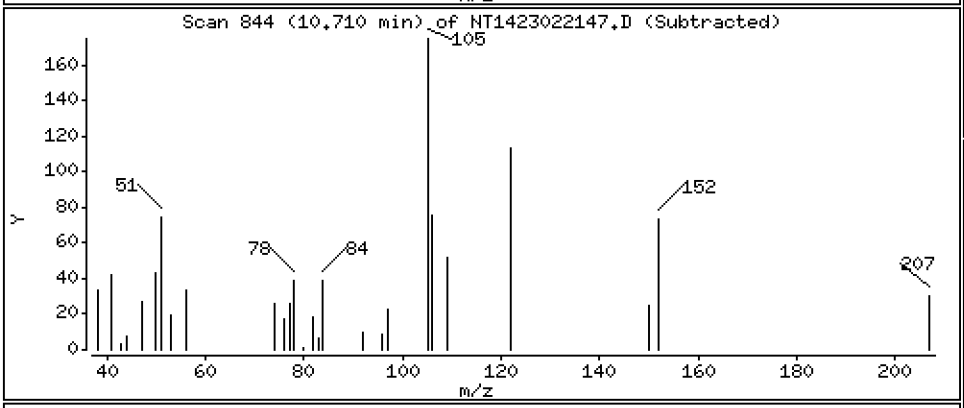
Column phase: ZB-5msi

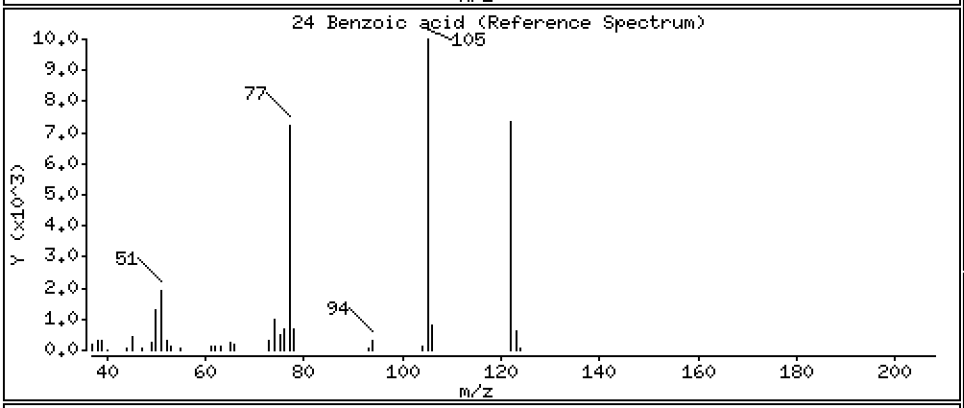
Column diameter: 0.25

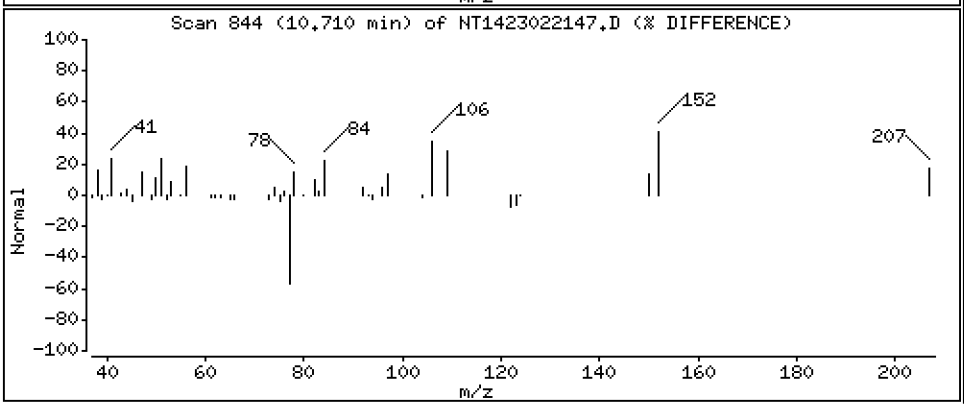
24 Benzoic acid

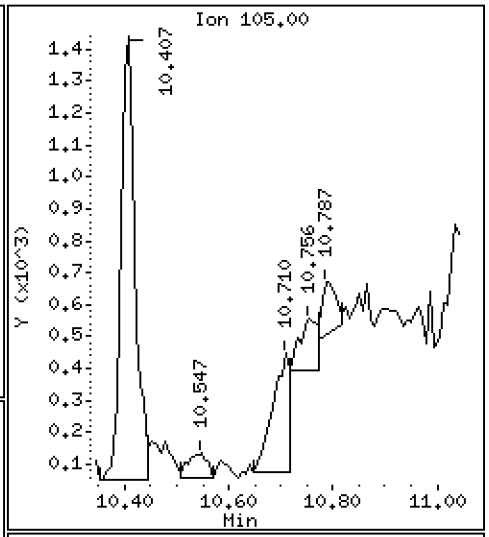
Concentration: 0.02075 ug/mL

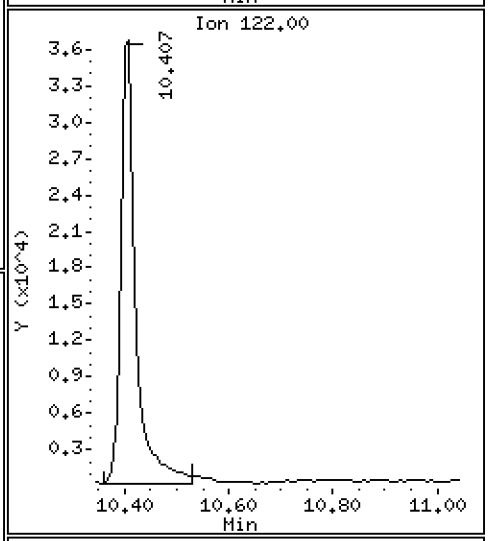


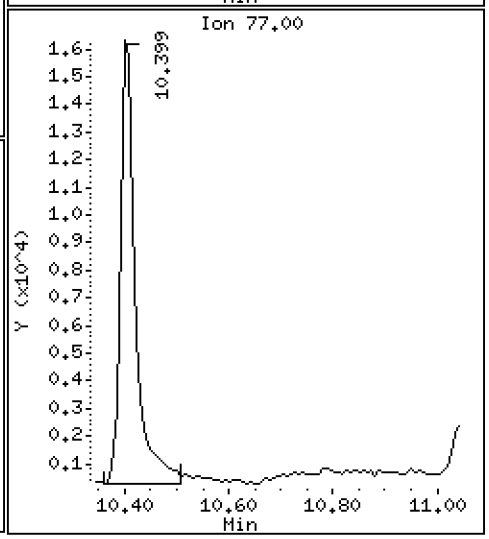












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022147.D

Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

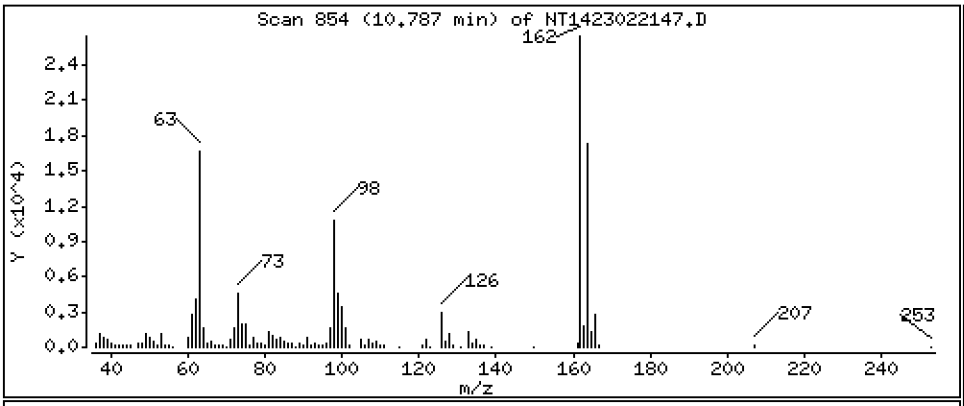
Operator: DSD

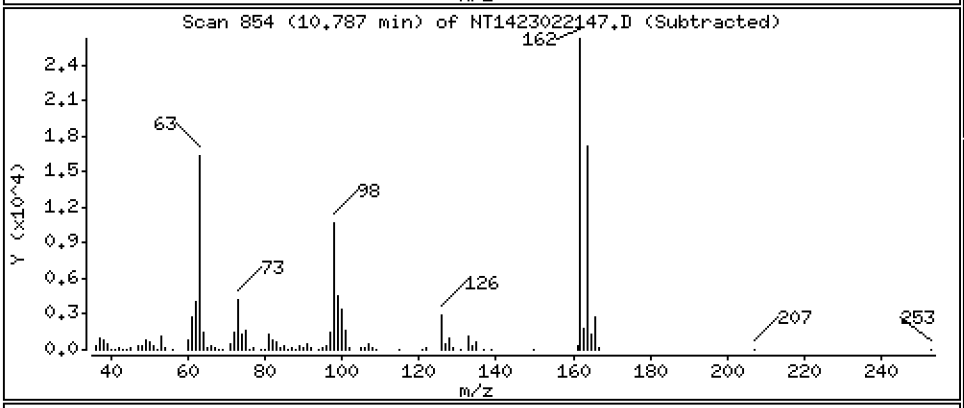
Column phase: ZB-5msi

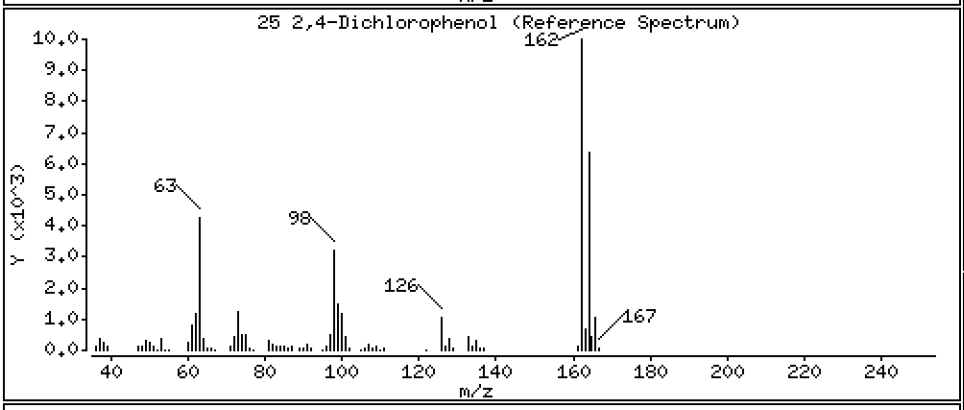
Column diameter: 0.25

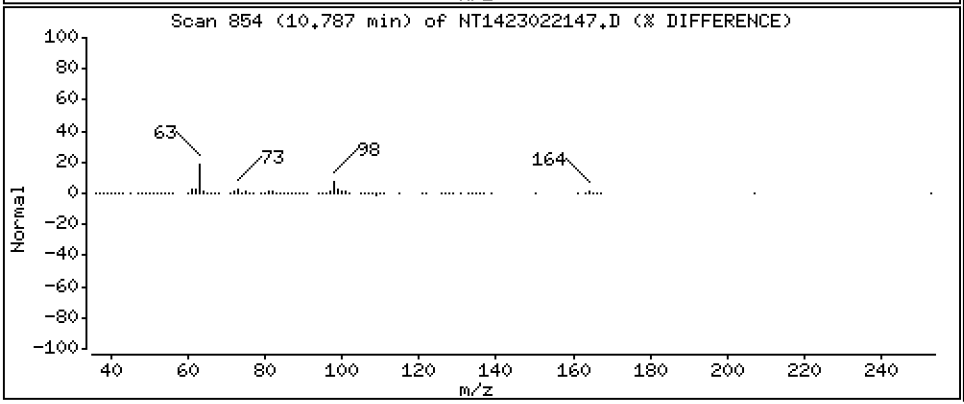
25 2,4-Dichlorophenol

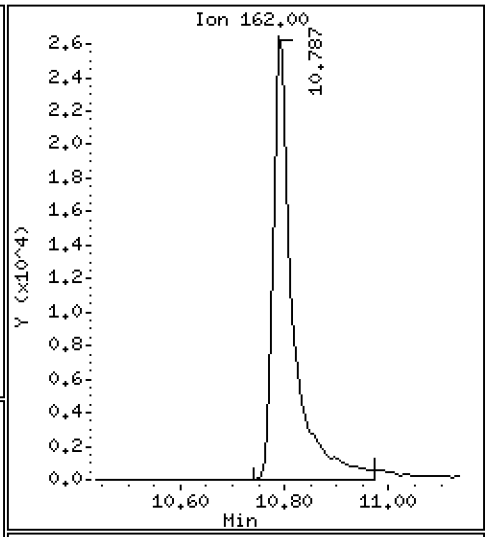
Concentration: 1.302 ug/mL

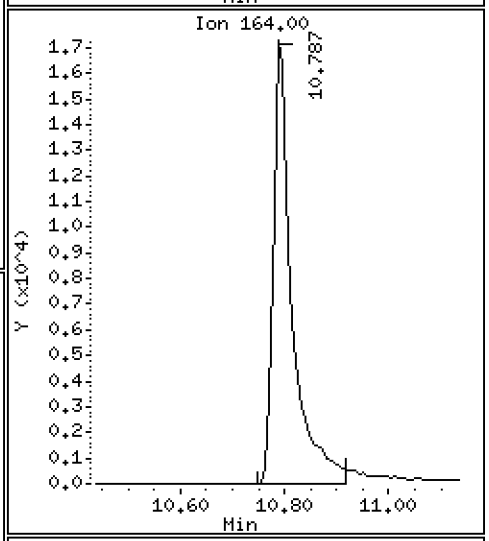


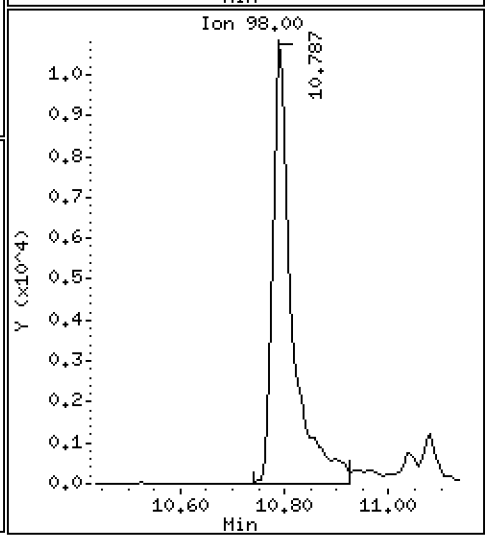












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

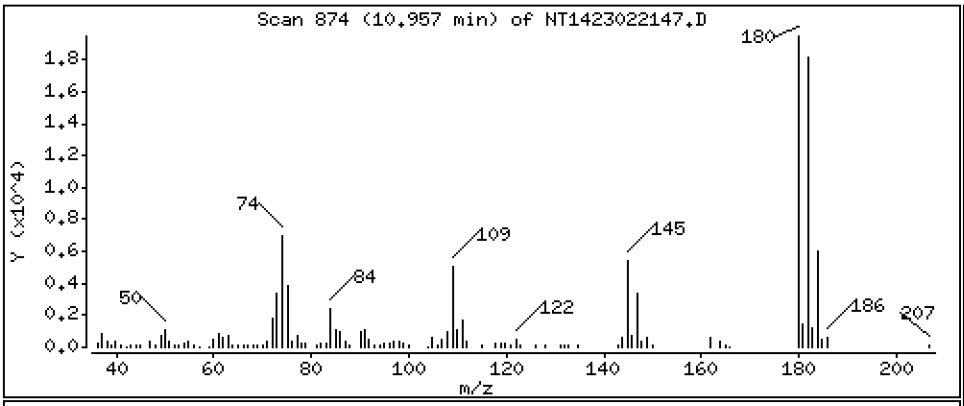
Operator: DSD

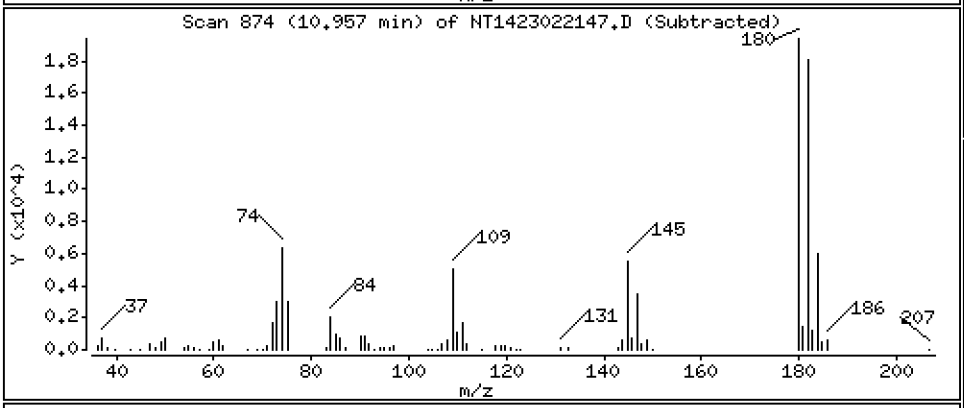
Column phase: ZB-5msi

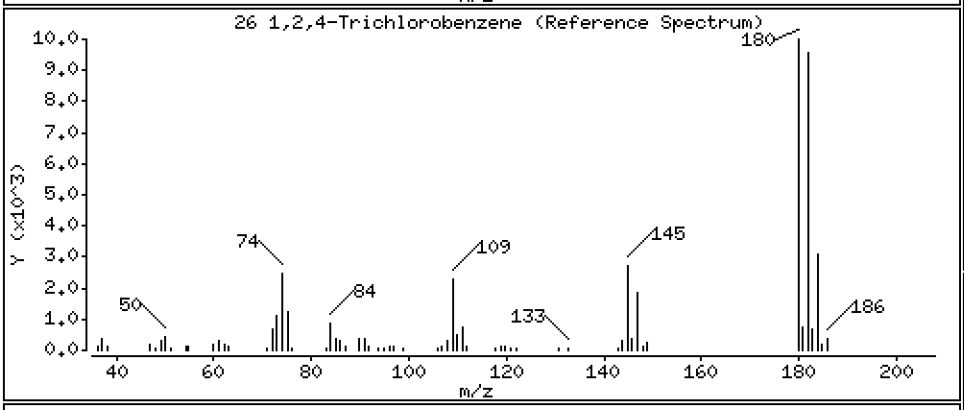
Column diameter: 0.25

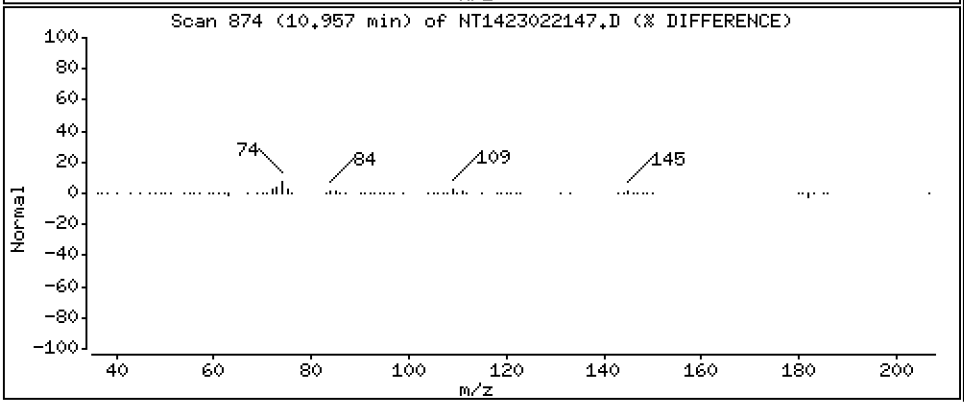
26 1,2,4-Trichlorobenzene

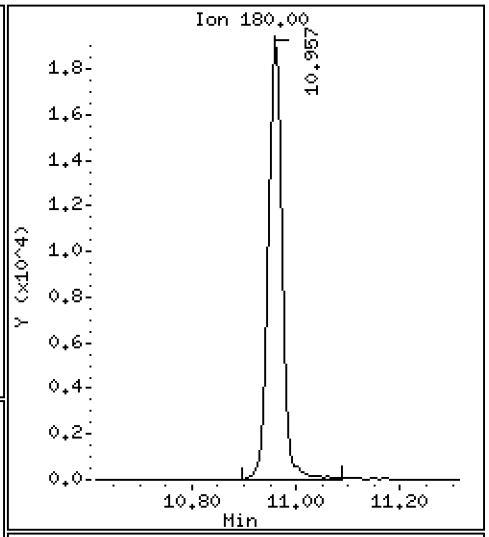
Concentration: 0.5442 ug/mL

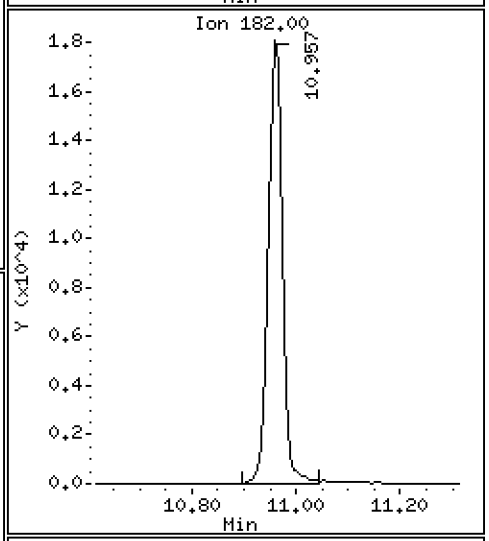


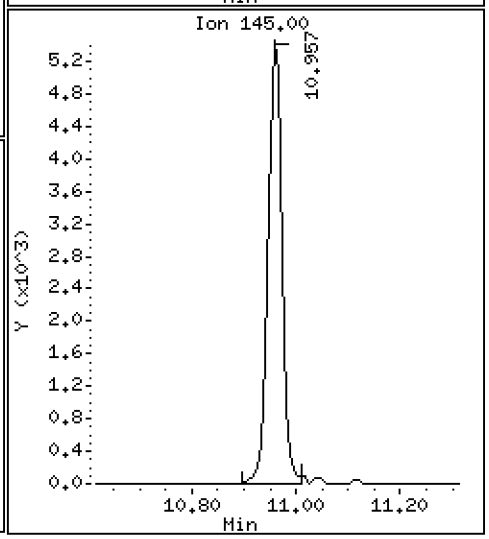












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

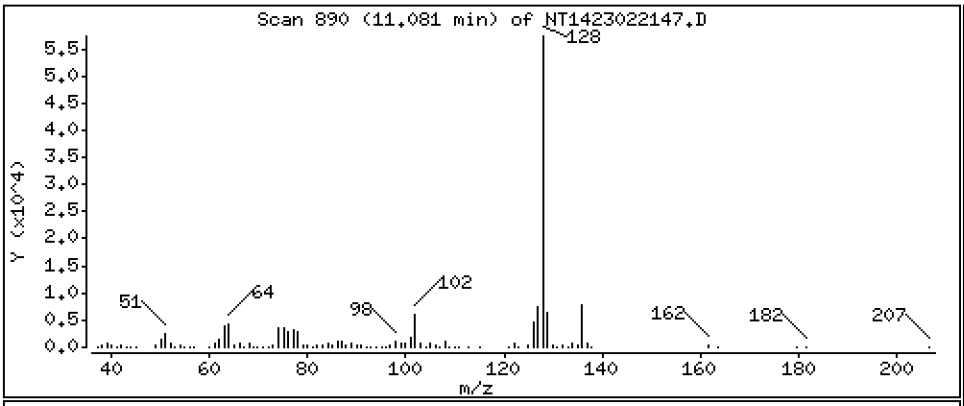
Operator: DSD

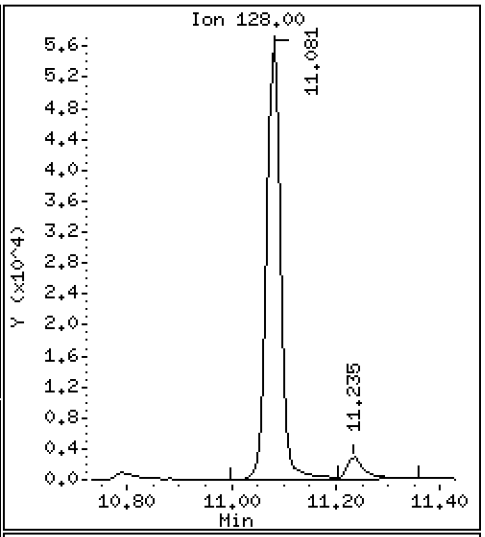
Column phase: ZB-5msi

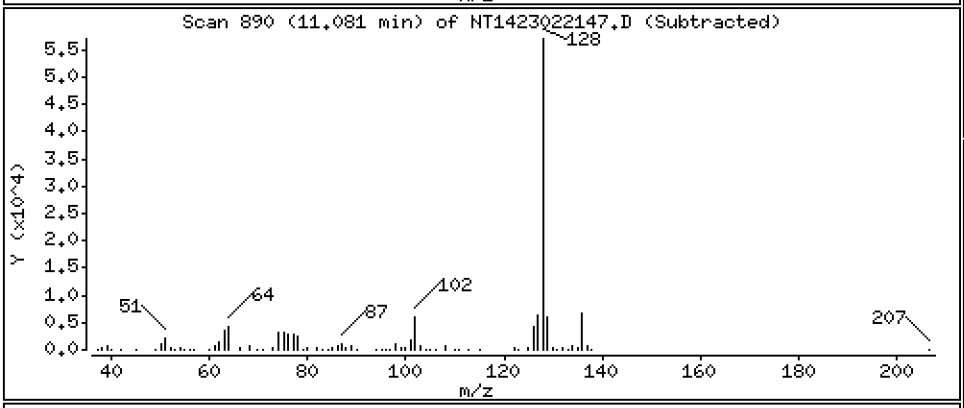
Column diameter: 0.25

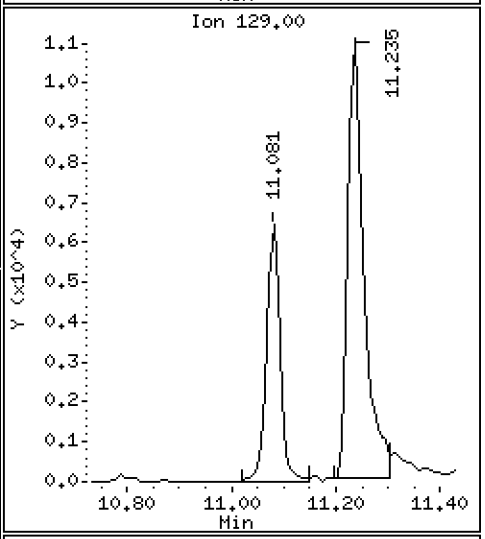
28 Naphthalene

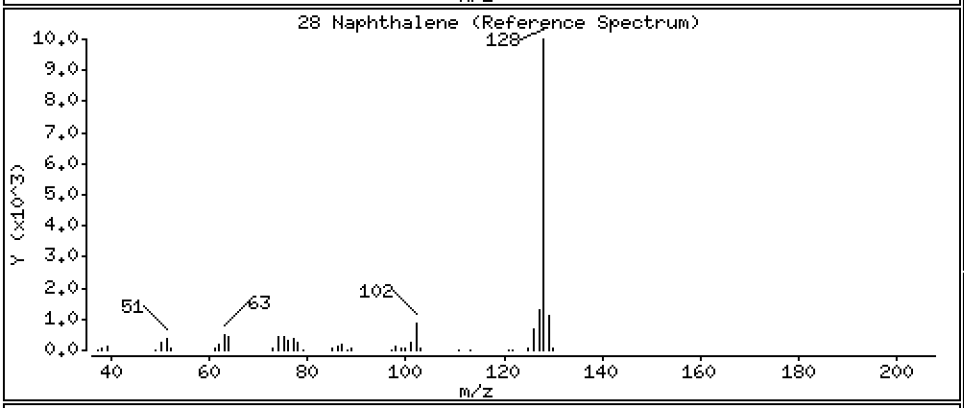
Concentration: 0.5397 ug/mL

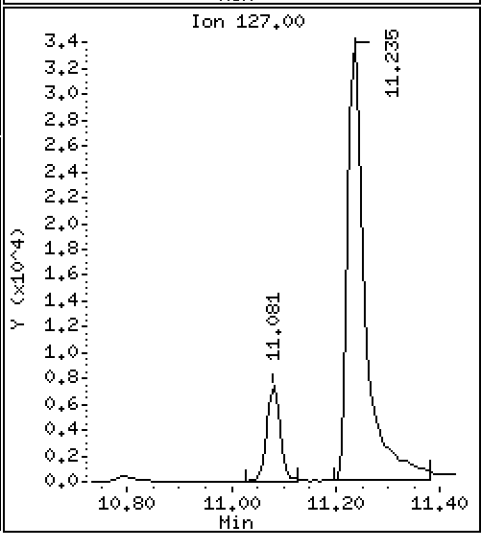


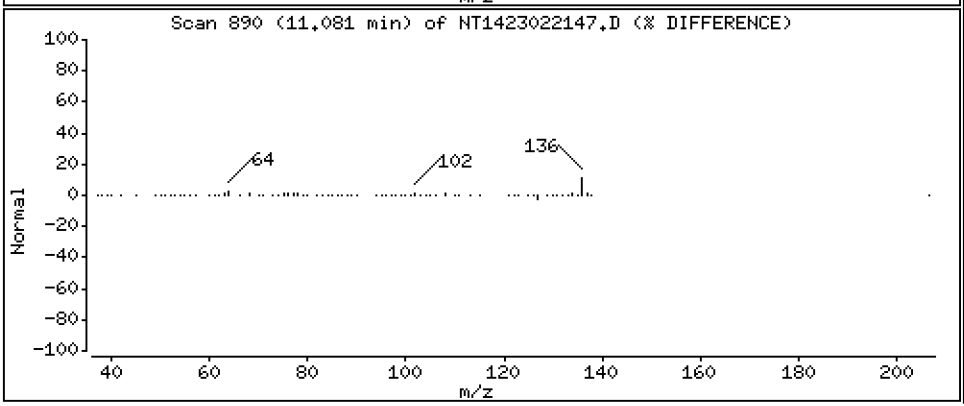












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

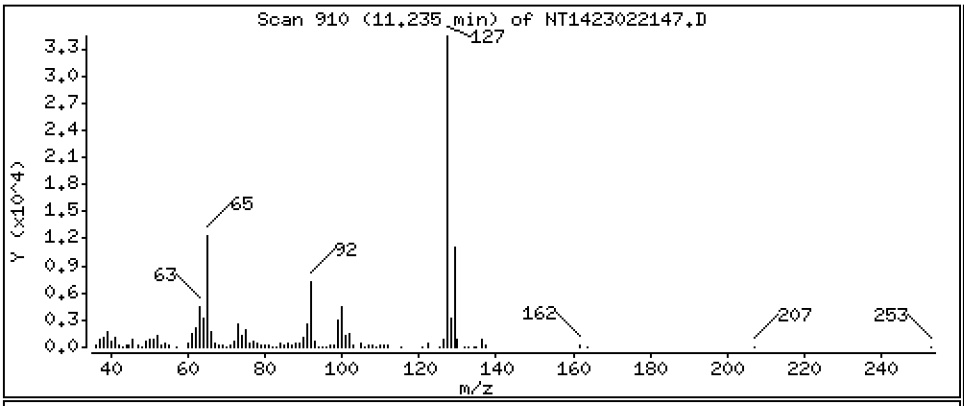
Operator: DSD

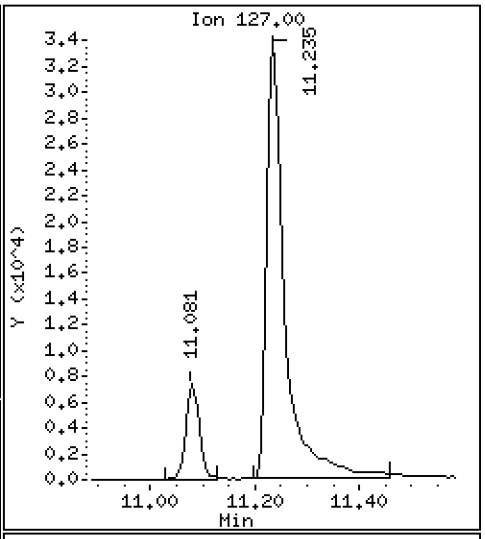
Column phase: ZB-5msi

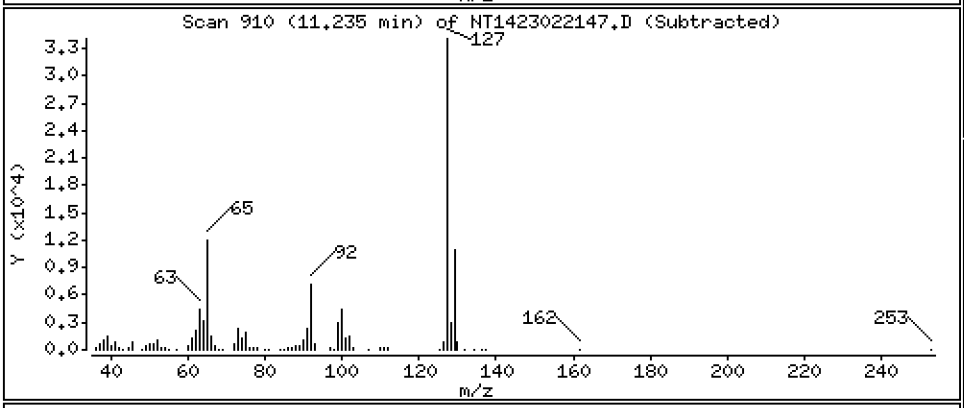
Column diameter: 0.25

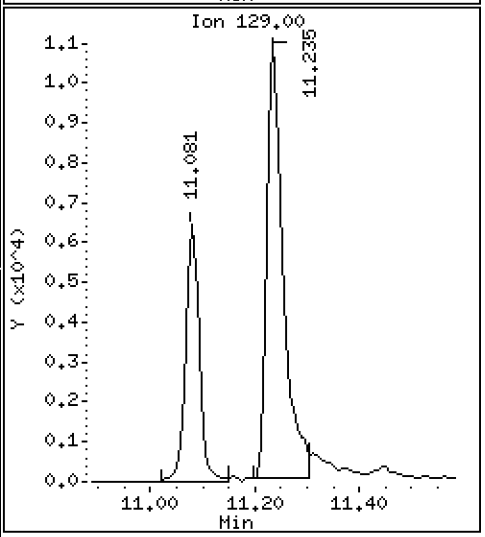
29 4-Chloroaniline

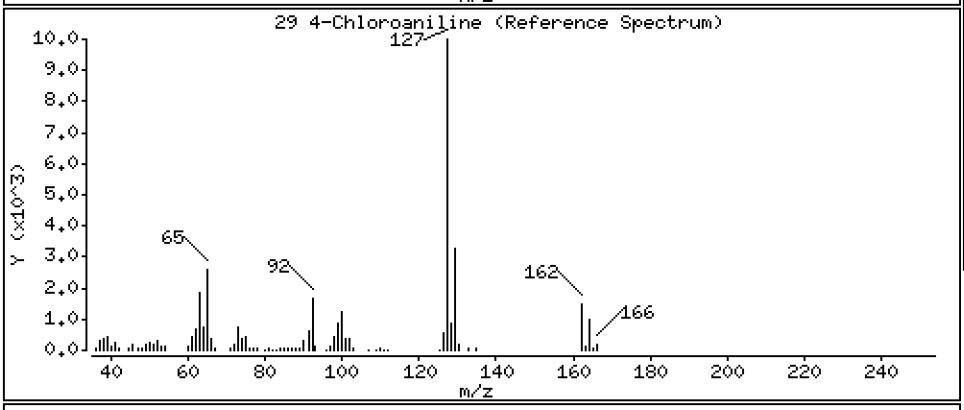
Concentration: 1.063 ug/mL

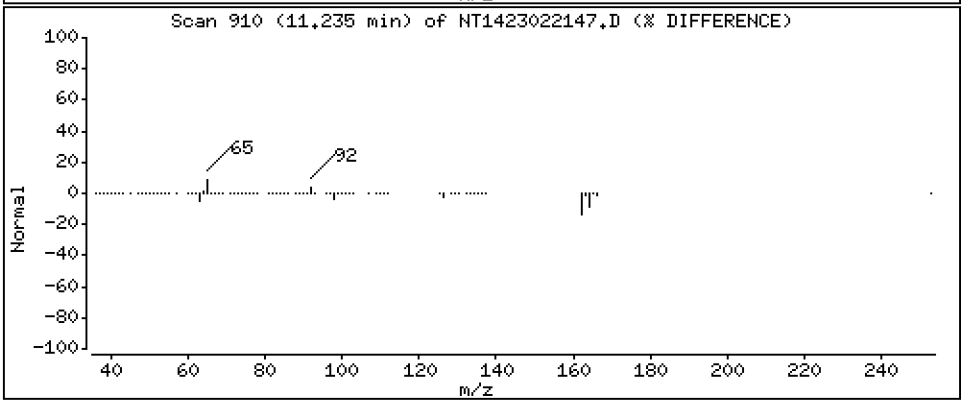












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

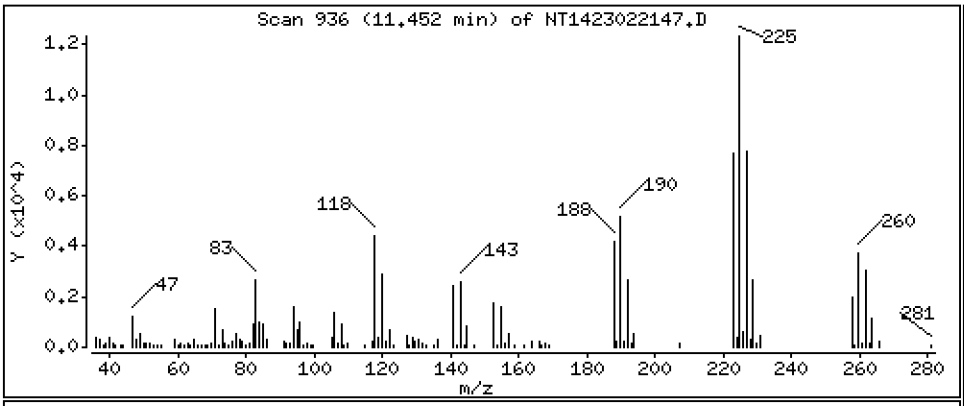
Operator: DSD

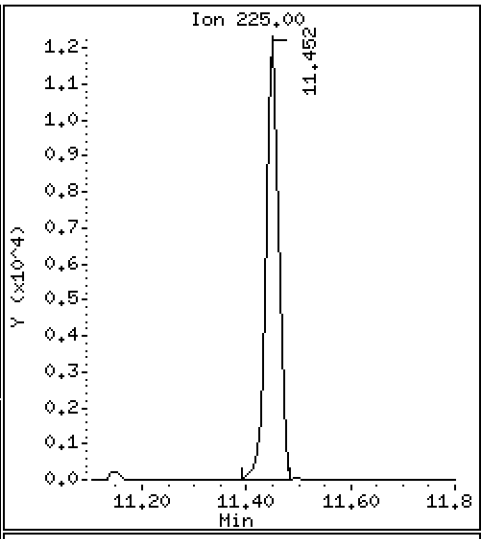
Column phase: ZB-5msi

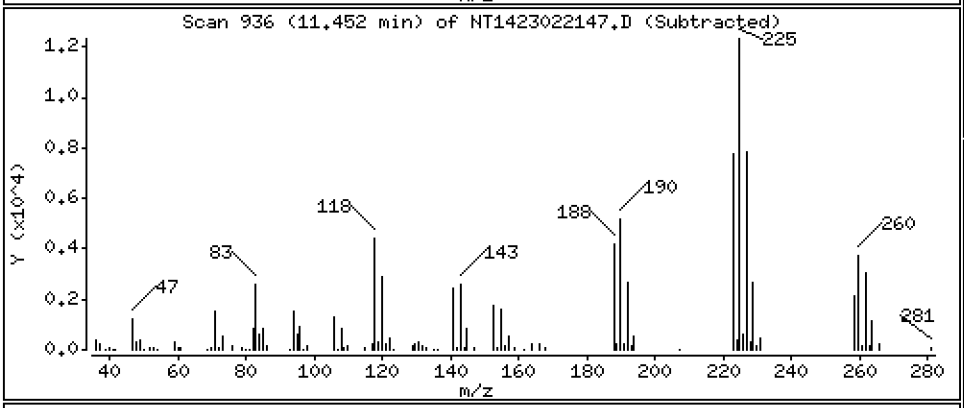
Column diameter: 0.25

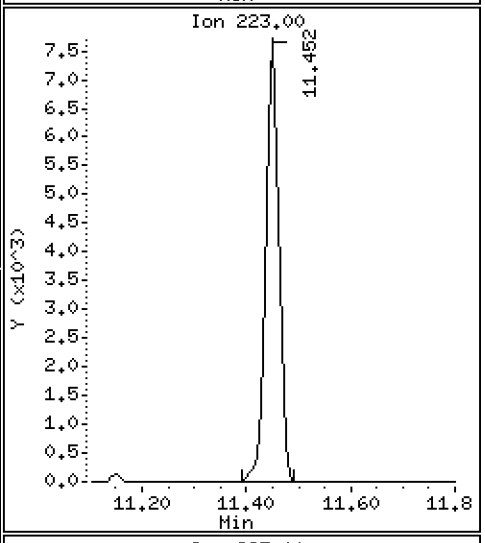
30 Hexachlorobutadiene

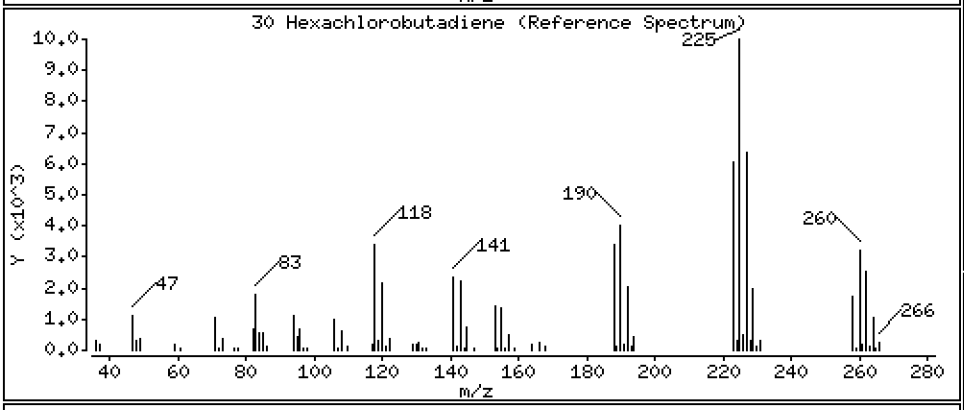
Concentration: 0.5763 ug/mL

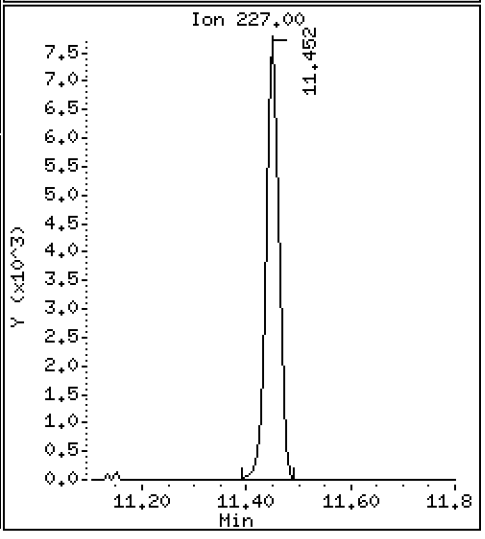


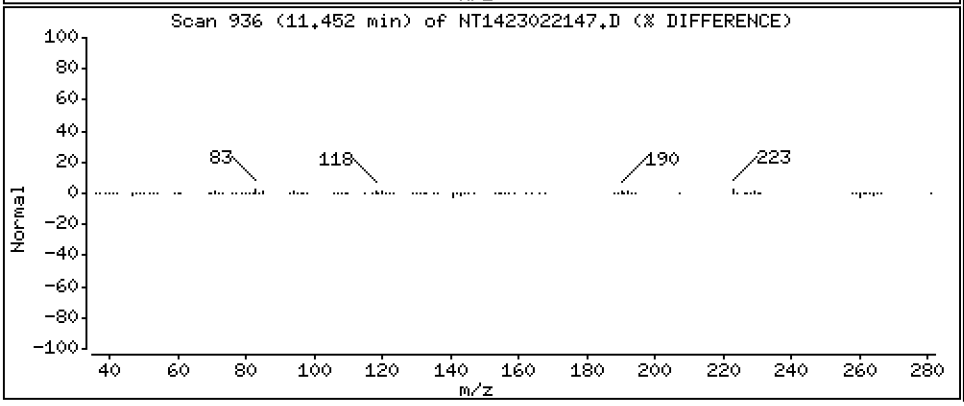












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

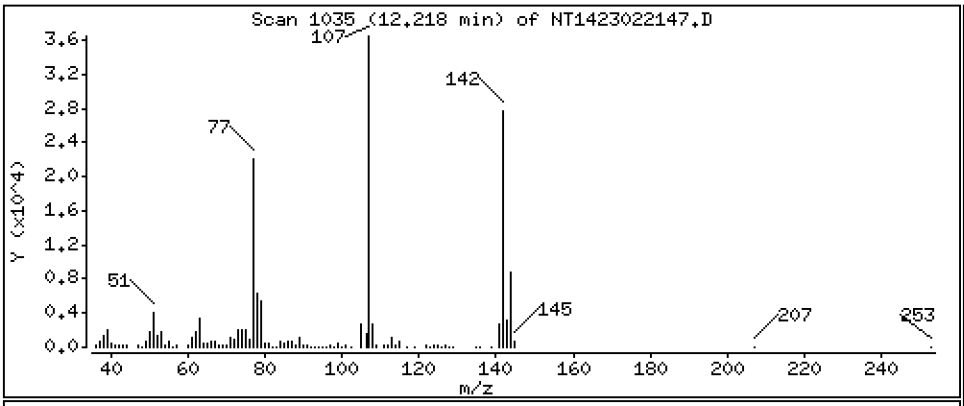
Operator: DSD

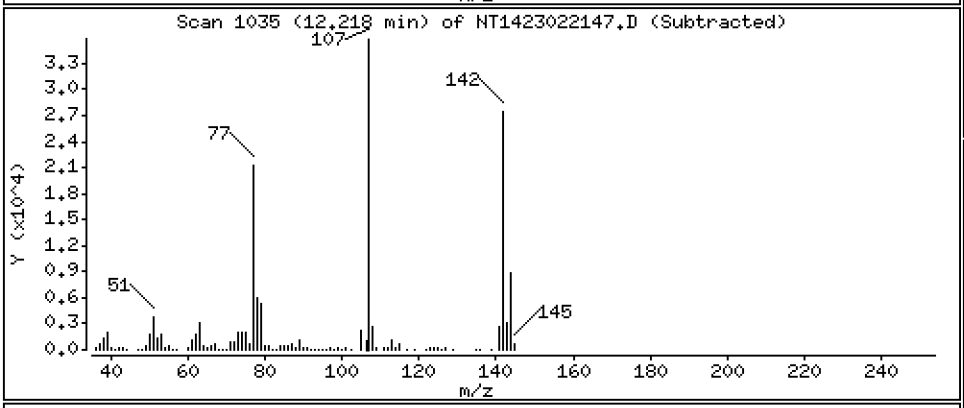
Column phase: ZB-5msi

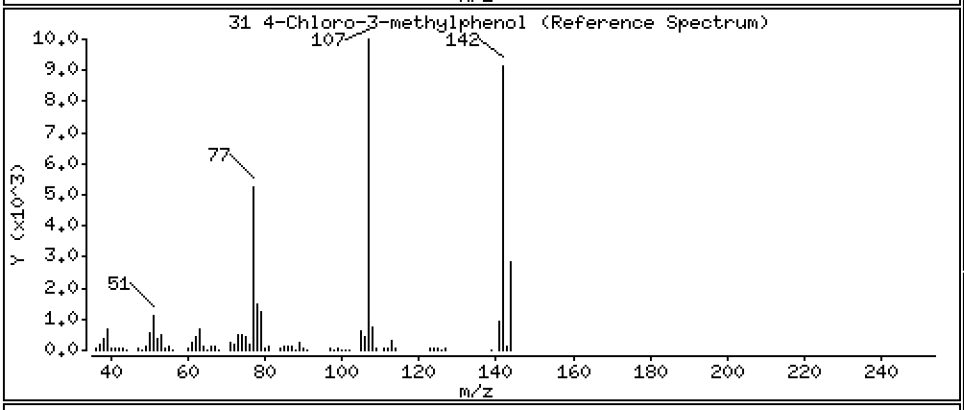
Column diameter: 0.25

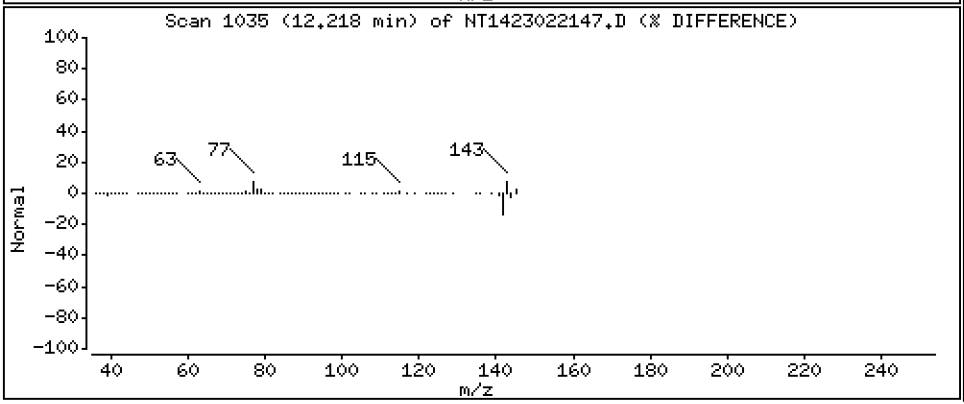
31 4-Chloro-3-methylphenol

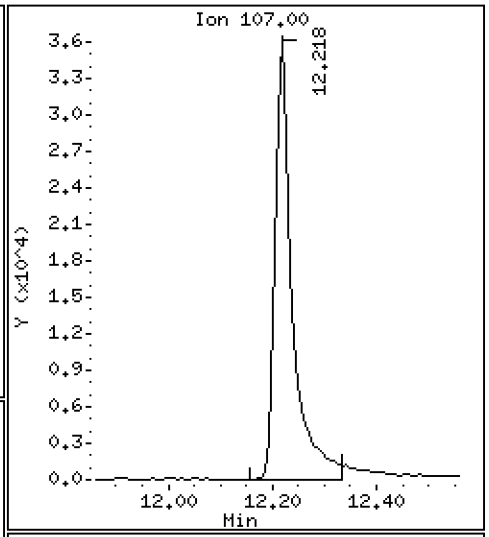
Concentration: 1.334 ug/mL

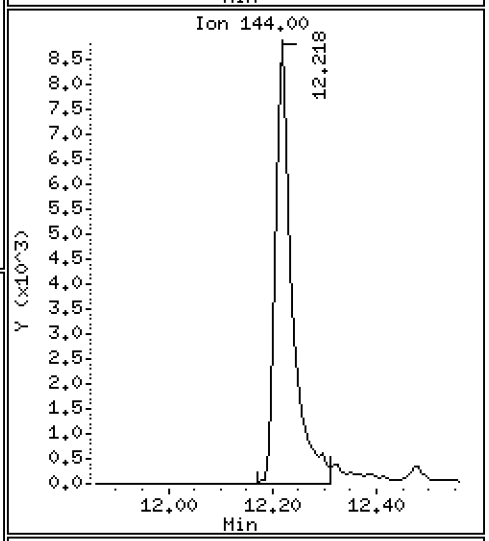


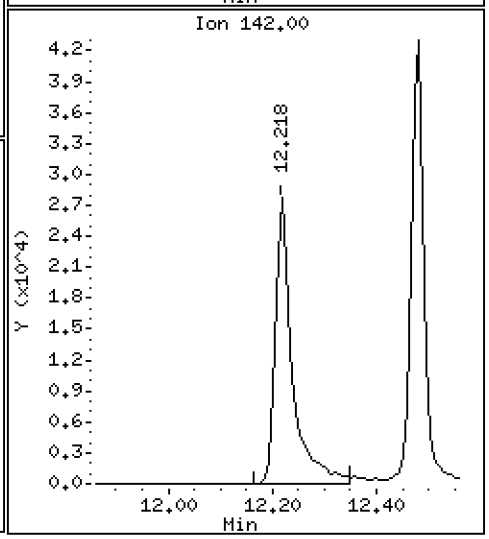












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

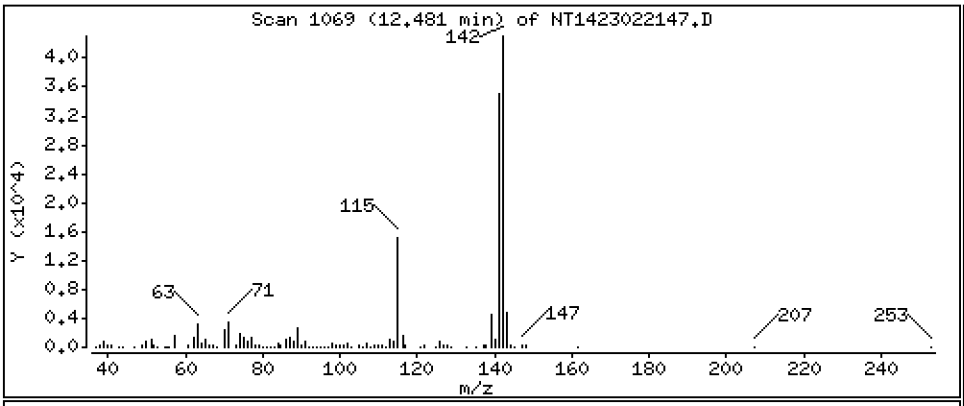
Operator: DSD

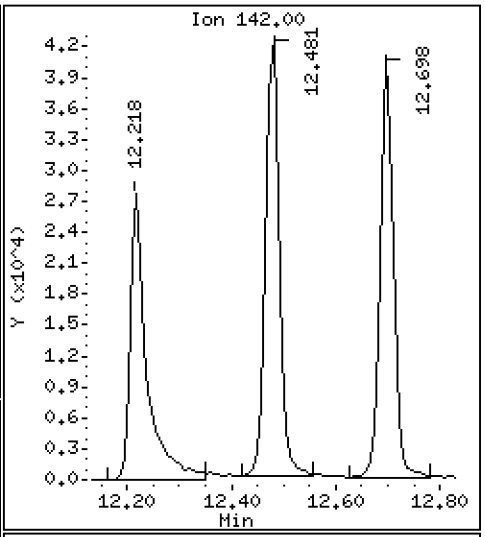
Column phase: ZB-5msi

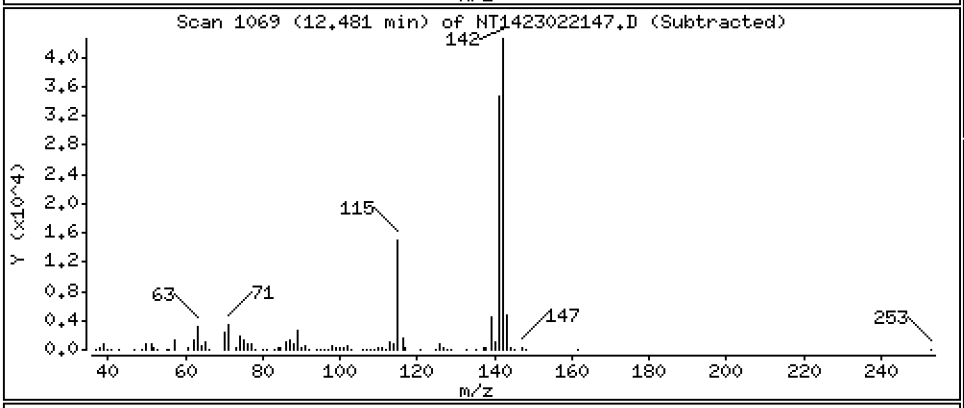
Column diameter: 0.25

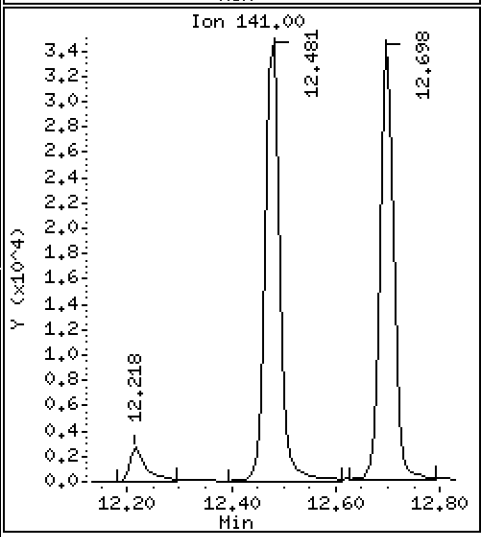
32 2-Methylnaphthalene

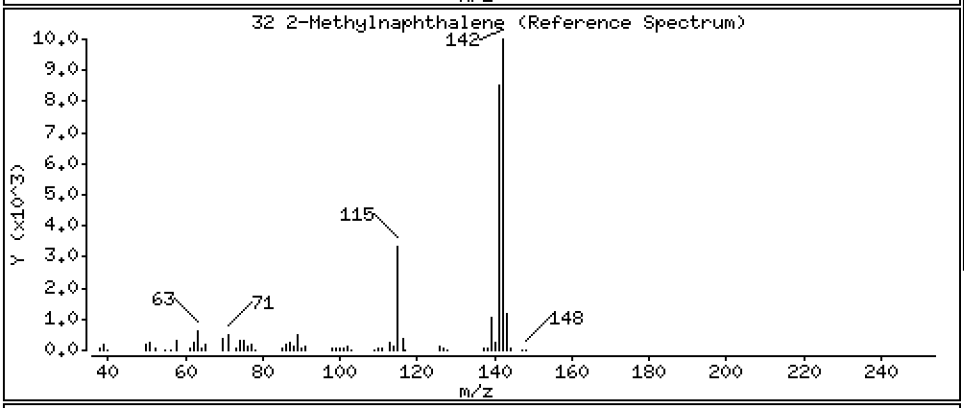
Concentration: 0.5331 ug/mL

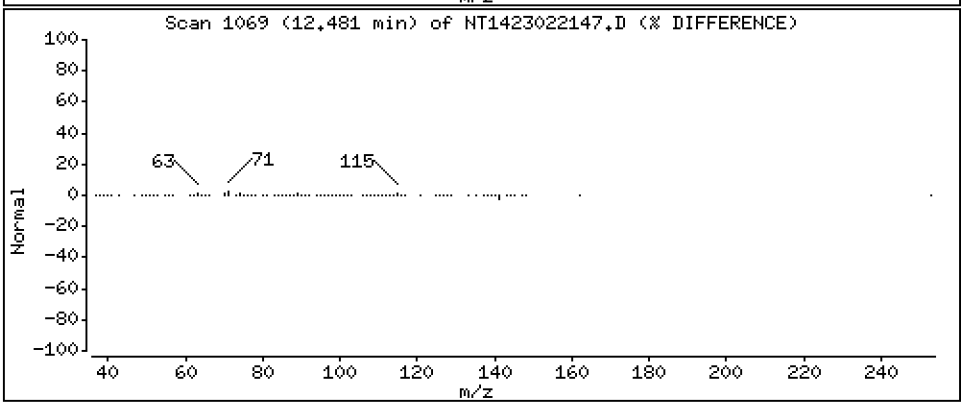












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

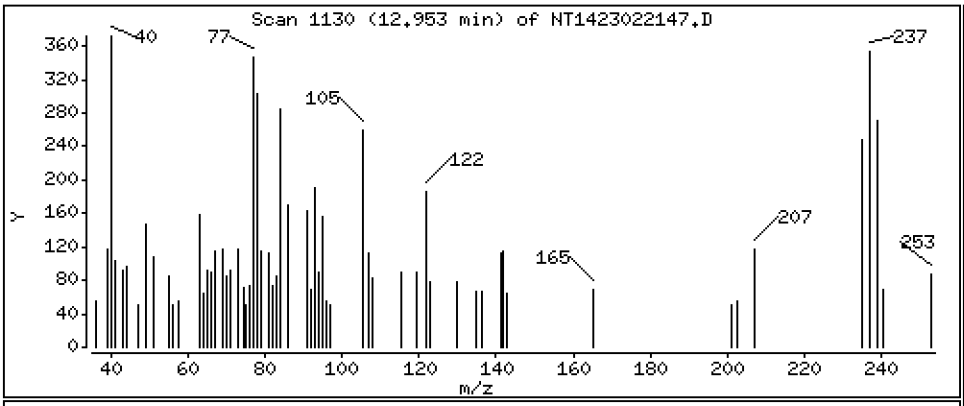
Operator: DSD

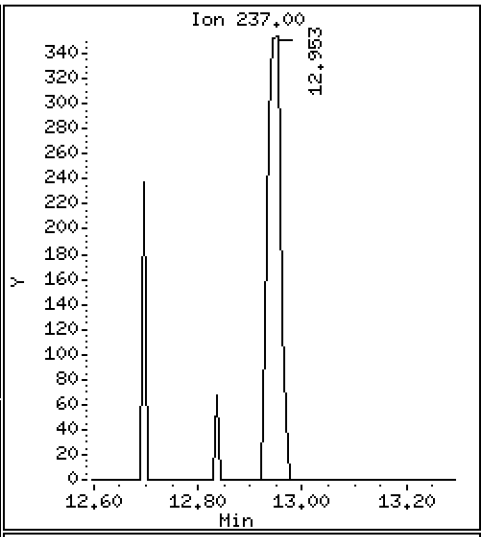
Column phase: ZB-5msi

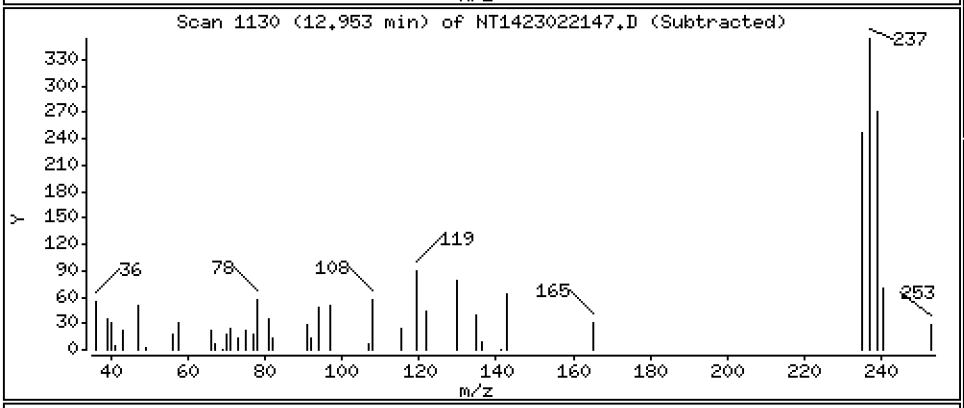
Column diameter: 0.25

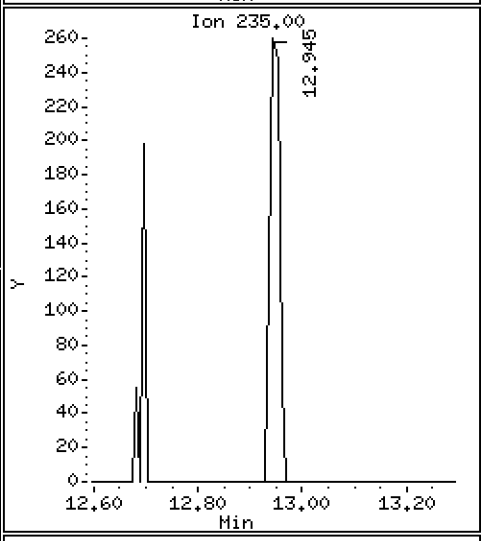
33 Hexachlorocyclopentadiene

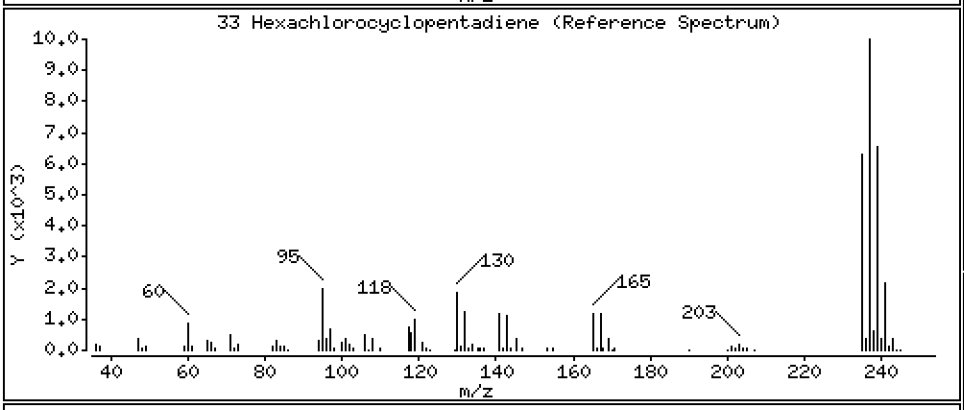
Concentration: 0.01357 ug/mL

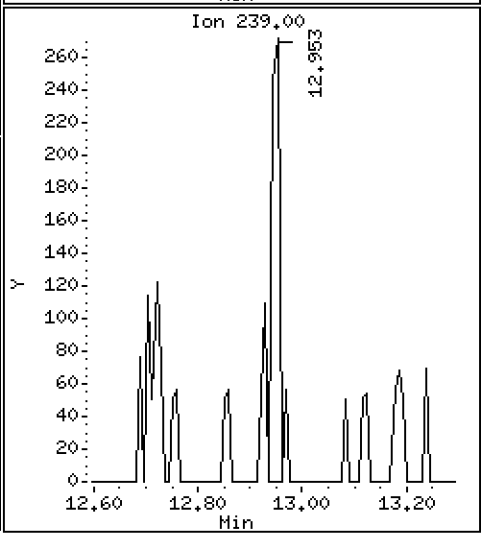


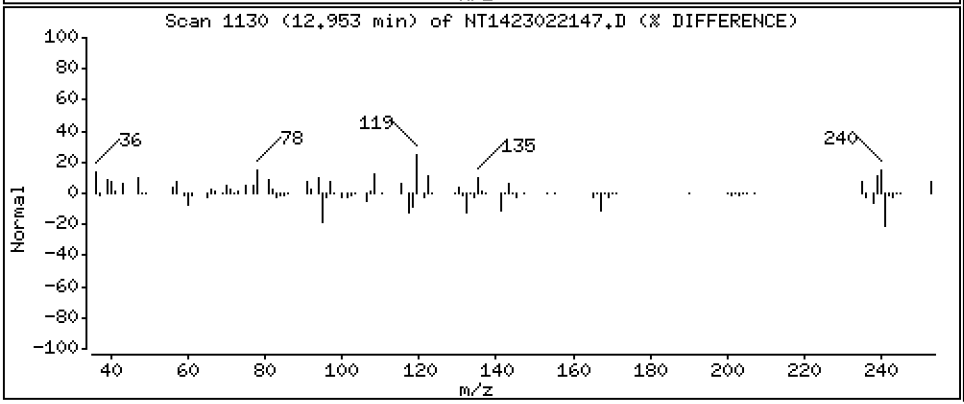












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

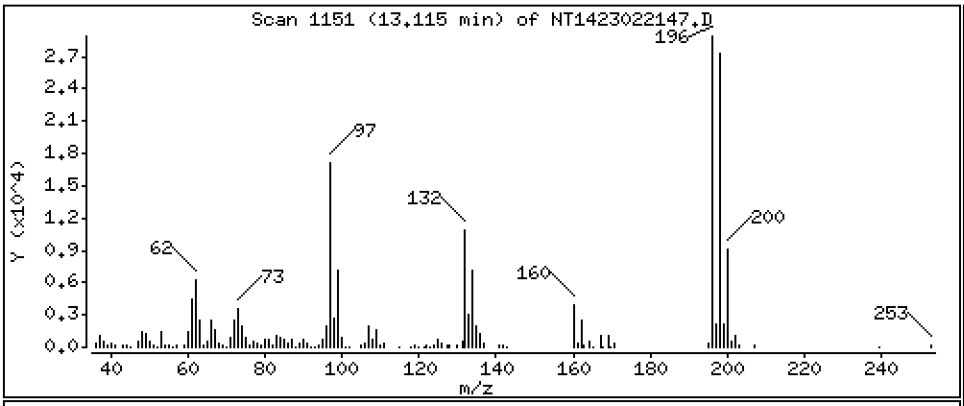
Operator: DSD

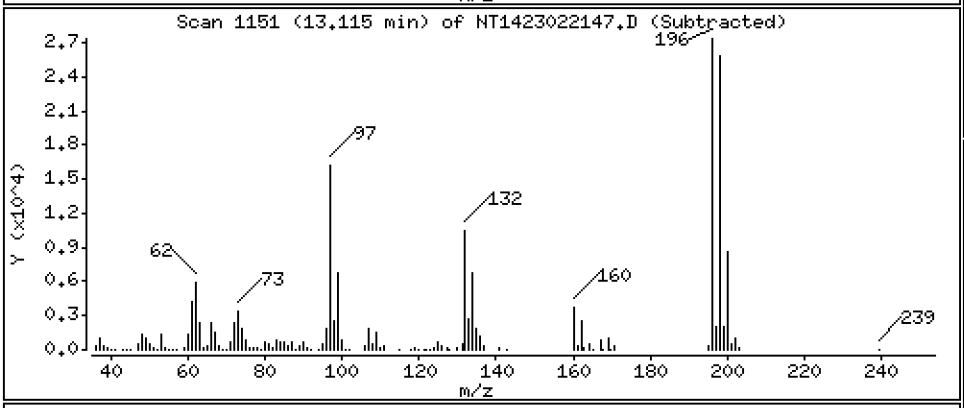
Column phase: ZB-5msi

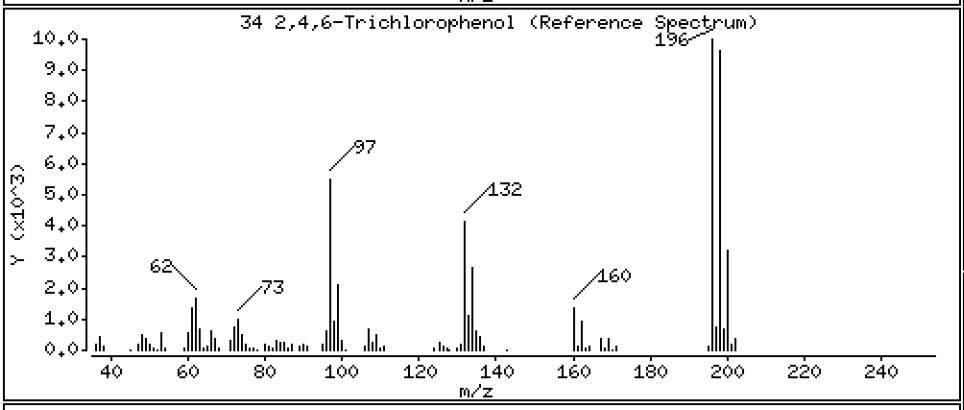
Column diameter: 0.25

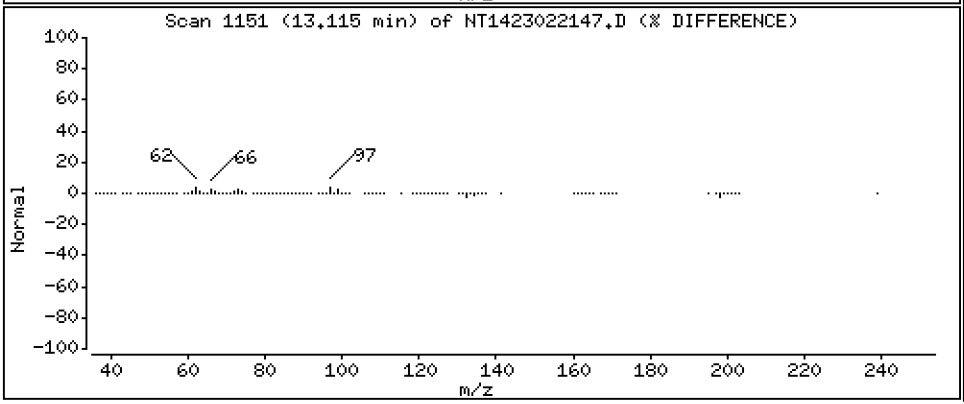
34 2,4,6-Trichlorophenol

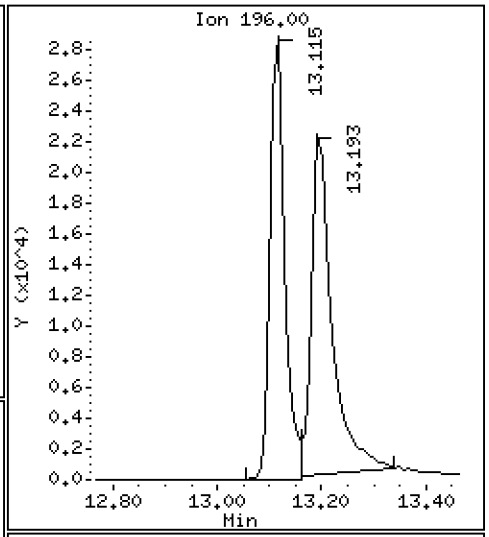
Concentration: 1.222 ug/mL

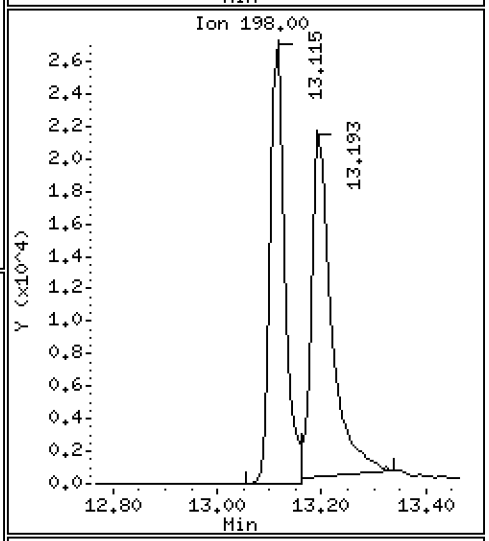


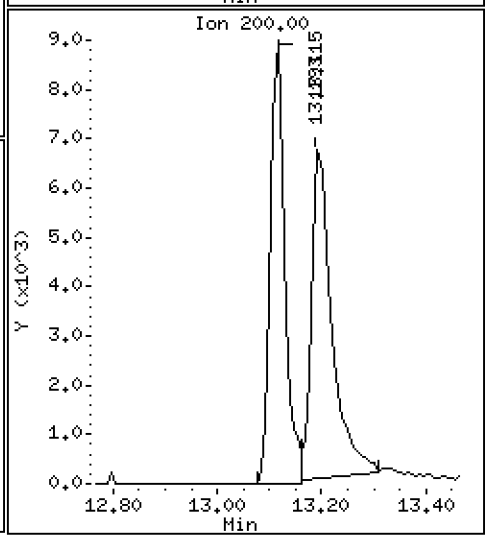












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

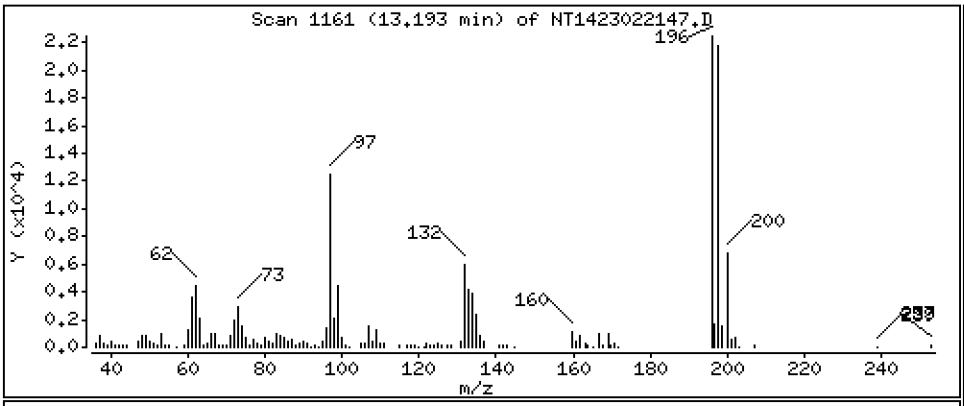
Operator: DSD

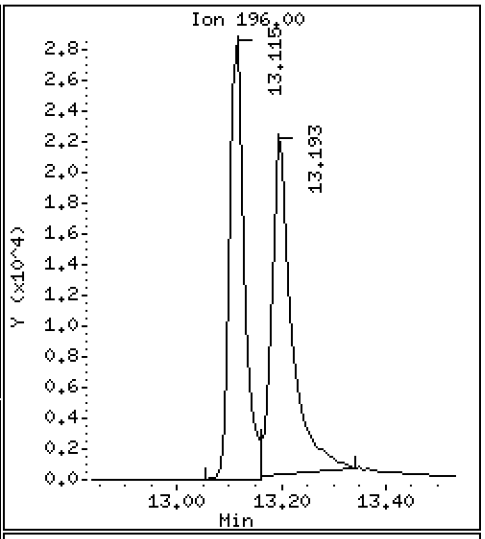
Column phase: ZB-5msi

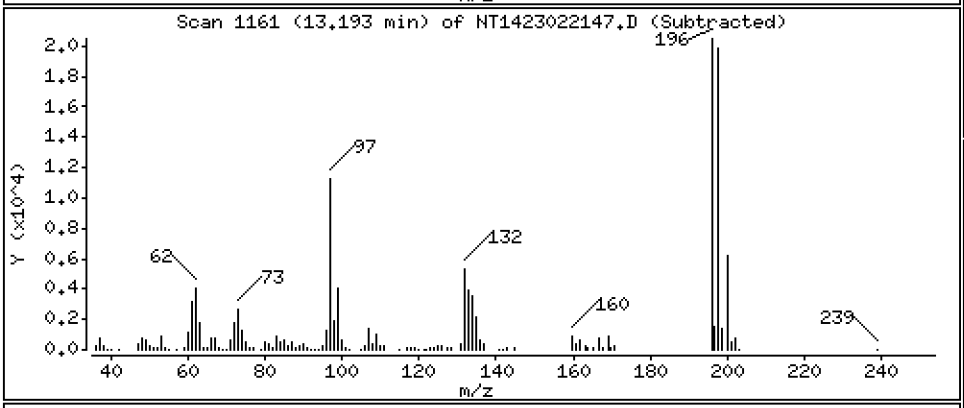
Column diameter: 0.25

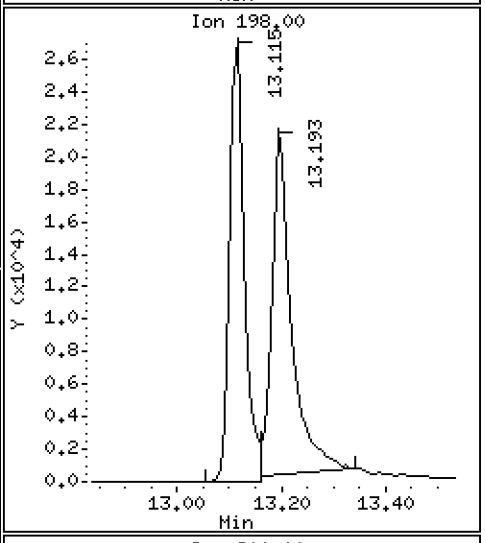
35 2,4,5-Trichlorophenol

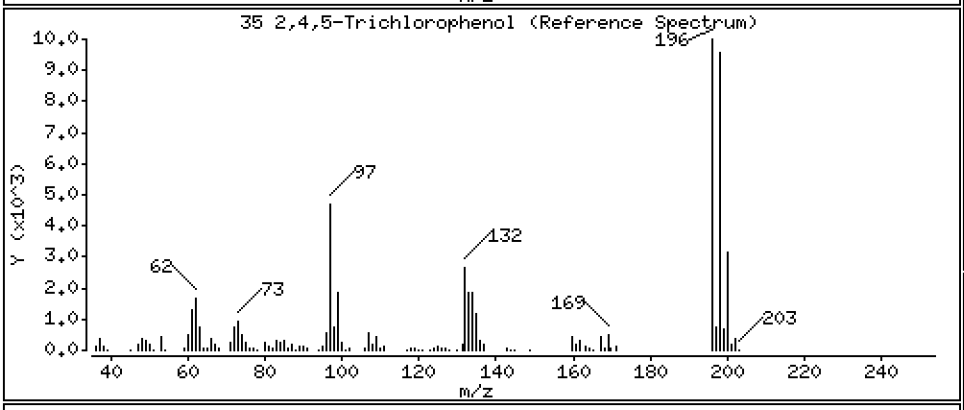
Concentration: 1.211 ug/mL

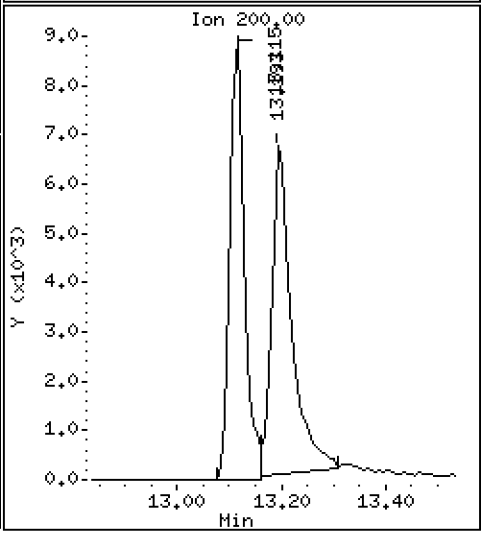


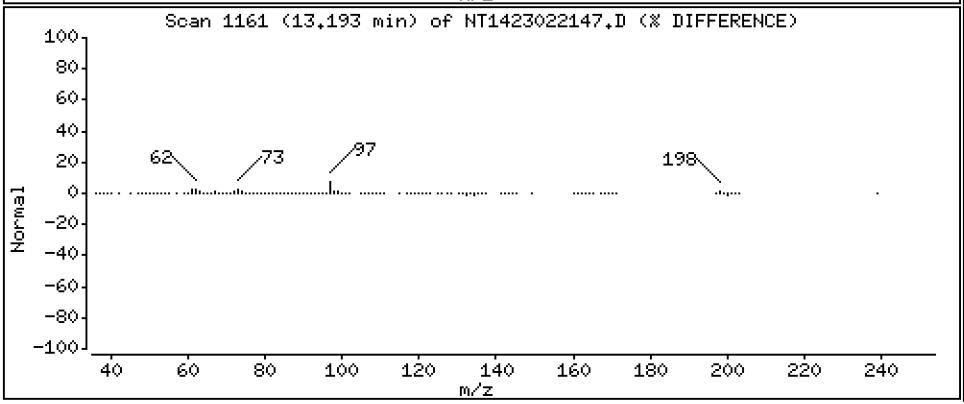












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

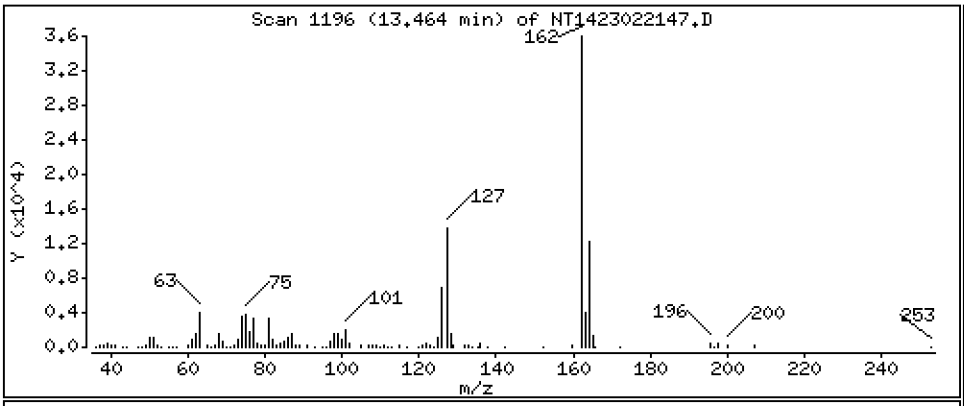
Operator: DSD

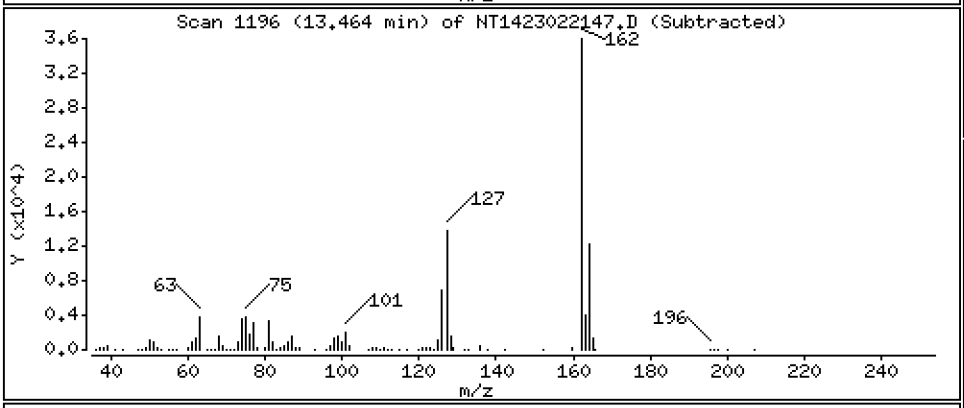
Column phase: ZB-5msi

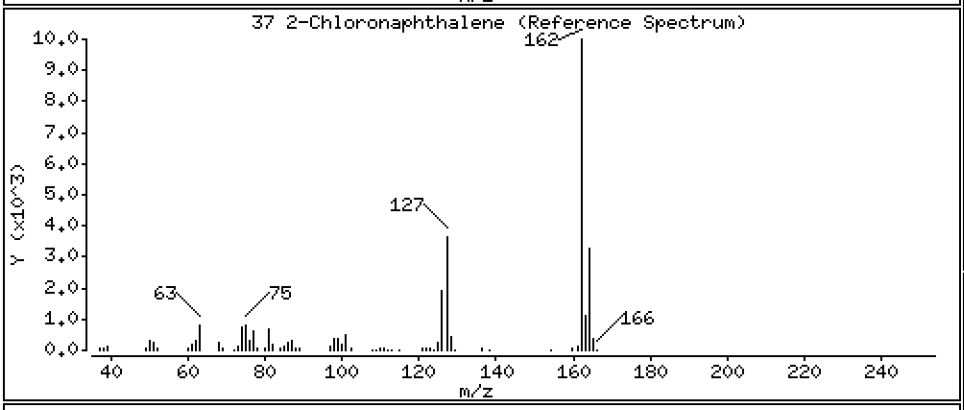
Column diameter: 0.25

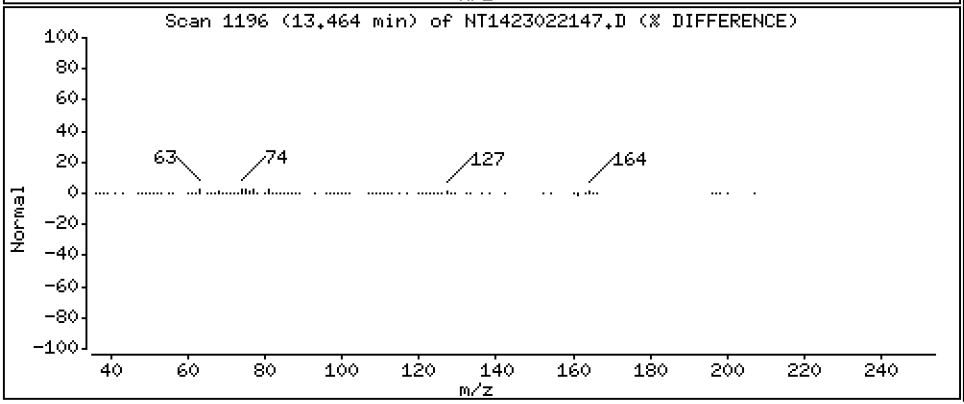
37 2-Chloronaphthalene

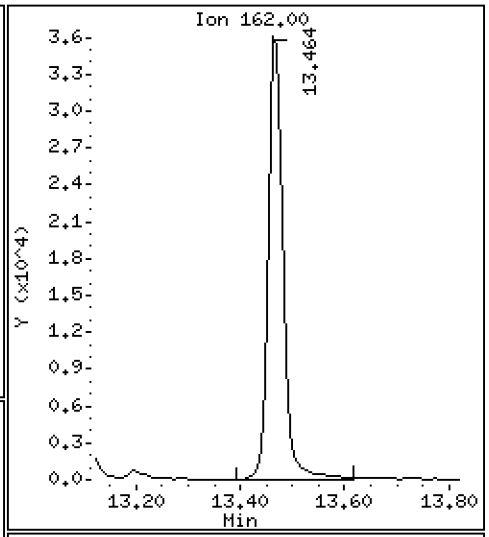
Concentration: 0.5249 ug/mL

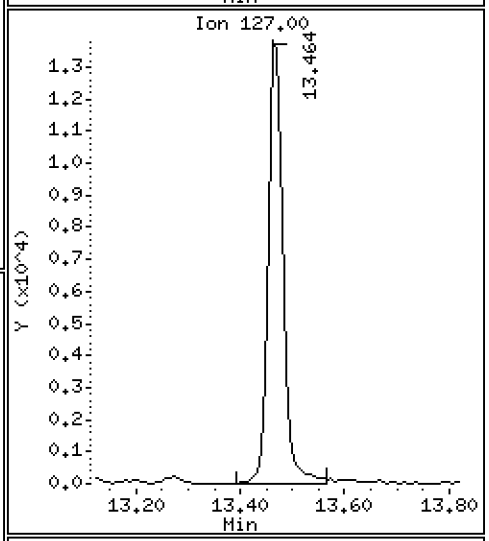


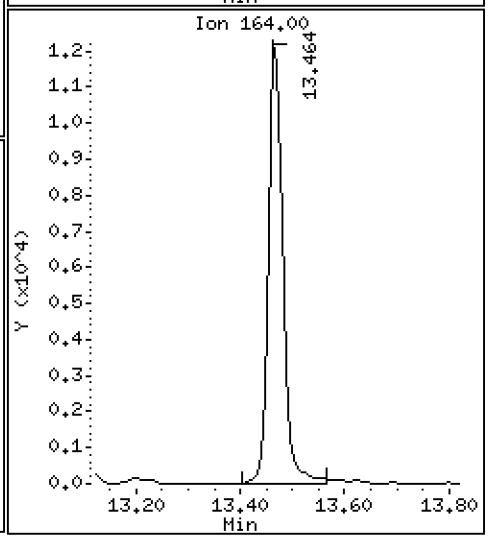












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

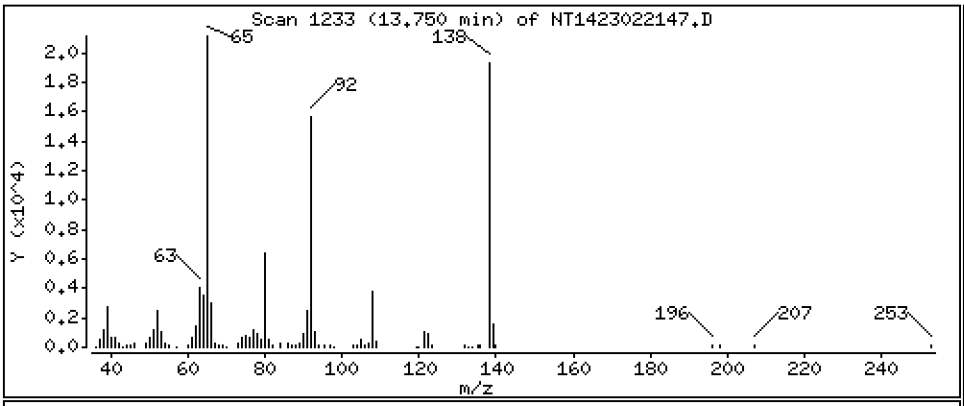
Operator: DSD

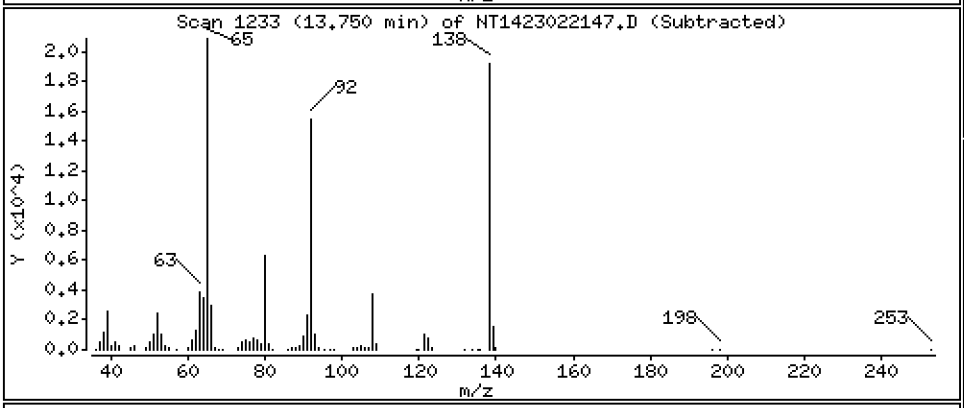
Column phase: ZB-5msi

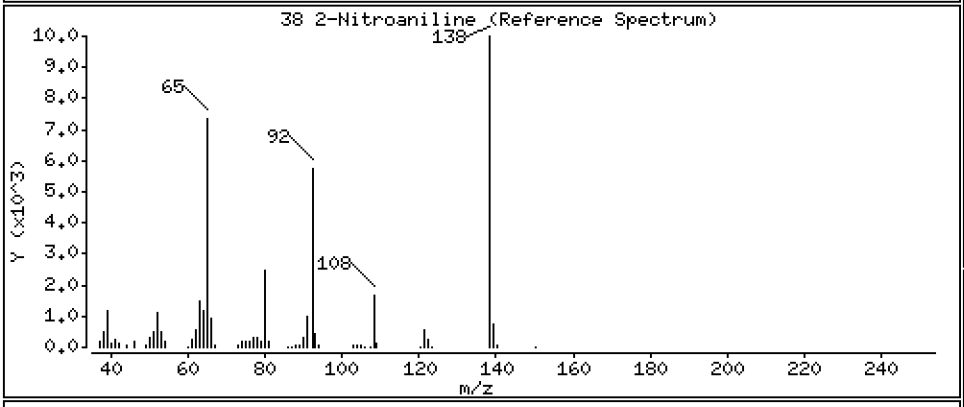
Column diameter: 0.25

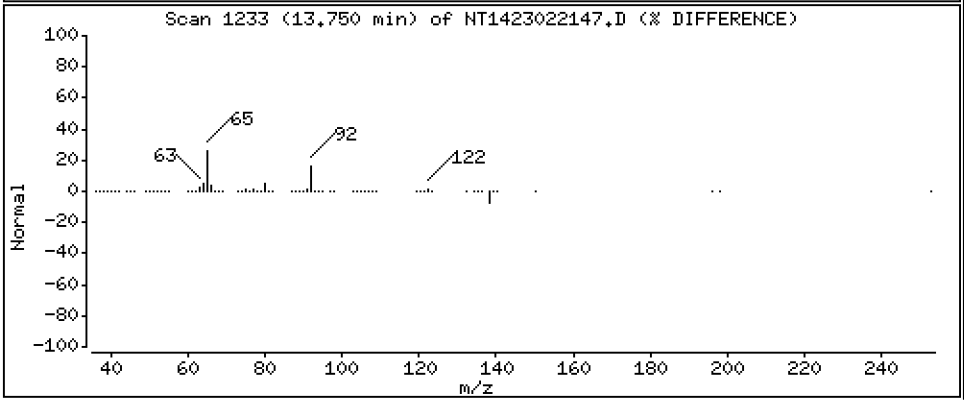
38 2-Nitroaniline

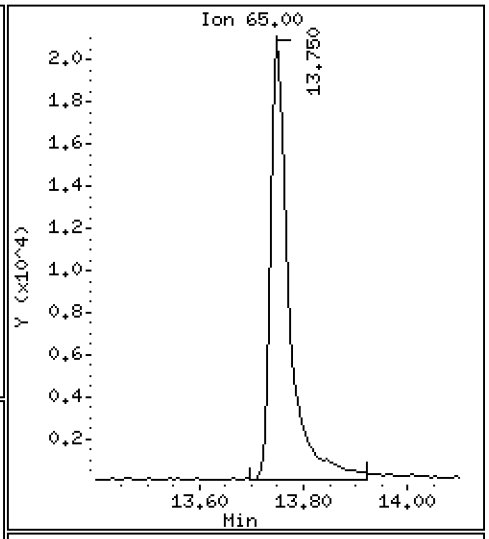
Concentration: 1.240 ug/mL

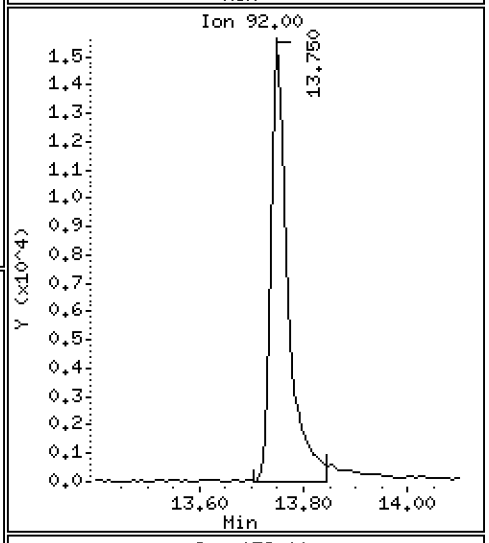


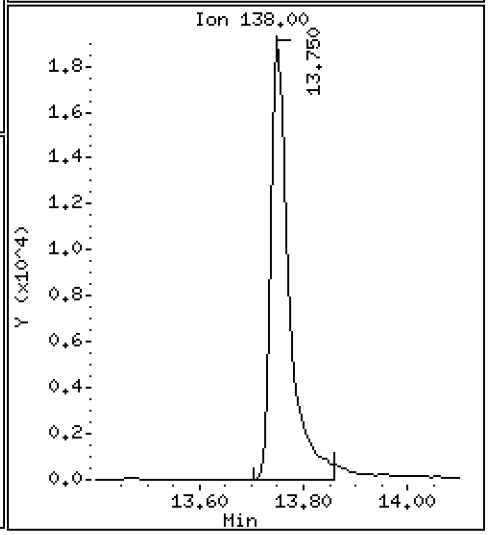












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

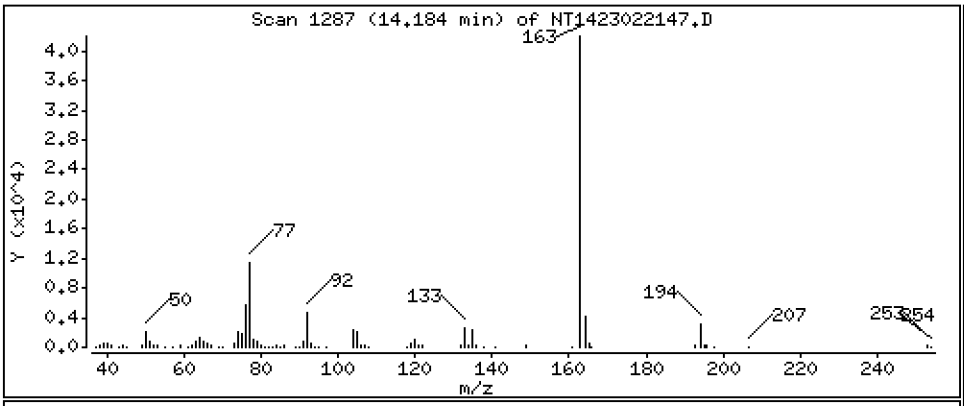
Operator: DSD

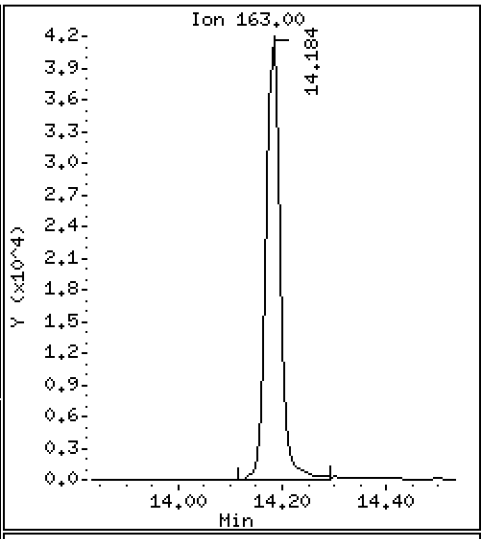
Column phase: ZB-5msi

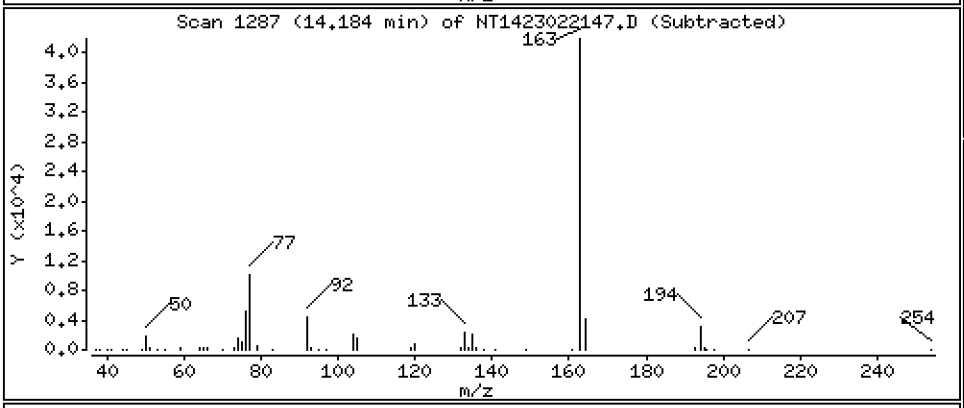
Column diameter: 0.25

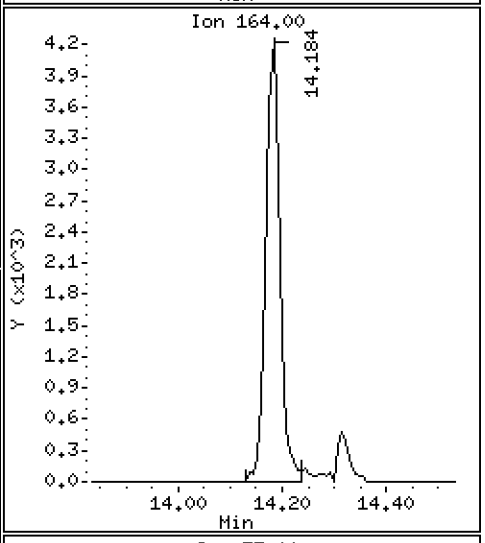
39 Dimethylphthalate

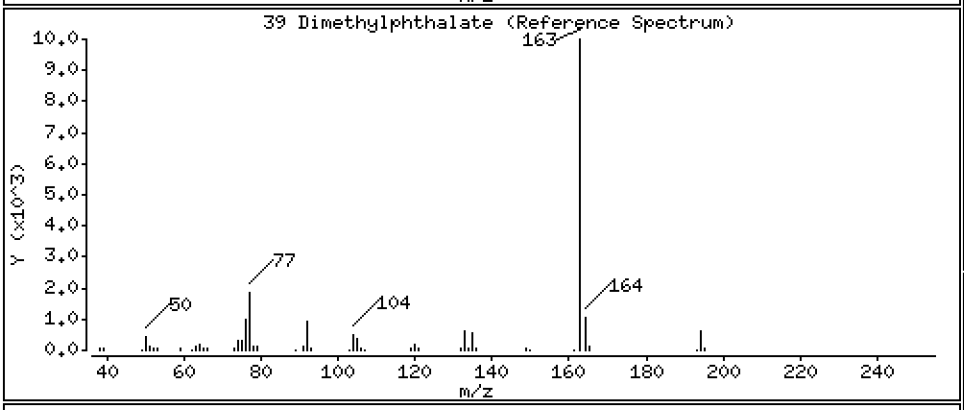
Concentration: 0.5509 ug/mL

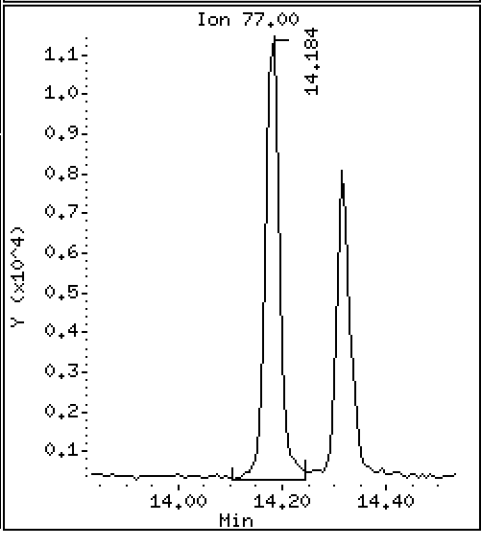


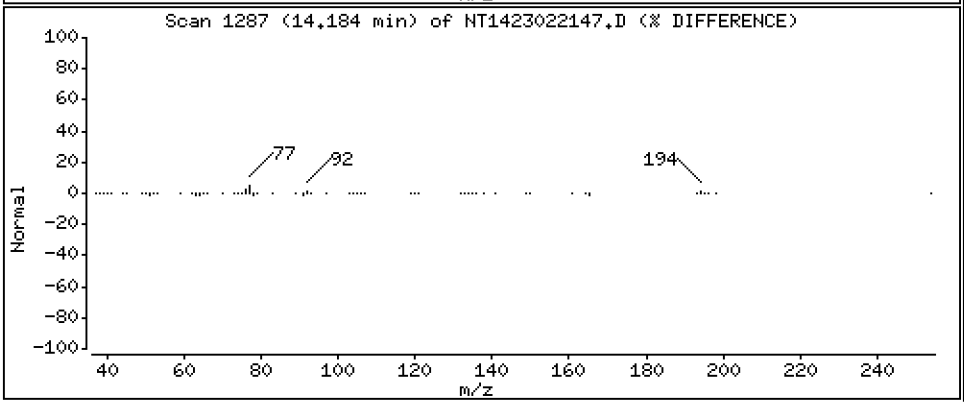












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

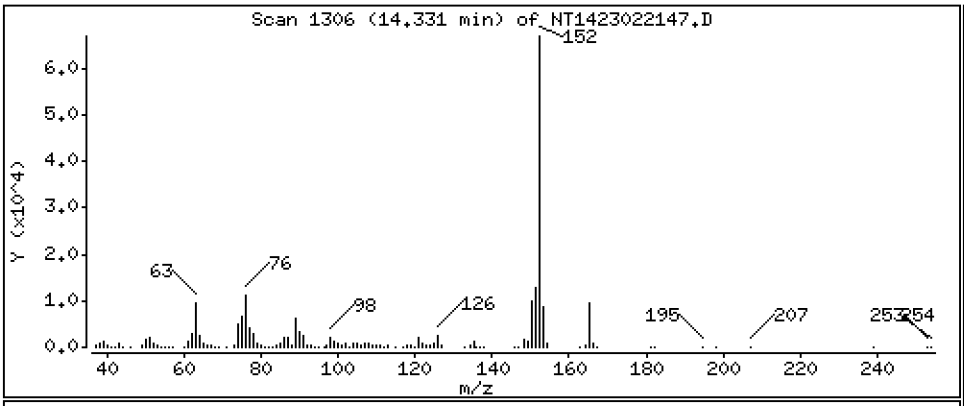
Operator: DSD

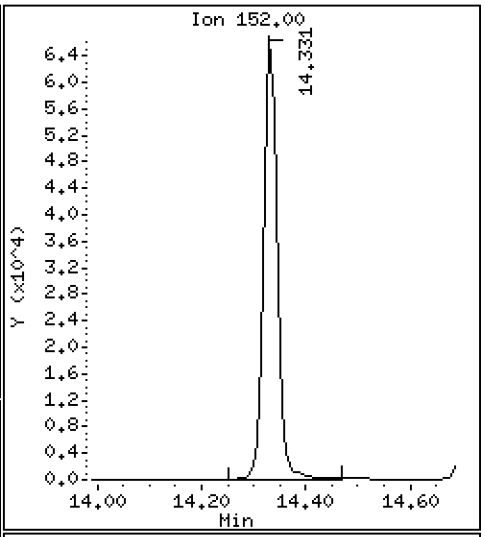
Column phase: ZB-5msi

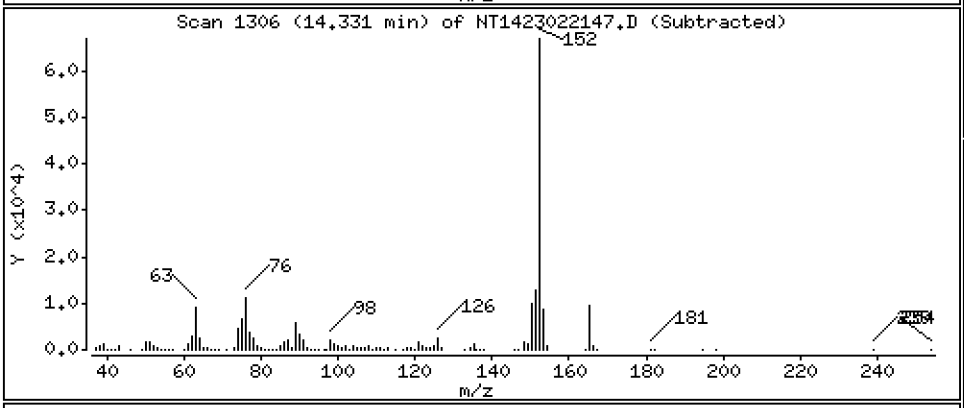
Column diameter: 0.25

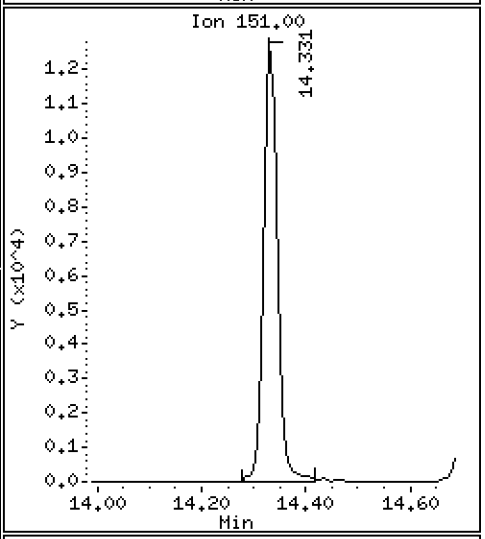
40 Acenaphthylene

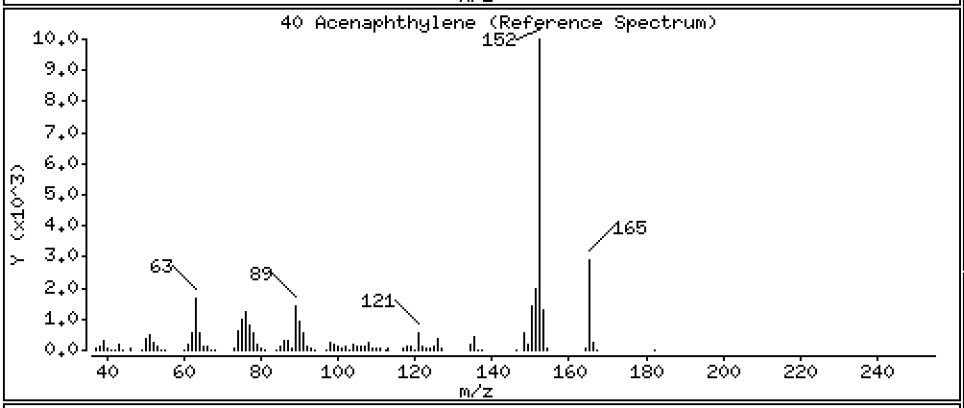
Concentration: 0.5736 ug/mL

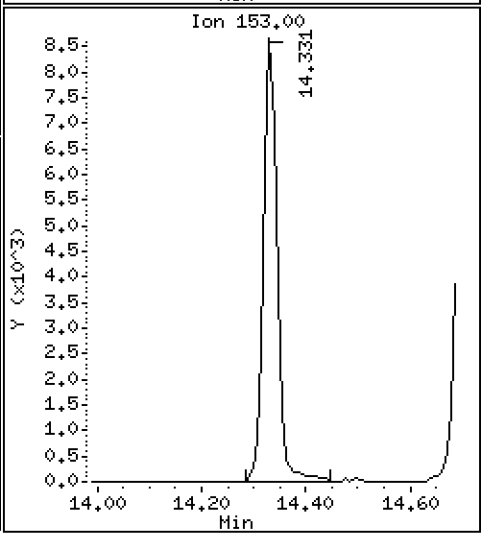


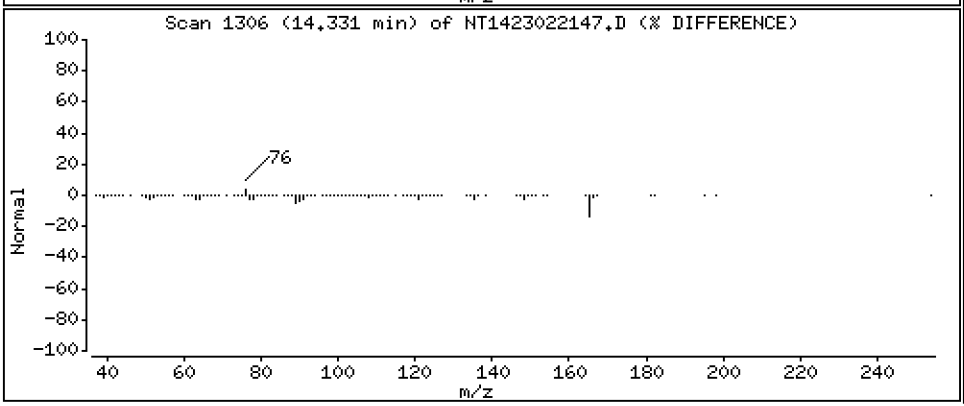












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

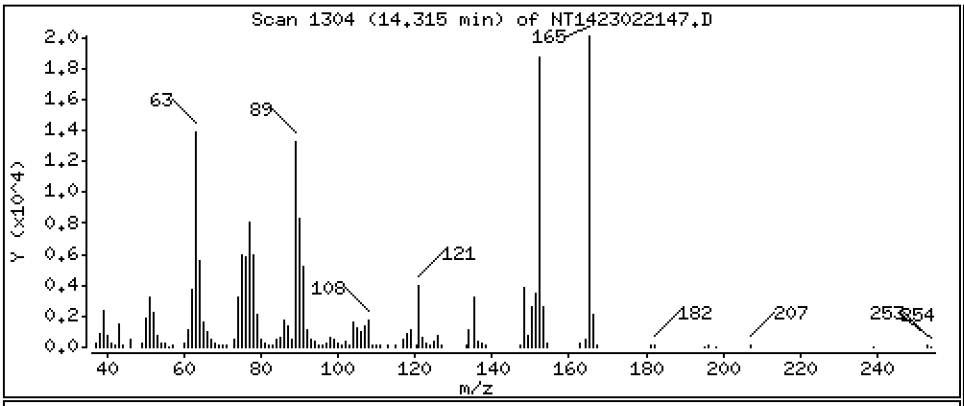
Operator: DSD

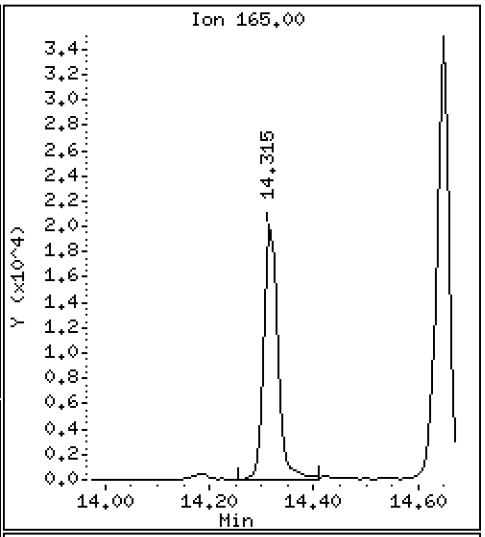
Column phase: ZB-5msi

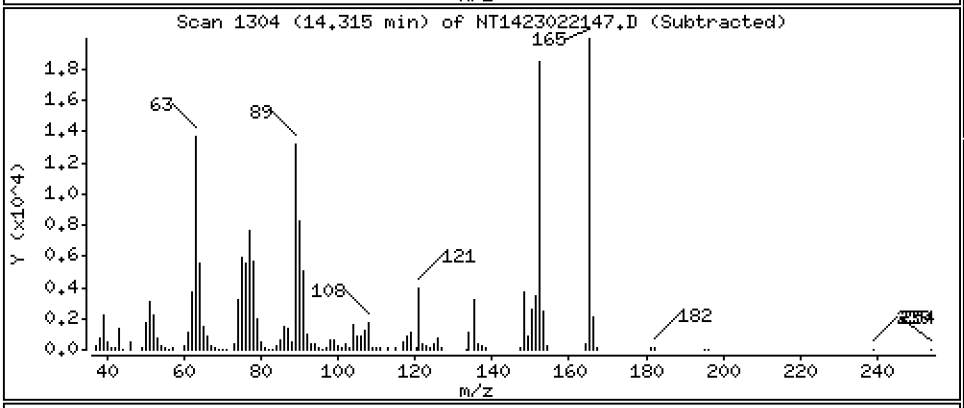
Column diameter: 0.25

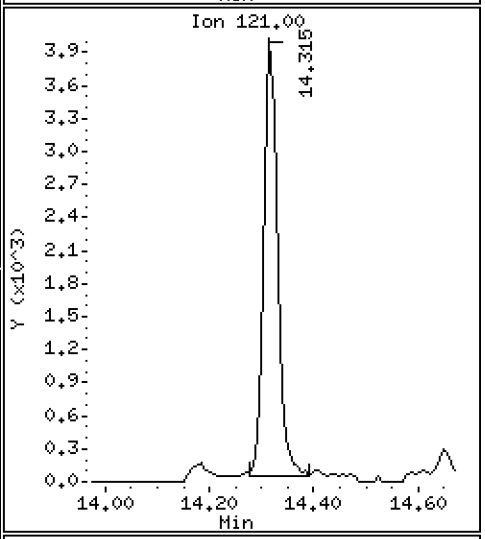
41 2,6-Dinitrotoluene

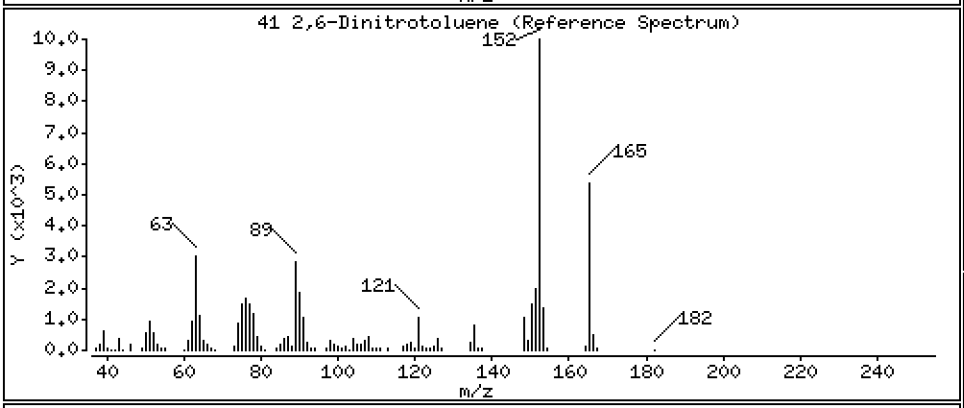
Concentration: 1.106 ug/mL

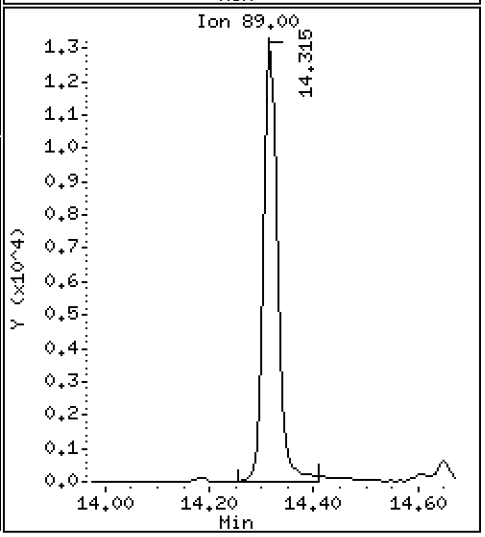


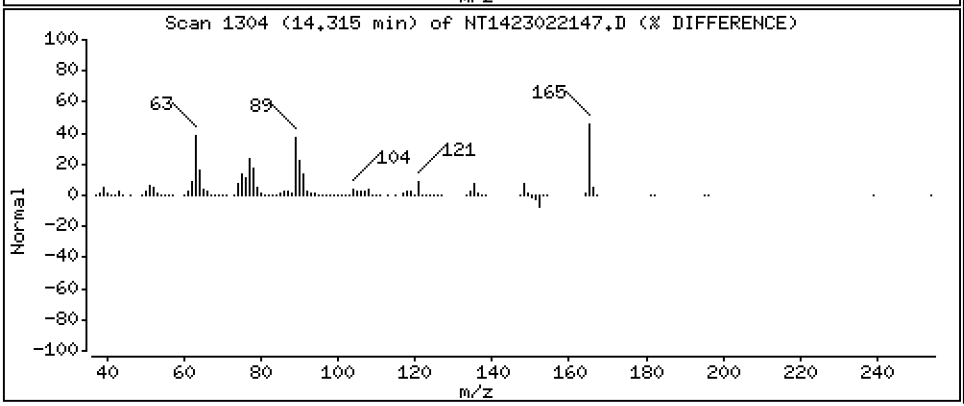












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

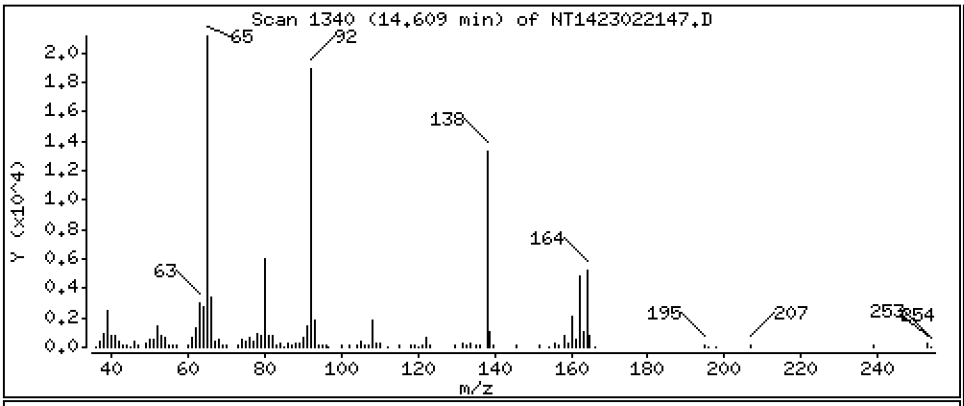
Operator: DSD

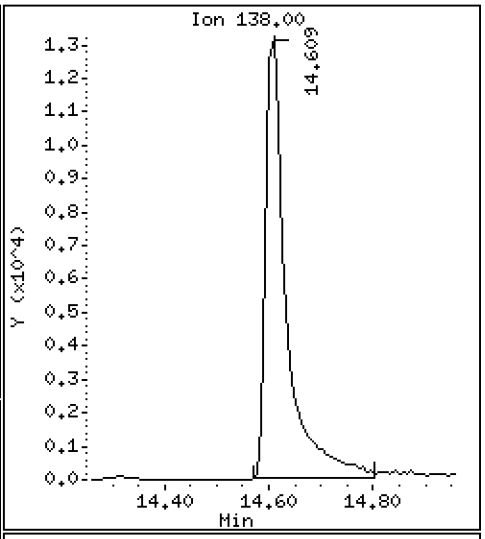
Column phase: ZB-5msi

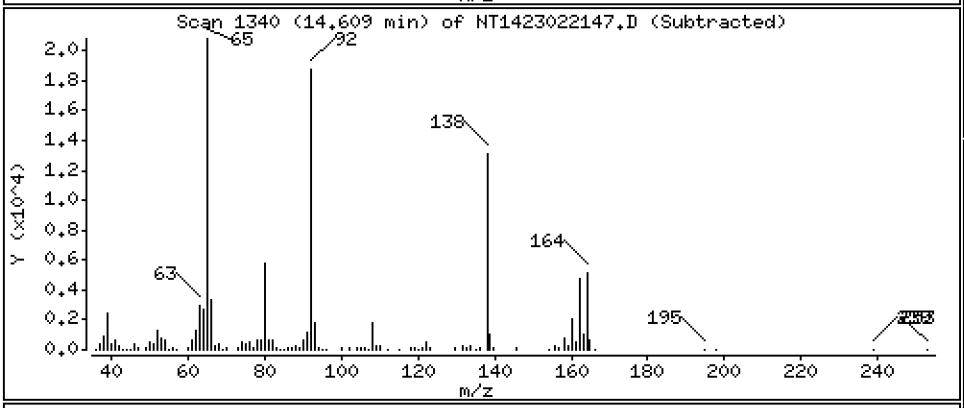
Column diameter: 0.25

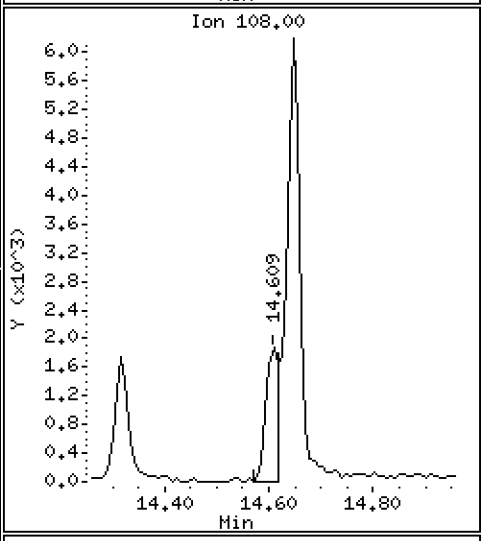
43 3-Nitroaniline

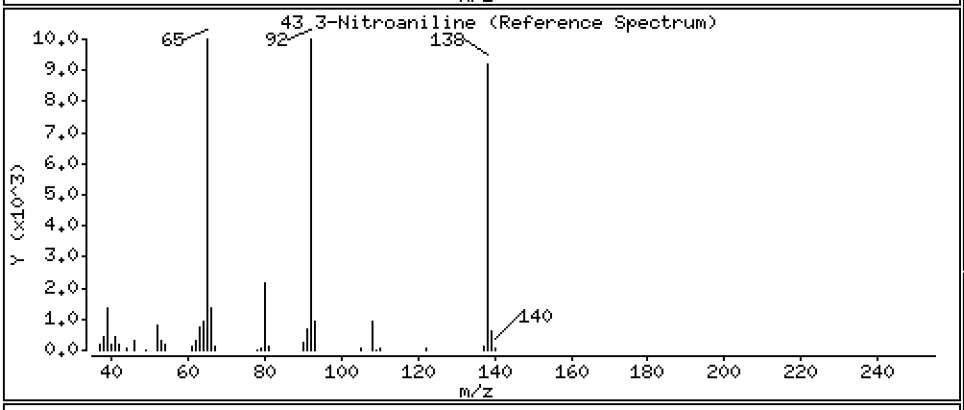
Concentration: 1.034 ug/mL

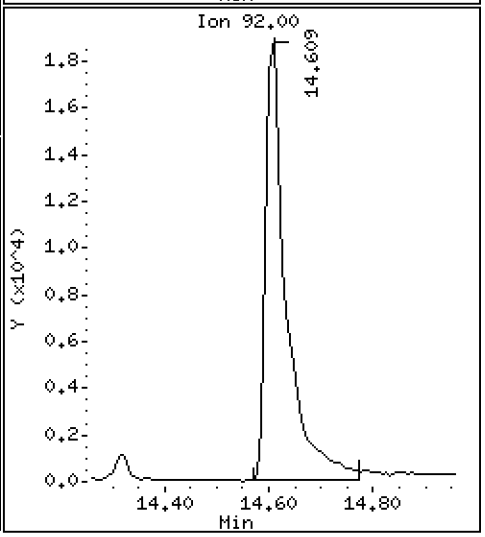


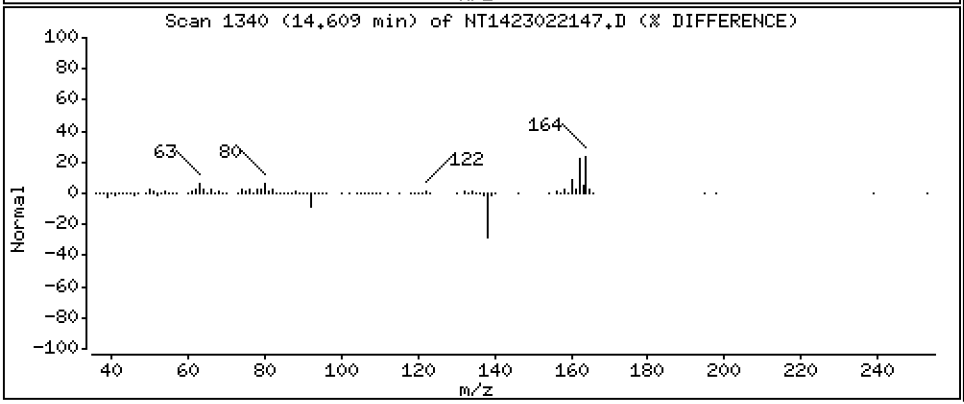












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

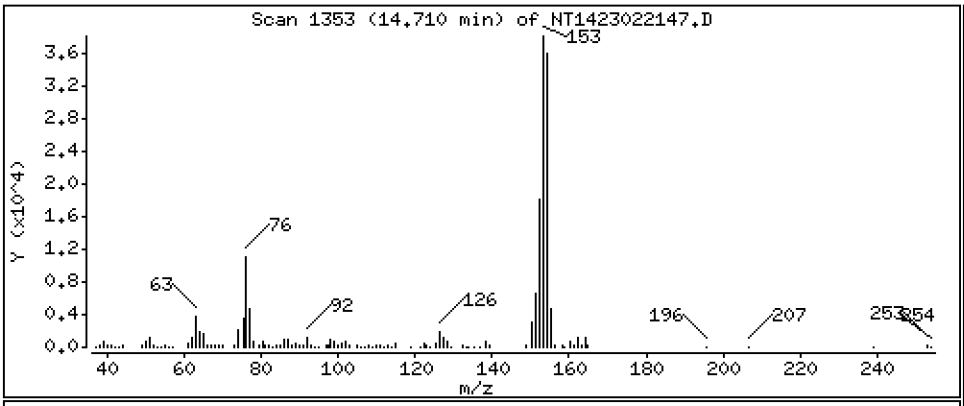
Operator: DSD

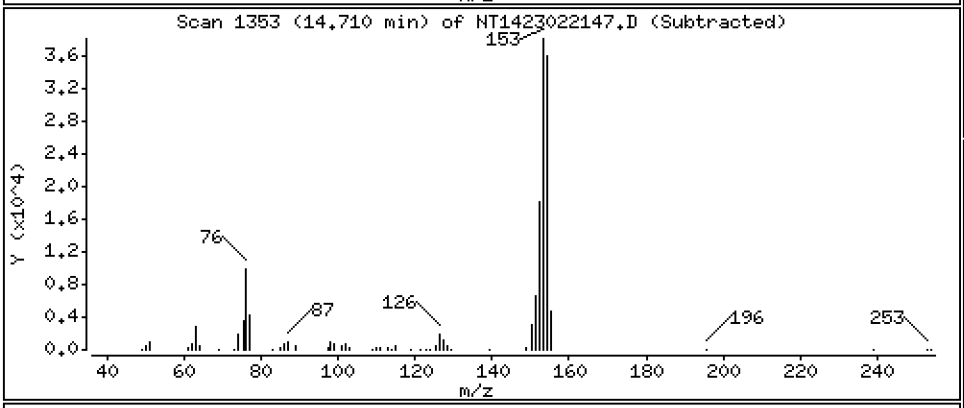
Column phase: ZB-5msi

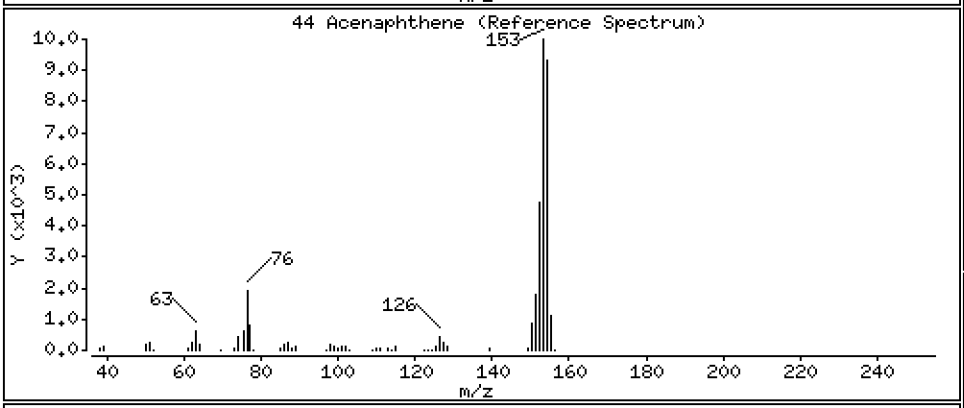
Column diameter: 0.25

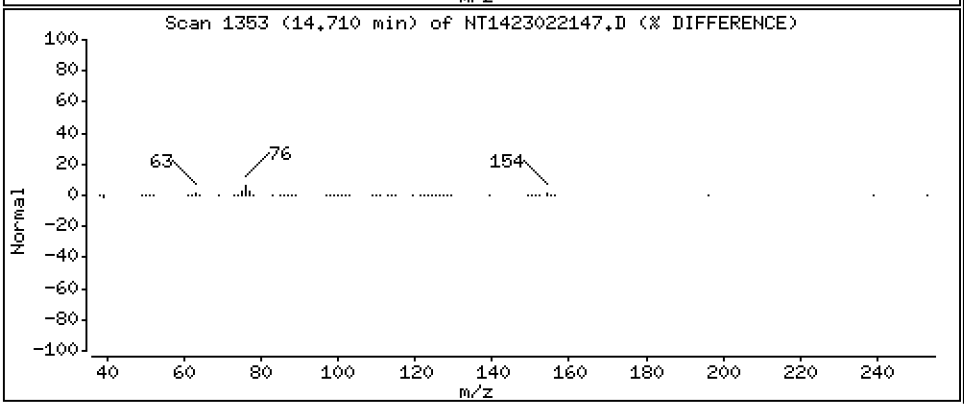
44 Acenaphthene

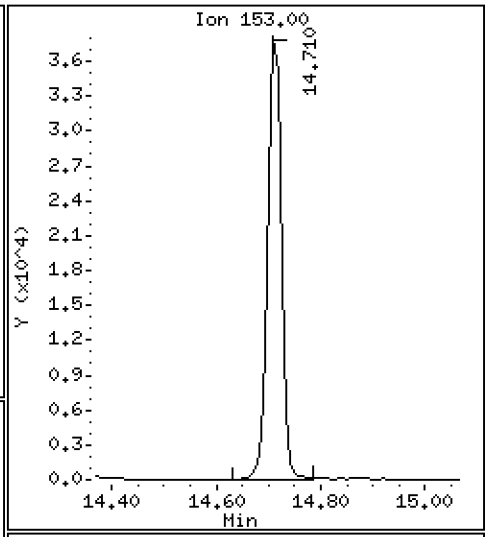
Concentration: 0.5494 ug/mL

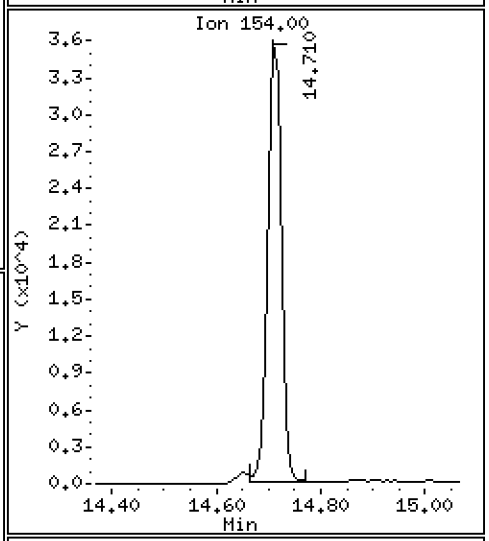


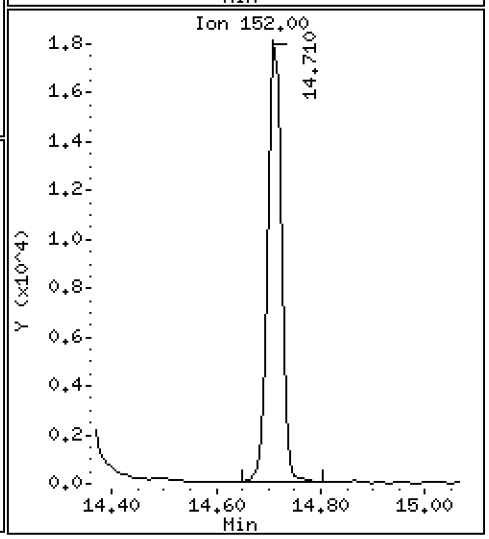












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

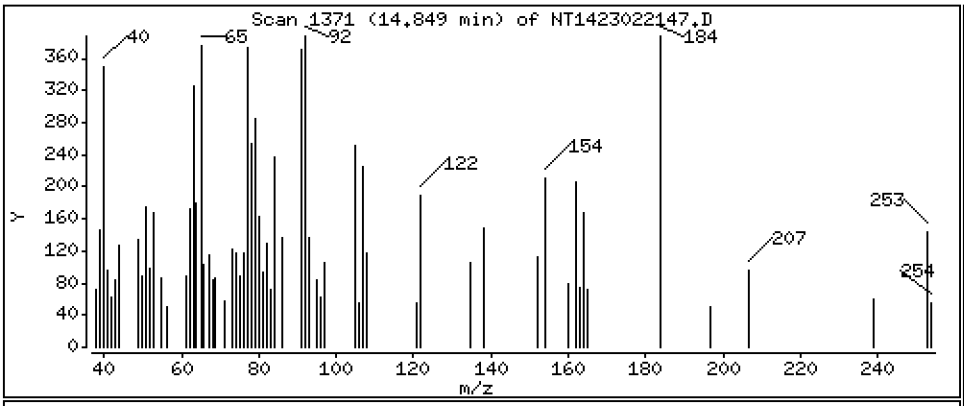
Operator: DSD

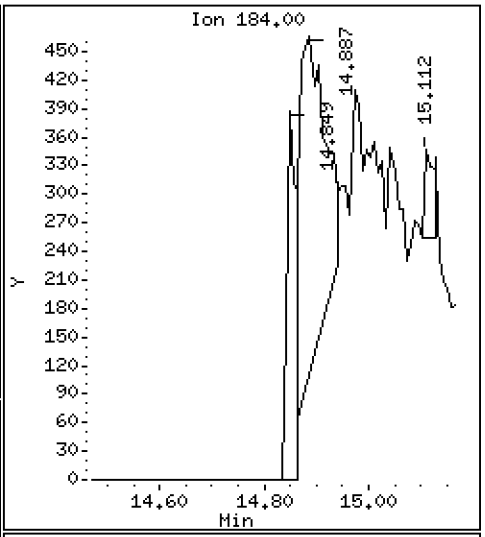
Column phase: ZB-5msi

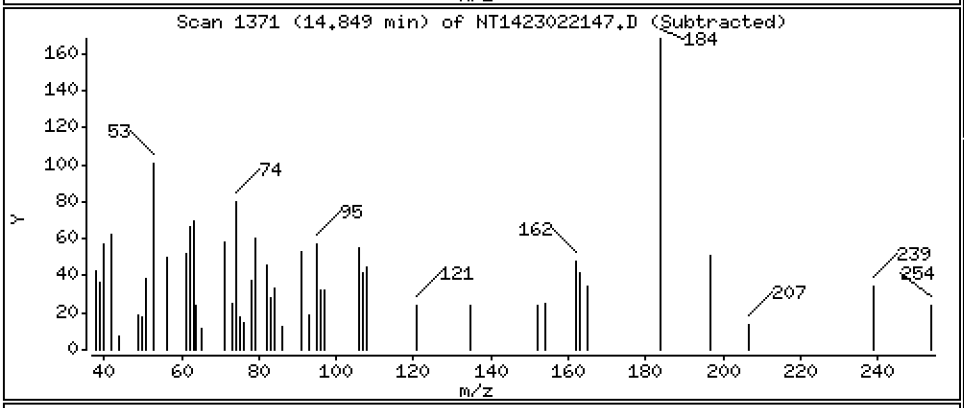
Column diameter: 0.25

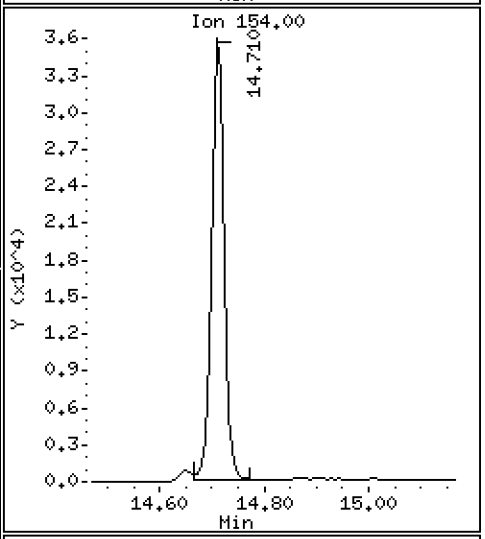
45 2,4-Dinitrophenol

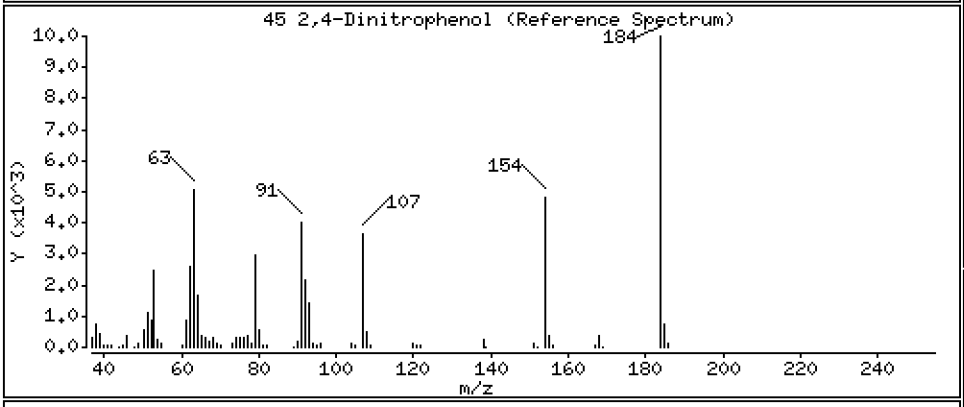
Concentration: 0.02527 ug/mL

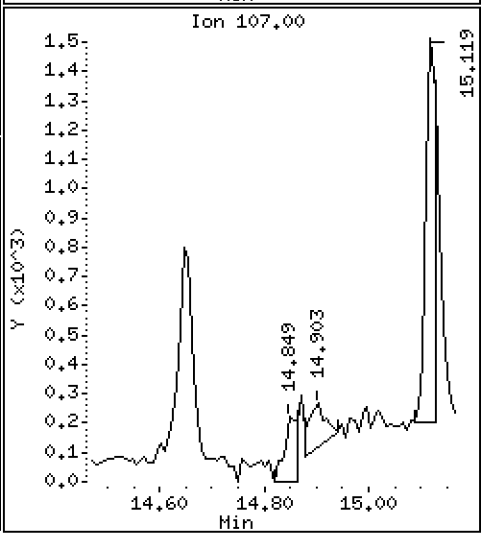


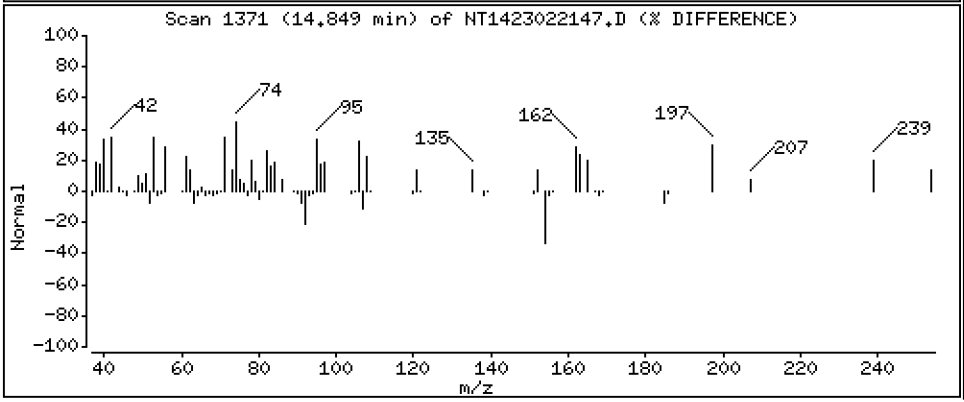












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

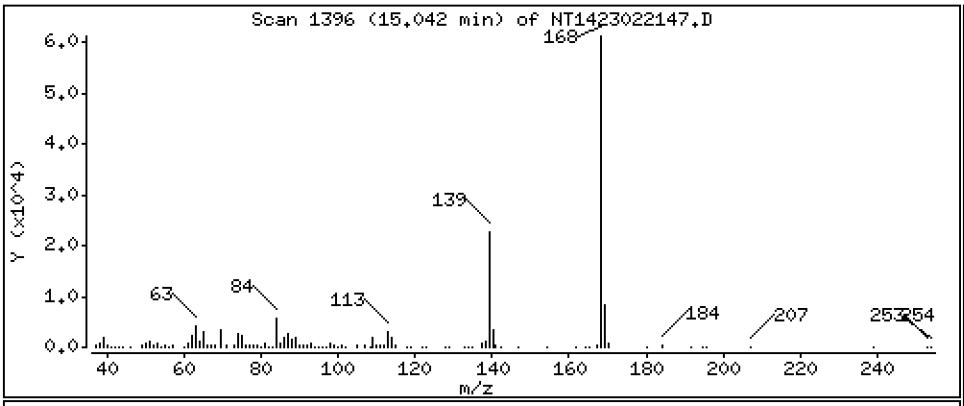
Operator: DSD

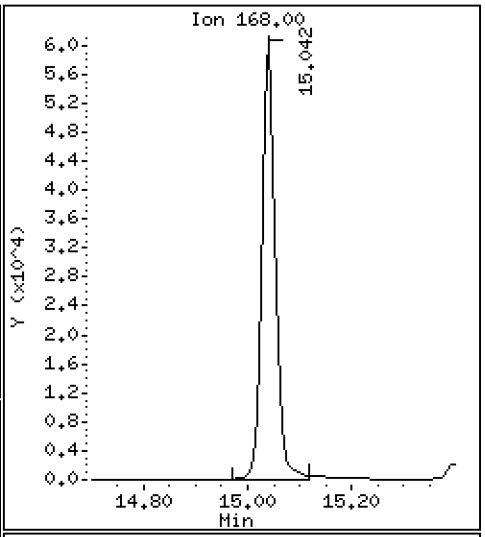
Column phase: ZB-5msi

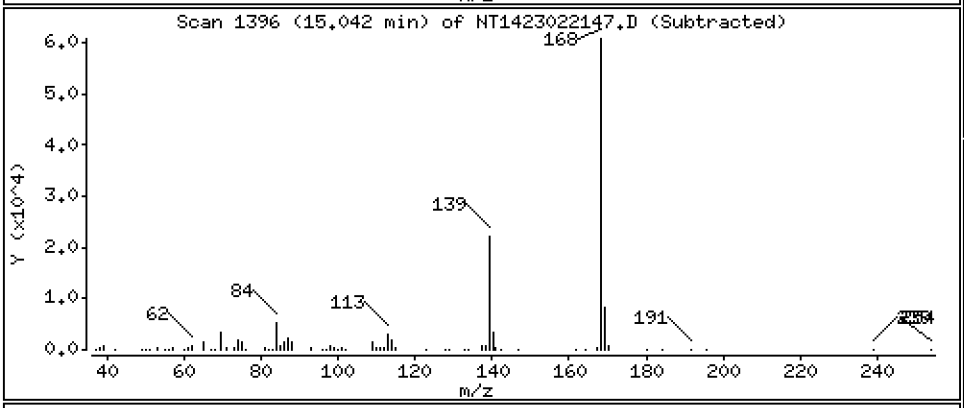
Column diameter: 0.25

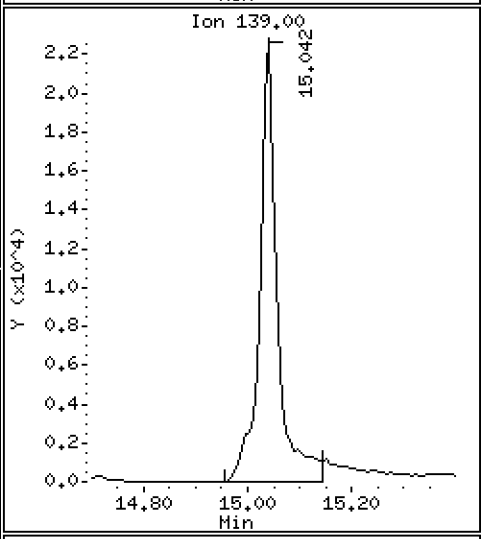
46 Dibenzofuran

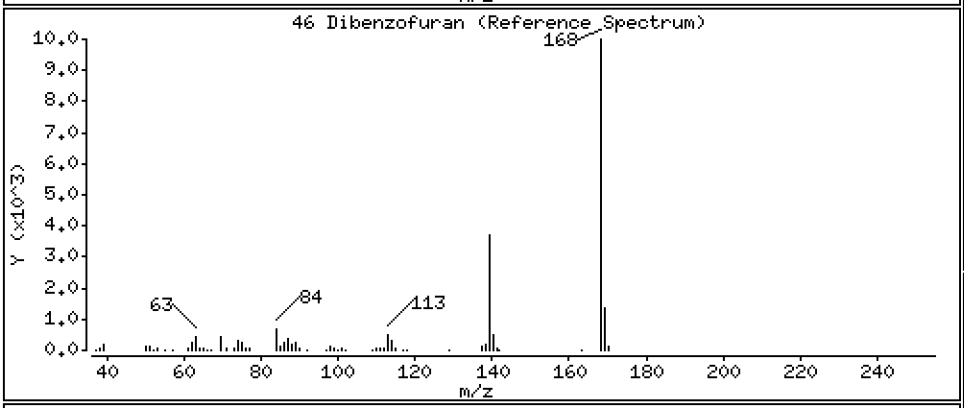
Concentration: 0.5406 ug/mL

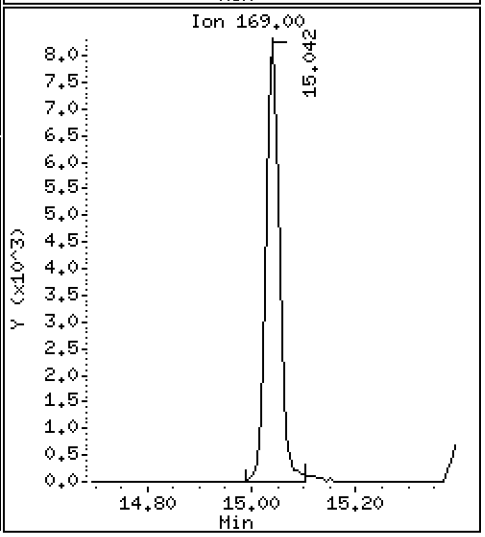


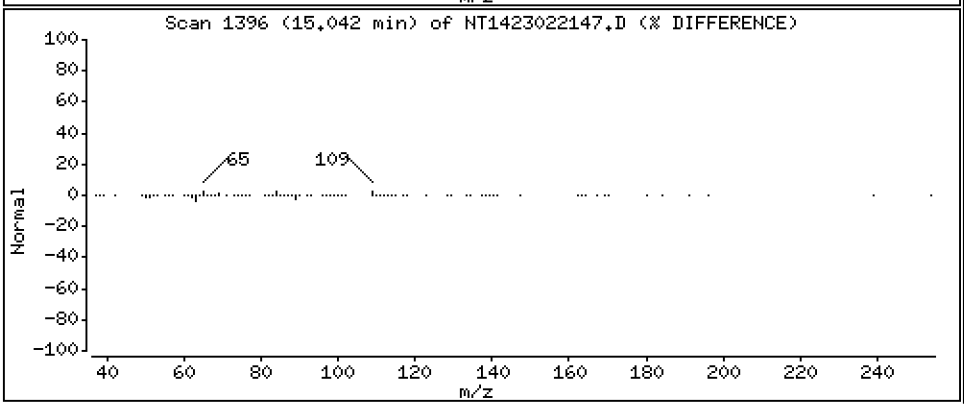












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

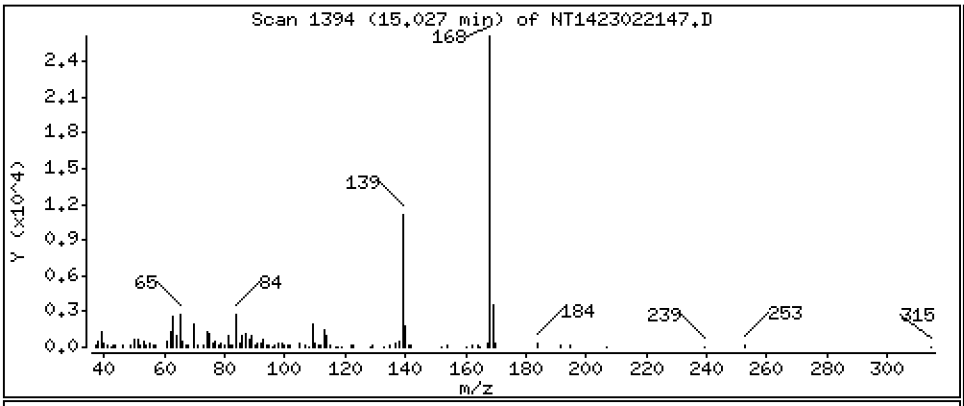
Operator: DSD

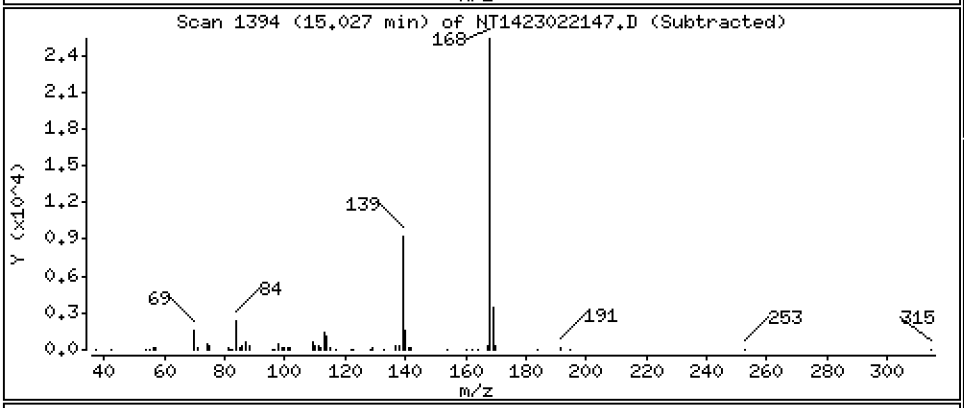
Column phase: ZB-5msi

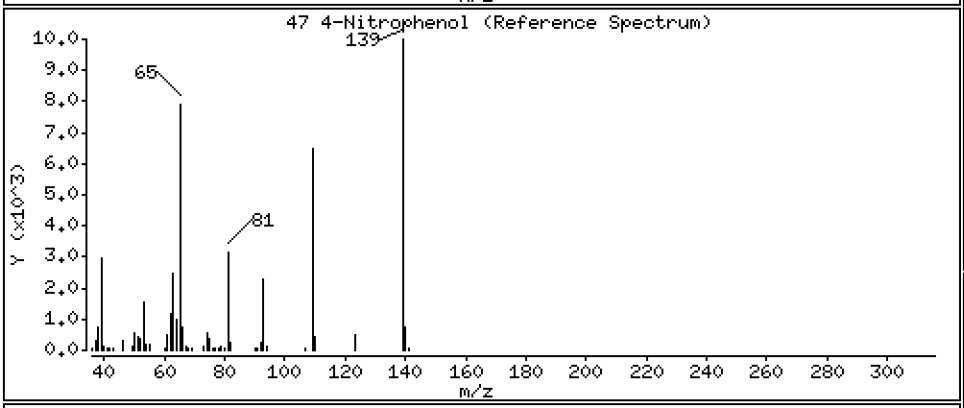
Column diameter: 0.25

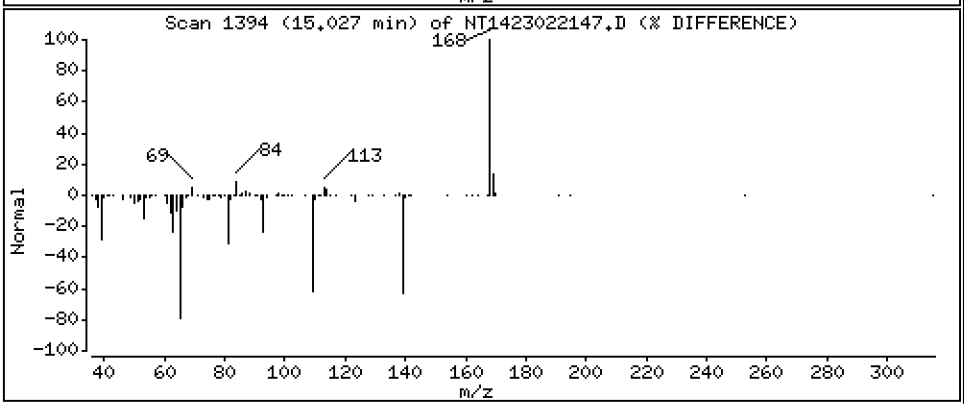
47 4-Nitrophenol

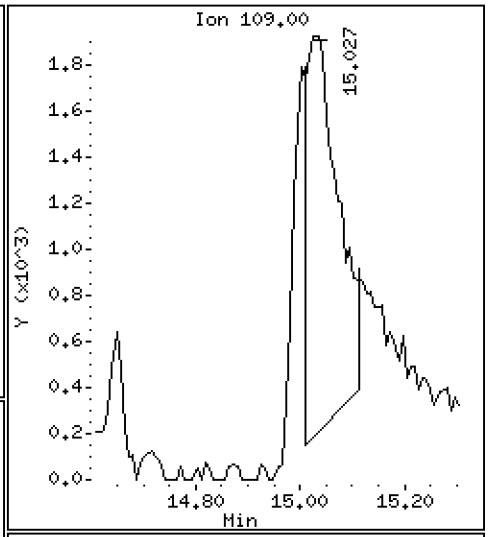
Concentration: 0.3691 ug/mL

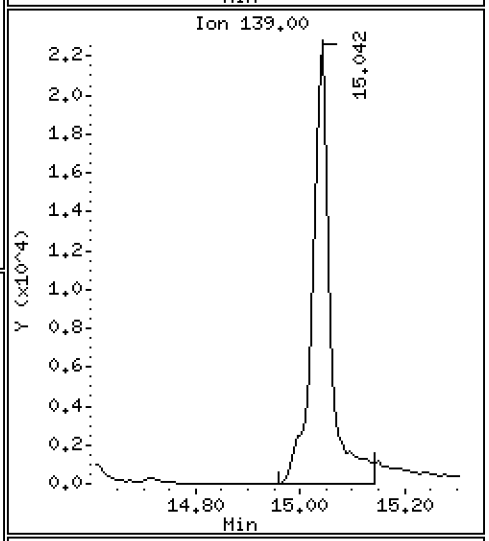


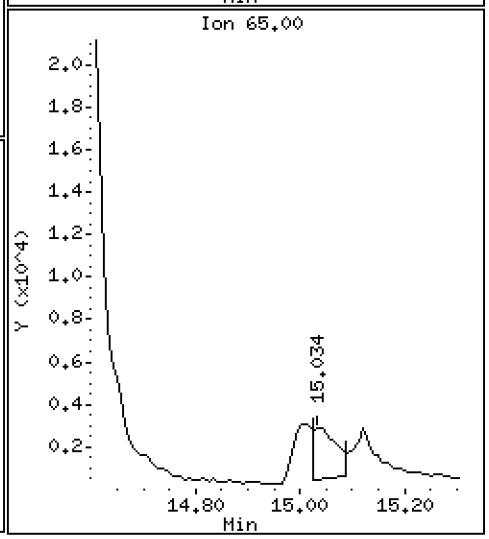












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

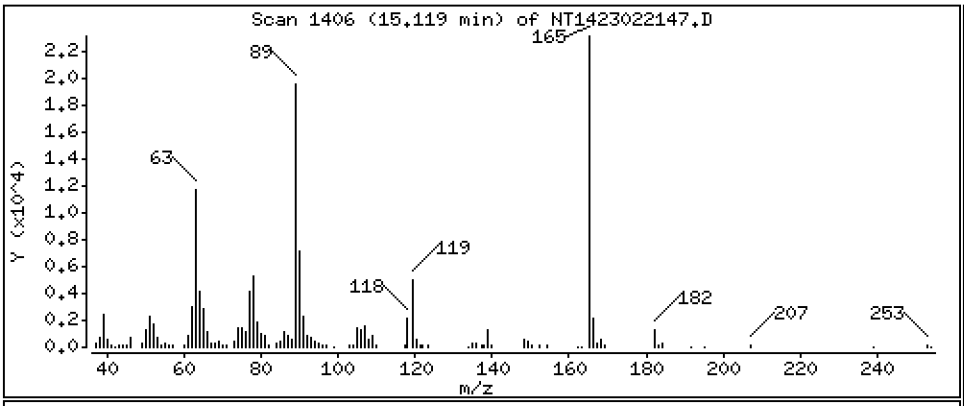
Operator: DSD

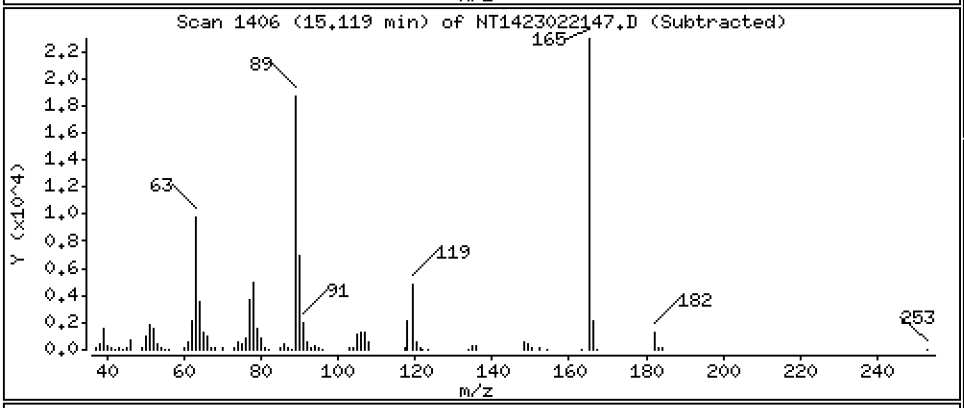
Column phase: ZB-5msi

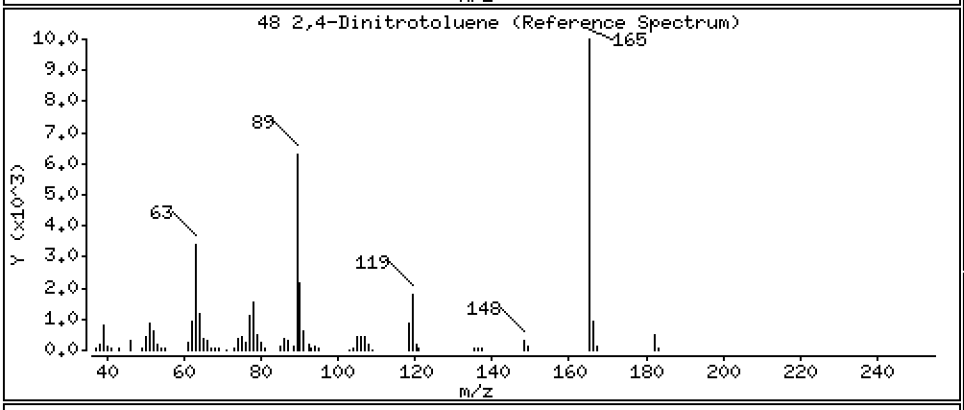
Column diameter: 0.25

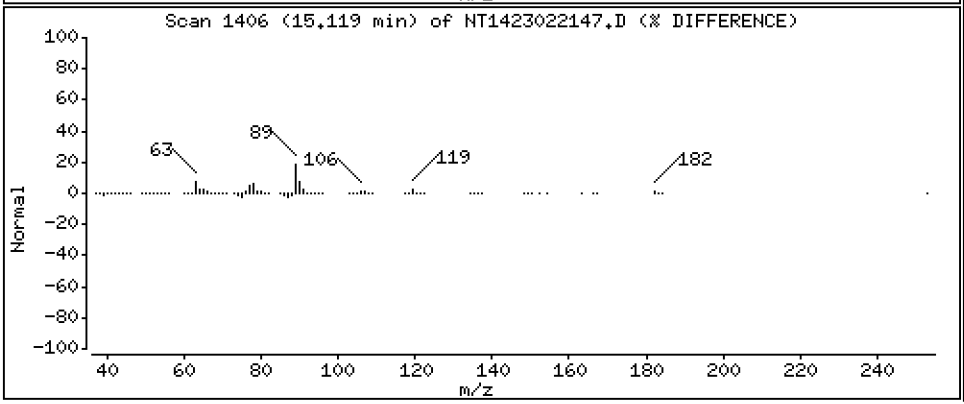
48 2,4-Dinitrotoluene

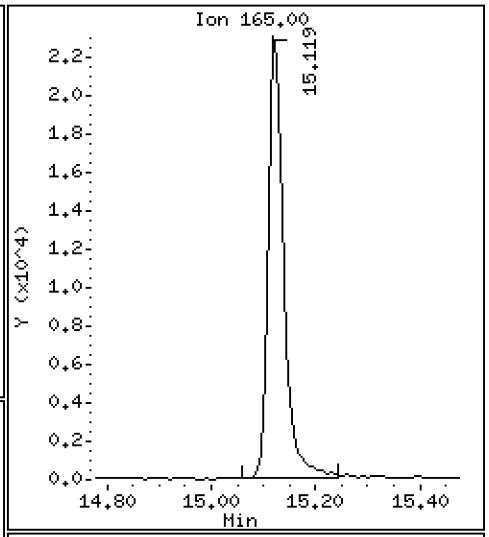
Concentration: 1.012 ug/mL

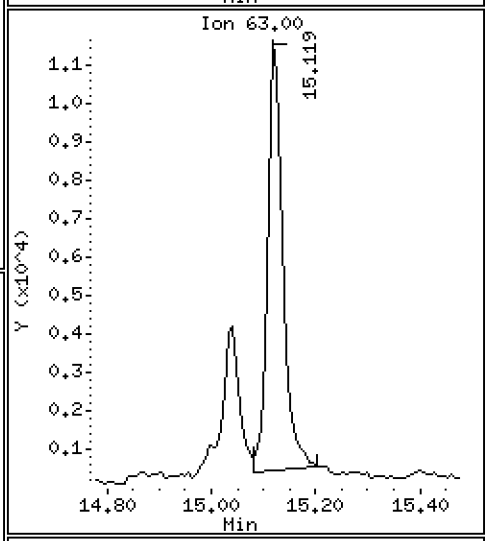


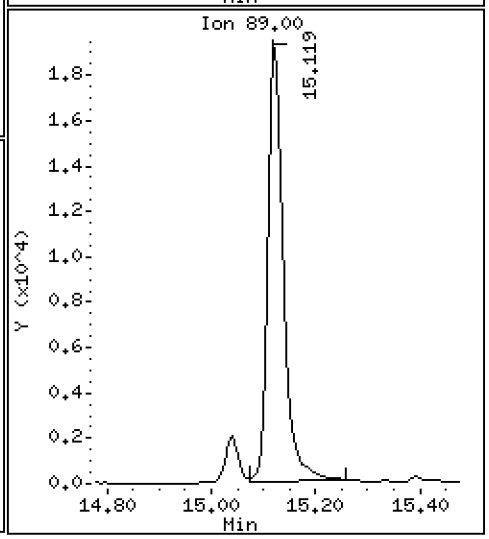












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

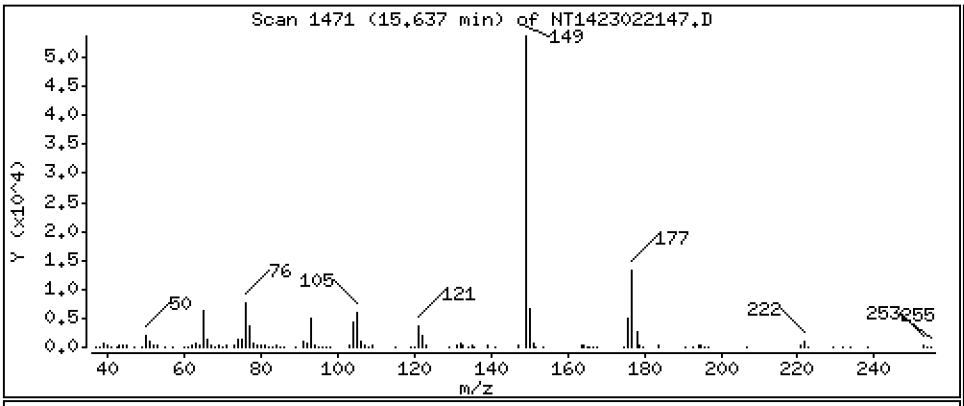
Operator: DSD

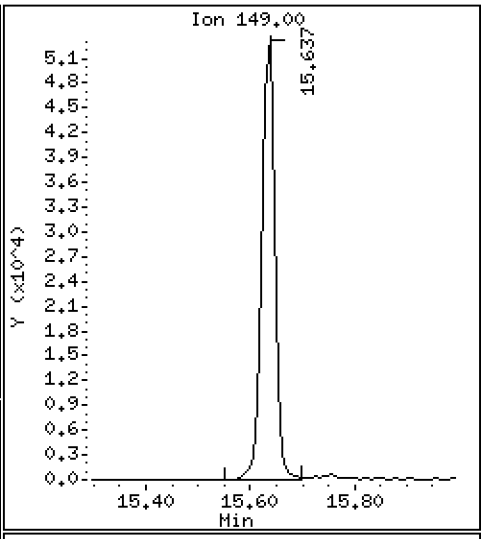
Column phase: ZB-5msi

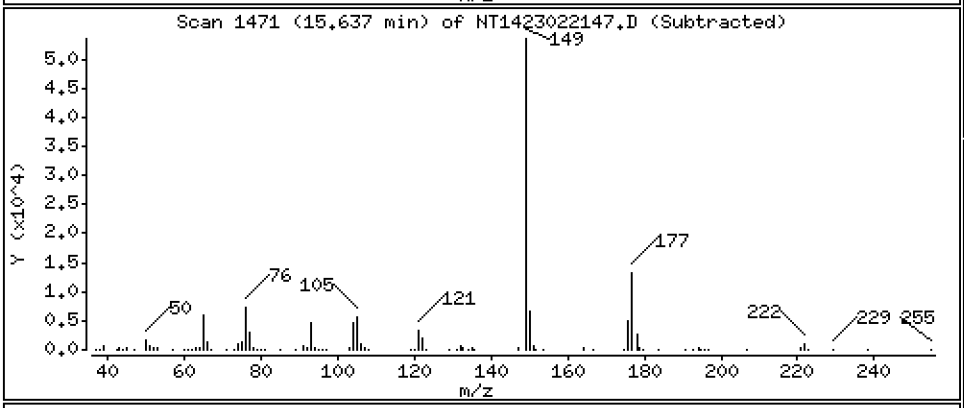
Column diameter: 0.25

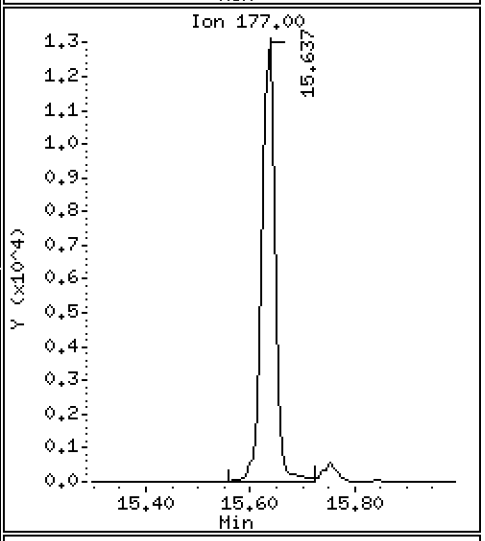
50 Diethylphthalate

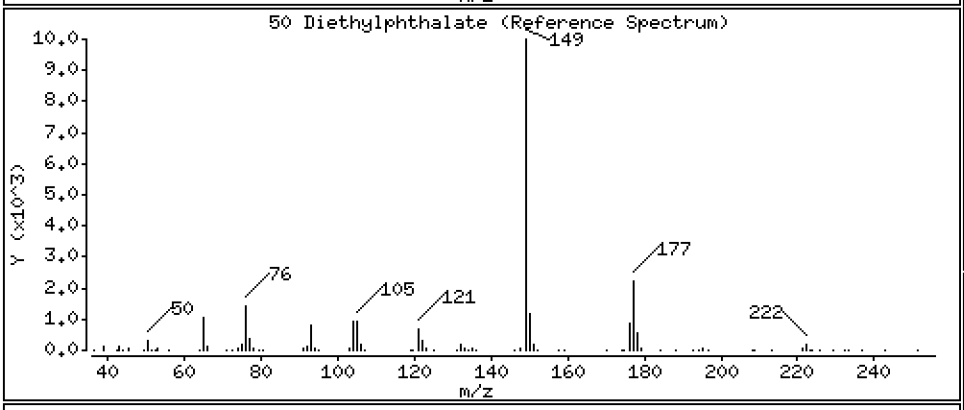
Concentration: 0.5345 ug/mL

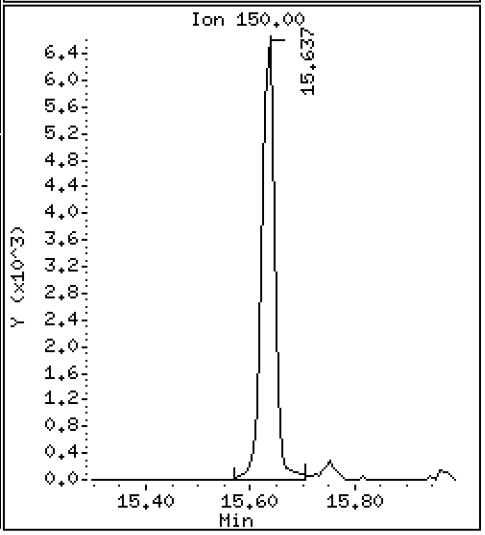


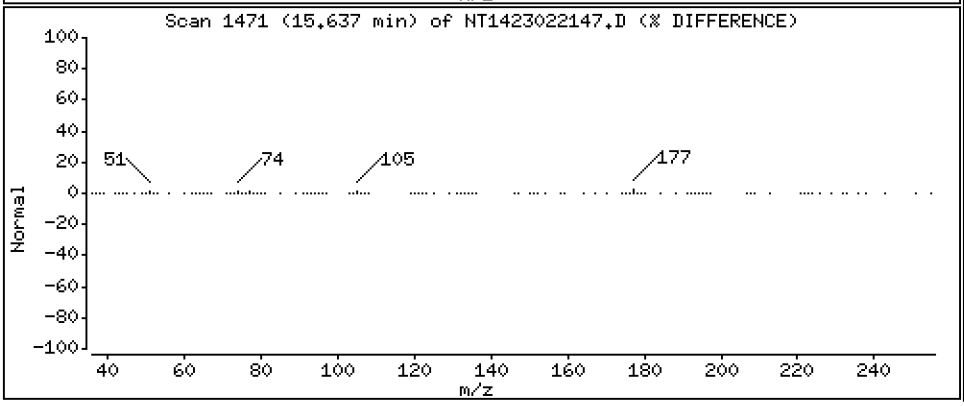












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

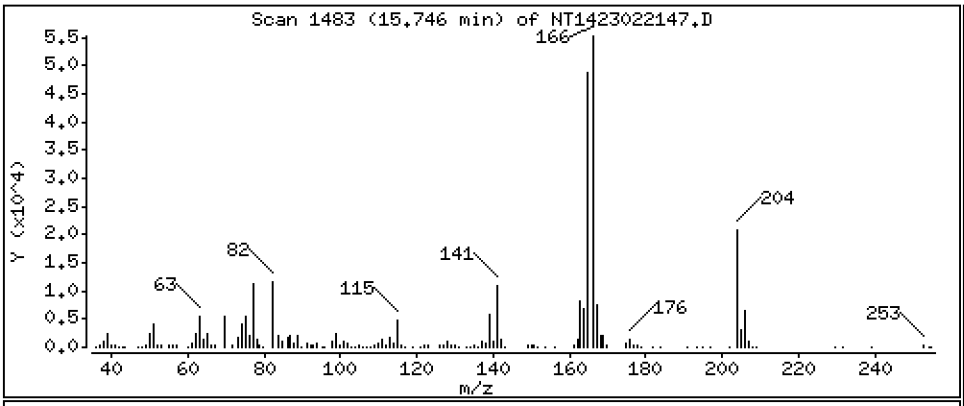
Operator: DSD

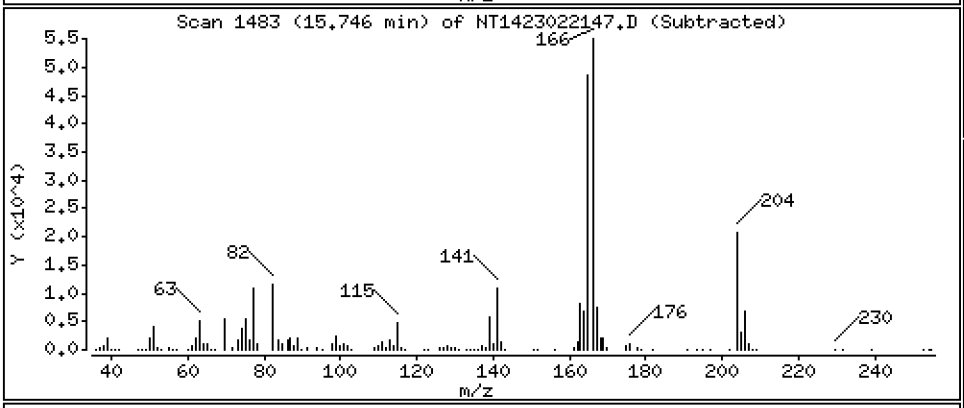
Column phase: ZB-5msi

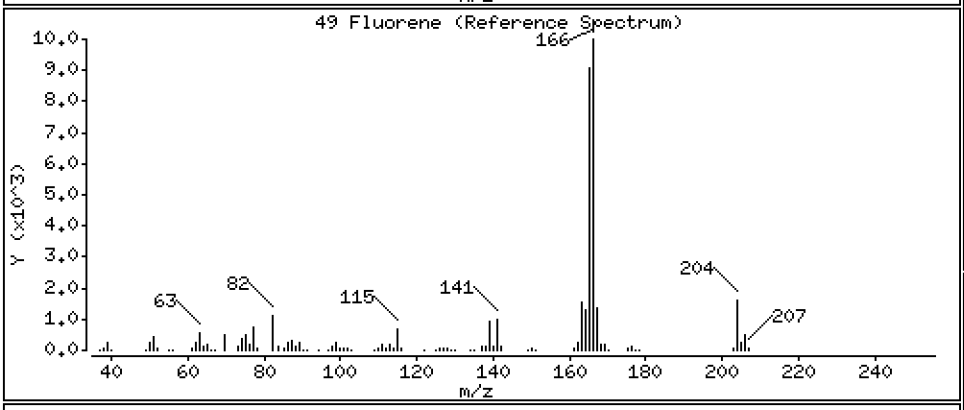
Column diameter: 0.25

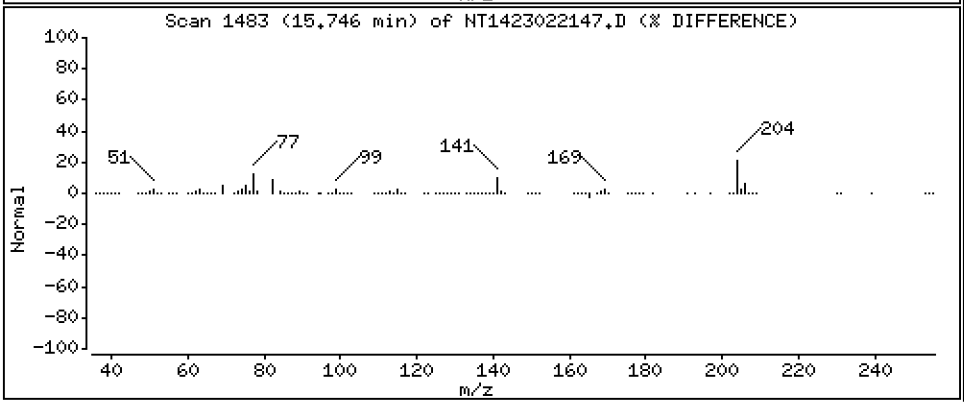
49 Fluorene

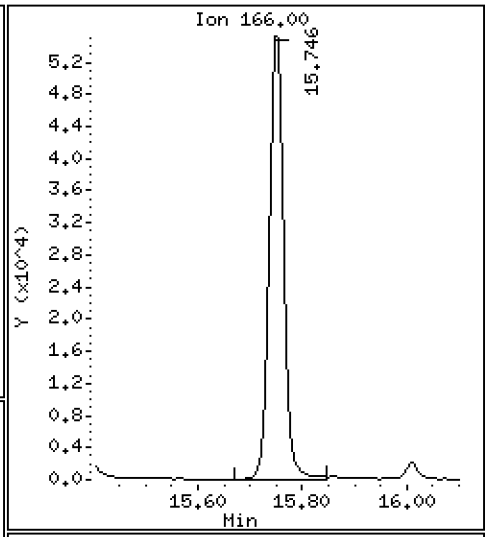
Concentration: 0.5473 ug/mL

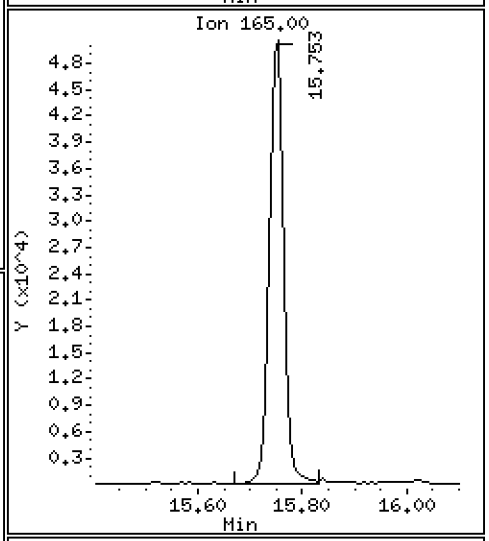


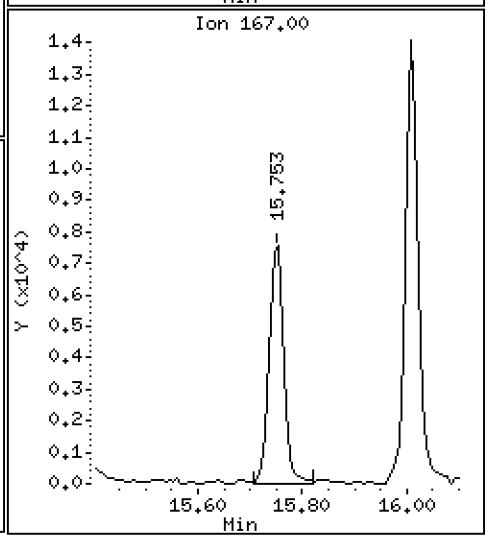












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

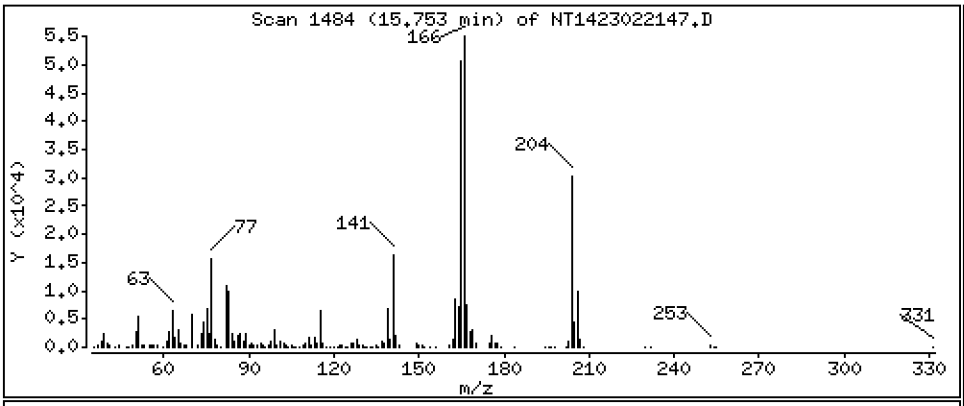
Operator: DSD

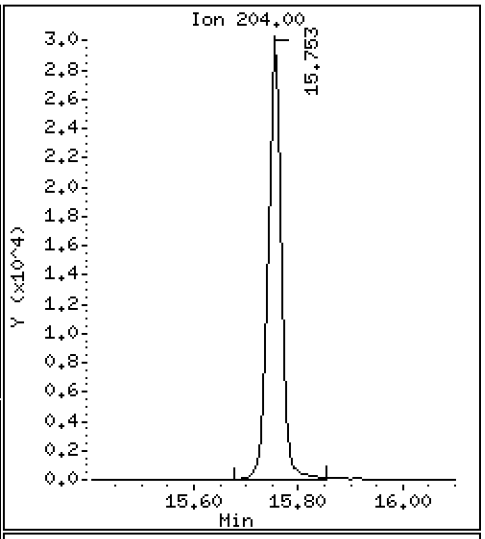
Column phase: ZB-5msi

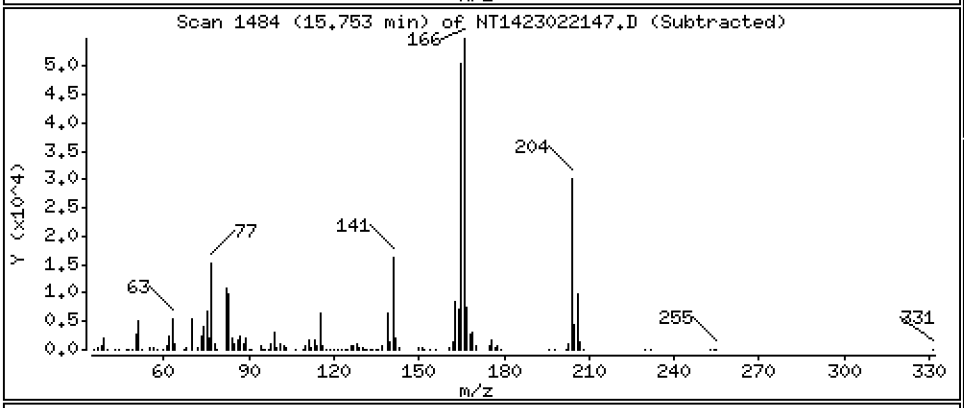
Column diameter: 0.25

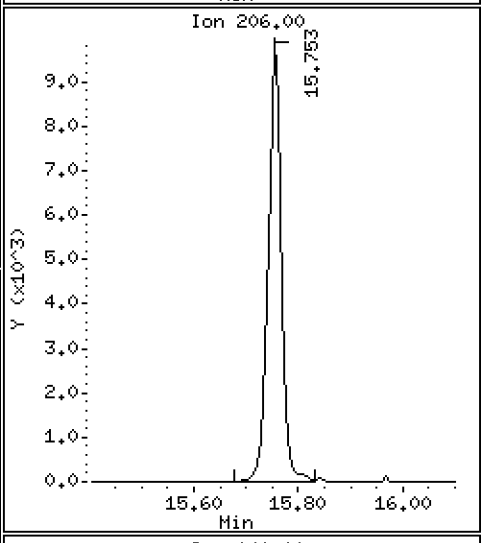
51 4-Chlorophenyl-phenylether

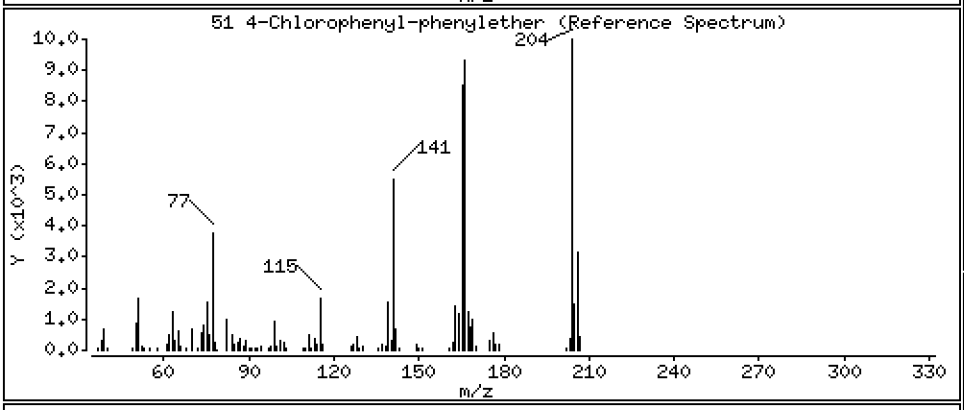
Concentration: 0.5154 ug/mL

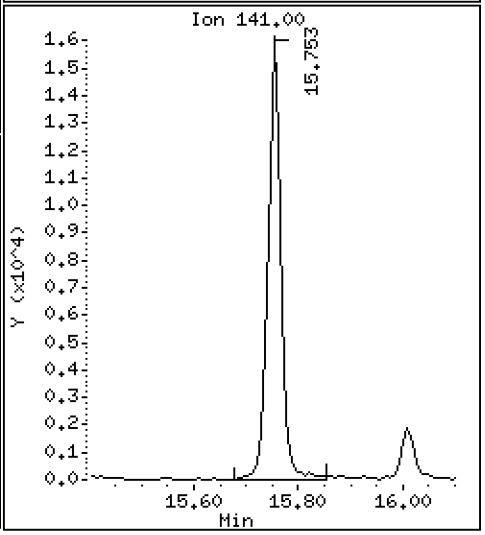


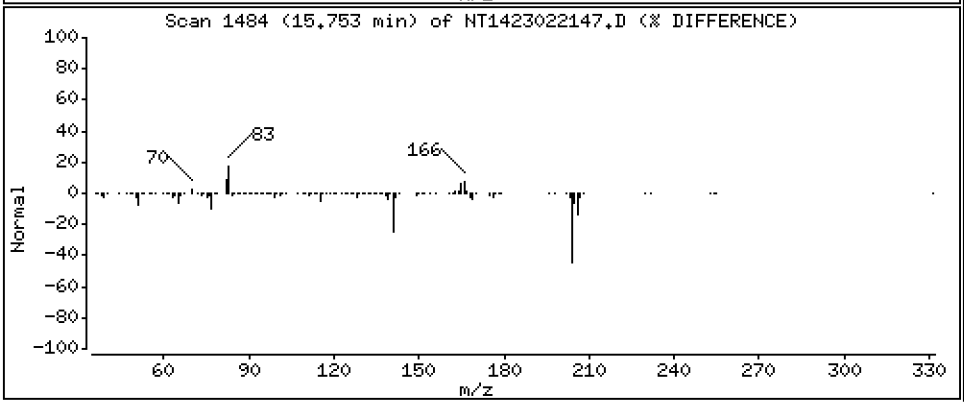












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

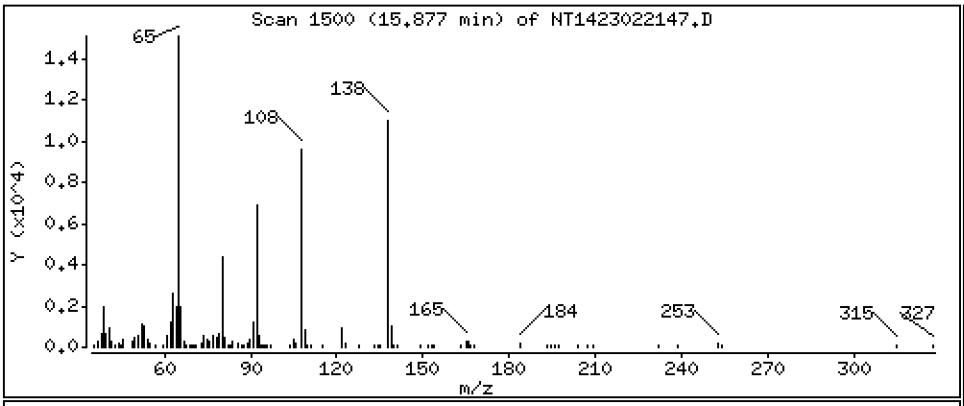
Operator: DSD

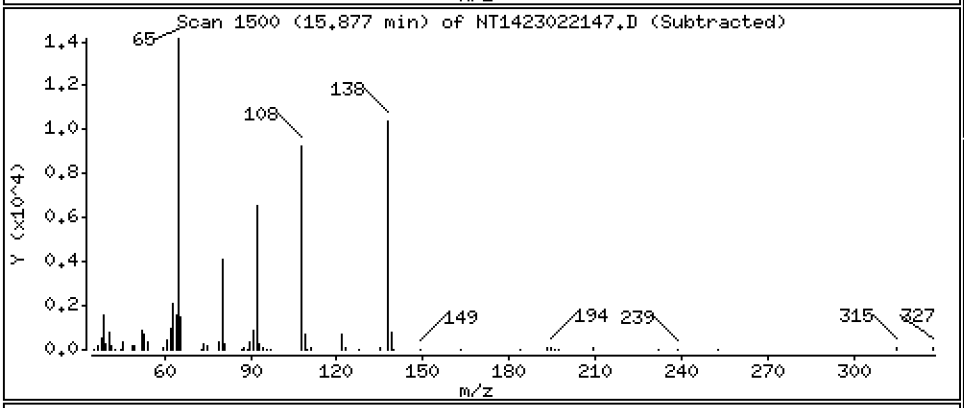
Column phase: ZB-5msi

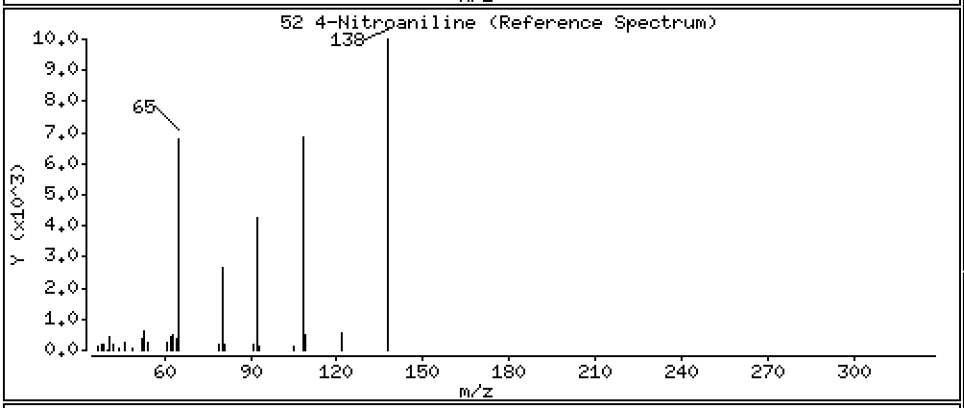
Column diameter: 0.25

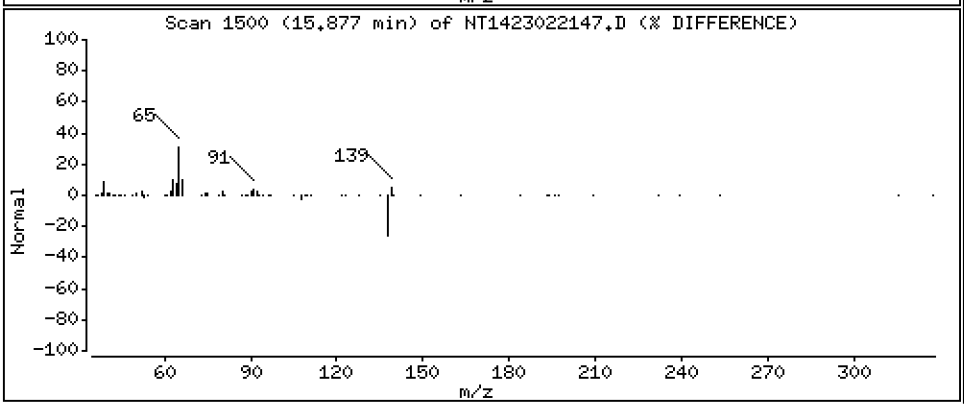
52 4-Nitroaniline

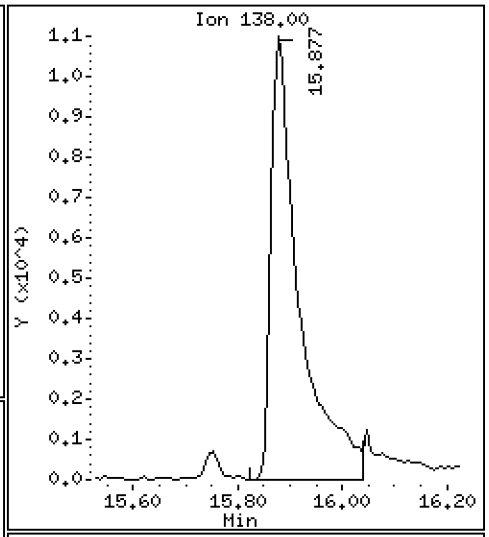
Concentration: 1.033 ug/mL

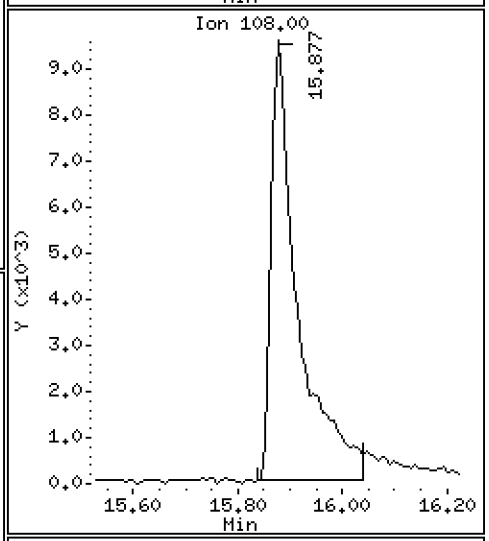


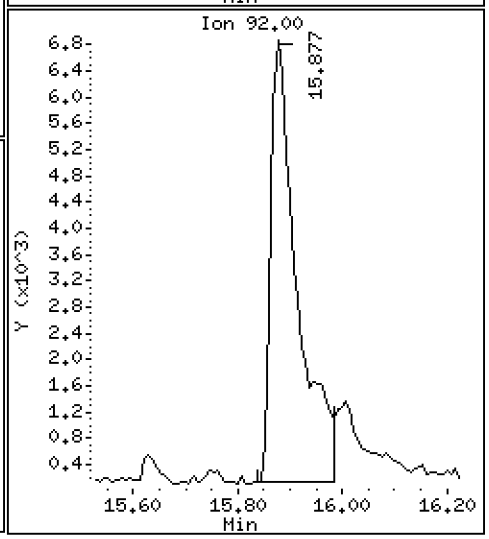












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

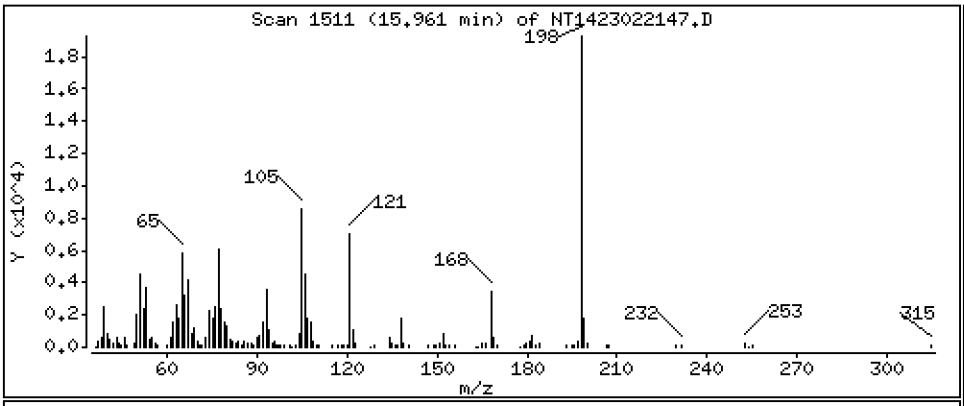
Operator: DSD

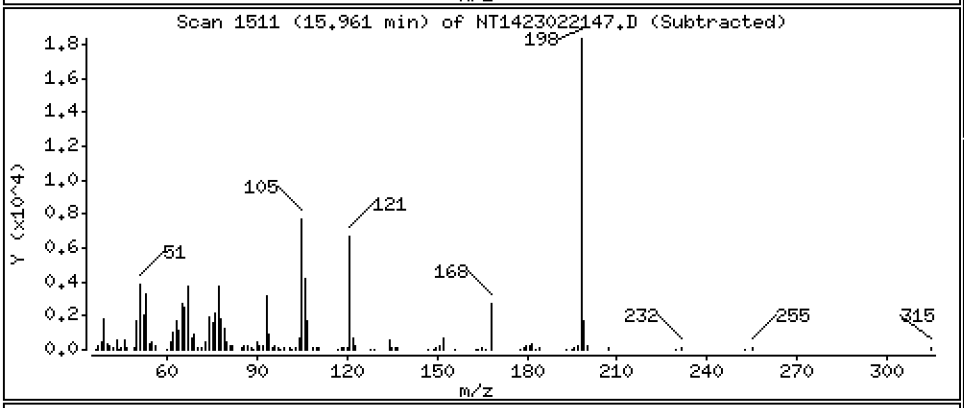
Column phase: ZB-5msi

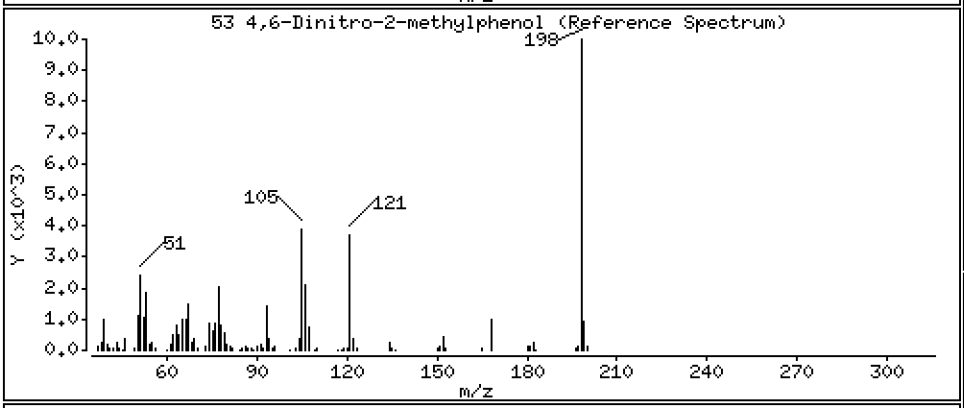
Column diameter: 0.25

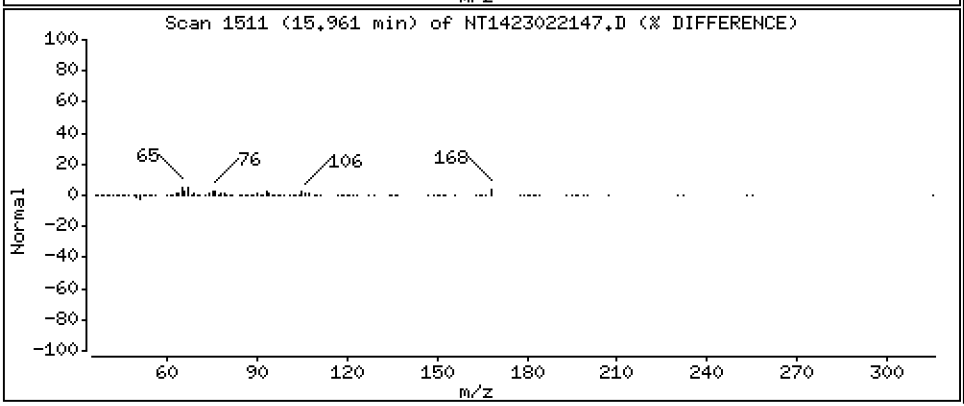
53 4,6-Dinitro-2-methylphenol

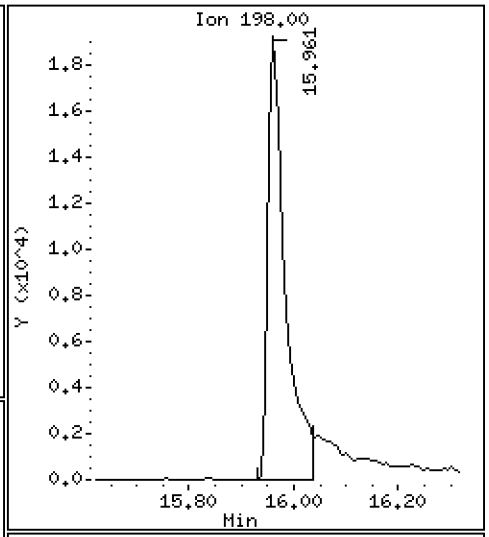
Concentration: 1.327 ug/mL

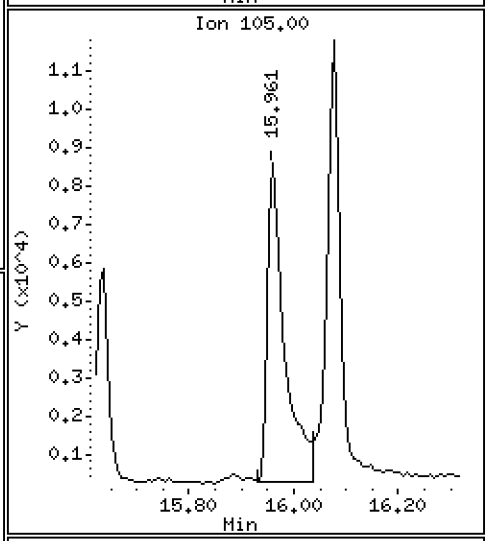


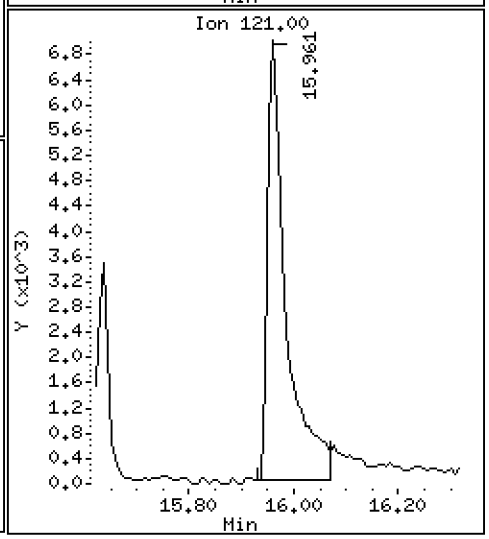












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

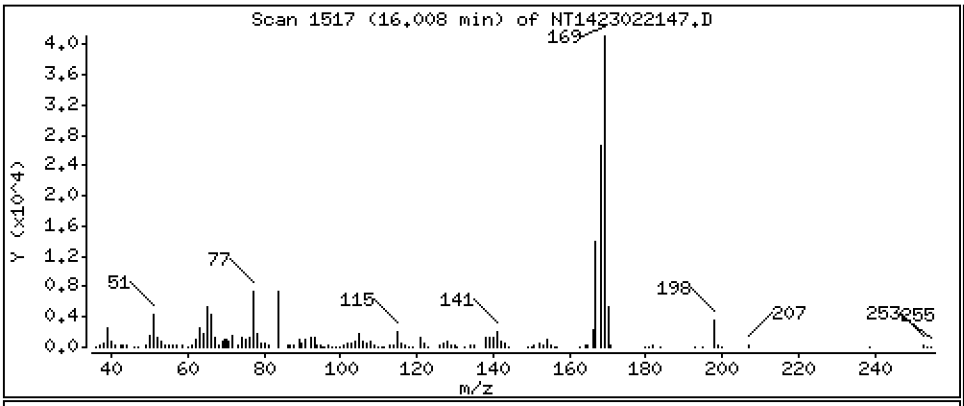
Operator: DSD

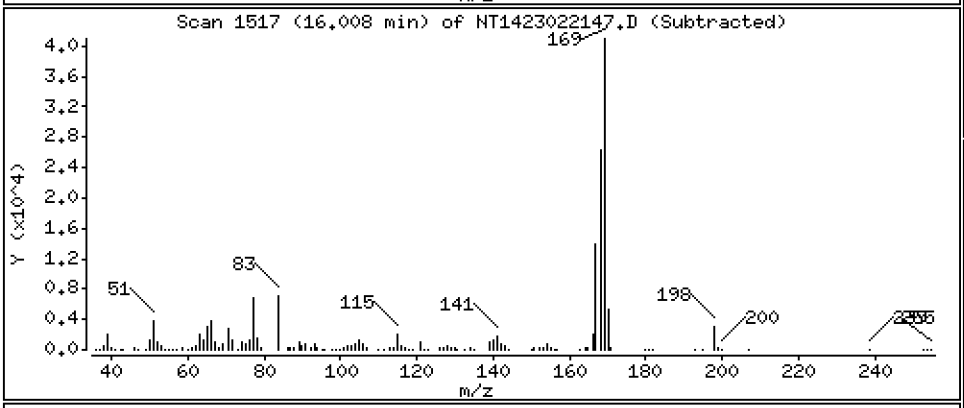
Column phase: ZB-5msi

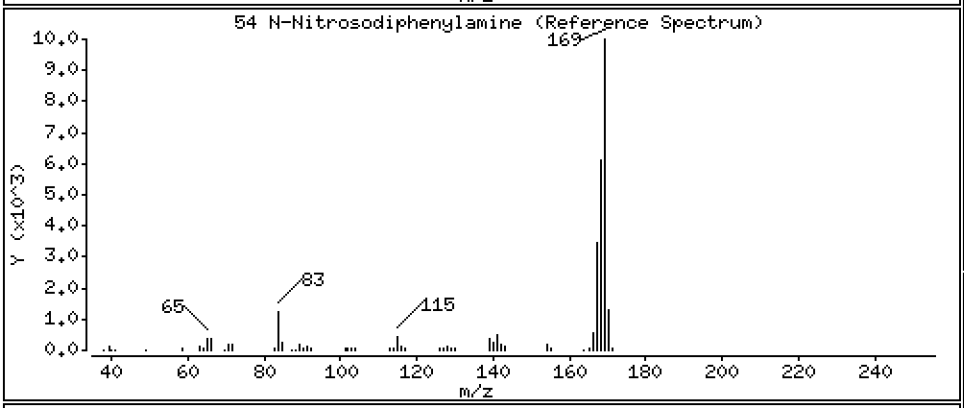
Column diameter: 0.25

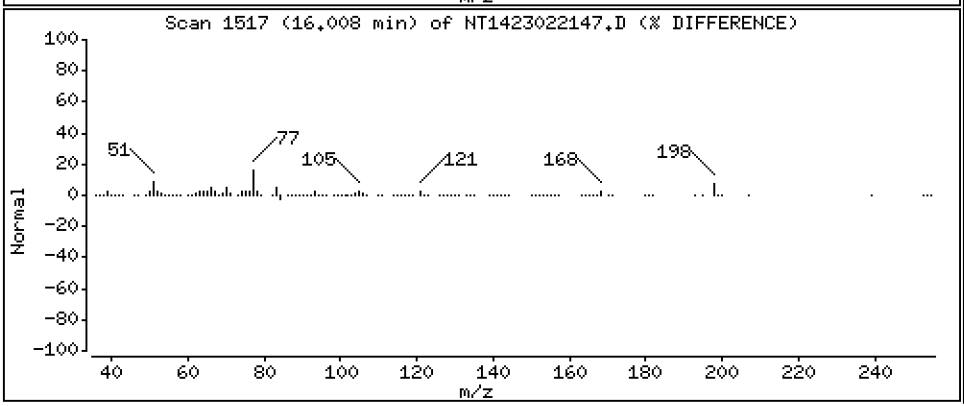
54 N-Nitrosodiphenylamine

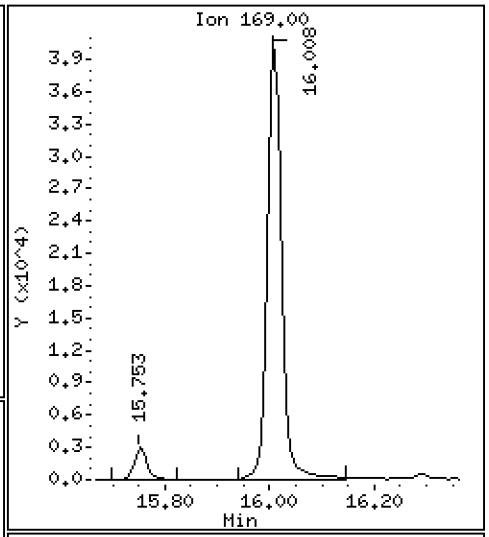
Concentration: 0.5657 ug/mL

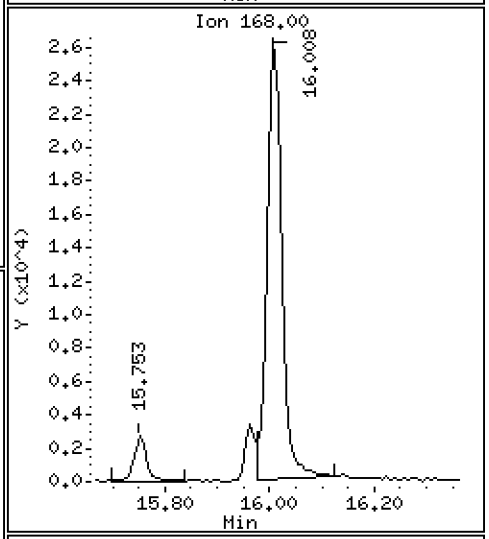


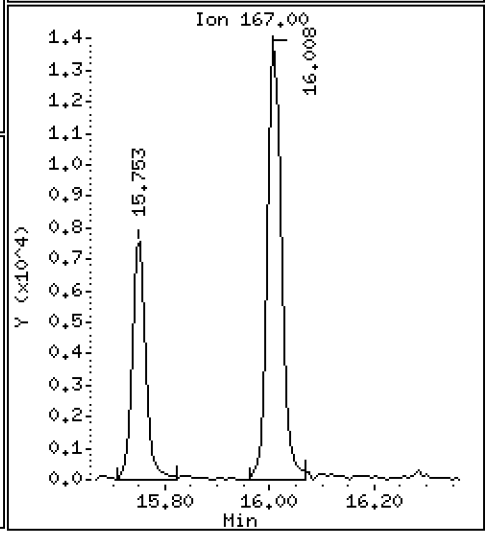












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

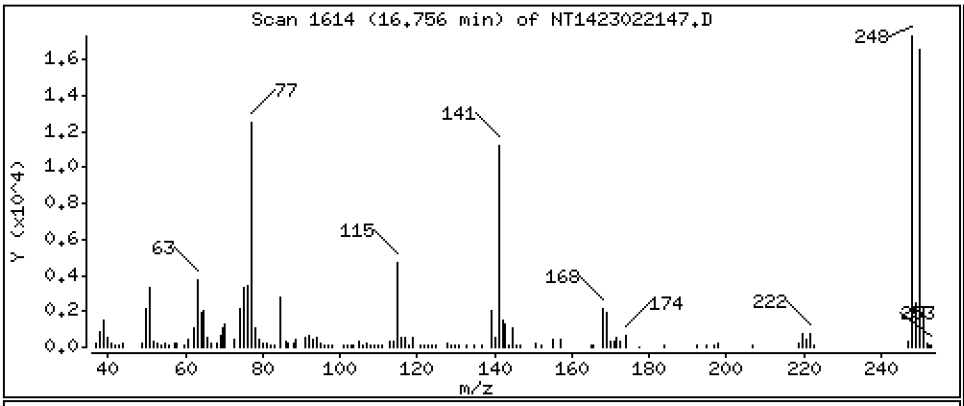
Operator: DSD

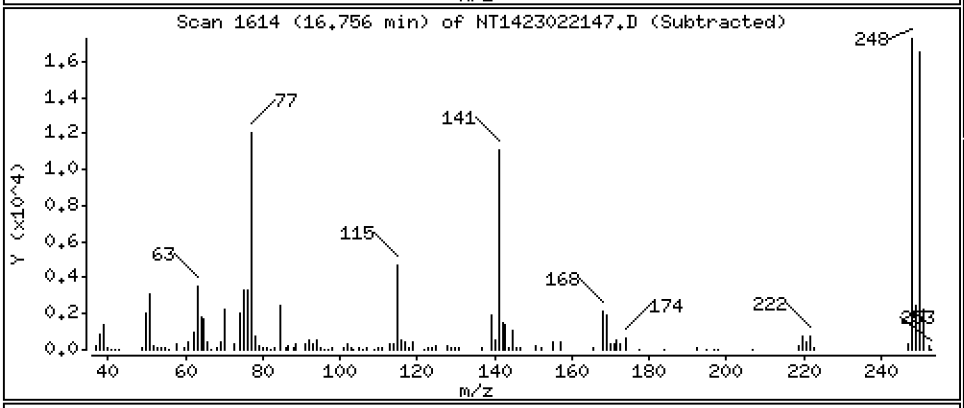
Column phase: ZB-5msi

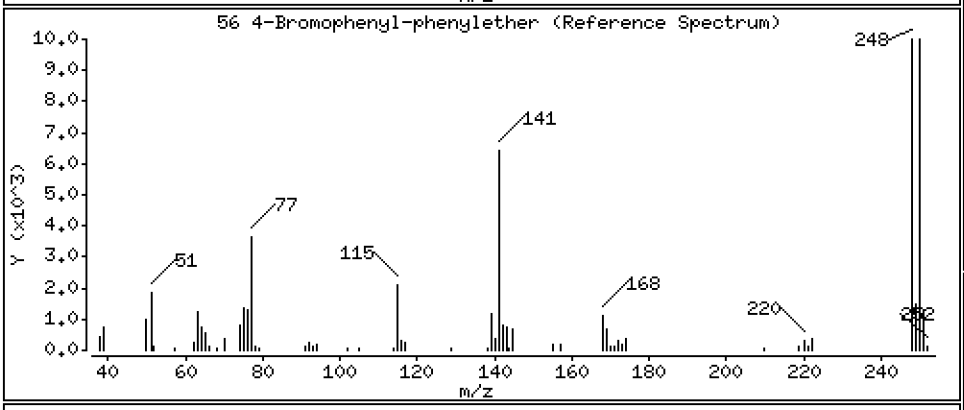
Column diameter: 0.25

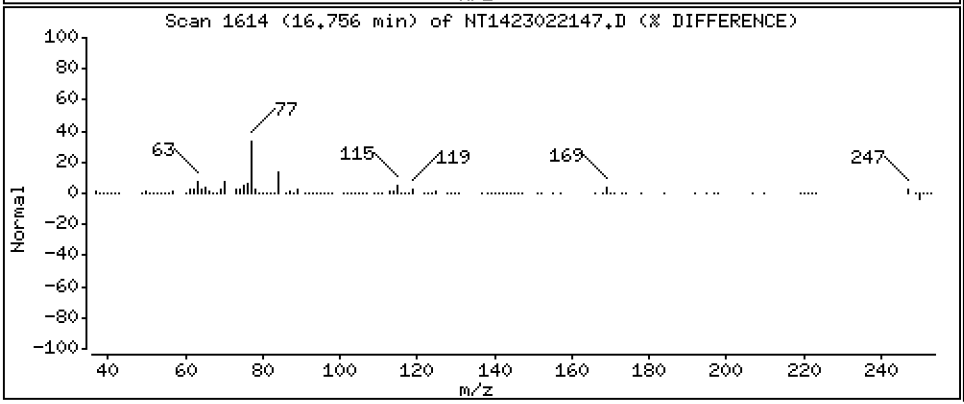
56 4-Bromophenyl-phenylether

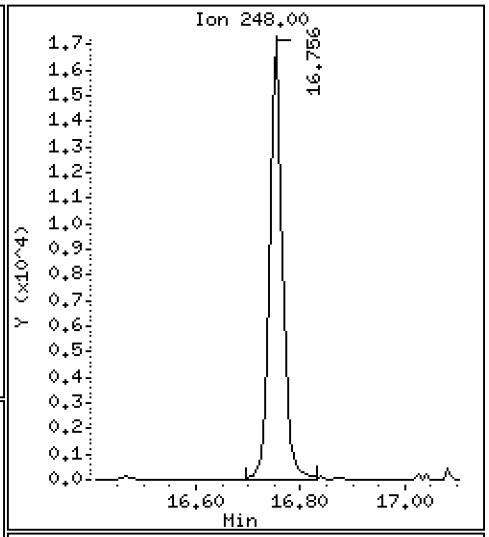
Concentration: 0.5026 ug/mL

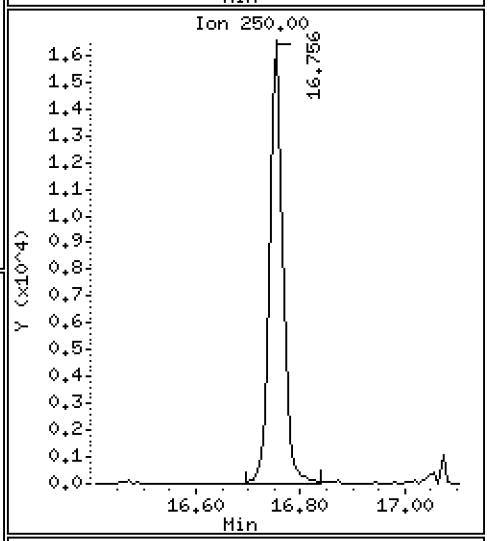


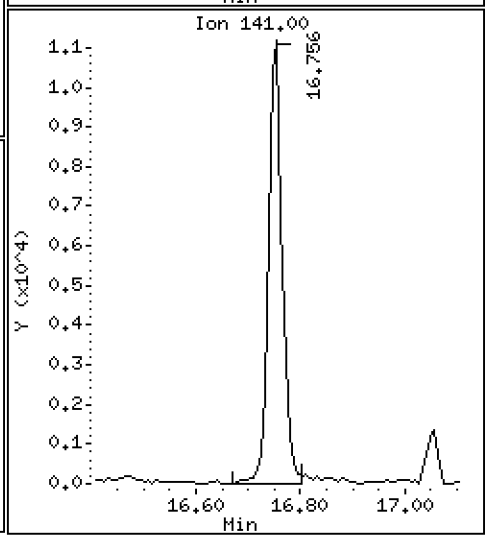












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

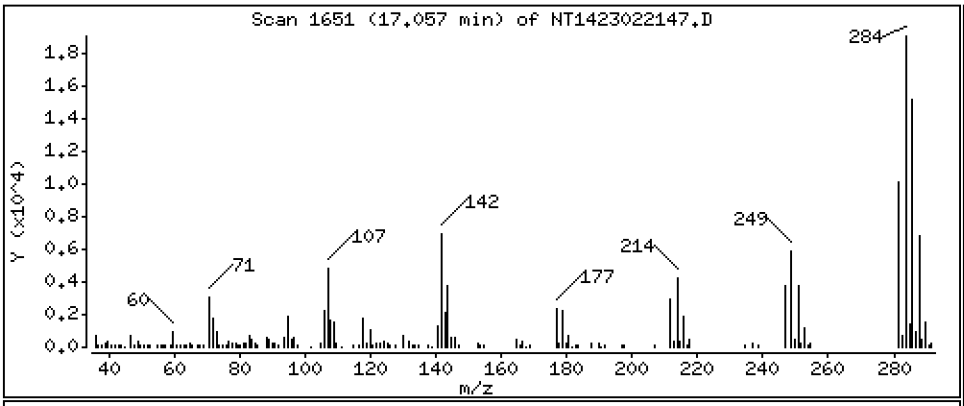
Operator: DSD

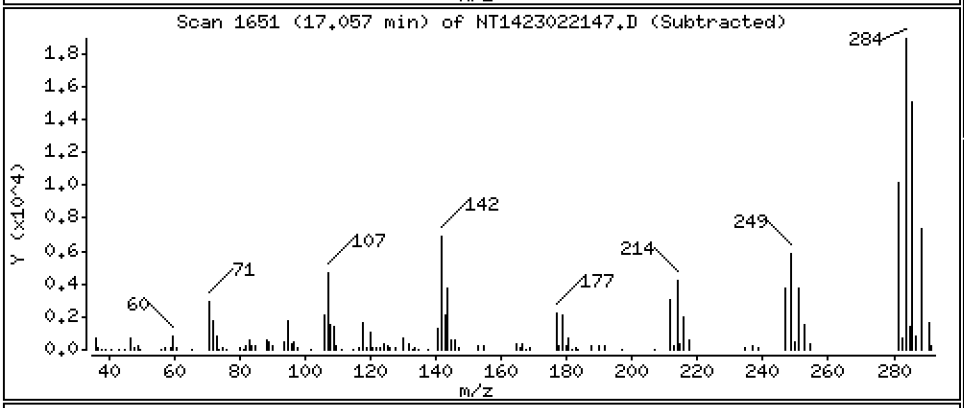
Column phase: ZB-5msi

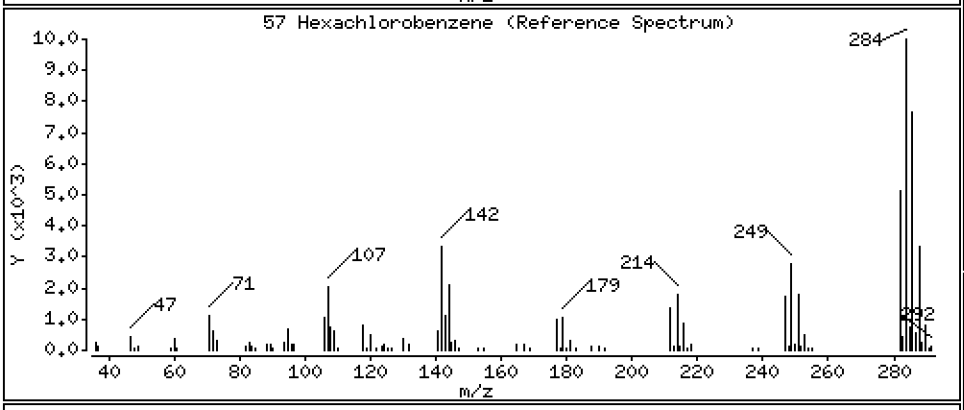
Column diameter: 0.25

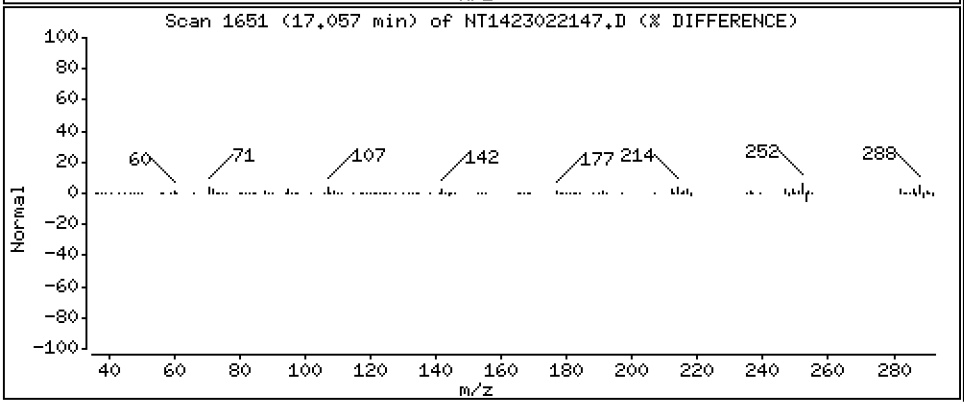
57 Hexachlorobenzene

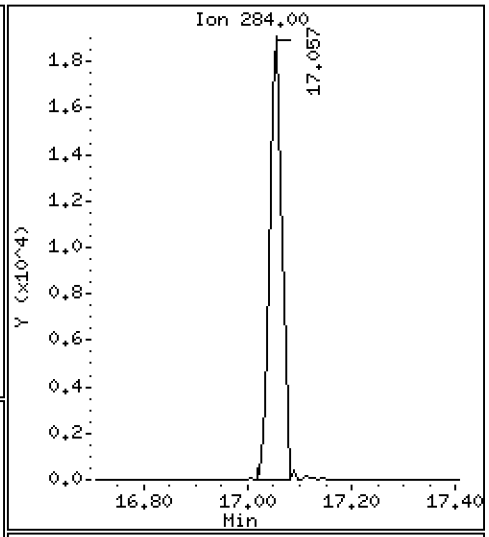
Concentration: 0.5247 ug/mL

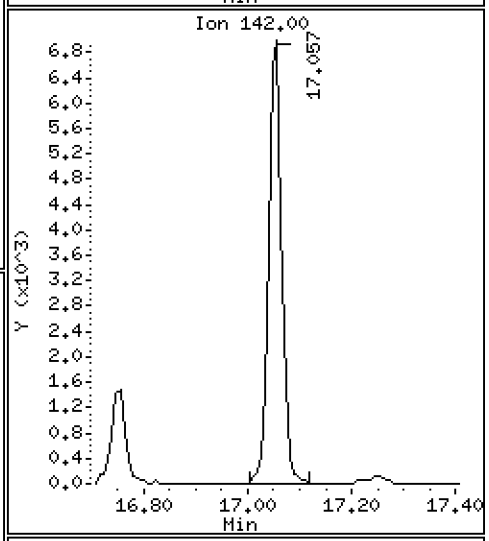


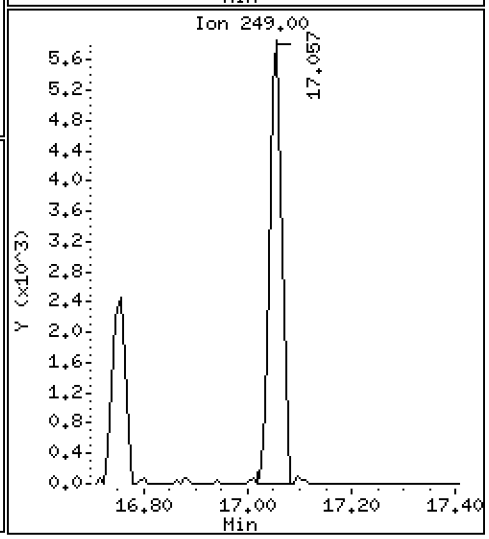












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

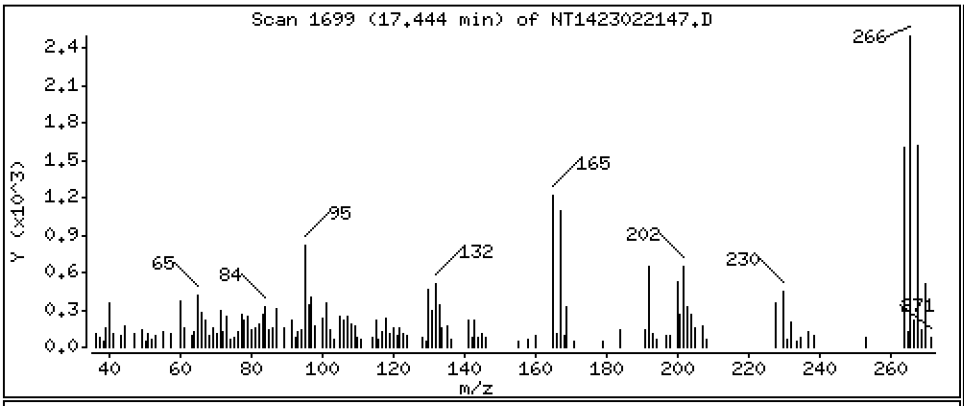
Operator: DSD

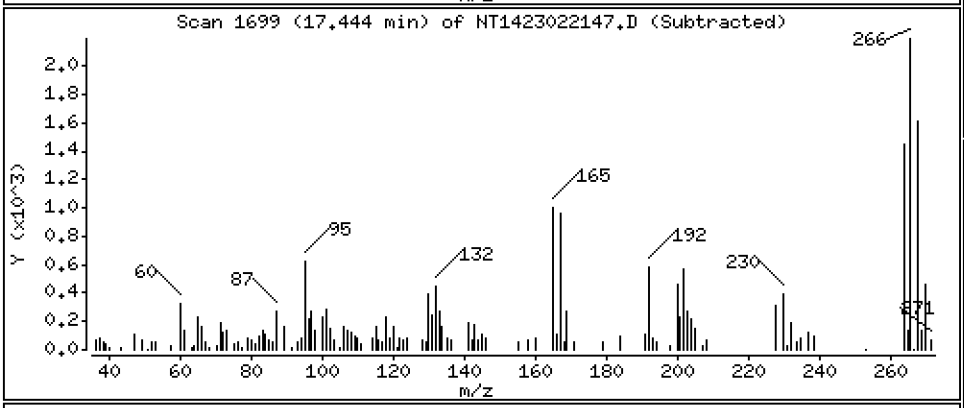
Column phase: ZB-5msi

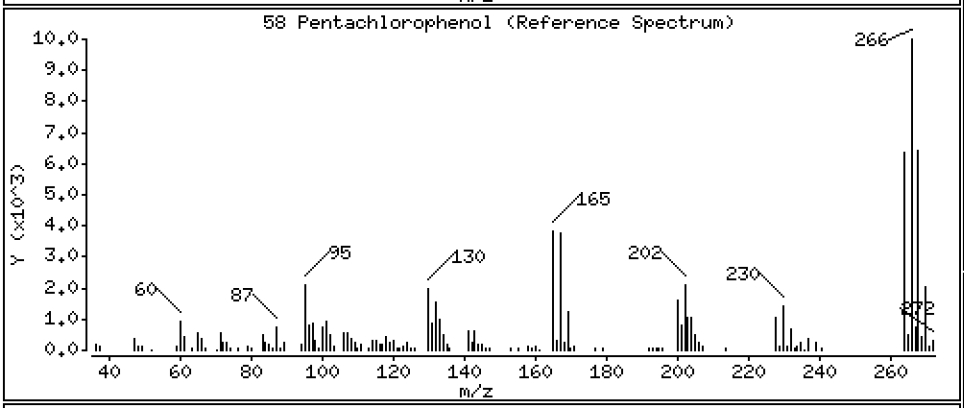
Column diameter: 0.25

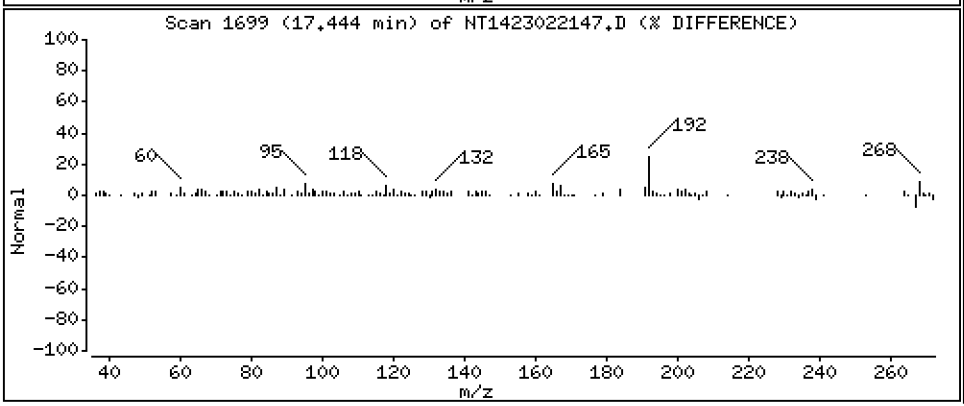
58 Pentachlorophenol

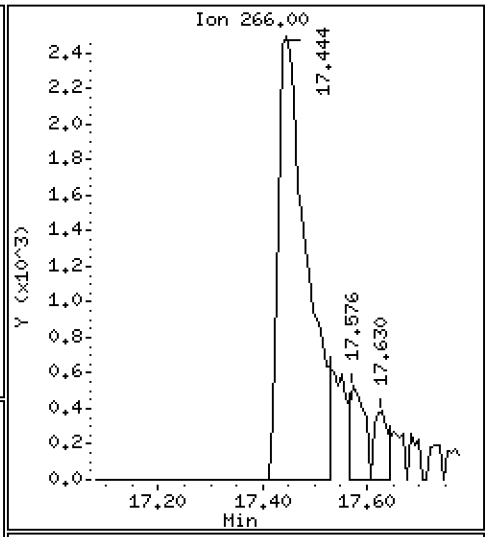
Concentration: 0.3369 ug/mL

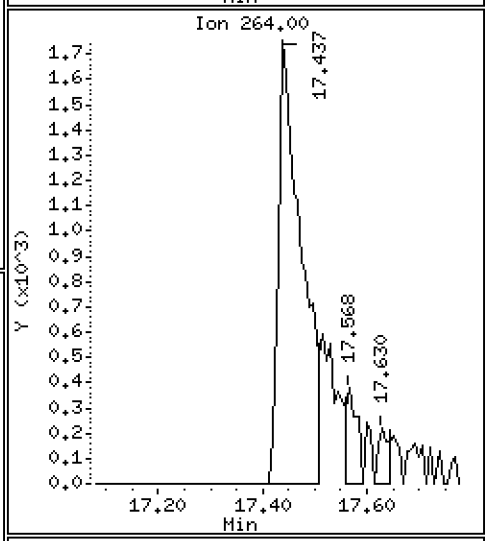


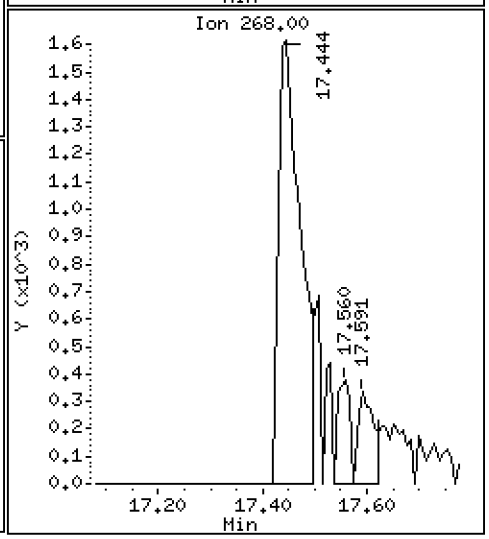












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

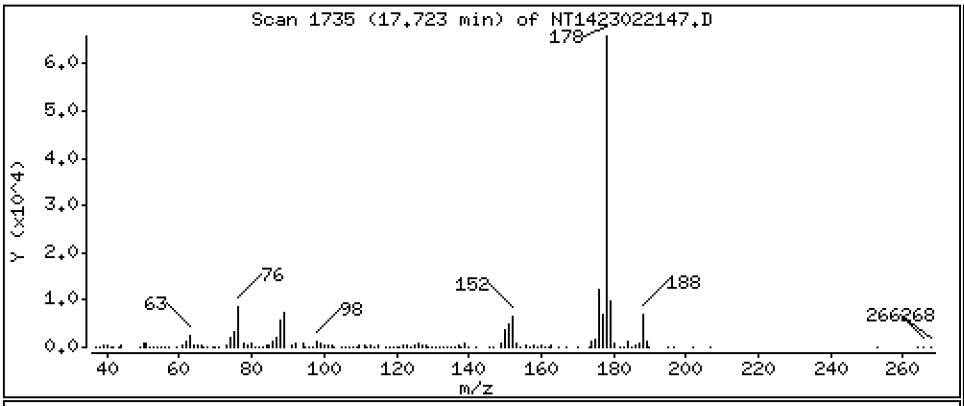
Operator: DSD

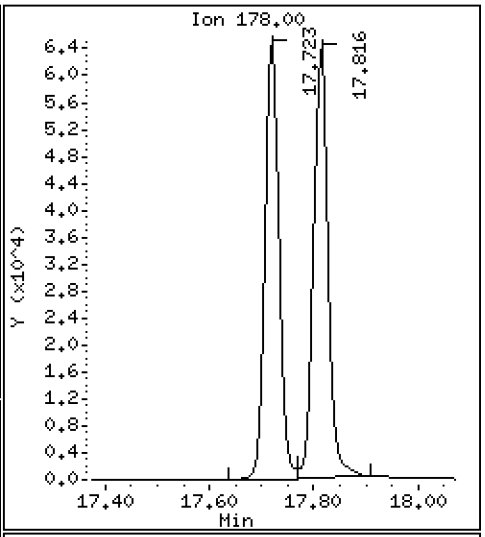
Column phase: ZB-5msi

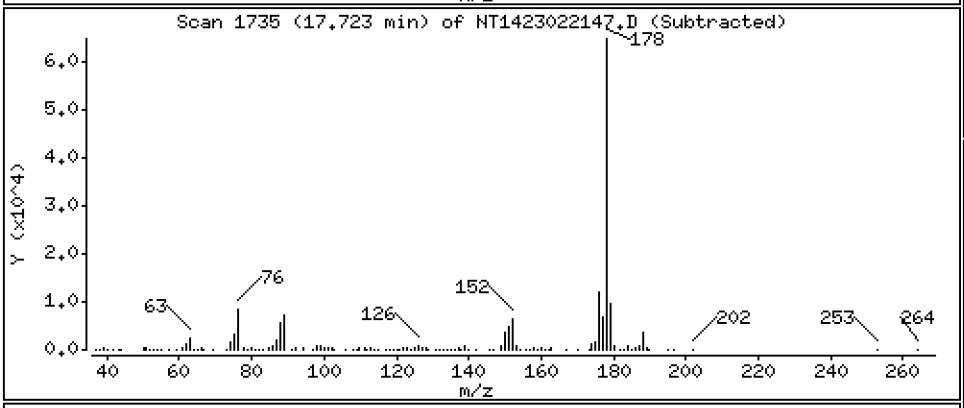
Column diameter: 0.25

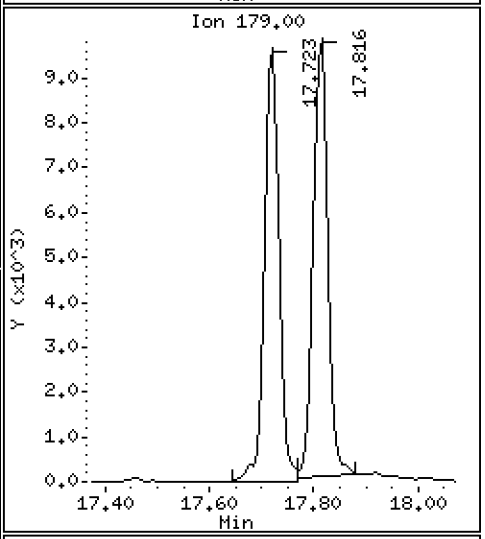
60 Phenanthrene

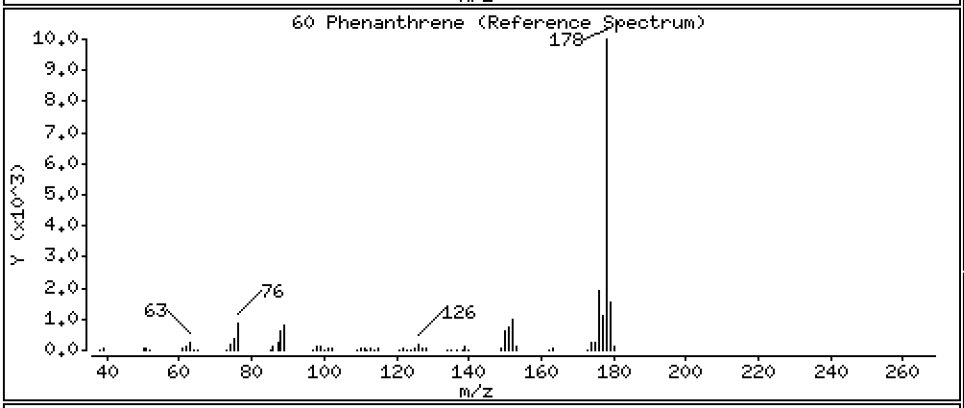
Concentration: 0.5390 ug/mL

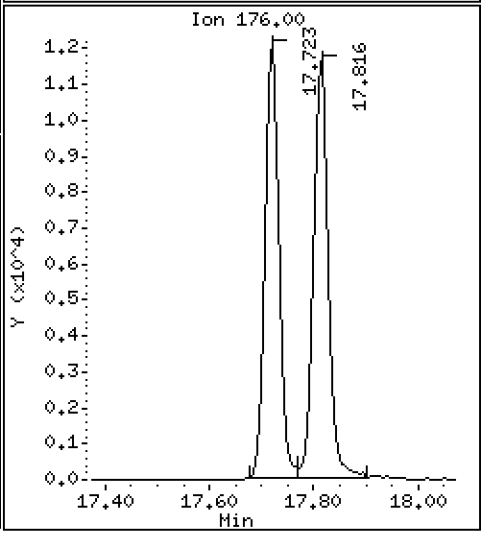


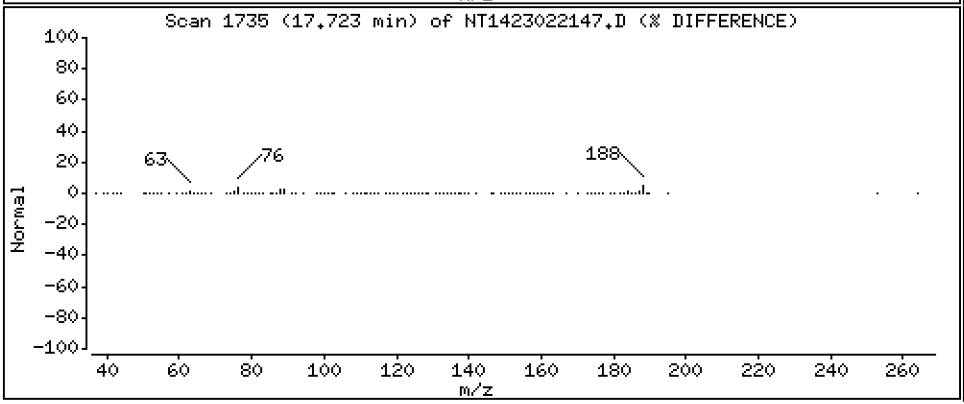












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

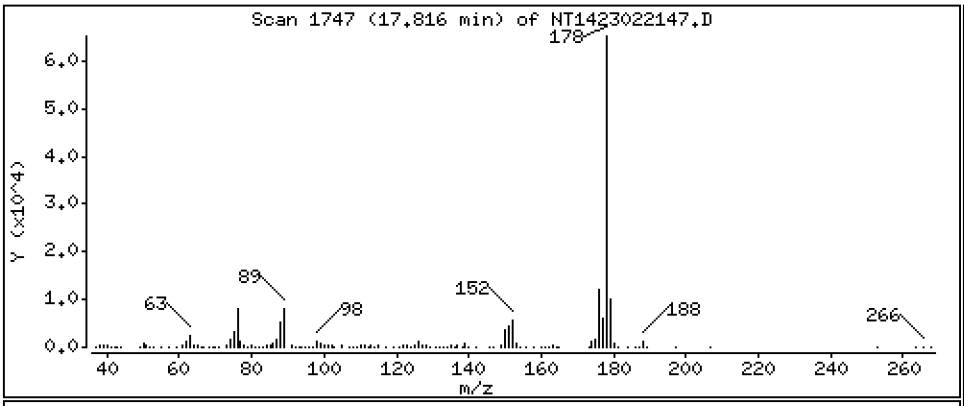
Operator: DSD

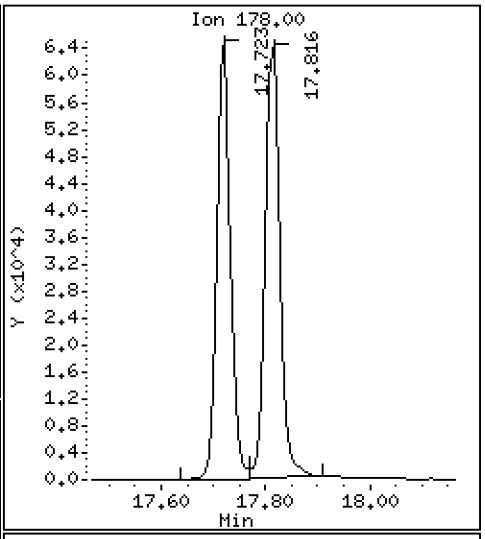
Column phase: ZB-5msi

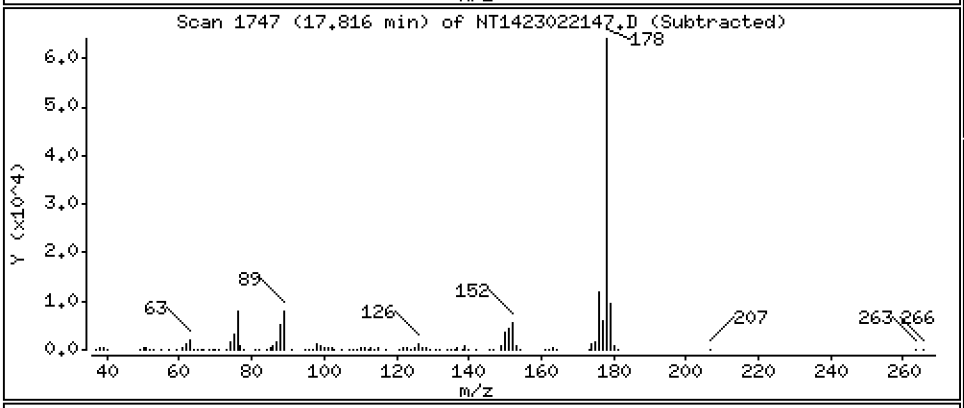
Column diameter: 0.25

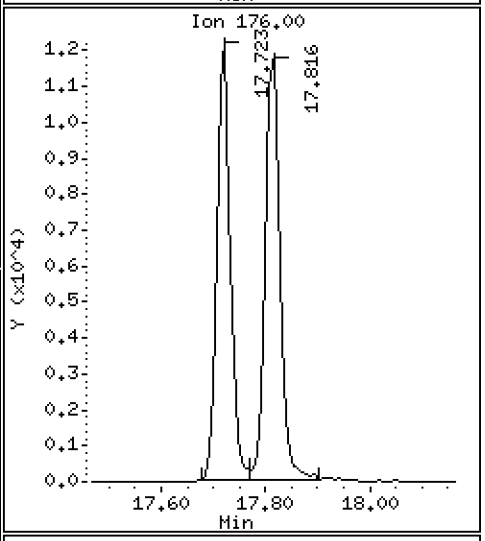
61 Anthracene

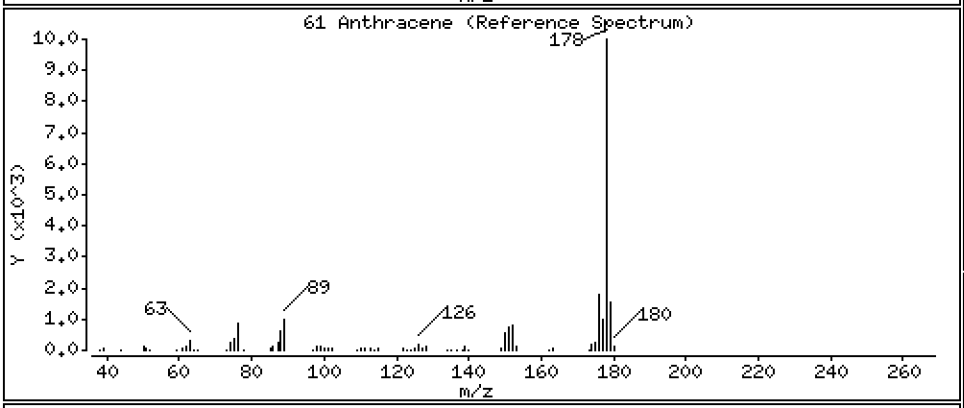
Concentration: 0.5582 ug/mL

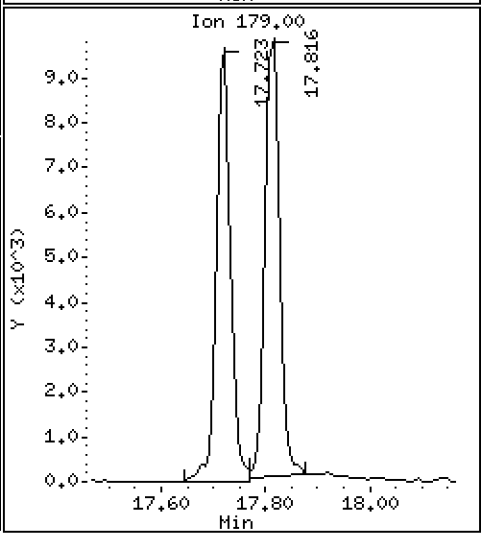


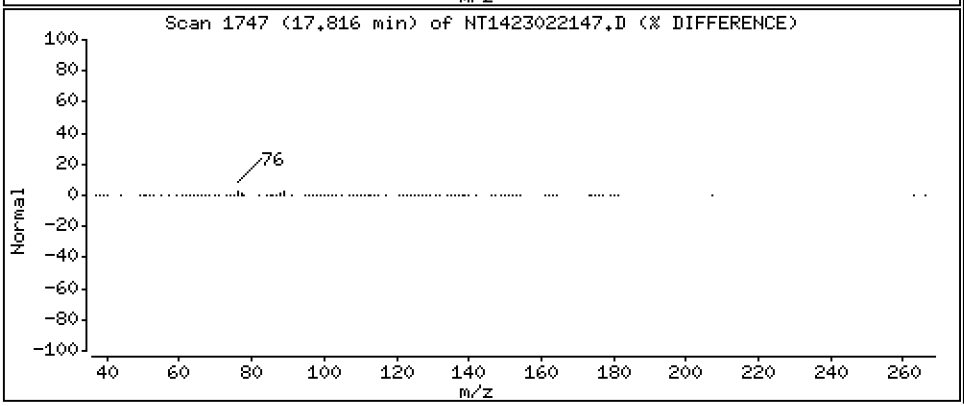












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

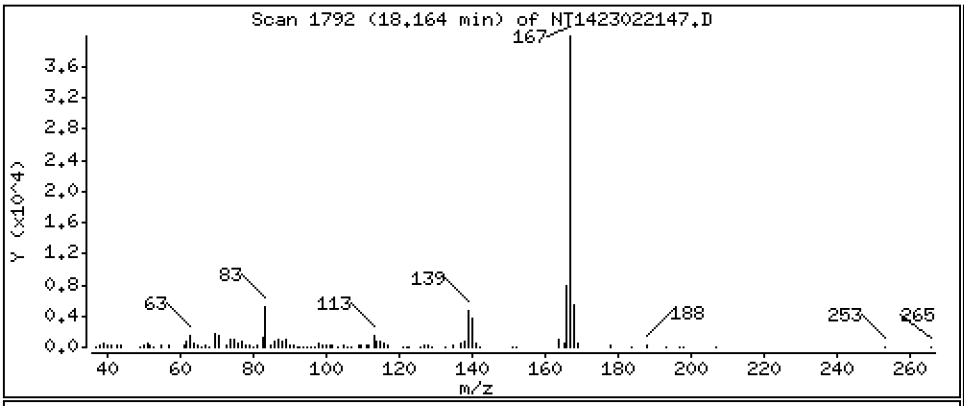
Operator: DSD

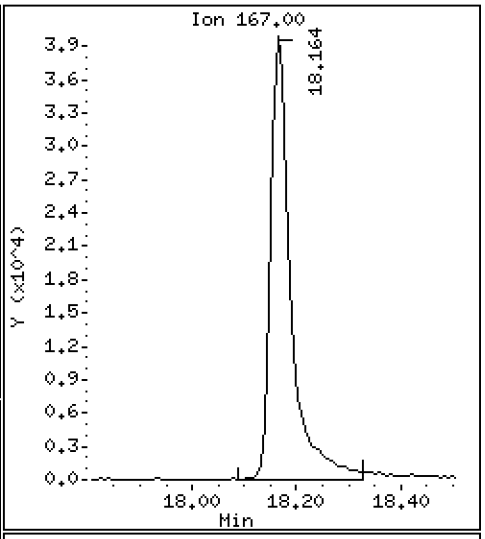
Column phase: ZB-5msi

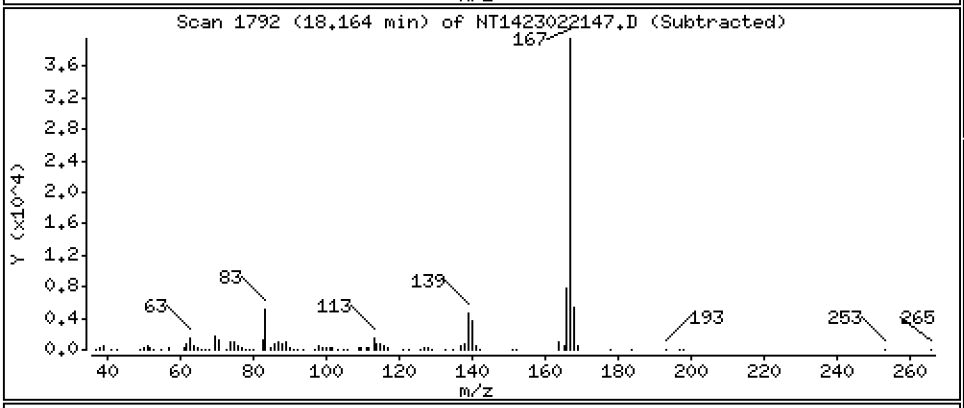
Column diameter: 0.25

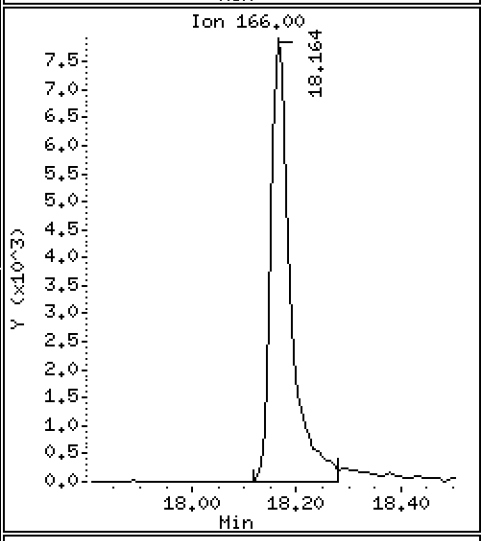
62 Carbazole

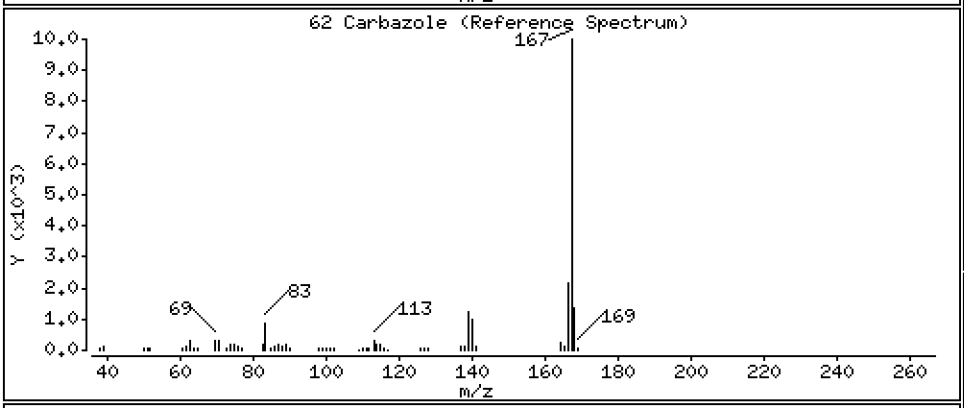
Concentration: 0.5348 ug/mL

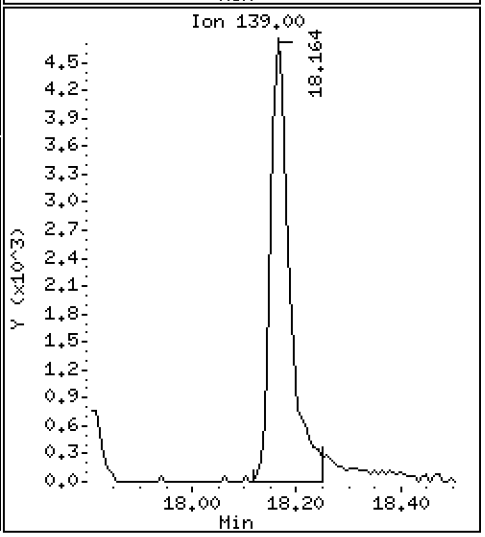


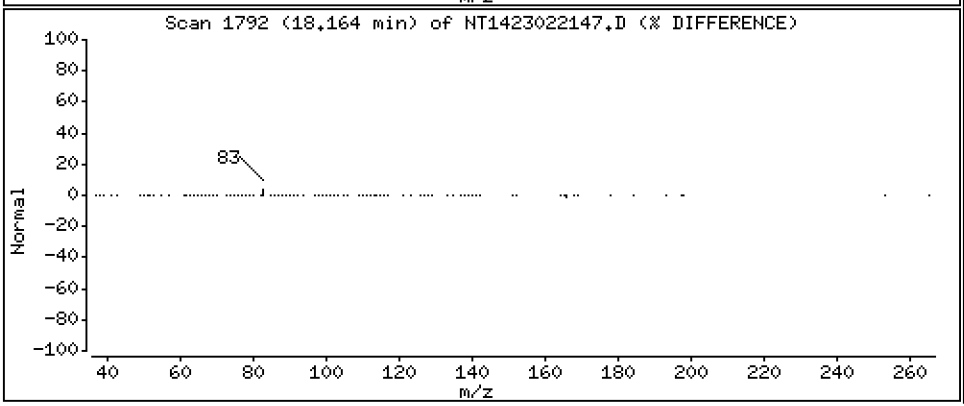












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

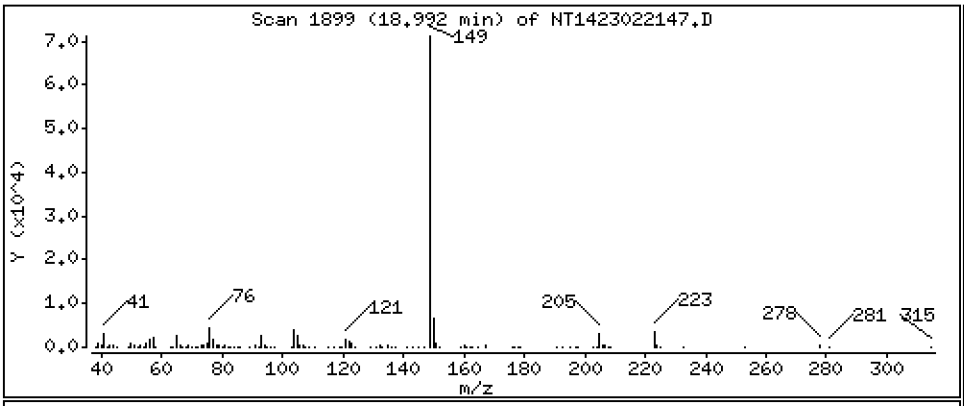
Operator: DSD

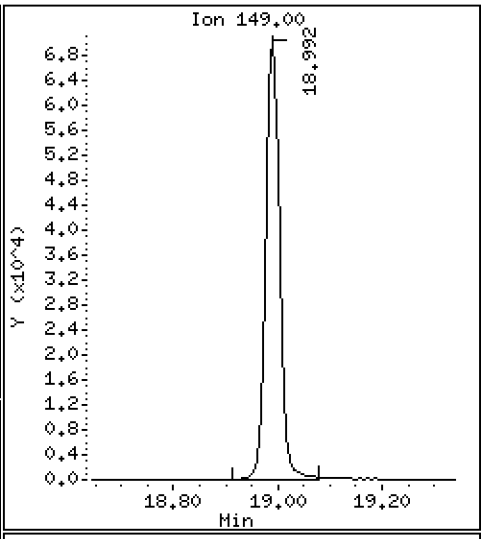
Column phase: ZB-5msi

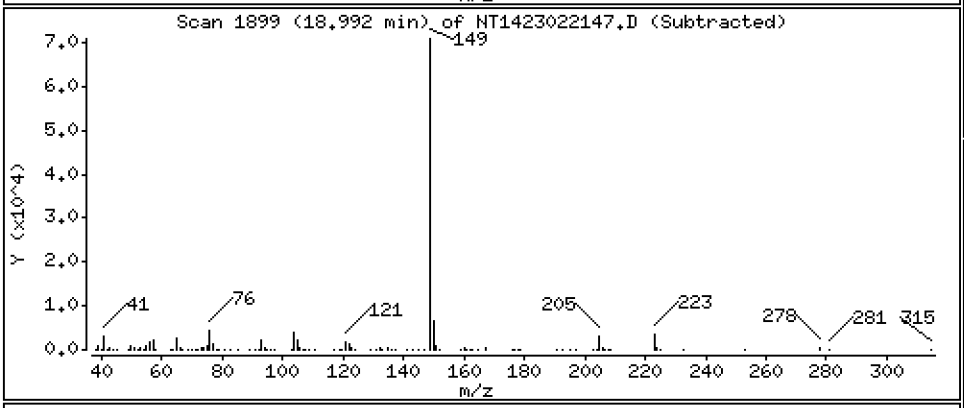
Column diameter: 0.25

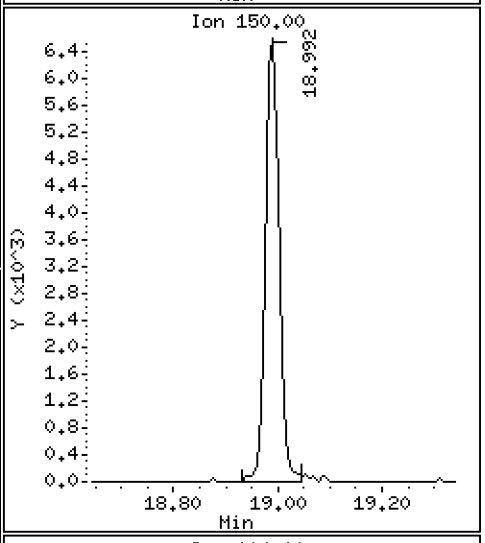
63 Di-n-butylphthalate

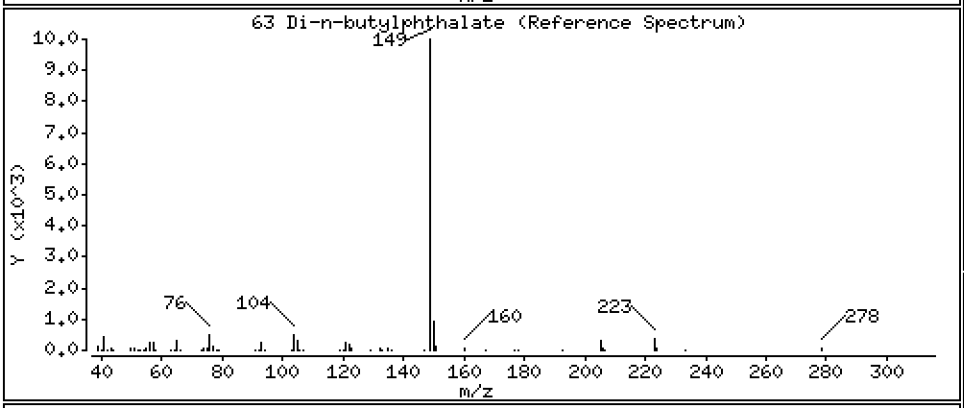
Concentration: 0.5718 ug/mL

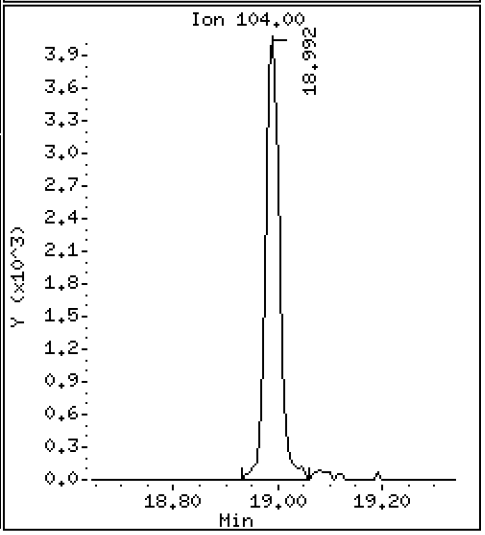


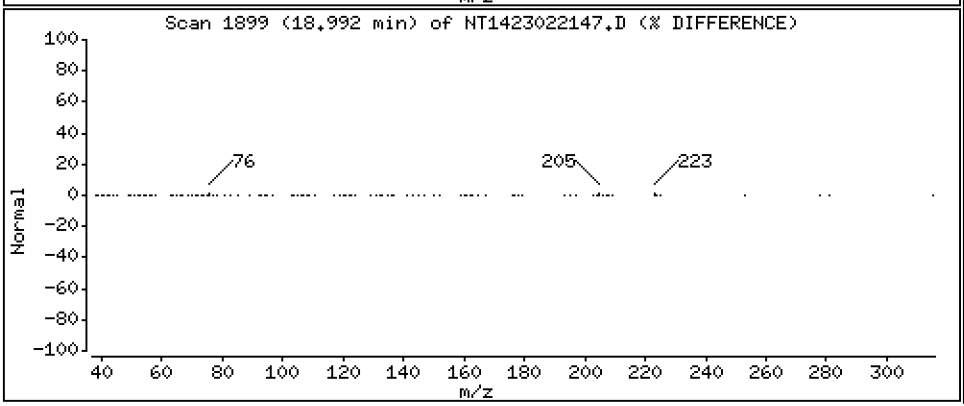












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

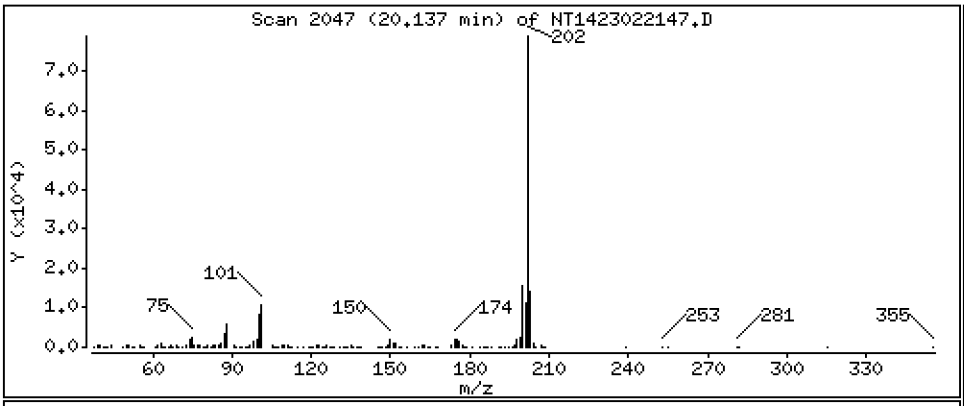
Operator: DSD

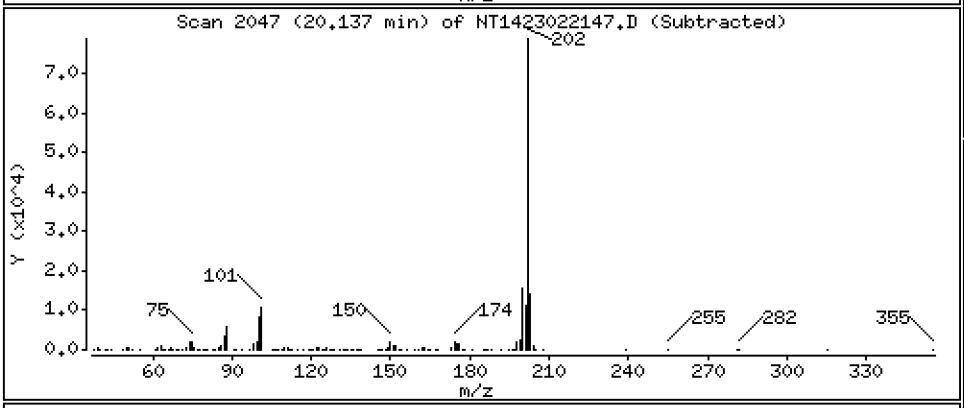
Column phase: ZB-5msi

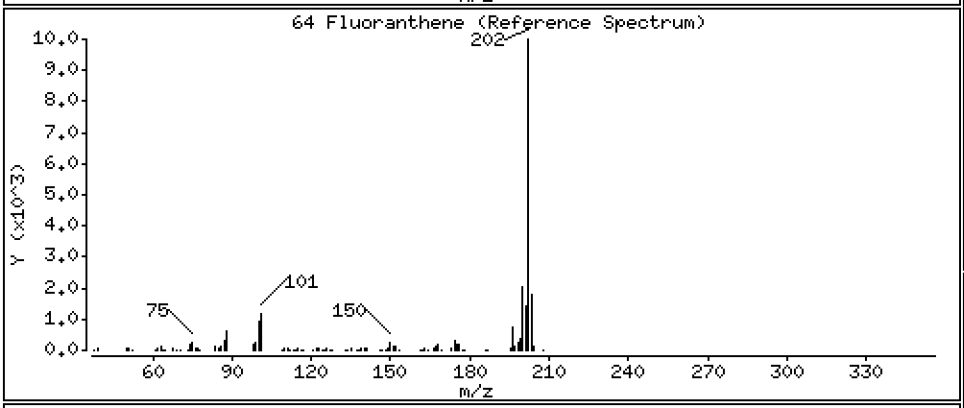
Column diameter: 0.25

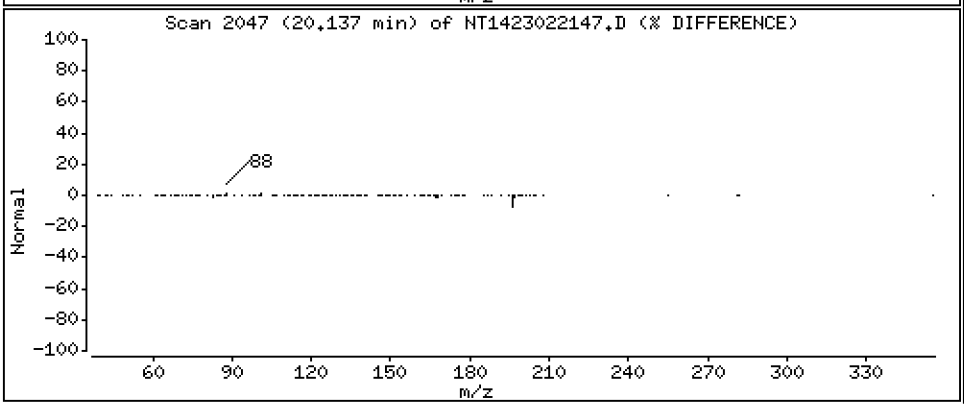
64 Fluoranthene

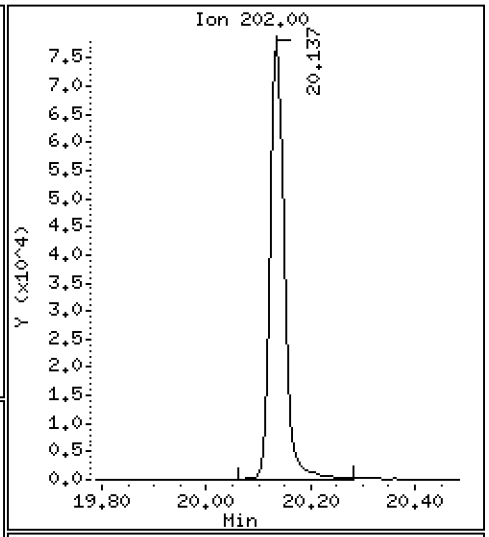
Concentration: 0.5476 ug/mL

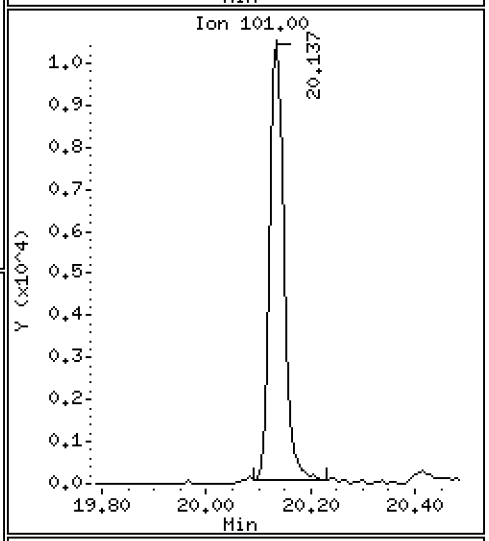


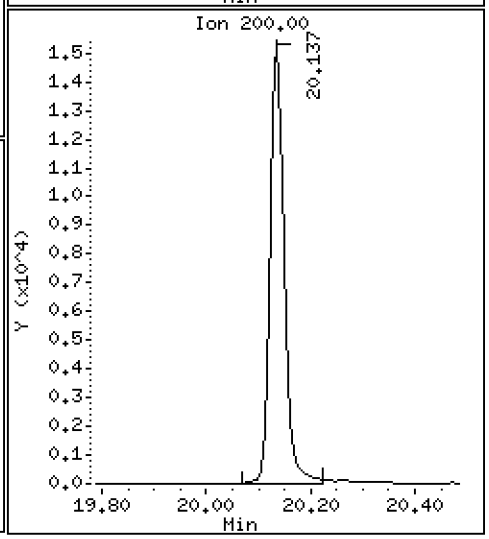












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

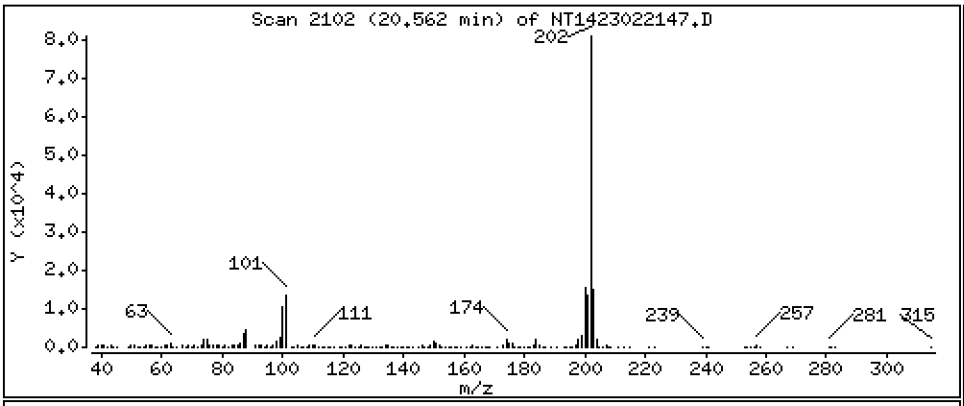
Operator: DSD

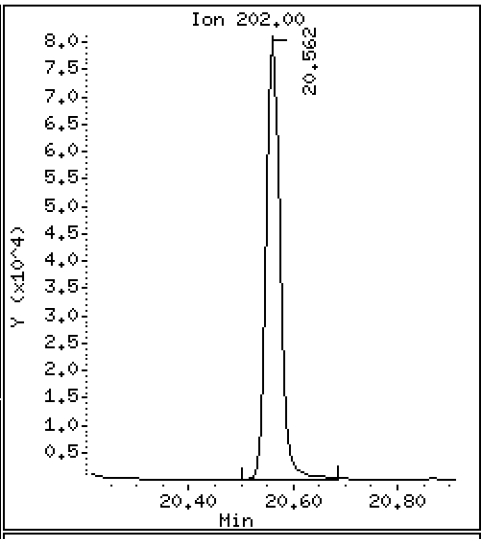
Column phase: ZB-5msi

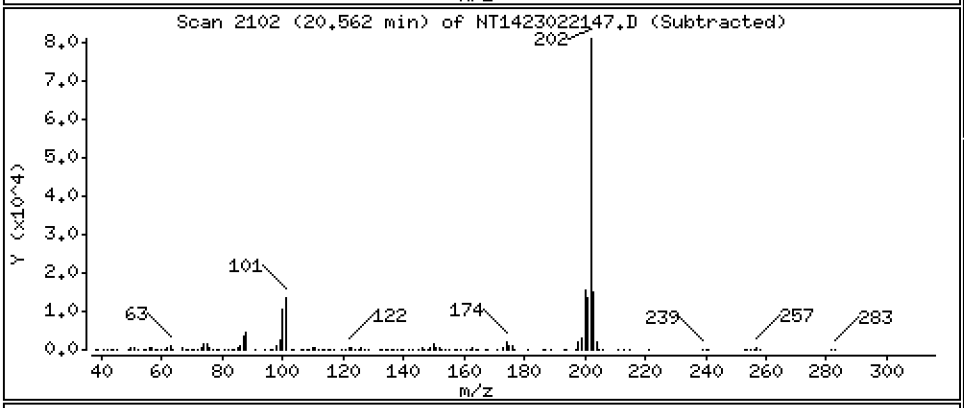
Column diameter: 0.25

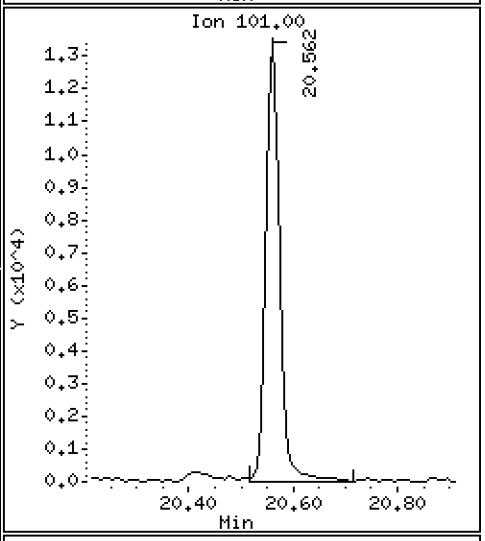
65 Pyrene

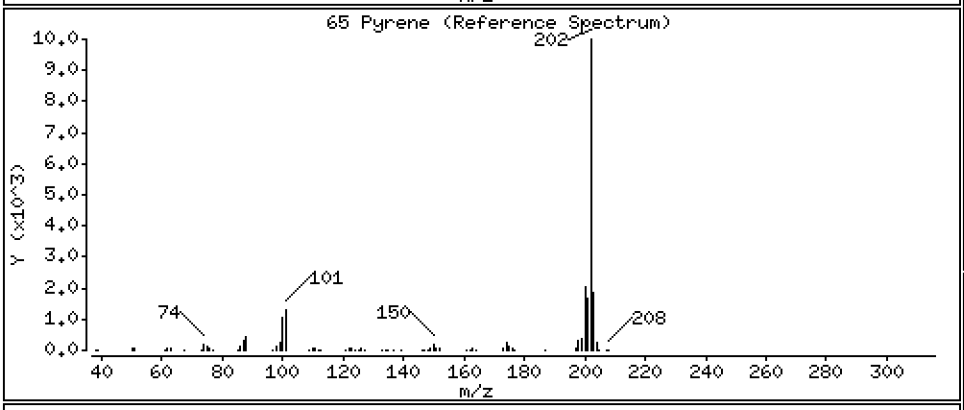
Concentration: 0.5211 ug/mL

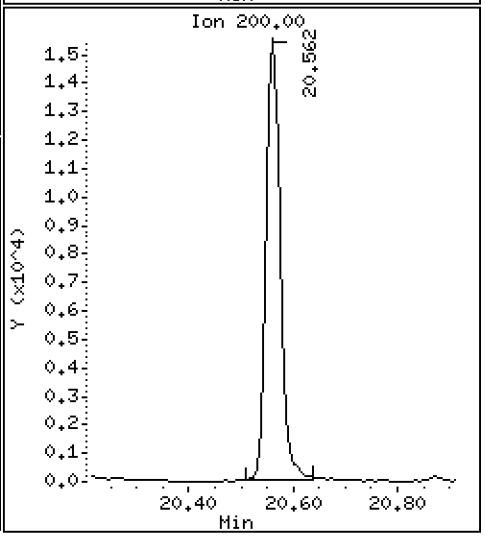


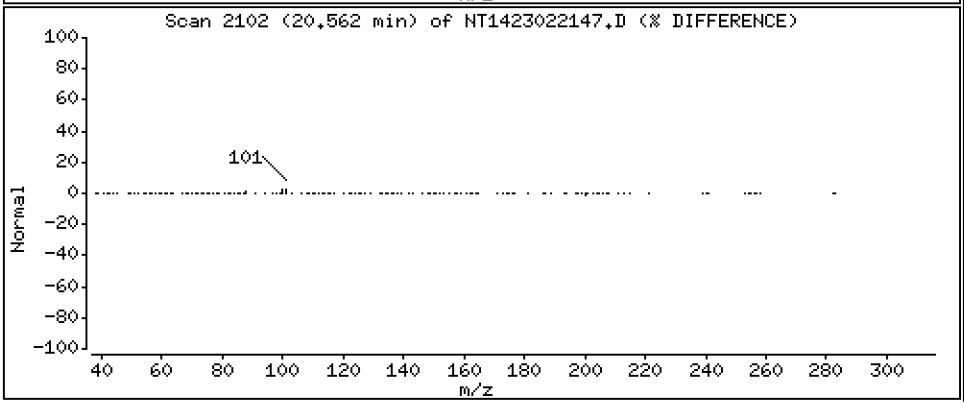












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

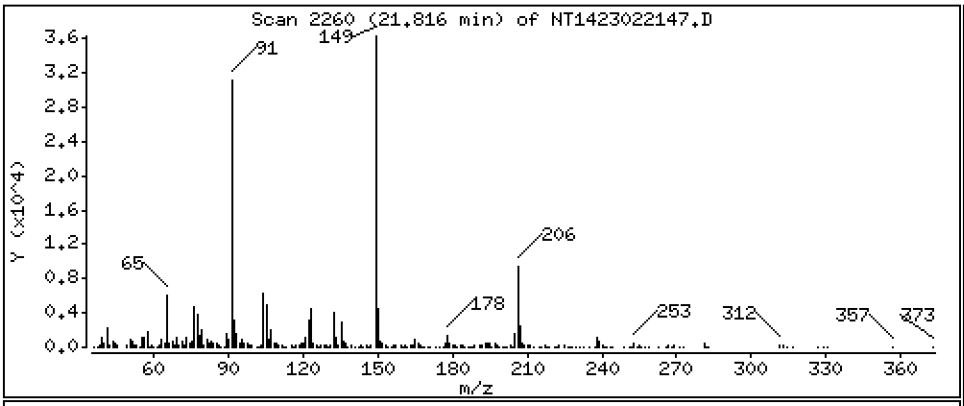
Operator: DSD

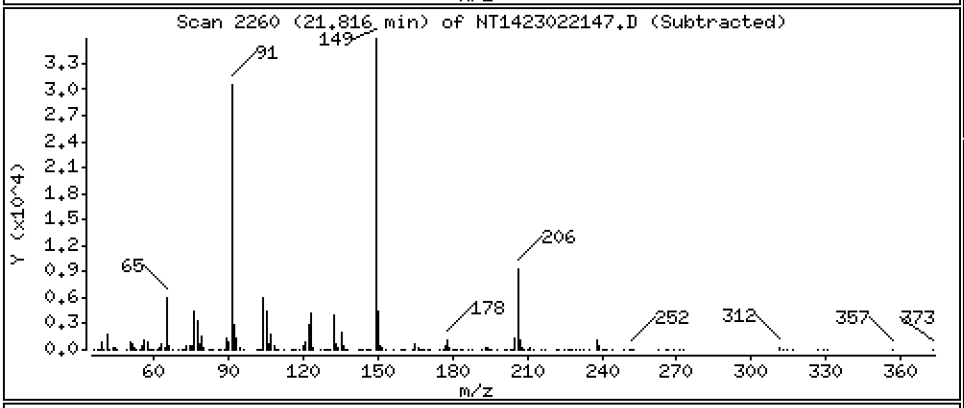
Column phase: ZB-5msi

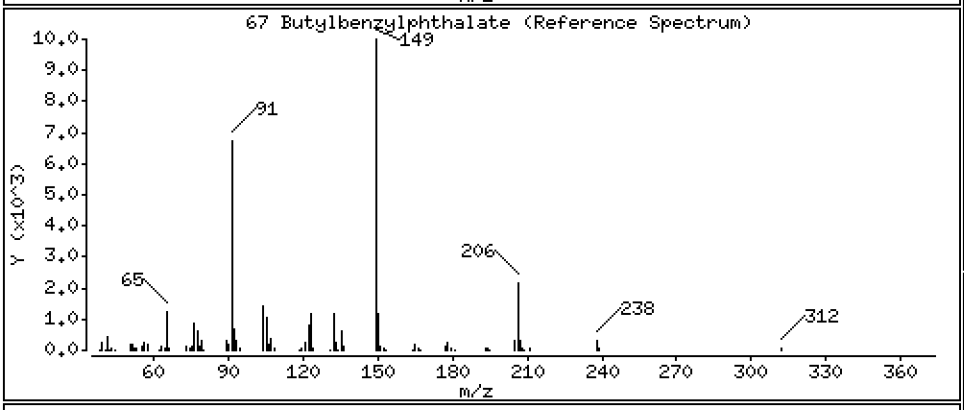
Column diameter: 0.25

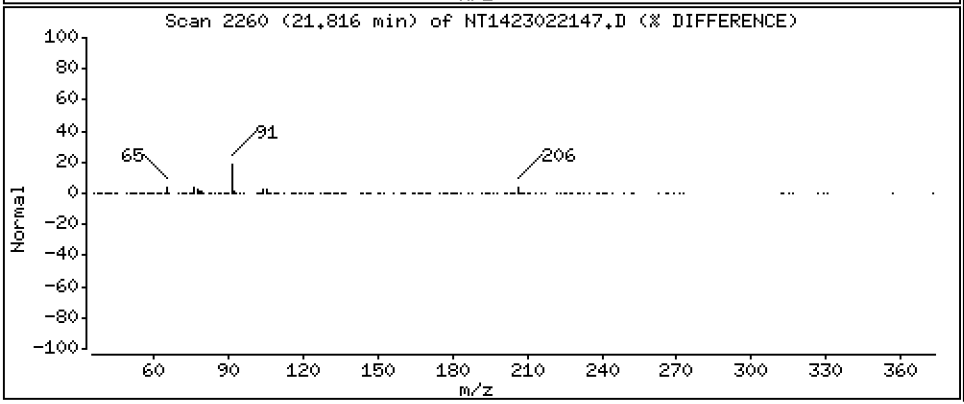
67 Butylbenzylphthalate

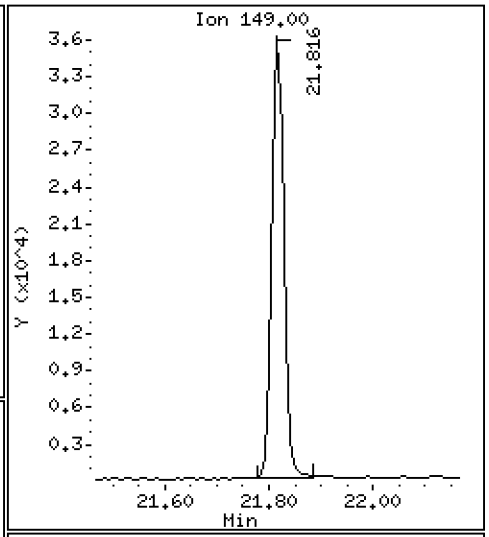
Concentration: 0.5922 ug/mL

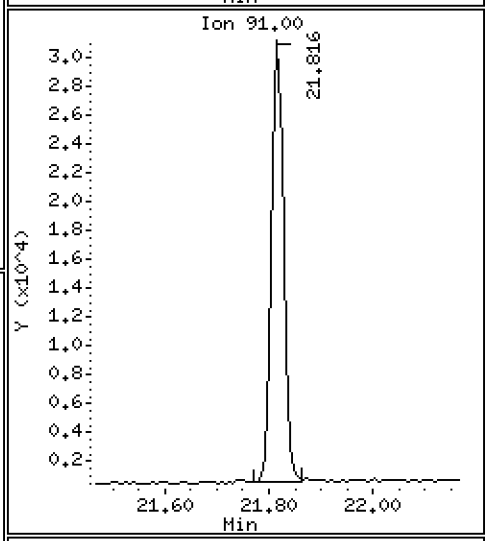


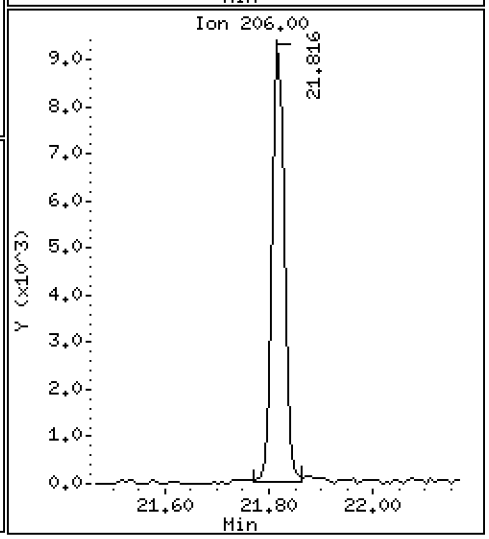












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

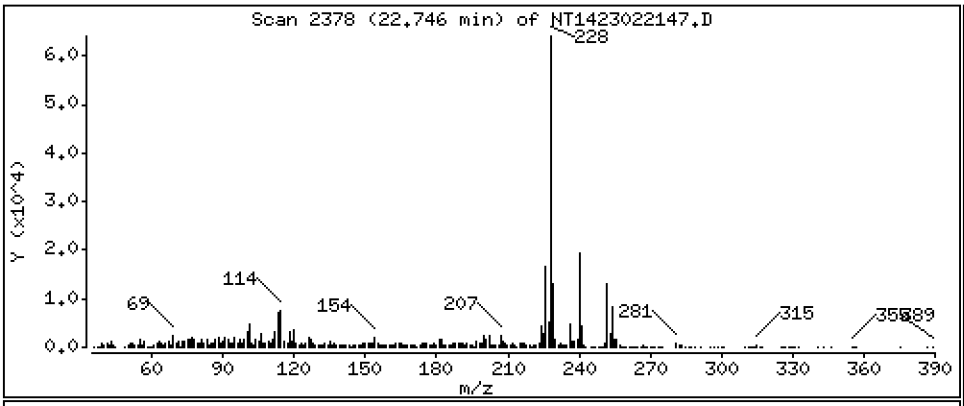
Operator: DSD

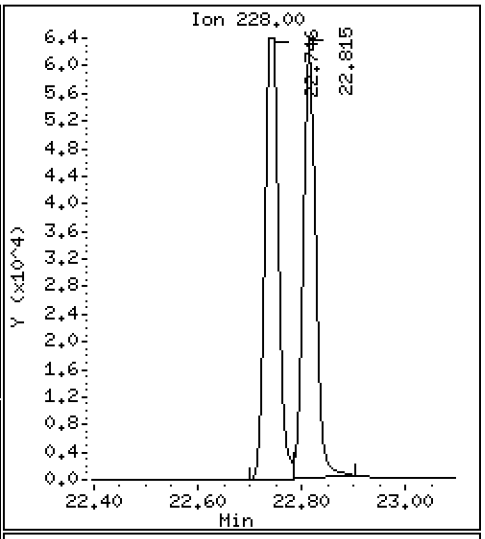
Column phase: ZB-5msi

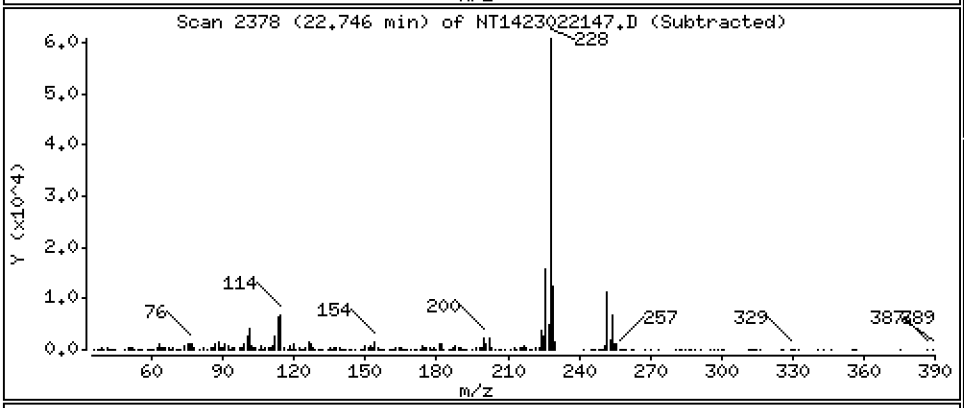
Column diameter: 0.25

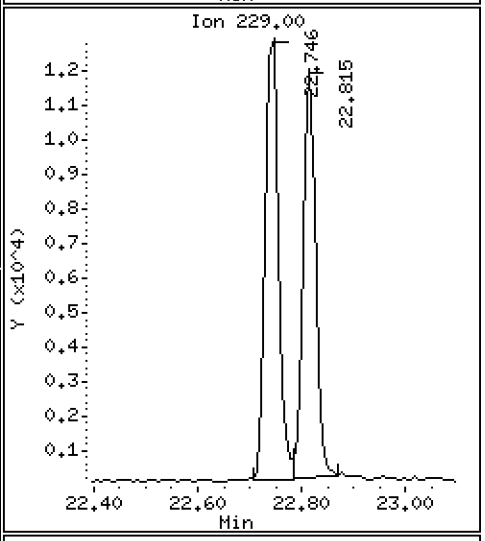
68 Benzo(a)anthracene

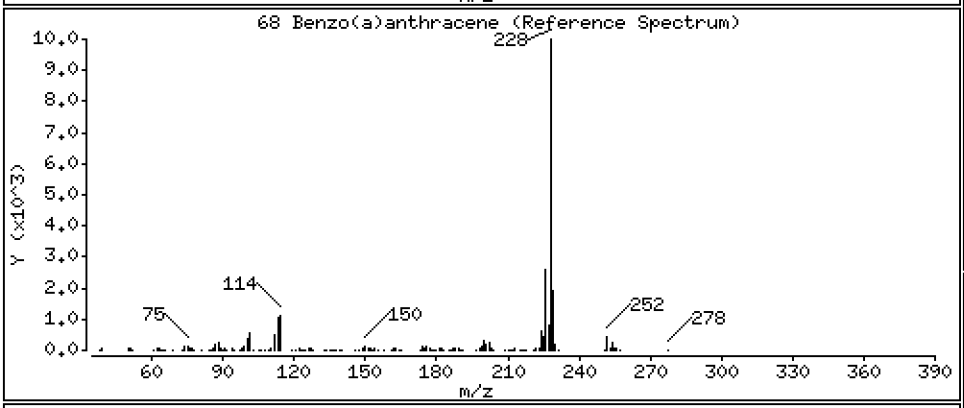
Concentration: 0.5638 ug/mL

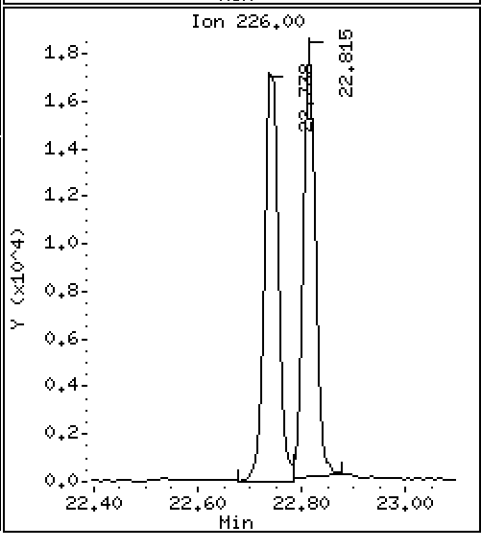


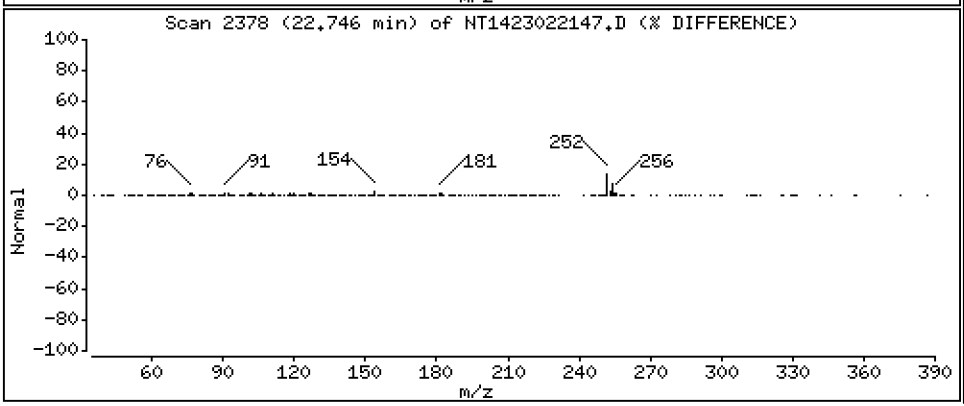












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

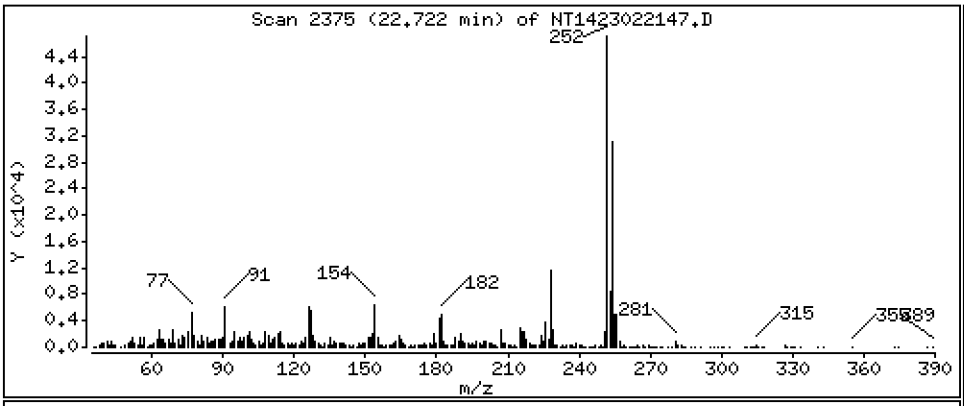
Operator: DSD

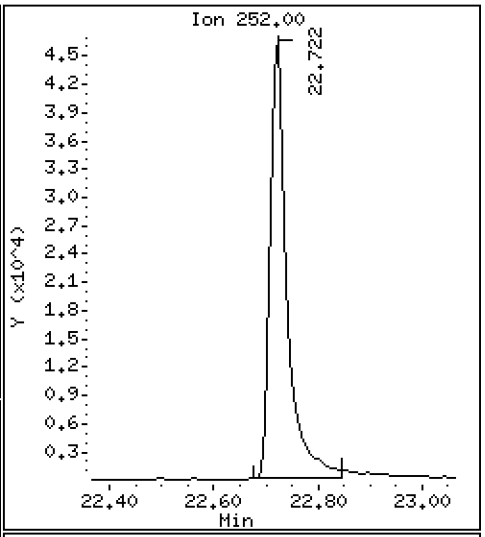
Column phase: ZB-5msi

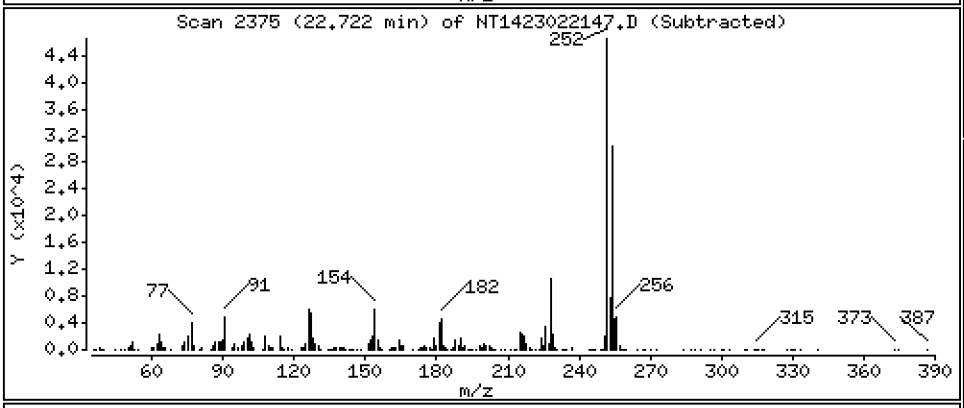
Column diameter: 0.25

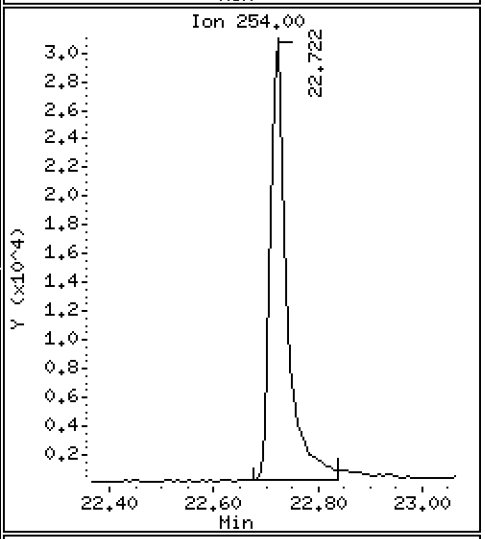
70 3,3'-Dichlorobenzidine

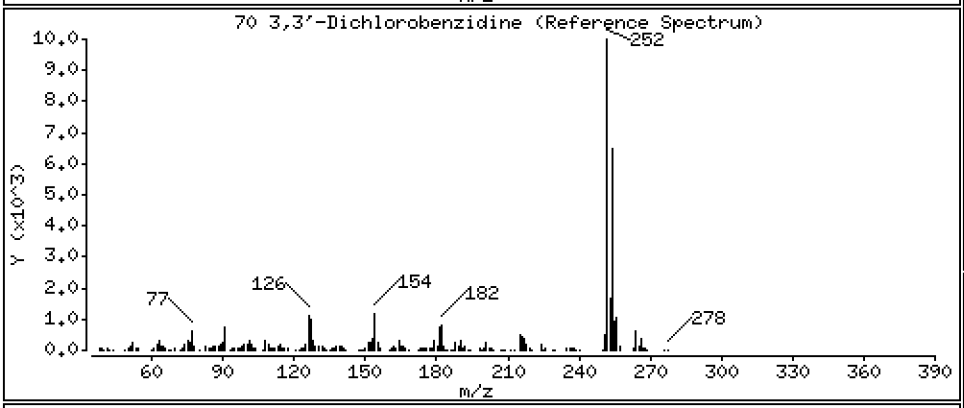
Concentration: 1.742 ug/mL

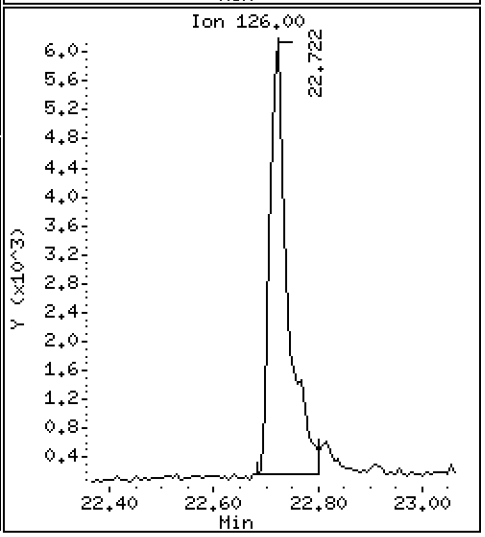


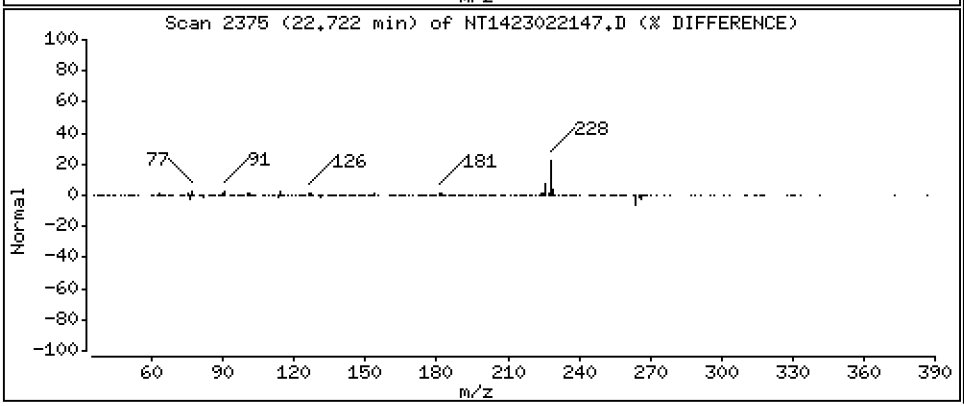












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

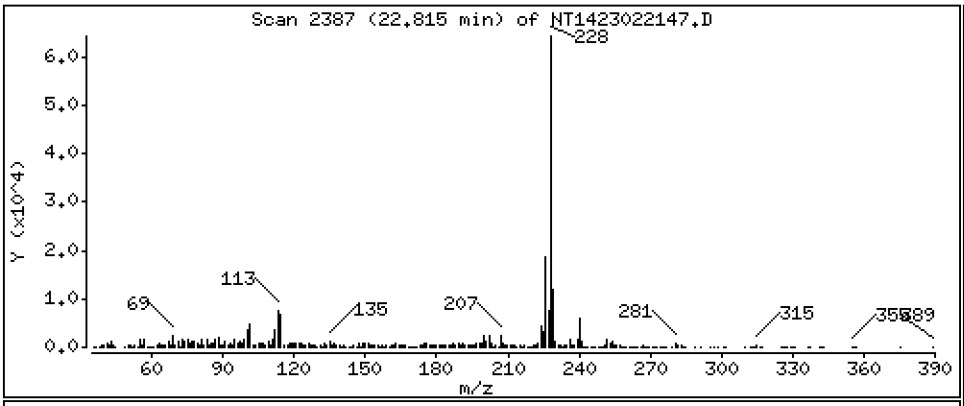
Operator: DSD

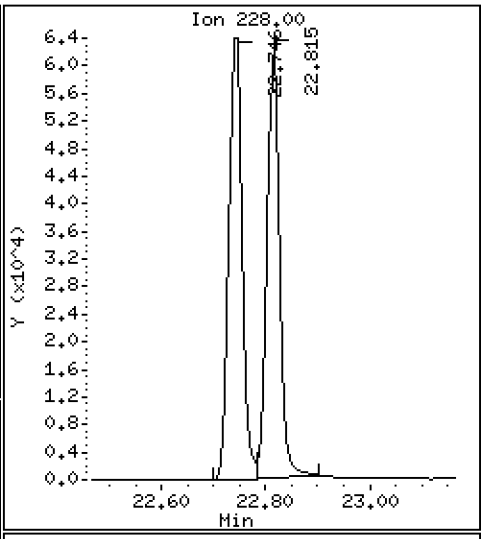
Column phase: ZB-5msi

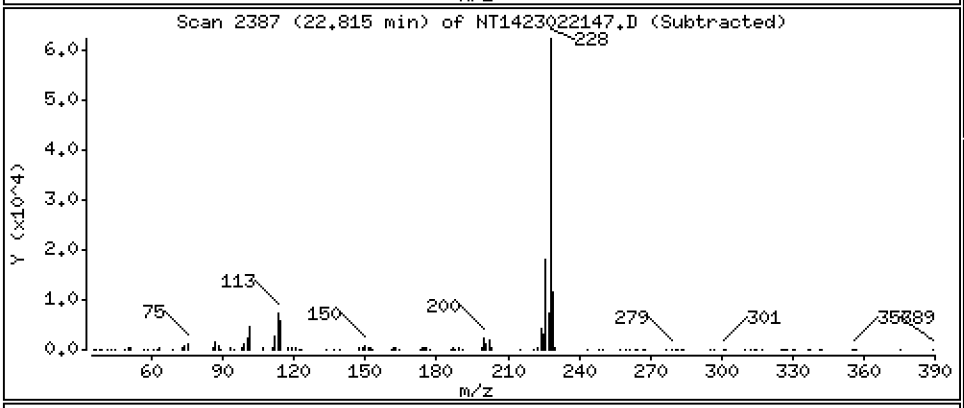
Column diameter: 0.25

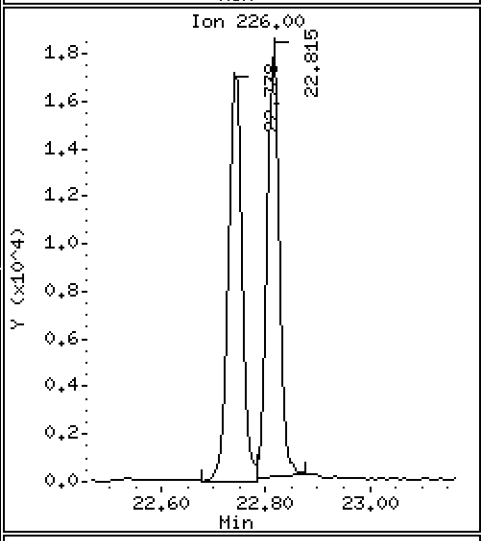
71 Chrysene

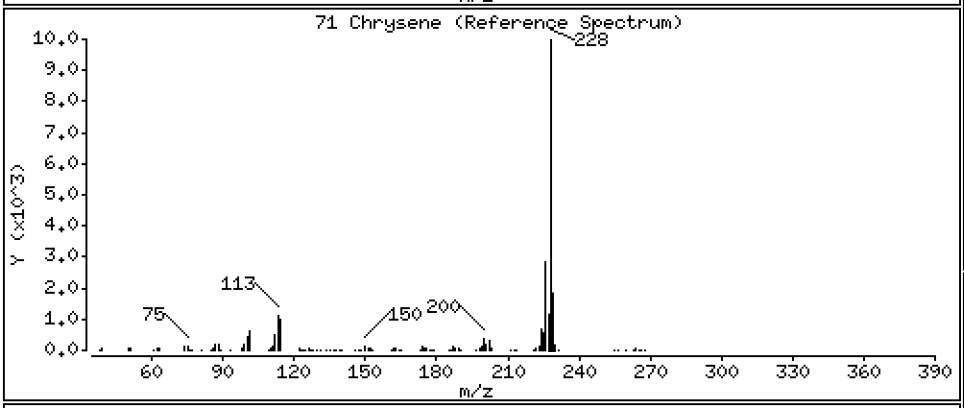
Concentration: 0.5608 ug/mL

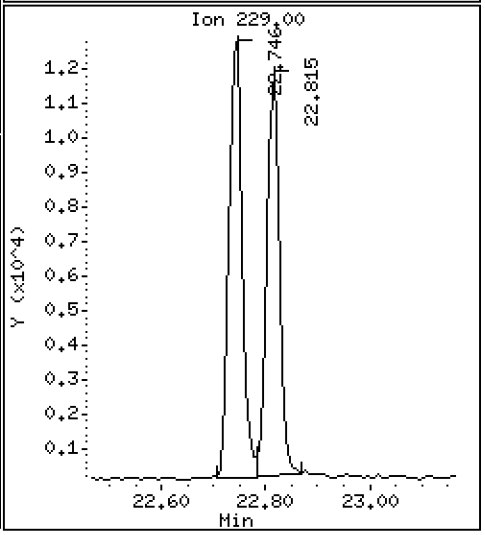


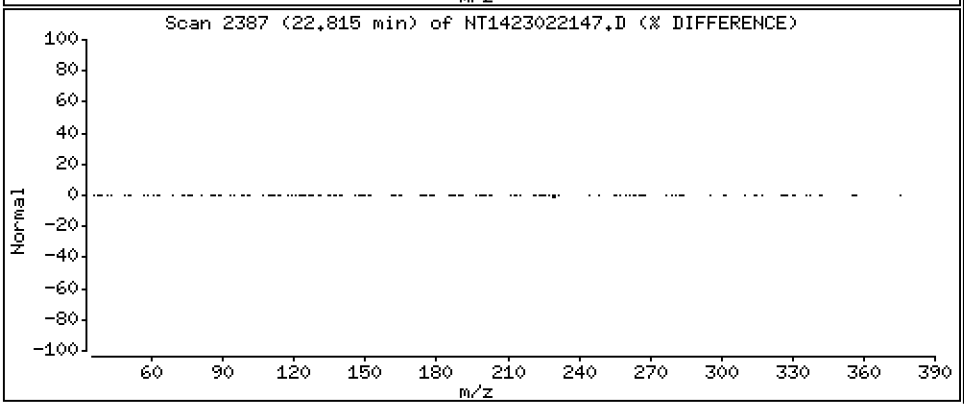












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

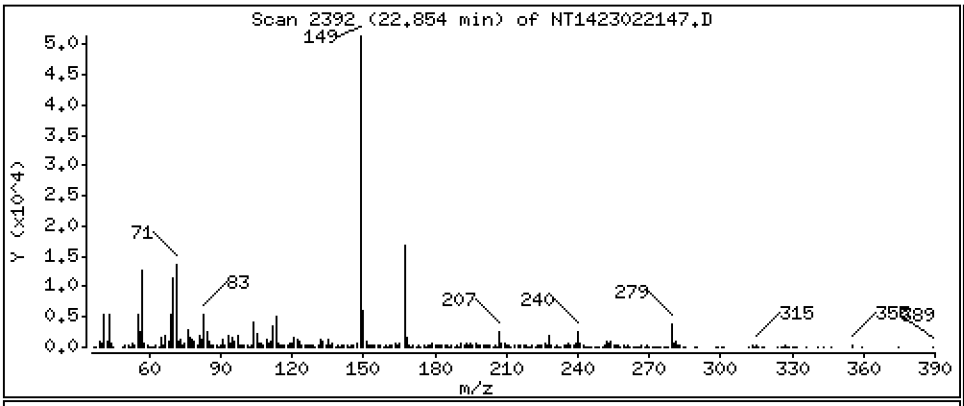
Operator: DSD

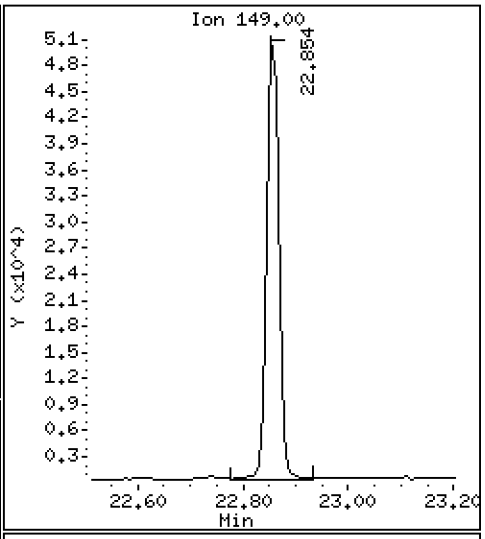
Column phase: ZB-5msi

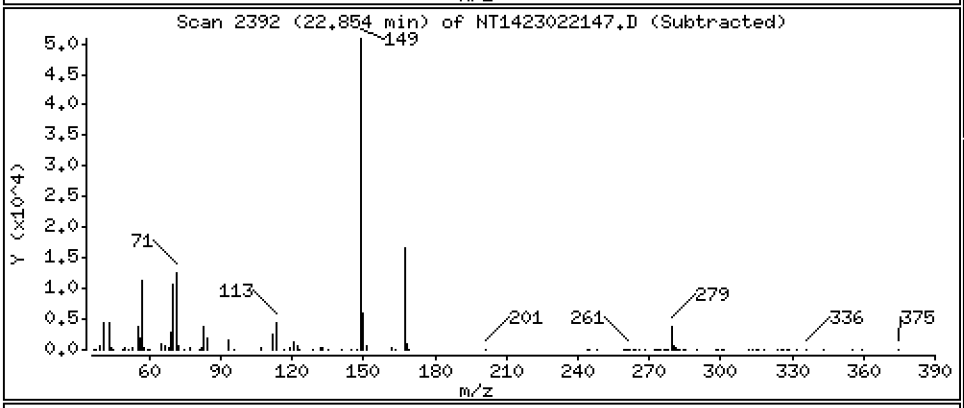
Column diameter: 0.25

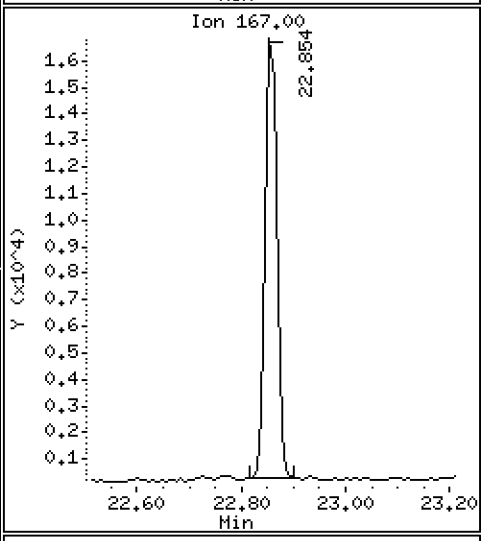
72 bis(2-Ethylhexyl)phthalate

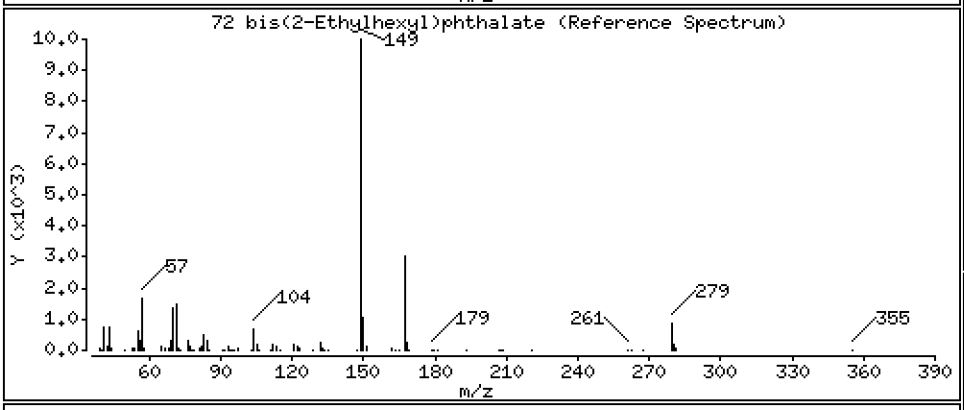
Concentration: 0.4083 ug/mL

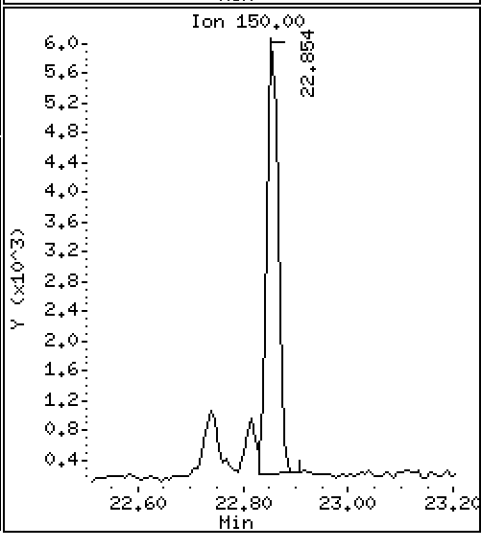


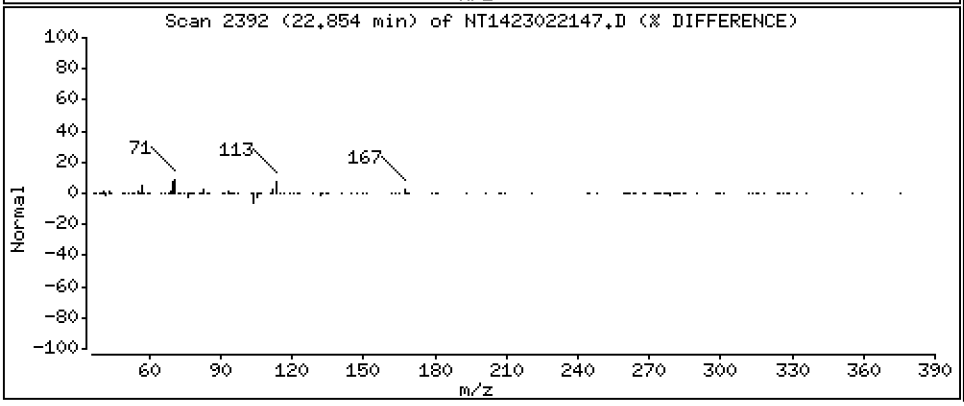












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

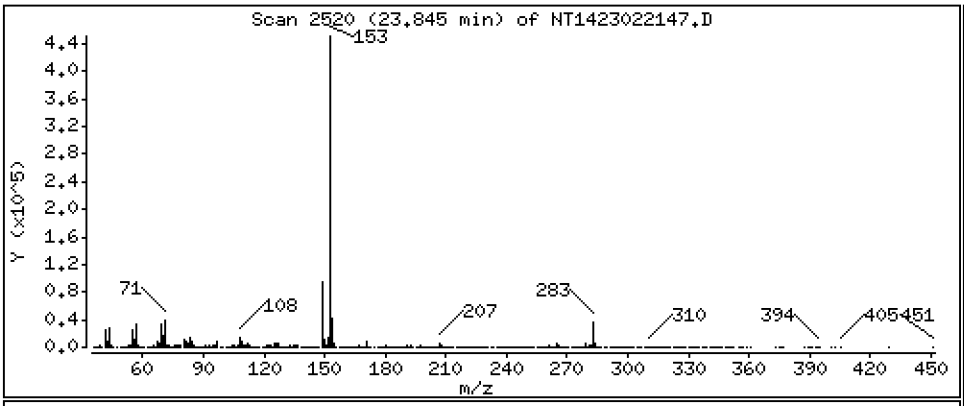
Operator: DSD

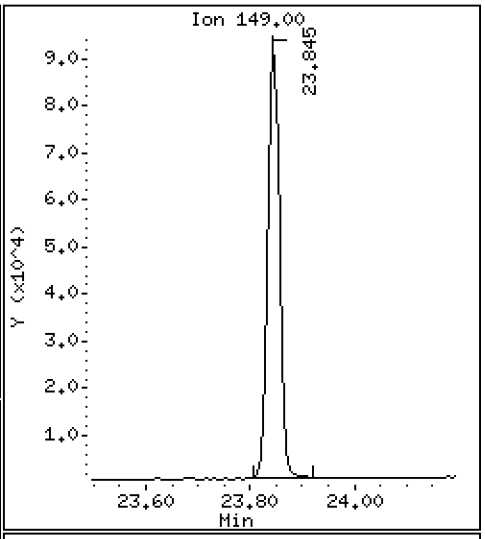
Column phase: ZB-5msi

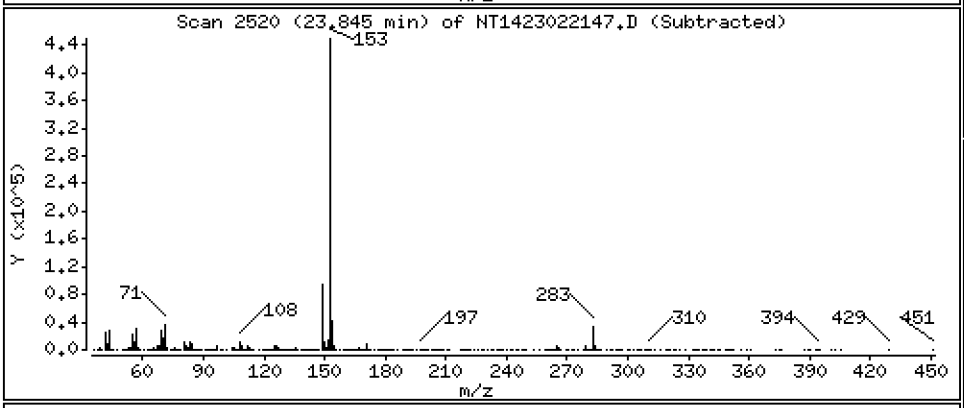
Column diameter: 0.25

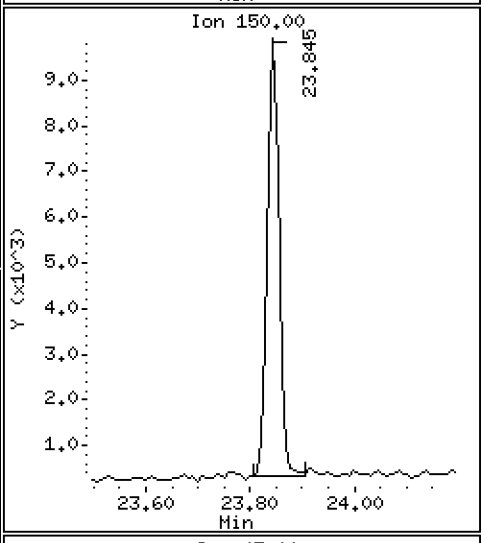
73 Di-n-octylphthalate

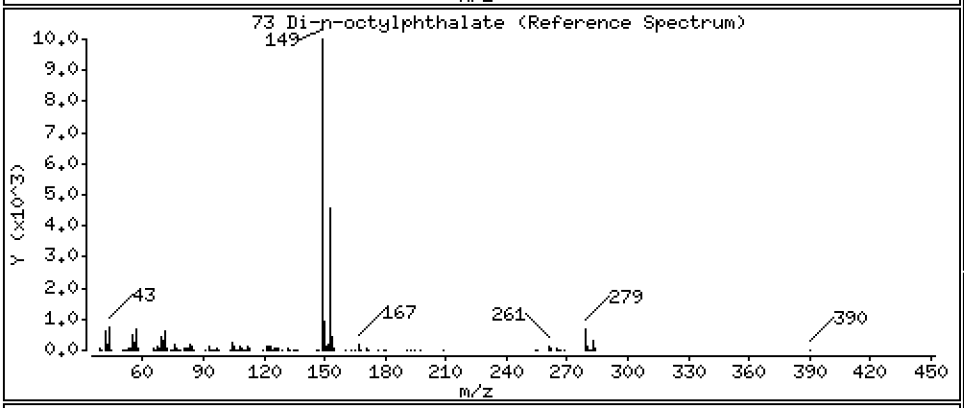
Concentration: 0.5279 ug/mL

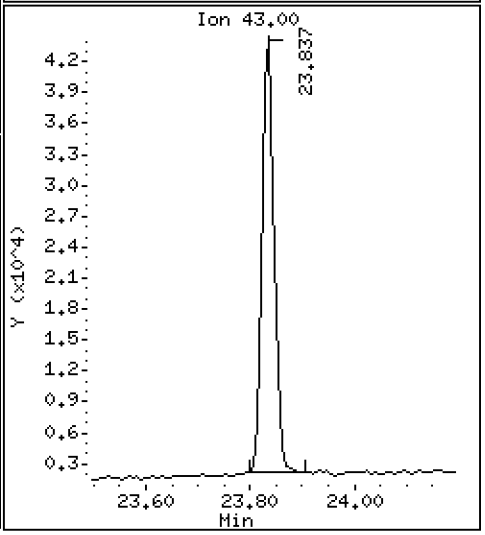


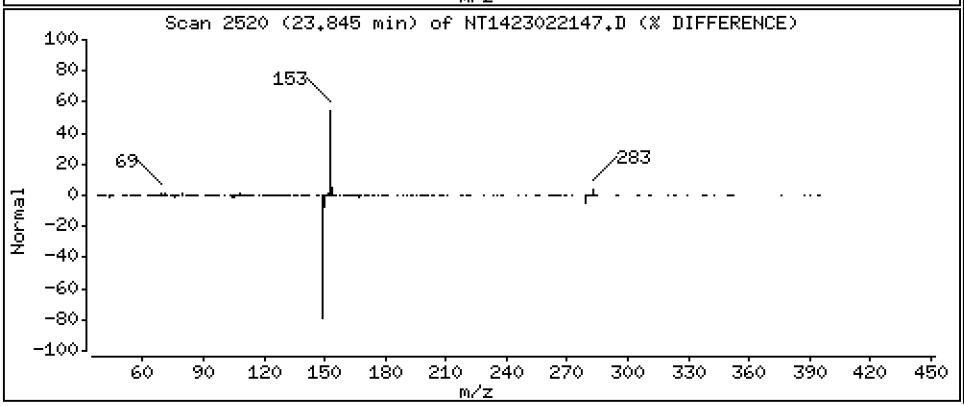












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

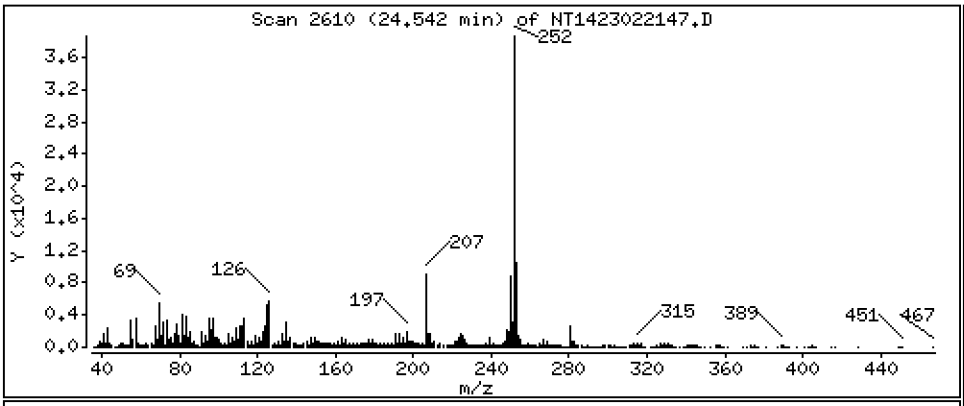
Operator: DSD

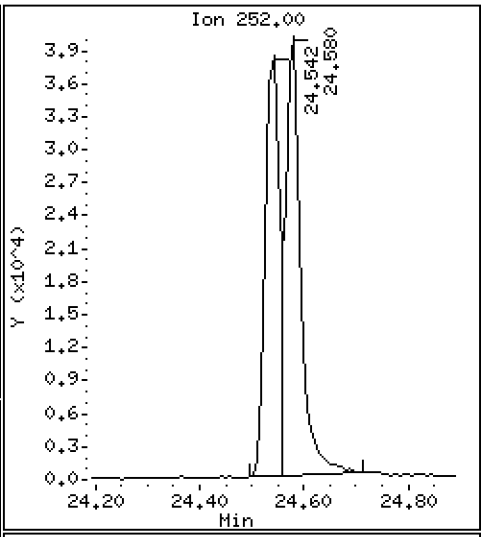
Column phase: ZB-5msi

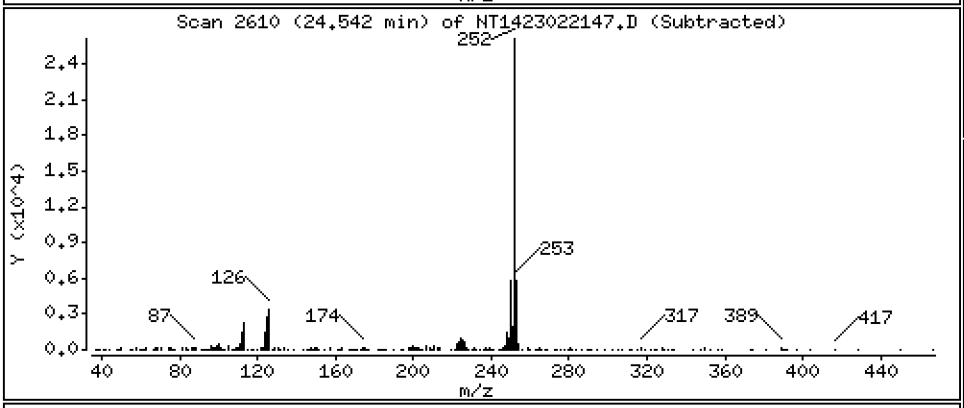
Column diameter: 0.25

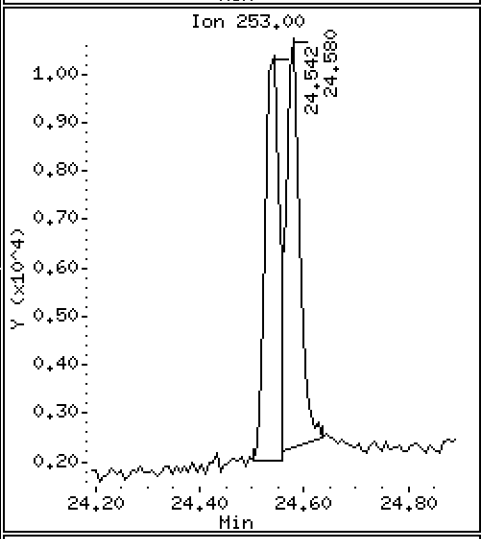
74 Benzo(b)fluoranthene

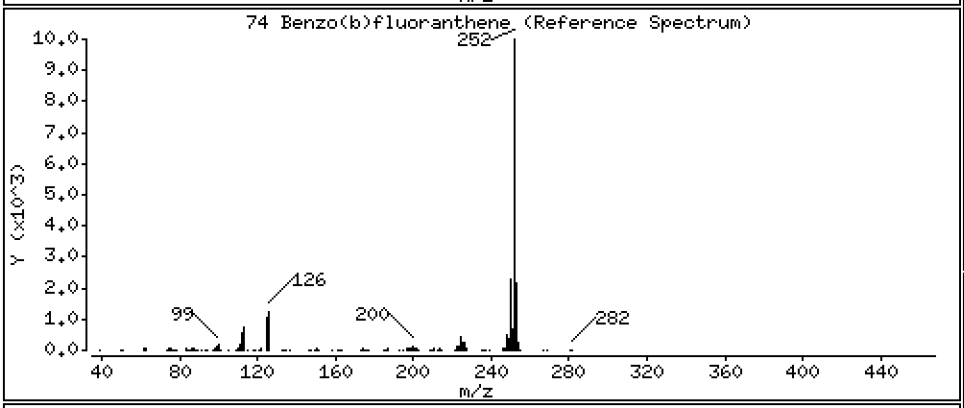
Concentration: 0.5134 ug/mL

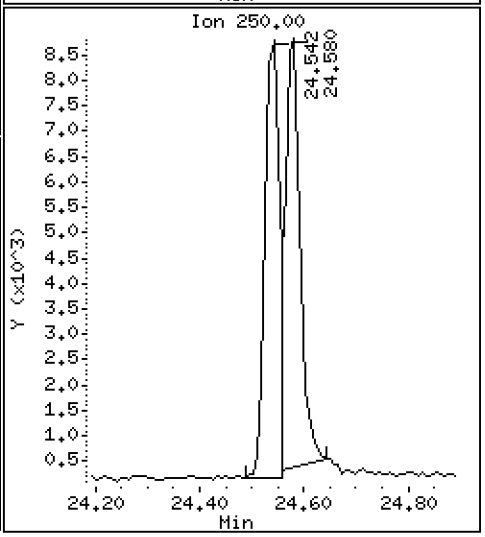


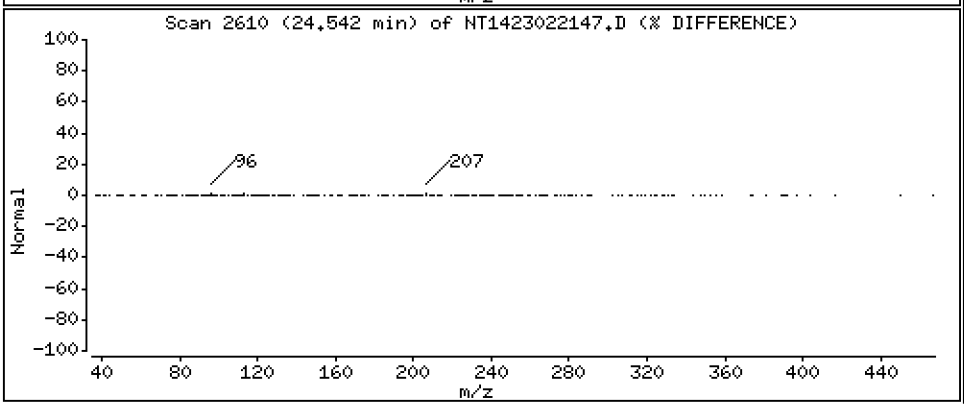












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

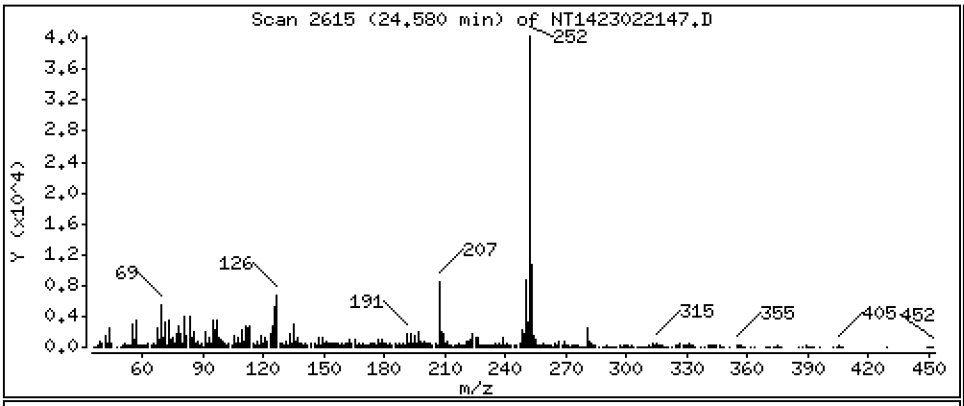
Operator: DSD

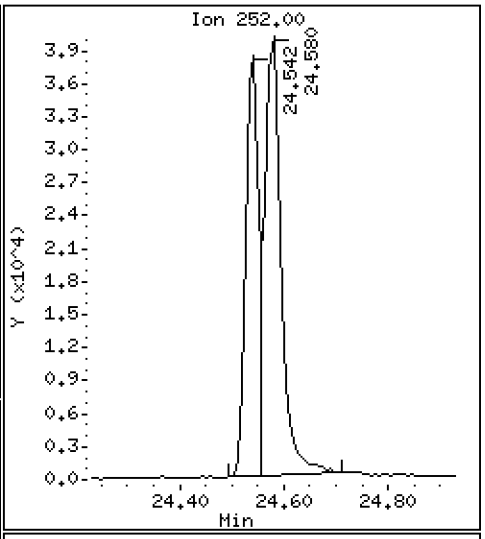
Column phase: ZB-5msi

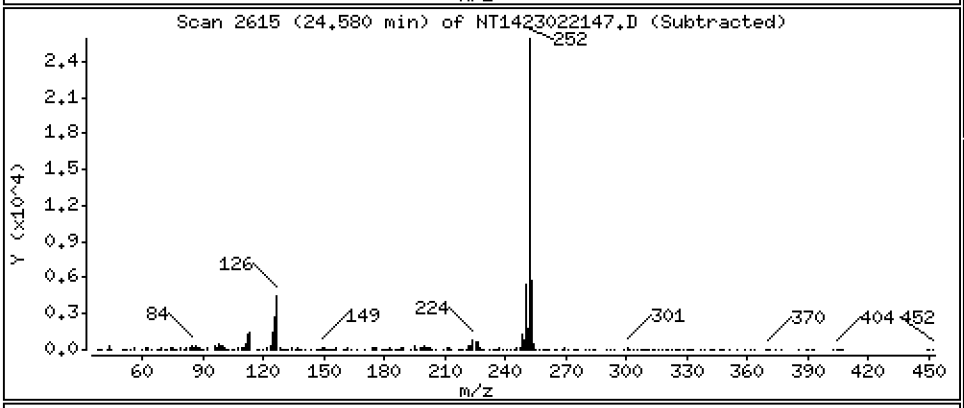
Column diameter: 0.25

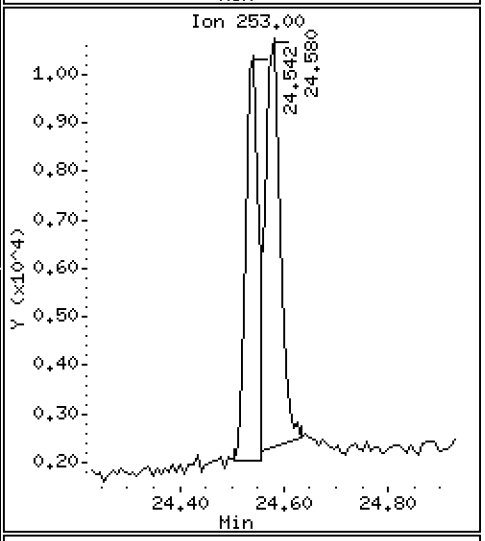
75 Benzo(k)fluoranthene

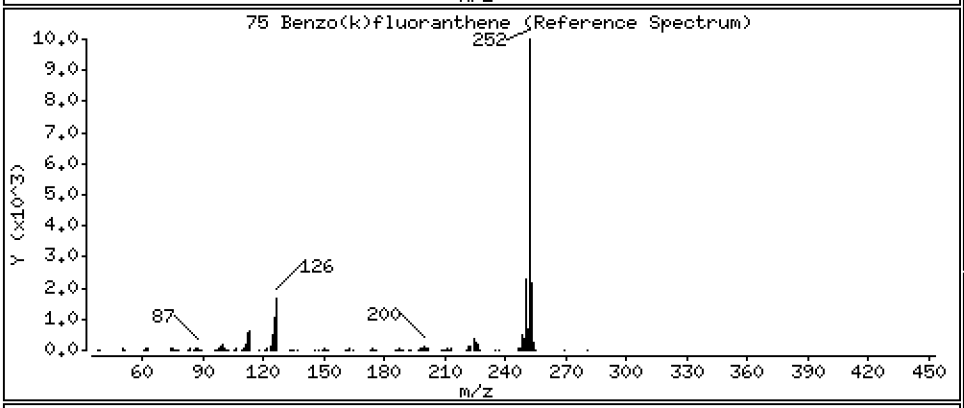
Concentration: 0.5948 ug/mL

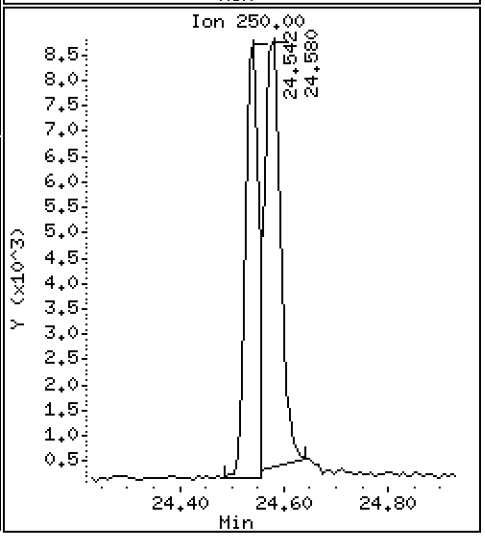


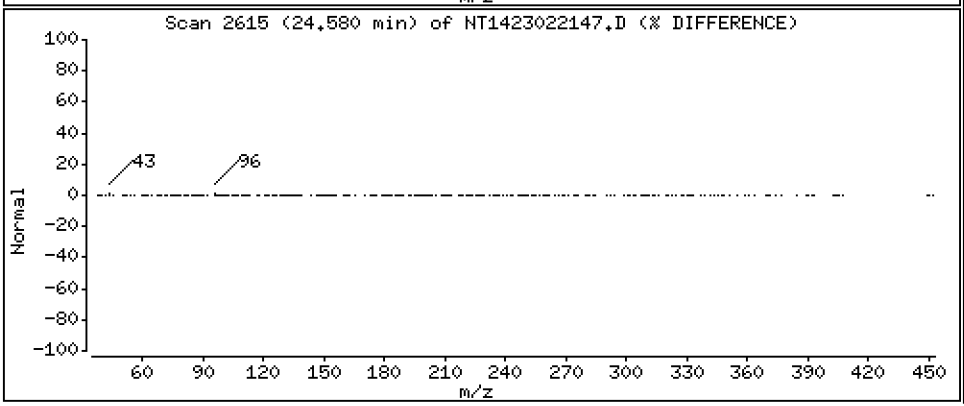












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

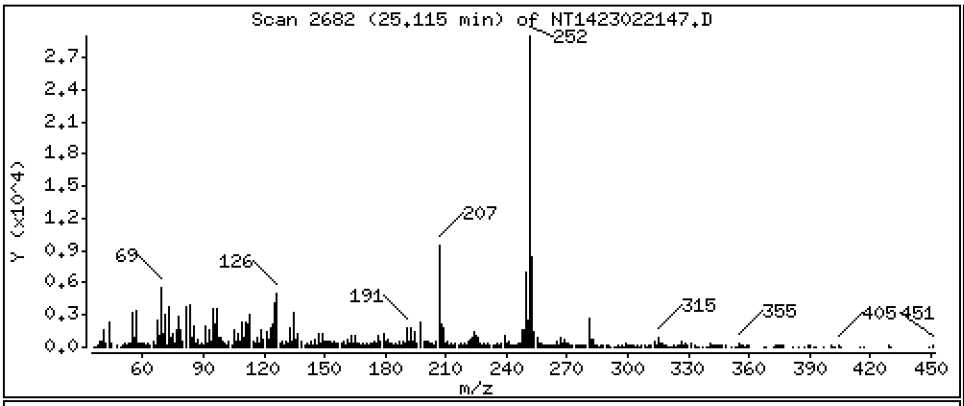
Operator: DSD

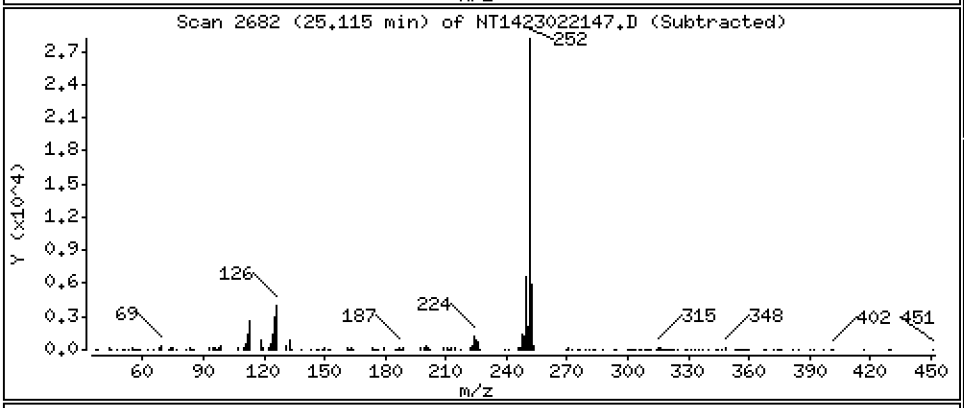
Column phase: ZB-5msi

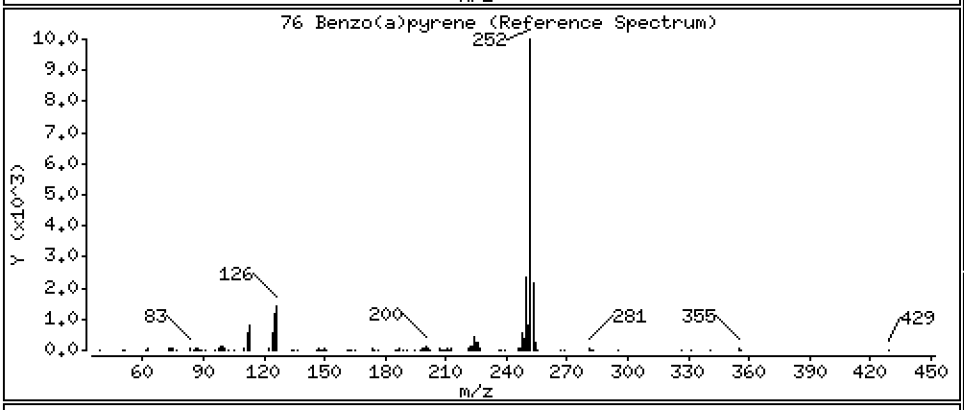
Column diameter: 0.25

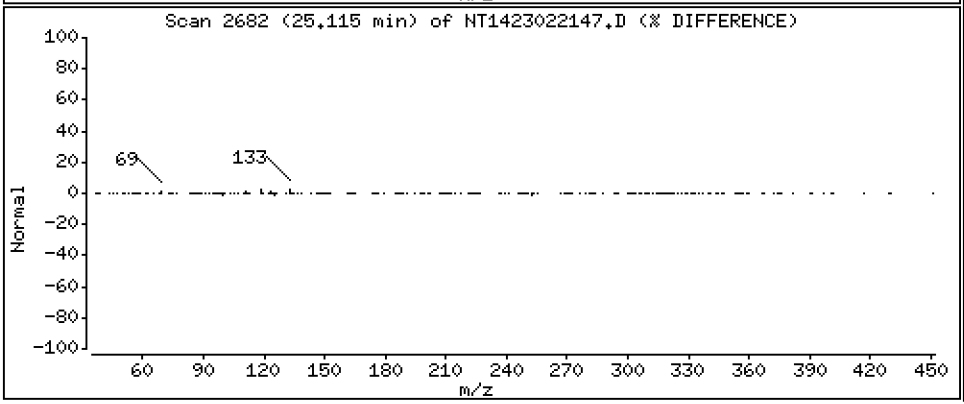
76 Benzo(a)pyrene

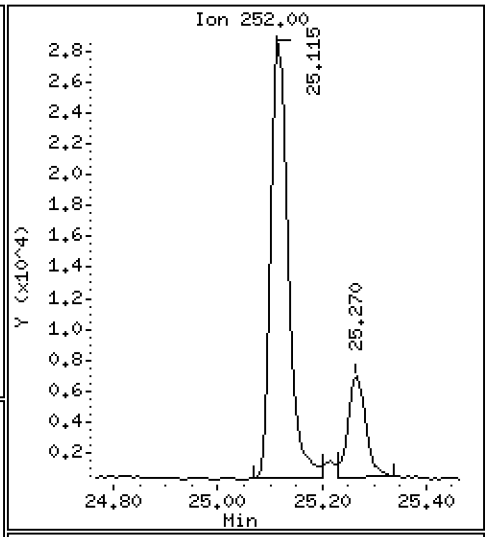
Concentration: 0.4872 ug/mL

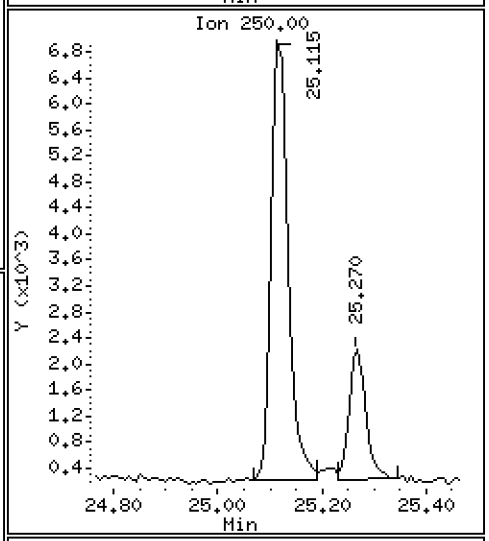


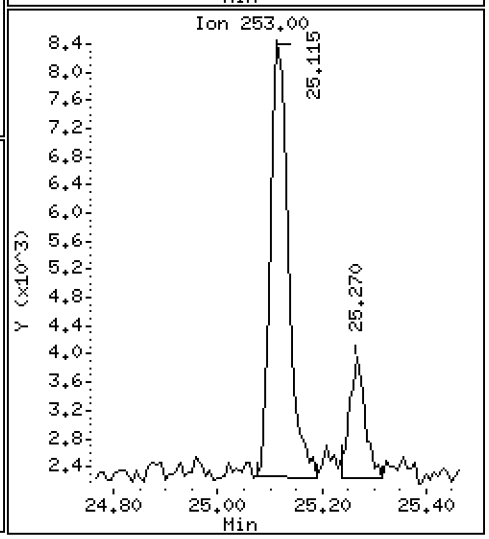












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

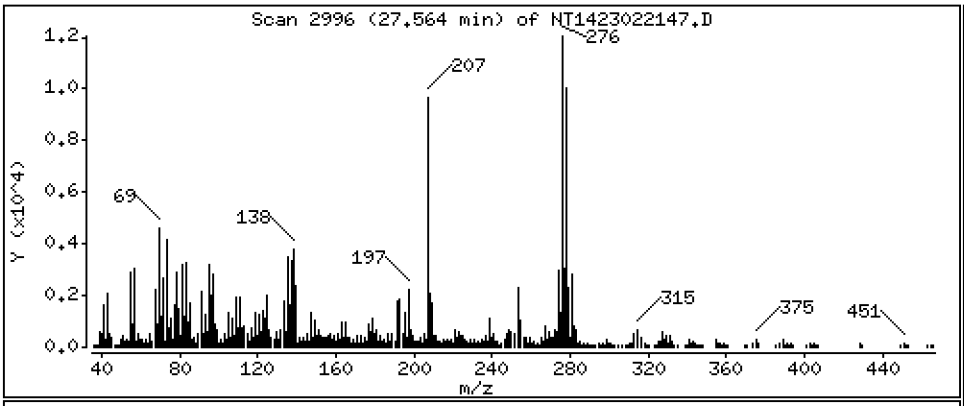
Operator: DSD

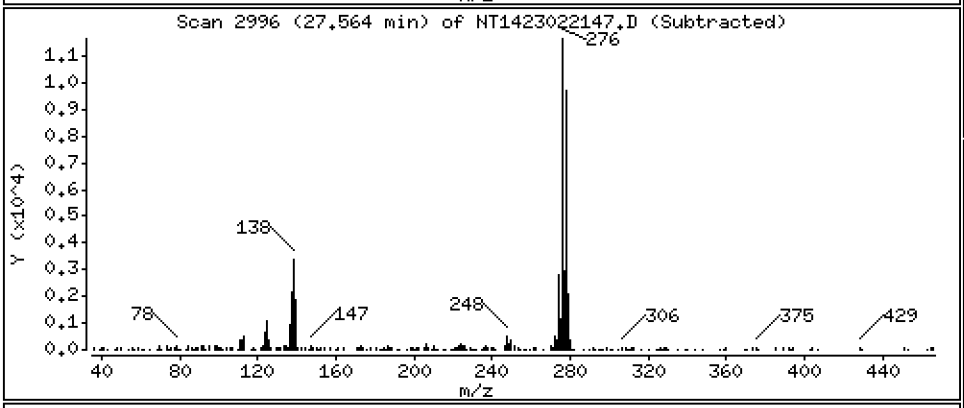
Column phase: ZB-5msi

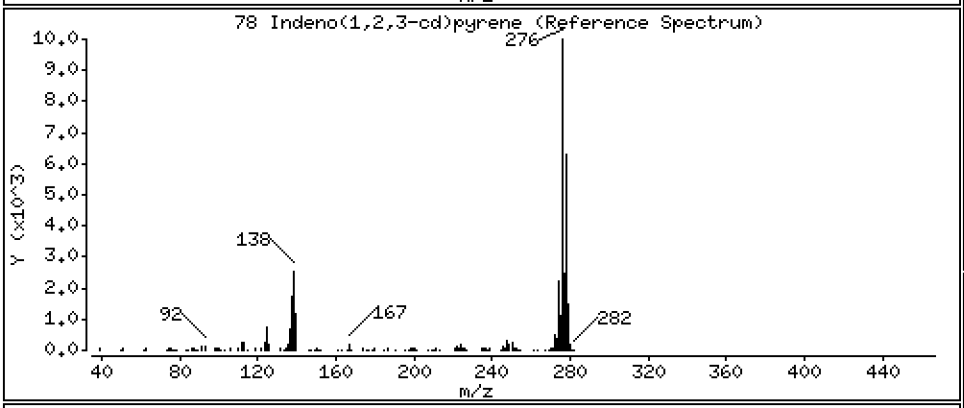
Column diameter: 0.25

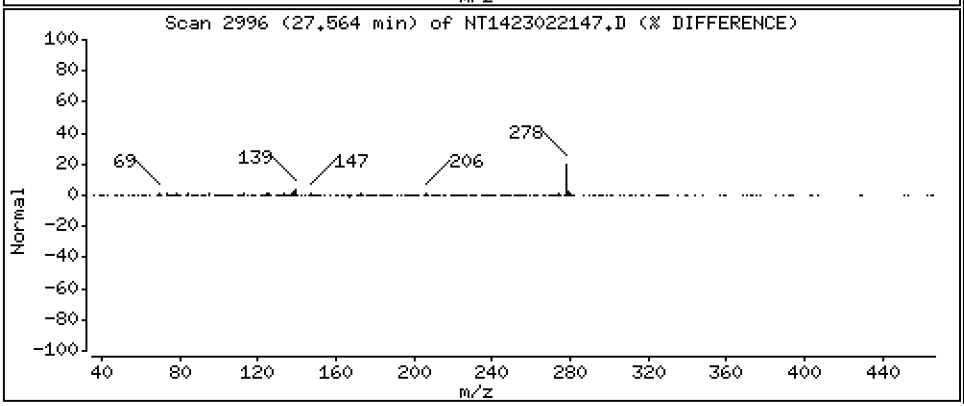
78 Indeno(1,2,3-cd)pyrene

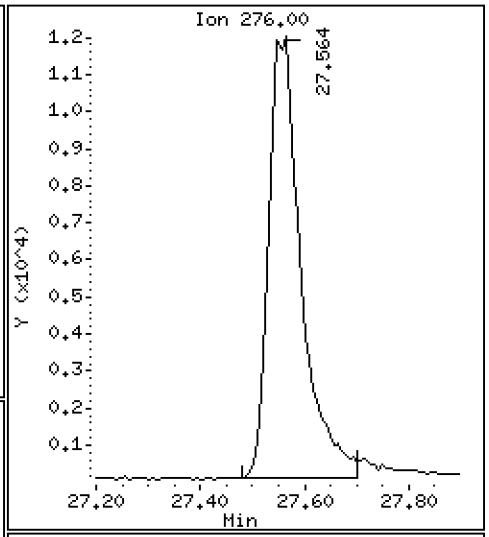
Concentration: 0.4767 ug/mL

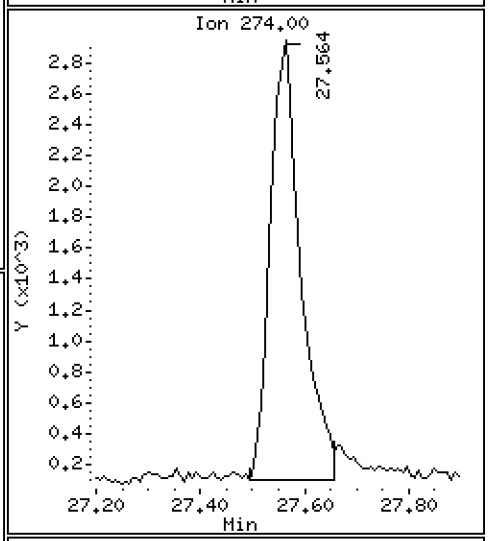


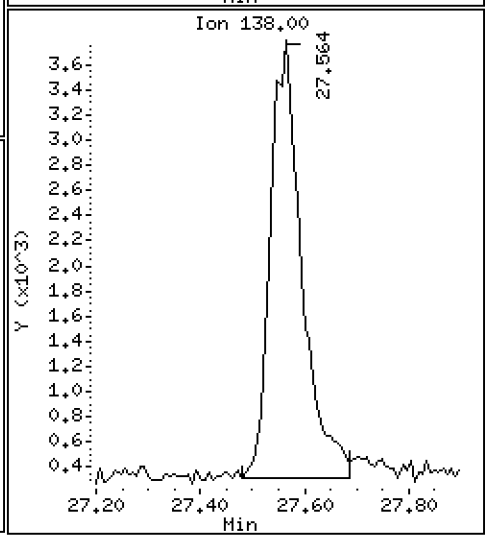












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

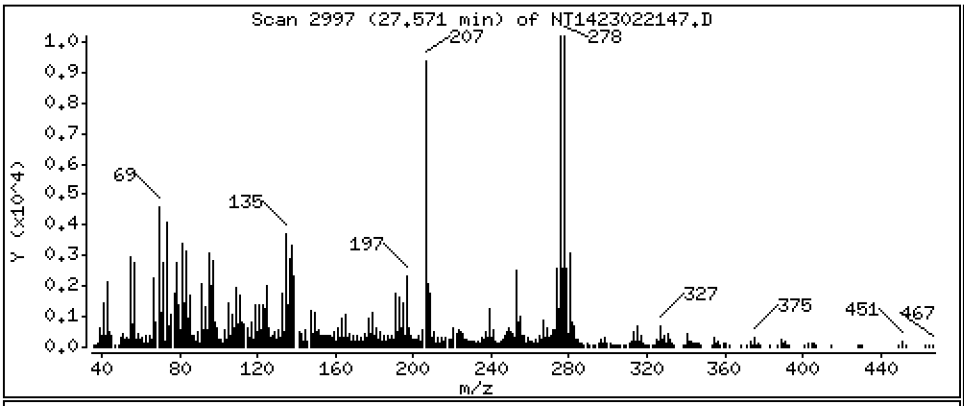
Operator: DSD

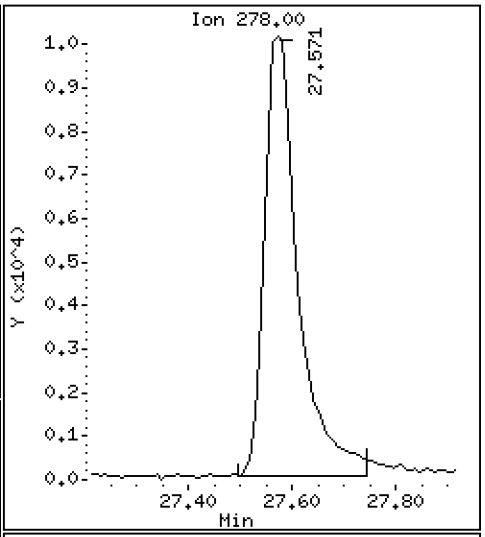
Column phase: ZB-5msi

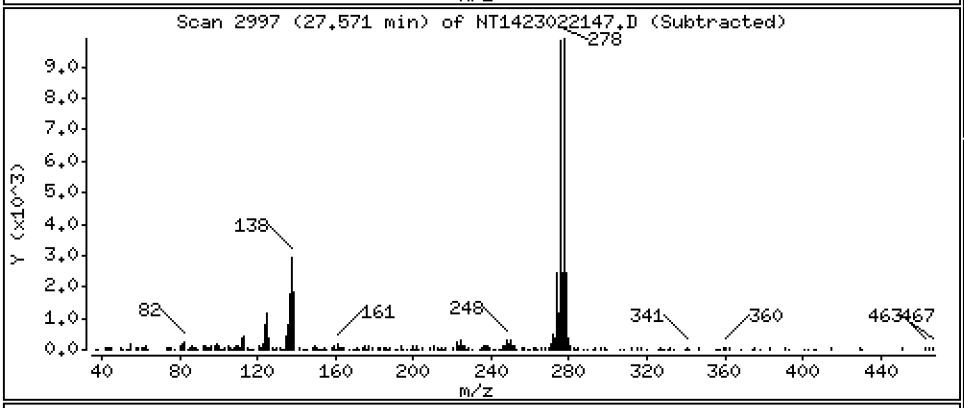
Column diameter: 0.25

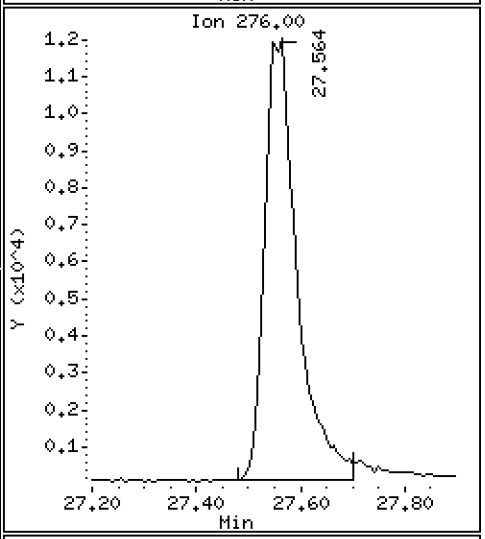
79 Dibenzo(a,h)anthracene

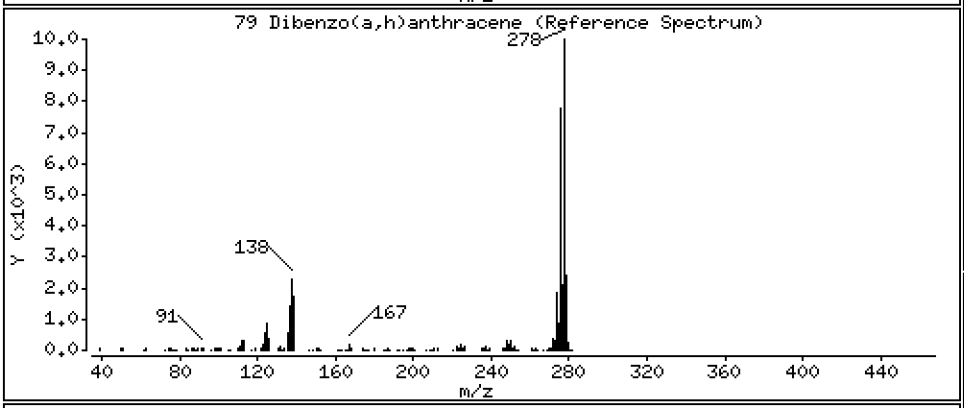
Concentration: 0.5044 ug/mL

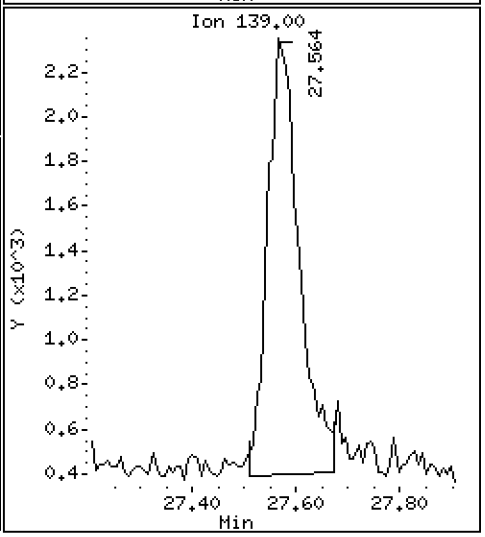


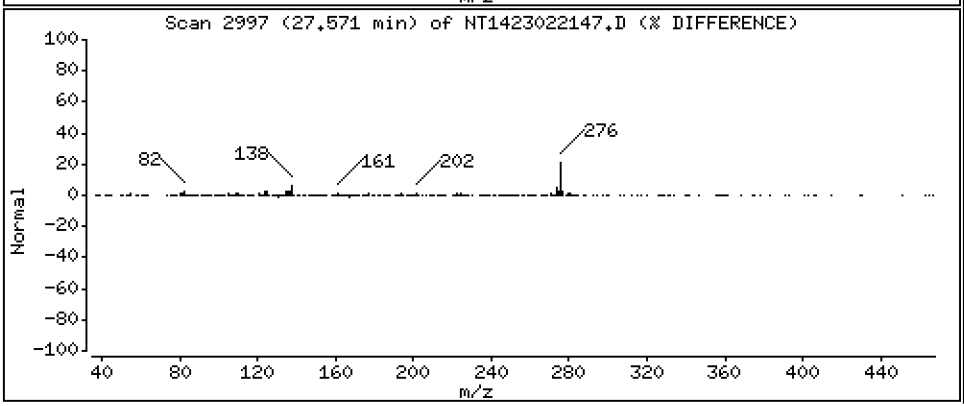












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

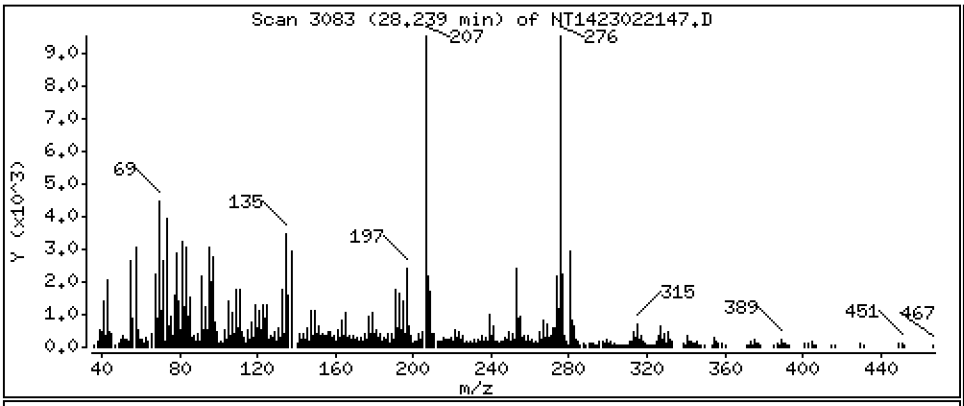
Operator: DSD

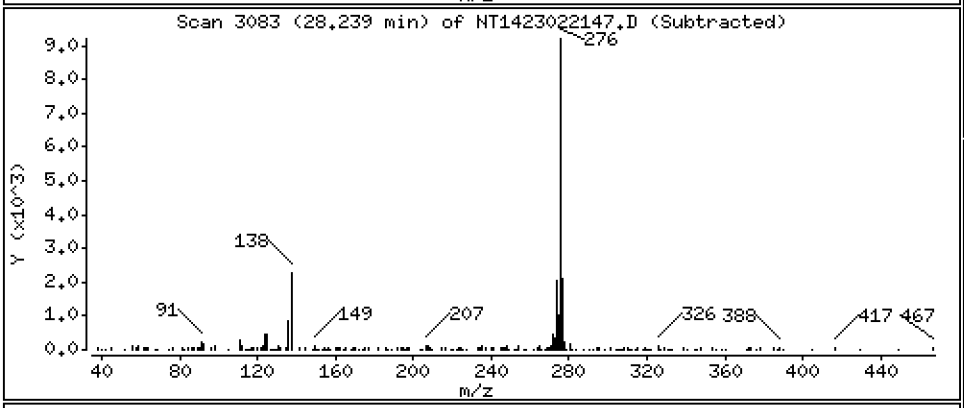
Column phase: ZB-5msi

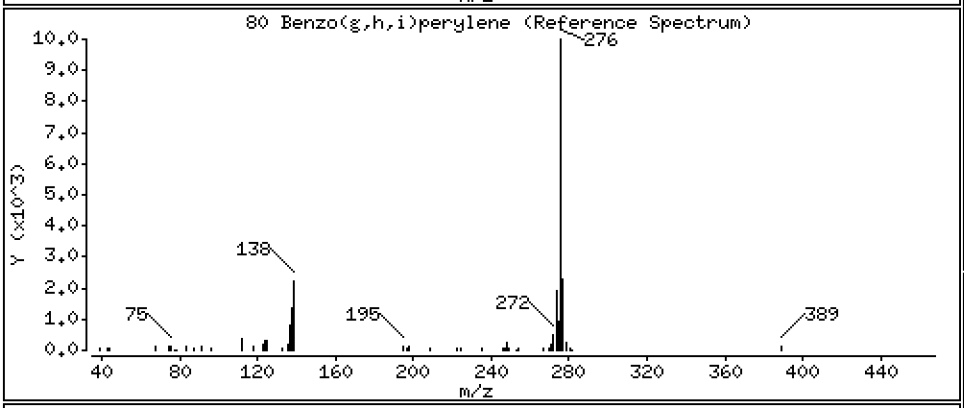
Column diameter: 0.25

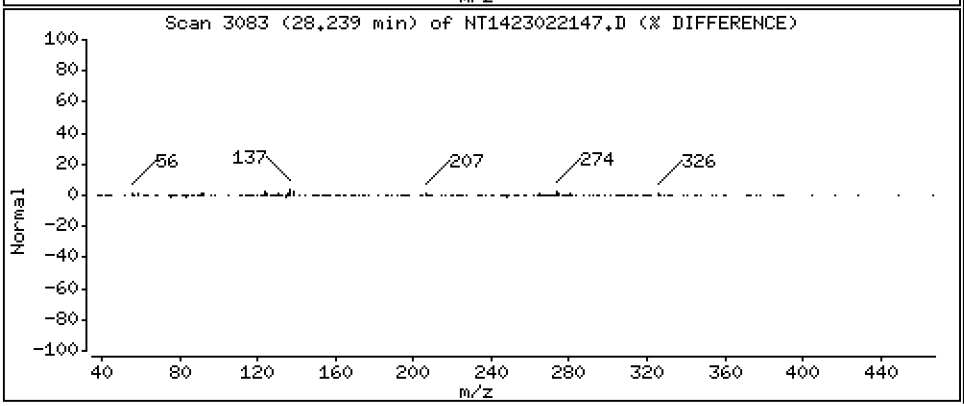
80 Benzo(g,h,i)perylene

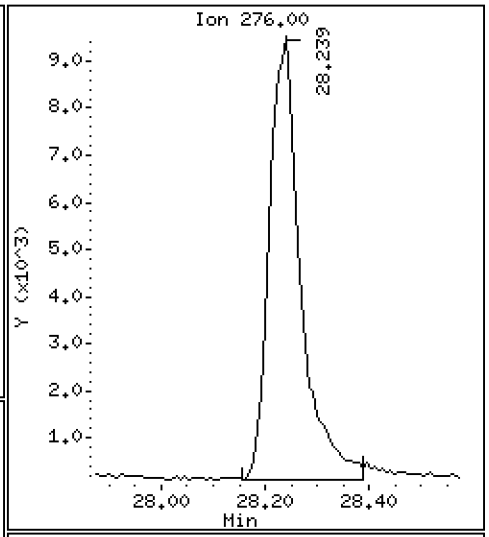
Concentration: 0.4472 ug/mL

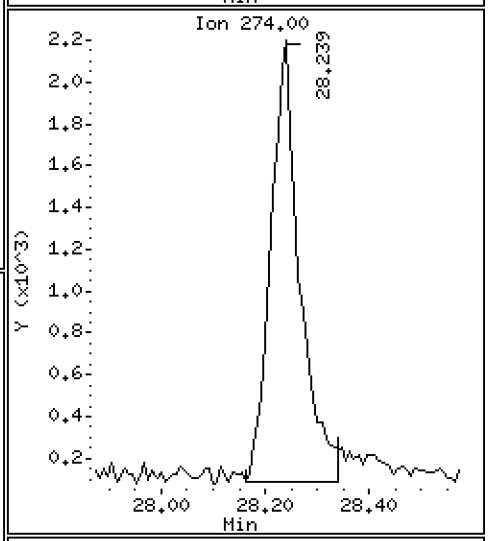


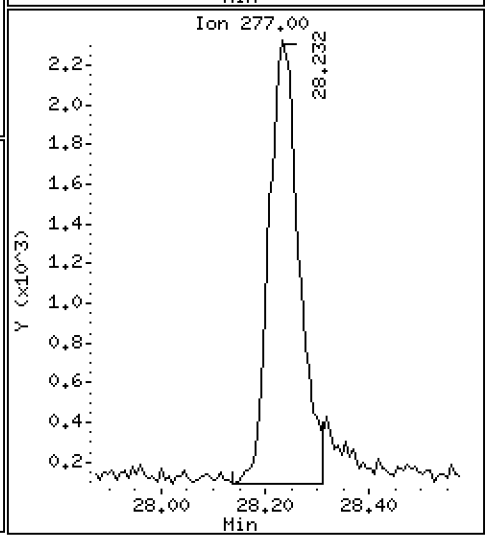












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

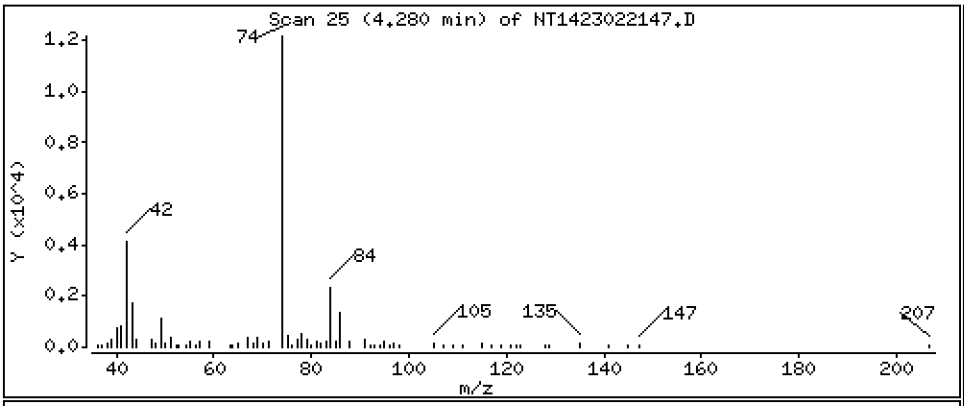
Operator: DSD

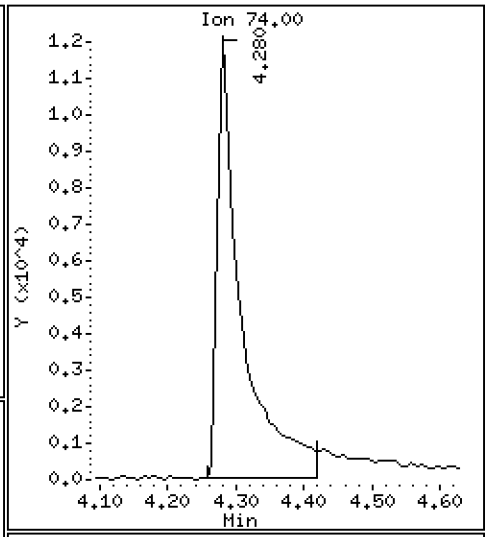
Column phase: ZB-5msi

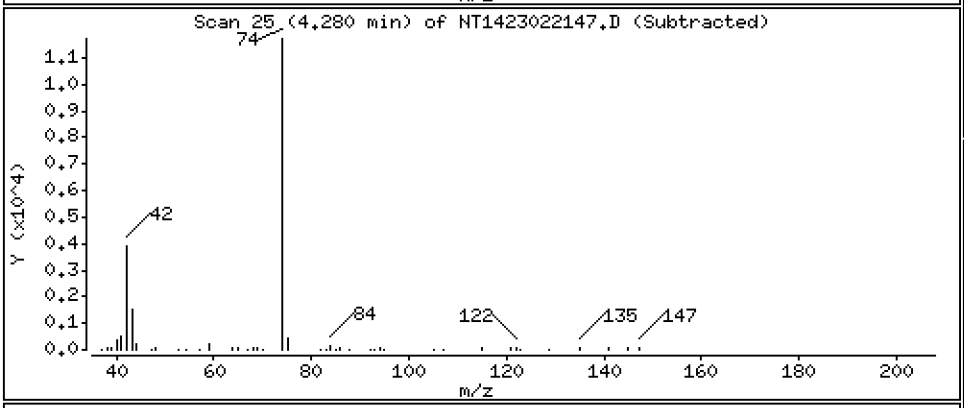
Column diameter: 0.25

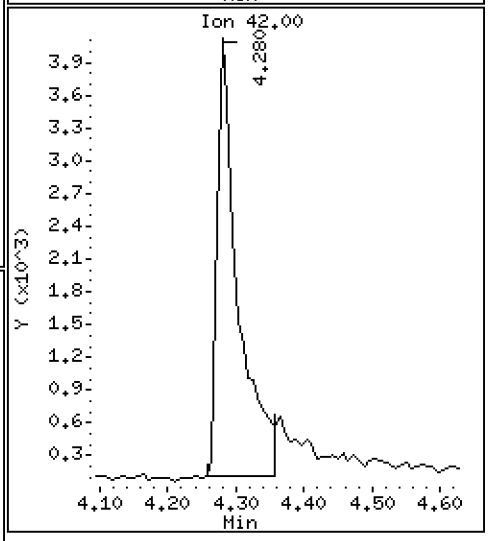
90 N-Nitrosodimethylamine

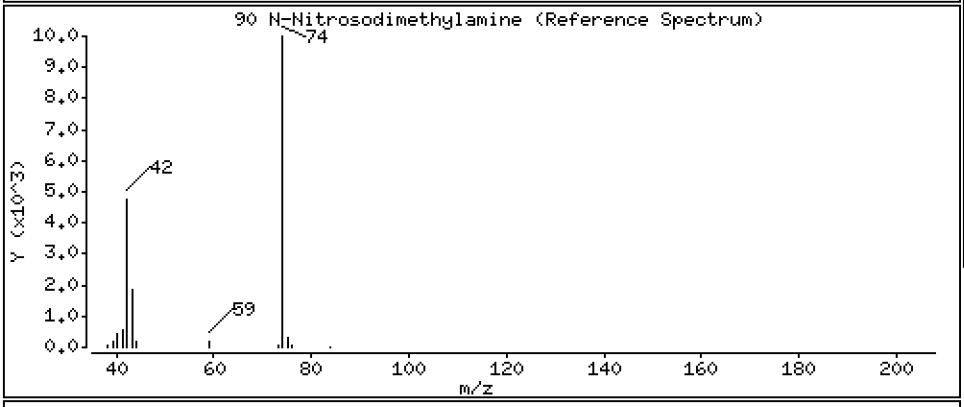
Concentration: 0.7173 ug/mL

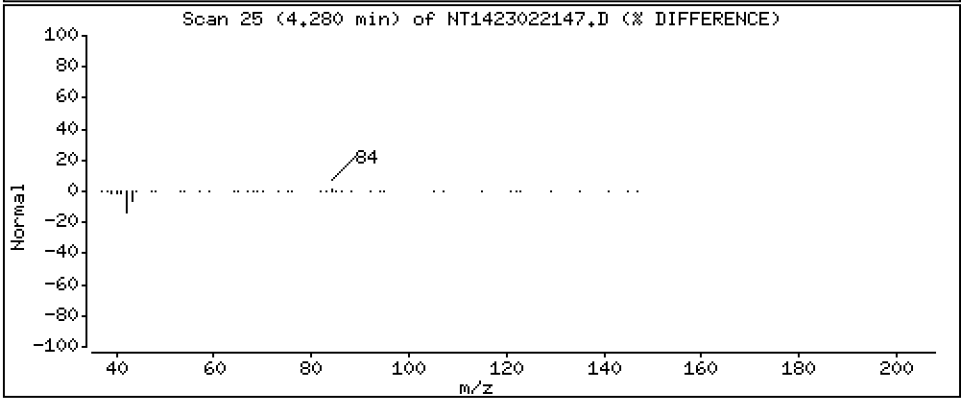












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022147.D

Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

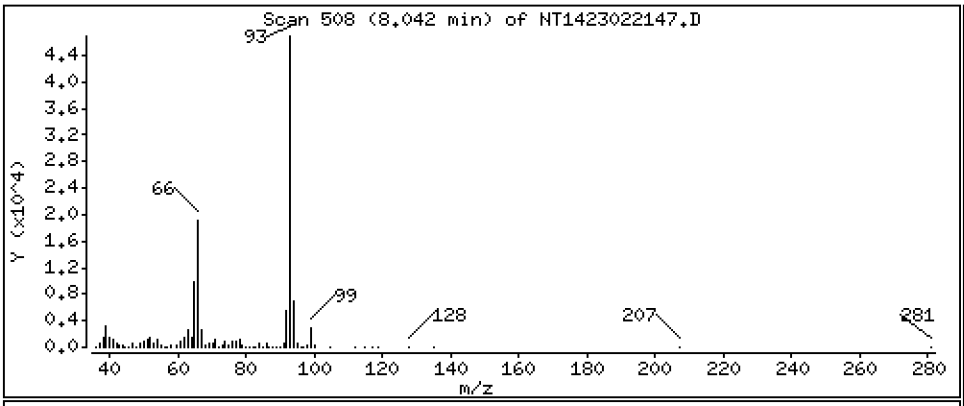
Operator: DSD

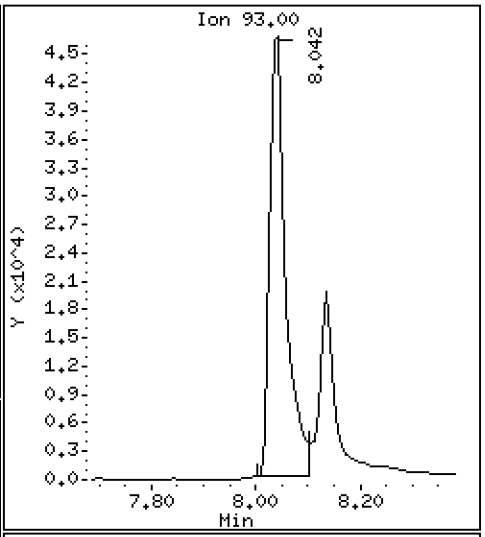
Column phase: ZB-5msi

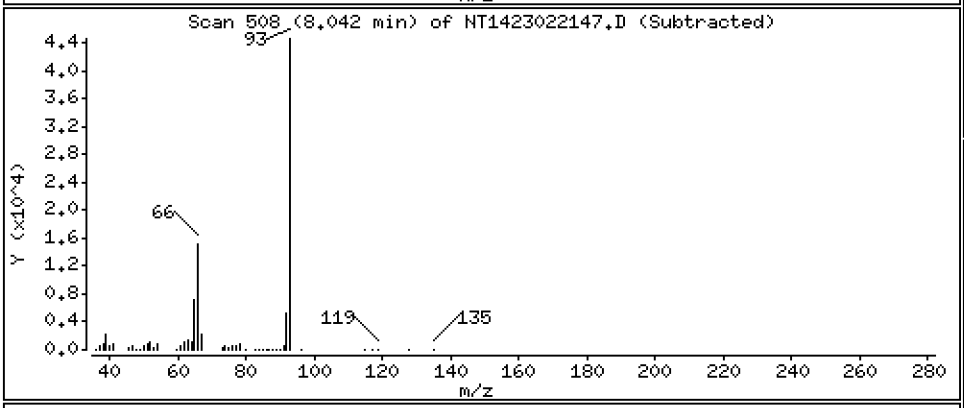
Column diameter: 0.25

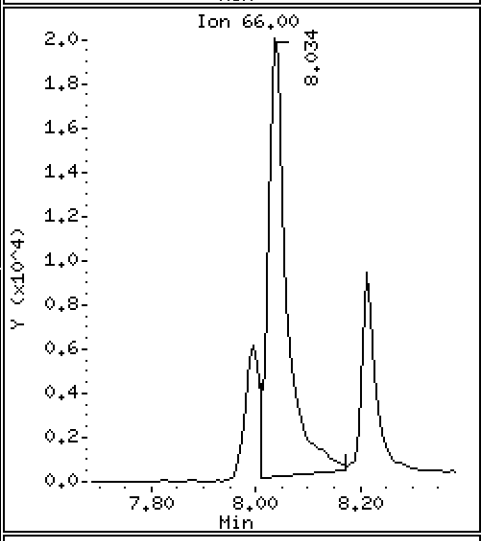
91 Aniline

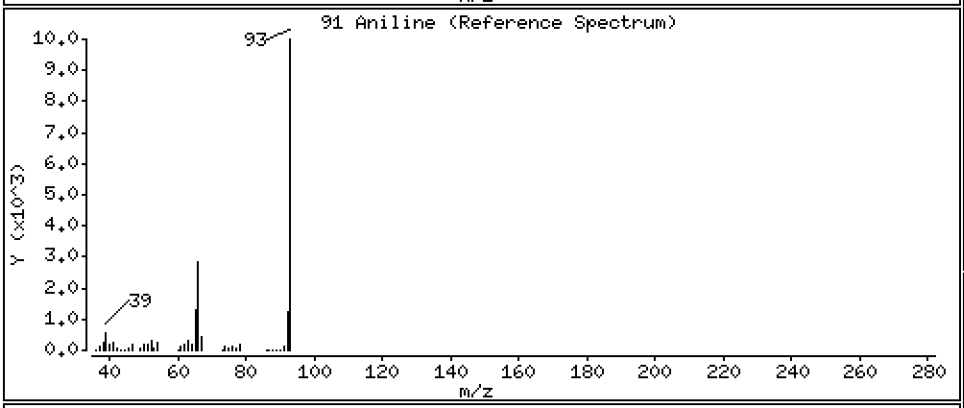
Concentration: 1.010 ug/mL

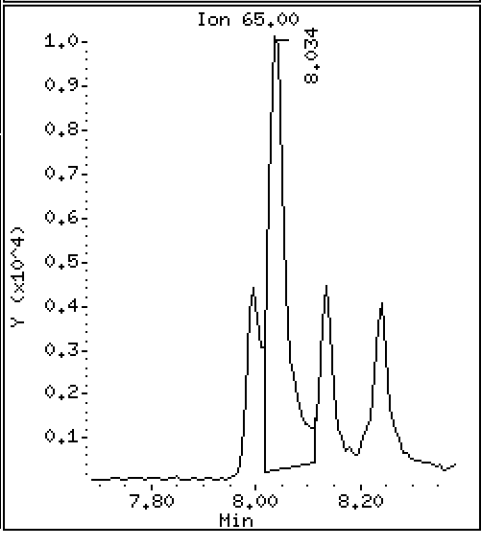


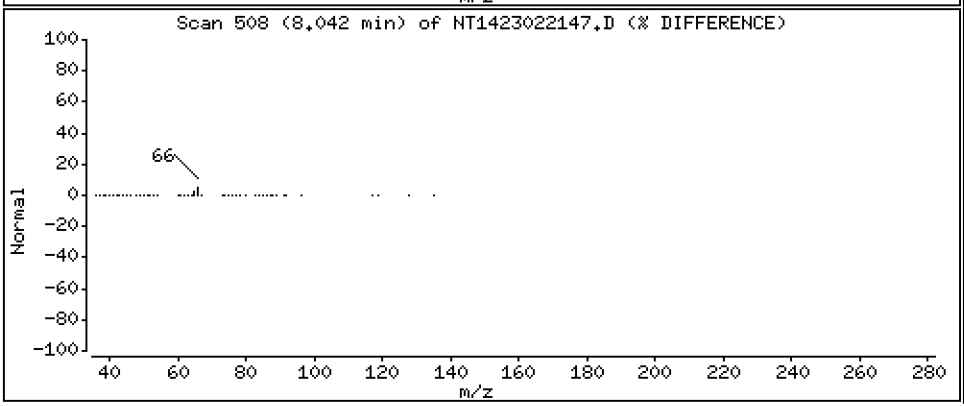












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

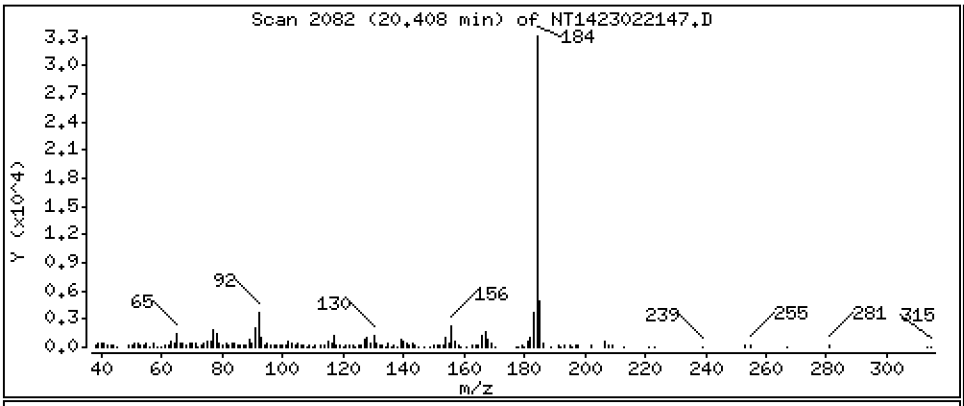
Operator: DSD

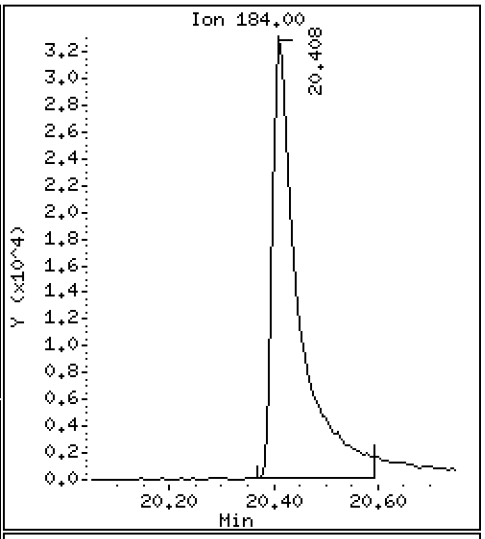
Column phase: ZB-5msi

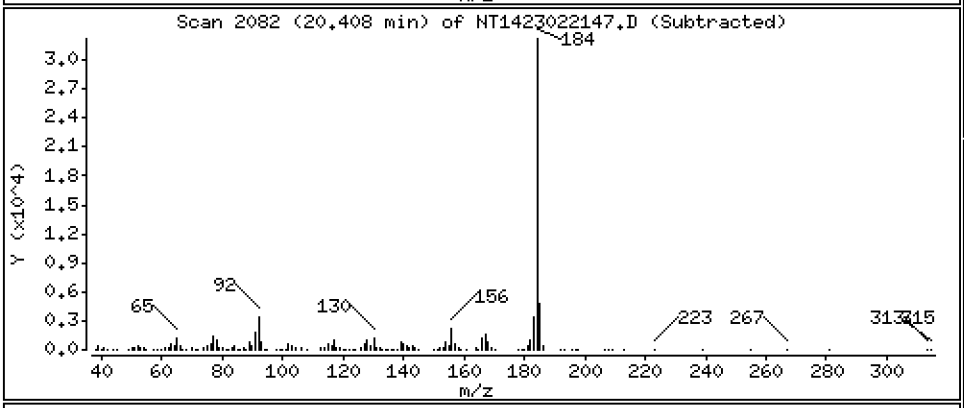
Column diameter: 0.25

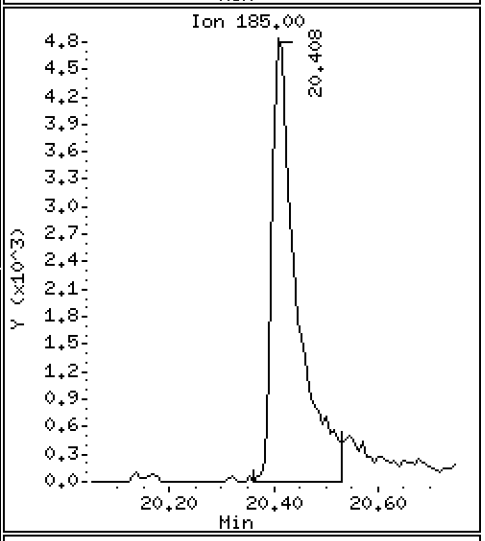
93 Benzidine

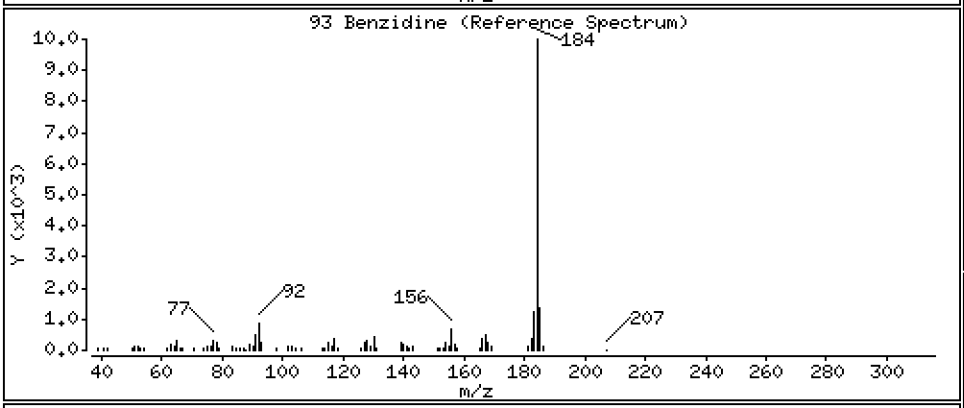
Concentration: 1.659 ug/mL

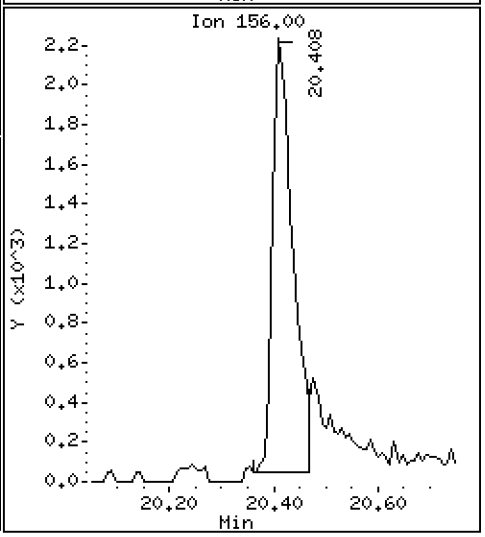


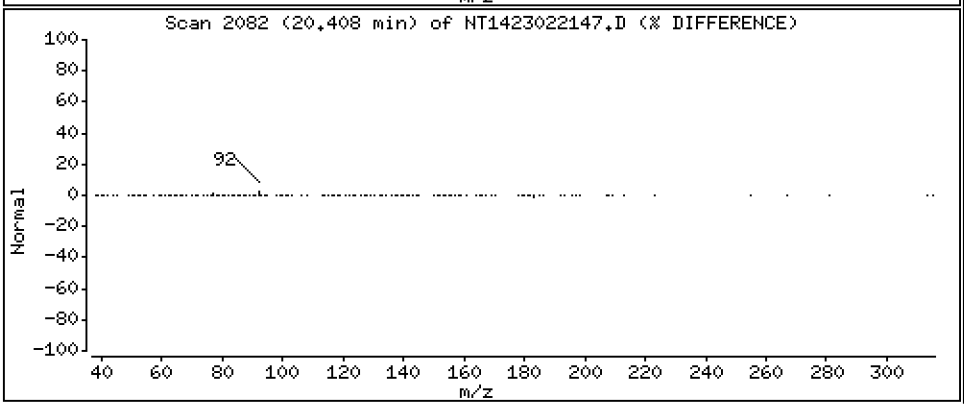












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022147.D

Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

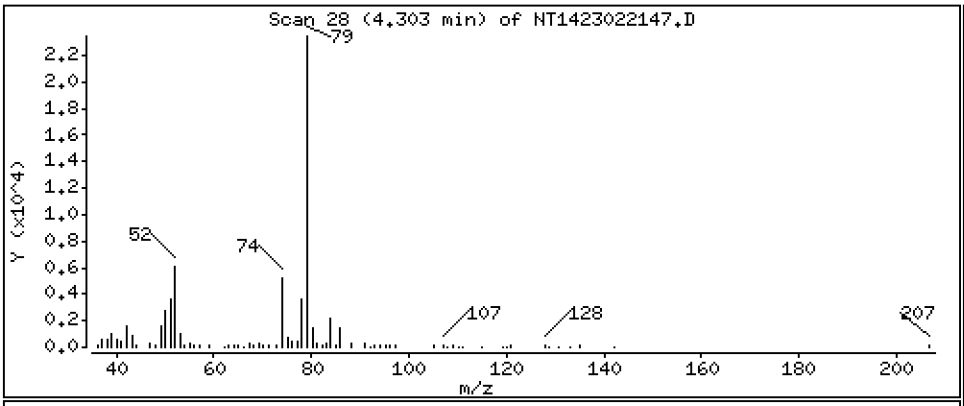
Operator: DSD

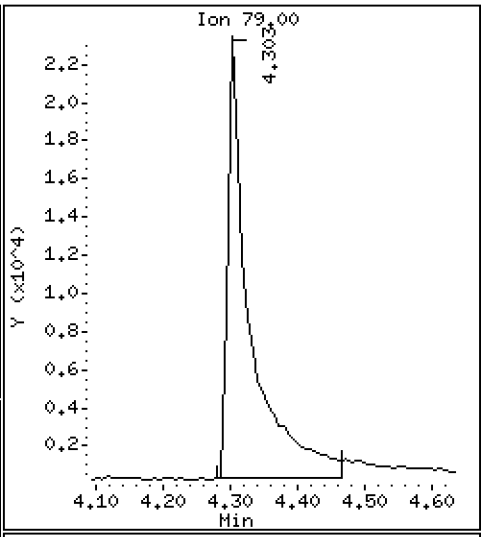
Column phase: ZB-5msi

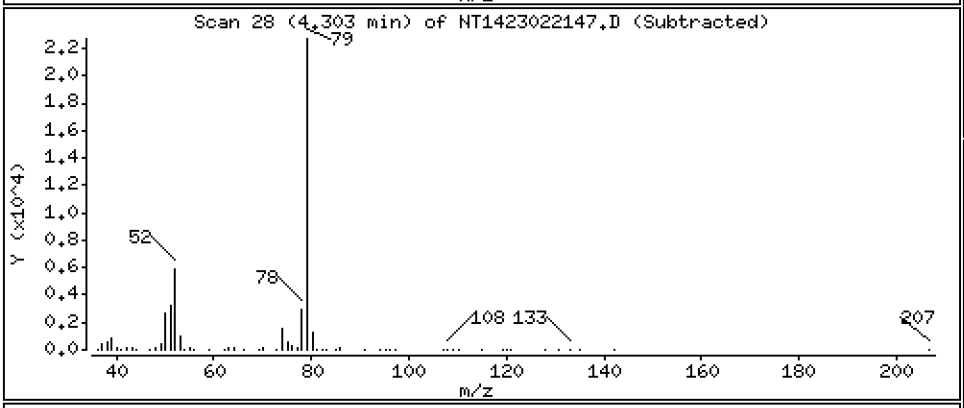
Column diameter: 0.25

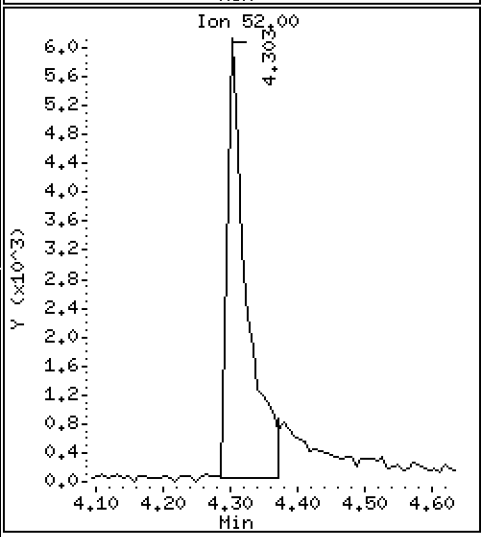
103 Pyridine

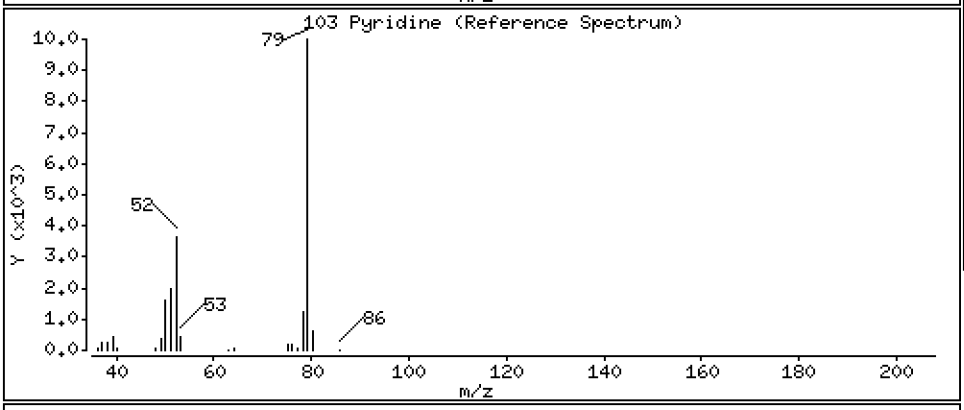
Concentration: 0.7947 ug/mL

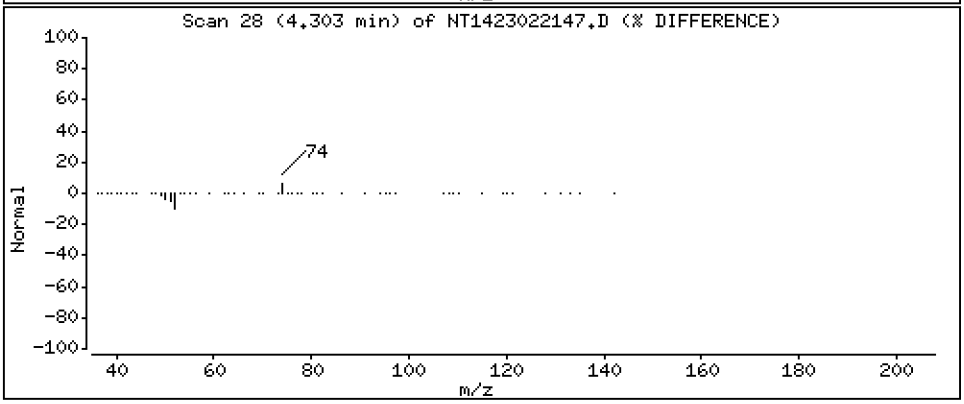












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022147.D

Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

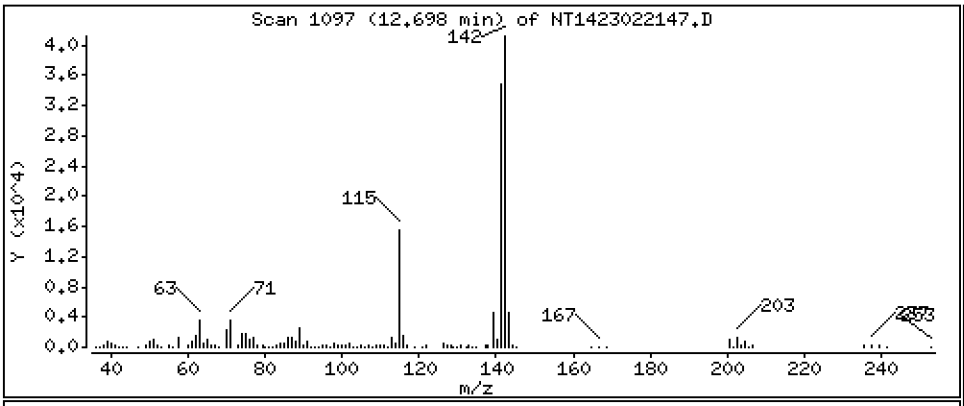
Operator: DSD

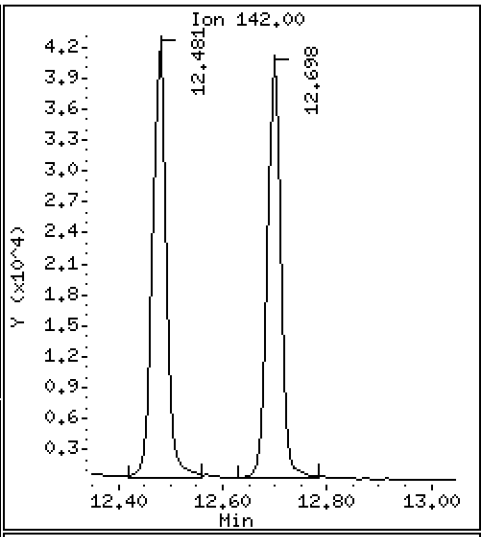
Column phase: ZB-5msi

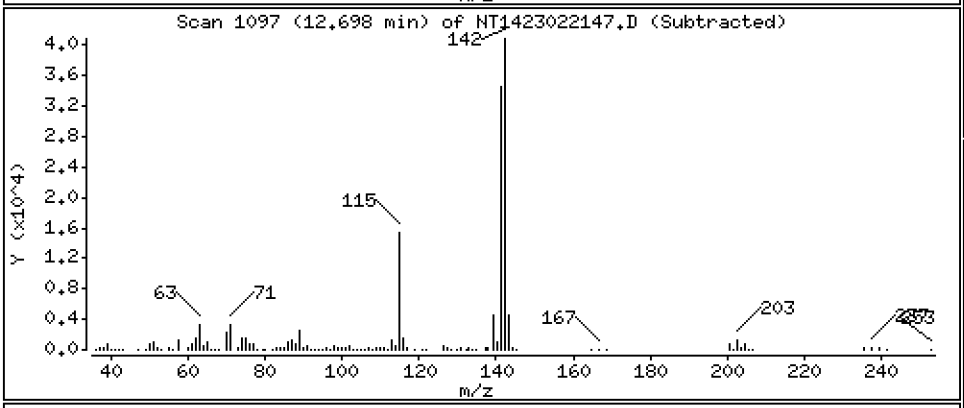
Column diameter: 0.25

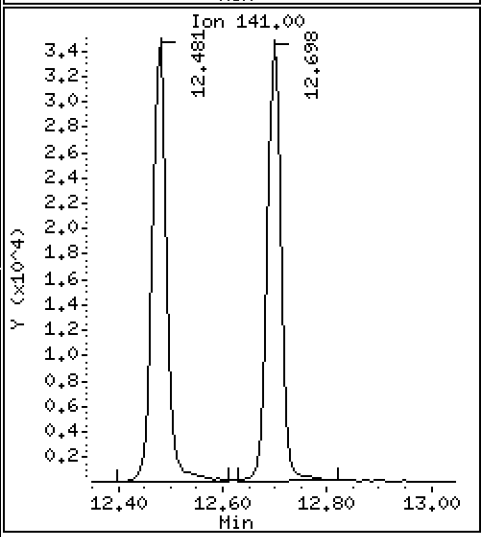
105 1-methylnaphthalene

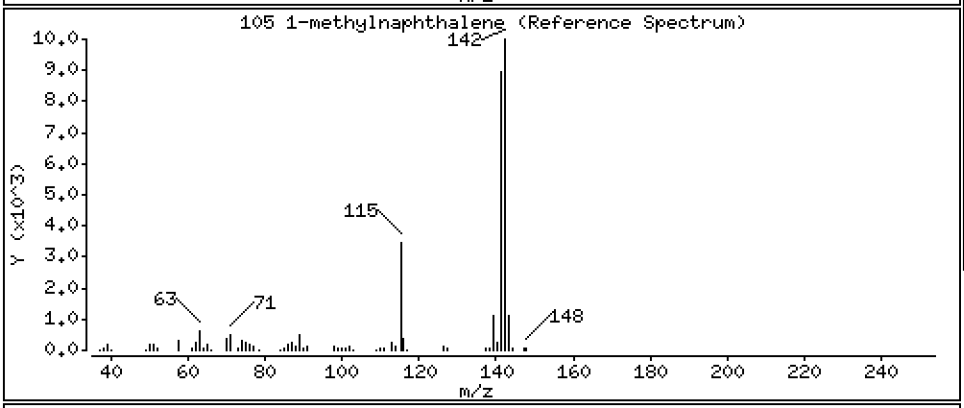
Concentration: 0.5322 ug/mL

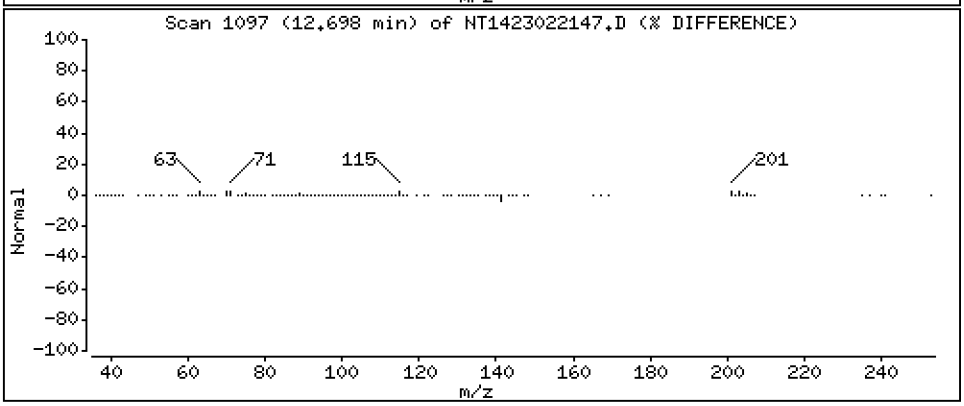












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

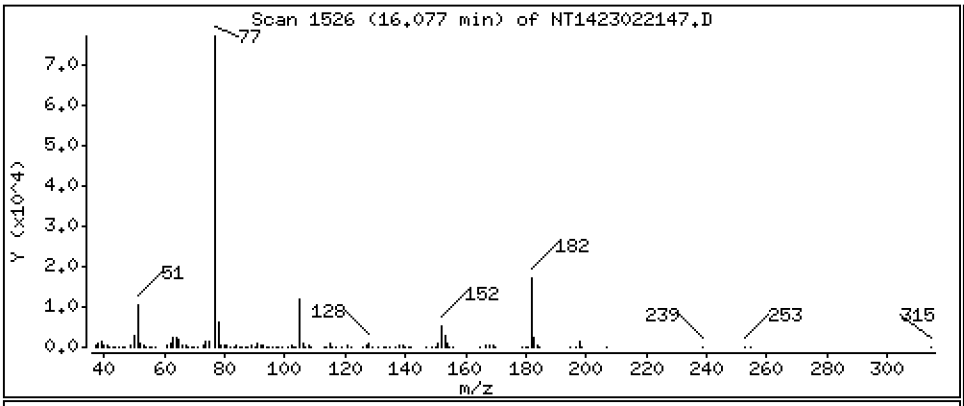
Operator: DSD

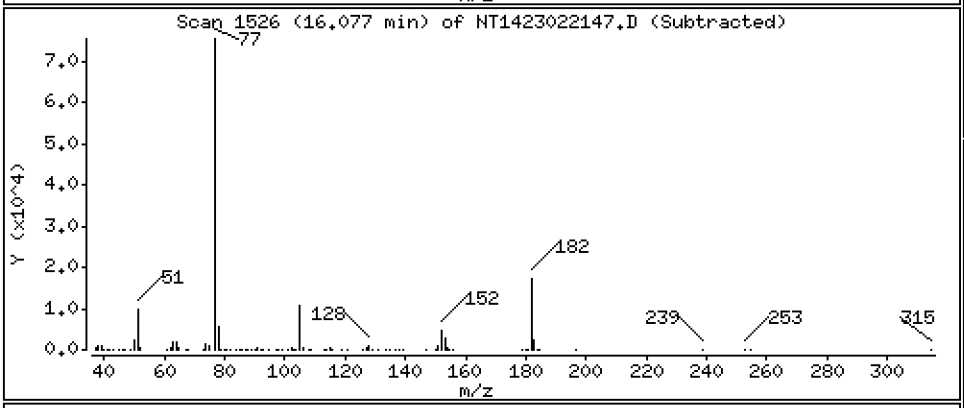
Column phase: ZB-5msi

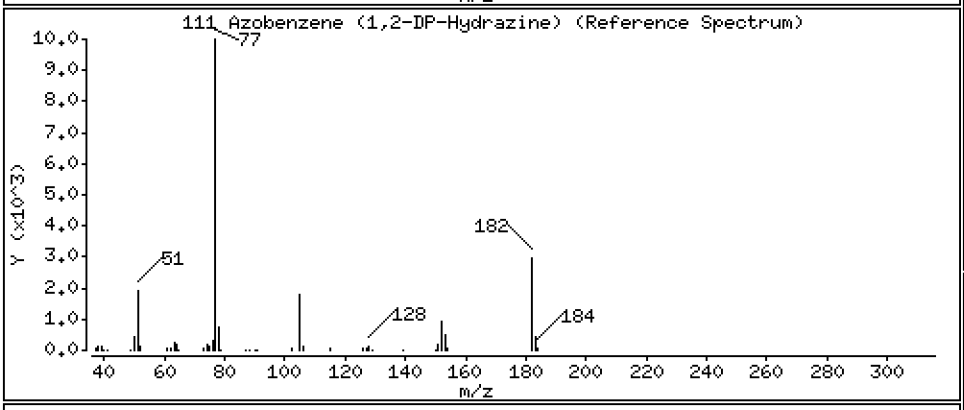
Column diameter: 0.25

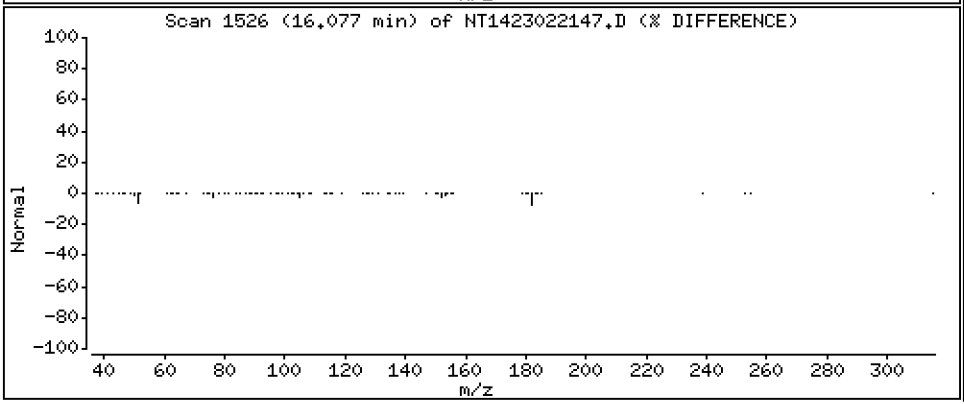
111 Azobenzene (1,2-DP-Hydrazine)

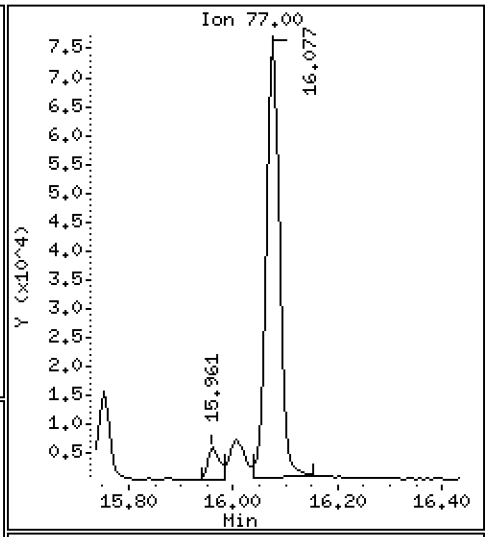
Concentration: 0.5682 ug/mL

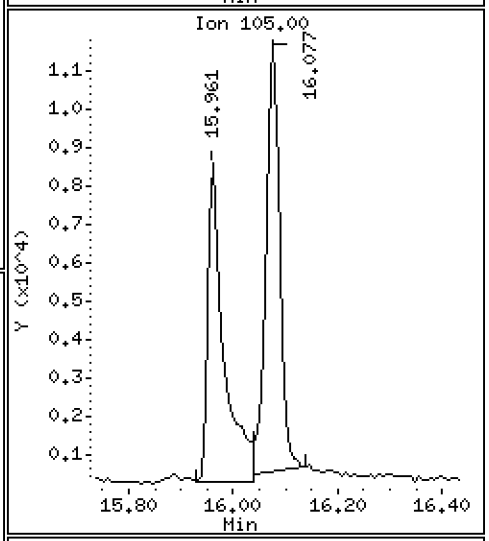


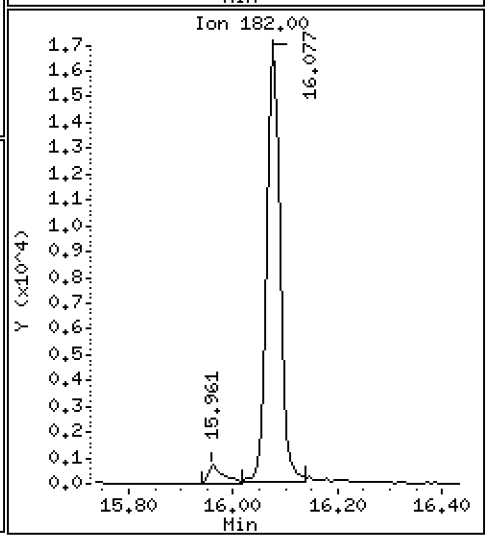












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

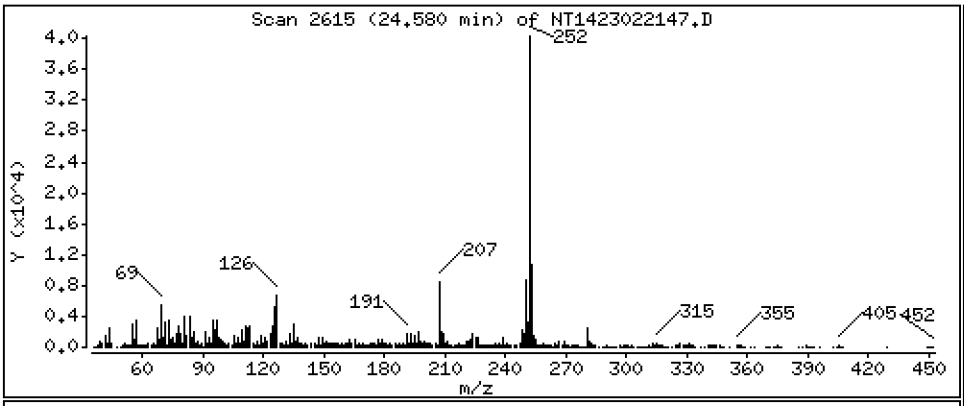
Operator: DSD

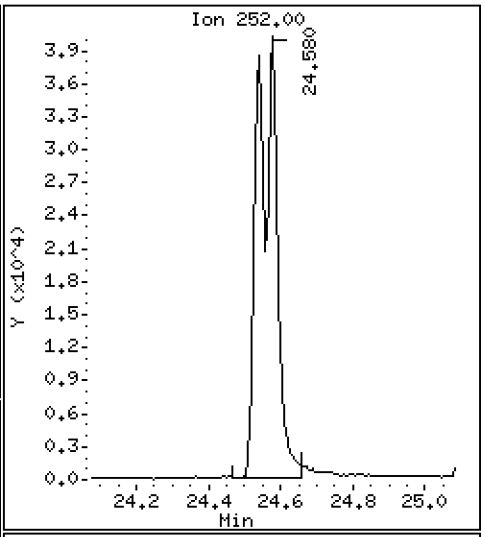
Column phase: ZB-5msi

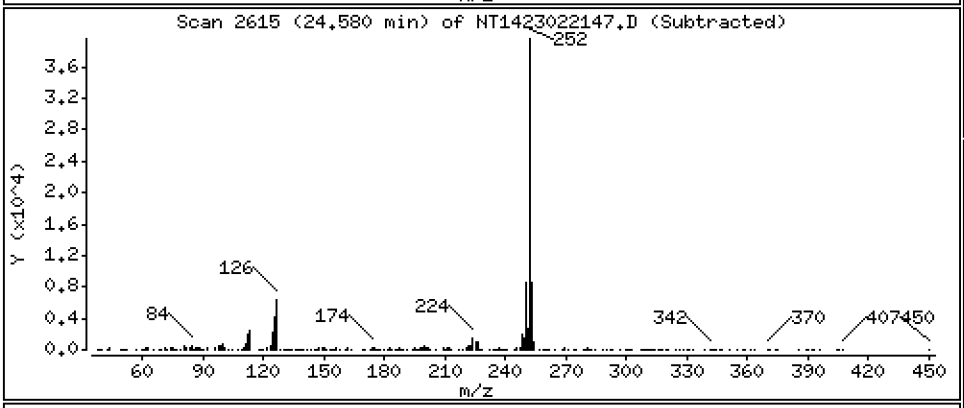
Column diameter: 0.25

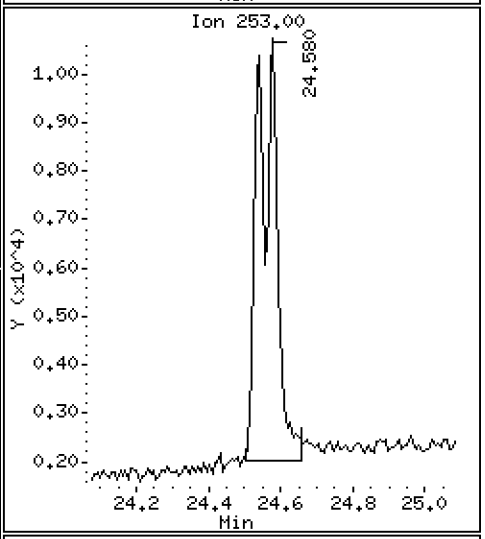
187 Total Benzofluoranthenes

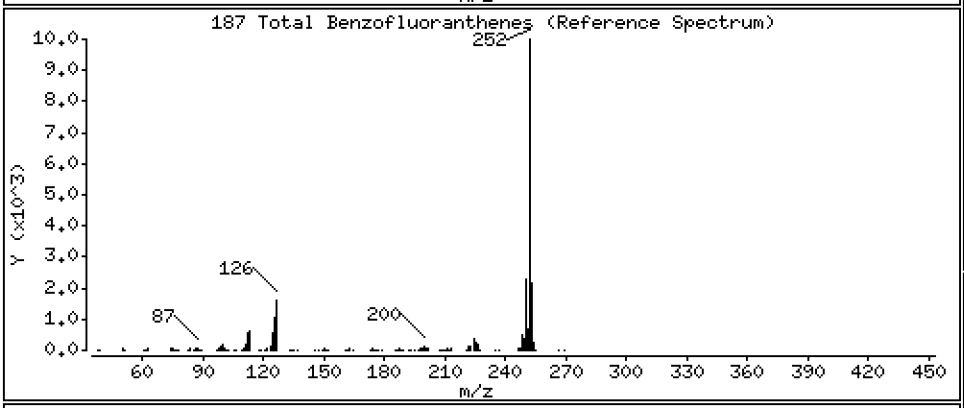
Concentration: 1.112 ug/mL

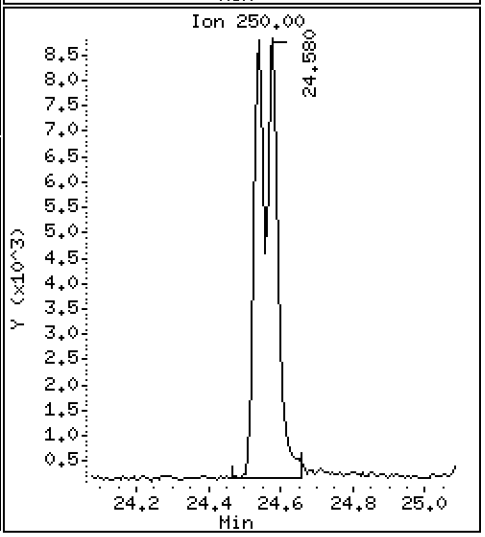


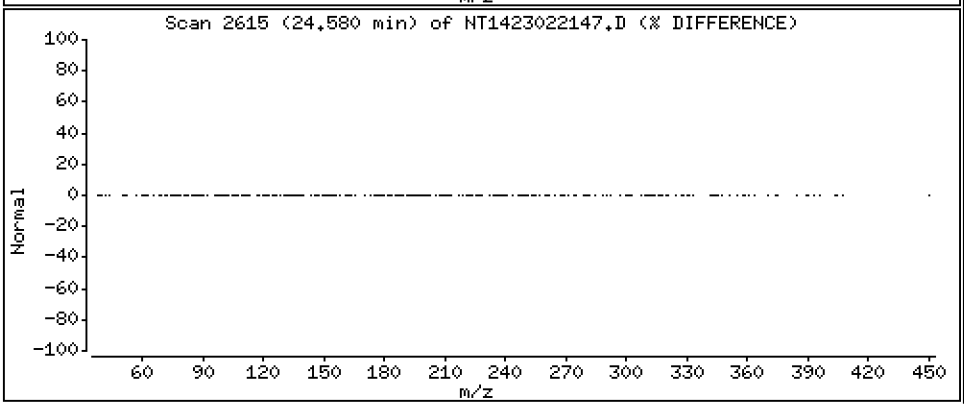












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022147.D

Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

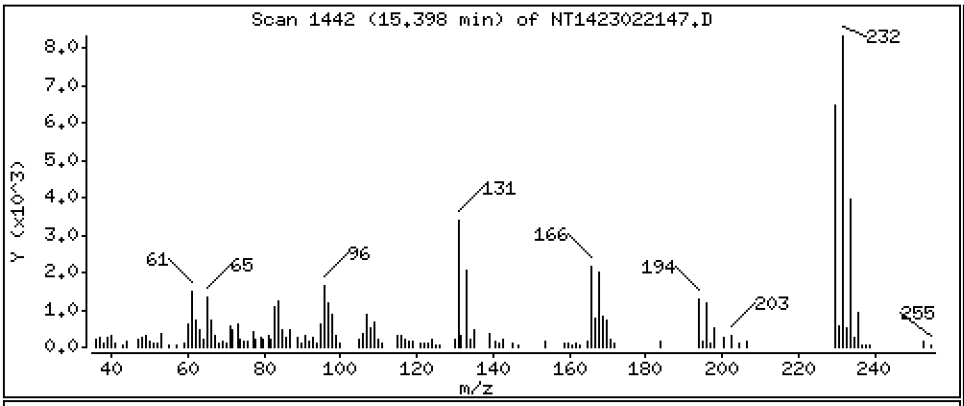
Operator: DSD

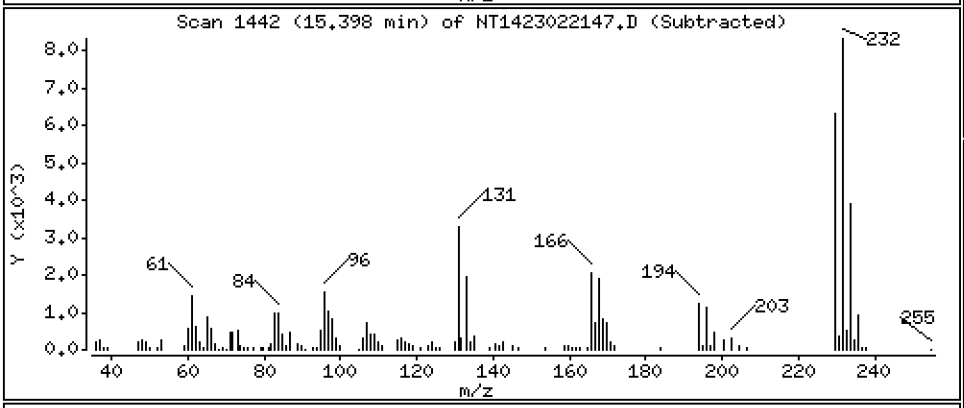
Column phase: ZB-5msi

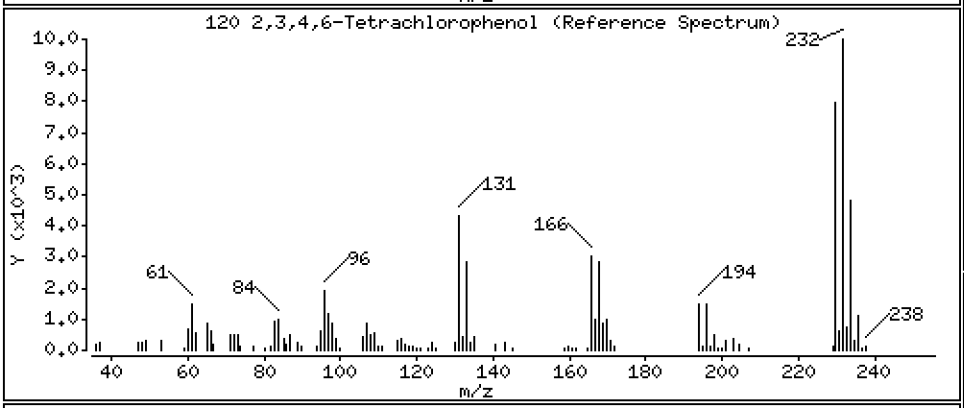
Column diameter: 0.25

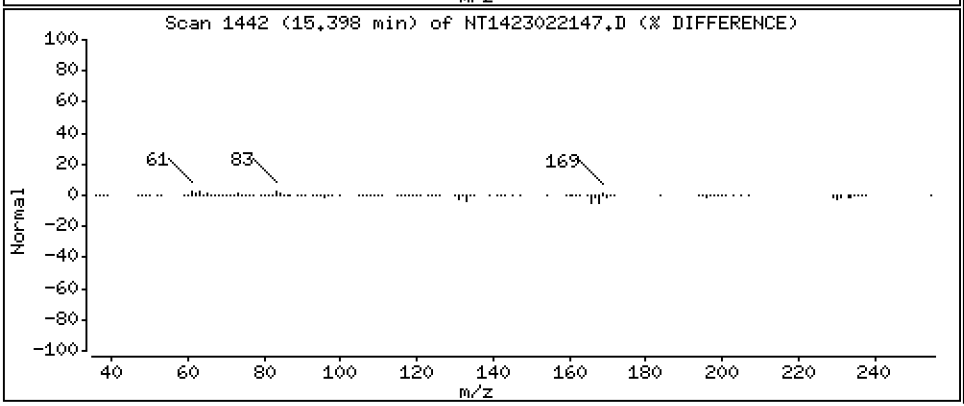
120 2,3,4,6-Tetrachlorophenol

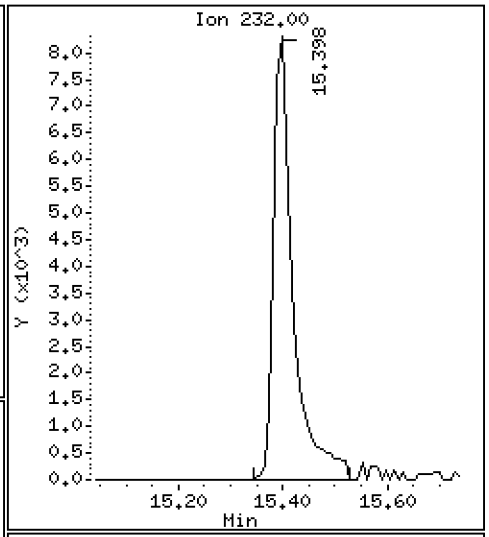
Concentration: 0.4394 ug/mL

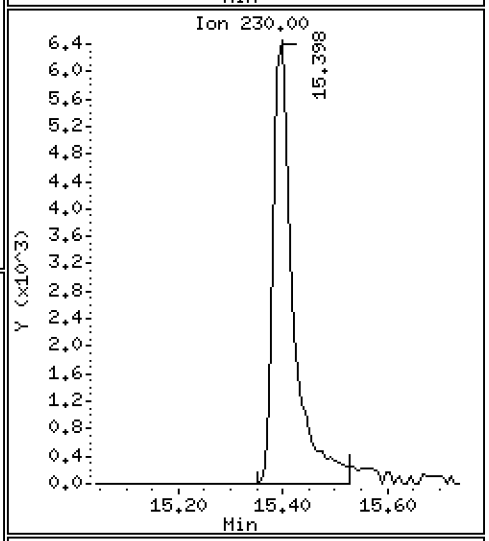


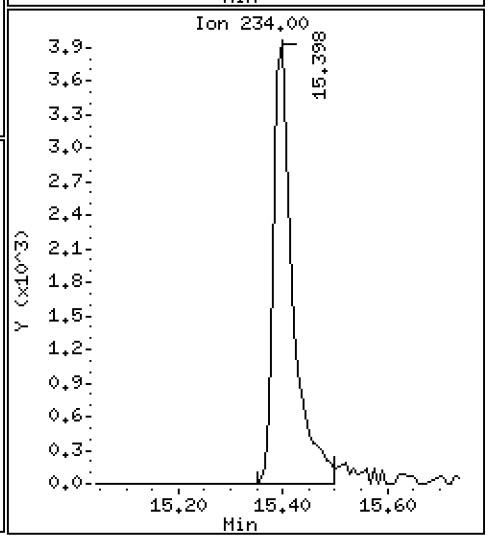












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221C.b\NT1423022147.D
Lab Smp Id: SLB0308-LCV1
Inj Date : 22-FEB-2023 17:11 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0308-LCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Meth Date : 03-Mar-2023 06:54 van Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.388	6.380	(0.746)	33422	0.61939	0.6194
$	2 Phenol-d5	99	7.972	7.972	(0.930)	62834	0.73405	0.7341
	3 Phenol	94	7.995	7.996	(0.933)	51334	0.56649	0.5665
$	5 2-Chlorophenol-d4	132	8.211	8.212	(0.958)	48243	0.78987	0.7899
	4 Bis(2-Chloroethyl)ether	93	8.134	8.135	(0.949)	36305	0.52446	0.5245
	6 2-Chlorophenol	128	8.242	8.243	(0.962)	32248	0.50534	0.5053
	7 1,3-Dichlorobenzene	146	8.505	8.506	(0.993)	36740	0.51716	0.5172
*	8 1,4-Dichlorobenzene-d4	152	8.567	8.568	(1.000)	201847	4.00000	
	9 1,4-Dichlorobenzene	146	8.598	8.599	(1.004)	39370	0.58393	0.5839
$	10 1,2-Dichlorobenzene-d4	152	8.924	8.925	(1.042)	25137	0.54906	0.5491
	12 1,2-Dichlorobenzene	146	8.948	8.948	(1.044)	35066	0.52025	0.5203
	11 Benzyl alcohol	108	8.893	8.863	(1.038)	12561	0.24683	0.2468
	14 2,2'-oxybis(1-Chloropropane)	121	9.150	9.150	(1.068)	7946	0.41209	0.4121
	13 2-Methylphenol	108	9.095	9.096	(1.062)	30937	0.48892	0.4889
	17 Hexachloroethane	117	9.530	9.530	(1.112)	12969	0.44245	0.4425
	16 N-Nitroso-di-n-propylamine	70	9.406	9.414	(1.098)	28760	0.49931	0.4993
	15 4-Methylphenol	108	9.375	9.367	(1.094)	33208	0.49701	0.4970
$	18 Nitrobenzene-d5	82	9.662	9.662	(0.875)	47257	0.54146	0.5415
	19 Nitrobenzene	77	9.701	9.701	(0.879)	43762	0.49966	0.4997
	20 Isophorone	82	10.143	10.151	(0.919)	63530	0.54979	0.5498
	21 2-Nitrophenol	139	10.329	10.329	(0.935)	15418	0.39339	0.3934
	22 2,4-Dimethylphenol	107	10.407	10.407	(0.942)	95161	1.43888	1.439
	23 Bis(2-Chloroethoxy)methane	93	10.593	10.593	(0.959)	37219	0.49514	0.4951
	24 Benzoic acid	105	10.709	10.694	(0.970)	861	0.02075	0.02075
	25 2,4-Dichlorophenol	162	10.787	10.787	(0.977)	73695	1.30198	1.302
	26 1,2,4-Trichlorobenzene	180	10.957	10.965	(0.992)	37313	0.54419	0.5442
*	27 Naphthalene-d8	136	11.042	11.042	(1.000)	755453	4.00000	
	28 Naphthalene	128	11.080	11.081	(1.003)	100525	0.53967	0.5397
	29 4-Chloroaniline	127	11.235	11.235	(1.017)	84622	1.06335	1.063
	30 Hexachlorobutadiene	225	11.451	11.451	(1.037)	24359	0.57630	0.5763
	31 4-Chloro-3-methylphenol	107	12.217	12.210	(1.106)	81758	1.33449	1.334
	32 2-Methylnaphthalene	142	12.480	12.481	(1.130)	74374	0.53312	0.5331
	33 Hexachlorocyclopentadiene	237	12.952	12.945	(0.884)	595	0.01357	0.01357

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.115	13.115	(0.895)	54447	1.22185	1.222
	35	2,4,5-Trichlorophenol	196	13.192	13.185	(0.901)	58447	1.21111	1.211
$	36	2-Fluorobiphenyl	172	13.270	13.270	(0.906)	92659	0.57242	0.5724
	37	2-Chloronaphthalene	162	13.463	13.471	(0.919)	69351	0.52489	0.5249
	38	2-Nitroaniline	65	13.750	13.750	(0.939)	53269	1.24004	1.240
	39	Dimethylphthalate	163	14.183	14.183	(0.968)	76132	0.55088	0.5509
	40	Acenaphthylene	152	14.330	14.338	(0.978)	115584	0.57356	0.5736
	41	2,6-Dinitrotoluene	165	14.315	14.323	(0.977)	35961	1.10584	1.106
*	42	Acenaphthene-d10	164	14.647	14.648	(1.000)	452443	4.00000	
	43	3-Nitroaniline	138	14.609	14.609	(0.997)	35680	1.03371	1.034
	44	Acenaphthene	153	14.709	14.717	(1.004)	66291	0.54944	0.5494
	45	2,4-Dinitrophenol	184	14.848	14.818	(1.014)	537	0.02527	0.02527
	46	Dibenzofuran	168	15.042	15.050	(1.027)	107086	0.54058	0.5406
	47	4-Nitrophenol	109	15.026	14.957	(1.026)	7378	0.36907	0.3691
	48	2,4-Dinitrotoluene	165	15.119	15.127	(1.032)	46528	1.01196	1.012
	50	Diethylphthalate	149	15.637	15.645	(1.068)	98193	0.53445	0.5345
	49	Fluorene	166	15.745	15.753	(1.075)	113381	0.54732	0.5473
	51	4-Chlorophenyl-phenylether	204	15.753	15.753	(1.075)	57091	0.51541	0.5154
	52	4-Nitroaniline	138	15.876	15.876	(1.084)	40917	1.03323	1.033
	53	4,6-Dinitro-2-methylphenol	198	15.961	15.969	(0.903)	43571	1.32658	1.327
	54	N-Nitrosodiphenylamine	169	16.007	16.015	(0.906)	73690	0.56567	0.5657
$	55	2,4,6-Tribromophenol	330	16.277	16.293	(1.111)	2158	0.08312	0.08312
	56	4-Bromophenyl-phenylether	248	16.755	16.756	(0.948)	29161	0.50258	0.5026
	57	Hexachlorobenzene	284	17.057	17.057	(0.965)	30933	0.52466	0.5247
	58	Pentachlorophenol	266	17.444	17.429	(0.987)	9654	0.33693	0.3369
*	59	Phenanthrene-d10	188	17.676	17.676	(1.000)	906518	4.00000	
	60	Phenanthrene	178	17.722	17.723	(1.003)	117419	0.53903	0.5390
	61	Anthracene	178	17.815	17.816	(1.008)	120469	0.55821	0.5582
	62	Carbazole	167	18.163	18.156	(1.028)	104733	0.53477	0.5348
	63	Di-n-butylphthalate	149	18.991	18.992	(1.074)	125083	0.57181	0.5718
	64	Fluoranthene	202	20.136	20.137	(0.884)	143007	0.54760	0.5476
	65	Pyrene	202	20.562	20.562	(0.903)	143899	0.52109	0.5211
$	66	Terphenyl-d14	244	20.871	20.872	(0.917)	124537	0.63515	0.6352
	67	Butylbenzylphthalate	149	21.816	21.816	(0.958)	53958	0.59221	0.5922
	68	Benzo(a)anthracene	228	22.745	22.745	(0.999)	109220	0.56384	0.5638
*	69	Chrysene-d12	240	22.768	22.769	(1.000)	605320	4.00000	
	70	3,3'-Dichlorobenzidine	252	22.722	22.715	(0.998)	103362	1.74165	1.742
	71	Chrysene	228	22.815	22.815	(1.002)	97715	0.56083	0.5608
	72	bis(2-Ethylhexyl)phthalate	149	22.854	22.854	(0.959)	76786	0.40830	0.4083
*	134	Di-n-octylphthalate-d4	153	23.837	23.837	(1.000)	1095180	4.00000	
	73	Di-n-octylphthalate	149	23.844	23.845	(1.000)	135172	0.52786	0.5279
	74	Benzo(b)fluoranthene	252	24.541	24.542	(0.973)	71314	0.51340	0.5134
	75	Benzo(k)fluoranthene	252	24.580	24.580	(0.975)	88280	0.59477	0.5948
	76	Benzo(a)pyrene	252	25.114	25.114	(0.996)	64144	0.48724	0.4872
*	77	Perylene-d12	264	25.215	25.223	(1.000)	437763	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.563	27.548	(1.093)	51685	0.47670	0.4767
	79	Dibenzo(a,h)anthracene	278	27.571	27.564	(1.093)	45069	0.50437	0.5044
	80	Benzo(g,h,i)perylene	276	28.239	28.224	(1.120)	39320	0.44715	0.4472
	90	N-Nitrosodimethylamine	74	4.280	4.280	(0.500)	29966	0.71727	0.7173
	91	Aniline	93	8.042	8.034	(0.939)	97922	1.01027	1.010
	93	Benzidine	184	20.407	20.400	(0.896)	114188	1.65929	1.659
	103	Pyridine	79	4.303	4.288	(0.502)	52537	0.79473	0.7947
	105	1-methylnaphthalene	142	12.697	12.697	(1.150)	69709	0.53224	0.5322
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.077	16.085	(1.098)	126870	0.56819	0.5682

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.580	24.580	(0.975)	150739	1.11151	1.112
120 2,3,4,6-Tetrachlorophenol	232	15.397	15.390	(1.051)	22639	0.43940	0.4394

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022147.D
Lab Smp Id: SLB0308-LCV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 16:35
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	232195	116098	464390	201847	-13.07
27 Naphthalene-d8	800631	400316	1601262	755453	-5.64
42 Acenaphthene-d10	488064	244032	976128	452443	-7.30
59 Phenanthrene-d10	971279	485640	1942558	906518	-6.67
69 Chrysene-d12	687083	343542	1374166	605320	-11.90
134 Di-n-octylphthala	1174636	587318	2349272	1095180	-6.76
77 Perylene-d12	491790	245895	983580	437763	-10.99

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	-0.00
69 Chrysene-d12	22.77	22.27	23.27	22.77	-0.00
134 Di-n-octylphthala	23.84	23.34	24.34	23.84	-0.00
77 Perylene-d12	25.22	24.72	25.72	25.22	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022147.D

Lab ID: SLB0308-LCV1
nt14.i, ABN.m, 22-FEB-2023 17:11

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: NT1423022146.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GB00046
Lab File ID:	NT1423022130Q.D	Calibration Date:	02/16/2023
Sequence:	SLB0305	Injection Date:	02/22/23
Lab Sample ID:	SLB0305-ICV1	Injection Time:	06:55
Sequence Name:	Initial Cal Check		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Phenol	A	5.0000	5.2	1.7957660	1.8668840		4.0	+/-20
4-Methylphenol	A	5.0000	5.5	1.3240860	1.4663080		10.7	+/-20
Naphthalene	A	5.0000	5.1	0.9862730	1.0133810		2.7	+/-20
2-Methylnaphthalene	A	5.0000	5.0	0.7386653	0.7394599		0.1	+/-20
Acenaphthylene	A	5.0000	5.2	1.7816190	1.8517480		3.9	+/-20
Dimethylphthalate	A	5.0000	5.1	1.2218100	1.2552690		2.7	+/-20
Acenaphthene	A	5.0000	5.2	1.0666800	1.1118320		4.2	+/-20
Dibenzofuran	A	5.0000	4.9	1.7513490	1.7256910		-1.5	+/-20
Fluorene	A	5.0000	5.0	1.8314530	1.8420610		0.6	+/-20
Phenanthrene	A	5.0000	5.2	0.9611900	0.9920664		3.2	+/-20
Anthracene	A	5.0000	5.7	0.9522768	1.0787300		13.3	+/-20
Fluoranthene	A	5.0000	4.7	1.7257220	1.6382410		-5.1	+/-20
Pyrene	A	5.0000	4.8	1.8248060	1.7681230		-3.1	+/-20
Butylbenzylphthalate	A	5.0000	5.1	0.5233989	0.6203340		2.1	+/-20
Benzo(a)anthracene	A	5.0000	5.3	1.2800360	1.3505160		5.5	+/-20
Chrysene	A	5.0000	5.4	1.1513540	1.2495890		8.5	+/-20
bis(2-Ethylhexyl)phthalate	A	5.0000	4.1	0.5470542	0.5461720		-18.5	+/-20
Benzofluoranthenes, Total	A	10.000	10.9	1.2391730	1.3476750		8.8	+/-20
Benzo(a)pyrene	A	5.0000	4.8	1.0848130	1.1736210		-3.2	+/-20
Indeno(1,2,3-cd)pyrene	A	5.0000	4.8	0.8621891	0.9725829		-4.2	+/-20
Dibenzo(a,h)anthracene	A	5.0000	5.0	0.7046903	0.8390104		0.1	+/-20
Benzo(g,h,i)perylene	A	5.0000	4.5	0.7176031	0.7472291		-9.7	+/-20
2-Fluorophenol	A	7.5000	8.26	1.0693230	1.1779060		10.2	+/-20
Phenol-d5	A	7.5000	7.79	1.6963140	1.7620110		3.9	+/-20
2-Chlorophenol-d4	A	7.5000	7.73	1.2103710	1.2475360		3.1	+/-20
1,2-Dichlorobenzene-d4	A	5.0000	4.87	0.9072515	0.8832238		-2.6	+/-20
Nitrobenzene-d5	A	5.0000	5.17	0.4621137	0.4778590		3.4	+/-20
2-Fluorobiphenyl	A	5.0000	5.02	1.4311010	1.4352900		0.3	+/-20
2,4,6-Tribromophenol	A	7.5000	7.39	0.2030581	0.2309704		-1.4	+/-20
p-Terphenyl-d14	A	5.0000	4.76	1.2956710	1.2325400		-4.9	+/-20

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022130.D

Page 1

Date : 22-FEB-2023 06:55

Client ID:

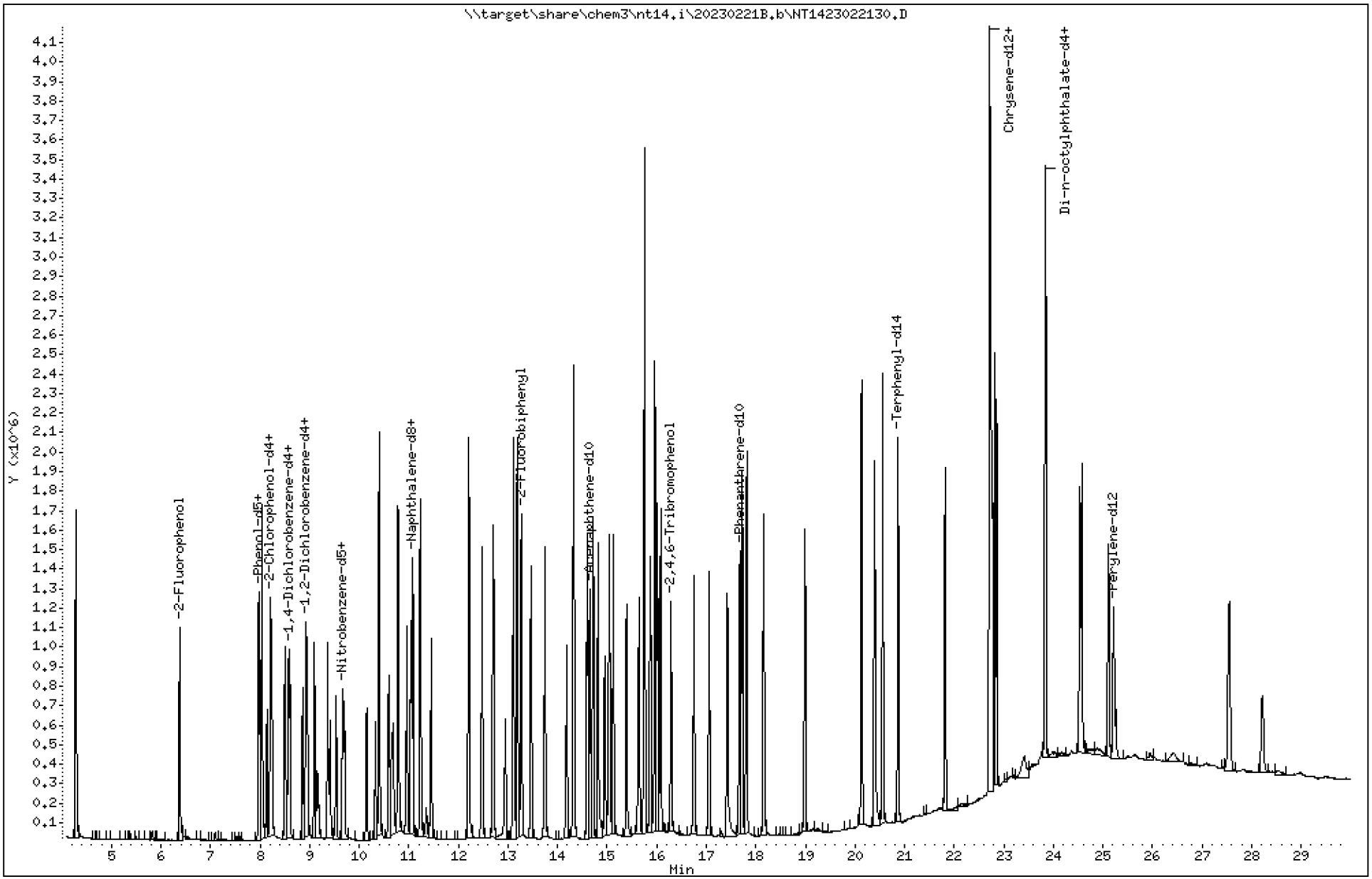
Instrument: nt14.i

Sample Info: SLB0305-ICV1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221B.b\NT1423022130.D
Lab Smp Id: SLB0305-ICV1
Inj Date : 22-FEB-2023 06:55 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0305-ICV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Meth Date : 23-Feb-2023 09:59 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.373	6.373	(0.744)	519291	7.50000	8.262
$	2 Phenol-d5	99	7.965	7.965	(0.930)	776799	7.50000	7.790
	3 Phenol	94	7.988	7.988	(0.932)	548689	5.00000	5.198
$	5 2-Chlorophenol-d4	132	8.212	8.212	(0.958)	549988	7.50000	7.730
	4 Bis(2-Chloroethyl)ether	93	8.135	8.135	(0.949)	399284	5.00000	4.952
	6 2-Chlorophenol	128	8.235	8.235	(0.961)	396347	5.00000	5.332
	7 1,3-Dichlorobenzene	146	8.498	8.498	(0.992)	416805	5.00000	5.037
*	8 1,4-Dichlorobenzene-d4	152	8.568	8.568	(1.000)	235125	4.00000	
	9 1,4-Dichlorobenzene	146	8.599	8.599	(1.004)	436312	5.00000	5.555
$	10 1,2-Dichlorobenzene-d4	152	8.925	8.925	(1.042)	259585	5.00000	4.868
	12 1,2-Dichlorobenzene	146	8.948	8.948	(1.044)	393306	5.00000	5.009
	11 Benzyl alcohol	108	8.855	8.855	(1.034)	263305	5.00000	4.417
	14 2,2'-oxybis(1-Chloropropane)	121	9.150	9.150	(1.068)	113296	5.00000	5.044(M)
	13 2-Methylphenol	108	9.096	9.096	(1.062)	409164	5.00000	5.551
	17 Hexachloroethane	117	9.530	9.530	(1.112)	163237	5.00000	4.781
	16 N-Nitroso-di-n-propylamine	70	9.414	9.414	(1.099)	350930	5.00000	5.230
	15 4-Methylphenol	108	9.367	9.367	(1.093)	430957	5.00000	5.537
$	18 Nitrobenzene-d5	82	9.662	9.662	(0.875)	527499	5.00000	5.170
	19 Nitrobenzene	77	9.701	9.701	(0.879)	523944	5.00000	5.118
	20 Isophorone	82	10.151	10.151	(0.919)	745982	5.00000	5.523
	21 2-Nitrophenol	139	10.322	10.322	(0.935)	245043	5.00000	5.227
	22 2,4-Dimethylphenol	107	10.399	10.399	(0.942)	857539	10.0000	11.09
	23 Bis(2-Chloroethoxy)methane	93	10.593	10.593	(0.959)	457241	5.00000	5.204
	24 Benzoic acid	105	10.686	10.686	(0.968)	883712	20.0000	17.43
	25 2,4-Dichlorophenol	162	10.787	10.787	(0.977)	721300	10.0000	10.90
	26 1,2,4-Trichlorobenzene	180	10.957	10.957	(0.992)	415256	5.00000	5.181
*	27 Naphthalene-d8	136	11.042	11.042	(1.000)	883104	4.00000	
	28 Naphthalene	128	11.081	11.081	(1.003)	1118651	5.00000	5.137
	29 4-Chloroaniline	127	11.228	11.228	(1.017)	1022070	10.0000	10.99
	30 Hexachlorobutadiene	225	11.452	11.452	(1.037)	268042	5.00000	5.425
	31 4-Chloro-3-methylphenol	107	12.210	12.210	(1.106)	811392	10.0000	11.33
	32 2-Methylnaphthalene	142	12.481	12.481	(1.130)	816275	5.00000	5.005
	33 Hexachlorocyclopentadiene	237	12.945	12.945	(0.884)	187881	10.0000	3.606

		QUANT SIG					AMOUNTS CAL-AMT	AMOUNTS ON-COL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34 2,4,6-Trichlorophenol	196	13.108	13.108	(0.895)	573714	10.0000	10.83
	35 2,4,5-Trichlorophenol	196	13.185	13.185	(0.900)	637089	10.0000	11.11
$	36 2-Fluorobiphenyl	172	13.270	13.270	(0.906)	964854	5.00000	5.015
	37 2-Chloronaphthalene	162	13.471	13.471	(0.920)	799103	5.00000	5.088
	38 2-Nitroaniline	65	13.750	13.750	(0.939)	573956	10.0000	11.24
	39 Dimethylphthalate	163	14.184	14.184	(0.968)	843837	5.00000	5.137
	40 Acenaphthylene	152	14.331	14.331	(0.978)	1244812	5.00000	5.197
	41 2,6-Dinitrotoluene	165	14.323	14.323	(0.978)	402088	10.0000	10.40
*	42 Acenaphthene-d10	164	14.648	14.648	(1.000)	537789	4.00000	
	43 3-Nitroaniline	138	14.601	14.601	(0.997)	452978	10.0000	11.04
	44 Acenaphthene	153	14.717	14.717	(1.005)	747414	5.00000	5.212
	45 2,4-Dinitrophenol	184	14.818	14.818	(1.012)	469721	20.0000	17.83
	46 Dibenzofuran	168	15.042	15.042	(1.027)	1160072	5.00000	4.927
	47 4-Nitrophenol	109	14.949	14.949	(1.021)	223006	10.0000	9.317
	48 2,4-Dinitrotoluene	165	15.127	15.127	(1.033)	587363	10.0000	10.75
	50 Diethylphthalate	149	15.645	15.645	(1.068)	1094767	5.00000	5.013
	49 Fluorene	166	15.753	15.753	(1.075)	1238300	5.00000	5.029
	51 4-Chlorophenyl-phenylether	204	15.753	15.753	(1.075)	623567	5.00000	4.736
	52 4-Nitroaniline	138	15.869	15.869	(1.083)	542604	10.0000	11.53
	53 4,6-Dinitro-2-methylphenol	198	15.961	15.961	(0.903)	860378	20.0000	21.32
	54 N-Nitrosodiphenylamine	169	16.008	16.008	(0.906)	796863	5.00000	5.137
$	55 2,4,6-Tribromophenol	330	16.293	16.293	(1.112)	232900	7.50000	7.392
	56 4-Bromophenyl-phenylether	248	16.756	16.756	(0.948)	350716	5.00000	5.076
	57 Hexachlorobenzene	284	17.057	17.057	(0.965)	346104	5.00000	4.929
	58 Pentachlorophenol	266	17.421	17.421	(0.986)	325841	10.0000	9.290
*	59 Phenanthrene-d10	188	17.676	17.676	(1.000)	1079531	4.00000	
	60 Phenanthrene	178	17.723	17.723	(1.003)	1338708	5.00000	5.161
	61 Anthracene	178	17.816	17.816	(1.008)	1455653	5.00000	5.664
	62 Carbazole	167	18.156	18.156	(1.027)	1321363	5.00000	5.666
	63 Di-n-butylphthalate	149	18.992	18.992	(1.074)	1537298	5.00000	5.901
	64 Fluoranthene	202	20.137	20.137	(0.884)	1692321	5.00000	4.747
	65 Pyrene	202	20.562	20.562	(0.903)	1826491	5.00000	4.845
$	66 Terphenyl-d14	244	20.872	20.872	(0.917)	1273228	5.00000	4.756
	67 Butylbenzylphthalate	149	21.816	21.816	(0.958)	640812	5.00000	5.104
	68 Benzo(a)anthracene	228	22.738	22.738	(0.999)	1395098	5.00000	5.275
*	69 Chrysene-d12	240	22.769	22.769	(1.000)	826409	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.715	22.715	(0.998)	1366156	15.0000	16.73
	71 Chrysene	228	22.815	22.815	(1.002)	1290840	5.00000	5.427
	72 bis(2-Ethylhexyl)phthalate	149	22.854	22.854	(0.959)	914539	5.00000	4.076
*	134 Di-n-octylphthalate-d4	153	23.837	23.837	(1.000)	1339562	4.00000	
	73 Di-n-octylphthalate	149	23.845	23.845	(1.000)	1563296	5.00000	4.991
	74 Benzo(b)fluoranthene	252	24.534	24.534	(0.973)	1040613	5.00000	5.555
	75 Benzo(k)fluoranthene	252	24.573	24.573	(0.975)	1070552	5.00000	5.349
	76 Benzo(a)pyrene	252	25.115	25.115	(0.996)	866022	5.00000	4.838
*	77 Perylene-d12	264	25.215	25.215	(1.000)	590325	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	27.540	27.540	(1.092)	717675	5.00000	4.788
	79 Dibenzo(a,h)anthracene	278	27.556	27.556	(1.093)	619111	5.00000	5.005
	80 Benzo(g,h,i)perylene	276	28.216	28.216	(1.119)	551385	5.00000	4.514
	90 N-Nitrosodimethylamine	74	4.280	4.280	(0.500)	520024	10.0000	10.69
	91 Aniline	93	8.034	8.034	(0.938)	1155678	10.0000	10.24
	93 Benzidine	184	20.392	20.392	(0.896)	1497120	10.0000	19.46
	103 Pyridine	79	4.288	4.288	(0.500)	830029	10.0000	10.78
	105 1-methylnaphthalene	142	12.698	12.698	(1.150)	746138	5.00000	4.873
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.077	16.077	(1.098)	1402908	5.00000	5.286

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	24.573	24.573	(0.975)	1988916	10.0000	10.88
120 2,3,4,6-Tetrachlorophenol	232	15.390	15.390	(1.051)	338869	5.00000	5.420

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022130.D
Lab Smp Id: SLB0305-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Misc Info:

Calibration Date: 21-FEB-2023
Calibration Time: 23:06
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	235125	117563	470250	235125	0.00
27 Naphthalene-d8	883104	441552	1766208	883104	0.00
42 Acenaphthene-d10	537789	268895	1075578	537789	0.00
59 Phenanthrene-d10	1079531	539766	2159062	1079531	0.00
69 Chrysene-d12	826409	413205	1652818	826409	0.00
134 Di-n-octylphthala	1339562	669781	2679124	1339562	0.00
77 Perylene-d12	590325	295163	1180650	590325	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	0.00
69 Chrysene-d12	22.77	22.27	23.27	22.77	0.00
134 Di-n-octylphthala	23.84	23.34	24.34	23.84	0.00
77 Perylene-d12	25.22	24.72	25.72	25.22	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022130.D

Lab ID: SLB0305-ICV1
nt14.i, ABN.m, 22-FEB-2023 06:55

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

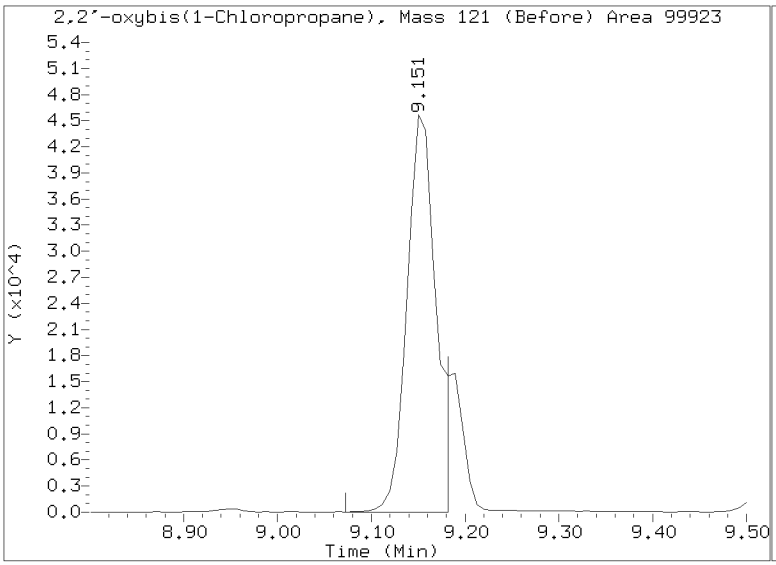
No RRT check. Ccal file.

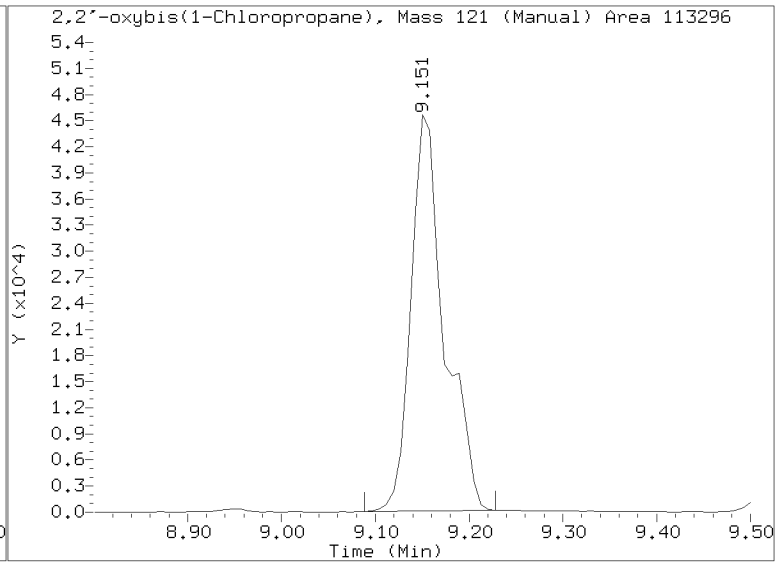
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221B.b/NT1423022130.D
Injection Date: 22-FEB-2023 06:55
Lab ID:SLB0305-ICV1 Client ID:
Report Date: 03/02/2023 06:52





Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221B.b

Instrument: nt14.i Date: 22-FEB-2023 Method: ABN.m

INITIAL CAL: 30-DEC-2022

Compound	%RSD or R^2
Benzidine	0.986

ICV CAL: NT1423022130.D 22-FEB-2023 06:55

Compound	%D
Hexachlorocyclopentadiene	-63.94
Benzidine	94.6

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GB00046
Lab File ID:	NT1423022146U.D	Calibration Date:	02/16/2023
Sequence:	SLB0308	Injection Date:	02/22/23
Lab Sample ID:	SLB0308-ICV1	Injection Time:	16:35
Sequence Name:	Initial Cal Check		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Phenol	A	5.0000	4.7	1.7957660	1.6942410		-5.7	+/-20
4-Methylphenol	A	5.0000	5.2	1.3240860	1.3663030		3.2	+/-20
Naphthalene	A	5.0000	5.2	0.9862730	1.0278920		4.2	+/-20
2-Methylnaphthalene	A	5.0000	5.0	0.7386653	0.7457868		1.0	+/-20
Acenaphthylene	A	5.0000	5.2	1.7816190	1.8572420		4.2	+/-20
Dimethylphthalate	A	5.0000	5.2	1.2218100	1.2593170		3.1	+/-20
Acenaphthene	A	5.0000	5.2	1.0666800	1.1086200		3.9	+/-20
Dibenzofuran	A	5.0000	4.9	1.7513490	1.7206150		-1.8	+/-20
Fluorene	A	5.0000	4.8	1.8314530	1.7746230		-3.1	+/-20
Phenanthrene	A	5.0000	5.2	0.9611900	0.9933434		3.3	+/-20
Anthracene	A	5.0000	5.6	0.9522768	1.0723170		12.6	+/-20
Fluoranthene	A	5.0000	5.1	1.7257220	1.7551890		1.7	+/-20
Pyrene	A	5.0000	5.1	1.8248060	1.8501120		1.4	+/-20
Butylbenzylphthalate	A	5.0000	5.5	0.5233989	0.6653007		9.4	+/-20
Benzo(a)anthracene	A	5.0000	5.3	1.2800360	1.3689400		6.9	+/-20
Chrysene	A	5.0000	5.4	1.1513540	1.2430110		8.0	+/-20
bis(2-Ethylhexyl)phthalate	A	5.0000	4.2	0.5470542	0.5604555		-16.3	+/-20
Benzofluoranthenes, Total	A	10.000	10.8	1.2391730	1.3422630		8.3	+/-20
Benzo(a)pyrene	A	5.0000	4.8	1.0848130	1.1629190		-4.1	+/-20
Indeno(1,2,3-cd)pyrene	A	5.0000	4.6	0.8621891	0.9423632		-7.1	+/-20
Dibenzo(a,h)anthracene	A	5.0000	4.9	0.7046903	0.8276687		-1.2	+/-20
Benzo(g,h,i)perylene	A	5.0000	4.3	0.7176031	0.7048846		-14.7	+/-20
2-Fluorophenol	A	7.5000	7.66	1.0693230	1.0917170		2.1	+/-20
Phenol-d5	A	7.5000	7.29	1.6963140	1.6492550		-2.8	+/-20
2-Chlorophenol-d4	A	7.5000	7.13	1.2103710	1.1500560		-5.0	+/-20
1,2-Dichlorobenzene-d4	A	5.0000	4.45	0.9072515	0.8074971		-11.0	+/-20
Nitrobenzene-d5	A	5.0000	5.25	0.4621137	0.4851543		5.0	+/-20
2-Fluorobiphenyl	A	5.0000	5.03	1.4311010	1.4389930		0.6	+/-20
2,4,6-Tribromophenol	A	7.5000	6.81	0.2030581	0.2124246		-9.2	+/-20
p-Terphenyl-d14	A	5.0000	5.04	1.2956710	1.3059290		0.8	+/-20

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022146.D

Page 1

Date : 22-FEB-2023 16:35

Client ID:

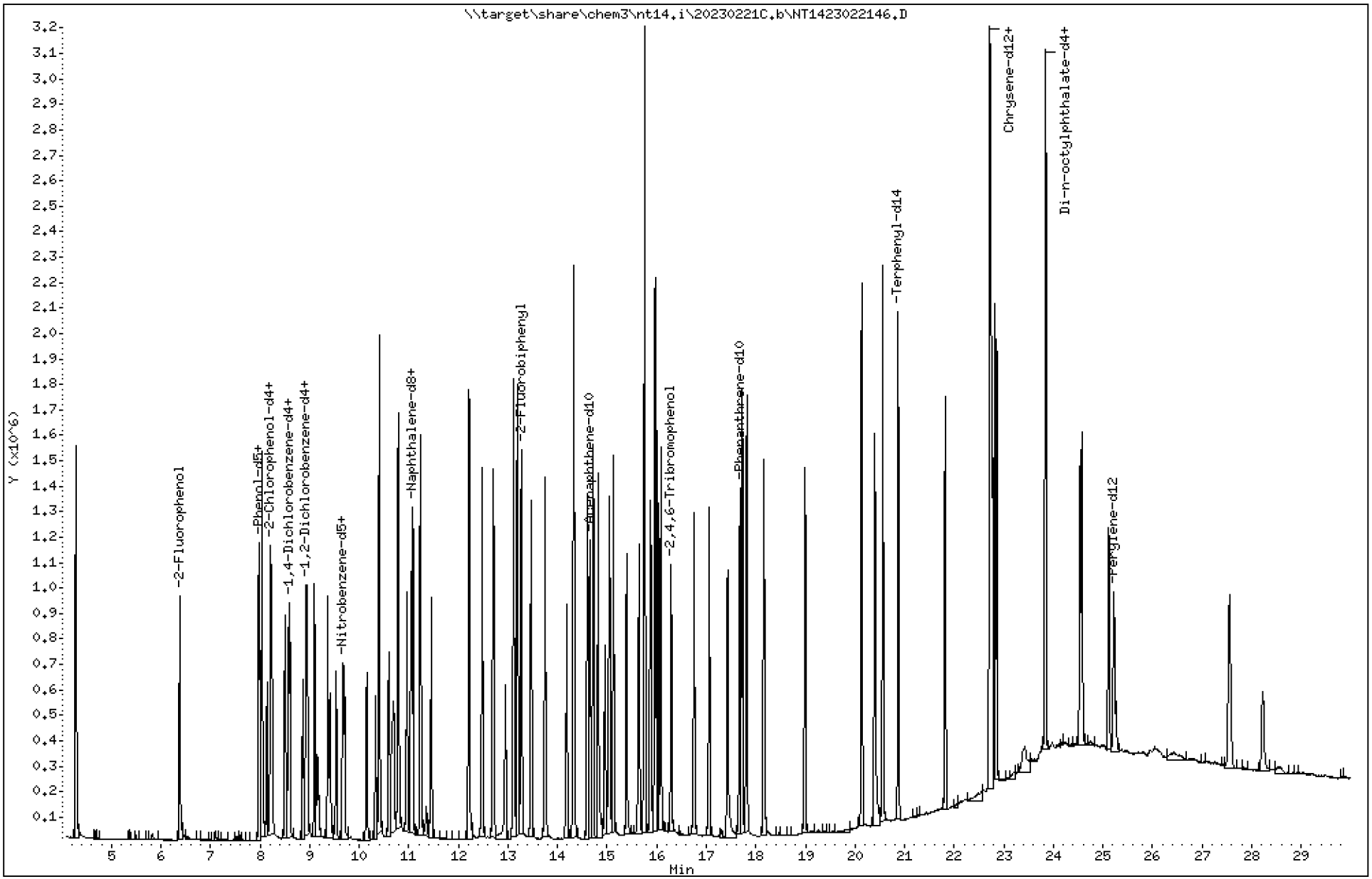
Instrument: nt14.i

Sample Info: SLB0308-ICV1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

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Lab Smp Id: SLB0308-ICV1
Inj Date : 22-FEB-2023 16:35 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0308-ICV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Meth Date : 03-Mar-2023 06:54 van Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							AMOUNTS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.380	6.380	(0.745)	475296	7.50000	7.657
$	2 Phenol-d5	99	7.972	7.972	(0.930)	718029	7.50000	7.292
	3 Phenol	94	7.996	7.996	(0.933)	491743	5.00000	4.717
$	5 2-Chlorophenol-d4	132	8.212	8.212	(0.958)	500695	7.50000	7.126
	4 Bis(2-Chloroethyl)ether	93	8.135	8.135	(0.949)	368945	5.00000	4.633
	6 2-Chlorophenol	128	8.243	8.243	(0.962)	384098	5.00000	5.232
	7 1,3-Dichlorobenzene	146	8.506	8.506	(0.993)	378177	5.00000	4.628
*	8 1,4-Dichlorobenzene-d4	152	8.568	8.568	(1.000)	232195	4.00000	
	9 1,4-Dichlorobenzene	146	8.599	8.599	(1.004)	398888	5.00000	5.143
$	10 1,2-Dichlorobenzene-d4	152	8.925	8.925	(1.042)	234371	5.00000	4.450
	12 1,2-Dichlorobenzene	146	8.948	8.948	(1.044)	358682	5.00000	4.626
	11 Benzyl alcohol	108	8.863	8.863	(1.034)	244275	5.00000	4.151
	14 2,2'-oxybis(1-Chloropropane)	121	9.150	9.150	(1.068)	103955	5.00000	4.687(M)
	13 2-Methylphenol	108	9.096	9.096	(1.062)	370212	5.00000	5.086
	17 Hexachloroethane	117	9.530	9.530	(1.112)	148042	5.00000	4.391
	16 N-Nitroso-di-n-propylamine	70	9.414	9.414	(1.099)	353857	5.00000	5.340
	15 4-Methylphenol	108	9.367	9.367	(1.093)	396561	5.00000	5.159
$	18 Nitrobenzene-d5	82	9.662	9.662	(0.875)	485537	5.00000	5.249
	19 Nitrobenzene	77	9.701	9.701	(0.879)	487509	5.00000	5.252
	20 Isophorone	82	10.151	10.151	(0.919)	696251	5.00000	5.685
	21 2-Nitrophenol	139	10.329	10.329	(0.935)	225903	5.00000	5.313
	22 2,4-Dimethylphenol	107	10.407	10.407	(0.942)	773198	10.0000	11.03
	23 Bis(2-Chloroethoxy)methane	93	10.593	10.593	(0.959)	419331	5.00000	5.264
	24 Benzoic acid	105	10.694	10.694	(0.968)	826503	20.0000	17.95
	25 2,4-Dichlorophenol	162	10.787	10.787	(0.977)	646282	10.0000	10.77
	26 1,2,4-Trichlorobenzene	180	10.965	10.965	(0.993)	373953	5.00000	5.146
*	27 Naphthalene-d8	136	11.042	11.042	(1.000)	800631	4.00000	
	28 Naphthalene	128	11.081	11.081	(1.003)	1028703	5.00000	5.211
	29 4-Chloroaniline	127	11.235	11.235	(1.017)	913644	10.0000	10.83
	30 Hexachlorobutadiene	225	11.451	11.451	(1.037)	243541	5.00000	5.437
	31 4-Chloro-3-methylphenol	107	12.210	12.210	(1.106)	741908	10.0000	11.43
	32 2-Methylnaphthalene	142	12.481	12.481	(1.130)	746375	5.00000	5.048
	33 Hexachlorocyclopentadiene	237	12.945	12.945	(0.884)	177478	10.0000	3.754

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.115	13.115	(0.895)	510756	10.0000	10.63
	35	2,4,5-Trichlorophenol	196	13.185	13.185	(0.900)	575055	10.0000	11.05
$	36	2-Fluorobiphenyl	172	13.270	13.270	(0.906)	877901	5.00000	5.028
	37	2-Chloronaphthalene	162	13.471	13.471	(0.920)	724205	5.00000	5.081
	38	2-Nitroaniline	65	13.750	13.750	(0.939)	565693	10.0000	12.21
	39	Dimethylphthalate	163	14.183	14.183	(0.968)	768284	5.00000	5.153
	40	Acenaphthylene	152	14.338	14.338	(0.979)	1133066	5.00000	5.212
	41	2,6-Dinitrotoluene	165	14.323	14.323	(0.978)	365280	10.0000	10.41
*	42	Acenaphthene-d10	164	14.648	14.648	(1.000)	488064	4.00000	
	43	3-Nitroaniline	138	14.609	14.609	(0.997)	410618	10.0000	11.03
	44	Acenaphthene	153	14.717	14.717	(1.005)	676347	5.00000	5.197
	45	2,4-Dinitrophenol	184	14.818	14.818	(1.012)	438518	20.0000	18.32
	46	Dibenzofuran	168	15.050	15.050	(1.027)	1049713	5.00000	4.912
	47	4-Nitrophenol	109	14.957	14.957	(1.021)	192893	10.0000	8.883
	48	2,4-Dinitrotoluene	165	15.127	15.127	(1.033)	530228	10.0000	10.69
	50	Diethylphthalate	149	15.645	15.645	(1.068)	985562	5.00000	4.973
	49	Fluorene	166	15.753	15.753	(1.075)	1082662	5.00000	4.845
	51	4-Chlorophenyl-phenylether	204	15.753	15.753	(1.075)	556916	5.00000	4.661
	52	4-Nitroaniline	138	15.876	15.876	(1.084)	498914	10.0000	11.68
	53	4,6-Dinitro-2-methylphenol	198	15.969	15.969	(0.903)	777904	20.0000	21.42
	54	N-Nitrosodiphenylamine	169	16.015	16.015	(0.906)	719337	5.00000	5.154
$	55	2,4,6-Tribromophenol	330	16.293	16.293	(1.112)	194394	7.50000	6.810
	56	4-Bromophenyl-phenylether	248	16.756	16.756	(0.948)	314428	5.00000	5.058
	57	Hexachlorobenzene	284	17.057	17.057	(0.965)	311383	5.00000	4.929
	58	Pentachlorophenol	266	17.429	17.429	(0.986)	273711	10.0000	8.690
*	59	Phenanthrene-d10	188	17.676	17.676	(1.000)	971279	4.00000	
	60	Phenanthrene	178	17.723	17.723	(1.003)	1206017	5.00000	5.167
	61	Anthracene	178	17.816	17.816	(1.008)	1301899	5.00000	5.630
	62	Carbazole	167	18.156	18.156	(1.027)	1184660	5.00000	5.646
	63	Di-n-butylphthalate	149	18.992	18.992	(1.074)	1382016	5.00000	5.897
	64	Fluoranthene	202	20.137	20.137	(0.884)	1507451	5.00000	5.085
	65	Pyrene	202	20.562	20.562	(0.903)	1588976	5.00000	5.069
$	66	Terphenyl-d14	244	20.872	20.872	(0.917)	1121602	5.00000	5.040
	67	Butylbenzylphthalate	149	21.816	21.816	(0.958)	571396	5.00000	5.470
	68	Benzo(a)anthracene	228	22.745	22.745	(0.999)	1175719	5.00000	5.347
*	69	Chrysene-d12	240	22.769	22.769	(1.000)	687083	4.00000	
	70	3,3'-Dichlorobenzidine	252	22.715	22.715	(0.998)	1139589	15.0000	16.79
	71	Chrysene	228	22.815	22.815	(1.002)	1067565	5.00000	5.398
	72	bis(2-Ethylhexyl)phthalate	149	22.854	22.854	(0.959)	822914	5.00000	4.186
*	134	Di-n-octylphthalate-d4	153	23.837	23.837	(1.000)	1174636	4.00000	
	73	Di-n-octylphthalate	149	23.845	23.845	(1.000)	1377166	5.00000	5.014
	74	Benzo(b)fluoranthene	252	24.542	24.542	(0.973)	814635	5.00000	5.220
	75	Benzo(k)fluoranthene	252	24.580	24.580	(0.975)	932797	5.00000	5.594
	76	Benzo(a)pyrene	252	25.114	25.114	(0.996)	714890	5.00000	4.794
*	77	Perylene-d12	264	25.223	25.223	(1.000)	491790	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.548	27.548	(1.092)	579306	5.00000	4.643
	79	Dibenzo(a,h)anthracene	278	27.564	27.564	(1.093)	508799	5.00000	4.939
	80	Benzo(g,h,i)perylene	276	28.224	28.224	(1.119)	433319	5.00000	4.266
	90	N-Nitrosodimethylamine	74	4.280	4.280	(0.500)	479910	10.0000	9.986
	91	Aniline	93	8.034	8.034	(0.938)	1051235	10.0000	9.428
	93	Benzidine	184	20.400	20.400	(0.896)	1274022	10.0000	20.01
	103	Pyridine	79	4.288	4.288	(0.500)	781562	10.0000	10.28
	105	1-methylnaphthalene	142	12.697	12.697	(1.150)	677818	5.00000	4.883
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.085	16.085	(1.098)	1290061	5.00000	5.356

						AMOUNTS	
	QUANT SIG					CAL-AMT	ON-COL
Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
187 Total Benzofluoranthenes	252	24.580	24.580	(0.975)	1650279	10.0000	10.83
120 2,3,4,6-Tetrachlorophenol	232	15.390	15.390	(1.051)	295895	5.00000	5.219

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022146.D
Lab Smp Id: SLB0308-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 06:55
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	235125	117563	470250	232195	-1.25
27 Naphthalene-d8	883104	441552	1766208	800631	-9.34
42 Acenaphthene-d10	537789	268895	1075578	488064	-9.25
59 Phenanthrene-d10	1079531	539766	2159062	971279	-10.03
69 Chrysene-d12	826409	413205	1652818	687083	-16.86
134 Di-n-octylphthala	1339562	669781	2679124	1174636	-12.31
77 Perylene-d12	590325	295163	1180650	491790	-16.69

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	-0.00
69 Chrysene-d12	22.77	22.27	23.27	22.77	-0.00
134 Di-n-octylphthala	23.84	23.34	24.34	23.84	-0.00
77 Perylene-d12	25.22	24.72	25.72	25.22	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022146.D

Lab ID: SLB0308-ICV1
nt14.i, ABN.m, 22-FEB-2023 16:35

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

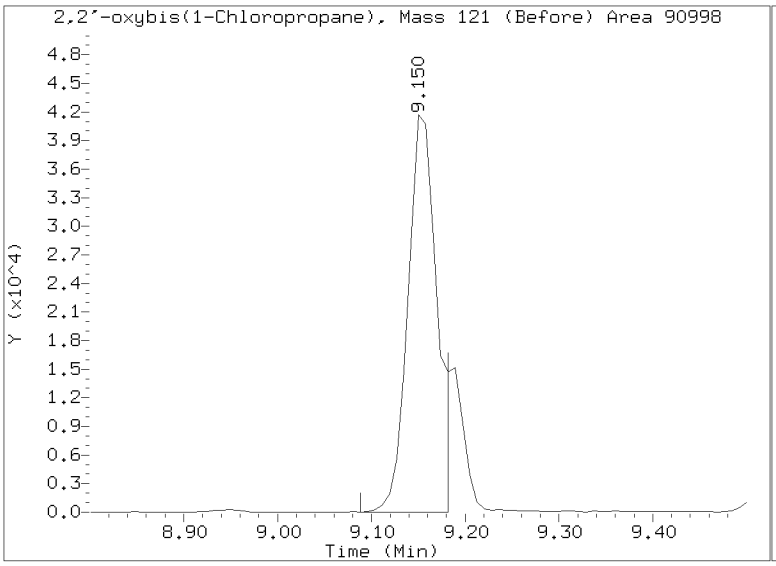
No RRT check. Ccal file.

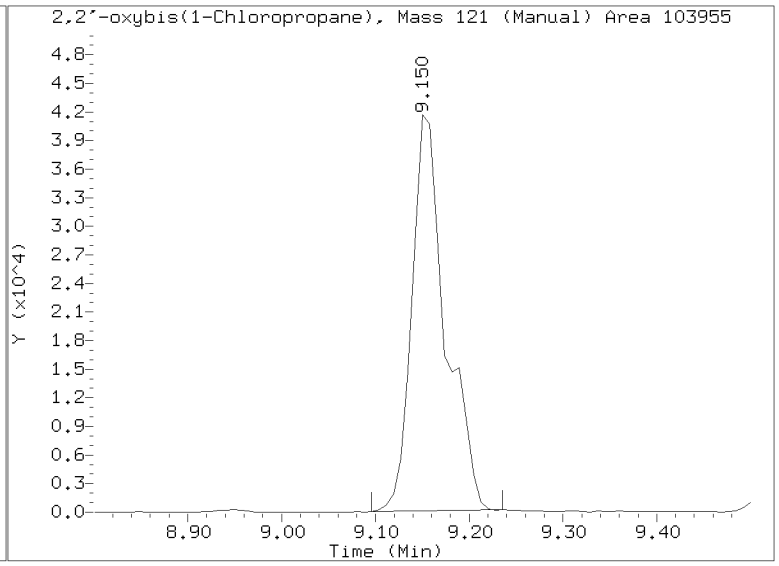
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221C.b/NT1423022146.D
Injection Date: 22-FEB-2023 16:35
Lab ID:SLB0308-ICV1 Client ID:
Report Date: 03/03/2023 06:54





Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221C.b

Instrument: nt14.i Date: 22-FEB-2023 Method: ABN.m

INITIAL CAL: 30-DEC-2022

Compound	%RSD or R^2
Benzidine	0.986

ICV CAL: NT1423022146.D 22-FEB-2023 16:35

Compound	%D
Hexachlorocyclopentadiene	-62.46
2-Nitroaniline	22.08
Benzidine	100.1

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GB00046
Lab File ID:	NT1423021613.D	Calibration Date:	02/16/2023
Sequence:	SLB0234	Injection Date:	02/16/23
Lab Sample ID:	SLB0234-SCV1	Injection Time:	21:18
Sequence Name:	SCV 5.0		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Phenol	A	5.0000	4.6	1.7957660	1.6618960		-7.5	+/-20	
bis(2-chloroethyl) ether	A	5.0000	5.2	1.3717970	1.4153290		3.2	+/-20	
2-Chlorophenol	A	5.0000	4.6	1.2646140	1.1676710		-7.7	+/-20	
1,3-Dichlorobenzene	A	5.0000	4.8	1.4078420	1.3430150		-4.6	+/-20	
1,4-Dichlorobenzene	A	5.0000	4.8	1.3361040	1.2801510		-4.2	+/-20	
1,2-Dichlorobenzene	A	5.0000	4.8	1.3357080	1.2710030		-4.8	+/-20	
Benzyl Alcohol	A	5.0000	4.6	0.8584087	0.9383522		-7.5	+/-20	
2,2'-Oxybis(1-chloropropane)	A	5.0000	5.6	0.3821177	0.4254421		11.3	+/-20	
2-Methylphenol	A	5.0000	4.4	1.2539360	1.0953370		-12.6	+/-20	
Hexachloroethane	A	5.0000	5.0	0.5808679	0.5852133		0.7	+/-20	
N-Nitroso-di-n-Propylamine	A	5.0000	5.0	1.1414440	1.1386550		-0.2	+/-20	
4-Methylphenol	A	5.0000	4.6	1.3240860	1.2156810		-8.2	+/-20	
Nitrobenzene	A	5.0000	4.9	0.4637383	0.4589877		-1.0	+/-20	
Isophorone	A	5.0000	7.1	0.6118329	0.8680150		41.9	+/-20	*
2-Nitrophenol	A	5.0000	4.5	0.1668667	0.1884065		-10.9	+/-20	
2,4-Dimethylphenol	A	5.0000	4.3	0.3501768	0.2993160		-14.5	+/-20	
Bis(2-Chloroethoxy)methane	A	5.0000	5.7	0.3980063	0.4569254		14.8	+/-20	
2,4-Dichlorophenol	A	5.0000	5.1	0.2996999	0.3071096		2.5	+/-20	
1,2,4-Trichlorobenzene	A	5.0000	4.6	0.3630457	0.3376190		-7.0	+/-20	
Naphthalene	A	5.0000	4.7	0.9862730	0.9341725		-5.3	+/-20	
Benzoic acid	A	10.000	5.5	0.1876532	0.1226896		-44.9	+/-20	*
4-Chloroaniline	A	5.0000	3.9	0.4213649	0.3296086		-21.8	+/-20	*
Hexachlorobutadiene	A	5.0000	4.9	0.2238011	0.2200640		-1.7	+/-20	
4-Chloro-3-Methylphenol	A	5.0000	5.0	0.3243891	0.3272807		0.9	+/-20	
2-Methylnaphthalene	A	5.0000	4.6	0.7386653	0.6805108		-7.9	+/-20	
Hexachlorocyclopentadiene	A	5.0000	5.3	0.3875173	0.4108546		6.0	+/-20	
2,4,6-Trichlorophenol	A	5.0000	4.8	0.3939585	0.3788267		-3.8	+/-20	
2,4,5-Trichlorophenol	A	5.0000	4.7	0.4266518	0.4016371		-5.9	+/-20	
2-Chloronaphthalene	A	5.0000	4.6	1.1680960	1.0837170		-7.2	+/-20	
2-Nitroaniline	A	5.0000	4.9	0.3797818	0.3685652		-3.0	+/-20	
Acenaphthylene	A	5.0000	4.7	1.7816190	1.6594800		-6.9	+/-20	
Dimethylphthalate	A	5.0000	4.7	1.2218100	1.1467890		-6.1	+/-20	
2,6-Dinitrotoluene	A	5.0000	4.9	0.2874984	0.2837430		-1.3	+/-20	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GB00046
Lab File ID:	NT1423021613.D	Calibration Date:	02/16/2023
Sequence:	SLB0234	Injection Date:	02/16/23
Lab Sample ID:	SLB0234-SCV1	Injection Time:	21:18
Sequence Name:	SCV 5.0		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Acenaphthene	A	5.0000	4.6	1.0666800	0.9884336		-7.3	+/-20	
3-Nitroaniline	A	5.0000	4.9	0.3051549	0.3003721		-1.6	+/-20	
2,4-Dinitrophenol	A	5.0000	0.3	0.1326177	0.0094058		-95.0	+/-20	*
Dibenzofuran	A	5.0000	4.5	1.7513490	1.5931320		-9.0	+/-20	
4-Nitrophenol	A	5.0000	4.1	0.1470256	0.1436378		-19.0	+/-20	
2,4-Dinitrotoluene	A	5.0000	4.9	0.4064887	0.3946834		-2.9	+/-20	
Fluorene	A	5.0000	4.6	1.8314530	1.6987730		-7.2	+/-20	
4-Chlorophenylphenyl ether	A	5.0000	4.8	0.9792941	0.9311554		-4.9	+/-20	
Diethyl phthalate	A	5.0000	4.7	1.6243010	1.5338980		-5.6	+/-20	
4-Nitroaniline	A	5.0000	4.8	0.3501076	0.3334111		-4.8	+/-20	
4,6-Dinitro-2-methylphenol	A	5.0000	3.7	0.1007578	0.1062530		-26.9	+/-20	*
N-Nitrosodiphenylamine	A	5.0000	4.9	0.5748169	0.5641540		-1.9	+/-20	
4-Bromophenyl phenyl ether	A	5.0000	5.2	0.2560228	0.2638340		3.1	+/-20	
Hexachlorobenzene	A	5.0000	4.7	0.2601536	0.2434561		-6.4	+/-20	
Pentachlorophenol	A	5.0000	3.9	0.1012755	0.1004943		-21.4	+/-20	*
Phenanthrene	A	5.0000	4.7	0.9611900	0.9015803		-6.2	+/-20	
Anthracene	A	5.0000	4.3	0.9522768	0.8197144		-13.9	+/-20	
Carbazole	A	5.0000	4.8	0.8641689	0.8281937		-4.2	+/-20	
Di-n-Butylphthalate	A	5.0000	5.5	0.9652316	1.0646460		10.3	+/-20	
Fluoranthene	A	5.0000	4.7	1.7257220	1.6158960		-6.4	+/-20	
Pyrene	A	5.0000	4.4	1.8248060	1.6058770		-12.0	+/-20	
Butylbenzylphthalate	A	5.0000	4.6	0.5233989	0.5545390		-8.6	+/-20	
Benzo(a)anthracene	A	5.0000	4.5	1.2800360	1.1598210		-9.4	+/-20	
3,3'-Dichlorobenzidine	A	10.000	9.3	0.3395308	0.3672495		-6.7	+/-20	
Chrysene	A	5.0000	4.5	1.1513540	1.0302990		-10.5	+/-20	
bis(2-Ethylhexyl)phthalate	A	5.0000	4.6	0.5470542	0.6206049		-7.0	+/-20	
Di-n-Octylphthalate	A	5.0000	5.0	0.9352762	0.9282008		-0.8	+/-20	
Benzofluoranthenes, Total	A	10.000	9.7	1.2391730	1.2035130		-2.9	+/-20	
Benzo(a)pyrene	A	5.0000	4.6	1.0848130	1.1172010		-7.9	+/-20	
Indeno(1,2,3-cd)pyrene	A	5.0000	4.4	0.8621891	0.8907536		-12.1	+/-20	
Dibenzo(a,h)anthracene	A	5.0000	4.4	0.7046903	0.7289073		-12.7	+/-20	
Benzo(g,h,i)perylene	A	5.0000	4.4	0.7176031	0.7244191		-12.4	+/-20	
1-Methylnaphthalene	A	5.0000	4.8	0.6934747	0.6601390		-4.8	+/-20	
2-Fluorophenol	A	7.5000	8.37	1.0693230	1.1938270		11.6	+/-20	

* Values outside of QC limits

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GB00046
Lab File ID:	NT1423021613.D	Calibration Date:	02/16/2023
Sequence:	SLB0234	Injection Date:	02/16/23
Lab Sample ID:	SLB0234-SCV1	Injection Time:	21:18
Sequence Name:	SCV 5.0		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol-d5	A	7.5000	7.99	1.6963140	1.8071690		6.5	+/-20
2-Chlorophenol-d4	A	7.5000	7.76	1.2103710	1.2528480		3.5	+/-20
1,2-Dichlorobenzene-d4	A	5.0000	4.99	0.9072515	0.9048813		-0.3	+/-20
Nitrobenzene-d5	A	5.0000	5.19	0.4621137	0.4800794		3.9	+/-20
2-Fluorobiphenyl	A	5.0000	4.87	1.4311010	1.3939410		-2.6	+/-20
2,4,6-Tribromophenol	A	7.5000	7.14	0.2030581	0.2229526		-4.8	+/-20
p-Terphenyl-d14	A	5.0000	4.73	1.2956710	1.2259560		-5.4	+/-20

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

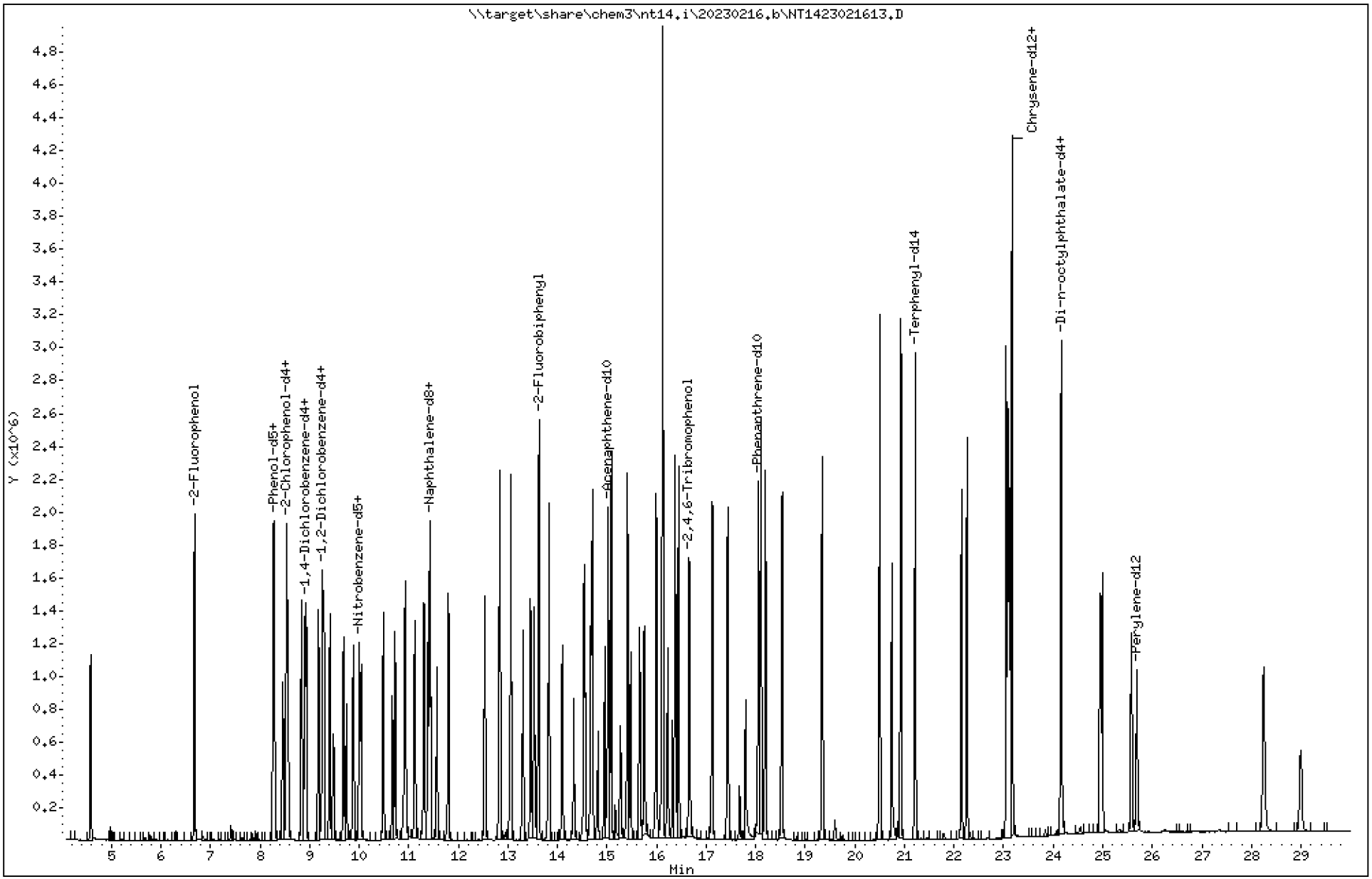
Sample Info: SLB0234-SCV1

Column phase: ZB-5msi

Instrument: nt14.i

Operator: DSD

Column diameter: 0.25



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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

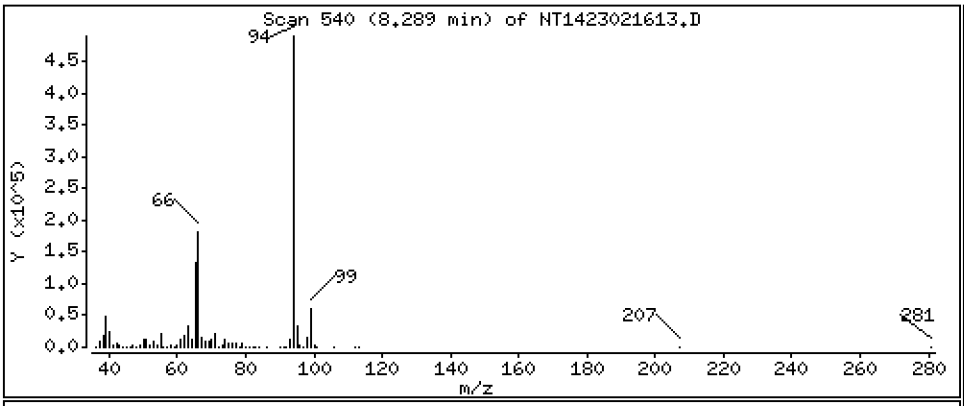
Operator: DSD

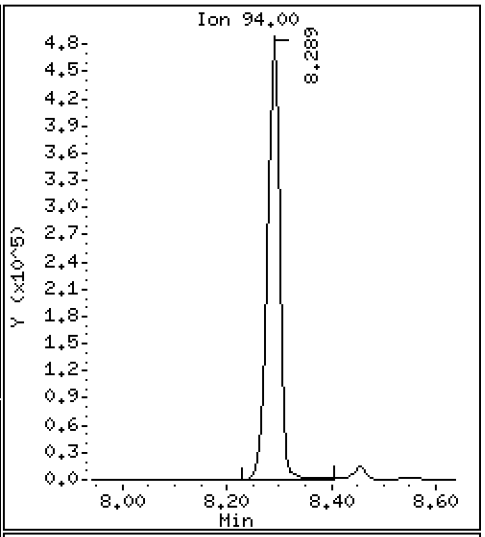
Column phase: ZB-5msi

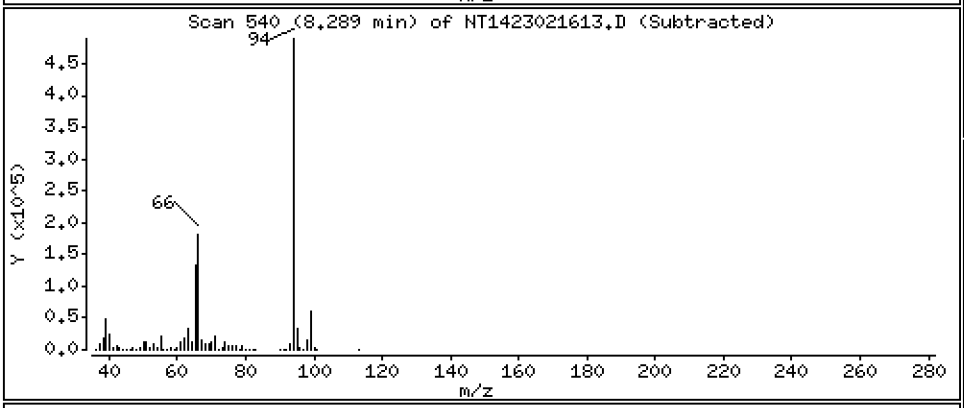
Column diameter: 0.25

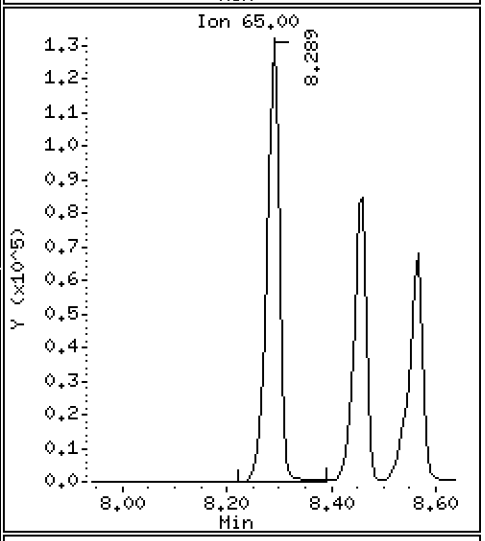
3 Phenol

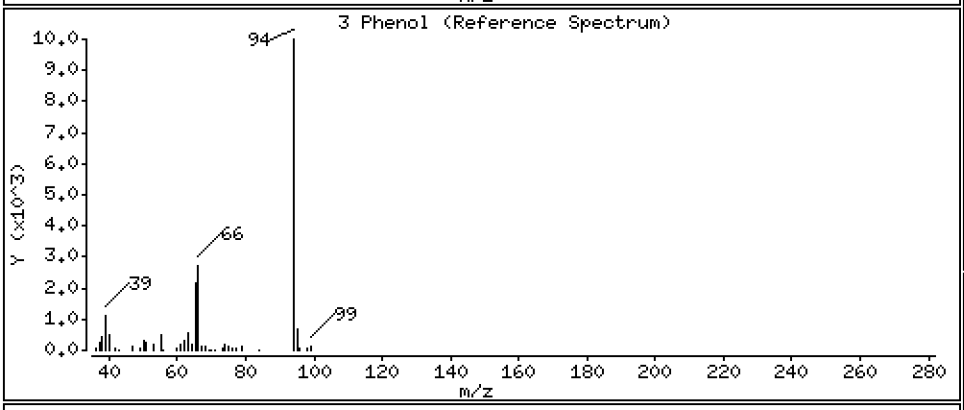
Concentration: 4.627 ug/mL

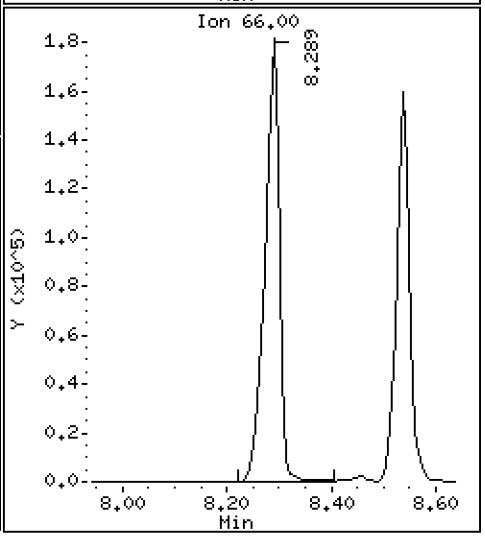


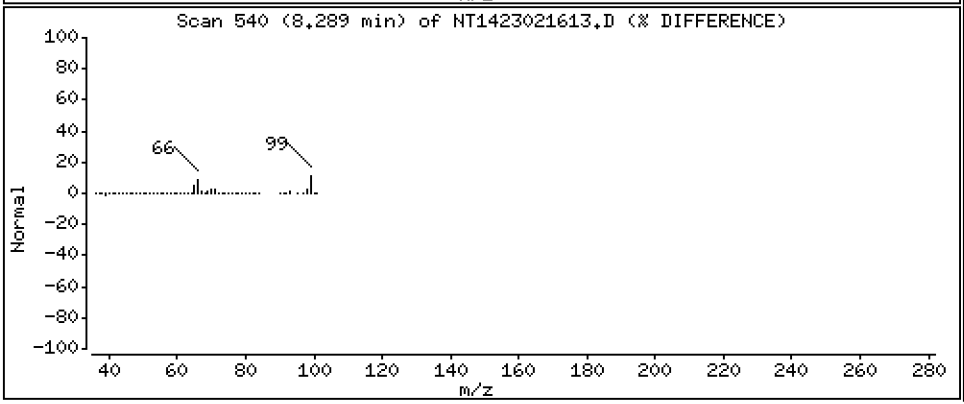












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

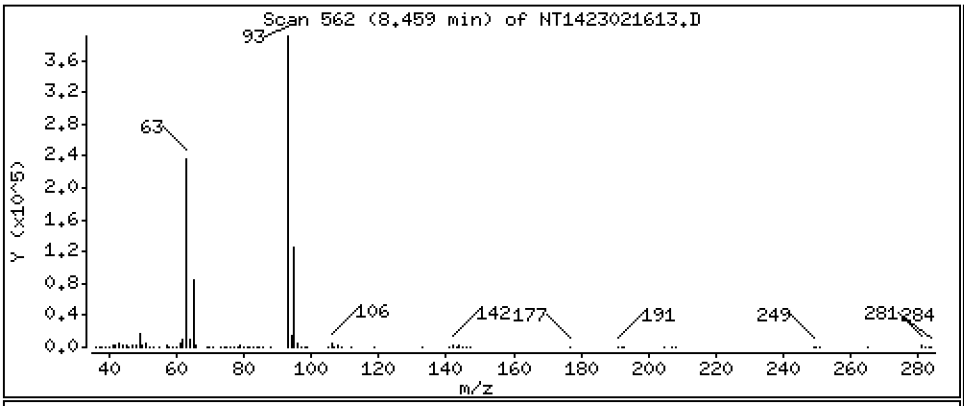
Operator: DSD

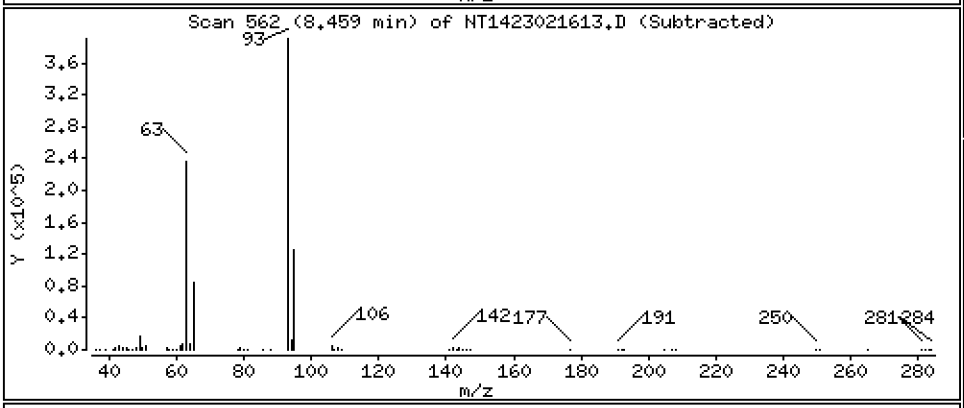
Column phase: ZB-5msi

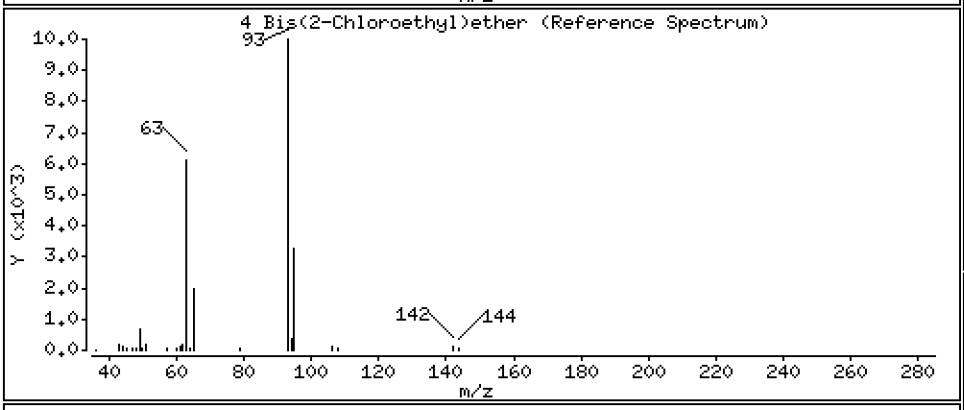
Column diameter: 0.25

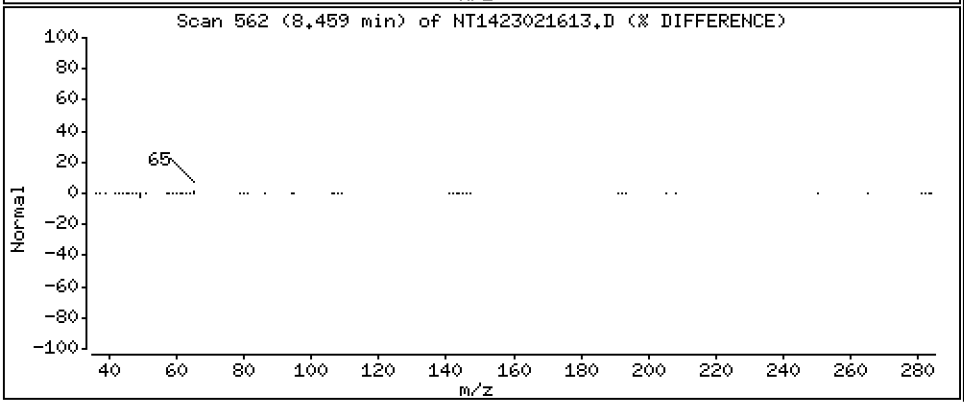
4 Bis(2-Chloroethyl)ether

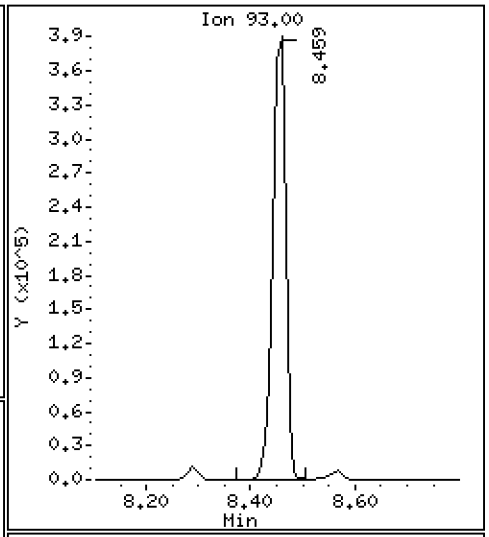
Concentration: 5.159 ug/mL

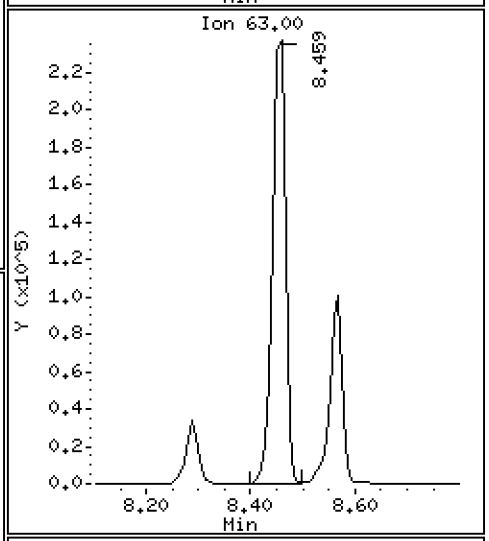


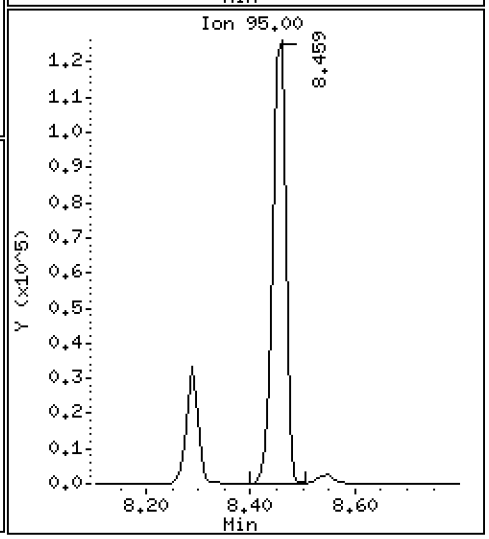












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

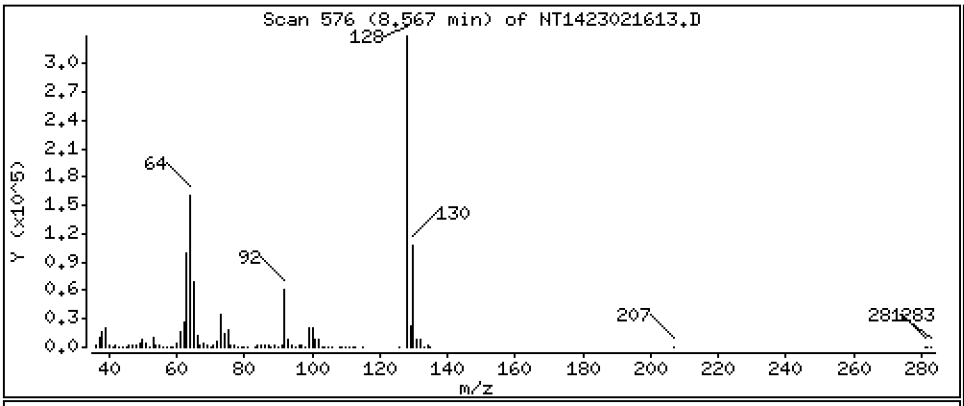
Operator: DSD

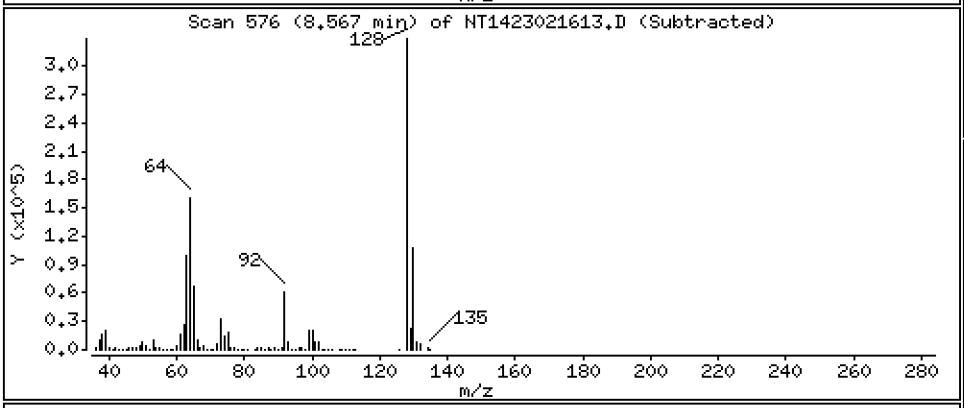
Column phase: ZB-5msi

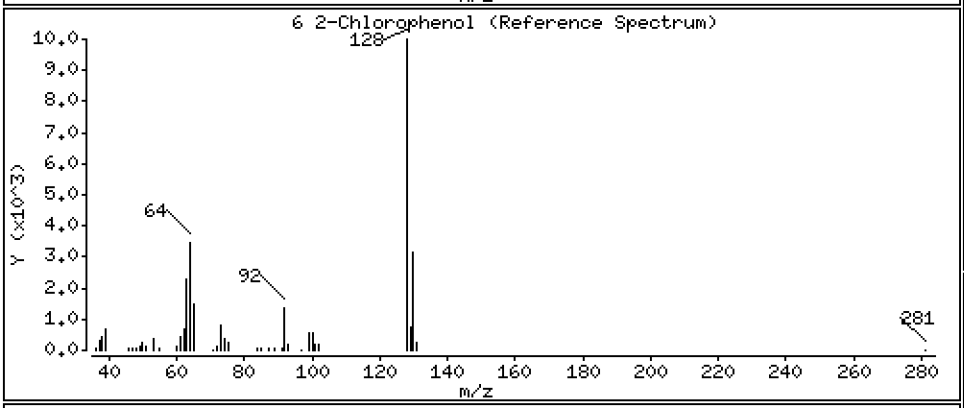
Column diameter: 0.25

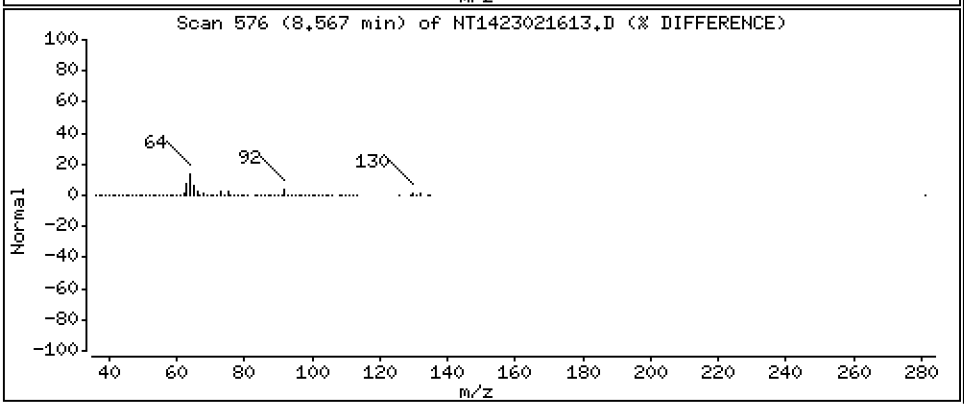
6 2-Chlorophenol

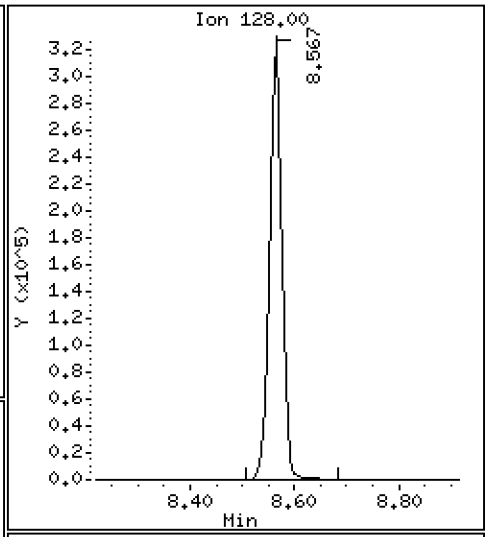
Concentration: 4.617 ug/mL

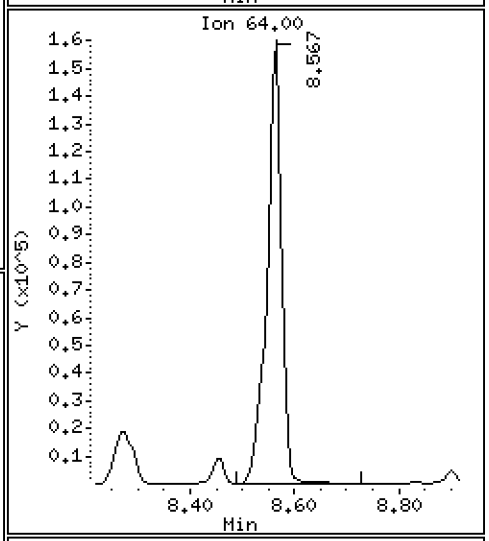


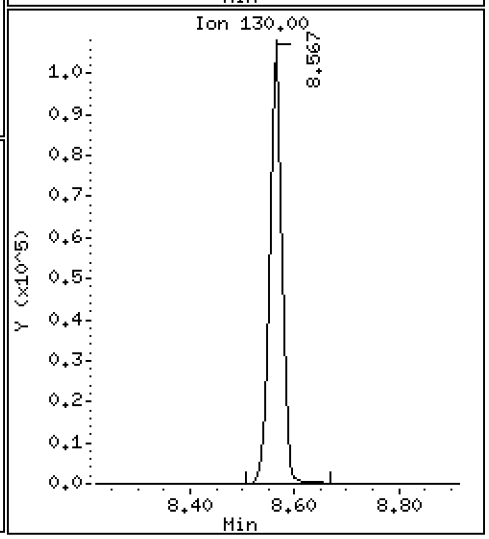












Date : 16-FEB-2023 21:18

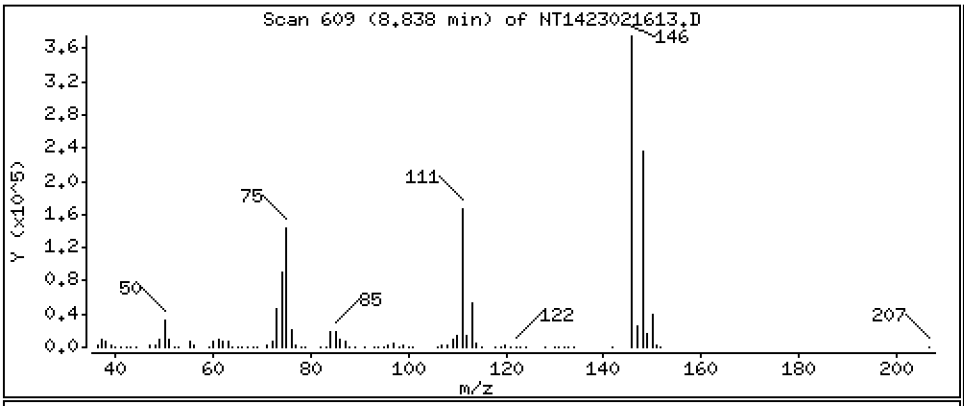
Client ID: Instrument: nt14.i

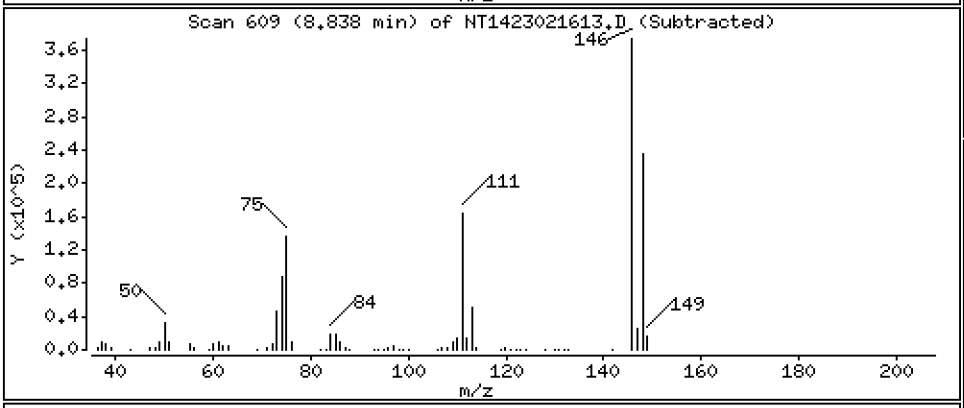
Sample Info: SLB0234-SCV1

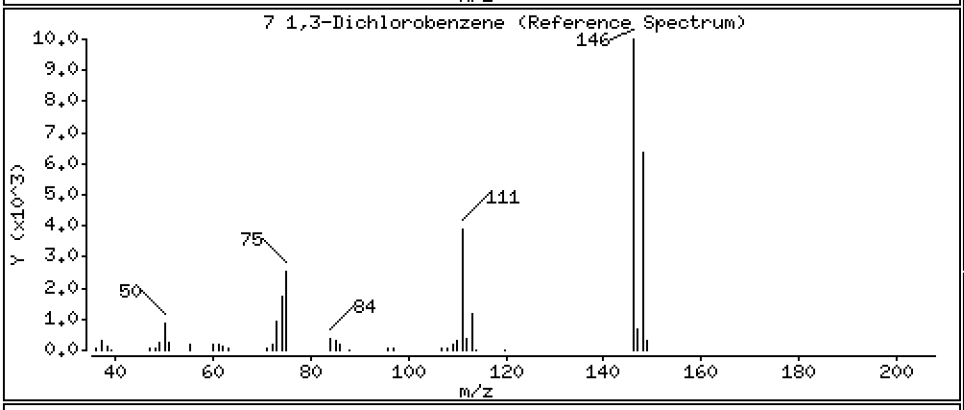
Operator: DSD

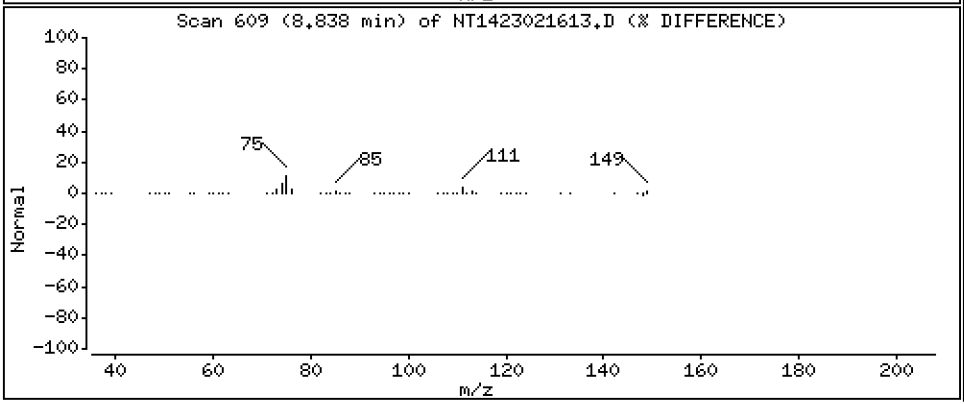
Column phase: ZB-5msi Column diameter: 0.25

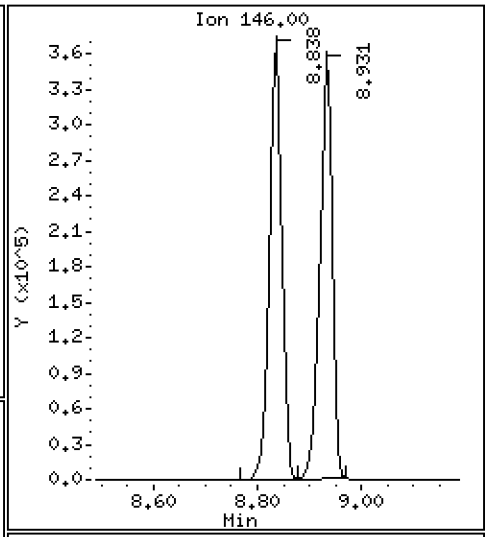
7 1,3-Dichlorobenzene Concentration: 4.770 ug/mL

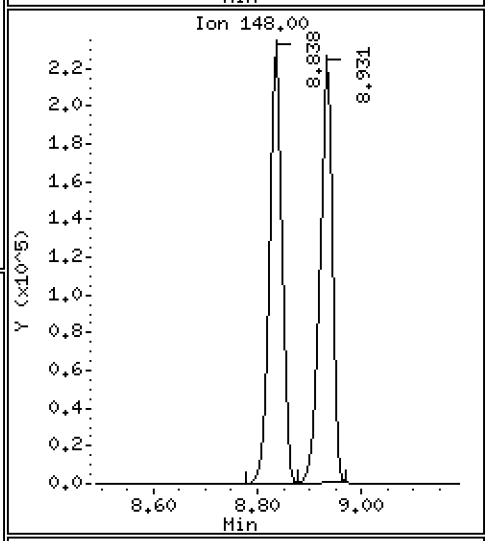


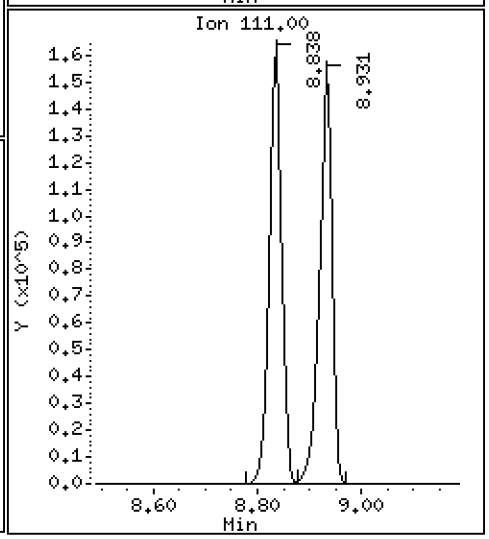












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

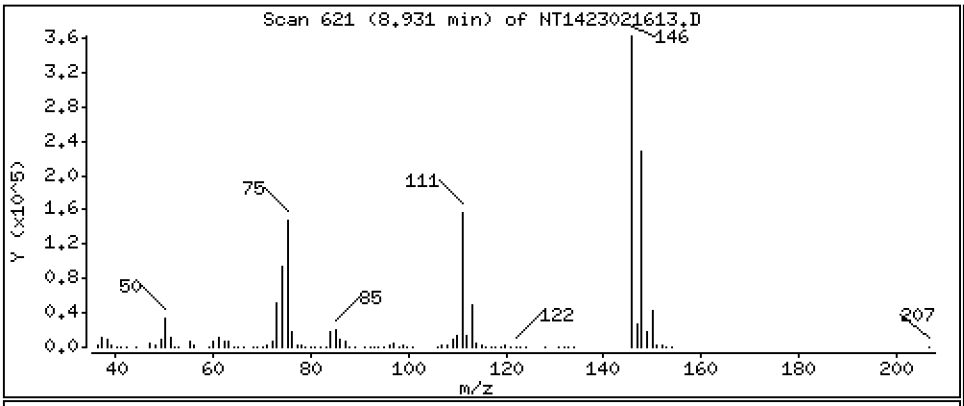
Operator: DSD

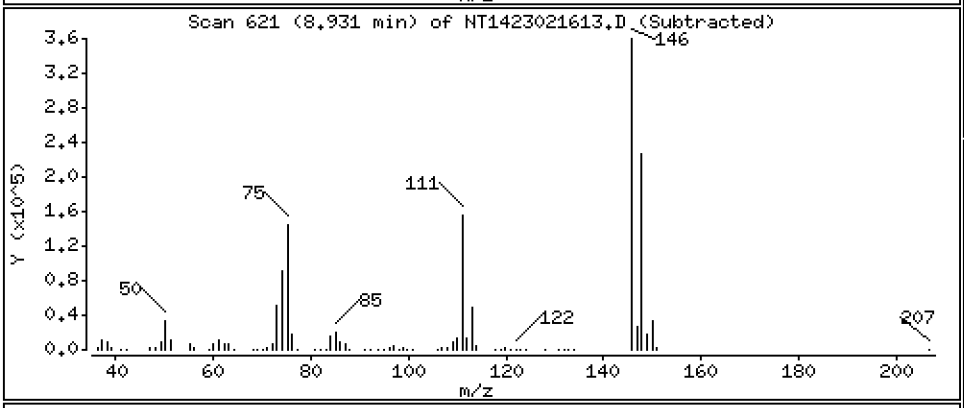
Column phase: ZB-5msi

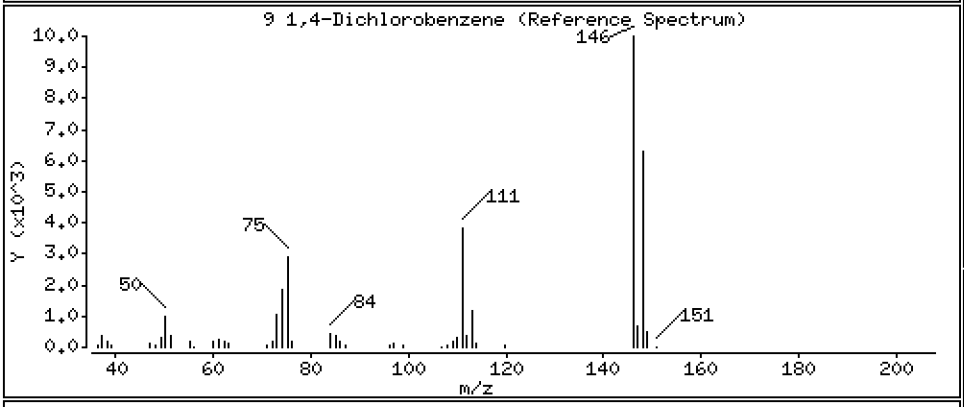
Column diameter: 0.25

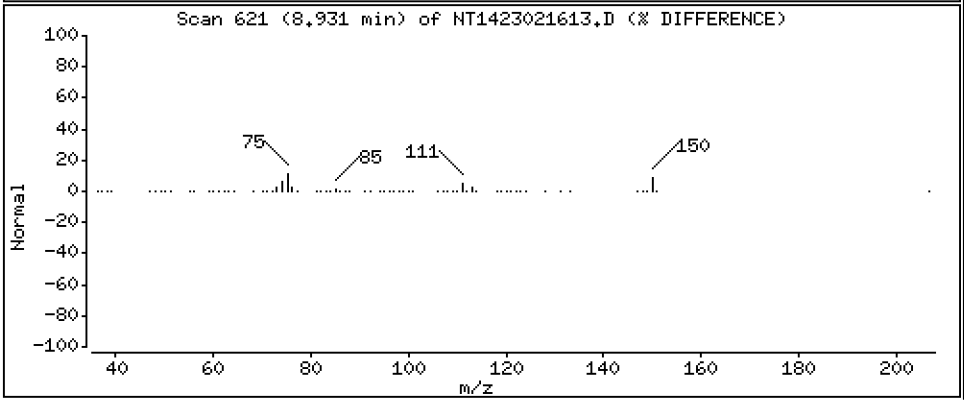
9 1,4-Dichlorobenzene

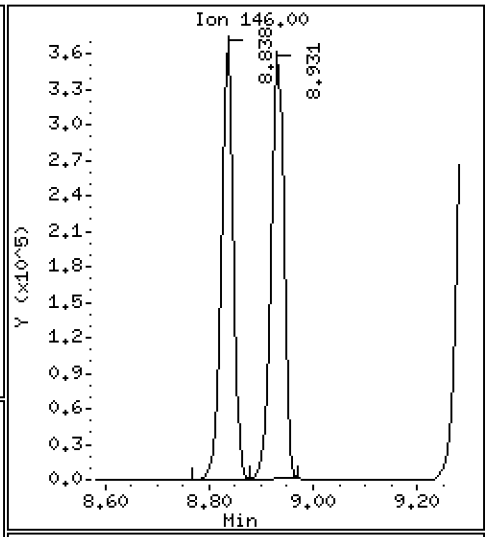
Concentration: 4.791 ug/mL

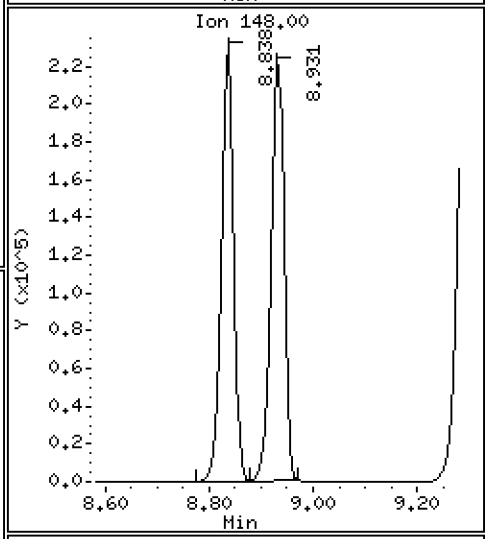


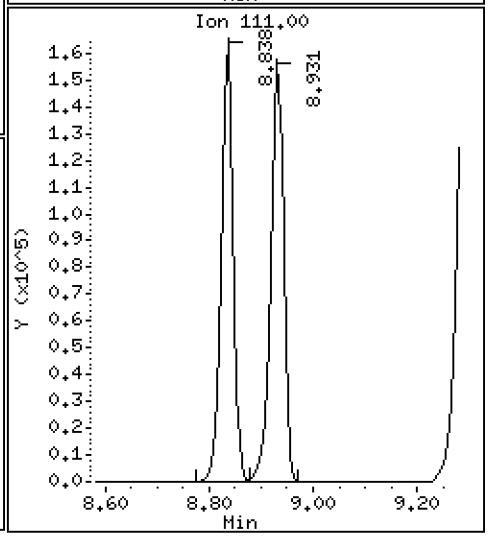












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

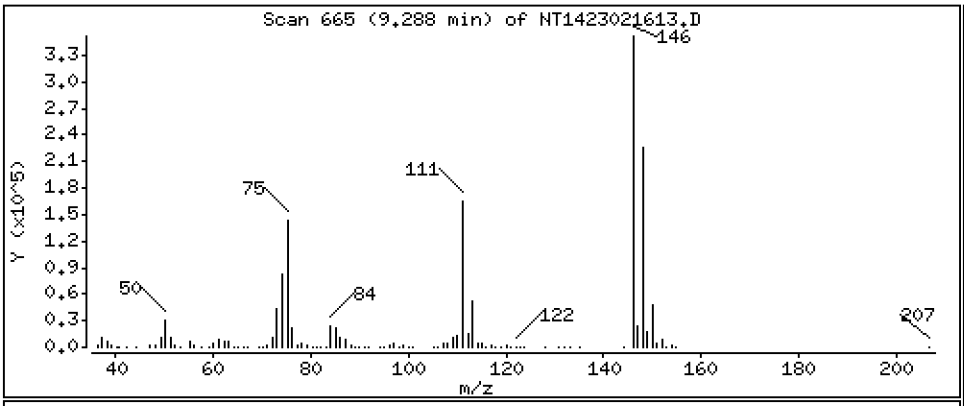
Operator: DSD

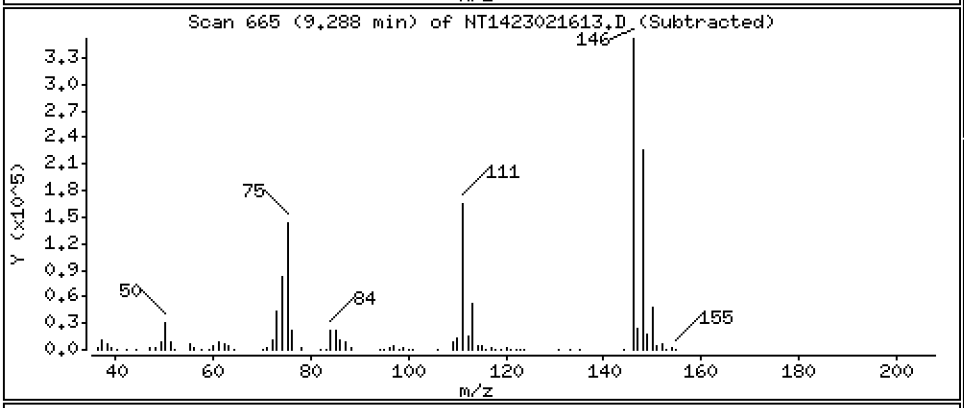
Column phase: ZB-5msi

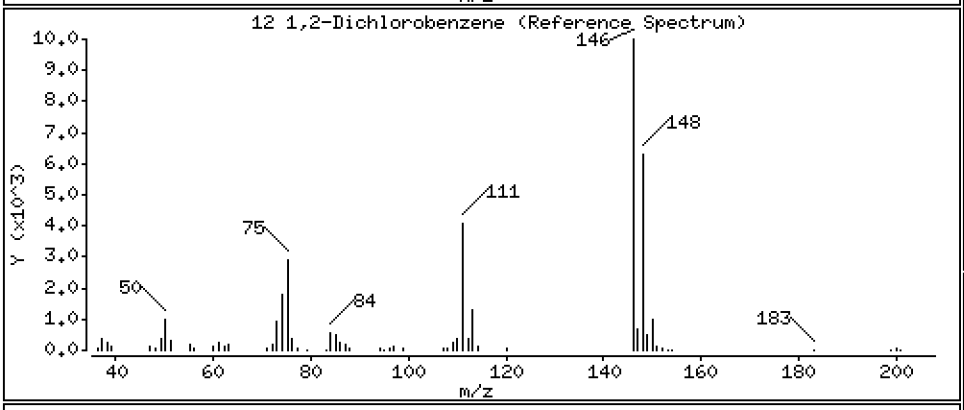
Column diameter: 0.25

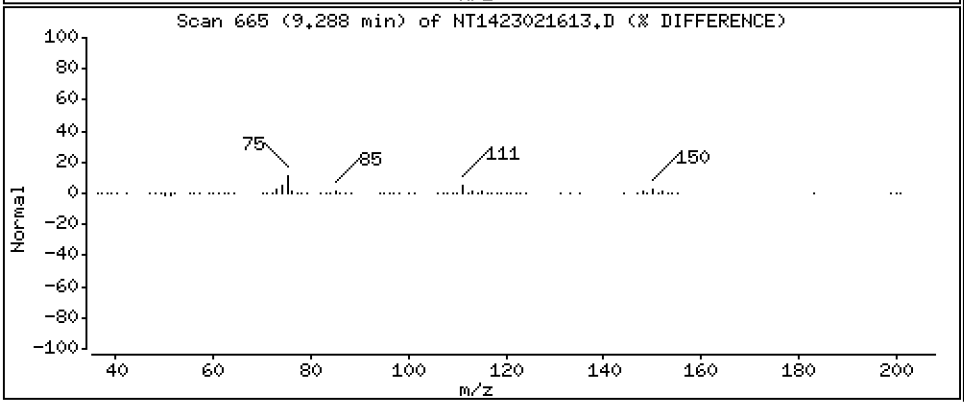
12 1,2-Dichlorobenzene

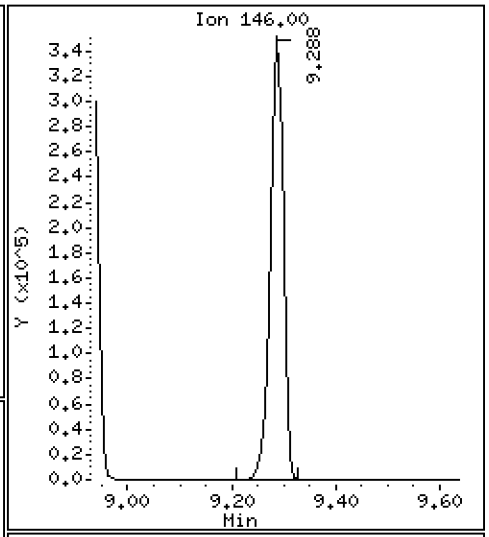
Concentration: 4.758 ug/mL

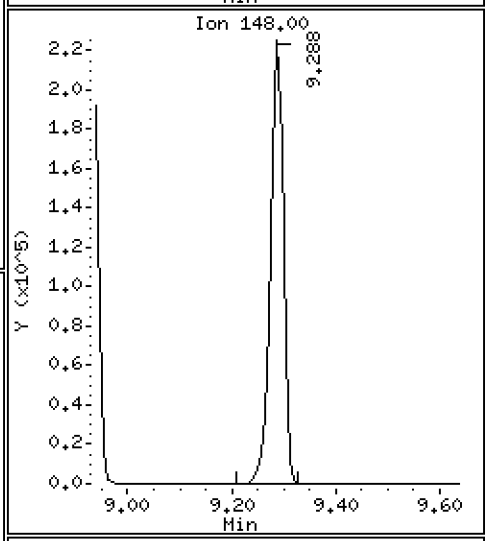


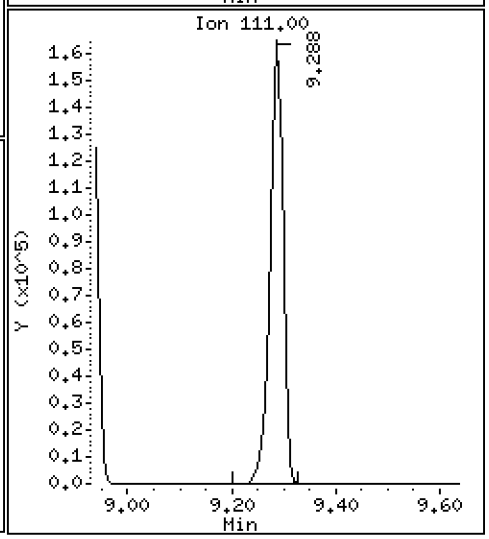












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

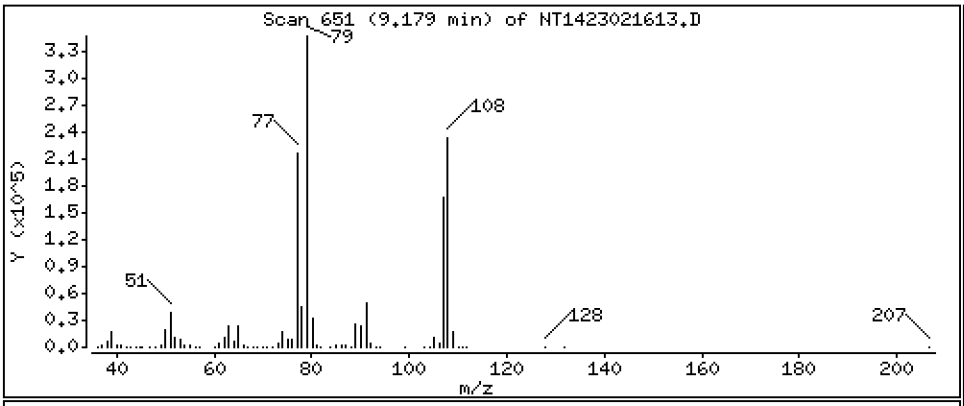
Operator: DSD

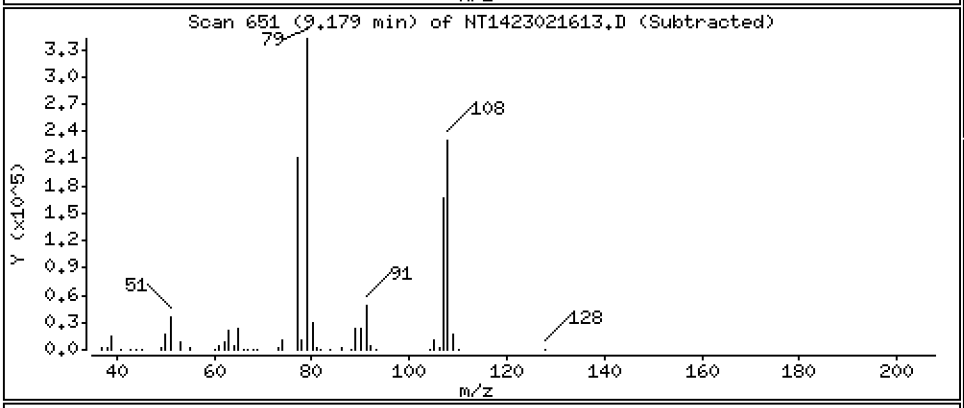
Column phase: ZB-5msi

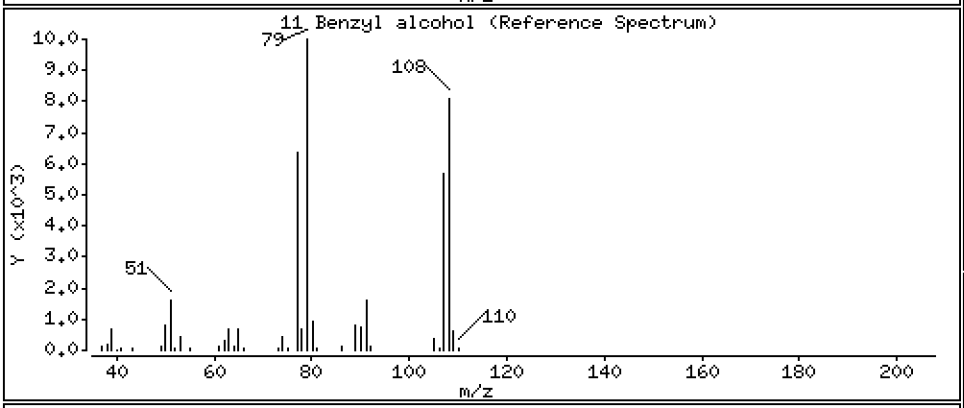
Column diameter: 0.25

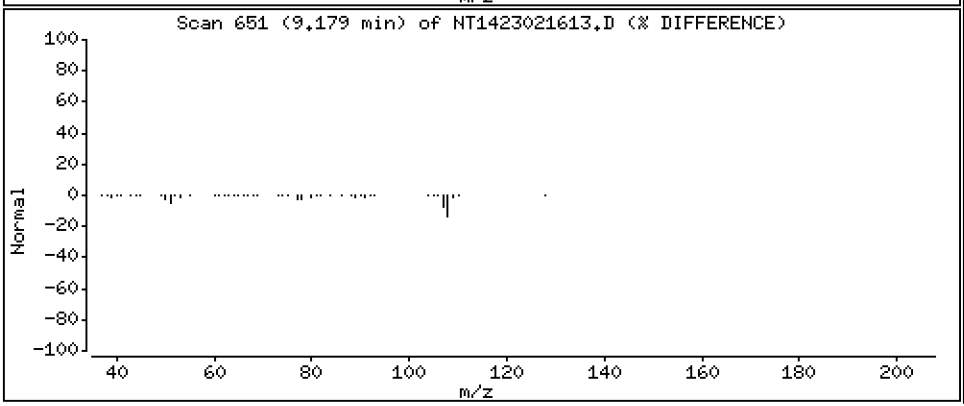
11 Benzyl alcohol

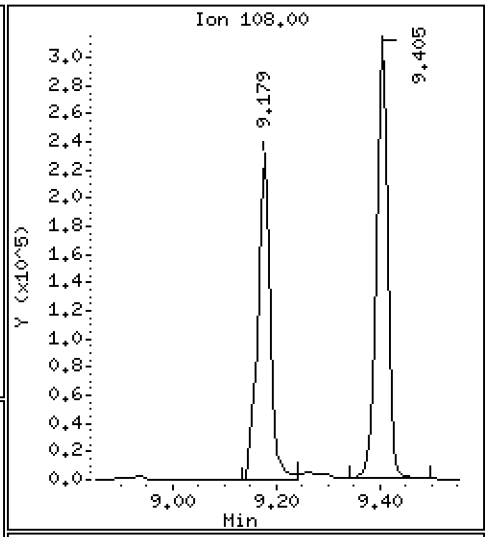
Concentration: 4.625 ug/mL

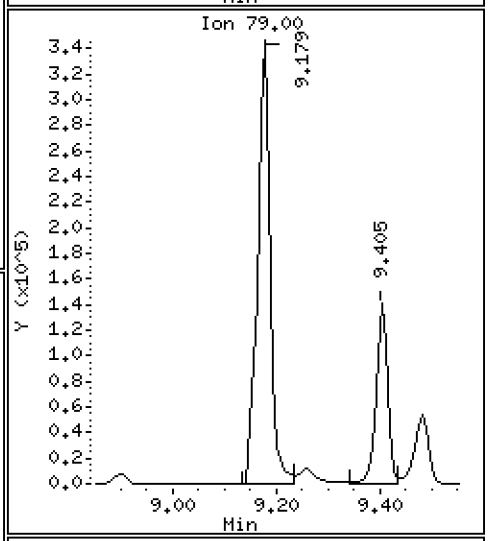


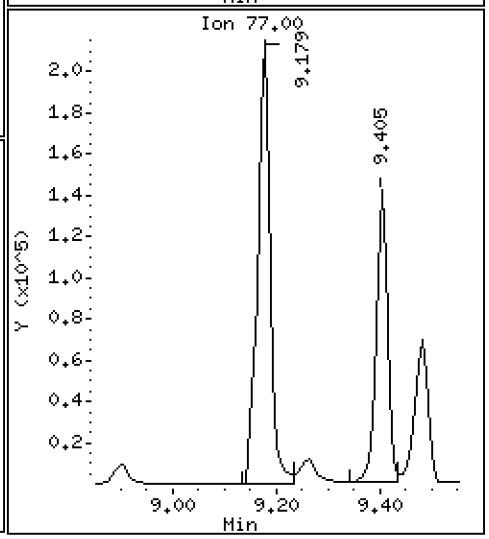












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

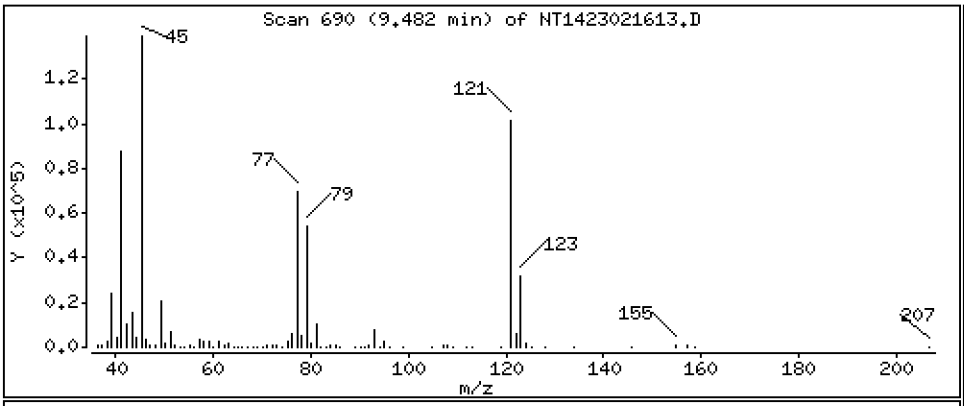
Operator: DSD

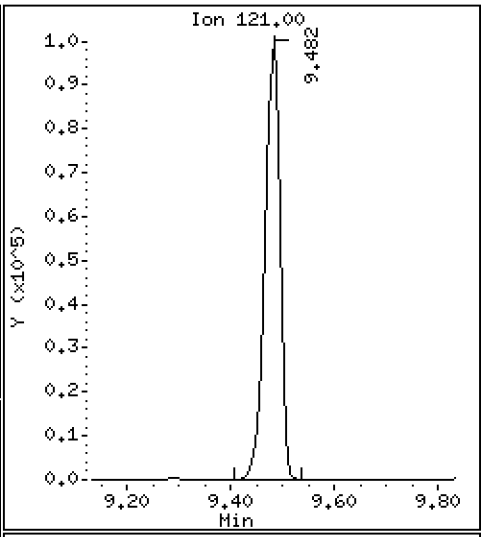
Column phase: ZB-5msi

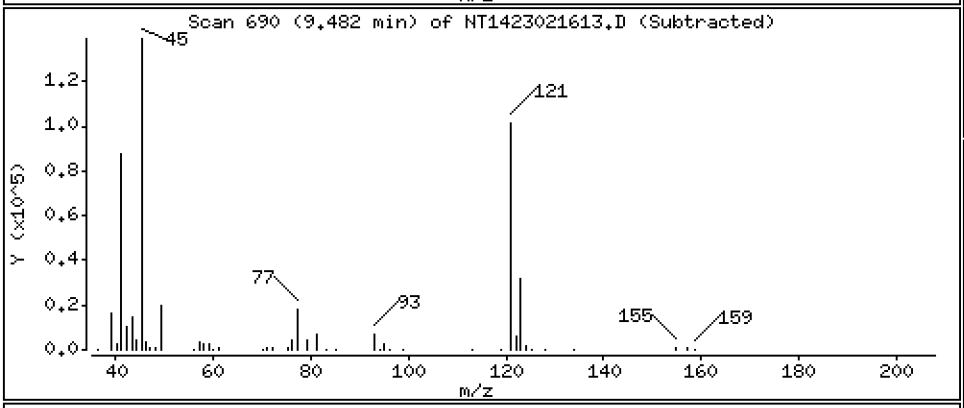
Column diameter: 0.25

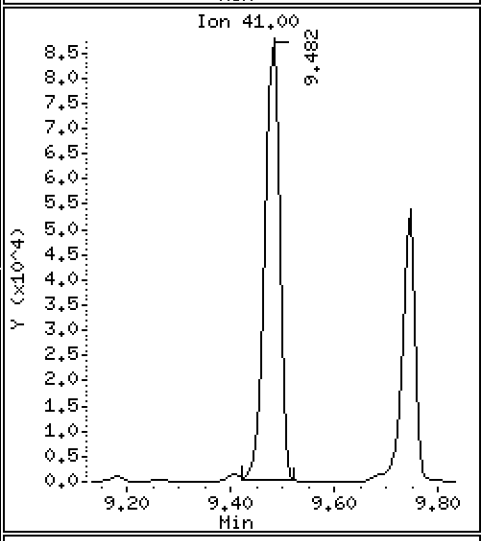
14 2,2'-oxybis(1-Chloropropane)

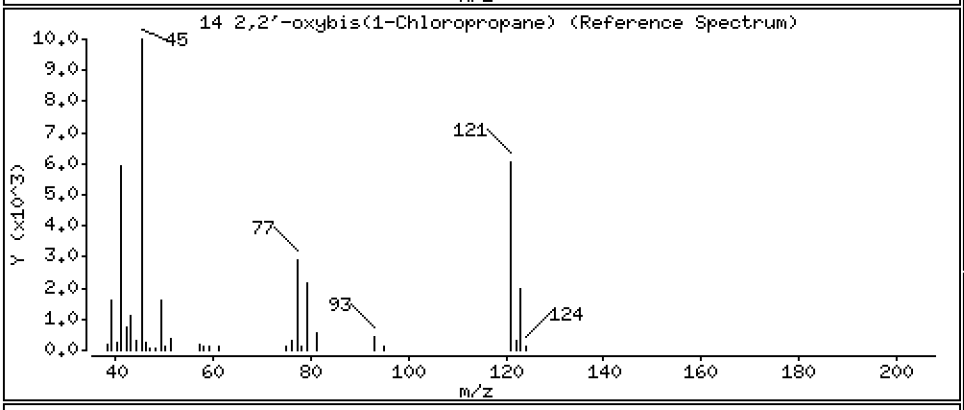
Concentration: 5.567 ug/mL

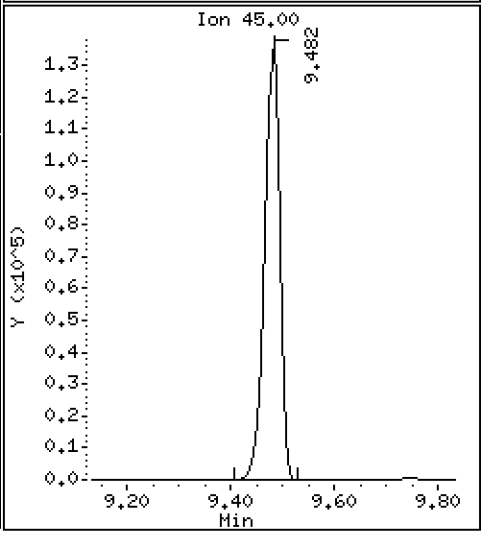


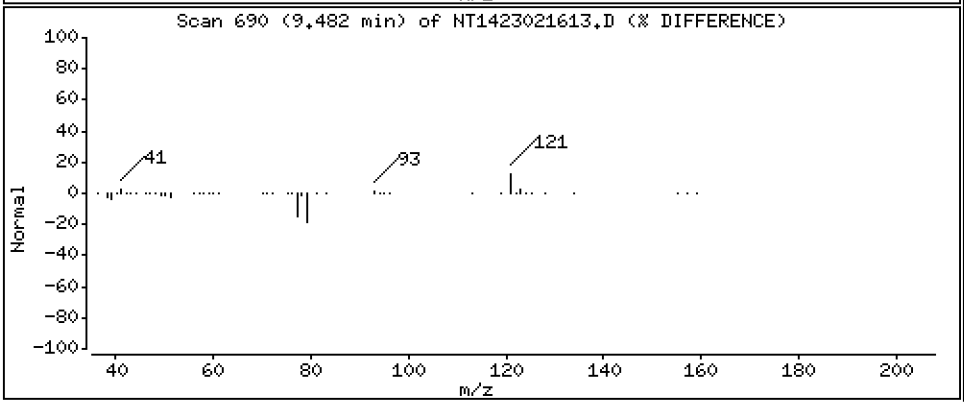












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

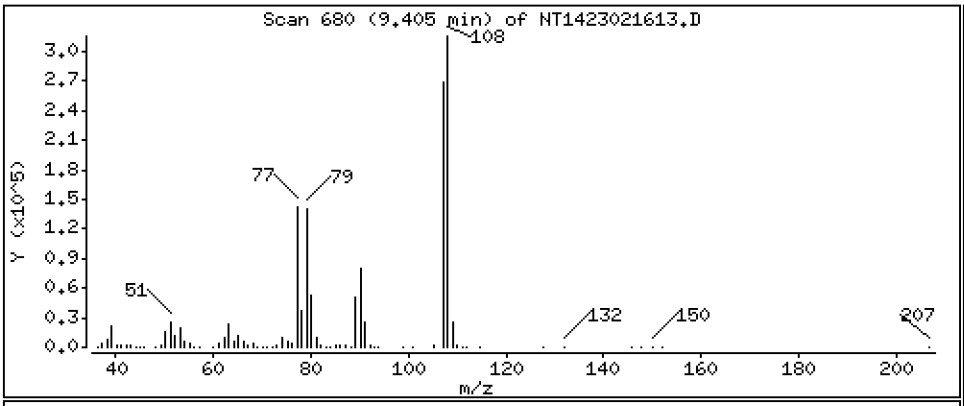
Operator: DSD

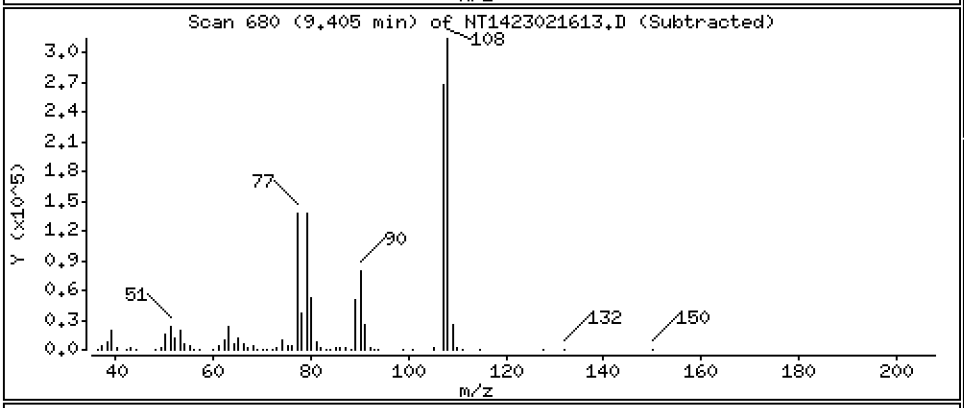
Column phase: ZB-5msi

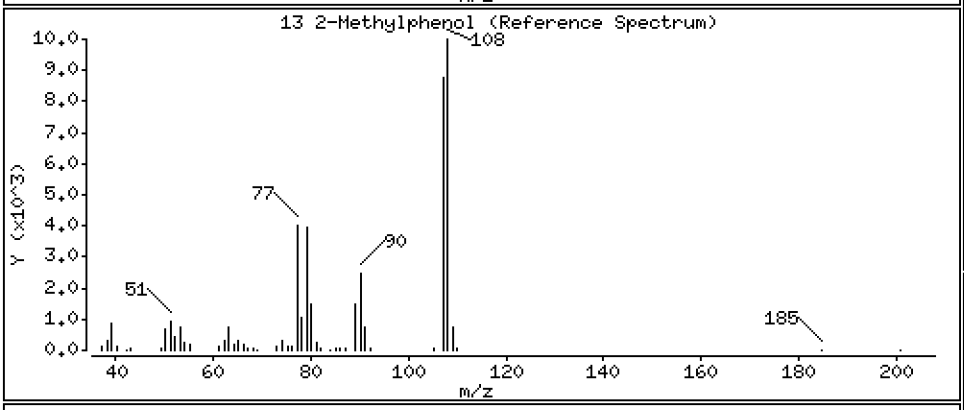
Column diameter: 0.25

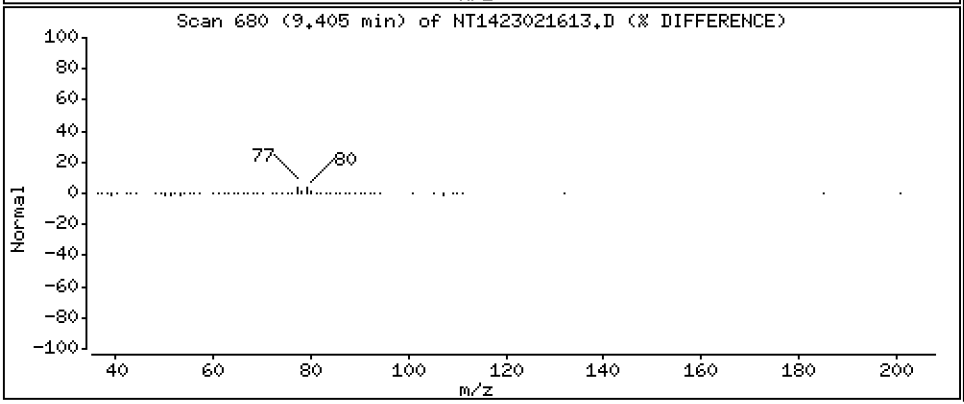
13 2-Methylphenol

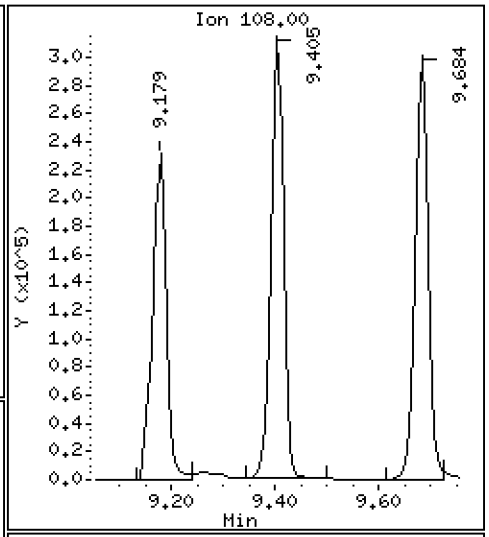
Concentration: 4.368 ug/mL

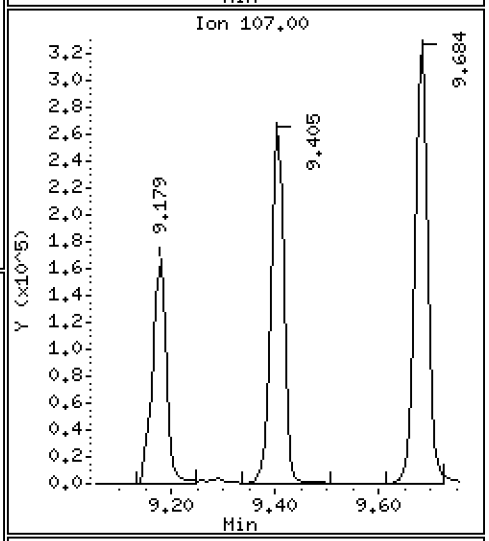


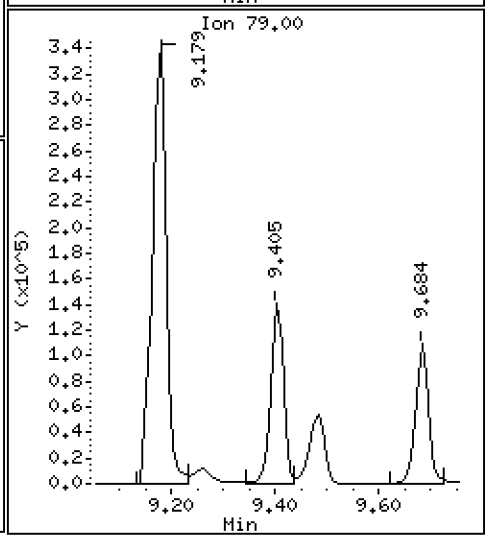












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

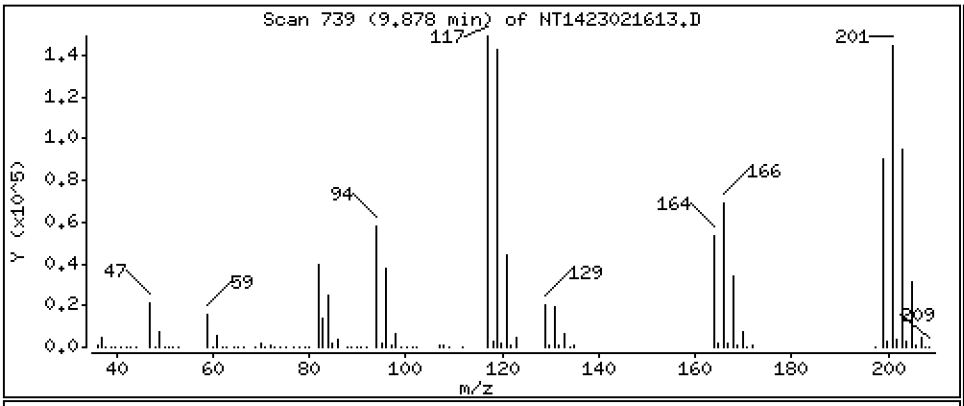
Operator: DSD

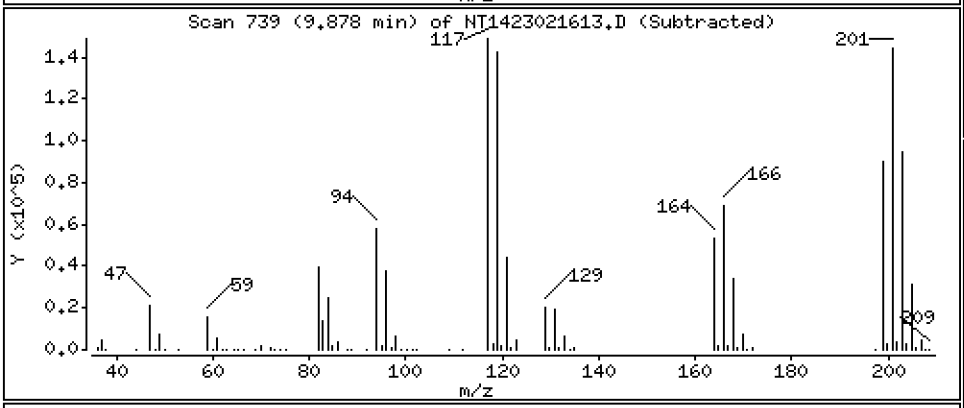
Column phase: ZB-5msi

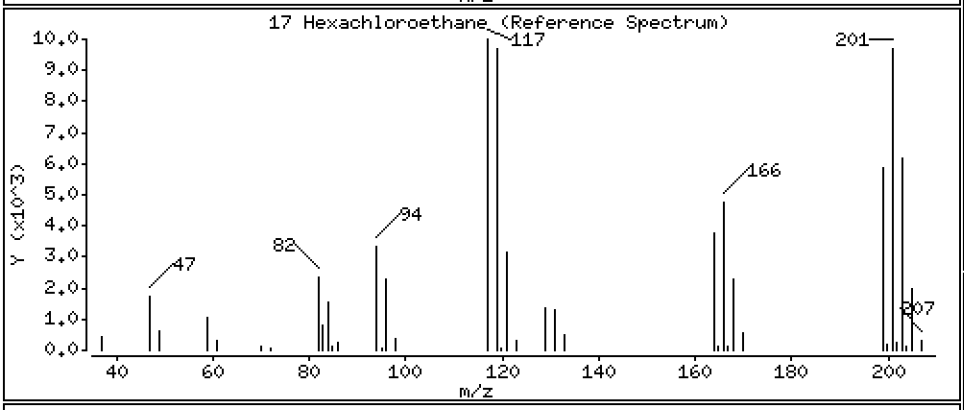
Column diameter: 0.25

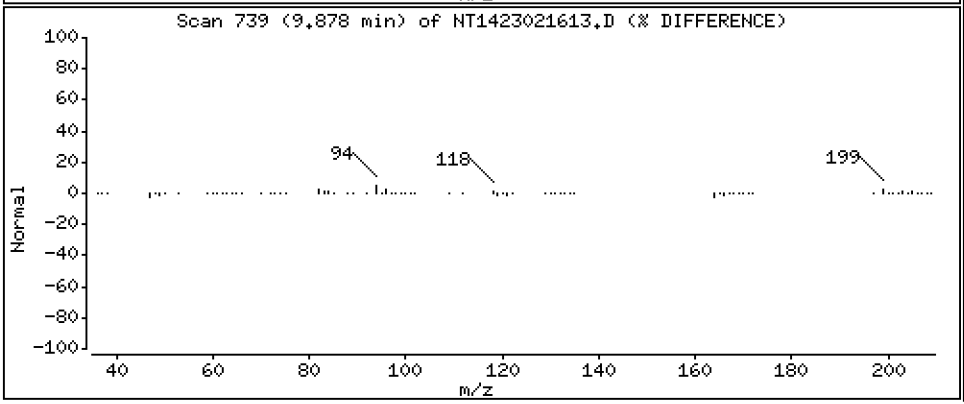
17 Hexachloroethane

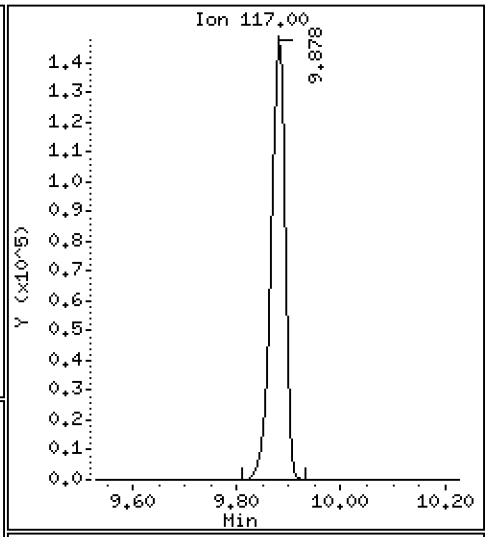
Concentration: 5.037 ug/mL

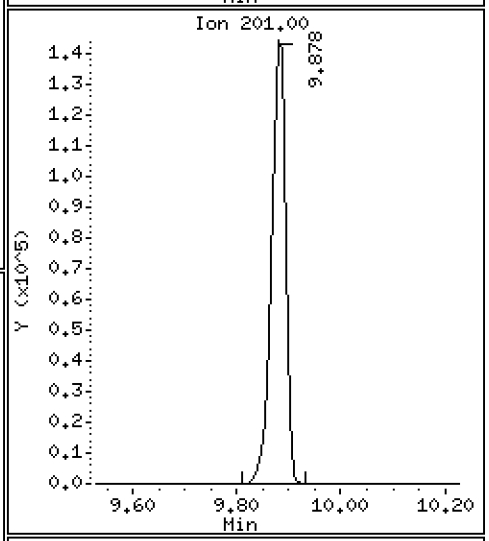


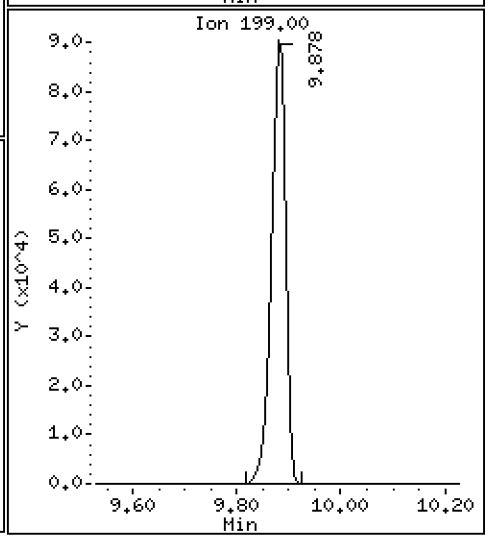












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

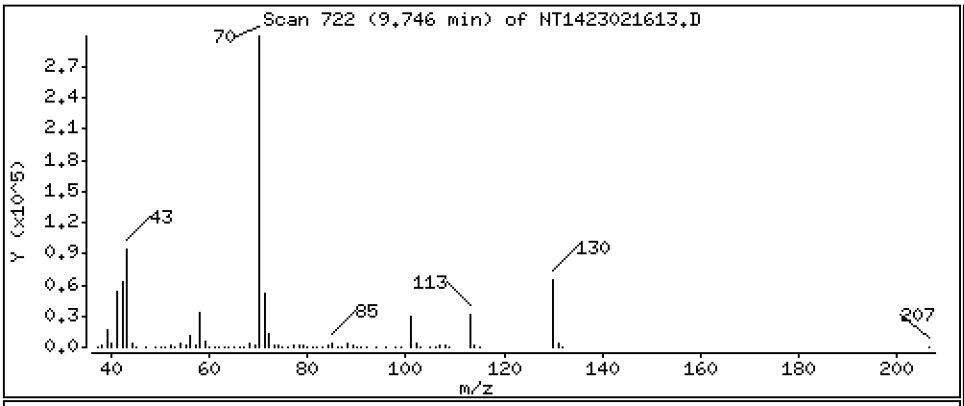
Operator: DSD

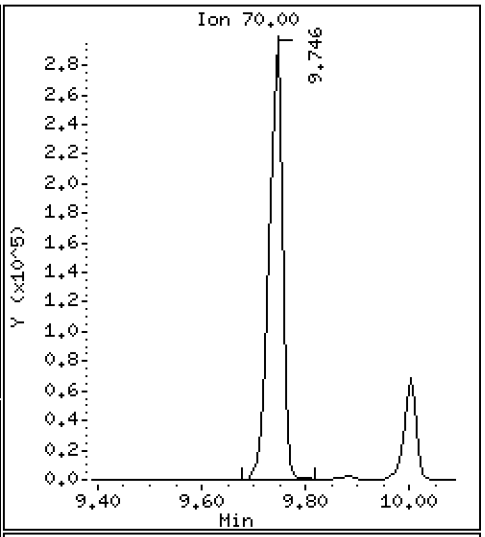
Column phase: ZB-5msi

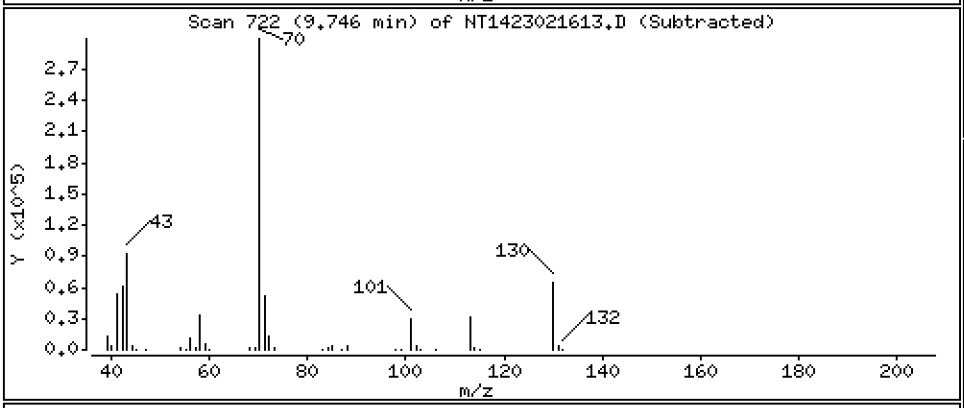
Column diameter: 0.25

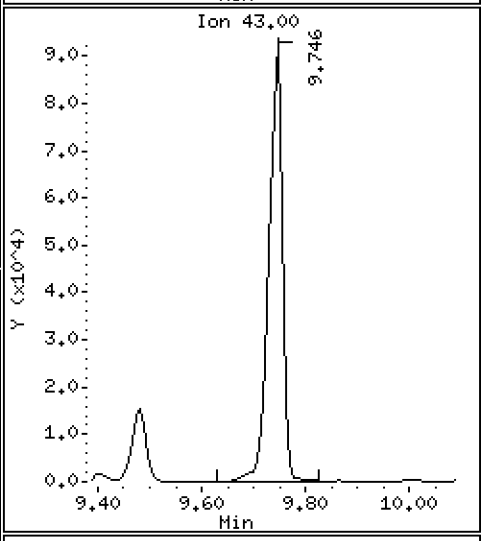
16 N-Nitroso-di-n-propylamine

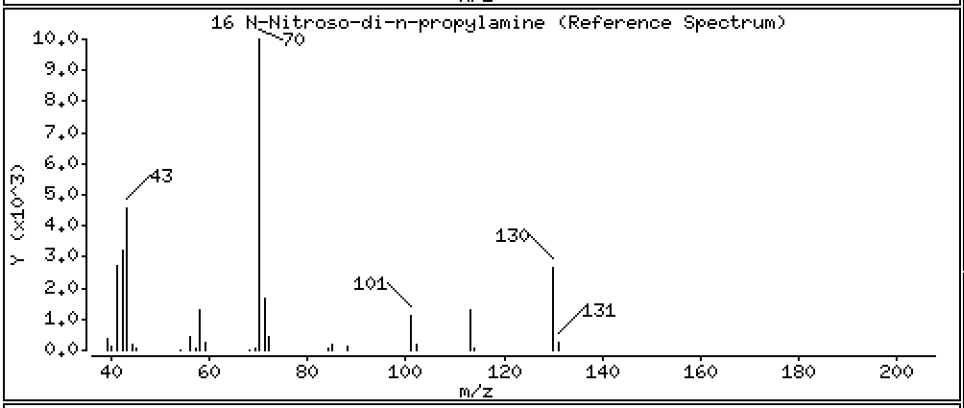
Concentration: 4.988 ug/mL

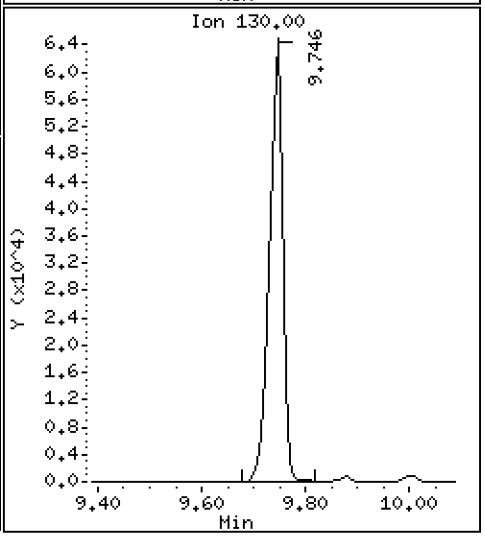


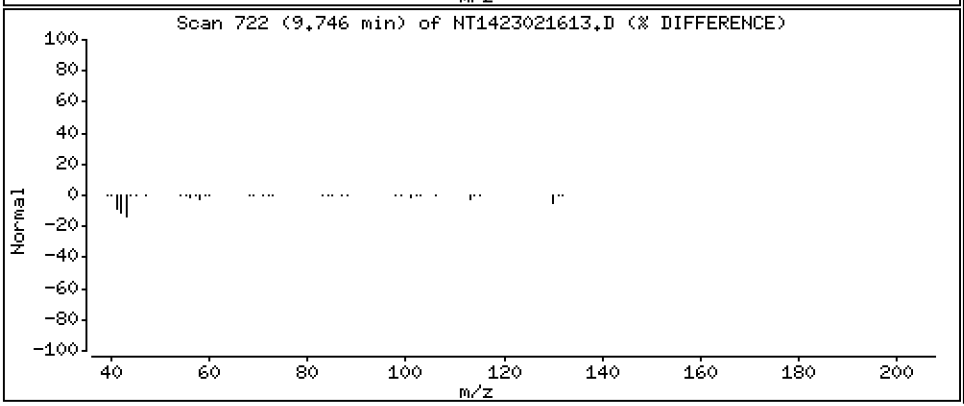












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

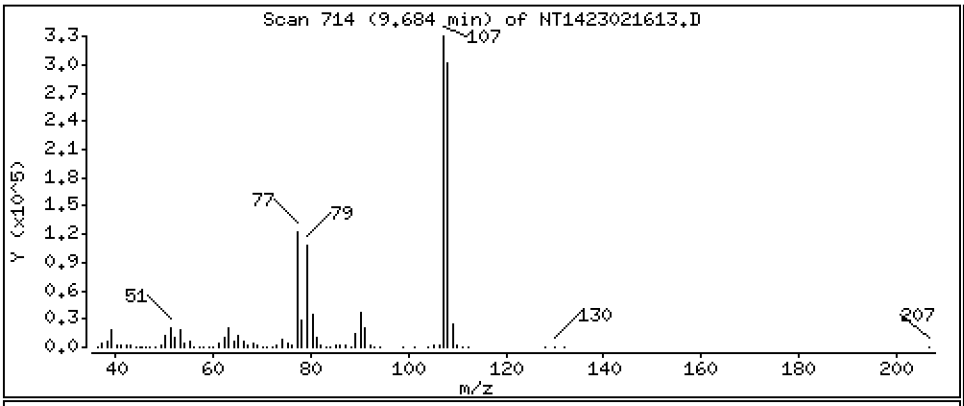
Operator: DSD

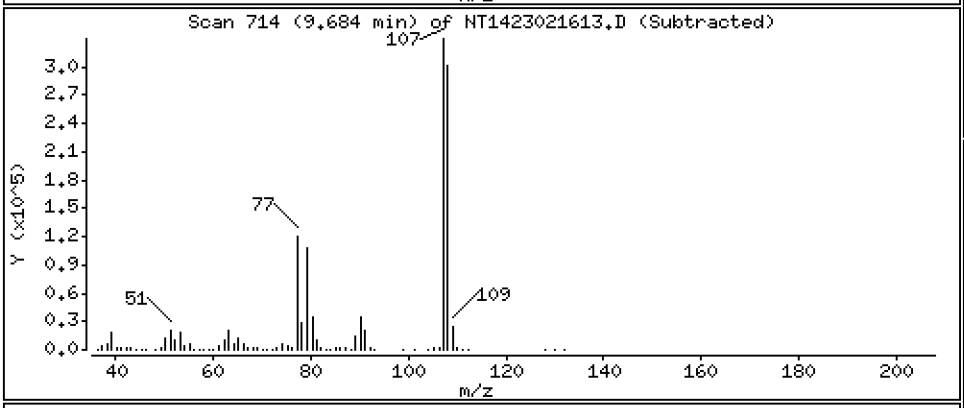
Column phase: ZB-5msi

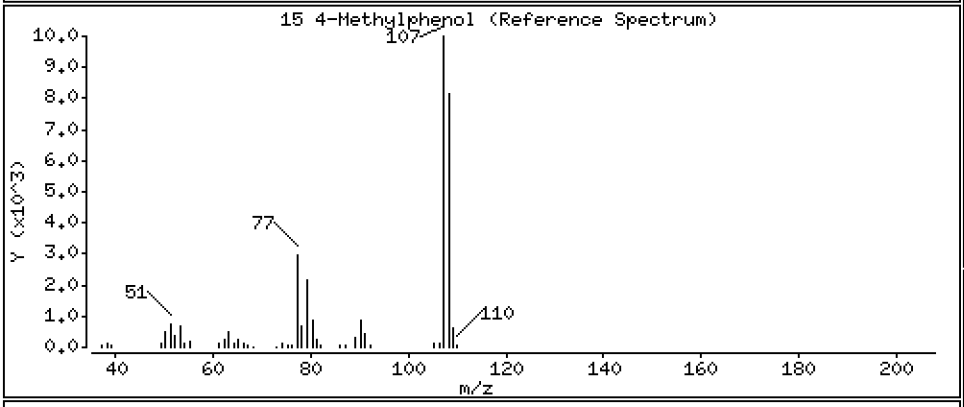
Column diameter: 0.25

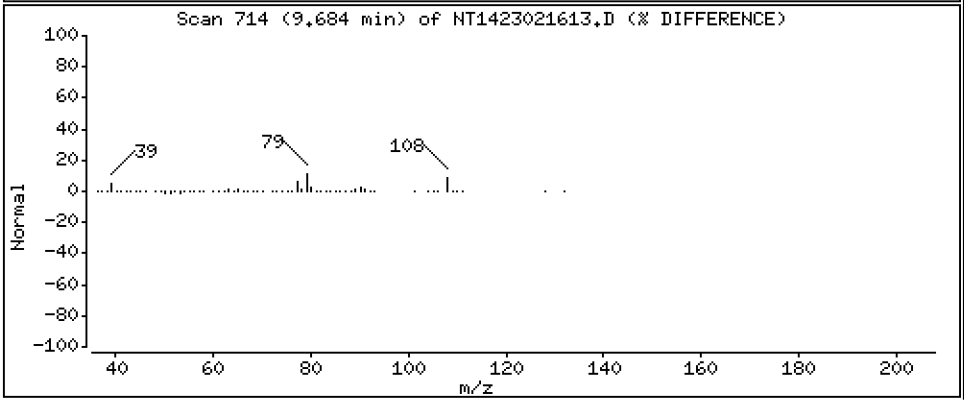
15 4-Methylphenol

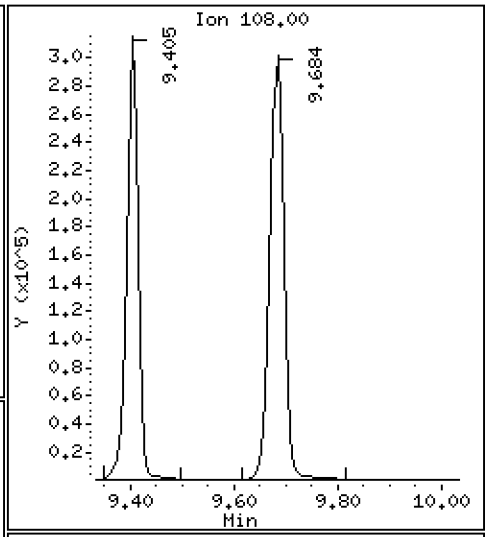
Concentration: 4.591 ug/mL

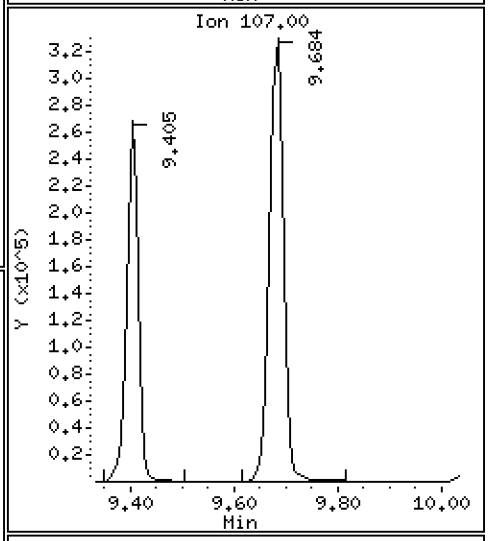


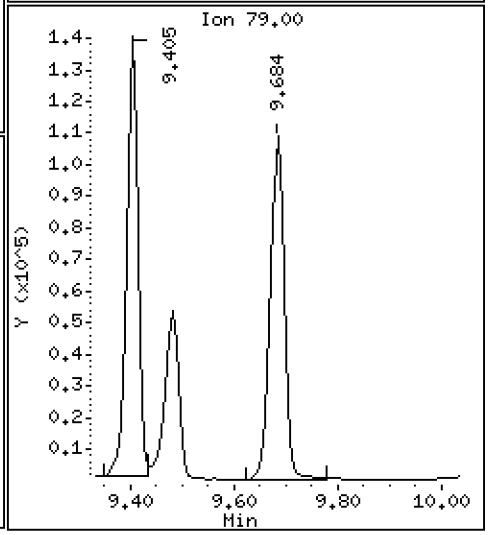












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

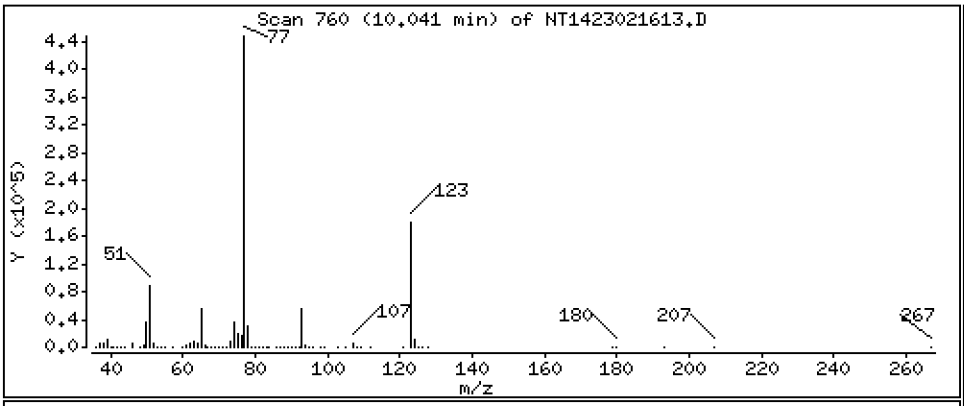
Operator: DSD

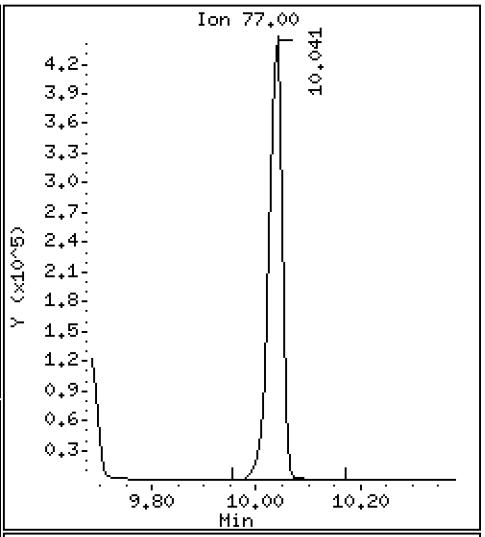
Column phase: ZB-5msi

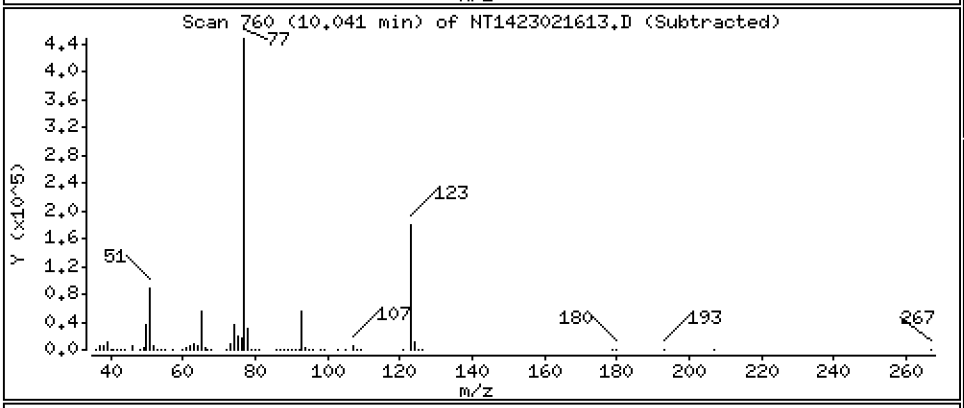
Column diameter: 0.25

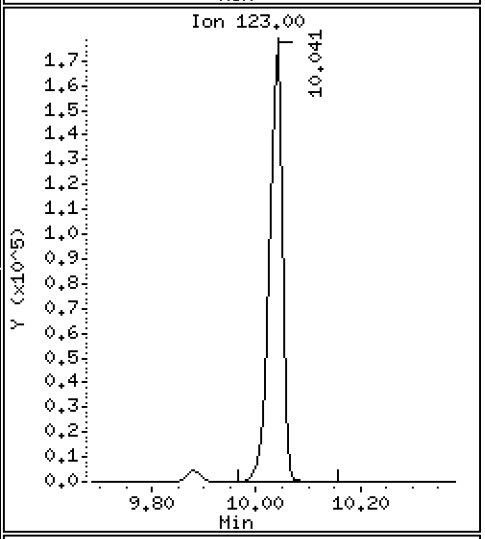
19 Nitrobenzene

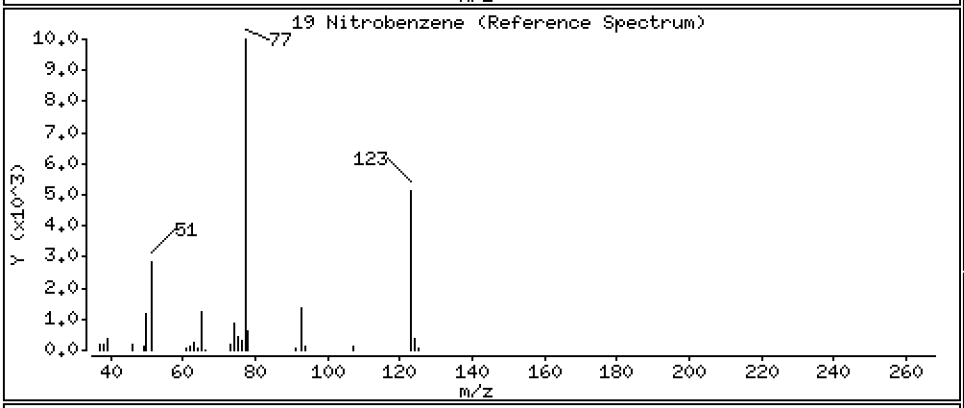
Concentration: 4.949 ug/mL

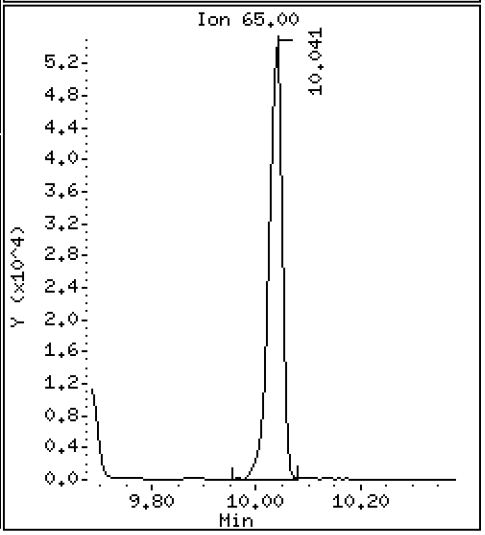


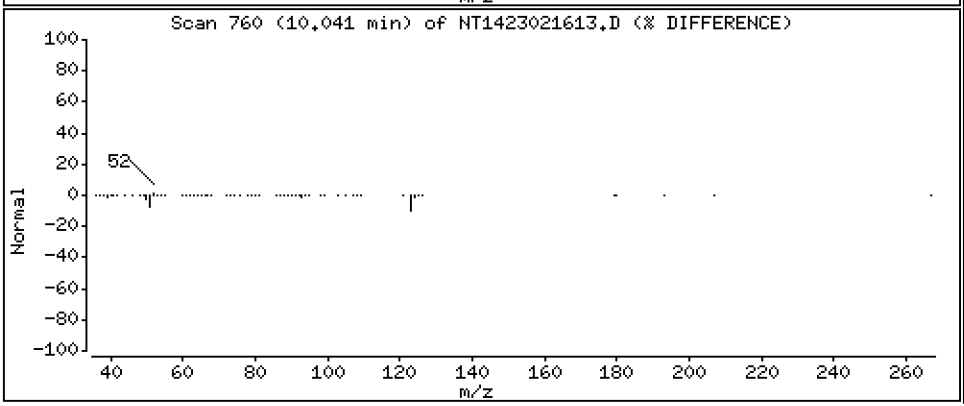












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

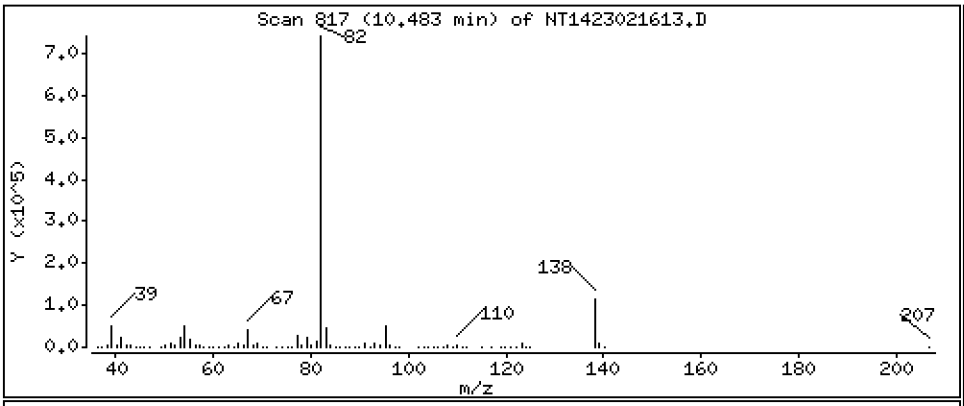
Operator: DSD

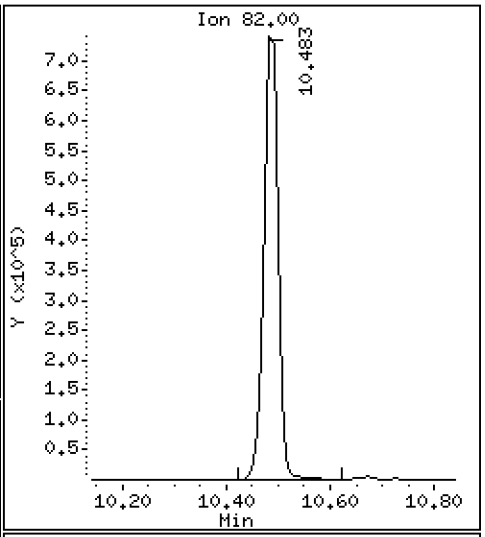
Column phase: ZB-5msi

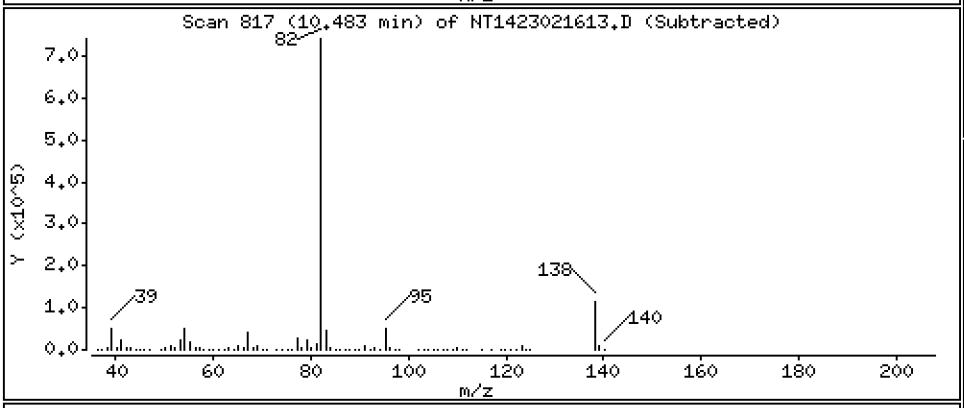
Column diameter: 0.25

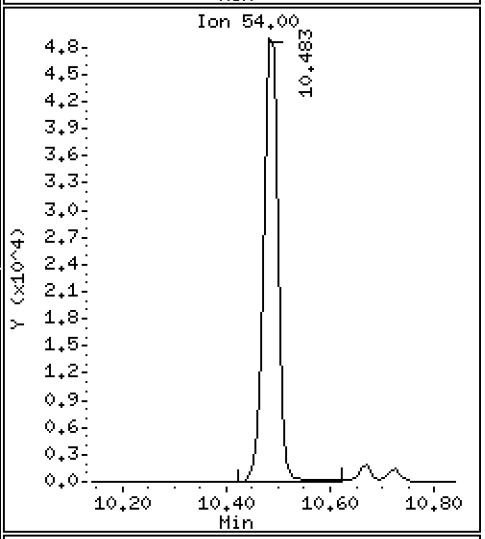
20 Isophorone

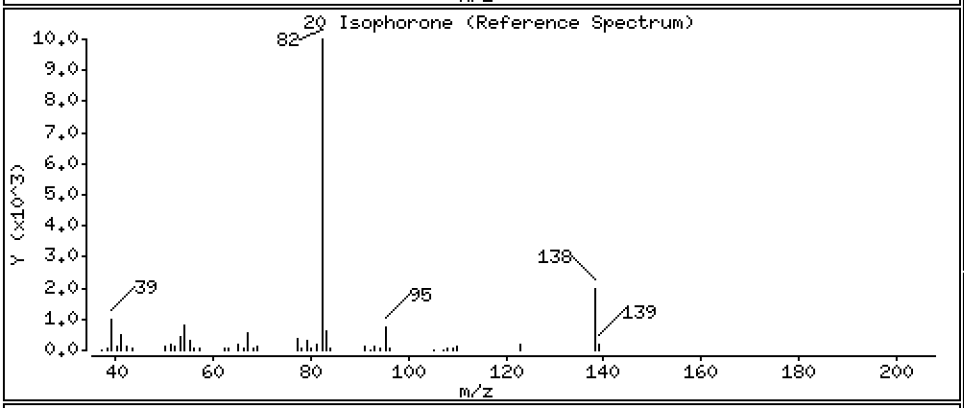
Concentration: 7.094 ug/mL

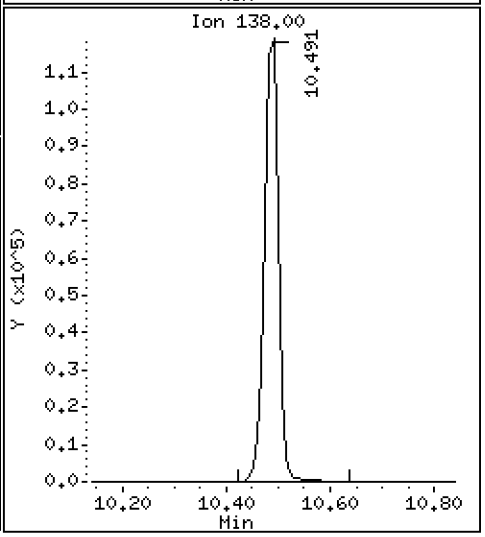


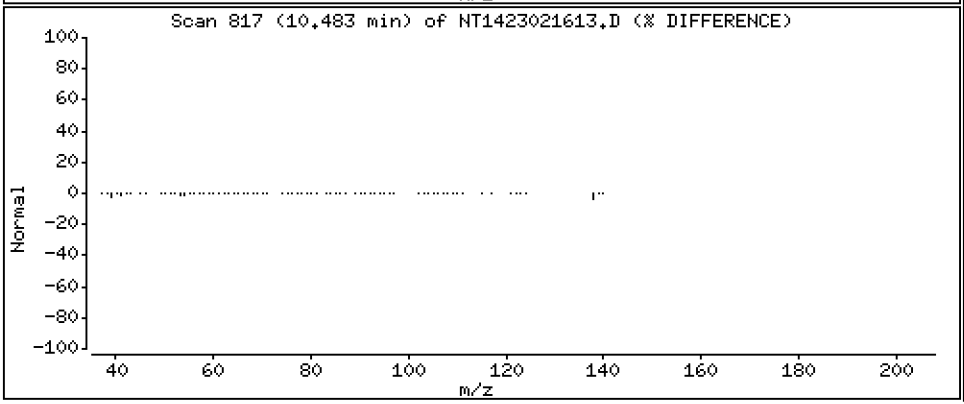












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

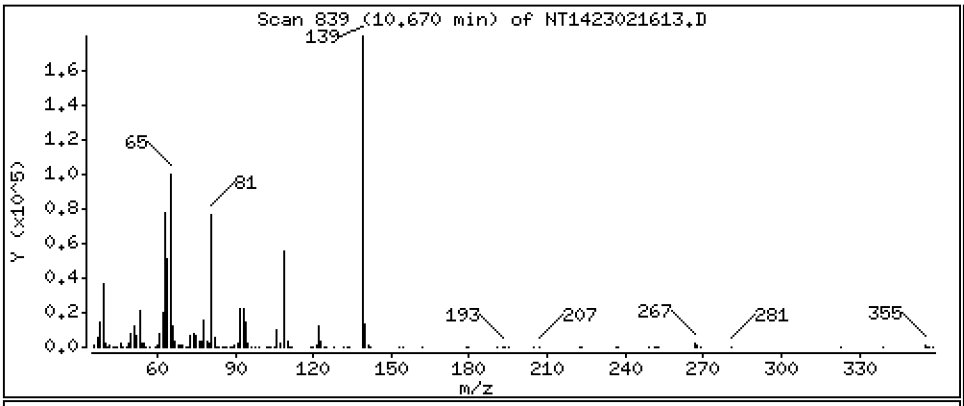
Operator: DSD

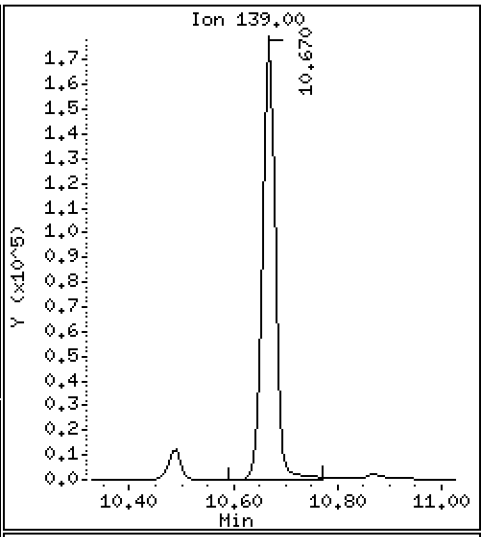
Column phase: ZB-5msi

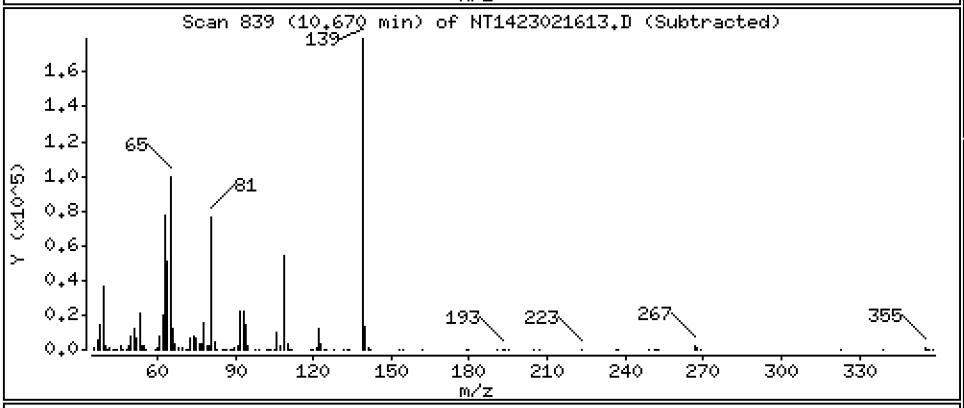
Column diameter: 0.25

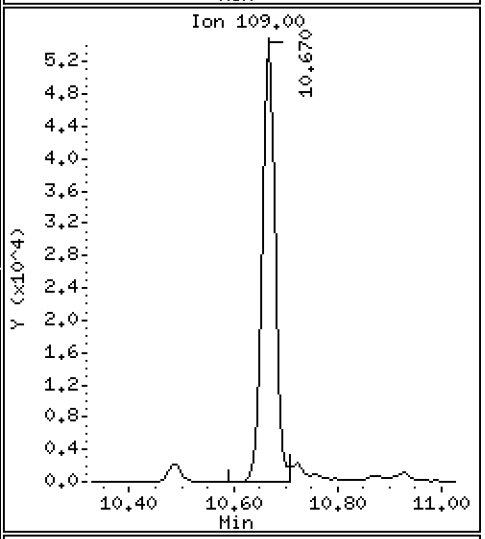
21 2-Nitrophenol

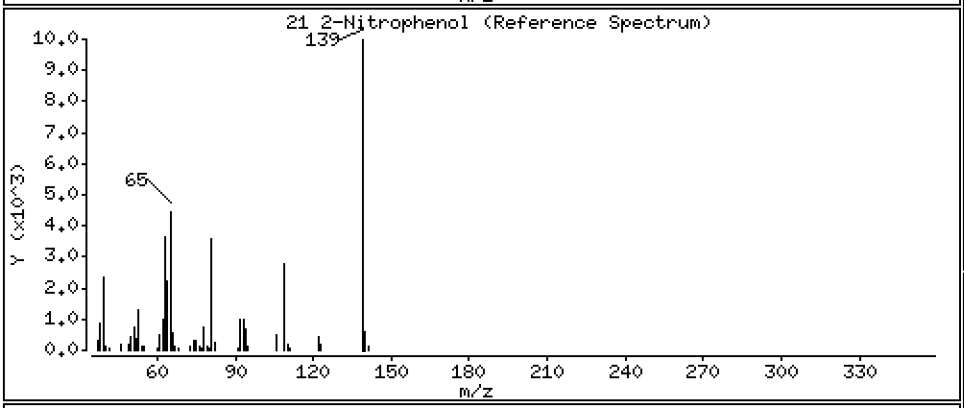
Concentration: 4.453 ug/mL

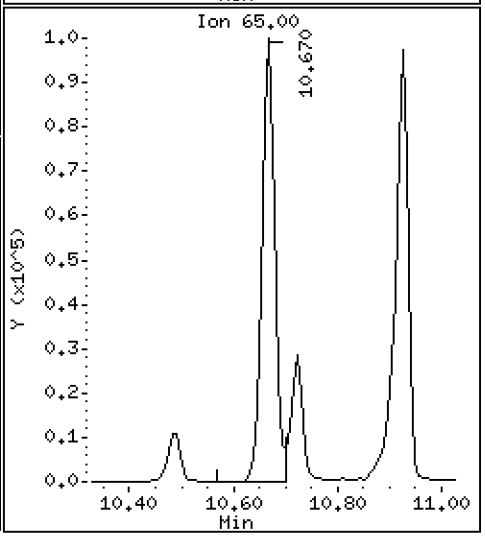


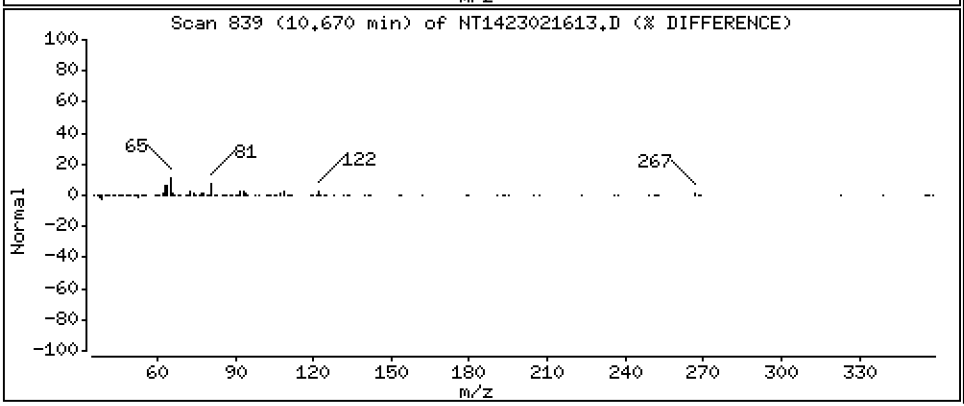












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

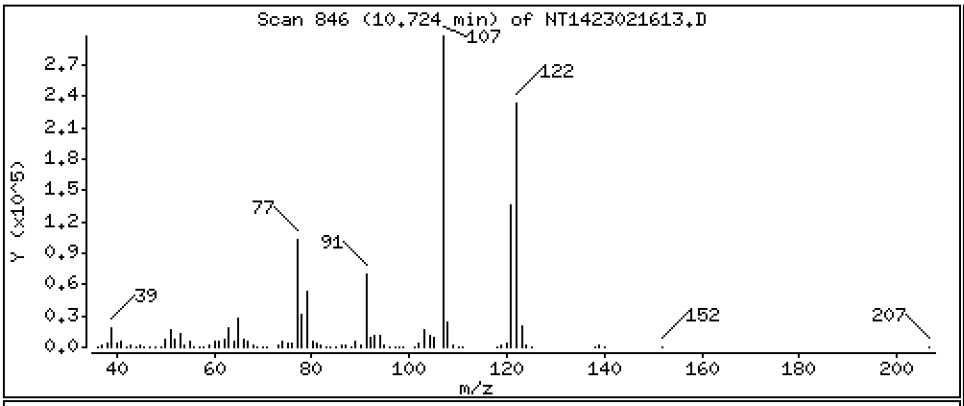
Operator: DSD

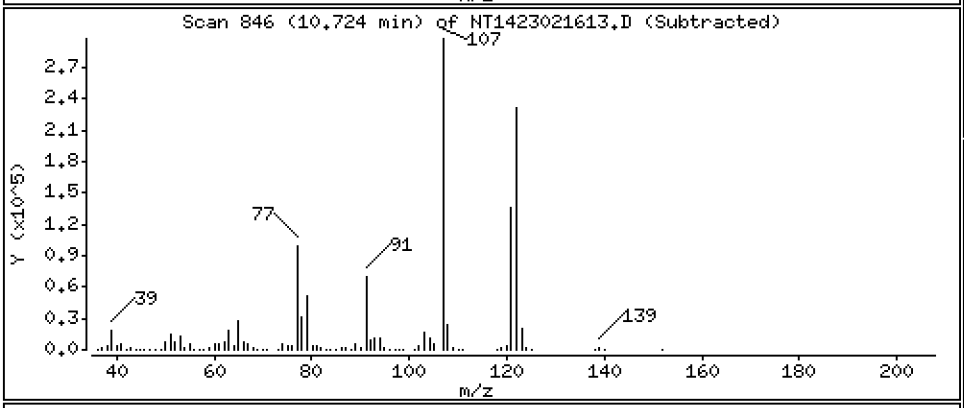
Column phase: ZB-5msi

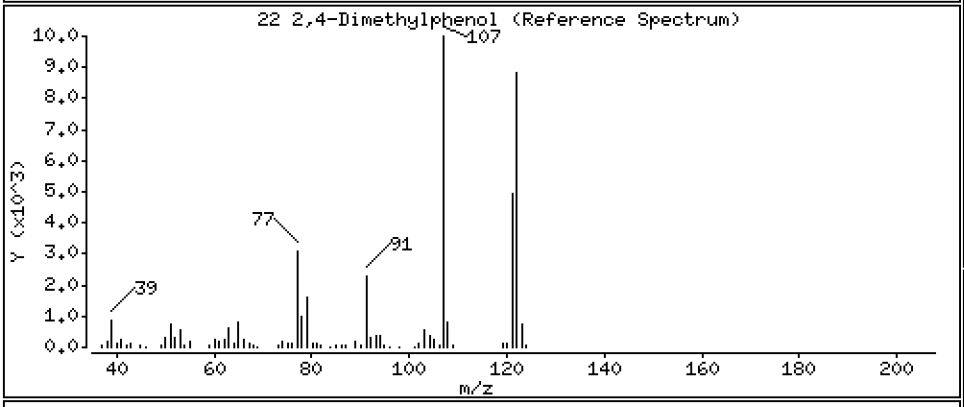
Column diameter: 0.25

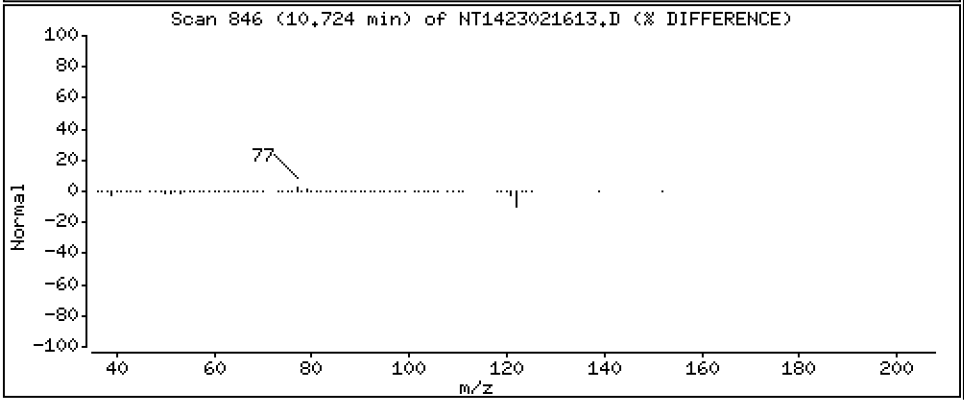
22 2,4-Dimethylphenol

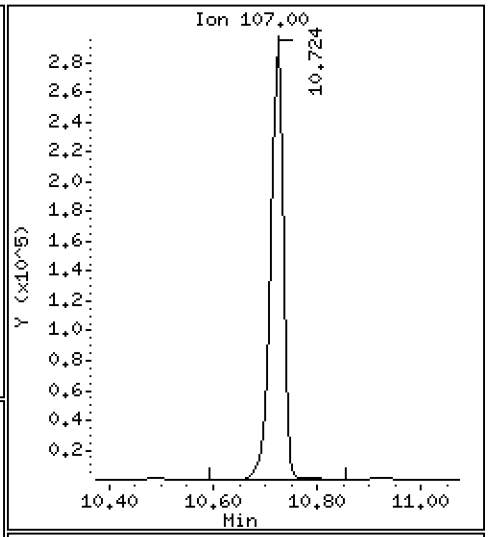
Concentration: 4.274 ug/mL

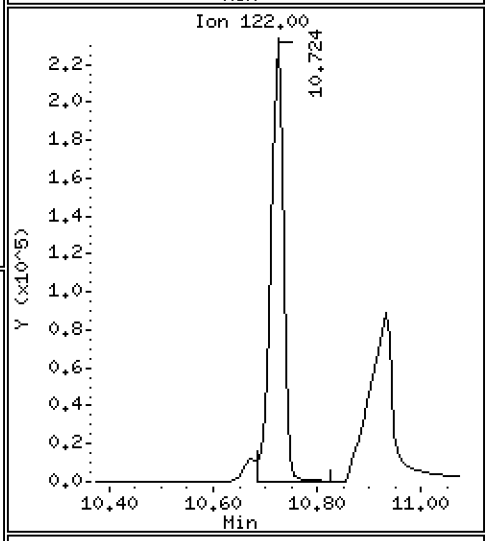


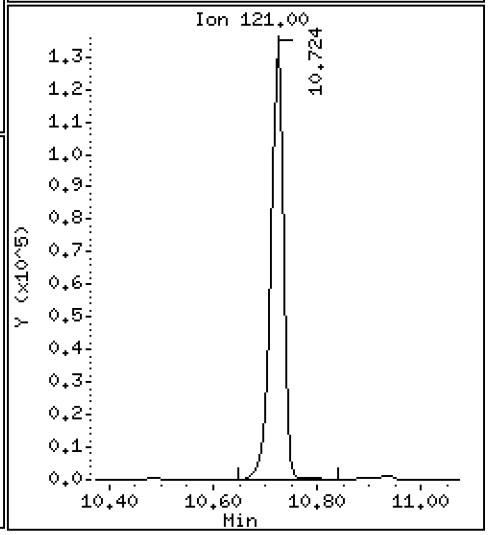












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

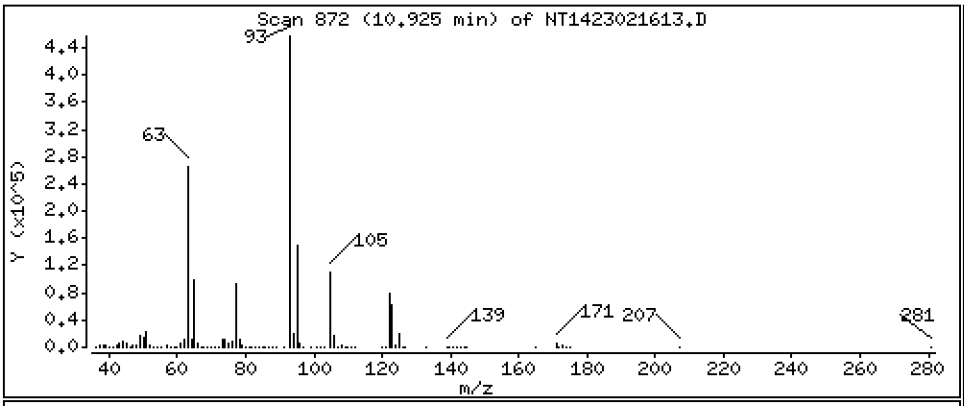
Operator: DSD

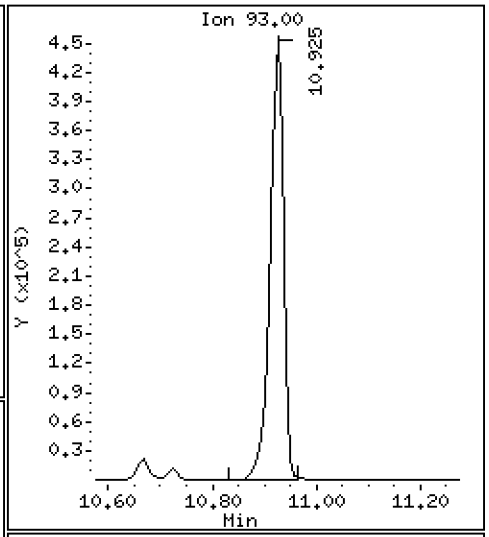
Column phase: ZB-5msi

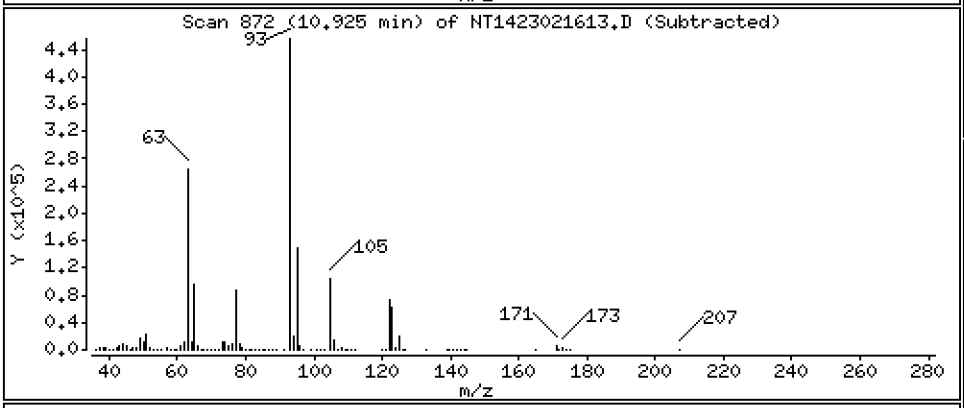
Column diameter: 0.25

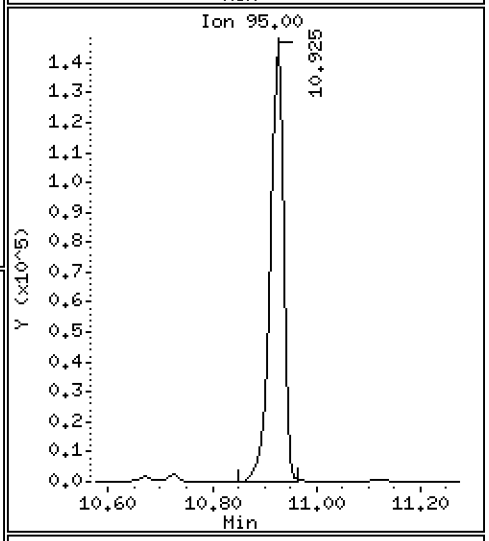
23 Bis(2-Chloroethoxy)methane

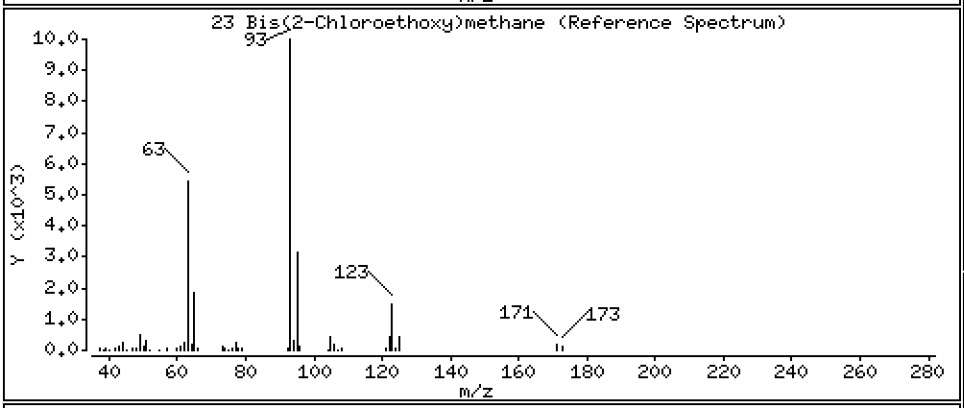
Concentration: 5.740 ug/mL

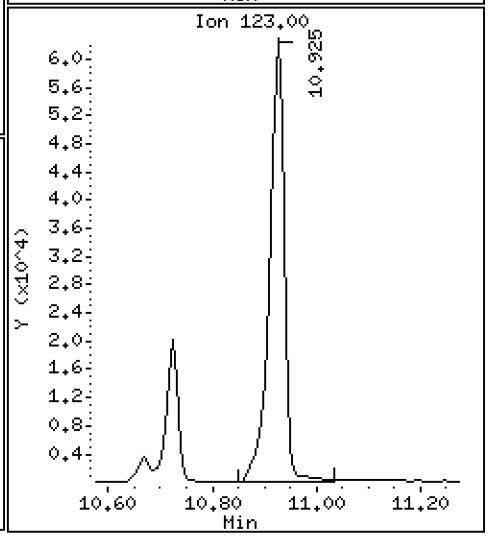


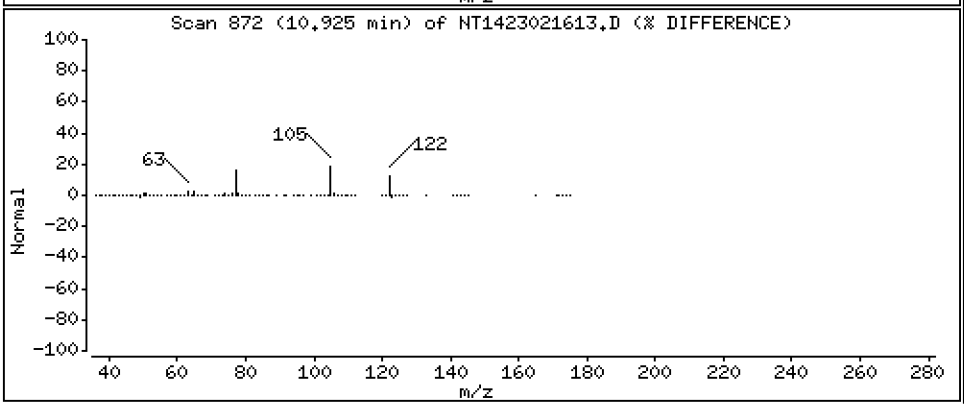












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

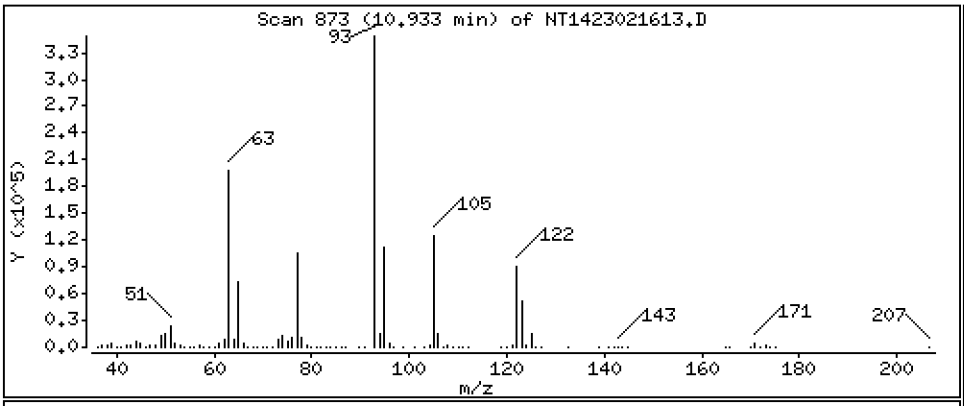
Operator: DSD

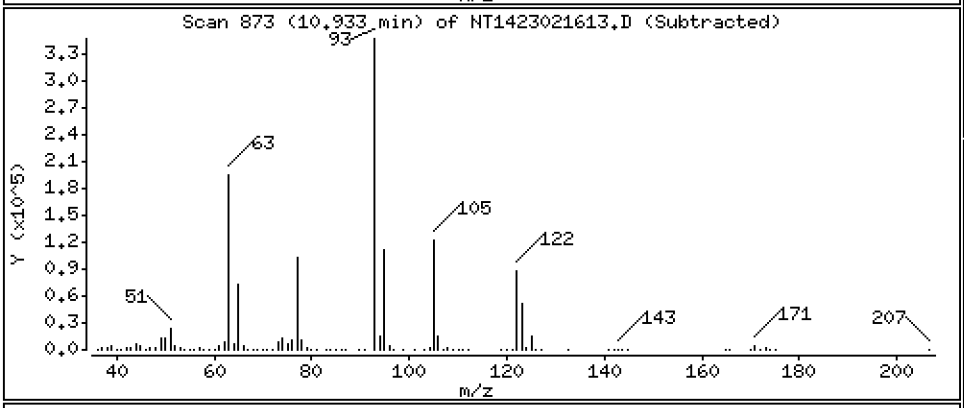
Column phase: ZB-5msi

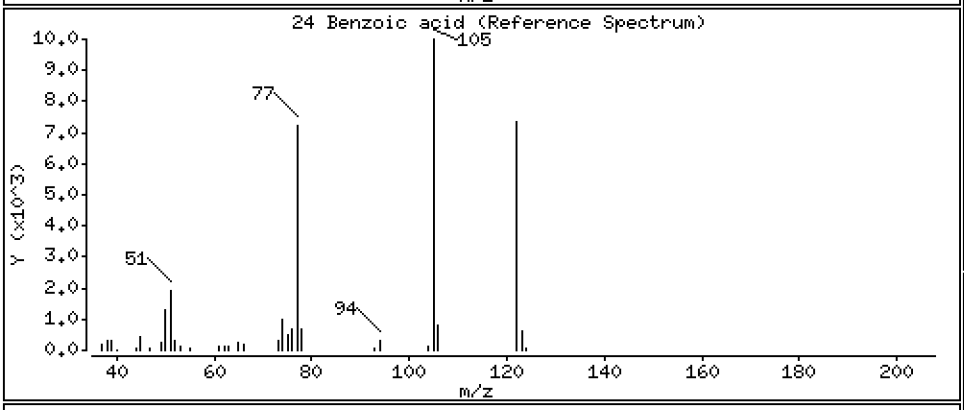
Column diameter: 0.25

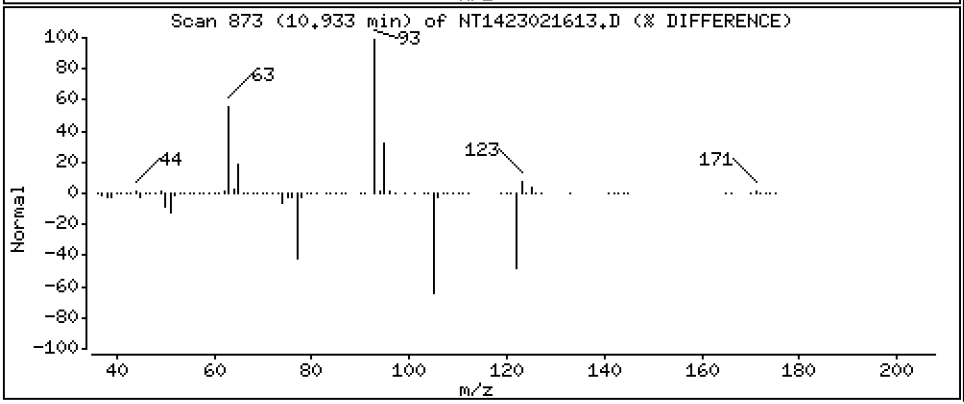
24 Benzoic acid

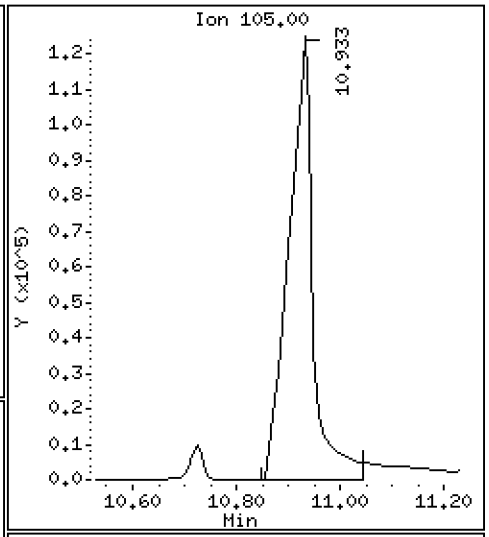
Concentration: 5.510 ug/mL

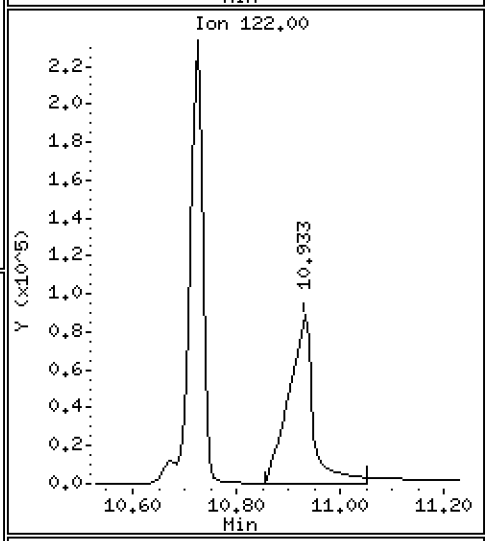


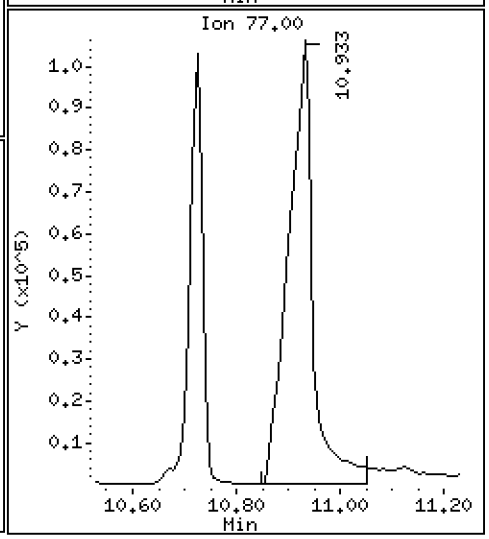












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

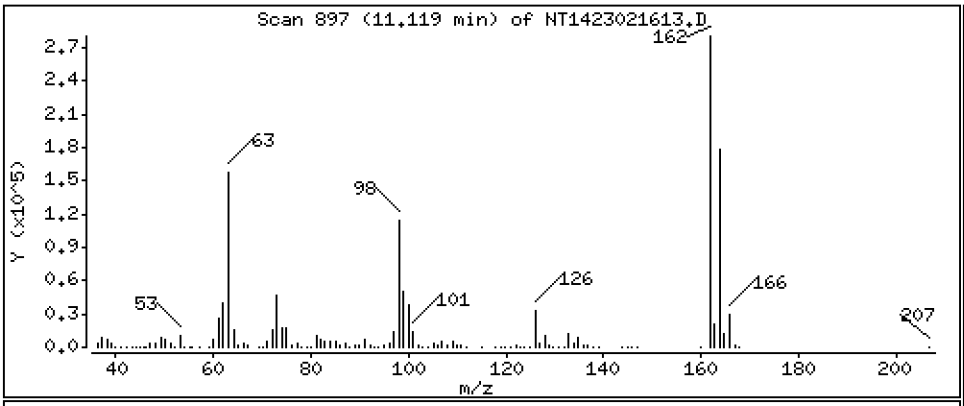
Operator: DSD

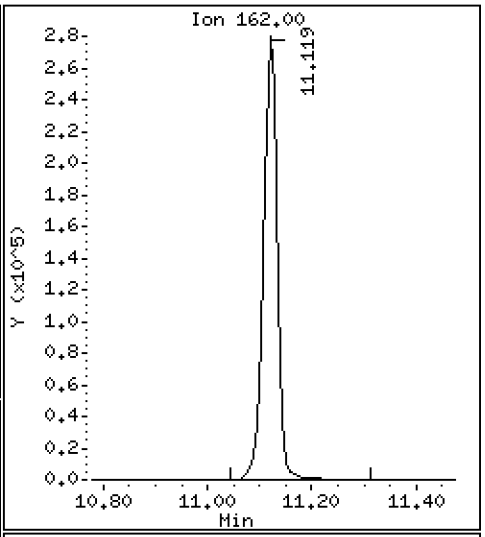
Column phase: ZB-5msi

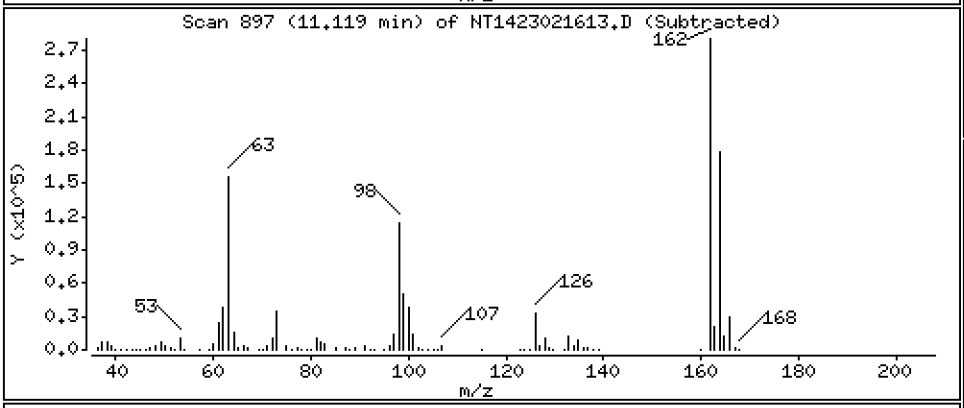
Column diameter: 0.25

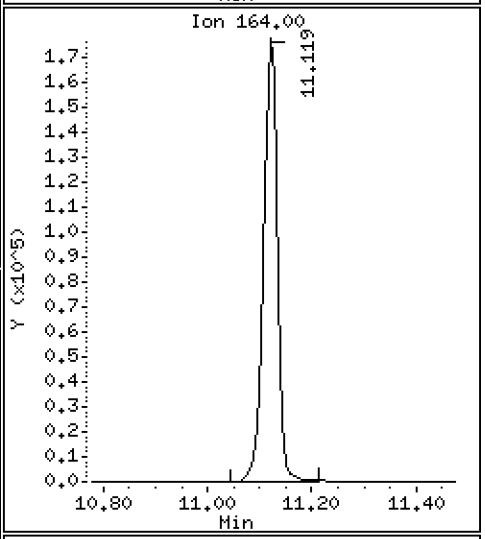
25 2,4-Dichlorophenol

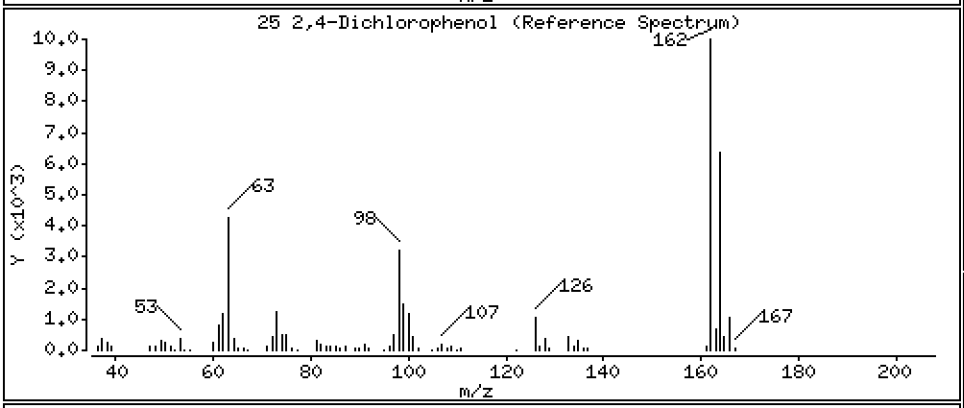
Concentration: 5.124 ug/mL

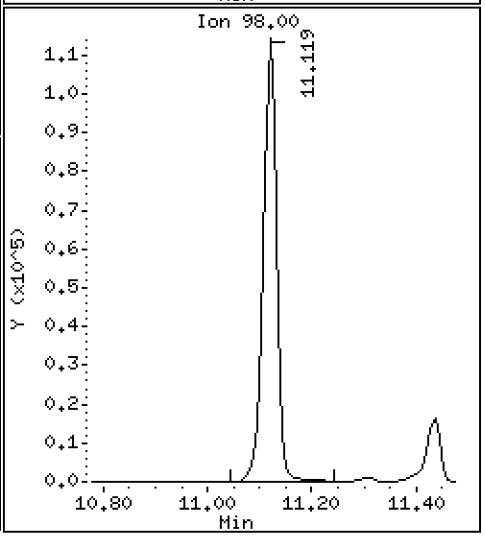


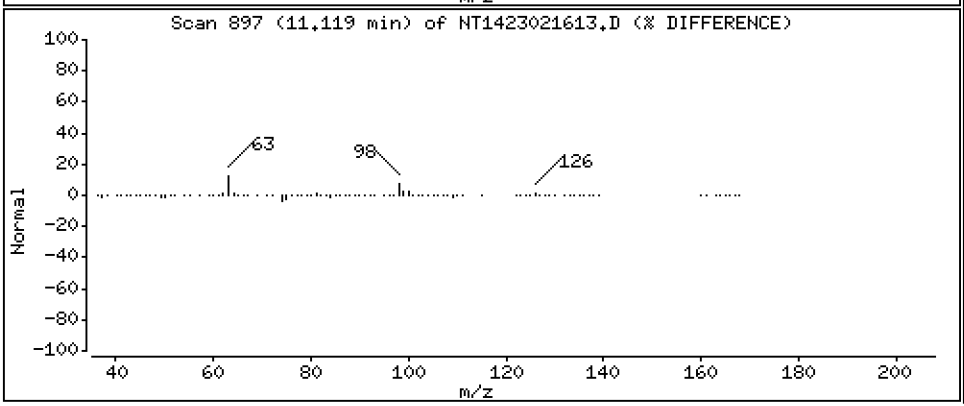












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

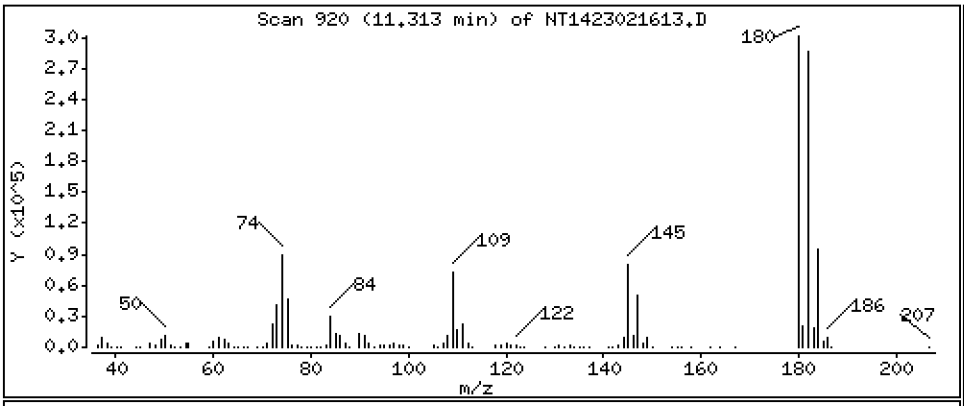
Operator: DSD

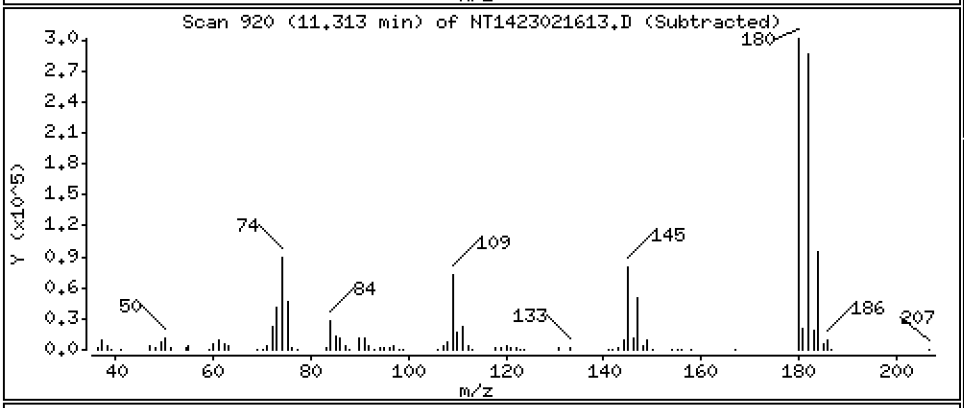
Column phase: ZB-5msi

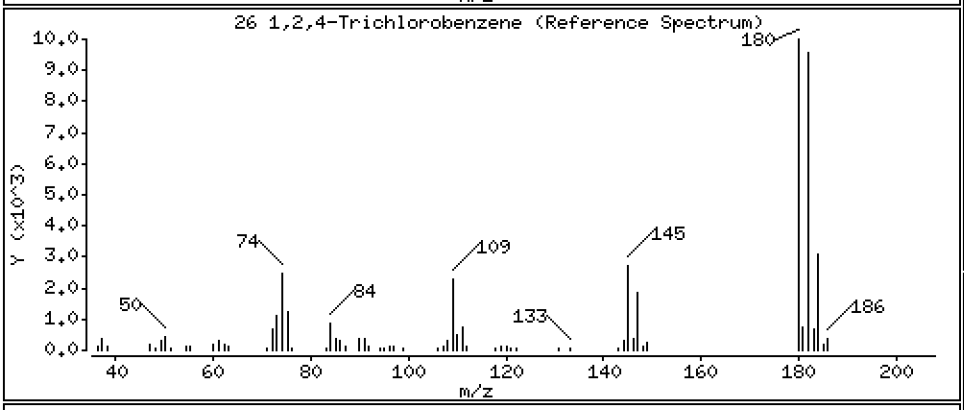
Column diameter: 0.25

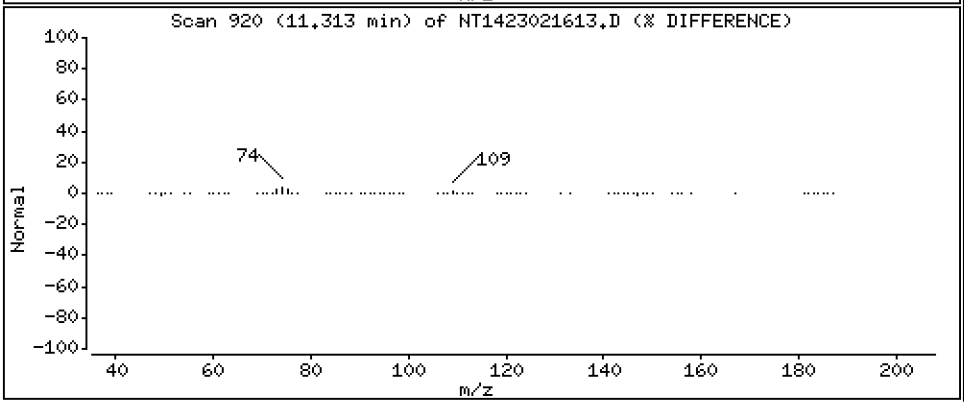
26 1,2,4-Trichlorobenzene

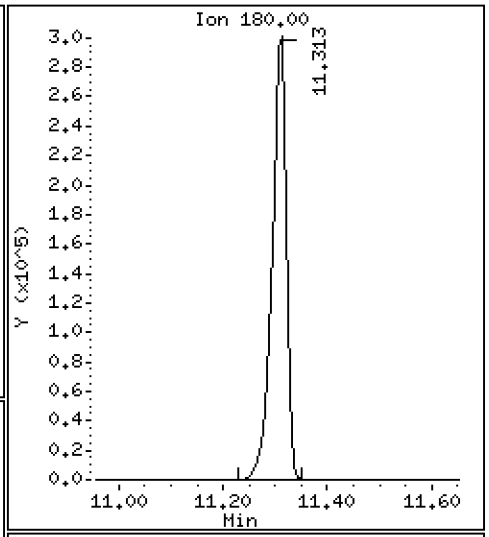
Concentration: 4.650 ug/mL

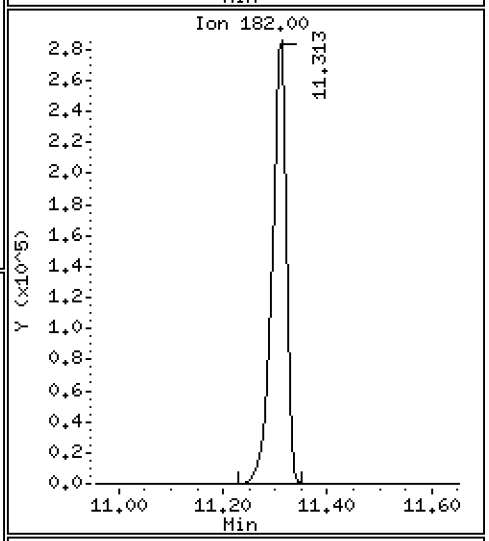


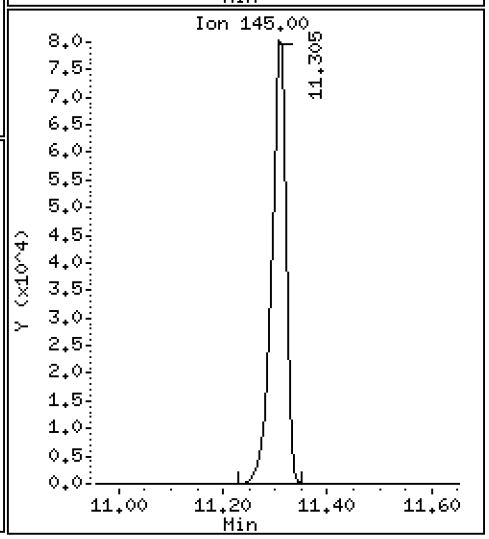












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

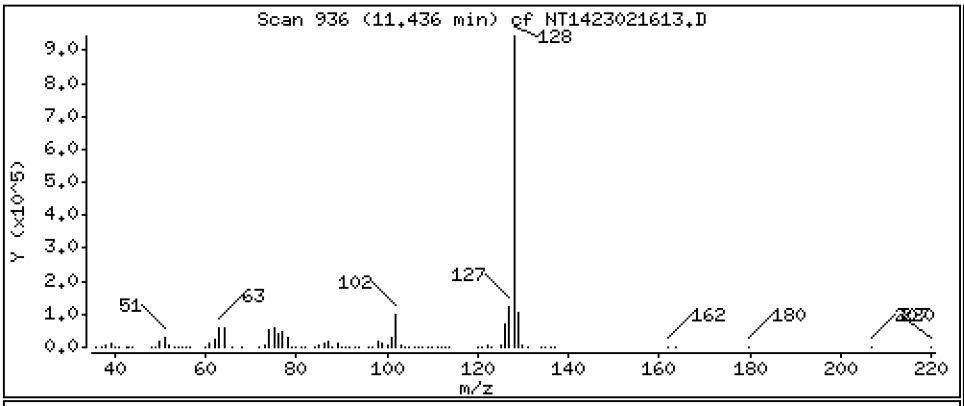
Operator: DSD

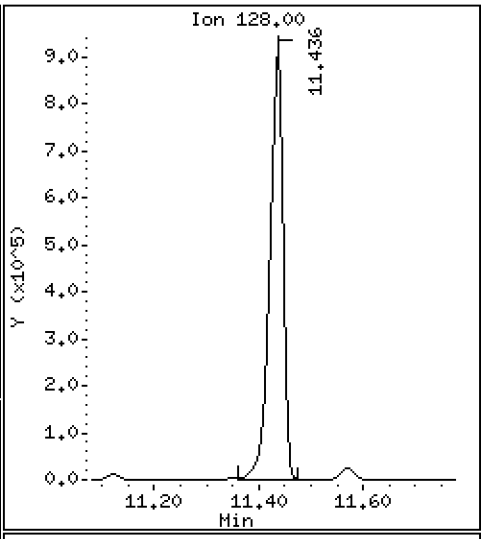
Column phase: ZB-5msi

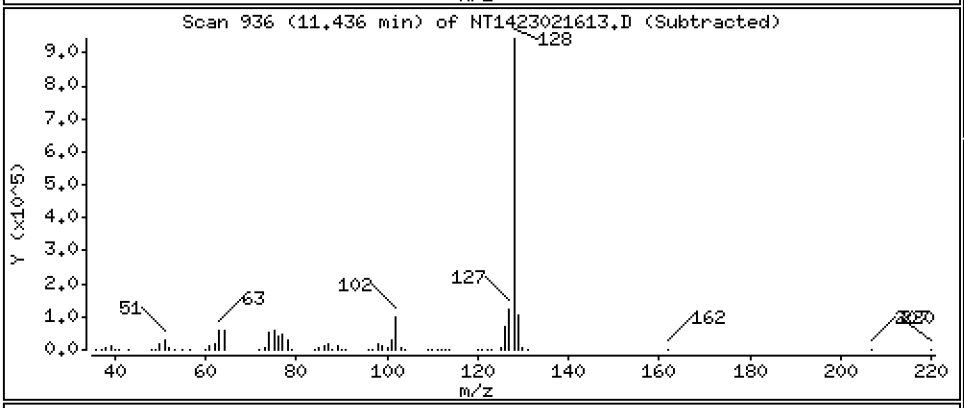
Column diameter: 0.25

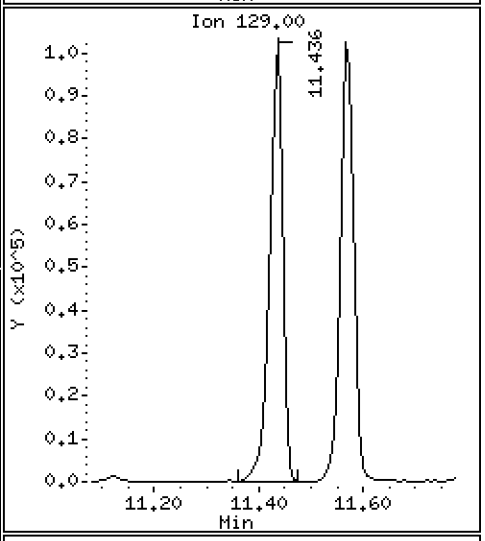
28 Naphthalene

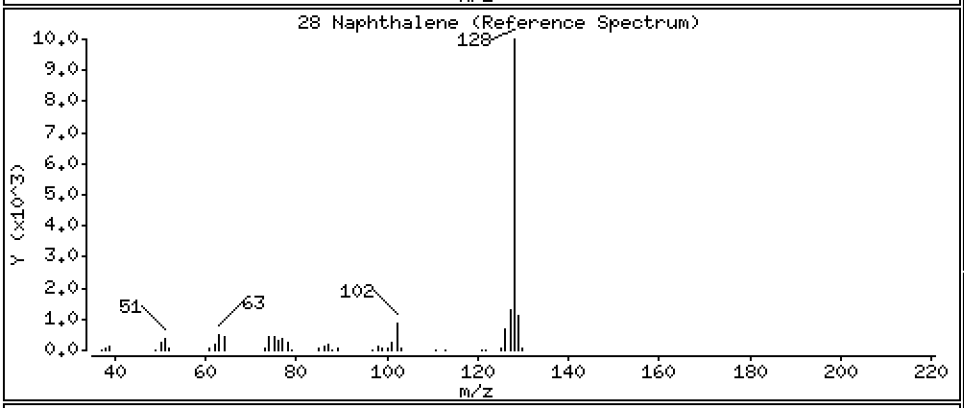
Concentration: 4.736 ug/mL

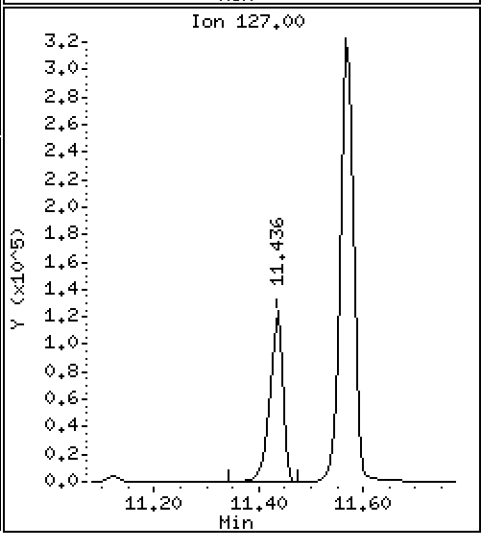


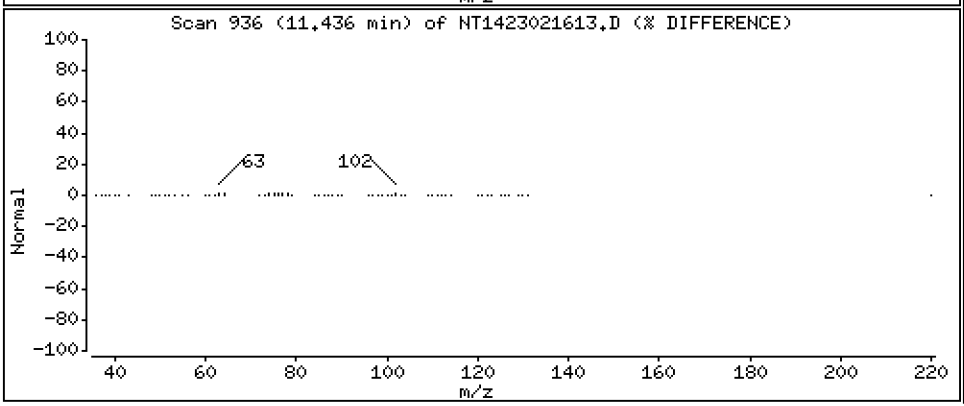












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

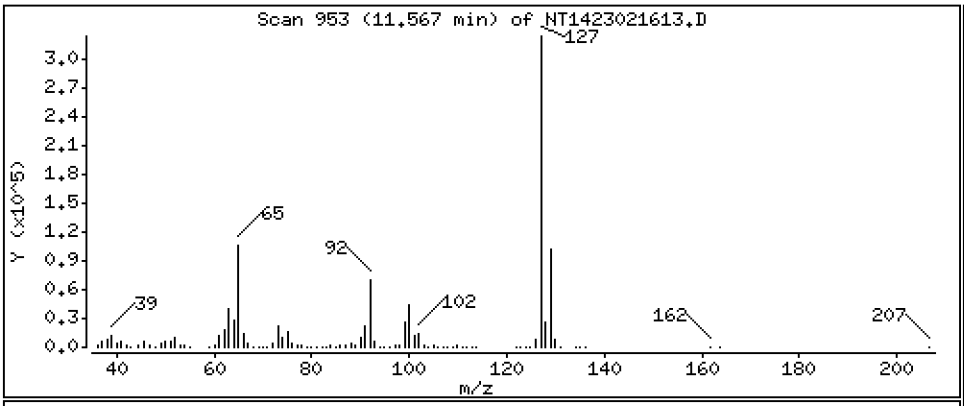
Operator: DSD

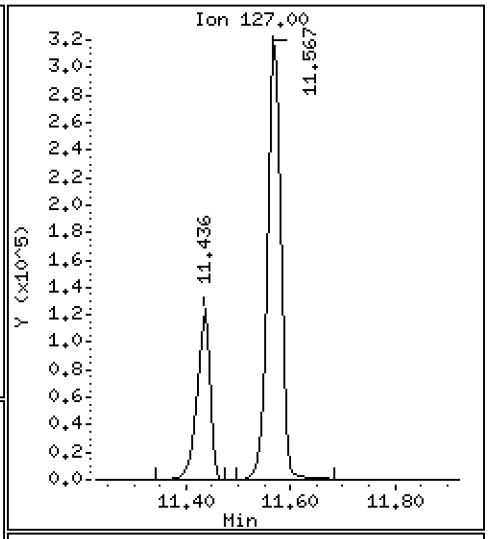
Column phase: ZB-5msi

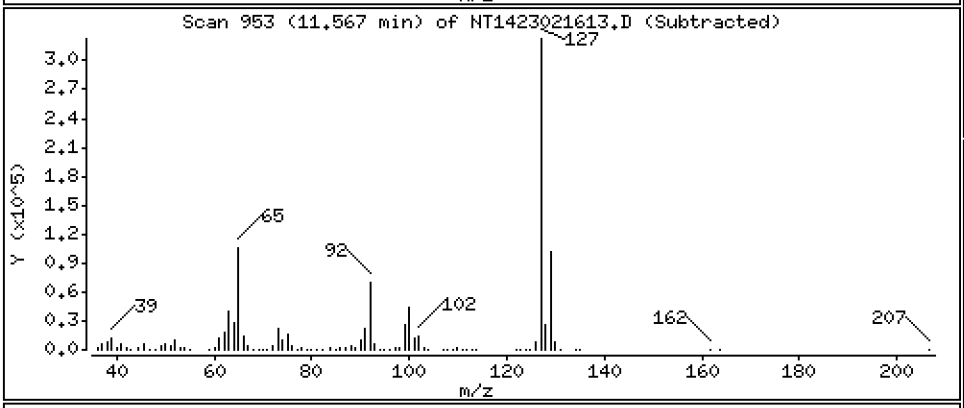
Column diameter: 0.25

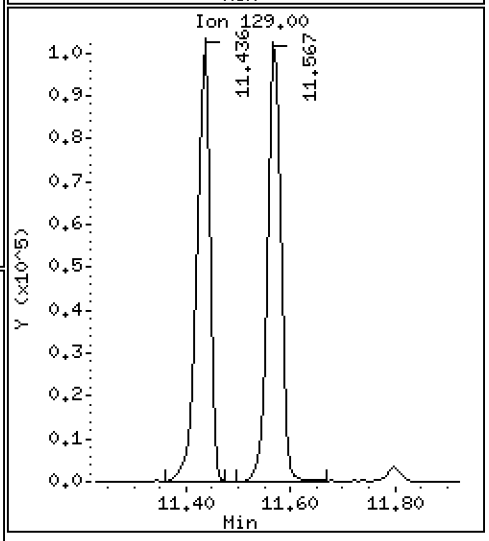
29 4-Chloroaniline

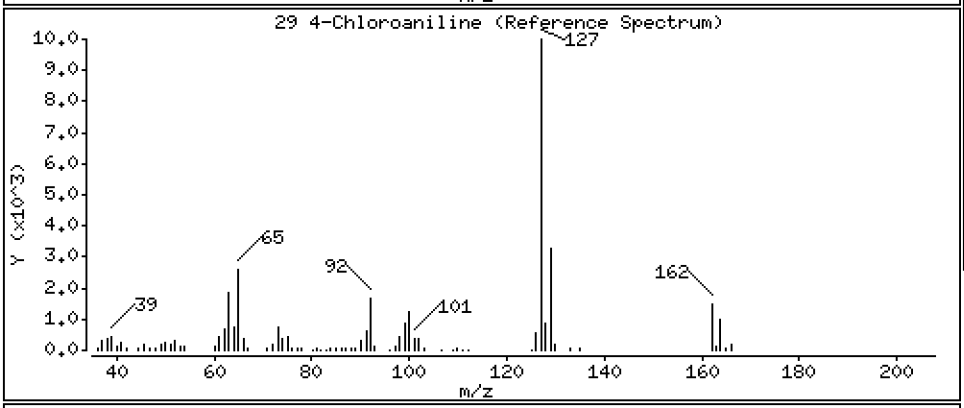
Concentration: 3.911 ug/mL

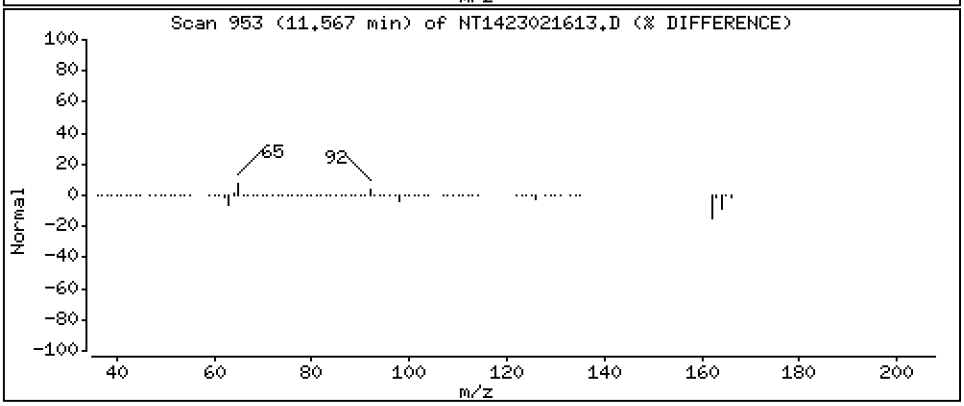












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

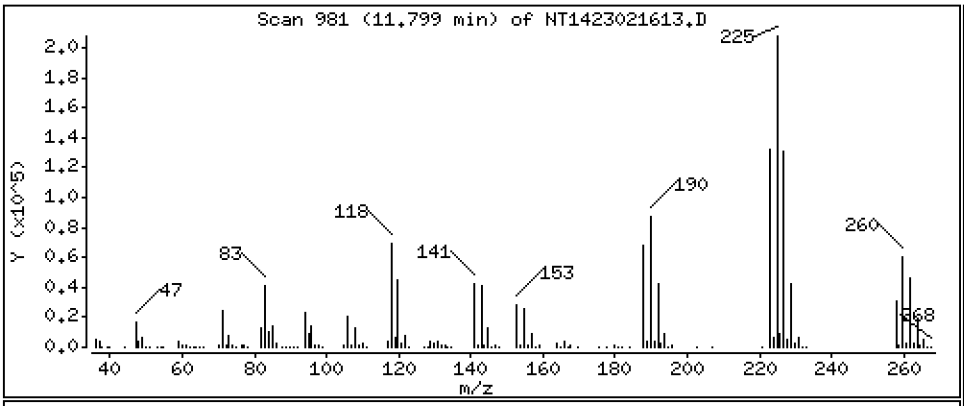
Operator: DSD

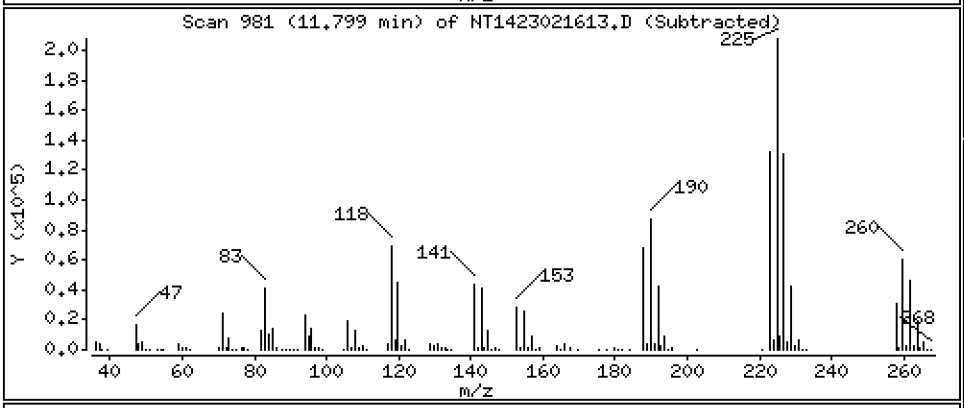
Column phase: ZB-5msi

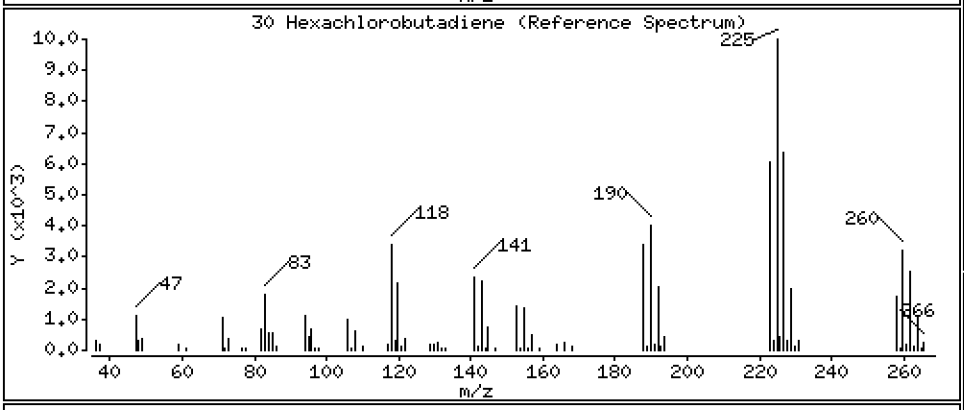
Column diameter: 0.25

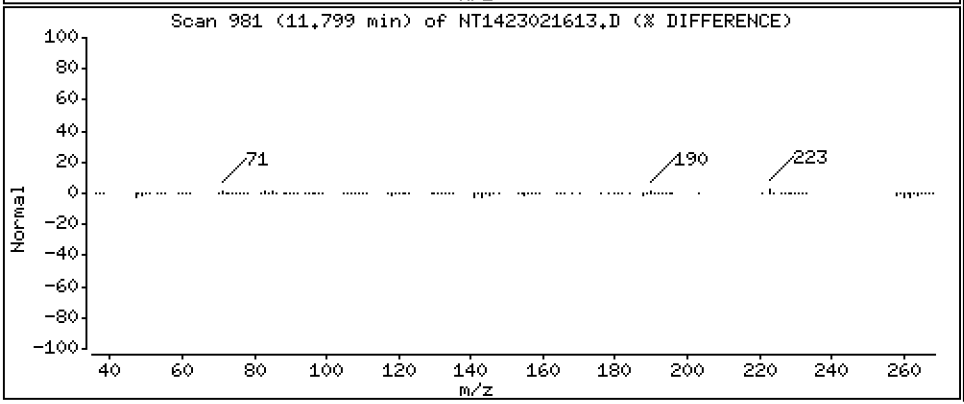
30 Hexachlorobutadiene

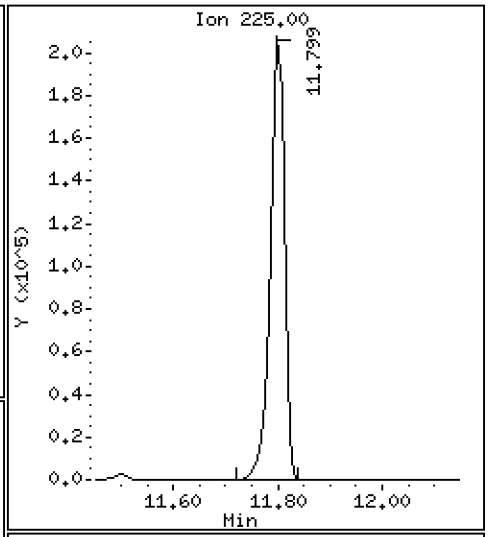
Concentration: 4.917 ug/mL

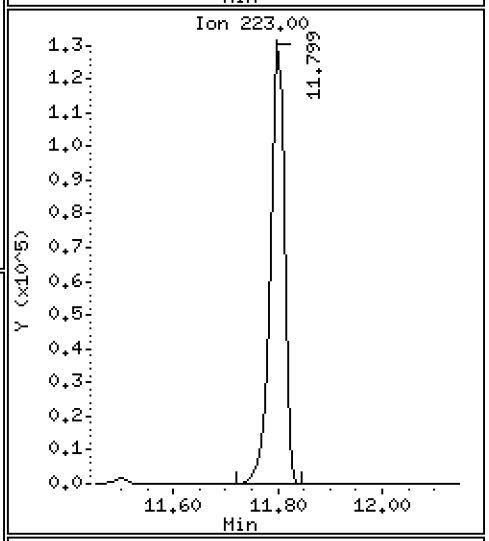


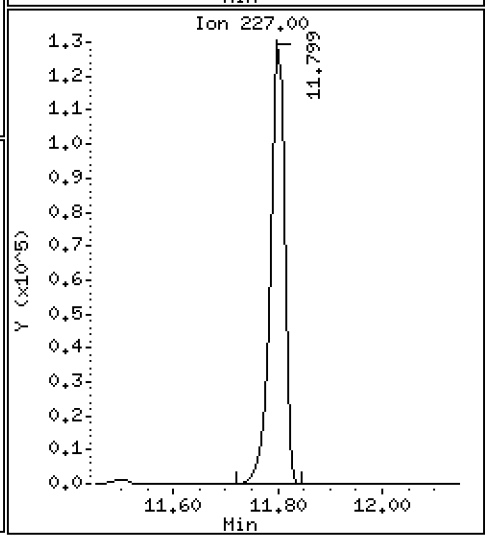












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

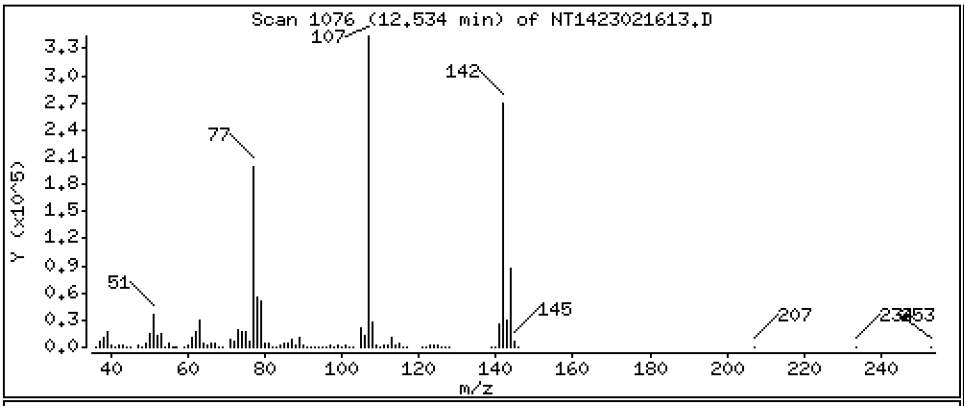
Operator: DSD

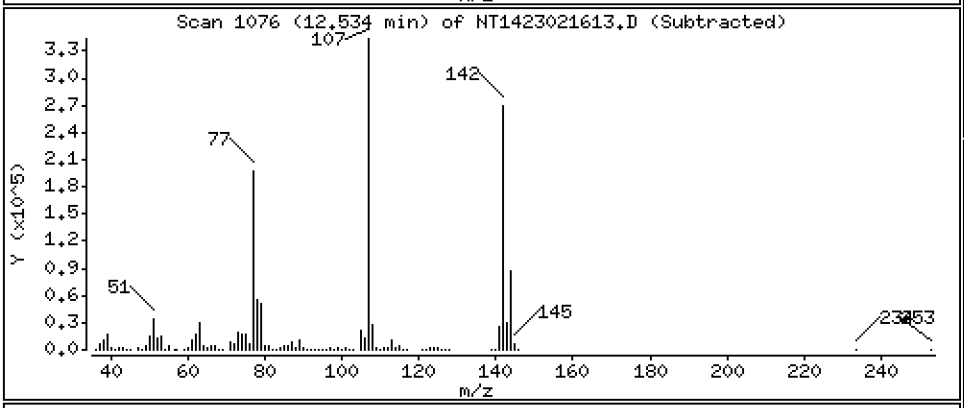
Column phase: ZB-5msi

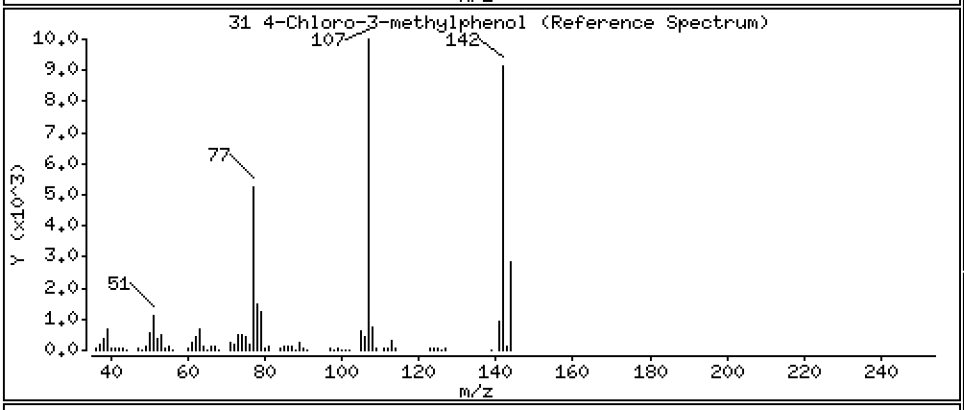
Column diameter: 0.25

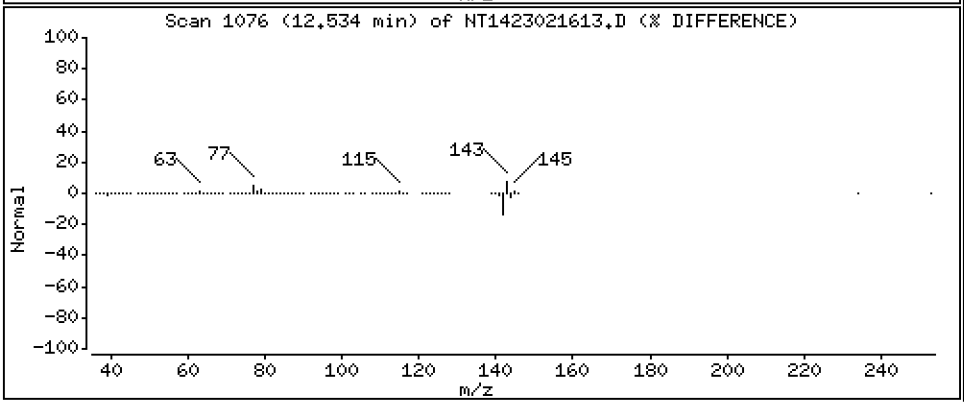
31 4-Chloro-3-methylphenol

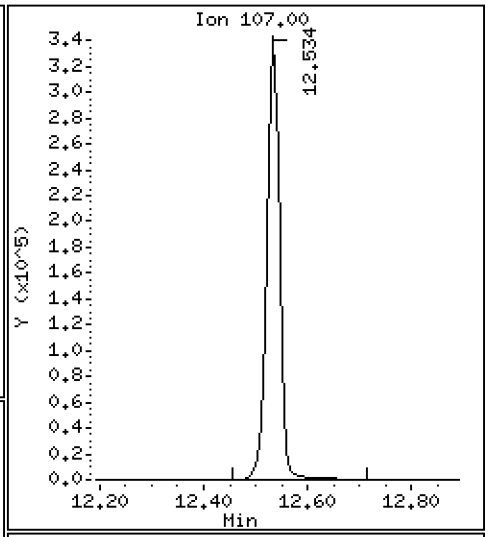
Concentration: 5.045 ug/mL

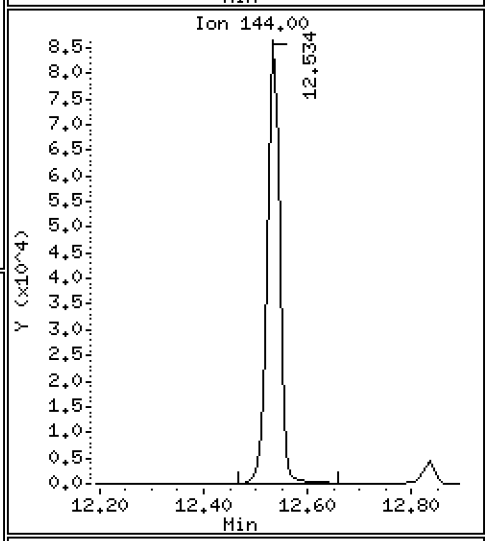


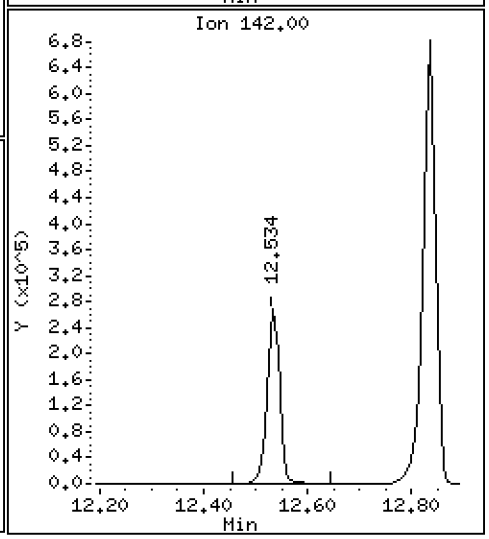












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

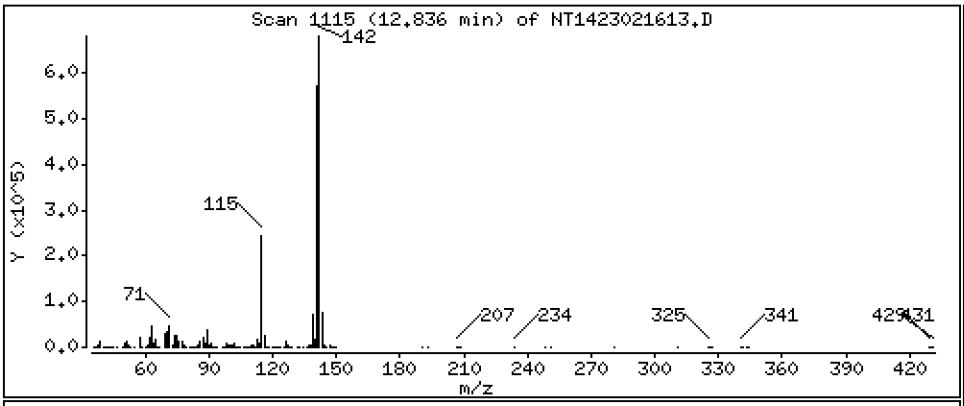
Operator: DSD

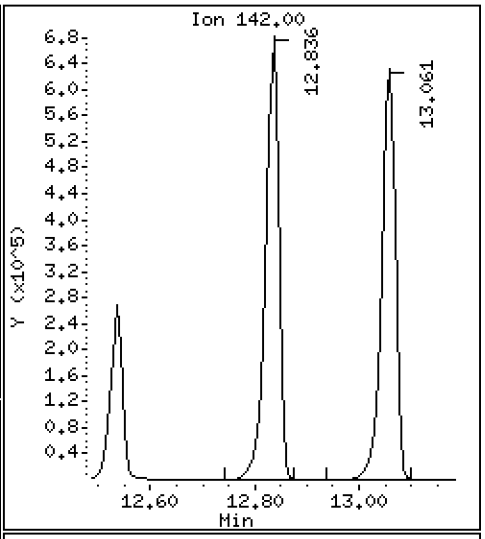
Column phase: ZB-5msi

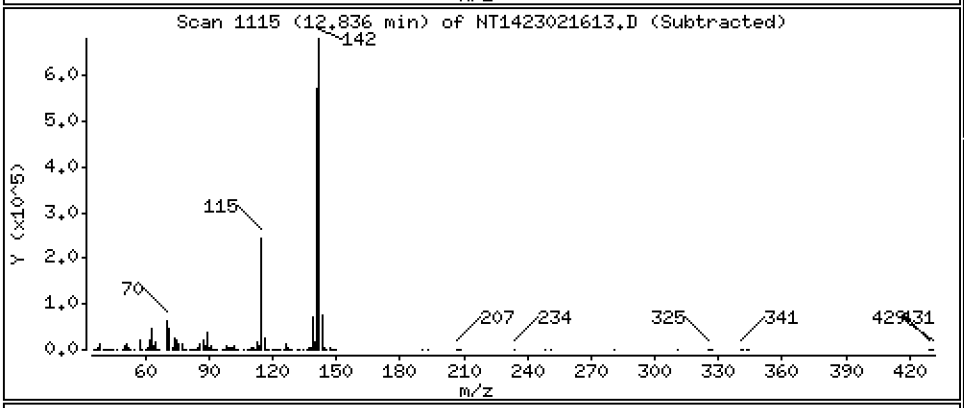
Column diameter: 0.25

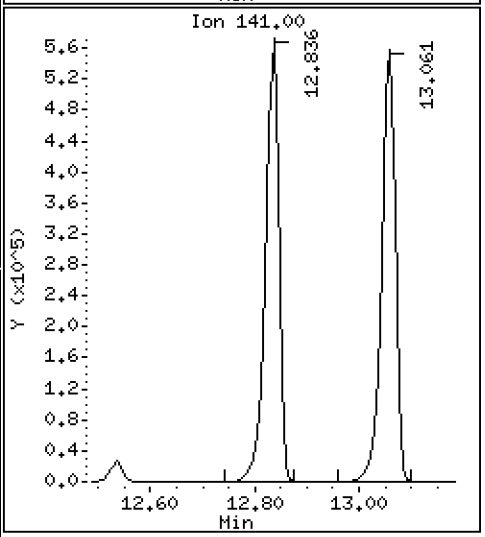
32 2-Methylnaphthalene

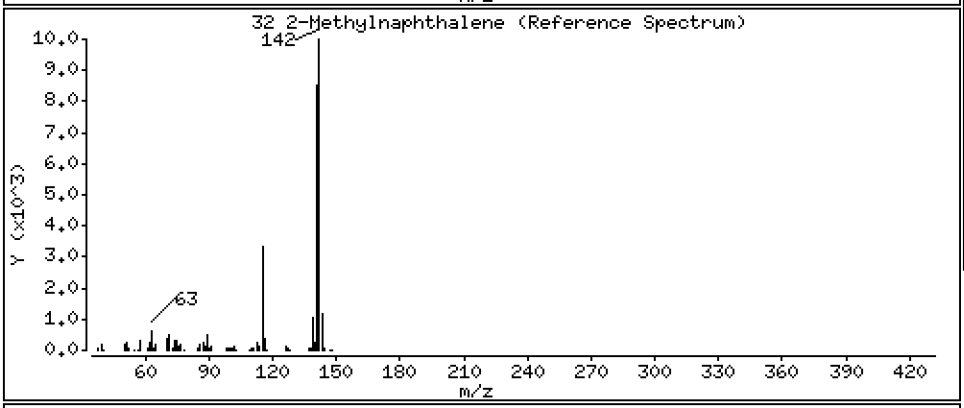
Concentration: 4.606 ug/mL

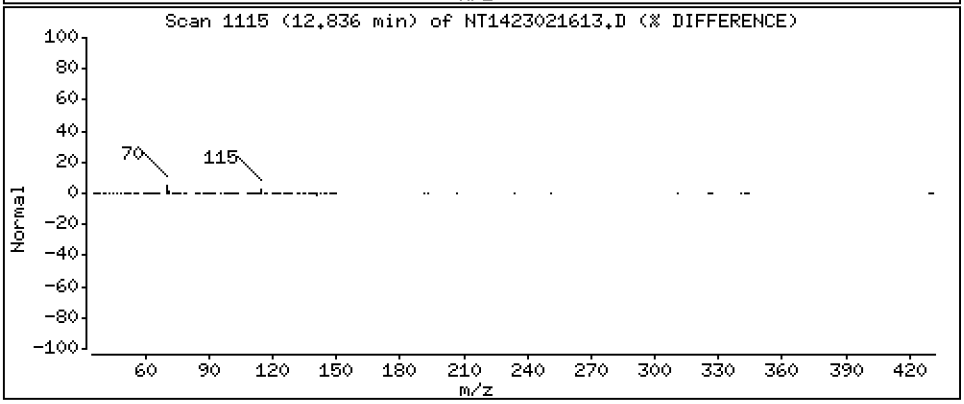












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

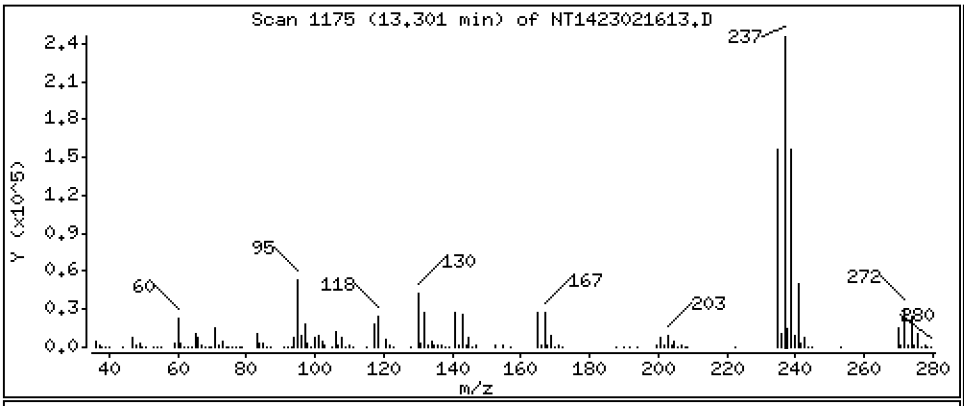
Operator: DSD

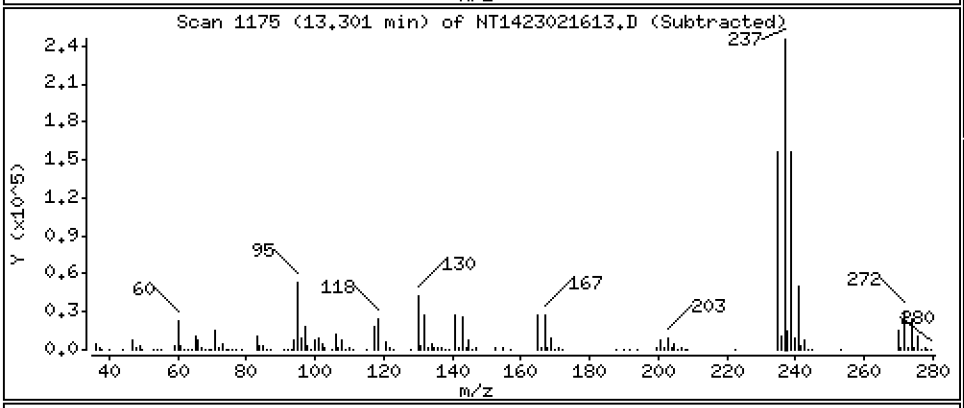
Column phase: ZB-5msi

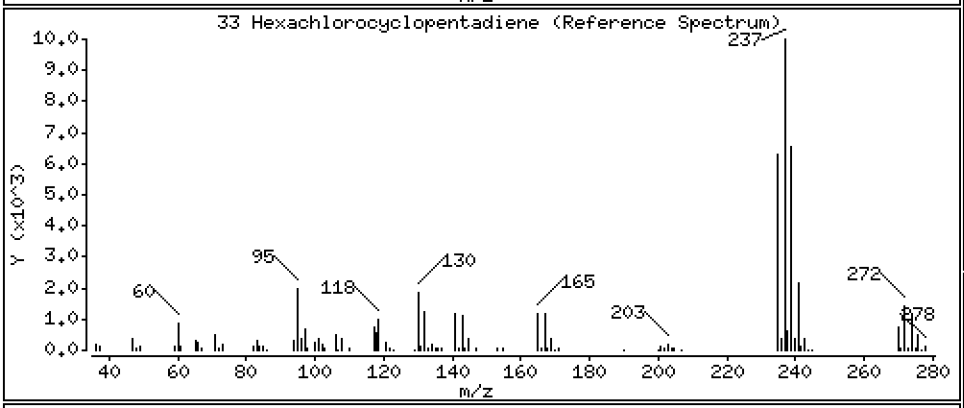
Column diameter: 0.25

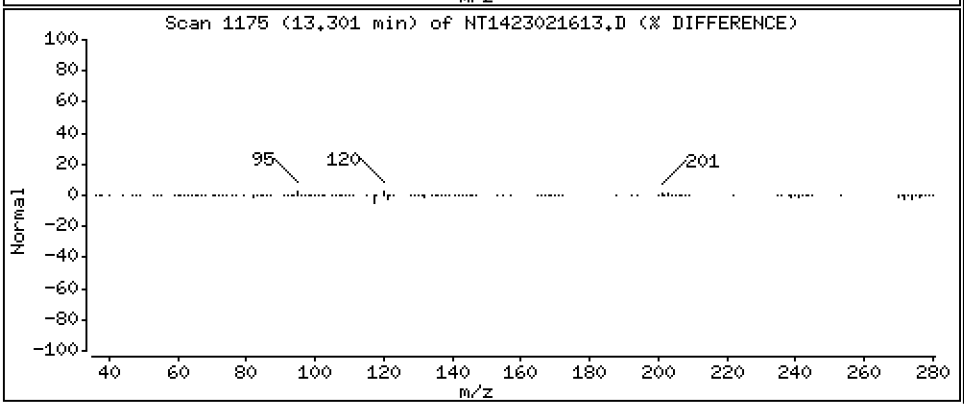
33 Hexachlorocyclopentadiene

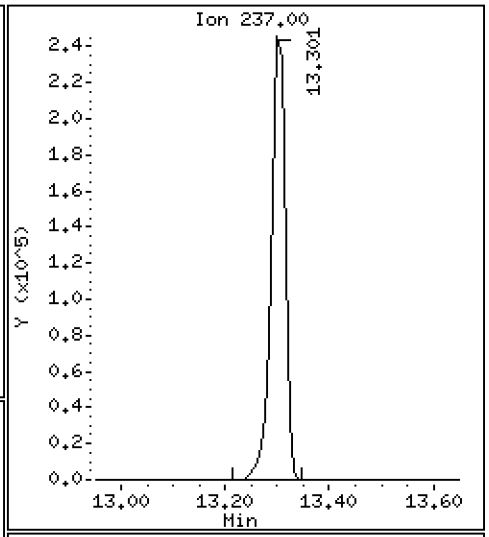
Concentration: 5.301 ug/mL

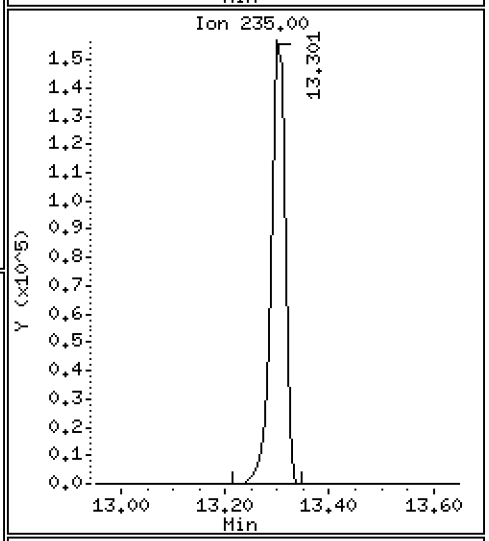


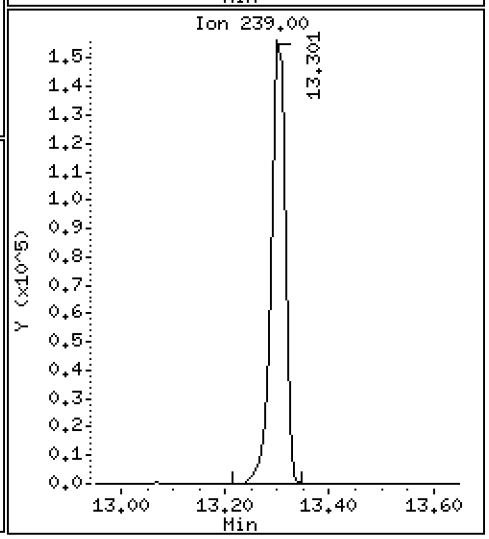












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

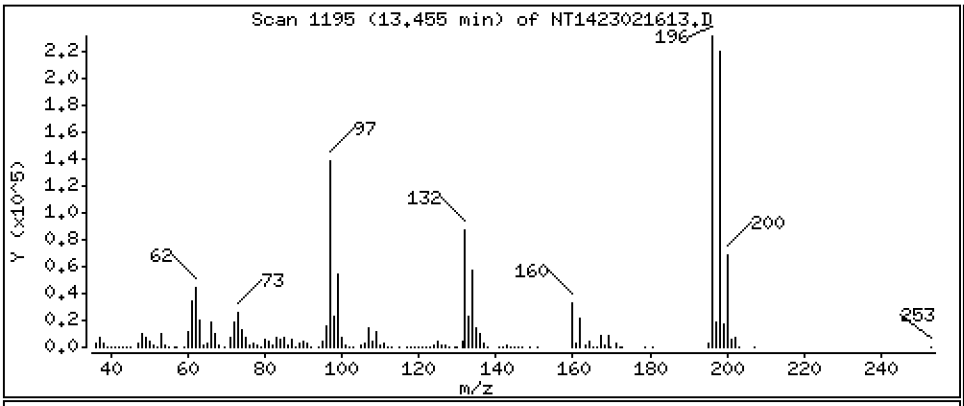
Operator: DSD

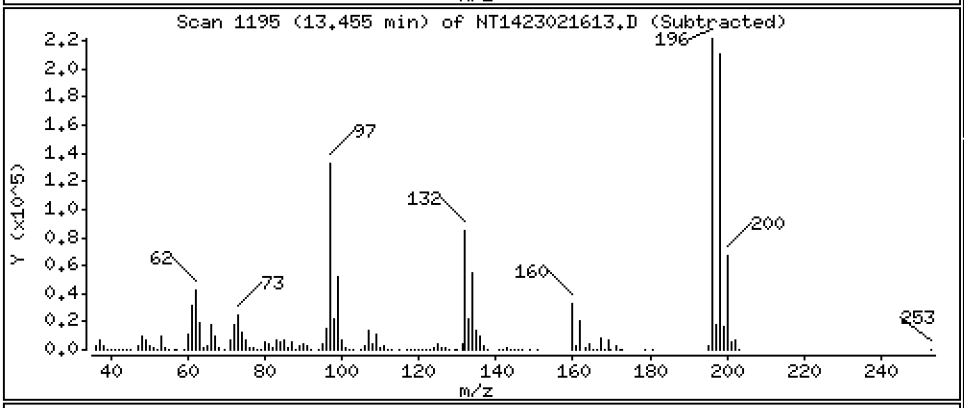
Column phase: ZB-5msi

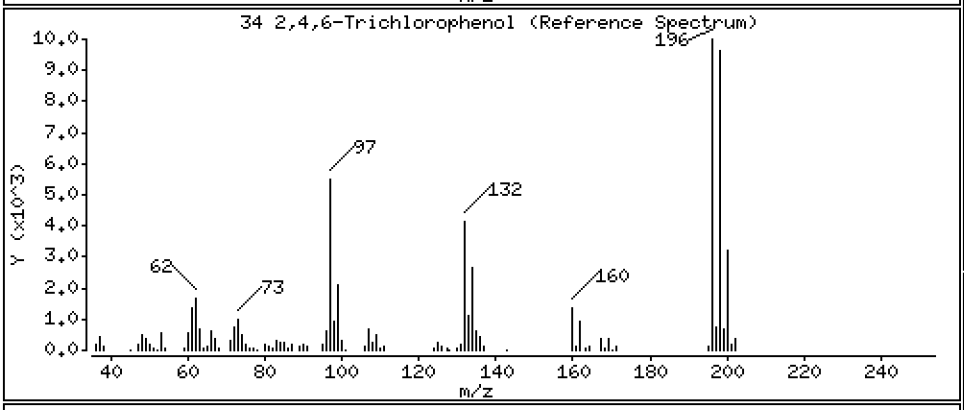
Column diameter: 0.25

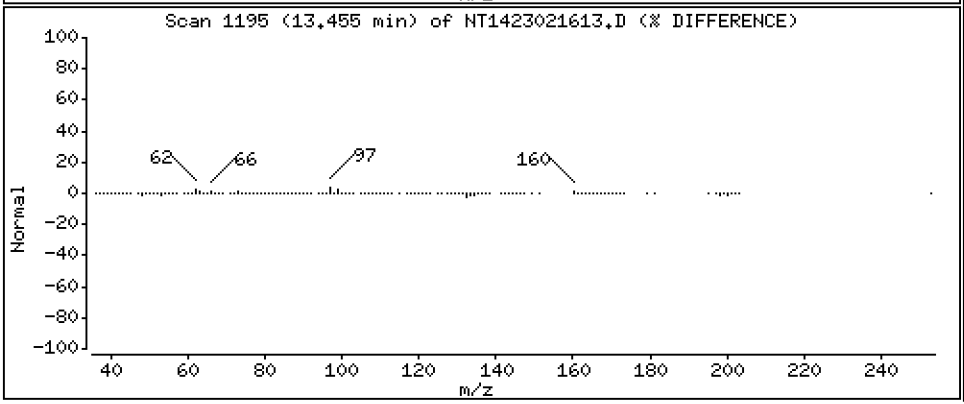
34 2,4,6-Trichlorophenol

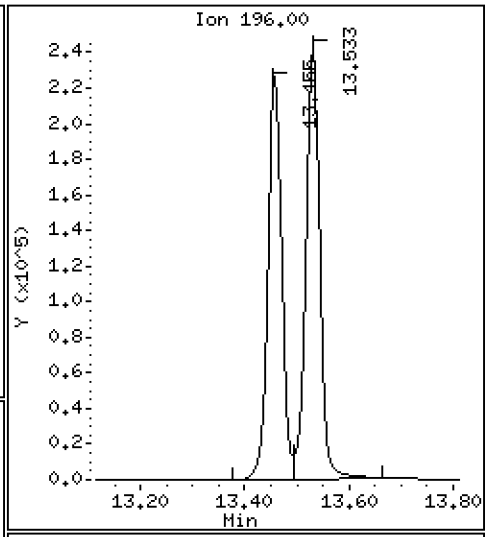
Concentration: 4.808 ug/mL

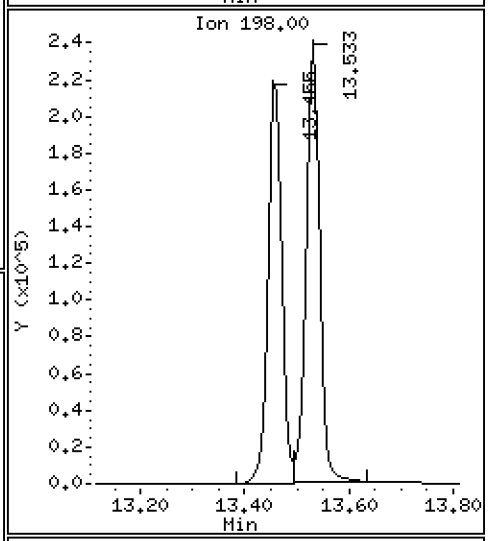


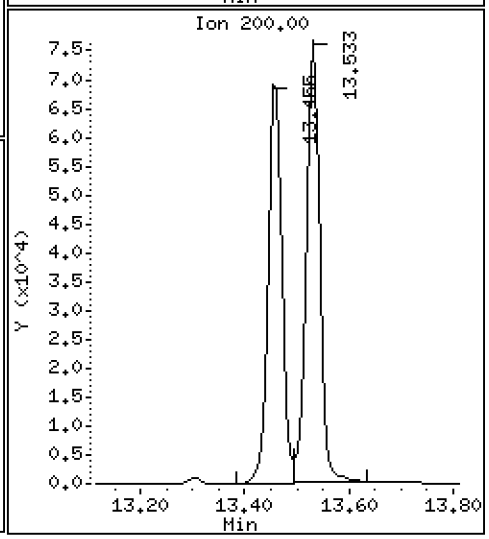












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

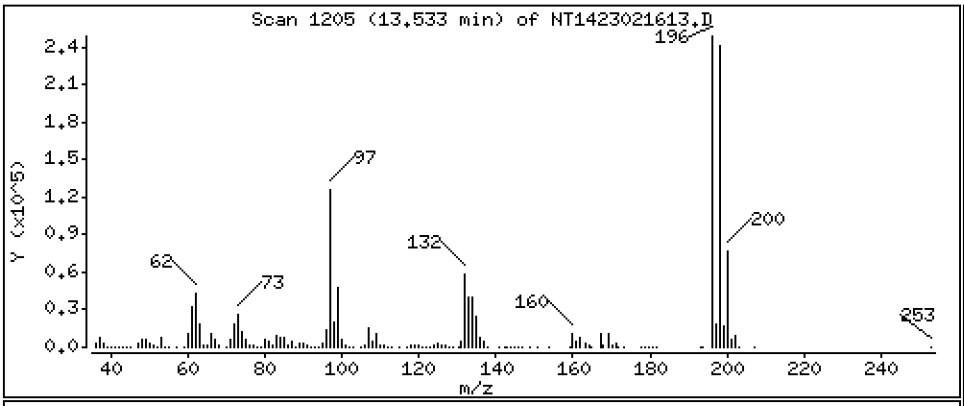
Operator: DSD

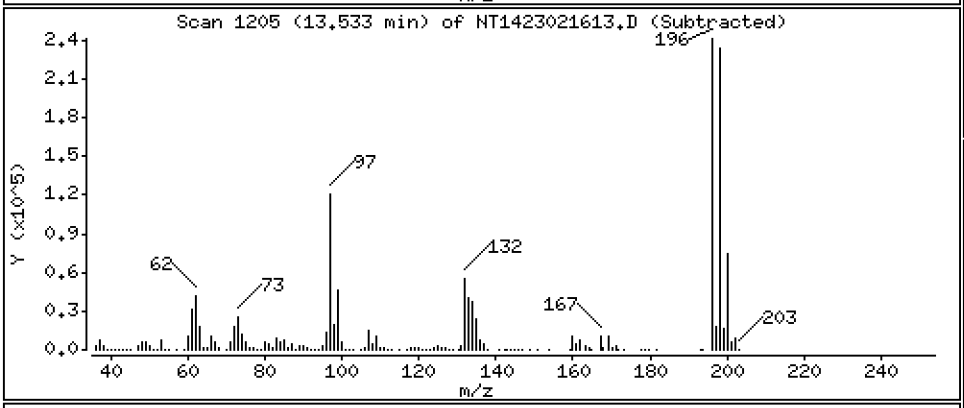
Column phase: ZB-5msi

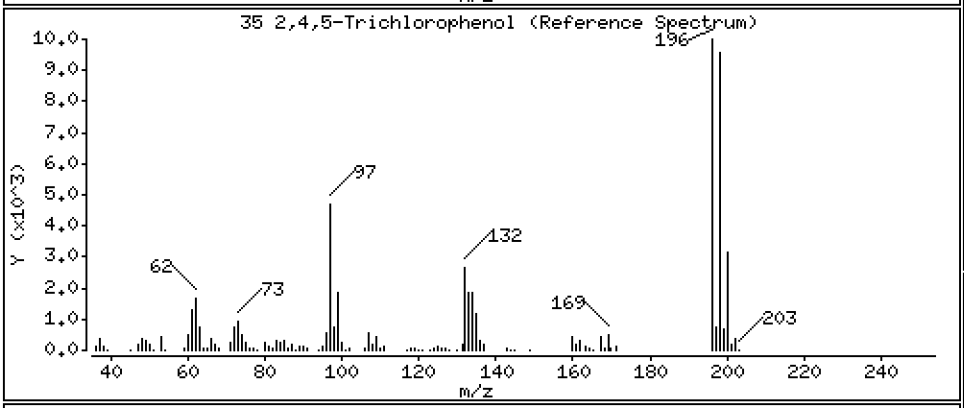
Column diameter: 0.25

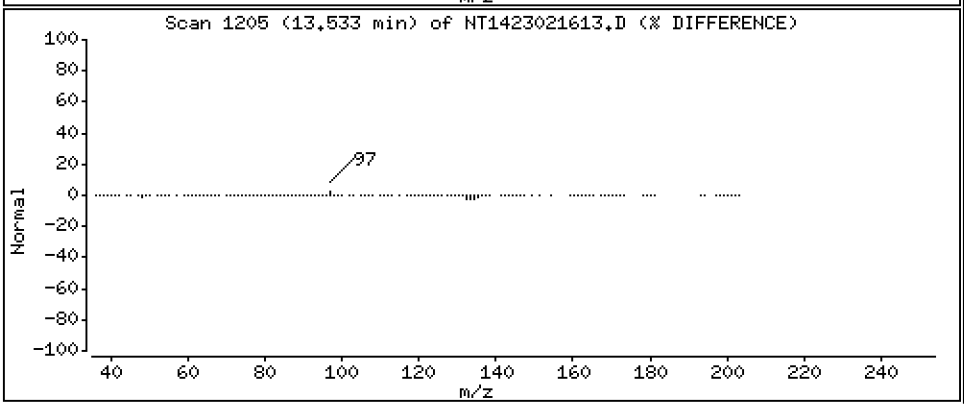
35 2,4,5-Trichlorophenol

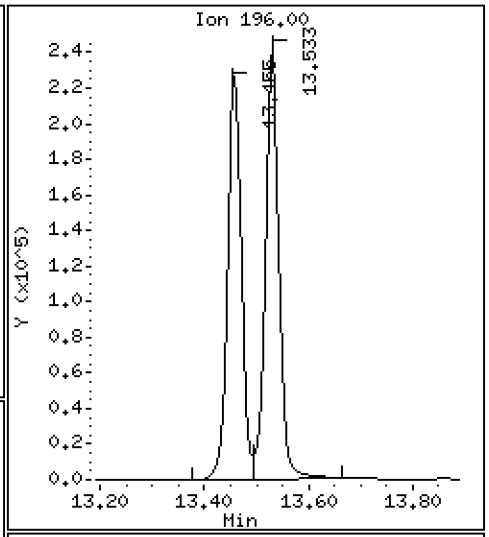
Concentration: 4.707 ug/mL

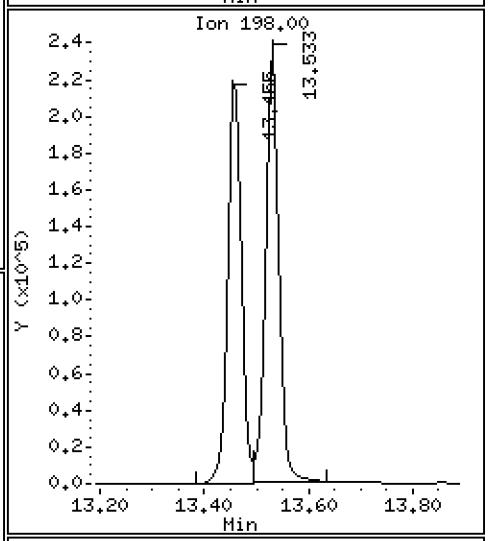


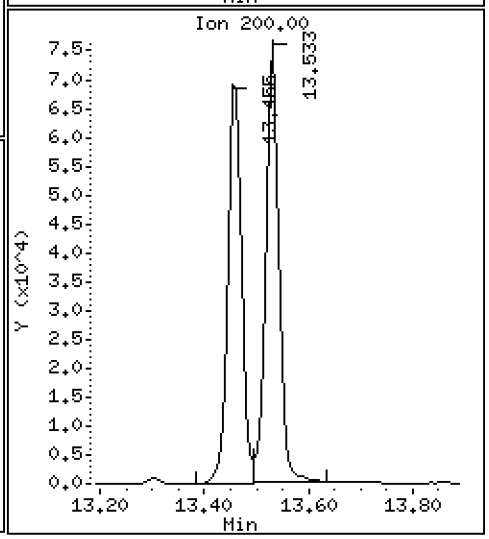












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

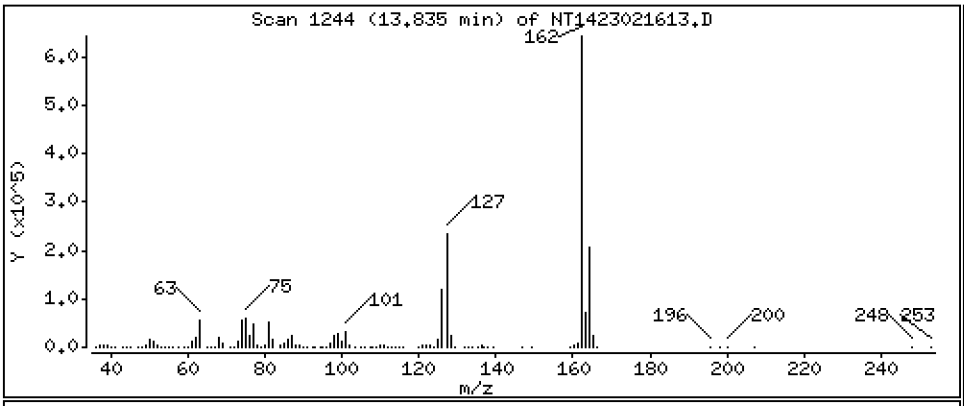
Operator: DSD

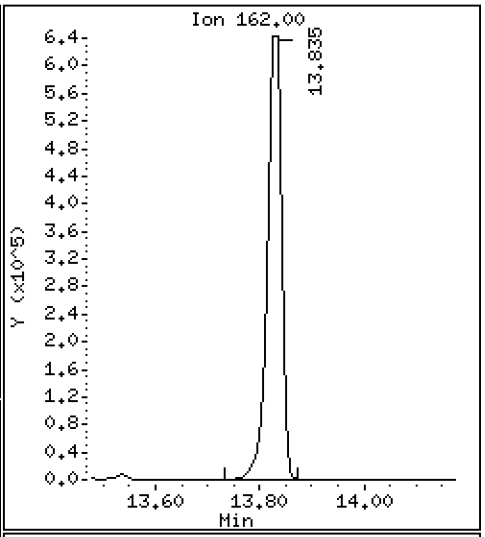
Column phase: ZB-5msi

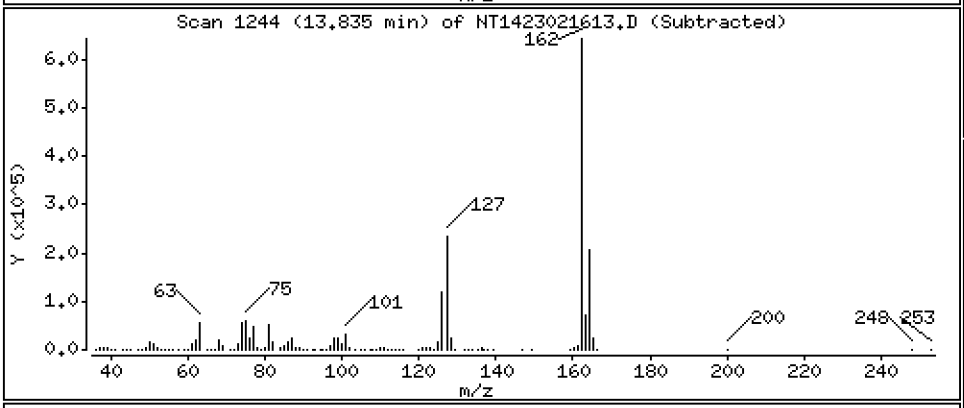
Column diameter: 0.25

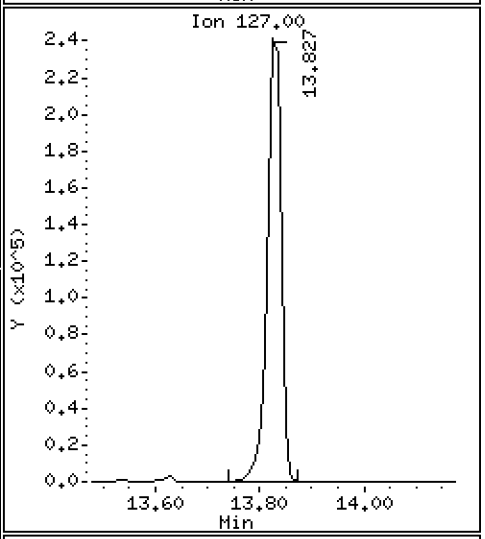
37 2-Chloronaphthalene

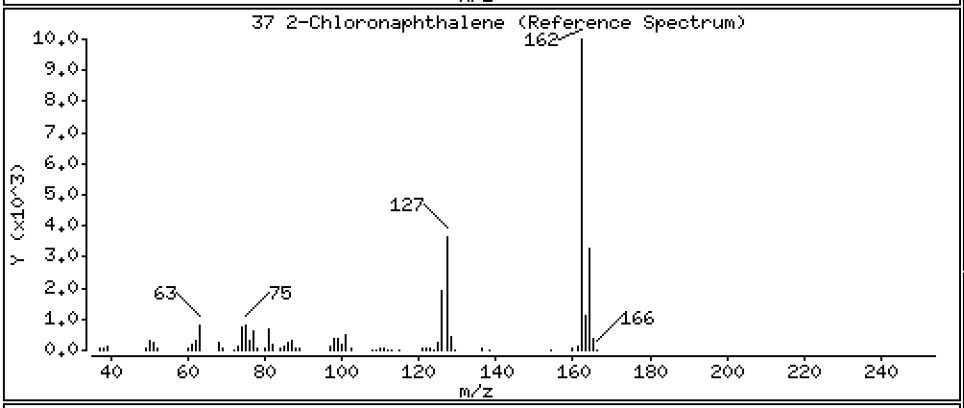
Concentration: 4.639 ug/mL

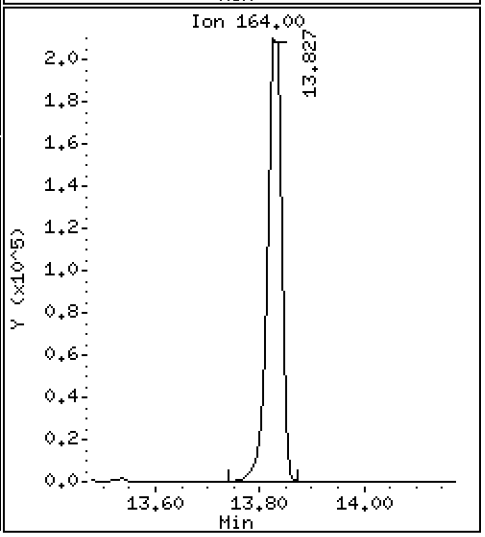


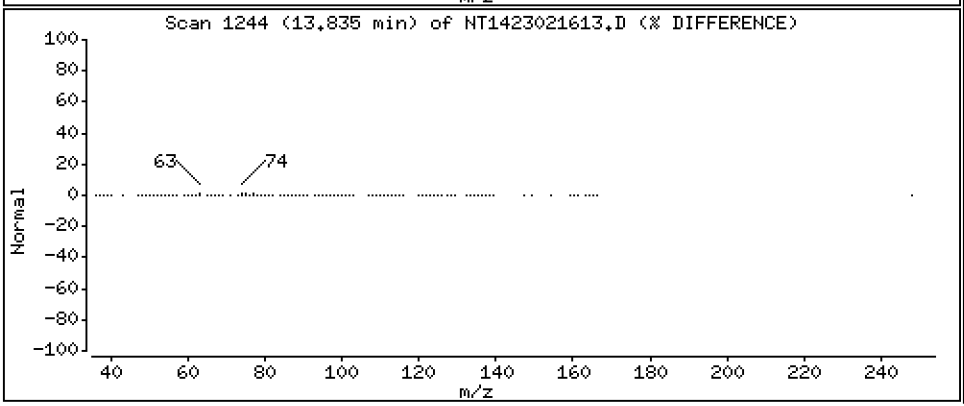












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

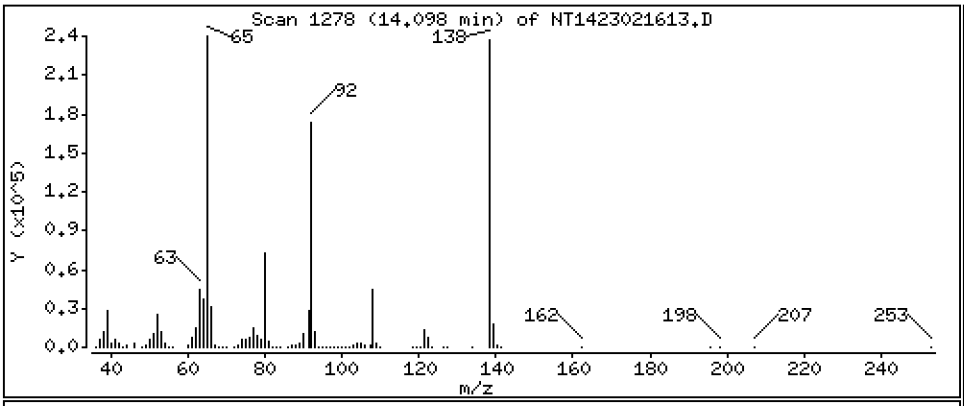
Operator: DSD

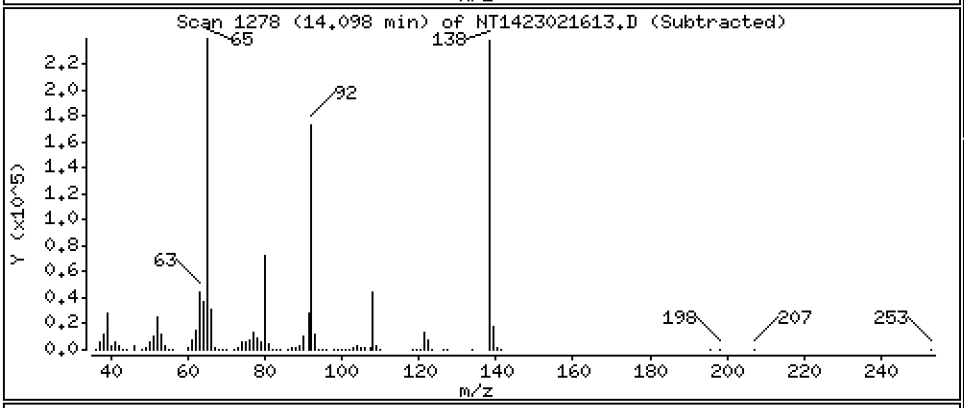
Column phase: ZB-5msi

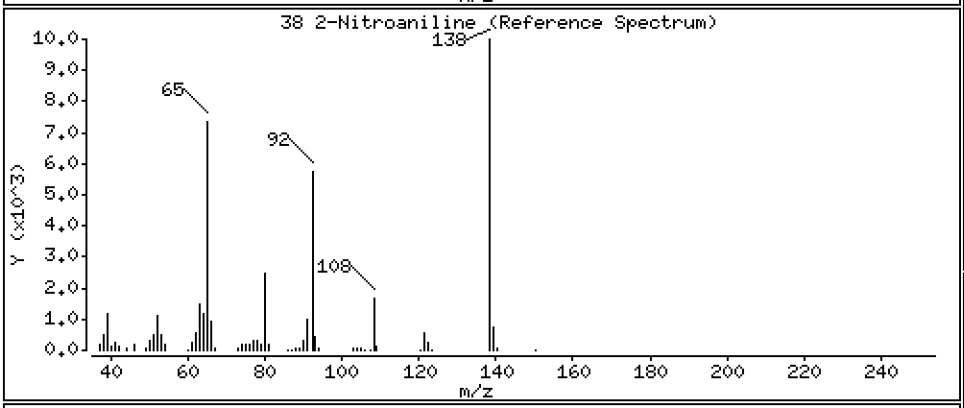
Column diameter: 0.25

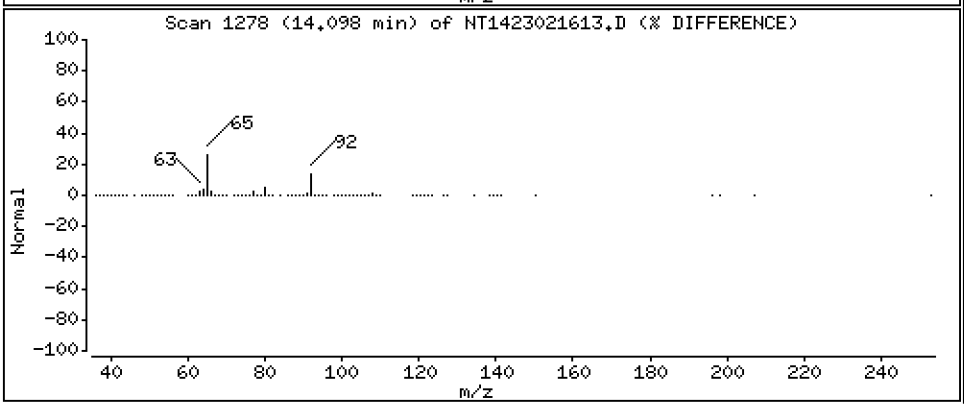
38 2-Nitroaniline

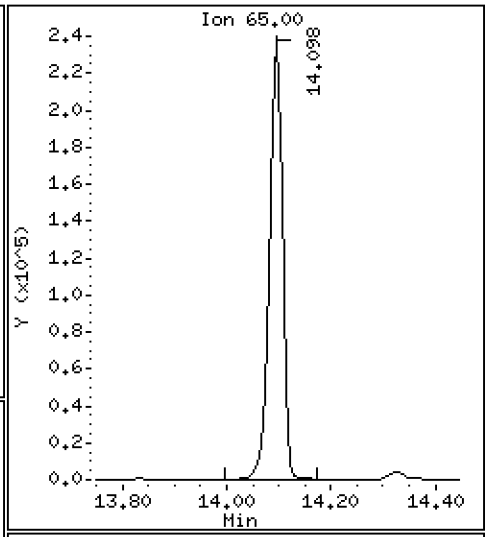
Concentration: 4.852 ug/mL

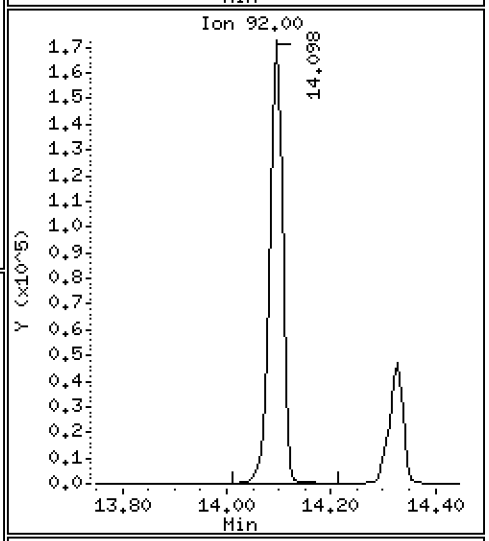


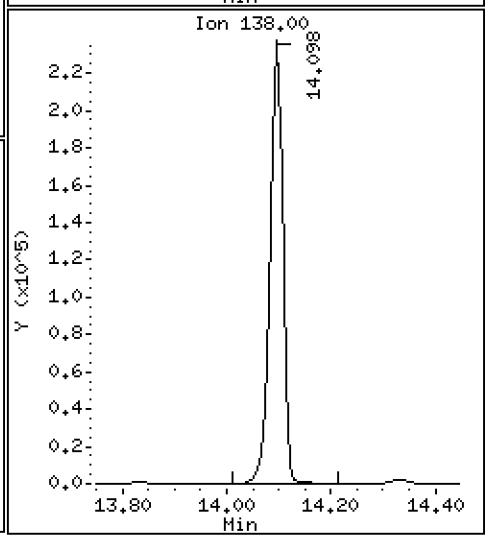












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

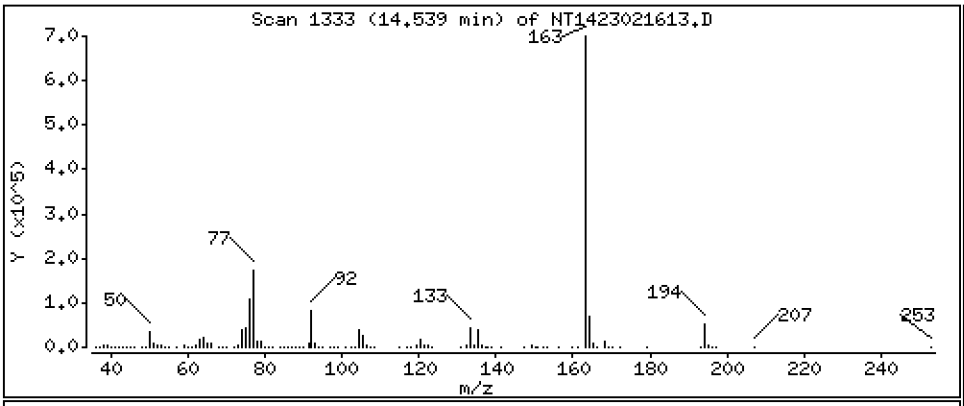
Operator: DSD

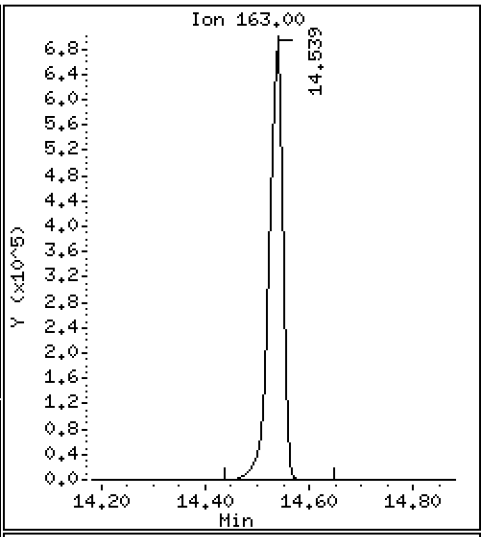
Column phase: ZB-5msi

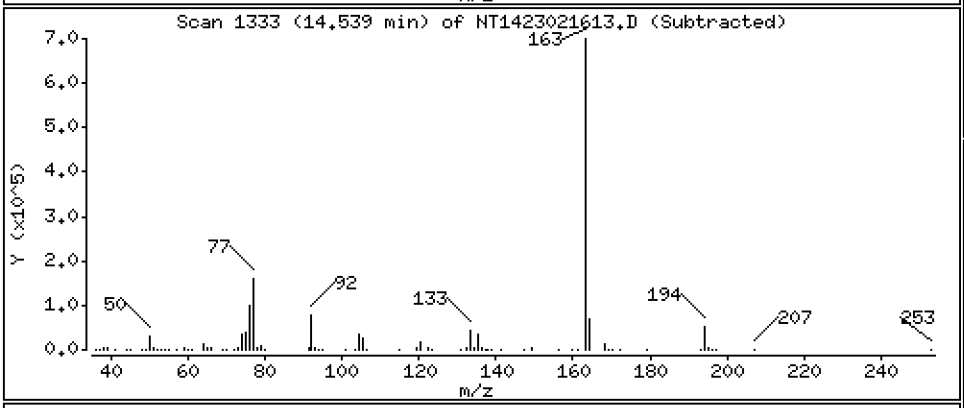
Column diameter: 0.25

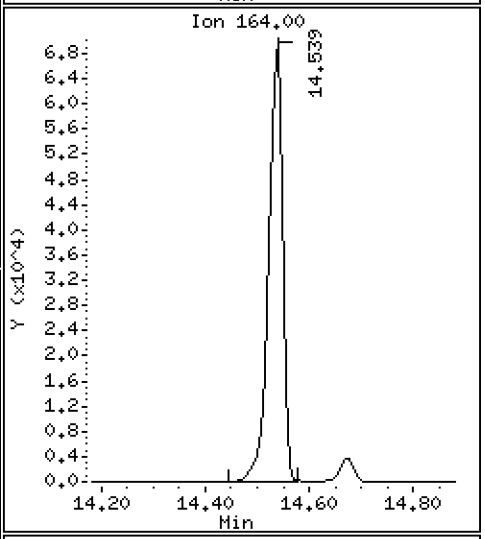
39 Dimethylphthalate

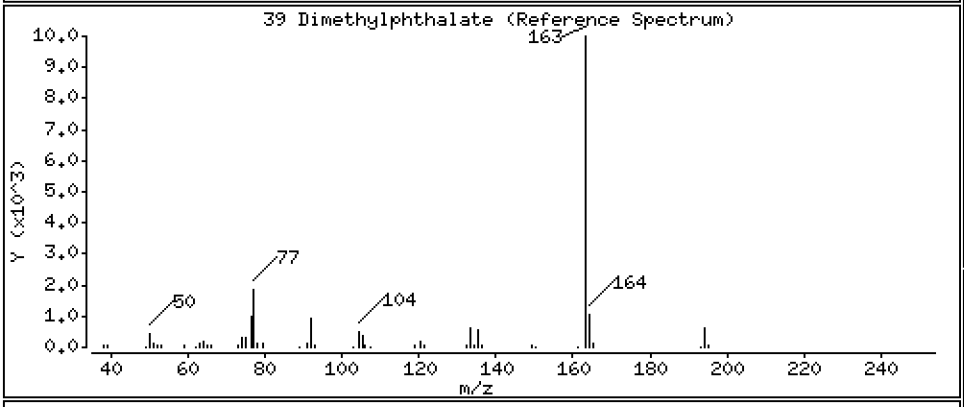
Concentration: 4.693 ug/mL

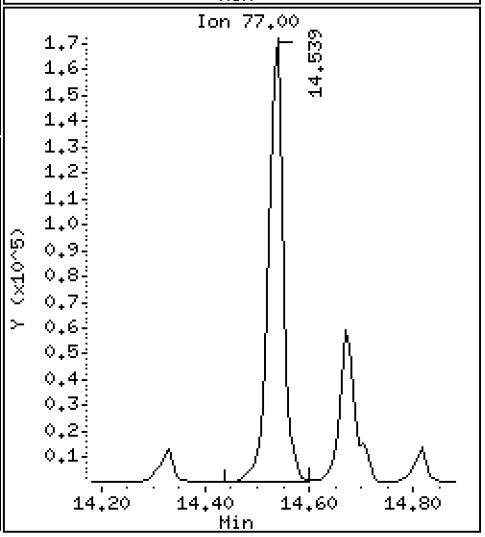


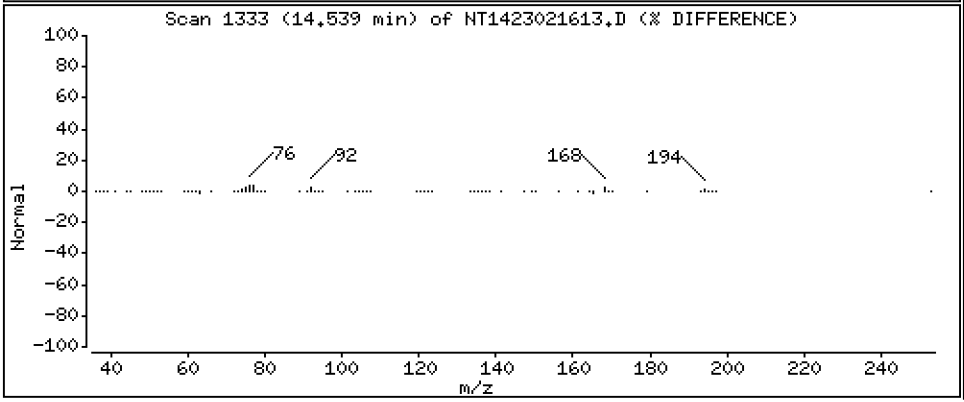












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

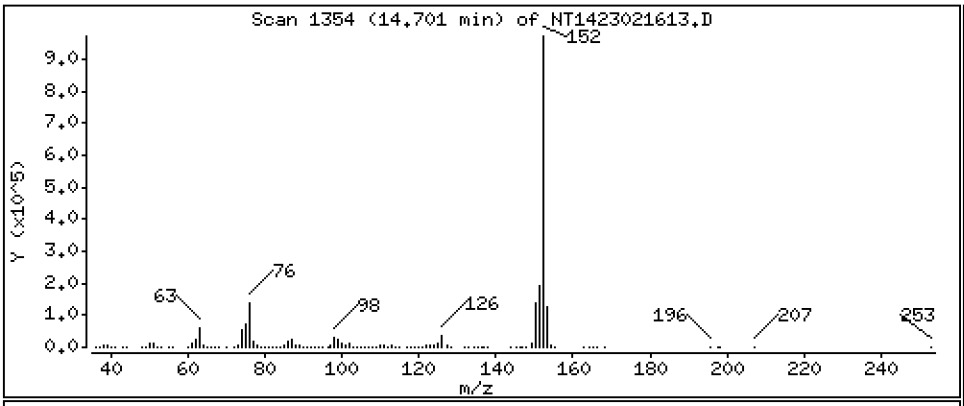
Operator: DSD

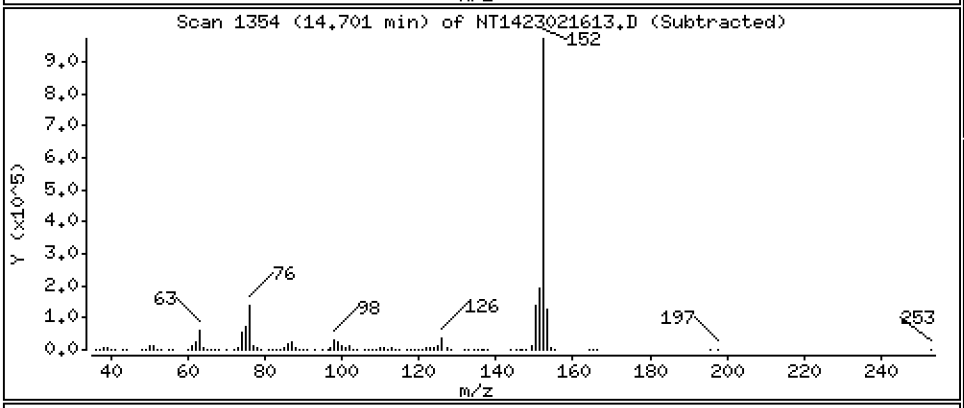
Column phase: ZB-5msi

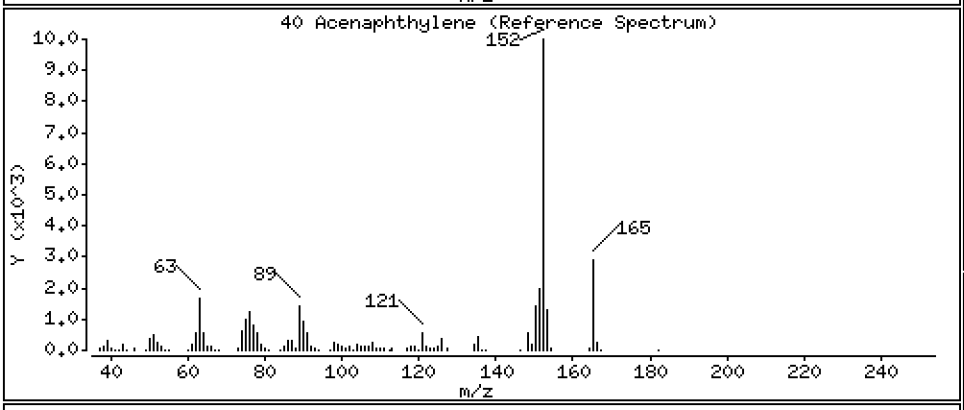
Column diameter: 0.25

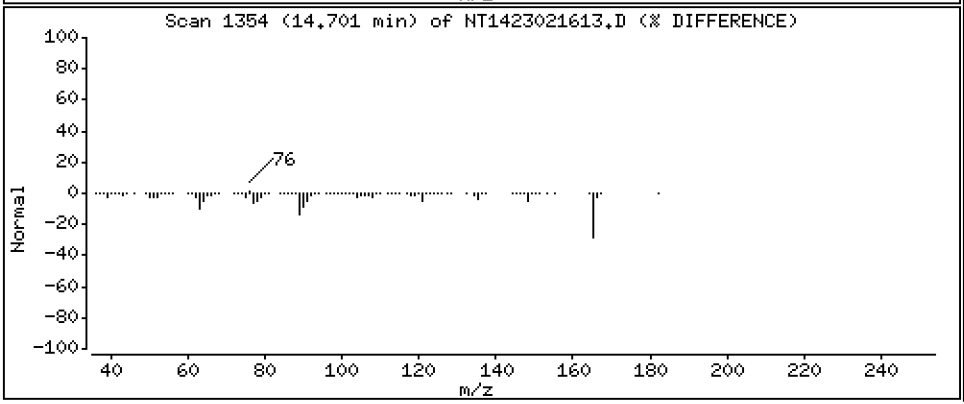
40 Acenaphthylene

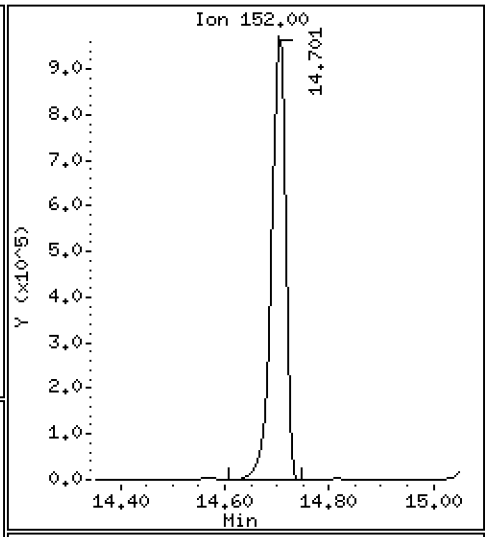
Concentration: 4.657 ug/mL

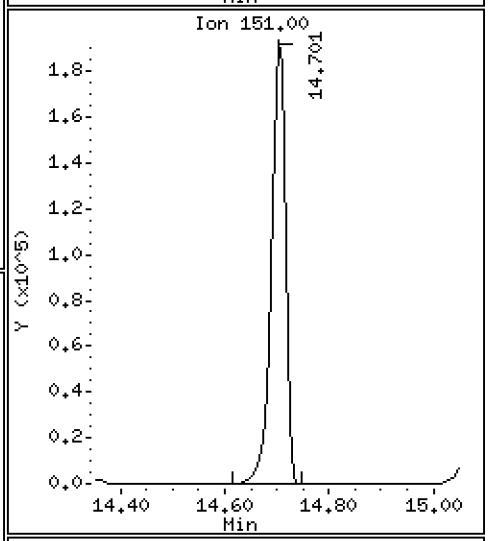


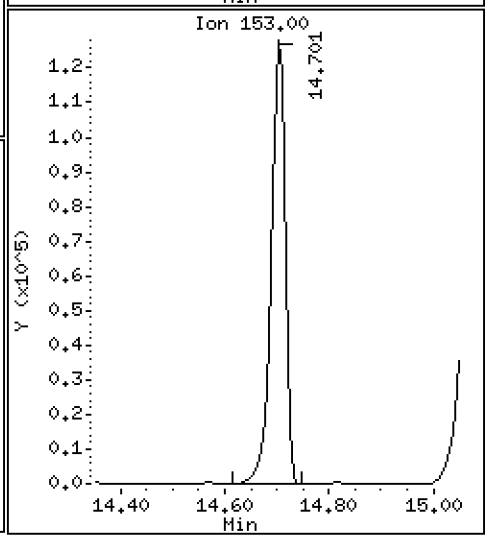












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

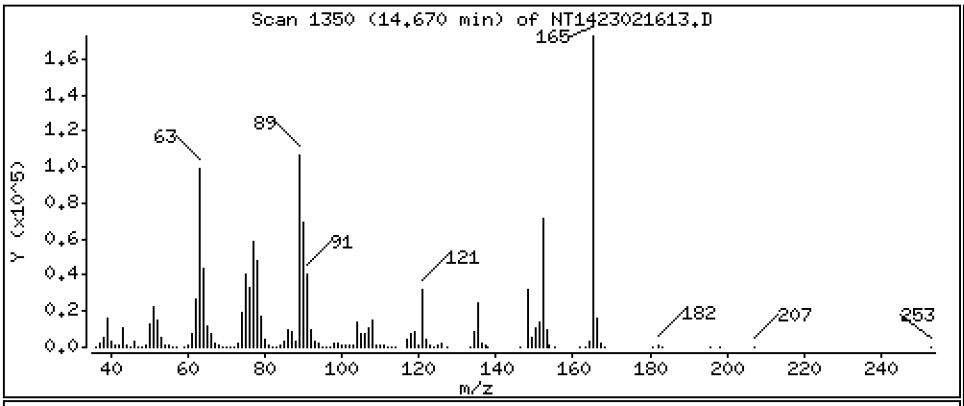
Operator: DSD

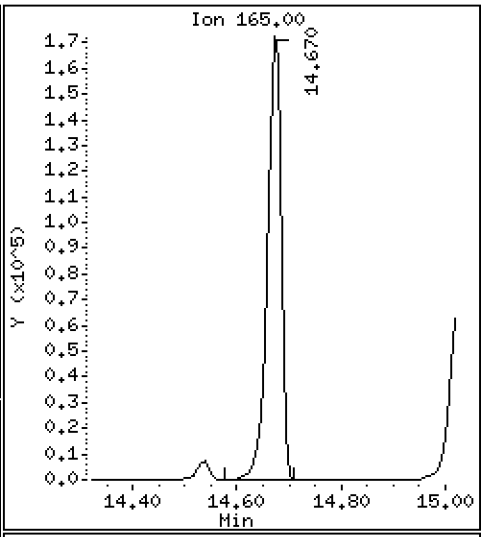
Column phase: ZB-5msi

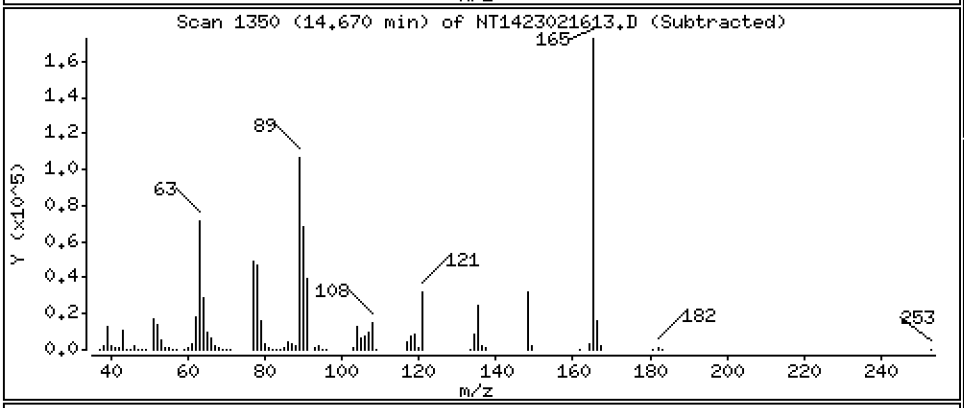
Column diameter: 0.25

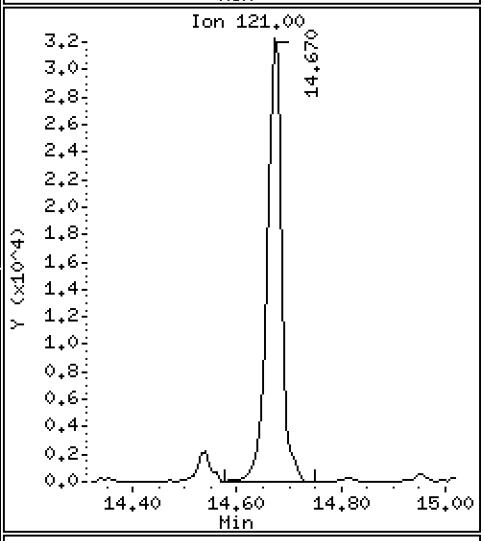
41 2,6-Dinitrotoluene

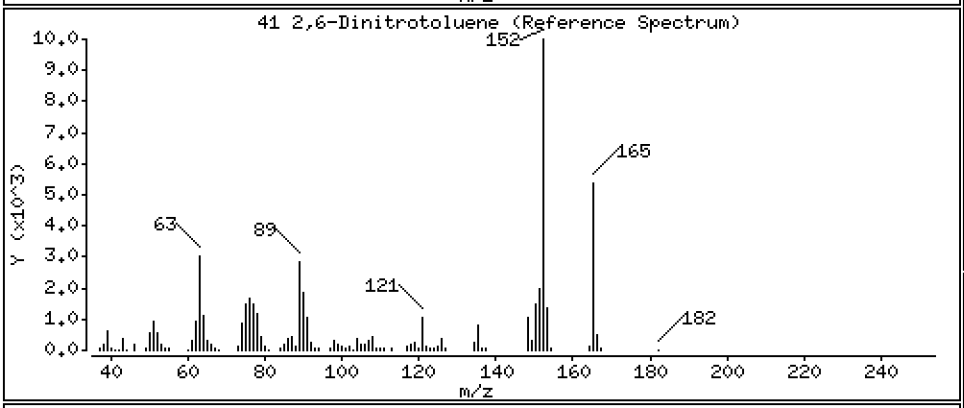
Concentration: 4.935 ug/mL

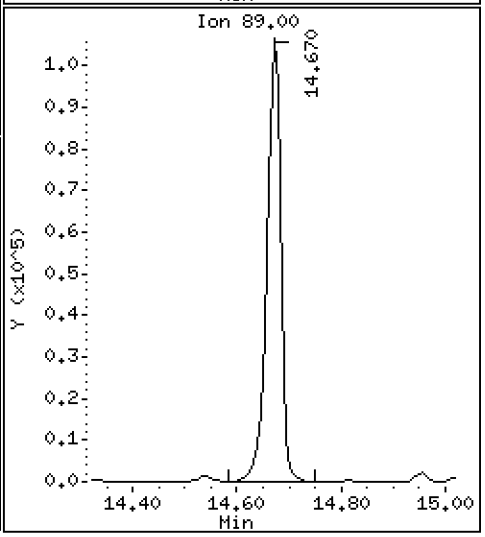


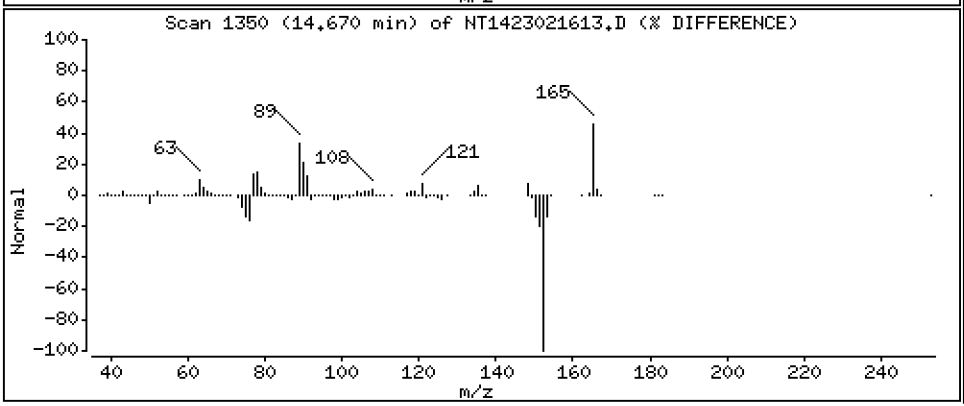












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

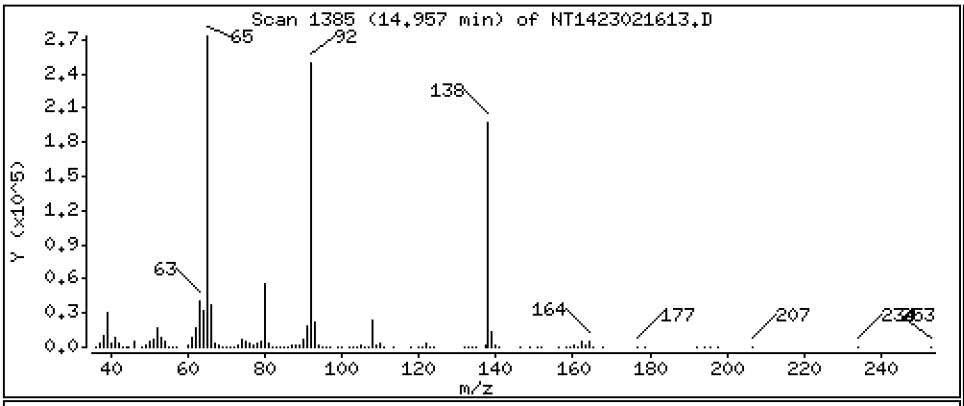
Operator: DSD

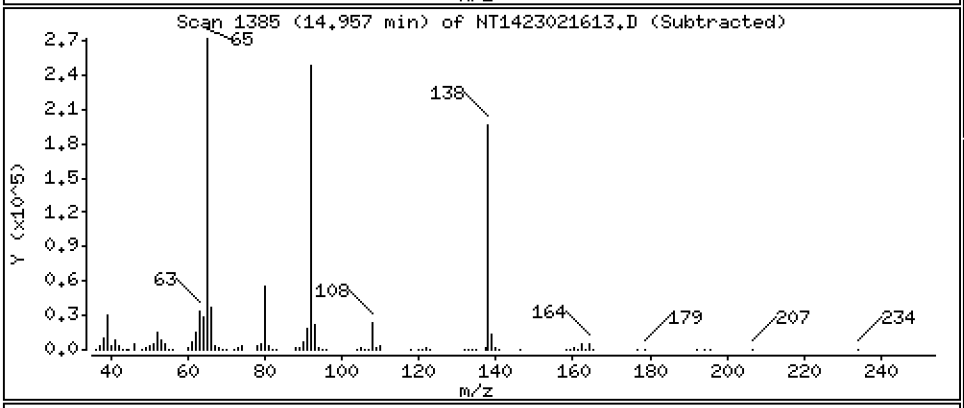
Column phase: ZB-5msi

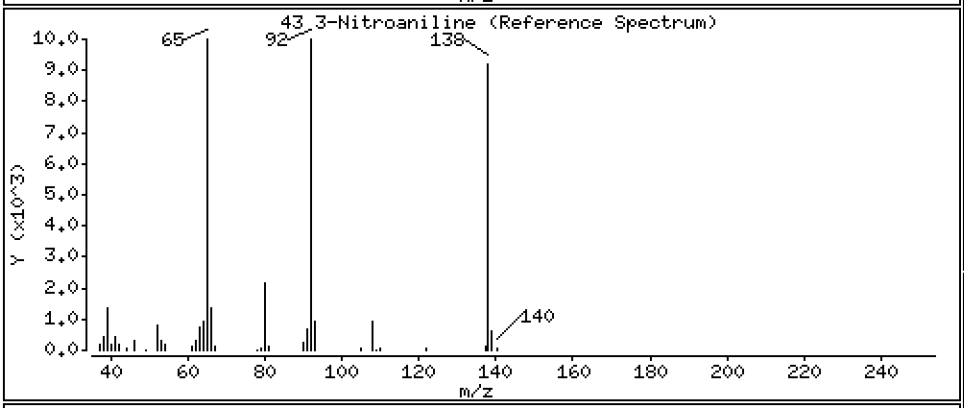
Column diameter: 0.25

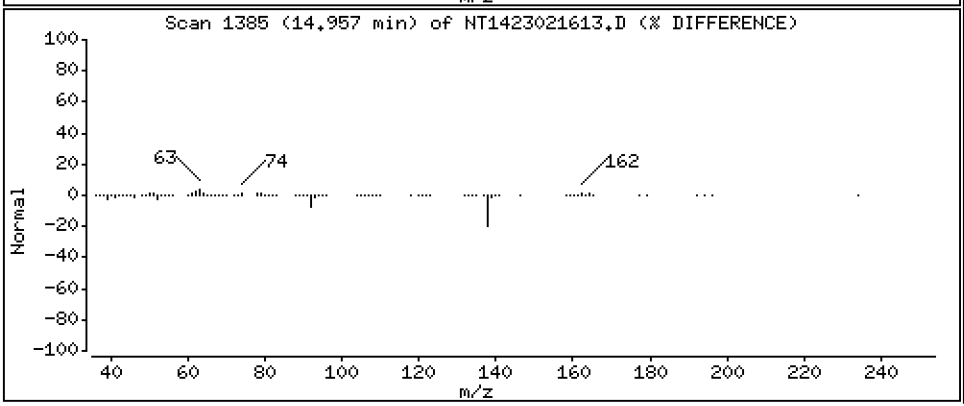
43 3-Nitroaniline

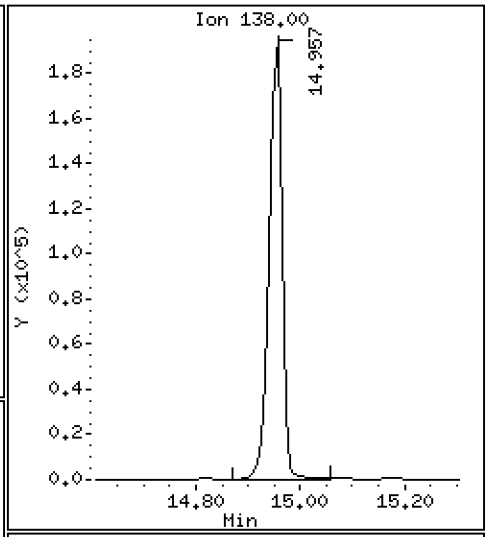
Concentration: 4.922 ug/mL

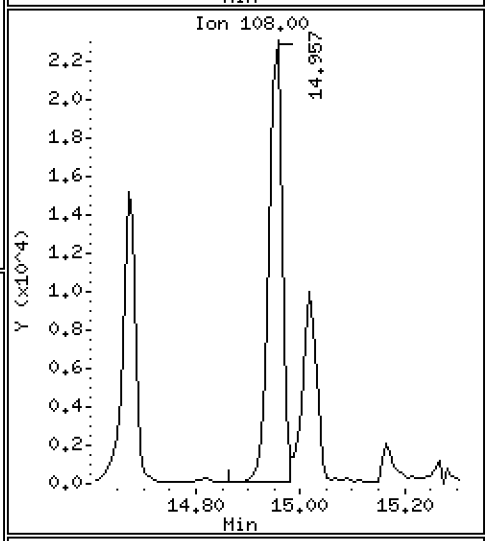


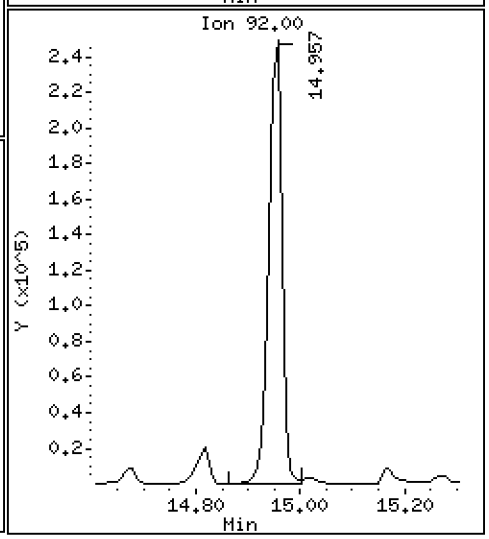












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

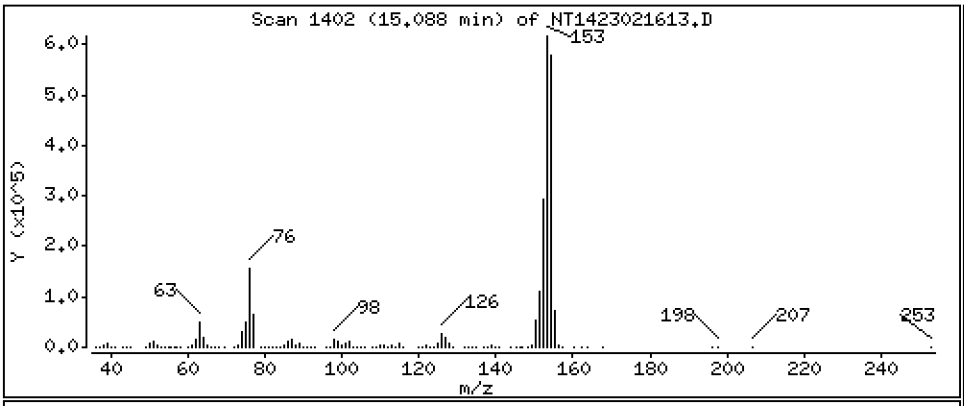
Operator: DSD

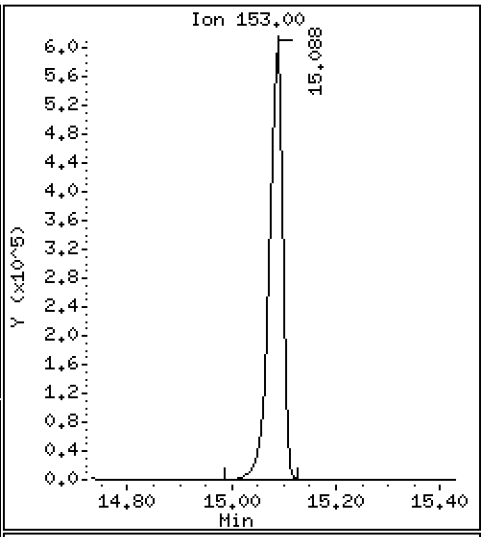
Column phase: ZB-5msi

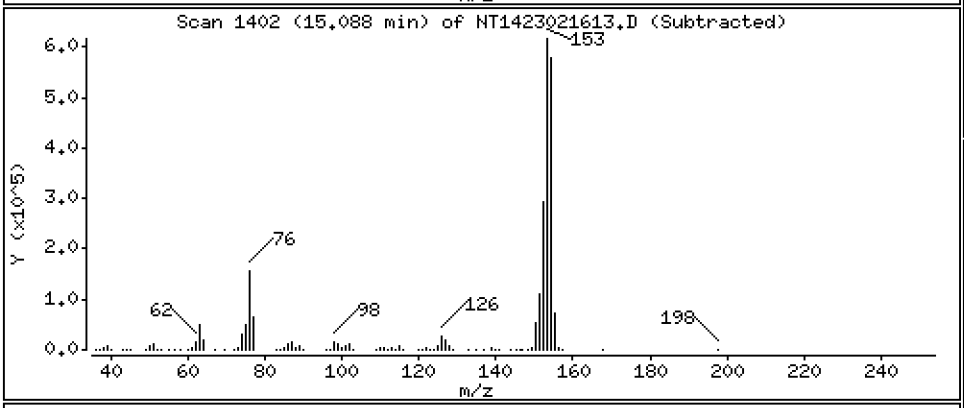
Column diameter: 0.25

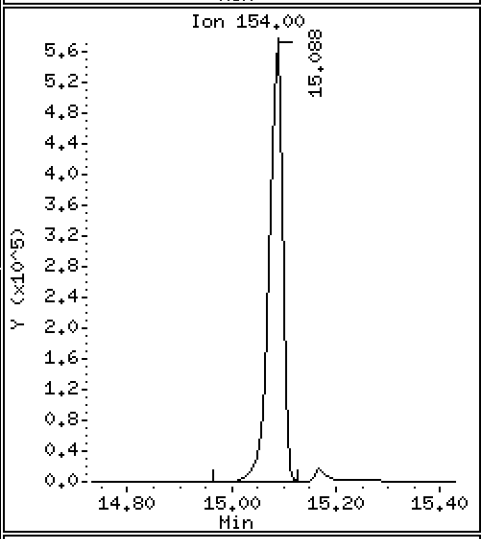
44 Acenaphthene

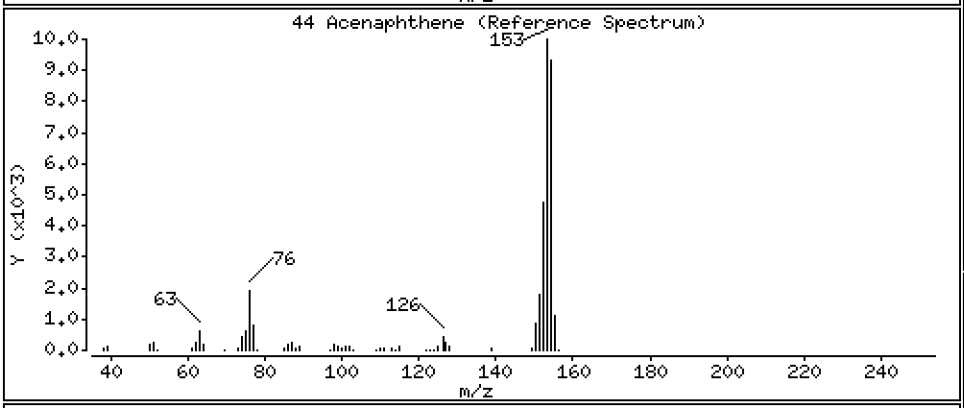
Concentration: 4.633 ug/mL

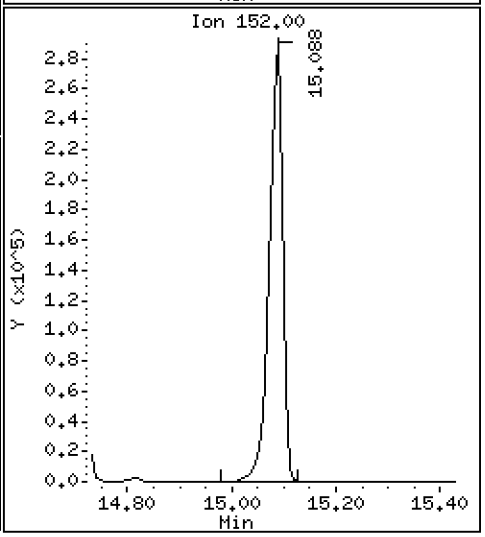


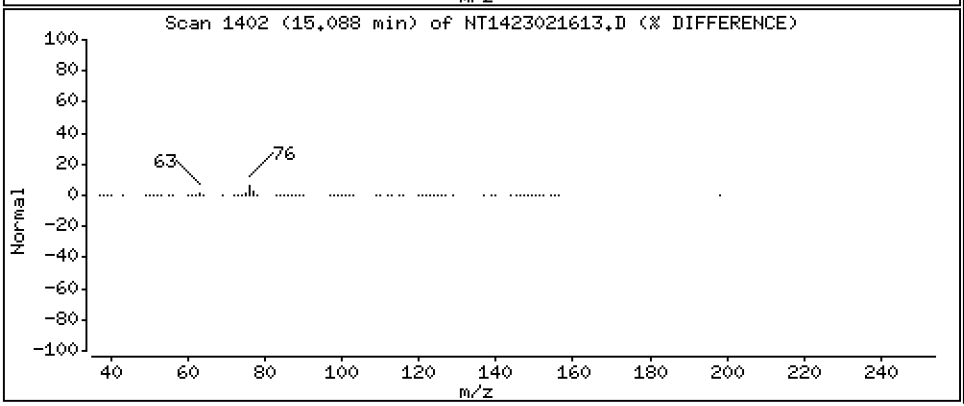












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

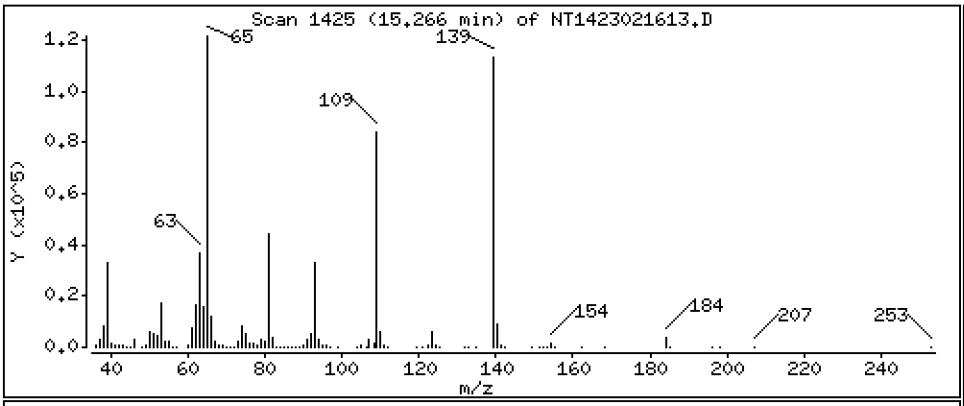
Operator: DSD

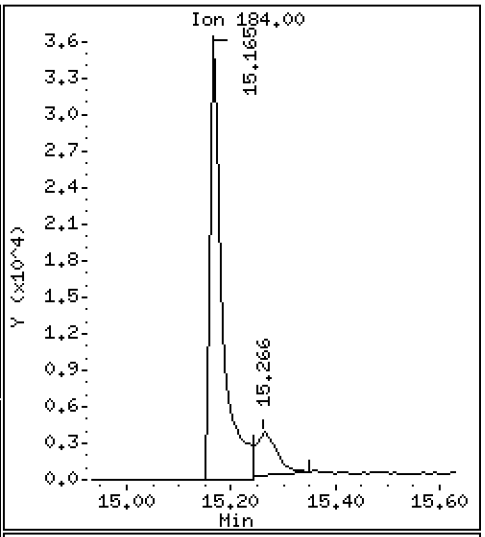
Column phase: ZB-5msi

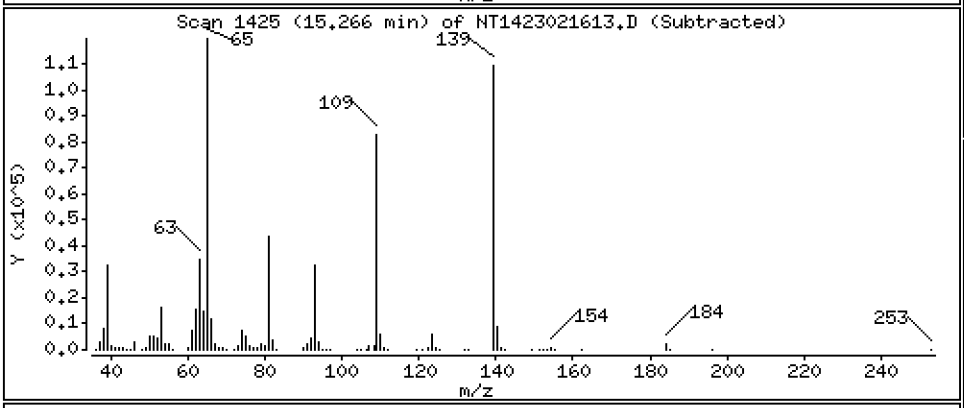
Column diameter: 0.25

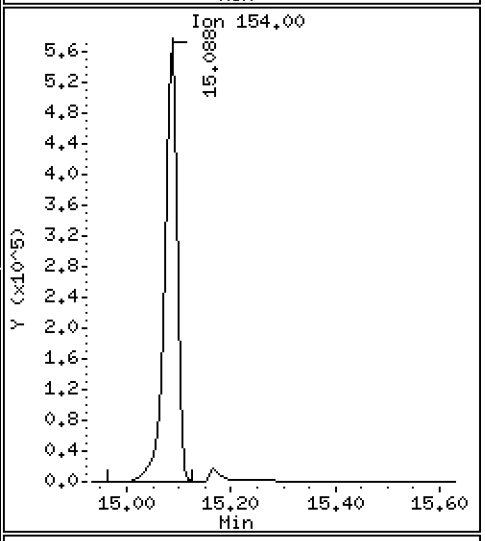
45 2,4-Dinitrophenol

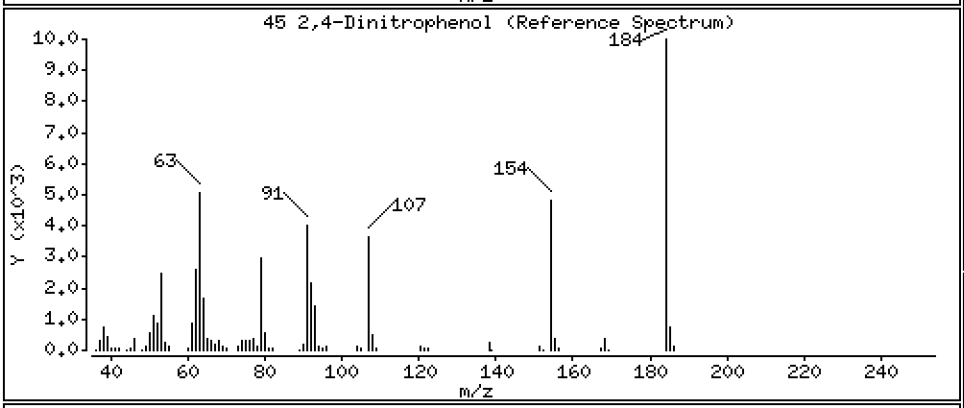
Concentration: 0.2502 ug/mL

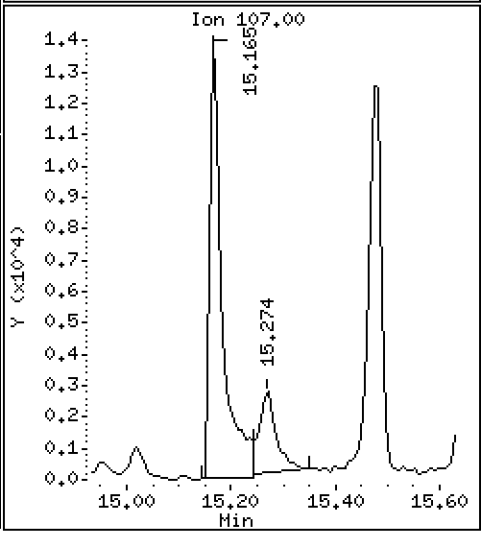


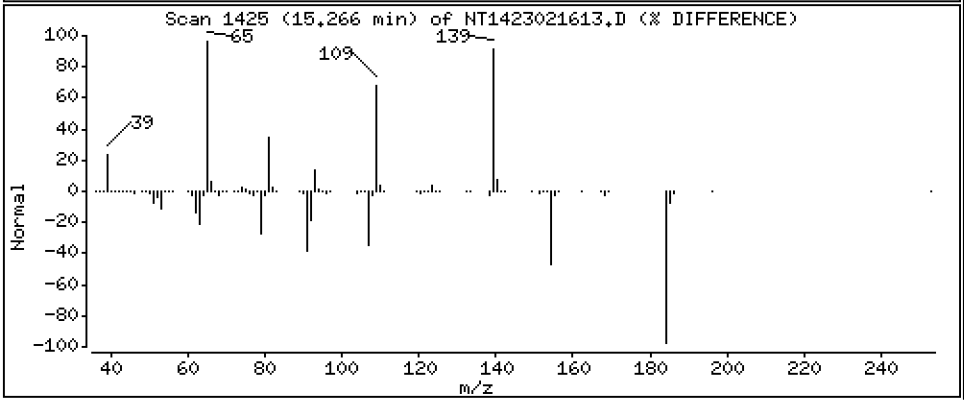












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

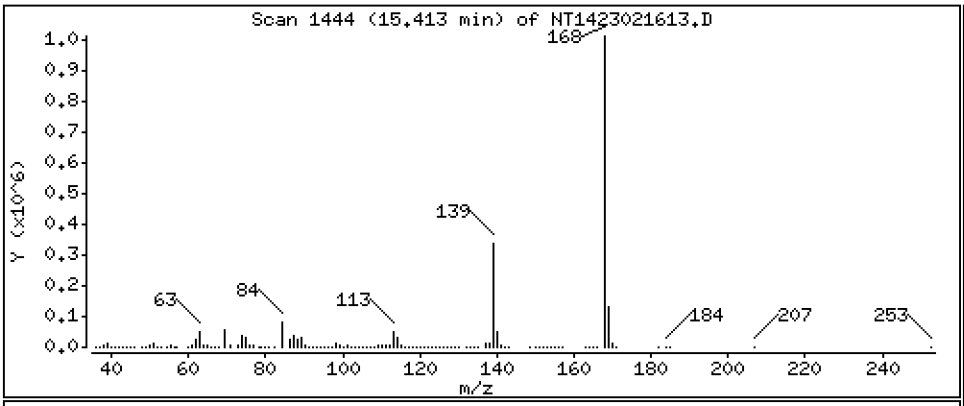
Operator: DSD

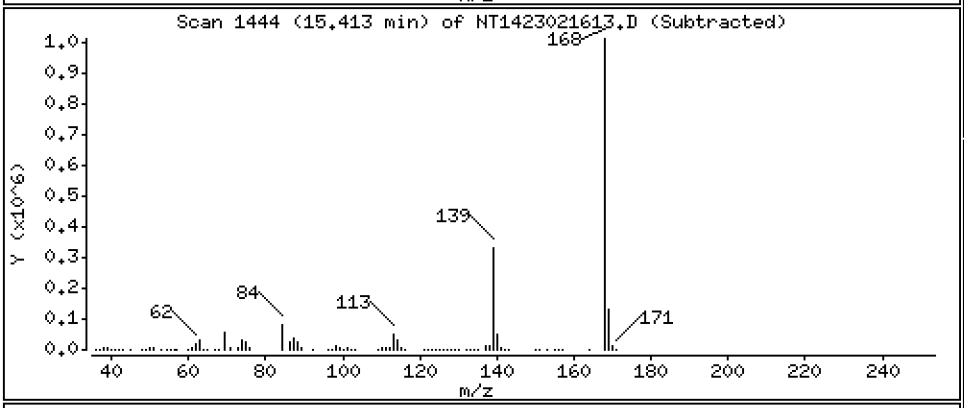
Column phase: ZB-5msi

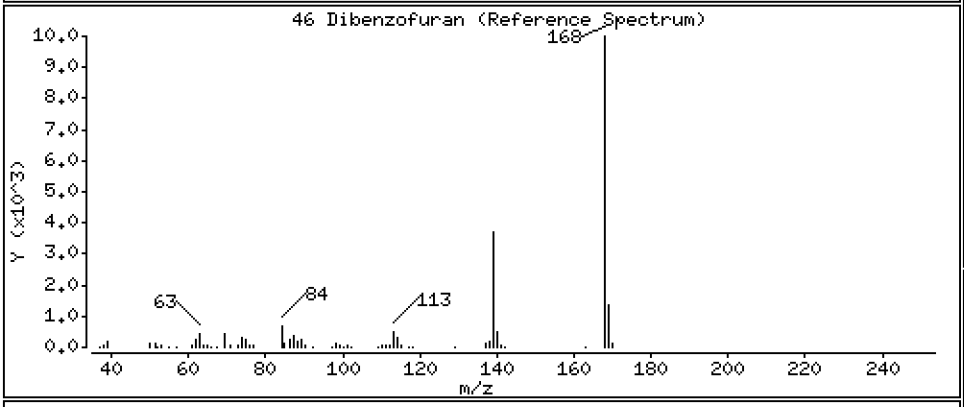
Column diameter: 0.25

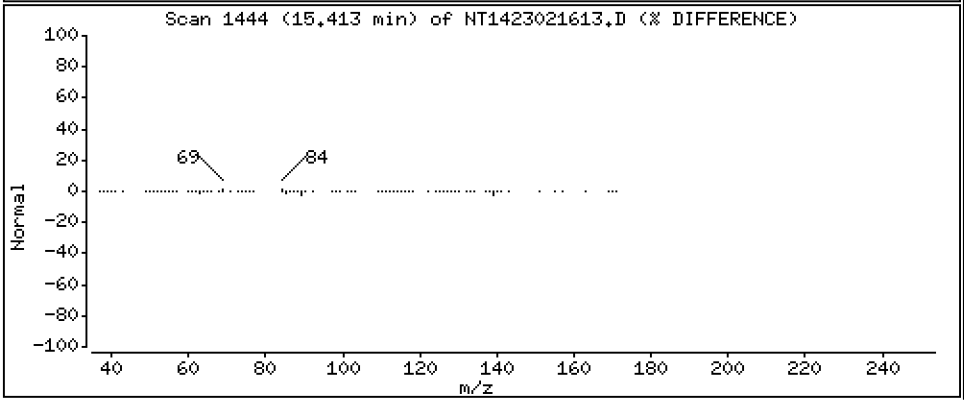
46 Dibenzofuran

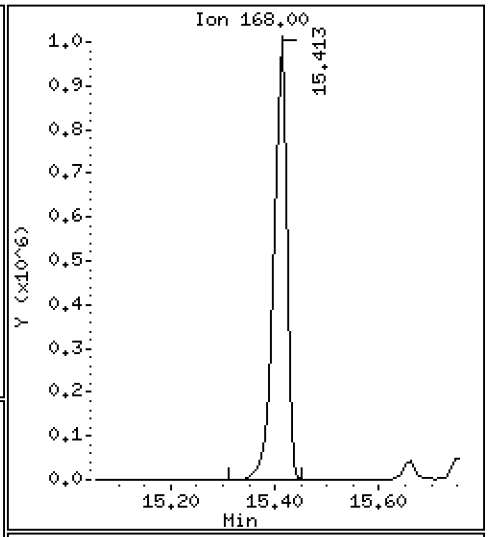
Concentration: 4.548 ug/mL

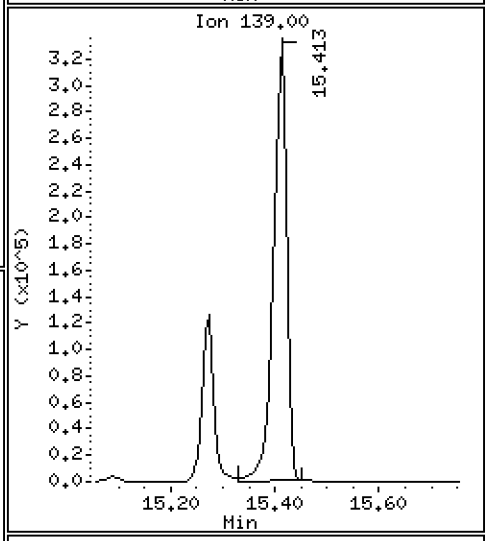


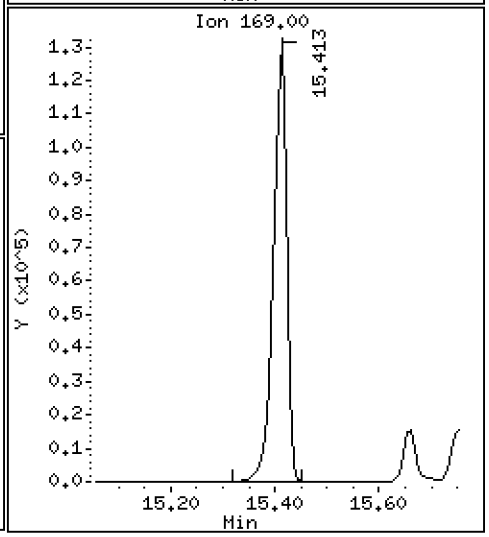












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

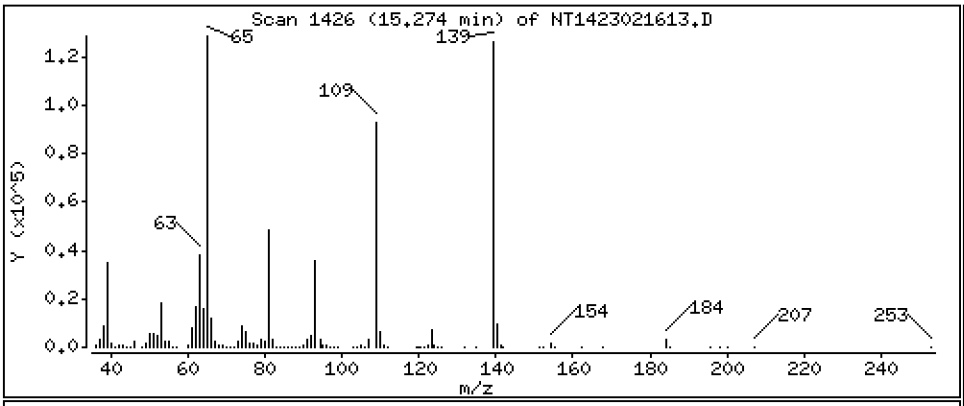
Operator: DSD

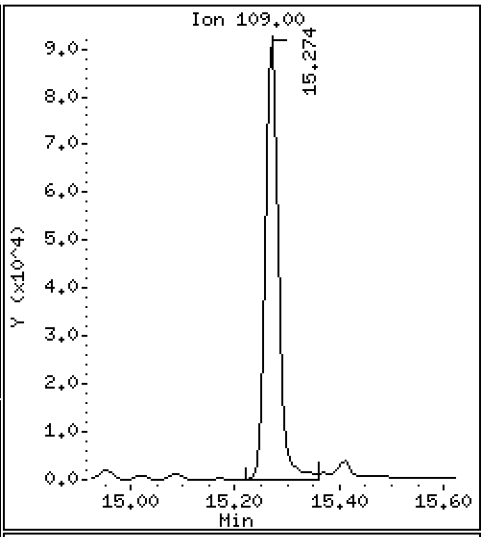
Column phase: ZB-5msi

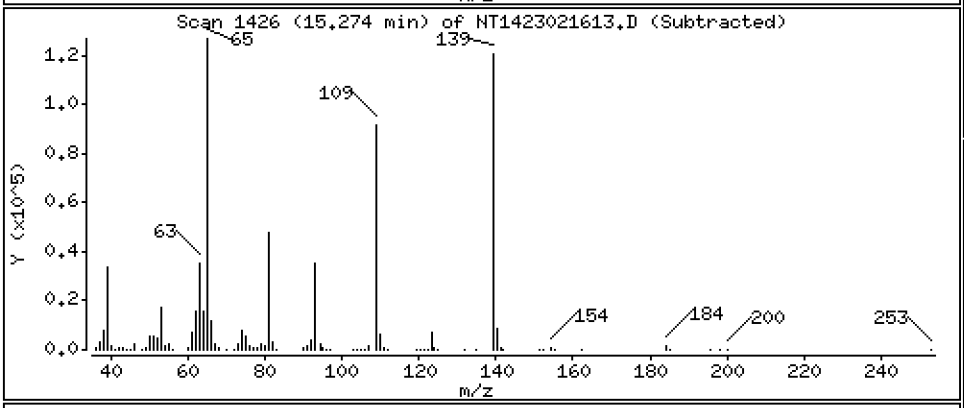
Column diameter: 0.25

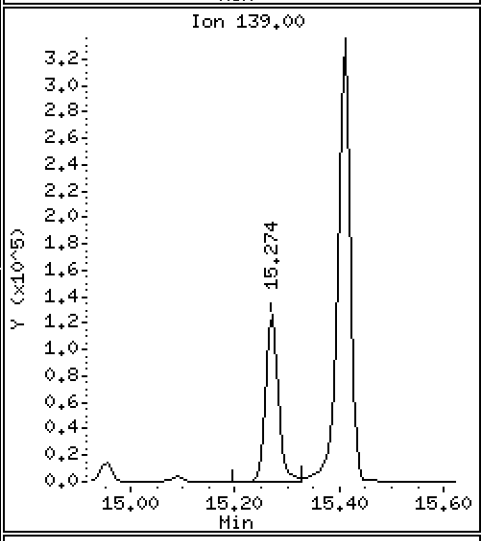
47 4-Nitrophenol

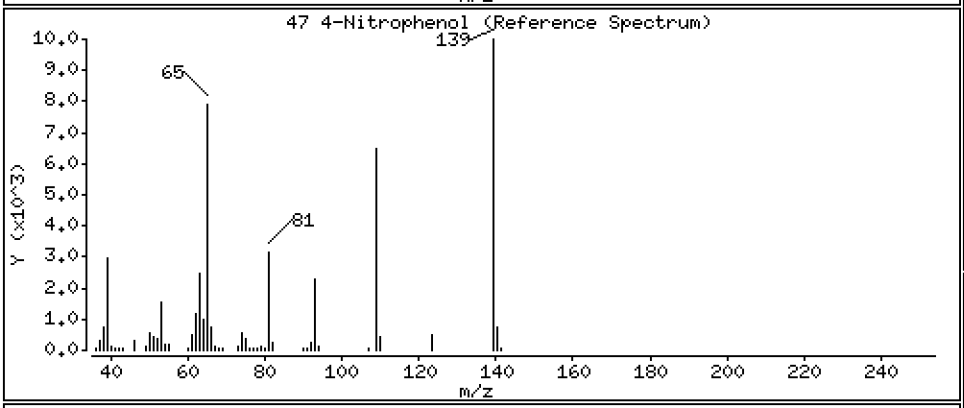
Concentration: 4.052 ug/mL

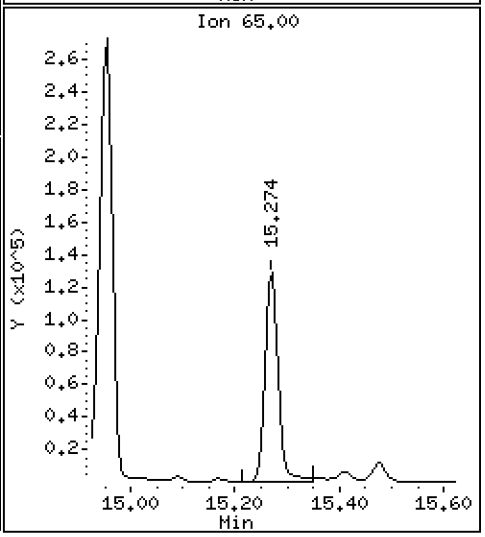


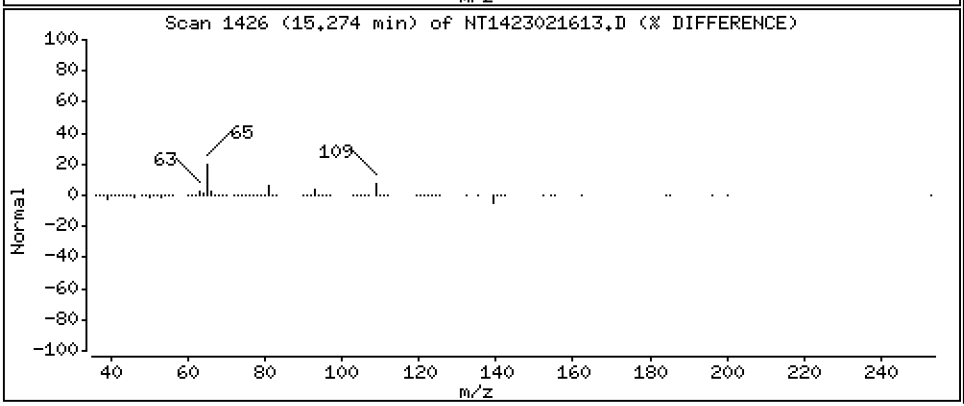












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

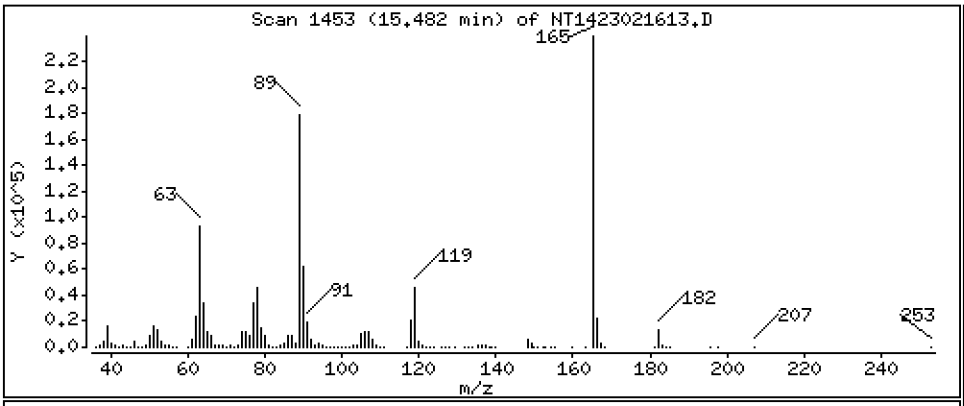
Operator: DSD

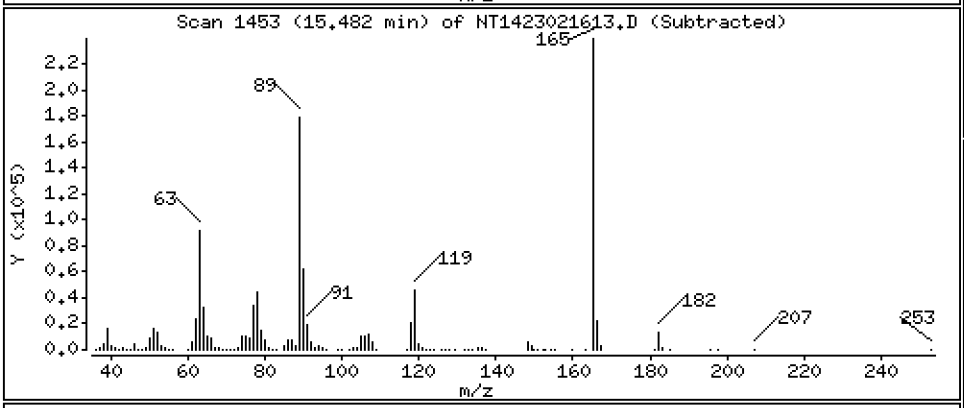
Column phase: ZB-5msi

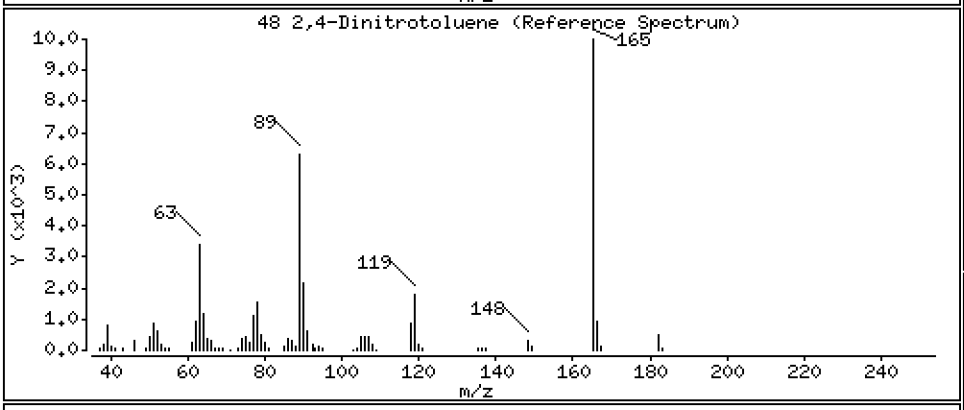
Column diameter: 0.25

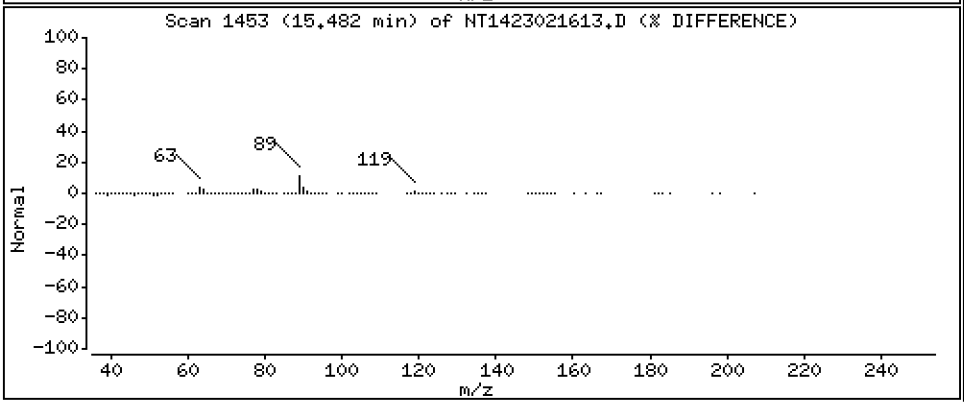
48 2,4-Dinitrotoluene

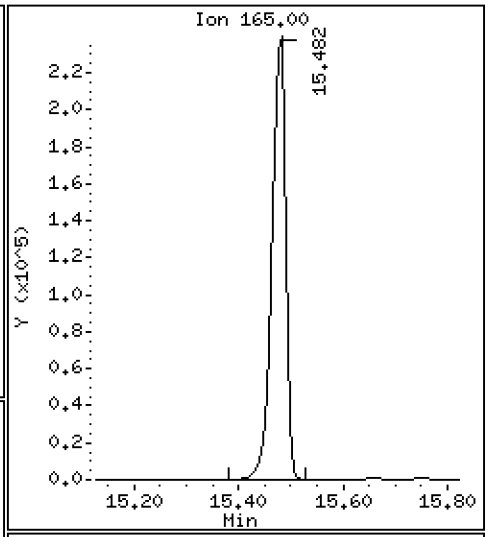
Concentration: 4.855 ug/mL

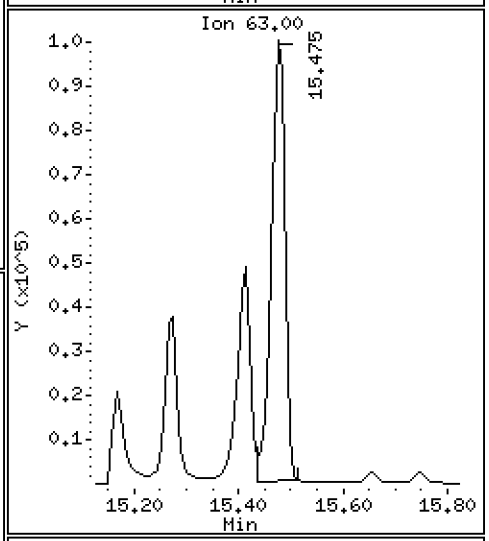


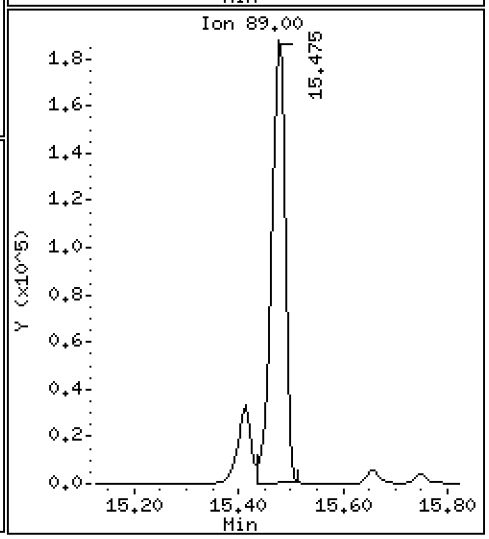












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

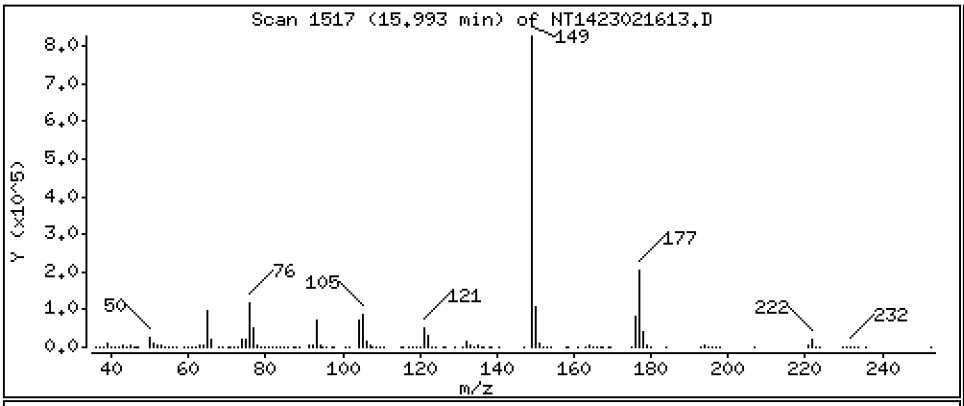
Operator: DSD

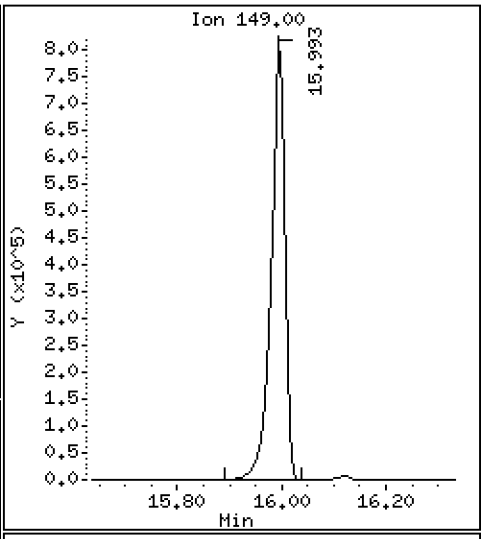
Column phase: ZB-5msi

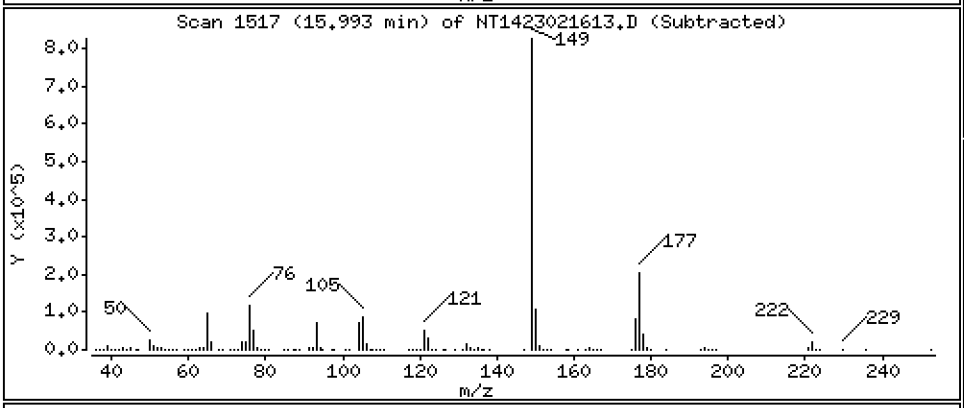
Column diameter: 0.25

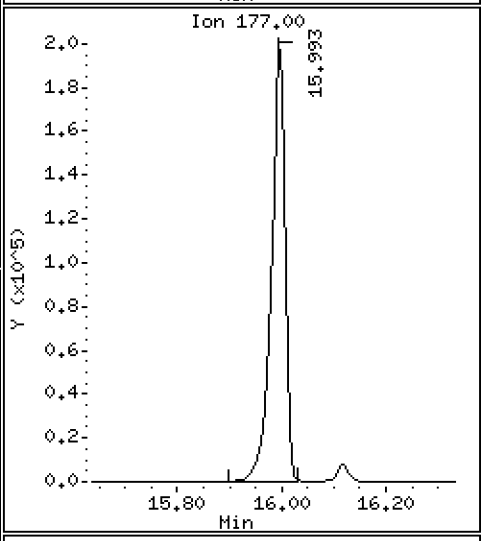
50 Diethylphthalate

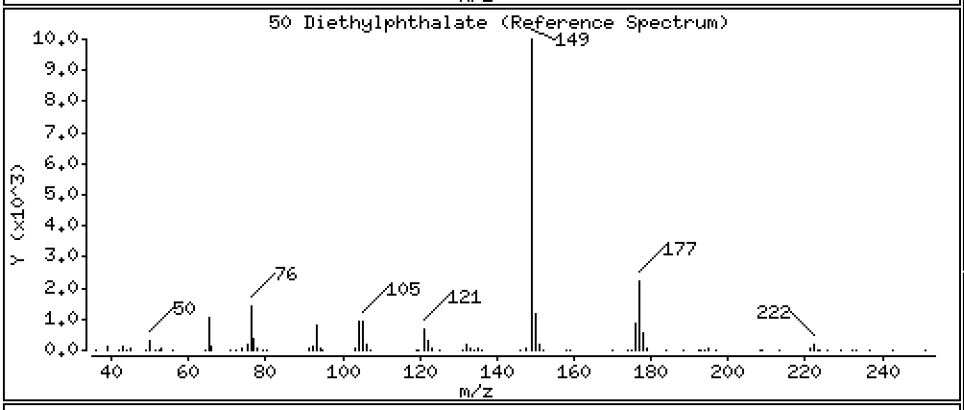
Concentration: 4.722 ug/mL

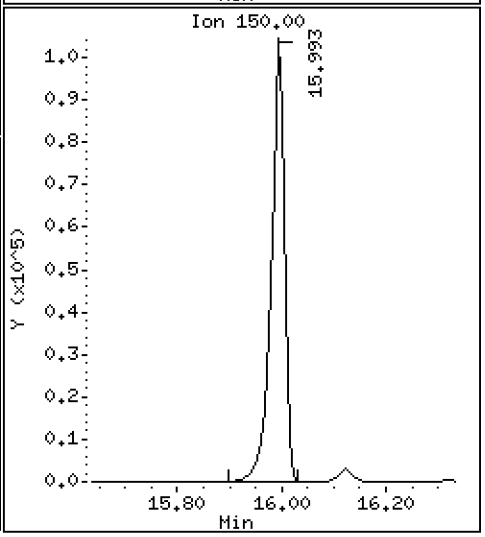


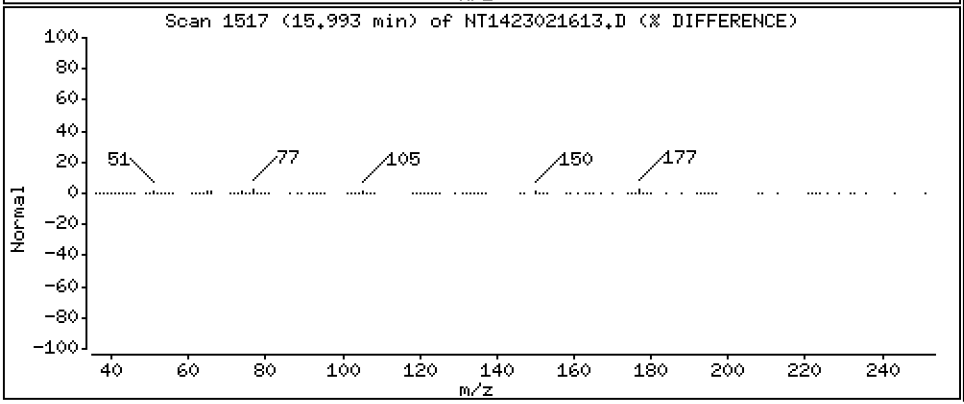












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

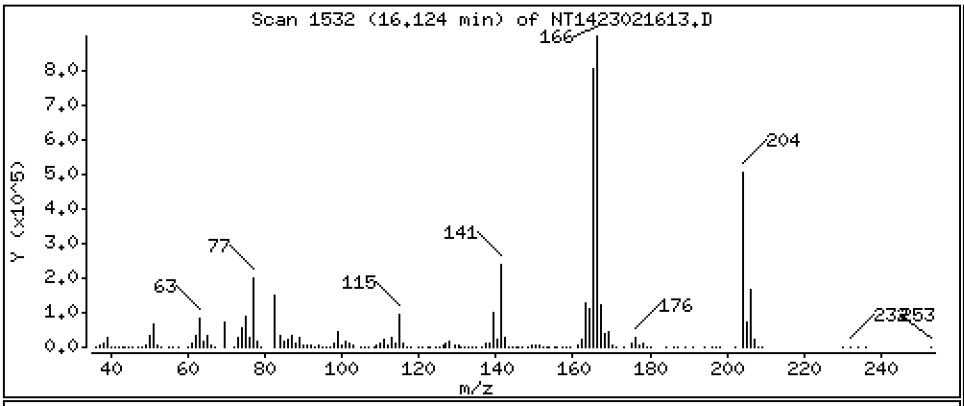
Operator: DSD

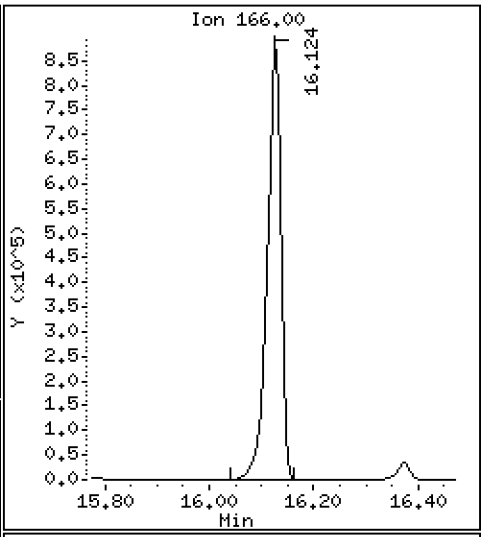
Column phase: ZB-5msi

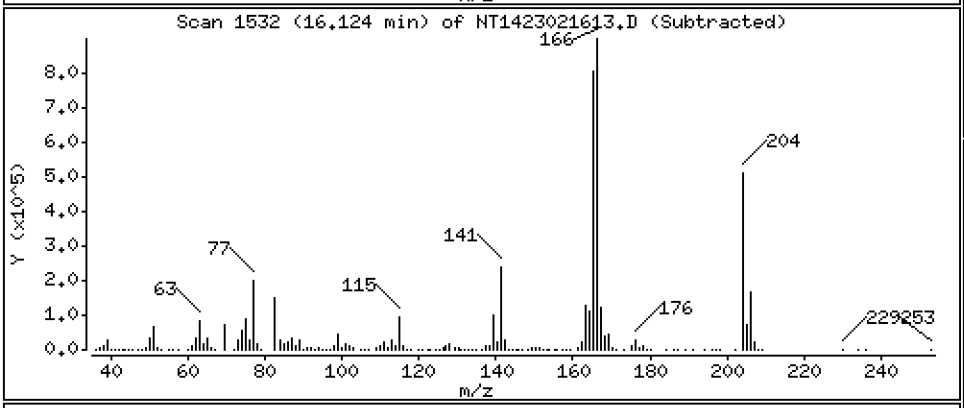
Column diameter: 0.25

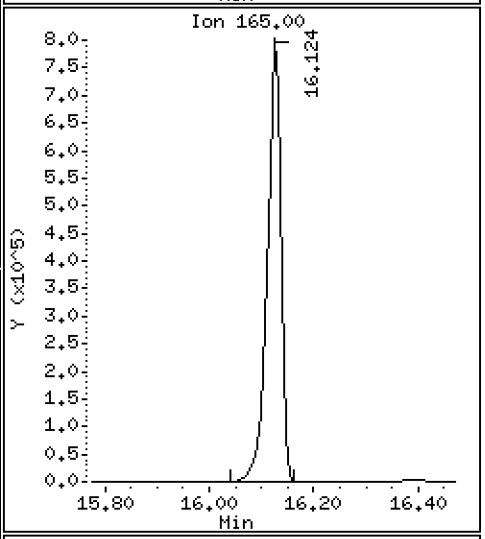
49 Fluorene

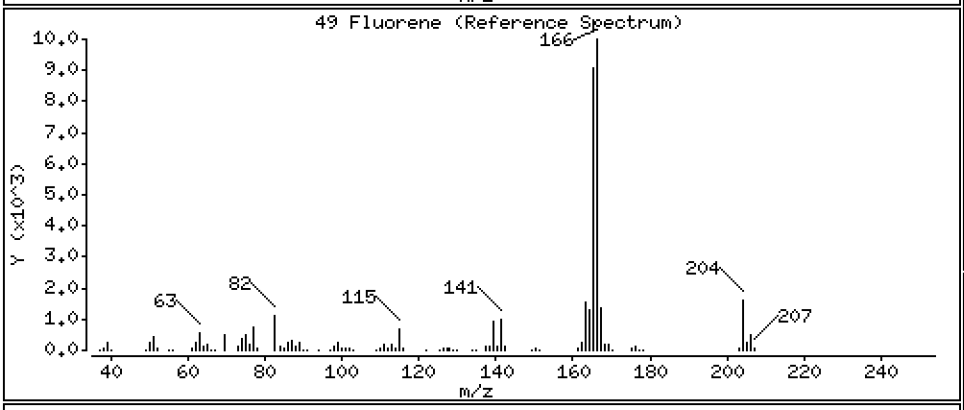
Concentration: 4.638 ug/mL

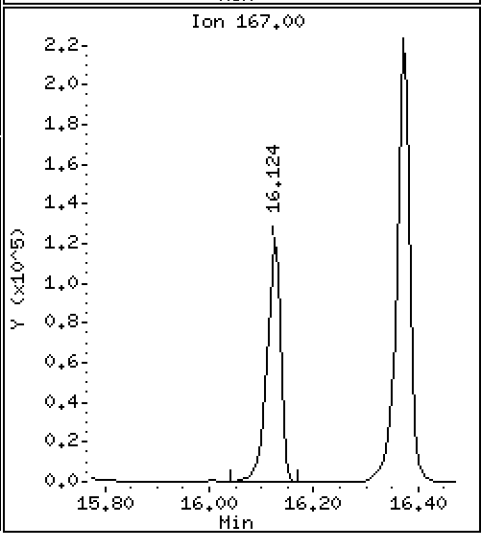


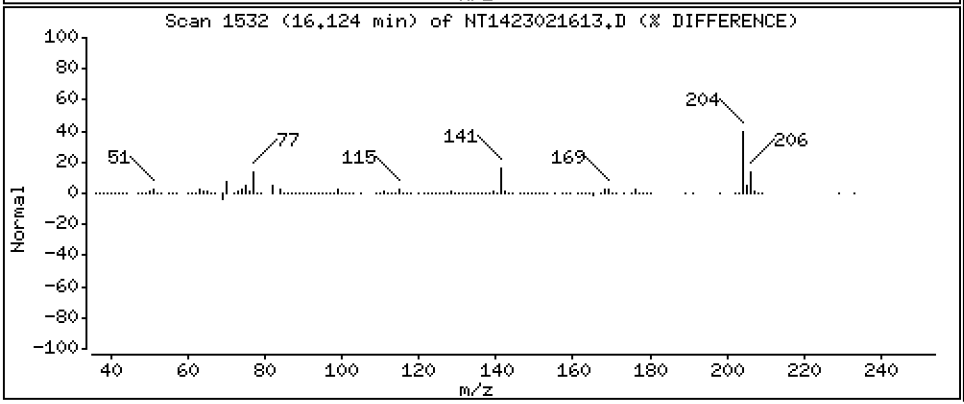












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

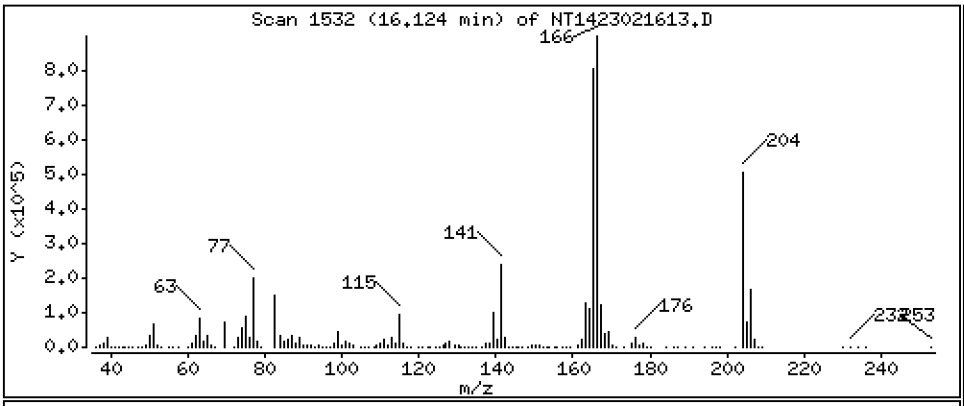
Operator: DSD

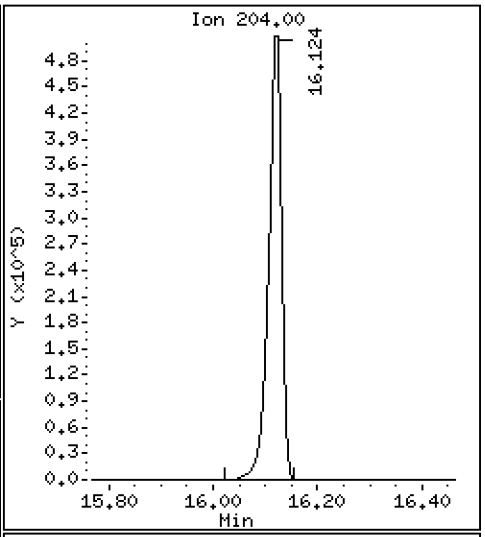
Column phase: ZB-5msi

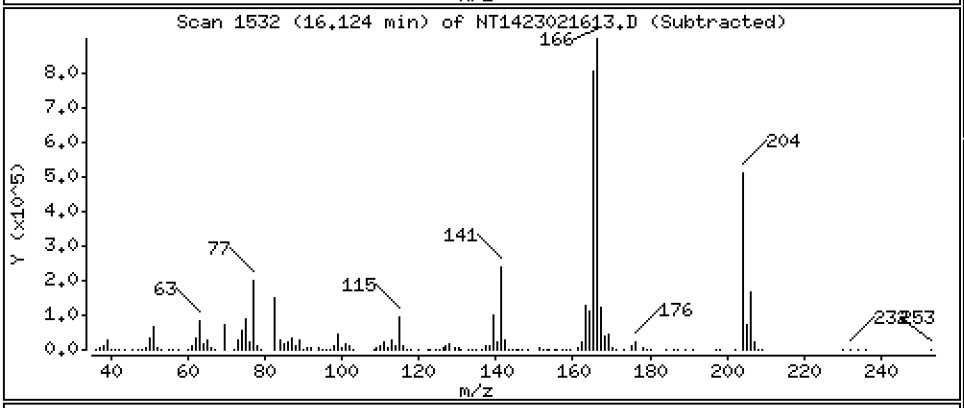
Column diameter: 0.25

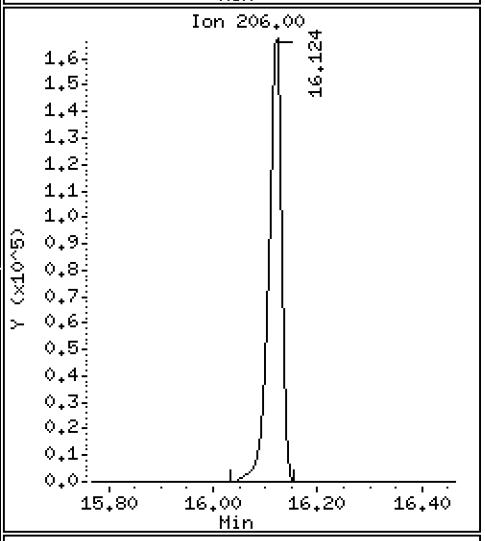
51 4-Chlorophenyl-phenylether

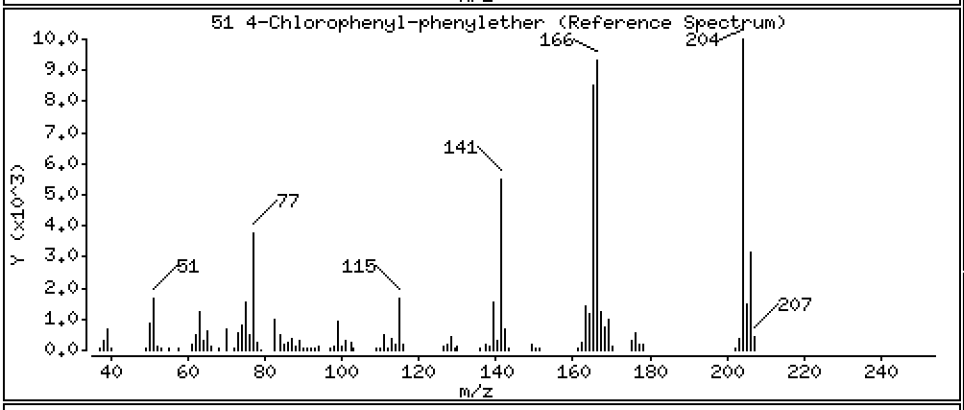
Concentration: 4.754 ug/mL

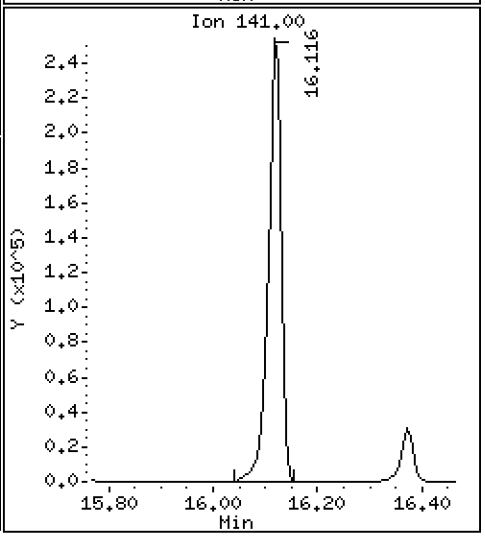


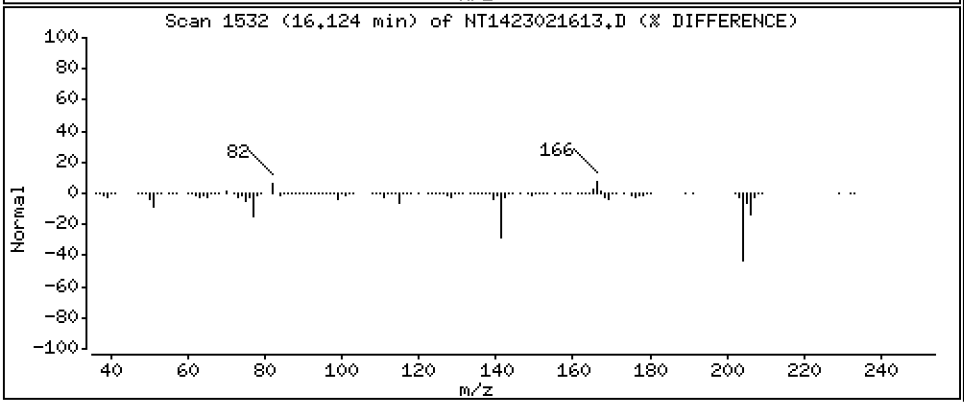












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

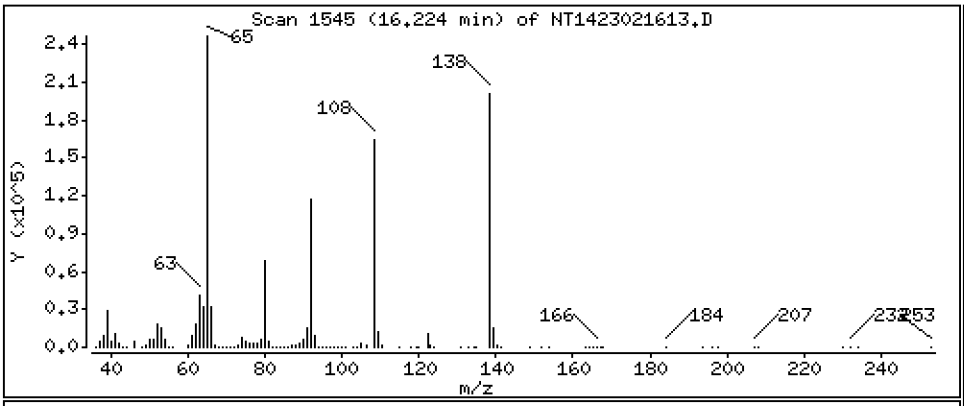
Operator: DSD

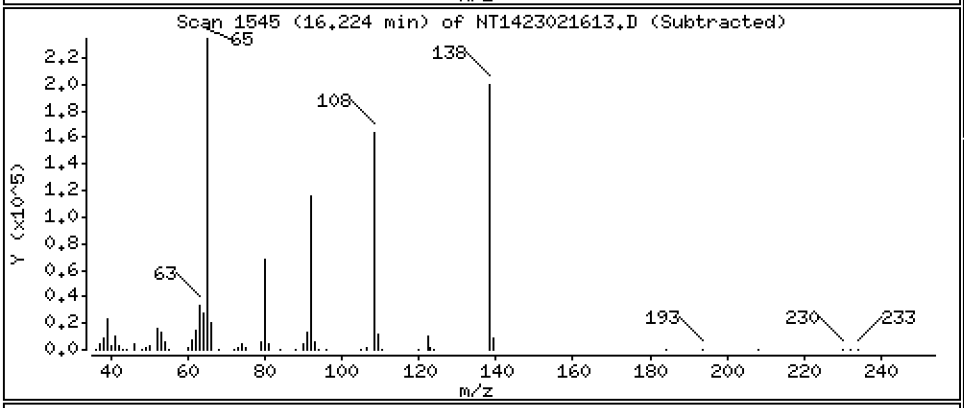
Column phase: ZB-5msi

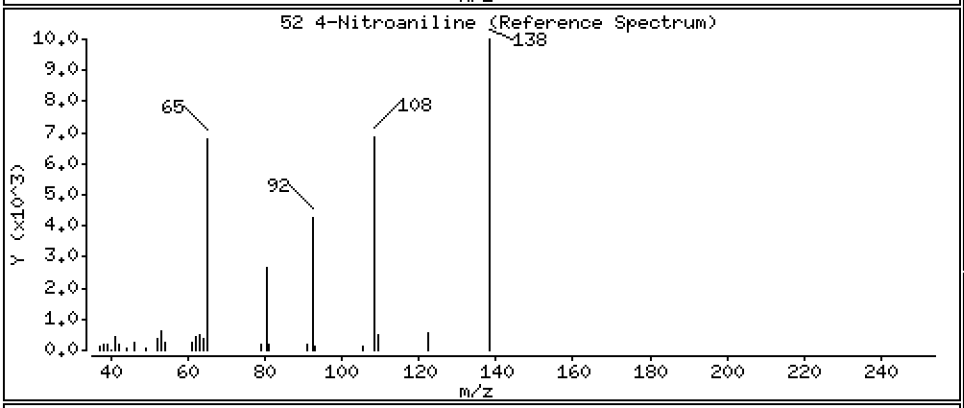
Column diameter: 0.25

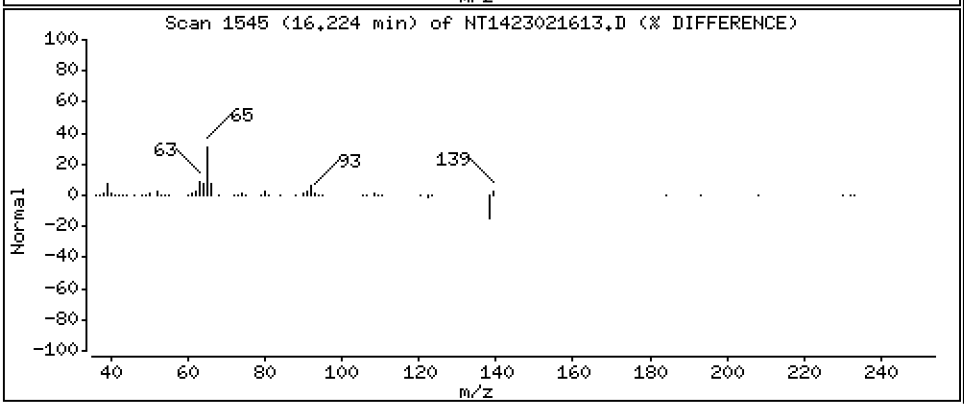
52 4-Nitroaniline

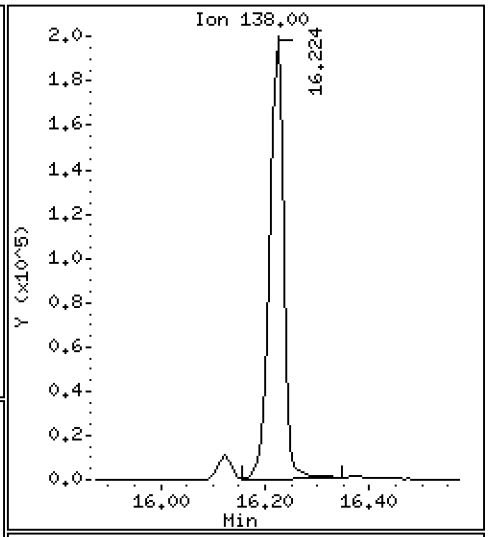
Concentration: 4.762 ug/mL

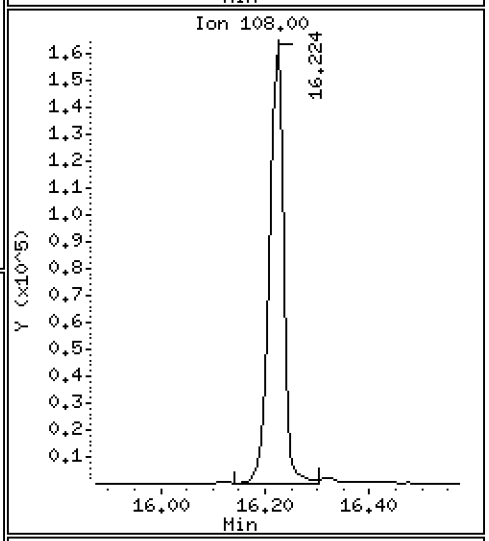


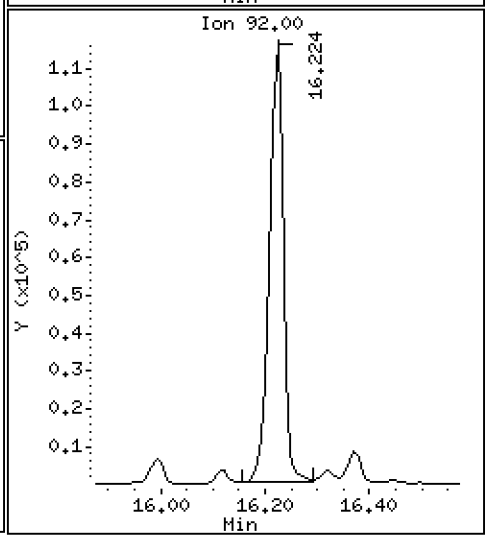












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

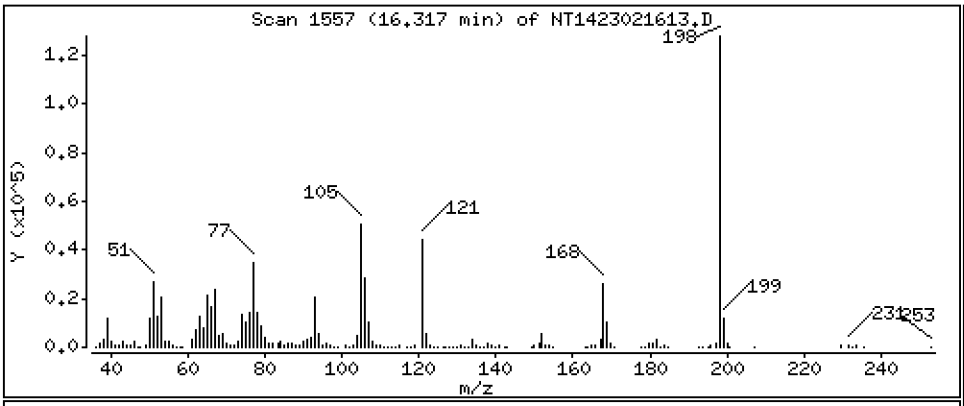
Operator: DSD

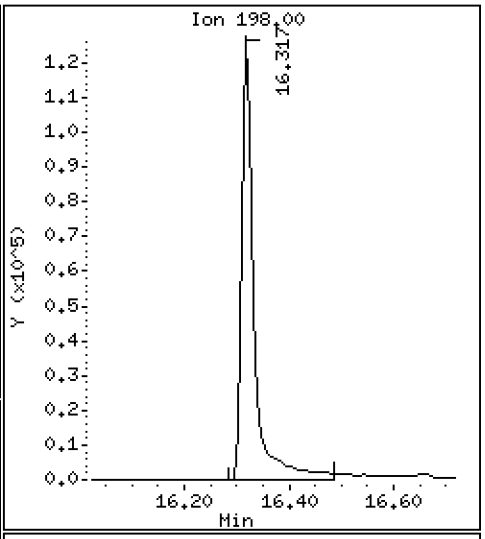
Column phase: ZB-5msi

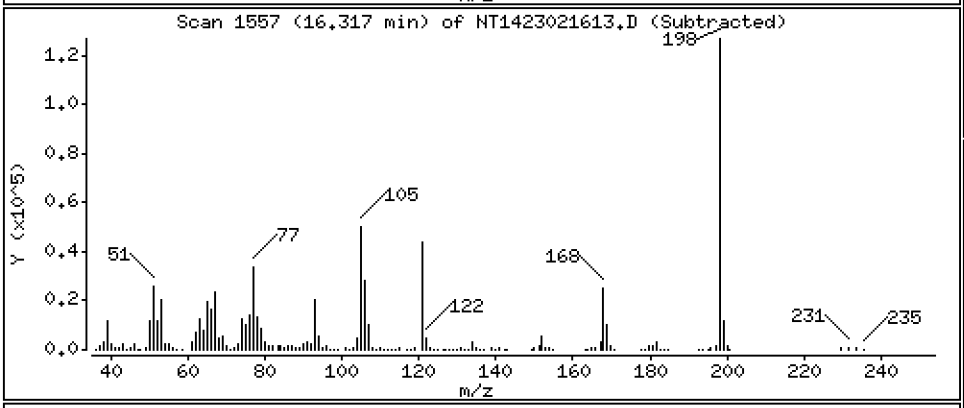
Column diameter: 0.25

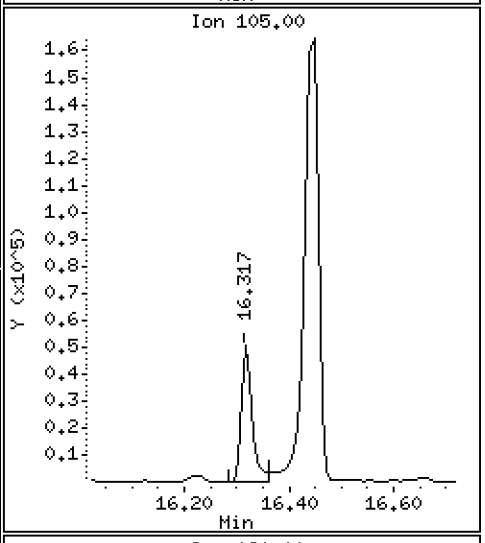
53 4,6-Dinitro-2-methylphenol

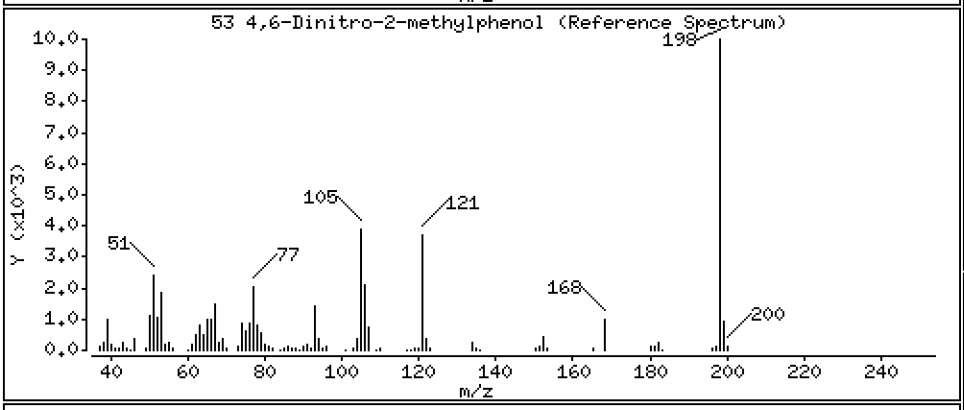
Concentration: 3.653 ug/mL

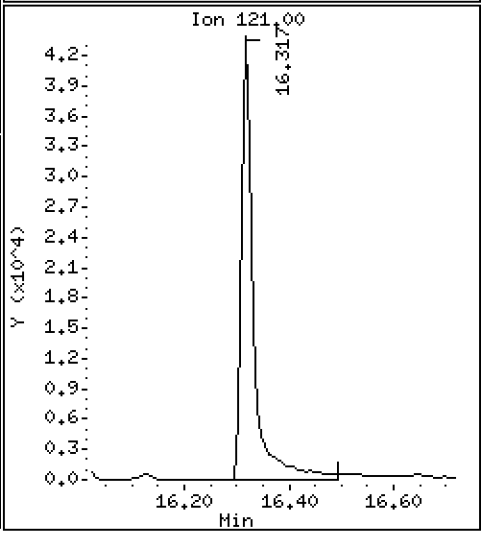


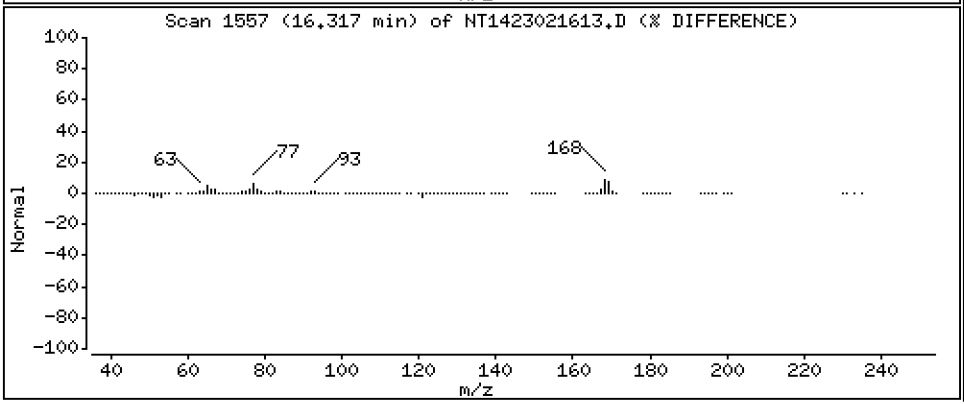












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

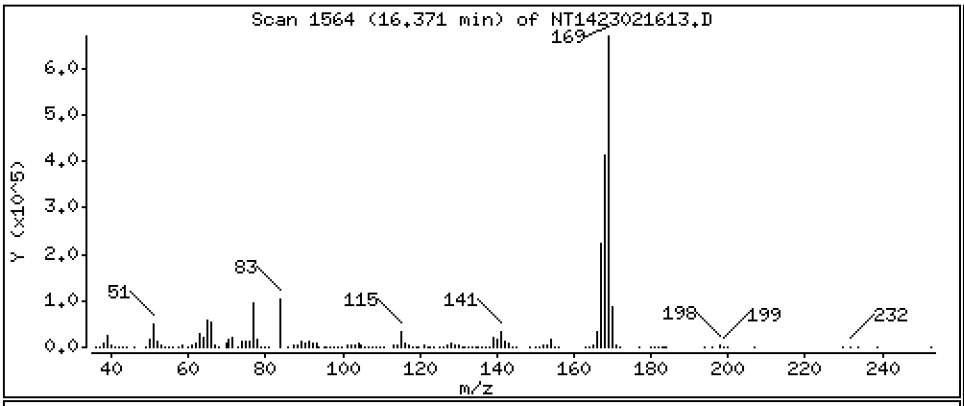
Operator: DSD

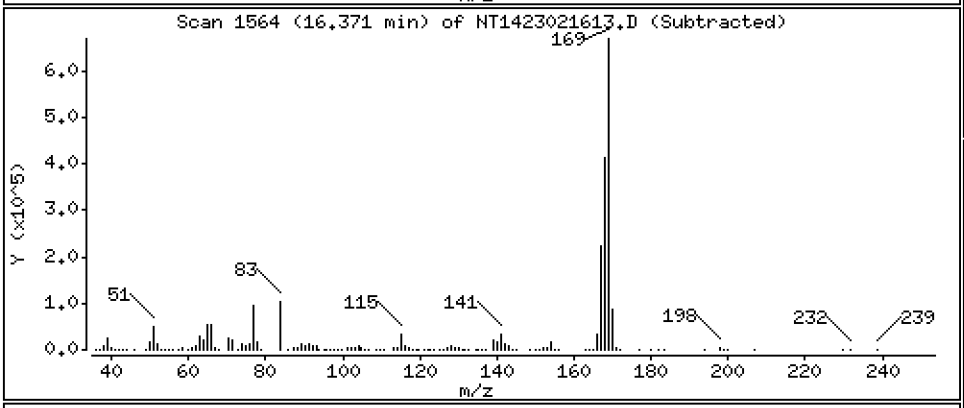
Column phase: ZB-5msi

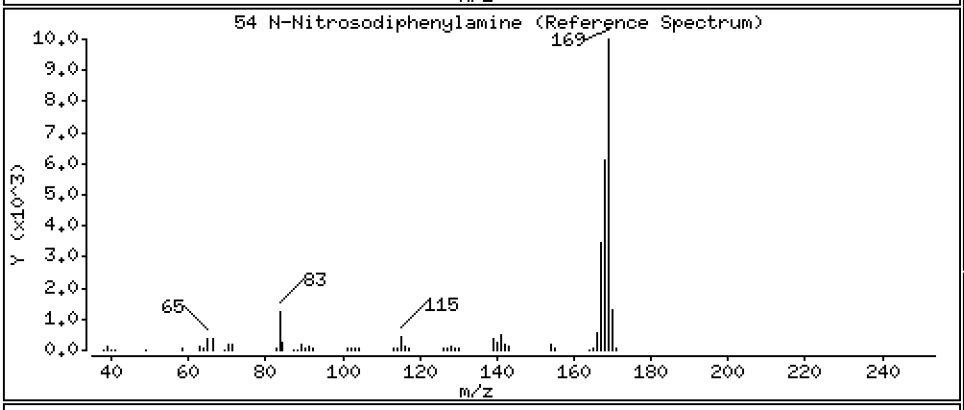
Column diameter: 0.25

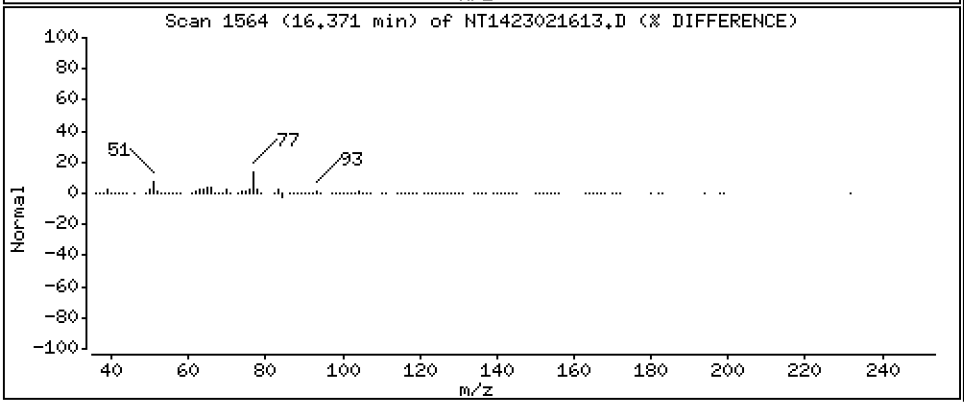
54 N-Nitrosodiphenylamine

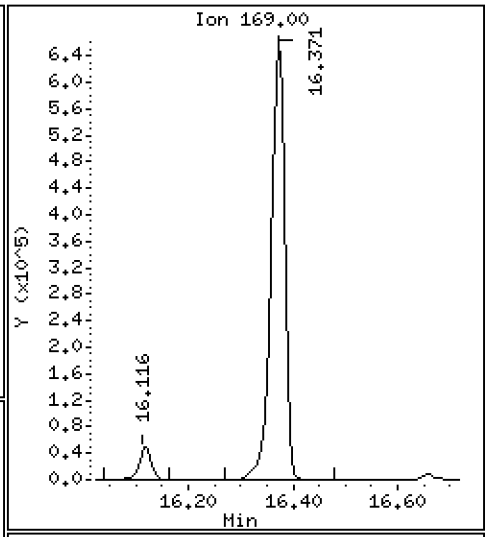
Concentration: 4.907 ug/mL

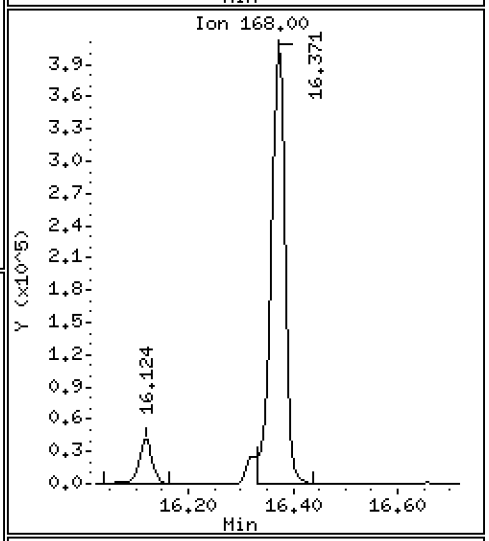


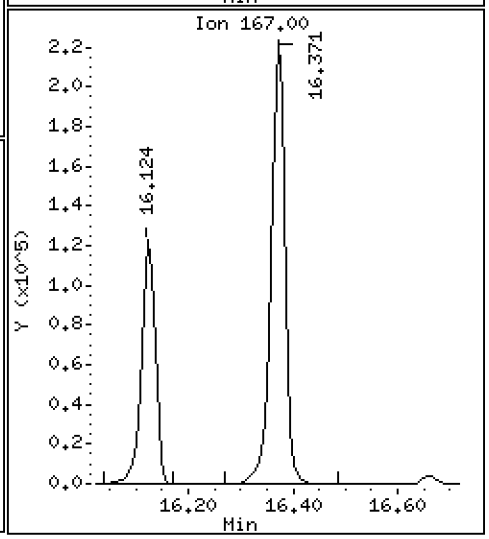












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

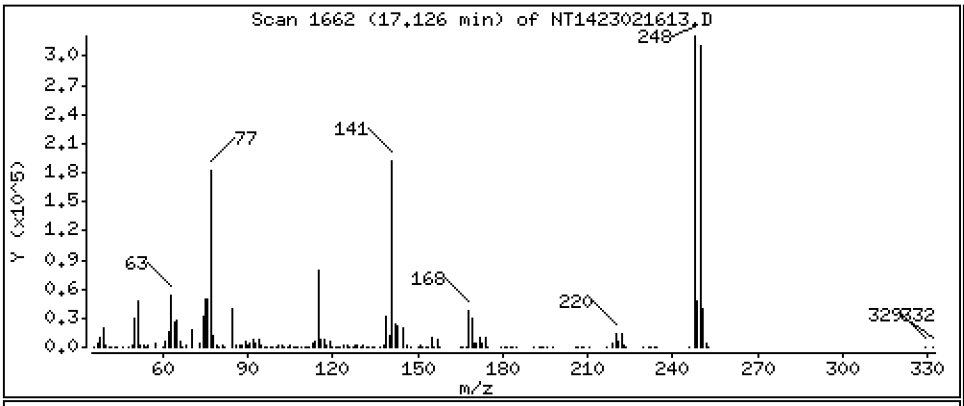
Operator: DSD

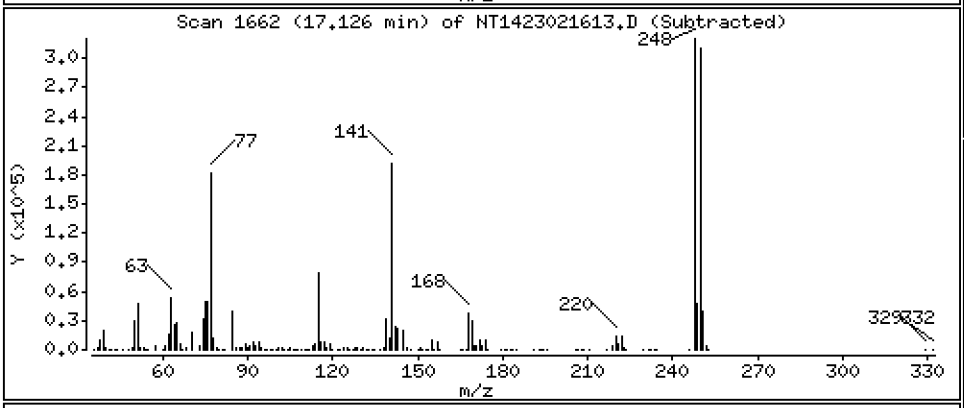
Column phase: ZB-5msi

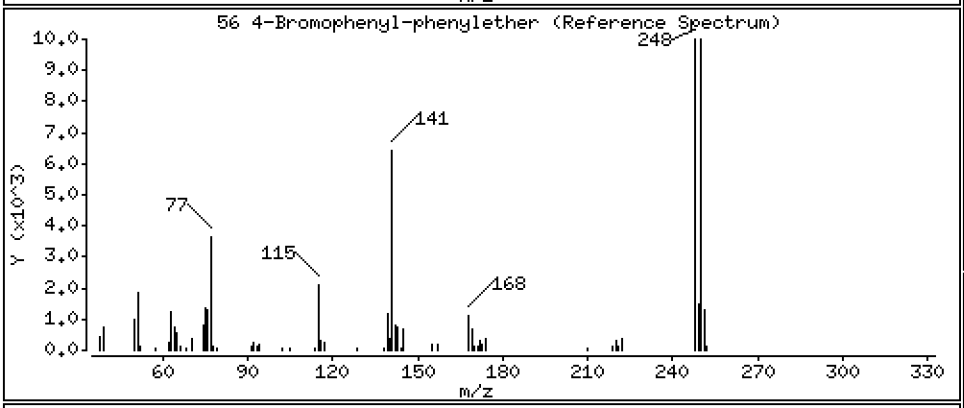
Column diameter: 0.25

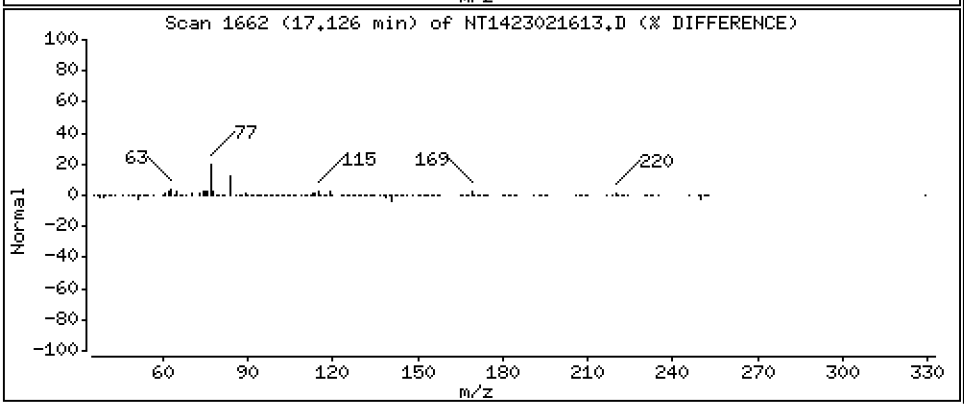
56 4-Bromophenyl-phenylether

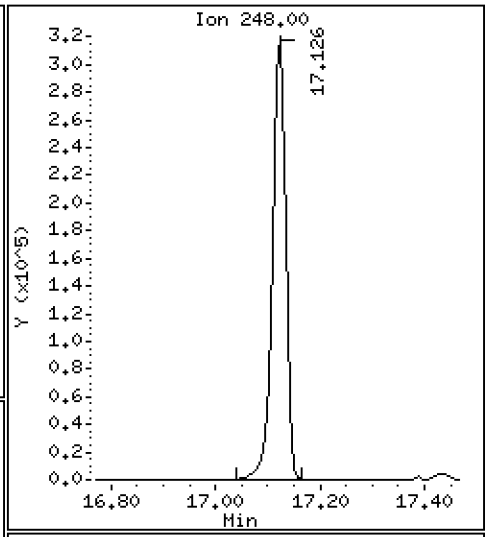
Concentration: 5.153 ug/mL

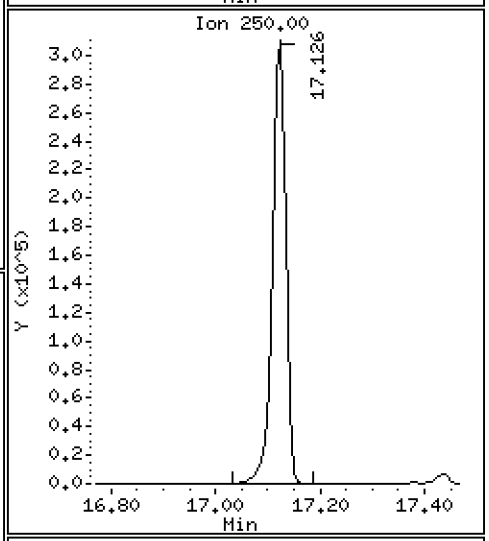


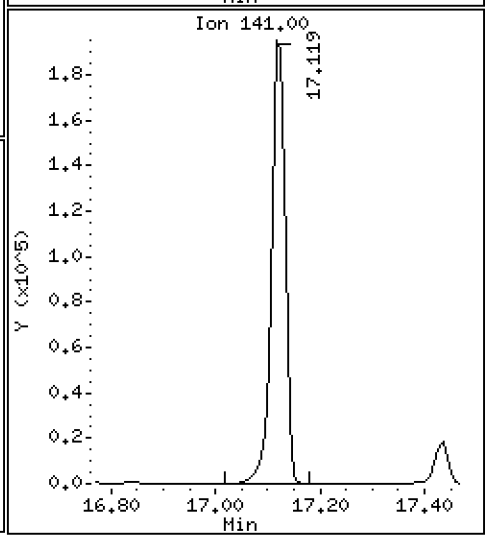












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

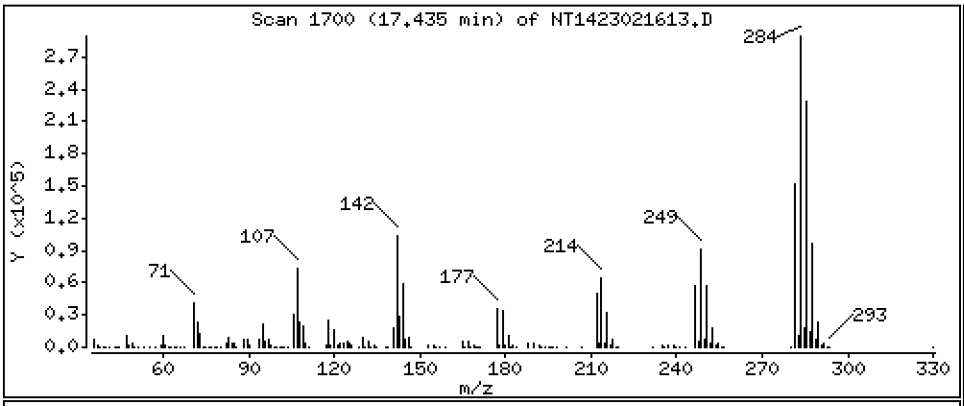
Operator: DSD

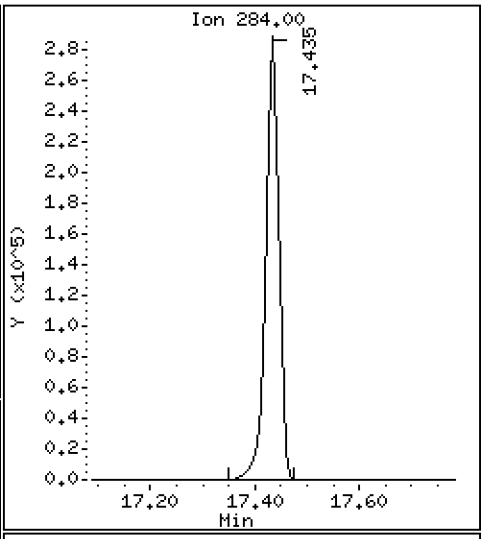
Column phase: ZB-5msi

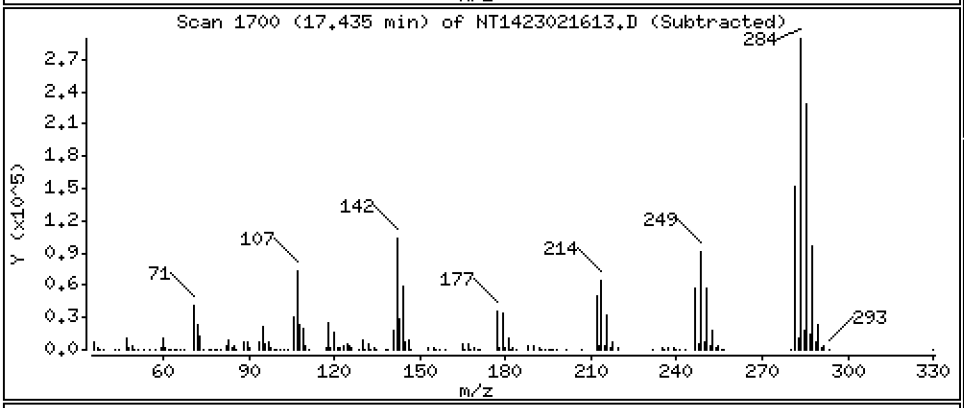
Column diameter: 0.25

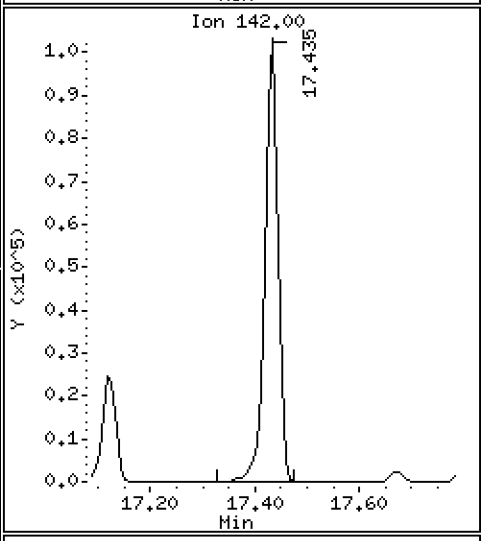
57 Hexachlorobenzene

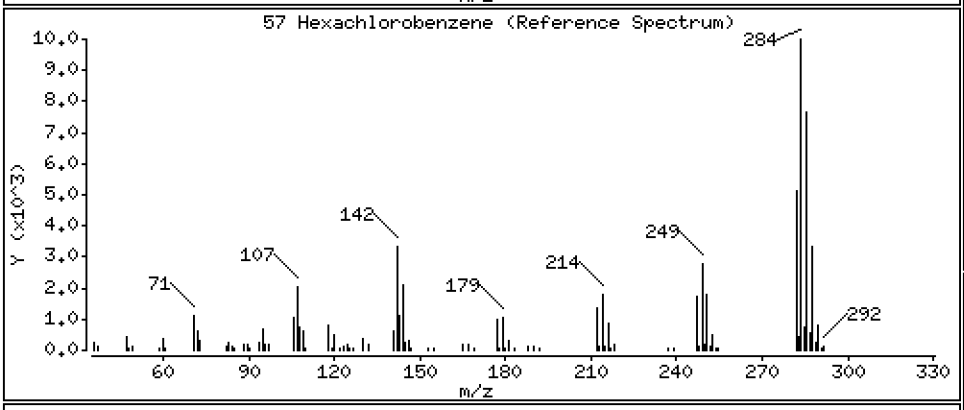
Concentration: 4.679 ug/mL

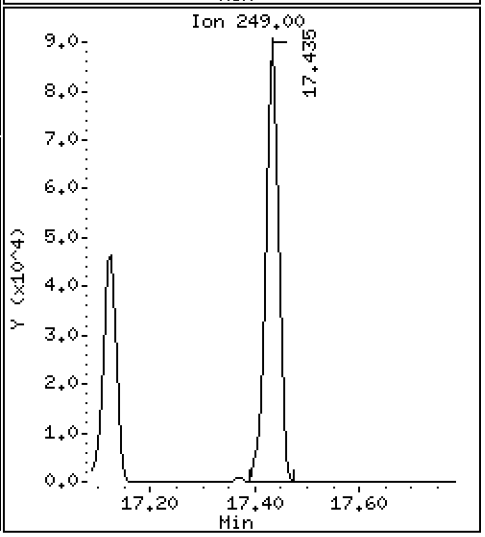


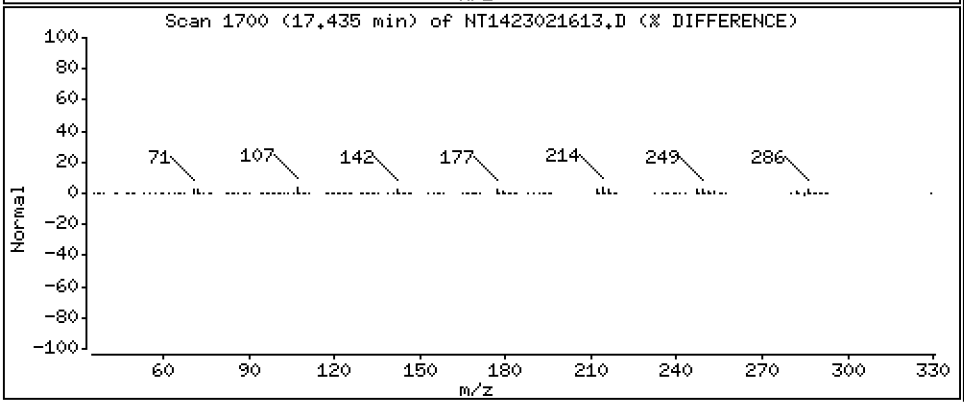












Date : 16-FEB-2023 21:18

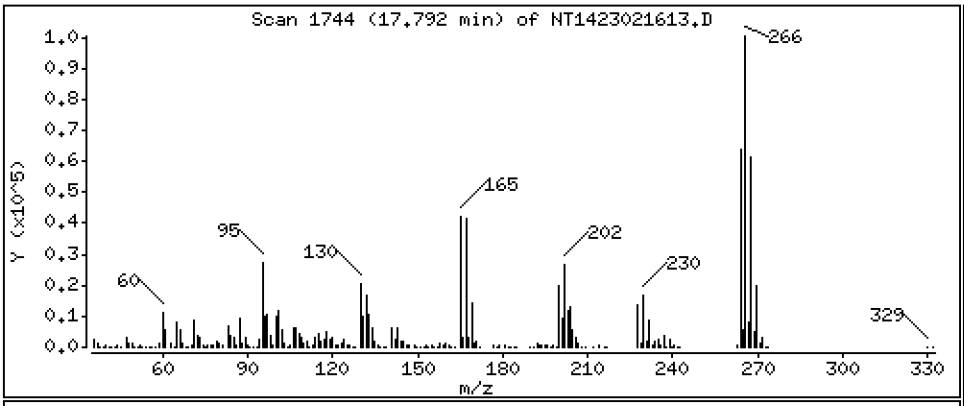
Client ID: Instrument: nt14.i

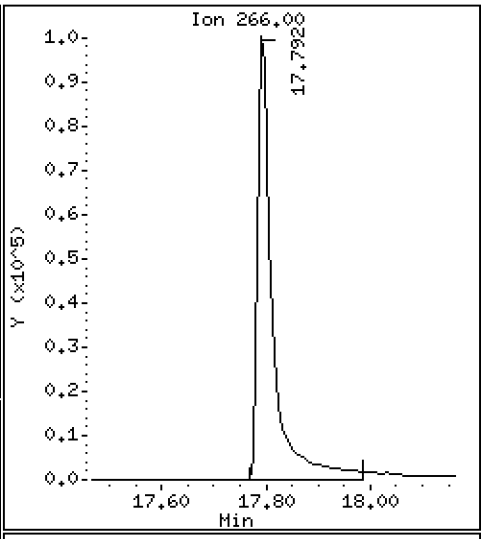
Sample Info: SLB0234-SCV1

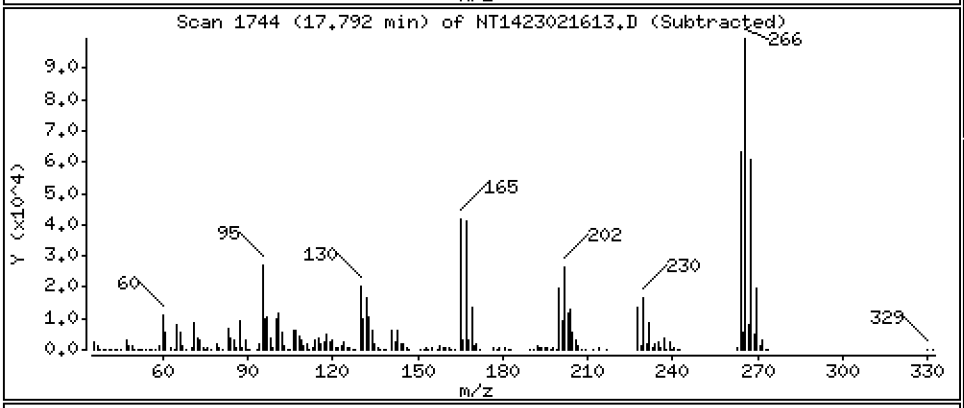
Operator: DSD

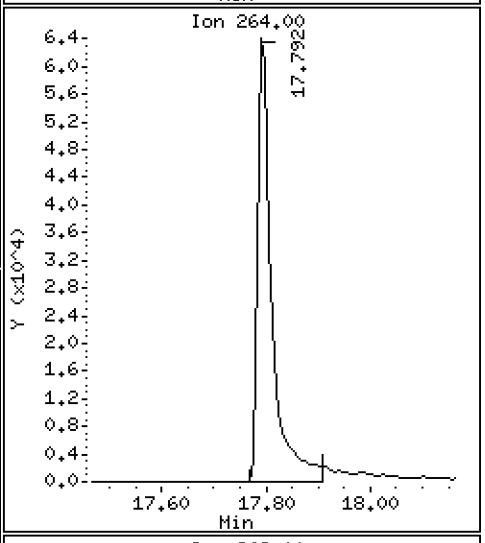
Column phase: ZB-5msi Column diameter: 0.25

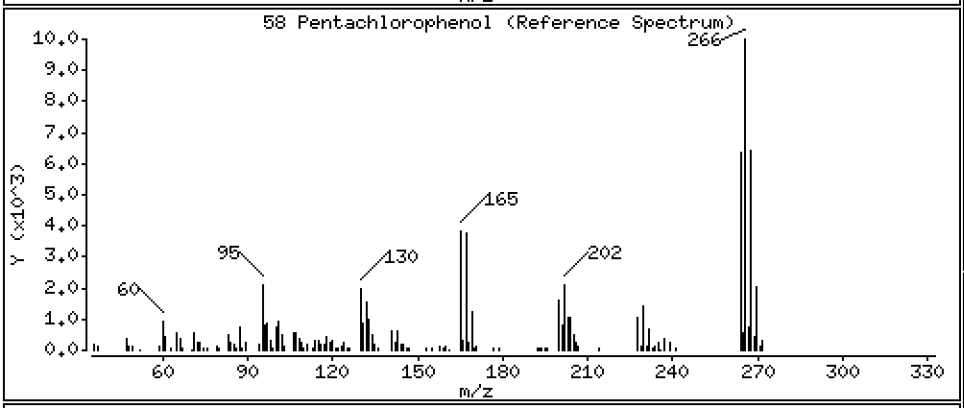
58 Pentachlorophenol Concentration: 3.932 ug/mL

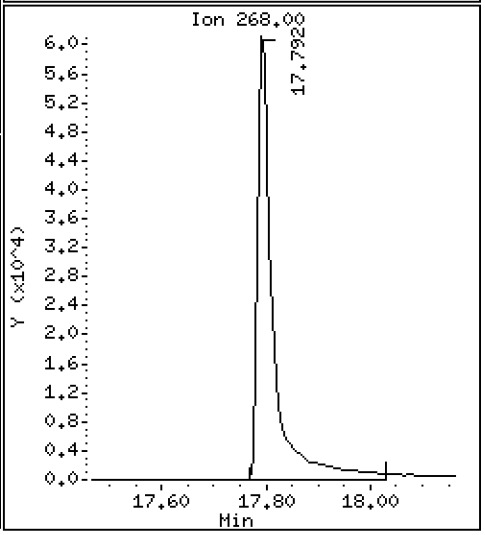


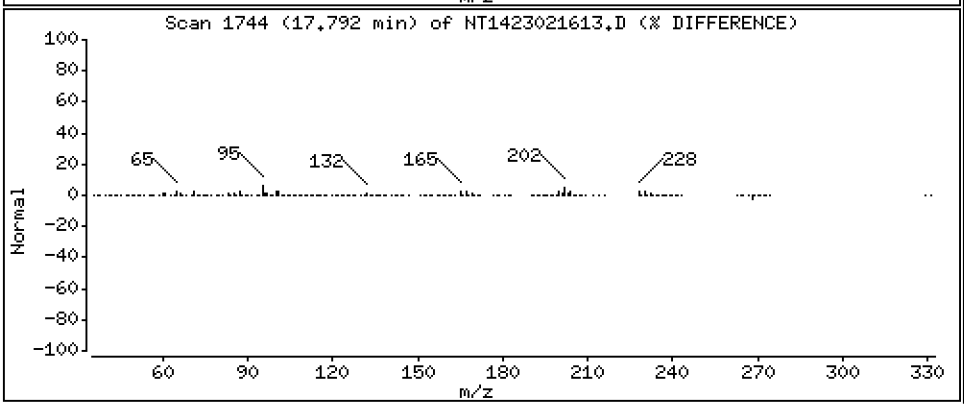












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

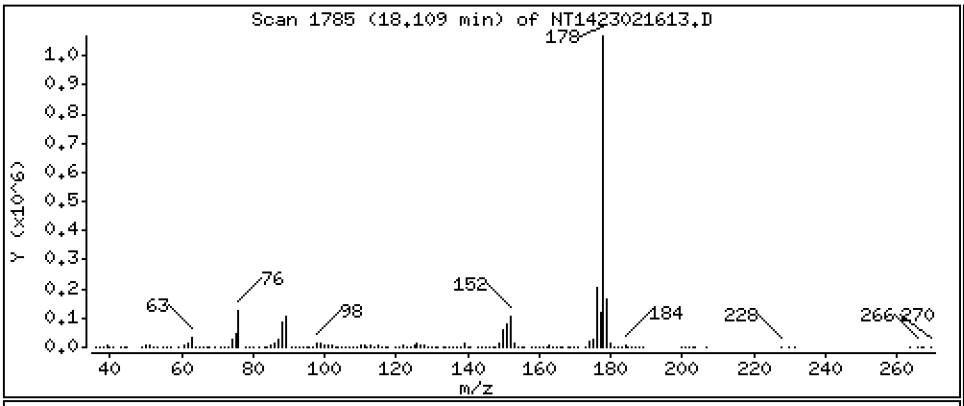
Operator: DSD

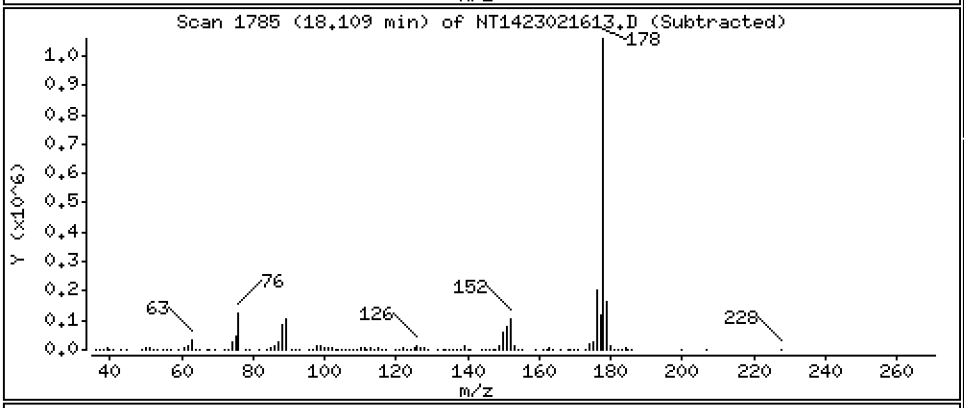
Column phase: ZB-5msi

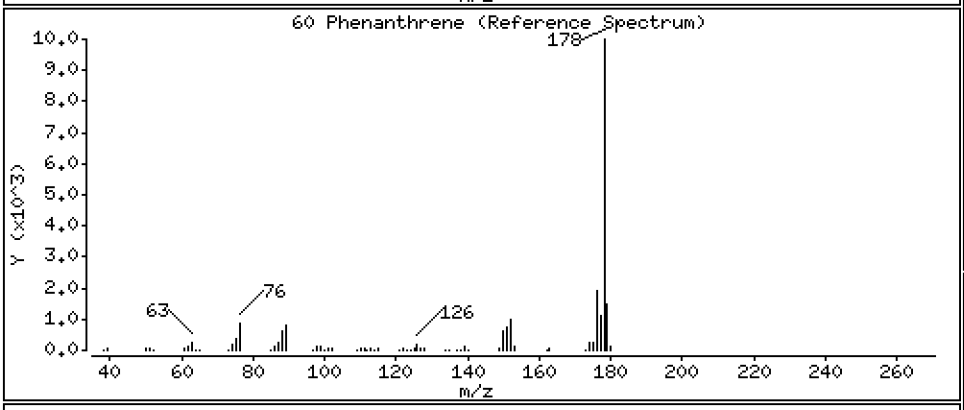
Column diameter: 0.25

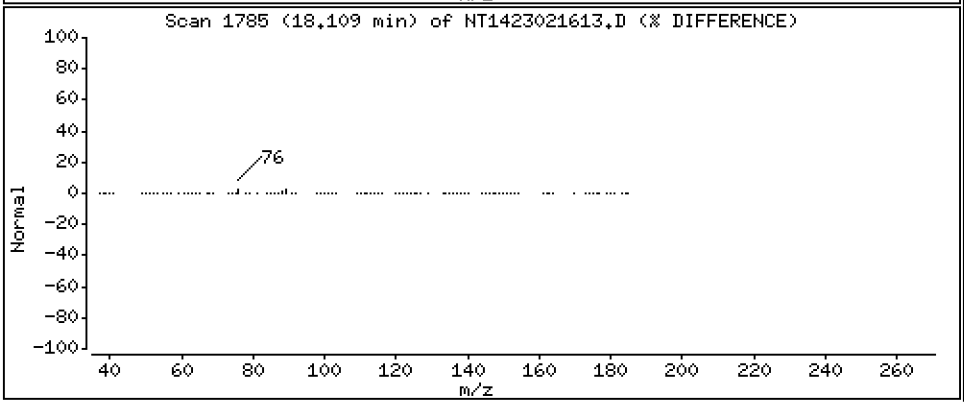
60 Phenanthrene

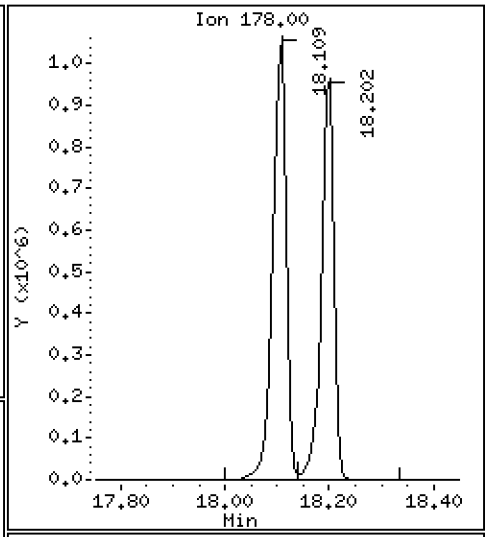
Concentration: 4.690 ug/mL

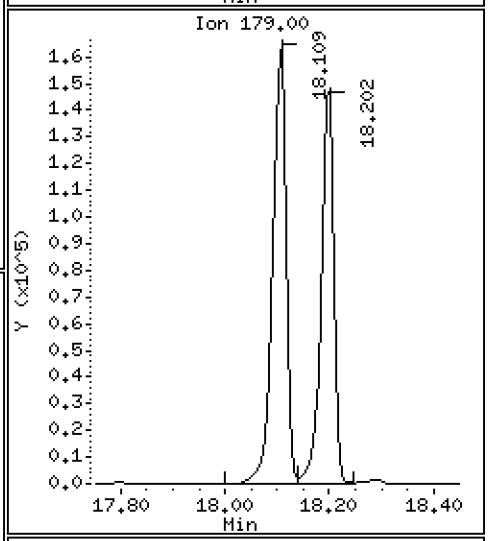


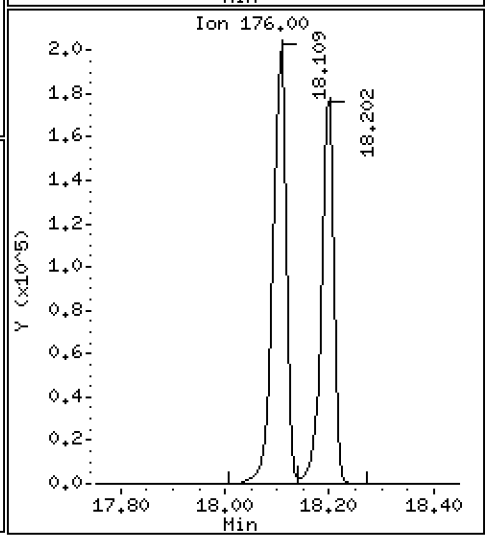












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

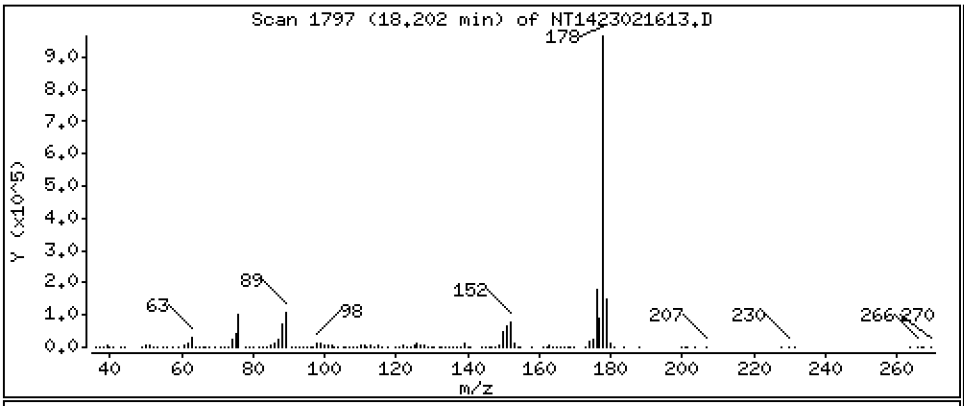
Operator: DSD

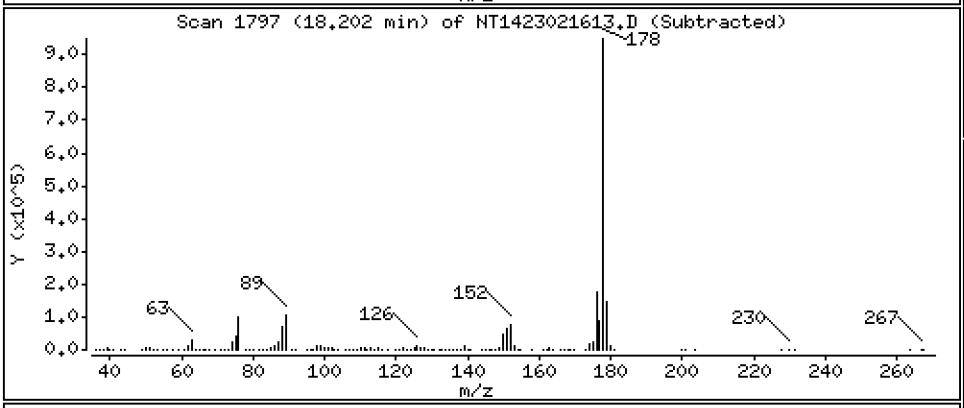
Column phase: ZB-5msi

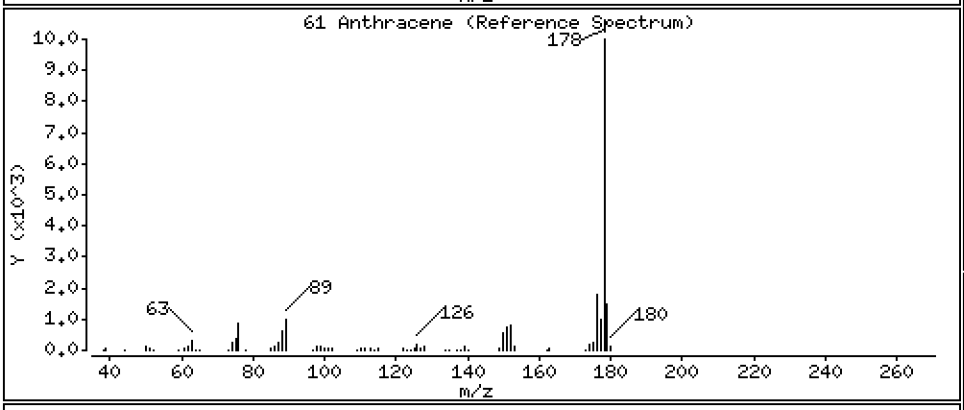
Column diameter: 0.25

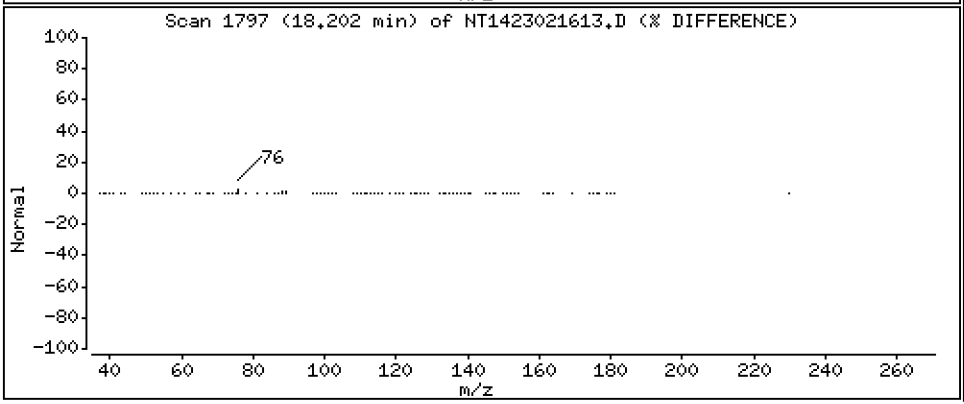
61 Anthracene

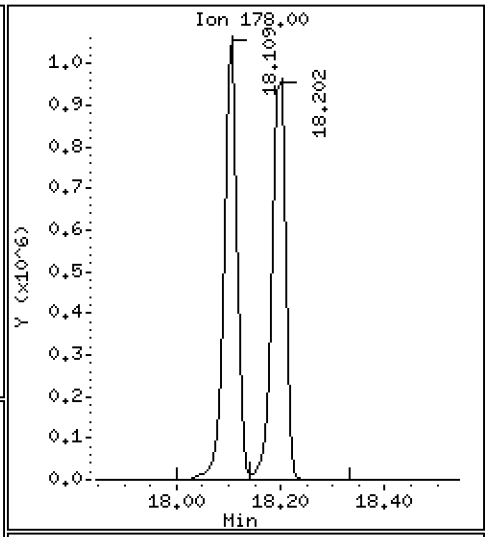
Concentration: 4.304 ug/mL

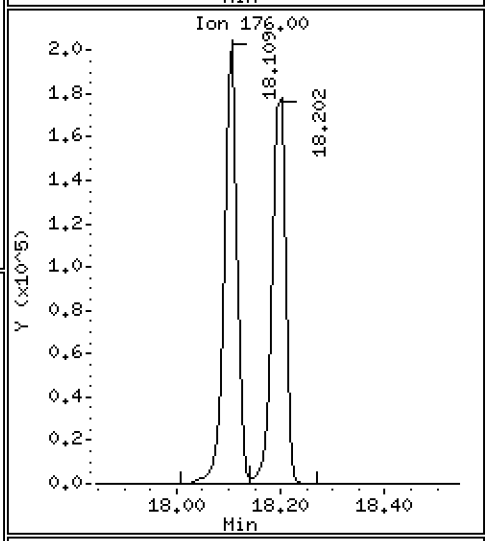


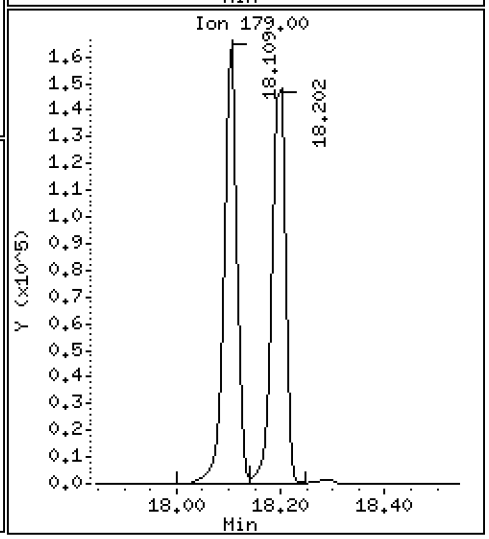












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

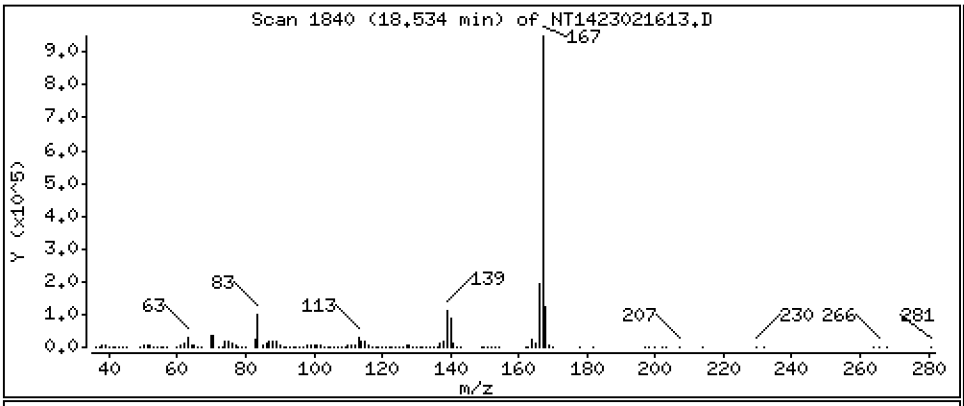
Operator: DSD

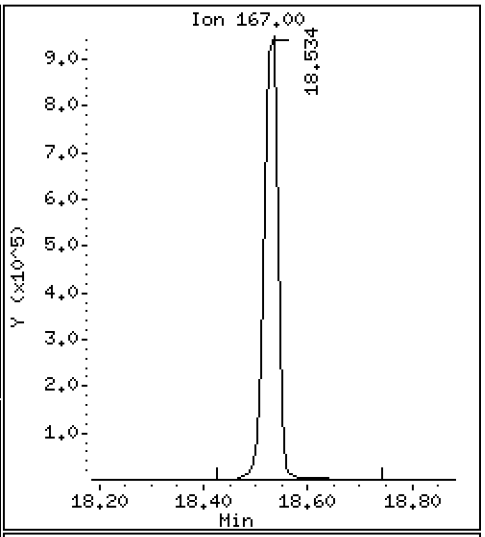
Column phase: ZB-5msi

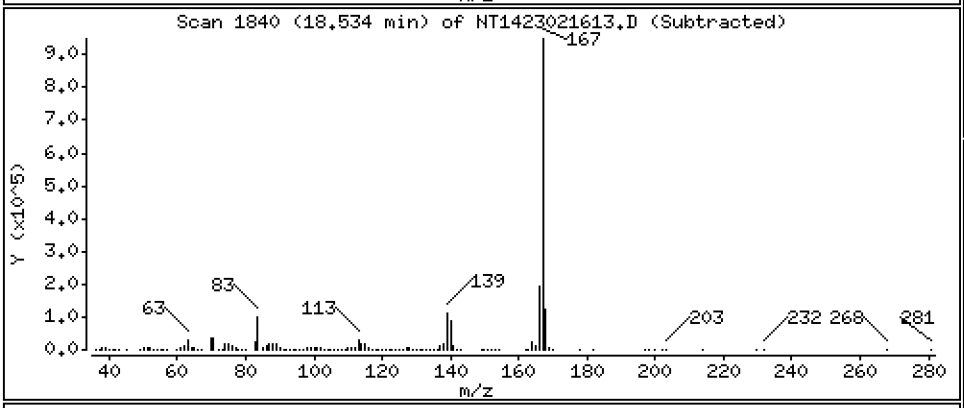
Column diameter: 0.25

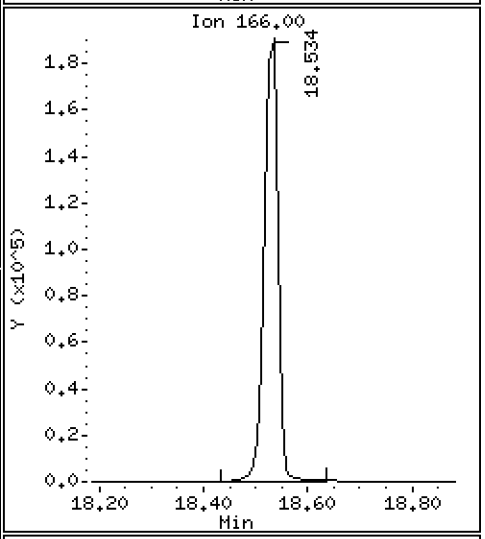
62 Carbazole

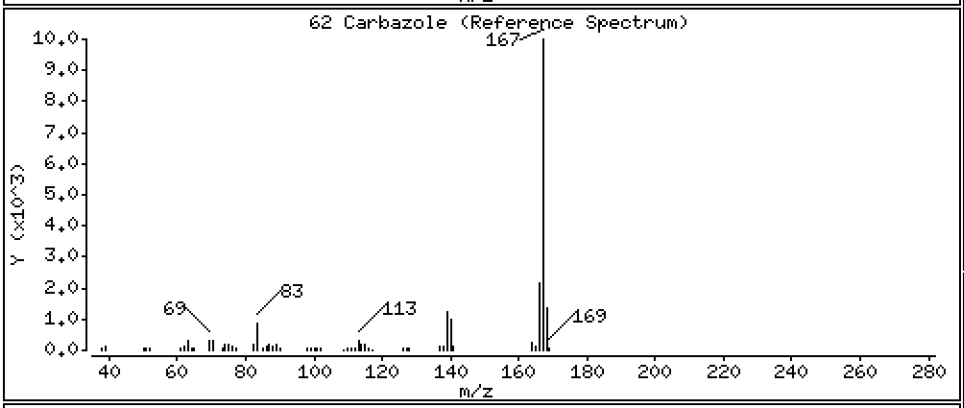
Concentration: 4.792 ug/mL

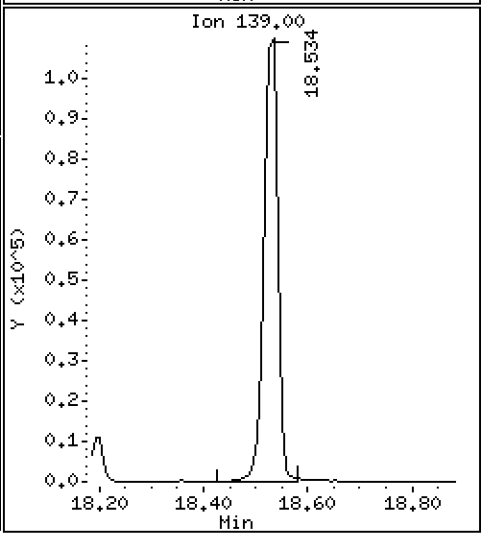


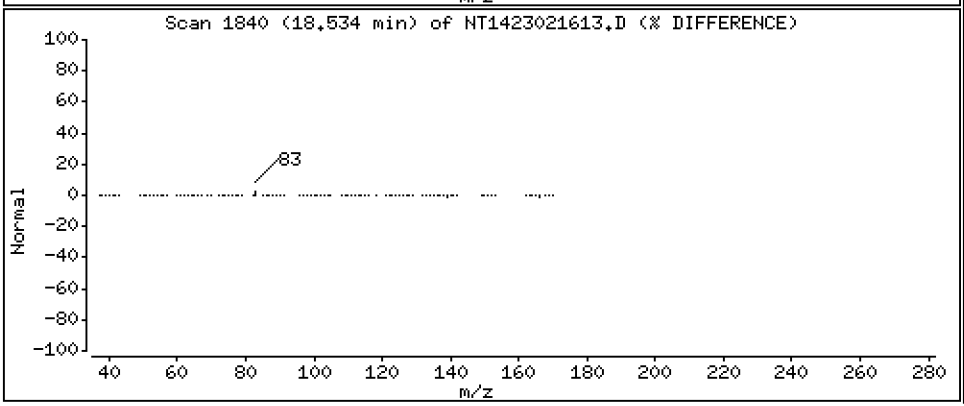












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

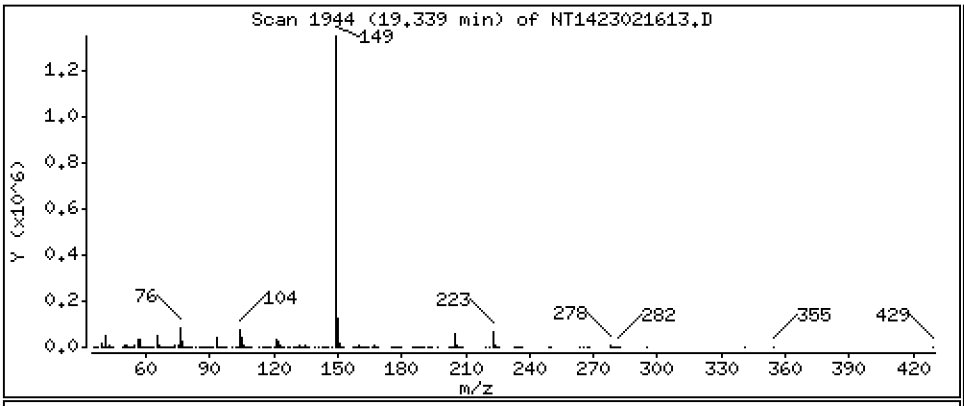
Operator: DSD

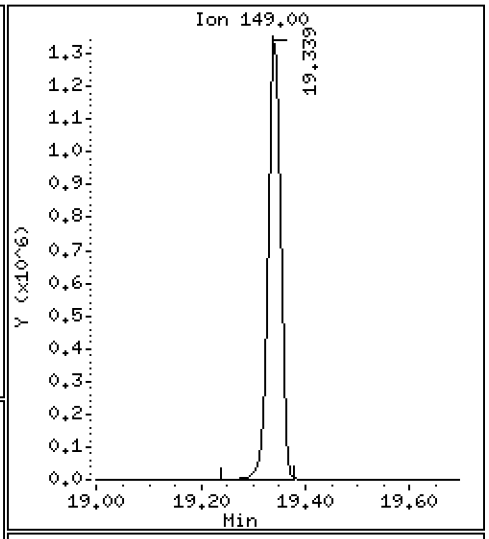
Column phase: ZB-5msi

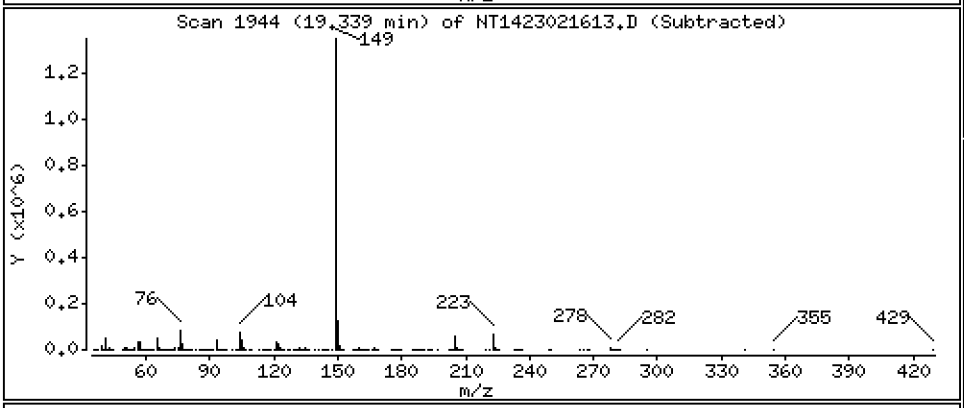
Column diameter: 0.25

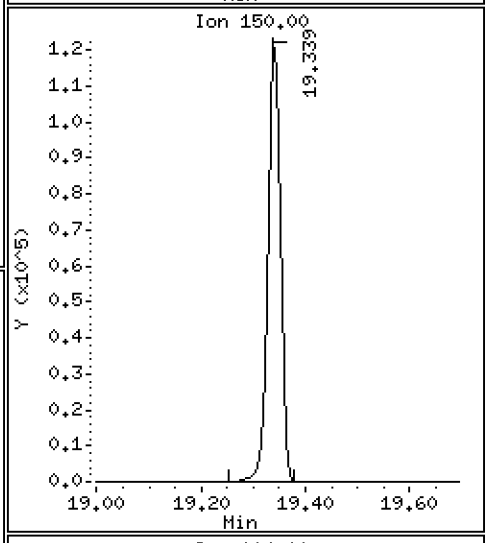
63 Di-n-butylphthalate

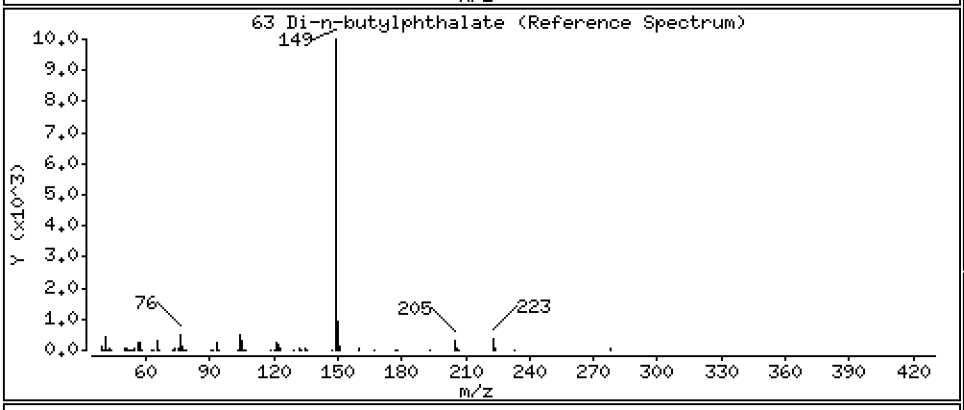
Concentration: 5.515 ug/mL

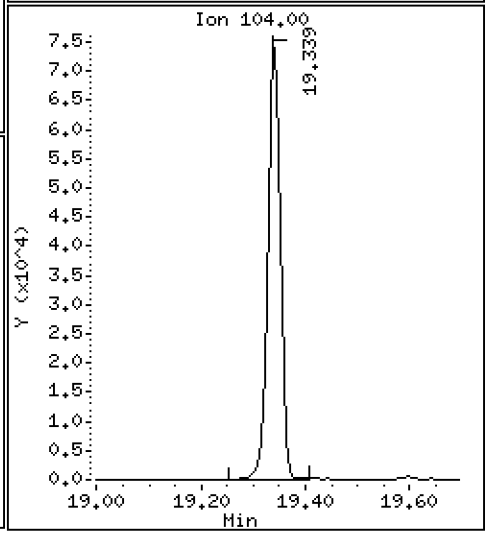


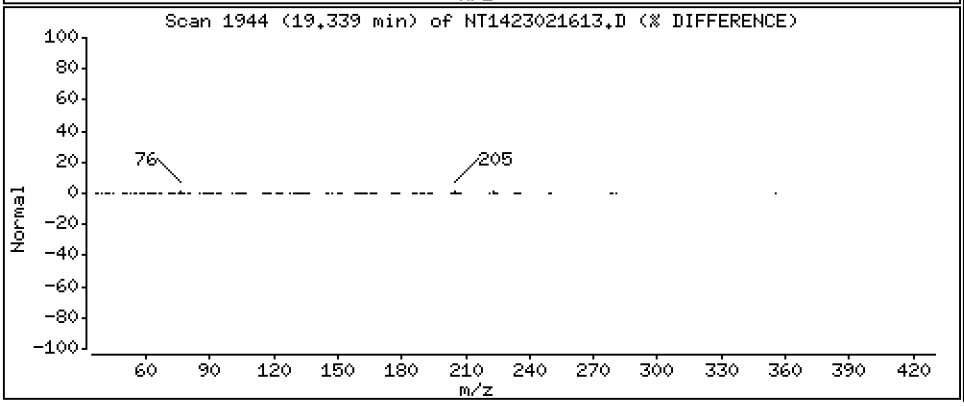












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

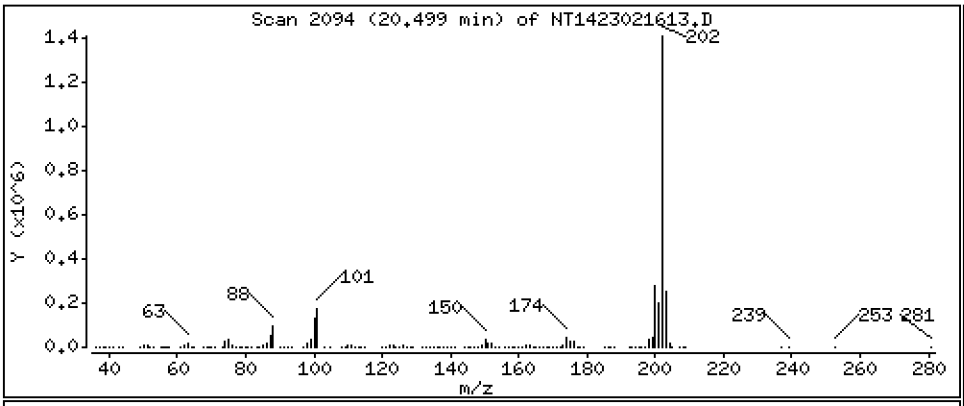
Operator: DSD

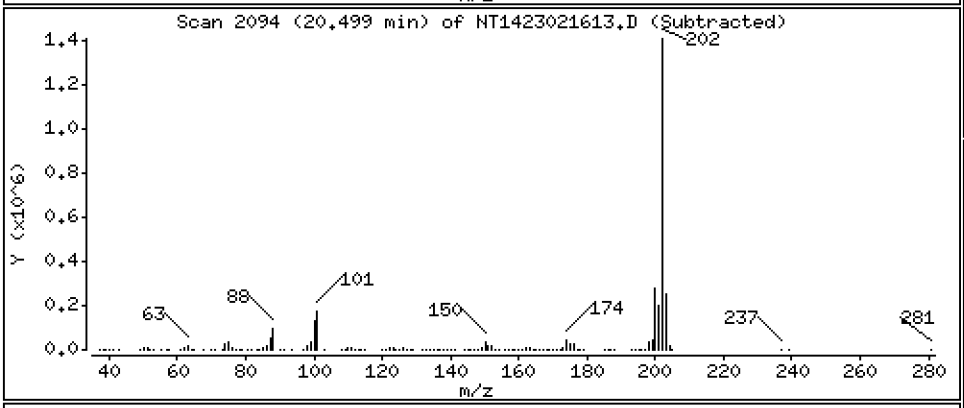
Column phase: ZB-5msi

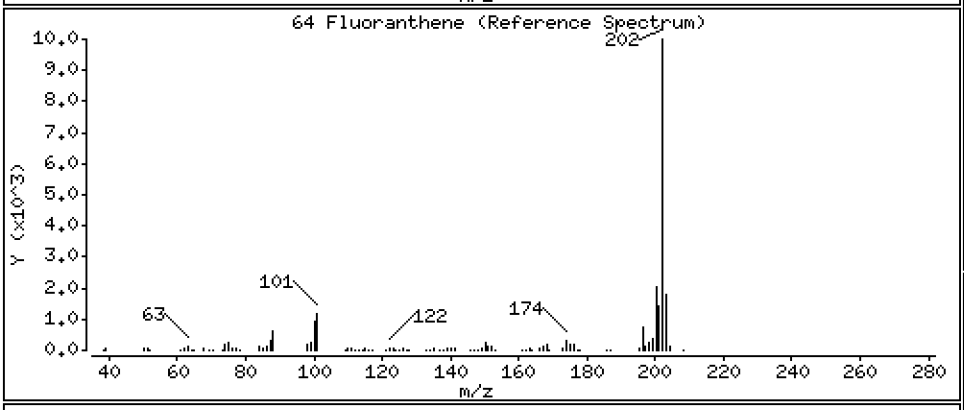
Column diameter: 0.25

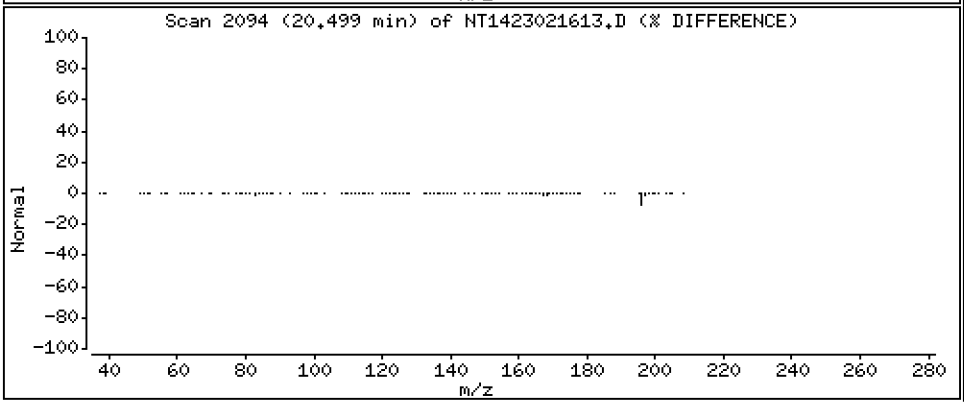
64 Fluoranthene

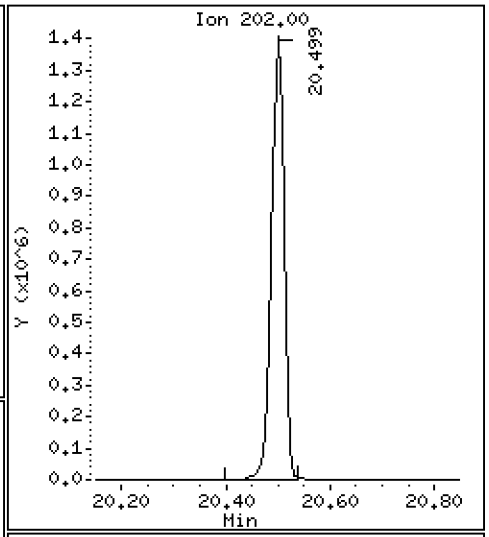
Concentration: 4.682 ug/mL

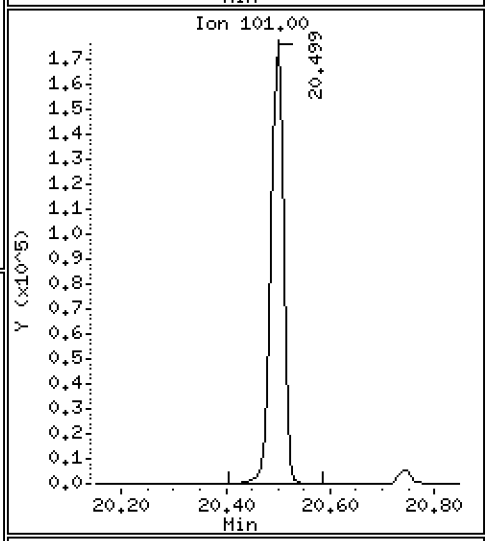


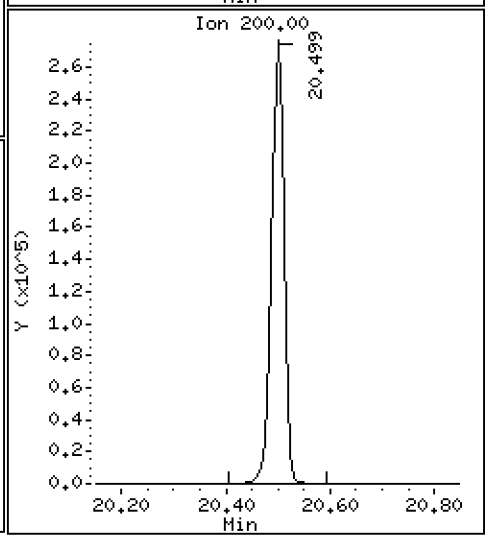












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

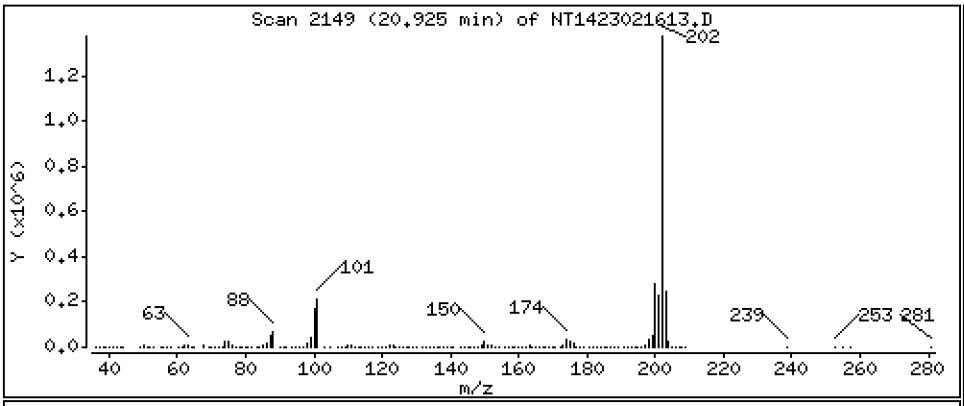
Operator: DSD

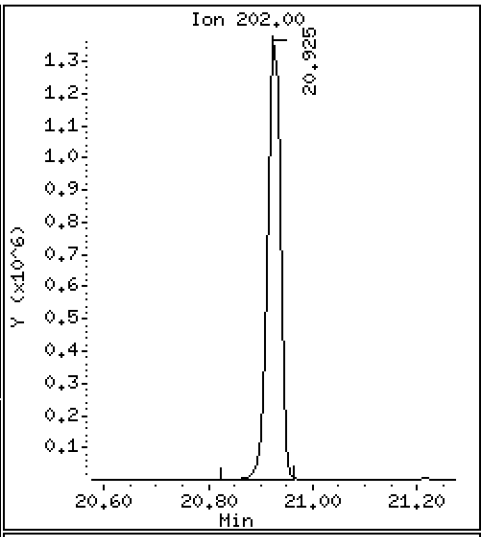
Column phase: ZB-5msi

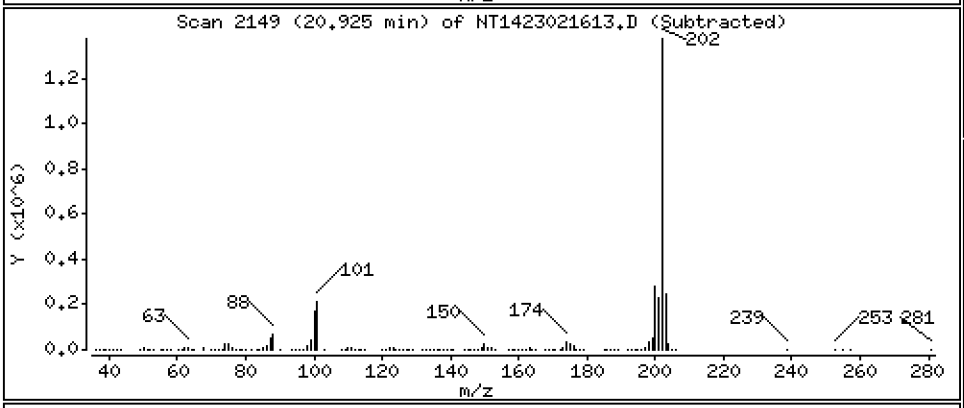
Column diameter: 0.25

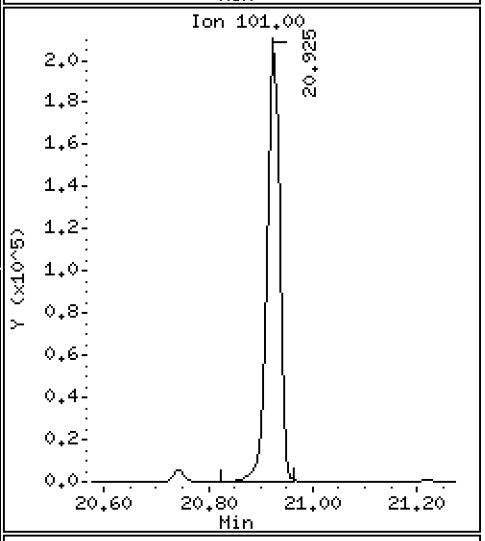
65 Pyrene

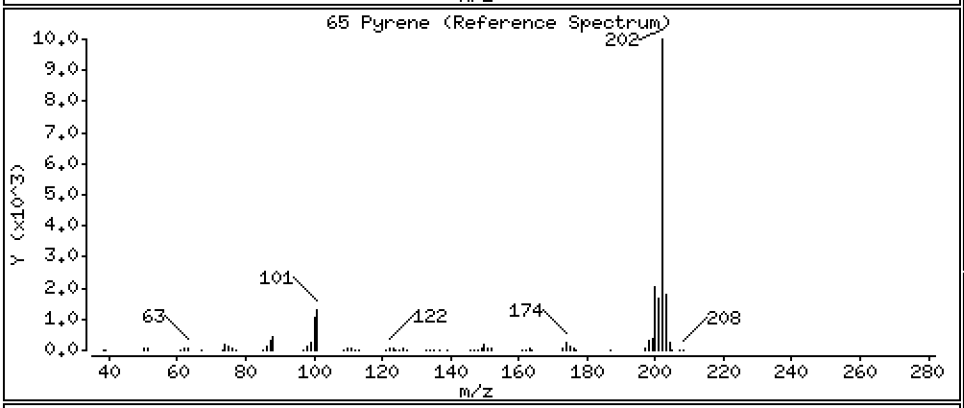
Concentration: 4.400 ug/mL

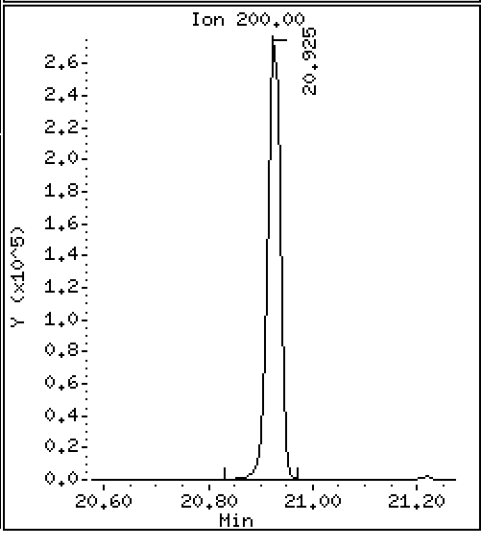


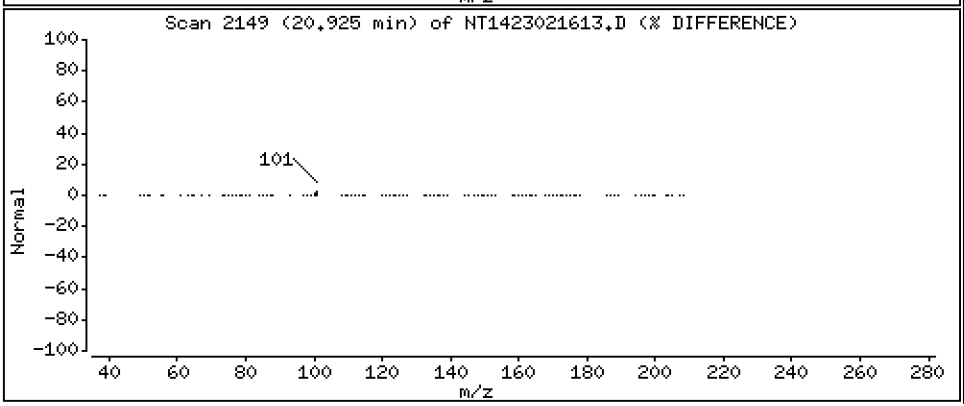












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

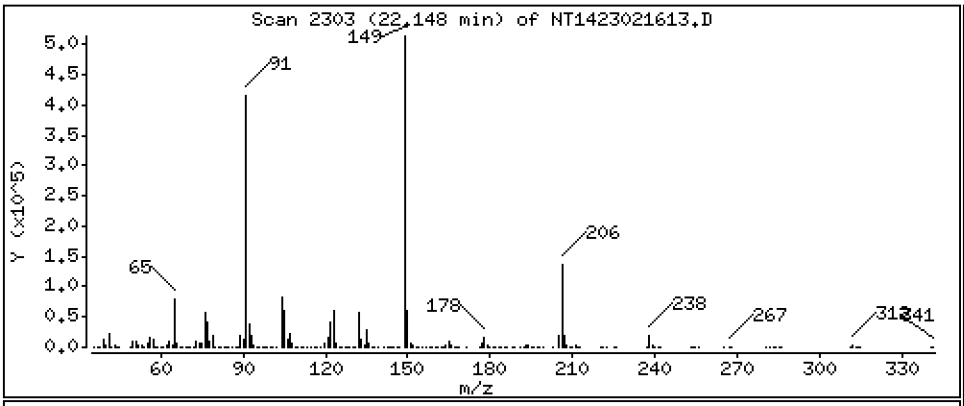
Operator: DSD

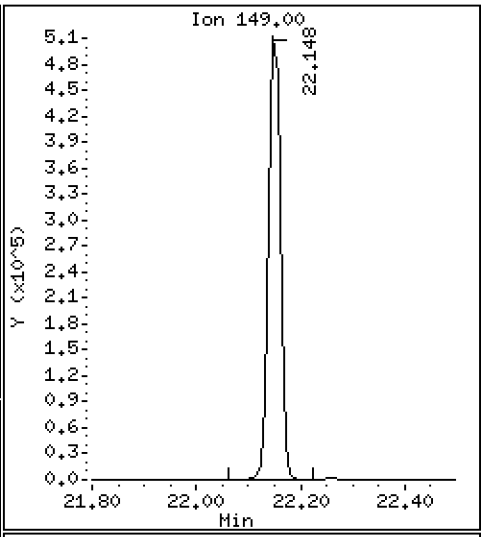
Column phase: ZB-5msi

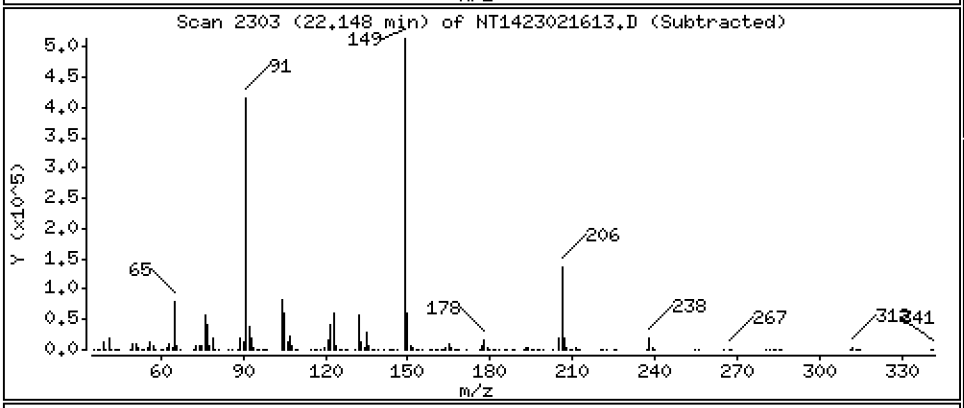
Column diameter: 0.25

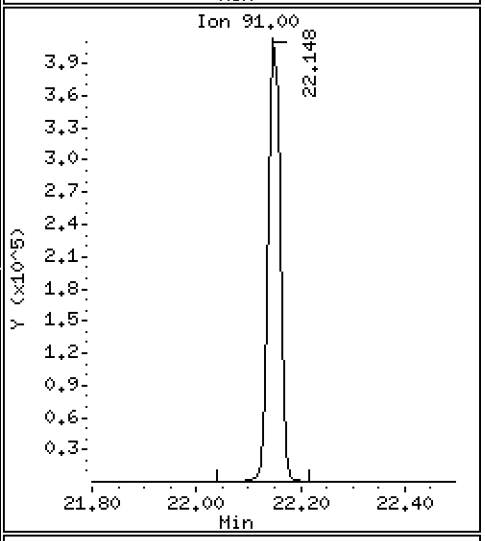
67 Butylbenzylphthalate

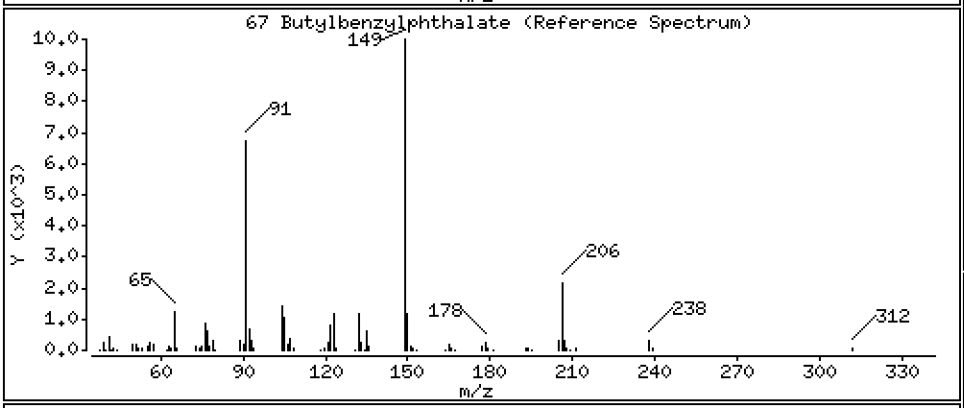
Concentration: 4.568 ug/mL

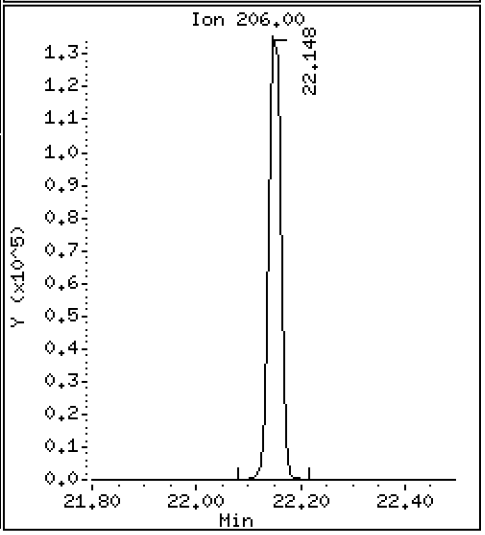


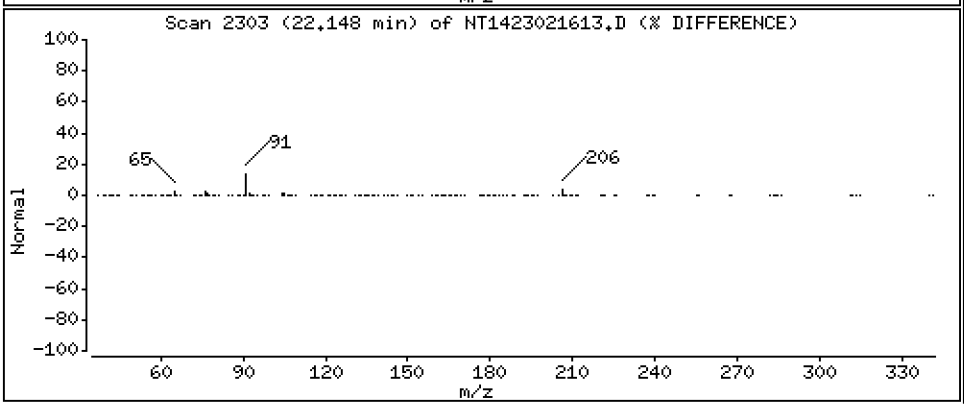












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

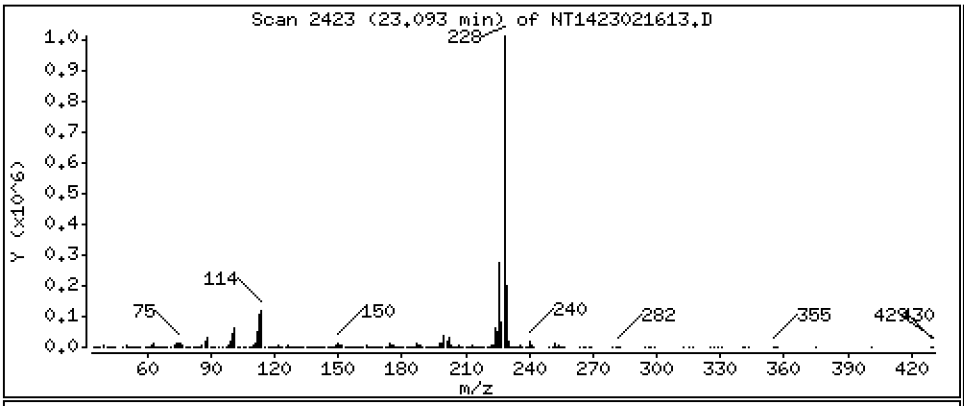
Operator: DSD

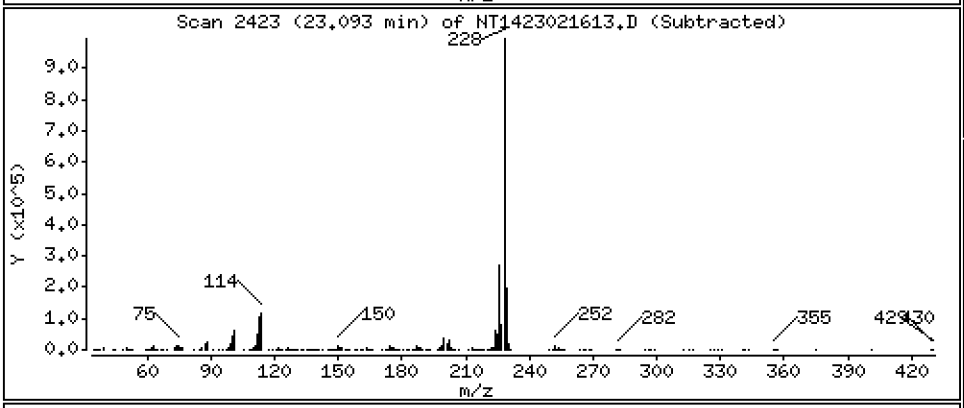
Column phase: ZB-5msi

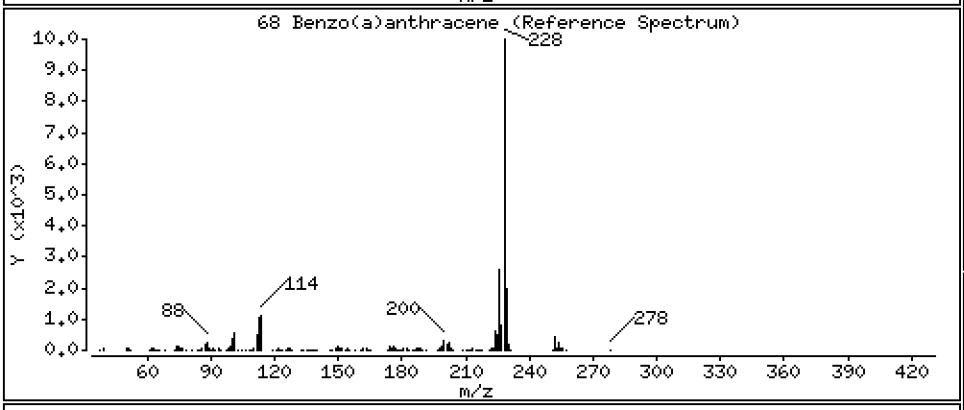
Column diameter: 0.25

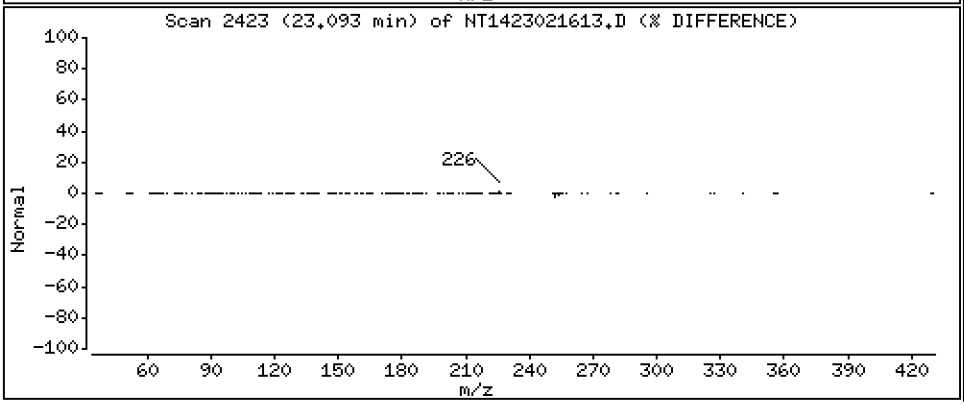
68 Benzo(a)anthracene

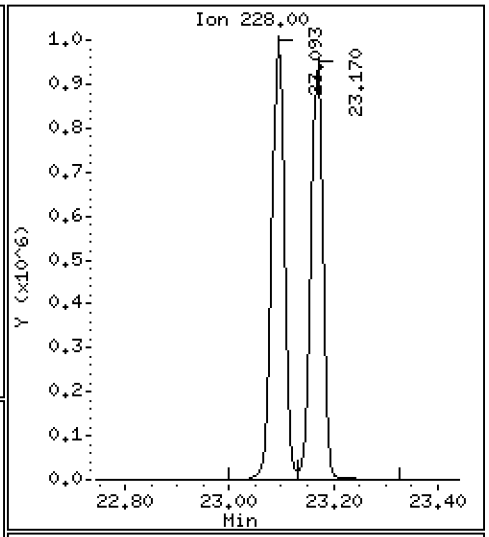
Concentration: 4.530 ug/mL

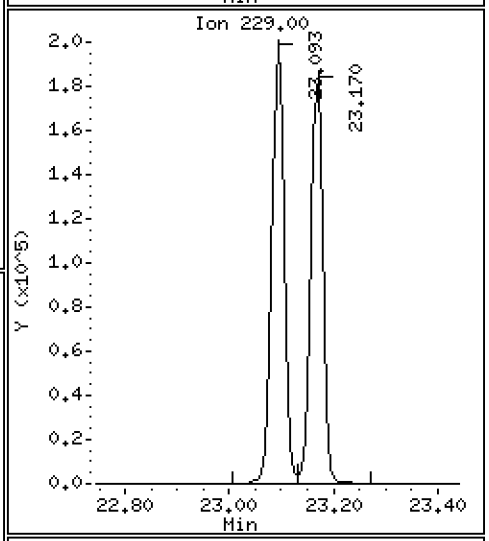


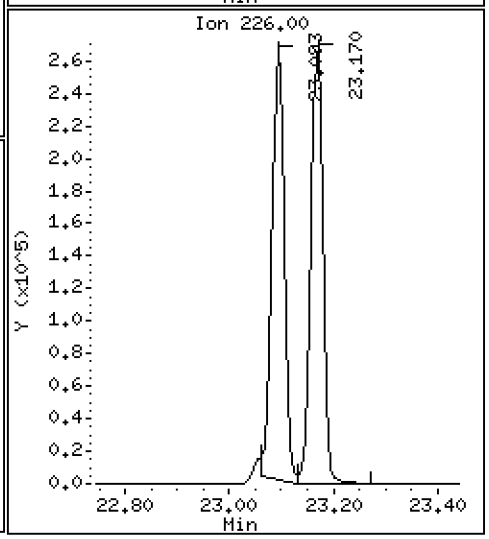












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

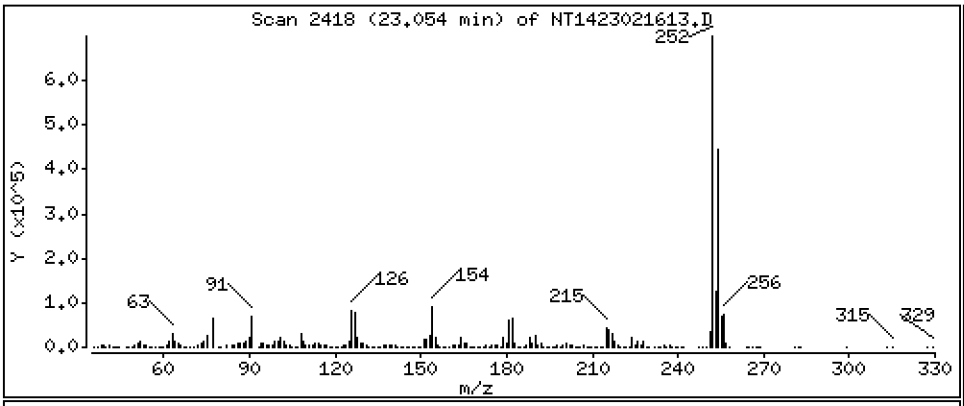
Operator: DSD

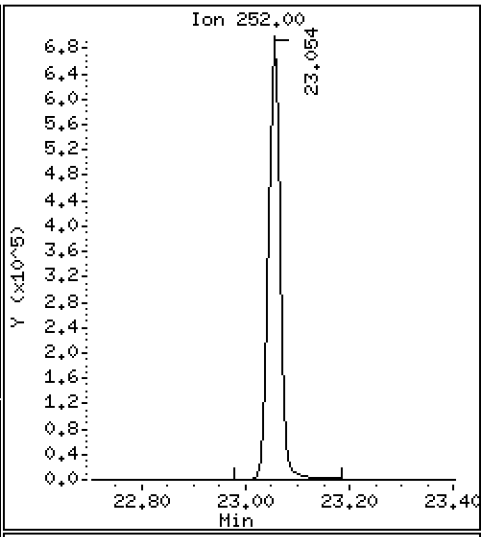
Column phase: ZB-5msi

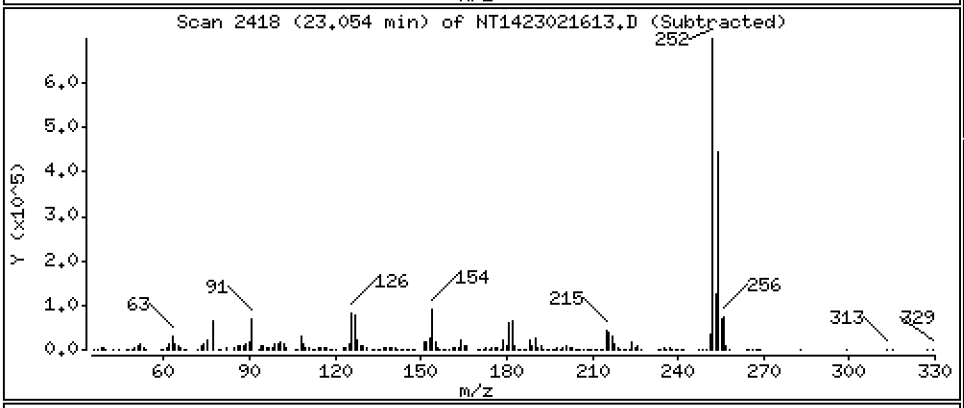
Column diameter: 0.25

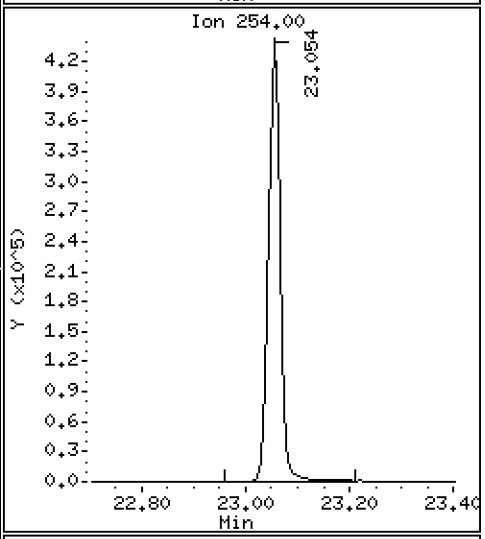
70 3,3'-Dichlorobenzidine

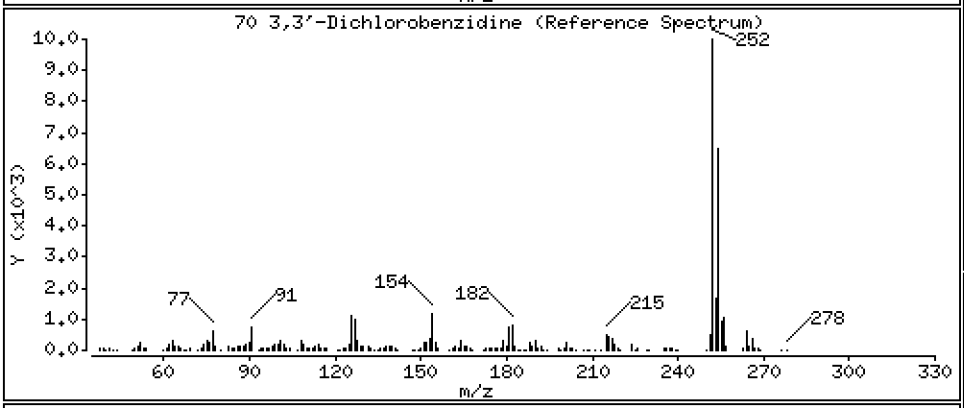
Concentration: 9.328 ug/mL

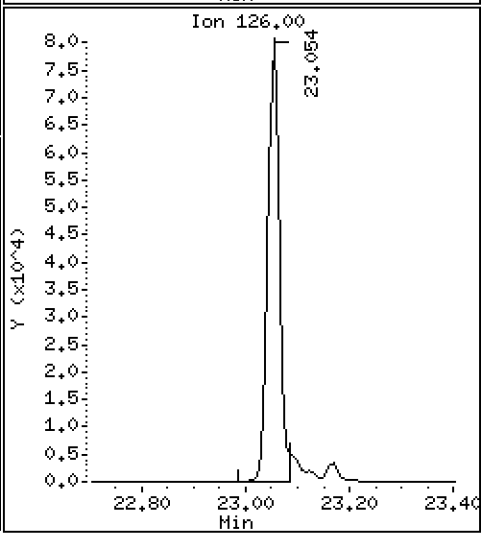


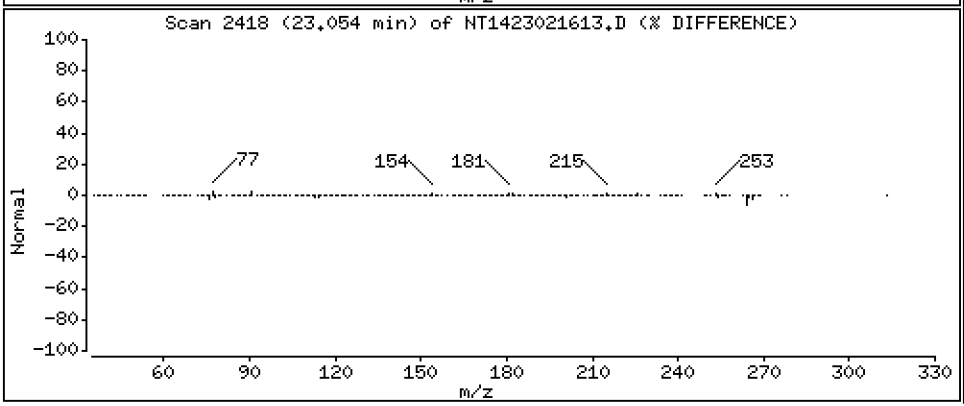












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

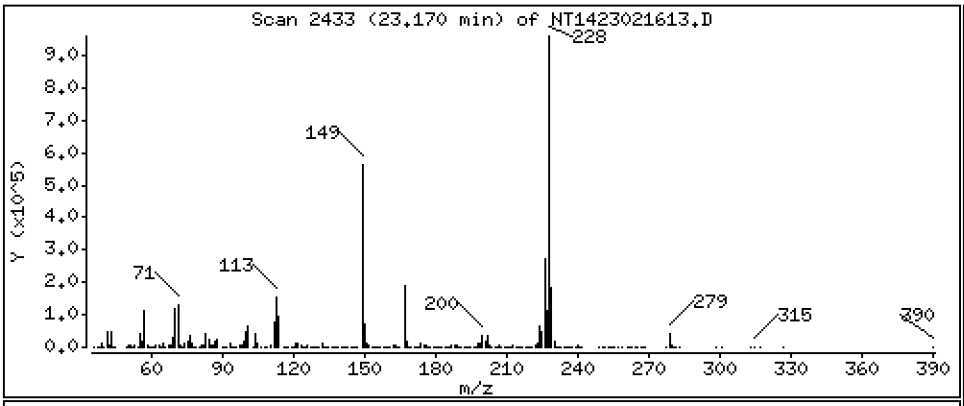
Operator: DSD

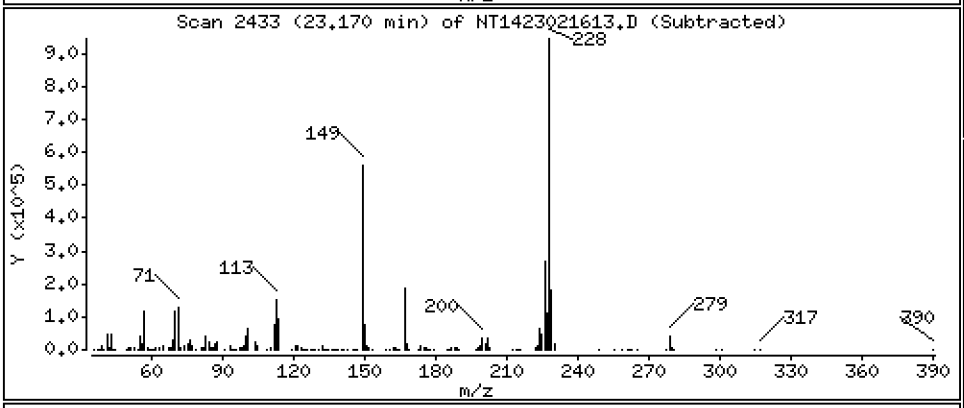
Column phase: ZB-5msi

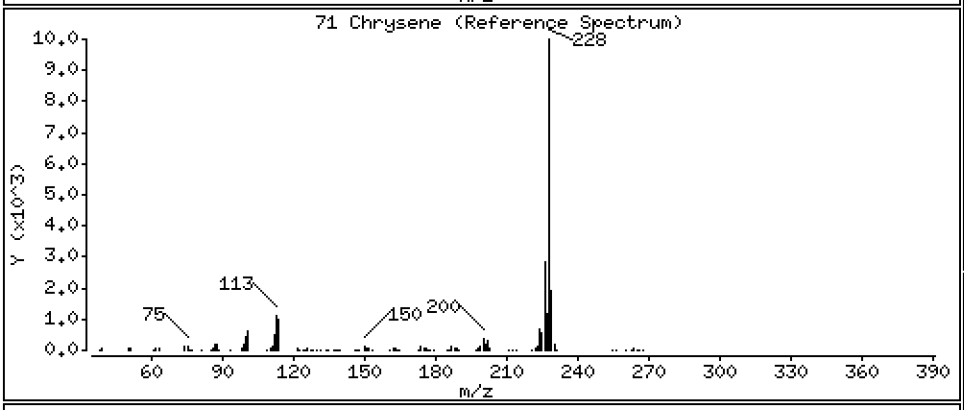
Column diameter: 0.25

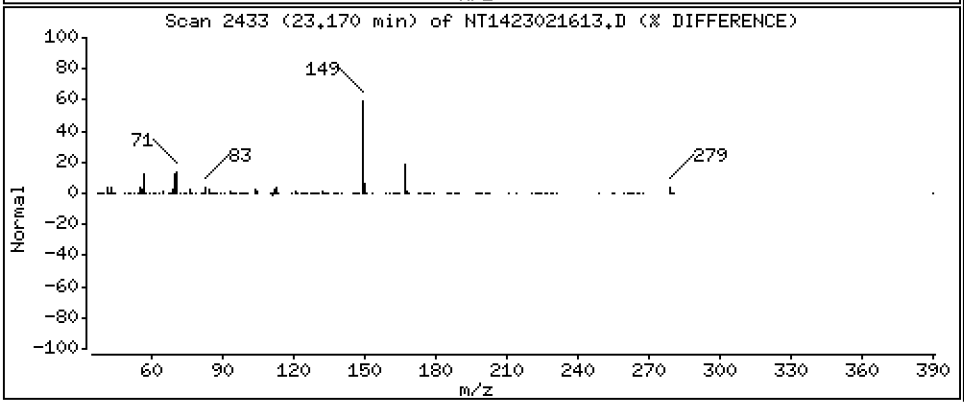
71 Chrysene

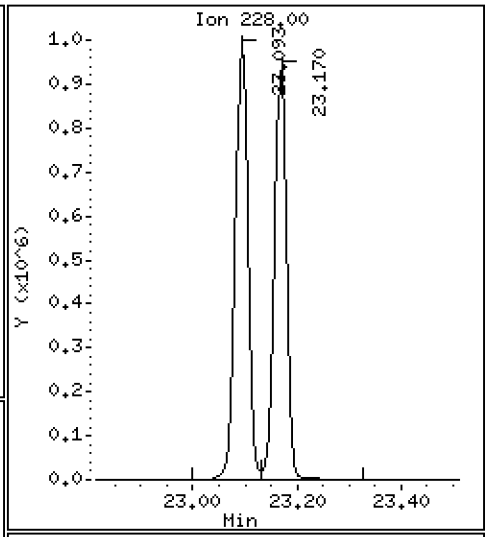
Concentration: 4.474 ug/mL

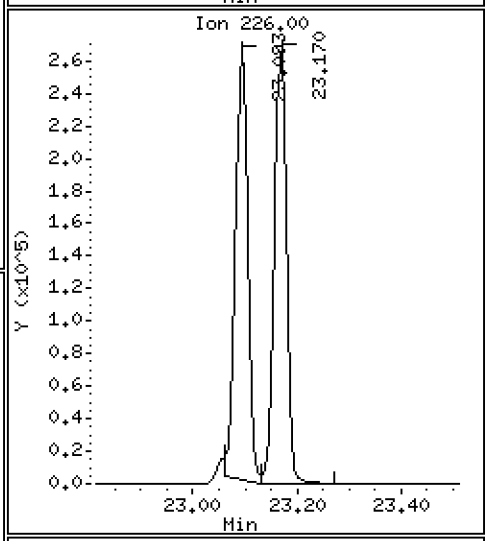


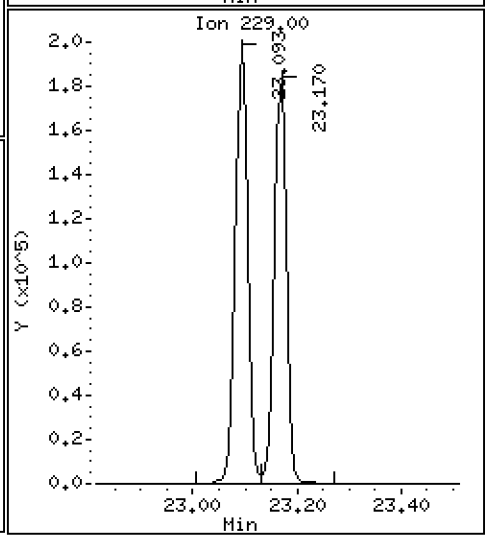












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

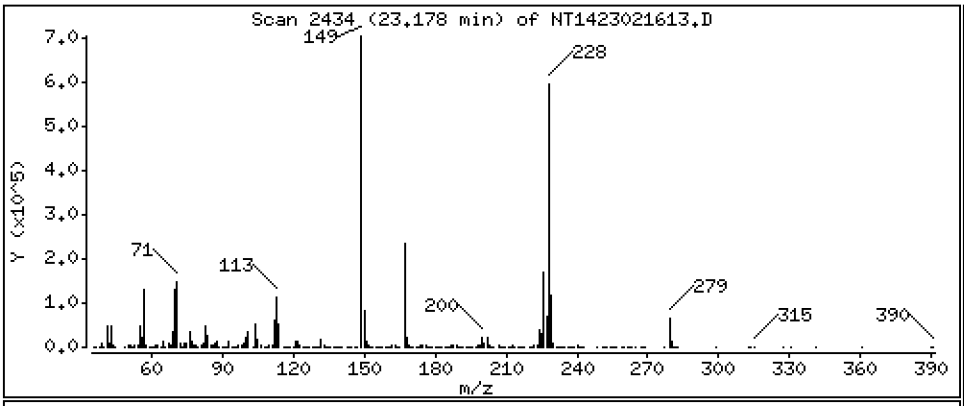
Operator: DSD

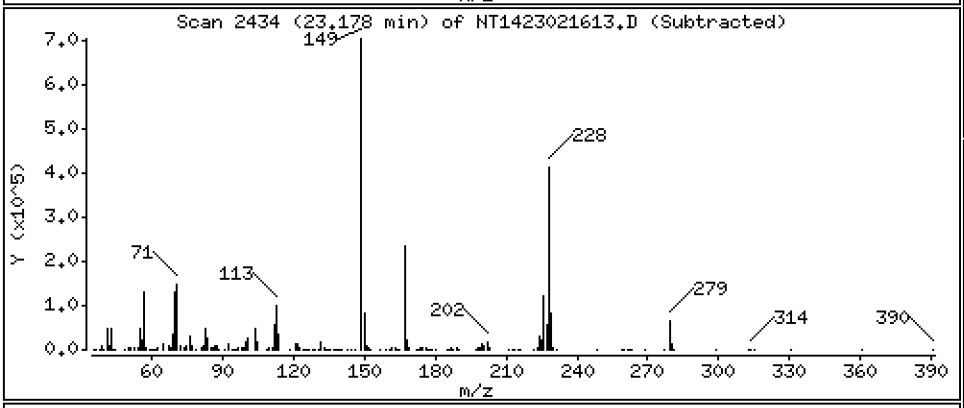
Column phase: ZB-5msi

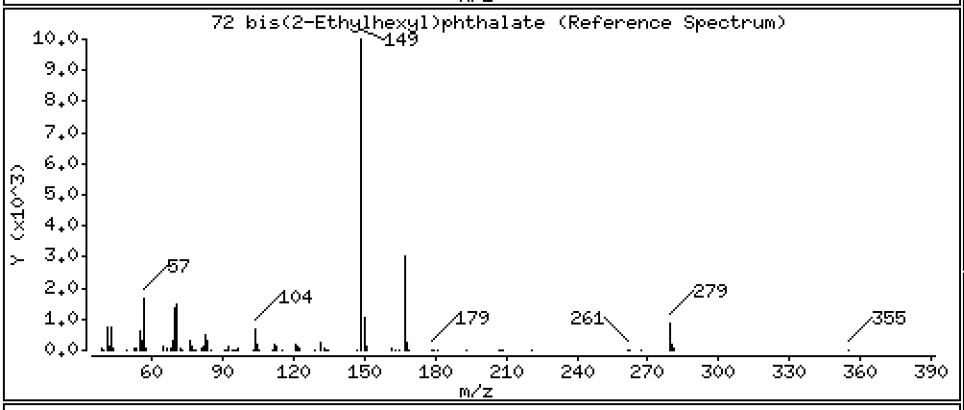
Column diameter: 0.25

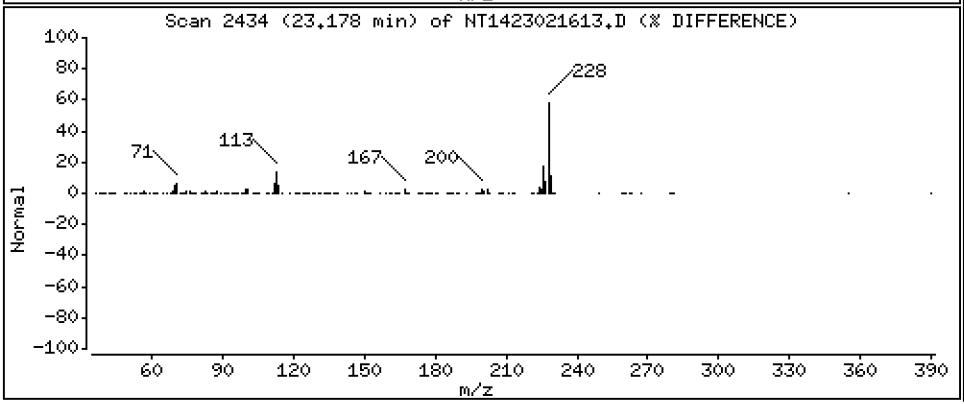
72 bis(2-Ethylhexyl)phthalate

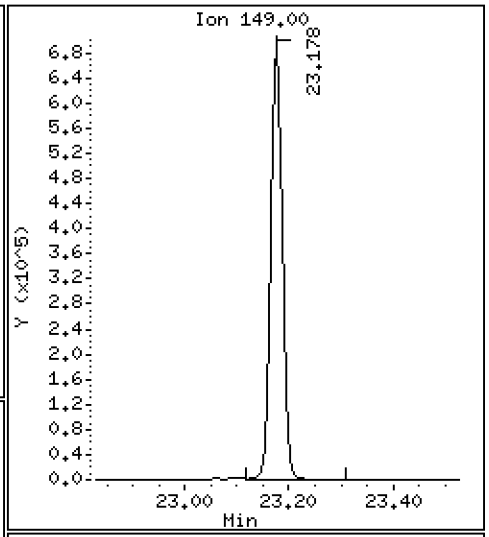
Concentration: 4.649 ug/mL

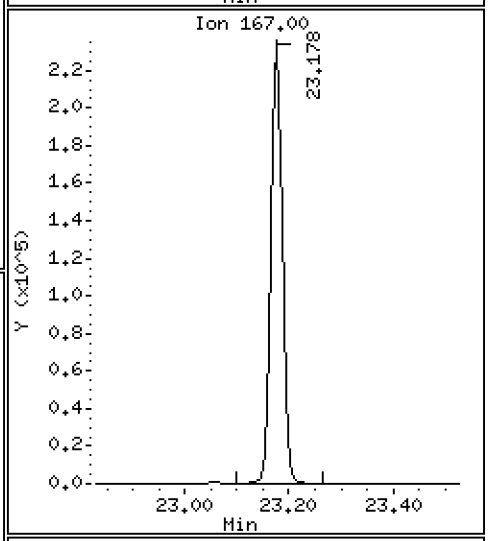


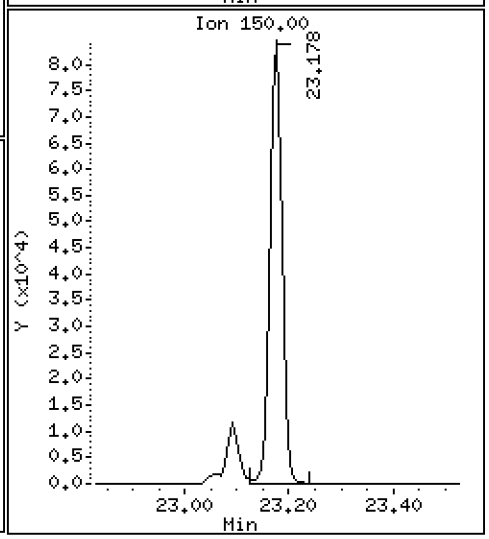












Date : 16-FEB-2023 21:18

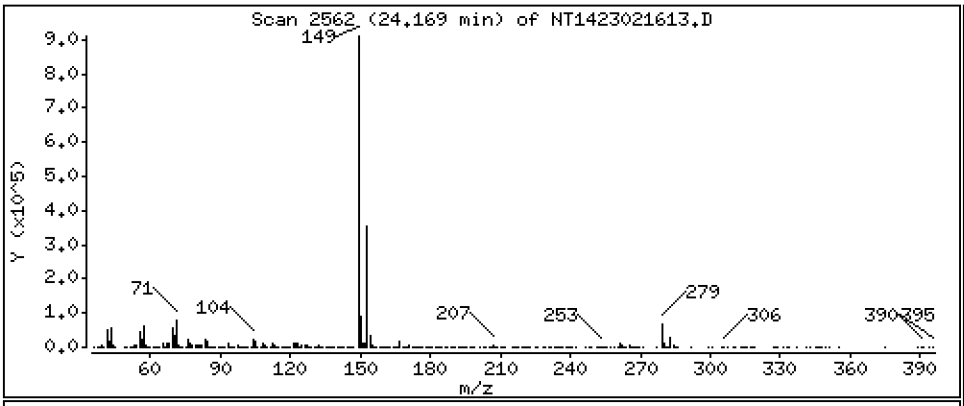
Client ID: Instrument: nt14.i

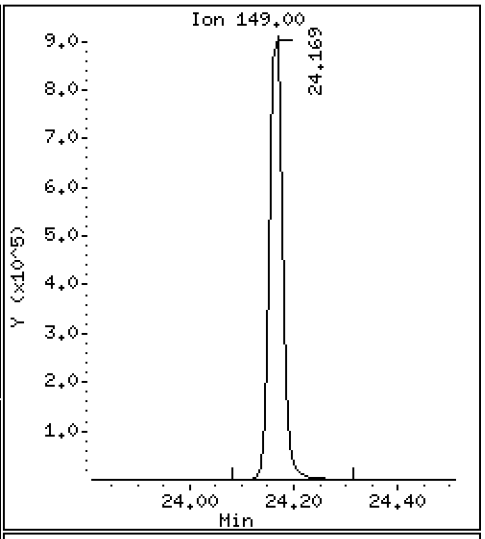
Sample Info: SLB0234-SCV1

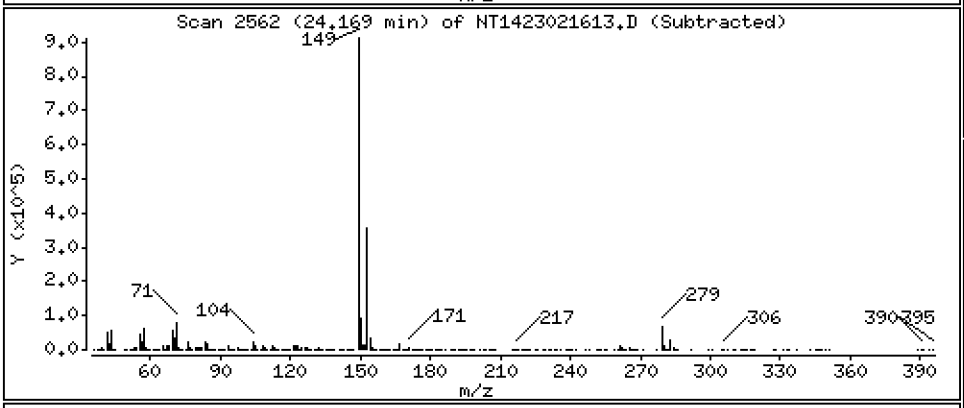
Operator: DSD

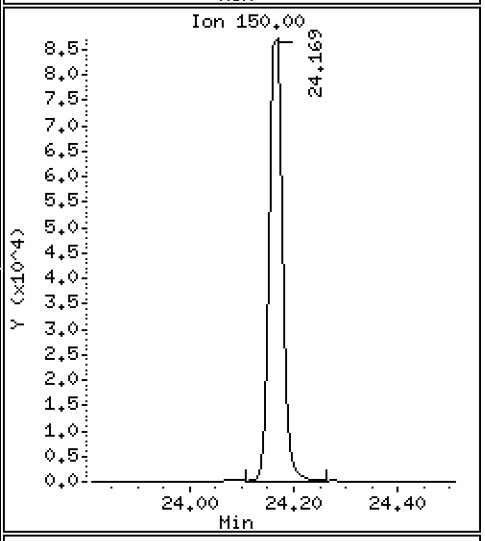
Column phase: ZB-5msi Column diameter: 0.25

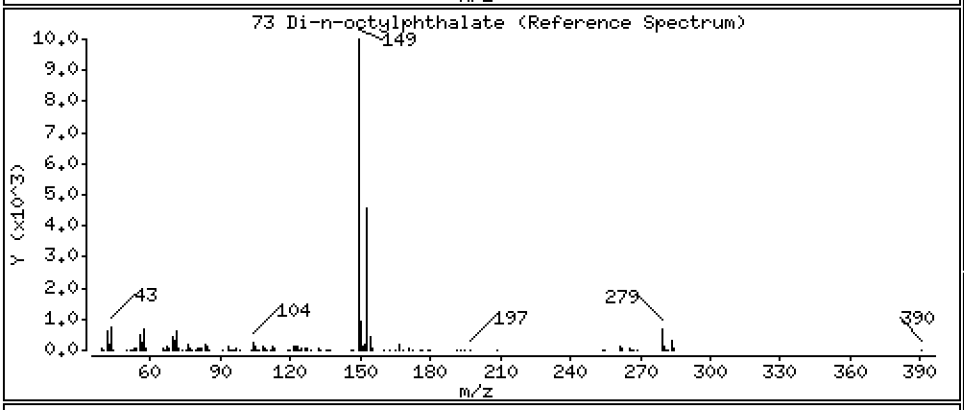
73 Di-n-octylphthalate Concentration: 4.962 ug/mL

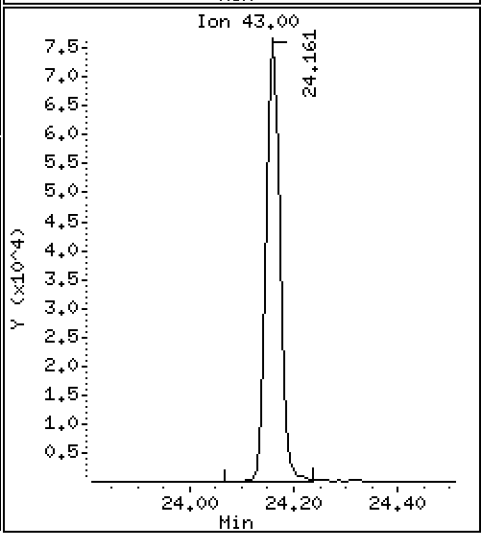


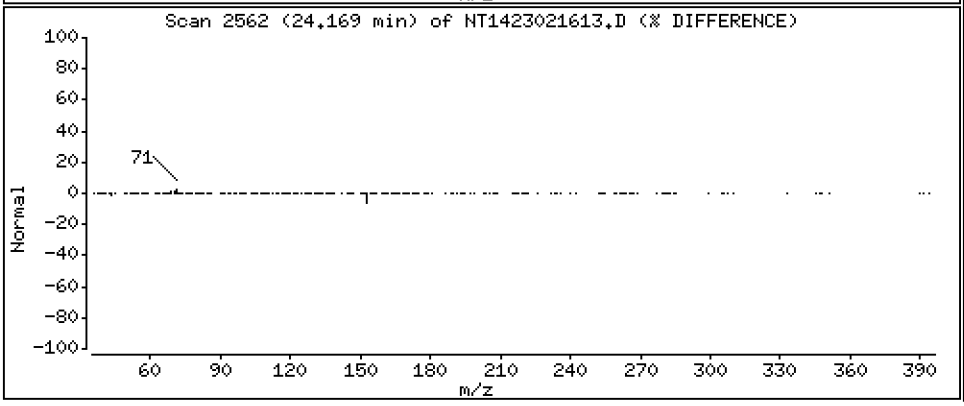












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

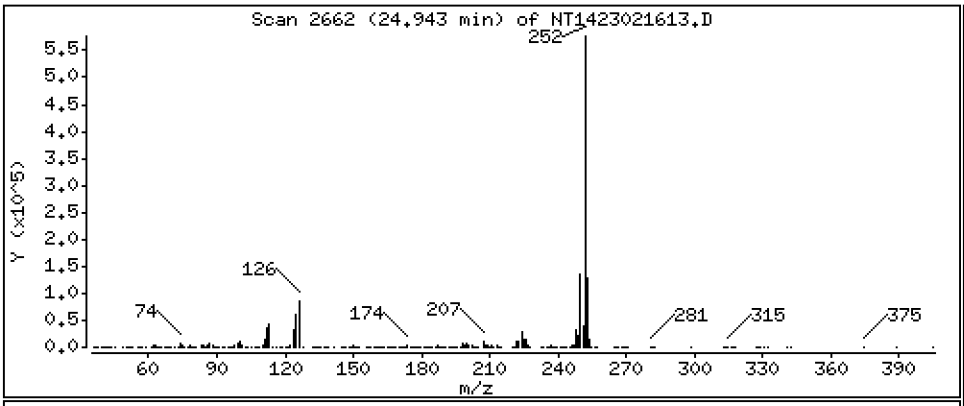
Operator: DSD

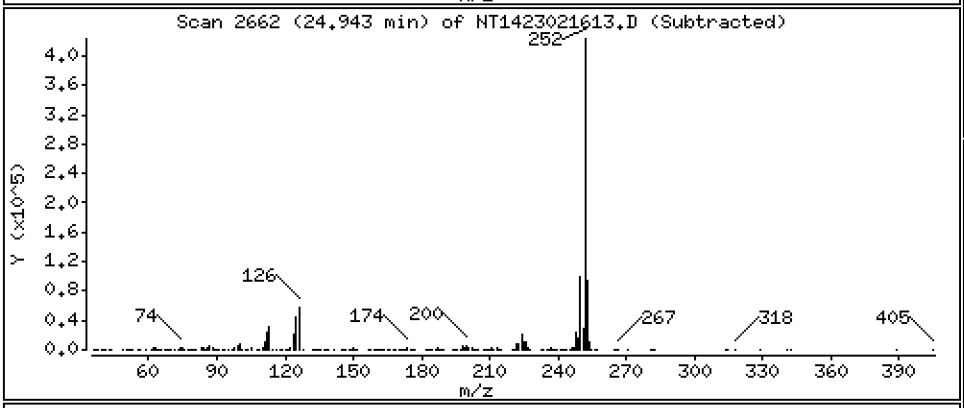
Column phase: ZB-5msi

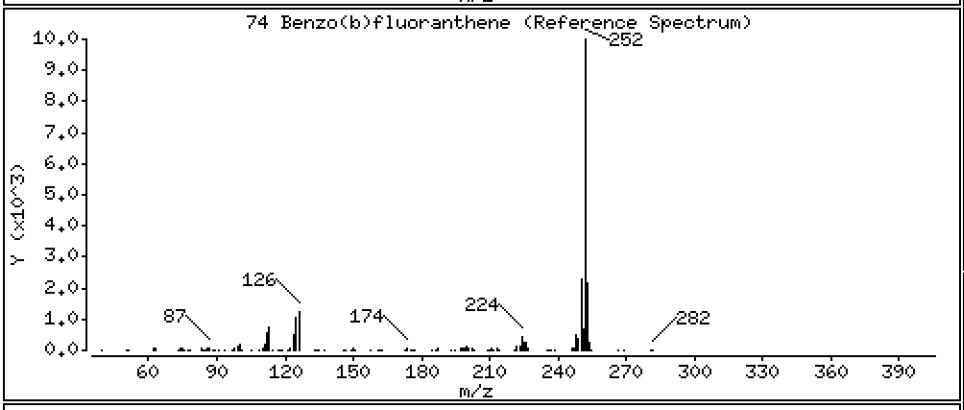
Column diameter: 0.25

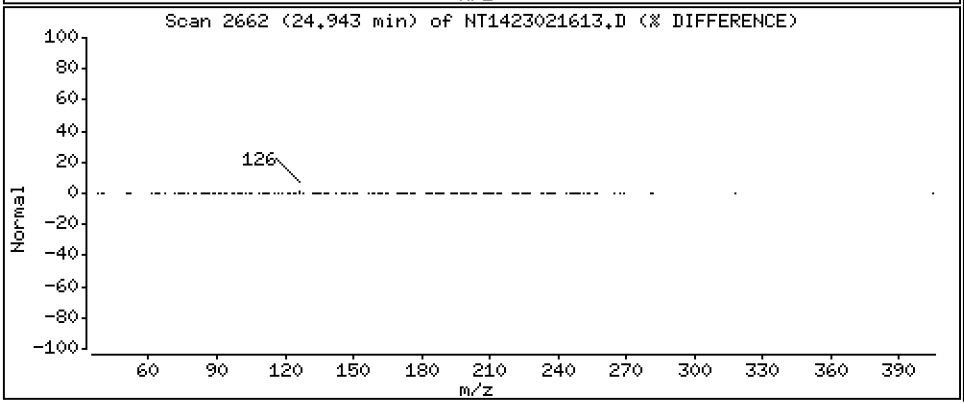
74 Benzo(b)fluoranthene

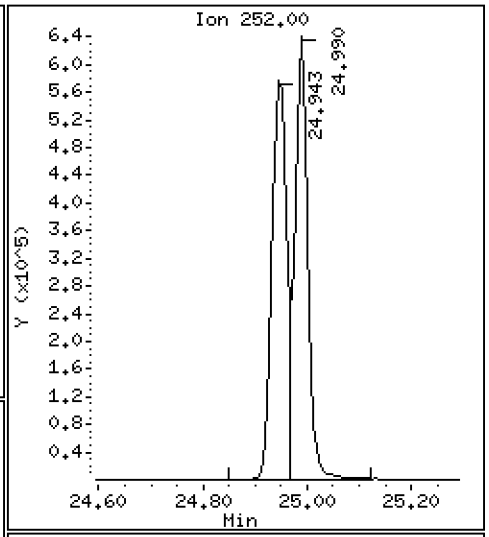
Concentration: 4.813 ug/mL

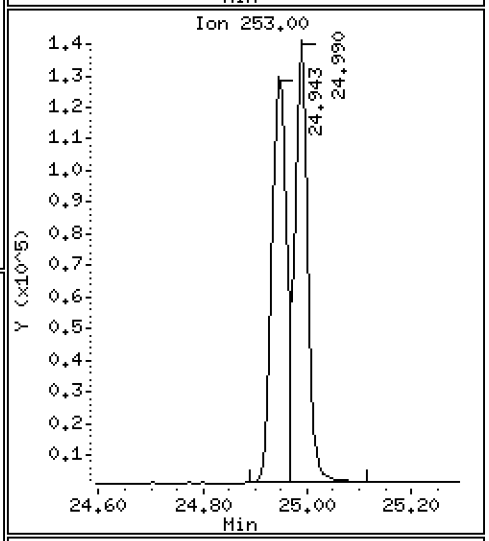


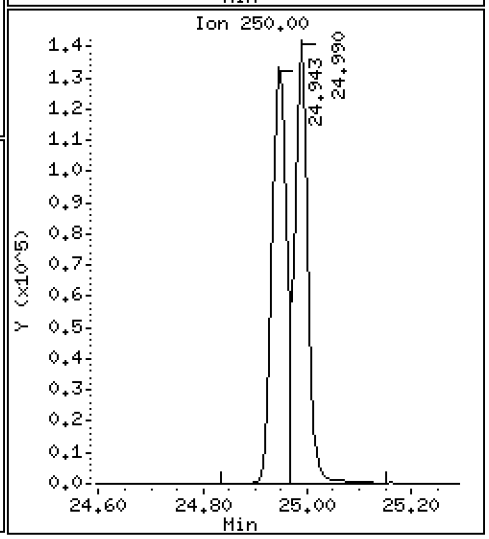












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

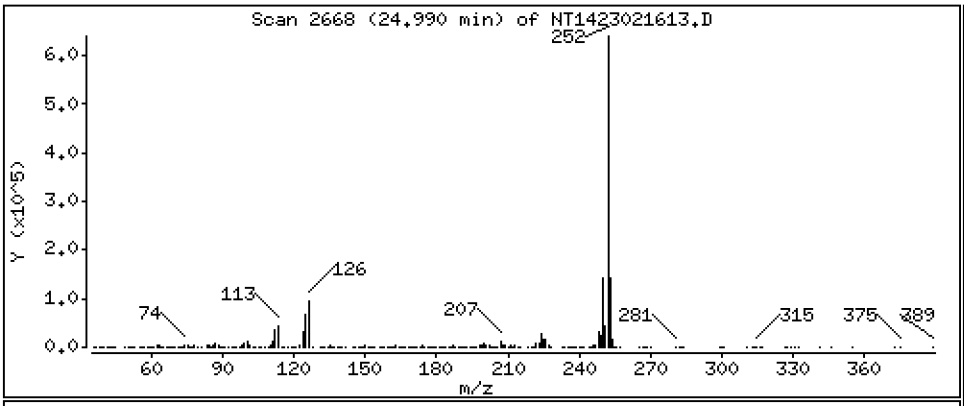
Operator: DSD

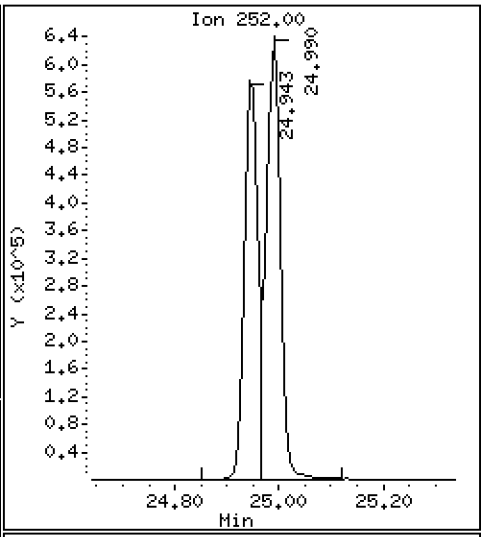
Column phase: ZB-5msi

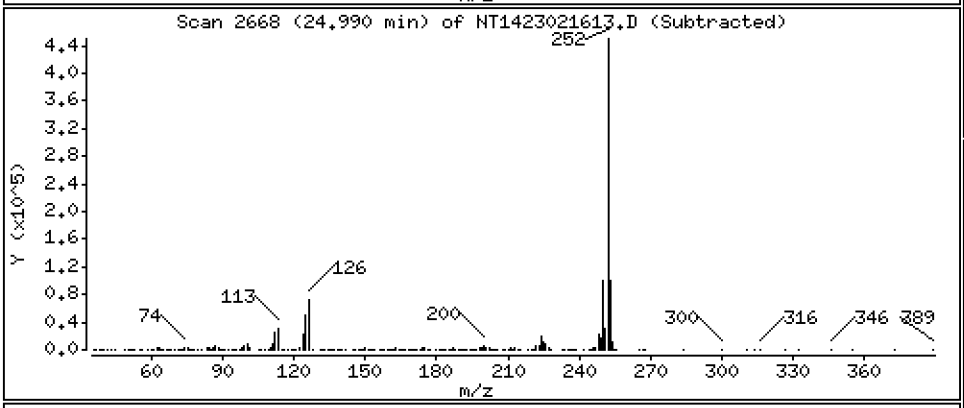
Column diameter: 0.25

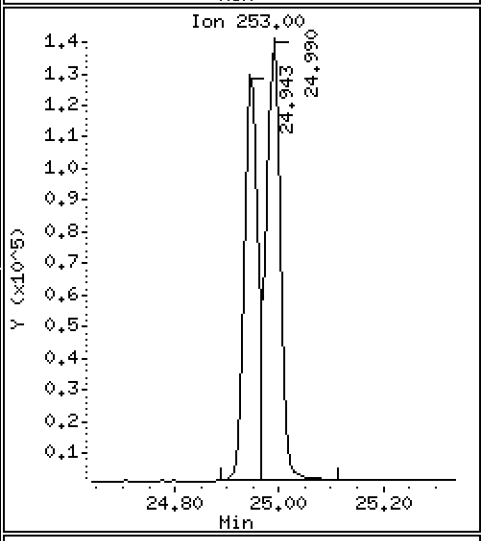
75 Benzo(k)fluoranthene

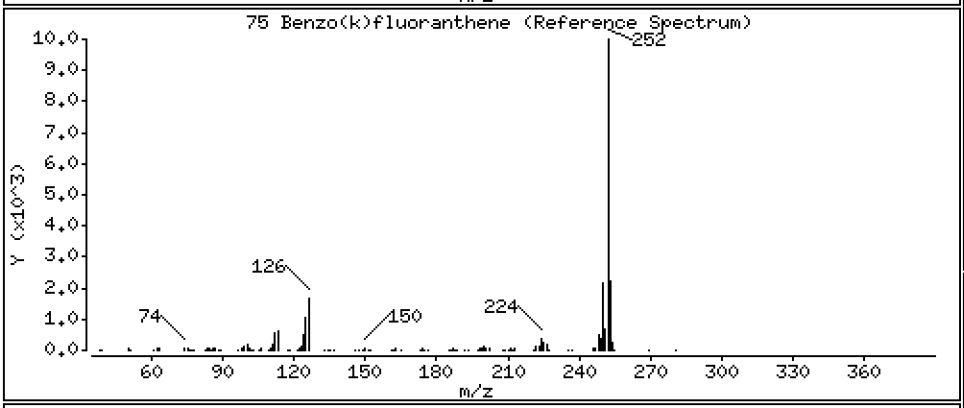
Concentration: 4.838 ug/mL

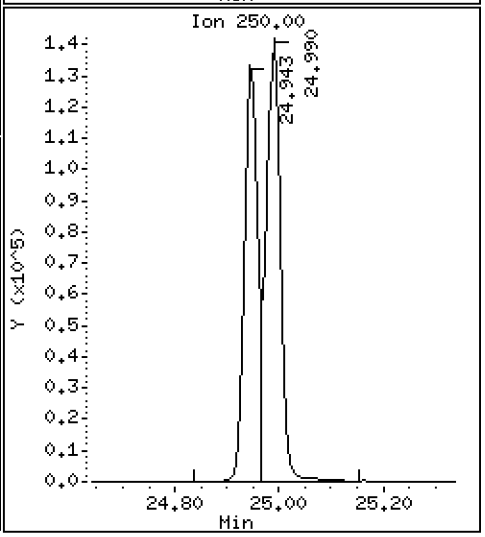


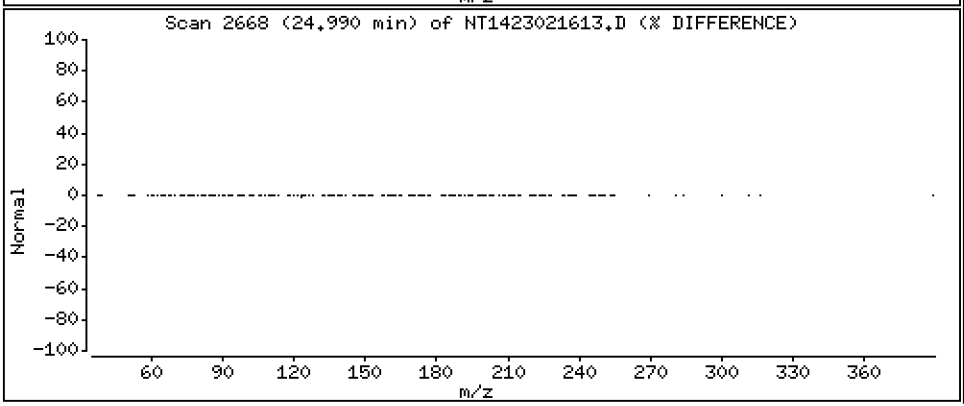












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

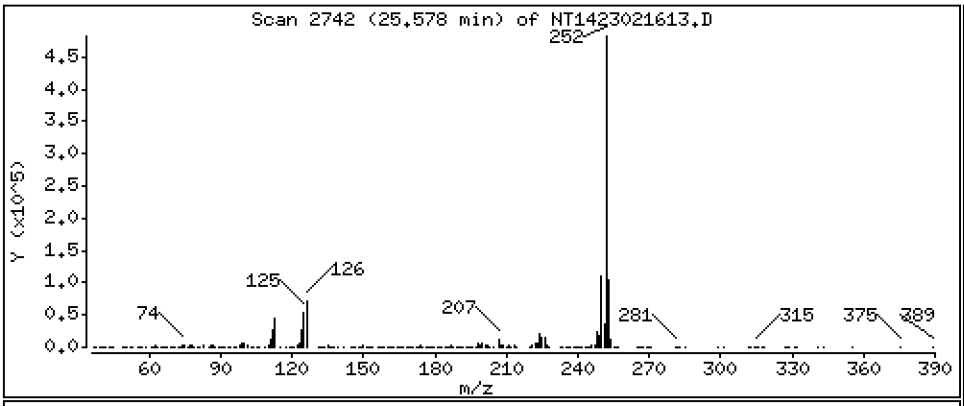
Operator: DSD

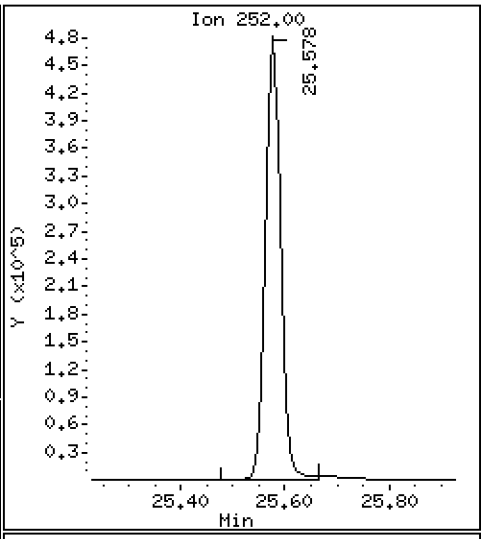
Column phase: ZB-5msi

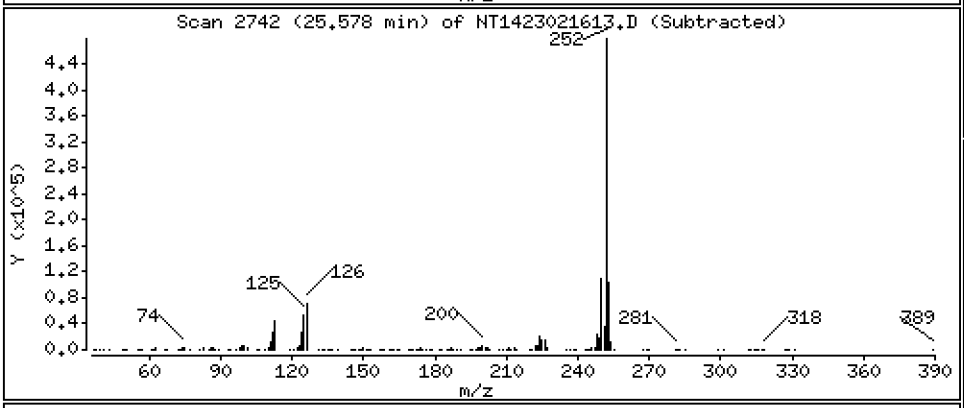
Column diameter: 0.25

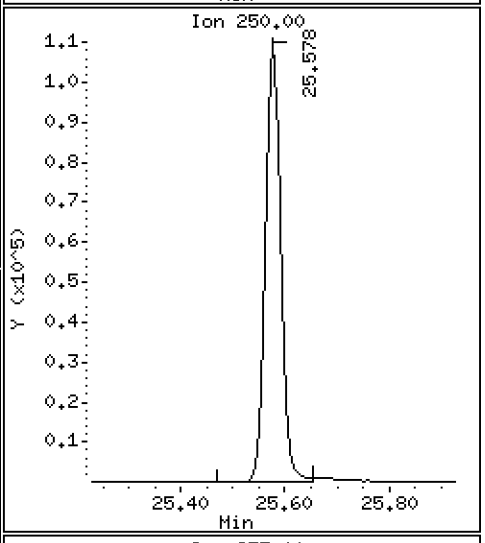
76 Benzo(a)pyrene

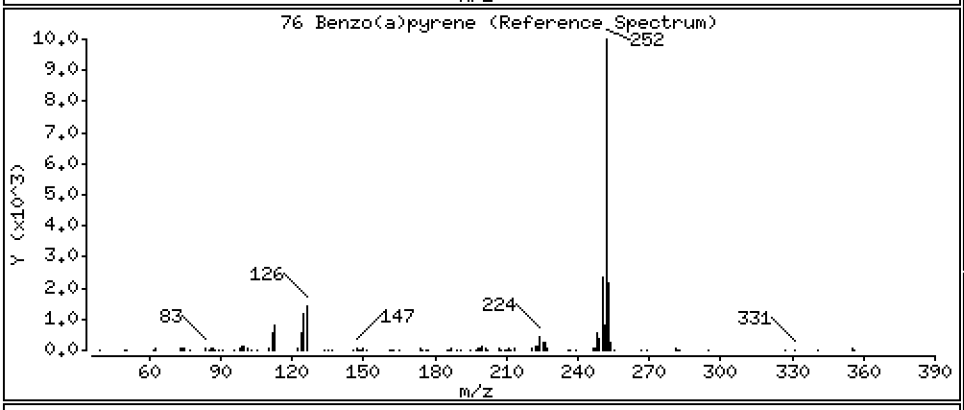
Concentration: 4.607 ug/mL

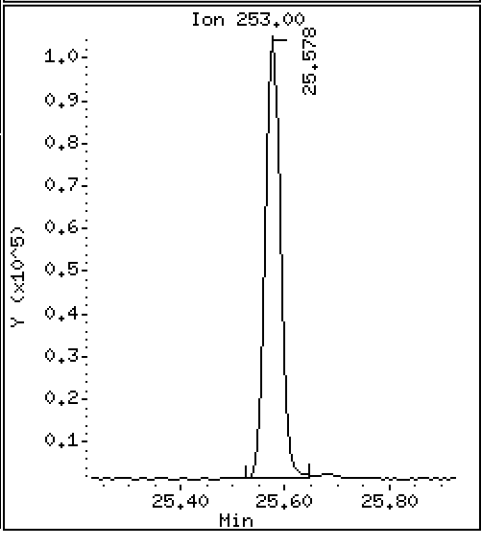


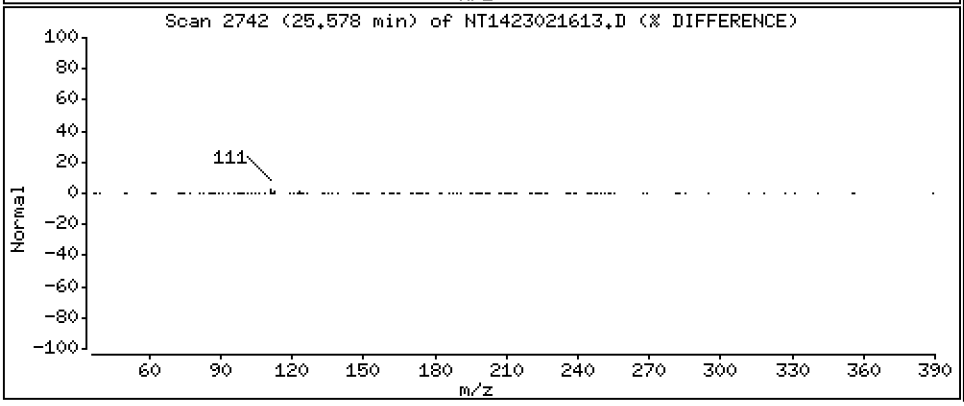












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

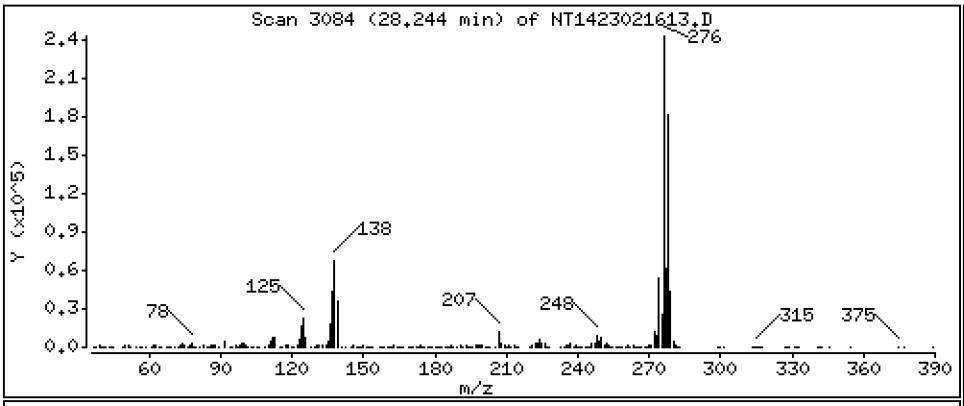
Operator: DSD

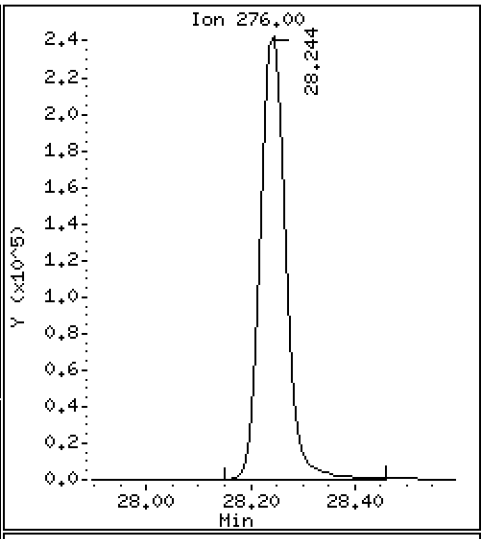
Column phase: ZB-5msi

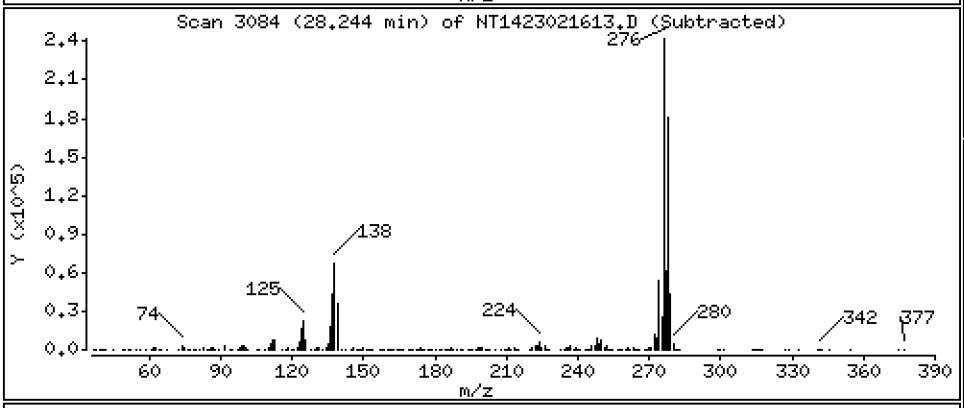
Column diameter: 0.25

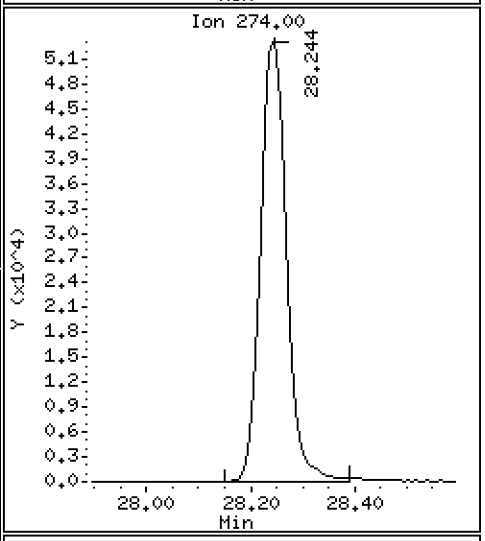
78 Indeno(1,2,3-cd)pyrene

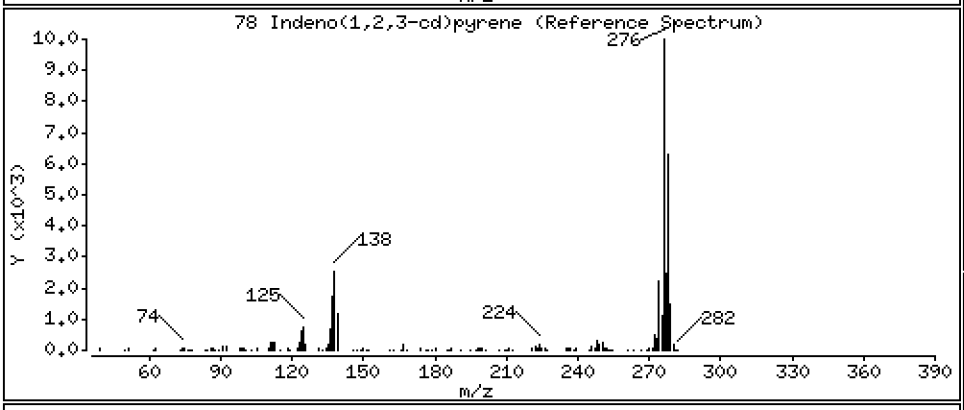
Concentration: 4.395 ug/mL

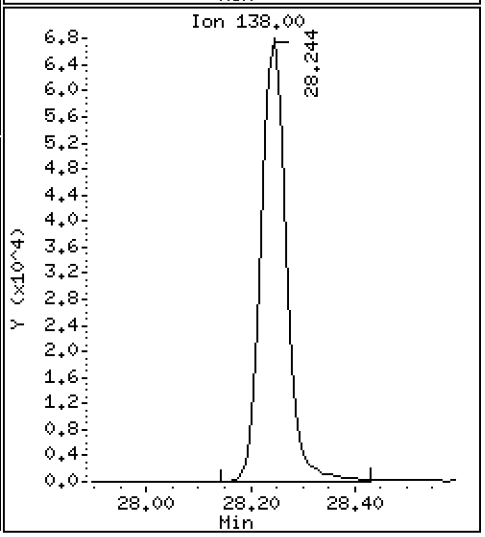


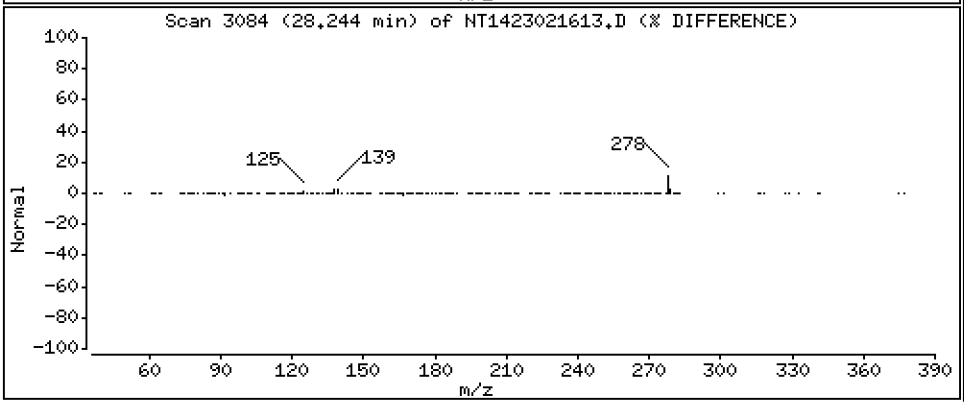












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

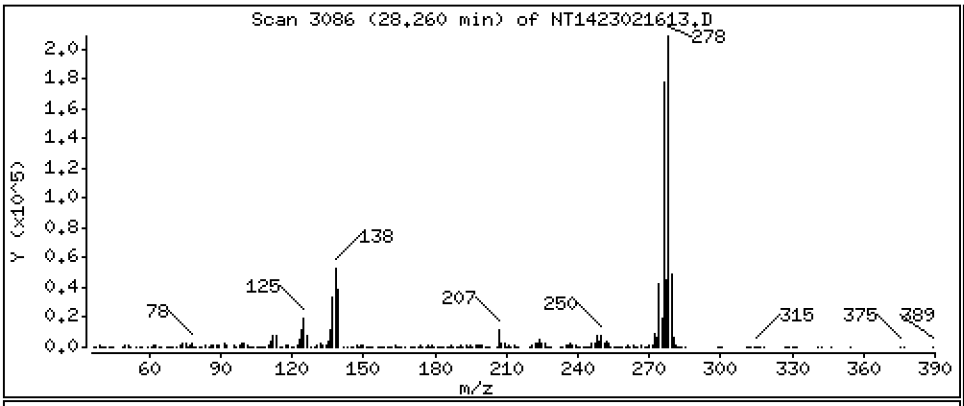
Operator: DSD

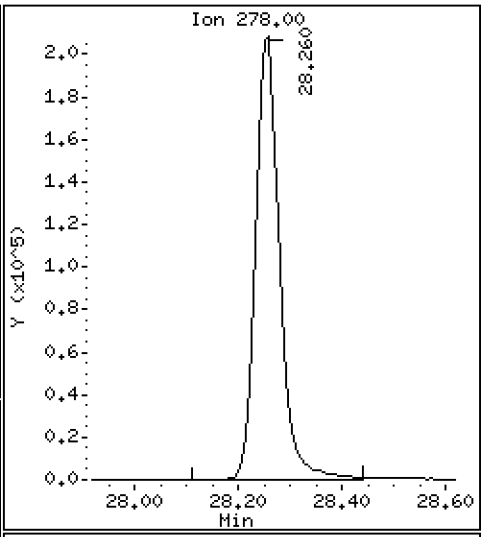
Column phase: ZB-5msi

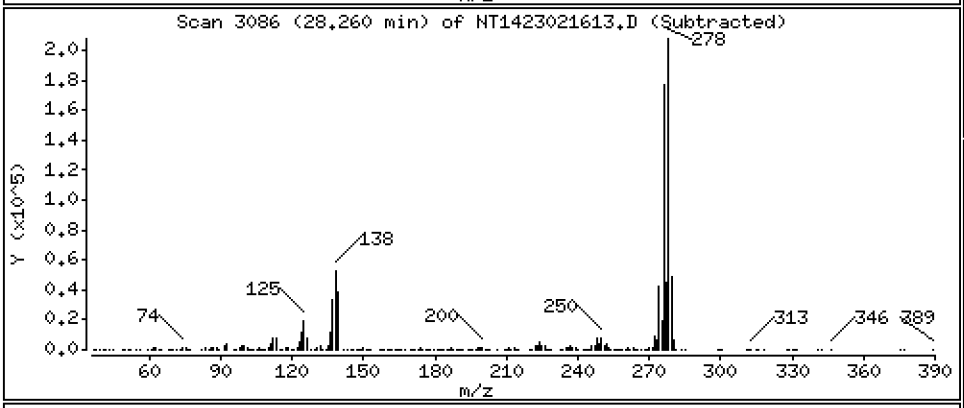
Column diameter: 0.25

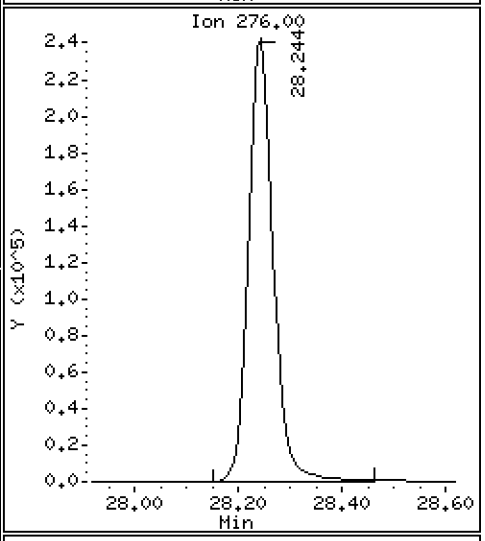
79 Dibenzo(a,h)anthracene

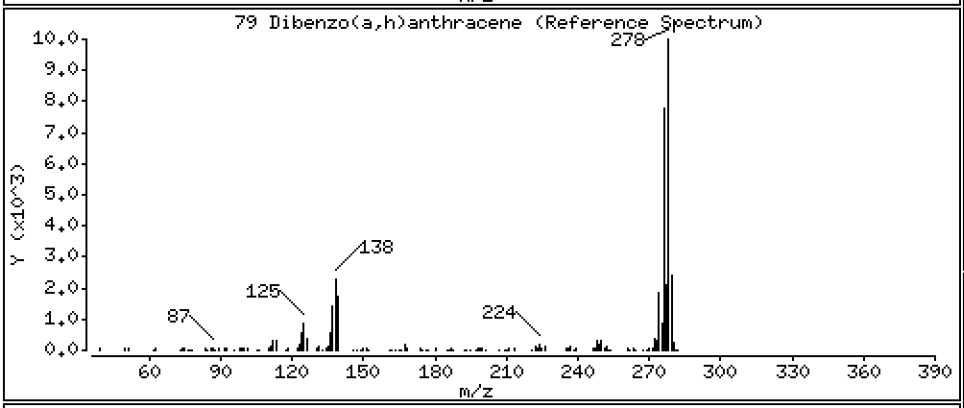
Concentration: 4.365 ug/mL

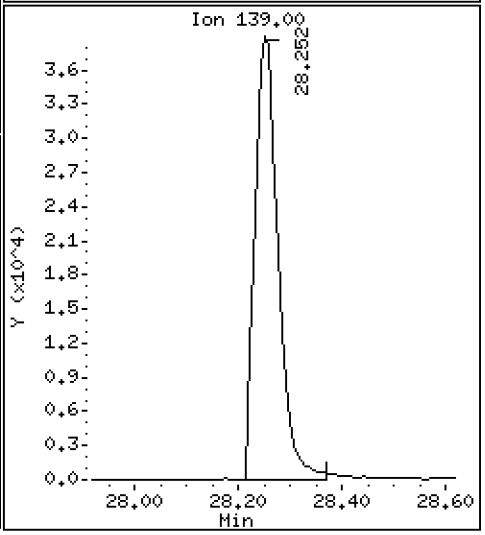


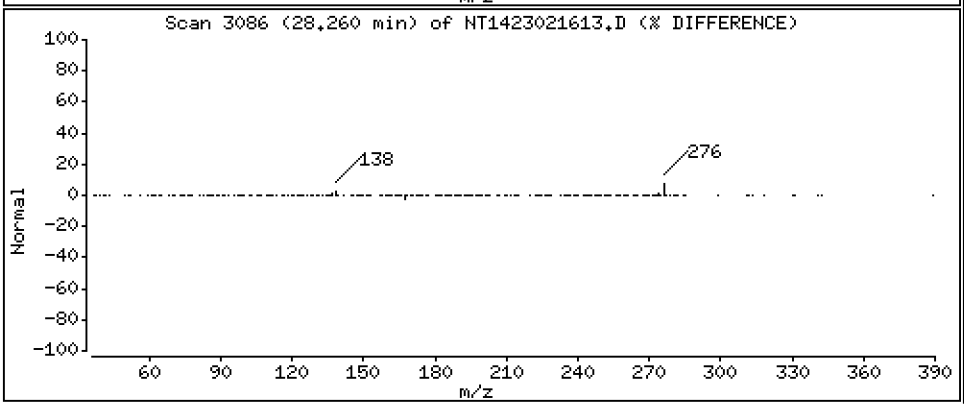












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

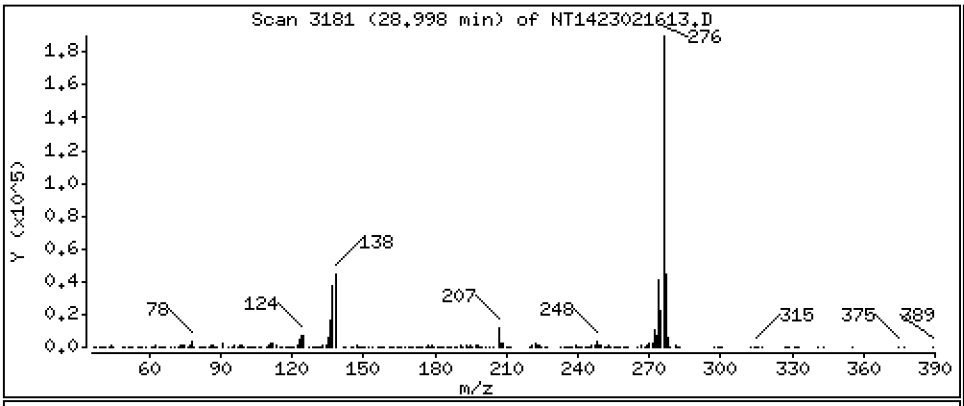
Operator: DSD

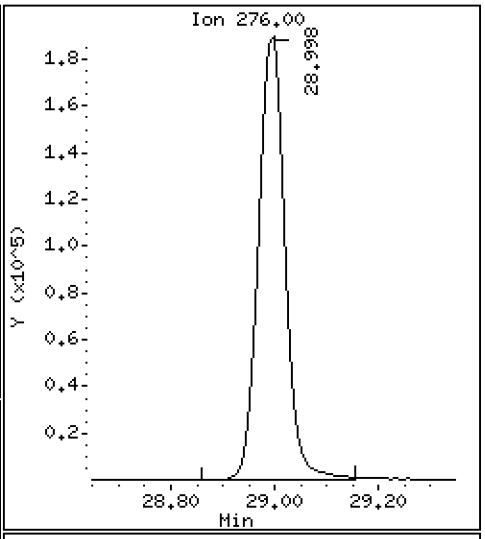
Column phase: ZB-5msi

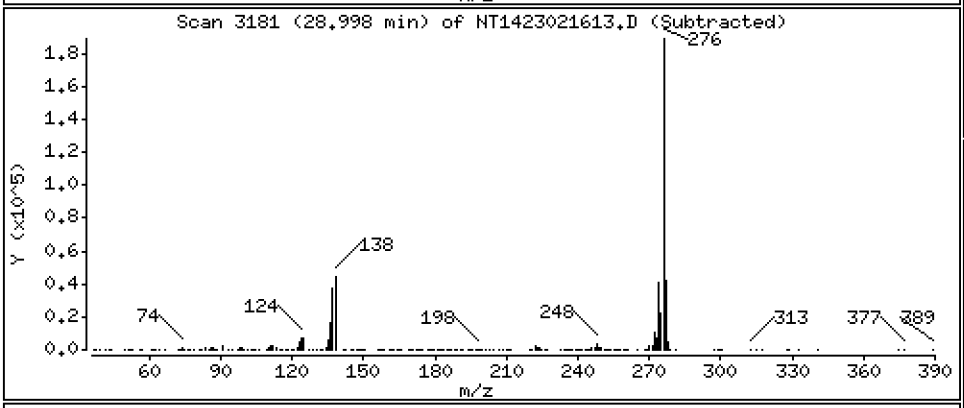
Column diameter: 0.25

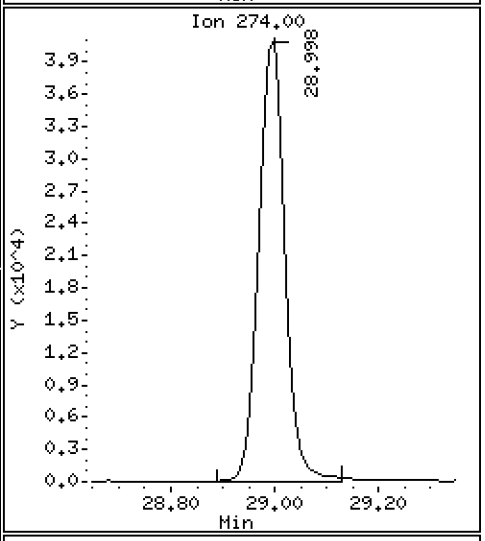
80 Benzo(g,h,i)perylene

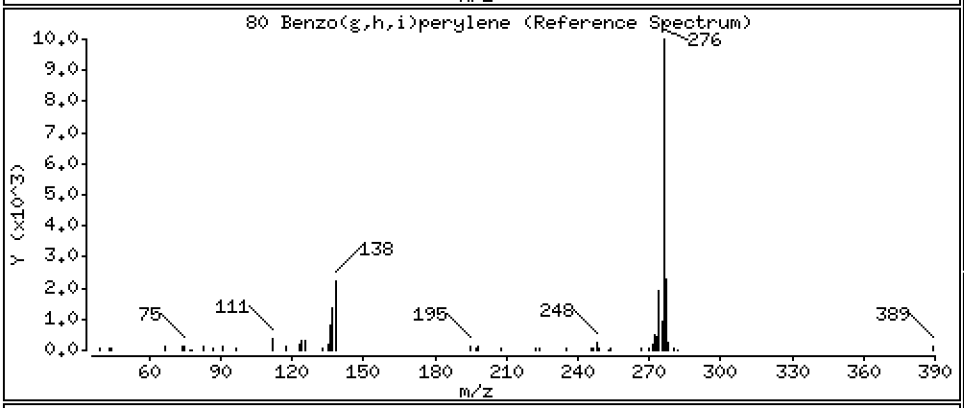
Concentration: 4.380 ug/mL

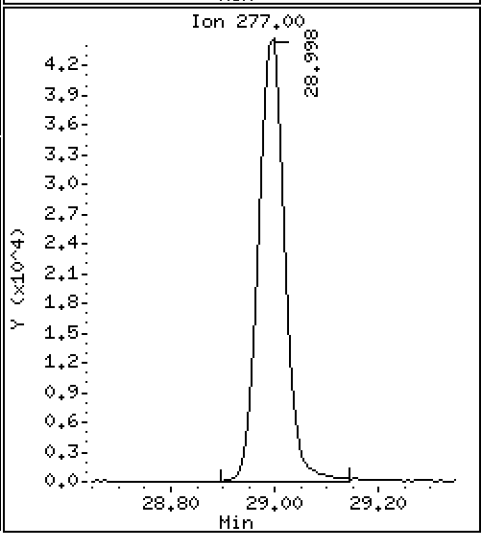


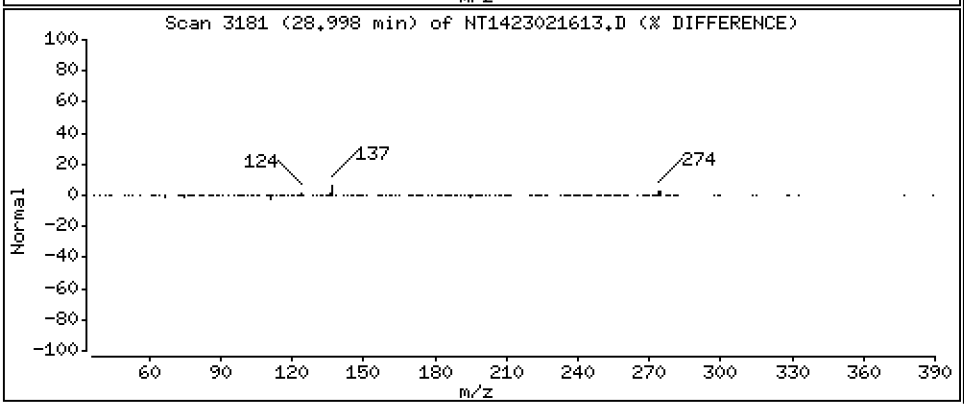












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

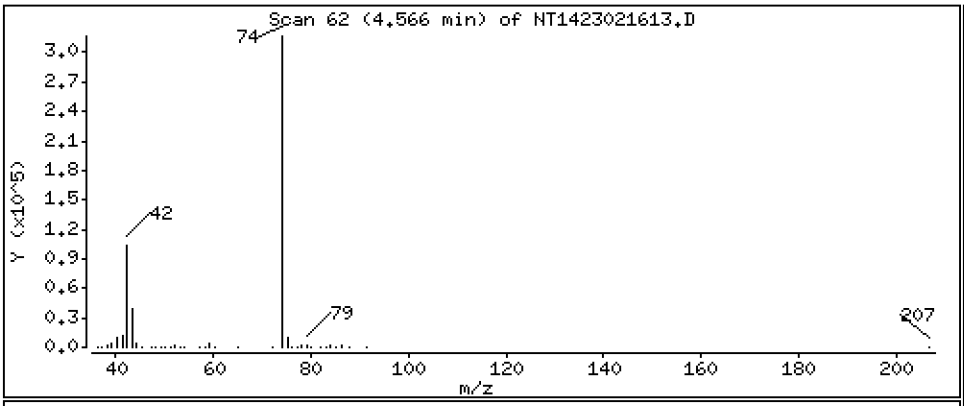
Operator: DSD

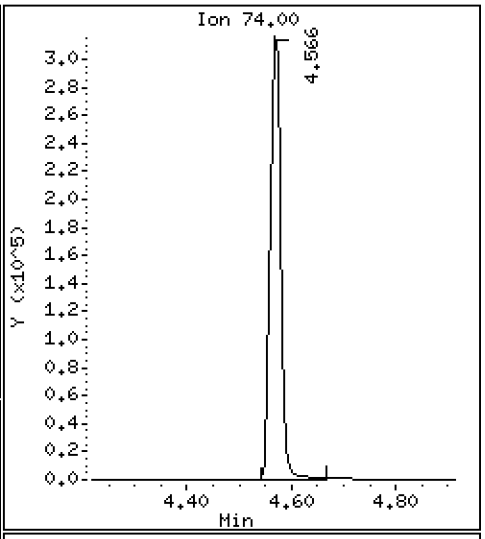
Column phase: ZB-5msi

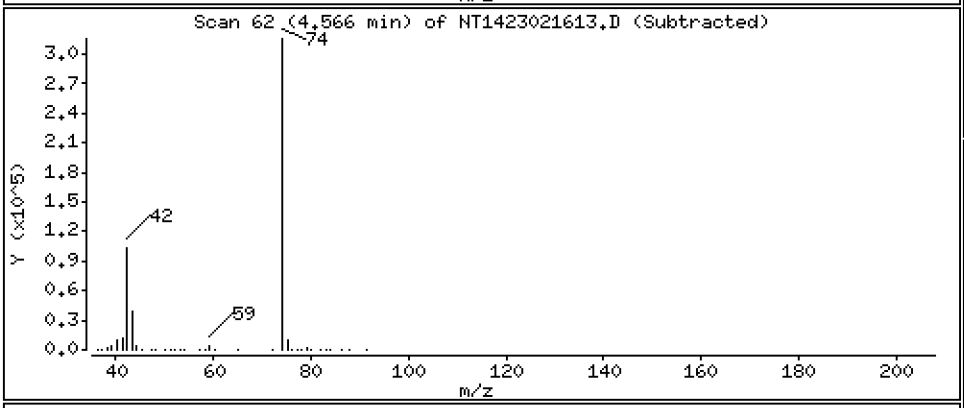
Column diameter: 0.25

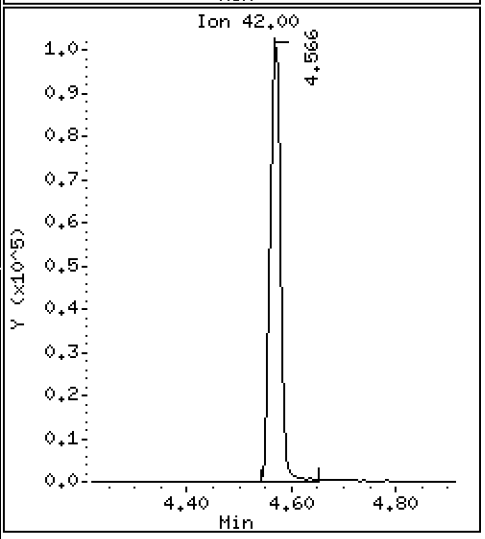
90 N-Nitrosodimethylamine

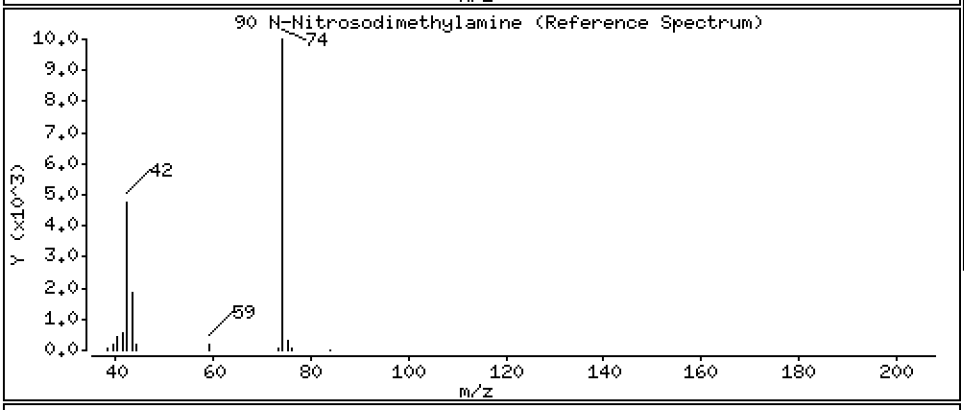
Concentration: 5.632 ug/mL

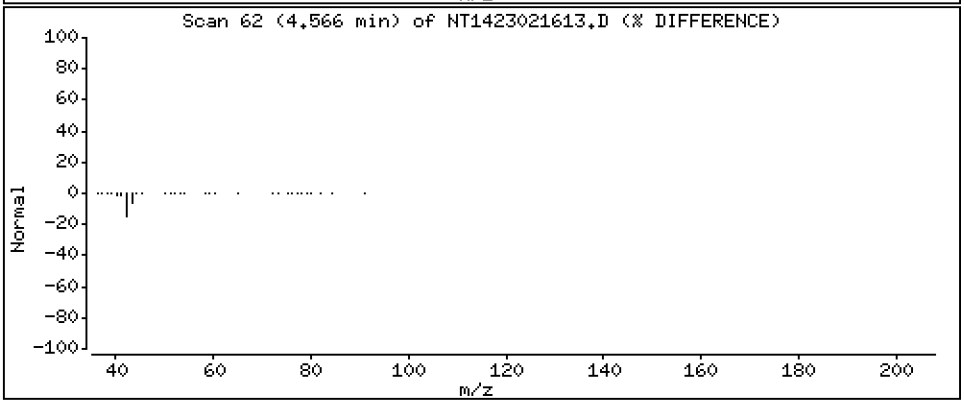












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

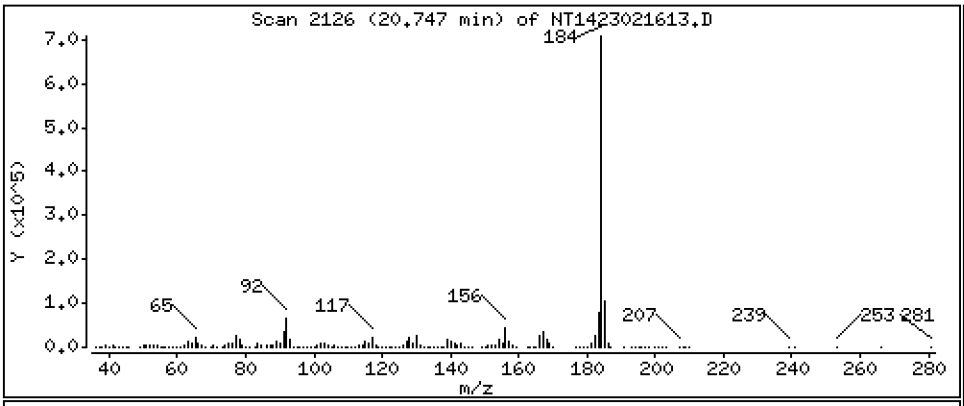
Operator: DSD

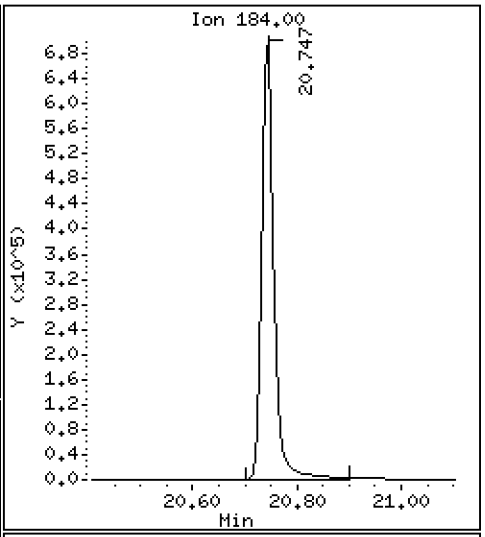
Column phase: ZB-5msi

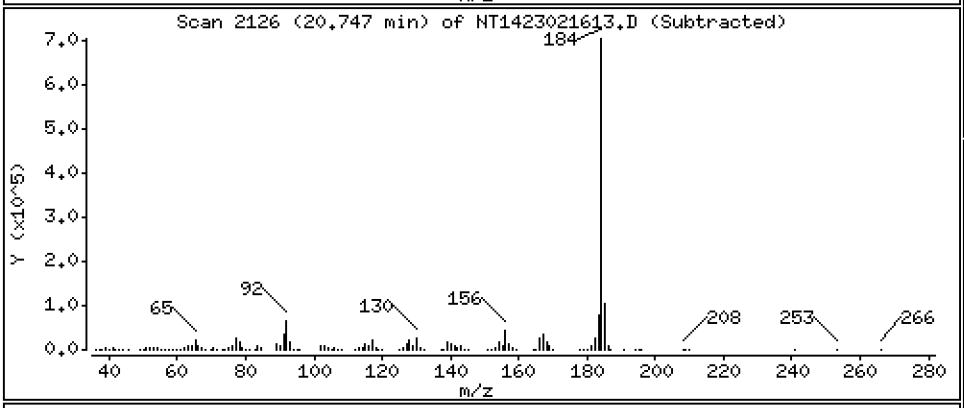
Column diameter: 0.25

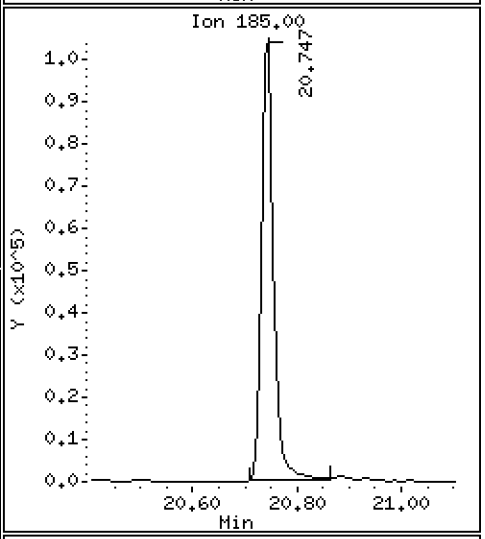
93 Benzidine

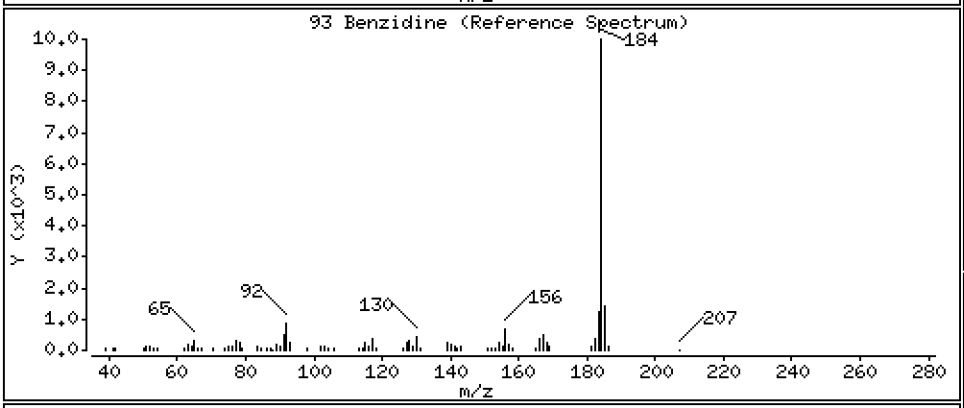
Concentration: 9.984 ug/mL

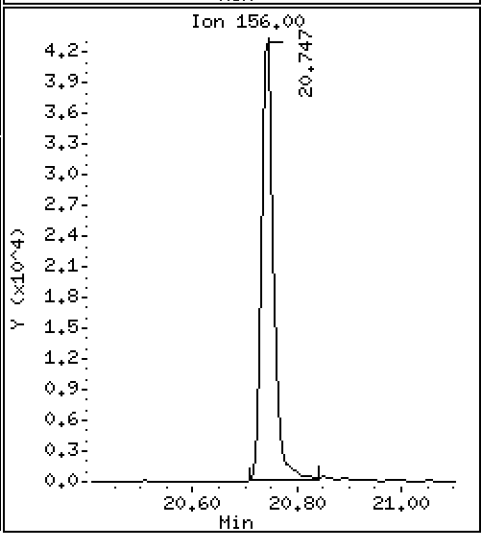


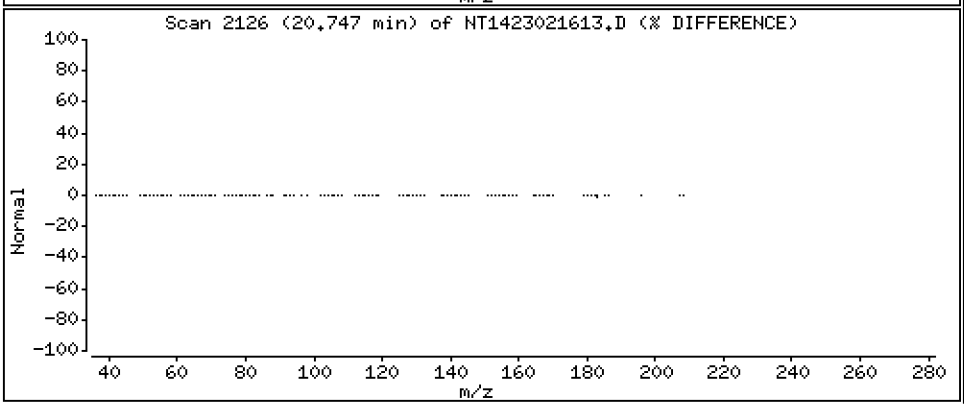












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

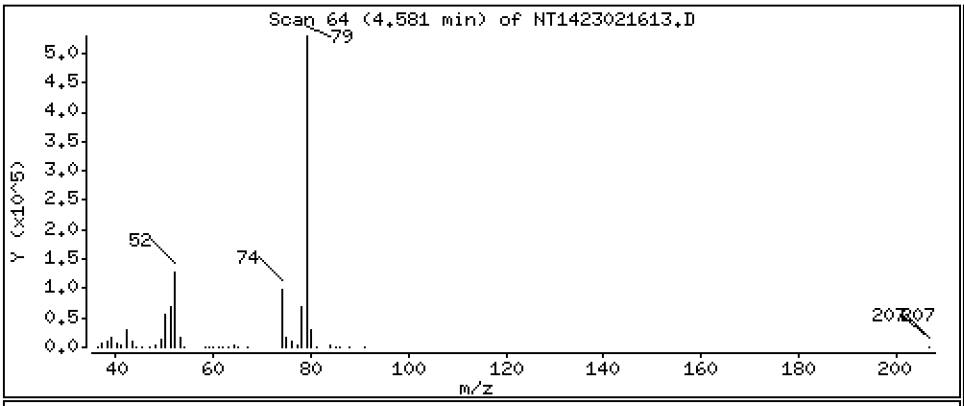
Operator: DSD

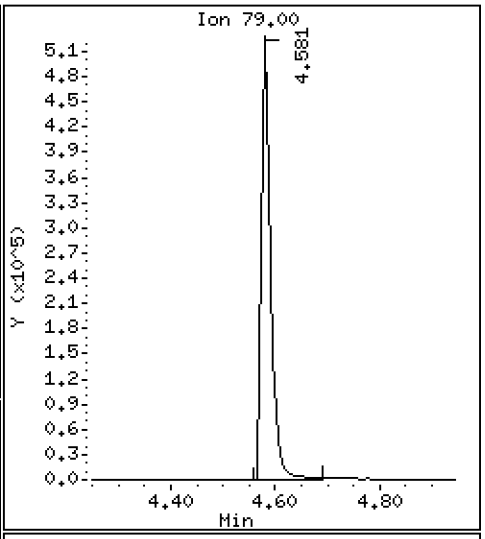
Column phase: ZB-5msi

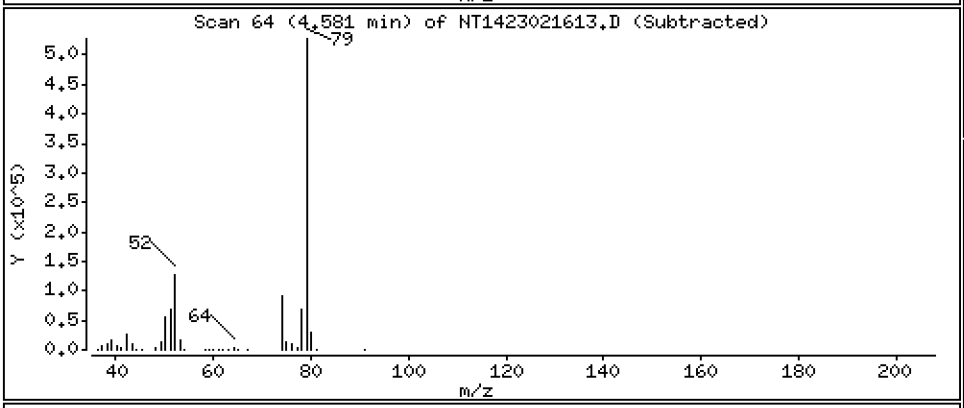
Column diameter: 0.25

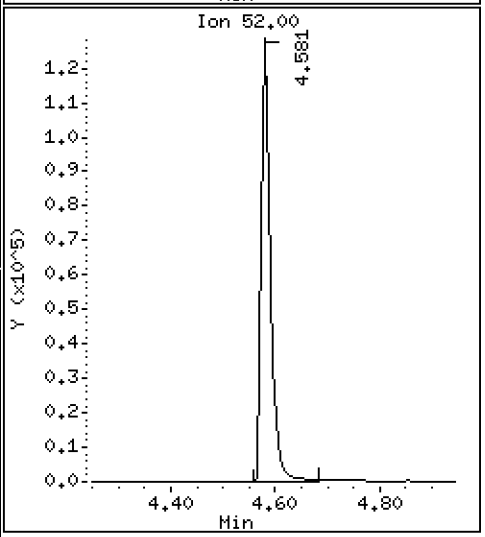
103 Pyridine

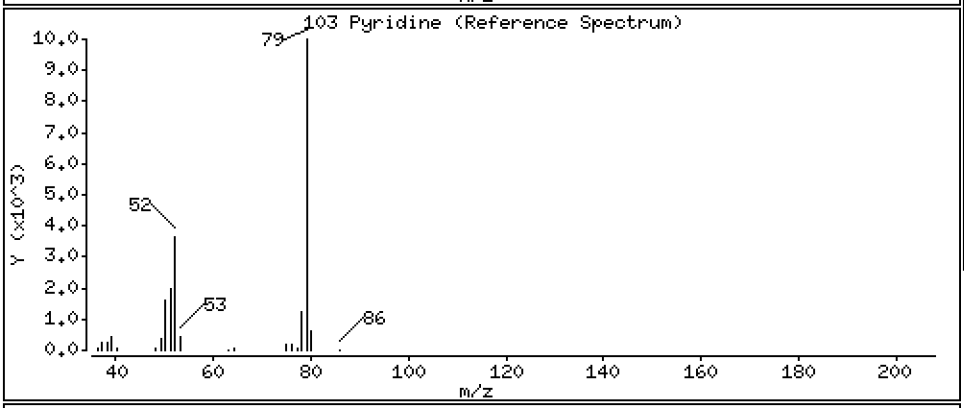
Concentration: 5.566 ug/mL

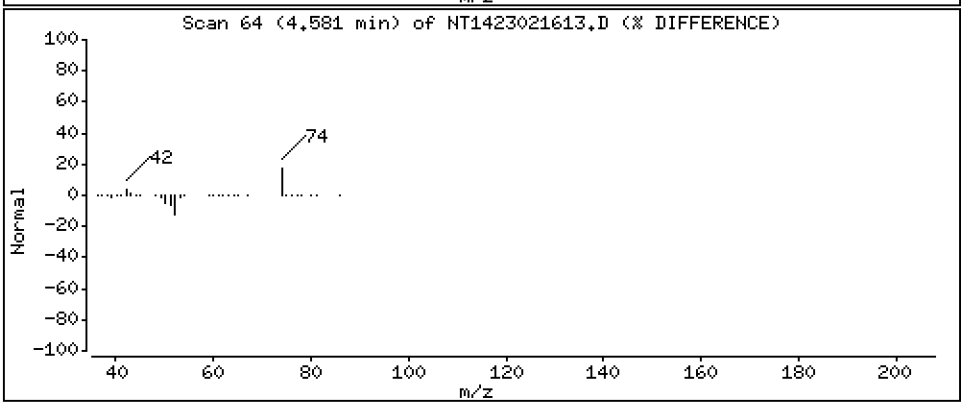












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

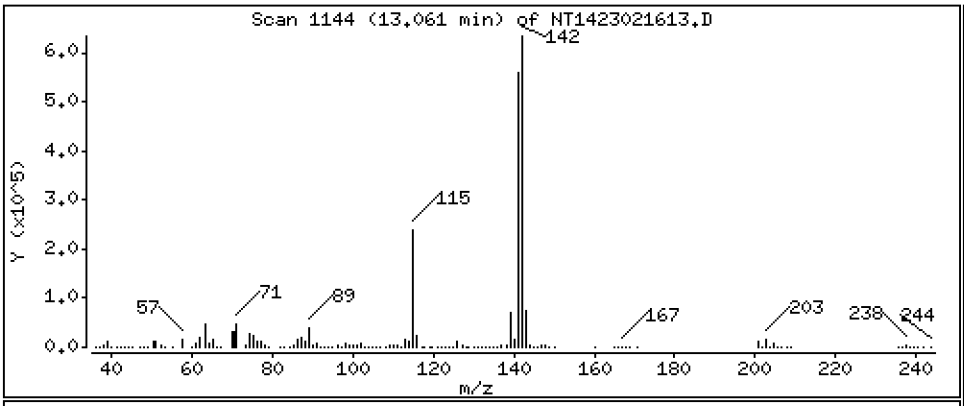
Operator: DSD

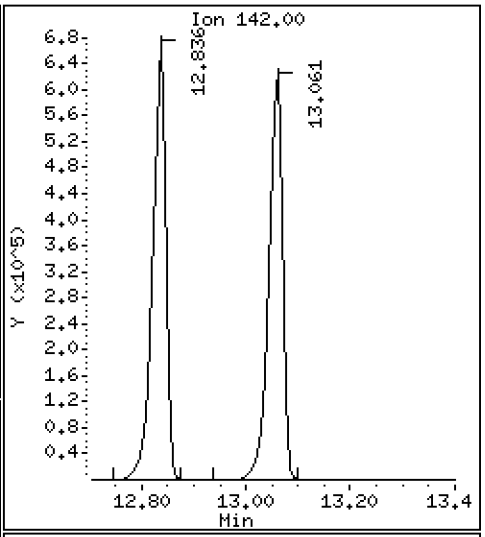
Column phase: ZB-5msi

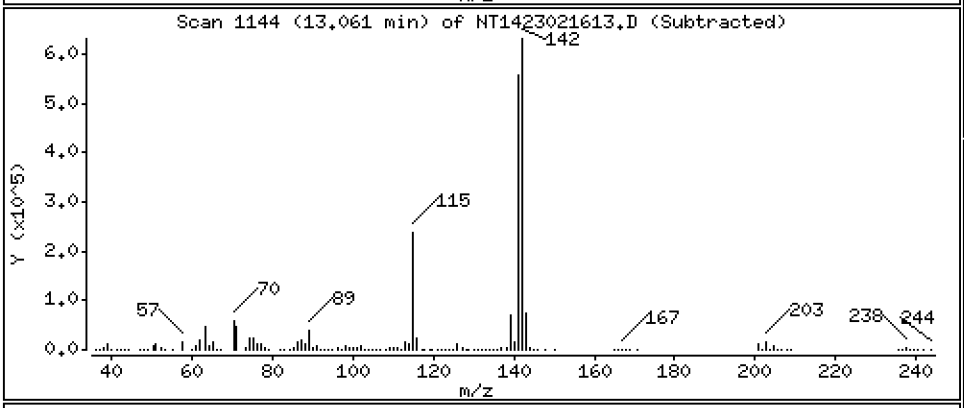
Column diameter: 0.25

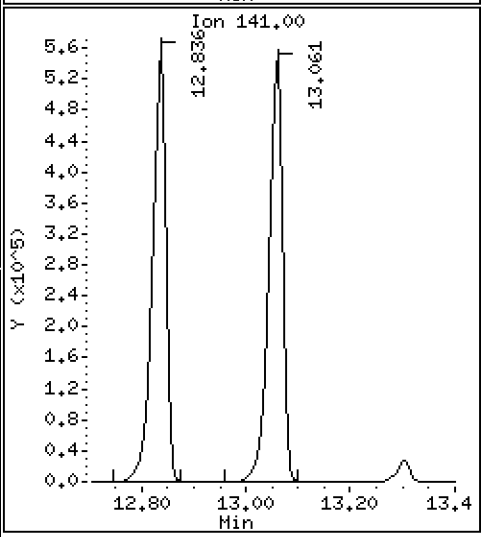
105 1-methylnaphthalene

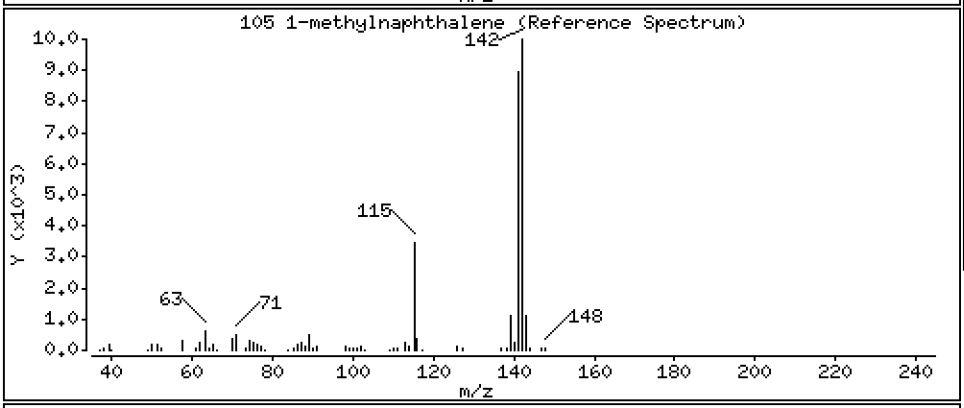
Concentration: 4.760 ug/mL

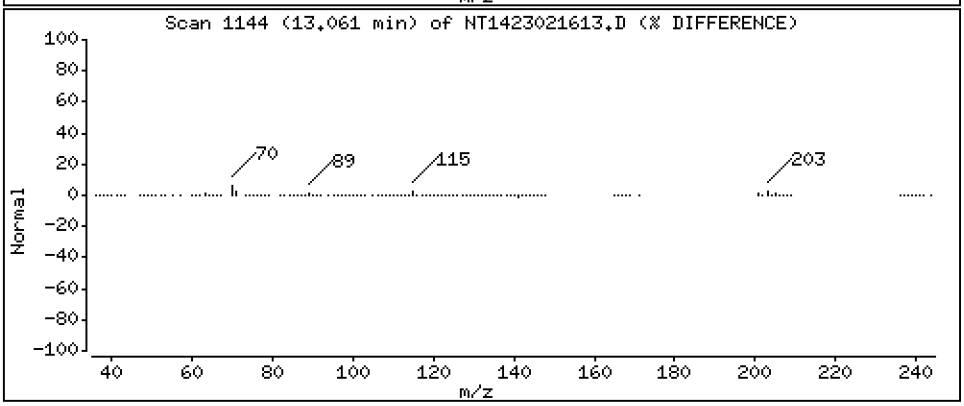












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

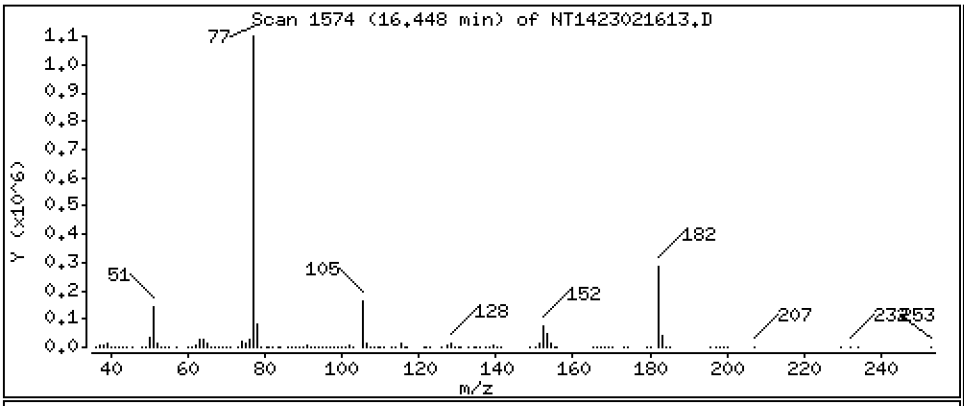
Operator: DSD

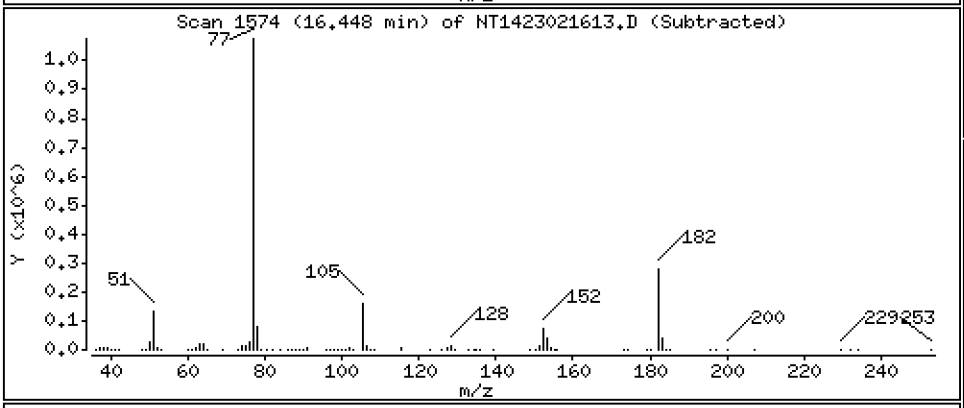
Column phase: ZB-5msi

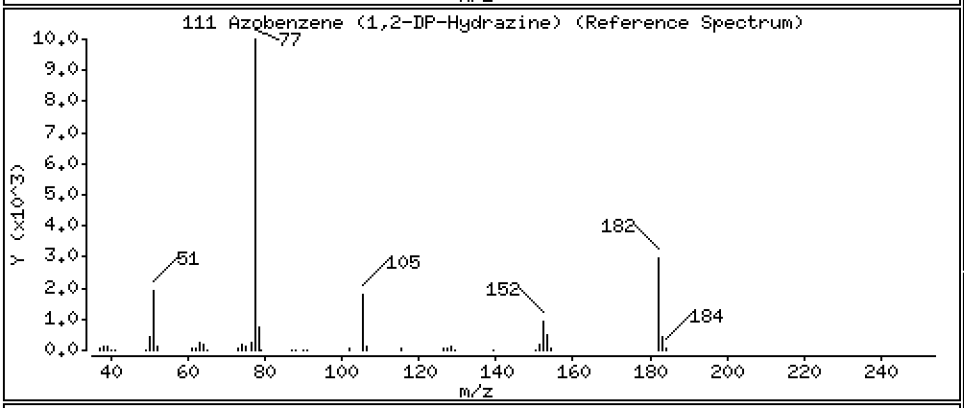
Column diameter: 0.25

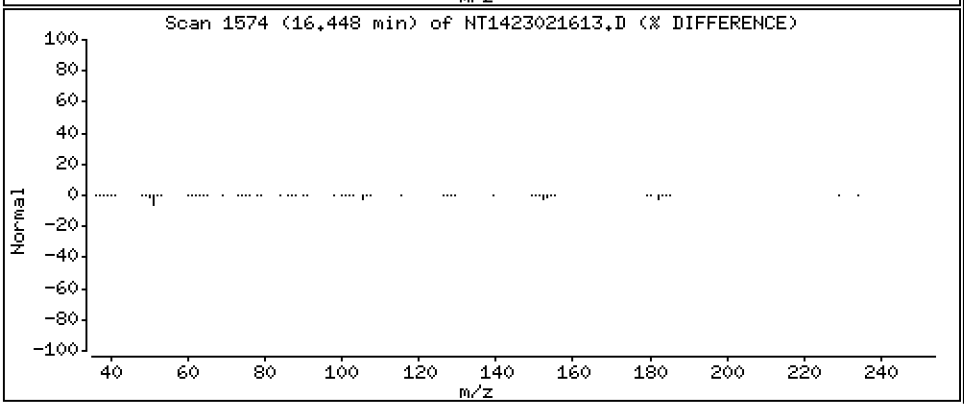
111 Azobenzene (1,2-DP-Hydrazine)

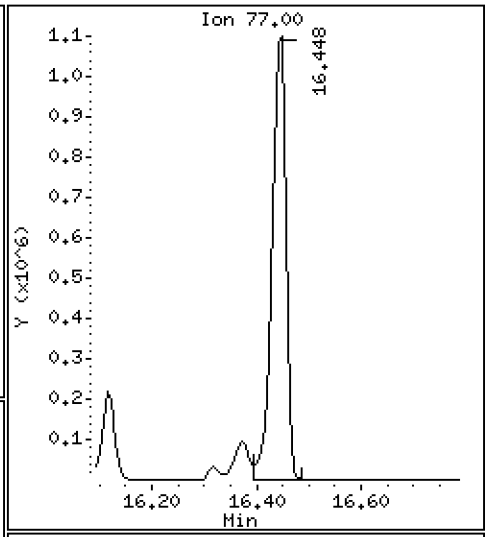
Concentration: 4.655 ug/mL

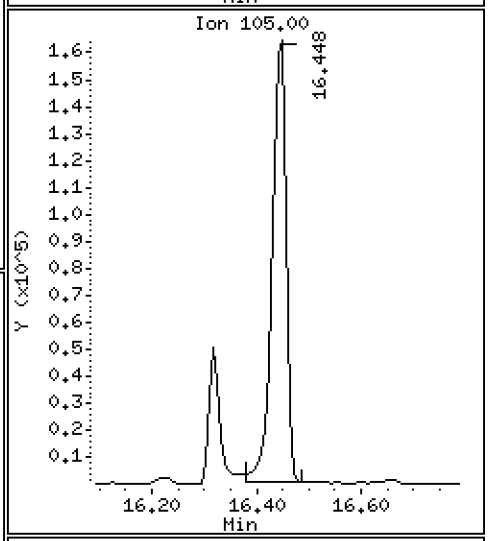


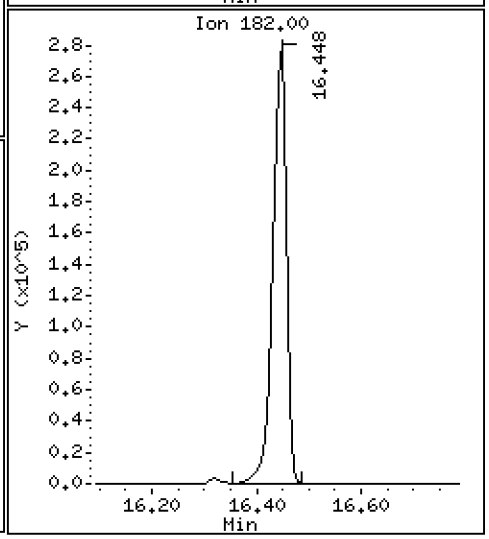












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

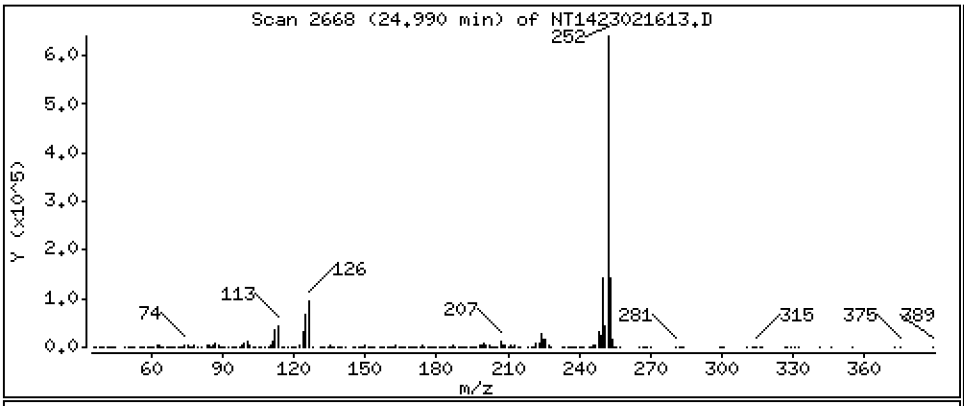
Operator: DSD

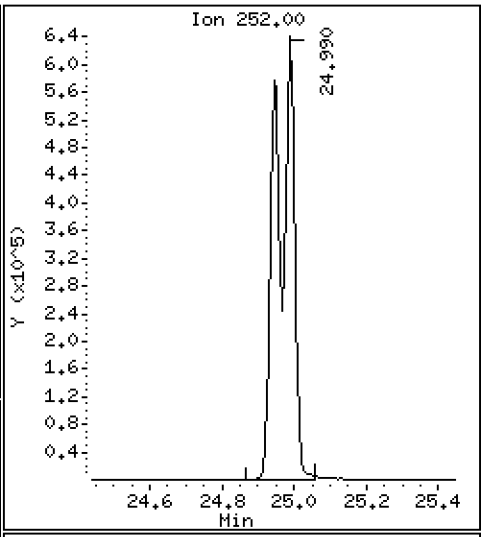
Column phase: ZB-5msi

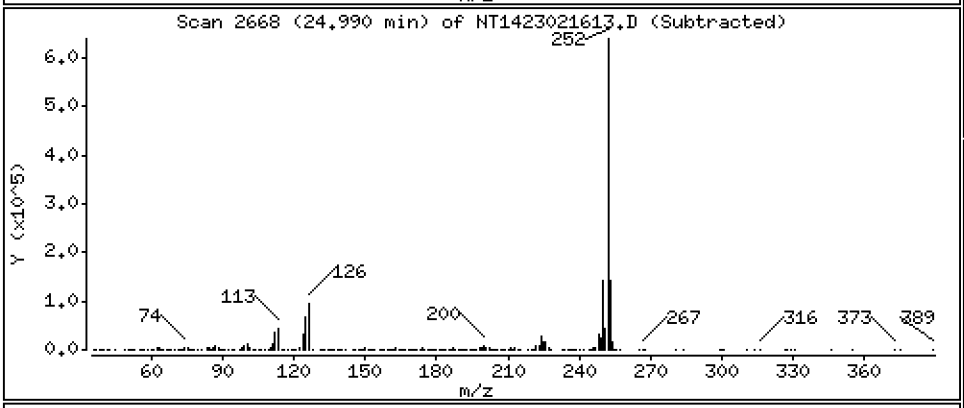
Column diameter: 0.25

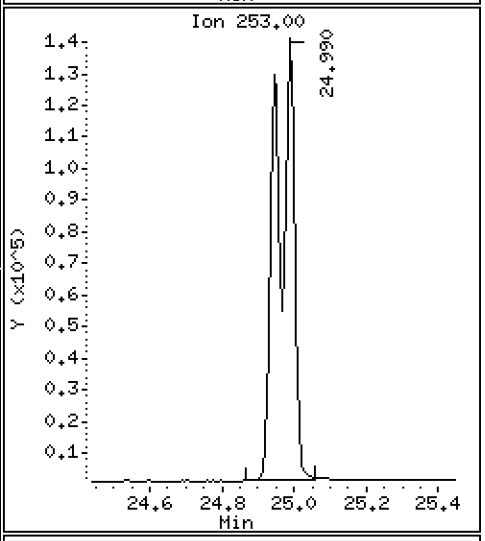
187 Total Benzofluoranthenes

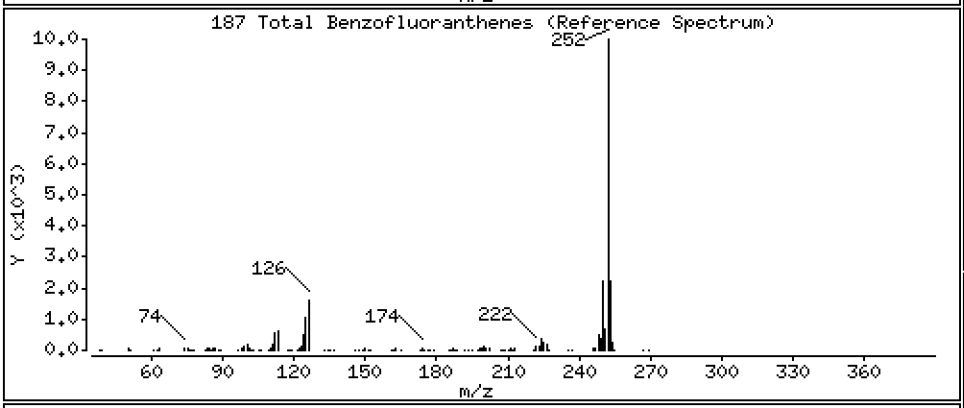
Concentration: 9.712 ug/mL

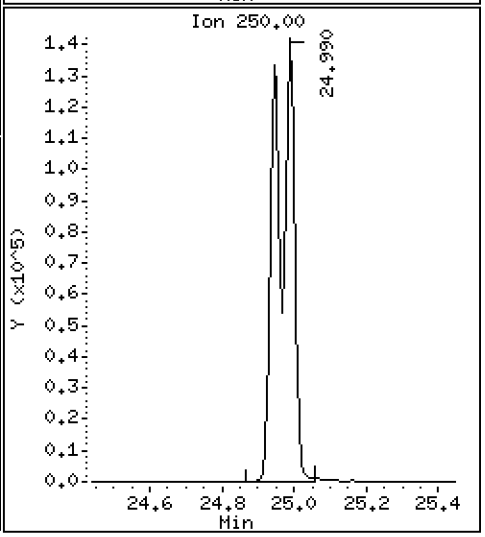


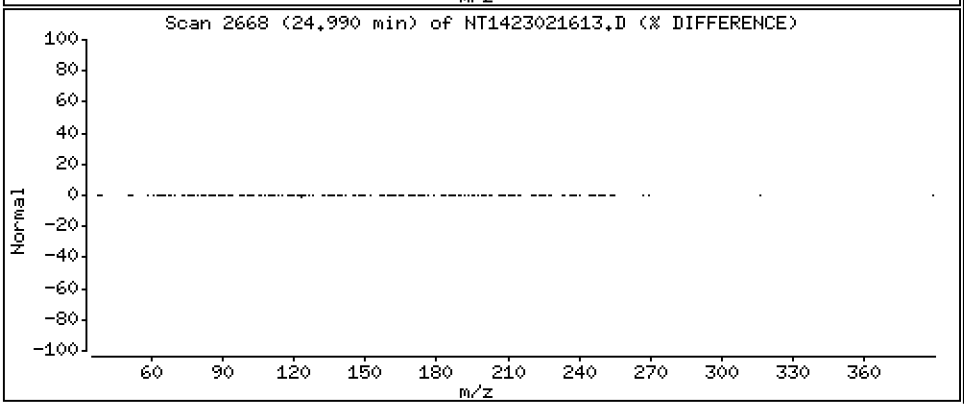












Data File: \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0234-SCV1

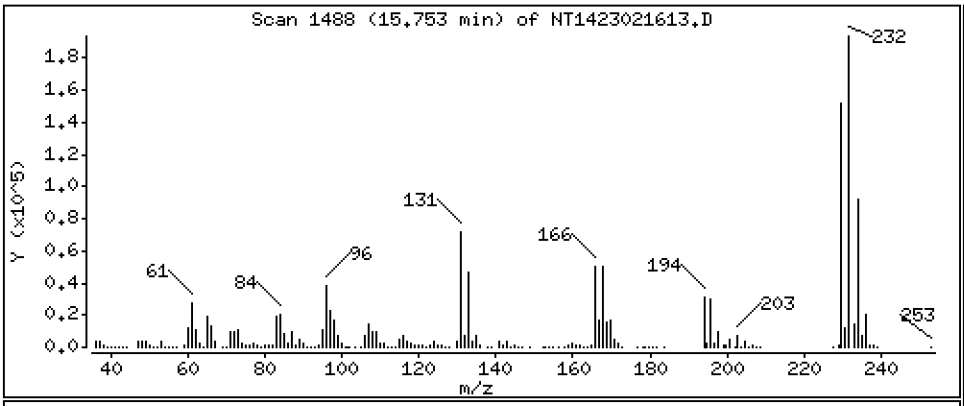
Operator: DSD

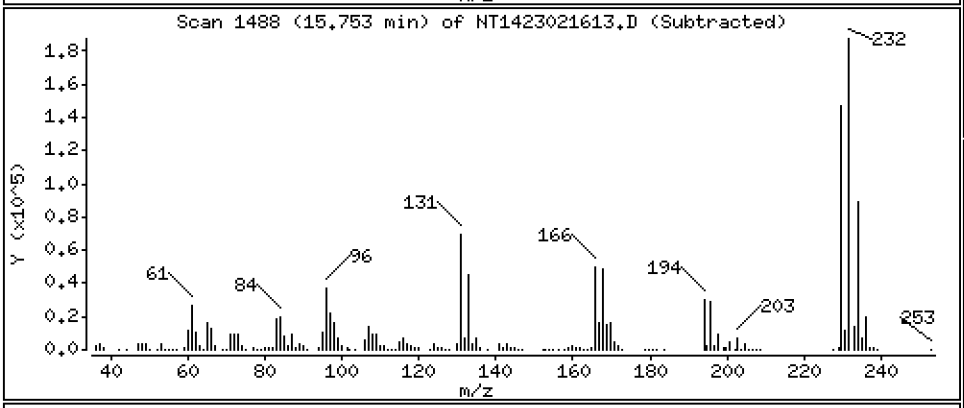
Column phase: ZB-5msi

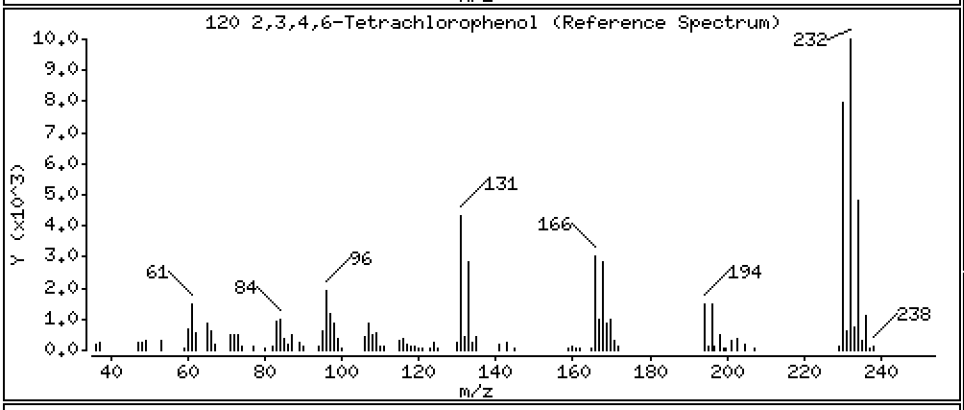
Column diameter: 0.25

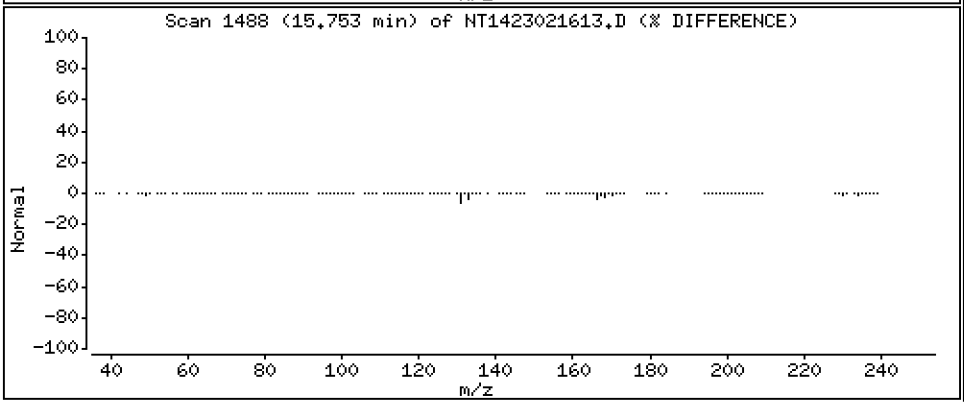
120 2,3,4,6-Tetrachlorophenol

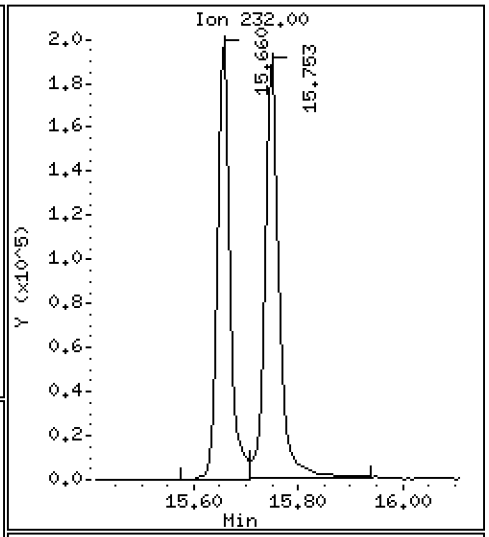
Concentration: 3.875 ug/mL

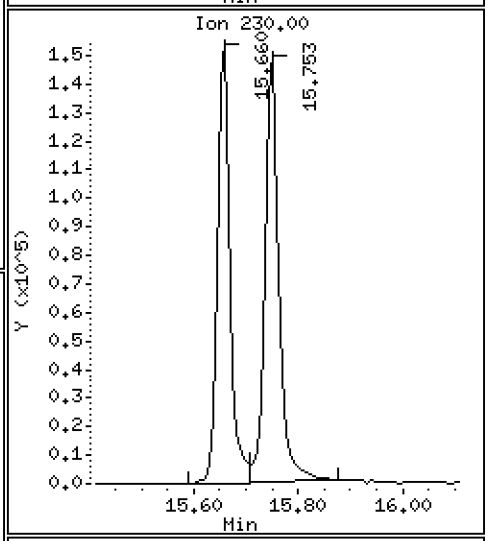


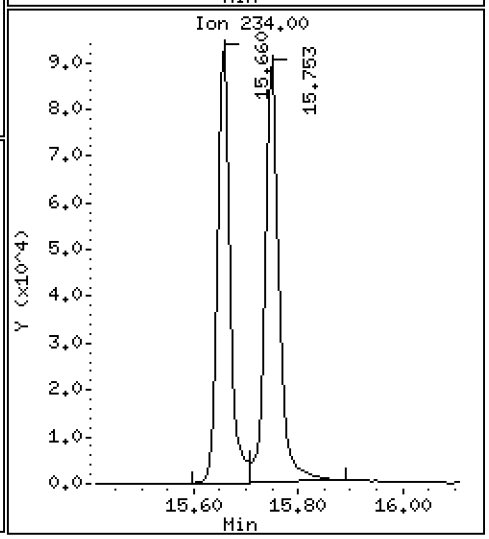












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230216.b\NT1423021613.D
Lab Smp Id: SLB0234-SCV1
Inj Date : 16-FEB-2023 21:18 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0234-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230216.b\ABN.m
Meth Date : 17-Feb-2023 15:05 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.674	6.682	(0.750)	812311	8.37324	8.373
$	2 Phenol-d5	99	8.266	8.266	(0.929)	1229645	7.99013	7.990
	3 Phenol	94	8.289	8.289	(0.931)	753865	4.62726	4.627
$	5 2-Chlorophenol-d4	132	8.536	8.536	(0.959)	852471	7.76321	7.763
	4 Bis(2-Chloroethyl)ether	93	8.459	8.451	(0.950)	642018	5.15867	5.159
	6 2-Chlorophenol	128	8.567	8.567	(0.963)	529676	4.61671	4.617
	7 1,3-Dichlorobenzene	146	8.838	8.838	(0.993)	609215	4.76976	4.770
*	8 1,4-Dichlorobenzene-d4	152	8.900	8.900	(1.000)	362894	4.00000	
	9 1,4-Dichlorobenzene	146	8.931	8.931	(1.003)	580699	4.79061	4.791
$	10 1,2-Dichlorobenzene-d4	152	9.264	9.257	(1.041)	410470	4.98694	4.987
	12 1,2-Dichlorobenzene	146	9.288	9.288	(1.044)	576549	4.75778	4.758
	11 Benzyl alcohol	108	9.179	9.202	(1.031)	425653	4.62539	4.625
	14 2,2'-oxybis(1-Chloropropane)	121	9.482	9.482	(1.065)	192988	5.56690	5.567
	13 2-Methylphenol	108	9.404	9.404	(1.057)	496864	4.36760	4.368
	17 Hexachloroethane	117	9.878	9.878	(1.110)	265463	5.03740	5.037
	16 N-Nitroso-di-n-propylamine	70	9.746	9.738	(1.095)	516514	4.98778	4.988
	15 4-Methylphenol	108	9.684	9.684	(1.088)	551454	4.59064	4.591
$	18 Nitrobenzene-d5	82	10.002	10.002	(0.878)	806144	5.19439	5.194
	19 Nitrobenzene	77	10.041	10.033	(0.881)	770727	4.94878	4.949
	20 Isophorone	82	10.483	10.491	(0.920)	1457561	7.09356	7.094
	21 2-Nitrophenol	139	10.669	10.677	(0.936)	316370	4.45322	4.453
	22 2,4-Dimethylphenol	107	10.723	10.724	(0.941)	502608	4.27378	4.274
	23 Bis(2-Chloroethoxy)methane	93	10.925	10.925	(0.959)	767264	5.74018	5.740
	24 Benzoic acid	105	10.933	10.879	(0.959)	412038	5.51023	5.510
	25 2,4-Dichlorophenol	162	11.119	11.127	(0.976)	515695	5.12362	5.124
	26 1,2,4-Trichlorobenzene	180	11.312	11.305	(0.993)	566926	4.64981	4.650
*	27 Naphthalene-d8	136	11.397	11.389	(1.000)	1343351	4.00000	
	28 Naphthalene	128	11.436	11.428	(1.003)	1568652	4.73587	4.736
	29 4-Chloroaniline	127	11.567	11.575	(1.015)	553475	3.91120	3.911
	30 Hexachlorobutadiene	225	11.799	11.799	(1.035)	369529	4.91651	4.917
	31 4-Chloro-3-methylphenol	107	12.534	12.542	(1.100)	549566	5.04457	5.045
	32 2-Methylnaphthalene	142	12.836	12.836	(1.126)	1142706	4.60635	4.606
	33 Hexachlorocyclopentadiene	237	13.300	13.301	(0.886)	438821	5.30111	5.301

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.455	13.463	(0.896)	404613	4.80795	4.808
	35	2,4,5-Trichlorophenol	196	13.532	13.541	(0.901)	428976	4.70685	4.707
$	36	2-Fluorobiphenyl	172	13.625	13.617	(0.907)	1488825	4.87017	4.870
	37	2-Chloronaphthalene	162	13.834	13.826	(0.921)	1157484	4.63882	4.639
	38	2-Nitroaniline	65	14.097	14.097	(0.939)	393653	4.85233	4.852
	39	Dimethylphthalate	163	14.538	14.531	(0.968)	1224849	4.69299	4.693
	40	Acenaphthylene	152	14.701	14.701	(0.979)	1772439	4.65722	4.657
	41	2,6-Dinitrotoluene	165	14.670	14.670	(0.977)	303057	4.93469	4.935
*	42	Acenaphthene-d10	164	15.018	15.018	(1.000)	854455	4.00000	
	43	3-Nitroaniline	138	14.956	14.957	(0.996)	320818	4.92163	4.922
	44	Acenaphthene	153	15.088	15.080	(1.005)	1055715	4.63322	4.633
	45	2,4-Dinitrophenol	184	15.265	15.282	(1.016)	10046	0.25021	0.2502
	46	Dibenzofuran	168	15.412	15.405	(1.026)	1701574	4.54830	4.548
	47	4-Nitrophenol	109	15.273	15.273	(1.017)	153415	4.05153	4.052
	48	2,4-Dinitrotoluene	165	15.482	15.475	(1.031)	421549	4.85479	4.855
	50	Diethylphthalate	149	15.992	15.984	(1.065)	1638308	4.72171	4.722
	49	Fluorene	166	16.123	16.124	(1.074)	1814406	4.63777	4.638
	51	4-Chlorophenyl-phenylether	204	16.123	16.116	(1.074)	994538	4.75422	4.754
	52	4-Nitroaniline	138	16.224	16.224	(1.080)	356106	4.76155	4.762
	53	4,6-Dinitro-2-methylphenol	198	16.316	16.370	(0.904)	216522	3.65299	3.653
	54	N-Nitrosodiphenylamine	169	16.370	16.370	(0.907)	1149631	4.90725	4.907
$	55	2,4,6-Tribromophenol	330	16.663	16.663	(1.110)	357193	7.14108	7.141
	56	4-Bromophenyl-phenylether	248	17.126	17.118	(0.949)	537640	5.15255	5.153
	57	Hexachlorobenzene	284	17.435	17.434	(0.966)	496114	4.67908	4.679
	58	Pentachlorophenol	266	17.791	17.814	(0.985)	204787	3.93169	3.932
*	59	Phenanthrene-d10	188	18.054	18.054	(1.000)	1630237	4.00000	
	60	Phenanthrene	178	18.108	18.101	(1.003)	1837237	4.68992	4.690
	61	Anthracene	178	18.201	18.193	(1.008)	1670411	4.30397	4.304
	62	Carbazole	167	18.534	18.534	(1.027)	1687690	4.79185	4.792
	63	Di-n-butylphthalate	149	19.338	19.346	(1.071)	2169531	5.51497	5.515
	64	Fluoranthene	202	20.499	20.499	(0.887)	2246209	4.68180	4.682
	65	Pyrene	202	20.924	20.925	(0.905)	2232282	4.40013	4.400
$	66	Terphenyl-d14	244	21.219	21.219	(0.918)	1704165	4.73097	4.731
	67	Butylbenzylphthalate	149	22.148	22.148	(0.958)	770848	4.56767	4.568
	68	Benzo(a)anthracene	228	23.092	23.092	(0.999)	1612232	4.53042	4.530
*	69	Chrysene-d12	240	23.123	23.123	(1.000)	1112056	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.054	23.054	(0.997)	1021005	9.32793	9.328
	71	Chrysene	228	23.170	23.162	(1.002)	1432188	4.47430	4.474
	72	bis(2-Ethylhexyl)phthalate	149	23.178	23.178	(0.960)	1007189	4.64885	4.649
*	134	Di-n-octylphthalate-d4	153	24.153	24.153	(1.000)	1298332	4.00000	
	73	Di-n-octylphthalate	149	24.168	24.161	(1.001)	1506391	4.96217	4.962
	74	Benzo(b)fluoranthene	252	24.943	24.943	(0.971)	1120169	4.81299	4.813
	75	Benzo(k)fluoranthene	252	24.989	24.989	(0.973)	1203272	4.83840	4.838
	76	Benzo(a)pyrene	252	25.577	25.578	(0.996)	1024300	4.60711	4.607
*	77	Perylene-d12	264	25.686	25.686	(1.000)	733476	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.244	28.244	(1.100)	816683	4.39546	4.395
	79	Dibenzo(a,h)anthracene	278	28.259	28.267	(1.100)	668295	4.36484	4.365
	80	Benzo(g,h,i)perylene	276	28.997	28.997	(1.129)	664180	4.38025	4.380
	90	N-Nitrosodimethylamine	74	4.566	4.566	(0.513)	423038	5.63216	5.632
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	20.747	20.754	(0.897)	1133759	9.98385	9.984
	103	Pyridine	79	4.581	4.597	(0.515)	661518	5.56593	5.566
	105	1-methylnaphthalene	142	13.060	13.053	(1.146)	1108498	4.75965	4.760
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.447	16.440	(1.095)	1962985	4.65510	4.655

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.989	24.943	(0.973)	2206870	9.71223	9.712
120 2,3,4,6-Tetrachlorophenol	232	15.752	15.760	(1.049)	382367	3.87456	3.875

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021613.D
Lab Smp Id: SLB0234-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\ABN.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 17:06
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	375798	187899	751596	362894	-3.43
27 Naphthalene-d8	1378169	689085	2756338	1343351	-2.53
42 Acenaphthene-d10	847135	423568	1694270	854455	0.86
59 Phenanthrene-d10	1675180	837590	3350360	1630237	-2.68
69 Chrysene-d12	1073562	536781	2147124	1112056	3.59
134 Di-n-octylphthala	1344129	672065	2688258	1298332	-3.41
77 Perylene-d12	721978	360989	1443956	733476	1.59

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.90	8.40	9.40	8.90	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.40	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	-0.00
59 Phenanthrene-d10	18.05	17.55	18.55	18.05	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	-0.00
134 Di-n-octylphthala	24.15	23.65	24.65	24.15	-0.00
77 Perylene-d12	25.69	25.19	26.19	25.69	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021613.D

Lab ID: SLB0234-SCV1
nt14.i, ABN.m, 16-FEB-2023 21:18

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.959	0.000	0.9593	Benzoic acid
1.016	0.000	1.0165	2,4-Dinitrophenol
1.017	0.000	1.0170	4-Nitrophenol
0.985	0.000	0.9854	Pentachlorophenol

RRT check based on Ccal File: NT1423021610.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GB00046
Lab File ID:	NT1423022146.D	Calibration Date:	02/16/2023
Sequence:	SLB0305	Injection Date:	02/22/23
Lab Sample ID:	SLB0305-CCV1	Injection Time:	16:35
Sequence Name:	Calibration Check		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	5.0000	4.7	1.7957660	1.6942410		-5.7	+/-50
4-Methylphenol	A	5.0000	5.2	1.3240860	1.3663030		3.2	+/-50
Naphthalene	A	5.0000	5.2	0.9862730	1.0278920		4.2	+/-50
2-Methylnaphthalene	A	5.0000	5.0	0.7386653	0.7457868		1.0	+/-50
Acenaphthylene	A	5.0000	5.2	1.7816190	1.8572420		4.2	+/-50
Dimethylphthalate	A	5.0000	5.2	1.2218100	1.2593170		3.1	+/-50
Acenaphthene	A	5.0000	5.2	1.0666800	1.1086200		3.9	+/-50
Dibenzofuran	A	5.0000	4.9	1.7513490	1.7206150		-1.8	+/-50
Fluorene	A	5.0000	4.8	1.8314530	1.7746230		-3.1	+/-50
Phenanthrene	A	5.0000	5.2	0.9611900	0.9933434		3.3	+/-50
Anthracene	A	5.0000	5.6	0.9522768	1.0723170		12.6	+/-50
Fluoranthene	A	5.0000	5.1	1.7257220	1.7551890		1.7	+/-50
Pyrene	A	5.0000	5.1	1.8248060	1.8501120		1.4	+/-50
Butylbenzylphthalate	A	5.0000	5.5	0.5233989	0.6653007		9.4	+/-50
Benzo(a)anthracene	A	5.0000	5.3	1.2800360	1.3689400		6.9	+/-50
Chrysene	A	5.0000	5.4	1.1513540	1.2430110		8.0	+/-50
bis(2-Ethylhexyl)phthalate	A	5.0000	4.2	0.5470542	0.5604555		-16.3	+/-50
Benzofluoranthenes, Total	A	10.000	10.8	1.2391730	1.3422630		8.3	+/-50
Benzo(a)pyrene	A	5.0000	4.8	1.0848130	1.1629190		-4.1	+/-50
Indeno(1,2,3-cd)pyrene	A	5.0000	4.6	0.8621891	0.9423632		-7.1	+/-50
Dibenzo(a,h)anthracene	A	5.0000	4.9	0.7046903	0.8276687		-1.2	+/-50
Benzo(g,h,i)perylene	A	5.0000	4.3	0.7176031	0.7048846		-14.7	+/-50
2-Fluorophenol	A	7.5000	7.66	1.0693230	1.0917170		2.1	+/-50
Phenol-d5	A	7.5000	7.29	1.6963140	1.6492550		-2.8	+/-50
2-Chlorophenol-d4	A	7.5000	7.13	1.2103710	1.1500560		-5.0	+/-50
1,2-Dichlorobenzene-d4	A	5.0000	4.45	0.9072515	0.8074971		-11.0	+/-50
Nitrobenzene-d5	A	5.0000	5.25	0.4621137	0.4851543		5.0	+/-50
2-Fluorobiphenyl	A	5.0000	5.03	1.4311010	1.4389930		0.6	+/-50
2,4,6-Tribromophenol	A	7.5000	6.81	0.2030581	0.2124246		-9.2	+/-50
p-Terphenyl-d14	A	5.0000	5.04	1.2956710	1.3059290		0.8	+/-50

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022146.D

Page 1

Date : 22-FEB-2023 16:35

Client ID:

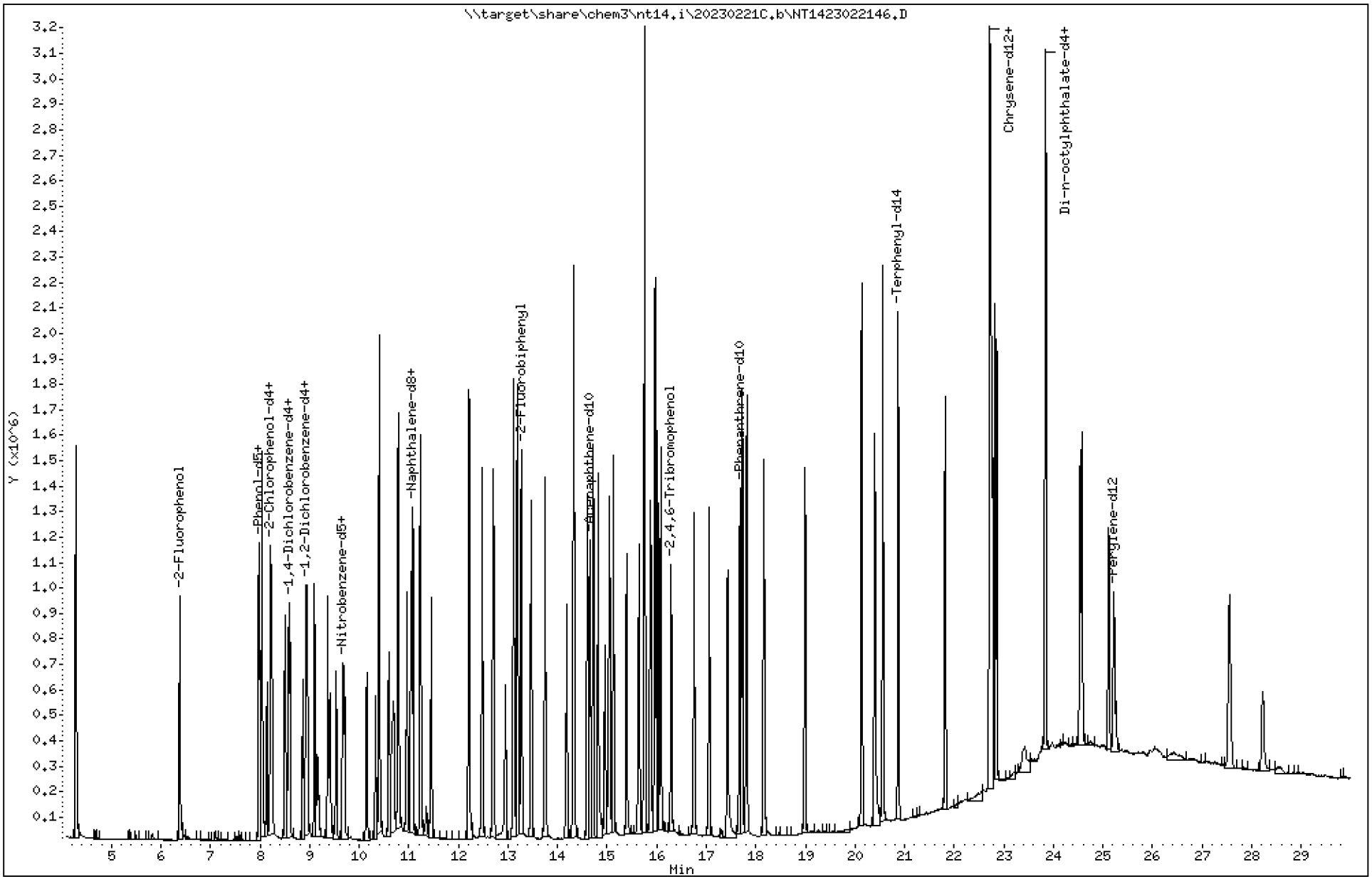
Instrument: nt14.i

Sample Info: SLB0308-ICV1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

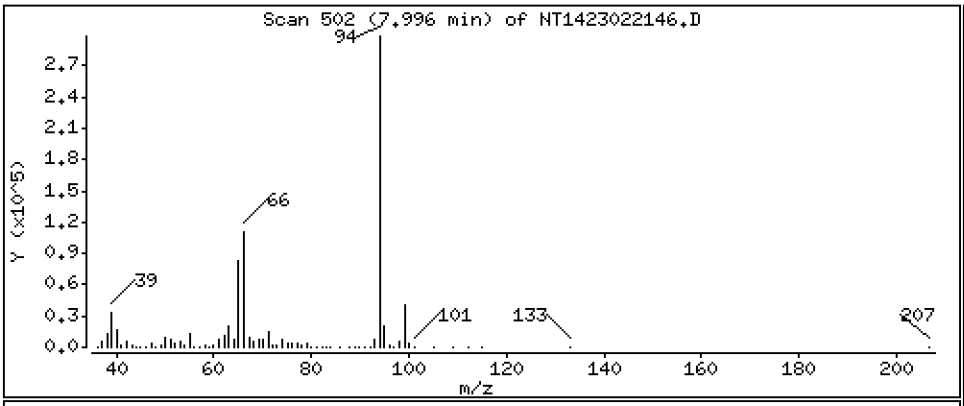
Operator: DSD

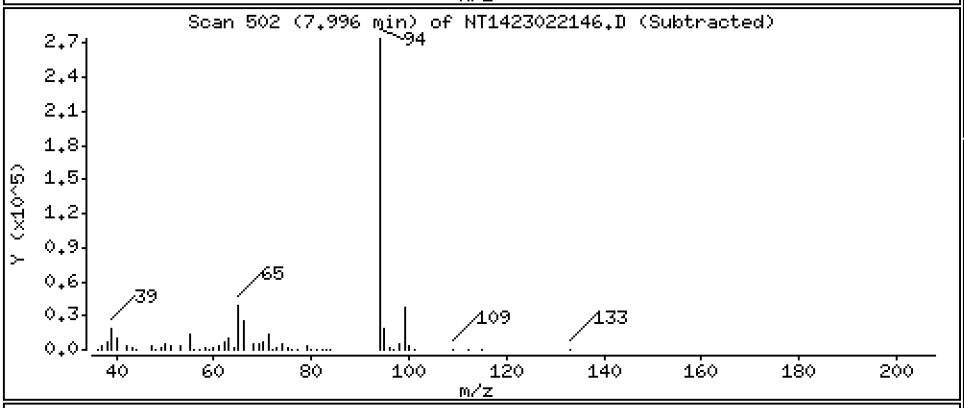
Column phase: ZB-5msi

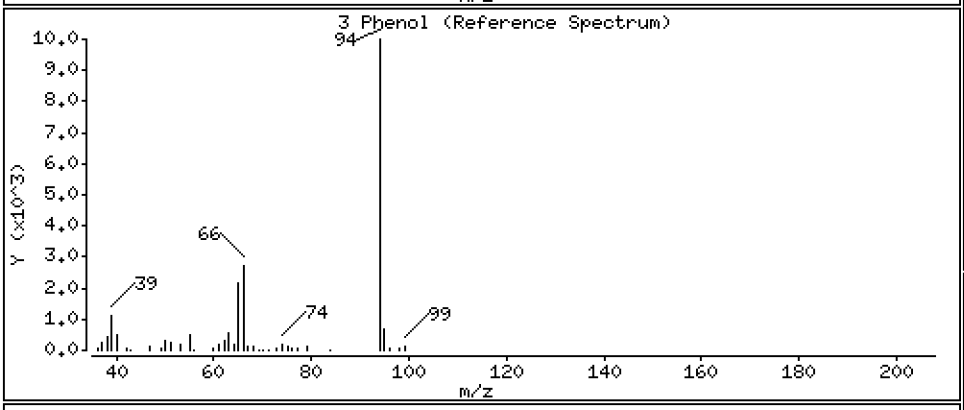
Column diameter: 0.25

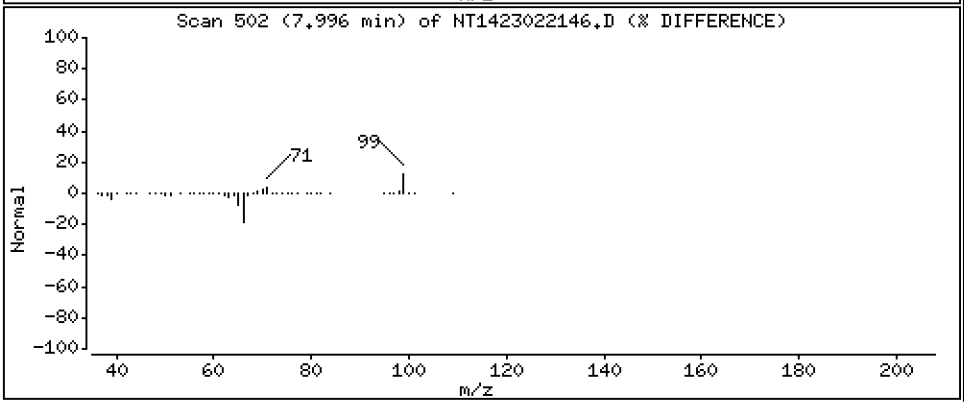
3 Phenol

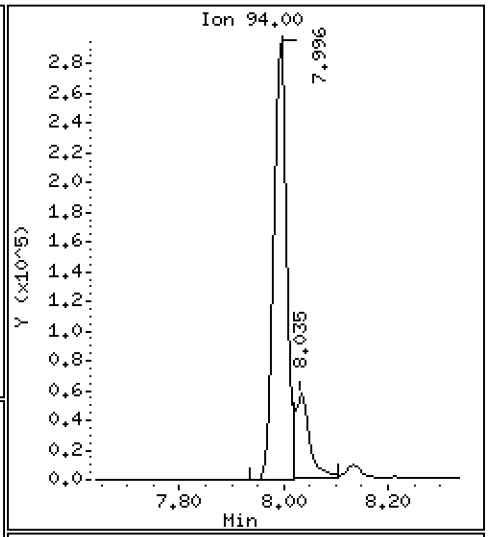
Concentration: 4.717 ug/mL

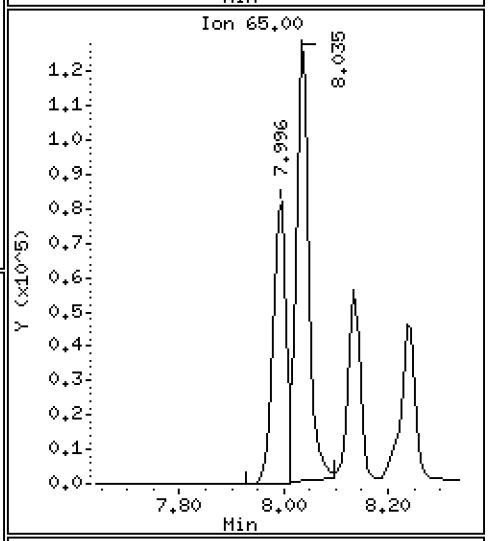


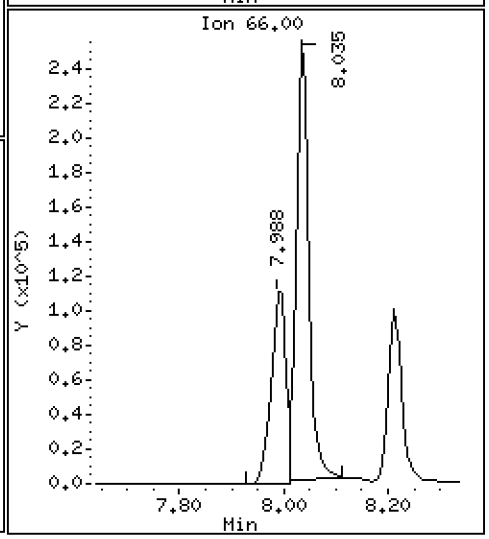












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

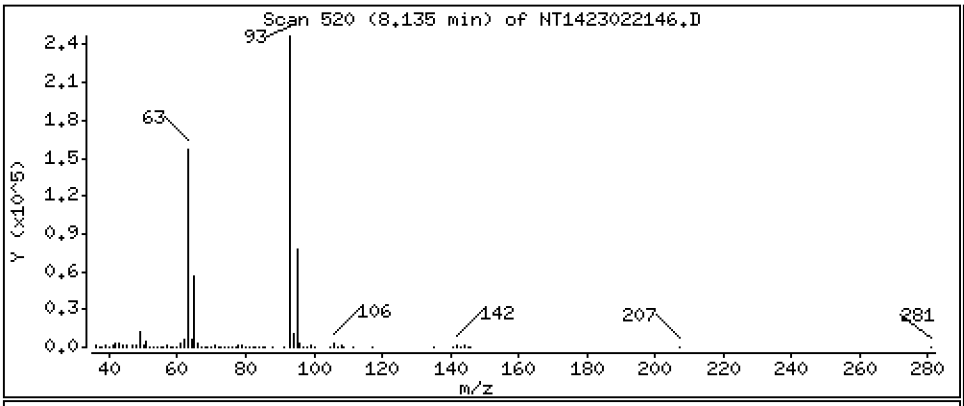
Operator: DSD

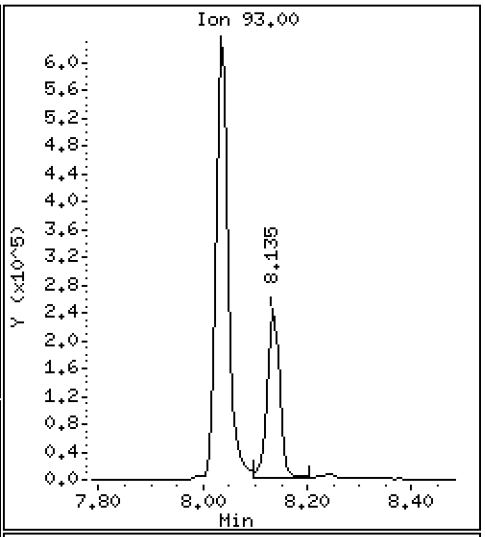
Column phase: ZB-5msi

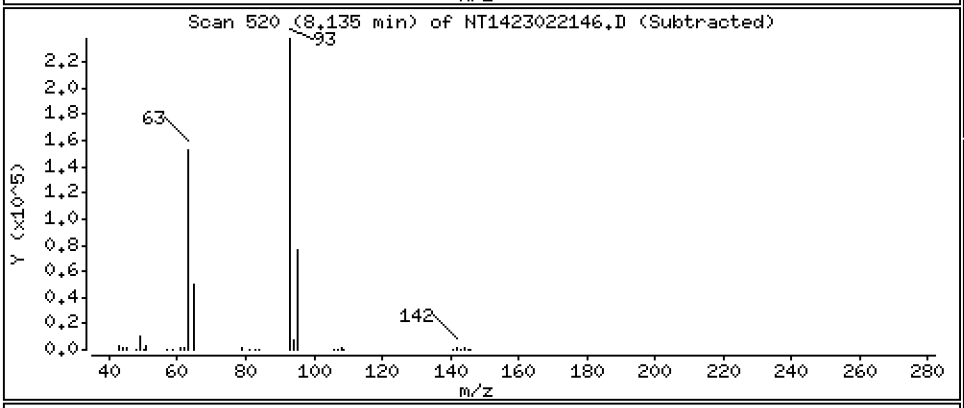
Column diameter: 0.25

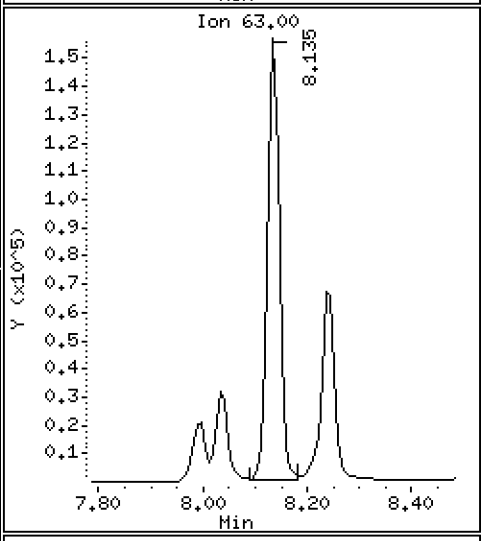
4 Bis(2-Chloroethyl)ether

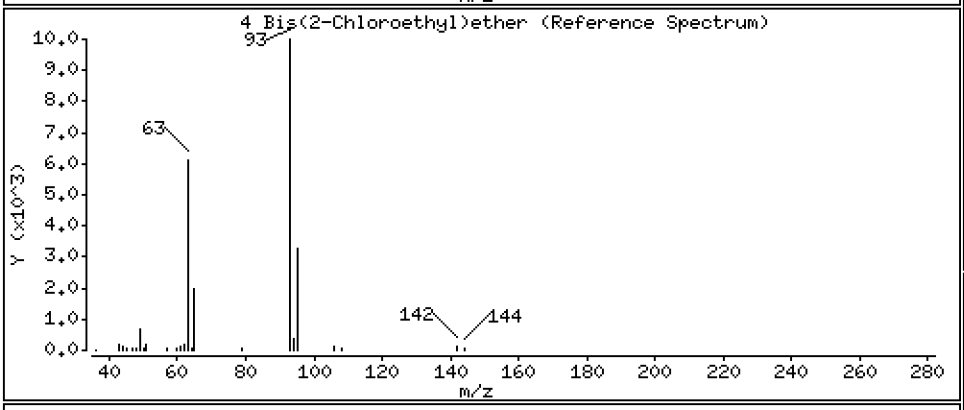
Concentration: 4.633 ug/mL

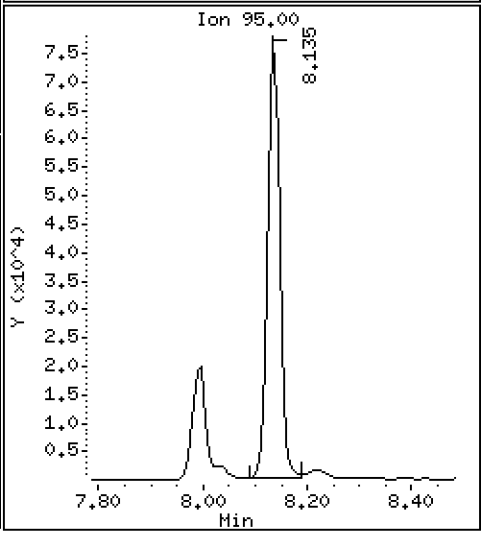


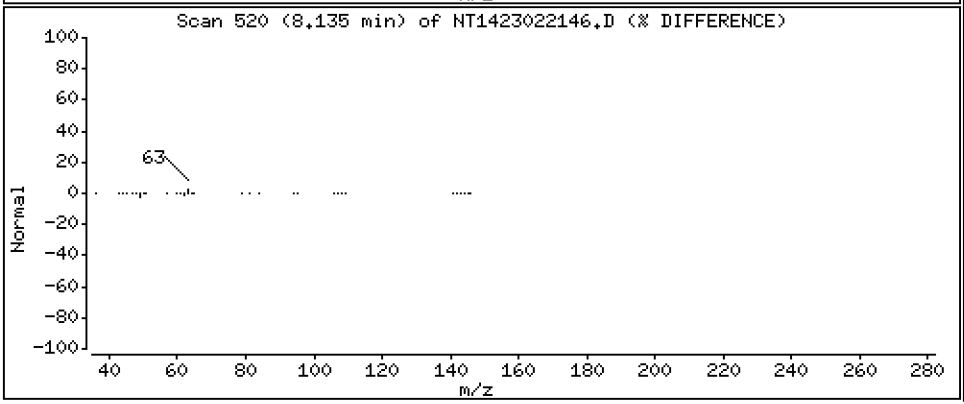












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

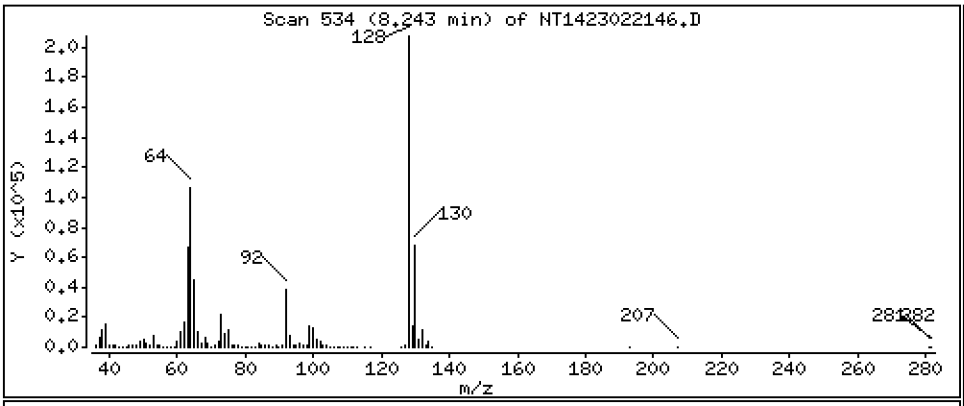
Operator: DSD

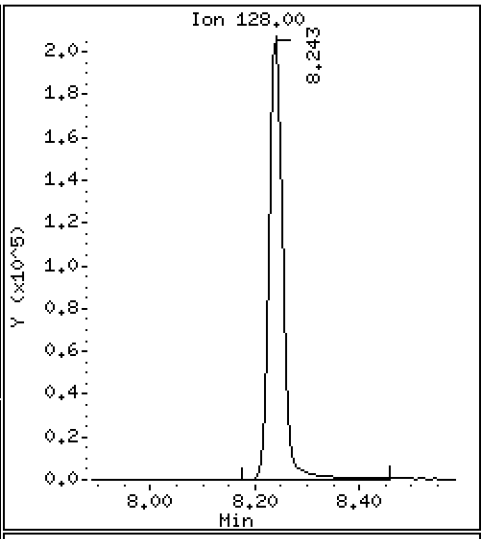
Column phase: ZB-5msi

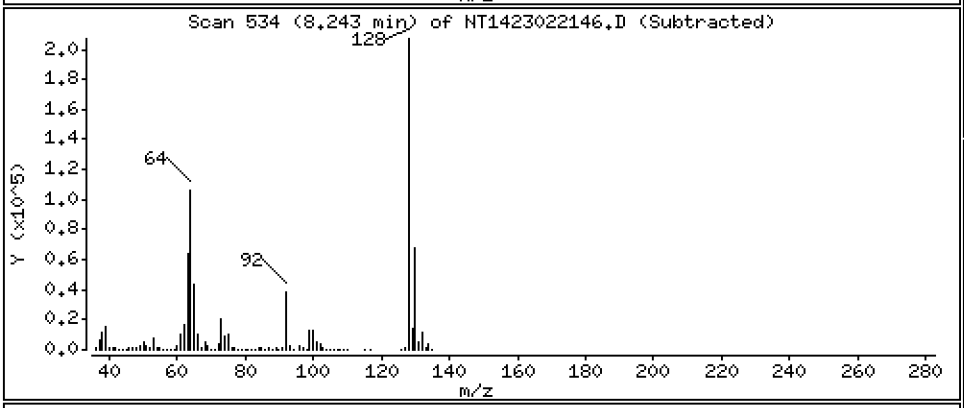
Column diameter: 0.25

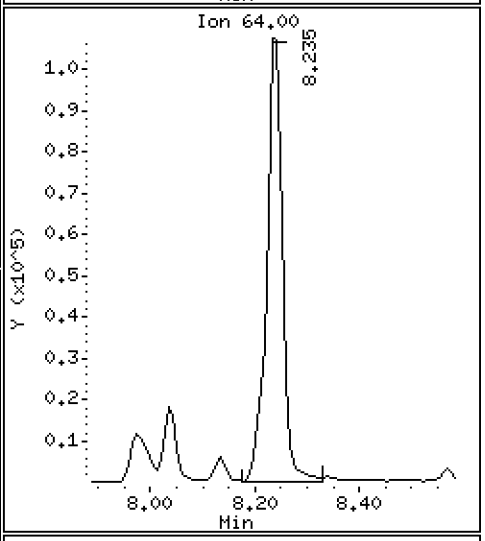
6 2-Chlorophenol

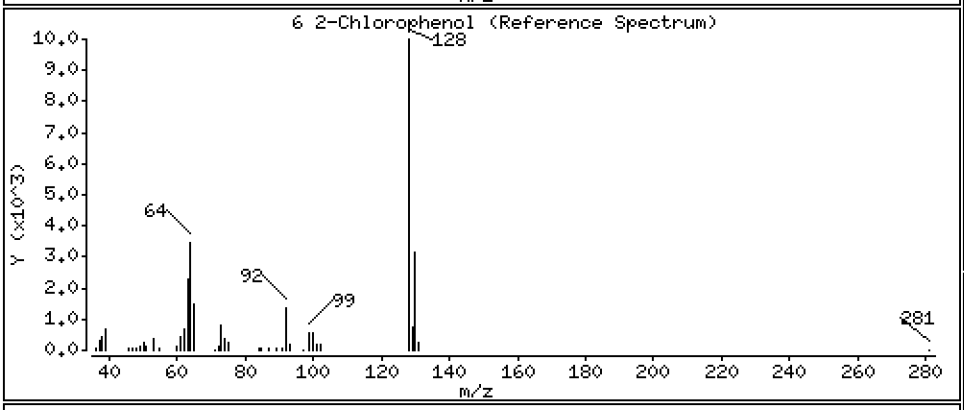
Concentration: 5.232 ug/mL

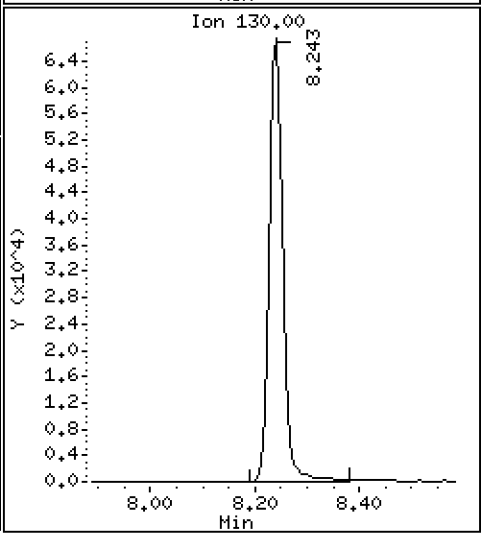


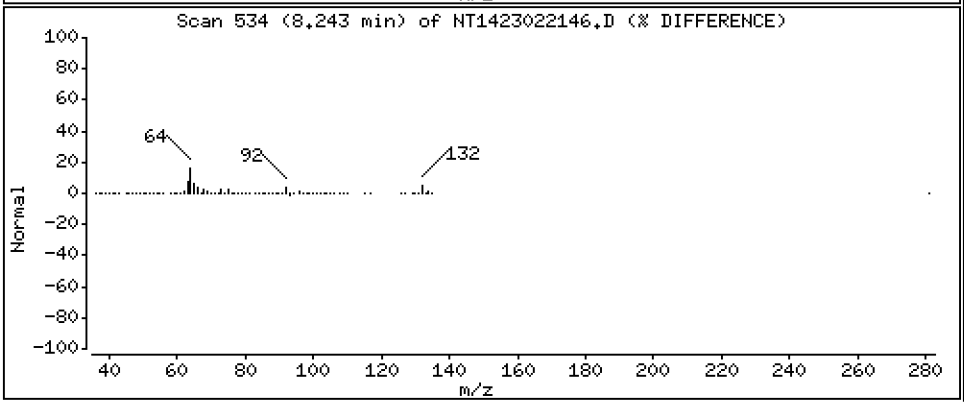












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

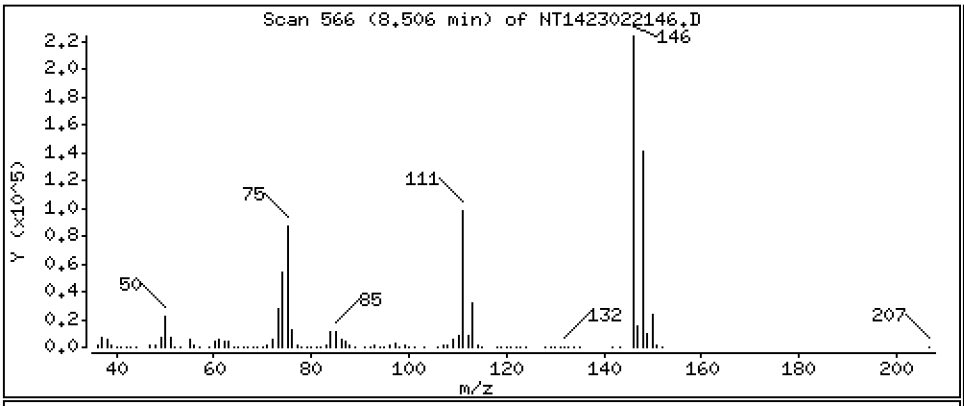
Operator: DSD

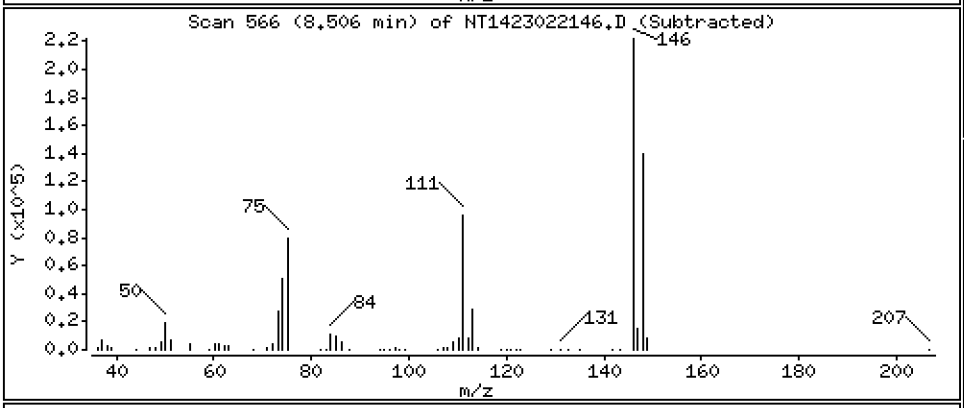
Column phase: ZB-5msi

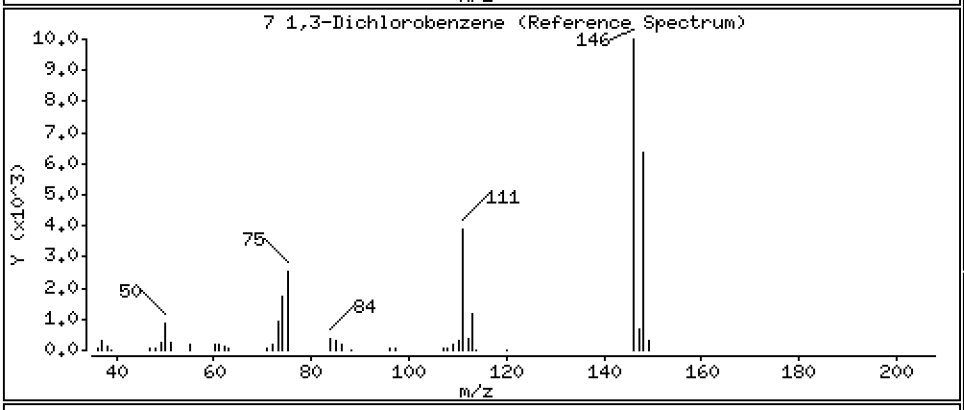
Column diameter: 0.25

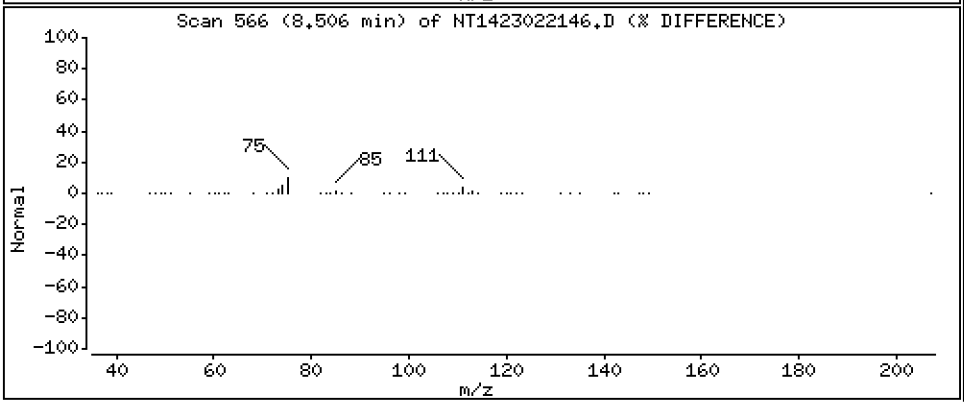
7 1,3-Dichlorobenzene

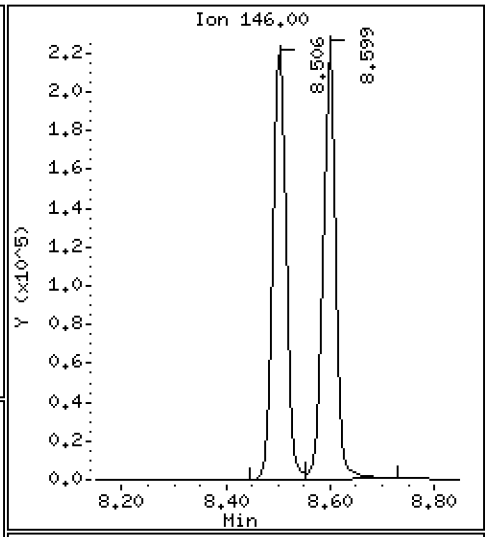
Concentration: 4.628 ug/mL

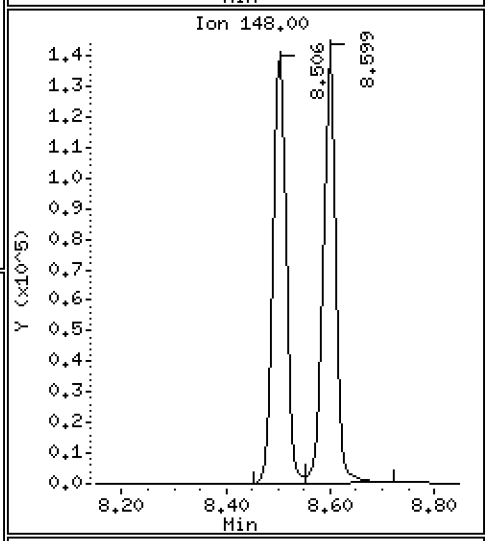


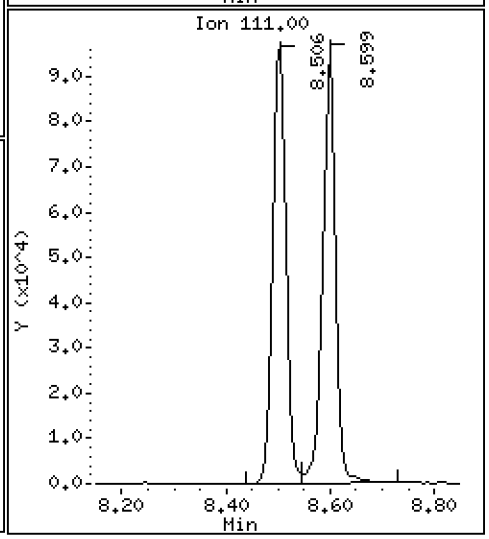












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

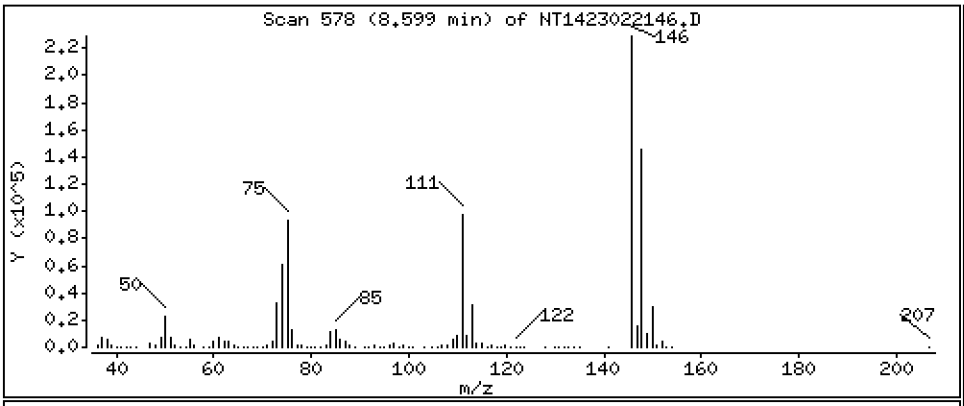
Operator: DSD

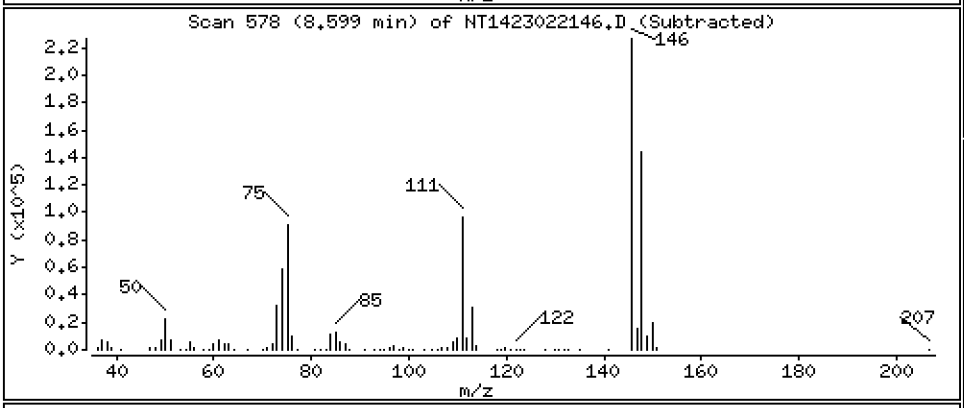
Column phase: ZB-5msi

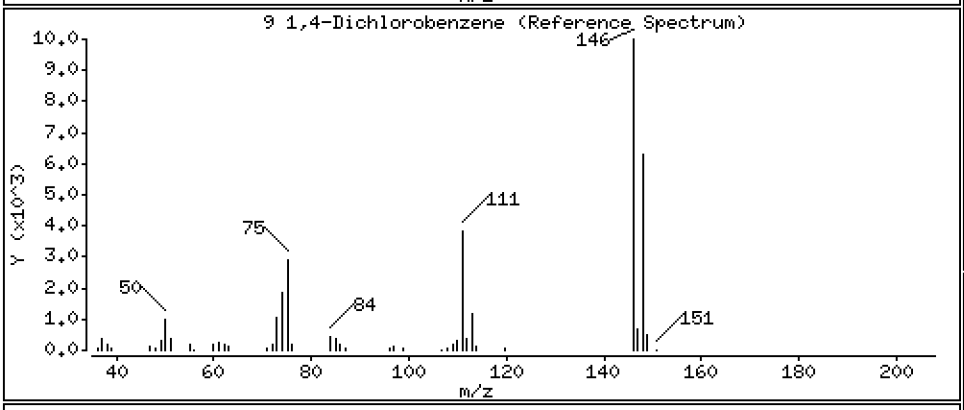
Column diameter: 0.25

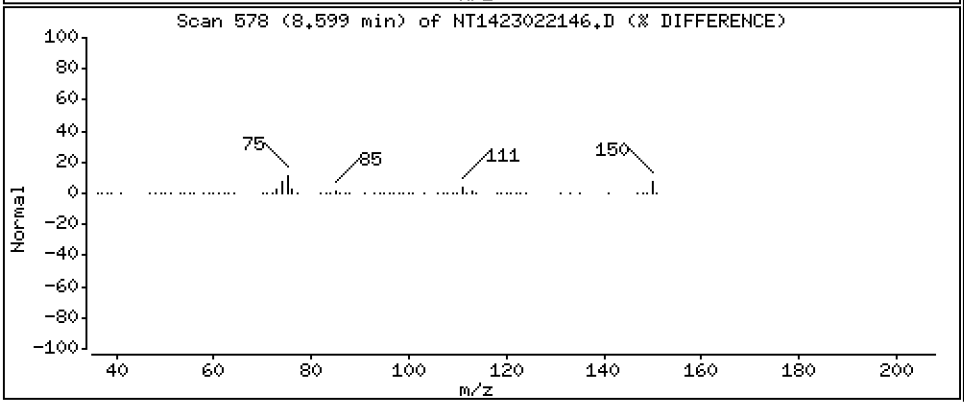
9 1,4-Dichlorobenzene

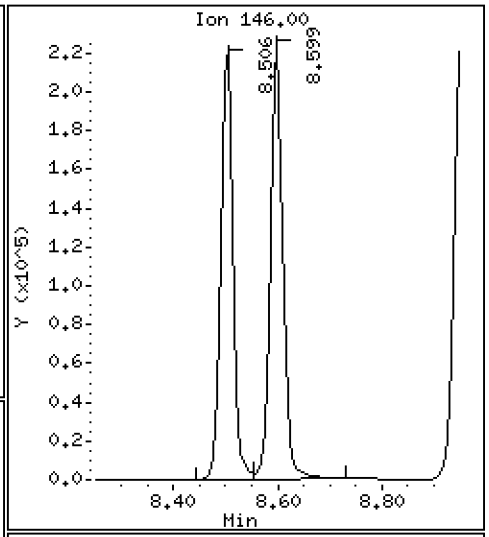
Concentration: 5.143 ug/mL

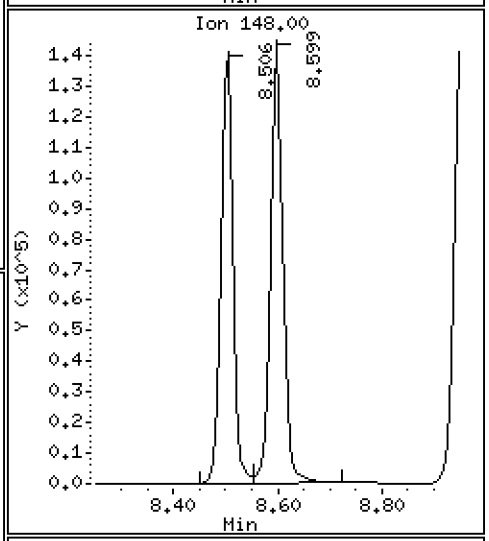


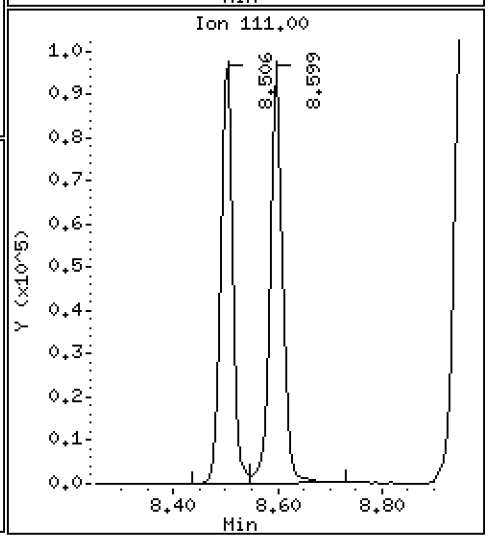












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

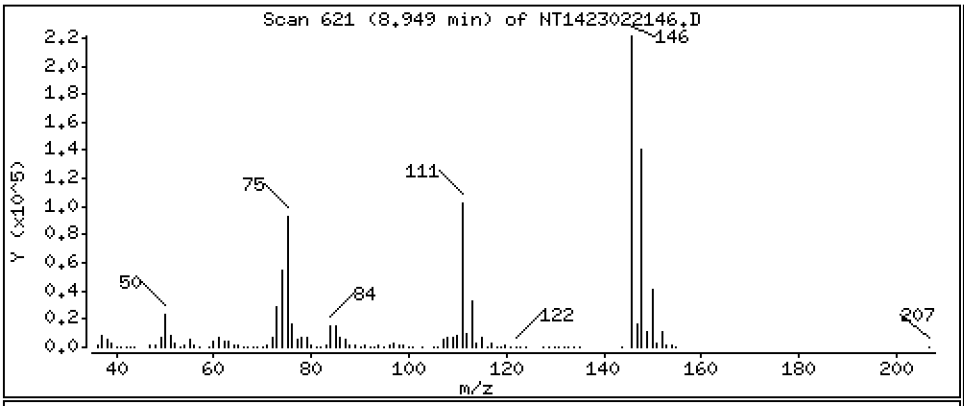
Operator: DSD

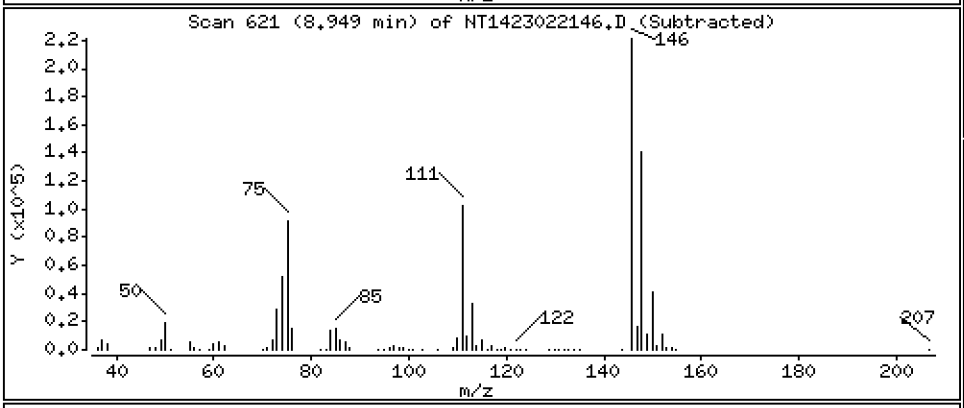
Column phase: ZB-5msi

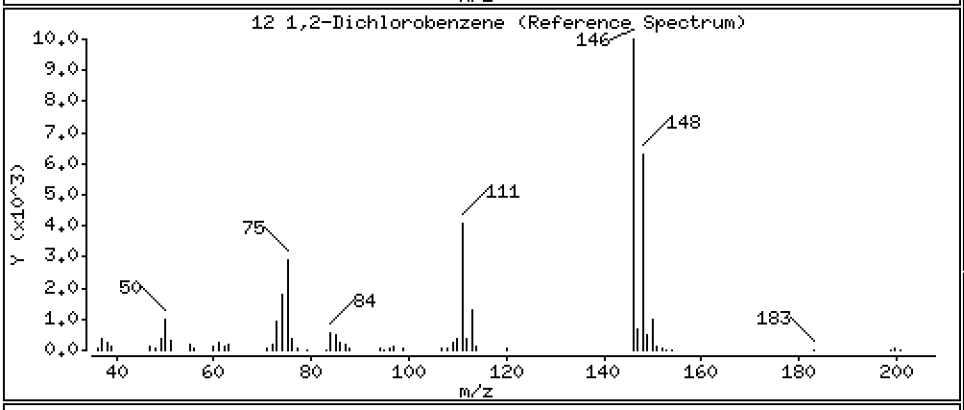
Column diameter: 0.25

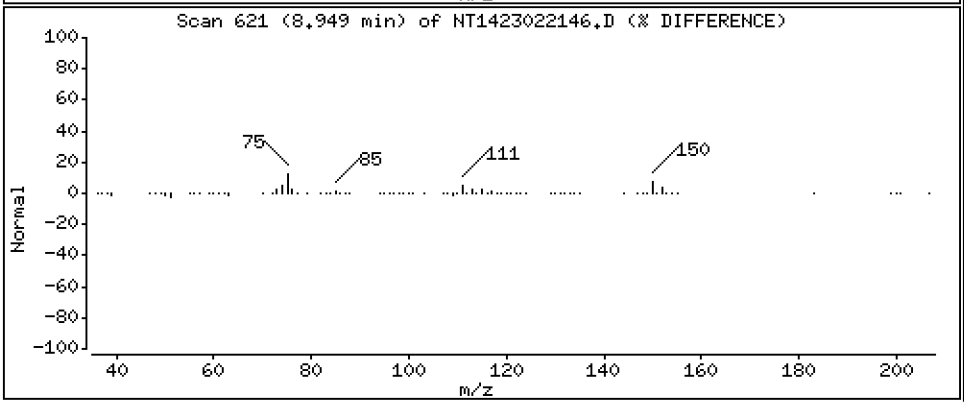
12 1,2-Dichlorobenzene

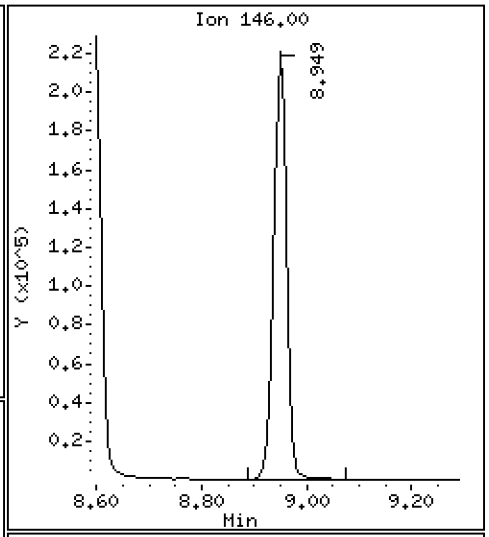
Concentration: 4.626 ug/mL

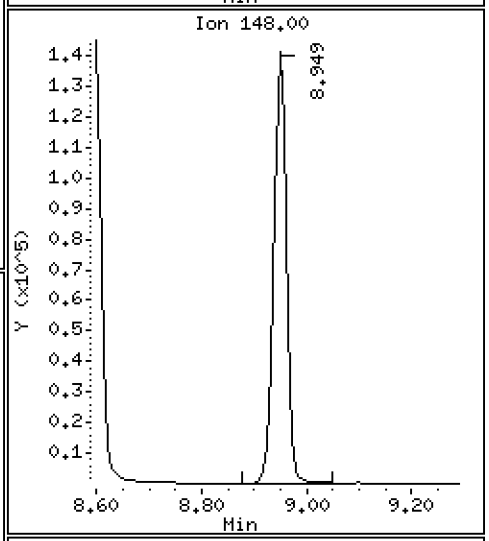


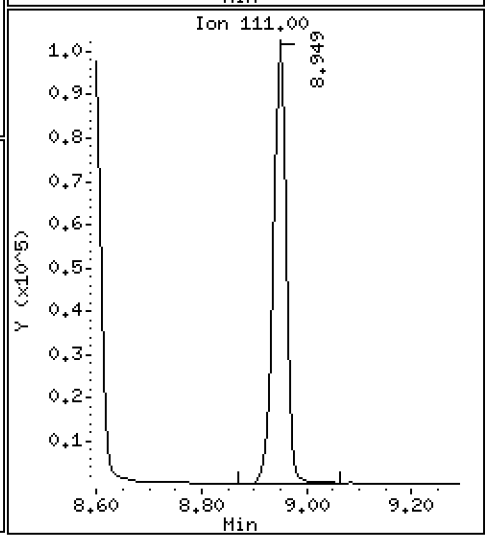












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

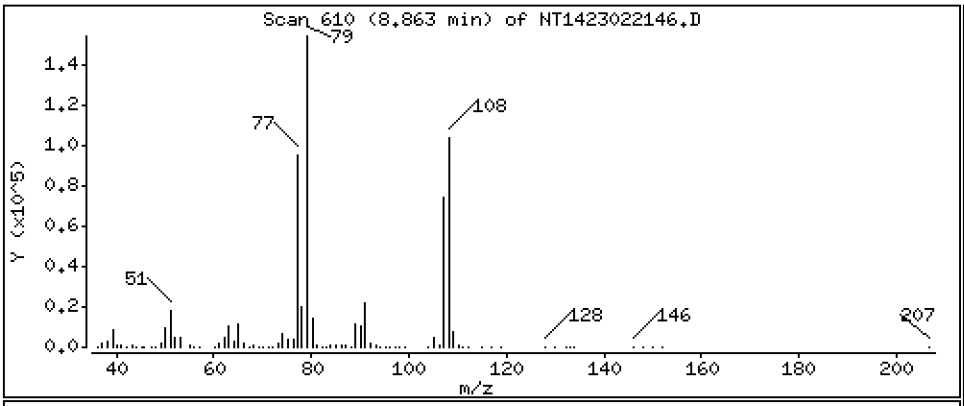
Operator: DSD

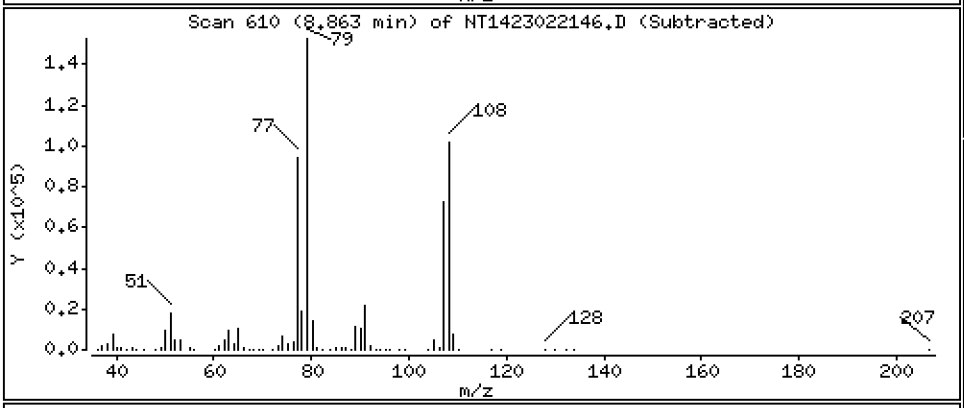
Column phase: ZB-5msi

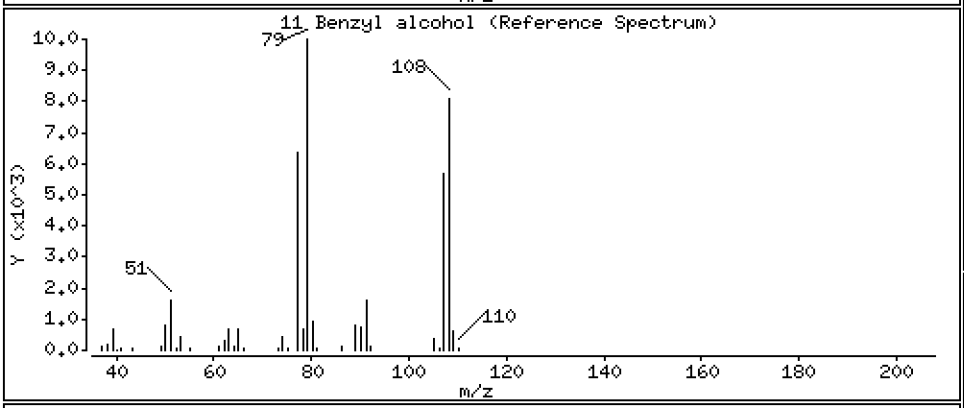
Column diameter: 0.25

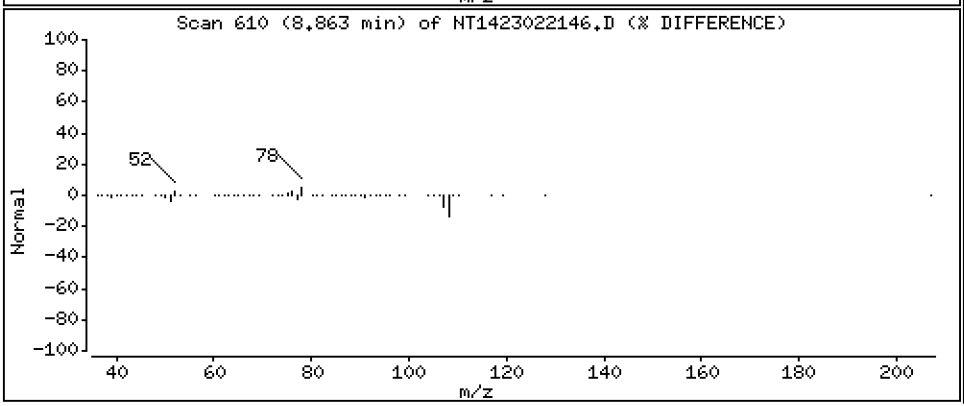
11 Benzyl alcohol

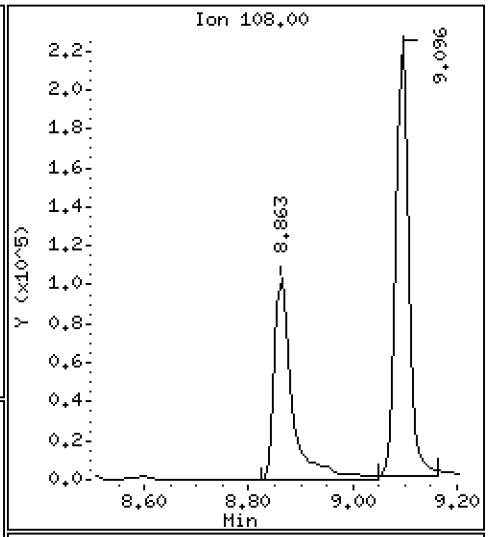
Concentration: 4.151 ug/mL

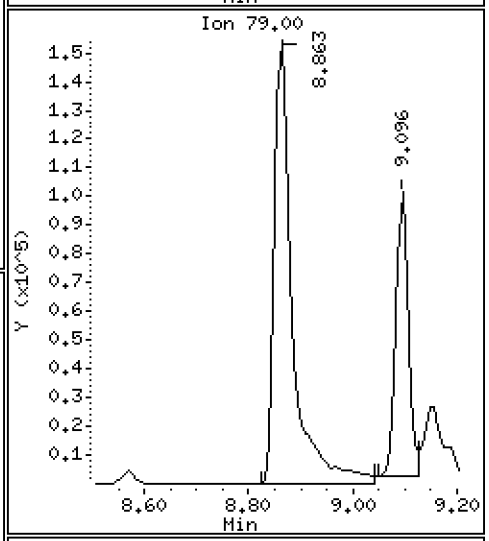


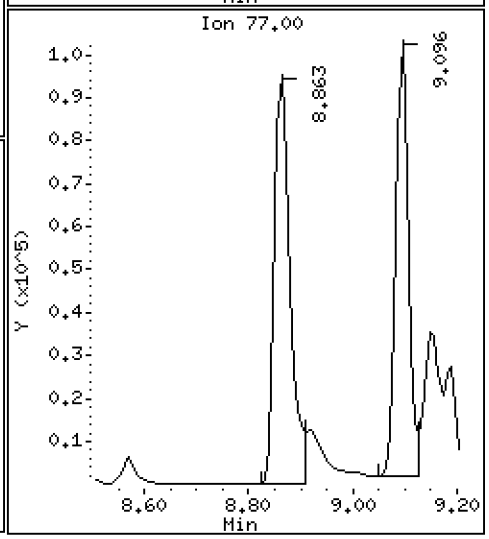












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

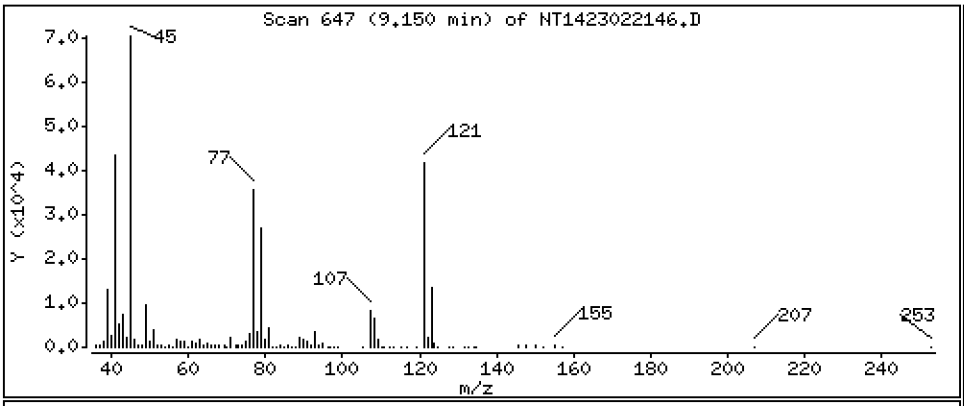
Operator: DSD

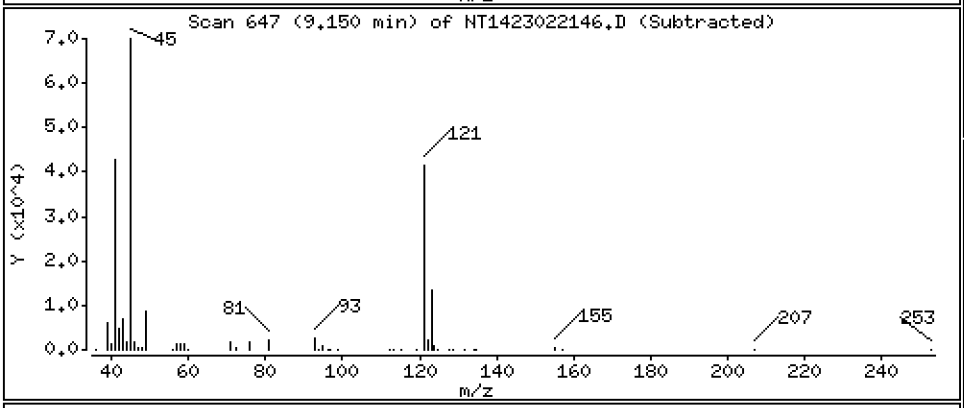
Column phase: ZB-5msi

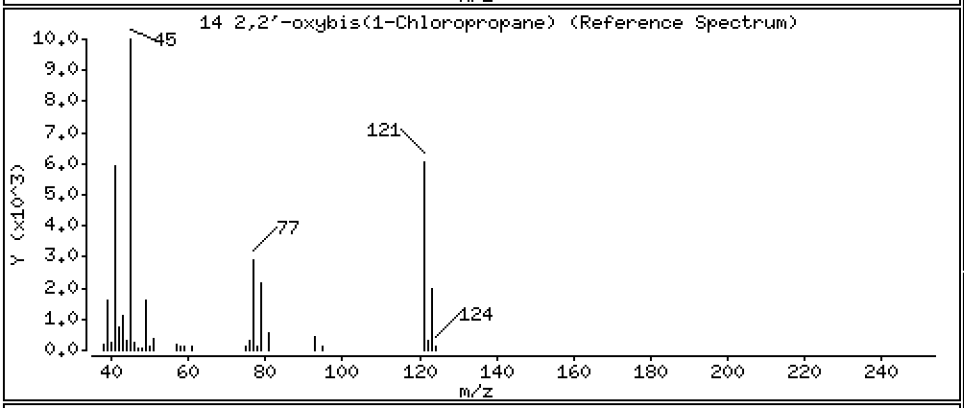
Column diameter: 0.25

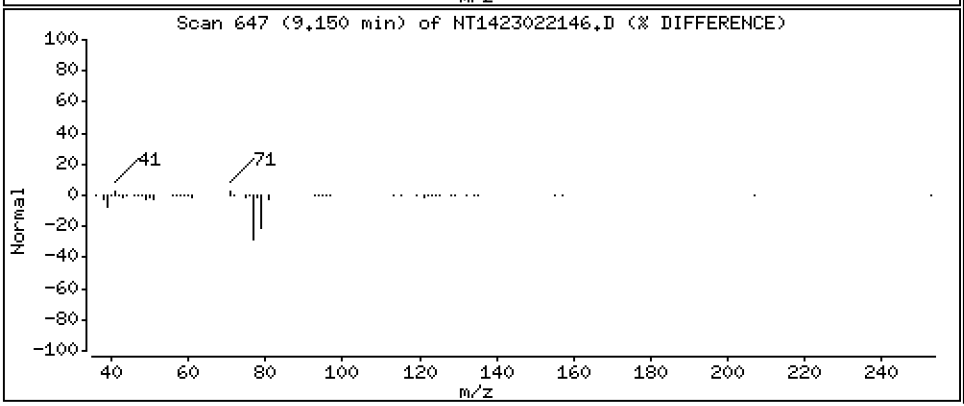
14 2,2'-oxybis(1-Chloropropane)

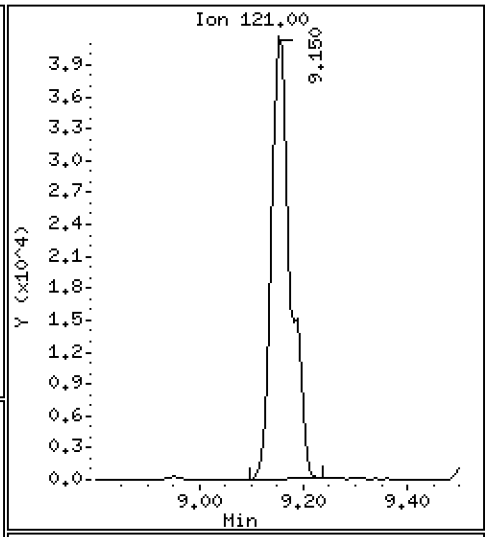
Concentration: 4.687 ug/mL

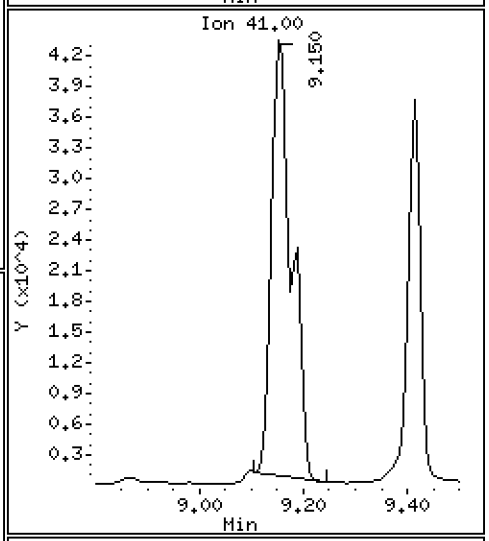


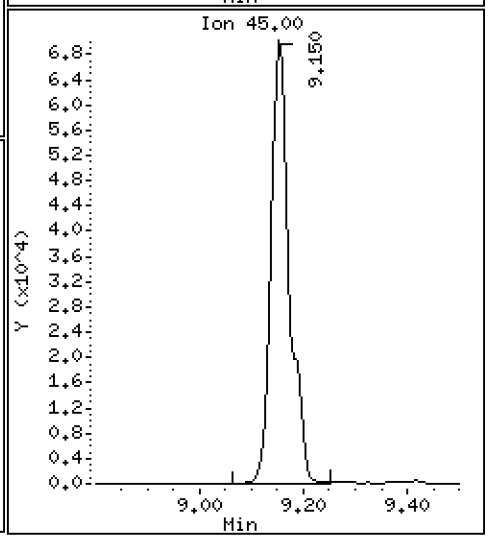












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

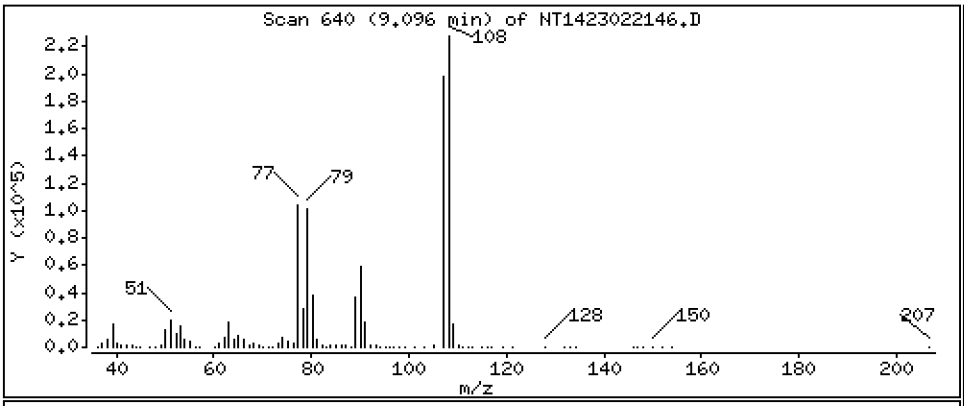
Operator: DSD

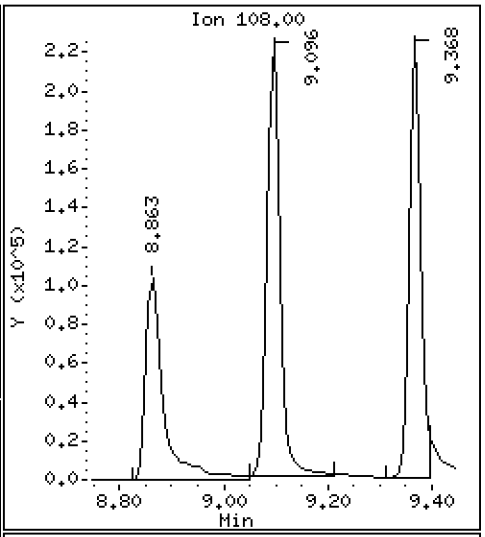
Column phase: ZB-5msi

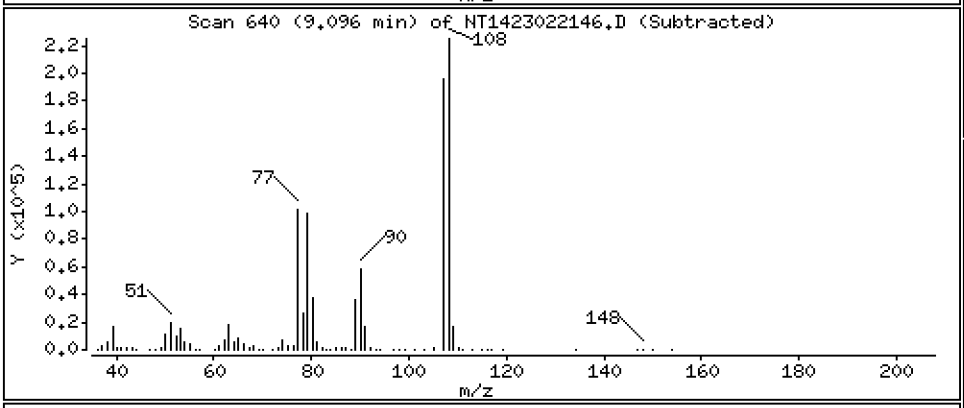
Column diameter: 0.25

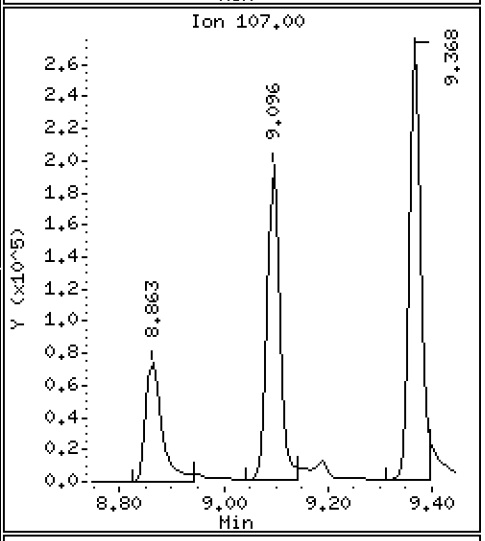
13 2-Methylphenol

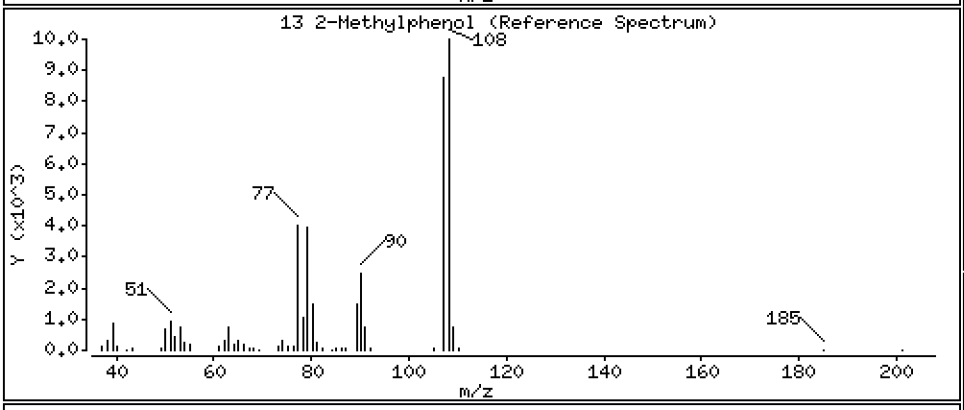
Concentration: 5.086 ug/mL

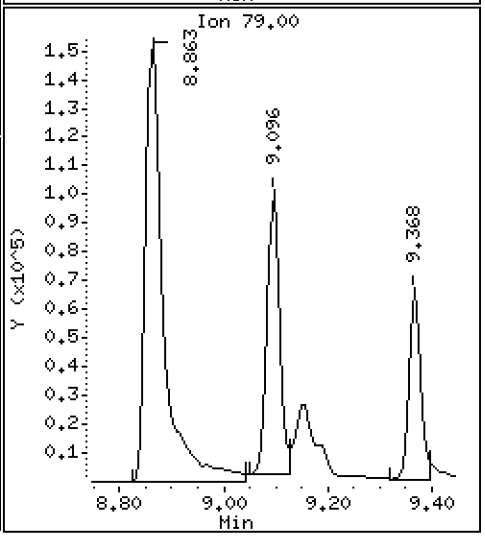


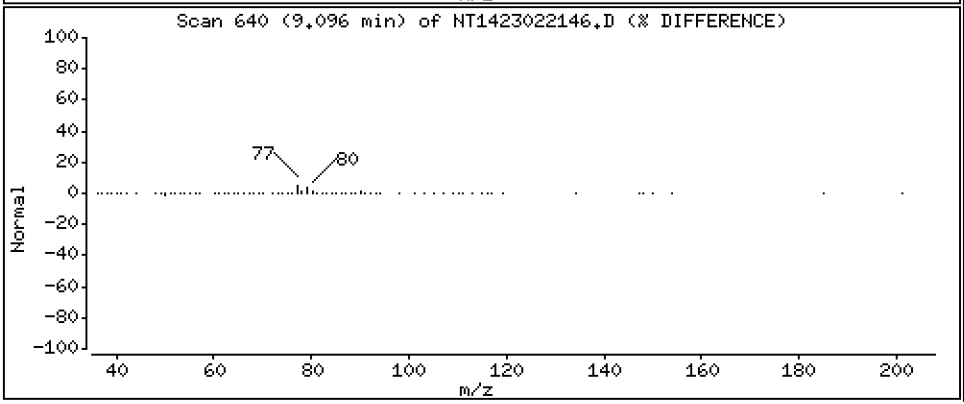












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

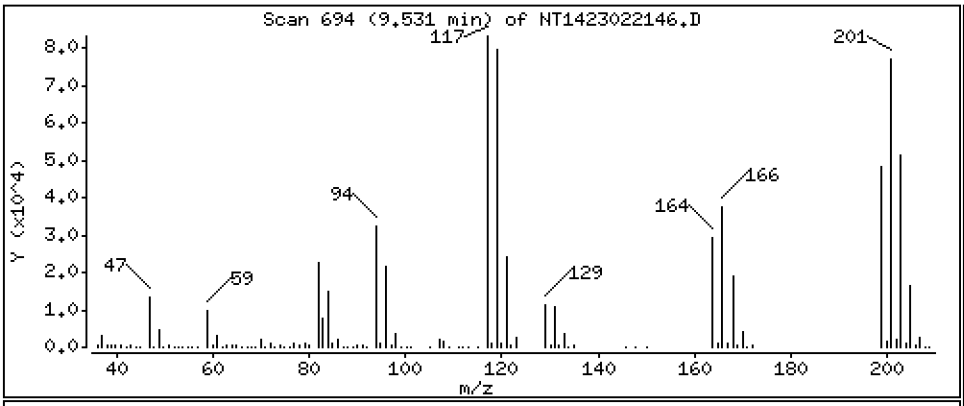
Operator: DSD

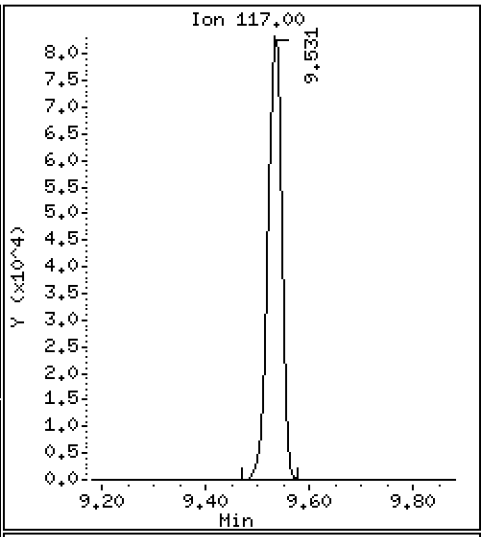
Column phase: ZB-5msi

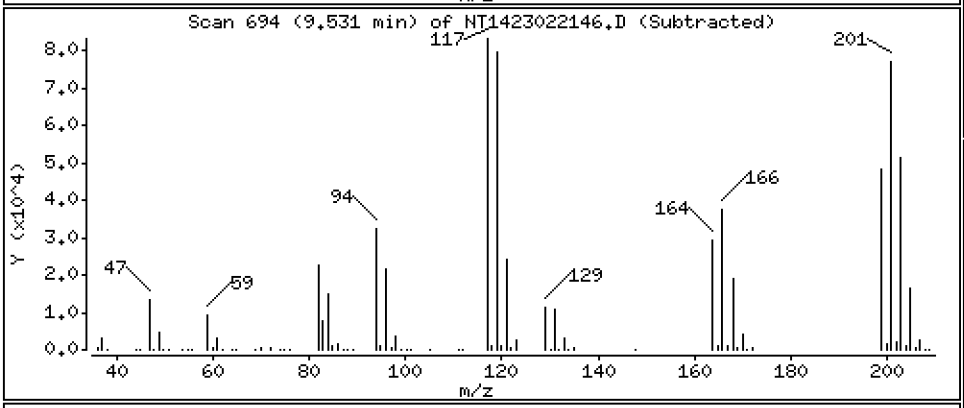
Column diameter: 0.25

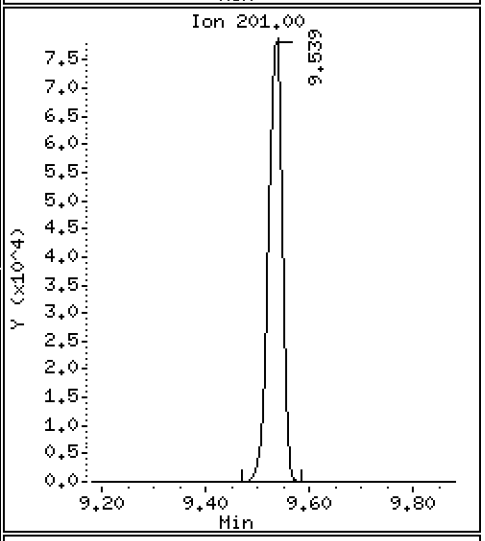
17 Hexachloroethane

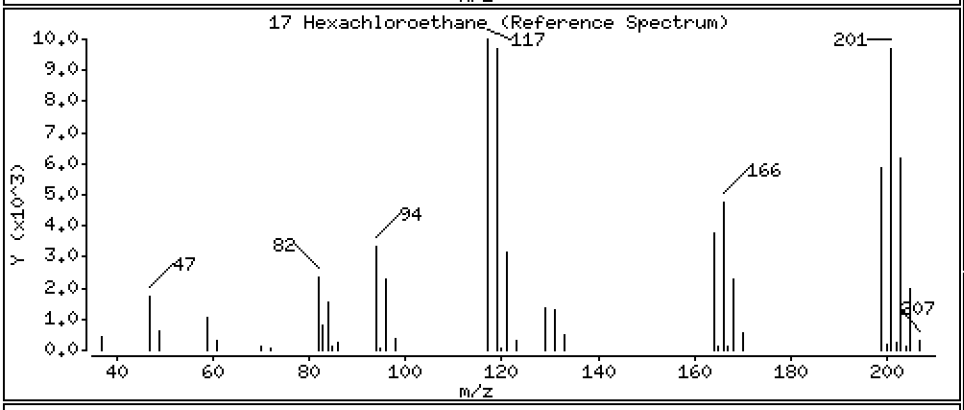
Concentration: 4.391 ug/mL

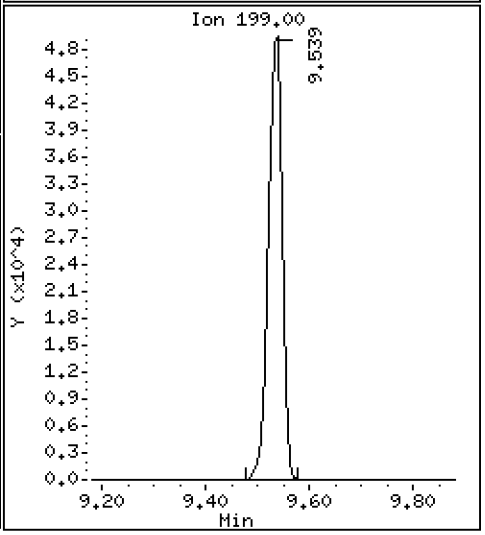


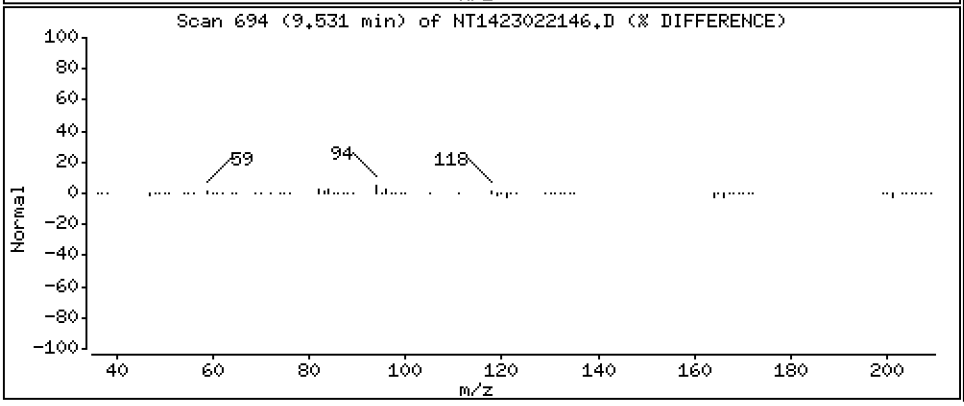












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

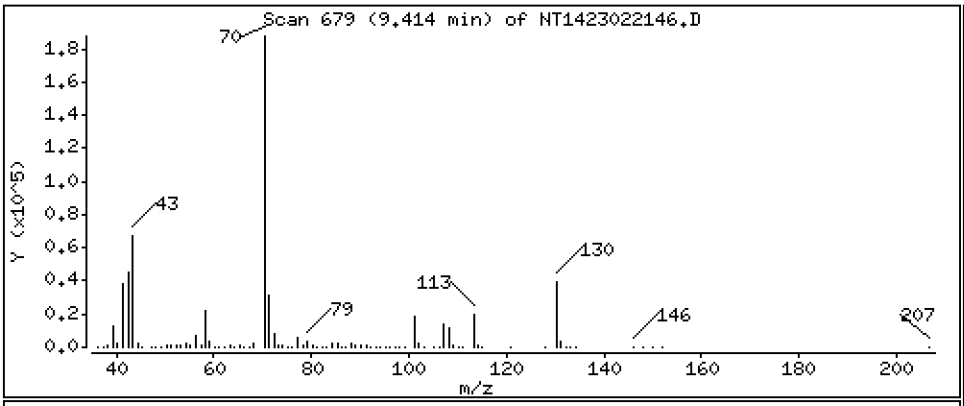
Operator: DSD

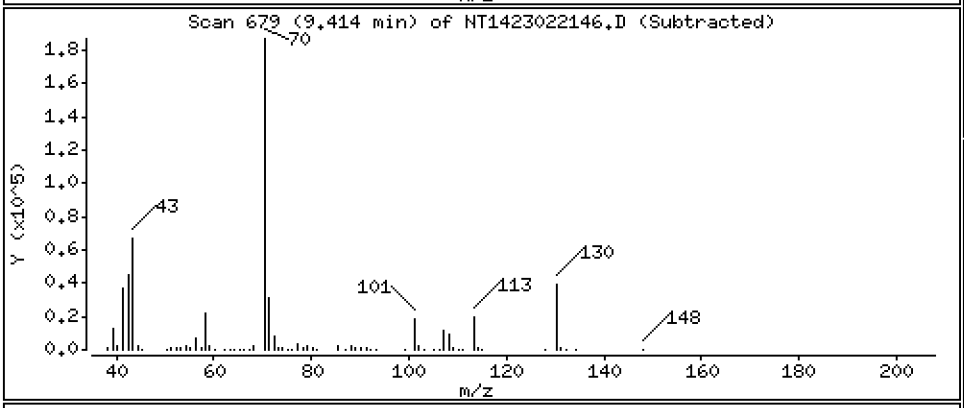
Column phase: ZB-5msi

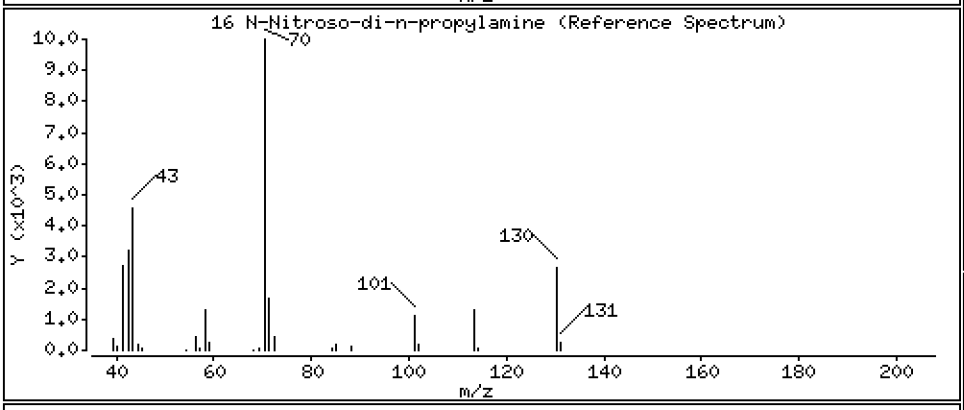
Column diameter: 0.25

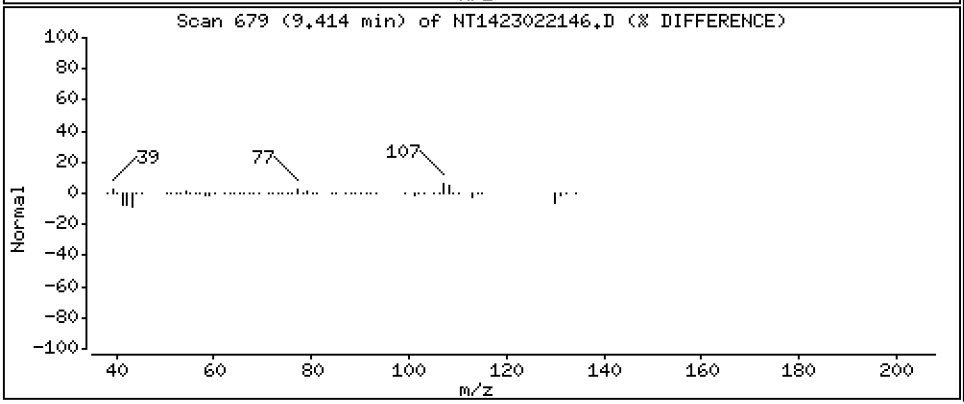
16 N-Nitroso-di-n-propylamine

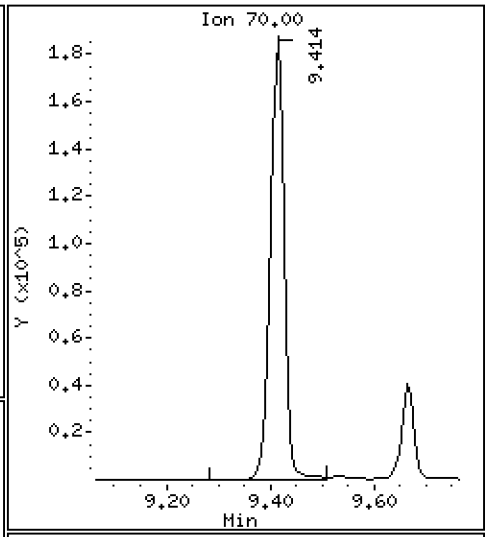
Concentration: 5.340 ug/mL

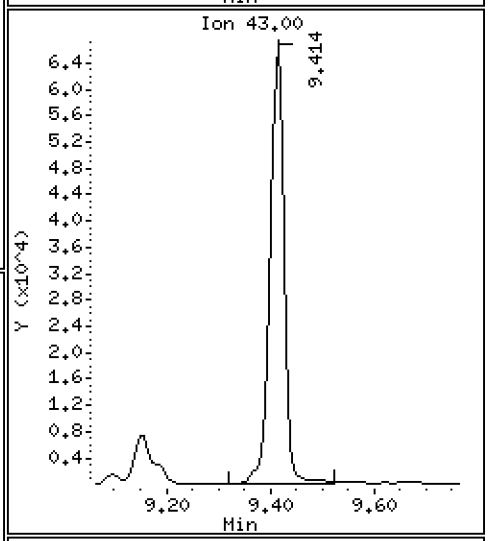


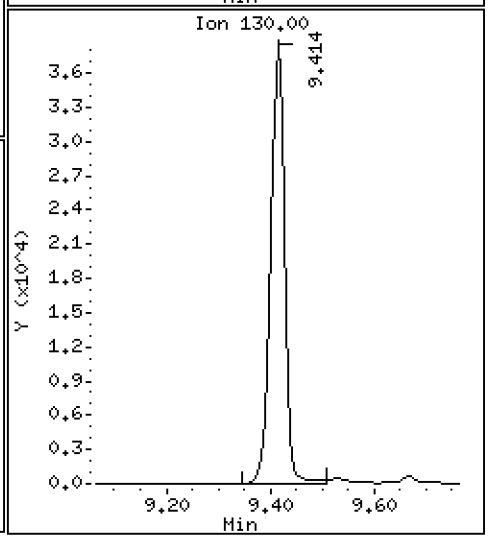












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

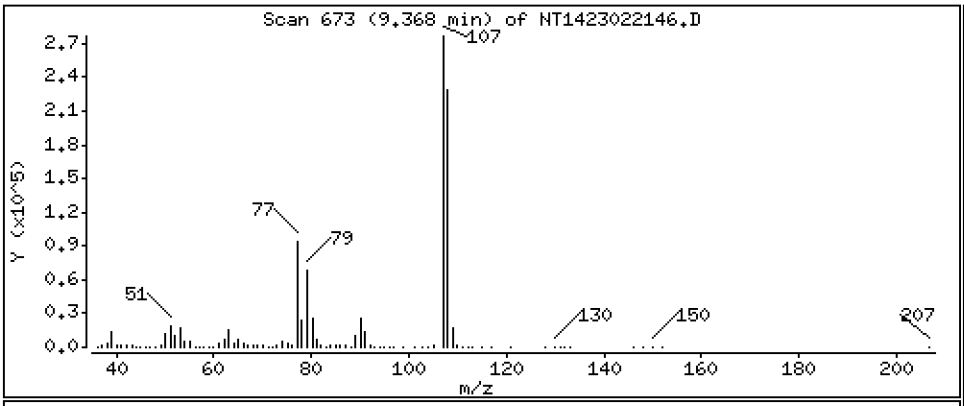
Operator: DSD

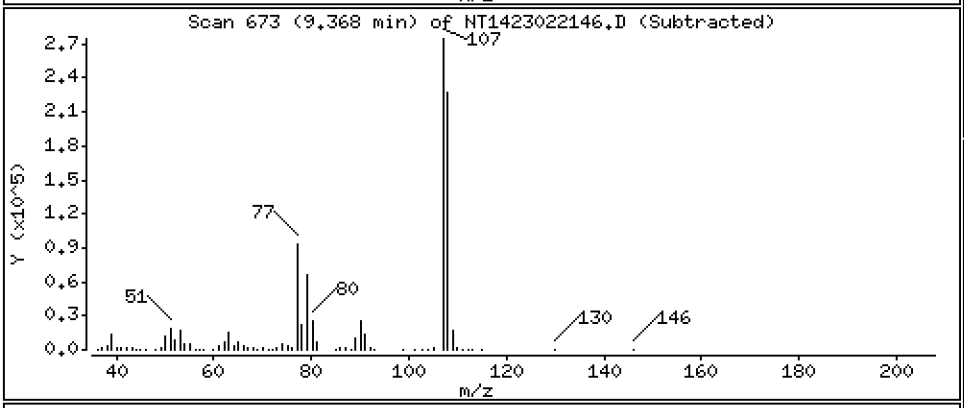
Column phase: ZB-5msi

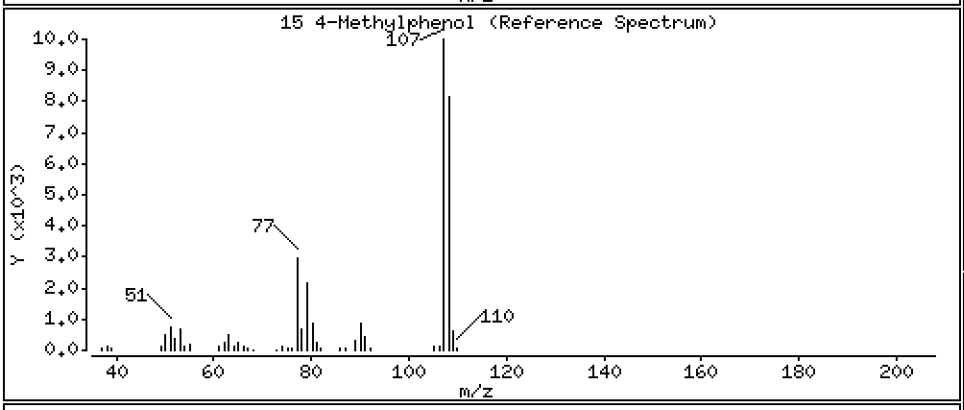
Column diameter: 0.25

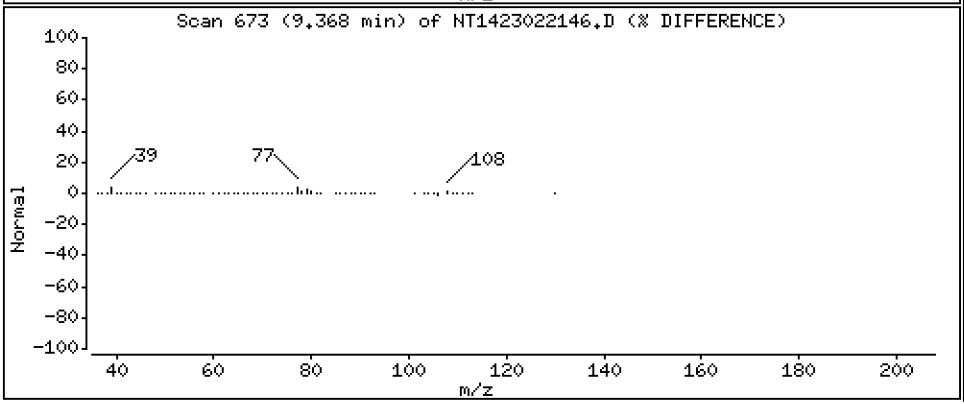
15 4-Methylphenol

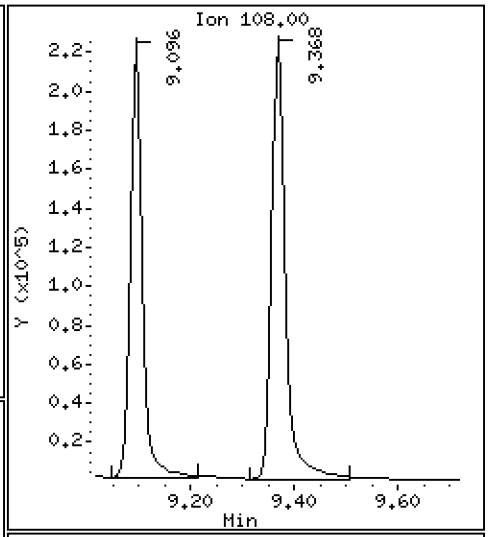
Concentration: 5.159 ug/mL

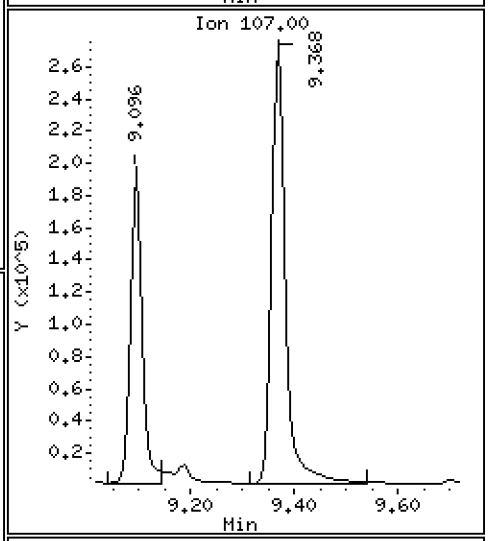


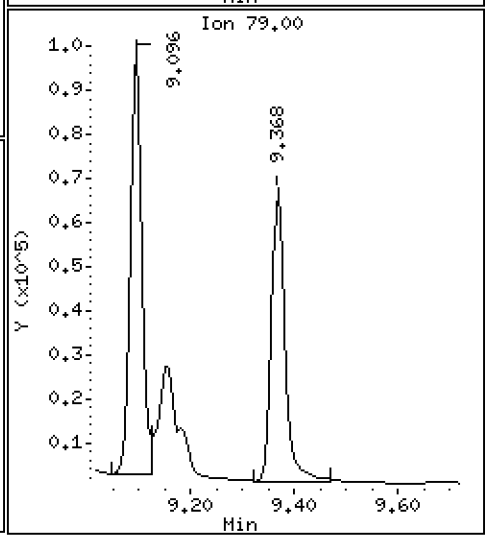












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

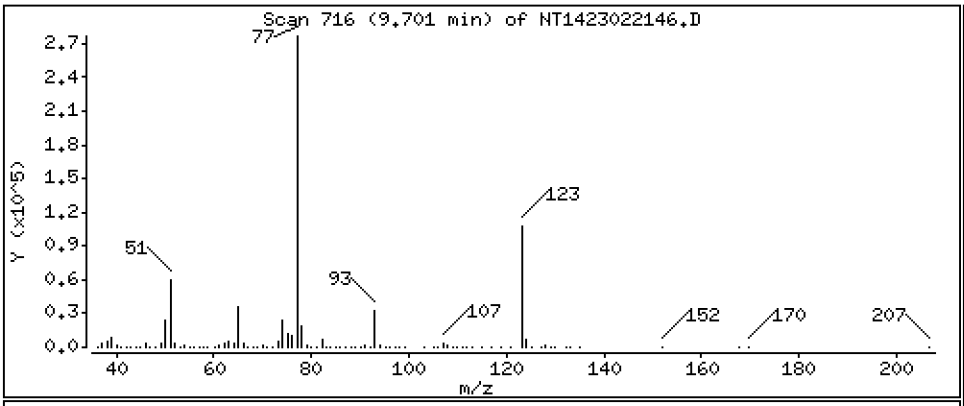
Operator: DSD

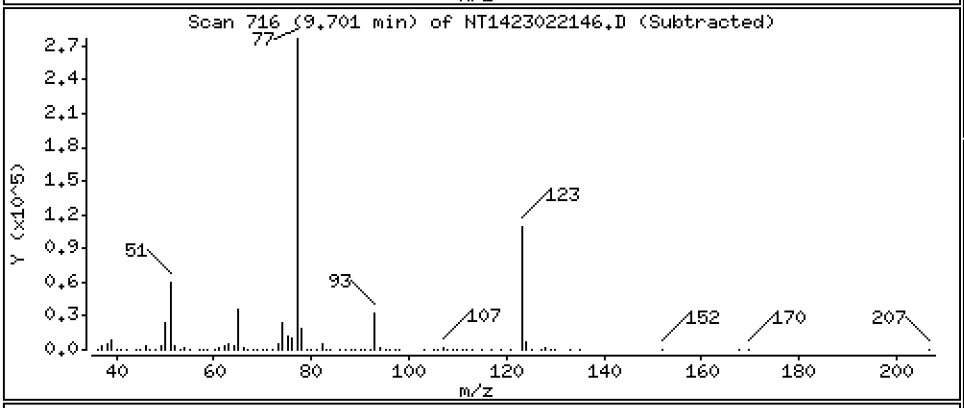
Column phase: ZB-5msi

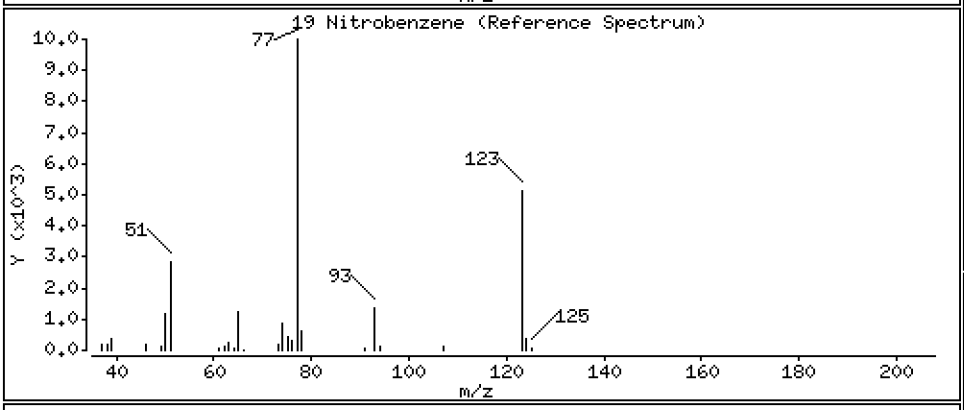
Column diameter: 0.25

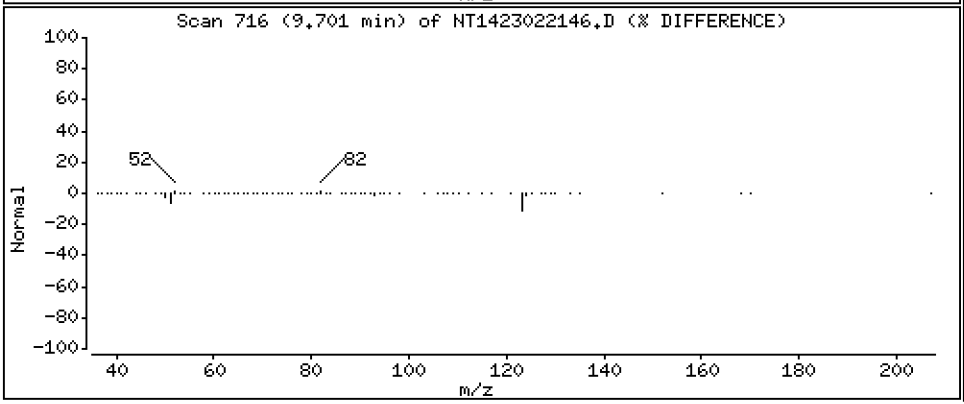
19 Nitrobenzene

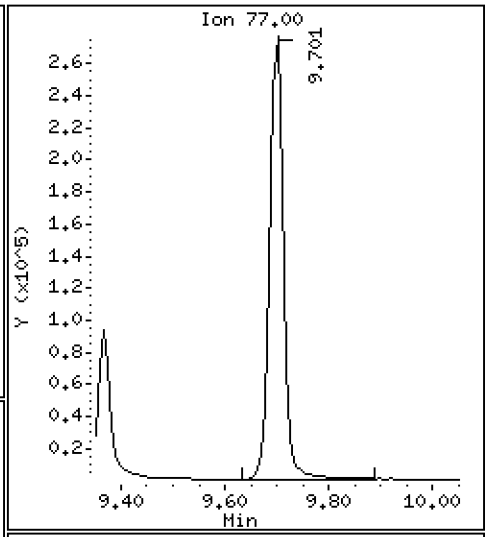
Concentration: 5.252 ug/mL

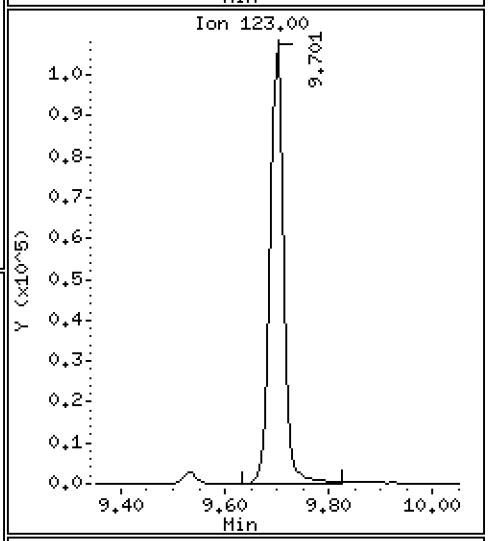


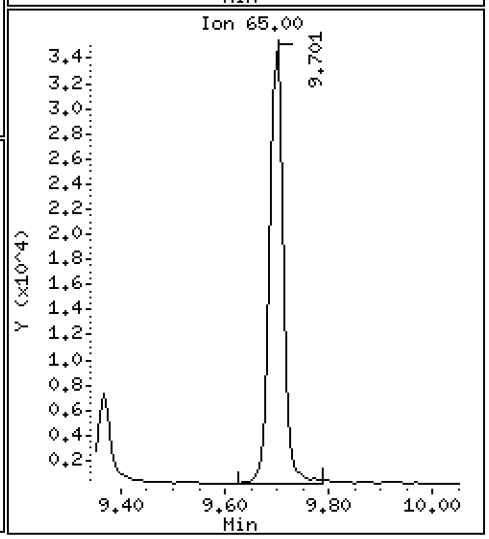












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

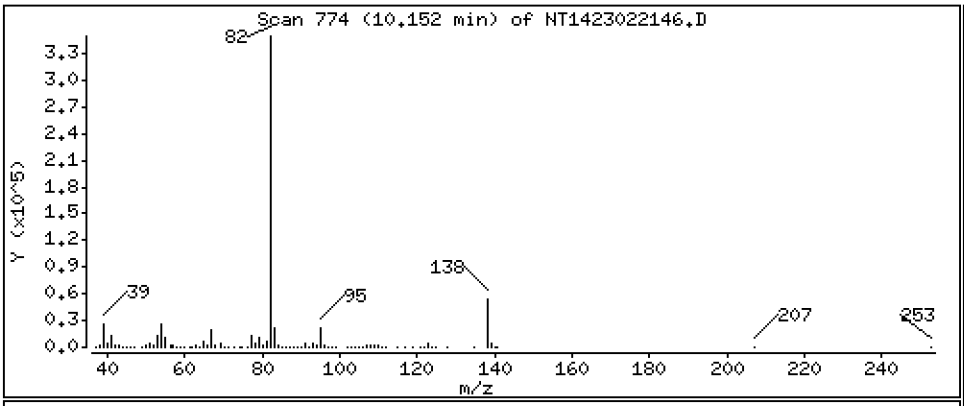
Operator: DSD

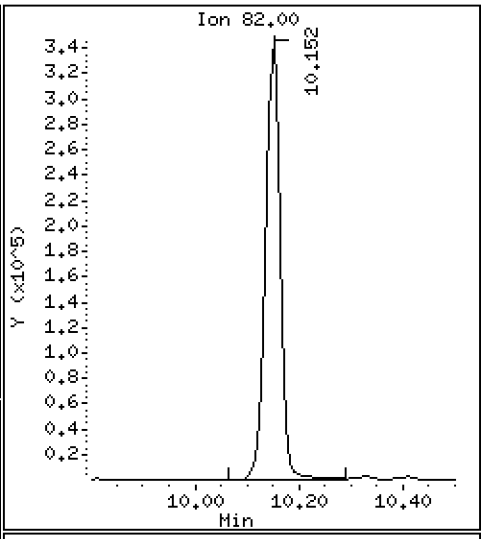
Column phase: ZB-5msi

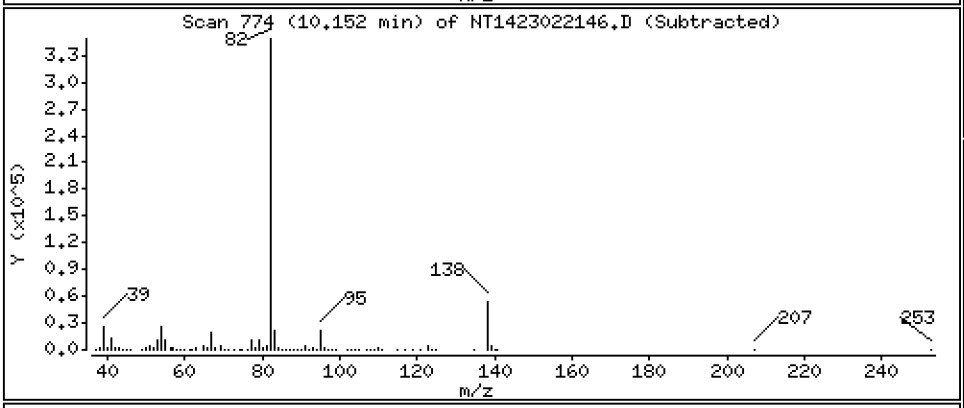
Column diameter: 0.25

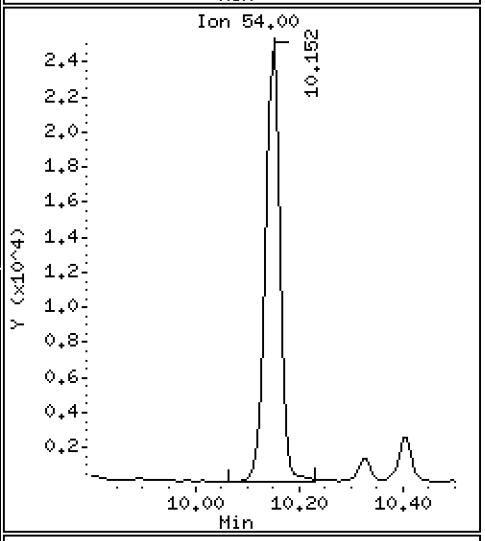
20 Isophorone

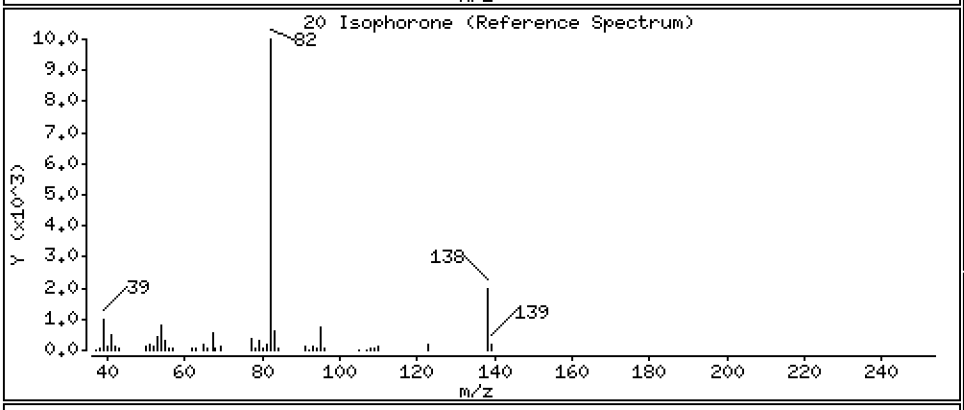
Concentration: 5.685 ug/mL

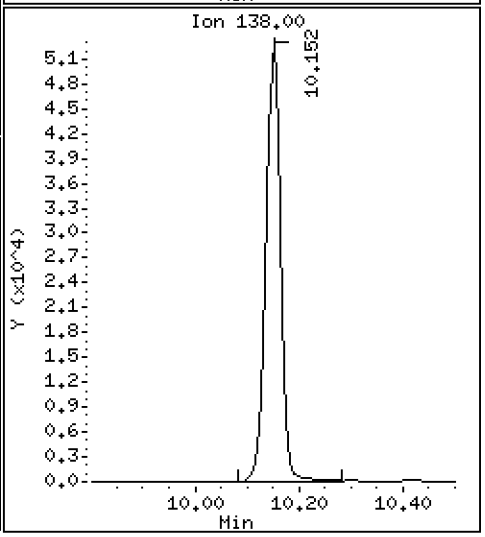


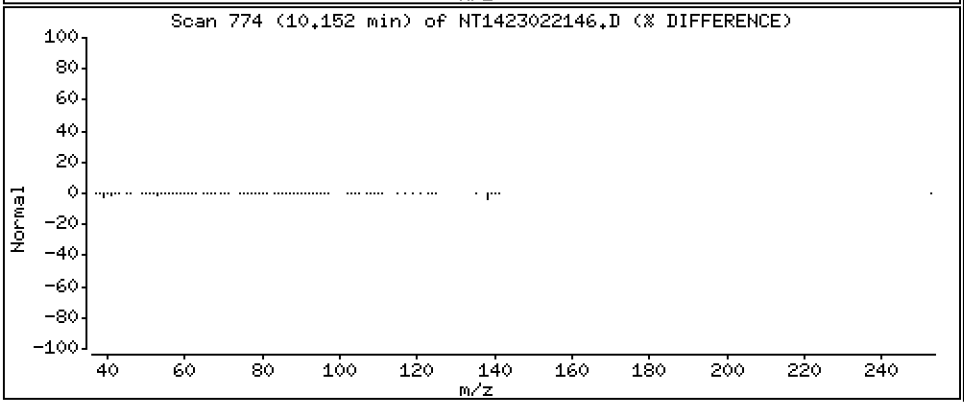












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

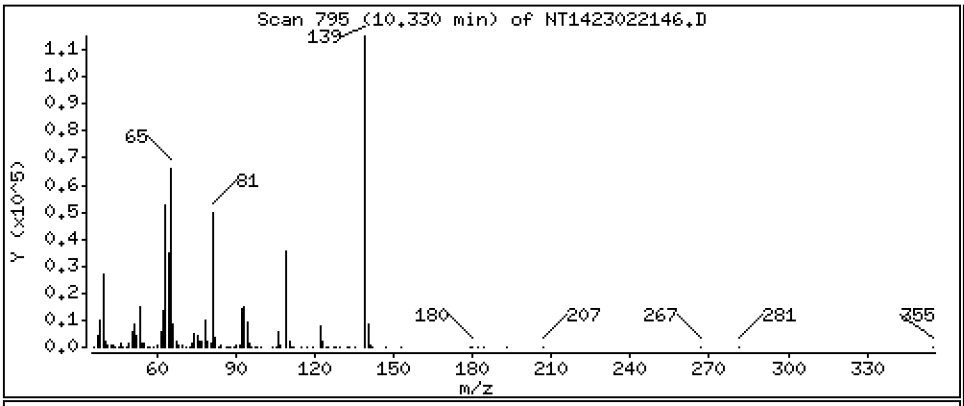
Operator: DSD

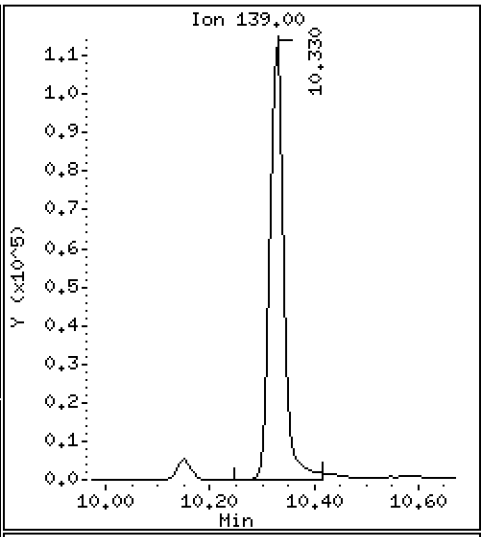
Column phase: ZB-5msi

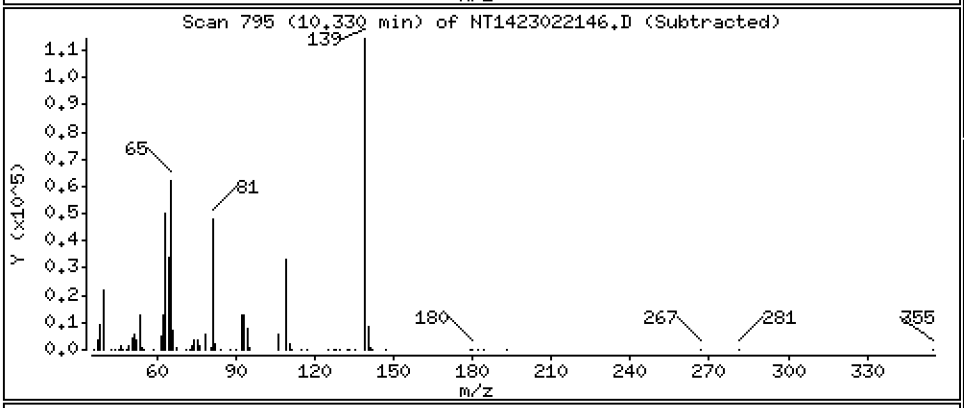
Column diameter: 0.25

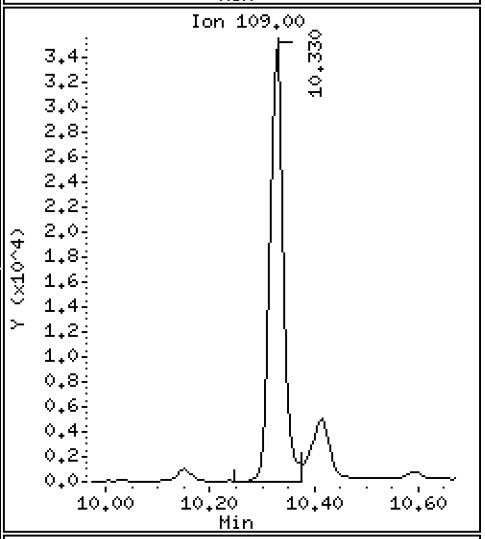
21 2-Nitrophenol

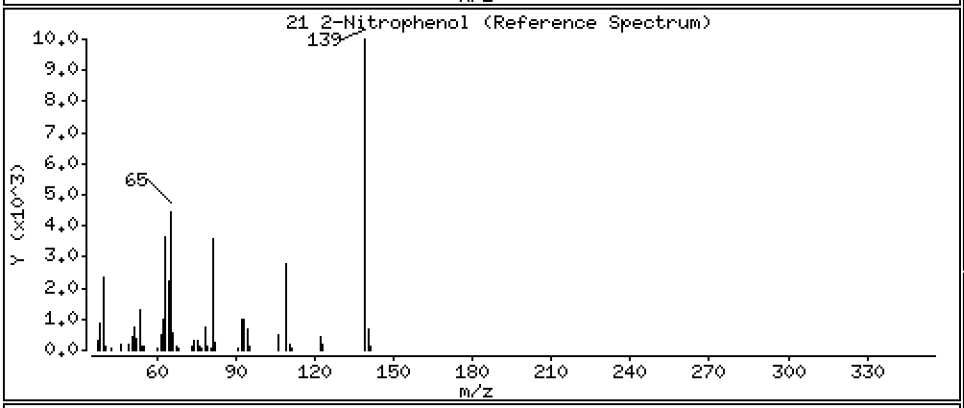
Concentration: 5.313 ug/mL

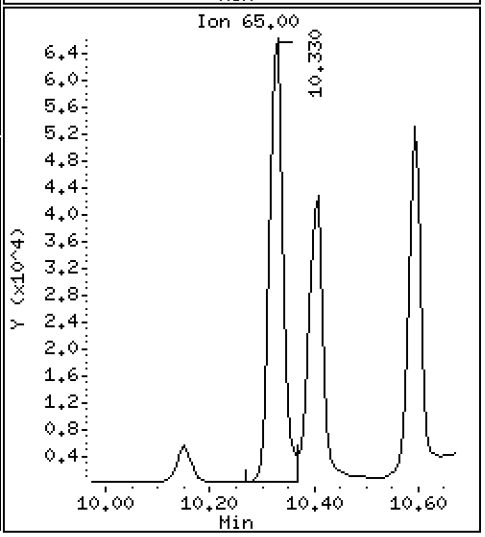


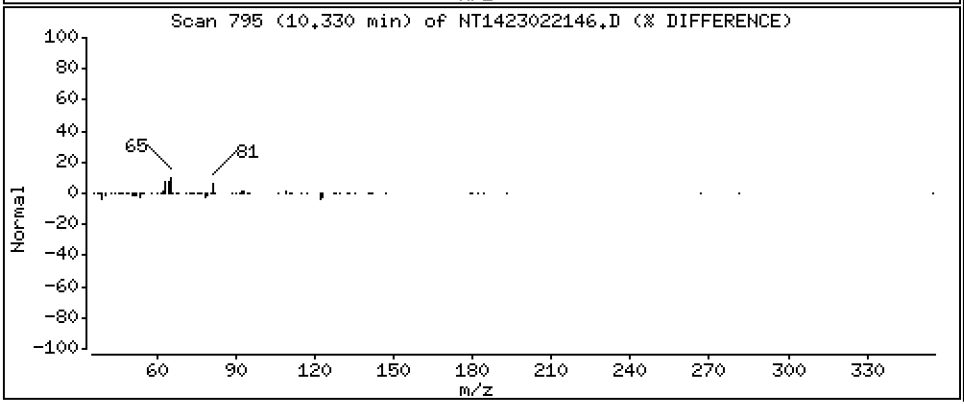












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

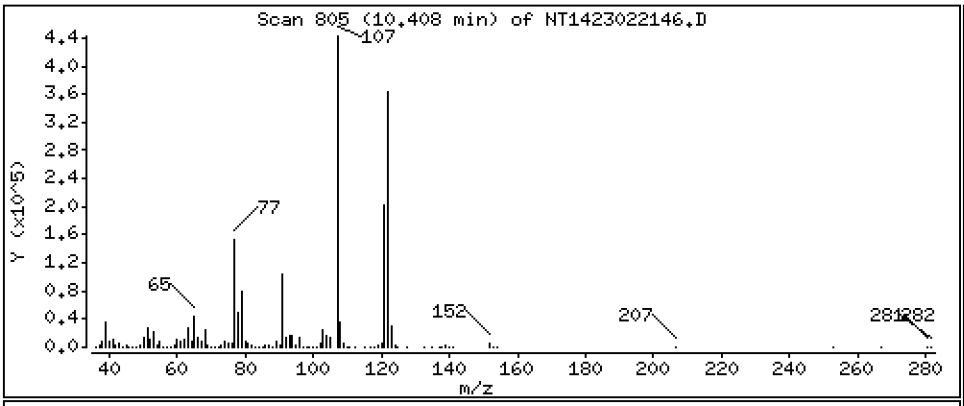
Operator: DSD

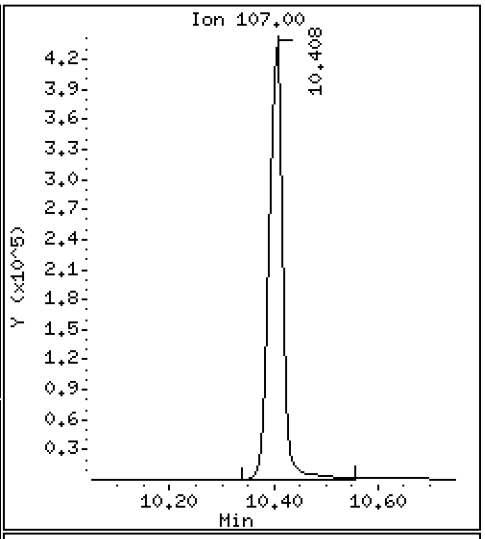
Column phase: ZB-5msi

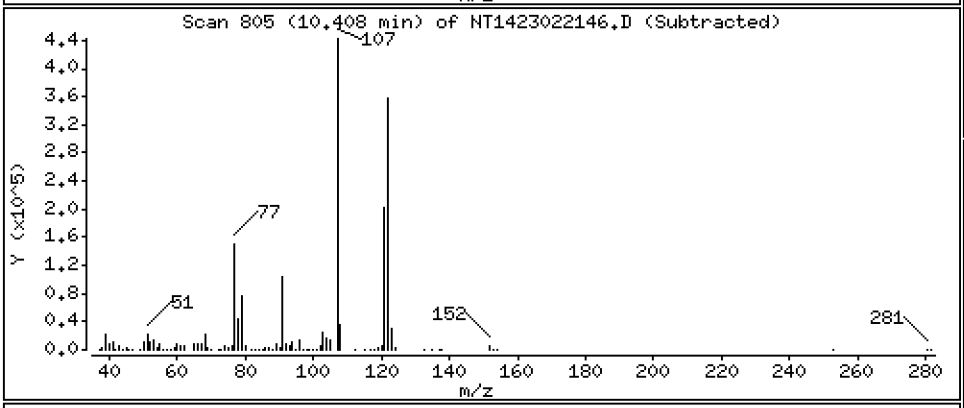
Column diameter: 0.25

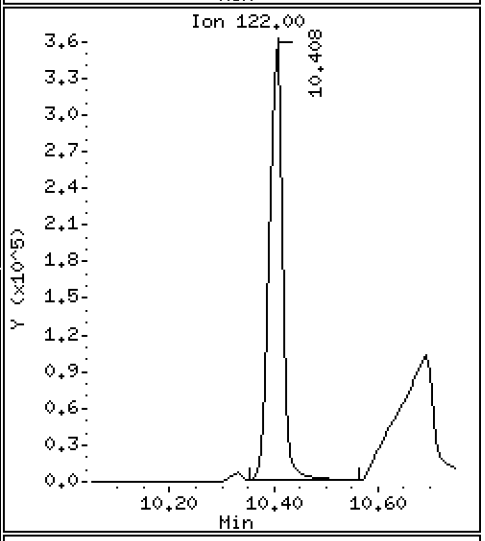
22 2,4-Dimethylphenol

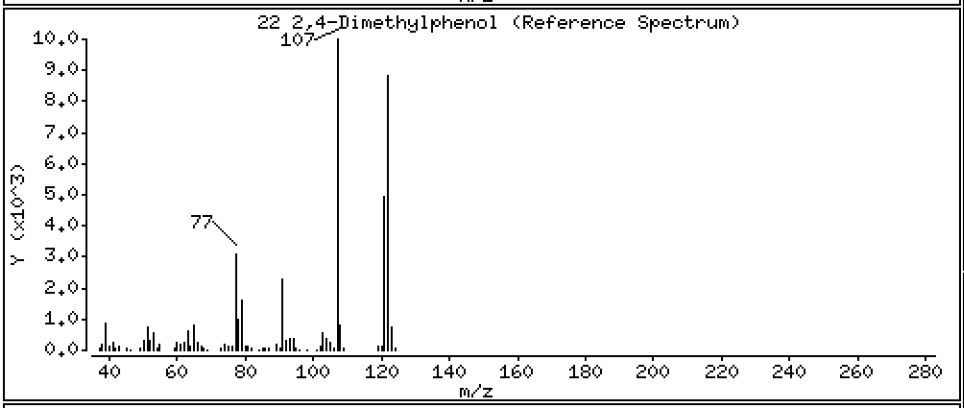
Concentration: 11.03 ug/mL

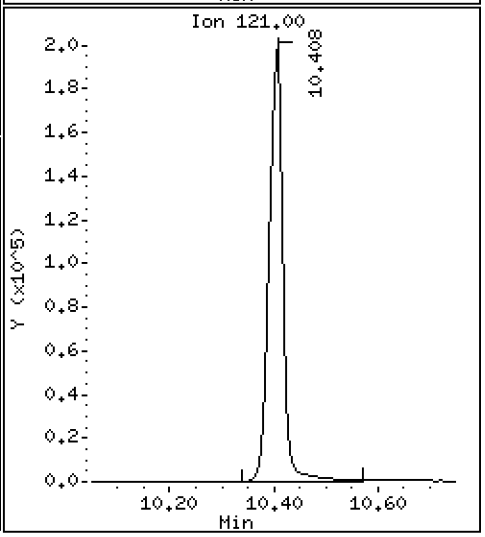


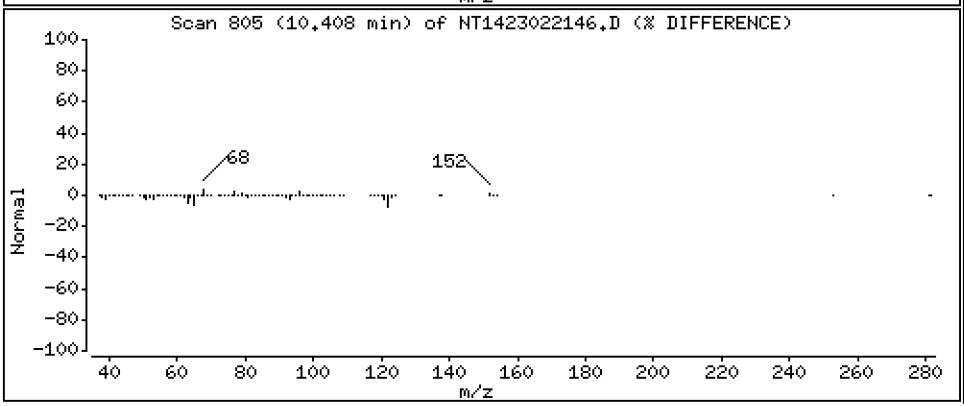












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

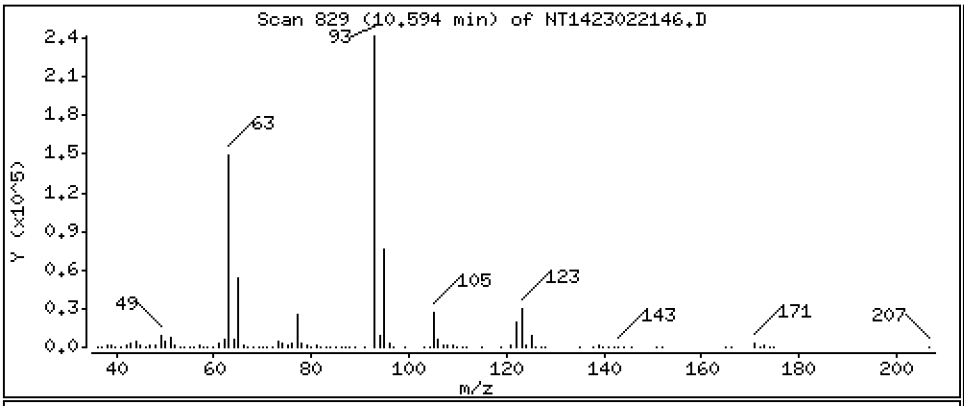
Operator: DSD

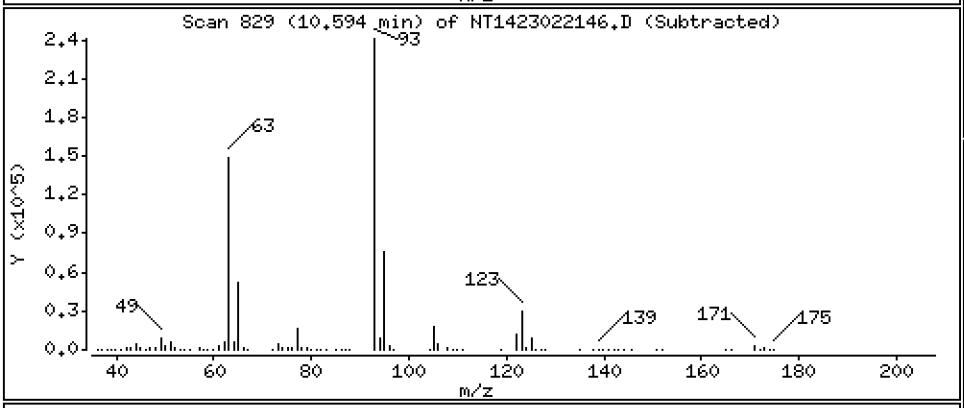
Column phase: ZB-5msi

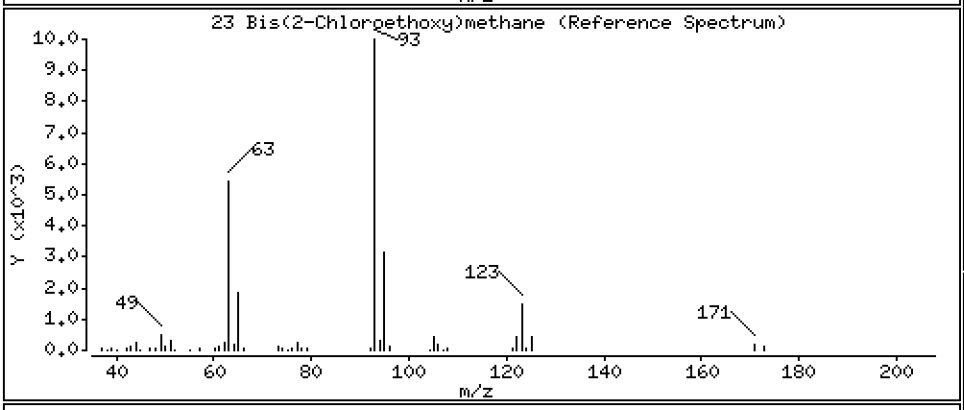
Column diameter: 0.25

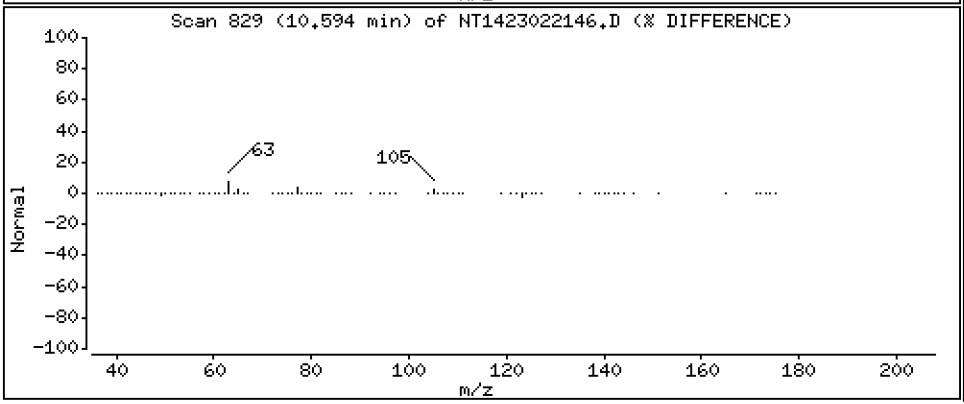
23 Bis(2-Chloroethoxy)methane

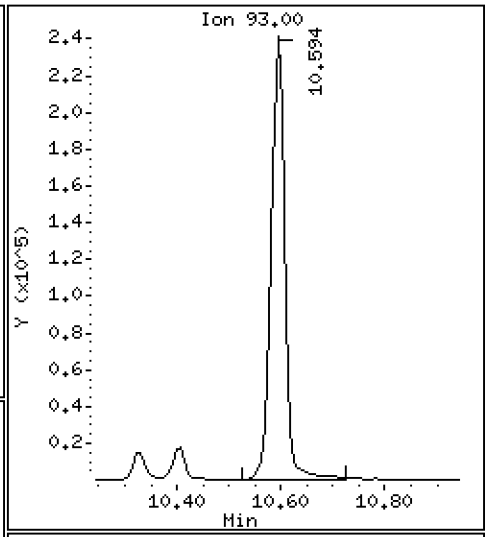
Concentration: 5.264 ug/mL

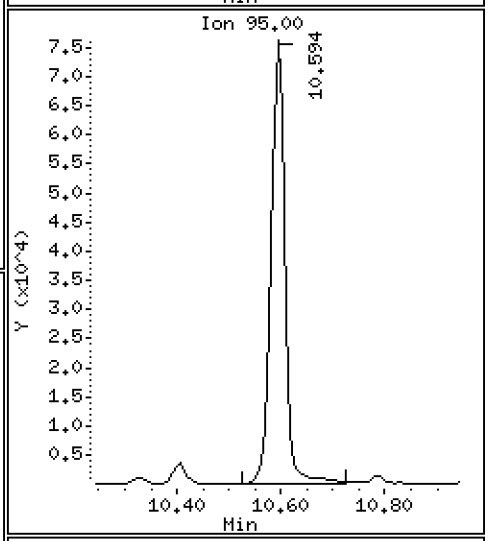


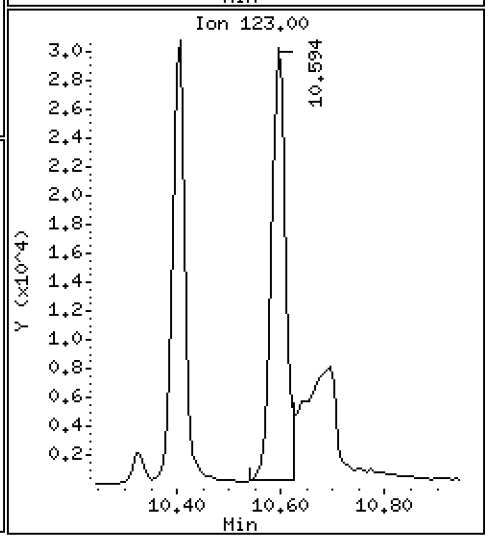












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

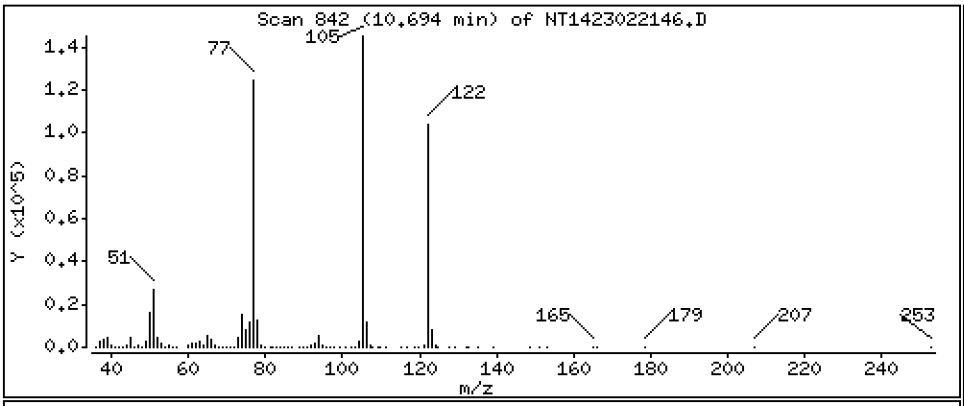
Operator: DSD

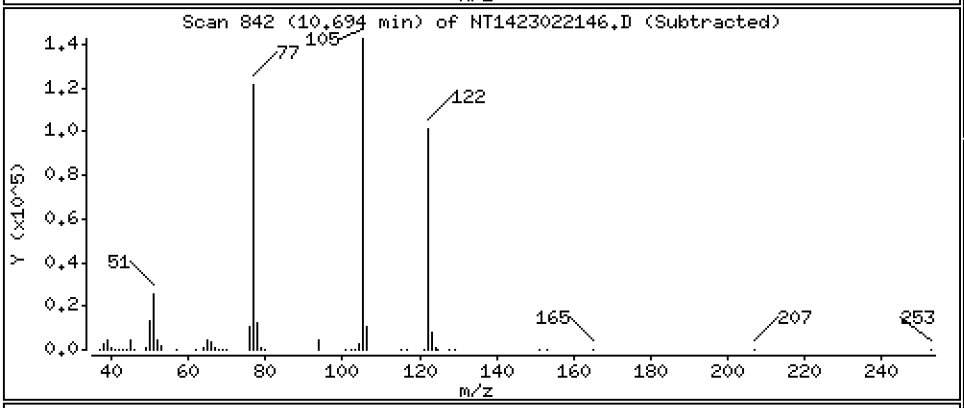
Column phase: ZB-5msi

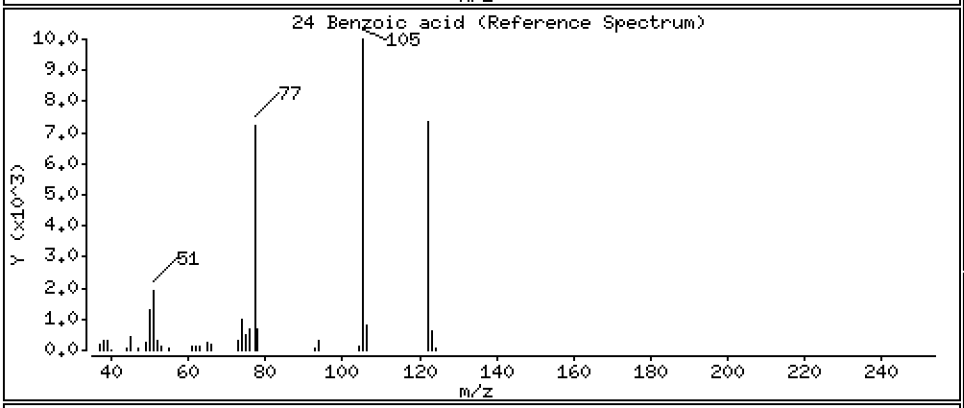
Column diameter: 0.25

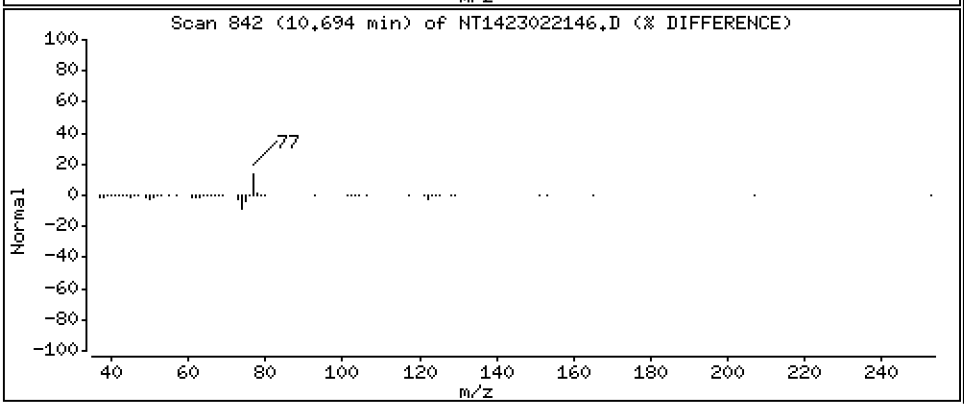
24 Benzoic acid

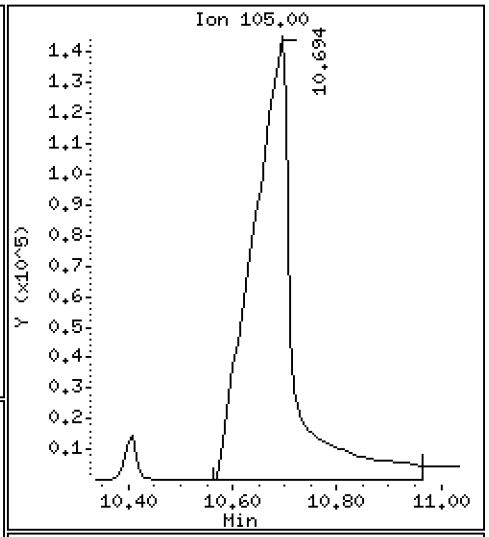
Concentration: 17.95 ug/mL

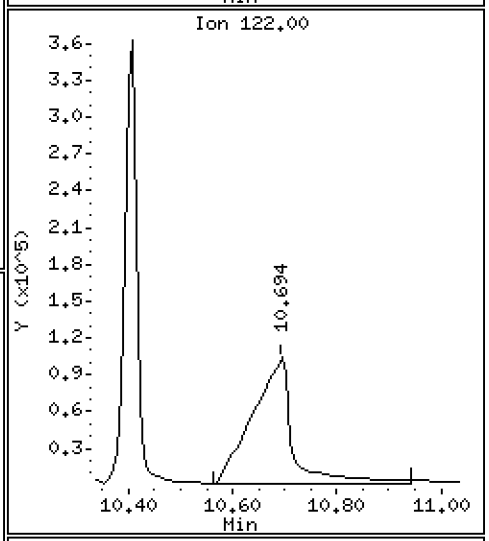


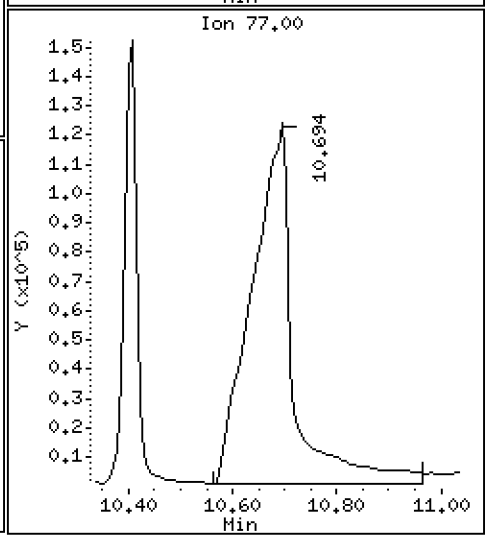












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

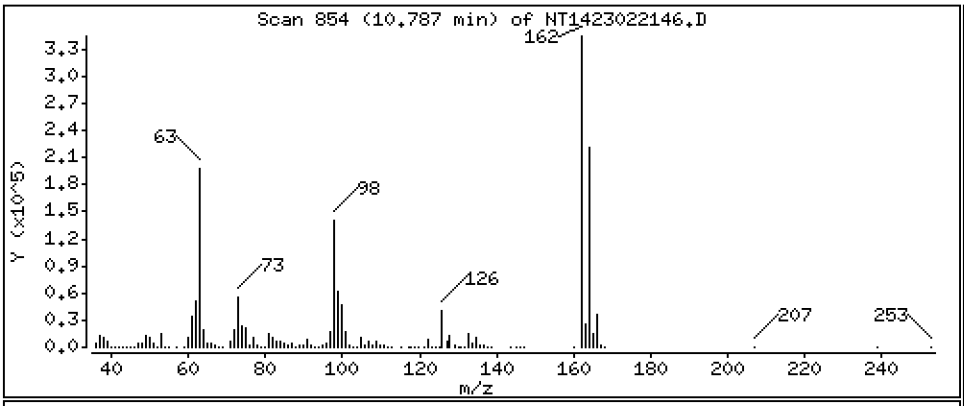
Operator: DSD

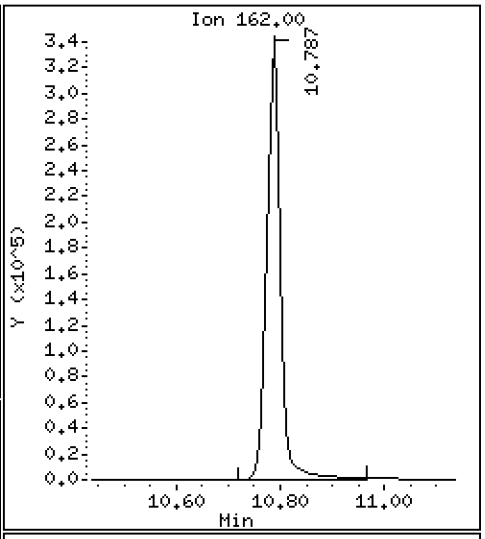
Column phase: ZB-5msi

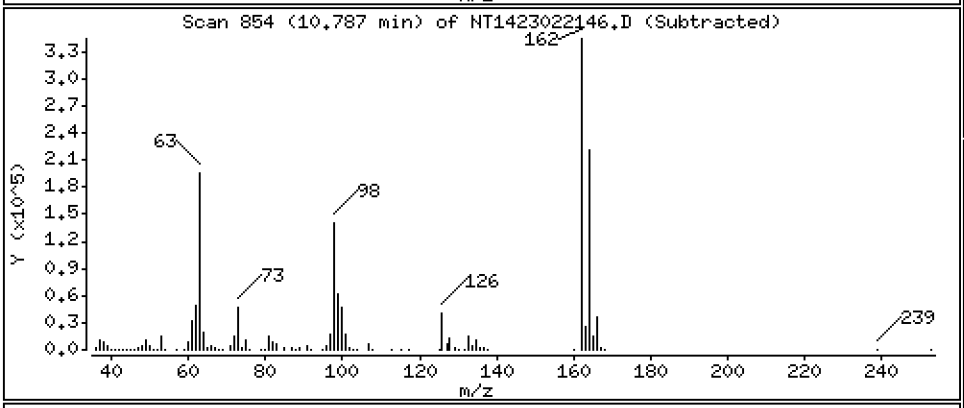
Column diameter: 0.25

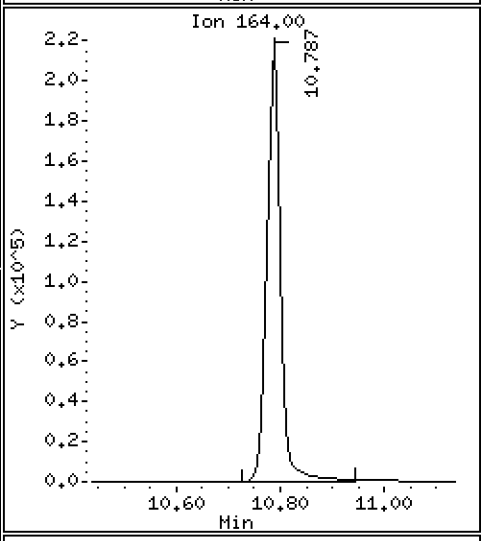
25 2,4-Dichlorophenol

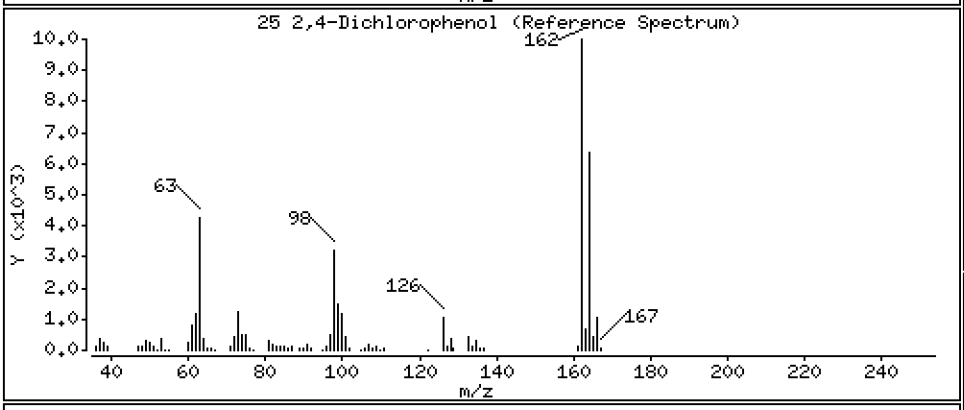
Concentration: 10.77 ug/mL

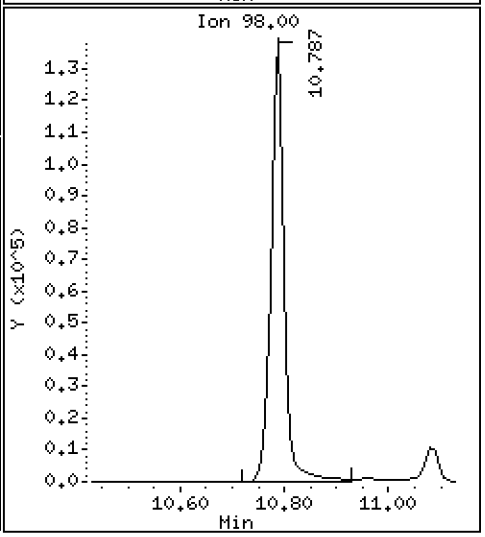


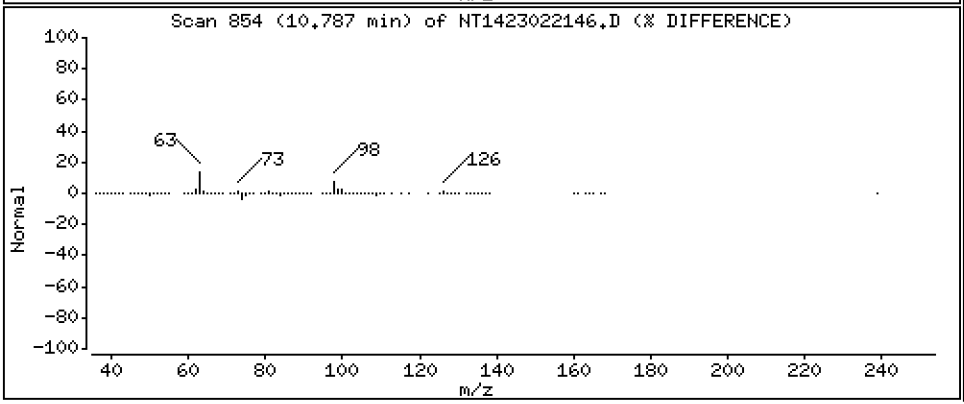












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

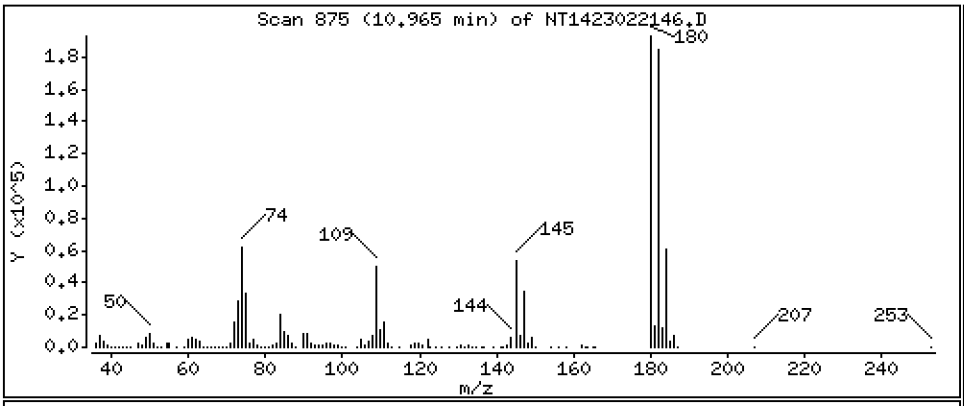
Operator: DSD

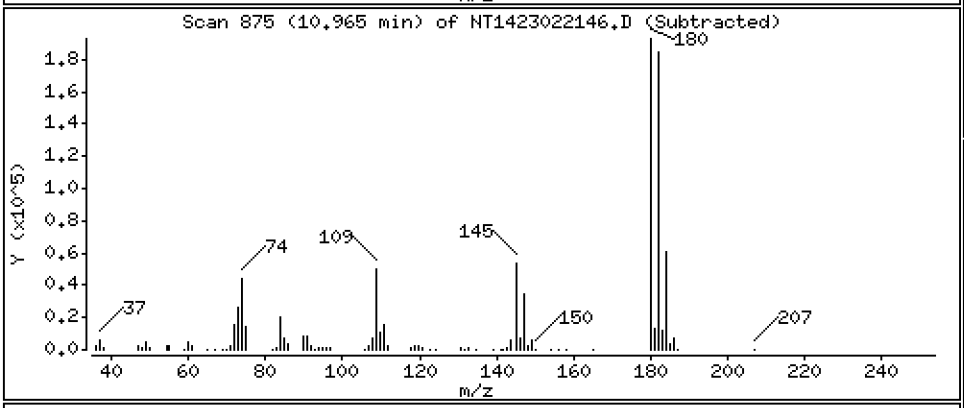
Column phase: ZB-5msi

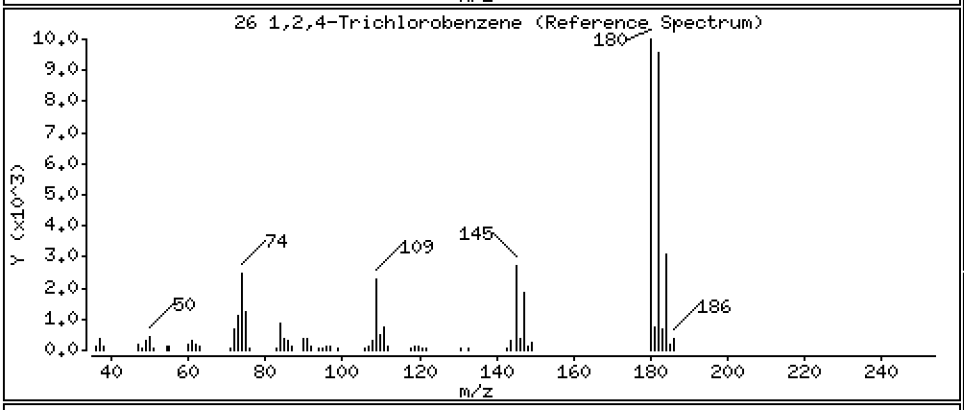
Column diameter: 0.25

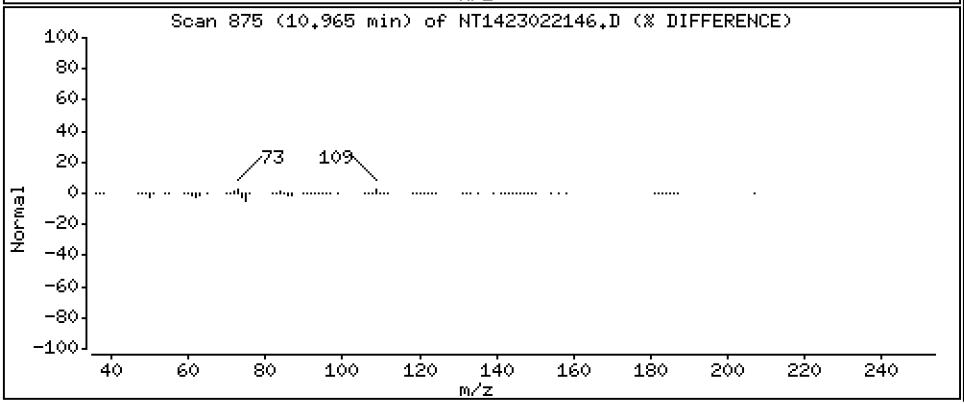
26 1,2,4-Trichlorobenzene

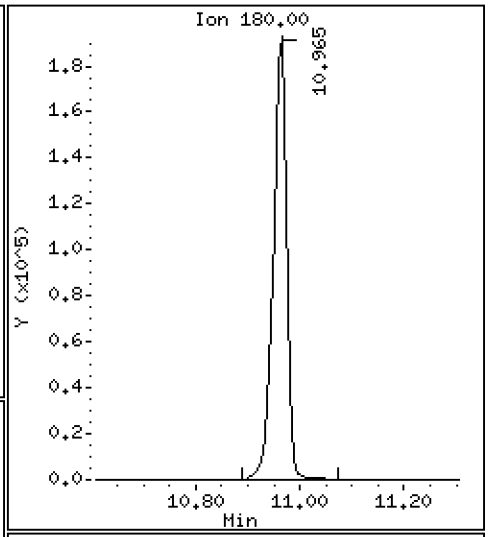
Concentration: 5.146 ug/mL

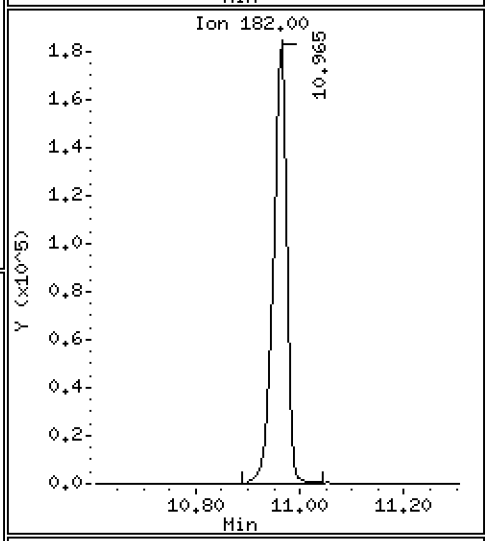


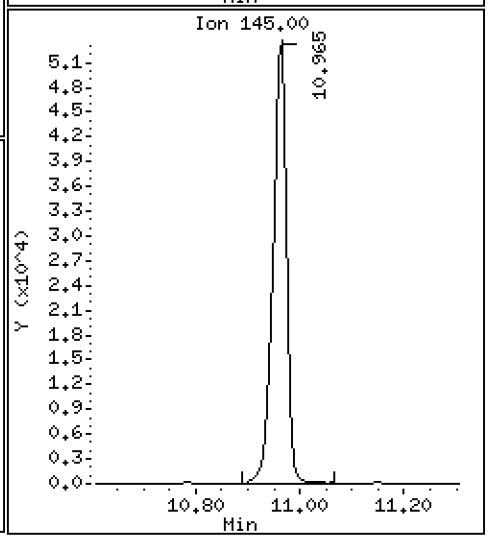












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022146.D

Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

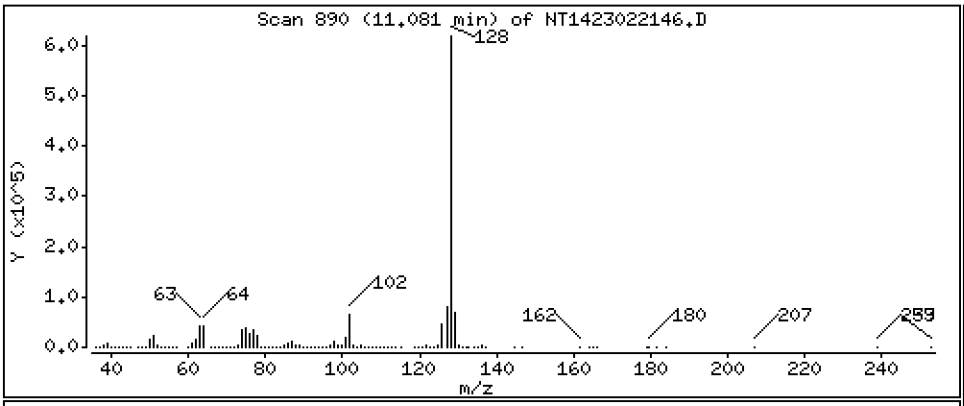
Operator: DSD

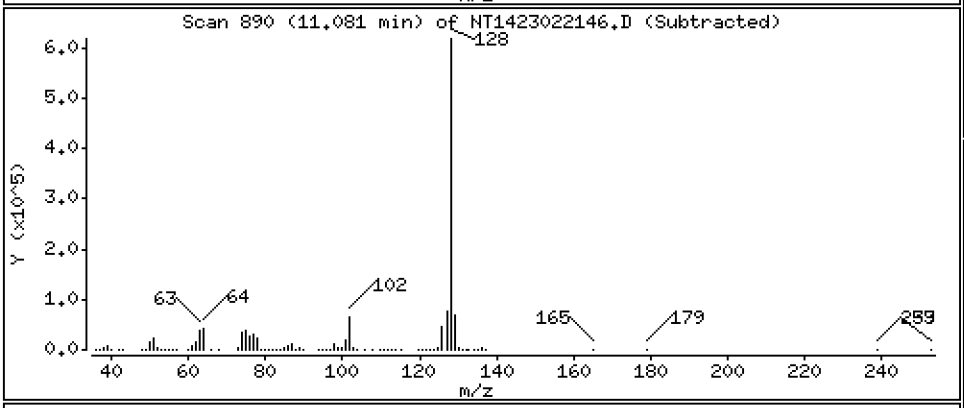
Column phase: ZB-5msi

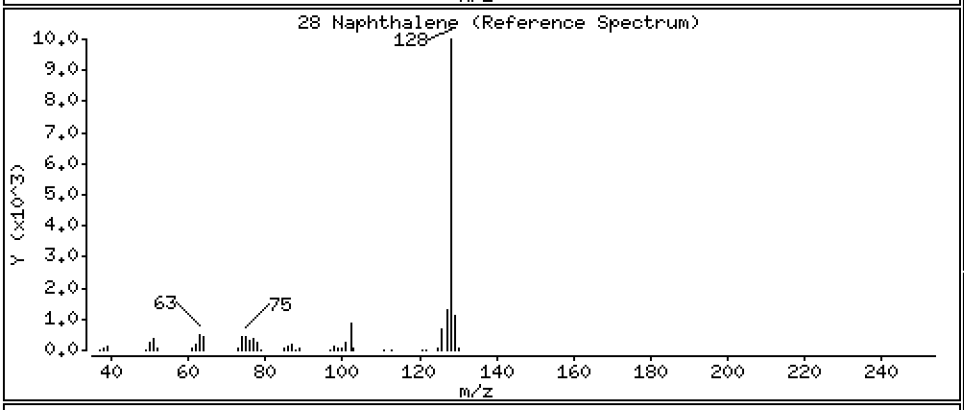
Column diameter: 0.25

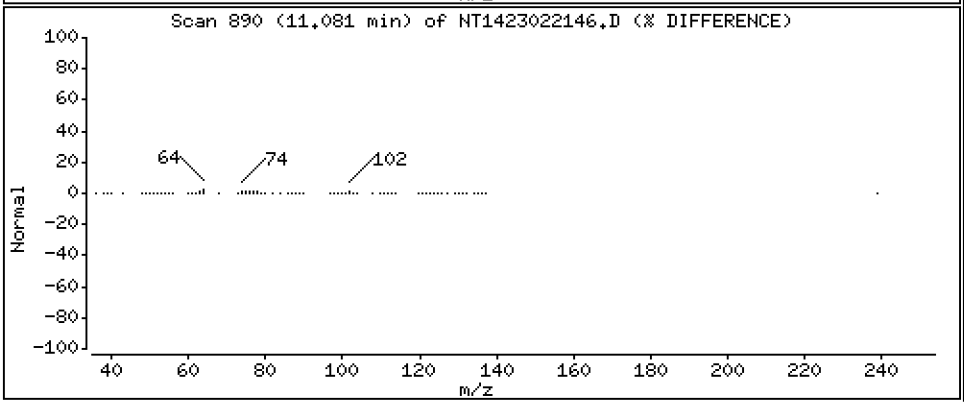
28 Naphthalene

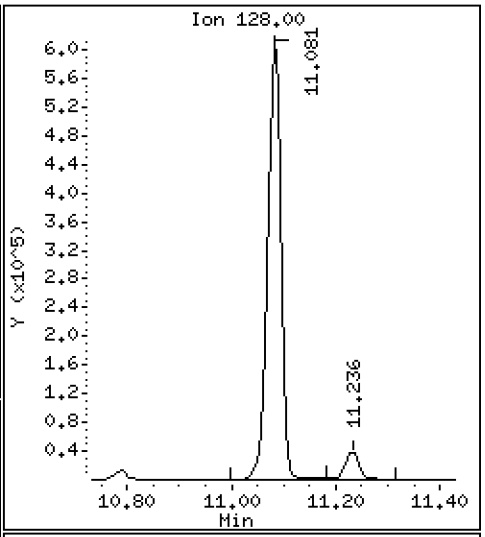
Concentration: 5.211 ug/mL

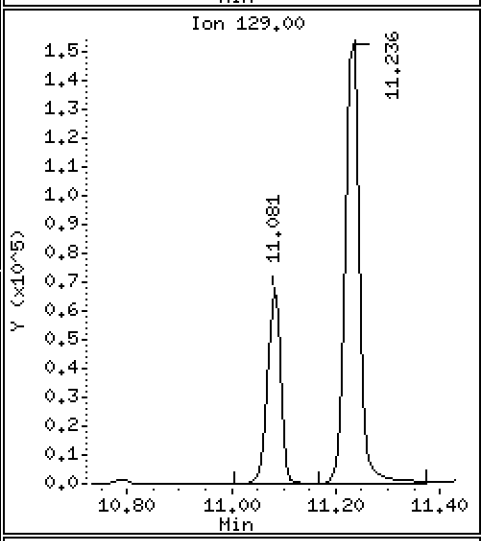


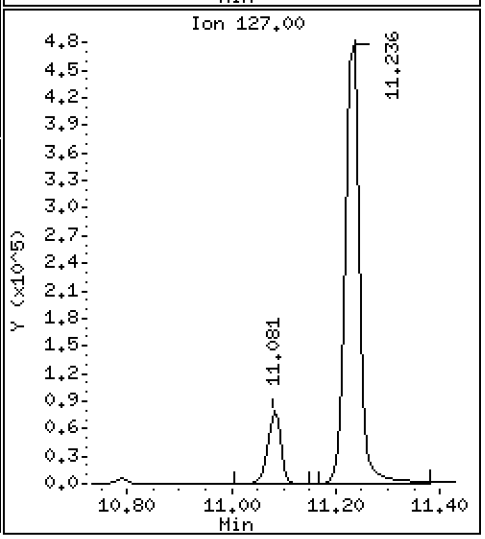












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

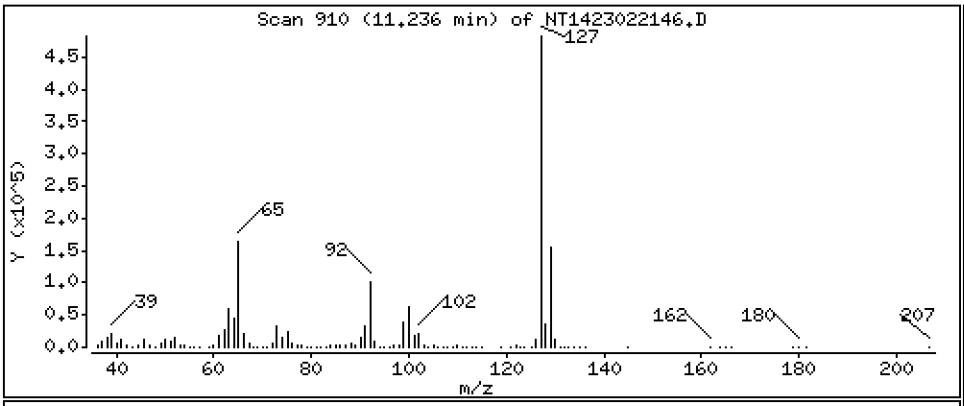
Operator: DSD

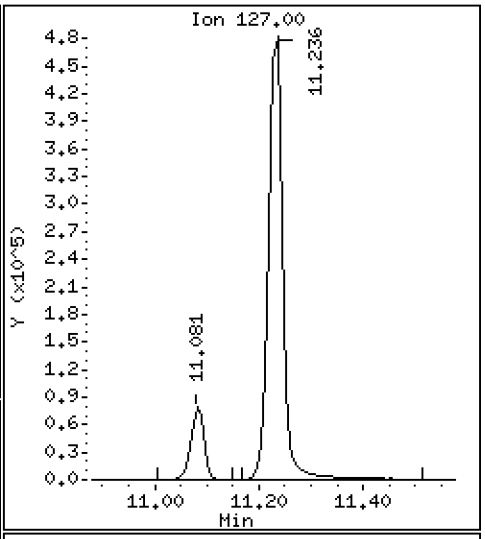
Column phase: ZB-5msi

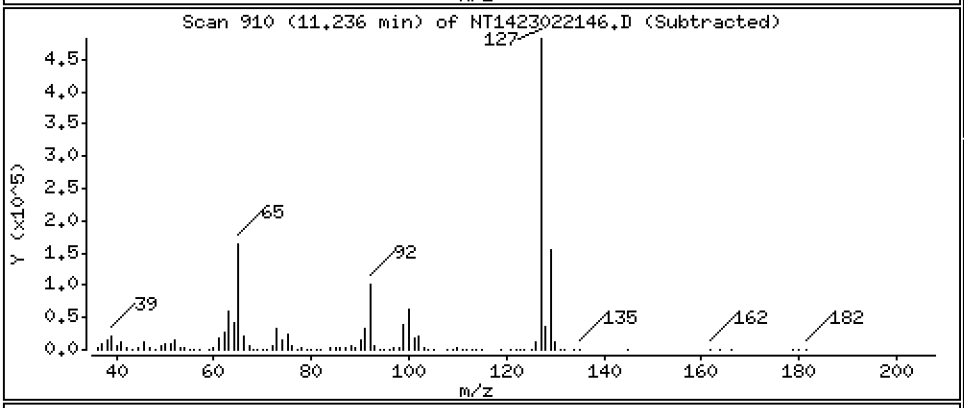
Column diameter: 0.25

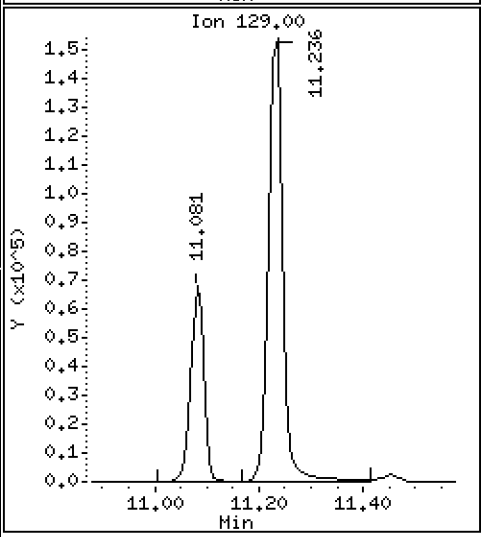
29 4-Chloroaniline

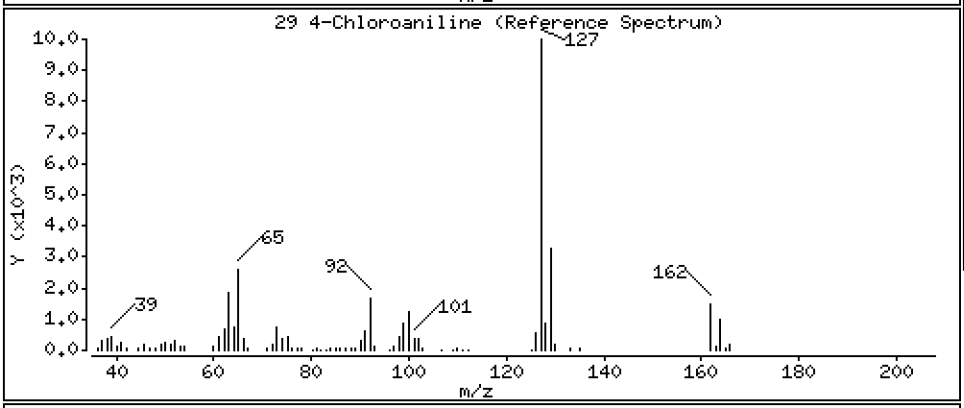
Concentration: 10.83 ug/mL

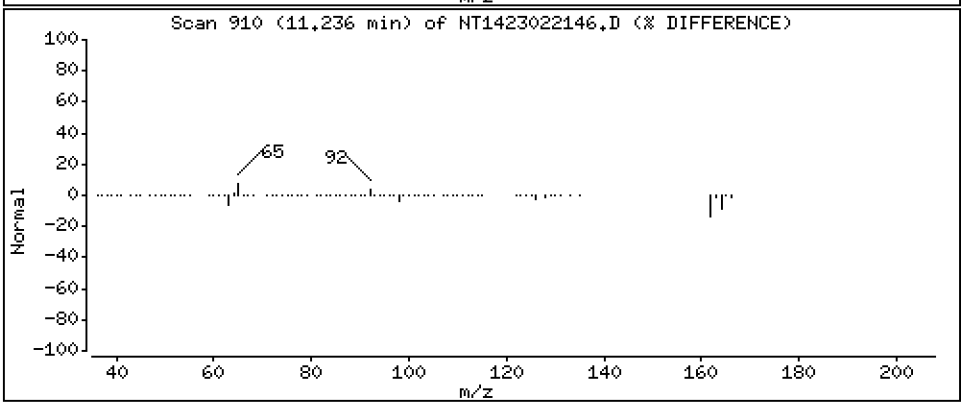












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

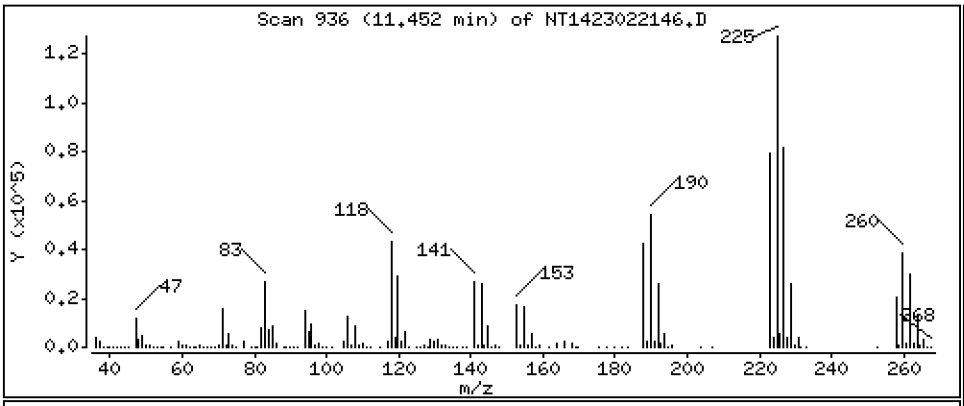
Operator: DSD

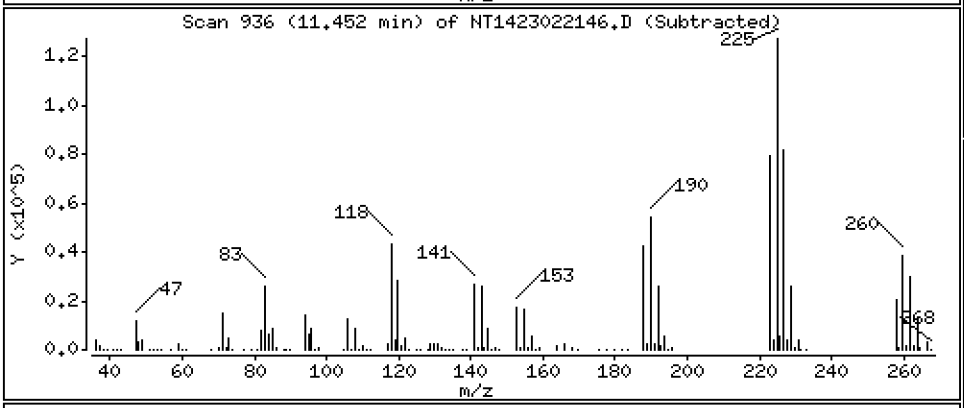
Column phase: ZB-5msi

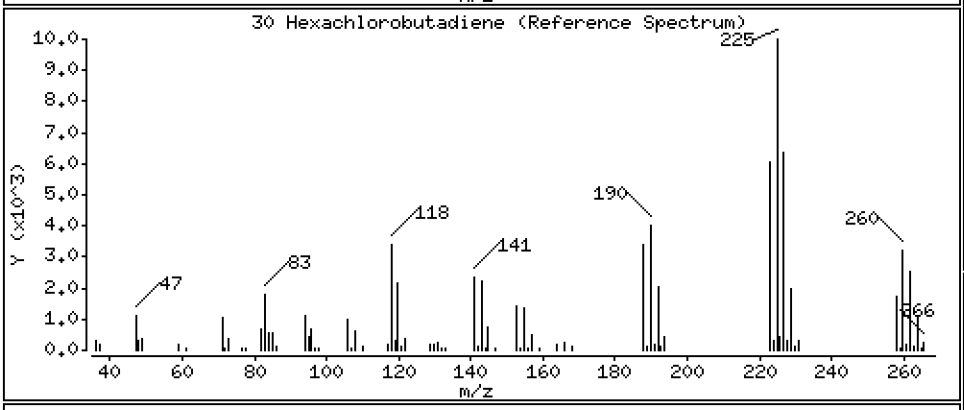
Column diameter: 0.25

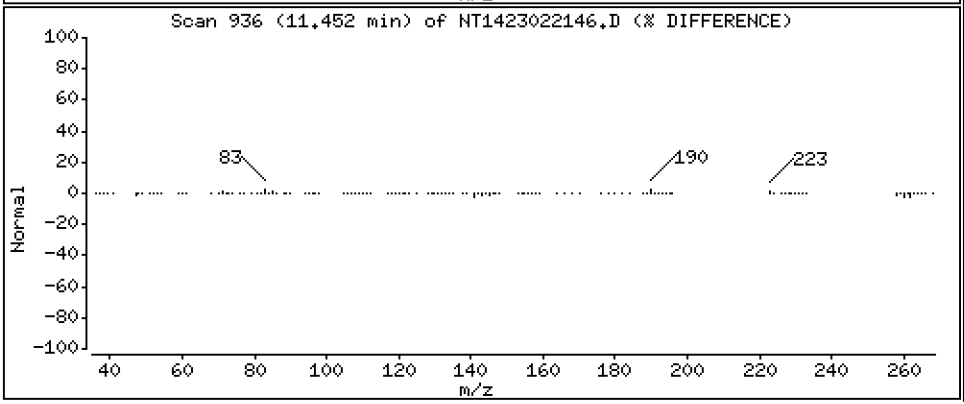
30 Hexachlorobutadiene

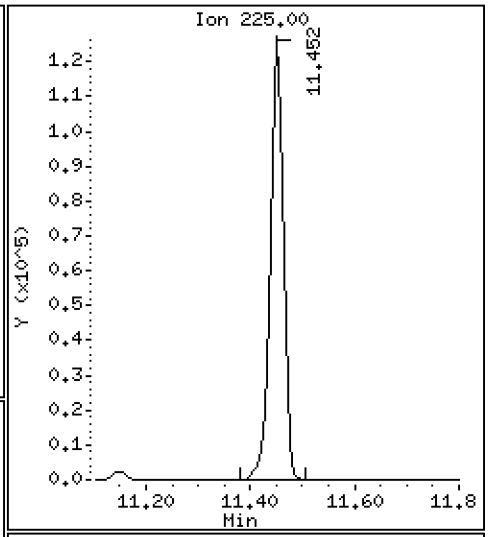
Concentration: 5.437 ug/mL

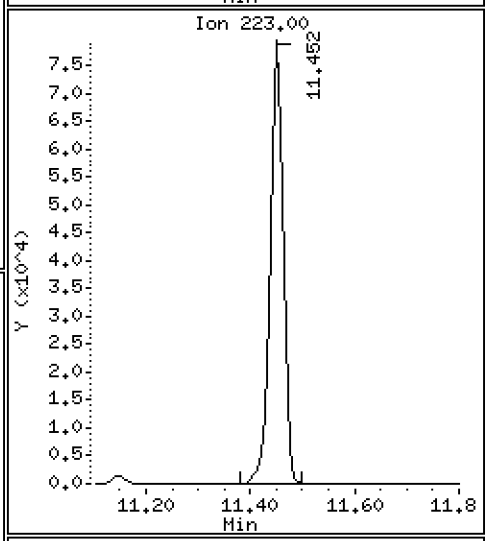


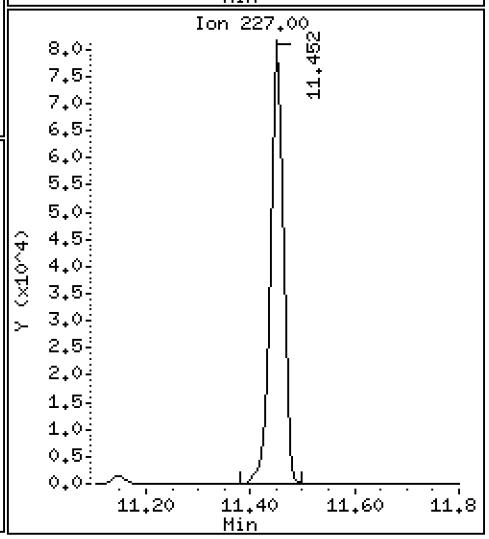












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

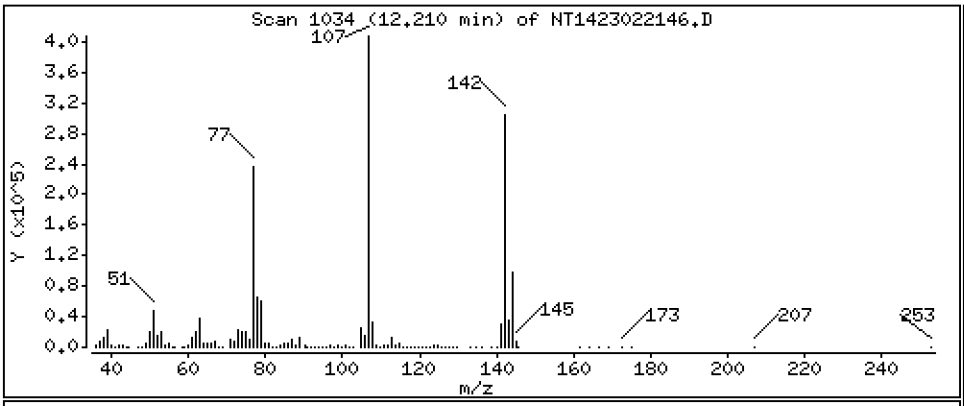
Operator: DSD

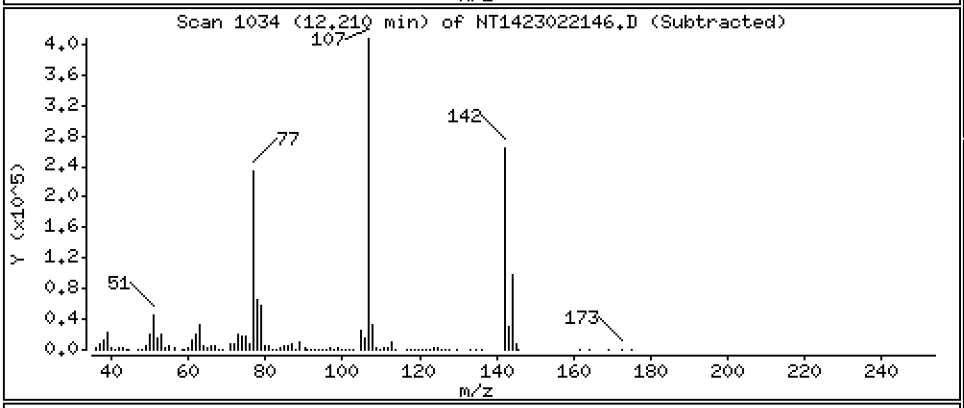
Column phase: ZB-5msi

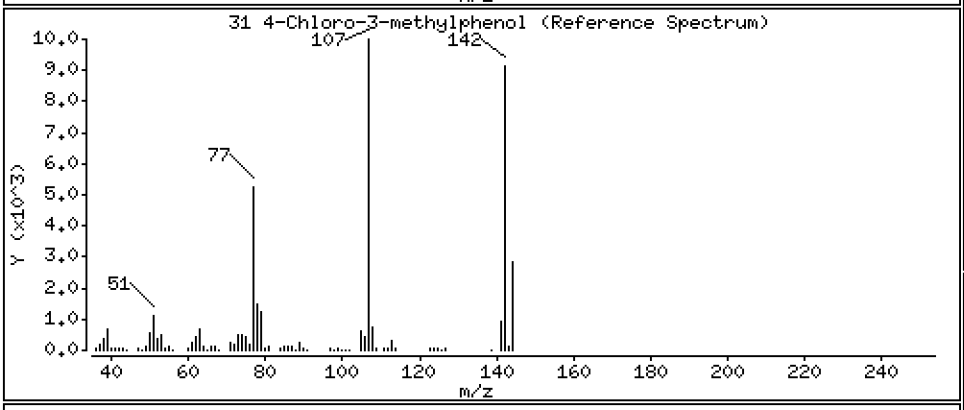
Column diameter: 0.25

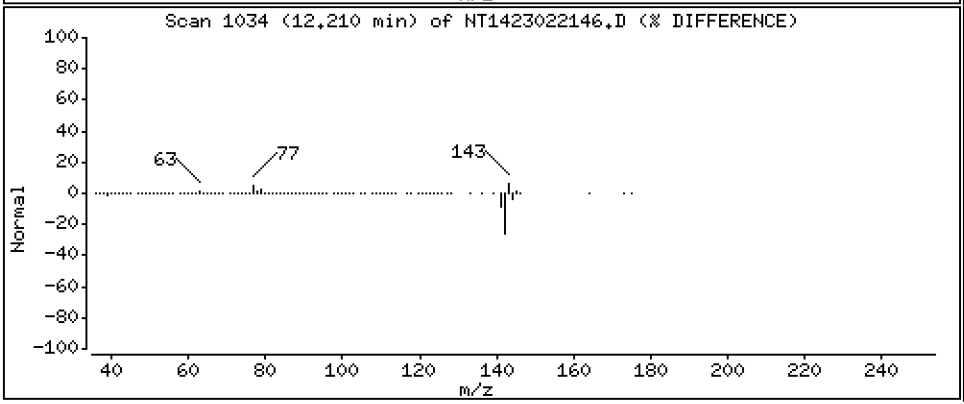
31 4-Chloro-3-methylphenol

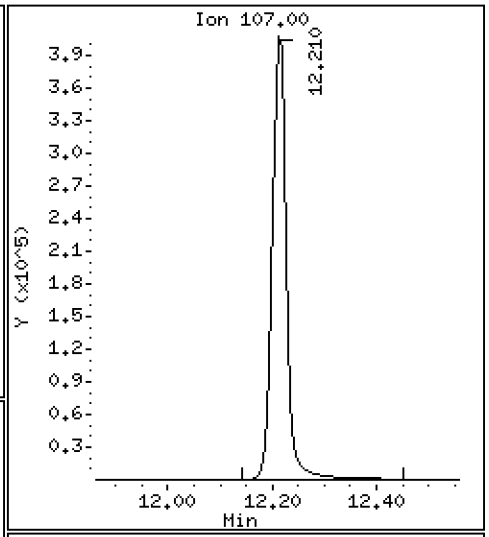
Concentration: 11.43 ug/mL

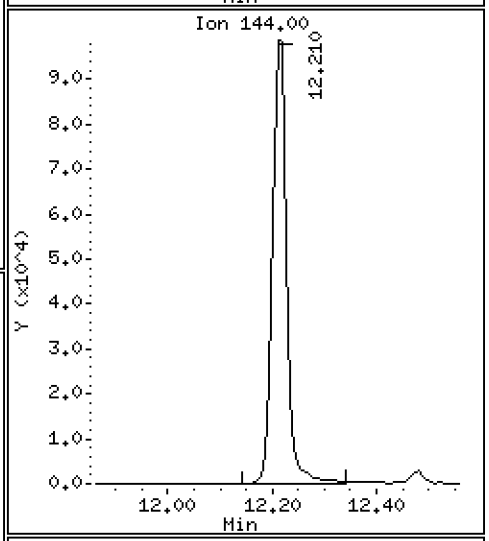


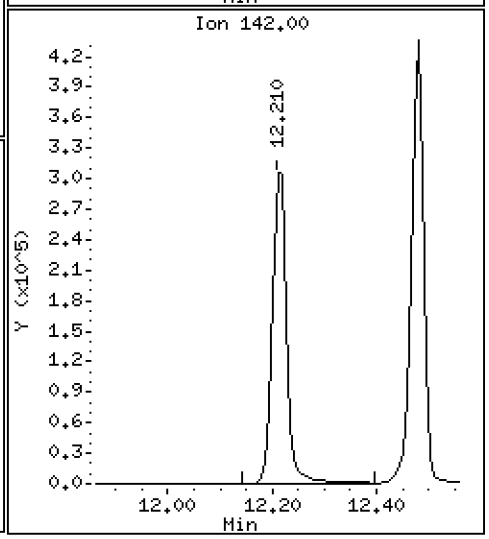












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

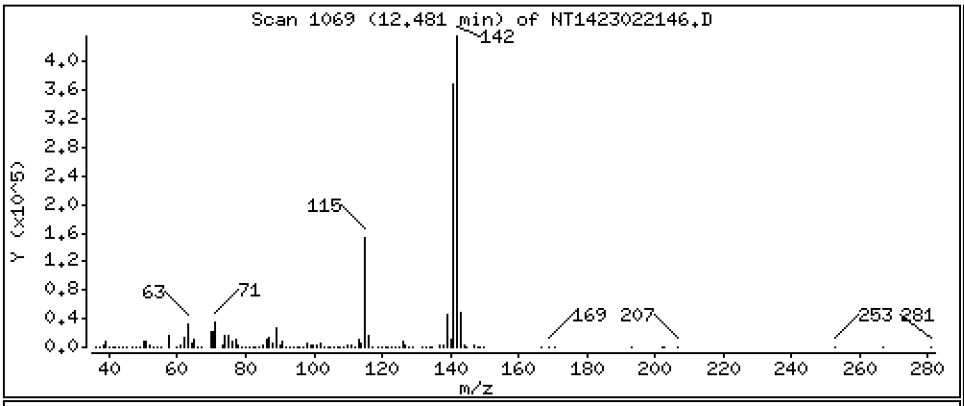
Operator: DSD

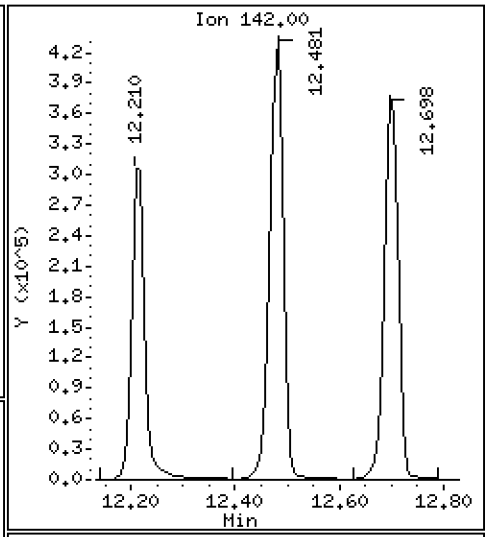
Column phase: ZB-5msi

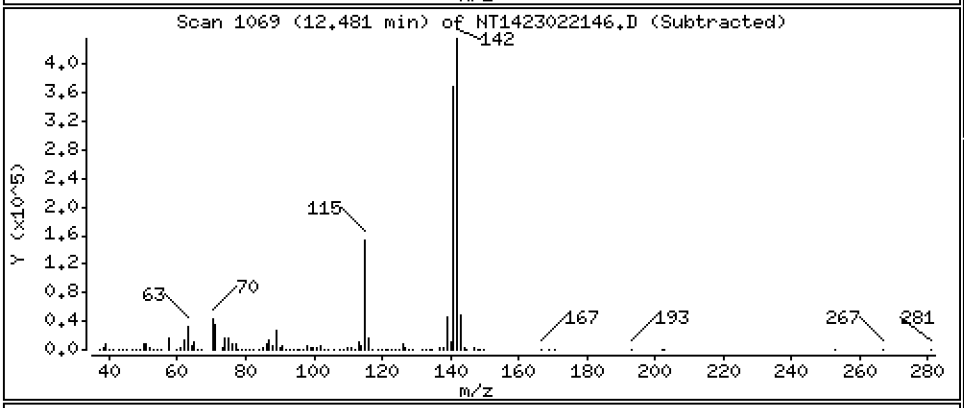
Column diameter: 0.25

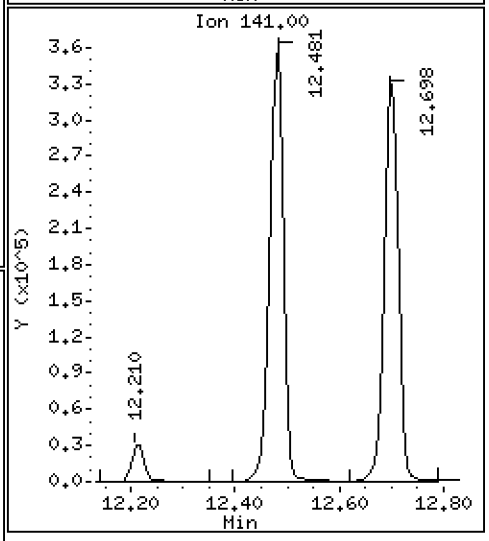
32 2-Methylnaphthalene

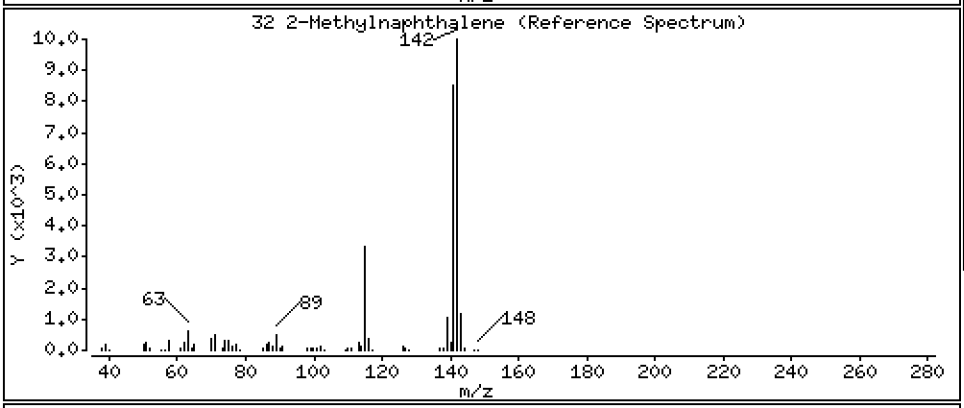
Concentration: 5.048 ug/mL

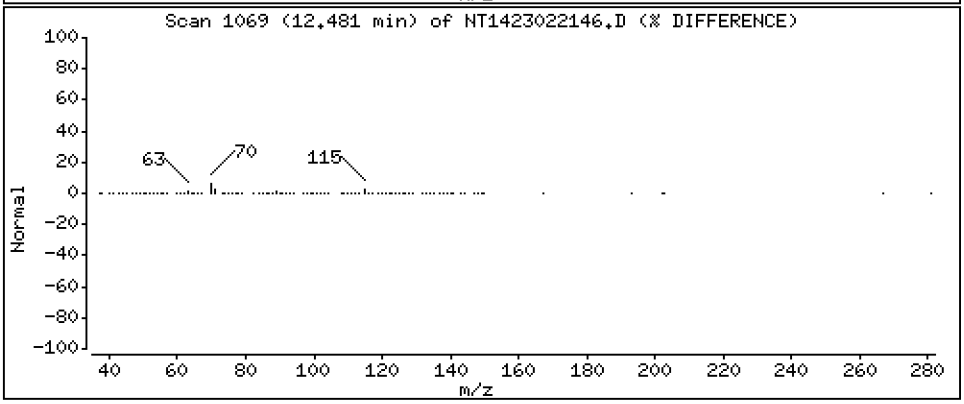












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

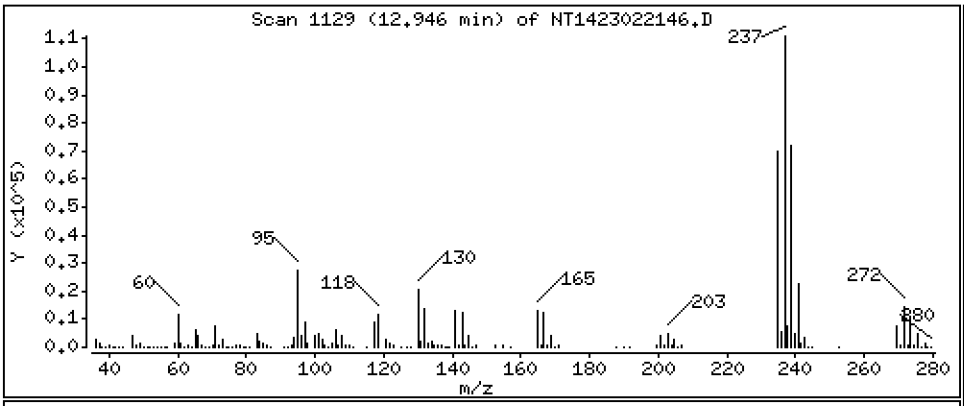
Operator: DSD

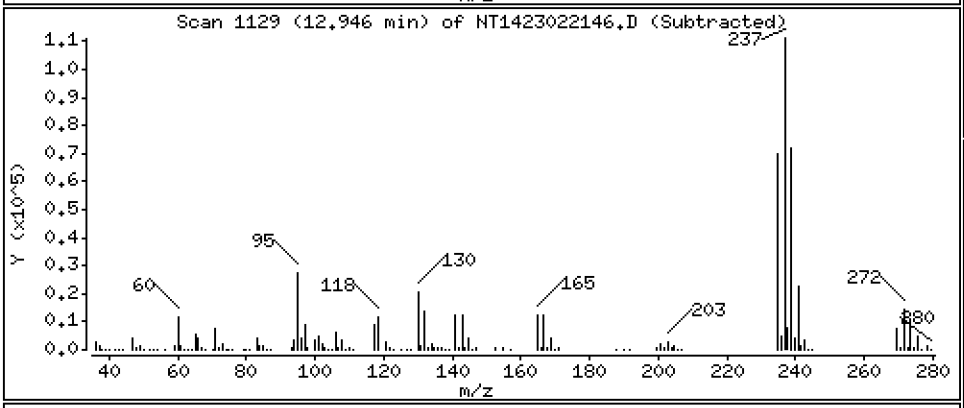
Column phase: ZB-5msi

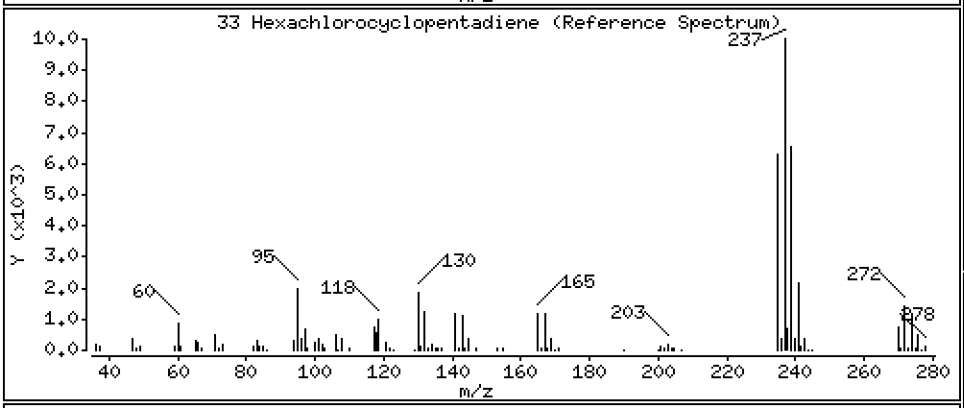
Column diameter: 0.25

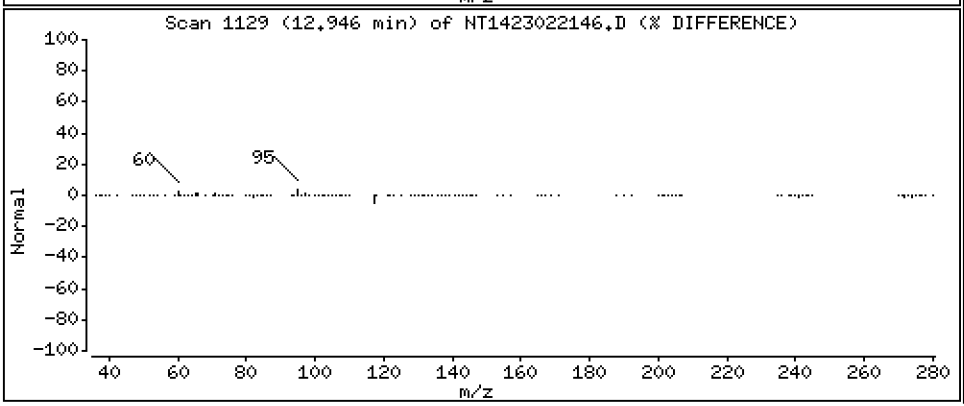
33 Hexachlorocyclopentadiene

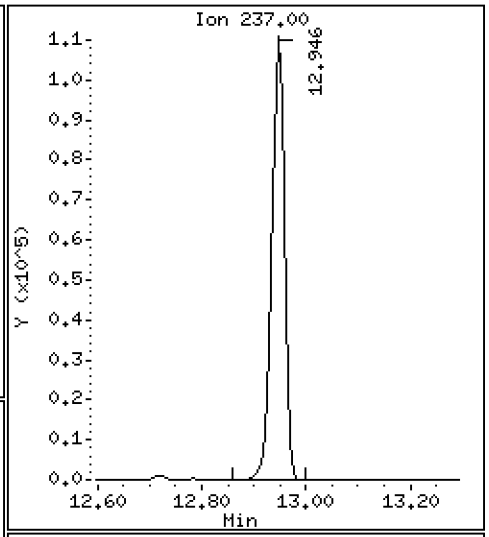
Concentration: 3.754 ug/mL

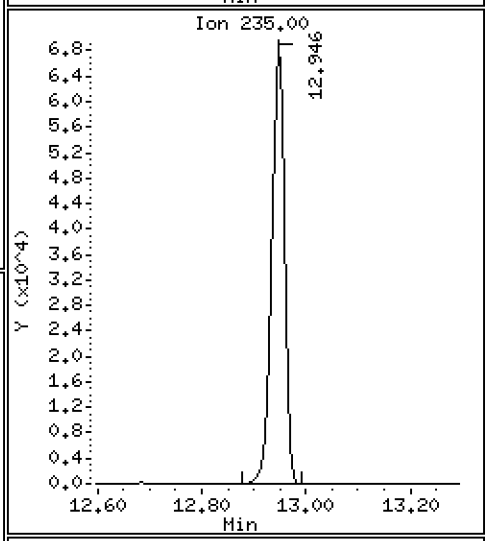


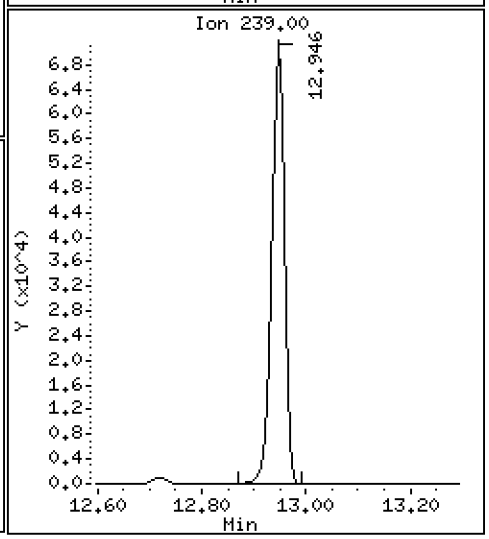












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

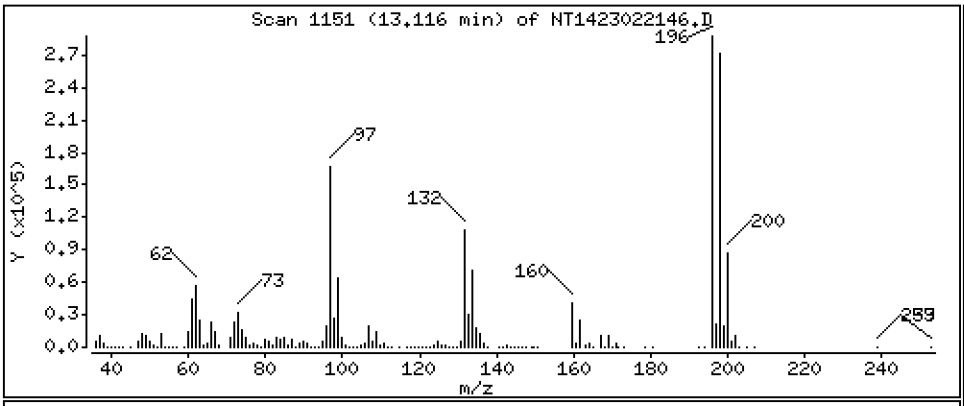
Operator: DSD

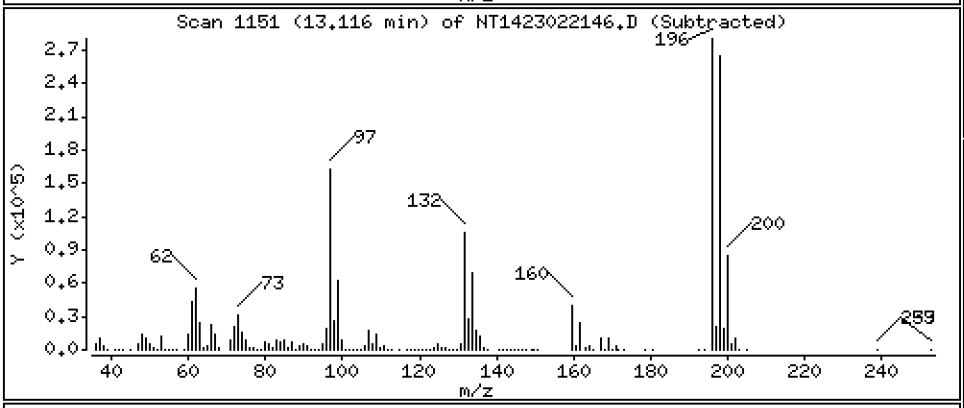
Column phase: ZB-5msi

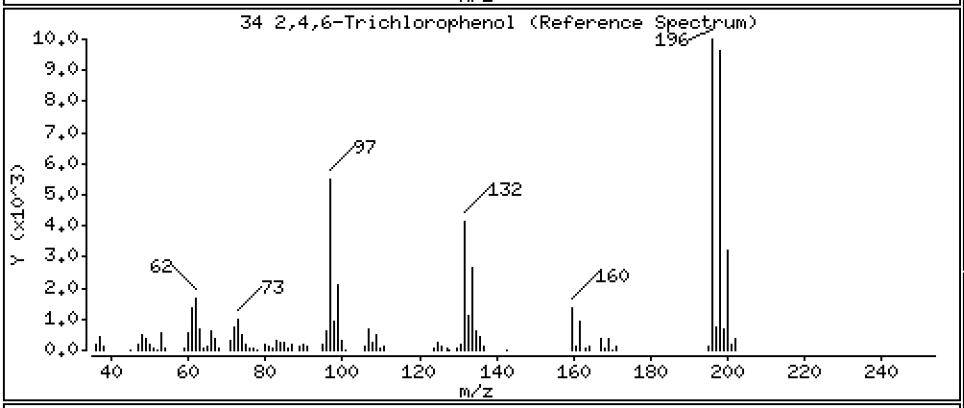
Column diameter: 0.25

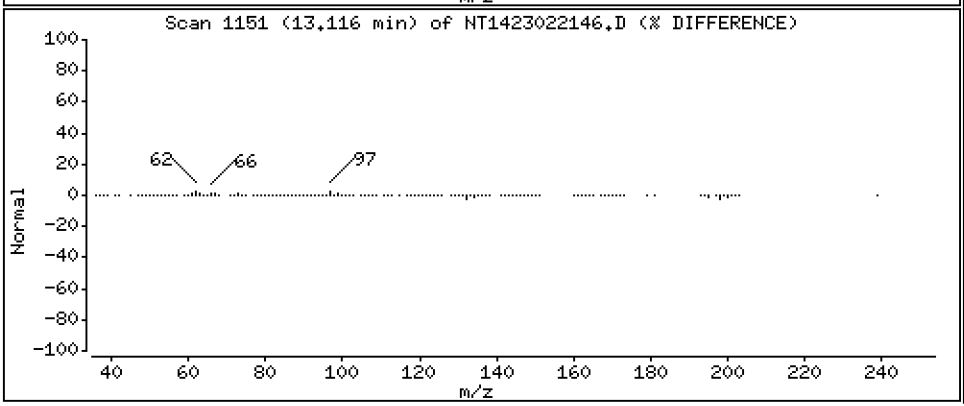
34 2,4,6-Trichlorophenol

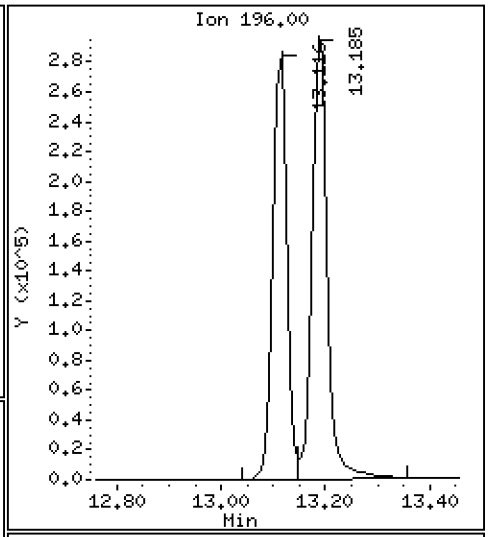
Concentration: 10.63 ug/mL

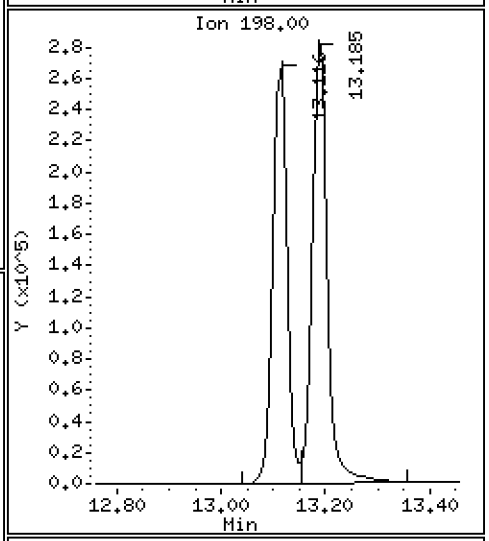


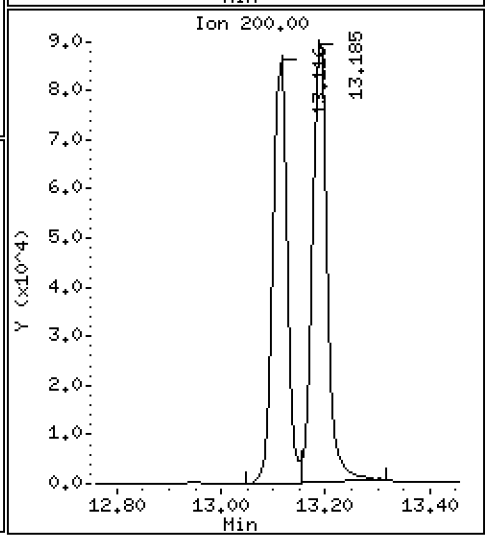












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

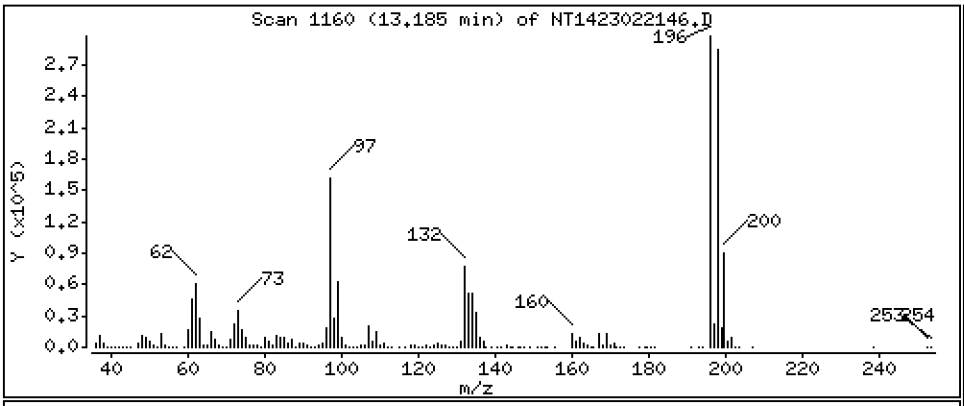
Operator: DSD

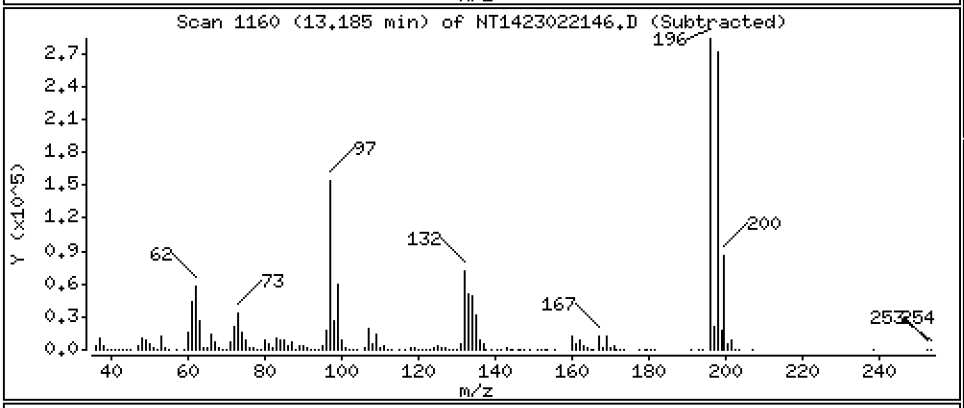
Column phase: ZB-5msi

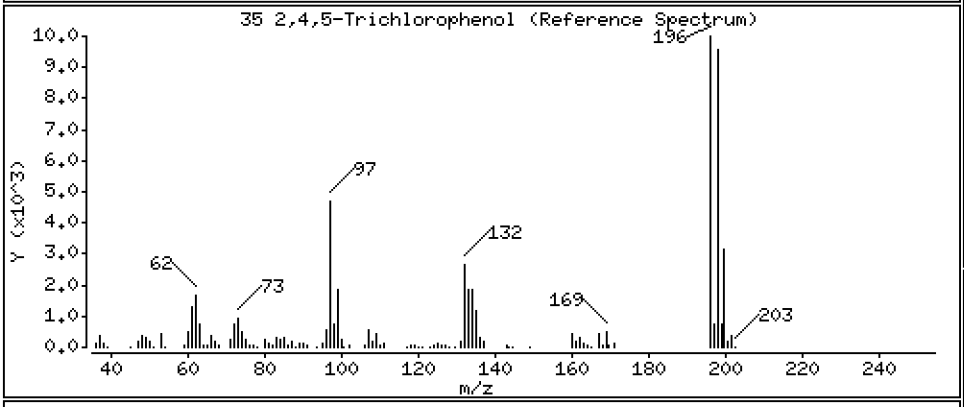
Column diameter: 0.25

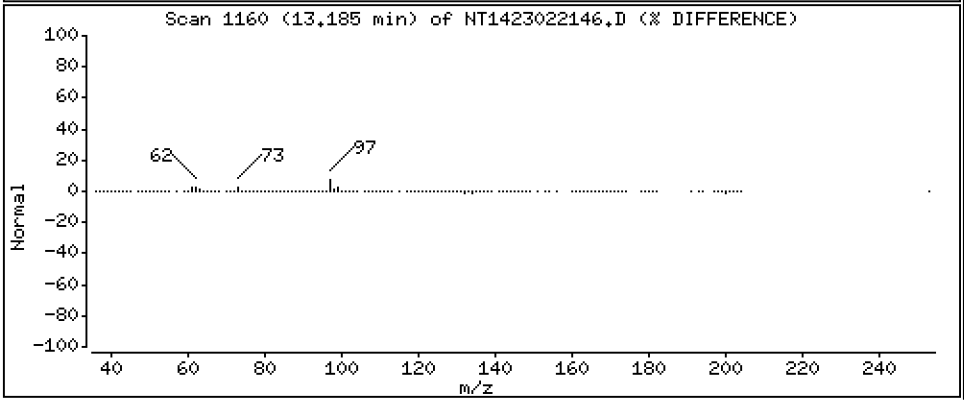
35 2,4,5-Trichlorophenol

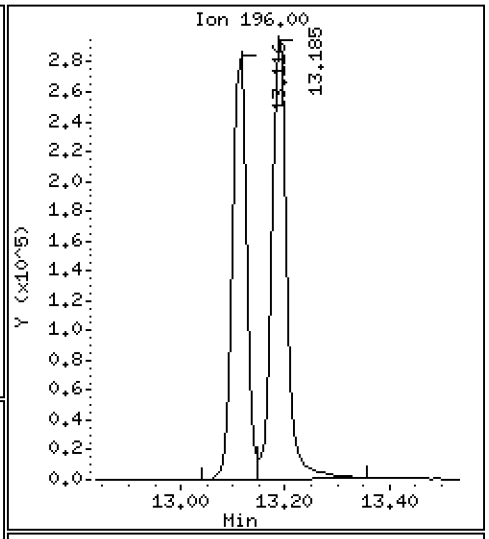
Concentration: 11.05 ug/mL

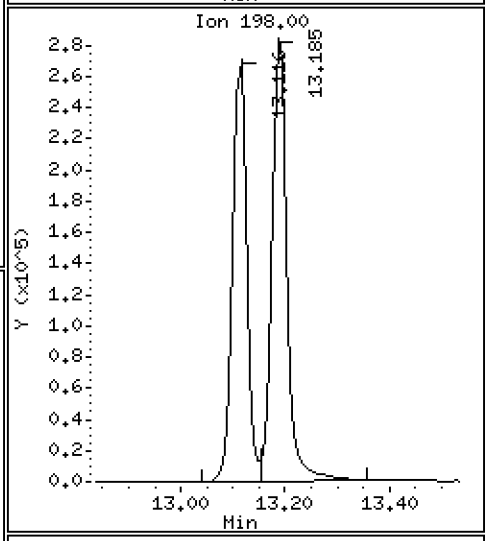


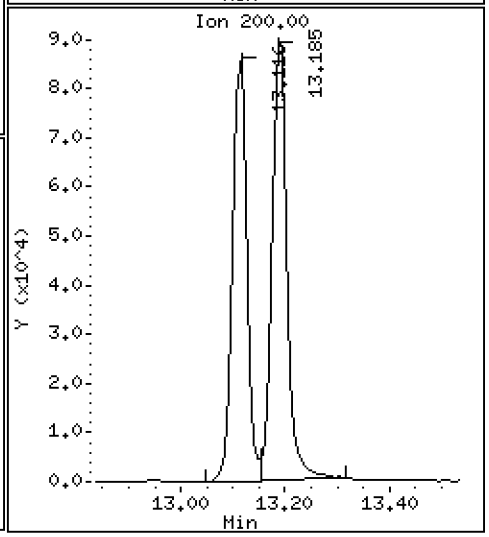












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

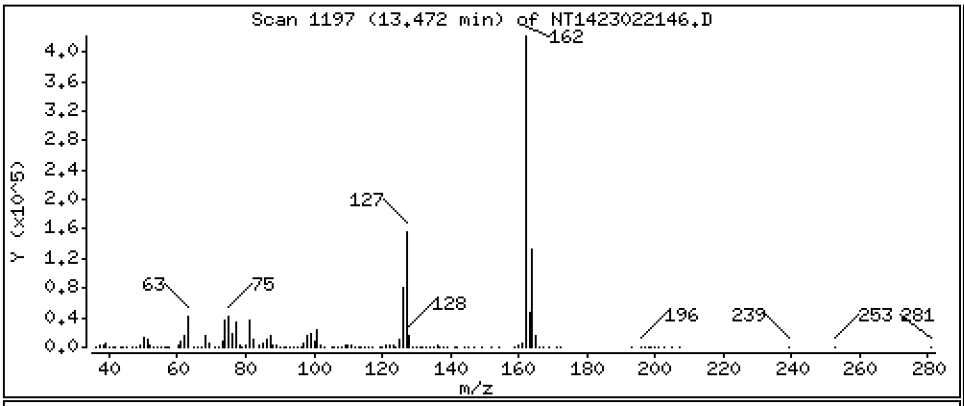
Operator: DSD

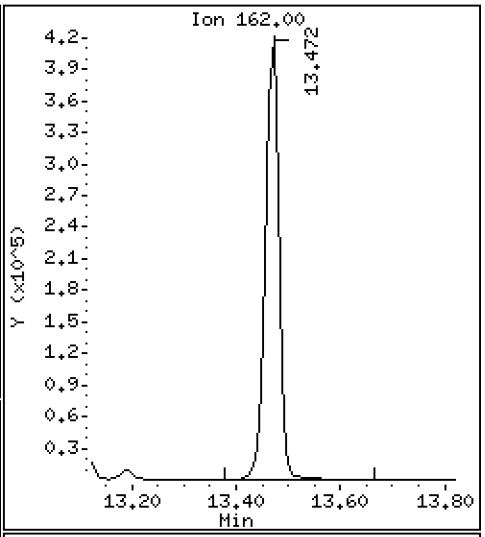
Column phase: ZB-5msi

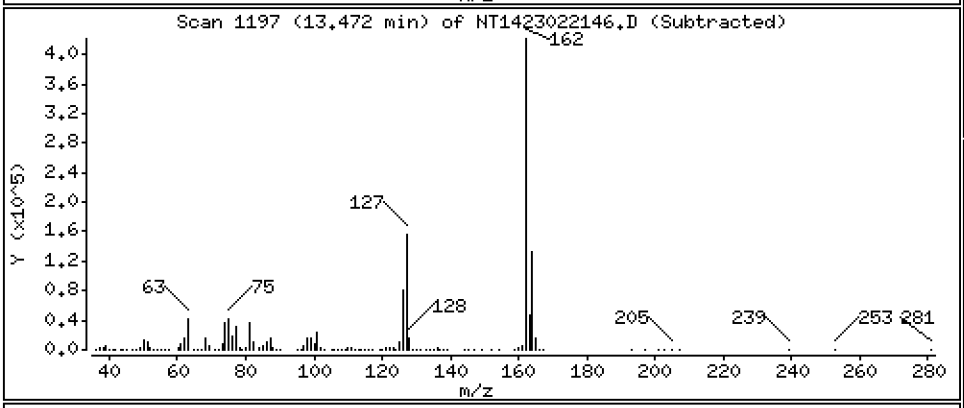
Column diameter: 0.25

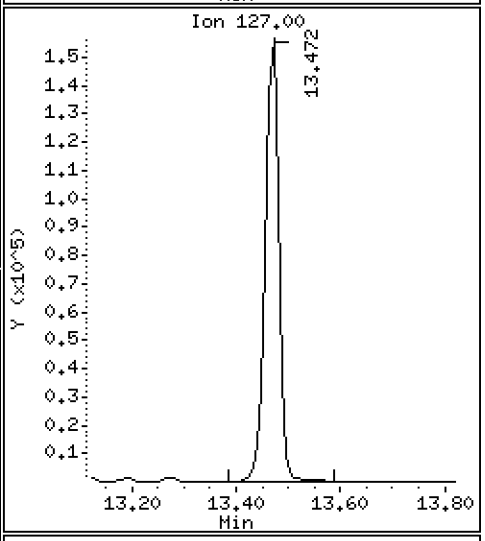
37 2-Chloronaphthalene

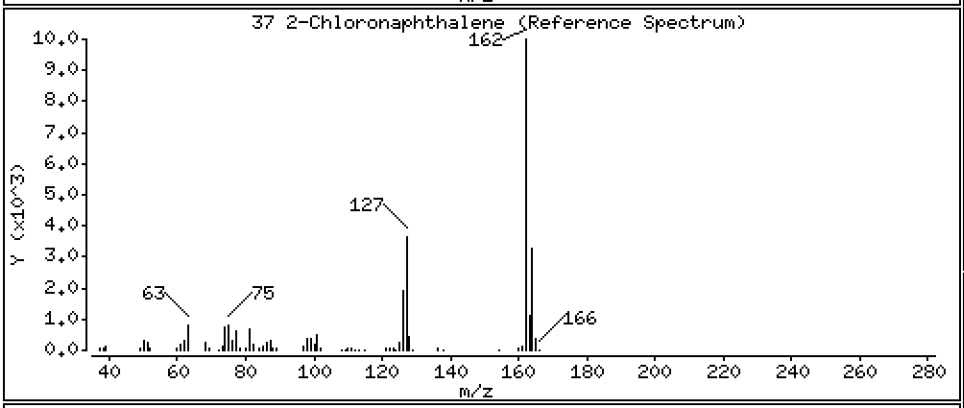
Concentration: 5.081 ug/mL

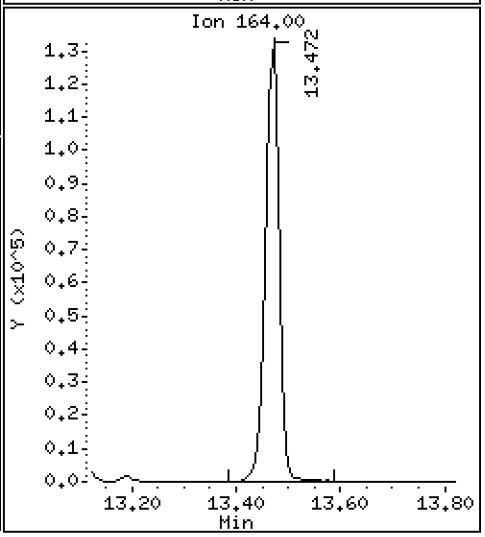


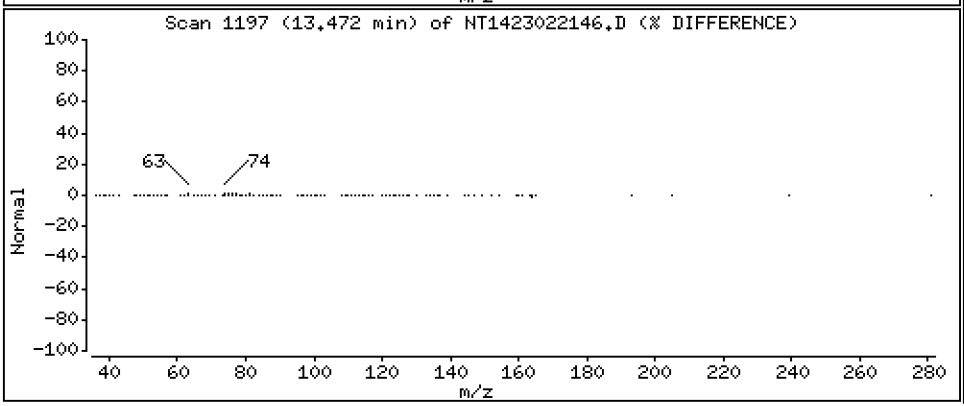












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

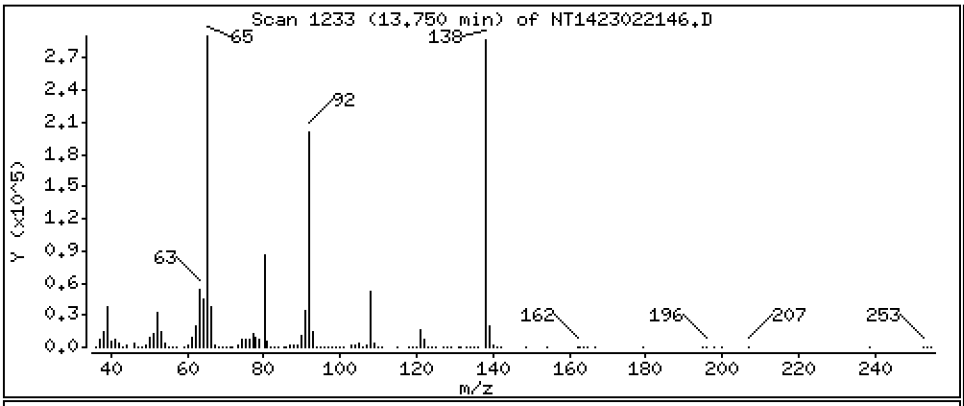
Operator: DSD

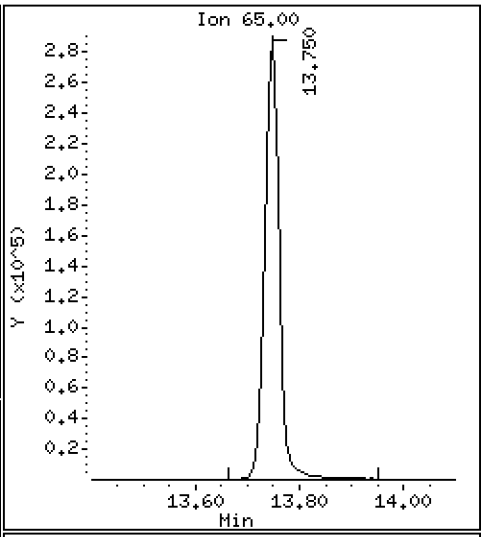
Column phase: ZB-5msi

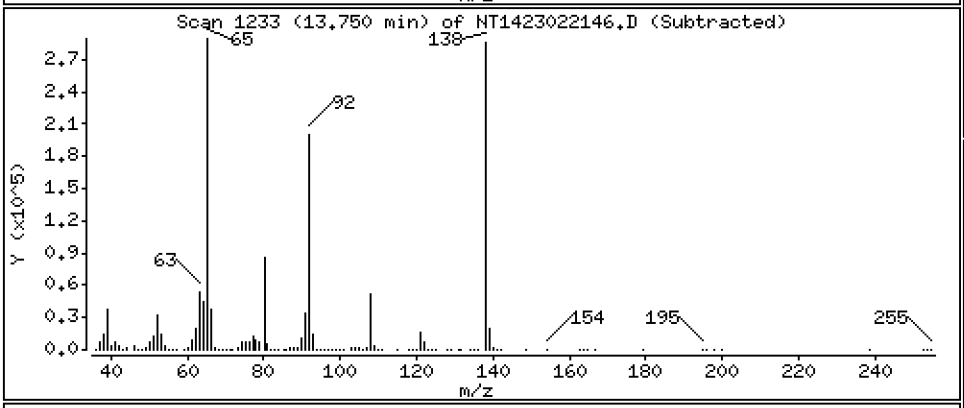
Column diameter: 0.25

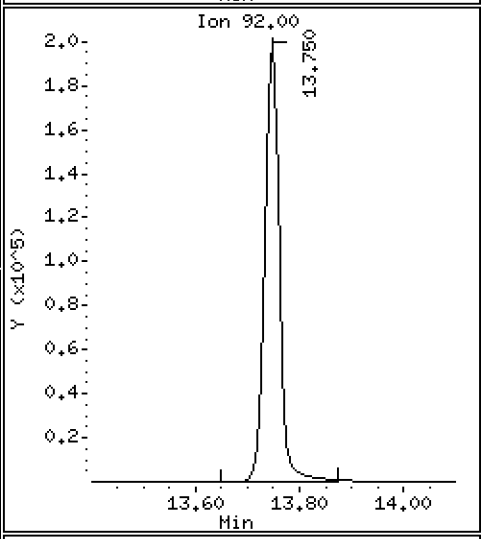
38 2-Nitroaniline

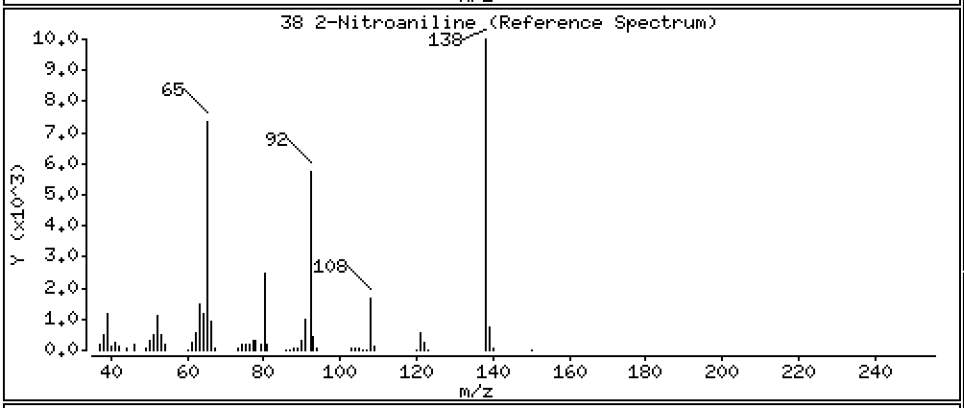
Concentration: 12.21 ug/mL

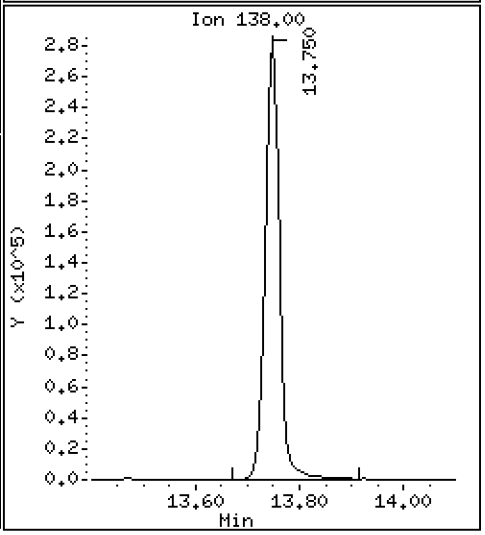


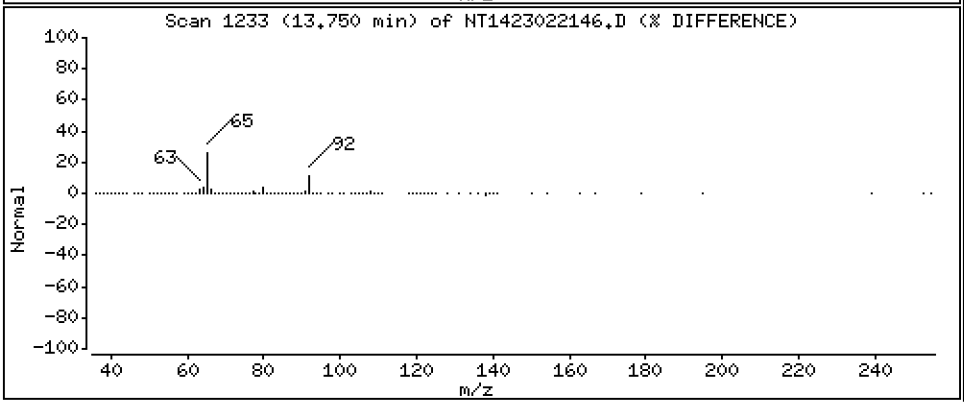












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

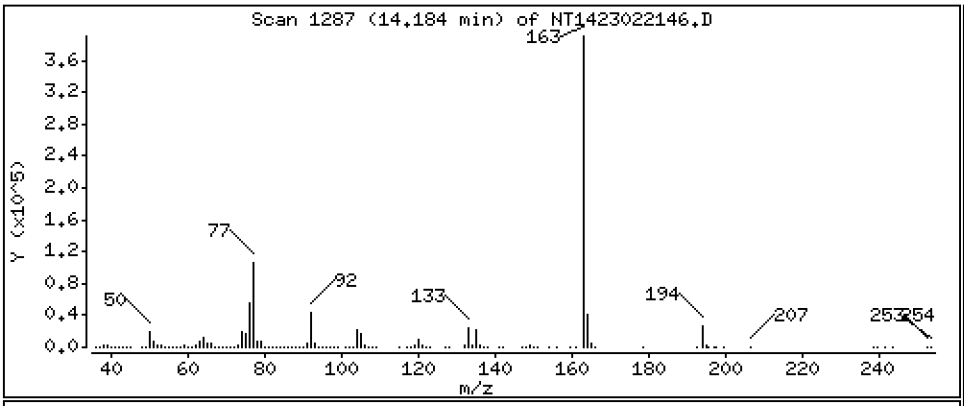
Operator: DSD

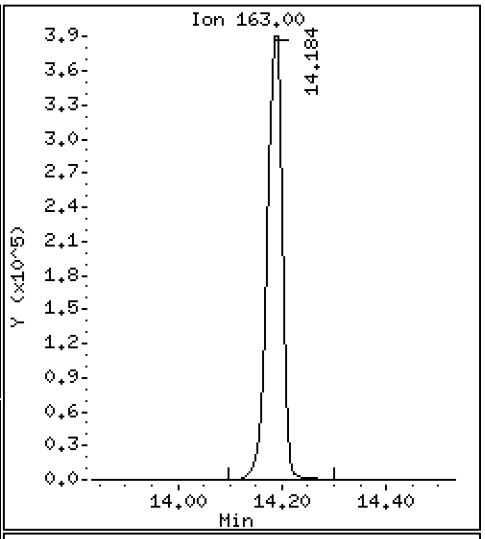
Column phase: ZB-5msi

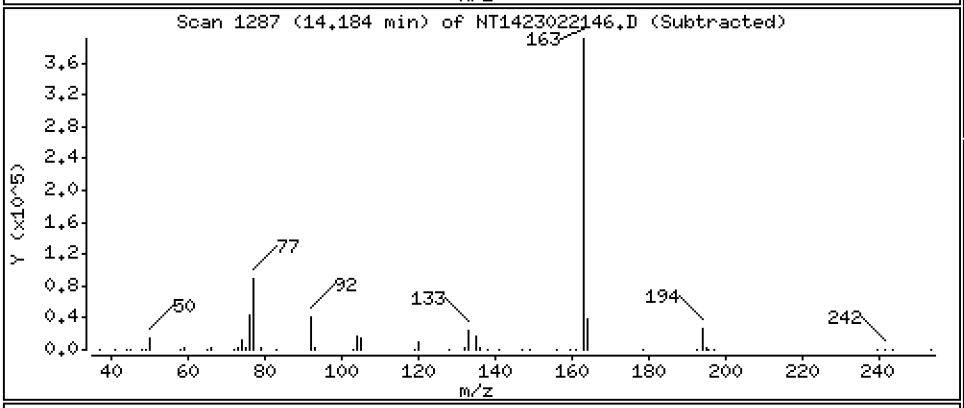
Column diameter: 0.25

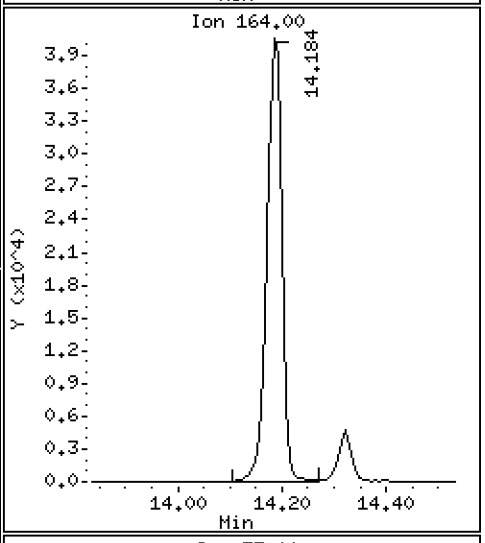
39 Dimethylphthalate

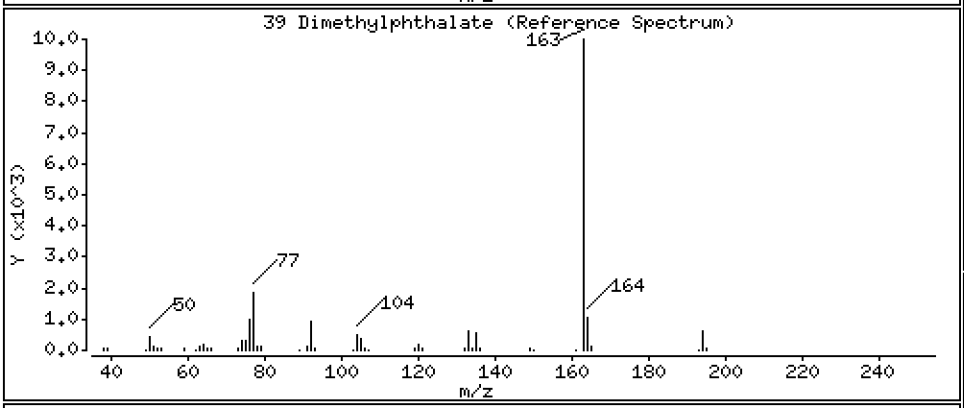
Concentration: 5.153 ug/mL

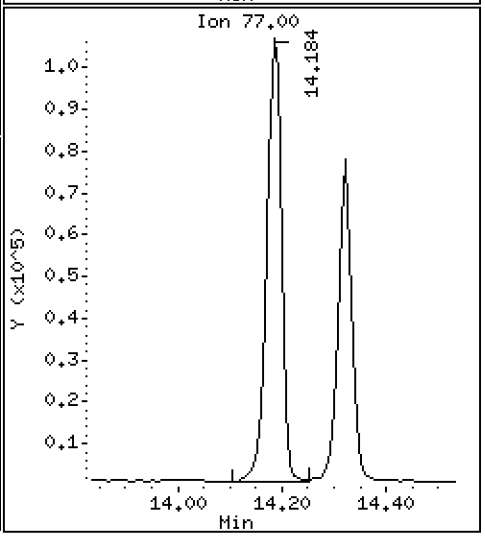


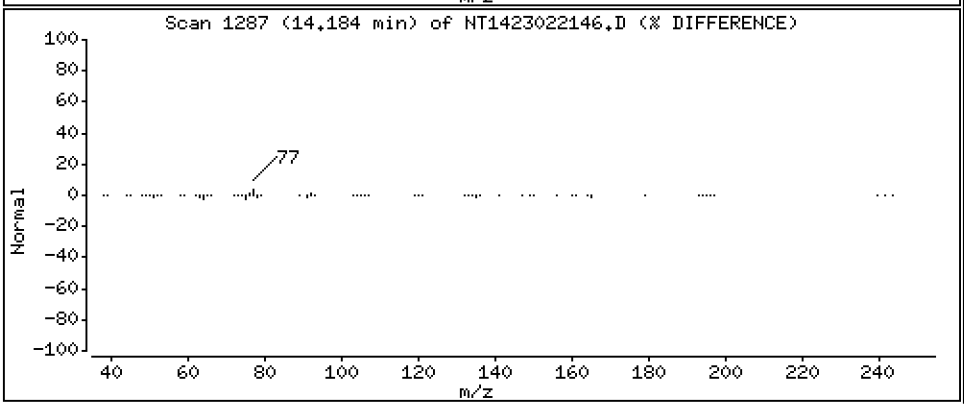












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

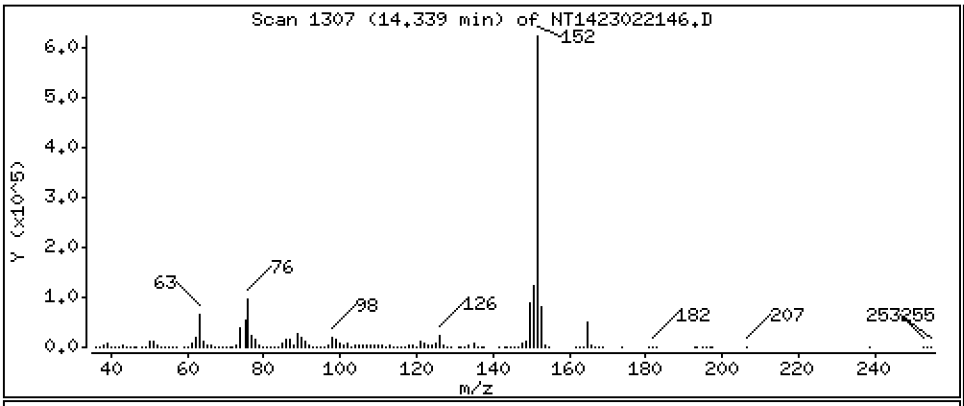
Operator: DSD

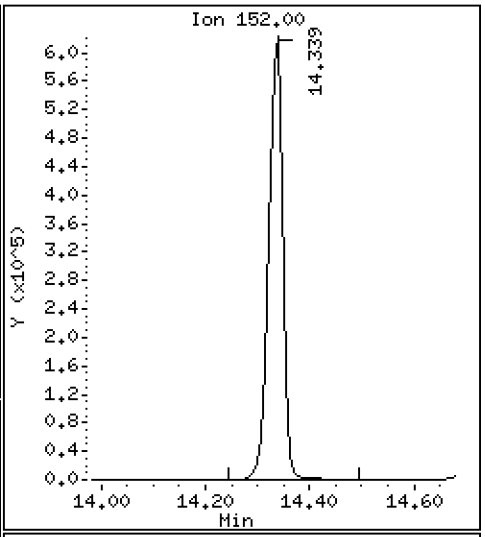
Column phase: ZB-5msi

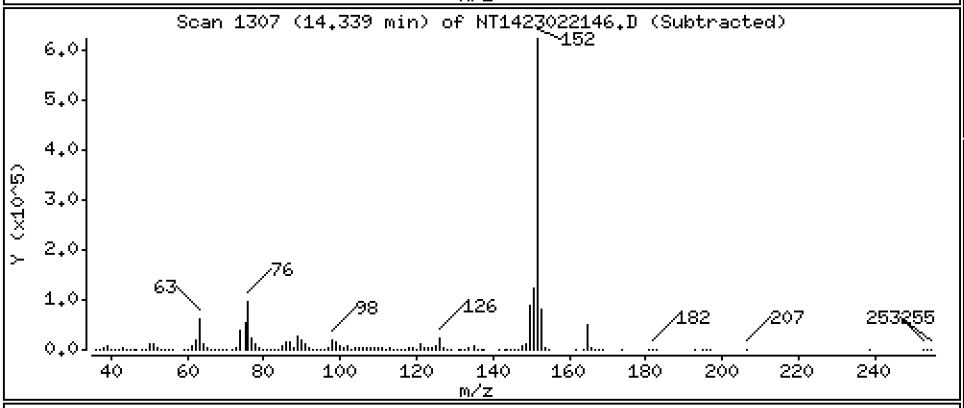
Column diameter: 0.25

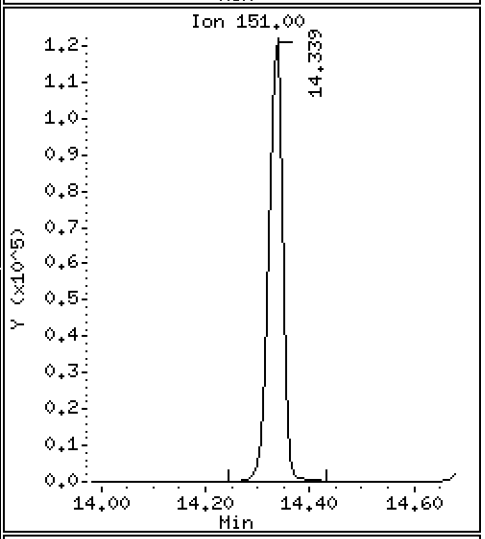
40 Acenaphthylene

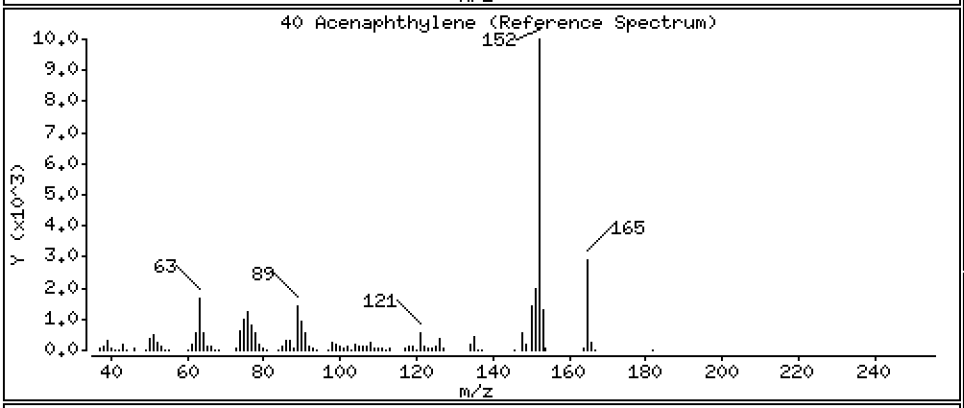
Concentration: 5.212 ug/mL

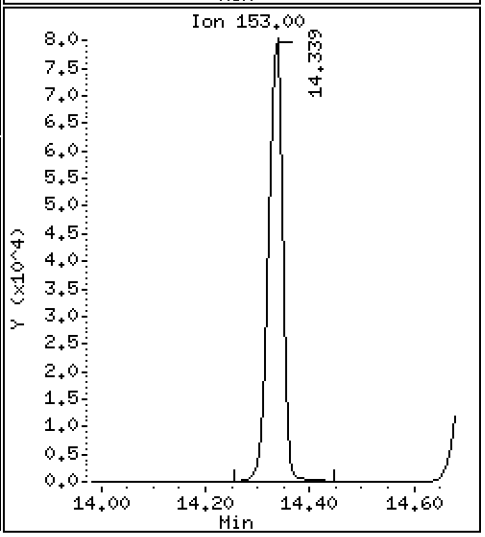


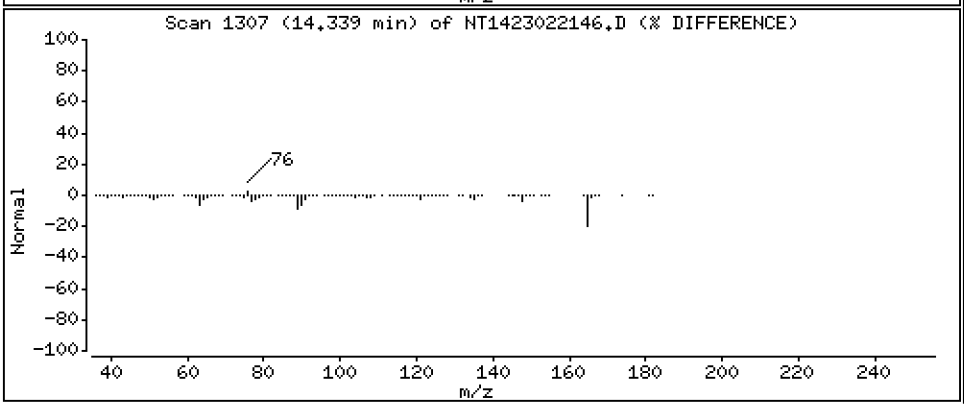












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

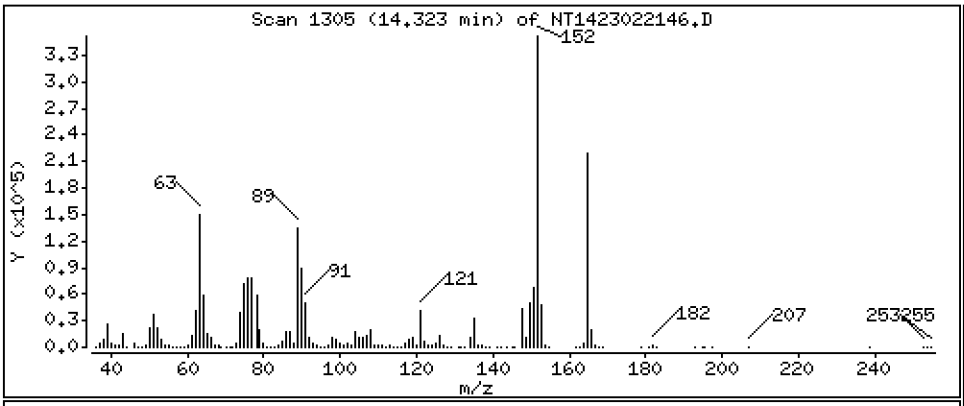
Operator: DSD

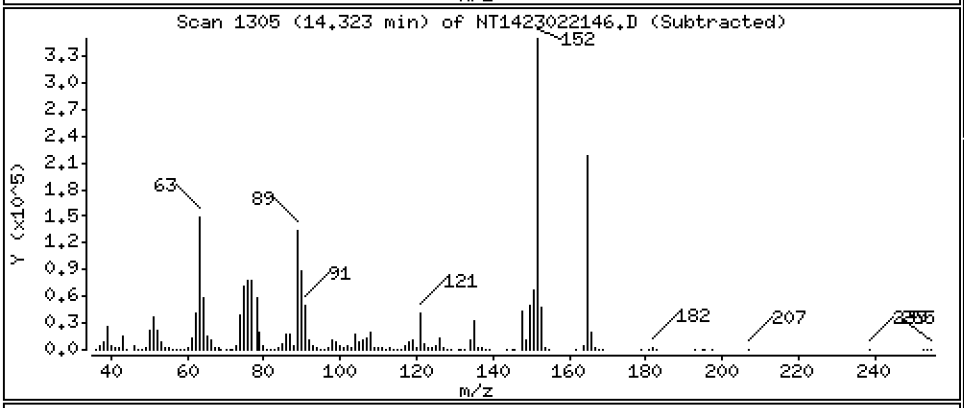
Column phase: ZB-5msi

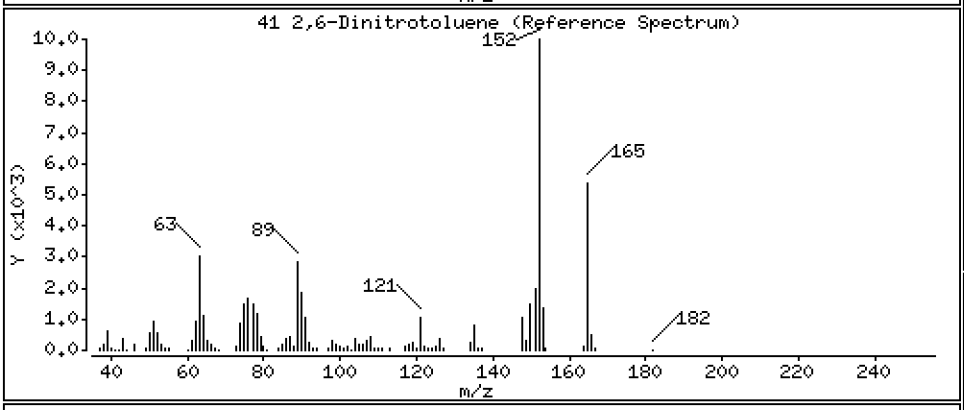
Column diameter: 0.25

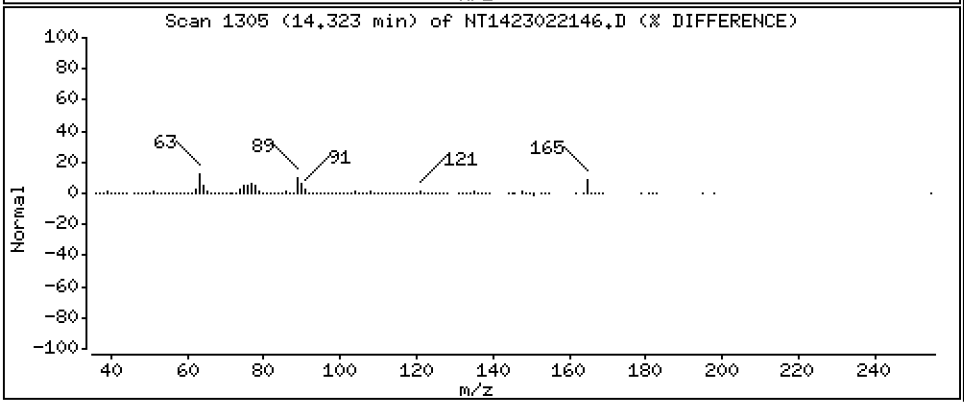
41 2,6-Dinitrotoluene

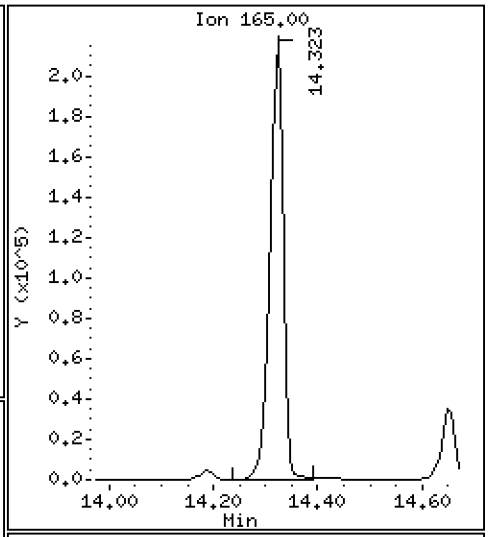
Concentration: 10.41 ug/mL

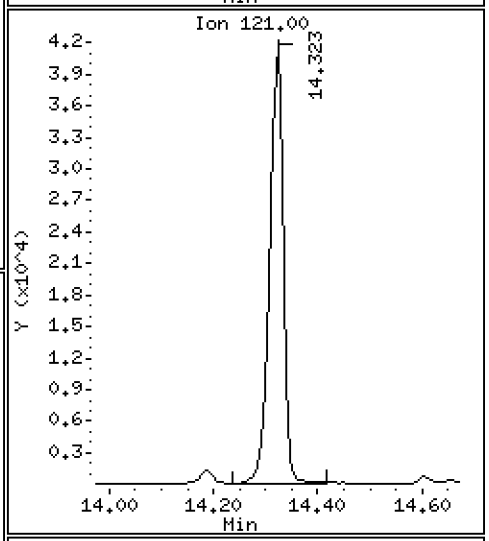


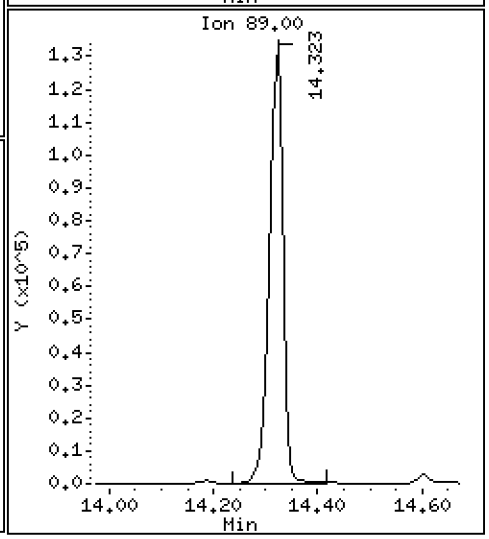












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

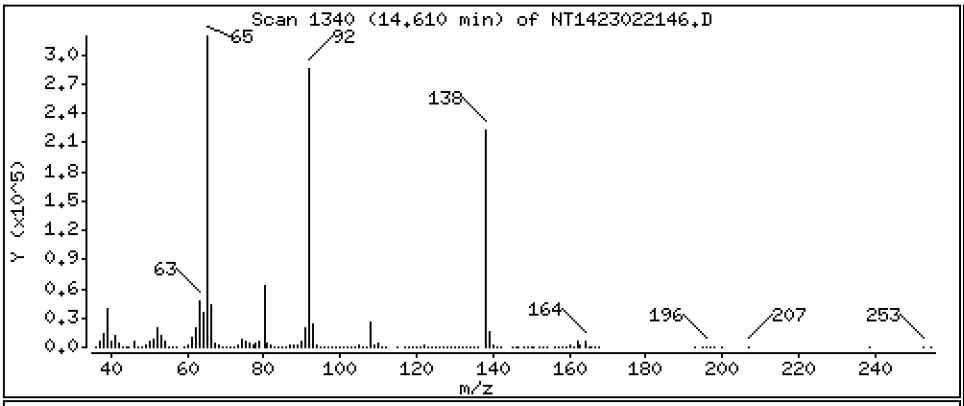
Operator: DSD

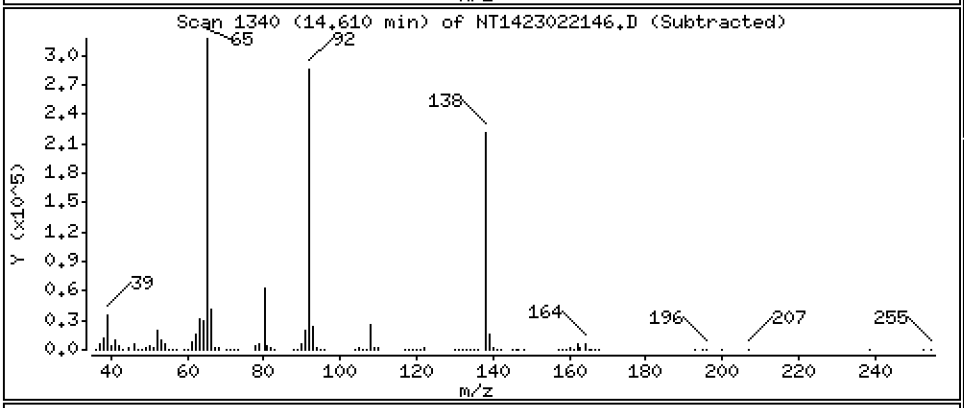
Column phase: ZB-5msi

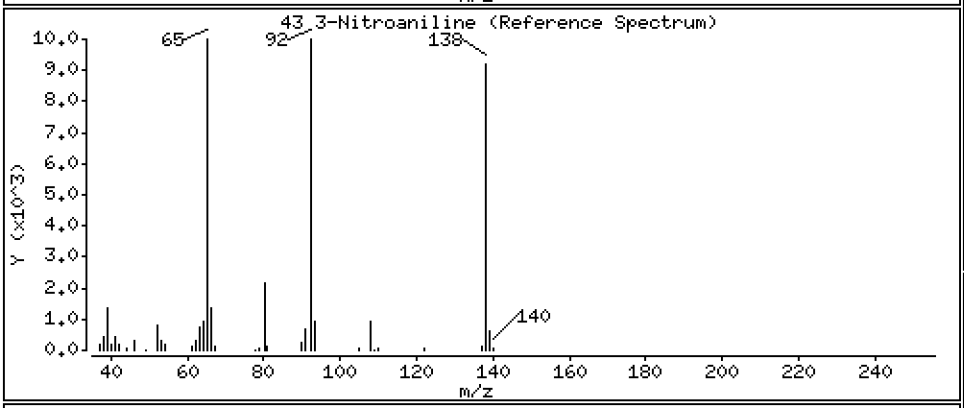
Column diameter: 0.25

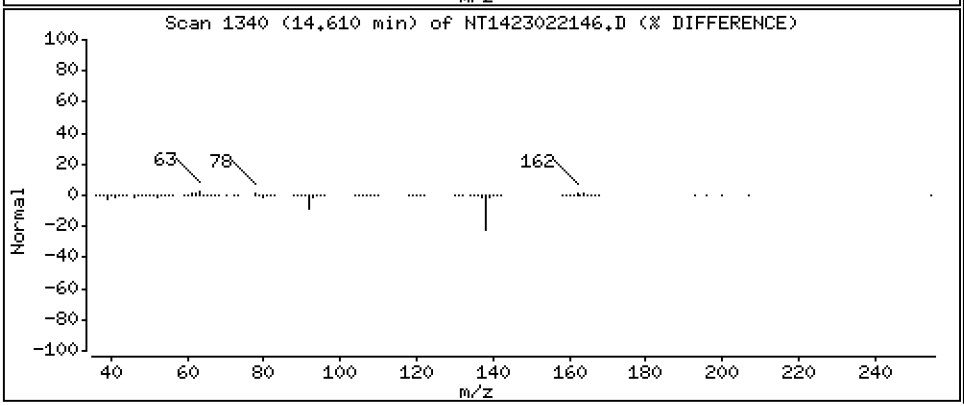
43 3-Nitroaniline

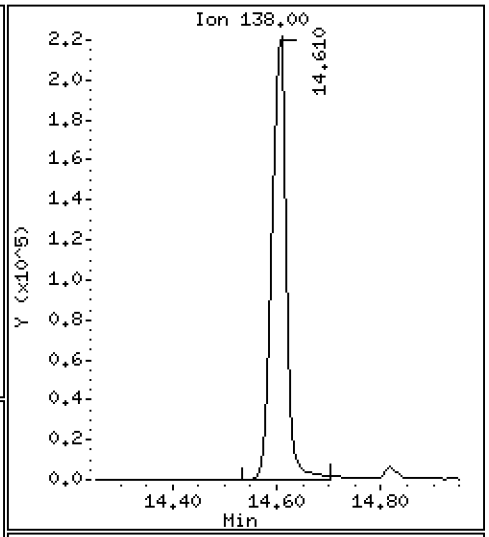
Concentration: 11.03 ug/mL

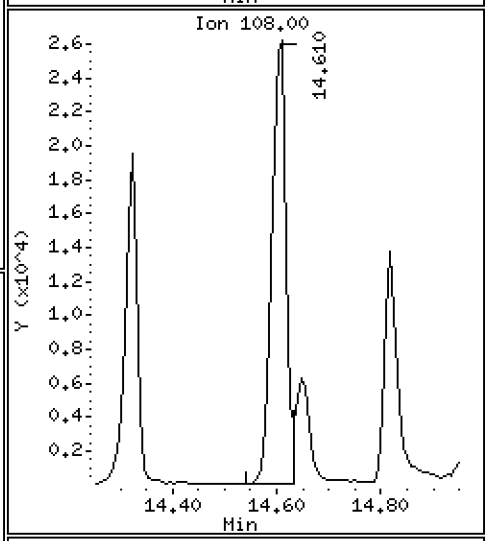


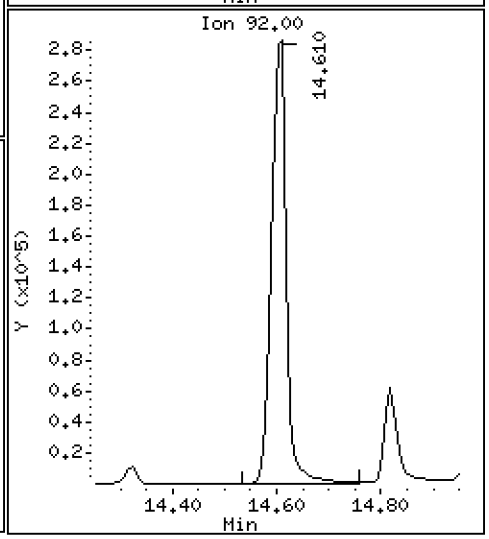












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

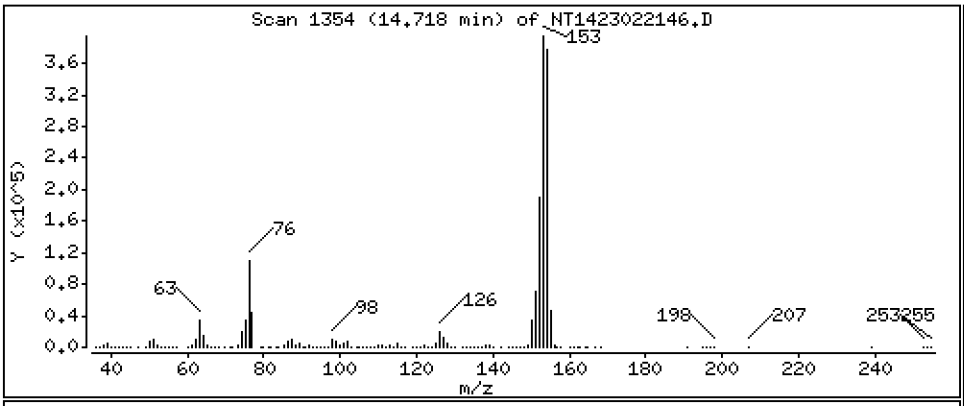
Operator: DSD

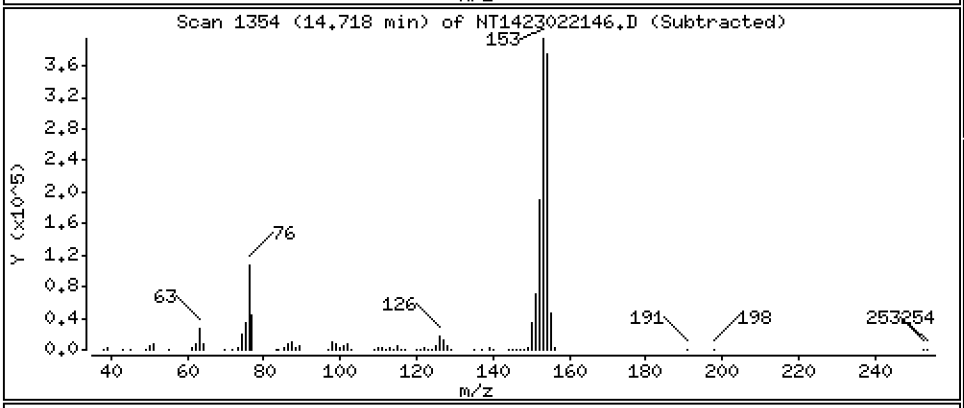
Column phase: ZB-5msi

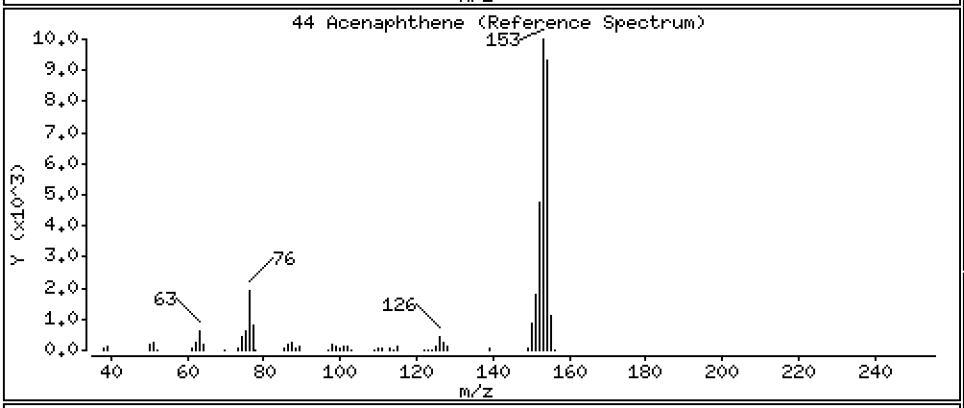
Column diameter: 0.25

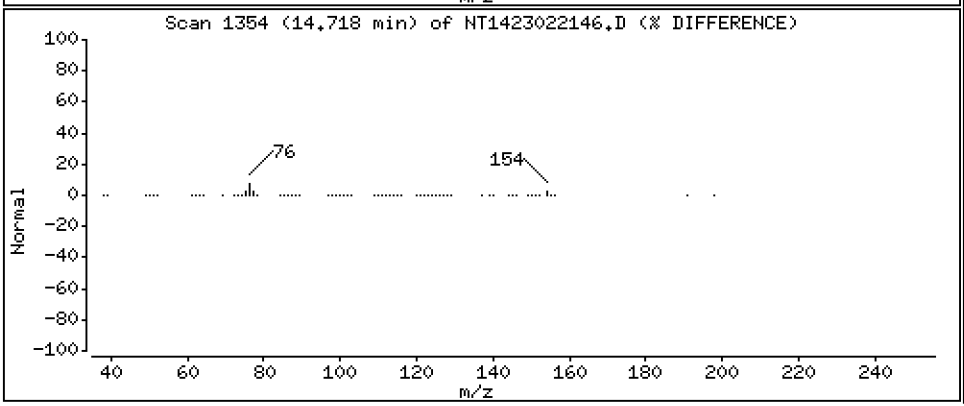
44 Acenaphthene

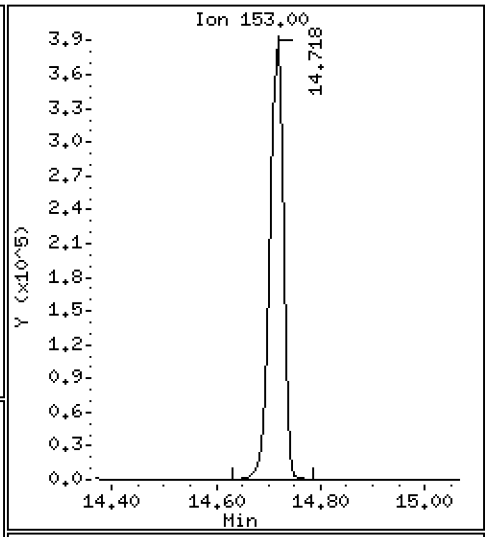
Concentration: 5.197 ug/mL

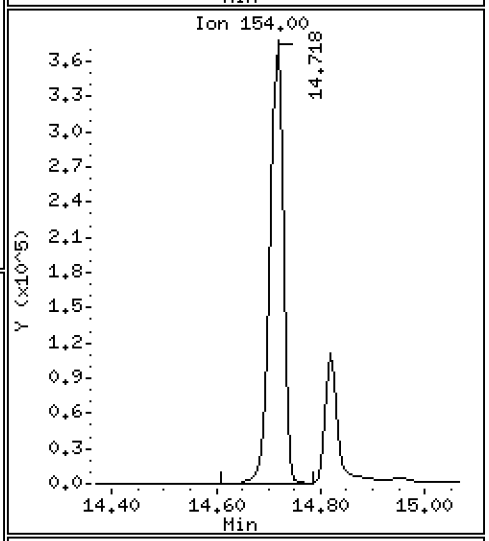


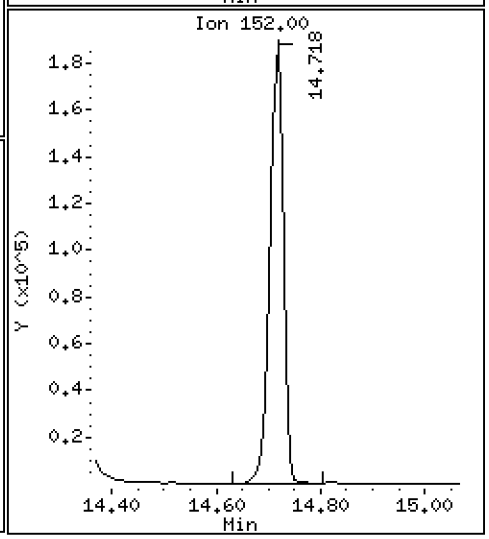












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

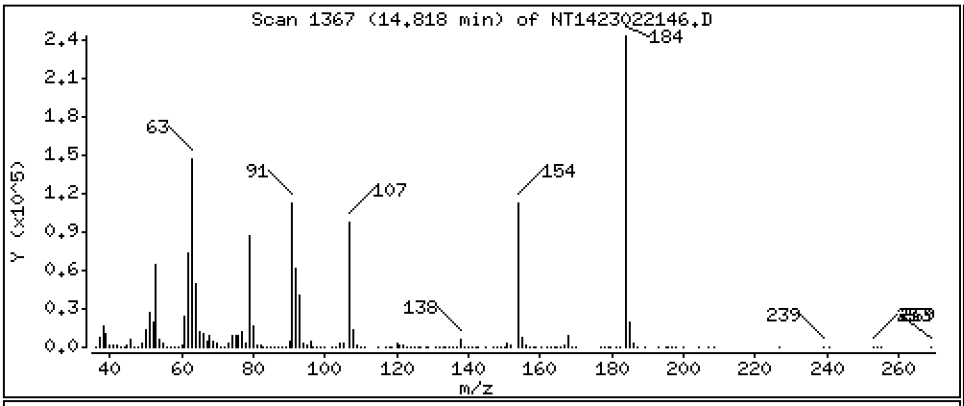
Operator: DSD

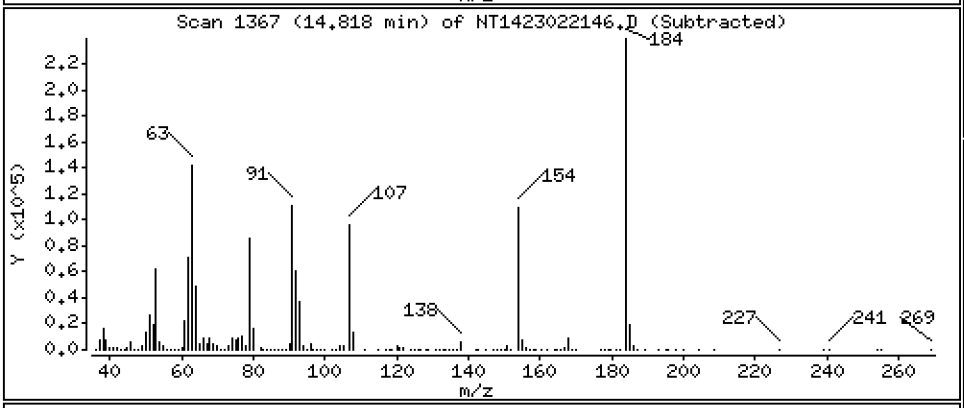
Column phase: ZB-5msi

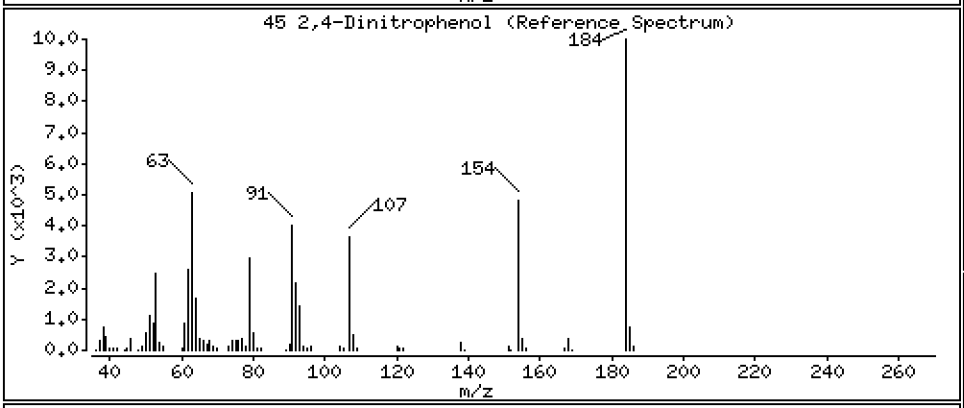
Column diameter: 0.25

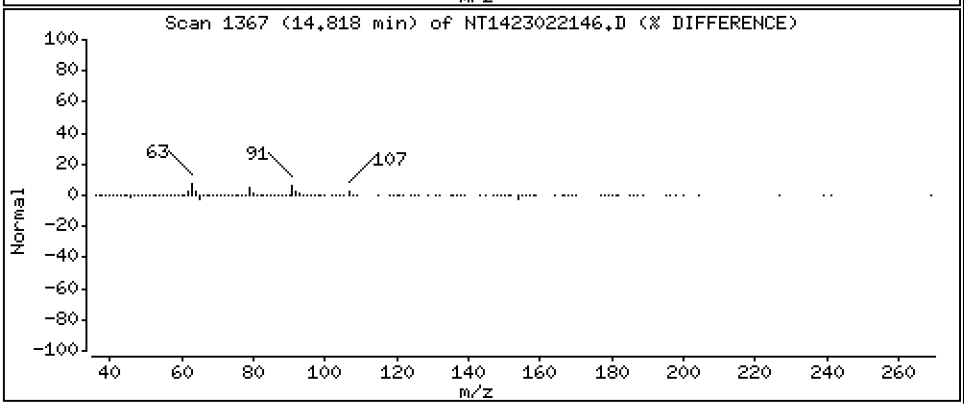
45 2,4-Dinitrophenol

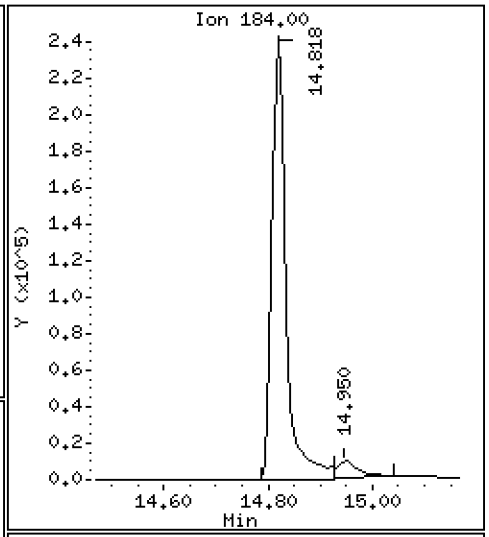
Concentration: 18.32 ug/mL

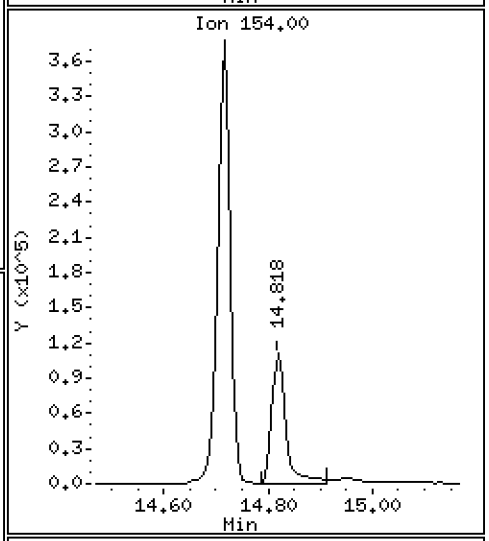


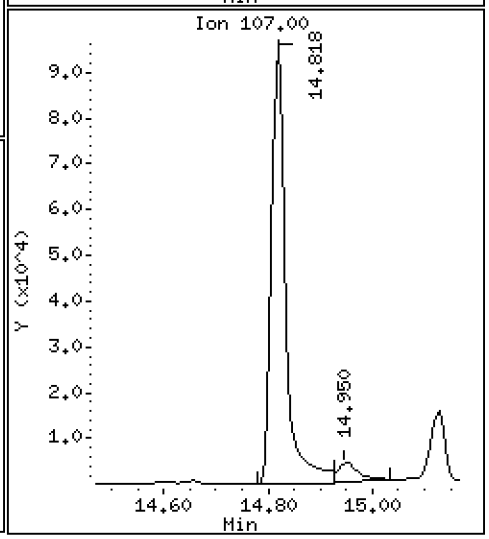












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

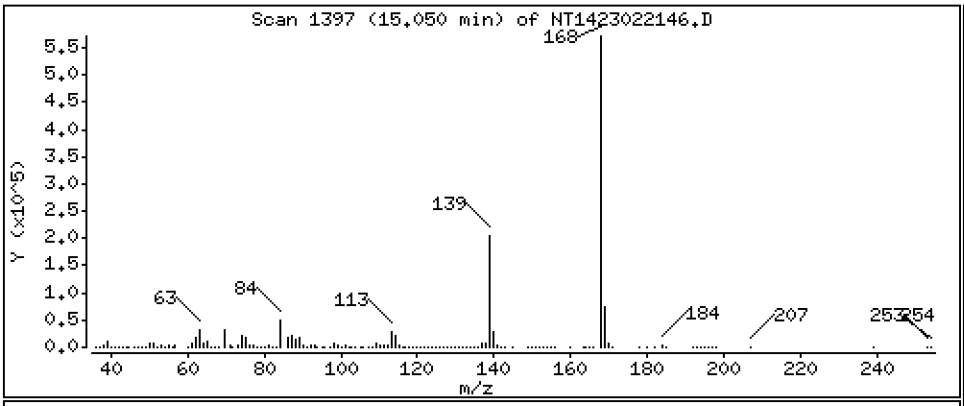
Operator: DSD

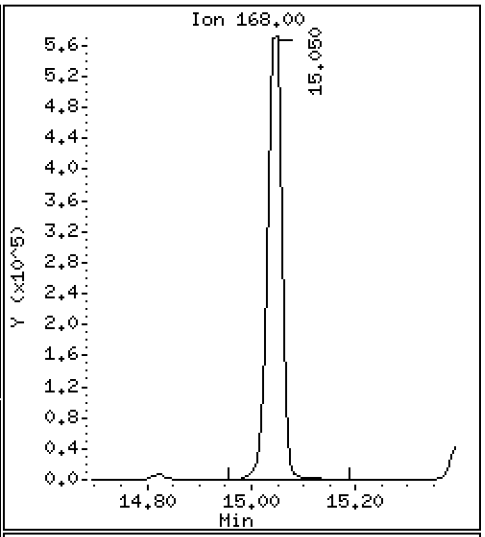
Column phase: ZB-5msi

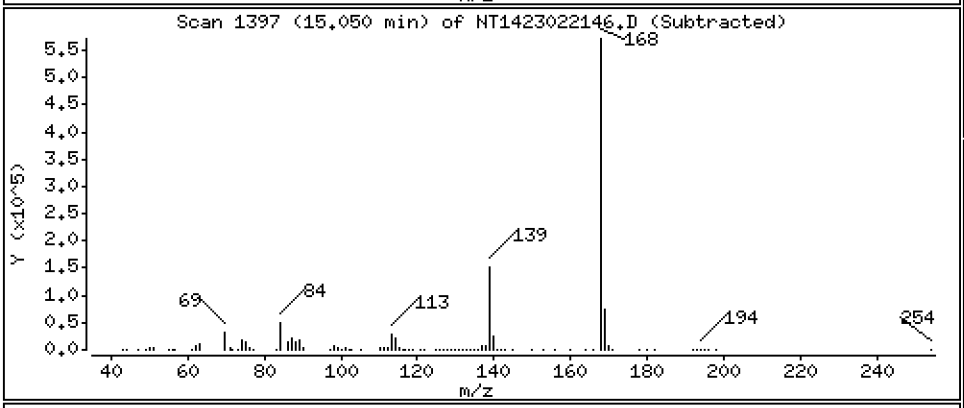
Column diameter: 0.25

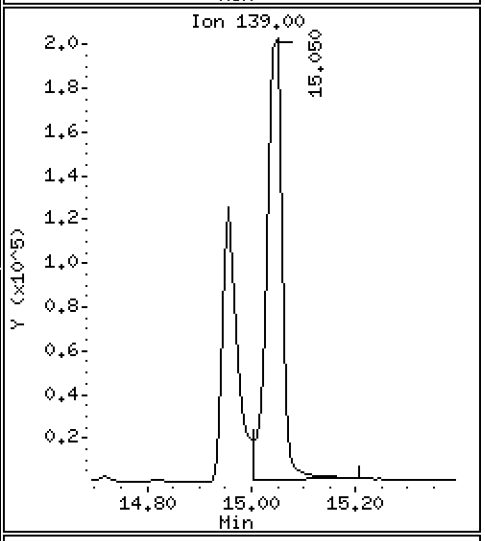
46 Dibenzofuran

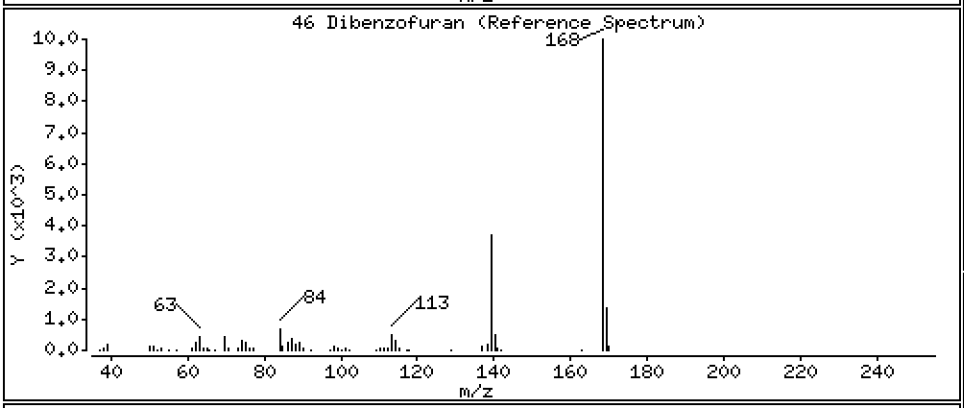
Concentration: 4.912 ug/mL

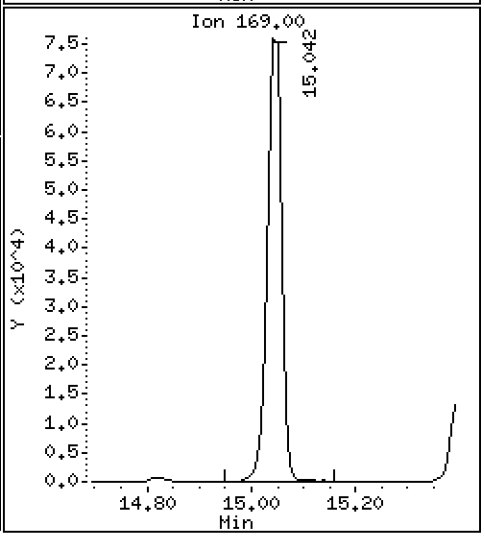


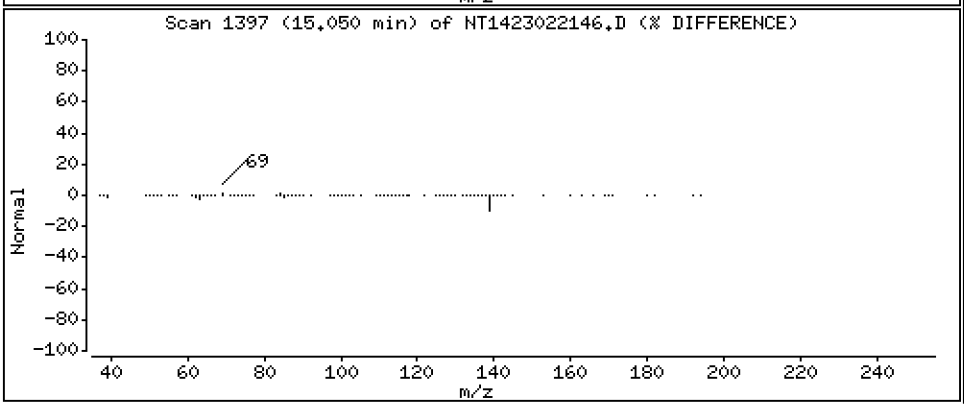












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

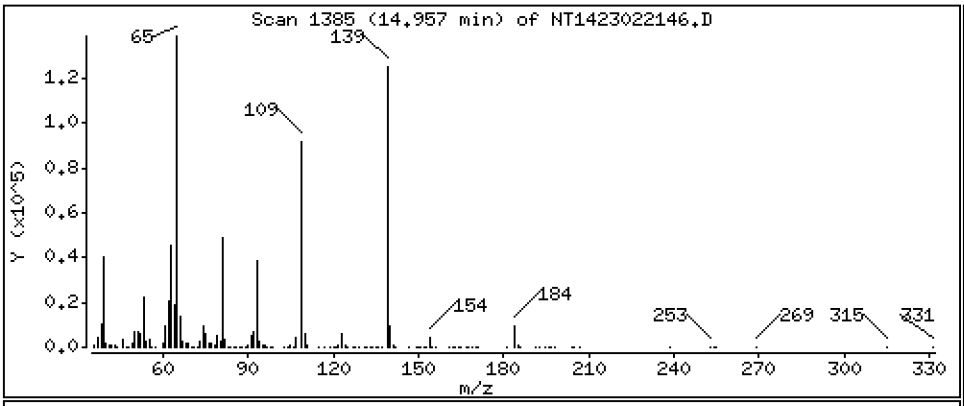
Operator: DSD

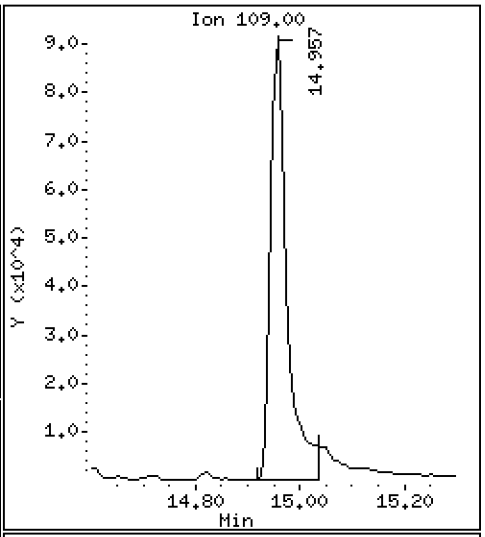
Column phase: ZB-5msi

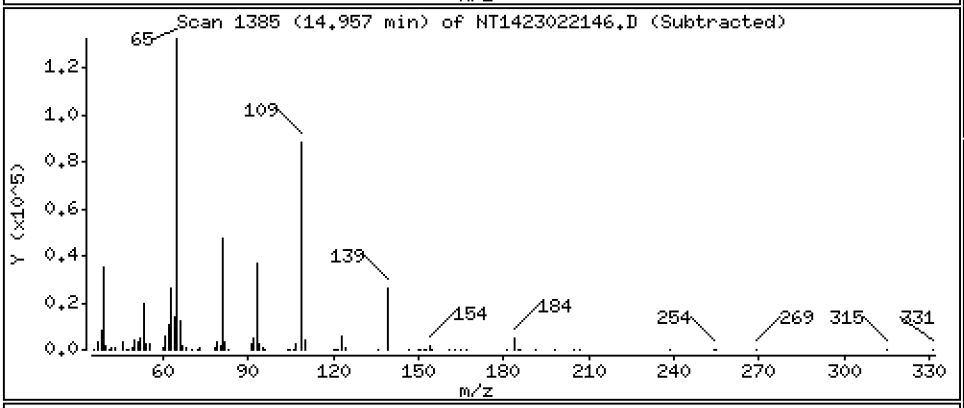
Column diameter: 0.25

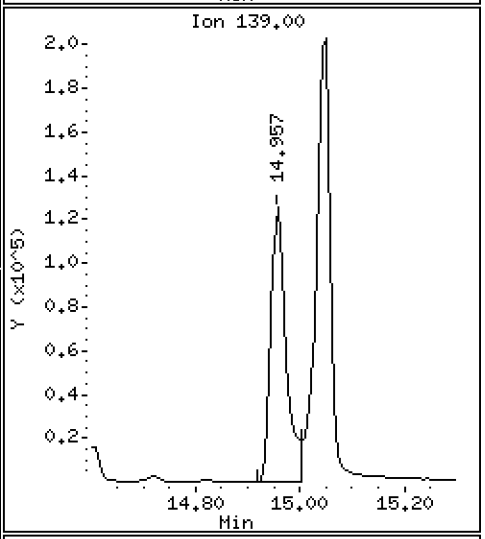
47 4-Nitrophenol

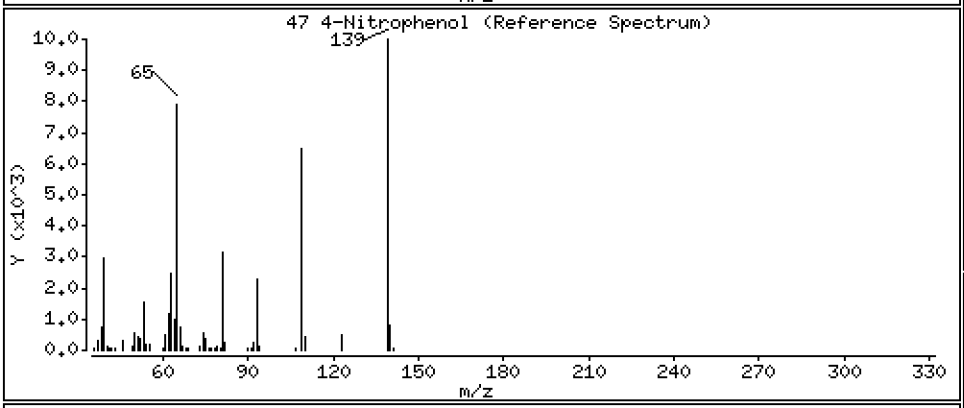
Concentration: 8.883 ug/mL

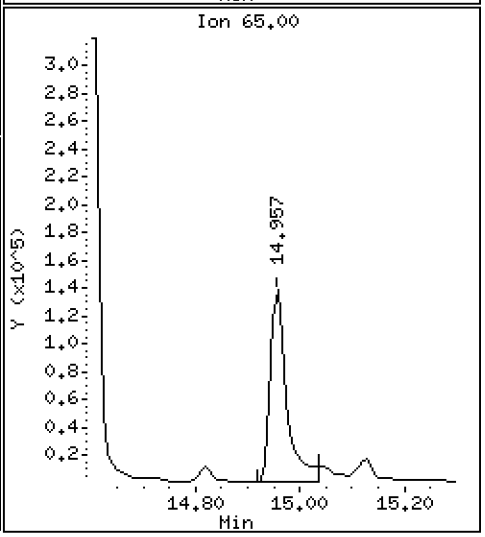


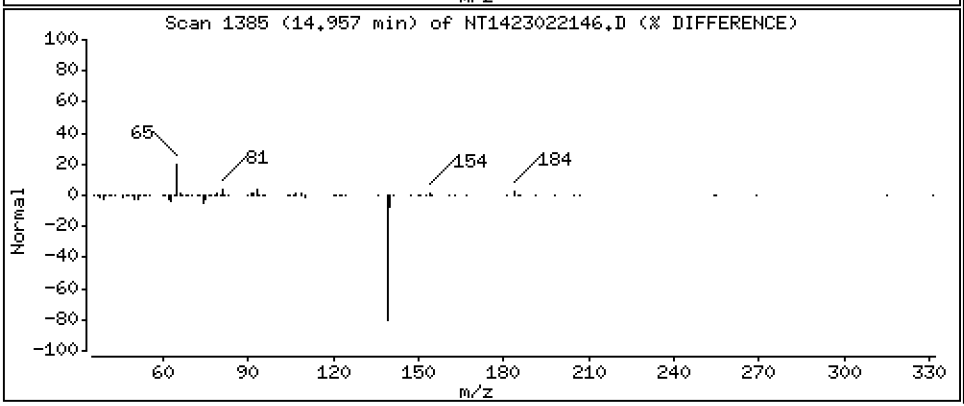












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

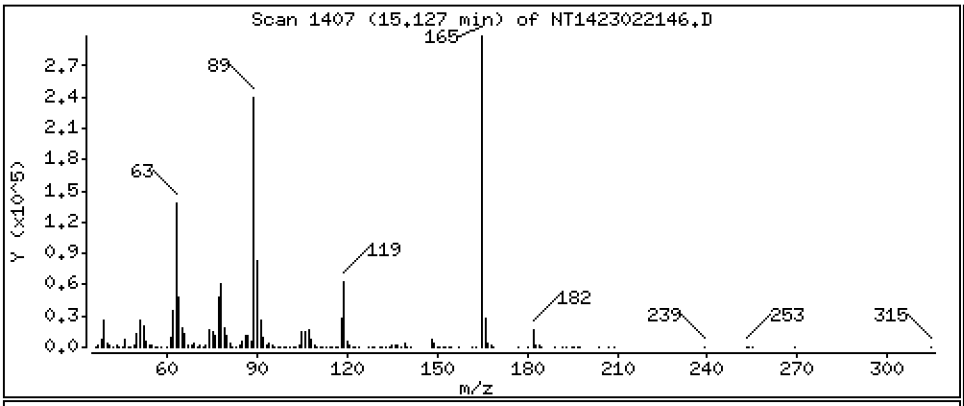
Operator: DSD

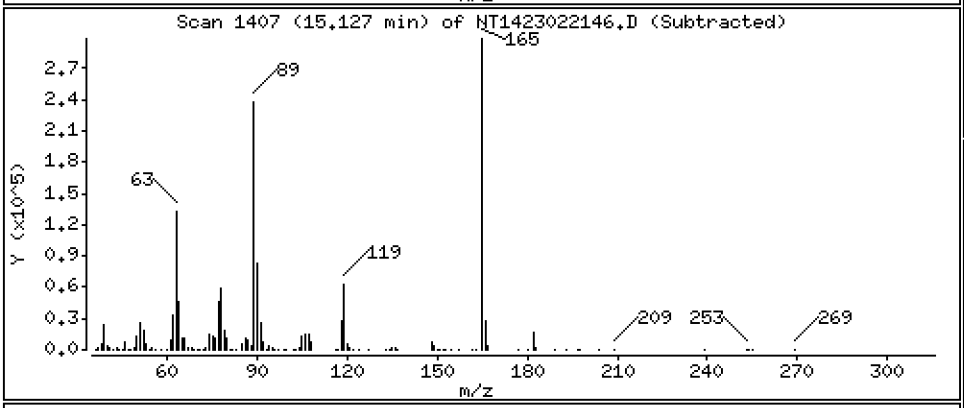
Column phase: ZB-5msi

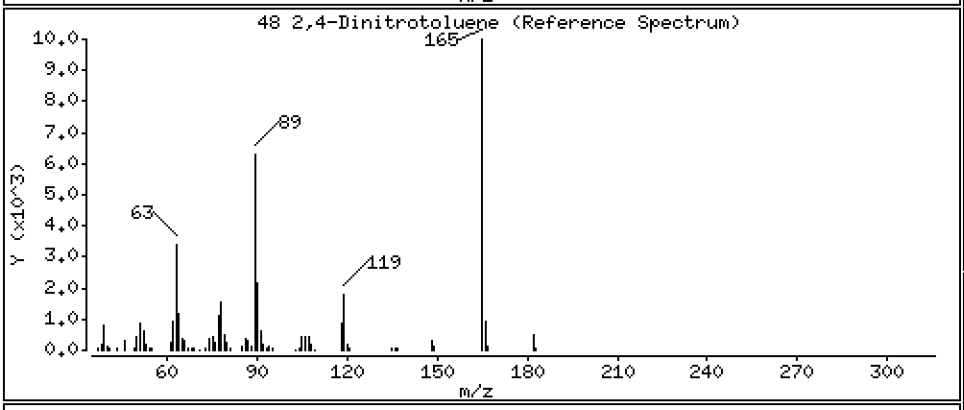
Column diameter: 0.25

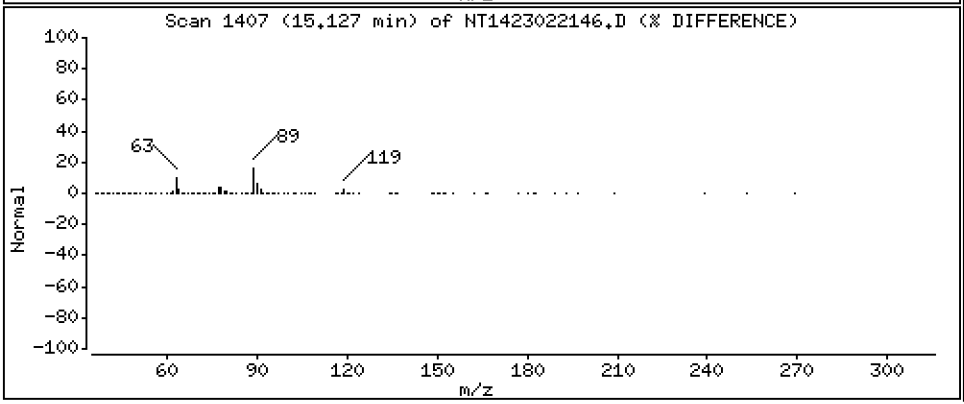
48 2,4-Dinitrotoluene

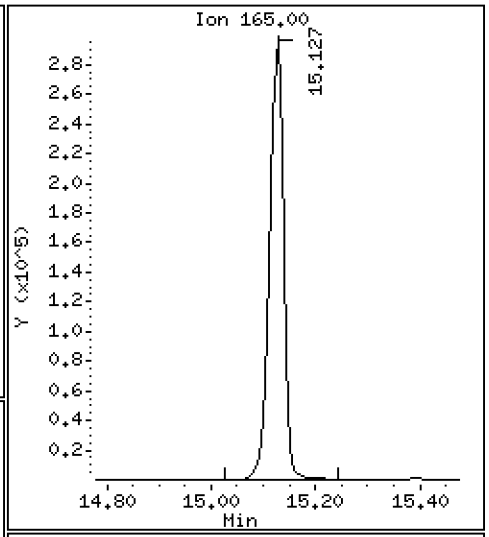
Concentration: 10.69 ug/mL

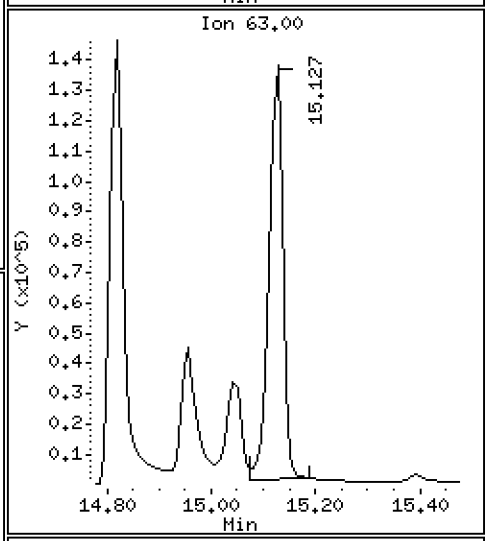


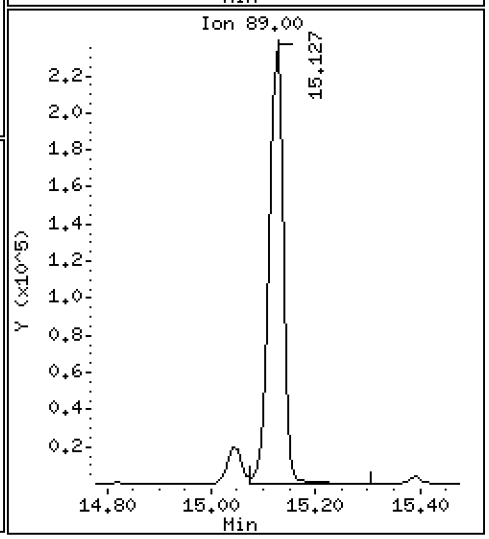












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

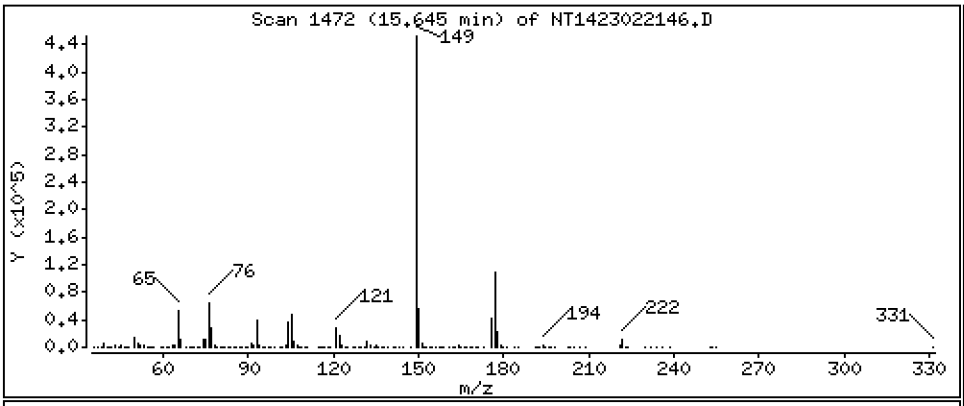
Operator: DSD

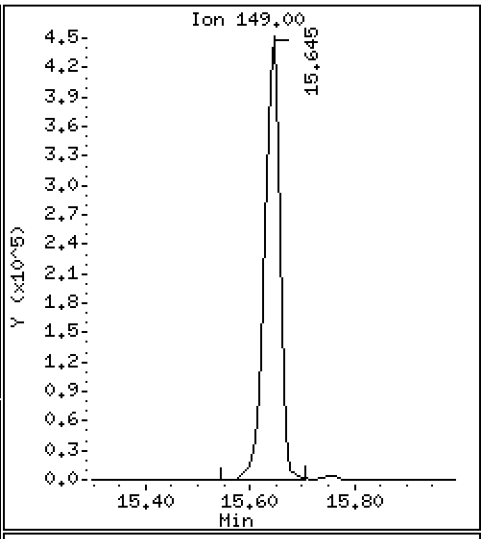
Column phase: ZB-5msi

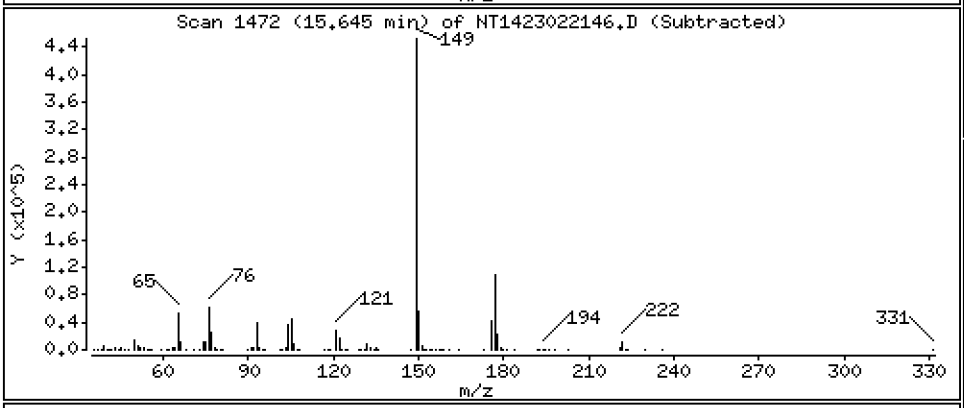
Column diameter: 0.25

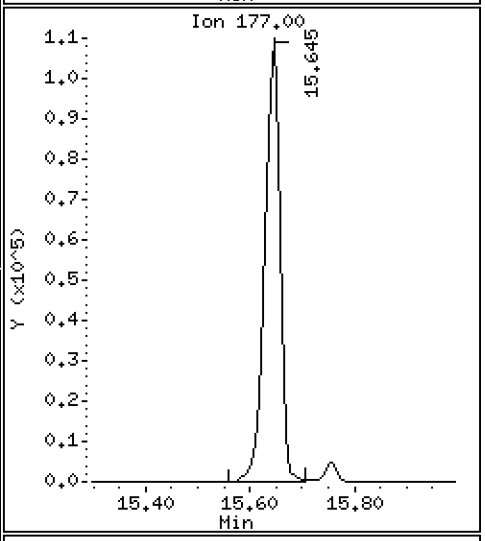
50 Diethylphthalate

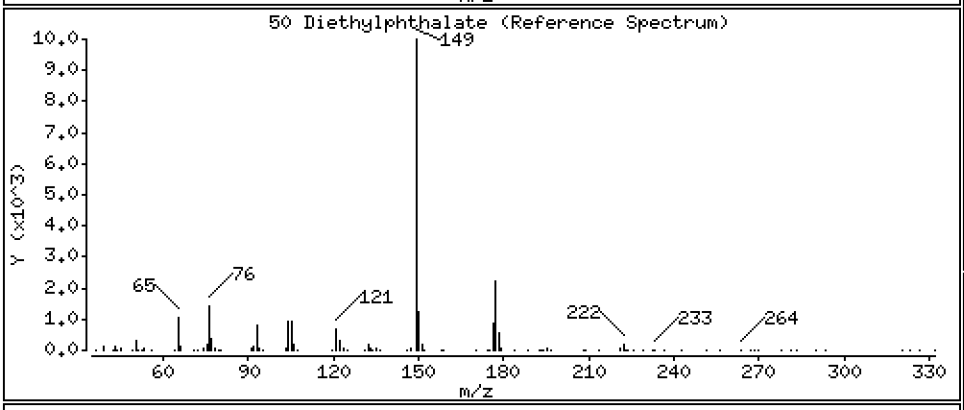
Concentration: 4.973 ug/mL

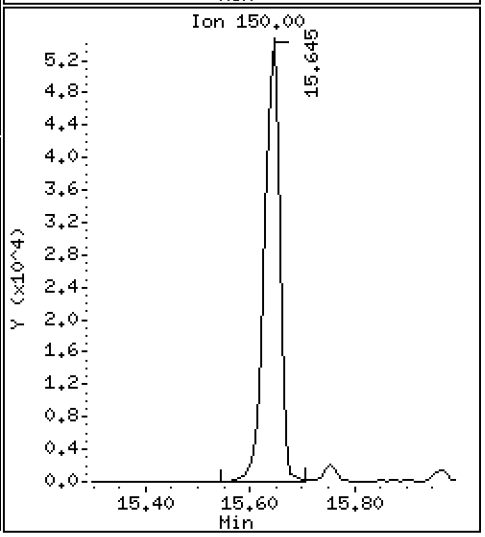


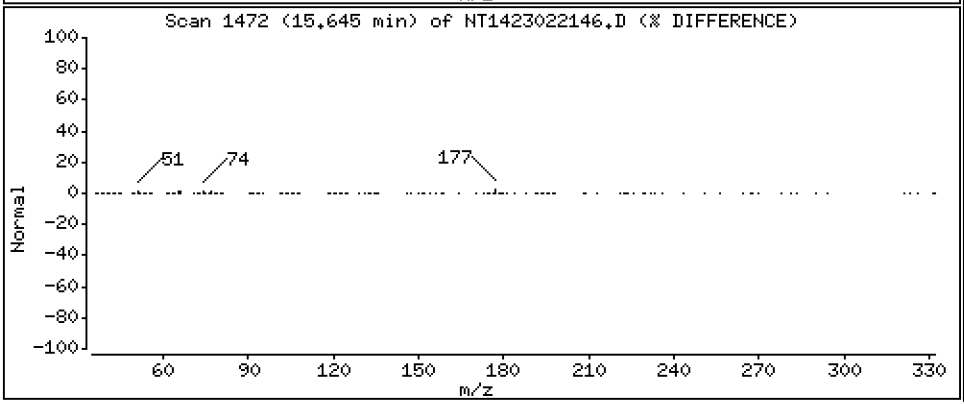












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

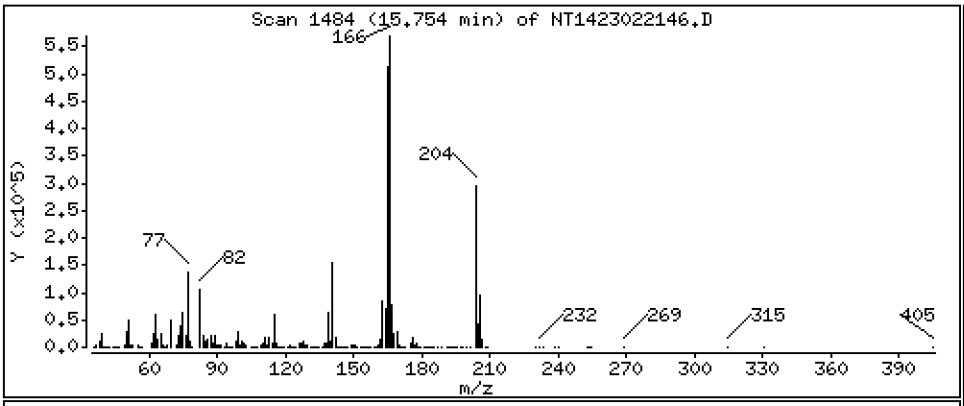
Operator: DSD

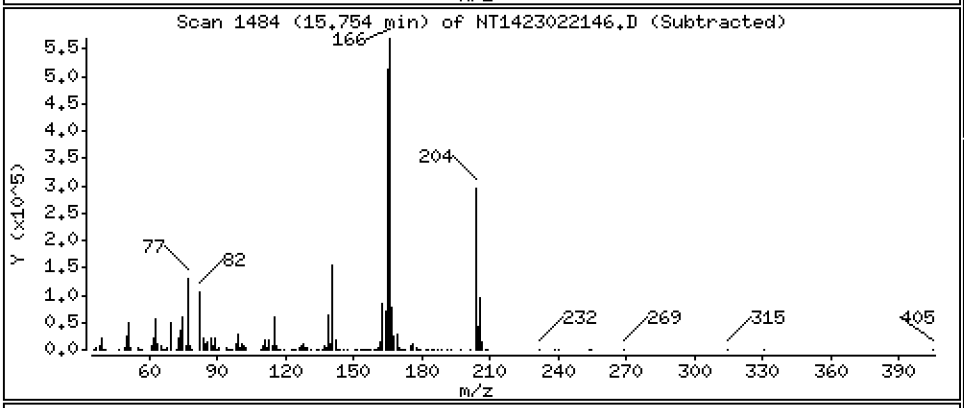
Column phase: ZB-5msi

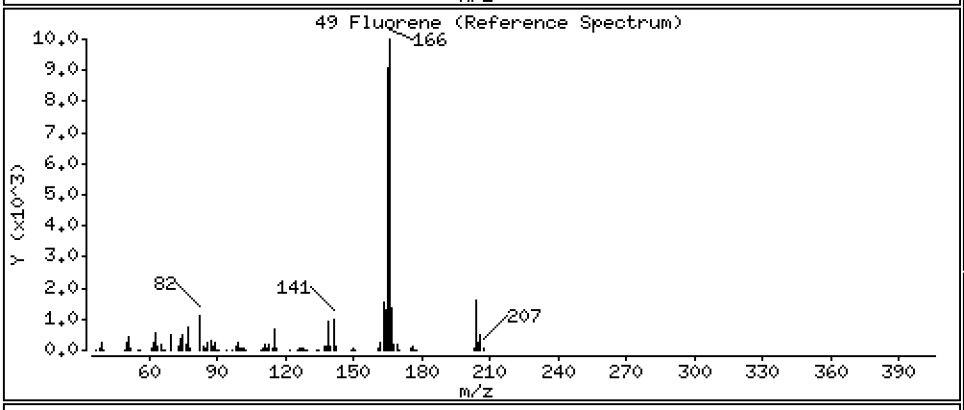
Column diameter: 0.25

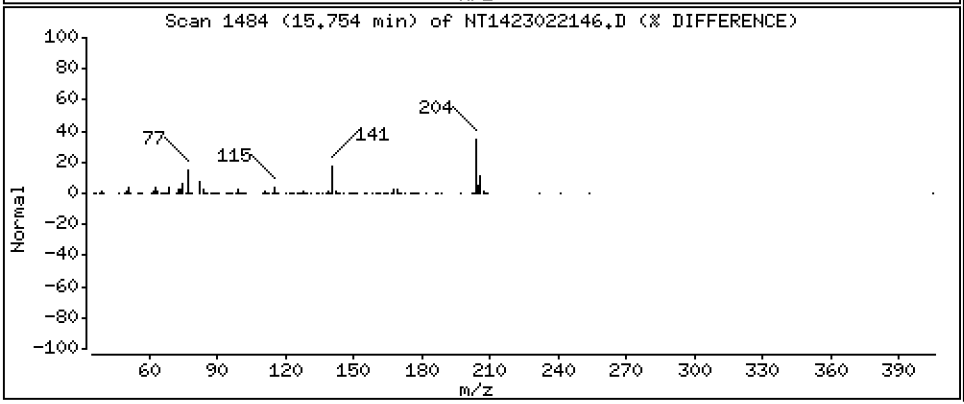
49 Fluorene

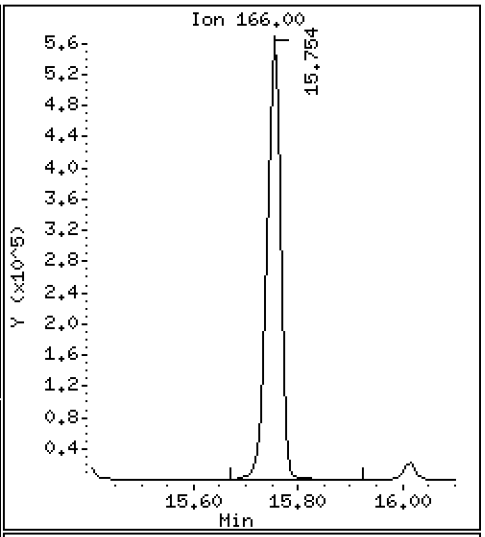
Concentration: 4.845 ug/mL

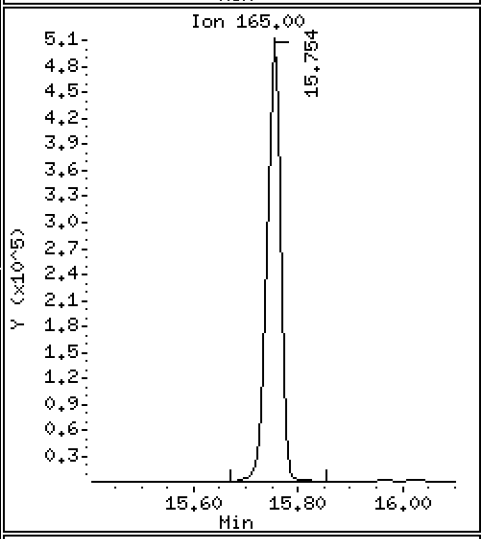


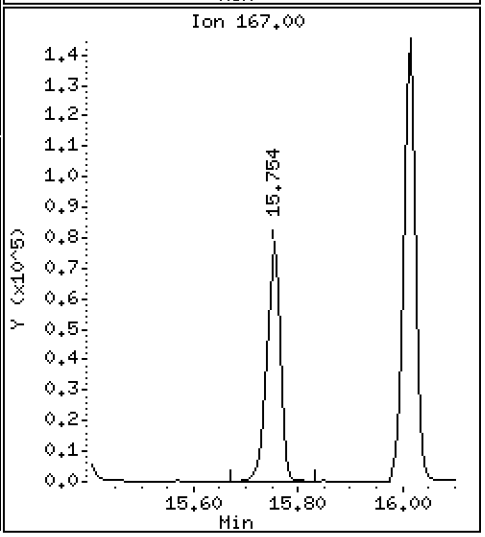












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

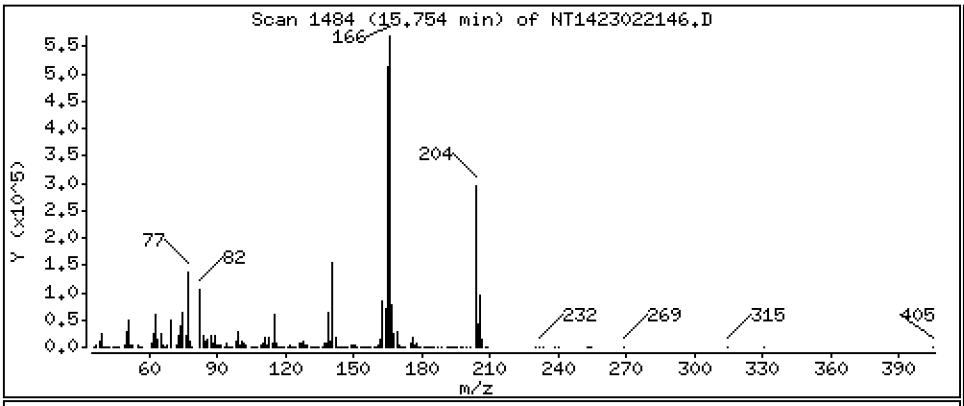
Operator: DSD

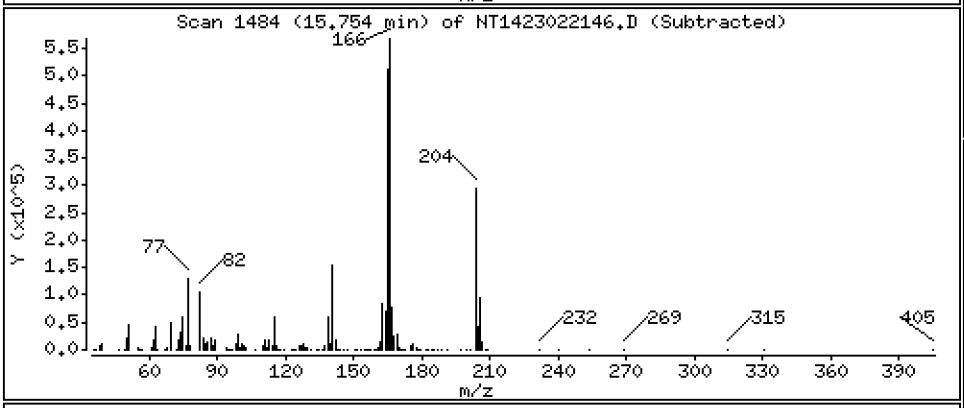
Column phase: ZB-5msi

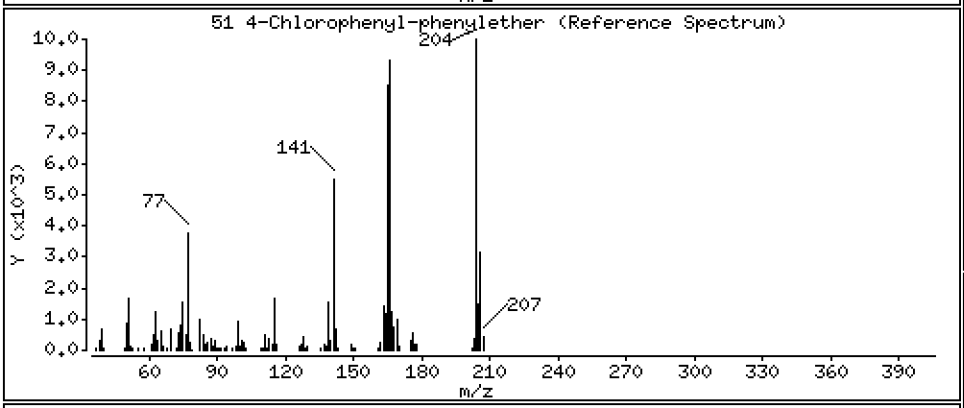
Column diameter: 0.25

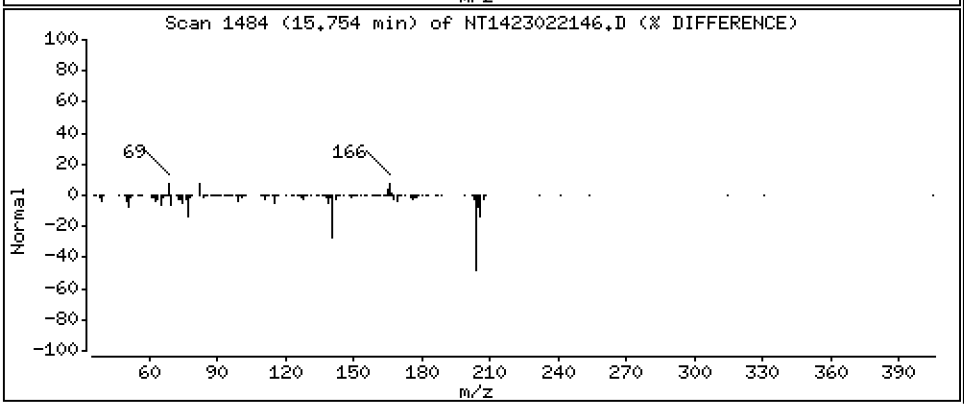
51 4-Chlorophenyl-phenylether

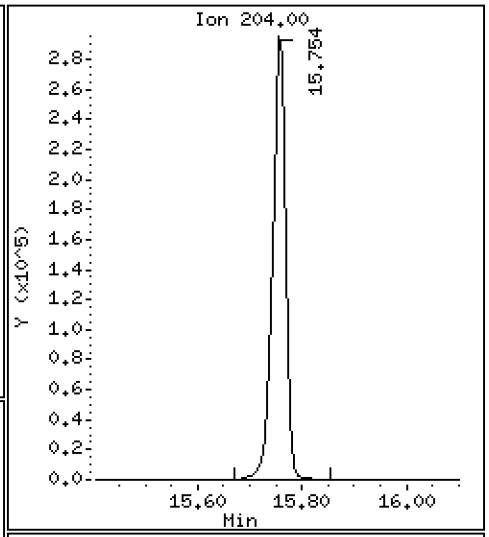
Concentration: 4.661 ug/mL

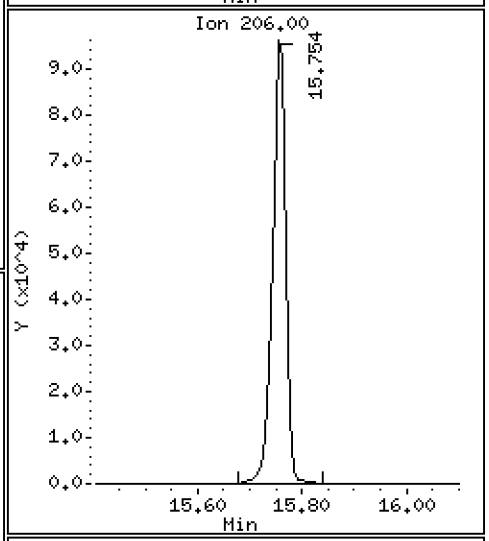


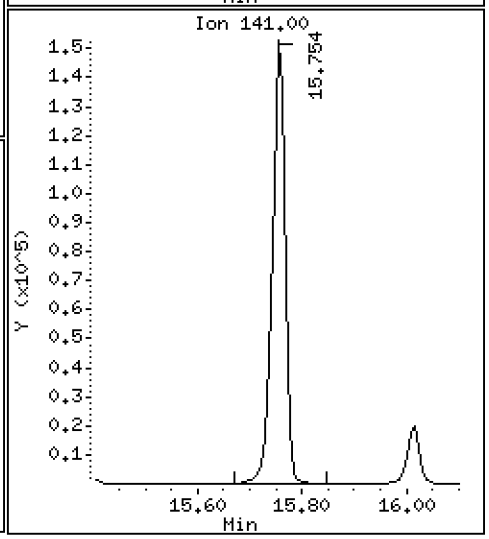












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

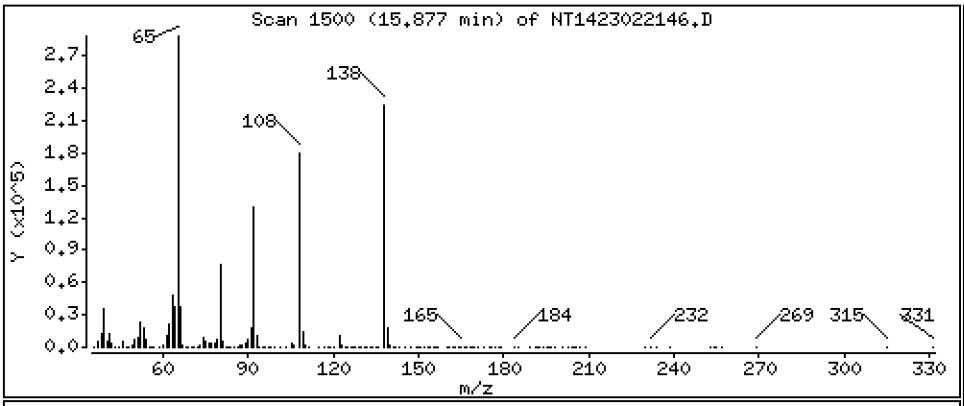
Operator: DSD

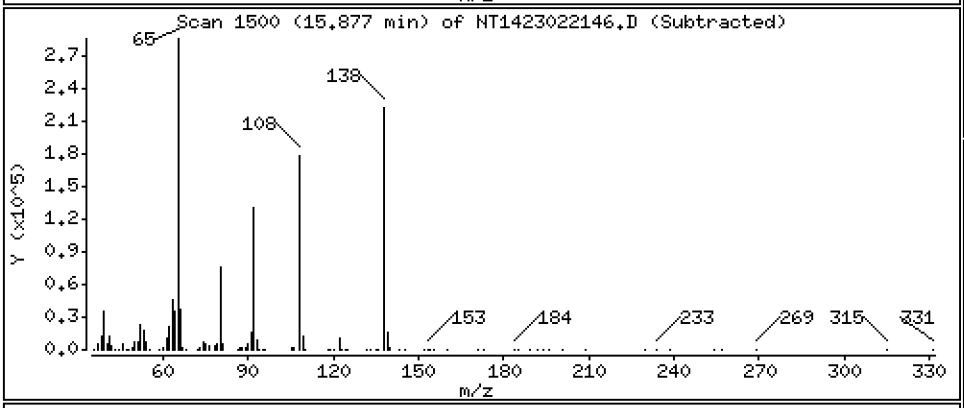
Column phase: ZB-5msi

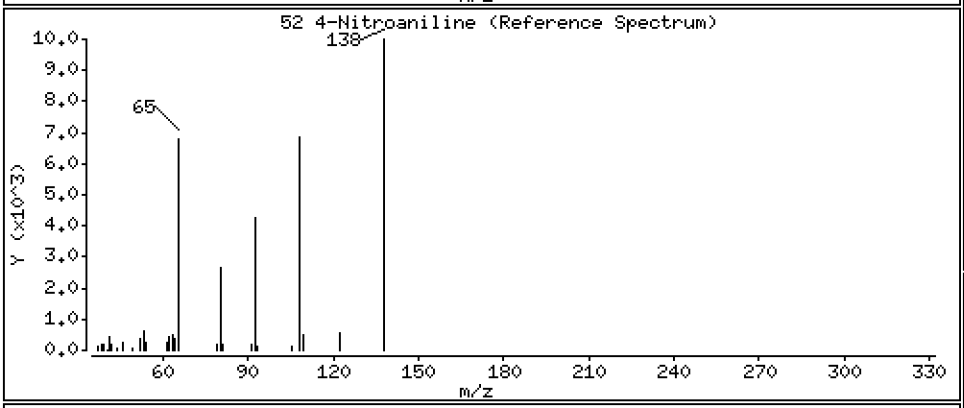
Column diameter: 0.25

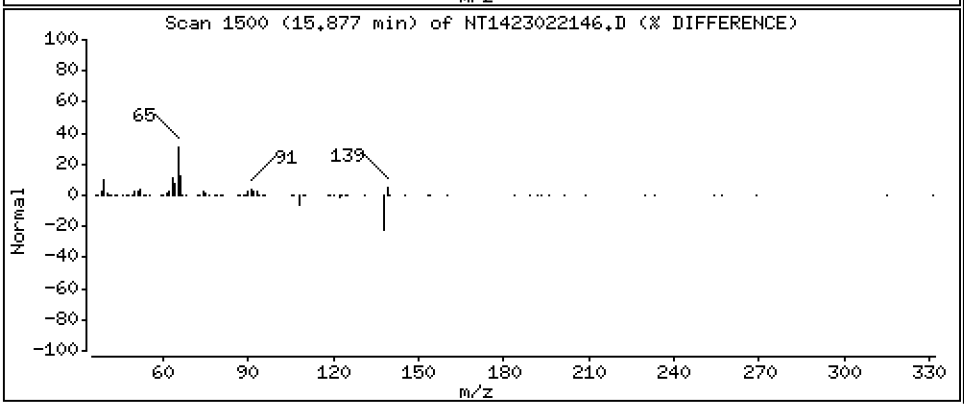
52 4-Nitroaniline

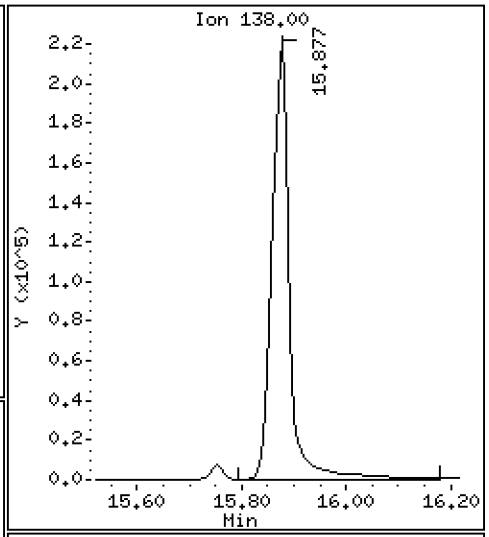
Concentration: 11.68 ug/mL

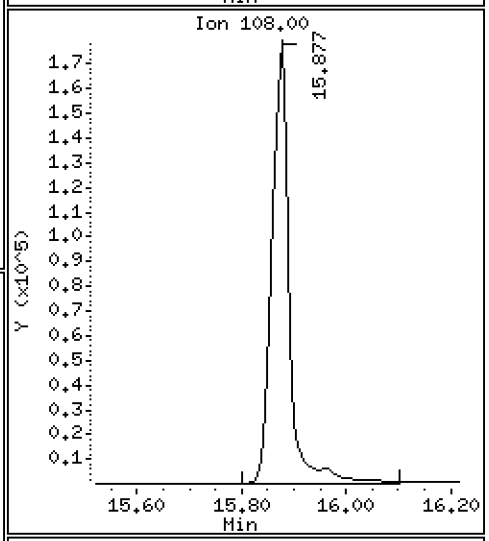


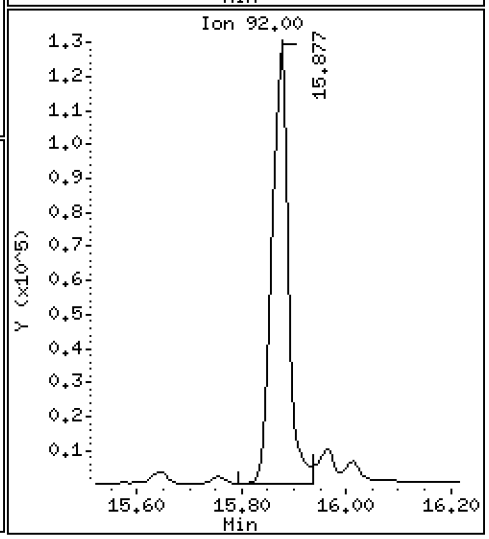












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

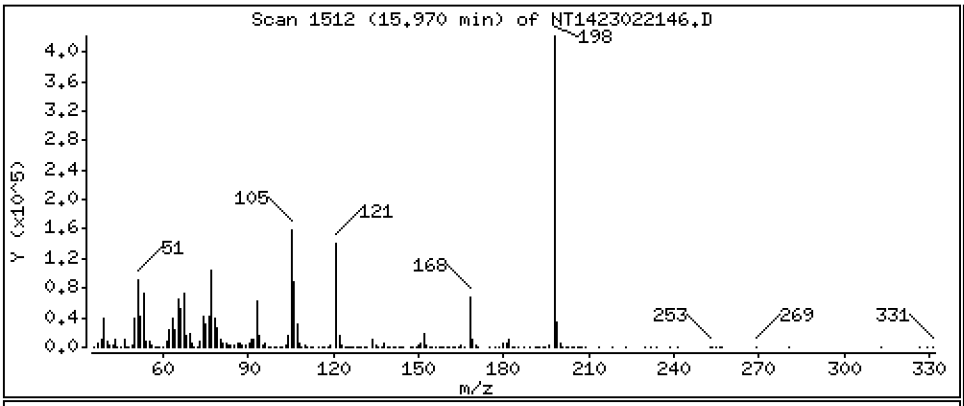
Operator: DSD

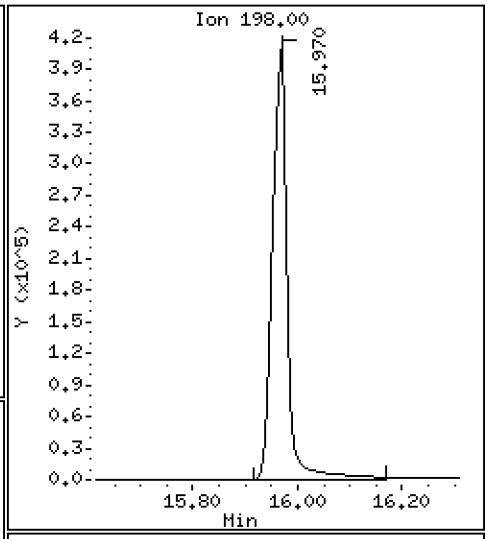
Column phase: ZB-5msi

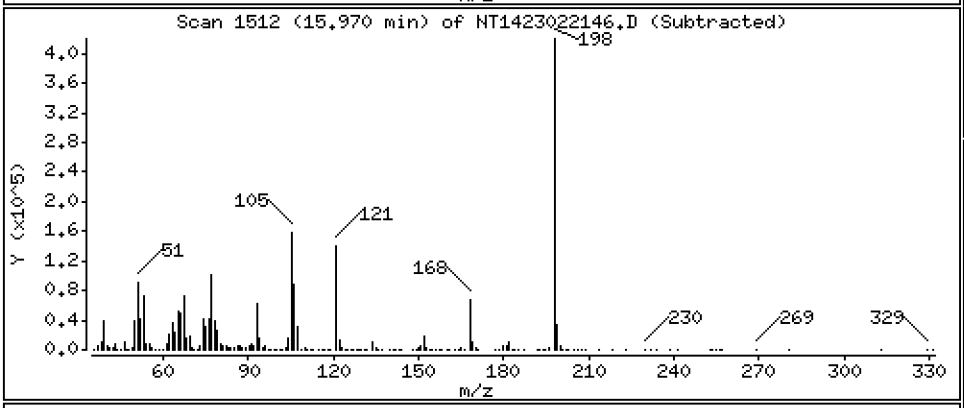
Column diameter: 0.25

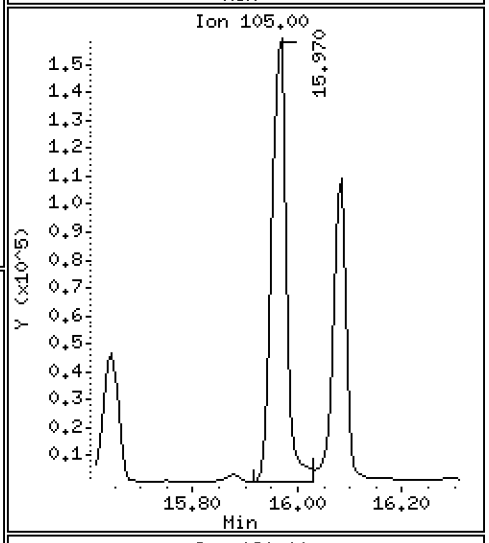
53 4,6-Dinitro-2-methylphenol

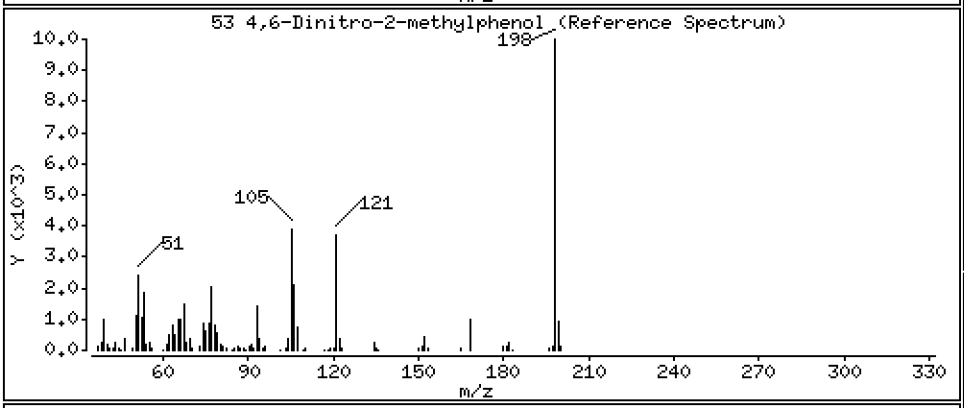
Concentration: 21.42 ug/mL

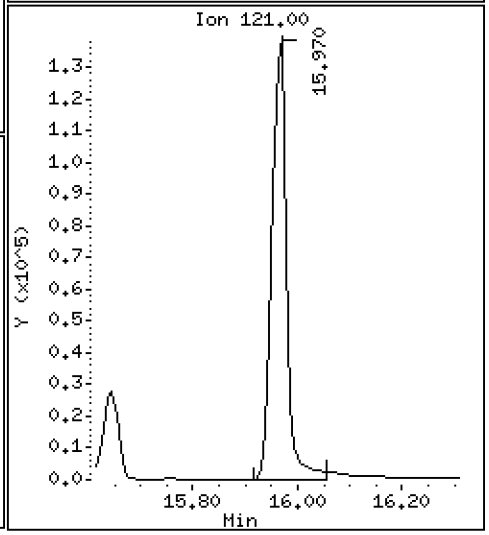


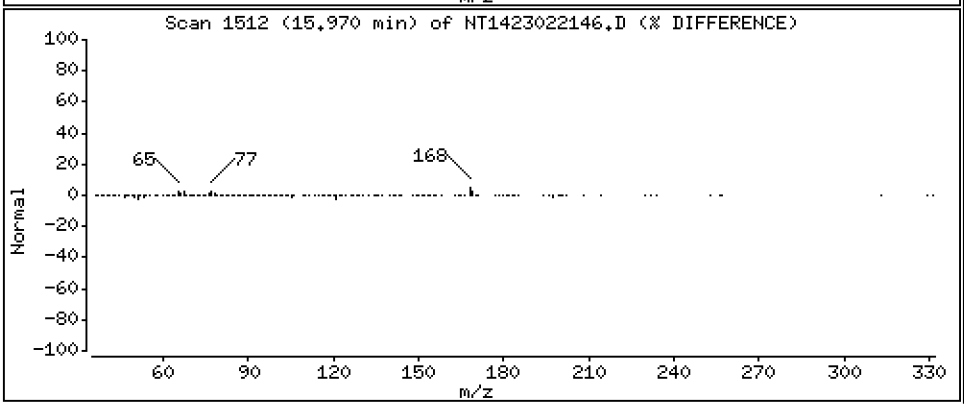












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

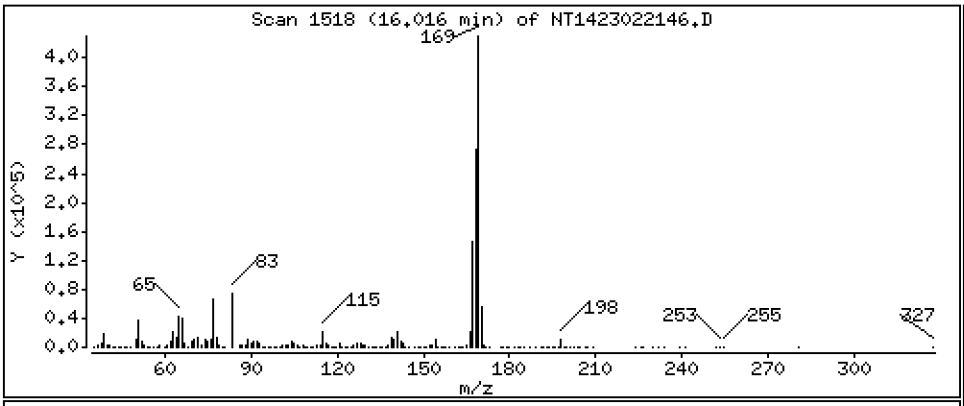
Operator: DSD

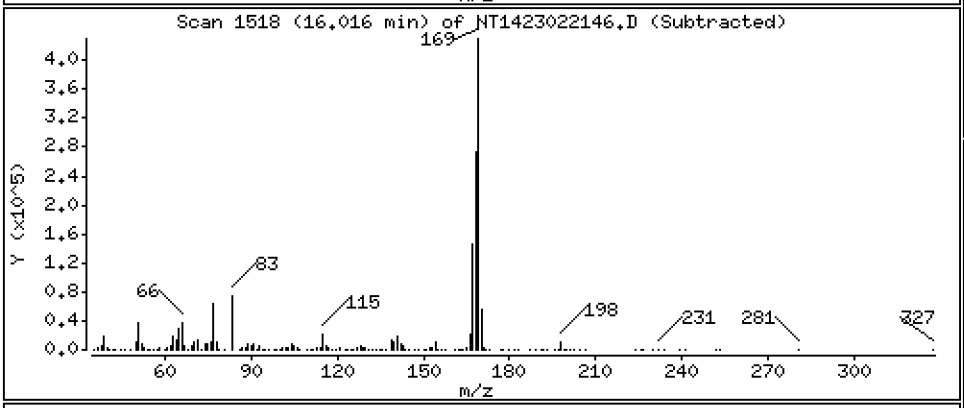
Column phase: ZB-5msi

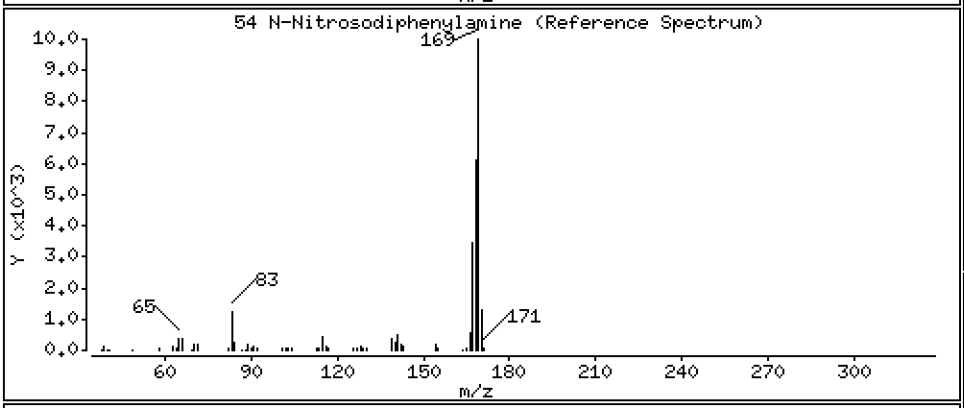
Column diameter: 0.25

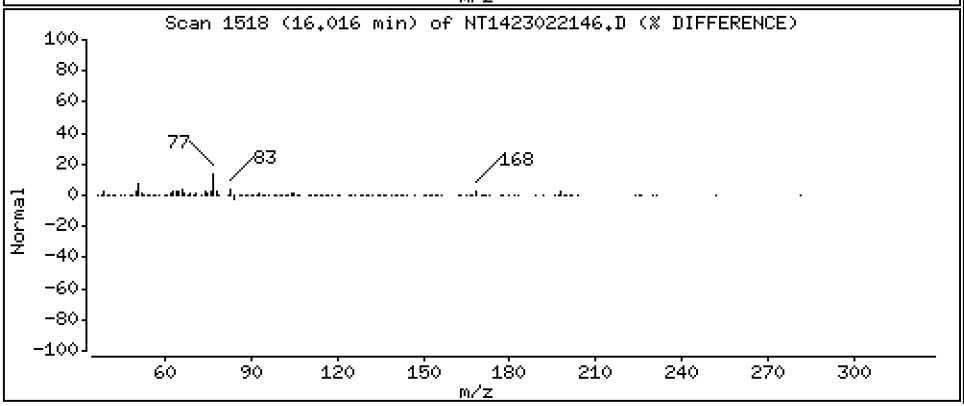
54 N-Nitrosodiphenylamine

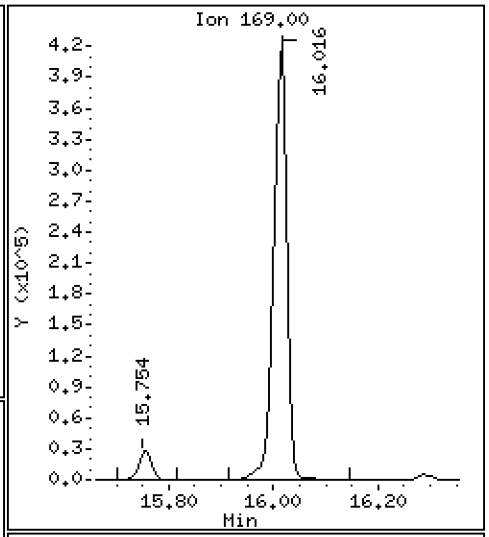
Concentration: 5.154 ug/mL

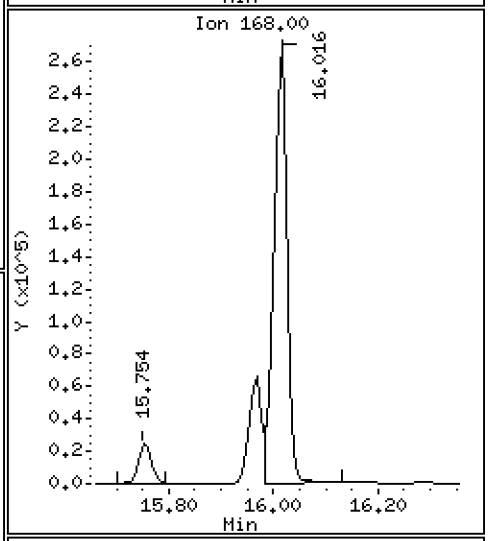


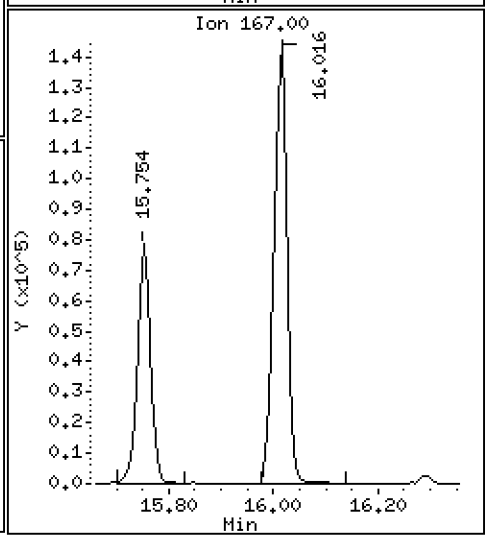












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

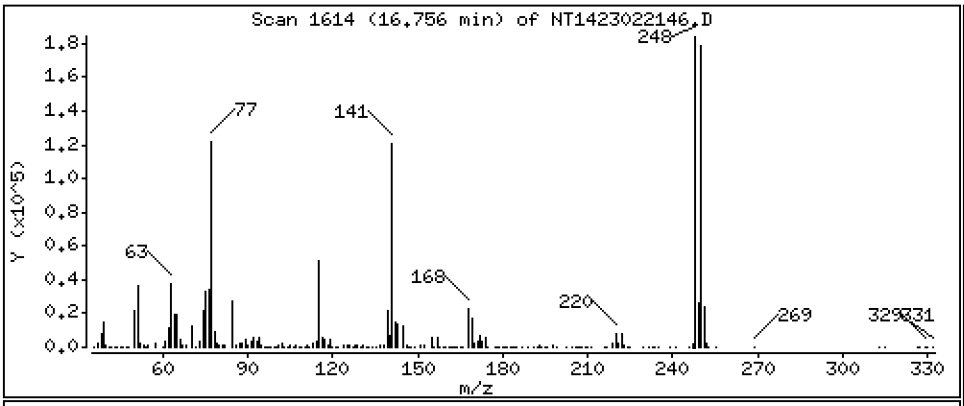
Operator: DSD

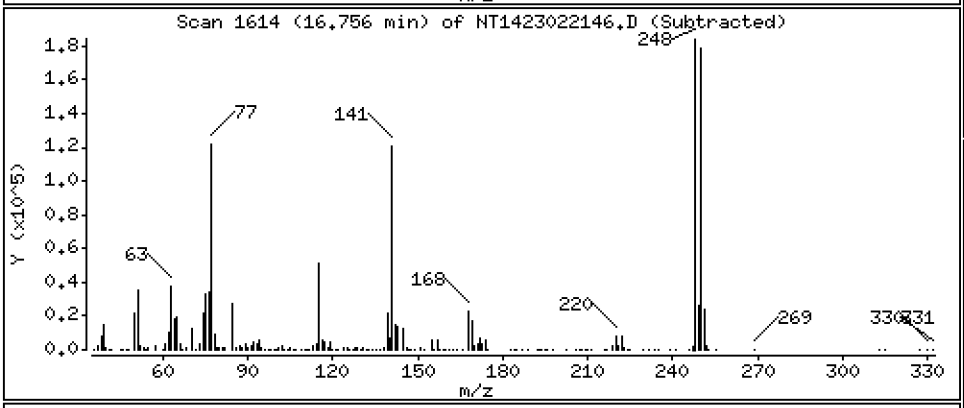
Column phase: ZB-5msi

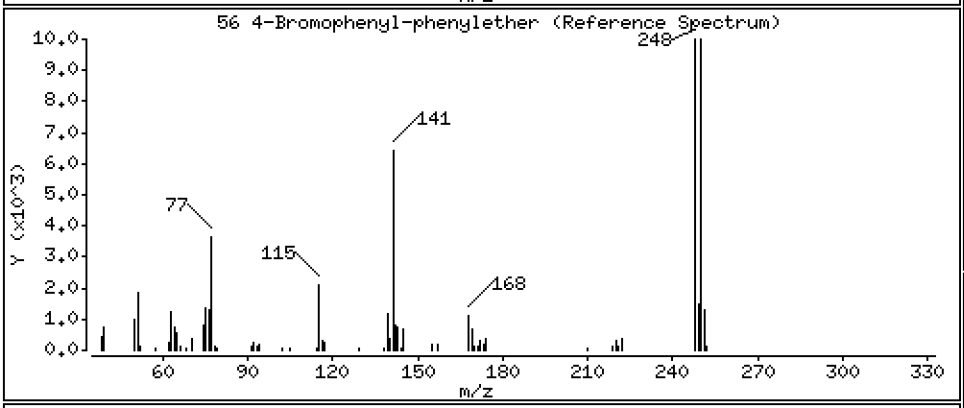
Column diameter: 0.25

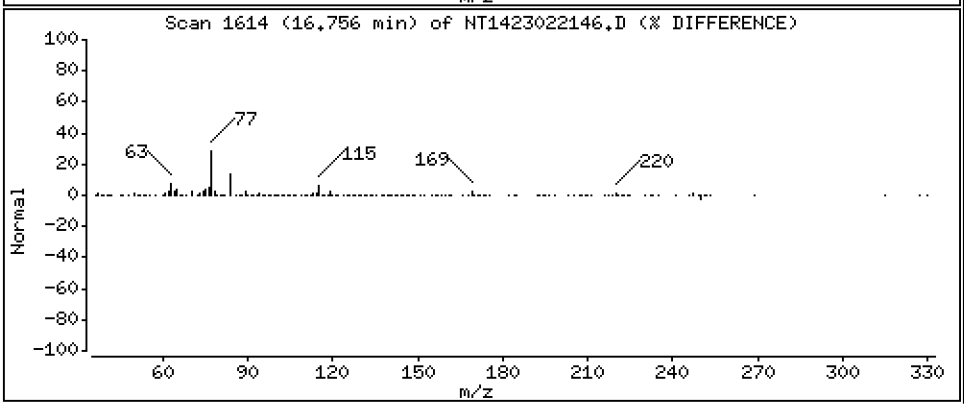
56 4-Bromophenyl-phenylether

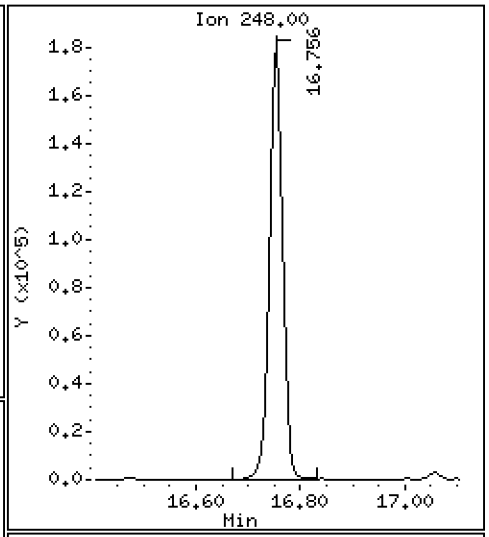
Concentration: 5.058 ug/mL

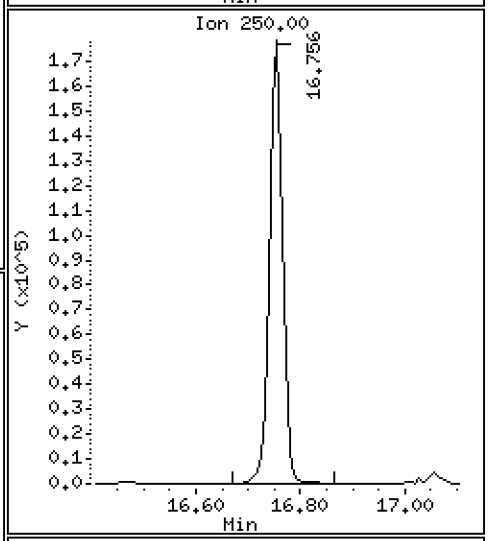


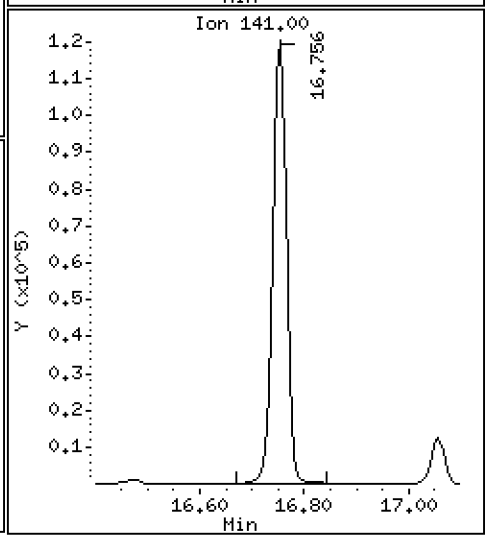












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

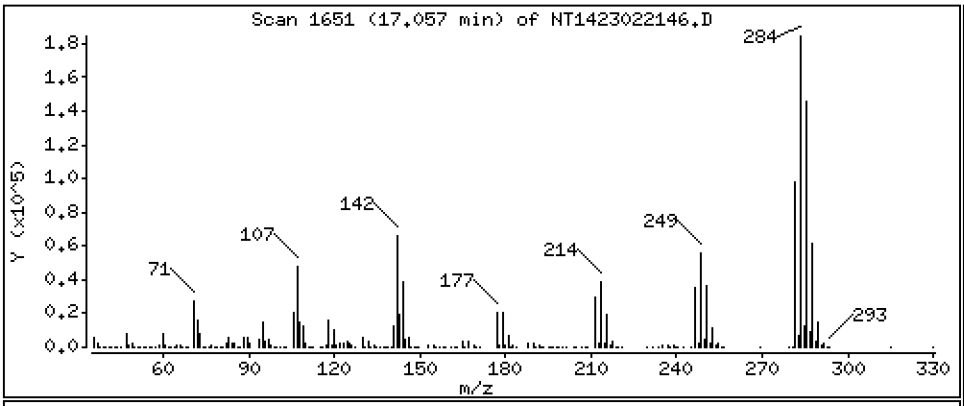
Operator: DSD

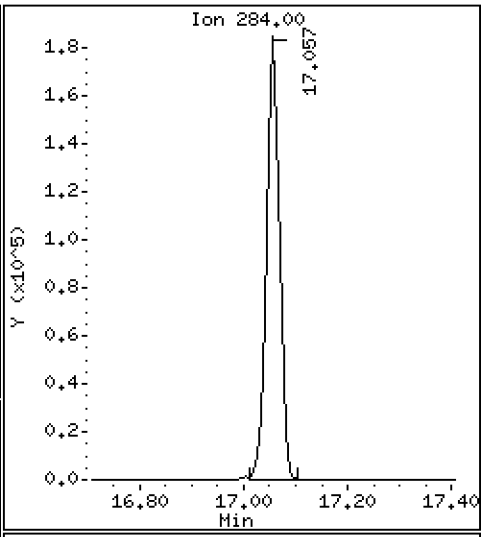
Column phase: ZB-5msi

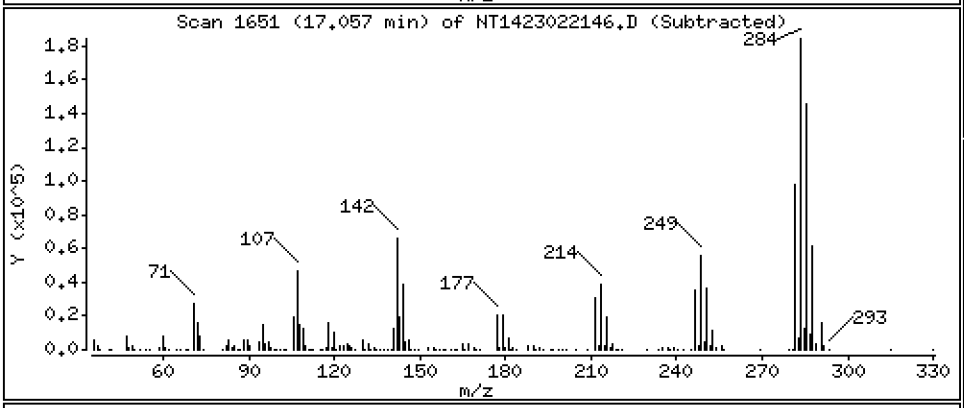
Column diameter: 0.25

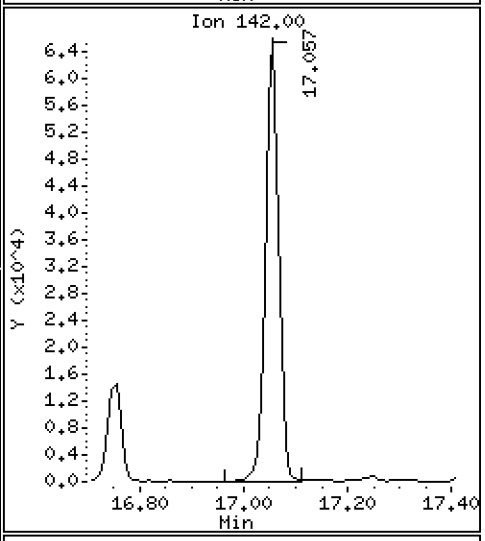
57 Hexachlorobenzene

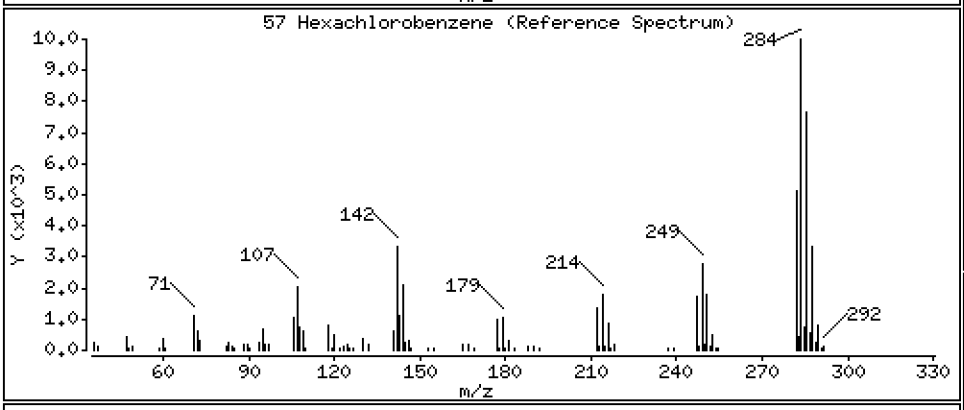
Concentration: 4.929 ug/mL

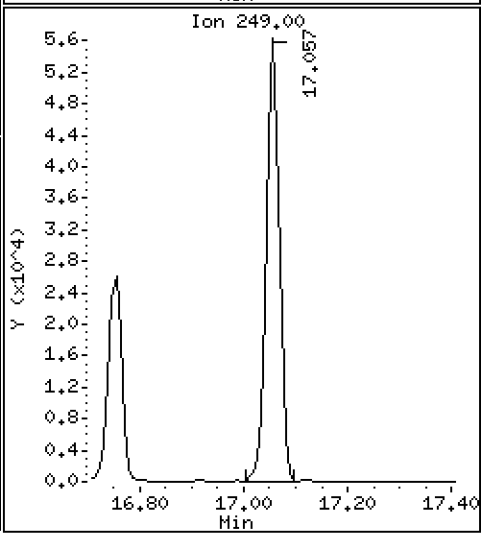


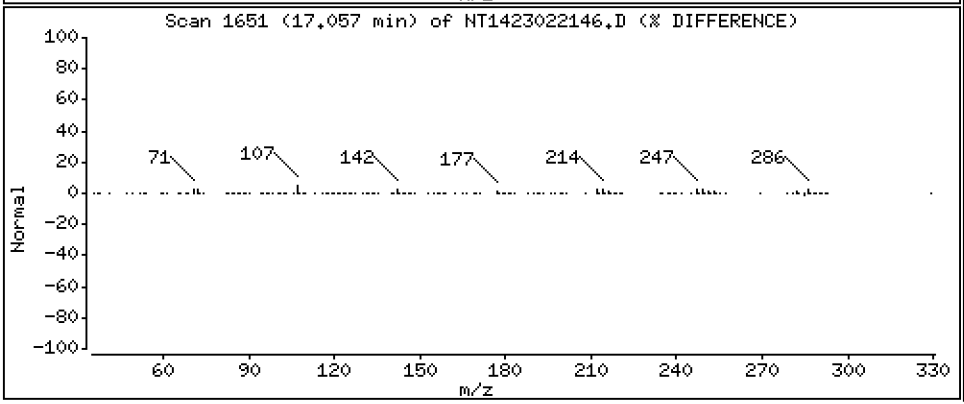












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

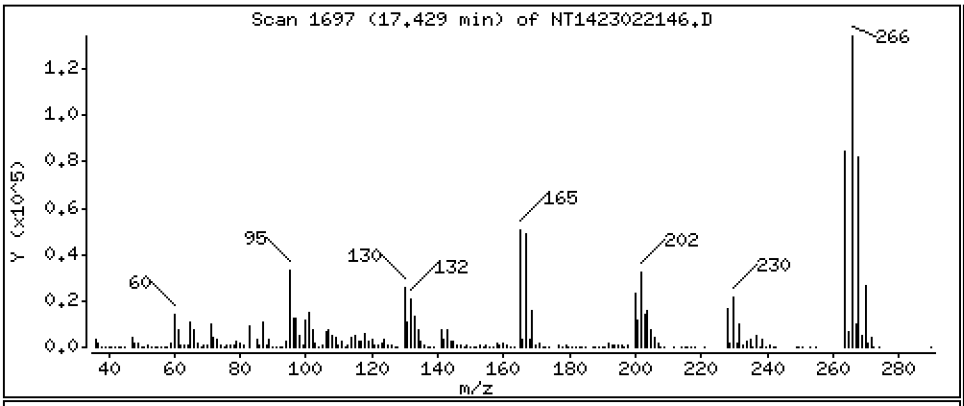
Operator: DSD

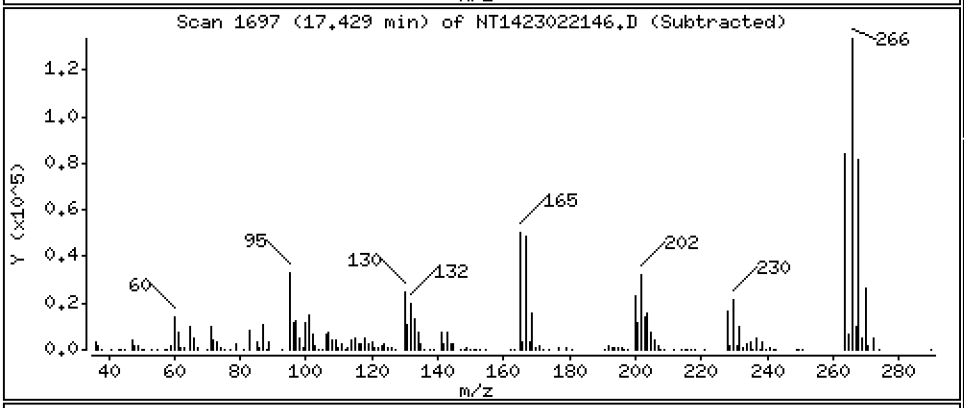
Column phase: ZB-5msi

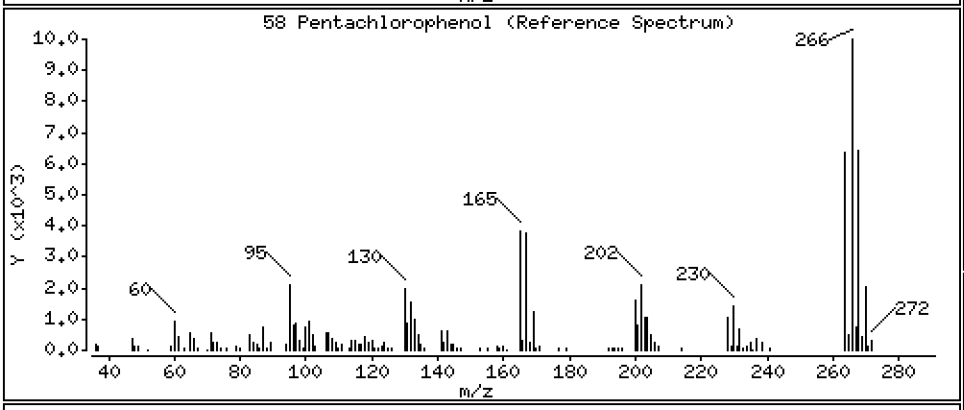
Column diameter: 0.25

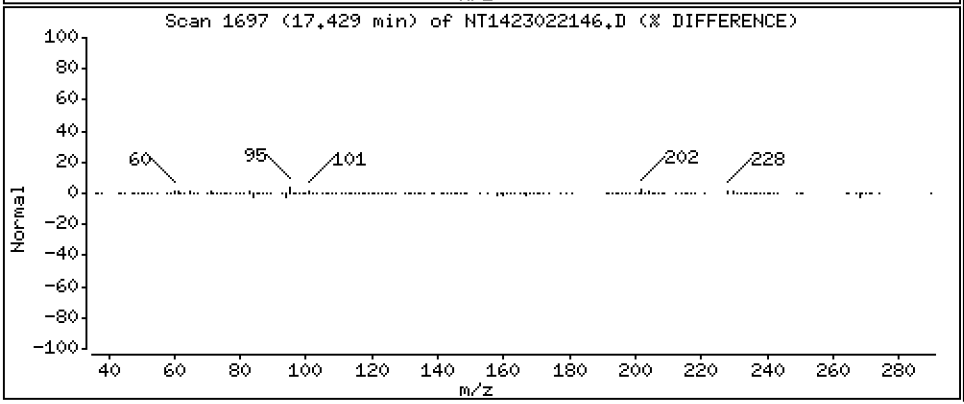
58 Pentachlorophenol

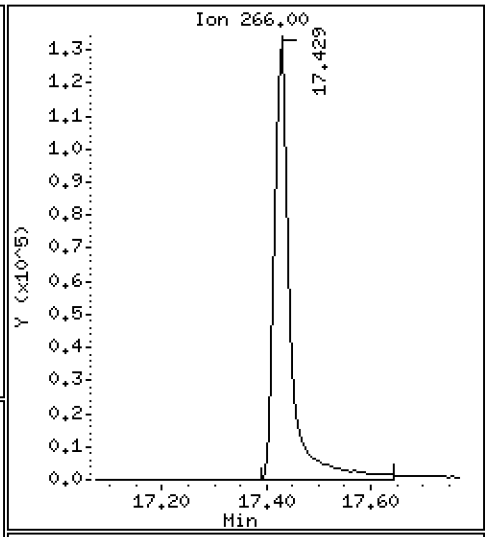
Concentration: 8.690 ug/mL

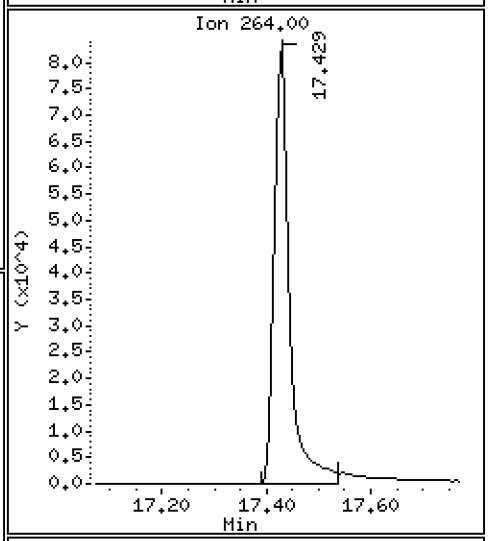


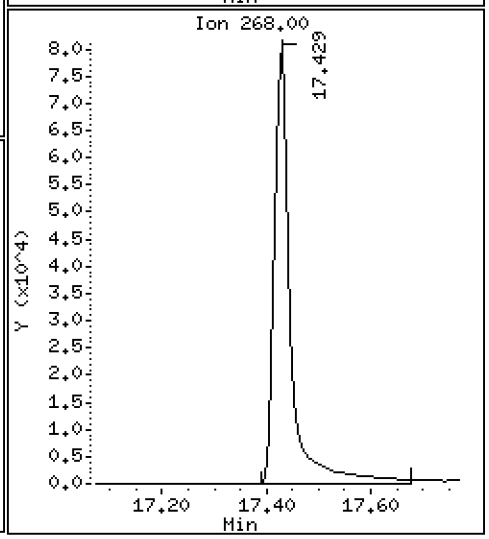












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022146.D

Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

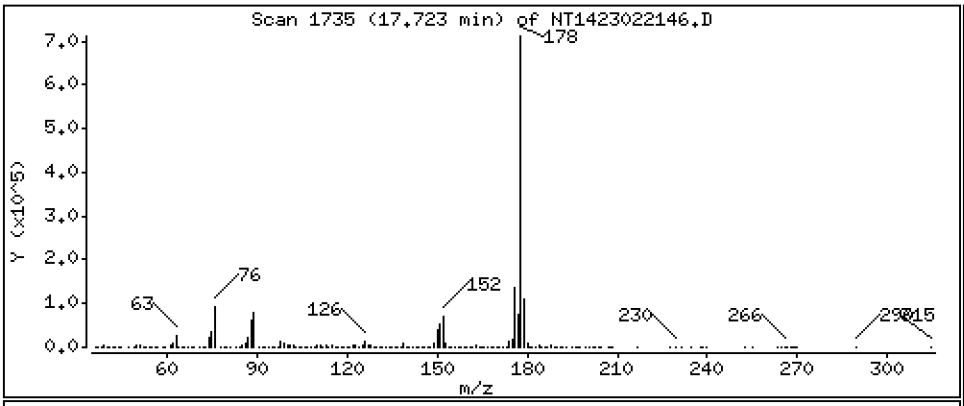
Operator: DSD

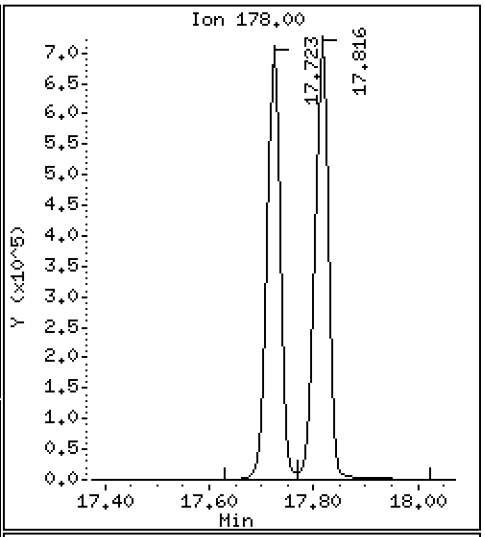
Column phase: ZB-5msi

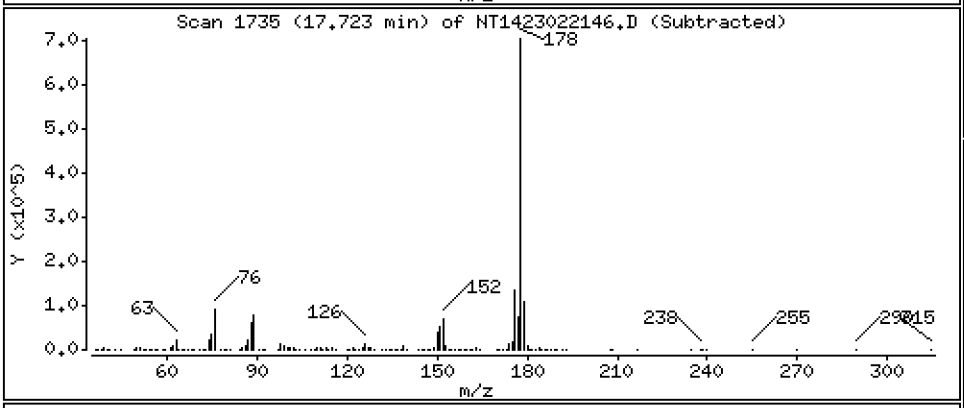
Column diameter: 0.25

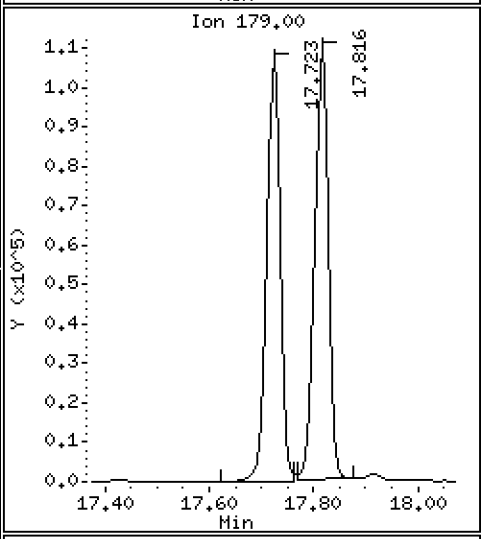
60 Phenanthrene

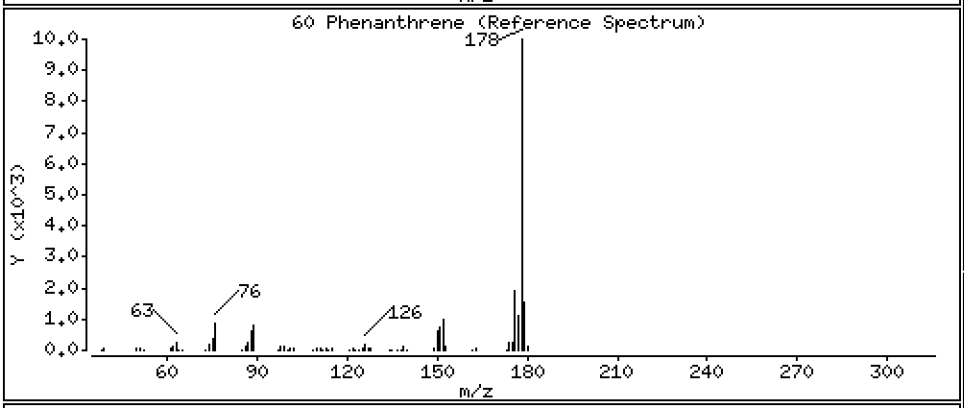
Concentration: 5.167 ug/mL

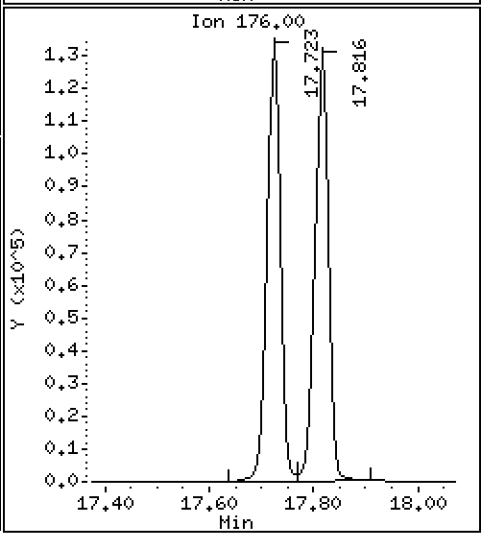


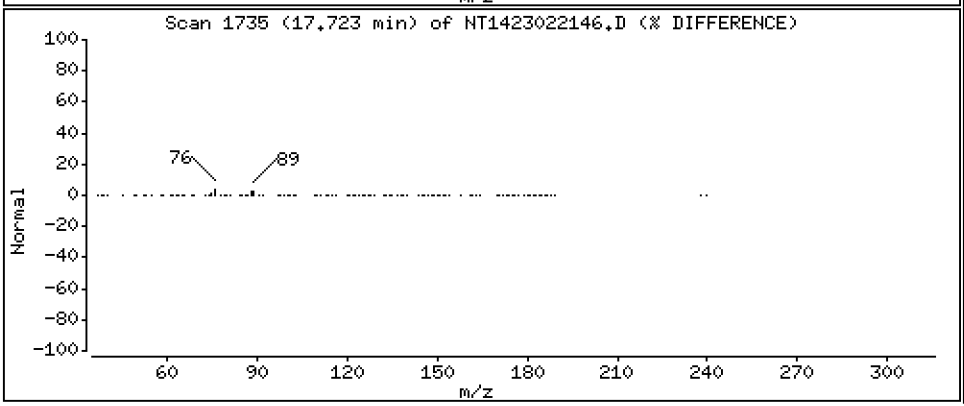












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

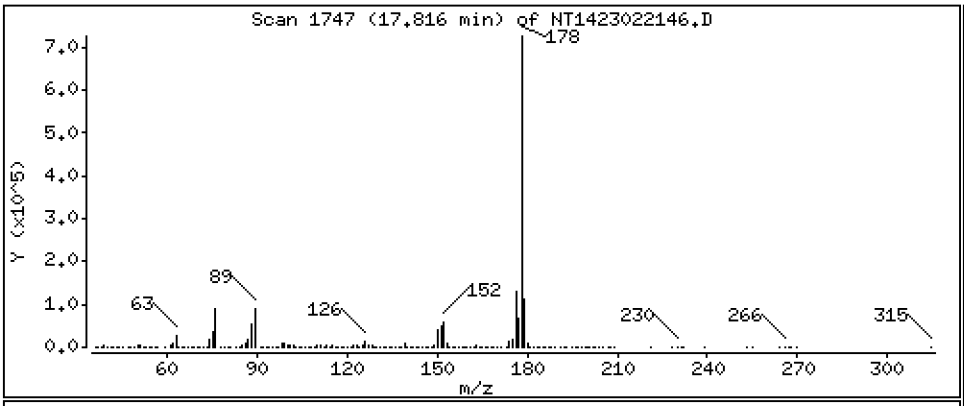
Operator: DSD

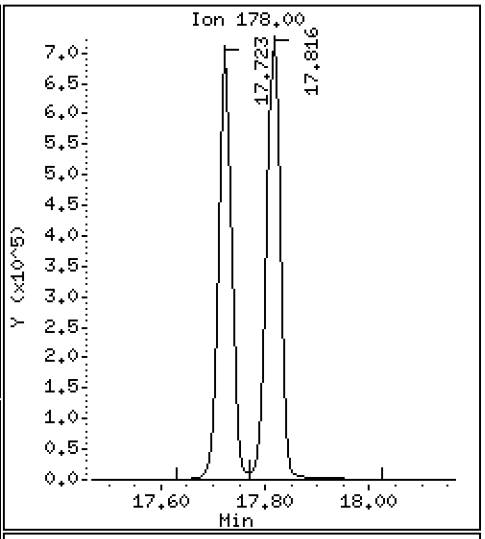
Column phase: ZB-5msi

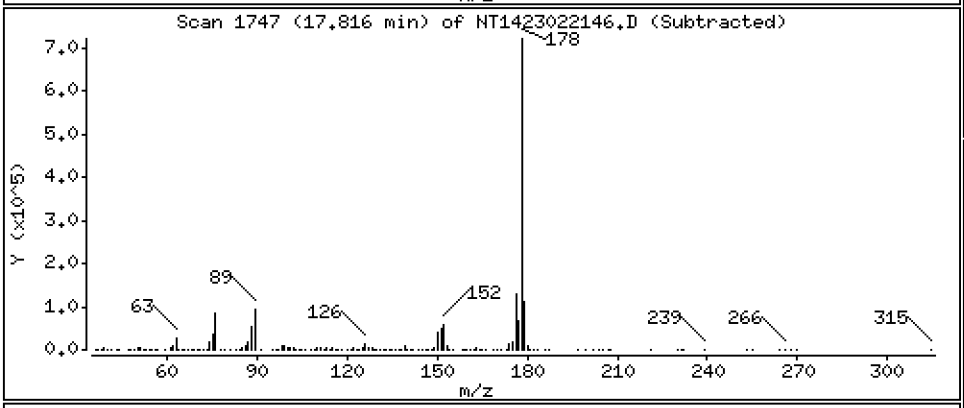
Column diameter: 0.25

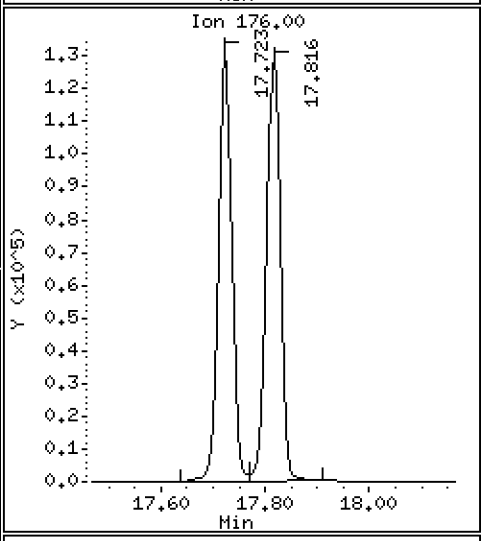
61 Anthracene

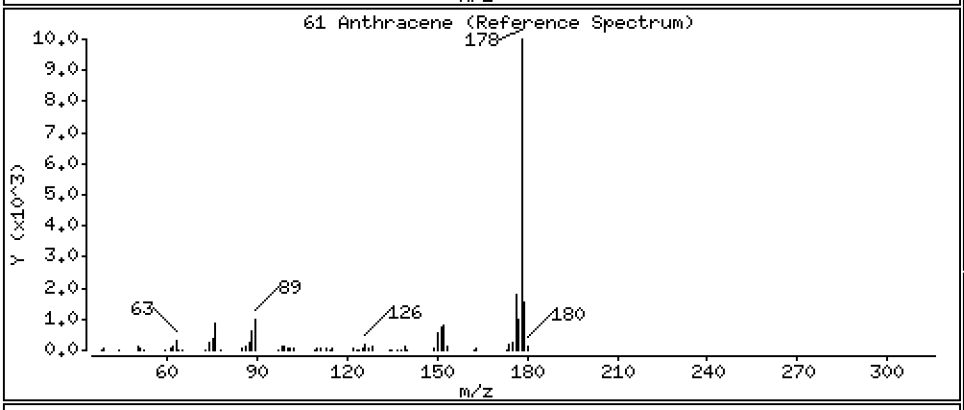
Concentration: 5.630 ug/mL

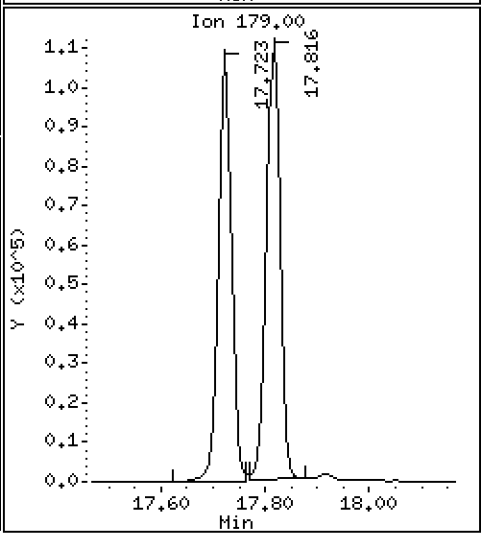


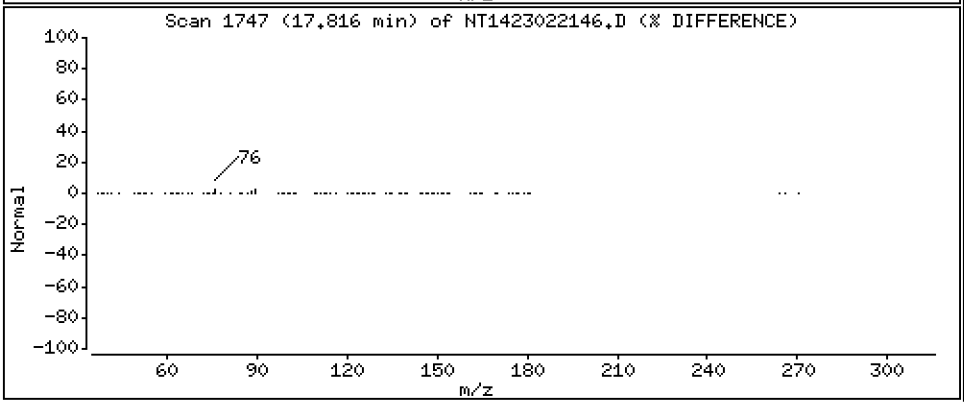












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

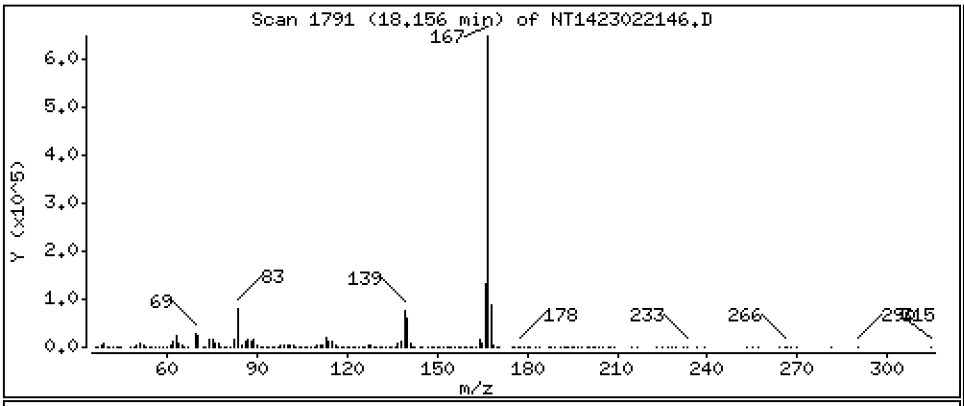
Operator: DSD

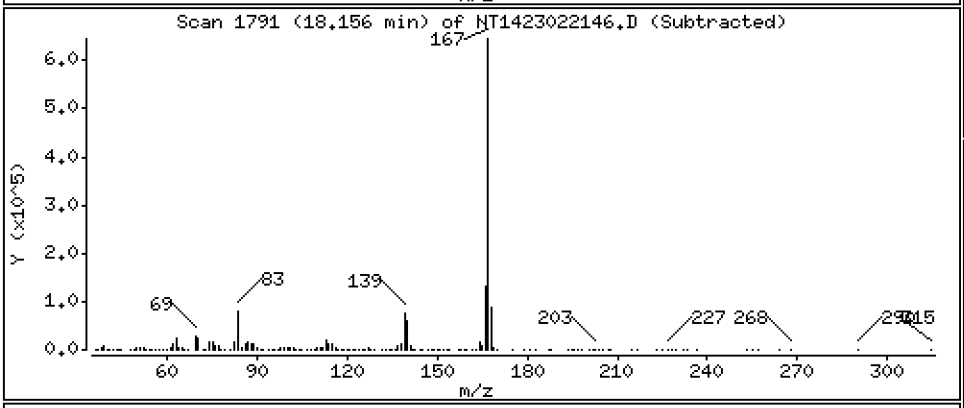
Column phase: ZB-5msi

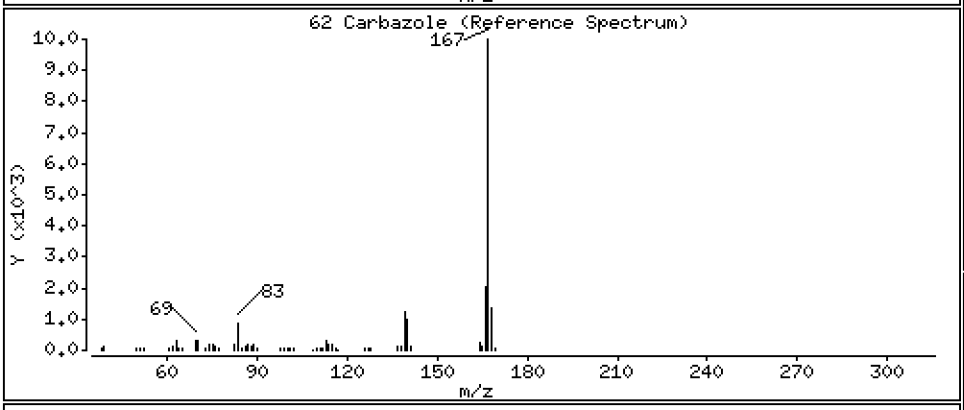
Column diameter: 0.25

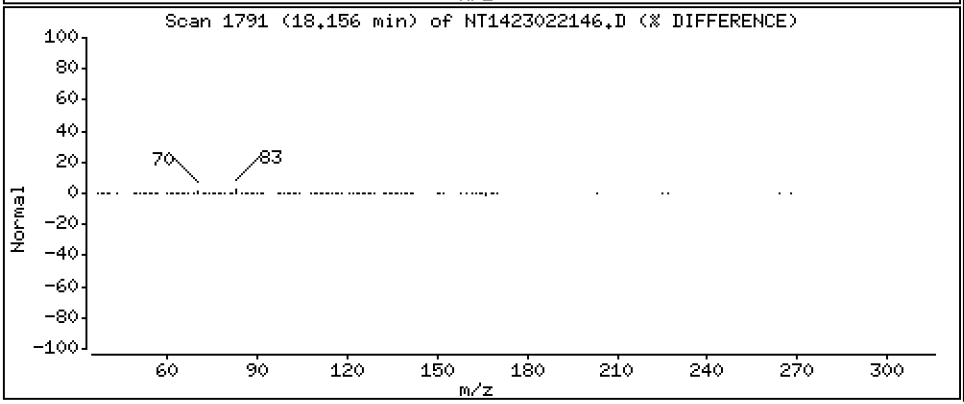
62 Carbazole

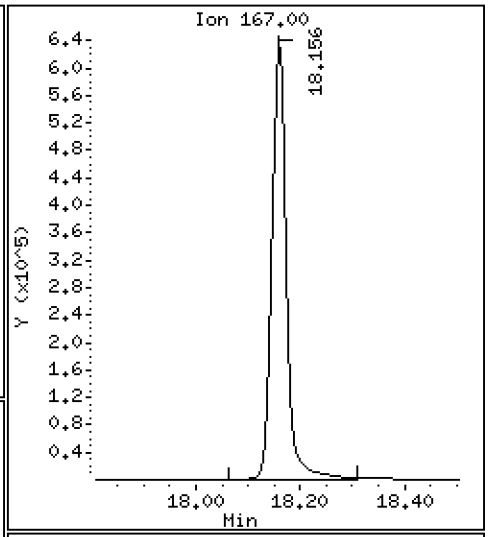
Concentration: 5.646 ug/mL

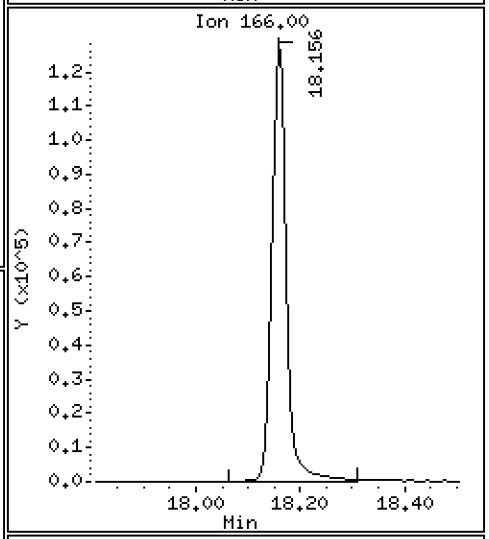


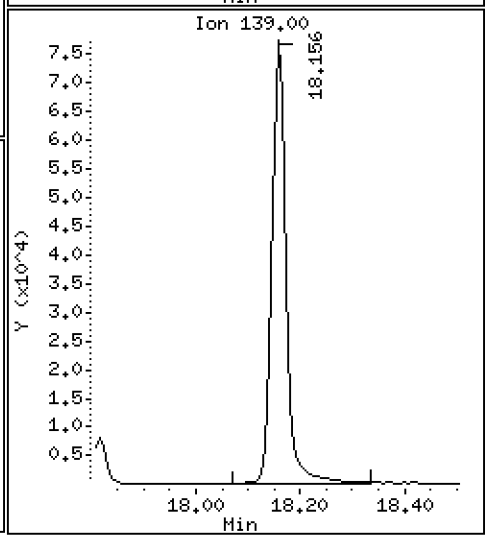












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

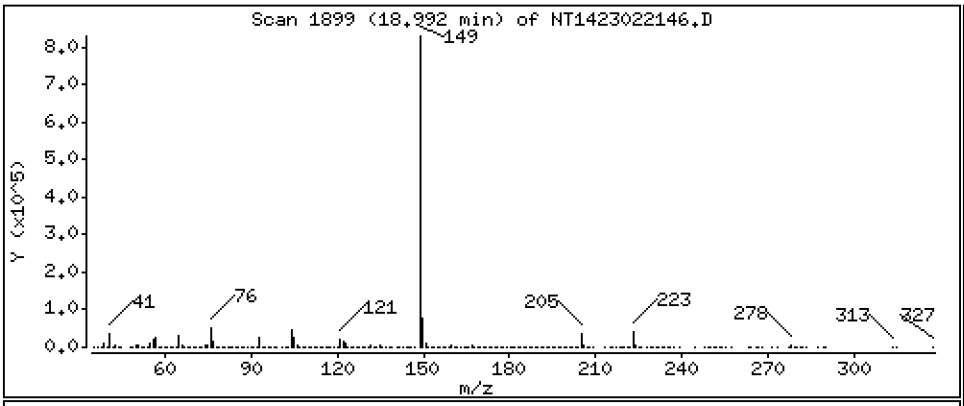
Operator: DSD

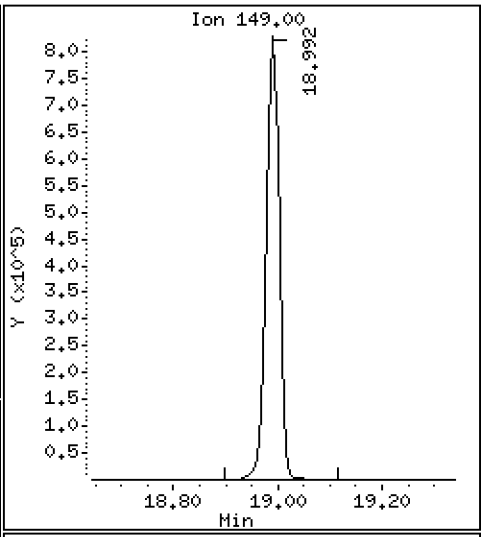
Column phase: ZB-5msi

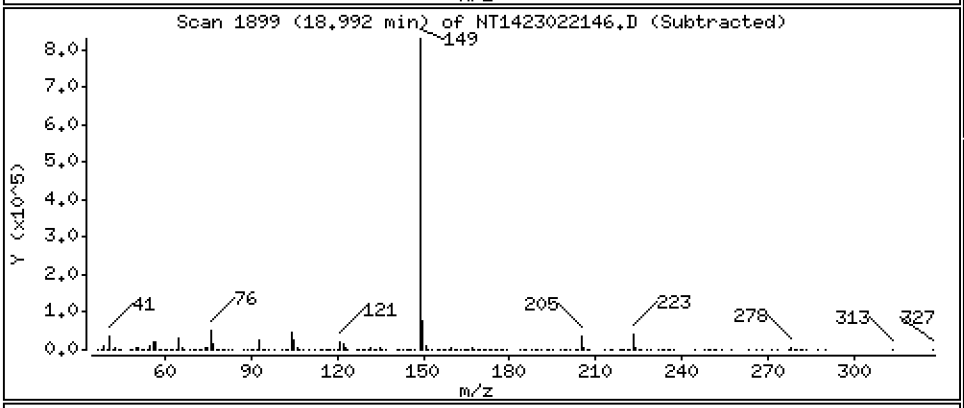
Column diameter: 0.25

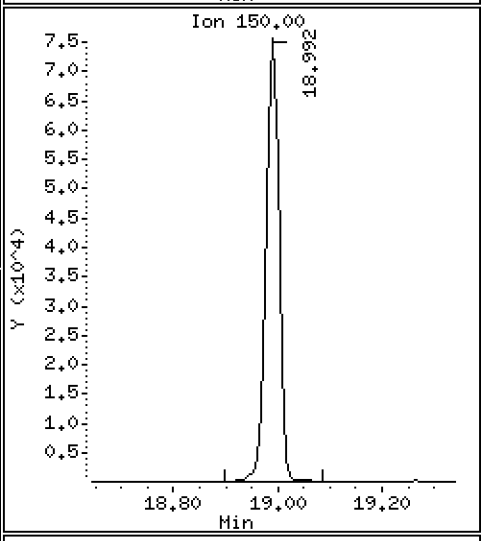
63 Di-n-butylphthalate

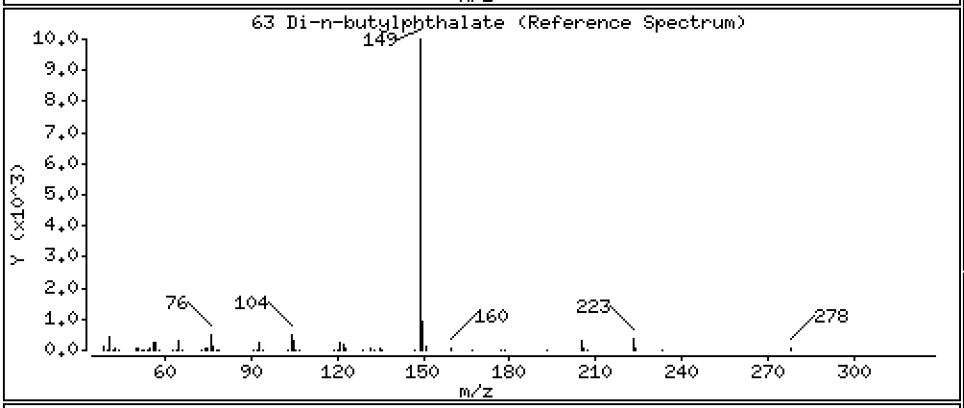
Concentration: 5.897 ug/mL

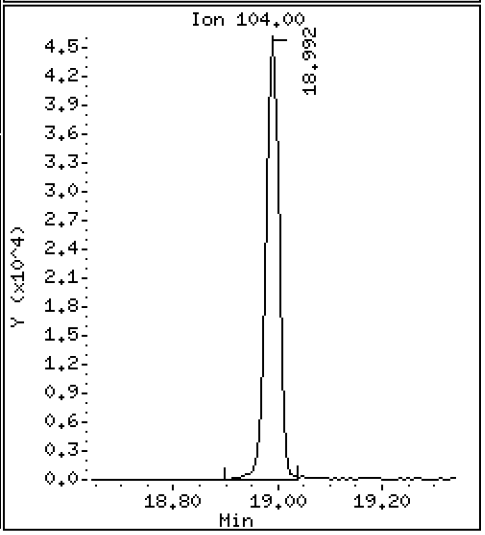


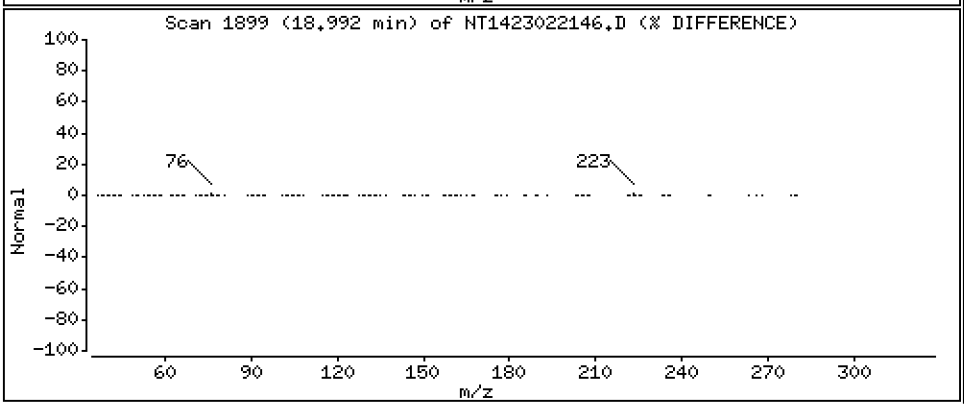












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

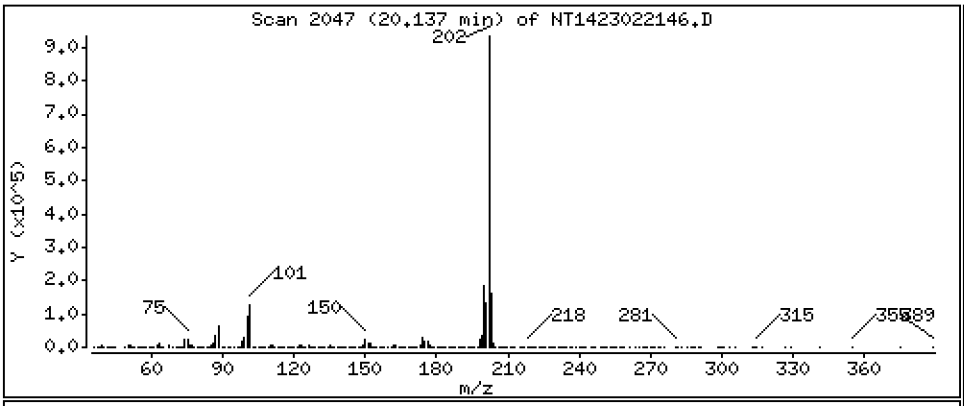
Operator: DSD

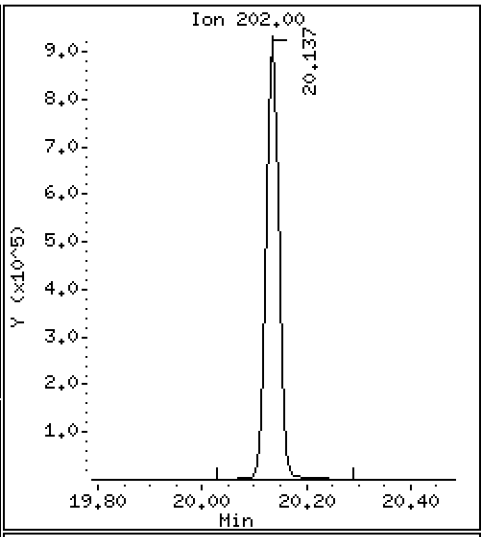
Column phase: ZB-5msi

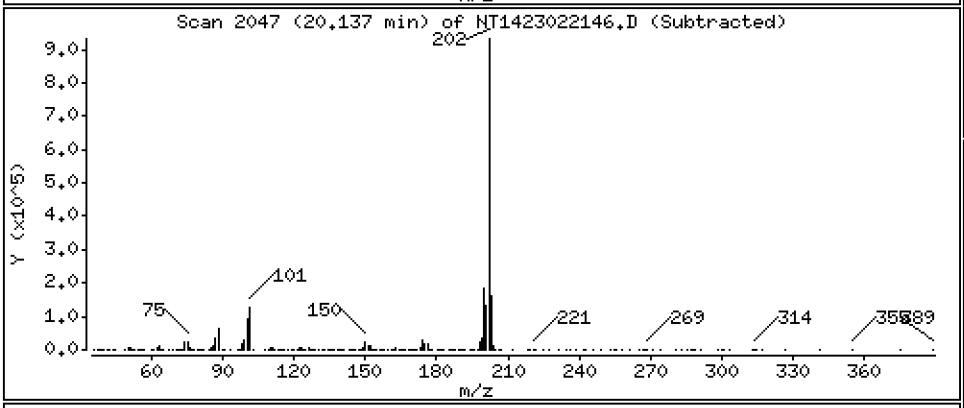
Column diameter: 0.25

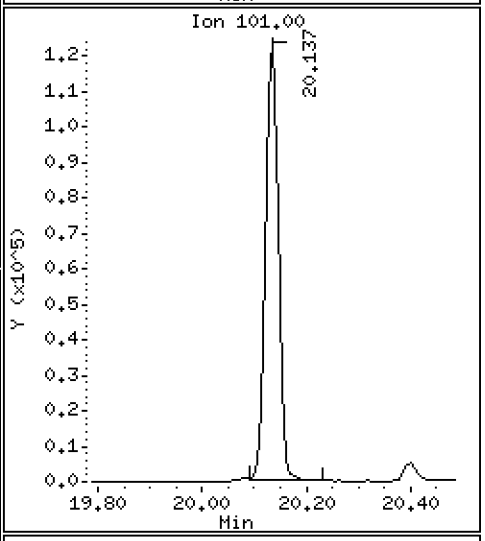
64 Fluoranthene

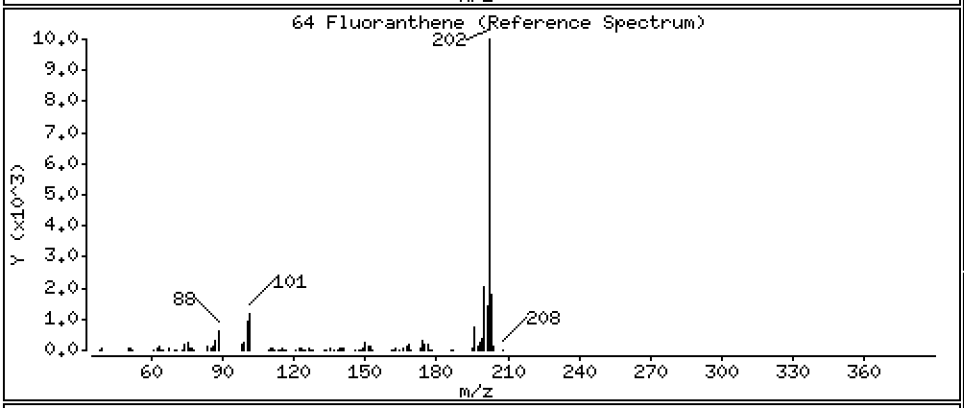
Concentration: 5.085 ug/mL

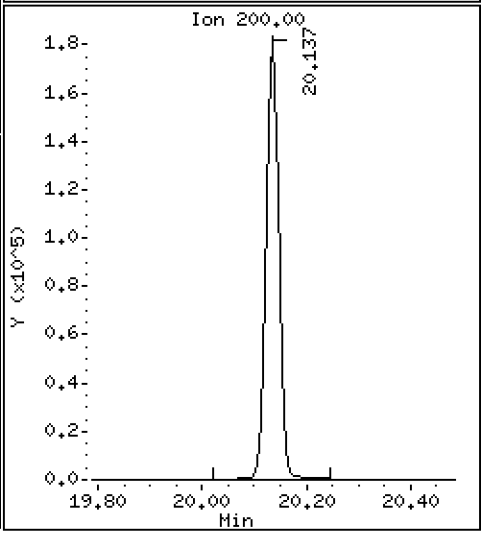


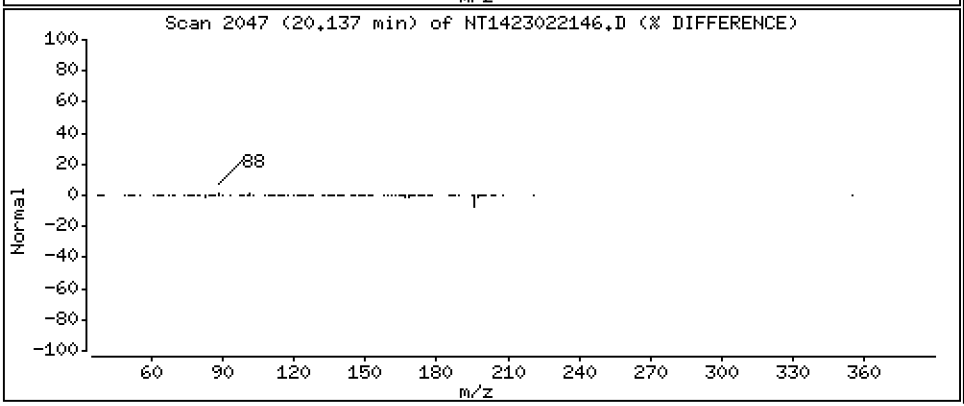












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

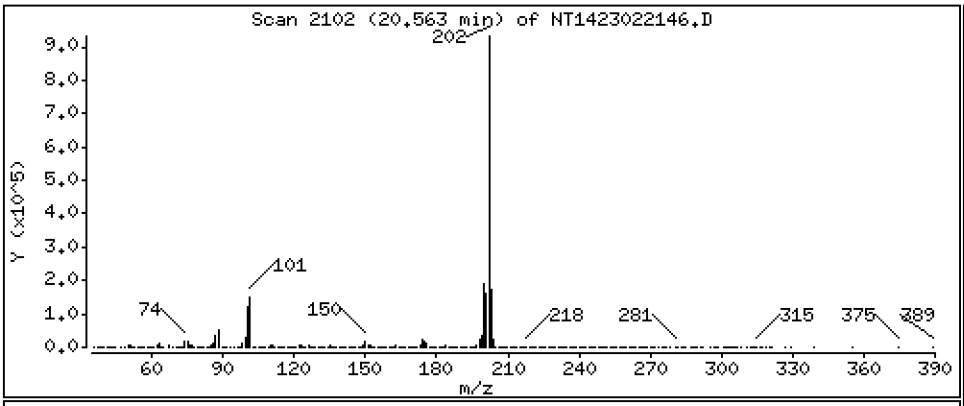
Operator: DSD

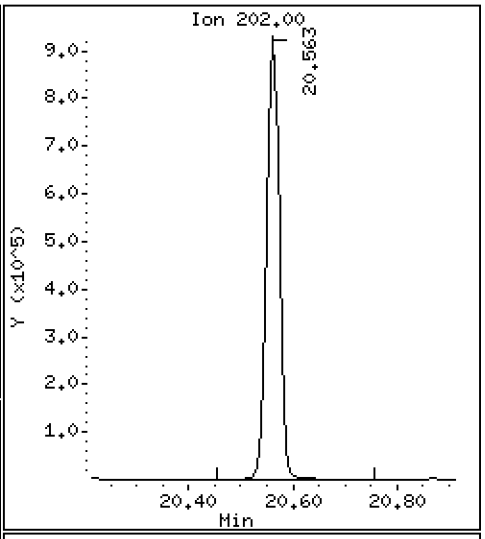
Column phase: ZB-5msi

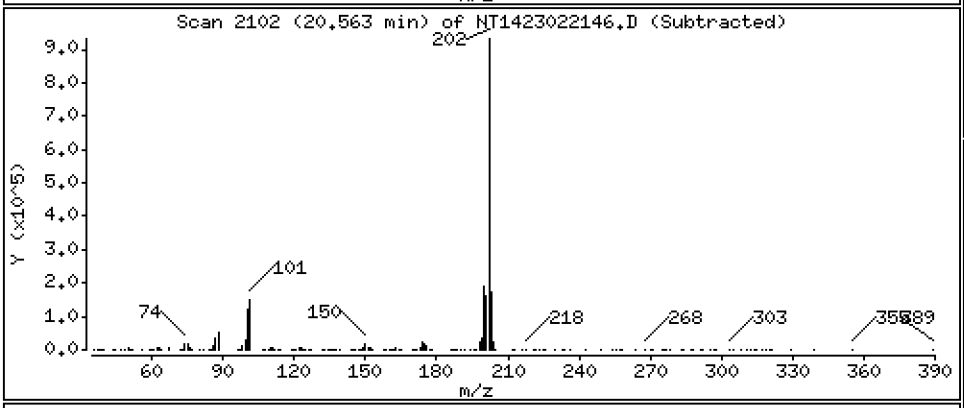
Column diameter: 0.25

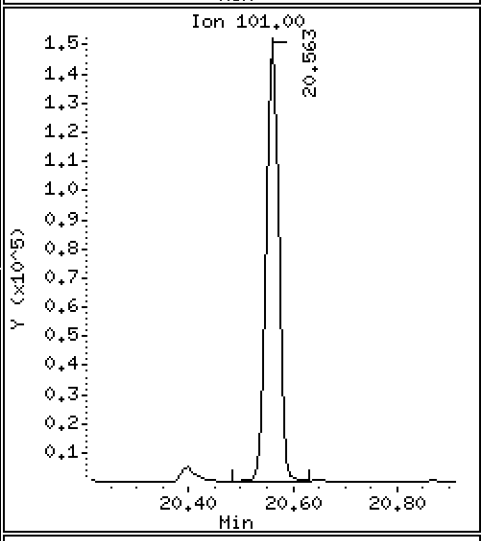
65 Pyrene

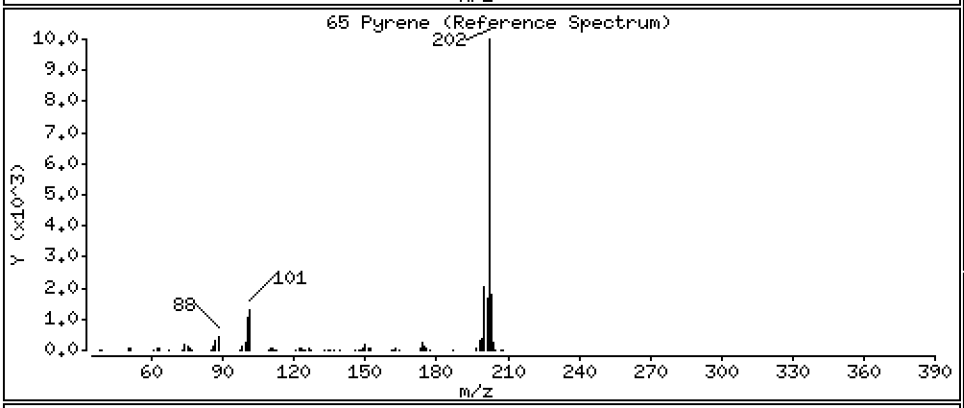
Concentration: 5.069 ug/mL

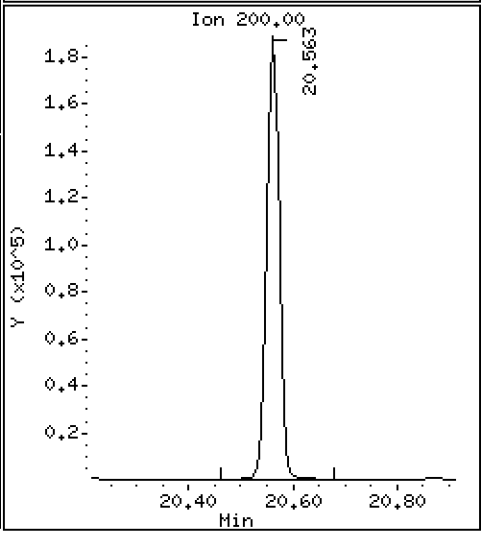


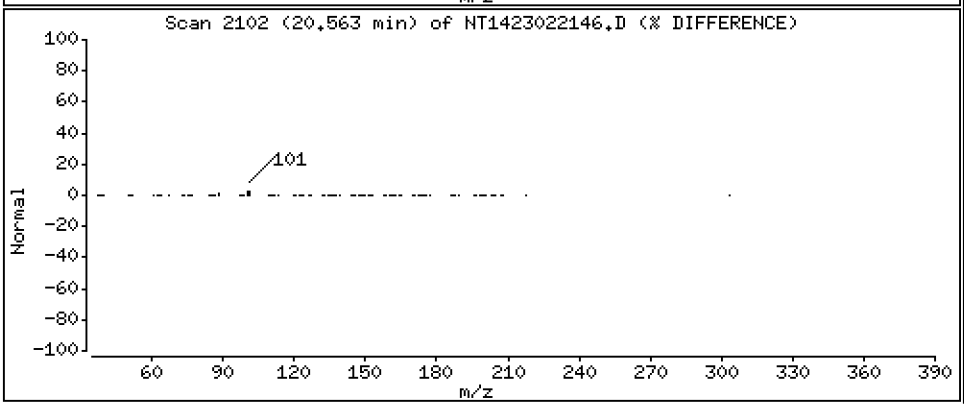












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

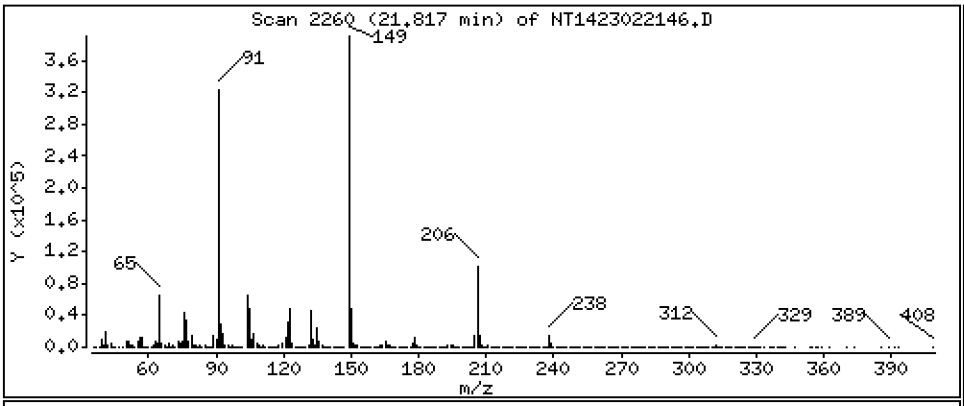
Operator: DSD

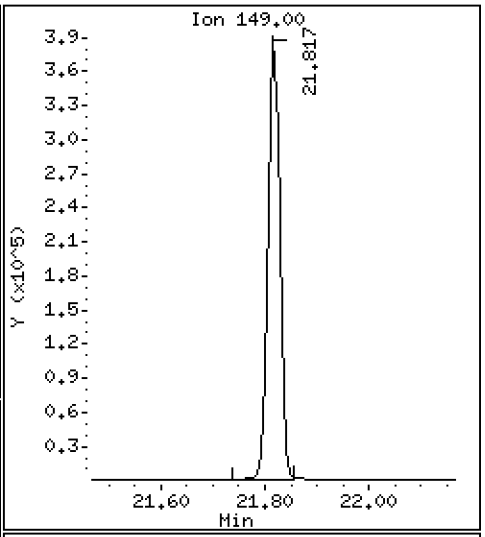
Column phase: ZB-5msi

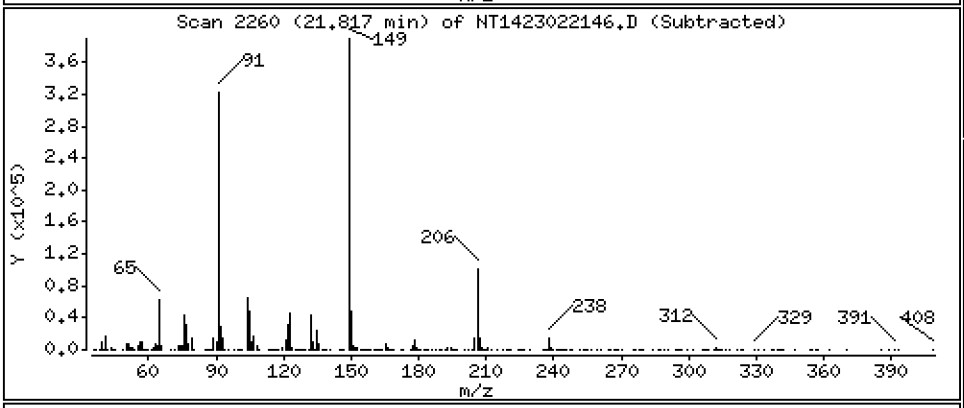
Column diameter: 0.25

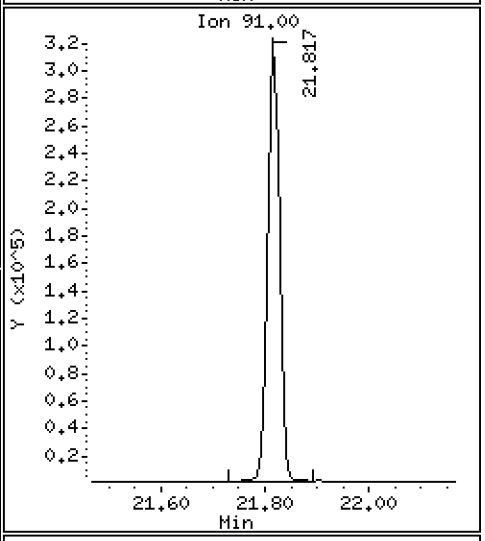
67 Butylbenzylphthalate

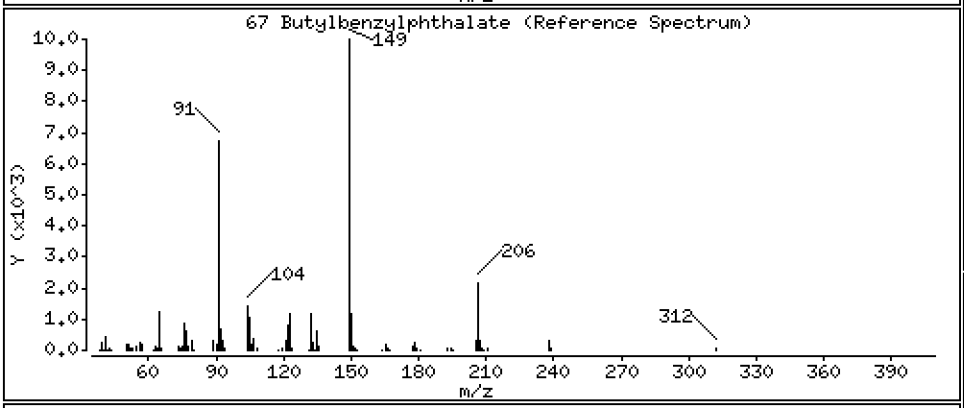
Concentration: 5.470 ug/mL

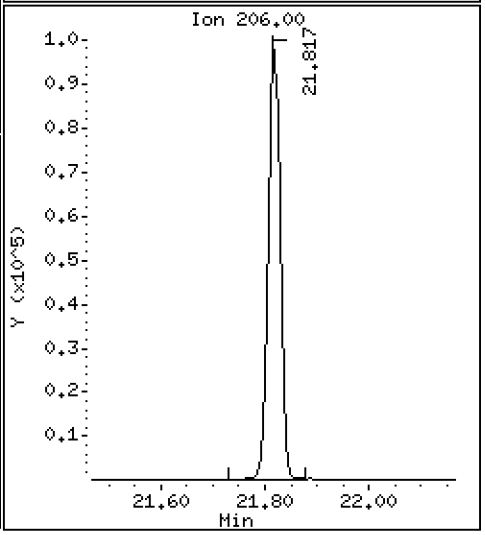


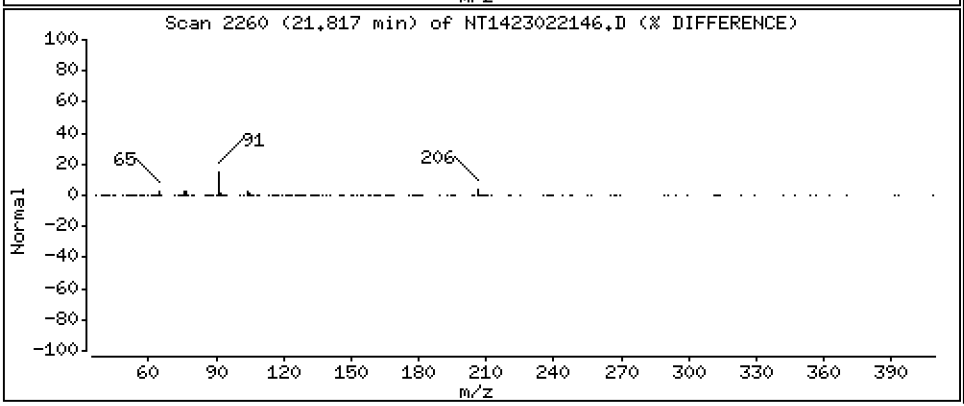












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

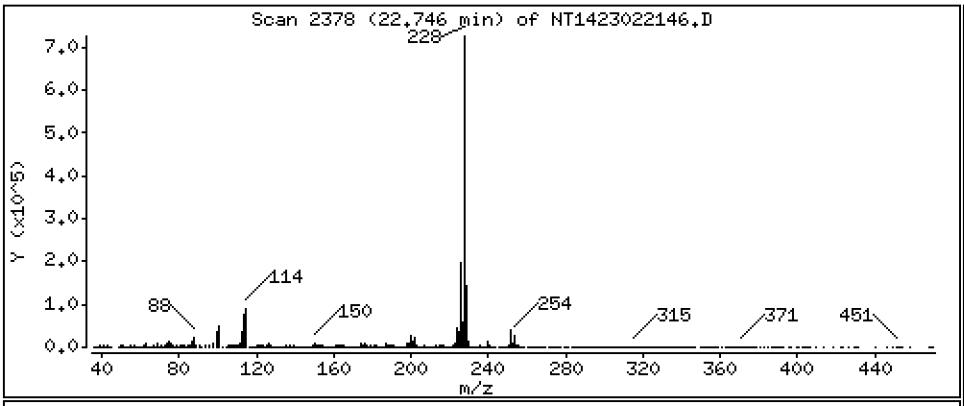
Operator: DSD

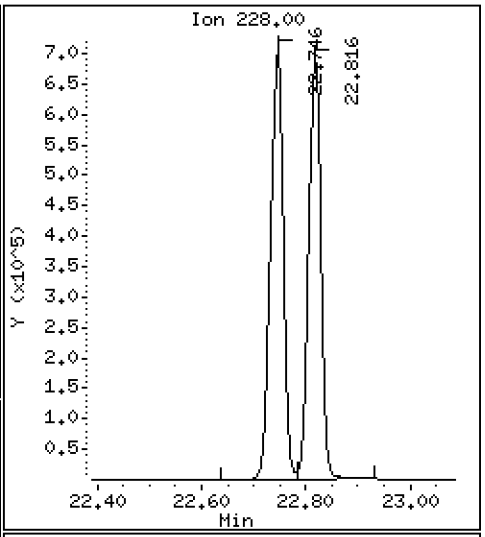
Column phase: ZB-5msi

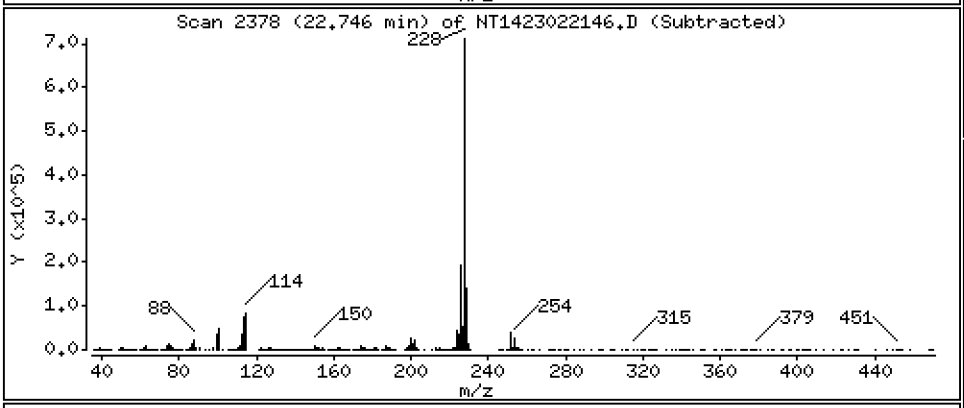
Column diameter: 0.25

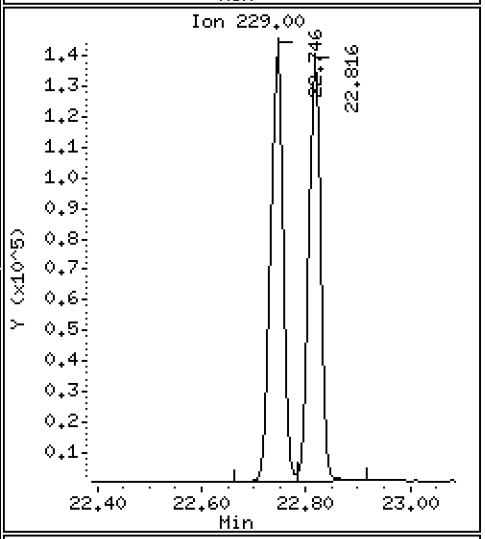
68 Benzo(a)anthracene

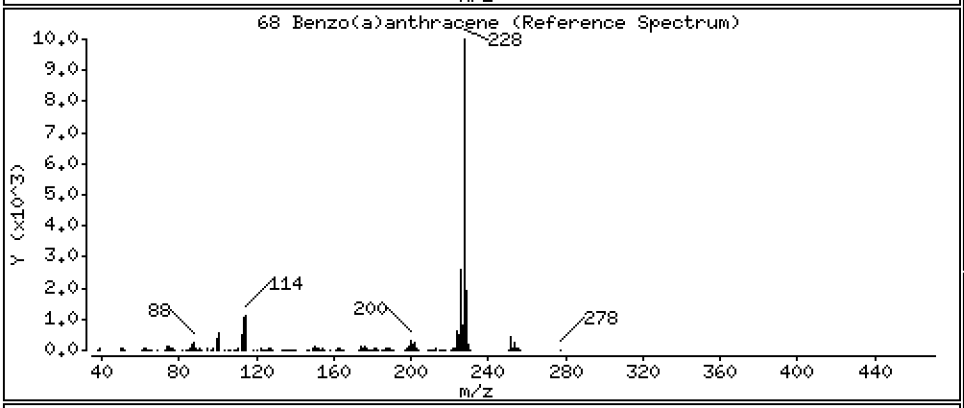
Concentration: 5.347 ug/mL

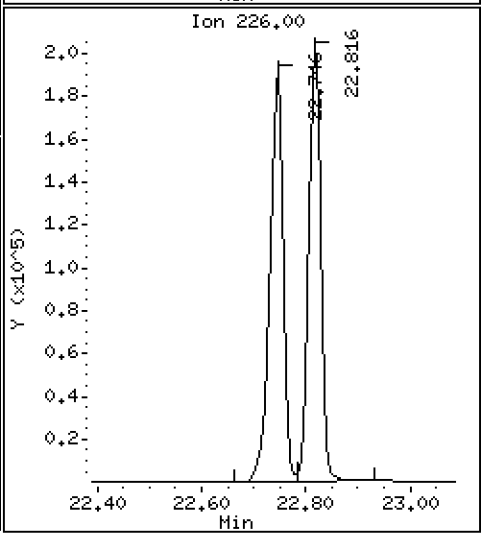


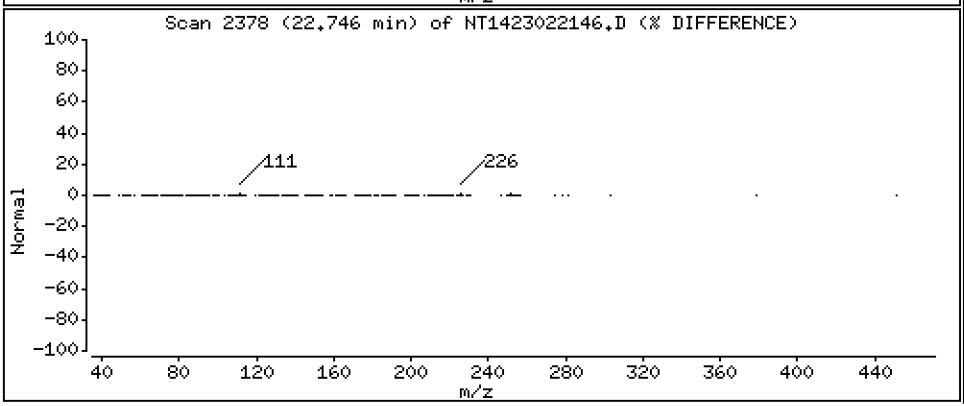












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

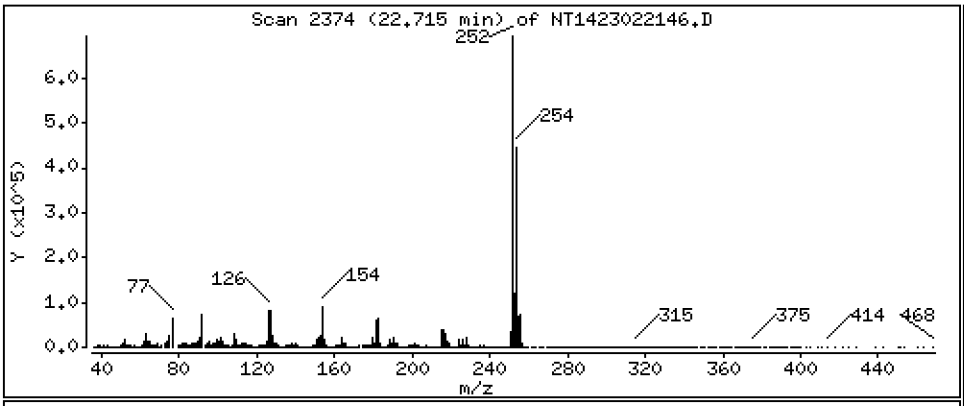
Operator: DSD

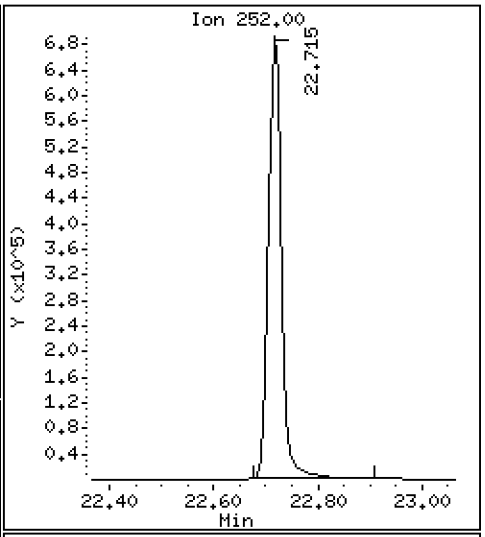
Column phase: ZB-5msi

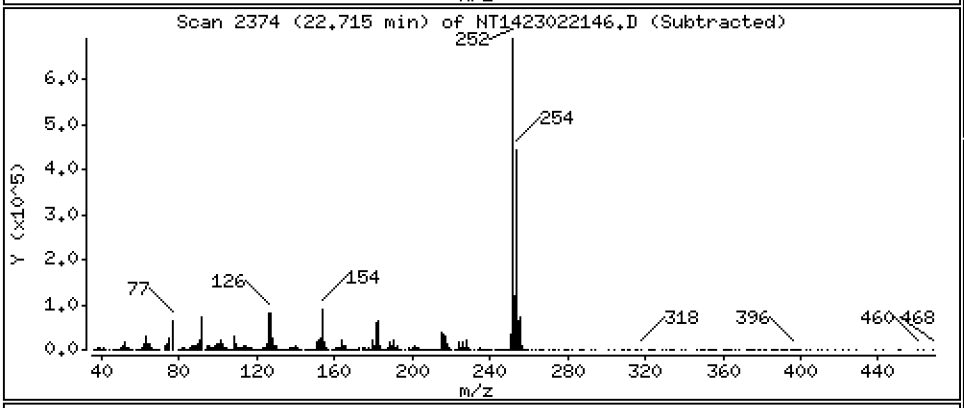
Column diameter: 0.25

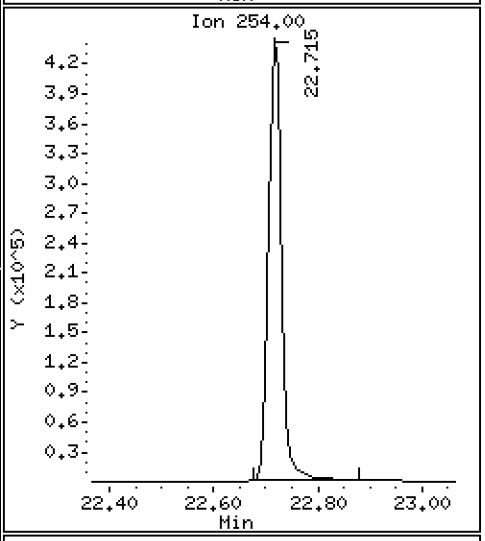
70 3,3'-Dichlorobenzidine

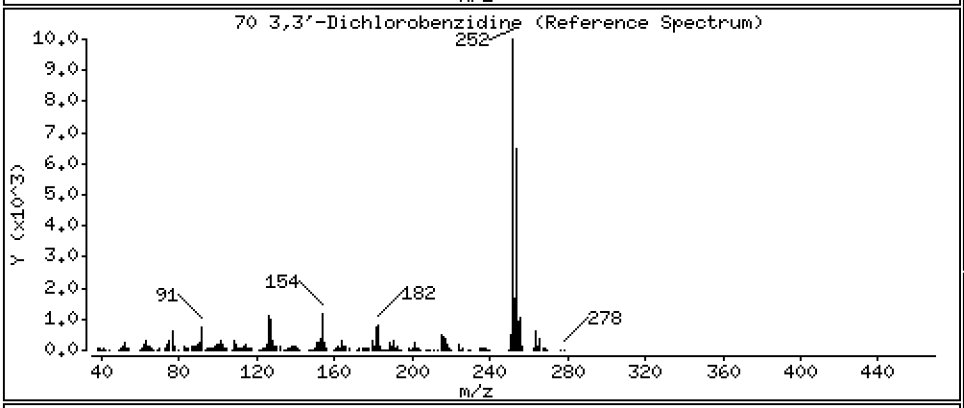
Concentration: 16.79 ug/mL

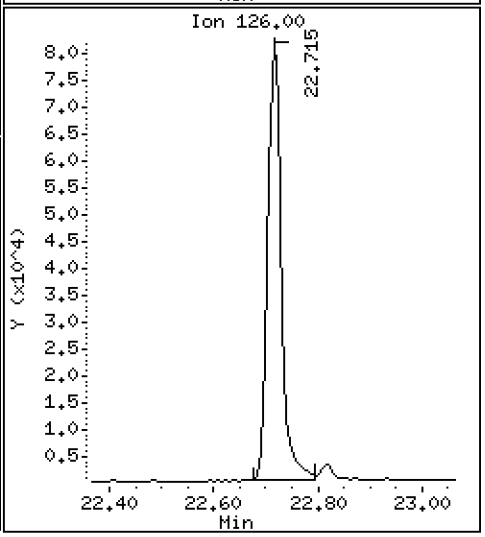


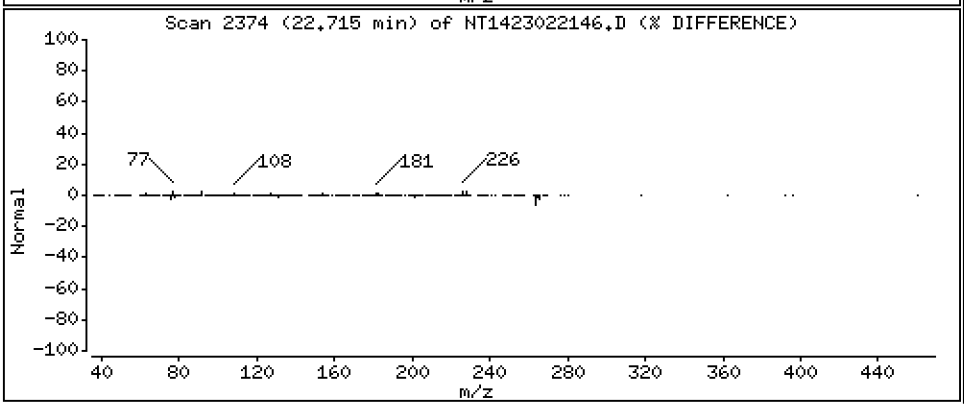












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

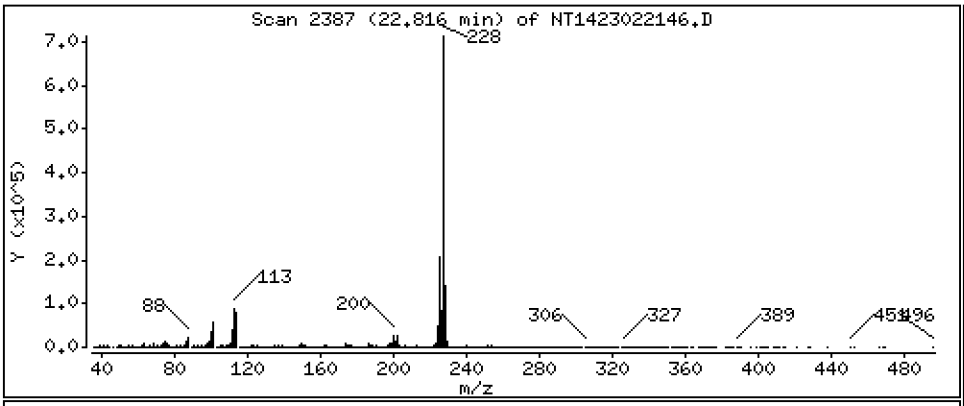
Operator: DSD

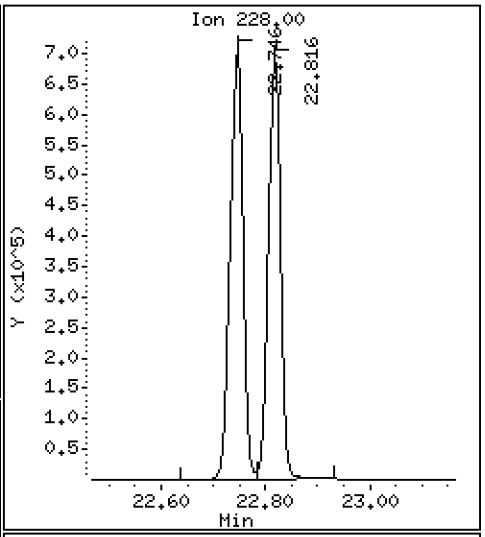
Column phase: ZB-5msi

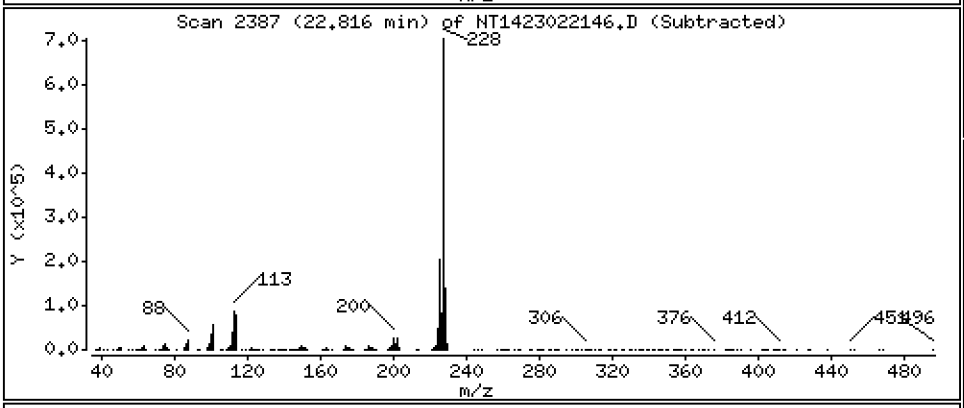
Column diameter: 0.25

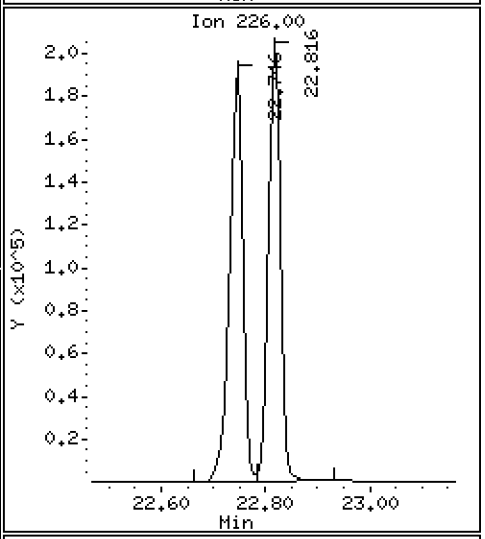
71 Chrysene

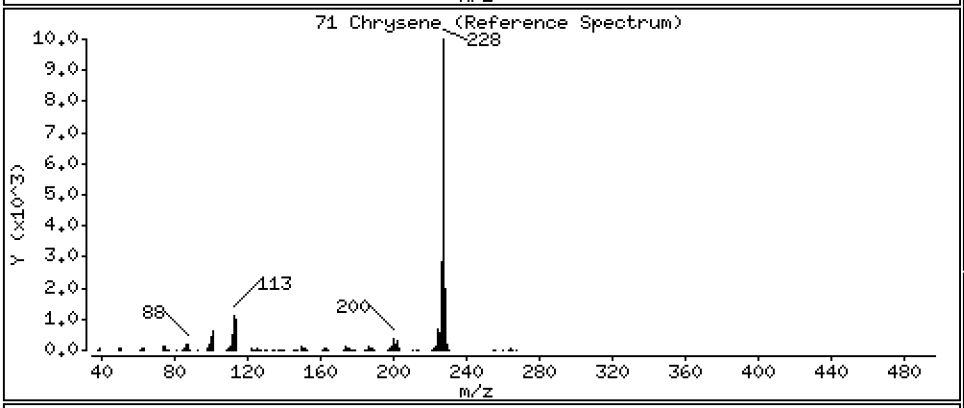
Concentration: 5.398 ug/mL

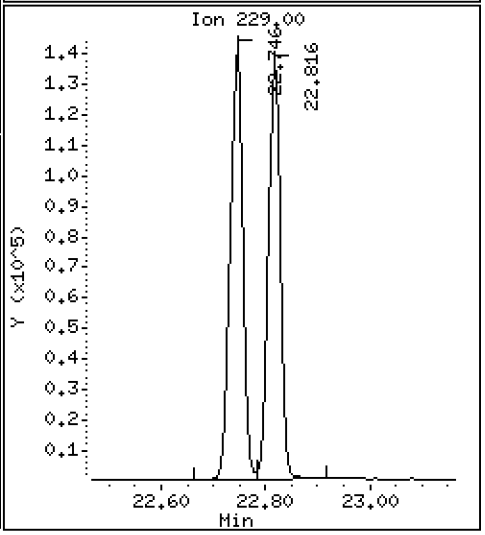


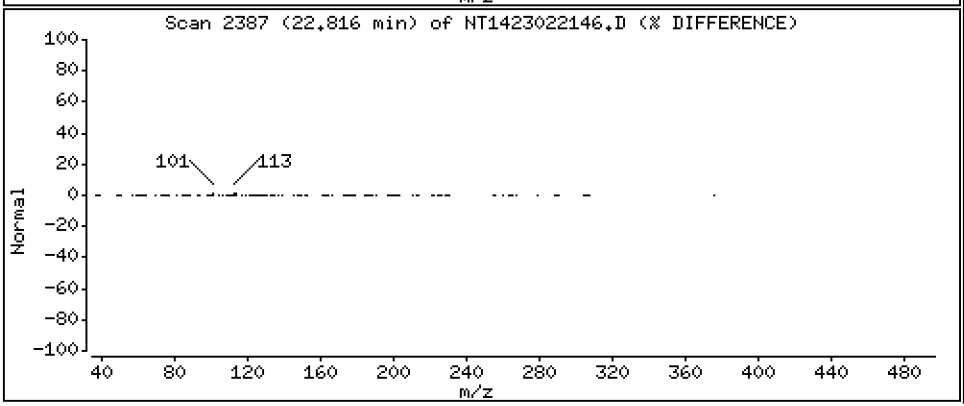












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

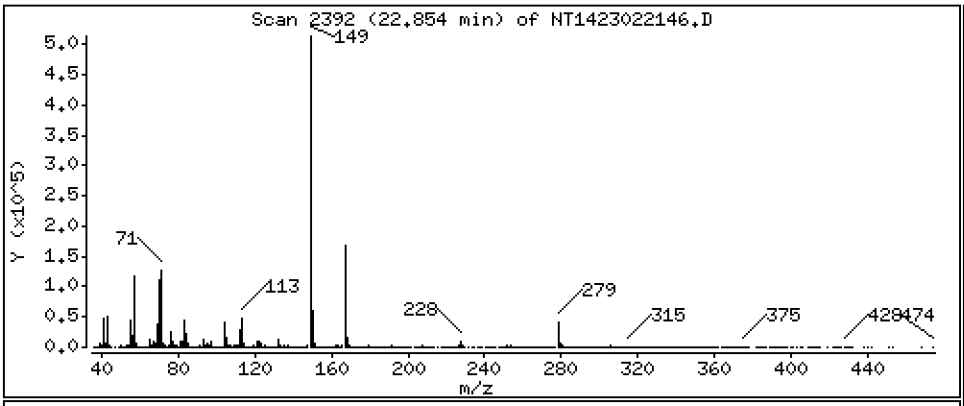
Operator: DSD

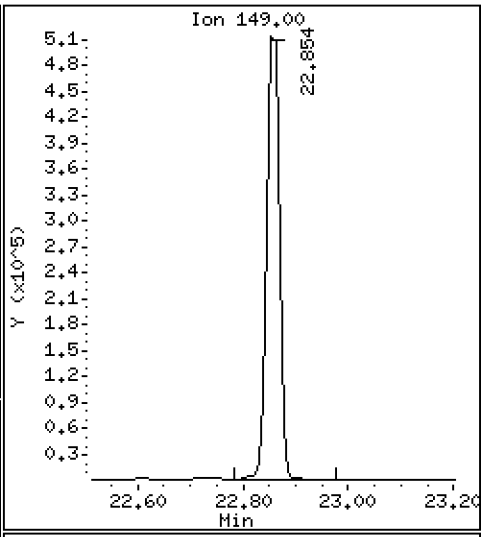
Column phase: ZB-5msi

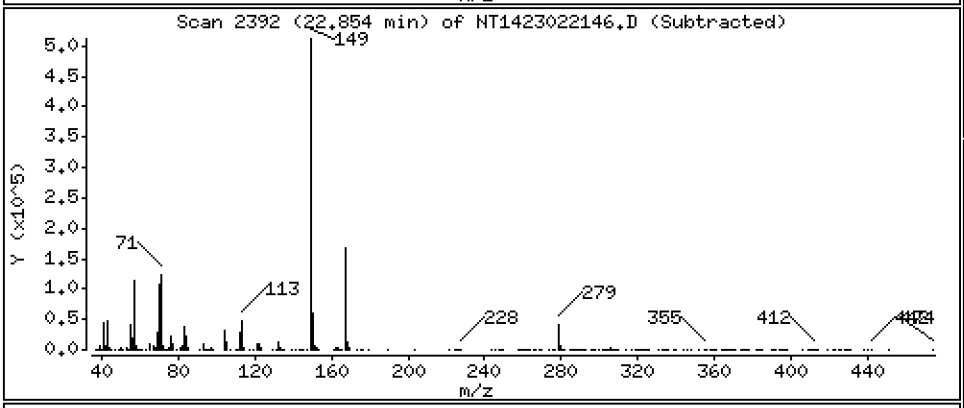
Column diameter: 0.25

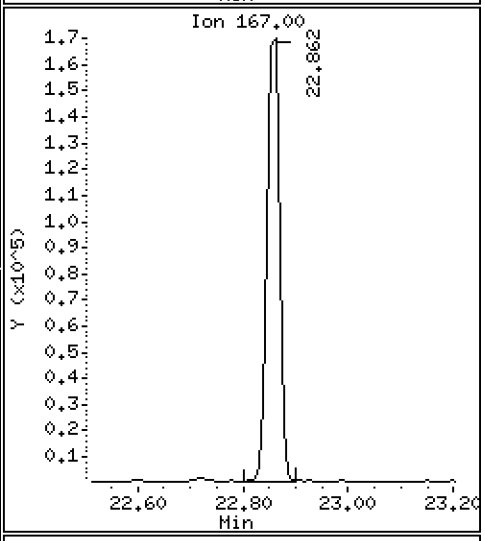
72 bis(2-Ethylhexyl)phthalate

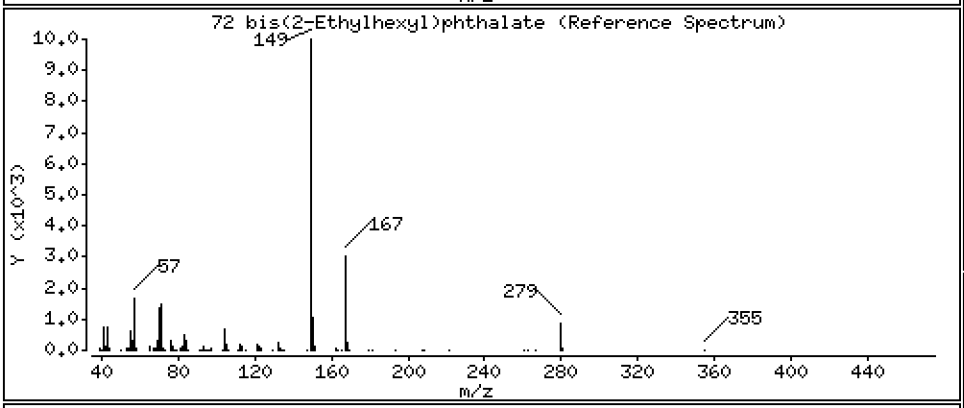
Concentration: 4.186 ug/mL

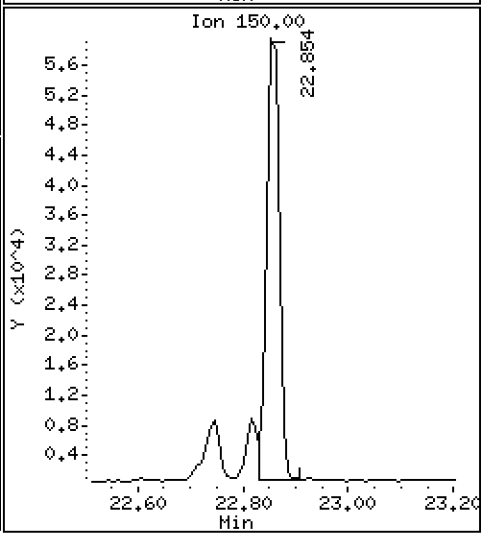


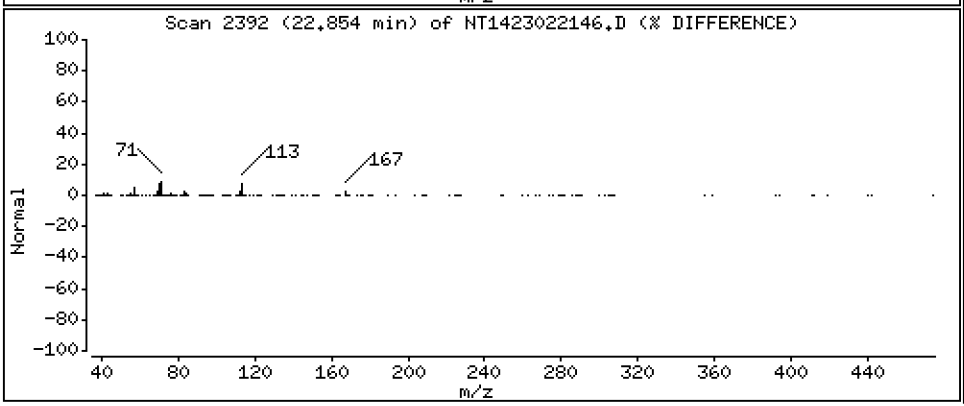












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

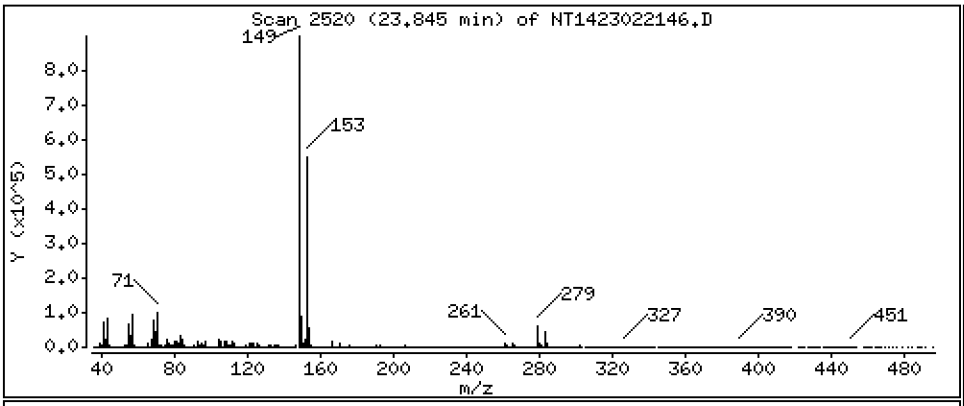
Operator: DSD

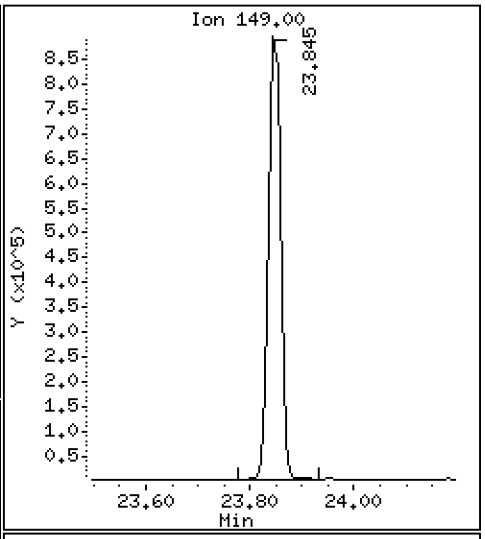
Column phase: ZB-5msi

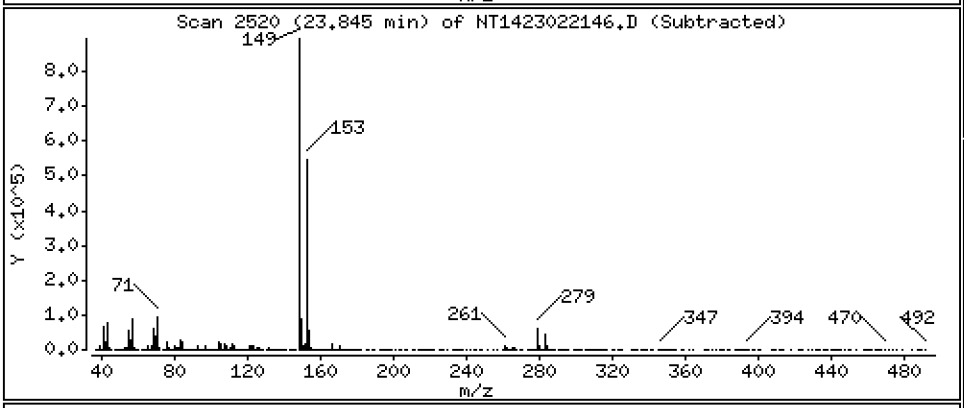
Column diameter: 0.25

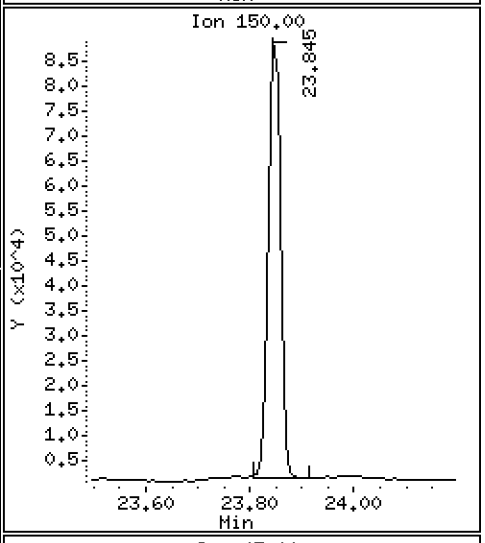
73 Di-n-octylphthalate

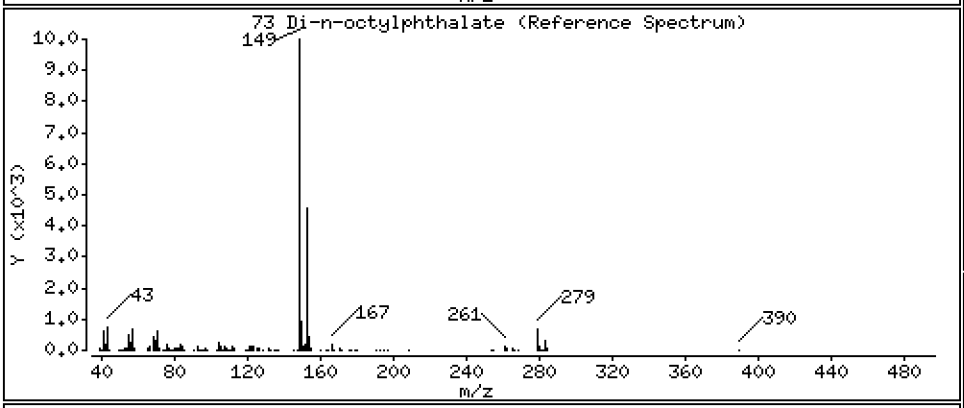
Concentration: 5.014 ug/mL

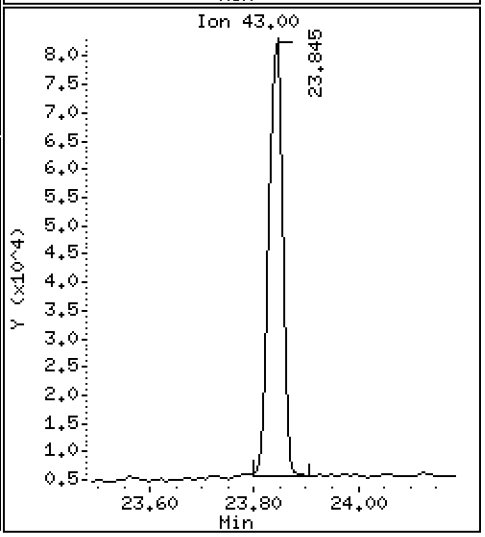


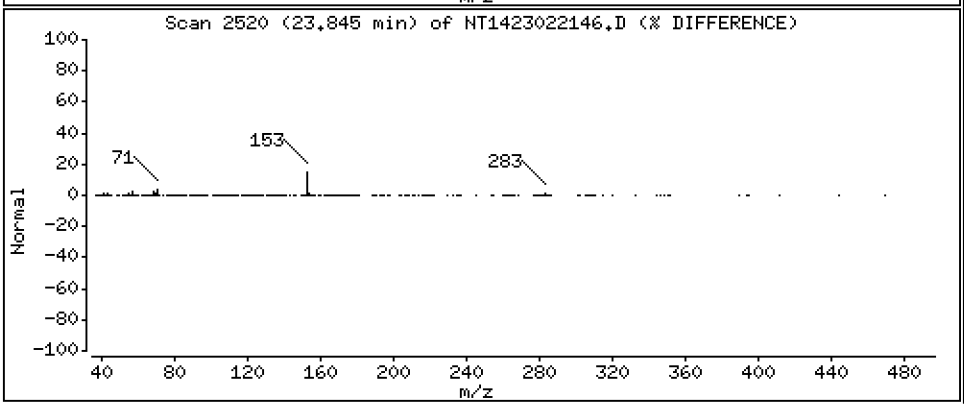












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

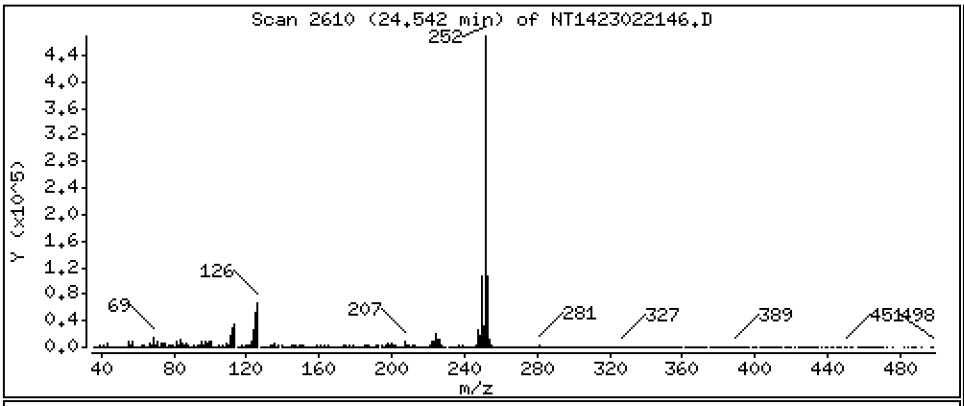
Operator: DSD

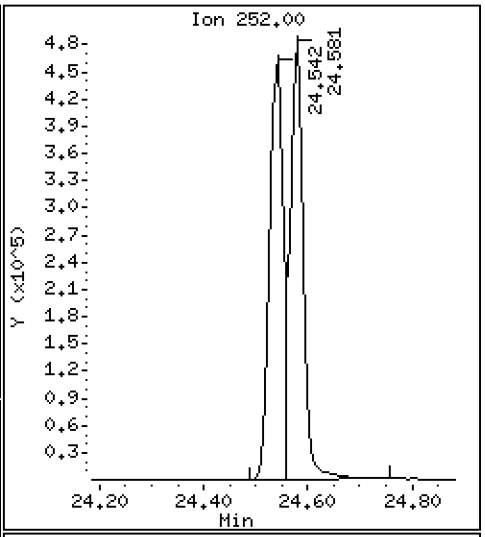
Column phase: ZB-5msi

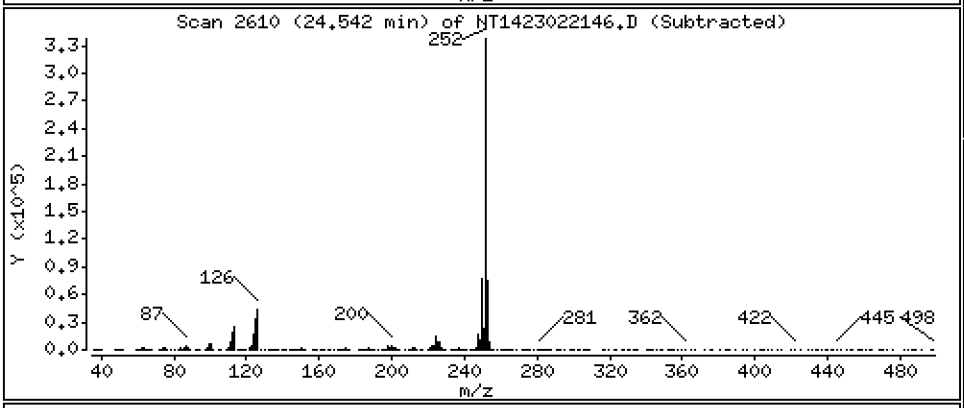
Column diameter: 0.25

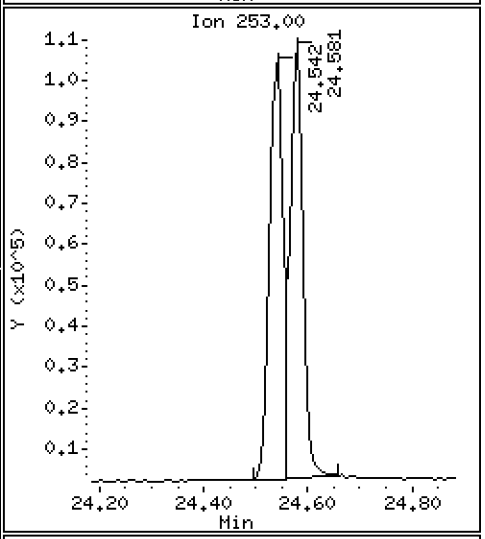
74 Benzo(b)fluoranthene

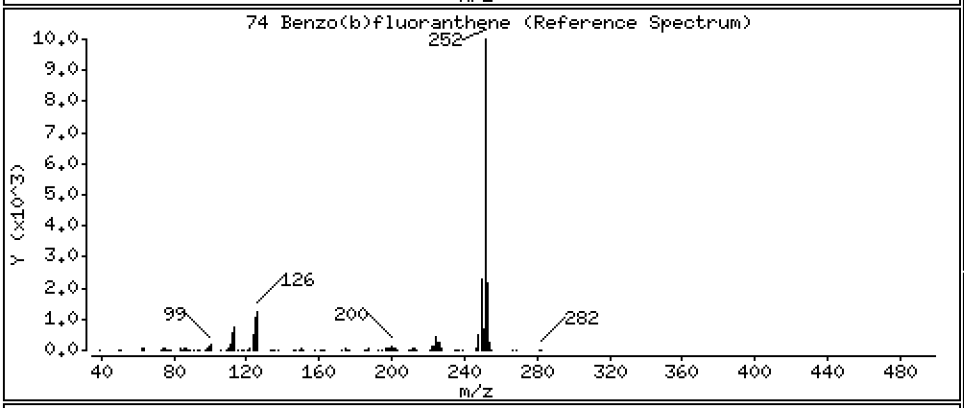
Concentration: 5.220 ug/mL

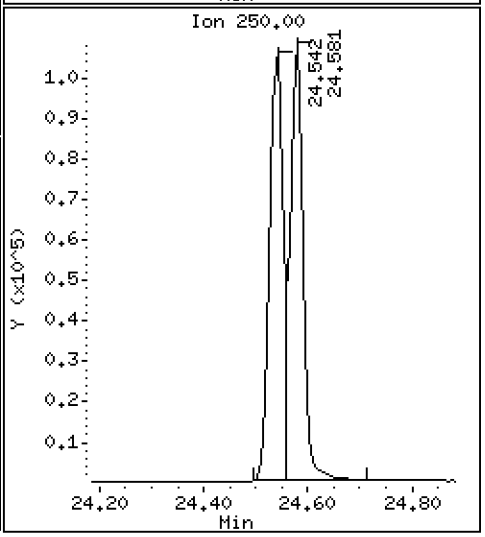


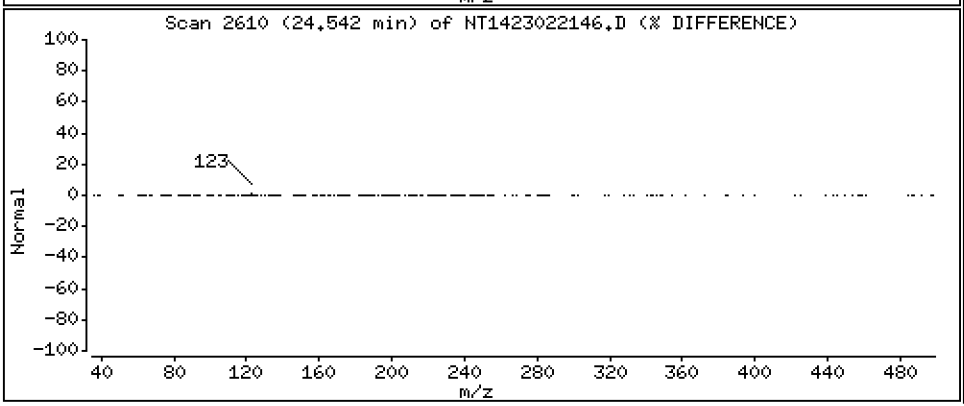












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

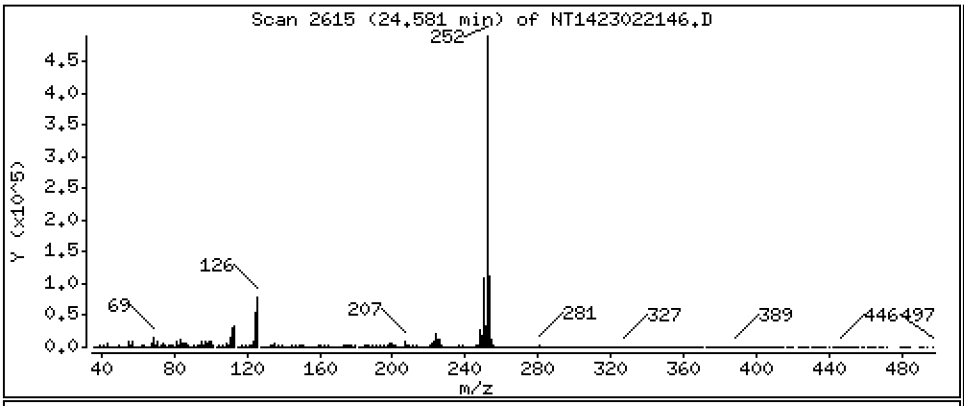
Operator: DSD

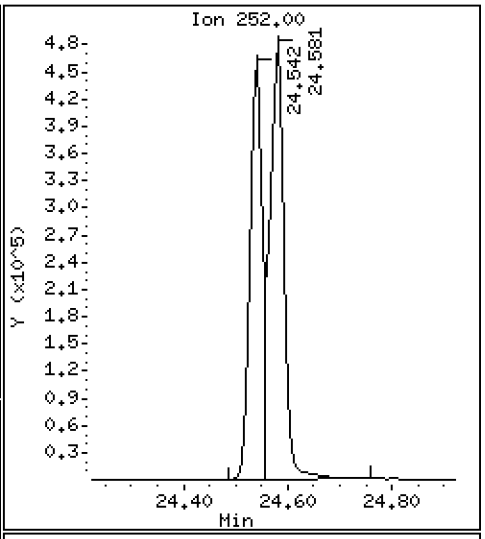
Column phase: ZB-5msi

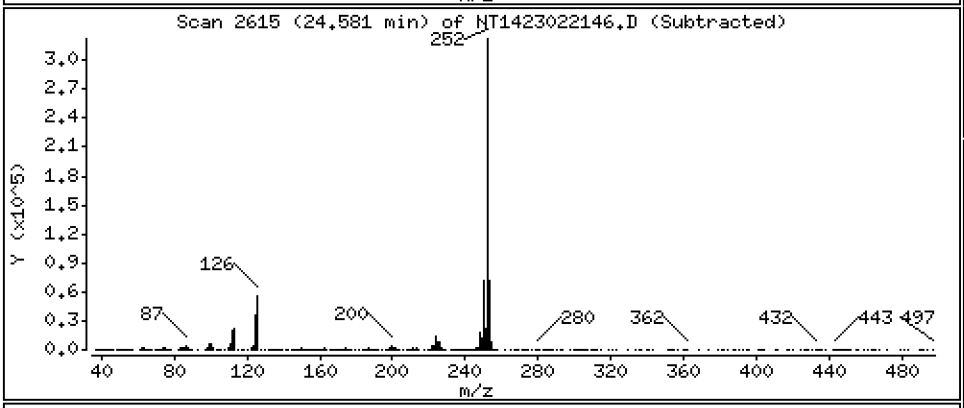
Column diameter: 0.25

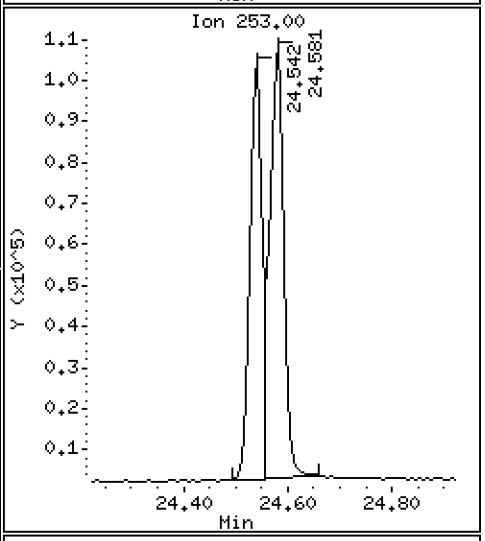
75 Benzo(k)fluoranthene

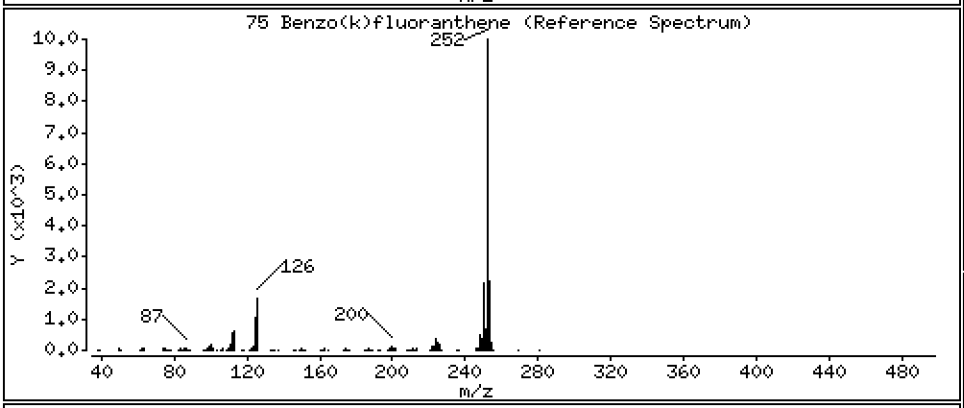
Concentration: 5.594 ug/mL

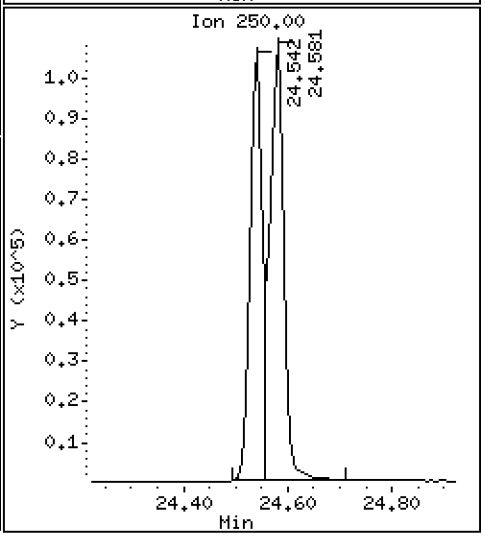


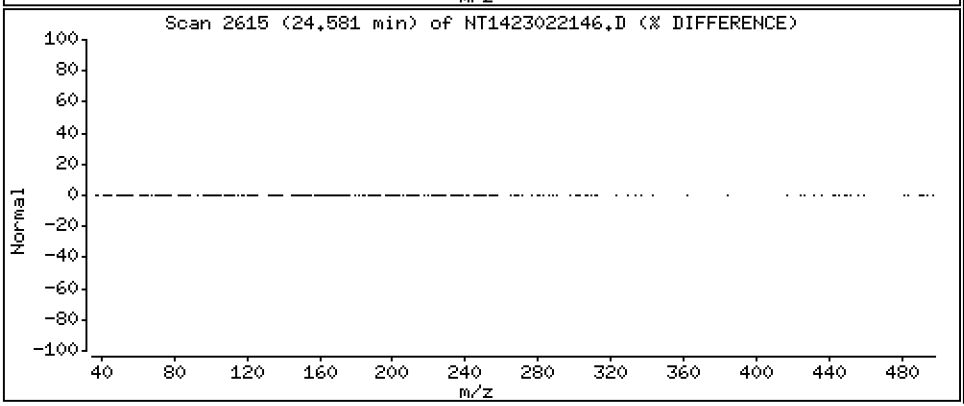












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

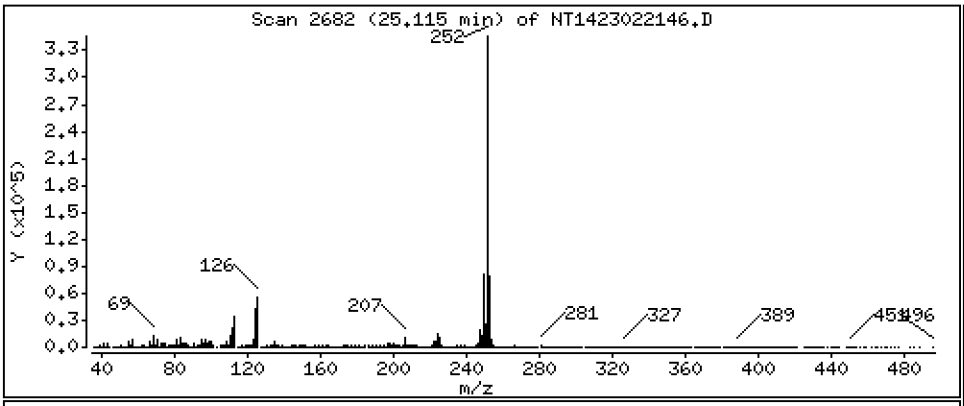
Operator: DSD

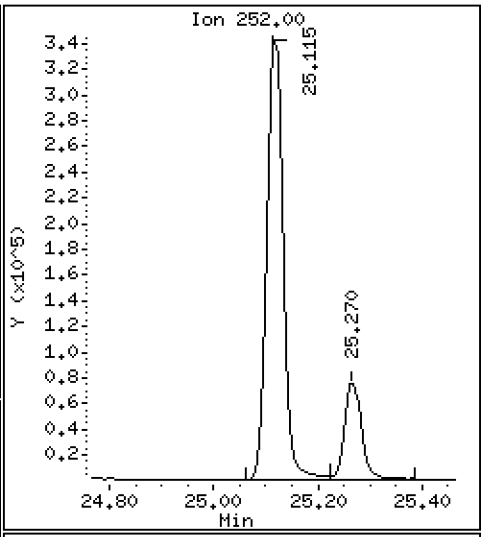
Column phase: ZB-5msi

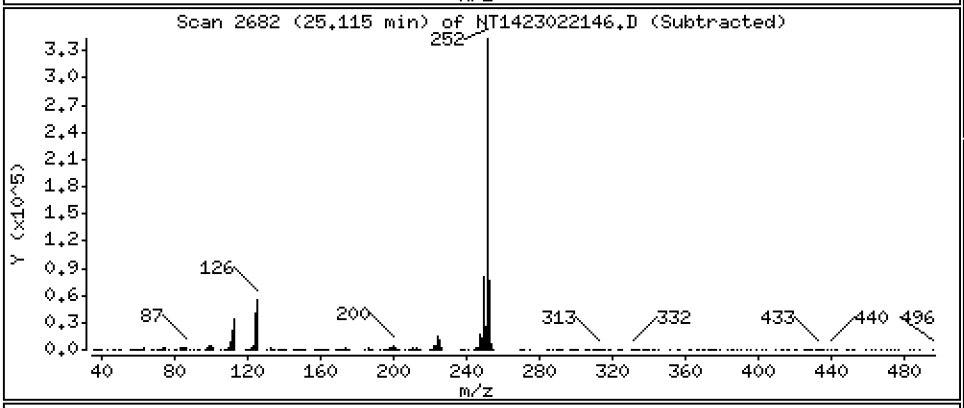
Column diameter: 0.25

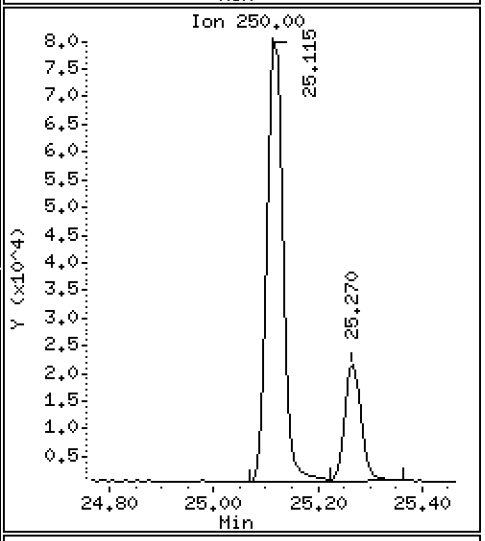
76 Benzo(a)pyrene

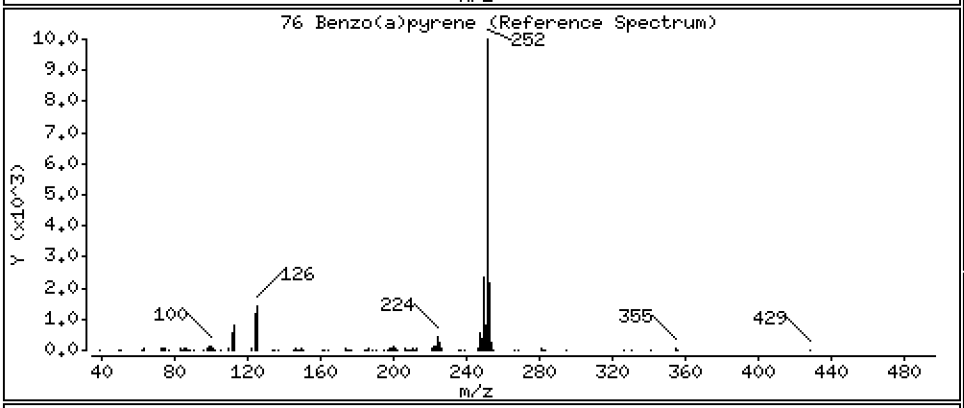
Concentration: 4.794 ug/mL

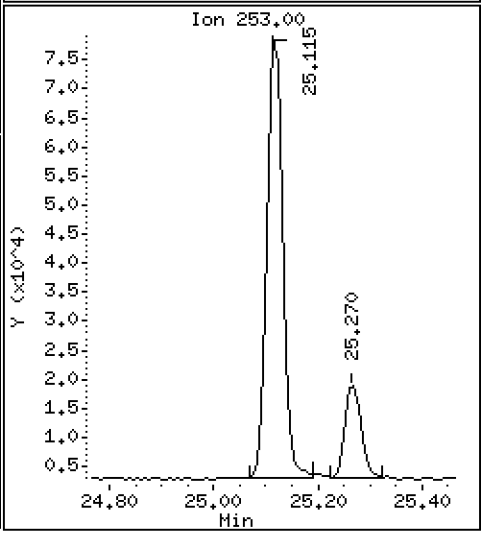


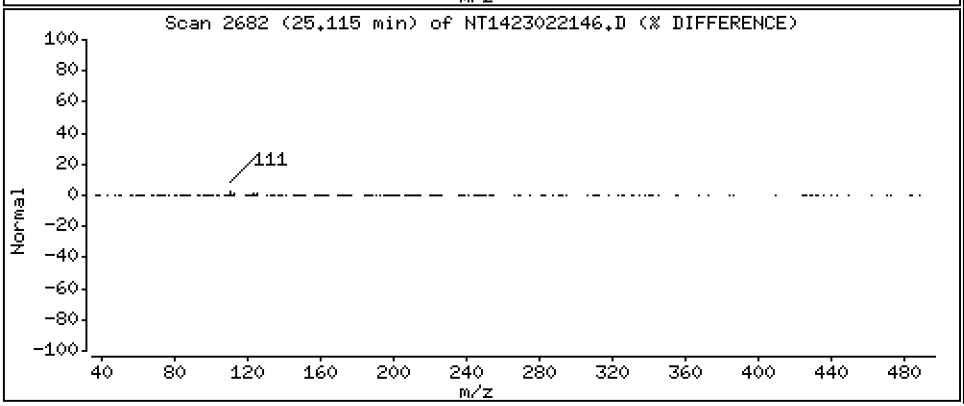












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

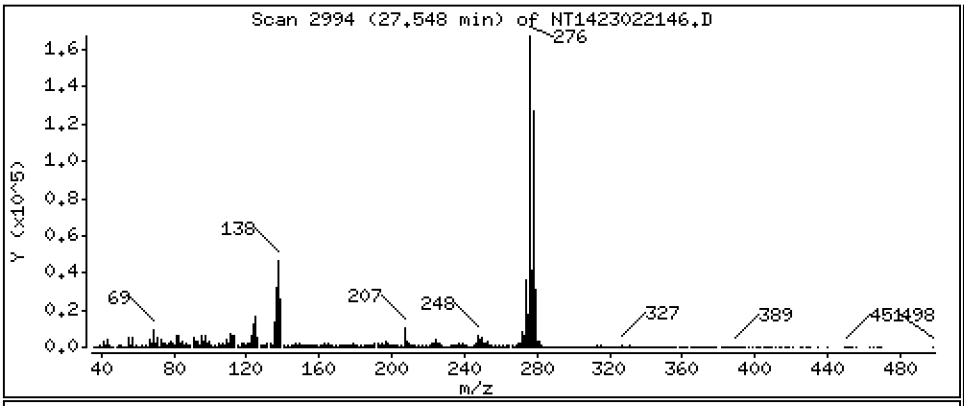
Operator: DSD

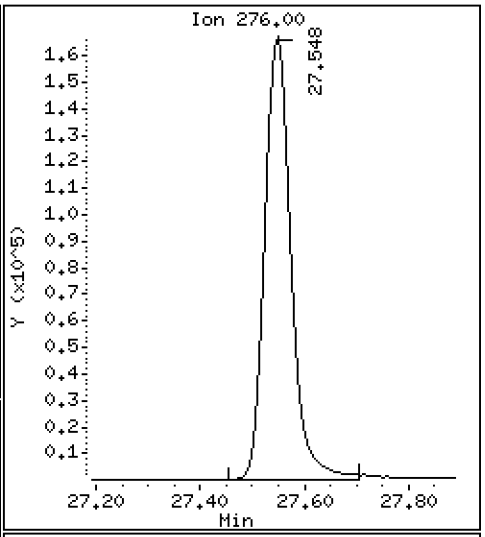
Column phase: ZB-5msi

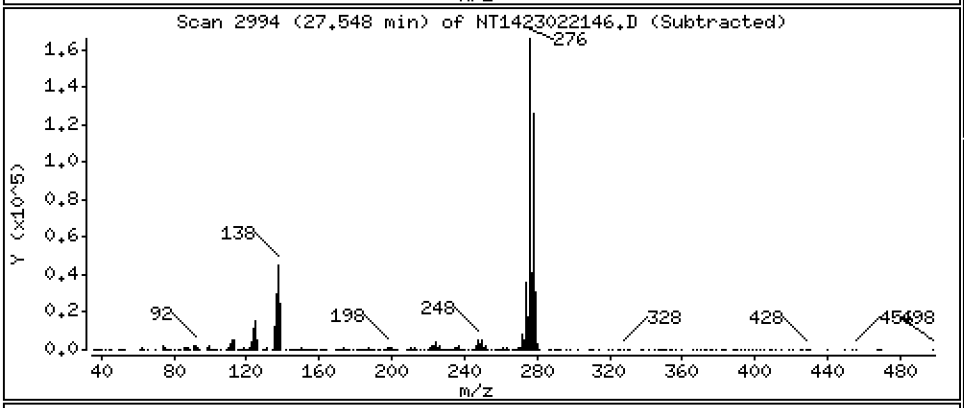
Column diameter: 0.25

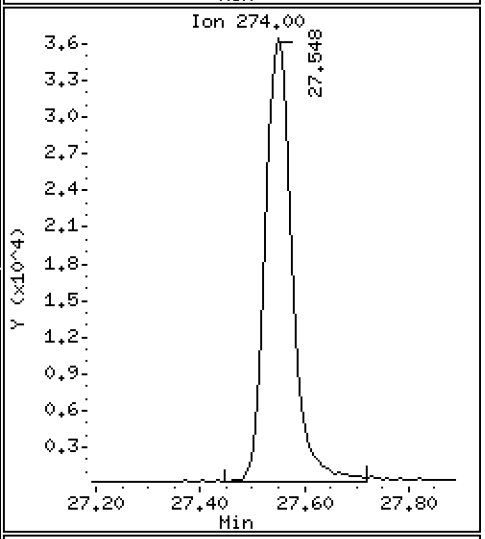
78 Indeno(1,2,3-cd)pyrene

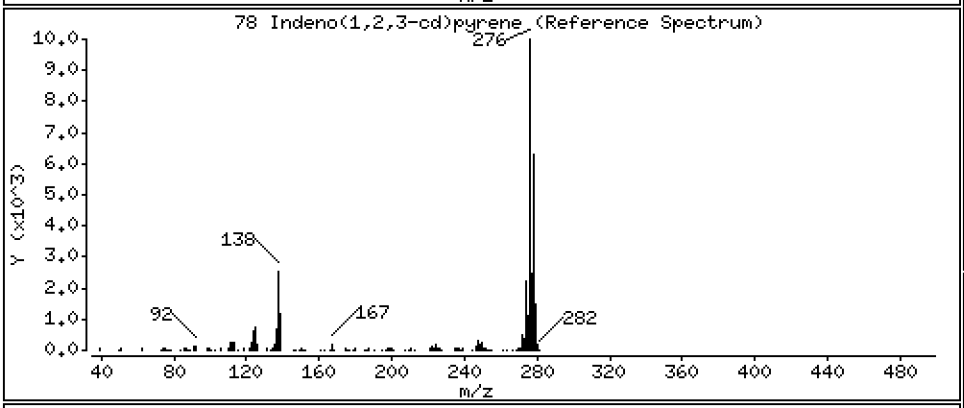
Concentration: 4.643 ug/mL

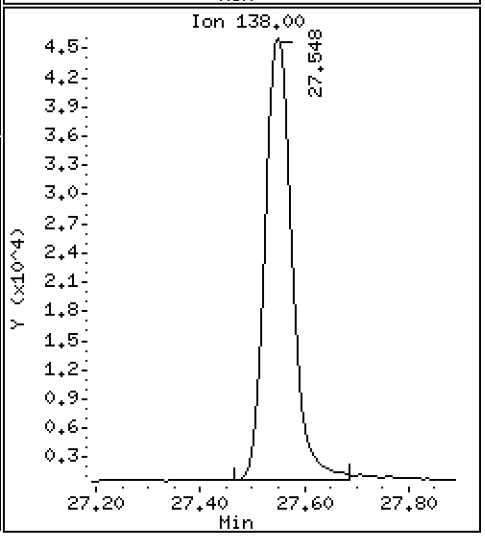


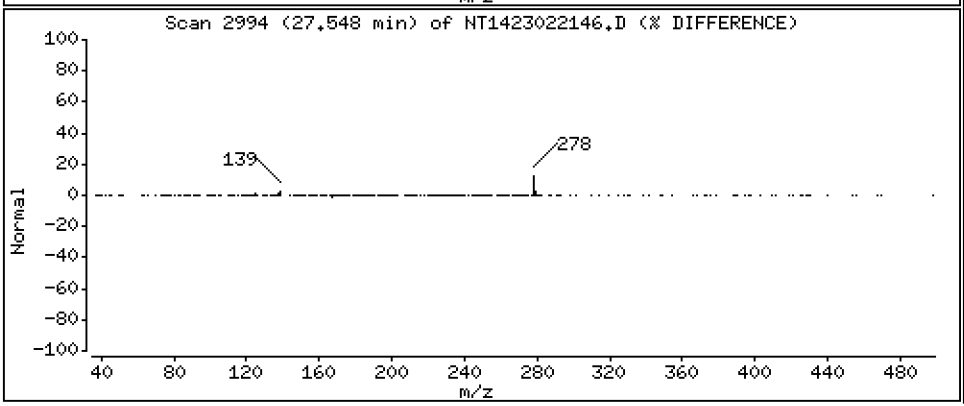












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

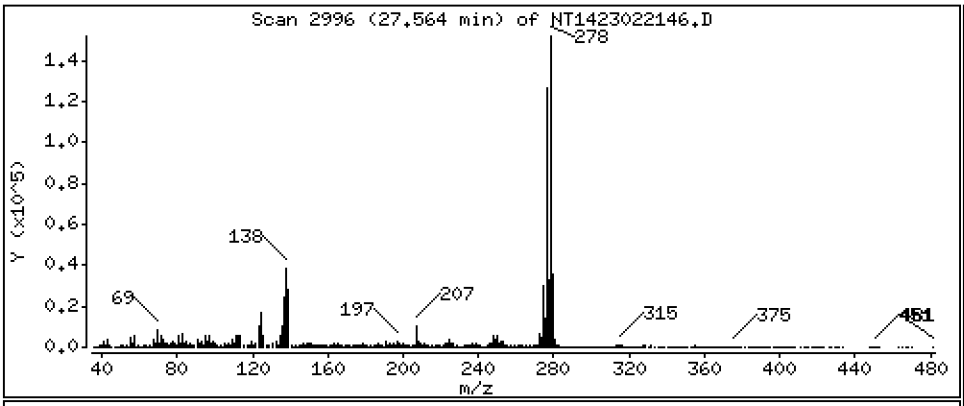
Operator: DSD

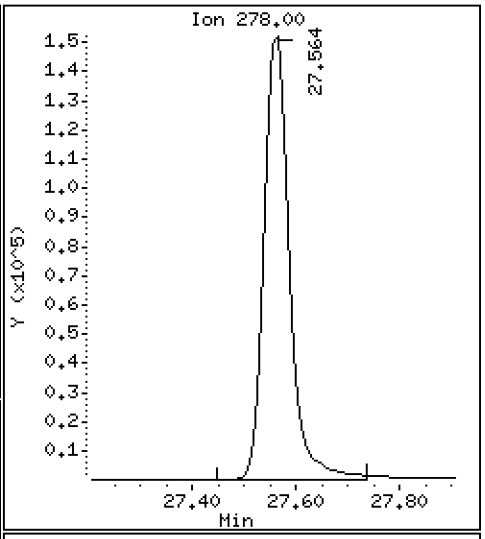
Column phase: ZB-5msi

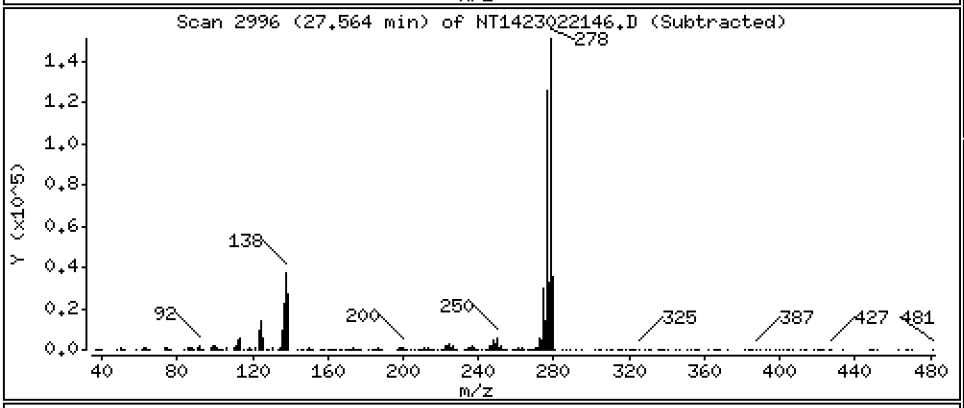
Column diameter: 0.25

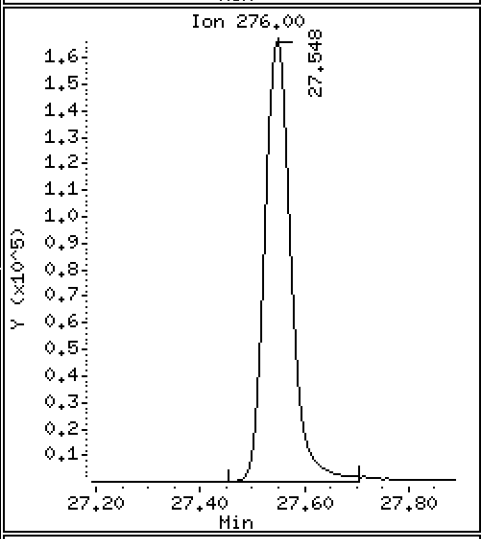
79 Dibenzo(a,h)anthracene

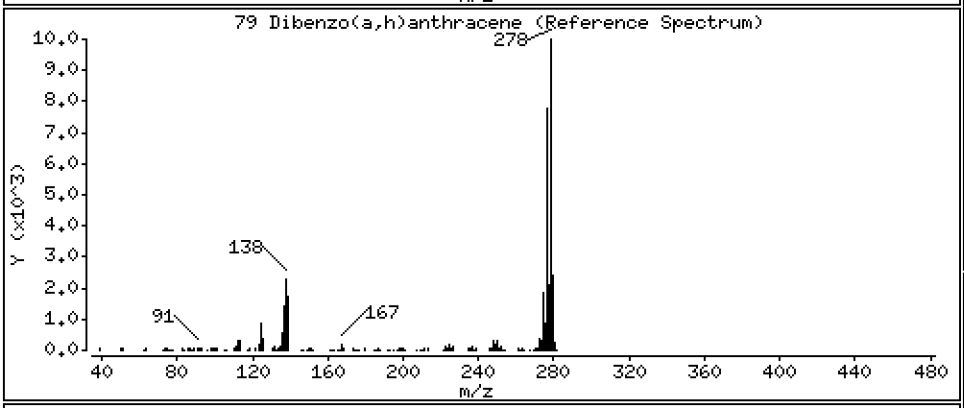
Concentration: 4.939 ug/mL

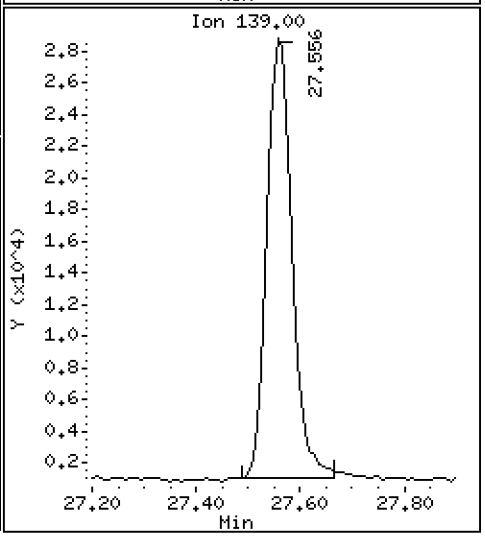


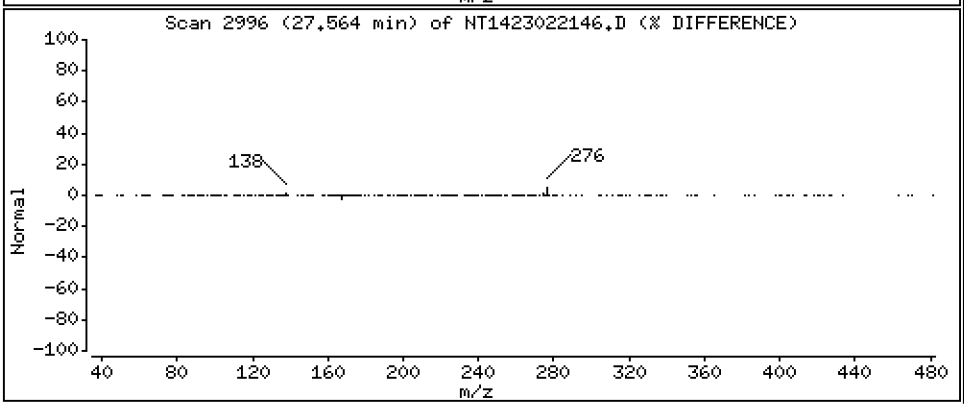












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

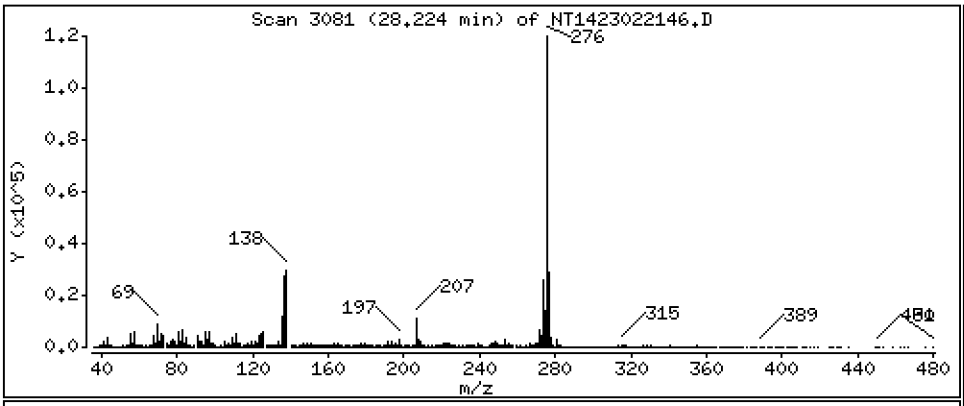
Operator: DSD

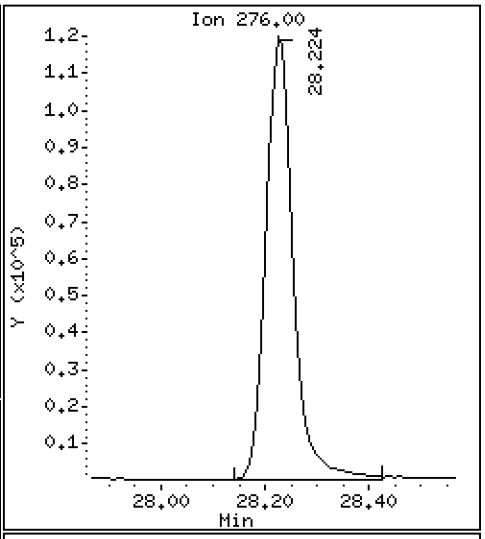
Column phase: ZB-5msi

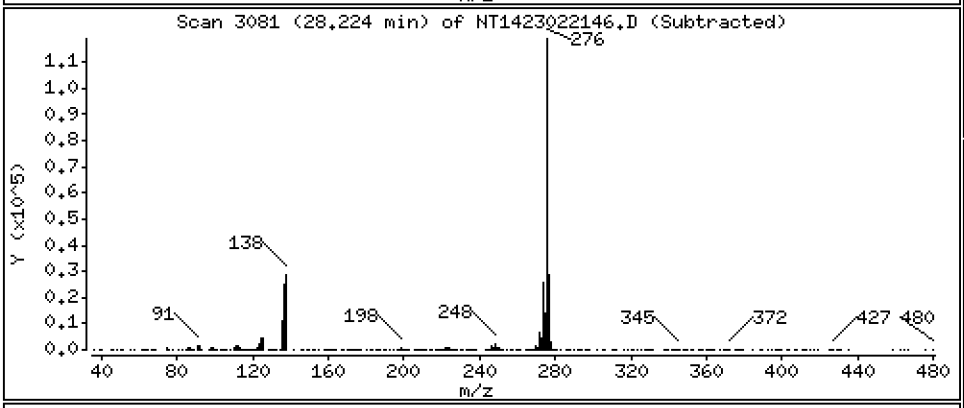
Column diameter: 0.25

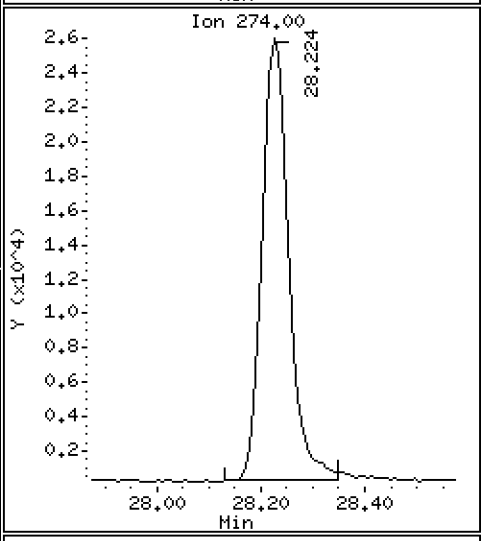
80 Benzo(g,h,i)perylene

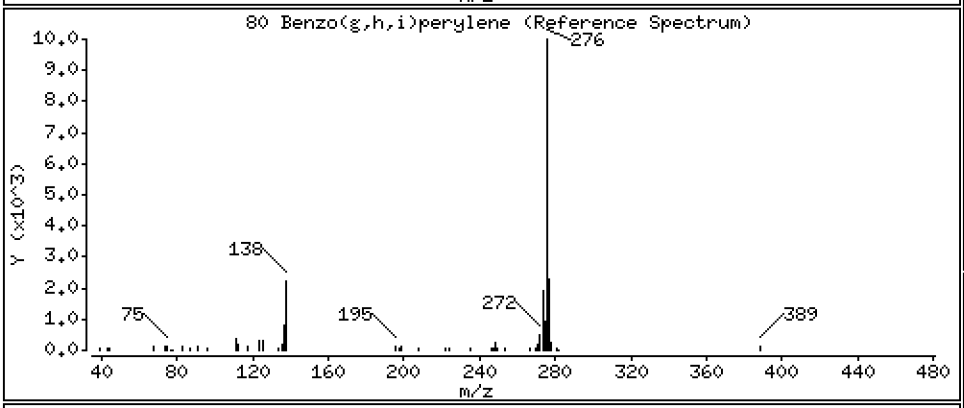
Concentration: 4.266 ug/mL

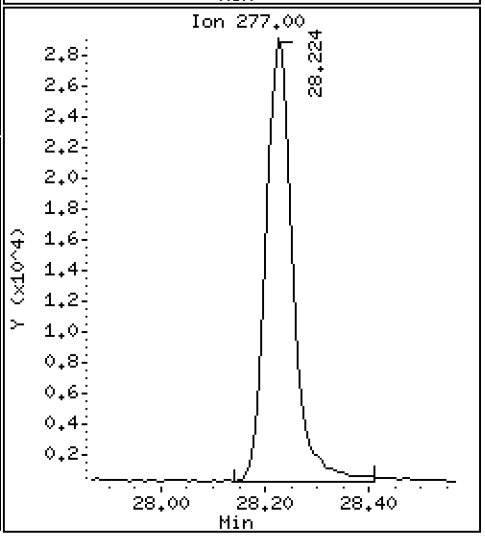


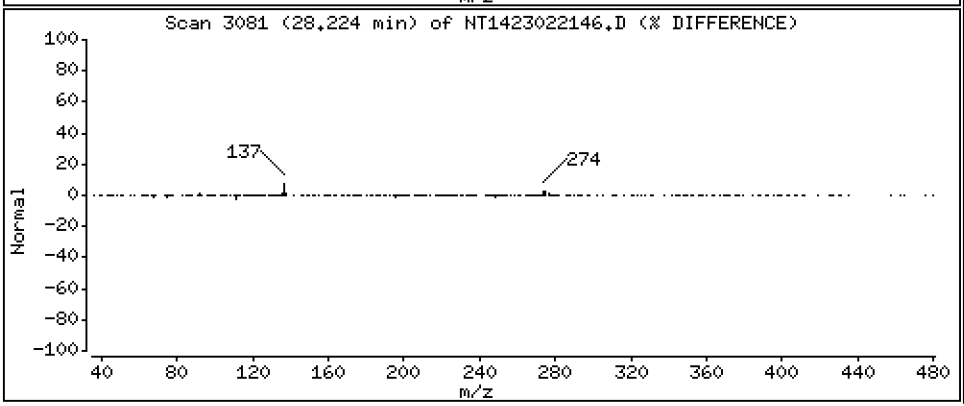












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

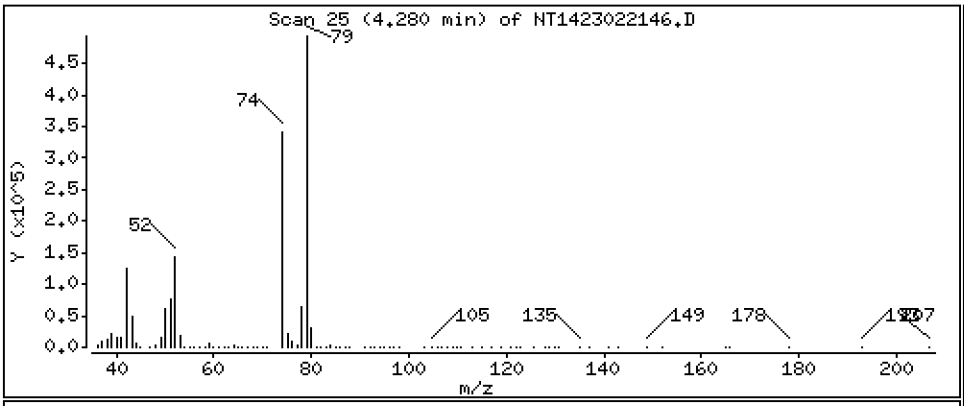
Operator: DSD

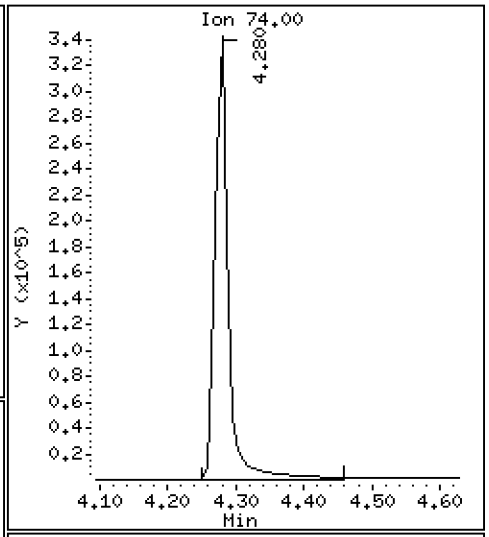
Column phase: ZB-5msi

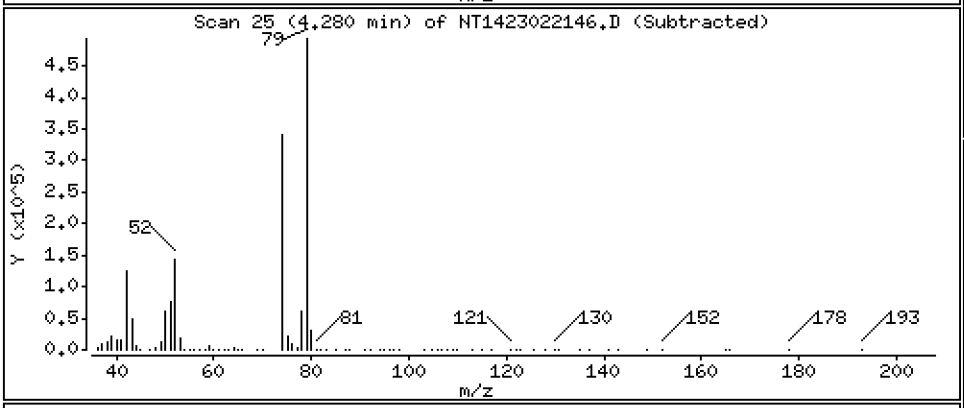
Column diameter: 0.25

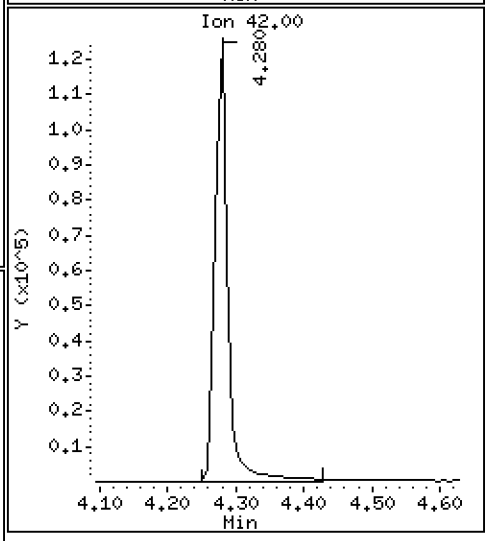
90 N-Nitrosodimethylamine

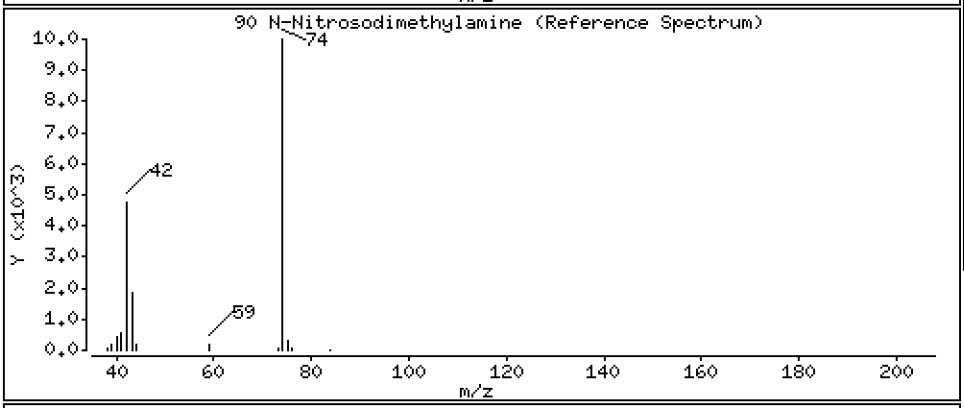
Concentration: 9.986 ug/mL

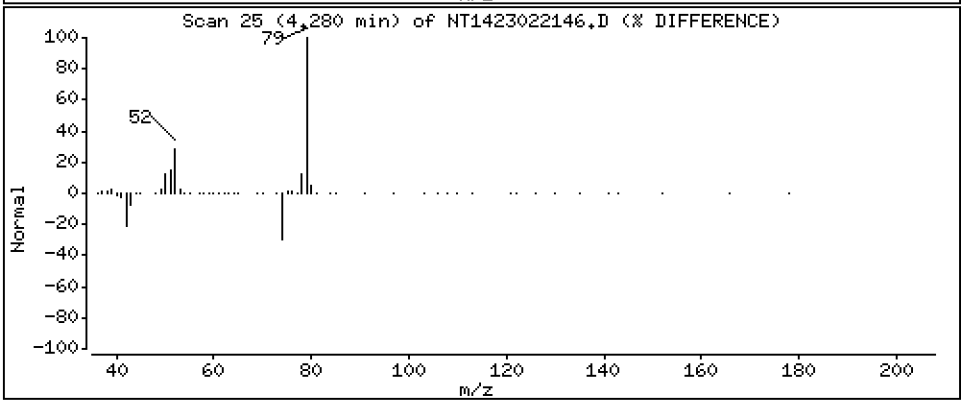












Date : 22-FEB-2023 16:35

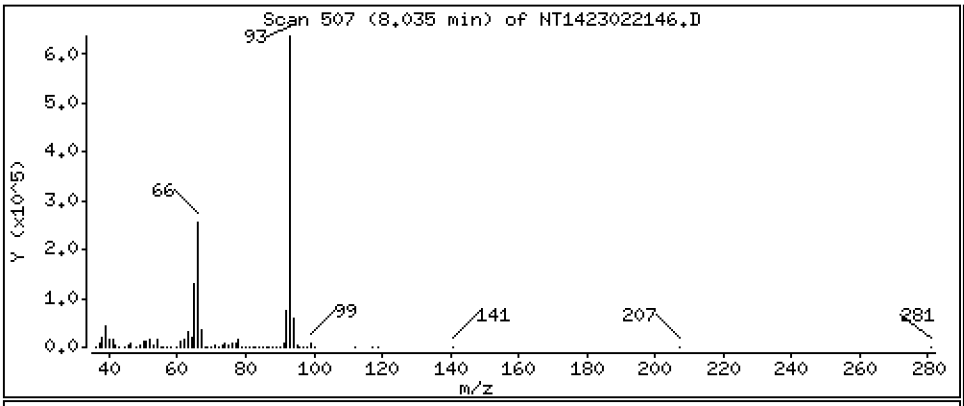
Client ID: Instrument: nt14.i

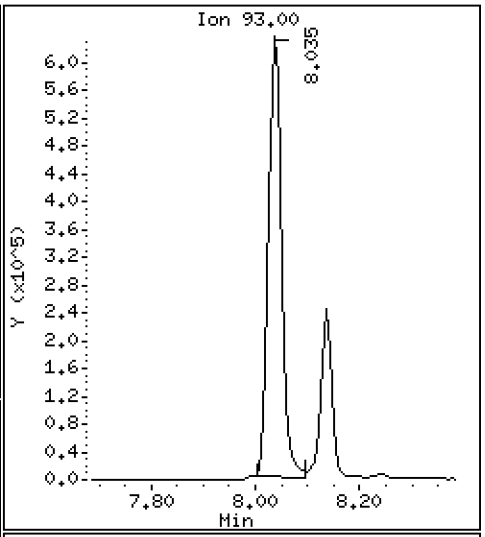
Sample Info: SLB0308-ICV1

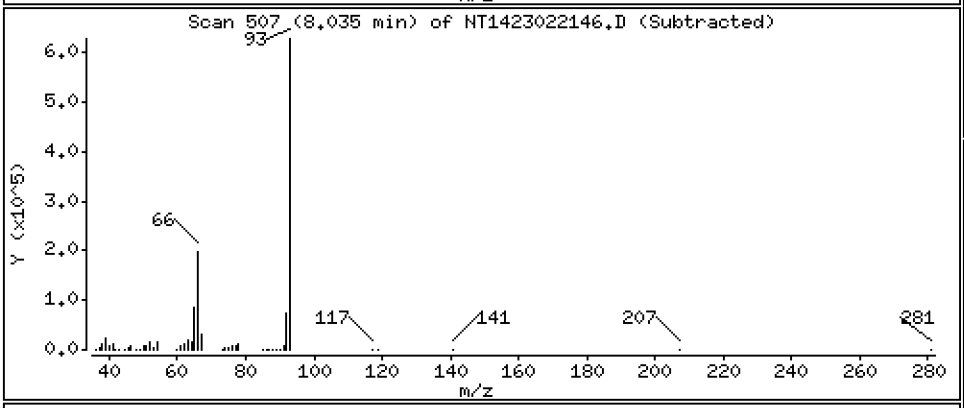
Operator: DSD

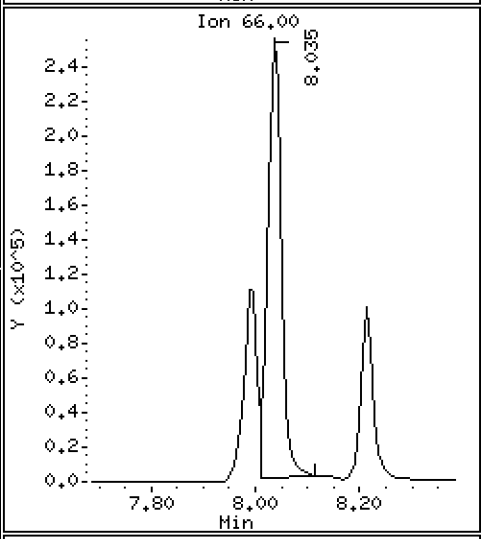
Column phase: ZB-5msi Column diameter: 0.25

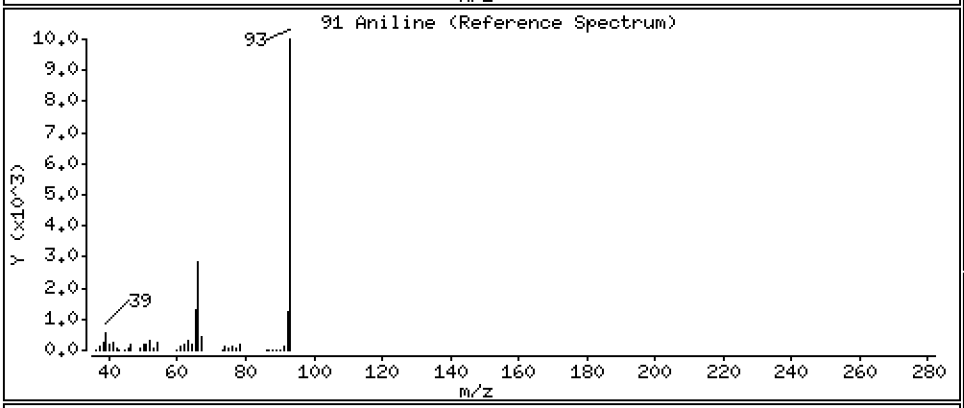
91 Aniline Concentration: 9.428 ug/mL

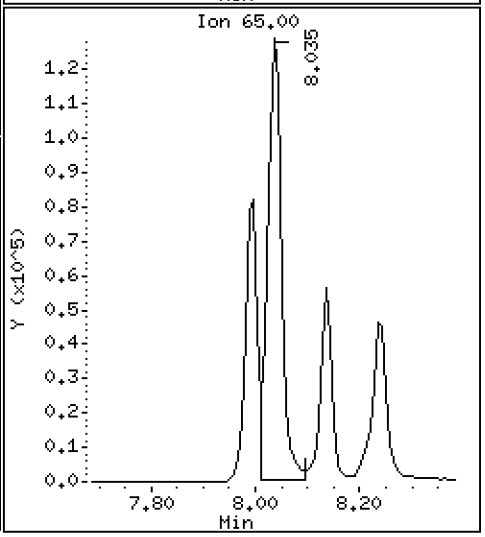


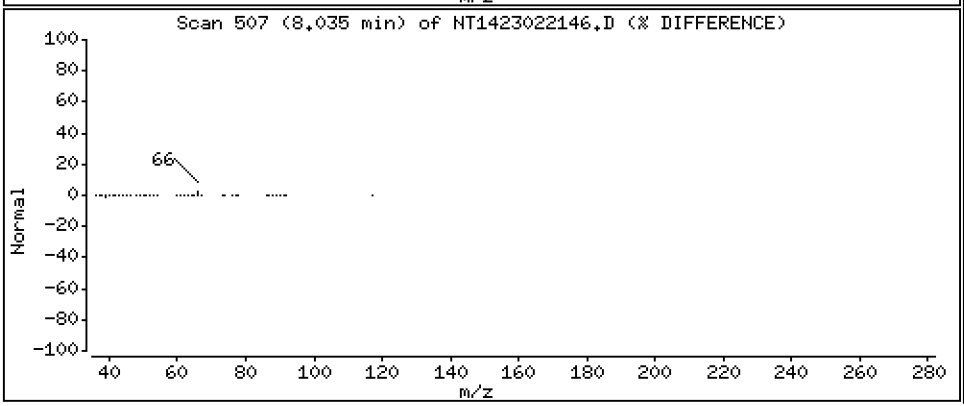












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022146.D

Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

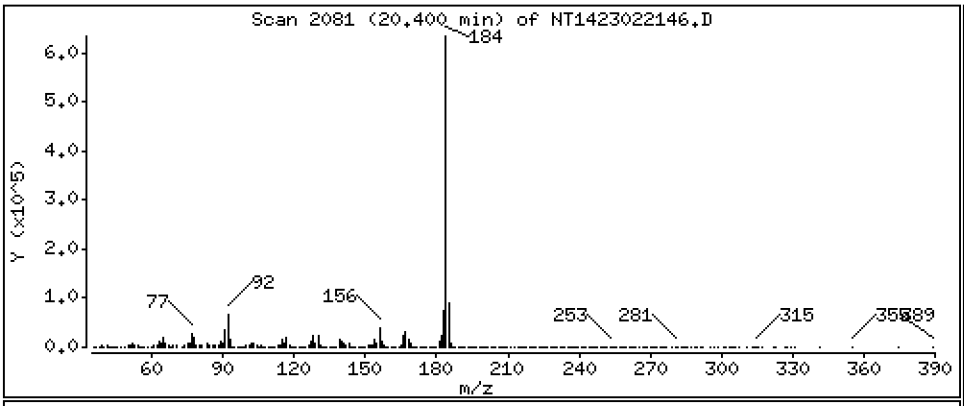
Operator: DSD

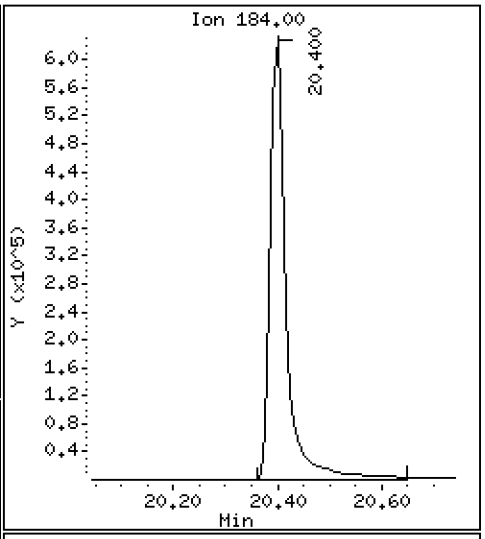
Column phase: ZB-5msi

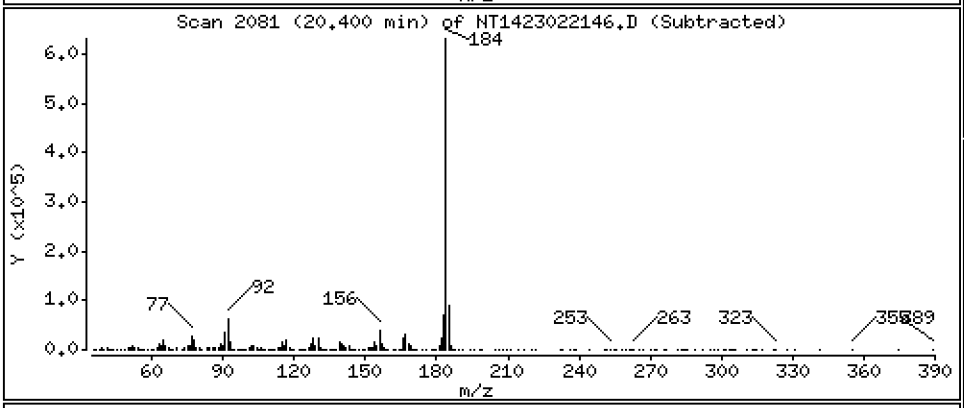
Column diameter: 0.25

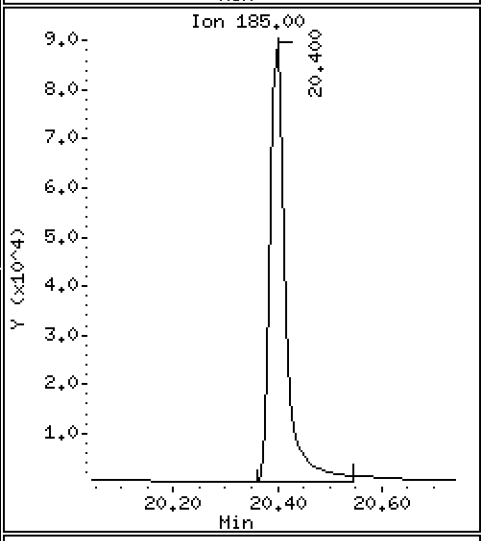
93 Benzidine

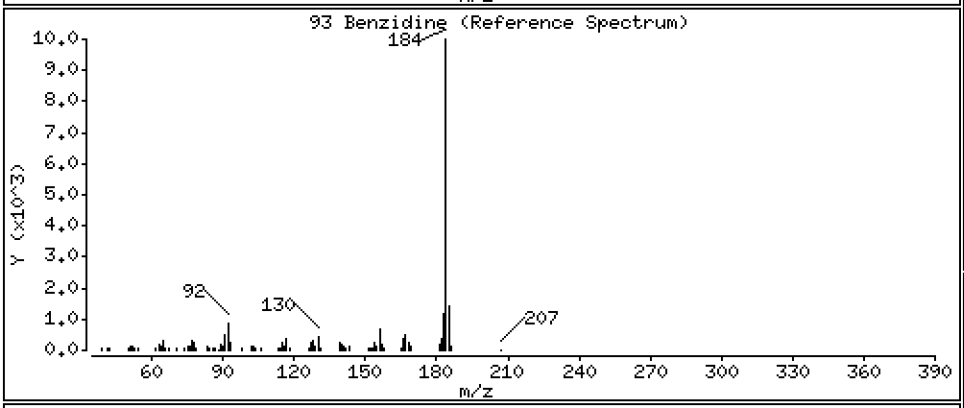
Concentration: 20.01 ug/mL

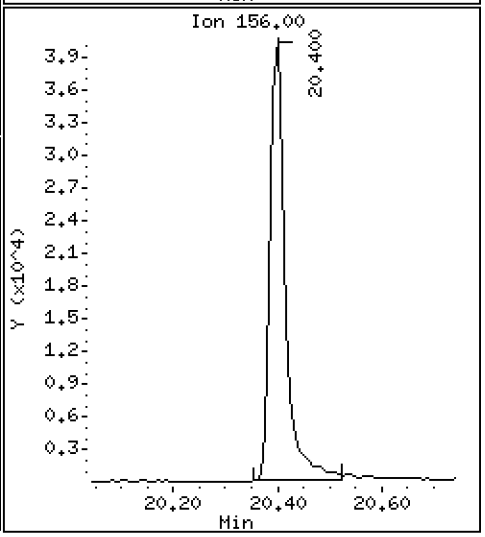


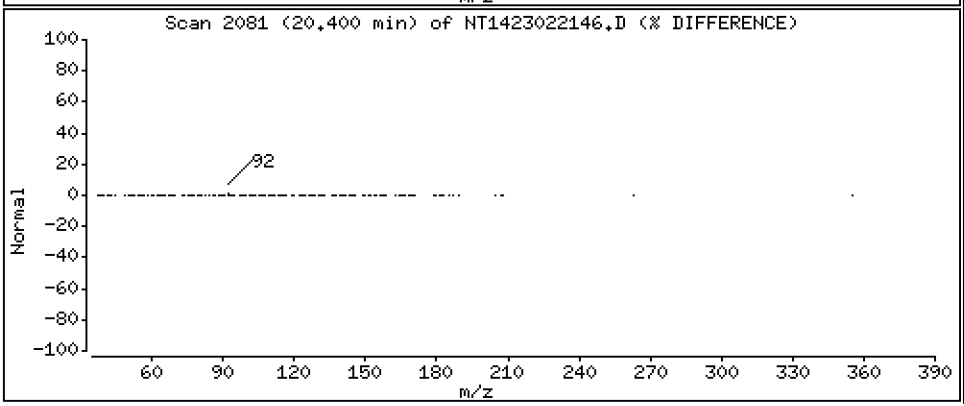












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

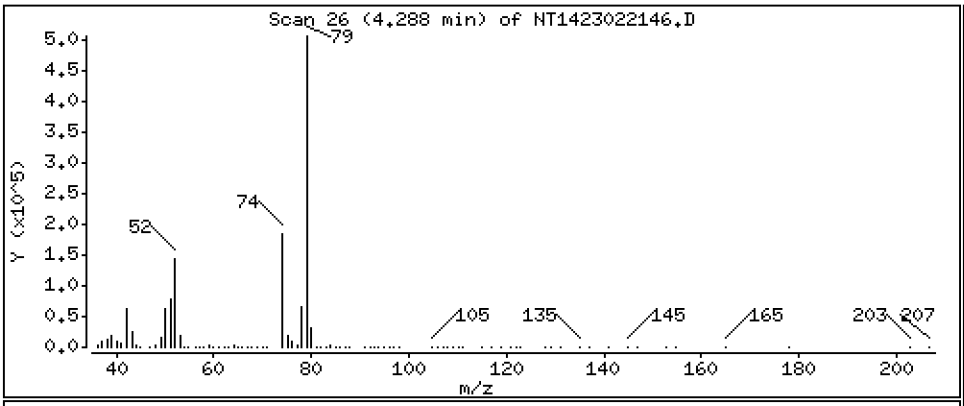
Operator: DSD

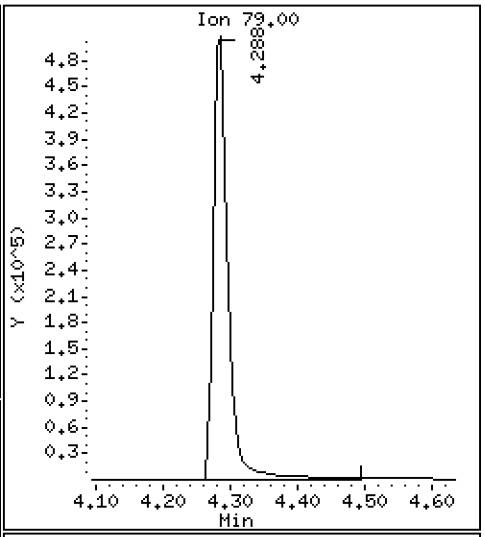
Column phase: ZB-5msi

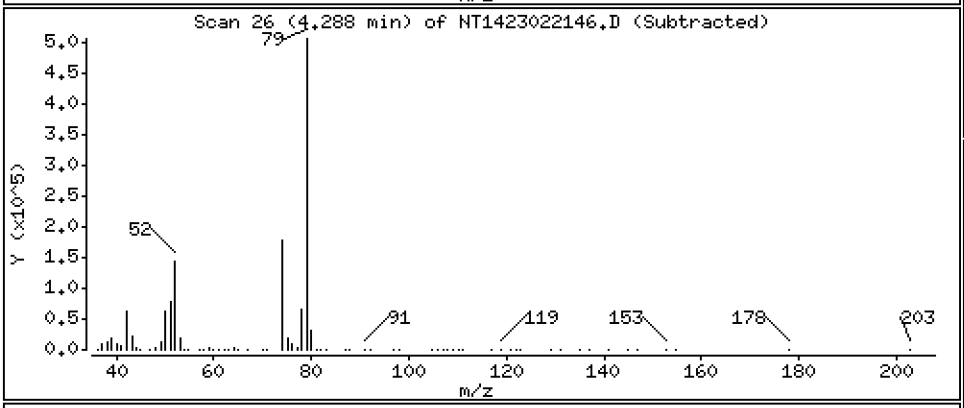
Column diameter: 0.25

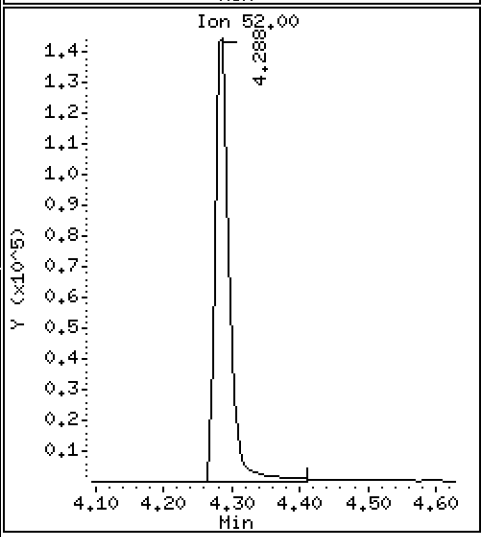
103 Pyridine

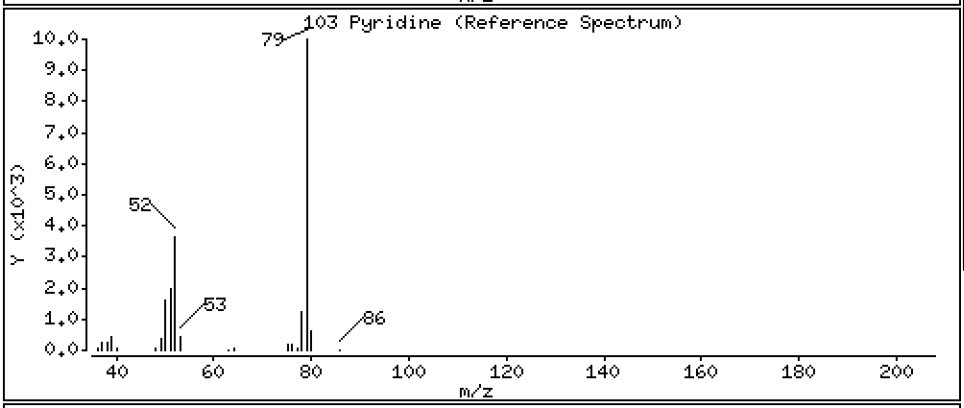
Concentration: 10.28 ug/mL

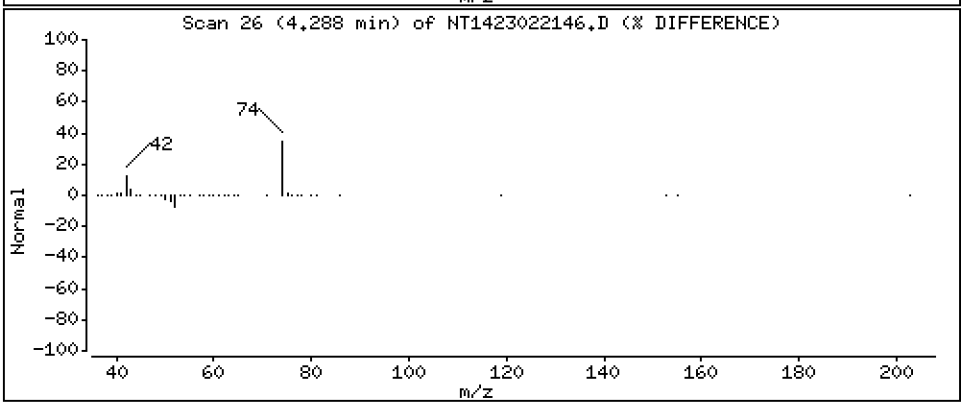












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

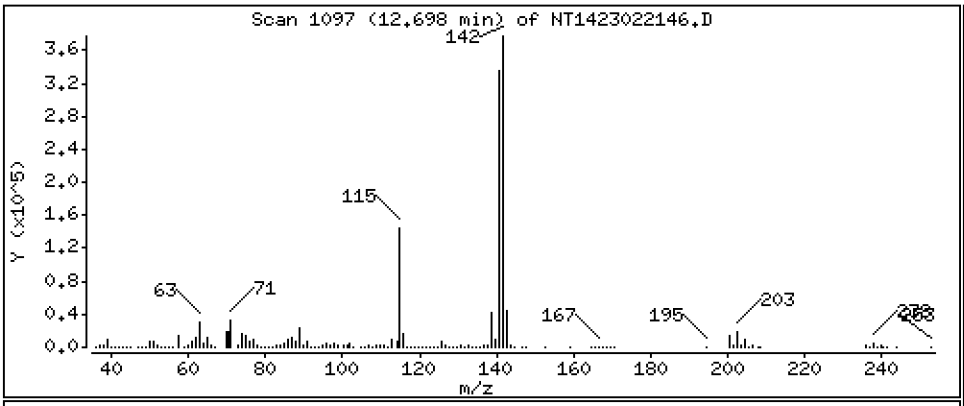
Operator: DSD

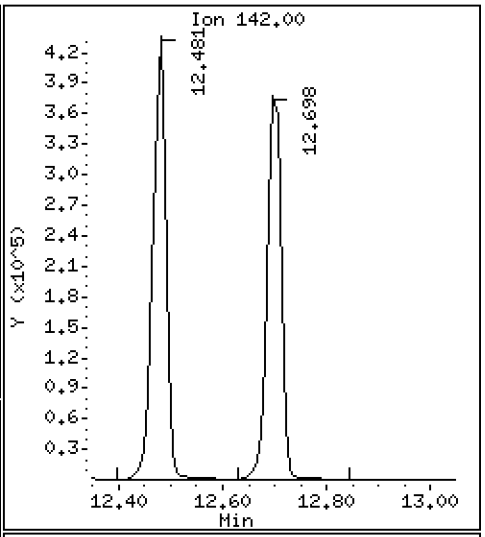
Column phase: ZB-5msi

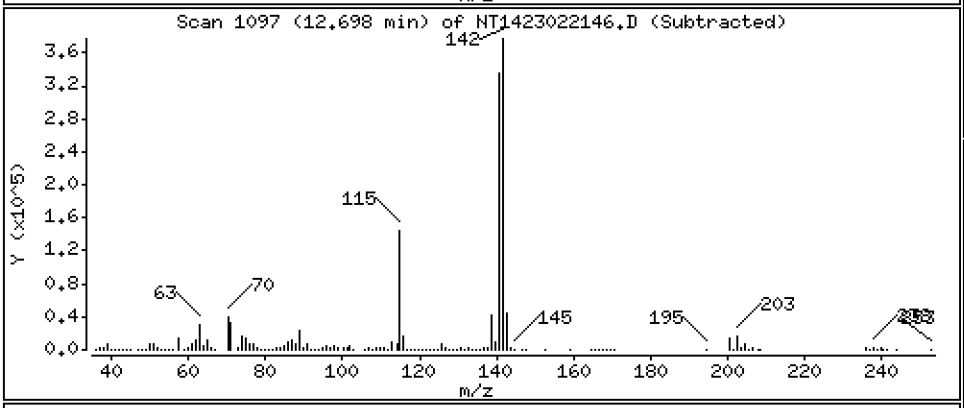
Column diameter: 0.25

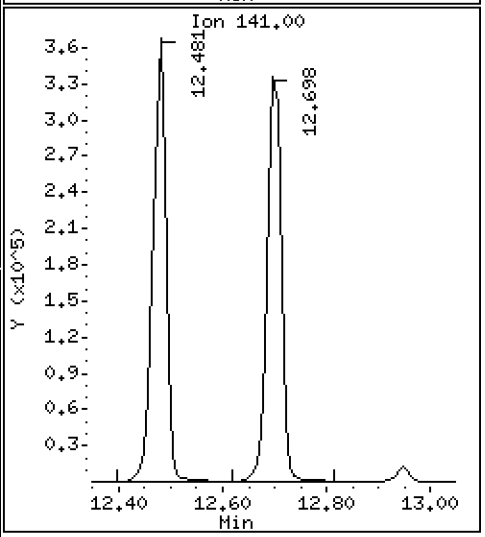
105 1-methylnaphthalene

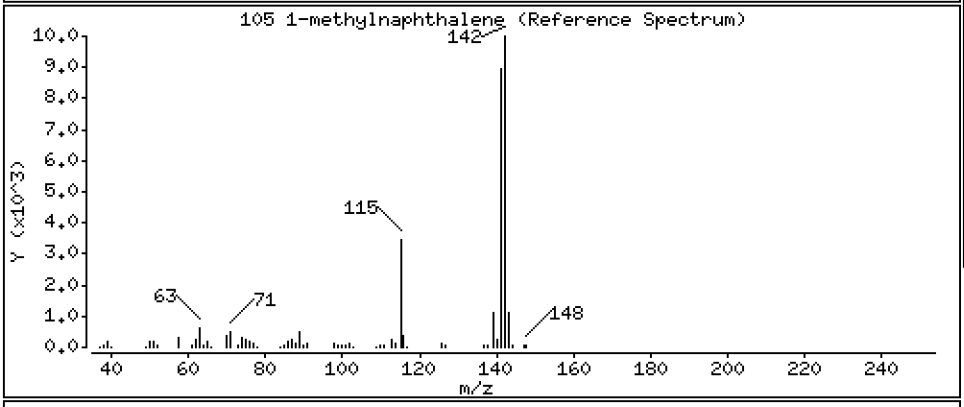
Concentration: 4.883 ug/mL

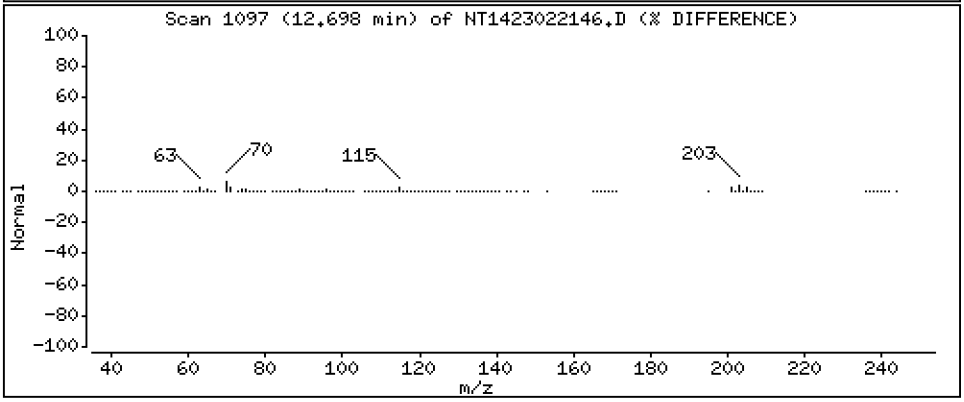












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

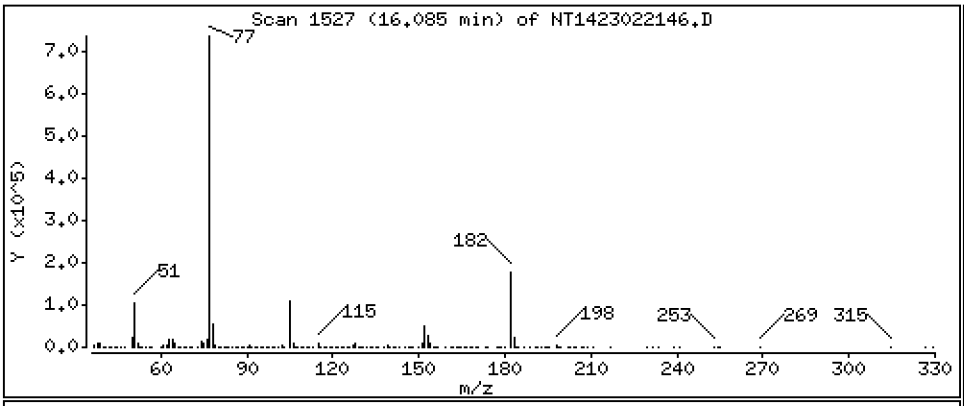
Operator: DSD

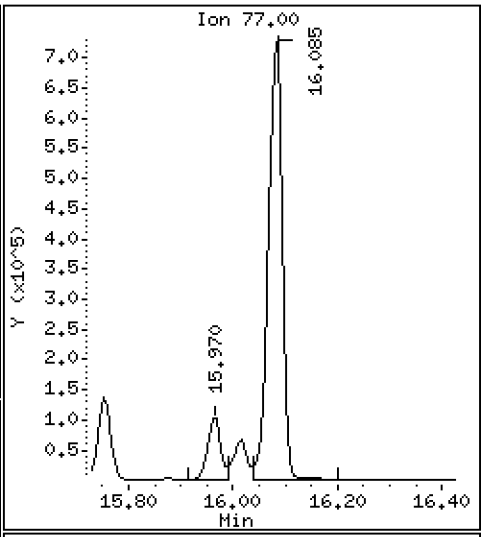
Column phase: ZB-5msi

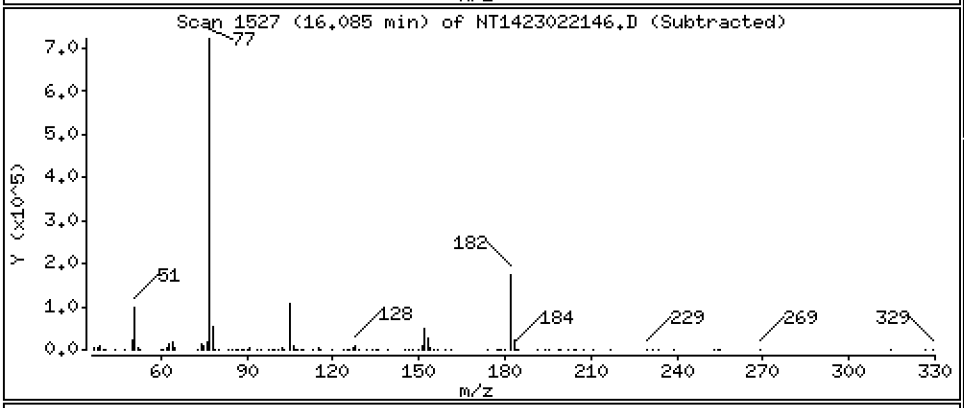
Column diameter: 0.25

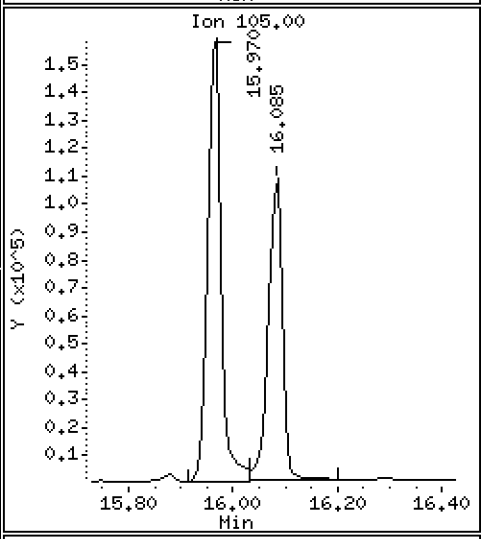
111 Azobenzene (1,2-DP-Hydrazine)

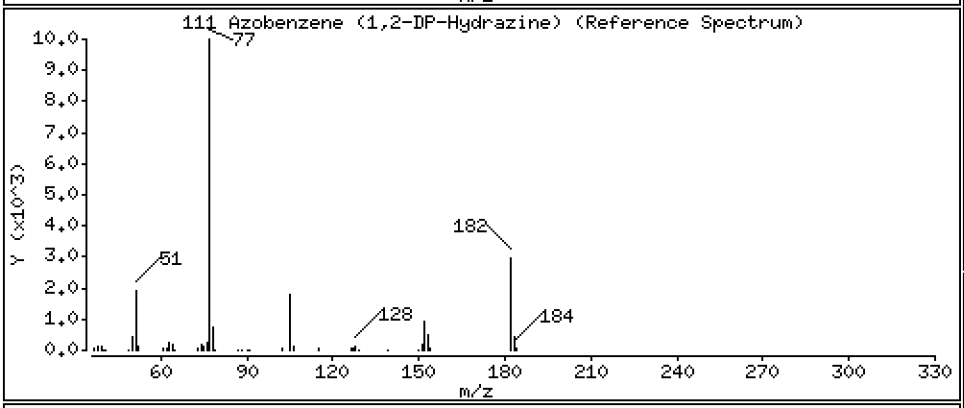
Concentration: 5.356 ug/mL

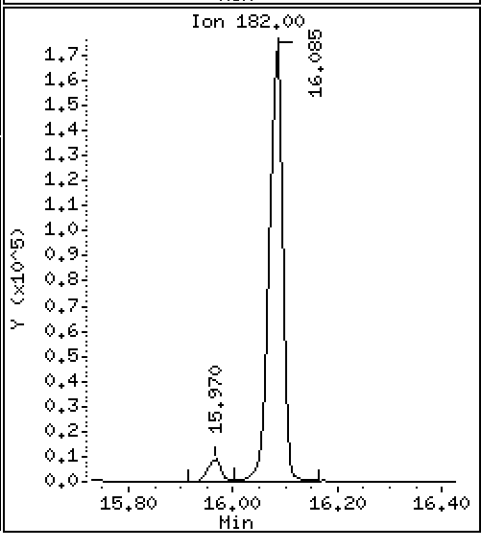


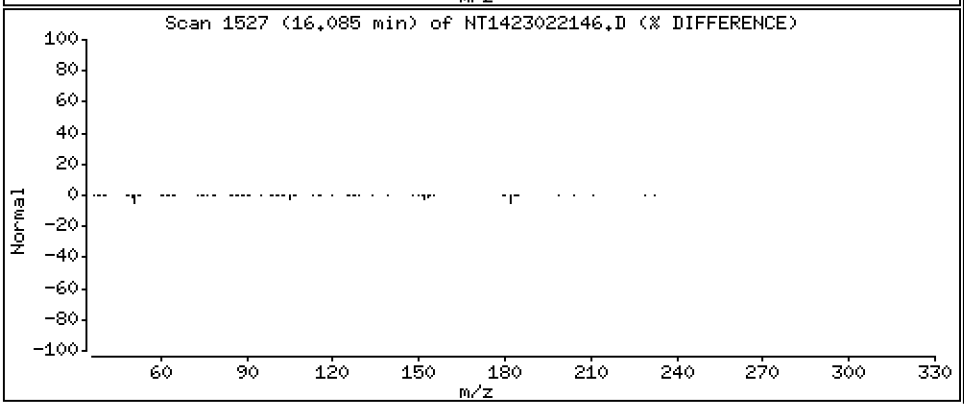












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

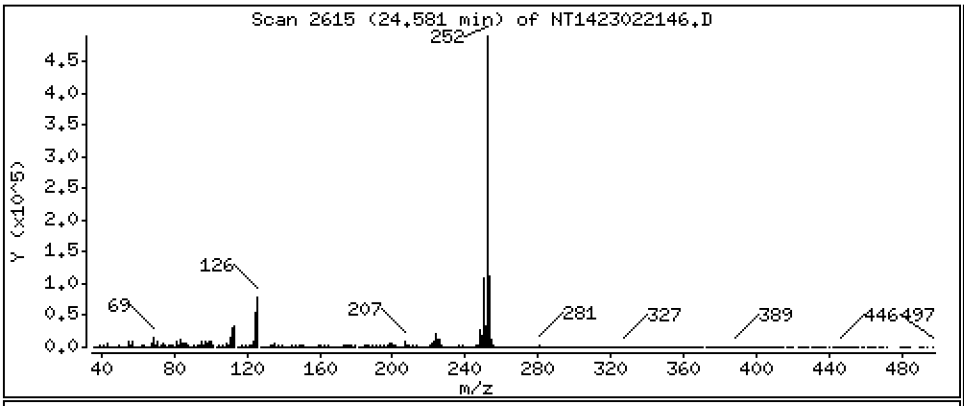
Operator: DSD

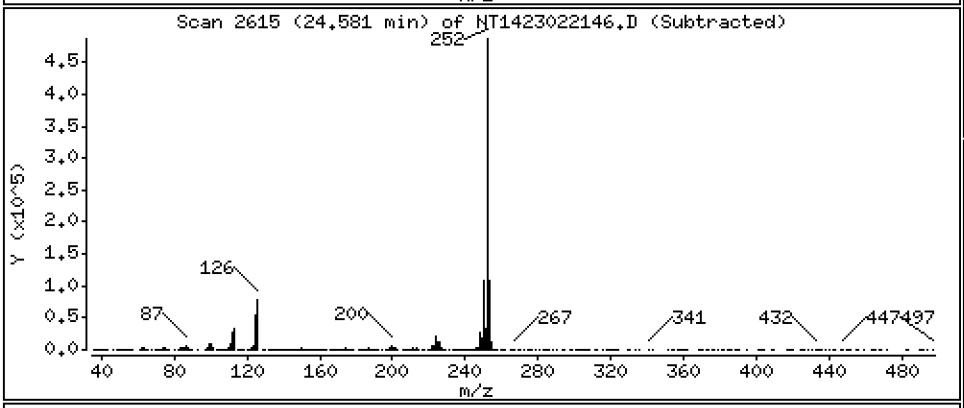
Column phase: ZB-5msi

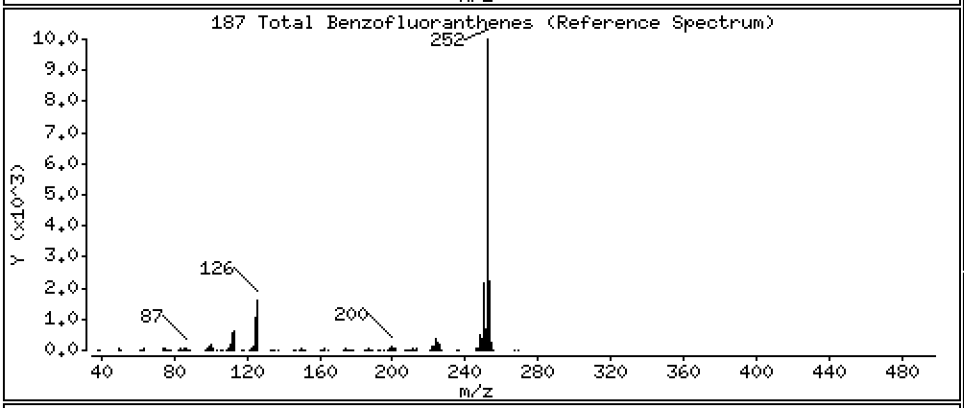
Column diameter: 0.25

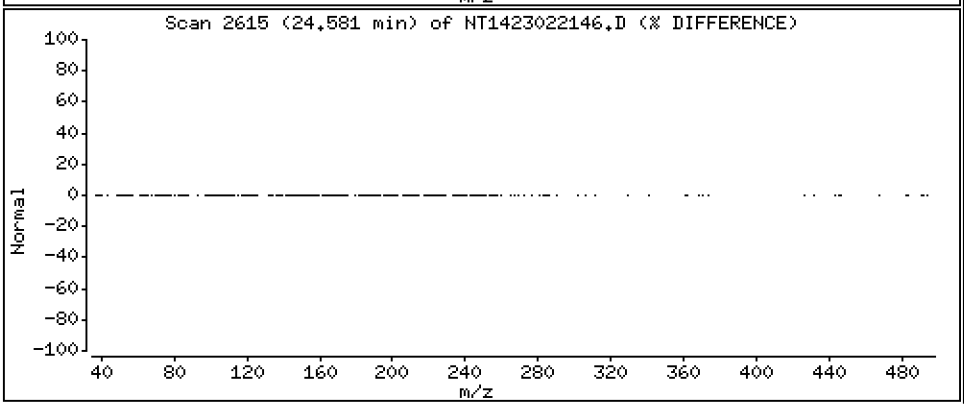
187 Total Benzofluoranthenes

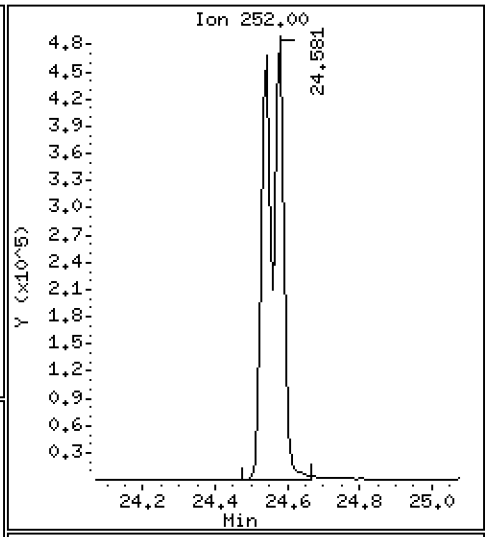
Concentration: 10.83 ug/mL

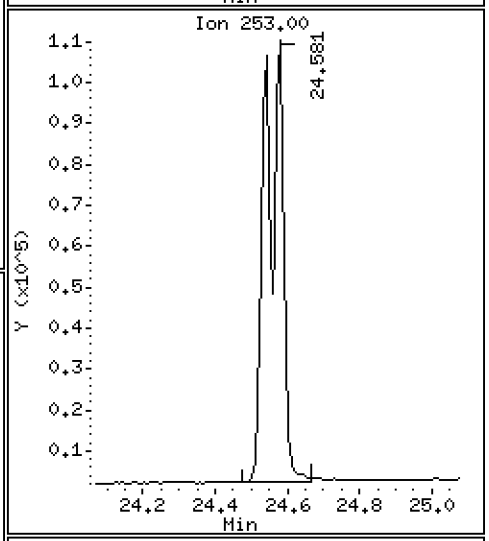


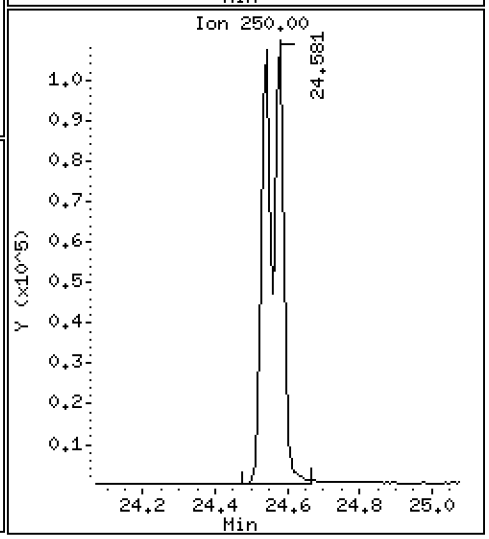












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Date : 22-FEB-2023 16:35

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-ICV1

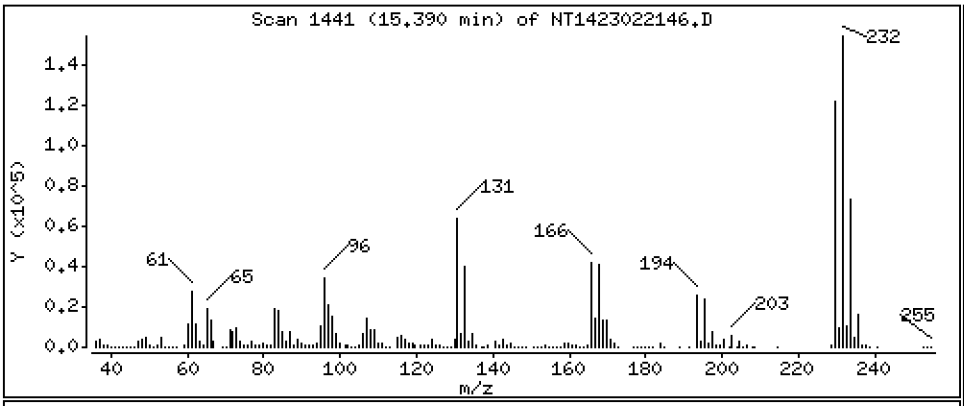
Operator: DSD

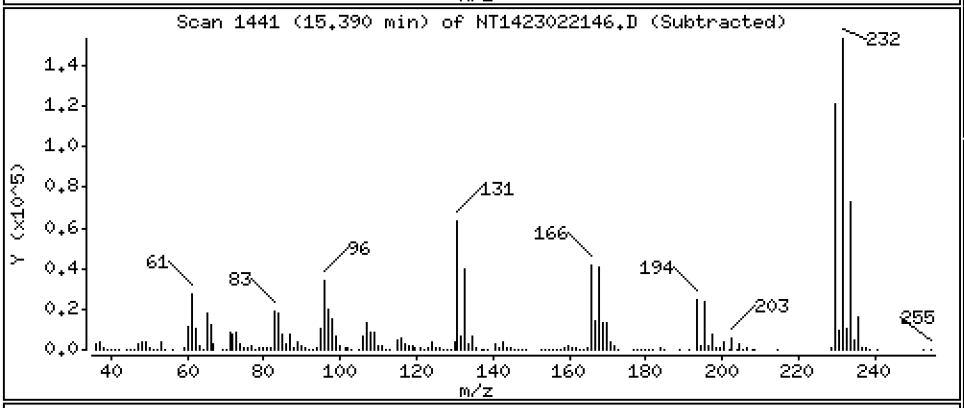
Column phase: ZB-5msi

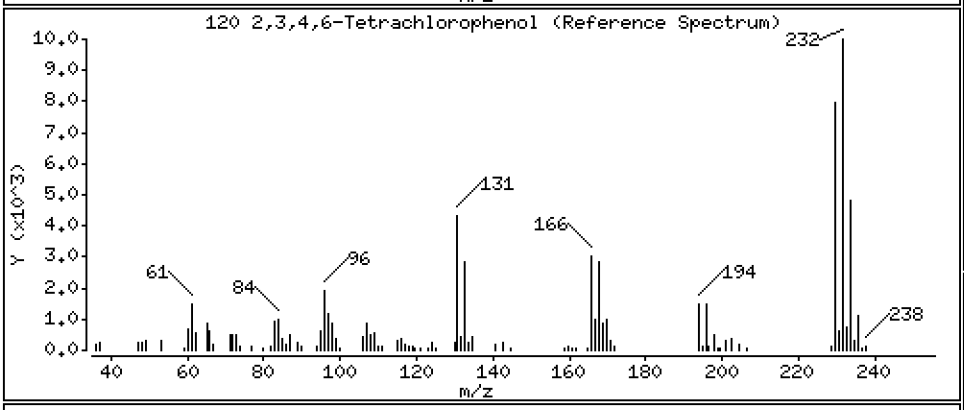
Column diameter: 0.25

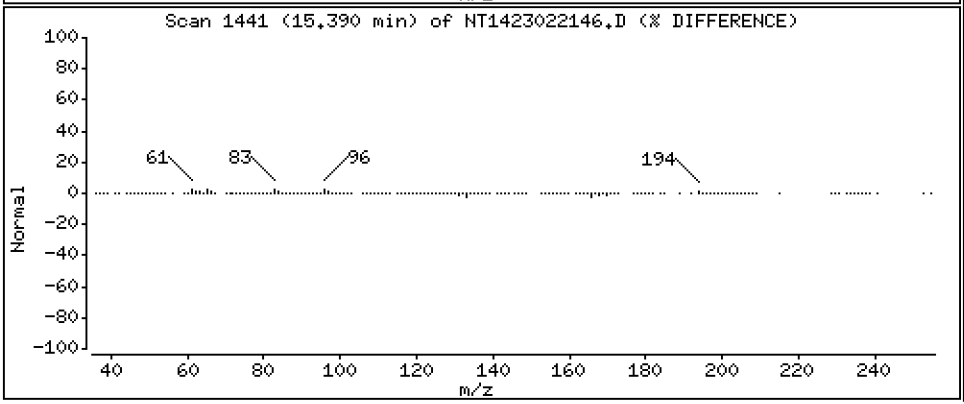
120 2,3,4,6-Tetrachlorophenol

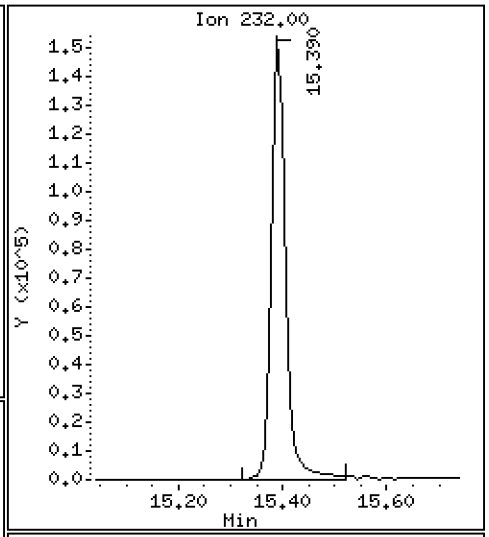
Concentration: 5.219 ug/mL

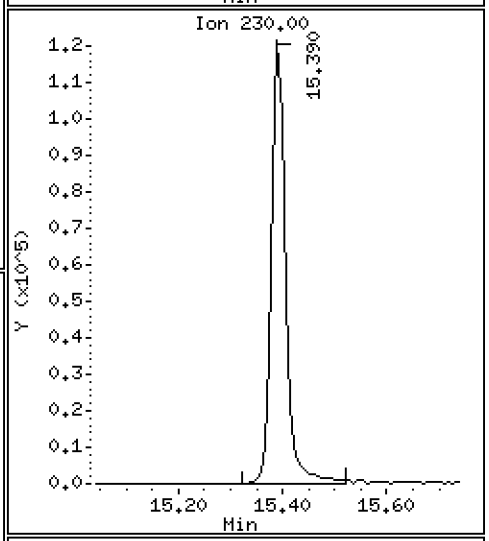


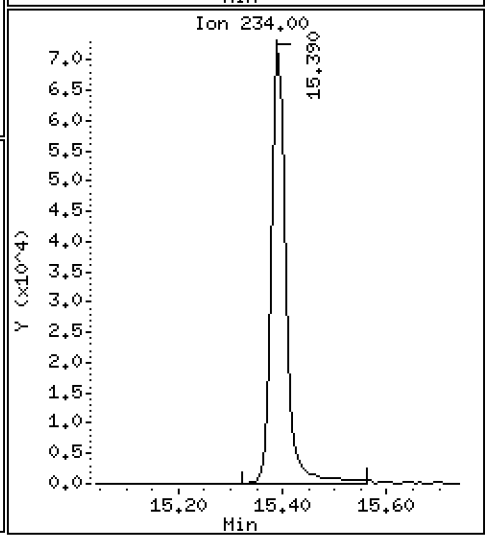












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221C.b\NT1423022146.D
Lab Smp Id: SLB0308-ICV1
Inj Date : 22-FEB-2023 16:35 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0308-ICV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Meth Date : 23-Feb-2023 09:59 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.380	6.373	(0.745)	475296	7.65707	7.657
$	2 Phenol-d5	99	7.972	7.965	(0.930)	718029	7.29193	7.292
	3 Phenol	94	7.996	7.988	(0.933)	491743	4.71732	4.717
$	5 2-Chlorophenol-d4	132	8.212	8.212	(0.958)	500695	7.12627	7.126
	4 Bis(2-Chloroethyl)ether	93	8.135	8.135	(0.949)	368945	4.63318	4.633
	6 2-Chlorophenol	128	8.243	8.235	(0.962)	384098	5.23228	5.232
	7 1,3-Dichlorobenzene	146	8.506	8.498	(0.993)	378177	4.62752	4.628
*	8 1,4-Dichlorobenzene-d4	152	8.568	8.568	(1.000)	232195	4.00000	
	9 1,4-Dichlorobenzene	146	8.599	8.599	(1.004)	398888	5.14302	5.143
$	10 1,2-Dichlorobenzene-d4	152	8.925	8.925	(1.042)	234371	4.45024	4.450
	12 1,2-Dichlorobenzene	146	8.948	8.948	(1.044)	358682	4.62599	4.626
	11 Benzyl alcohol	108	8.863	8.855	(1.034)	244275	4.15121	4.151
	14 2,2'-oxybis(1-Chloropropane)	121	9.150	9.150	(1.068)	103955	4.68657	4.687(M)
	13 2-Methylphenol	108	9.096	9.096	(1.062)	370212	5.08607	5.086
	17 Hexachloroethane	117	9.530	9.530	(1.112)	148042	4.39051	4.391
	16 N-Nitroso-di-n-propylamine	70	9.414	9.414	(1.099)	353857	5.34048	5.340
	15 4-Methylphenol	108	9.367	9.367	(1.093)	396561	5.15942	5.159
$	18 Nitrobenzene-d5	82	9.662	9.662	(0.875)	485537	5.24930	5.249
	19 Nitrobenzene	77	9.701	9.701	(0.879)	487509	5.25215	5.252
	20 Isophorone	82	10.151	10.151	(0.919)	696251	5.68539	5.685
	21 2-Nitrophenol	139	10.329	10.322	(0.935)	225903	5.31288	5.313
	22 2,4-Dimethylphenol	107	10.407	10.399	(0.942)	773198	11.0314	11.03
	23 Bis(2-Chloroethoxy)methane	93	10.593	10.593	(0.959)	419331	5.26374	5.264
	24 Benzoic acid	105	10.694	10.686	(0.968)	826503	17.9545	17.95
	25 2,4-Dichlorophenol	162	10.787	10.787	(0.977)	646282	10.7737	10.77
	26 1,2,4-Trichlorobenzene	180	10.965	10.957	(0.993)	373953	5.14616	5.146
*	27 Naphthalene-d8	136	11.042	11.042	(1.000)	800631	4.00000	
	28 Naphthalene	128	11.081	11.081	(1.003)	1028703	5.21099	5.211
	29 4-Chloroaniline	127	11.235	11.228	(1.017)	913644	10.8329	10.83
	30 Hexachlorobutadiene	225	11.451	11.452	(1.037)	243541	5.43673	5.437
	31 4-Chloro-3-methylphenol	107	12.210	12.210	(1.106)	741908	11.4265	11.43
	32 2-Methylnaphthalene	142	12.481	12.481	(1.130)	746375	5.04820	5.048
	33 Hexachlorocyclopentadiene	237	12.945	12.945	(0.884)	177478	3.75350	3.754

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.115	13.108	(0.895)	510756	10.6254	10.63
	35	2,4,5-Trichlorophenol	196	13.185	13.185	(0.900)	575055	11.0464	11.05
$	36	2-Fluorobiphenyl	172	13.270	13.270	(0.906)	877901	5.02757	5.028
	37	2-Chloronaphthalene	162	13.471	13.471	(0.920)	724205	5.08120	5.081
	38	2-Nitroaniline	65	13.750	13.750	(0.939)	565693	12.2076	12.21
	39	Dimethylphthalate	163	14.183	14.184	(0.968)	768284	5.15349	5.153
	40	Acenaphthylene	152	14.338	14.331	(0.979)	1133066	5.21223	5.212
	41	2,6-Dinitrotoluene	165	14.323	14.323	(0.978)	365280	10.4129	10.41
*	42	Acenaphthene-d10	164	14.648	14.648	(1.000)	488064	4.00000	
	43	3-Nitroaniline	138	14.609	14.601	(0.997)	410618	11.0281	11.03
	44	Acenaphthene	153	14.717	14.717	(1.005)	676347	5.19659	5.197
	45	2,4-Dinitrophenol	184	14.818	14.818	(1.012)	438518	18.3221	18.32
	46	Dibenzofuran	168	15.050	15.042	(1.027)	1049713	4.91226	4.912
	47	4-Nitrophenol	109	14.957	14.949	(1.021)	192893	8.88305	8.883
	48	2,4-Dinitrotoluene	165	15.127	15.127	(1.033)	530228	10.6905	10.69
	50	Diethylphthalate	149	15.645	15.645	(1.068)	985562	4.97280	4.973
	49	Fluorene	166	15.753	15.753	(1.075)	1082662	4.84485	4.845
	51	4-Chlorophenyl-phenylether	204	15.753	15.753	(1.075)	556916	4.66079	4.661
	52	4-Nitroaniline	138	15.876	15.869	(1.084)	498914	11.6790	11.68
	53	4,6-Dinitro-2-methylphenol	198	15.969	15.961	(0.903)	777904	21.4213	21.42
	54	N-Nitrosodiphenylamine	169	16.015	16.008	(0.906)	719337	5.15370	5.154
$	55	2,4,6-Tribromophenol	330	16.293	16.293	(1.112)	194394	6.81043	6.810
	56	4-Bromophenyl-phenylether	248	16.756	16.756	(0.948)	314428	5.05776	5.058
	57	Hexachlorobenzene	284	17.057	17.057	(0.965)	311383	4.92925	4.929
	58	Pentachlorophenol	266	17.429	17.421	(0.986)	273711	8.69026	8.690
*	59	Phenanthrene-d10	188	17.676	17.676	(1.000)	971279	4.00000	
	60	Phenanthrene	178	17.723	17.723	(1.003)	1206017	5.16726	5.167
	61	Anthracene	178	17.816	17.816	(1.008)	1301899	5.63028	5.630
	62	Carbazole	167	18.156	18.156	(1.027)	1184660	5.64561	5.646
	63	Di-n-butylphthalate	149	18.992	18.992	(1.074)	1382016	5.89654	5.897
	64	Fluoranthene	202	20.137	20.137	(0.884)	1507451	5.08538	5.085
	65	Pyrene	202	20.562	20.562	(0.903)	1588976	5.06934	5.069
$	66	Terphenyl-d14	244	20.872	20.872	(0.917)	1121602	5.03959	5.040
	67	Butylbenzylphthalate	149	21.816	21.816	(0.958)	571396	5.46967	5.470
	68	Benzo(a)anthracene	228	22.745	22.738	(0.999)	1175719	5.34727	5.347
*	69	Chrysene-d12	240	22.769	22.769	(1.000)	687083	4.00000	
	70	3,3'-Dichlorobenzidine	252	22.715	22.715	(0.998)	1139589	16.7854	16.79
	71	Chrysene	228	22.815	22.815	(1.002)	1067565	5.39804	5.398
	72	bis(2-Ethylhexyl)phthalate	149	22.854	22.854	(0.959)	822914	4.18565	4.186
*	134	Di-n-octylphthalate-d4	153	23.837	23.837	(1.000)	1174636	4.00000	
	73	Di-n-octylphthalate	149	23.845	23.845	(1.000)	1377166	5.01422	5.014
	74	Benzo(b)fluoranthene	252	24.542	24.534	(0.973)	814635	5.22036	5.220
	75	Benzo(k)fluoranthene	252	24.580	24.573	(0.975)	932797	5.59411	5.594
	76	Benzo(a)pyrene	252	25.114	25.115	(0.996)	714890	4.79390	4.794
*	77	Perylene-d12	264	25.223	25.215	(1.000)	491790	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.548	27.540	(1.092)	579306	4.64327	4.643
	79	Dibenzo(a,h)anthracene	278	27.564	27.556	(1.093)	508799	4.93909	4.939
	80	Benzo(g,h,i)perylene	276	28.224	28.216	(1.119)	433319	4.26585	4.266
	90	N-Nitrosodimethylamine	74	4.280	4.280	(0.500)	479910	9.98579	9.986
	91	Aniline	93	8.034	8.034	(0.938)	1051235	9.42814	9.428
	93	Benzidine	184	20.400	20.392	(0.896)	1274022	20.0149	20.01
	103	Pyridine	79	4.288	4.288	(0.500)	781562	10.2775	10.28
	105	1-methylnaphthalene	142	12.697	12.698	(1.150)	677818	4.88326	4.883
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.085	16.077	(1.098)	1290061	5.35593	5.356

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.580	24.573	(0.975)	1650279	10.8319	10.83
120 2,3,4,6-Tetrachlorophenol	232	15.390	15.390	(1.051)	295895	5.21934	5.219

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022146.D
Lab Smp Id: SLB0308-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 06:55
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	235125	117563	470250	232195	-1.25
27 Naphthalene-d8	883104	441552	1766208	800631	-9.34
42 Acenaphthene-d10	537789	268895	1075578	488064	-9.25
59 Phenanthrene-d10	1079531	539766	2159062	971279	-10.03
69 Chrysene-d12	826409	413205	1652818	687083	-16.86
134 Di-n-octylphthala	1339562	669781	2679124	1174636	-12.31
77 Perylene-d12	590325	295163	1180650	491790	-16.69

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	-0.00
69 Chrysene-d12	22.77	22.27	23.27	22.77	-0.00
134 Di-n-octylphthala	23.84	23.34	24.34	23.84	-0.00
77 Perylene-d12	25.22	24.72	25.72	25.22	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022146.D

Lab ID: SLB0308-ICV1
nt14.i, ABN.m, 22-FEB-2023 16:35

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

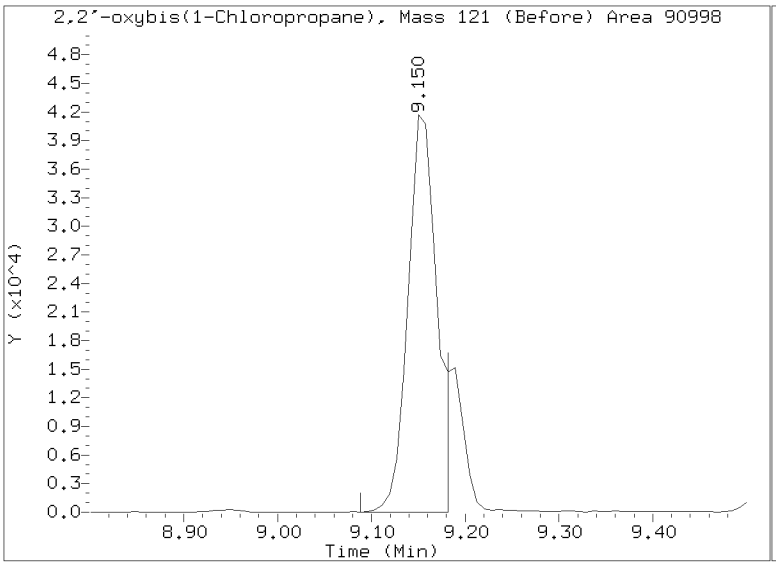
RRT check based on Ccal File: NT1423022130.D

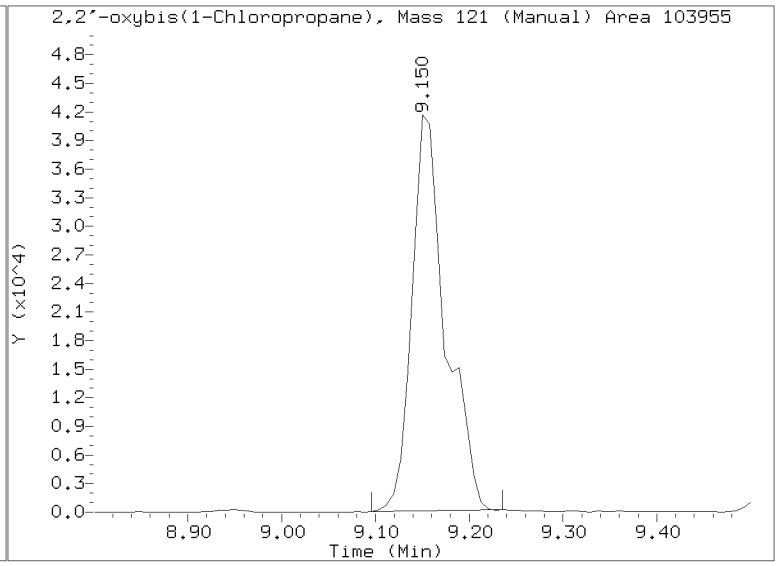
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221C.b/NT1423022146.D
Injection Date: 22-FEB-2023 16:35
Lab ID:SLB0308-ICV1 Client ID:
Report Date: 02/24/2023 15:42





APPROVED

By Deenay Dunmore at 3:43 pm, Feb 24, 2023

Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION CONTINUING CALIBRATION CHECK

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GB00046
Lab File ID:	NT1423022131.D	Calibration Date:	02/16/2023
Sequence:	SLB0305	Injection Date:	02/22/23
Lab Sample ID:	SLB0305-LCV1	Injection Time:	07:32
Sequence Name:	ABN 0.2		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Phenol	A	0.50000	0.4	1.7957660	1.2931360		-28.0	+/-50	
4-Methylphenol	A	0.50000	0.5	1.3240860	1.2148560		-8.3	+/-50	
Naphthalene	A	0.50000	0.5	0.9862730	1.0540350		6.9	+/-50	
2-Methylnaphthalene	A	0.50000	0.5	0.7386653	0.8095424		9.6	+/-50	
Acenaphthylene	A	0.50000	0.6	1.7816190	2.0516860		15.2	+/-50	
Dimethylphthalate	A	0.50000	0.6	1.2218100	1.3630510		11.6	+/-50	
Acenaphthene	A	0.50000	0.6	1.0666800	1.1854490		11.1	+/-50	
Dibenzofuran	A	0.50000	0.5	1.7513490	1.9244640		9.9	+/-50	
Fluorene	A	0.50000	0.6	1.8314530	2.0203660		10.3	+/-50	
Phenanthrene	A	0.50000	0.5	0.9611900	1.0489250		9.1	+/-50	
Anthracene	A	0.50000	0.6	0.9522768	1.0712410		12.5	+/-50	
Fluoranthene	A	0.50000	0.5	1.7257220	1.7726270		2.7	+/-50	
Pyrene	A	0.50000	0.5	1.8248060	1.8095270		-0.8	+/-50	
Butylbenzylphthalate	A	0.50000	0.6	0.5233989	0.6668025		10.8	+/-50	
Benzo(a)anthracene	A	0.50000	0.6	1.2800360	1.4676390		14.7	+/-50	
Chrysene	A	0.50000	0.6	1.1513540	1.3191520		14.6	+/-50	
bis(2-Ethylhexyl)phthalate	A	0.50000	0.4	0.5470542	0.5383697		-21.6	+/-50	
Benzofluoranthenes, Total	A	1.0000	1.1	1.2391730	1.3952190		12.6	+/-50	
Benzo(a)pyrene	A	0.50000	0.5	1.0848130	1.2111820		0.7	+/-50	
Indeno(1,2,3-cd)pyrene	A	0.50000	0.5	0.8621891	1.0443380		5.4	+/-50	
Dibenzo(a,h)anthracene	A	0.50000	0.6	0.7046903	0.9143088		11.9	+/-50	
Benzo(g,h,i)perylene	A	0.50000	0.5	0.7176031	0.7837594		-2.5	+/-50	
2-Fluorophenol	A	0.75000	0.597	1.0693230	0.8517705		-20.3	+/-50	
Phenol-d5	A	0.75000	0.711	1.6963140	1.6084470		-5.2	+/-50	
2-Chlorophenol-d4	A	0.75000	0.736	1.2103710	1.1884590		-1.8	+/-50	
1,2-Dichlorobenzene-d4	A	0.50000	0.517	0.9072515	0.9375417		3.3	+/-50	
Nitrobenzene-d5	A	0.50000	0.566	0.4621137	0.5235223		13.3	+/-50	
2-Fluorobiphenyl	A	0.50000	0.574	1.4311010	1.6442360		14.9	+/-50	
2,4,6-Tribromophenol	A	0.75000	0.315	0.2030581	0.0964662		-58.0	+/-50	*
p-Terphenyl-d14	A	0.50000	0.602	1.2956710	1.5597870		20.4	+/-50	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022131.D

Date : 22-FEB-2023 07:32

Client ID:

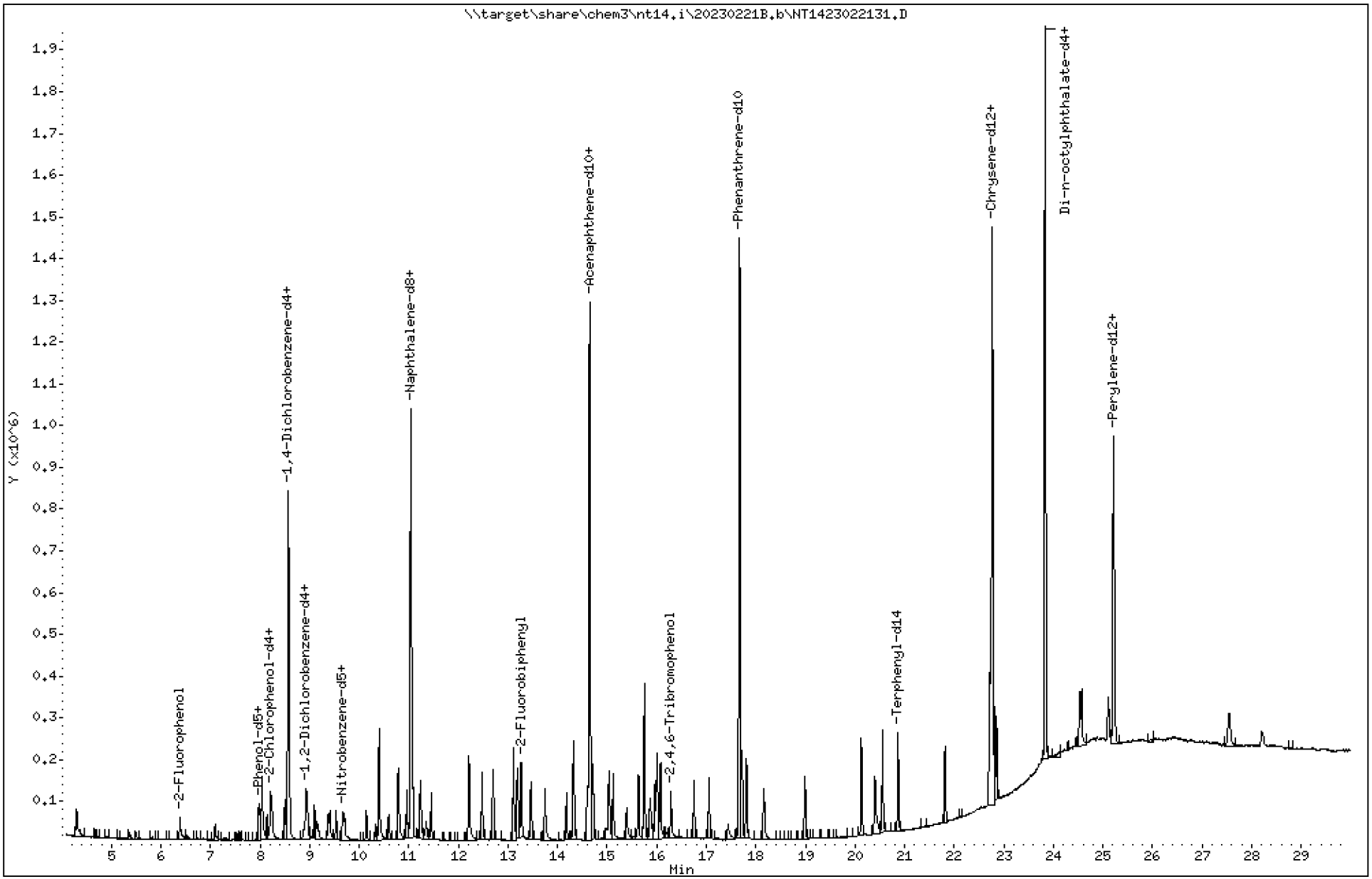
Instrument: nt14.i

Sample Info: SLB0305-LCV1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

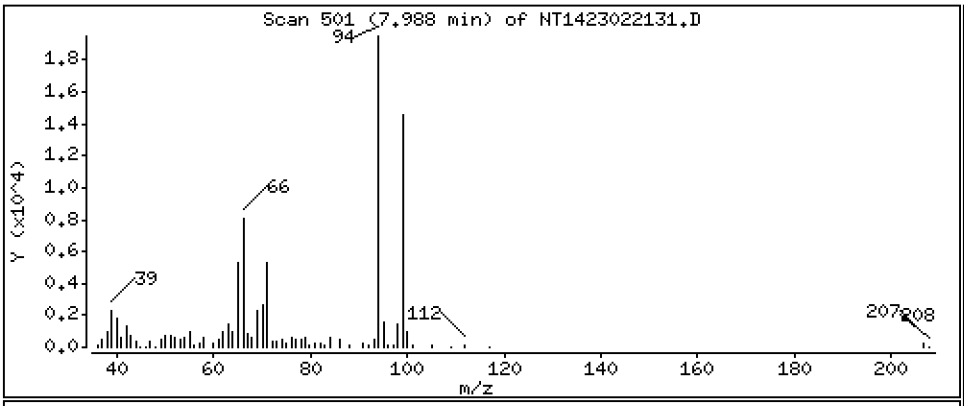
Operator: DSD

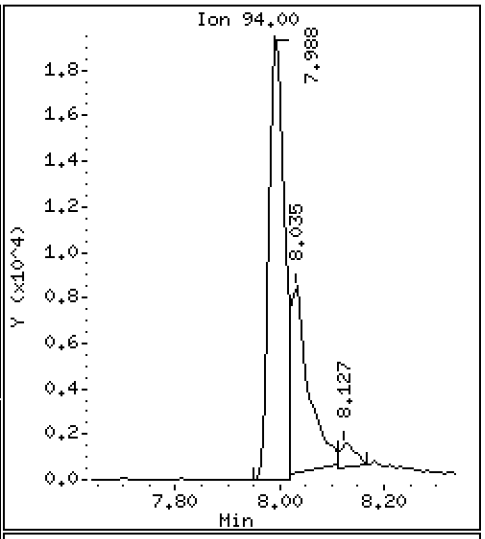
Column phase: ZB-5msi

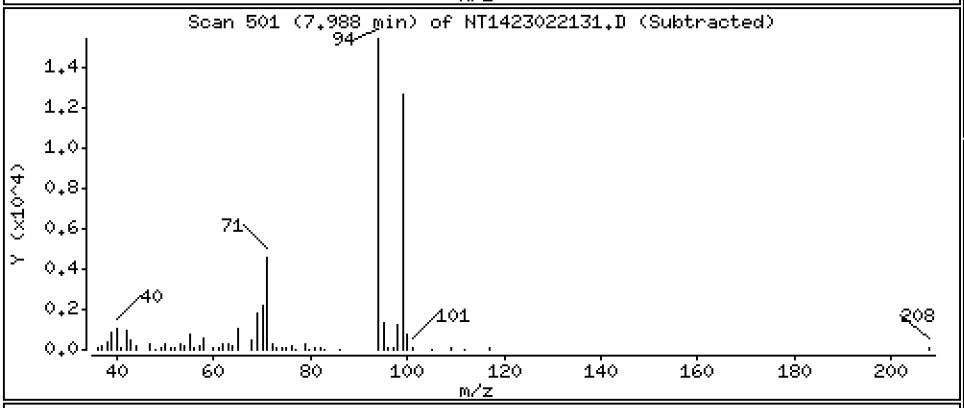
Column diameter: 0.25

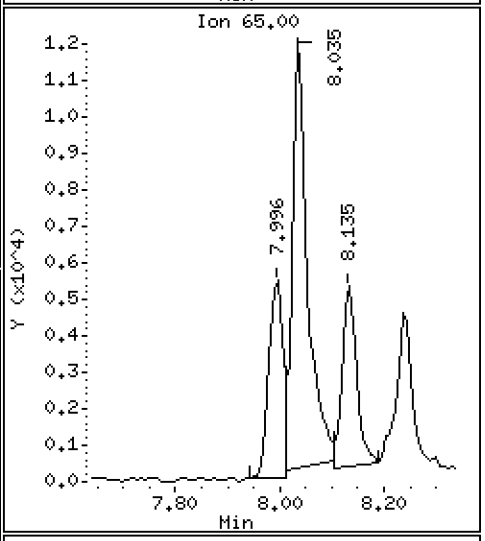
3 Phenol

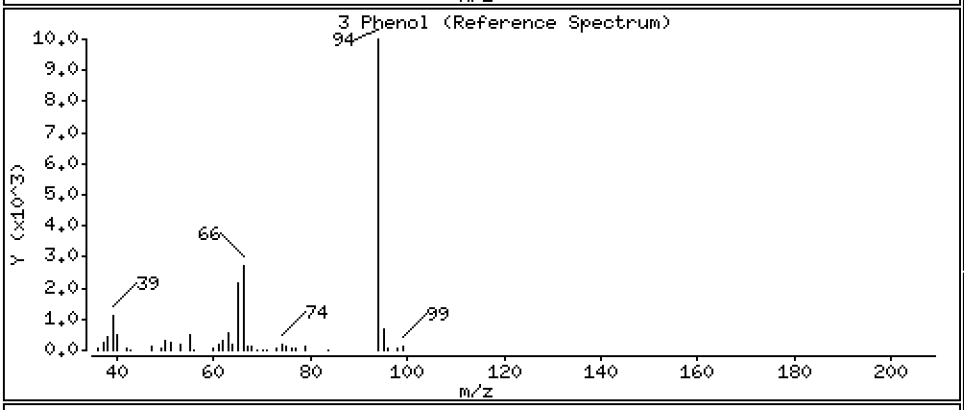
Concentration: 0.3601 ug/mL

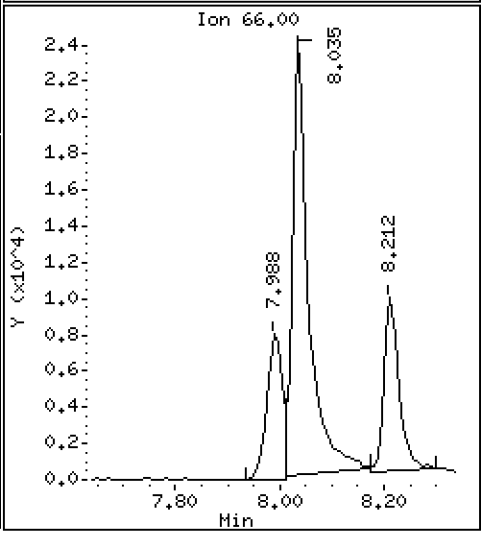


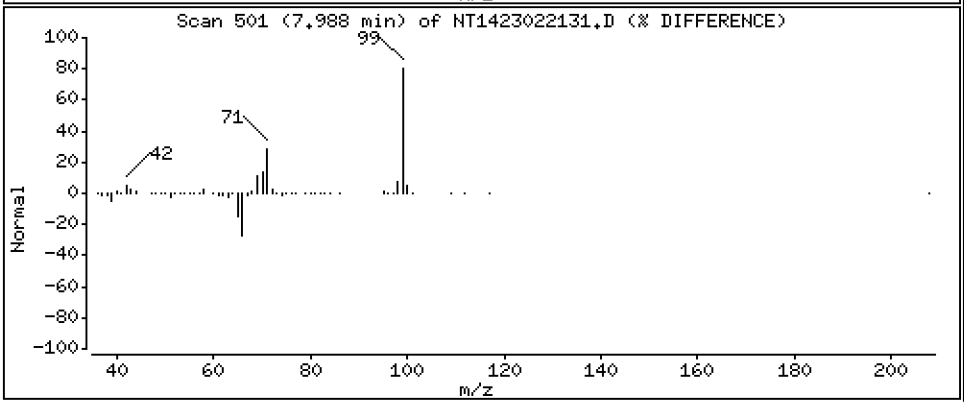












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

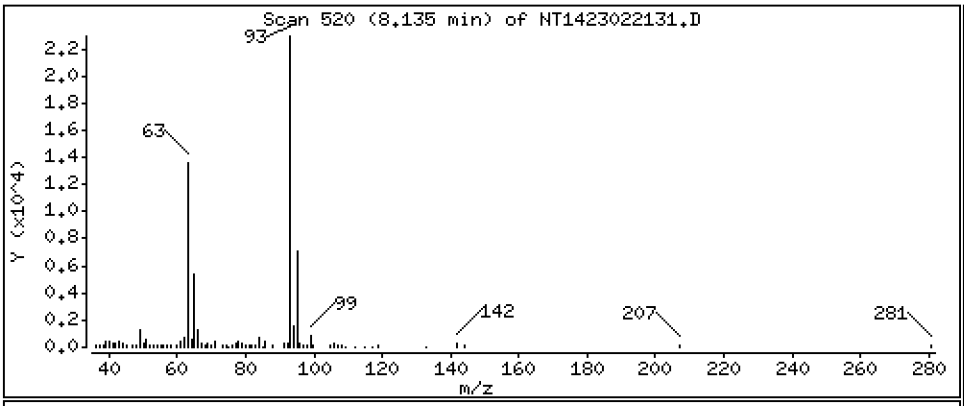
Operator: DSD

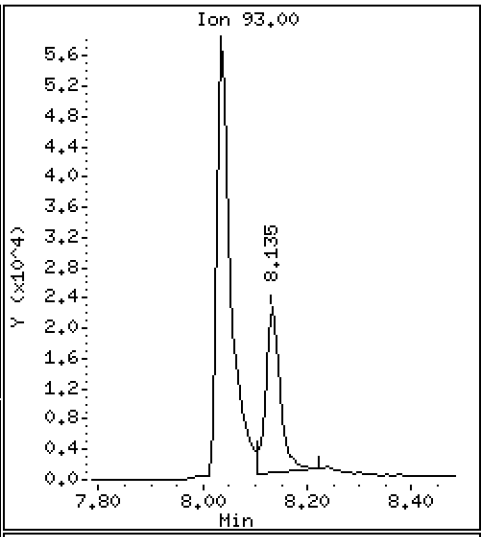
Column phase: ZB-5msi

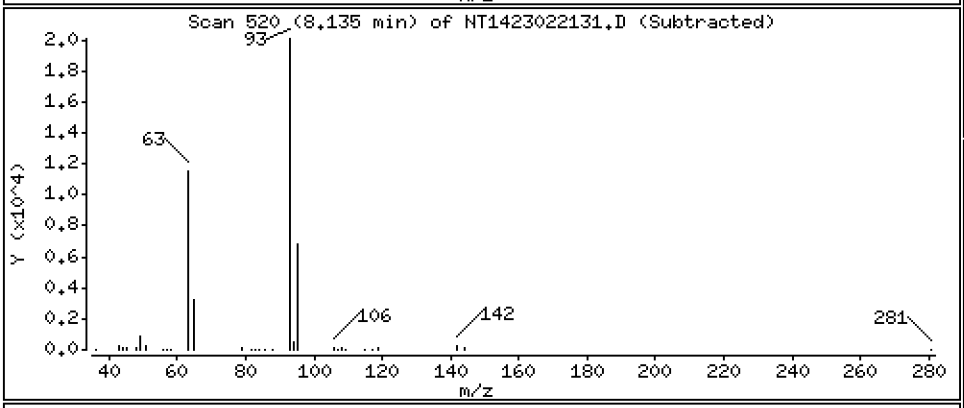
Column diameter: 0.25

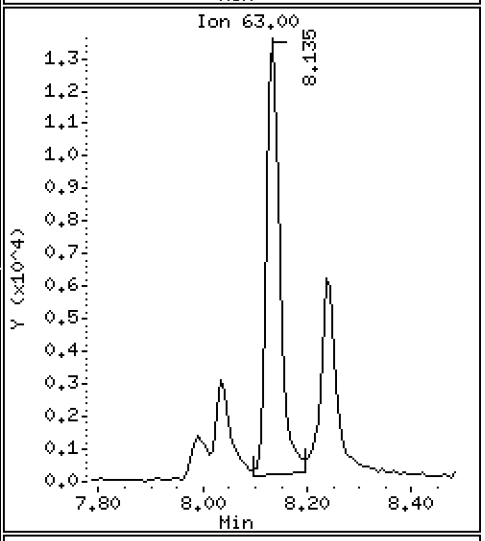
4 Bis(2-Chloroethyl)ether

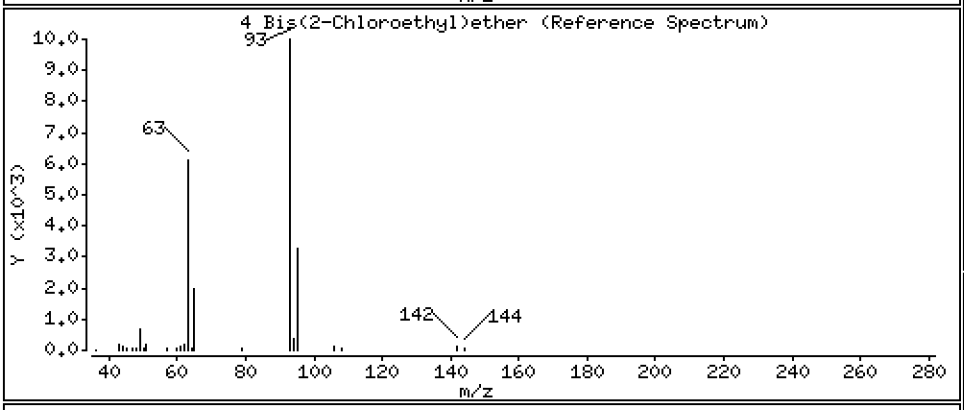
Concentration: 0.4688 ug/mL

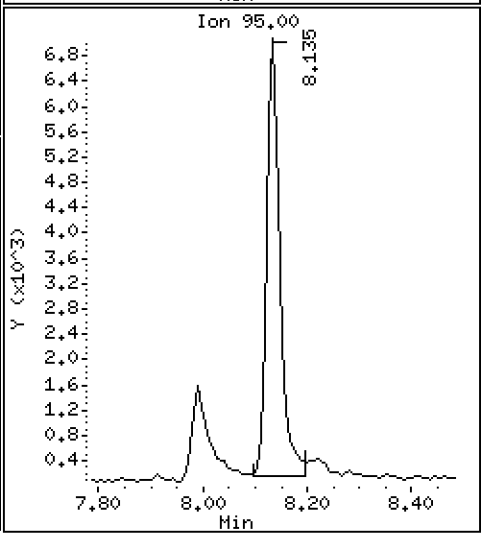


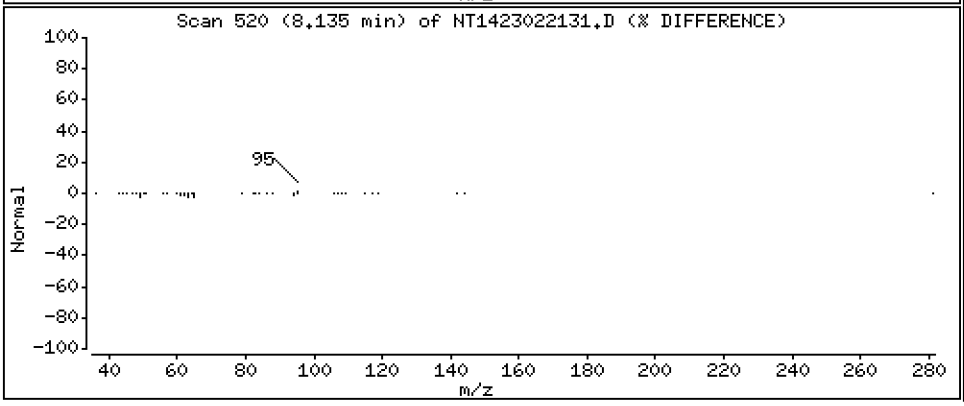












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

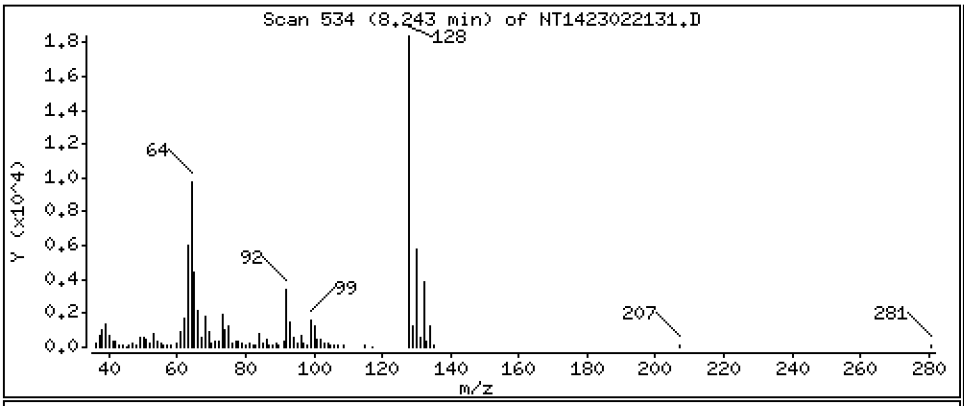
Operator: DSD

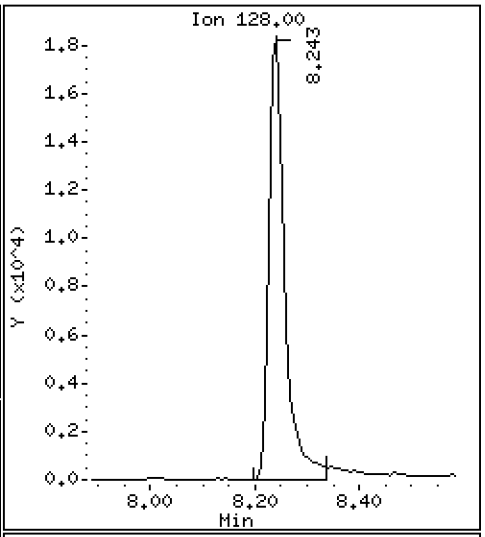
Column phase: ZB-5msi

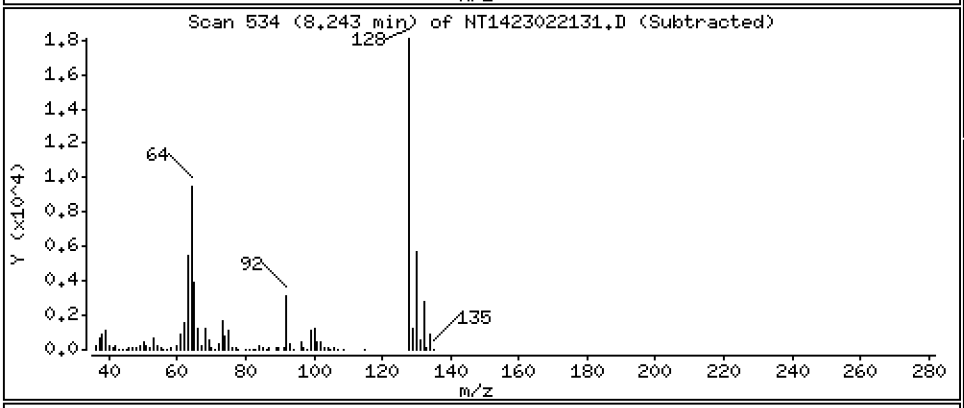
Column diameter: 0.25

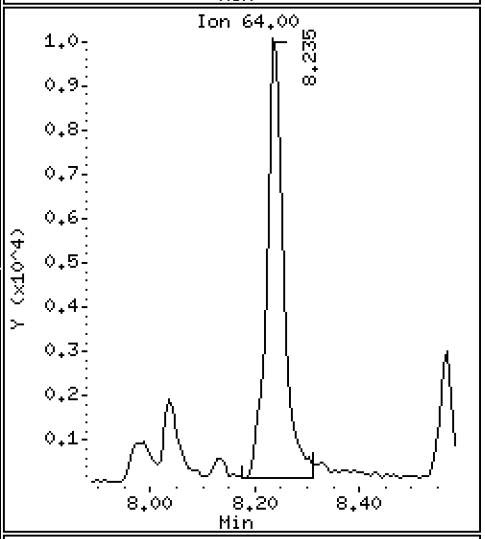
6 2-Chlorophenol

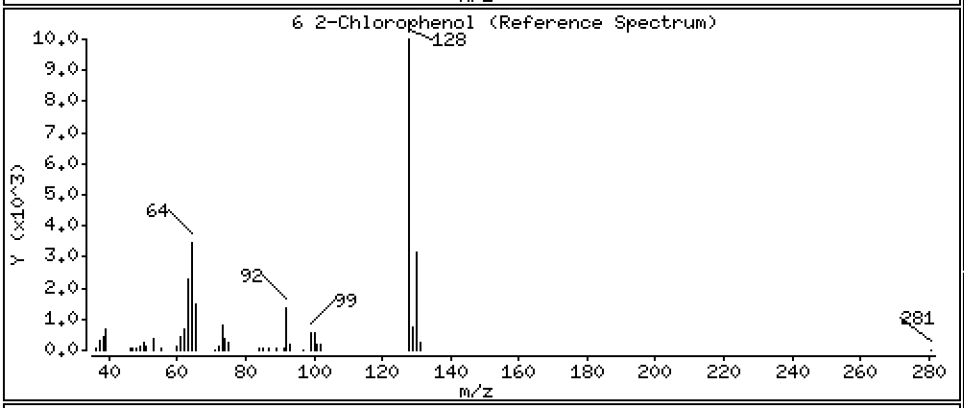
Concentration: 0.4826 ug/mL

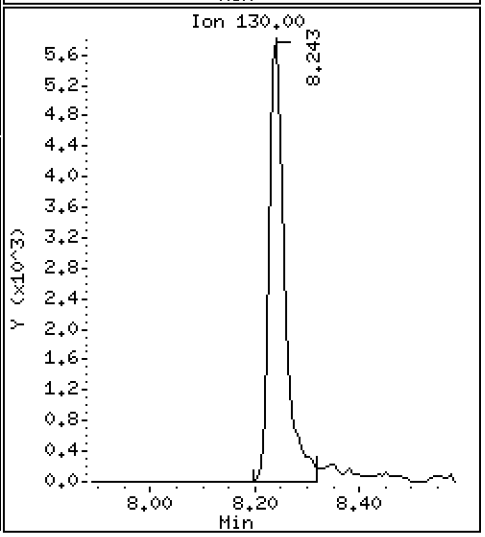


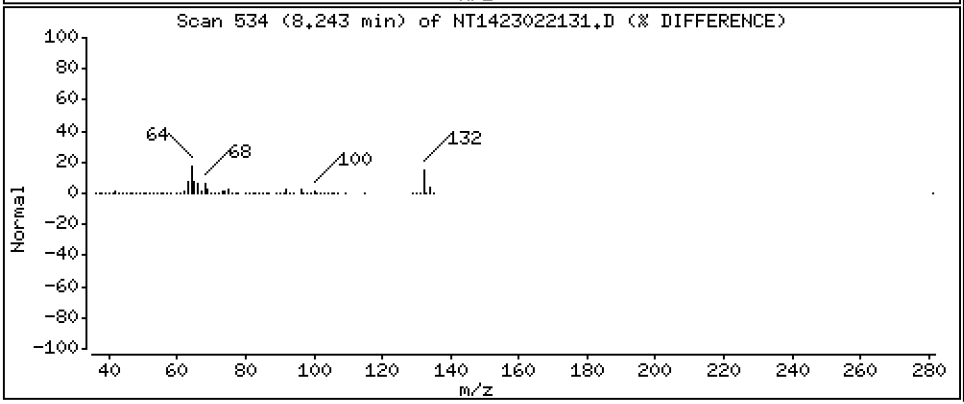












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

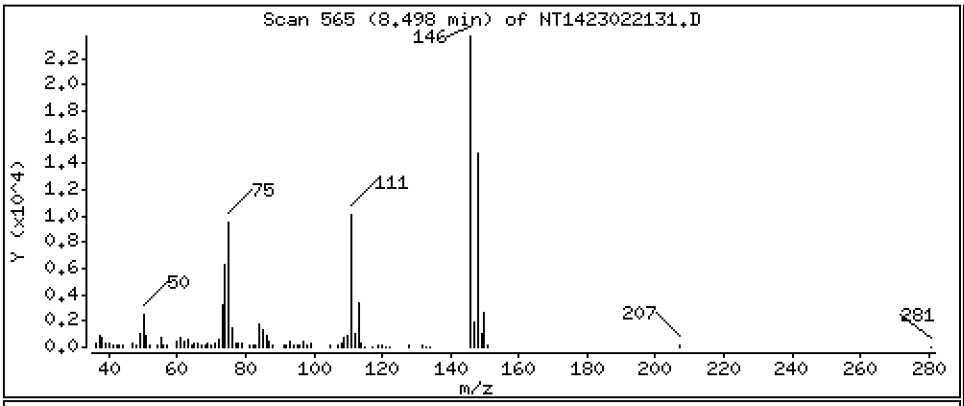
Operator: DSD

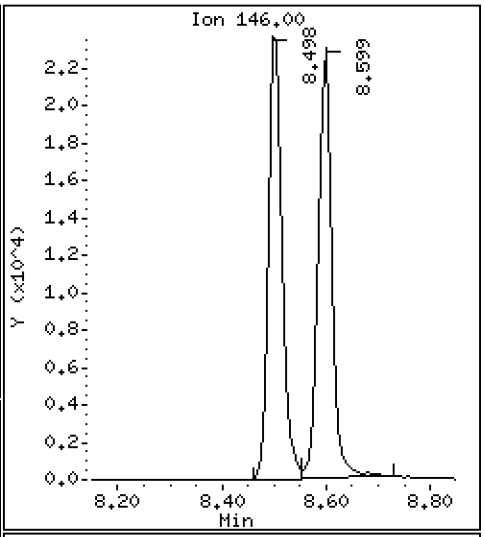
Column phase: ZB-5msi

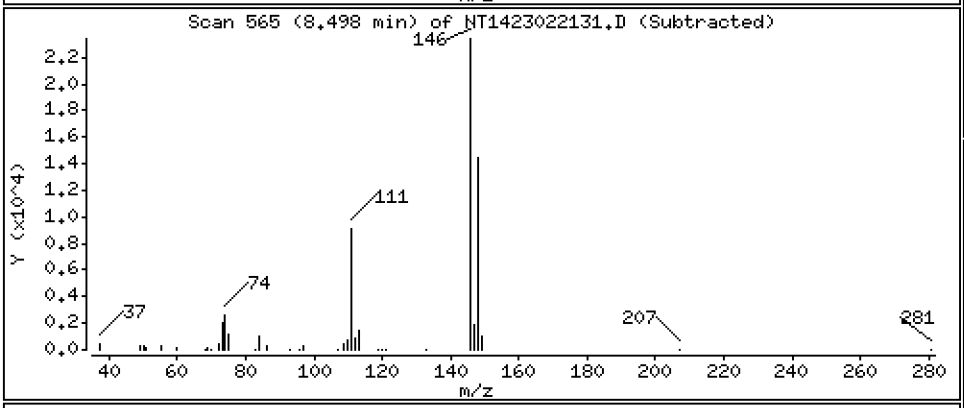
Column diameter: 0.25

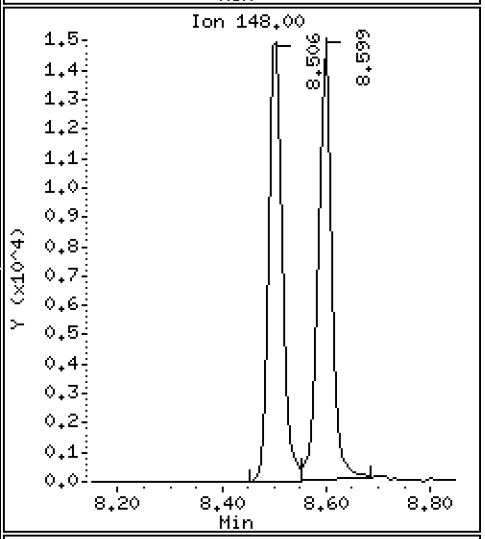
7 1,3-Dichlorobenzene

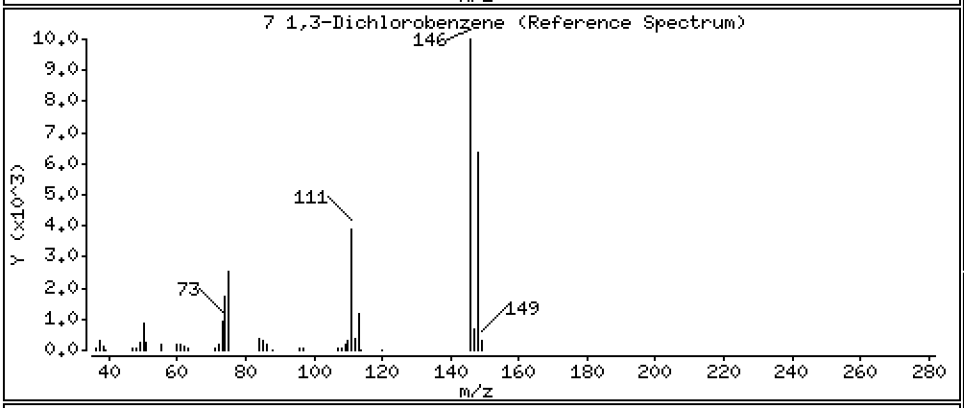
Concentration: 0.4824 ug/mL

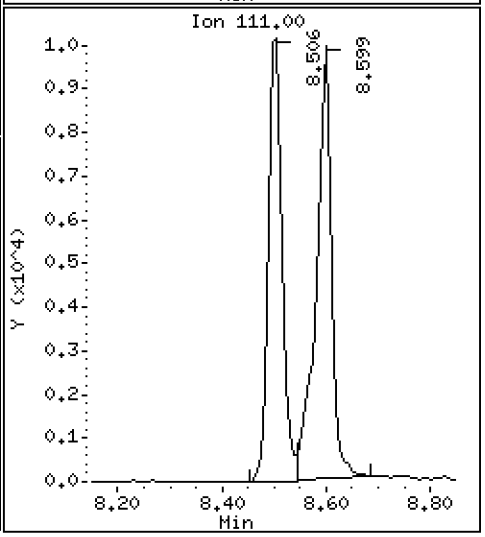


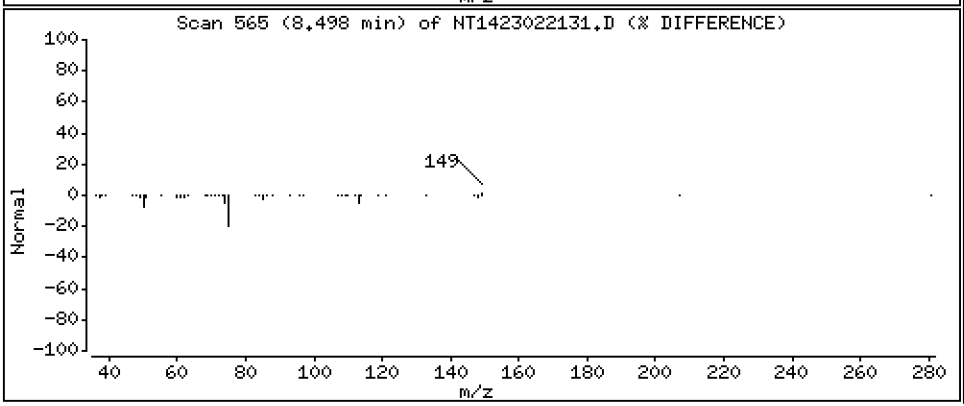












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

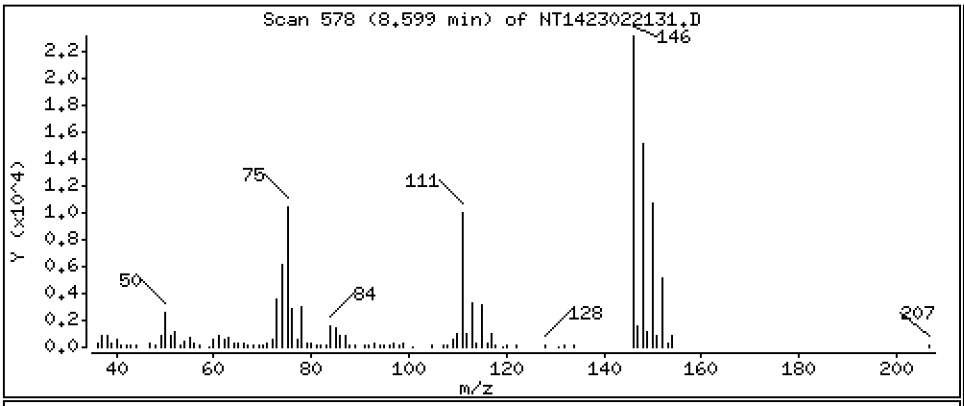
Operator: DSD

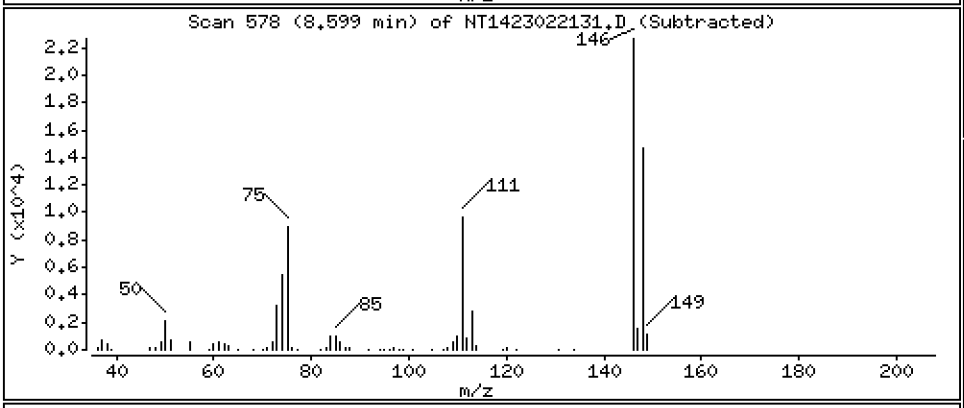
Column phase: ZB-5msi

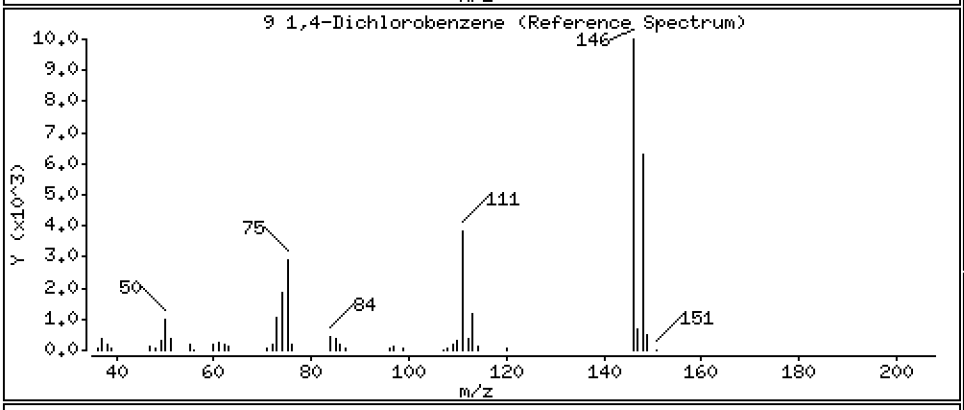
Column diameter: 0.25

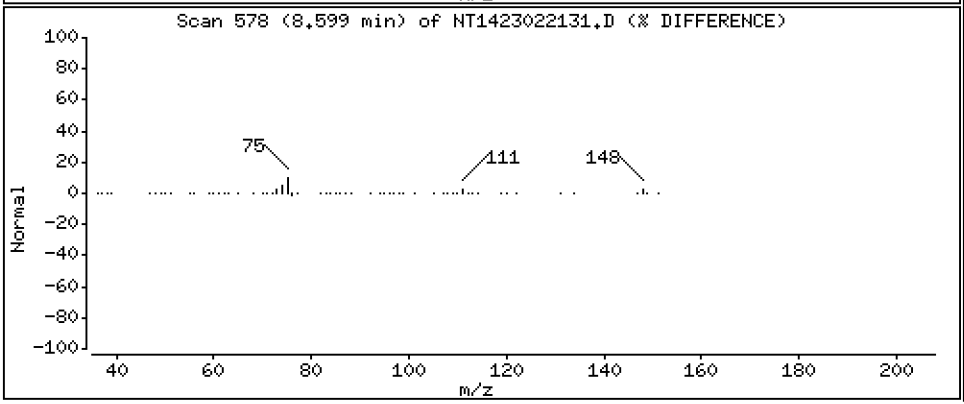
9 1,4-Dichlorobenzene

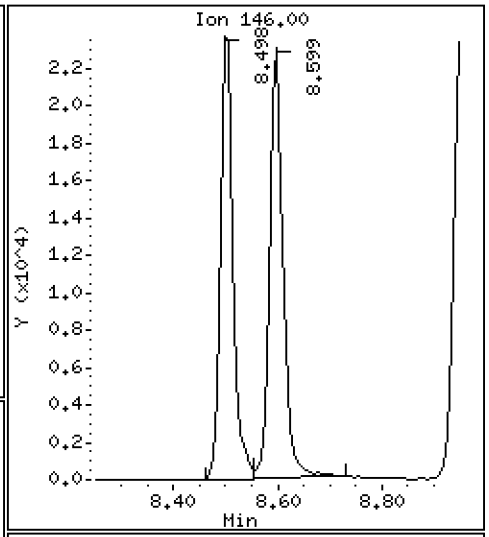
Concentration: 0.5449 ug/mL

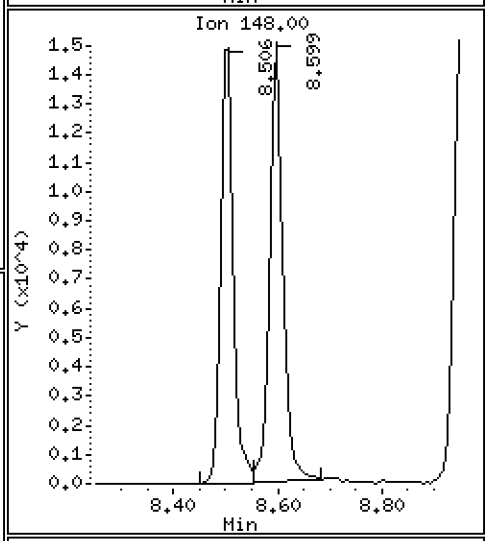


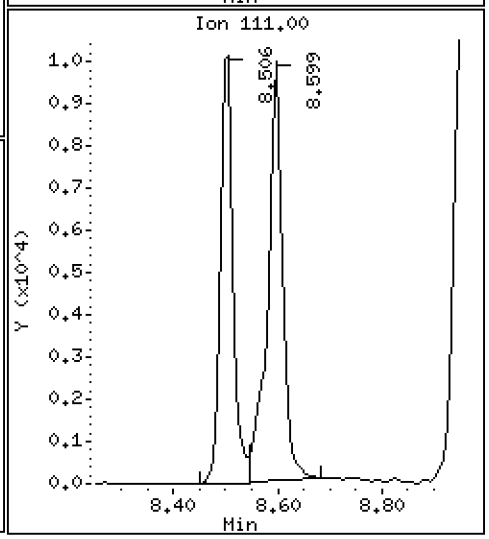












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

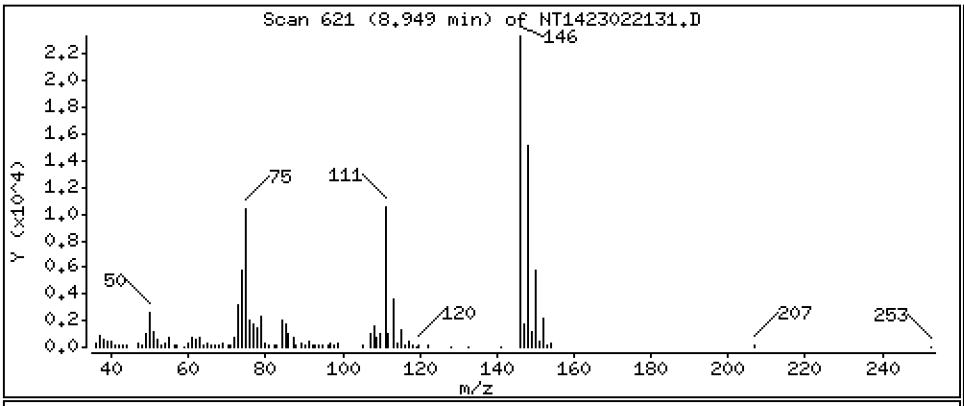
Operator: DSD

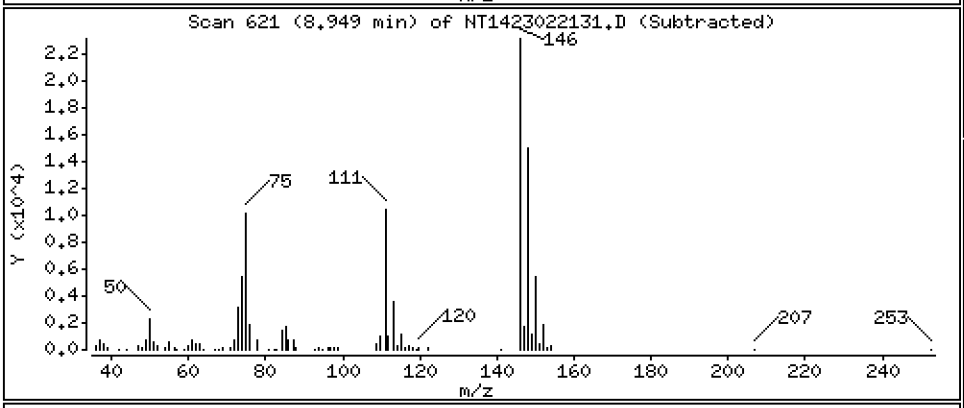
Column phase: ZB-5msi

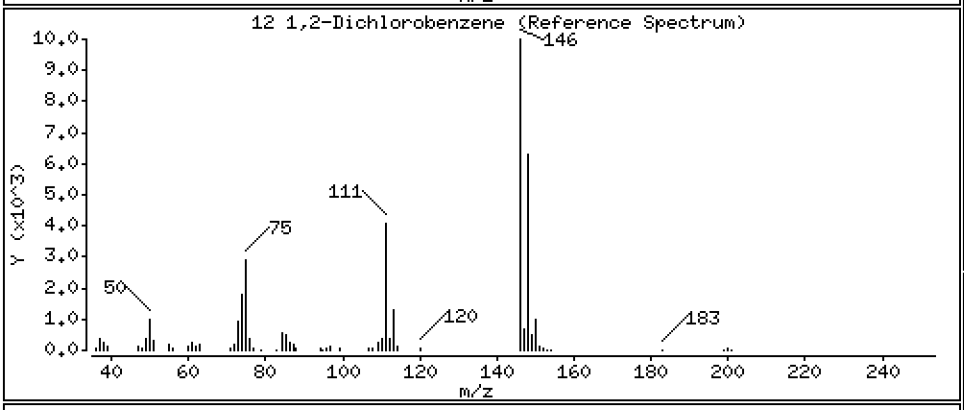
Column diameter: 0.25

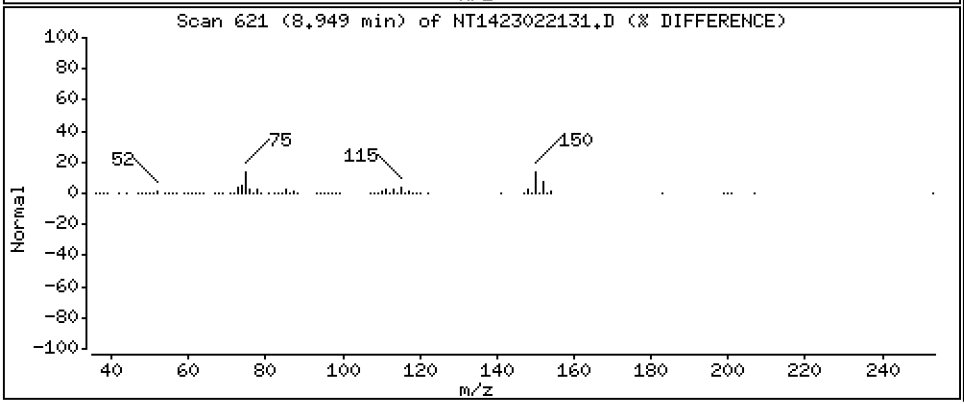
12 1,2-Dichlorobenzene

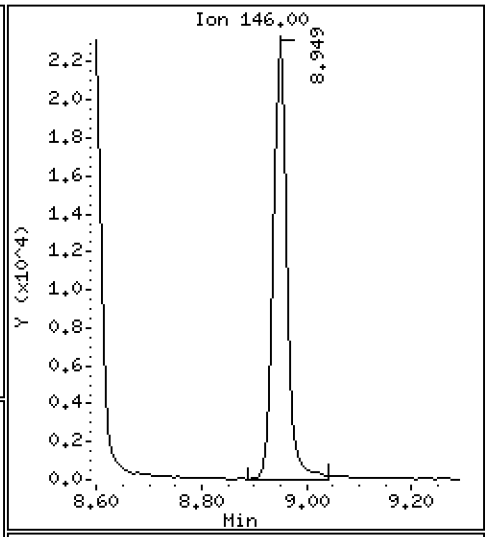
Concentration: 0.4898 ug/mL

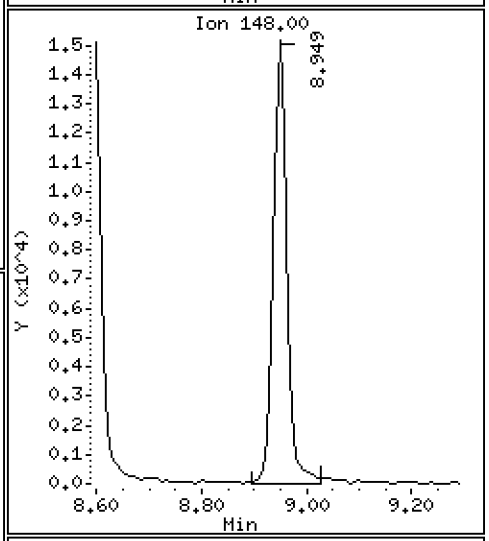


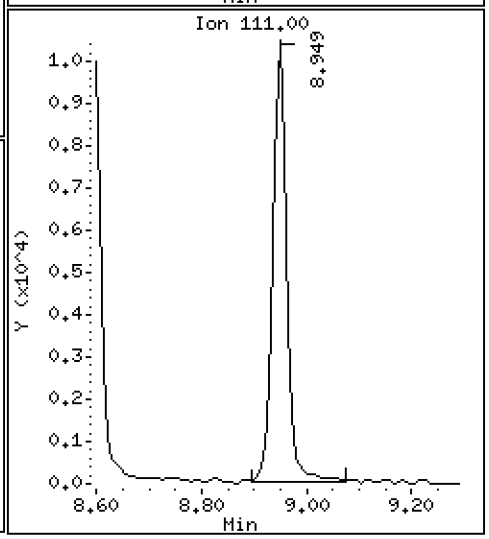












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

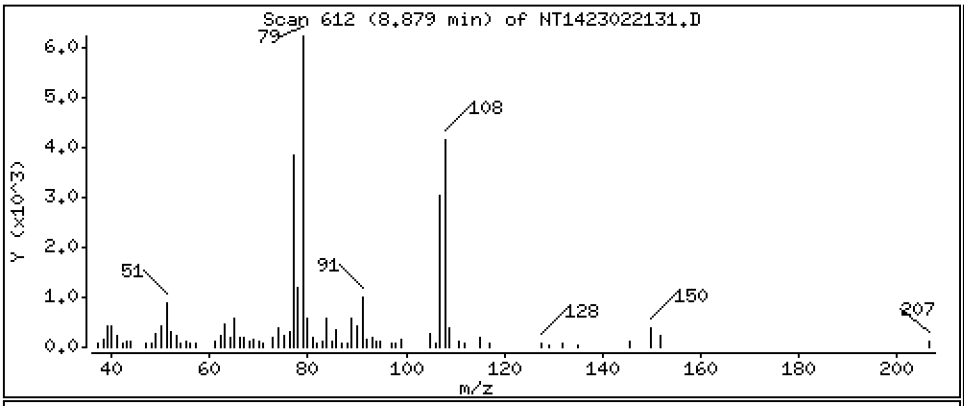
Operator: DSD

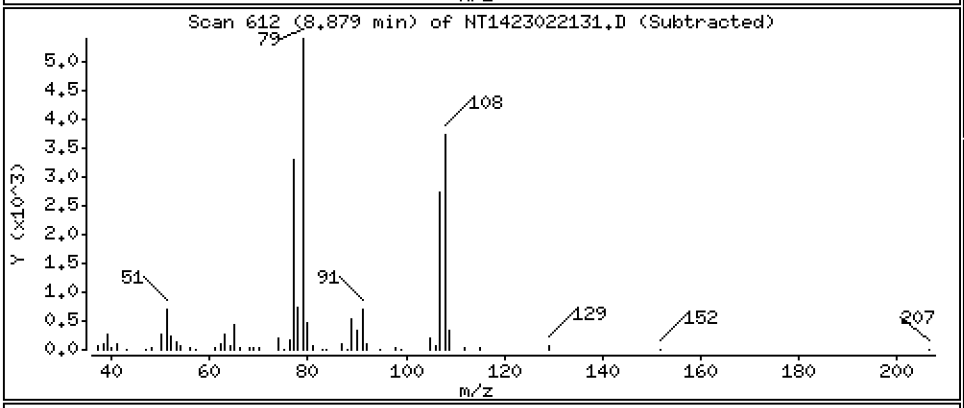
Column phase: ZB-5msi

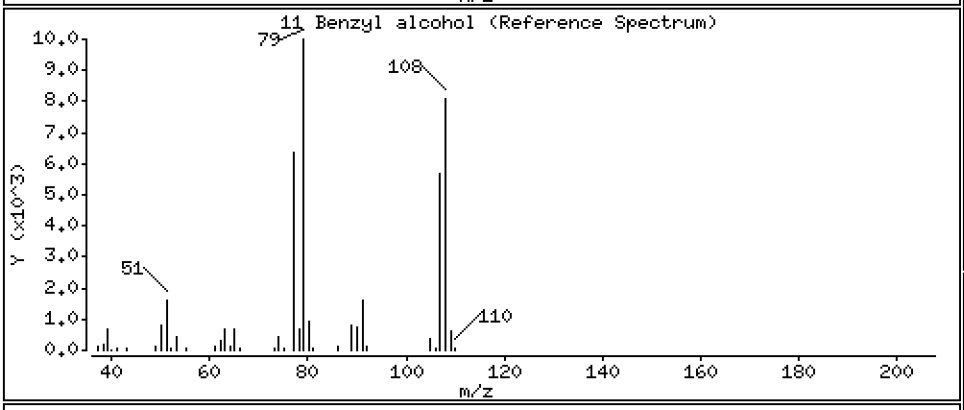
Column diameter: 0.25

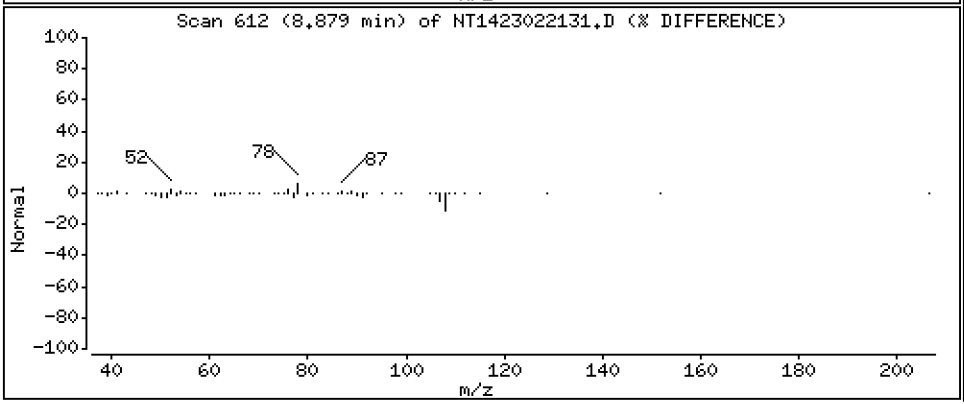
11 Benzyl alcohol

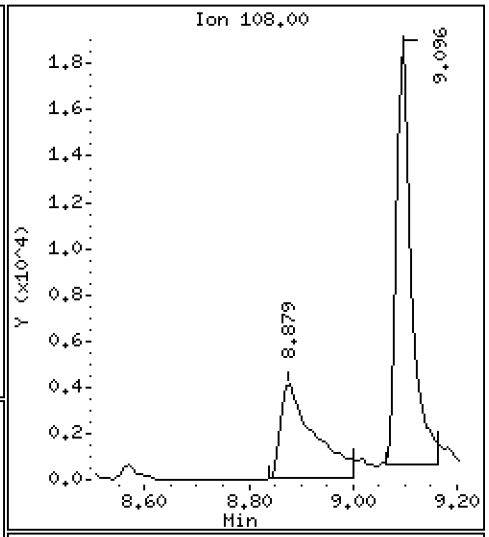
Concentration: 0.2966 ug/mL

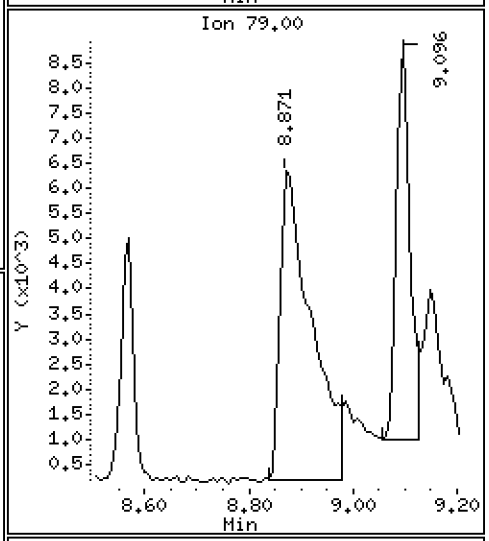


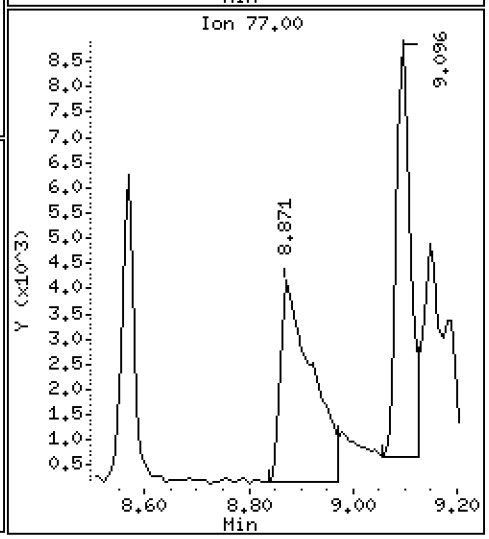












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

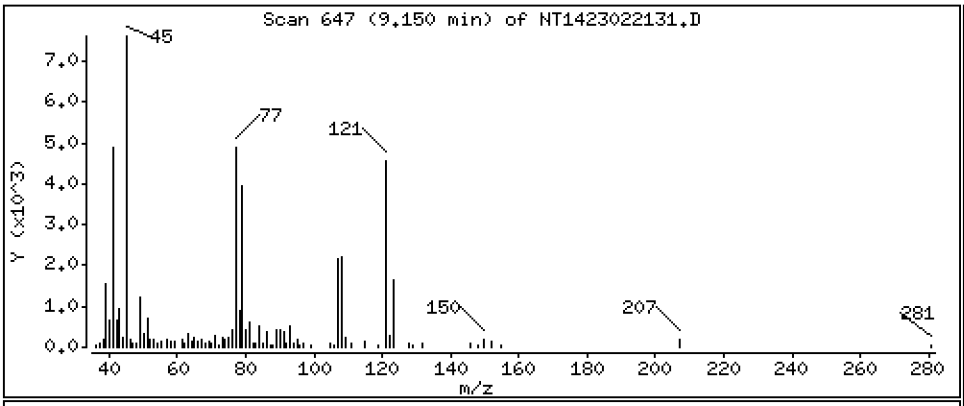
Operator: DSD

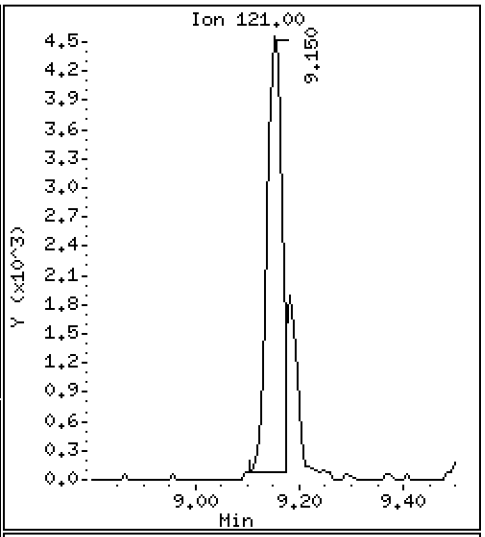
Column phase: ZB-5msi

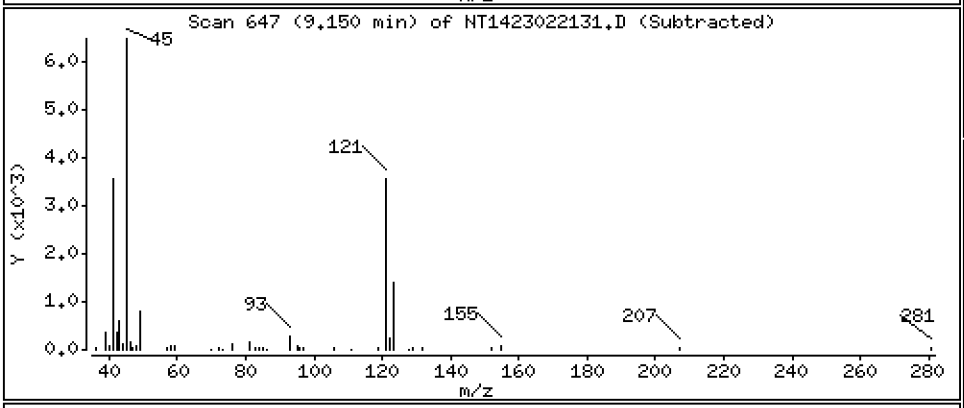
Column diameter: 0.25

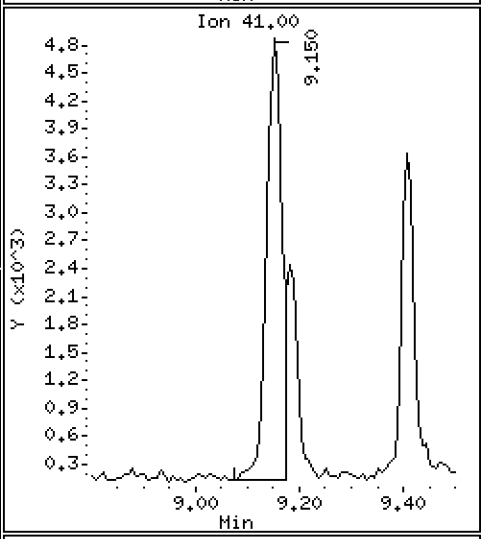
14 2,2'-oxybis(1-Chloropropane)

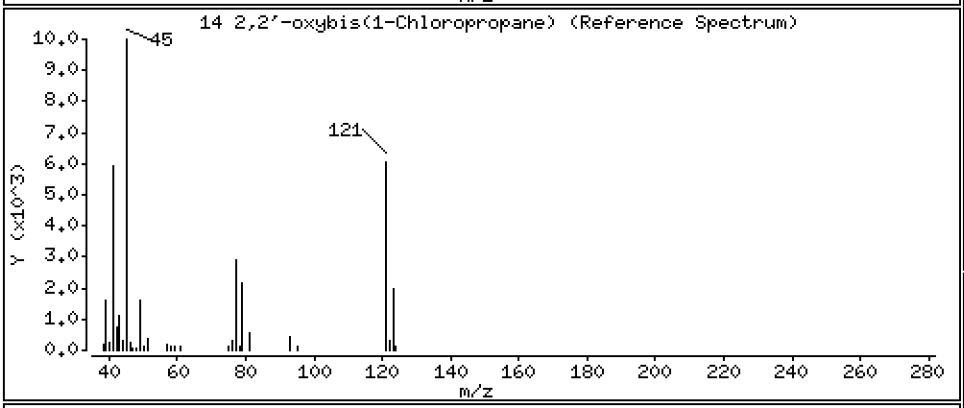
Concentration: 0.3701 ug/mL

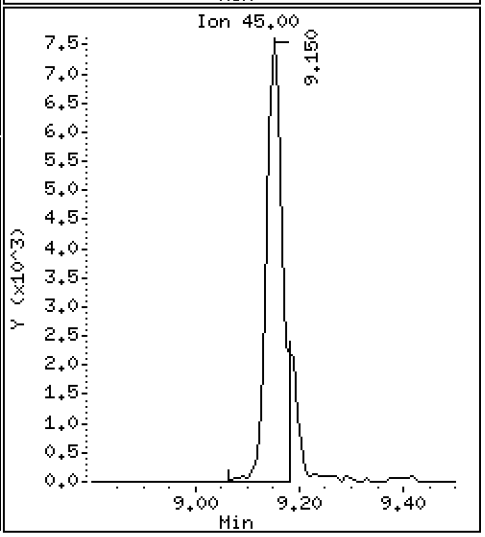


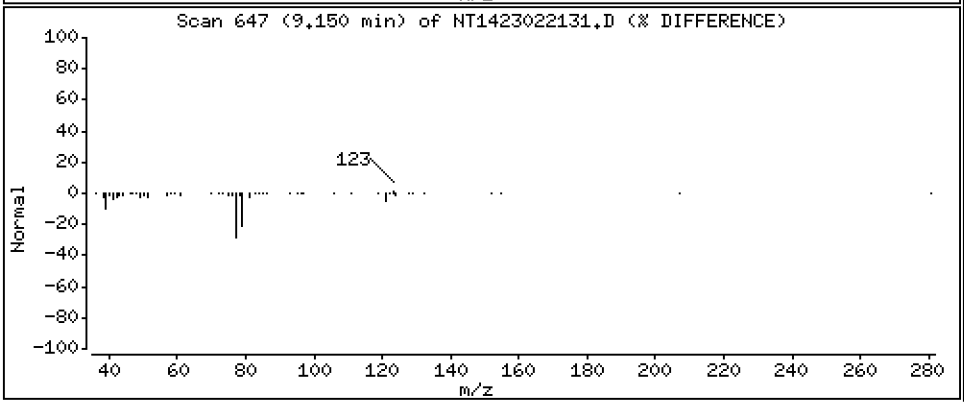












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

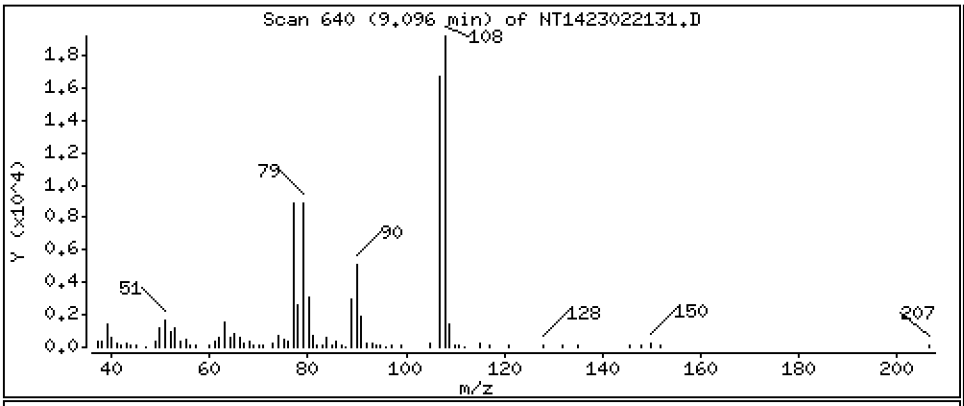
Operator: DSD

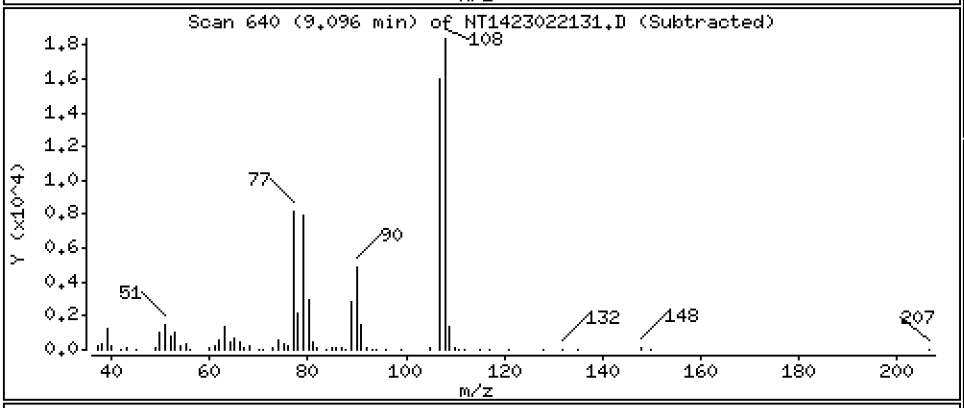
Column phase: ZB-5msi

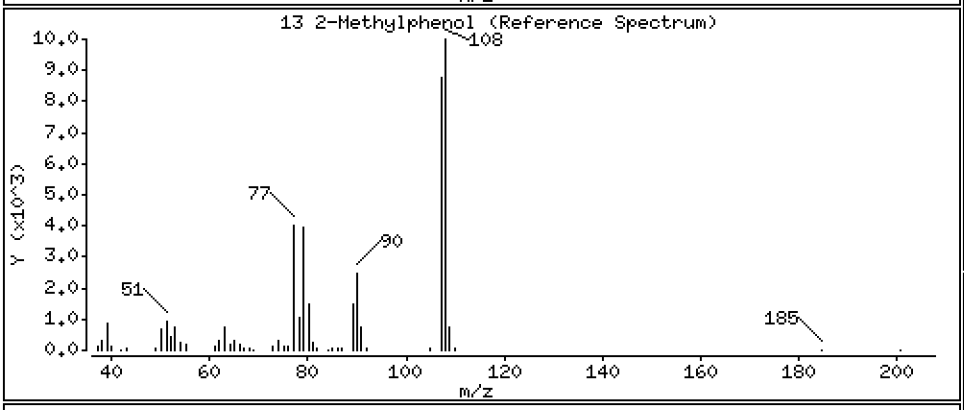
Column diameter: 0.25

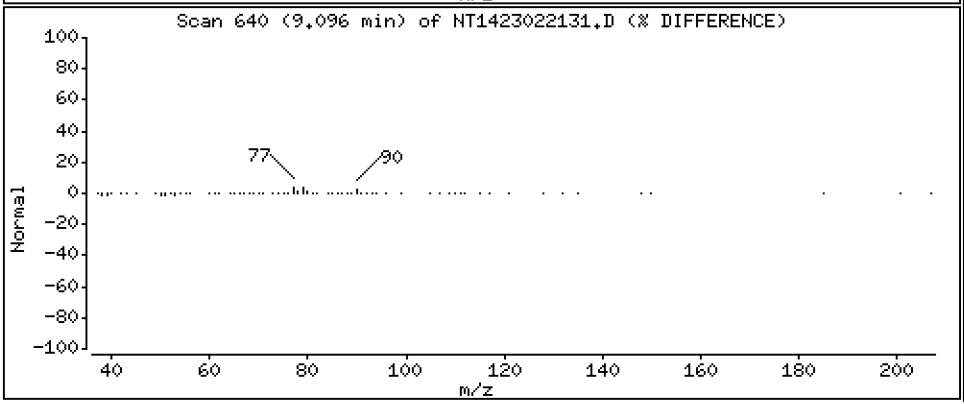
13 2-Methylphenol

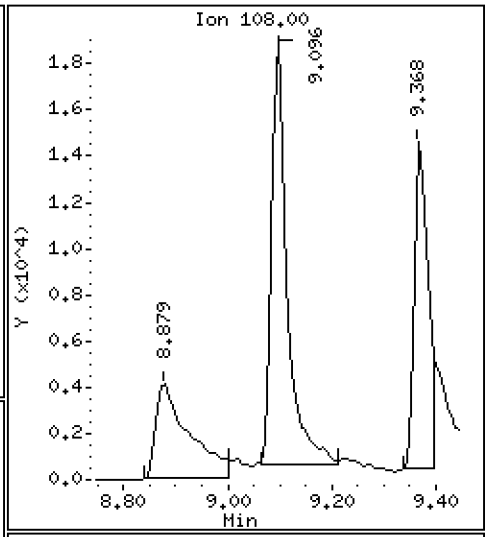
Concentration: 0.4720 ug/mL

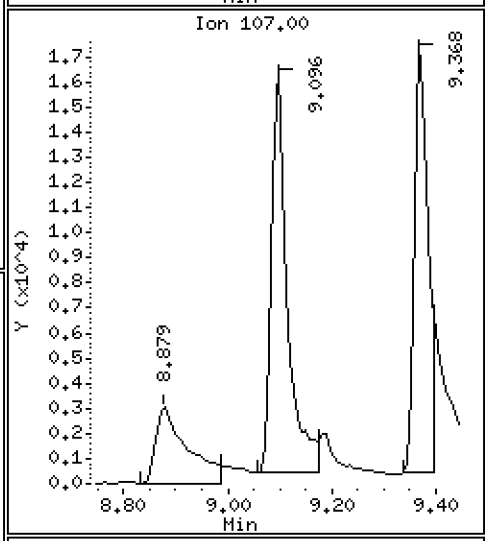


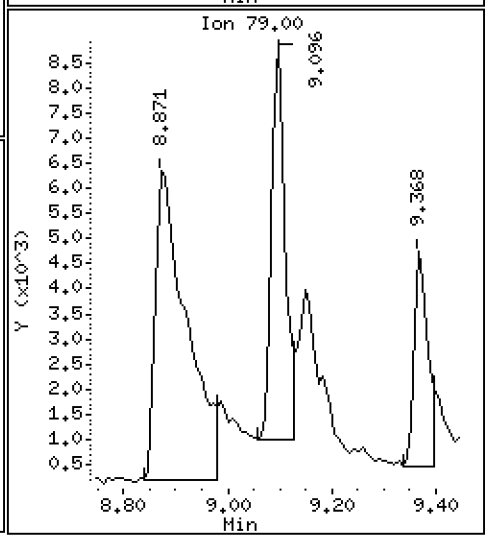












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

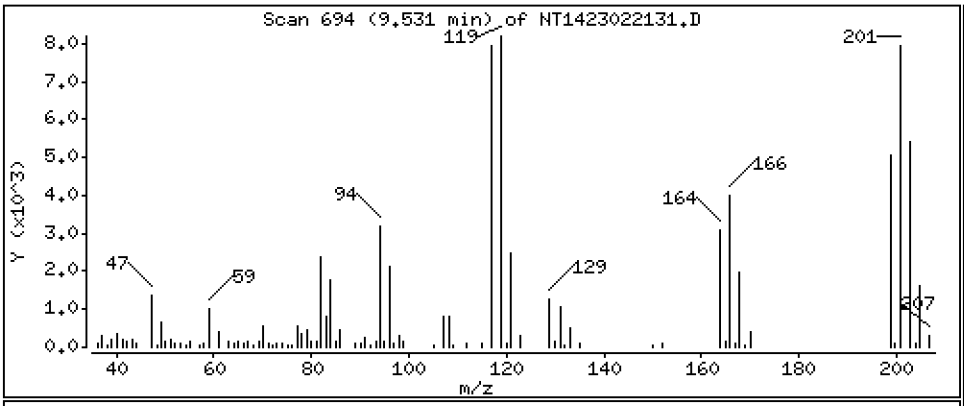
Operator: DSD

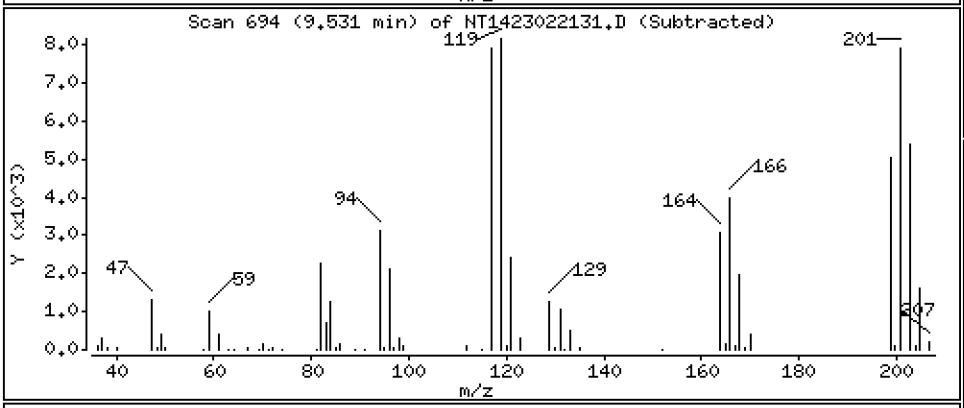
Column phase: ZB-5msi

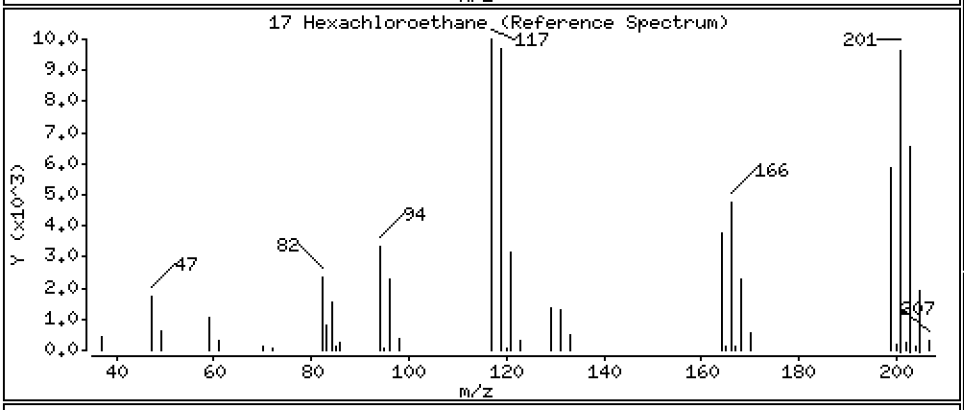
Column diameter: 0.25

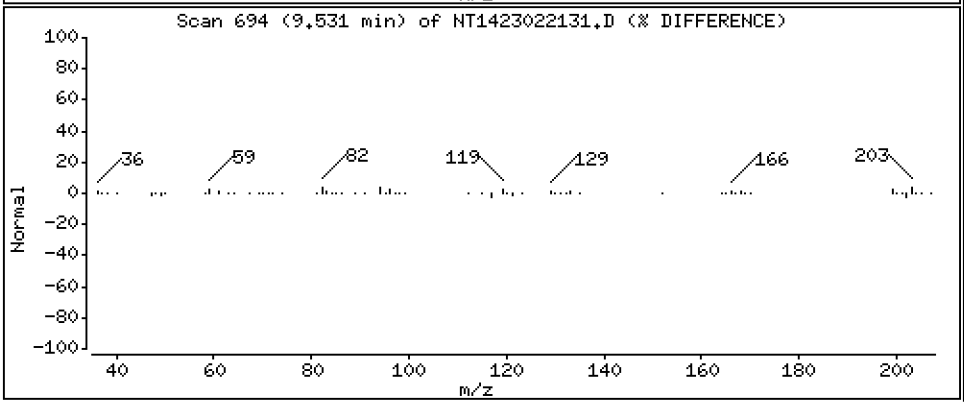
17 Hexachloroethane

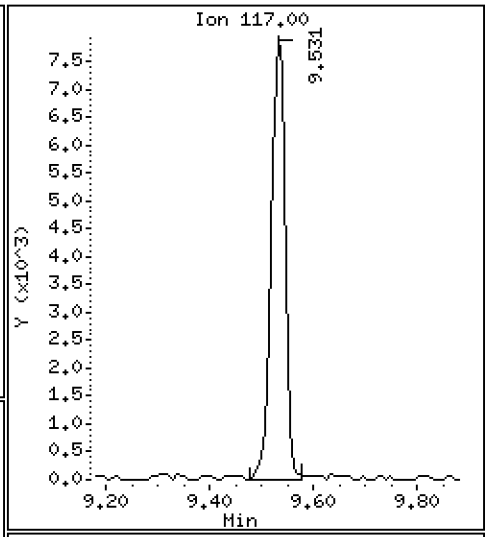
Concentration: 0.3941 ug/mL

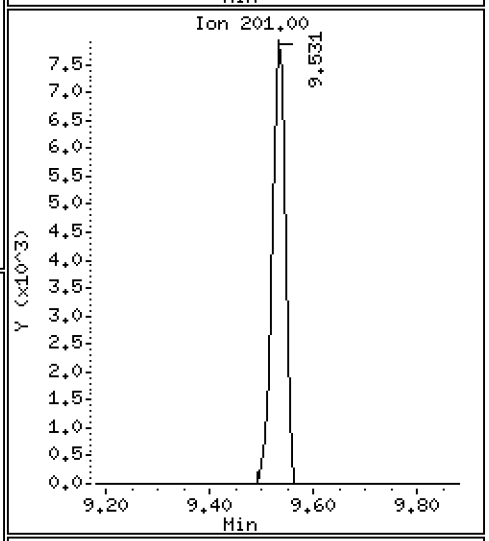


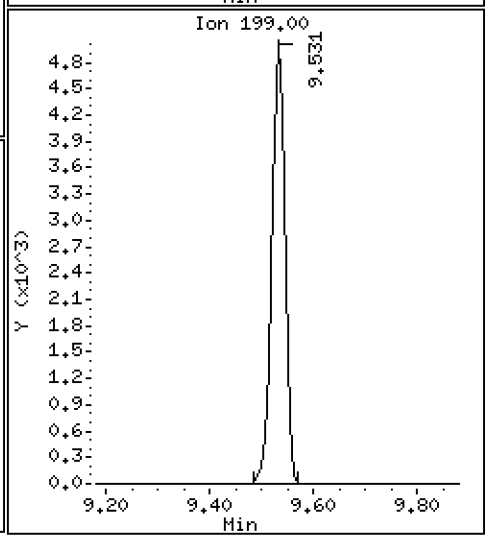












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

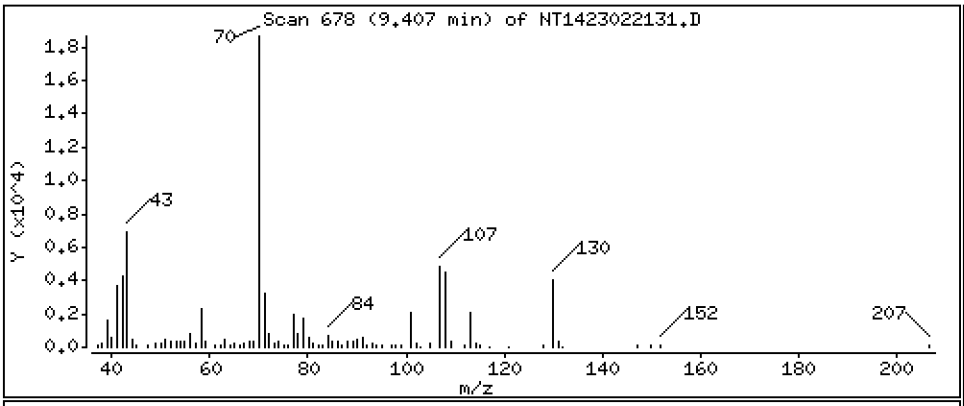
Operator: DSD

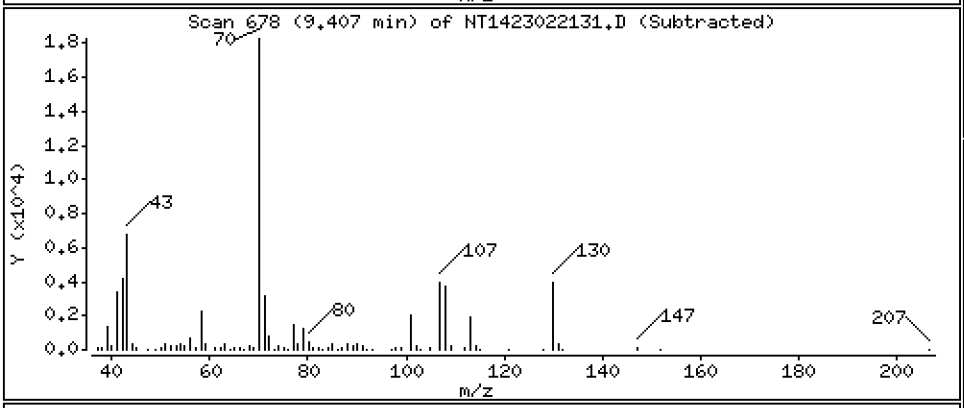
Column phase: ZB-5msi

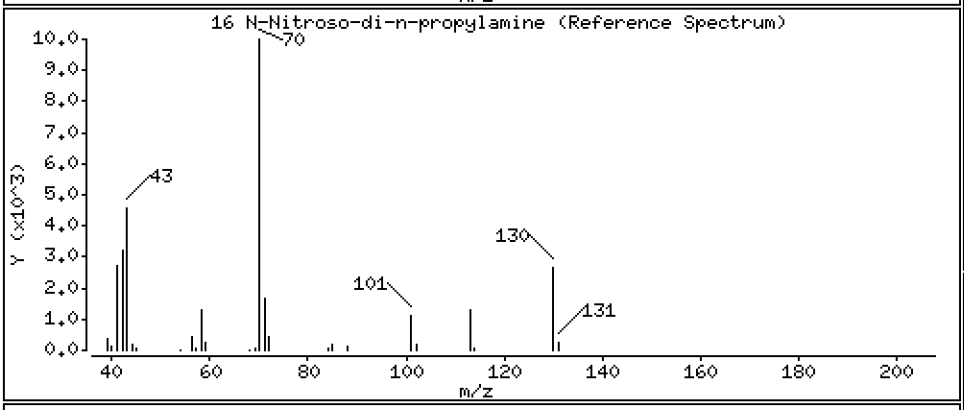
Column diameter: 0.25

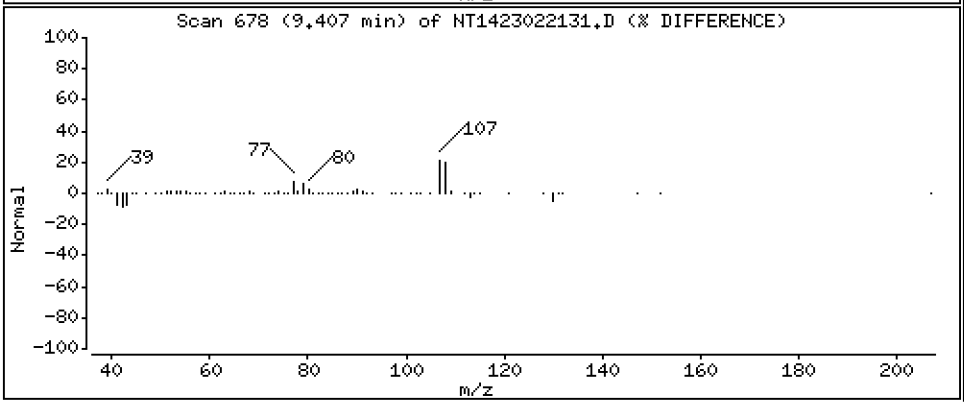
16 N-Nitroso-di-n-propylamine

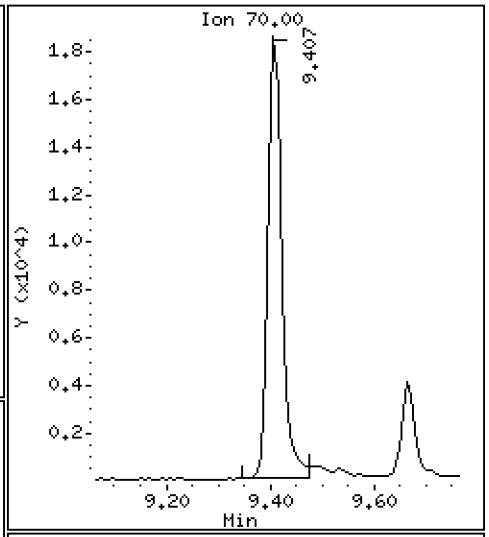
Concentration: 0.4706 ug/mL

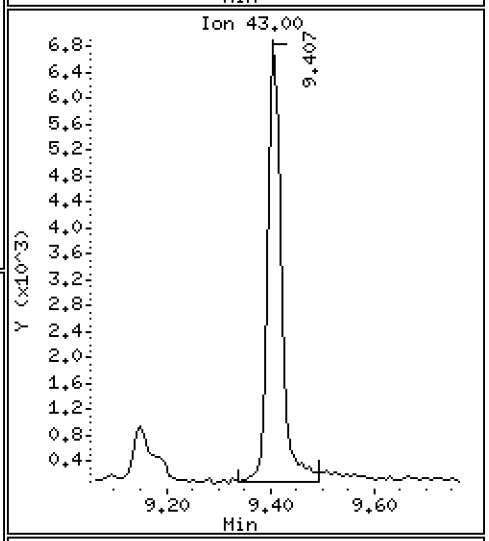


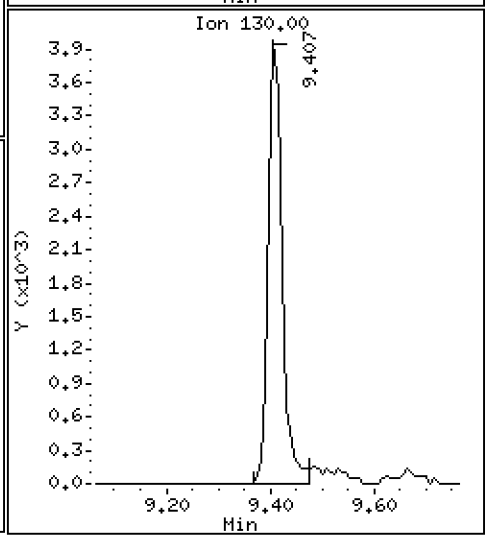












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

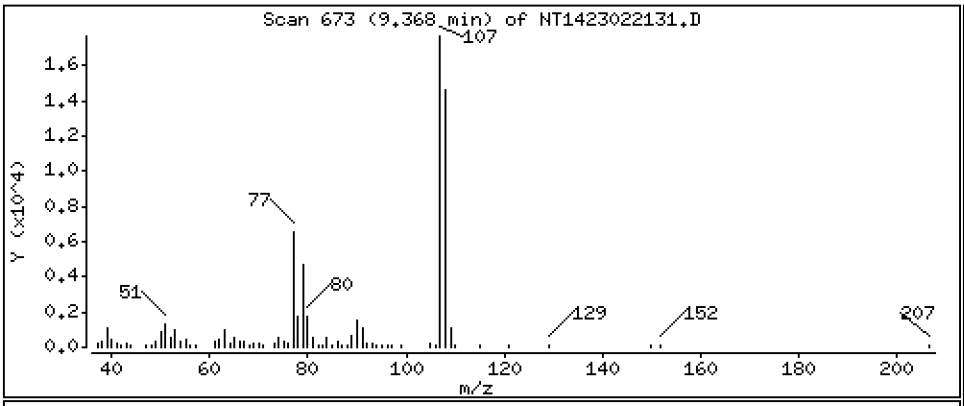
Operator: DSD

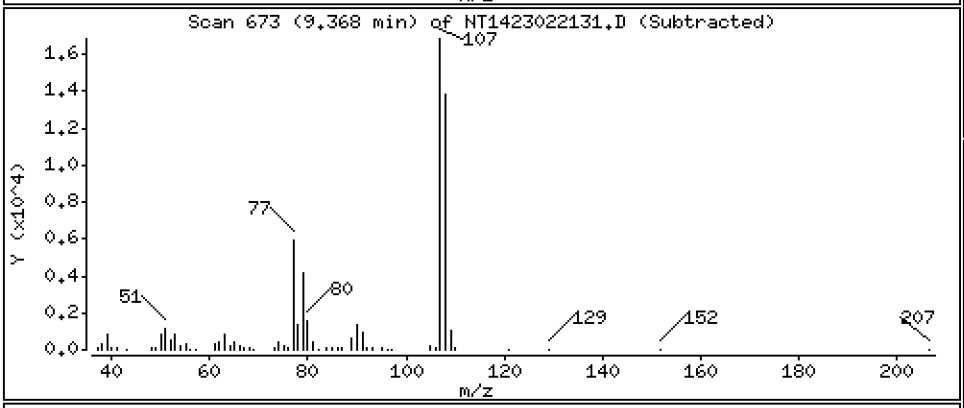
Column phase: ZB-5msi

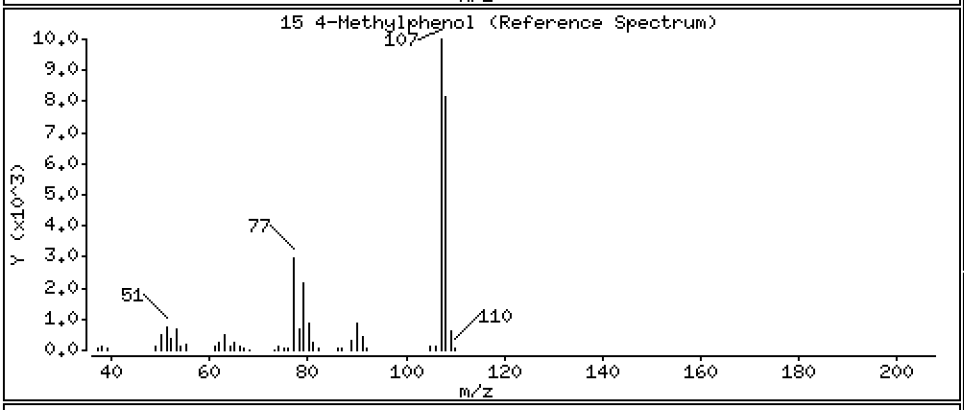
Column diameter: 0.25

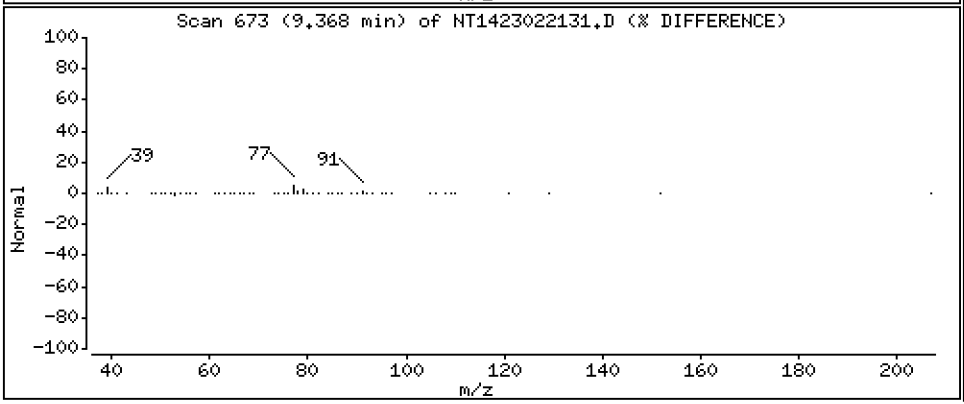
15 4-Methylphenol

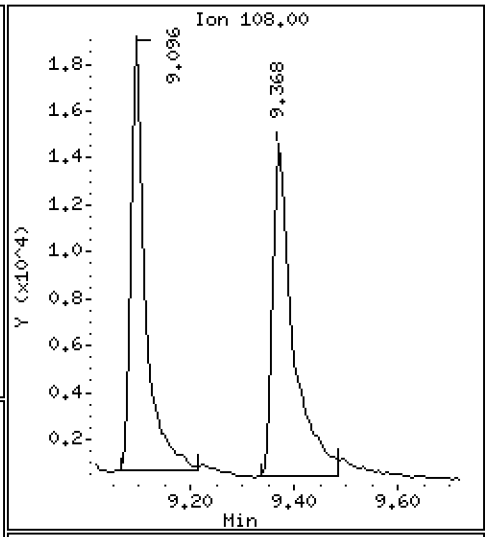
Concentration: 0.4588 ug/mL

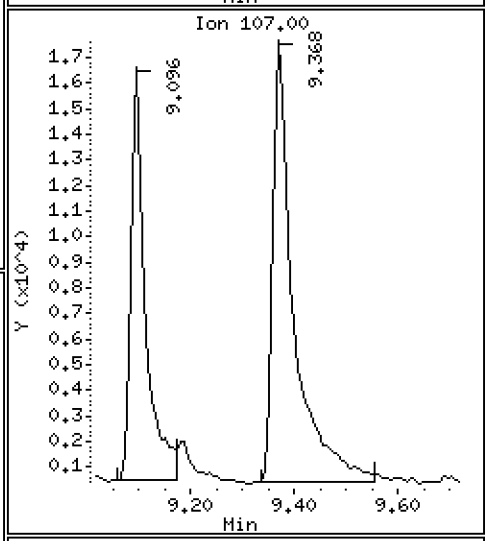


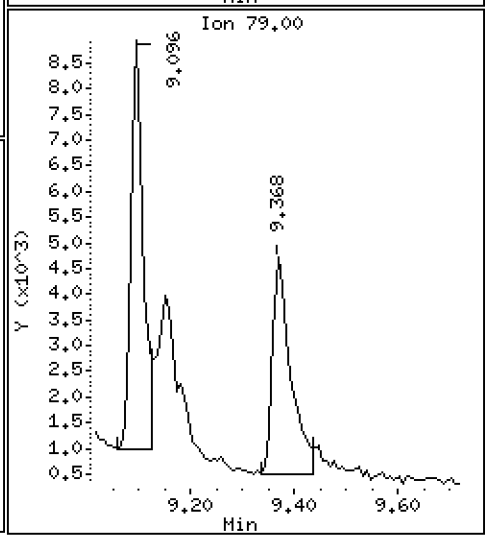












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

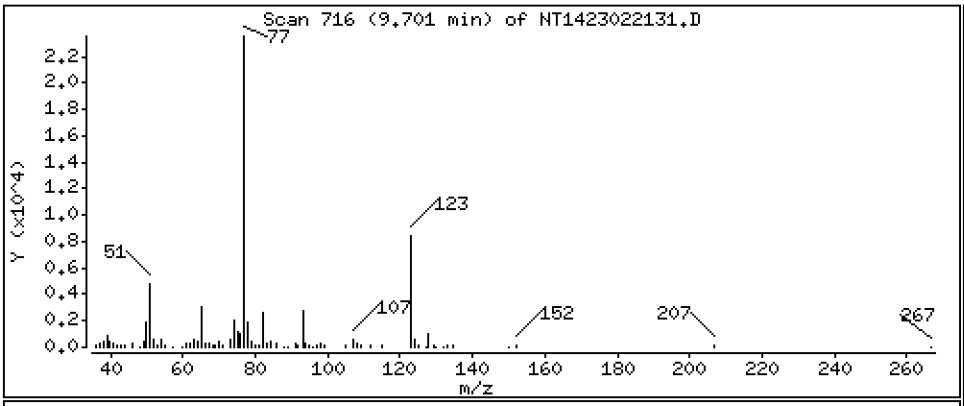
Operator: DSD

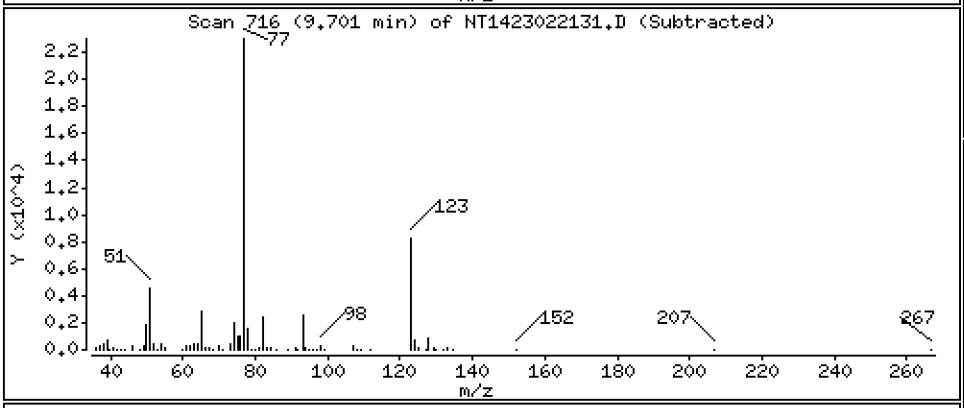
Column phase: ZB-5msi

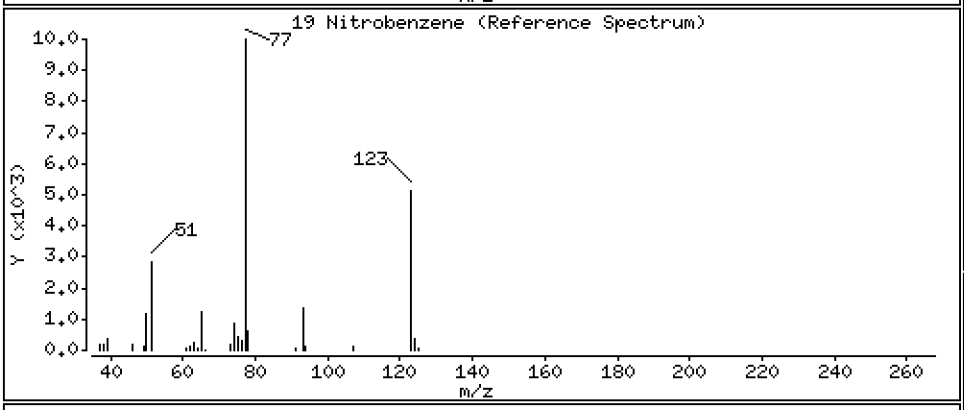
Column diameter: 0.25

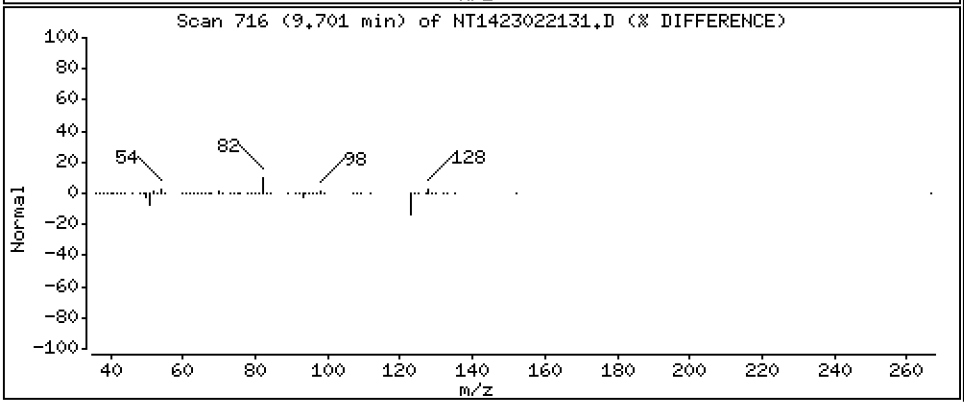
19 Nitrobenzene

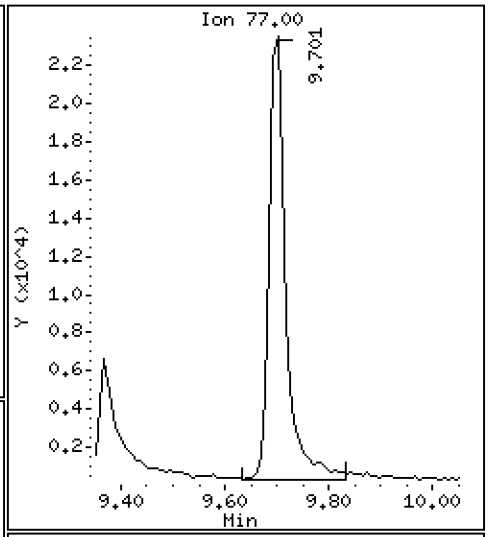
Concentration: 0.5041 ug/mL

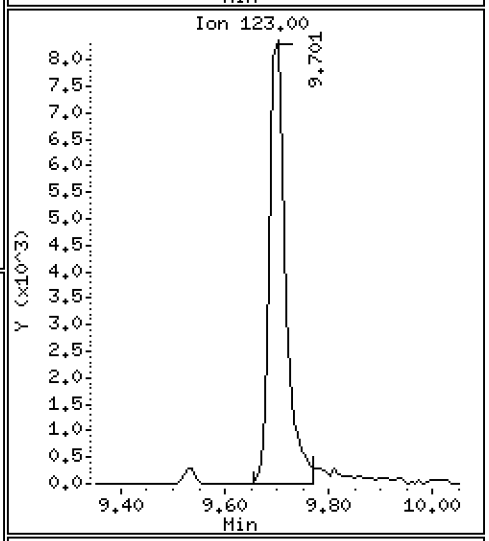


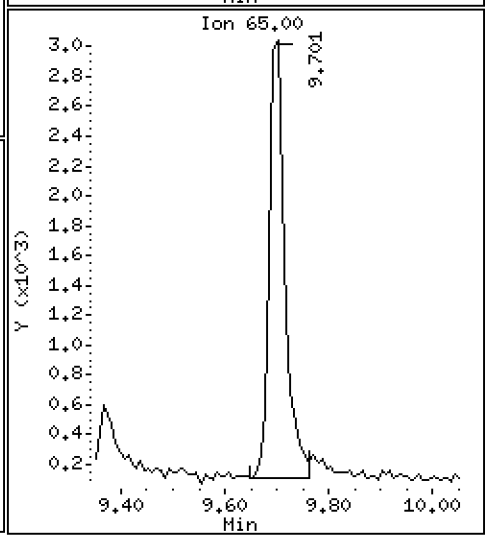












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

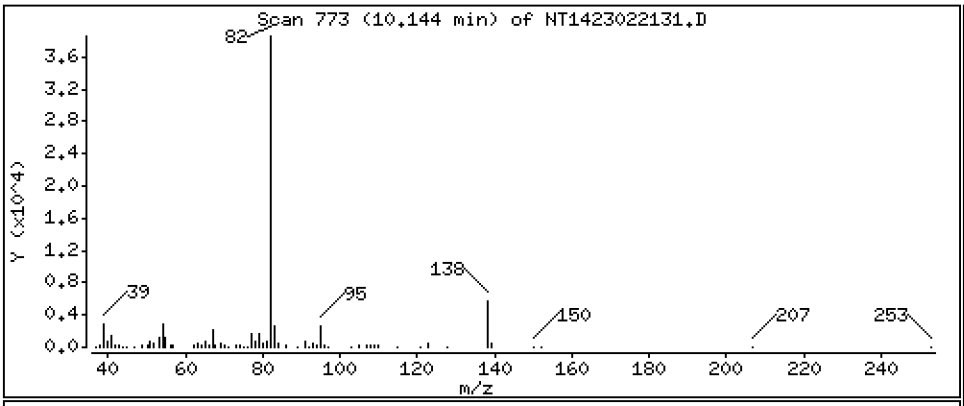
Operator: DSD

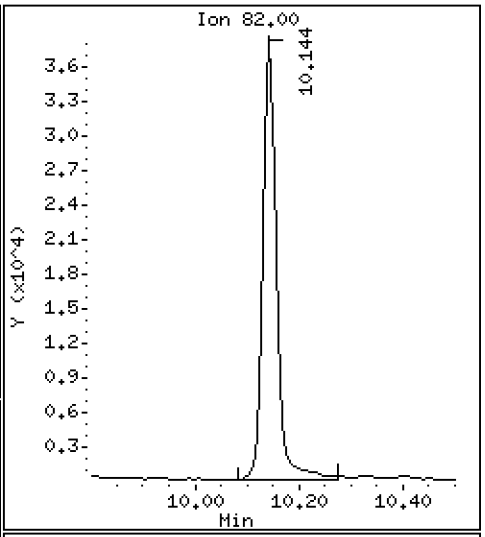
Column phase: ZB-5msi

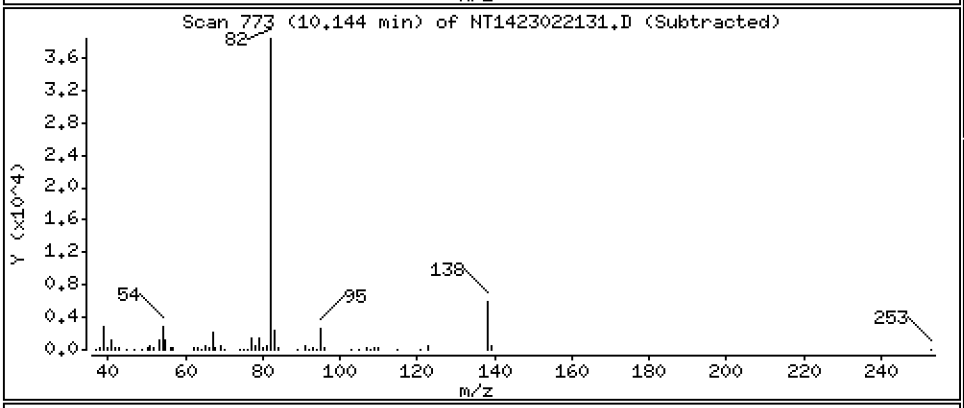
Column diameter: 0.25

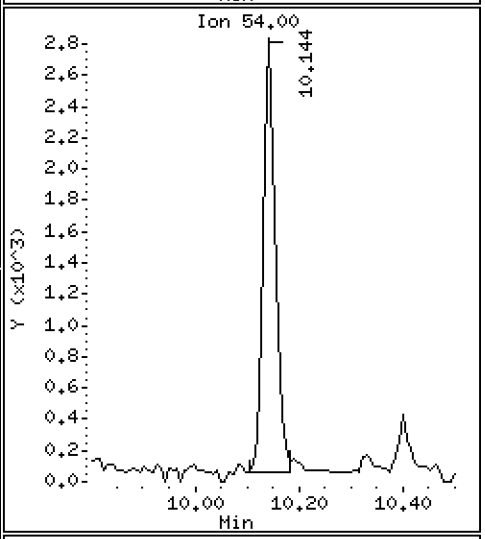
20 Isophorone

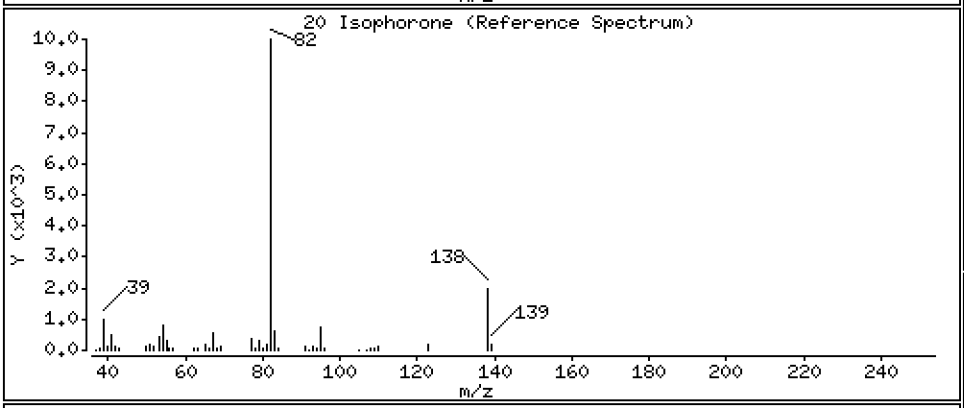
Concentration: 0.5461 ug/mL

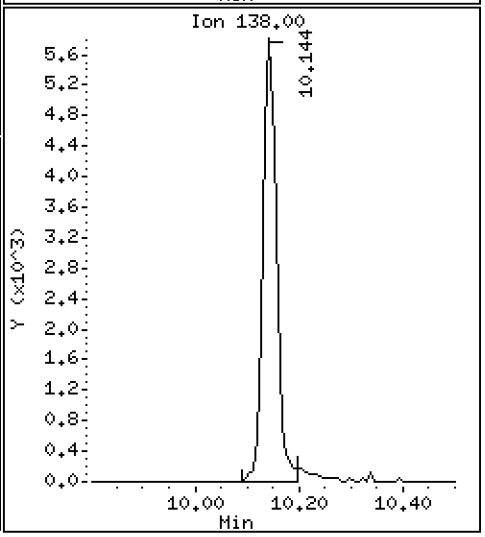


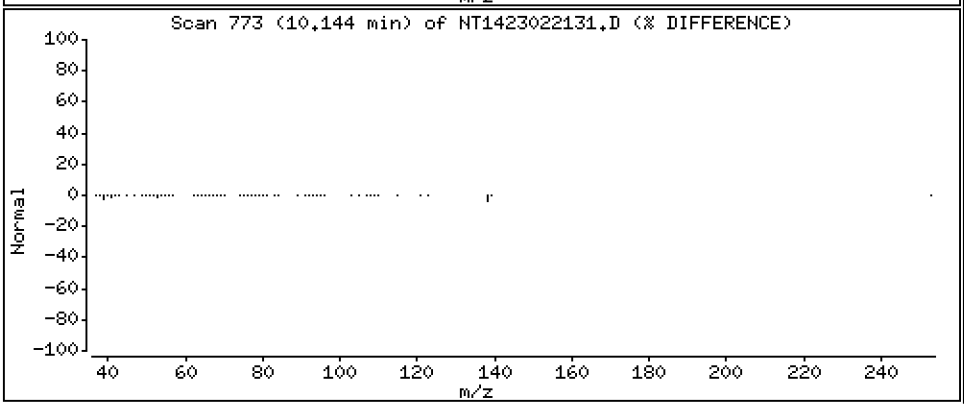












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

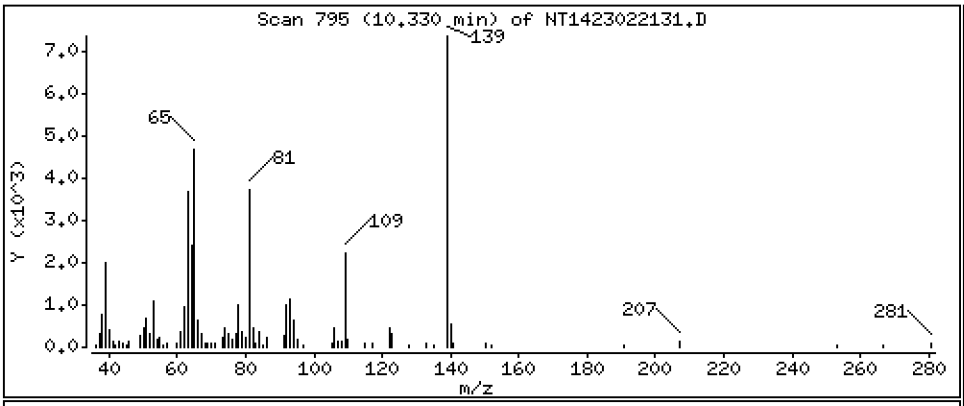
Operator: DSD

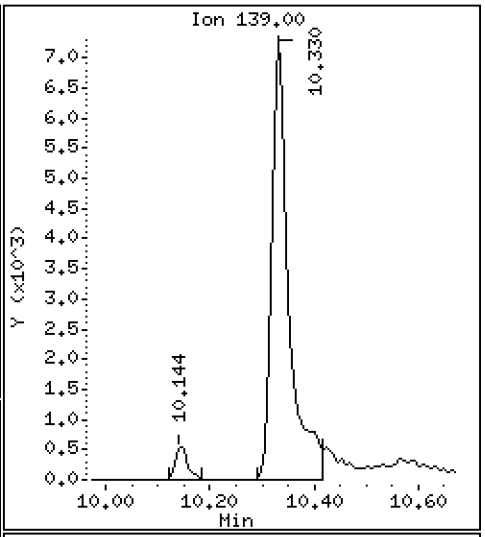
Column phase: ZB-5msi

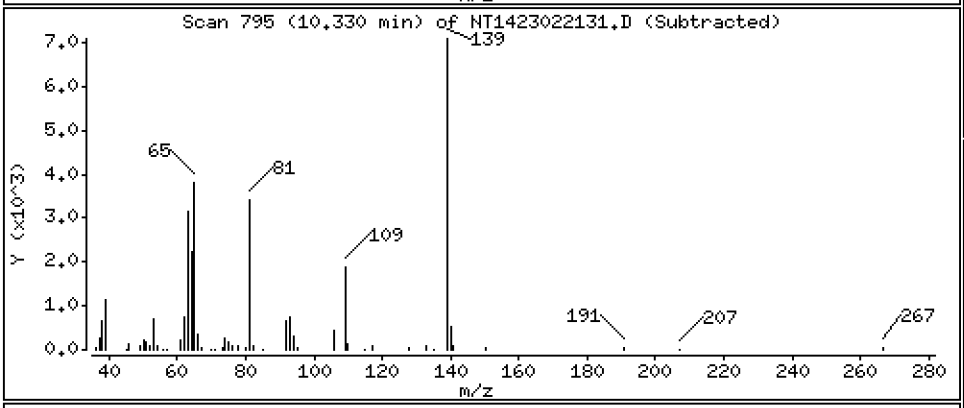
Column diameter: 0.25

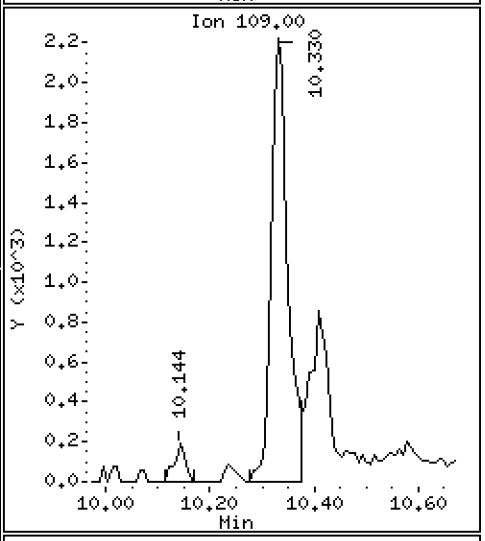
21 2-Nitrophenol

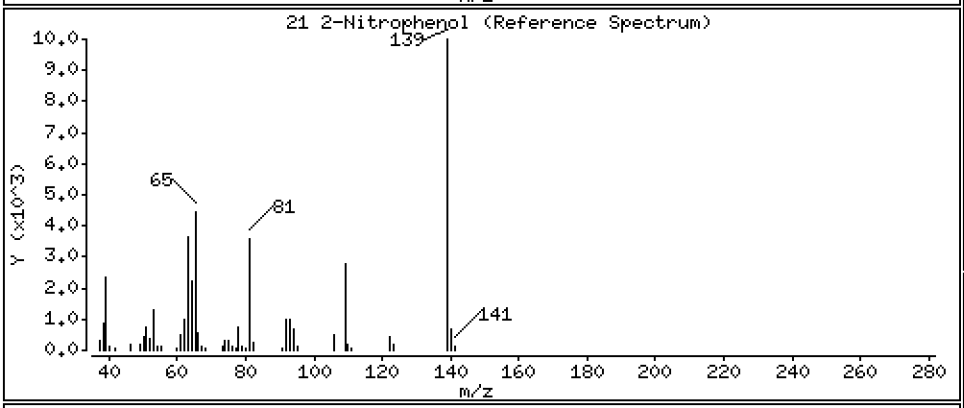
Concentration: 0.3736 ug/mL

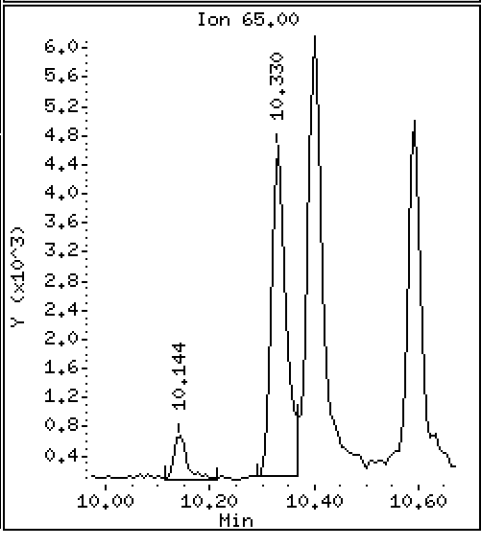


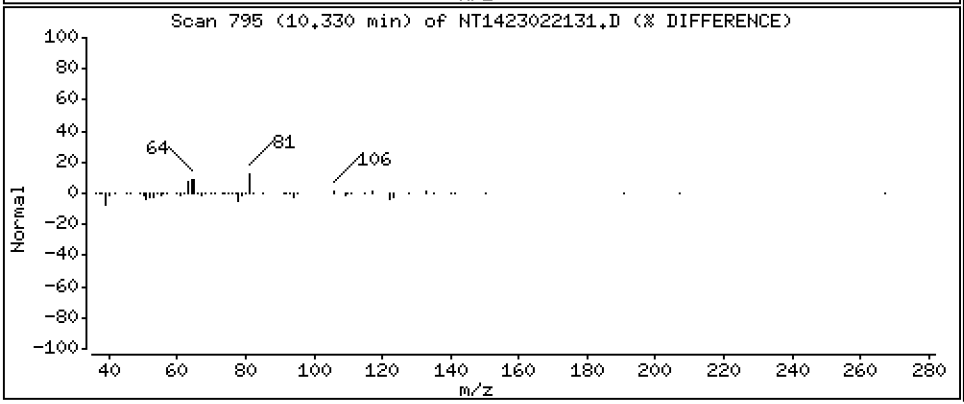












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

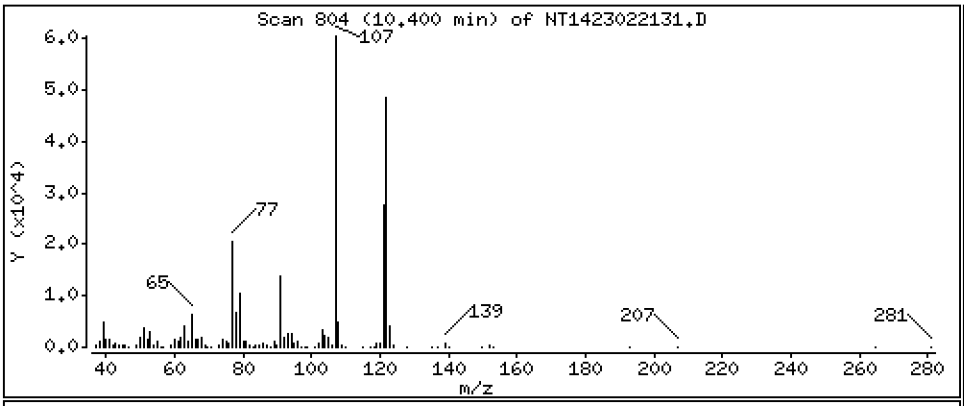
Operator: DSD

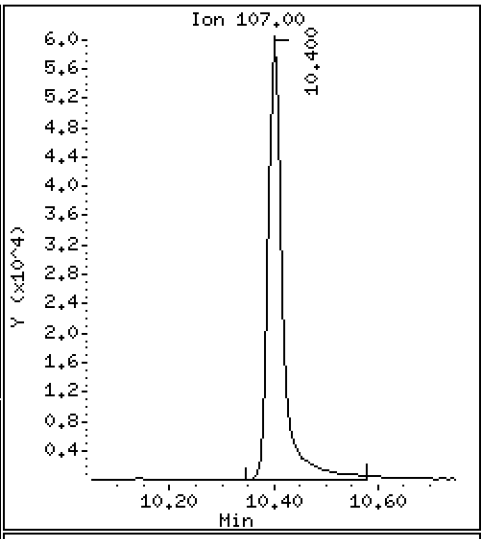
Column phase: ZB-5msi

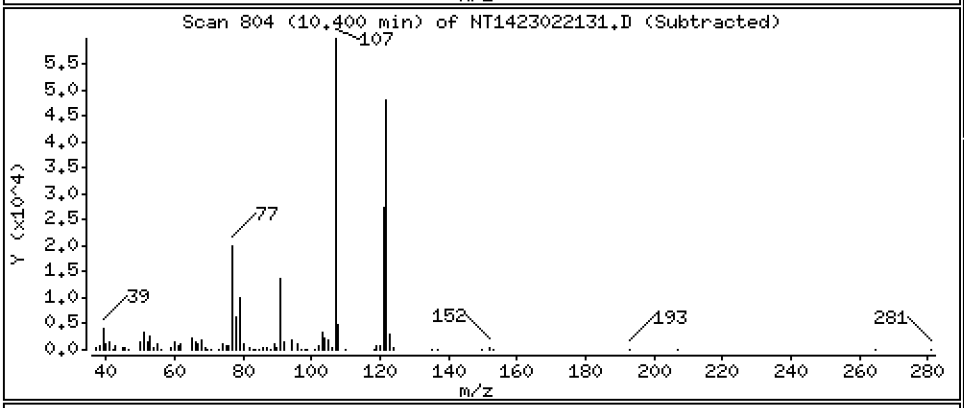
Column diameter: 0.25

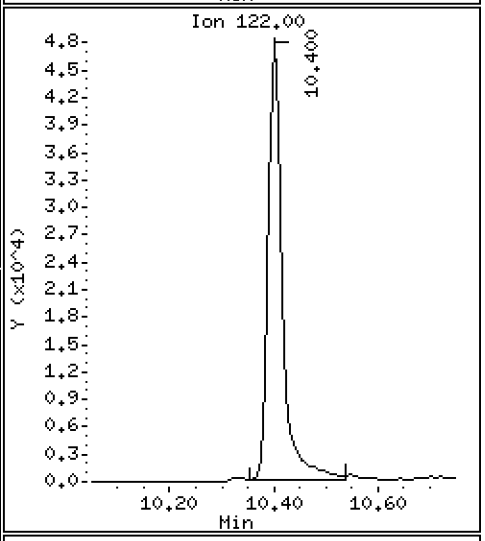
22 2,4-Dimethylphenol

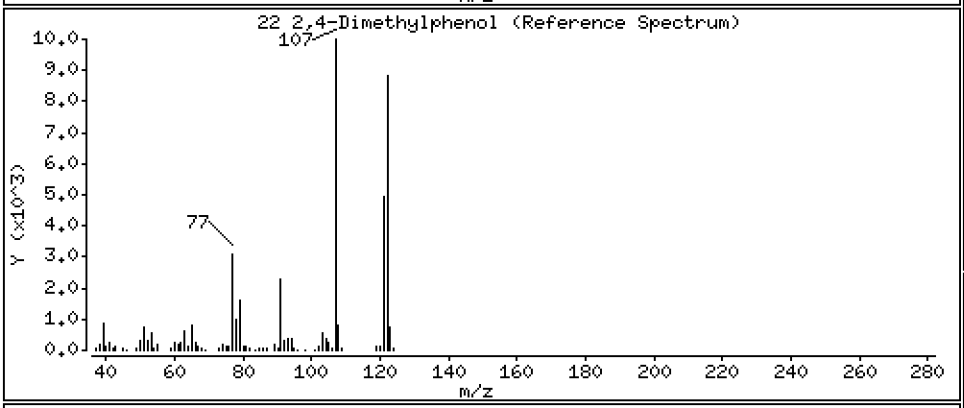
Concentration: 1.496 ug/mL

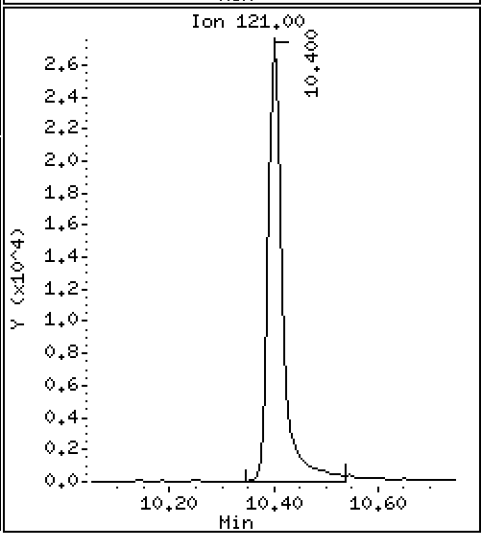


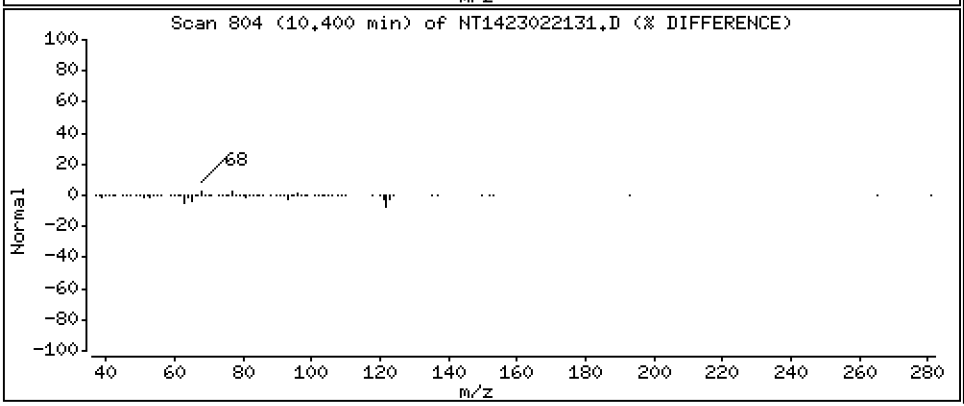












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

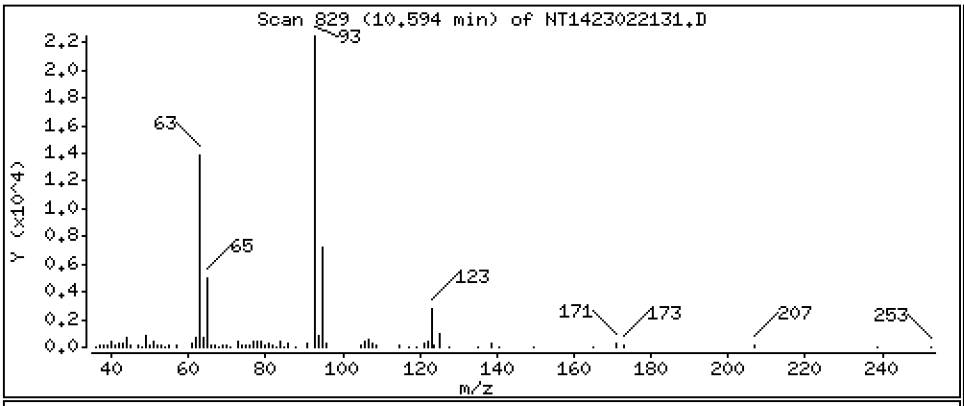
Operator: DSD

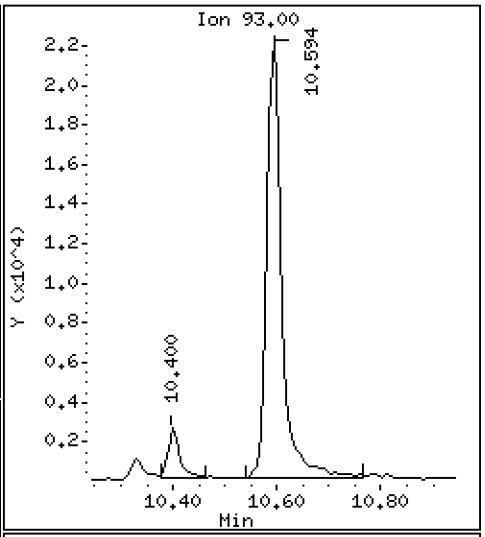
Column phase: ZB-5msi

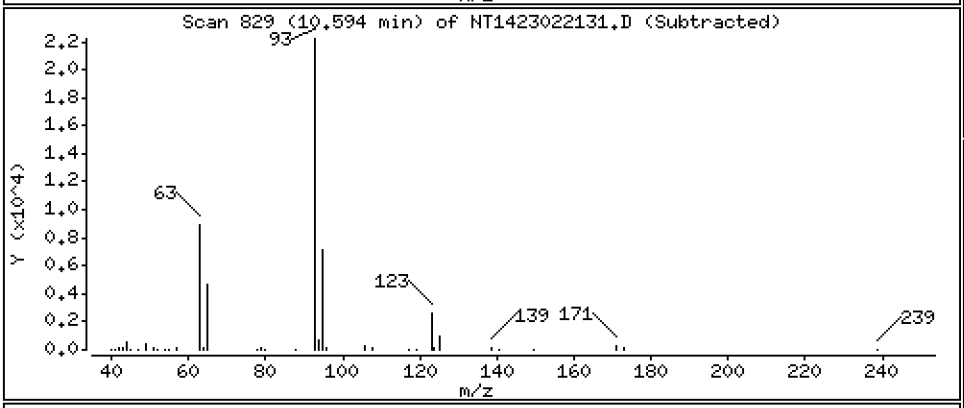
Column diameter: 0.25

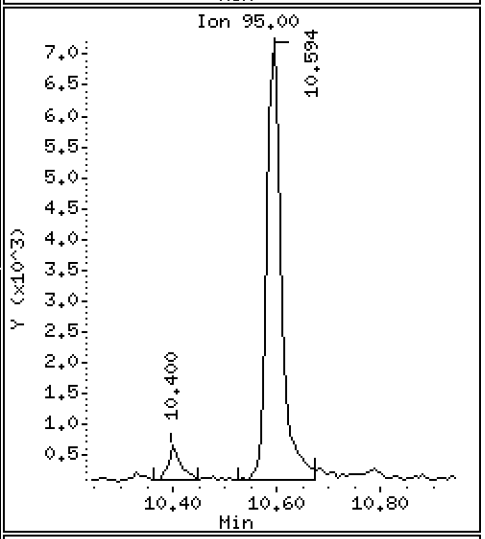
23 Bis(2-Chloroethoxy)methane

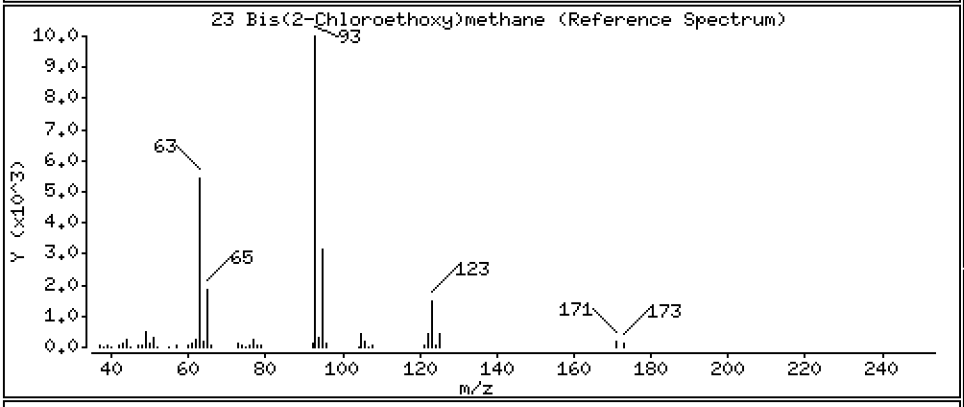
Concentration: 0.5084 ug/mL

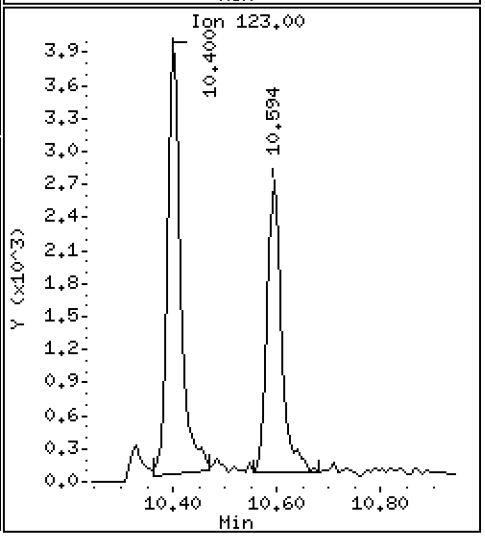


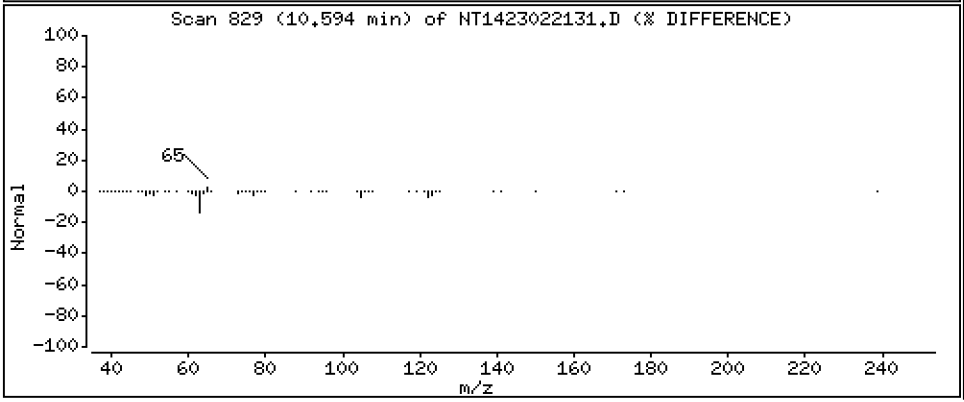












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022131.D

Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

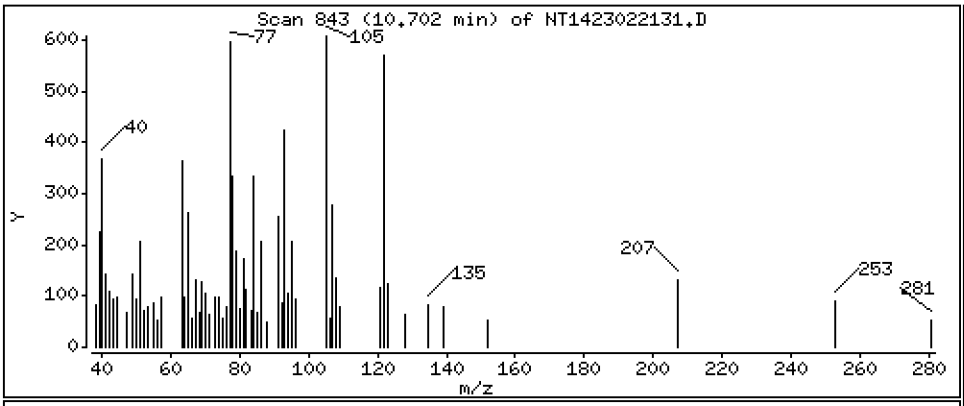
Operator: DSD

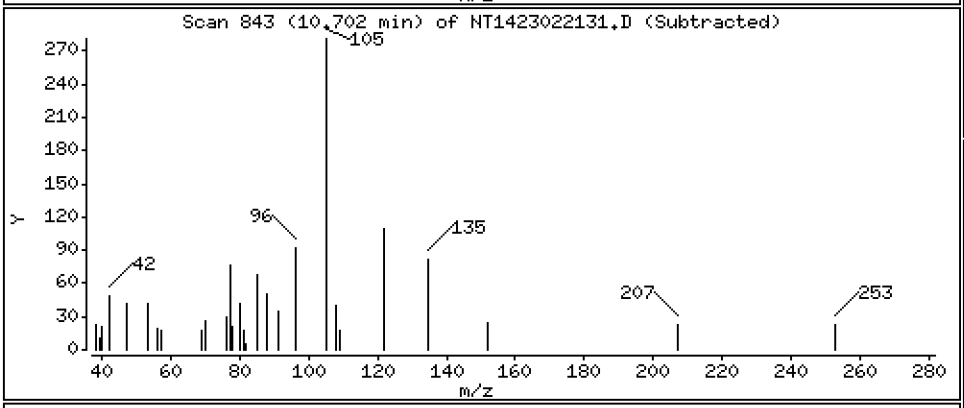
Column phase: ZB-5msi

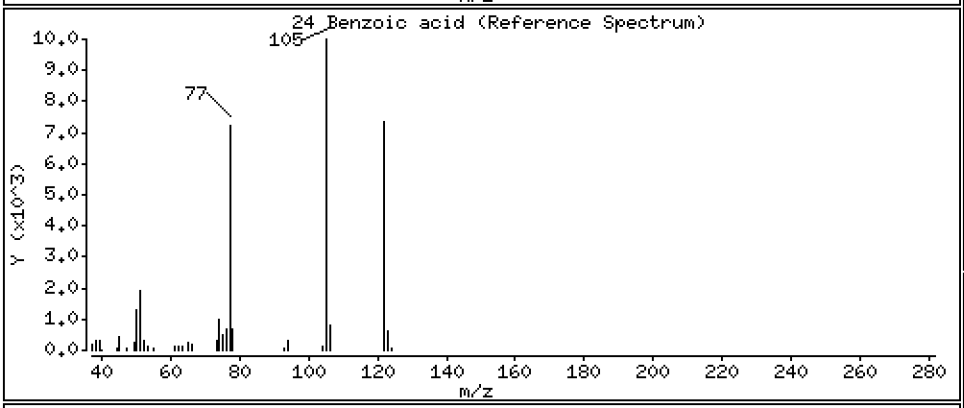
Column diameter: 0.25

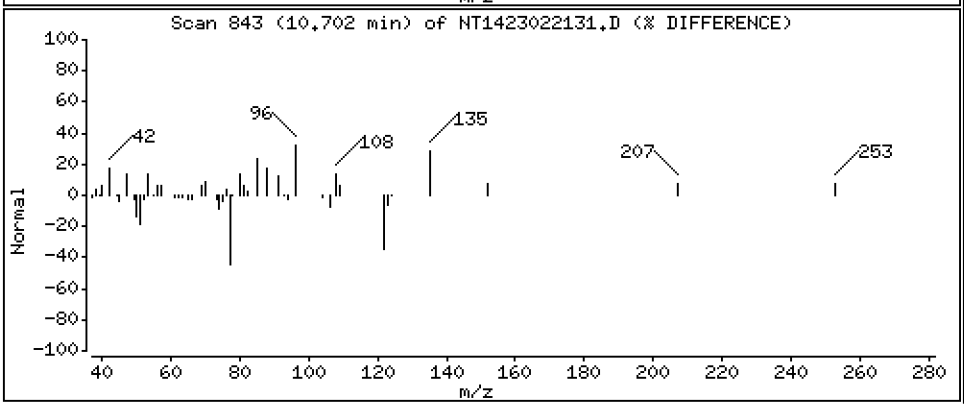
24 Benzoic acid

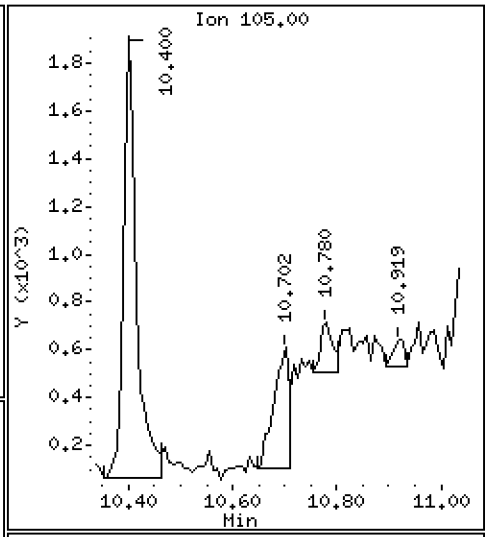
Concentration: 0.02226 ug/mL

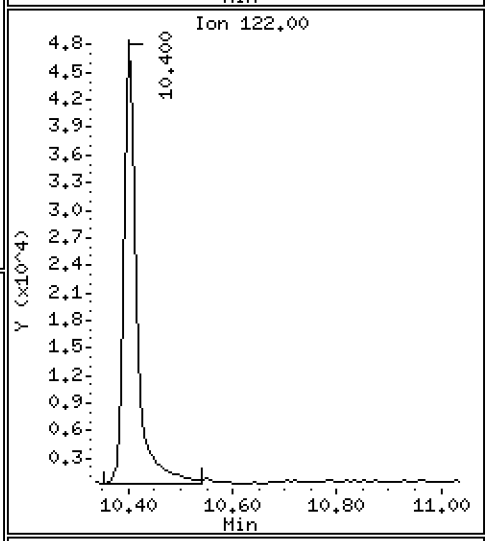


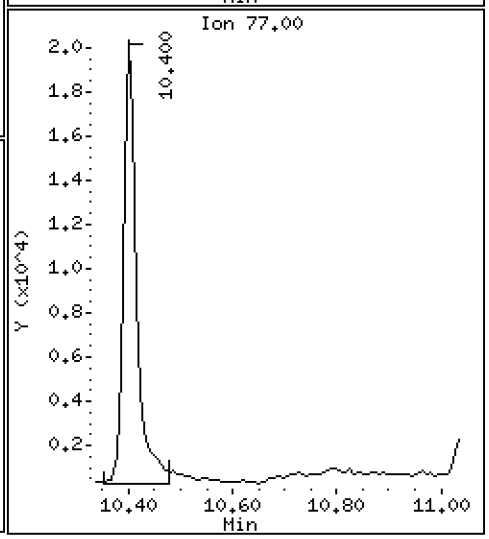












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

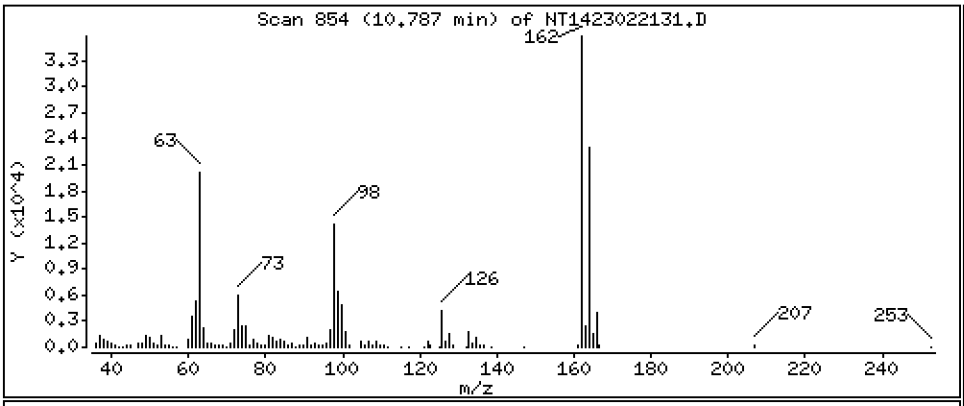
Operator: DSD

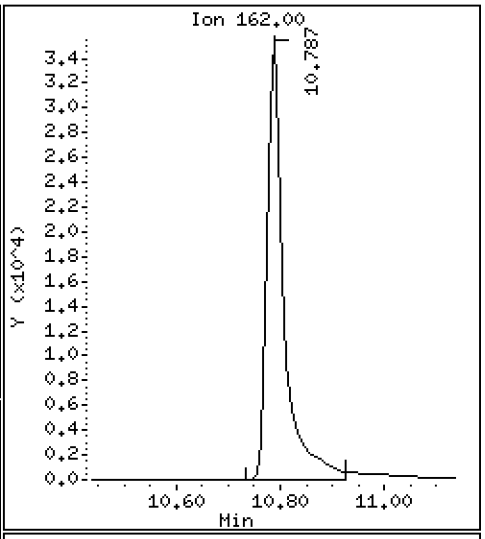
Column phase: ZB-5msi

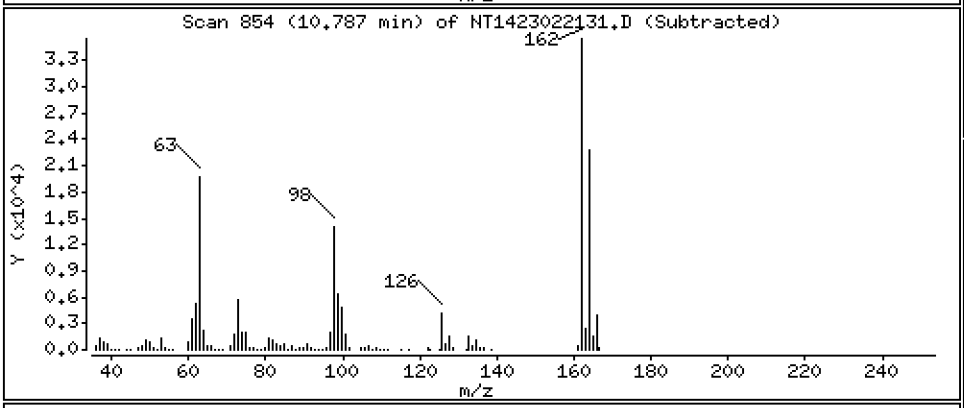
Column diameter: 0.25

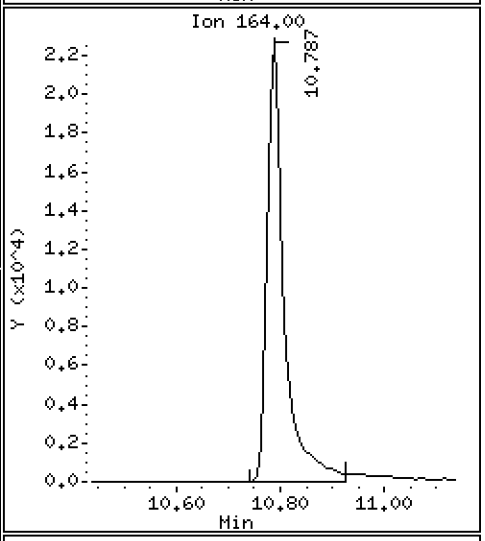
25 2,4-Dichlorophenol

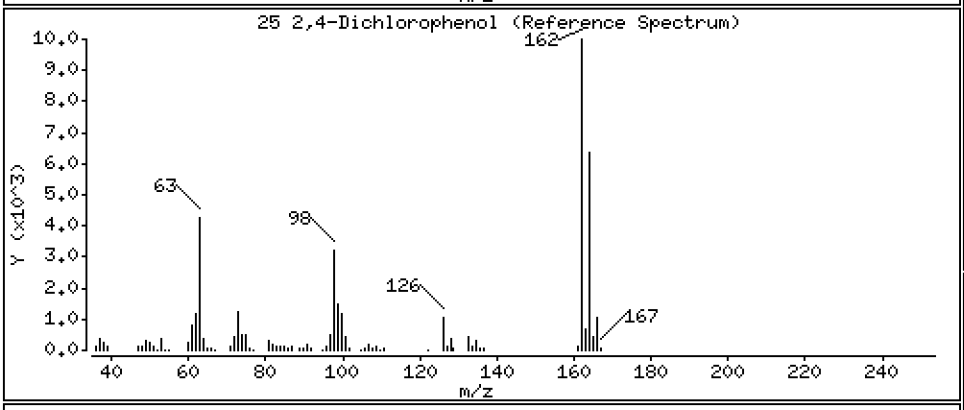
Concentration: 1.326 ug/mL

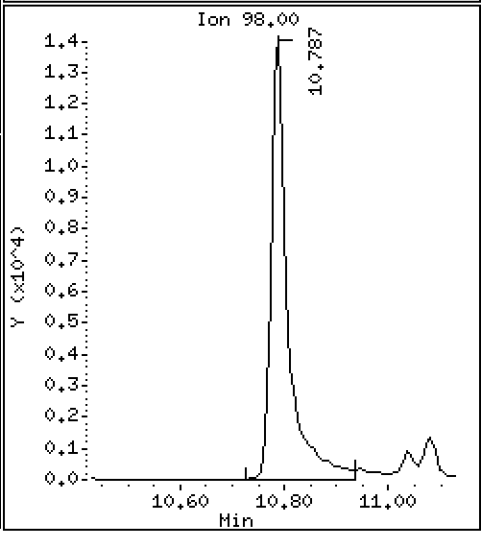


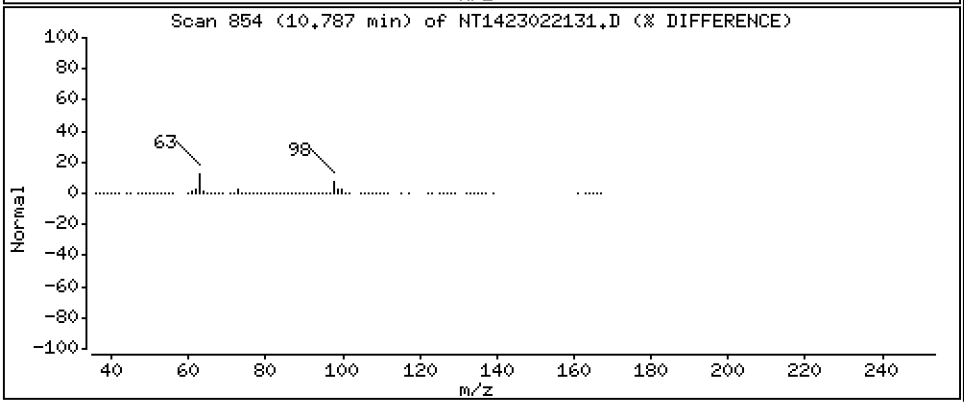












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

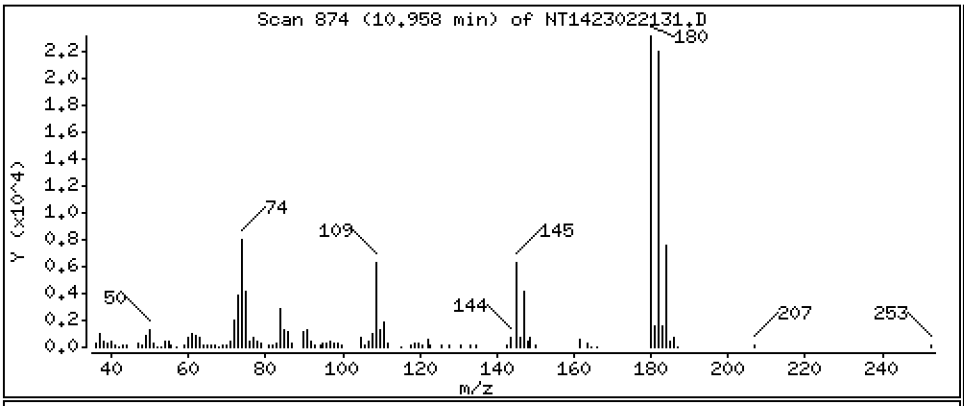
Operator: DSD

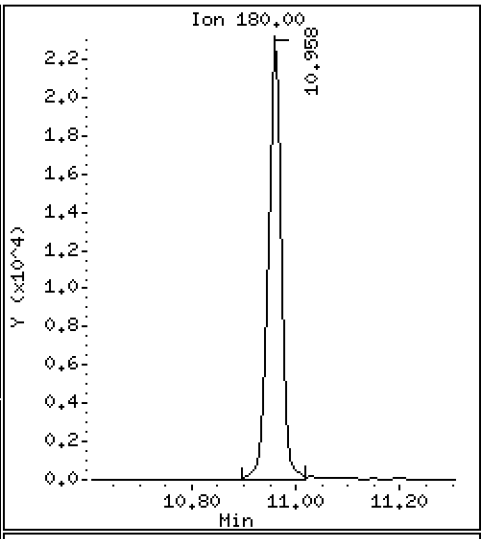
Column phase: ZB-5msi

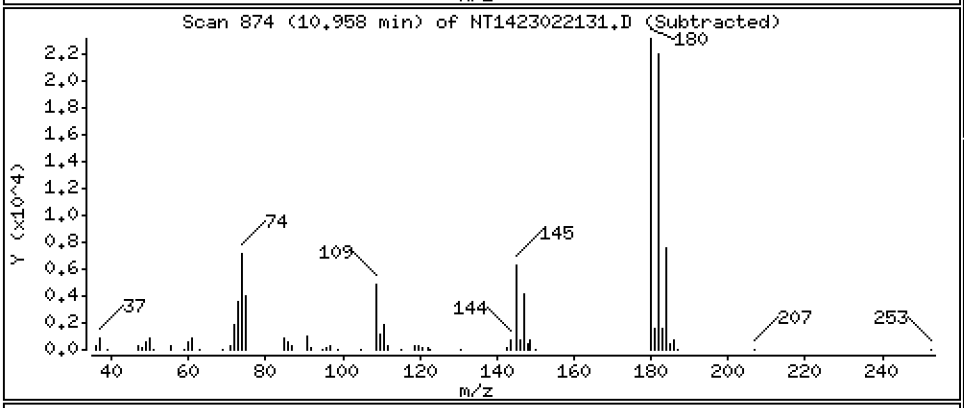
Column diameter: 0.25

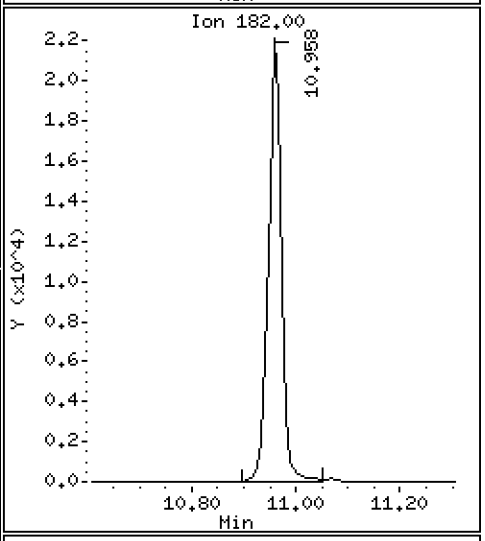
26 1,2,4-Trichlorobenzene

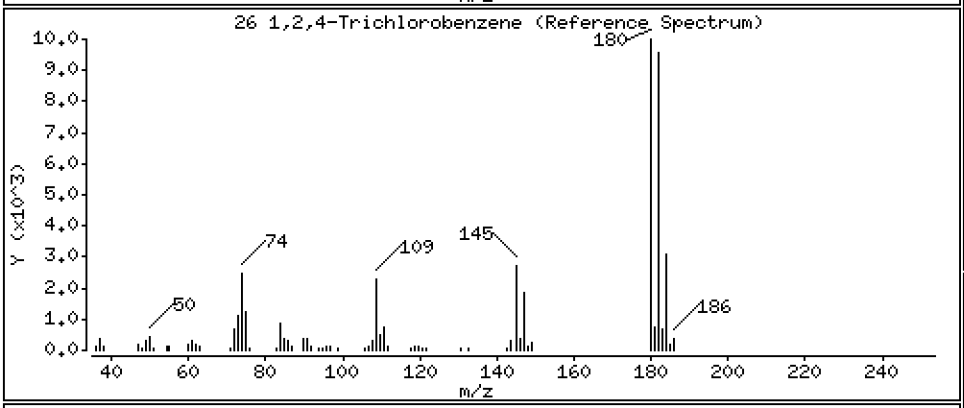
Concentration: 0.5821 ug/mL

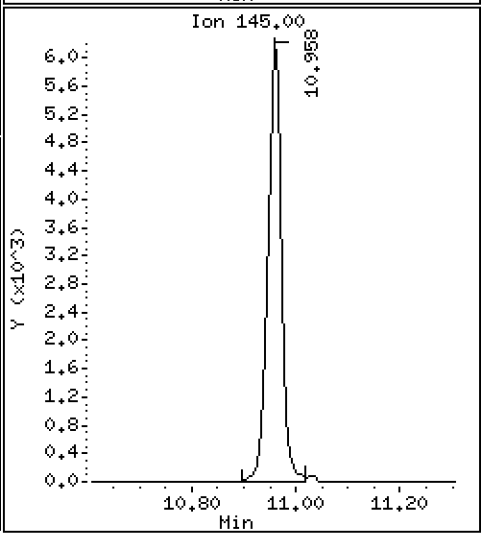


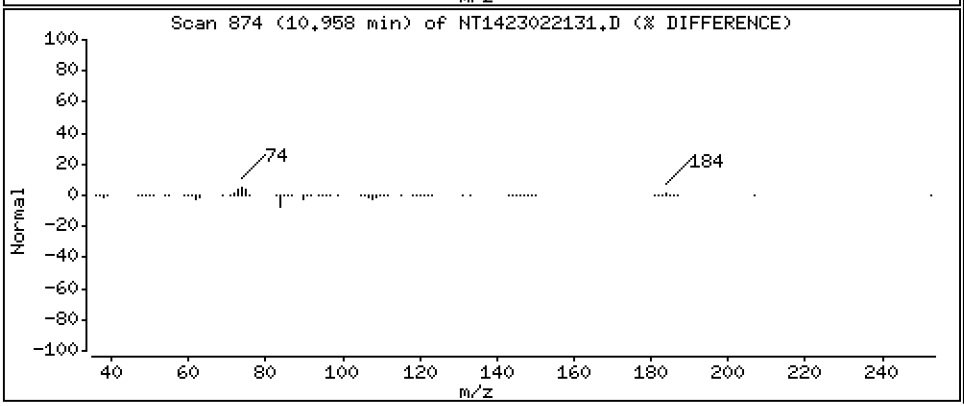












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

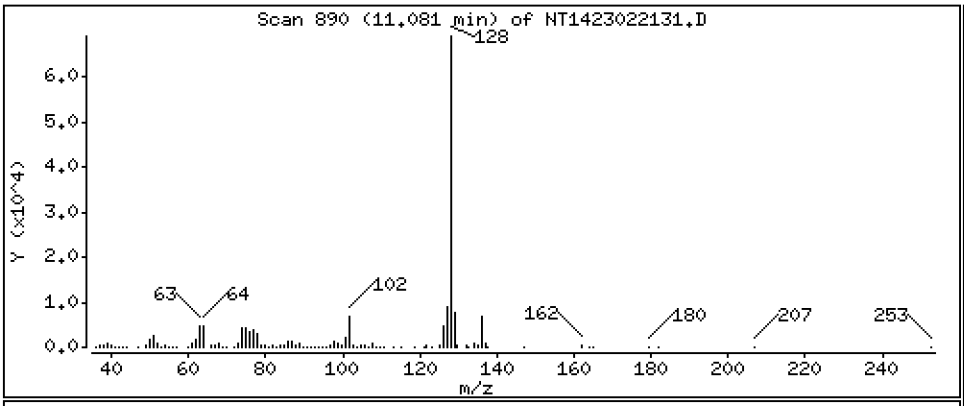
Operator: DSD

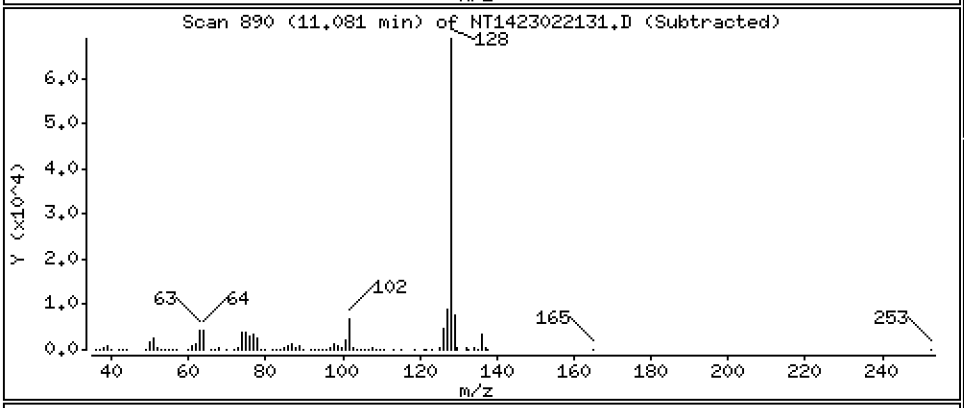
Column phase: ZB-5msi

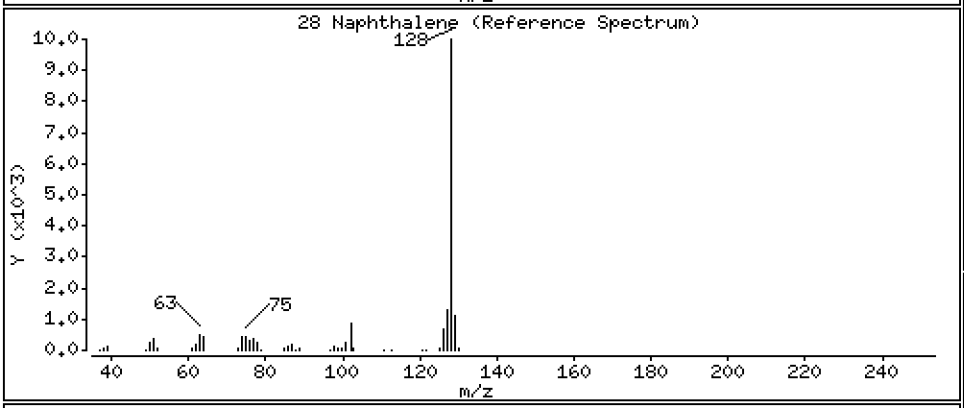
Column diameter: 0.25

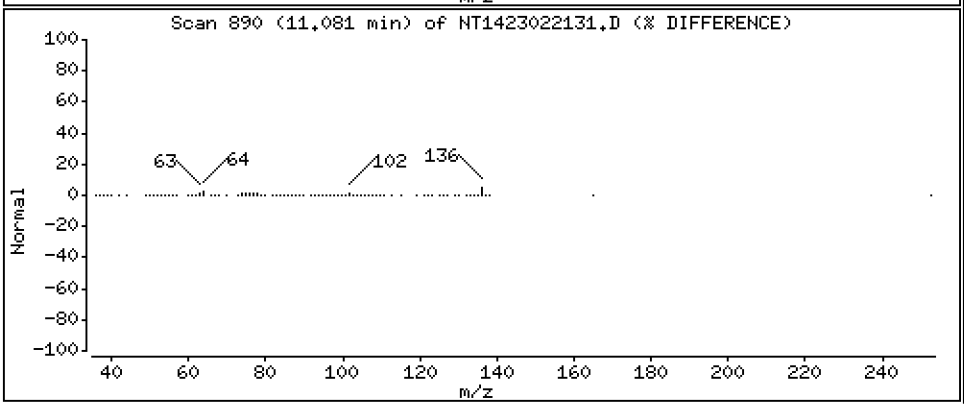
28 Naphthalene

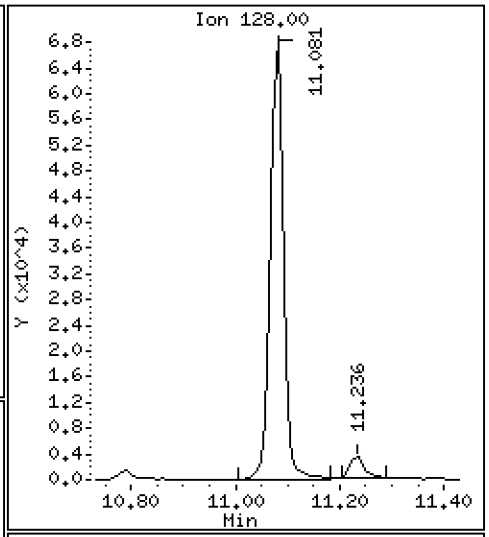
Concentration: 0.5344 ug/mL

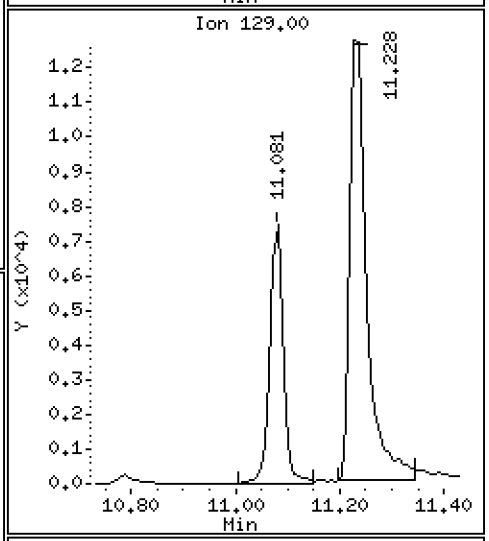


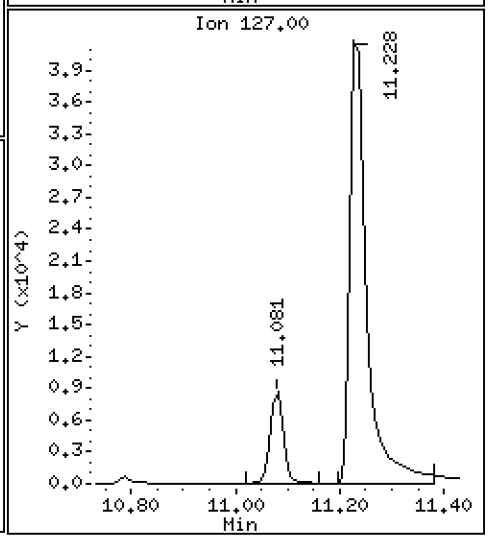












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

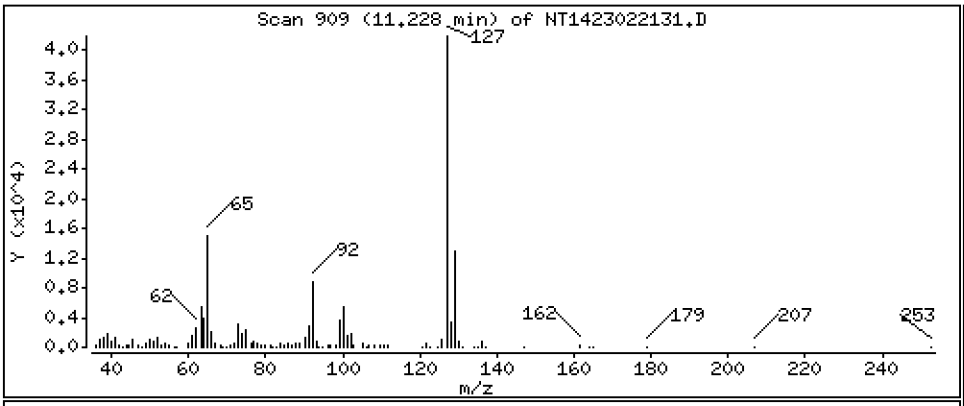
Operator: DSD

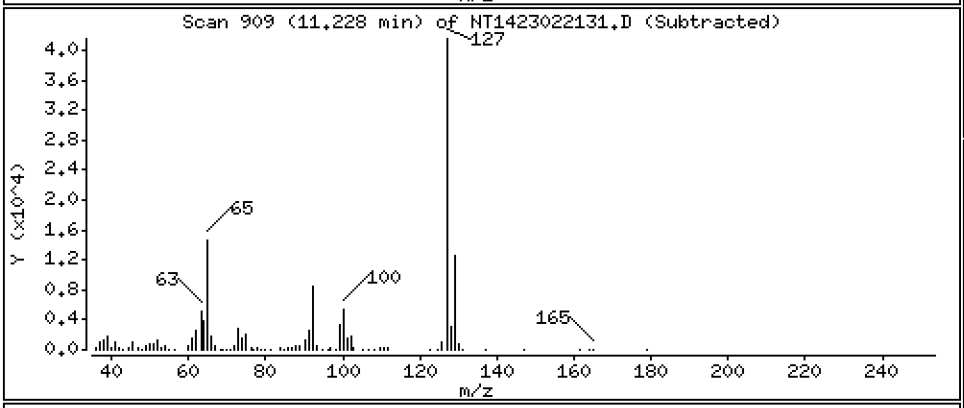
Column phase: ZB-5msi

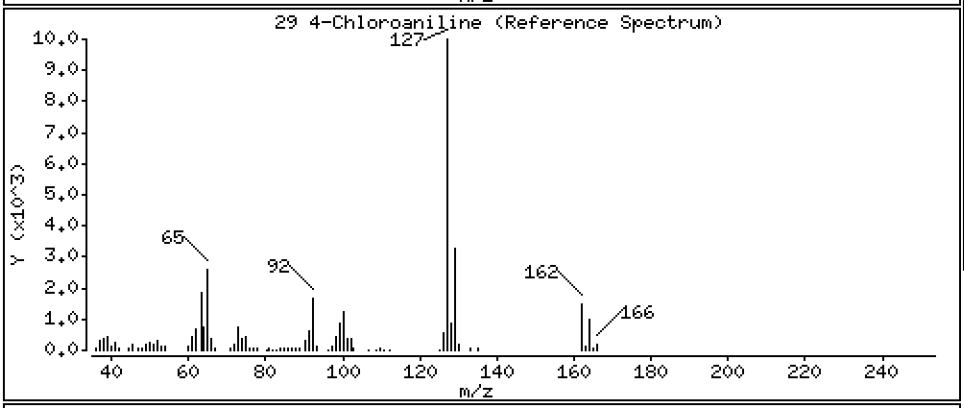
Column diameter: 0.25

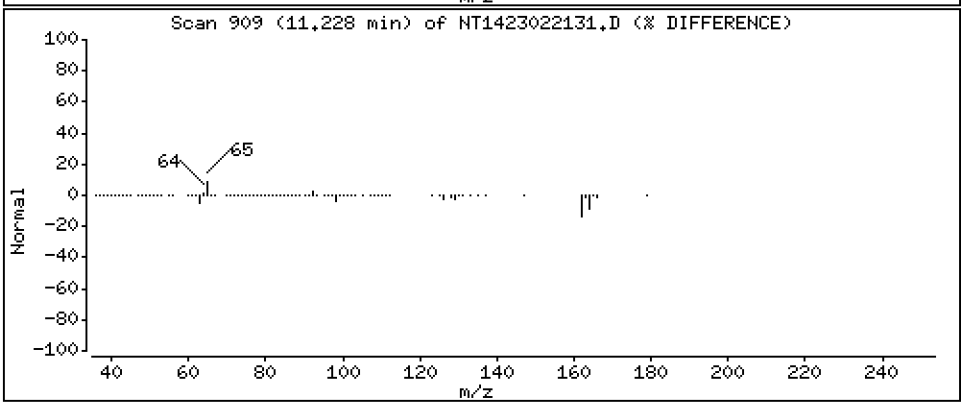
29 4-Chloroaniline

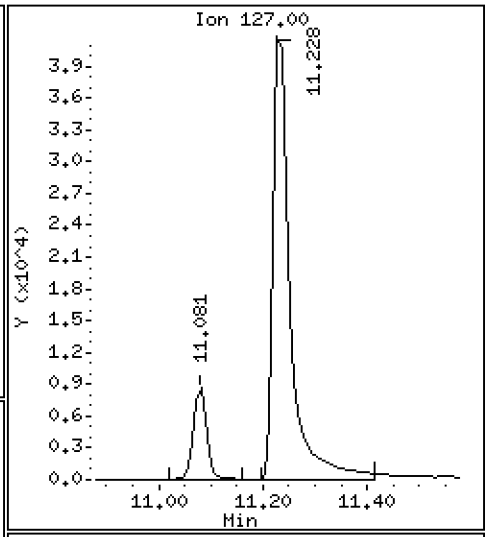
Concentration: 1.088 ug/mL

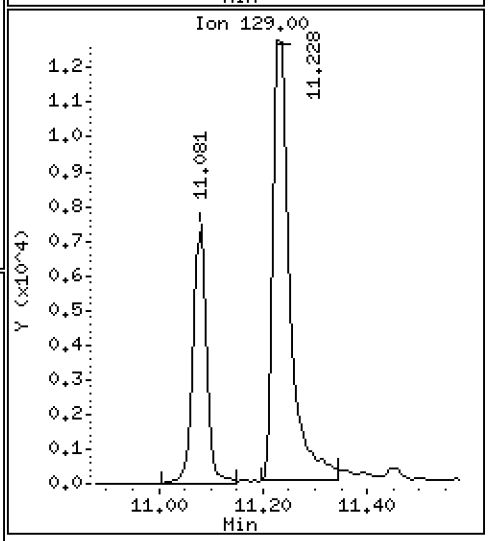












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

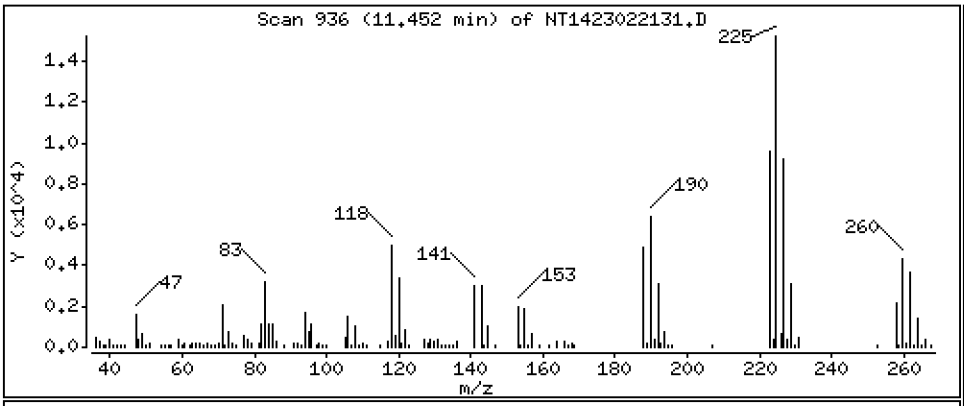
Operator: DSD

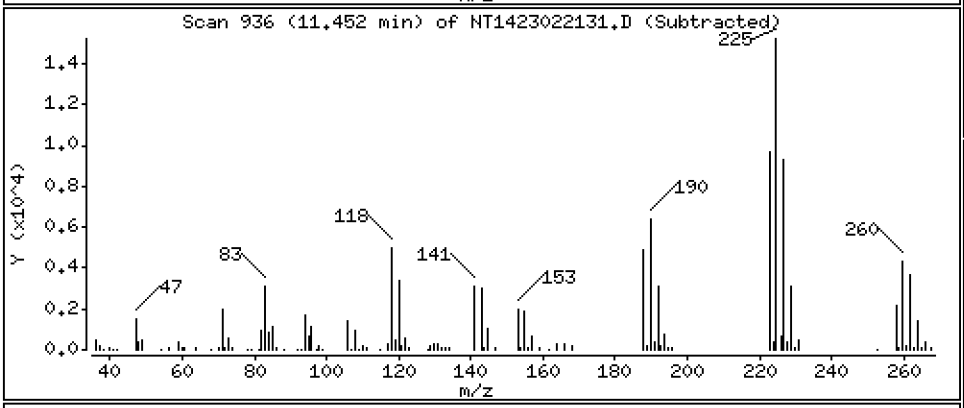
Column phase: ZB-5msi

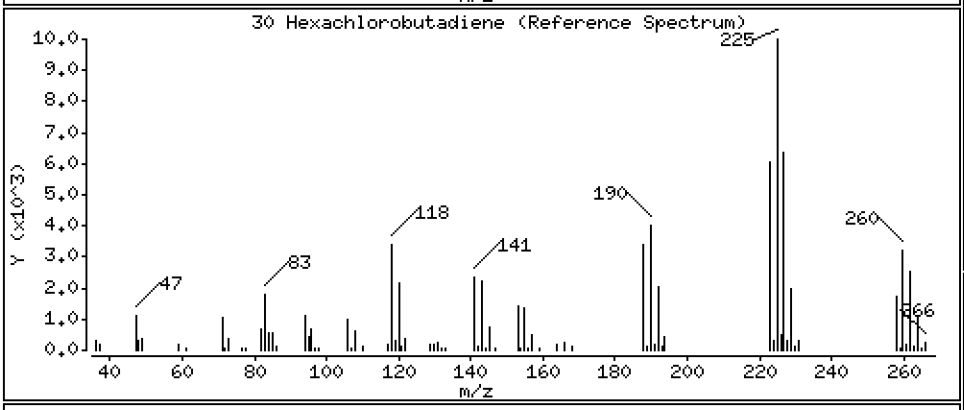
Column diameter: 0.25

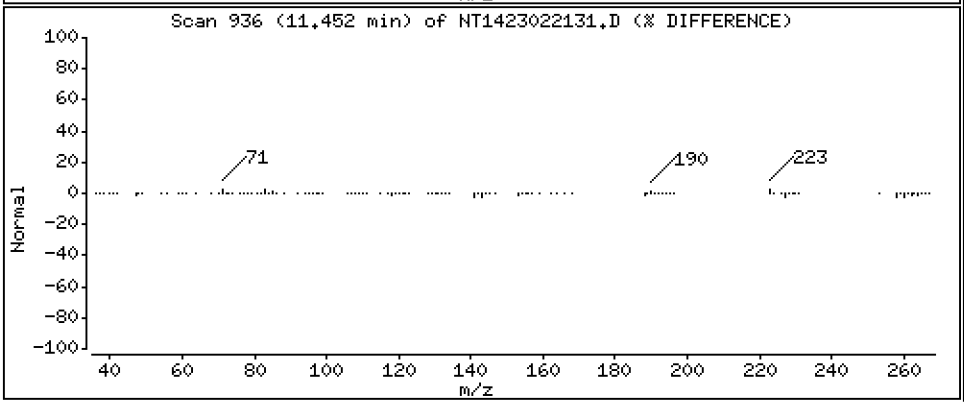
30 Hexachlorobutadiene

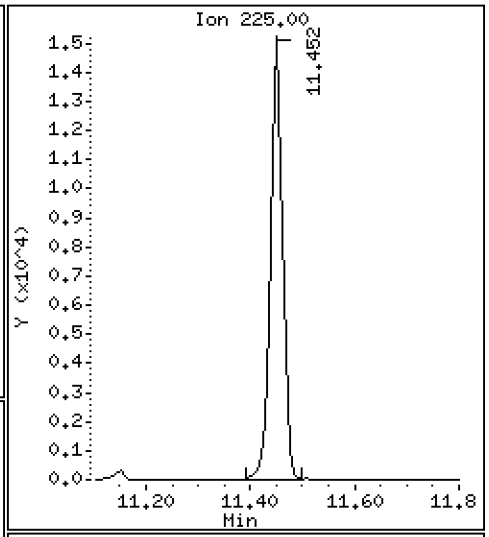
Concentration: 0.5814 ug/mL

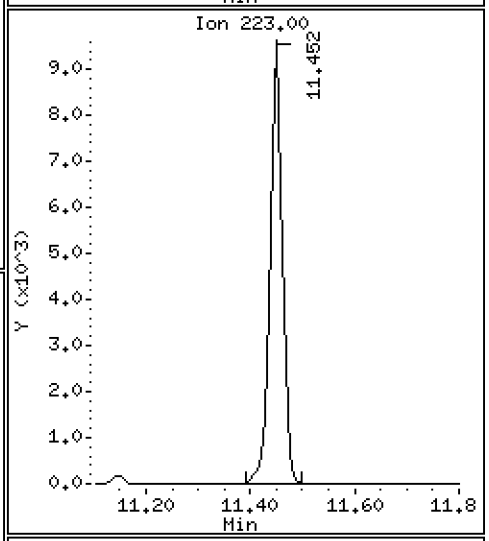


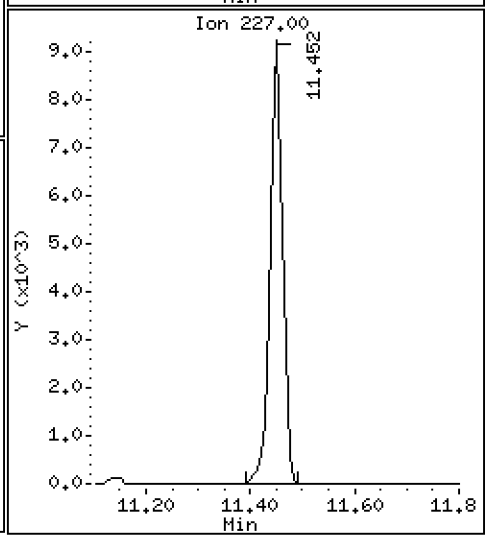












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

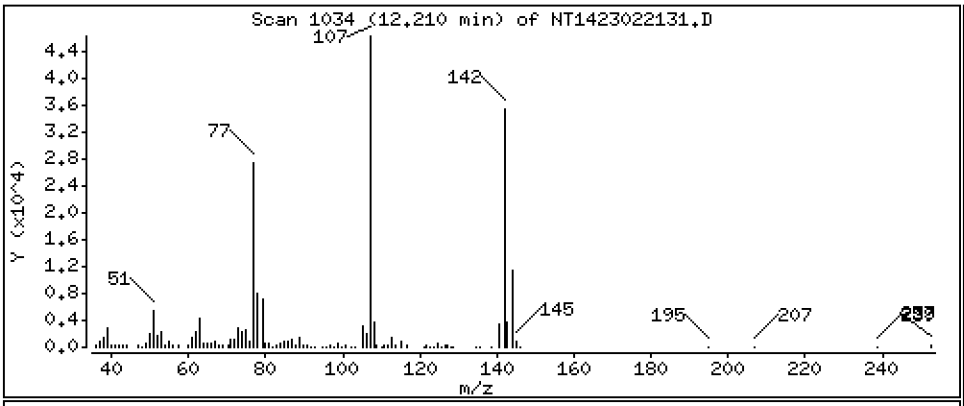
Operator: DSD

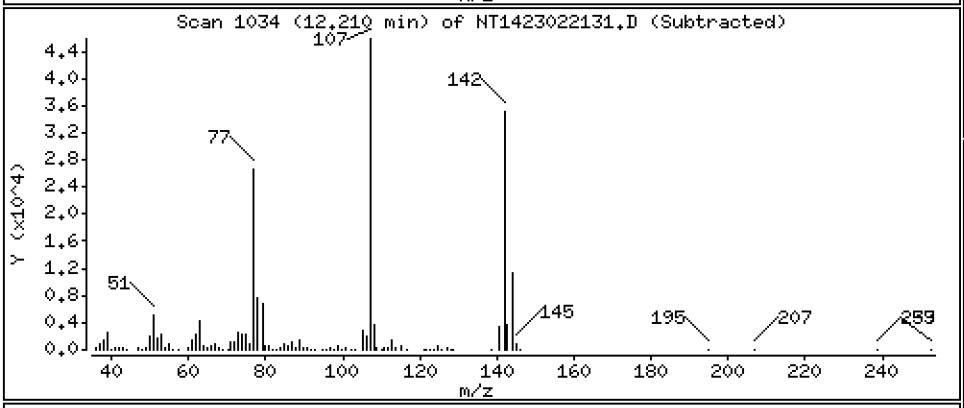
Column phase: ZB-5msi

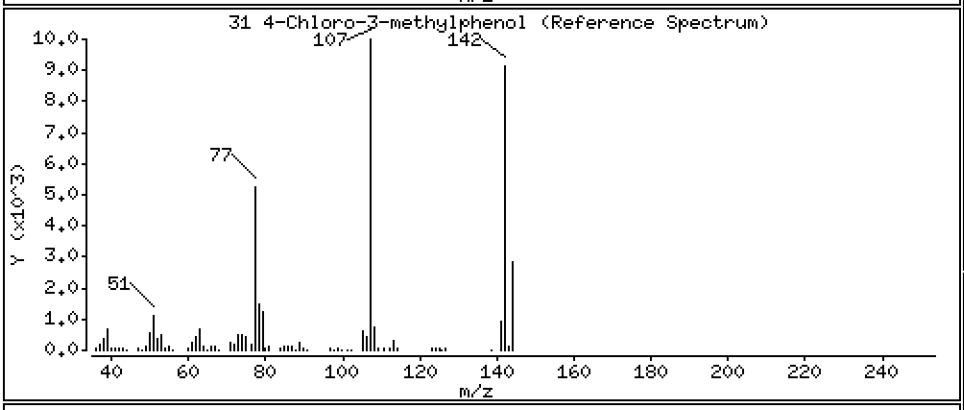
Column diameter: 0.25

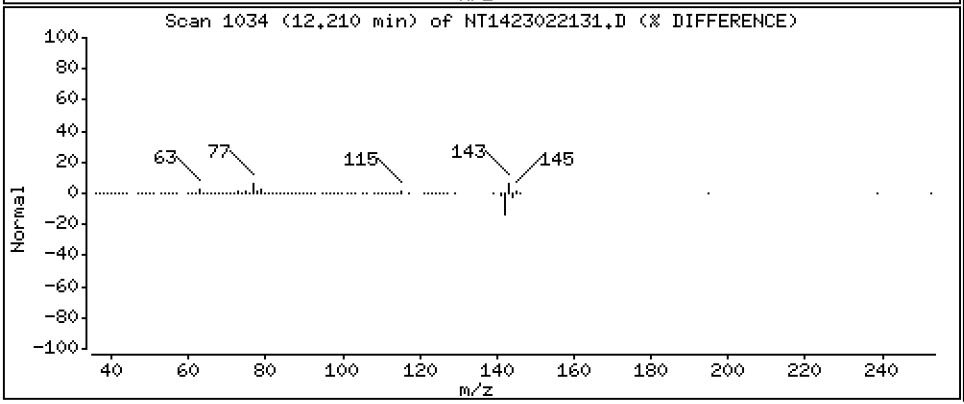
31 4-Chloro-3-methylphenol

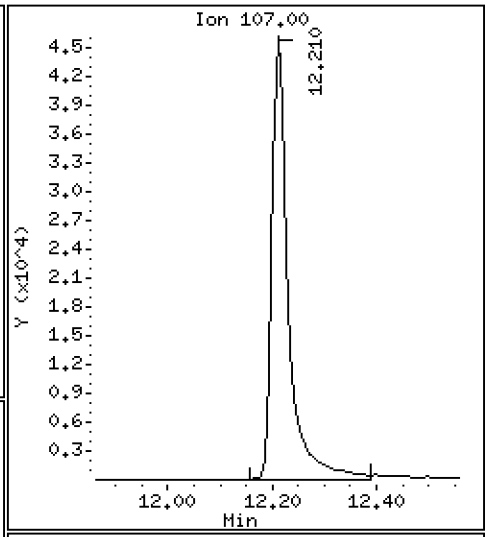
Concentration: 1.412 ug/mL

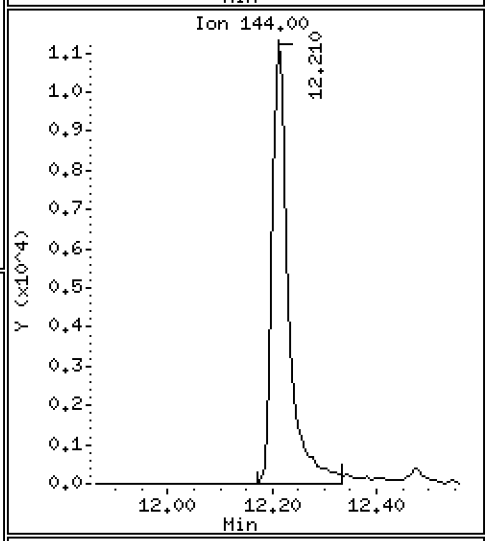


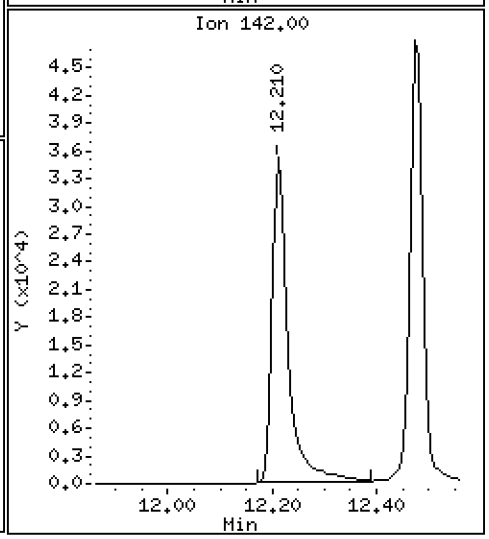












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022131.D

Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

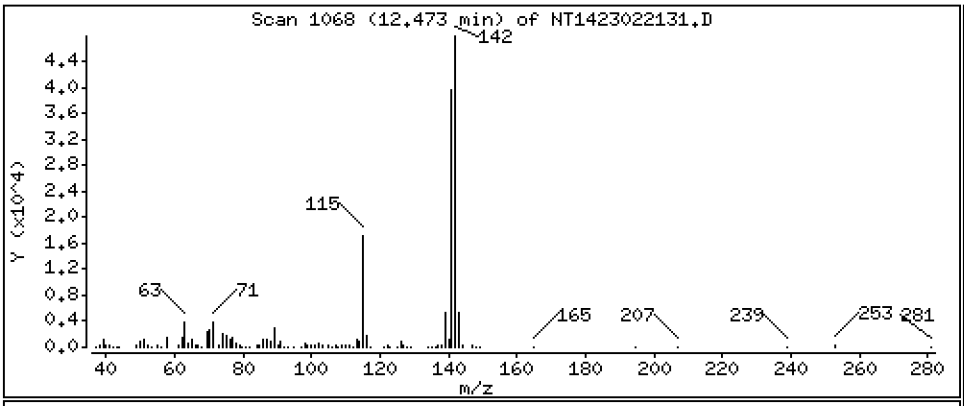
Operator: DSD

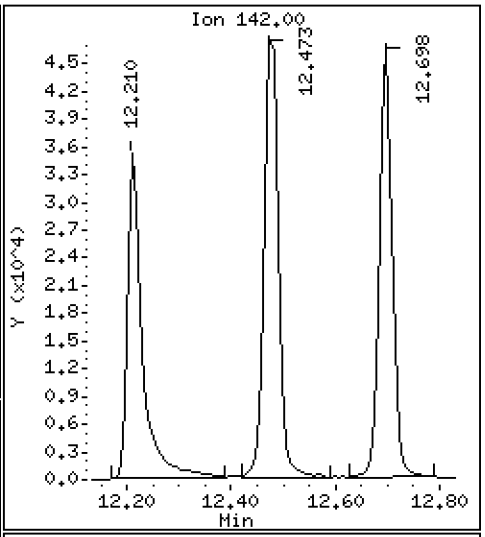
Column phase: ZB-5msi

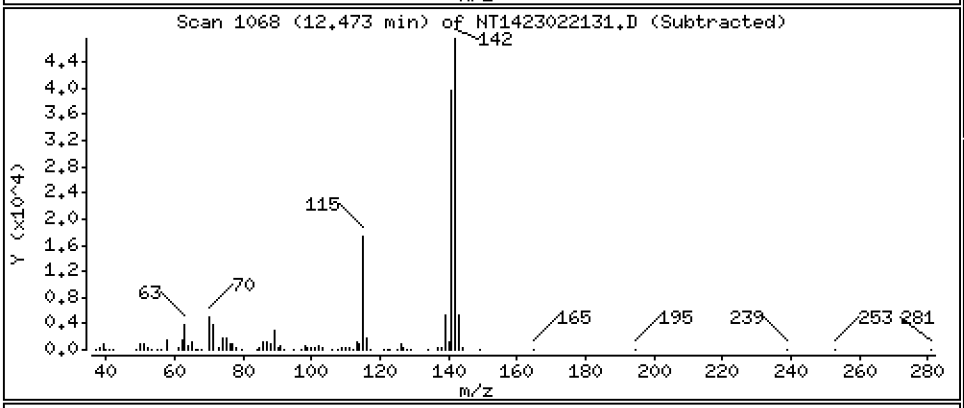
Column diameter: 0.25

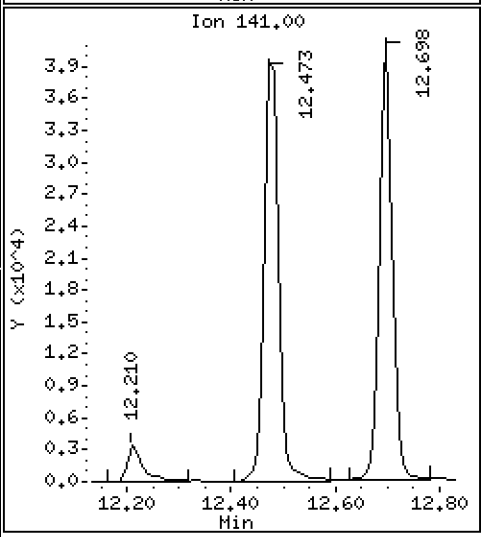
32 2-Methylnaphthalene

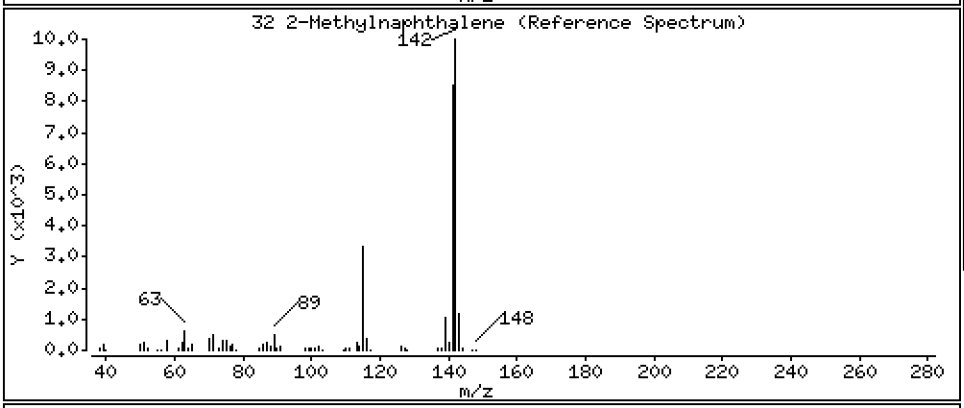
Concentration: 0.5480 ug/mL

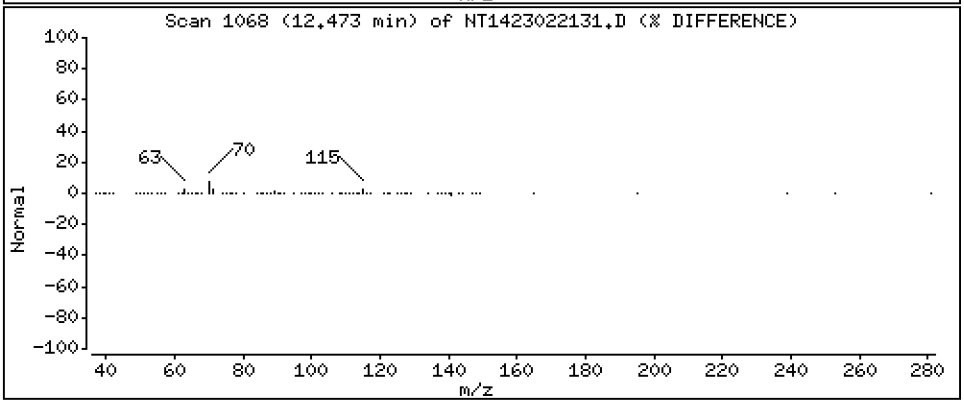












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

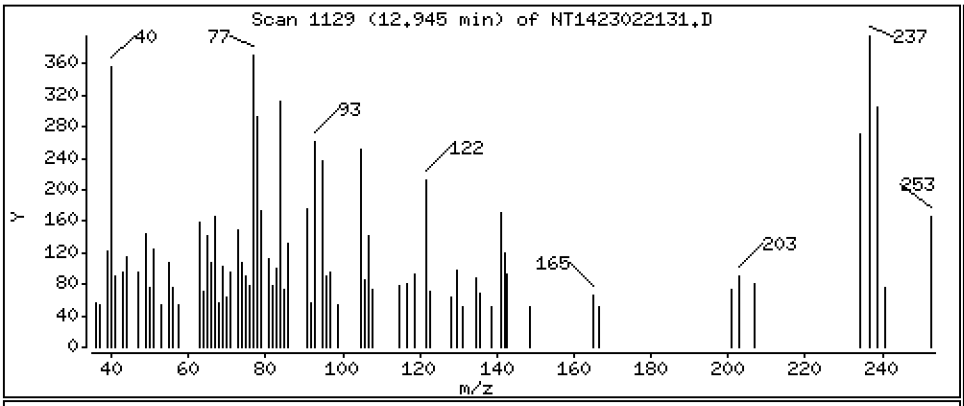
Operator: DSD

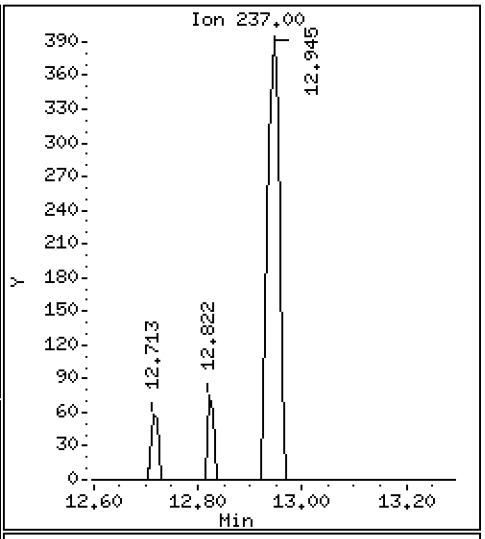
Column phase: ZB-5msi

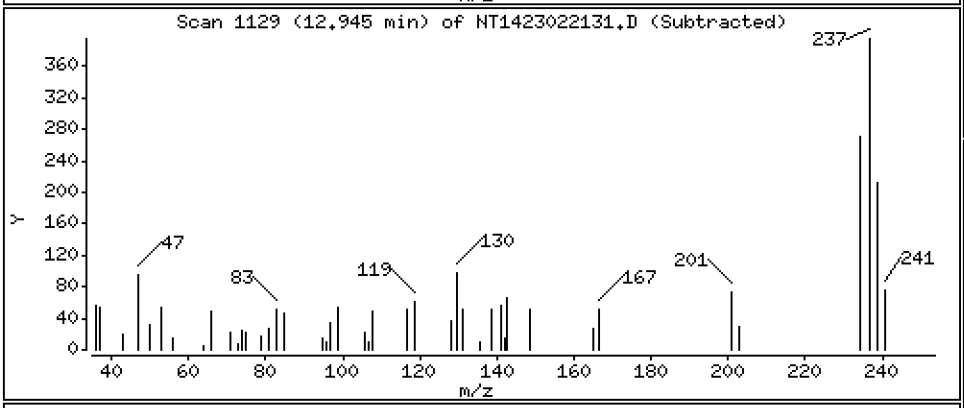
Column diameter: 0.25

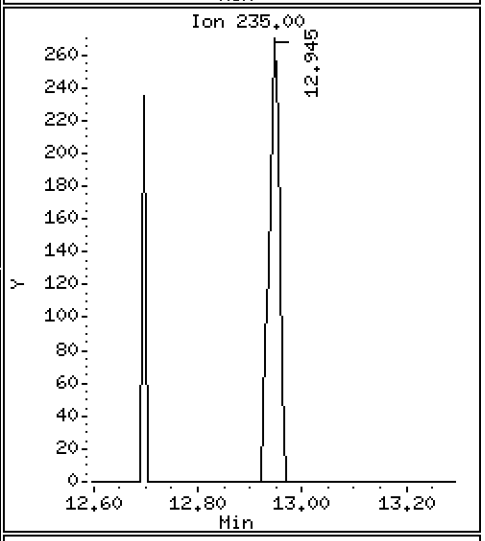
33 Hexachlorocyclopentadiene

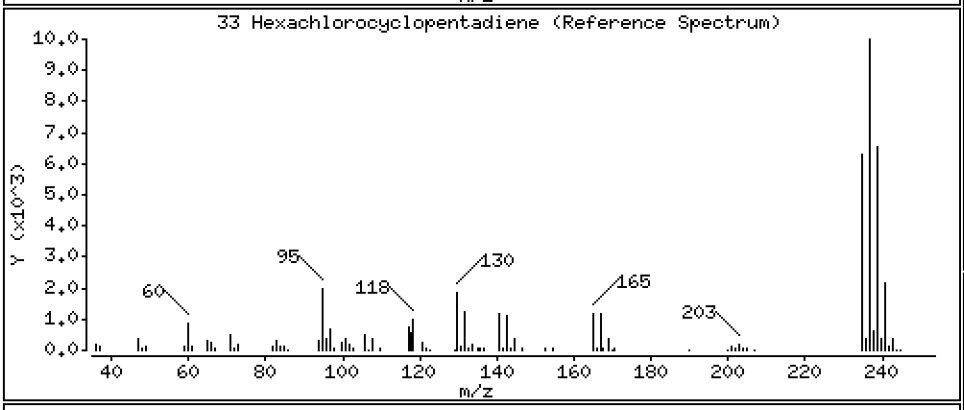
Concentration: 0.01179 ug/mL

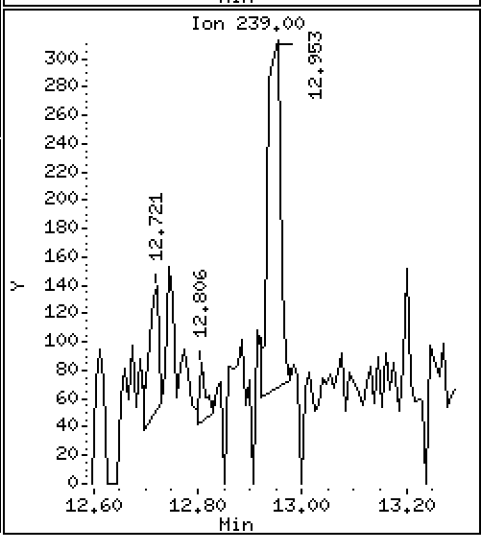


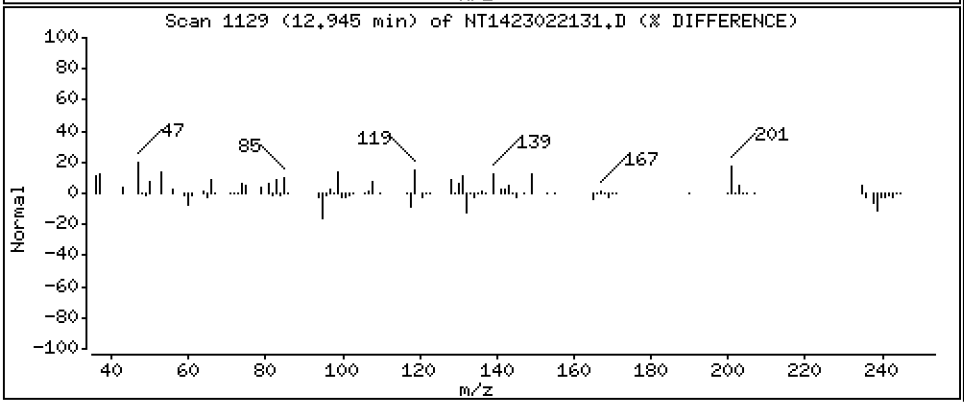












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

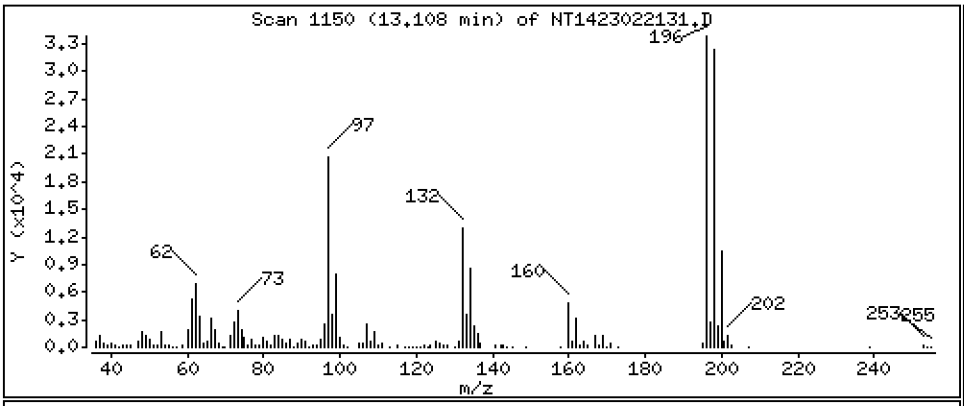
Operator: DSD

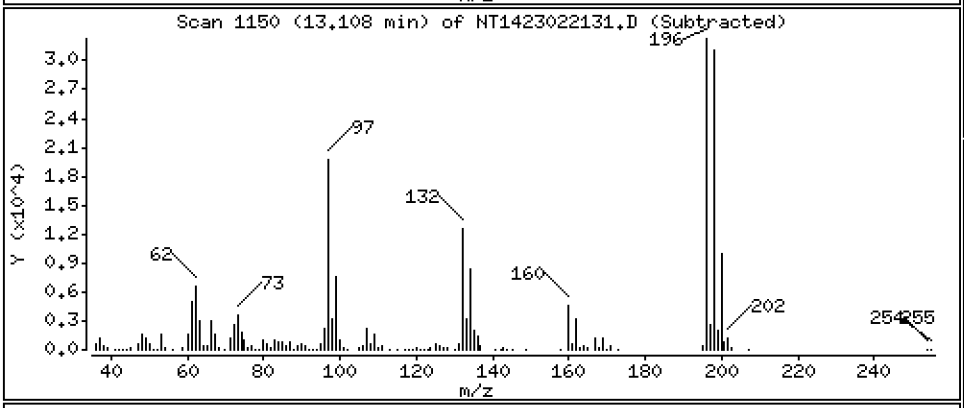
Column phase: ZB-5msi

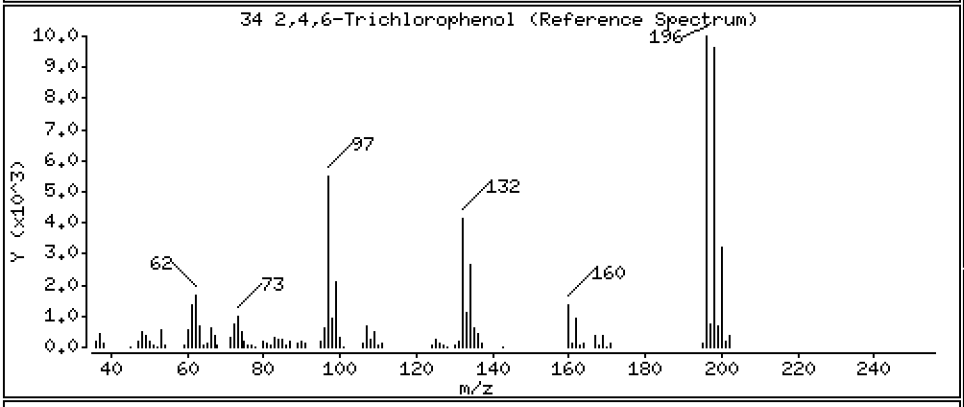
Column diameter: 0.25

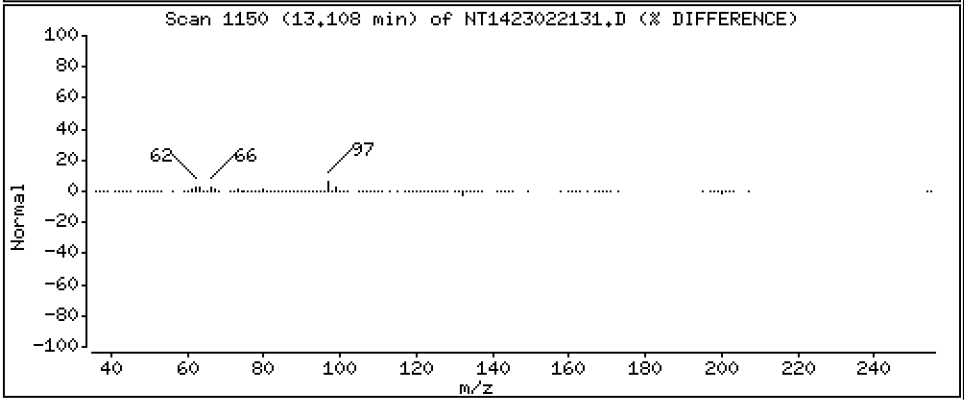
34 2,4,6-Trichlorophenol

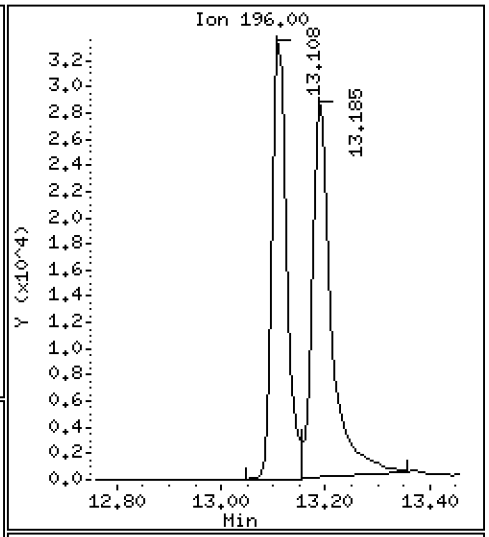
Concentration: 1.259 ug/mL

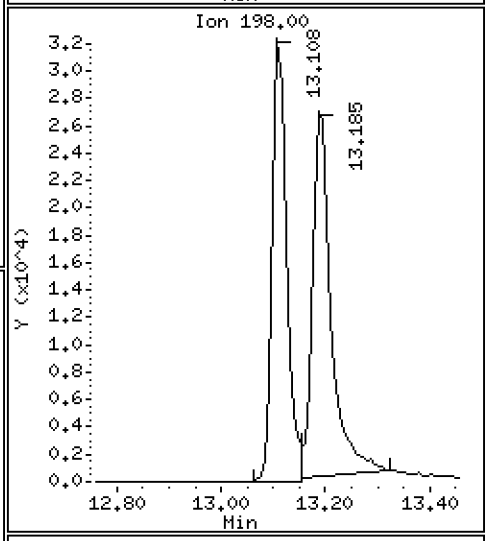


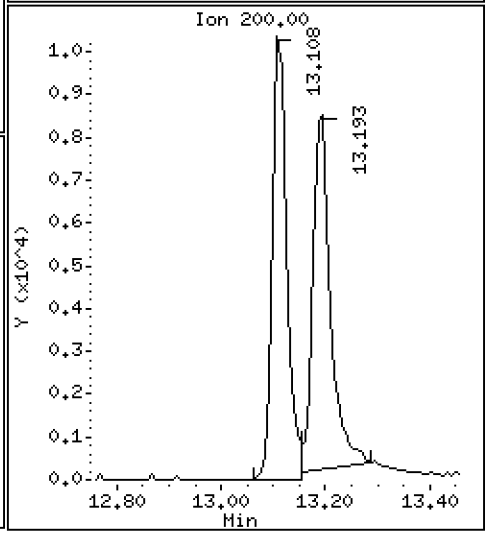












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

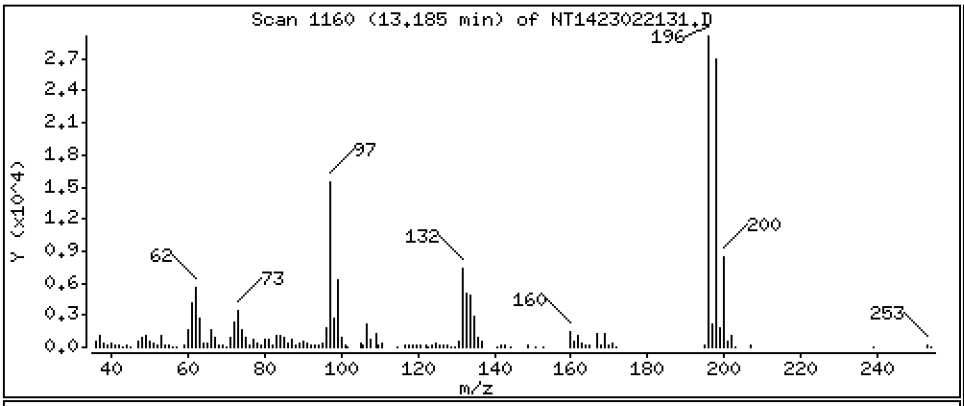
Operator: DSD

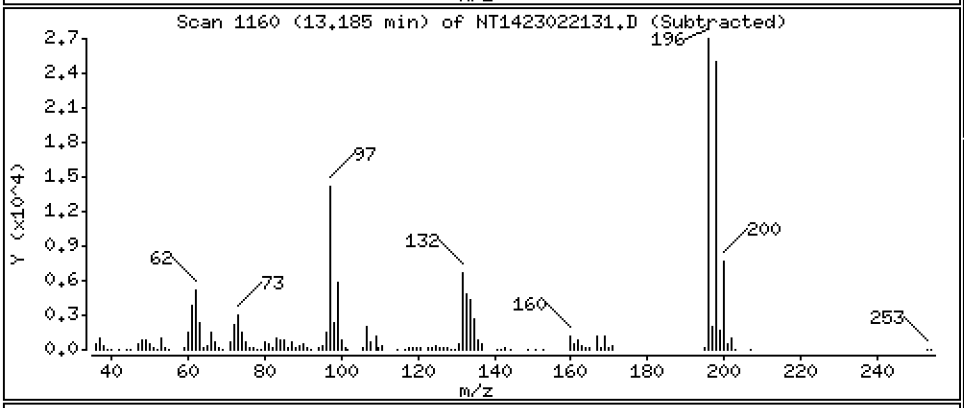
Column phase: ZB-5msi

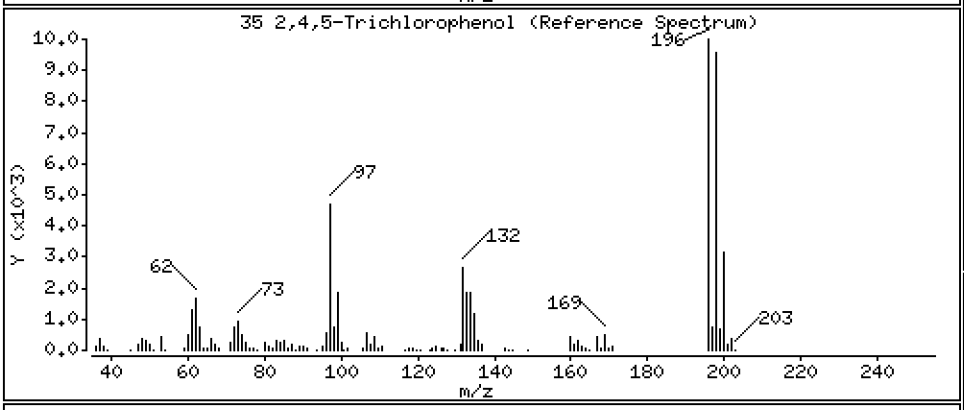
Column diameter: 0.25

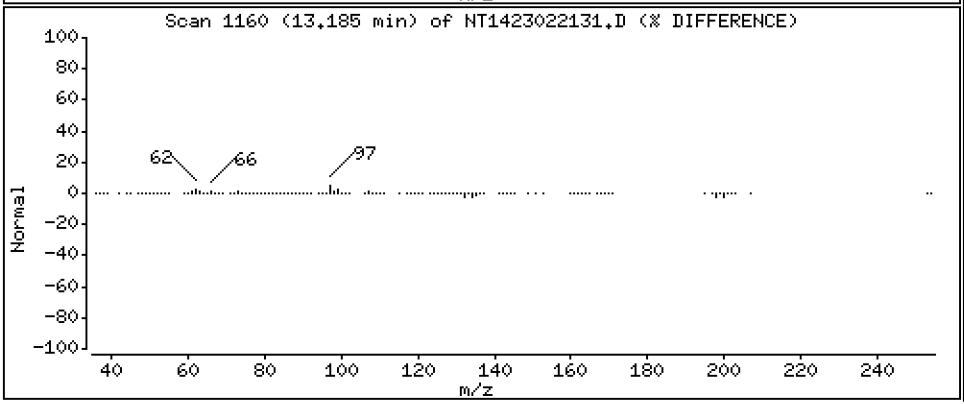
35 2,4,5-Trichlorophenol

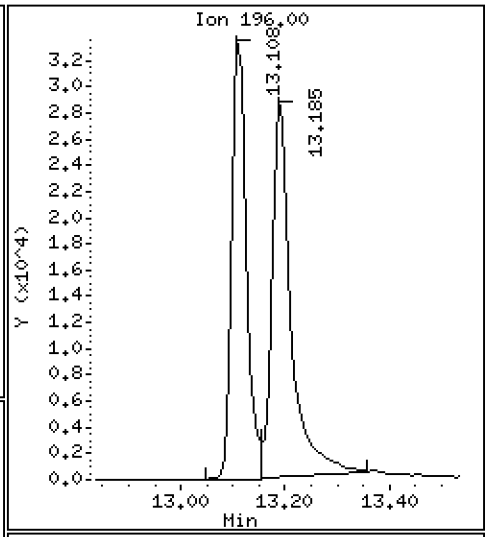
Concentration: 1.301 ug/mL

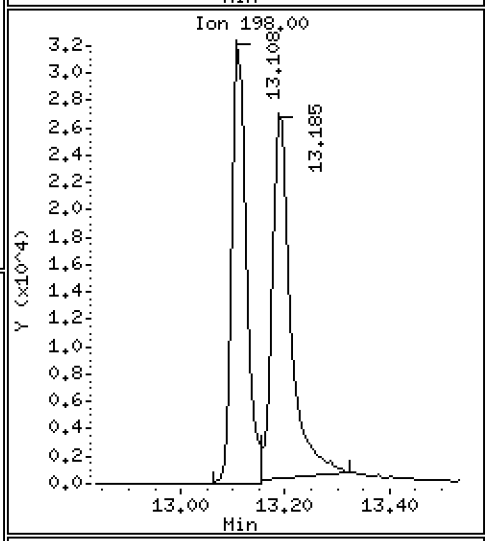


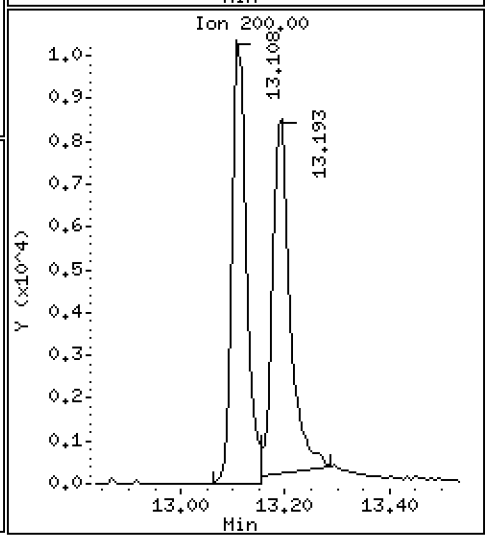












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

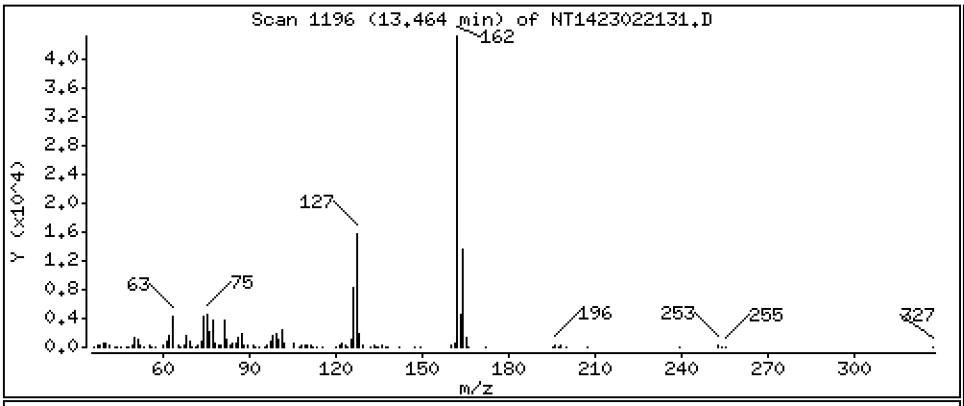
Operator: DSD

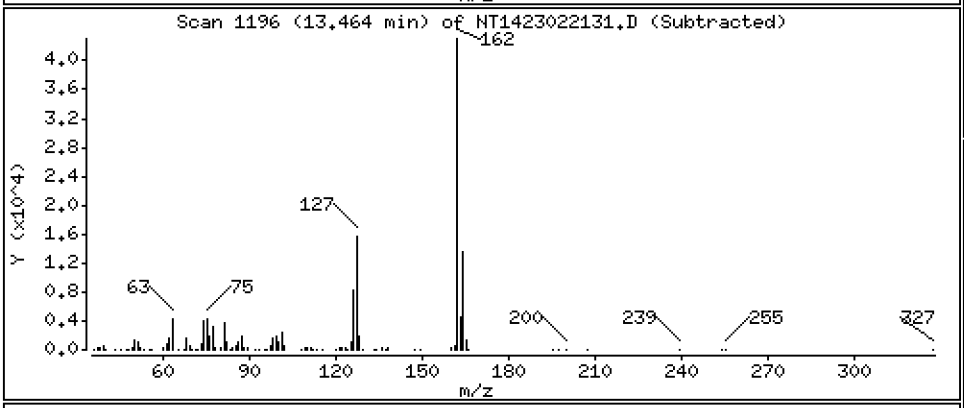
Column phase: ZB-5msi

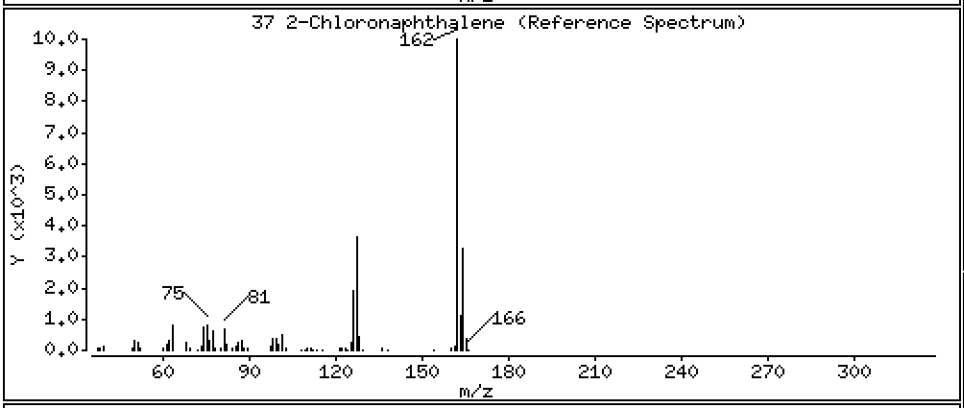
Column diameter: 0.25

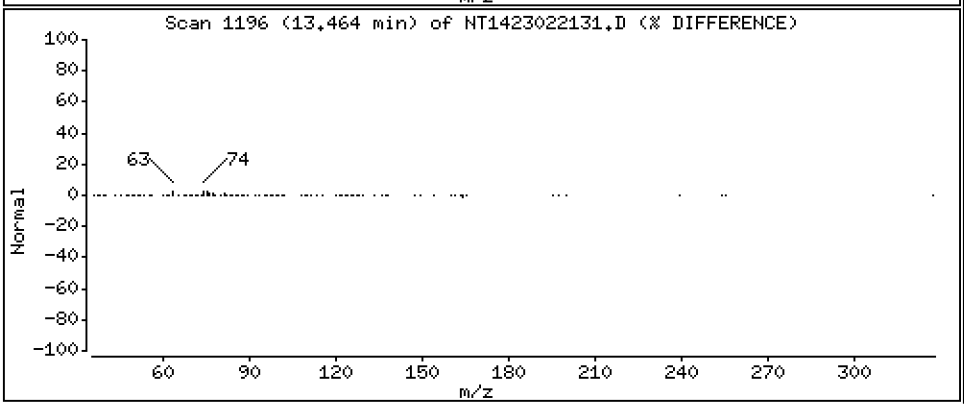
37 2-Chloronaphthalene

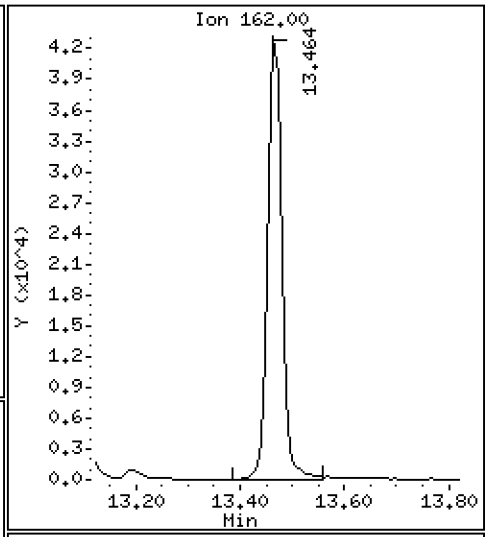
Concentration: 0.5255 ug/mL

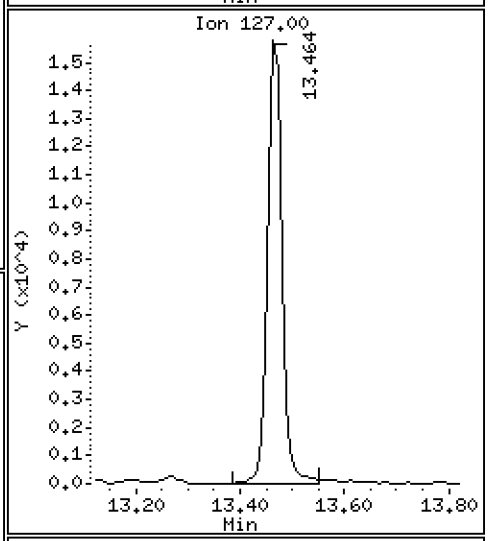


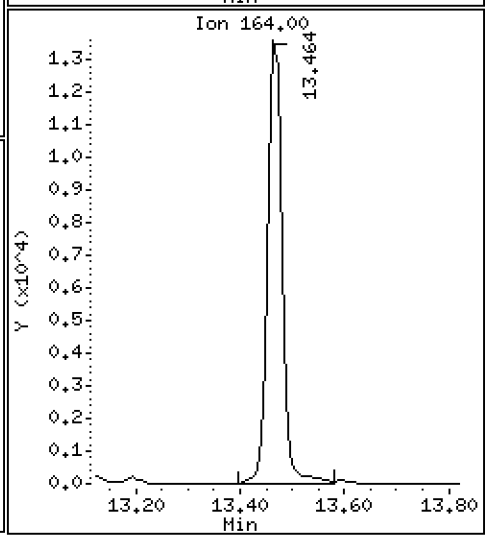












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

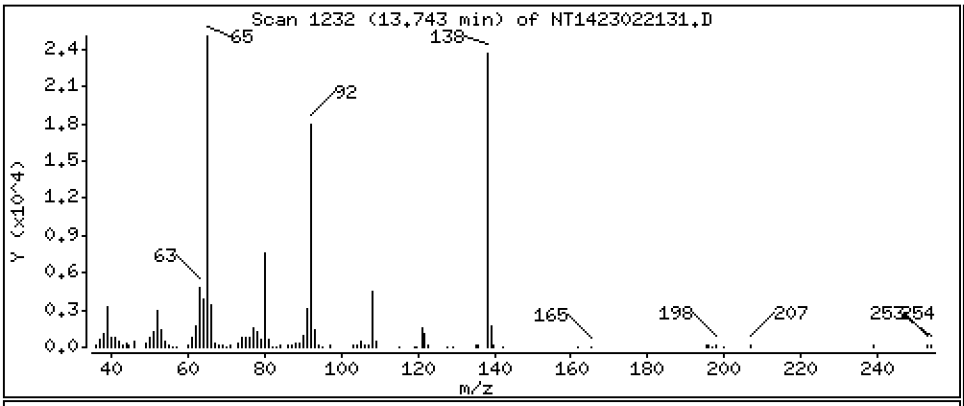
Operator: DSD

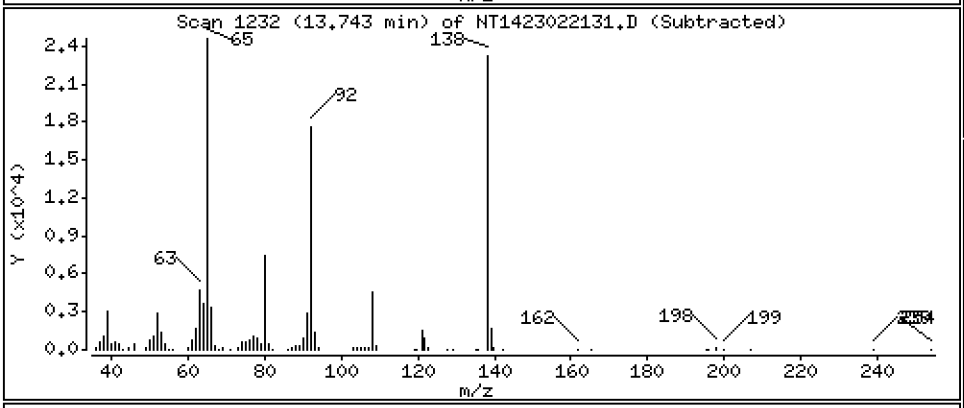
Column phase: ZB-5msi

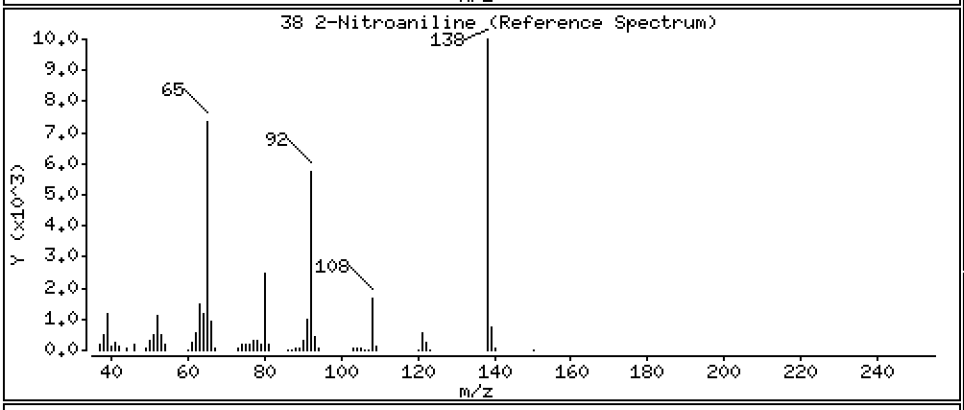
Column diameter: 0.25

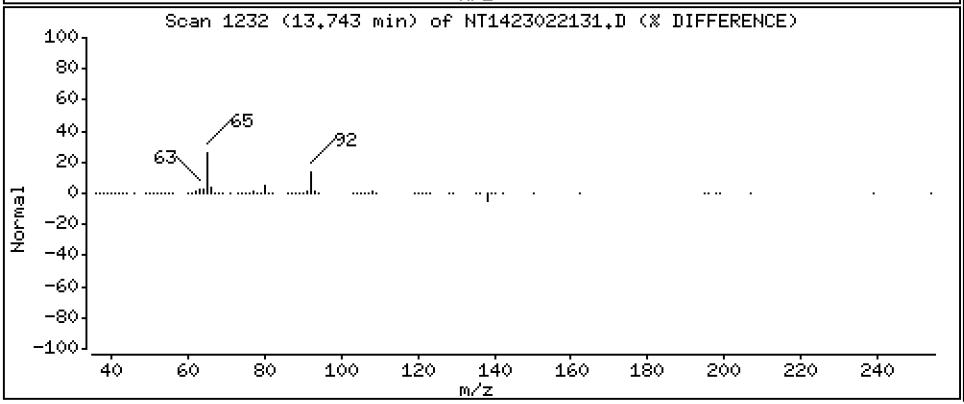
38 2-Nitroaniline

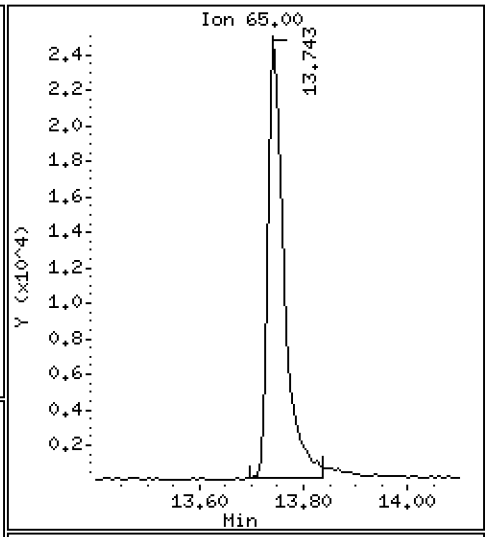
Concentration: 1.089 ug/mL

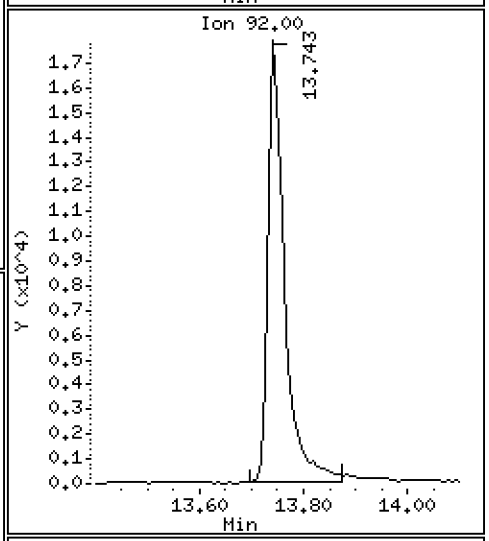


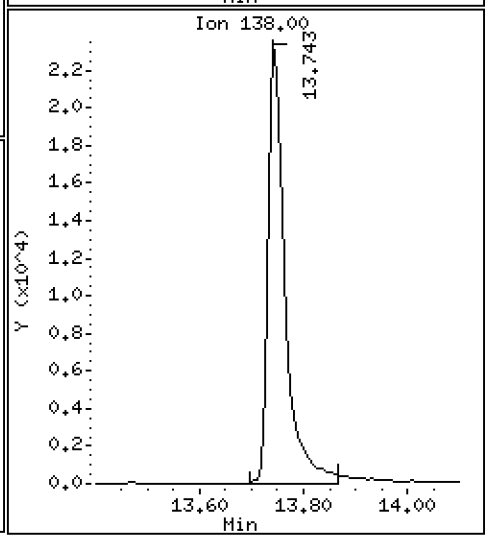












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

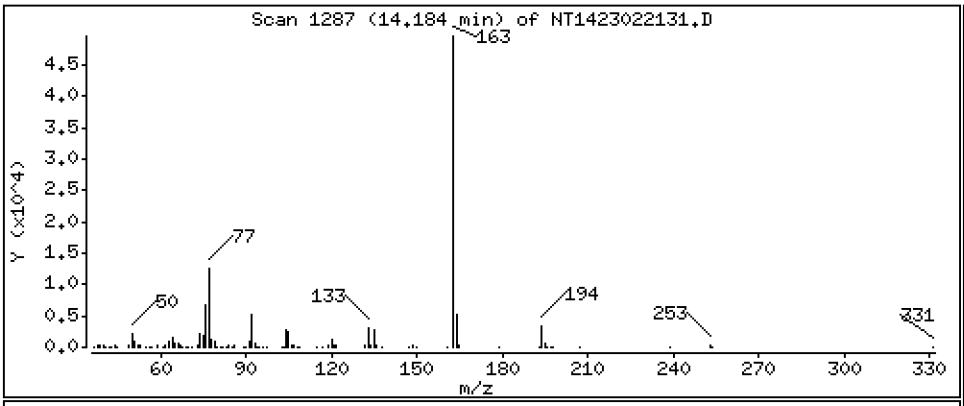
Operator: DSD

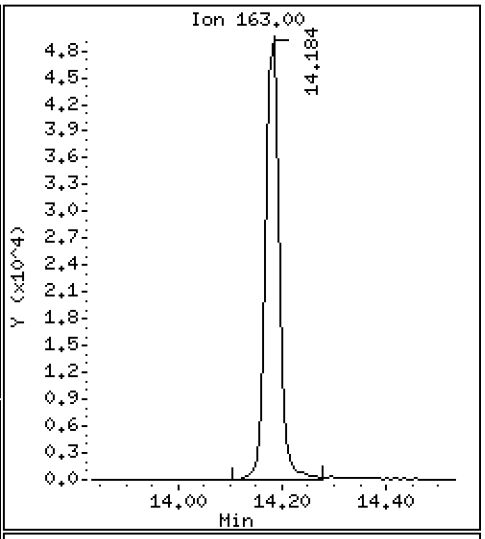
Column phase: ZB-5msi

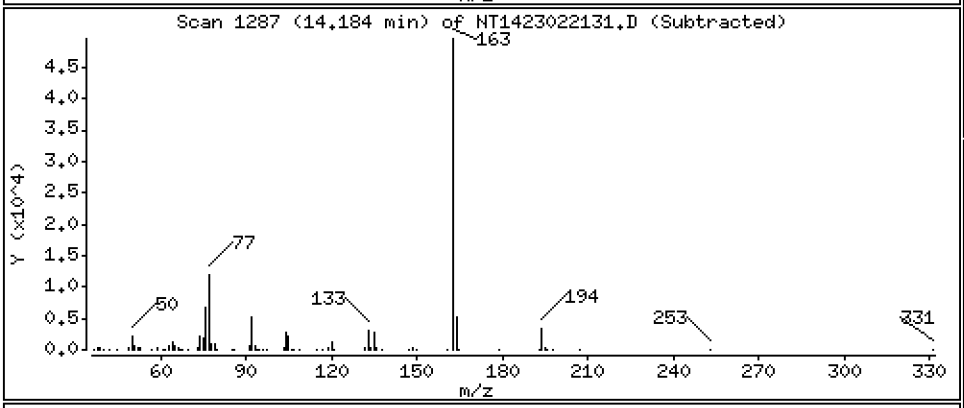
Column diameter: 0.25

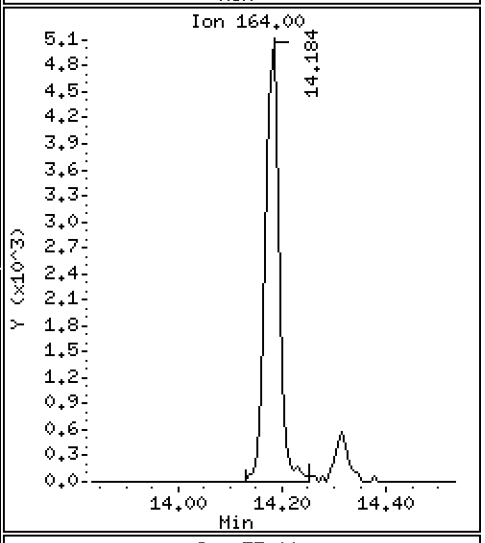
39 Dimethylphthalate

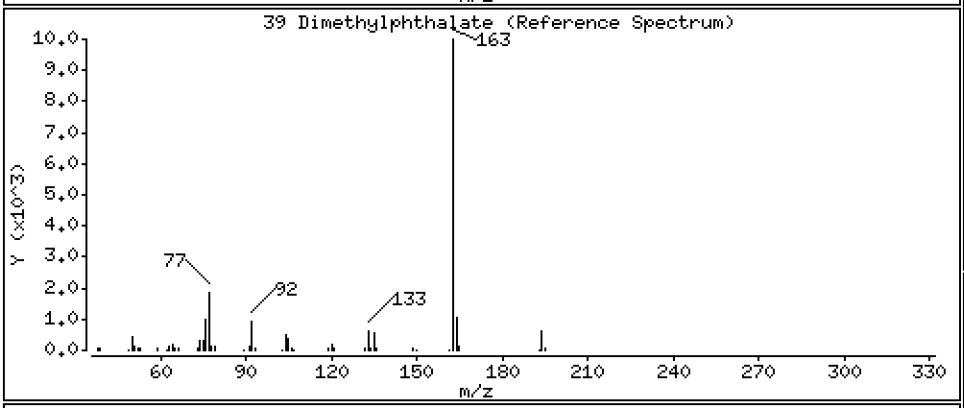
Concentration: 0.5578 ug/mL

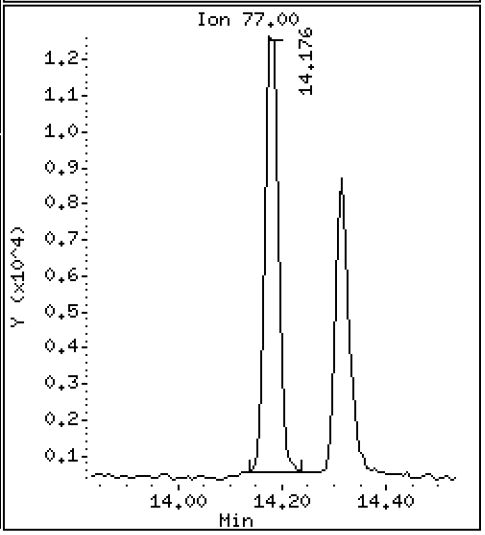


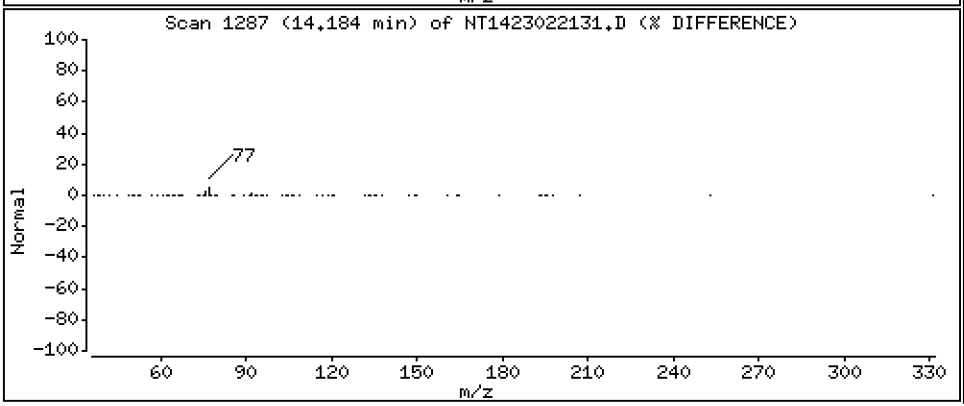












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

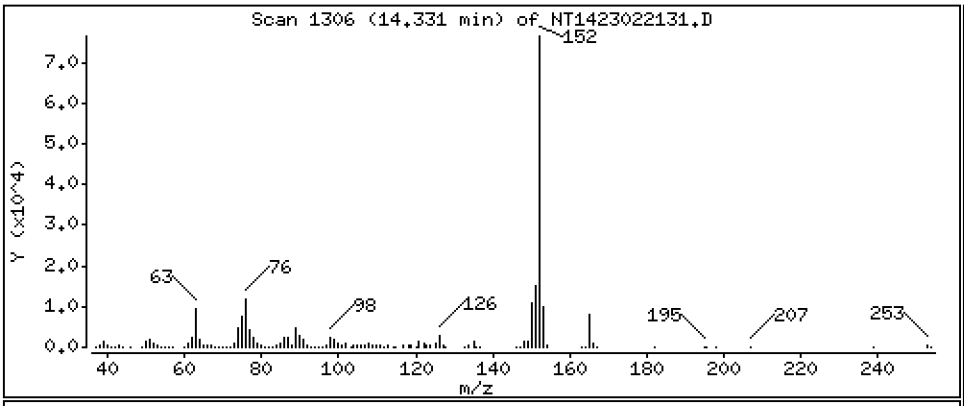
Operator: DSD

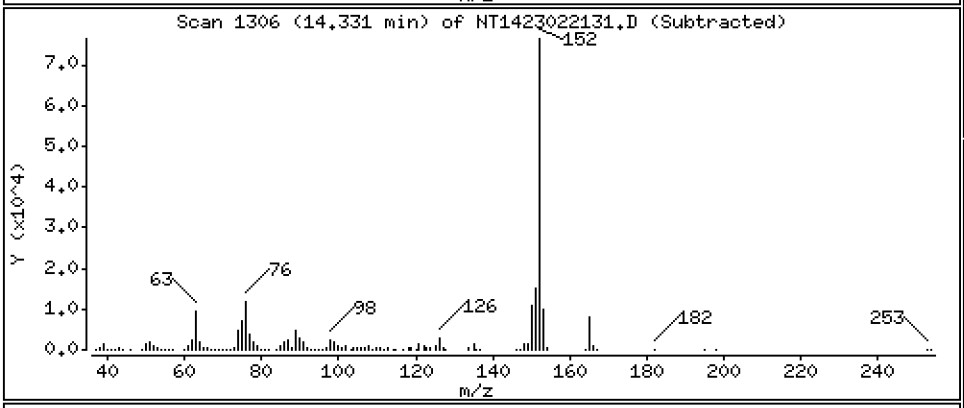
Column phase: ZB-5msi

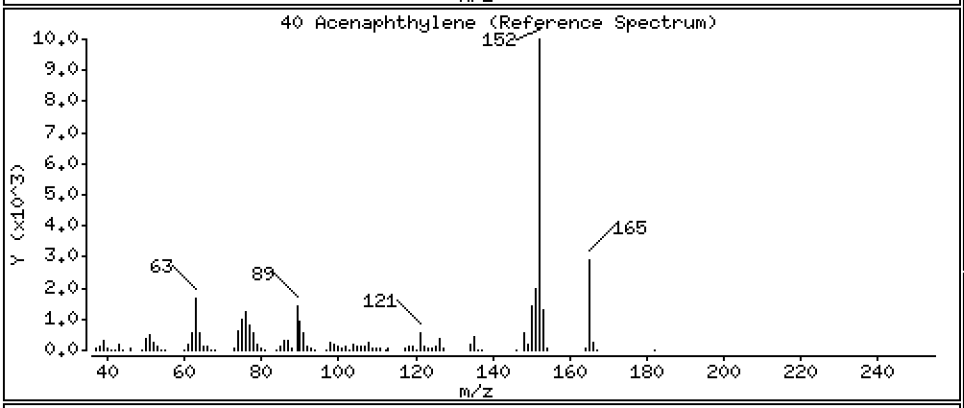
Column diameter: 0.25

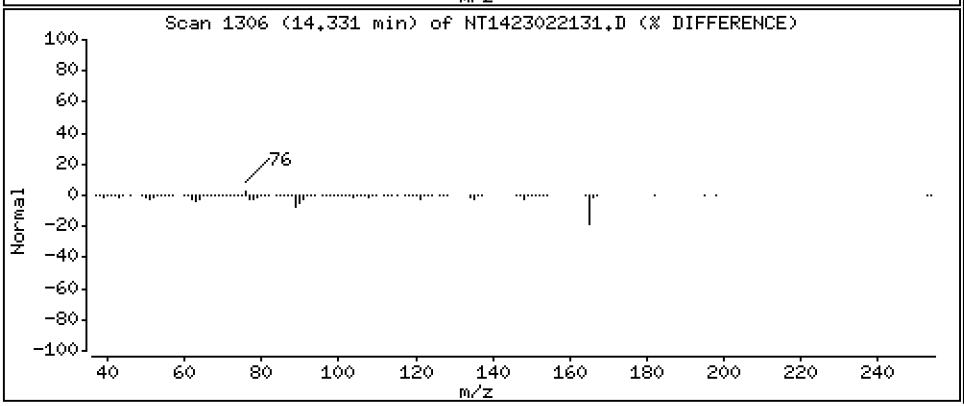
40 Acenaphthylene

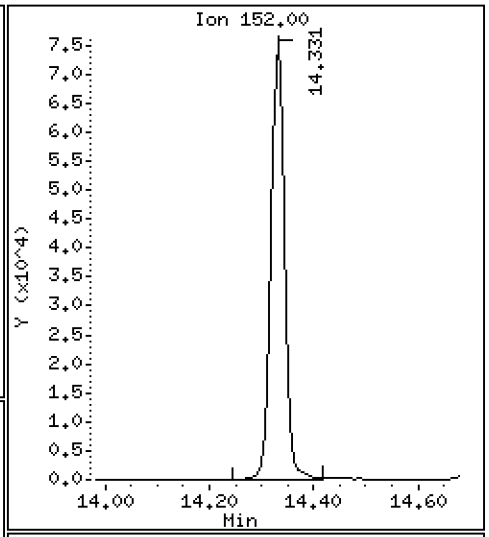
Concentration: 0.5758 ug/mL

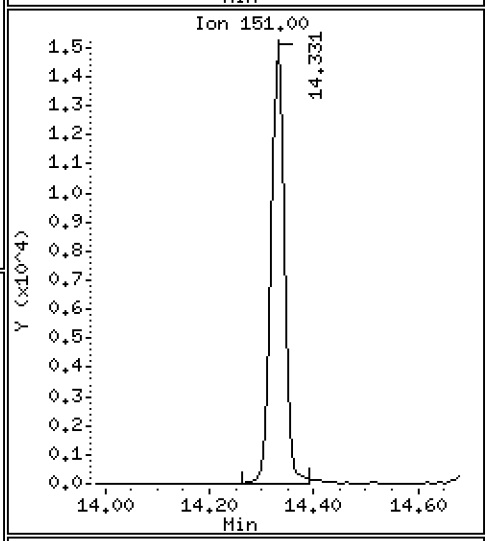


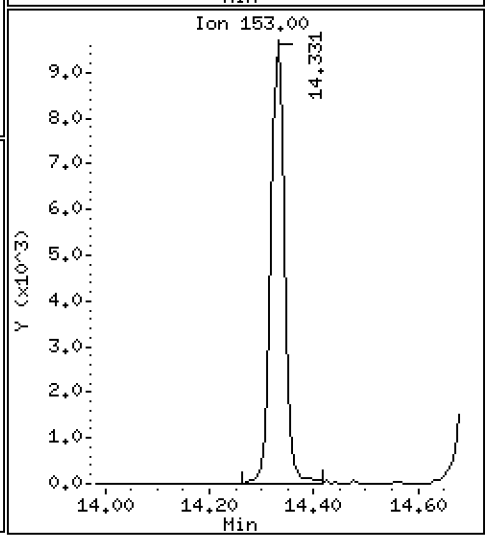












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

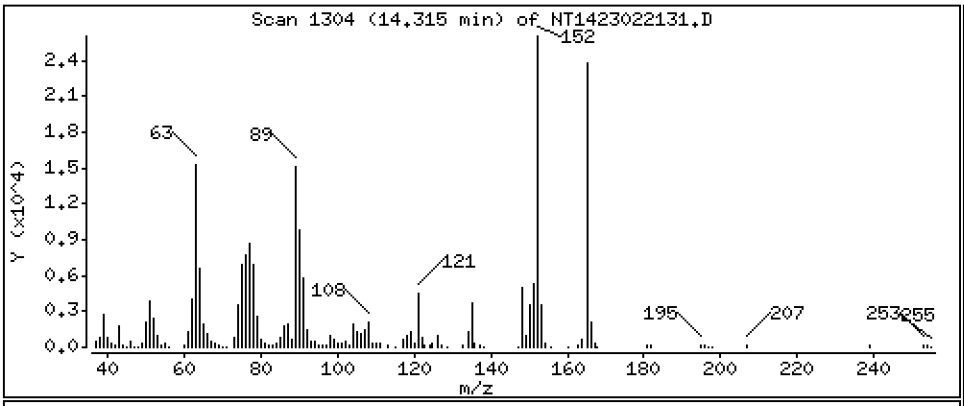
Operator: DSD

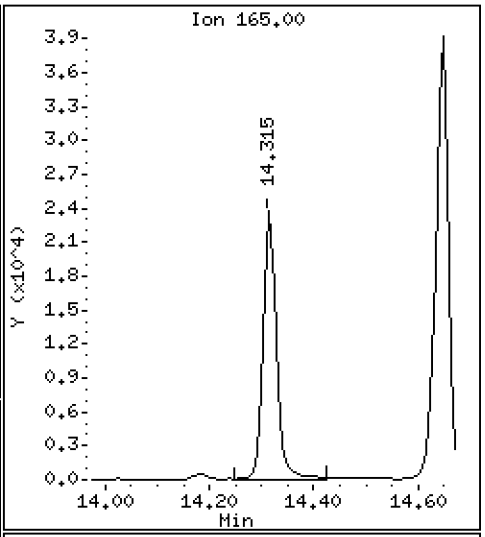
Column phase: ZB-5msi

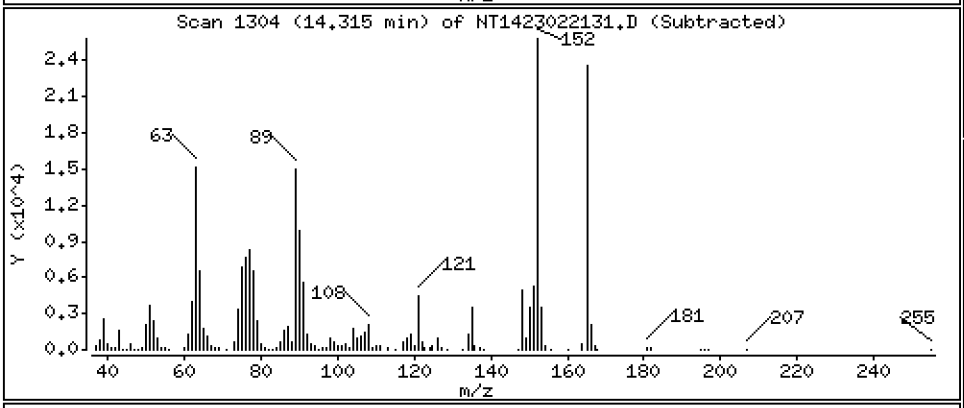
Column diameter: 0.25

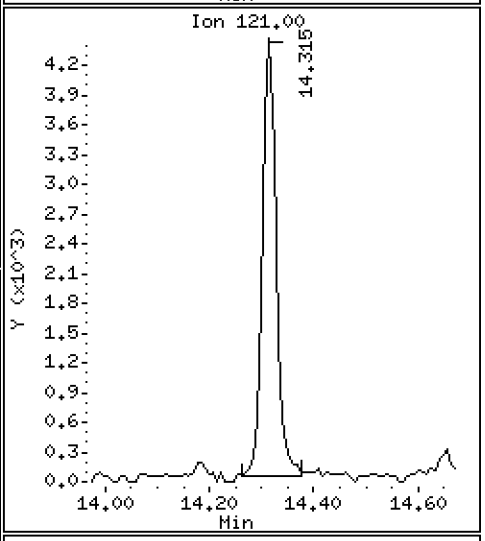
41 2,6-Dinitrotoluene

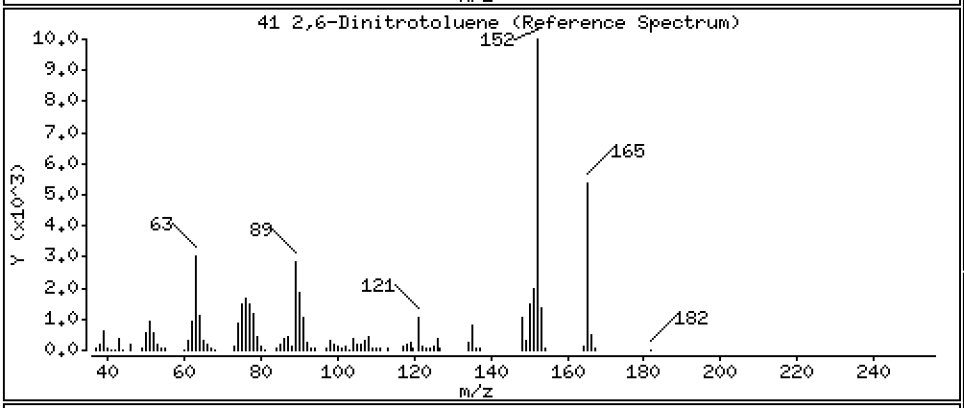
Concentration: 1.075 ug/mL

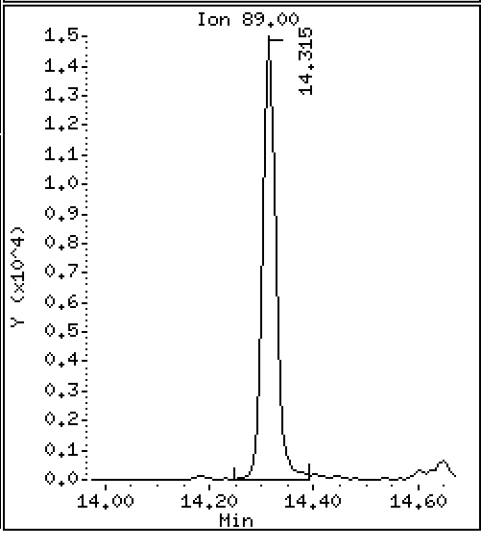


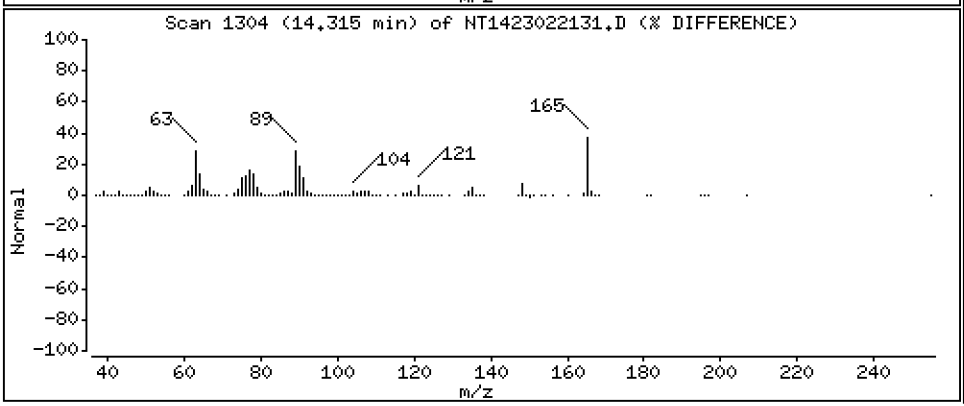












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

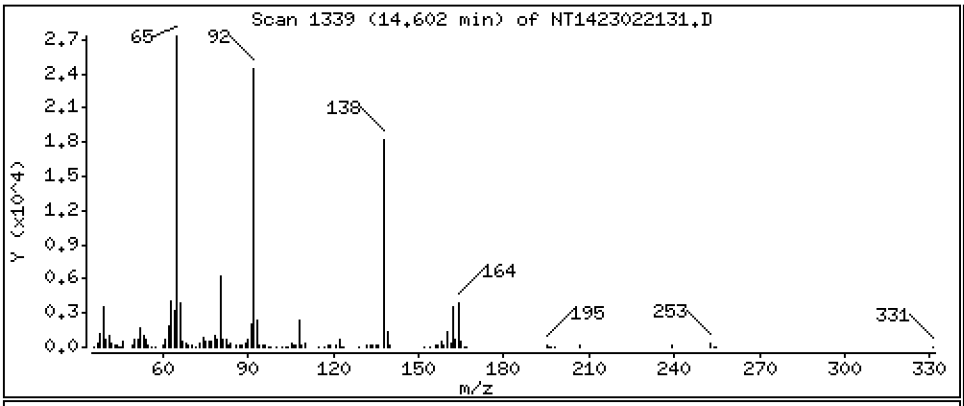
Operator: DSD

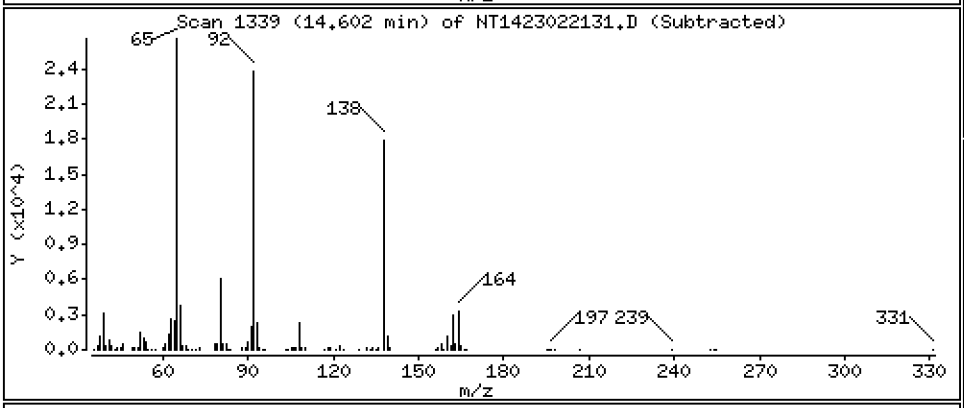
Column phase: ZB-5msi

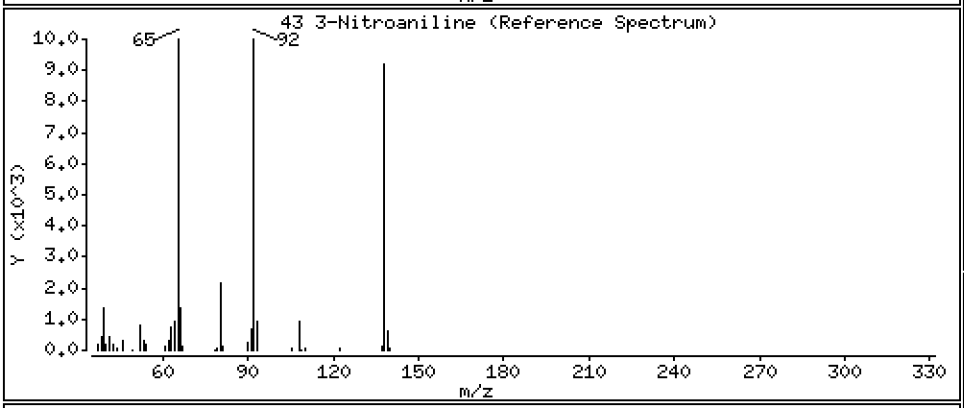
Column diameter: 0.25

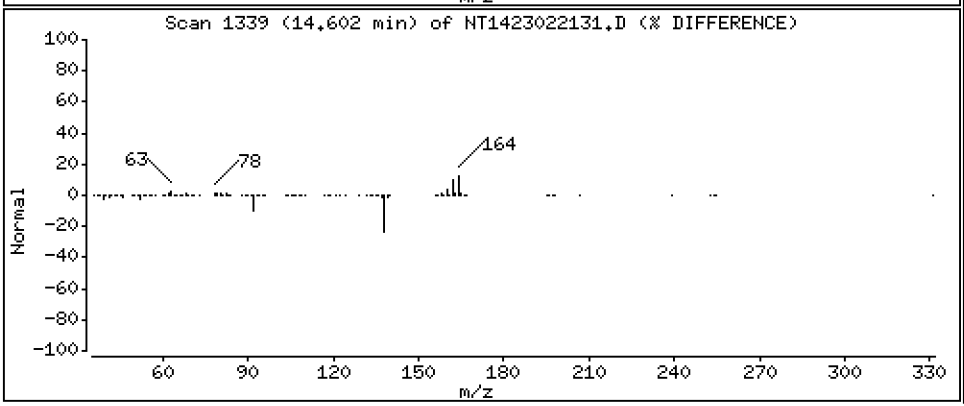
43 3-Nitroaniline

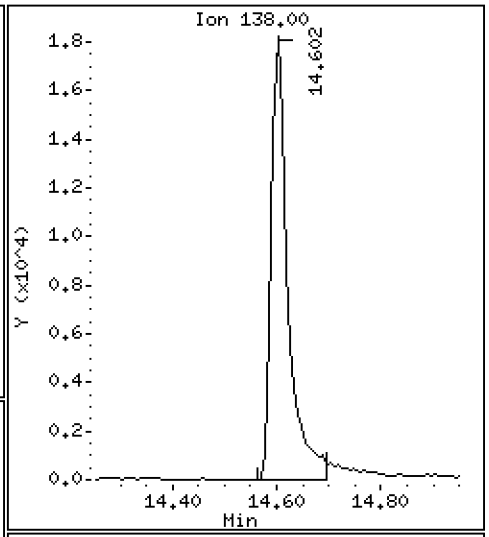
Concentration: 1.004 ug/mL

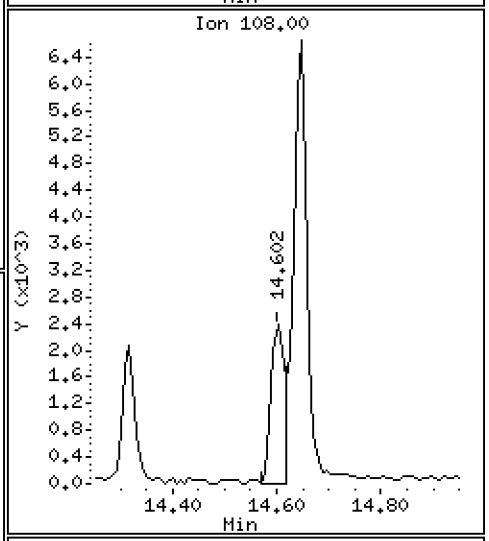


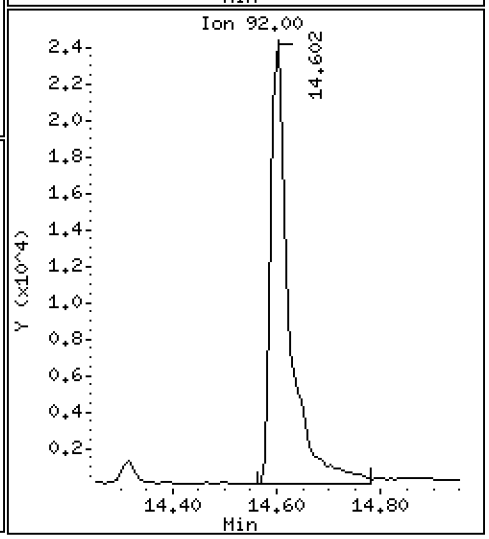












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

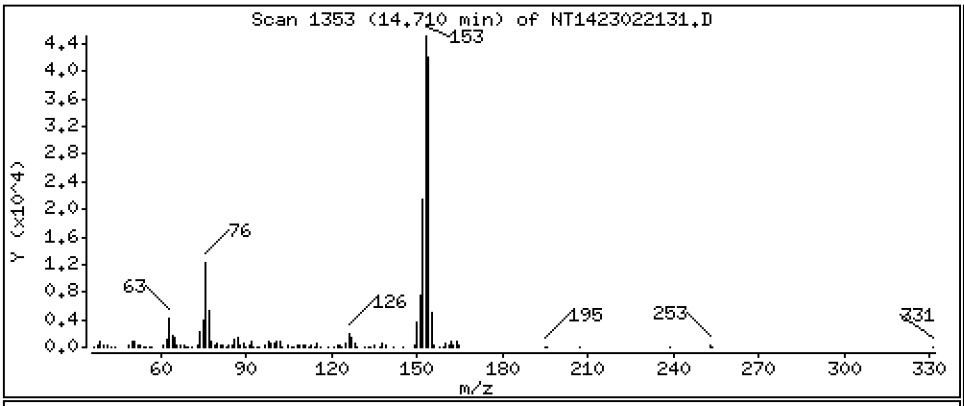
Operator: DSD

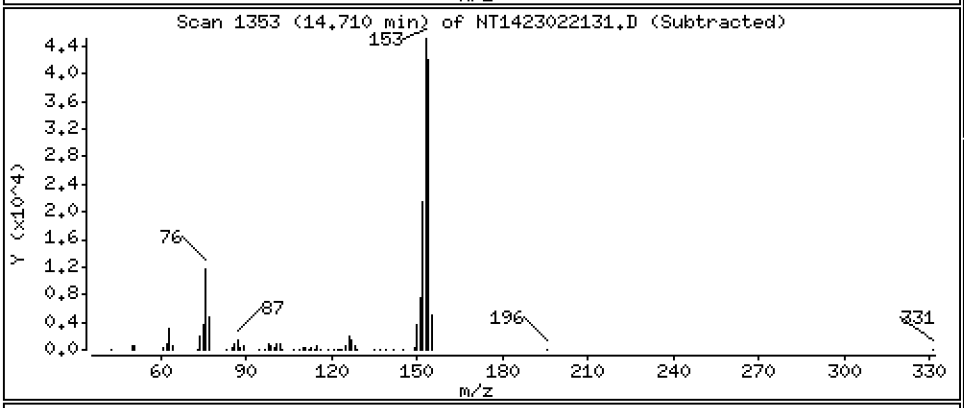
Column phase: ZB-5msi

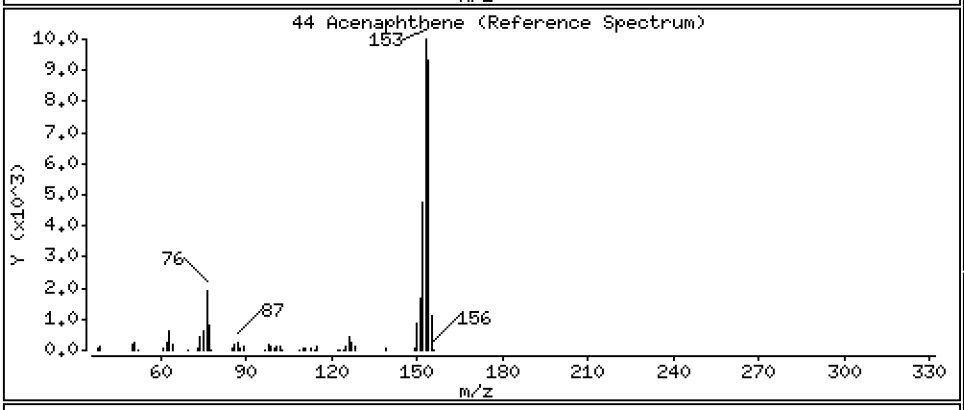
Column diameter: 0.25

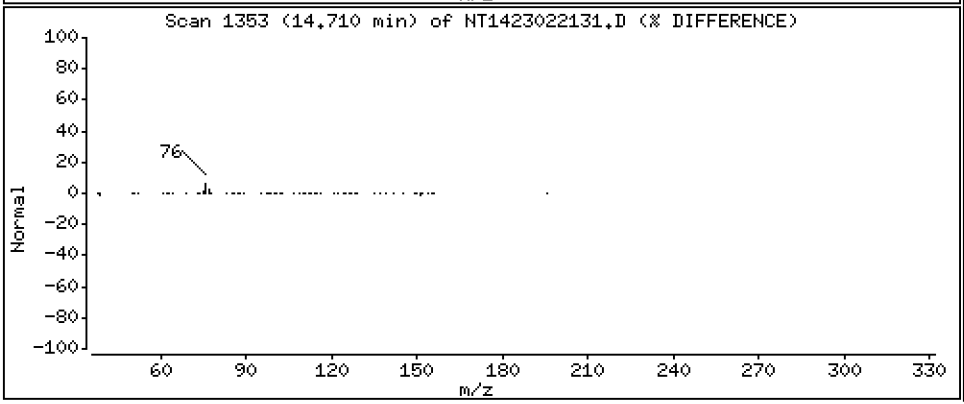
44 Acenaphthene

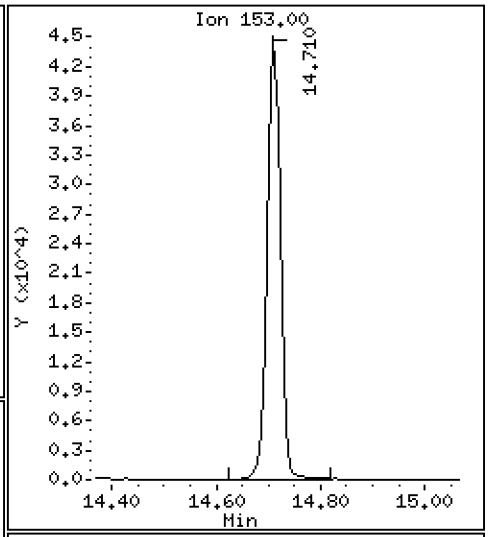
Concentration: 0.5557 ug/mL

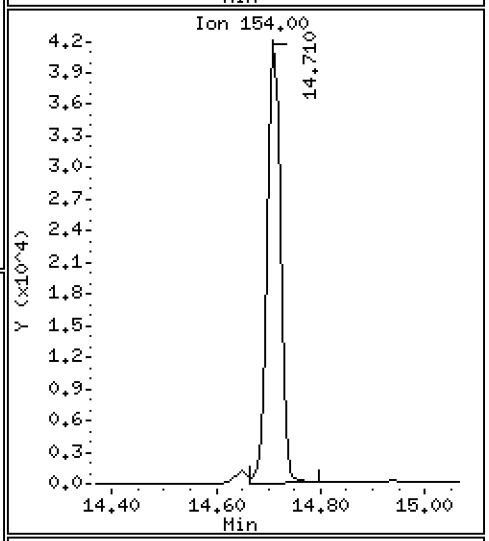


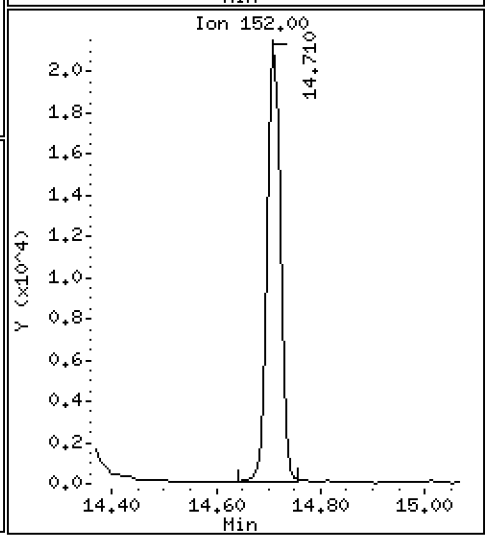












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

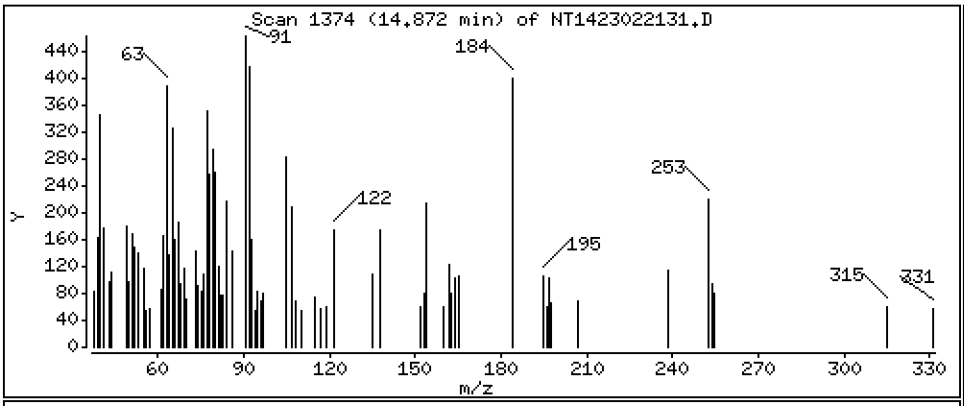
Operator: DSD

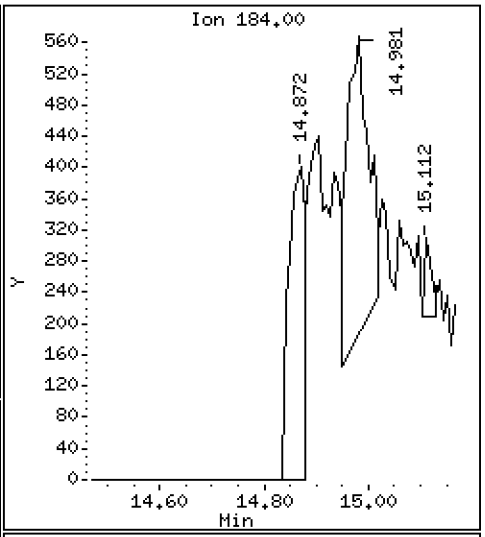
Column phase: ZB-5msi

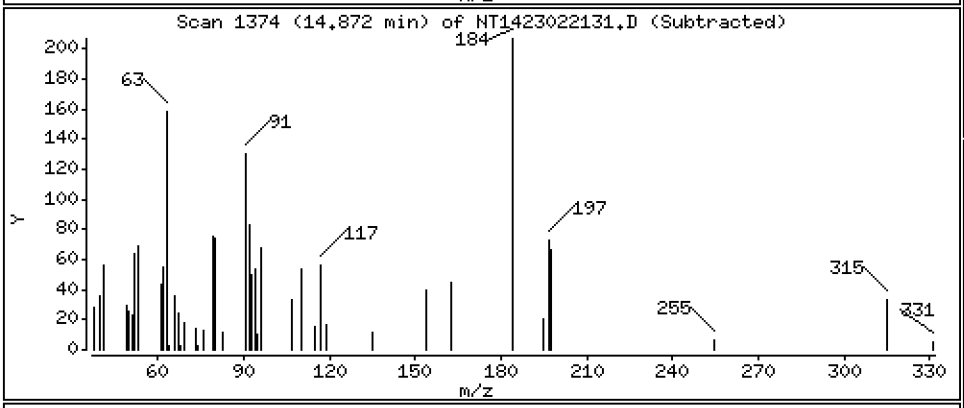
Column diameter: 0.25

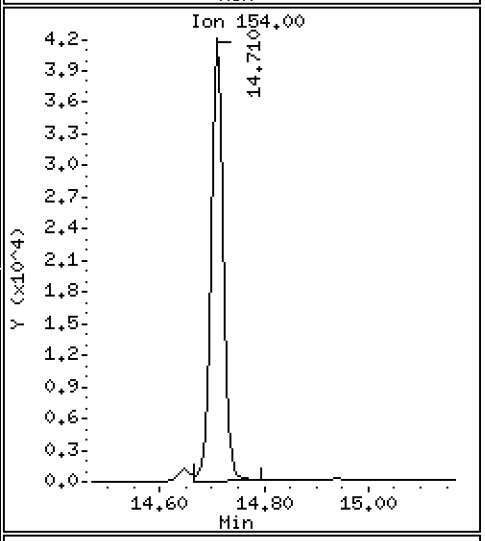
45 2,4-Dinitrophenol

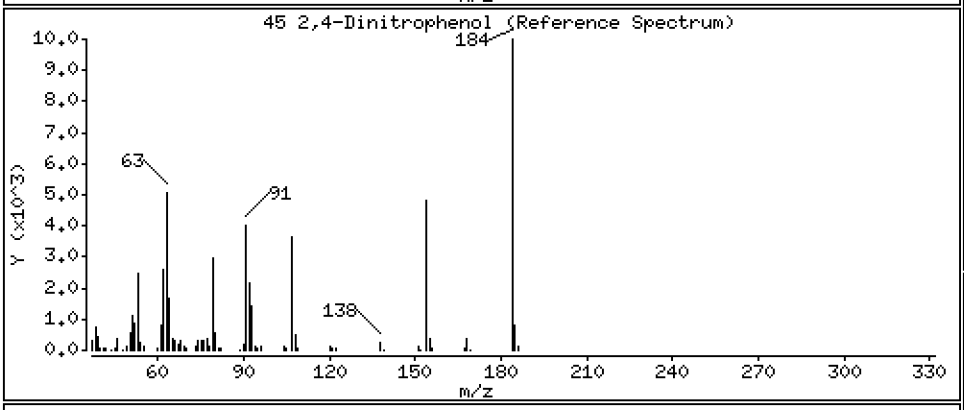
Concentration: 0.03884 ug/mL

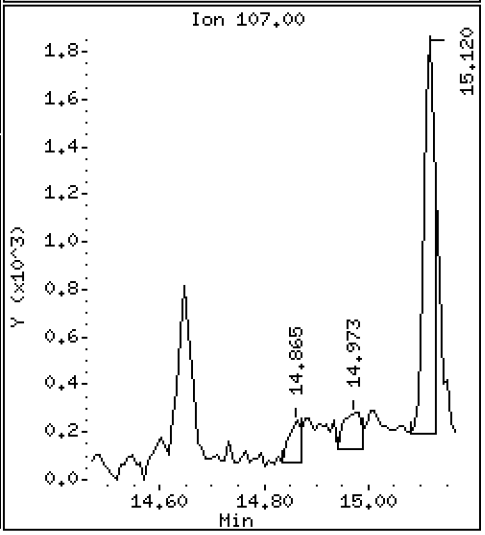


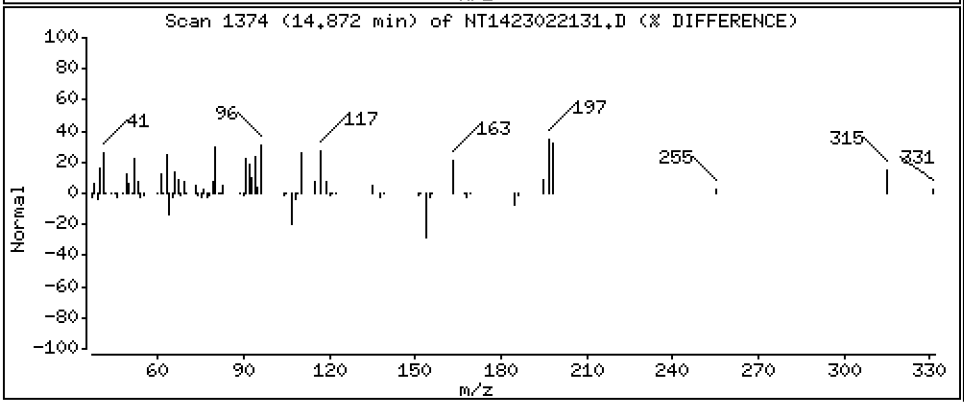












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

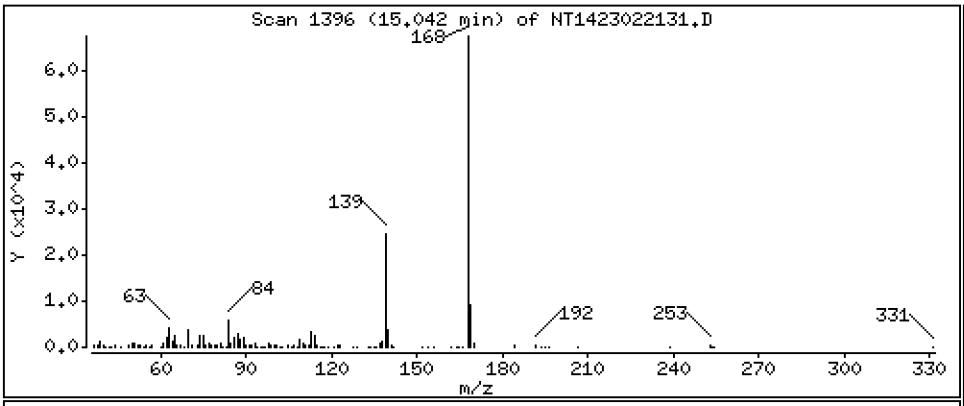
Operator: DSD

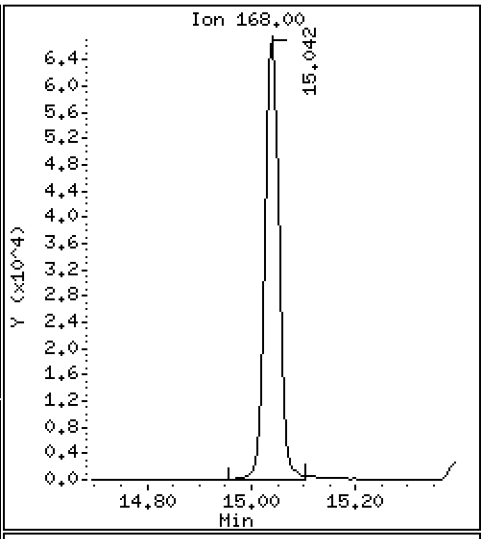
Column phase: ZB-5msi

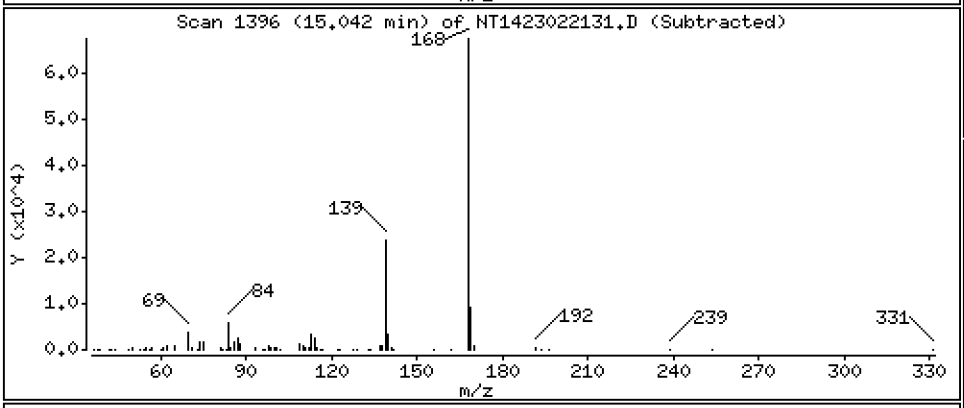
Column diameter: 0.25

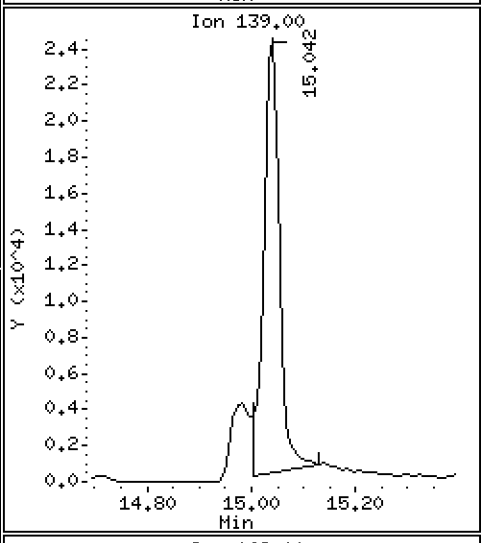
46 Dibenzofuran

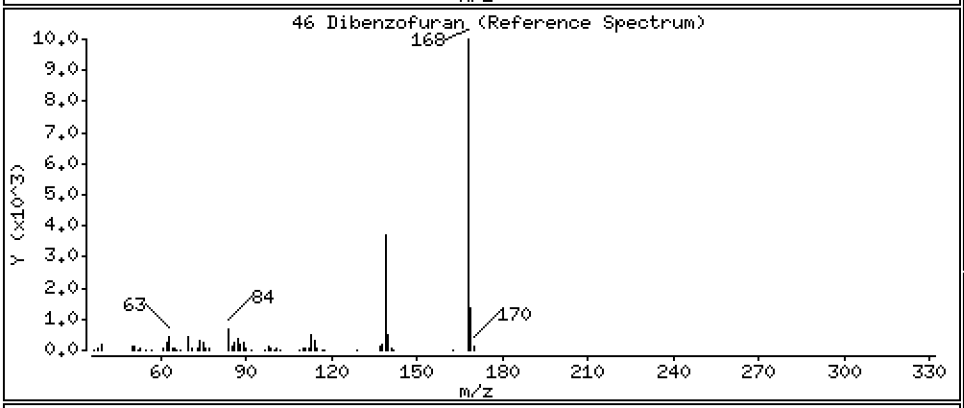
Concentration: 0.5494 ug/mL

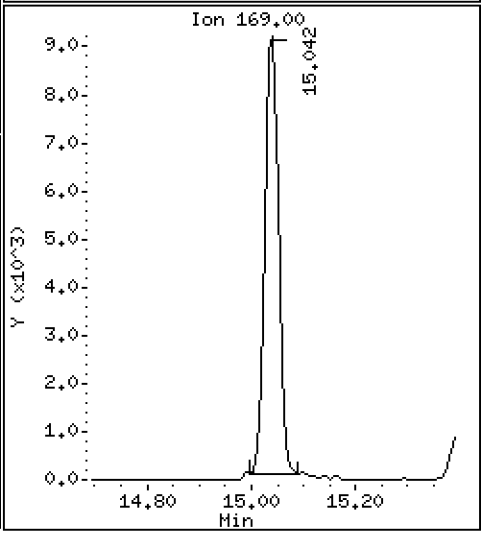


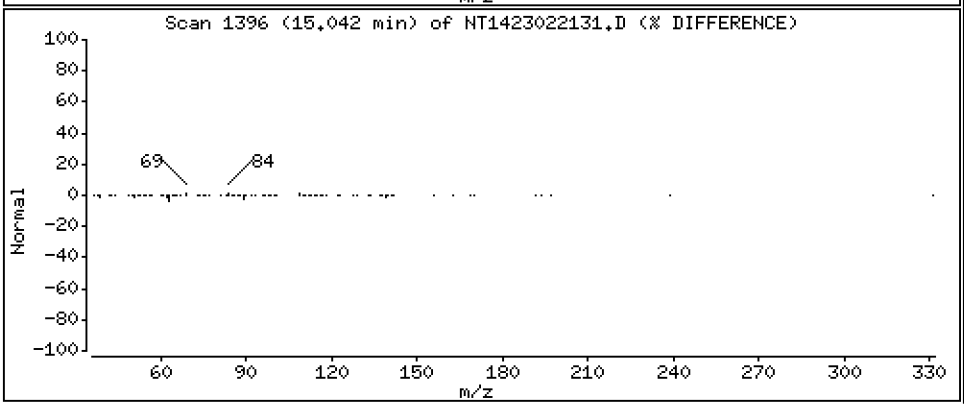












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

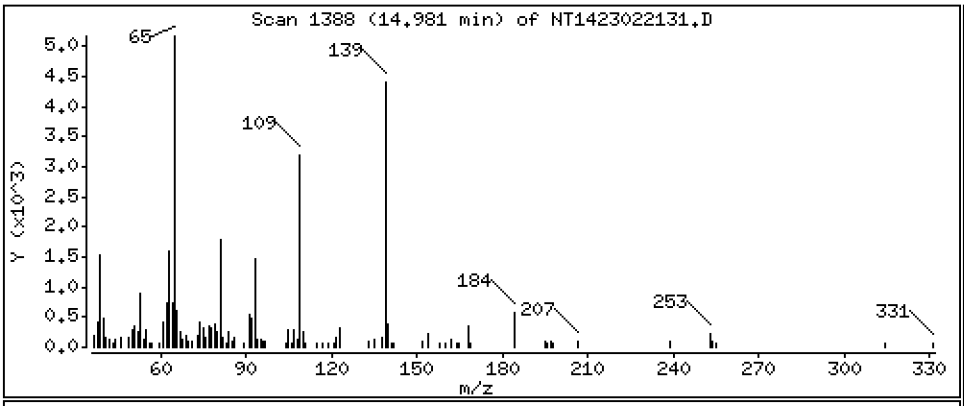
Operator: DSD

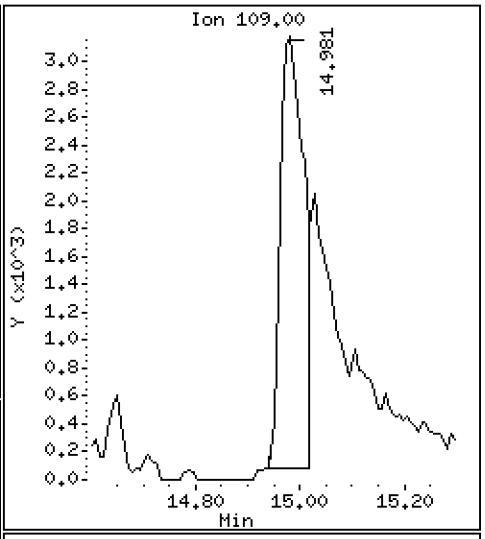
Column phase: ZB-5msi

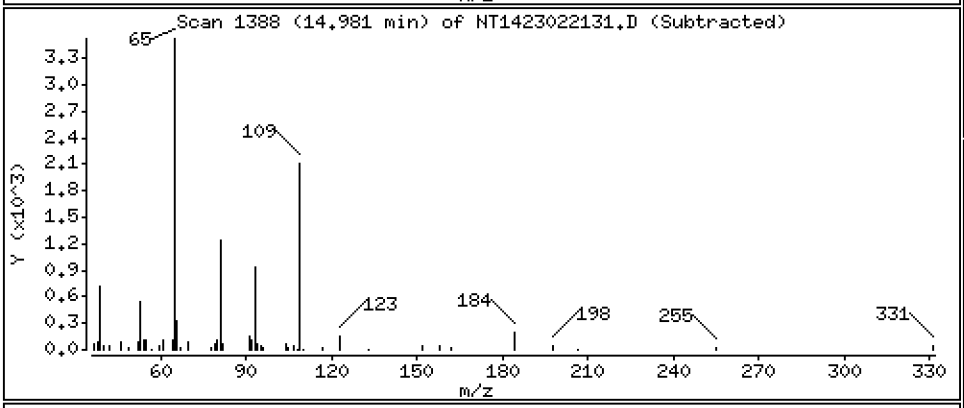
Column diameter: 0.25

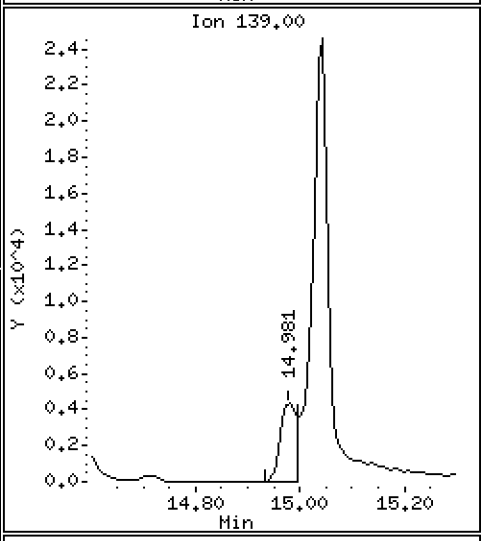
47 4-Nitrophenol

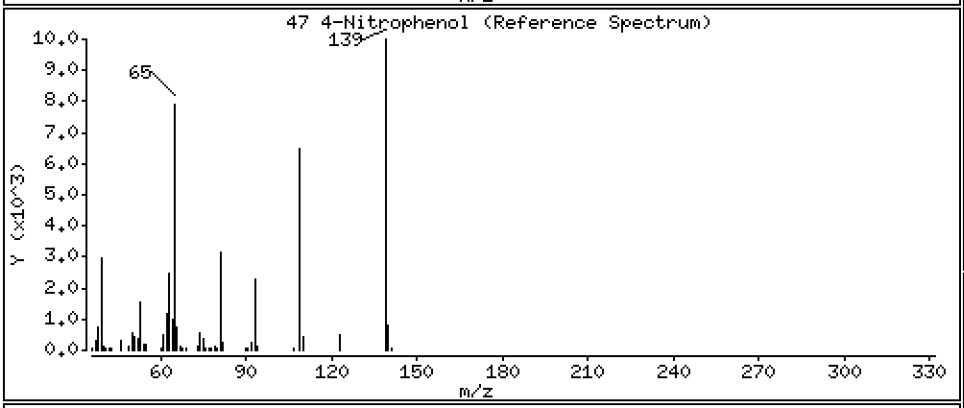
Concentration: 0.4520 ug/mL

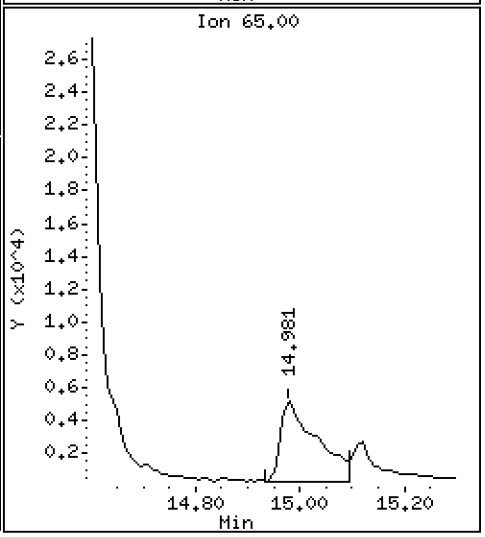


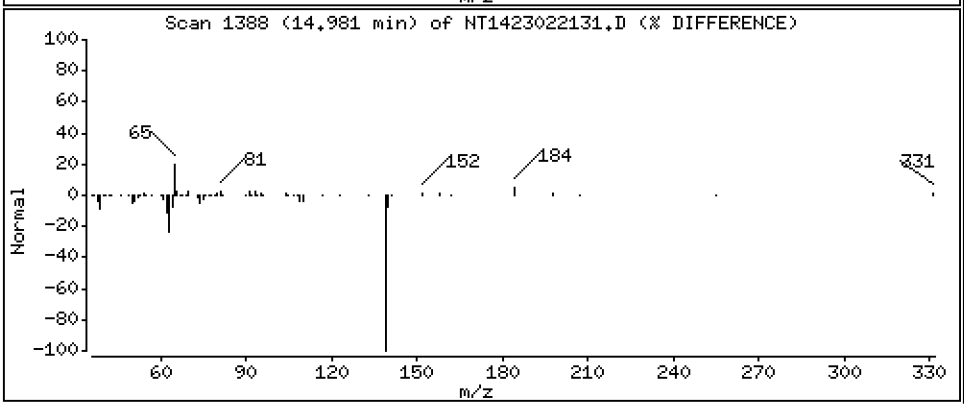












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

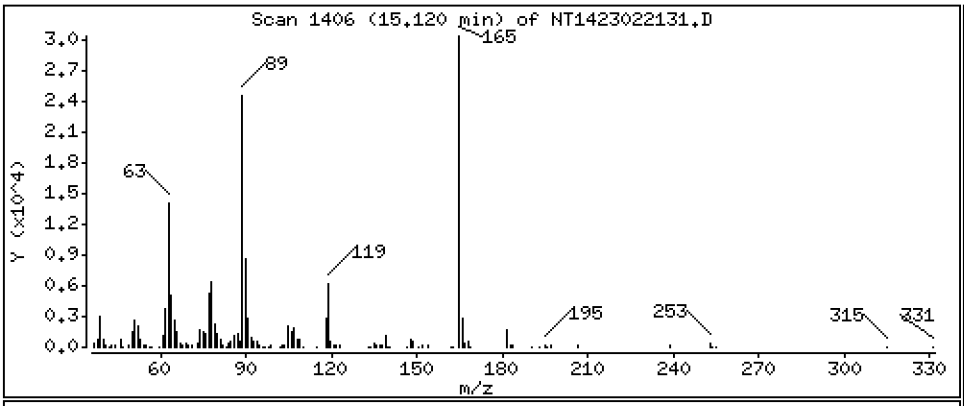
Operator: DSD

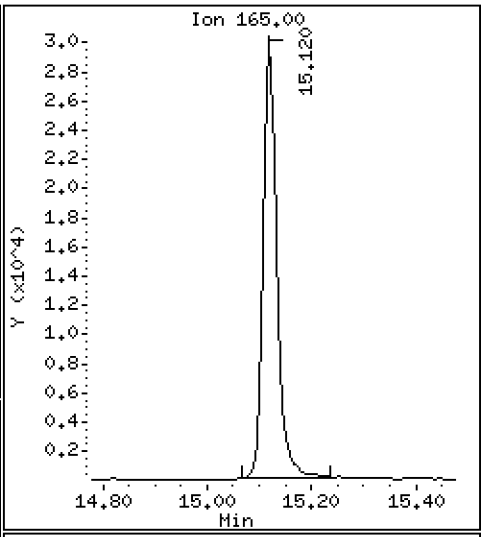
Column phase: ZB-5msi

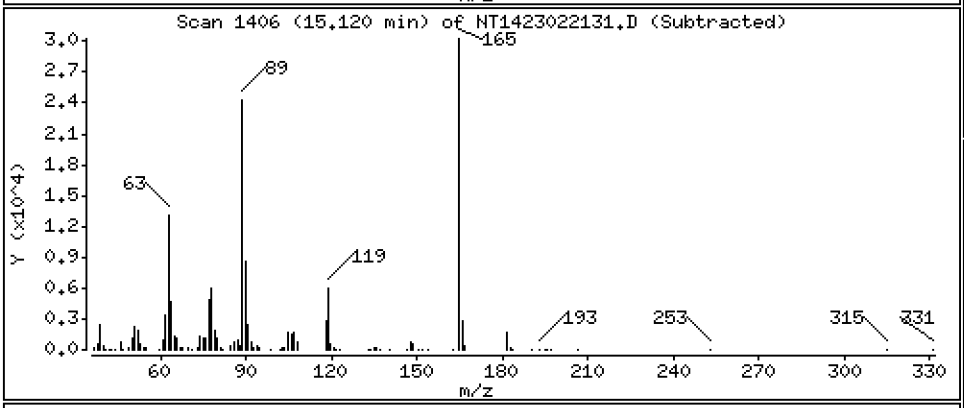
Column diameter: 0.25

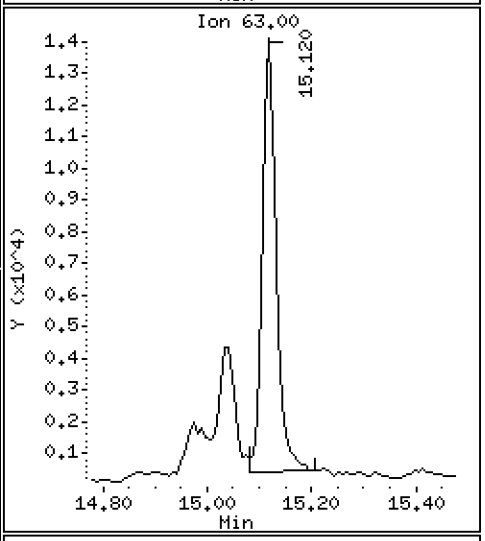
48 2,4-Dinitrotoluene

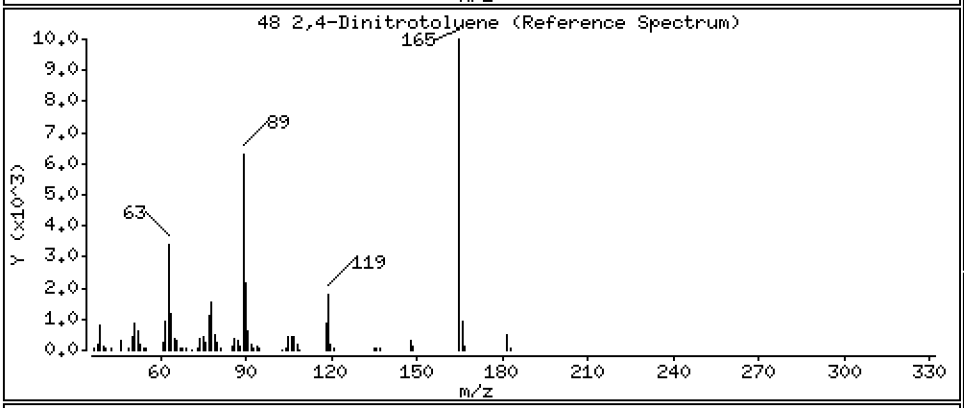
Concentration: 1.001 ug/mL

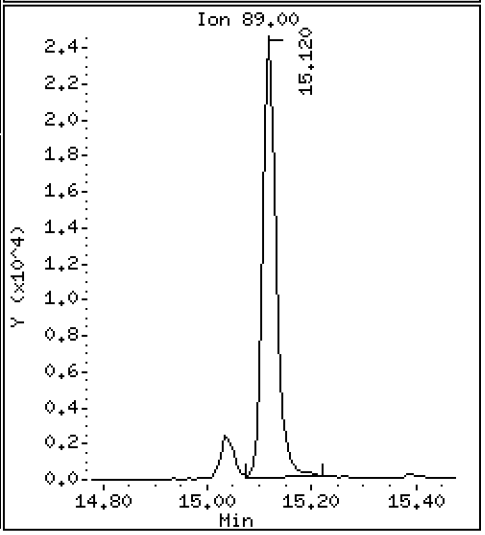


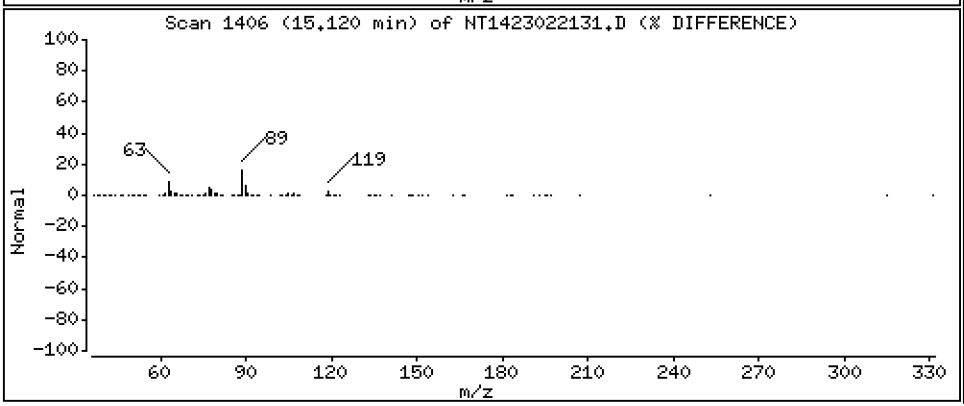












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

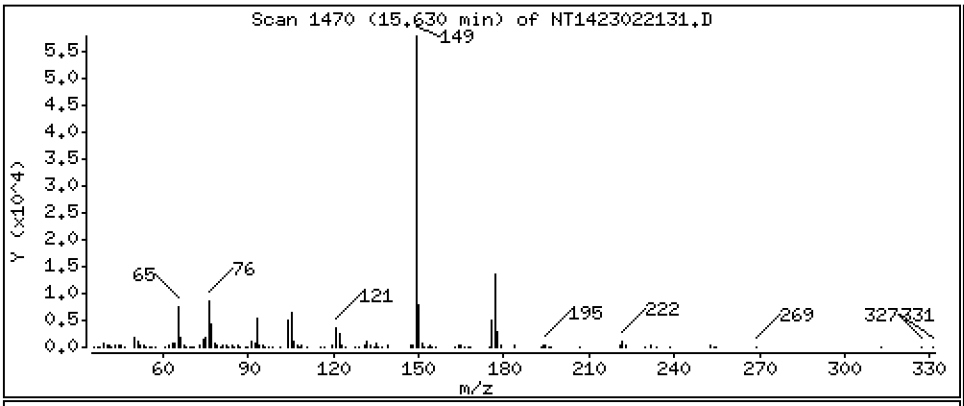
Operator: DSD

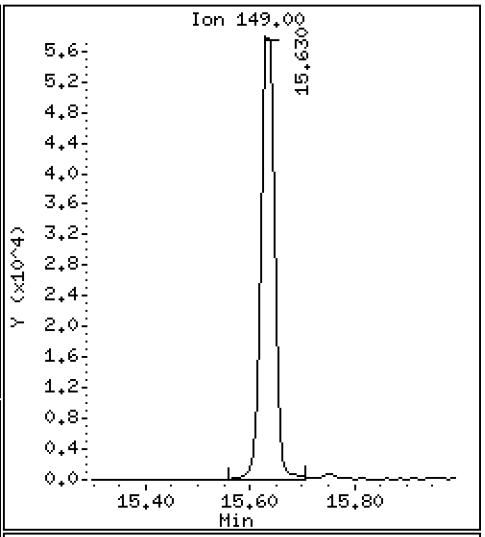
Column phase: ZB-5msi

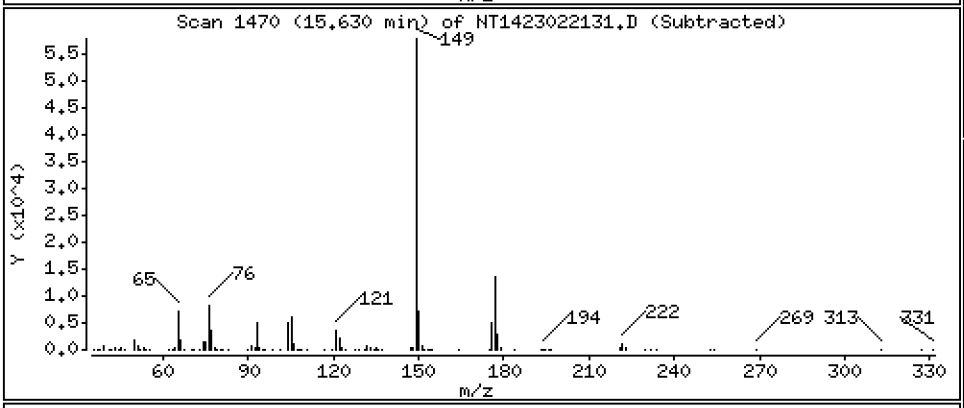
Column diameter: 0.25

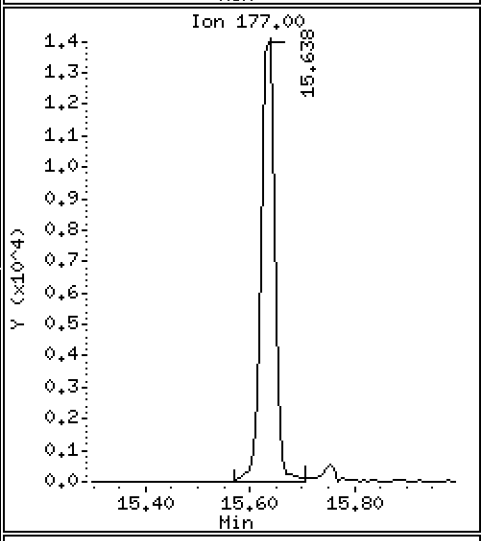
50 Diethylphthalate

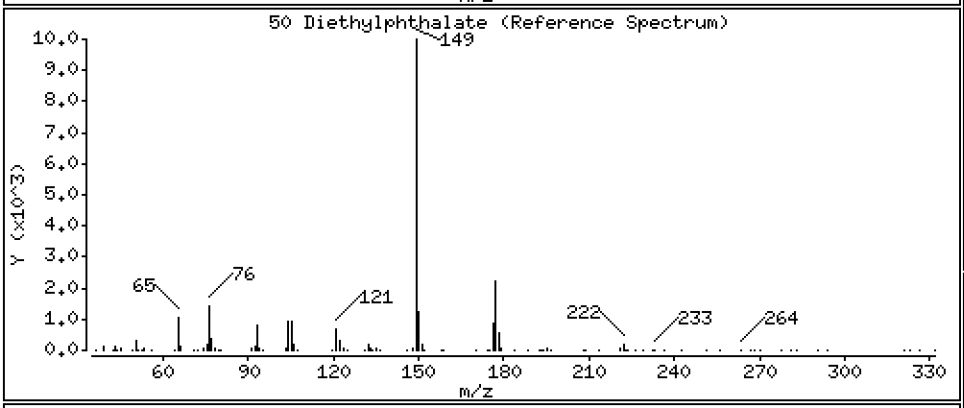
Concentration: 0.5353 ug/mL

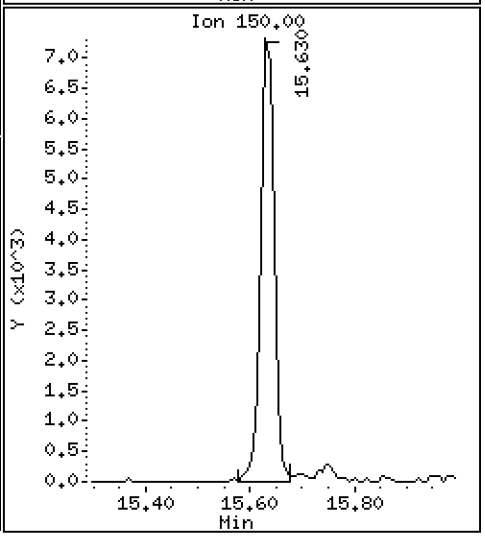


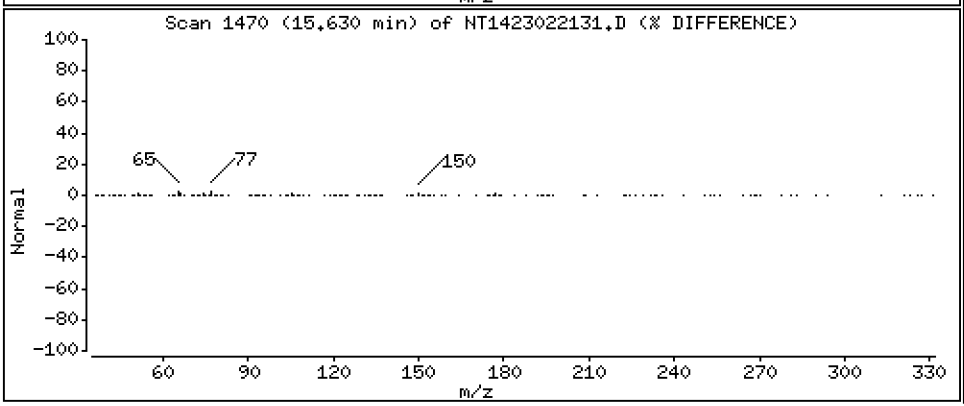












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

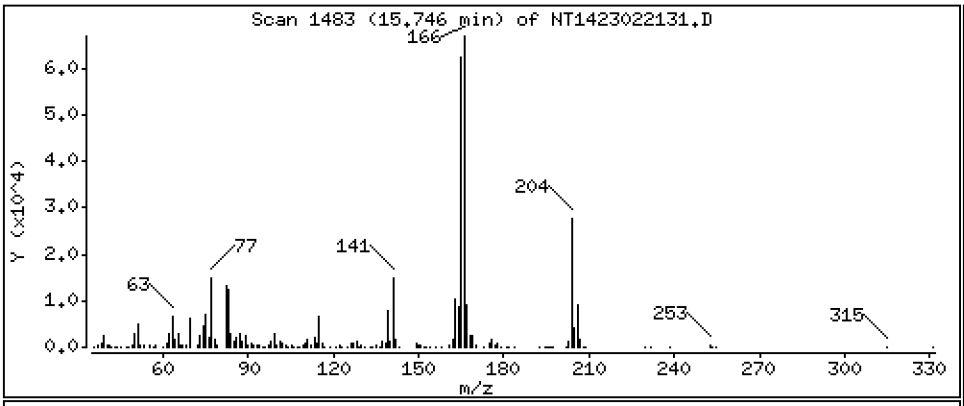
Operator: DSD

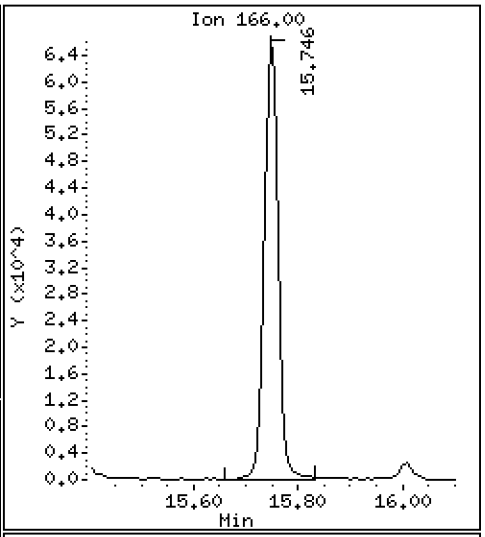
Column phase: ZB-5msi

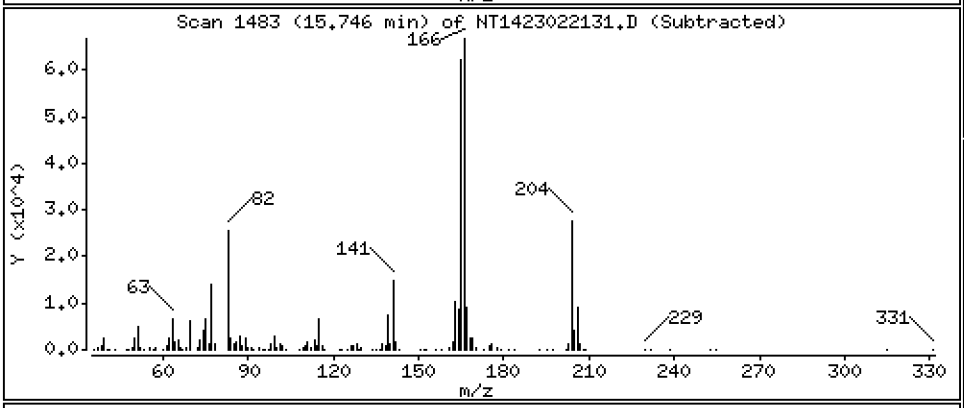
Column diameter: 0.25

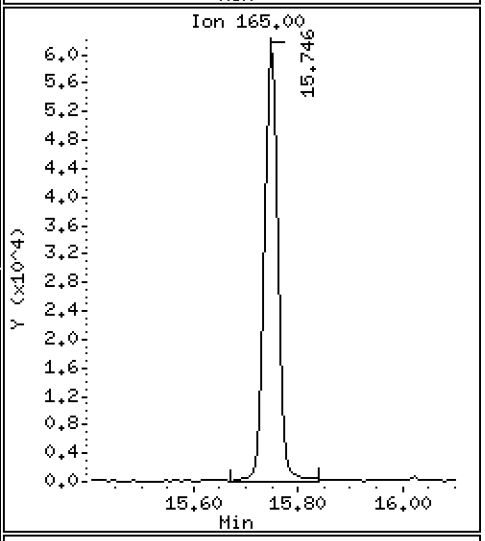
49 Fluorene

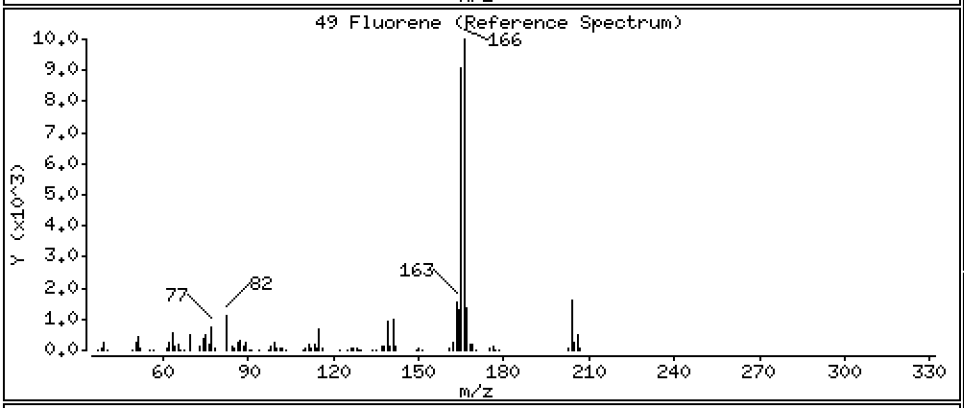
Concentration: 0.5516 ug/mL

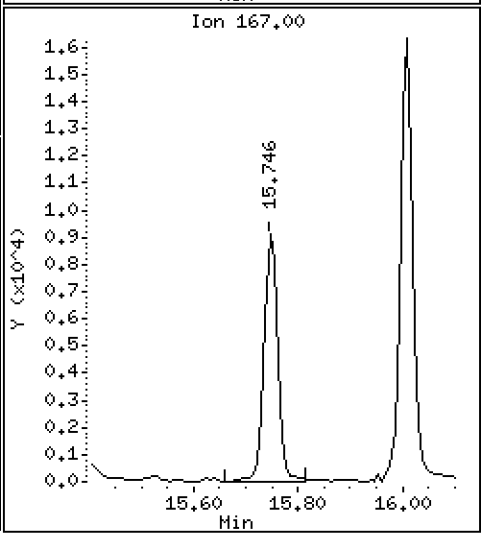


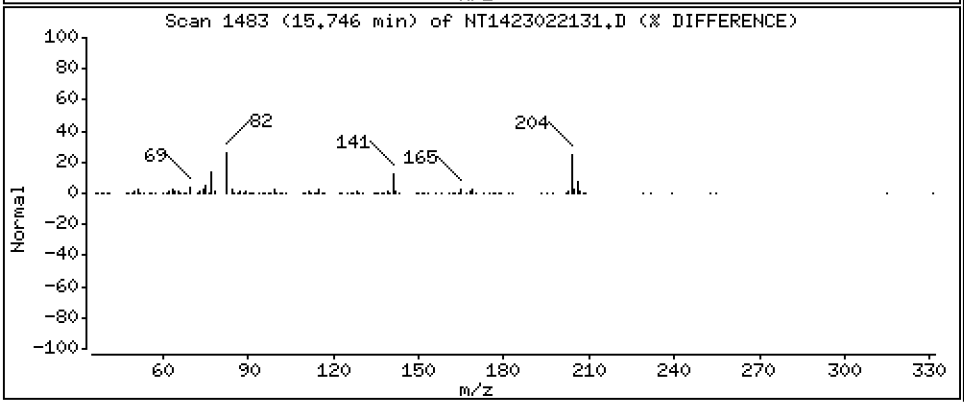












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

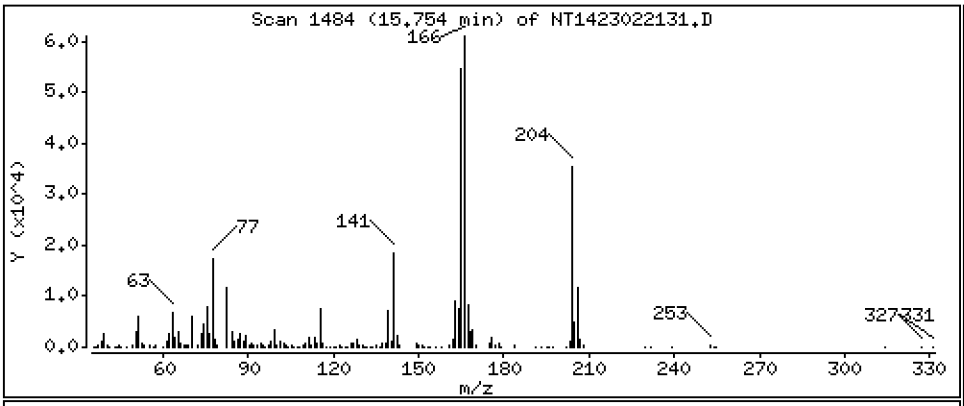
Operator: DSD

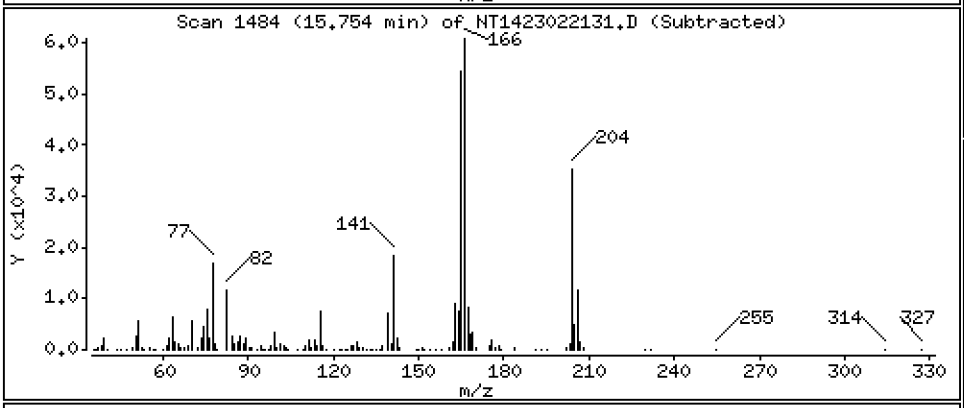
Column phase: ZB-5msi

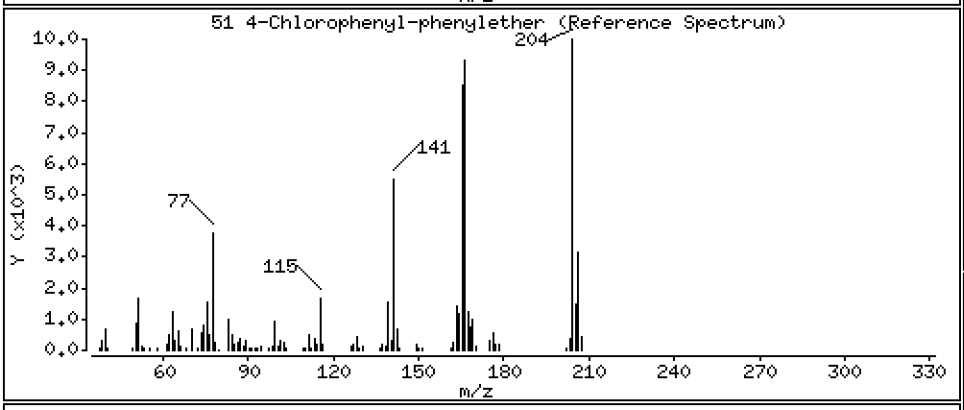
Column diameter: 0.25

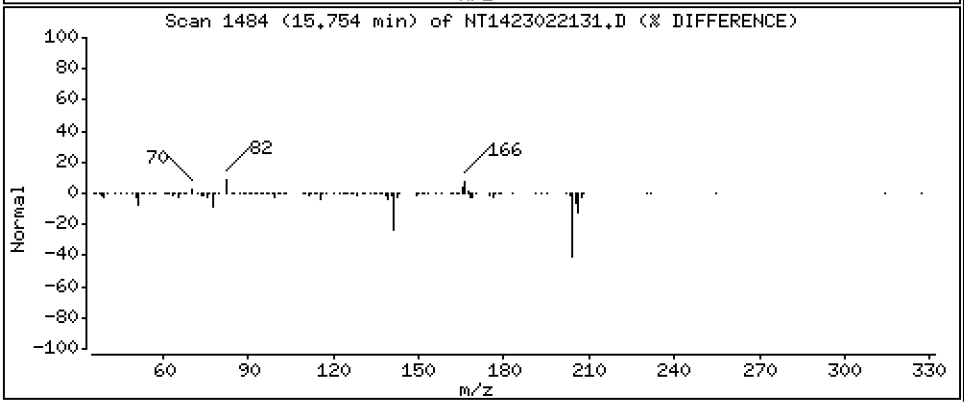
51 4-Chlorophenyl-phenylether

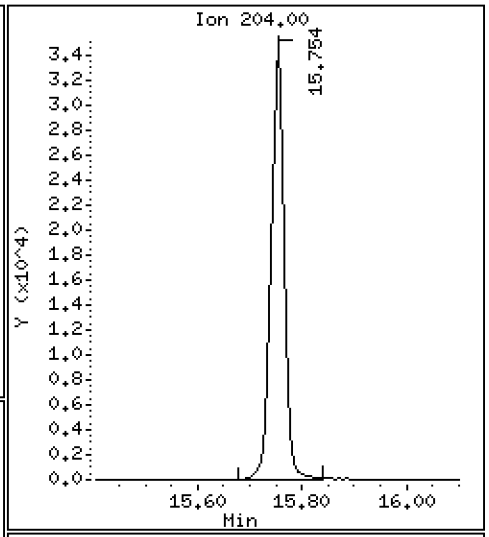
Concentration: 0.5235 ug/mL

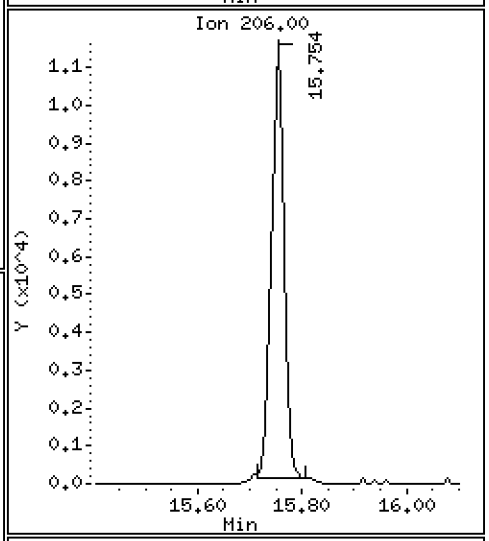


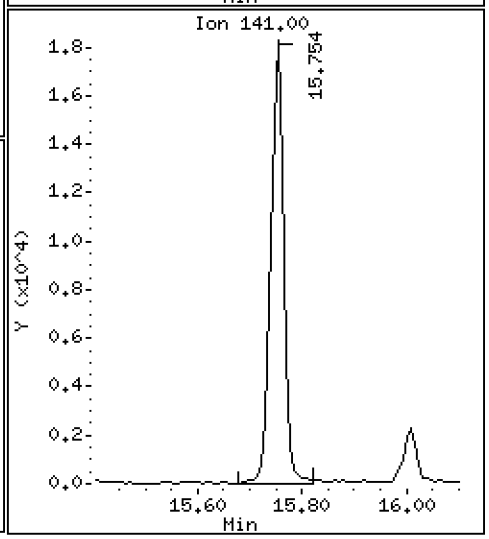












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

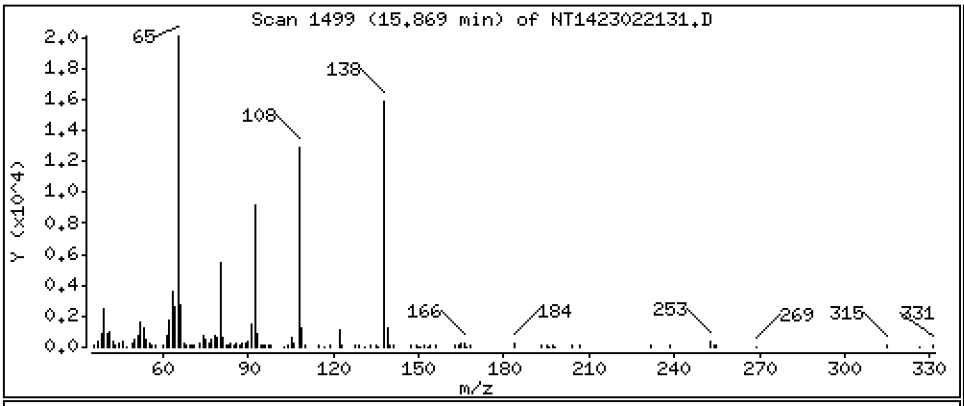
Operator: DSD

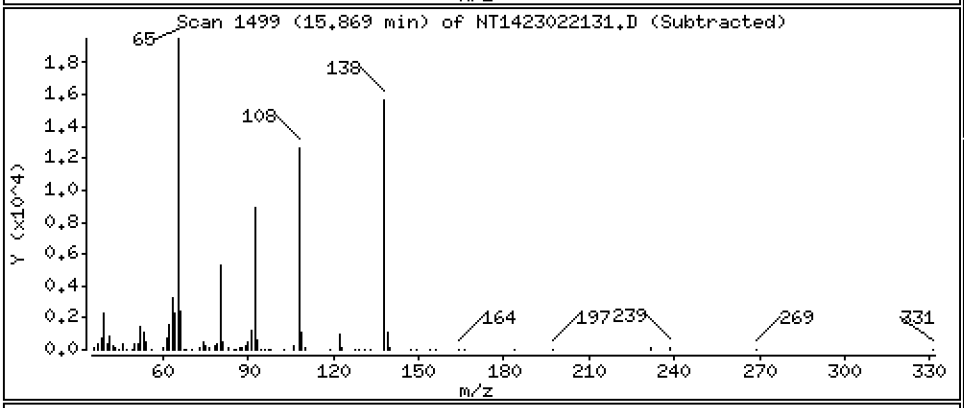
Column phase: ZB-5msi

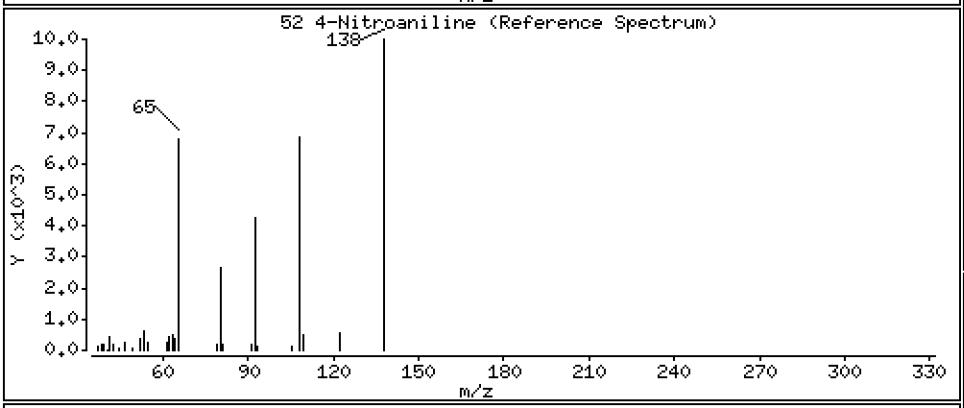
Column diameter: 0.25

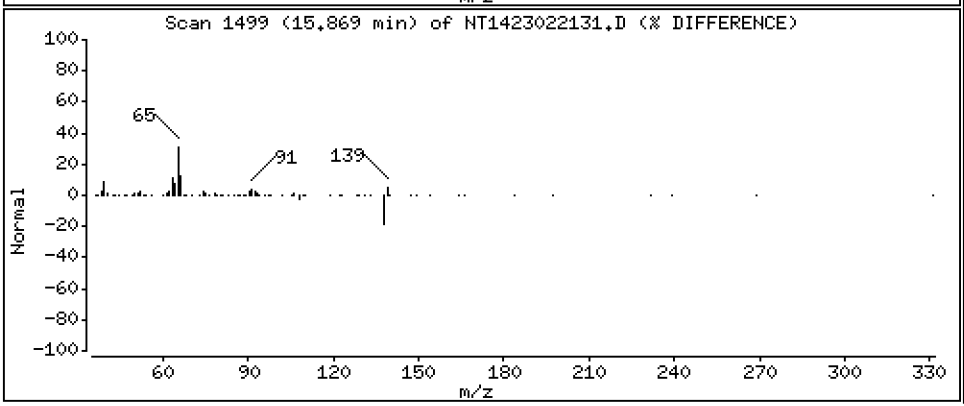
52 4-Nitroaniline

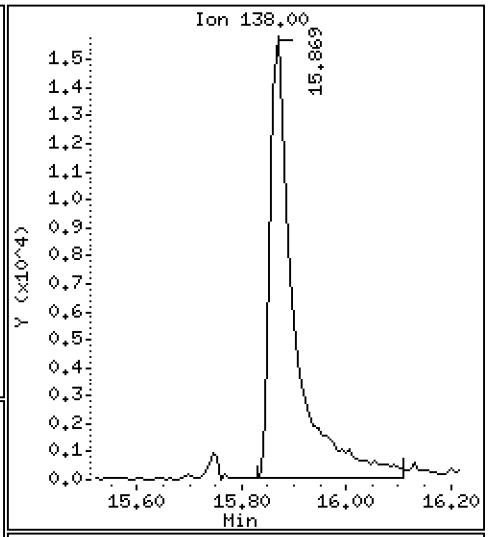
Concentration: 1.111 ug/mL

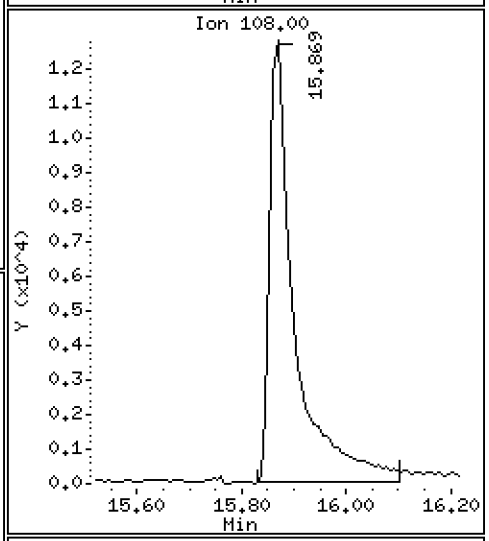


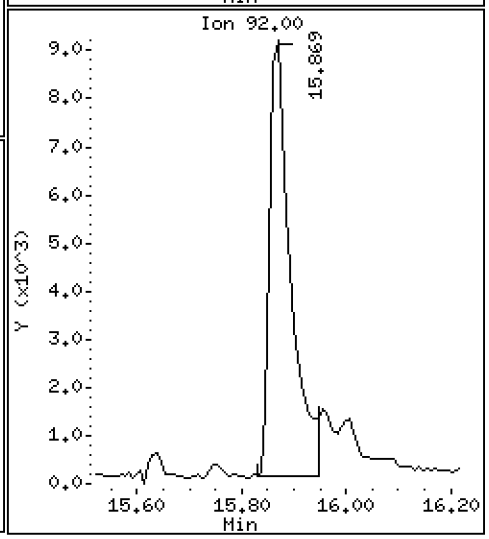












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

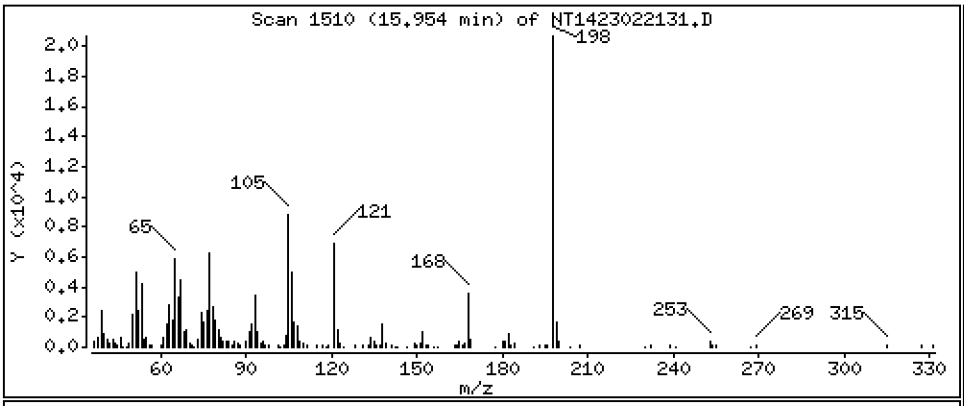
Operator: DSD

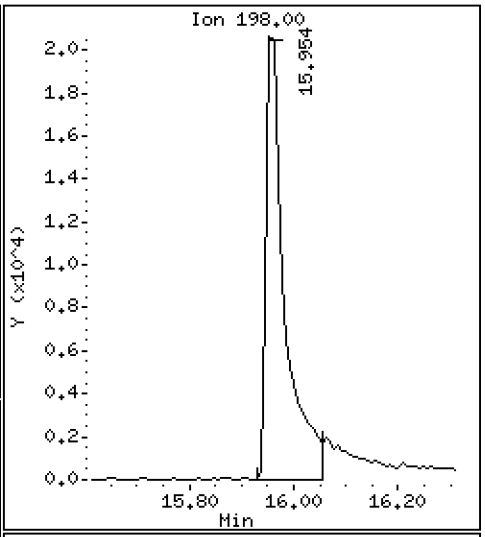
Column phase: ZB-5msi

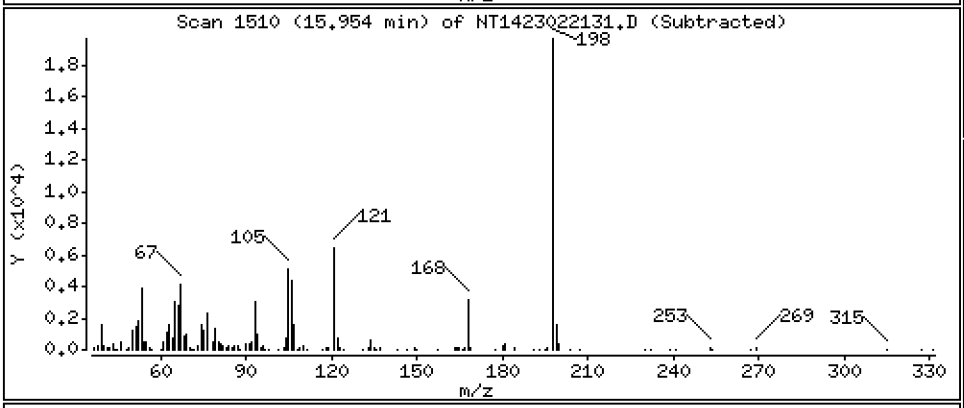
Column diameter: 0.25

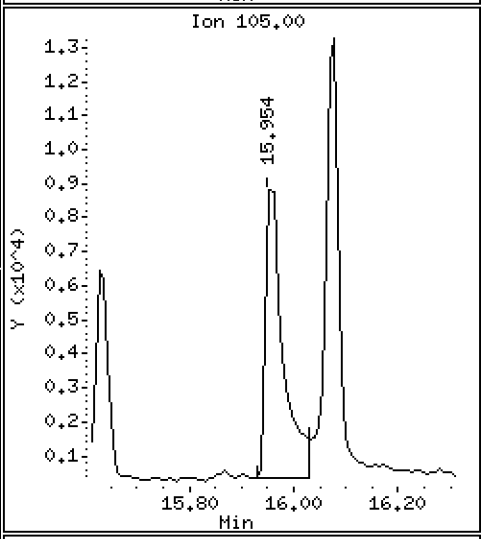
53 4,6-Dinitro-2-methylphenol

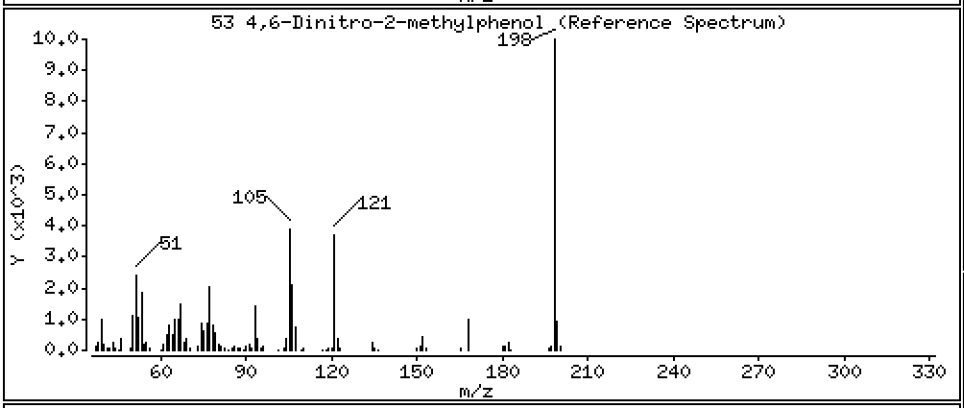
Concentration: 1.333 ug/mL

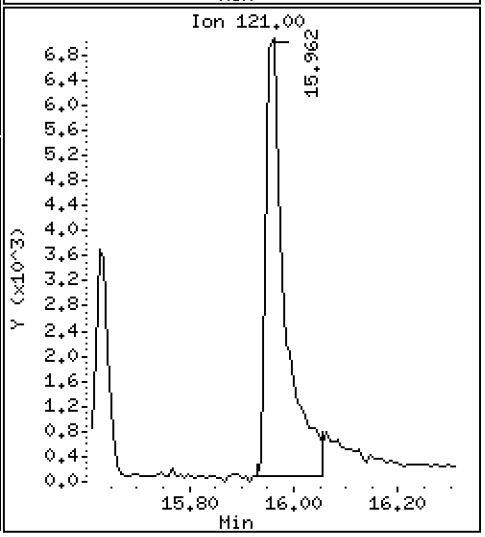


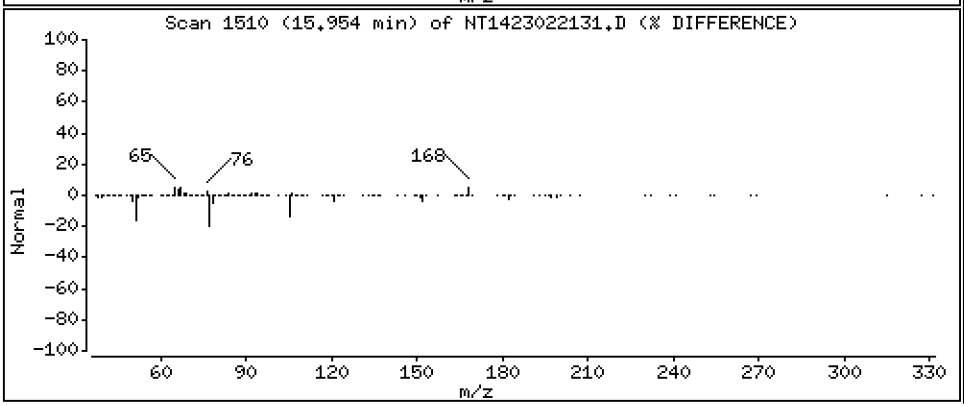












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

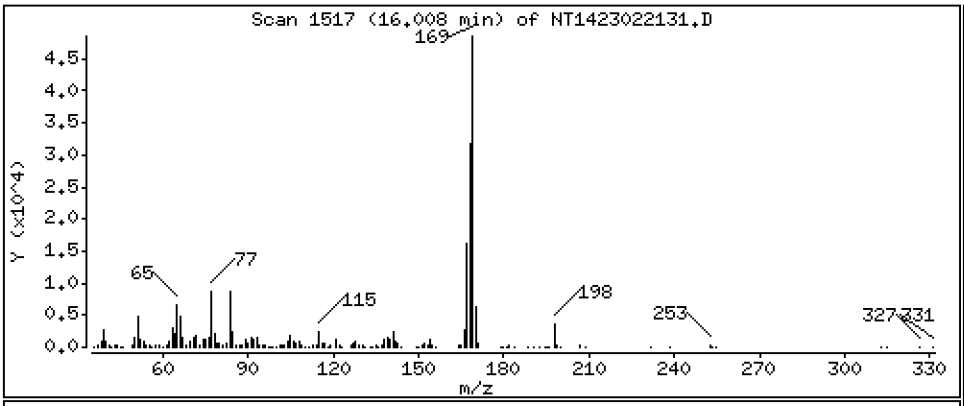
Operator: DSD

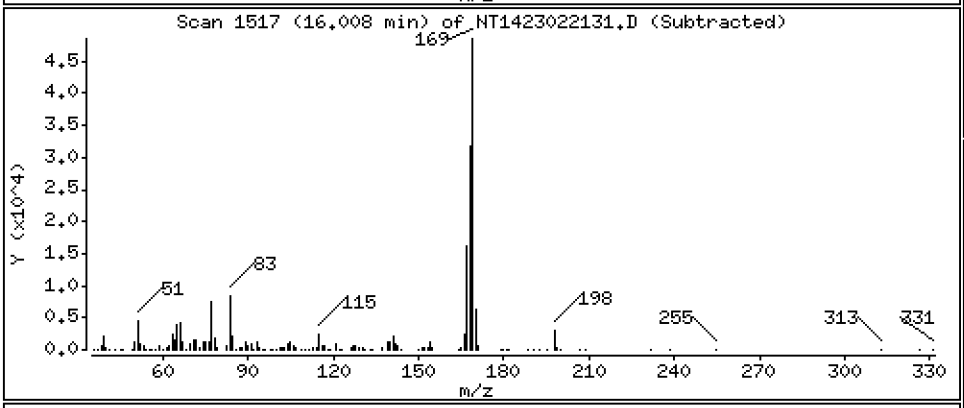
Column phase: ZB-5msi

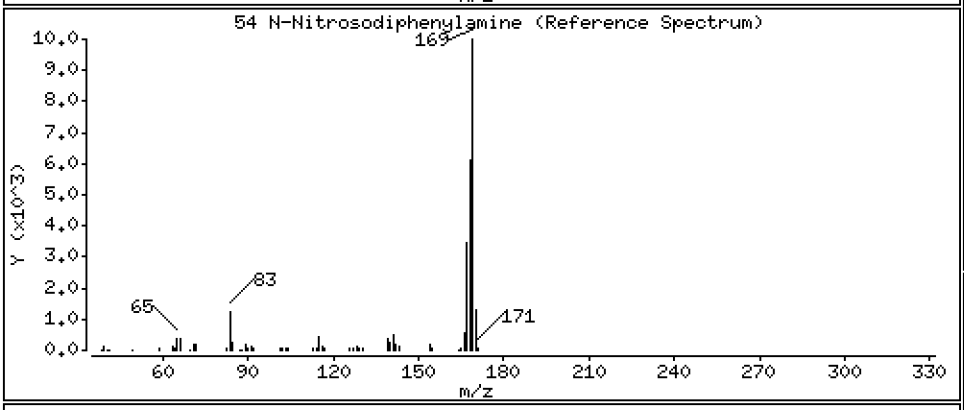
Column diameter: 0.25

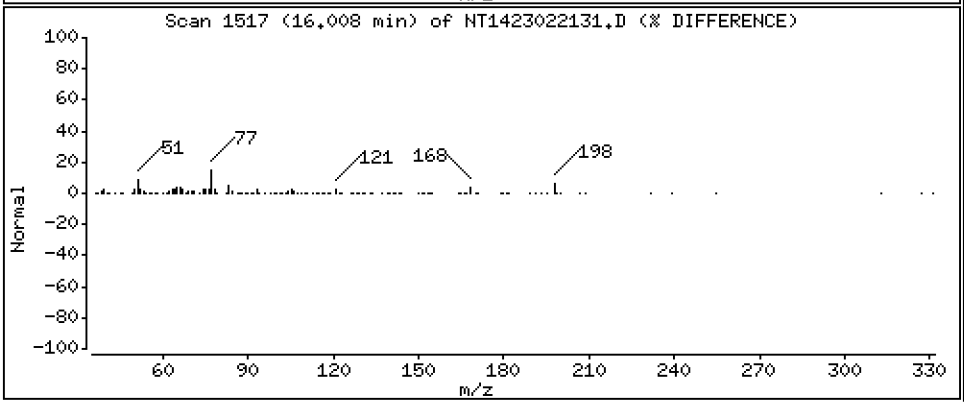
54 N-Nitrosodiphenylamine

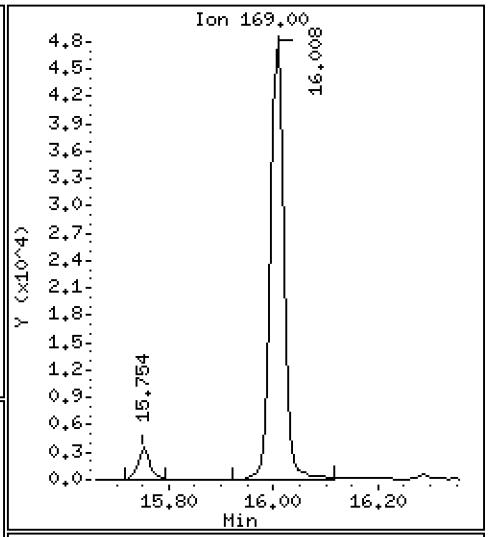
Concentration: 0.5601 ug/mL

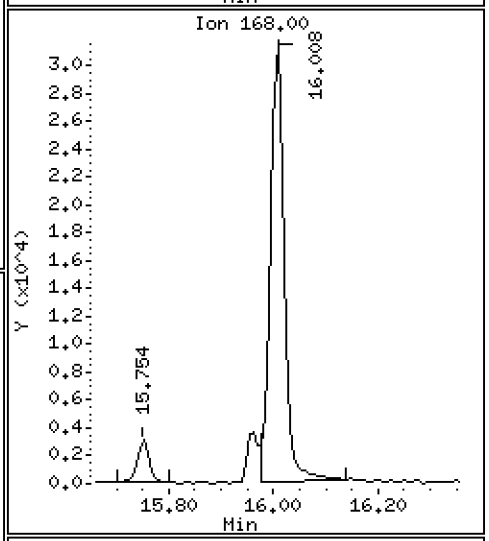


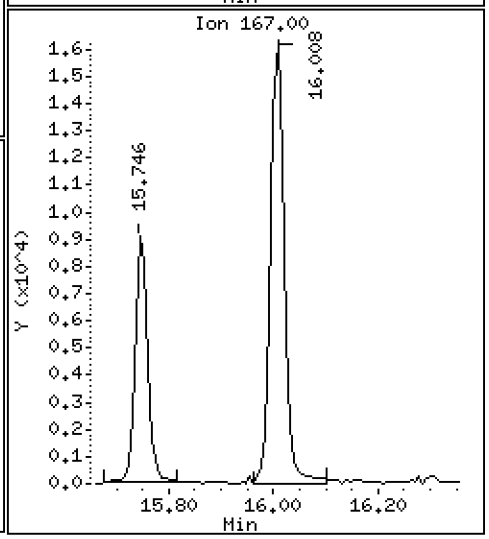












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

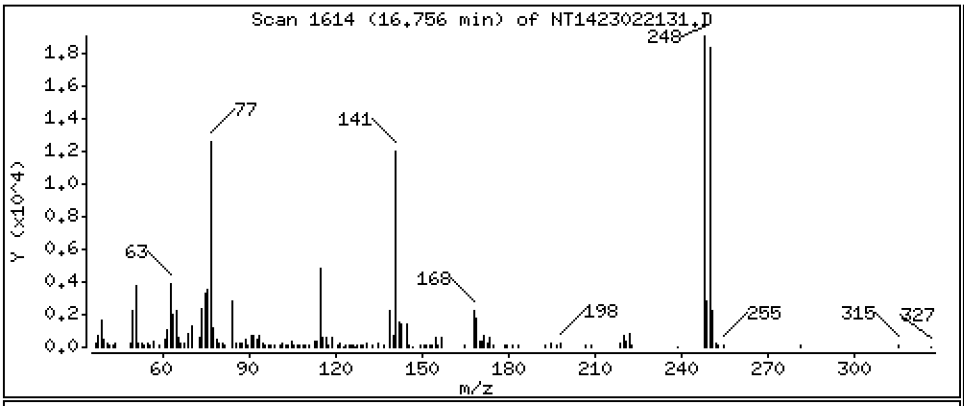
Operator: DSD

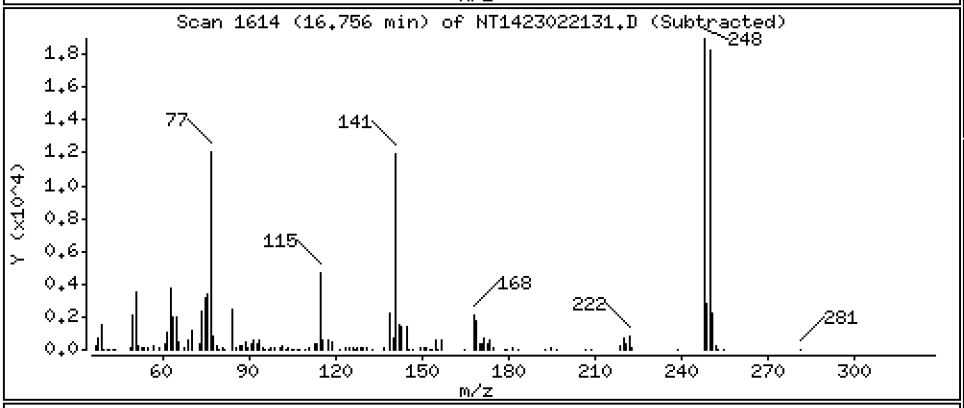
Column phase: ZB-5msi

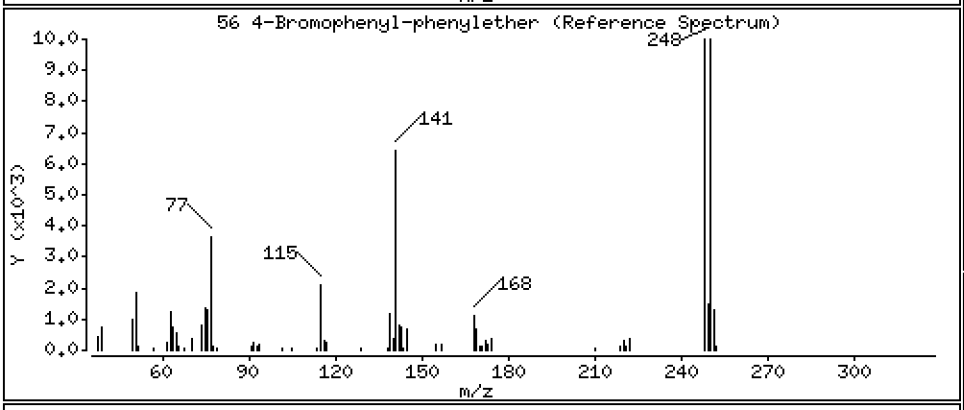
Column diameter: 0.25

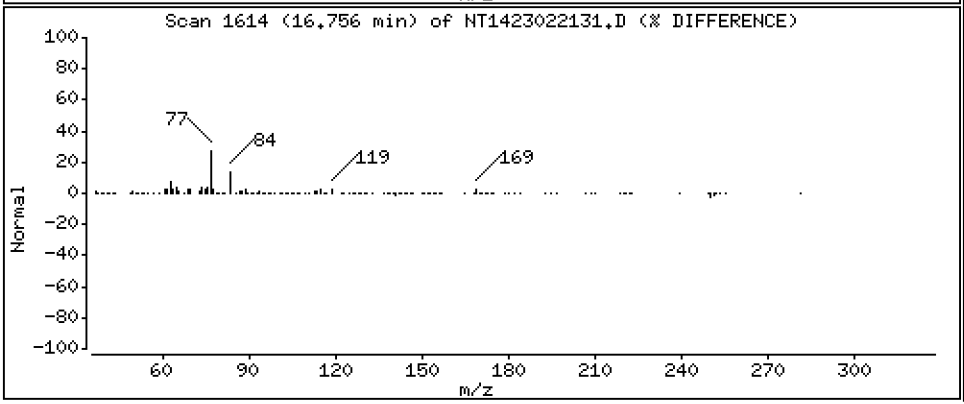
56 4-Bromophenyl-phenylether

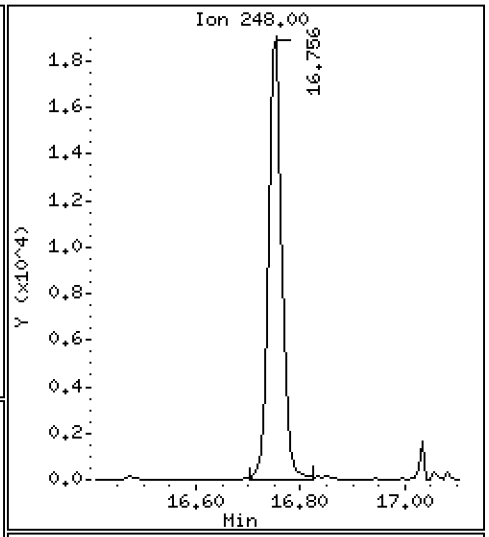
Concentration: 0.5084 ug/mL

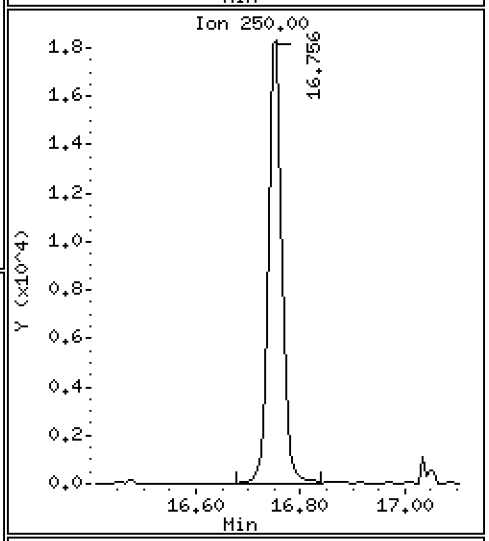


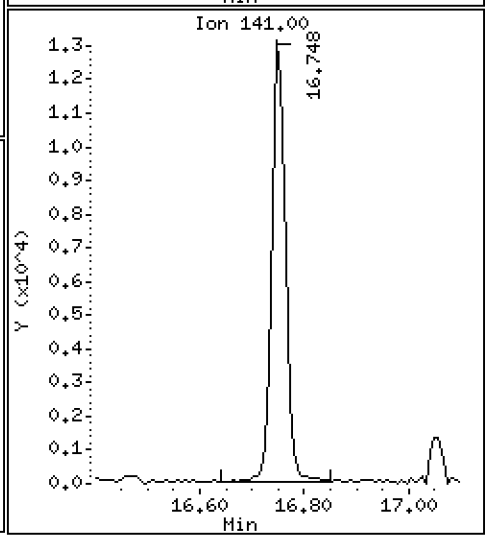












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

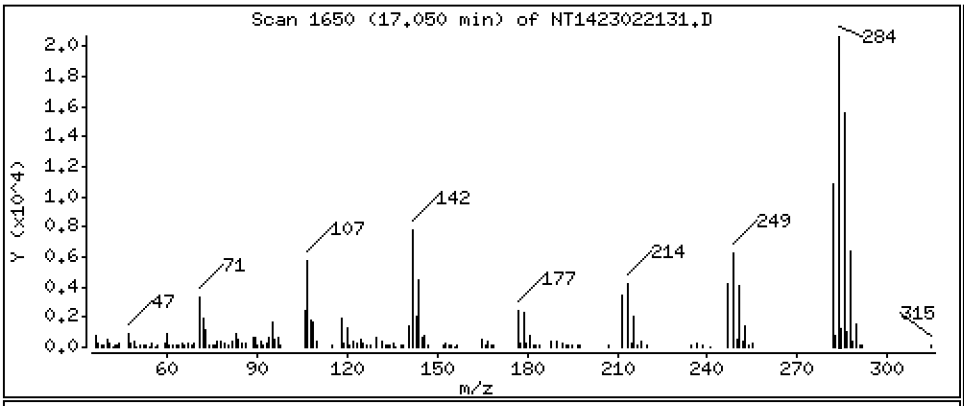
Operator: DSD

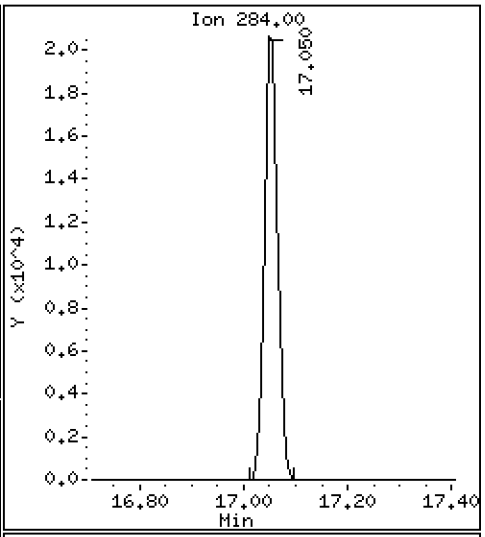
Column phase: ZB-5msi

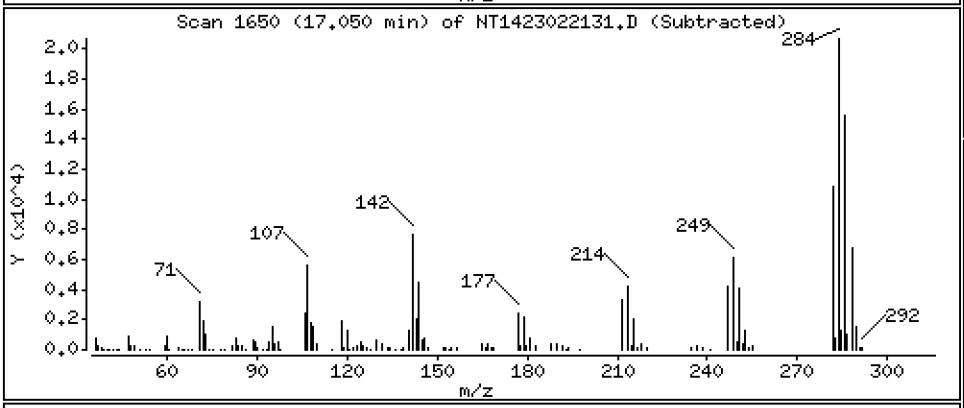
Column diameter: 0.25

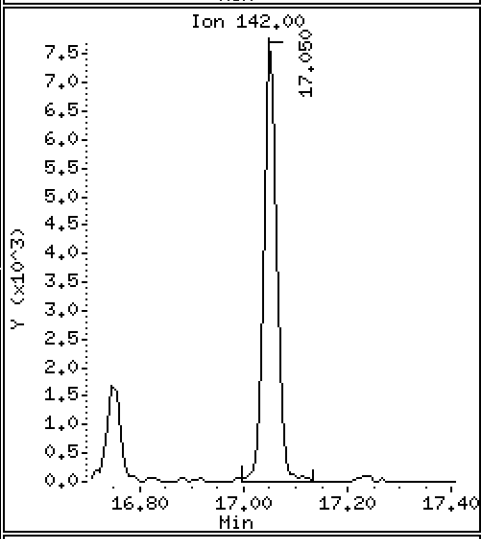
57 Hexachlorobenzene

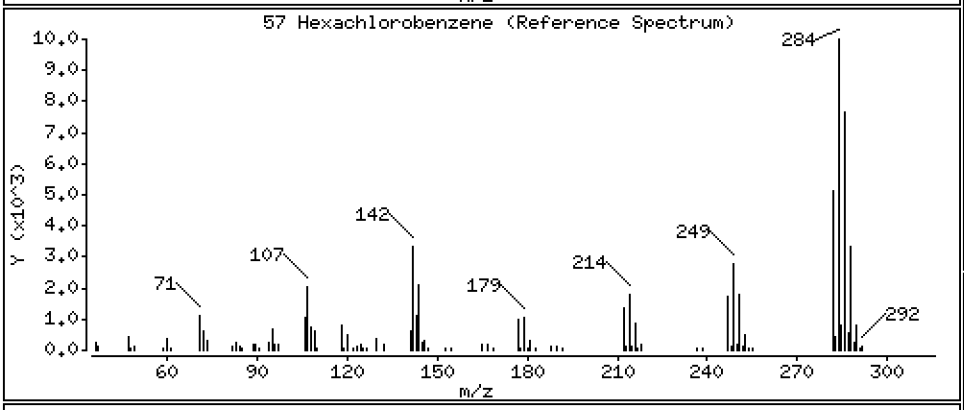
Concentration: 0.5386 ug/mL

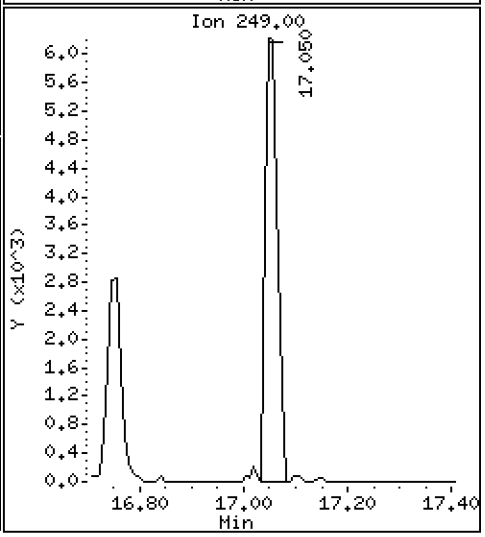


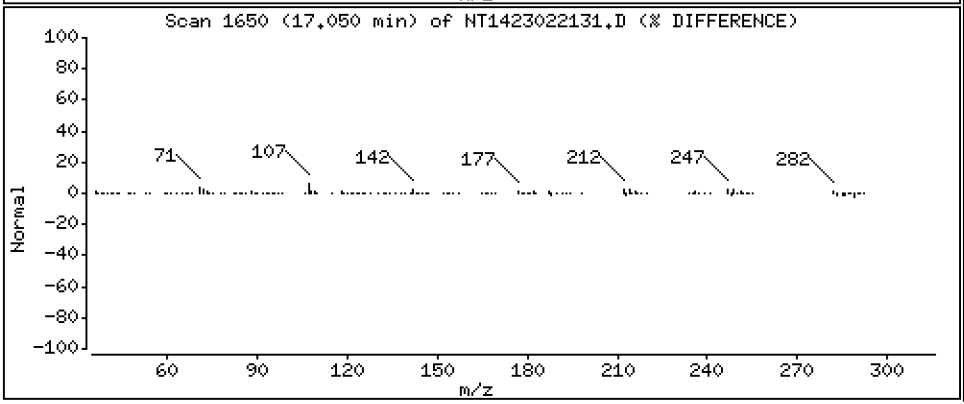












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

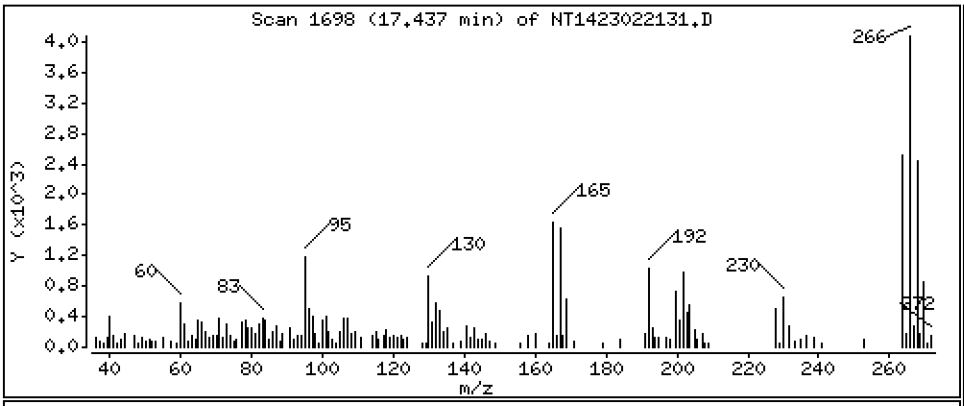
Operator: DSD

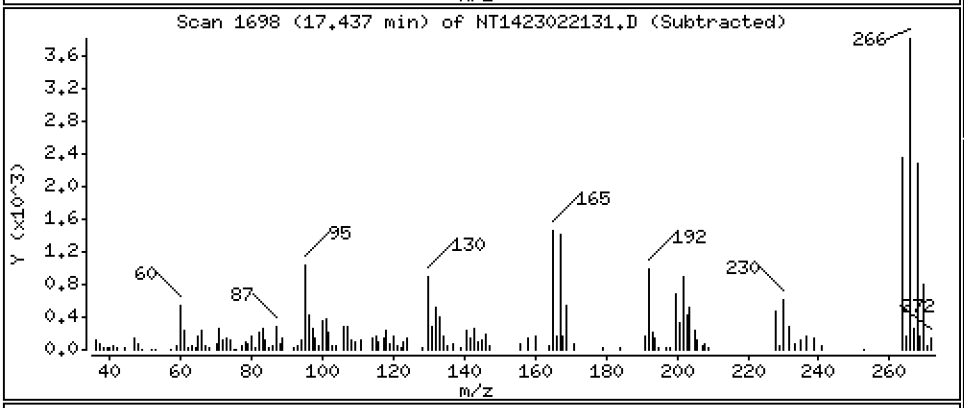
Column phase: ZB-5msi

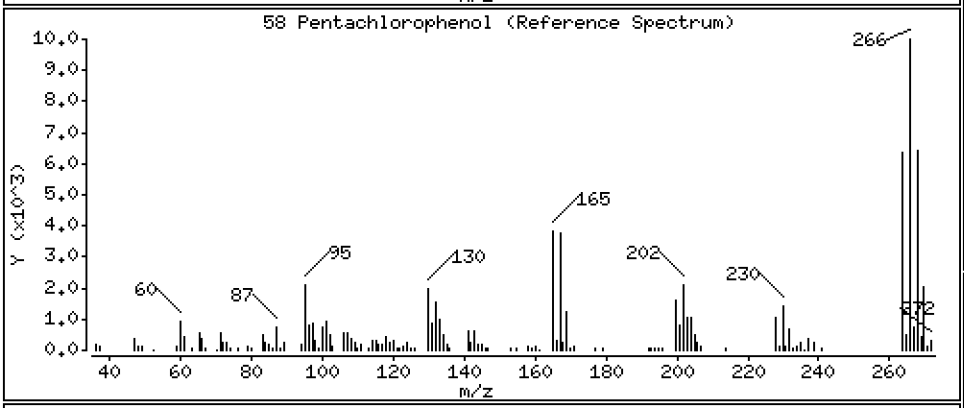
Column diameter: 0.25

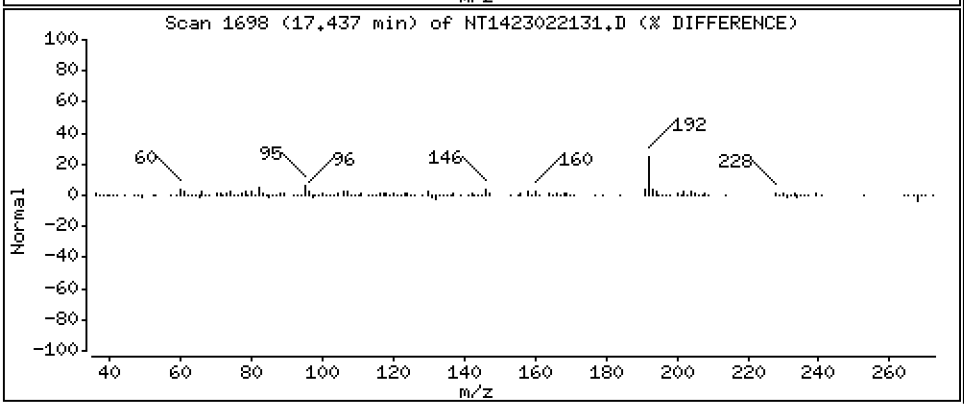
58 Pentachlorophenol

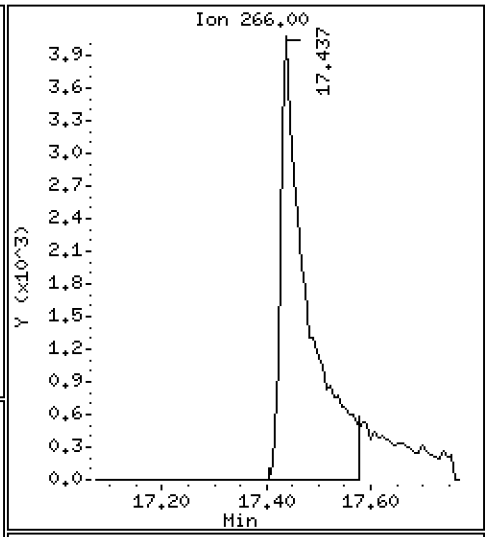
Concentration: 0.4510 ug/mL

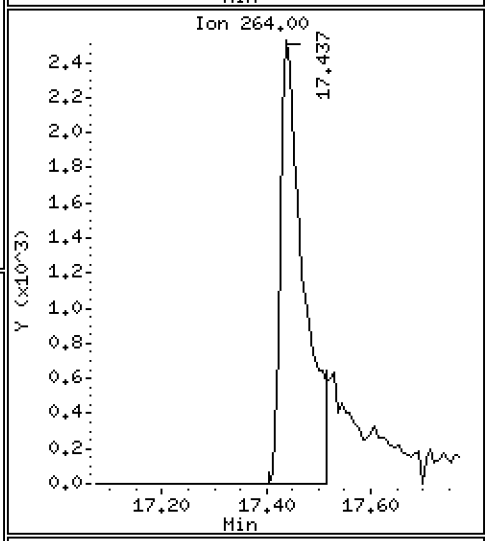


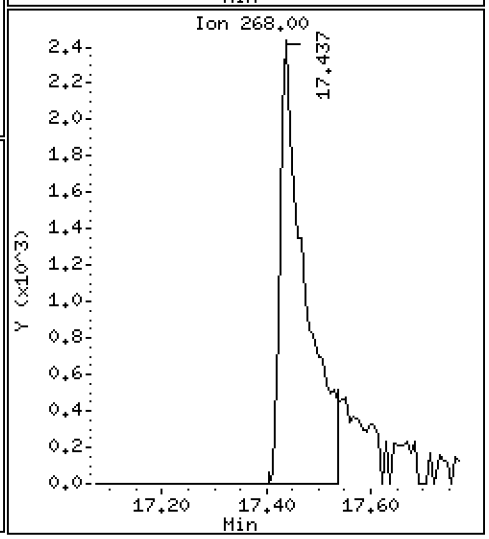












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

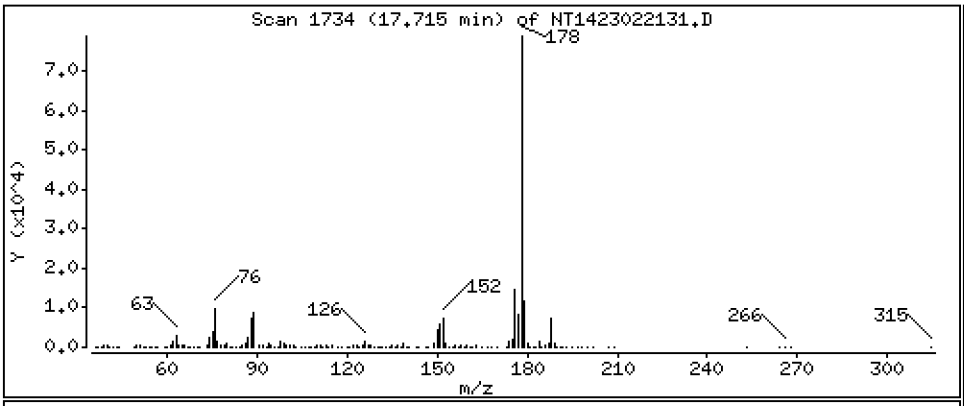
Operator: DSD

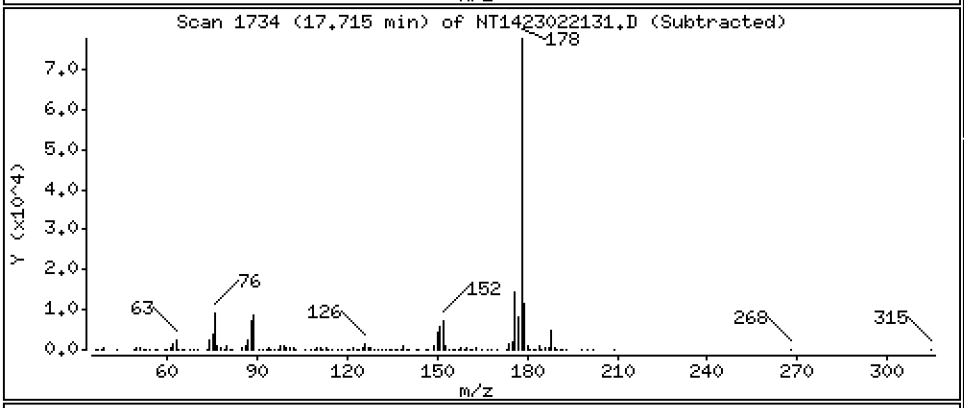
Column phase: ZB-5msi

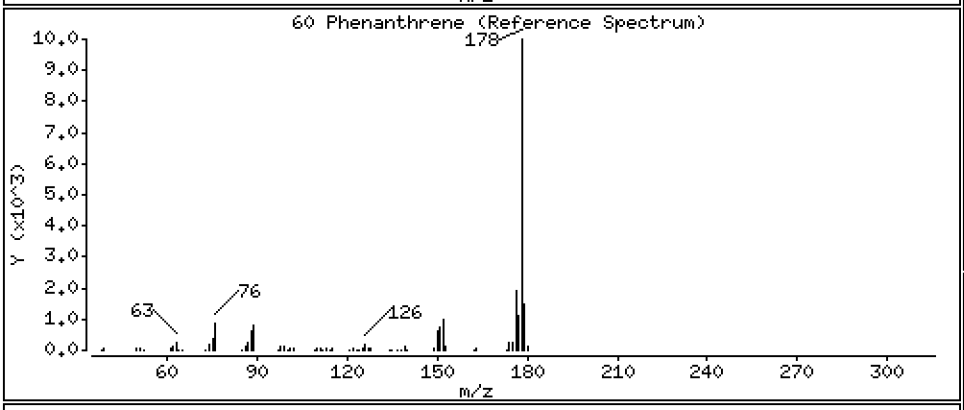
Column diameter: 0.25

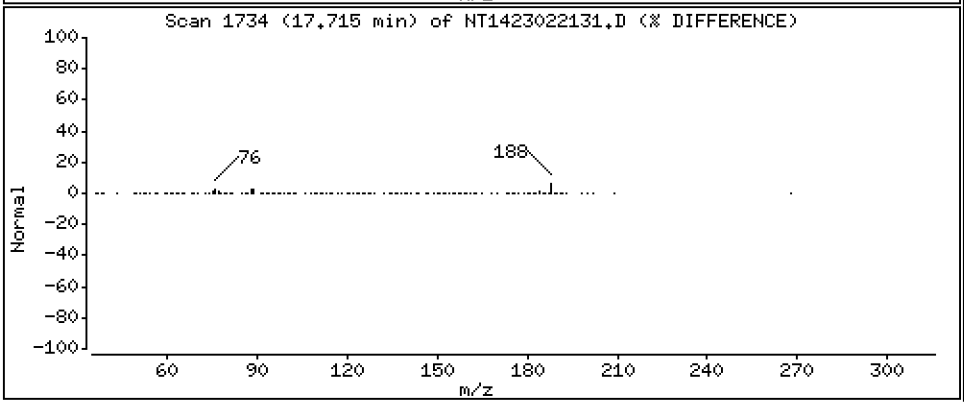
60 Phenanthrene

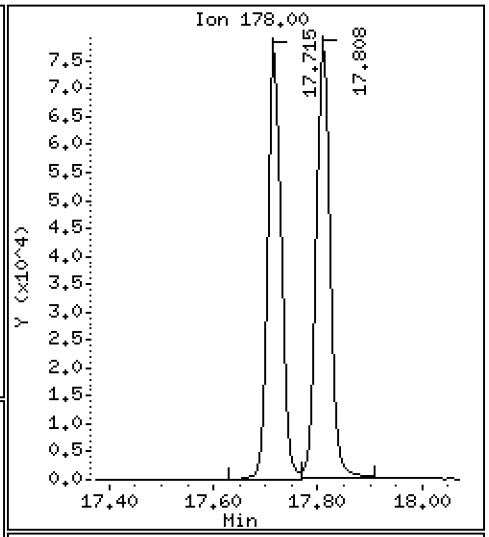
Concentration: 0.5456 ug/mL

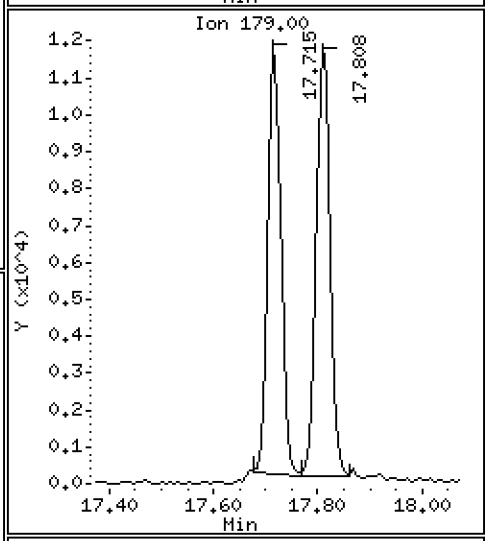


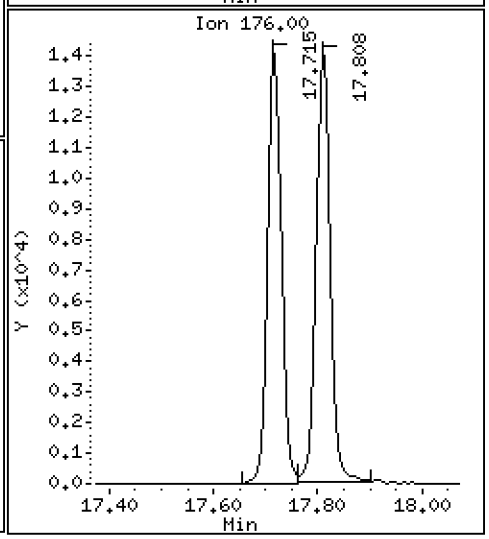












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

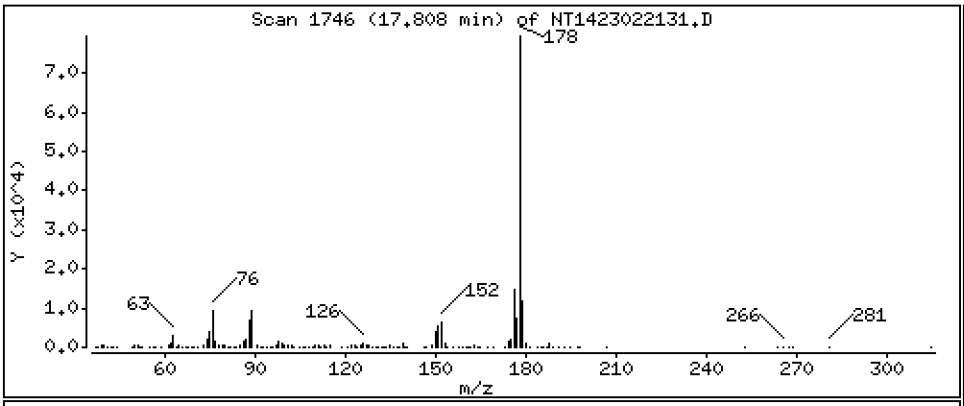
Operator: DSD

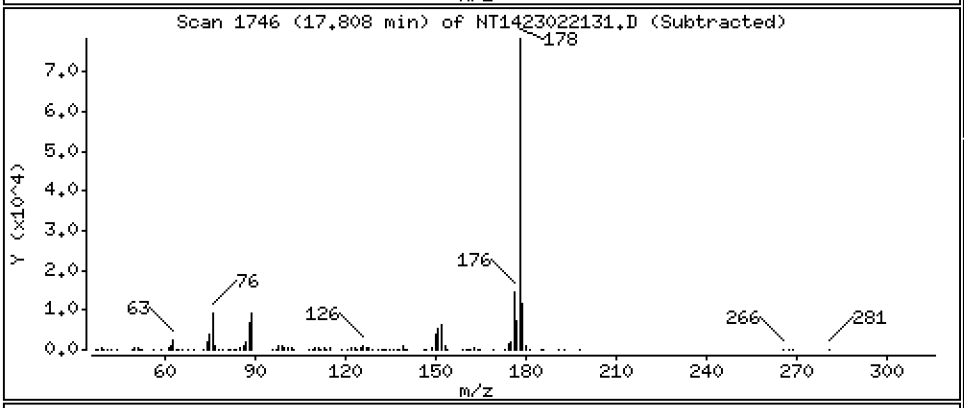
Column phase: ZB-5msi

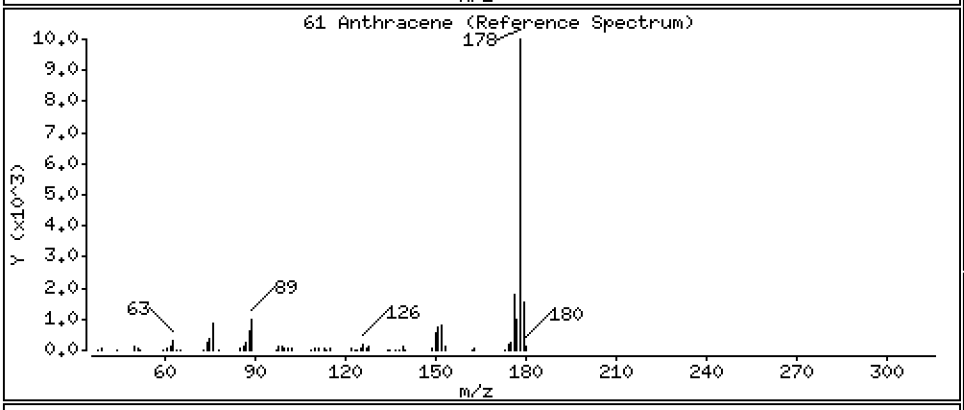
Column diameter: 0.25

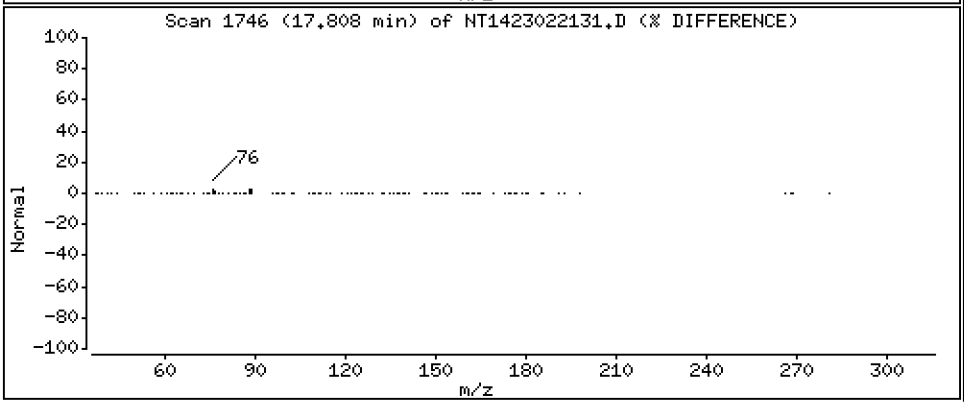
61 Anthracene

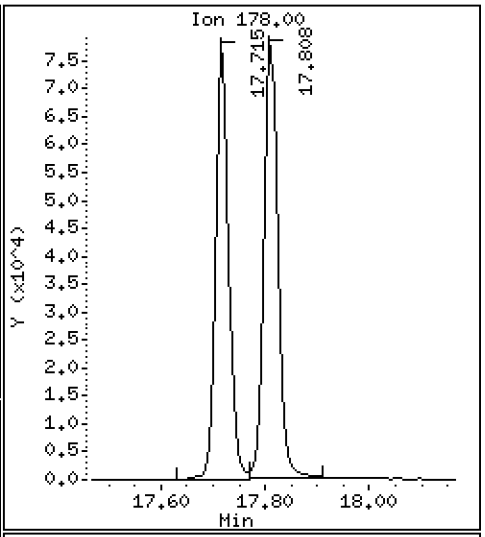
Concentration: 0.5625 ug/mL

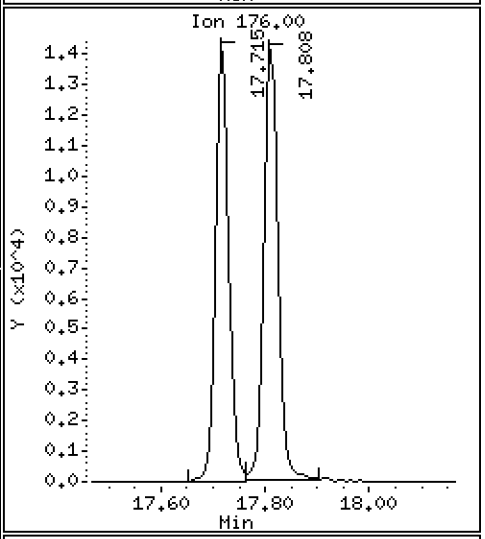


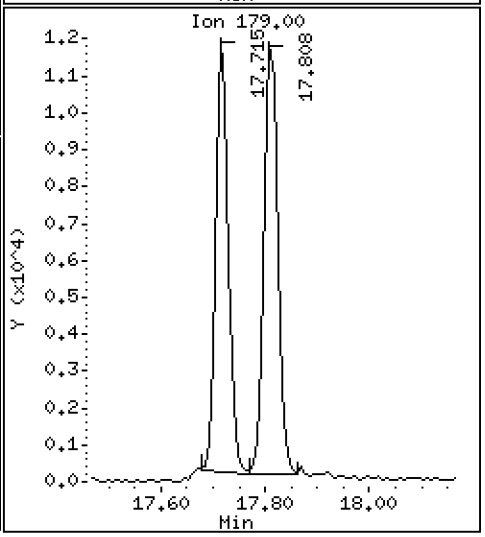












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

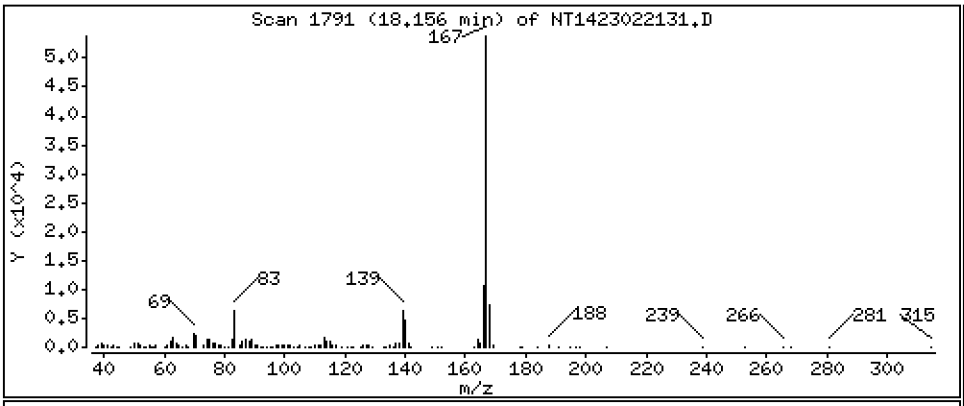
Operator: DSD

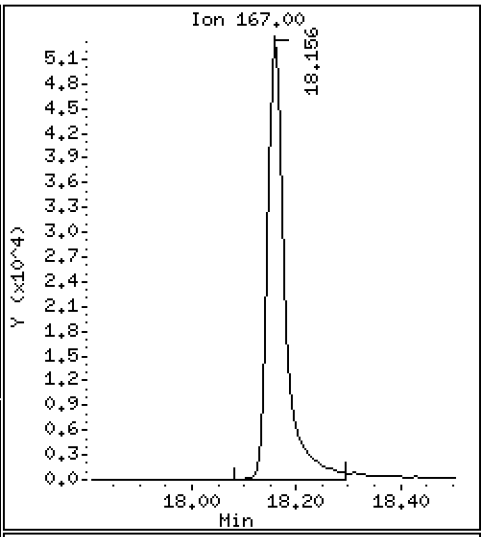
Column phase: ZB-5msi

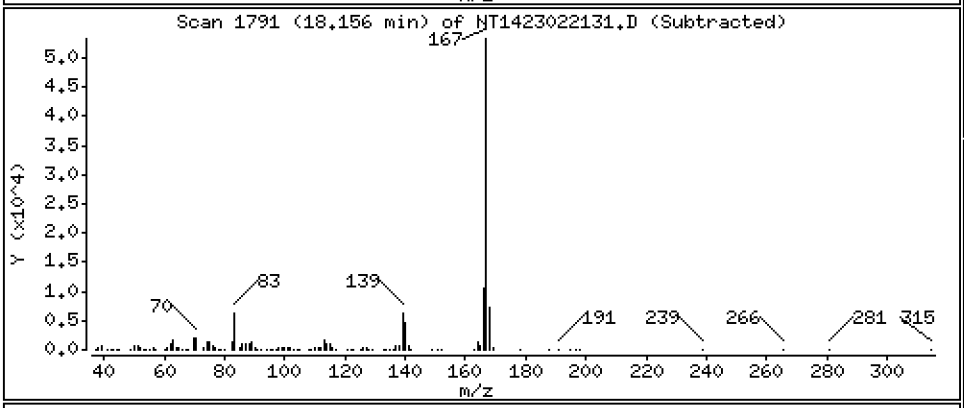
Column diameter: 0.25

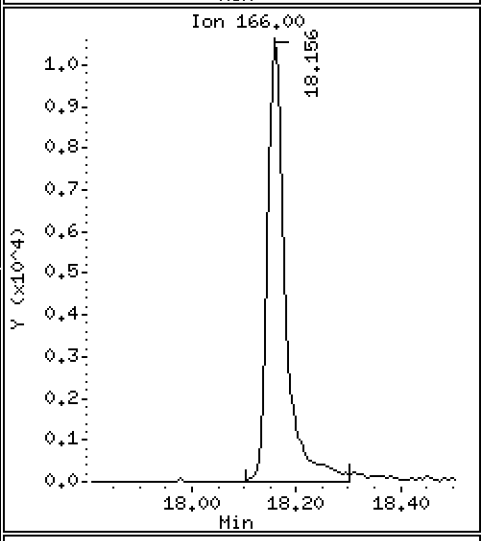
62 Carbazole

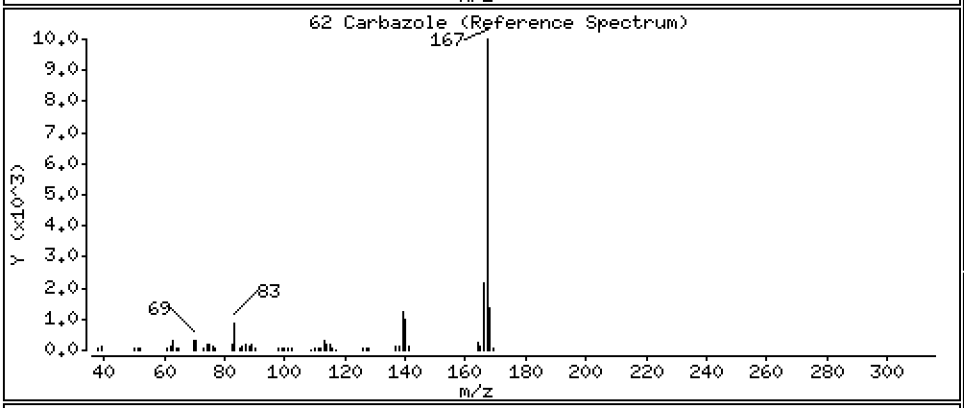
Concentration: 0.5494 ug/mL

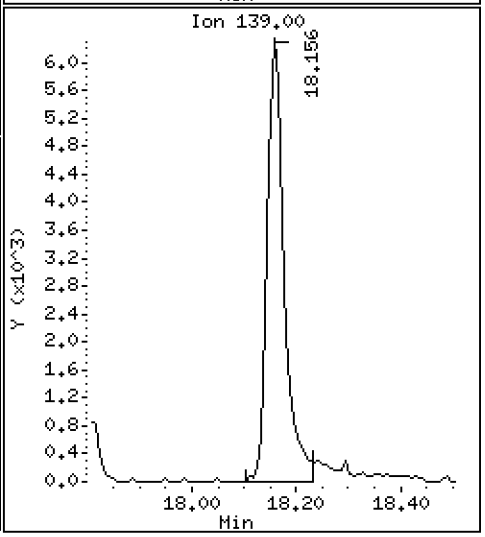


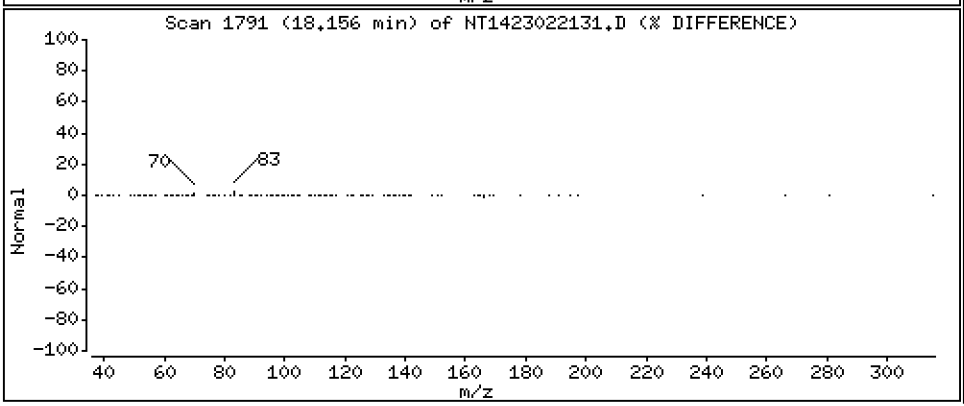












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

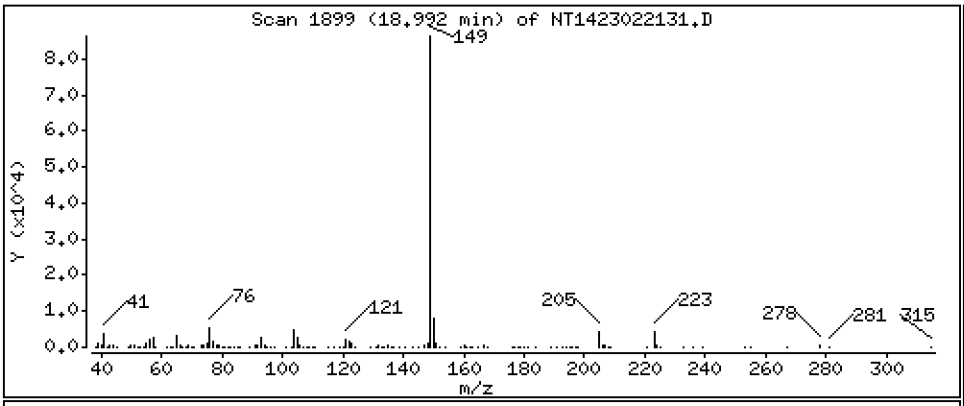
Operator: DSD

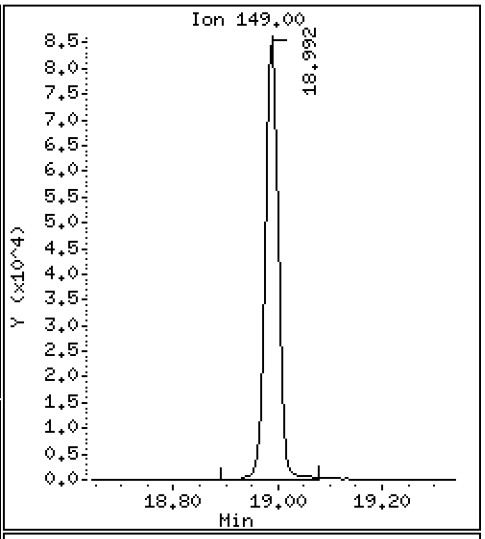
Column phase: ZB-5msi

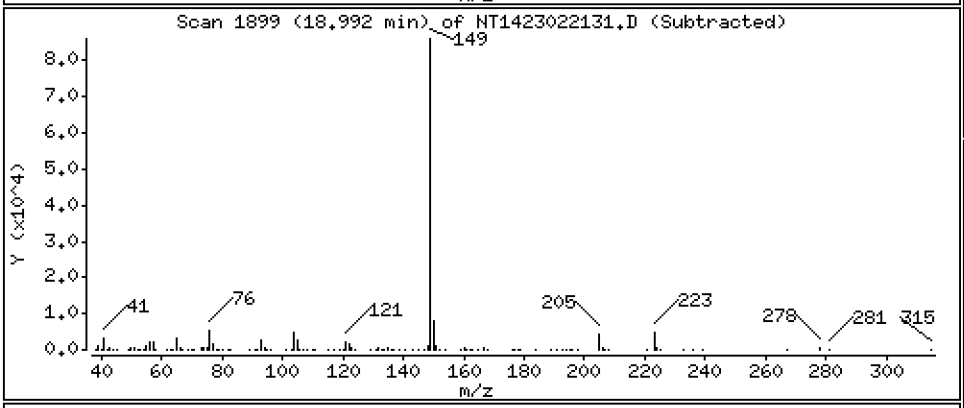
Column diameter: 0.25

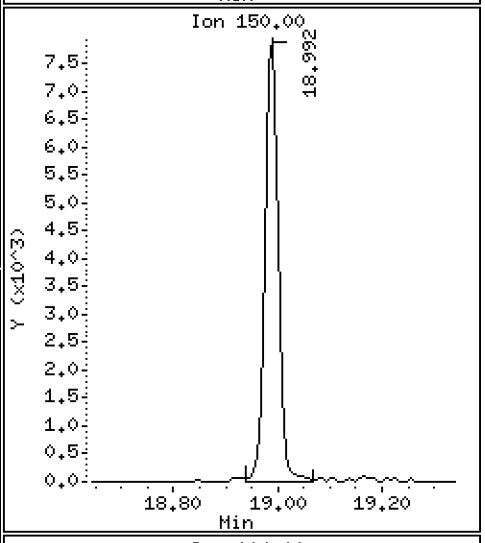
63 Di-n-butylphthalate

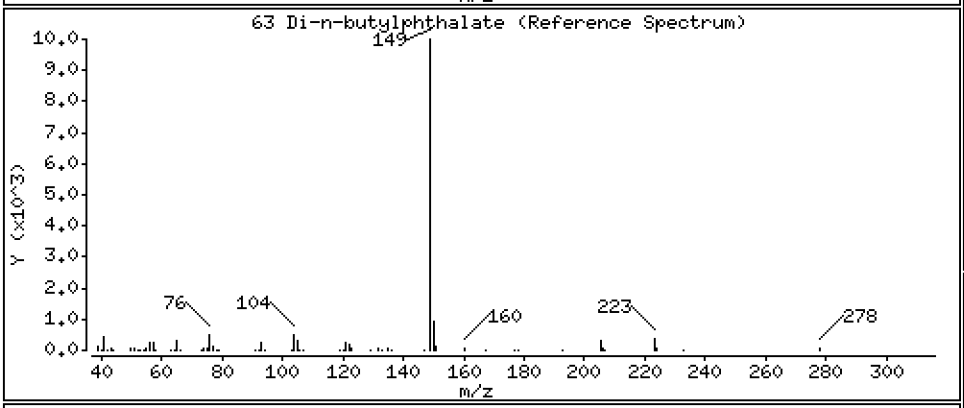
Concentration: 0.5733 ug/mL

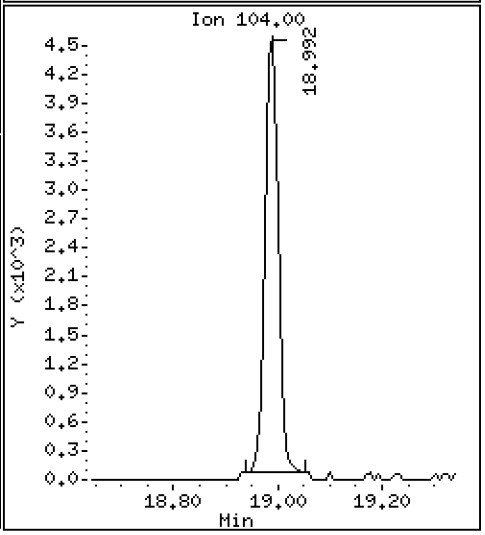


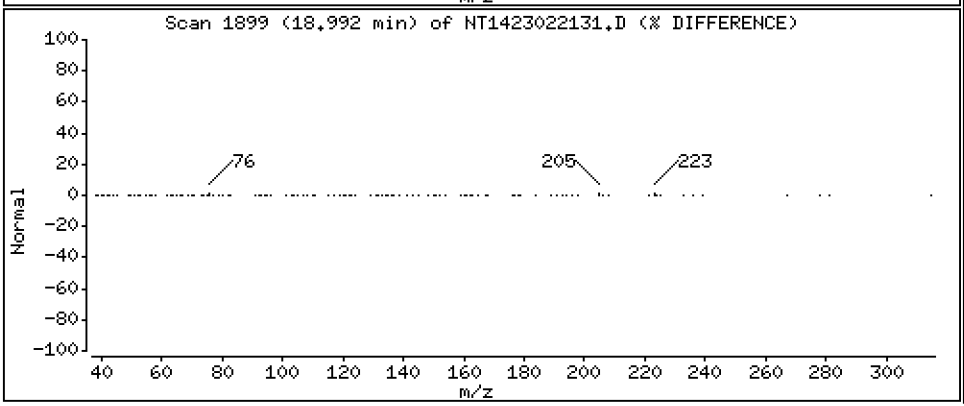












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

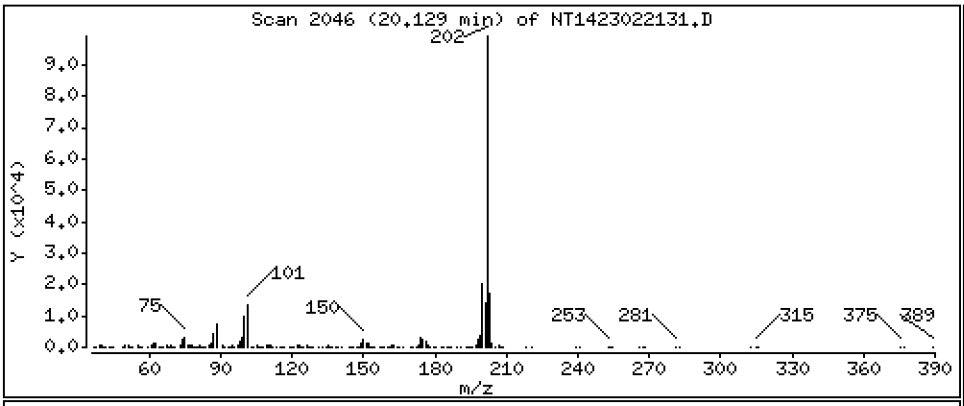
Operator: DSD

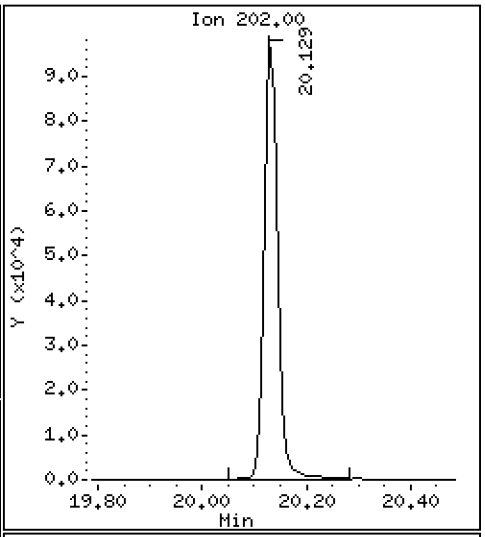
Column phase: ZB-5msi

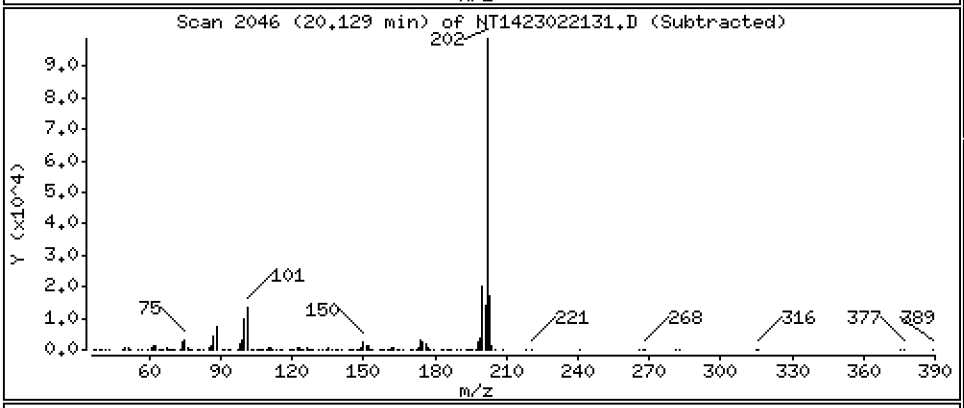
Column diameter: 0.25

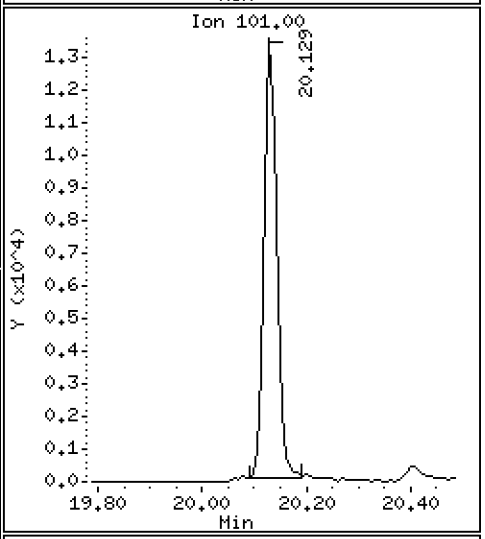
64 Fluoranthene

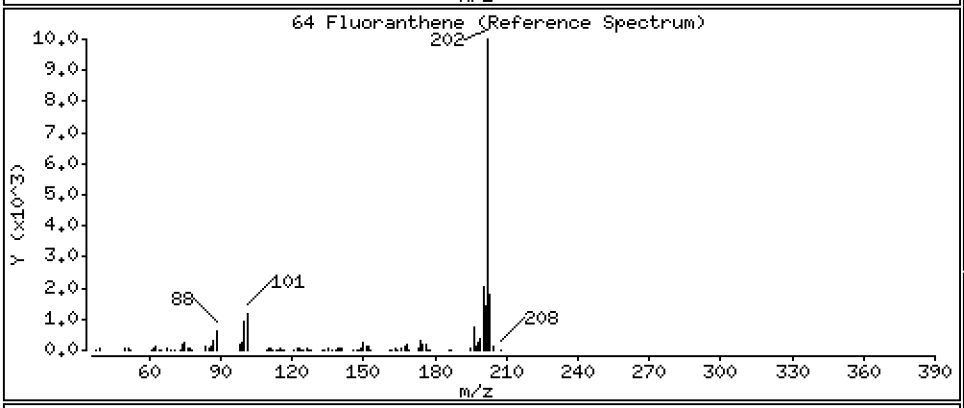
Concentration: 0.5136 ug/mL

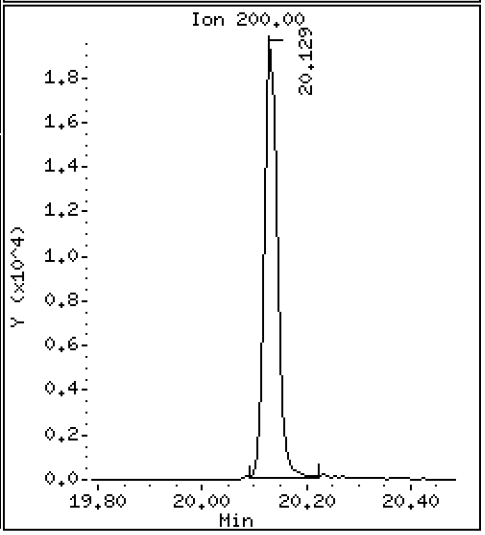


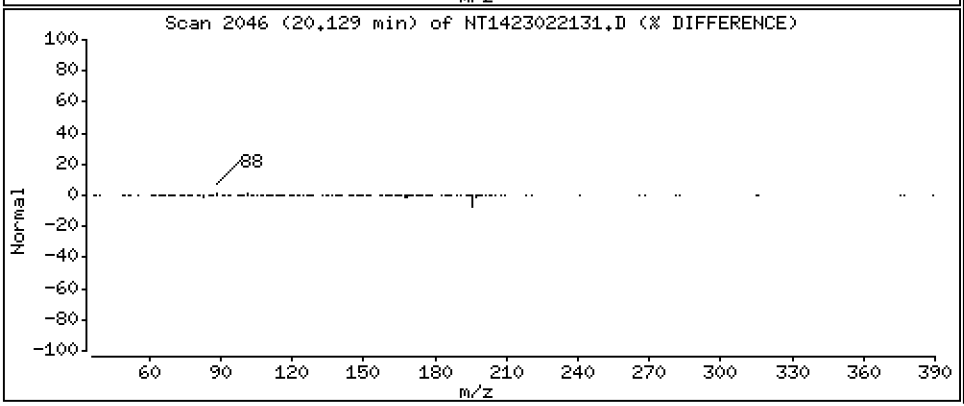












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

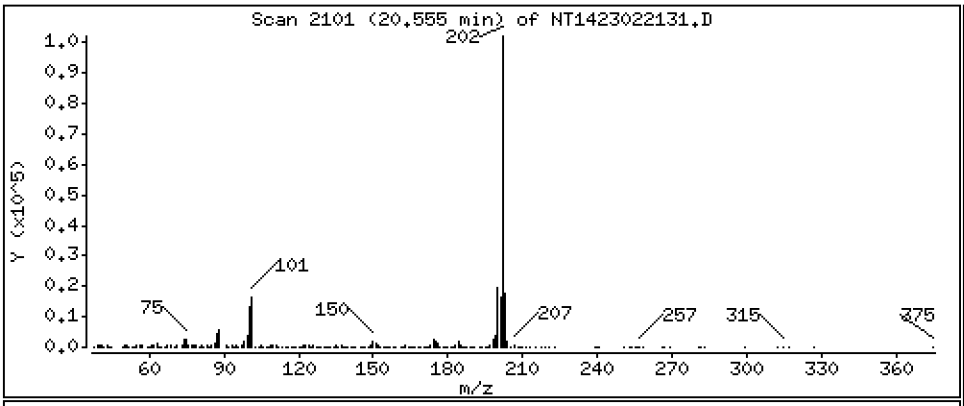
Operator: DSD

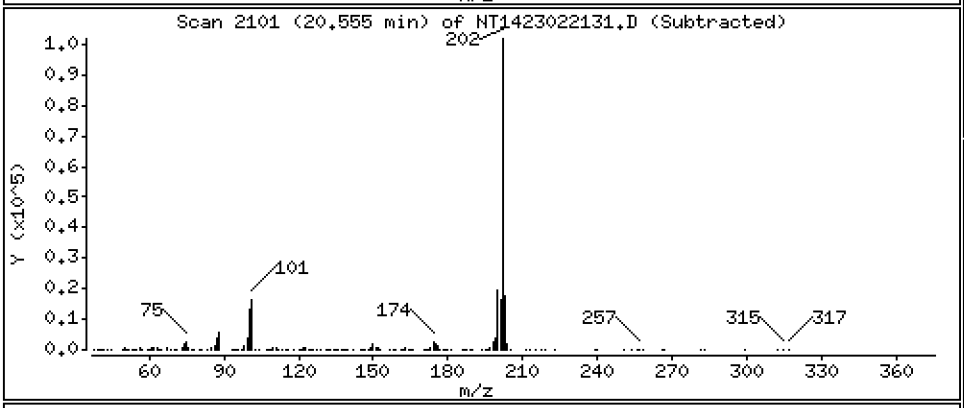
Column phase: ZB-5msi

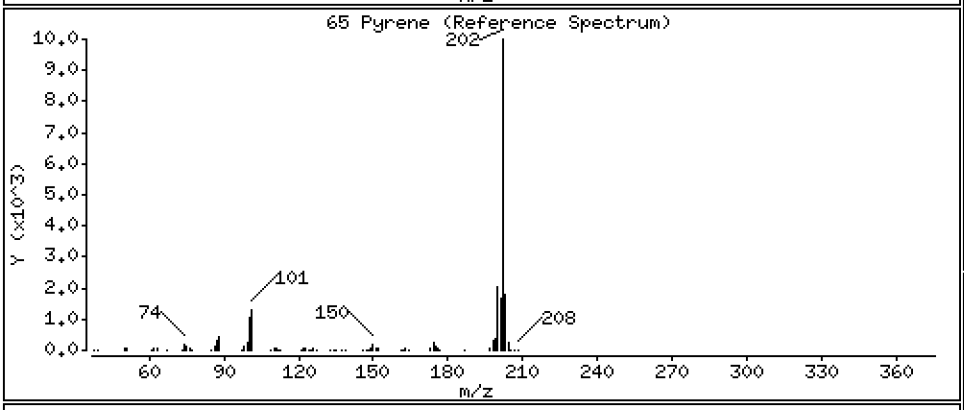
Column diameter: 0.25

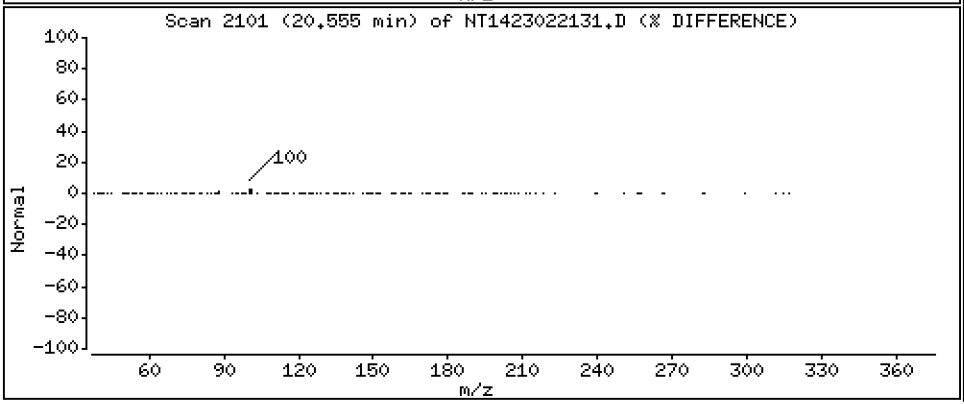
65 Pyrene

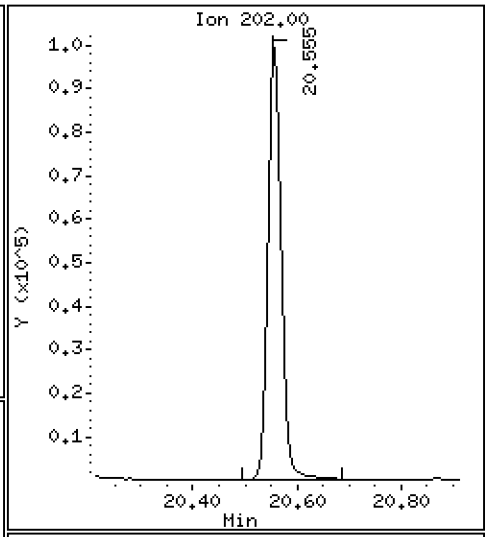
Concentration: 0.4958 ug/mL

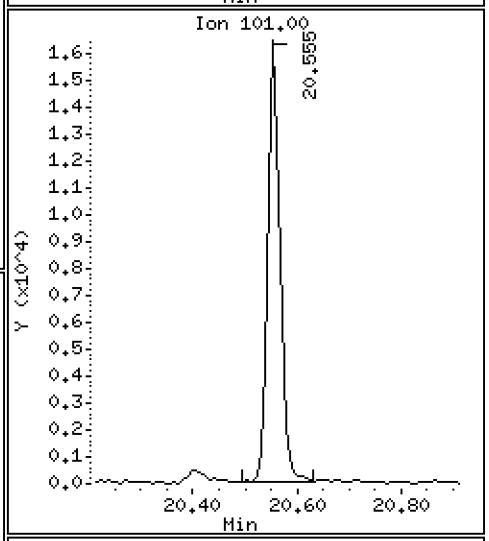


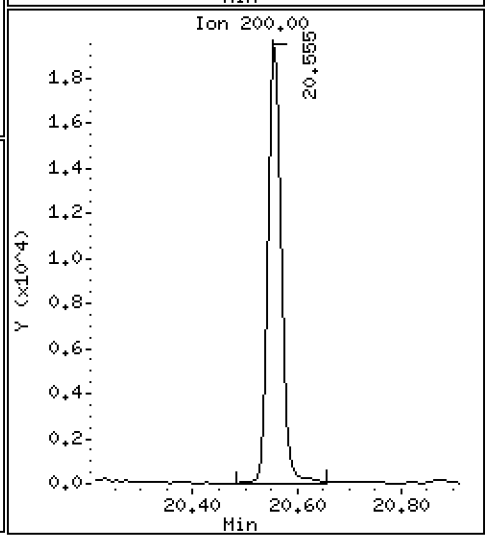












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

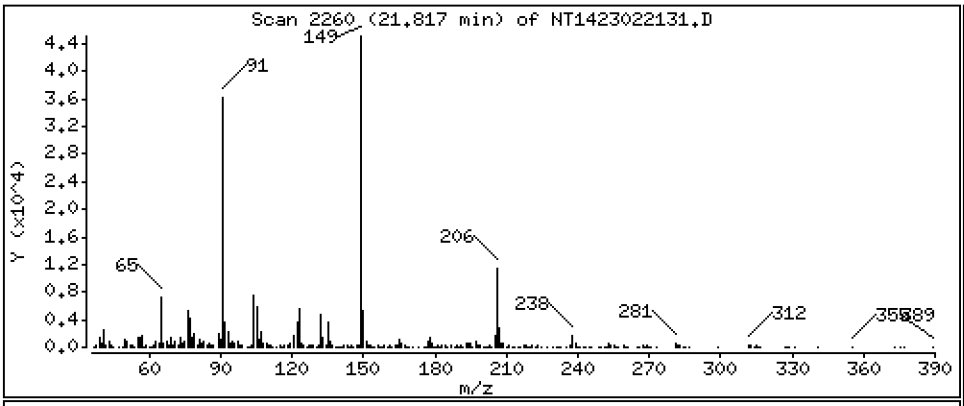
Operator: DSD

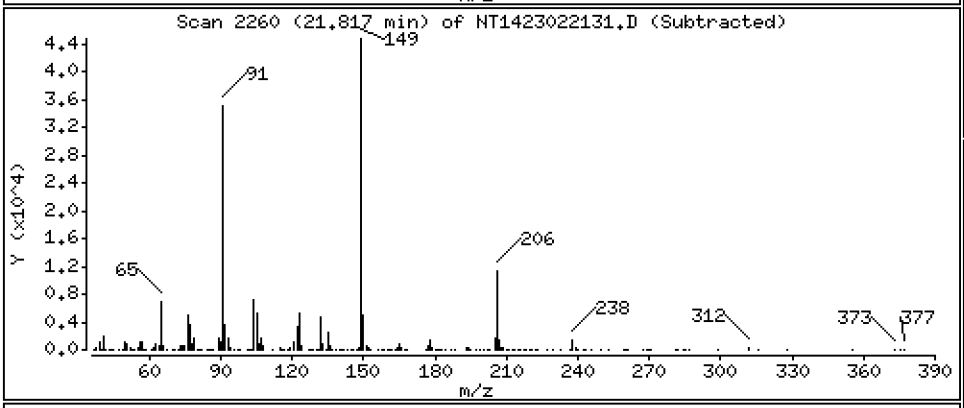
Column phase: ZB-5msi

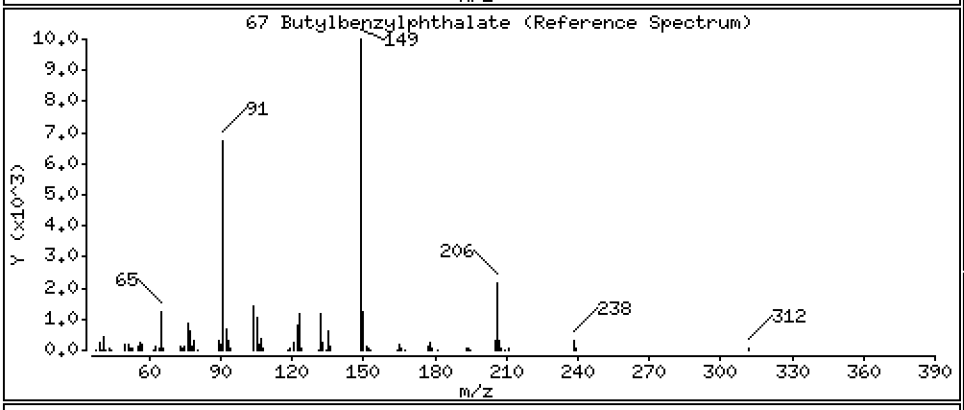
Column diameter: 0.25

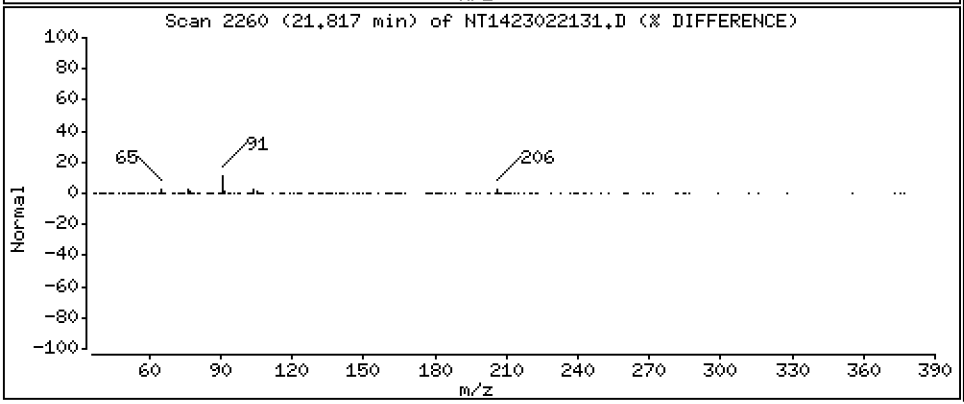
67 Butylbenzylphthalate

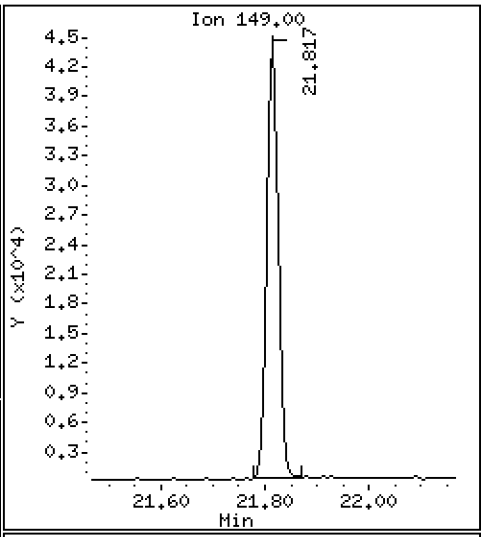
Concentration: 0.5538 ug/mL

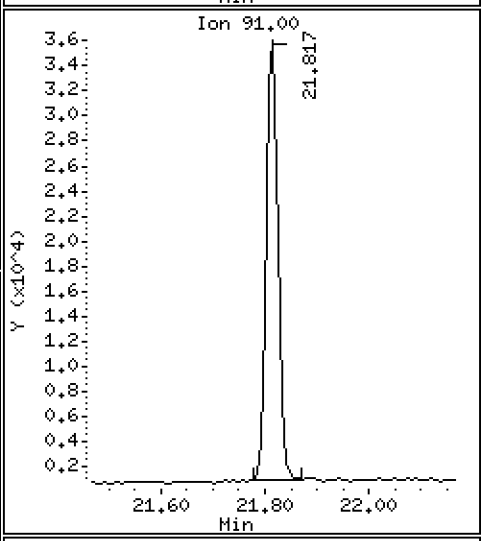


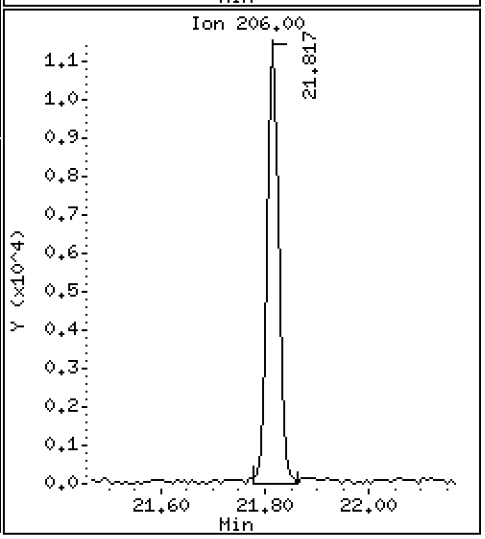












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

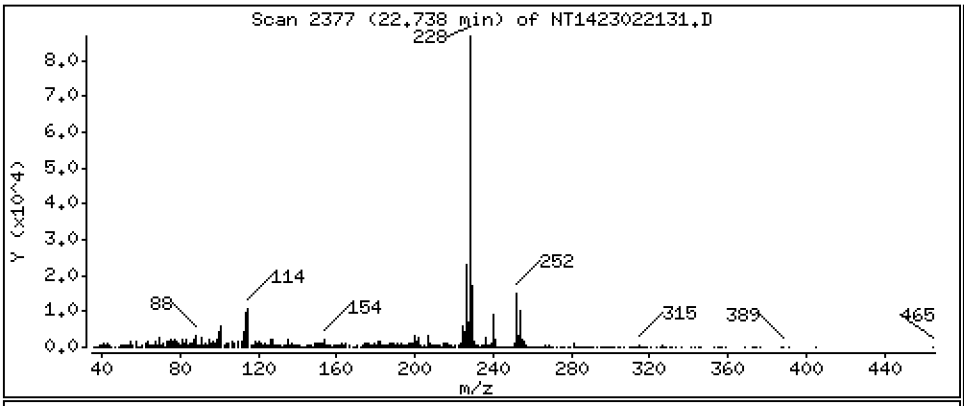
Operator: DSD

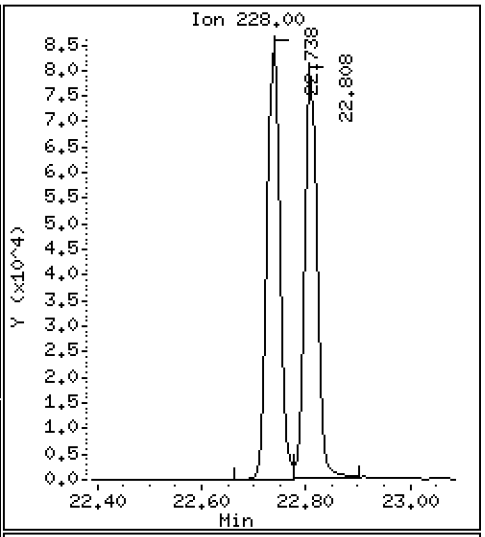
Column phase: ZB-5msi

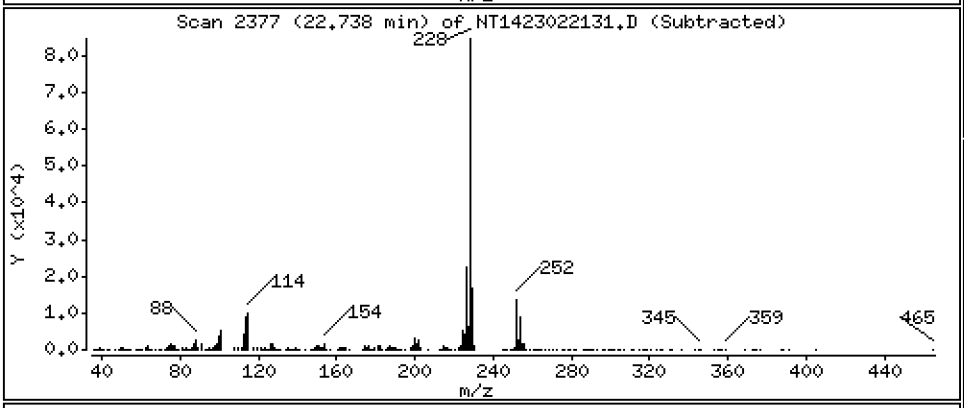
Column diameter: 0.25

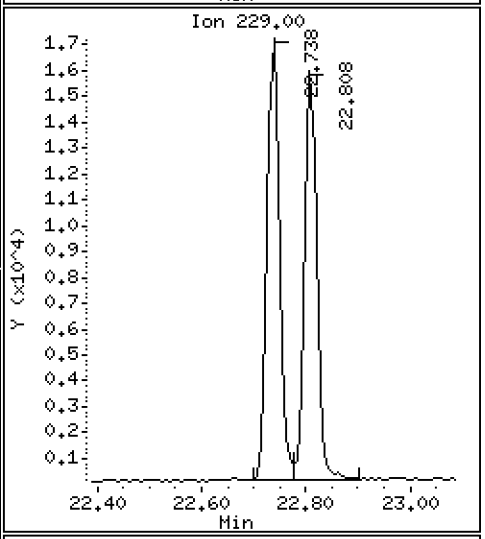
68 Benzo(a)anthracene

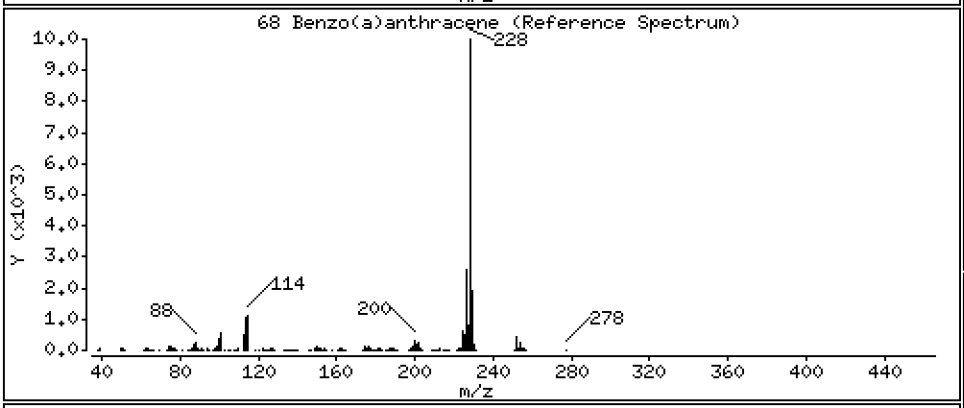
Concentration: 0.5733 ug/mL

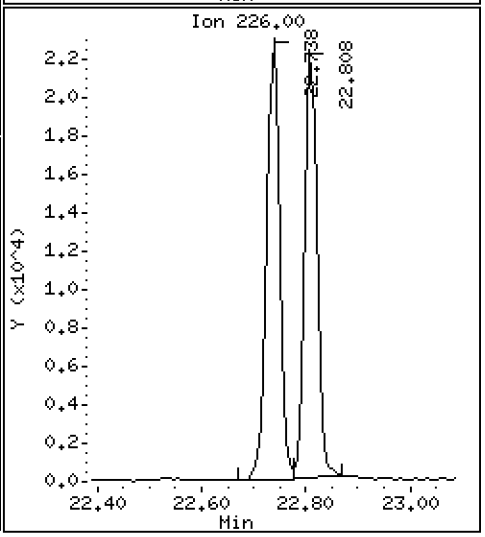


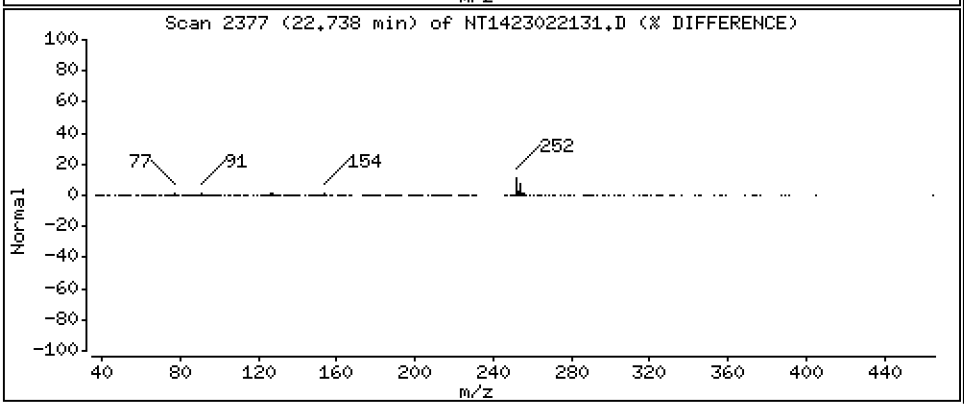












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

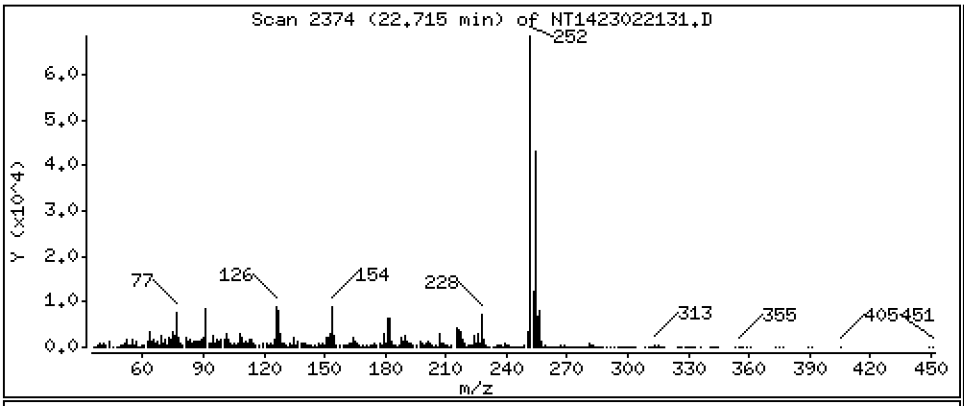
Operator: DSD

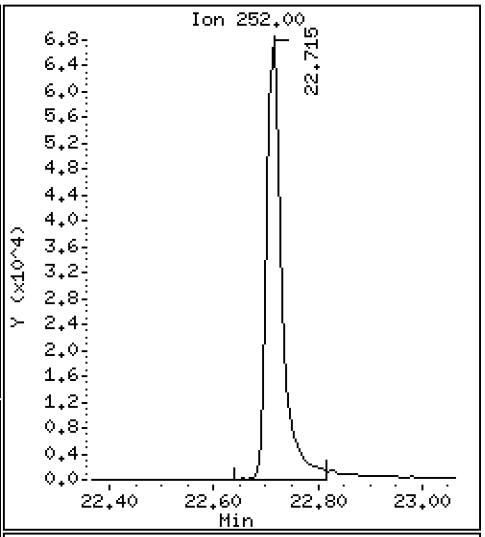
Column phase: ZB-5msi

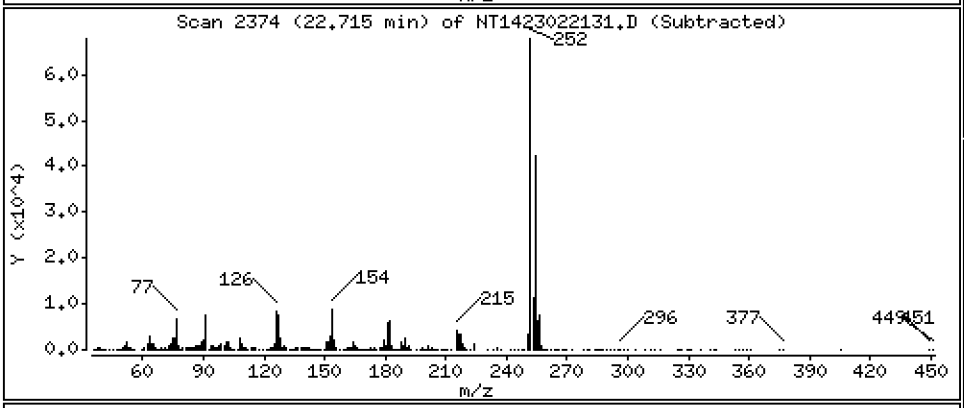
Column diameter: 0.25

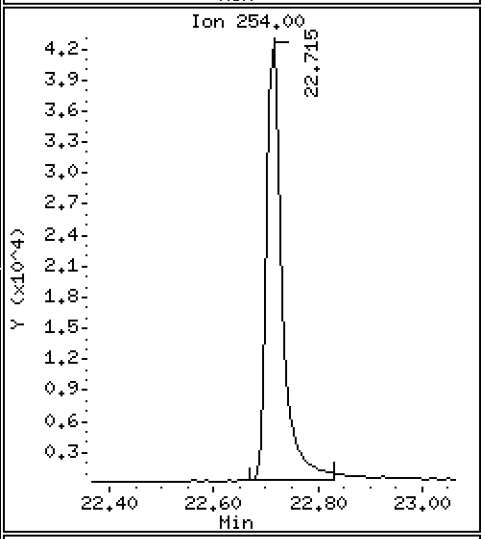
70 3,3'-Dichlorobenzidine

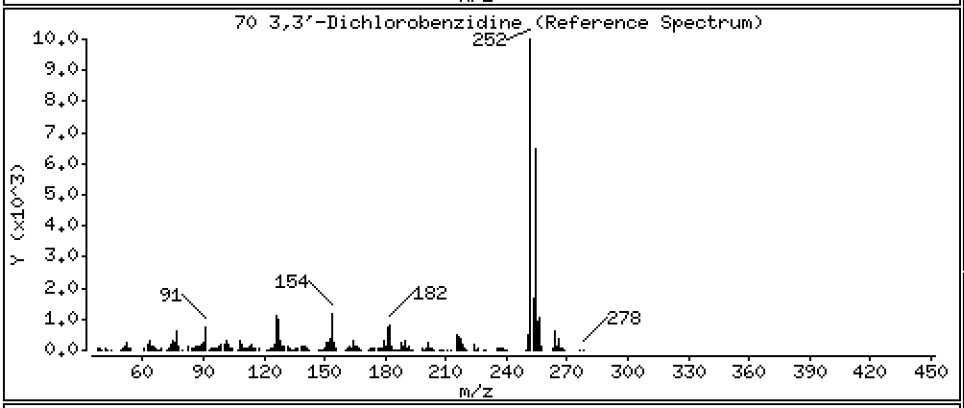
Concentration: 1.808 ug/mL

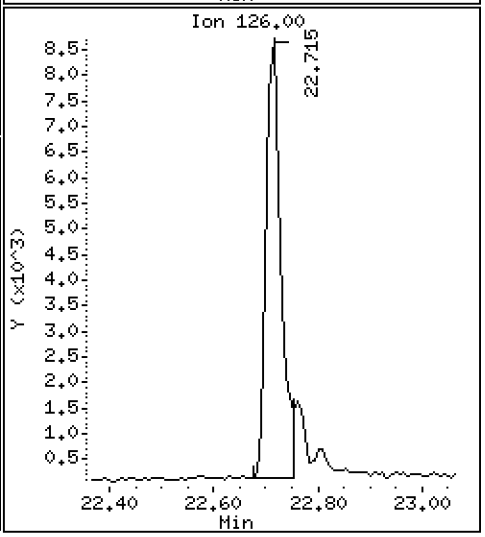


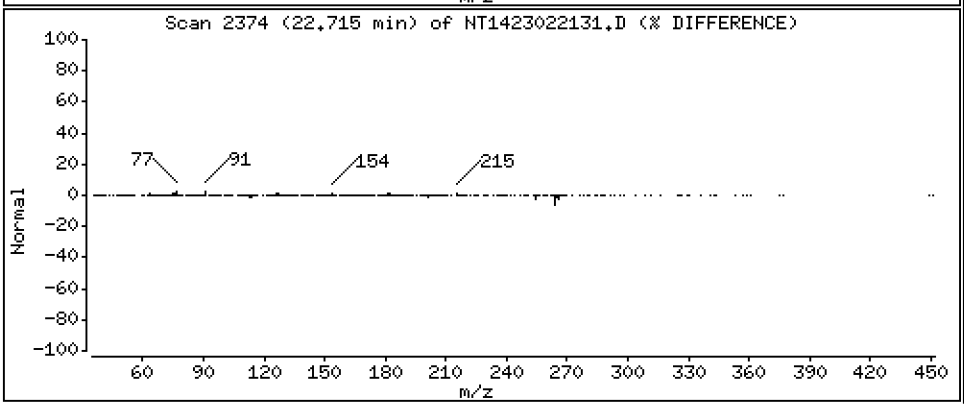












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

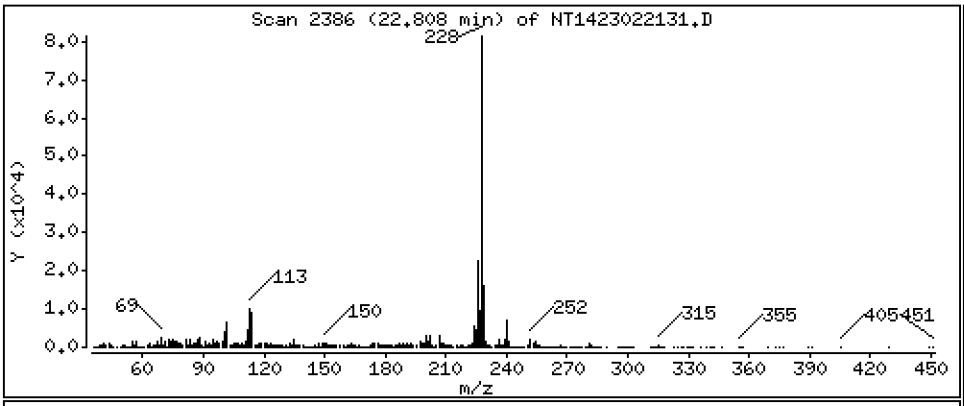
Operator: DSD

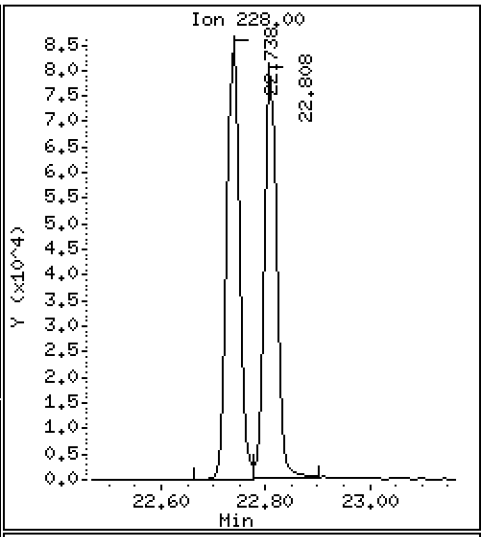
Column phase: ZB-5msi

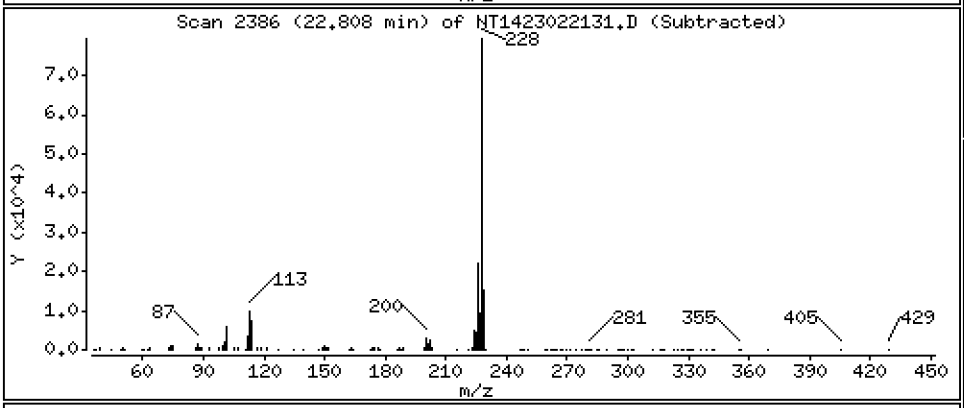
Column diameter: 0.25

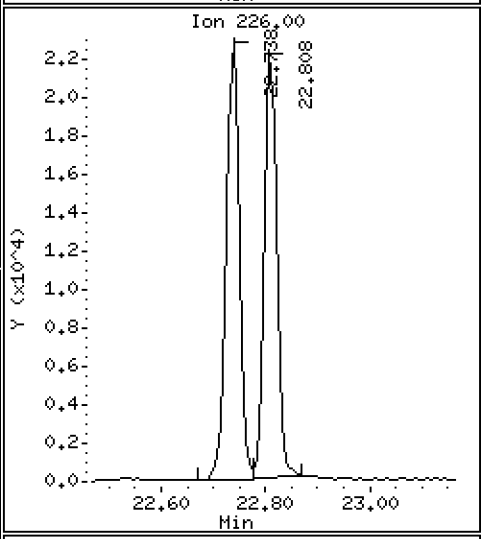
71 Chrysene

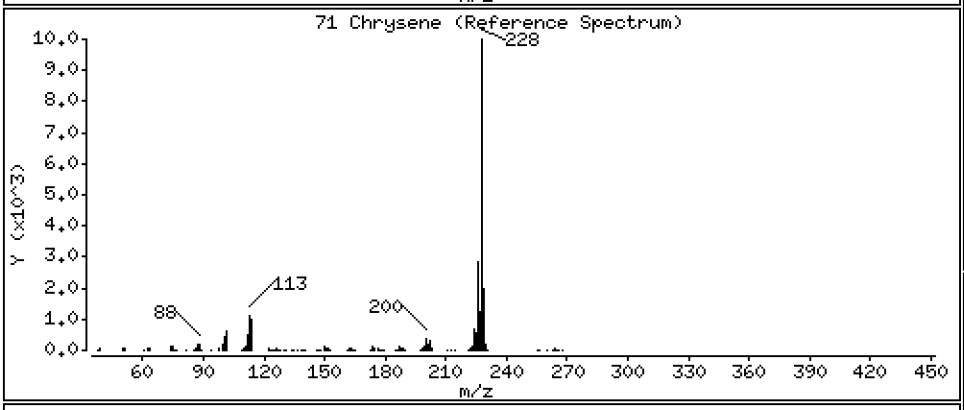
Concentration: 0.5729 ug/mL

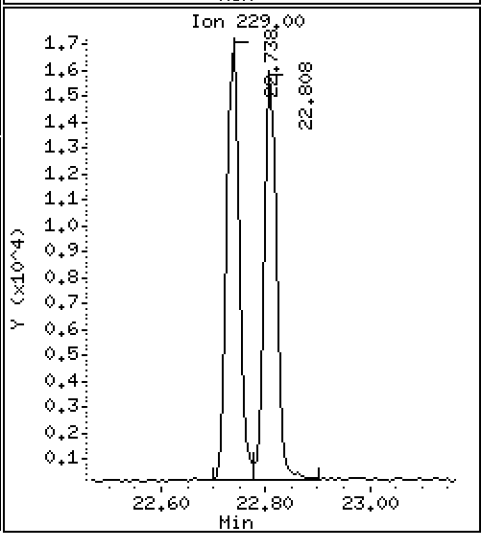


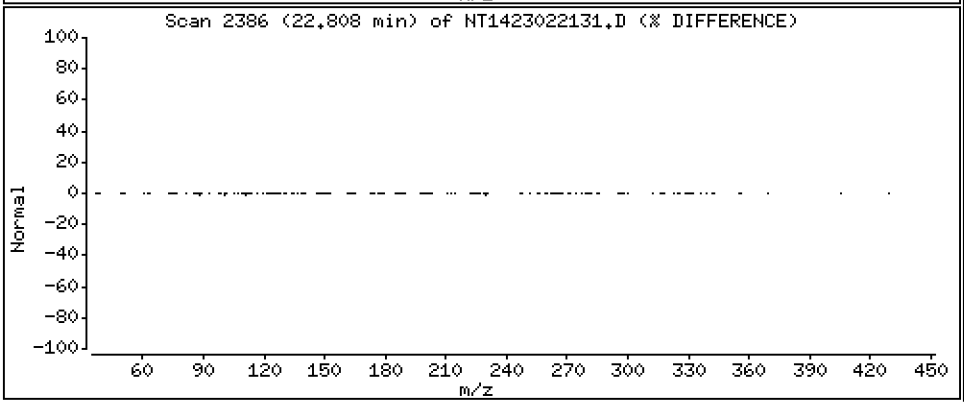












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

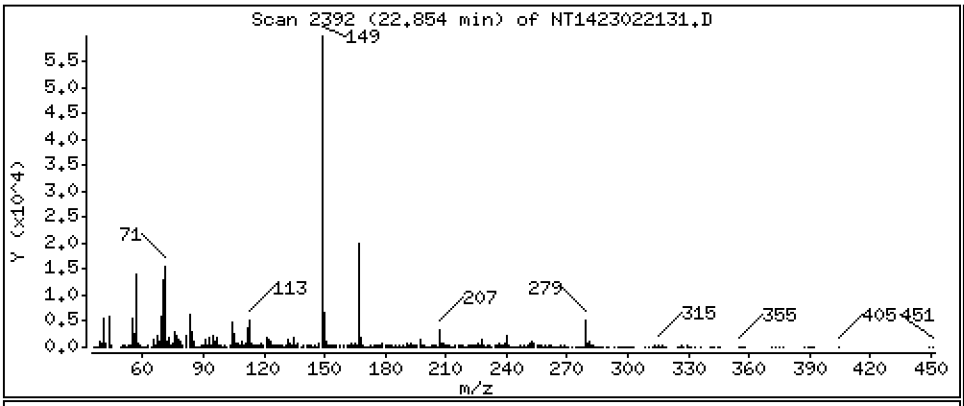
Operator: DSD

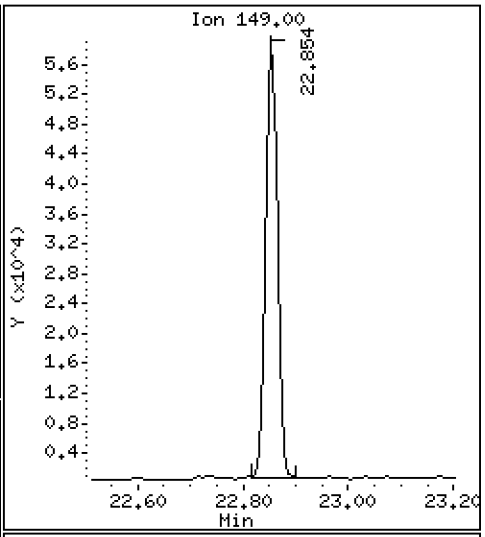
Column phase: ZB-5msi

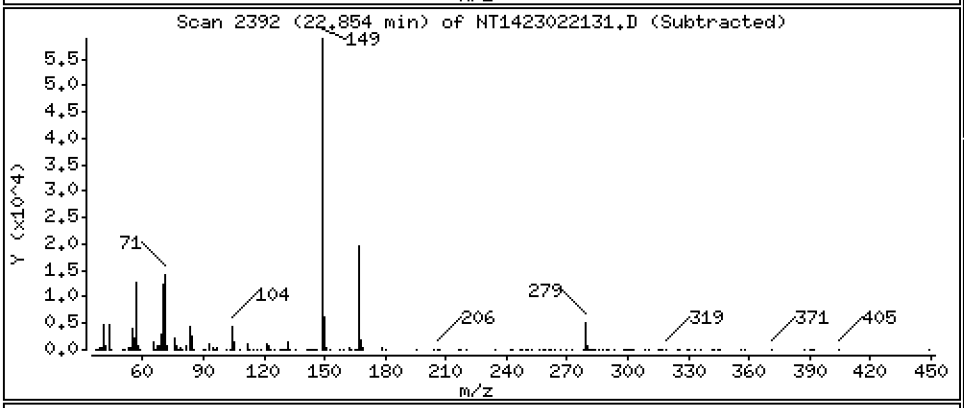
Column diameter: 0.25

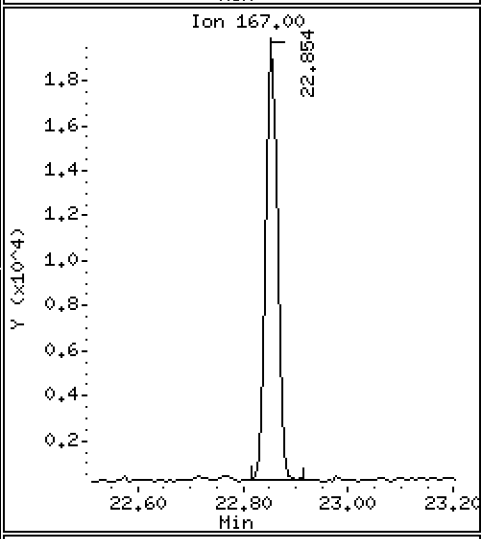
72 bis(2-Ethylhexyl)phthalate

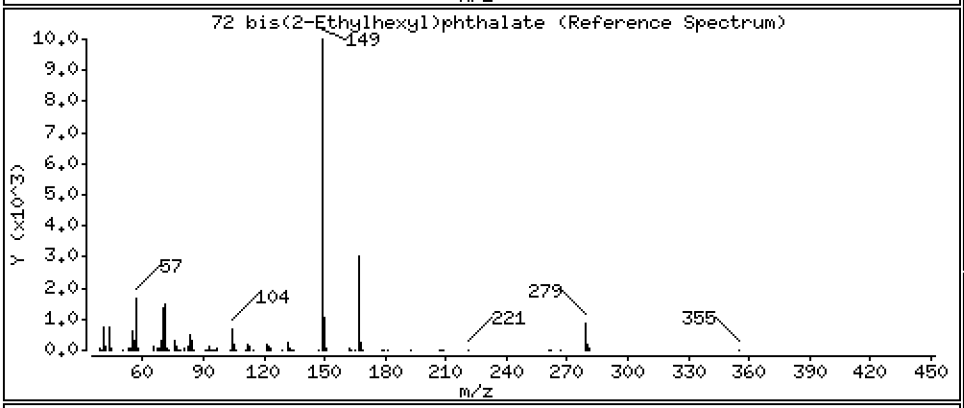
Concentration: 0.3918 ug/mL

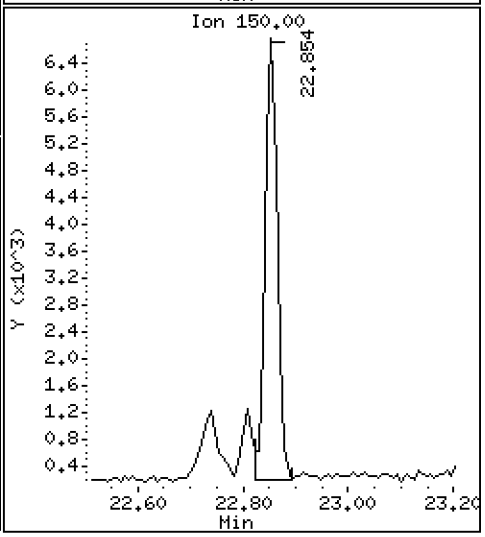


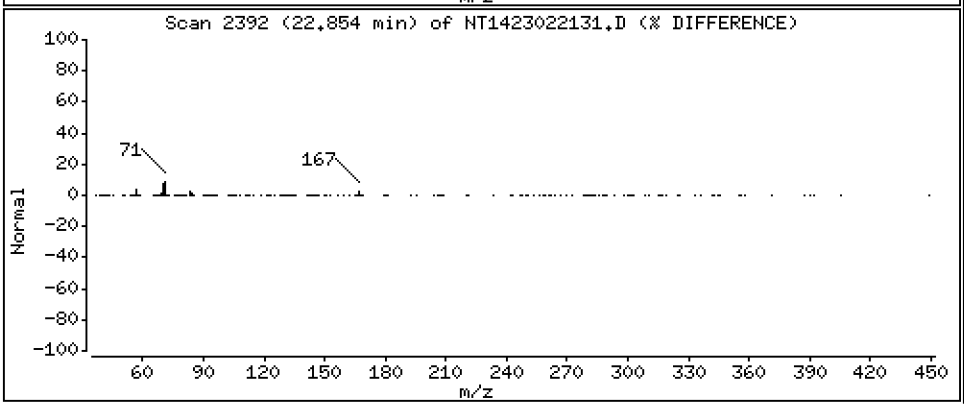












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022131.D

Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

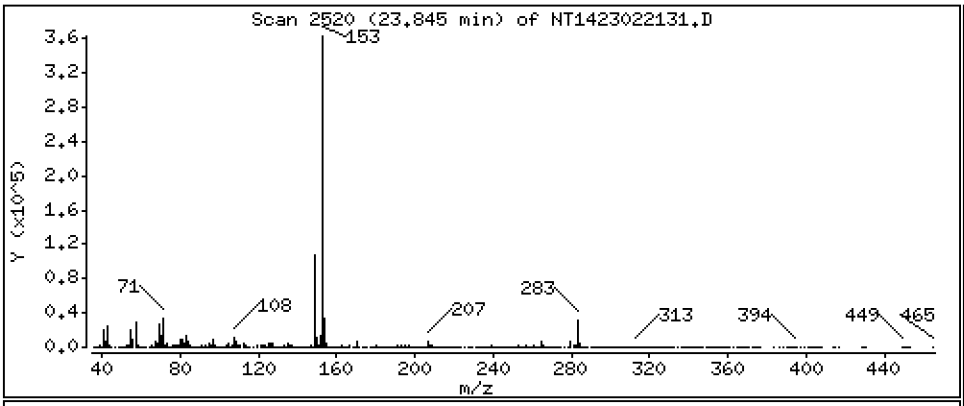
Operator: DSD

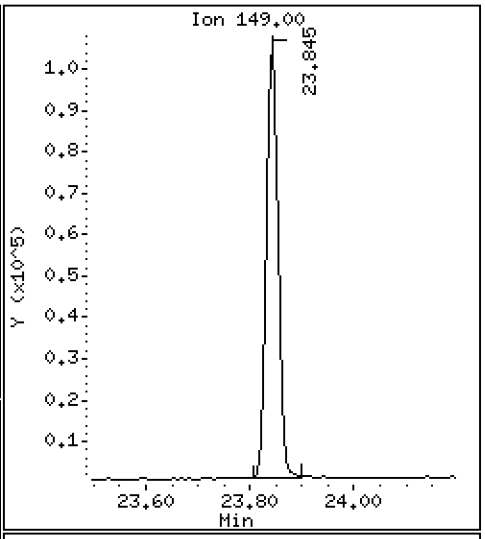
Column phase: ZB-5msi

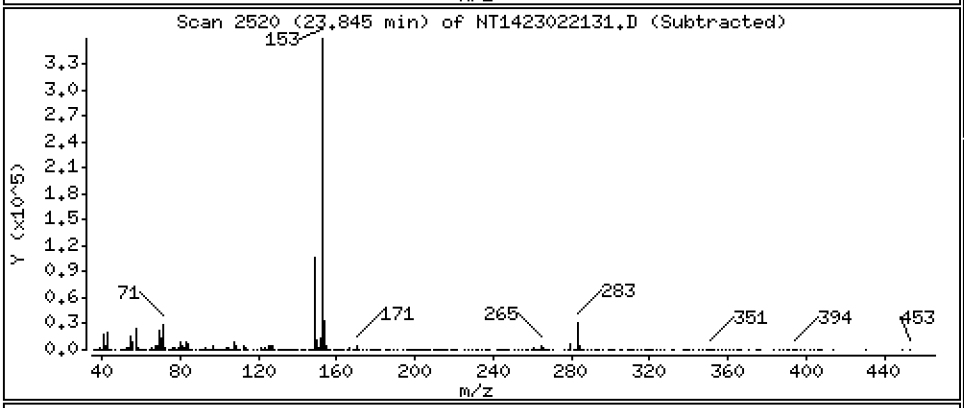
Column diameter: 0.25

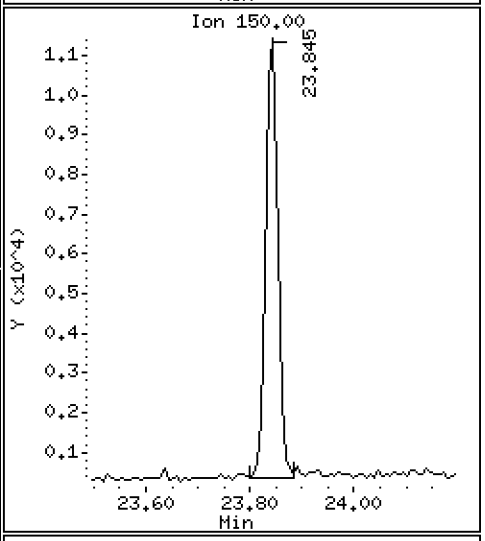
73 Di-n-octylphthalate

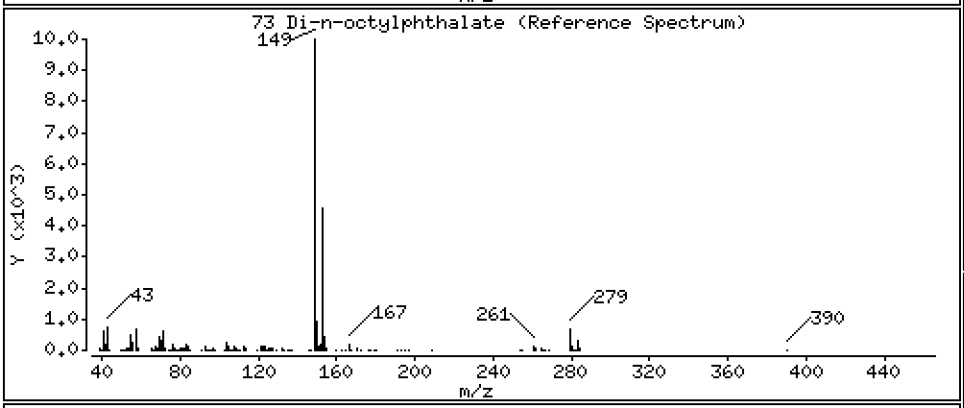
Concentration: 0.5126 ug/mL

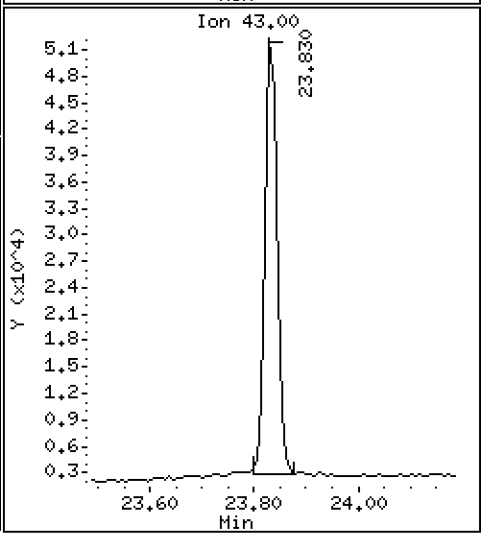


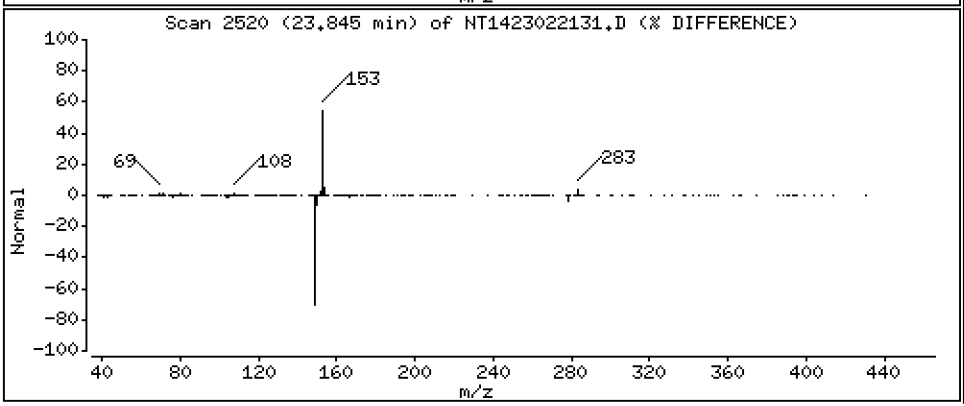












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

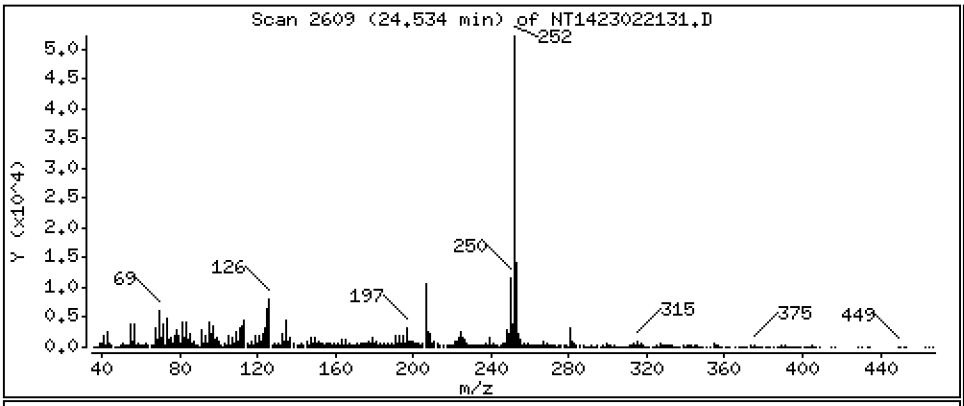
Operator: DSD

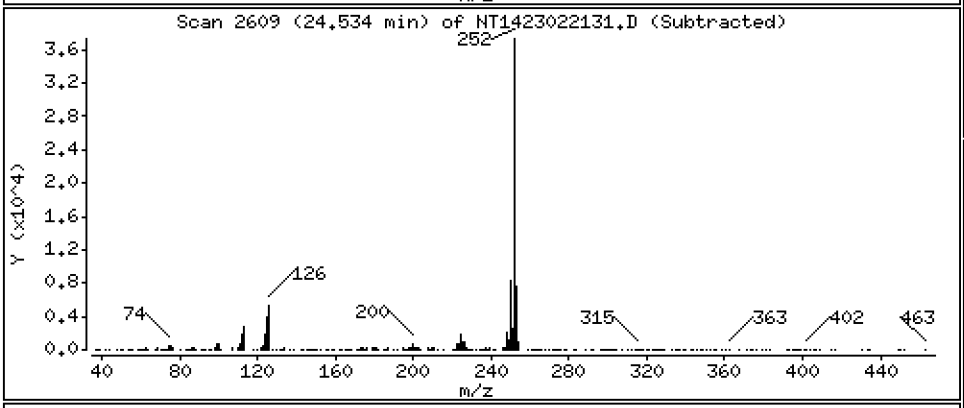
Column phase: ZB-5msi

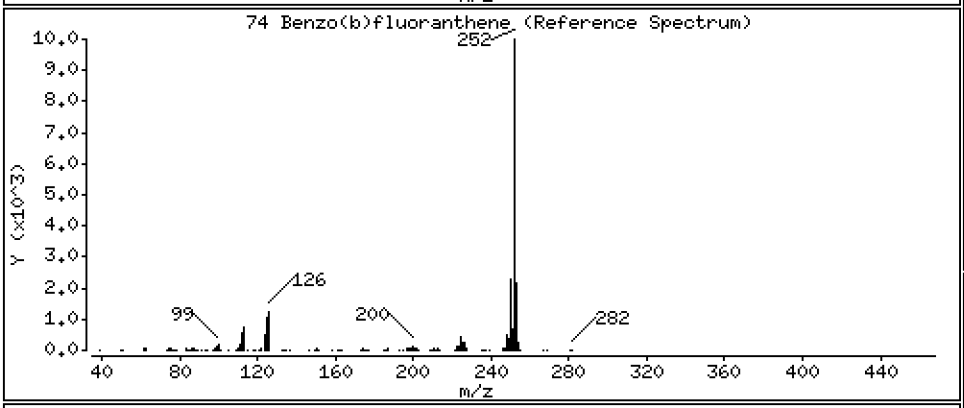
Column diameter: 0.25

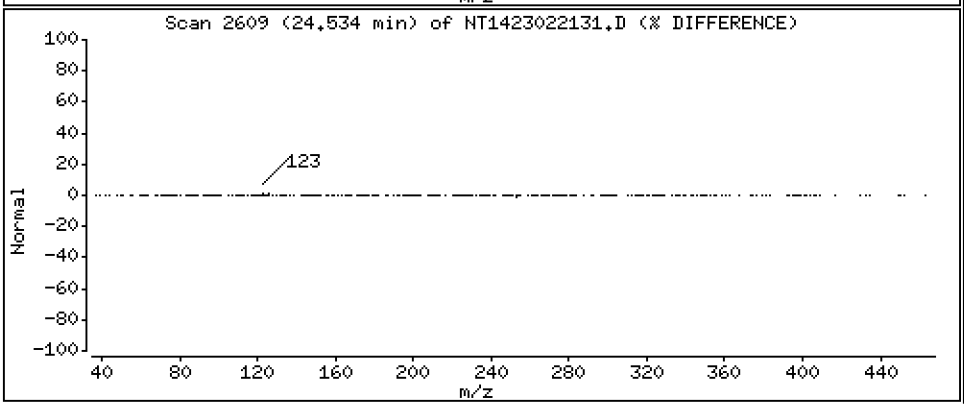
74 Benzo(b)fluoranthene

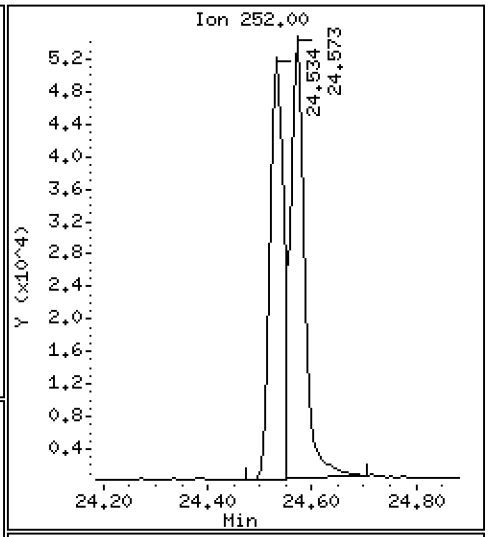
Concentration: 0.5145 ug/mL

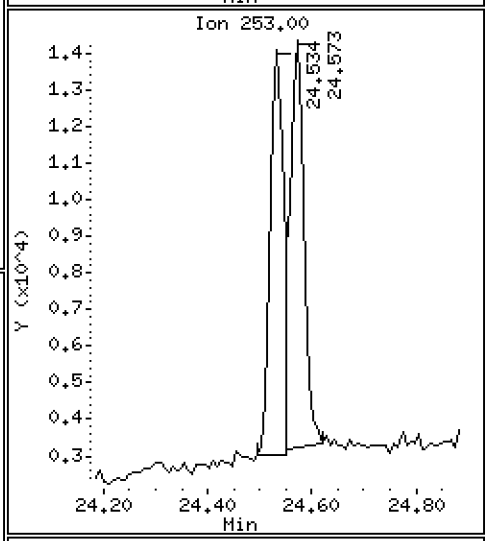


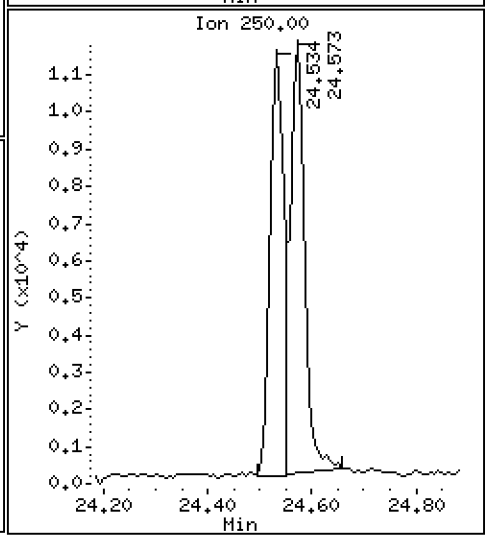












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

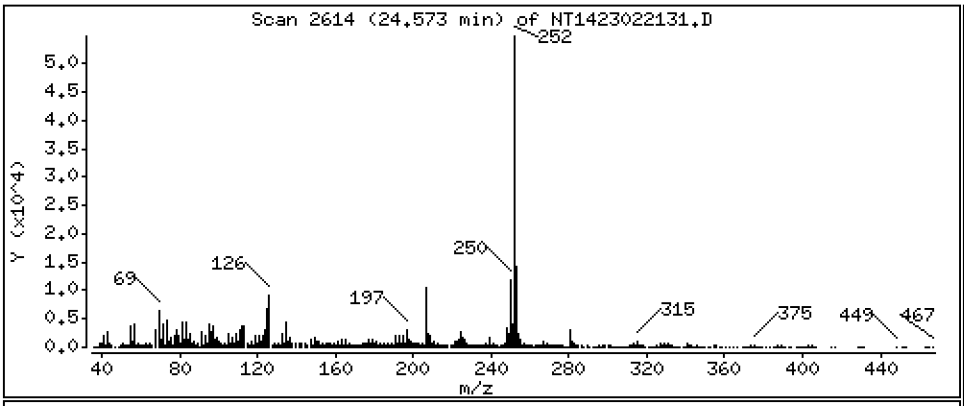
Operator: DSD

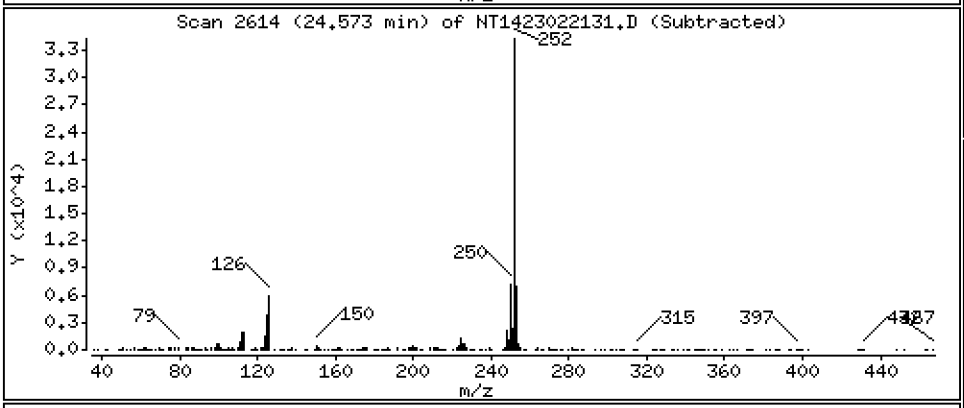
Column phase: ZB-5msi

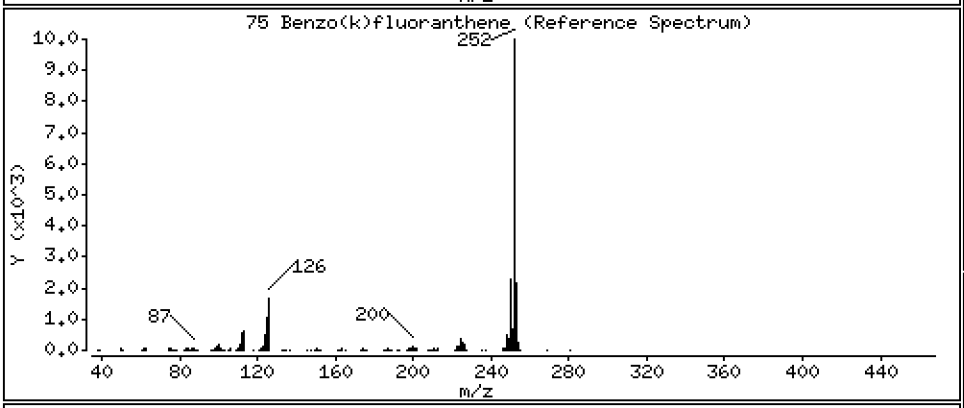
Column diameter: 0.25

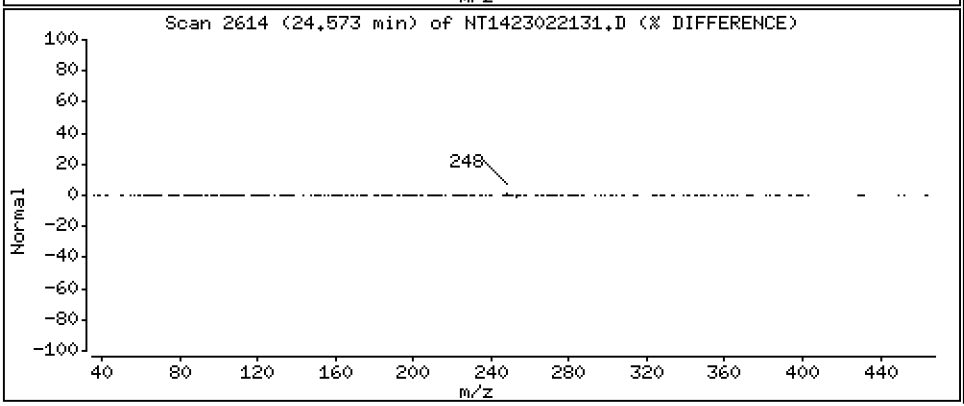
75 Benzo(k)fluoranthene

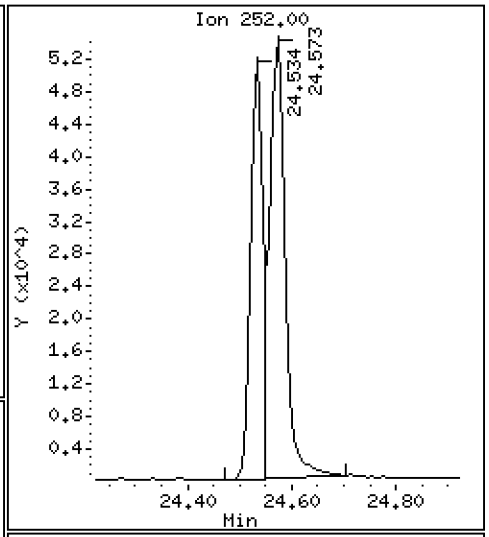
Concentration: 0.6072 ug/mL

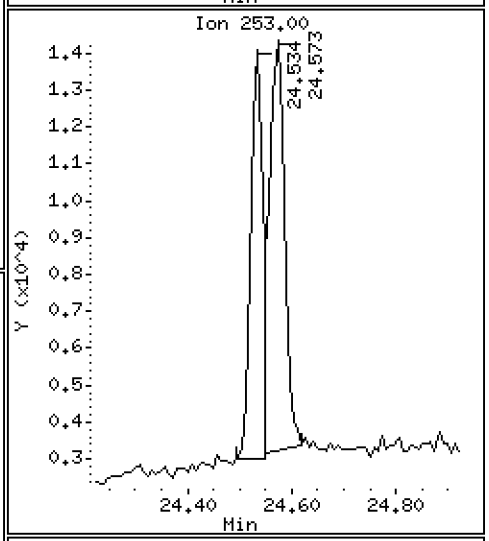


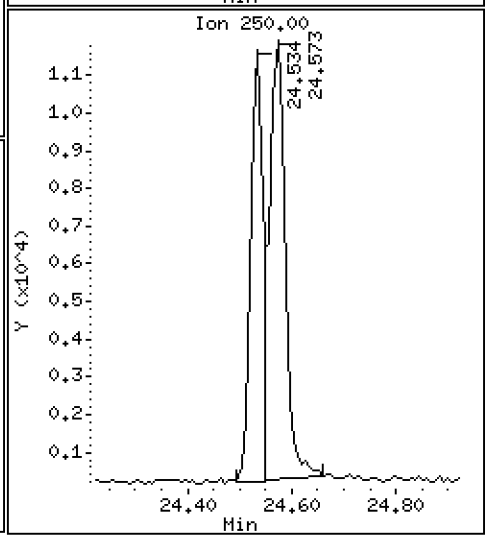












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

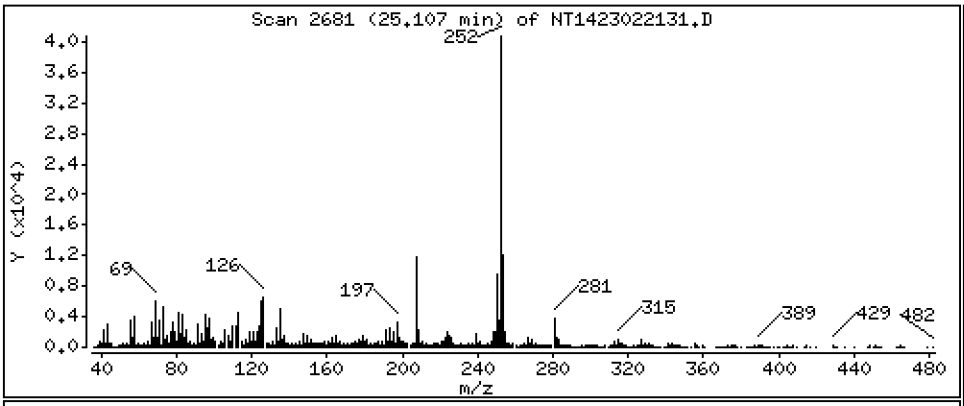
Operator: DSD

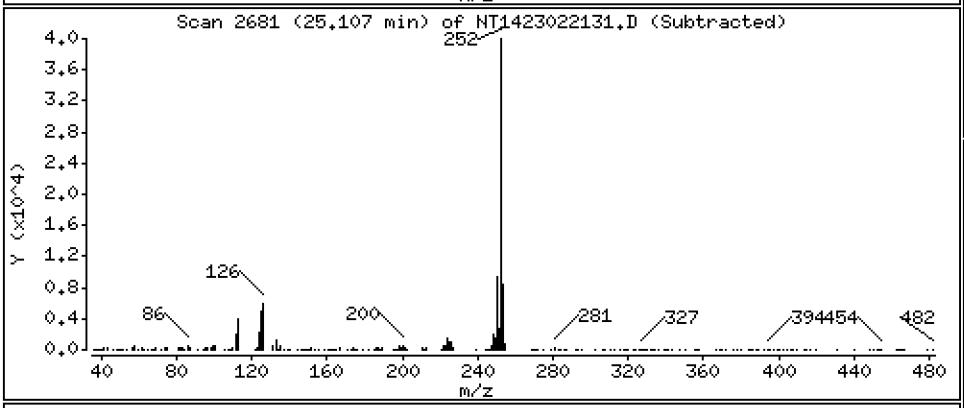
Column phase: ZB-5msi

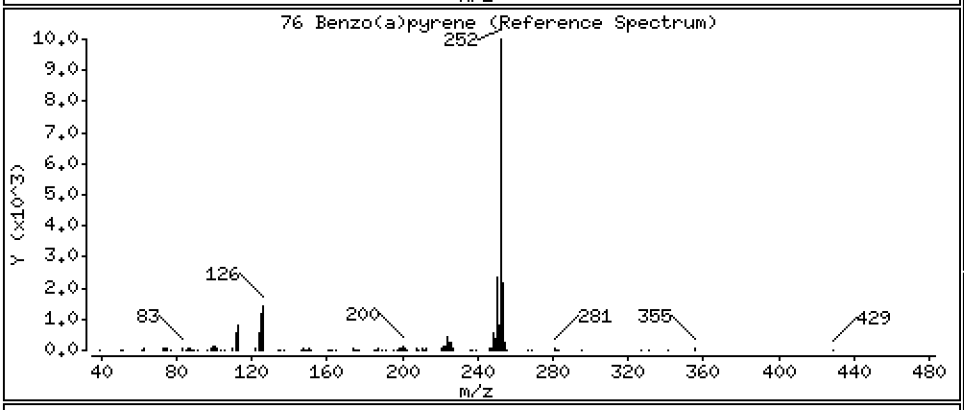
Column diameter: 0.25

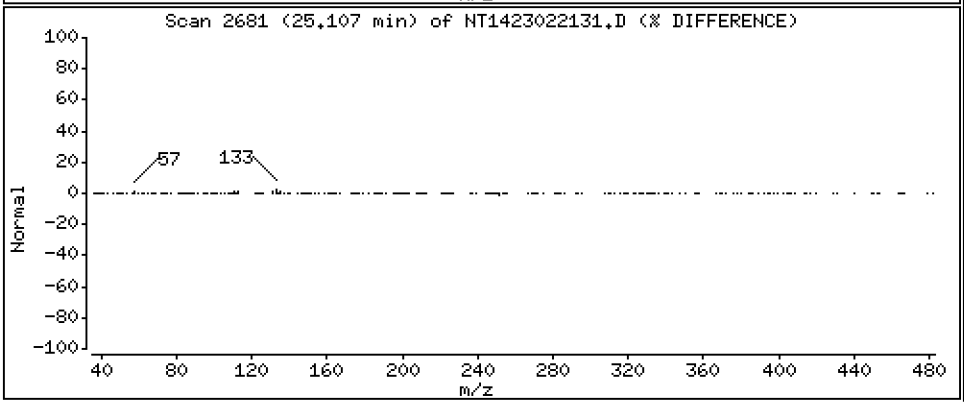
76 Benzo(a)pyrene

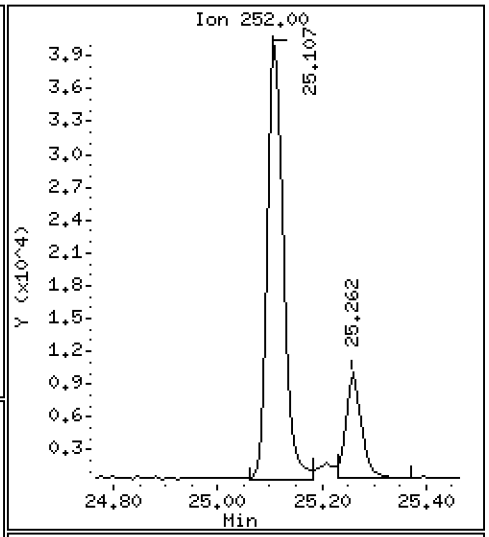
Concentration: 0.5034 ug/mL

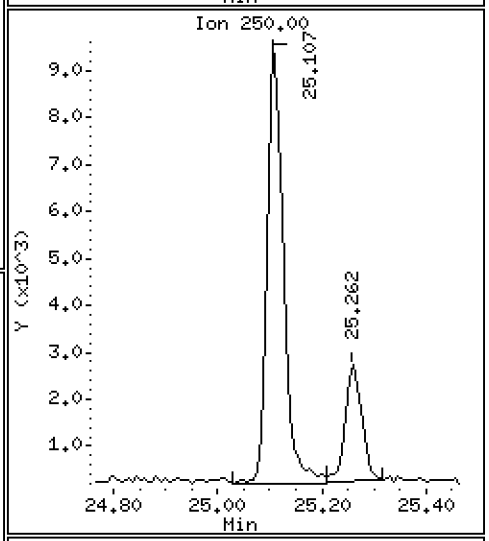


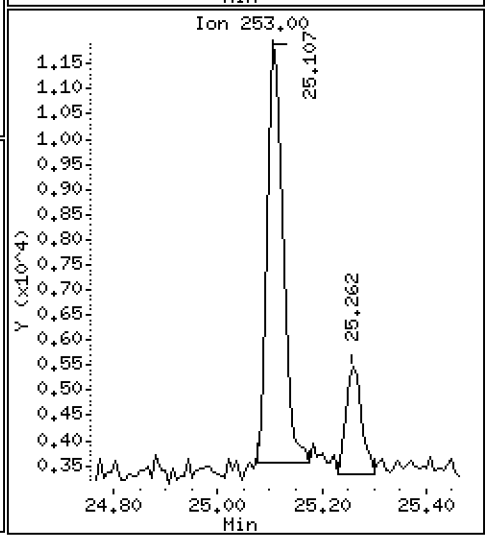












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

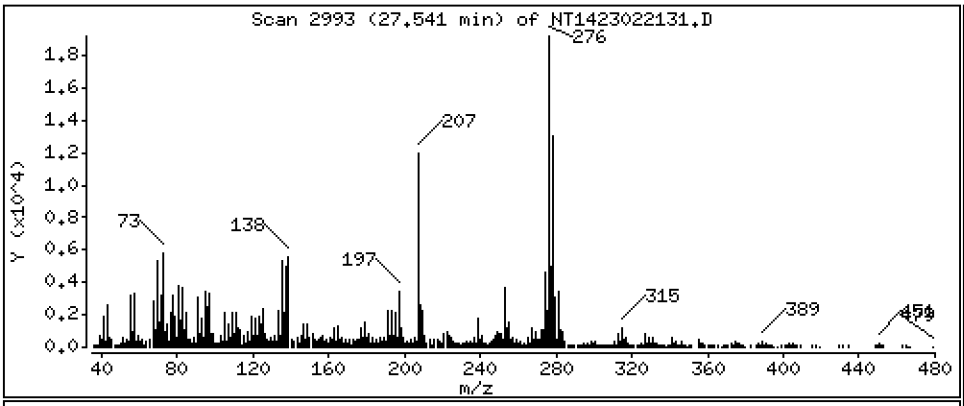
Operator: DSD

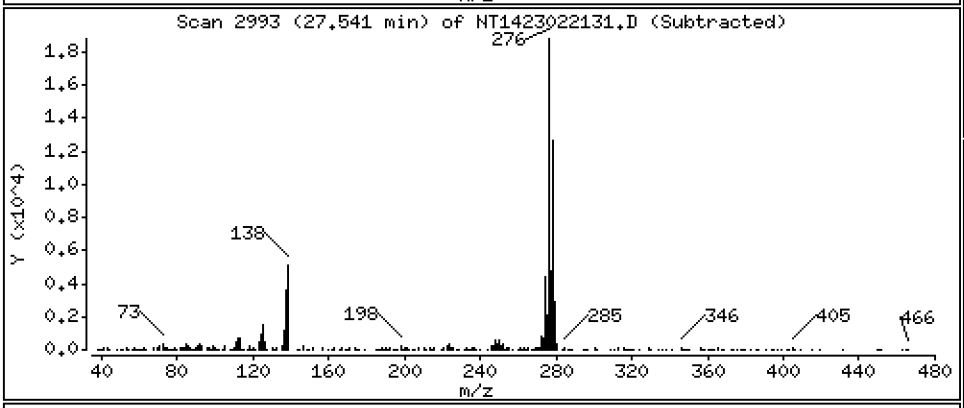
Column phase: ZB-5msi

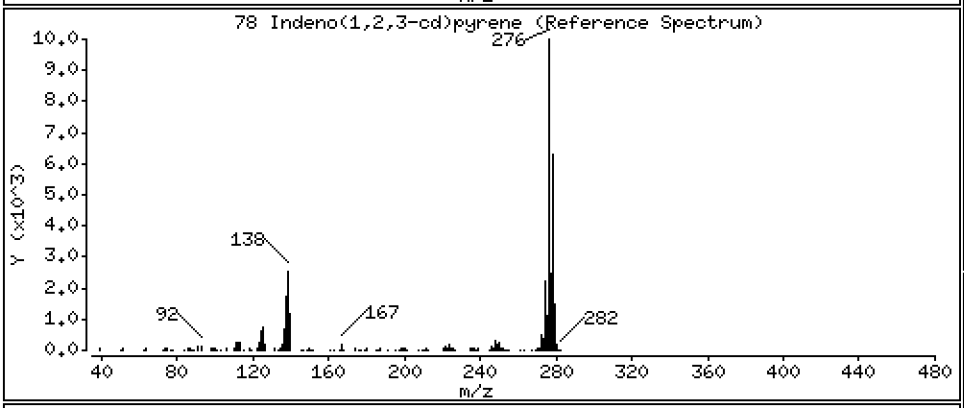
Column diameter: 0.25

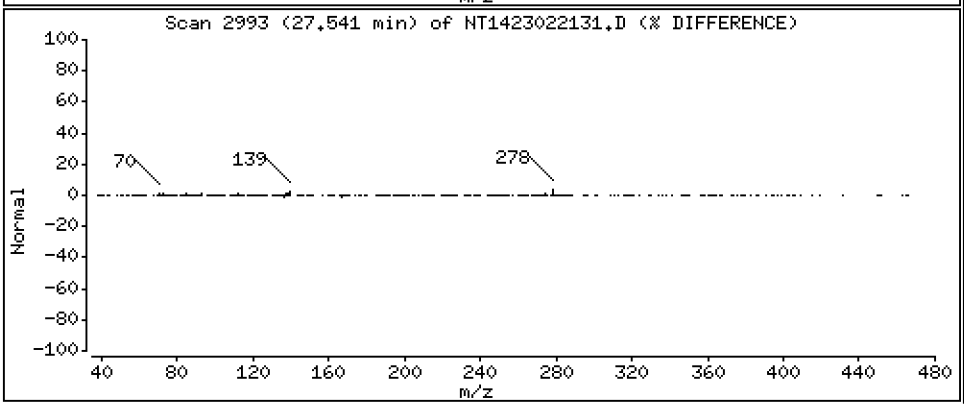
78 Indeno(1,2,3-cd)pyrene

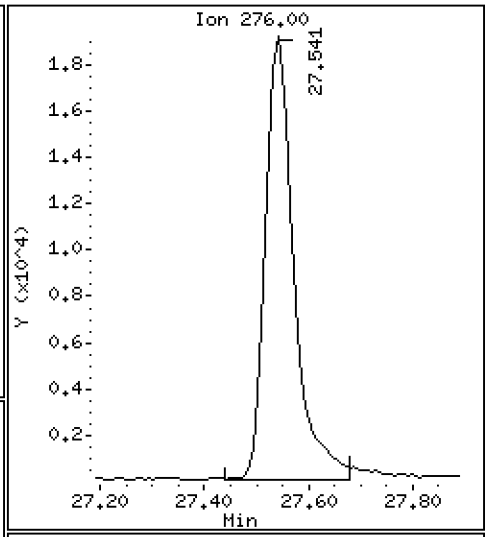
Concentration: 0.5269 ug/mL

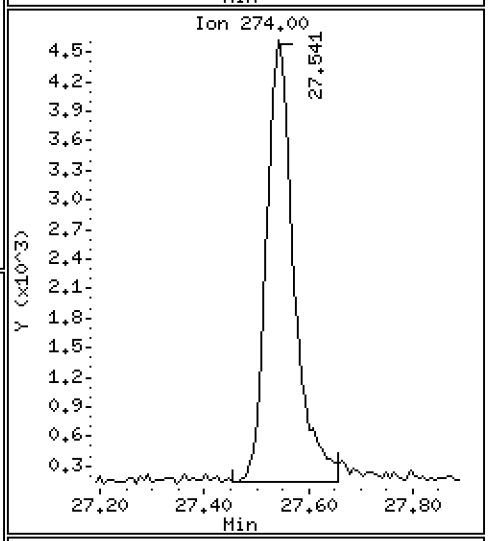


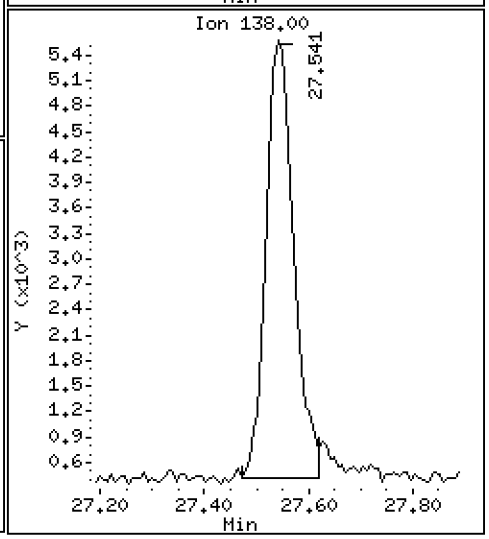












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

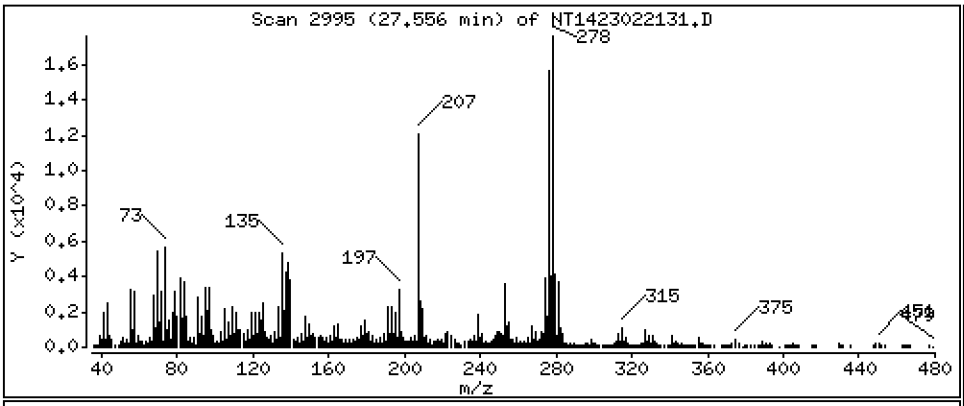
Operator: DSD

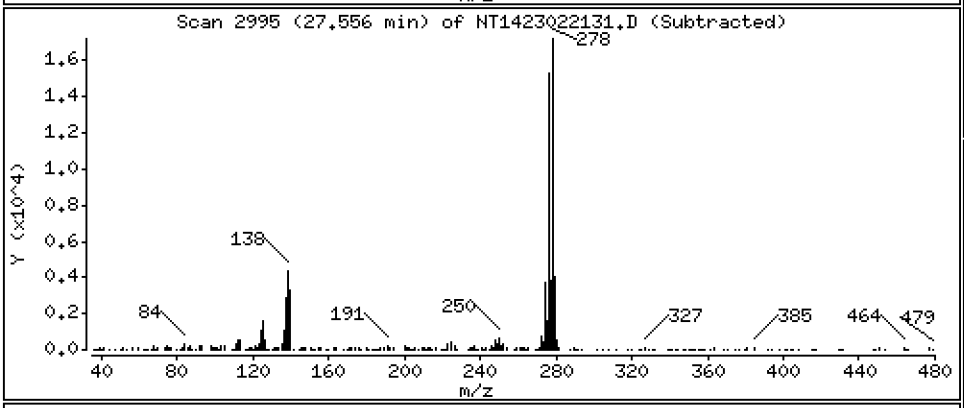
Column phase: ZB-5msi

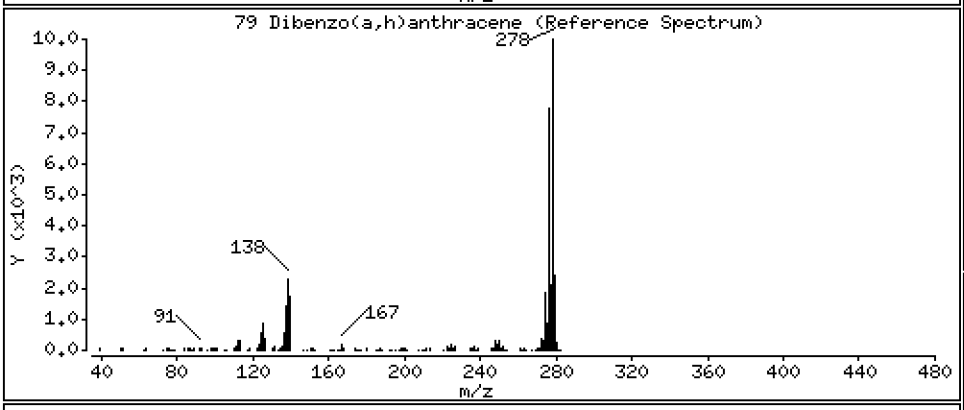
Column diameter: 0.25

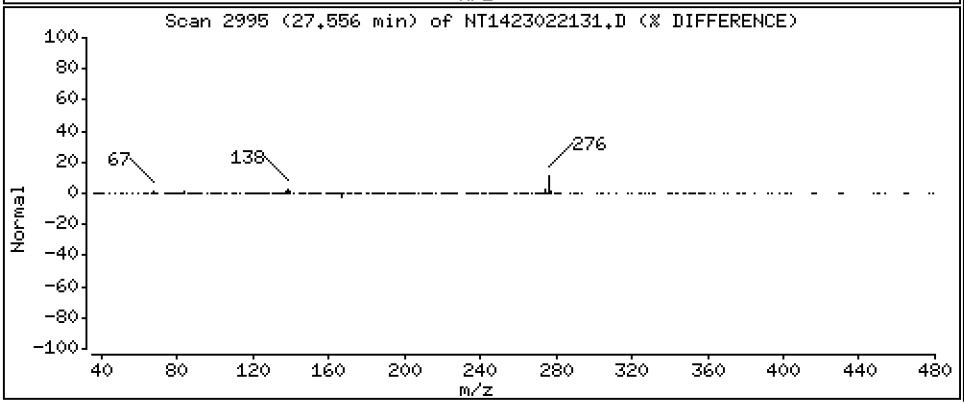
79 Dibenzo(a,h)anthracene

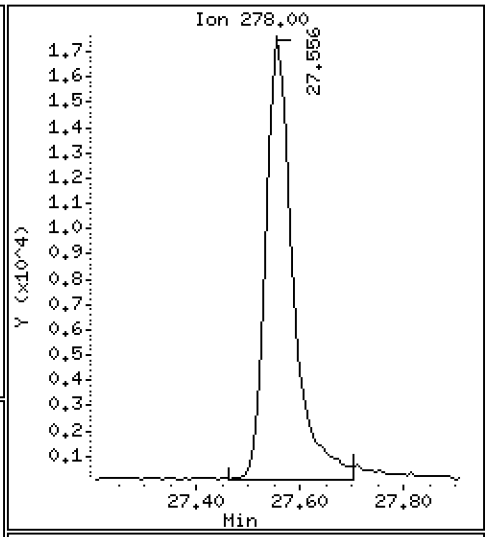
Concentration: 0.5597 ug/mL

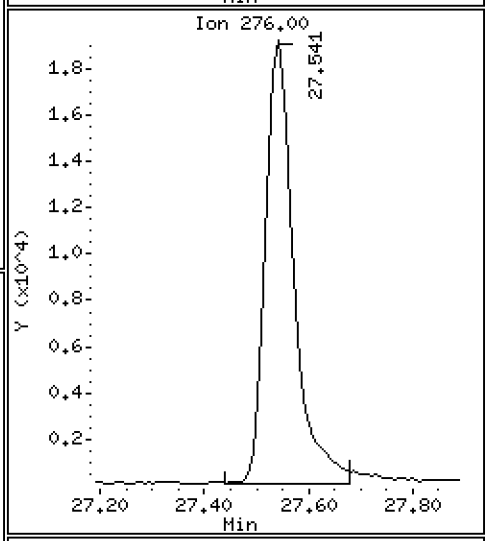


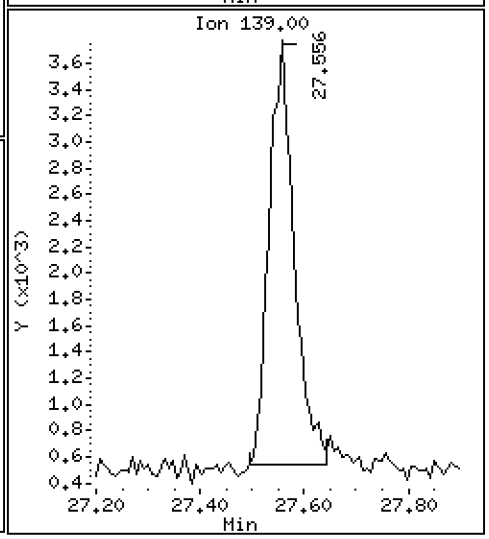












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

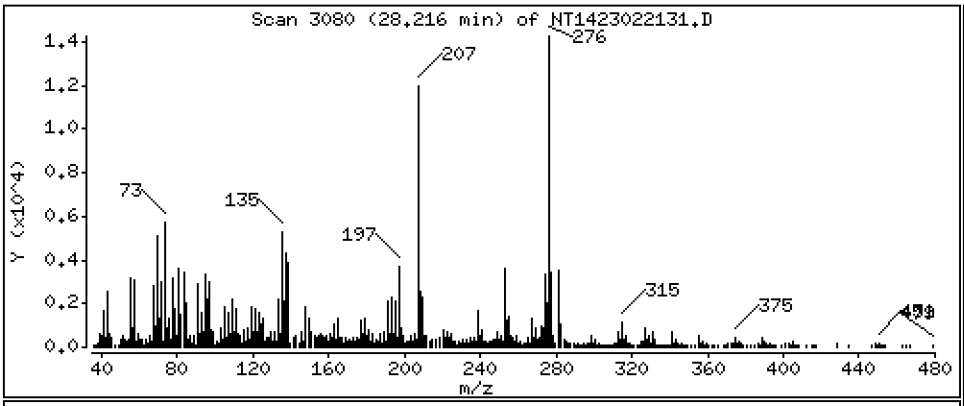
Operator: DSD

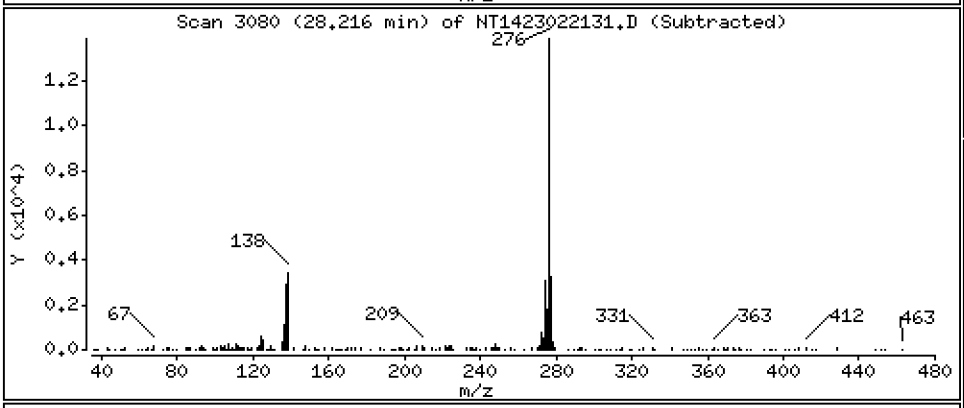
Column phase: ZB-5msi

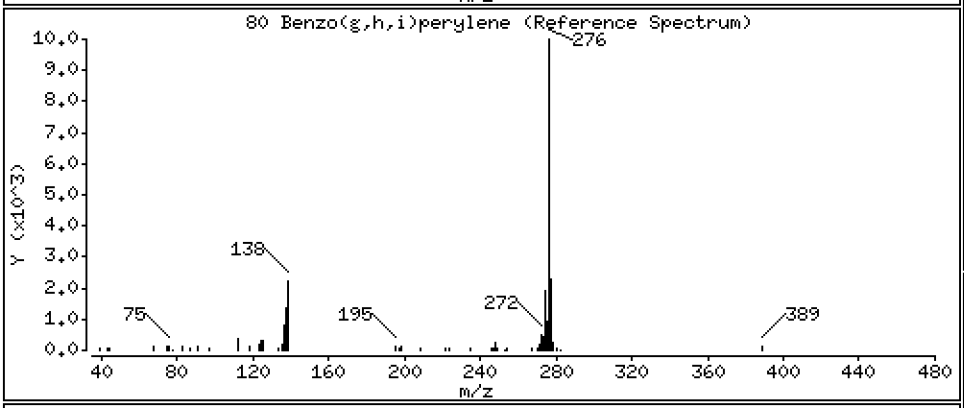
Column diameter: 0.25

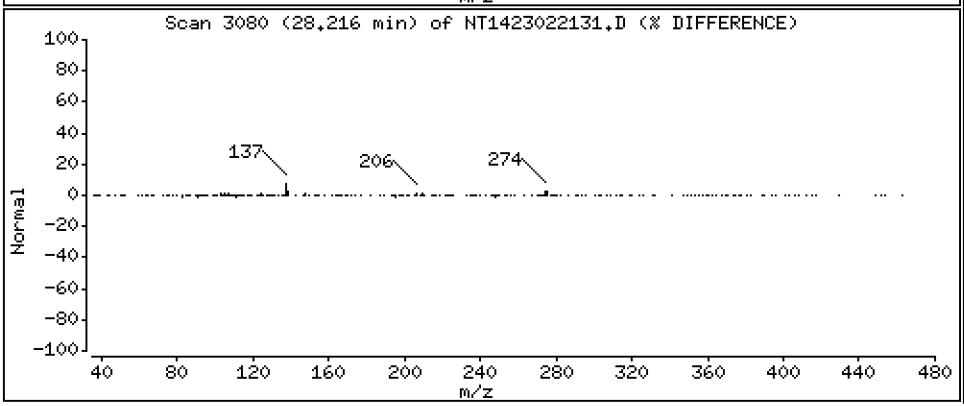
80 Benzo(g,h,i)perylene

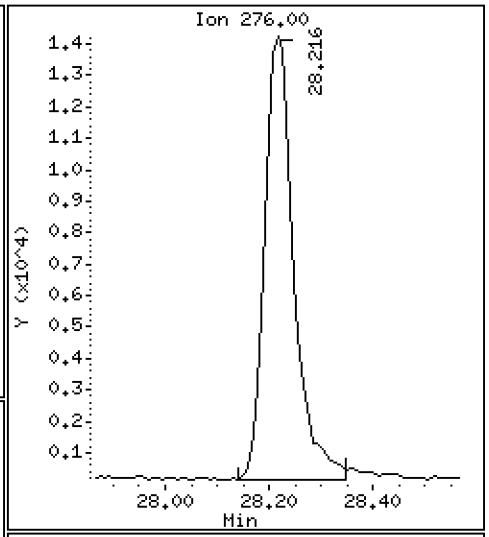
Concentration: 0.4876 ug/mL

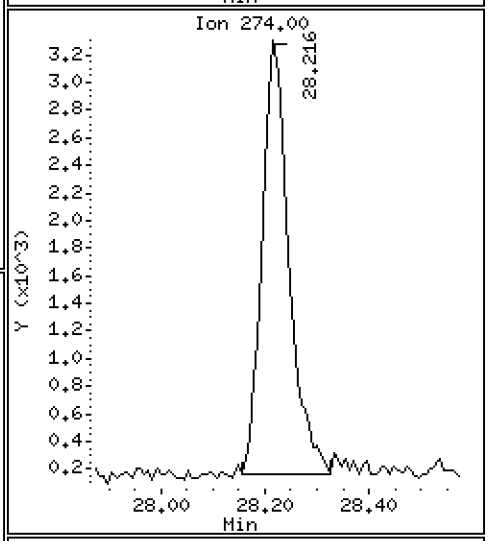


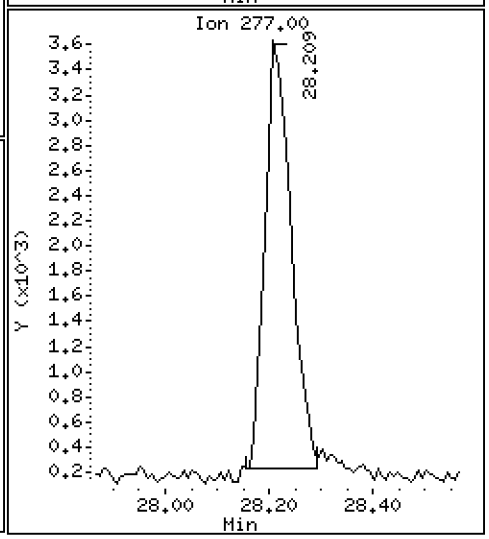












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022131.D

Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

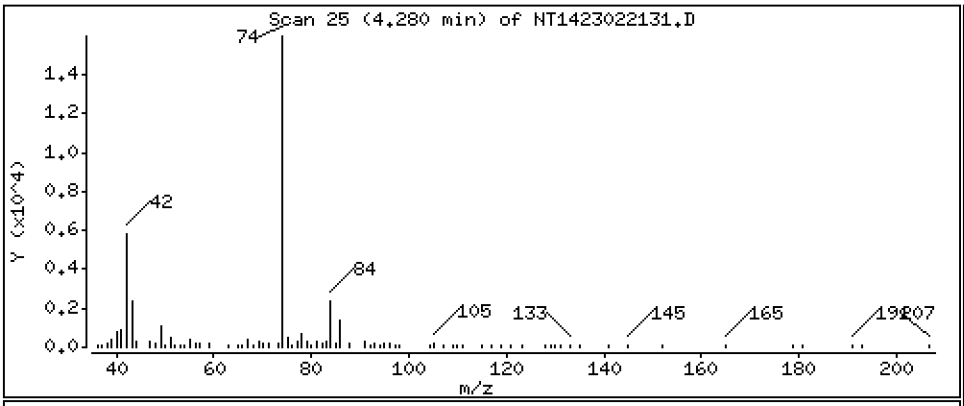
Operator: DSD

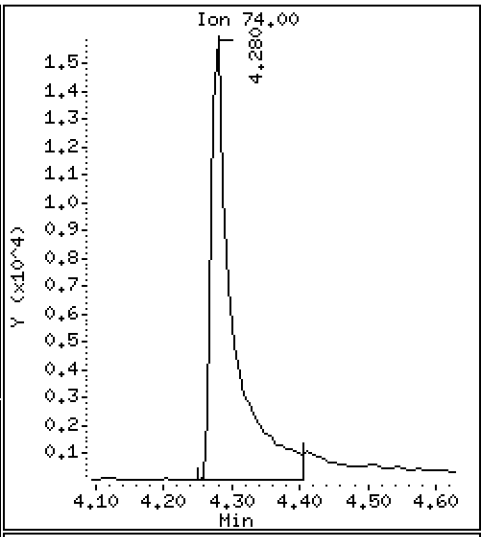
Column phase: ZB-5msi

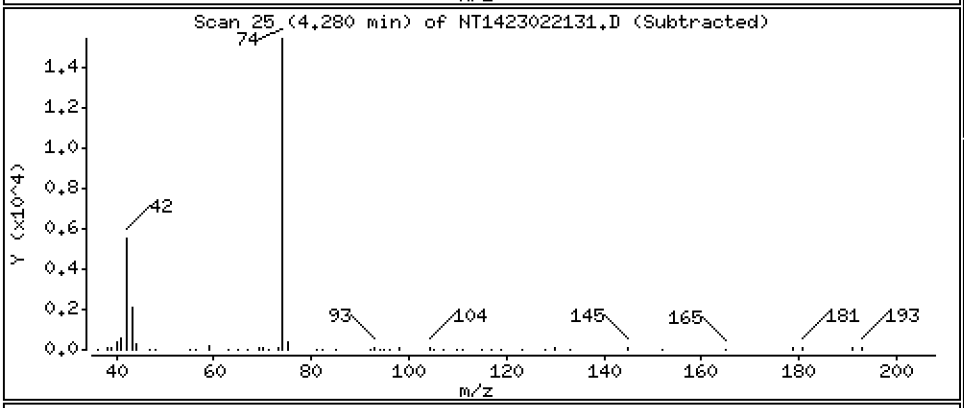
Column diameter: 0.25

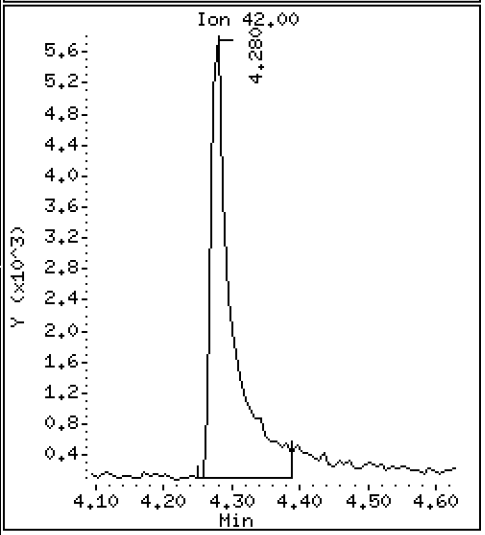
90 N-Nitrosodimethylamine

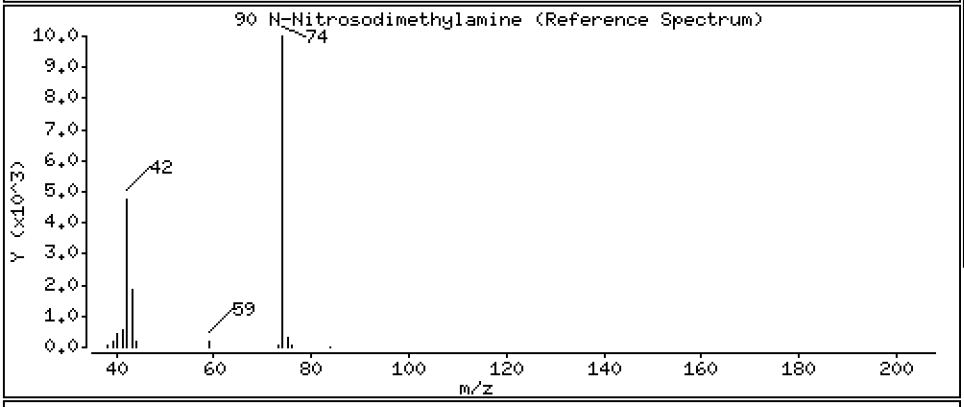
Concentration: 0.7001 ug/mL

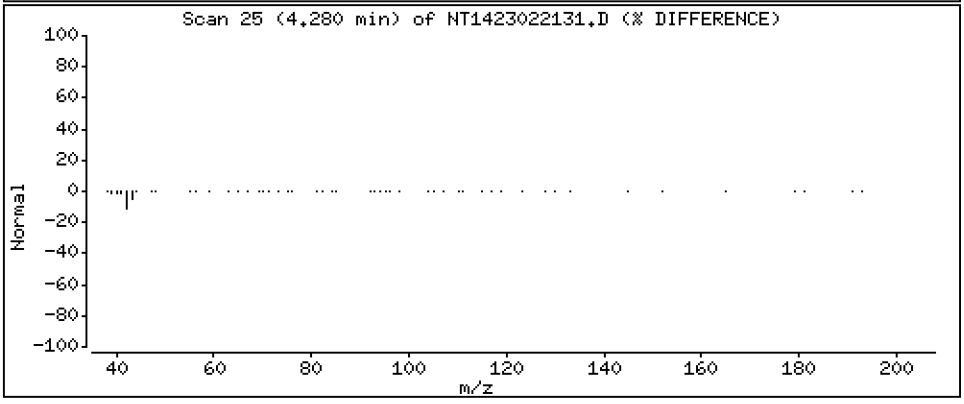












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

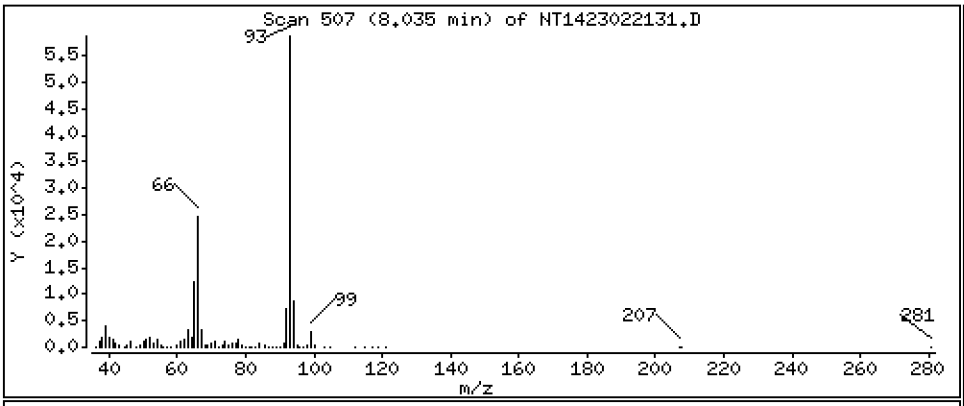
Operator: DSD

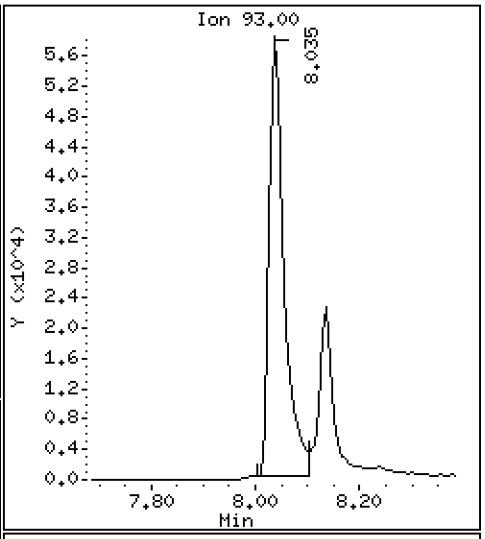
Column phase: ZB-5msi

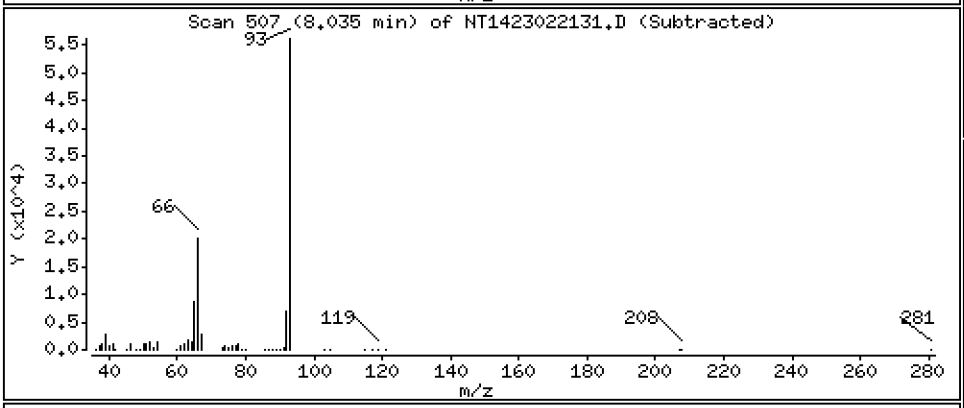
Column diameter: 0.25

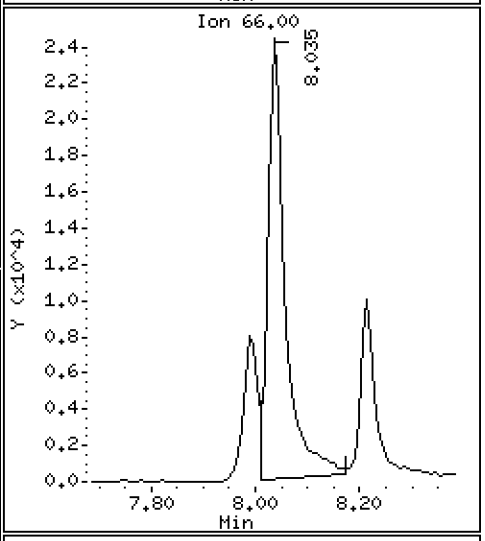
91 Aniline

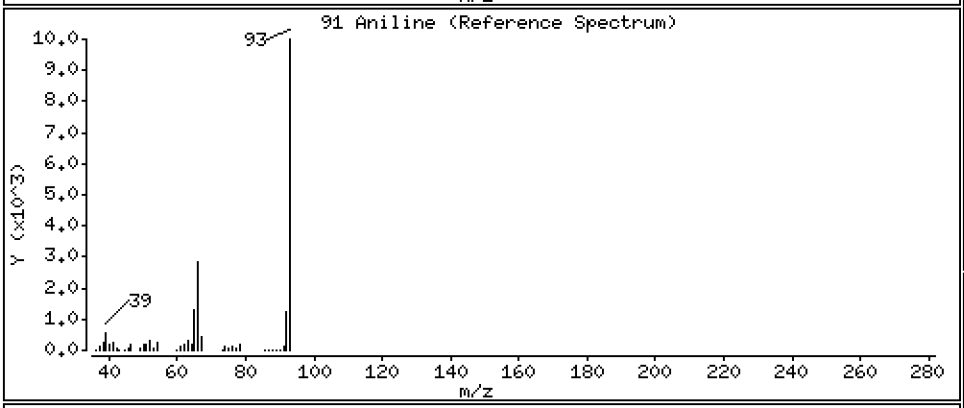
Concentration: 0.9507 ug/mL

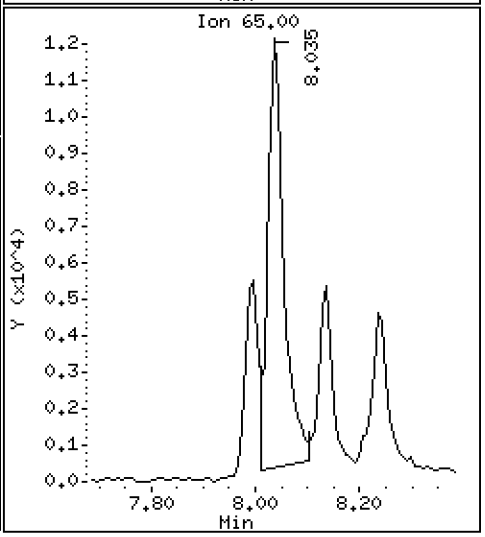


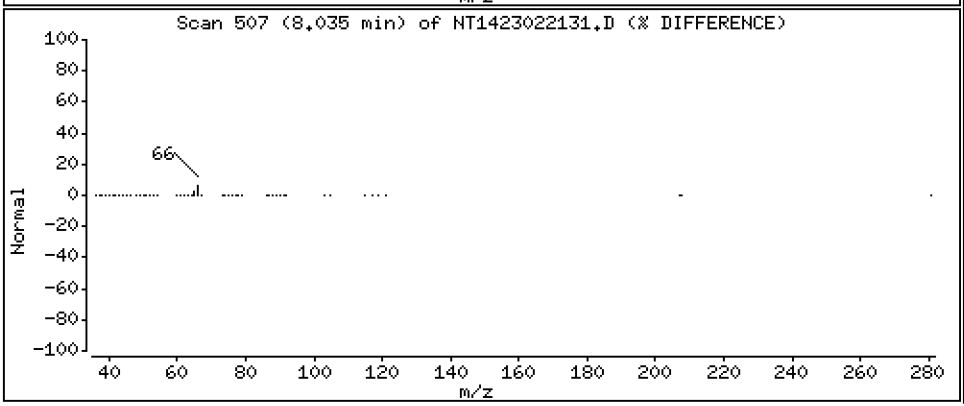












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

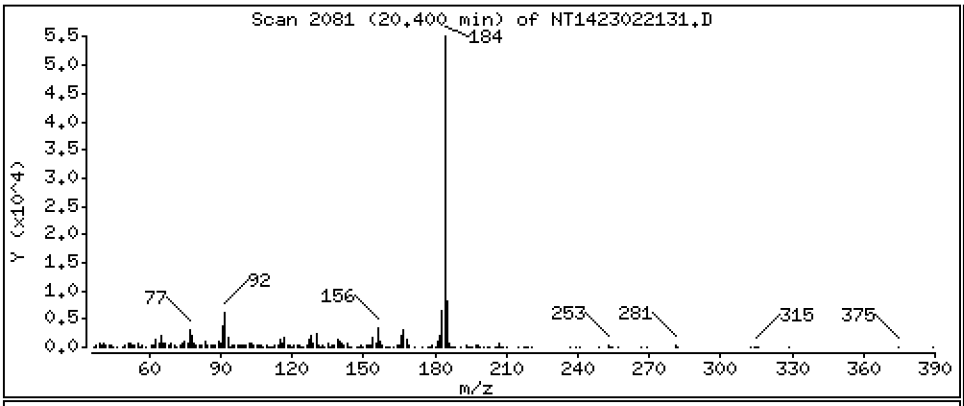
Operator: DSD

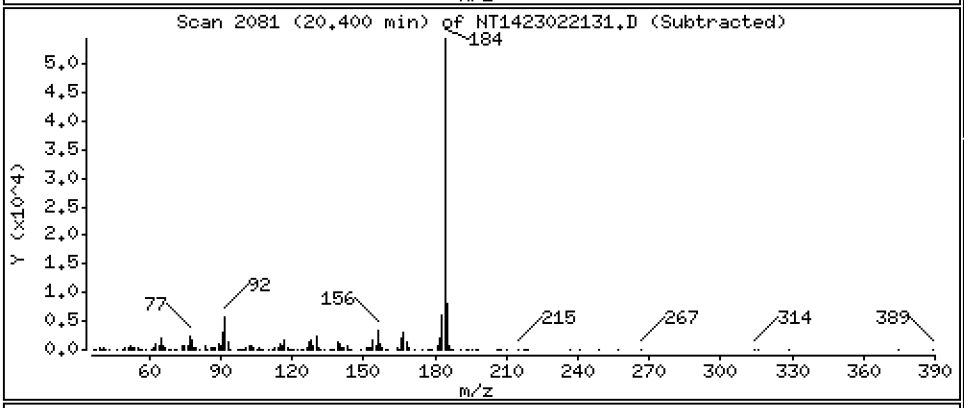
Column phase: ZB-5msi

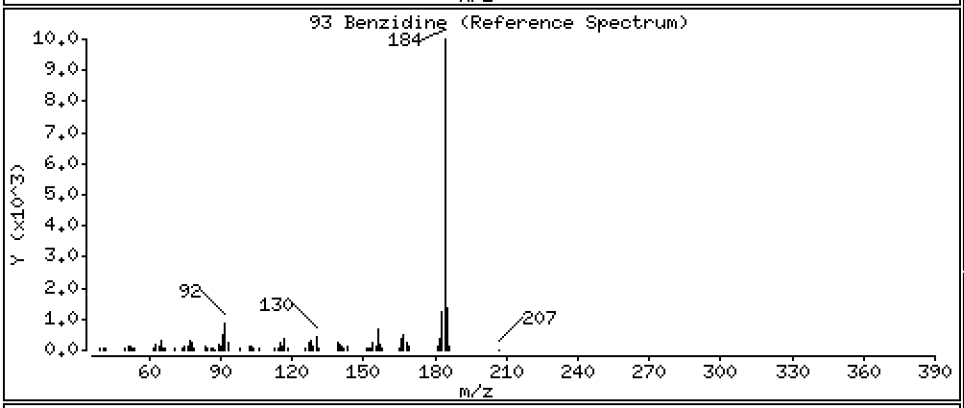
Column diameter: 0.25

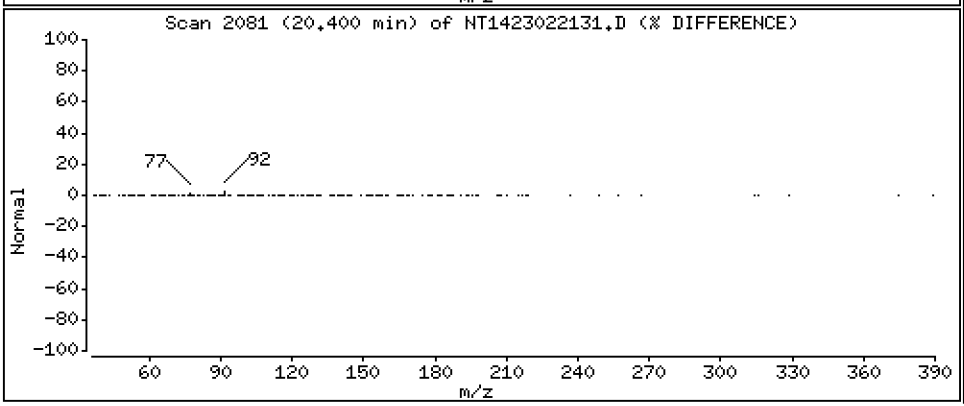
93 Benzidine

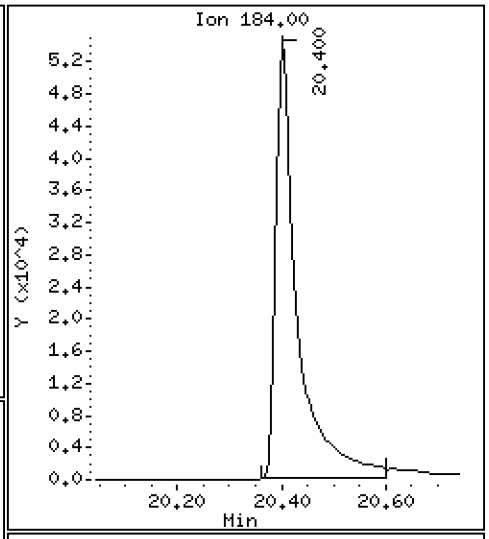
Concentration: 1.781 ug/mL

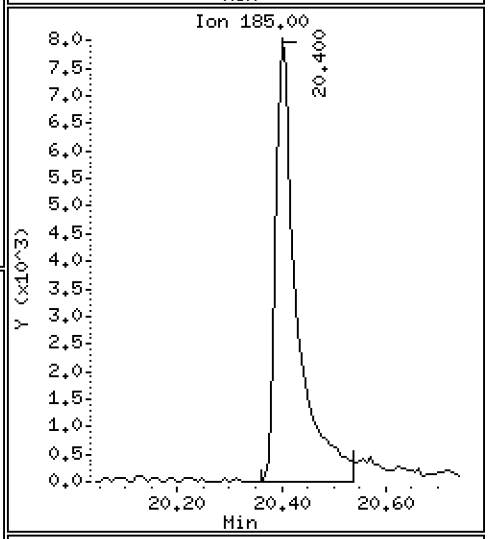


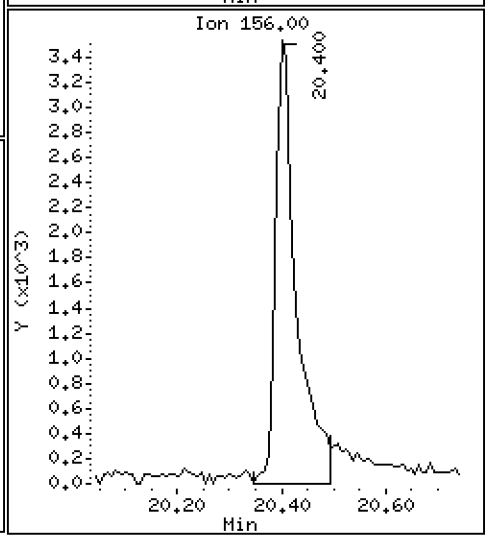












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

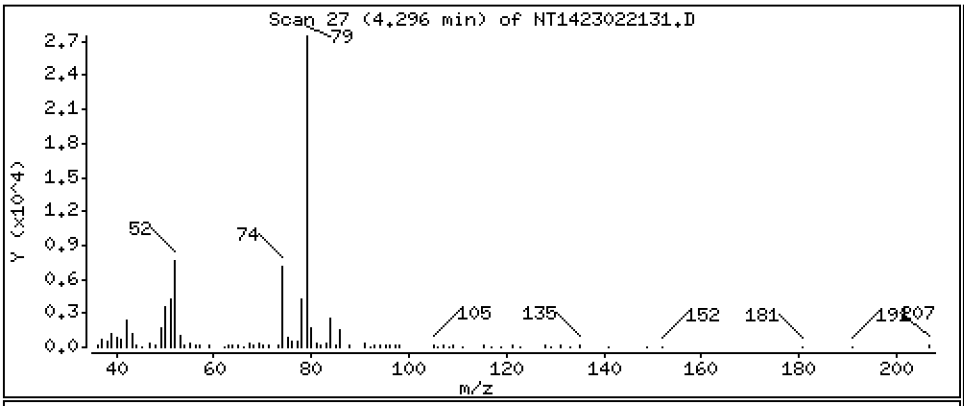
Operator: DSD

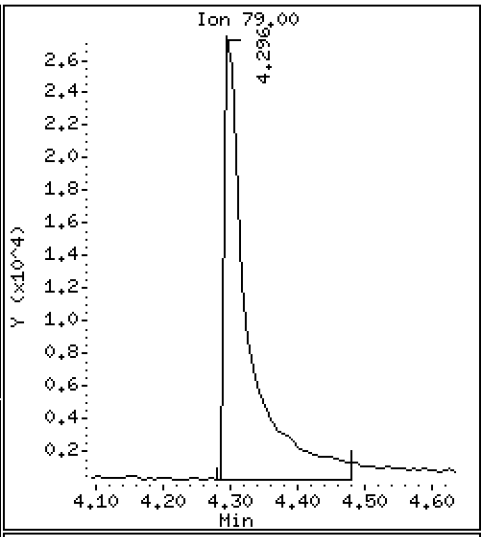
Column phase: ZB-5msi

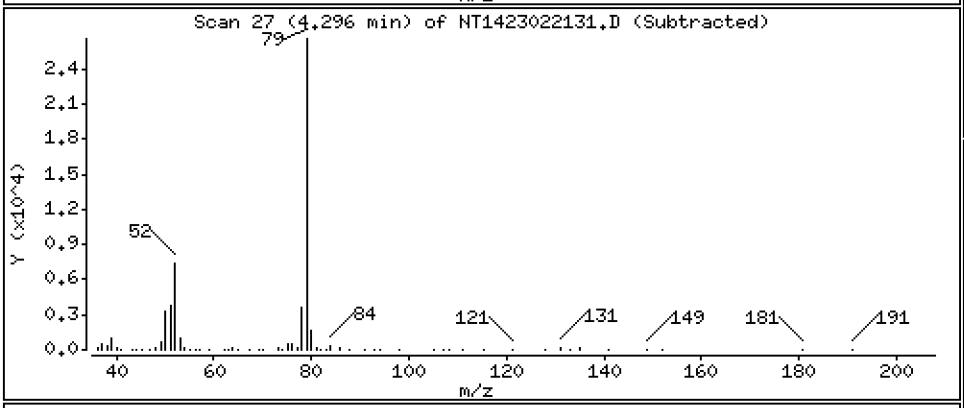
Column diameter: 0.25

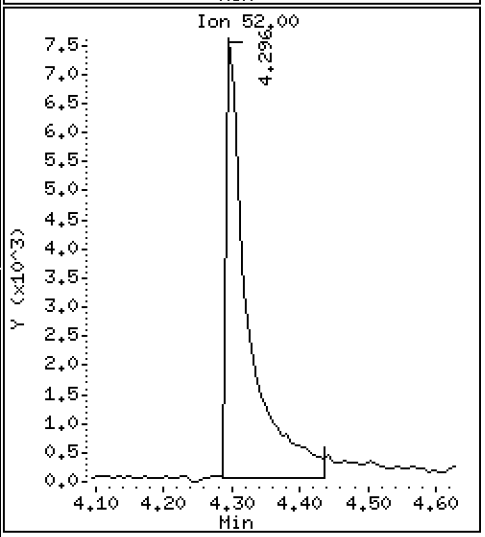
103 Pyridine

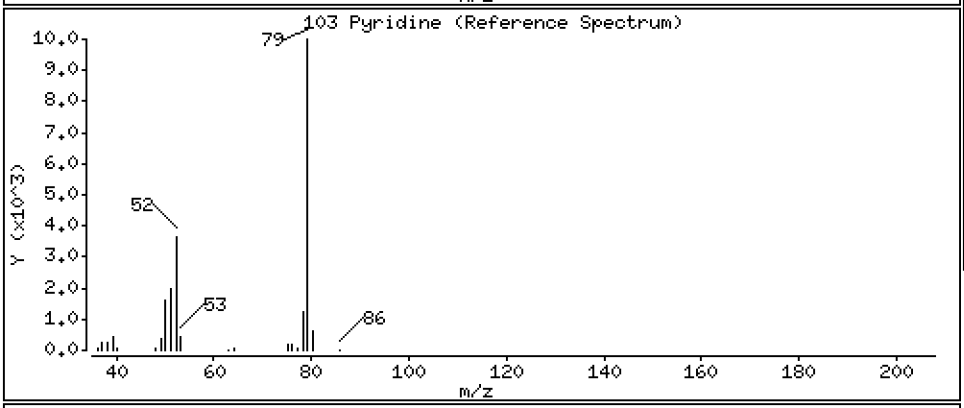
Concentration: 0.8116 ug/mL

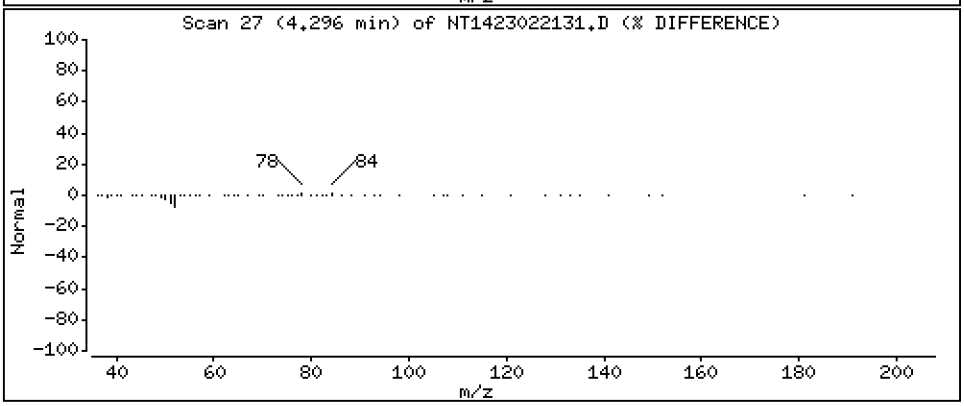












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

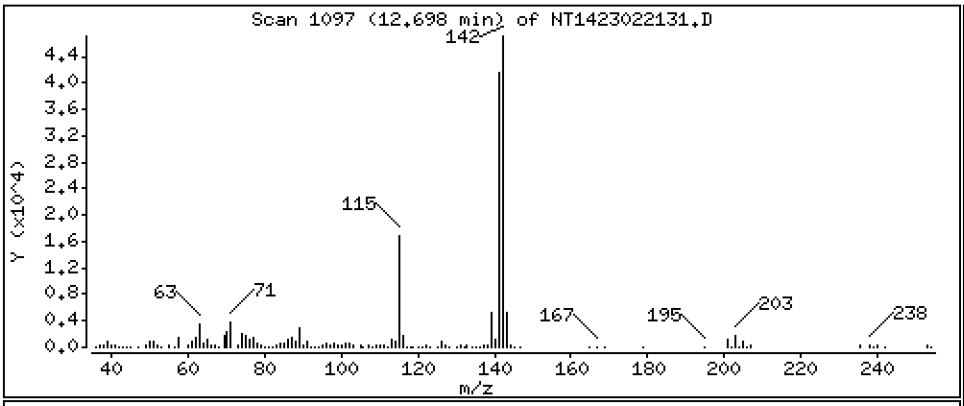
Operator: DSD

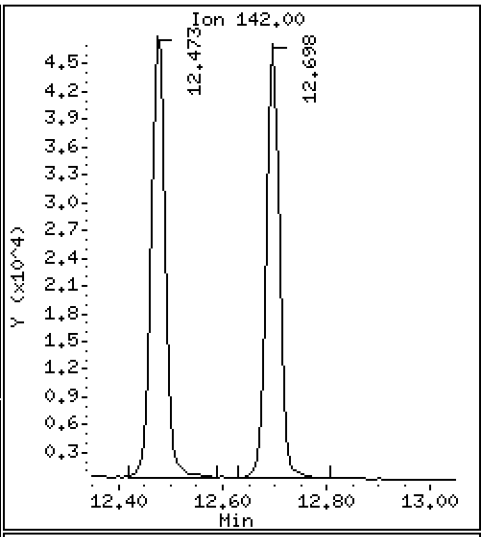
Column phase: ZB-5msi

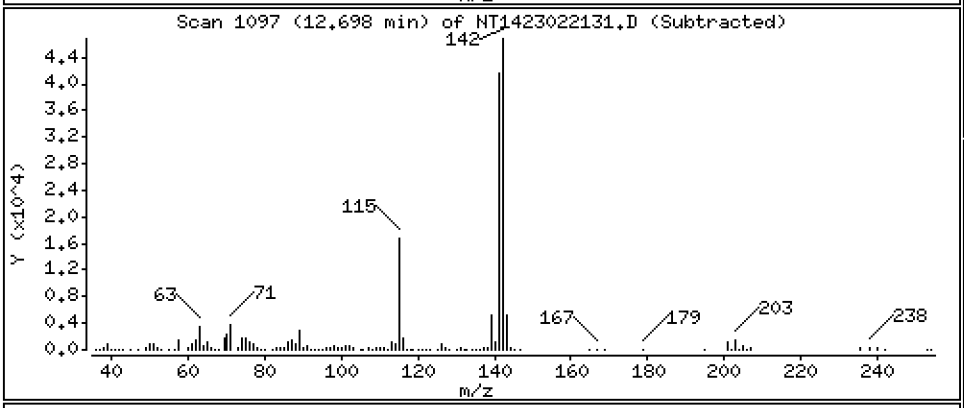
Column diameter: 0.25

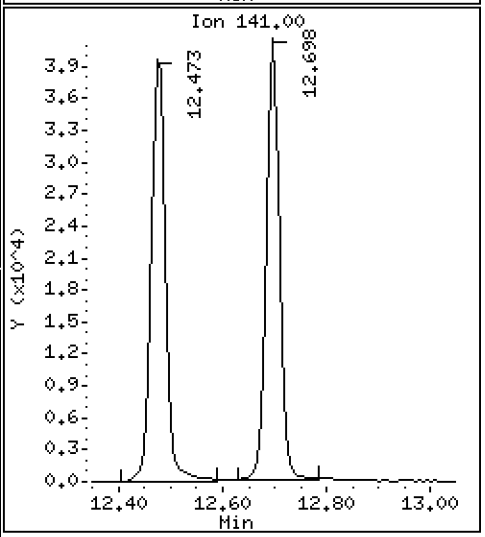
105 1-methylnaphthalene

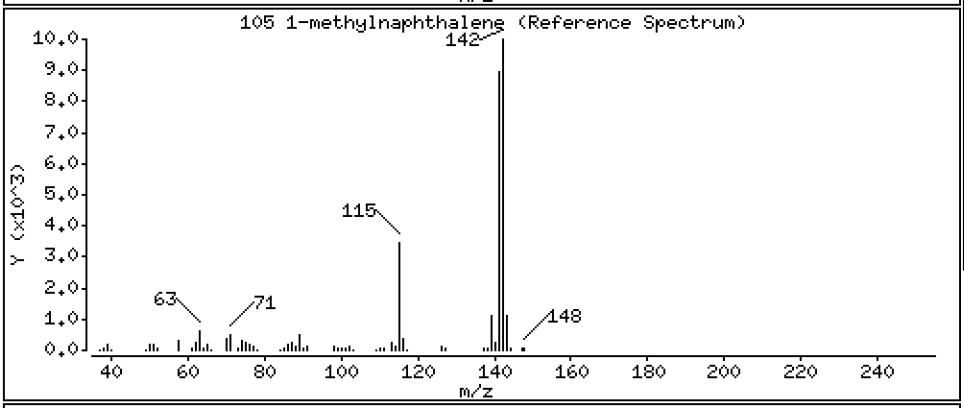
Concentration: 0.5338 ug/mL

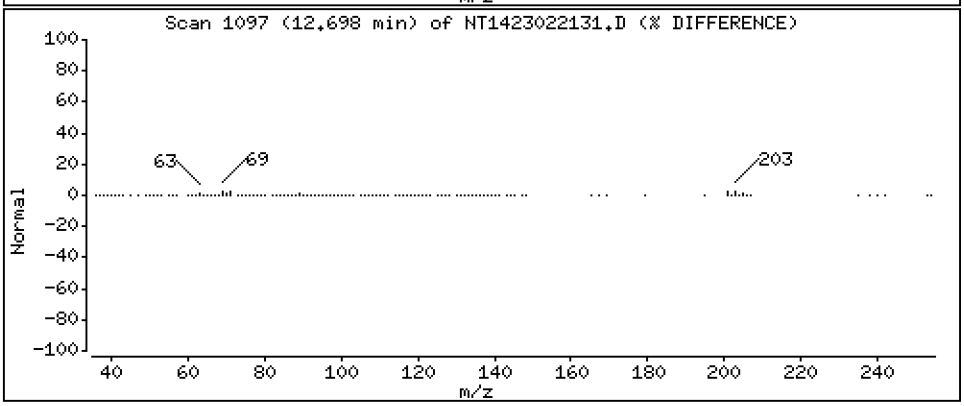












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Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

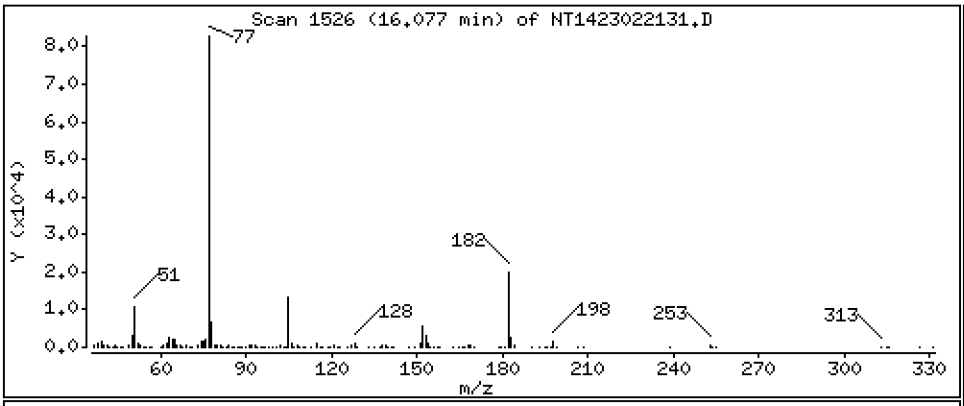
Operator: DSD

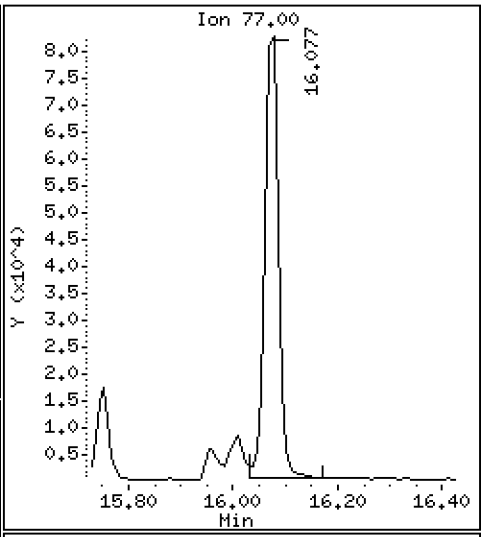
Column phase: ZB-5msi

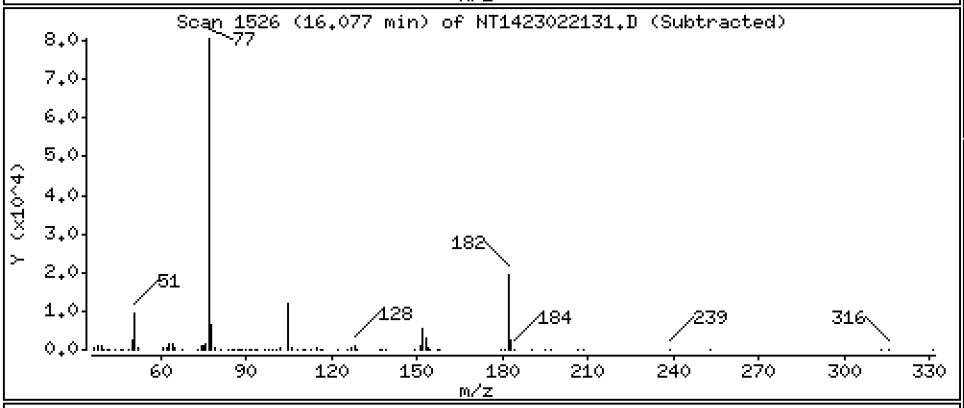
Column diameter: 0.25

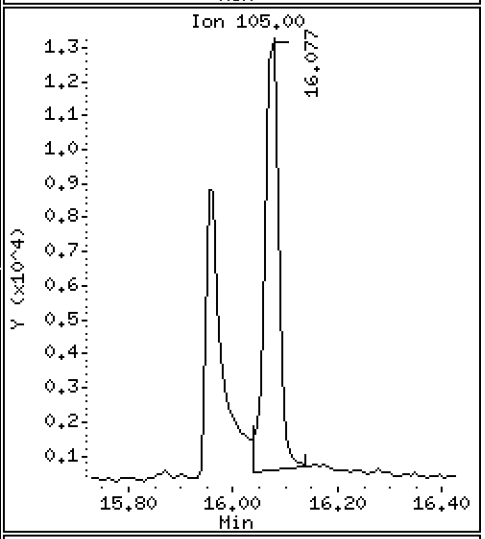
111 Azobenzene (1,2-DP-Hydrazine)

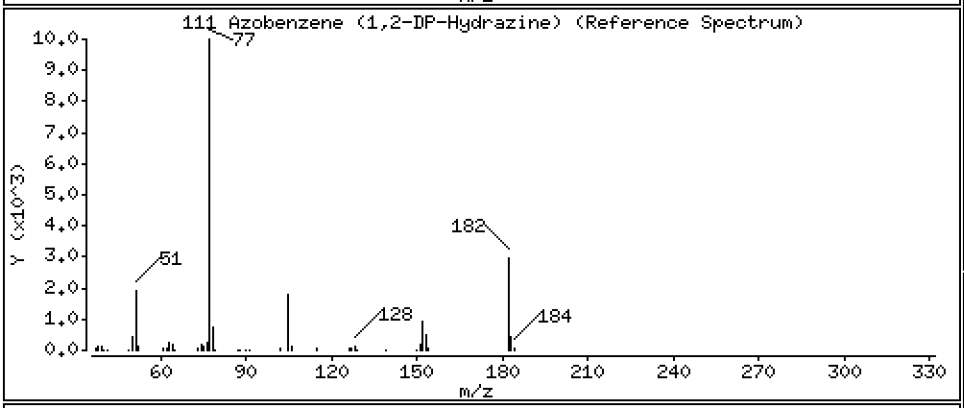
Concentration: 0.5636 ug/mL

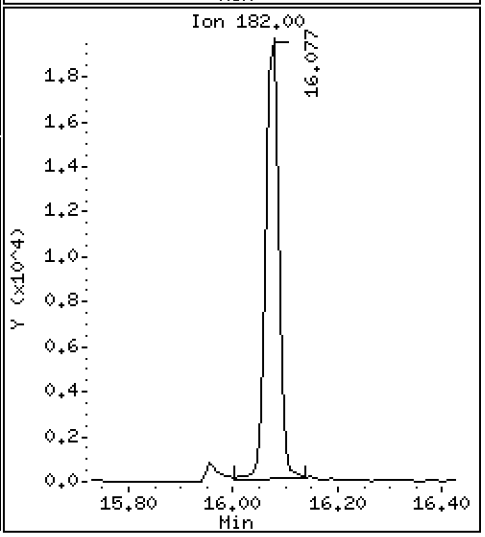


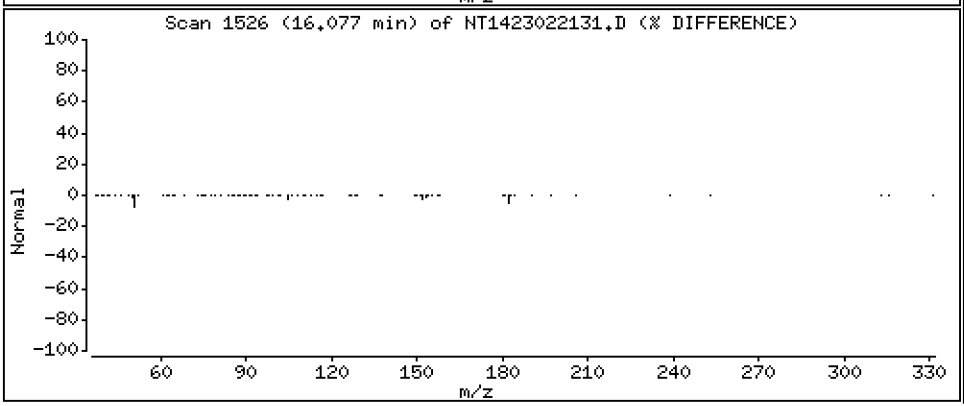












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022131.D

Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

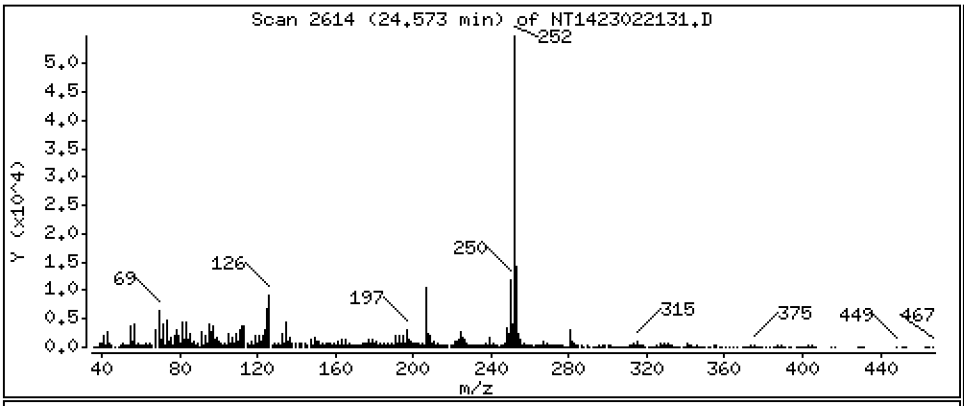
Operator: DSD

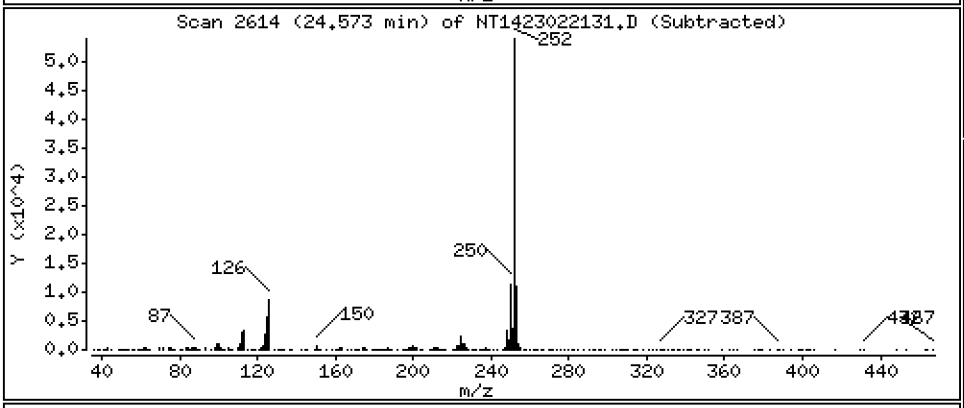
Column phase: ZB-5msi

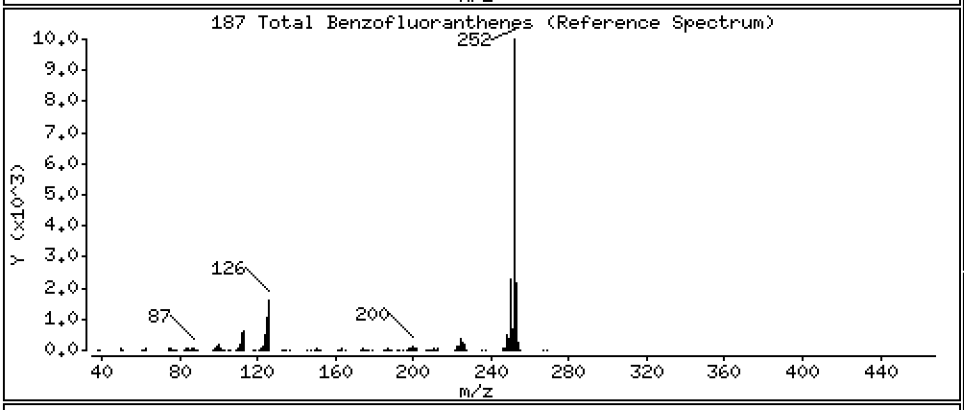
Column diameter: 0.25

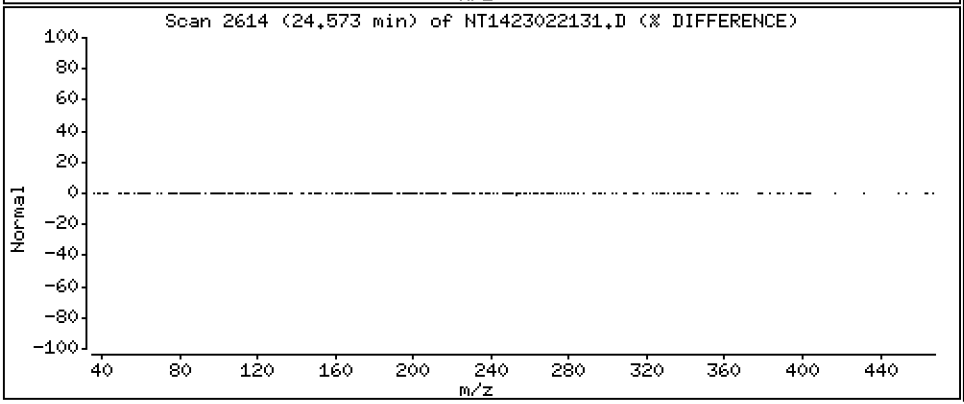
187 Total Benzofluoranthenes

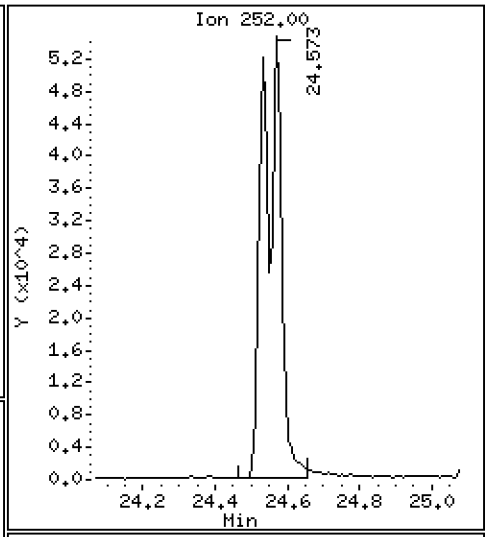
Concentration: 1.126 ug/mL

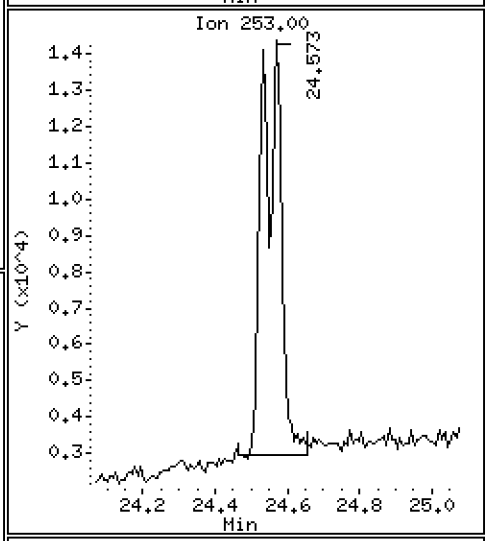


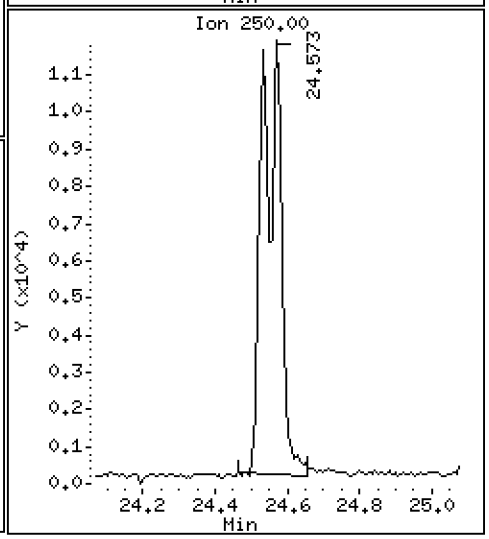












Data File: \\target\share\chem3\nt14.i\20230221B.b\NT1423022131.D

Date : 22-FEB-2023 07:32

Client ID:

Instrument: nt14.i

Sample Info: SLB0305-LCV1

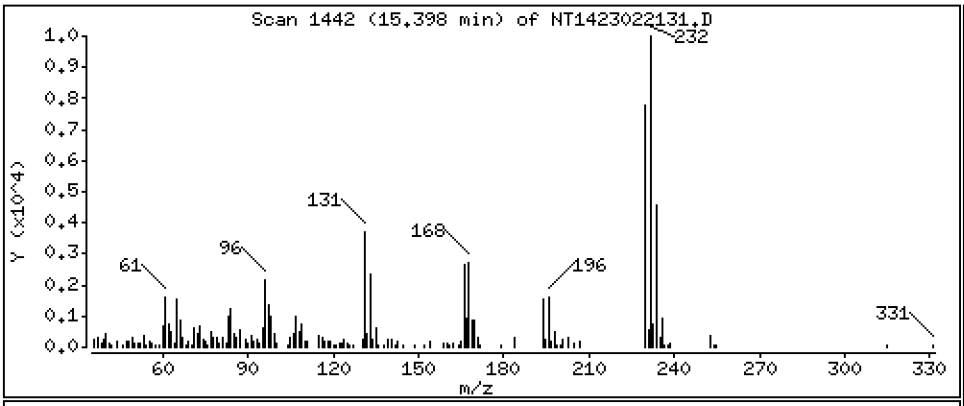
Operator: DSD

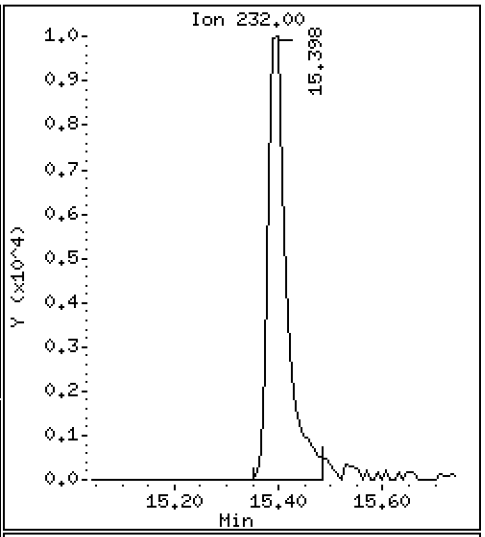
Column phase: ZB-5msi

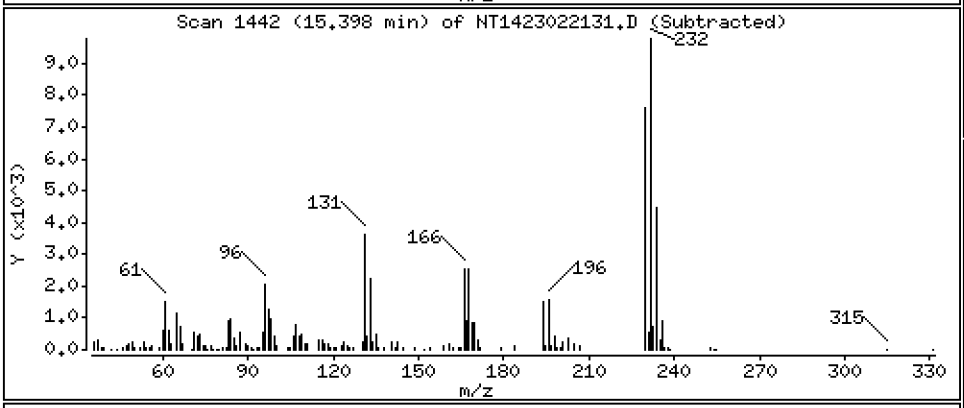
Column diameter: 0.25

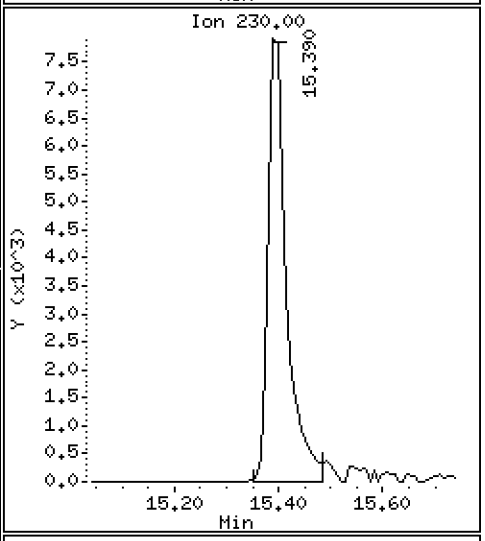
120 2,3,4,6-Tetrachlorophenol

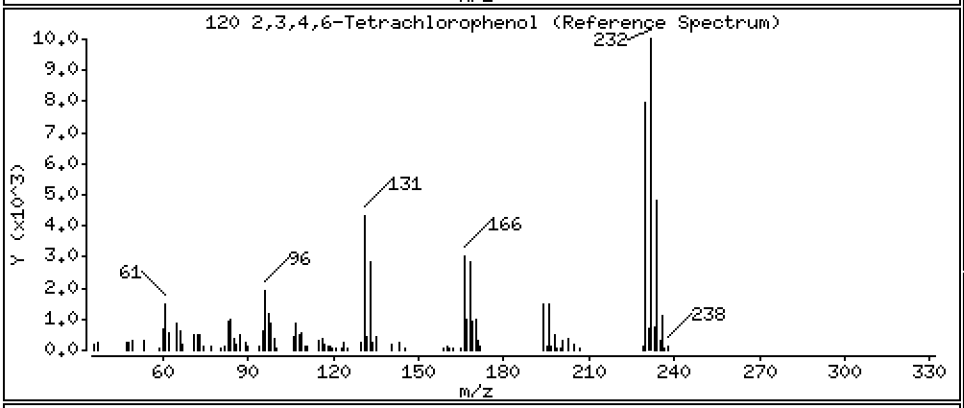
Concentration: 0.4181 ug/mL

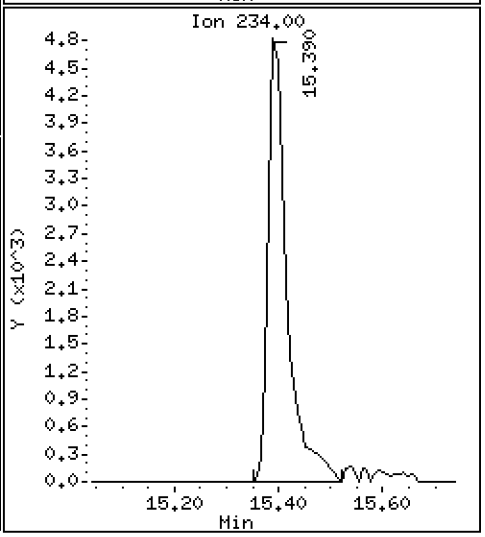


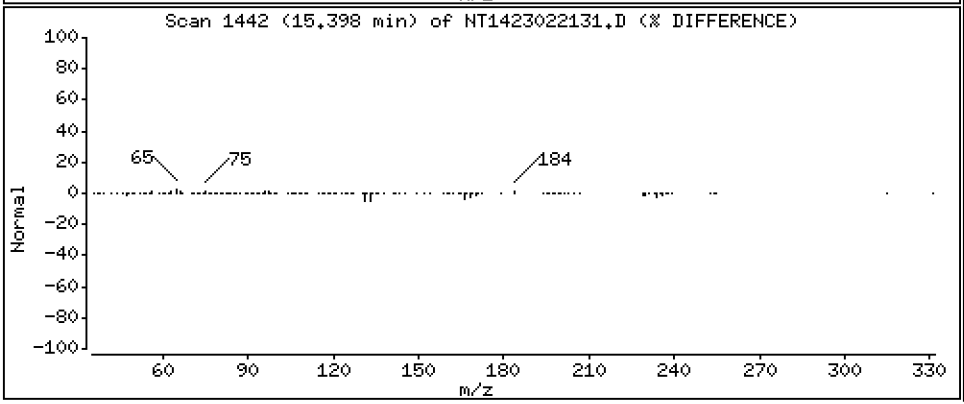












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221B.b\NT1423022131.D
Lab Smp Id: SLB0305-LCV1
Inj Date : 22-FEB-2023 07:32 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0305-LCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Meth Date : 23-Feb-2023 09:59 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.380	6.373	(0.745)	39286	0.59741	0.5974
$	2 Phenol-d5	99	7.972	7.965	(0.930)	74186	0.71115	0.7112
	3 Phenol	94	7.988	7.988	(0.932)	39762	0.36005	0.3601
$	5 2-Chlorophenol-d4	132	8.212	8.212	(0.958)	54815	0.73642	0.7364
	4 Bis(2-Chloroethyl)ether	93	8.135	8.135	(0.949)	39547	0.46878	0.4688
	6 2-Chlorophenol	128	8.243	8.235	(0.962)	37530	0.48258	0.4826
	7 1,3-Dichlorobenzene	146	8.498	8.498	(0.992)	41767	0.48242	0.4824
*	8 1,4-Dichlorobenzene-d4	152	8.568	8.568	(1.000)	245988	4.00000	
	9 1,4-Dichlorobenzene	146	8.599	8.599	(1.004)	44772	0.54489	0.5449
$	10 1,2-Dichlorobenzene-d4	152	8.925	8.925	(1.042)	28828	0.51669	0.5167
	12 1,2-Dichlorobenzene	146	8.948	8.948	(1.044)	40233	0.48980	0.4898
	11 Benzyl alcohol	108	8.878	8.855	(1.036)	18396	0.29661	0.2966
	14 2,2'-oxybis(1-Chloropropane)	121	9.150	9.150	(1.068)	8696	0.37006	0.3701
	13 2-Methylphenol	108	9.096	9.096	(1.062)	36394	0.47195	0.4720
	17 Hexachloroethane	117	9.530	9.530	(1.112)	14079	0.39413	0.3941
	16 N-Nitroso-di-n-propylamine	70	9.406	9.414	(1.098)	33033	0.47059	0.4706
	15 4-Methylphenol	108	9.367	9.367	(1.093)	37355	0.45875	0.4588
$	18 Nitrobenzene-d5	82	9.662	9.662	(0.875)	55872	0.56644	0.5664
	19 Nitrobenzene	77	9.701	9.701	(0.879)	49895	0.50407	0.5041
	20 Isophorone	82	10.143	10.151	(0.919)	71321	0.54613	0.5461
	21 2-Nitrophenol	139	10.329	10.322	(0.935)	16545	0.37356	0.3736
	22 2,4-Dimethylphenol	107	10.399	10.399	(0.942)	111792	1.49567	1.496
	23 Bis(2-Chloroethoxy)methane	93	10.593	10.593	(0.959)	43186	0.50835	0.5084
	24 Benzoic acid	105	10.702	10.686	(0.969)	1044	0.02226	0.02226
	25 2,4-Dichlorophenol	162	10.787	10.787	(0.977)	84793	1.32551	1.326
	26 1,2,4-Trichlorobenzene	180	10.957	10.957	(0.992)	45105	0.58207	0.5821
*	27 Naphthalene-d8	136	11.042	11.042	(1.000)	853786	4.00000	
	28 Naphthalene	128	11.081	11.081	(1.003)	112490	0.53435	0.5344
	29 4-Chloroaniline	127	11.227	11.228	(1.017)	97829	1.08773	1.088
	30 Hexachlorobutadiene	225	11.451	11.452	(1.037)	27775	0.58144	0.5814
	31 4-Chloro-3-methylphenol	107	12.210	12.210	(1.106)	97768	1.41202	1.412
	32 2-Methylnaphthalene	142	12.473	12.481	(1.130)	86397	0.54798	0.5480
	33 Hexachlorocyclopentadiene	237	12.945	12.945	(0.884)	583	0.01179	0.01179

		QUANT SIG					CONCENTRATIONS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.108	13.108	(0.895)	63260	1.25854	1.259
	35 2,4,5-Trichlorophenol	196	13.185	13.185	(0.900)	70815	1.30089	1.301
$	36 2-Fluorobiphenyl	172	13.270	13.270	(0.906)	104893	0.57447	0.5745
	37 2-Chloronaphthalene	162	13.464	13.471	(0.919)	78319	0.52550	0.5255
	38 2-Nitroaniline	65	13.742	13.750	(0.938)	52757	1.08876	1.089
	39 Dimethylphthalate	163	14.183	14.184	(0.968)	86955	0.55780	0.5578
	40 Acenaphthylene	152	14.330	14.331	(0.978)	130886	0.57579	0.5758
	41 2,6-Dinitrotoluene	165	14.315	14.323	(0.977)	39416	1.07455	1.075
*	42 Acenaphthene-d10	164	14.648	14.648	(1.000)	510355	4.00000	
	43 3-Nitroaniline	138	14.601	14.601	(0.997)	39071	1.00351	1.004
	44 Acenaphthene	153	14.709	14.717	(1.004)	75625	0.55567	0.5557
	45 2,4-Dinitrophenol	184	14.872	14.818	(1.015)	931	0.03884	0.03884
	46 Dibenzofuran	168	15.042	15.042	(1.027)	122770	0.54942	0.5494
	47 4-Nitrophenol	109	14.980	14.949	(1.023)	10193	0.45200	0.4520
	48 2,4-Dinitrotoluene	165	15.119	15.127	(1.032)	51905	1.00080	1.001
	50 Diethylphthalate	149	15.629	15.645	(1.067)	110941	0.53532	0.5353
	49 Fluorene	166	15.745	15.753	(1.075)	128888	0.55157	0.5516
	51 4-Chlorophenyl-phenylether	204	15.753	15.753	(1.075)	65408	0.52349	0.5235
	52 4-Nitroaniline	138	15.869	15.869	(1.083)	49641	1.11129	1.111
	53 4,6-Dinitro-2-methylphenol	198	15.954	15.961	(0.903)	49913	1.33288	1.333
	54 N-Nitrosodiphenylamine	169	16.008	16.008	(0.906)	83184	0.56006	0.5601
$	55 2,4,6-Tribromophenol	330	16.285	16.293	(1.112)	9231	0.31501	0.3150
	56 4-Bromophenyl-phenylether	248	16.755	16.756	(0.948)	33635	0.50844	0.5084
	57 Hexachlorobenzene	284	17.049	17.057	(0.965)	36207	0.53863	0.5386
	58 Pentachlorophenol	266	17.436	17.421	(0.987)	14738	0.45099	0.4510
*	59 Phenanthrene-d10	188	17.668	17.676	(1.000)	1033553	4.00000	
	60 Phenanthrene	178	17.715	17.723	(1.003)	135515	0.54564	0.5456
	61 Anthracene	178	17.808	17.816	(1.008)	138398	0.56246	0.5625
	62 Carbazole	167	18.156	18.156	(1.028)	122679	0.54941	0.5494
	63 Di-n-butylphthalate	149	18.991	18.992	(1.075)	142980	0.57329	0.5733
	64 Fluoranthene	202	20.129	20.137	(0.884)	167418	0.51359	0.5136
	65 Pyrene	202	20.554	20.562	(0.903)	170903	0.49581	0.4958
$	66 Terphenyl-d14	244	20.864	20.872	(0.916)	147316	0.60192	0.6019
	67 Butylbenzylphthalate	149	21.816	21.816	(0.958)	62977	0.55379	0.5538
	68 Benzo(a)anthracene	228	22.738	22.738	(0.999)	138613	0.57328	0.5733
*	69 Chrysene-d12	240	22.769	22.769	(1.000)	755570	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.714	22.715	(0.998)	133909	1.80761	1.808
	71 Chrysene	228	22.807	22.815	(1.002)	124589	0.57287	0.5729
	72 bis(2-Ethylhexyl)phthalate	149	22.854	22.854	(0.959)	85666	0.39185	0.3918
*	134 Di-n-octylphthalate-d4	153	23.829	23.837	(1.000)	1272969	4.00000	
	73 Di-n-octylphthalate	149	23.845	23.845	(1.001)	152581	0.51263	0.5126
	74 Benzo(b)fluoranthene	252	24.534	24.534	(0.973)	90355	0.51448	0.5145
	75 Benzo(k)fluoranthene	252	24.572	24.573	(0.975)	113957	0.60725	0.6072
	76 Benzo(a)pyrene	252	25.107	25.115	(0.996)	83795	0.50342	0.5034
*	77 Perylene-d12	264	25.215	25.215	(1.000)	553476	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	27.540	27.540	(1.092)	72252	0.52692	0.5269
	79 Dibenzo(a,h)anthracene	278	27.556	27.556	(1.093)	63256	0.55973	0.5597
	80 Benzo(g,h,i)perylene	276	28.216	28.216	(1.119)	54224	0.48759	0.4876
	90 N-Nitrosodimethylamine	74	4.280	4.280	(0.500)	35646	0.70012	0.7001
	91 Aniline	93	8.034	8.034	(0.938)	112299	0.95069	0.9507
	93 Benzidine	184	20.400	20.392	(0.896)	152718	1.78115	1.781
	103 Pyridine	79	4.295	4.288	(0.501)	65386	0.81161	0.8116
	105 1-methylnaphthalene	142	12.697	12.698	(1.150)	79012	0.53379	0.5338
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.077	16.077	(1.098)	141942	0.56356	0.5636

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.572	24.573	(0.975)	193055	1.12593	1.126
120 2,3,4,6-Tetrachlorophenol	232	15.397	15.390	(1.051)	24295	0.41807	0.4181

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022131.D
Lab Smp Id: SLB0305-LCV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 06:55
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	235125	117563	470250	245988	4.62
27 Naphthalene-d8	883104	441552	1766208	853786	-3.32
42 Acenaphthene-d10	537789	268895	1075578	510355	-5.10
59 Phenanthrene-d10	1079531	539766	2159062	1033553	-4.26
69 Chrysene-d12	826409	413205	1652818	755570	-8.57
134 Di-n-octylphthala	1339562	669781	2679124	1272969	-4.97
77 Perylene-d12	590325	295163	1180650	553476	-6.24

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.67	-0.04
69 Chrysene-d12	22.77	22.27	23.27	22.77	-0.00
134 Di-n-octylphthala	23.84	23.34	24.34	23.83	-0.03
77 Perylene-d12	25.22	24.72	25.72	25.22	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022131.D

Lab ID: SLB0305-LCV1
nt14.i, ABN.m, 22-FEB-2023 07:32

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: NT1423022130.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GB00046
Lab File ID:	NT1423022160.D	Calibration Date:	02/16/2023
Sequence:	SLB0308	Injection Date:	02/23/23
Lab Sample ID:	SLB0308-CCV1	Injection Time:	01:02
Sequence Name:	Calibration Check		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	5.0000	4.9	1.7957660	1.7595650		-2.0	+/-50
4-Methylphenol	A	5.0000	5.3	1.3240860	1.3934820		5.2	+/-50
Naphthalene	A	5.0000	5.2	0.9862730	1.0347230		4.9	+/-50
2-Methylnaphthalene	A	5.0000	5.0	0.7386653	0.7456132		0.9	+/-50
Acenaphthylene	A	5.0000	5.2	1.7816190	1.8671910		4.8	+/-50
Dimethylphthalate	A	5.0000	5.2	1.2218100	1.2634460		3.4	+/-50
Acenaphthene	A	5.0000	5.2	1.0666800	1.1125790		4.3	+/-50
Dibenzofuran	A	5.0000	4.9	1.7513490	1.7324410		-1.1	+/-50
Fluorene	A	5.0000	5.0	1.8314530	1.8178300		-0.7	+/-50
Phenanthrene	A	5.0000	5.2	0.9611900	0.9925679		3.3	+/-50
Anthracene	A	5.0000	5.6	0.9522768	1.0613610		11.5	+/-50
Fluoranthene	A	5.0000	5.4	1.7257220	1.8539230		7.4	+/-50
Pyrene	A	5.0000	5.4	1.8248060	1.9593470		7.4	+/-50
Butylbenzylphthalate	A	5.0000	5.9	0.5233989	0.7236320		18.9	+/-50
Benzo(a)anthracene	A	5.0000	5.3	1.2800360	1.3595640		6.2	+/-50
Chrysene	A	5.0000	5.5	1.1513540	1.2600890		9.4	+/-50
bis(2-Ethylhexyl)phthalate	A	5.0000	4.2	0.5470542	0.5635367		-15.8	+/-50
Benzofluoranthenes, Total	A	10.000	10.9	1.2391730	1.3559510		9.4	+/-50
Benzo(a)pyrene	A	5.0000	4.8	1.0848130	1.1644970		-4.0	+/-50
Indeno(1,2,3-cd)pyrene	A	5.0000	4.5	0.8621891	0.9121286		-10.0	+/-50
Dibenzo(a,h)anthracene	A	5.0000	4.8	0.7046903	0.8047863		-3.9	+/-50
Benzo(g,h,i)perylene	A	5.0000	4.0	0.7176031	0.6656153		-19.3	+/-50
2-Fluorophenol	A	7.5000	7.73	1.0693230	1.1022750		3.1	+/-50
Phenol-d5	A	7.5000	7.53	1.6963140	1.7027520		0.4	+/-50
2-Chlorophenol-d4	A	7.5000	7.24	1.2103710	1.1683340		-3.5	+/-50
1,2-Dichlorobenzene-d4	A	5.0000	4.50	0.9072515	0.8168635		-10.0	+/-50
Nitrobenzene-d5	A	5.0000	5.41	0.4621137	0.4996896		8.1	+/-50
2-Fluorobiphenyl	A	5.0000	5.06	1.4311010	1.4476130		1.2	+/-50
2,4,6-Tribromophenol	A	7.5000	6.79	0.2030581	0.2118830		-9.4	+/-50
p-Terphenyl-d14	A	5.0000	5.33	1.2956710	1.3804980		6.5	+/-50

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221D.b\NT1423022160.D

Page 1

Date : 23-FEB-2023 01:02

Client ID:

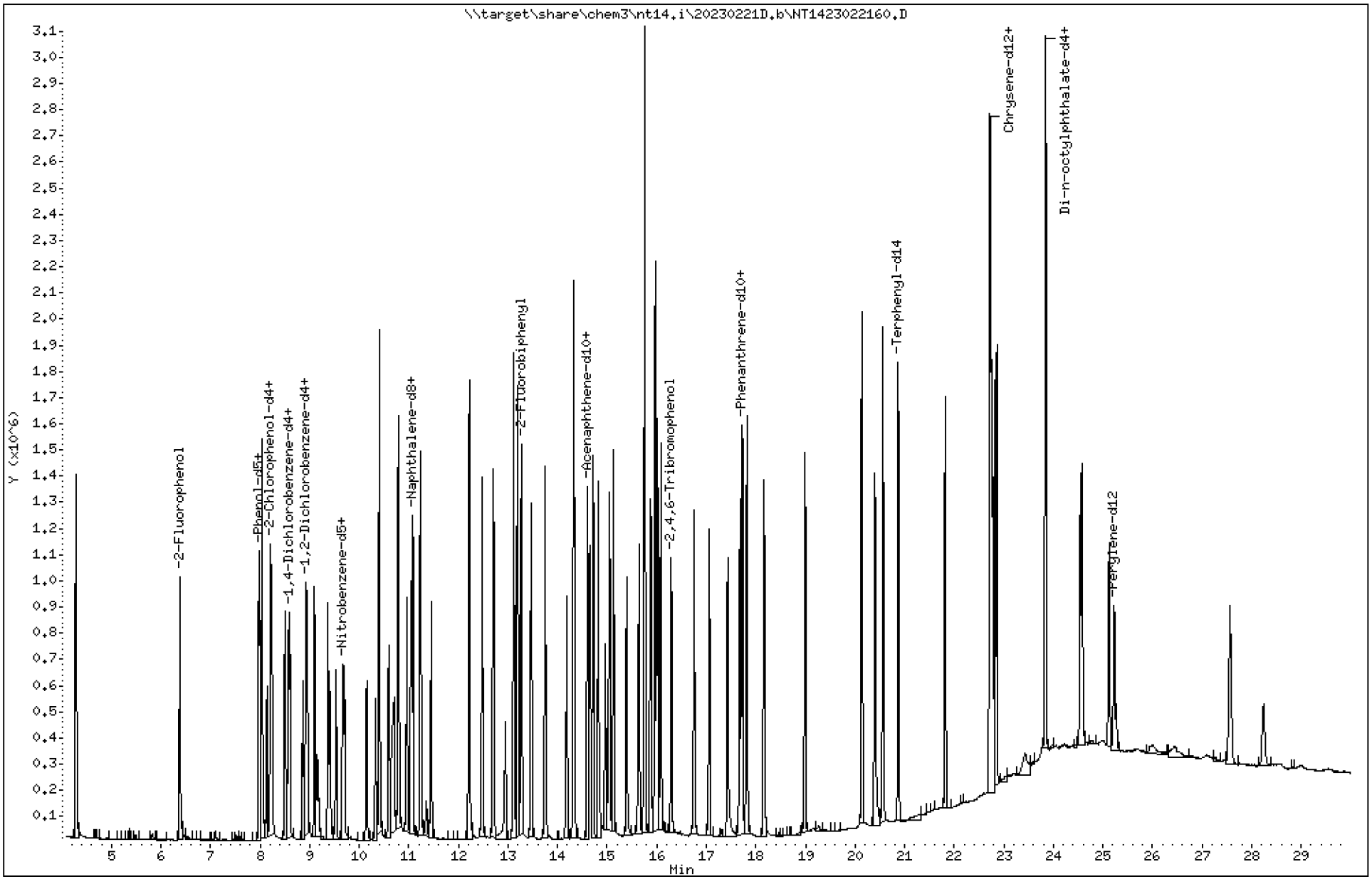
Instrument: nt14.i

Sample Info: SLB0352-ICV1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230221D.b\NT1423022160.D
Lab Smp Id: SLB0352-ICV1
Inj Date : 23-FEB-2023 01:02 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0352-ICV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230221D.b\ABN.m
Meth Date : 28-Feb-2023 15:10 deenayd Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.381	6.381	(0.745)	455918	7.50000	7.731
$	2	Phenol-d5	99	7.973	7.973	(0.930)	704285	7.50000	7.528
	3	Phenol	94	7.996	7.996	(0.933)	490758	5.00000	4.955(M)
$	5	2-Chlorophenol-d4	132	8.212	8.212	(0.958)	483241	7.50000	7.240
	4	Bis(2-Chloroethyl)ether	93	8.135	8.135	(0.949)	312206	5.00000	4.127(M)
	6	2-Chlorophenol	128	8.243	8.243	(0.962)	346354	5.00000	4.966
	7	1,3-Dichlorobenzene	146	8.498	8.498	(0.992)	360943	5.00000	4.649
*	8	1,4-Dichlorobenzene-d4	152	8.568	8.568	(1.000)	220595	4.00000	
	9	1,4-Dichlorobenzene	146	8.599	8.599	(1.004)	376124	5.00000	5.105
$	10	1,2-Dichlorobenzene-d4	152	8.925	8.925	(1.042)	225245	5.00000	4.502
	12	1,2-Dichlorobenzene	146	8.948	8.948	(1.044)	344987	5.00000	4.683
	11	Benzyl alcohol	108	8.863	8.863	(1.034)	236938	5.00000	4.238
	14	2,2'-oxybis(1-Chloropropane)	121	9.150	9.150	(1.068)	98506	5.00000	4.674(M)
	13	2-Methylphenol	108	9.096	9.096	(1.062)	360789	5.00000	5.217
	17	Hexachloroethane	117	9.530	9.530	(1.112)	141566	5.00000	4.419
	16	N-Nitroso-di-n-propylamine	70	9.414	9.414	(1.099)	350026	5.00000	5.560
	15	4-Methylphenol	108	9.368	9.368	(1.093)	384244	5.00000	5.262
$	18	Nitrobenzene-d5	82	9.662	9.662	(0.875)	476970	5.00000	5.407
	19	Nitrobenzene	77	9.701	9.701	(0.879)	476135	5.00000	5.378
	20	Isophorone	82	10.151	10.151	(0.919)	674182	5.00000	5.772
	21	2-Nitrophenol	139	10.330	10.330	(0.935)	201830	5.00000	4.985
	22	2,4-Dimethylphenol	107	10.407	10.407	(0.942)	749201	10.0000	11.21
	23	Bis(2-Chloroethoxy)methane	93	10.593	10.593	(0.959)	401442	5.00000	5.283
	24	Benzoic acid	105	10.702	10.702	(0.969)	860316	20.0000	19.51
	25	2,4-Dichlorophenol	162	10.787	10.787	(0.977)	625671	10.0000	10.94
	26	1,2,4-Trichlorobenzene	180	10.965	10.965	(0.993)	357997	5.00000	5.165
*	27	Naphthalene-d8	136	11.042	11.042	(1.000)	763626	4.00000	
	28	Naphthalene	128	11.081	11.081	(1.003)	987677	5.00000	5.246
	29	4-Chloroaniline	127	11.235	11.235	(1.017)	881337	10.0000	10.96
	30	Hexachlorobutadiene	225	11.452	11.452	(1.037)	223435	5.00000	5.230
	31	4-Chloro-3-methylphenol	107	12.218	12.218	(1.106)	706462	10.0000	11.41
	32	2-Methylnaphthalene	142	12.481	12.481	(1.130)	711712	5.00000	5.047
	33	Hexachlorocyclopentadiene	237	12.945	12.945	(0.883)	132345	10.0000	2.942

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.115	13.115	(0.895)	489467	10.0000	10.70
	35	2,4,5-Trichlorophenol	196	13.193	13.193	(0.900)	549830	10.0000	11.10
$	36	2-Fluorobiphenyl	172	13.270	13.270	(0.905)	840316	5.00000	5.058
	37	2-Chloronaphthalene	162	13.471	13.471	(0.919)	690970	5.00000	5.095
	38	2-Nitroaniline	65	13.750	13.750	(0.938)	559525	10.0000	12.69
	39	Dimethylphthalate	163	14.184	14.184	(0.968)	733410	5.00000	5.170
	40	Acenaphthylene	152	14.338	14.338	(0.978)	1083874	5.00000	5.240
	41	2,6-Dinitrotoluene	165	14.323	14.323	(0.977)	347080	10.0000	10.40
*	42	Acenaphthene-d10	164	14.656	14.656	(1.000)	464387	4.00000	
	43	3-Nitroaniline	138	14.609	14.609	(0.997)	395236	10.0000	11.16
	44	Acenaphthene	153	14.717	14.717	(1.004)	645834	5.00000	5.215
	45	2,4-Dinitrophenol	184	14.818	14.818	(1.011)	421017	20.0000	18.48
	46	Dibenzofuran	168	15.050	15.050	(1.027)	1005654	5.00000	4.946
	47	4-Nitrophenol	109	14.965	14.965	(1.021)	205259	10.0000	9.926
	48	2,4-Dinitrotoluene	165	15.127	15.127	(1.032)	508427	10.0000	10.77
	50	Diethylphthalate	149	15.645	15.645	(1.068)	948421	5.00000	5.029
	49	Fluorene	166	15.753	15.753	(1.075)	1055221	5.00000	4.963
	51	4-Chlorophenyl-phenylether	204	15.761	15.761	(1.075)	529446	5.00000	4.657
	52	4-Nitroaniline	138	15.877	15.877	(1.083)	470290	10.0000	11.57
	53	4,6-Dinitro-2-methylphenol	198	15.969	15.969	(0.903)	731989	20.0000	21.31
	54	N-Nitrosodiphenylamine	169	16.015	16.015	(0.906)	693684	5.00000	5.252
$	55	2,4,6-Tribromophenol	330	16.293	16.293	(1.112)	184492	7.50000	6.793
	56	4-Bromophenyl-phenylether	248	16.756	16.756	(0.948)	298888	5.00000	5.081
	57	Hexachlorobenzene	284	17.057	17.057	(0.965)	293939	5.00000	4.917
	58	Pentachlorophenol	266	17.429	17.429	(0.986)	261657	10.0000	8.777
*	59	Phenanthrene-d10	188	17.676	17.676	(1.000)	919090	4.00000	
	60	Phenanthrene	178	17.723	17.723	(1.003)	1140324	5.00000	5.163
	61	Anthracene	178	17.823	17.823	(1.008)	1219358	5.00000	5.573
	62	Carbazole	167	18.164	18.164	(1.028)	1121185	5.00000	5.647
	63	Di-n-butylphthalate	149	18.992	18.992	(1.074)	1332112	5.00000	6.006
	64	Fluoranthene	202	20.137	20.137	(0.884)	1385659	5.00000	5.371
	65	Pyrene	202	20.562	20.562	(0.903)	1464455	5.00000	5.369
$	66	Terphenyl-d14	244	20.872	20.872	(0.916)	1031812	5.00000	5.327
	67	Butylbenzylphthalate	149	21.816	21.816	(0.958)	540857	5.00000	5.943
	68	Benzo(a)anthracene	228	22.746	22.746	(0.999)	1016165	5.00000	5.311
*	69	Chrysene-d12	240	22.777	22.777	(1.000)	597936	4.00000	
	70	3,3'-Dichlorobenzidine	252	22.715	22.715	(0.997)	1004240	15.0000	17.00
	71	Chrysene	228	22.823	22.823	(1.002)	941816	5.00000	5.472
	72	bis(2-Ethylhexyl)phthalate	149	22.862	22.862	(0.959)	775299	5.00000	4.209
*	134	Di-n-octylphthalate-d4	153	23.837	23.837	(1.000)	1100619	4.00000	
	73	Di-n-octylphthalate	149	23.845	23.845	(1.000)	1274056	5.00000	4.951
	74	Benzo(b)fluoranthene	252	24.542	24.542	(0.973)	764678	5.00000	5.639
	75	Benzo(k)fluoranthene	252	24.580	24.580	(0.975)	780831	5.00000	5.388
	76	Benzo(a)pyrene	252	25.122	25.122	(0.996)	622115	5.00000	4.800
*	77	Perylene-d12	264	25.223	25.223	(1.000)	427388	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.556	27.556	(1.092)	487291	5.00000	4.498
	79	Dibenzo(a,h)anthracene	278	27.572	27.572	(1.093)	429945	5.00000	4.806
	80	Benzo(g,h,i)perylene	276	28.240	28.240	(1.120)	355595	5.00000	4.035
	90	N-Nitrosodimethylamine	74	4.280	4.280	(0.500)	468645	10.0000	10.26
	91	Aniline	93	8.034	8.034	(0.938)	1025317	10.0000	9.679
	93	Benzidine	184	20.400	20.400	(0.896)	1115633	10.0000	20.17
	103	Pyridine	79	4.288	4.288	(0.500)	755434	10.0000	10.46
	105	1-methylnaphthalene	142	12.698	12.698	(1.150)	653654	5.00000	4.937
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.085	16.085	(1.098)	1257298	5.00000	5.486

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	24.580	24.580	(0.975)	1448793	10.0000	10.94
120 2,3,4,6-Tetrachlorophenol	232	15.398	15.398	(1.051)	284086	5.00000	5.265

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022160.D
Lab Smp Id: SLB0352-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221D.b\ABN.m
Misc Info:

Calibration Date: 21-FEB-2023
Calibration Time: 13:44
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	220595	110298	441190	220595	0.00
27 Naphthalene-d8	763626	381813	1527252	763626	0.00
42 Acenaphthene-d10	464387	232194	928774	464387	0.00
59 Phenanthrene-d10	919090	459545	1838180	919090	0.00
69 Chrysene-d12	597936	298968	1195872	597936	0.00
134 Di-n-octylphthala	1100619	550310	2201238	1100619	0.00
77 Perylene-d12	427388	213694	854776	427388	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	0.00
42 Acenaphthene-d10	14.66	14.16	15.16	14.66	0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	0.00
69 Chrysene-d12	22.78	22.28	23.28	22.78	0.00
134 Di-n-octylphthala	23.84	23.34	24.34	23.84	0.00
77 Perylene-d12	25.22	24.72	25.72	25.22	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022160.D

Lab ID: SLB0352-ICV1
nt14.i, ABN.m, 23-FEB-2023 01:02

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

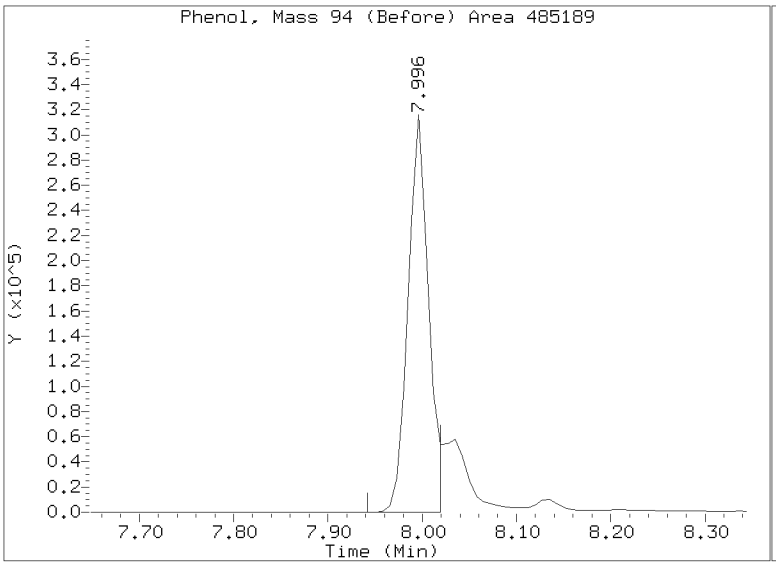
No RRT check. Ccal file.

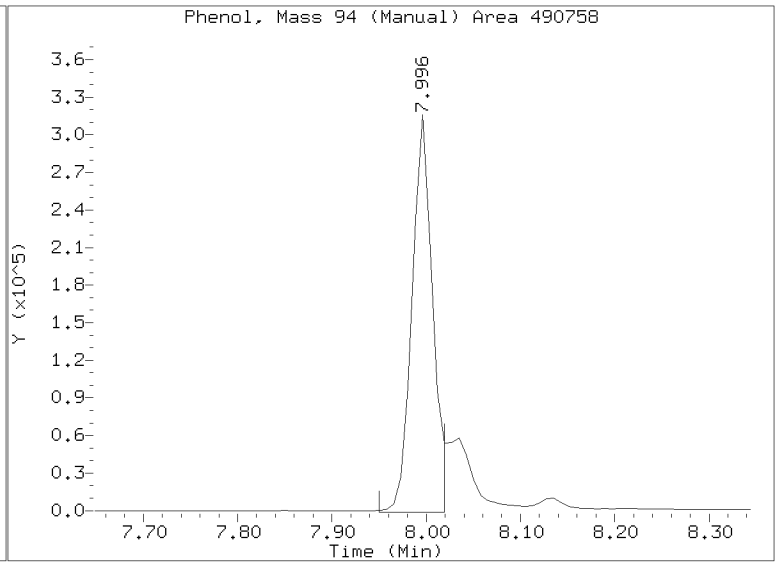
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

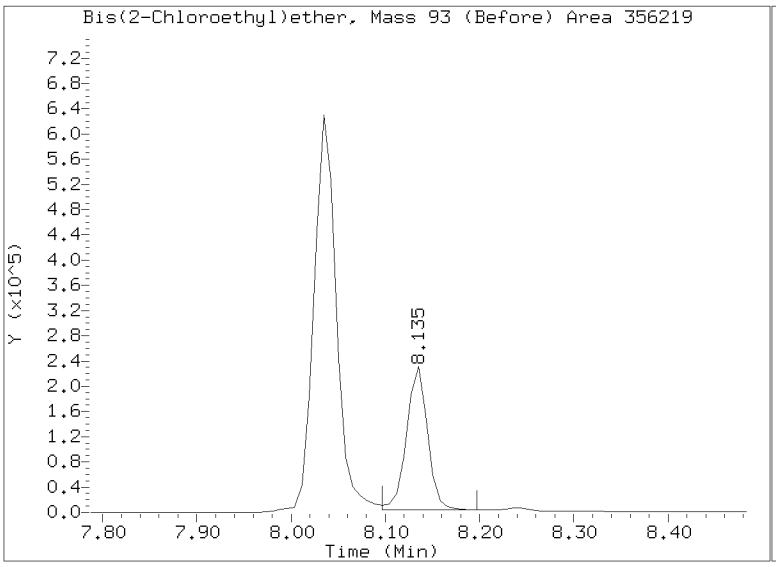
* Only compounds listed in the work order have been verified by the analyst *

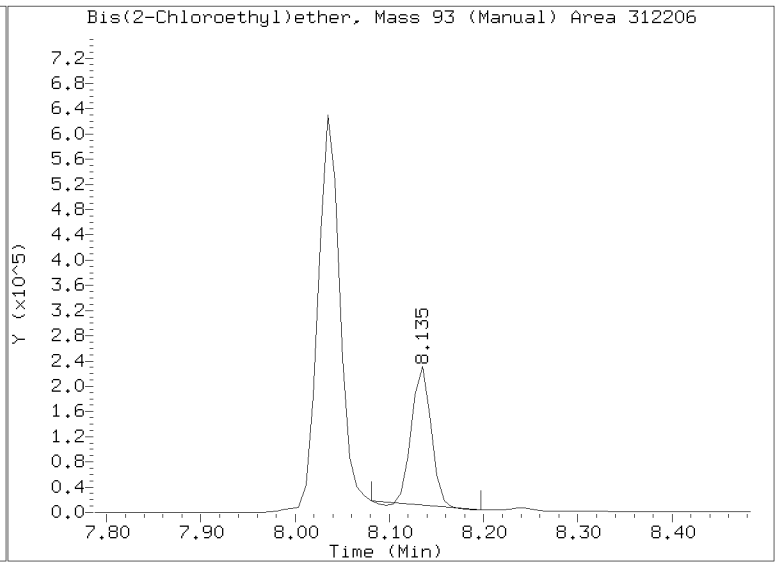
Quant Ion Manual Peak Adjustment Report

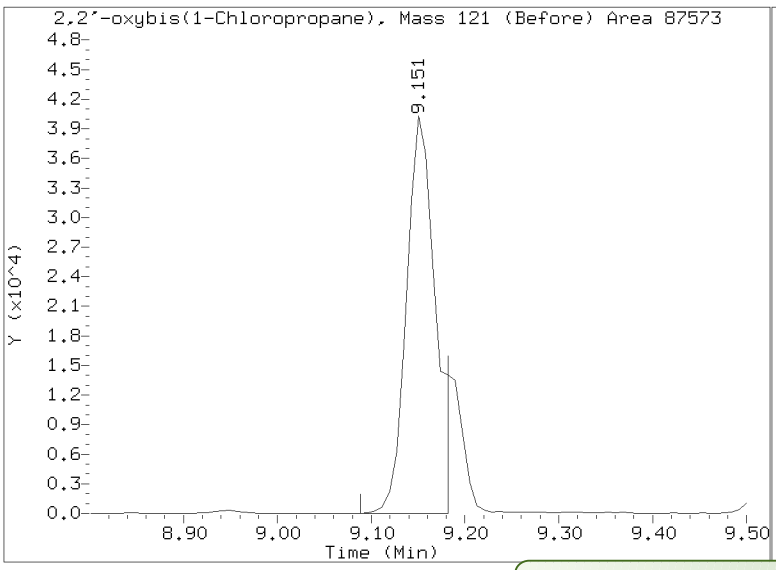
Datafile: //target/share/chem3/nt14.i/20230221D.b/NT1423022160.D
Injection Date: 23-FEB-2023 01:02
Lab ID:SLB0352-ICV1 Client ID:
Report Date: 03/24/2023 15:34

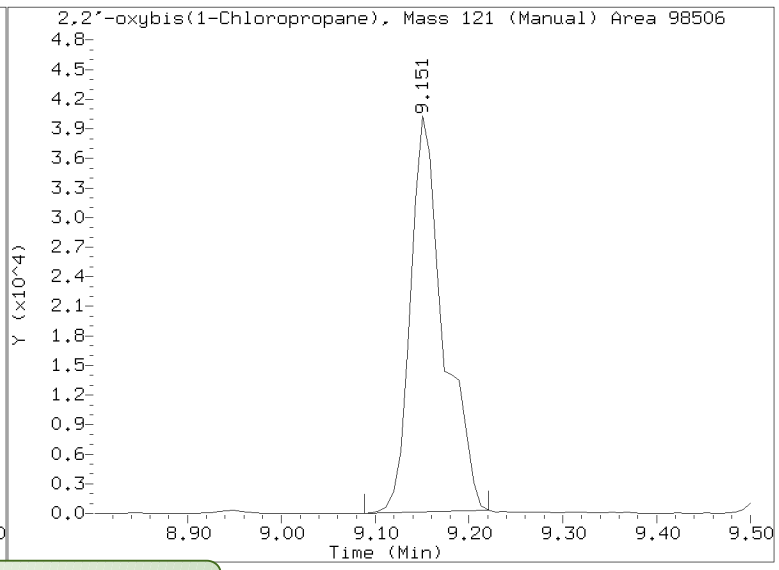












APPROVED
By Deenay Dunmore at 3:38 pm, Mar 24, 2023

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221D.b

Instrument: nt14.i Date: 23-FEB-2023 Method: ABN.m

INITIAL CAL: 30-DEC-2022

Compound	%RSD or R^2
Benzidine	0.986

ICV CAL: NT1423022160.D 23-FEB-2023 01:02

Compound	%D
Hexachlorocyclopentadiene	-70.58
2-Nitroaniline	26.90
Benzidine	101.7

Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION CONTINUING CALIBRATION CHECK

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GB00046
Lab File ID:	NT1423022147.D	Calibration Date:	02/16/2023
Sequence:	SLB0308	Injection Date:	02/22/23
Lab Sample ID:	SLB0308-LCV1	Injection Time:	17:11
Sequence Name:	ABN 0.2		

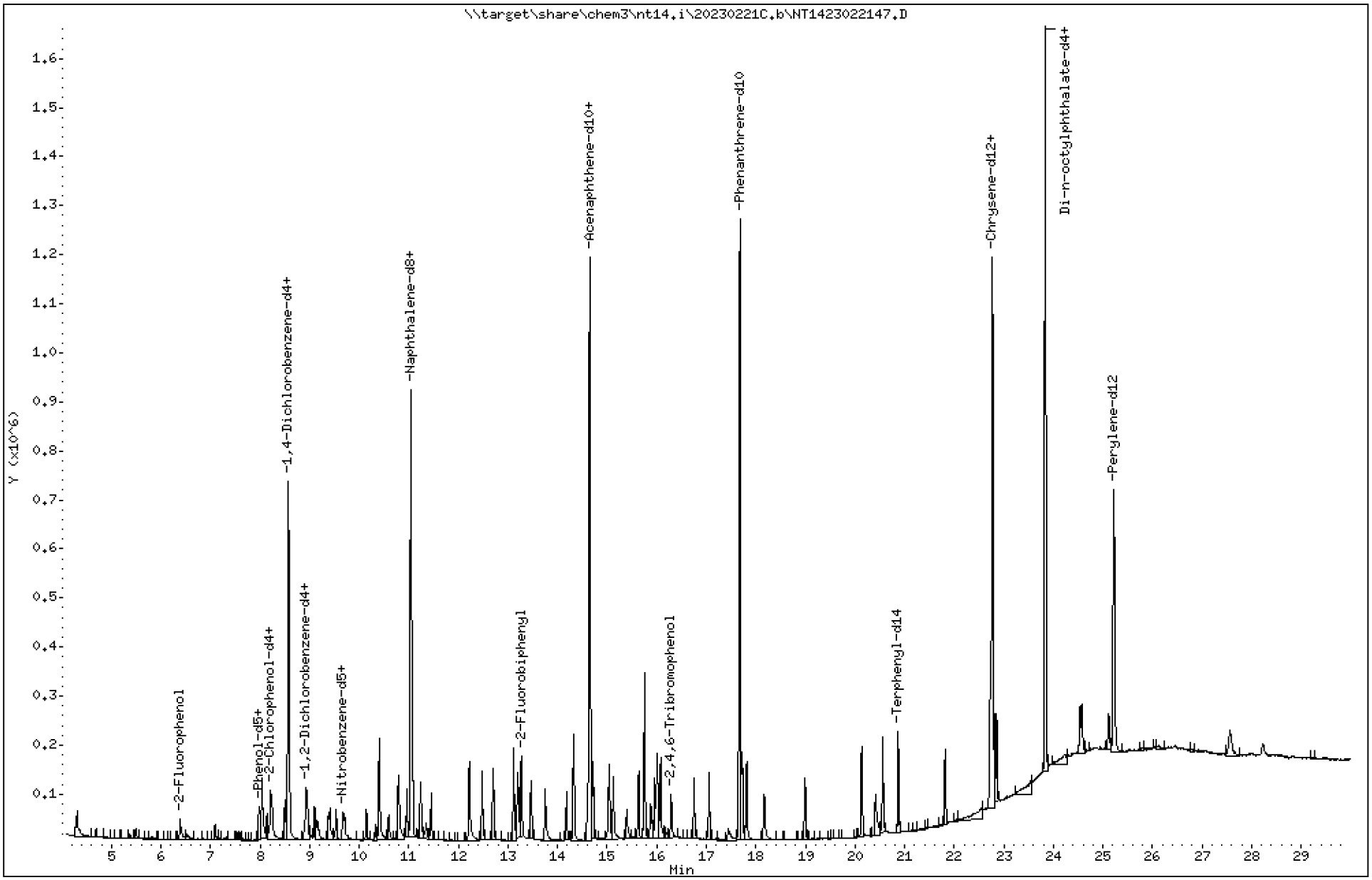
		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Phenol	A	0.50000	0.6	1.7957660	2.0345710		13.3	+/-50	
4-Methylphenol	A	0.50000	0.5	1.3240860	1.3161650		-0.6	+/-50	
Naphthalene	A	0.50000	0.5	0.9862730	1.0645270		7.9	+/-50	
2-Methylnaphthalene	A	0.50000	0.5	0.7386653	0.7875963		6.6	+/-50	
Acenaphthylene	A	0.50000	0.6	1.7816190	2.0437310		14.7	+/-50	
Dimethylphthalate	A	0.50000	0.6	1.2218100	1.3461500		10.2	+/-50	
Acenaphthene	A	0.50000	0.5	1.0666800	1.1721430		9.9	+/-50	
Dibenzofuran	A	0.50000	0.5	1.7513490	1.8934720		8.1	+/-50	
Fluorene	A	0.50000	0.5	1.8314530	2.0047790		9.5	+/-50	
Phenanthrene	A	0.50000	0.5	0.9611900	1.0362200		7.8	+/-50	
Anthracene	A	0.50000	0.6	0.9522768	1.0631360		11.6	+/-50	
Fluoranthene	A	0.50000	0.5	1.7257220	1.8900020		9.5	+/-50	
Pyrene	A	0.50000	0.5	1.8248060	1.9017910		4.2	+/-50	
Butylbenzylphthalate	A	0.50000	0.6	0.5233989	0.7131170		18.4	+/-50	
Benzo(a)anthracene	A	0.50000	0.6	1.2800360	1.4434680		12.8	+/-50	
Chrysene	A	0.50000	0.6	1.1513540	1.2914160		12.2	+/-50	
bis(2-Ethylhexyl)phthalate	A	0.50000	0.4	0.5470542	0.5609014		-18.3	+/-50	
Benzofluoranthenes, Total	A	1.0000	1.1	1.2391730	1.3773570		11.2	+/-50	
Benzo(a)pyrene	A	0.50000	0.5	1.0848130	1.1722140		-2.6	+/-50	
Indeno(1,2,3-cd)pyrene	A	0.50000	0.5	0.8621891	0.9445293		-4.7	+/-50	
Dibenzo(a,h)anthracene	A	0.50000	0.5	0.7046903	0.8236237		0.9	+/-50	
Benzo(g,h,i)perylene	A	0.50000	0.4	0.7176031	0.7185623		-10.6	+/-50	
2-Fluorophenol	A	0.75000	0.619	1.0693230	0.8830979		-17.4	+/-50	
Phenol-d5	A	0.75000	0.734	1.6963140	1.6602410		-2.1	+/-50	
2-Chlorophenol-d4	A	0.75000	0.790	1.2103710	1.2747080		5.3	+/-50	
1,2-Dichlorobenzene-d4	A	0.50000	0.549	0.9072515	0.9962794		9.8	+/-50	
Nitrobenzene-d5	A	0.50000	0.541	0.4621137	0.5004362		8.3	+/-50	
2-Fluorobiphenyl	A	0.50000	0.572	1.4311010	1.6383770		14.5	+/-50	
2,4,6-Tribromophenol	A	0.75000	0.0831	0.2030581	0.0254382		-88.9	+/-50	*
p-Terphenyl-d14	A	0.50000	0.635	1.2956710	1.6459000		27.0	+/-50	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022147.D
Date : 22-FEB-2023 17:11
Client ID:
Sample Info: SLB0308-LCV1

Instrument: nt14.i
Operator: DSD
Column diameter: 0.25

Column phase: ZB-5msi



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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

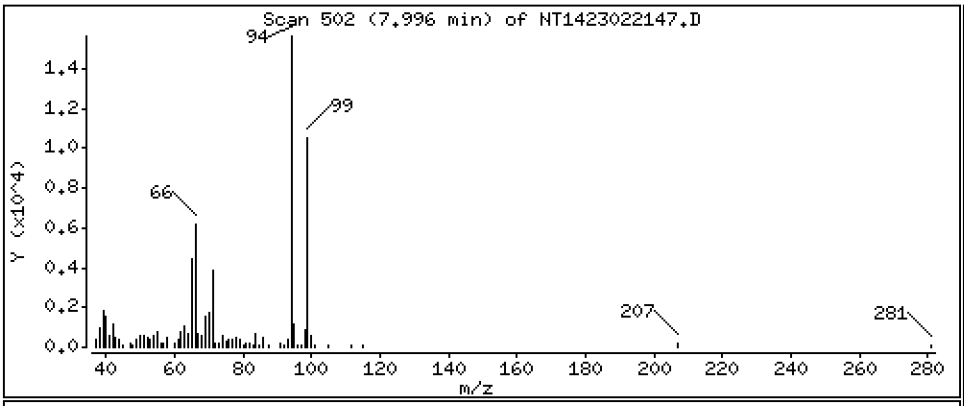
Operator: DSD

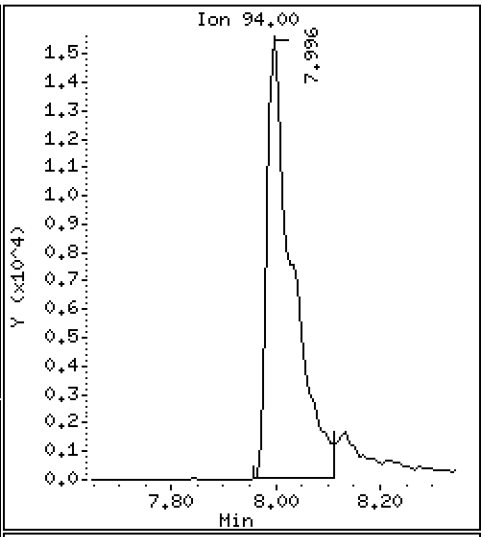
Column phase: ZB-5msi

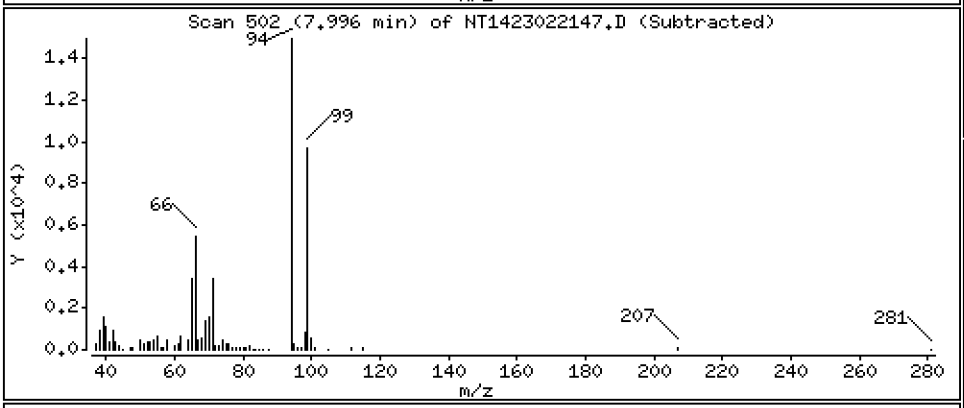
Column diameter: 0.25

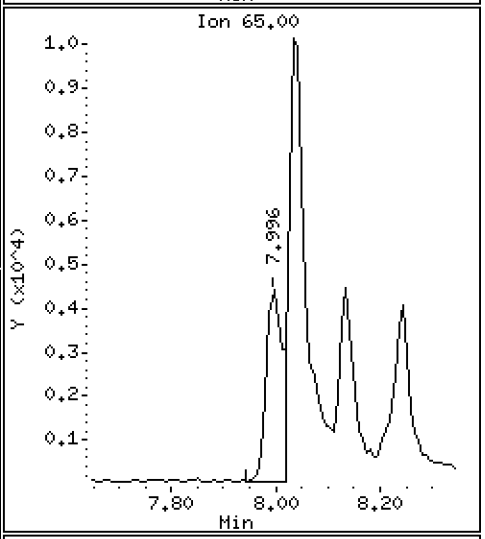
3 Phenol

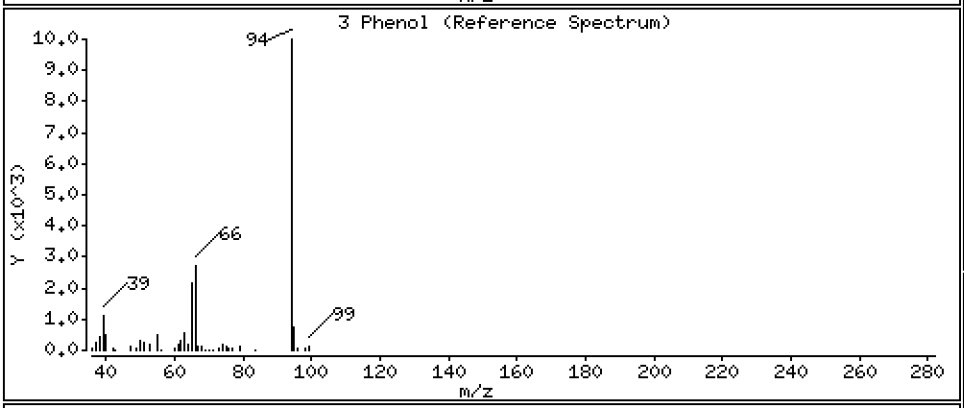
Concentration: 0.5665 ug/mL

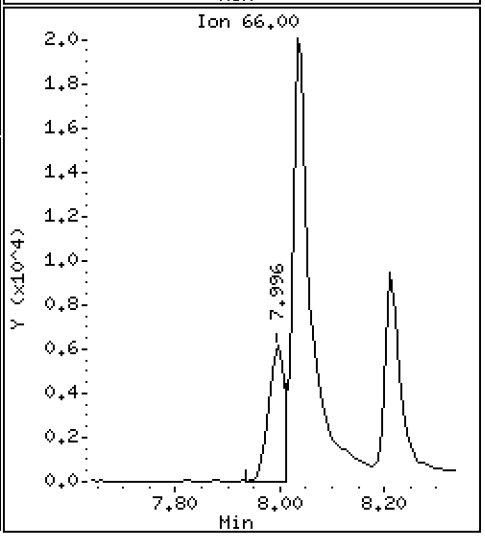


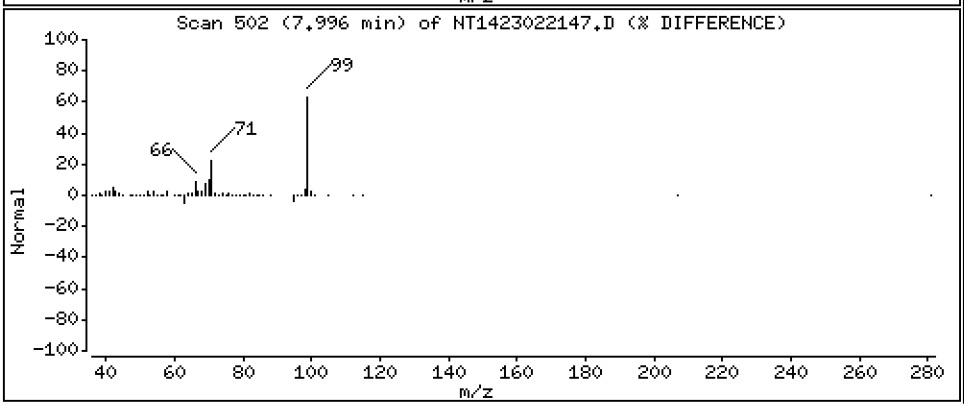












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

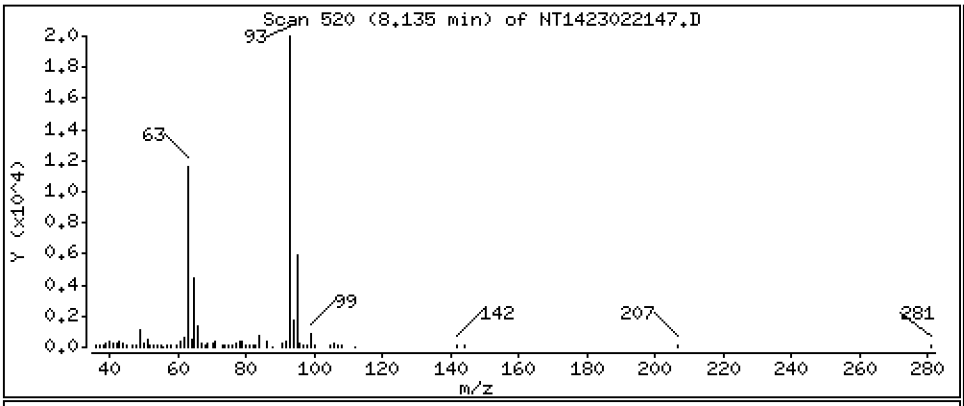
Operator: DSD

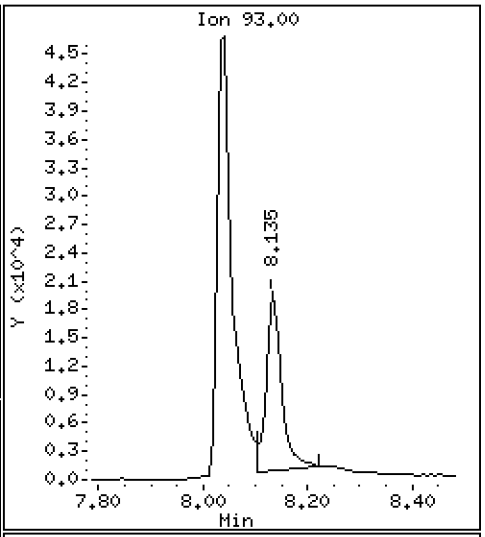
Column phase: ZB-5msi

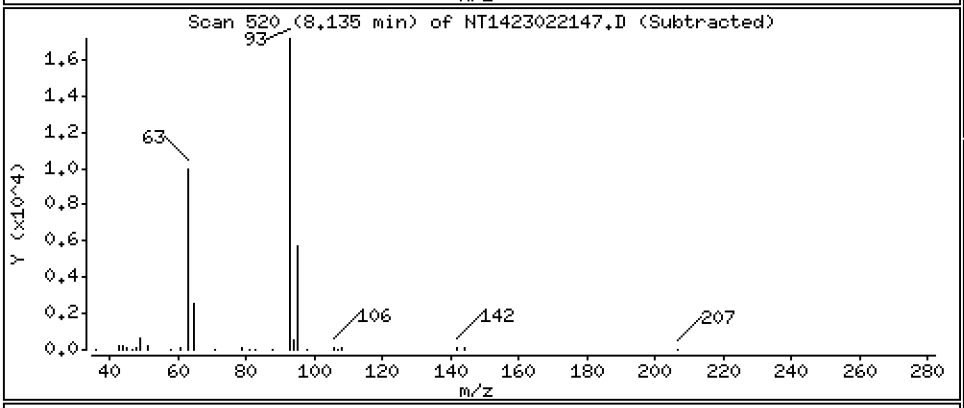
Column diameter: 0.25

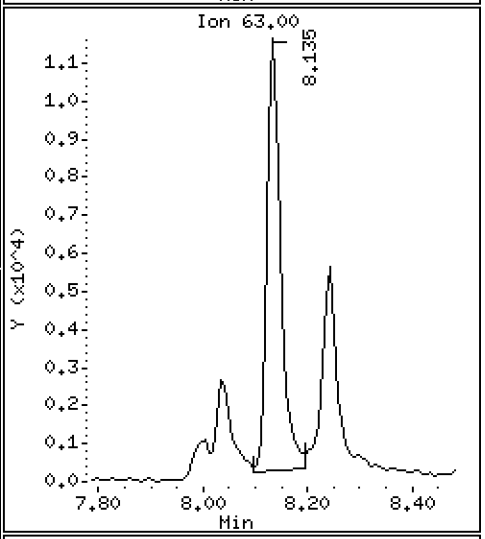
4 Bis(2-Chloroethyl)ether

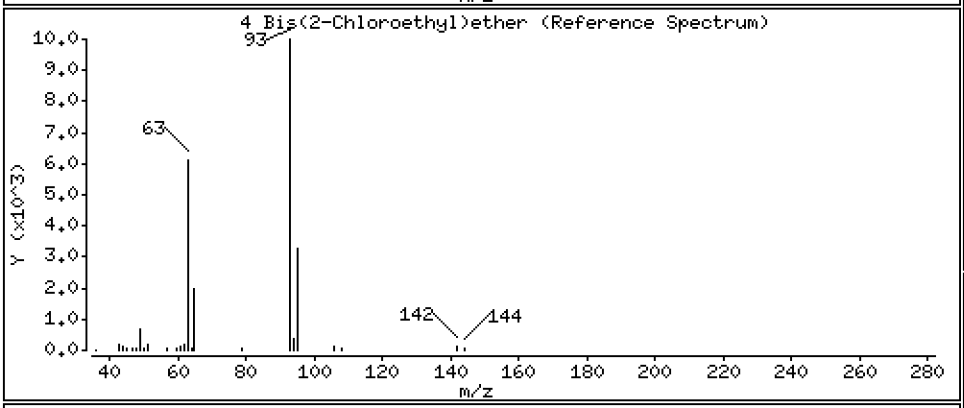
Concentration: 0.5245 ug/mL

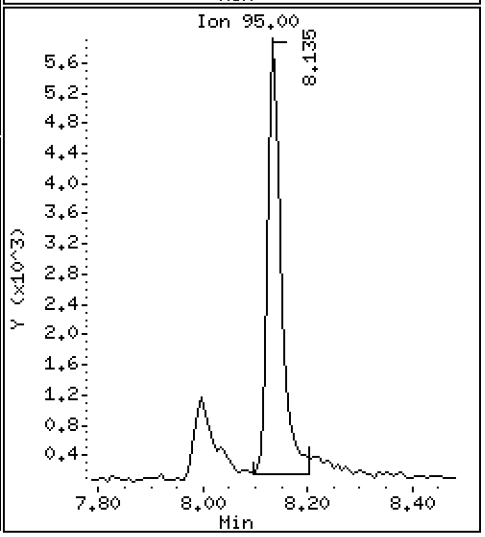


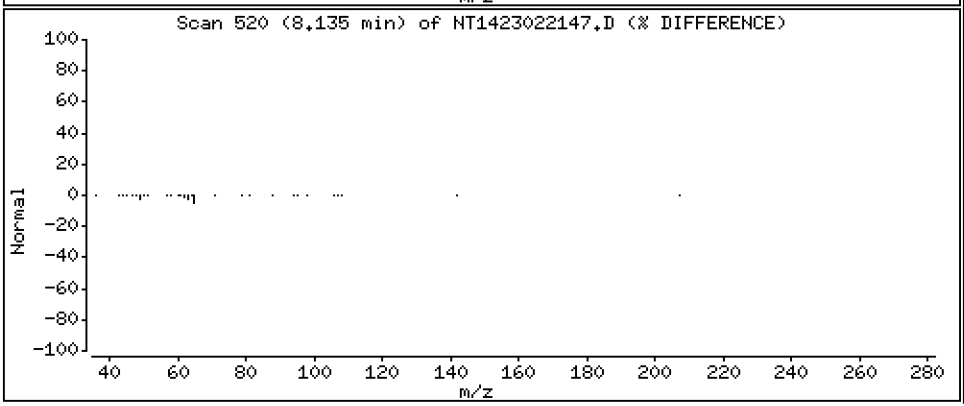












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

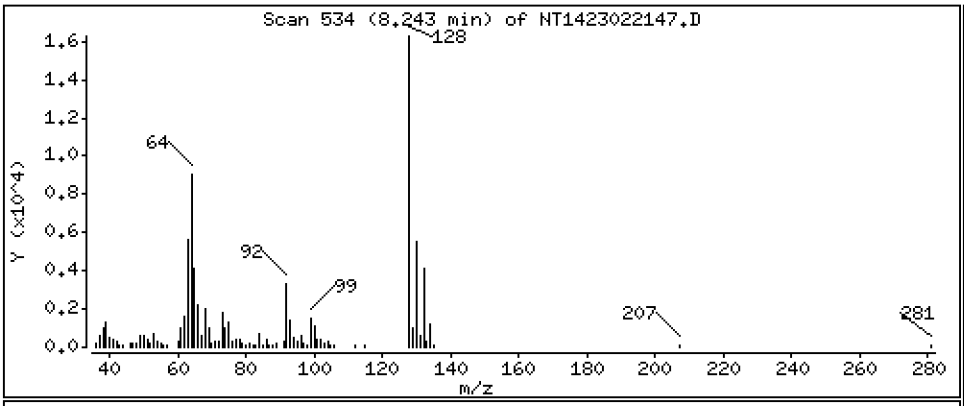
Operator: DSD

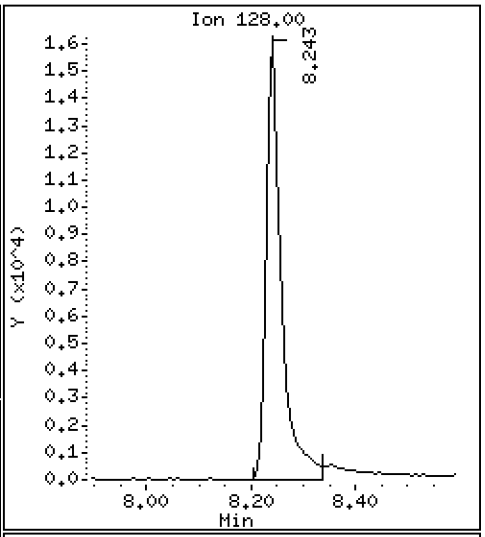
Column phase: ZB-5msi

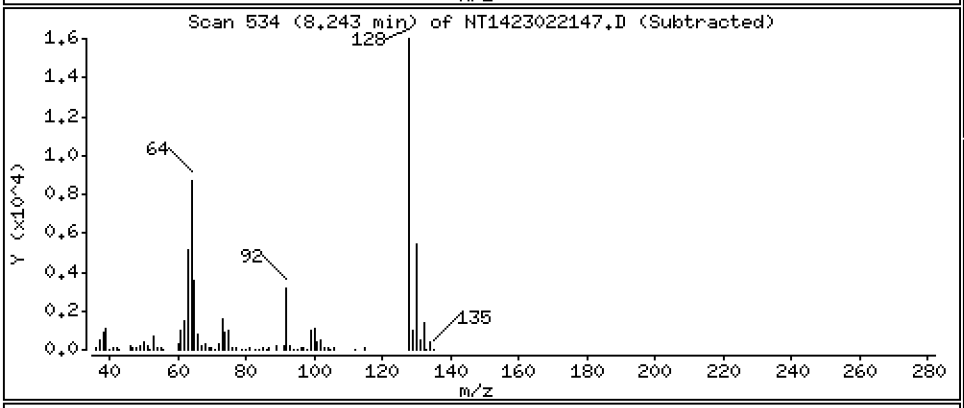
Column diameter: 0.25

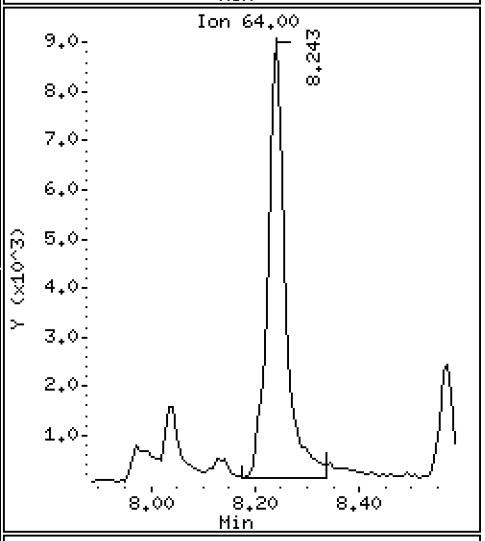
6 2-Chlorophenol

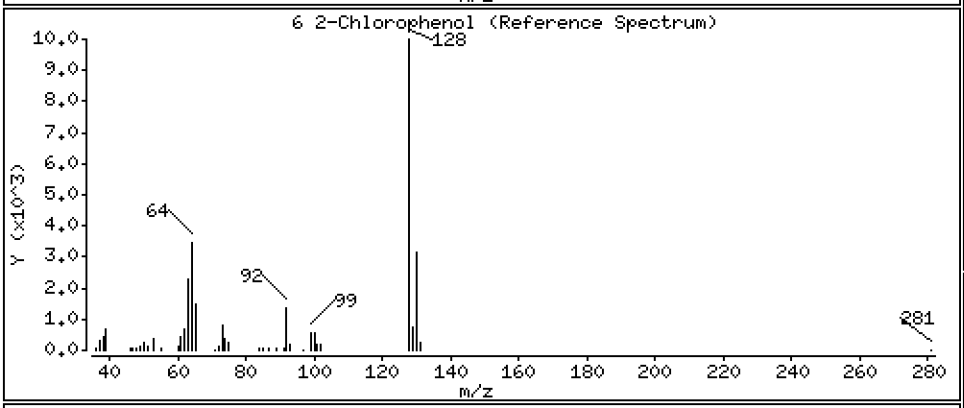
Concentration: 0.5053 ug/mL

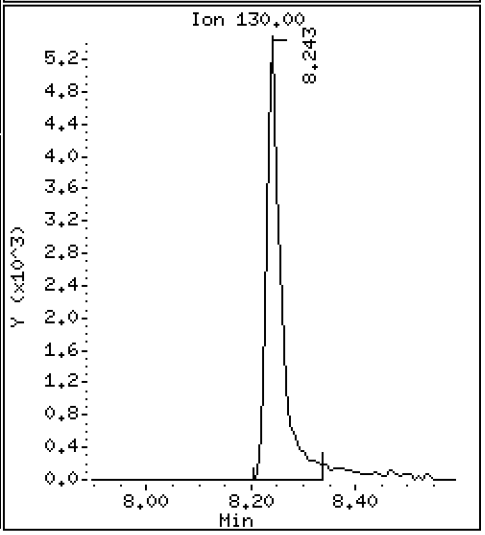


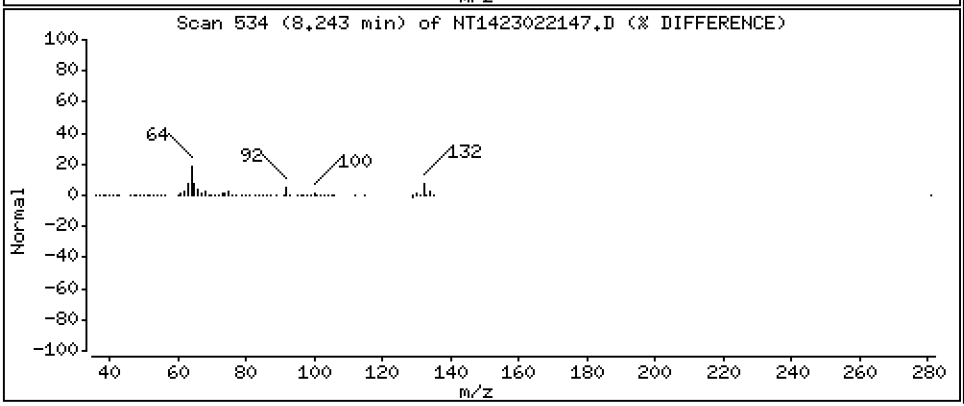












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

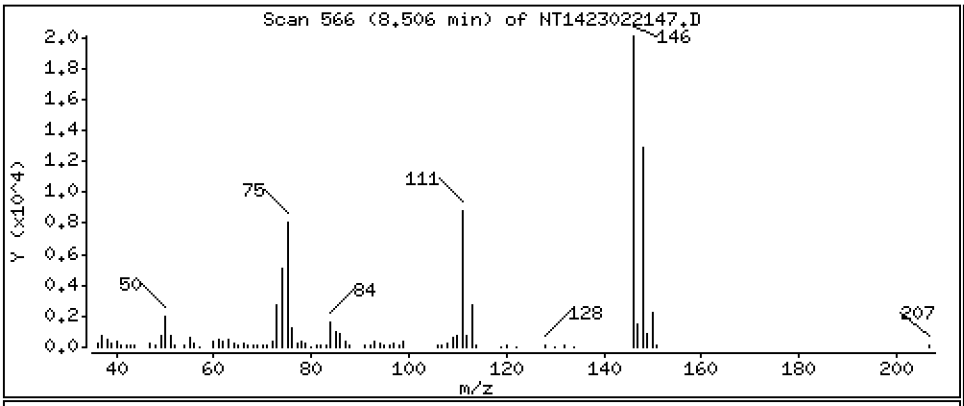
Operator: DSD

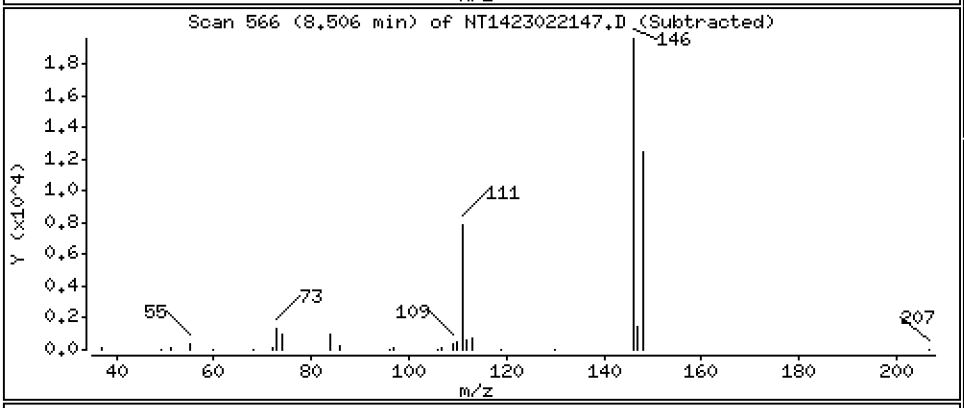
Column phase: ZB-5msi

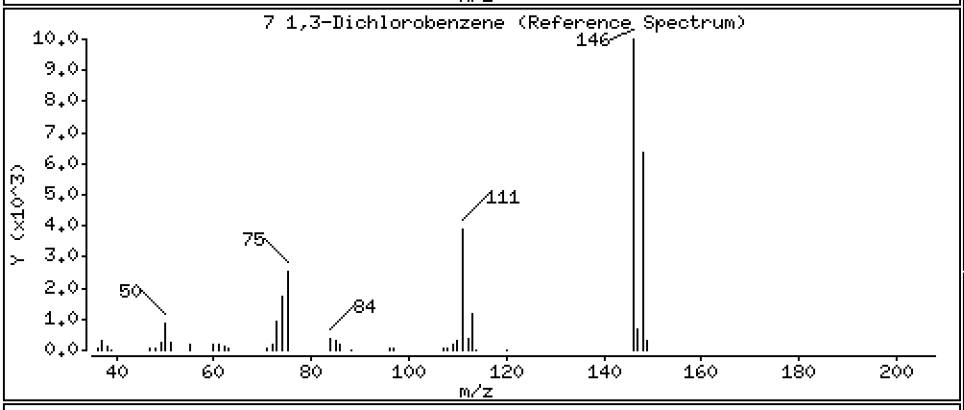
Column diameter: 0.25

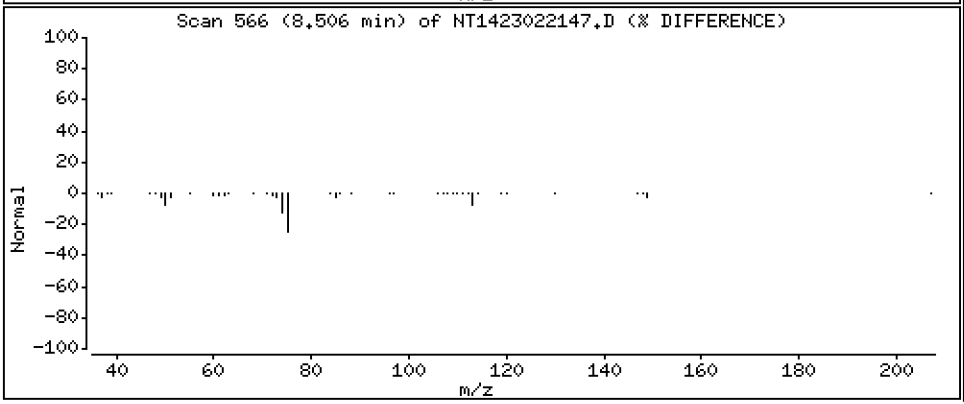
7 1,3-Dichlorobenzene

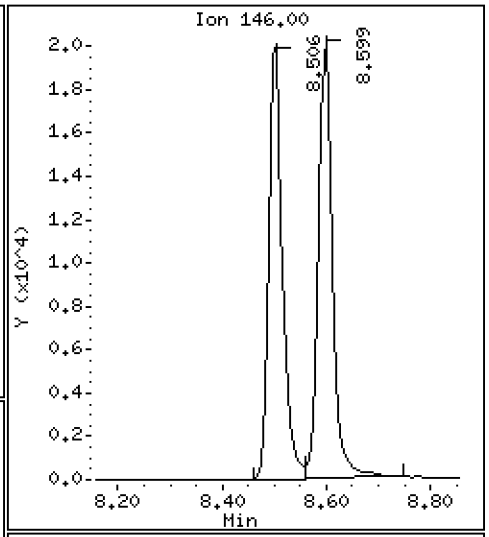
Concentration: 0.5172 ug/mL

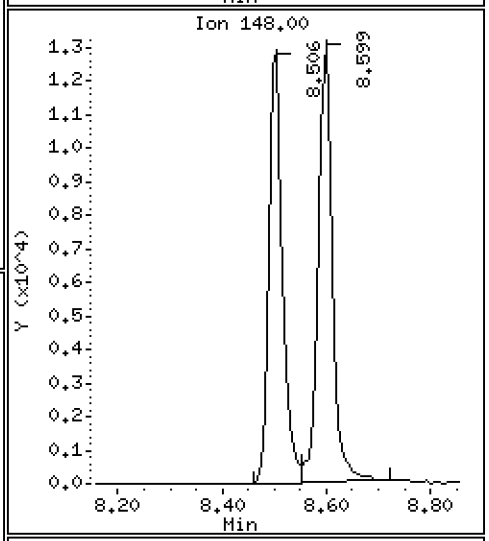


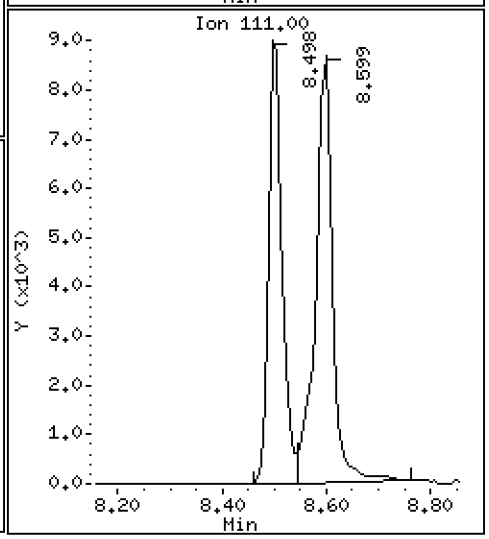












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

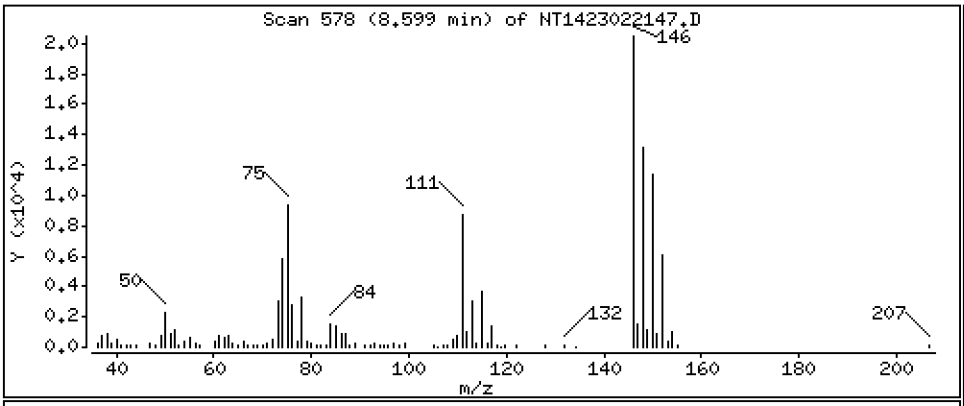
Operator: DSD

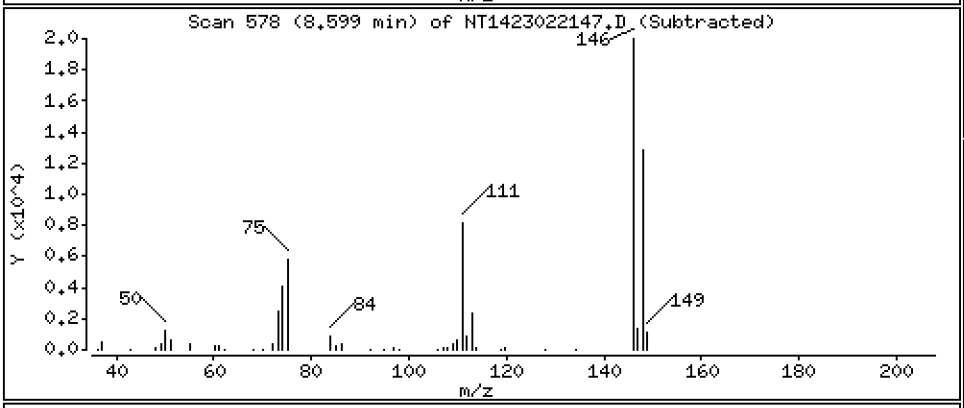
Column phase: ZB-5msi

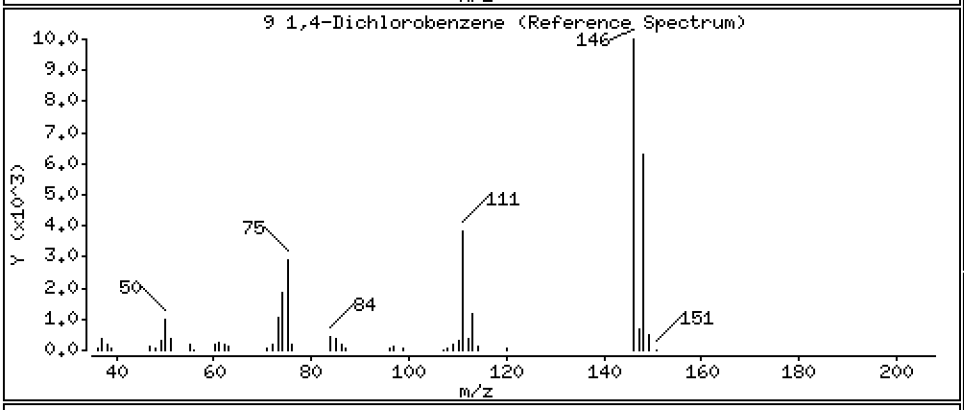
Column diameter: 0.25

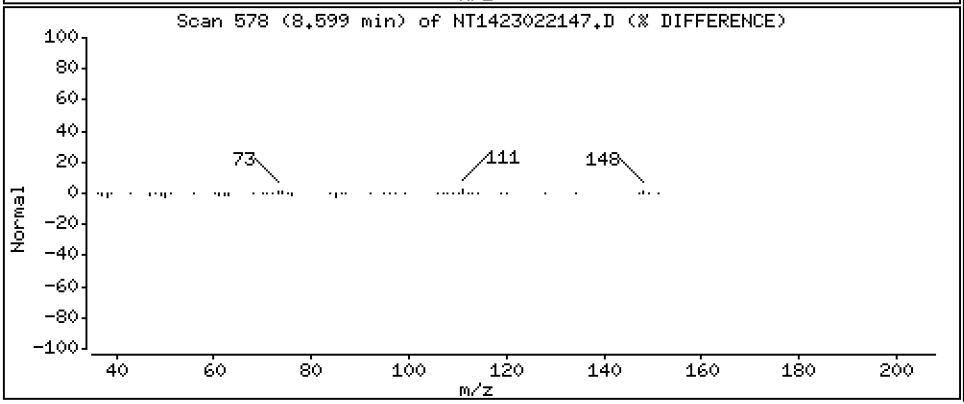
9 1,4-Dichlorobenzene

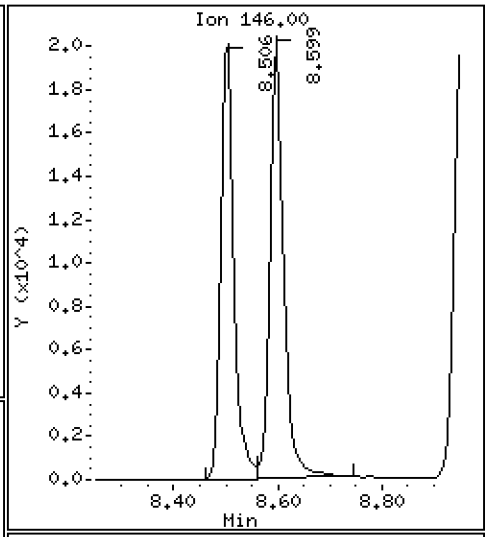
Concentration: 0.5839 ug/mL

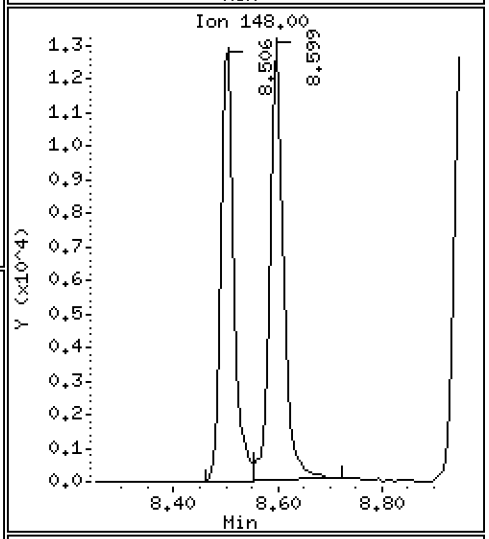


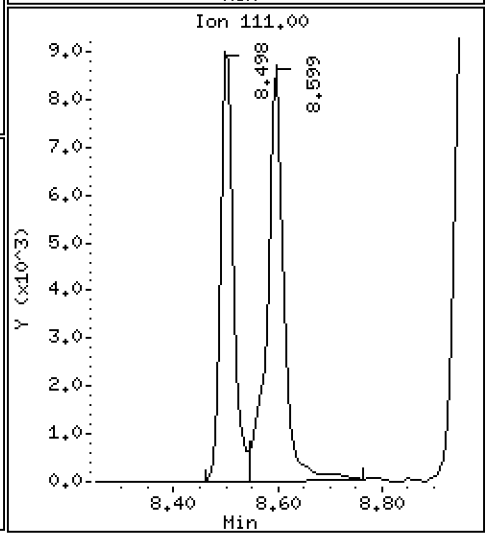












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

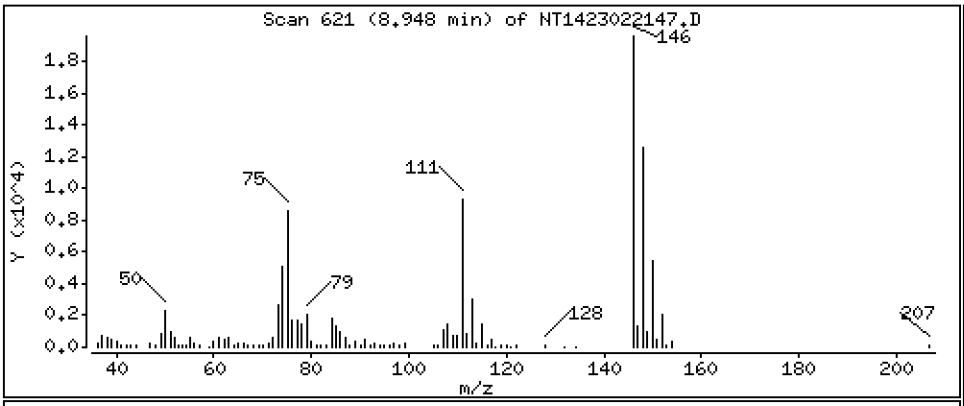
Operator: DSD

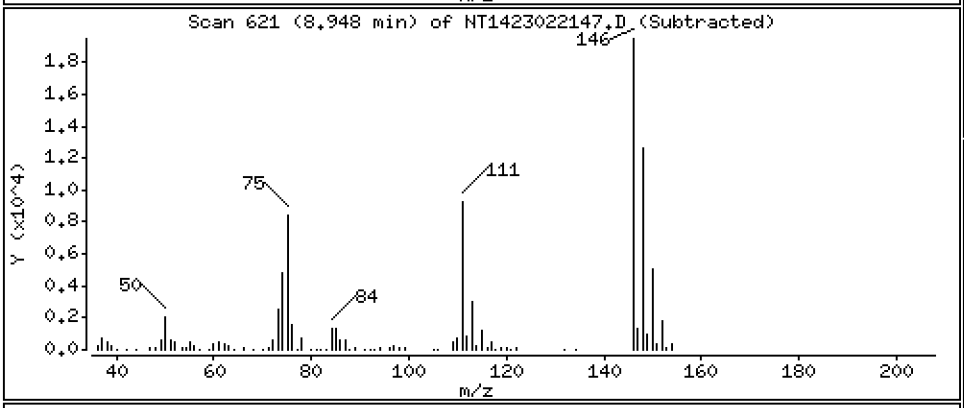
Column phase: ZB-5msi

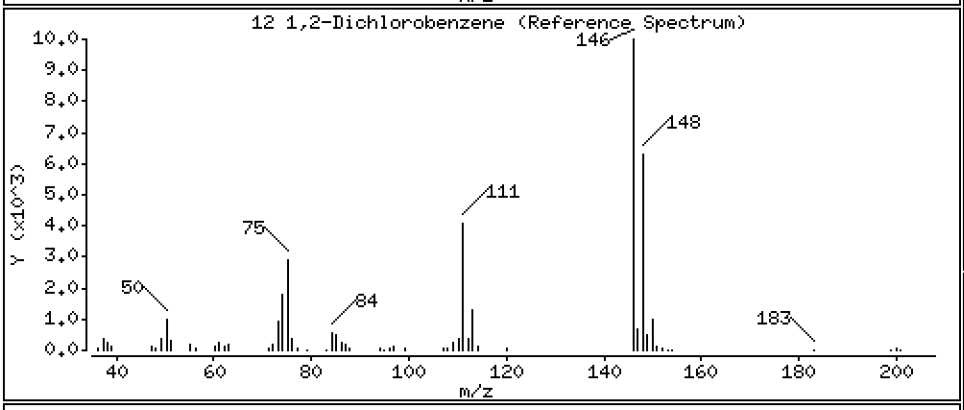
Column diameter: 0.25

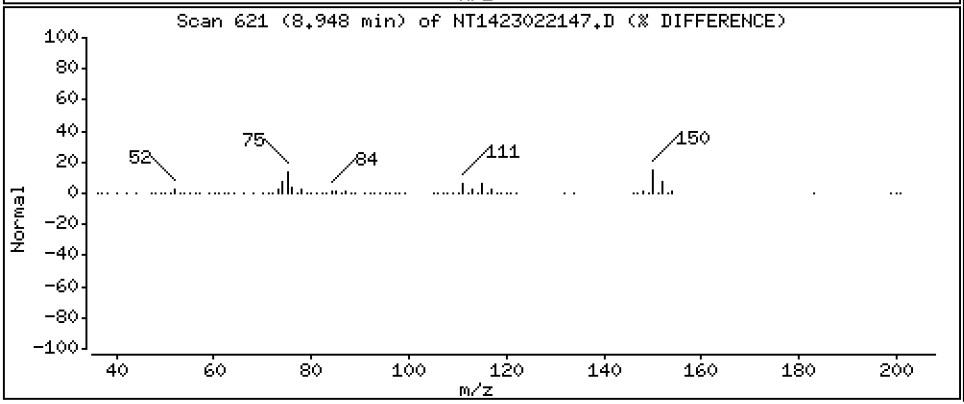
12 1,2-Dichlorobenzene

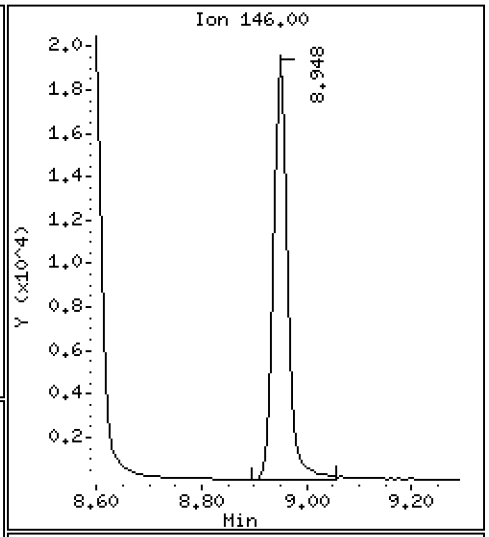
Concentration: 0.5203 ug/mL

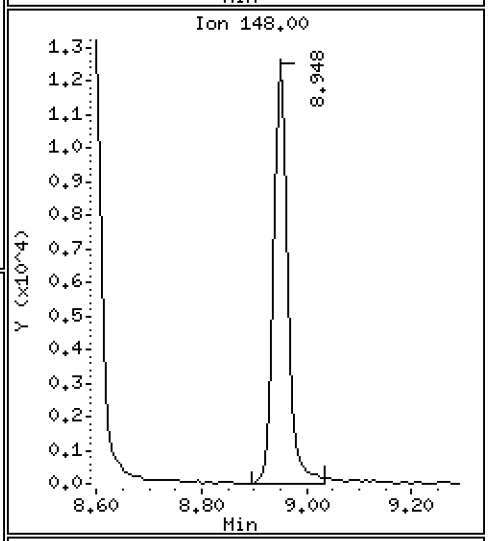


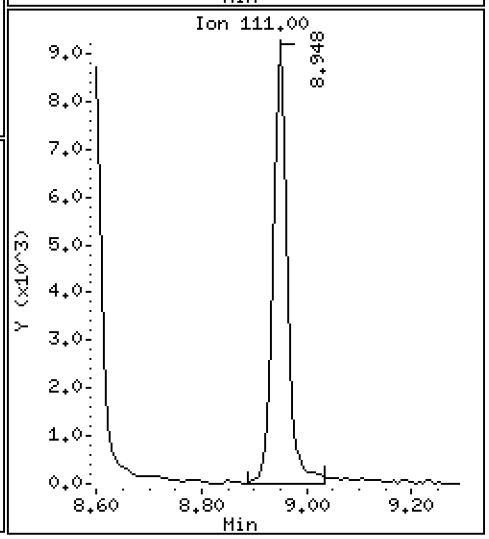












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

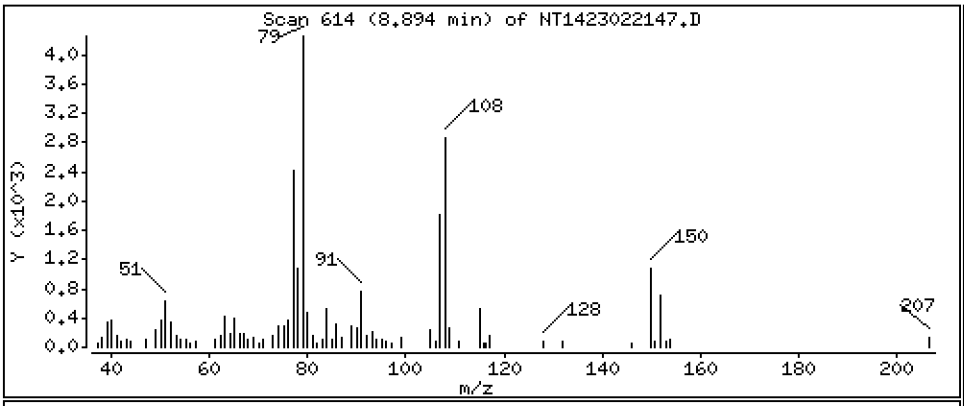
Operator: DSD

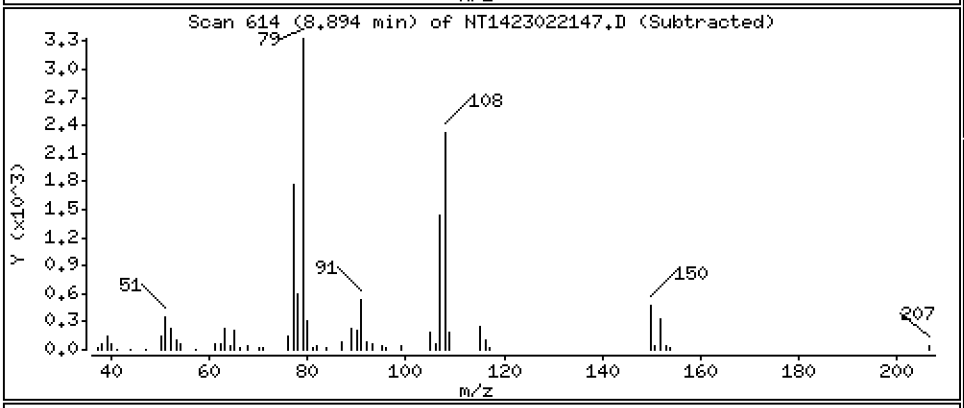
Column phase: ZB-5msi

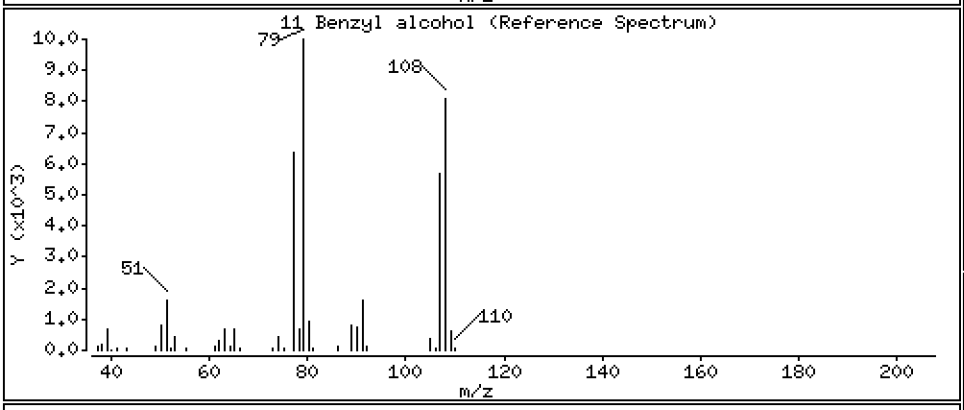
Column diameter: 0.25

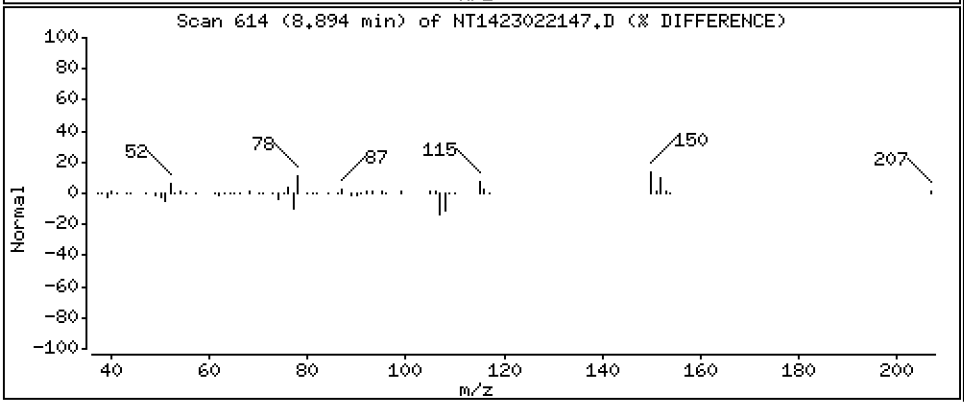
11 Benzyl alcohol

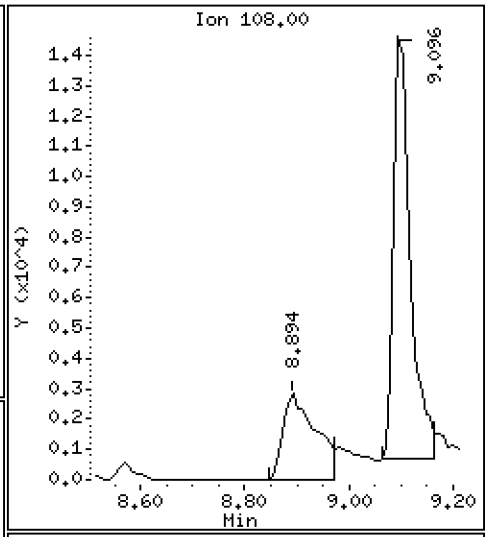
Concentration: 0.2468 ug/mL

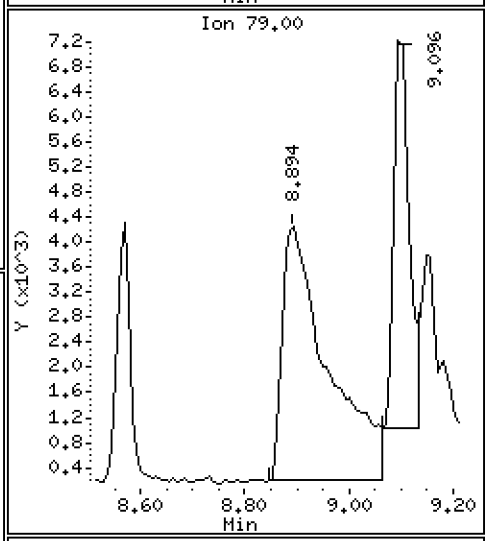


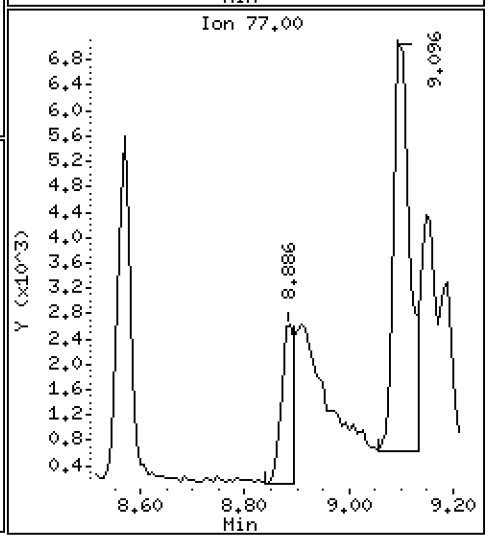












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

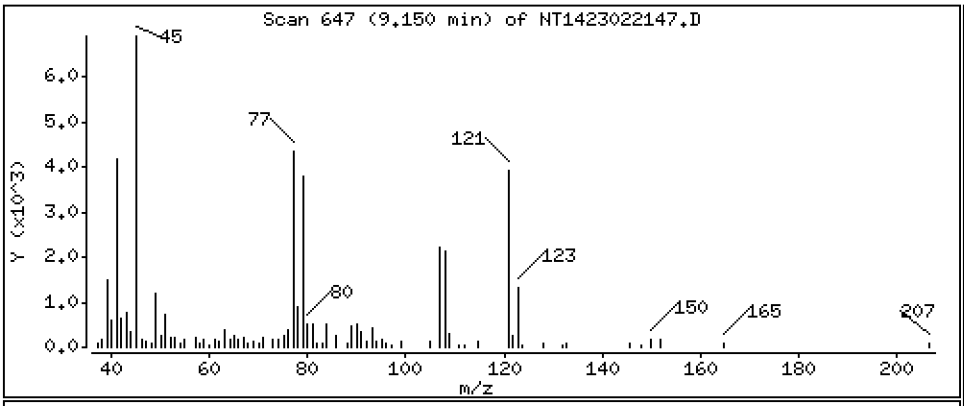
Operator: DSD

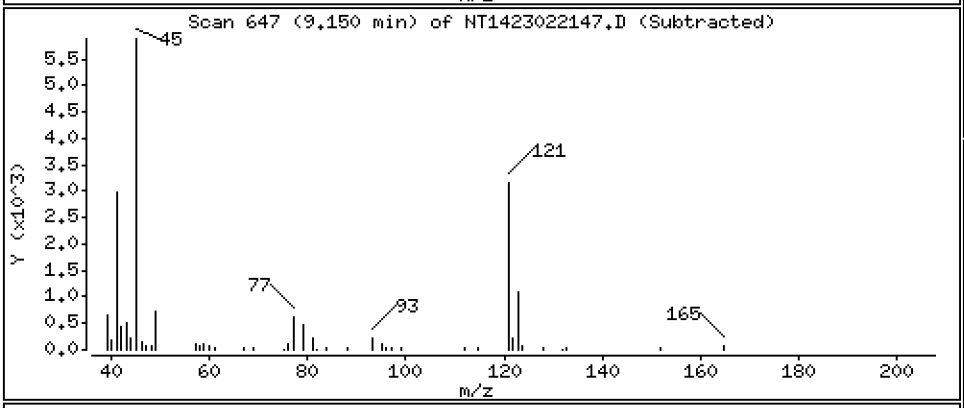
Column phase: ZB-5msi

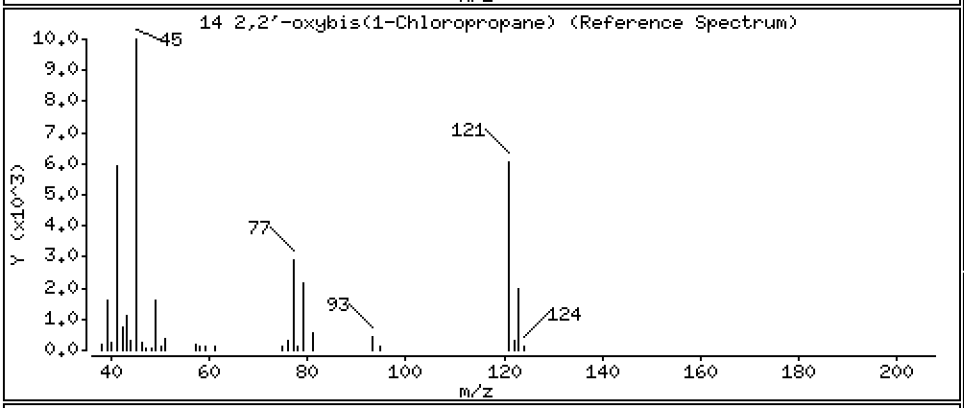
Column diameter: 0.25

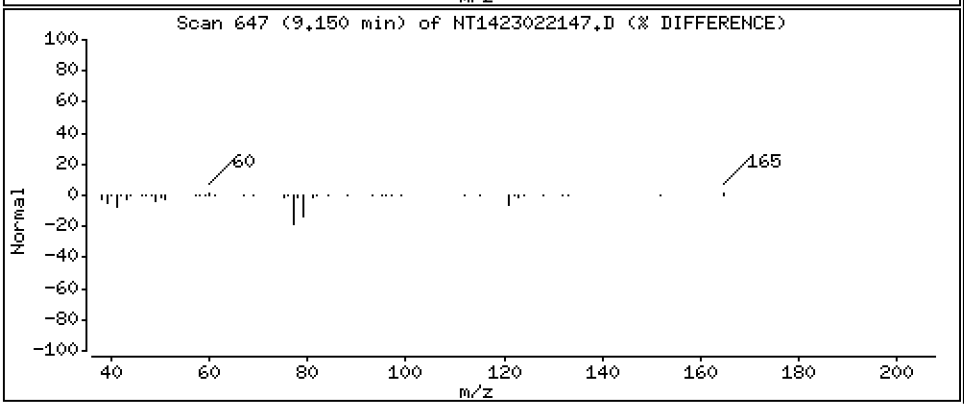
14 2,2'-oxybis(1-Chloropropane)

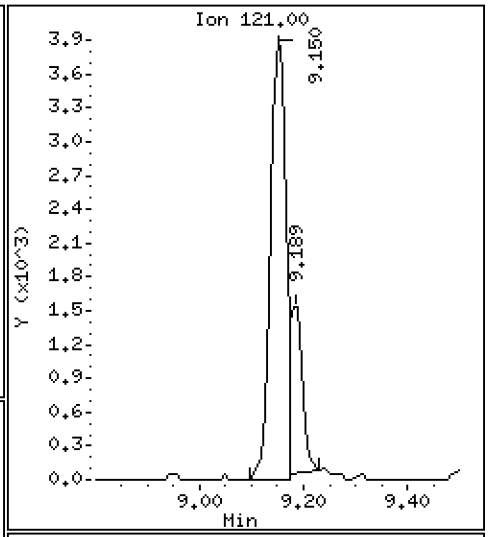
Concentration: 0.4121 ug/mL

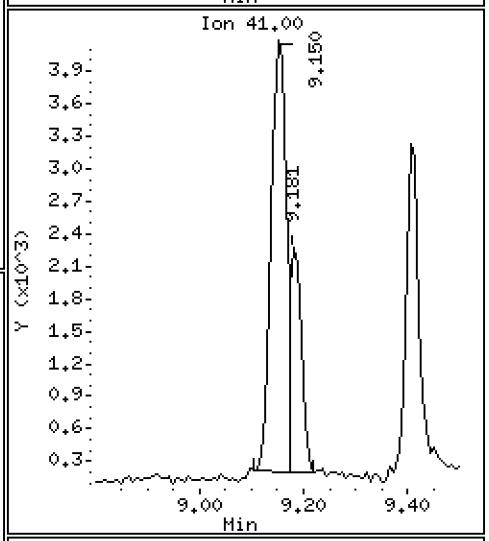


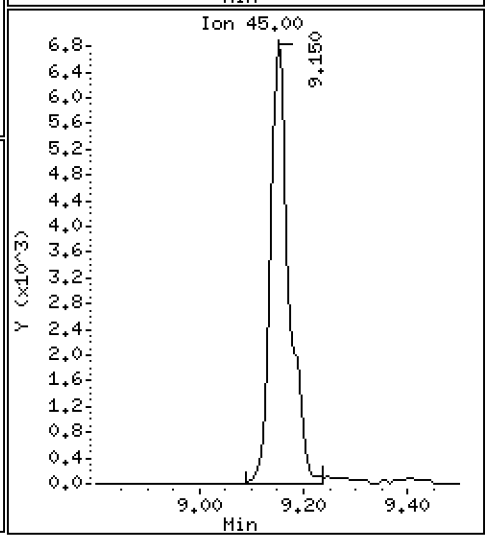












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

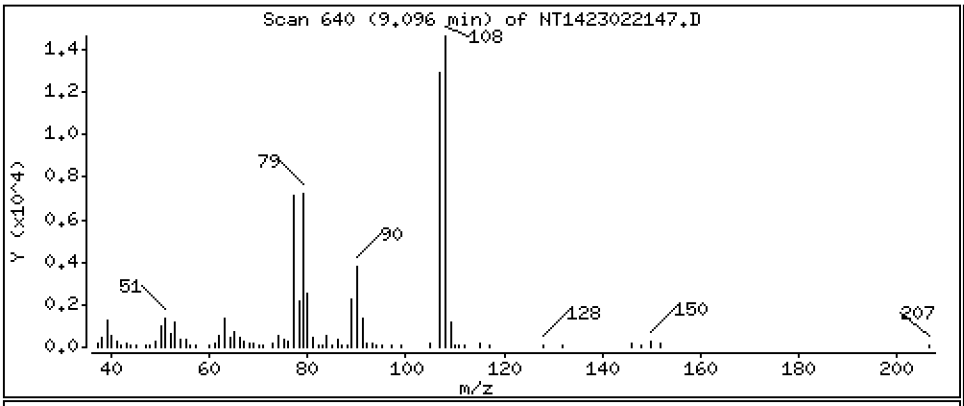
Operator: DSD

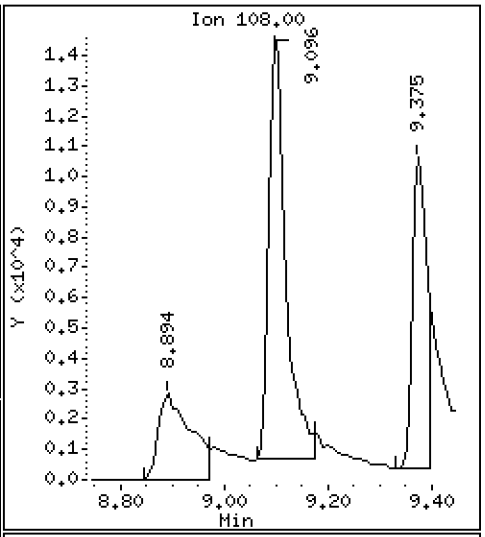
Column phase: ZB-5msi

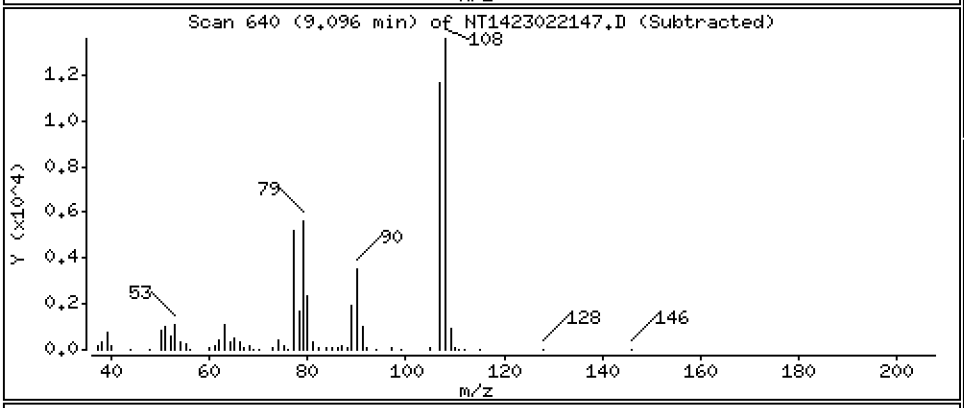
Column diameter: 0.25

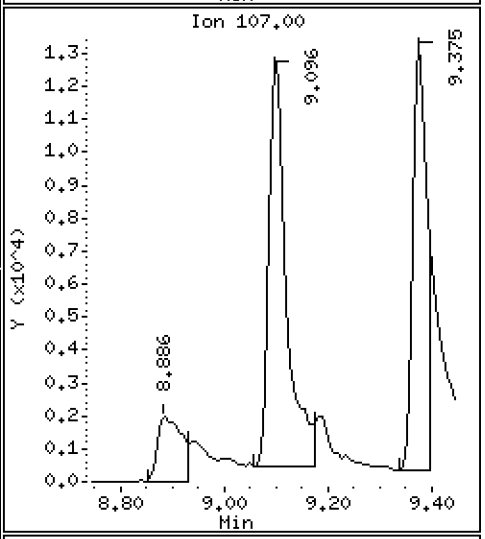
13 2-Methylphenol

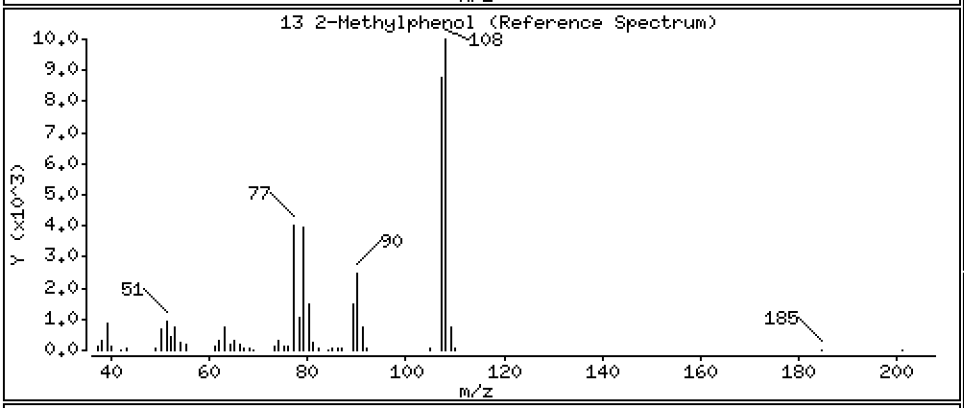
Concentration: 0.4889 ug/mL

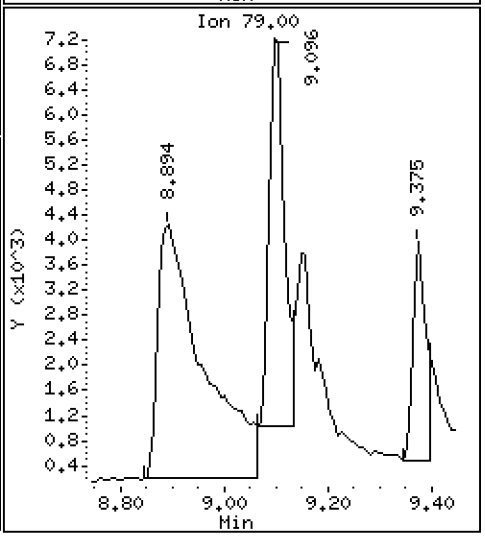


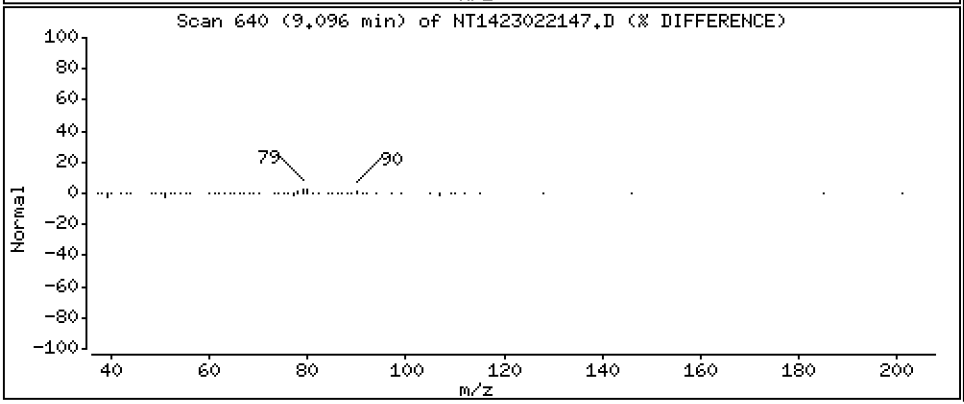












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

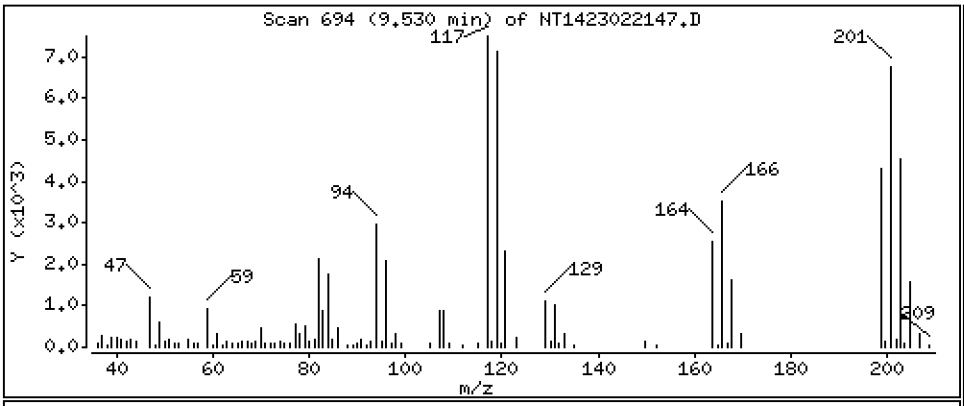
Operator: DSD

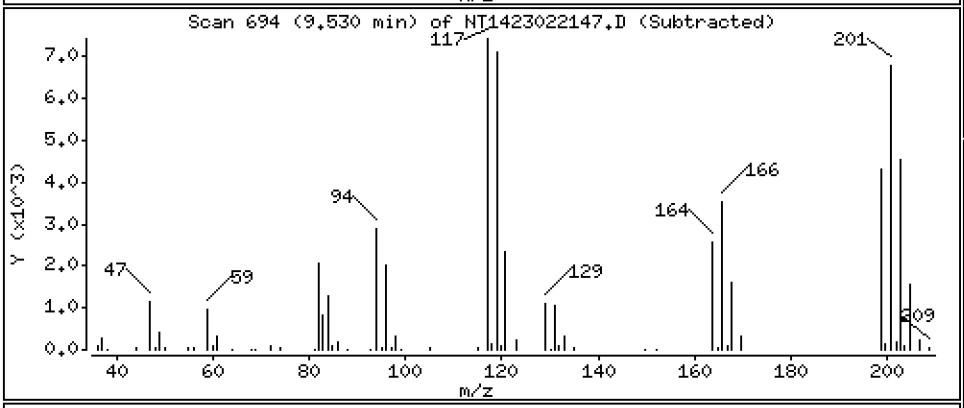
Column phase: ZB-5msi

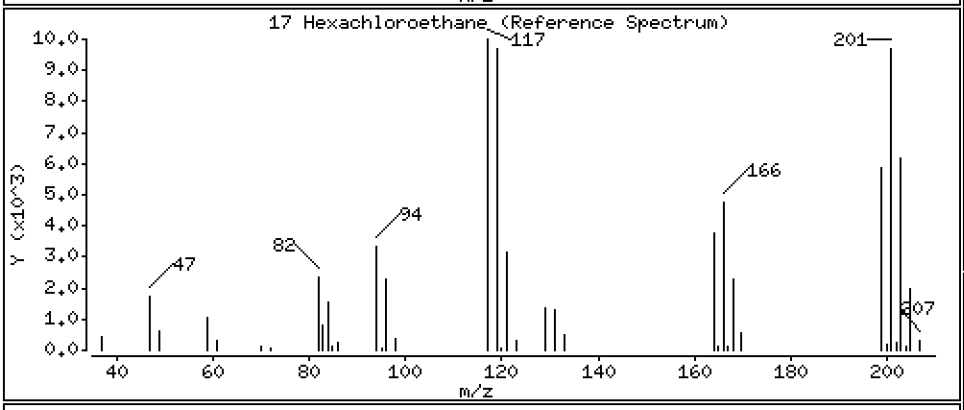
Column diameter: 0.25

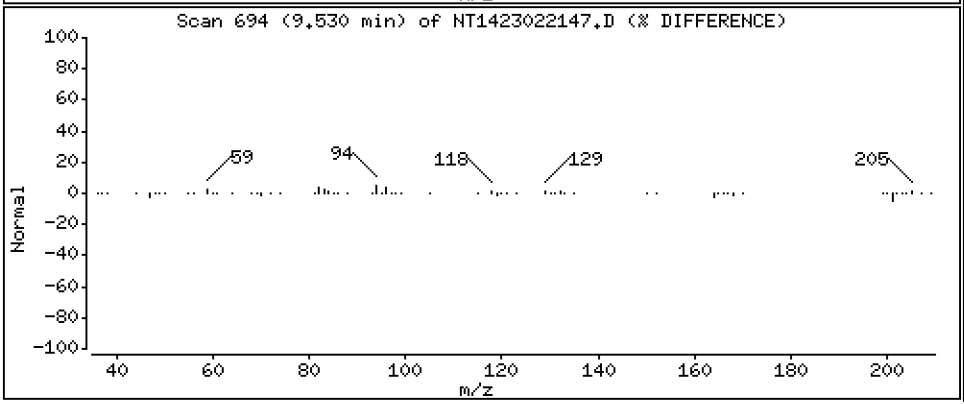
17 Hexachloroethane

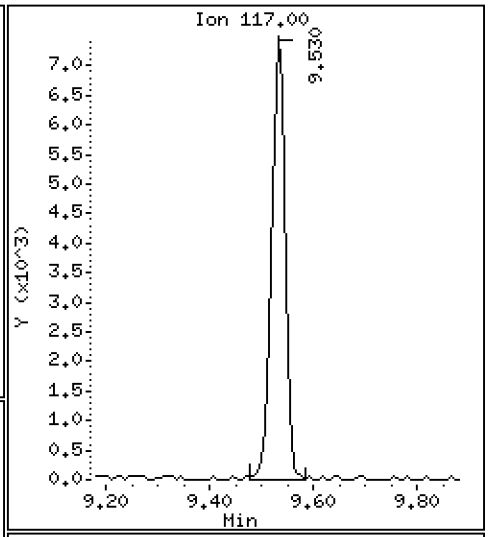
Concentration: 0.4425 ug/mL

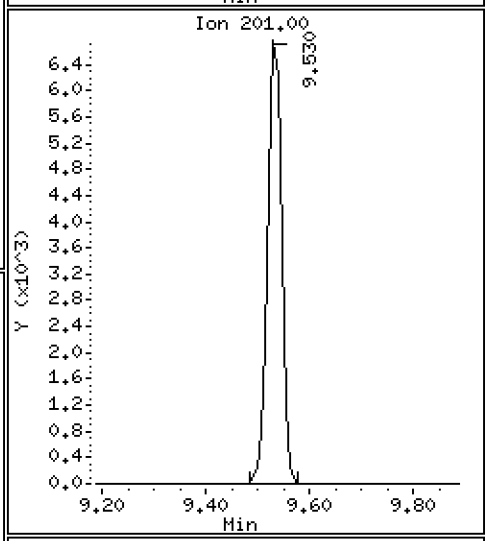


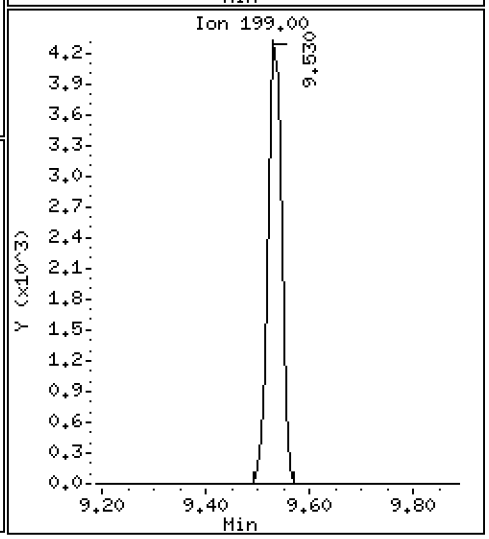












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

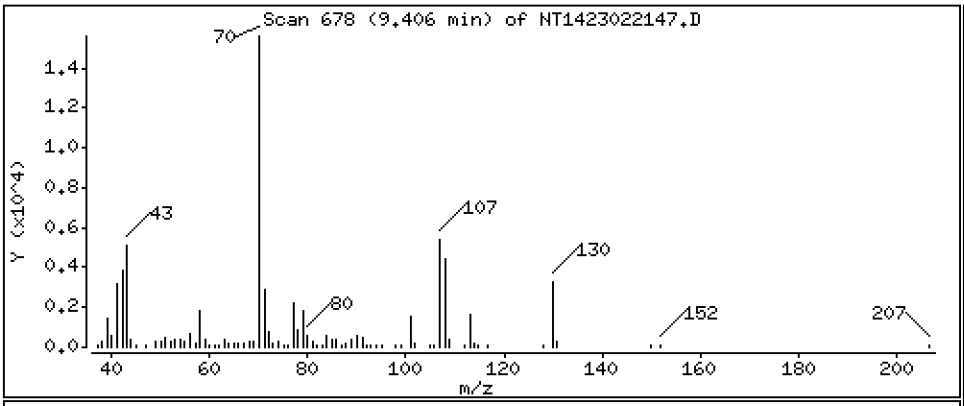
Operator: DSD

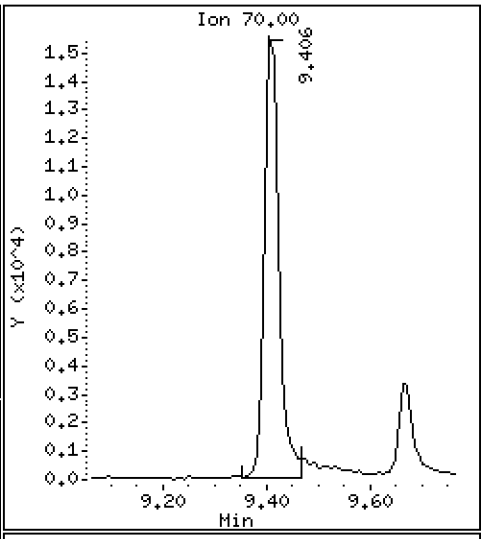
Column phase: ZB-5msi

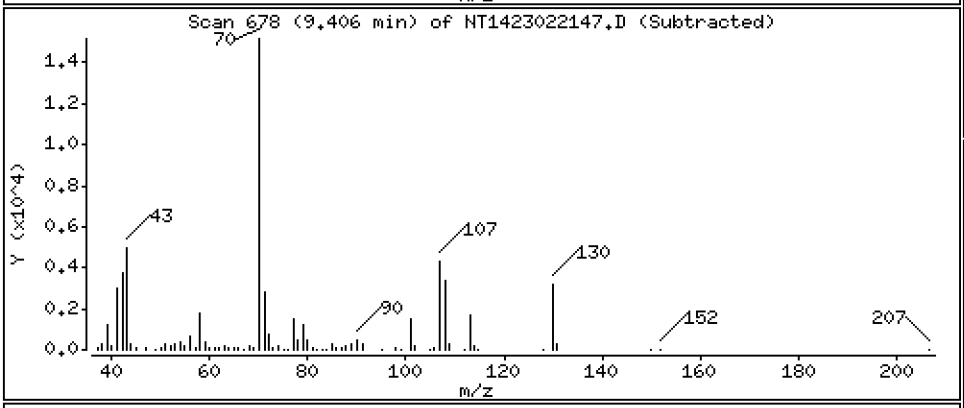
Column diameter: 0.25

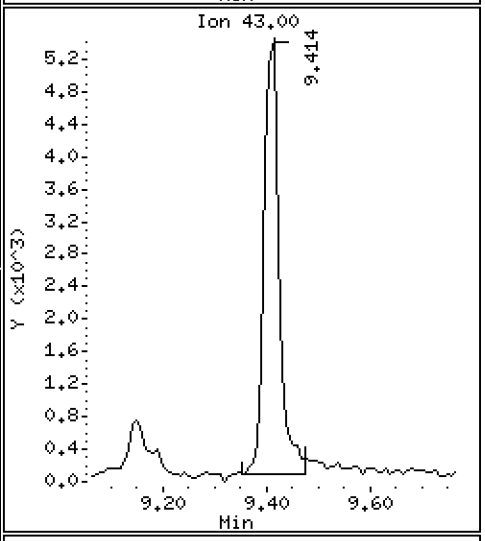
16 N-Nitroso-di-n-propylamine

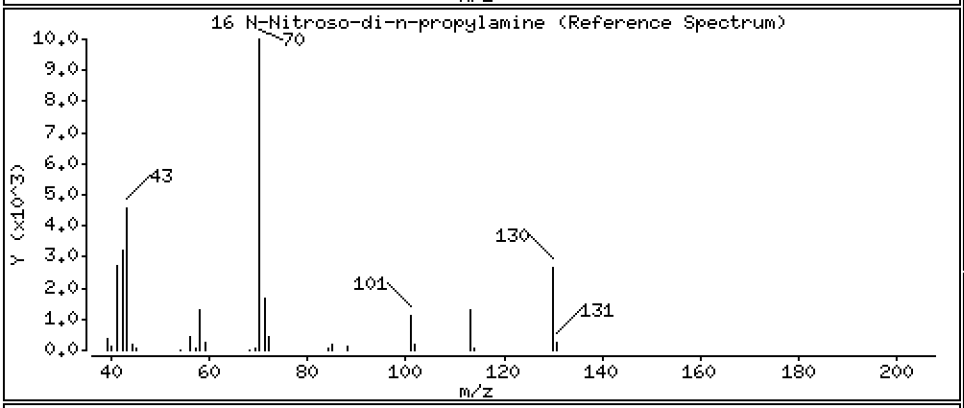
Concentration: 0.4993 ug/mL

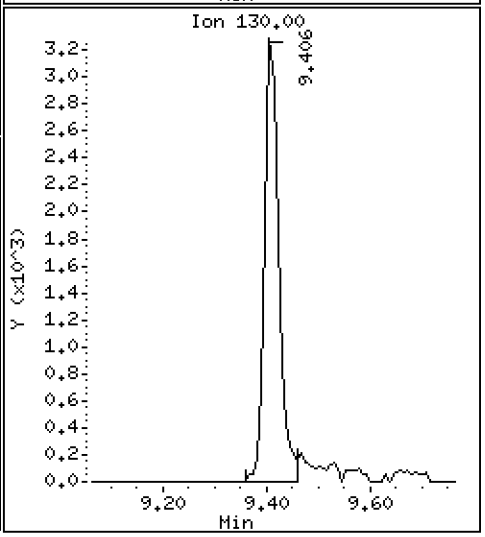


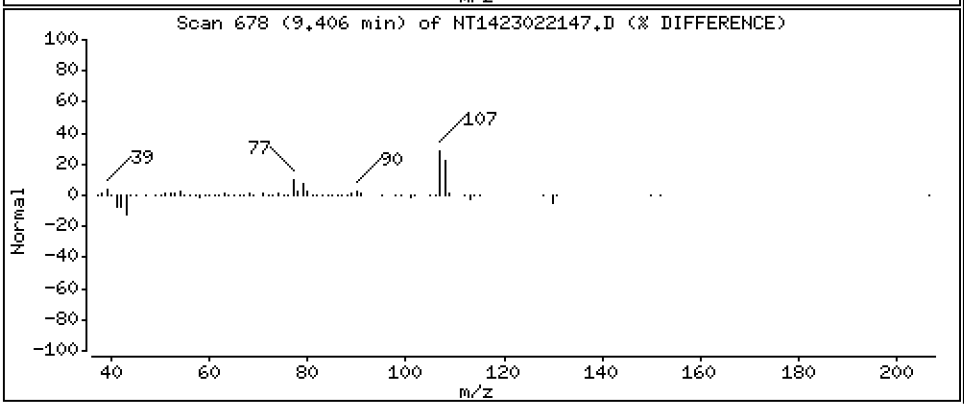












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

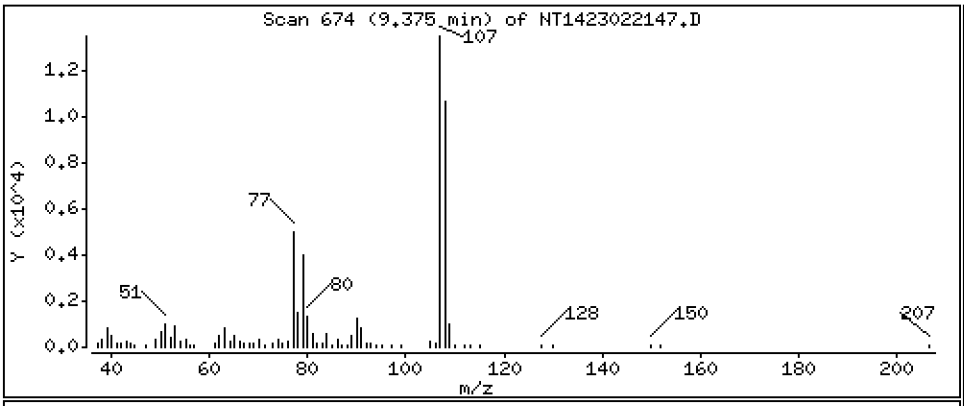
Operator: DSD

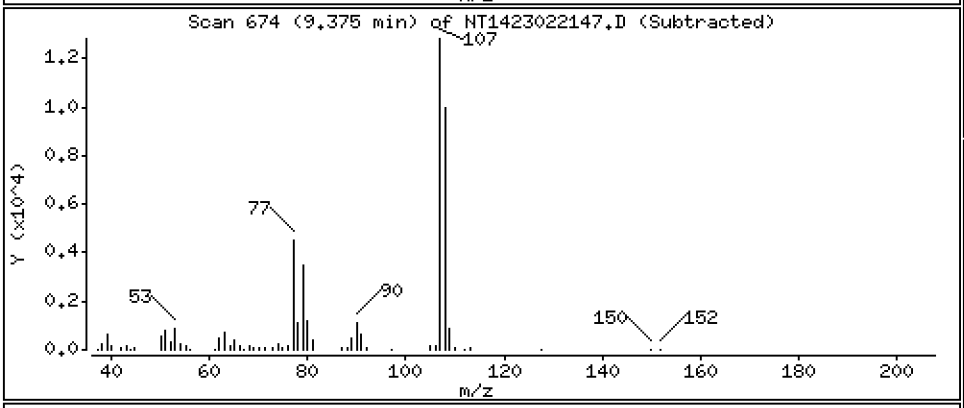
Column phase: ZB-5msi

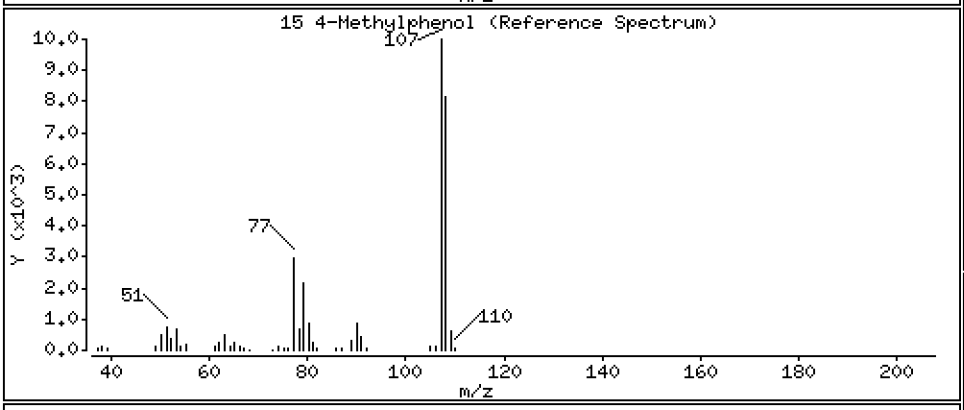
Column diameter: 0.25

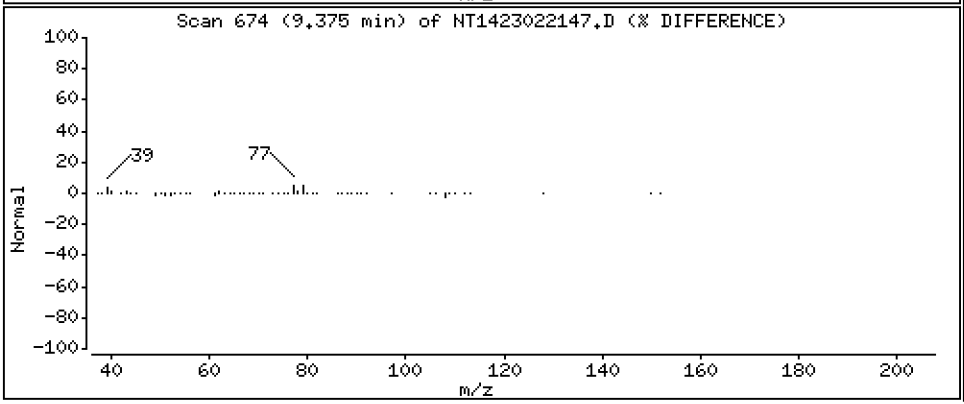
15 4-Methylphenol

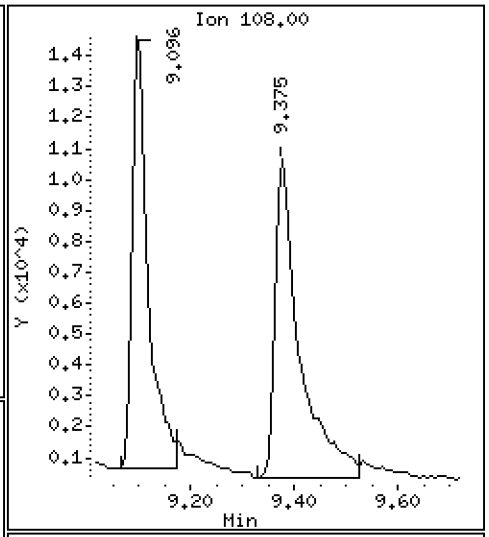
Concentration: 0.4970 ug/mL

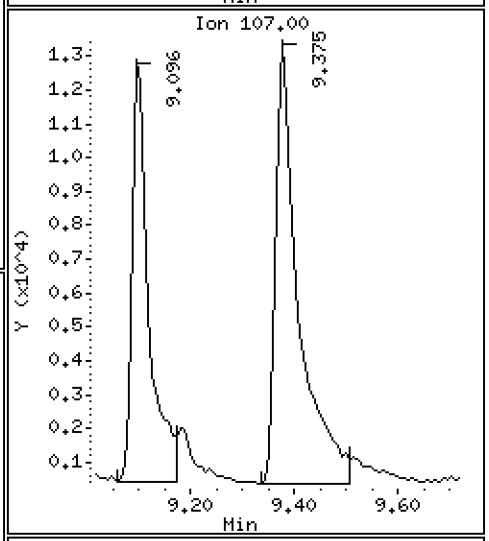


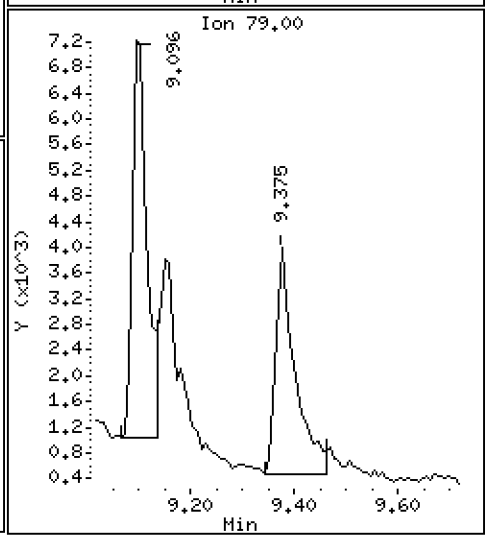












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

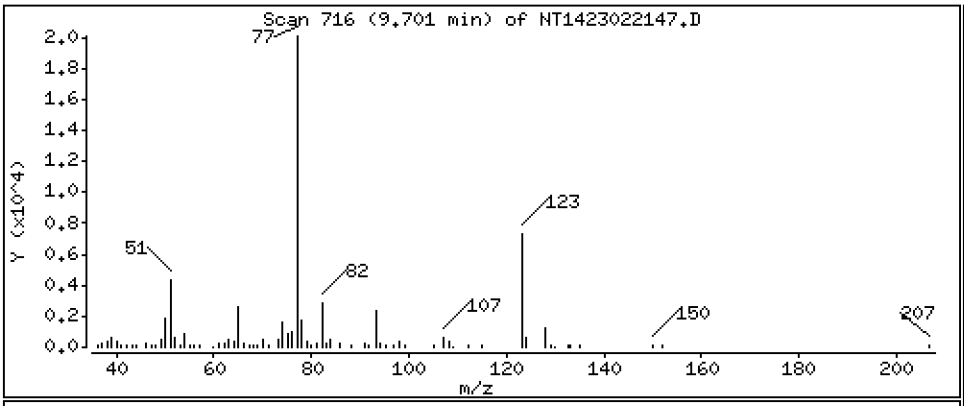
Operator: DSD

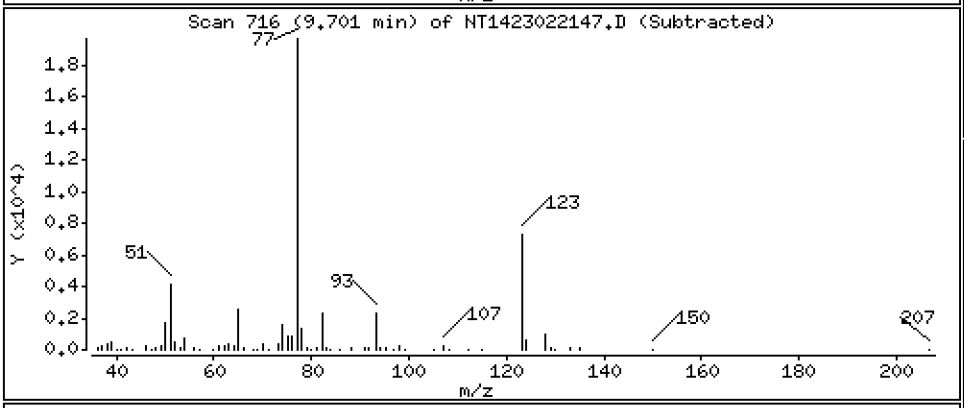
Column phase: ZB-5msi

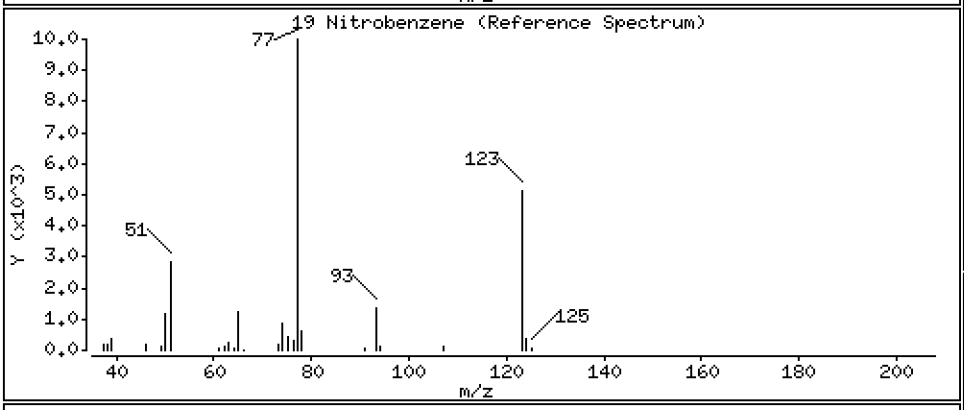
Column diameter: 0.25

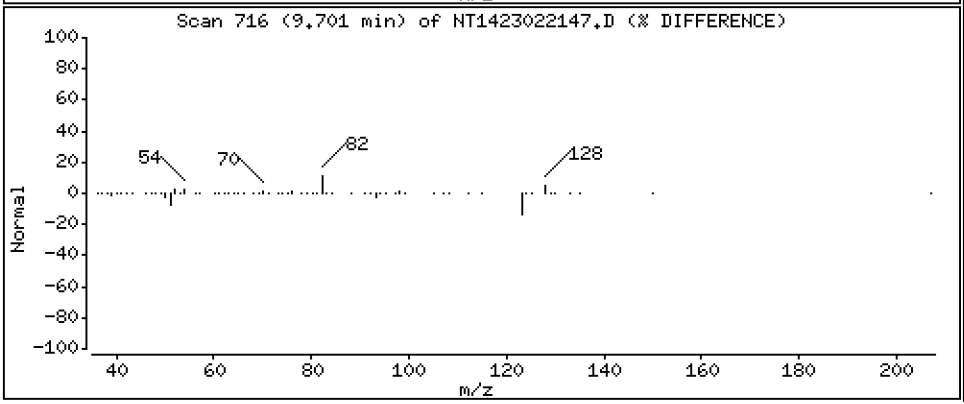
19 Nitrobenzene

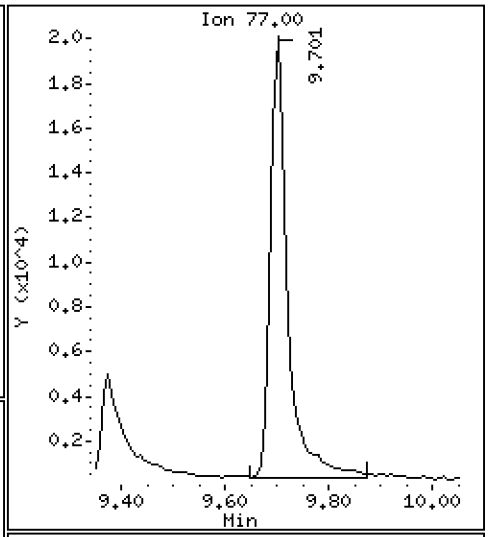
Concentration: 0.4997 ug/mL

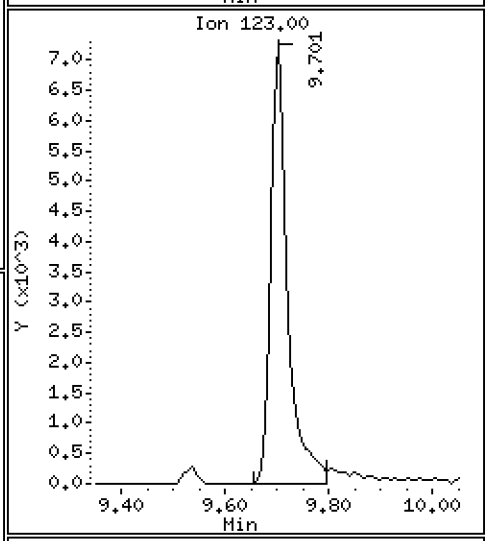


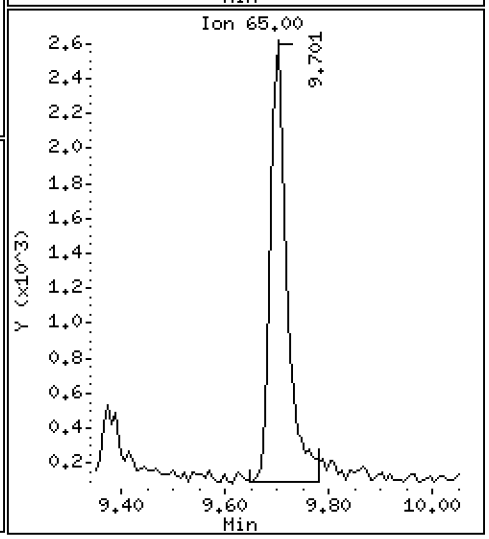












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

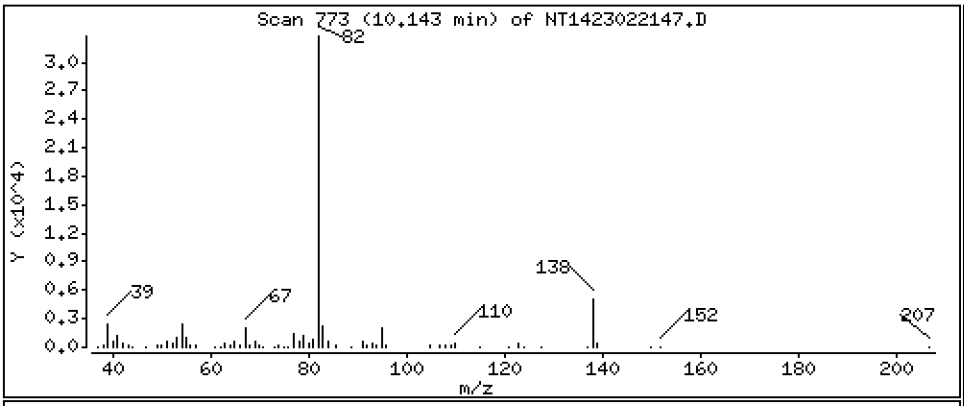
Operator: DSD

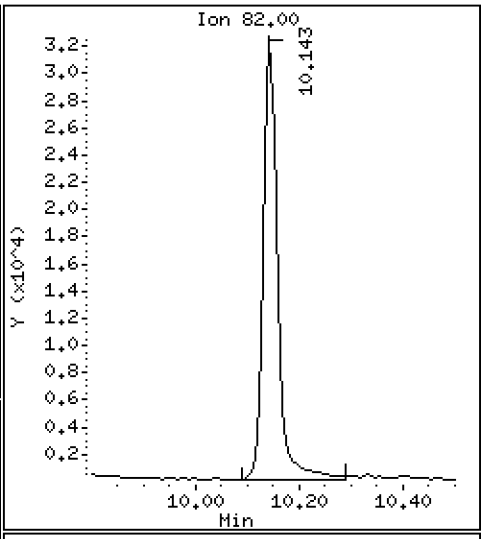
Column phase: ZB-5msi

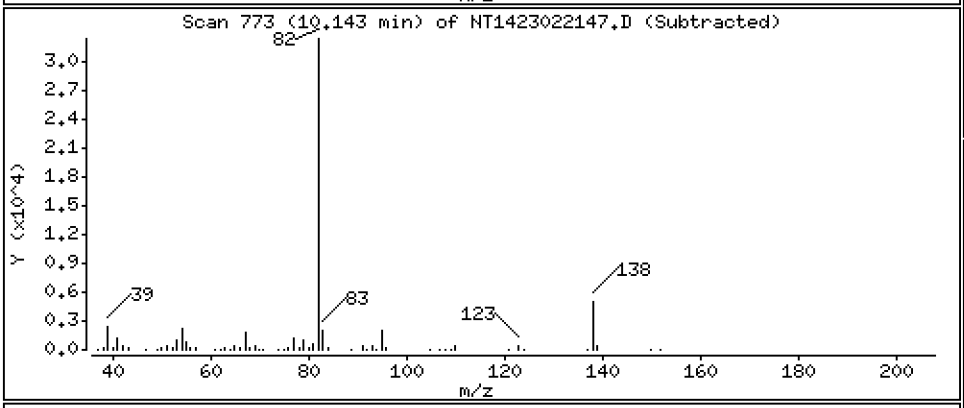
Column diameter: 0.25

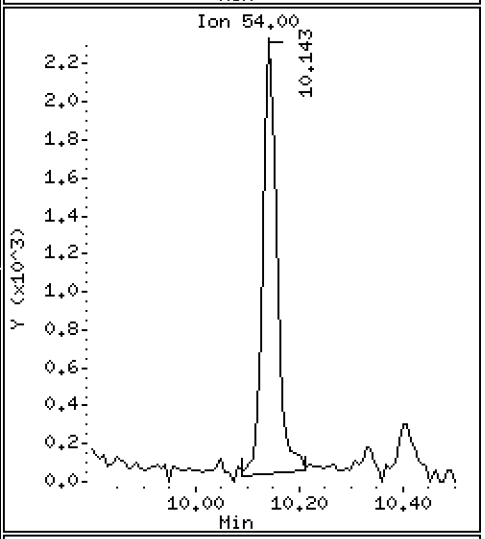
20 Isophorone

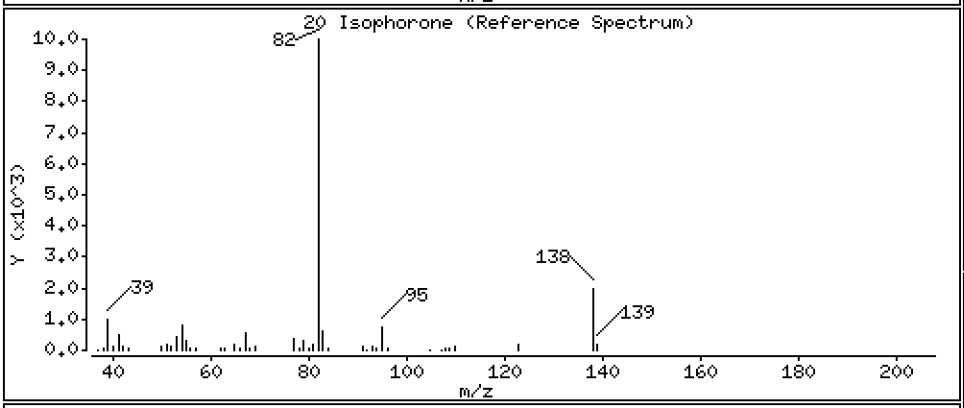
Concentration: 0.5498 ug/mL

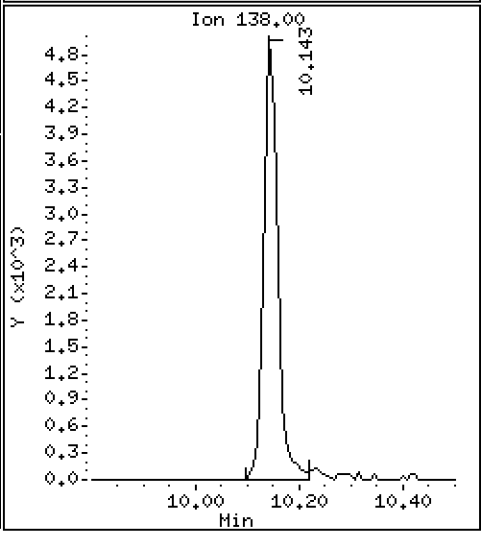


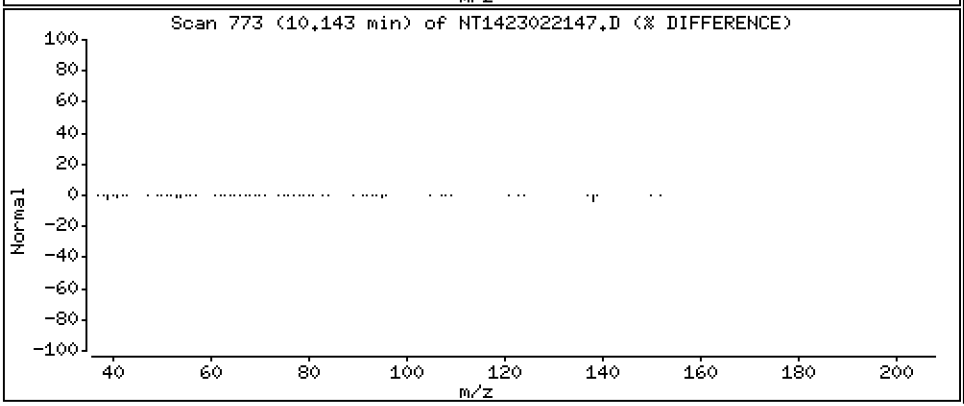












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

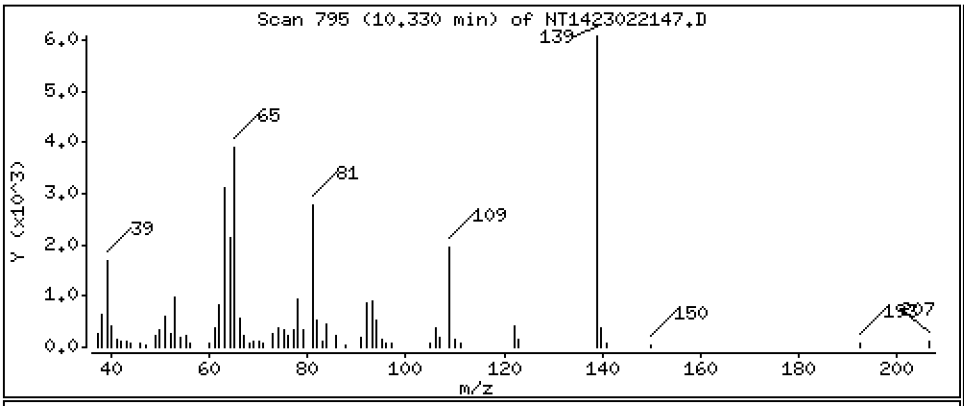
Operator: DSD

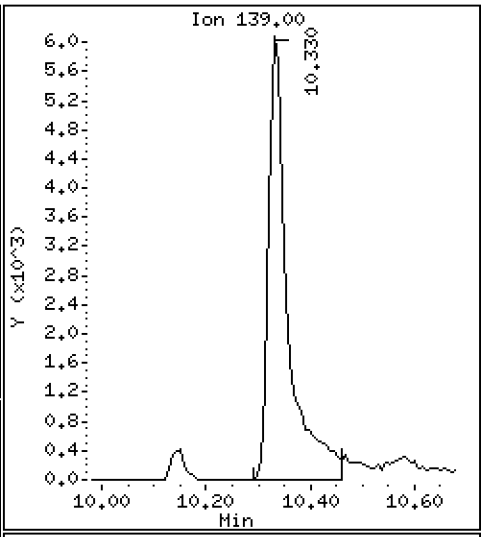
Column phase: ZB-5msi

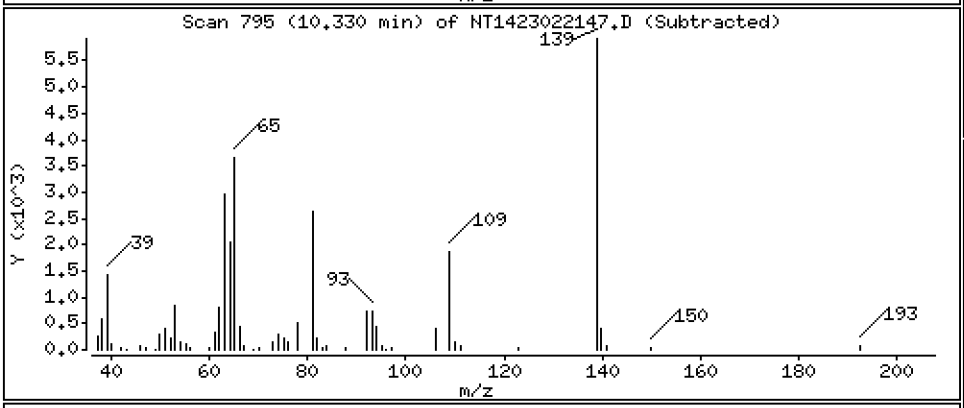
Column diameter: 0.25

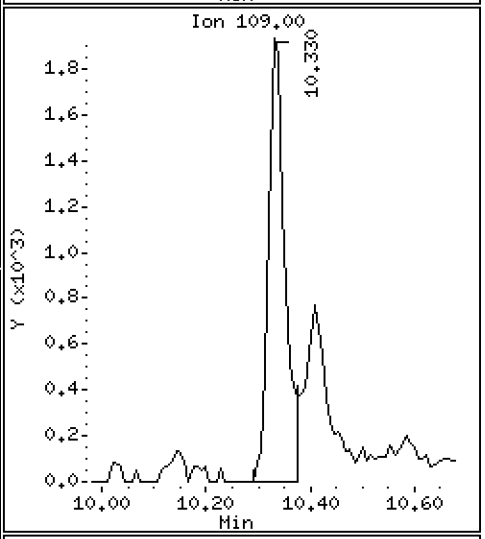
21 2-Nitrophenol

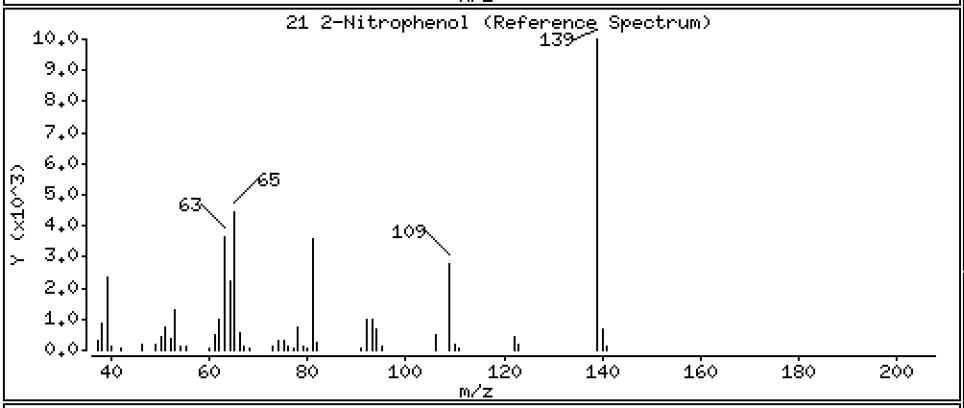
Concentration: 0.3934 ug/mL

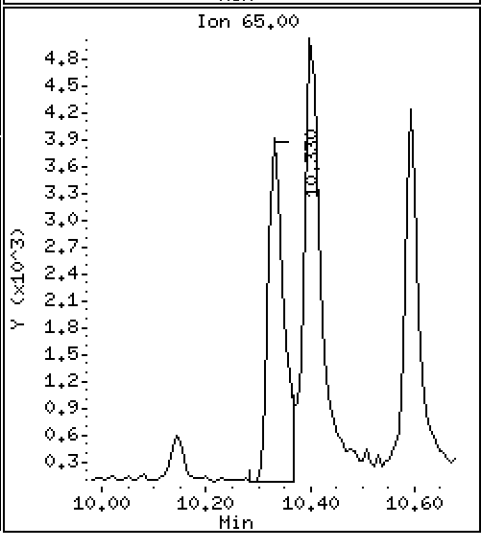


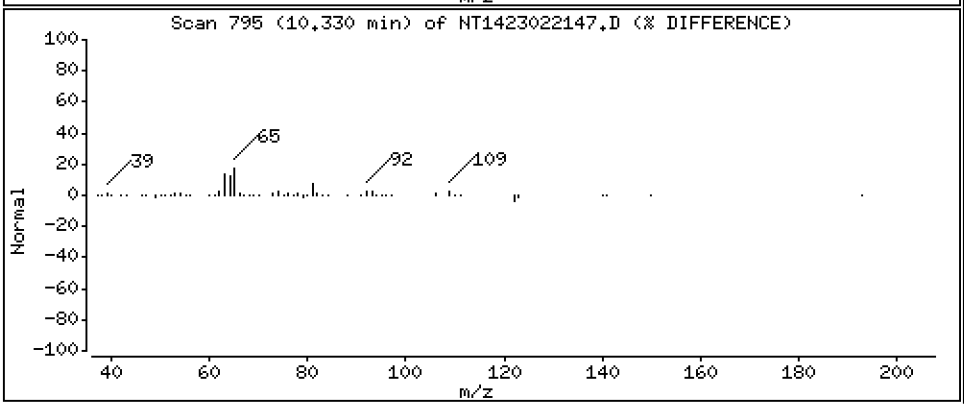












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

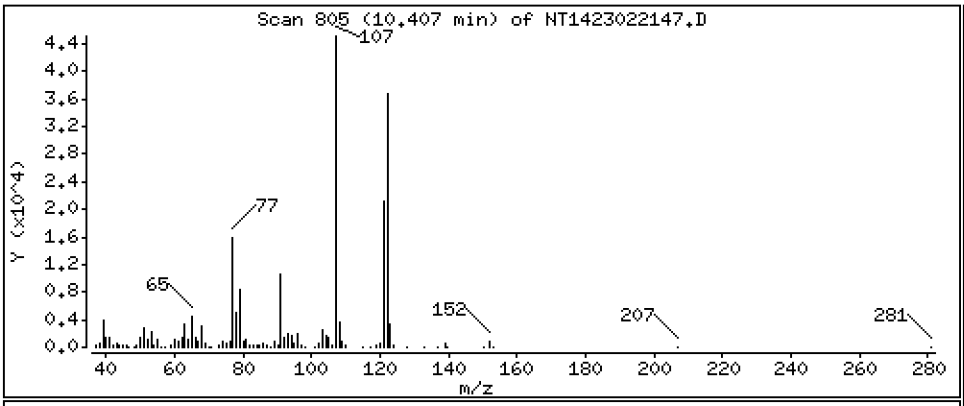
Operator: DSD

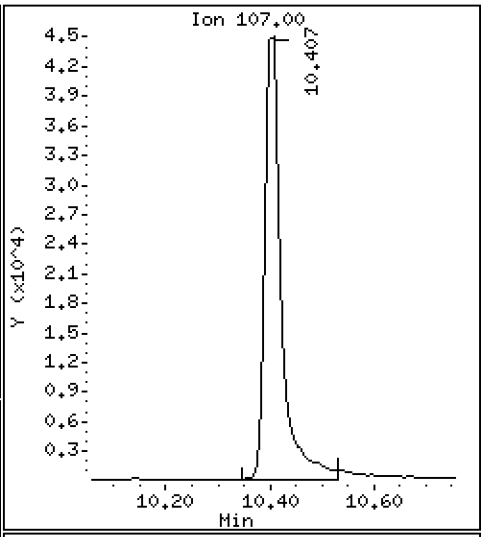
Column phase: ZB-5msi

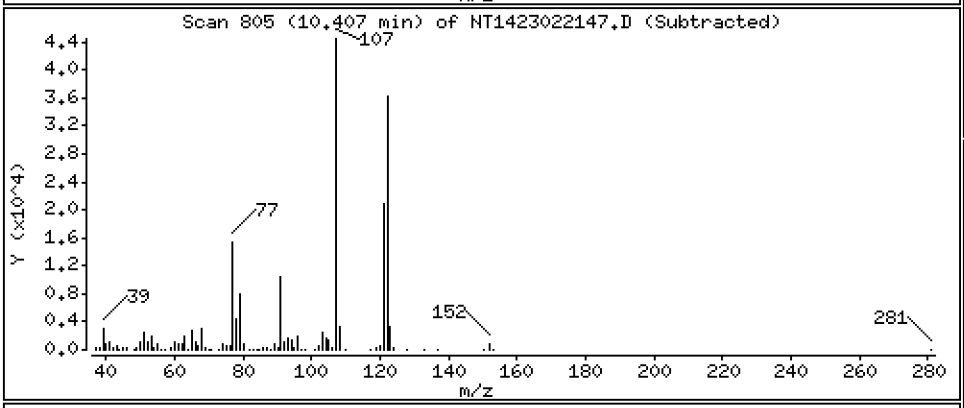
Column diameter: 0.25

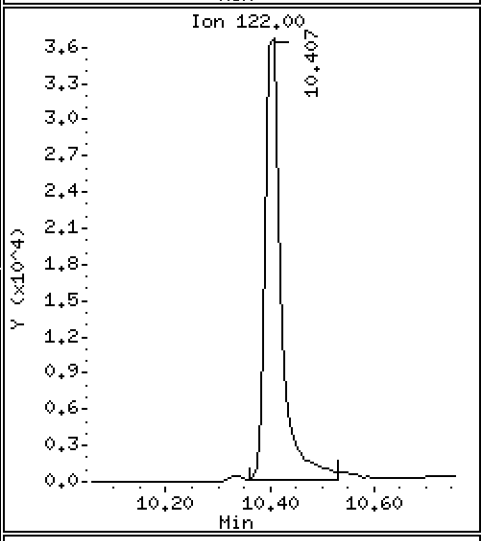
22 2,4-Dimethylphenol

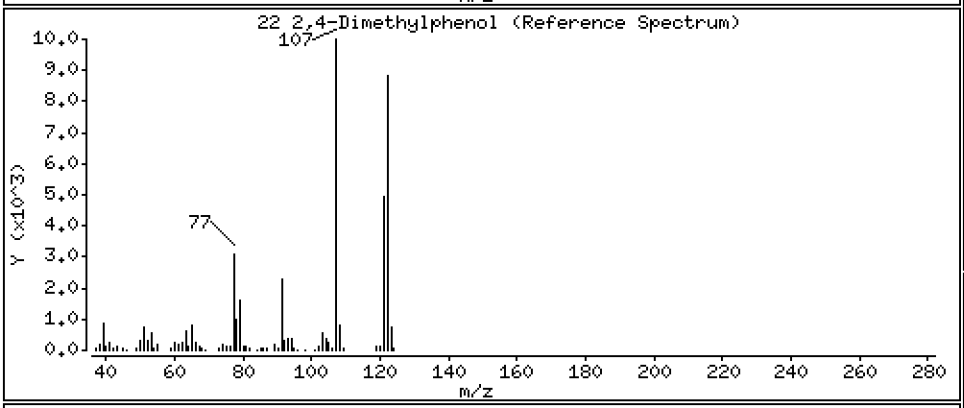
Concentration: 1.439 ug/mL

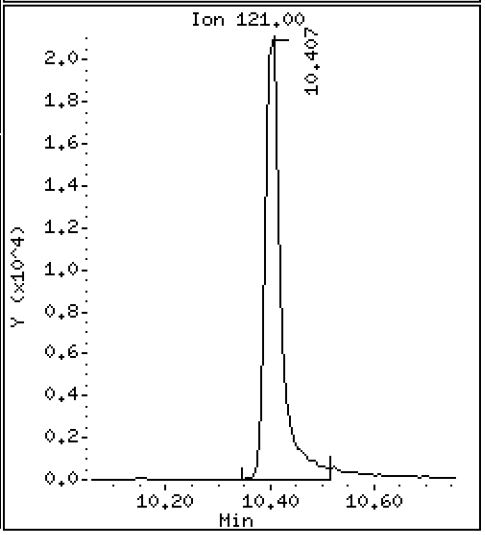


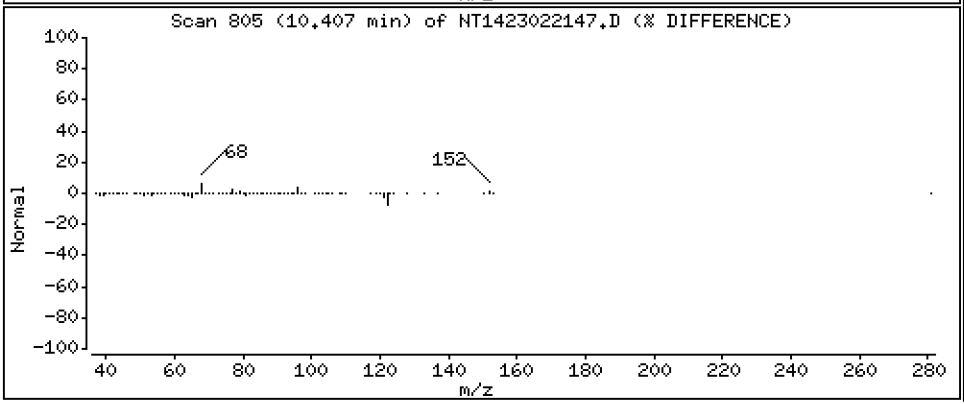












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

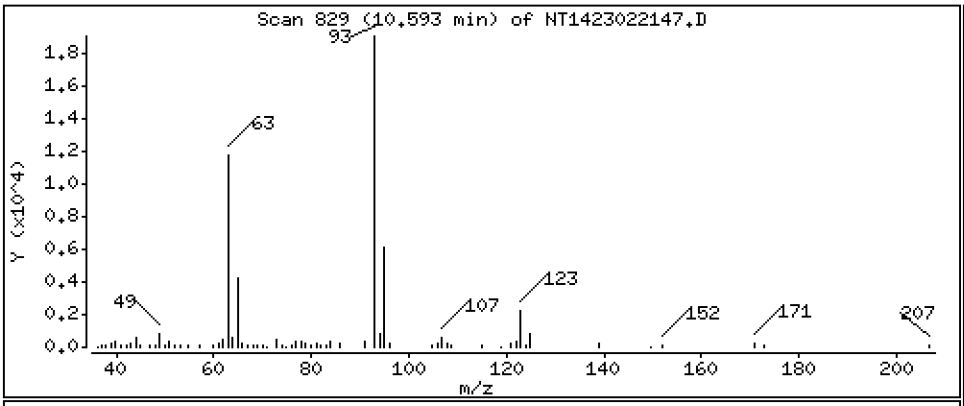
Operator: DSD

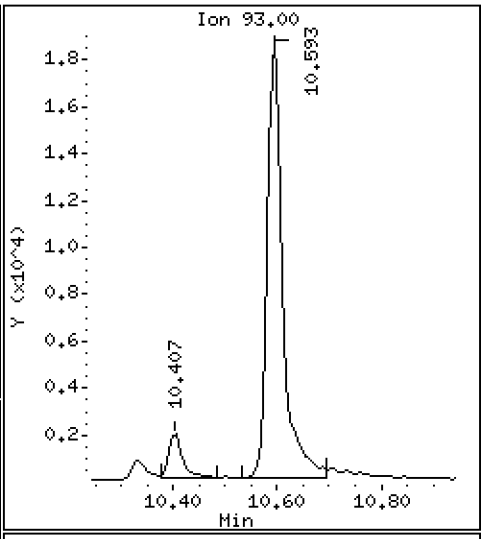
Column phase: ZB-5msi

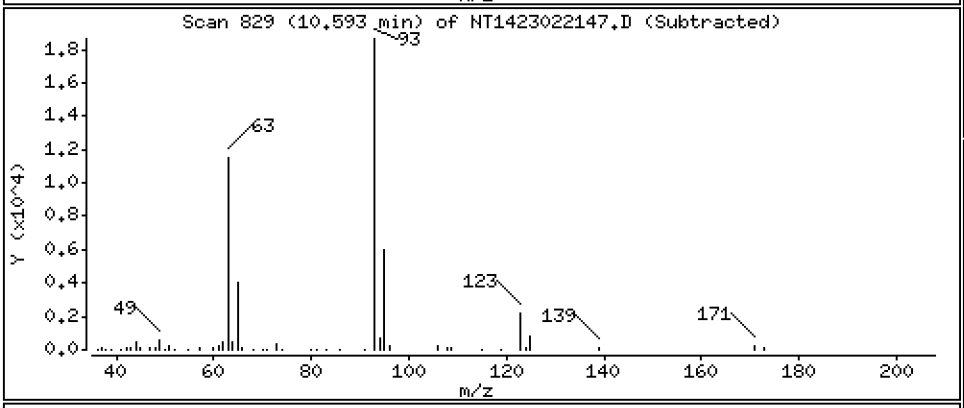
Column diameter: 0.25

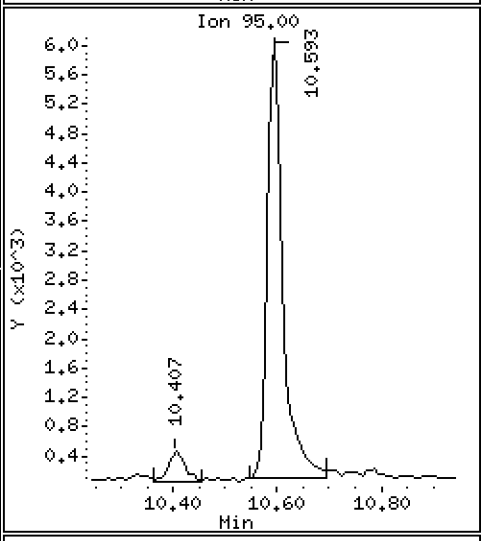
23 Bis(2-Chloroethoxy)methane

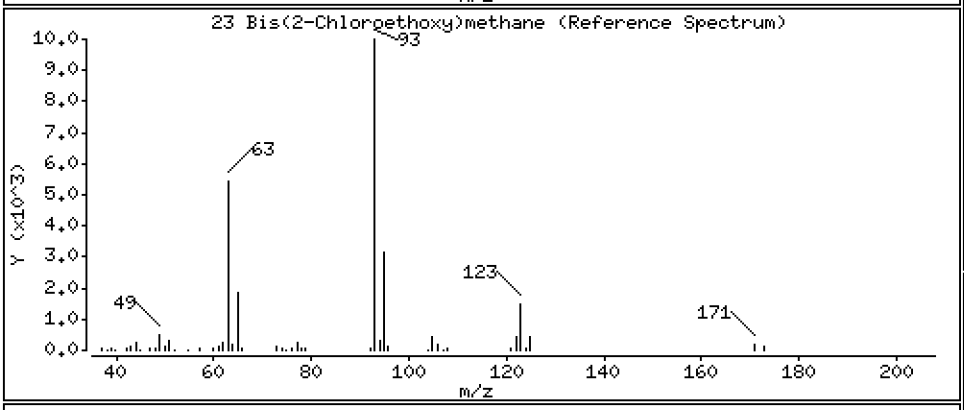
Concentration: 0.4951 ug/mL

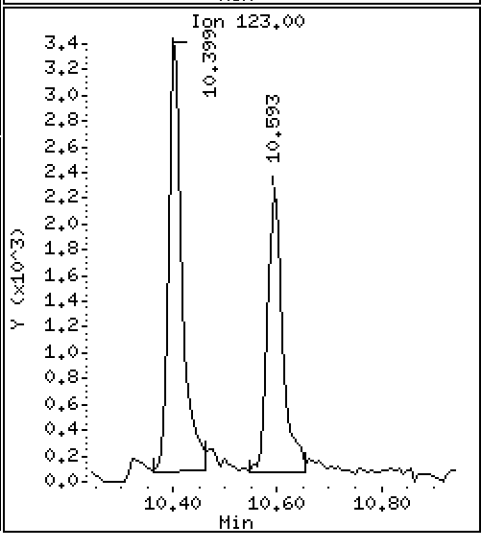


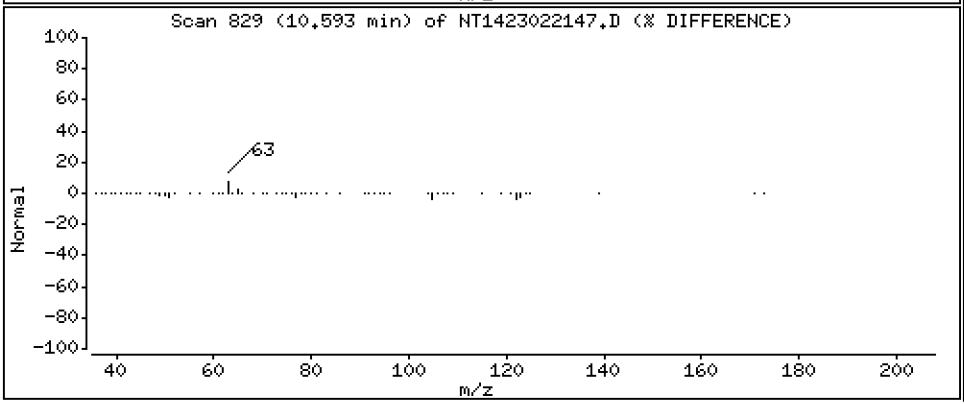












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

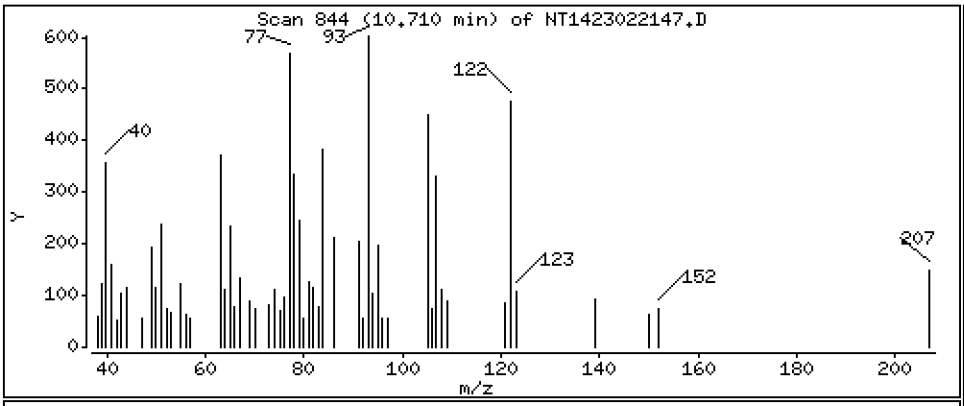
Operator: DSD

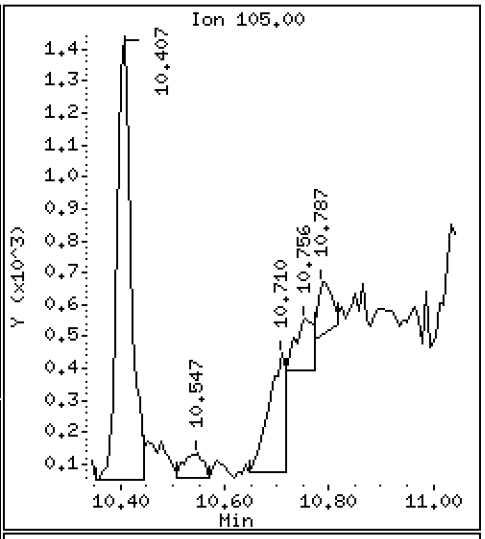
Column phase: ZB-5msi

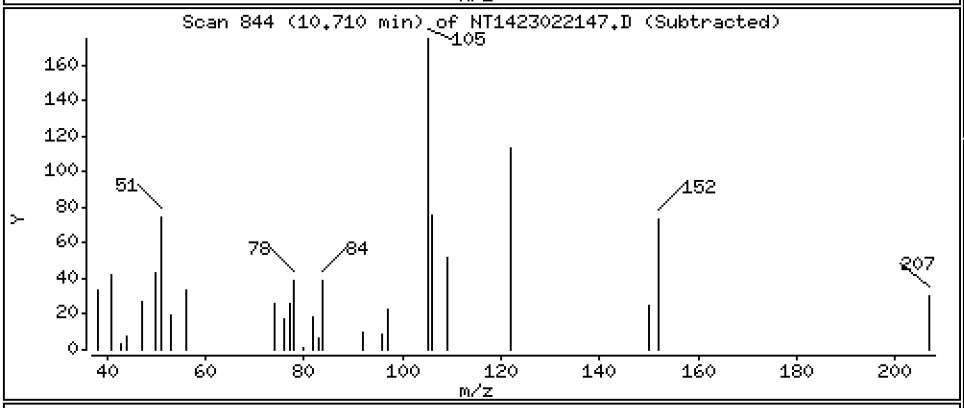
Column diameter: 0.25

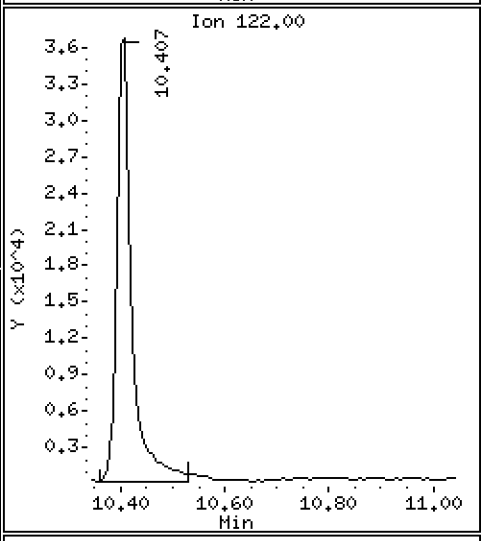
24 Benzoic acid

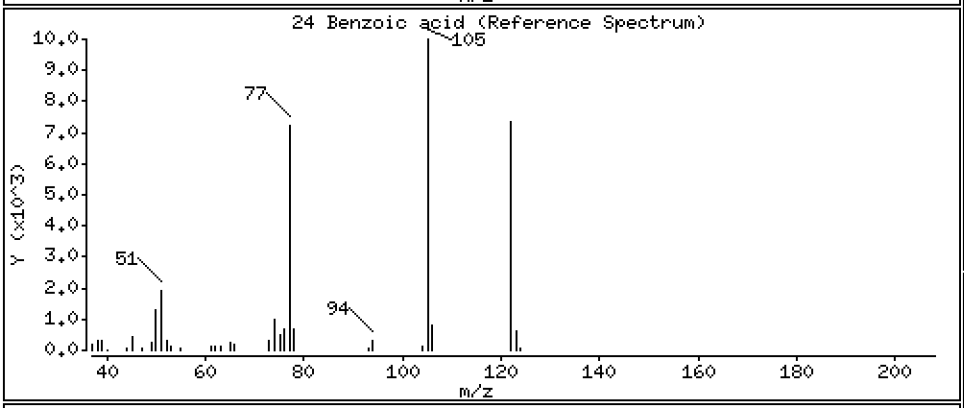
Concentration: 0.02075 ug/mL

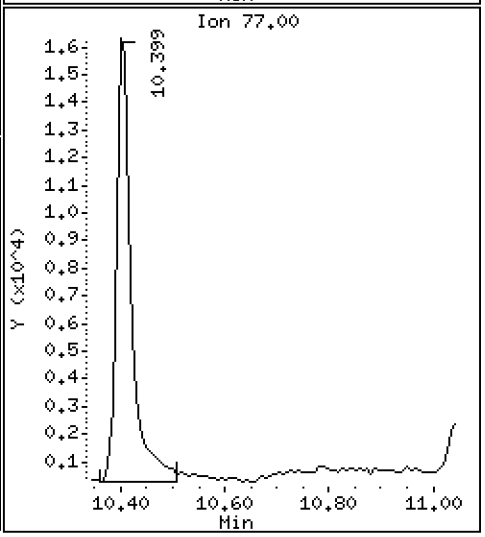


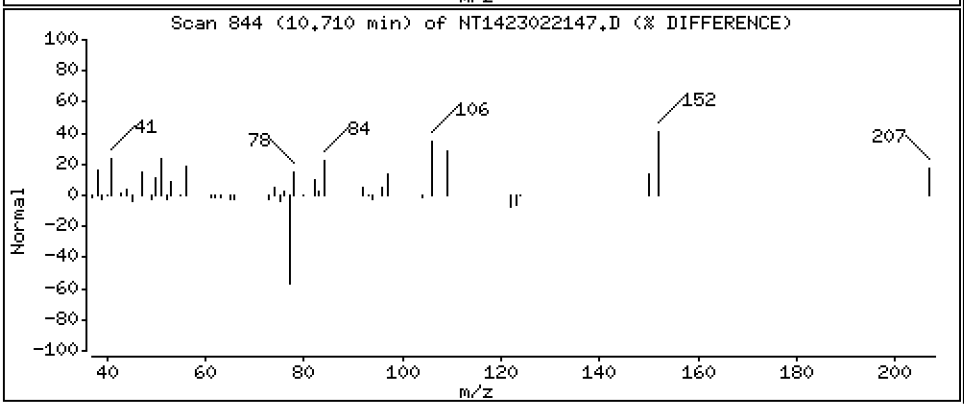












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

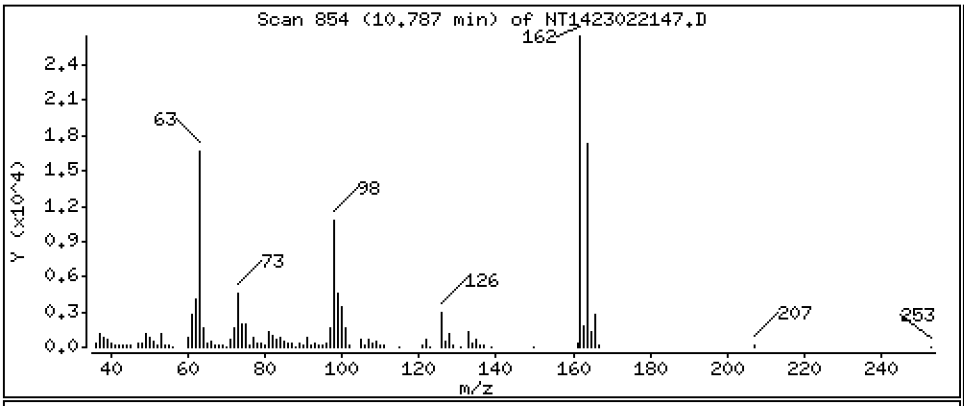
Operator: DSD

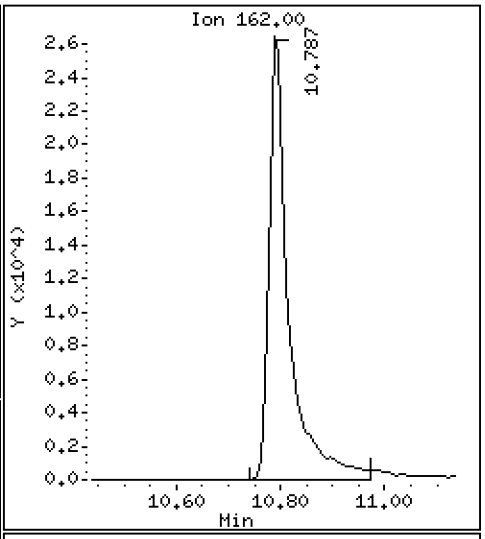
Column phase: ZB-5msi

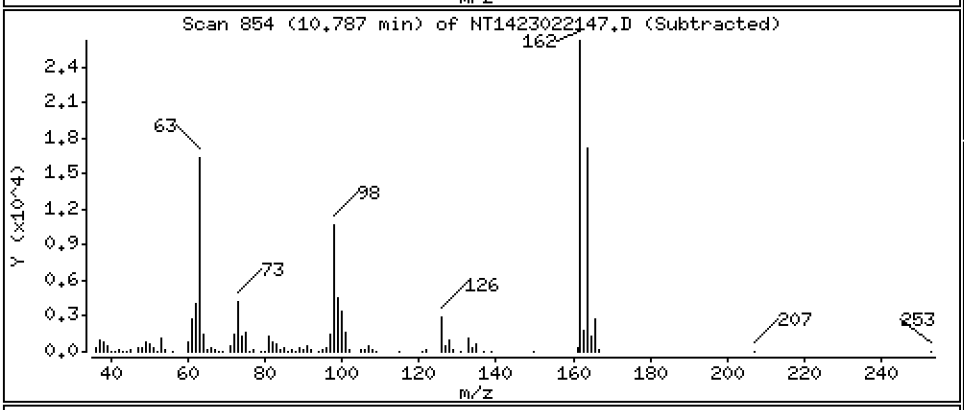
Column diameter: 0.25

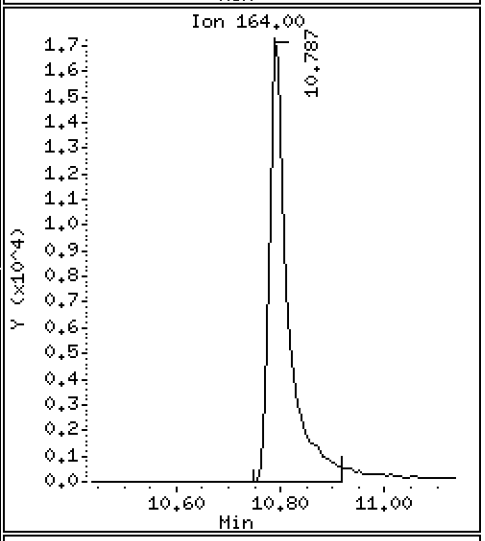
25 2,4-Dichlorophenol

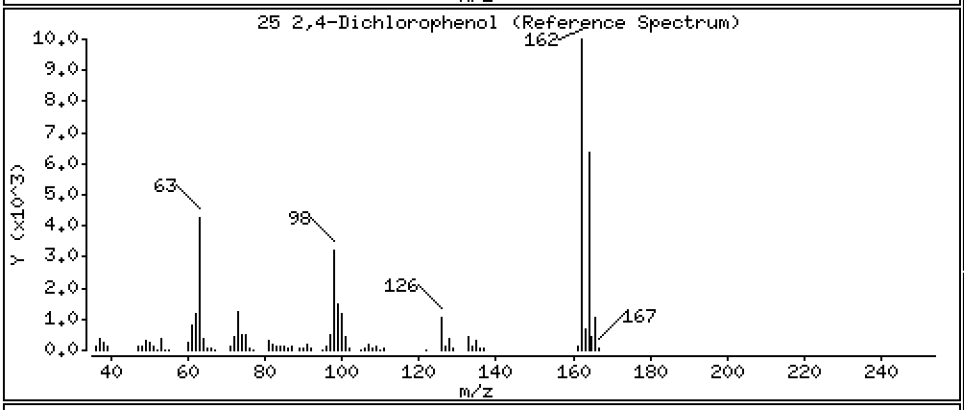
Concentration: 1.302 ug/mL

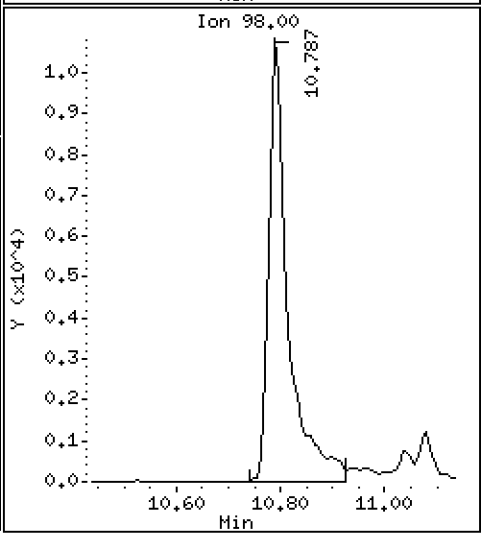


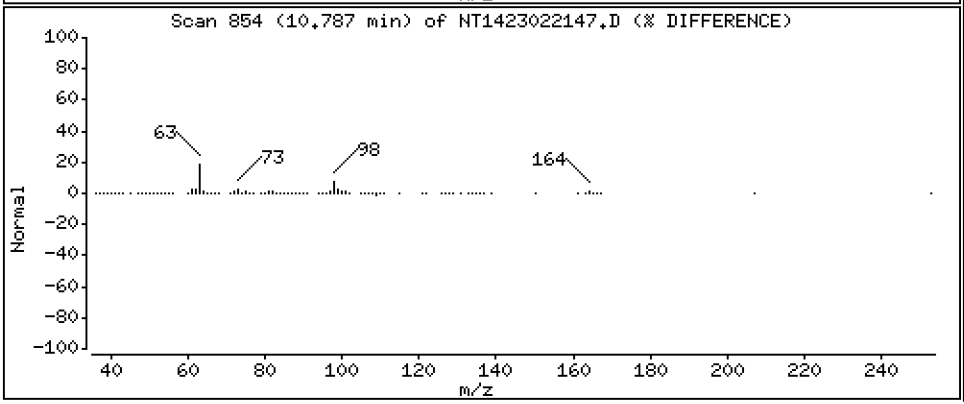












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

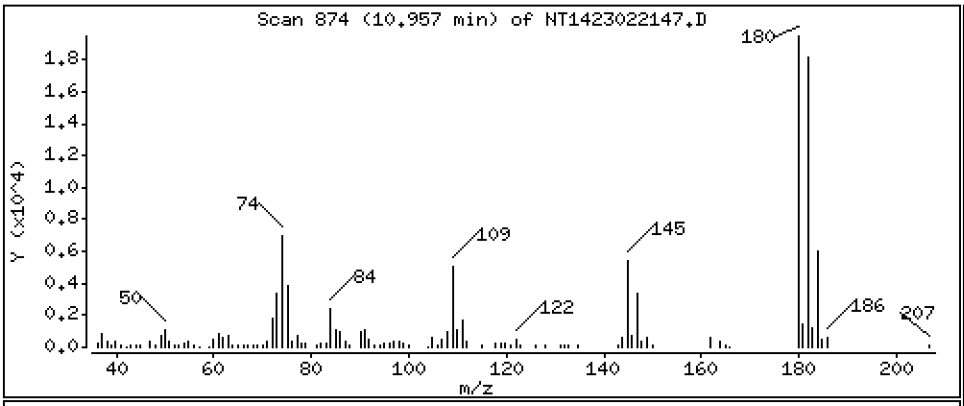
Operator: DSD

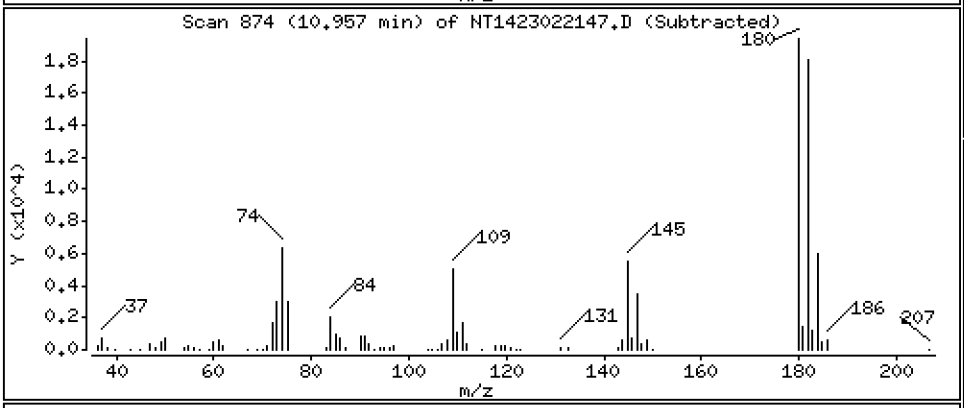
Column phase: ZB-5msi

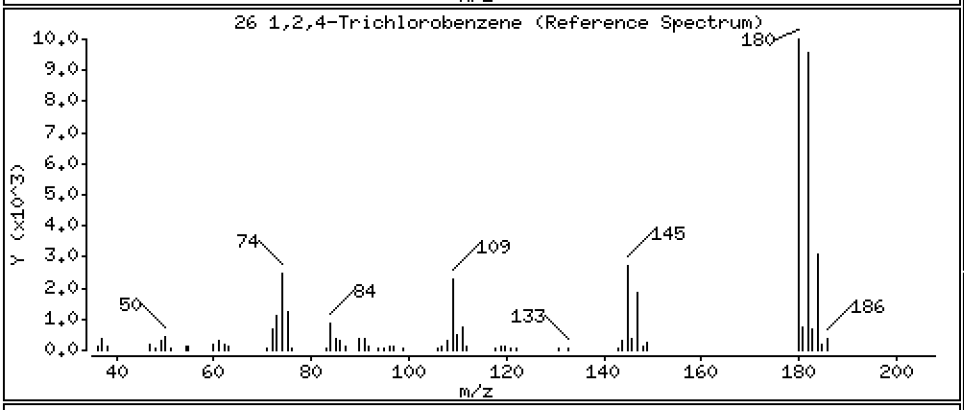
Column diameter: 0.25

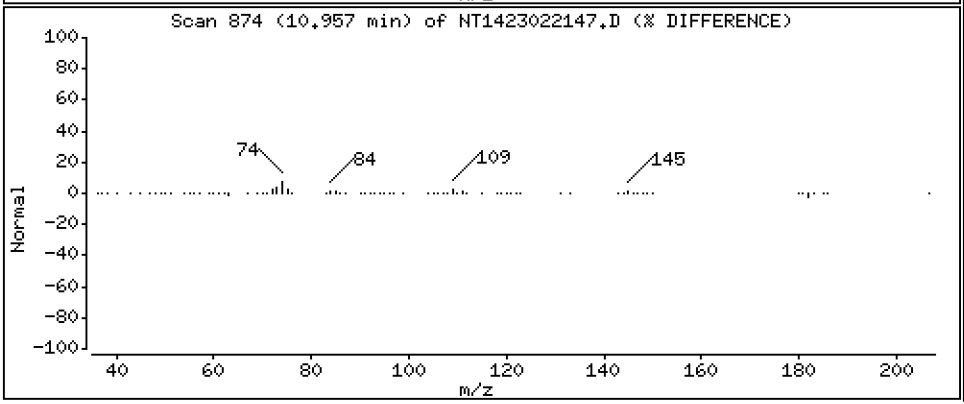
26 1,2,4-Trichlorobenzene

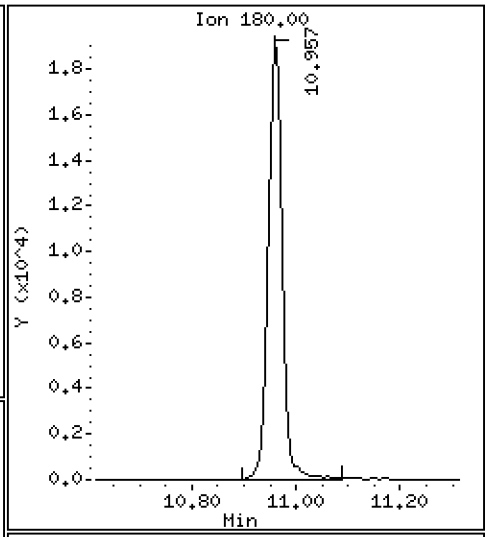
Concentration: 0.5442 ug/mL

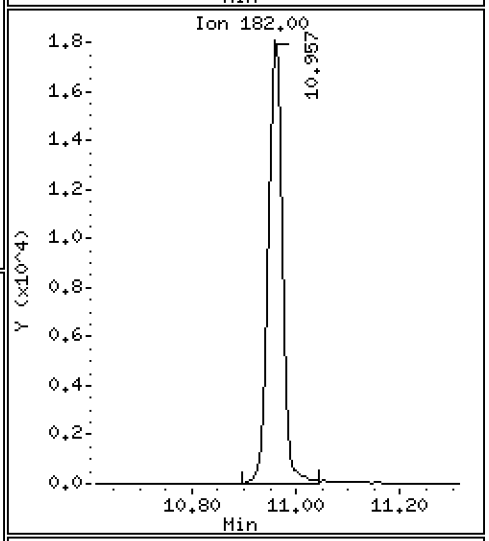


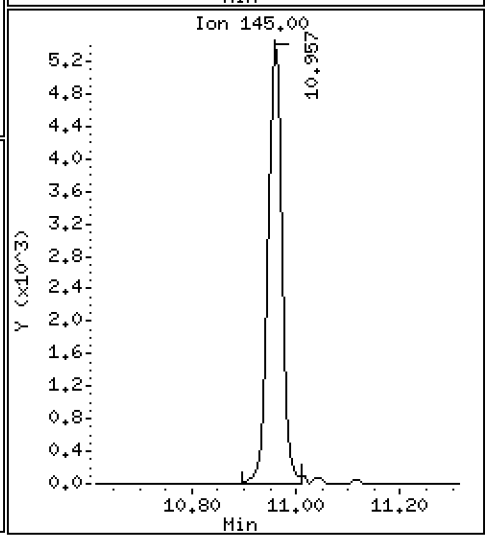












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

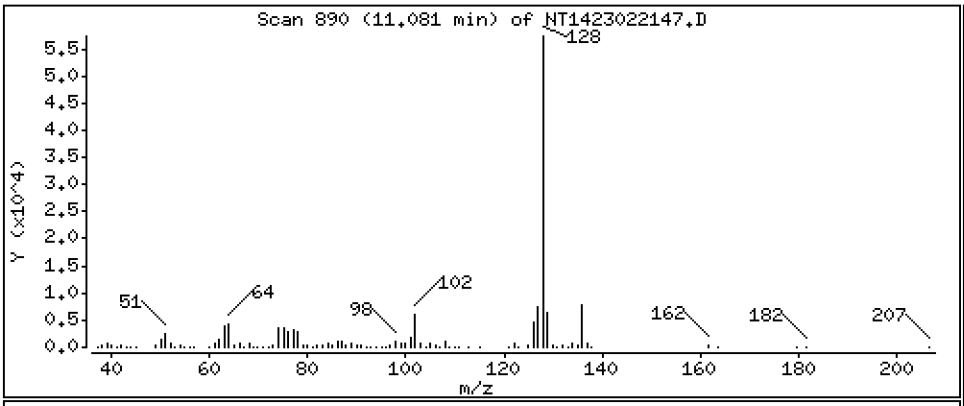
Operator: DSD

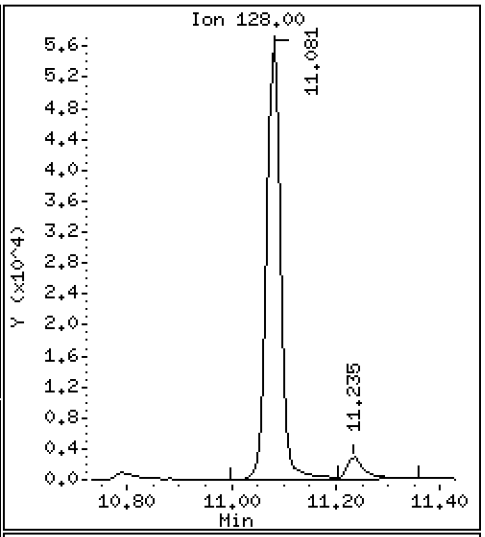
Column phase: ZB-5msi

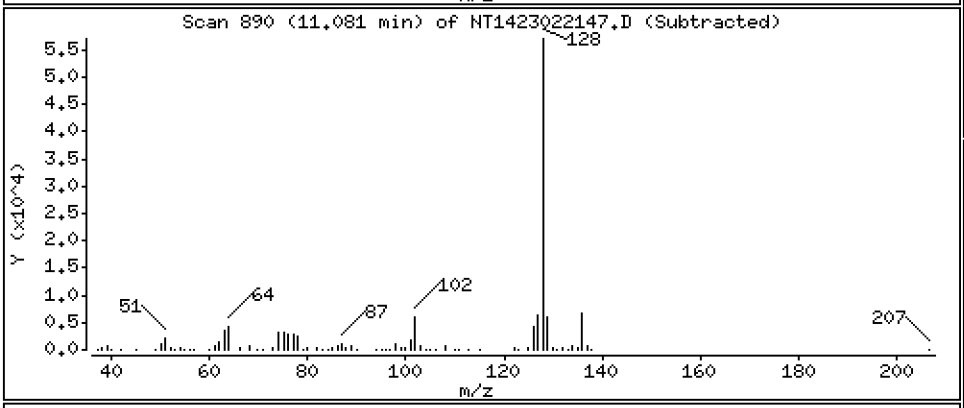
Column diameter: 0.25

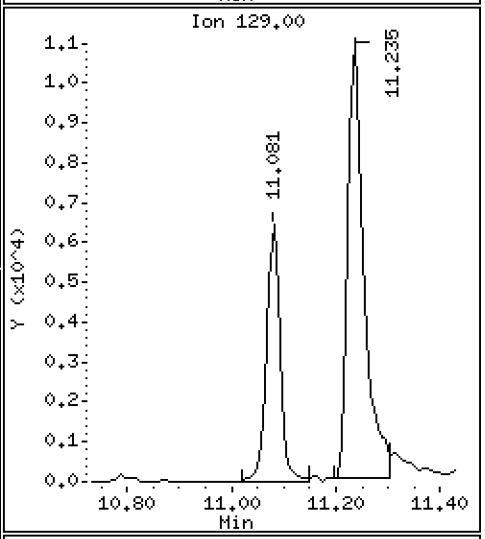
28 Naphthalene

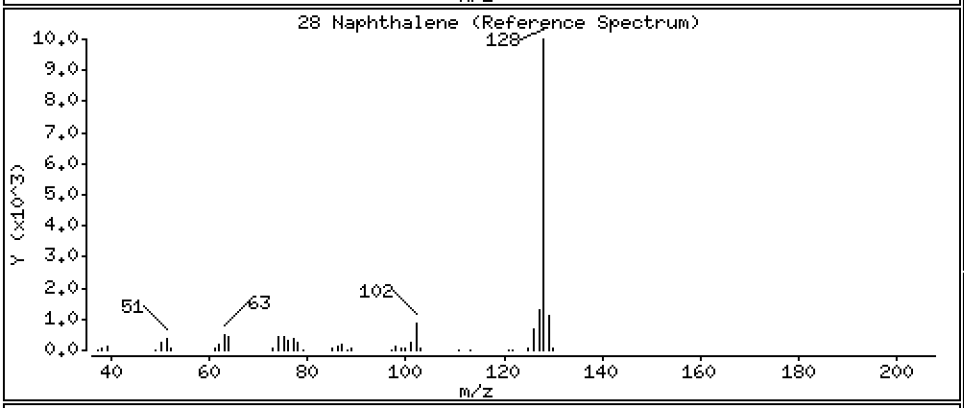
Concentration: 0.5397 ug/mL

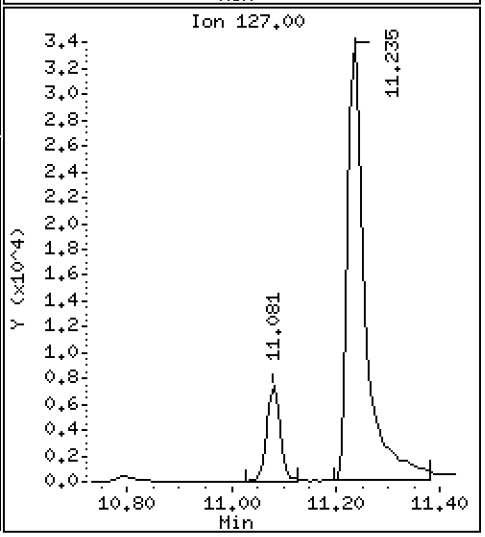


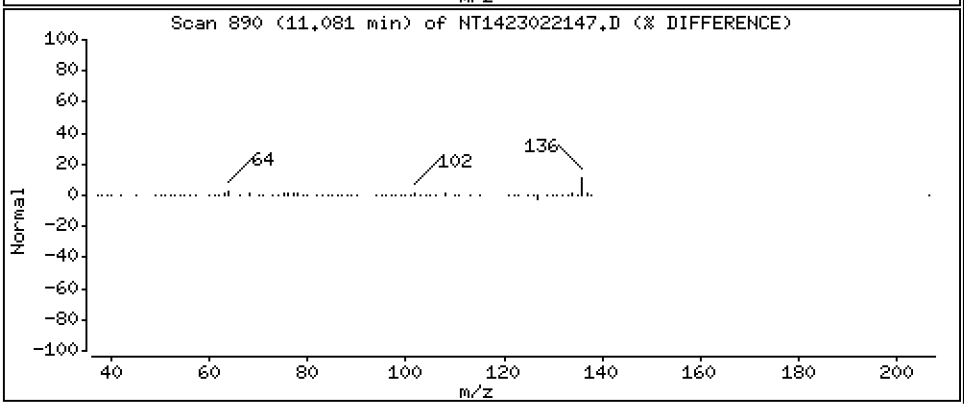












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

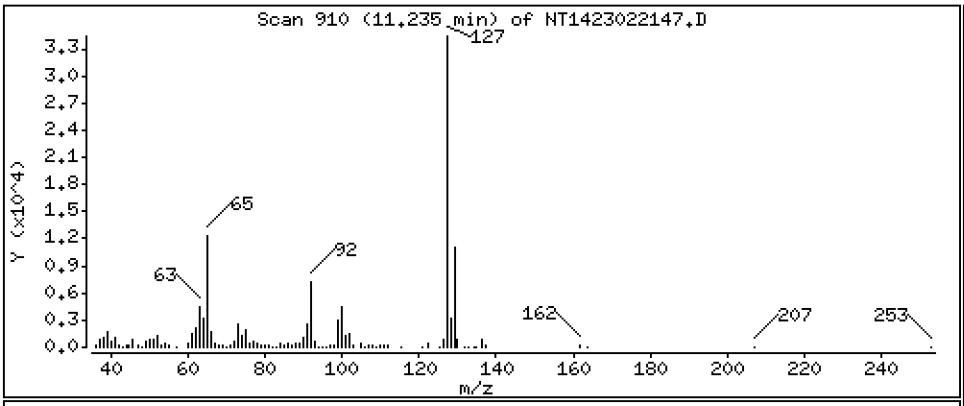
Operator: DSD

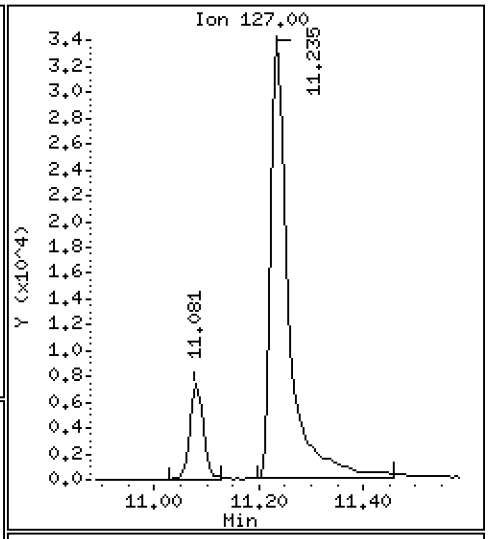
Column phase: ZB-5msi

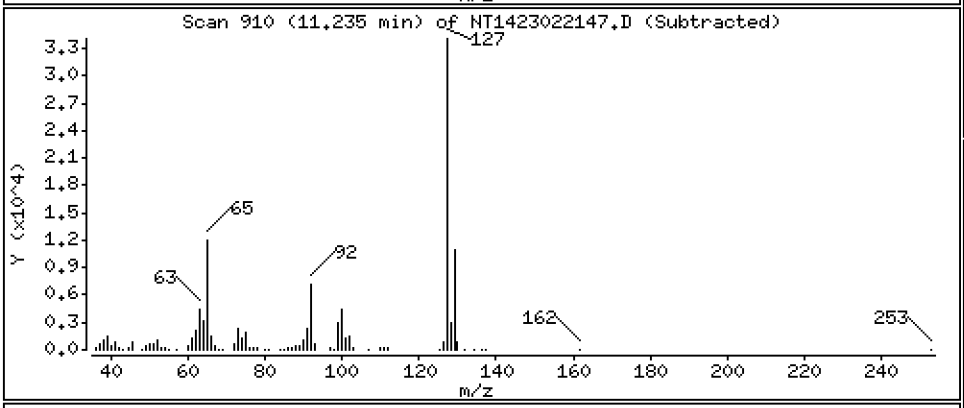
Column diameter: 0.25

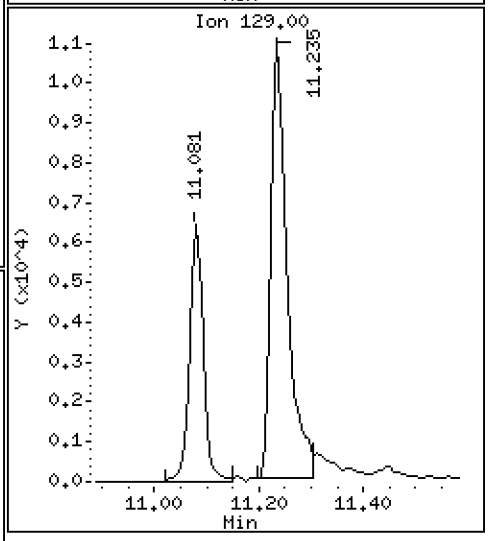
29 4-Chloroaniline

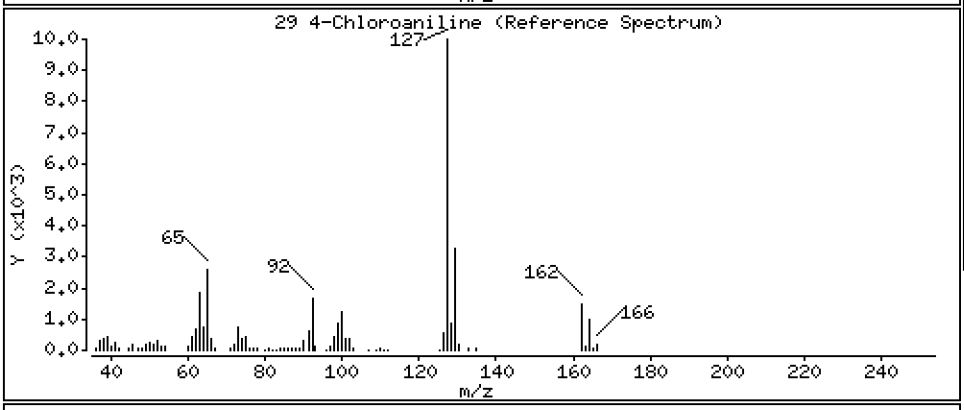
Concentration: 1.063 ug/mL

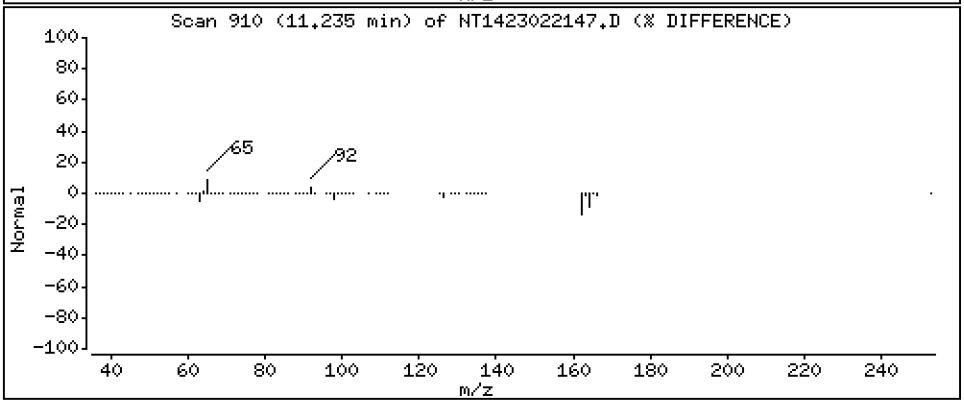












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

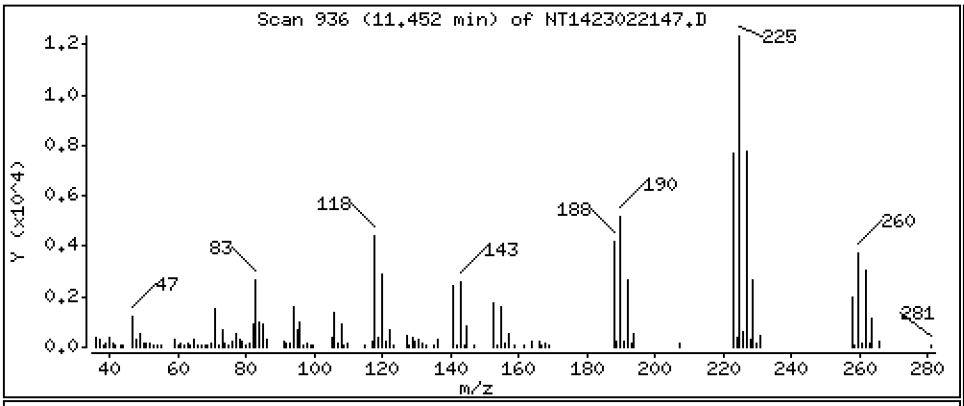
Operator: DSD

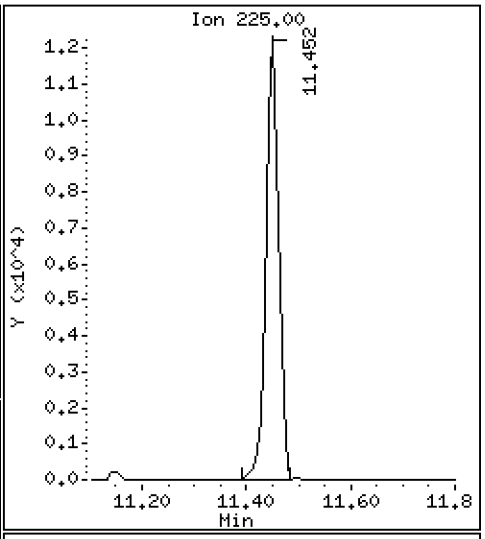
Column phase: ZB-5msi

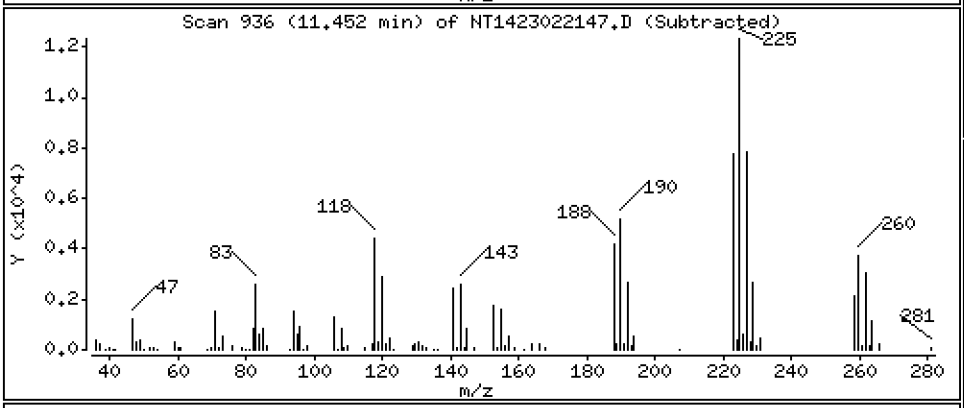
Column diameter: 0.25

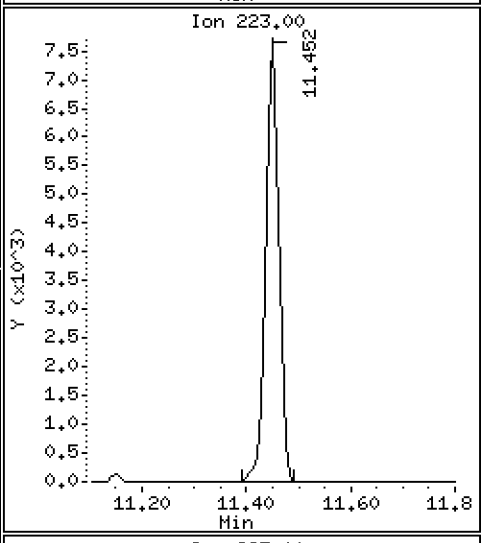
30 Hexachlorobutadiene

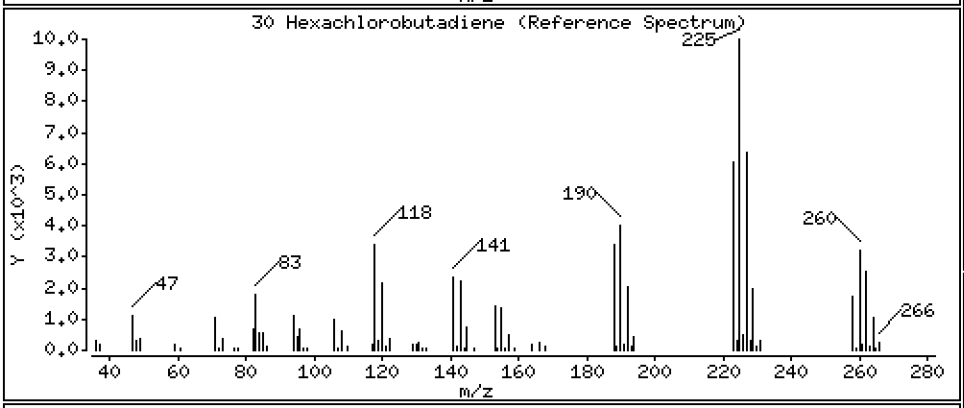
Concentration: 0.5763 ug/mL

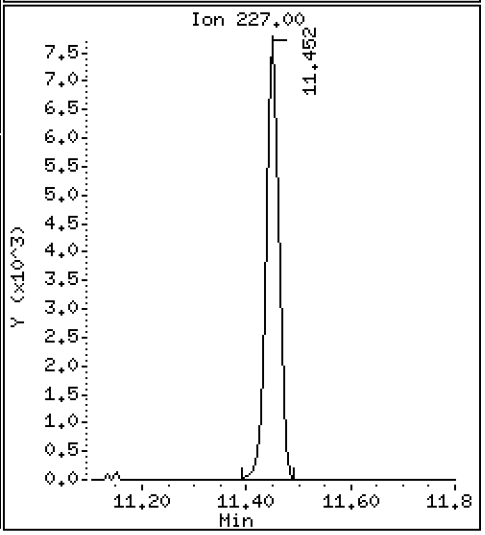


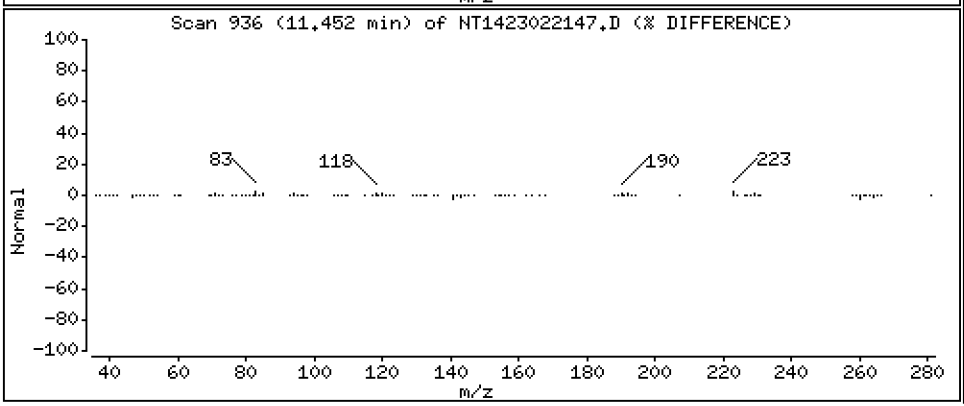












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

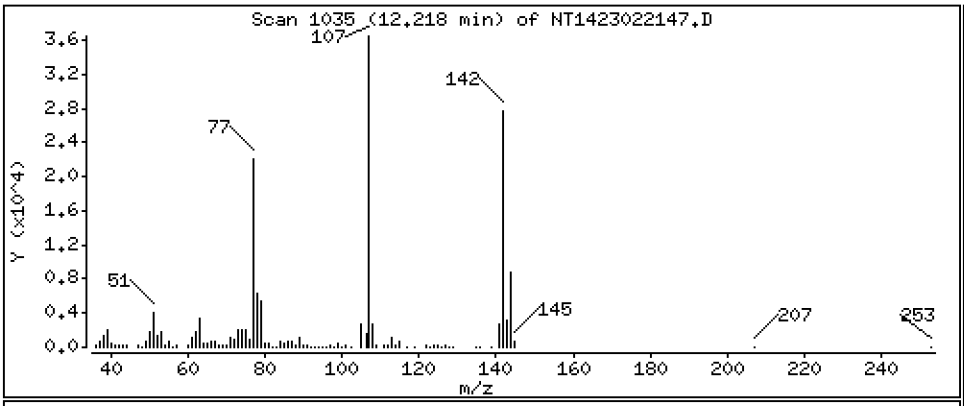
Operator: DSD

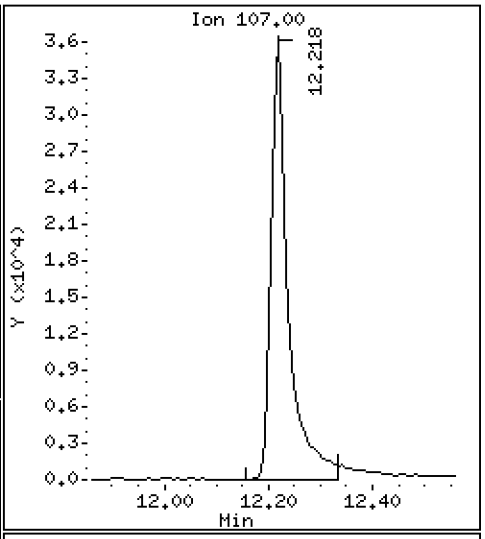
Column phase: ZB-5msi

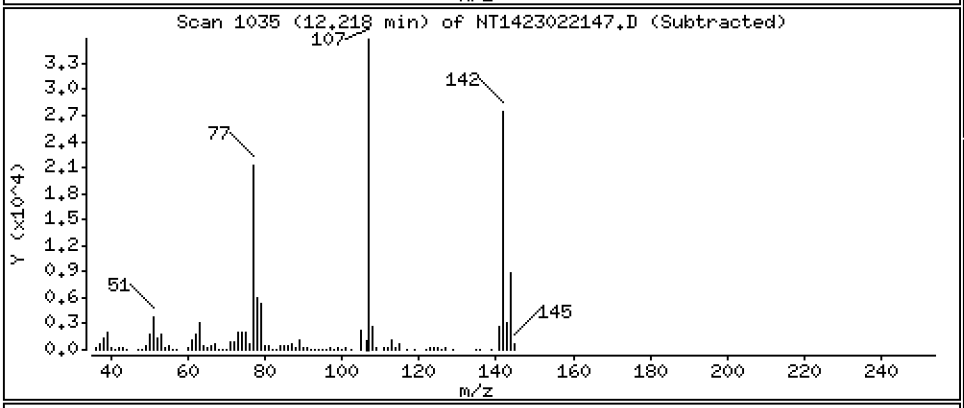
Column diameter: 0.25

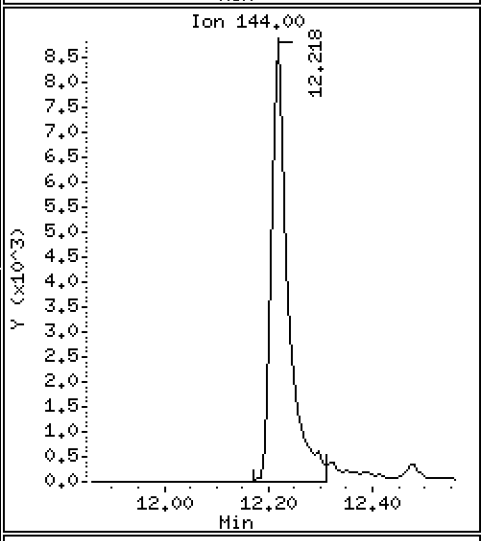
31 4-Chloro-3-methylphenol

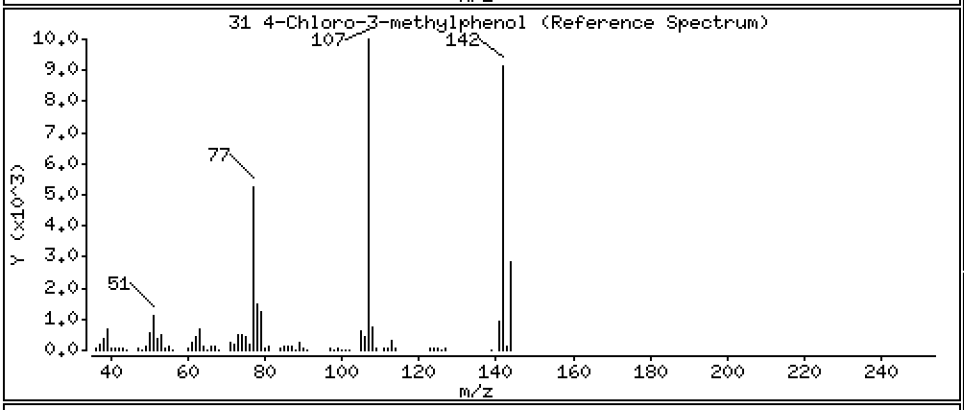
Concentration: 1.334 ug/mL

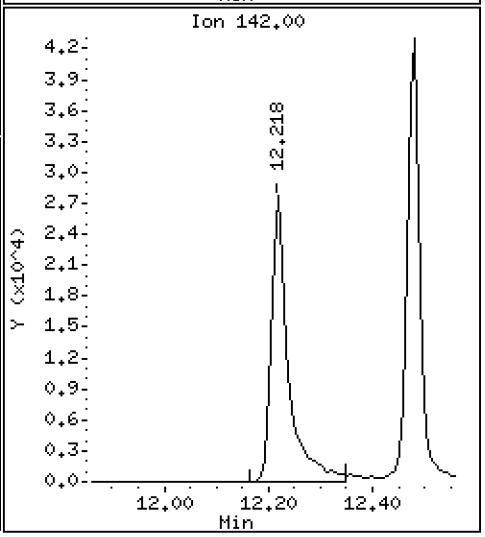


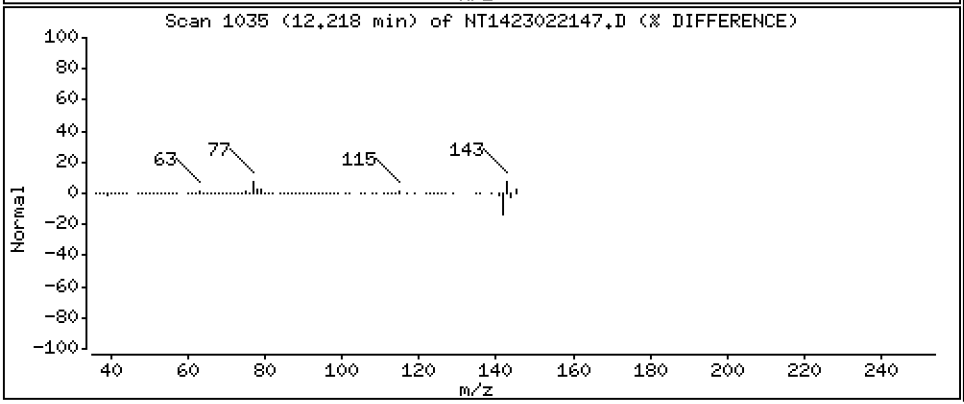












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

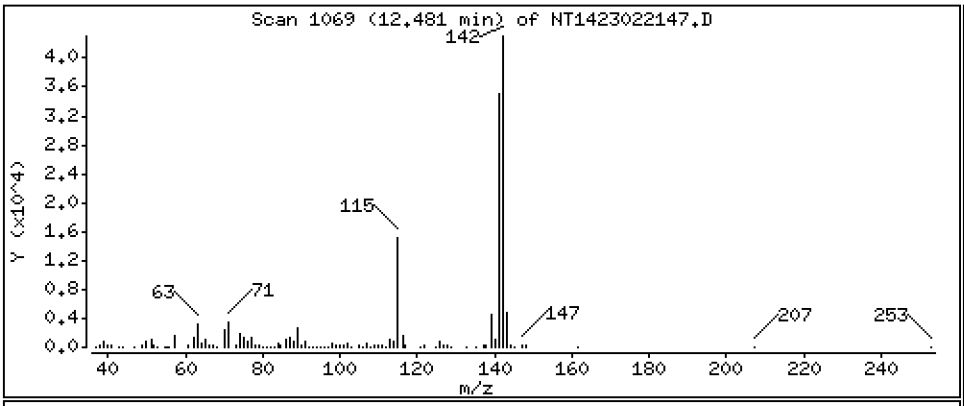
Operator: DSD

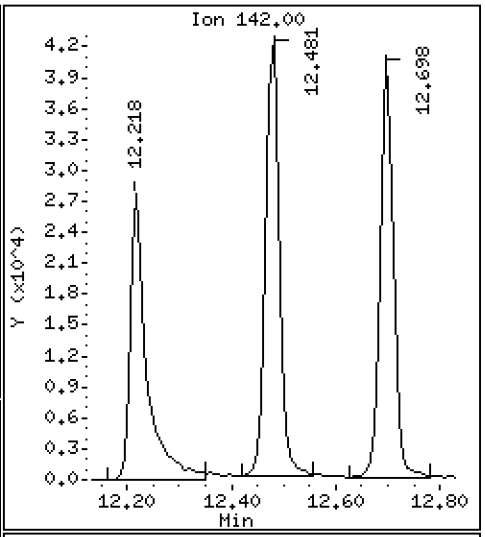
Column phase: ZB-5msi

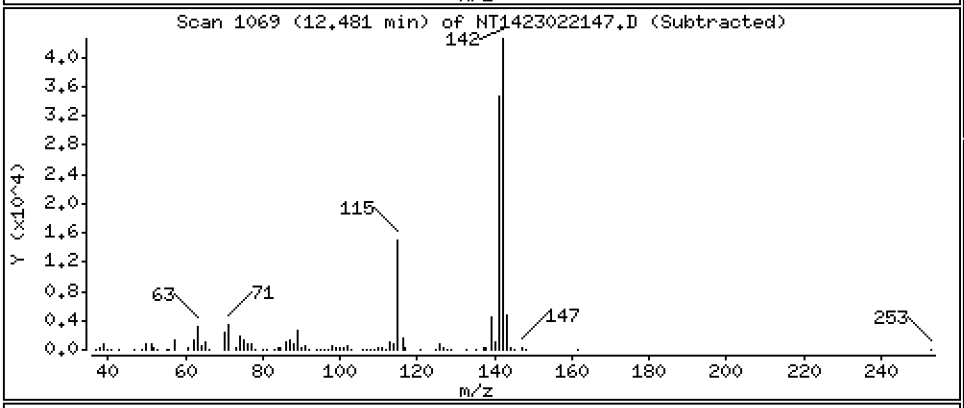
Column diameter: 0.25

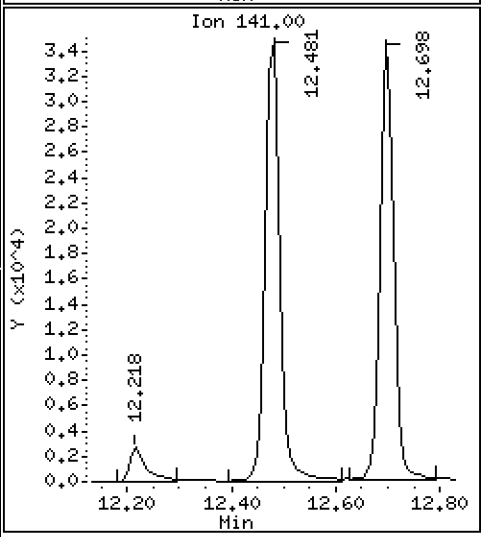
32 2-Methylnaphthalene

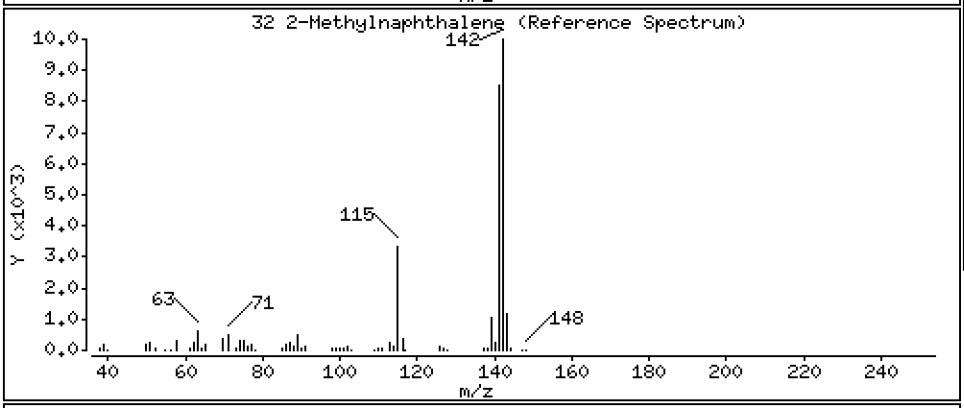
Concentration: 0.5331 ug/mL

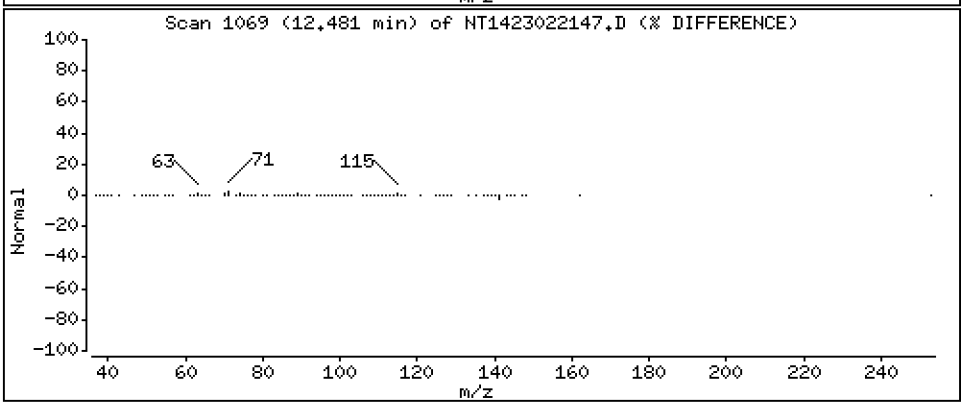












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

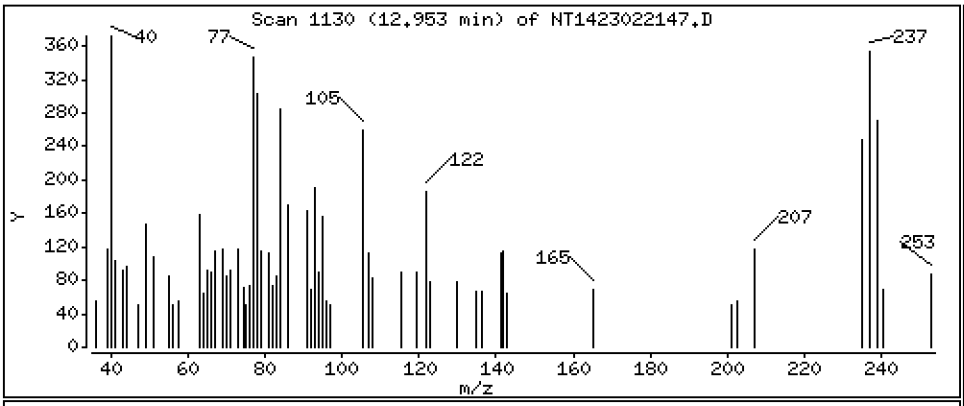
Operator: DSD

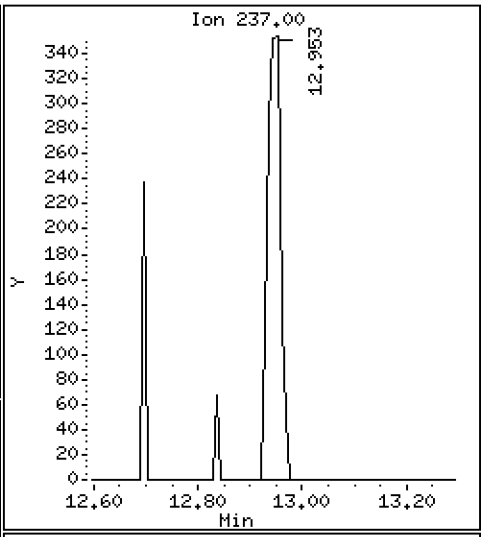
Column phase: ZB-5msi

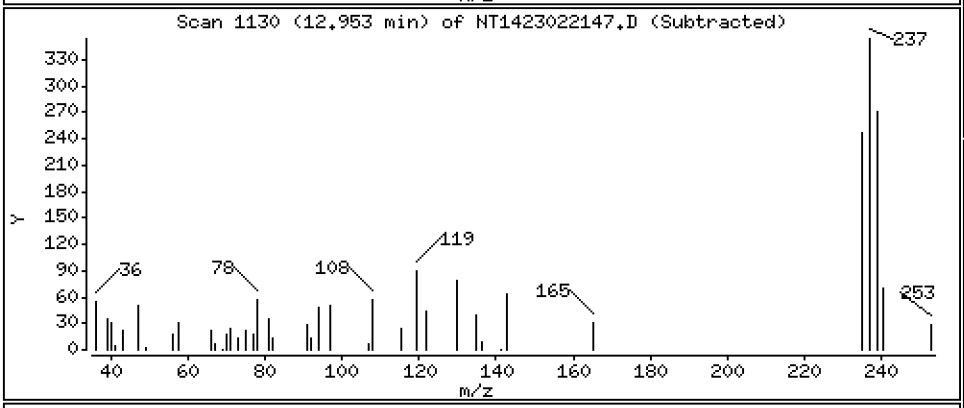
Column diameter: 0.25

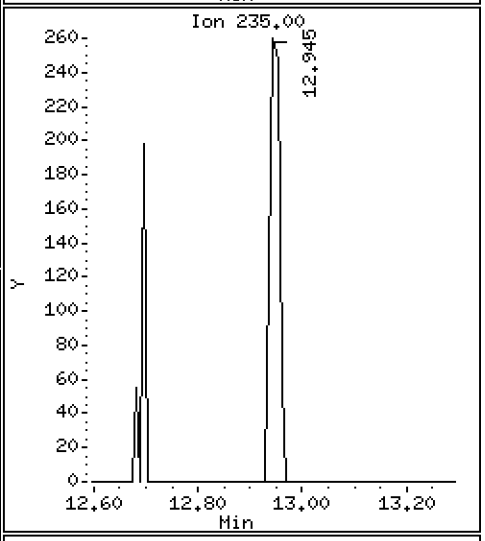
33 Hexachlorocyclopentadiene

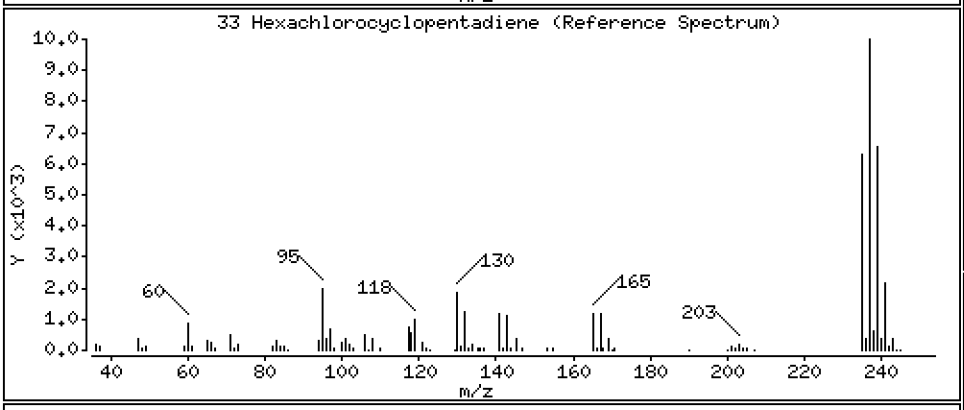
Concentration: 0.01357 ug/mL

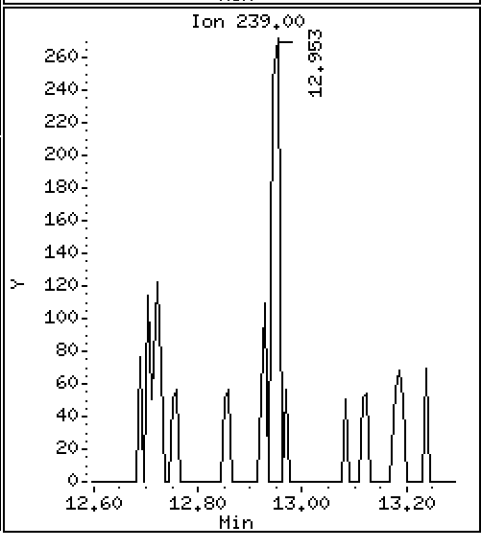


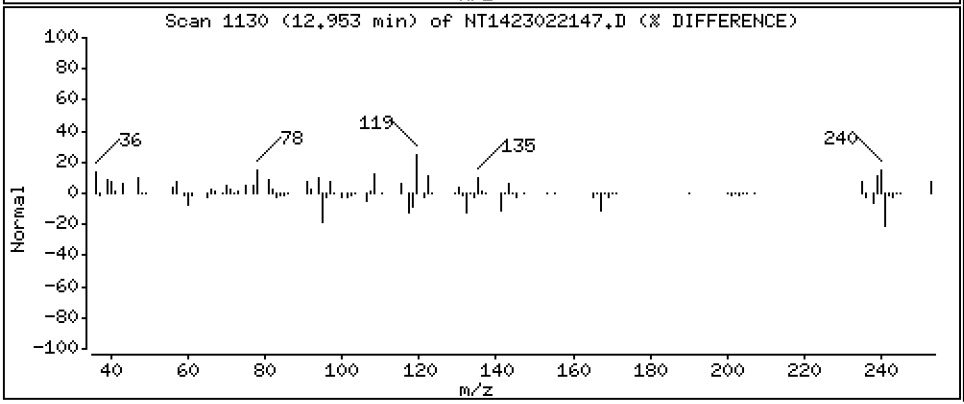












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

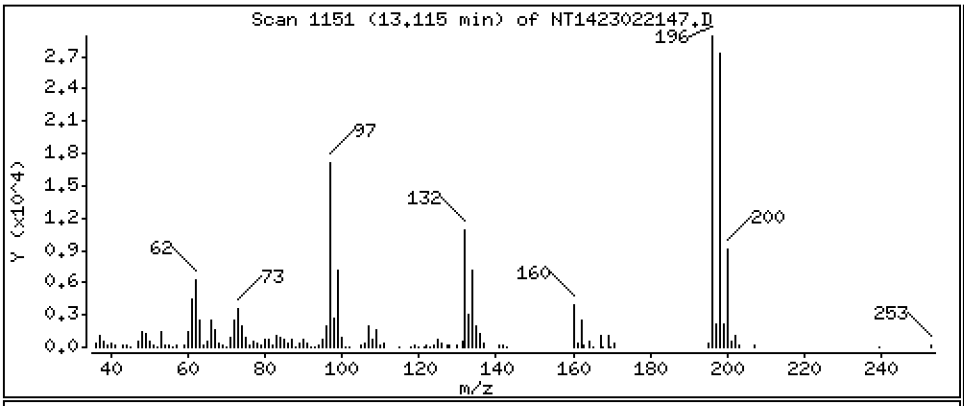
Operator: DSD

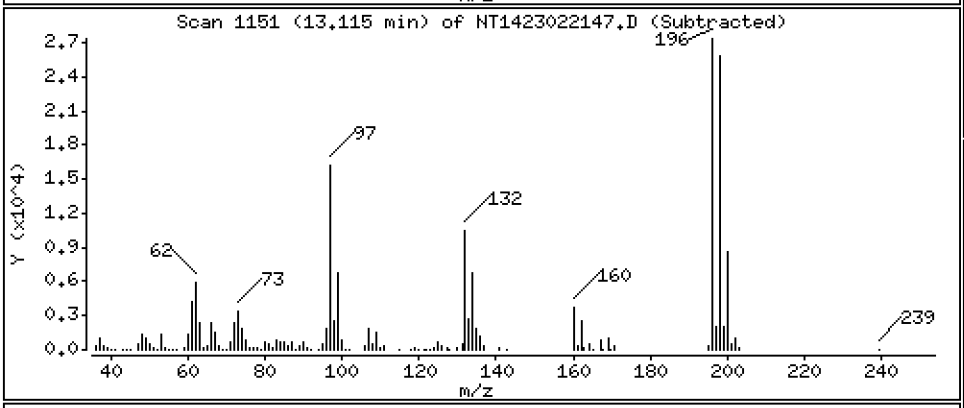
Column phase: ZB-5msi

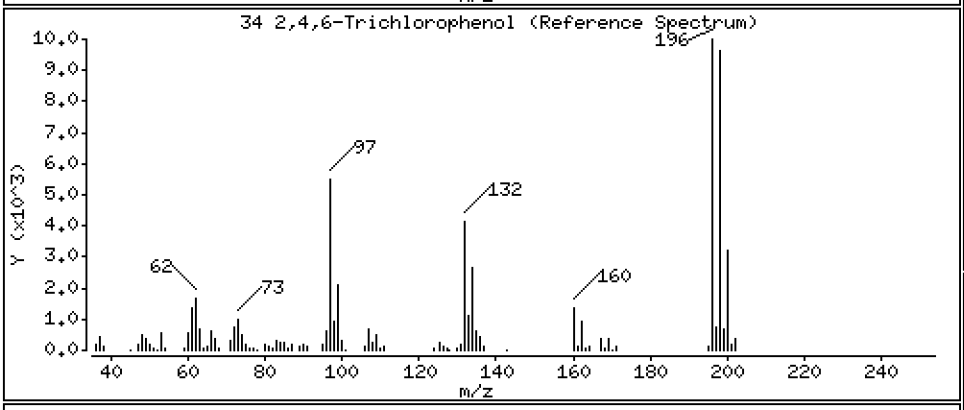
Column diameter: 0.25

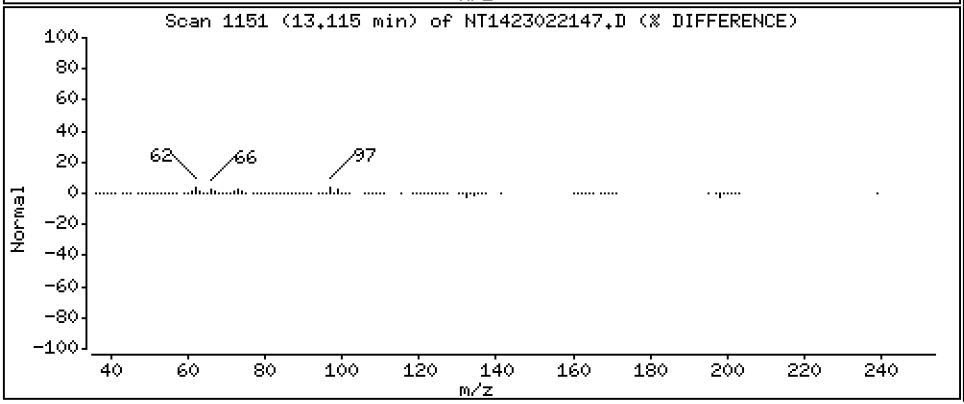
34 2,4,6-Trichlorophenol

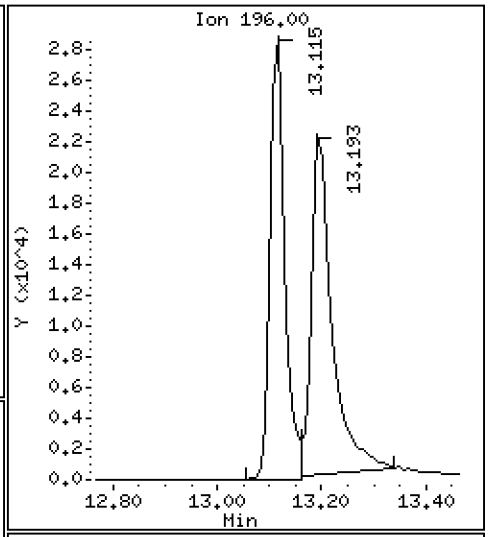
Concentration: 1.222 ug/mL

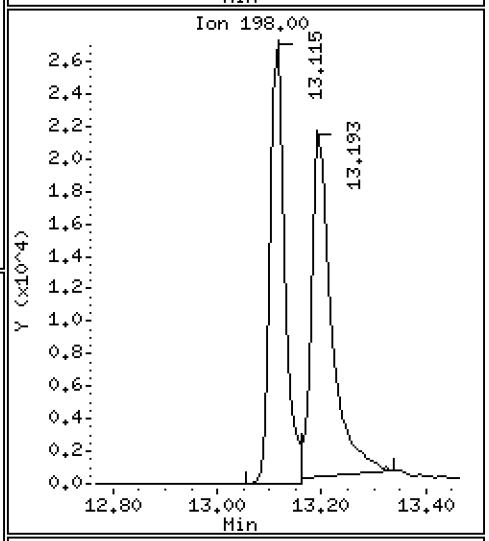


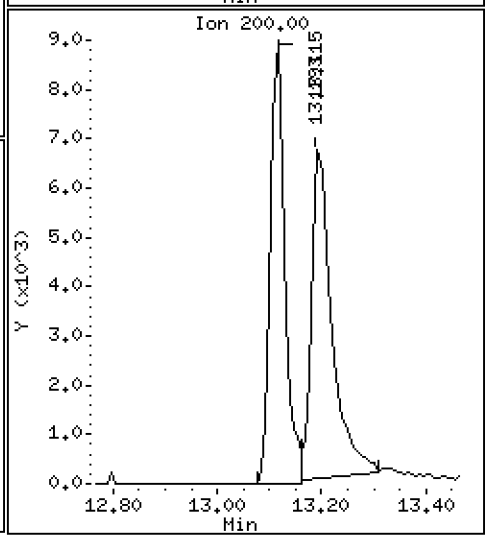












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

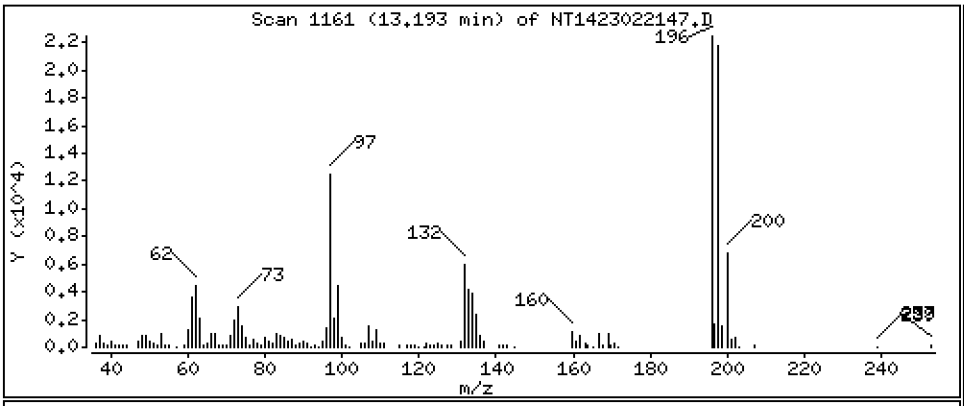
Operator: DSD

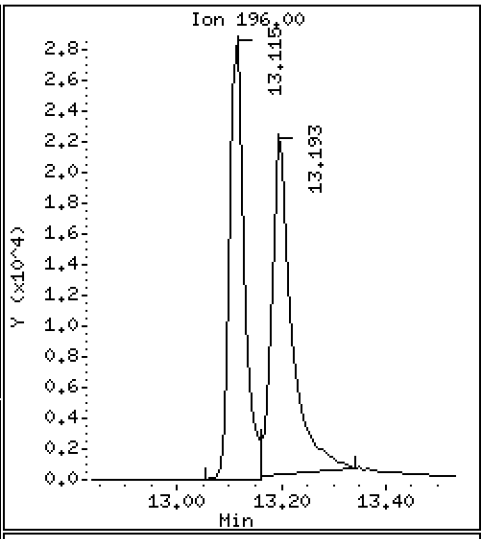
Column phase: ZB-5msi

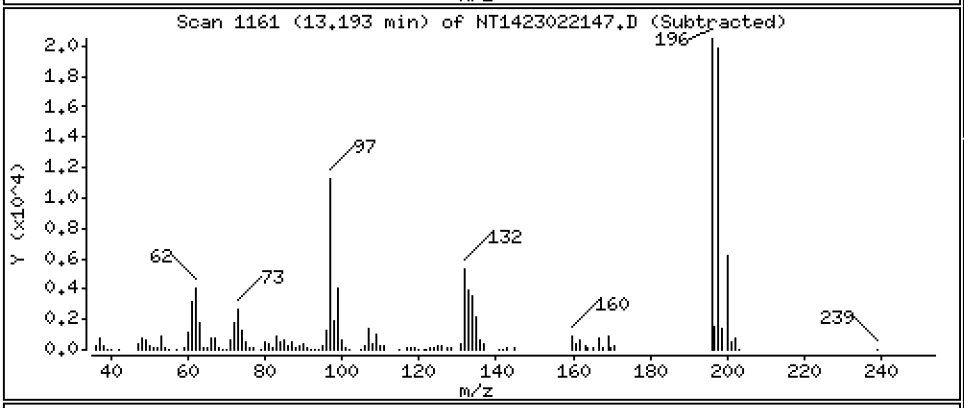
Column diameter: 0.25

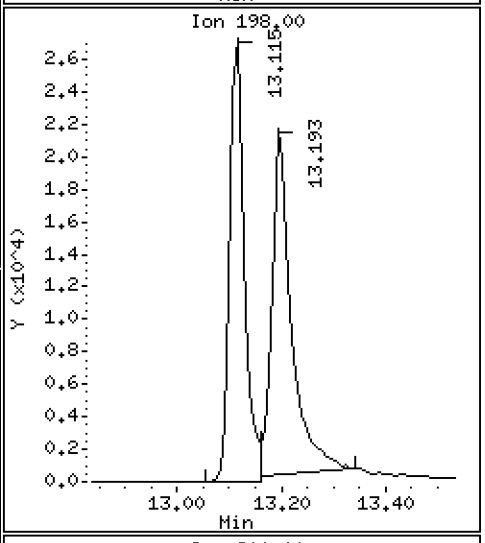
35 2,4,5-Trichlorophenol

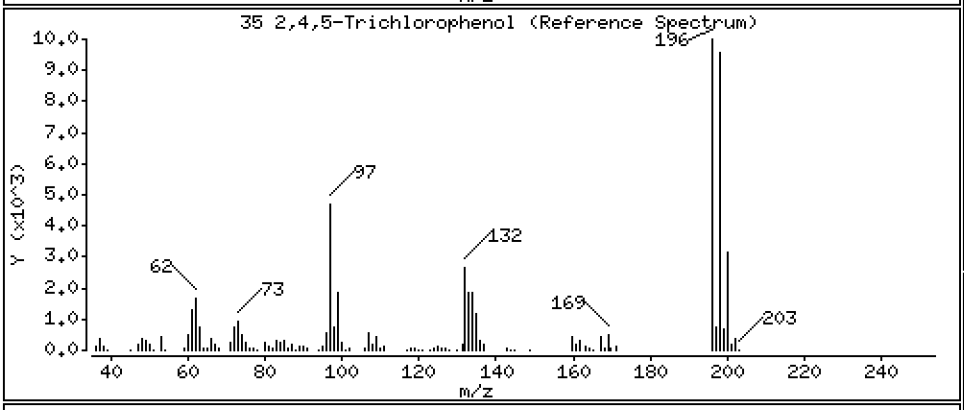
Concentration: 1.211 ug/mL

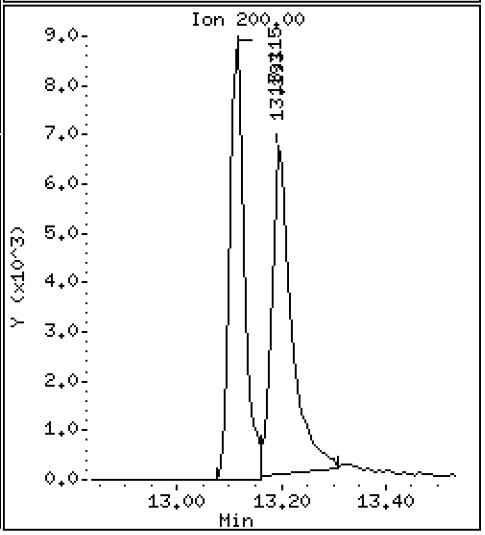


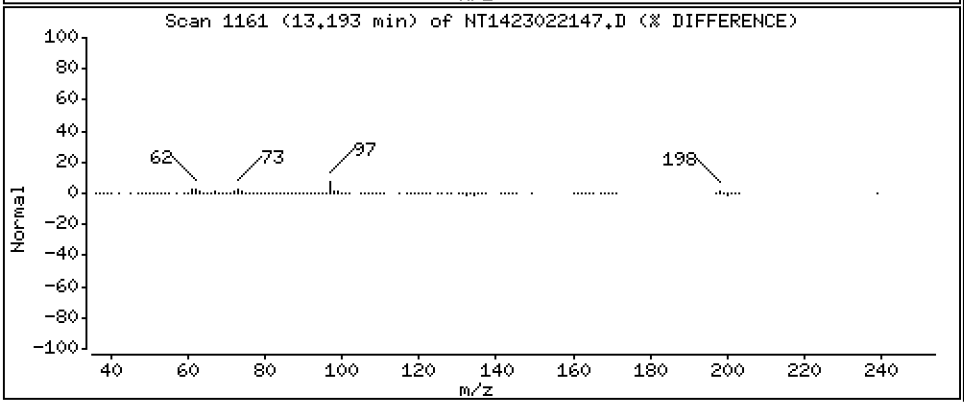












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

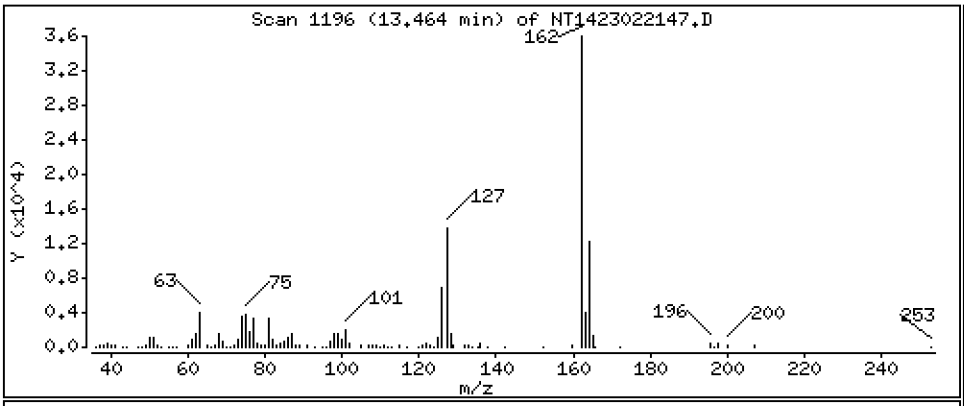
Operator: DSD

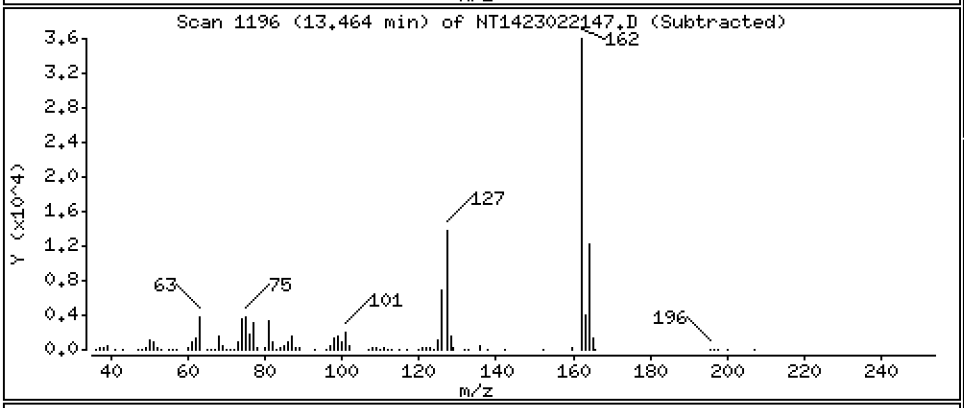
Column phase: ZB-5msi

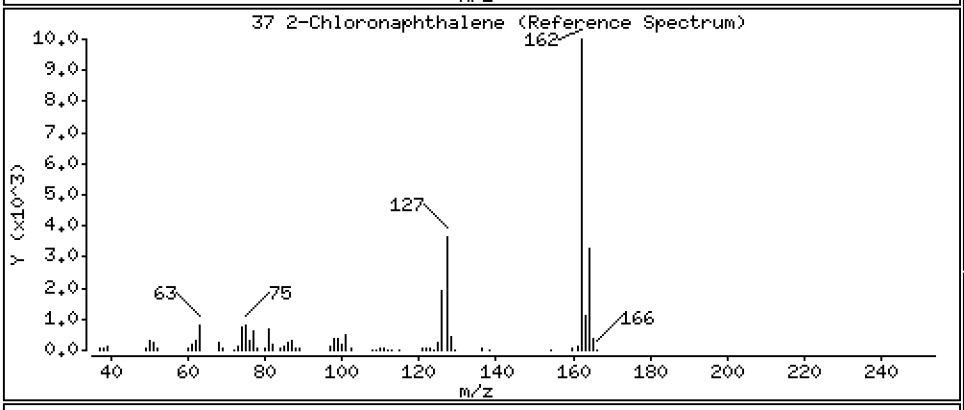
Column diameter: 0.25

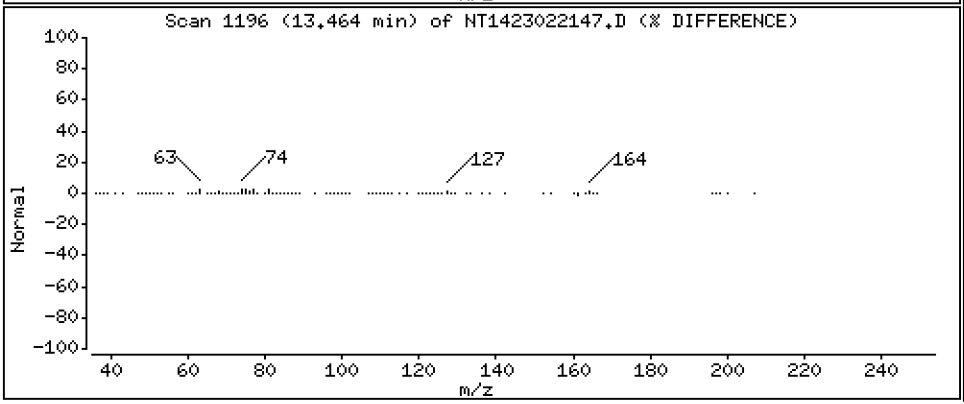
37 2-Chloronaphthalene

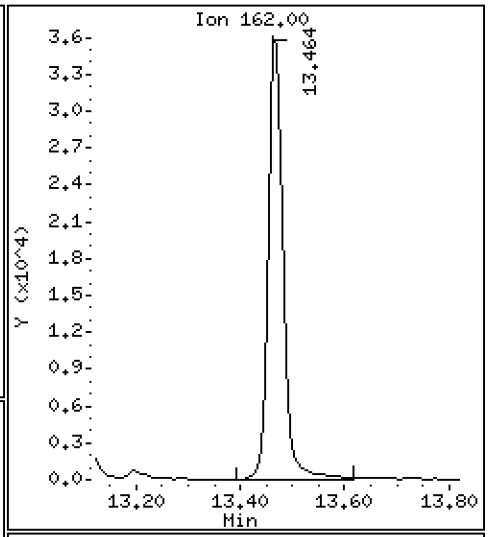
Concentration: 0.5249 ug/mL

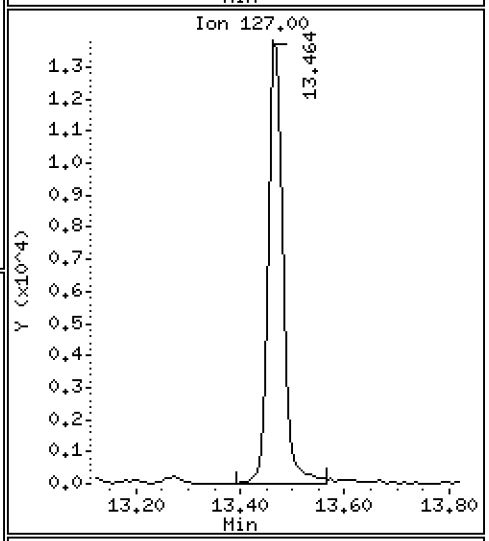


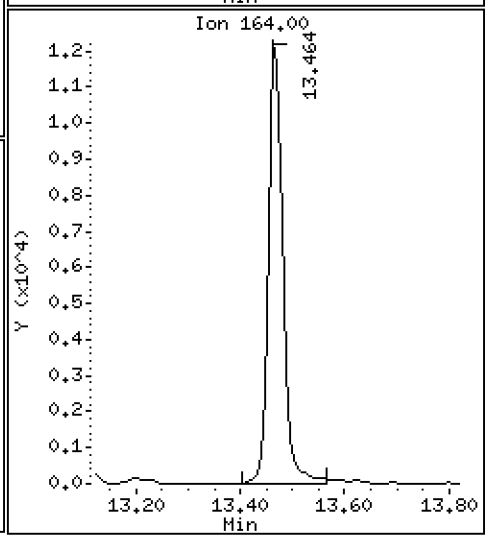












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022147.D

Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

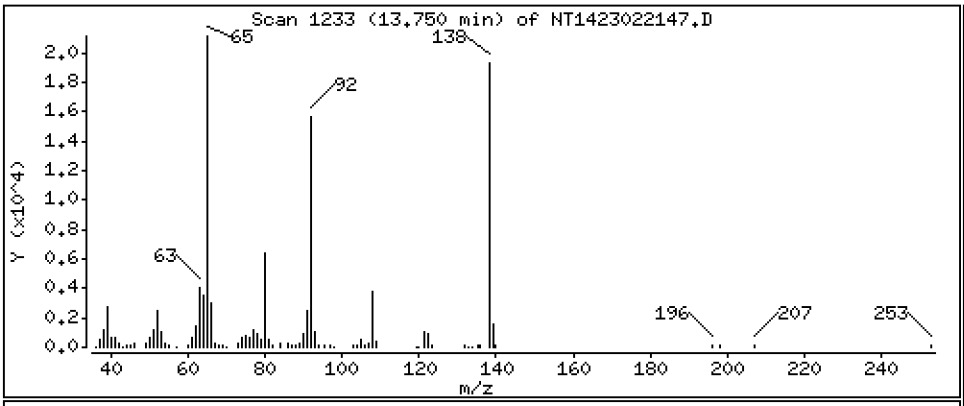
Operator: DSD

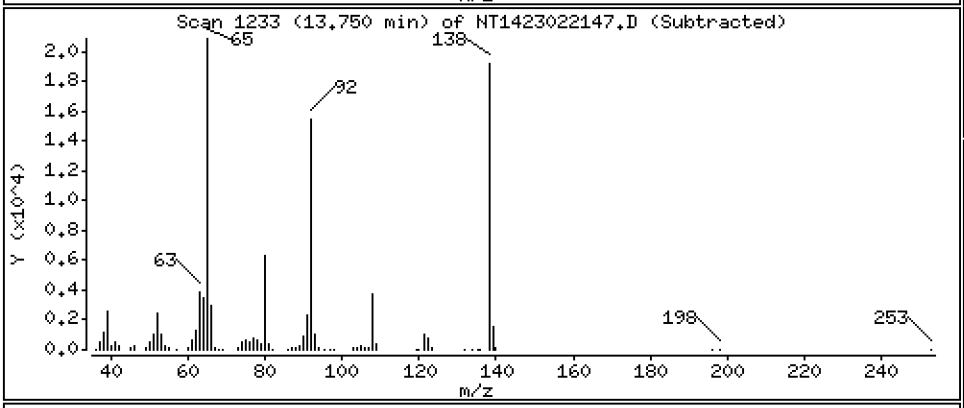
Column phase: ZB-5msi

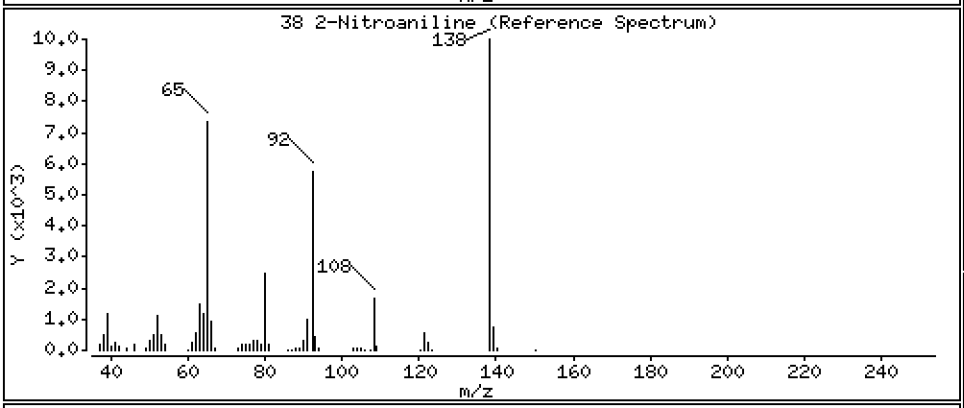
Column diameter: 0.25

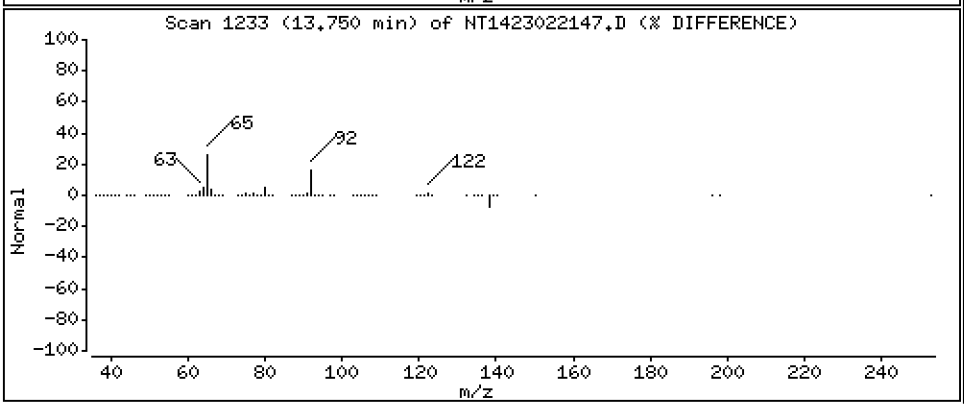
38 2-Nitroaniline

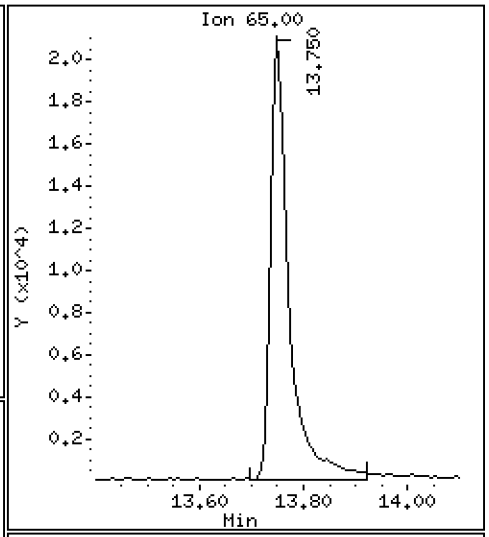
Concentration: 1.240 ug/mL

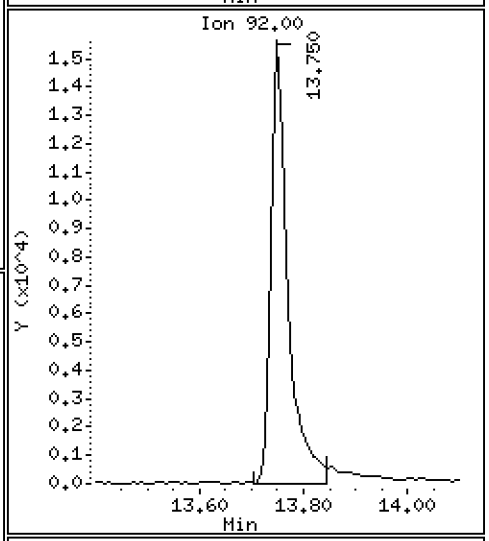


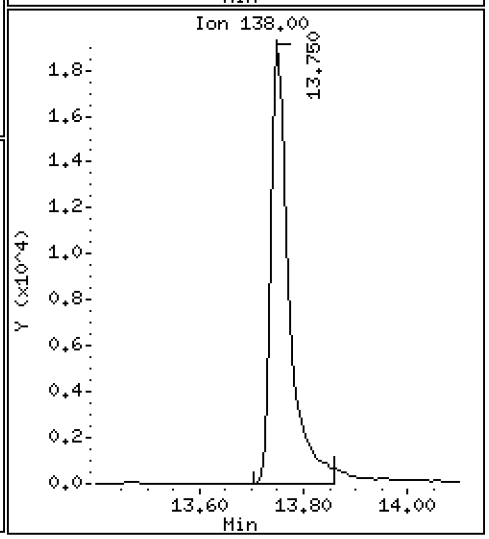












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

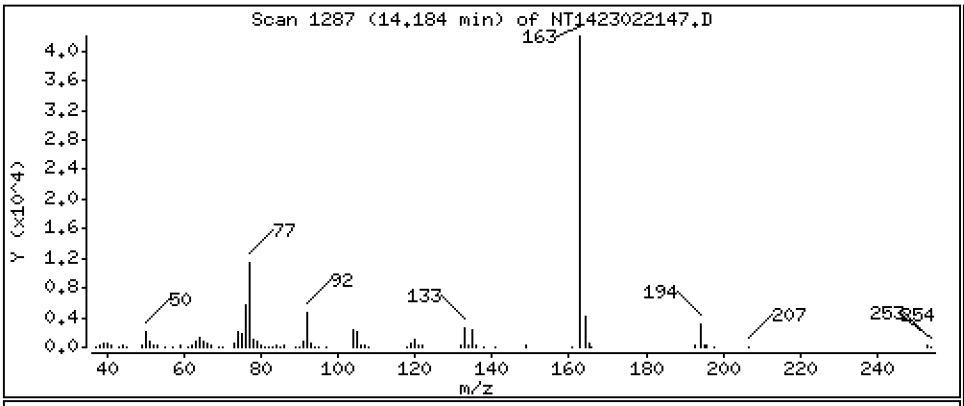
Operator: DSD

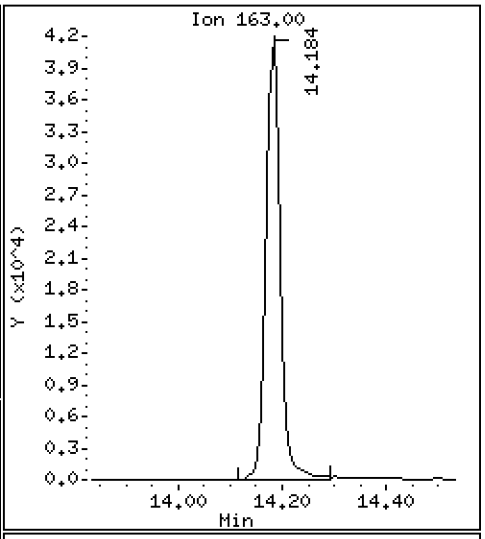
Column phase: ZB-5msi

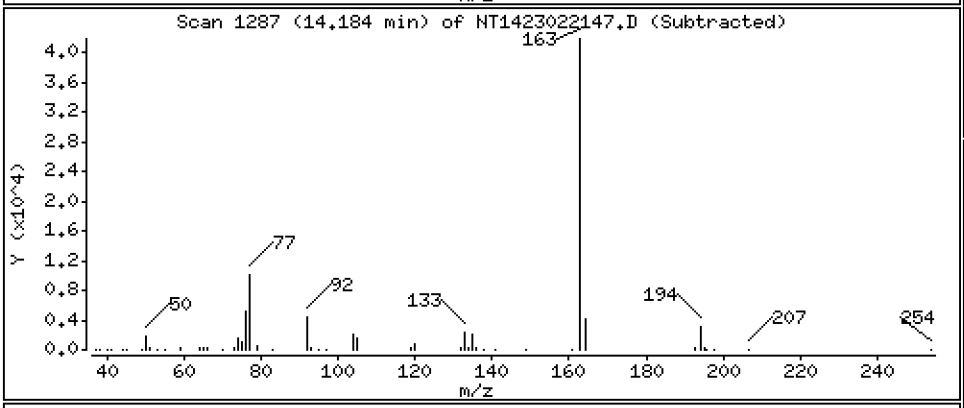
Column diameter: 0.25

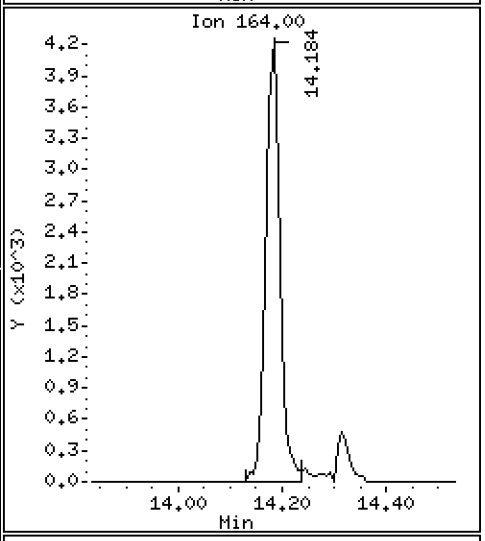
39 Dimethylphthalate

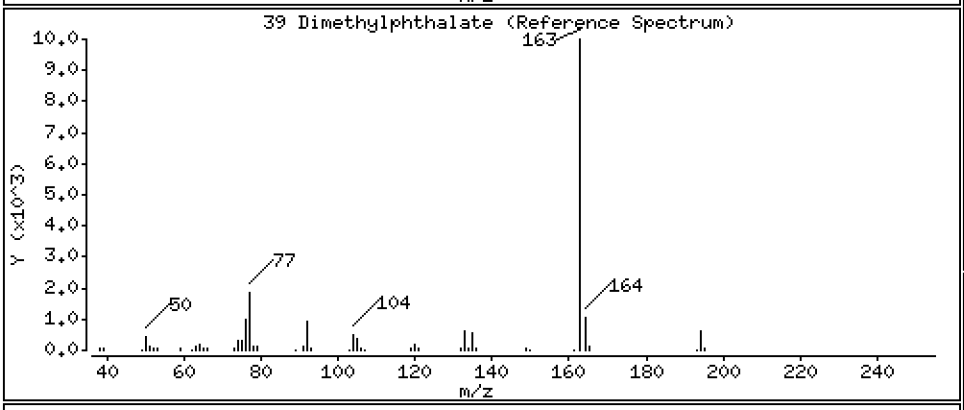
Concentration: 0.5509 ug/mL

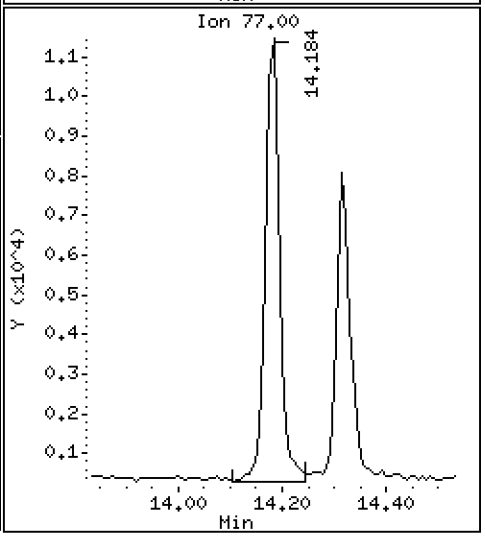


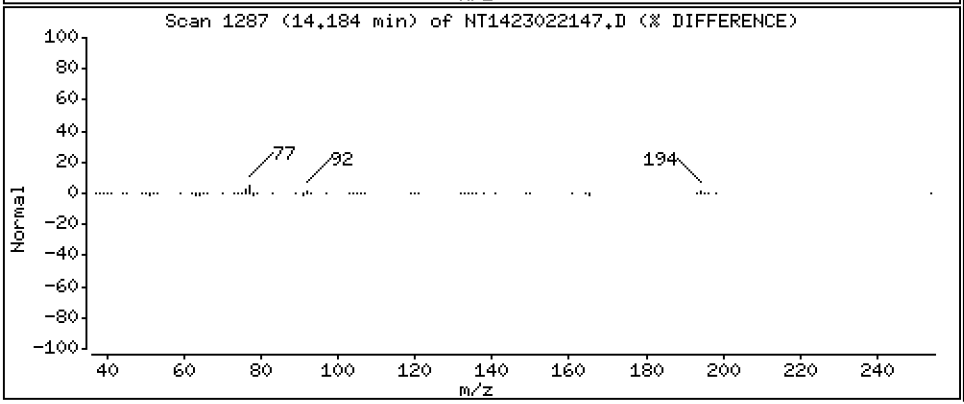












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

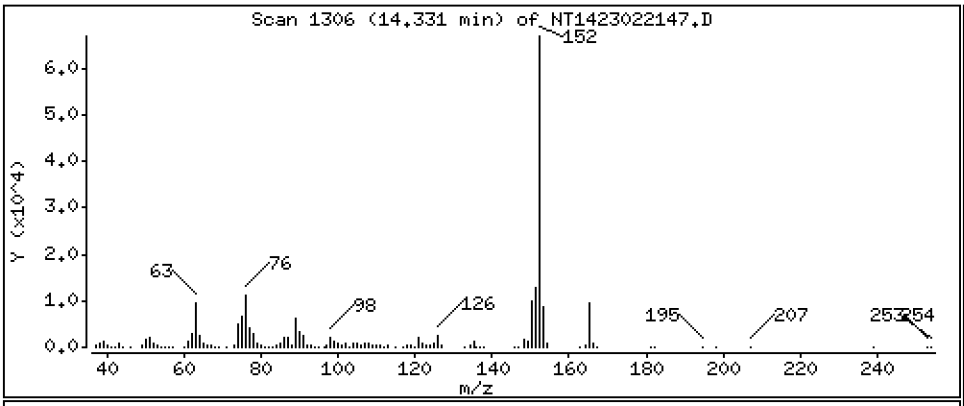
Operator: DSD

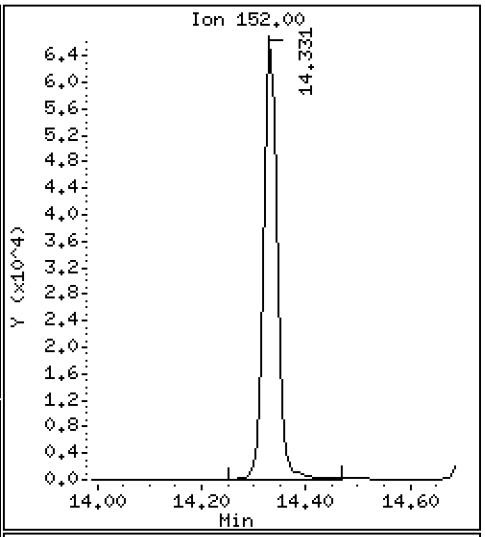
Column phase: ZB-5msi

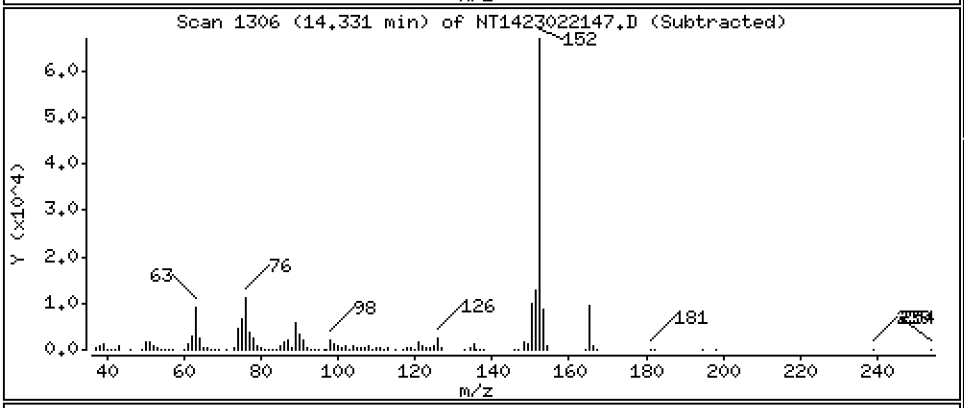
Column diameter: 0.25

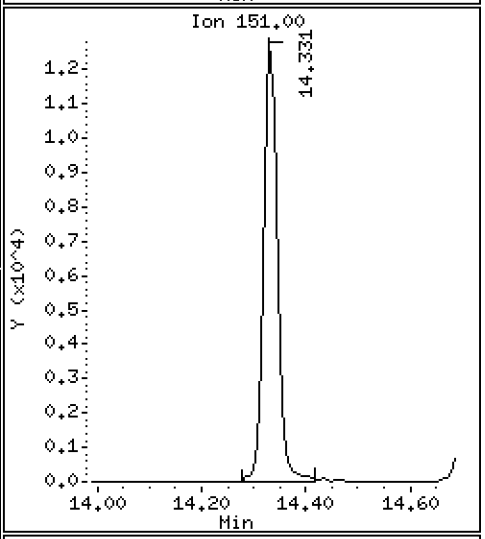
40 Acenaphthylene

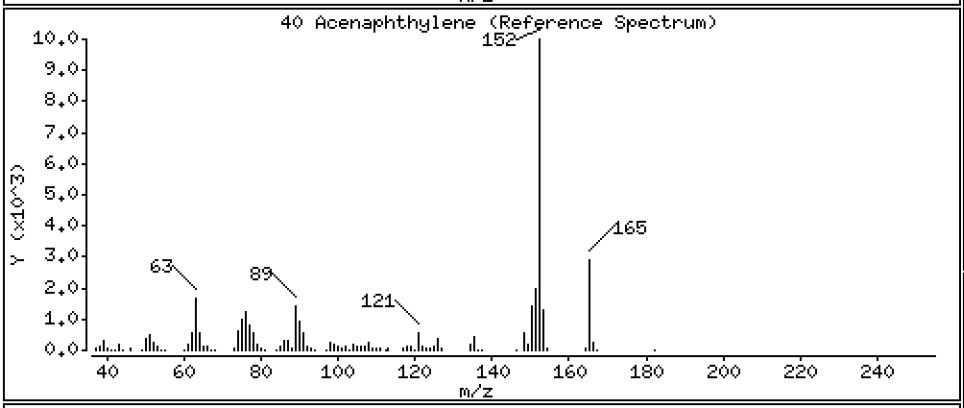
Concentration: 0.5736 ug/mL

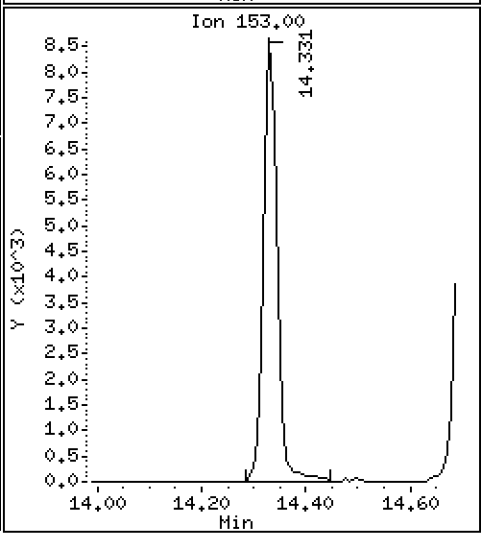


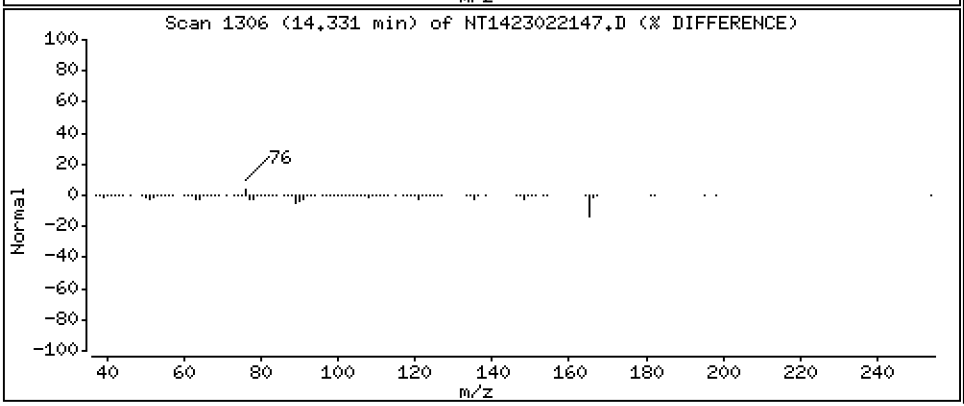












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

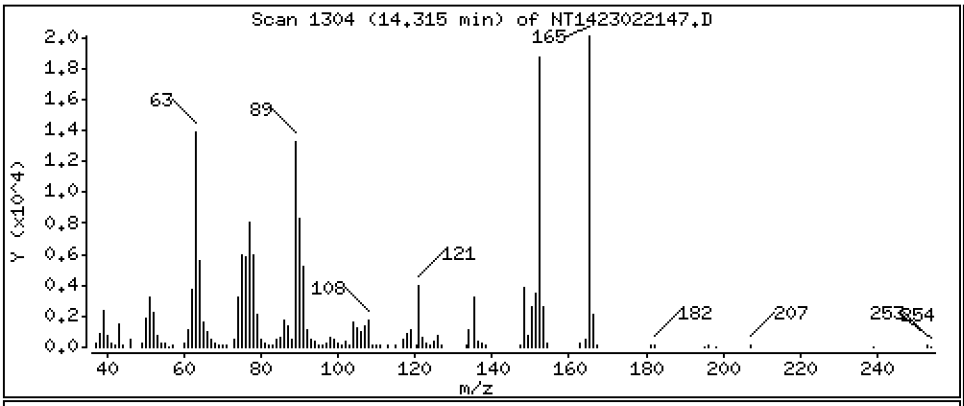
Operator: DSD

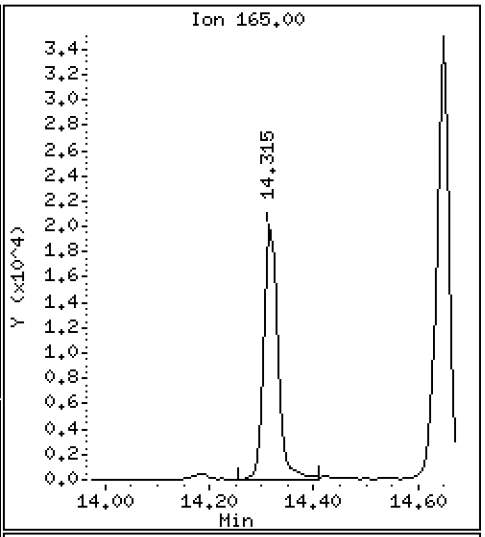
Column phase: ZB-5msi

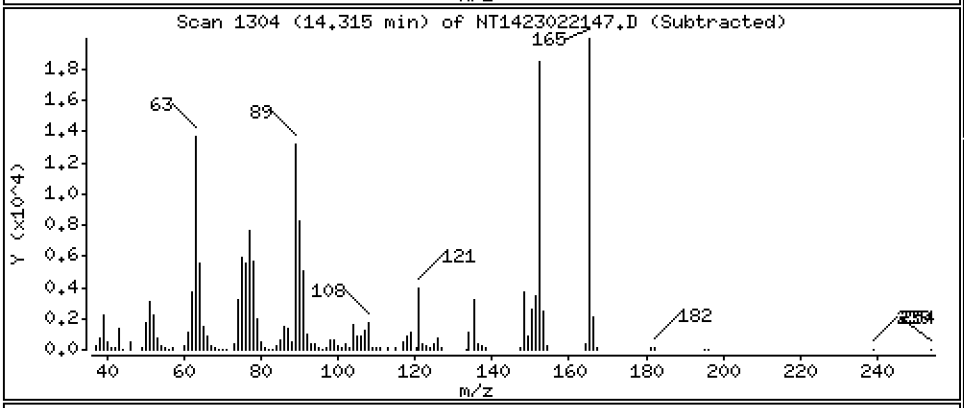
Column diameter: 0.25

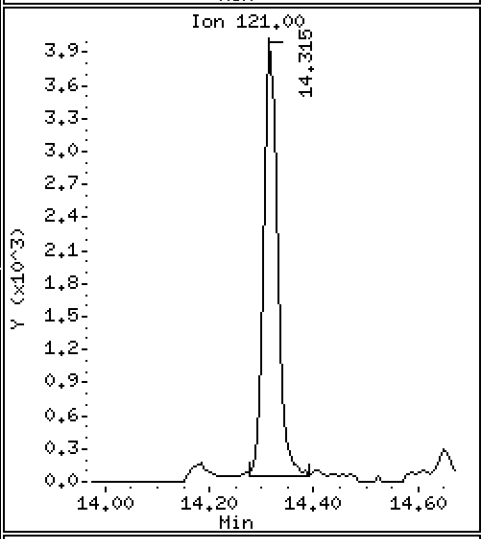
41 2,6-Dinitrotoluene

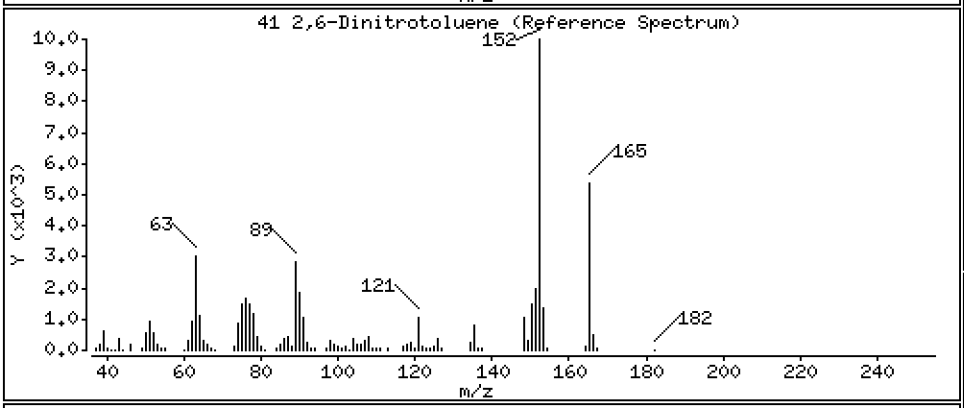
Concentration: 1.106 ug/mL

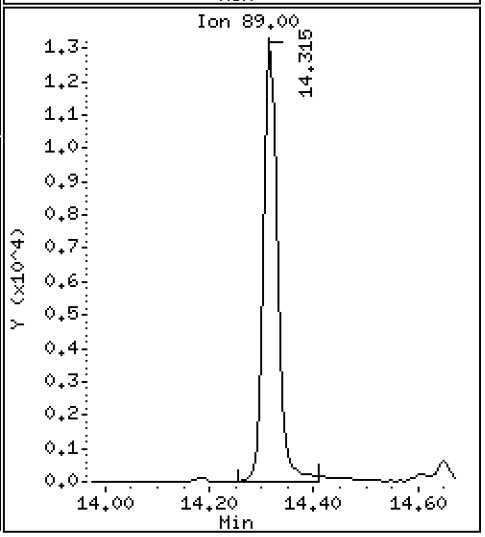


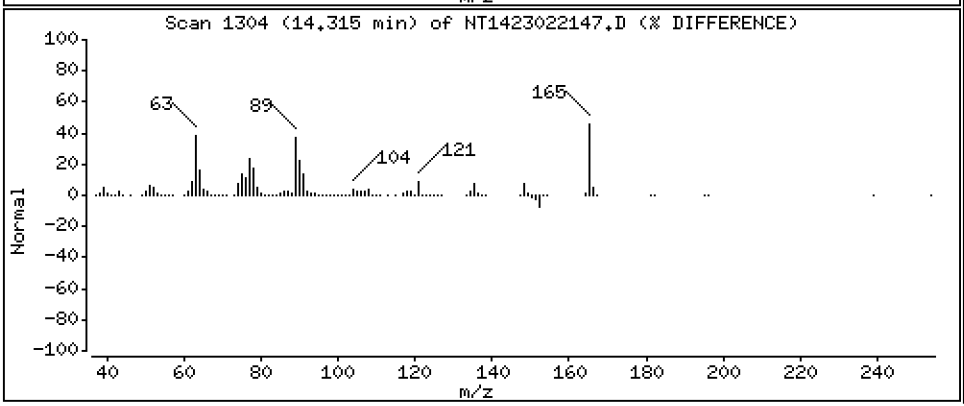












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

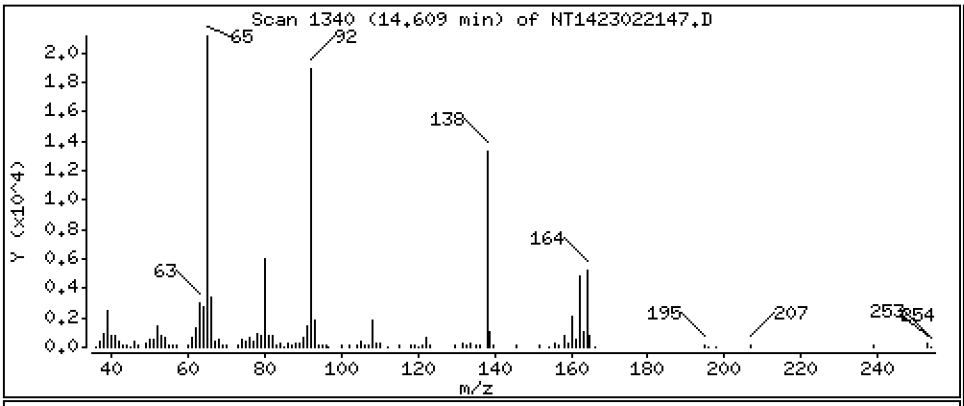
Operator: DSD

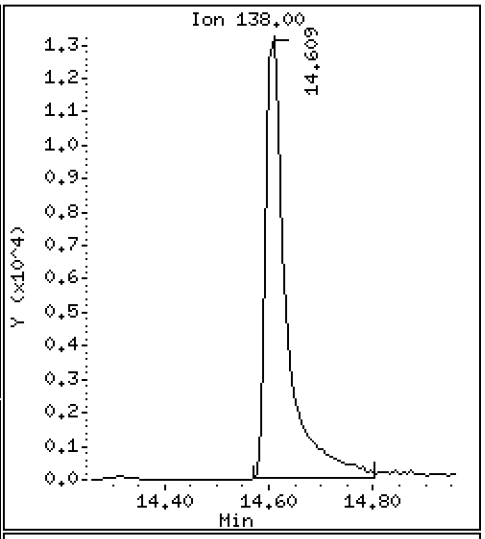
Column phase: ZB-5msi

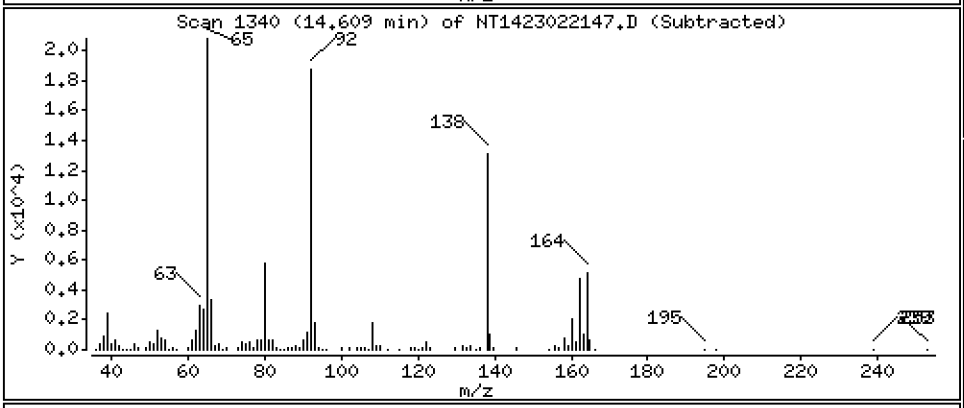
Column diameter: 0.25

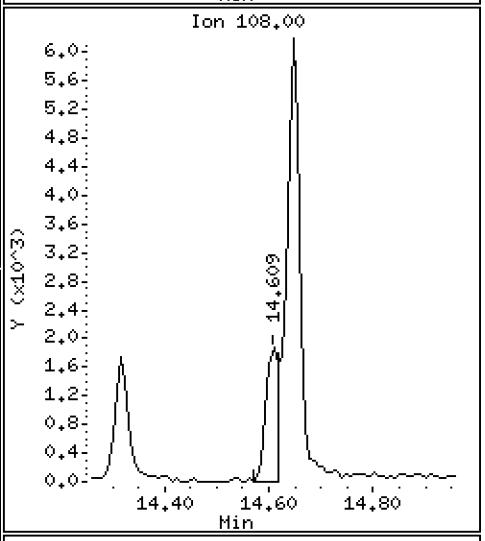
43 3-Nitroaniline

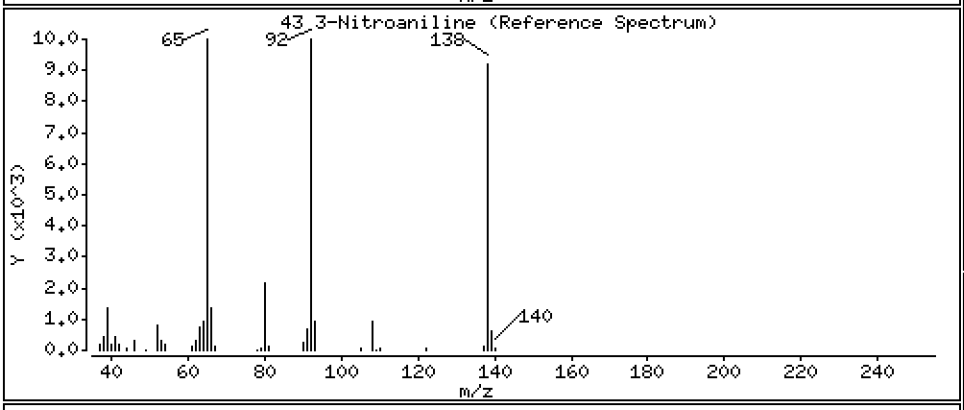
Concentration: 1.034 ug/mL

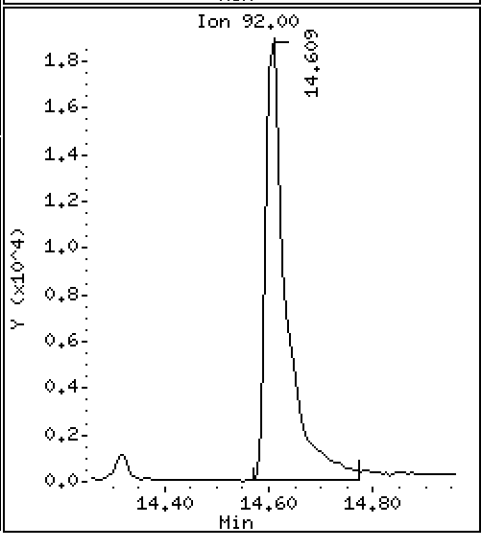


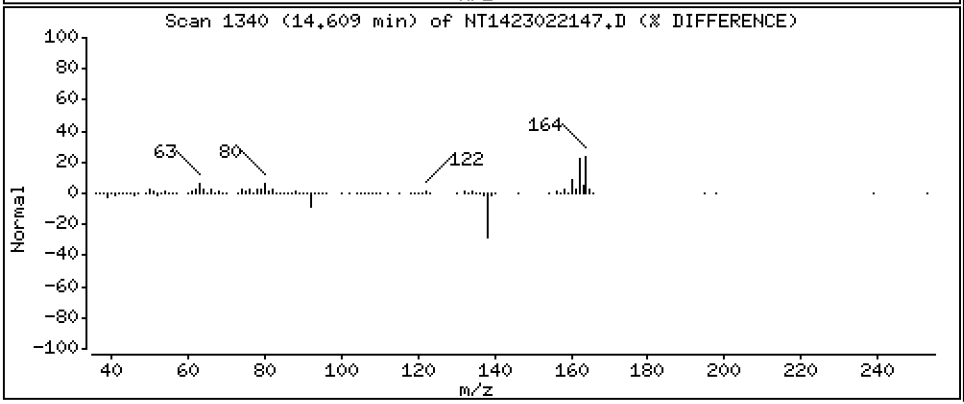












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

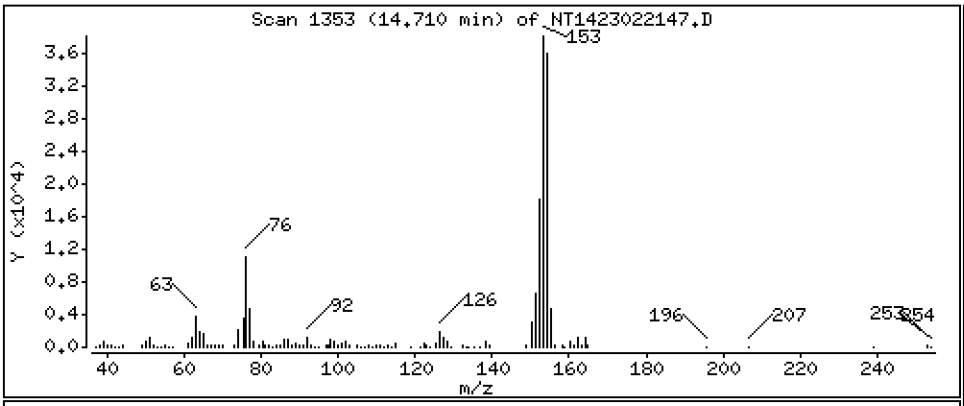
Operator: DSD

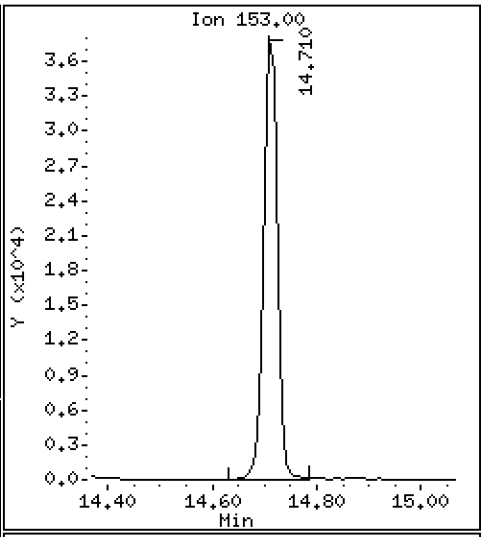
Column phase: ZB-5msi

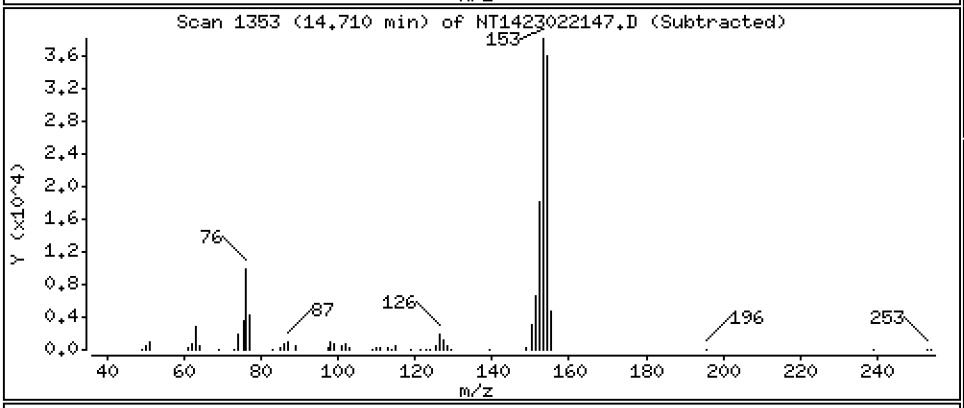
Column diameter: 0.25

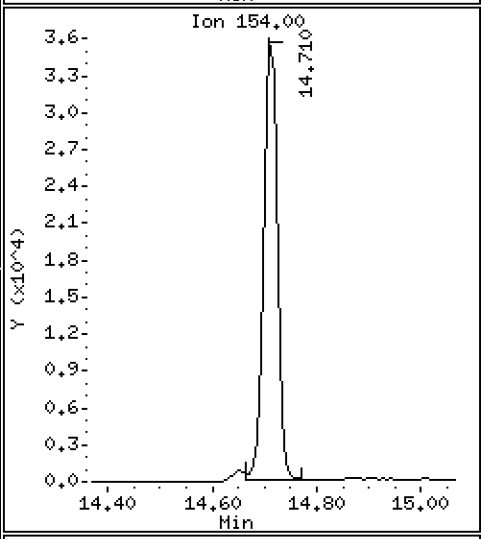
44 Acenaphthene

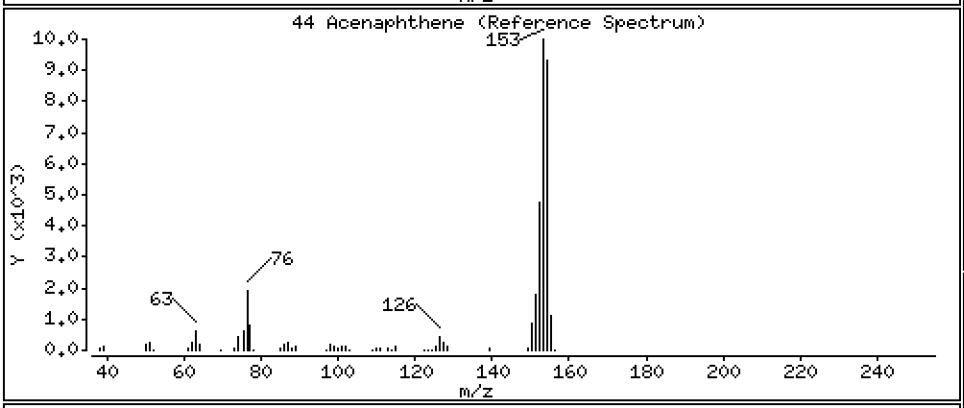
Concentration: 0.5494 ug/mL

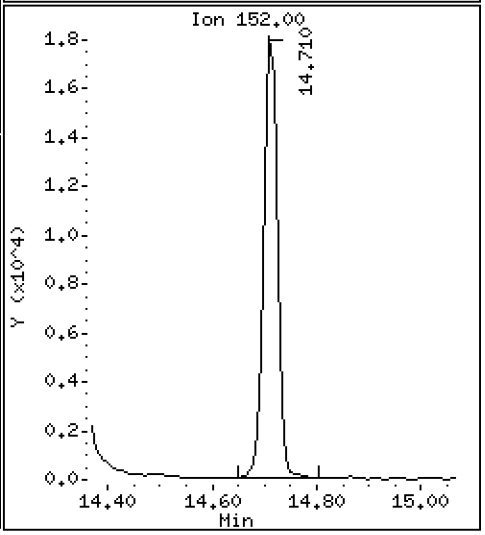


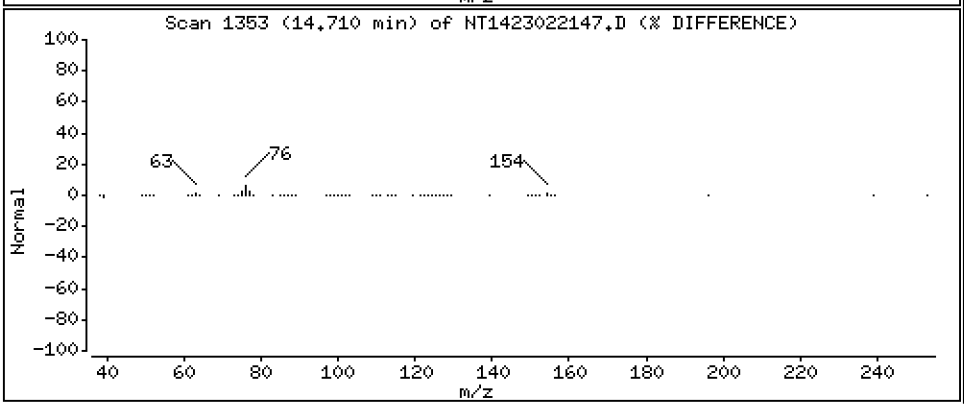












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

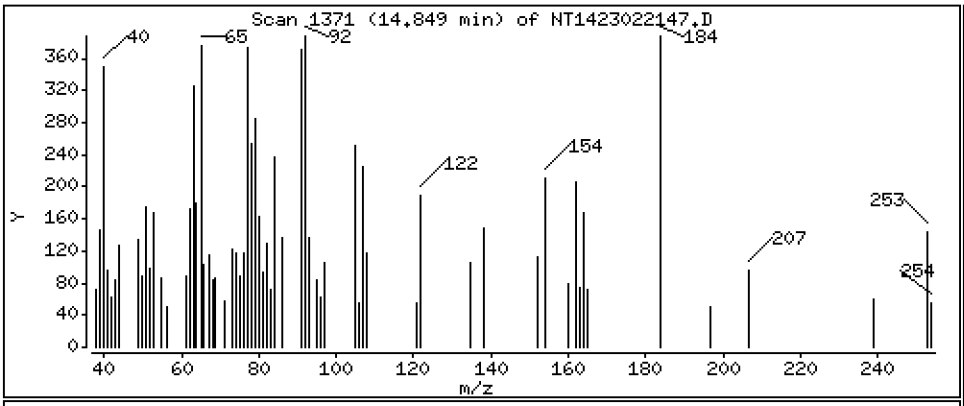
Operator: DSD

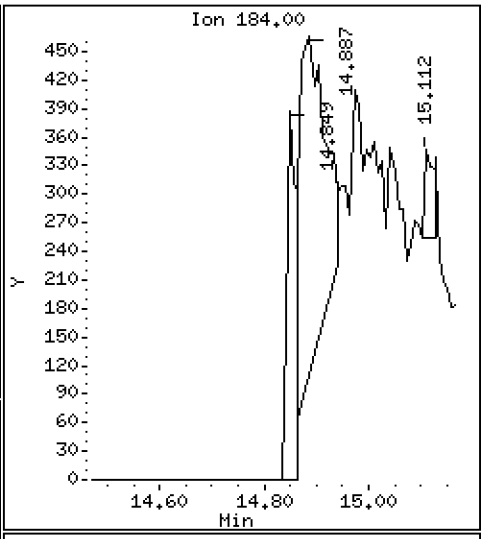
Column phase: ZB-5msi

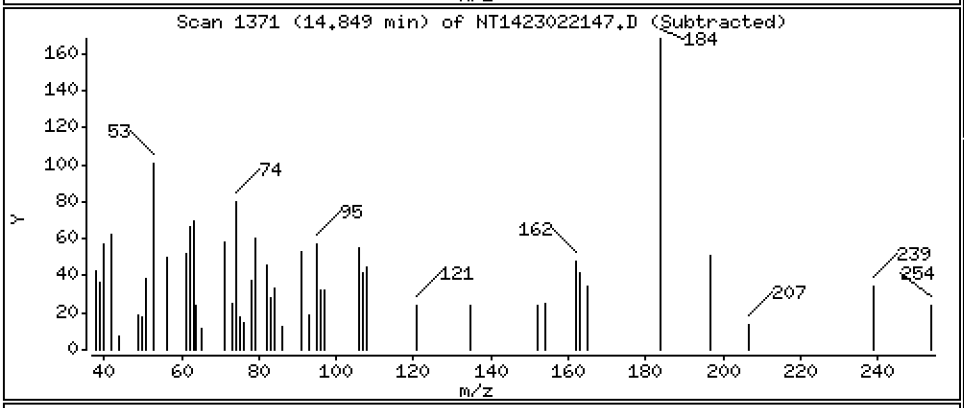
Column diameter: 0.25

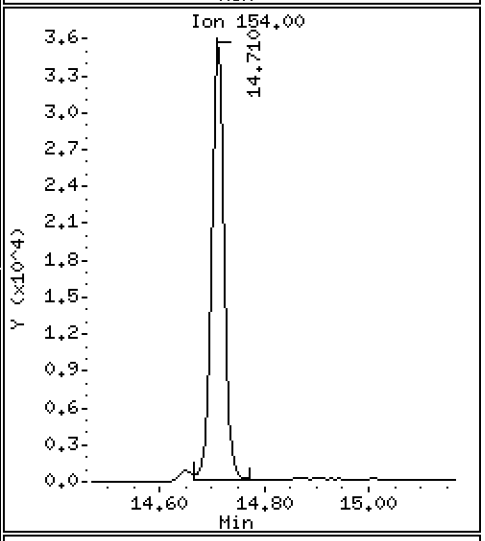
45 2,4-Dinitrophenol

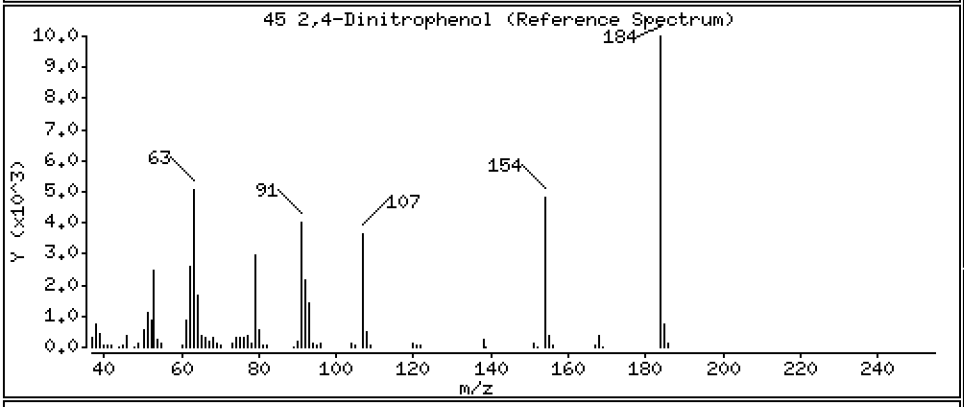
Concentration: 0.02527 ug/mL

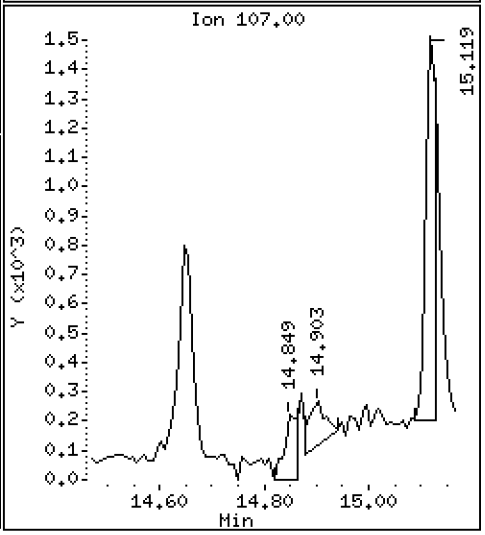


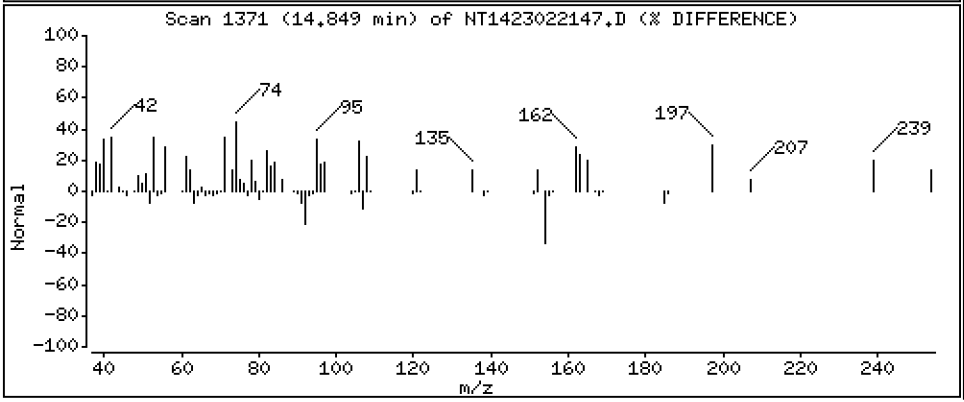












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

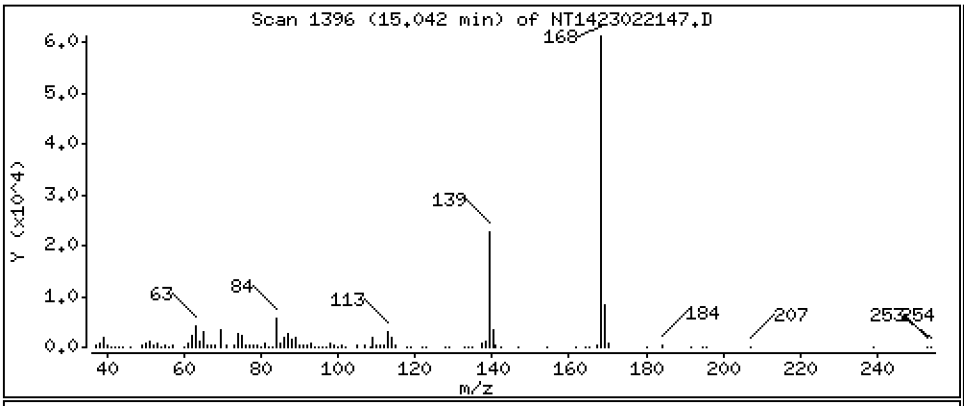
Operator: DSD

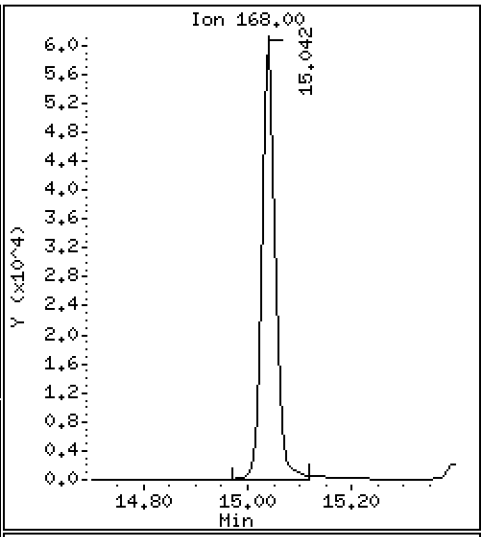
Column phase: ZB-5msi

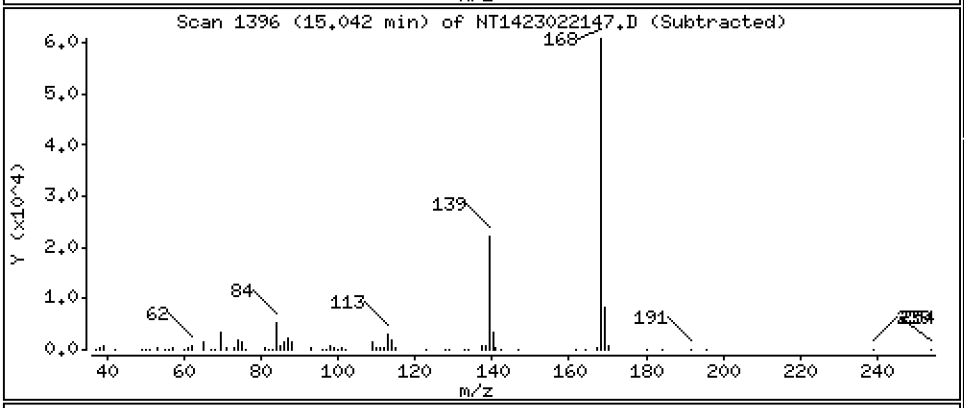
Column diameter: 0.25

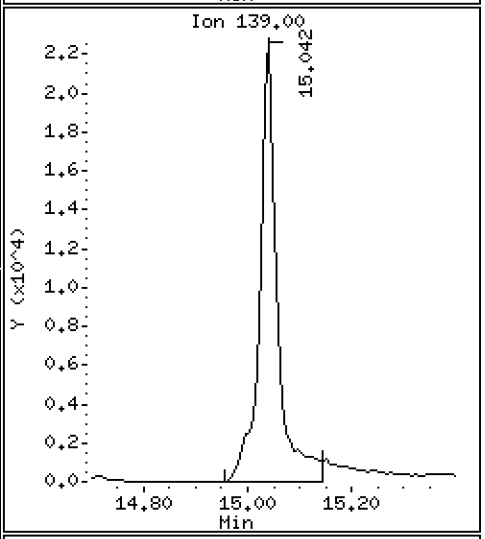
46 Dibenzofuran

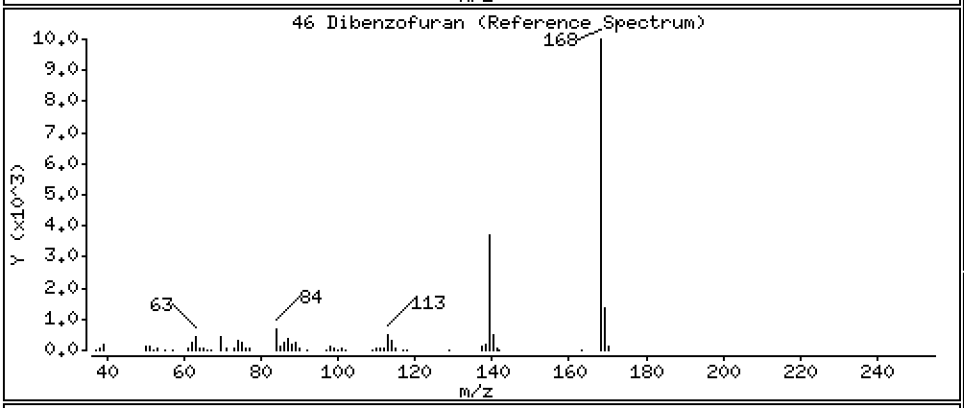
Concentration: 0.5406 ug/mL

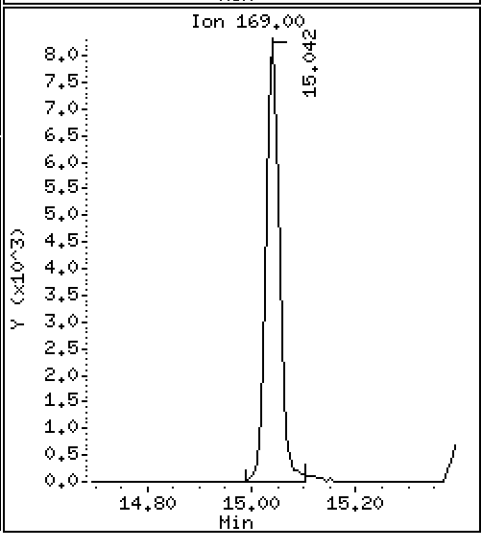


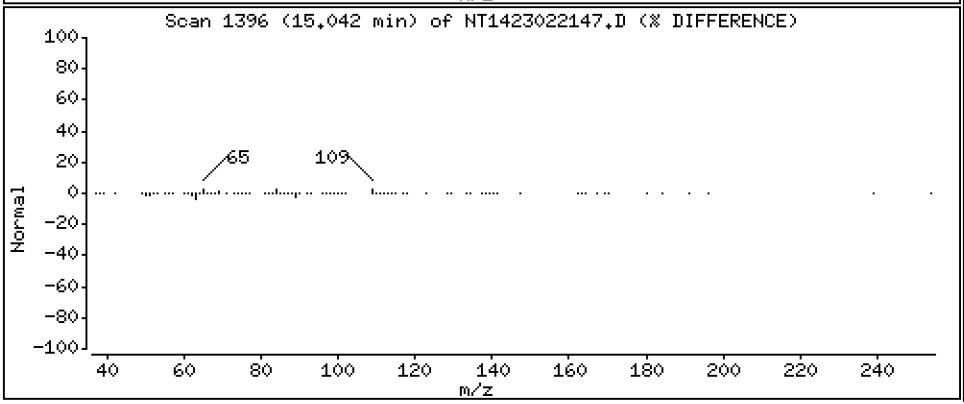












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

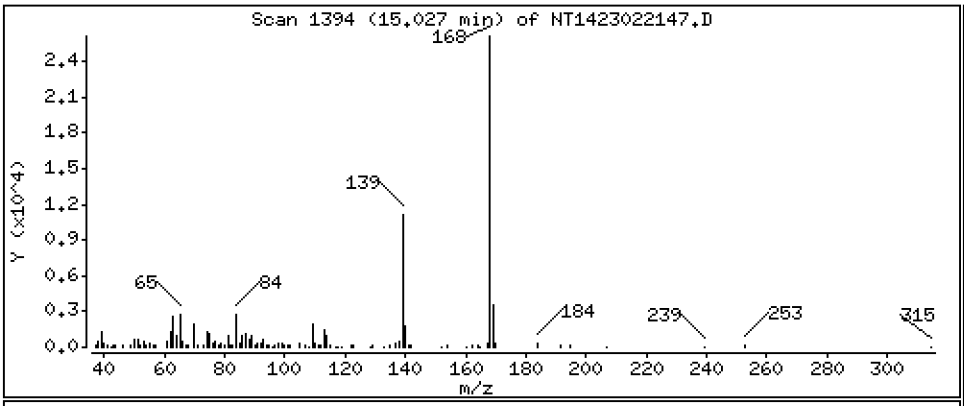
Operator: DSD

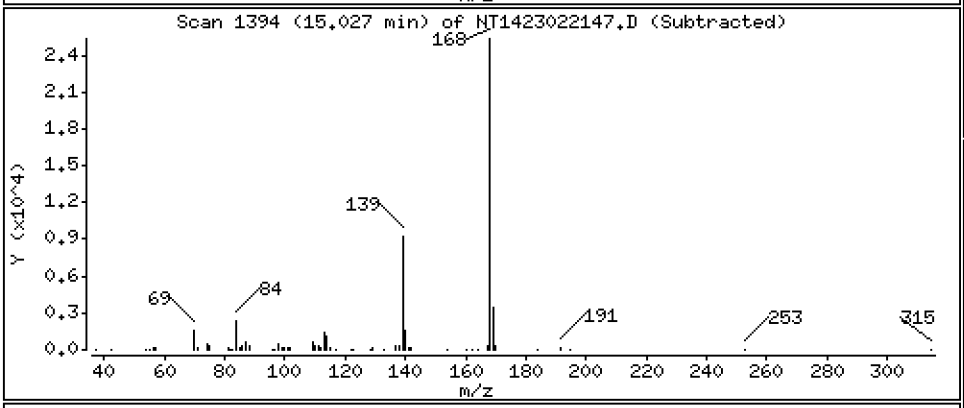
Column phase: ZB-5msi

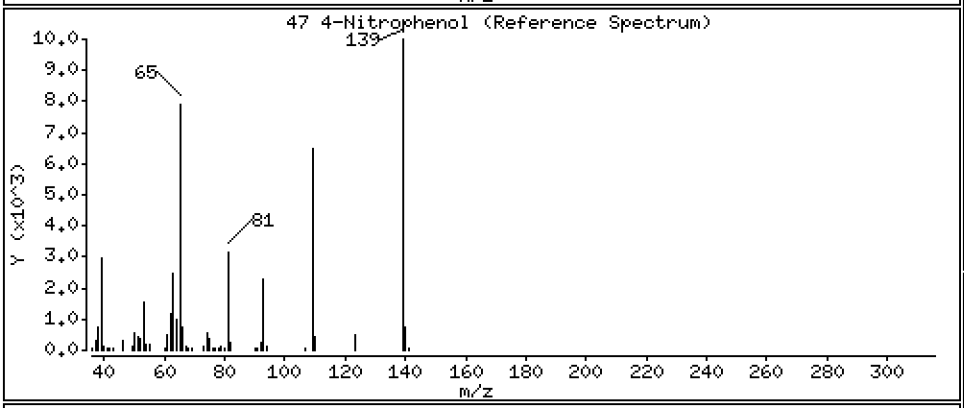
Column diameter: 0.25

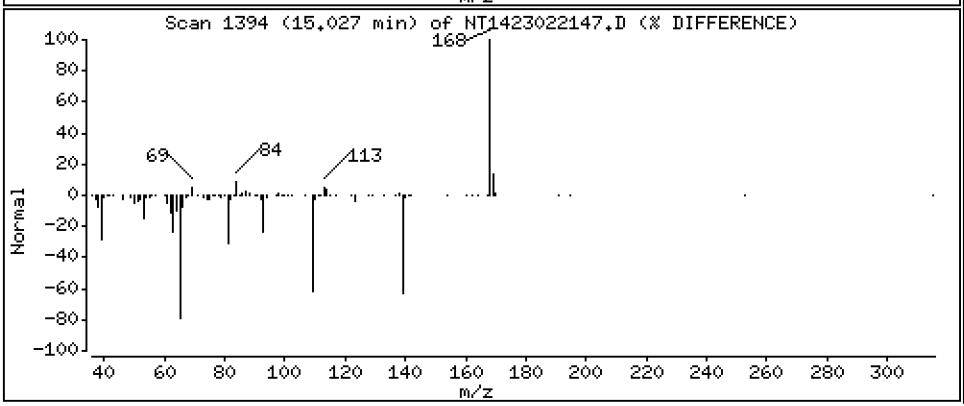
47 4-Nitrophenol

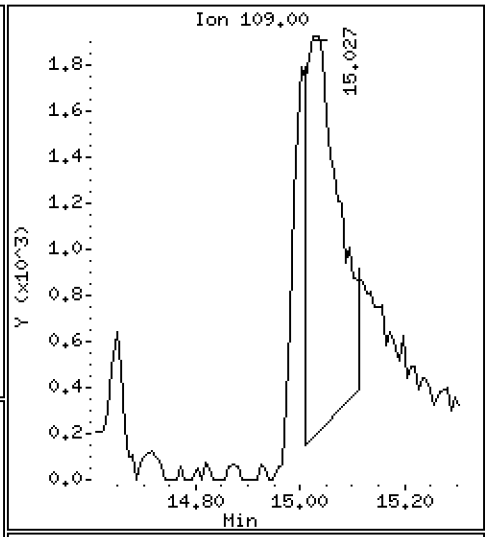
Concentration: 0.3691 ug/mL

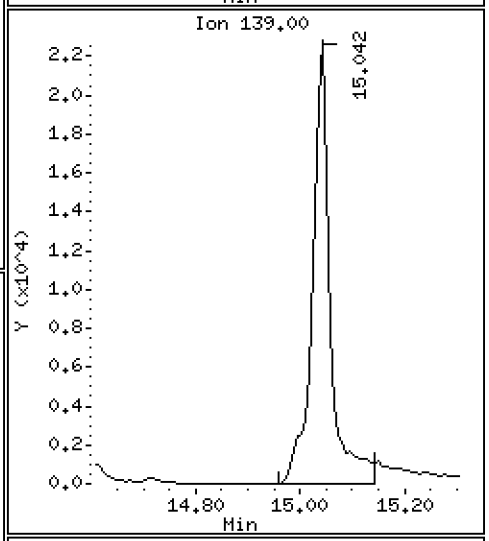


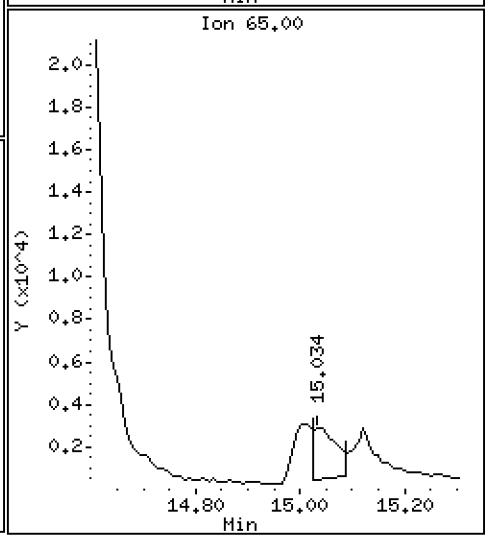












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

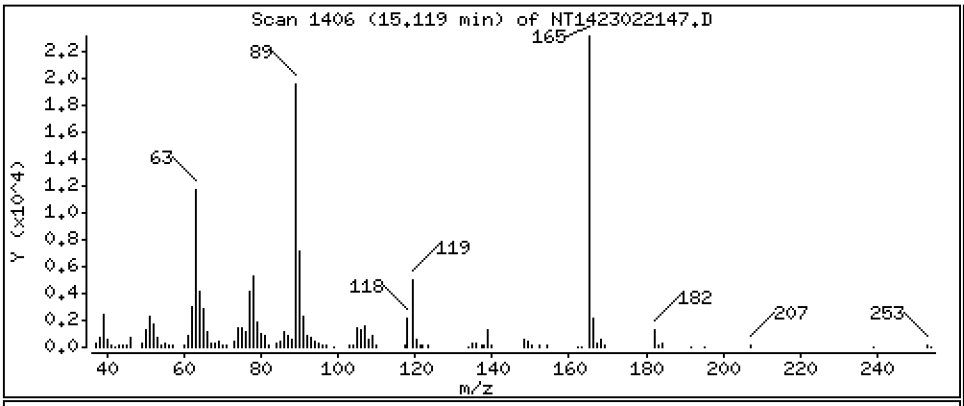
Operator: DSD

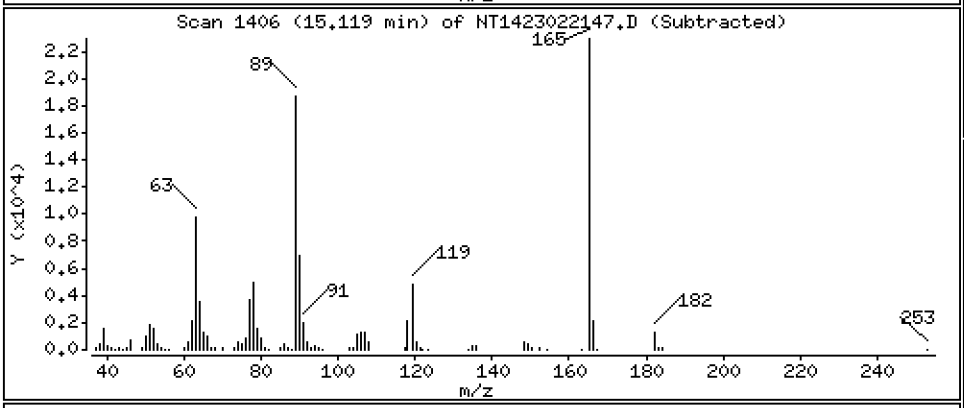
Column phase: ZB-5msi

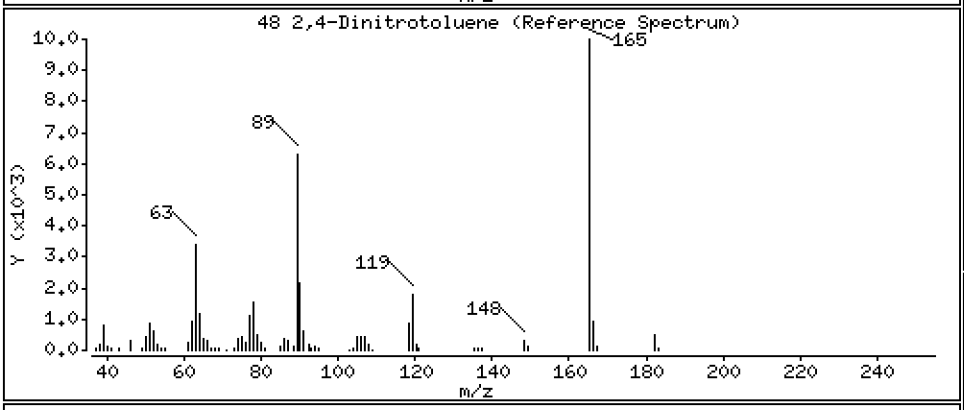
Column diameter: 0.25

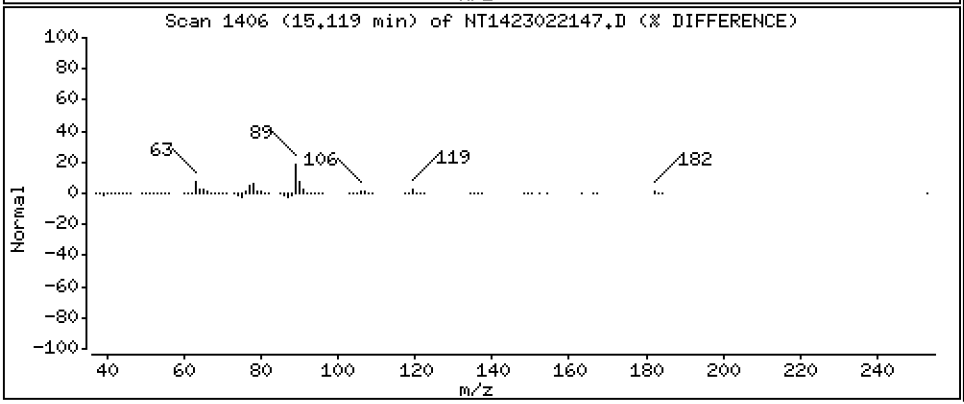
48 2,4-Dinitrotoluene

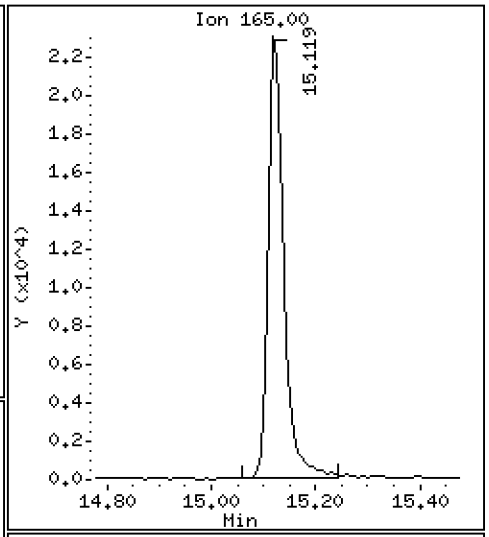
Concentration: 1.012 ug/mL

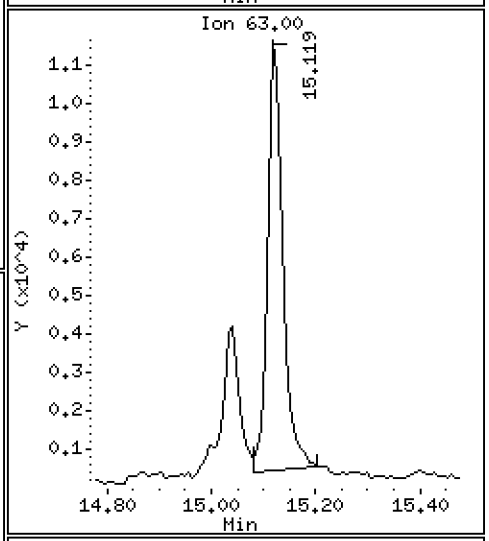


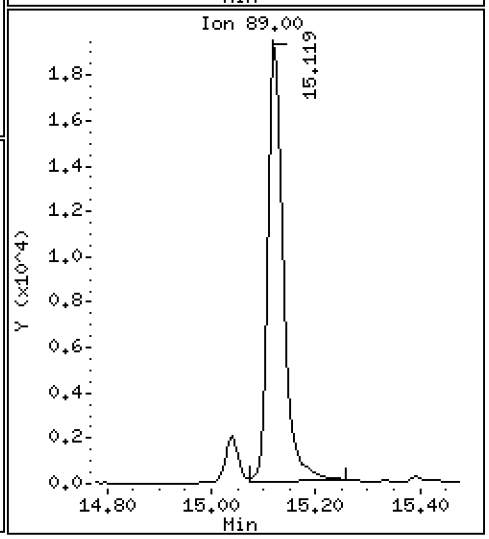












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

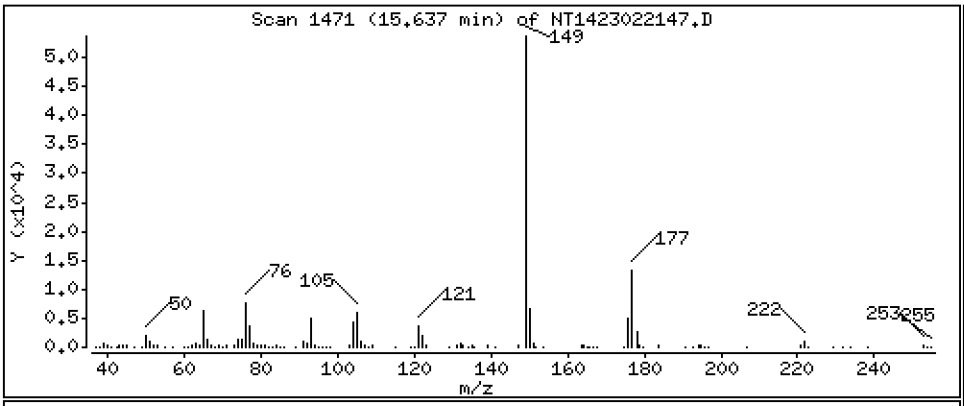
Operator: DSD

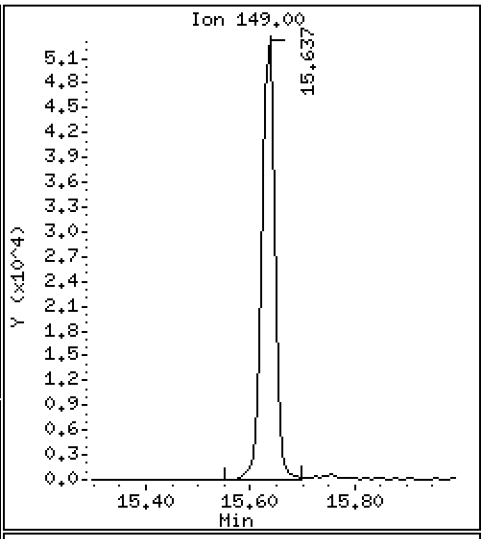
Column phase: ZB-5msi

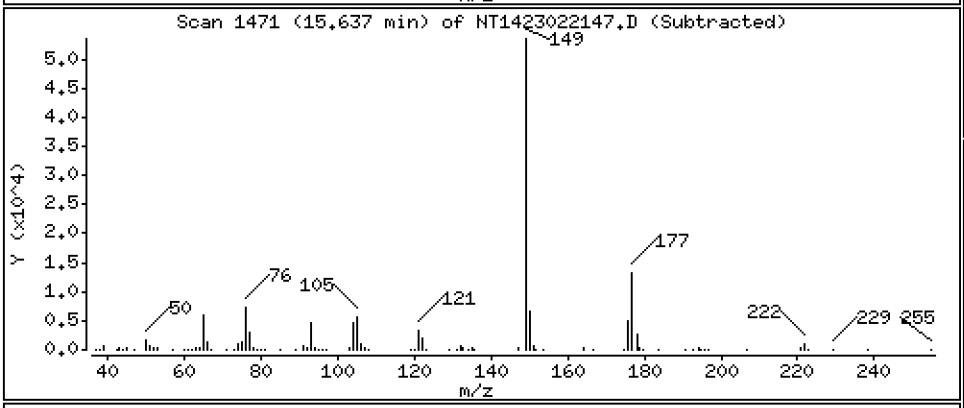
Column diameter: 0.25

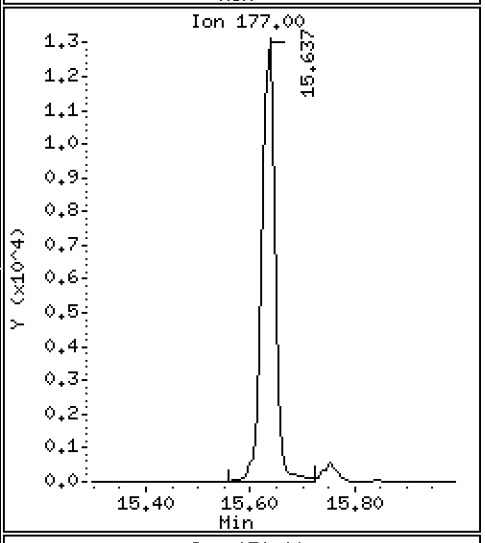
50 Diethylphthalate

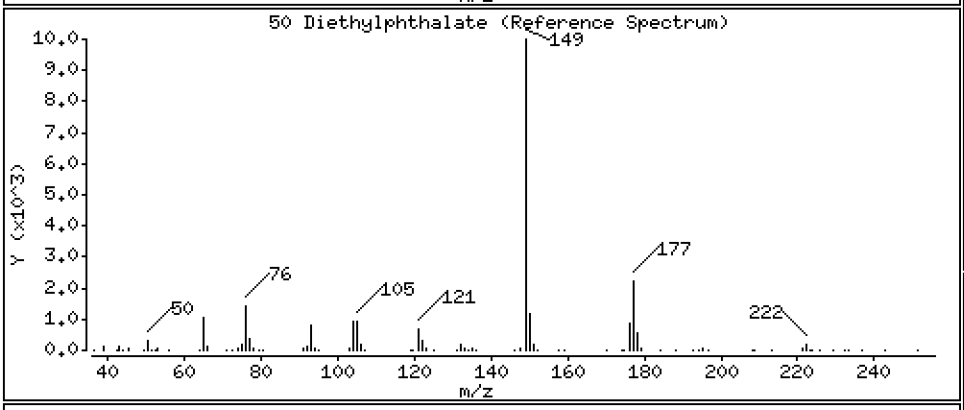
Concentration: 0.5345 ug/mL

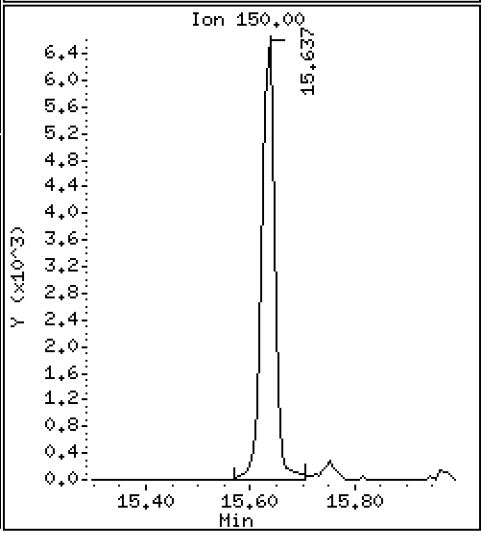


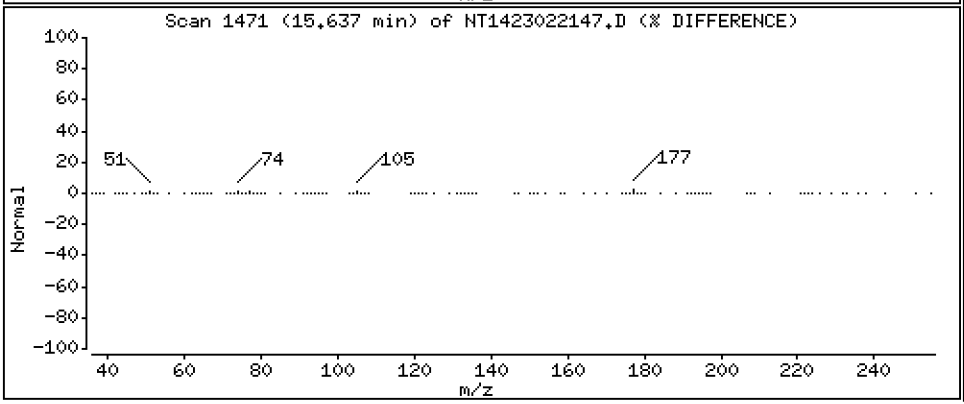












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

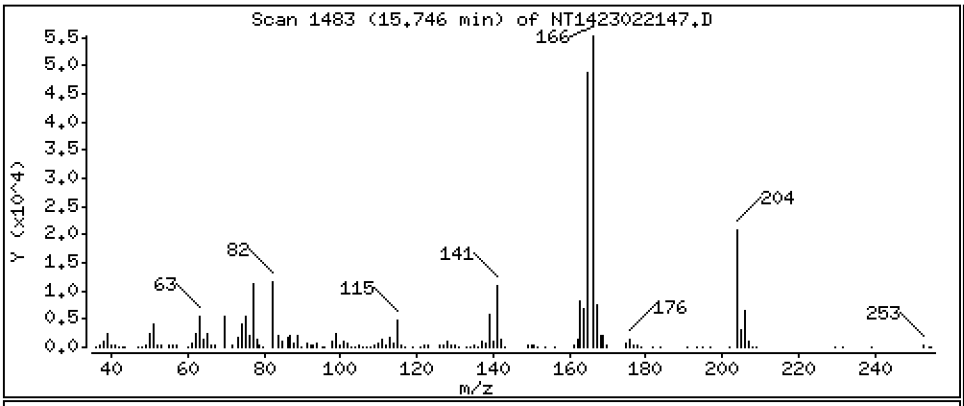
Operator: DSD

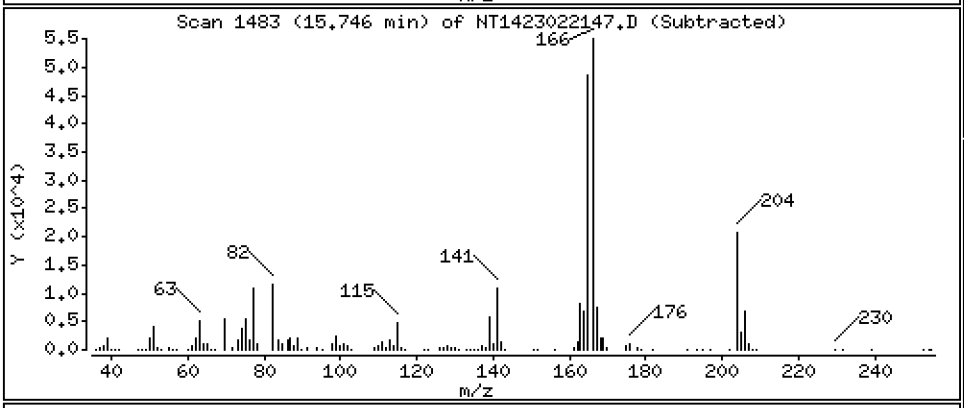
Column phase: ZB-5msi

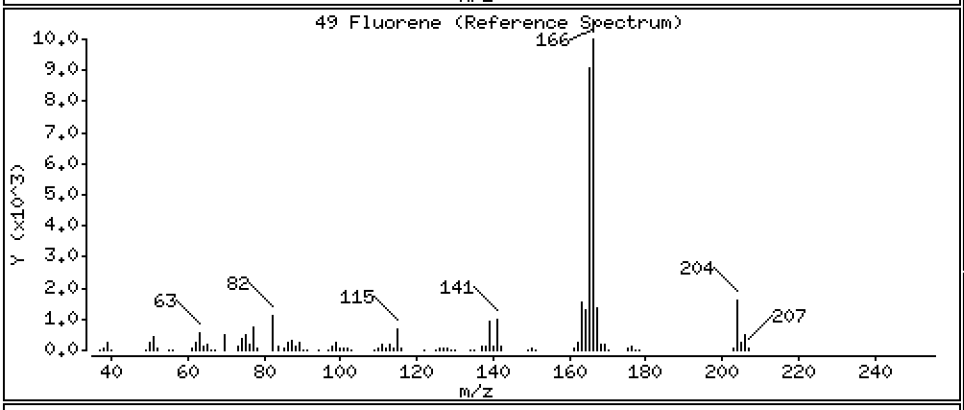
Column diameter: 0.25

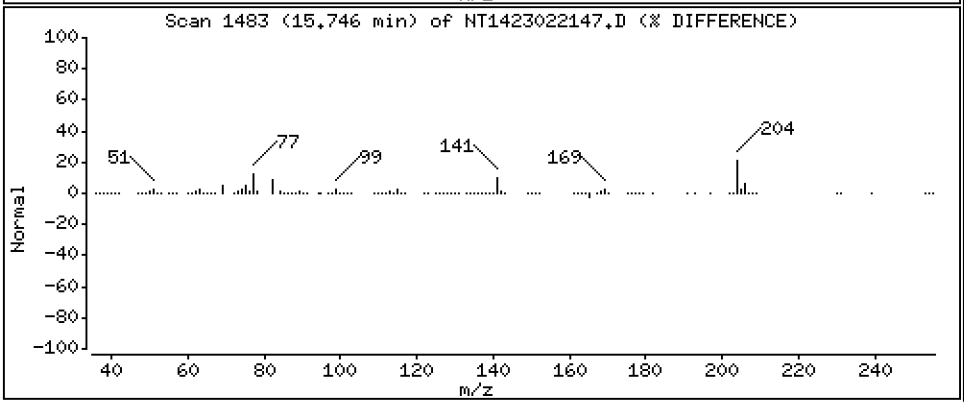
49 Fluorene

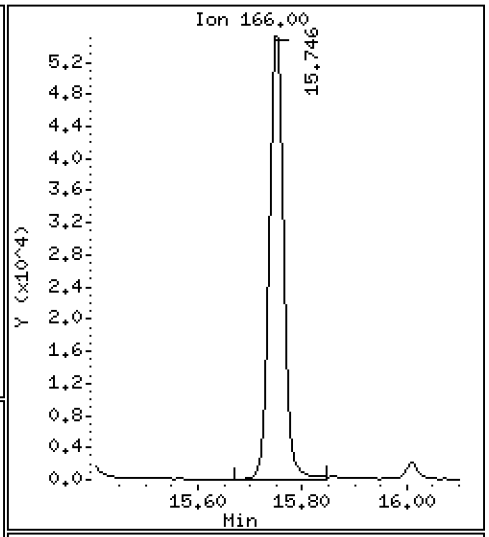
Concentration: 0.5473 ug/mL

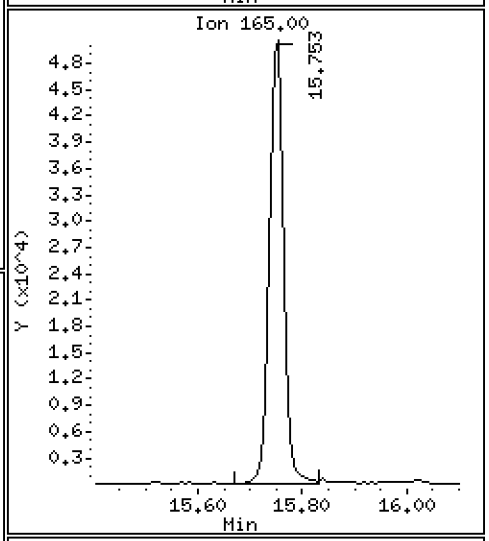


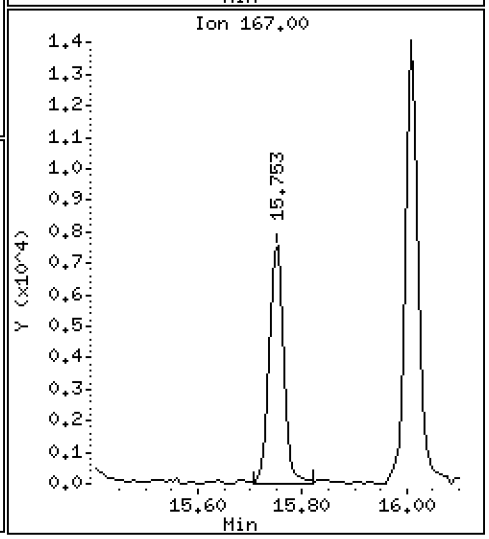












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

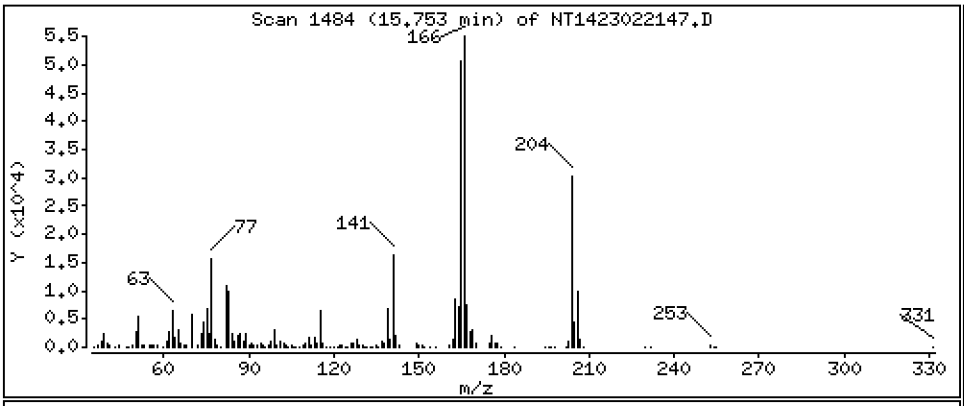
Operator: DSD

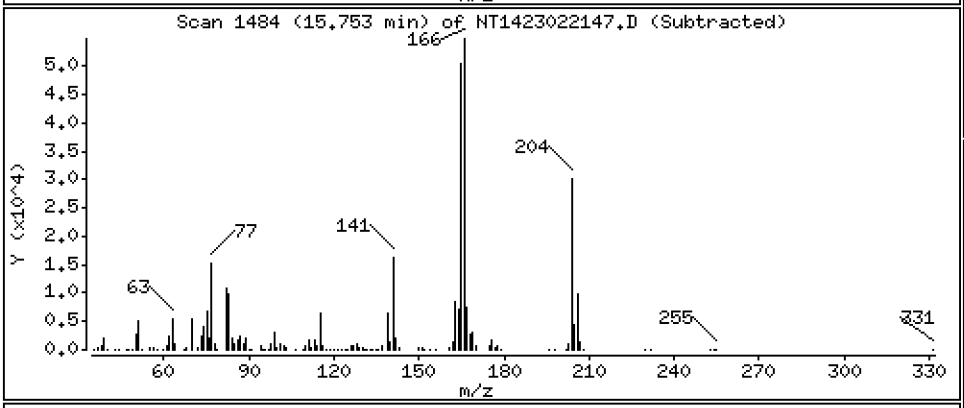
Column phase: ZB-5msi

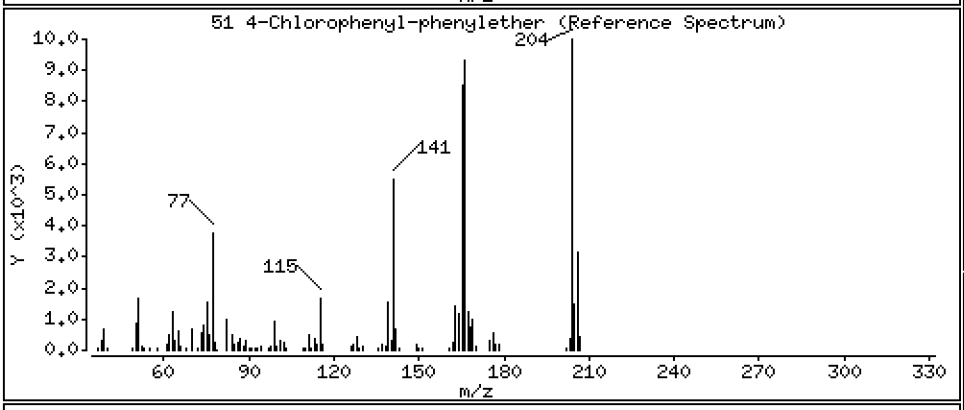
Column diameter: 0.25

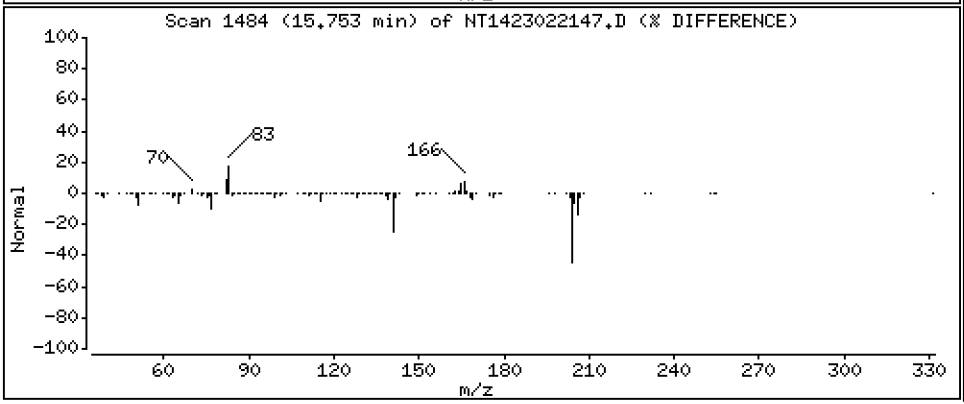
51 4-Chlorophenyl-phenylether

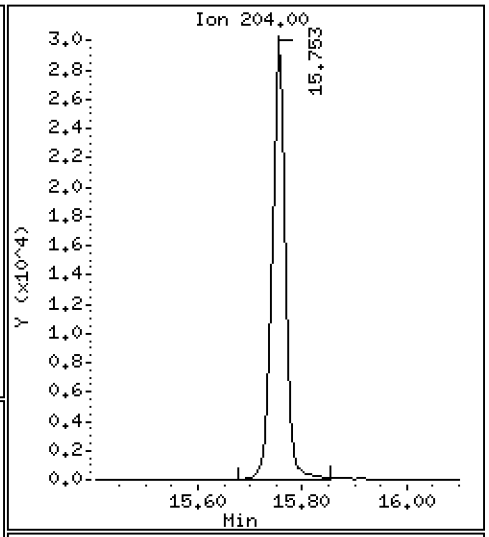
Concentration: 0.5154 ug/mL

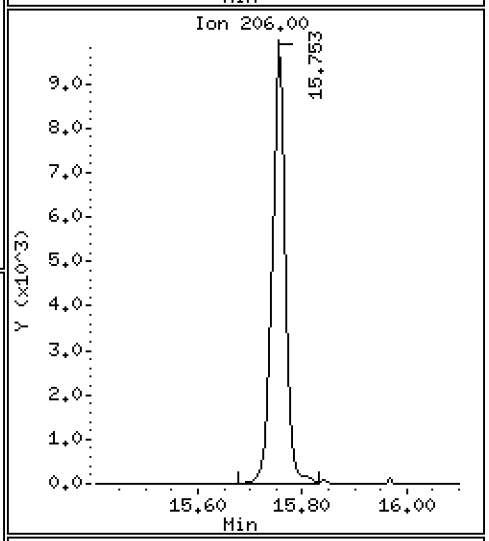


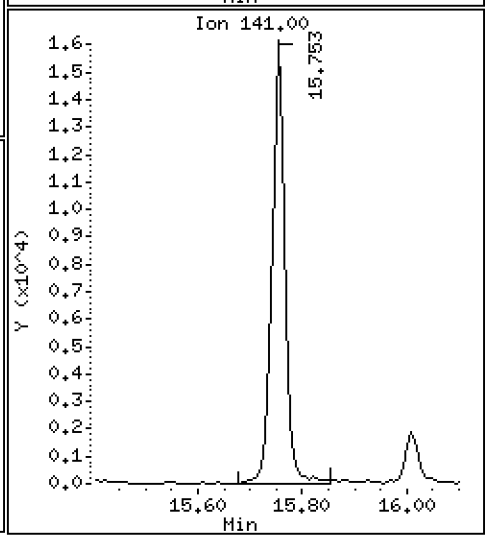












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

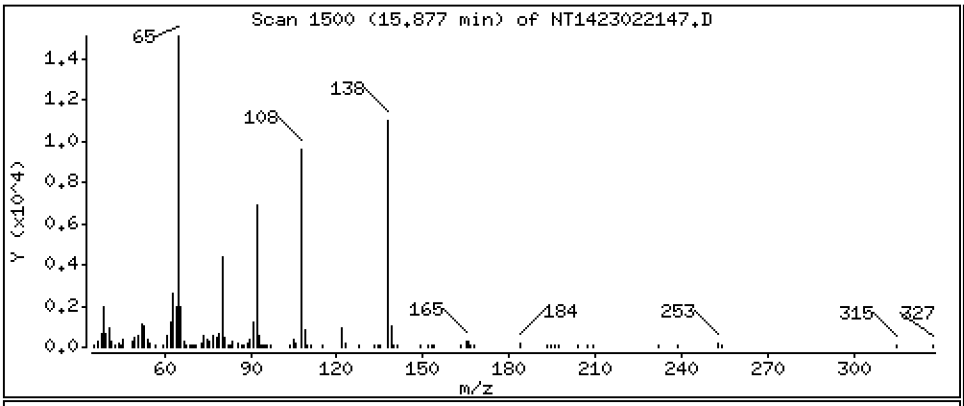
Operator: DSD

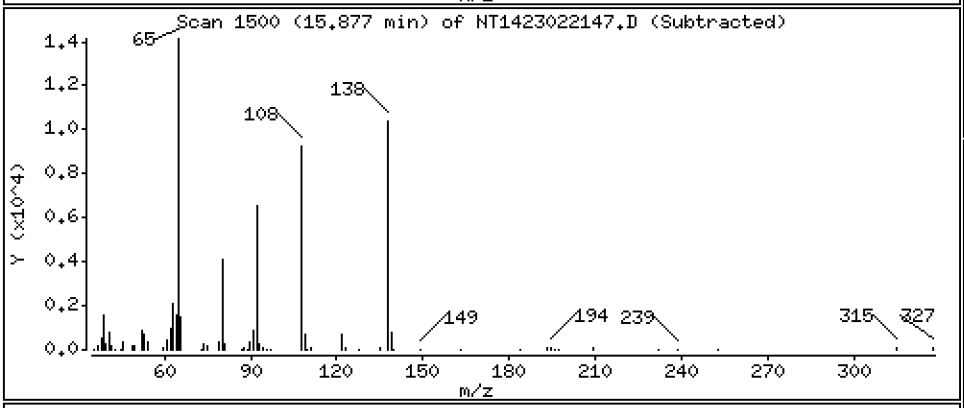
Column phase: ZB-5msi

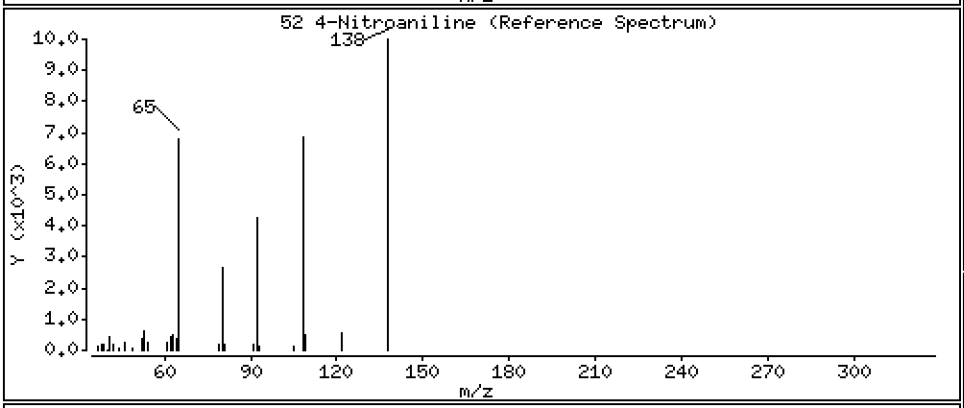
Column diameter: 0.25

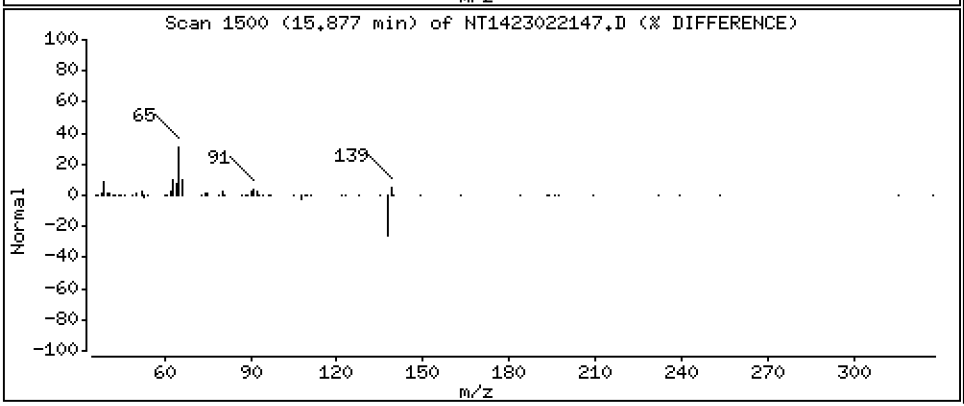
52 4-Nitroaniline

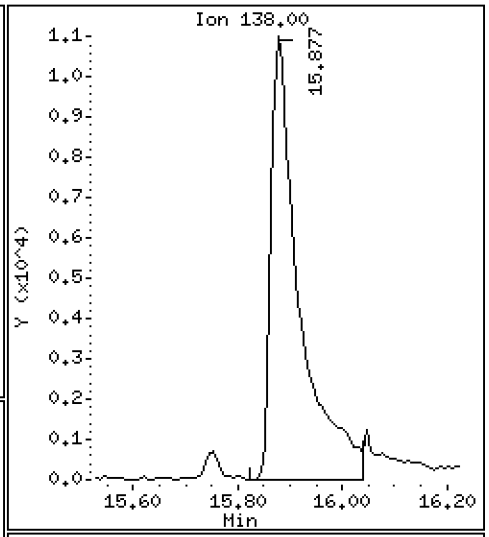
Concentration: 1.033 ug/mL

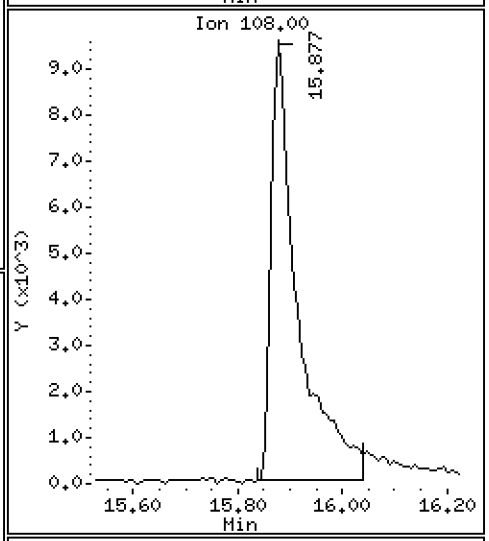


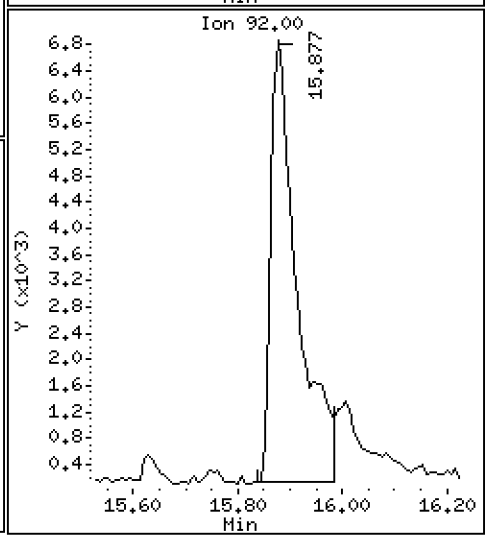












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

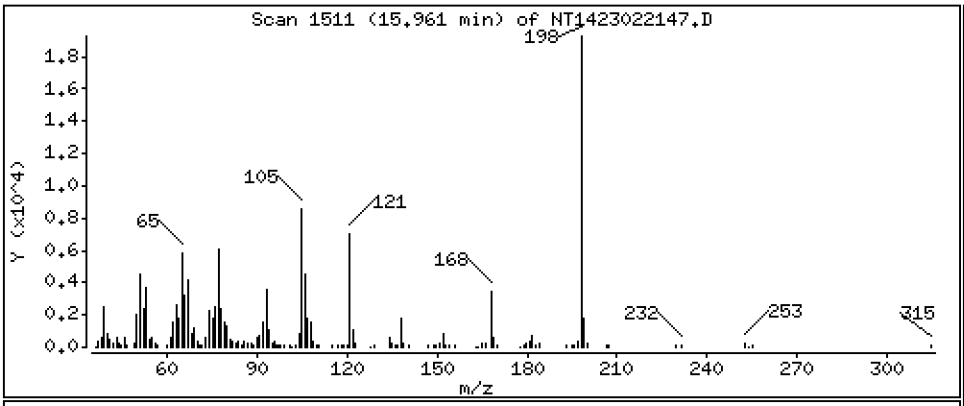
Operator: DSD

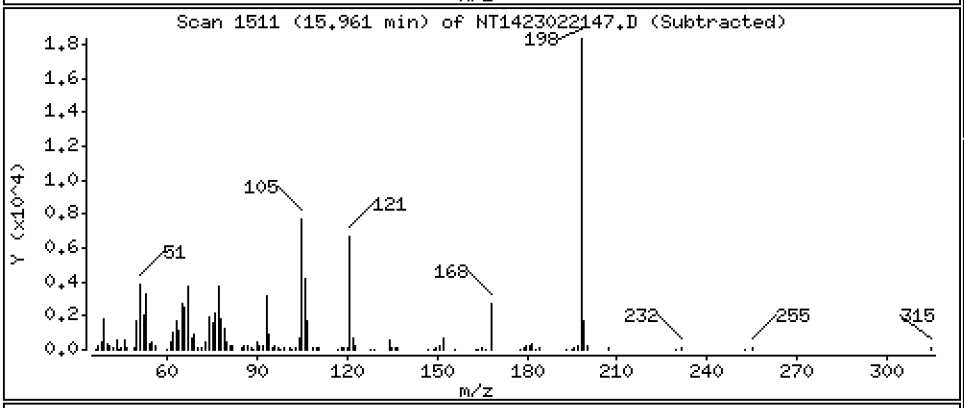
Column phase: ZB-5msi

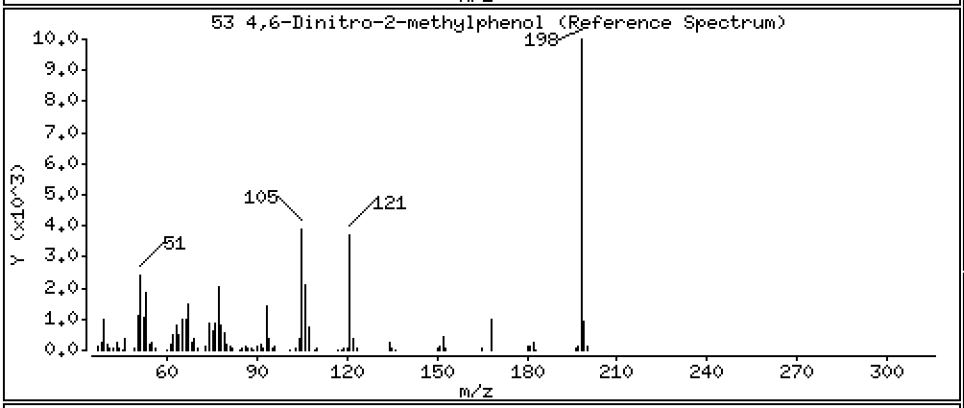
Column diameter: 0.25

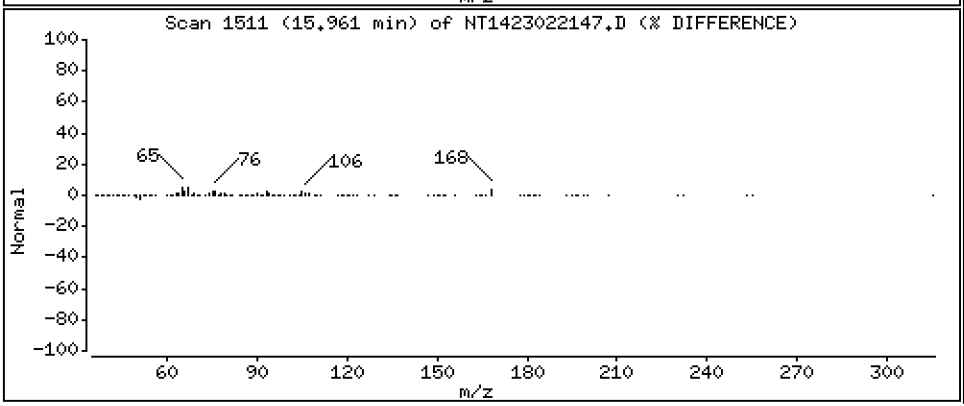
53 4,6-Dinitro-2-methylphenol

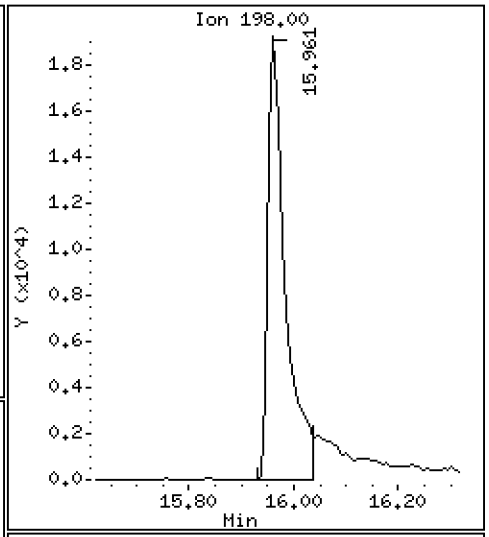
Concentration: 1.327 ug/mL

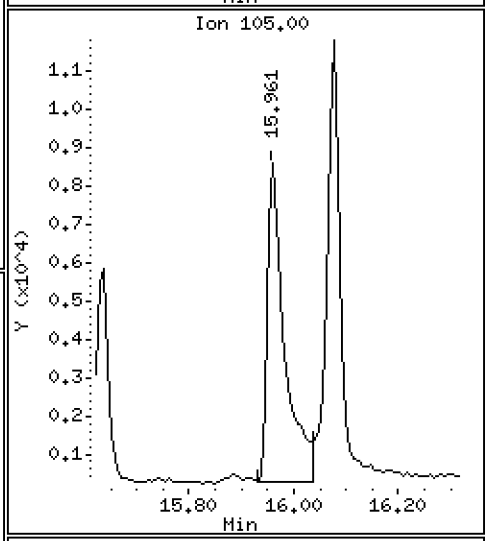


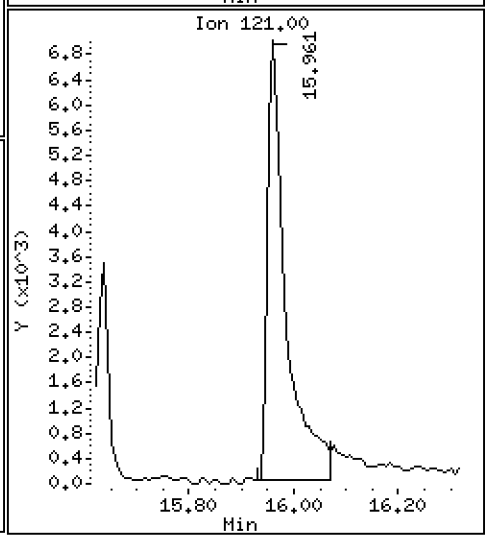












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

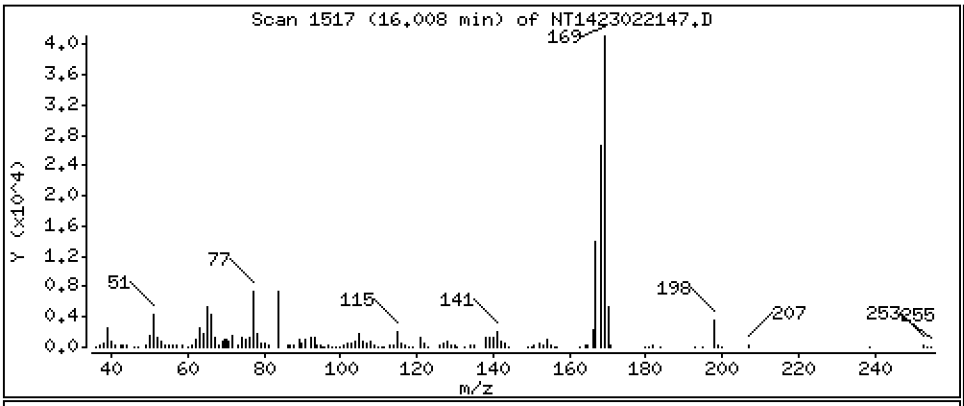
Operator: DSD

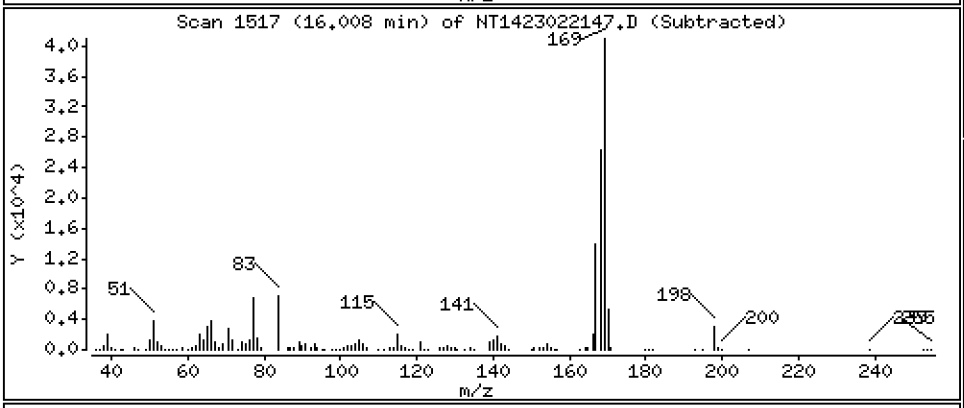
Column phase: ZB-5msi

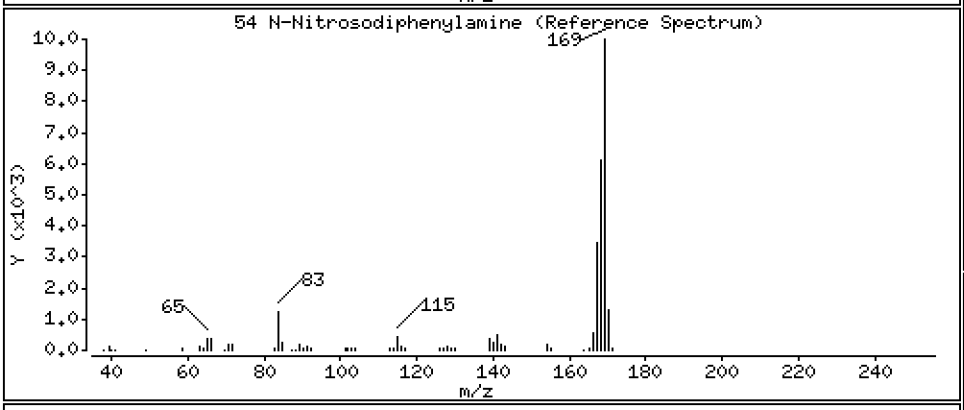
Column diameter: 0.25

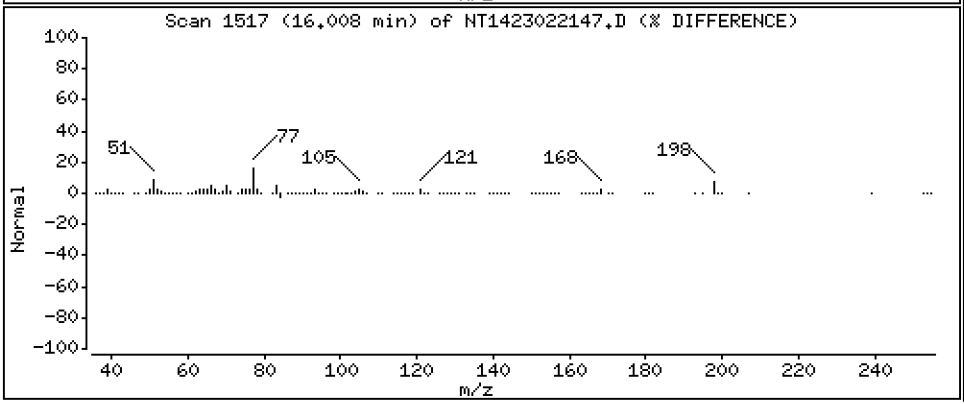
54 N-Nitrosodiphenylamine

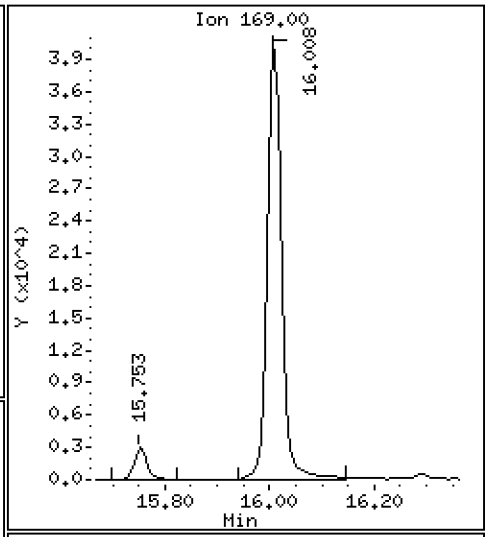
Concentration: 0.5657 ug/mL

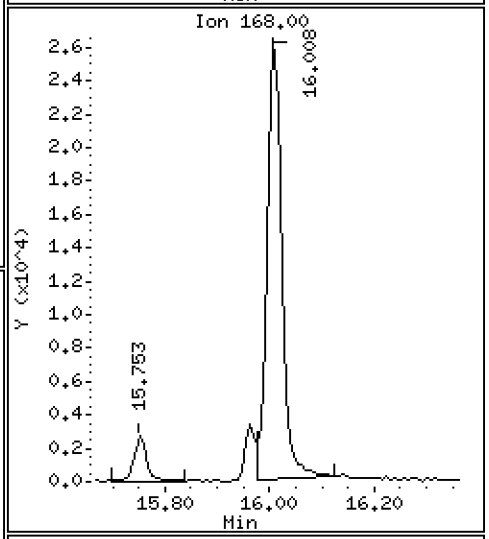


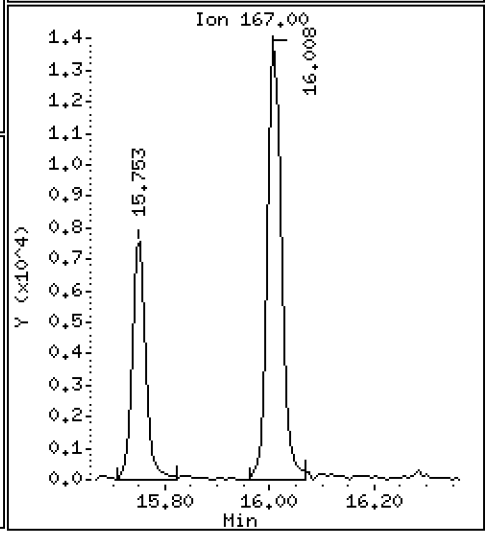












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

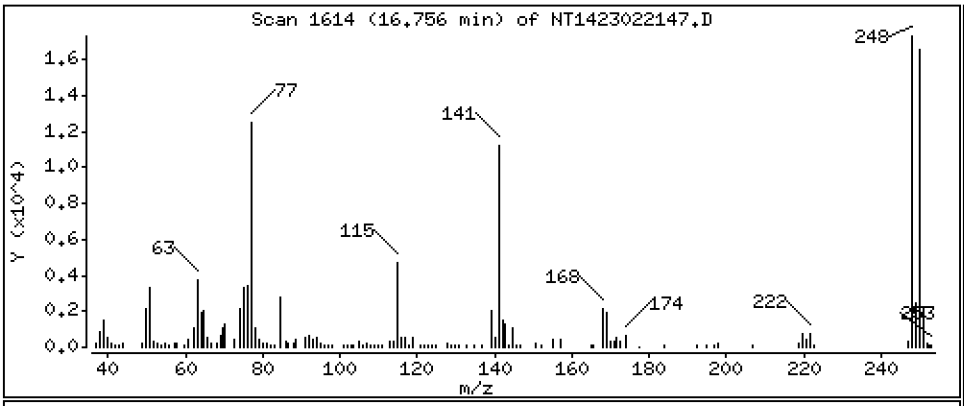
Operator: DSD

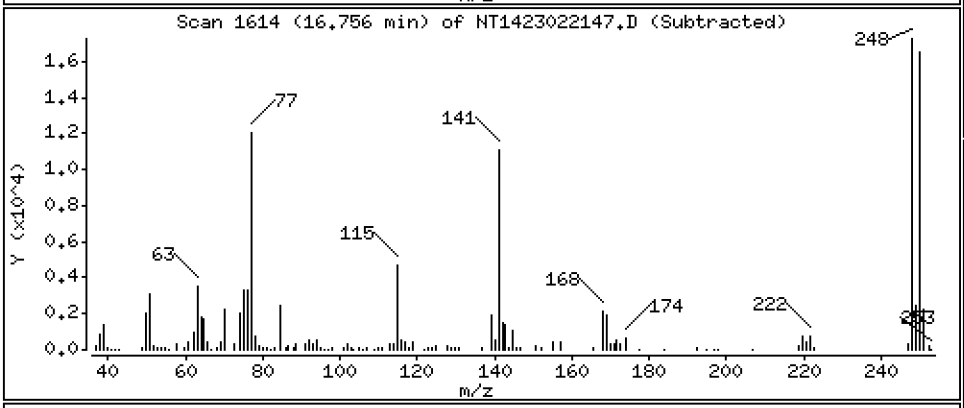
Column phase: ZB-5msi

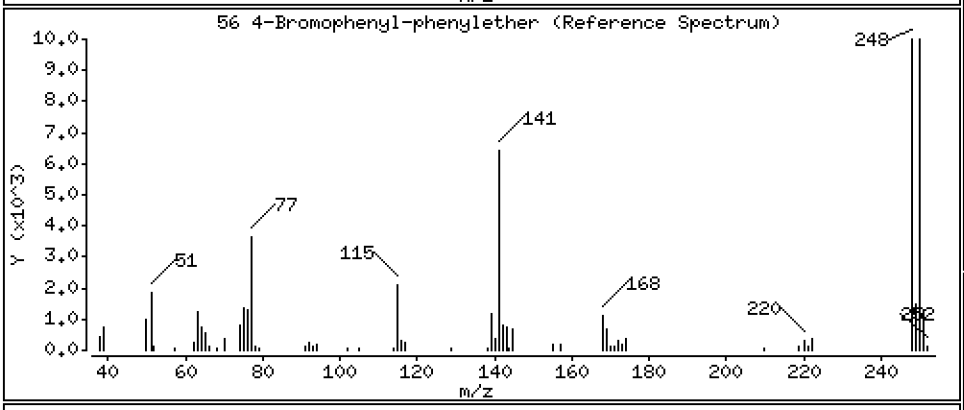
Column diameter: 0.25

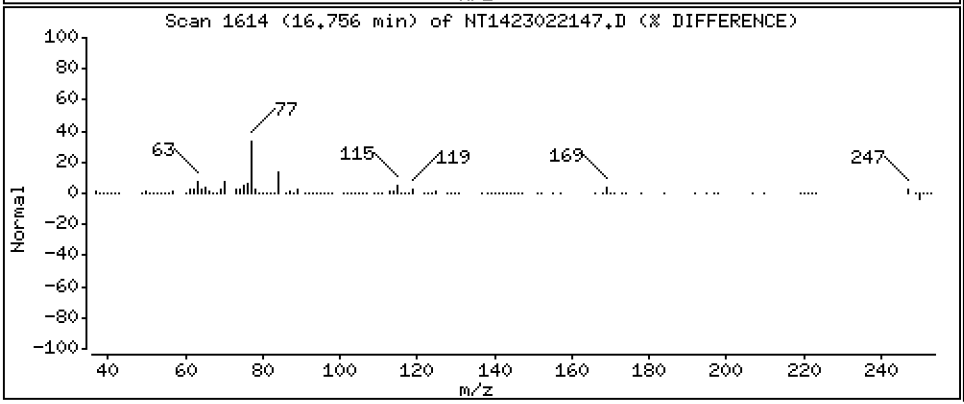
56 4-Bromophenyl-phenylether

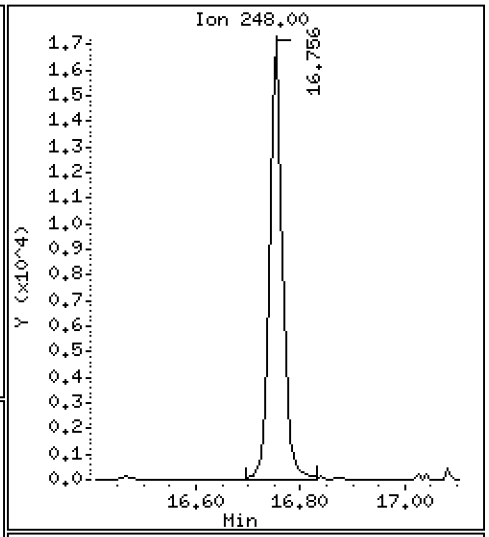
Concentration: 0.5026 ug/mL

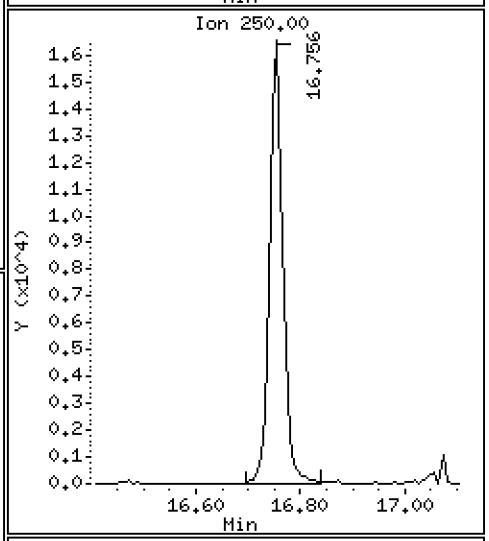


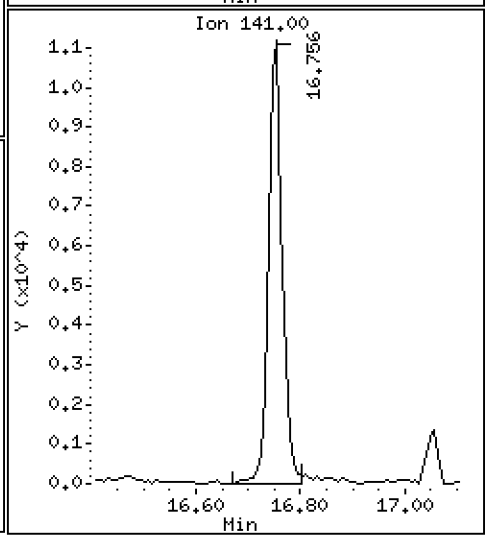












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

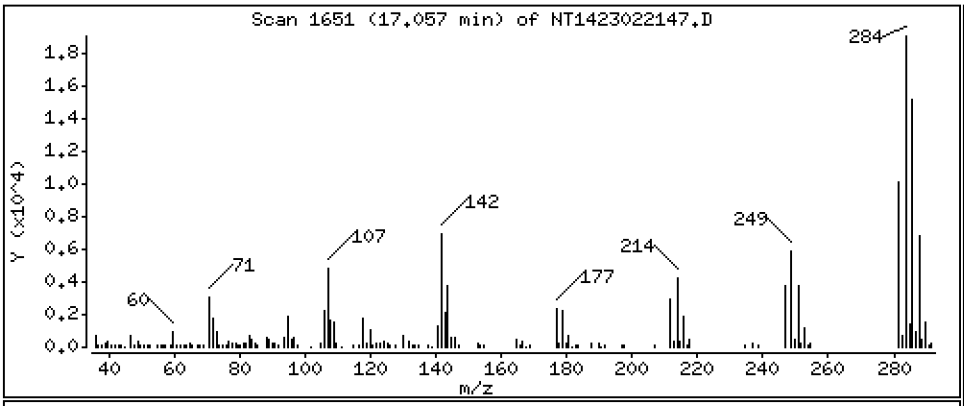
Operator: DSD

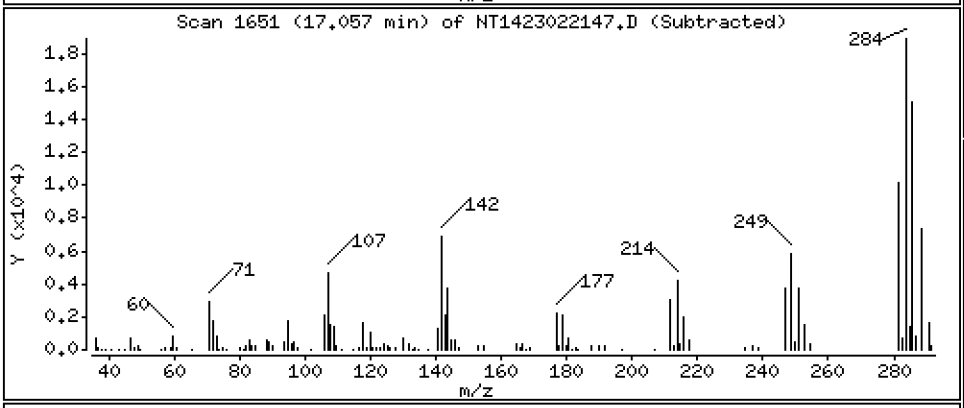
Column phase: ZB-5msi

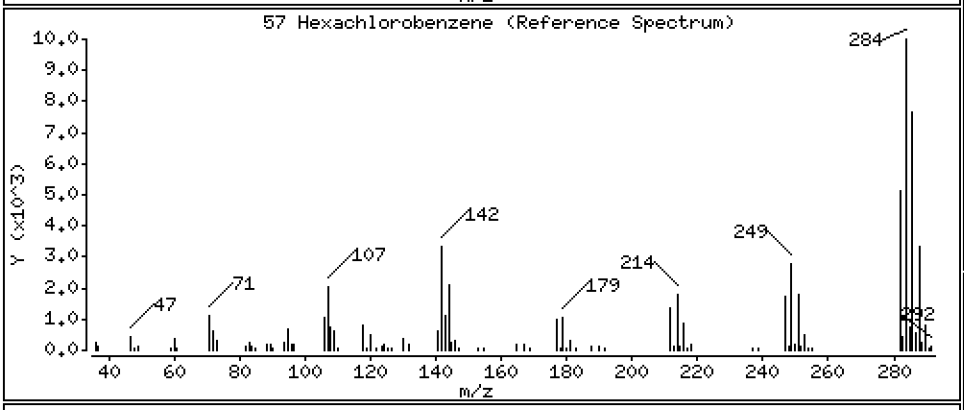
Column diameter: 0.25

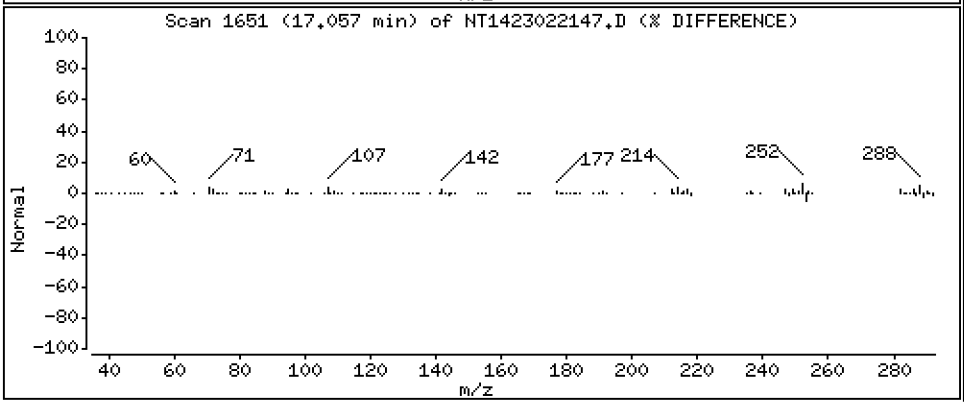
57 Hexachlorobenzene

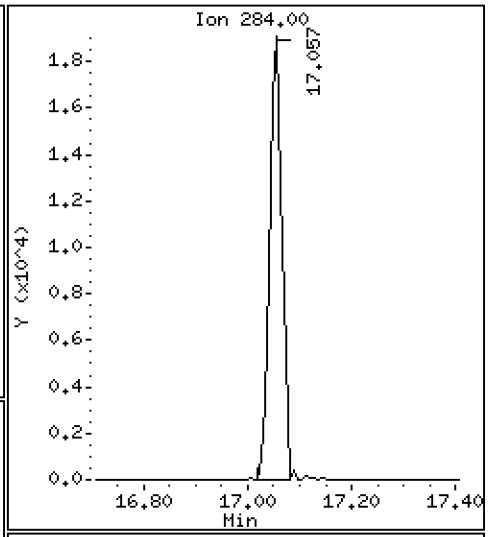
Concentration: 0.5247 ug/mL

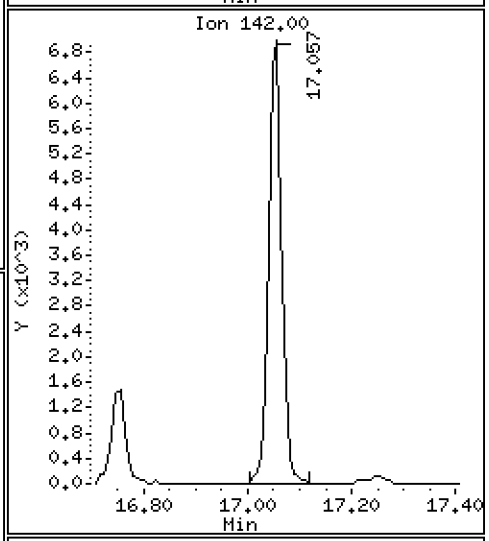


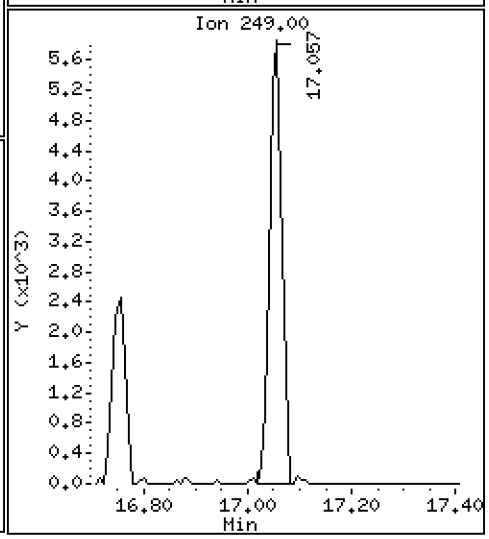












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

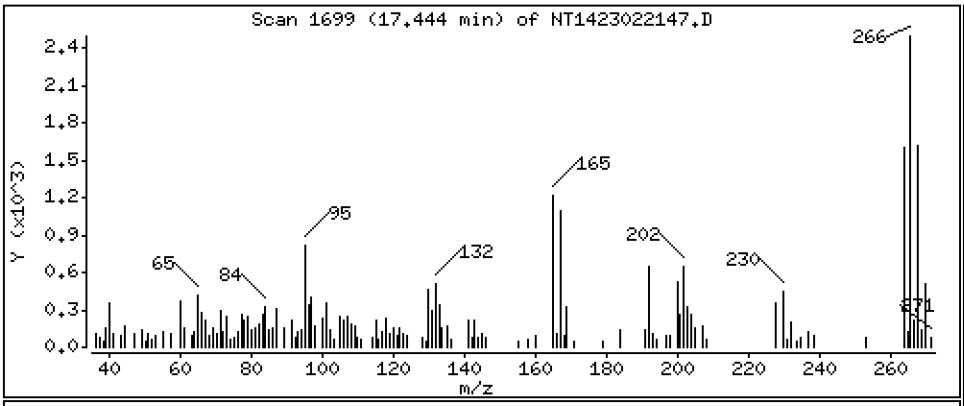
Operator: DSD

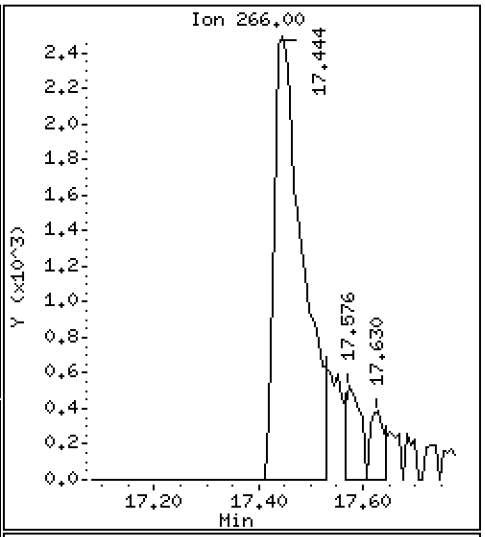
Column phase: ZB-5msi

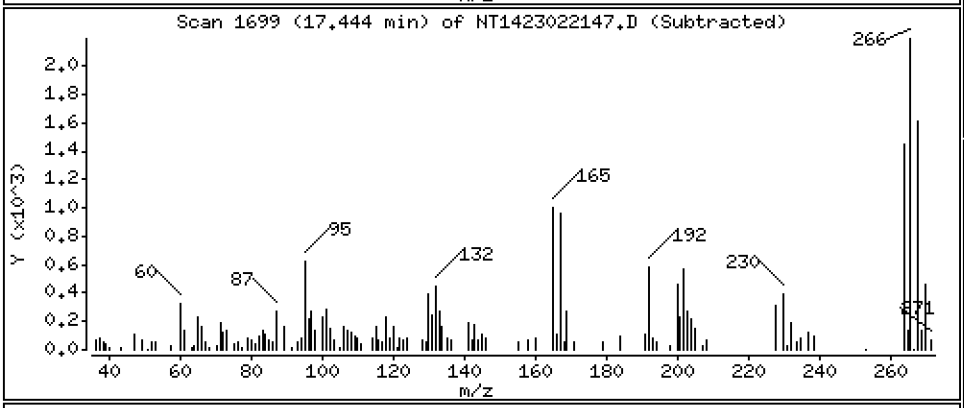
Column diameter: 0.25

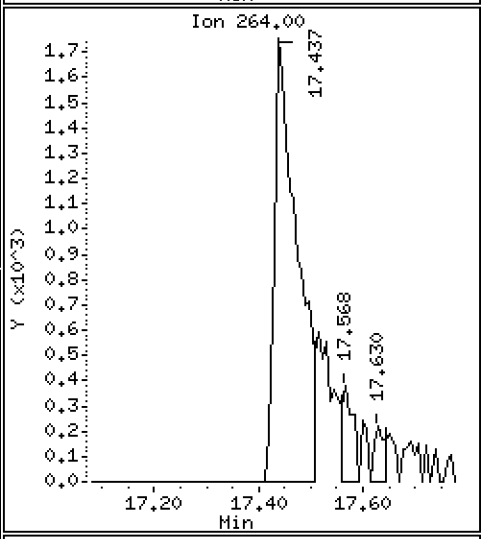
58 Pentachlorophenol

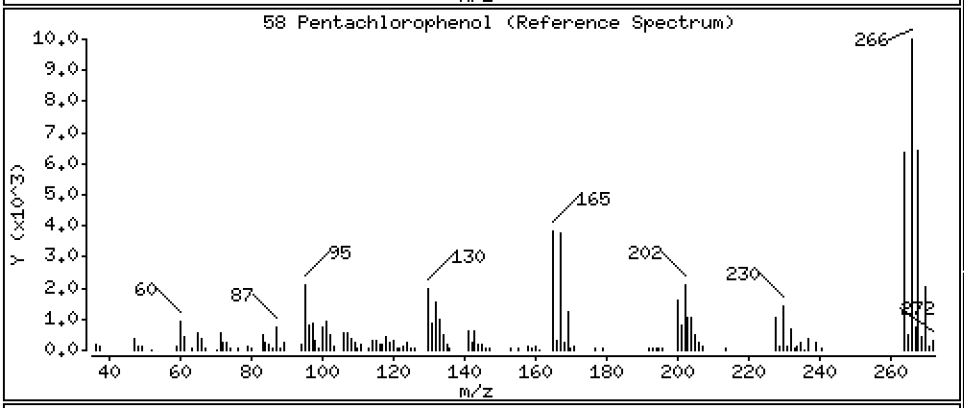
Concentration: 0.3369 ug/mL

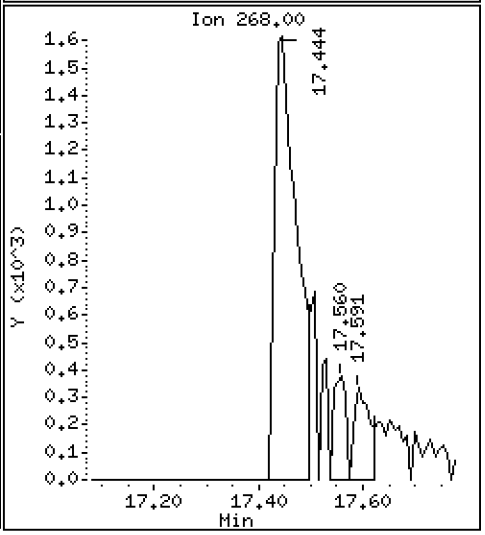


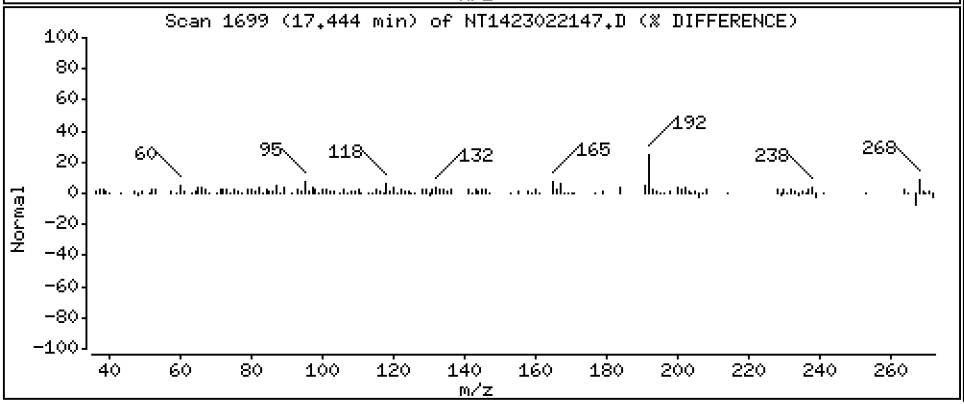












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

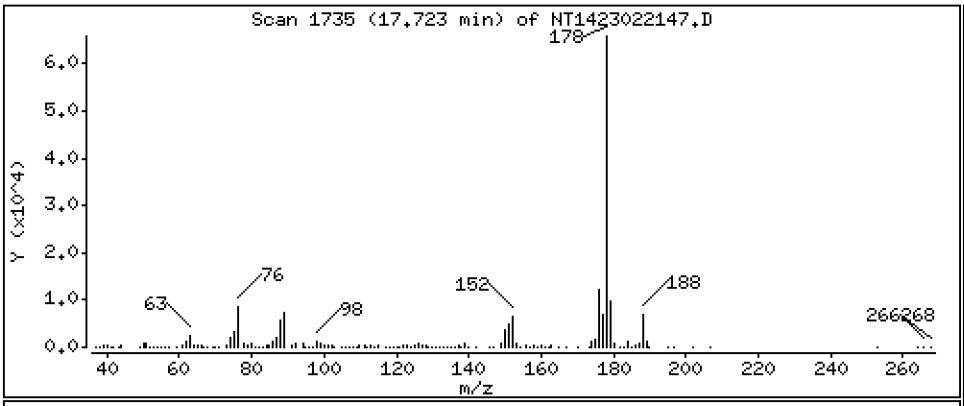
Operator: DSD

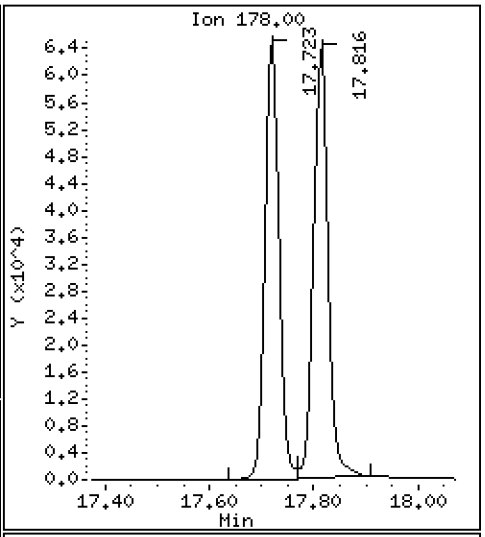
Column phase: ZB-5msi

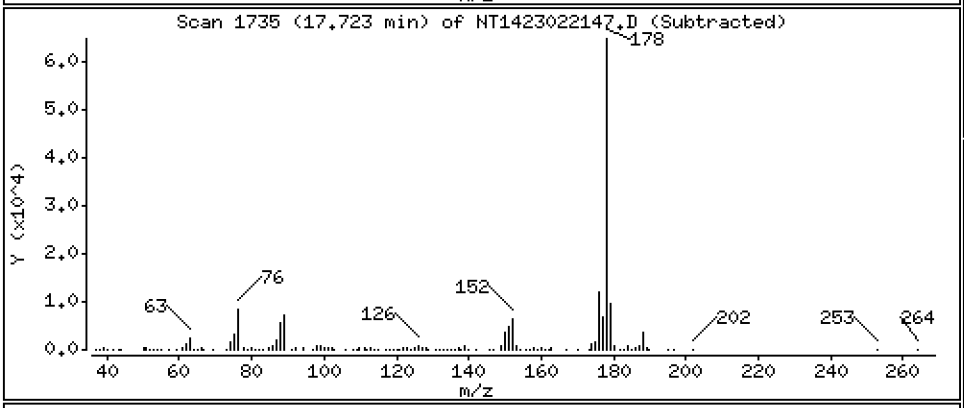
Column diameter: 0.25

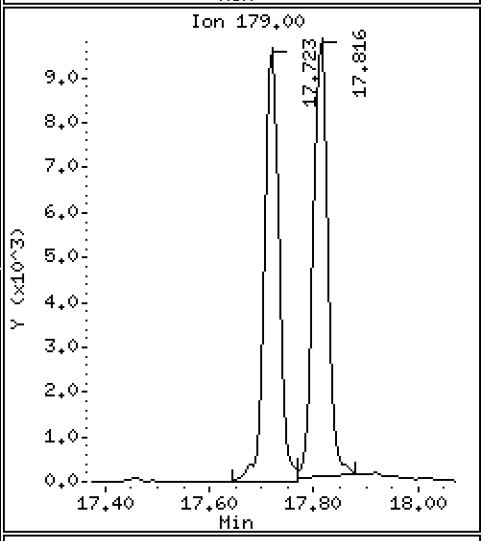
60 Phenanthrene

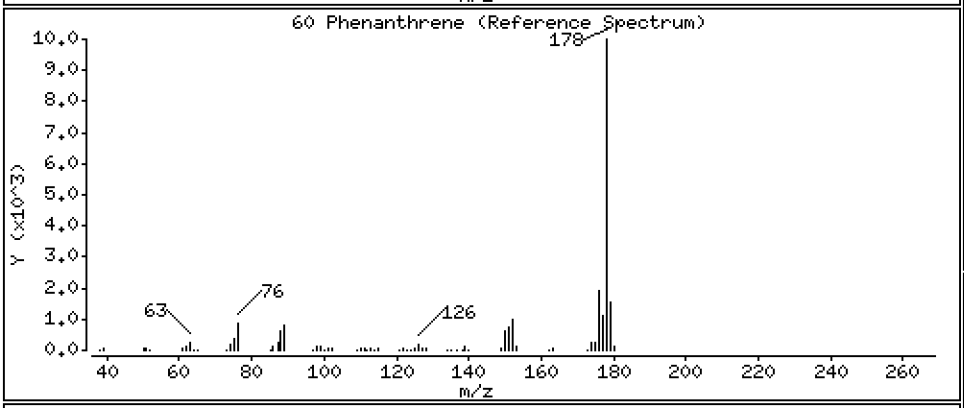
Concentration: 0.5390 ug/mL

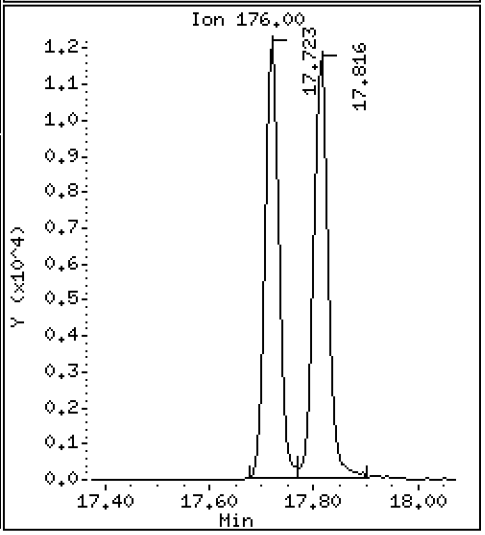


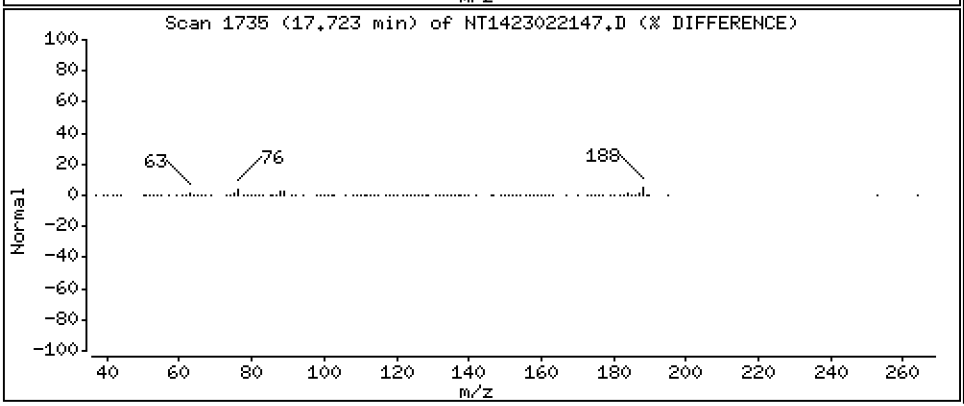












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

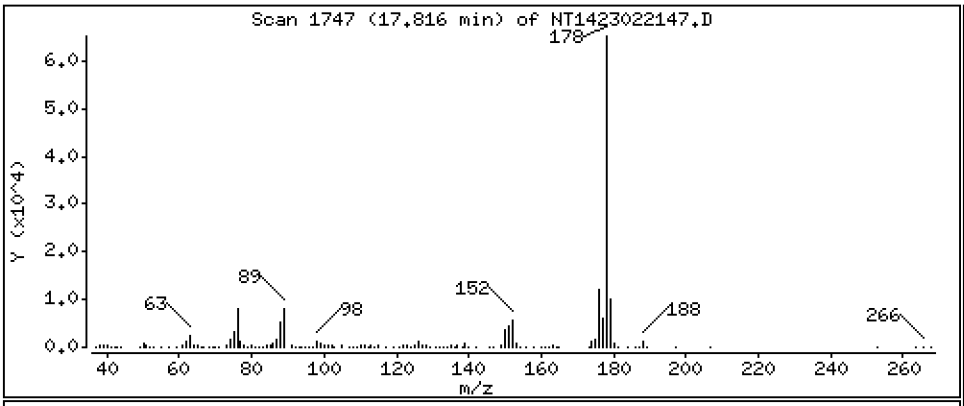
Operator: DSD

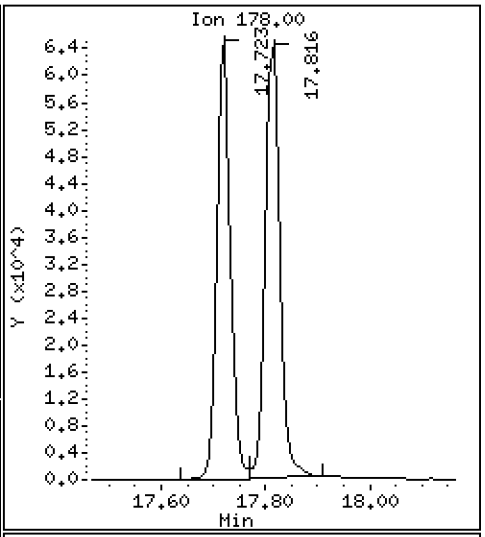
Column phase: ZB-5msi

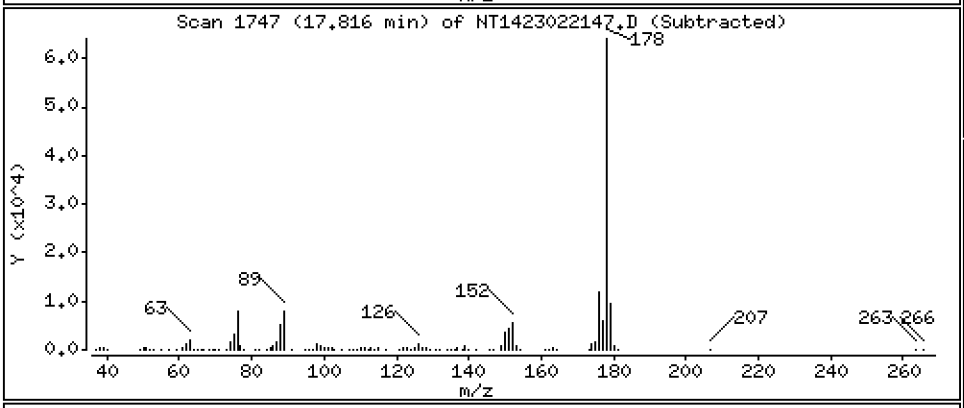
Column diameter: 0.25

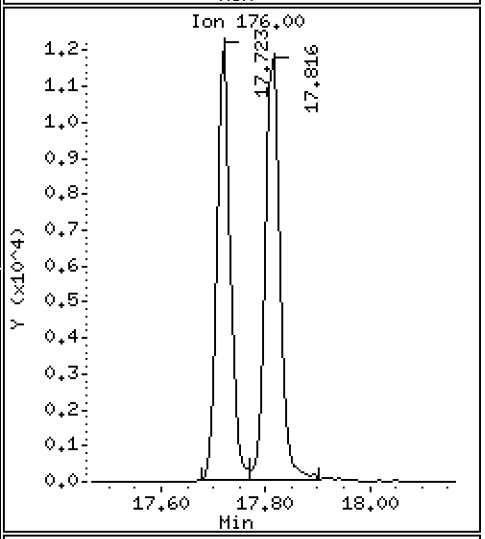
61 Anthracene

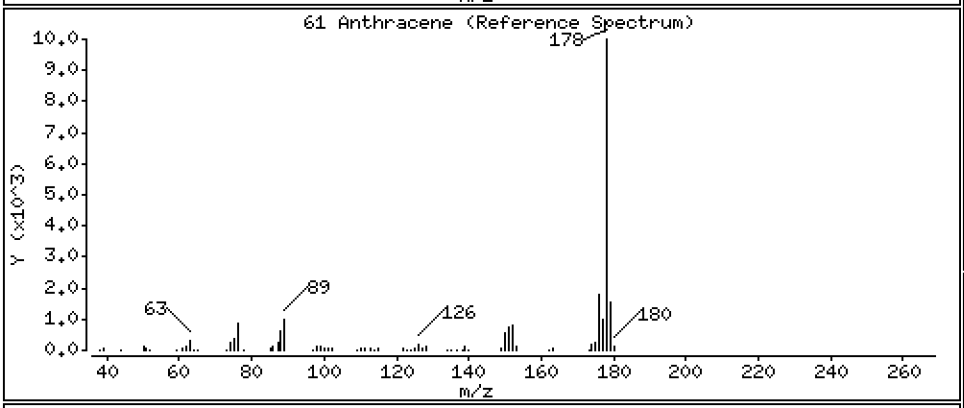
Concentration: 0.5582 ug/mL

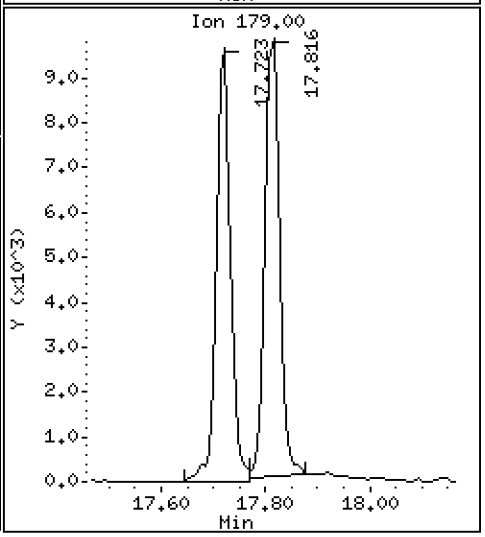


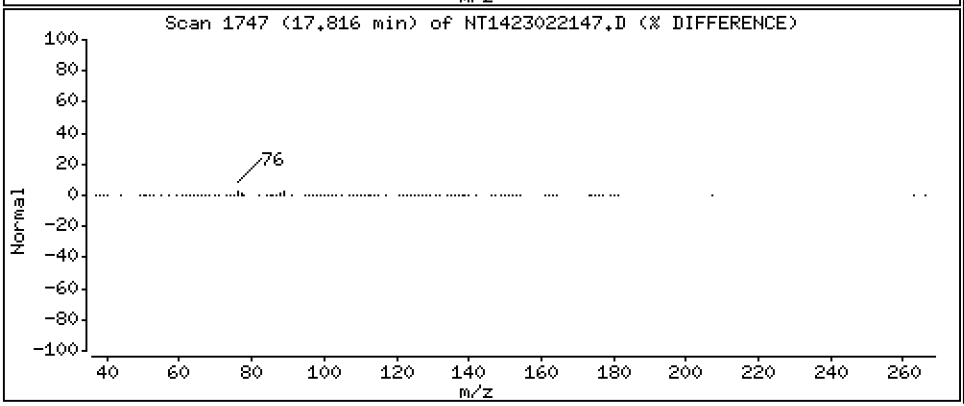












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022147.D

Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

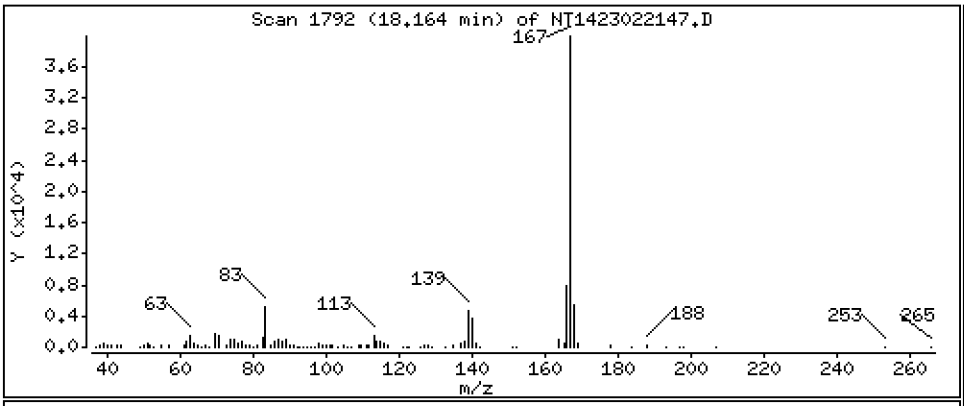
Operator: DSD

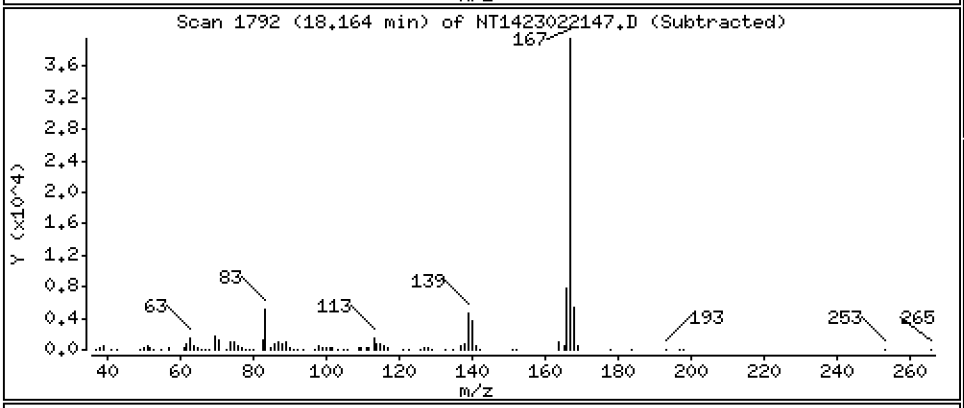
Column phase: ZB-5msi

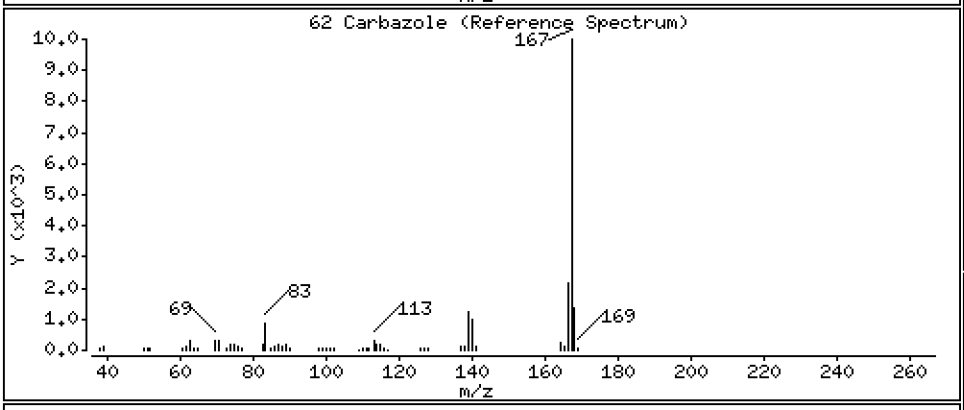
Column diameter: 0.25

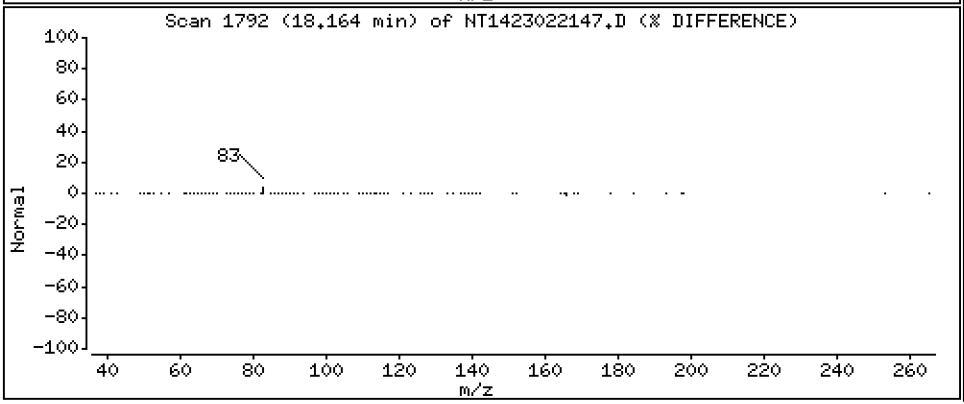
62 Carbazole

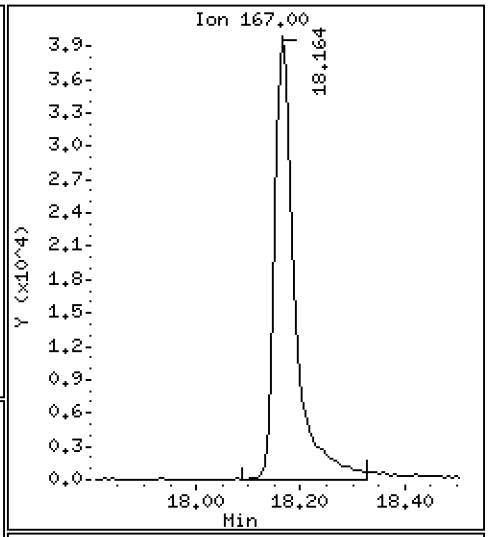
Concentration: 0.5348 ug/mL

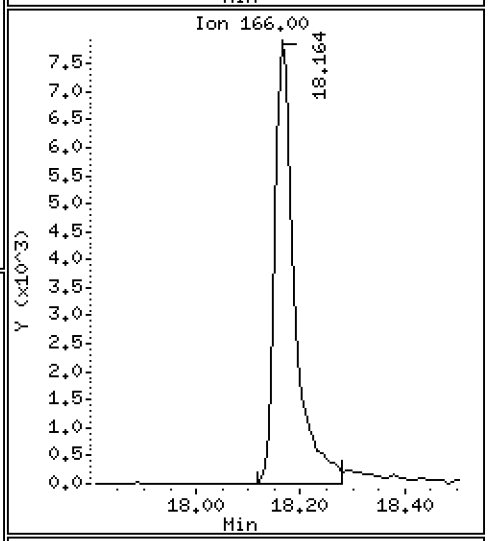


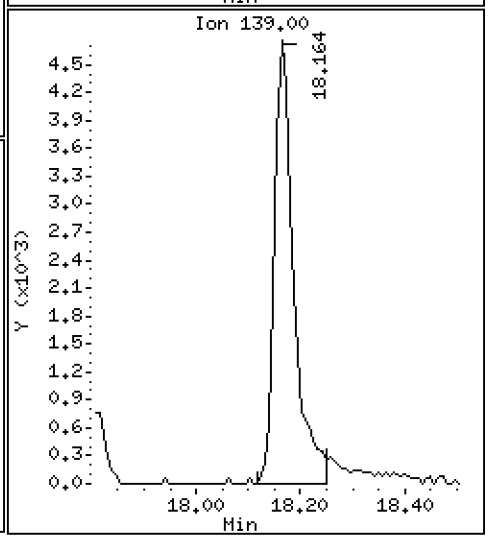












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

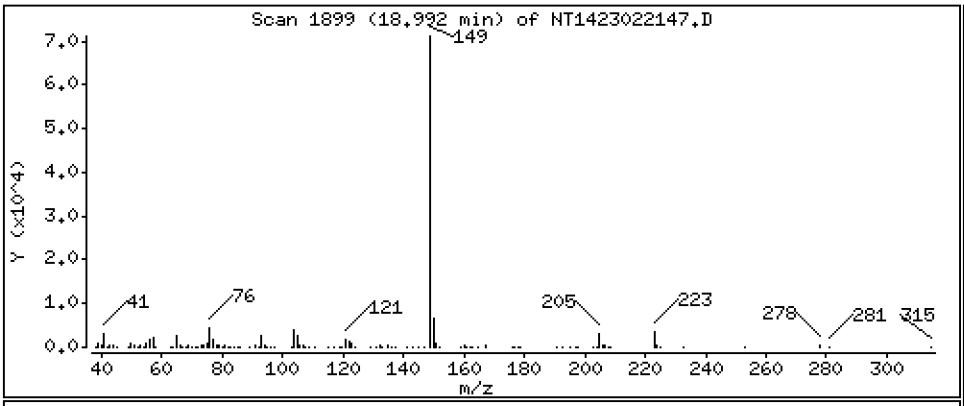
Operator: DSD

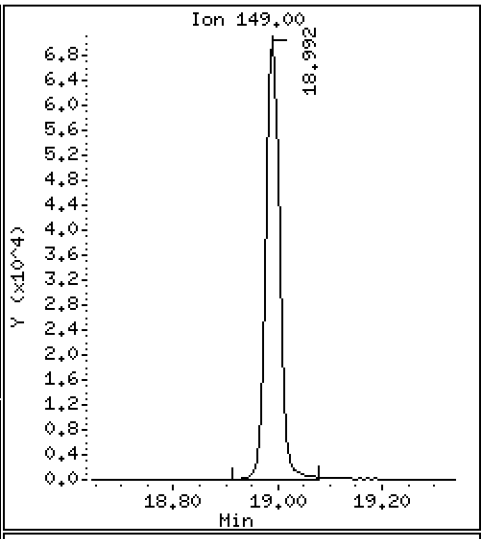
Column phase: ZB-5msi

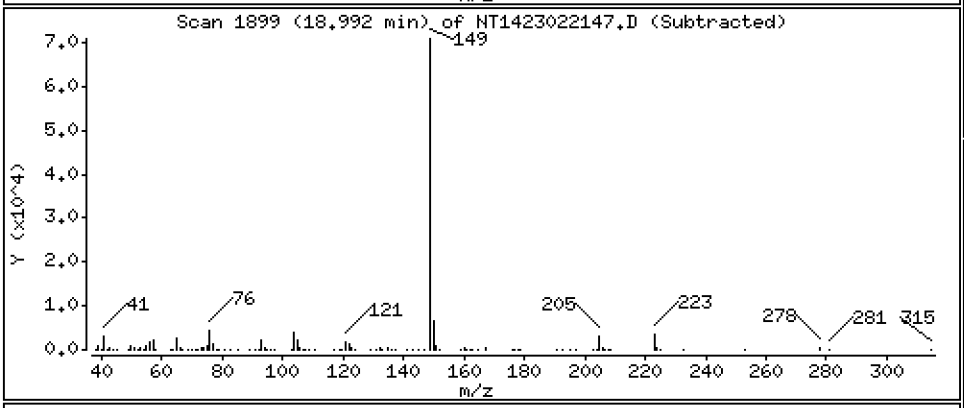
Column diameter: 0.25

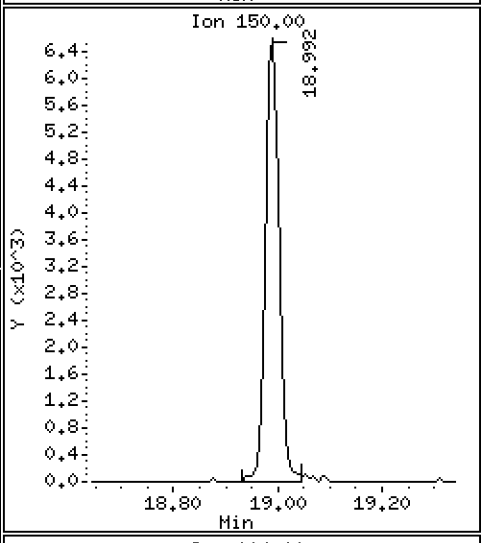
63 Di-n-butylphthalate

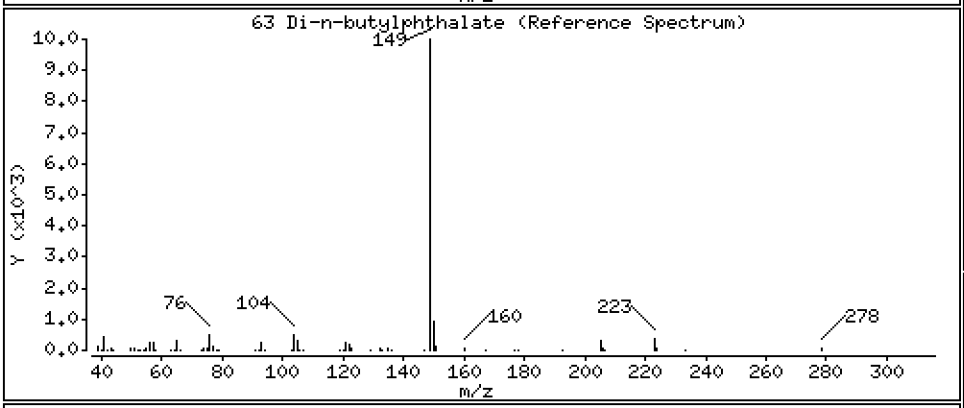
Concentration: 0.5718 ug/mL

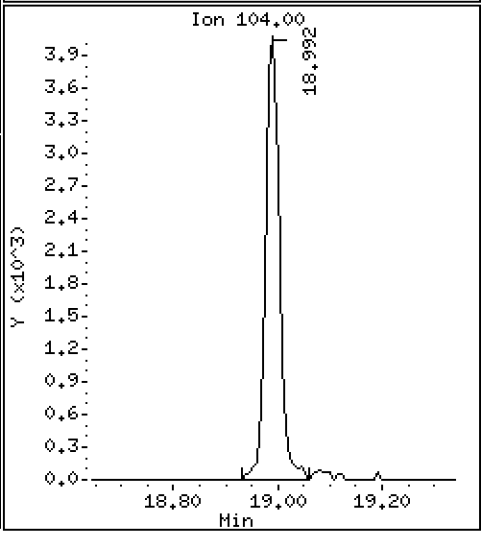


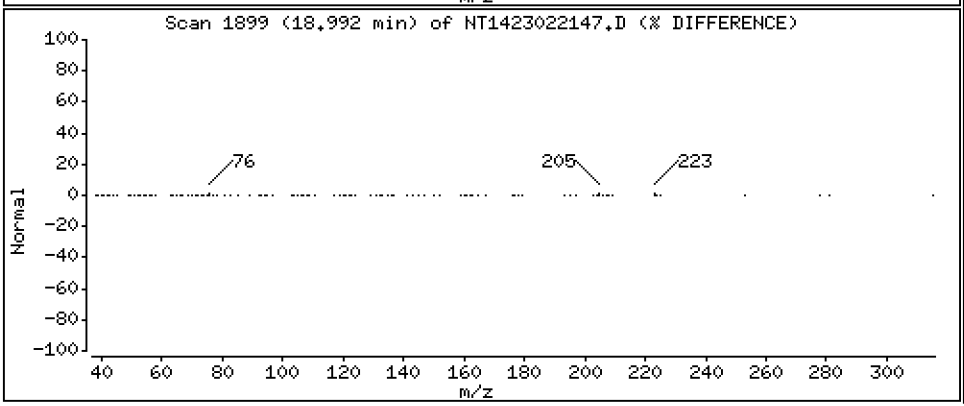












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

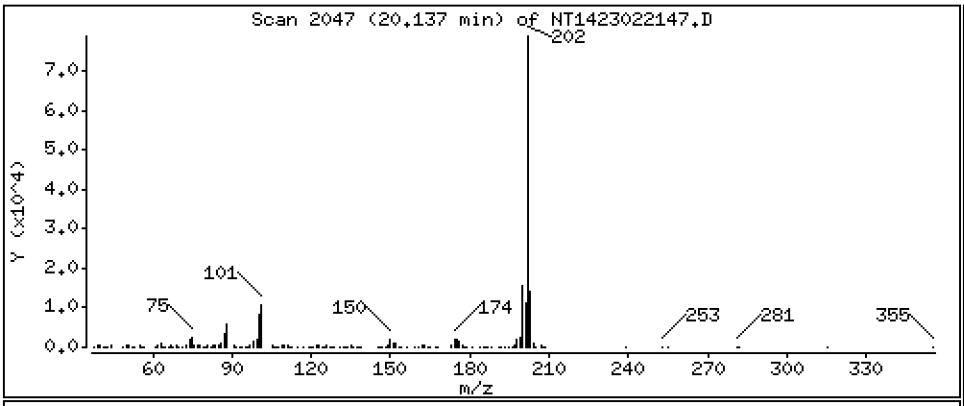
Operator: DSD

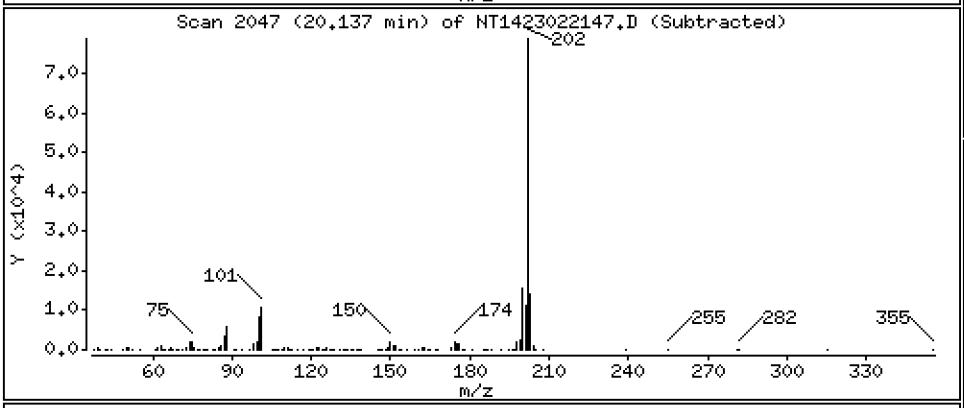
Column phase: ZB-5msi

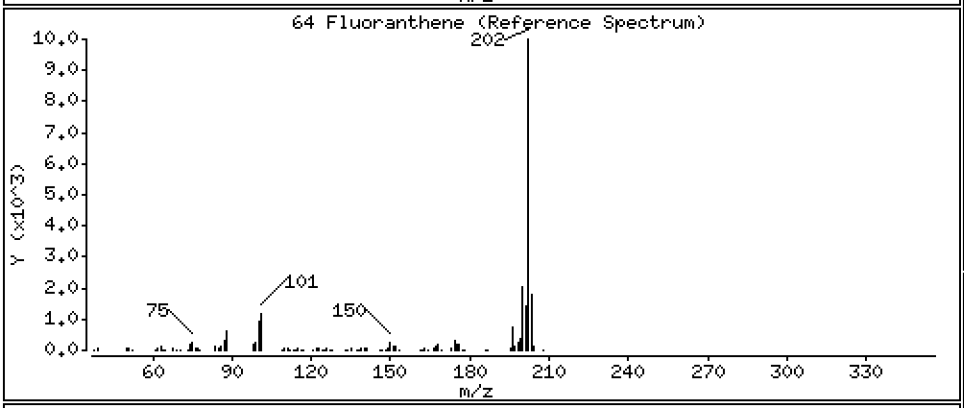
Column diameter: 0.25

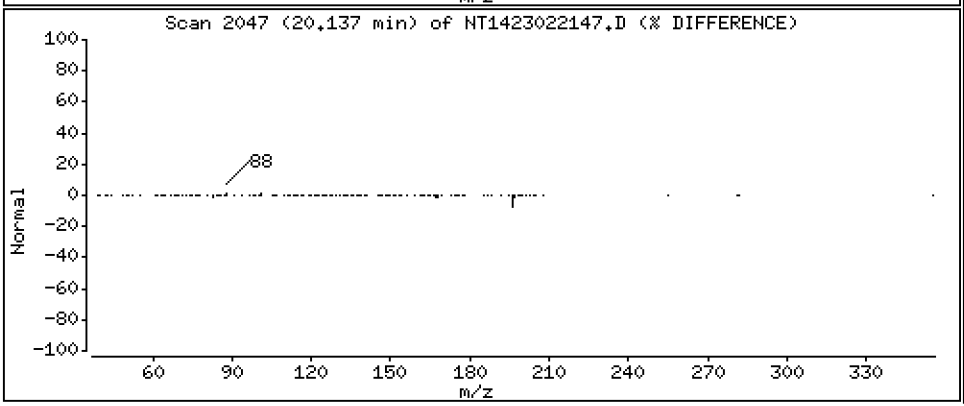
64 Fluoranthene

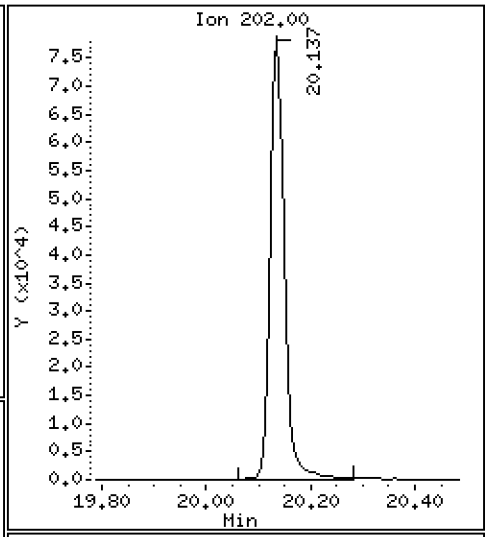
Concentration: 0.5476 ug/mL

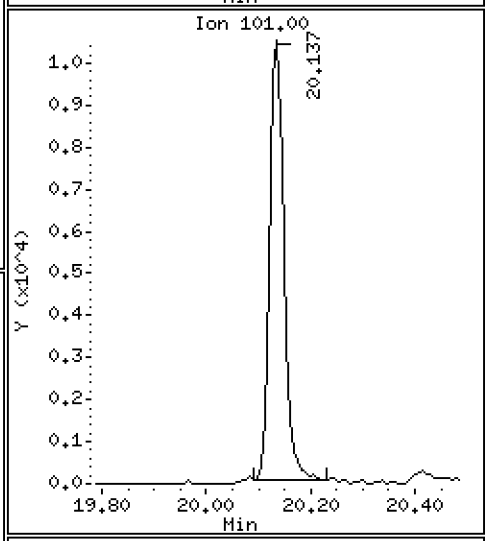


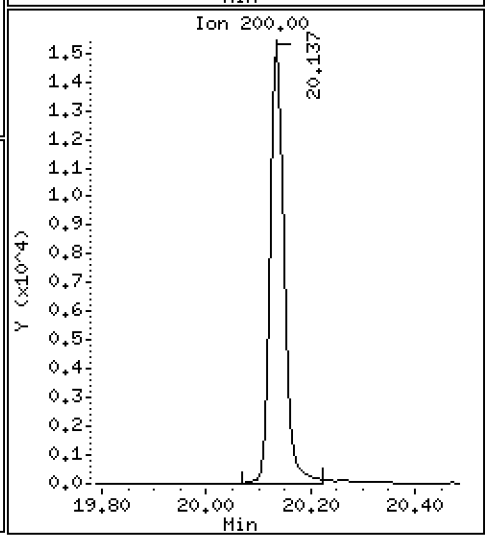












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

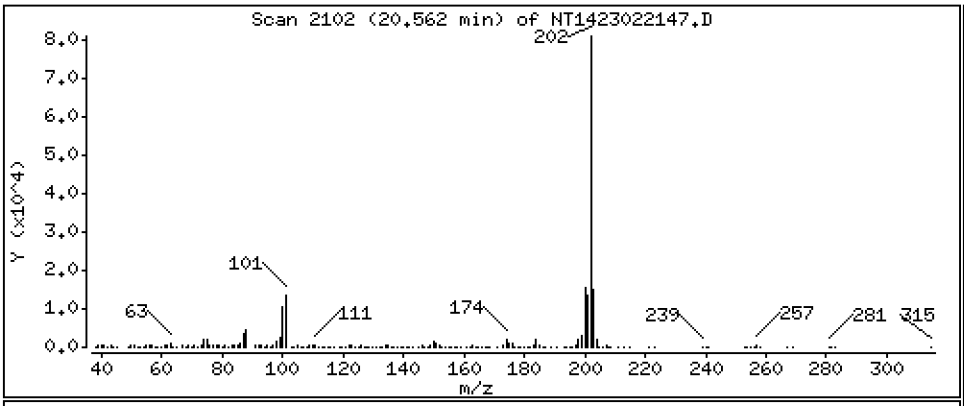
Operator: DSD

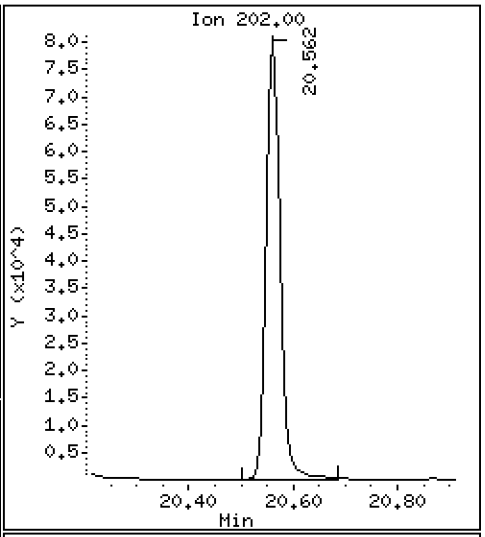
Column phase: ZB-5msi

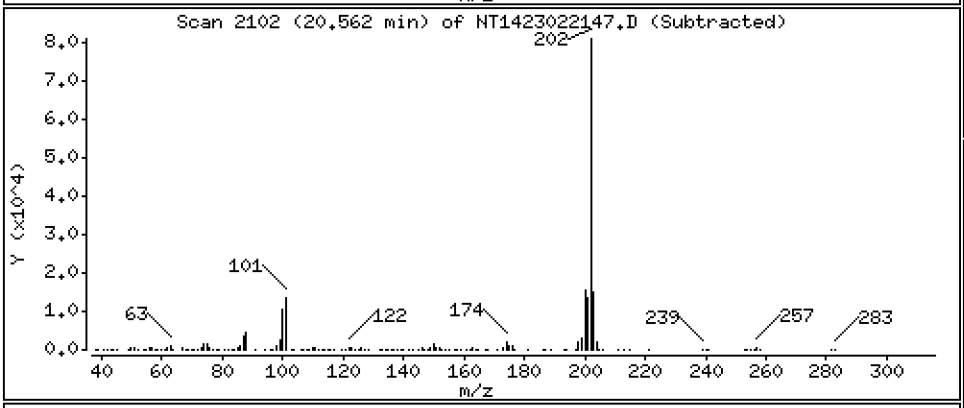
Column diameter: 0.25

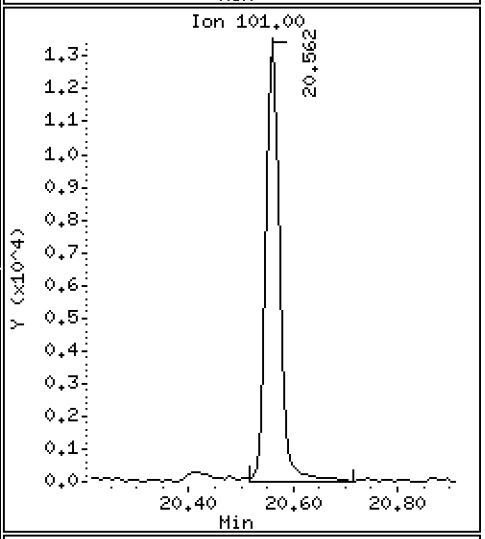
65 Pyrene

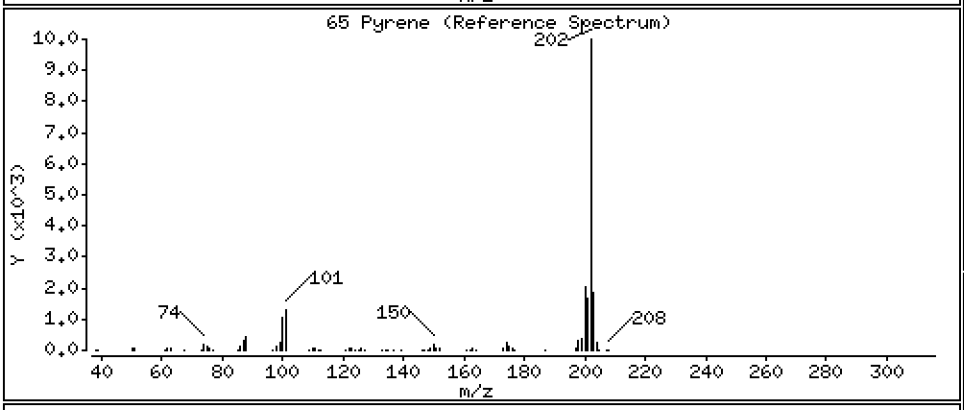
Concentration: 0.5211 ug/mL

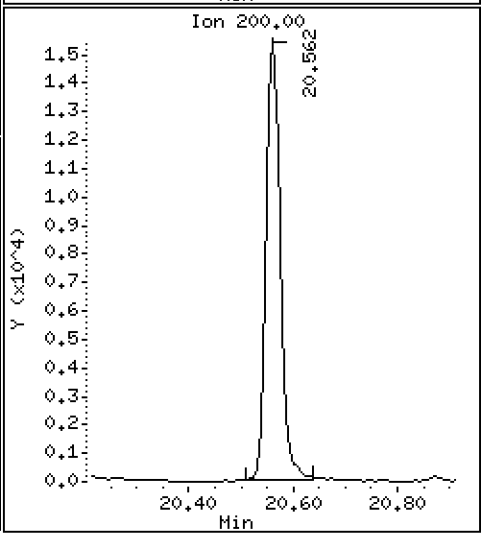


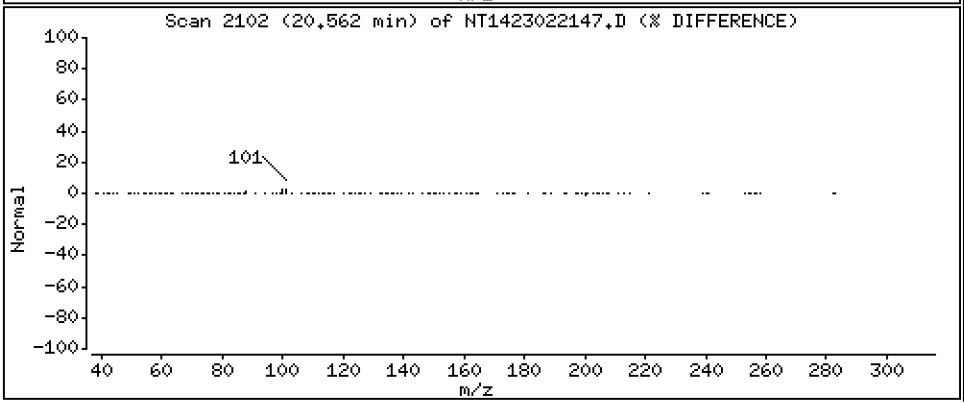












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

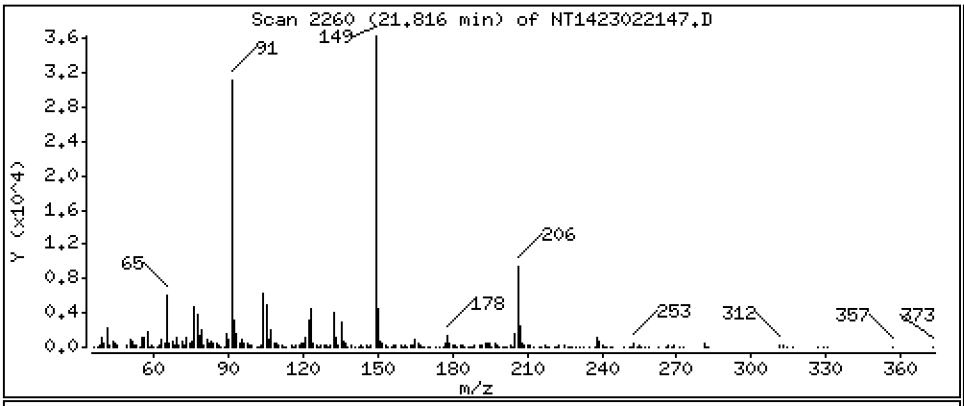
Operator: DSD

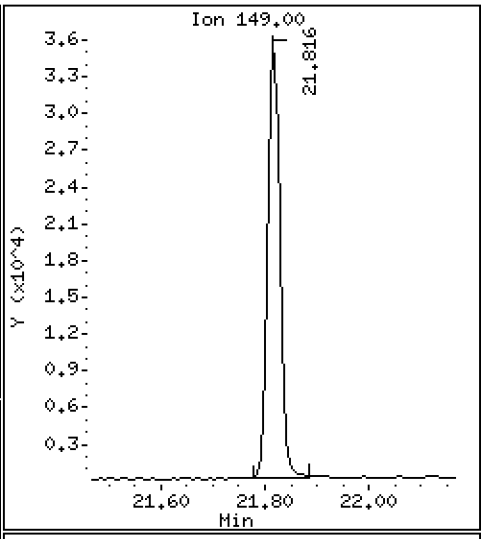
Column phase: ZB-5msi

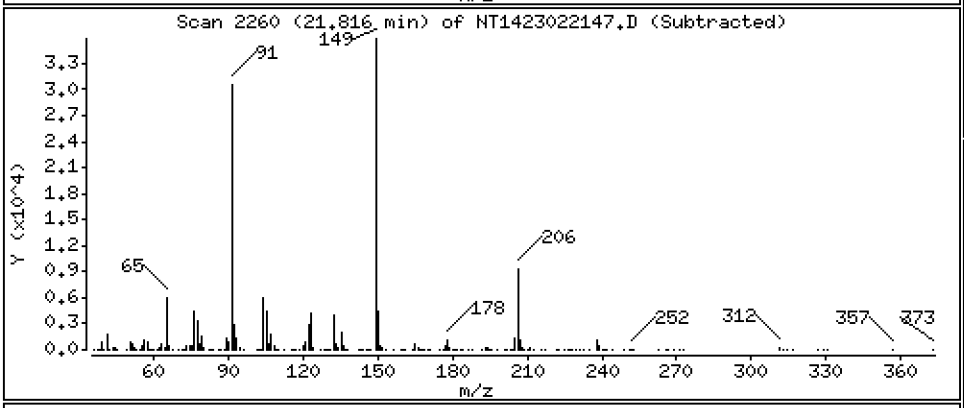
Column diameter: 0.25

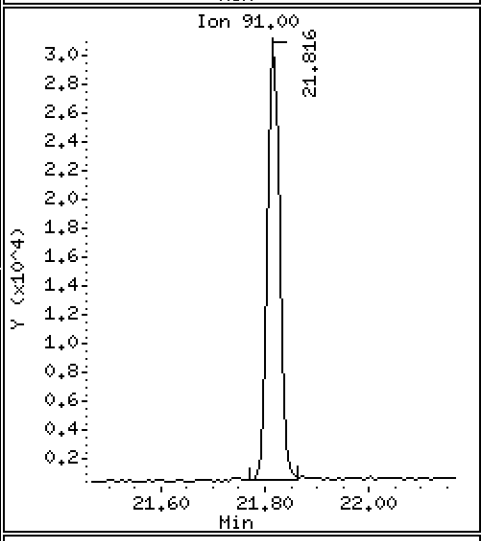
67 Butylbenzylphthalate

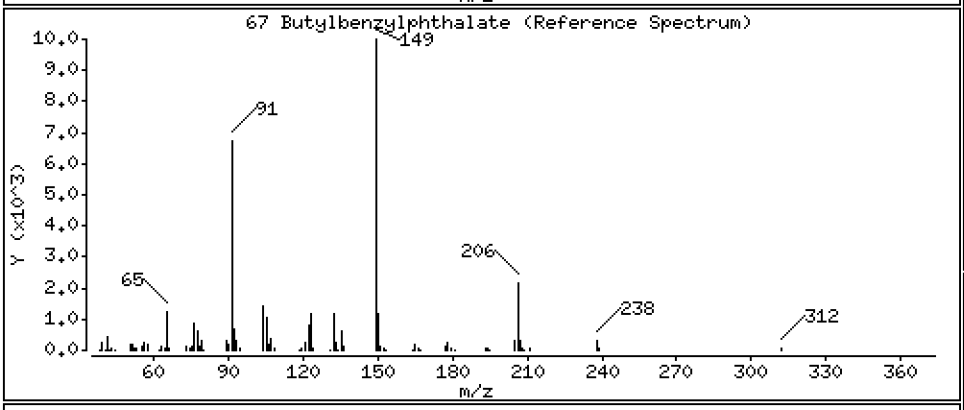
Concentration: 0.5922 ug/mL

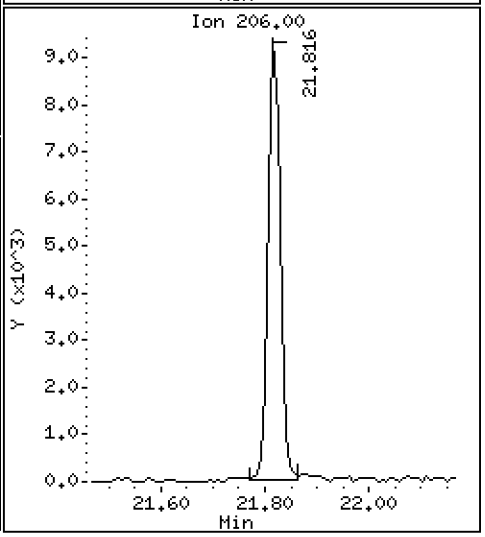


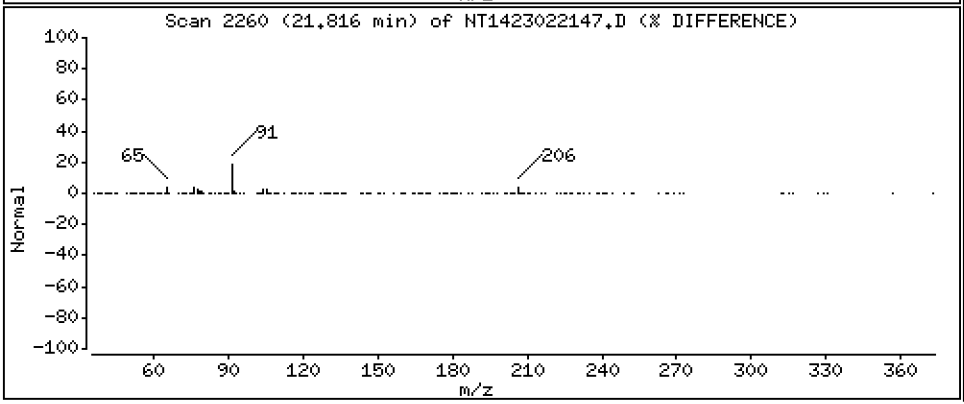












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

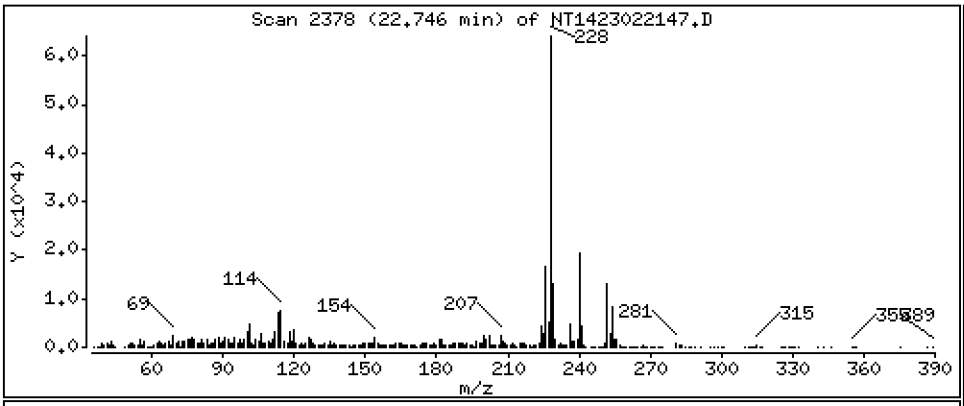
Operator: DSD

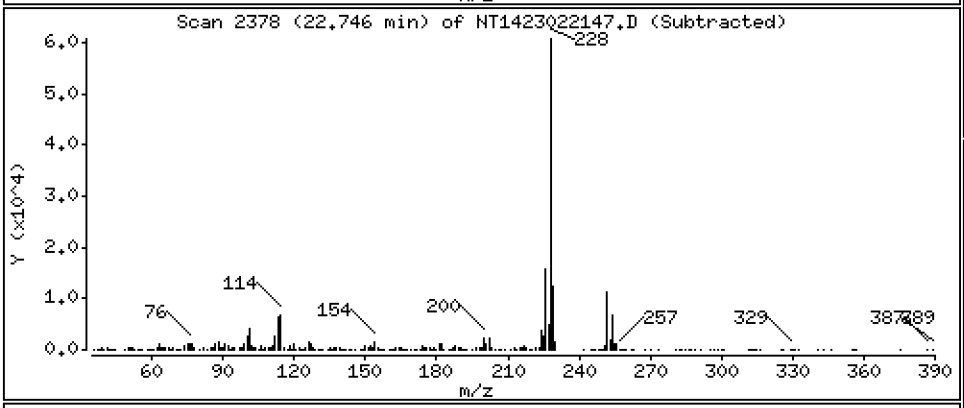
Column phase: ZB-5msi

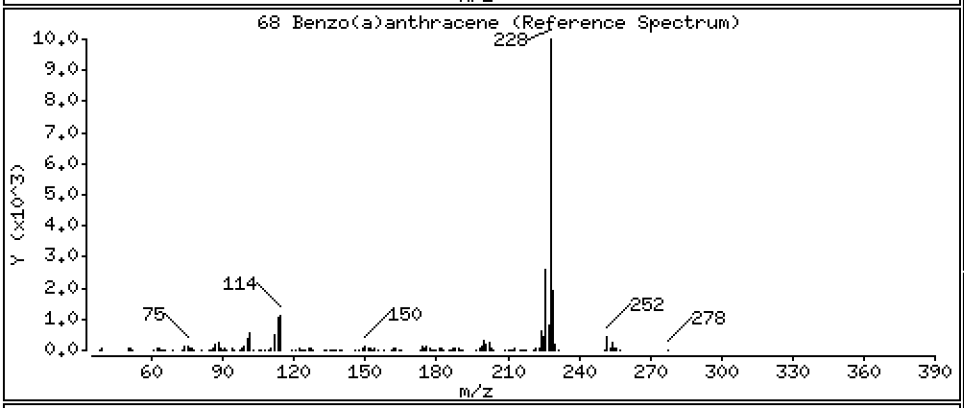
Column diameter: 0.25

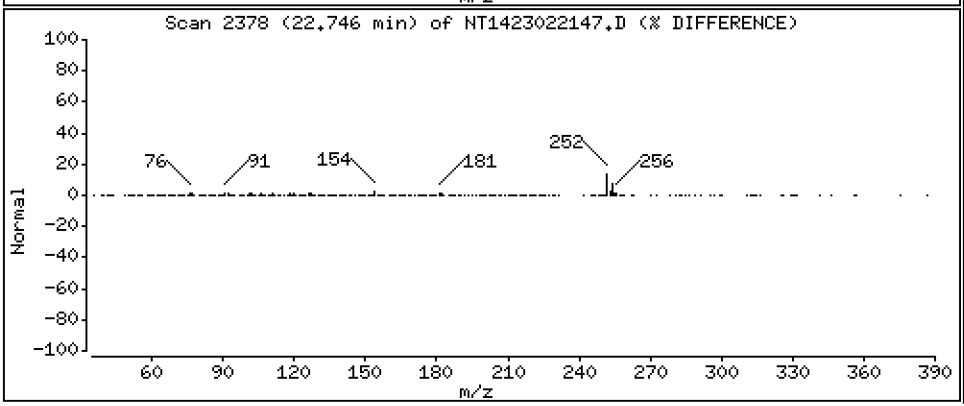
68 Benzo(a)anthracene

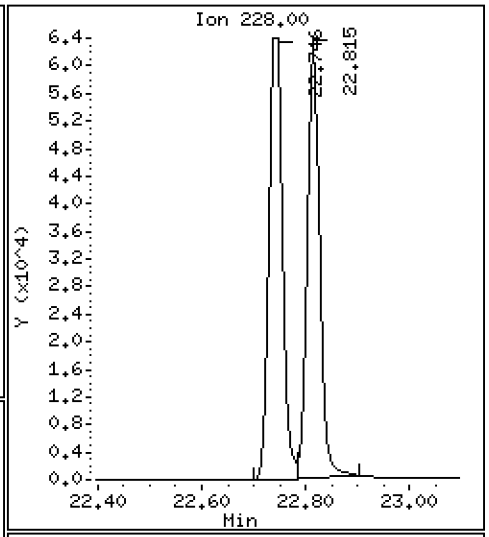
Concentration: 0.5638 ug/mL

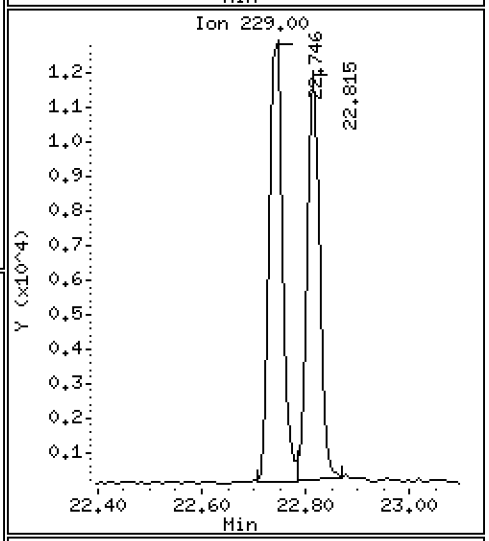


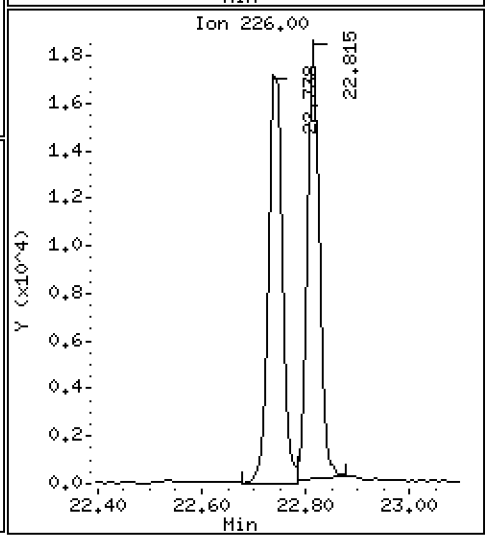












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

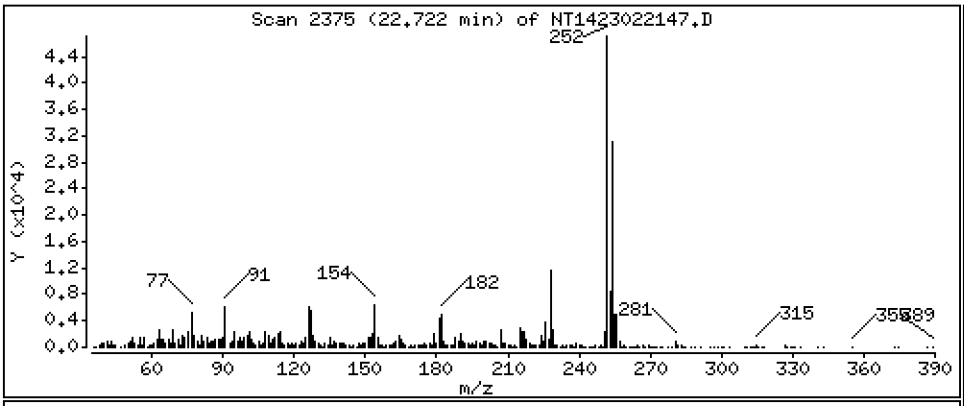
Operator: DSD

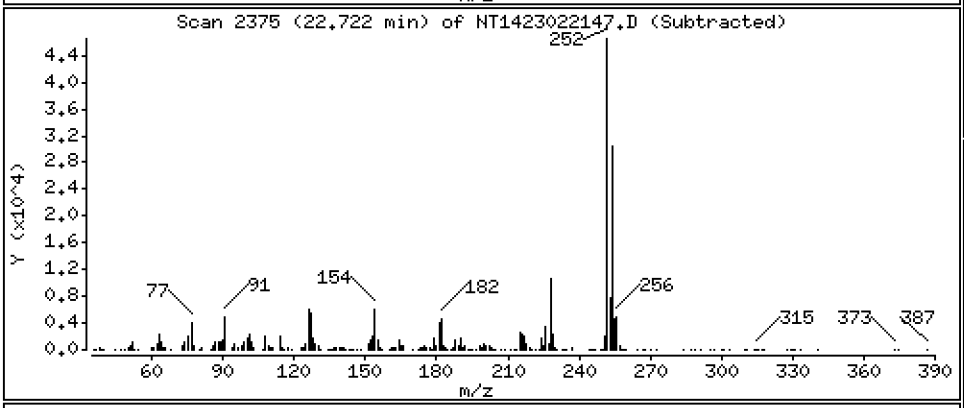
Column phase: ZB-5msi

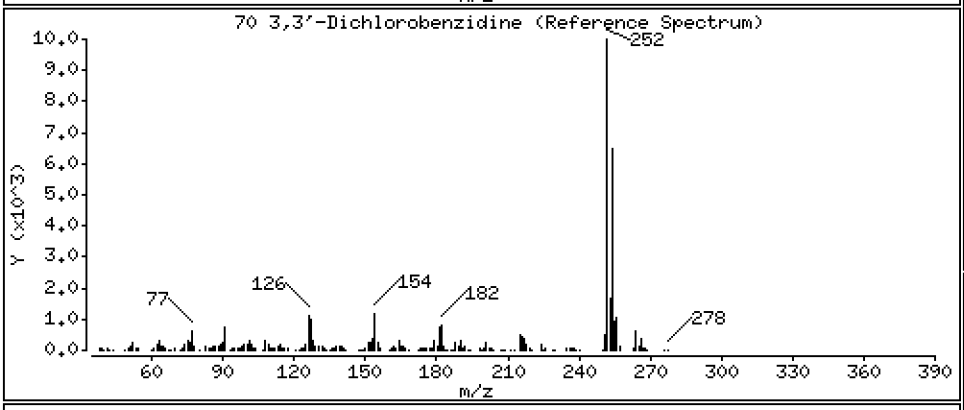
Column diameter: 0.25

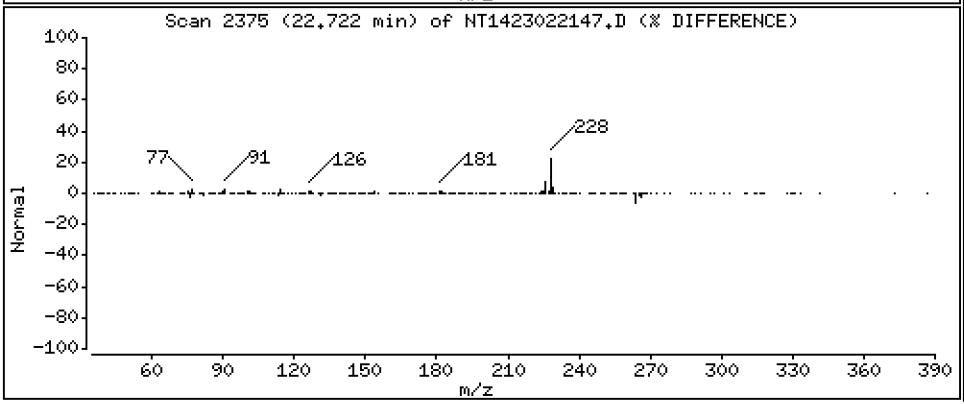
70 3,3'-Dichlorobenzidine

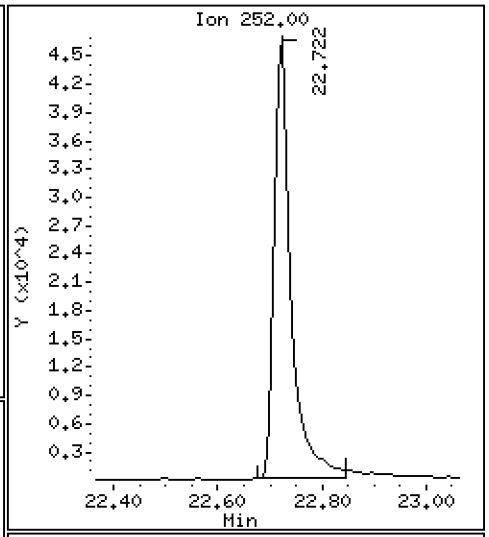
Concentration: 1.742 ug/mL

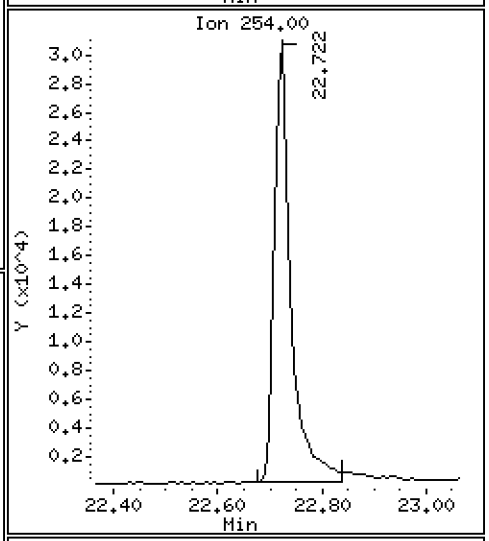


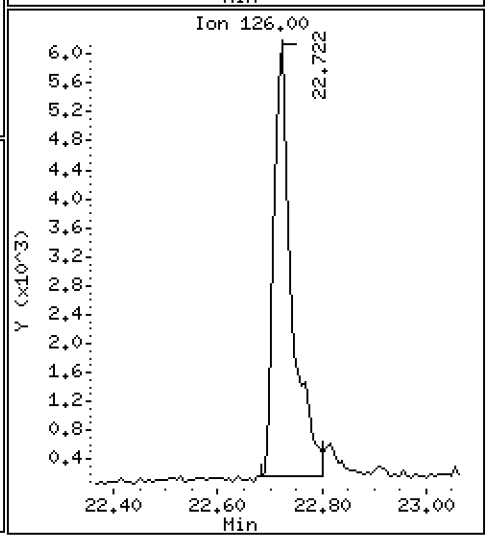












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

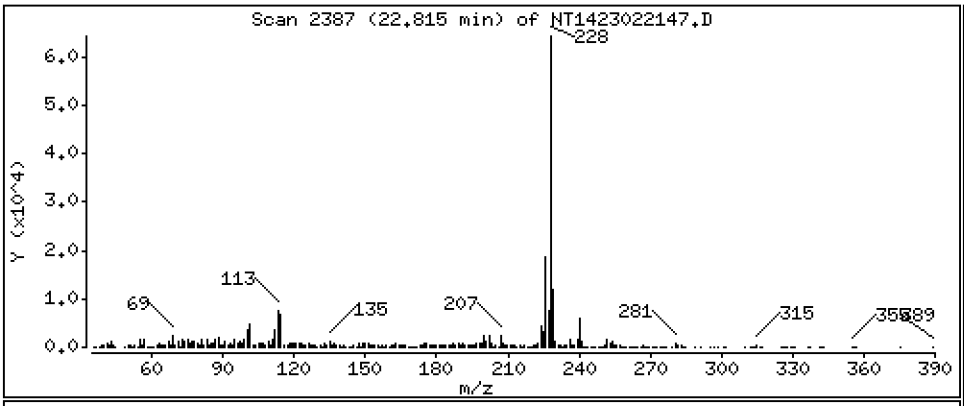
Operator: DSD

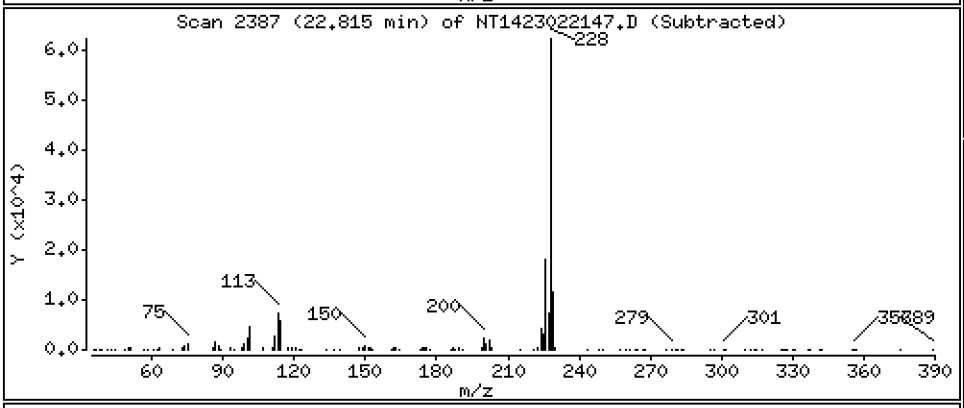
Column phase: ZB-5msi

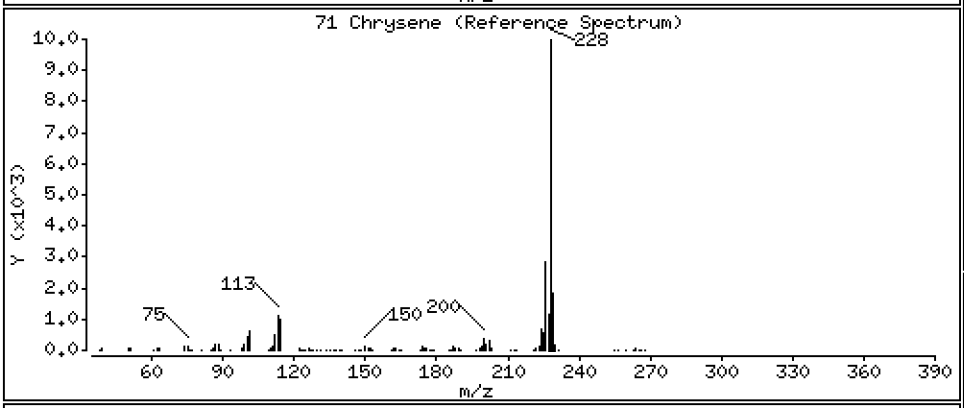
Column diameter: 0.25

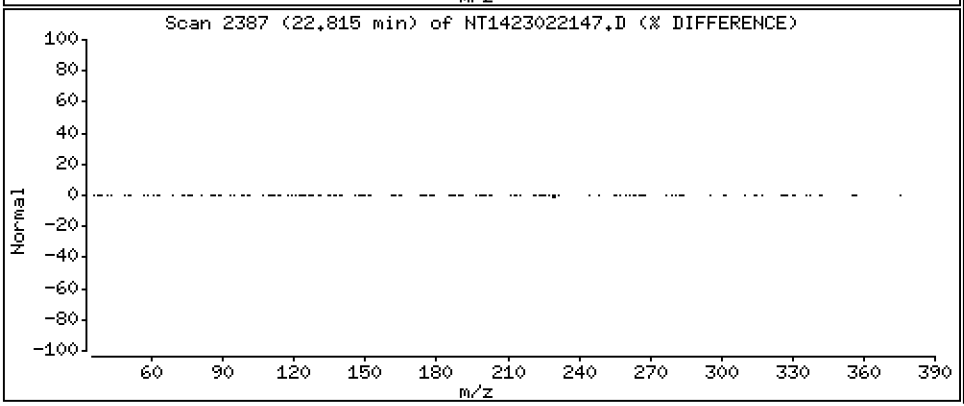
71 Chrysene

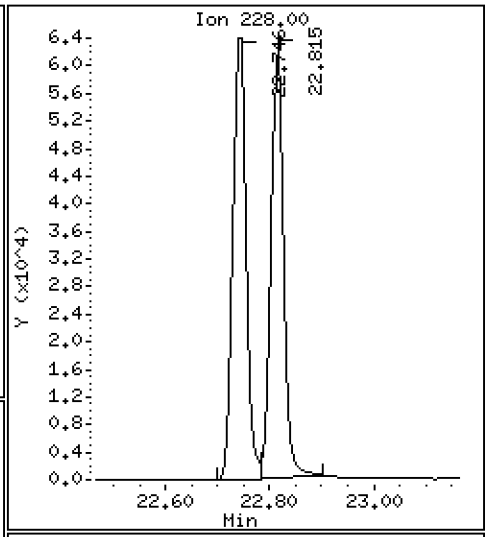
Concentration: 0.5608 ug/mL

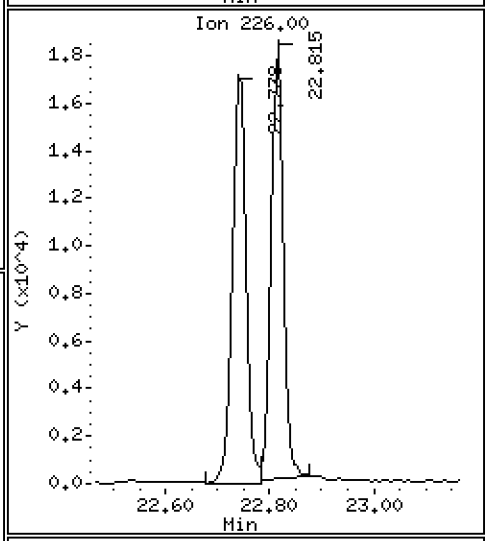


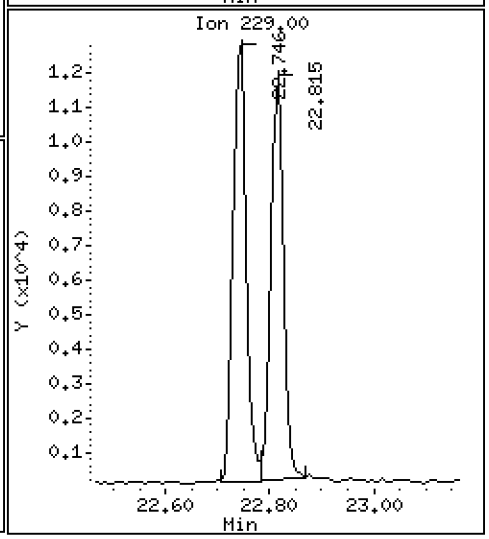












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

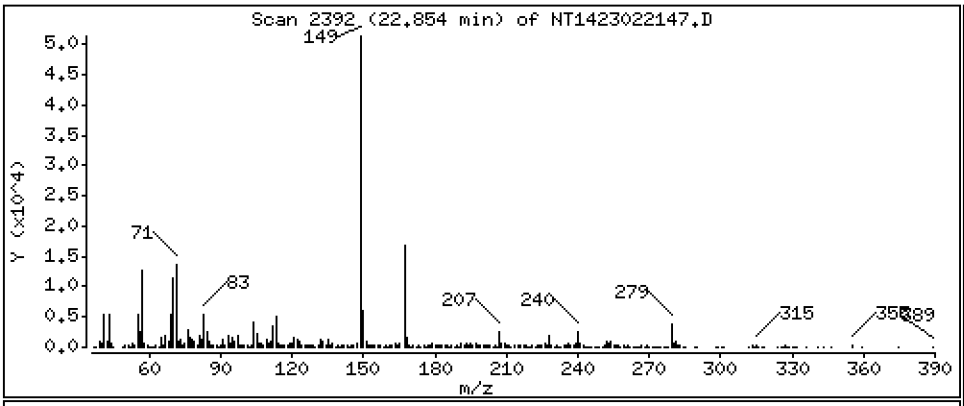
Operator: DSD

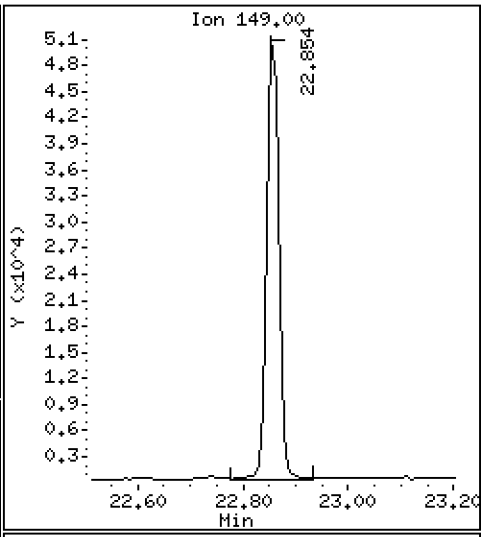
Column phase: ZB-5msi

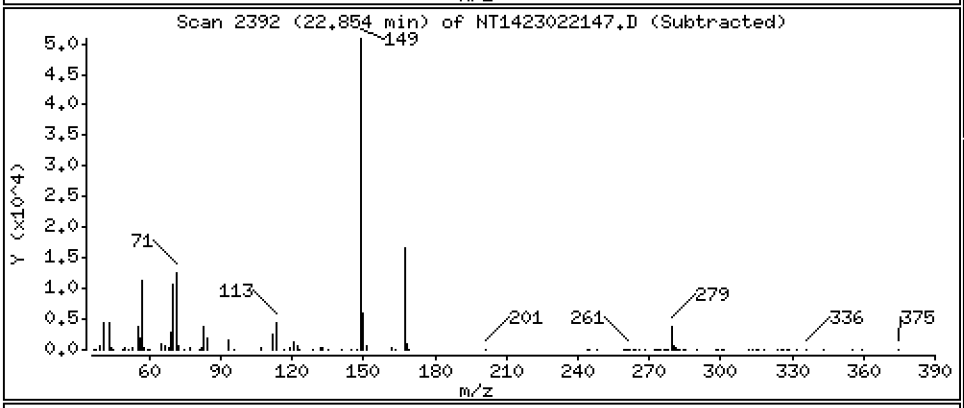
Column diameter: 0.25

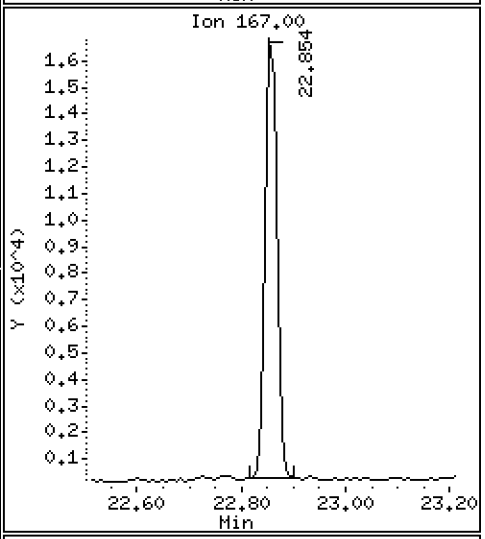
72 bis(2-Ethylhexyl)phthalate

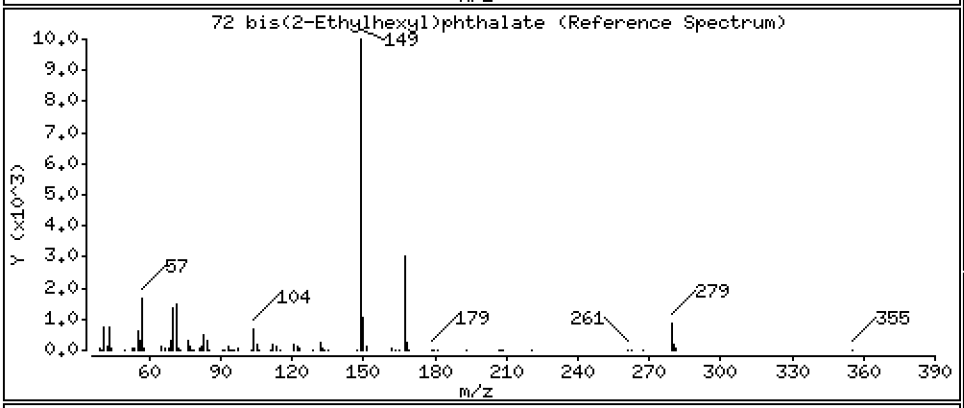
Concentration: 0.4083 ug/mL

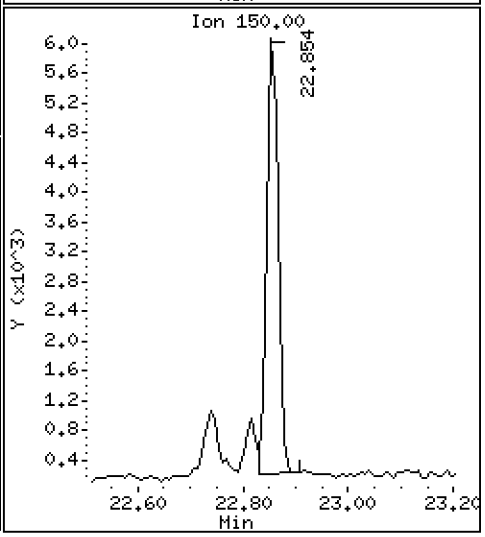


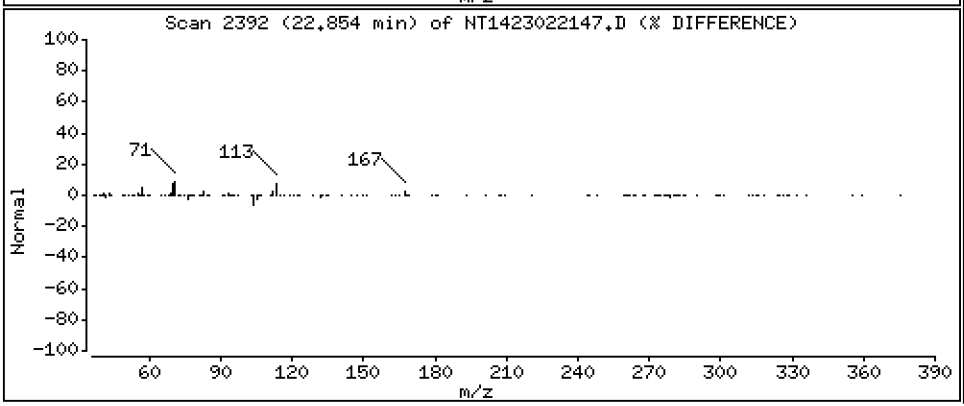












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

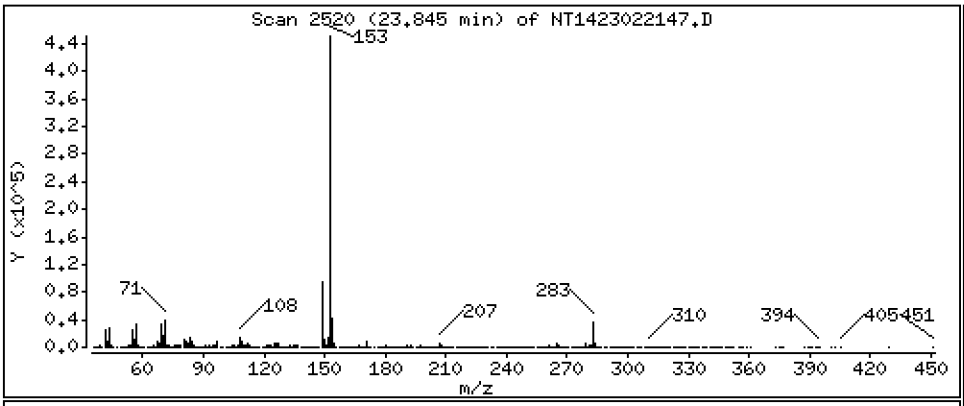
Operator: DSD

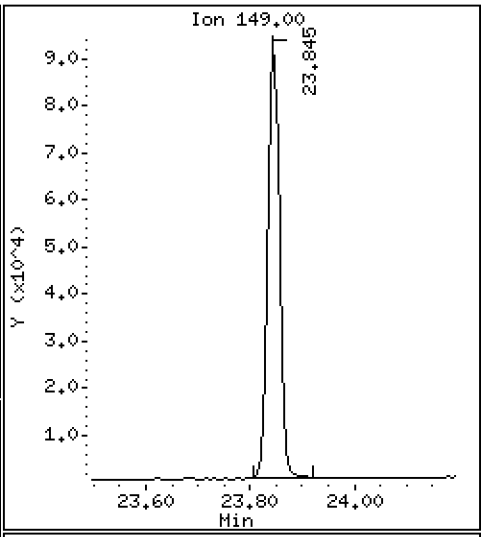
Column phase: ZB-5msi

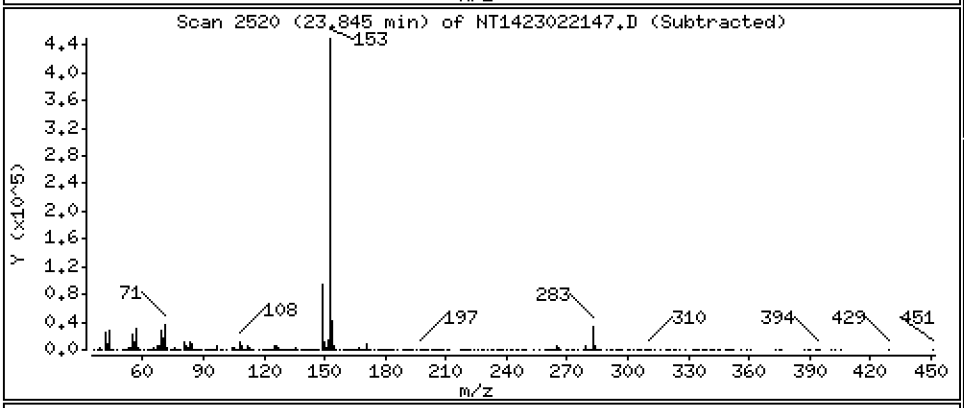
Column diameter: 0.25

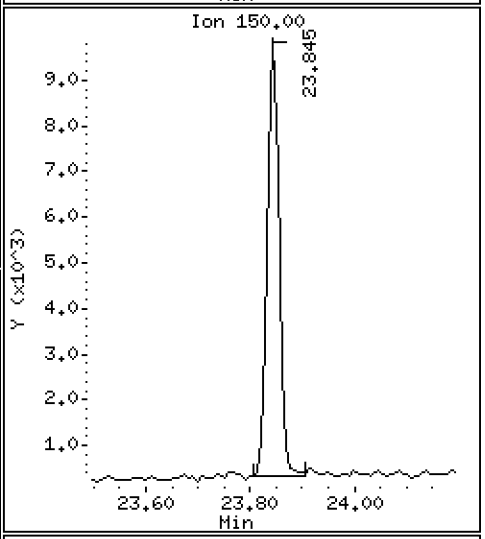
73 Di-n-octylphthalate

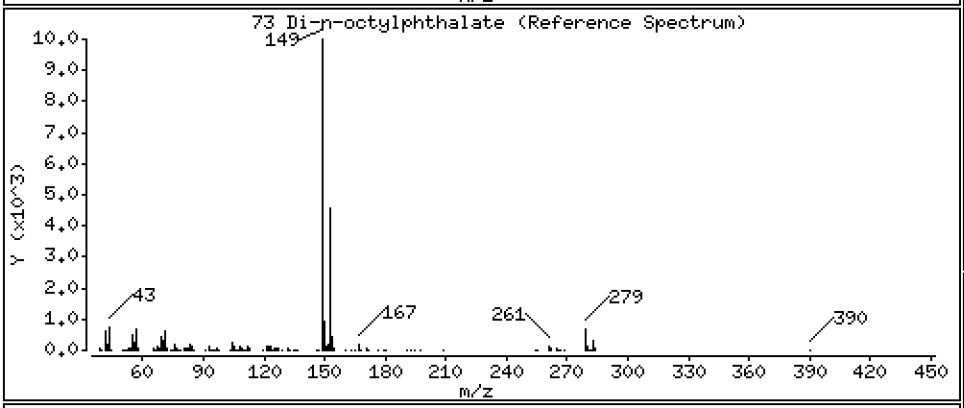
Concentration: 0.5279 ug/mL

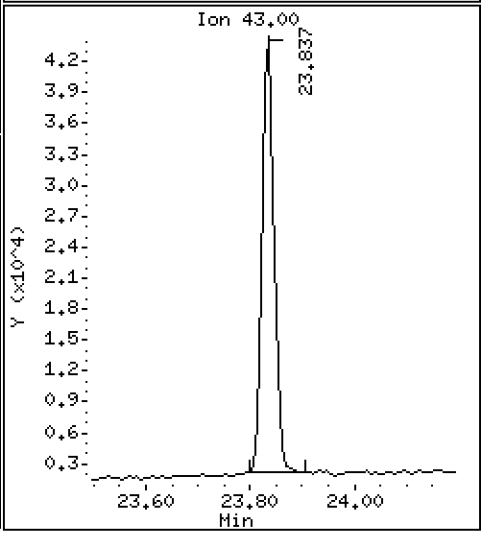


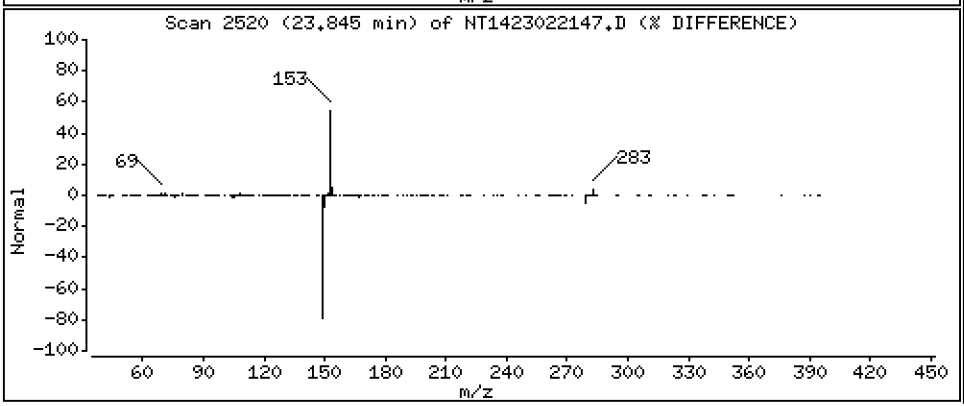












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

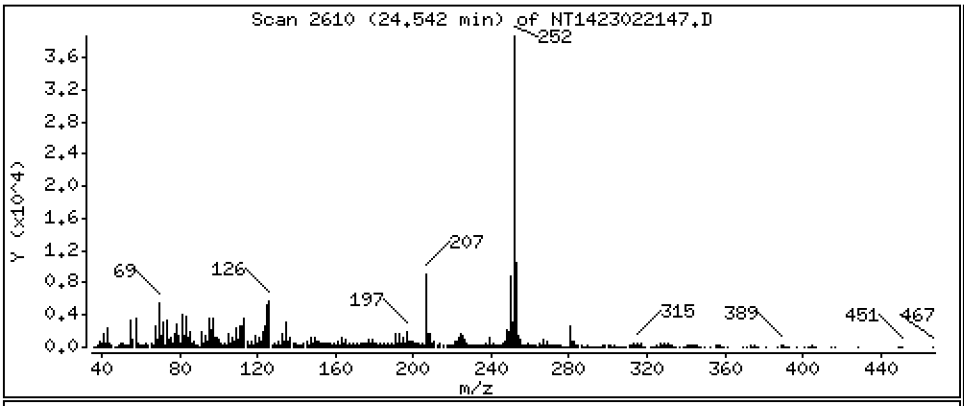
Operator: DSD

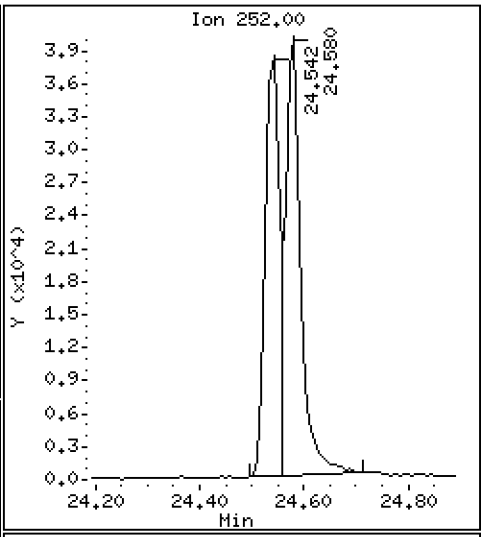
Column phase: ZB-5msi

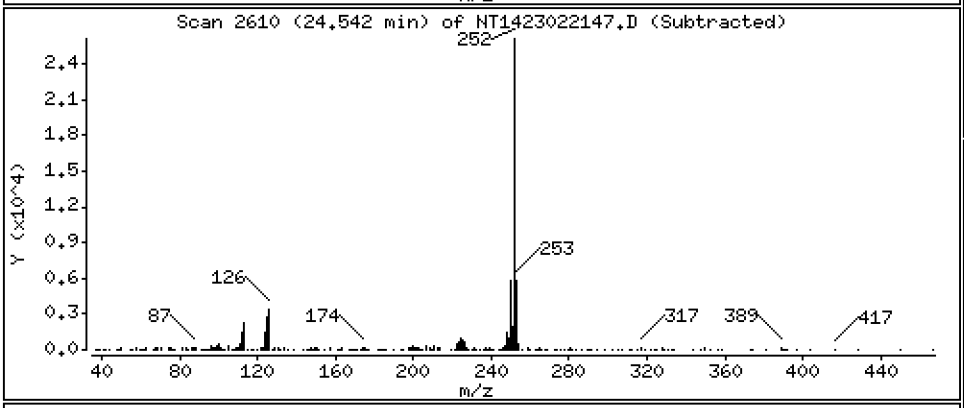
Column diameter: 0.25

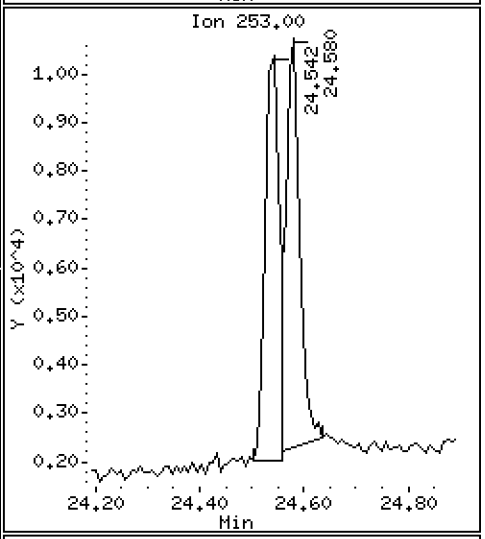
74 Benzo(b)fluoranthene

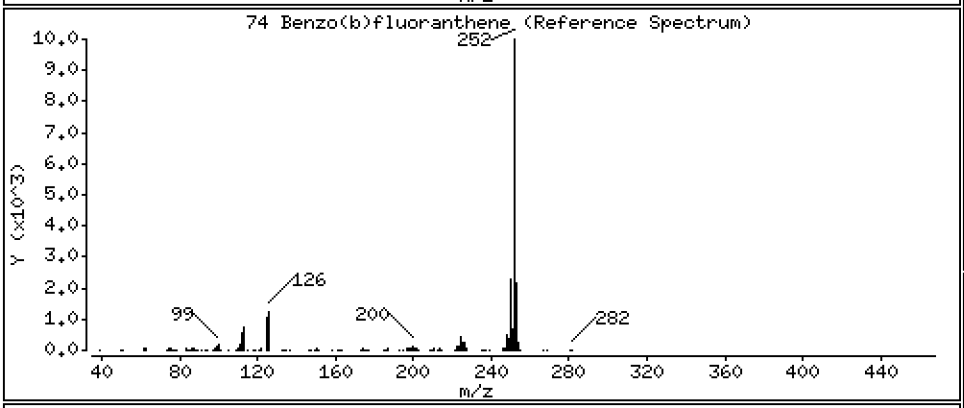
Concentration: 0.5134 ug/mL

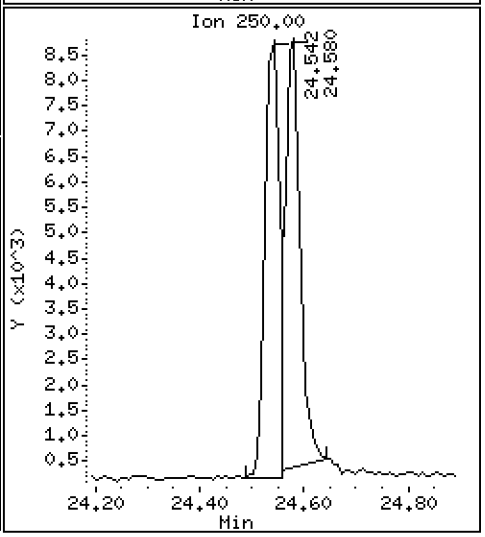


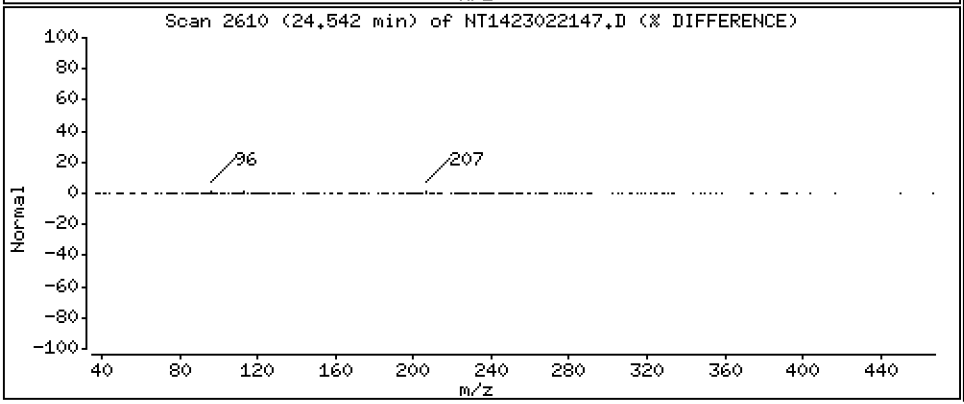












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

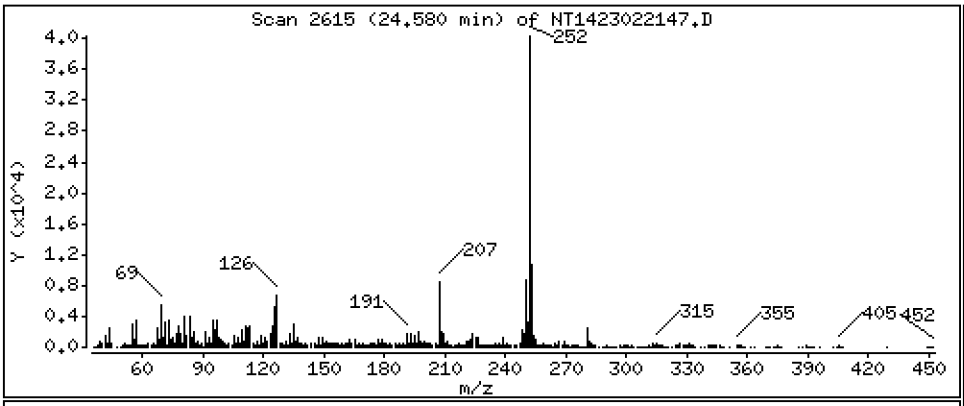
Operator: DSD

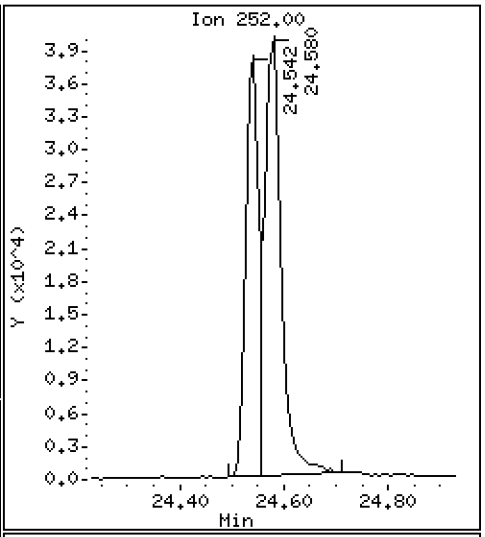
Column phase: ZB-5msi

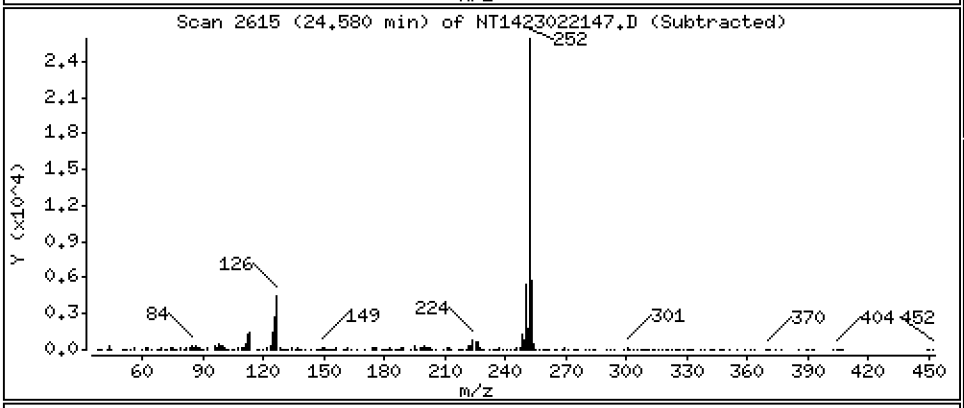
Column diameter: 0.25

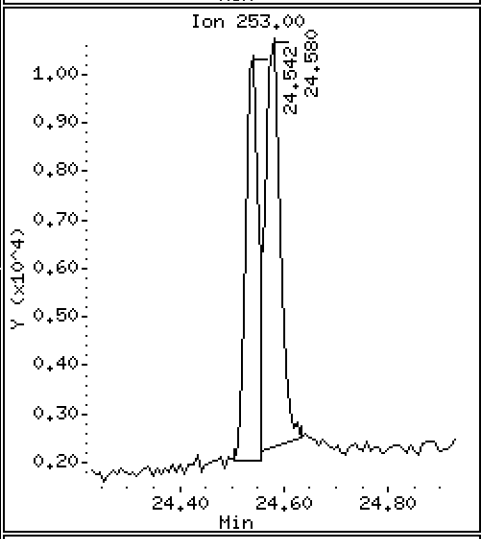
75 Benzo(k)fluoranthene

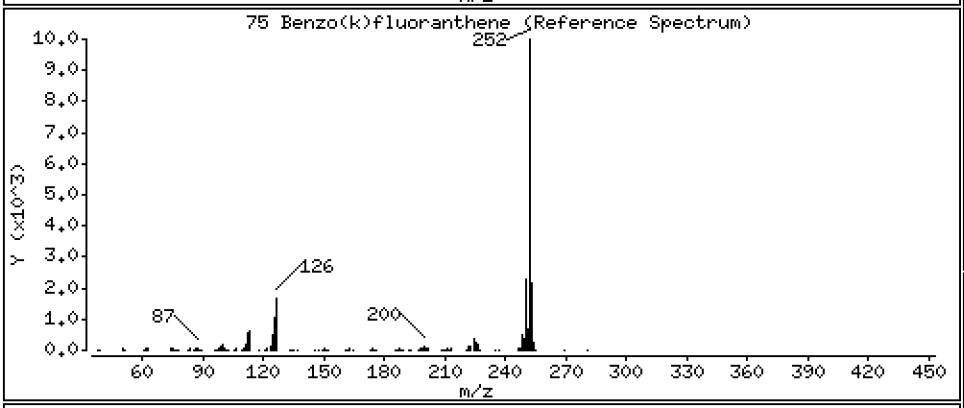
Concentration: 0.5948 ug/mL

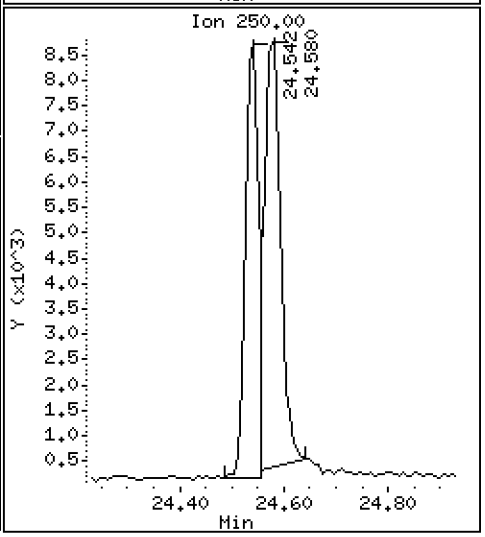


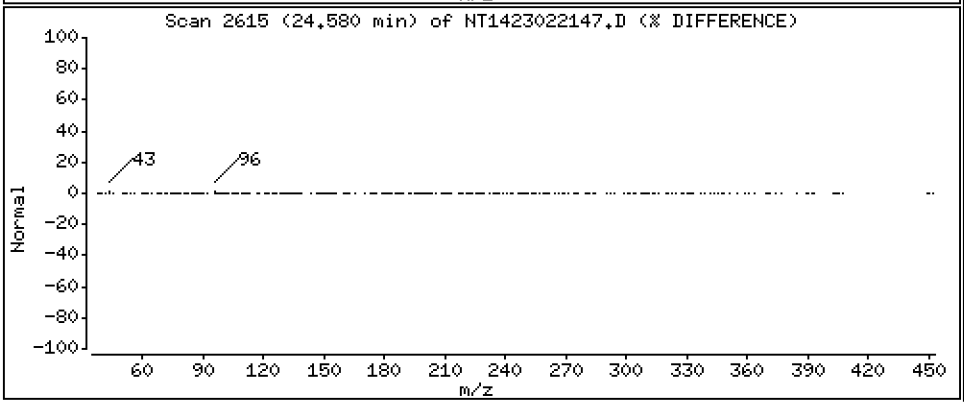












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

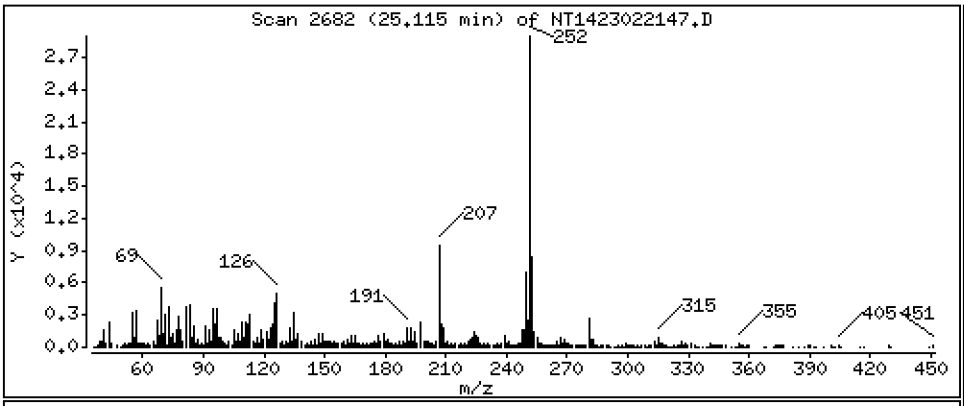
Operator: DSD

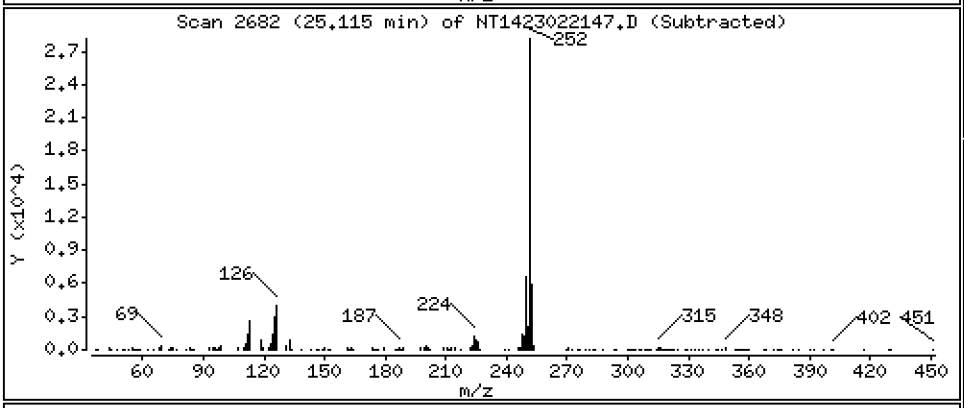
Column phase: ZB-5msi

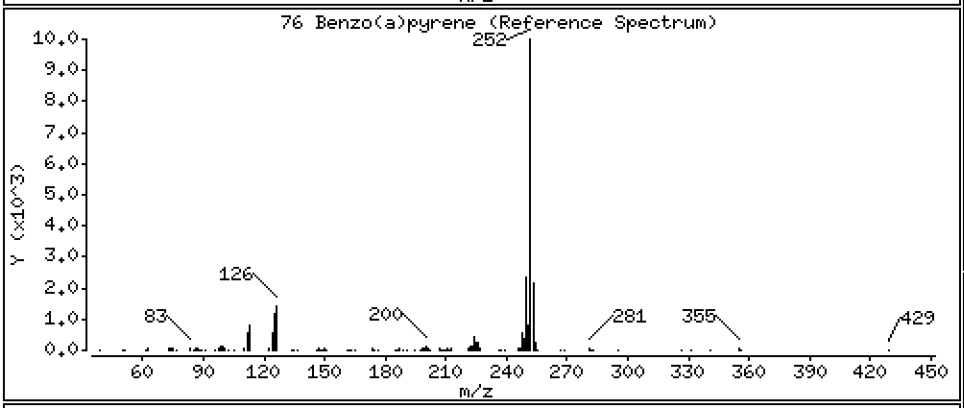
Column diameter: 0.25

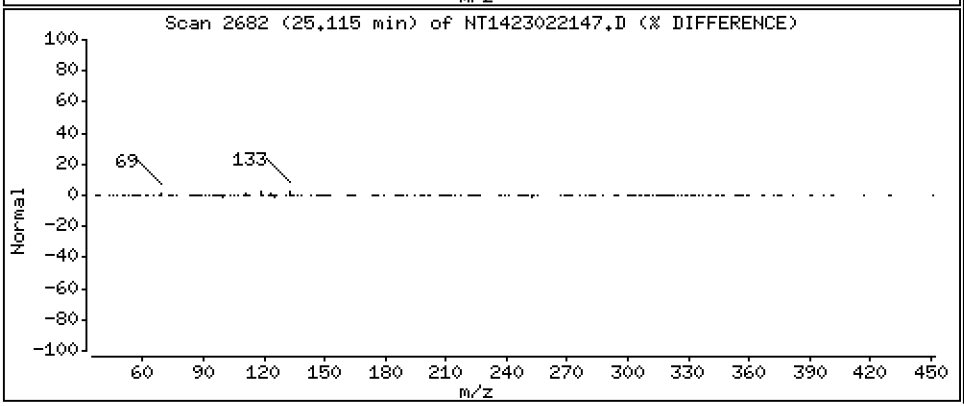
76 Benzo(a)pyrene

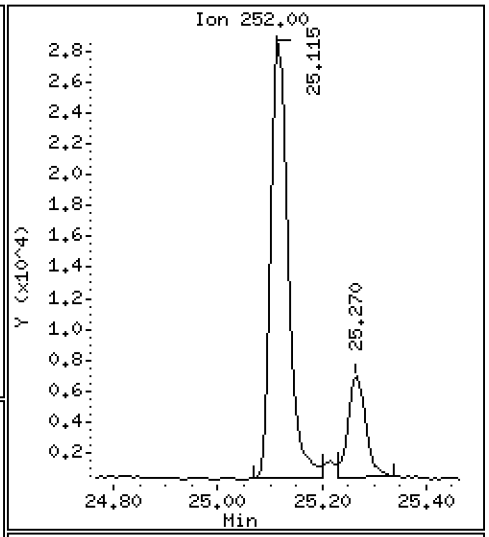
Concentration: 0.4872 ug/mL

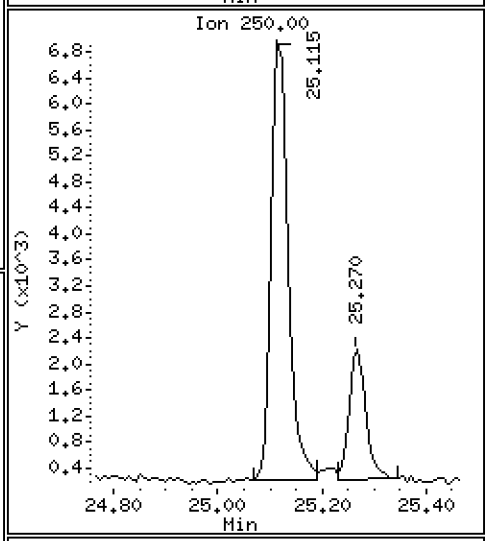


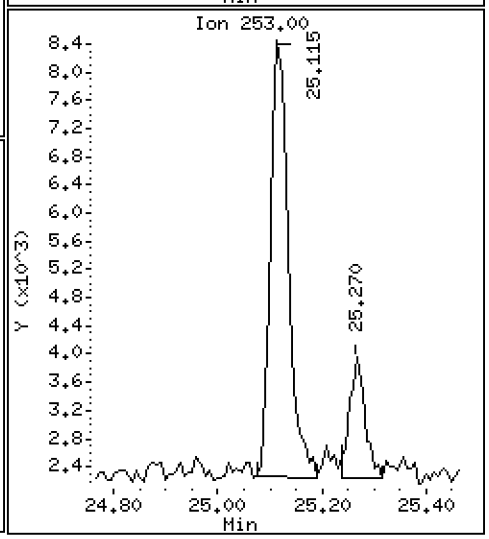












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

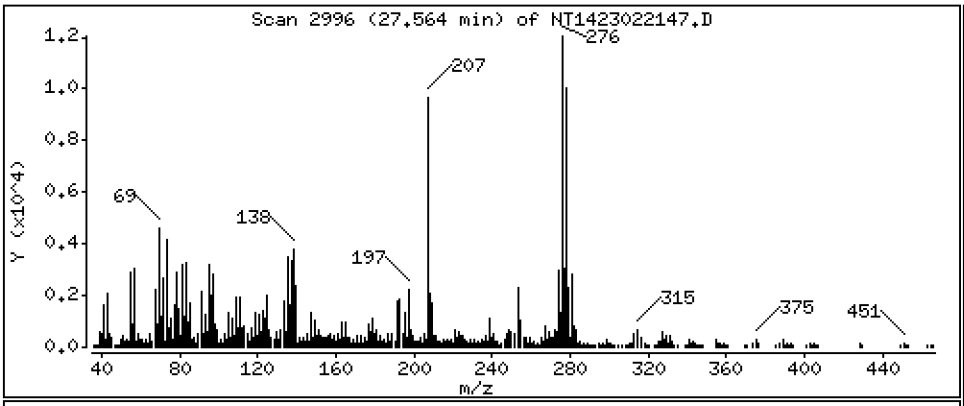
Operator: DSD

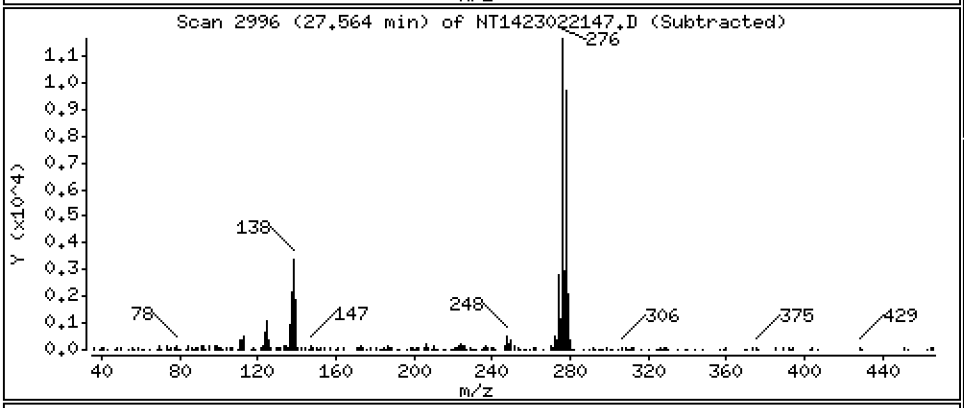
Column phase: ZB-5msi

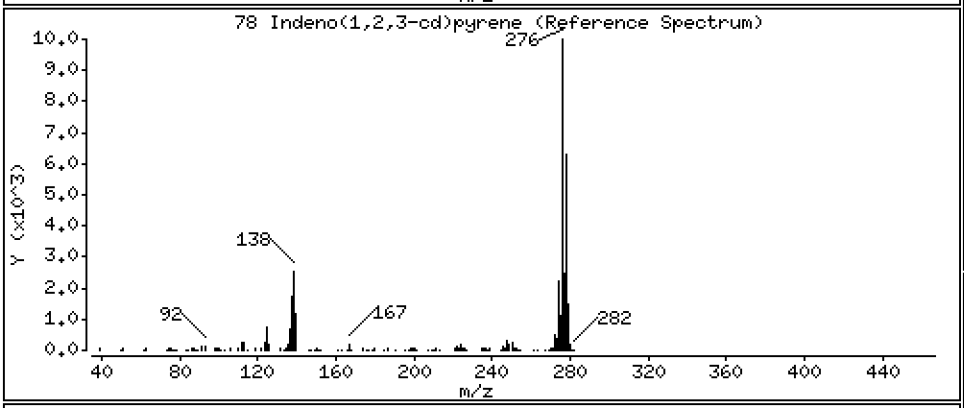
Column diameter: 0.25

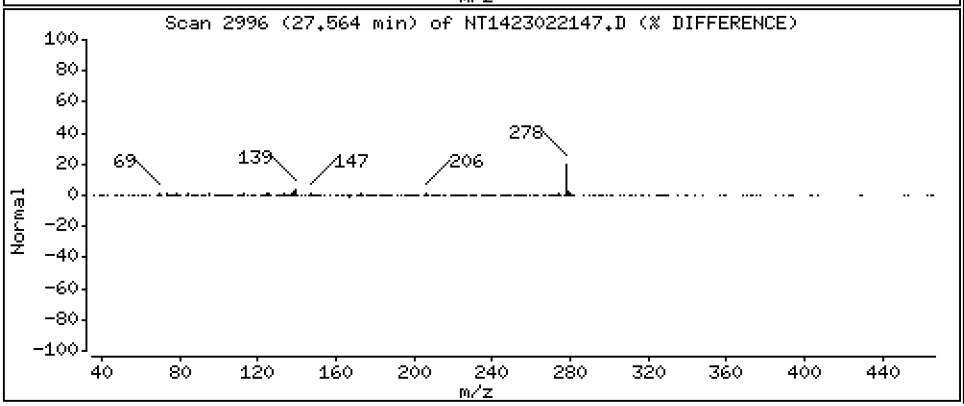
78 Indeno(1,2,3-cd)pyrene

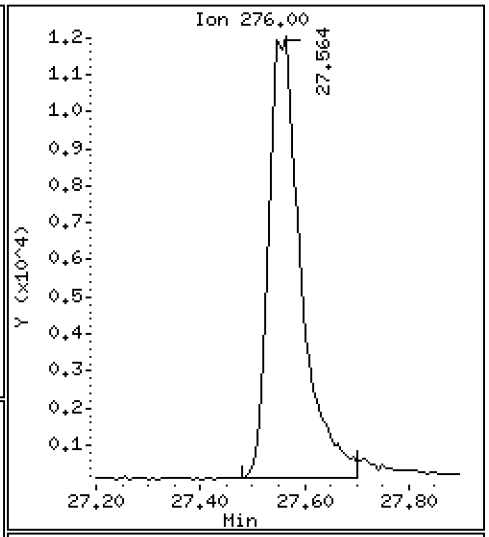
Concentration: 0.4767 ug/mL

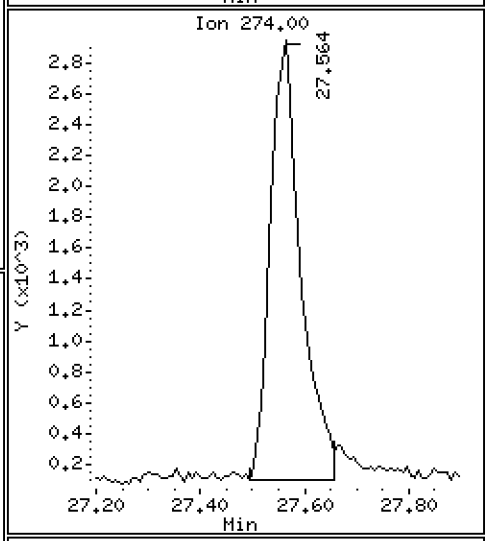


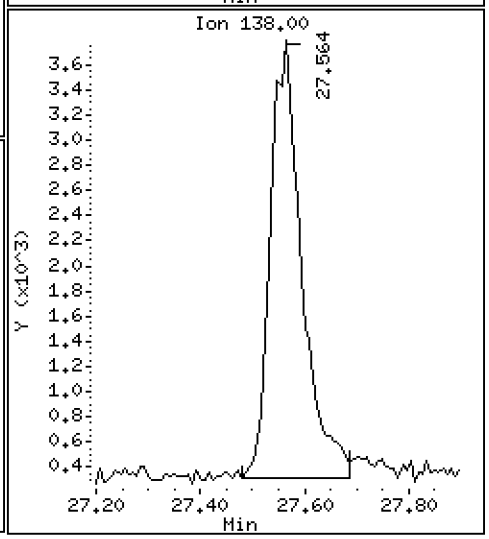












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022147.D

Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

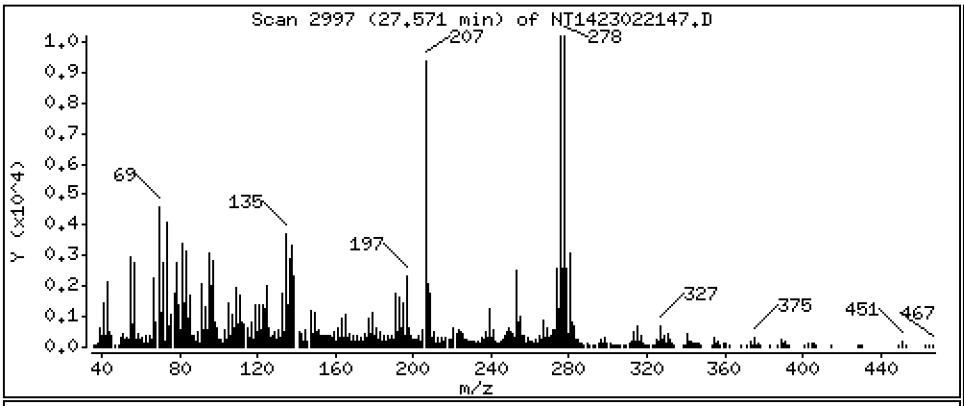
Operator: DSD

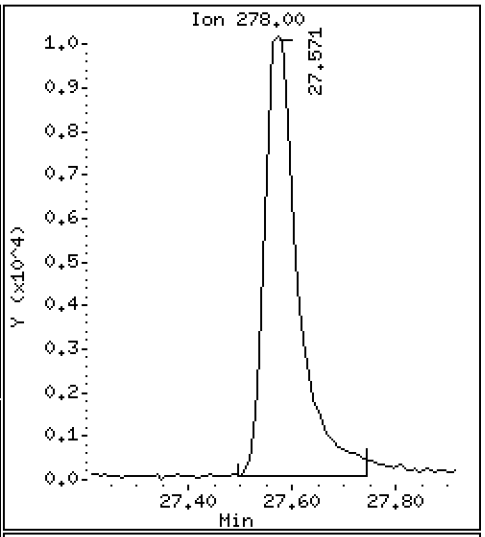
Column phase: ZB-5msi

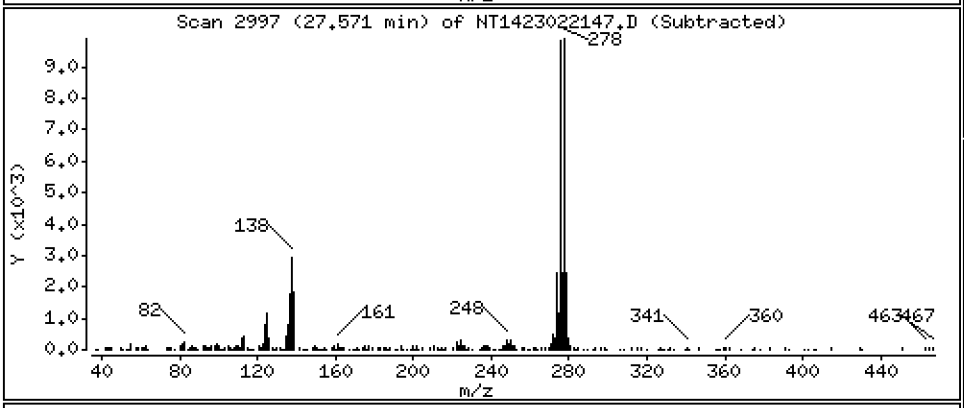
Column diameter: 0.25

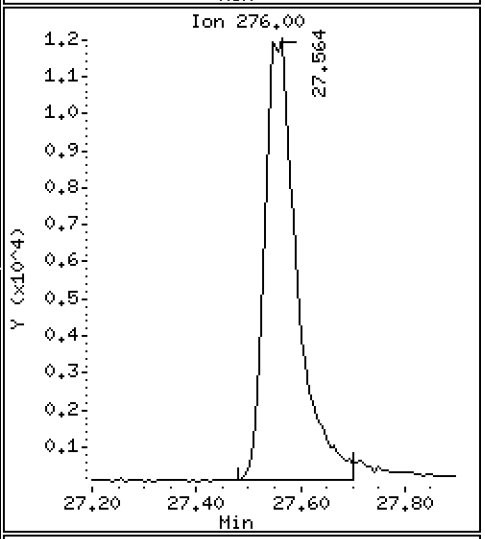
79 Dibenzo(a,h)anthracene

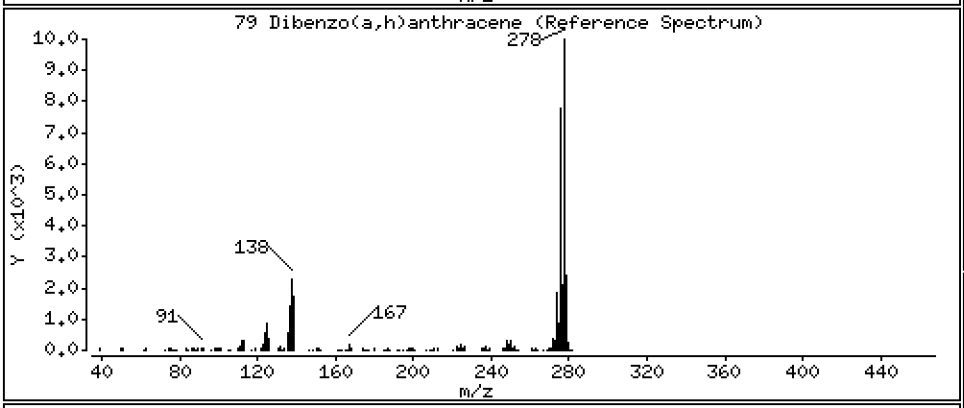
Concentration: 0.5044 ug/mL

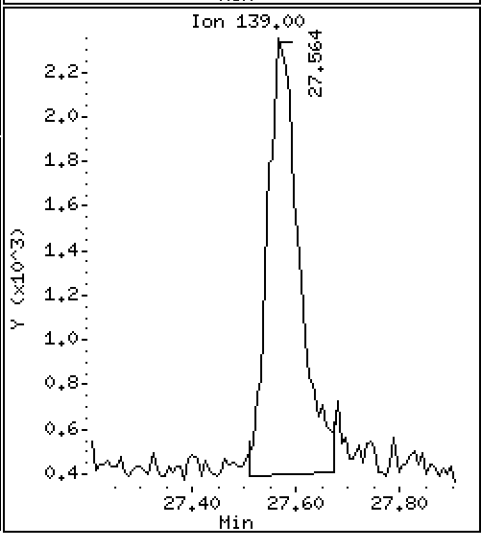


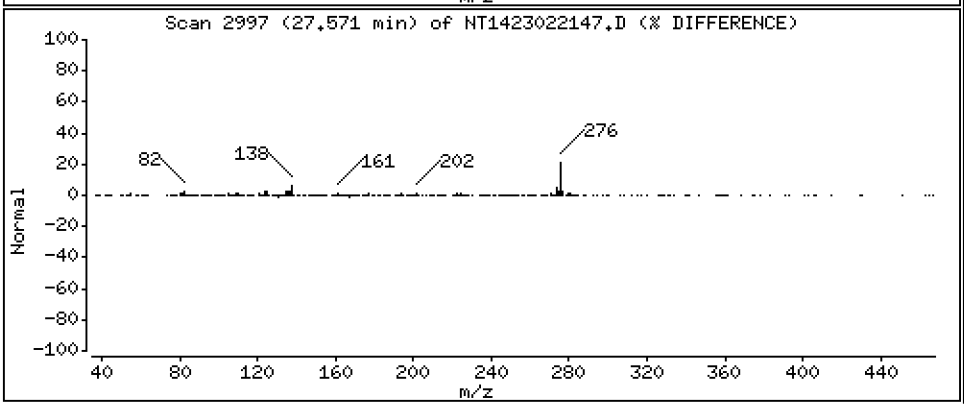












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

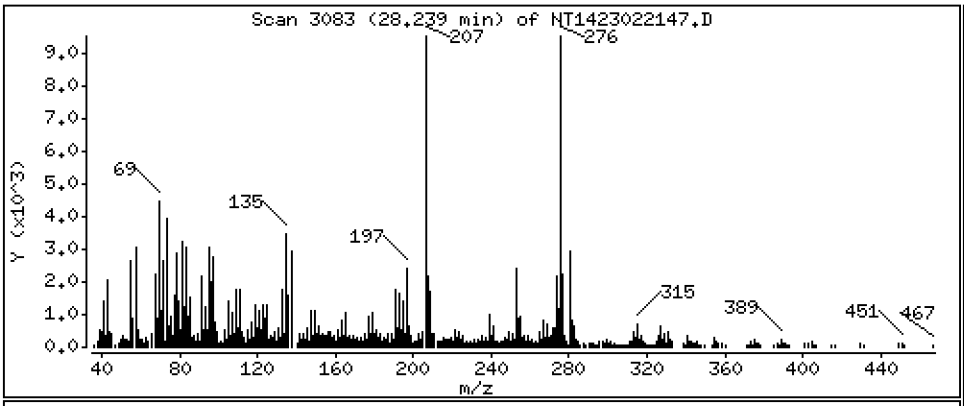
Operator: DSD

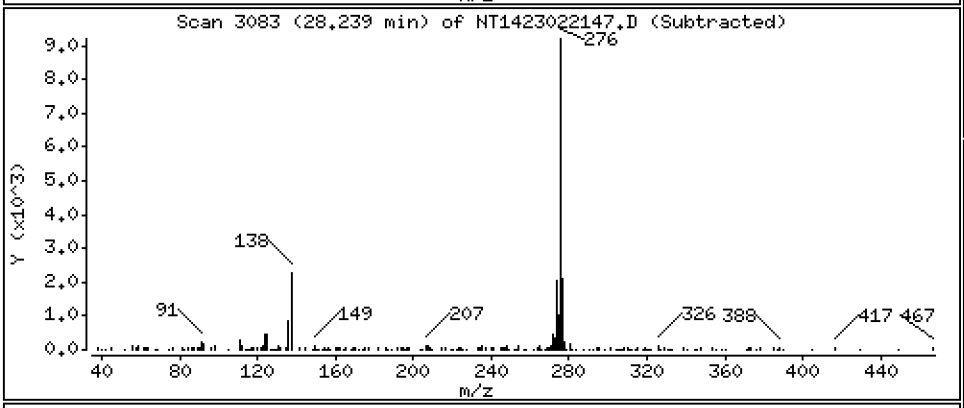
Column phase: ZB-5msi

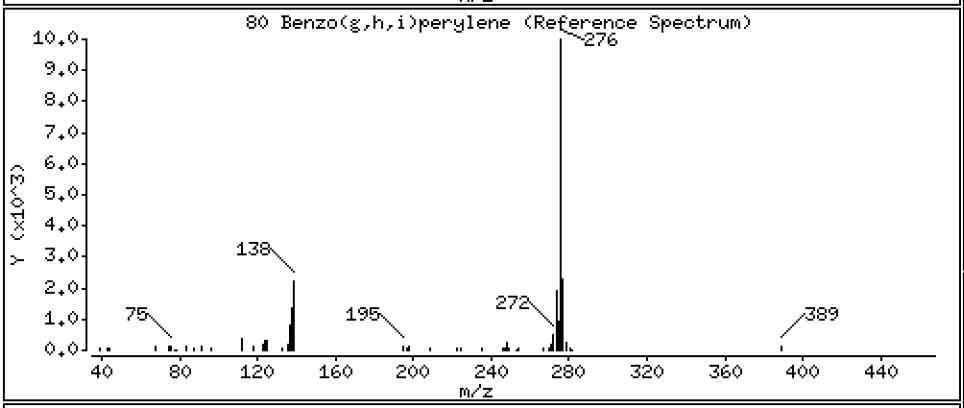
Column diameter: 0.25

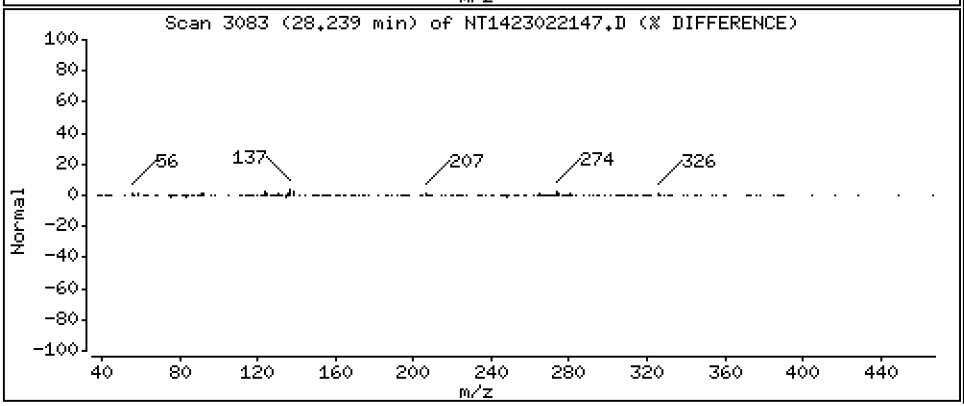
80 Benzo(g,h,i)perylene

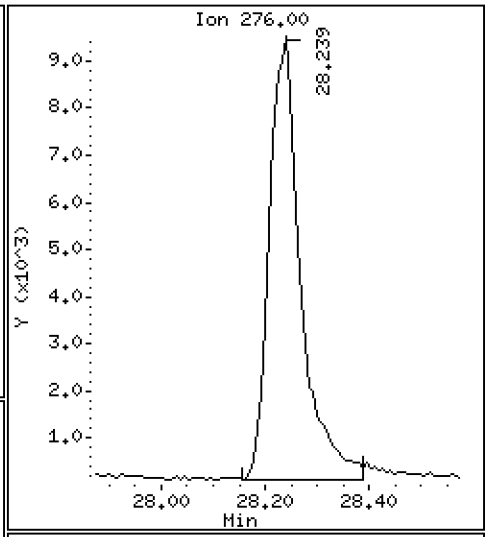
Concentration: 0.4472 ug/mL

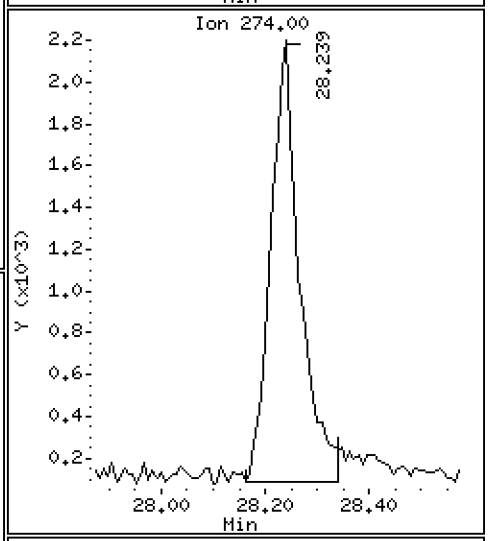


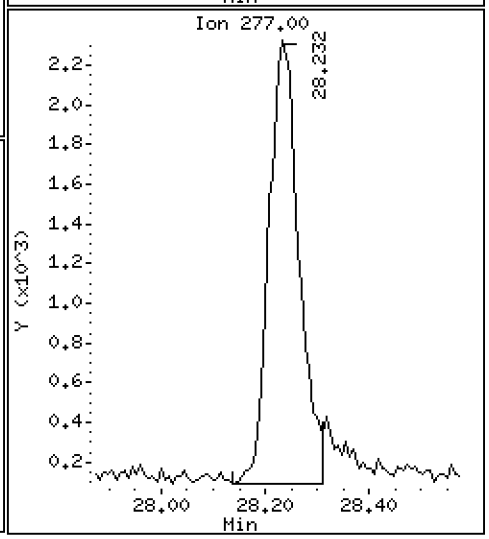












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

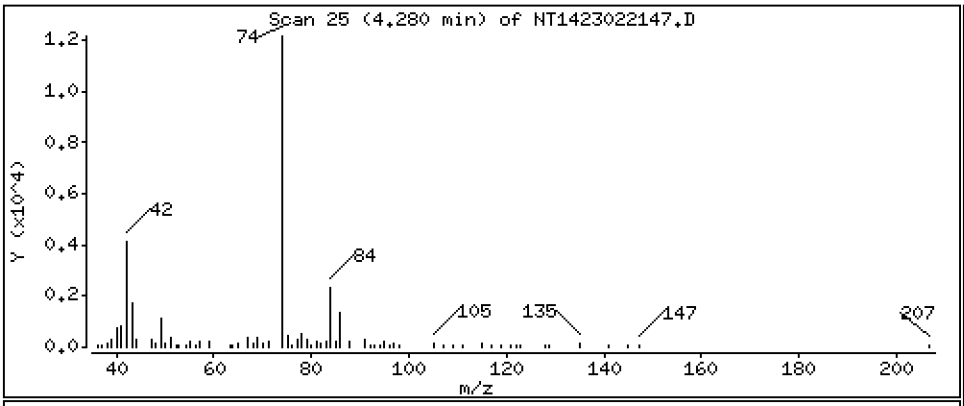
Operator: DSD

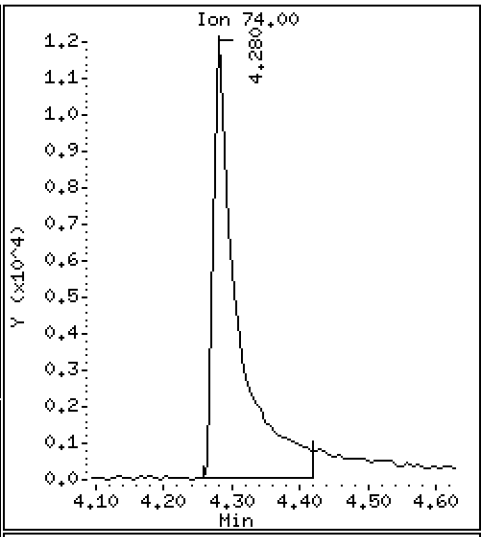
Column phase: ZB-5msi

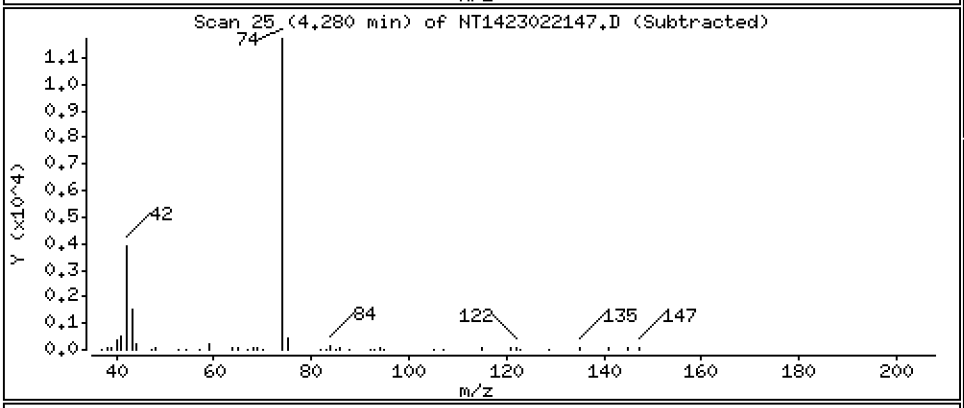
Column diameter: 0.25

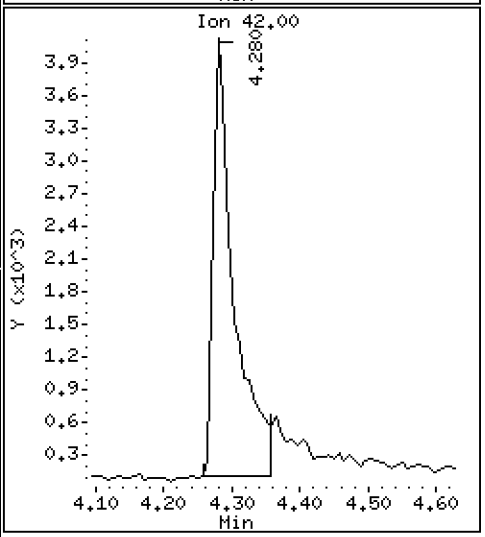
90 N-Nitrosodimethylamine

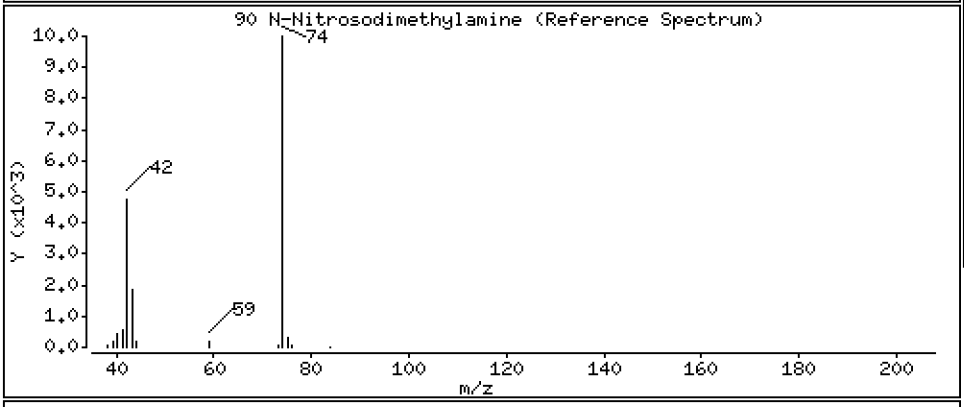
Concentration: 0.7173 ug/mL

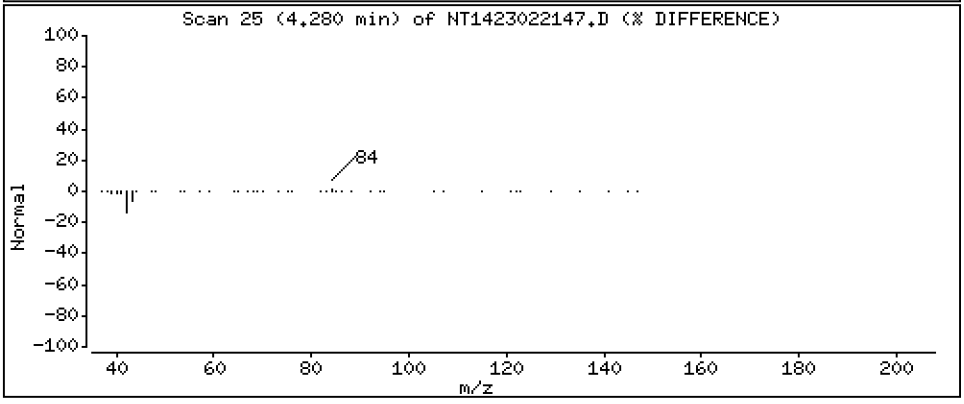












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

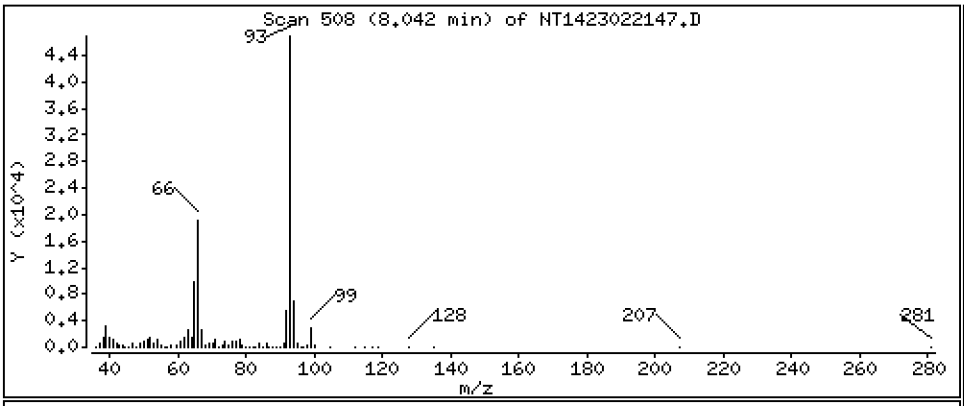
Operator: DSD

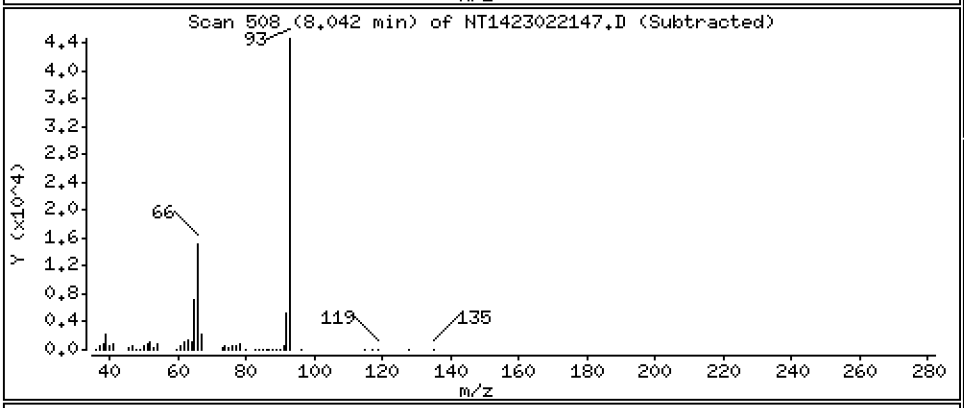
Column phase: ZB-5msi

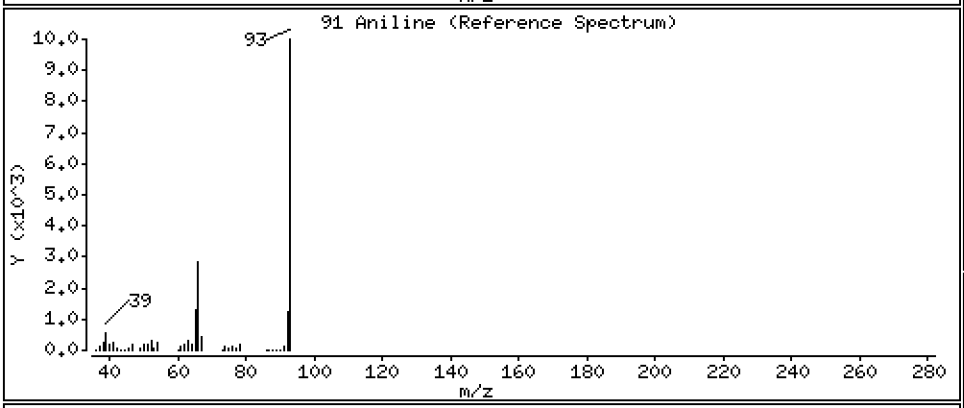
Column diameter: 0.25

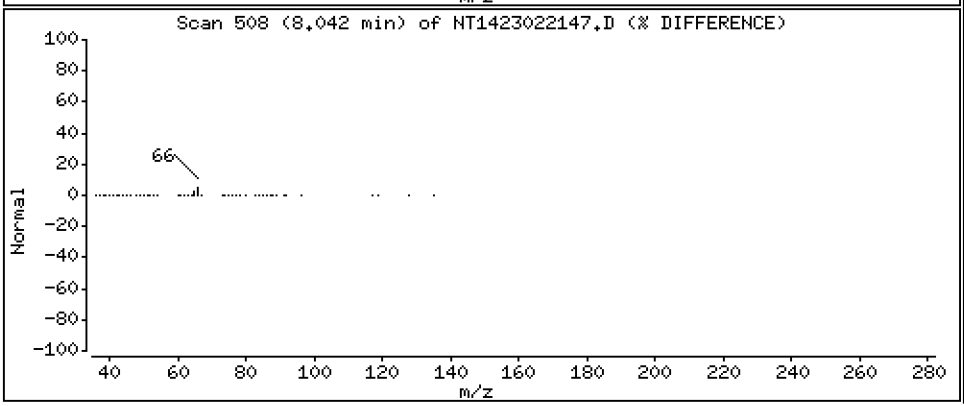
91 Aniline

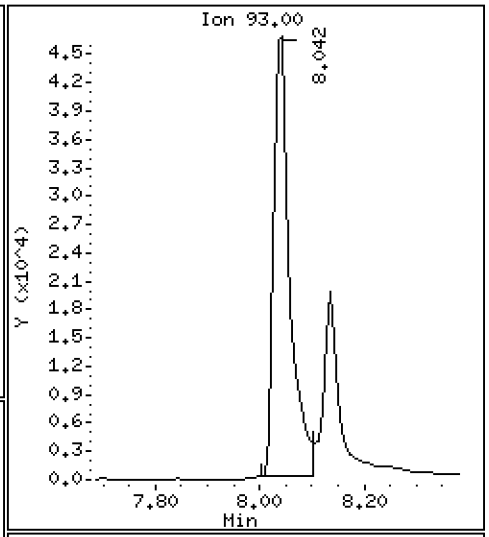
Concentration: 1.010 ug/mL

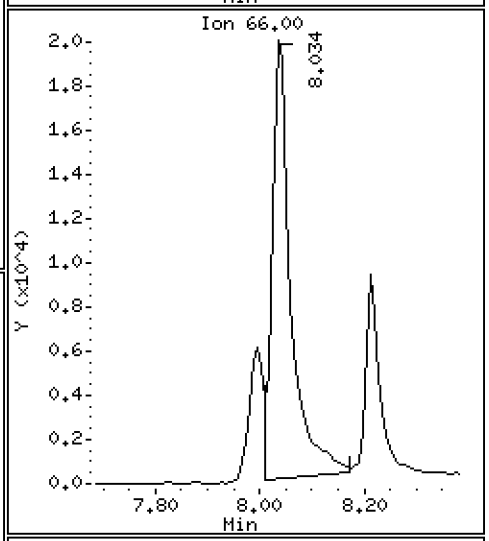


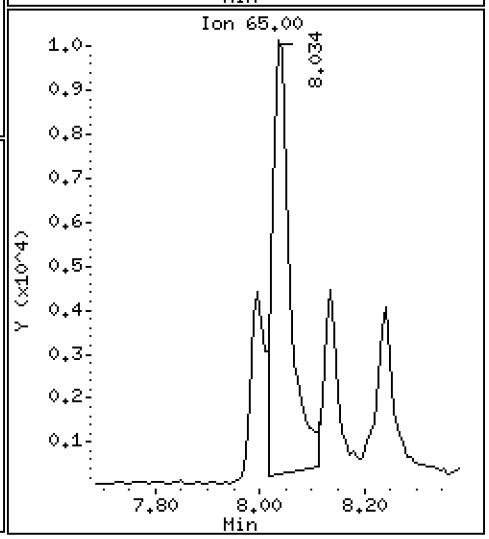












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

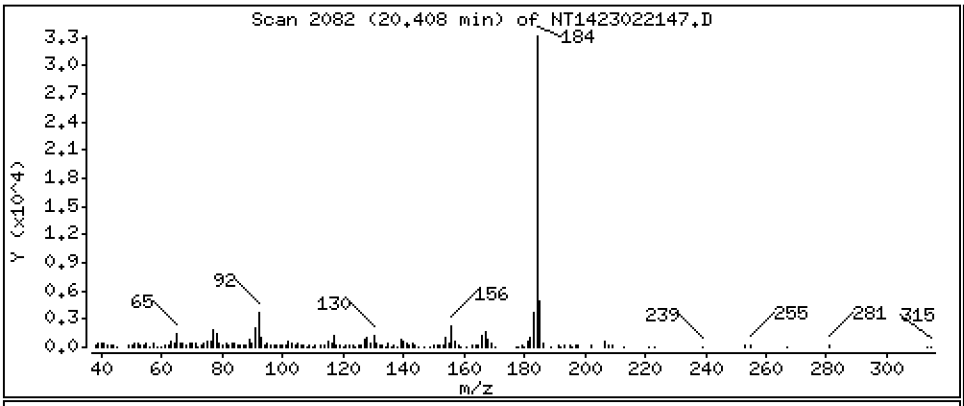
Operator: DSD

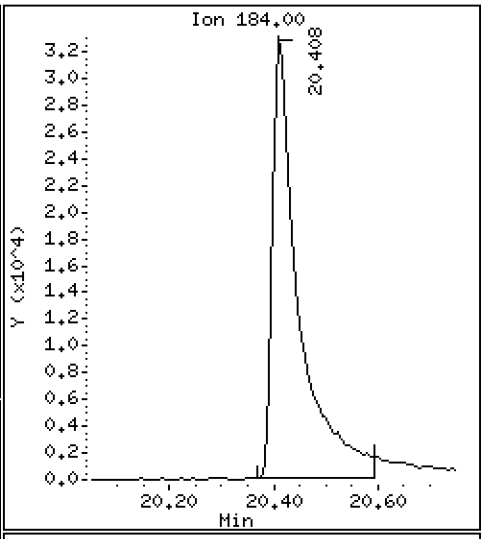
Column phase: ZB-5msi

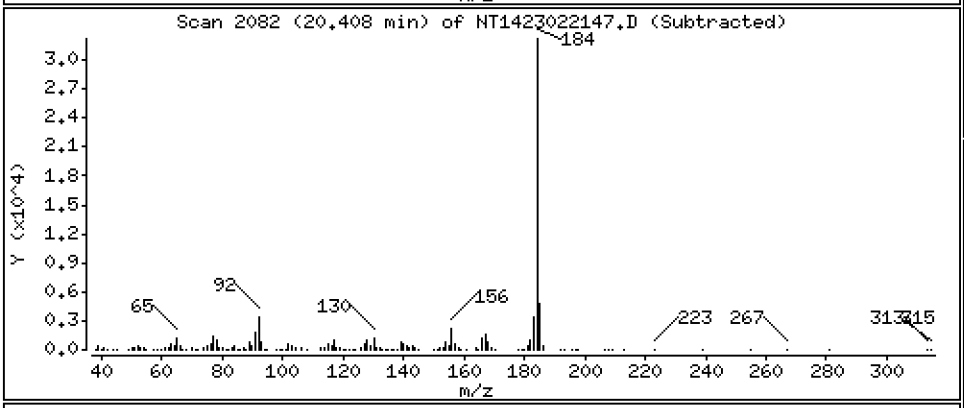
Column diameter: 0.25

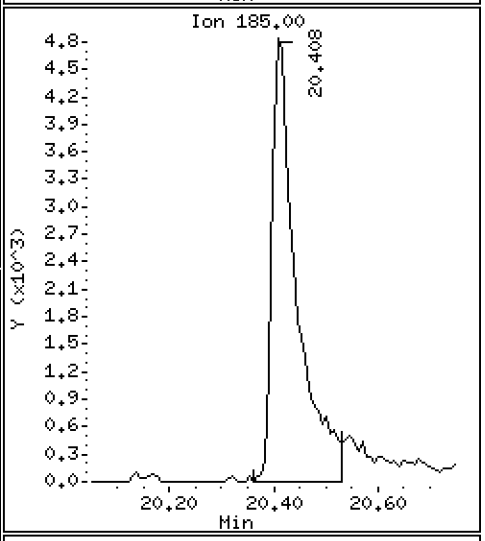
93 Benzidine

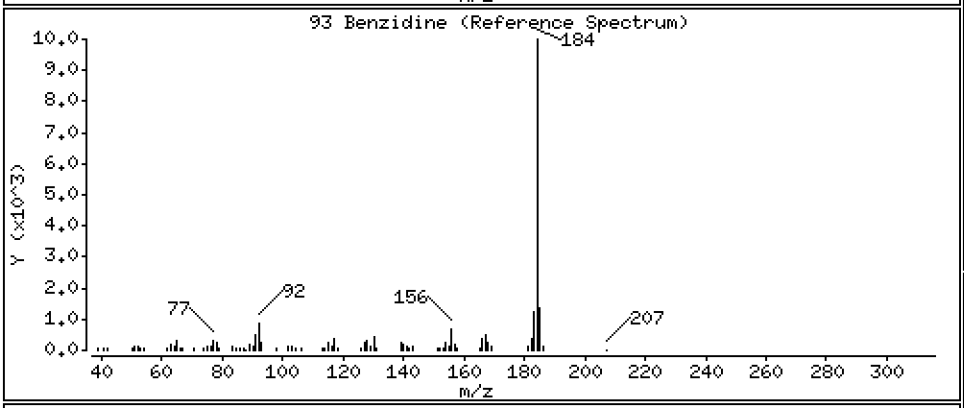
Concentration: 1.659 ug/mL

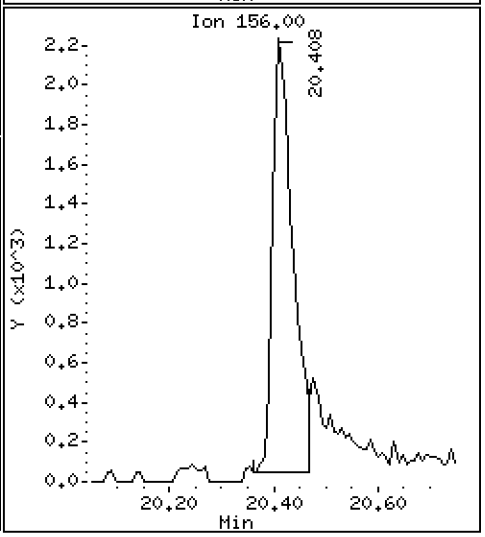


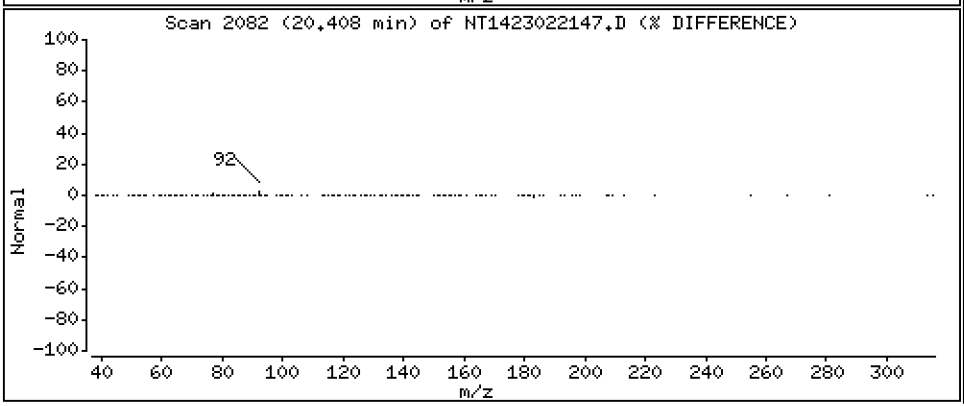












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

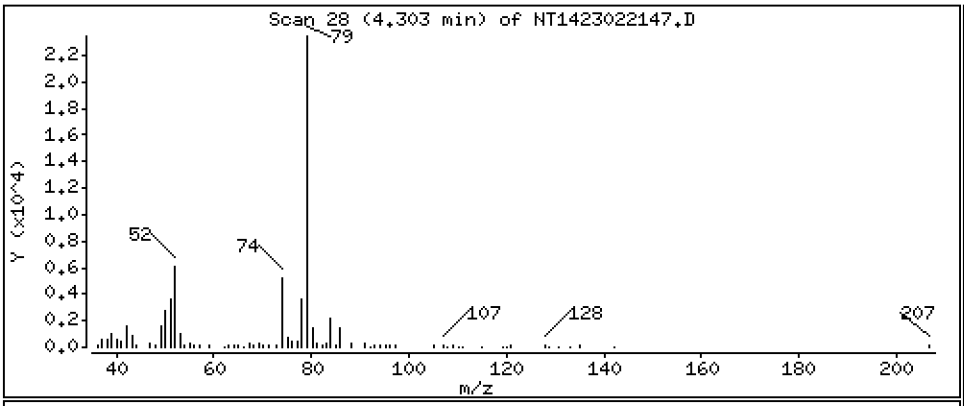
Operator: DSD

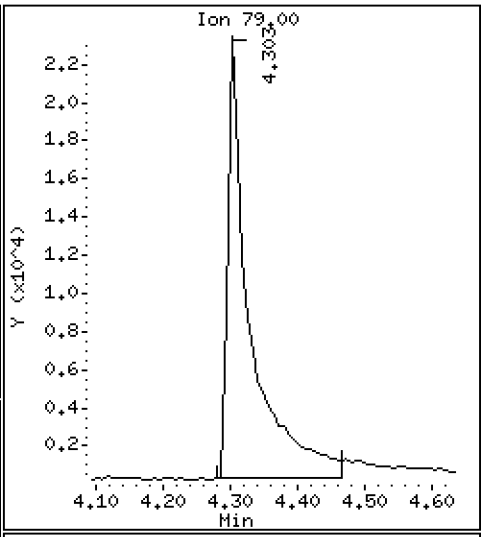
Column phase: ZB-5msi

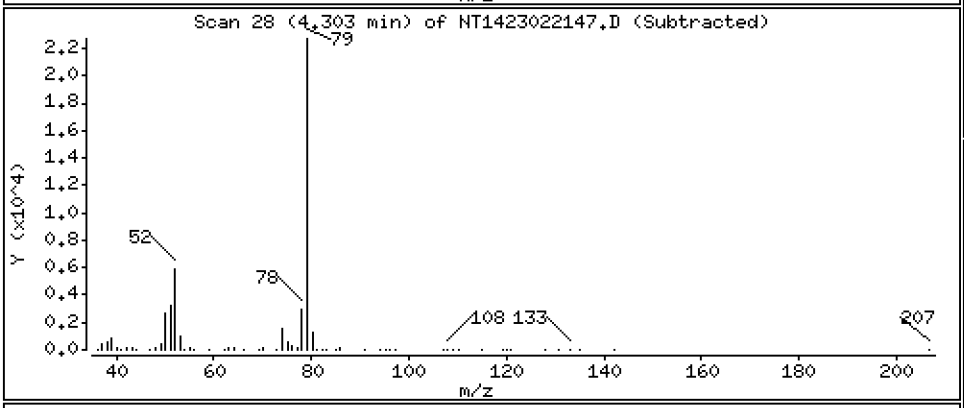
Column diameter: 0.25

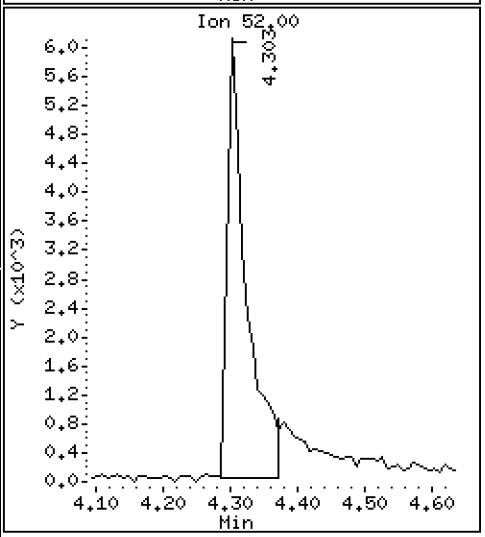
103 Pyridine

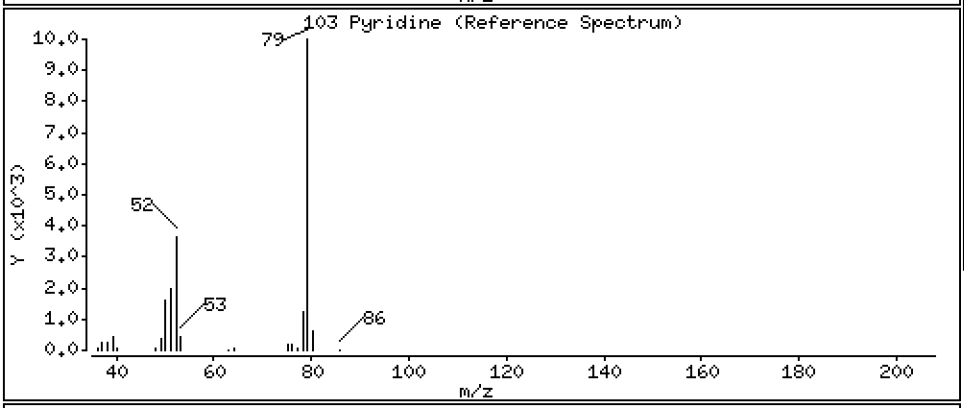
Concentration: 0.7947 ug/mL

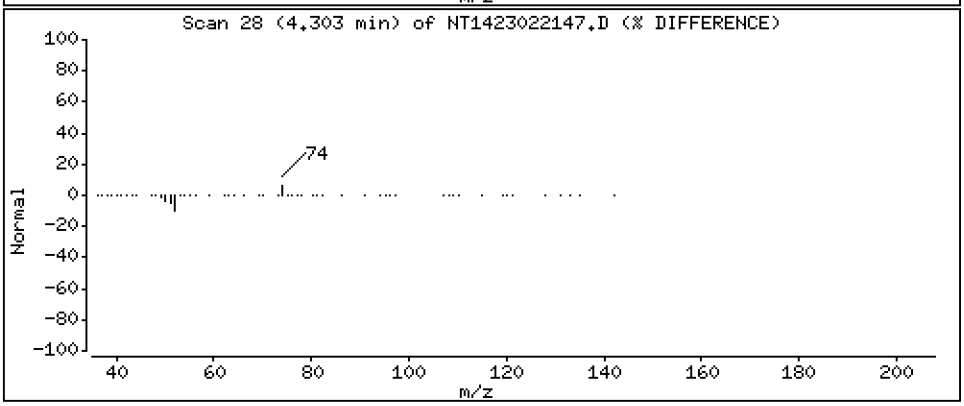












Data File: \\target\share\chem3\nt14.i\20230221C.b\NT1423022147.D

Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

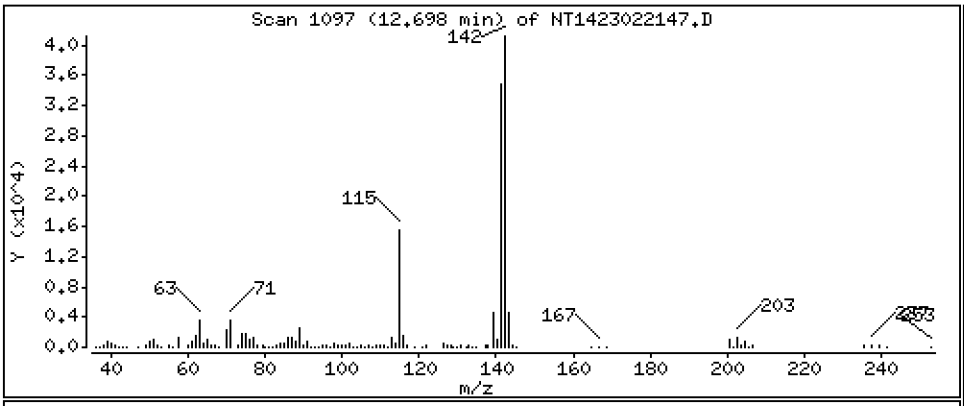
Operator: DSD

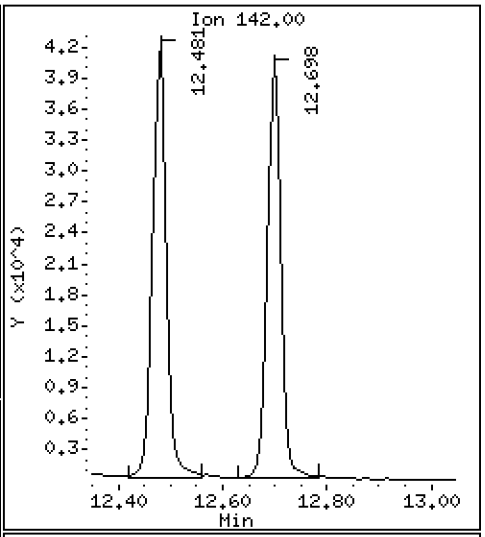
Column phase: ZB-5msi

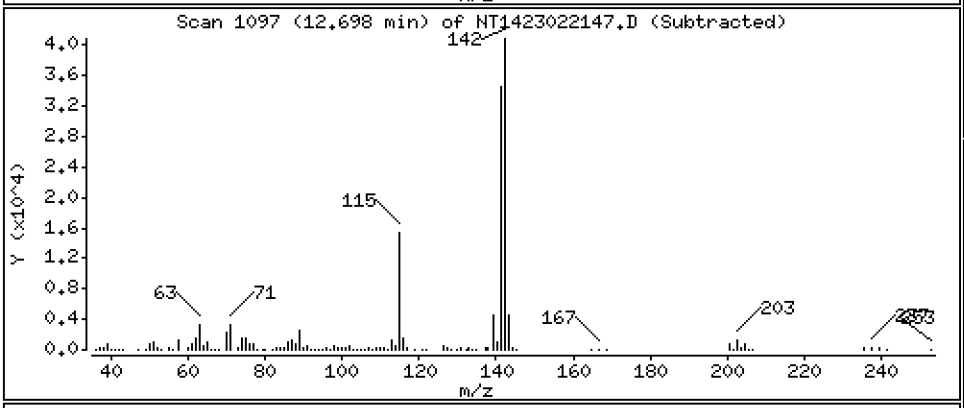
Column diameter: 0.25

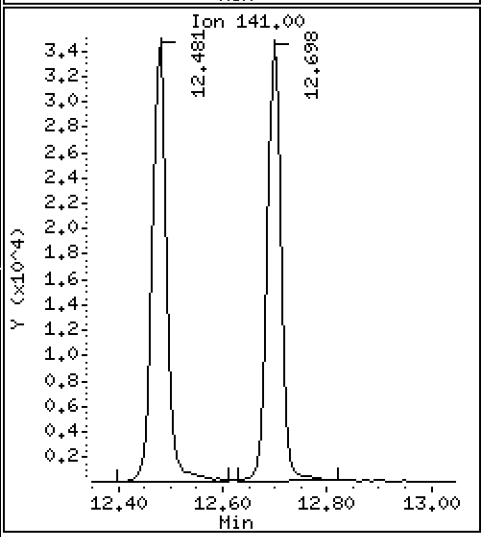
105 1-methylnaphthalene

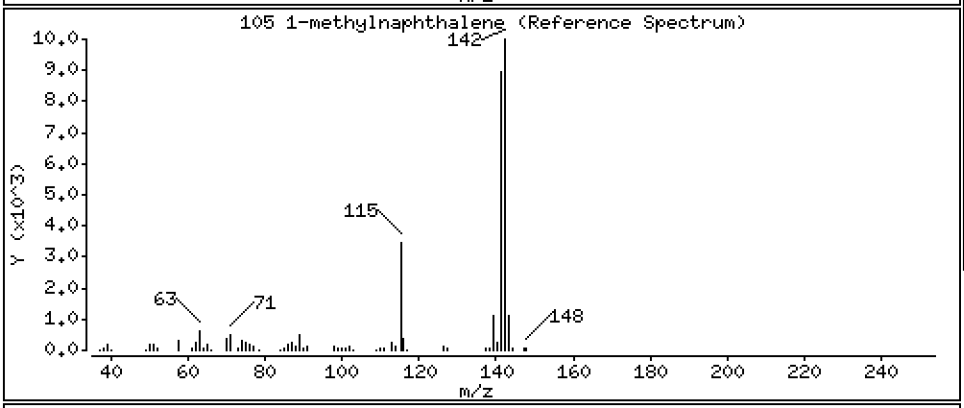
Concentration: 0.5322 ug/mL

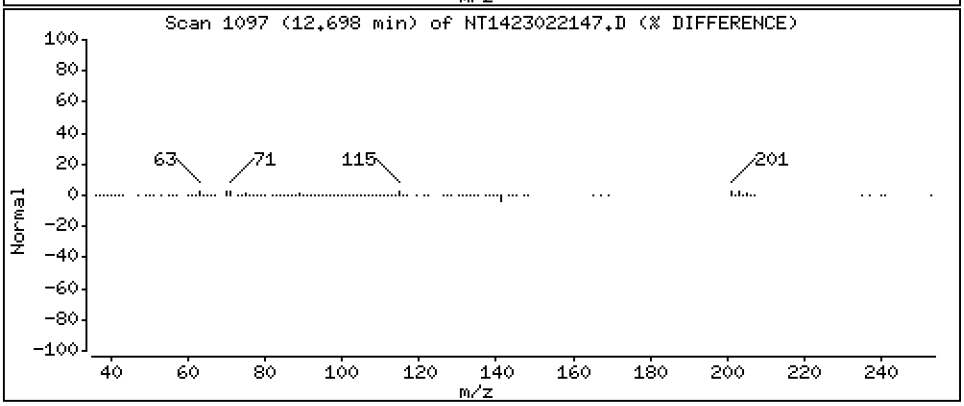












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

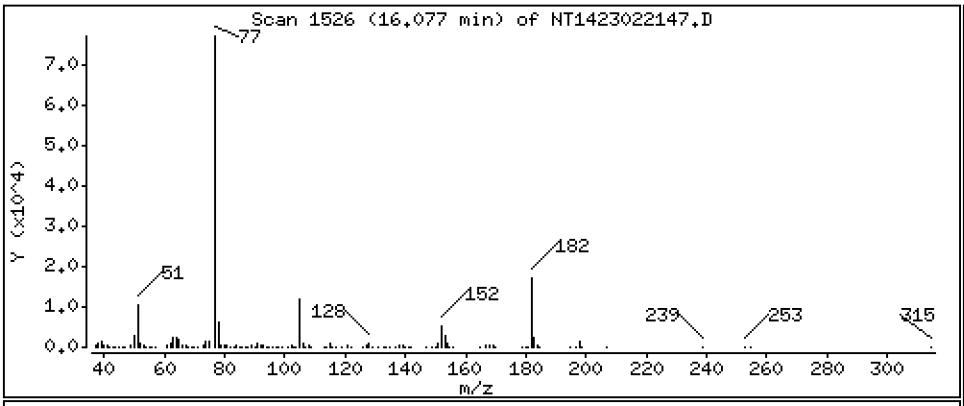
Operator: DSD

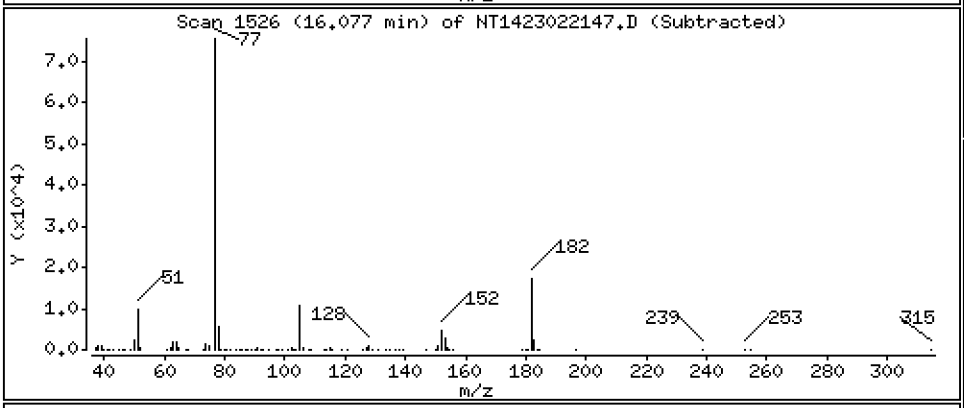
Column phase: ZB-5msi

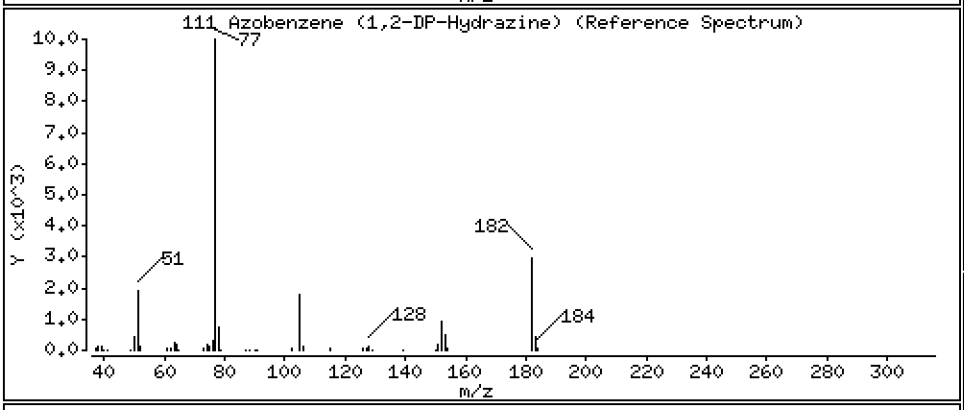
Column diameter: 0.25

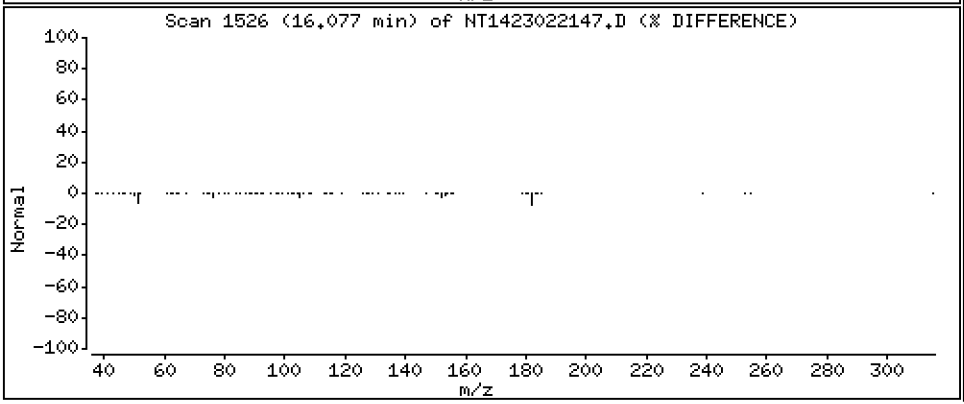
111 Azobenzene (1,2-DP-Hydrazine)

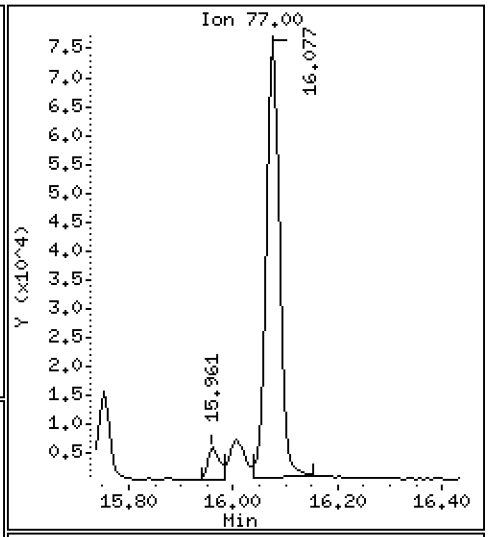
Concentration: 0.5682 ug/mL

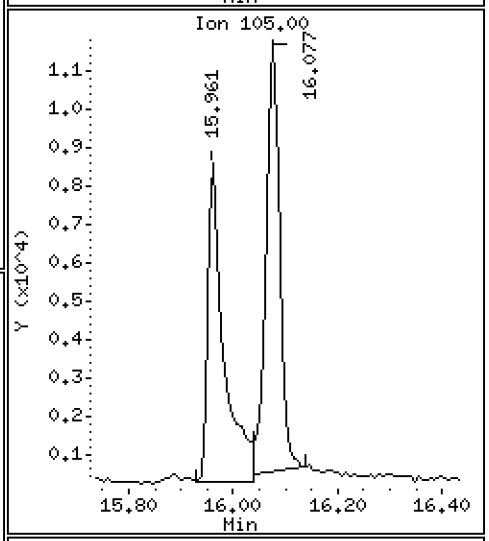


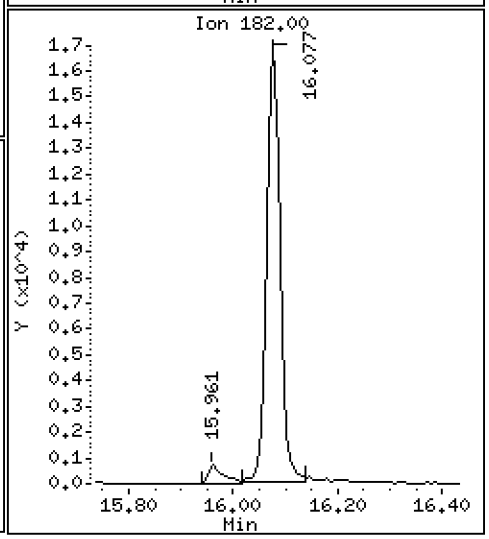












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

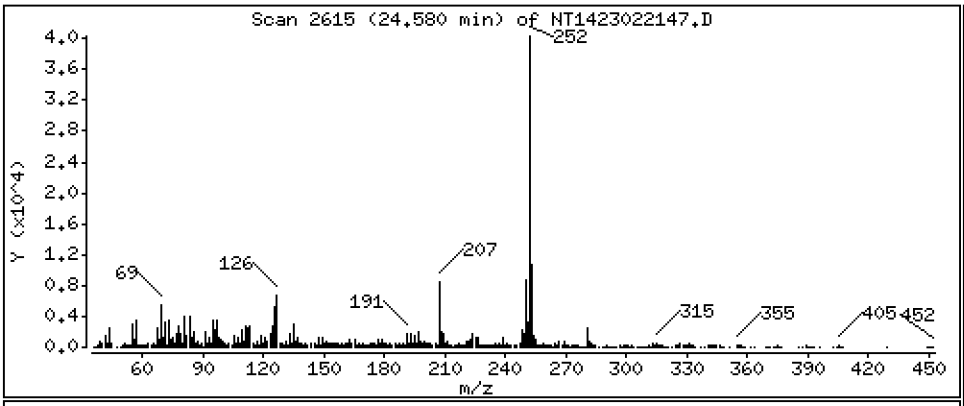
Operator: DSD

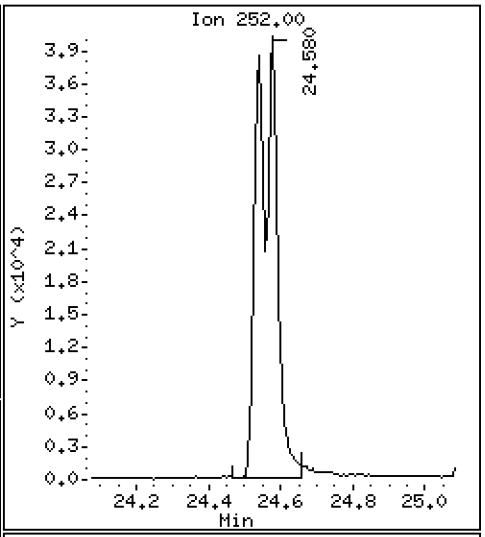
Column phase: ZB-5msi

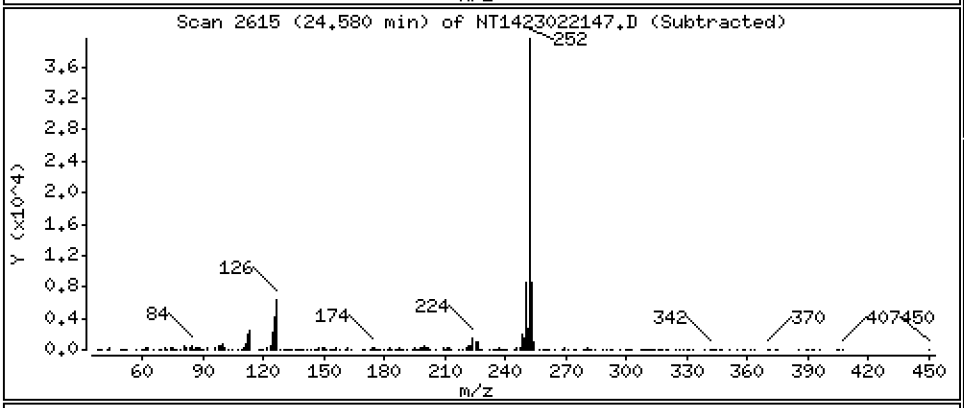
Column diameter: 0.25

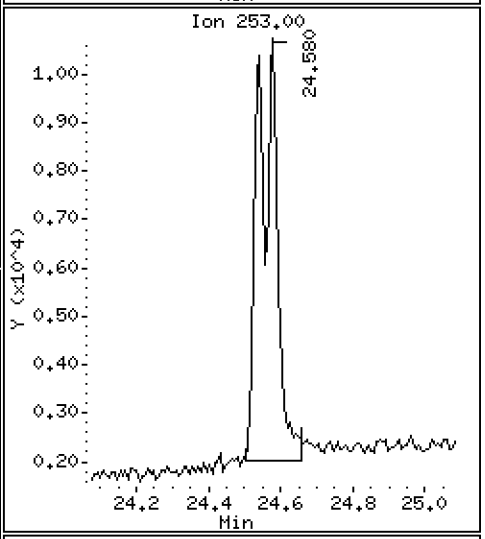
187 Total Benzofluoranthenes

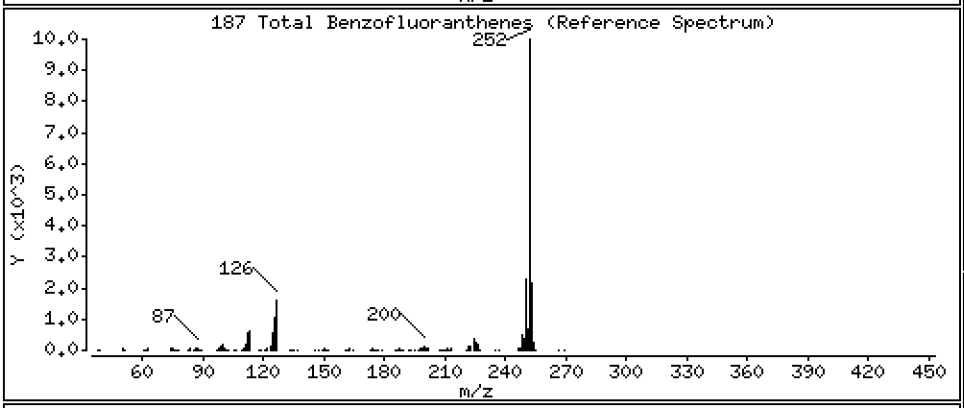
Concentration: 1.112 ug/mL

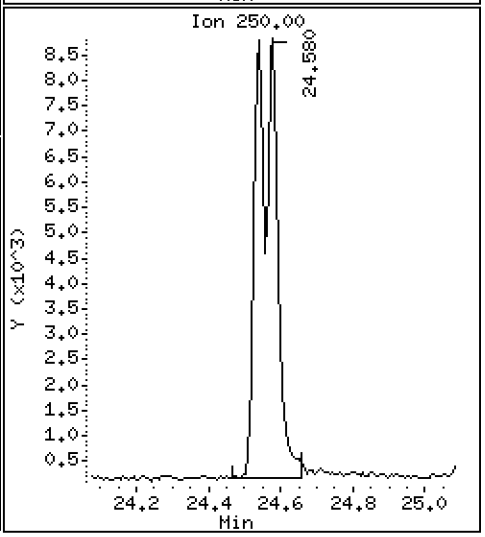


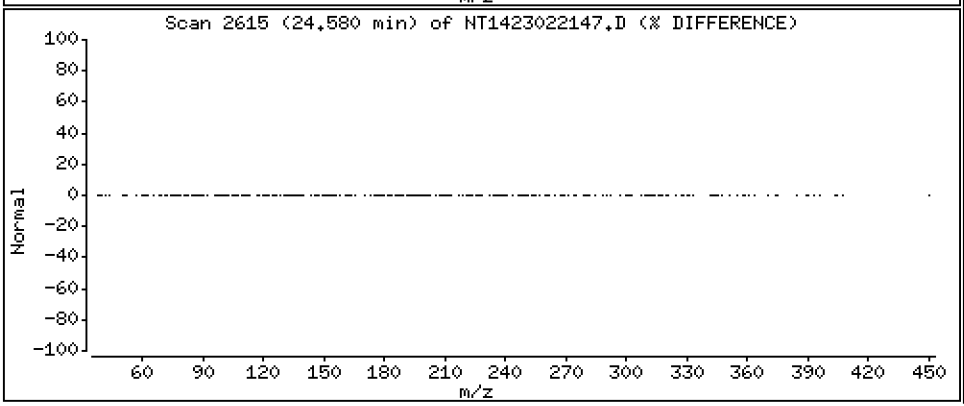












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Date : 22-FEB-2023 17:11

Client ID:

Instrument: nt14.i

Sample Info: SLB0308-LCV1

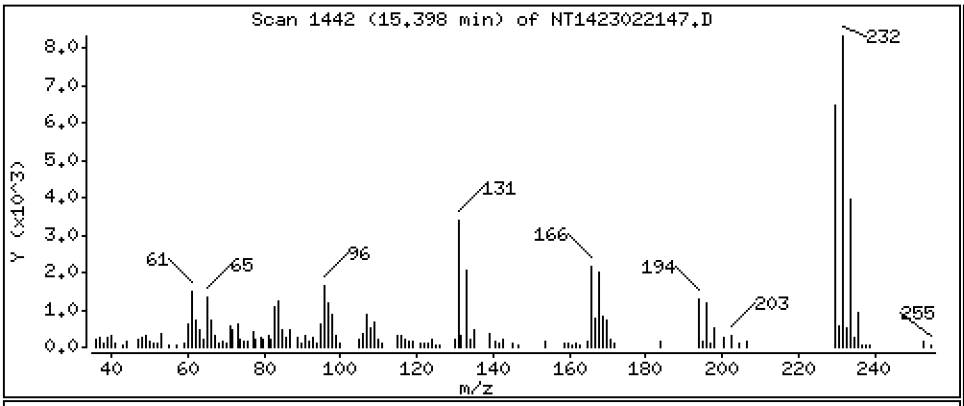
Operator: DSD

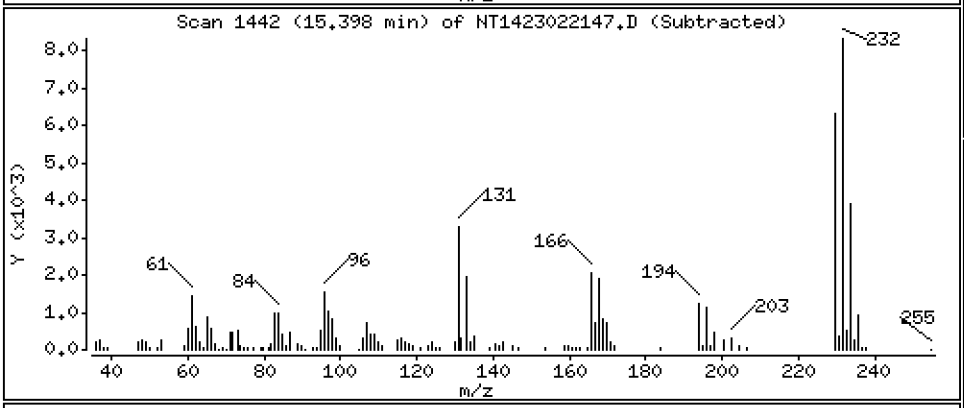
Column phase: ZB-5msi

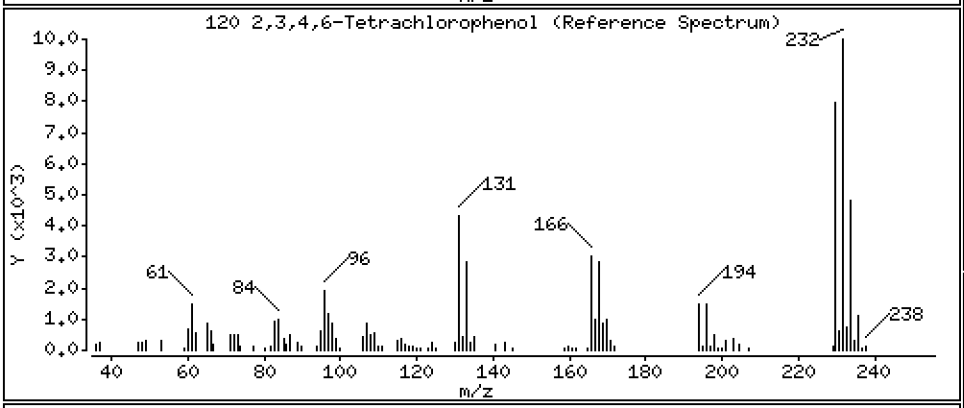
Column diameter: 0.25

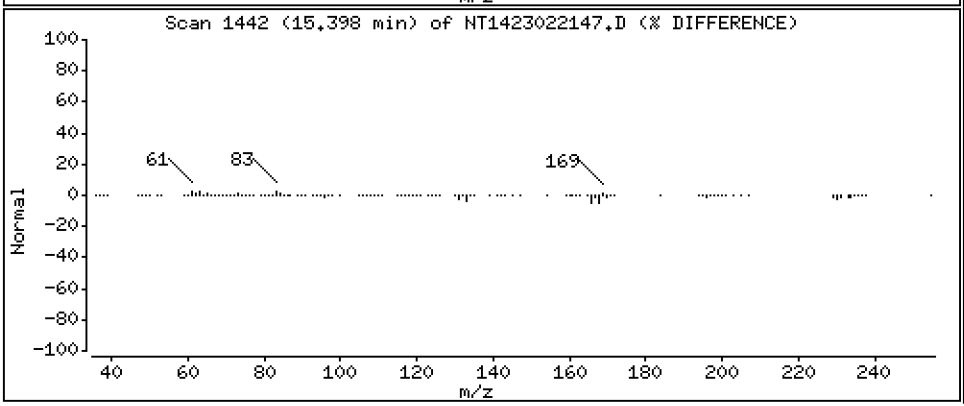
120 2,3,4,6-Tetrachlorophenol

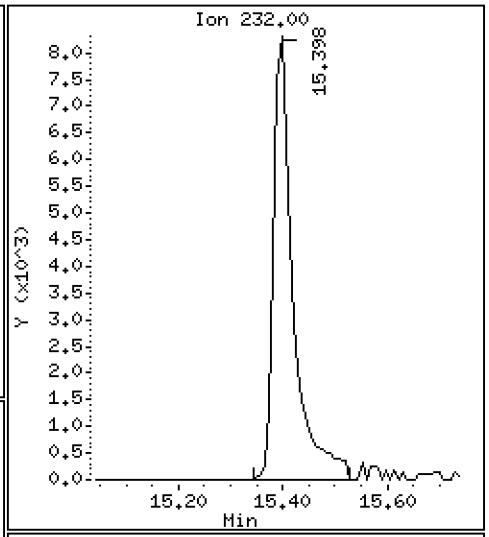
Concentration: 0.4394 ug/mL

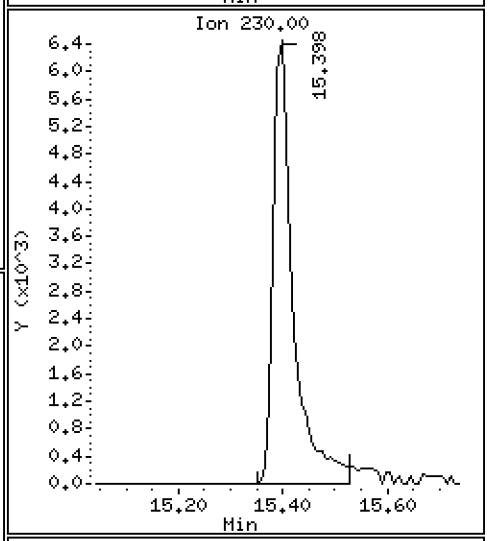


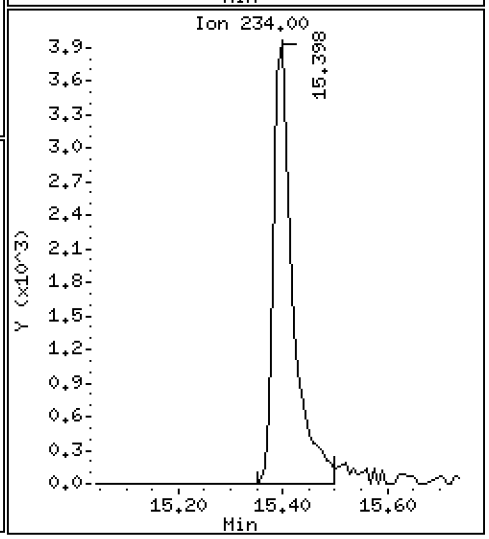












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

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Operator : DSD Inst ID: nt14.i
Smp Info : SLB0308-LCV1
Misc Info :
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Meth Date : 03-Mar-2023 06:54 van Quant Type: ISTD
Cal Date : 16-FEB-2023 19:30 Cal File: NT1423021610.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.388	6.380	(0.746)	33422	0.61939	0.6194
$	2 Phenol-d5	99	7.972	7.972	(0.930)	62834	0.73405	0.7341
	3 Phenol	94	7.995	7.996	(0.933)	51334	0.56649	0.5665
$	5 2-Chlorophenol-d4	132	8.211	8.212	(0.958)	48243	0.78987	0.7899
	4 Bis(2-Chloroethyl)ether	93	8.134	8.135	(0.949)	36305	0.52446	0.5245
	6 2-Chlorophenol	128	8.242	8.243	(0.962)	32248	0.50534	0.5053
	7 1,3-Dichlorobenzene	146	8.505	8.506	(0.993)	36740	0.51716	0.5172
*	8 1,4-Dichlorobenzene-d4	152	8.567	8.568	(1.000)	201847	4.00000	
	9 1,4-Dichlorobenzene	146	8.598	8.599	(1.004)	39370	0.58393	0.5839
$	10 1,2-Dichlorobenzene-d4	152	8.924	8.925	(1.042)	25137	0.54906	0.5491
	12 1,2-Dichlorobenzene	146	8.948	8.948	(1.044)	35066	0.52025	0.5203
	11 Benzyl alcohol	108	8.893	8.863	(1.038)	12561	0.24683	0.2468
	14 2,2'-oxybis(1-Chloropropane)	121	9.150	9.150	(1.068)	7946	0.41209	0.4121
	13 2-Methylphenol	108	9.095	9.096	(1.062)	30937	0.48892	0.4889
	17 Hexachloroethane	117	9.530	9.530	(1.112)	12969	0.44245	0.4425
	16 N-Nitroso-di-n-propylamine	70	9.406	9.414	(1.098)	28760	0.49931	0.4993
	15 4-Methylphenol	108	9.375	9.367	(1.094)	33208	0.49701	0.4970
$	18 Nitrobenzene-d5	82	9.662	9.662	(0.875)	47257	0.54146	0.5415
	19 Nitrobenzene	77	9.701	9.701	(0.879)	43762	0.49966	0.4997
	20 Isophorone	82	10.143	10.151	(0.919)	63530	0.54979	0.5498
	21 2-Nitrophenol	139	10.329	10.329	(0.935)	15418	0.39339	0.3934
	22 2,4-Dimethylphenol	107	10.407	10.407	(0.942)	95161	1.43888	1.439
	23 Bis(2-Chloroethoxy)methane	93	10.593	10.593	(0.959)	37219	0.49514	0.4951
	24 Benzoic acid	105	10.709	10.694	(0.970)	861	0.02075	0.02075
	25 2,4-Dichlorophenol	162	10.787	10.787	(0.977)	73695	1.30198	1.302
	26 1,2,4-Trichlorobenzene	180	10.957	10.965	(0.992)	37313	0.54419	0.5442
*	27 Naphthalene-d8	136	11.042	11.042	(1.000)	755453	4.00000	
	28 Naphthalene	128	11.080	11.081	(1.003)	100525	0.53967	0.5397
	29 4-Chloroaniline	127	11.235	11.235	(1.017)	84622	1.06335	1.063
	30 Hexachlorobutadiene	225	11.451	11.451	(1.037)	24359	0.57630	0.5763
	31 4-Chloro-3-methylphenol	107	12.217	12.210	(1.106)	81758	1.33449	1.334
	32 2-Methylnaphthalene	142	12.480	12.481	(1.130)	74374	0.53312	0.5331
	33 Hexachlorocyclopentadiene	237	12.952	12.945	(0.884)	595	0.01357	0.01357

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.115	13.115	(0.895)	54447	1.22185	1.222
	35	2,4,5-Trichlorophenol	196	13.192	13.185	(0.901)	58447	1.21111	1.211
$	36	2-Fluorobiphenyl	172	13.270	13.270	(0.906)	92659	0.57242	0.5724
	37	2-Chloronaphthalene	162	13.463	13.471	(0.919)	69351	0.52489	0.5249
	38	2-Nitroaniline	65	13.750	13.750	(0.939)	53269	1.24004	1.240
	39	Dimethylphthalate	163	14.183	14.183	(0.968)	76132	0.55088	0.5509
	40	Acenaphthylene	152	14.330	14.338	(0.978)	115584	0.57356	0.5736
	41	2,6-Dinitrotoluene	165	14.315	14.323	(0.977)	35961	1.10584	1.106
*	42	Acenaphthene-d10	164	14.647	14.648	(1.000)	452443	4.00000	
	43	3-Nitroaniline	138	14.609	14.609	(0.997)	35680	1.03371	1.034
	44	Acenaphthene	153	14.709	14.717	(1.004)	66291	0.54944	0.5494
	45	2,4-Dinitrophenol	184	14.848	14.818	(1.014)	537	0.02527	0.02527
	46	Dibenzofuran	168	15.042	15.050	(1.027)	107086	0.54058	0.5406
	47	4-Nitrophenol	109	15.026	14.957	(1.026)	7378	0.36907	0.3691
	48	2,4-Dinitrotoluene	165	15.119	15.127	(1.032)	46528	1.01196	1.012
	50	Diethylphthalate	149	15.637	15.645	(1.068)	98193	0.53445	0.5345
	49	Fluorene	166	15.745	15.753	(1.075)	113381	0.54732	0.5473
	51	4-Chlorophenyl-phenylether	204	15.753	15.753	(1.075)	57091	0.51541	0.5154
	52	4-Nitroaniline	138	15.876	15.876	(1.084)	40917	1.03323	1.033
	53	4,6-Dinitro-2-methylphenol	198	15.961	15.969	(0.903)	43571	1.32658	1.327
	54	N-Nitrosodiphenylamine	169	16.007	16.015	(0.906)	73690	0.56567	0.5657
$	55	2,4,6-Tribromophenol	330	16.277	16.293	(1.111)	2158	0.08312	0.08312
	56	4-Bromophenyl-phenylether	248	16.755	16.756	(0.948)	29161	0.50258	0.5026
	57	Hexachlorobenzene	284	17.057	17.057	(0.965)	30933	0.52466	0.5247
	58	Pentachlorophenol	266	17.444	17.429	(0.987)	9654	0.33693	0.3369
*	59	Phenanthrene-d10	188	17.676	17.676	(1.000)	906518	4.00000	
	60	Phenanthrene	178	17.722	17.723	(1.003)	117419	0.53903	0.5390
	61	Anthracene	178	17.815	17.816	(1.008)	120469	0.55821	0.5582
	62	Carbazole	167	18.163	18.156	(1.028)	104733	0.53477	0.5348
	63	Di-n-butylphthalate	149	18.991	18.992	(1.074)	125083	0.57181	0.5718
	64	Fluoranthene	202	20.136	20.137	(0.884)	143007	0.54760	0.5476
	65	Pyrene	202	20.562	20.562	(0.903)	143899	0.52109	0.5211
$	66	Terphenyl-d14	244	20.871	20.872	(0.917)	124537	0.63515	0.6352
	67	Butylbenzylphthalate	149	21.816	21.816	(0.958)	53958	0.59221	0.5922
	68	Benzo(a)anthracene	228	22.745	22.745	(0.999)	109220	0.56384	0.5638
*	69	Chrysene-d12	240	22.768	22.769	(1.000)	605320	4.00000	
	70	3,3'-Dichlorobenzidine	252	22.722	22.715	(0.998)	103362	1.74165	1.742
	71	Chrysene	228	22.815	22.815	(1.002)	97715	0.56083	0.5608
	72	bis(2-Ethylhexyl)phthalate	149	22.854	22.854	(0.959)	76786	0.40830	0.4083
*	134	Di-n-octylphthalate-d4	153	23.837	23.837	(1.000)	1095180	4.00000	
	73	Di-n-octylphthalate	149	23.844	23.845	(1.000)	135172	0.52786	0.5279
	74	Benzo(b)fluoranthene	252	24.541	24.542	(0.973)	71314	0.51340	0.5134
	75	Benzo(k)fluoranthene	252	24.580	24.580	(0.975)	88280	0.59477	0.5948
	76	Benzo(a)pyrene	252	25.114	25.114	(0.996)	64144	0.48724	0.4872
*	77	Perylene-d12	264	25.215	25.223	(1.000)	437763	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	27.563	27.548	(1.093)	51685	0.47670	0.4767
	79	Dibenzo(a,h)anthracene	278	27.571	27.564	(1.093)	45069	0.50437	0.5044
	80	Benzo(g,h,i)perylene	276	28.239	28.224	(1.120)	39320	0.44715	0.4472
	90	N-Nitrosodimethylamine	74	4.280	4.280	(0.500)	29966	0.71727	0.7173
	91	Aniline	93	8.042	8.034	(0.939)	97922	1.01027	1.010
	93	Benzidine	184	20.407	20.400	(0.896)	114188	1.65929	1.659
	103	Pyridine	79	4.303	4.288	(0.502)	52537	0.79473	0.7947
	105	1-methylnaphthalene	142	12.697	12.697	(1.150)	69709	0.53224	0.5322
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.077	16.085	(1.098)	126870	0.56819	0.5682

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	24.580	24.580	(0.975)	150739	1.11151	1.112
120 2,3,4,6-Tetrachlorophenol	232	15.397	15.390	(1.051)	22639	0.43940	0.4394

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022147.D
Lab Smp Id: SLB0308-LCV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\ABN.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 16:35
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	232195	116098	464390	201847	-13.07
27 Naphthalene-d8	800631	400316	1601262	755453	-5.64
42 Acenaphthene-d10	488064	244032	976128	452443	-7.30
59 Phenanthrene-d10	971279	485640	1942558	906518	-6.67
69 Chrysene-d12	687083	343542	1374166	605320	-11.90
134 Di-n-octylphthala	1174636	587318	2349272	1095180	-6.76
77 Perylene-d12	491790	245895	983580	437763	-10.99

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.68	17.18	18.18	17.68	-0.00
69 Chrysene-d12	22.77	22.27	23.27	22.77	-0.00
134 Di-n-octylphthala	23.84	23.34	24.34	23.84	-0.00
77 Perylene-d12	25.22	24.72	25.72	25.22	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022147.D

Lab ID: SLB0308-LCV1
nt14.i, ABN.m, 22-FEB-2023 17:11

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: NT1423022146.D

On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

* Only compounds listed in the work order have been verified by the analyst *

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0234	Instrument:	NT14
		Calibration:	GB00046

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLB0234-TUN3	NT1423021603.D	NA	02/16/23 14:33
ABN 20	SLB0234-CAL7	NT1423021604.D	NA	02/16/23 15:54
ABN 10	SLB0234-CAL6	NT1423021605.D	NA	02/16/23 16:30
ABN 5	SLB0234-CAL5	NT1423021606.D	NA	02/16/23 17:06
ABN 2.5	SLB0234-CAL4	NT1423021607.D	NA	02/16/23 17:42
ABN 1.0	SLB0234-CAL3	NT1423021608.D	NA	02/16/23 18:18
ABN 0.5	SLB0234-CAL2	NT1423021609.D	NA	02/16/23 18:54
ABN 0.2	SLB0234-CAL1	NT1423021610.D	NA	02/16/23 19:30
SCV 5.0	SLB0234-SCV1	NT1423021613.D	NA	02/16/23 21:18
Initial Cal Blank	SLB0234-ICB1	NT1423021618.D	NA	02/17/23 00:17

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0305	Instrument:	NT14
		Calibration:	GB00046

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLB0305-TUN1	NT1423022101Q.D	NA	02/21/23 13:06
Initial Cal Check	SLB0305-ICV1	NT1423022130Q.D	NA	02/22/23 06:55
ABN 0.2	SLB0305-LCV1	NT1423022131.D	NA	02/22/23 07:32
Blank	BLA0393-BLK1	NT1423022134.D	Solid	02/22/23 09:21
LCS	BLA0393-BS1	NT1423022135.D	Solid	02/22/23 09:57
LCS Dup	BLA0393-BSD1	NT1423022136.D	Solid	02/22/23 10:33
Reference	BLA0393-SRM1	NT1423022137.D	Solid	02/22/23 11:09
Initial Cal Blank	SLB0305-ICB1	NT1423022138.D	NA	02/22/23 11:45
LDW23-SC1250	23A0133-03	NT1423022141.D	Solid	02/22/23 13:34
LDW23-SC1241	23A0133-06	NT1423022142.D	Solid	02/22/23 14:10
LDW23-IT1217	23A0133-07	NT1423022143.D	Solid	02/22/23 14:46
LDW23-IT1217	BLA0393-MS1	NT1423022144.D	Solid	02/22/23 15:22
LDW23-IT1217	BLA0393-MSD1	NT1423022145.D	Solid	02/22/23 15:58
Calibration Check	SLB0305-CCV1	NT1423022146.D	NA	02/22/23 16:35

ANALYSIS SEQUENCE

SLB0305

Instrument ID: NT14
Calibration ID: GB00046
MS EM Level: 1765 EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: L001045

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLB0305-TUN1	MS Tune	QC		1	K008469		02/21/2023 13:06	NT1423022101.D	DSD	
SLB0305-ICV1	Initial Cal Check	QC		2	K011109	K010831	02/22/2023 06:55	NT1423022130.D	DSD	
SLB0305-LCV1	ABN 0.2	QC		3	K011106	K010831	02/22/2023 07:32	NT1423022131.D	DSD	
SLB0305-ICB1	Initial Cal Blank	QC		4	K005156	K010831	02/22/2023 11:45	NT1423022138.D	DSD	
23A0133-03	LDW23-SC1250	(20ug/kg solid or 0.2ug/L l	C 04	5		K010831	02/22/2023 13:34	NT1423022141.D	DSD	
23A0133-06	LDW23-SC1241	(20ug/kg solid or 0.2ug/L l	C 04	6		K010831	02/22/2023 14:10	NT1423022142.D	DSD	
23A0133-07	LDW23-IT1217	(20ug/kg solid or 0.2ug/L l	C 04	7		K010831	02/22/2023 14:46	NT1423022143.D	DSD	
BLA0393-BLK1	Blank	QC		8		K010831	02/22/2023 09:21	NT1423022134.D	DSD	
BLA0393-BS1	LCS	QC		9		K010831	02/22/2023 09:57	NT1423022135.D	DSD	
BLA0393-BSD1	LCS Dup	QC		10		K010831	02/22/2023 10:33	NT1423022136.D	DSD	
BLA0393-SRM1	Reference	QC		11		K010831	02/22/2023 11:09	NT1423022137.D	DSD	
BLA0393-MS1	Matrix Spike	QC		12		K010831	02/22/2023 15:22	NT1423022144.D	DSD	
BLA0393-MSD1	Matrix Spike Dup	QC		13		K010831	02/22/2023 15:58	NT1423022145.D	DSD	
SLB0305-CCV1	Calibration Check	QC		14	K011109	K010831	02/22/2023 16:35	NT1423022146.D	DSD	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221B.b

	Time	Filename	LabID	ClientId	DF																
1	1306	NT1423022101.D	SLB0305-TUN1		1	|NO ISTDS FOUND||															
2	0655	NT1423022130.D	SLB0305-ICV1		1	| 8.57	235125||11.04	883104||14.65	537789||17.68	1079531||22.77	826409||25.22	590325||23.84	1339562|								
3	0732	NT1423022131.D	SLB0305-LCV1		1	| 8.57	245988||11.04	853786||14.65	510355||17.67	1033553||22.77	755570||25.22	553476||23.83	1272969|								
4	0808	NT1423022132.D	SIM-ICV3		1	| 8.57	242725||11.04	894869||14.65	541941||17.67	1095105||22.77	810584||25.22	587079||23.83	1347459|								
5	0844	NT1423022133.D	SIM-LCV3		1	| 8.57	232931||11.03	870017||14.65	532939||17.67	1110405||22.77	808877||25.22	588312||23.83	1314621|								
6	0921	NT1423022134.D	BLA0393-BLK1		1	| 8.56	284140||11.03	1037690||14.64	609838||17.67	1243935||22.77	909432||25.22	647031||23.84	1479271|								
7	0957	NT1423022135.D	BLA0393-BS1		1	| 8.56	305581||11.04	1035299||14.65	627265||17.67	1255650||22.77	965199||25.22	698052||23.84	1554743|								
8	1033	NT1423022136.D	BLA0393-BSD1		1	| 8.57	289546||11.03	1072886||14.65	648876||17.67	1294186||22.77	1002280||25.22	711817||23.83	1583974|								
9	1109	NT1423022137.D	BLA0393-SRM1		1	| 8.56	288382||11.04	1041151||14.64	625557||17.67	1275726||22.77	973077||25.22	711743||23.84	1604308|								
10	1145	NT1423022138.D	SLB0305-ICB1		1	| 8.57	281285||11.04	967857||14.65	593165||17.67	1161769||22.77	871510||25.22	607018||23.83	1395024|								
11	1222	NT1423022139.D	BLA0216-BLK2		1	| 8.56	443526||11.03	1691504||14.65	1103234||17.67	2169163||22.77	1815612||25.22	1298510||23.84	3495270|								
12	1258	NT1423022140.D	BLA0339-BLK2		1	| 8.57	325781||11.04	1087126||14.65	634009||17.67	1298967||22.76	933033||25.22	653891||23.83	1521806|								
13	1334	NT1423022141.D	23A0133-03		1	| 8.57	280852||11.04	1056982||14.65	619051||17.68	1118900||22.78	765759||25.23	591788||23.84	1139581|								
14	1410	NT1423022142.D	23A0133-06		1	| 8.57	269919||11.04	1008331||14.65	590268||17.68	1069248||22.78	694925||25.24	545086||23.84	1027928|								
15	1446	NT1423022143.D	23A0133-07		1	| 8.57	272617||11.04	1014620||14.65	592525||17.68	1105020||22.78	748718||25.24	575105||23.85	1115939|								
16	1522	NT1423022144.D	BLA0393-MS1		1	| 8.57	254010||11.04	945302||14.66	575898||17.68	1060510||22.79	691195||25.24	527204||23.85	1060591|								
17	1558	NT1423022145.D	BLA0393-MSD1		1	| 8.57	248736||11.04	930871||14.66	563398||17.68	1129370||22.78	693821||25.24	543989||23.85	1038555|								
18	1635	NT1423022146.D	SLB0305-CCV1		1	| 8.57	232195||11.04	800631||14.65	488064||17.68	971279||22.77	687083||25.22	491790||23.84	1174636|								

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221B.b

ARI Job No.: SLB0 Method: DFTPP8270E.m Instrument: nt14.i Date: 21-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1306	NT1423022101.D	SLB0305-TUN1		1	NO MANUAL INTEGRATION
0655	NT1423022130.D	SLB0305-ICV1		1	2,2'-oxybis(1-Chloropropane),
0732	NT1423022131.D	SLB0305-LCV1		1	NO MANUAL INTEGRATION
0808	NT1423022132.D	SIM-ICV3		1	NO MANUAL INTEGRATION
0844	NT1423022133.D	SIM-LCV3		1	NO MANUAL INTEGRATION
0921	NT1423022134.D	BLA0393-BLK1		1	NO MANUAL INTEGRATION
0957	NT1423022135.D	BLA0393-BS1		1	NO MANUAL INTEGRATION
1033	NT1423022136.D	BLA0393-BSD1		1	NO MANUAL INTEGRATION
1109	NT1423022137.D	BLA0393-SRM1		1	NO MANUAL INTEGRATION
1145	NT1423022138.D	SLB0305-ICB1		1	NO MANUAL INTEGRATION
1222	NT1423022139.D	BLA0216-BLK2		1	NO MANUAL INTEGRATION
1258	NT1423022140.D	BLA0339-BLK2		1	NO MANUAL INTEGRATION
1334	NT1423022141.D	23A0133-03		1	1,4-Dichlorobenzene,
1410	NT1423022142.D	23A0133-06		1	1,4-Dichlorobenzene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene,
1446	NT1423022143.D	23A0133-07		1	Benzo(k)fluoranthene, Dibenzo(a,h)anthracene,
1522	NT1423022144.D	BLA0393-MS1		1	NO MANUAL INTEGRATION
1558	NT1423022145.D	BLA0393-MSD1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221B.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1635	NT1423022146.D	SLB0305-CCV1		1	2,2'-oxybis(1-Chloropropane),

Security Status Report

Date: 01-Mar-2023 13:07

NT1423022101.D	Data Locked	deenayd, 01-
NT1423022130.D	Data Locked	deenayd, 01-
NT1423022131.D	Data Locked	deenayd, 01-
NT1423022132.D	Data Locked	deenayd, 01-
NT1423022133.D	Data Locked	deenayd, 01-
NT1423022134.D	Data Locked	deenayd, 01-
NT1423022135.D	Data Locked	deenayd, 01-
NT1423022136.D	Data Locked	deenayd, 01-
NT1423022137.D	Data Locked	deenayd, 01-
NT1423022138.D	Data Locked	deenayd, 01-
NT1423022139.D	Data Locked	deenayd, 01-
NT1423022140.D	Data Locked	deenayd, 01-
NT1423022141.D	Data Locked	deenayd, 01-
NT1423022142.D	Data Locked	deenayd, 01-
NT1423022143.D	Data Locked	deenayd, 01-
NT1423022144.D	Data Locked	deenayd, 01-
NT1423022145.D	Data Locked	deenayd, 01-
NT1423022146.D	Data Locked	deenayd, 01-

Analytical Resources, LLC
Analytical Chemists and Consultants

Printed: 3/1/2023 1:18:09PM

ANALYSIS SEQUENCE

SLB0305

Instrument ID: NT14
Calibration ID: GB00046
MS EM Level: 1765 EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: L001045

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLB0305-TUN1	MS Tune	QC		1	K008469		02/21/2023 13:06	NT1423022101.D	DSD	
SLB0305-ICV1	Initial Cal Check	QC		2	K011109	K010831	02/22/2023 06:55	NT1423022130.D	DSD	
SLB0305-LCV1	ABN 0.2	QC		3	K011106	K010831	02/22/2023 07:32	NT1423022131.D	DSD	
SLB0305-ICB1	Initial Cal Blank	QC		4	K005156	K010831	02/22/2023 11:45	NT1423022138.D	DSD	
23A0133-03	LDW23-SC1250	(20ug/kg solid or 0.2ug/L l	C 04	5		K010831	02/22/2023 13:34	NT1423022141.D	DSD	
23A0133-06	LDW23-SC1241	(20ug/kg solid or 0.2ug/L l	C 04	6		K010831	02/22/2023 14:10	NT1423022142.D	DSD	
23A0133-07	LDW23-IT1217	(20ug/kg solid or 0.2ug/L l	C 04	7		K010831	02/22/2023 14:46	NT1423022143.D	DSD	
BLA0393-BLK1	Blank	QC		8		K010831	02/22/2023 09:21	NT1423022134.D	DSD	
BLA0393-BS1	LCS	QC		9		K010831	02/22/2023 09:57	NT1423022135.D	DSD	
BLA0393-BSD1	LCS Dup	QC		10		K010831	02/22/2023 10:33	NT1423022136.D	DSD	
BLA0393-SRM1	Reference	QC		11		K010831	02/22/2023 11:09	NT1423022137.D	DSD	
BLA0393-MS1	Matrix Spike	QC		12		K010831	02/22/2023 15:22	NT1423022144.D	DSD	
BLA0393-MSD1	Matrix Spike Dup	QC		13		K010831	02/22/2023 15:58	NT1423022145.D	DSD	
SLB0305-CCV1	Calibration Check	QC		14	K011109	K010831	02/22/2023 16:35	NT1423022146.D	DSD	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221.b

	Time	Filename	LabID	ClientId	DF														
1	1306	NT1423022101.D	SLB0288-TUN1		1	NO ISTDS FOUND													
2	1344	NT1423022102.D	SLB0288-ICV1		1	8.57	295100	11.04	1091540	14.65	660523	17.67	1348811	22.77	1246865	25.21	1232622	23.84	1679747
3	1441	NT1423022103.D	SLB0288-LCV1		1	8.57	309776	11.04	1101893	14.65	657941	17.67	1349492	22.76	1213375	25.21	1208711	23.84	1607598
4	1517	NT1423022104.D	SIM-ICV1		1	8.57	310532	11.04	1125660	14.65	671338	17.67	1385843	22.76	1251522	25.21	1248117	23.84	1660727
5	1553	NT1423022105.D	SIM-LCV1		1	8.57	328729	11.03	1105457	14.64	657072	17.67	1368697	22.76	1213754	25.21	1208637	23.83	1565031
6	1629	NT1423022106.D	SLB0288-ICB1		1	8.57	332999	11.04	1101519	14.65	646117	17.67	1339632	22.76	1192379	25.21	1177470	23.83	1485047
7	1705	NT1423022107.D	23A0088-08RE1		1	8.57	318413	11.03	1084937	14.65	647995	17.68	1351960	22.78	1106578	25.22	851915	23.84	1464688
8	1741	NT1423022108.D	23A0088-09RE1		1	8.57	294455	11.04	1074354	14.65	642015	17.68	1312627	22.78	1070632	25.22	833218	23.84	1486782
9	1817	NT1423022109.D	23A0088-10RE1		1	8.57	278846	11.04	1024669	14.65	610338	17.68	1244783	22.78	1012163	25.22	772032	23.84	1462266
10	1853	NT1423022110.D	23A0088-11RE1		1	8.57	272505	11.04	1023768	14.65	608490	17.68	1245114	22.78	980720	25.22	720970	23.84	1431389
11	1929	NT1423022111.D	23A0088-12RE1		1	8.57	276345	11.04	1031513	14.65	612628	17.68	1250983	22.78	985068	25.22	754830	23.84	1409105
12	2005	NT1423022112.D	23A0088-13RE1		1	8.57	298566	11.04	1026241	14.65	613178	17.68	1253999	22.78	935354	25.23	703975	23.84	1374261
13	2042	NT1423022113.D	BLA0216-MS2		1	8.57	269447	11.04	937340	14.66	571879	17.68	1168980	22.78	918452	25.23	688893	23.84	1336479
14	2117	NT1423022114.D	BLA0216-MSD2		1	8.57	252796	11.04	941907	14.66	576283	17.68	1167081	22.78	925232	25.23	690127	23.84	1374518
15	2154	NT1423022115.D	23A0088-14RE1		1	8.57	243475	11.04	918419	14.65	543697	17.68	1109408	22.78	862488	25.22	626193	23.84	1272989
16	2230	NT1423022116.D	23A0088-15RE1		1	8.57	244815	11.04	908292	14.65	543478	17.68	1104772	22.78	842954	25.23	636847	23.84	1235676
17	2306	NT1423022117.D	SLB0288-CCV1		1	8.57	247721	11.04	862325	14.65	519526	17.68	1059882	22.77	930840	25.22	746835	23.84	1343425

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221.b

ARI Job No.: SLB0 Method: DFTPP8270E.m Instrument: nt14.i Date: 21-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1306	NT1423022101.D	SLB0288-TUN1		1	NO MANUAL INTEGRATION
1344	NT1423022102.D	SLB0288-ICV1		1	2,2'-oxybis(1-Chloropropane),
1441	NT1423022103.D	SLB0288-LCV1		1	NO MANUAL INTEGRATION
1517	NT1423022104.D	SIM-ICV1		1	NO MANUAL INTEGRATION
1553	NT1423022105.D	SIM-LCV1		1	3-Nitroaniline,
1629	NT1423022106.D	SLB0288-ICB1		1	NO MANUAL INTEGRATION
1705	NT1423022107.D	23A0088-08RE1		1	4-Methylphenol,
1741	NT1423022108.D	23A0088-09RE1		1	1,4-Dichlorobenzene, 4-Methylphenol,
1817	NT1423022109.D	23A0088-10RE1		1	1,4-Dichlorobenzene, 4-Methylphenol,
1853	NT1423022110.D	23A0088-11RE1		1	4-Methylphenol, Dibenzo(a,h)anthracene,
1929	NT1423022111.D	23A0088-12RE1		1	1,4-Dichlorobenzene, 4-Methylphenol, Dibenzo(a,h)anthracene,
2005	NT1423022112.D	23A0088-13RE1		1	Dibenzo(a,h)anthracene,
2042	NT1423022113.D	BLA0216-MS2		1	NO MANUAL INTEGRATION
2117	NT1423022114.D	BLA0216-MSD2		1	NO MANUAL INTEGRATION
2154	NT1423022115.D	23A0088-14RE1		1	1,4-Dichlorobenzene, 2,4-Dichlorophenol,
2230	NT1423022116.D	23A0088-15RE1		1	1,4-Dichlorobenzene,
2306	NT1423022117.D	SLB0288-CCV1		1	2,2'-oxybis(1-Chloropropane),

Security Status Report

Date: 01-Mar-2023 13:15

NT1423022101.D	Data Locked	deenayd, 01-
NT1423022102.D	Data Locked	deenayd, 01-
NT1423022103.D	Data Locked	deenayd, 01-
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NT1423022182.D	Data Locked	deenayd, 01-
NT1423022183.D	Data Locked	deenayd, 01-
NT1423022184.D	Data Locked	deenayd, 01-
NT1423022185.D	Data Locked	deenayd, 01-

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0308	Instrument:	NT14
		Calibration:	GB00046

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLB0308-TUN1	NT1423022101U.D	NA	02/21/23 13:06
Initial Cal Check	SLB0308-ICV1	NT1423022146U.D	NA	02/22/23 16:35
ABN 0.2	SLB0308-LCV1	NT1423022147.D	NA	02/22/23 17:11
LDW23-SC1185	23A0133-08	NT1423022151.D	Solid	02/22/23 19:36
LDW23-SC1234	23A0133-09	NT1423022152.D	Solid	02/22/23 20:12
LDW23-SC1215	23A0133-10	NT1423022153.D	Solid	02/22/23 20:48
LDW23-SC1222	23A0133-11	NT1423022154.D	Solid	02/22/23 21:24
LDW23-SC1227	23A0133-12	NT1423022155.D	Solid	02/22/23 22:01
LDW23-SS1110	23A0133-13	NT1423022156.D	Solid	02/22/23 22:37
LDW23-SS1109	23A0133-14	NT1423022157.D	Solid	02/22/23 23:14
LDW23-SS1092	23A0133-15	NT1423022158.D	Solid	02/22/23 23:50
LDW23-SS1091	23A0133-16	NT1423022159.D	Solid	02/23/23 00:26
Calibration Check	SLB0308-CCV1	NT1423022160.D	NA	02/23/23 01:02

ANALYSIS SEQUENCE

SLB0308

Instrument ID: NT14
Calibration ID: GB00046
MS EM Level: 1765 EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: L001045

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLB0308-TUN1	MS Tune	QC		1	K008469		02/21/2023 13:06	NT1423022101.D	DSD	
SLB0308-ICV1	Initial Cal Check	QC		2	K011109	K010831	02/22/2023 16:35	NT1423022146.D	DSD	
SLB0308-LCV1	ABN 0.2	QC		3	K011106	K010831	02/22/2023 17:11	NT1423022147.D	DSD	
23A0133-08	LDW23-SC1185	(20ug/kg solid or 0.2ug/L l	C 04	4		K010831	02/22/2023 19:36	NT1423022151.D	DSD	
23A0133-09	LDW23-SC1234	(20ug/kg solid or 0.2ug/L l	C 04	5		K010831	02/22/2023 20:12	NT1423022152.D	DSD	
23A0133-10	LDW23-SC1215	(20ug/kg solid or 0.2ug/L l	C 04	6		K010831	02/22/2023 20:48	NT1423022153.D	DSD	
23A0133-11	LDW23-SC1222	(20ug/kg solid or 0.2ug/L l	C 04	7		K010831	02/22/2023 21:24	NT1423022154.D	DSD	
23A0133-12	LDW23-SC1227	(20ug/kg solid or 0.2ug/L l	C 04	8		K010831	02/22/2023 22:01	NT1423022155.D	DSD	
23A0133-13	LDW23-SS1110	(20ug/kg solid or 0.2ug/L l	C 04	9		K010831	02/22/2023 22:37	NT1423022156.D	DSD	
23A0133-14	LDW23-SS1109	(20ug/kg solid or 0.2ug/L l	C 04	10		K010831	02/22/2023 23:14	NT1423022157.D	DSD	
23A0133-15	LDW23-SS1092	(20ug/kg solid or 0.2ug/L l	C 04	11		K010831	02/22/2023 23:50	NT1423022158.D	DSD	
23A0133-16	LDW23-SS1091	(20ug/kg solid or 0.2ug/L l	C 04	12		K010831	02/23/2023 00:26	NT1423022159.D	DSD	
SLB0308-CCV1	Calibration Check	QC		13	K011109	K010831	02/23/2023 01:02	NT1423022160.D	DSD	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221C.b

	Time	Filename	LabID	ClientId	DF																			
1	1635	NT1423022146.D	SLB0308-ICV1		1	8.57	232195	11.04	800631	14.65	488064	17.68	971279	22.77	687083	25.22	491790	23.84	1174636					
2	1711	NT1423022147.D	SLB0308-LCV1		1	8.57	201847	11.04	755453	14.65	452443	17.68	906518	22.77	605320	25.22	437763	23.84	1095180					
3	1747	NT1423022148.D	SIM-ICV4		1	8.57	222021	11.04	831177	14.65	499220	17.68	1007953	22.77	694885	25.22	492005	23.84	1210074					
4	1823	NT1423022149.D	SIM-LCV4		1	8.57	209240	11.04	796199	14.65	479572	17.68	994915	22.77	658022	25.22	476470	23.84	1143845					
5	1859	NT1423022150.D	BLA0393-BLK2		1	8.56	254405	11.03	934429	14.65	550948	17.67	1110942	22.77	733543	25.22	502221	23.83	1272527					
6	1936	NT1423022151.D	23A0133-08		1	8.56	250617	11.03	933737	14.65	548784	17.68	1107865	22.78	677026	25.23	512843	23.85	1014732					
7	2012	NT1423022152.D	23A0133-09		1	8.56	252718	11.04	946317	14.65	557839	17.68	1132840	22.78	690894	25.23	516651	23.84	1147377					
8	2048	NT1423022153.D	23A0133-10		1	8.57	244527	11.04	925301	14.66	551910	17.69	969354	22.79	608919	25.25	512839	23.85	812974					
9	2124	NT1423022154.D	23A0133-11		1	8.57	252762	11.04	928827	14.65	548189	17.68	1013650	22.78	630996	25.24	488257	23.84	911596					
10	2201	NT1423022155.D	23A0133-12		1	8.57	264280	11.04	908214	14.65	539062	17.68	989773	22.78	655335	25.24	490273	23.85	1053482					
11	2237	NT1423022156.D	23A0133-13		1	8.57	242232	11.04	898755	14.65	525285	17.68	967087	22.78	628753	25.24	443402	23.85	1026024					
12	2314	NT1423022157.D	23A0133-14		1	8.57	232091	11.04	875125	14.65	511374	17.68	940136	22.78	602807	25.24	457458	23.85	961022					
13	2350	NT1423022158.D	23A0133-15		1	8.57	234208	11.04	882984	14.65	514243	17.68	946120	22.78	586498	25.24	459530	23.85	968104					
14	0026	NT1423022159.D	23A0133-16		1	8.57	229976	11.04	862270	14.65	511308	17.68	937379	22.78	588825	25.24	450789	23.84	978709					
15	0102	NT1423022160.D	SLB0308-CCV1		1	8.57	220595	11.04	763626	14.66	464387	17.68	919090	22.78	597936	25.22	427388	23.84	1100619					

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221C.b

ARI Job No.: SLB0 Method: DFTPP8270E.m Instrument: nt14.i Date: 21-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1306	NT1423022101.D	SLB0308-TUN1		1	NO MANUAL INTEGRATION
1635	NT1423022146.D	SLB0308-ICV1		1	2,2'-oxybis(1-Chloropropane),
1711	NT1423022147.D	SLB0308-LCV1		1	NO MANUAL INTEGRATION
1747	NT1423022148.D	SIM-ICV4		1	NO MANUAL INTEGRATION
1823	NT1423022149.D	SIM-LCV4		1	NO MANUAL INTEGRATION
1859	NT1423022150.D	BLA0393-BLK2		1	NO MANUAL INTEGRATION
1936	NT1423022151.D	23A0133-08		1	1,4-Dichlorobenzene,
2012	NT1423022152.D	23A0133-09		1	Dibenzo(a,h)anthracene,
2048	NT1423022153.D	23A0133-10		1	1,4-Dichlorobenzene, Dibenzo(a,h)anthracene,
2124	NT1423022154.D	23A0133-11		1	Benzo(b)fluoranthene, Dibenzo(a,h)anthracene,
2201	NT1423022155.D	23A0133-12		1	1,4-Dichlorobenzene, Benzo(b)fluoranthene, Benzo(k)fluoranthene,
2237	NT1423022156.D	23A0133-13		1	1,4-Dichlorobenzene, Butylbenzylphthalate, Dibenzo(a,h)anthracene,
2314	NT1423022157.D	23A0133-14		1	1,4-Dichlorobenzene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene,
2350	NT1423022158.D	23A0133-15		1	1,4-Dichlorobenzene, Butylbenzylphthalate, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene,
0026	NT1423022159.D	23A0133-16		1	Butylbenzylphthalate, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene,
0102	NT1423022160.D	SLB0308-CCV1		1	2,2'-oxybis(1-Chloropropane),

Security Status Report

Date: 01-Mar-2023 13:03

NT1423022101.D	Data Locked	deenayd, 01-
NT1423022146.D	Data Locked	deenayd, 01-
NT1423022147.D	Data Locked	deenayd, 01-
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NT1423022150.D	Data Locked	deenayd, 01-
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NT1423022152.D	Data Locked	deenayd, 01-
NT1423022153.D	Data Locked	deenayd, 01-
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NT1423022157.D	Data Locked	deenayd, 01-
NT1423022158.D	Data Locked	deenayd, 01-
NT1423022159.D	Data Locked	deenayd, 01-
NT1423022160.D	Data Locked	deenayd, 01-

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0349	Instrument:	NT14
		Calibration:	GC00009

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Blank	BLA0393-BLK2	NT1423022150.D	Solid	02/22/23 18:59

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLB0349

Instrument: NT14
Calibration ID: GB00047

Printed: 2/25/2023 11:41:46AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0349-ICV1	QC		1		K011107	K010831		
SLB0349-LCV1	QC		2		K011452	K010831		
BLA0393-BLK2	QC		3			K010831		
BLA0393-BS2	QC		4			K010831		
BLA0393-BSD2	QC		5			K010831		
BLA0393-SRM2	QC		6			K010831		
BLA0393-MS2	QC		7			K010831		
BLA0393-MSD2	QC		8			K010831		
23A0133-03	8270E-SIM Dual Scan SVOC	C 04	9			K010831	Anchor QEA, LLC	
23A0133-06	8270E-SIM Dual Scan SVOC	C 04	10			K010831	Anchor QEA, LLC	
23A0133-07	8270E-SIM Dual Scan SVOC	C 04	11			K010831	Anchor QEA, LLC	
SLB0349-CCV1	QC		12		K011107	K010831		

Samples Loaded By Date

Data Processed By Date

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221B.b\SIM.b

	Time	Filename	LabID	ClientId	DF																
1	0808	NT1423022132S.D	SLB0349-ICV1		1	8.57	261796	11.04	959301	14.65	503659	17.67	1179954	22.77	887360	25.21	652371				
2	0844	NT1423022133S.D	SLB0349-LCV1		1	8.57	250681	11.04	941427	14.65	501249	17.67	1198933	22.77	872687	25.21	655540				
3	0921	NT1423022134S.D	BLA0393-BLK2		1	8.57	305329	11.04	1097705	14.65	569801	17.67	1341702	22.77	981145	25.21	724557				
4	0957	NT1423022135S.D	BLA0393-BS2		1	8.57	303756	11.04	1100976	14.65	589097	17.67	1355563	22.77	1057826	25.22	773837				
5	1033	NT1423022136S.D	BLA0393-BSD2		1	8.57	312906	11.04	1132810	14.65	607003	17.67	1400120	22.77	1066010	25.21	790323				
6	1109	NT1423022137S.D	BLA0393-SRM2		1	8.57	308877	11.04	1099039	14.65	586353	17.67	1378091	22.77	1051858	25.21	787258				
7	1145	NT1423022138S.D	SEQ-ICB3		1	8.57	279753	11.04	1033166	14.65	558610	17.67	1278244	22.77	958103	25.21	685911				
8	1222	NT1423022139S.D	BLA0216-BLK2		1	8.57	476068	11.04	1782735	14.65	1024773	17.67	2314781	22.77	1942677	25.22	1444344				
9	1258	NT1423022140S.D	BLA0339-BLK2		1	8.57	320586	11.04	1155302	14.65	593650	17.67	1399186	22.77	1032153	25.21	735833				
10	1334	NT1423022141S.D	23A0133-03		1	8.57	306861	11.04	1117860	14.65	583150	17.68	1223903	22.78	812823	25.24	639897				
11	1410	NT1423022142S.D	23A0133-06		1	8.57	292896	11.04	1064153	14.65	556751	17.68	1124300	22.78	730051	25.24	591653				
12	1446	NT1423022143S.D	23A0133-07		1	8.57	296383	11.04	1069932	14.65	552424	17.68	1198526	22.79	796921	25.24	630918				
13	1522	NT1423022144S.D	BLA0393-MS2		1	8.57	277989	11.05	1004957	14.66	535030	17.69	1238609	22.79	740543	25.24	573408				
14	1558	NT1423022145S.D	BLA0393-MSD2		1	8.57	271109	11.05	983790	14.65	526434	17.69	1217018	22.79	722770	25.24	593366				
15	1635	NT1423022146S.D	SEQ-ICV4		1	8.57	231248	11.05	850675	14.65	455458	17.68	1045228	22.77	743612	25.22	546846				
16	1711	NT1423022147S.D	SEQ-ICV4		1	8.57	218377	11.04	810952	14.65	424595	17.67	994464	22.77	671091	25.22	495034				
17	1747	NT1423022148S.D	SLB0293-CCV1		1	8.57	241018	11.04	887165	14.65	467553	17.67	1079793	22.77	754146	25.22	558201				

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221B.b\SIM.b

ARI Job No.: SLB0 Method: SIM.b\SIMABN2.m Instrument: nt14.i Date: 22-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0808	NT14230221 32S.D	SLB0349-ICV1		1	2-Methylphenol, Benzoic acid, N-Nitrosodimethylamine,
0844	NT14230221 33S.D	SLB0349-LCV1		1	Benzoic acid, Pertachlorophenol,
0921	NT14230221 34S.D	BLA0393-BLK2		1	NO MANUAL INTEGRATION
0957	NT14230221 35S.D	BLA0393-BS2		1	NO MANUAL INTEGRATION
1033	NT14230221 36S.D	BLA0393-BSD2		1	NO MANUAL INTEGRATION
1109	NT14230221 37S.D	BLA0393-SRM2		1	NO MANUAL INTEGRATION
1145	NT14230221 38S.D	SEQ-ICB3		1	NO MANUAL INTEGRATION
1222	NT14230221 39S.D	BLA0216-BLK2		1	NO MANUAL INTEGRATION
1258	NT14230221 40S.D	BLA0339-BLK2		1	NO MANUAL INTEGRATION
1334	NT14230221 41S.D	23A0133-03		1	1,4-Dichlorobenzene, Benzyl alcohol,
1410	NT14230221 42S.D	23A0133-06		1	Hexachlorobutadiene, Diethylphthalate, Pentachlorophenol,
1446	NT14230221 43S.D	23A0133-07		1	1,4-Dichlorobenzene, 2-Methylphenol, Diethylphthalate,
1522	NT14230221 44S.D	BLA0393-MS2		1	NO MANUAL INTEGRATION
1558	NT14230221 45S.D	BLA0393-MSD2		1	NO MANUAL INTEGRATION
1635	NT14230221 46S.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
1711	NT14230221 47S.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
1747	NT14230221 48S.D	SLB0293-CCV1		1	2-Methylphenol, N-Nitroso-di-n-propylamine, Benzoic acid, N-Nitrosodimethylamine, 2-Fluorophenol,

Security Status Report

Date: 25-Feb-2023 11:33

NT1423022132S.D	Data Locked	yev, 25-
NT1423022133S.D	Data Locked	yev, 25-
NT1423022134S.D	Data Locked	yev, 25-
NT1423022135S.D	Data Locked	yev, 25-
NT1423022136S.D	Data Locked	yev, 25-
NT1423022137S.D	Data Locked	yev, 25-
NT1423022138S.D	Data Locked	yev, 25-
NT1423022139S.D	Data Locked	yev, 25-
NT1423022140S.D	Data Locked	yev, 25-
NT1423022141S.D	Data Locked	yev, 25-
NT1423022142S.D	Data Locked	yev, 25-
NT1423022143S.D	Data Locked	yev, 25-
NT1423022144S.D	Data Locked	yev, 25-
NT1423022145S.D	Data Locked	yev, 25-
NT1423022146S.D	Data Locked	yev, 25-
NT1423022147S.D	Data Locked	yev, 25-
NT1423022148S.D	Data Locked	yev, 25-

ANALYSIS SEQUENCE

SLB0349

Instrument ID: NT14
Calibration ID: GB00047
MS EM Level: EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: ZB-5MS

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLB0349-ICV1	Initial Cal Check	QC		1	K011107	K010831	02/22/2023 08:08	NT1423022132S.D	DSD	
SLB0349-LCV1	Low Cal Check	QC		2	K011452	K010831	02/22/2023 08:44	NT1423022133S.D	DSD	
BLA0393-BLK2	Blank	QC		3		K010831	02/22/2023 09:21	NT1423022134S.D	DSD	
BLA0393-BS2	LCS	QC		4		K010831	02/22/2023 09:57	NT1423022135S.D	DSD	
BLA0393-BSD2	LCS Dup	QC		5		K010831	02/22/2023 10:33	NT1423022136S.D	DSD	
BLA0393-SRM2	Reference	QC		6		K010831	02/22/2023 11:09	NT1423022137S.D	DSD	
BLA0393-MS2	Matrix Spike	QC		7		K010831	02/22/2023 15:22	NT1423022144S.D	DSD	
BLA0393-MSD2	Matrix Spike Dup	QC		8		K010831	02/22/2023 15:58	NT1423022145S.D	DSD	
23A0133-03	LDW23-SC1250	270E-SIM Dual Scan SVO	C 04	9		K010831	02/22/2023 13:34	NT1423022141S.D	DSD	
23A0133-06	LDW23-SC1241	270E-SIM Dual Scan SVO	C 04	10		K010831	02/22/2023 14:10	NT1423022142S.D	DSD	
23A0133-07	LDW23-IT1217	270E-SIM Dual Scan SVO	C 04	11		K010831	02/22/2023 14:46	NT1423022143S.D	DSD	
SLB0349-CCV1	Calibration Check	QC		12	K011107	K010831	02/22/2023 17:47	NT1423022148S.D	DSD	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221B.b\SIM.b

	Time	Filename	LabID	ClientId	DF											
1	0808	NT1423022132S.D	SLB0349-ICV1		1	8.57	261796	11.04	959301	14.65	503659	17.67	1179954	22.77	887360	25.21	652371
2	0844	NT1423022133S.D	SLB0349-LCV1		1	8.57	250681	11.04	941427	14.65	501249	17.67	1198933	22.77	872687	25.21	655540
3	0921	NT1423022134S.D	BLA0393-BLK2		1	8.57	305329	11.04	1097705	14.65	569801	17.67	1341702	22.77	981145	25.21	724557
4	0957	NT1423022135S.D	BLA0393-BS2		1	8.57	303756	11.04	1100976	14.65	589097	17.67	1355563	22.77	1057826	25.22	773837
5	1033	NT1423022136S.D	BLA0393-BSD2		1	8.57	312906	11.04	1132810	14.65	607003	17.67	1400120	22.77	1066010	25.21	790323
6	1109	NT1423022137S.D	BLA0393-SRM2		1	8.57	308877	11.04	1099039	14.65	586353	17.67	1378091	22.77	1051858	25.21	787258
7	1145	NT1423022138S.D	SEQ-ICB3		1	8.57	279753	11.04	1033166	14.65	558610	17.67	1278244	22.77	958103	25.21	685911
8	1222	NT1423022139S.D	BLA0216-BLK2		1	8.57	476068	11.04	1782735	14.65	1024773	17.67	2314781	22.77	1942677	25.22	1444344
9	1258	NT1423022140S.D	BLA0339-BLK2		1	8.57	320586	11.04	1155302	14.65	593650	17.67	1399186	22.77	1032153	25.21	735833
10	1334	NT1423022141S.D	23A0133-03		1	8.57	306861	11.04	1117860	14.65	583150	17.68	1223903	22.78	812823	25.24	639897
11	1410	NT1423022142S.D	23A0133-06		1	8.57	292896	11.04	1064153	14.65	556751	17.68	1124300	22.78	730051	25.24	591653
12	1446	NT1423022143S.D	23A0133-07		1	8.57	296383	11.04	1069932	14.65	552424	17.68	1198526	22.79	796921	25.24	630918
13	1522	NT1423022144S.D	BLA0393-MS2		1	8.57	277989	11.05	1004957	14.66	535030	17.69	1238609	22.79	740543	25.24	573408
14	1558	NT1423022145S.D	BLA0393-MSD2		1	8.57	271109	11.05	983790	14.65	526434	17.69	1217018	22.79	722770	25.24	593366
15	1635	NT1423022146S.D	SEQ-ICV4		1	8.57	231248	11.05	850675	14.65	455458	17.68	1045228	22.77	743612	25.22	546846
16	1711	NT1423022147S.D	SEQ-ICV4		1	8.57	218377	11.04	810952	14.65	424595	17.67	994464	22.77	671091	25.22	495034
17	1747	NT1423022148S.D	SLB0293-CCV1		1	8.57	241018	11.04	887165	14.65	467553	17.67	1079793	22.77	754146	25.22	558201

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221B.b\SIM.b

ARI Job No.: SLB0 Method: SIM.b\SIMABN2.m Instrument: nt14.i Date: 22-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0808	NT14230221320S.D	SLB0349-ICV1		1	2-Methylphenol, Benzoic acid, N-Nitrosodimethylamine,
0844	NT14230221330S.D	SLB0349-LCV1		1	Benzoic acid, Pentachlorophenol,
0921	NT14230221340S.D	BLA0393-BLK2		1	NO MANUAL INTEGRATION
0957	NT14230221350S.D	BLA0393-BS2		1	NO MANUAL INTEGRATION
1033	NT14230221360S.D	BLA0393-BSD2		1	NO MANUAL INTEGRATION
1109	NT14230221370S.D	BLA0393-SRM2		1	NO MANUAL INTEGRATION
1145	NT14230221380S.D	SEQ-ICB3		1	NO MANUAL INTEGRATION
1222	NT14230221390S.D	BLA0216-BLK2		1	NO MANUAL INTEGRATION
1258	NT14230221400S.D	BLA0339-BLK2		1	NO MANUAL INTEGRATION
1334	NT14230221410S.D	23A0133-03		1	1,4-Dichlorobenzene, Benzyl alcohol,
1410	NT14230221420S.D	23A0133-06		1	Hexachlorobutadiene, Diethylphthalate, Pentachlorophenol,
1446	NT14230221430S.D	23A0133-07		1	1,4-Dichlorobenzene, 2-Methylphenol, Diethylphthalate,
1522	NT14230221440S.D	BLA0393-MS2		1	NO MANUAL INTEGRATION
1558	NT14230221450S.D	BLA0393-MSD2		1	NO MANUAL INTEGRATION
1635	NT14230221460S.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
1711	NT14230221470S.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
1747	NT14230221480S.D	SLB0293-CCV1		1	2-Methylphenol, N-Nitroso-di-n-propylamine, Benzoic acid, N-Nitrosodimethylamine, 2-Fluorophenol,

Security Status Report

Date: 02-Mar-2023 13:33

NT1423022132S.D	Data Locked	deenayd, 02-
NT1423022133S.D	Data Locked	deenayd, 02-
NT1423022134S.D	Data Locked	deenayd, 02-
NT1423022135S.D	Data Locked	deenayd, 02-
NT1423022136S.D	Data Locked	deenayd, 02-
NT1423022137S.D	Data Locked	deenayd, 02-
NT1423022138S.D	Data Locked	deenayd, 02-
NT1423022139S.D	Data Locked	deenayd, 02-
NT1423022140S.D	Data Locked	deenayd, 02-
NT1423022141S.D	Data Locked	deenayd, 02-
NT1423022142S.D	Data Locked	deenayd, 02-
NT1423022143S.D	Data Locked	deenayd, 02-
NT1423022144S.D	Data Locked	deenayd, 02-
NT1423022145S.D	Data Locked	deenayd, 02-
NT1423022146S.D	Data Locked	deenayd, 02-
NT1423022147S.D	Data Locked	deenayd, 02-
NT1423022148S.D	Data Locked	deenayd, 02-

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0234	Instrument:	NT14
Calibration:	GB00046	Calibration Date:	02/16/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0234-SCV1 (Water)			Lab File ID: NT1423021613.D			Analyzed: 02/16/23 21:18		
2-Fluorophenol	7.5000	112	80 - 120	6.674	6.676143	-0.0021	N/A	
Phenol-d5	7.5000	107	80 - 120	8.266	8.270143	-0.0041	N/A	
2-Chlorophenol-d4	7.5000	104	80 - 120	8.536	8.538143	-0.0021	N/A	
1,2-Dichlorobenzene-d4	5.0000	99.7	80 - 120	9.264	9.26	0.0040	N/A	
Nitrobenzene-d5	5.0000	104	80 - 120	10.002	10.00286	-0.0009	N/A	
2-Fluorobiphenyl	5.0000	97.4	80 - 120	13.625	13.62286	0.0021	N/A	
2,4,6-Tribromophenol	7.5000	95.2	80 - 120	16.663	16.66314	-0.0001	N/A	
p-Terphenyl-d14	5.0000	94.6	80 - 120	21.219	21.21986	-0.0009	N/A	
SLB0234-ICB1 (Water)			Lab File ID: NT1423021618.D			Analyzed: 02/17/23 00:17		
2-Fluorophenol	7.5000	117	30 - 160	6.674	6.676143	-0.0021	N/A	
Phenol-d5	7.5000	109	30 - 160	8.266	8.270143	-0.0041	N/A	
2-Chlorophenol-d4	7.5000	111	30 - 160	8.536	8.538143	-0.0021	N/A	
1,2-Dichlorobenzene-d4	5.0000	109	30 - 160	9.257	9.26	-0.0030	N/A	
Nitrobenzene-d5	5.0000	113	30 - 160	10.002	10.00286	-0.0009	N/A	
2-Fluorobiphenyl	5.0000	113	30 - 160	13.617	13.62286	-0.0059	N/A	
2,4,6-Tribromophenol	7.5000	77.2	30 - 160	16.656	16.66314	-0.0071	N/A	
p-Terphenyl-d14	5.0000	118	30 - 160	21.219	21.21986	-0.0009	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0305	Instrument:	NT14
Calibration:	GB00046	Calibration Date:	02/16/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0305-ICV1 (Solid)			Lab File ID: NT1423022130Q.D			Analyzed: 02/22/23 06:55		
2-Fluorophenol	7.5000	110	80 - 120	6.373	6.676143	-0.3031	N/A	
Phenol-d5	7.5000	104	80 - 120	7.965	8.270143	-0.3051	N/A	
2-Chlorophenol-d4	7.5000	103	80 - 120	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	5.0000	97.4	80 - 120	8.925	9.26	-0.3350	N/A	
Nitrobenzene-d5	5.0000	103	80 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	5.0000	100	80 - 120	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	7.5000	98.6	80 - 120	16.293	16.66314	-0.3701	N/A	
p-Terphenyl-d14	5.0000	95.1	80 - 120	20.872	21.21986	-0.3479	N/A	
SLB0305-LCV1 (Solid)			Lab File ID: NT1423022131.D			Analyzed: 02/22/23 07:32		
2-Fluorophenol	0.75000	79.7	50 - 150	6.38	6.676143	-0.2961	N/A	
Phenol-d5	0.75000	94.8	50 - 150	7.972	8.270143	-0.2981	N/A	
2-Chlorophenol-d4	0.75000	98.2	50 - 150	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	0.50000	103	50 - 150	8.925	9.26	-0.3350	N/A	
Nitrobenzene-d5	0.50000	113	50 - 150	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	0.50000	115	50 - 150	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	0.75000	42.0	50 - 150	16.285	16.66314	-0.3781	N/A	*
p-Terphenyl-d14	0.50000	120	50 - 150	20.864	21.21986	-0.3559	N/A	
BLA0393-BLK1 (Solid)			Lab File ID: NT1423022134.D			Analyzed: 02/22/23 09:21		
2-Fluorophenol	750.00	58.0	27 - 120	6.388	6.676143	-0.2881	N/A	
Phenol-d5	750.00	57.8	29 - 120	7.965	8.270143	-0.3051	N/A	
2-Chlorophenol-d4	750.00	60.5	31 - 120	8.204	8.538143	-0.3341	N/A	
1,2-Dichlorobenzene-d4	500.00	61.3	32 - 120	8.917	9.26	-0.3430	N/A	
Nitrobenzene-d5	500.00	67.3	30 - 120	9.654	10.00286	-0.3489	N/A	
2-Fluorobiphenyl	500.00	68.3	35 - 120	13.262	13.62286	-0.3609	N/A	
2,4,6-Tribromophenol	750.00	41.8	24 - 134	16.285	16.66314	-0.3781	N/A	
p-Terphenyl-d14	500.00	70.3	37 - 120	20.864	21.21986	-0.3559	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0305	Instrument:	NT14
Calibration:	GB00046	Calibration Date:	02/16/2023

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLA0393-BS1 (Solid)			Lab File ID: NT1423022135.D			Analyzed: 02/22/23 09:57		
2-Fluorophenol	750.00	66.1	27 - 120	6.388	6.676143	-0.2881	N/A	
Phenol-d5	750.00	64.8	29 - 120	7.965	8.270143	-0.3051	N/A	
2-Chlorophenol-d4	750.00	64.9	31 - 120	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	500.00	60.2	32 - 120	8.917	9.26	-0.3430	N/A	
Nitrobenzene-d5	500.00	72.3	30 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	500.00	71.6	35 - 120	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	750.00	68.6	24 - 134	16.285	16.66314	-0.3781	N/A	
p-Terphenyl-d14	500.00	71.1	37 - 120	20.864	21.21986	-0.3559	N/A	
BLA0393-BSD1 (Solid)			Lab File ID: NT1423022136.D			Analyzed: 02/22/23 10:33		
2-Fluorophenol	750.00	75.4	27 - 120	6.388	6.676143	-0.2881	N/A	
Phenol-d5	750.00	74.0	29 - 120	7.965	8.270143	-0.3051	N/A	
2-Chlorophenol-d4	750.00	73.9	31 - 120	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	500.00	68.4	32 - 120	8.917	9.26	-0.3430	N/A	
Nitrobenzene-d5	500.00	75.4	30 - 120	9.654	10.00286	-0.3489	N/A	
2-Fluorobiphenyl	500.00	74.8	35 - 120	13.262	13.62286	-0.3609	N/A	
2,4,6-Tribromophenol	750.00	68.5	24 - 134	16.285	16.66314	-0.3781	N/A	
p-Terphenyl-d14	500.00	72.8	37 - 120	20.864	21.21986	-0.3559	N/A	
BLA0393-SRM1 (Solid)			Lab File ID: NT1423022137.D			Analyzed: 02/22/23 11:09		
2-Fluorophenol	7500.0	79.4	27 - 120	6.388	6.676143	-0.2881	N/A	
Phenol-d5	7500.0	74.8	29 - 120	7.965	8.270143	-0.3051	N/A	
2-Chlorophenol-d4	7500.0	75.8	31 - 120	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	5000.0	69.5	32 - 120	8.917	9.26	-0.3430	N/A	
Nitrobenzene-d5	5000.0	75.1	30 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	5000.0	77.2	35 - 120	13.262	13.62286	-0.3609	N/A	
2,4,6-Tribromophenol	7500.0	79.9	24 - 134	16.285	16.66314	-0.3781	N/A	
p-Terphenyl-d14	5000.0	69.6	37 - 120	20.864	21.21986	-0.3559	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0305	Instrument:	NT14
Calibration:	GB00046	Calibration Date:	02/16/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0305-ICB1 (Solid)			Lab File ID: NT1423022138.D			Analyzed: 02/22/23 11:45		
2-Fluorophenol	7.5000	102	27 - 120	6.373	6.676143	-0.3031	N/A	
Phenol-d5	7.5000	93.9	29 - 120	7.965	8.270143	-0.3051	N/A	
2-Chlorophenol-d4	7.5000	104	31 - 120	8.204	8.538143	-0.3341	N/A	
1,2-Dichlorobenzene-d4	5.0000	94.9	32 - 120	8.917	9.26	-0.3430	N/A	
Nitrobenzene-d5	5.0000	101	30 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	5.0000	99.7	35 - 120	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	7.5000	84.0	24 - 134	16.285	16.66314	-0.3781	N/A	
p-Terphenyl-d14	5.0000	99.8	37 - 120	20.864	21.21986	-0.3559	N/A	
23A0133-03 (Solid)			Lab File ID: NT1423022141.D			Analyzed: 02/22/23 13:34		
2-Fluorophenol	748.69	60.6	27 - 120	6.381	6.676143	-0.2951	N/A	
Phenol-d5	748.69	56.0	29 - 120	7.965	8.270143	-0.3051	N/A	
2-Chlorophenol-d4	748.69	63.1	31 - 120	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	499.12	59.0	32 - 120	8.925	9.26	-0.3350	N/A	
Nitrobenzene-d5	499.12	64.3	30 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	499.12	67.7	35 - 120	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	748.69	69.9	24 - 134	16.285	16.66314	-0.3781	N/A	
p-Terphenyl-d14	499.12	70.6	37 - 120	20.88	21.21986	-0.3399	N/A	
23A0133-06 (Solid)			Lab File ID: NT1423022142.D			Analyzed: 02/22/23 14:10		
2-Fluorophenol	750.15	74.0	27 - 120	6.388	6.676143	-0.2881	N/A	
Phenol-d5	750.15	69.6	29 - 120	7.972	8.270143	-0.2981	N/A	
2-Chlorophenol-d4	750.15	71.0	31 - 120	8.211	8.538143	-0.3271	N/A	
1,2-Dichlorobenzene-d4	500.10	66.2	32 - 120	8.924	9.26	-0.3360	N/A	
Nitrobenzene-d5	500.10	72.0	30 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	500.10	74.2	35 - 120	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	750.15	67.1	24 - 134	16.293	16.66314	-0.3701	N/A	
p-Terphenyl-d14	500.10	87.7	37 - 120	20.887	21.21986	-0.3329	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0305
Instrument: NT14
Calibration: GB00046
Calibration Date: 02/16/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0133-07 (Solid)			Lab File ID: NT1423022143.D			Analyzed: 02/22/23 14:46		
2-Fluorophenol	746.74	73.2	27 - 120	6.396	6.676143	-0.2801	N/A	
Phenol-d5	746.74	68.2	29 - 120	7.972	8.270143	-0.2981	N/A	
2-Chlorophenol-d4	746.74	70.4	31 - 120	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	497.83	65.0	32 - 120	8.925	9.26	-0.3350	N/A	
Nitrobenzene-d5	497.83	69.5	30 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	497.83	71.2	35 - 120	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	746.74	65.1	24 - 134	16.293	16.66314	-0.3701	N/A	
p-Terphenyl-d14	497.83	72.9	37 - 120	20.887	21.21986	-0.3329	N/A	
BLA0393-MS1 (Solid)			Lab File ID: NT1423022144.D			Analyzed: 02/22/23 15:22		
2-Fluorophenol	749.85	68.6	27 - 120	6.388	6.676143	-0.2881	N/A	
Phenol-d5	749.85	63.1	29 - 120	7.972	8.270143	-0.2981	N/A	
2-Chlorophenol-d4	749.85	65.8	31 - 120	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	499.90	58.2	32 - 120	8.925	9.26	-0.3350	N/A	
Nitrobenzene-d5	499.90	65.8	30 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	499.90	64.4	35 - 120	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	749.85	64.5	24 - 134	16.293	16.66314	-0.3701	N/A	
p-Terphenyl-d14	499.90	73.0	37 - 120	20.895	21.21986	-0.3249	N/A	
BLA0393-MSD1 (Solid)			Lab File ID: NT1423022145.D			Analyzed: 02/22/23 15:58		
2-Fluorophenol	749.85	74.2	27 - 120	6.396	6.676143	-0.2801	N/A	
Phenol-d5	749.85	70.5	29 - 120	7.972	8.270143	-0.2981	N/A	
2-Chlorophenol-d4	749.85	69.9	31 - 120	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	499.90	63.0	32 - 120	8.925	9.26	-0.3350	N/A	
Nitrobenzene-d5	499.90	69.9	30 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	499.90	70.3	35 - 120	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	749.85	69.8	24 - 134	16.293	16.66314	-0.3701	N/A	
p-Terphenyl-d14	499.90	80.0	37 - 120	20.887	21.21986	-0.3329	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0305	Instrument:	NT14
Calibration:	GB00046	Calibration Date:	02/16/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0305-CCV1 (Solid)			Lab File ID: NT1423022146.D			Analyzed: 02/22/23 16:35		
2-Fluorophenol	7.5000	102	50 - 150	6.38	6.676143	-0.2961	N/A	
Phenol-d5	7.5000	97.2	50 - 150	7.972	8.270143	-0.2981	N/A	
2-Chlorophenol-d4	7.5000	95.0	50 - 150	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	5.0000	89.0	50 - 150	8.925	9.26	-0.3350	N/A	
Nitrobenzene-d5	5.0000	105	50 - 150	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	5.0000	101	50 - 150	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	7.5000	90.8	50 - 150	16.293	16.66314	-0.3701	N/A	
p-Terphenyl-d14	5.0000	101	50 - 150	20.872	21.21986	-0.3479	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0308	Instrument:	NT14
Calibration:	GB00046	Calibration Date:	02/16/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0308-ICV1 (Solid)			Lab File ID: NT1423022146U.D			Analyzed: 02/22/23 16:35		
2-Fluorophenol	7.5000	102	80 - 120	6.38	6.676143	-0.2961	N/A	
Phenol-d5	7.5000	97.2	80 - 120	7.972	8.270143	-0.2981	N/A	
2-Chlorophenol-d4	7.5000	95.0	80 - 120	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	5.0000	89.0	80 - 120	8.925	9.26	-0.3350	N/A	
Nitrobenzene-d5	5.0000	105	80 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	5.0000	101	80 - 120	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	7.5000	90.8	80 - 120	16.293	16.66314	-0.3701	N/A	
p-Terphenyl-d14	5.0000	101	80 - 120	20.872	21.21986	-0.3479	N/A	
SLB0308-LCV1 (Solid)			Lab File ID: NT1423022147.D			Analyzed: 02/22/23 17:11		
2-Fluorophenol	0.75000	82.6	50 - 150	6.388	6.676143	-0.2881	N/A	
Phenol-d5	0.75000	97.9	50 - 150	7.972	8.270143	-0.2981	N/A	
2-Chlorophenol-d4	0.75000	105	50 - 150	8.211	8.538143	-0.3271	N/A	
1,2-Dichlorobenzene-d4	0.50000	110	50 - 150	8.924	9.26	-0.3360	N/A	
Nitrobenzene-d5	0.50000	108	50 - 150	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	0.50000	114	50 - 150	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	0.75000	11.1	50 - 150	16.277	16.66314	-0.3861	N/A	*
p-Terphenyl-d14	0.50000	127	50 - 150	20.871	21.21986	-0.3489	N/A	
23A0133-08 (Solid)			Lab File ID: NT1423022151.D			Analyzed: 02/22/23 19:36		
2-Fluorophenol	748.90	68.9	27 - 120	6.396	6.676143	-0.2801	N/A	
Phenol-d5	748.90	62.5	29 - 120	7.972	8.270143	-0.2981	N/A	
2-Chlorophenol-d4	748.90	71.5	31 - 120	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	499.26	59.9	32 - 120	8.917	9.26	-0.3430	N/A	
Nitrobenzene-d5	499.26	65.5	30 - 120	9.654	10.00286	-0.3489	N/A	
2-Fluorobiphenyl	499.26	69.6	35 - 120	13.262	13.62286	-0.3609	N/A	
2,4,6-Tribromophenol	748.90	69.2	24 - 134	16.293	16.66314	-0.3701	N/A	
p-Terphenyl-d14	499.26	85.7	37 - 120	20.879	21.21986	-0.3409	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0308
Instrument: NT14
Calibration: GB00046
Calibration Date: 02/16/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0133-09 (Solid)			Lab File ID: NT1423022152.D			Analyzed: 02/22/23 20:12		
2-Fluorophenol	749.92	47.1	27 - 120	6.388	6.676143	-0.2881	N/A	
Phenol-d5	749.92	42.9	29 - 120	7.972	8.270143	-0.2981	N/A	
2-Chlorophenol-d4	749.92	45.9	31 - 120	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	499.95	42.8	32 - 120	8.917	9.26	-0.3430	N/A	
Nitrobenzene-d5	499.95	45.7	30 - 120	9.654	10.00286	-0.3489	N/A	
2-Fluorobiphenyl	499.95	47.3	35 - 120	13.262	13.62286	-0.3609	N/A	
2,4,6-Tribromophenol	749.92	39.4	24 - 134	16.293	16.66314	-0.3701	N/A	
p-Terphenyl-d14	499.95	54.1	37 - 120	20.879	21.21986	-0.3409	N/A	
23A0133-10 (Solid)			Lab File ID: NT1423022153.D			Analyzed: 02/22/23 20:48		
2-Fluorophenol	749.00	71.1	27 - 120	6.388	6.676143	-0.2881	N/A	
Phenol-d5	749.00	66.5	29 - 120	7.973	8.270143	-0.2971	N/A	
2-Chlorophenol-d4	749.00	69.7	31 - 120	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	499.33	63.5	32 - 120	8.925	9.26	-0.3350	N/A	
Nitrobenzene-d5	499.33	69.0	30 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	499.33	69.0	35 - 120	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	749.00	58.6	24 - 134	16.301	16.66314	-0.3621	N/A	
p-Terphenyl-d14	499.33	74.1	37 - 120	20.895	21.21986	-0.3249	N/A	
23A0133-11 (Solid)			Lab File ID: NT1423022154.D			Analyzed: 02/22/23 21:24		
2-Fluorophenol	749.33	70.8	27 - 120	6.388	6.676143	-0.2881	N/A	
Phenol-d5	749.33	66.8	29 - 120	7.972	8.270143	-0.2981	N/A	
2-Chlorophenol-d4	749.33	69.0	31 - 120	8.211	8.538143	-0.3271	N/A	
1,2-Dichlorobenzene-d4	499.55	62.7	32 - 120	8.924	9.26	-0.3360	N/A	
Nitrobenzene-d5	499.55	69.6	30 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	499.55	69.5	35 - 120	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	749.33	48.7	24 - 134	16.293	16.66314	-0.3701	N/A	
p-Terphenyl-d14	499.55	79.1	37 - 120	20.887	21.21986	-0.3329	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0308	Instrument:	NT14
Calibration:	GB00046	Calibration Date:	02/16/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0133-12 (Solid)			Lab File ID: NT1423022155.D			Analyzed: 02/22/23 22:01		
2-Fluorophenol	748.91	41.9	27 - 120	6.38	6.676143	-0.2961	N/A	
Phenol-d5	748.91	43.6	29 - 120	7.972	8.270143	-0.2981	N/A	
2-Chlorophenol-d4	748.91	50.8	31 - 120	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	499.28	47.2	32 - 120	8.925	9.26	-0.3350	N/A	
Nitrobenzene-d5	499.28	57.1	30 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	499.28	57.4	35 - 120	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	748.91	30.8	24 - 134	16.293	16.66314	-0.3701	N/A	
p-Terphenyl-d14	499.28	64.5	37 - 120	20.887	21.21986	-0.3329	N/A	
23A0133-13 (Solid)			Lab File ID: NT1423022156.D			Analyzed: 02/22/23 22:37		
2-Fluorophenol	749.45	74.3	27 - 120	6.396	6.676143	-0.2801	N/A	
Phenol-d5	749.45	69.8	29 - 120	7.972	8.270143	-0.2981	N/A	
2-Chlorophenol-d4	749.45	71.6	31 - 120	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	499.64	64.5	32 - 120	8.917	9.26	-0.3430	N/A	
Nitrobenzene-d5	499.64	71.6	30 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	499.64	72.1	35 - 120	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	749.45	71.2	24 - 134	16.293	16.66314	-0.3701	N/A	
p-Terphenyl-d14	499.64	80.1	37 - 120	20.887	21.21986	-0.3329	N/A	
23A0133-14 (Solid)			Lab File ID: NT1423022157.D			Analyzed: 02/22/23 23:14		
2-Fluorophenol	749.28	73.3	27 - 120	6.396	6.676143	-0.2801	N/A	
Phenol-d5	749.28	68.4	29 - 120	7.973	8.270143	-0.2971	N/A	
2-Chlorophenol-d4	749.28	69.8	31 - 120	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	499.52	64.5	32 - 120	8.925	9.26	-0.3350	N/A	
Nitrobenzene-d5	499.52	70.5	30 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	499.52	70.2	35 - 120	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	749.28	71.8	24 - 134	16.293	16.66314	-0.3701	N/A	
p-Terphenyl-d14	499.52	88.2	37 - 120	20.88	21.21986	-0.3399	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0308
Instrument: NT14
Calibration: GB00046
Calibration Date: 02/16/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0133-15 (Solid)			Lab File ID: NT1423022158.D			Analyzed: 02/22/23 23:50		
2-Fluorophenol	749.23	68.0	27 - 120	6.388	6.676143	-0.2881	N/A	
Phenol-d5	749.23	63.9	29 - 120	7.972	8.270143	-0.2981	N/A	
2-Chlorophenol-d4	749.23	66.0	31 - 120	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	499.49	60.3	32 - 120	8.925	9.26	-0.3350	N/A	
Nitrobenzene-d5	499.49	66.4	30 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	499.49	66.4	35 - 120	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	749.23	47.3	24 - 134	16.293	16.66314	-0.3701	N/A	
p-Terphenyl-d14	499.49	85.2	37 - 120	20.88	21.21986	-0.3399	N/A	
23A0133-16 (Solid)			Lab File ID: NT1423022159.D			Analyzed: 02/23/23 00:26		
2-Fluorophenol	1237.8	71.2	27 - 120	6.388	6.676143	-0.2881	N/A	
Phenol-d5	1237.8	66.4	29 - 120	7.98	8.270143	-0.2901	N/A	
2-Chlorophenol-d4	1237.8	69.6	31 - 120	8.211	8.538143	-0.3271	N/A	
1,2-Dichlorobenzene-d4	825.23	63.8	32 - 120	8.924	9.26	-0.3360	N/A	
Nitrobenzene-d5	825.23	71.1	30 - 120	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	825.23	70.5	35 - 120	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	1237.8	68.7	24 - 134	16.293	16.66314	-0.3701	N/A	
p-Terphenyl-d14	825.23	80.4	37 - 120	20.887	21.21986	-0.3329	N/A	
SLB0308-CCV1 (Solid)			Lab File ID: NT1423022160.D			Analyzed: 02/23/23 01:02		
2-Fluorophenol	7.5000	103	50 - 150	6.381	6.676143	-0.2951	N/A	
Phenol-d5	7.5000	100	50 - 150	7.973	8.270143	-0.2971	N/A	
2-Chlorophenol-d4	7.5000	96.5	50 - 150	8.212	8.538143	-0.3261	N/A	
1,2-Dichlorobenzene-d4	5.0000	90.0	50 - 150	8.925	9.26	-0.3350	N/A	
Nitrobenzene-d5	5.0000	108	50 - 150	9.662	10.00286	-0.3409	N/A	
2-Fluorobiphenyl	5.0000	101	50 - 150	13.27	13.62286	-0.3529	N/A	
2,4,6-Tribromophenol	7.5000	90.6	50 - 150	16.293	16.66314	-0.3701	N/A	
p-Terphenyl-d14	5.0000	107	50 - 150	20.872	21.21986	-0.3479	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0349	Instrument:	NT14
Calibration:	GC00009	Calibration Date:	02/16/2023

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLA0393-BLK2 (Solid)			Lab File ID: NT1423022150.D			Analyzed: 02/22/23 18:59		
2-Fluorophenol	750.00	58.8	27 - 120	6.396		6.3960	N/A	
Phenol-d5	750.00	59.9	29 - 120	7.964		7.9640	N/A	
2-Chlorophenol-d4	750.00	65.8	31 - 120	8.211		8.2110	N/A	
1,2-Dichlorobenzene-d4	500.00	61.8	32 - 120	8.917		8.9170	N/A	
Nitrobenzene-d5	500.00	68.7	30 - 120	9.654		9.6540	N/A	
2-Fluorobiphenyl	500.00	67.4	35 - 120	13.262		13.2620	N/A	
2,4,6-Tribromophenol	750.00	43.4	24 - 134	16.285		16.2850	N/A	
p-Terphenyl-d14	500.00	76.1	37 - 120	20.871		20.8710	N/A	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0234	Instrument:	NT14
		Calibration:	GB00046

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SLB0234-SCV1)		(Water)		Lab File ID: NT1423021613.D				Analyzed: 02/16/23 21:18	
1,4-Dichlorobenzene-d4	362894	8.9	375798	8.9	97	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1343351	11.397	1378169	11.397	97	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	854455	15.018	847135	15.018	101	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1630237	18.054	1675180	18.054	97	50 - 200	0.000	+/-0.50	
Chrysene-d12	1112056	23.123	1073562	23.123	104	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1298332	24.153	1344129	24.153	97	50 - 200	0.000	+/-0.50	
Perylene-d12	733476	25.686	721978	25.686	102	50 - 200	0.000	+/-0.50	
Initial Cal Blank (SLB0234-ICB1)		(Water)		Lab File ID: NT1423021618.D				Analyzed: 02/17/23 00:17	
1,4-Dichlorobenzene-d4	274788	8.9	375798	8.9	73	50 - 200	0.000	+/-0.50	
Naphthalene-d8	975858	11.389	1378169	11.397	71	50 - 200	-0.008	+/-0.50	
Acenaphthene-d10	576816	15.01	847135	15.018	68	50 - 200	-0.008	+/-0.50	
Phenanthrene-d10	1140272	18.054	1675180	18.054	68	50 - 200	0.000	+/-0.50	
Chrysene-d12	714655	23.116	1073562	23.123	67	50 - 200	-0.007	+/-0.50	
Di-n-Octylphthalate-d4	689415	24.153	1344129	24.153	51	50 - 200	0.000	+/-0.50	
Perylene-d12	466173	25.686	721978	25.686	65	50 - 200	0.000	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0305	Instrument:	NT14
		Calibration:	GB00046

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLB0305-ICV1)		(Solid)	Lab File ID: NT1423022130Q.D				Analyzed: 02/22/23 06:55		
1,4-Dichlorobenzene-d4	235125	8.568	235125	8.568	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	883104	11.042	883104	11.042	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	537789	14.648	537789	14.648	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1079531	17.676	1079531	17.676	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	826409	22.769	826409	22.769	100	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1339562	23.837	1339562	23.837	100	50 - 200	0.000	+/-0.50	
Perylene-d12	590325	25.215	590325	25.215	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLB0305-LCV1)		(Solid)	Lab File ID: NT1423022131.D				Analyzed: 02/22/23 07:32		
1,4-Dichlorobenzene-d4	245988	8.568	235125	8.568	105	50 - 200	0.000	+/-0.50	
Naphthalene-d8	853786	11.042	883104	11.042	97	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	510355	14.648	537789	14.648	95	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1033553	17.668	1079531	17.676	96	50 - 200	-0.008	+/-0.50	
Chrysene-d12	755570	22.769	826409	22.769	91	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1272969	23.829	1339562	23.837	95	50 - 200	-0.008	+/-0.50	
Perylene-d12	553476	25.215	590325	25.215	94	50 - 200	0.000	+/-0.50	
Blank (BLA0393-BLK1)		(Solid)	Lab File ID: NT1423022134.D				Analyzed: 02/22/23 09:21		
1,4-Dichlorobenzene-d4	284140	8.56	235125	8.568	121	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	1037690	11.034	883104	11.042	118	50 - 200	-0.008	+/-0.50	
Acenaphthene-d10	609838	14.64	537789	14.648	113	50 - 200	-0.008	+/-0.50	
Phenanthrene-d10	1243935	17.669	1079531	17.676	115	50 - 200	-0.007	+/-0.50	
Chrysene-d12	909432	22.769	826409	22.769	110	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1479271	23.837	1339562	23.837	110	50 - 200	0.000	+/-0.50	
Perylene-d12	647031	25.215	590325	25.215	110	50 - 200	0.000	+/-0.50	
LCS (BLA0393-BS1)		(Solid)	Lab File ID: NT1423022135.D				Analyzed: 02/22/23 09:57		
1,4-Dichlorobenzene-d4	305581	8.56	235125	8.568	130	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	1035299	11.042	883104	11.042	117	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	627265	14.648	537789	14.648	117	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1255650	17.669	1079531	17.676	116	50 - 200	-0.007	+/-0.50	
Chrysene-d12	965199	22.769	826409	22.769	117	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1554743	23.837	1339562	23.837	116	50 - 200	0.000	+/-0.50	
Perylene-d12	698052	25.215	590325	25.215	118	50 - 200	0.000	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0305	Instrument:	NT14
		Calibration:	GB00046

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (BLA0393-BSD1)		(Solid)		Lab File ID: NT1423022136.D				Analyzed: 02/22/23 10:33	
1,4-Dichlorobenzene-d4	289546	8.568	235125	8.568	123	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1072886	11.034	883104	11.042	121	50 - 200	-0.008	+/-0.50	
Acenaphthene-d10	648876	14.648	537789	14.648	121	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1294186	17.668	1079531	17.676	120	50 - 200	-0.008	+/-0.50	
Chrysene-d12	1002280	22.769	826409	22.769	121	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1583974	23.829	1339562	23.837	118	50 - 200	-0.008	+/-0.50	
Perylene-d12	711817	25.215	590325	25.215	121	50 - 200	0.000	+/-0.50	
Reference (BLA0393-SRM1)		(Solid)		Lab File ID: NT1423022137.D				Analyzed: 02/22/23 11:09	
1,4-Dichlorobenzene-d4	288382	8.56	235125	8.568	123	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	1041151	11.035	883104	11.042	118	50 - 200	-0.007	+/-0.50	
Acenaphthene-d10	625557	14.64	537789	14.648	116	50 - 200	-0.008	+/-0.50	
Phenanthrene-d10	1275726	17.669	1079531	17.676	118	50 - 200	-0.007	+/-0.50	
Chrysene-d12	973077	22.769	826409	22.769	118	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1604308	23.837	1339562	23.837	120	50 - 200	0.000	+/-0.50	
Perylene-d12	711743	25.215	590325	25.215	121	50 - 200	0.000	+/-0.50	
Initial Cal Blank (SLB0305-ICB1)		(Solid)		Lab File ID: NT1423022138.D				Analyzed: 02/22/23 11:45	
1,4-Dichlorobenzene-d4	281285	8.568	235125	8.568	120	50 - 200	0.000	+/-0.50	
Naphthalene-d8	967857	11.035	883104	11.042	110	50 - 200	-0.007	+/-0.50	
Acenaphthene-d10	593165	14.648	537789	14.648	110	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1161769	17.669	1079531	17.676	108	50 - 200	-0.007	+/-0.50	
Chrysene-d12	871510	22.769	826409	22.769	105	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1395024	23.829	1339562	23.837	104	50 - 200	-0.008	+/-0.50	
Perylene-d12	607018	25.215	590325	25.215	103	50 - 200	0.000	+/-0.50	
LDW23-SC1250 (23A0133-03)		(Solid)		Lab File ID: NT1423022141.D				Analyzed: 02/22/23 13:34	
1,4-Dichlorobenzene-d4	280852	8.568	235125	8.568	119	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1056982	11.042	883104	11.042	120	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	619051	14.648	537789	14.648	115	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1118900	17.676	1079531	17.676	104	50 - 200	0.000	+/-0.50	
Chrysene-d12	765759	22.784	826409	22.769	93	50 - 200	0.015	+/-0.50	
Di-n-Octylphthalate-d4	1139581	23.837	1339562	23.837	85	50 - 200	0.000	+/-0.50	
Perylene-d12	591788	25.231	590325	25.215	100	50 - 200	0.016	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0305	Instrument:	NT14
		Calibration:	GB00046

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SC1241 (23A0133-06)		(Solid)		Lab File ID: NT1423022142.D				Analyzed: 02/22/23 14:10	
1,4-Dichlorobenzene-d4	269919	8.567	235125	8.568	115	50 - 200	-0.001	+/-0.50	
Naphthalene-d8	1008331	11.042	883104	11.042	114	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	590268	14.647	537789	14.648	110	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	1069248	17.676	1079531	17.676	99	50 - 200	0.000	+/-0.50	
Chrysene-d12	694925	22.784	826409	22.769	84	50 - 200	0.015	+/-0.50	
Di-n-Octylphthalate-d4	1027928	23.844	1339562	23.837	77	50 - 200	0.007	+/-0.50	
Perylene-d12	545086	25.238	590325	25.215	92	50 - 200	0.023	+/-0.50	
LDW23-IT1217 (23A0133-07)		(Solid)		Lab File ID: NT1423022143.D				Analyzed: 02/22/23 14:46	
1,4-Dichlorobenzene-d4	272617	8.568	235125	8.568	116	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1014620	11.042	883104	11.042	115	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	592525	14.648	537789	14.648	110	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1105020	17.684	1079531	17.676	102	50 - 200	0.008	+/-0.50	
Chrysene-d12	748718	22.784	826409	22.769	91	50 - 200	0.015	+/-0.50	
Di-n-Octylphthalate-d4	1115939	23.845	1339562	23.837	83	50 - 200	0.008	+/-0.50	
Perylene-d12	575105	25.238	590325	25.215	97	50 - 200	0.023	+/-0.50	
Matrix Spike (BLA0393-MS1)		(Solid)		Lab File ID: NT1423022144.D				Analyzed: 02/22/23 15:22	
1,4-Dichlorobenzene-d4	254010	8.568	235125	8.568	108	50 - 200	0.000	+/-0.50	
Naphthalene-d8	945302	11.042	883104	11.042	107	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	575898	14.655	537789	14.648	107	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	1060510	17.684	1079531	17.676	98	50 - 200	0.008	+/-0.50	
Chrysene-d12	691195	22.792	826409	22.769	84	50 - 200	0.023	+/-0.50	
Di-n-Octylphthalate-d4	1060591	23.845	1339562	23.837	79	50 - 200	0.008	+/-0.50	
Perylene-d12	527204	25.238	590325	25.215	89	50 - 200	0.023	+/-0.50	
Matrix Spike Dup (BLA0393-MSD1)		(Solid)		Lab File ID: NT1423022145.D				Analyzed: 02/22/23 15:58	
1,4-Dichlorobenzene-d4	248736	8.568	235125	8.568	106	50 - 200	0.000	+/-0.50	
Naphthalene-d8	930871	11.042	883104	11.042	105	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	563398	14.655	537789	14.648	105	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	1129370	17.684	1079531	17.676	105	50 - 200	0.008	+/-0.50	
Chrysene-d12	693821	22.784	826409	22.769	84	50 - 200	0.015	+/-0.50	
Di-n-Octylphthalate-d4	1038555	23.845	1339562	23.837	78	50 - 200	0.008	+/-0.50	
Perylene-d12	543989	25.238	590325	25.215	92	50 - 200	0.023	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0308	Instrument:	NT14
		Calibration:	GB00046

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLB0308-ICV1)		(Solid)	Lab File ID: NT1423022146U.D				Analyzed: 02/22/23 16:35		
1,4-Dichlorobenzene-d4	232195	8.568	232195	8.568	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	800631	11.042	800631	11.042	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	488064	14.648	488064	14.648	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	971279	17.676	971279	17.676	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	687083	22.769	687083	22.769	100	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1174636	23.837	1174636	23.837	100	50 - 200	0.000	+/-0.50	
Perylene-d12	491790	25.223	491790	25.223	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLB0308-LCV1)		(Solid)	Lab File ID: NT1423022147.D				Analyzed: 02/22/23 17:11		
1,4-Dichlorobenzene-d4	201847	8.567	232195	8.568	87	50 - 200	-0.001	+/-0.50	
Naphthalene-d8	755453	11.042	800631	11.042	94	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	452443	14.647	488064	14.648	93	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	906518	17.676	971279	17.676	93	50 - 200	0.000	+/-0.50	
Chrysene-d12	605320	22.768	687083	22.769	88	50 - 200	-0.001	+/-0.50	
Di-n-Octylphthalate-d4	1095180	23.837	1174636	23.837	93	50 - 200	0.000	+/-0.50	
Perylene-d12	437763	25.215	491790	25.223	89	50 - 200	-0.008	+/-0.50	
LDW23-SC1185 (23A0133-08)		(Solid)	Lab File ID: NT1423022151.D				Analyzed: 02/22/23 19:36		
1,4-Dichlorobenzene-d4	250617	8.56	232195	8.568	108	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	933737	11.034	800631	11.042	117	50 - 200	-0.008	+/-0.50	
Acenaphthene-d10	548784	14.647	488064	14.648	112	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	1107865	17.676	971279	17.676	114	50 - 200	0.000	+/-0.50	
Chrysene-d12	677026	22.784	687083	22.769	99	50 - 200	0.015	+/-0.50	
Di-n-Octylphthalate-d4	1014732	23.845	1174636	23.837	86	50 - 200	0.008	+/-0.50	
Perylene-d12	512843	25.23	491790	25.223	104	50 - 200	0.007	+/-0.50	
LDW23-SC1234 (23A0133-09)		(Solid)	Lab File ID: NT1423022152.D				Analyzed: 02/22/23 20:12		
1,4-Dichlorobenzene-d4	252718	8.56	232195	8.568	109	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	946317	11.042	800631	11.042	118	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	557839	14.648	488064	14.648	114	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1132840	17.676	971279	17.676	117	50 - 200	0.000	+/-0.50	
Chrysene-d12	690894	22.776	687083	22.769	101	50 - 200	0.007	+/-0.50	
Di-n-Octylphthalate-d4	1147377	23.837	1174636	23.837	98	50 - 200	0.000	+/-0.50	
Perylene-d12	516651	25.231	491790	25.223	105	50 - 200	0.008	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0308	Instrument:	NT14
		Calibration:	GB00046

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SC1215 (23A0133-10)		(Solid)		Lab File ID: NT1423022153.D				Analyzed: 02/22/23 20:48	
1,4-Dichlorobenzene-d4	244527	8.568	232195	8.568	105	50 - 200	0.000	+/-0.50	
Naphthalene-d8	925301	11.042	800631	11.042	116	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	551910	14.656	488064	14.648	113	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	969354	17.692	971279	17.676	100	50 - 200	0.016	+/-0.50	
Chrysene-d12	608919	22.792	687083	22.769	89	50 - 200	0.023	+/-0.50	
Di-n-Octylphthalate-d4	812974	23.853	1174636	23.837	69	50 - 200	0.016	+/-0.50	
Perylene-d12	512839	25.246	491790	25.223	104	50 - 200	0.023	+/-0.50	
LDW23-SC1222 (23A0133-11)		(Solid)		Lab File ID: NT1423022154.D				Analyzed: 02/22/23 21:24	
1,4-Dichlorobenzene-d4	252762	8.567	232195	8.568	109	50 - 200	-0.001	+/-0.50	
Naphthalene-d8	928827	11.042	800631	11.042	116	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	548189	14.647	488064	14.648	112	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	1013650	17.684	971279	17.676	104	50 - 200	0.008	+/-0.50	
Chrysene-d12	630996	22.784	687083	22.769	92	50 - 200	0.015	+/-0.50	
Di-n-Octylphthalate-d4	911596	23.844	1174636	23.837	78	50 - 200	0.007	+/-0.50	
Perylene-d12	488257	25.238	491790	25.223	99	50 - 200	0.015	+/-0.50	
LDW23-SC1227 (23A0133-12)		(Solid)		Lab File ID: NT1423022155.D				Analyzed: 02/22/23 22:01	
1,4-Dichlorobenzene-d4	264280	8.568	232195	8.568	114	50 - 200	0.000	+/-0.50	
Naphthalene-d8	908214	11.042	800631	11.042	113	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	539062	14.648	488064	14.648	110	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	989773	17.684	971279	17.676	102	50 - 200	0.008	+/-0.50	
Chrysene-d12	655335	22.784	687083	22.769	95	50 - 200	0.015	+/-0.50	
Di-n-Octylphthalate-d4	1053482	23.845	1174636	23.837	90	50 - 200	0.008	+/-0.50	
Perylene-d12	490273	25.238	491790	25.223	100	50 - 200	0.015	+/-0.50	
LDW23-SS1110 (23A0133-13)		(Solid)		Lab File ID: NT1423022156.D				Analyzed: 02/22/23 22:37	
1,4-Dichlorobenzene-d4	242232	8.568	232195	8.568	104	50 - 200	0.000	+/-0.50	
Naphthalene-d8	898755	11.042	800631	11.042	112	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	525285	14.647	488064	14.648	108	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	967087	17.684	971279	17.676	100	50 - 200	0.008	+/-0.50	
Chrysene-d12	628753	22.784	687083	22.769	92	50 - 200	0.015	+/-0.50	
Di-n-Octylphthalate-d4	1026024	23.845	1174636	23.837	87	50 - 200	0.008	+/-0.50	
Perylene-d12	443402	25.238	491790	25.223	90	50 - 200	0.015	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0308	Instrument:	NT14
		Calibration:	GB00046

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SS1109 (23A0133-14)		(Solid)	Lab File ID: NT1423022157.D				Analyzed: 02/22/23 23:14		
1,4-Dichlorobenzene-d4	232091	8.568	232195	8.568	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	875125	11.042	800631	11.042	109	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	511374	14.648	488064	14.648	105	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	940136	17.684	971279	17.676	97	50 - 200	0.008	+/-0.50	
Chrysene-d12	602807	22.784	687083	22.769	88	50 - 200	0.015	+/-0.50	
Di-n-Octylphthalate-d4	961022	23.845	1174636	23.837	82	50 - 200	0.008	+/-0.50	
Perylene-d12	457458	25.239	491790	25.223	93	50 - 200	0.016	+/-0.50	
LDW23-SS1092 (23A0133-15)		(Solid)	Lab File ID: NT1423022158.D				Analyzed: 02/22/23 23:50		
1,4-Dichlorobenzene-d4	234208	8.568	232195	8.568	101	50 - 200	0.000	+/-0.50	
Naphthalene-d8	882984	11.042	800631	11.042	110	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	514243	14.648	488064	14.648	105	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	946120	17.684	971279	17.676	97	50 - 200	0.008	+/-0.50	
Chrysene-d12	586498	22.784	687083	22.769	85	50 - 200	0.015	+/-0.50	
Di-n-Octylphthalate-d4	968104	23.845	1174636	23.837	82	50 - 200	0.008	+/-0.50	
Perylene-d12	459530	25.238	491790	25.223	93	50 - 200	0.015	+/-0.50	
LDW23-SS1091 (23A0133-16)		(Solid)	Lab File ID: NT1423022159.D				Analyzed: 02/23/23 00:26		
1,4-Dichlorobenzene-d4	229976	8.567	232195	8.568	99	50 - 200	-0.001	+/-0.50	
Naphthalene-d8	862270	11.042	800631	11.042	108	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	511308	14.647	488064	14.648	105	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	937379	17.684	971279	17.676	97	50 - 200	0.008	+/-0.50	
Chrysene-d12	588825	22.784	687083	22.769	86	50 - 200	0.015	+/-0.50	
Di-n-Octylphthalate-d4	978709	23.844	1174636	23.837	83	50 - 200	0.007	+/-0.50	
Perylene-d12	450789	25.238	491790	25.223	92	50 - 200	0.015	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0349	Instrument:	NT14
		Calibration:	GC00009

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (BLA0393-BLK2)		(Solid)		Lab File ID: NT1423022150.D				Analyzed: 02/22/23 18:59	
1,4-Dichlorobenzene-d4	254405	8.56				50 - 200		+/-0.50	
Naphthalene-d8	934429	11.034				50 - 200		+/-0.50	
Acenaphthene-d10	550948	14.647				50 - 200		+/-0.50	
Phenanthrene-d10	1110942	17.668				50 - 200		+/-0.50	
Chrysene-d12	733543	22.768				50 - 200		+/-0.50	
Di-n-Octylphthalate-d4	1272527	23.829				50 - 200		+/-0.50	
Perylene-d12	502221	25.215				50 - 200		+/-0.50	

HOLDING TIME SUMMARY

Analysis: EPA 8270E

Laboratory: Analytical Resources, LLC SDG: 23A0133

Client: Anchor QEA, LLC Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1250 23A0133-03	01/06/23 10:32	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 13:34	35	40	
LDW23-SC1241 23A0133-06	01/06/23 10:51	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 14:10	35	40	
LDW23-IT1217 23A0133-07	01/06/23 11:14	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 14:46	35	40	
LDW23-SC1185 23A0133-08	01/06/23 12:00	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 19:36	35	40	
LDW23-SC1234 23A0133-09	01/06/23 13:34	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 20:12	35	40	
LDW23-SC1215 23A0133-10	01/06/23 11:38	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 20:48	35	40	
LDW23-SC1222 23A0133-11	01/06/23 13:00	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 21:24	35	40	
LDW23-SC1227 23A0133-12	01/06/23 13:18	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 22:01	35	40	
LDW23-SS1110 23A0133-13	01/06/23 14:00	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 22:37	35	40	
LDW23-SS1109 23A0133-14	01/06/23 14:13	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 23:14	35	40	
LDW23-SS1092 23A0133-15	01/06/23 14:26	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 23:50	35	40	
LDW23-SS1091 23A0133-16	01/06/23 14:50	01/06/23 17:26	01/18/23 15:24	12	365	02/23/23 00:26	35	40	
Matrix Spike BLA0393-MS1	01/06/23 11:14	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 15:22	35	40	
Matrix Spike Dup BLA0393-MSD1	01/06/23 11:14	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 15:58	35	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: NT14

Analyte	MDL	RL	Units
Phenol	4.4	20.0	ug/kg
4-Methylphenol	7.4	20.0	ug/kg
Naphthalene	4.2	20.0	ug/kg
2-Methylnaphthalene	4.5	20.0	ug/kg
Acenaphthylene	6.2	20.0	ug/kg
Dimethylphthalate	4.4	20.0	ug/kg
Acenaphthene	5.2	20.0	ug/kg
Dibenzofuran	14.1	20.0	ug/kg
Fluorene	14.6	20.0	ug/kg
Phenanthrene	8.7	20.0	ug/kg
Anthracene	7.2	20.0	ug/kg
Fluoranthene	6.1	20.0	ug/kg
Pyrene	5.7	20.0	ug/kg
Butylbenzylphthalate	9.4	20.0	ug/kg
Benzo(a)anthracene	6.0	20.0	ug/kg
Chrysene	6.1	20.0	ug/kg
bis(2-Ethylhexyl)phthalate	14.1	50.0	ug/kg
Benzofluoranthenes, Total	21.0	40.0	ug/kg
Benzo(a)pyrene	4.2	20.0	ug/kg
Indeno(1,2,3-cd)pyrene	14.7	20.0	ug/kg
Dibenzo(a,h)anthracene	17.2	20.0	ug/kg
Benzo(g,h,i)perylene	13.6	20.0	ug/kg

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: NA

Chemical: Tributyl Phosphate

Manufacturer: Chemservice

Product #: O-916

Lot #: 59-57A

Purity: 99%

Analyst: VB

Element: B000954

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001873

Printed: 9/23/2013 11:47:03AM

Description:	SVOC 4,4 DDT	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	23-Sep-13
Solvent:	N/A	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 11:46 by JZ
Vendor:	Chem Service	Lot #:	198-128A
Vendor Catalog #:			

Comments

Neat, Purity @ 99.2%. (ARI#: 790A)

Analyte	CAS Number	Concentration	Units
4,4'-DDT	50-29-3	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 4,4' DDT

Manufacturer: Chem Service

Product #: _____

Lot #: 198-128A

Purity: 99.2%

Analyst: AB

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001875

Printed: 9/23/2013 12:13:55PM

Description:	SVOC alpha-Terpineol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	N/A	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 12:13 by JZ
Vendor:	ACROS Organics	Lot #:	AD16481201
Vendor Catalog #:			

Comments

Neat, Purity @ 98%. (ARI#: I1582A)

Analyte	CAS Number	Concentration	Units
alpha-Terpineol	98-55-5	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: alpha-Terpineol

Manufacturer: Acros Organics

Product #: _____

Lot #: A0648170 1

Purity: 98%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001885

Printed: 9/23/2013 3:45:57PM

Description:	SVOA Dibutyl Phenyl phosphate	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 15:45 by JZ
Vendor:	Monsanto	Lot #:	N/A
Vendor Catalog #:			

Comments

Neat, Purity @ 98.9%.

Analyte	CAS Number	Concentration	Units
Dibutyl Phenyl Phosphate	2528-36-1	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Dibutyl Phenyl Phosphate

Manufacturer: Monsanto

Product #: N/A

Lot #: N/A

Purity: 98.9%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001886

Printed: 9/23/2013 3:59:35PM

Description:	SVOC Triphenyl Phosphate	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 15:59 by JZ
Vendor:	Aldrich	Lot #:	04902CM
Vendor Catalog #:			

Comments

Neat, Purity @ 99%.

Analyte	CAS Number	Concentration	Units
Triphenyl Phosphate	115-86-6	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Triphenyl Phosphate

Manufacturer: Aldrich

Product #: _____

Lot #: 04907CM

Purity: 99%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001887

Printed: 9/23/2013 4:18:55PM

Description:	SVOC Butylated Hydroxytoluene	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 16:18 by JZ
Vendor:	SIGMA	Lot #:	39F-0197
Vendor Catalog #:			

Comments

neat,Purity @ 99.9%.

Analyte	CAS Number	Concentration	Units
Butylated Hydroxytoluene	128-37-0	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: Butylated Hydroxytoluene

Manufacturer: Sigma

Product #: _____

Lot #: 39F-0197

Purity: 99.8%

Analyst: AR

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001890

Printed: 9/23/2013 5:02:53PM

Description:	SVOC Butyl Diphenyl Phosphate	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 17:02 by JZ
Vendor:	Monsanto	Lot #:	N/A
Vendor Catalog #:			

Comments

Neat, Purity @ 98%.

Analyte	CAS Number	Concentration	Units
Butyl Diphenyl Phosphate	2752-95-6	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: Butyl Diphenyl Phosphate

Manufacturer: Monsanto

Product #: NA

Lot #: NA

Purity: 98%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001941

Printed: 9/25/2013 1:45:31PM

Description:	SVOC 2,4-Dinitrophenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 13:45 by JZ
Vendor:	SIGMA	Lot #:	65H5021
Vendor Catalog #:			

Comments

Neat, Purity @ 90-95%. (ARI#: 0466)

Analyte	CAS Number	Concentration	Units
2,4-Dinitrophenol	51-28-5	1000000	ug/mL

B001941
SVOA 2,4-Dinitrophenol
Expires 12/31/2029
Prepared By Jianqing Zhou 9/25/2013

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 2,4-Dinitrophenol

Manufacturer: Sigma

Product #: _____

Lot #: bEH 502 1

Purity: 90 ~ 94%

Analyst: _____

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001945

Printed: 9/25/2013 3:23:22PM

Description:	SVOC Benzoic Acid	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:23 by JZ
Vendor:	ACROS Organics	Lot #:	A0224339
Vendor Catalog #:			

Comments

Neat, Purity @ 98%.

Analyte	CAS Number	Concentration	Units
Benzoic acid	65-85-0	1000000	ug/mL

B001945
SVOC Benzoic Acid
Expires 12/31/2029
Prepared By Jianqing Zhou 12/31/2012

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Benzoic Acid

Manufacturer: Acros Organics

Product #: _____

Lot #: A0214339

Purity: 98%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001948

Printed: 9/25/2013 3:37:51PM

Description:	SVOC 4,6-Dinitro-2-Methylphenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:37 by JZ
Vendor:	Chem Service	Lot #:	179-31A
Vendor Catalog #:			

Comments

Neat, Purity @ 99%. (ARI#: 009A)

Analyte	CAS Number	Concentration	Units
4,6-Dinitro-2-methylphenol	534-52-1	1000000	ug/mL

B001948
SVOA 4,6-Dinitro-2-Methylphenol
Expires 12/31/2029
Prepared By Jianqing Zhou 9/25/2013

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: 4,6-Dinitro-2-Methylphenol

Manufacturer: Chem Service

Product #: _____

Lot #: 179-31A

Purity: 99%

Analyst: KB

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B002054

Printed: 10/4/2013 6:32:21PM

Description:	SVOA 1-Methylnaphthalene	Expires:	02-Apr-14
Standard Type:	Analyte Spike	Prepared:	13-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	04-Oct-13 18:32 by JZ
Vendor:	Chem Service	Lot #:	62-5B
Vendor Catalog #:			

Comments

Neat, Purity @ 99%

Analyte	CAS Number	Concentration	Units
1-Methylnaphthalene	90-12-0	1000000	ug/mL

B002054
SVOA 1-Methylnaphthalene
Solvent / Lot: NA
Prep: 12/13/2012 by JZ
Exp: 12/31/2029
Location:

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 1-Methyl naphthalene

Manufacturer: Chem Service

Product #: 0787

Lot #: 67-53

Purity: 99%

Analyst: AZ

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B002135

Printed: 10/15/2013 12:07:39PM

Description:	SVOA Benzidine	Expires:	31-Dec-29
Standard Type:	Analyte Spike	Prepared:	15-Oct-13
Solvent:	N/A	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	15-Oct-13 12:07 by JZ
Vendor:	SIGMA	Lot #:	18C0024
Vendor Catalog #:			

Comments

Purity @ 95%. ARI#: 0467.

Analyte	CAS Number	Concentration	Units
Benzidine	92-87-5	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Benzidine

Manufacturer: Sigma

Product #: B-3503

Lot #: 18C0024

Purity: 98%

Analyst: [signature]

Certificate of Analysis

Product Name:	1,2,4,5-Tetrachlorobenzene
Product Description:	98%
Product Brand:	Sigma-Aldrich
Product Number:	131857
Molecular Weight:	215.89
CAS Number:	95-94-3

TEST	SPECIFICATION	LOT 19309JR RESULTS
APPEARANCE	WHITE POWDER, CHIPS OR CRYSTALS	WHITE CHIPS
INFRARED SPECTRUM	CONFORMS TO STRUCTURE.	CONFORMS TO STRUCTURE AND STANDARD AS
** **		ILLUSTRATED ON PAGE 1011C OF EDITION I,
** **		VOLUME 1 OF "THE ALDRICH LIBRARY OF FT-IR
** **		SPECTRA".
GAS LIQUID	97.5% (MINIMUM)	99.9 %
QUALITY CONTROL		JULY 1997

Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

F009172
SVOC 1,2,4,5-Tetrachlorobenzene
Expires 12/31/2079
Prepared By Joshua Rains 10/6/2017

H000691

Data File: \\target\share\chem2\fid4a.i\20230317.b\423C1703.D

Page 1

Date : 17-MAR-2023 10:46

Client ID:

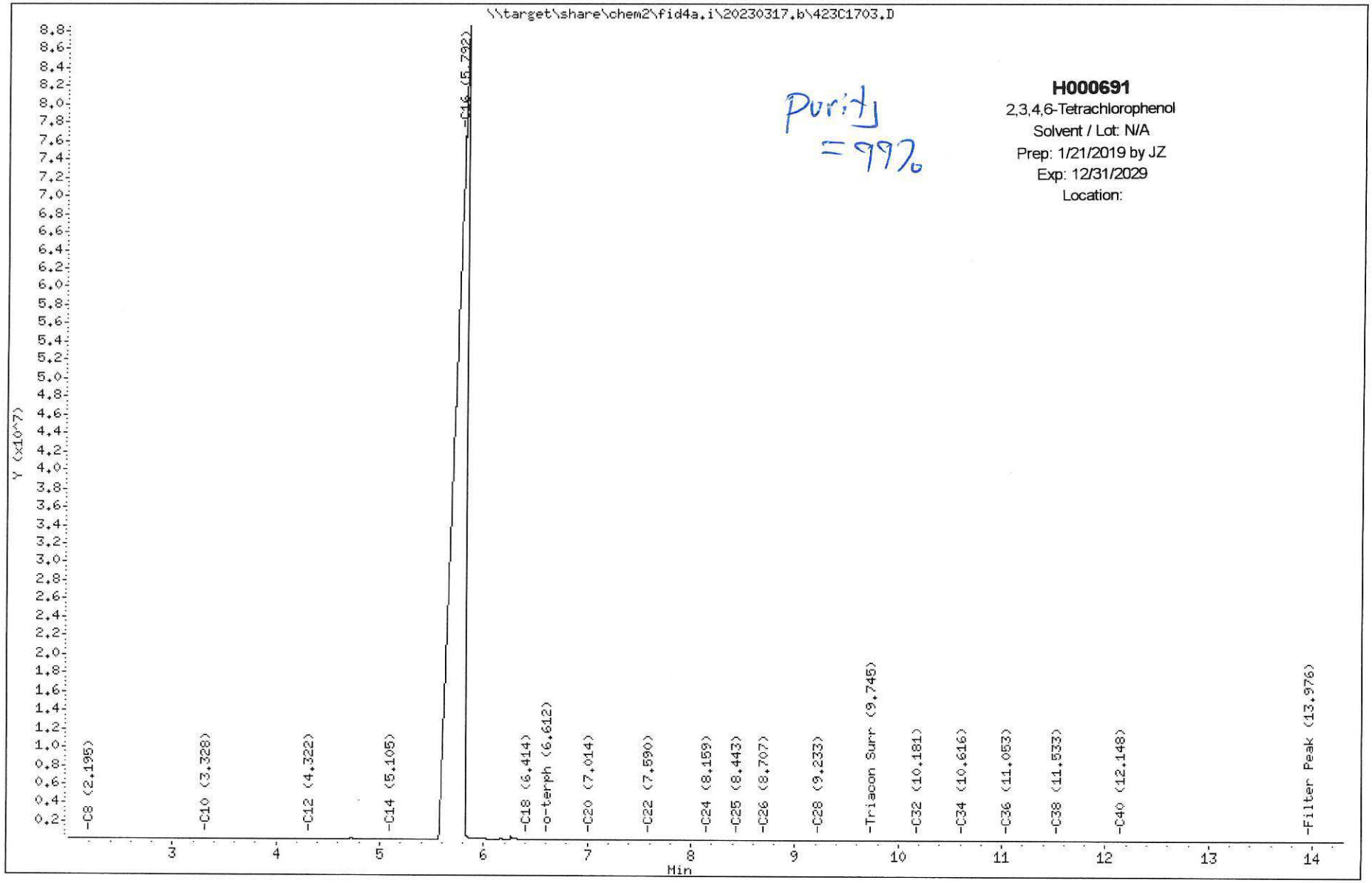
Instrument: fid4a.i

Sample Info: K007226

Operator: AA

Column phase: RTX-1

Column diameter: 0.25



Purity = 99%

H000691
2,3,4,6-Tetrachlorophenol
Solvent / Lot: N/A
Prep: 1/21/2019 by JZ
Exp: 12/31/2029
Location:

ARI Labs, Inc.

Data file : \\target\share\chem2\fid4a.i\20230317.b\423C1703.D
Lab Smp Id: K007226
Inj Date : 17-MAR-2023 10:46
Operator : AA   Inst ID: fid4a.i
Smp Info : K007226
Misc Info :
Comment   :
Method   : \\target\share\chem2\fid4a.i\20230317.b\FID4TPH.m
Meth Date : 17-Mar-2023 16:58 alfonso   Quant Type: AREA%
Cal Date : 18-AUG-2022 11:51   Cal File: 422H1803.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: Falcon+   Compound Sublist: tph.sub
Target Version: 4.14
Processing Host: ALFONSO-201901

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable   Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.043	81395	55677	0.684	0.012	1 Toluene
2.074	68503	39991	0.584	0.010	
2.104	85451	37158	0.435	0.012	
2.146	59381	25207	0.424	0.008	
2.181	11414	22862	2.003	0.001	
2.195	34939	23199	0.664	0.005	2 C8
2.218	8679	21808	2.513	0.001	
2.224	21070	21832	1.036	0.003	
2.243	45086	20191	0.448	0.006	
2.286	3130	15677	5.009	0.000	
2.291	12615	15880	1.259	0.001	
2.313	20979	15888	0.757	0.003	
2.333	7621	15373	2.017	0.001	
2.348	31874	17112	0.537	0.004	
2.373	4619	13267	2.872	0.000	
2.380	12003	13446	1.120	0.001	
2.393	10327	13347	1.292	0.001	
2.408	9963	12697	1.274	0.001	
2.446	24366	11882	0.488	0.003	
2.498	24898	10214	0.410	0.003	
2.557	1592	6395	4.017	0.000	
2.570	4427	6384	1.442	0.000	
2.583	4275	6215	1.454	0.000	
2.595	1208	6068	5.024	0.000	
2.602	3076	6230	2.025	0.000	
2.607	1560	6270	4.019	0.000	
2.631	17195	8933	0.520	0.002	
2.654	17386	7637	0.439	0.002	
2.703	4531	5468	1.207	0.000	
2.717	9156	5741	0.627	0.001	
2.740	3955	5045	1.275	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.768	1029	4134	4.017	0.000	
2.771	830	4189	5.050	0.000	
2.778	1924	4438	2.307	0.000	
2.784	5498	4564	0.830	0.000	
2.846	25970	8400	0.323	0.003	
2.880	939	3165	3.370	0.000	
2.884	1885	3183	1.688	0.000	
2.901	4805	3504	0.729	0.000	
2.938	581	1990	3.423	0.000	
2.944	1450	2016	1.390	0.000	
2.955	449	1816	4.043	0.000	
2.967	1234	2009	1.629	0.000	
2.982	712	2087	2.931	0.000	
2.988	1000	2338	2.337	0.000	
3.001	3475	3541	1.019	0.000	
3.018	3528	3705	1.050	0.000	
3.033	983	2521	2.564	0.000	
3.038	1297	2686	2.070	0.000	
3.044	2547	2541	0.997	0.000	
3.069	389	1330	3.418	0.000	
3.078	728	1545	2.123	0.000	
3.085	1244	1637	1.316	0.000	
3.098	1115	1624	1.457	0.000	
3.108	926	1475	1.593	0.000	
3.119	239	1202	5.036	0.000	
3.125	540	1251	2.315	0.000	
3.133	409	1219	2.978	0.000	
3.144	2600	1886	0.725	0.000	
3.165	620	1604	2.588	0.000	
3.173	554	1647	2.972	0.000	
3.192	2423	2273	0.938	0.000	
3.197	582	2418	4.158	0.000	
3.204	1161	2723	2.346	0.000	
3.208	825	2777	3.364	0.000	
3.228	4472	3391	0.758	0.000	
3.246	1586	2676	1.688	0.000	
3.279	1194	2070	1.734	0.000	
3.293	854	1951	2.285	0.000	
3.298	595	2029	3.408	0.000	
3.315	2640	2597	0.984	0.000	
3.320	1015	2542	2.504	0.000	
3.328	1549	2593	1.674	0.000	3 C10
3.338	1314	2533	1.928	0.000	
3.350	523	2159	4.130	0.000	
3.358	1776	2105	1.185	0.000	
3.371	356	1797	5.043	0.000	
3.378	914	1880	2.057	0.000	
3.383	380	1927	5.068	0.000	
3.387	595	2023	3.399	0.000	
3.395	1390	2270	1.633	0.000	
3.405	1490	1994	1.338	0.000	
3.423	690	1601	2.321	0.000	
3.435	821	1554	1.894	0.000	
3.441	387	1583	4.087	0.000	
3.444	401	1625	4.051	0.000	
3.448	403	1636	4.060	0.000	
3.455	1216	1700	1.398	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
3.478	235	1185	5.047	0.000	
3.482	412	1229	2.986	0.000	
3.488	695	1177	1.694	0.000	
3.501	239	969	4.063	0.000	
3.509	914	1149	1.258	0.000	
3.520	1078	1069	0.992	0.000	
3.540	301	927	3.079	0.000	
3.556	406	849	2.089	0.000	
3.567	370	873	2.359	0.000	
3.572	178	939	5.270	0.000	
3.578	591	1171	1.981	0.000	
3.591	869	1353	1.556	0.000	
3.596	741	1352	1.826	0.000	
3.606	471	1401	2.976	0.000	
3.613	548	1411	2.577	0.000	
3.618	433	1521	3.511	0.000	
3.625	710	1635	2.303	0.000	
3.630	910	1667	1.832	0.000	
3.652	661	1562	2.362	0.000	
3.670	462	1214	2.627	0.000	
3.686	1036	1453	1.403	0.000	
3.690	829	1374	1.658	0.000	
3.702	531	1191	2.241	0.000	
3.712	452	1355	3.001	0.000	
3.716	820	1423	1.736	0.000	
3.736	2685	2093	0.780	0.000	
3.752	689	2030	2.946	0.000	
3.760	4109	2349	0.572	0.000	
3.805	3183	2036	0.640	0.000	
3.823	496	1686	3.401	0.000	
3.835	1641	2314	1.410	0.000	
3.859	9243	4616	0.499	0.001	
3.897	851	1745	2.051	0.000	
3.904	503	1721	3.419	0.000	
3.927	3866	3293	0.852	0.000	
3.941	5520	3558	0.645	0.000	
3.980	573	1715	2.991	0.000	
3.992	1027	1794	1.748	0.000	
3.995	1494	1860	1.245	0.000	
4.010	887	1639	1.847	0.000	
4.021	663	1724	2.602	0.000	
4.026	1380	1776	1.287	0.000	
4.045	306	1546	5.059	0.000	
4.053	1001	1758	1.757	0.000	
4.061	1137	1804	1.586	0.000	
4.072	779	1773	2.275	0.000	
4.080	989	1896	1.917	0.000	
4.087	561	1905	3.396	0.000	
4.098	1956	2156	1.103	0.000	
4.106	1168	2044	1.750	0.000	
4.127	1049	1627	1.551	0.000	
4.142	587	1545	2.633	0.000	
4.148	1155	1572	1.361	0.000	
4.173	3682	2398	0.651	0.000	
4.189	1023	1738	1.700	0.000	
4.204	549	1627	2.961	0.000	
4.213	628	1658	2.641	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
4.221	1039	1830	1.761	0.000	
4.227	447	1814	4.058	0.000	
4.248	2703	2638	0.976	0.000	
4.256	1387	2945	2.123	0.000	
4.260	743	2988	4.022	0.000	
4.265	912	3081	3.378	0.000	
4.268	779	3140	4.031	0.000	
4.275	1736	3217	1.853	0.000	
4.289	2688	3495	1.300	0.000	
4.295	3466	3448	0.995	0.000	
4.322	1054	2680	2.543	0.000	4 C12
4.330	1686	2627	1.558	0.000	
4.358	1066	1974	1.852	0.000	
4.378	434	1758	4.054	0.000	
4.384	1324	1879	1.419	0.000	
4.403	860	1608	1.869	0.000	
4.414	457	1567	3.431	0.000	
4.421	1117	1675	1.499	0.000	
4.433	910	1538	1.690	0.000	
4.439	865	1534	1.774	0.000	
4.449	764	1302	1.705	0.000	
4.471	433	1123	2.593	0.000	
4.476	734	1135	1.546	0.000	
4.490	385	1005	2.610	0.000	
4.498	555	1186	2.137	0.000	
4.502	695	1166	1.677	0.000	
4.518	587	949	1.618	0.000	
4.526	316	925	2.924	0.000	
4.533	560	989	1.765	0.000	
4.543	469	1001	2.135	0.000	
4.548	222	916	4.130	0.000	
4.553	188	980	5.207	0.000	
4.558	255	1038	4.076	0.000	
4.568	652	1157	1.775	0.000	
4.573	338	1151	3.409	0.000	
4.580	487	1283	2.636	0.000	
4.596	3801	1950	0.513	0.000	
4.631	531	1429	2.692	0.000	
4.663	4548	3737	0.822	0.000	
4.667	2815	3822	1.358	0.000	
4.679	2199	3760	1.710	0.000	
4.688	1068	3585	3.356	0.000	
4.694	2166	3742	1.727	0.000	
4.723	372603	172476	0.463	0.055	
4.894	47034	21828	0.464	0.006	
4.956	80510	28154	0.350	0.011	
4.999	54273	16950	0.312	0.008	
5.068	1137	5713	5.027	0.000	
5.072	8415	5792	0.688	0.001	
5.105	4203	4316	1.027	0.000	5 C14
5.146	660	2685	4.070	0.000	
5.153	2524	2649	1.050	0.000	
5.170	1076	2437	2.265	0.000	
5.174	2371	2438	1.028	0.000	
5.201	1013	2011	1.986	0.000	
5.210	2064	2332	1.130	0.000	
5.224	1083	2304	2.127	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.228	2027	2354	1.162	0.000	
5.276	4673	2682	0.574	0.000	
5.322	195	844	4.328	0.000	
5.331	977	1203	1.231	0.000	
5.356	490	993	2.027	0.000	
5.361	814	1044	1.283	0.000	
5.382	115	387	3.351	0.000	
5.399	619	960	1.551	0.000	
5.406	402	1035	2.576	0.000	
5.410	378	1122	2.968	0.000	
5.423	1663	1555	0.935	0.000	
5.452	5951	5020	0.844	0.000	
5.501	290	797	2.753	0.000	
5.523	2317	2472	1.067	0.000	
5.538	5946	6823	1.147	0.000	
5.792	501855376	76456669	0.152	74.449	6 C16
5.807	79757019	82319946	1.032	11.775	
5.823	77929961	88539160	1.136	11.505	
5.962	75333	84828	1.126	0.011	
5.986	474748	124326	0.262	0.070	
6.070	17103	57180	3.343	0.002	
6.074	120761	57565	0.477	0.017	
6.113	90233	47140	0.522	0.013	
6.165	407438	218439	0.536	0.060	
6.263	944101	374166	0.396	0.139	
6.414	114839	39498	0.344	0.016	7 C18
6.464	53190	31177	0.586	0.007	
6.523	31509	25870	0.821	0.004	
6.551	4785	23963	5.008	0.000	
6.559	51194	25409	0.496	0.007	
6.590	21354	21666	1.015	0.003	
6.612	35061	21127	0.603	0.005	$ 8 o-terph
6.638	17712	19934	1.125	0.002	
6.672	22159	19651	0.887	0.003	
6.683	26846	19268	0.718	0.003	
6.708	5413	18142	3.351	0.000	
6.713	24941	18247	0.732	0.003	
6.747	50657	18478	0.365	0.007	
6.795	23973	17444	0.728	0.003	
6.814	28457	17895	0.629	0.004	
6.837	10746	15445	1.437	0.001	
6.871	29974	21406	0.714	0.004	
6.874	4287	21471	5.009	0.000	
6.882	20520	21675	1.056	0.003	
6.944	32864	17445	0.531	0.004	
6.978	9138	15347	1.679	0.001	
7.014	4130	13830	3.348	0.000	9 C20
7.025	12567	14083	1.121	0.001	
7.038	4952	14274	2.882	0.000	
7.044	6508	14578	2.240	0.000	
7.050	25344	14736	0.581	0.003	
7.099	5531	12365	2.236	0.000	
7.108	16440	12371	0.752	0.002	
7.129	9415	11275	1.198	0.001	
7.175	3589	10327	2.878	0.000	
7.182	7285	10474	1.438	0.001	
7.212	11252	10002	0.889	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.227	5193	9506	1.830	0.000	
7.237	5172	9476	1.832	0.000	
7.247	4652	9357	2.011	0.000	
7.254	3258	9369	2.875	0.000	
7.259	7003	9455	1.350	0.001	
7.272	5540	9252	1.670	0.000	
7.283	4511	9087	2.014	0.000	
7.296	5828	9031	1.550	0.000	
7.308	4850	8866	1.828	0.000	
7.318	3111	9014	2.897	0.000	
7.324	3191	9168	2.873	0.000	
7.328	2775	9325	3.360	0.000	
7.339	6190	9713	1.569	0.000	
7.344	2920	9761	3.343	0.000	
7.350	17091	9874	0.578	0.002	
7.379	7217	8616	1.194	0.001	
7.395	5430	8408	1.548	0.000	
7.404	2492	8342	3.348	0.000	
7.409	1666	8354	5.014	0.000	
7.415	2955	8500	2.877	0.000	
7.423	3887	8782	2.259	0.000	
7.465	28160	14253	0.506	0.004	
7.471	6466	14499	2.242	0.000	
7.480	6649	15111	2.273	0.000	
7.484	26595	15197	0.571	0.003	
7.514	13964	13621	0.975	0.002	
7.539	8118	12614	1.554	0.001	
7.553	10540	12495	1.185	0.001	
7.584	2820	11307	4.010	0.000	
7.590	4522	11429	2.527	0.000	10 C22
7.620	16634	10435	0.627	0.002	
7.653	6793	9783	1.440	0.001	
7.663	8606	9666	1.123	0.001	
7.675	2827	9464	3.347	0.000	
7.683	9373	9620	1.026	0.001	
7.699	3657	9205	2.517	0.000	
7.708	5071	9290	1.832	0.000	
7.713	10483	9274	0.885	0.001	
7.735	10686	9257	0.866	0.001	
7.752	4732	8664	1.831	0.000	
7.765	5624	8765	1.558	0.000	
7.773	5614	8686	1.547	0.000	
7.784	3375	8506	2.520	0.000	
7.793	2118	8517	4.021	0.000	
7.799	10086	8544	0.847	0.001	
7.817	7761	8325	1.073	0.001	
7.833	2415	8088	3.350	0.000	
7.838	2838	8160	2.875	0.000	
7.844	3649	8173	2.240	0.000	
7.858	2009	8069	4.017	0.000	
7.864	4482	8197	1.829	0.000	
7.871	3688	8223	2.230	0.000	
7.879	4875	8269	1.696	0.000	
7.889	2009	8061	4.013	0.000	
7.897	4080	8308	2.036	0.000	
7.916	17828	10103	0.567	0.002	
7.935	4052	9086	2.242	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.940	2229	8948	4.015	0.000	
7.945	5765	8973	1.556	0.000	
7.954	6458	8765	1.357	0.000	
7.976	2099	8428	4.016	0.000	
7.984	10213	8807	0.862	0.001	
7.999	4897	8282	1.691	0.000	
8.013	8782	8112	0.924	0.001	
8.028	5860	7858	1.341	0.000	
8.040	3929	7871	2.003	0.000	
8.054	9161	8146	0.889	0.001	
8.067	2701	7766	2.876	0.000	
8.074	3069	7702	2.510	0.000	
8.081	2694	7742	2.874	0.000	
8.088	2705	7793	2.881	0.000	
8.095	5842	7832	1.341	0.000	
8.104	5419	7841	1.447	0.000	
8.119	5740	7735	1.348	0.000	
8.134	4986	7768	1.558	0.000	
8.141	5893	8009	1.359	0.000	
8.159	9098	8027	0.882	0.001	11 C24
8.174	3156	7971	2.526	0.000	
8.185	2376	7967	3.353	0.000	
8.190	4739	7937	1.675	0.000	
8.202	5181	8028	1.549	0.000	
8.212	1994	8027	4.025	0.000	
8.223	6137	8270	1.348	0.000	
8.236	6864	8171	1.190	0.001	
8.248	2383	7986	3.351	0.000	
8.253	2405	8059	3.351	0.000	
8.259	5294	8207	1.550	0.000	
8.268	2866	8235	2.874	0.000	
8.280	6583	8312	1.263	0.000	
8.289	4538	8296	1.828	0.000	
8.295	2060	8300	4.029	0.000	
8.300	2063	8291	4.020	0.000	
8.313	7062	8400	1.189	0.001	
8.318	1667	8375	5.023	0.000	
8.332	11362	9100	0.801	0.001	
8.343	4357	8741	2.006	0.000	
8.358	1267	8458	6.676	0.000	
8.363	2991	8621	2.882	0.000	
8.371	3980	8983	2.257	0.000	
8.379	6330	9083	1.435	0.000	
8.385	3111	8963	2.881	0.000	
8.393	6706	9050	1.349	0.000	
8.404	4903	8943	1.824	0.000	
8.417	8437	8972	1.063	0.001	
8.438	7166	9103	1.270	0.001	
8.443	3211	9227	2.873	0.000	12 C25
8.450	3688	9295	2.521	0.000	
8.455	2313	9276	4.010	0.000	
8.475	30054	13714	0.456	0.004	
8.504	5760	9733	1.690	0.000	
8.519	2799	9376	3.350	0.000	
8.529	4766	9710	2.037	0.000	
8.537	4875	9815	2.013	0.000	
8.543	8411	9973	1.186	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
8.555	2969	9916	3.340	0.000	
8.560	3974	9987	2.513	0.000	
8.568	2483	9997	4.026	0.000	
8.572	5007	10043	2.006	0.000	
8.591	14074	10725	0.762	0.002	
8.602	2648	10665	4.028	0.000	
8.606	2159	10862	5.032	0.000	
8.609	2183	10952	5.017	0.000	
8.633	7361	10561	1.435	0.001	
8.647	6774	10495	1.549	0.001	
8.658	2596	10420	4.014	0.000	
8.663	4723	10573	2.239	0.000	
8.669	3156	10589	3.355	0.000	
8.687	15405	11334	0.736	0.002	
8.699	6103	11158	1.828	0.000	
8.707	2223	11136	5.009	0.000	13 C26
8.730	28697	12536	0.437	0.004	
8.754	8658	11553	1.334	0.001	
8.763	2896	11612	4.010	0.000	
8.780	15029	12352	0.822	0.002	
8.788	1833	12243	6.680	0.000	
8.798	11854	12679	1.070	0.001	
8.806	1873	12509	6.677	0.000	
8.809	3133	12565	4.011	0.000	
8.813	2506	12550	5.008	0.000	
8.819	7588	12757	1.681	0.001	
8.829	4418	12679	2.870	0.000	
8.835	6988	12762	1.826	0.001	
8.848	13711	13258	0.967	0.002	
8.872	26625	13656	0.513	0.003	
8.894	4575	13127	2.869	0.000	
8.898	2631	13188	5.013	0.000	
8.902	5918	13262	2.241	0.000	
8.914	8577	13313	1.552	0.001	
8.922	4011	13433	3.349	0.000	
8.926	4724	13546	2.867	0.000	
8.933	6787	13651	2.011	0.001	
8.946	9614	13923	1.448	0.001	
8.951	6274	14004	2.232	0.000	
8.960	5592	14036	2.510	0.000	
8.966	3513	14090	4.011	0.000	
8.969	2829	14171	5.009	0.000	
8.973	4976	14233	2.860	0.000	
8.980	4289	14365	3.350	0.000	
8.996	27708	16441	0.593	0.004	
9.013	8129	14847	1.827	0.001	
9.025	8129	14840	1.826	0.001	
9.036	7503	15229	2.030	0.001	
9.040	4559	15225	3.340	0.000	
9.057	14920	16251	1.089	0.002	
9.067	9915	16831	1.698	0.001	
9.076	8535	17331	2.031	0.001	
9.081	5250	17596	3.352	0.000	
9.084	10558	17675	1.674	0.001	
9.095	4386	17601	4.013	0.000	
9.111	30564	19262	0.630	0.004	
9.128	8346	18722	2.243	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.139	15095	18986	1.258	0.002	
9.149	6655	19050	2.862	0.000	
9.158	23240	19719	0.848	0.003	
9.171	1903	19042	10.005	0.000	
9.175	4773	19156	4.013	0.000	
9.187	23630	19927	0.843	0.003	
9.199	4925	19763	4.013	0.000	
9.208	14115	20394	1.445	0.002	
9.219	12303	20691	1.682	0.001	
9.226	7266	20831	2.867	0.001	
9.233	15622	21000	1.344	0.002	14 C28
9.247	9280	20714	2.232	0.001	
9.262	45057	27849	0.618	0.006	
9.281	22651	23200	1.024	0.003	
9.304	13489	22820	1.692	0.001	
9.307	18038	22862	1.267	0.002	
9.328	8656	21778	2.516	0.001	
9.334	8635	21650	2.507	0.001	
9.343	16240	21738	1.339	0.002	
9.354	5409	21709	4.013	0.000	
9.367	16481	22234	1.349	0.002	
9.370	6683	22346	3.344	0.000	
9.382	14775	23166	1.568	0.002	
9.390	11679	23531	2.015	0.001	
9.394	12888	23584	1.830	0.001	
9.408	18752	23645	1.261	0.002	
9.416	4675	23396	5.004	0.000	
9.428	25138	24392	0.970	0.003	
9.438	20233	24095	1.191	0.002	
9.468	67429	26696	0.396	0.009	
9.496	8413	24122	2.867	0.001	
9.507	12049	24259	2.013	0.001	
9.527	36362	25771	0.709	0.005	
9.538	12891	25911	2.010	0.001	
9.543	6452	25853	4.007	0.000	
9.551	10420	26202	2.515	0.001	
9.557	29750	26593	0.894	0.004	
9.574	6252	25071	4.010	0.000	
9.593	29143	27655	0.949	0.004	
9.599	40783	27905	0.684	0.006	
9.620	13159	26364	2.004	0.001	
9.632	17259	26799	1.553	0.002	
9.640	13210	26592	2.013	0.001	
9.664	35362	28170	0.797	0.005	
9.672	27890	28134	1.009	0.004	
9.696	26737	28634	1.071	0.003	
9.711	53475	30848	0.577	0.007	
9.745	33266	29504	0.887	0.004	$ 15 Triacon Surr
9.752	7348	29501	4.015	0.001	
9.756	20542	29565	1.439	0.003	
9.768	7255	29059	4.005	0.001	
9.773	7275	29173	4.010	0.001	
9.785	31543	30611	0.970	0.004	
9.803	46804	32832	0.701	0.006	
9.821	10456	30060	2.875	0.001	
9.833	30772	31156	1.012	0.004	
9.860	77784	33514	0.431	0.011	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.881	12779	32069	2.510	0.001	
9.892	14531	32668	2.248	0.002	
9.896	8201	32902	4.012	0.001	
9.908	23357	33882	1.451	0.003	
9.912	27050	34095	1.260	0.003	
9.939	14585	32570	2.233	0.002	
9.951	23032	33095	1.437	0.003	
9.956	11596	33292	2.871	0.001	
9.966	16544	33271	2.011	0.002	
9.971	11660	33391	2.864	0.001	
9.975	10051	33617	3.345	0.001	
9.983	15209	33983	2.234	0.002	
9.988	15177	33830	2.229	0.002	
9.996	10128	33907	3.348	0.001	
10.018	43348	35629	0.822	0.006	
10.021	7133	35693	5.004	0.001	
10.025	8960	35988	4.016	0.001	
10.034	42064	36944	0.878	0.006	
10.063	65447	38699	0.591	0.009	
10.077	7375	36906	5.004	0.001	
10.083	16743	37428	2.235	0.002	
10.095	34467	38665	1.122	0.005	
10.118	90921	40621	0.447	0.013	
10.151	37738	38047	1.008	0.005	
10.158	11383	38037	3.342	0.001	
10.168	36074	38274	1.061	0.005	
10.181	15072	37809	2.509	0.002	16 C32
10.185	5655	37746	6.675	0.000	
10.198	43905	38471	0.876	0.006	
10.208	24771	38177	1.541	0.003	
10.218	19031	38113	2.003	0.002	
10.228	13353	38279	2.867	0.001	
10.237	21225	38826	1.829	0.003	
10.243	30946	38929	1.258	0.004	
10.266	43064	39733	0.923	0.006	
10.275	11912	39784	3.340	0.001	
10.278	19932	39886	2.001	0.002	
10.293	46366	40725	0.878	0.006	
10.318	46465	41024	0.883	0.006	
10.328	24720	41353	1.673	0.003	
10.334	10308	41278	4.005	0.001	
10.343	29100	41866	1.439	0.004	
10.354	22822	41695	1.827	0.003	
10.360	16568	41490	2.504	0.002	
10.376	31388	42321	1.348	0.004	
10.384	36478	43119	1.182	0.005	
10.393	21427	43144	2.014	0.003	
10.416	82339	44731	0.543	0.012	
10.434	23173	42257	1.824	0.003	
10.455	42801	43684	1.021	0.006	
10.459	19648	44004	2.240	0.002	
10.469	19632	43883	2.235	0.002	
10.492	56113	45807	0.816	0.008	
10.497	20626	45915	2.226	0.003	
10.503	27439	45837	1.671	0.004	
10.513	31833	45842	1.440	0.004	
10.523	6773	45190	6.672	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
10.529	22697	45513	2.005	0.003	
10.543	39087	46432	1.188	0.005	
10.552	16284	46719	2.869	0.002	
10.558	18796	47158	2.509	0.002	
10.576	69878	48769	0.698	0.010	
10.586	12085	48384	4.004	0.001	
10.592	21757	48469	2.228	0.003	
10.609	46960	50482	1.075	0.006	
10.616	40486	50812	1.255	0.005	17 C34
10.628	52392	50284	0.960	0.007	
10.665	99744	52644	0.528	0.014	
10.680	20832	52264	2.509	0.003	
10.699	126137	55939	0.443	0.018	
10.723	18258	52316	2.865	0.002	
10.733	65550	52928	0.807	0.009	
10.751	49102	51903	1.057	0.007	
10.765	10288	51490	5.005	0.001	
10.777	73220	52877	0.722	0.010	
10.791	15621	52150	3.338	0.002	
10.799	46819	52190	1.115	0.006	
10.817	52000	52328	1.006	0.007	
10.828	13014	52167	4.008	0.001	
10.833	18275	52280	2.861	0.002	
10.838	67284	52271	0.777	0.009	
10.860	15395	51401	3.339	0.002	
10.867	15366	51252	3.335	0.002	
10.874	25712	51608	2.007	0.003	
10.885	59363	52064	0.877	0.008	
10.901	33199	51247	1.544	0.004	
10.911	35859	51446	1.435	0.005	
10.925	15150	50526	3.335	0.002	
10.936	27761	50508	1.819	0.004	
10.954	40634	51235	1.261	0.005	
10.958	17973	51428	2.861	0.002	
10.982	101216	54997	0.543	0.014	
10.999	80380	54264	0.675	0.011	
11.022	15822	52869	3.342	0.002	
11.029	23878	53171	2.227	0.003	
11.032	23908	53219	2.226	0.003	
11.044	39793	53228	1.338	0.005	
11.053	13218	52959	4.007	0.001	19 C36
11.057	26491	53088	2.004	0.003	
11.069	47933	53454	1.115	0.007	
11.079	78088	52997	0.679	0.011	
11.132	4853	48537	10.002	0.000	
11.138	21933	48845	2.227	0.003	
11.148	46678	49317	1.057	0.006	
11.158	12248	49060	4.006	0.001	
11.164	14711	49102	3.338	0.002	
11.179	64473	49939	0.775	0.009	
11.192	19751	49439	2.503	0.002	
11.197	14848	49541	3.337	0.002	
11.202	17336	49566	2.859	0.002	
11.206	12400	49639	4.003	0.001	
11.212	56808	49881	0.878	0.008	
11.230	26830	48794	1.819	0.003	
11.263	19014	47590	2.503	0.002	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
11.267	11927	47790	4.007	0.001	
11.285	66432	50042	0.753	0.009	
11.308	17214	49235	2.860	0.002	
11.312	19684	49285	2.504	0.002	
11.322	19740	49570	2.511	0.002	
11.331	27467	50208	1.828	0.004	
11.334	12565	50301	4.003	0.001	
11.338	17617	50367	2.859	0.002	
11.356	50450	50688	1.005	0.007	
11.383	31641	48774	1.541	0.004	
11.392	14562	48589	3.337	0.002	
11.398	14566	48593	3.336	0.002	
11.405	21947	48858	2.226	0.003	
11.418	36961	49602	1.342	0.005	
11.428	52174	49838	0.955	0.007	
11.438	46900	49605	1.058	0.006	
11.456	66003	49218	0.746	0.009	
11.481	84312	48818	0.579	0.012	
11.518	39837	46996	1.180	0.005	
11.533	55836	46822	0.839	0.008	20 C38
11.560	30101	46465	1.544	0.004	
11.568	20916	46512	2.224	0.003	
11.573	11637	46596	4.004	0.001	
11.579	23274	46598	2.002	0.003	
11.586	13953	46531	3.335	0.002	
11.591	9318	46631	5.004	0.001	
11.623	97892	48831	0.499	0.014	
11.631	17107	48984	2.863	0.002	
11.638	22090	49260	2.230	0.003	
11.642	32050	49351	1.540	0.004	
11.669	95446	50981	0.534	0.014	
11.685	95822	49865	0.520	0.014	
11.788	8918	44609	5.002	0.001	
11.791	35704	44768	1.254	0.005	
11.804	11082	44350	4.002	0.001	
11.813	22172	44403	2.003	0.003	
11.823	19993	44543	2.228	0.002	
11.829	13395	44754	3.341	0.001	
11.837	20184	44981	2.228	0.002	
11.852	26933	44942	1.669	0.003	
11.866	36041	45224	1.255	0.005	
11.877	15835	45355	2.864	0.002	
11.883	18222	45726	2.509	0.002	
11.889	15985	45741	2.861	0.002	
11.896	20679	46117	2.230	0.003	
11.905	23259	46896	2.016	0.003	
11.929	70146	49826	0.710	0.010	
11.936	52288	50085	0.958	0.007	
11.951	14787	49369	3.339	0.002	
11.957	17313	49595	2.865	0.002	
11.961	32199	49647	1.542	0.004	
11.971	19578	49063	2.506	0.002	
11.980	34244	49065	1.433	0.005	
12.019	96987	51133	0.527	0.014	
12.025	48685	51499	1.058	0.007	
12.053	38386	51386	1.339	0.005	
12.062	38575	51549	1.336	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
12.070	17923	51300	2.862	0.002	
12.078	45780	51141	1.117	0.006	
12.105	31495	48817	1.550	0.004	
12.118	85510	48295	0.565	0.012	
12.148	55474	46657	0.841	0.008	21 C40
12.172	34299	45899	1.338	0.005	
12.181	18286	45754	2.502	0.002	
12.188	20565	45727	2.223	0.003	
12.198	29701	45787	1.542	0.004	
12.212	11377	45530	4.002	0.001	
12.218	29576	45566	1.541	0.004	
12.237	41054	45750	1.114	0.006	
12.243	13695	45701	3.337	0.002	
12.253	27528	46122	1.675	0.004	
12.260	16149	46201	2.861	0.002	
12.272	32473	46571	1.434	0.004	
12.347	231342	54259	0.235	0.034	
12.355	96470	54322	0.563	0.014	
12.383	13155	52687	4.005	0.001	
12.389	52817	52930	1.002	0.007	
12.434	117936	55204	0.468	0.017	
12.440	19323	55283	2.861	0.002	
12.448	22049	55156	2.502	0.003	
12.460	127044	56114	0.442	0.018	
12.500	63536	55700	0.877	0.009	
12.519	44746	56237	1.257	0.006	
12.523	16928	56556	3.341	0.002	
12.528	14154	56666	4.003	0.002	
12.532	14154	56644	4.002	0.002	
12.538	25607	57089	2.229	0.003	
12.543	31284	57010	1.822	0.004	
12.560	76588	57084	0.745	0.011	
12.574	22463	56167	2.500	0.003	
12.583	192414	56305	0.293	0.028	
12.668	201456	54098	0.269	0.029	
12.722	63529	49368	0.777	0.009	
12.744	14574	48683	3.340	0.002	
12.757	68233	49046	0.719	0.010	
12.777	29106	48653	1.672	0.004	
12.802	69072	49884	0.722	0.010	
12.805	19947	49915	2.502	0.002	
12.813	12457	49907	4.006	0.001	
12.826	42860	50672	1.182	0.006	
12.830	15192	50711	3.338	0.002	
12.835	63121	50727	0.804	0.009	
12.856	30109	50299	1.671	0.004	
12.871	12459	49875	4.003	0.001	
12.876	24950	49913	2.001	0.003	
12.883	12458	49860	4.002	0.001	
12.892	24999	50091	2.004	0.003	
12.904	37682	50442	1.339	0.005	
12.918	60965	51059	0.838	0.009	
12.929	15268	50972	3.338	0.002	
12.950	101236	52476	0.518	0.014	
12.991	32619	50285	1.542	0.004	
13.030	23826	47690	2.002	0.003	
13.047	49429	47410	0.959	0.007	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.072	11668	46709	4.003	0.001	
13.077	14056	46964	3.341	0.002	
13.083	21201	47214	2.227	0.003	
13.092	45034	47490	1.055	0.006	
13.103	33139	47401	1.430	0.004	
13.119	58622	47300	0.807	0.008	
13.136	61979	46406	0.749	0.009	
13.163	36232	45399	1.253	0.005	
13.172	13552	45219	3.337	0.002	
13.178	13550	45211	3.337	0.002	
13.183	13581	45318	3.337	0.002	
13.188	15867	45365	2.859	0.002	
13.193	11350	45433	4.003	0.001	
13.206	54879	45909	0.837	0.008	
13.233	74220	46899	0.632	0.010	
13.246	18724	46923	2.506	0.002	
13.250	14089	47028	3.338	0.002	
13.254	9392	46999	5.004	0.001	
13.261	35241	47103	1.337	0.005	
13.270	21093	46884	2.223	0.003	
13.278	16404	46889	2.858	0.002	
13.284	28108	46937	1.670	0.004	
13.309	27777	46575	1.677	0.004	
13.313	11643	46617	4.004	0.001	
13.323	30391	46938	1.544	0.004	
13.337	49696	47554	0.957	0.007	
13.345	11906	47686	4.005	0.001	
13.352	21499	47921	2.229	0.003	
13.358	14416	48133	3.339	0.002	
13.366	24163	48487	2.007	0.003	
13.391	108474	49842	0.459	0.016	
13.411	39818	49922	1.254	0.005	
13.421	140245	49882	0.356	0.020	
13.468	75433	46221	0.613	0.011	
13.519	59701	44435	0.744	0.008	
13.538	26345	44021	1.671	0.003	
13.553	17475	43727	2.502	0.002	
13.559	19699	43828	2.225	0.002	
13.566	15324	43832	2.860	0.002	
13.574	28519	43956	1.541	0.004	
13.585	21950	43943	2.002	0.003	
13.595	26497	44341	1.673	0.003	
13.603	22230	44574	2.005	0.003	
13.608	11135	44585	4.004	0.001	
13.633	100703	46371	0.460	0.014	
13.650	25255	45974	1.820	0.003	
13.663	20511	45675	2.227	0.003	
13.670	15945	45584	2.859	0.002	
13.677	40973	45642	1.114	0.006	
13.688	4544	45448	10.002	0.000	
13.693	29520	45508	1.542	0.004	
13.718	24720	44995	1.820	0.003	
13.727	11216	44890	4.002	0.001	
13.735	29185	45025	1.543	0.004	
13.752	17874	44782	2.505	0.002	
13.767	35874	45020	1.255	0.005	
13.775	36036	45104	1.252	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.785	11226	44939	4.003	0.001	
13.790	47016	44953	0.956	0.006	
13.813	11118	44516	4.004	0.001	
13.818	37641	44507	1.182	0.005	
13.832	15424	44192	2.865	0.002	
13.838	17564	43967	2.503	0.002	
13.844	26339	43892	1.666	0.003	
13.855	30567	43821	1.434	0.004	
13.865	23854	43526	1.825	0.003	
13.882	28266	43639	1.544	0.004	
13.886	30418	43629	1.434	0.004	
13.901	34702	43472	1.253	0.005	
13.920	48162	44005	0.914	0.007	
13.928	17577	43956	2.501	0.002	
13.941	15410	44084	2.861	0.002	
13.946	11045	44251	4.006	0.001	
13.949	24369	44341	1.820	0.003	
13.959	22103	44264	2.003	0.003	
13.967	22088	44195	2.001	0.003	
13.976	33207	44336	1.335	0.004	18 Filter Peak
13.998	24195	44018	1.819	0.003	
14.007	15335	43888	2.862	0.002	
14.014	17519	43863	2.504	0.002	
14.019	54335	43870	0.807	0.008	
14.046	10722	42915	4.003	0.001	
14.052	19305	42955	2.225	0.002	
14.058	8568	42864	5.003	0.001	
14.067	38739	43159	1.114	0.005	
14.077	15012	42931	2.860	0.002	
14.083	25753	42977	1.669	0.003	
14.102	25682	42913	1.671	0.003	
14.108	19267	42865	2.225	0.002	
14.116	12834	42815	3.336	0.001	
14.126	25874	43369	1.676	0.003	
14.133	56339	43595	0.774	0.008	
14.161	32503	43582	1.341	0.004	
14.165	10909	43696	4.006	0.001	
14.170	15313	43822	2.862	0.002	
14.175	10960	43911	4.007	0.001	
14.178	13176	43945	3.335	0.001	
14.183	19785	43976	2.223	0.002	
14.191	8796	44018	5.005	0.001	
14.197	17636	44177	2.505	0.002	
14.208	28815	44459	1.543	0.004	
14.219	8873	44379	5.002	0.001	
14.223	13318	44445	3.337	0.001	
14.229	28860	44456	1.540	0.004	
14.247	15436	44194	2.863	0.002	
14.260	37147	43758	1.178	0.005	
14.274	45685	43705	0.957	0.006	
	677340272	268782821		100.000	

Total unknown % area = 25.478

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Certificate of Composition - Analytical Standard

BASE STOCK

Product no.: 22523051
Lot no.: LRAC9813
Expiry Date: May 2023
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: Dichloromethane
Certificate version: LRAC9813.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

J005199
SVOA-ABN BASE STOCK-200-800ug/ml
Expires 5/31/2023
Prepared By Jianqing Zhou 5/18/2021

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
3,3'-DICHLOROBENZIDINE CAS# 91-94-1	802	µg/mL	99.9	LC27068
2,4-DINITROTOLUENE CAS# 121-14-2	802	µg/mL	97.8	LB46632
2,6-DINITROTOLUENE CAS# 606-20-2	801	µg/mL	99.9	LB79891
HEXACHLOROCYCLOPENTADIENE CAS# 77-47-4	802	µg/mL	96.0	LB95525
N-NITROSODIMETHYLAMINE CAS# 62-75-9	801	µg/mL	95.0	2019-030598 5
PERYLENE CAS# 198-55-0	201	µg/mL	99.6	04101PG
ANILINE CAS# 62-53-3	803	µg/mL	100.0	10126MG
4-CHLOROANILINE CAS# 106-47-8	803	µg/mL	100.0	MKBZ6909V
2-NITROANILINE CAS# 88-74-4	802	µg/mL	99.9	LC05068
3-NITROANILINE CAS# 99-09-2	802	µg/mL	99.9	LC09264
4-NITROANILINE CAS# 100-01-6	802	µg/mL	99.9	LC11400
PYRIDINE (LOW WATER) CAS# 110-86-1	802	µg/mL	100.0	SHBJ9218

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

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Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Certificate issue date: 12-May-2021

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAC9813.01	12-May-2021	Original Release Date

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Certificate of Composition - Analytical Standard

ACID STOC"

Product no.: 22523046
Lot no.: LRAC9812
Expiry Date: May 2023
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: Dichloromethane
Certificate version: LRAC9812.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

J005200
SVOA-ABN ACID STOCK-200-800ug/ml
Solvent / Lot: DCM
Prep: 5/18/2021 by JZ
Exp: 5/31/2023
Location:

JZ 5/18/21

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2,4-DIMETHYLPHENOL CAS# 105-67-9	802	µg/mL	99.9	LB88935
2,4-DICHLOROPHENOL CAS# 120-83-2	802	µg/mL	100.0	BCBZ6787
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	802	µg/mL	99.9	JS00008
2,4-DINITROPHENOL CAS# 51-28-5	1806	µg/mL	75.9	MKBP5833V
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	803	µg/mL	98.7	LB82983
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	801	µg/mL	99.9	JS00013
4-NITROPHENOL CAS# 100-02-7	801	µg/mL	99.9	LC10889
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	1804	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	803	µg/mL	98.7	MKCK8156
BENZOIC ACID CAS# 65-85-0	1805	µg/mL	99.9	LC16514

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31493 **Lot No.:** A0167617

Description : CLP 04.1 BNA Surrogate Mix

CLP 04.1 BNA Surrogate Mix 1000-1500 µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2024 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

J005610
CLP 04.1 BNA SURR MIX
Expires 9/30/2024
Prepared By Jianqing Zhou 5/26/2021

C E R T I F I E D V A L U E S

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol		1,506.0 µg/mL	+/- 8.9452 µg/mL		Gravimetric
	CAS # 367-12-4	(Lot STBF3761V)		+/- 43.9882 µg/mL		Unstressed
	Purity 99%			+/- 53.3632 µg/mL		Stressed
2	Phenol-d6		1,512.0 µg/mL	+/- 8.9808 µg/mL		Gravimetric
	CAS # 13127-88-3	(Lot PR-31658)		+/- 44.1635 µg/mL		Unstressed
	Purity 99%			+/- 53.5758 µg/mL		Stressed
3	2-Chlorophenol-d4		1,502.0 µg/mL	+/- 8.9214 µg/mL		Gravimetric
	CAS # 93951-73-6	(Lot PR-30568)		+/- 43.8714 µg/mL		Unstressed
	Purity 99%			+/- 53.2214 µg/mL		Stressed
4	1,2-Dichlorobenzene-d4		1,006.0 µg/mL	+/- 5.9753 µg/mL		Gravimetric
	CAS # 2199-69-1	(Lot M-2097)		+/- 29.3839 µg/mL		Unstressed
	Purity 99%			+/- 35.6463 µg/mL		Stressed
5	Nitrobenzene-d5		1,002.0 µg/mL	+/- 5.9516 µg/mL		Gravimetric
	CAS # 4165-60-0	(Lot PR-29940B)		+/- 29.2671 µg/mL		Unstressed
	Purity 99%			+/- 35.5046 µg/mL		Stressed
6	2-Fluorobiphenyl		1,002.0 µg/mL	+/- 5.9516 µg/mL		Gravimetric
	CAS # 321-60-8	(Lot 00019169)		+/- 29.2671 µg/mL		Unstressed
	Purity 99%			+/- 35.5046 µg/mL		Stressed
7	2,4,6-Tribromophenol		1,502.0 µg/mL	+/- 8.9214 µg/mL		Gravimetric
	CAS # 118-79-6	(Lot S55013V)		+/- 43.8714 µg/mL		Unstressed
	Purity 99%			+/- 53.2214 µg/mL		Stressed

8	p-Terphenyl-d14		1,002.0	µg/mL	+/-	5.9516	µg/mL	Gravimetric
	CAS # 1718-51-0	(Lot PR-30504)			+/-	29.2671	µg/mL	Unstressed
	Purity 99%				+/-	35.5046	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

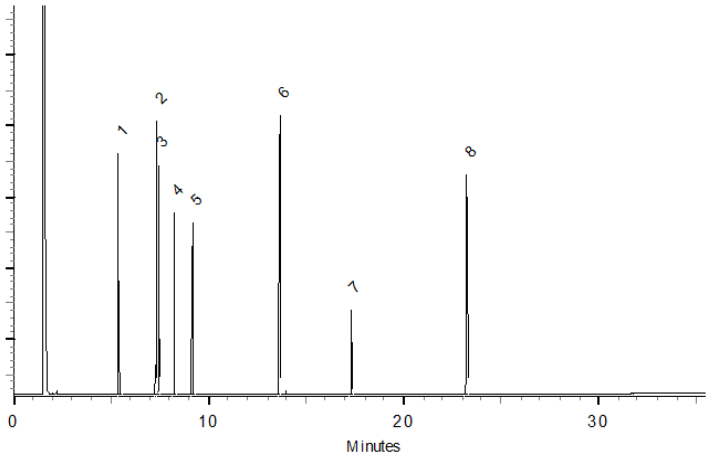
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 29-Dec-2020 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

Date Passed: 31-Dec-2020

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Agilent

Certificate of Analysis

J008074

SVOA PAH STD 2000ug/ml
Expires 6/30/2023
Prepared By Joshua Rains 8/5/2021

Product Name: PAH Standard

Product Number: US-106N-1

Lot Number: 0006540449

Lot Issue Date: 11-Jun-2020

Expiration Date: 30-Jun-2023

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
acenaphthene	000083-32-9	RM10879	2008 ± 10 µg/mL
acenaphthylene	000208-96-8	RM10891	2003 ± 10 µg/mL
anthracene	000120-12-7	RM14212	2006 ± 10 µg/mL
benz[a]anthracene	000056-55-3	RM16072	2006 ± 10 µg/mL
benzo[b]fluoranthene	000205-99-2	RM14571	2005 ± 10 µg/mL
benzo[k]fluoranthene	000207-08-9	RM14321	2009 ± 10 µg/mL
benzo[ghi]perylene	000191-24-2	RM15761	2008 ± 10 µg/mL
benzo[a]pyrene	000050-32-8	RM12669	2009 ± 10 µg/mL
chrysene	000218-01-9	RM12260	2009 ± 10 µg/mL
dibenz[a,h]anthracene	000053-70-3	RM06786	2009 ± 10 µg/mL
fluoranthene	000206-44-0	RM12277	2004 ± 10 µg/mL
fluorene	000086-73-7	RM09441	2009 ± 10 µg/mL
indeno[1,2,3-cd]pyrene	000193-39-5	RM14192	2009 ± 10 µg/mL
naphthalene	000091-20-3	NT00970	2008 ± 10 µg/mL
phenanthrene	000085-01-8	RM10495	2009 ± 10 µg/mL
pyrene	000129-00-0	RM03479	2008 ± 10 µg/mL

Matrix: methylene chloride/benzene (1:1)

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert No. AT-1937

Certificate of Analysis

Product Number: US-106N-1 **Lot Number:** 0006540449

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ISO 17034 Cert No.
AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/

ISO 17025 Cert
No. AT-1937

Certificate of Analysis

Produced by Phenova
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Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Lot Number: CL16062
Description: Benzidines Standard
Certification Date: November 19, 2020
Storage: 4 °C
Expiration Date: November 30, 2030
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 2.740%
3,3'-Dichlorobenzidine	91-94-1	2000	± 3.229%

J008310
Benzidines std @2000ug/ml
Expires 11/30/2030
Prepared By Van Spohn 8/12/2021

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

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Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

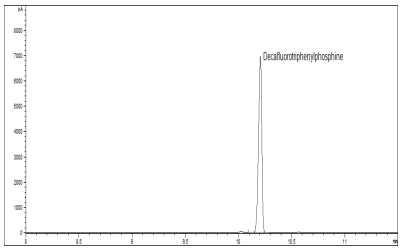
References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis - Certified Reference Material

Decafluorotriphenylphosphine solution

Product no.: 48724-U
Lot no.: LRAD0628
Expiry Date: October 2024
Manufacturing Date: September 2021
Storage: ROOM TEMPERATURE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD0628.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

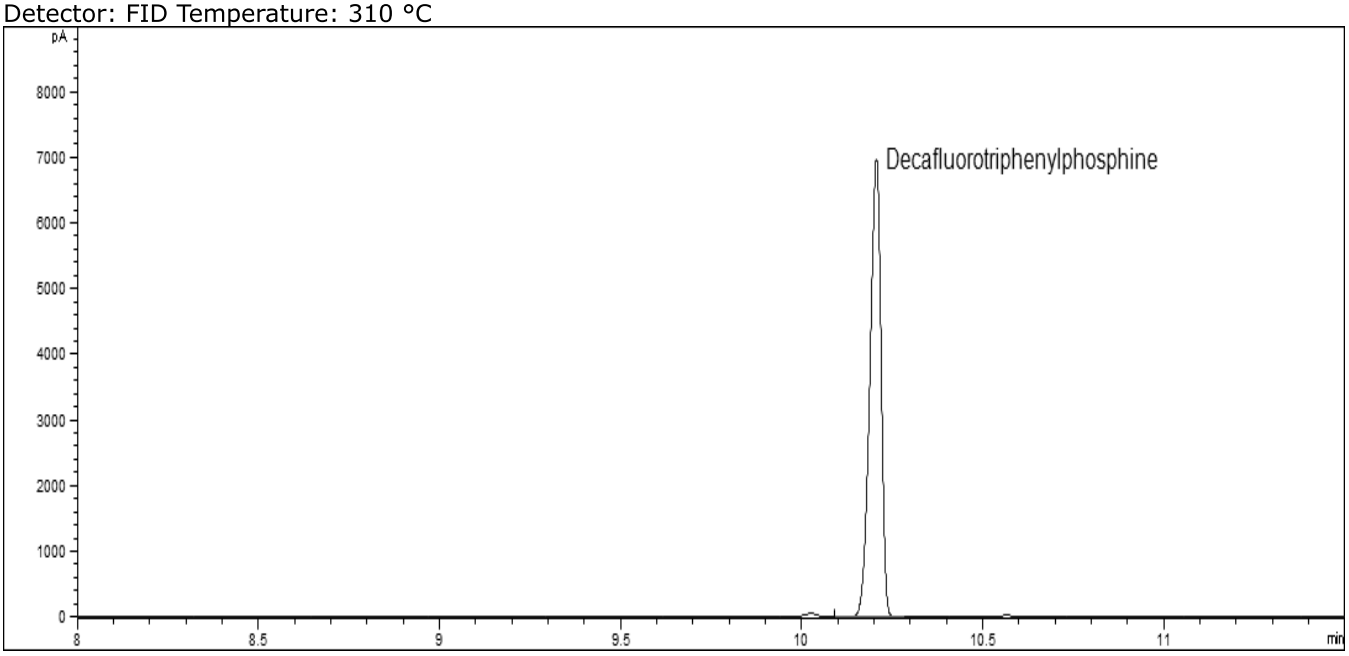


Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
DFTPP CAS# 5074-71-5	25.2 ± 2.6	mg/mL	97.0	10220909

ASSAY Method

METHOD: GC (BELLEFONTE)
Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness
Carrier Gas: H_2 Flow Rate: 4.3 mL/min
Inlet Temperature: 250 °C Injection Volume: 1 µL
Injection Mode: 25:1
Temperature Program: 120 °C (Hold 0 min) @ 12 °C/min to 260 °C (Hold 0 min)
Detector: FID Temperature: 310 °C



Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Elution details:

EO	RT(MIN)	ANALYTE
1	10.206	Decafluorotriphenylphosphine

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Minimum sample size: 1 µL

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 30-Sep-2021

Andy Ommen - QC Manager

Scott Stetler - QA Manager

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom } ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD0628.01	30-Sep-2021	Original Release Date

.

Certificate of Analysis

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101246
Description: Benzoic Acid
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL16693
Certification Date: May 6, 2021
Expiration Date: April 30, 2031

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 4.383%

K3238

A2LA ACCREDITED
Reference Material Producer
Certicate No. 2427.02

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Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

A2LA ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 25 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101443
Description: Aniline
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL17696
Certification Date: December 14, 2021
Expiration Date: December 31, 2029

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aniline	62-53-3	1000	± 0.760%

K 32 39

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

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Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID CRM143-50G
Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Certified Values

Analyte	*Units*	*Certified Value* [1,4]
1,2,4-Trichlorobenzene	µg/Kg	1477 ± 181
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	1625 ± 292
1-Chloronaphthalene	µg/Kg	2809 ± 84
2,3-Dimethylphenol	µg/Kg	4552 ± 137
2,4,5-Trichlorophenol	µg/Kg	3438 ± 245
2,4,6-Trichlorophenol	µg/Kg	2194 ± 251
2,4-Dichlorophenol	µg/Kg	6991 ± 394
2,4-Dimethylphenol	µg/Kg	6357 ± 879
2,4-Dinitrophenol	µg/Kg	2922 ± 523
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	3318 ± 442
2,6-Dichlorophenol	µg/Kg	4578 ± 874
2,6-Dimethylphenol	µg/Kg	7582 ± 228
2-Chloronaphthalene	µg/Kg	2223 ± 168
2-Chlorophenol	µg/Kg	1678 ± 202
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	5148 ± 685
2-Methylphenol (o-Cresol)	µg/Kg	6004 ± 573
2-Nitrophenol	µg/Kg	6456 ± 383
3,4-Dimethylphenol	µg/Kg	7185 ± 216
3+4-Methylphenol (m+p-Cresol)	µg/Kg	8033 ± 1613
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	7169 ± 310
4-Chloro-3-methylphenol	µg/Kg	2071 ± 110
4-Chlorophenyl phenylether	µg/Kg	2052 ± 113
4-Methylphenol (p-Cresol)	µg/Kg	6617 ± 1371
4-Nitrophenol	µg/Kg	6812 ± 595
Acenaphthene	µg/Kg	5489 ± 380

Description

Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Acenaphthylene	µg/Kg	1948 ± 240
Anthracene	µg/Kg	2866 ± 237
Benzo(a)anthracene	µg/Kg	5751 ± 552
Benzo(a)pyrene	µg/Kg	5902 ± 612
Benzo(b)fluoranthene	µg/Kg	3010 ± 409
Benzo(b+k)fluoranthene	µg/Kg	6534 ± 196
Benzo(g,h,i)perylene	µg/Kg	1380 ± 136
Benzo(k)fluoranthene	µg/Kg	2215 ± 237
Butyl benzyl phthalate	µg/Kg	3511 ± 384
Carbazole	µg/Kg	5412 ± 407
Chrysene	µg/Kg	1477 ± 72
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	2905 ± 321
Dibenzo(a,h)anthracene	µg/Kg	3420 ± 302
Dibenzofuran	µg/Kg	6130 ± 253
Dimethyl phthalate	µg/Kg	4537 ± 250
Di-n-butyl phthalate	µg/Kg	1721 ± 154
Di-n-octyl phthalate	µg/Kg	2744 ± 288
Fluoranthene	µg/Kg	2497 ± 222
Fluorene	µg/Kg	3724 ± 222
Hexachlorobutadiene	µg/Kg	1877 ± 245
Indeno(1,2,3-cd) pyrene	µg/Kg	3914 ± 409
Isophorone	µg/Kg	1615 ± 170
Naphthalene	µg/Kg	4458 ± 480
Nitrobenzene	µg/Kg	3539 ± 266
n-Nitrosodimethylamine	µg/Kg	1580 ± 402
n-Nitrosodiphenylamine	µg/Kg	2854 ± 379
Pentachlorophenol	µg/Kg	3411 ± 358
Phenanthrene	µg/Kg	5052 ± 385
Phenol	µg/Kg	2660 ± 184
Pyrene	µg/Kg	2964 ± 256
Pyridine	µg/Kg	1008 ± 30

Informational Values

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID CRM143-50G
Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Analyte	*Units*	*Suggested Acceptance Windows*	*Standard Deviation*
1,2,4-Trichlorobenzene	µg/Kg	148 to 2853	459
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	163 to 3440	605
1-Chloronaphthalene	µg/Kg	1123 to 4494	562
2,3-Dimethylphenol	µg/Kg	1821 to 7284	910
2,4,5-Trichlorophenol	µg/Kg	1003 to 5872	811
2,4,6-Trichlorophenol	µg/Kg	640 to 3748	518
2,4-Dichlorophenol	µg/Kg	2391 to 11591	1533
2,4-Dimethylphenol	µg/Kg	0.00 to 13959	2534
2,4-Dinitrophenol	µg/Kg	1169 to 4675	584
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	1248 to 5388	690
2,6-Dichlorophenol	µg/Kg	1831 to 7324	916
2,6-Dimethylphenol	µg/Kg	3033 to 12132	1516
2-Chloronaphthalene	µg/Kg	748 to 3699	492
2-Chlorophenol	µg/Kg	415 to 2942	421
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	0.00 to 10347	1733
2-Methylphenol (o-Cresol)	µg/Kg	1306 to 10702	1566
2-Nitrophenol	µg/Kg	1534 to 11379	1641
3,4-Dimethylphenol	µg/Kg	2874 to 11495	1437
3+4-Methylphenol (m+p-Cresol)	µg/Kg	4054 to 16218	2027
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	2901 to 11437	1423
4-Chloro-3-methylphenol	µg/Kg	677 to 3464	464
4-Chlorophenyl phenylether	µg/Kg	756 to 3348	432
4-Methylphenol (p-Cresol)	µg/Kg	2647 to 10587	1323
4-Nitrophenol	µg/Kg	681 to 14762	2650
Acenaphthene	µg/Kg	2243 to 8736	1082
Acenaphthylene	µg/Kg	712 to 3183	412
Anthracene	µg/Kg	1218 to 4515	550
Benzo(a)anthracene	µg/Kg	2806 to 8696	982
Benzo(a)pyrene	µg/Kg	2512 to 9292	1130
Benzo(b)fluoranthene	µg/Kg	1197 to 4822	604
Benzo(b+k)fluoranthene	µg/Kg	2614 to 10454	1307

Description

Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Benzo(g,h,i)perylene	µg/Kg	489 to 2271	297
Benzo(k)fluoranthene	µg/Kg	892 to 3537	441
Butyl benzyl phthalate	µg/Kg	1255 to 5766	752
Carbazole	µg/Kg	2032 to 8792	1127
Chrysene	µg/Kg	669 to 2284	269
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	765 to 5045	713
Dibenzo(a,h)anthracene	µg/Kg	1257 to 5583	721
Dibenzofuran	µg/Kg	2766 to 9493	1121
Dimethyl phthalate	µg/Kg	1842 to 7231	898
Di-n-butyl phthalate	µg/Kg	495 to 2947	409
Di-n-octyl phthalate	µg/Kg	690 to 4798	685
Fluoranthene	µg/Kg	984 to 4009	504
Fluorene	µg/Kg	1638 to 5810	695
Hexachlorobutadiene	µg/Kg	425 to 3329	484
Indeno(1,2,3-cd) pyrene	µg/Kg	870 to 6957	1015
Isophorone	µg/Kg	437 to 2792	392
Naphthalene	µg/Kg	1131 to 7784	1109
Nitrobenzene	µg/Kg	1024 to 6054	838
n-Nitrosodimethylamine	µg/Kg	632 to 2528	316
n-Nitrosodiphenylamine	µg/Kg	1142 to 4567	571
Pentachlorophenol	µg/Kg	341 to 7037	1209
Phenanthrene	µg/Kg	2307 to 7798	915
Phenol	µg/Kg	681 to 4639	660
Pyrene	µg/Kg	1118 to 4810	615
Pyridine	µg/Kg	403 to 1613	202

Additional Information:

DESCRIPTION

The organic sample is a soil containing extractable BNAs for analysis by 8100, 8270, 8310 or equivalent methods.

This product consist of a 5 vials each containing 10g of soil for analysis of PAHs. Each vial is identical and has been tested how homogeneity. Only one vial is need for test the remaining vials are to be used for multiple methods or routine testing.

The soil has been sterilized to minimize degradation of the sample.

The sample has been sized to 100 mesh.

Required storage condition is 4ºC.

The sample has been intentionally prepared with an apparent headspace.

STORAGE

The sample should be stored at 4ºC. It has been determined to be stable for the duration of the expiration date.

After sub-sampling replace cap securely and store remaining sample at 4ºC.

The shelf life of the product was determined by historic stability of similar CRM's. The expiration date may be extended based on stock and popularity upon successful stability testing by a 17025 accredited laboratory.

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID	CRM143-50G
Lot	**LRAC8918**
Expiration Date	January 2024
Manufacturing Date	January 2021
Storage Conditions	Refrigerate
Solvent/Matrix	SOIL

Stability and shelf life after opening must be determined by the user, taking into account sampling frequency/volume and all local conditions.

SAMPLE PREPARATION

Extract the complete contents of a single vial. Transfer entire contents of one vial to extraction vessel. Rinse vial and cap with extraction solvent.

Assume a 10g sample size for all calculations.

Note: Sample extracts and calibration solutions should be in the same solvent.

Report all results on a wet weight basis, do not correct for moisture.

NOTE: For method 8100 and using a packed column gas chromatographic method or cannot adequately resolve the following may coelute in four pairs of compounds: anthracene and phenanthrene; chrysene and benzo(a)anthracene; benzo(b)fluoranthene and benzo(k)fluoranthene; and dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene.

SCOPE AND APPLICATION

The BNAs in Soil Certified Reference Material (CRM) consists of 5 10mL VOA vials, with a Teflon lined closures containing approximately 10 grams of soil, fortified with BNAs. Being a natural matrix waste sample the analyst is challenged by the same preparation problems, analytical interferences, etc. as is typical for similar matrices received by the laboratory for analysis.

Description

Lot	**LRAC8918**
Expiration Date	January 2024
Manufacturing Date	January 2021
Storage Conditions	Refrigerate
Solvent/Matrix	SOIL

1 **Metrological traceability:** Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.
4 Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. K=2 unless specified. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom } ogeneity}^2 + u_{stability}^2}$$

***k*:** Coverage factor derived from a t-distribution table, based on the degrees of freedom of the data set. Assume 2.0 for a **Confidence interval = 95%**

6 Analytical Value- For QC verification of the certified value only- not to be used in calculations. Represents the analytical data obtained by comparison to a standard as analyzed by the method described in the CoA or another acceptable method. The result may differ from the certified value and UCRM based on method uncertainty as well as the uncertainty associated with the standard used for comparison.

Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were preformed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Homogeneity: Homogeneity was assessed in accordance with ISO 17034:2016. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared using a one-way analysis of variance approach as described by TNI EL-V3-2009 Appendix A.2. See Instructions for minimum sub-sample size.

Expiration is at end of month given on certificate and label.

MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

THIS PRODUCT WAS DESIGNED, PRODUCED AND VERIFIED FOR ACCURACY AND STABILITY IN ACCORDANCE WITH **ISO/IEC 17025:2017 (ANAB Cert AT-1467)** and **ISO 17034:2016 (ANAB Cert AR-1470).**

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certification Date	January 05, 2021
Version	0-152021

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Agilent

Certificate of Analysis

Product Name: Toxic Substances Standard

Product Number: US-103N-1 **Lot Issue Date:** 25-May-2021

Lot Number: 0006609664 **Expiration Date:** 30-Jun-2024

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
benzoic acid	000065-85-0	RM01884	2005 ± 10 µg/mL
o-cresol	000095-48-7	RM12877	2005 ± 10 µg/mL
p-cresol	000106-44-5	RM01988	2005 ± 10 µg/mL
2,4,5-trichlorophenol	000095-95-4	NT00344	2004 ± 10 µg/mL

Matrix: methylene chloride (dichloromethane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

5/11/22

K004539
toxic sub mix#1
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 6/30/2024
Location:

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

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Reference Material Certificate

Product Name: Phenols Standard
Product Number: US-107N-1
Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006648297
Lot Issue Date: 17-Nov-2021
Expiration Date: 31-Dec-2024

Component Name	CERTIFIED VALUES Concentration	Expanded Uncertainty	CAS#	Analyte Lot
4-chloro-3-methylphenol	2006 ±	10 µg/mL	000059-50-7	RM01885
2-chlorophenol	2007 ±	10 µg/mL	000095-57-8	RM01871
2,4-dichlorophenol	2005 ±	10 µg/mL	000120-83-2	RM13878
2,4-dimethylphenol	2006 ±	10 µg/mL	000105-67-9	RM13009
2,4-dinitrophenol	2006 ±	10 µg/mL	000051-28-5	RM02112
2-methyl-4,6-dinitrophenol	2005 ±	10 µg/mL	000534-52-1	RM02292
2-nitrophenol	2007 ±	10 µg/mL	000088-75-5	RM13445
4-nitrophenol	2006 ±	10 µg/mL	000100-02-7	RM03752
pentachlorophenol	2006 ±	10 µg/mL	000087-86-5	RM02474
phenol	2006 ±	10 µg/mL	000108-95-2	RM11471
2,4,6-trichlorophenol	2006 ±	10 µg/mL	000088-06-2	RM18096

Matrix: methylene chloride (dichloromethane)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

5/11/22

CSD-QA-015.1

K004540
phenols mix
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 12/31/2024
Location:

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name: PAH Standard
Product Number: US-106N-1
Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006627349
Lot Issue Date: 17-Sep-2021
Expiration Date: 31-Oct-2024

Component Name	CERTIFIED VALUES Concentration	Expanded Uncertainty	CAS#	Analyte Lot
acenaphthene	2007 ±	10 µg/mL	000083-32-9	RM10879
acenaphthylene	2004 ±	10 µg/mL	000208-96-8	RM10891
anthracene	2006 ±	10 µg/mL	000120-12-7	RM14212
benz[a]anthracene	2006 ±	10 µg/mL	000056-55-3	RM16072
benzo[b]fluoranthene	2006 ±	10 µg/mL	000205-99-2	RM14571
benzo[k]fluoranthene	2006 ±	10 µg/mL	000207-08-9	RM18376
benzo[ghi]perylene	2006 ±	10 µg/mL	000191-24-2	RM15761
benzo[a]pyrene	2006 ±	10 µg/mL	000050-32-8	RM17573
chrysene	2007 ±	10 µg/mL	000218-01-9	RM13771
dibenz[a,h]anthracene	2006 ±	10 µg/mL	000053-70-3	RM06786
fluoranthene	2006 ±	10 µg/mL	000206-44-0	RM12277
fluorene	2006 ±	10 µg/mL	000086-73-7	RM09441
indeno[1,2,3-cd]pyrene	2006 ±	10 µg/mL	000193-39-5	RM14192
naphthalene	2007 ±	10 µg/mL	000091-20-3	RM10445
phenanthrene	2005 ±	10 µg/mL	000085-01-8	RM10495
pyrene	2005 ±	10 µg/mL	000129-00-0	RM16126

Matrix: methylene chloride/benzene (1:1)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

K004541
SVOA PAH STD 2000ug/ml
Solvent / Lot: DCM/BENZENE
Prep: 5/11/2022 by JZ
Exp: 10/31/2024
Location: Fridge 19

CSD-QA-015.1

11/22

Reference Materials Producer
Cert #2495.01

Certificate of Analysis

Chemical Testing
Cert #2495.02

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This **SPEXOrganics**® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

Certificate of Reference Material

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021 Certifying Officer: Shannon Mora

Report of Certification

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory , please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5 µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i, where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

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Accredited to 17025 & Guide 34 ISO Certified to 9001

ACCREDITED
Reference Materials Producer
Cert #2495.01

ECS

Certificate of Analysis

ilac-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This **SPEXOrganics®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

K004542

Certificate of Reference Material

Catalog Number: ECS-A-030

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Lot No. AA210126005

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021

Certifying Officer: Shannon Nave

Report of Certification

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
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- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory, please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

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Accredited to 17025 & Guide 34 ISO Certified to 9001

Agilent

Certificate of Analysis

Product Name: 1-Methylnaphthalene Standard

Product Number: EPA-1225-1 **Lot Issue Date:** 19-Jul-2021

Lot Number: 0006624769 **Expiration Date:** 31-Jul-2023

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
1-methylnaphthalene	000090-12-0	RM07712	999.3 ± 5.0 µg/mL

Matrix: methanol (methyl alcohol)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

K004543
1-Methylnaphthalene
Solvent / Lot: MEOH
Prep: 5/11/2022 by JZ
Exp: 7/31/2023
Location:

5/11/22

Sample lot approver:
Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026
Page: 1 of 1
www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert
No. AT-1937

Agilent

Certificate of Analysis

Product Name: Toxic Substances Standard

Product Number: US-104N-1 **Lot Issue Date:** 02-Jul-2021

Lot Number: 0006620643 **Expiration Date:** 31-Jul-2023

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
aniline	000062-53-3	RM12853	2005 ± 10 µg/mL
benzyl alcohol	000100-51-6	RM10547	2004 ± 10 µg/mL
4-chloroaniline	000106-47-8	RM01886	2002 ± 10 µg/mL
dibenzofuran	000132-64-9	RM02077	2002 ± 10 µg/mL
2-methylnaphthalene	000091-57-6	RM01258	2006 ± 10 µg/mL
2-nitroaniline	000088-74-4	RM02402	2003 ± 10 µg/mL
3-nitroaniline	000099-09-2	RM02424	2003 ± 10 µg/mL
4-nitroaniline	000100-01-6	RM02425	2003 ± 10 µg/mL

Matrix: methylene chloride (dichloromethane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

K004544
toxic sub mix#2
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 7/31/2023
Location:

05/11/22

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

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ISO 17025 Cert No. AT-1937

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31493 **Lot No.:** A0181243

Description : CLP 04.1 BNA Surrogate Mix

CLP 04.1 BNA Surrogate Mix 1000-1500 µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2025 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

05/11/22

K004545
CLP 04.1 BNA SURR MIX
Solvent / Lot: AO175316
Prep: 5/11/2022 by JZ
Exp: 10/20/2025
Location:

Elution Order	Compound	Gr (weig					
1	2-Fluorophenol **CAS #** 367-12-4 (Lot STBJ2508) **Purity** 99%	1,50				µg/mL	Stressed
				+/-	53.3632	µg/mL	Stressed
2	Phenol-d6 **CAS #** 13127-88-3 (Lot PR-31262) **Purity** 99%	1,506.0	µg/mL	+/-	8.9452	µg/mL	Gravimetric
				+/-	43.9882	µg/mL	Unstressed
				+/-	53.3632	µg/mL	Stressed
3	2-Chlorophenol-d4 **CAS #** 93951-73-6 (Lot PR-30568) **Purity** 99%	1,510.0	µg/mL	+/-	8.9689	µg/mL	Gravimetric
				+/-	44.1050	µg/mL	Unstressed
				+/-	53.5049	µg/mL	Stressed
4	1,2-Dichlorobenzene-d4 **CAS #** 2199-69-1 (Lot PR-32542/022621DB1 **Purity** 99%	1,004.0	µg/mL	+/-	5.9635	µg/mL	Gravimetric
				+/-	29.3255	µg/mL	Unstressed
				+/-	35.5754	µg/mL	Stressed
5	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-29940A) **Purity** 99%	1,008.0	µg/mL	+/-	5.9872	µg/mL	Gravimetric
				+/-	29.4423	µg/mL	Unstressed
				+/-	35.7172	µg/mL	Stressed
6	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot 19169) **Purity** 99%	1,006.0	µg/mL	+/-	5.9753	µg/mL	Gravimetric
				+/-	29.3839	µg/mL	Unstressed
				+/-	35.6463	µg/mL	Stressed
7	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot MKCJ7664) **Purity** 99%	1,506.0	µg/mL	+/-	8.9452	µg/mL	Gravimetric
				+/-	43.9882	µg/mL	Unstressed
				+/-	53.3632	µg/mL	Stressed

Certificate of Analysis

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.:	AL0-101246	**Lot Number:**	CL17953
Description:	Benzoic Acid	**Certification Date:**	January 31, 2022
Storage:	4 °C	**Expiration Date:**	January 31, 2032
Provided As:	1 mL in 2 mL Ampoule in Methylene Chloride		

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 2.714%

K004603
Benzoic Acid @2000ug/ml
Solvent / Lot: N/A
Prep: 5/13/2022 by JZ
Exp: 1/31/2032
Location: GC

5/13/22

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

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Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018 us

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Certified Reference Material

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Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL17662
Certification Date: December 2, 2021
Expiration Date: November 30, 2031

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 0.211%
3,3'-Dichlorobenzidine	91-94-1	2000	± 1.305%

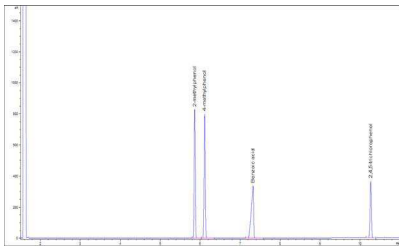
K004604
Benzidines std @2000ug/ml
Solvent / Lot: MeCl2
Prep: 5/13/2022 by JZ
Exp: 11/30/2031
Location: GC

5/13/22

Certificate of Analysis - Certified Reference Material

EPA TCL Hazardous Substances Mix 1

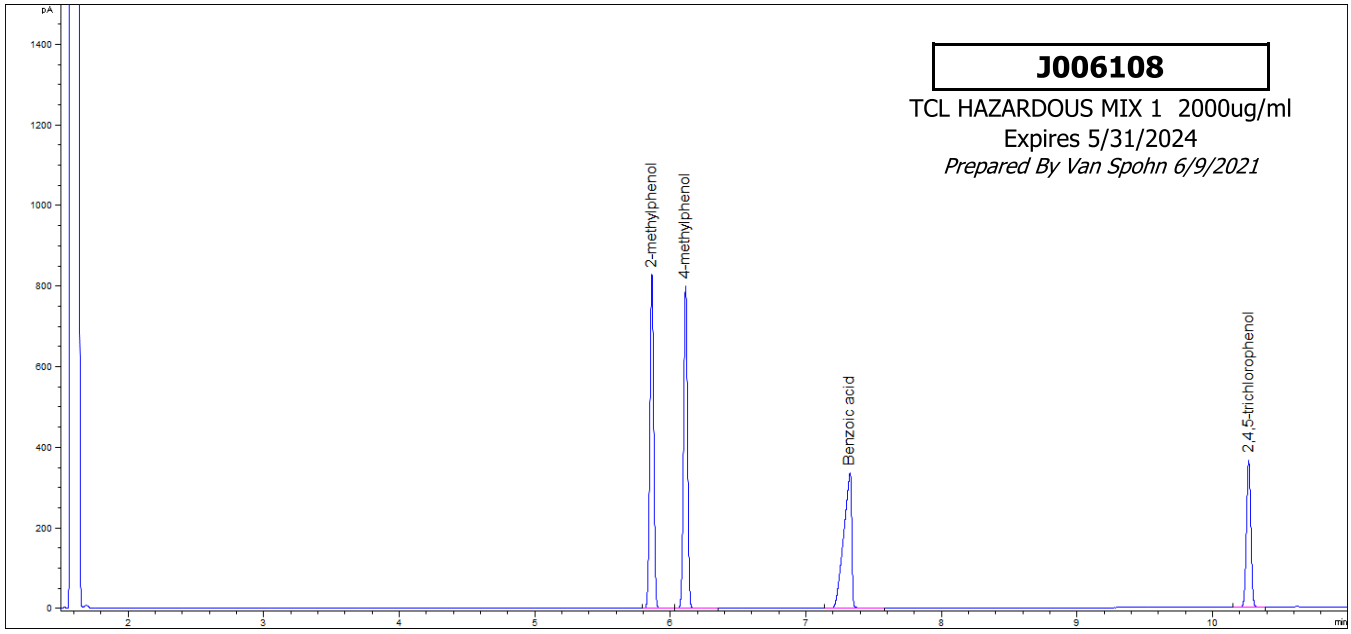
Product no.: 48907
Lot no.: LRAC9610
Expiry Date: May 2024
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAC9610.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*



Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Elution order*	*Raw Material Lot*
2-METHYLPHENOL CAS# 95-48-7	2004 ± 9	µg/mL	99.0	1	G1735A
4-METHYLPHENOL CAS# 106-44-5	2004 ± 13	µg/mL	98.9	2	06921MG
BENZOIC ACID CAS# 65-85-0	2012 ± 6	µg/mL	99.9	3	LC16514
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	2003 ± 6	µg/mL	99.9	4	JS00008

Informational Values:



Additional Information:
Analytical Method Parameters:
Column: Equity-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #98)
Carrier Gas: H2, Flow: 4.5 mL/min
Inlet Temperature: 170 °C, Injection Volume: 1 µL
Injection Mode: Split, Split Ratio: 20:1

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Temperature Program: 80 °C @ 10 °C/min to 190 °C (Hold 5 min)
Detector: FID
Detector Temperature: 310 °C

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 20-May-2021

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom}\ ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAC9610.01	20-May-2021	Original Release Date

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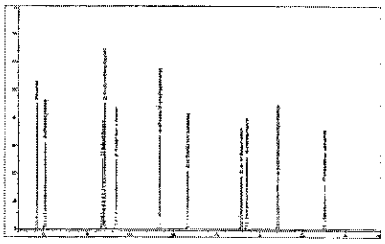
Certificate of Analysis - Certified Reference Material

EPA TCL Phenols Mix

Product no.: 48904
Lot no.: LRAD0139
Expiry Date: July 2024
Manufacturing Date: July 2021
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD0139.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*



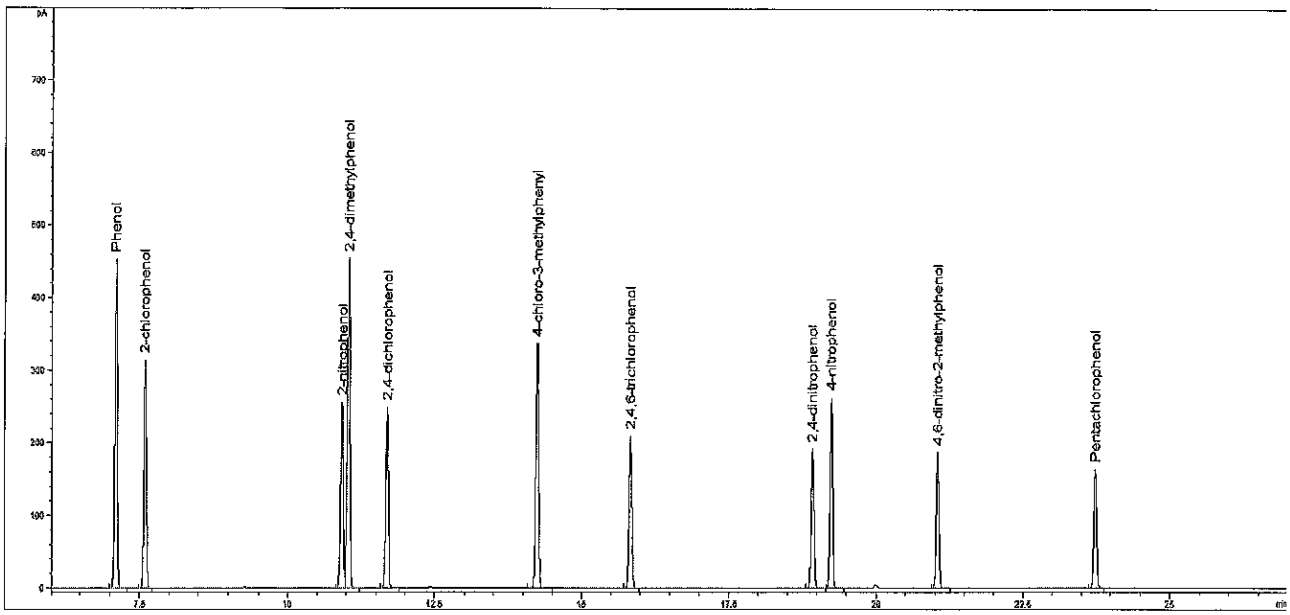
Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2-CHLOROPHENOL CAS# 95-57-8	2001 ± 25	µg/mL	99.9	STBG3033V
2-NITROPHENOL CAS# 88-75-5	1999 ± 18	µg/mL	99.3	15905BB
2,4-DIMETHYLPHENOL CAS# 105-67-9	2000 ± 14	µg/mL	99.2	05421CO
2,4-DICHLOROPHENOL CAS# 120-83-2	2000 ± 17	µg/mL	99.5	03221TN
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	2000 ± 5	µg/mL	99.9	JS00013
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	2002 ± 5	µg/mL	99.5	04212PS
2,4-DINITROPHENOL CAS# 51-28-5	2000 ± 28	µg/mL	66.9	STBJ5751
4-NITROPHENOL CAS# 100-02-7	2000 ± 33	µg/mL	99.0	04628LT
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	2000 ± 27	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	1999 ± 25	µg/mL	97.9	MKCD2150

ASSAY Method

J013597
TCL Phenols Mix 2000ug/ml
Solvent / Lot: LRAD0139
Prep: 12/30/2021 by VS
Exp: 7/31/2024
Location:

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.



METHOD: GC (Bellefonte Method)

Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness
Carrier Gas: H_2 Flow Rate: 4.5 mL/min
Inlet Temperature: 200 °C Injection Volume: 1.0 µL
Injection Mode: 25:1
Temperature Program: 80 °C (Hold 2 min) @ 6 °C/min to 260 °C (Hold 5 min)
Detector: FID Temperature: 310 °C

Elution details:

EO	RT(MIN)	ANALYTE
1	7.095	Phenol
2	7.585	2-chlorophenol
3	10.925	2-nitrophenol
4	11.037	2,4-dimethylphenol
5	11.696	2,4-dichlorphenol
6	14.242	4-chloro-3-m3thylphenol
7	15.842	2,4,6-trichlorophenol
8	18.93	2,4-dinitrophenol
9	19.25	4-nitrophenol
10	21.05	4,6-dinitro-2-methylphenol
11	23.752	Pentachlorophenol

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 12-Jul-2021

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{hom\ ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD0139.01	12-Jul-2021	Original Release Date

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Certificate of Analysis

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Certified Reference Material

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Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18355
Certification Date: July 25, 2022
Expiration Date: August 31, 2023

K007995
SVOA-8270 LCS MIX 1000ug/ml
Solvent / Lot: N/A
Prep: 8/29/2022 by JZ
Exp: 8/31/2023
Location: FREEZER 44

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Acenaphthene	83-32-9	1000	± 0.300%
Acenaphthylene	208-96-8	1000	± 0.225%
Anthracene	120-12-7	1000	± 6.858%
Azobenzene	103-33-3	1000	± 0.224%
Benzo(a)anthracene	56-55-3	1000	± 0.247%
Benzo(a)pyrene	50-32-8	1000	± 0.270%
Benzo(b)fluoranthene	205-99-2	1000	± 0.635%
Benzo(k)fluoranthene	207-08-9	1000	± 0.682%
Benzo(g,h,i)perylene	191-24-2	1000	± 0.272%
Benzyl alcohol	100-51-6	1000	± 0.231%
Benzyl butyl phthalate	85-68-7	1000	± 0.480%
bis(2-Chloroethoxy)methane	111-91-1	1000	± 0.479%
bis(2-Chloroethyl) ether	111-44-4	1000	± 0.479%
bis(2-Chloroisopropyl) ether	108-60-1	1000	± 0.550%
bis(2-Ethylhexyl) adipate	103-23-1	1000	± 0.479%
bis(2-Ethylhexyl) phthalate	117-81-7	1000	± 0.479%
4-Bromophenyl phenyl ether	101-55-3	1000	± 0.479%
Carbazole	86-74-8	1000	± 0.146%

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
4-Chloroaniline	106-47-8	1000	± 0.300%
4-Chloro-3-methylphenol	59-50-7	1000	± 0.545%
2-Chloronaphthalene	91-58-7	1000	± 0.224%
2-Chlorophenol	95-57-8	1000	± 0.507%
4-Chlorophenyl phenyl ether	7005-72-3	1000	± 0.479%
Chrysene	218-01-9	1000	± 0.145%
Dibenz(a,h)anthracene	53-70-3	1000	± 1.058%
Dibenzofuran	132-64-9	1000	± 0.302%
Di-n-butyl phthalate	84-74-2	1000	± 0.518%
1,2-Dichlorobenzene	95-50-1	1000	± 0.247%
1,3-Dichlorobenzene	541-73-1	1000	± 0.225%
1,4-Dichlorobenzene	106-46-7	1000	± 0.224%
2,4-Dichlorophenol	120-83-2	1000	± 0.545%
Diethyl phthalate	84-66-2	1000	± 0.518%
2,4-Dimethylphenol	105-67-9	1000	± 0.507%
Dimethyl phthalate	131-11-3	1000	± 0.518%
1,2-Dinitrobenzene	528-29-0	1000	± 0.361%
1,3-Dinitrobenzene	99-65-0	1000	± 0.300%
1,4-Dinitrobenzene	100-25-4	1000	± 0.242%
2,4-Dinitrophenol	51-28-5	1000	± 0.545%
2,4-Dinitrotoluene	121-14-2	1000	± 1.128%

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2,6-Dinitrotoluene	606-20-2	1000	± 0.224%
Di-n-octyl phthalate	117-84-0	1000	± 0.486%
Fluoranthene	206-44-0	1000	± 0.224%
Fluorene	86-73-7	1000	± 0.224%
Hexachlorobenzene	118-74-1	1000	± 0.152%
Hexachlorobutadiene	87-68-3	1000	± 0.746%
Hexachlorocyclopentadiene	77-47-4	1000	± 0.153%
Hexachloroethane	67-72-1	1000	± 0.300%
Indeno(1,2,3-cd)pyrene	193-39-5	1000	± 0.883%
Isophorone	78-59-1	1000	± 0.145%
2-Methyl-4,6-dinitrophenol	534-52-1	1000	± 0.508%
1-Methylnaphthalene	90-12-0	1000	± 0.479%
2-Methylnaphthalene	91-57-6	1000	± 0.487%
2-Methylphenol	95-48-7	1000	± 0.545%
3-Methylphenol	108-39-4	500	± 0.279%
4-Methylphenol	106-44-5	500	± 0.399%
Naphthalene	91-20-3	1000	± 0.226%
2-Nitroaniline	88-74-4	1000	± 0.224%
3-Nitroaniline	99-09-2	1000	± 0.235%
4-Nitroaniline	100-01-6	1000	± 0.300%
Nitrobenzene	98-95-3	1000	± 0.300%

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2-Nitrophenol	88-75-5	1000	± 0.514%
4-Nitrophenol	100-02-7	1000	± 0.519%
N-Nitrosodimethylamine	62-75-9	1000	± 0.503%
N-Nitrosodiphenylamine	86-30-6	1000	± 0.476%
N-Nitrosodi-n-propylamine	621-64-7	1000	± 0.461%
Pentachlorophenol	87-86-5	1000	± 0.202%
Phenanthrene	85-01-8	1000	± 0.145%
Phenol	108-95-2	1000	± 0.545%
Pyrene	129-00-0	1000	± 0.147%
Pyridine	110-86-1	1000	± 0.503%
2,3,4,6-Tetrachlorophenol	58-90-2	1000	± 0.247%
2,3,5,6-Tetrachlorophenol	935-95-5	1000	± 0.247%
1,2,4-Trichlorobenzene	120-82-1	1000	± 0.224%
2,4,5-Trichlorophenol	95-95-4	1000	± 0.507%
2,4,6-Trichlorophenol	88-06-2	1000	± 0.509%

Notes: The proper chemical name for Bis(2-Chloroiospropyl) ether is 2,2'-oxybis(1-chloropropane). The analytical uncertainty contribution to the expanded uncertainty for 3 and 4-Methylphenol is measured as the total of the two analytes. N-Nitrosodiphenylamine presents as Diphenylamine at 854 µg/mL.

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Composition - Analytical Standard

BASE STOCK

Product no.: 22523051
Lot no.: LRAD2751
Expiry Date: June 2024
Manufacturing Date: June 2022
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD2751.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
3,3'-DICHLOROBENZIDINE, 100MG, NEAT CAS# 91-94-1	799	µg/mL	99.8	LRAD2376
2,4-DINITROTOLUENE CAS# 121-14-2	801	µg/mL	97.8	LB46632
2,6-DINITROTOLUENE CAS# 606-20-2	800	µg/mL	99.2	11231AN
HEXACHLOROCYCLOPENTADIENE CAS# 77-47-4	800	µg/mL	96.0	LB95525
N-NITROSODIMETHYLAMINE CAS# 62-75-9	800	µg/mL	95.0	2019-030598 5
PERYLENE CAS# 198-55-0	200	µg/mL	99.6	04101PG
ANILINE CAS# 62-53-3	800	µg/mL	99.9	LA41596
4-CHLOROANILINE CAS# 106-47-8	800	µg/mL	100.0	MKBZ6909V
2-NITROANILINE CAS# 88-74-4	799	µg/mL	99.9	07411KN
3-NITROANILINE CAS# 99-09-2	800	µg/mL	99.9	LC09264
4-NITROANILINE CAS# 100-01-6	800	µg/mL	99.9	15609AA
PYRIDINE (LOW WATER) CAS# 110-86-1	800	µg/mL	100.0	SHBJ9218

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

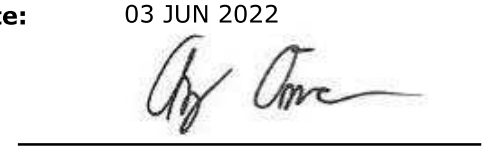
Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Certificate issue date: 03 JUN 2022



Andy Ommen - QC Manager

Scott Stetler - QA Manager

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD2751.01	03 JUN 2022	Original Release Date

Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

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Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101291	**Lot Number:**	CL11000
Description:	GC/MS Tuning Mix	**Certification Date:**	May 9, 2014
Storage:	4 °C	**Expiration Date:**	December 31, 2023
Provided As:	1 mL in 2 mL Ampoule in Methylene chloride	**Revision Date:**	August 5, 2015

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty (%)
Benzidine	92-87-5	1000	± 0.208%
Decafluorotriphenylphosphine (DFTPP)	5074-71-5	1000	± 0.057%
4,4'-DDT	50-29-3	1000	± 0.056%
Pentachlorophenol	87-86-5	1000	± 0.061%

LOO 1648

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL111110613_US

Certificate of Analysis

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Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101291
Description: GC/MS Tuning Mix
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene chloride

Lot Number: CL11000
Certification Date: May 9, 2014
Expiration Date: December 31, 2023
Revision Date: August 5, 2015

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty (%)
Benzidine	92-87-5	1000	± 0.208%
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4,4'-DDT	50-29-3	1000	± 0.056%
Pentachlorophenol	87-86-5	1000	± 0.061%

LOO1648

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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Chemical Testing Laboratory
Certificate No. 2427.03

IL11110613_us

Certificate of Analysis

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Access your MSDS and digital C of A at www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

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9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC Guide 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC Guide 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC Guide 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

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Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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Chemical Testing Laboratory
Certificate No. 2427.03

IL_111106.13_us

LDW23-SC1250

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-03 C	SDG:	23A0133
Sampled:	01/06/23 10:32	Prepared:	01/18/23 15:24	File ID:	NT1423022141S.D
% Solids:	51.11	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 13:34
Batch:	BLA0393	Sequence:	SLB0349	Initial/Final:	19.6 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GC00009
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.6	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	7.4	J	2.5	20.0
65-85-0	Benzoic acid	1	399	U	13.4	399
105-67-9	2,4-Dimethylphenol	1	2.6	J	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	20.0	U	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.69	406	54.2	27 - 120	
p-Terphenyl-d14	499.12	411	82.3	37 - 120	Q

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Date : 22-FEB-2023 13:34

Client ID:

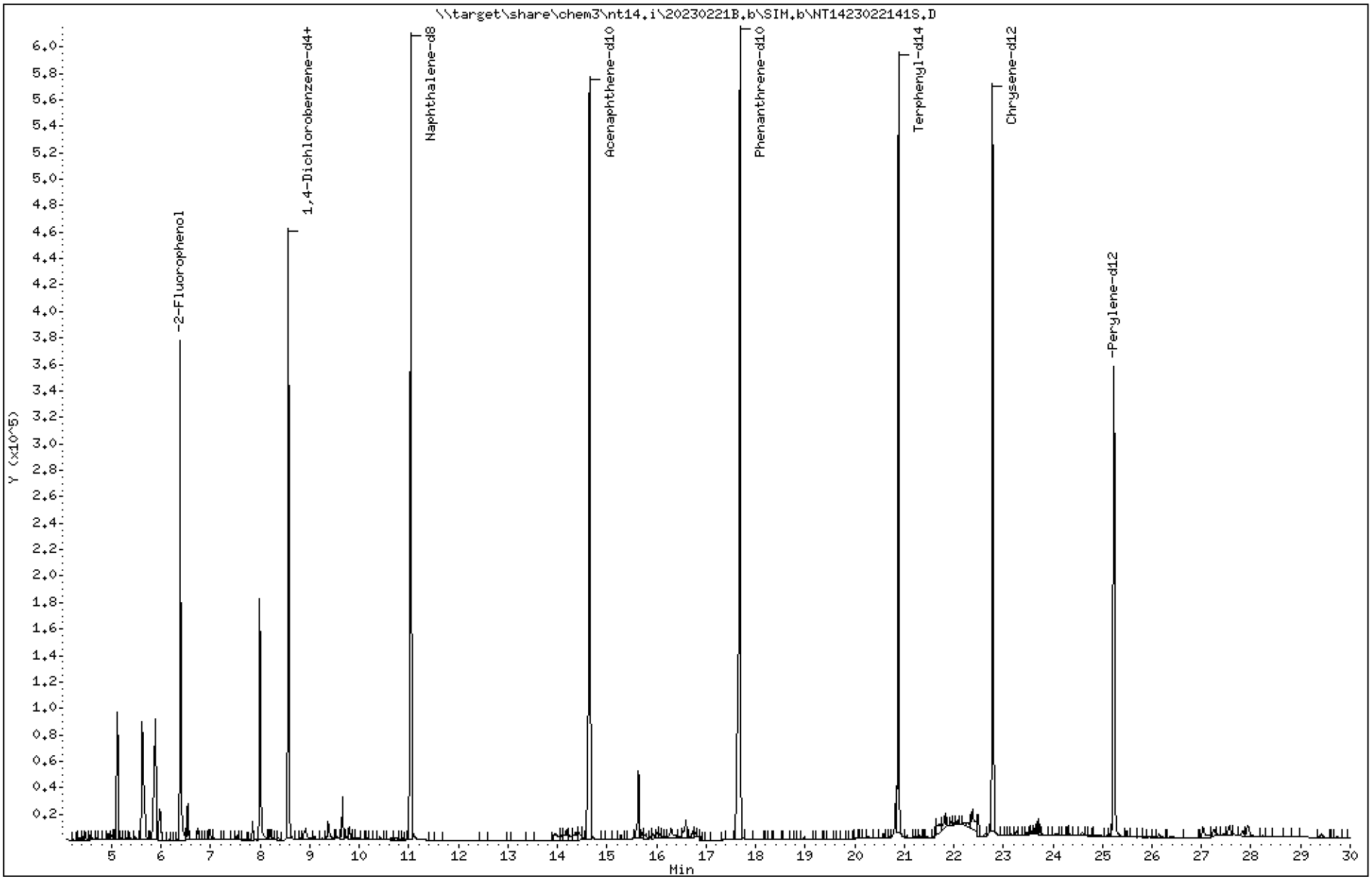
Sample Info: 23A0133-03

Instrument: nt14.i

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

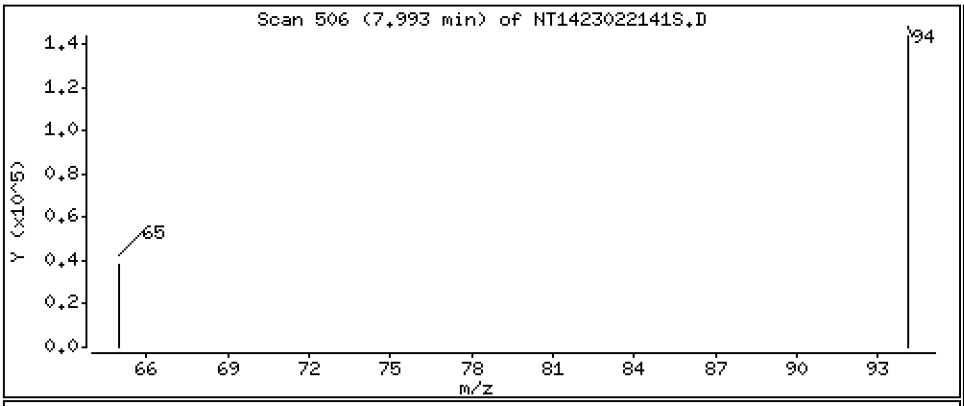
Operator: DSD

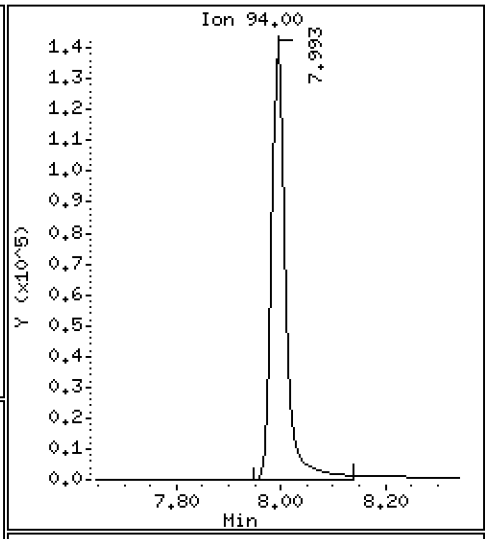
Column phase: ZB-5msi

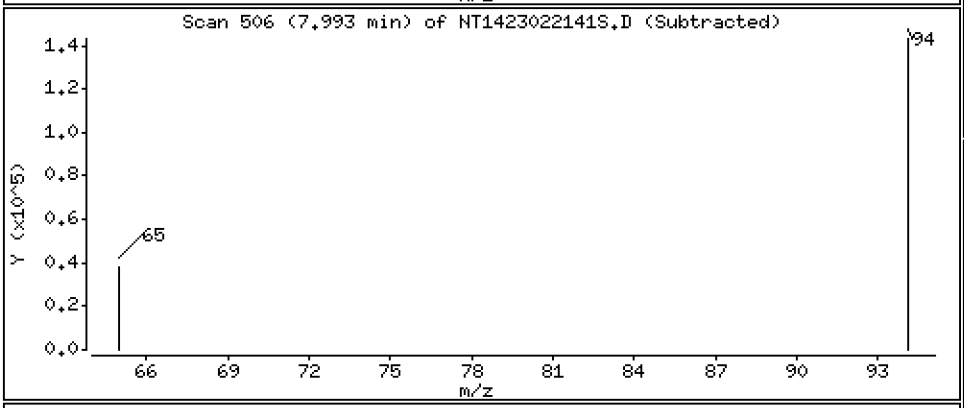
Column diameter: 0.25

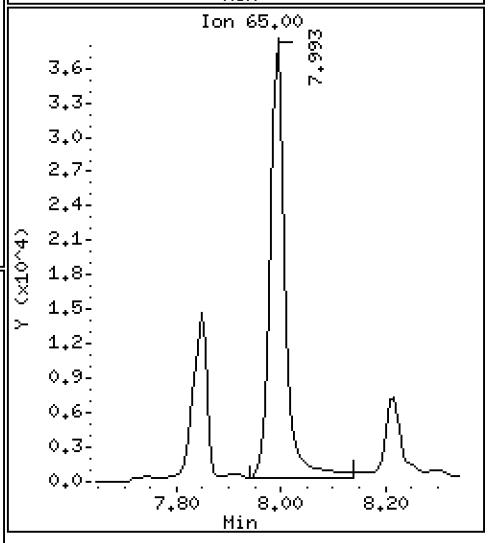
3 Phenol

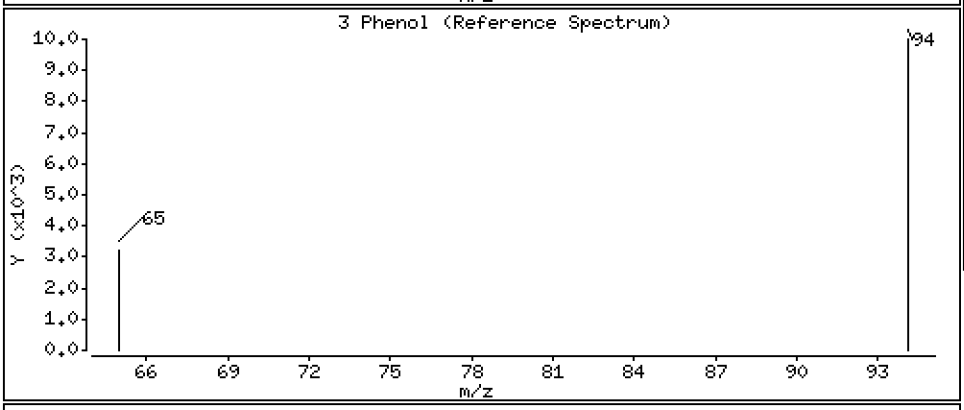
Concentration: 1.915 ug/mL

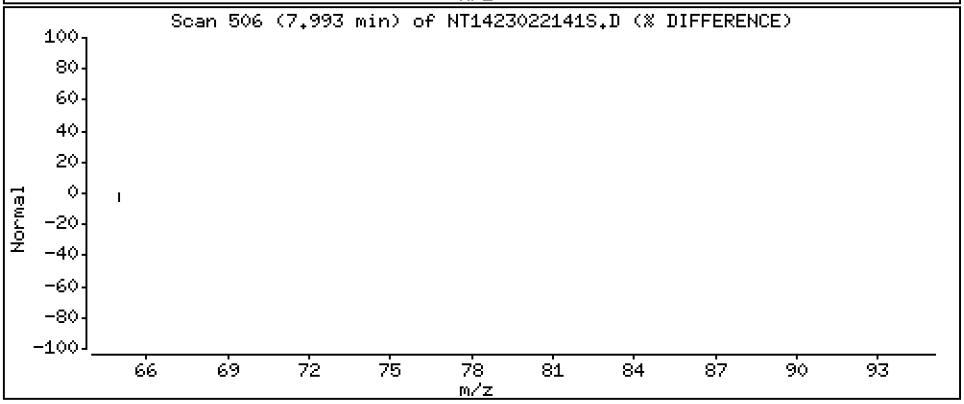












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

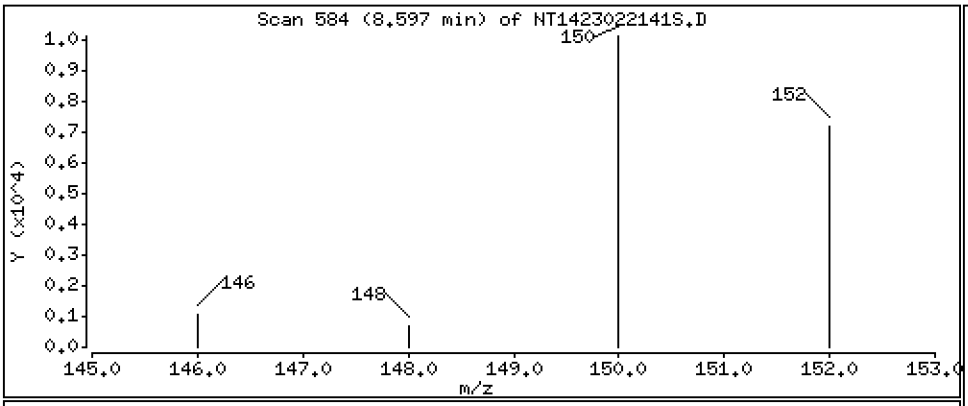
Operator: DSD

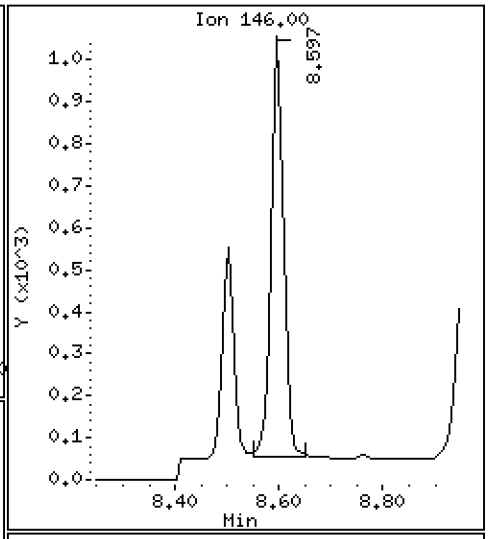
Column phase: ZB-5msi

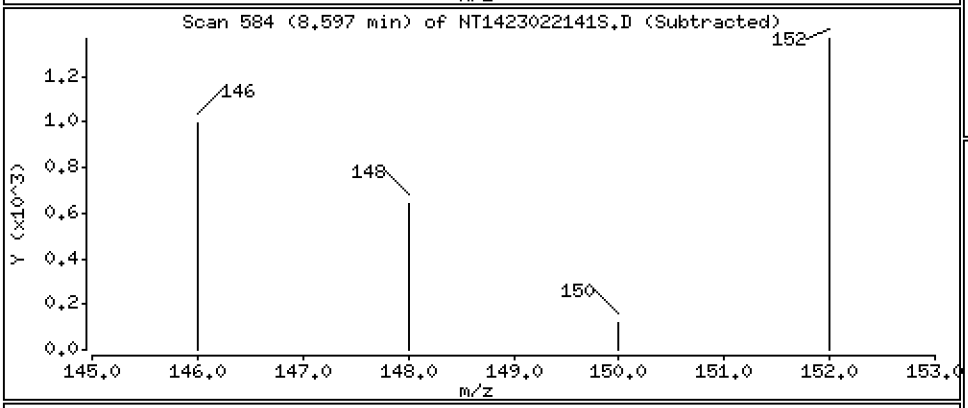
Column diameter: 0.25

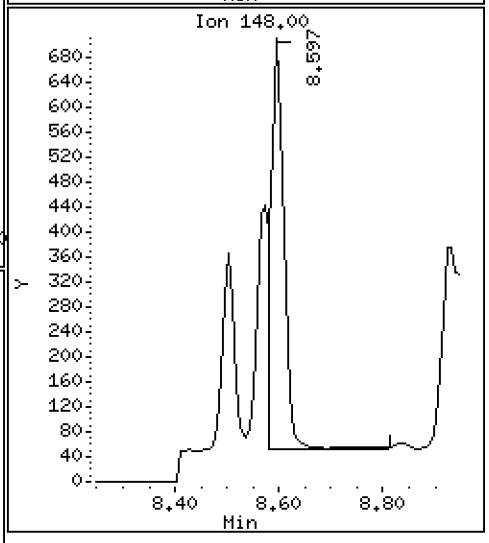
9 1,4-Dichlorobenzene

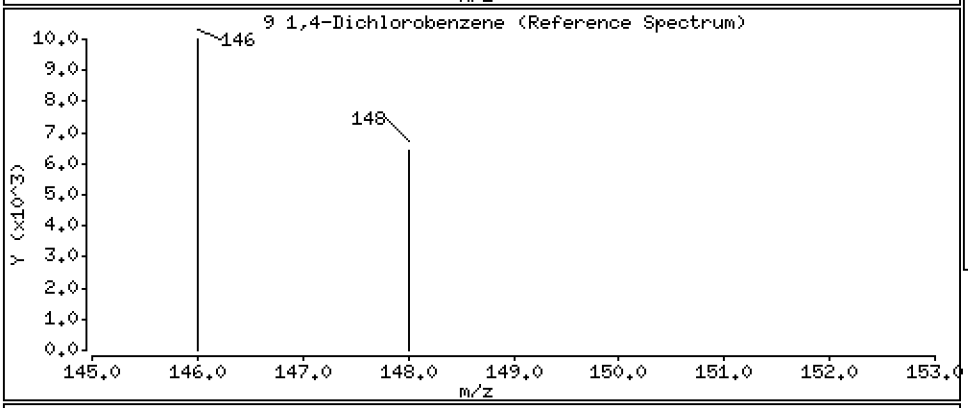
Concentration: 0.01616 ug/mL

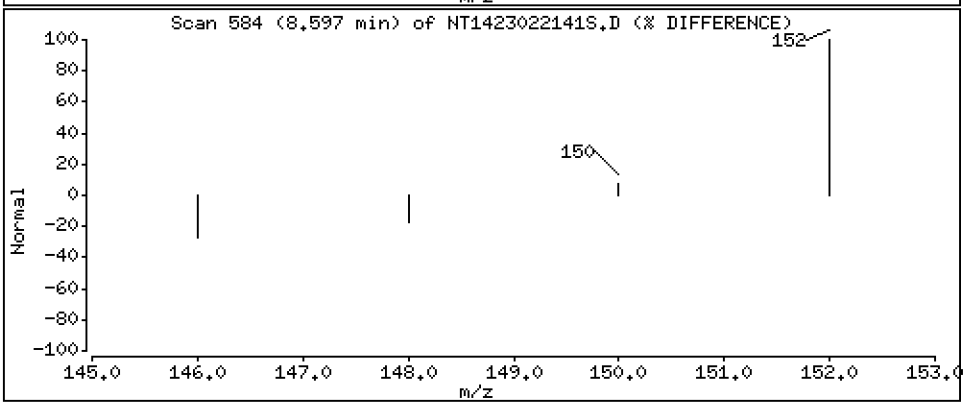












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

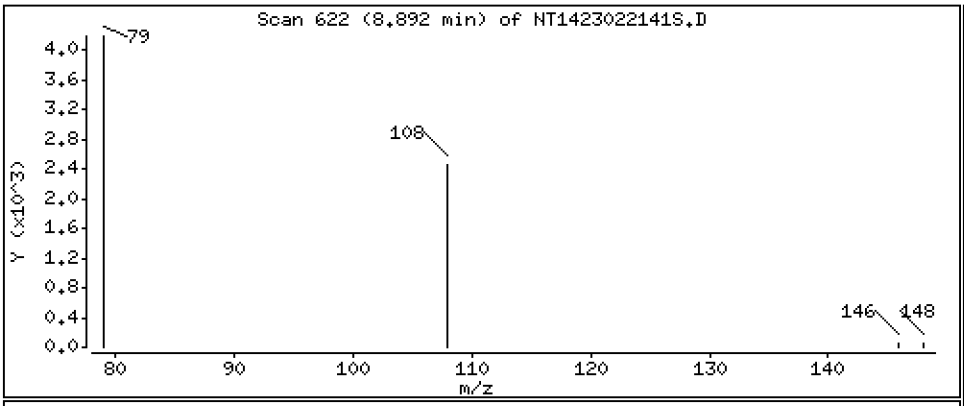
Operator: DSD

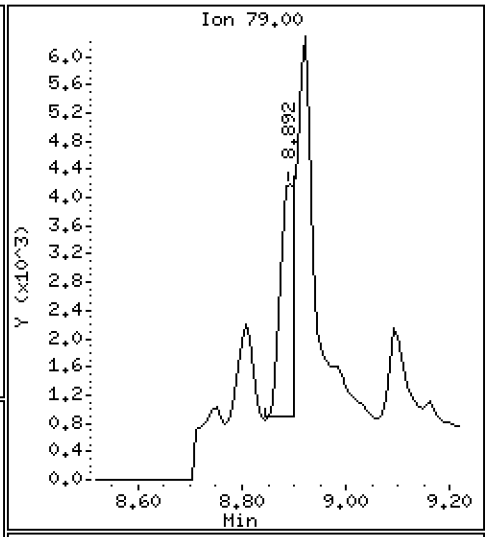
Column phase: ZB-5msi

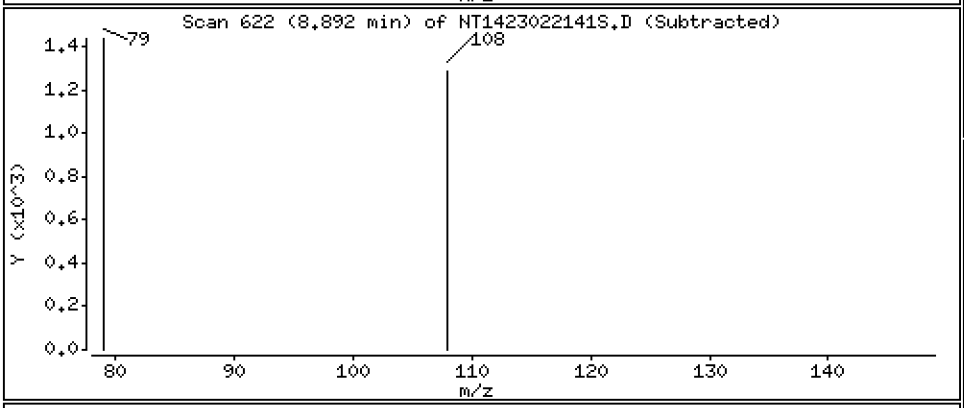
Column diameter: 0.25

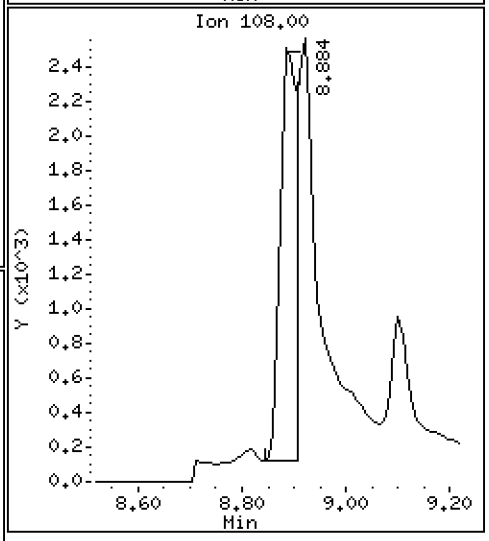
11 Benzyl alcohol

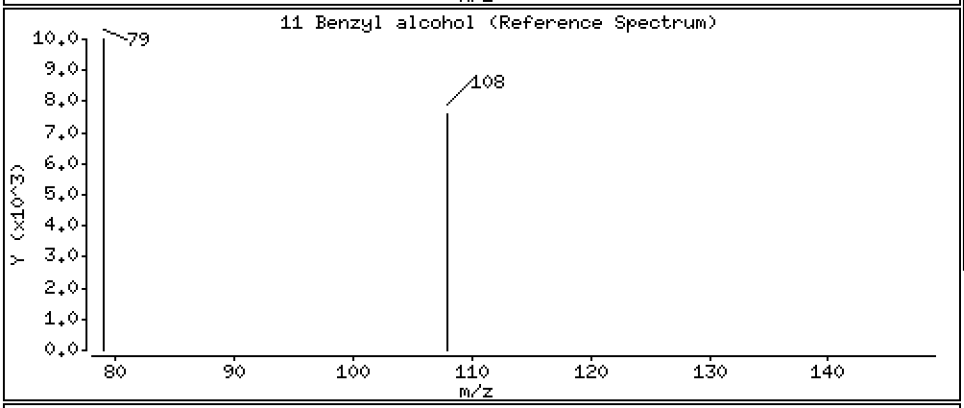
Concentration: 0.07443 ug/mL

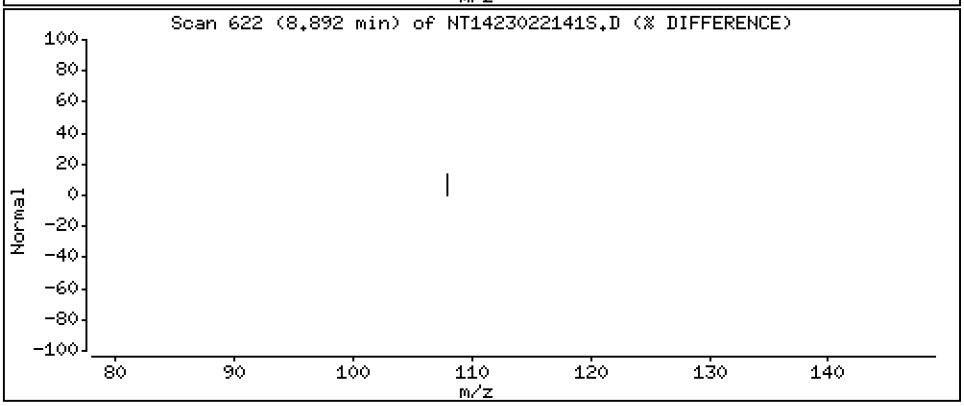












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

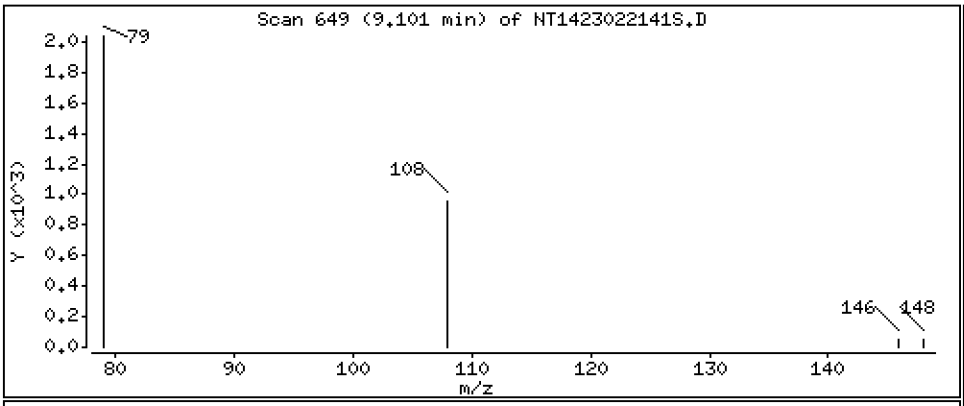
Operator: DSD

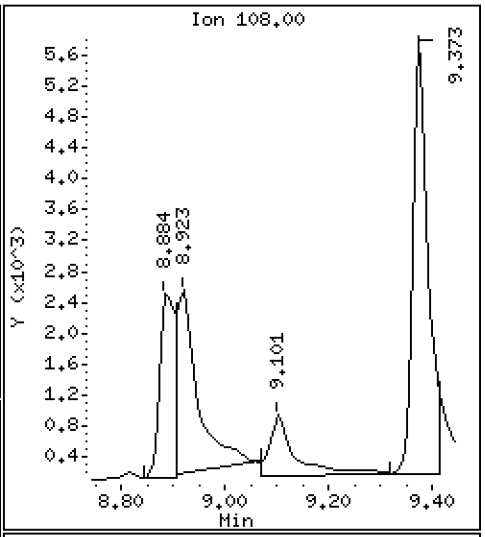
Column phase: ZB-5msi

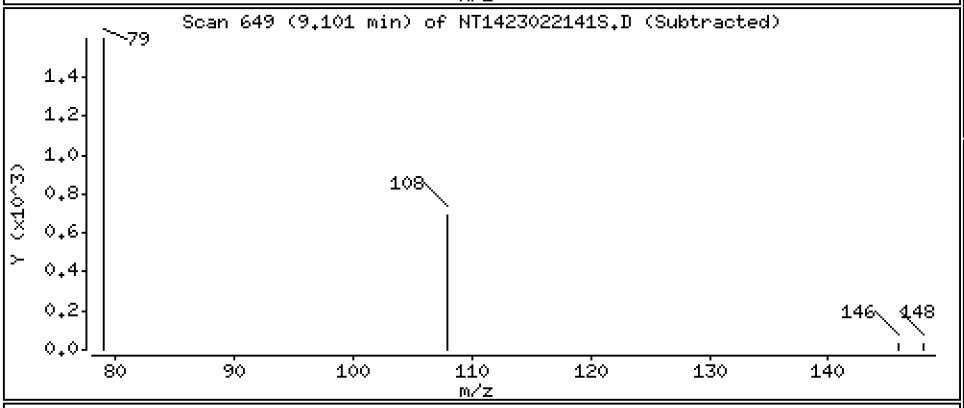
Column diameter: 0.25

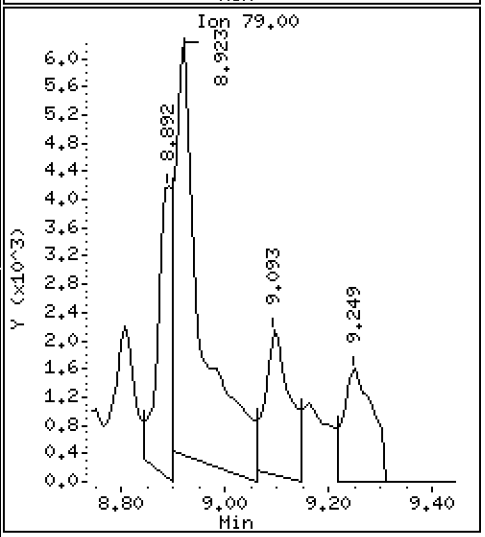
13 2-Methylphenol

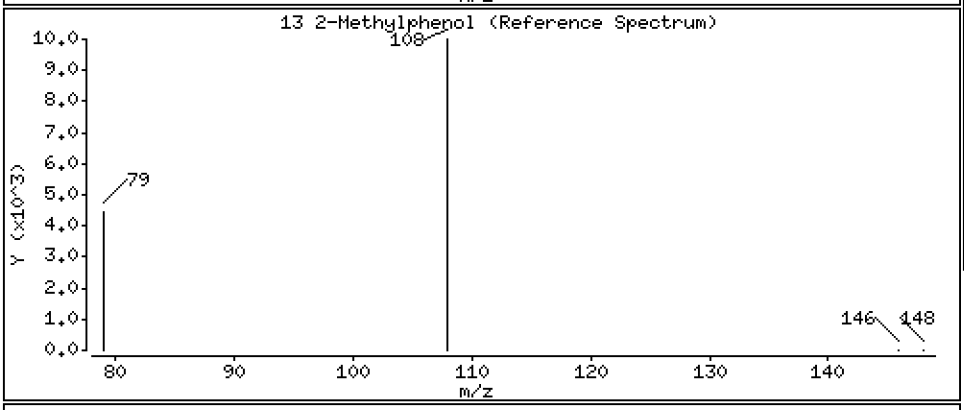
Concentration: 0.02833 ug/mL

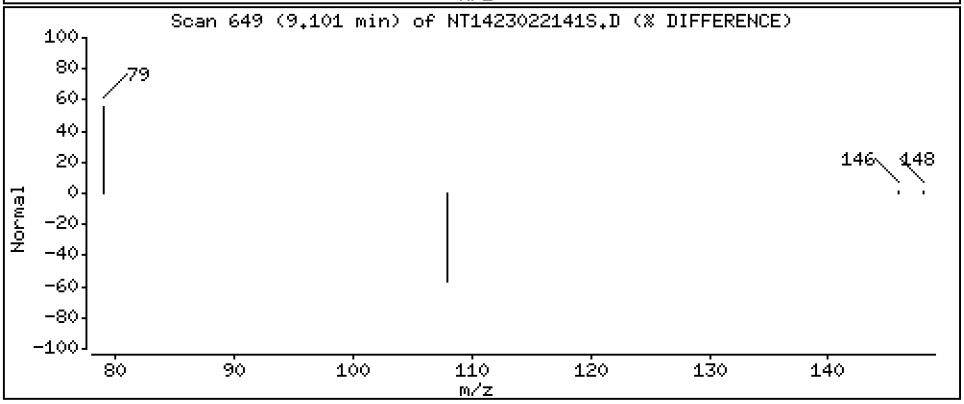












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

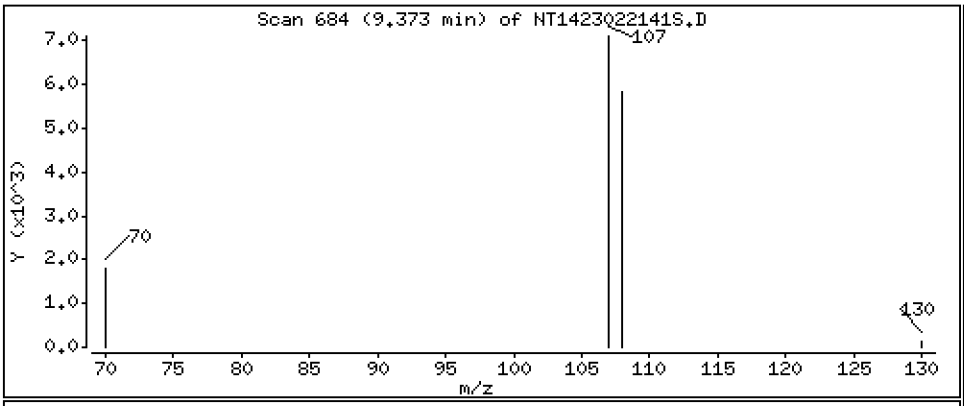
Operator: DSD

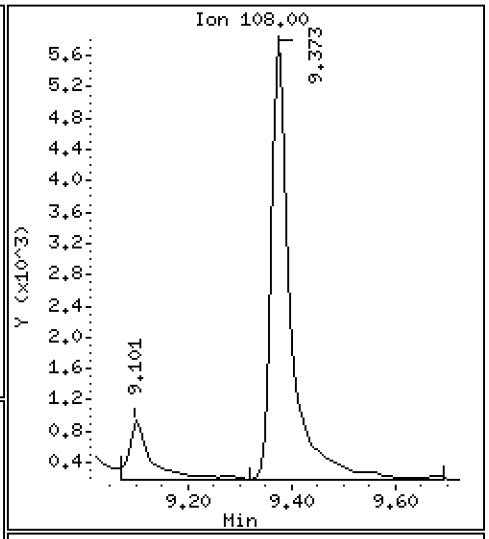
Column phase: ZB-5msi

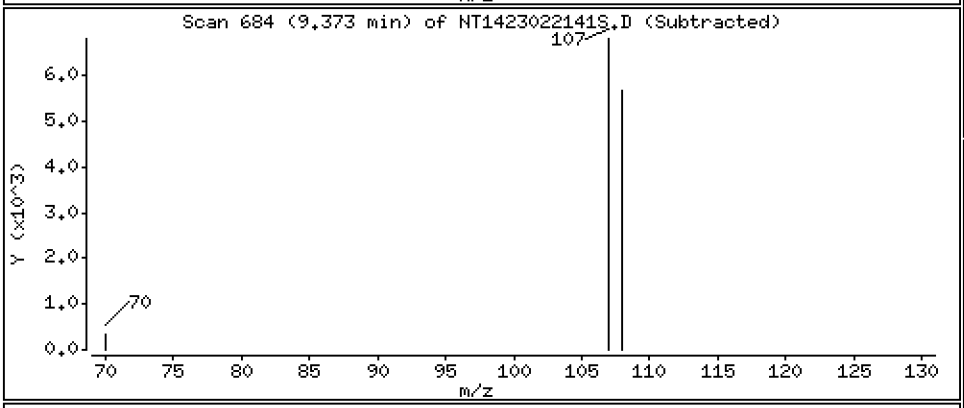
Column diameter: 0.25

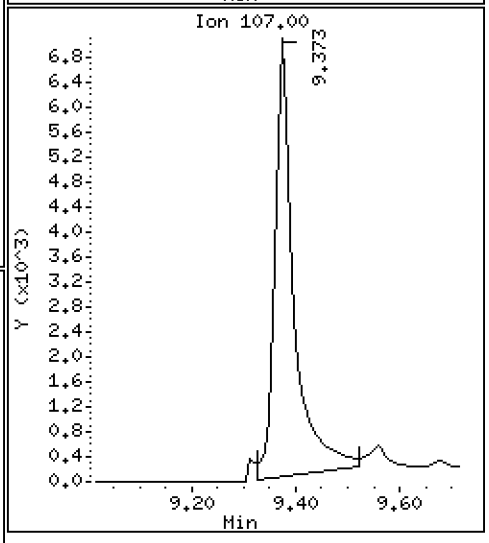
15 4-Methylphenol

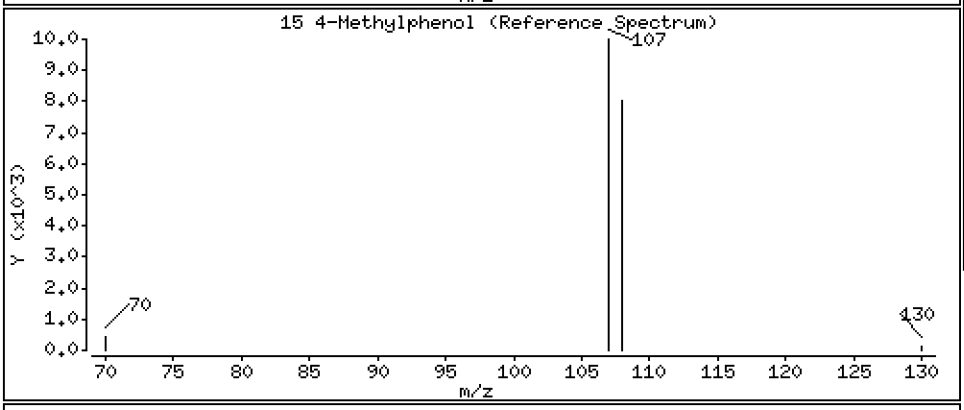
Concentration: 0.1418 ug/mL

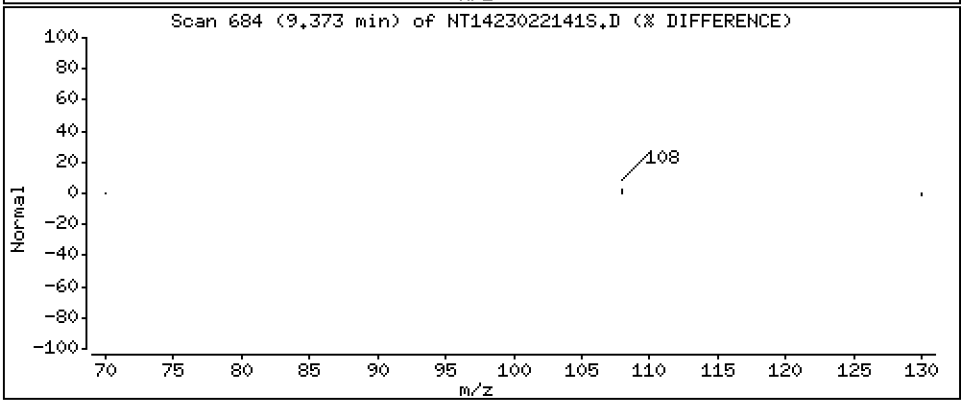












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

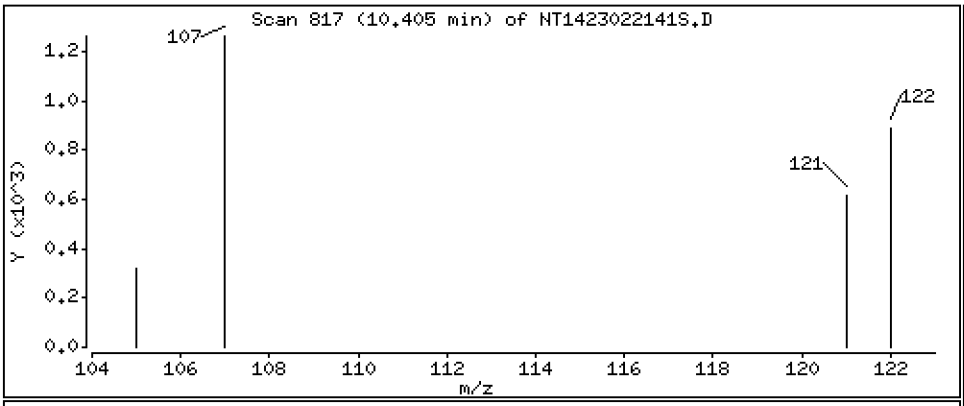
Operator: DSD

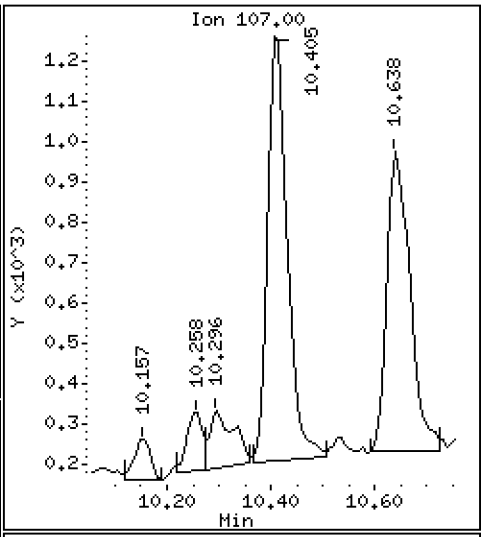
Column phase: ZB-5msi

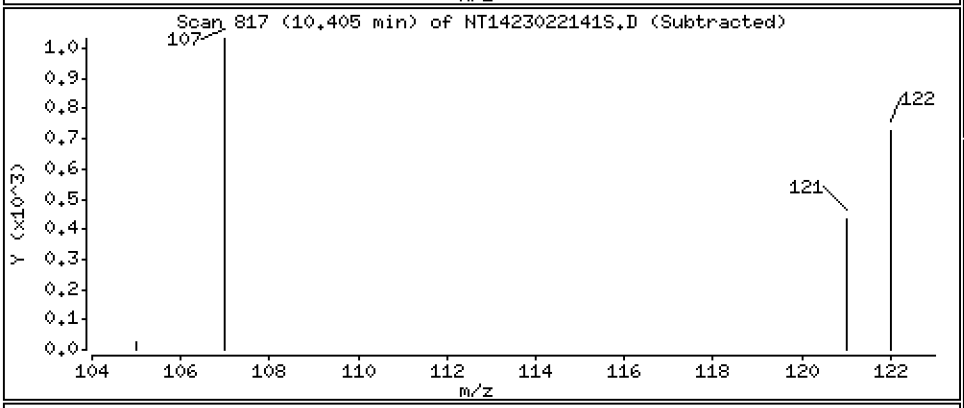
Column diameter: 0.25

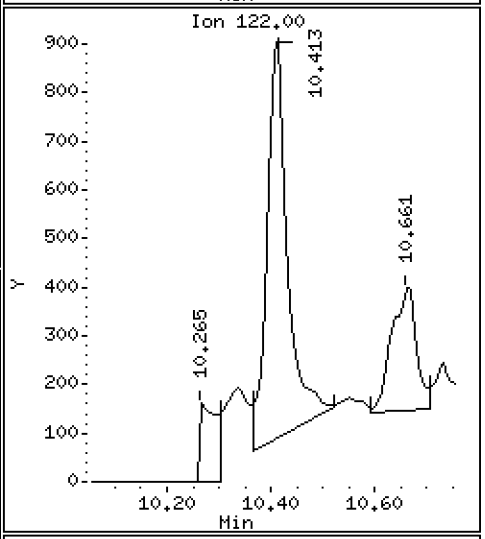
22 2,4-Dimethylphenol

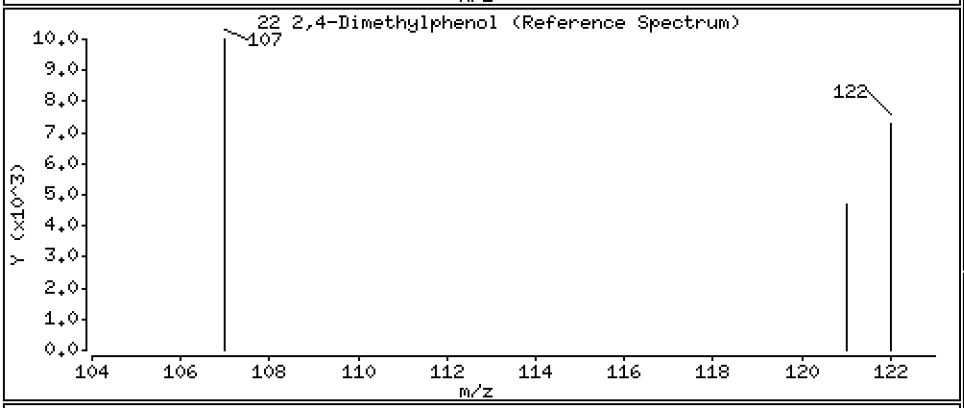
Concentration: 0.02646 ug/mL

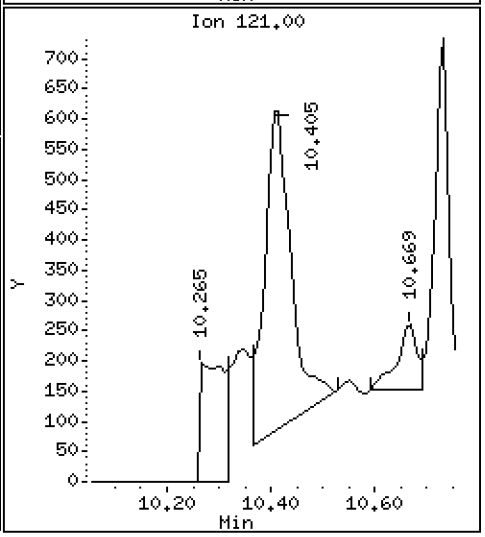


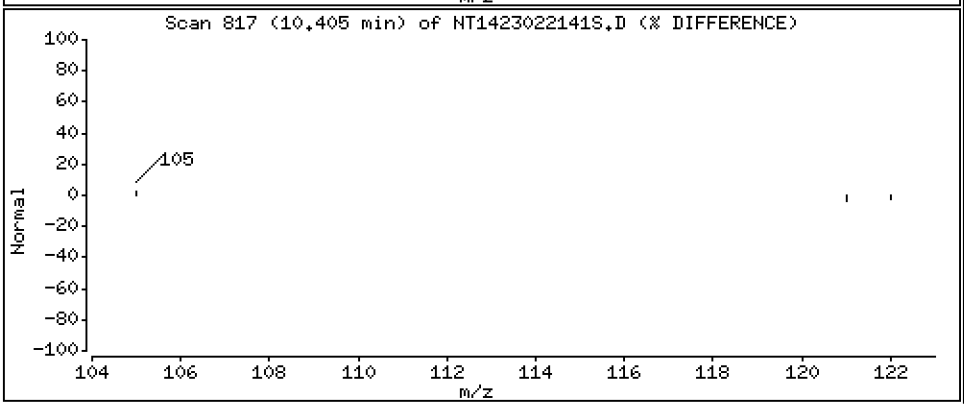












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Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

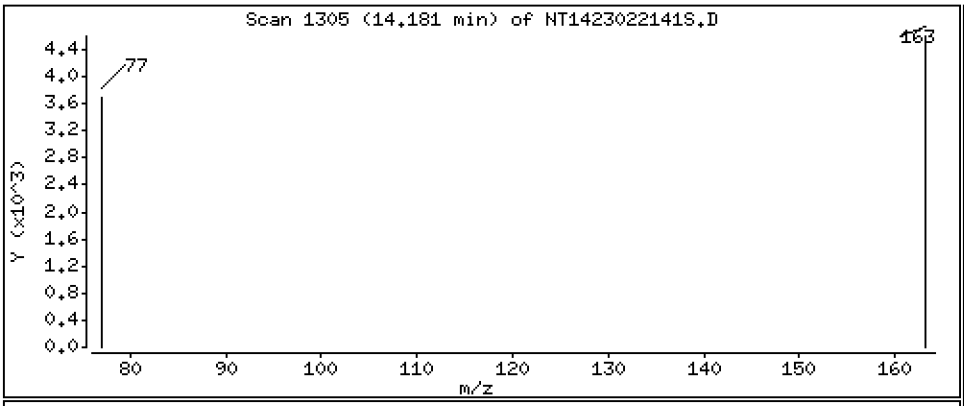
Operator: DSD

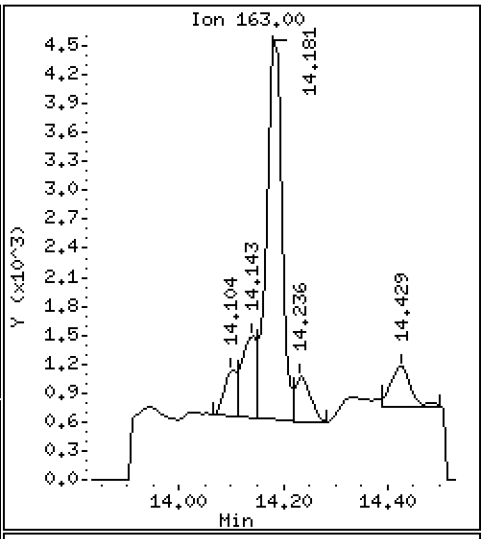
Column phase: ZB-5msi

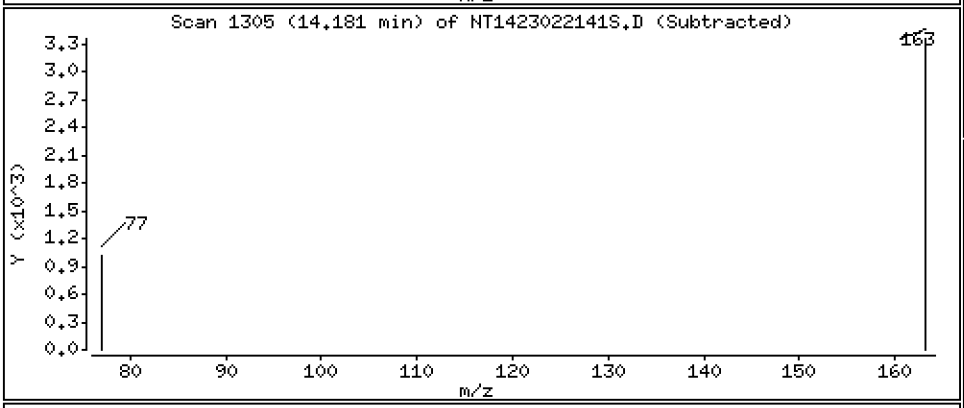
Column diameter: 0.25

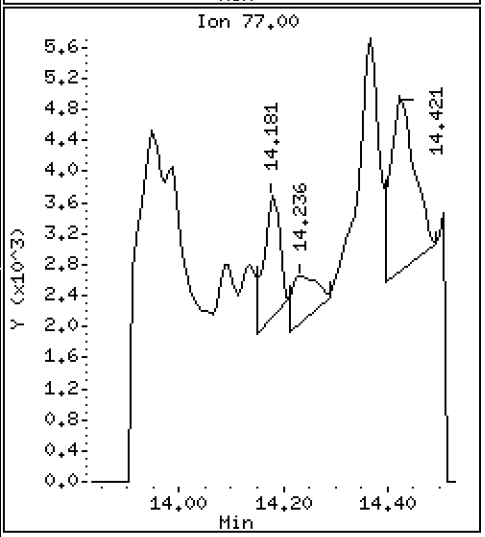
39 Dimethylphthalate

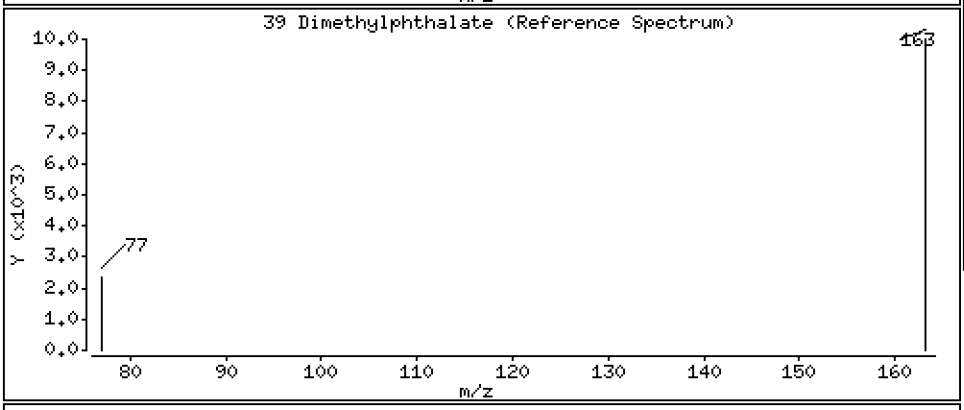
Concentration: 0.04446 ug/mL

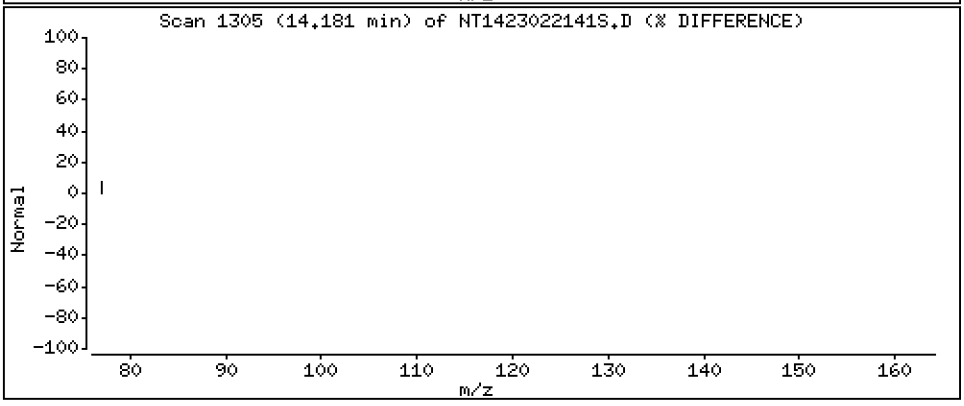












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221415.D

Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

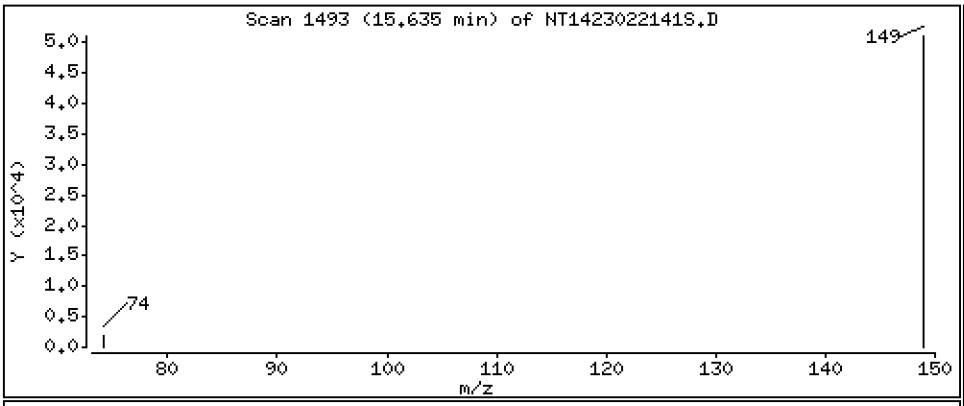
Operator: DSD

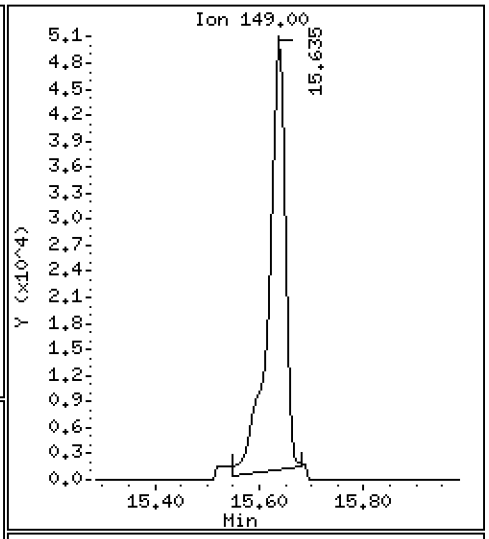
Column phase: ZB-5msi

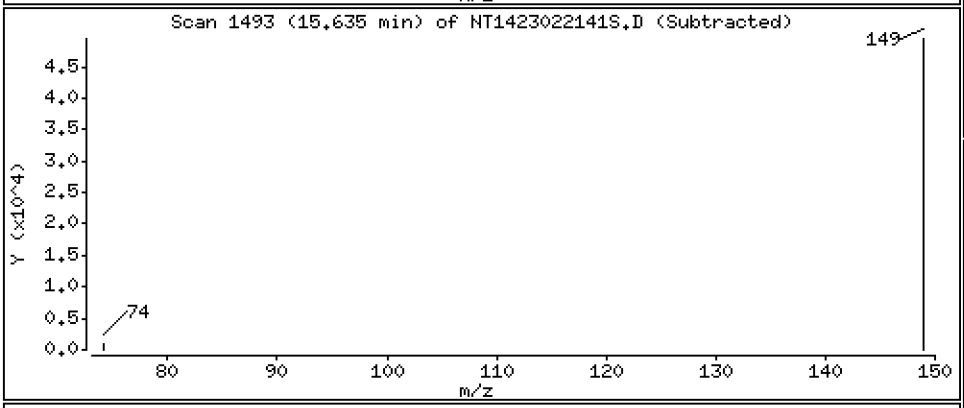
Column diameter: 0.25

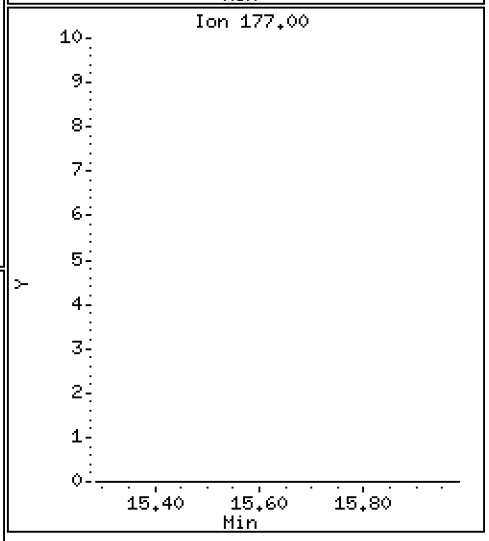
50 Diethylphthalate

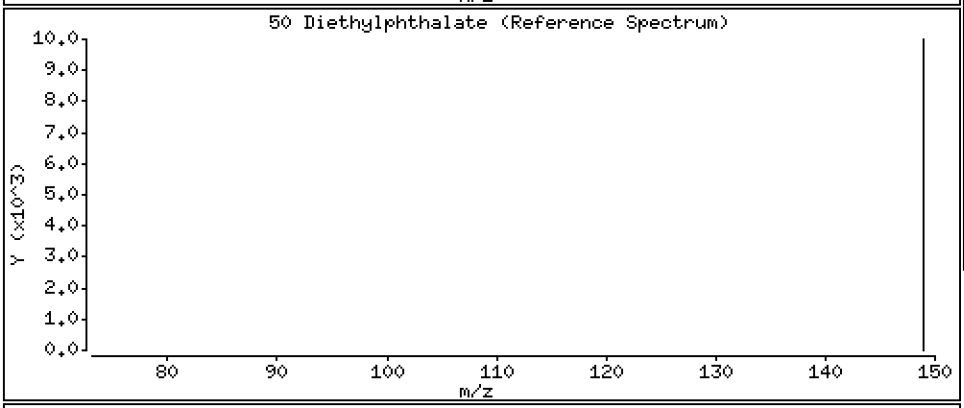
Concentration: 0.4773 ug/mL

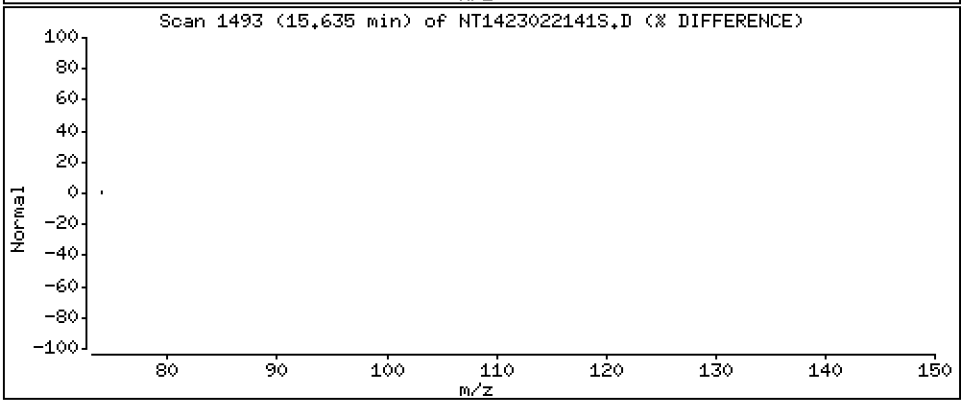












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221415.D

Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

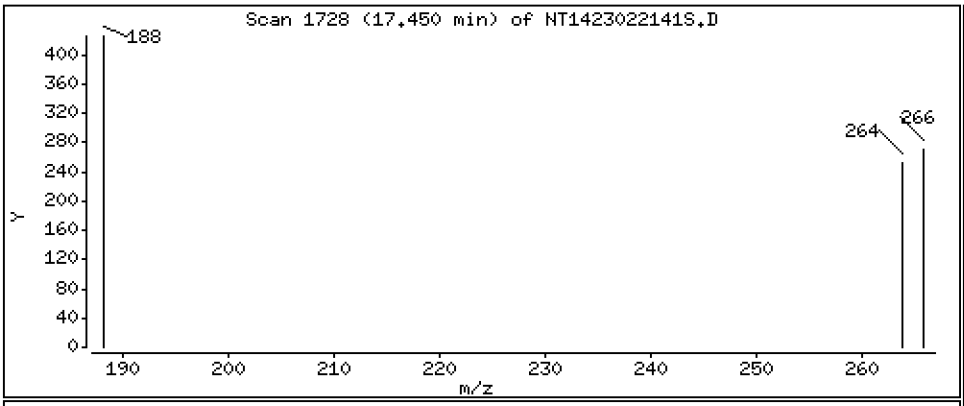
Operator: DSD

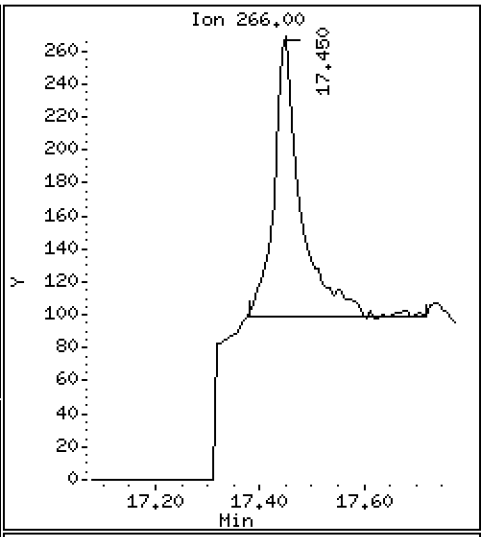
Column phase: ZB-5msi

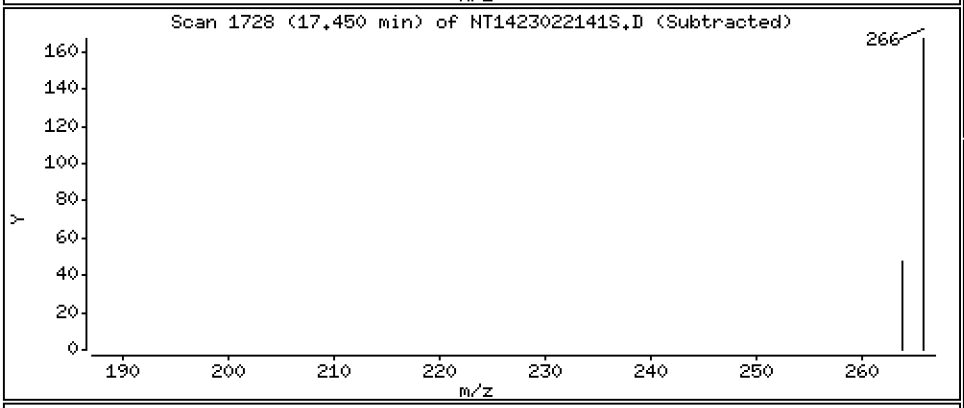
Column diameter: 0.25

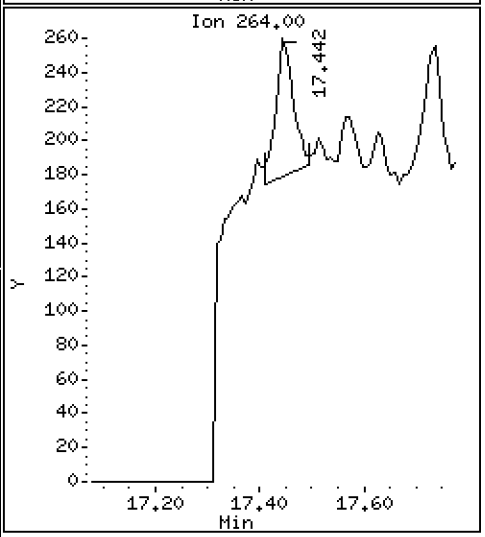
58 Pentachlorophenol

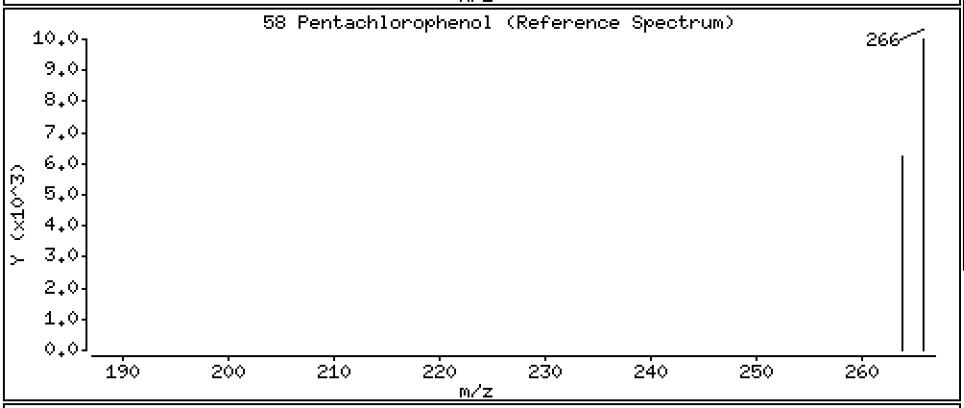
Concentration: 0.01884 ug/mL

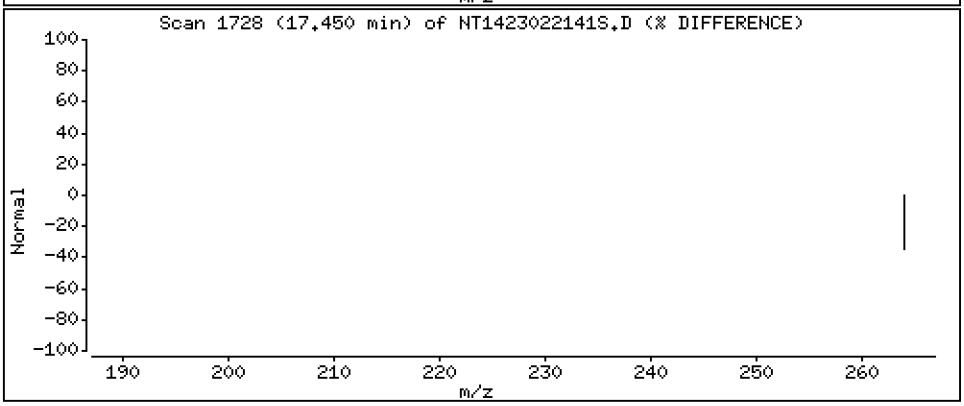












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221415.D

Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

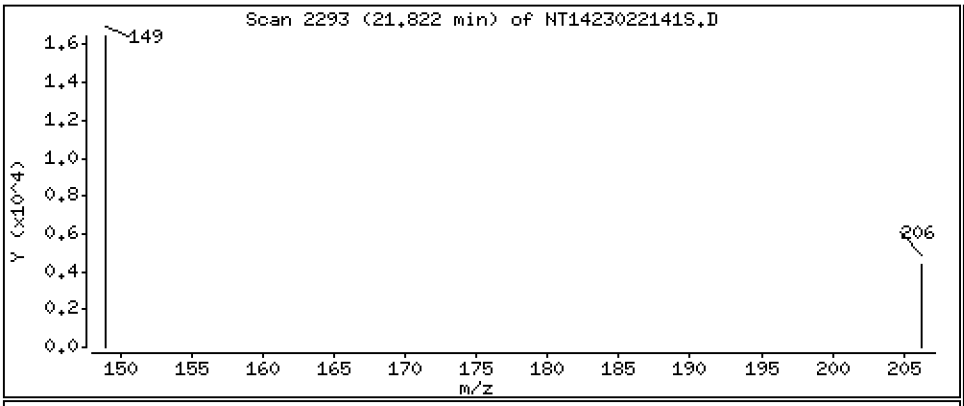
Operator: DSD

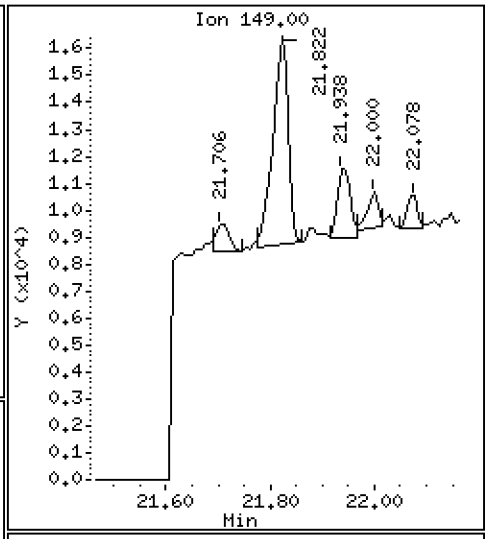
Column phase: ZB-5msi

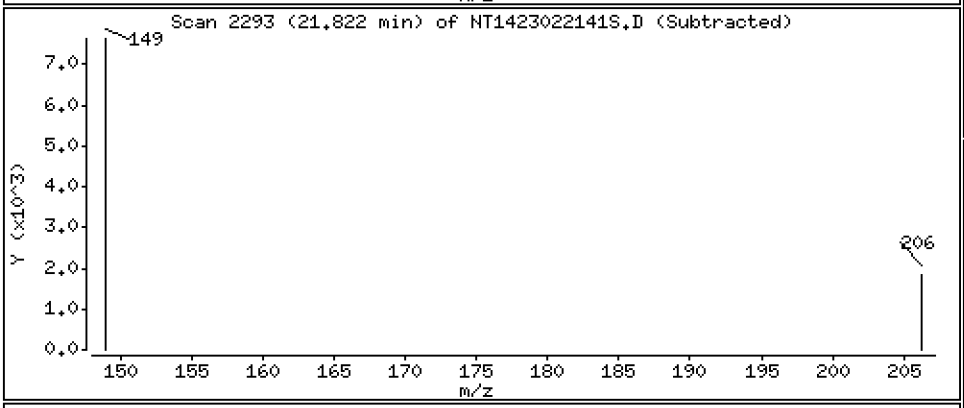
Column diameter: 0.25

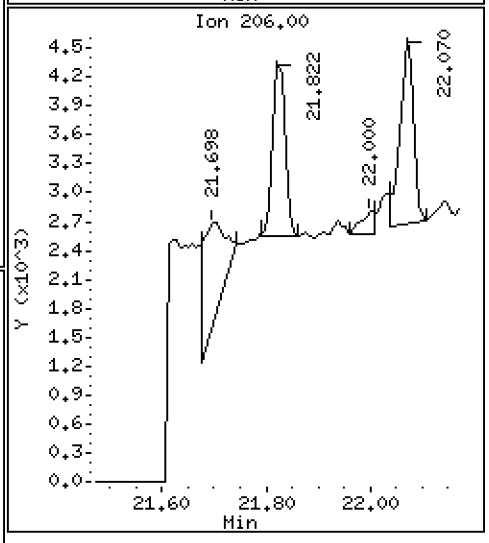
67 Butylbenzylphthalate

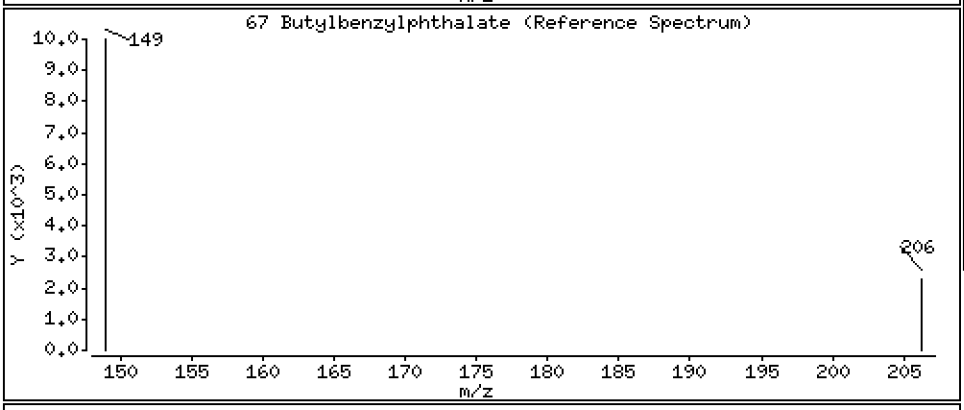
Concentration: 0.1460 ug/mL

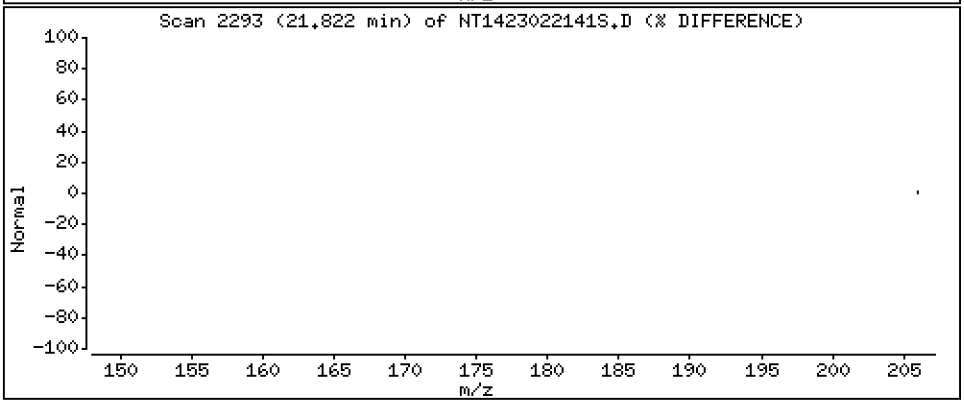












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221415.D

Date : 22-FEB-2023 13:34

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-03

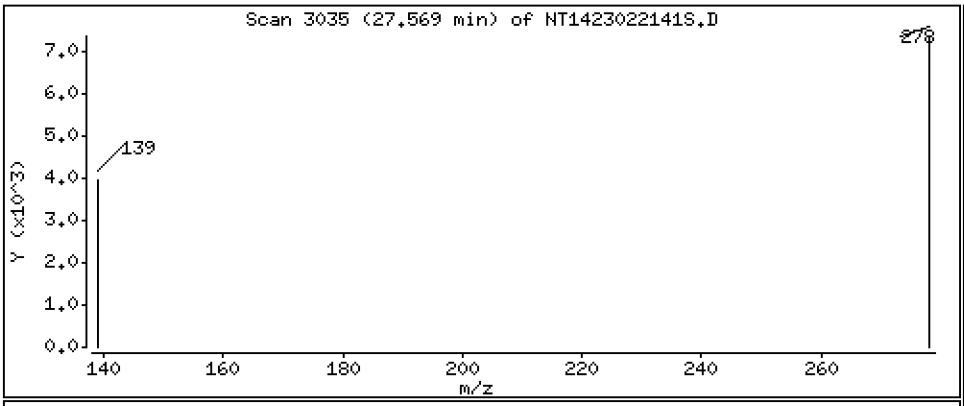
Operator: DSD

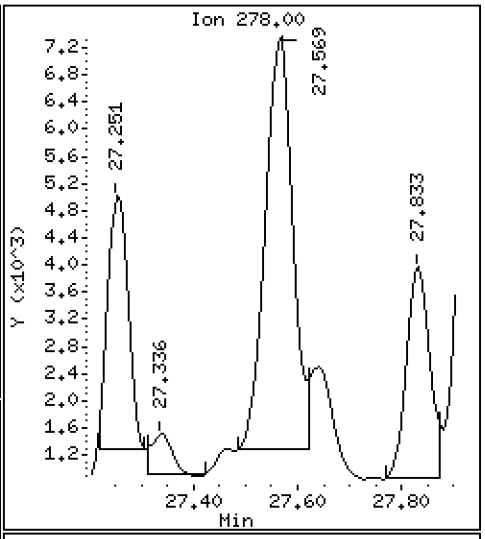
Column phase: ZB-5msi

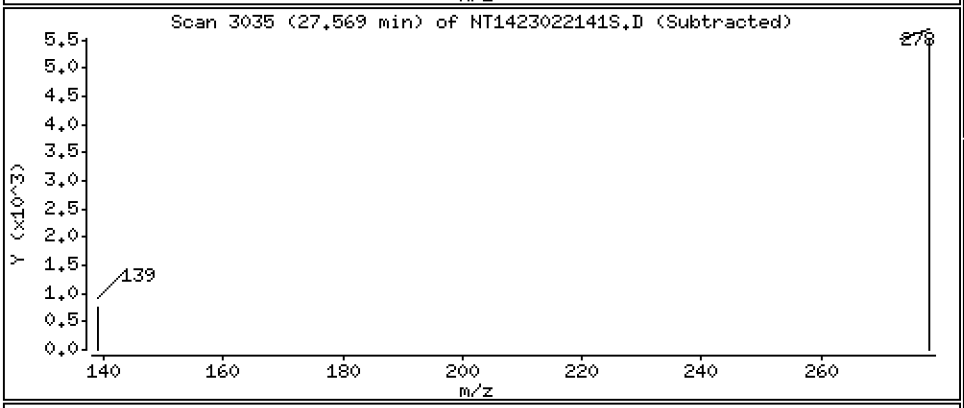
Column diameter: 0.25

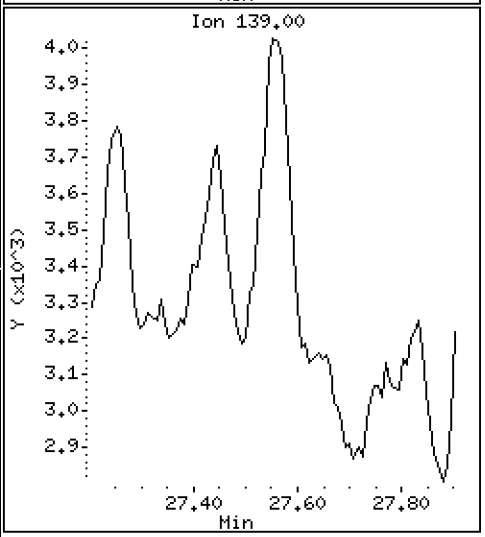
79 Dibenzo(a,h)anthracene

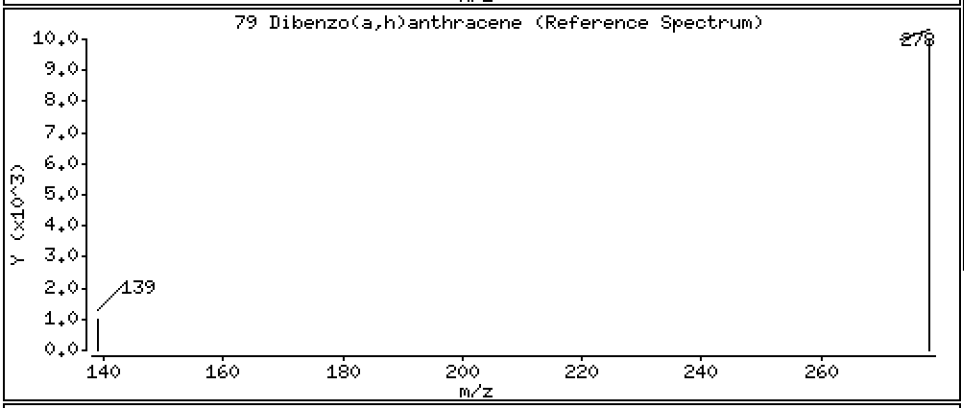
Concentration: 0.2001 ug/mL

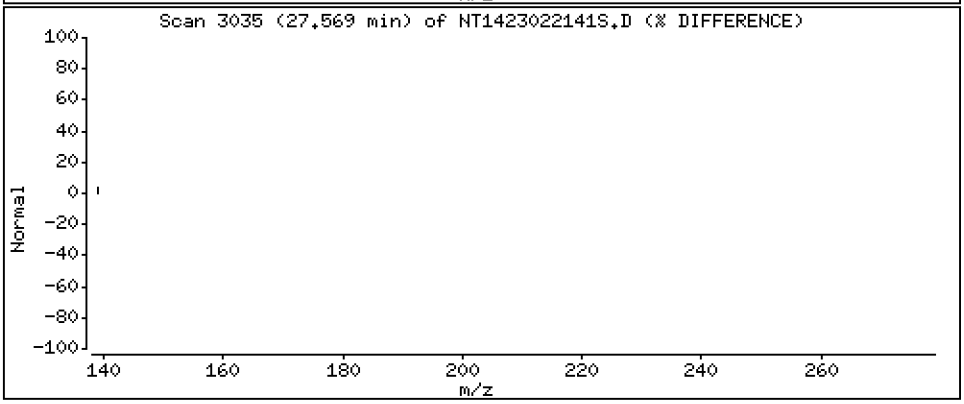












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT1423022141S.D
Lab Smp Id: 23A0133-03
Inj Date : 22-FEB-2023 13:34 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-03
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Meth Date : 17-Jun-2023 09:15 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 29
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
$	1	2-Fluorophenol	112	6.386	6.385	(0.745)	355262	4.06406	4.064(R)
	3	Phenol	94	7.993	7.993	(0.932)	253024	1.91510	1.915
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	8.573	8.573	(1.000)	306861	4.00000	
	9	1,4-Dichlorobenzene	146	8.596	8.596	(1.003)	1610	0.01616	0.01616(M)
	11	Benzyl alcohol	79	8.891	8.867	(1.037)	6255	0.07443	0.07443(MH)
	12	1,2-Dichlorobenzene	146	Compound Not Detected.					
	13	2-Methylphenol	108	9.101	9.093	(1.062)	2581	0.02833	0.02833
	15	4-Methylphenol	108	9.372	9.372	(1.093)	14149	0.14184	0.1418
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22	2,4-Dimethylphenol	107	10.404	10.404	(0.942)	2709	0.02646	0.02646
	24	Benzoic acid	105	Compound Not Detected.					
	26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27	Naphthalene-d8	136	11.040	11.039	(1.000)	1117860	4.00000	
	30	Hexachlorobutadiene	225	Compound Not Detected.					
	39	Dimethylphthalate	163	14.181	14.180	(0.968)	7910	0.04446	0.04446
*	42	Acenaphthene-d10	162	14.653	14.645	(1.000)	583150	4.00000	
	50	Diethylphthalate	149	15.635	15.634	(1.067)	106275	0.47729	0.4773
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	17.449	17.426	(0.987)	609	0.01884	0.01884
*	59	Phenanthrene-d10	188	17.681	17.673	(1.000)	1223903	4.00000	
$	66	Terphenyl-d14	244	20.885	20.869	(0.917)	890886	4.11704	4.117(R)
	67	Butylbenzylphthalate	149	21.821	21.813	(0.958)	14908	0.14602	0.1460
*	69	Chrysene-d12	240	22.782	22.766	(1.000)	812823	4.00000	
*	77	Perylene-d12	264	25.236	25.212	(1.000)	639897	4.00000	
	79	Dibenzo(a,h)anthracene	278	27.569	27.553	(1.092)	22444	0.20010	0.2001
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022141S.D
Lab Smp Id: 23A0133-03
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 08:08
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	261796	130898	523592	306861	17.21
27 Naphthalene-d8	959301	479651	1918602	1117860	16.53
42 Acenaphthene-d10	503659	251830	1007318	583150	15.78
59 Phenanthrene-d10	1179954	589977	2359908	1223903	3.72
69 Chrysene-d12	887360	443680	1774720	812823	-8.40
77 Perylene-d12	652371	326186	1304742	639897	-1.91

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	0.06
59 Phenanthrene-d10	17.67	17.17	18.17	17.68	0.05
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.07
77 Perylene-d12	25.21	24.71	25.71	25.24	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022141S.D

Lab ID: 23A0133-03
nt14.i, 20230221B.b\SIM.b\SIMABN2.m,   22-FEB-2023 13:34

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1423022132S.D

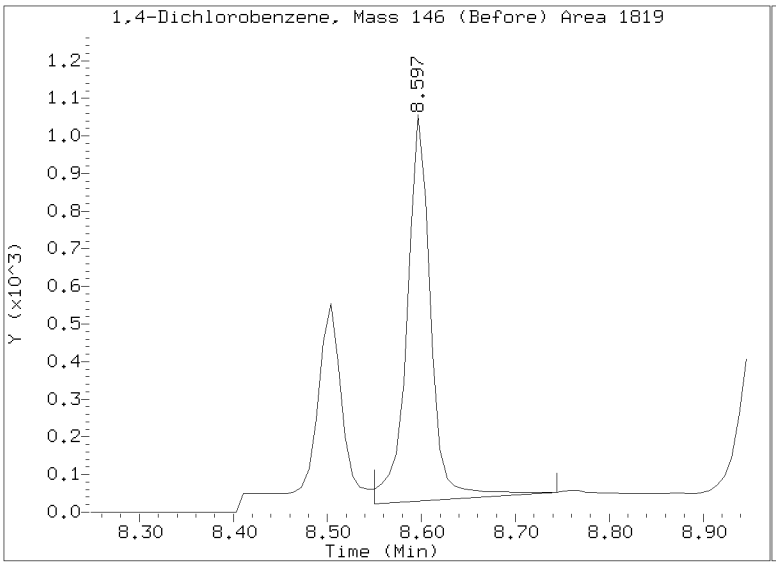
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

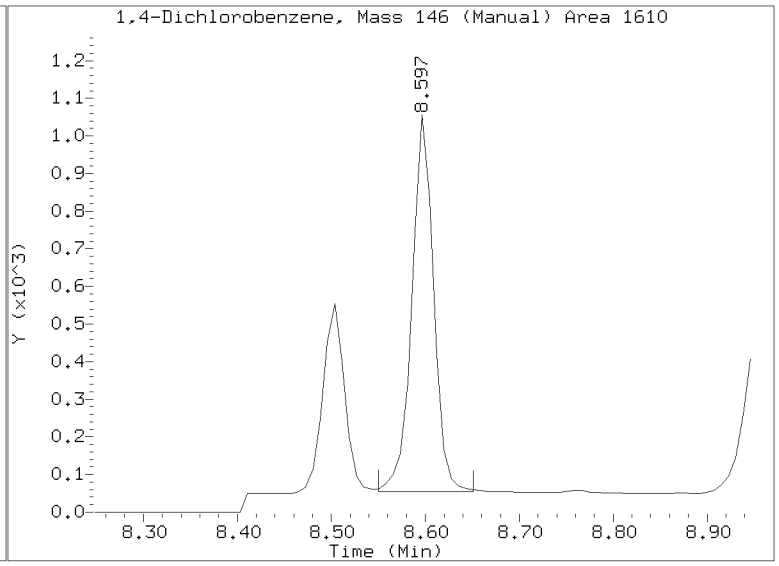
Exception: 1,2,4-Trichlorobenzene 0.0010

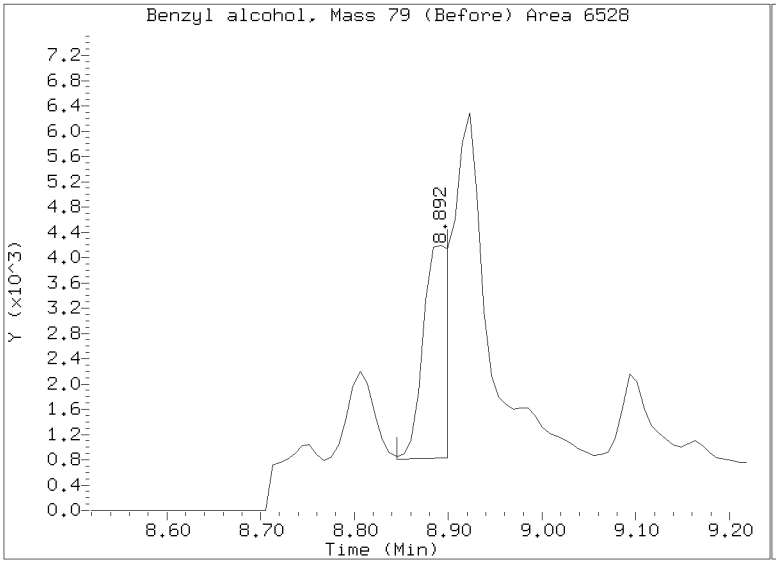
* Only compounds listed in the work order have been verified by the analyst *

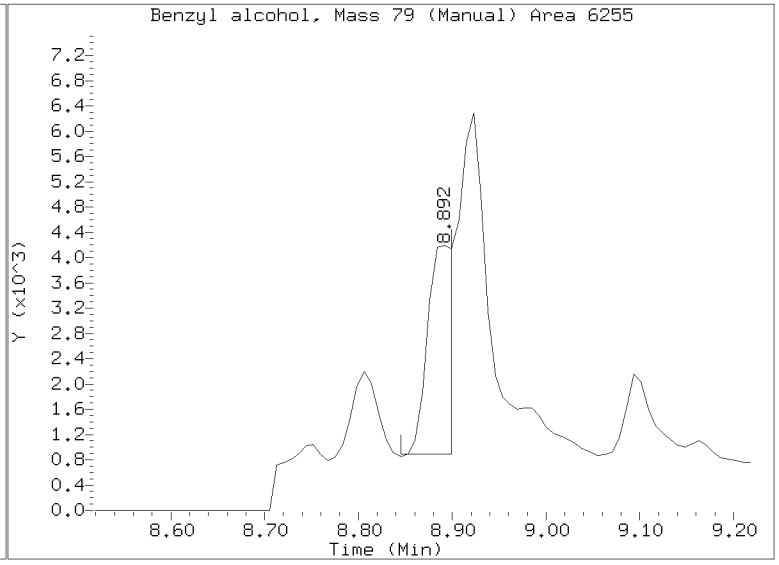
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221B.b/SIM.b/NT1423022141S.D
Injection Date: 22-FEB-2023 13:34
Lab ID:23A0133-03 Client ID:
Report Date: 06/17/2023 09:48









Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1241

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-06 C	SDG:	23A0133
Sampled:	01/06/23 10:51	Prepared:	01/18/23 15:24	File ID:	NT1423022142S.D
% Solids:	49.01	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 14:10
Batch:	BLA0393	Sequence:	SLB0349	Initial/Final:	20.4 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GC00009
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	2.1	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	27.2		2.5	20.0
65-85-0	Benzoic acid	1	400	U	13.4	400
105-67-9	2,4-Dimethylphenol	1	2.4	J	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	2.8	J	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	750.15	504	67.2	27 - 120	
p-Terphenyl-d14	500.10	462	92.3	37 - 120	Q

Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221425.D

Date : 22-FEB-2023 14:10

Client ID:

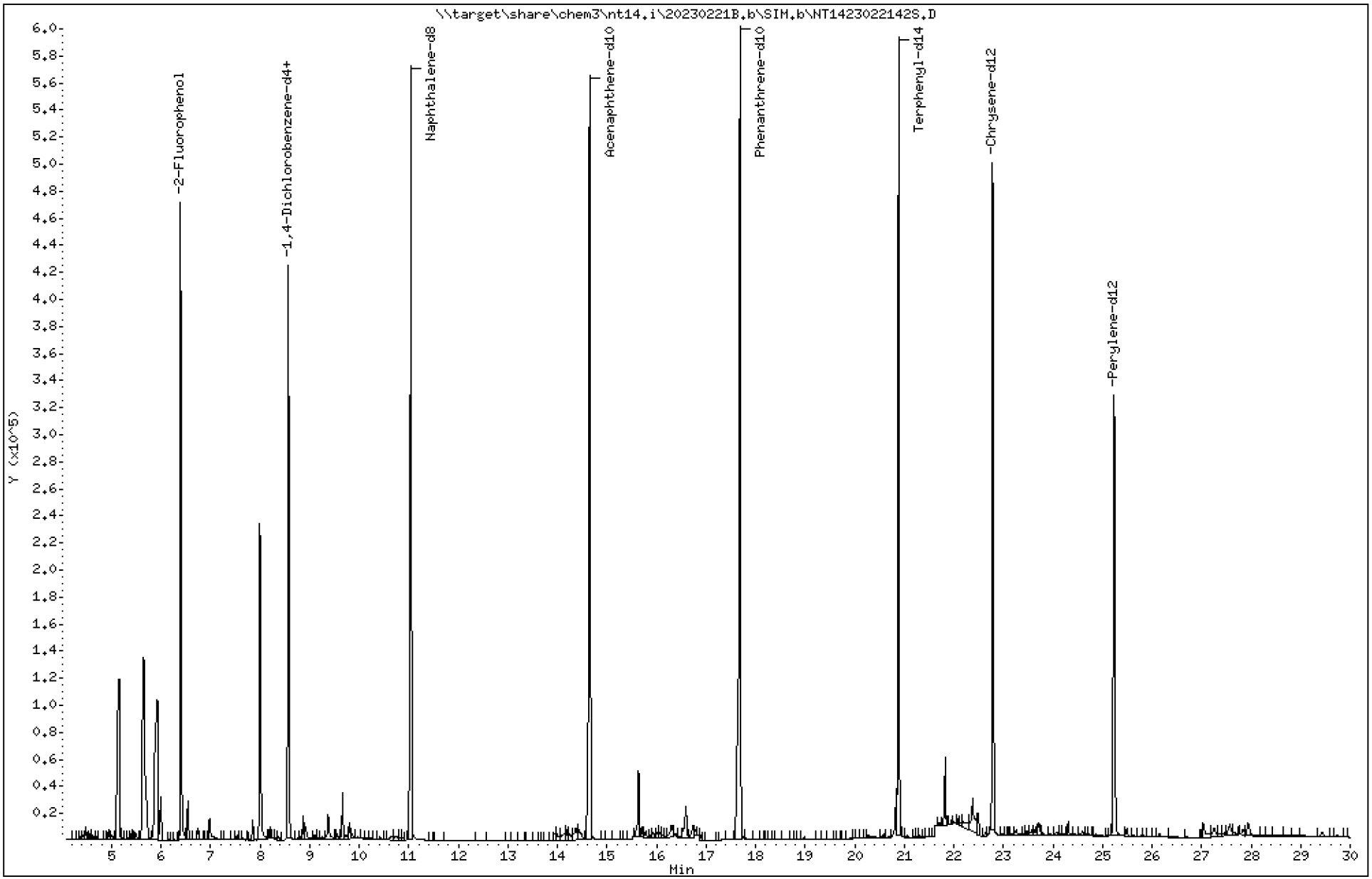
Instrument: nt14.i

Sample Info: 23A0133-06

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230022142S.D

Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

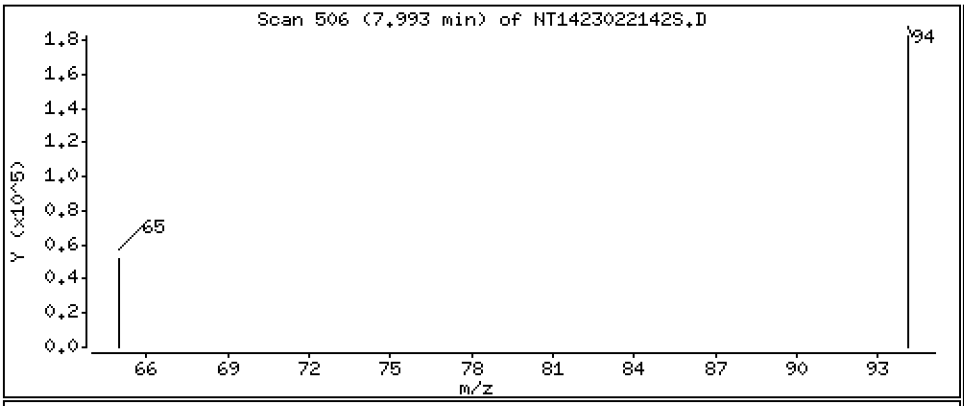
Operator: DSD

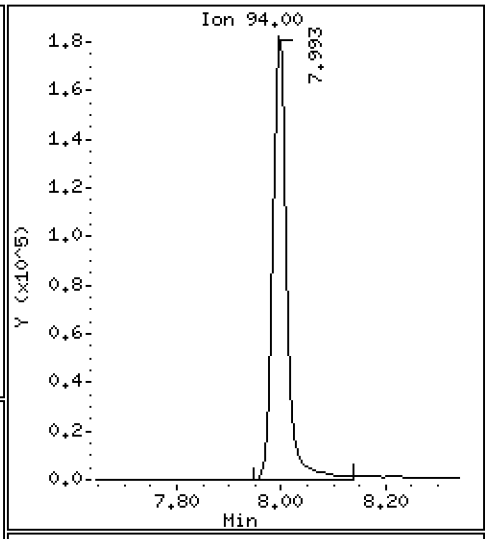
Column phase: ZB-5msi

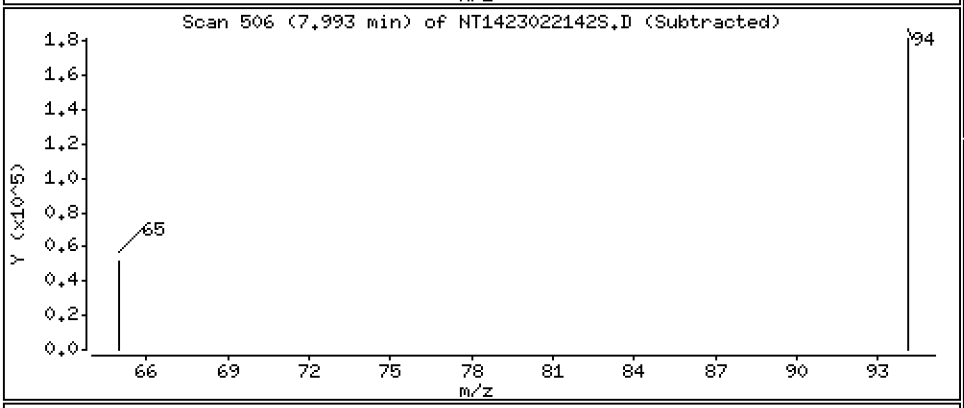
Column diameter: 0.25

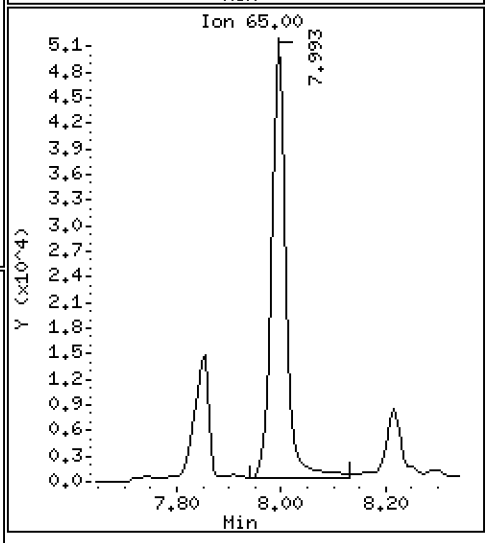
3 Phenol

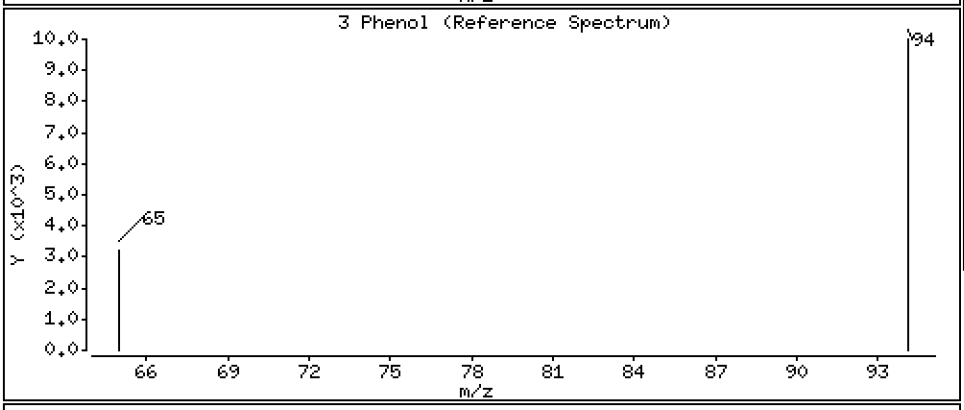
Concentration: 2.574 ug/mL

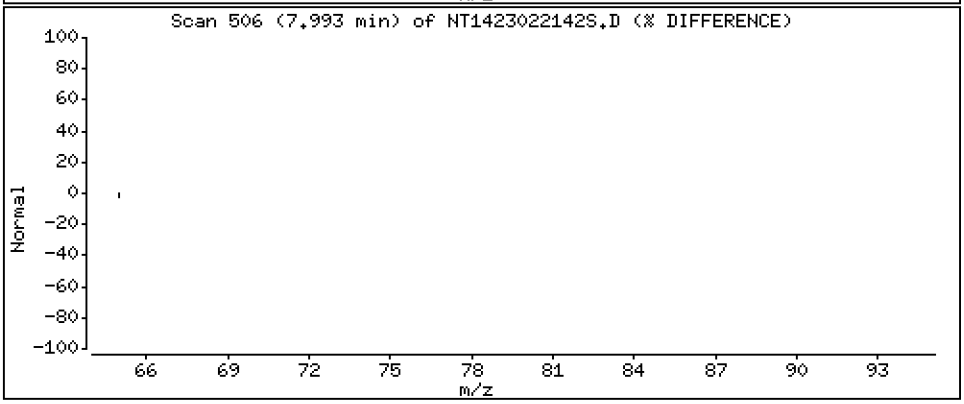












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230022142S.D

Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

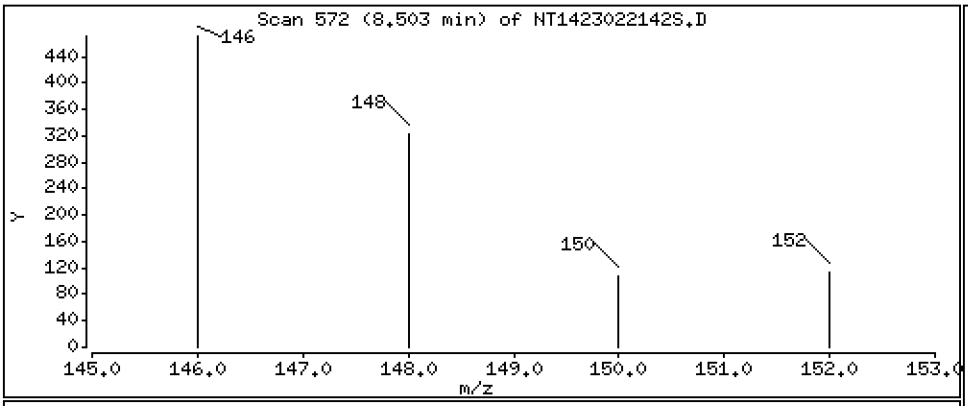
Operator: DSD

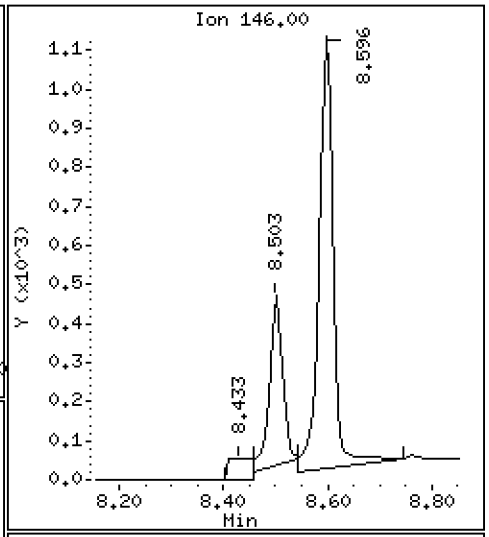
Column phase: ZB-5msi

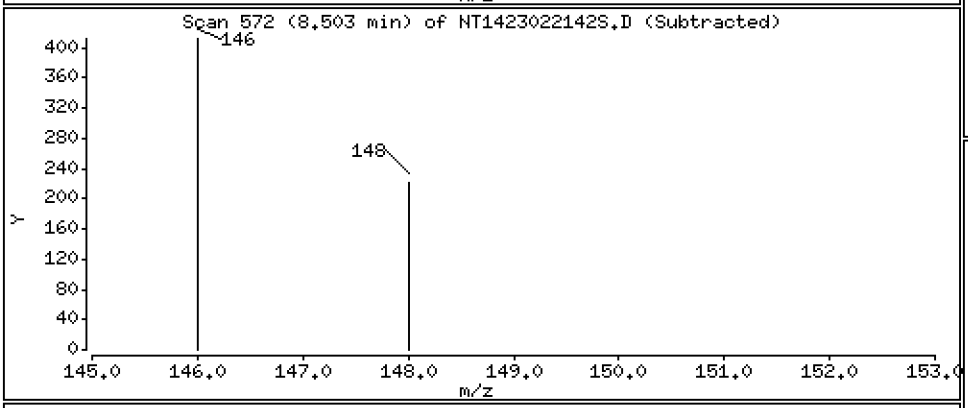
Column diameter: 0.25

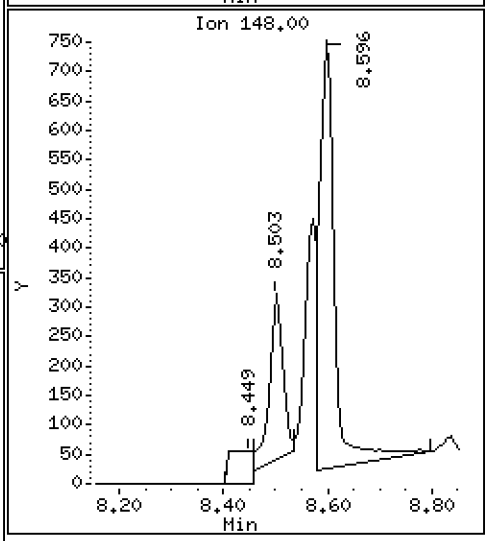
7 1,3-Dichlorobenzene

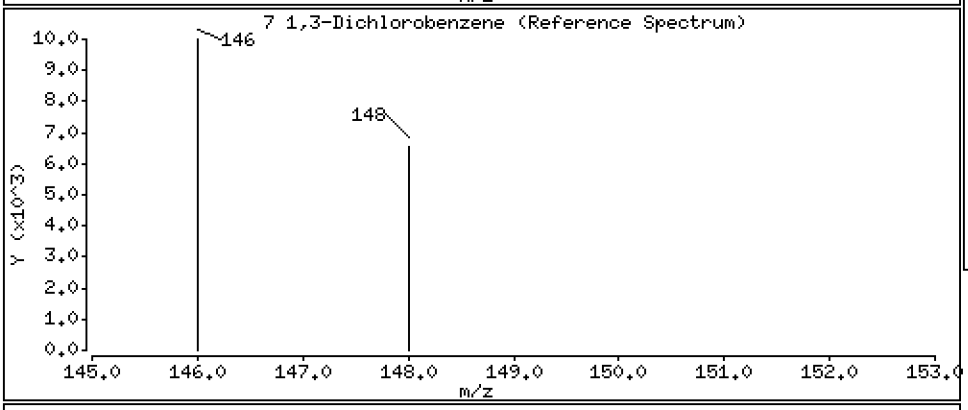
Concentration: 0.007596 ug/mL

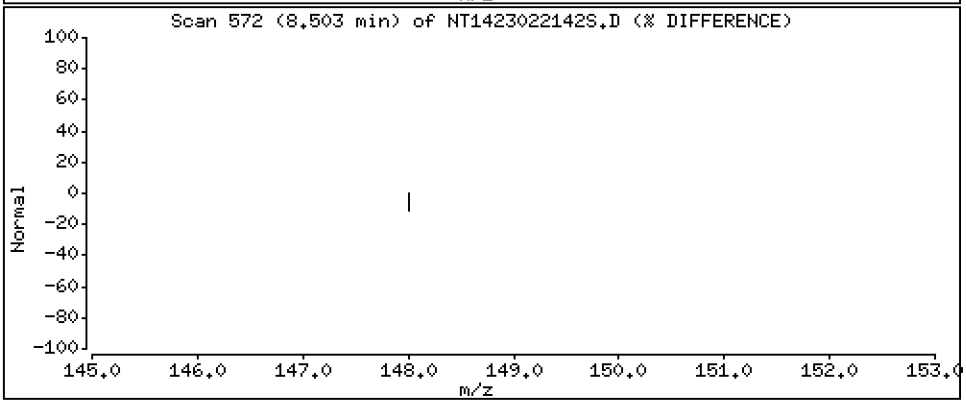












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221142S.D

Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

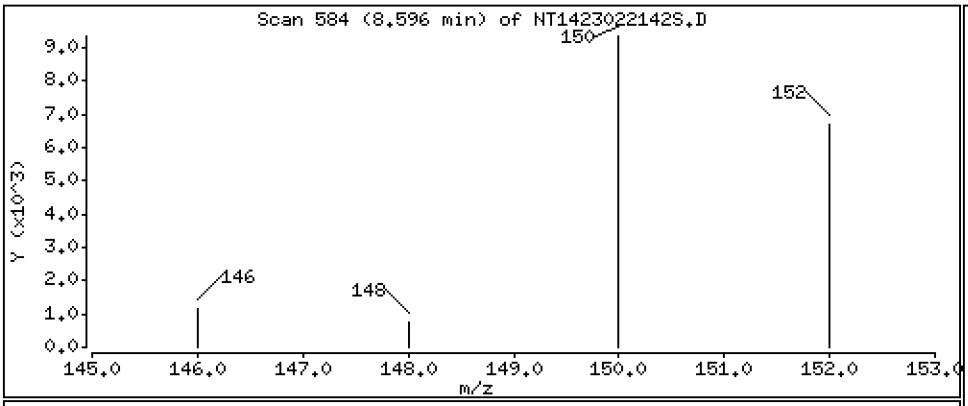
Operator: DSD

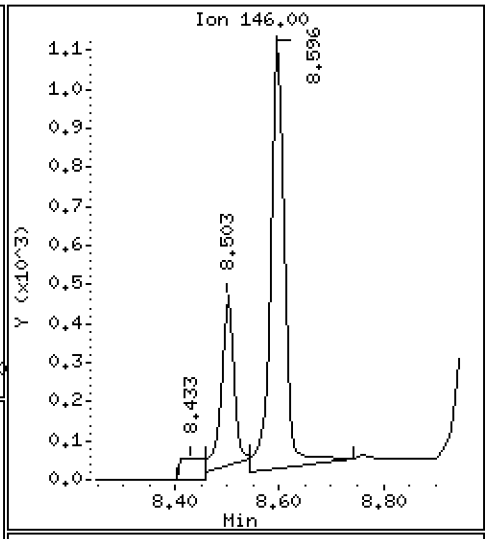
Column phase: ZB-5msi

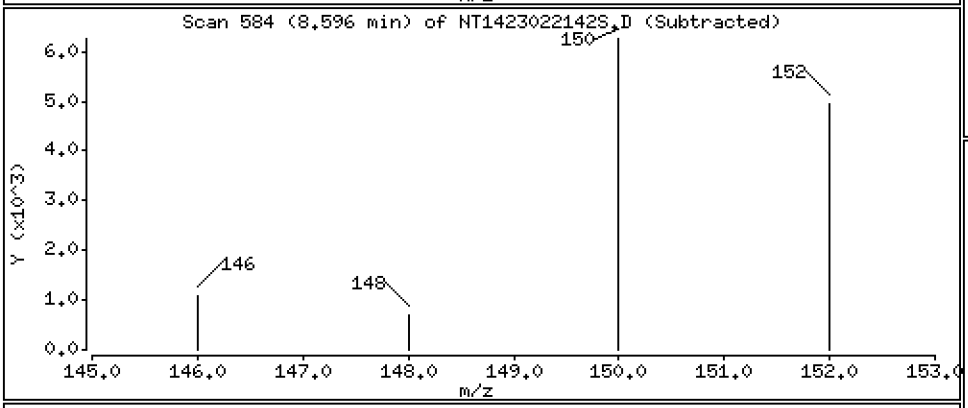
Column diameter: 0.25

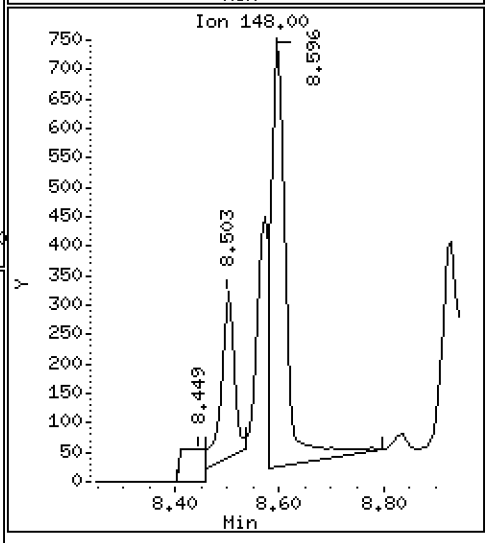
9 1,4-Dichlorobenzene

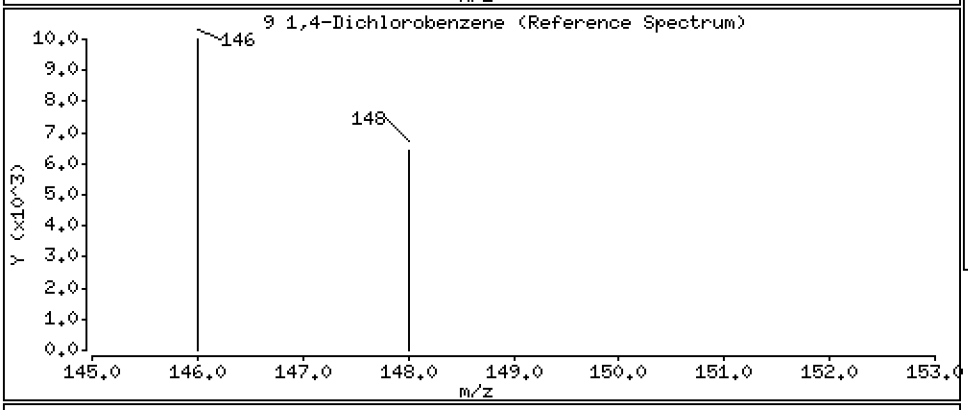
Concentration: 0.02100 ug/mL

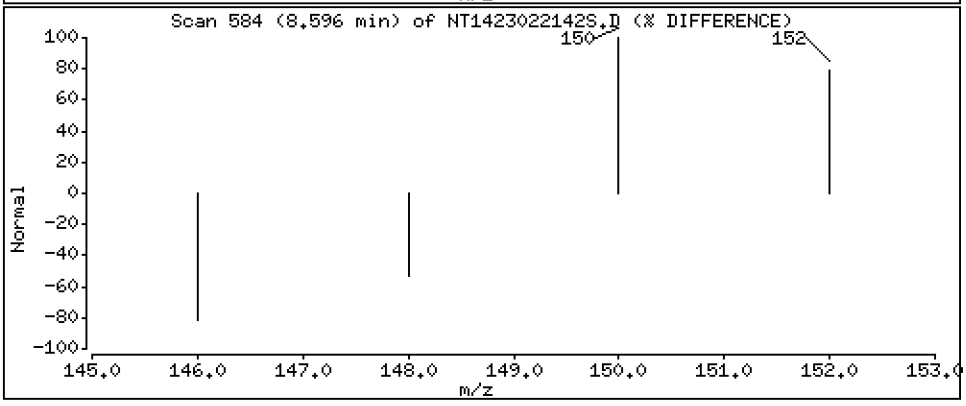












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221142S.D

Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

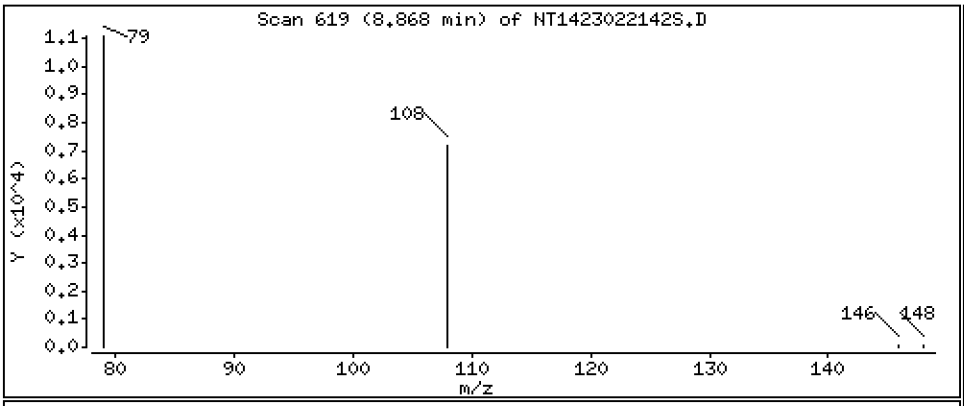
Operator: DSD

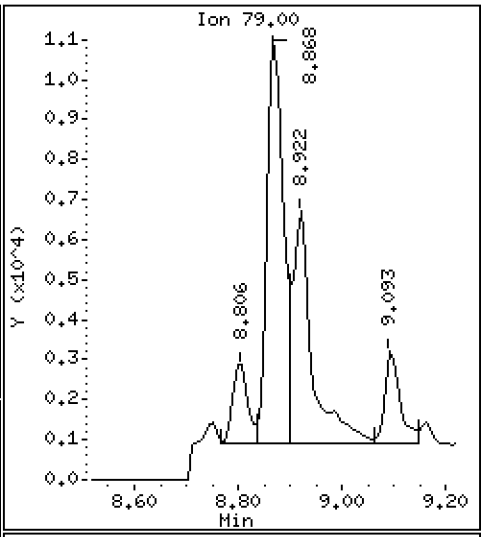
Column phase: ZB-5msi

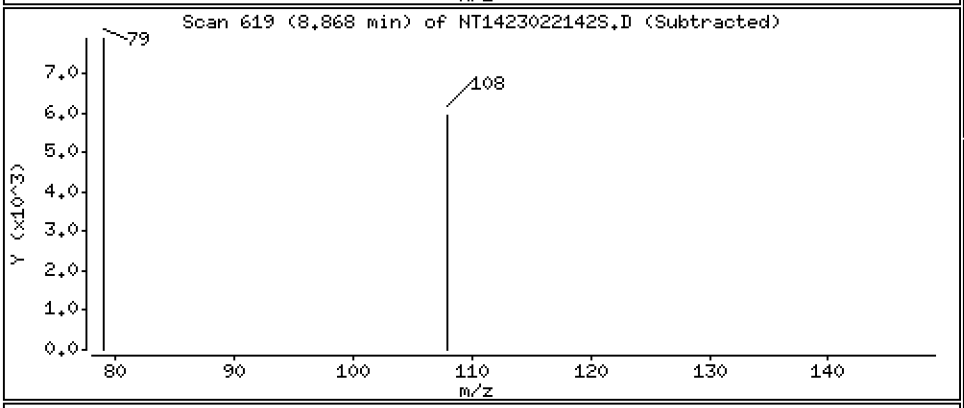
Column diameter: 0.25

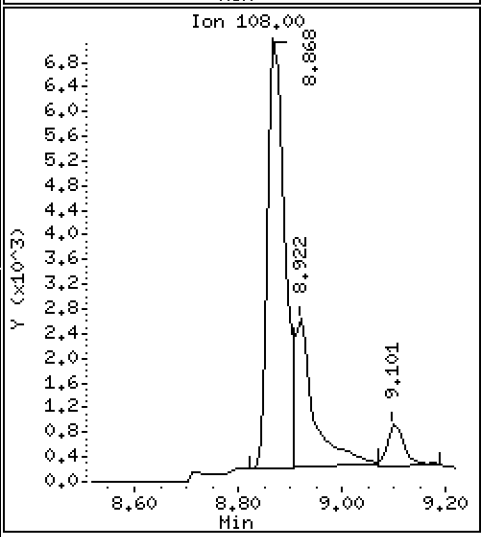
11 Benzyl alcohol

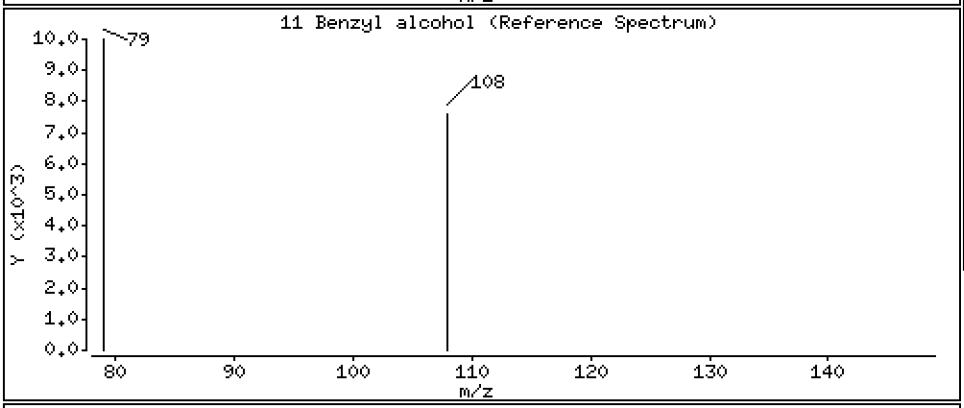
Concentration: 0.2721 ug/mL

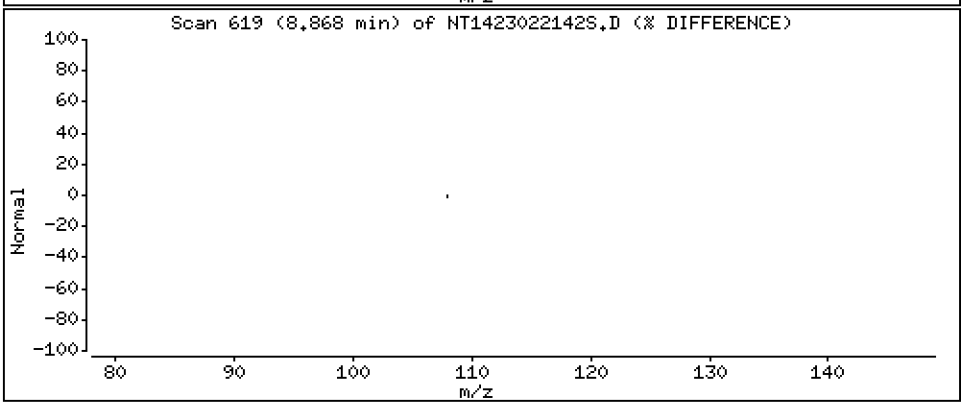












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

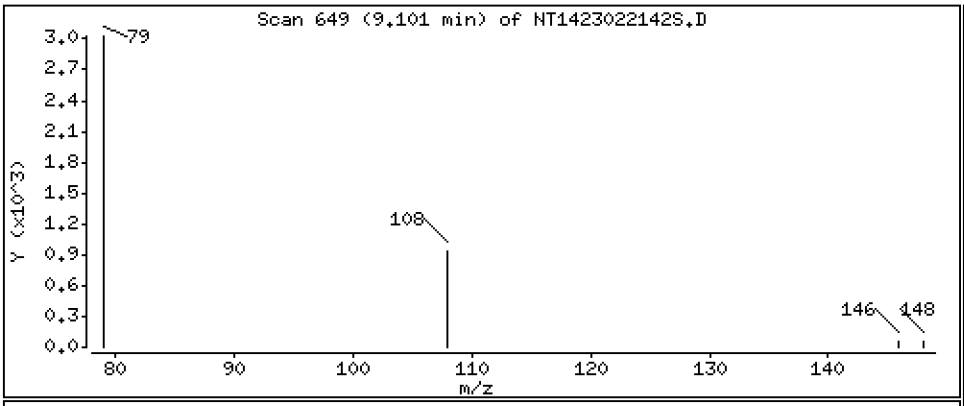
Operator: DSD

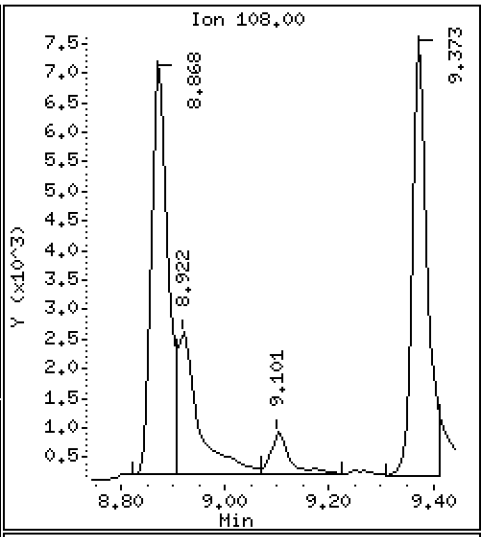
Column phase: ZB-5msi

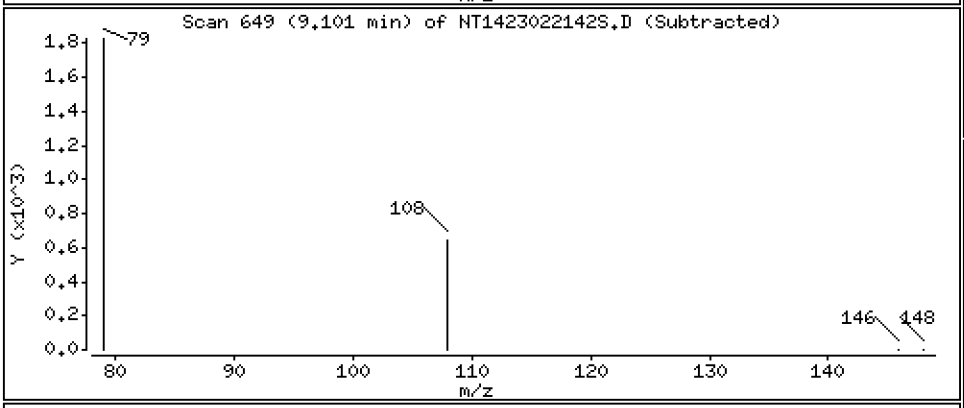
Column diameter: 0.25

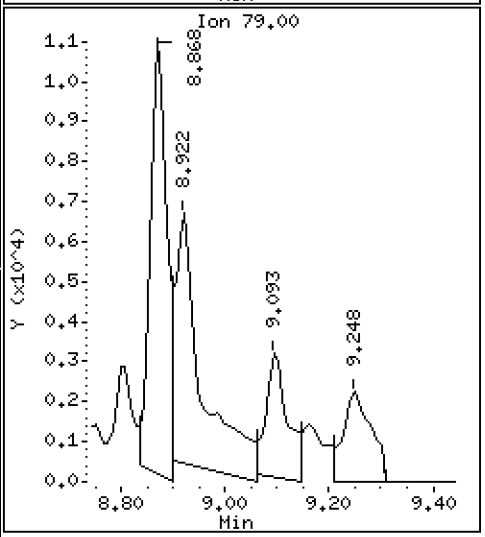
13 2-Methylphenol

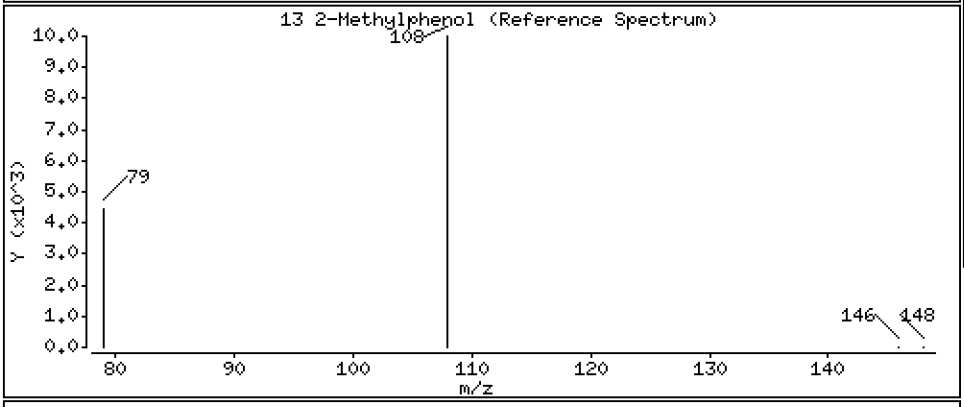
Concentration: 0.02036 ug/mL

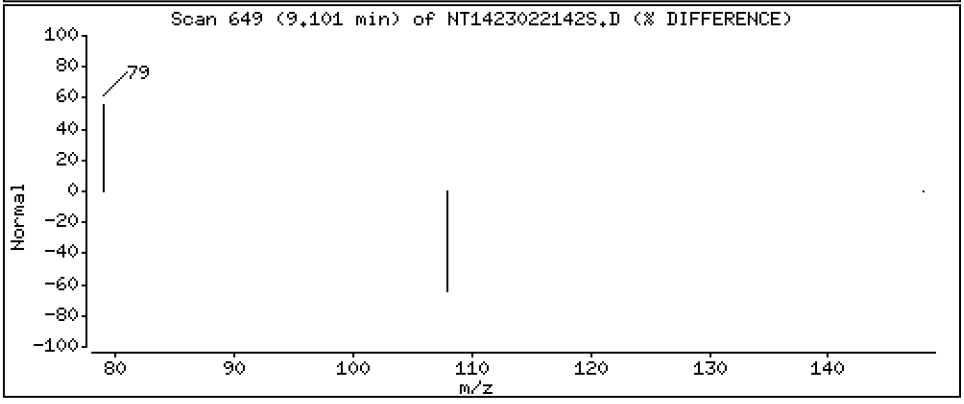












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

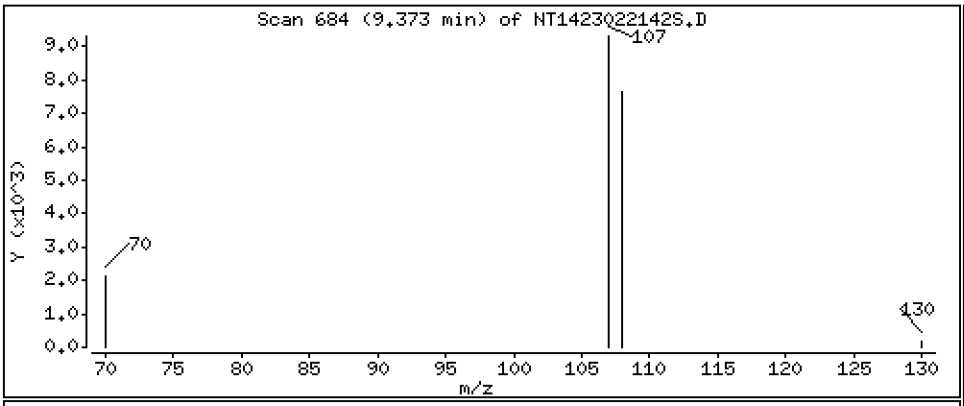
Operator: DSD

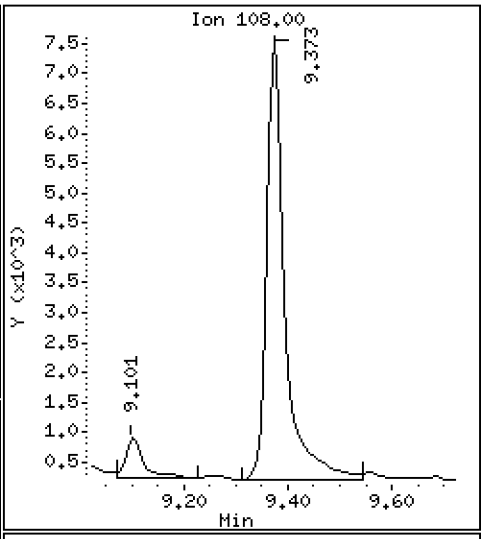
Column phase: ZB-5msi

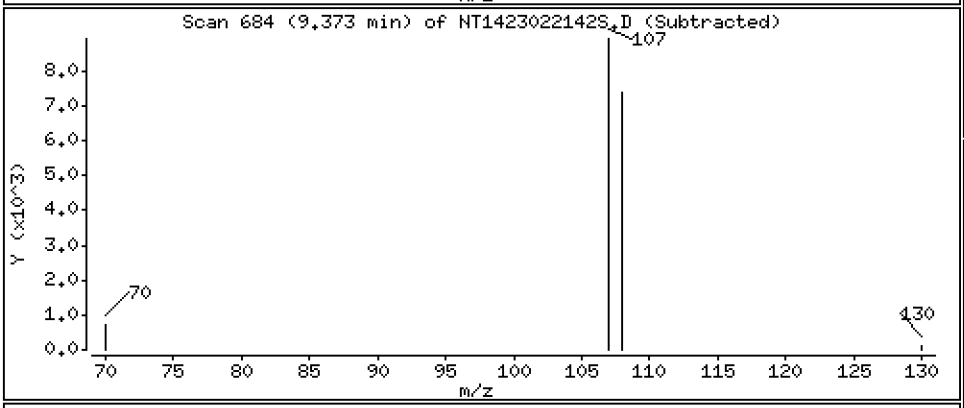
Column diameter: 0.25

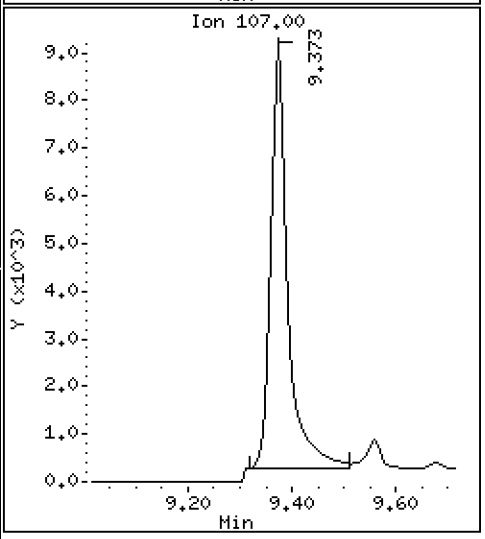
15 4-Methylphenol

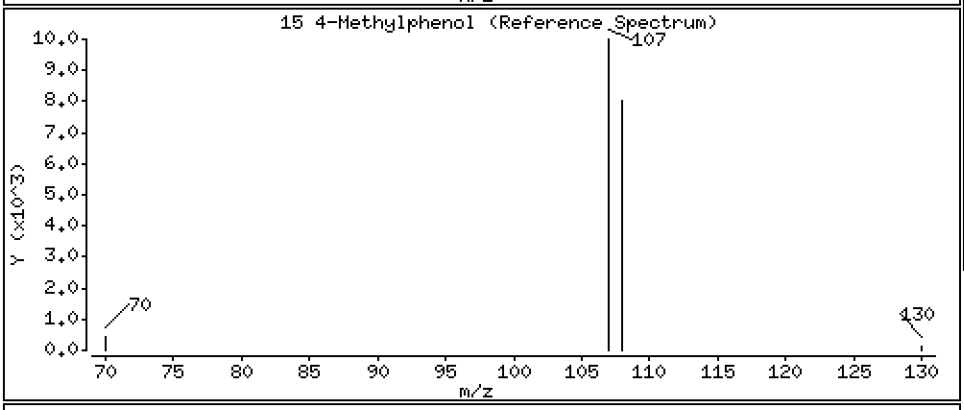
Concentration: 0.1804 ug/mL

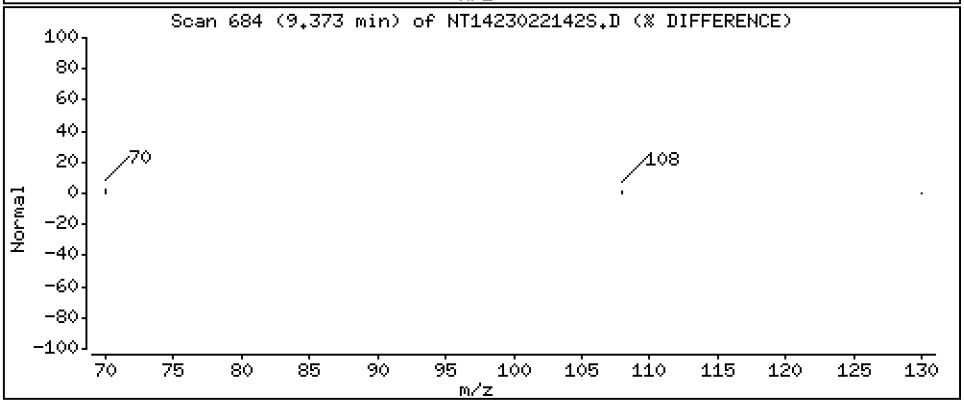












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

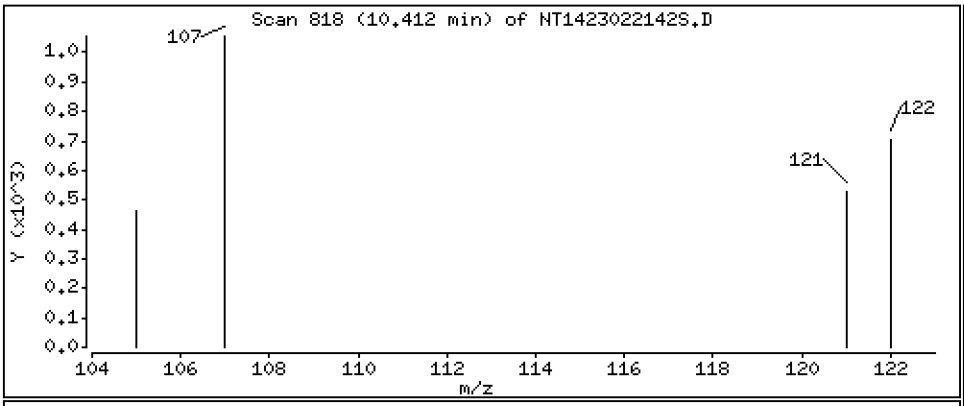
Operator: DSD

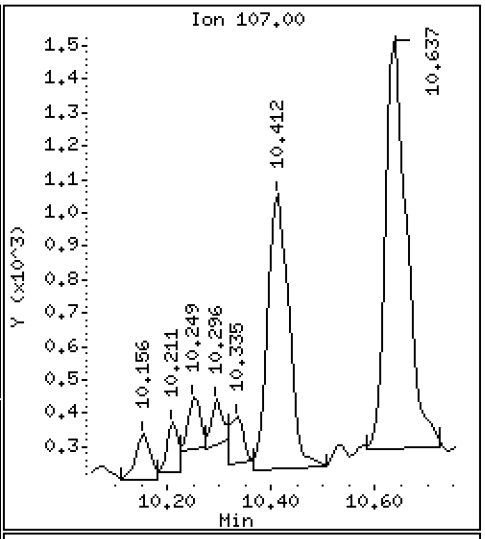
Column phase: ZB-5msi

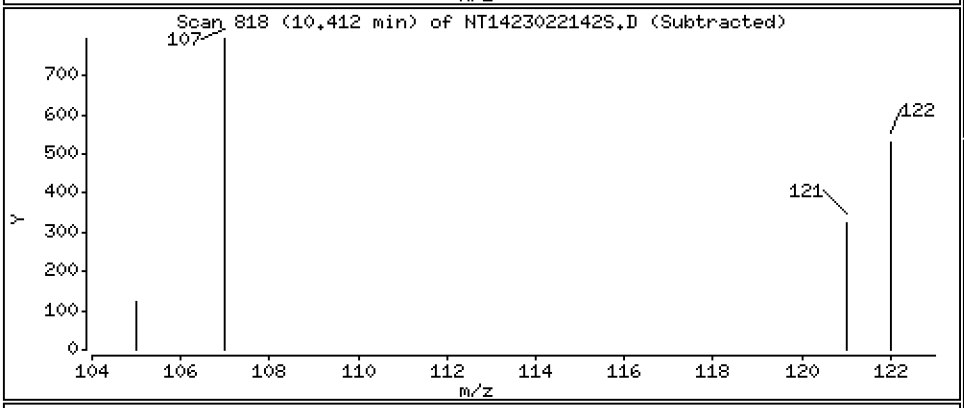
Column diameter: 0.25

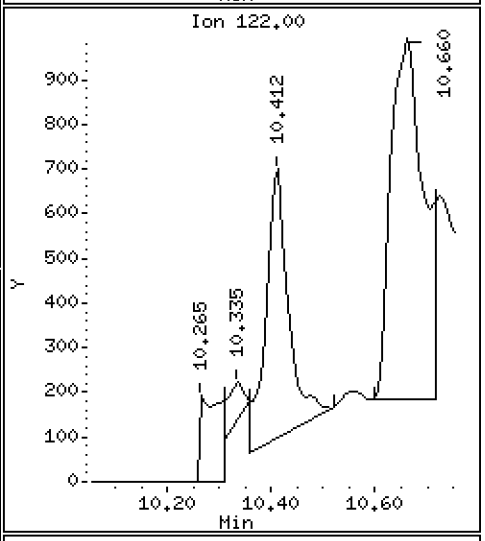
22 2,4-Dimethylphenol

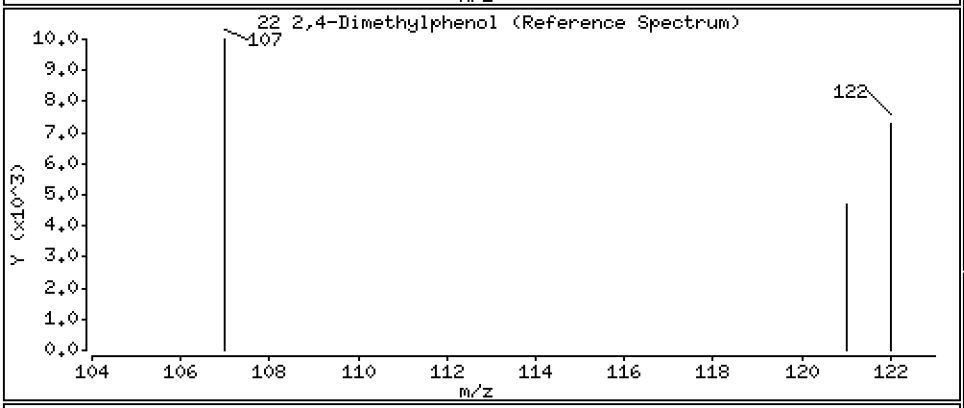
Concentration: 0.02354 ug/mL

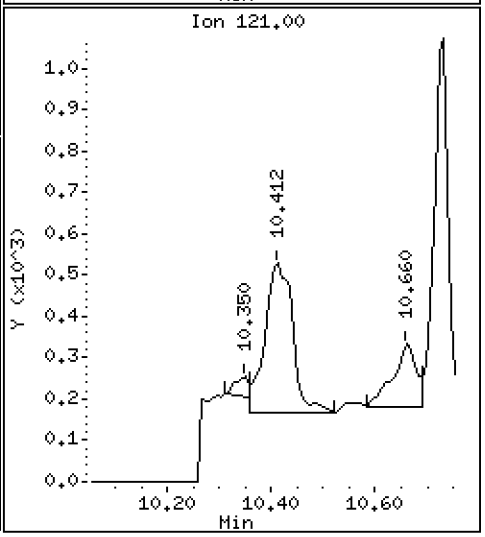


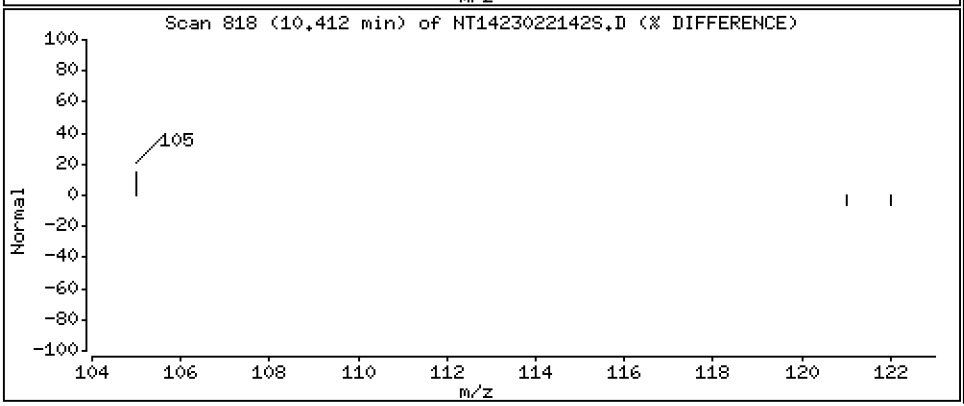












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

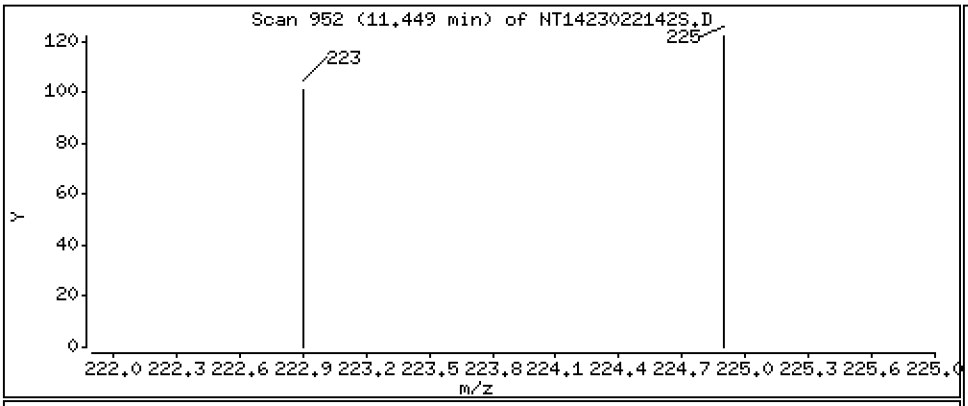
Operator: DSD

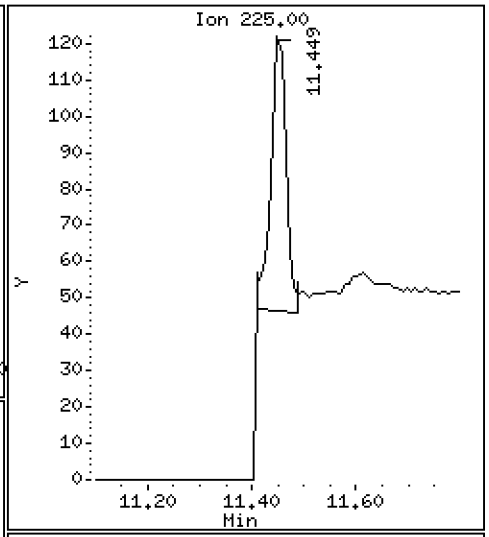
Column phase: ZB-5msi

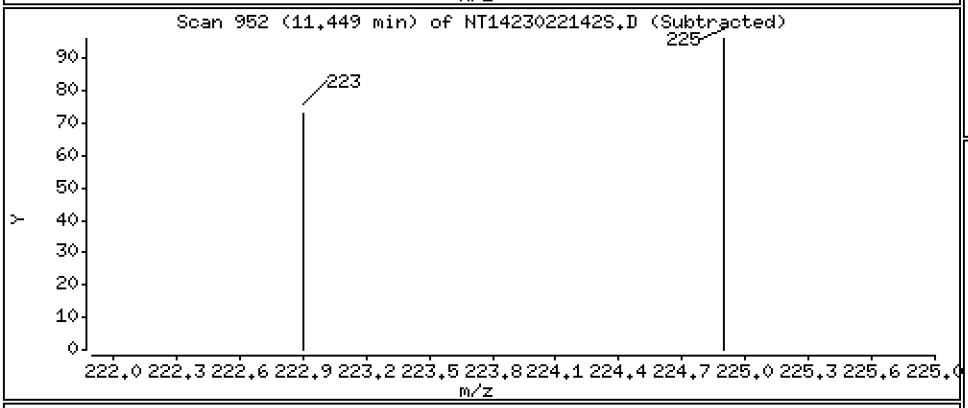
Column diameter: 0.25

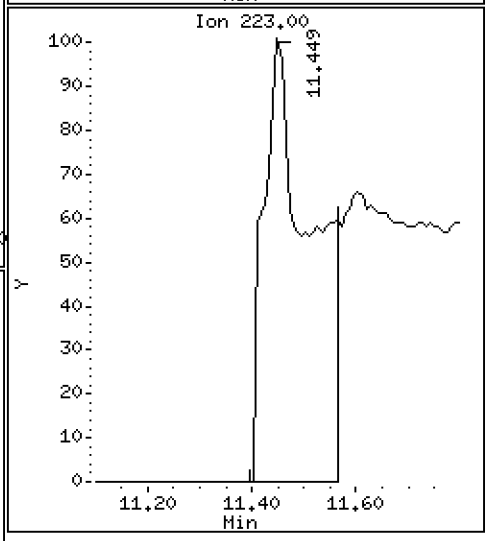
30 Hexachlorobutadiene

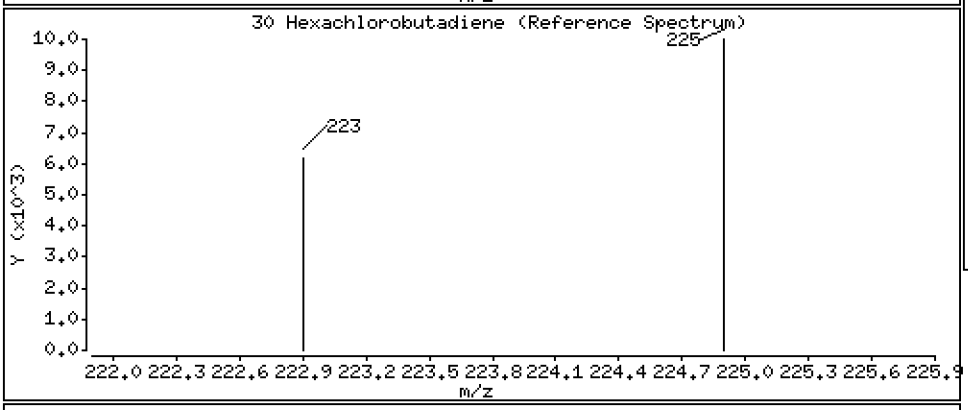
Concentration: 0.002496 ug/mL

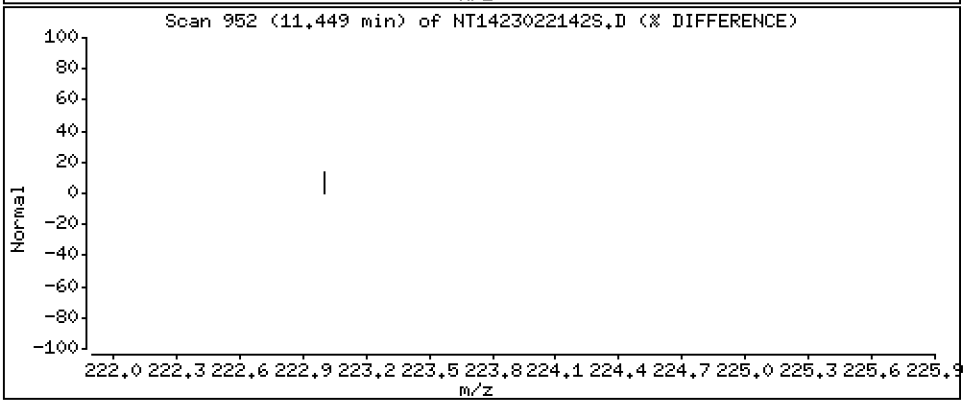












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221142S.D

Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

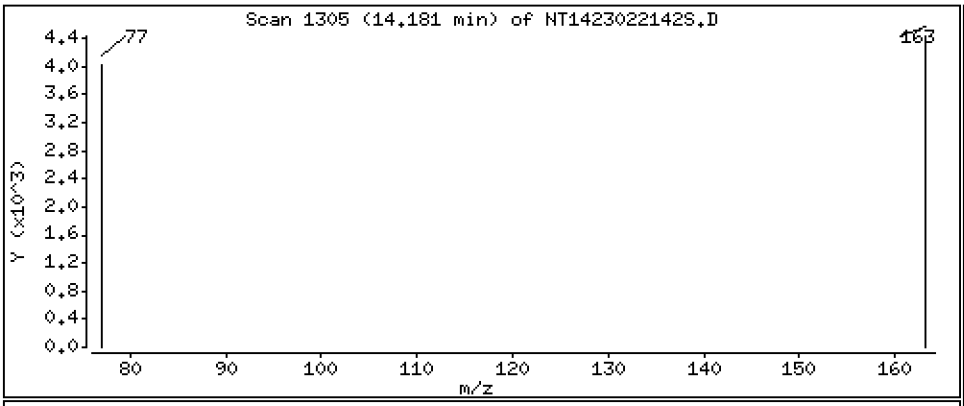
Operator: DSD

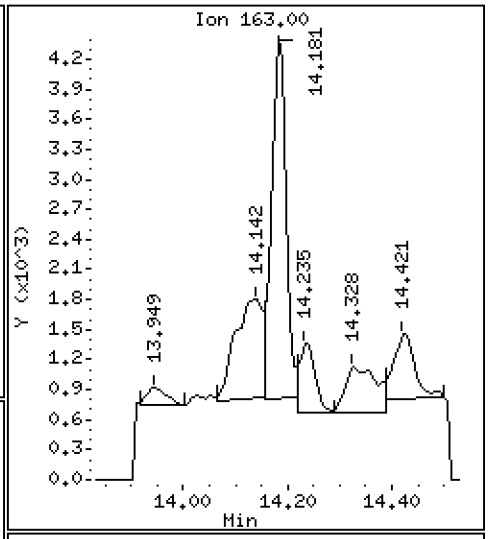
Column phase: ZB-5msi

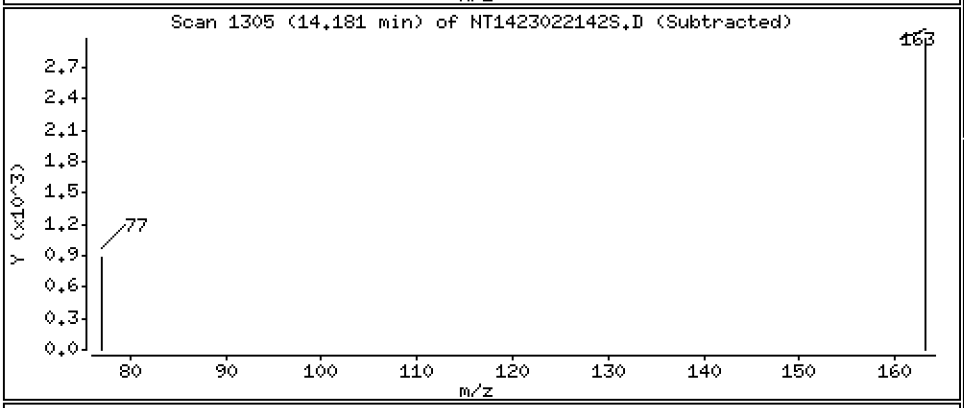
Column diameter: 0.25

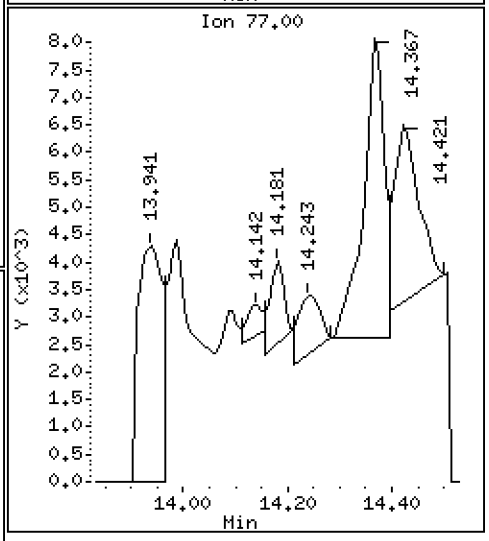
39 Dimethylphthalate

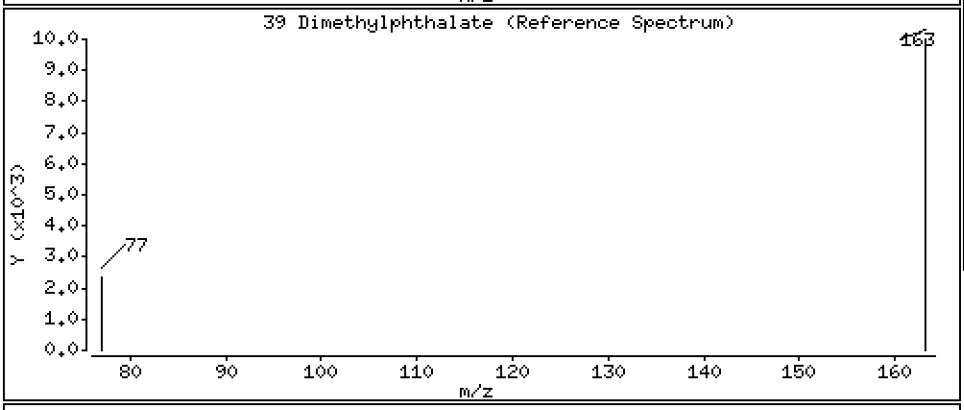
Concentration: 0.04020 ug/mL

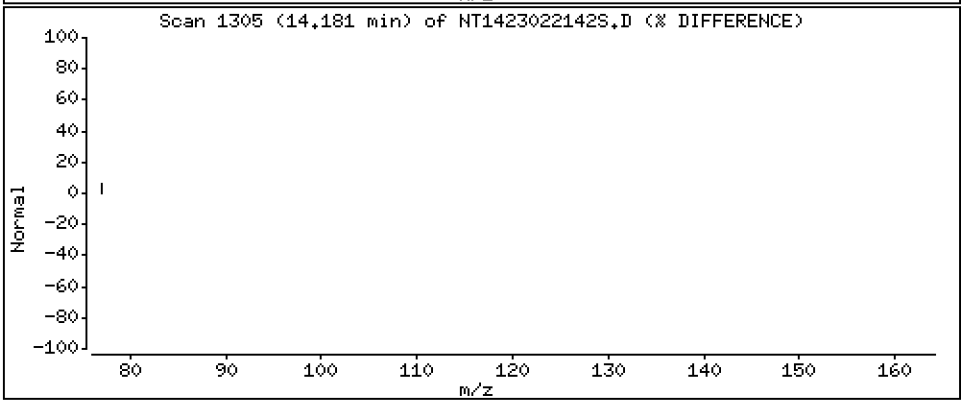












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

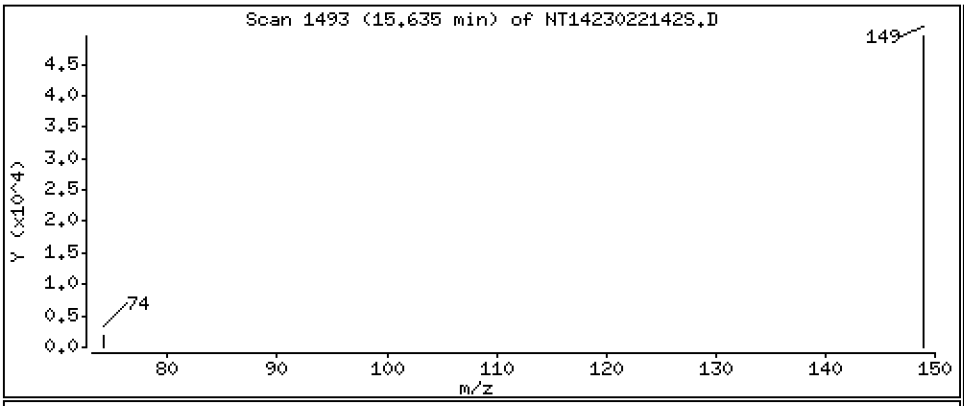
Operator: DSD

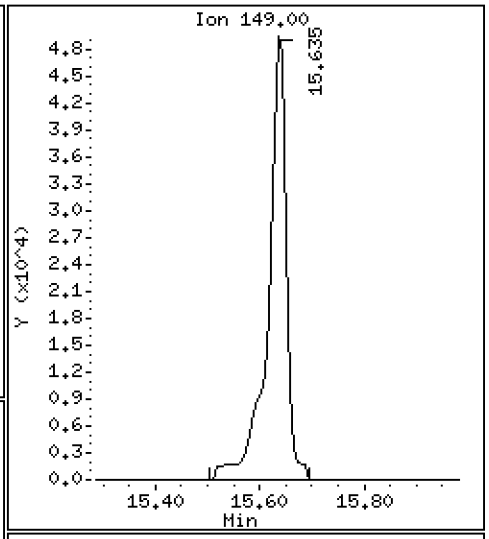
Column phase: ZB-5msi

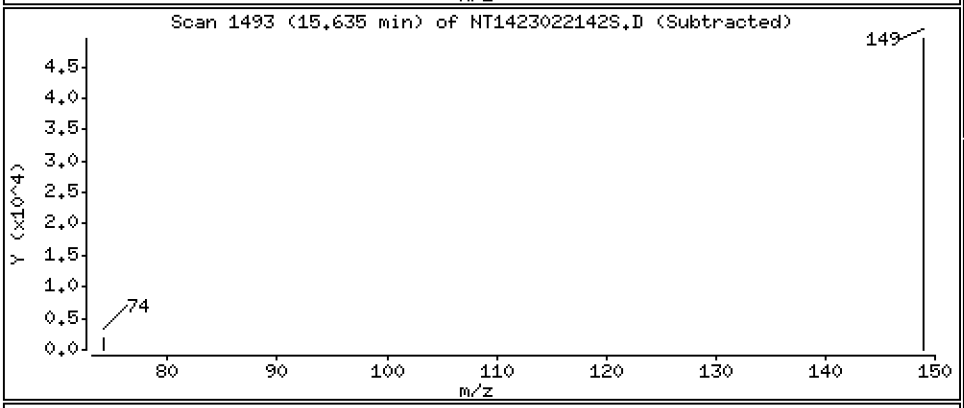
Column diameter: 0.25

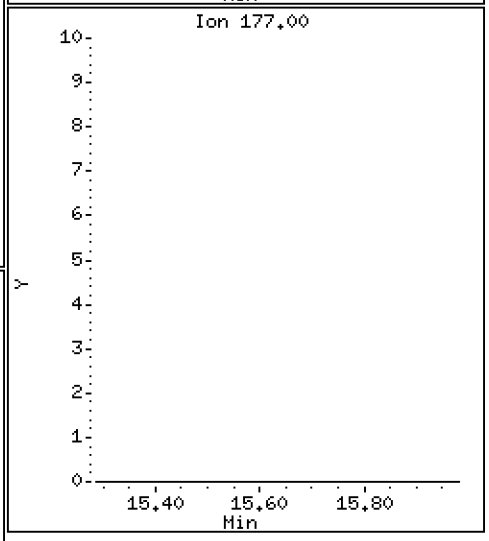
50 Diethylphthalate

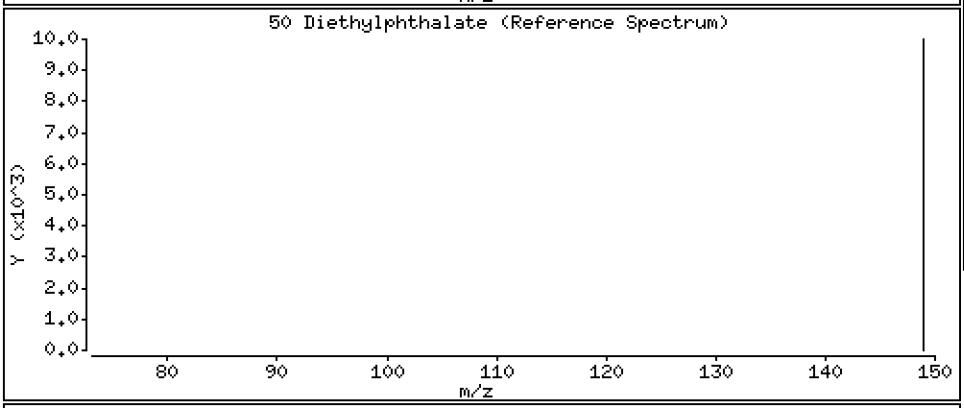
Concentration: 0.5467 ug/mL

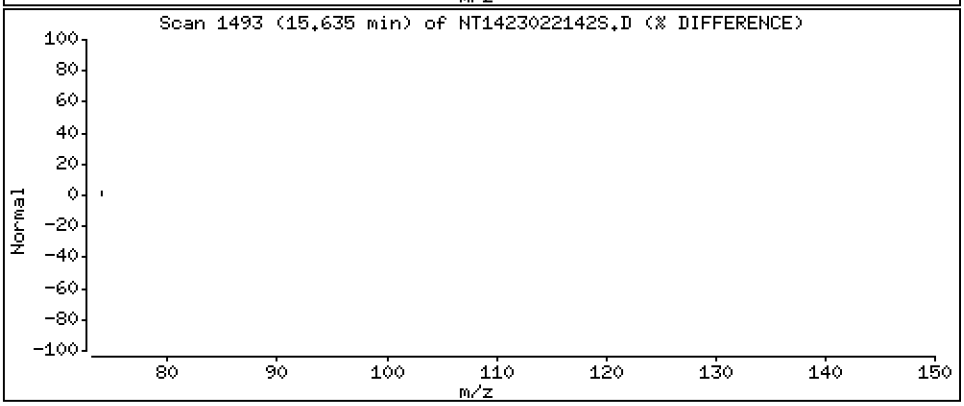












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

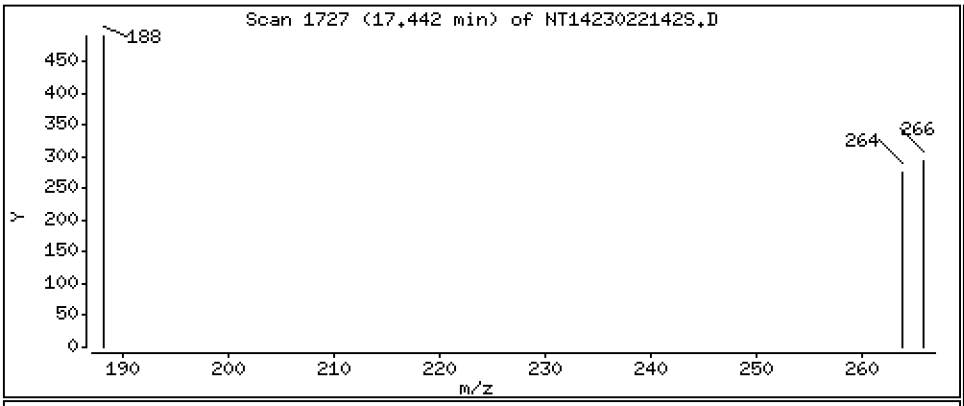
Operator: DSD

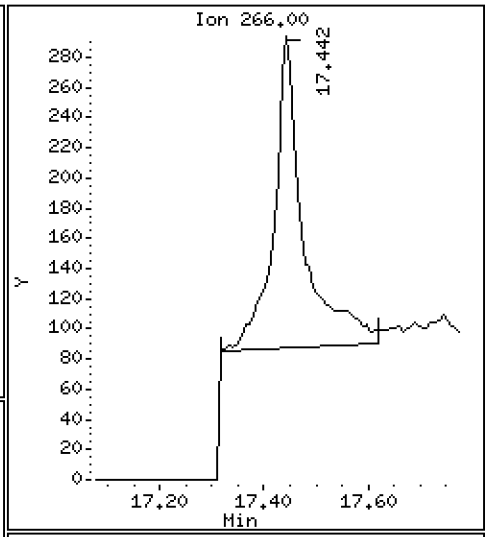
Column phase: ZB-5msi

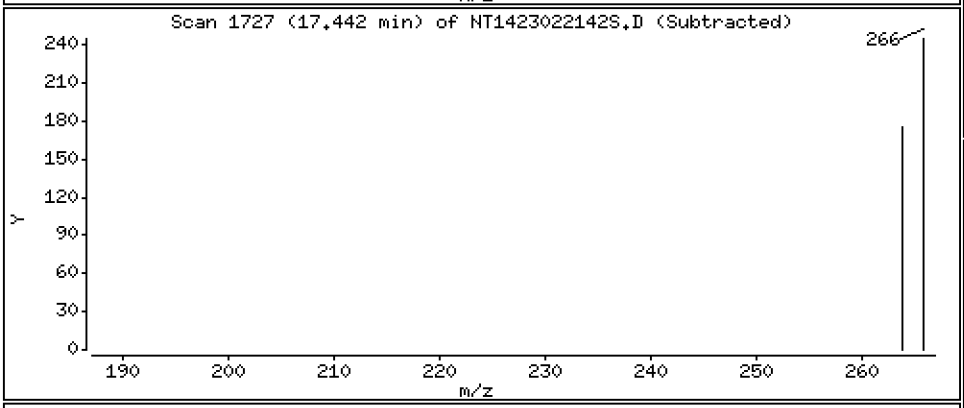
Column diameter: 0.25

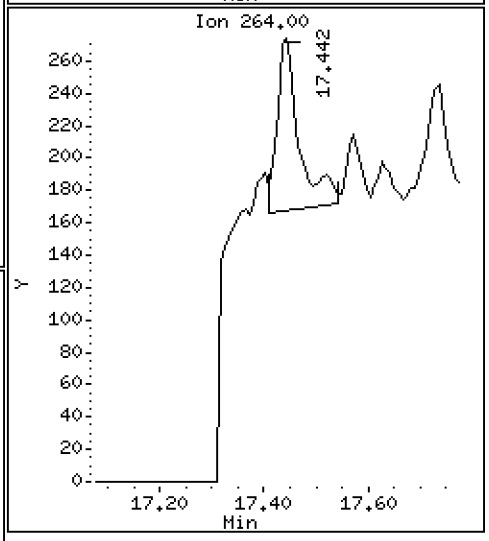
58 Pentachlorophenol

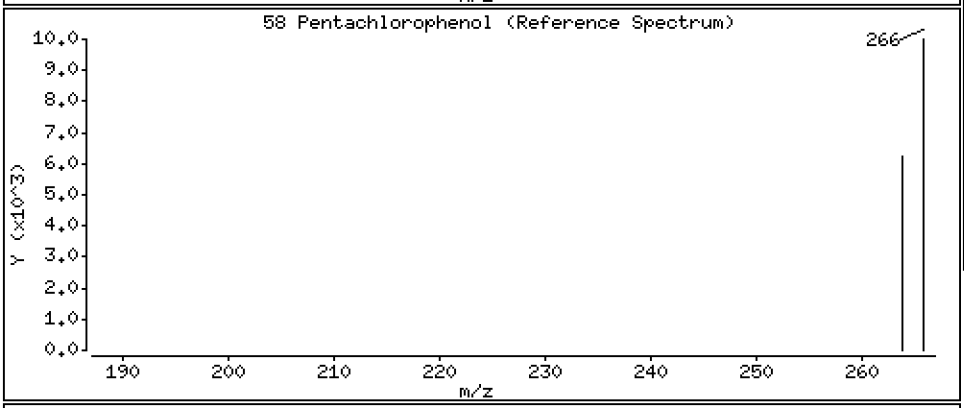
Concentration: 0.02798 ug/mL

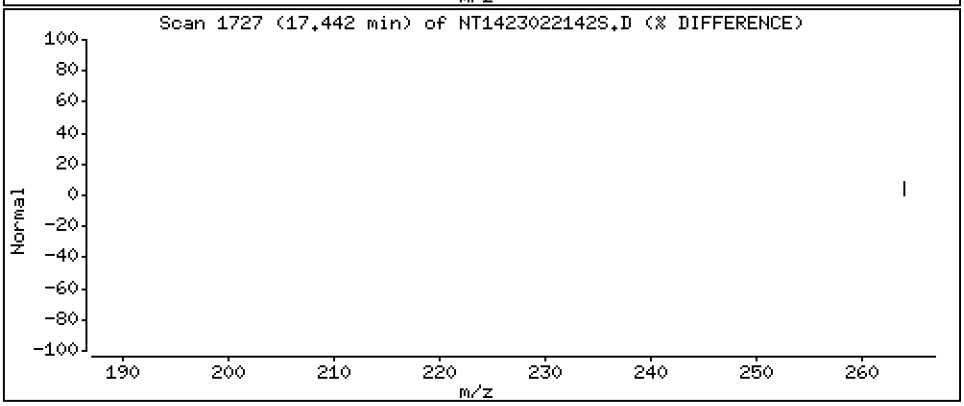












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230022142S.D

Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

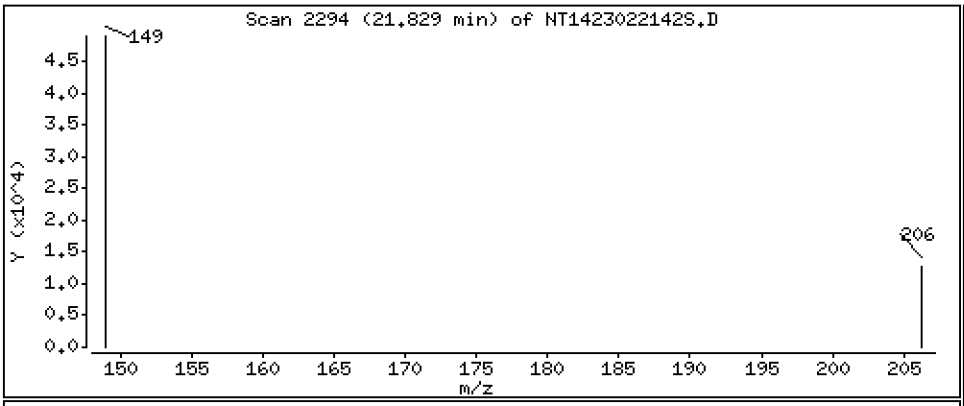
Operator: DSD

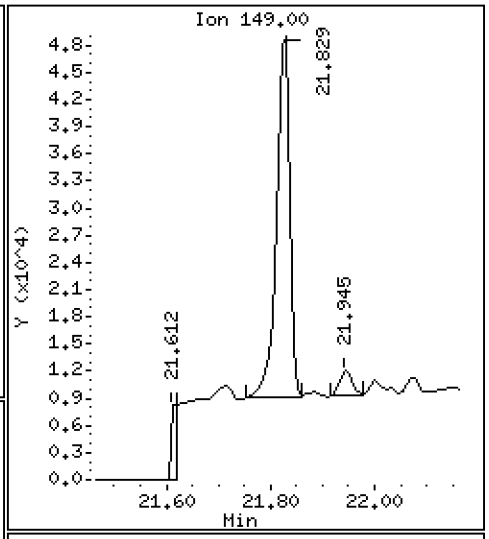
Column phase: ZB-5msi

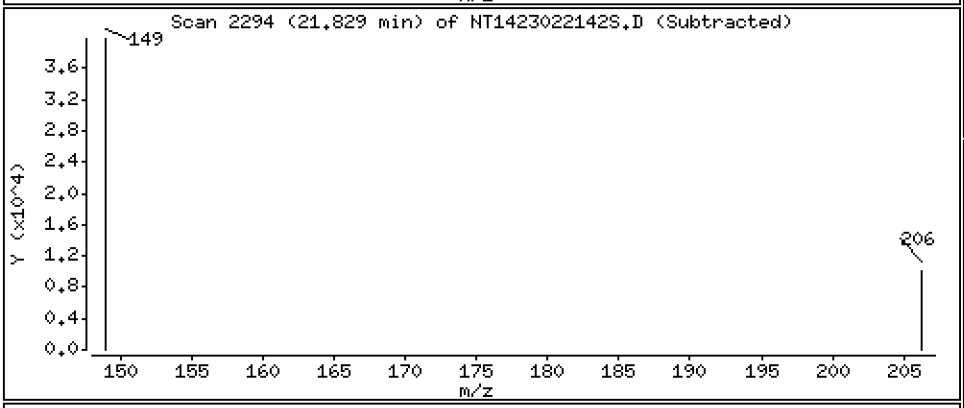
Column diameter: 0.25

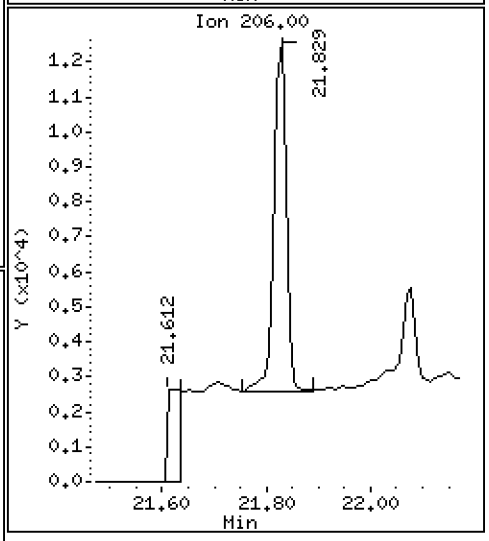
67 Butylbenzylphthalate

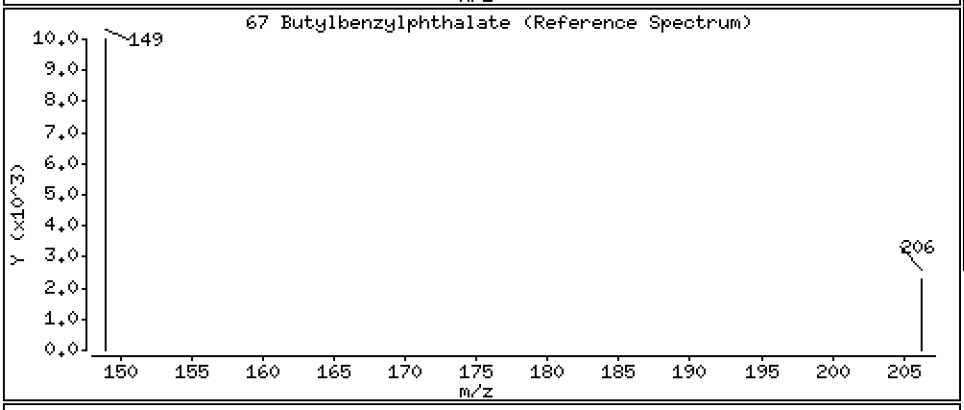
Concentration: 0.7323 ug/mL

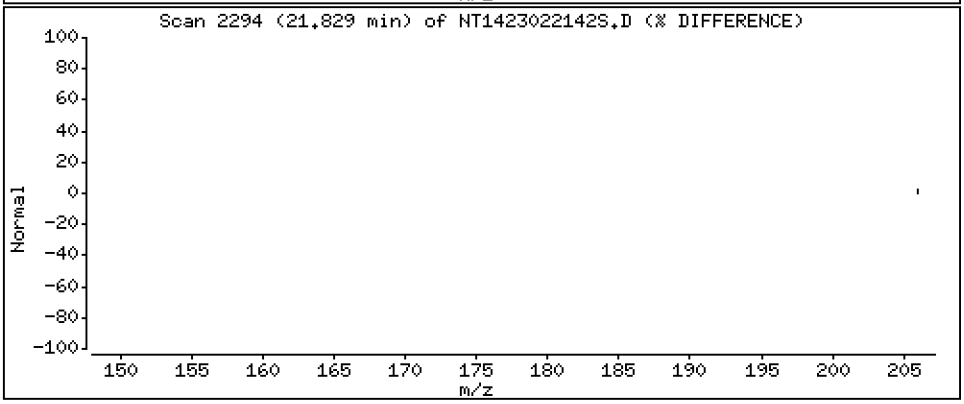












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Date : 22-FEB-2023 14:10

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-06

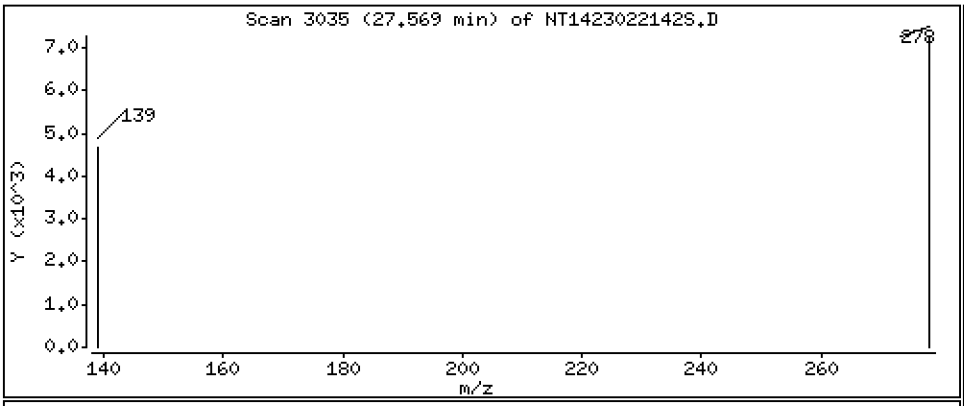
Operator: DSD

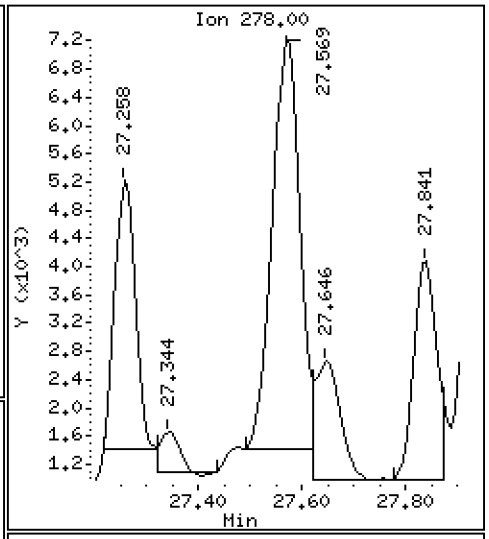
Column phase: ZB-5msi

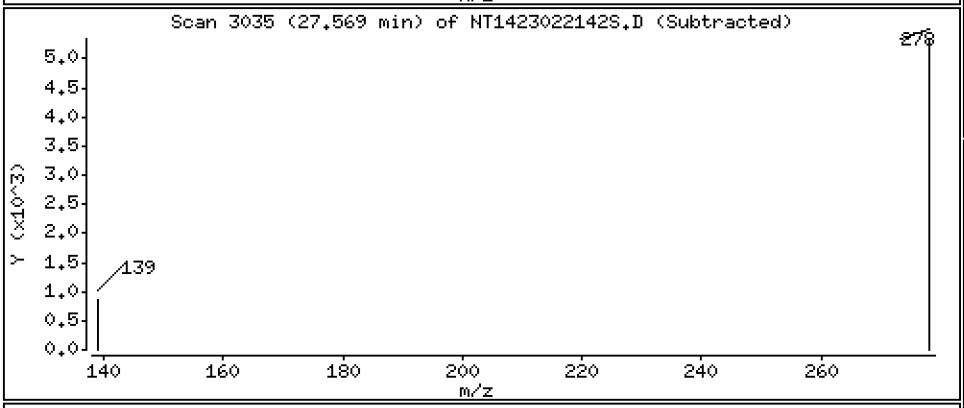
Column diameter: 0.25

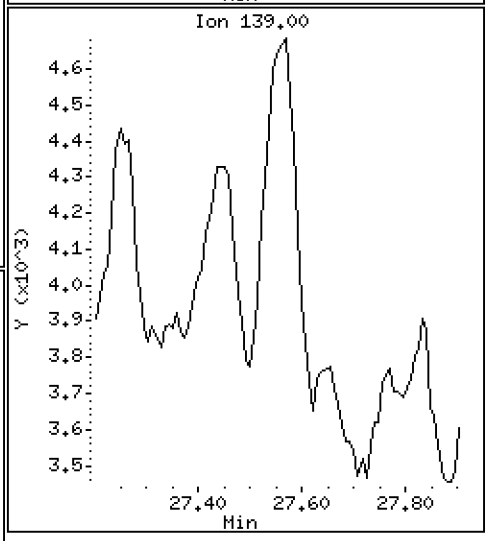
79 Dibenzo(a,h)anthracene

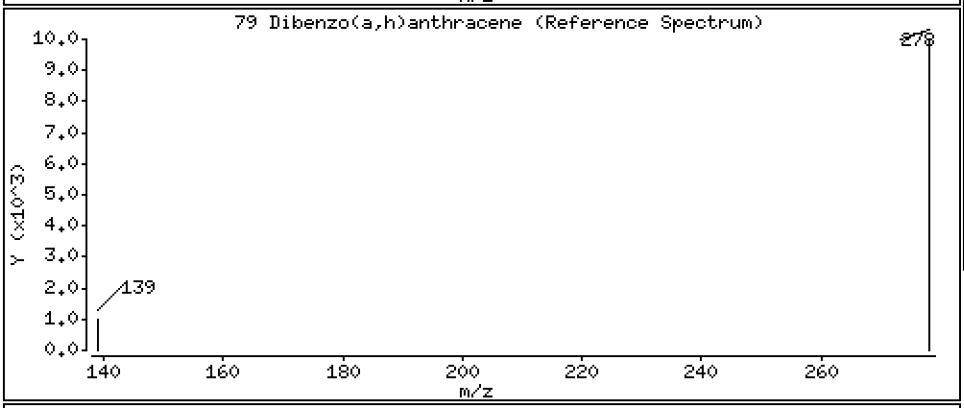
Concentration: 0.2072 ug/mL

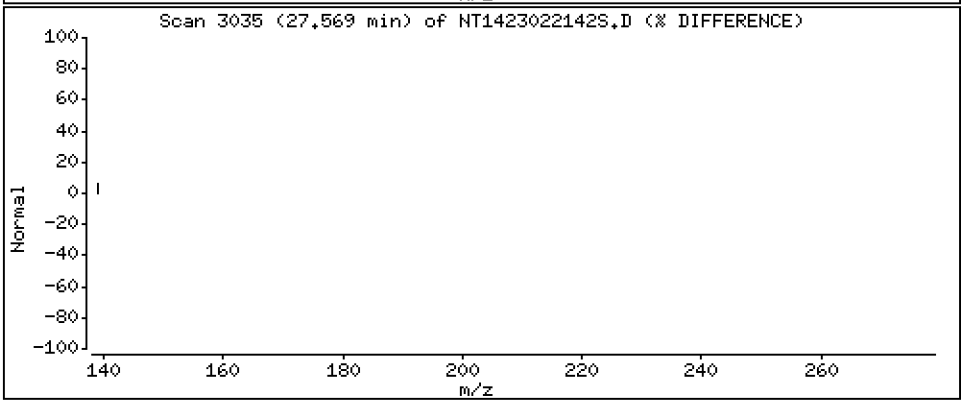












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT1423022142S.D
Lab Smp Id: 23A0133-06
Inj Date : 22-FEB-2023 14:10 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-06
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Meth Date : 17-Jun-2023 09:15 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 30
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

							CONCENTRATIONS	
		QUANT SIG					ON-COLUMN	FINAL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
$	1 2-Fluorophenol	112	6.393	6.385	(0.746)	418533	5.03875	5.039(R)
	3 Phenol	94	7.993	7.993	(0.932)	325236	2.57434	2.574
	7 1,3-Dichlorobenzene	146	8.503	8.503	(0.992)	757	0.00760	0.007596
*	8 1,4-Dichlorobenzene-d4	152	8.572	8.573	(1.000)	292896	4.00000	
	9 1,4-Dichlorobenzene	146	8.596	8.596	(1.003)	1996	0.02100	0.02100
	11 Benzyl alcohol	79	8.867	8.867	(1.034)	21826	0.27209	0.2721
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	9.100	9.093	(1.062)	1770	0.02036	0.02036
	15 4-Methylphenol	108	9.372	9.372	(1.093)	17179	0.18039	0.1804
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.412	10.404	(0.943)	2294	0.02354	0.02354
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.039	11.039	(1.000)	1064153	4.00000	
	30 Hexachlorobutadiene	225	11.448	11.449	(1.037)	148	0.00250	0.002496(M)
	39 Dimethylphthalate	163	14.180	14.180	(0.968)	6829	0.04020	0.04020
*	42 Acenaphthene-d10	162	14.652	14.645	(1.000)	556751	4.00000	
	50 Diethylphthalate	149	15.634	15.634	(1.067)	116225	0.54673	0.5467(M)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	17.441	17.426	(0.986)	831	0.02798	0.02798(M)
*	59 Phenanthrene-d10	188	17.681	17.673	(1.000)	1124300	4.00000	
$	66 Terphenyl-d14	244	20.884	20.869	(0.917)	896921	4.61488	4.615(R)
	67 Butylbenzylphthalate	149	21.829	21.813	(0.958)	67770	0.73231	0.7323
*	69 Chrysene-d12	240	22.781	22.766	(1.000)	730051	4.00000	
*	77 Perylene-d12	264	25.235	25.212	(1.000)	591653	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.568	27.553	(1.092)	21494	0.20723	0.2072
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022142S.D
Lab Smp Id: 23A0133-06
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 08:08
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	261796	130898	523592	292896	11.88
27 Naphthalene-d8	959301	479651	1918602	1064153	10.93
42 Acenaphthene-d10	503659	251830	1007318	556751	10.54
59 Phenanthrene-d10	1179954	589977	2359908	1124300	-4.72
69 Chrysene-d12	887360	443680	1774720	730051	-17.73
77 Perylene-d12	652371	326186	1304742	591653	-9.31

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	0.05
59 Phenanthrene-d10	17.67	17.17	18.17	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.07
77 Perylene-d12	25.21	24.71	25.71	25.24	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022142S.D

Lab ID: 23A0133-06
nt14.i, 20230221B.b\SIM.b\SIMABN2.m,   22-FEB-2023 14:10

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1423022132S.D

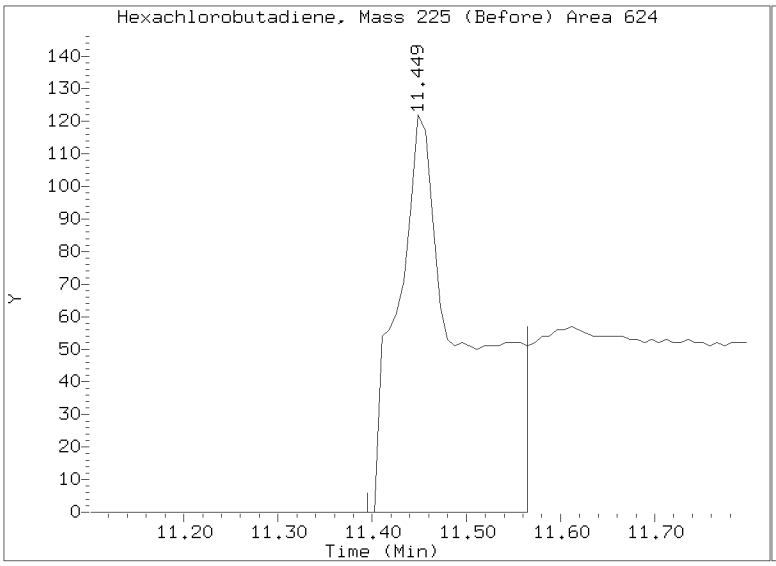
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

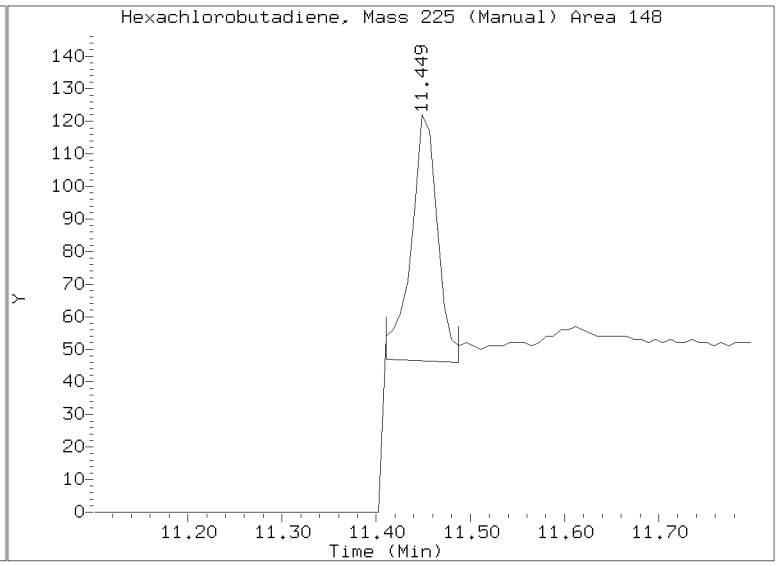
Exception: 1,2,4-Trichlorobenzene 0.0010

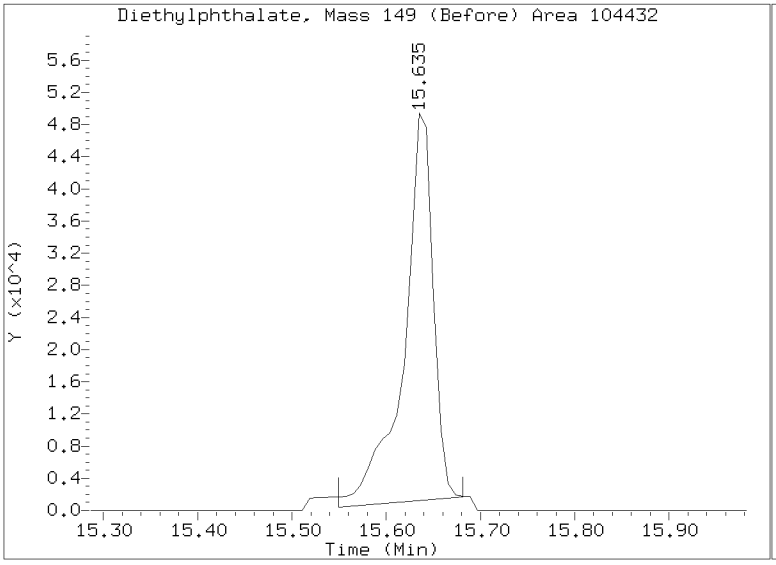
* Only compounds listed in the work order have been verified by the analyst *

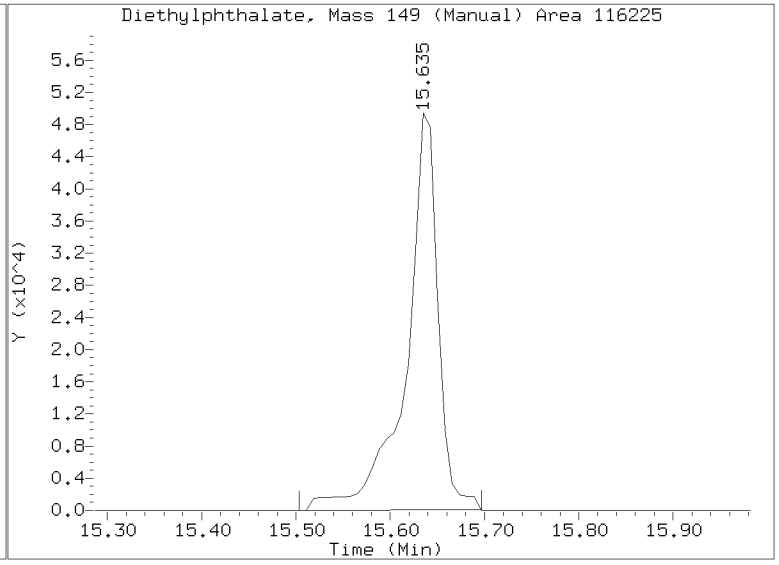
Quant Ion Manual Peak Adjustment Report

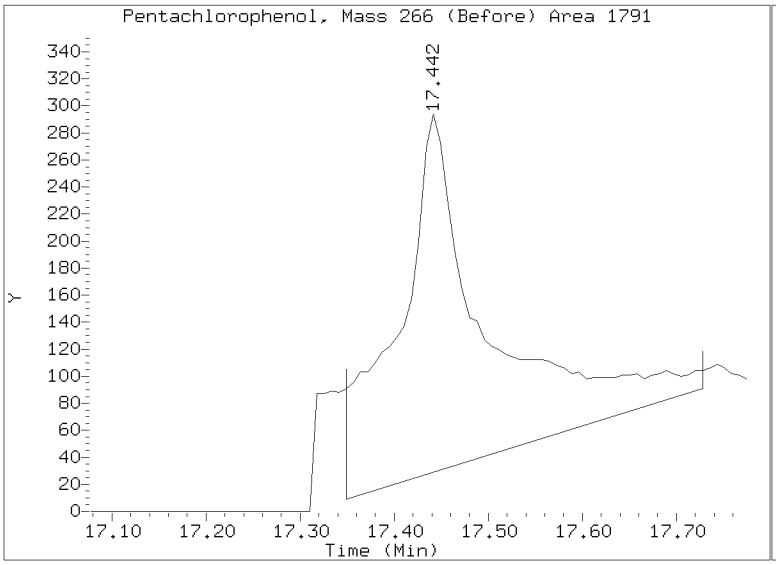
Datafile: //target/share/chem3/nt14.i/20230221B.b/SIM.b/NT1423022142S.D
Injection Date: 22-FEB-2023 14:10
Lab ID:23A0133-06 Client ID:
Report Date: 06/17/2023 09:48

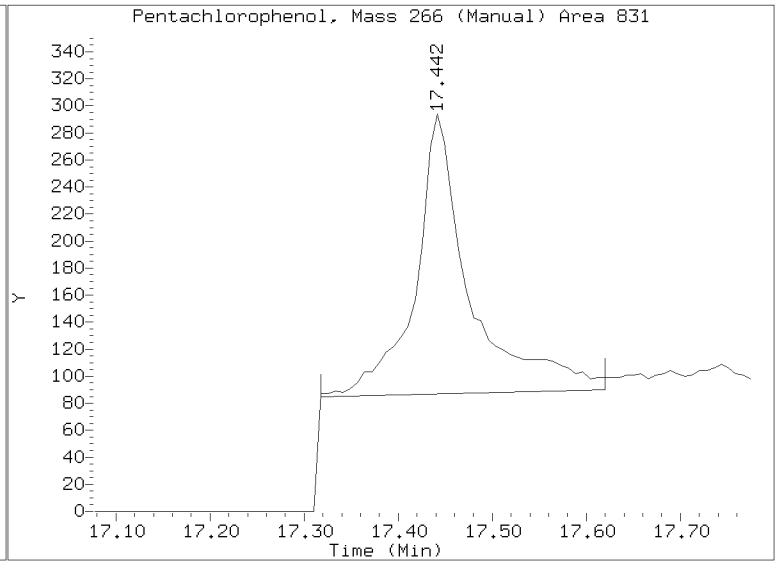












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1217

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-07 C	SDG:	23A0133
Sampled:	01/06/23 11:14	Prepared:	01/18/23 15:24	File ID:	NT1423022143S.D
% Solids:	59.50	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 14:46
Batch:	BLA0393	Sequence:	SLB0349	Initial/Final:	16.88 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GC00009
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.7	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	6.1	J	2.5	19.9
65-85-0	Benzoic acid	1	398	U	13.3	398
105-67-9	2,4-Dimethylphenol	1	2.3	J	2.2	19.9
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	19.9	U	2.1	19.9

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	746.74	492	65.9	27 - 120	
p-Terphenyl-d14	497.83	383	76.9	37 - 120	Q

Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221435.D

Page 1

Date : 22-FEB-2023 14:46

Client ID:

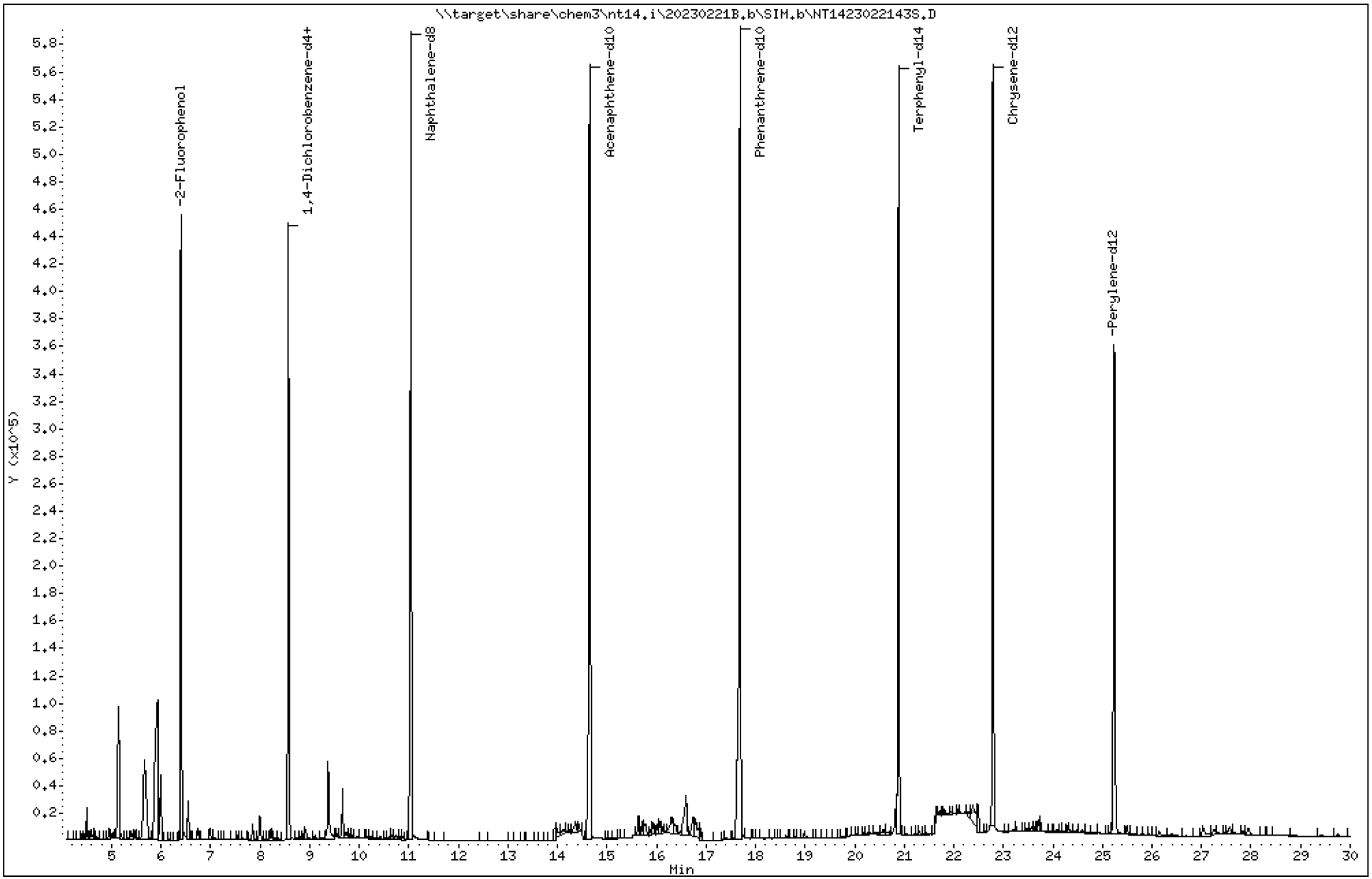
Instrument: nt14.i

Sample Info: 23A0133-07

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

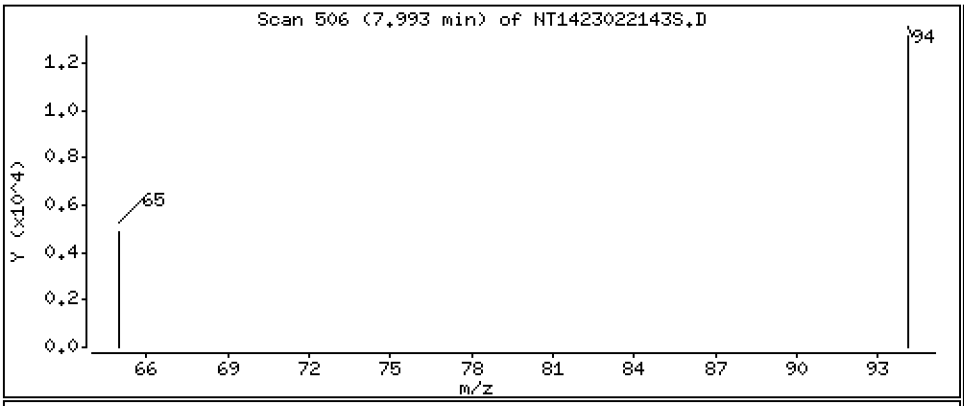
Operator: DSD

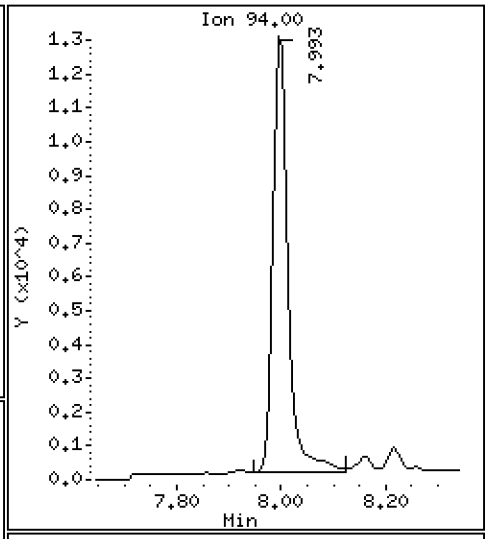
Column phase: ZB-5msi

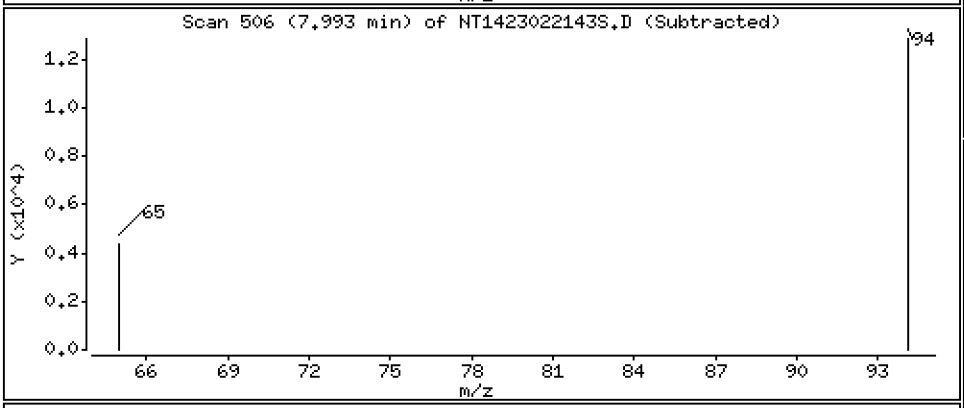
Column diameter: 0.25

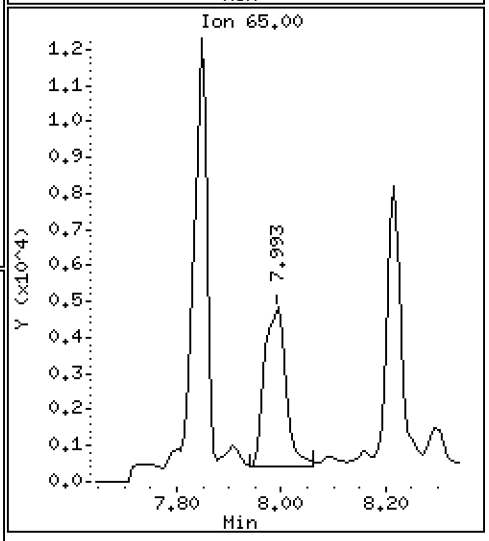
3 Phenol

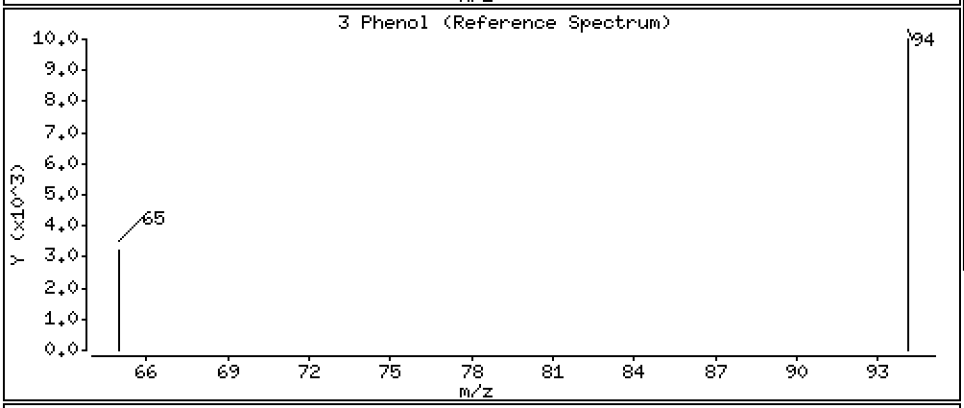
Concentration: 0.1988 ug/mL

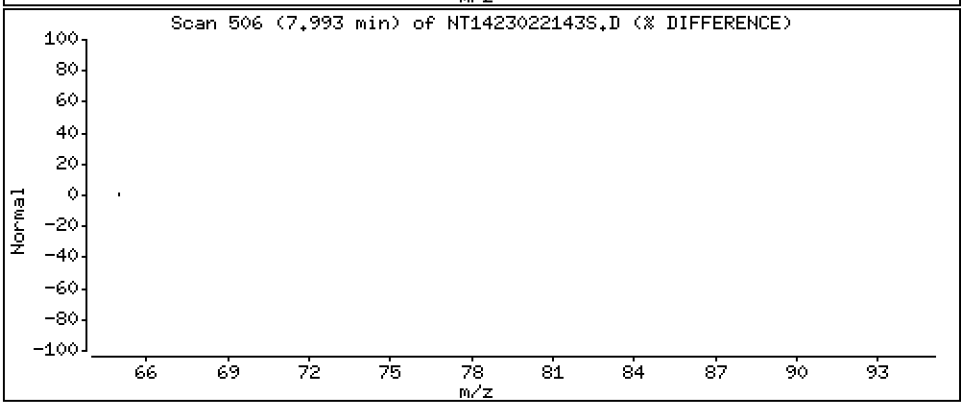












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

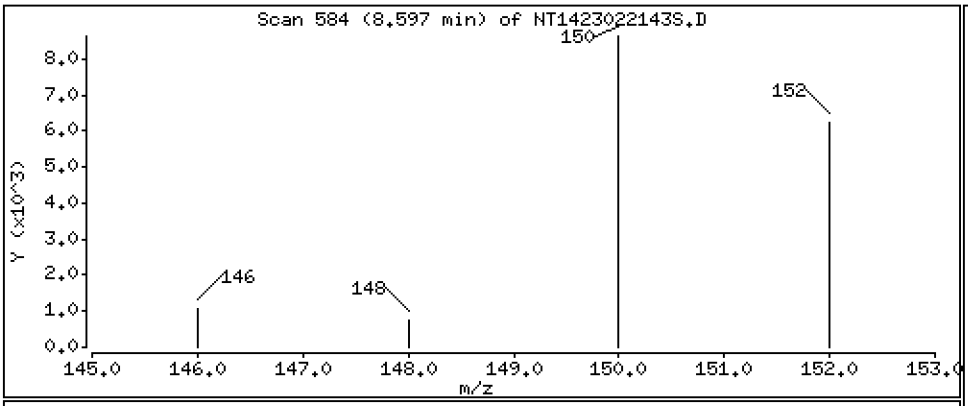
Operator: DSD

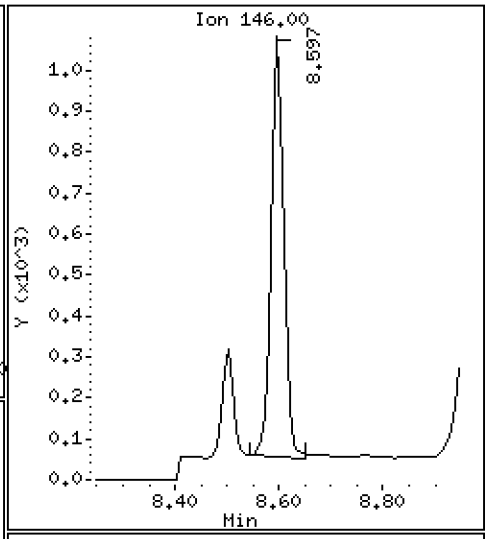
Column phase: ZB-5msi

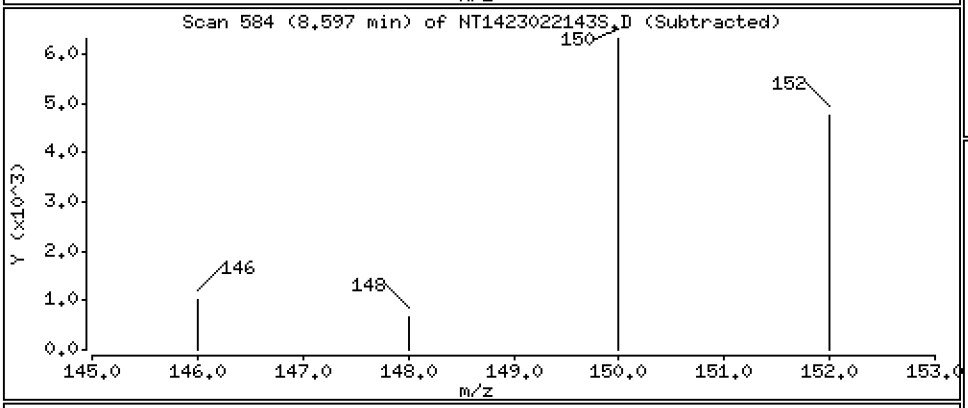
Column diameter: 0.25

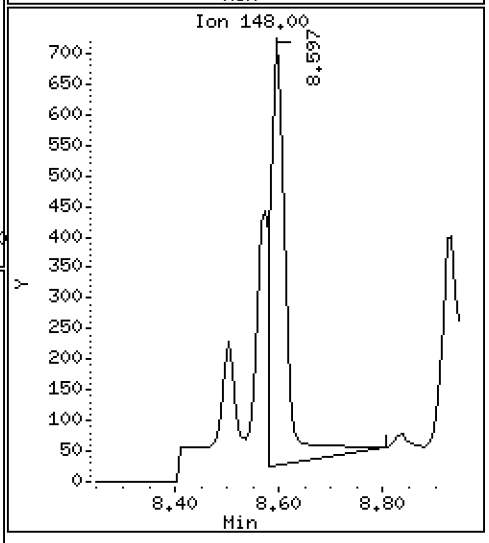
9 1,4-Dichlorobenzene

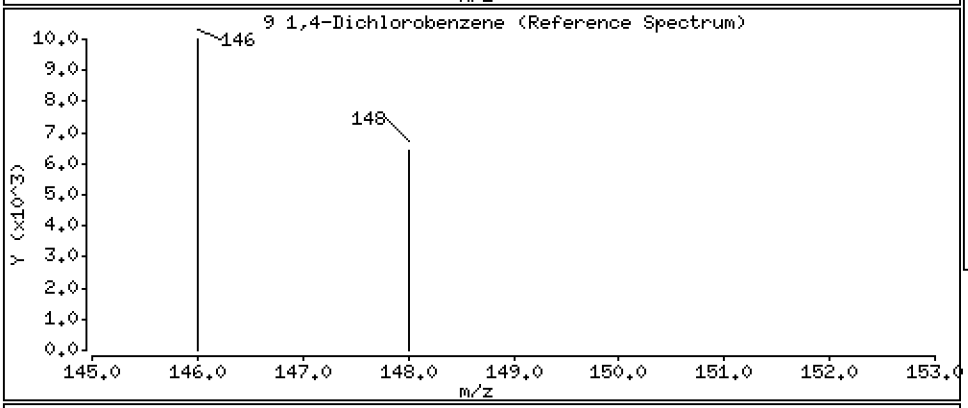
Concentration: 0.01744 ug/mL

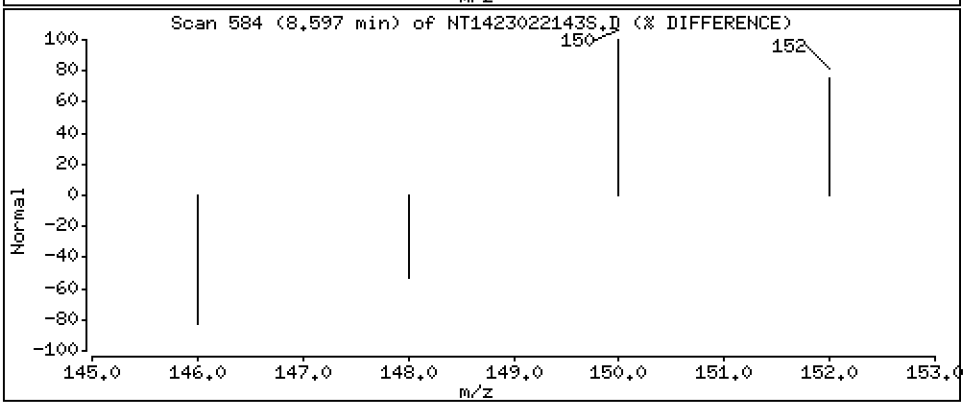












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221435.D

Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

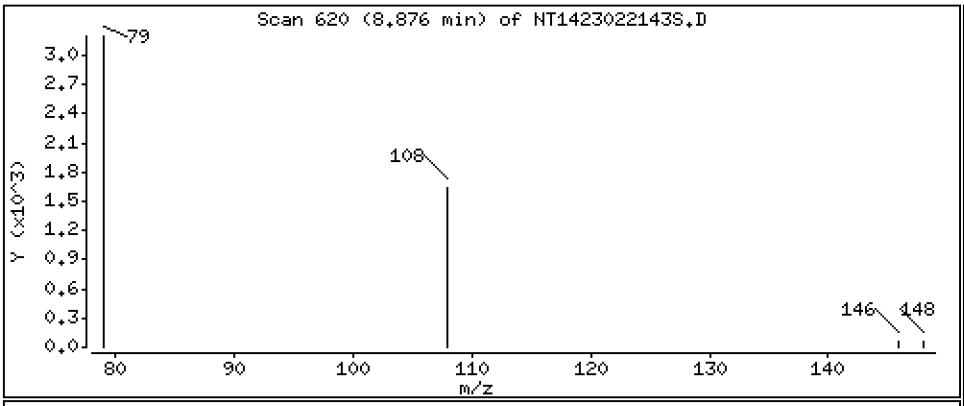
Operator: DSD

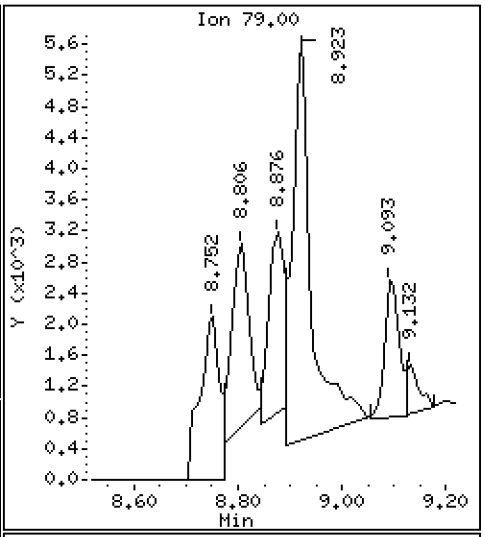
Column phase: ZB-5msi

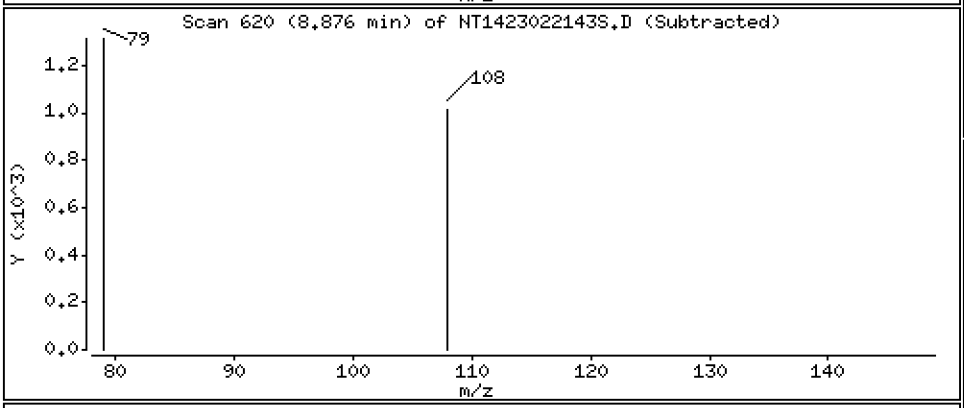
Column diameter: 0.25

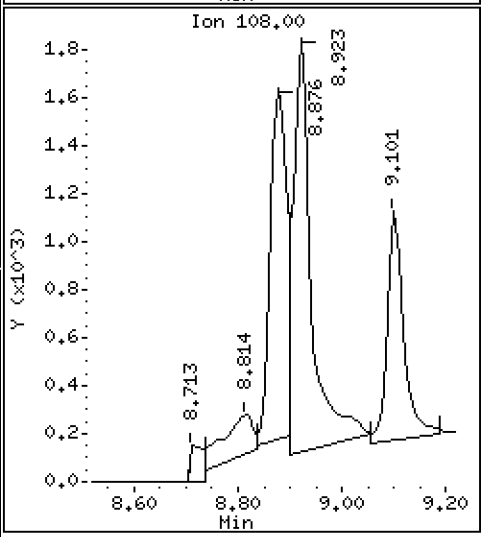
11 Benzyl alcohol

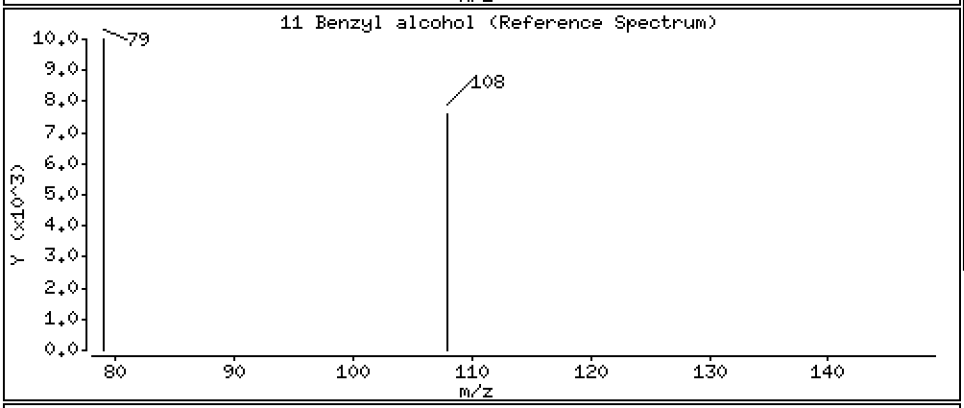
Concentration: 0.06156 ug/mL

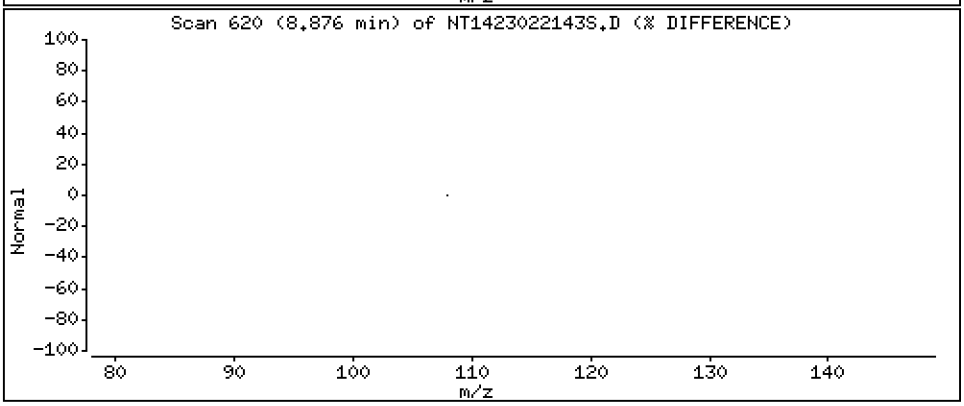












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

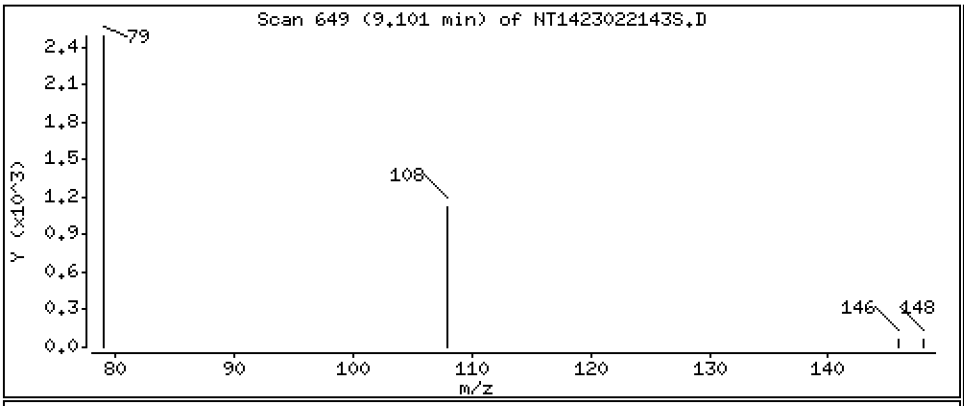
Operator: DSD

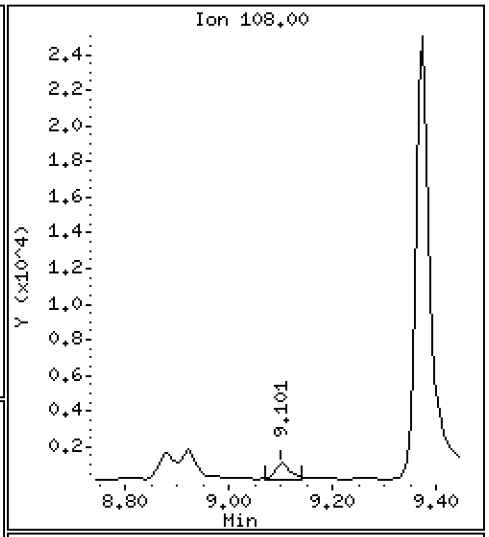
Column phase: ZB-5msi

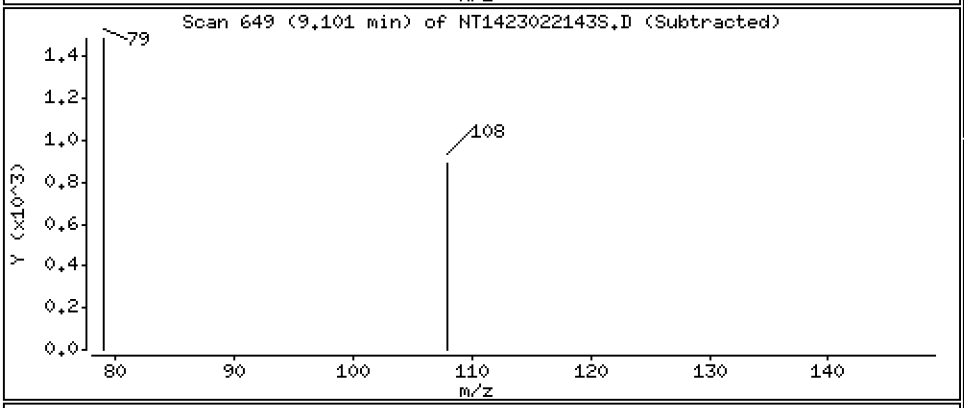
Column diameter: 0.25

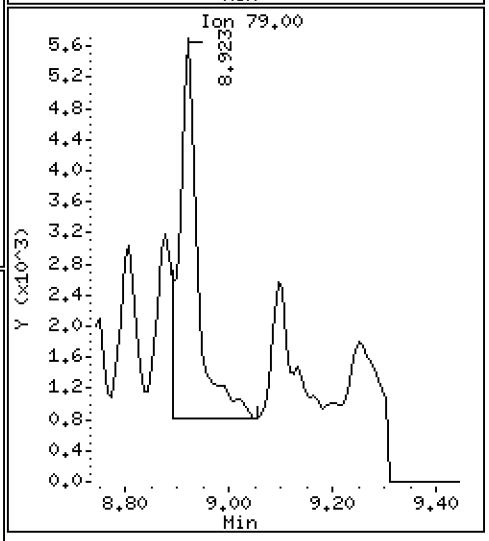
13 2-Methylphenol

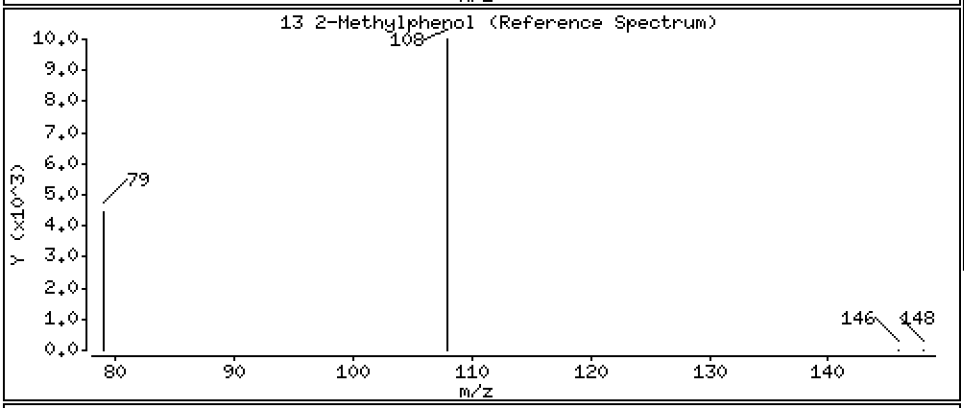
Concentration: 0.02338 ug/mL

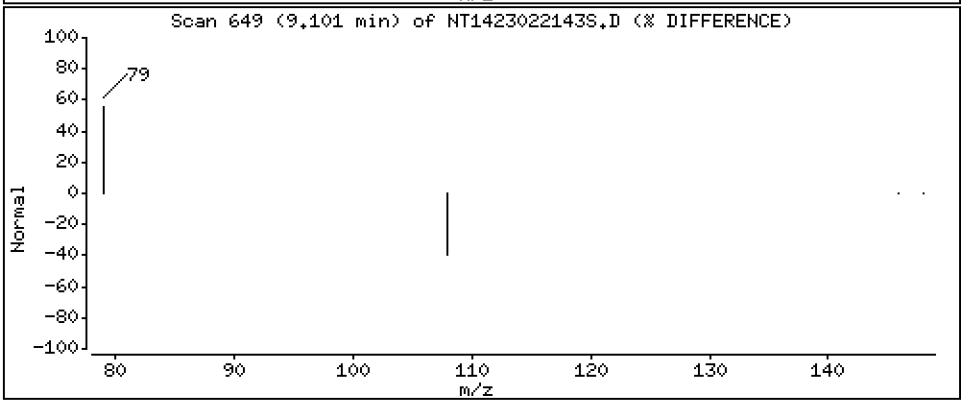












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

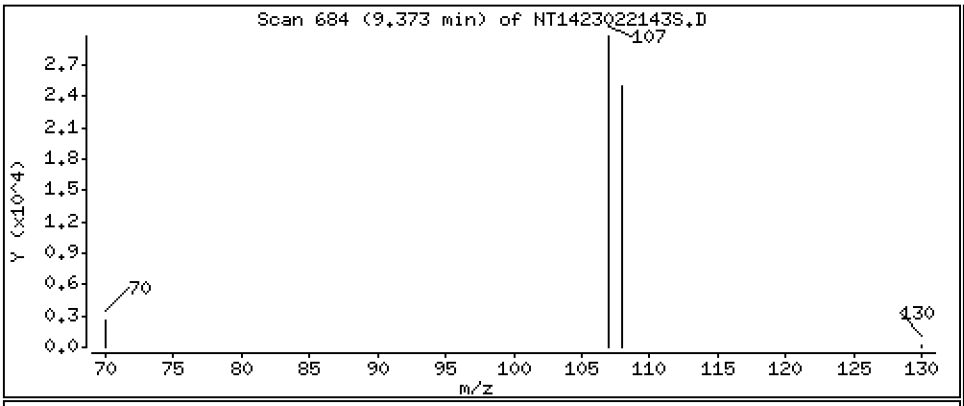
Operator: DSD

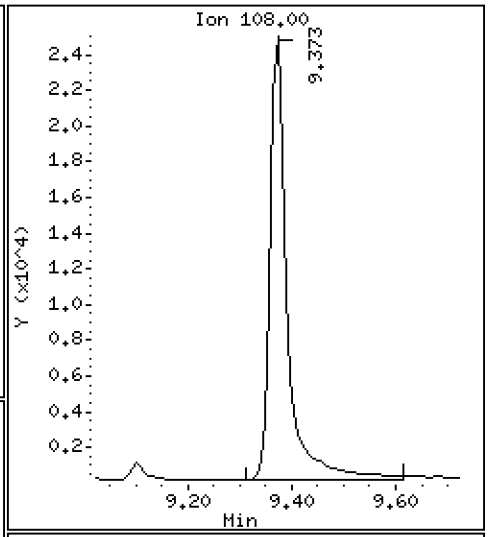
Column phase: ZB-5msi

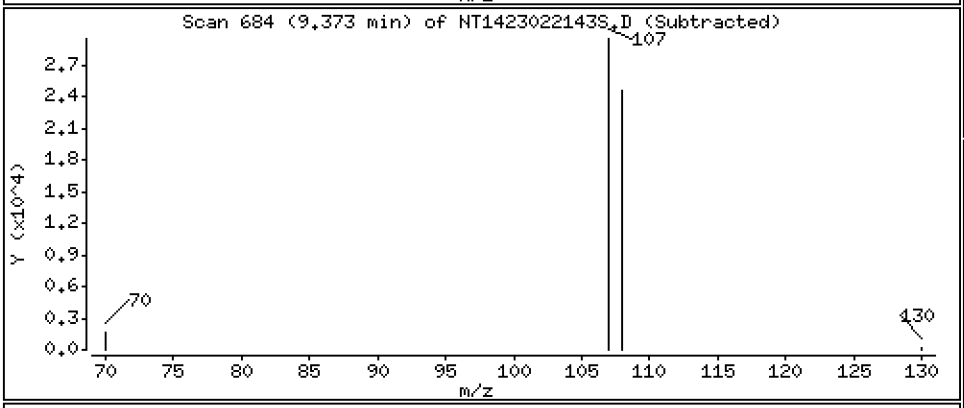
Column diameter: 0.25

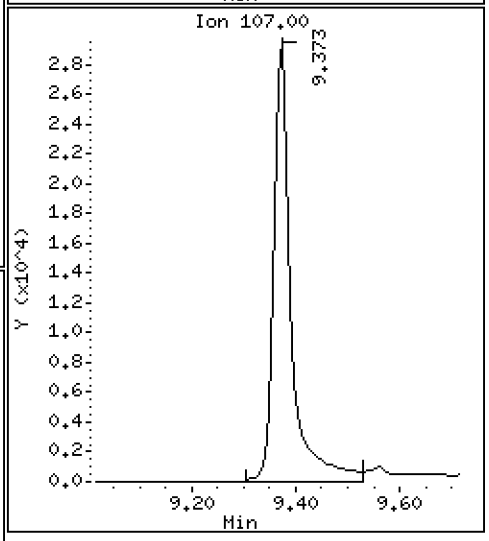
15 4-Methylphenol

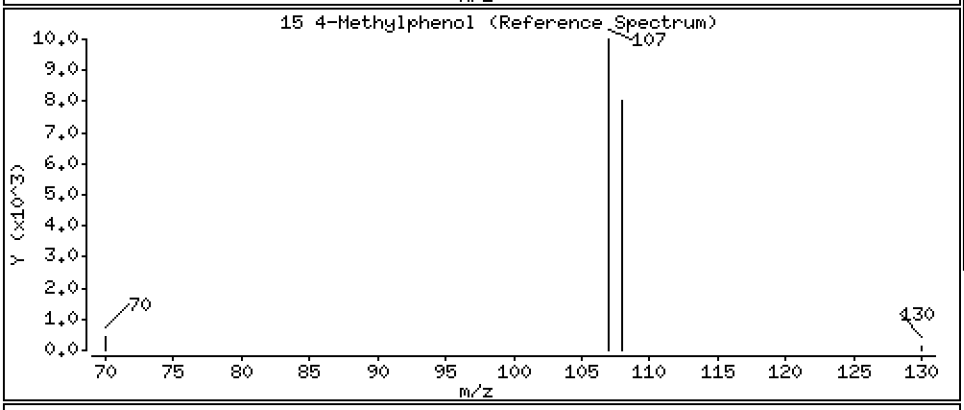
Concentration: 0.5677 ug/mL

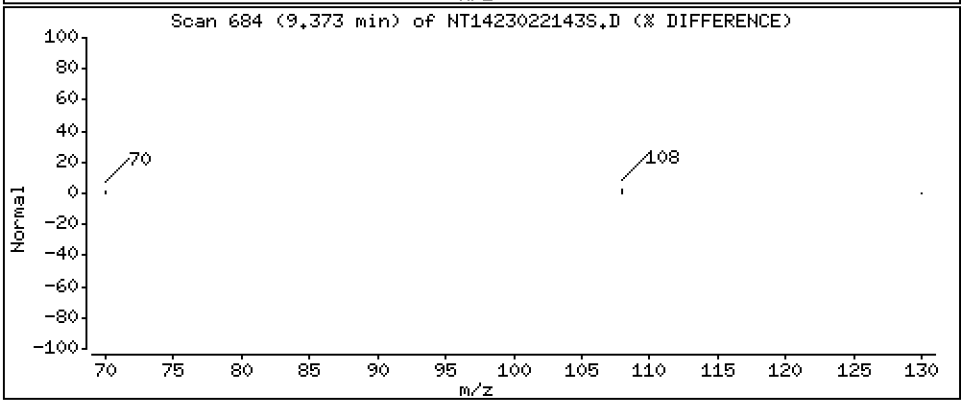












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

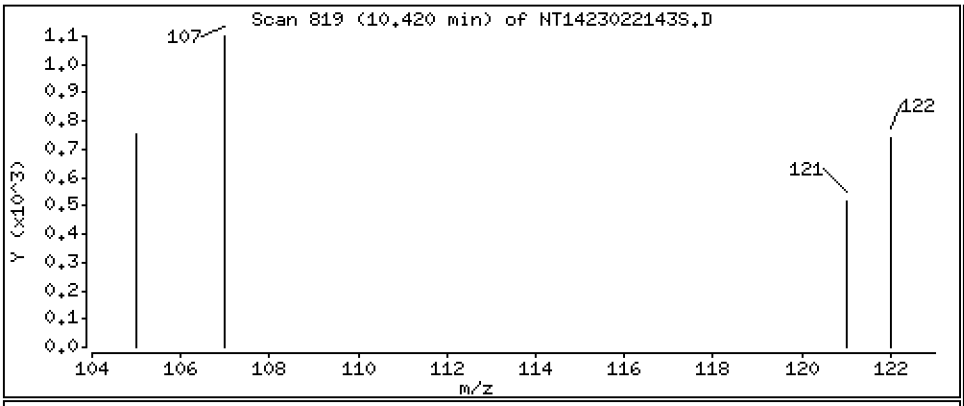
Operator: DSD

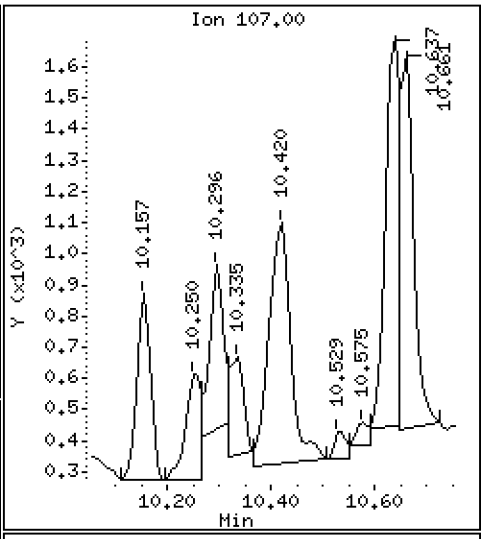
Column phase: ZB-5msi

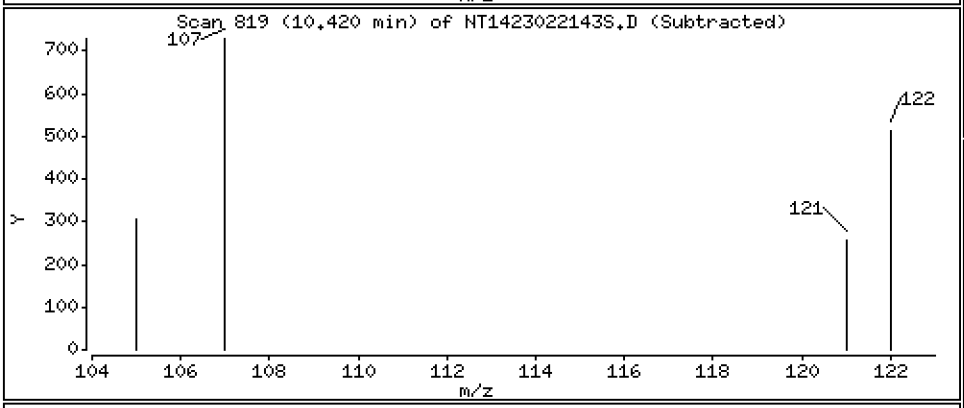
Column diameter: 0.25

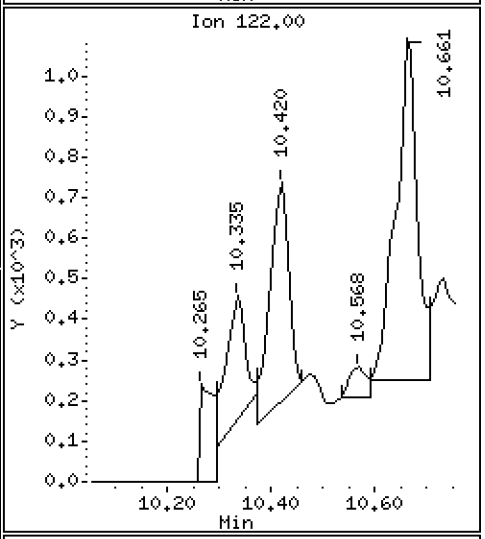
22 2,4-Dimethylphenol

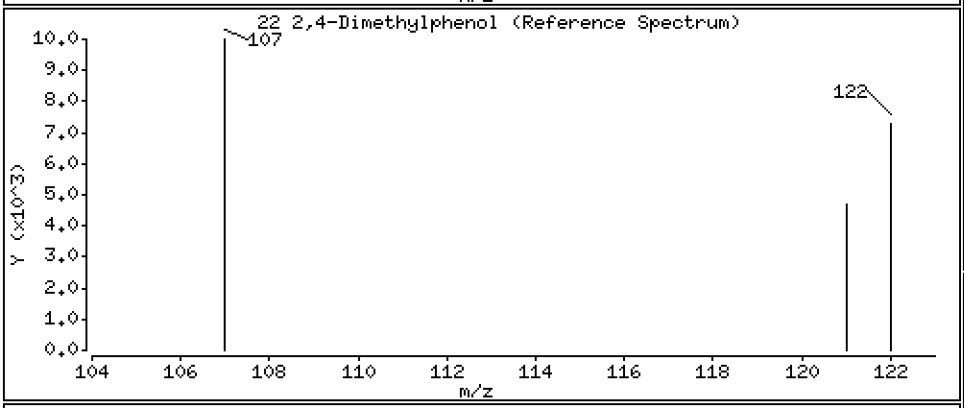
Concentration: 0.02311 ug/mL

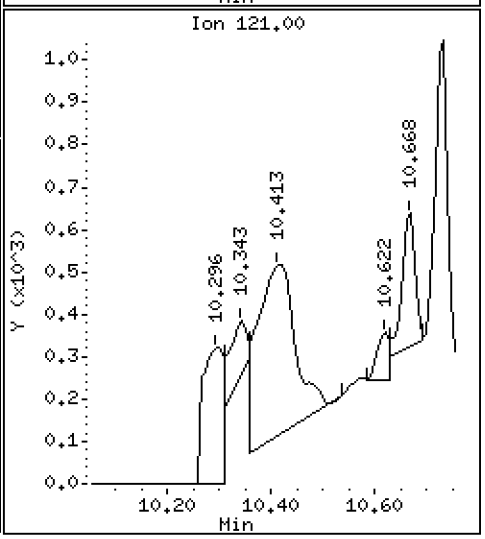


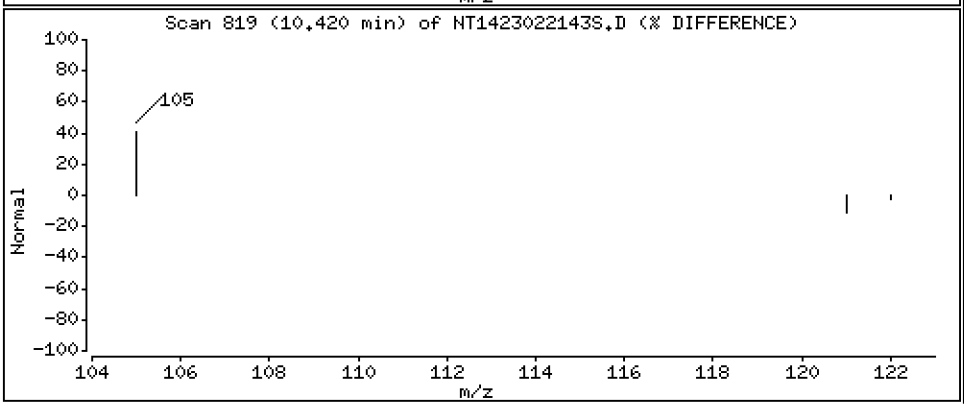












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

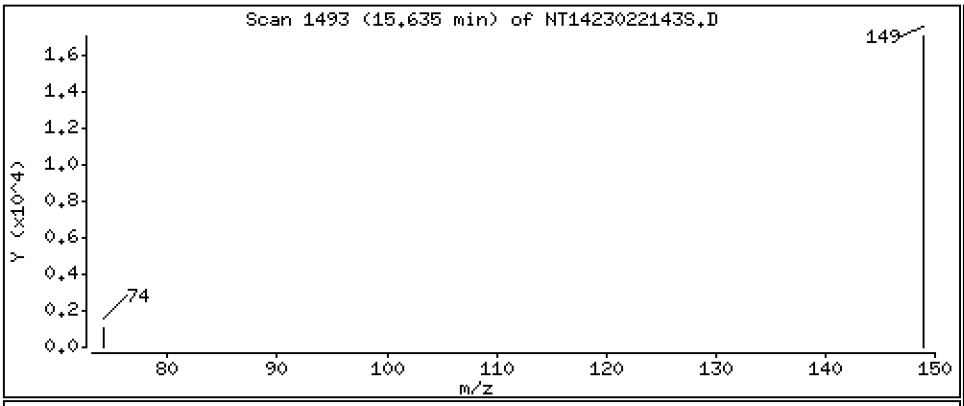
Operator: DSD

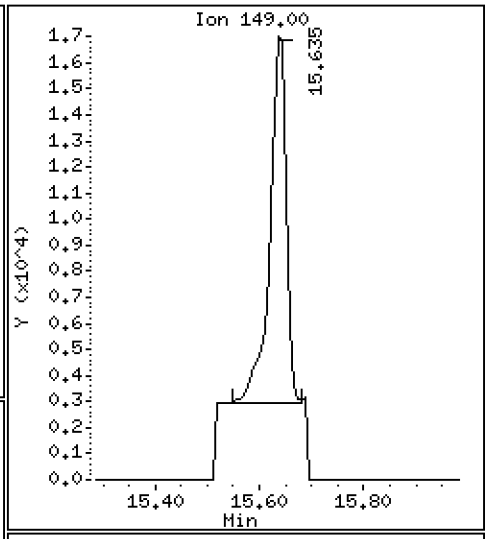
Column phase: ZB-5msi

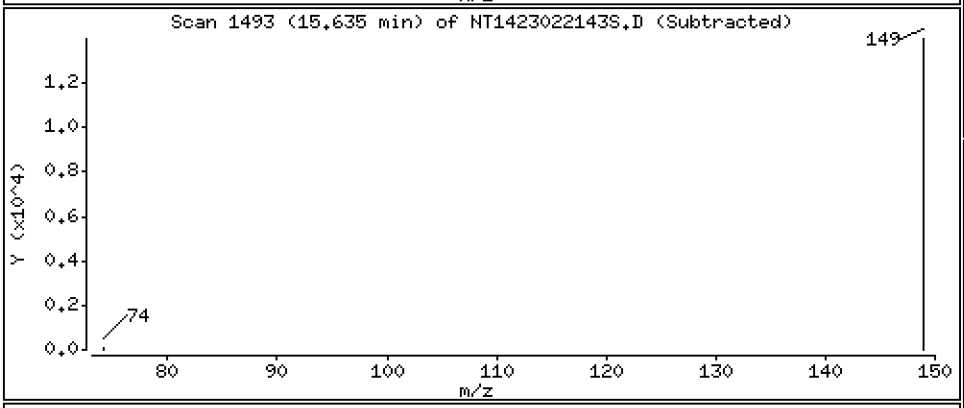
Column diameter: 0.25

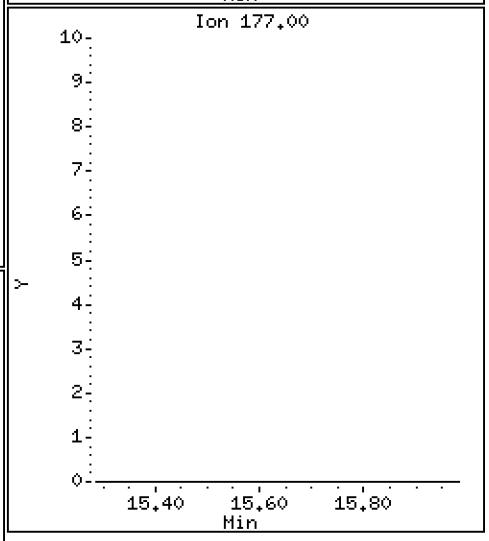
50 Diethylphthalate

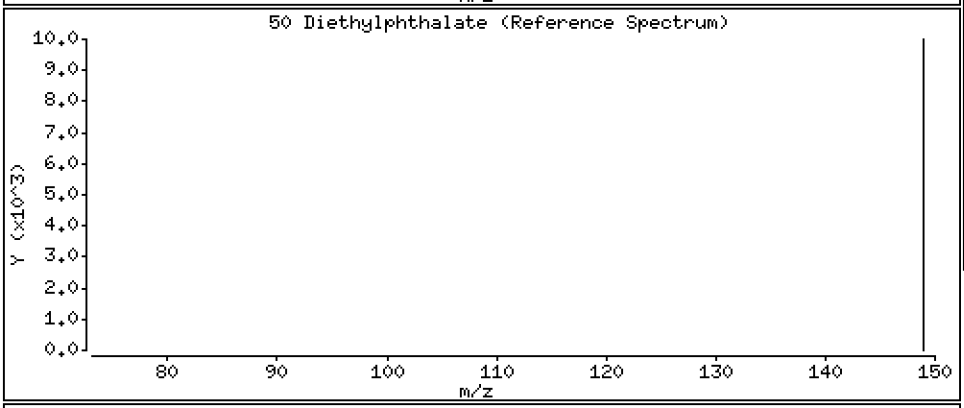
Concentration: 0.1421 ug/mL

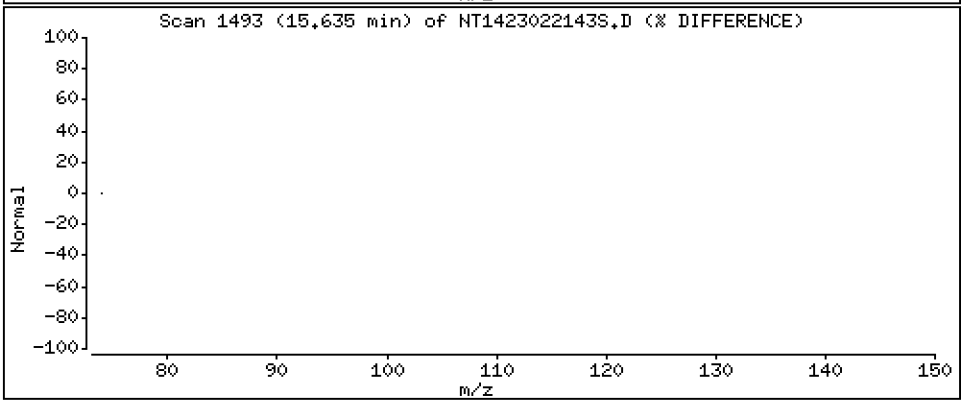












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

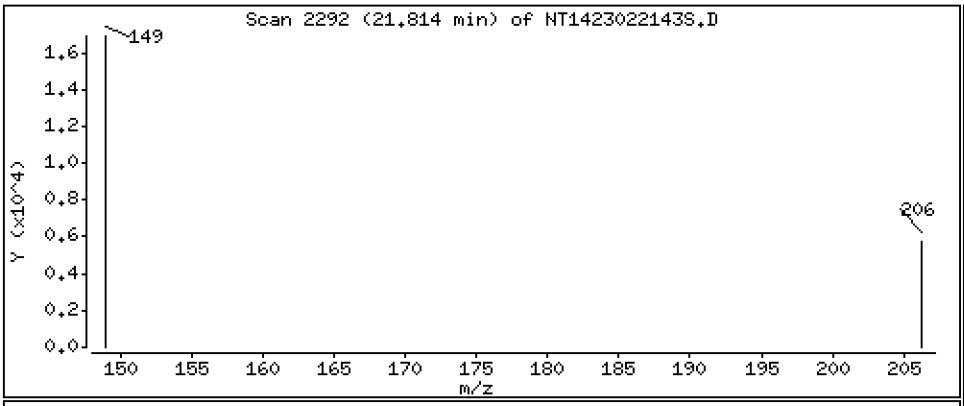
Operator: DSD

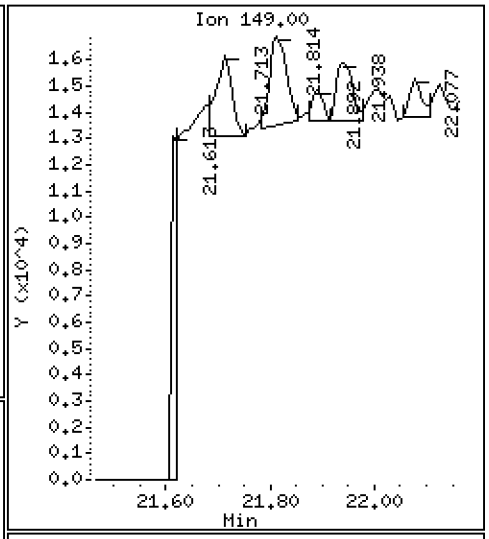
Column phase: ZB-5msi

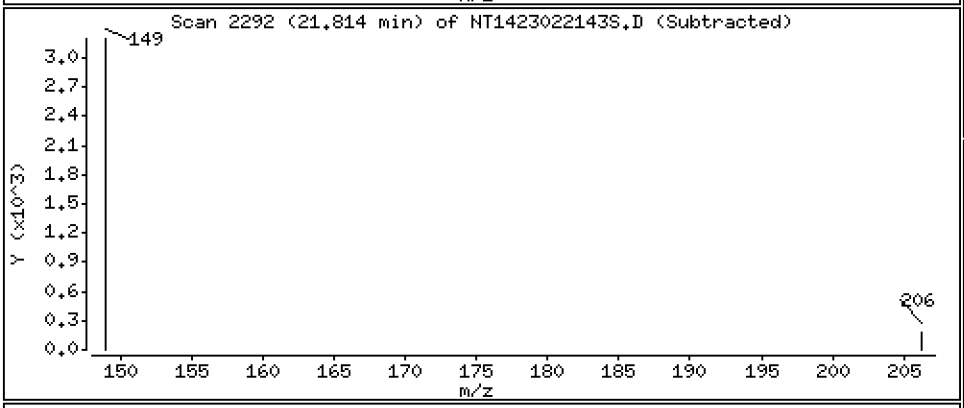
Column diameter: 0.25

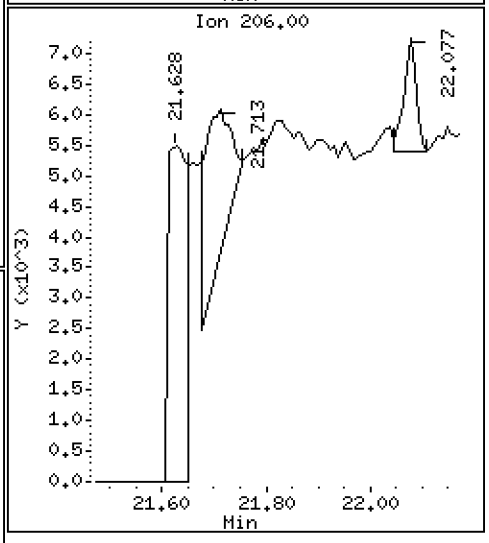
67 Butylbenzylphthalate

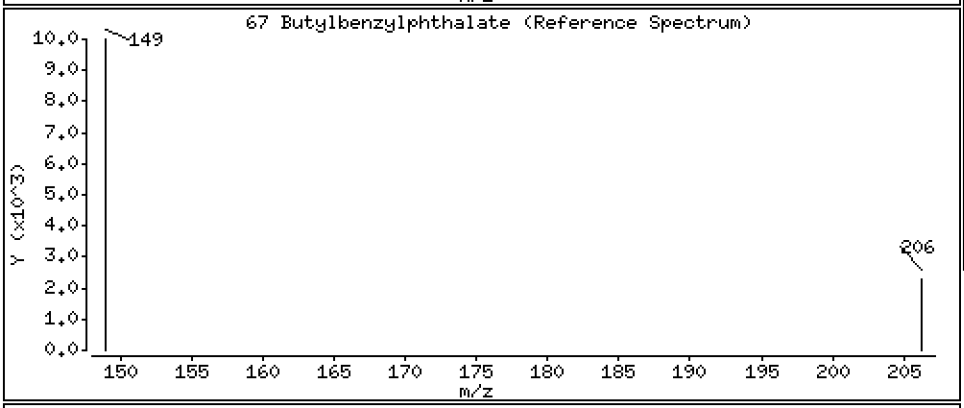
Concentration: 0.07458 ug/mL

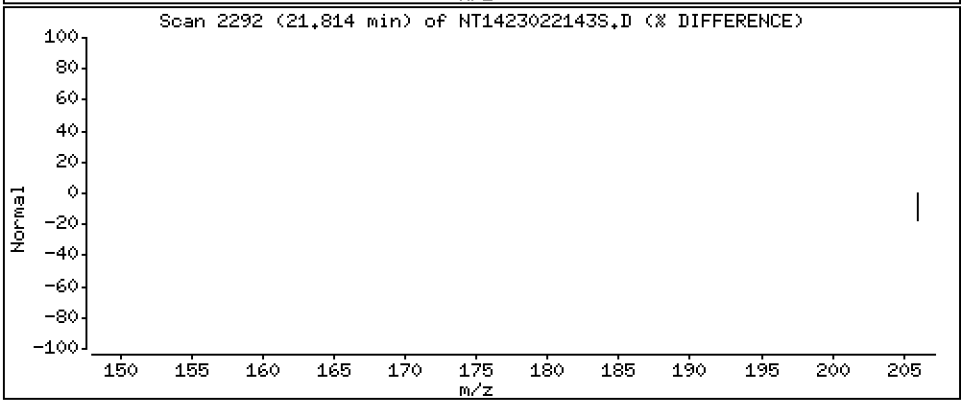












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Date : 22-FEB-2023 14:46

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-07

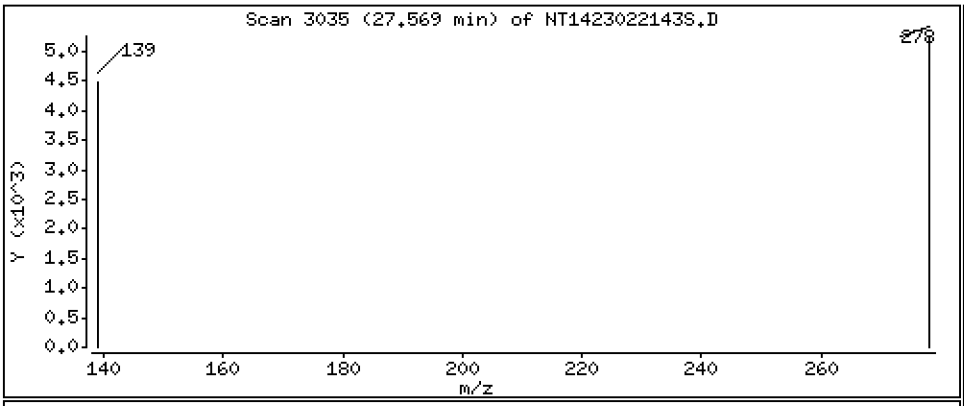
Operator: DSD

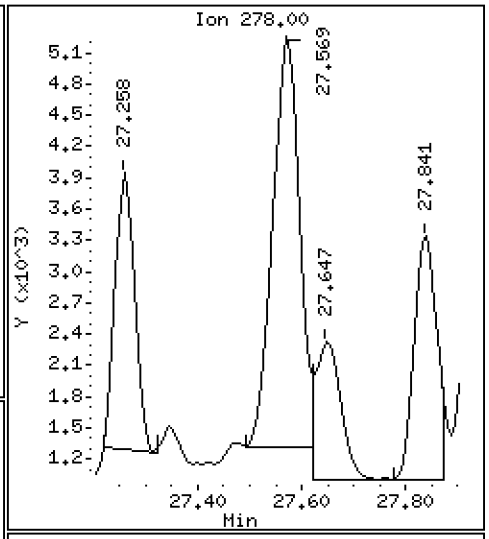
Column phase: ZB-5msi

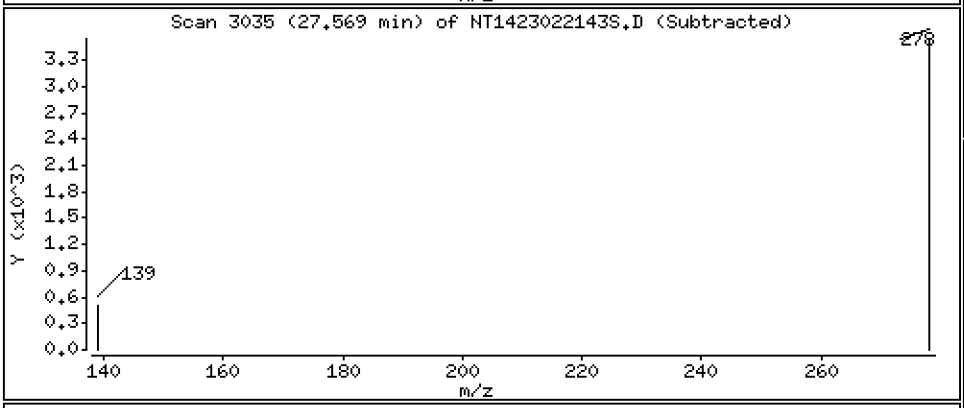
Column diameter: 0.25

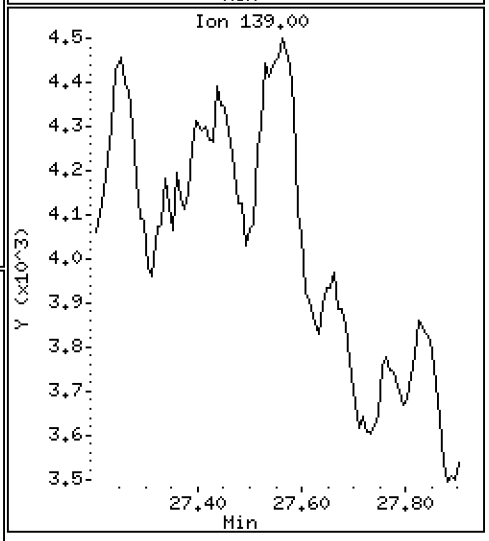
79 Dibenzo(a,h)anthracene

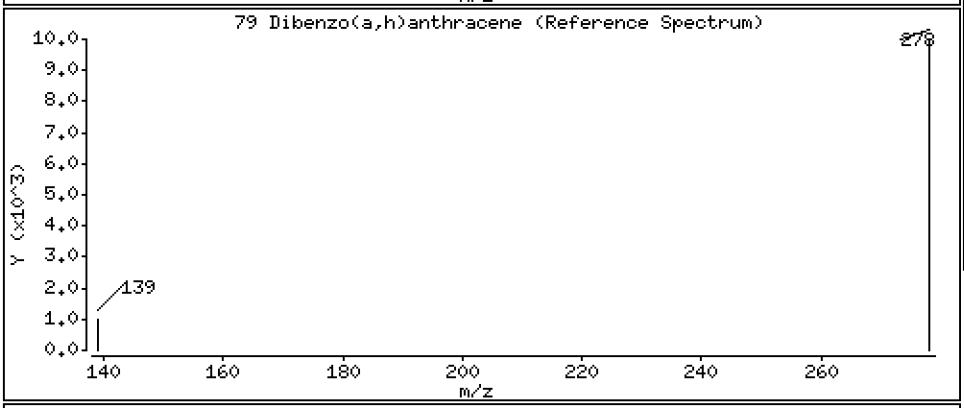
Concentration: 0.1295 ug/mL

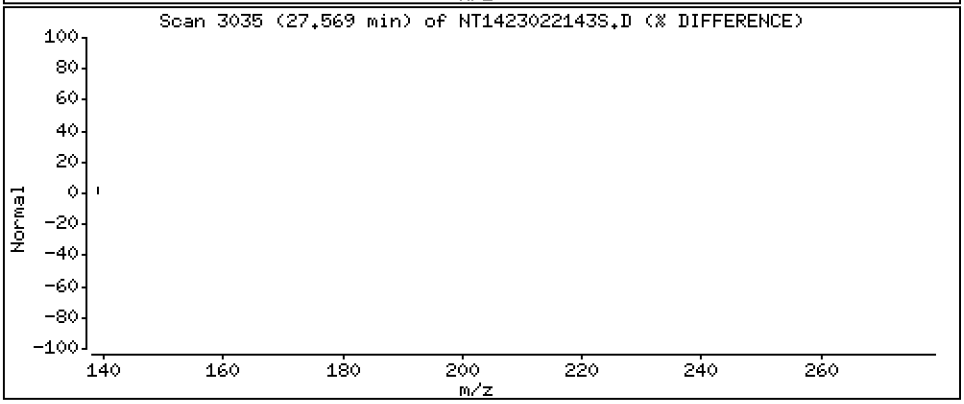












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT1423022143S.D
Lab Smp Id: 23A0133-07
Inj Date : 22-FEB-2023 14:46 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-07
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Meth Date : 17-Jun-2023 09:15 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 31
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.401	6.385	(0.747)	415548	4.94176	4.942(R)
	3 Phenol	94	7.993	7.993	(0.932)	25250	0.19880	0.1988
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.573	8.573	(1.000)	296383	4.00000	
	9 1,4-Dichlorobenzene	146	8.596	8.596	(1.003)	1678	0.01744	0.01744(M)
	11 Benzyl alcohol	79	8.875	8.867	(1.035)	4997	0.06156	0.06156
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	9.101	9.093	(1.062)	2057	0.02338	0.02338(M)
	15 4-Methylphenol	108	9.372	9.372	(1.093)	54803	0.56770	0.5677
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.420	10.404	(0.944)	2265	0.02311	0.02311
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.040	11.039	(1.000)	1069932	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
*	42 Acenaphthene-d10	162	14.653	14.645	(1.000)	552424	4.00000	
	50 Diethylphthalate	149	15.635	15.634	(1.067)	29972	0.14209	0.1421(M)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.681	17.673	(1.000)	1198526	4.00000	
$	66 Terphenyl-d14	244	20.885	20.869	(0.916)	815334	3.84308	3.843(R)
	67 Butylbenzylphthalate	149	21.814	21.813	(0.957)	7457	0.07458	0.07458
*	69 Chrysene-d12	240	22.789	22.766	(1.000)	796921	4.00000	
*	77 Perylene-d12	264	25.236	25.212	(1.000)	630918	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.569	27.553	(1.092)	14297	0.12945	0.1295
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022143S.D
Lab Smp Id: 23A0133-07
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 08:08
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	261796	130898	523592	296383	13.21
27 Naphthalene-d8	959301	479651	1918602	1069932	11.53
42 Acenaphthene-d10	503659	251830	1007318	552424	9.68
59 Phenanthrene-d10	1179954	589977	2359908	1198526	1.57
69 Chrysene-d12	887360	443680	1774720	796921	-10.19
77 Perylene-d12	652371	326186	1304742	630918	-3.29

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	0.05
59 Phenanthrene-d10	17.67	17.17	18.17	17.68	0.05
69 Chrysene-d12	22.77	22.27	23.27	22.79	0.10
77 Perylene-d12	25.21	24.71	25.71	25.24	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022143S.D

Lab ID: 23A0133-07
nt14.i, 20230221B.b\SIM.b\SIMABN2.m,   22-FEB-2023 14:46

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1423022132S.D

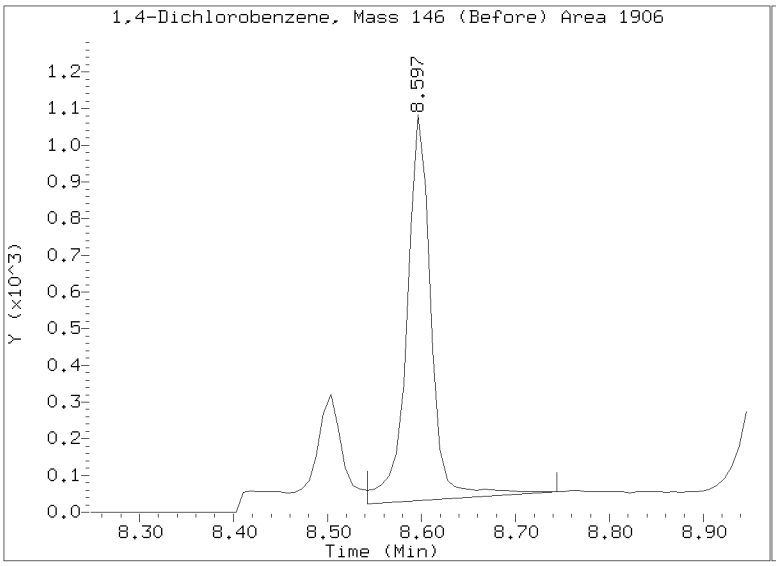
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

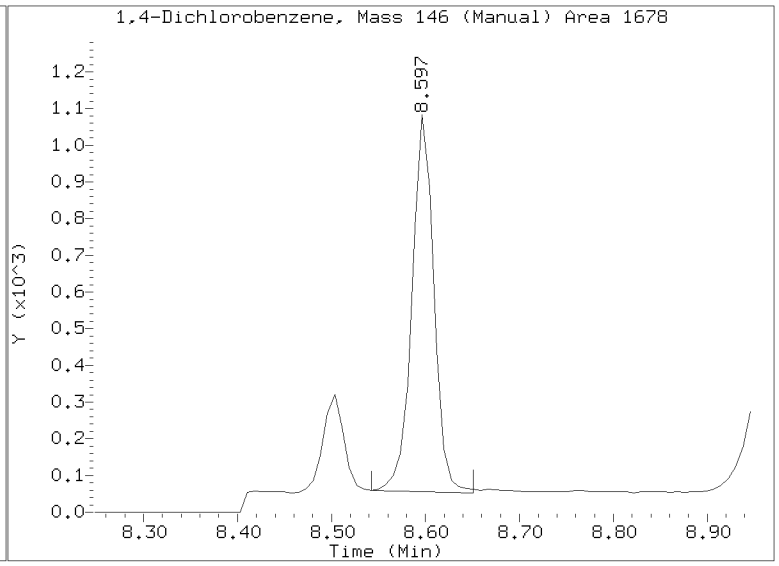
Exception: 1,2,4-Trichlorobenzene 0.0010

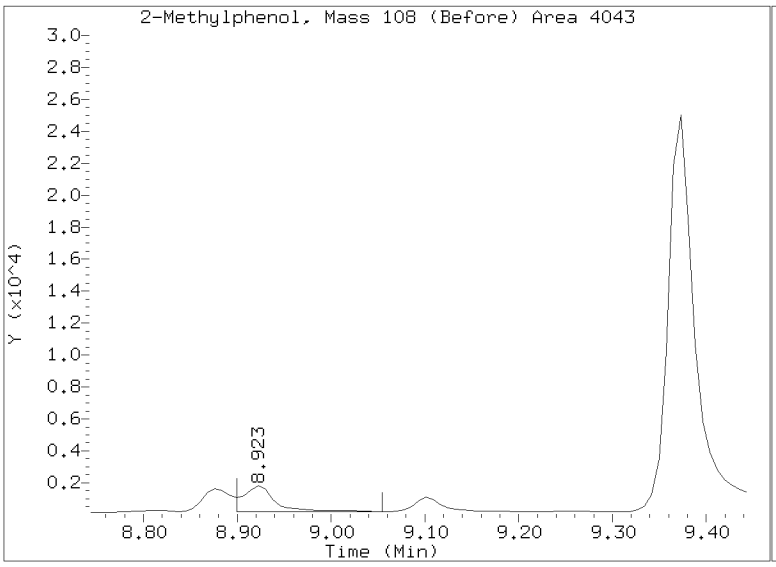
* Only compounds listed in the work order have been verified by the analyst *

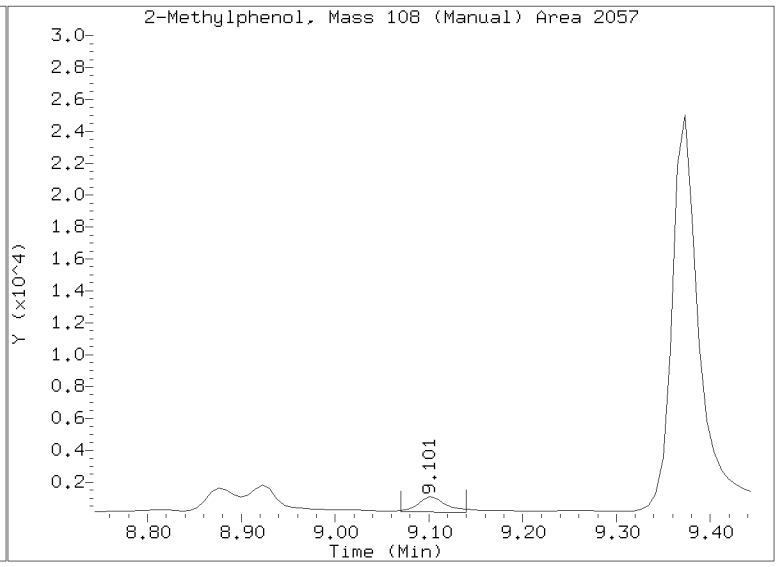
Quant Ion Manual Peak Adjustment Report

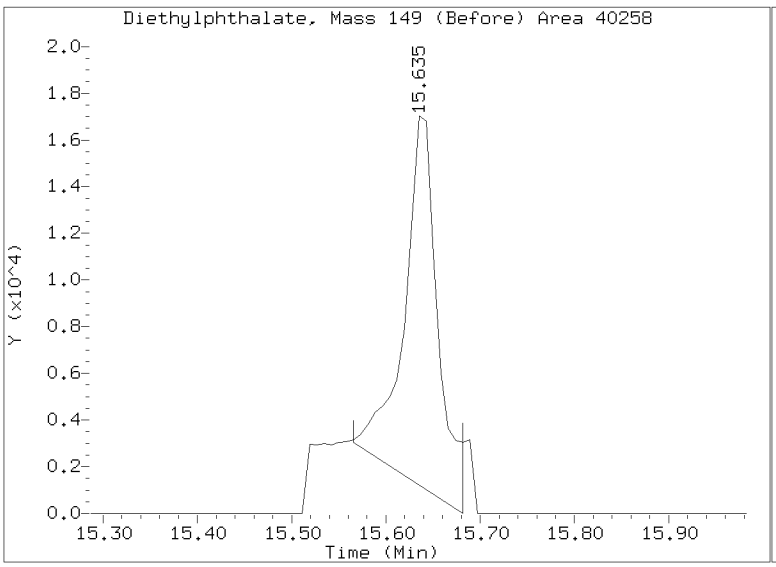
Datafile: //target/share/chem3/nt14.i/20230221B.b/SIM.b/NT1423022143S.D
Injection Date: 22-FEB-2023 14:46
Lab ID:23A0133-07 Client ID:
Report Date: 06/17/2023 09:48

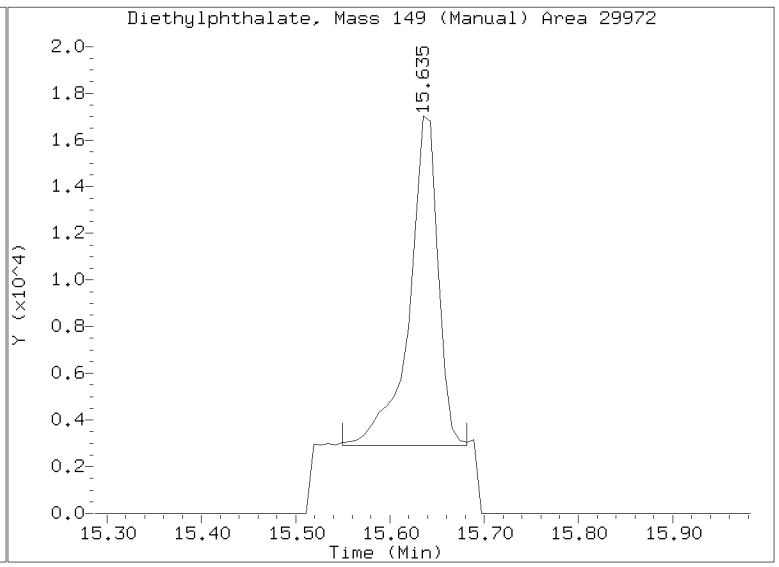












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1185

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-08 C	SDG:	23A0133
Sampled:	01/06/23 12:00	Prepared:	01/18/23 15:24	File ID:	NT1423022151S.D
% Solids:	58.60	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 19:36
Batch:	BLA0393	Sequence:	SLB0351	Initial/Final:	17.09 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GC00009
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	2.6	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	0.8	J	0.7	5.0
100-51-6	Benzyl Alcohol	1	20.2		2.5	20.0
65-85-0	Benzoic acid	1	399	U	13.4	399
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	39.9	U	2.1	39.9

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.90	465	62.1	27 - 120	
p-Terphenyl-d14	499.26	450	90.1	37 - 120	Q

Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221S1S.D

Page 1

Date : 22-FEB-2023 19:36

Client ID:

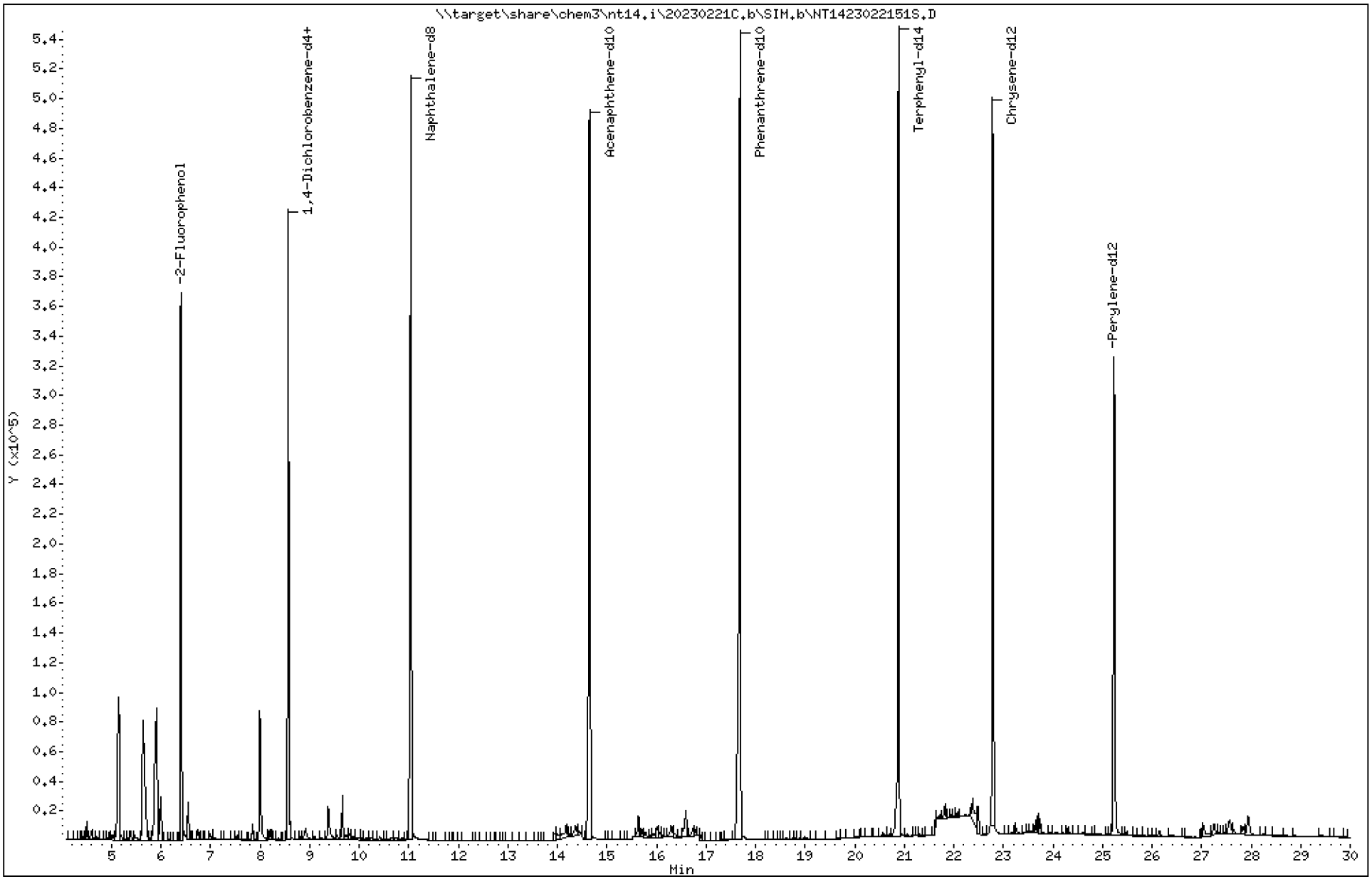
Instrument: nt14.i

Sample Info: 23A0133-08

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

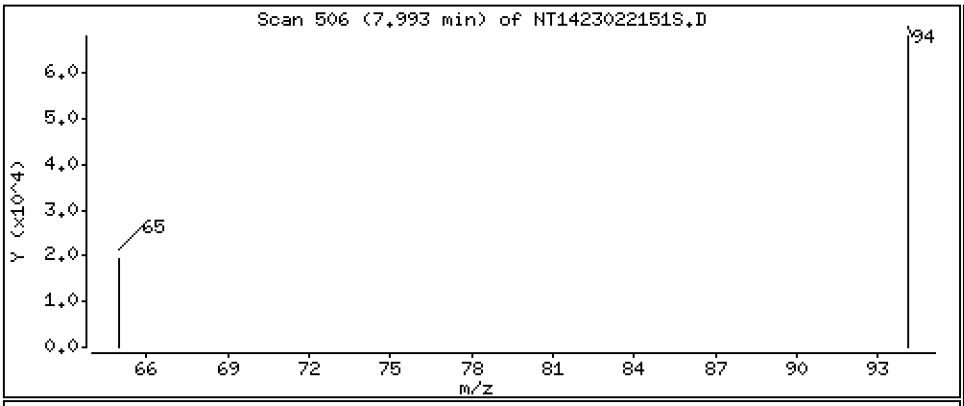
Operator: DSD

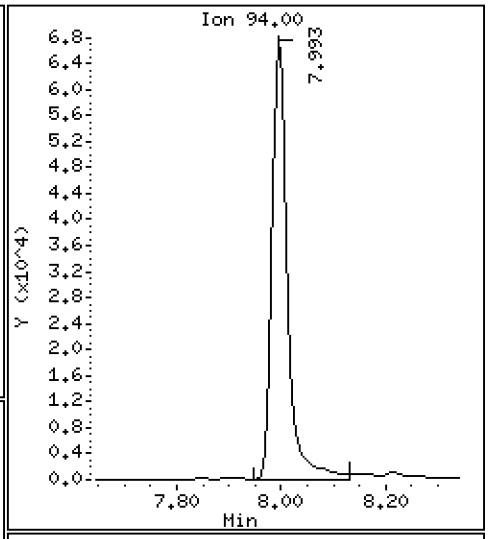
Column phase: ZB-5msi

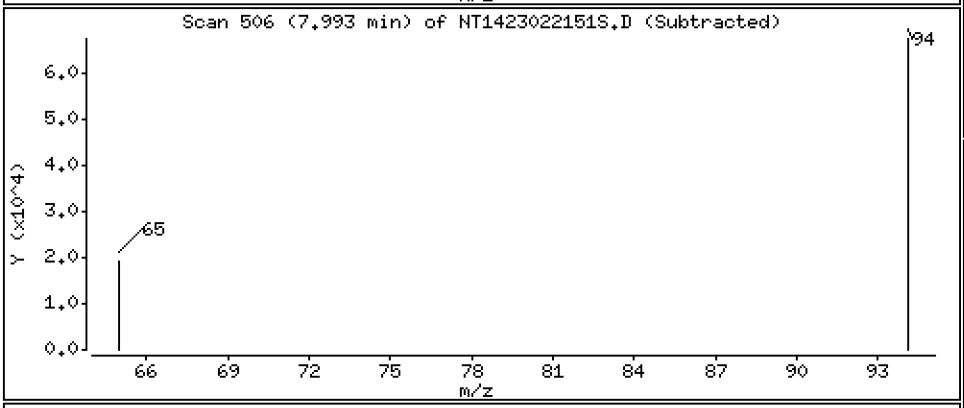
Column diameter: 0.25

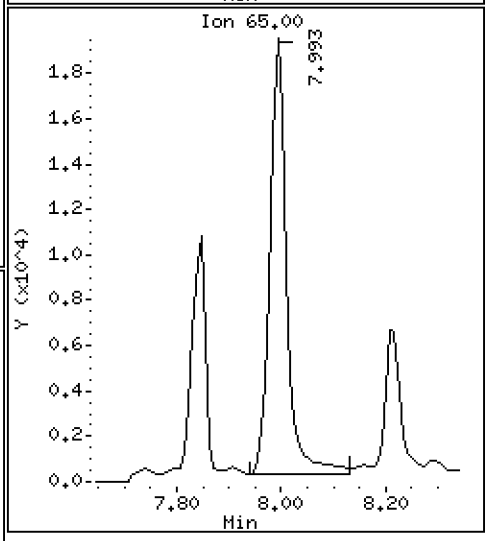
3 Phenol

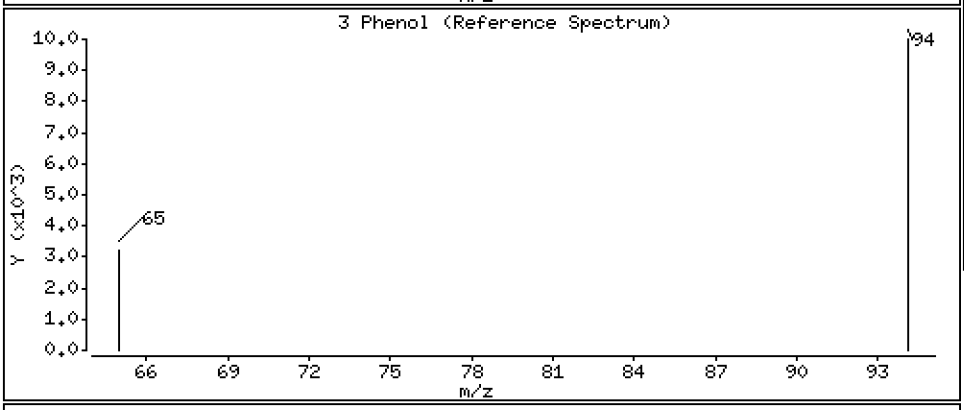
Concentration: 1.144 ug/mL

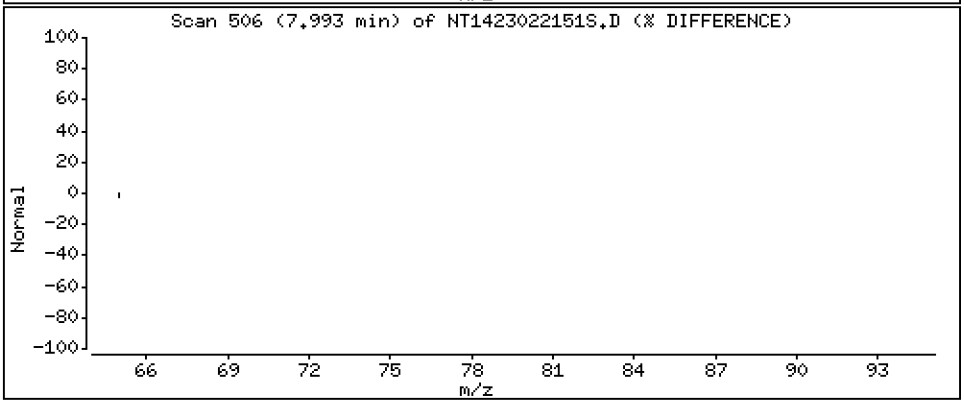












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

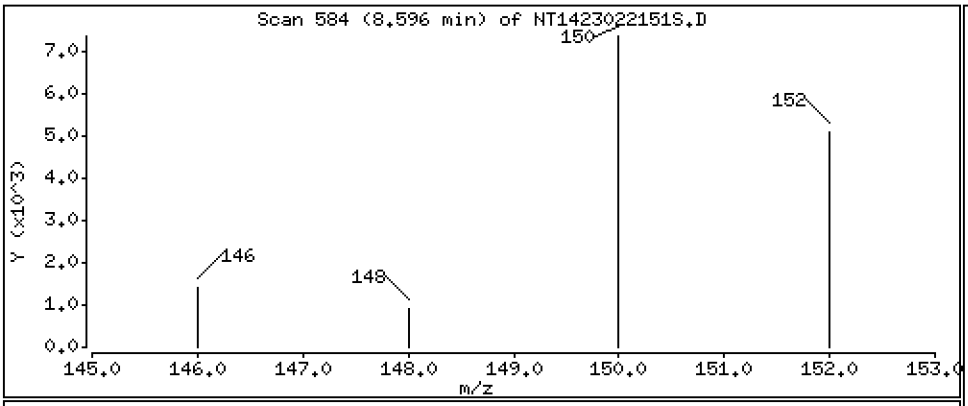
Operator: DSD

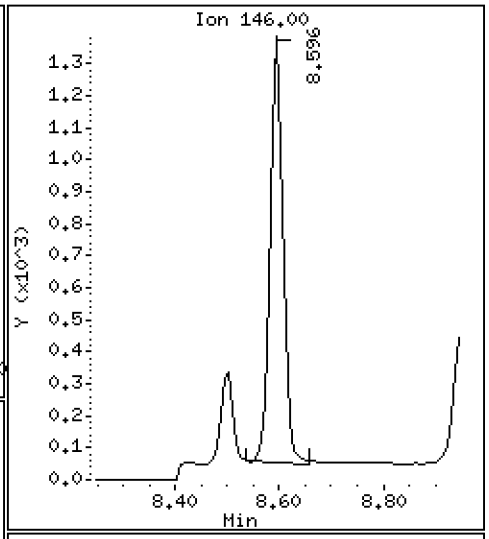
Column phase: ZB-5msi

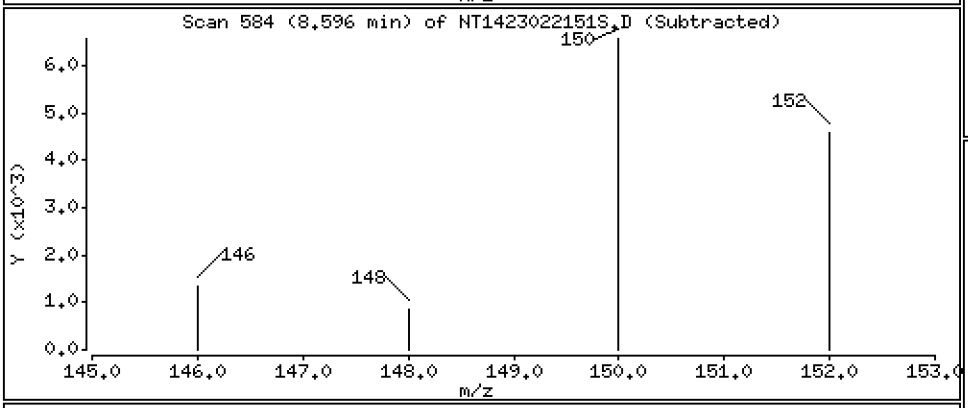
Column diameter: 0.25

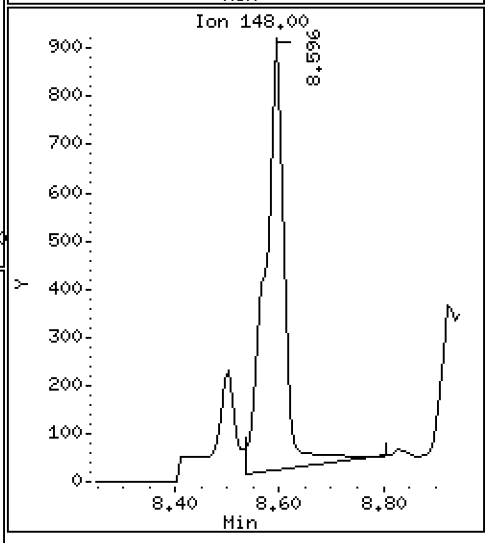
9 1,4-Dichlorobenzene

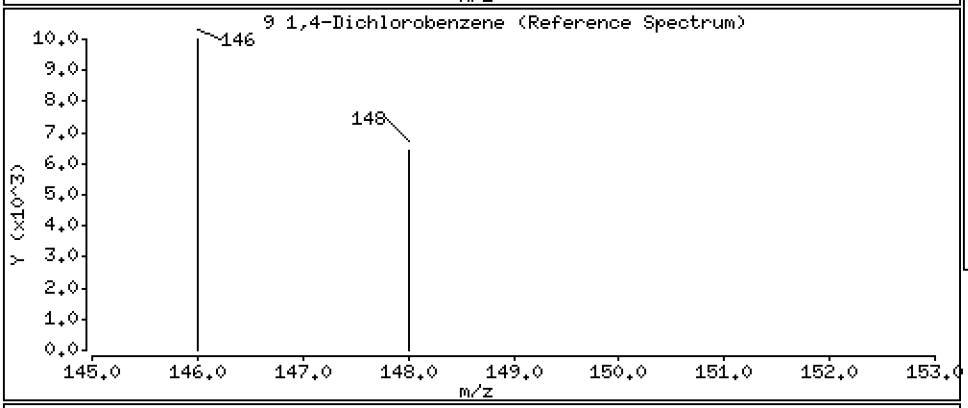
Concentration: 0.02563 ug/mL

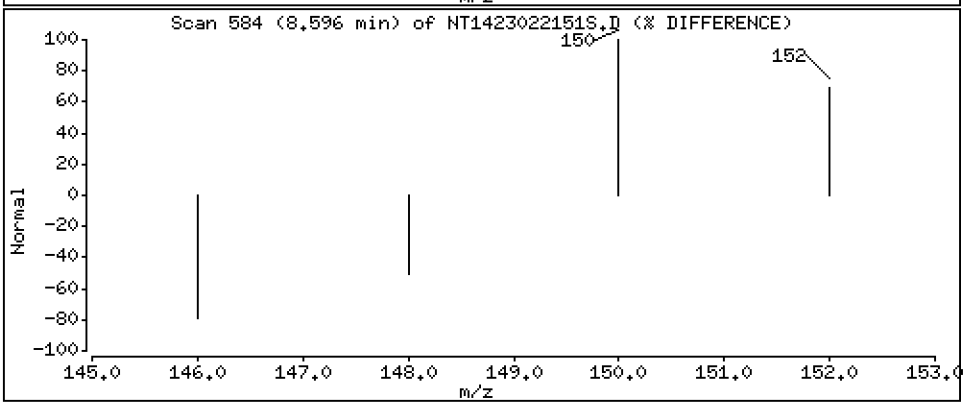












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

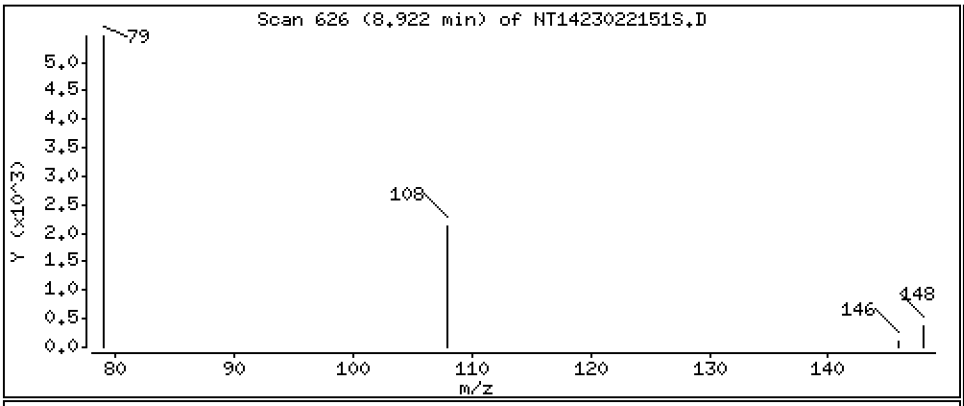
Operator: DSD

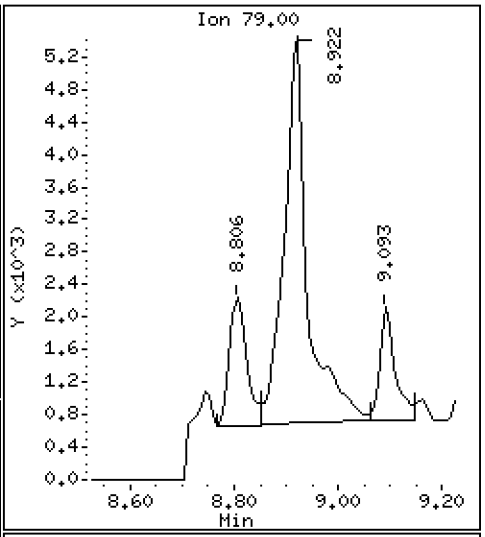
Column phase: ZB-5msi

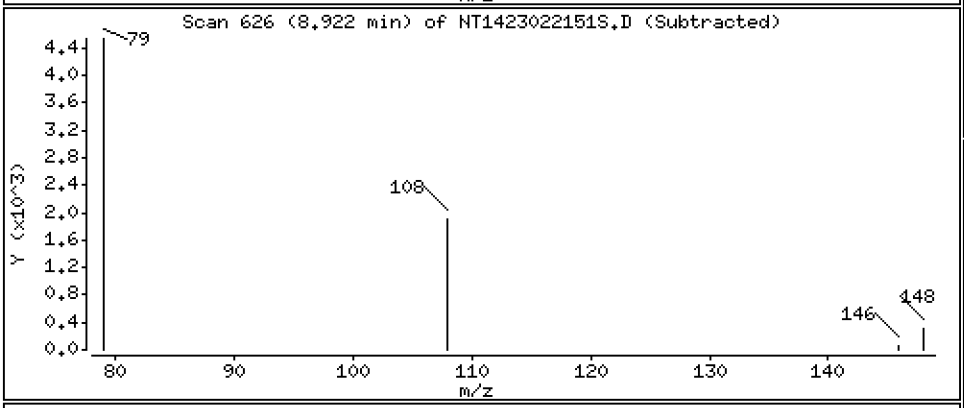
Column diameter: 0.25

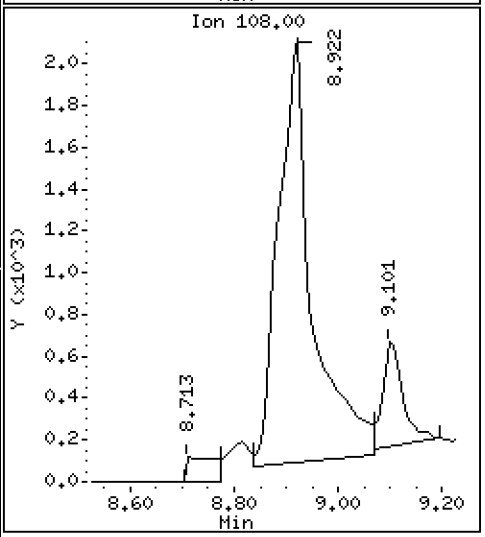
11 Benzyl alcohol

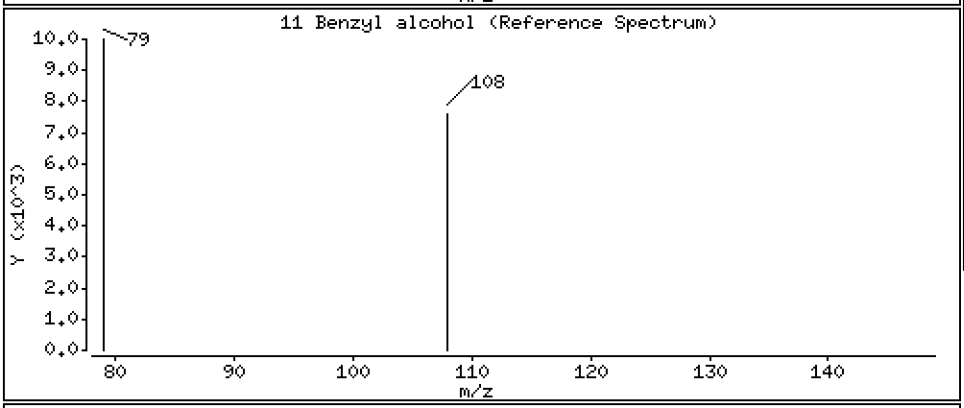
Concentration: 0.2026 ug/mL

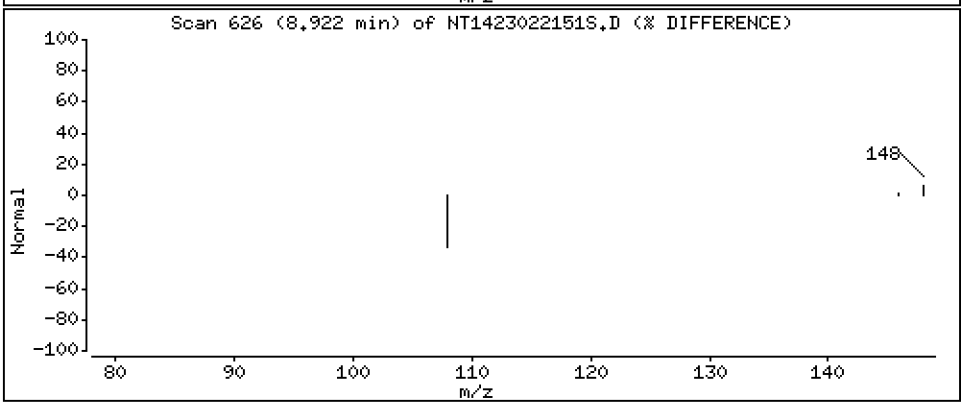












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

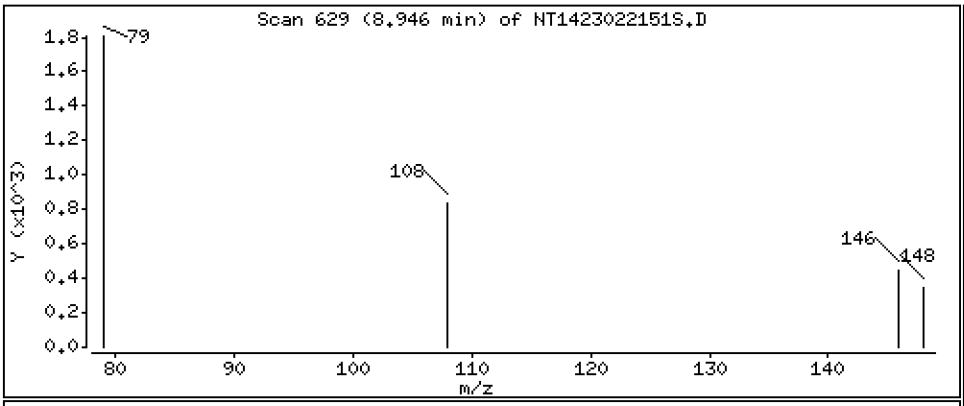
Operator: DSD

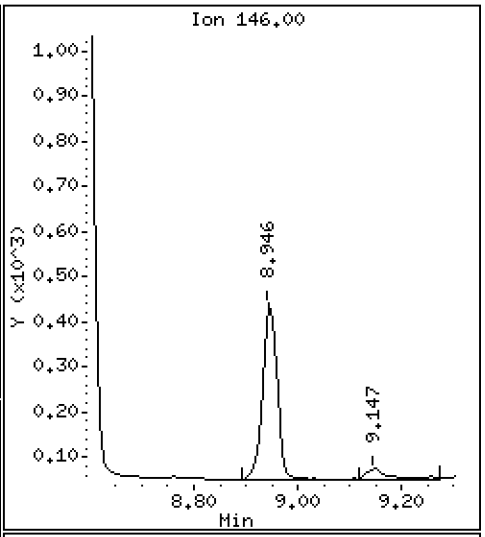
Column phase: ZB-5msi

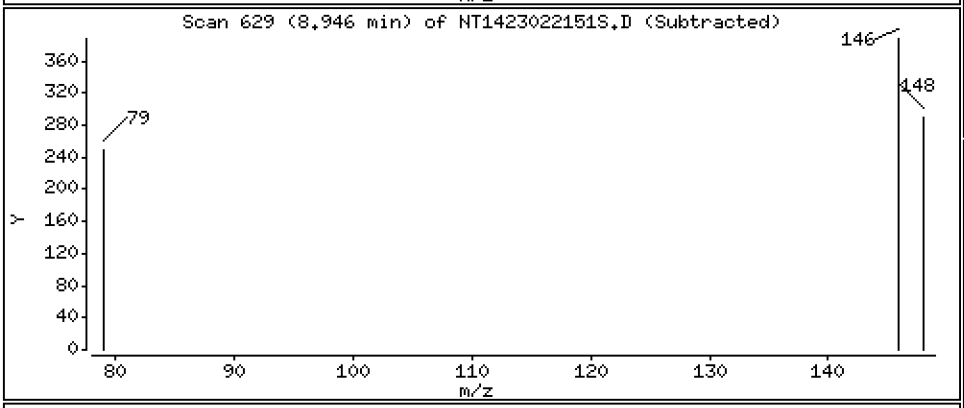
Column diameter: 0.25

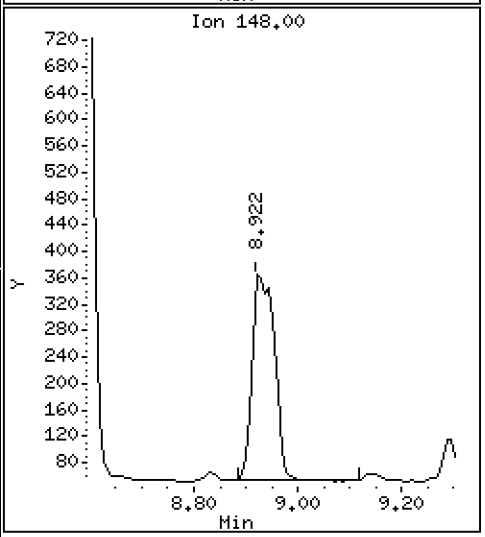
12 1,2-Dichlorobenzene

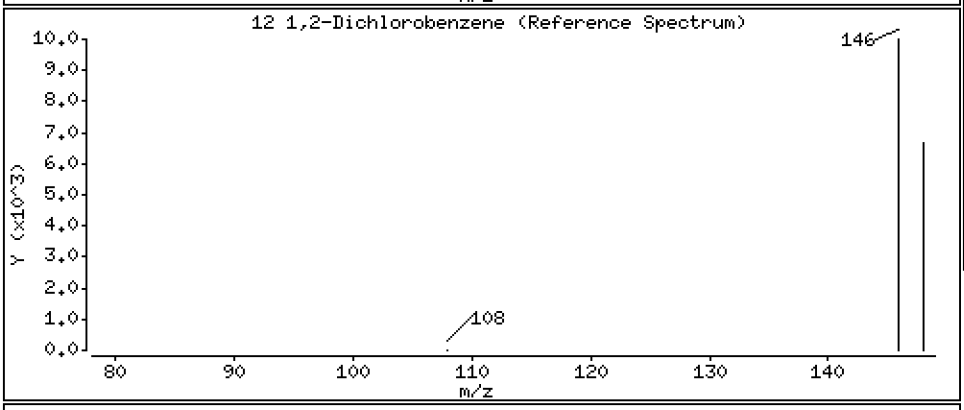
Concentration: 0.008192 ug/mL

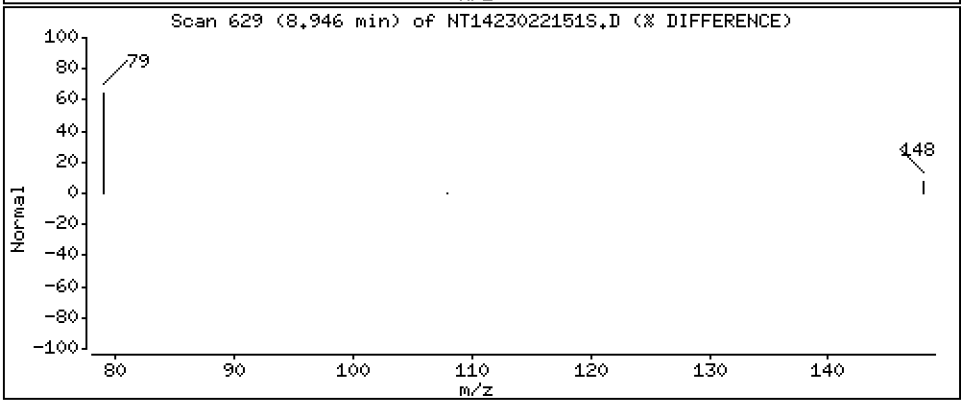












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

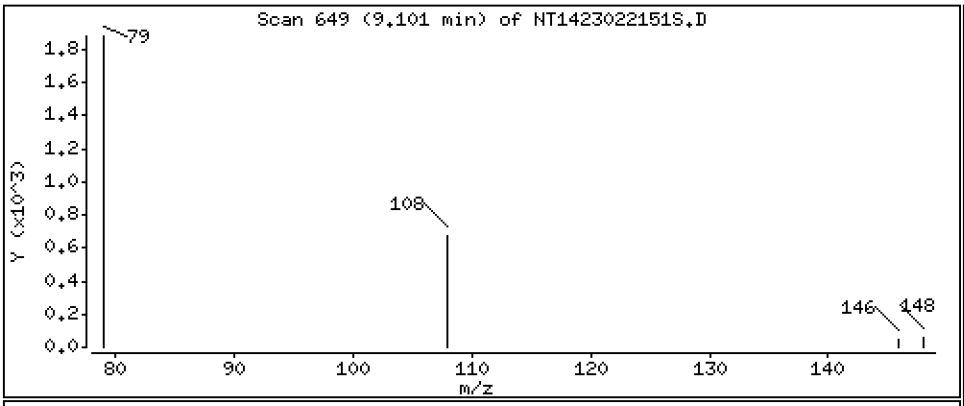
Operator: DSD

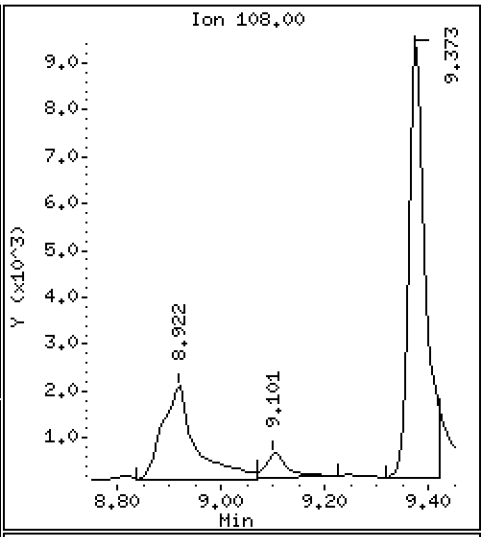
Column phase: ZB-5msi

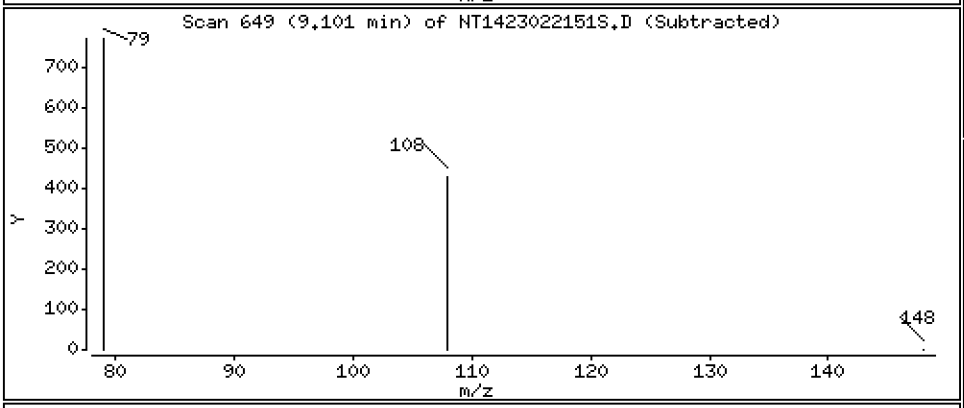
Column diameter: 0.25

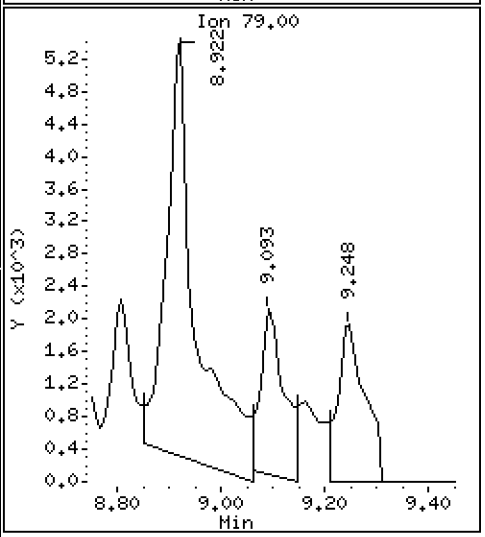
13 2-Methylphenol

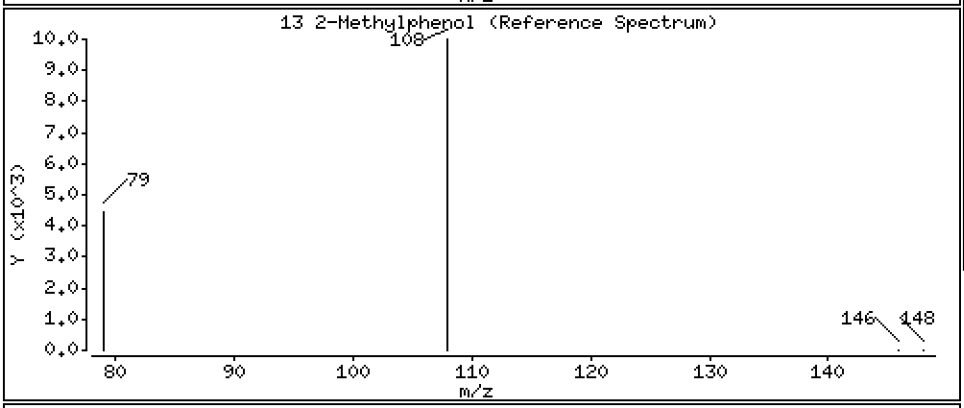
Concentration: 0.01677 ug/mL

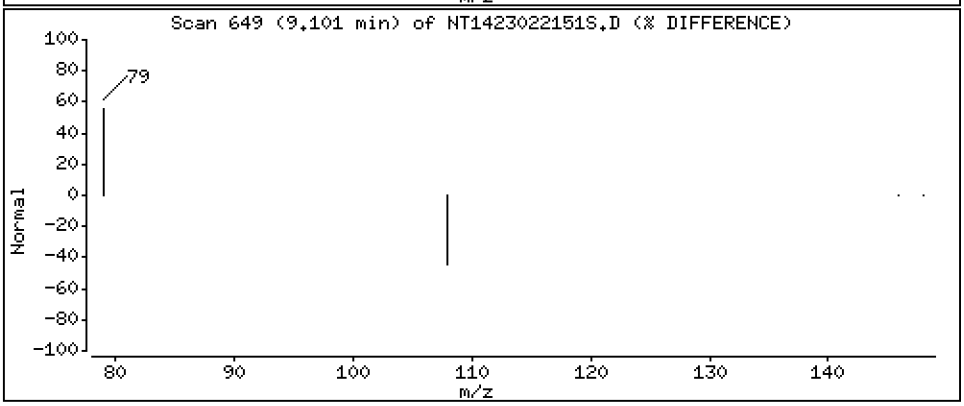












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Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

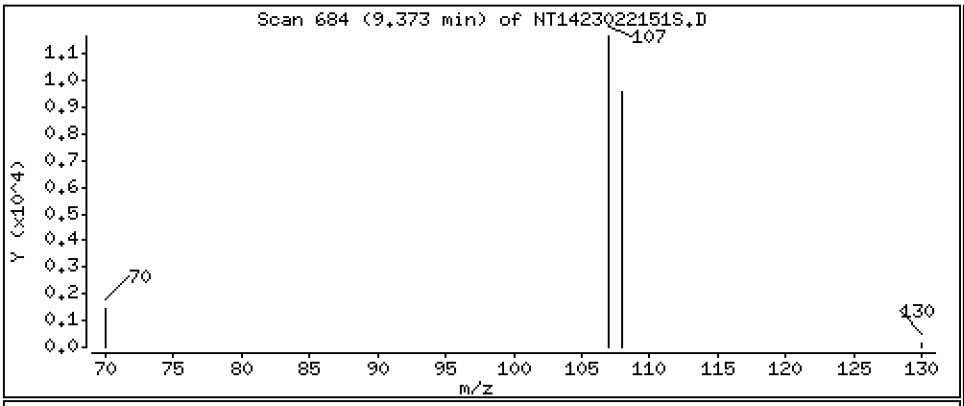
Operator: DSD

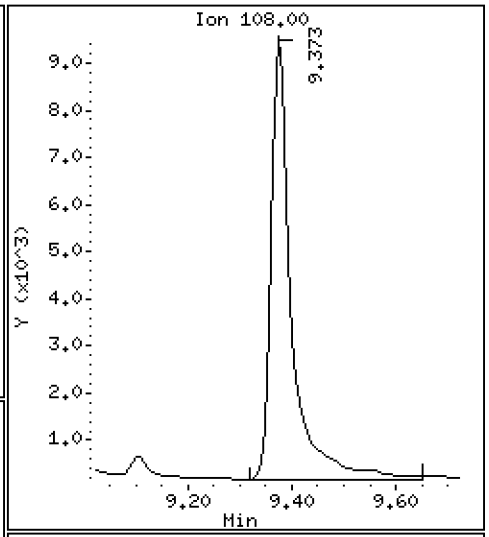
Column phase: ZB-5msi

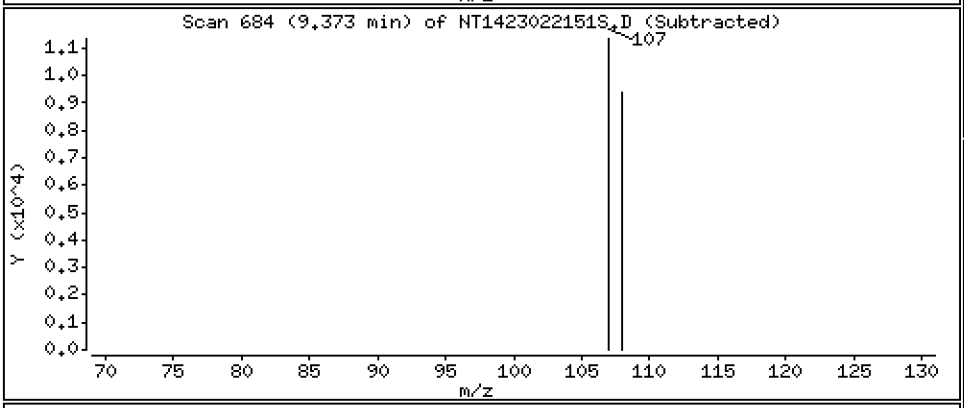
Column diameter: 0.25

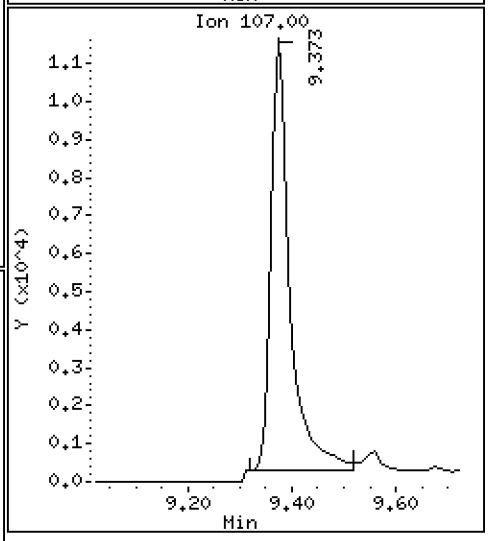
15 4-Methylphenol

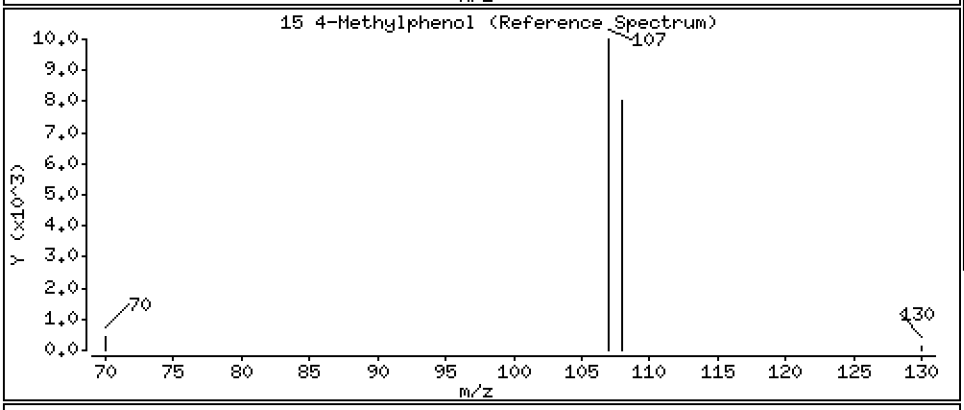
Concentration: 0.2841 ug/mL

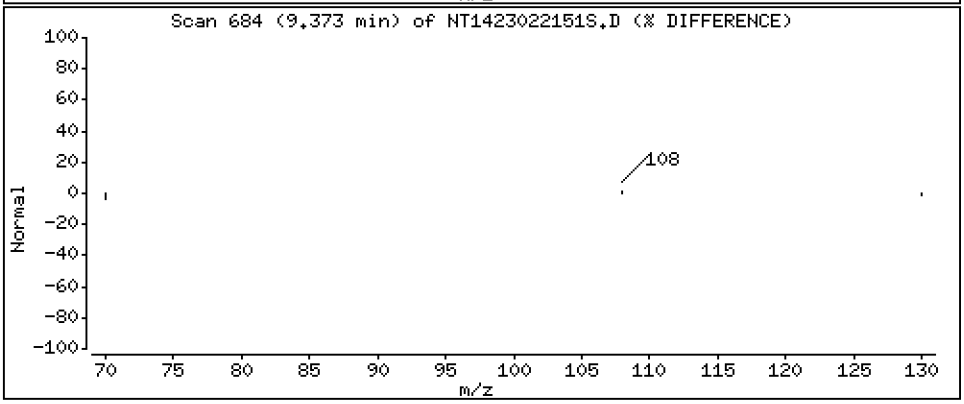












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022151S.D

Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

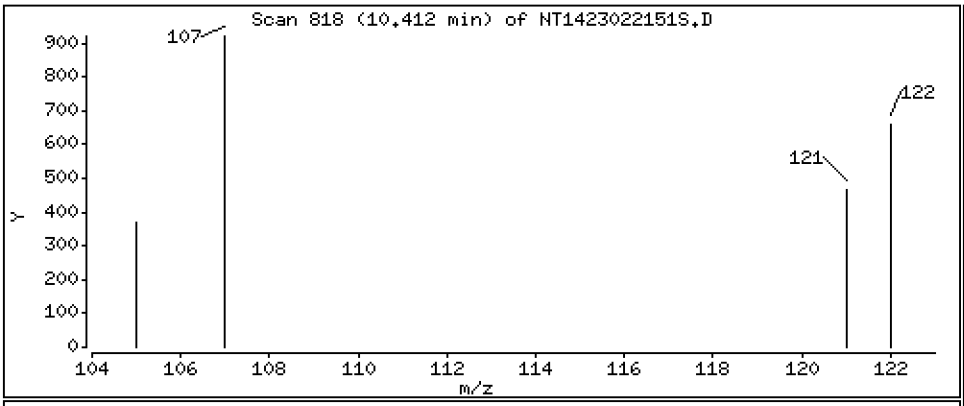
Operator: DSD

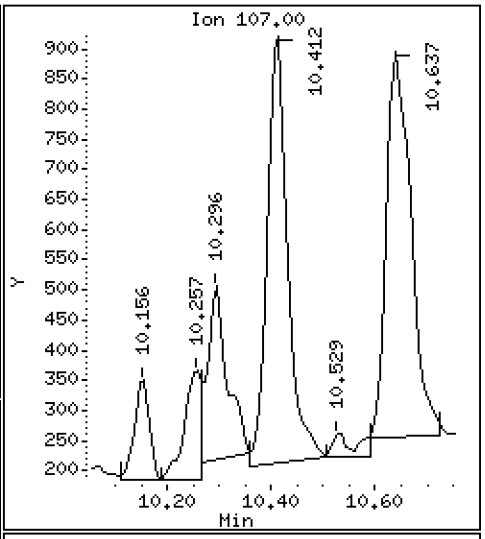
Column phase: ZB-5msi

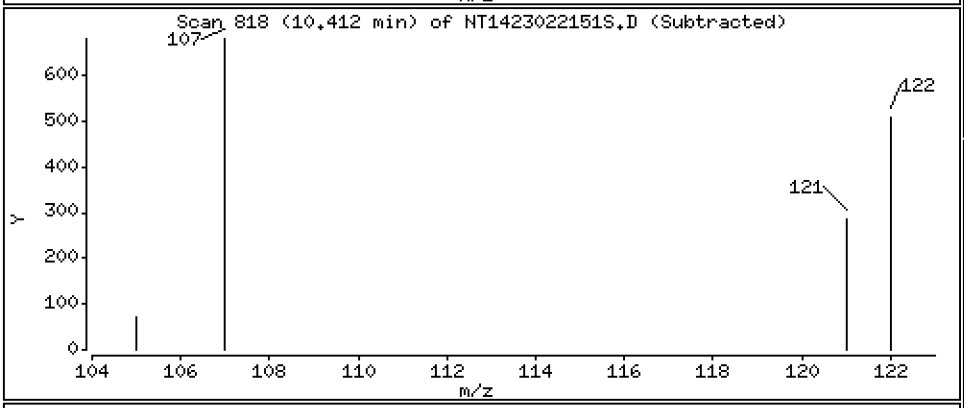
Column diameter: 0.25

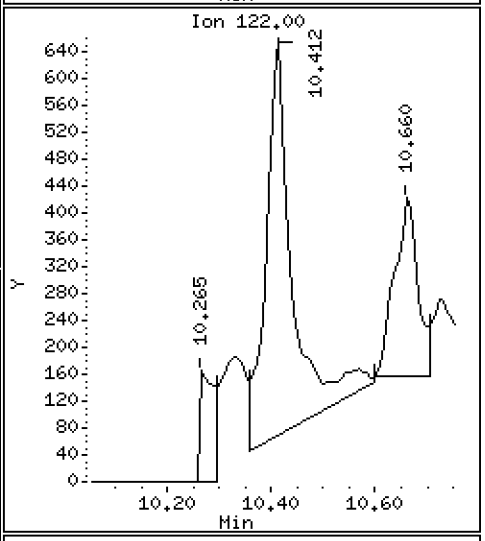
22 2,4-Dimethylphenol

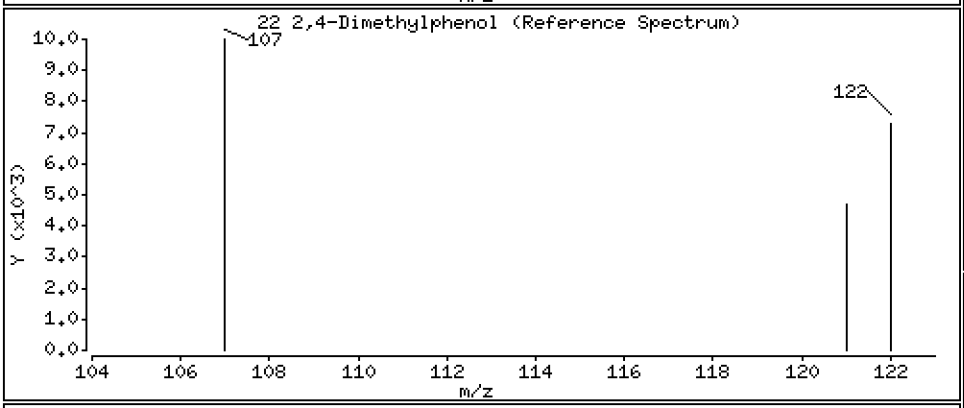
Concentration: 0.02077 ug/mL

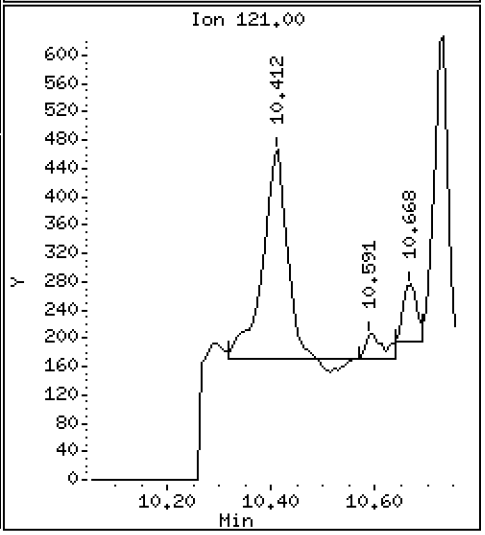


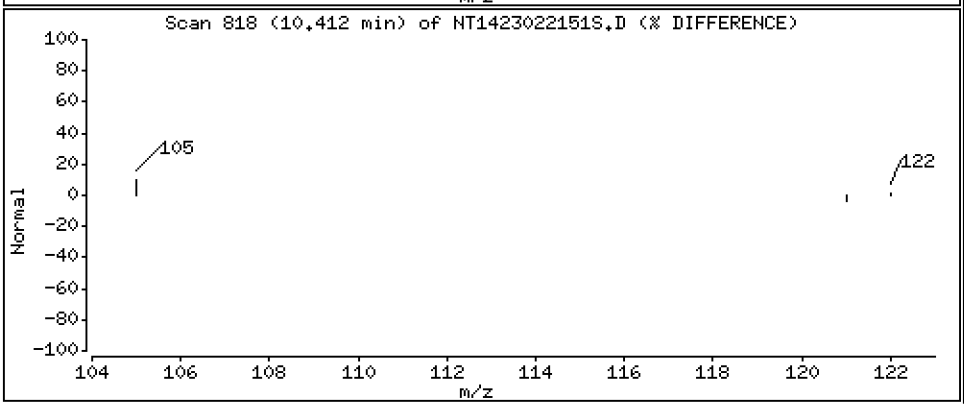












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221S1S.D

Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

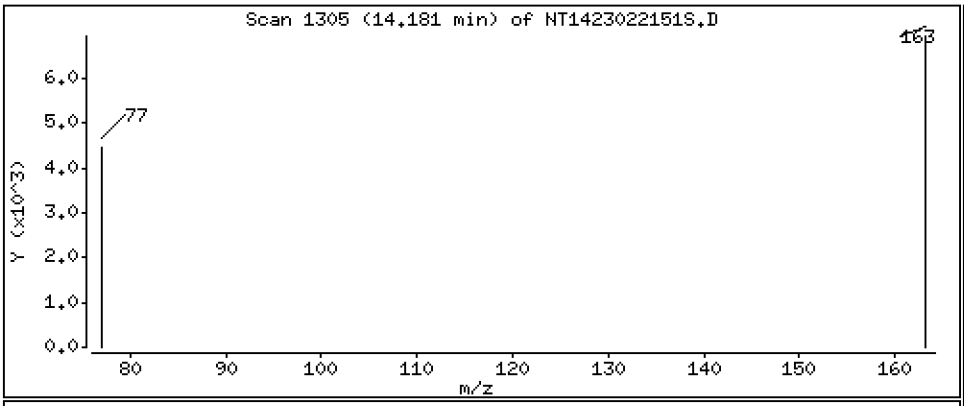
Operator: DSD

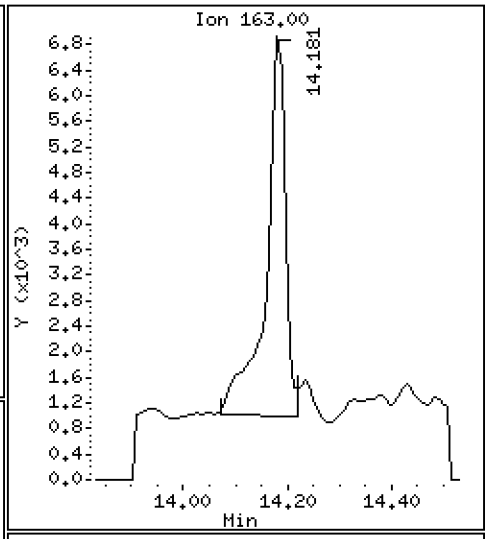
Column phase: ZB-5msi

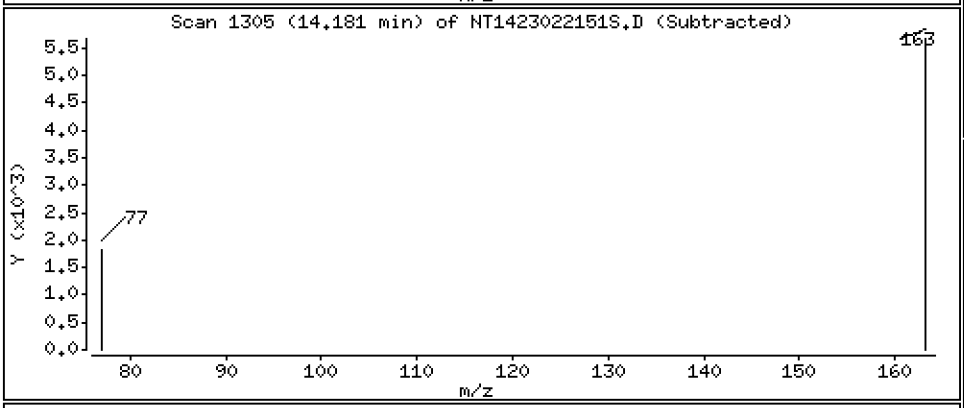
Column diameter: 0.25

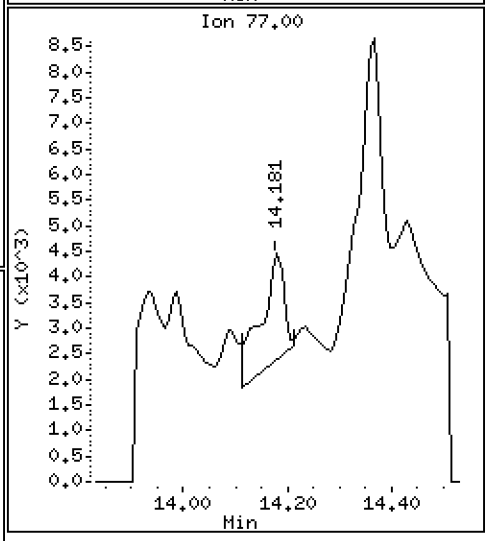
39 Dimethylphthalate

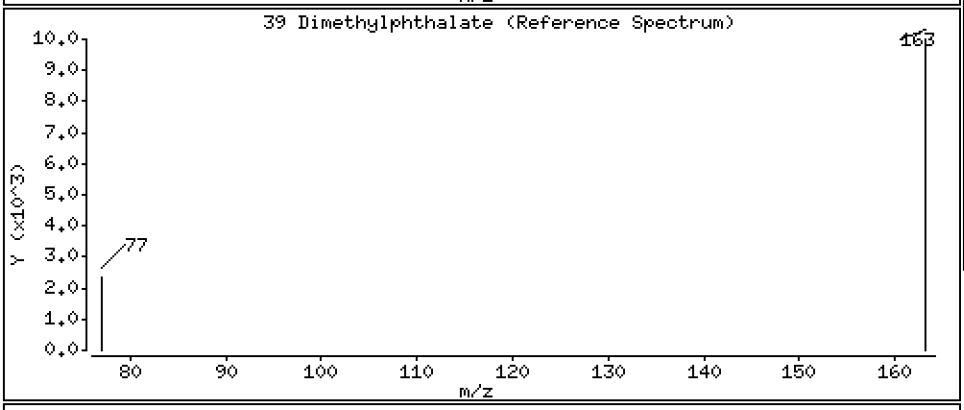
Concentration: 0.09428 ug/mL

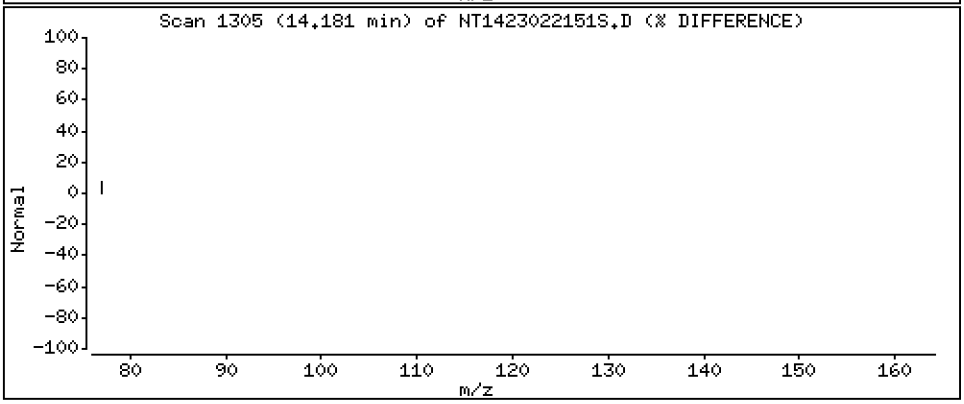












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022151S.D

Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

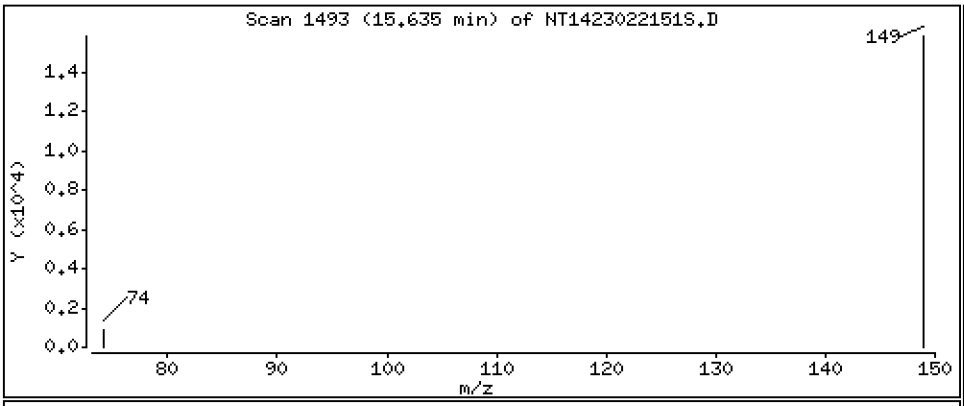
Operator: DSD

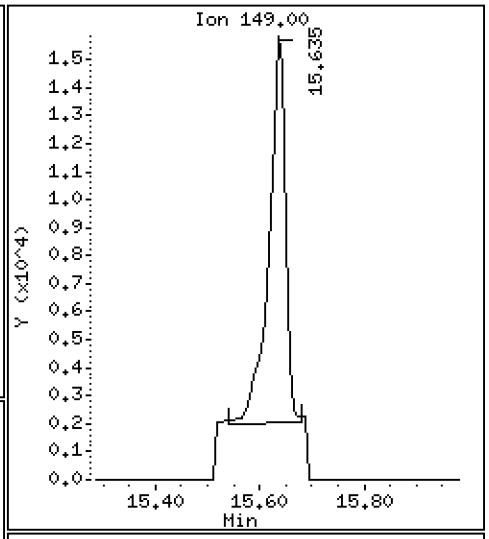
Column phase: ZB-5msi

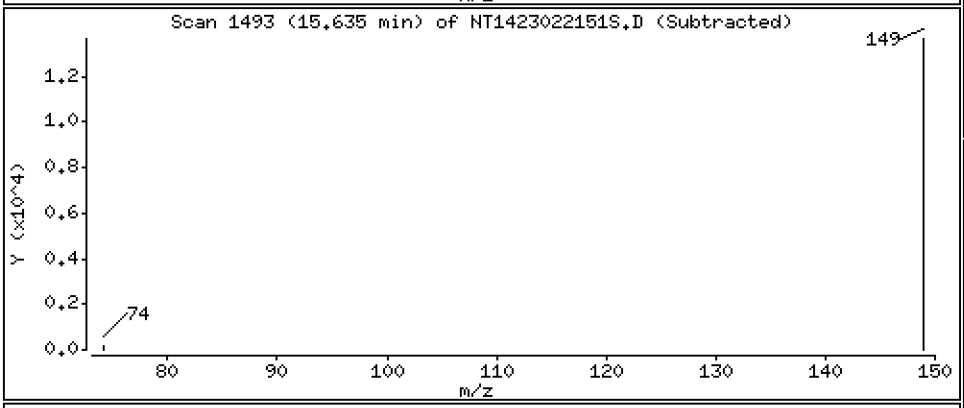
Column diameter: 0.25

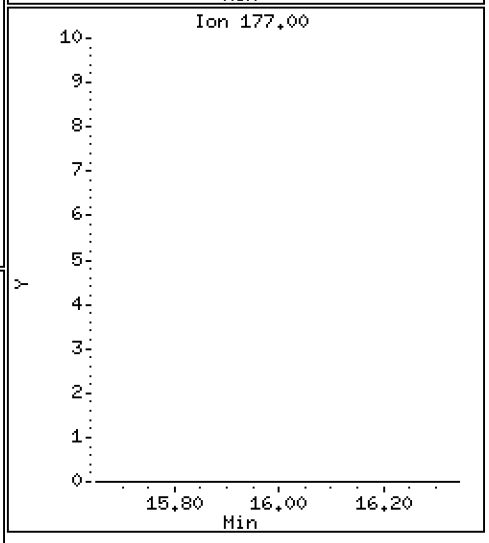
50 Diethylphthalate

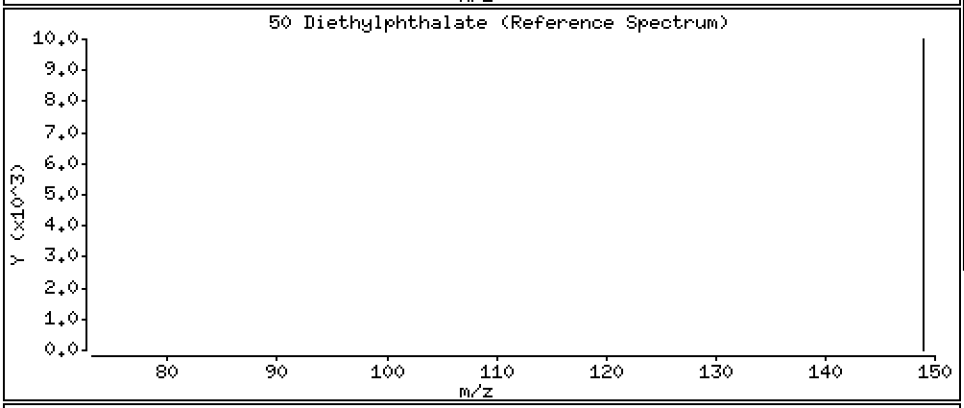
Concentration: 0.1519 ug/mL

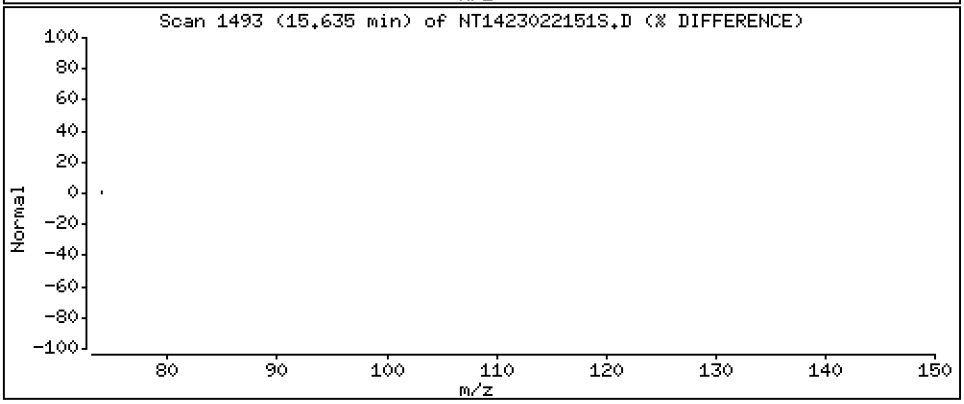












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221S1S.D

Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

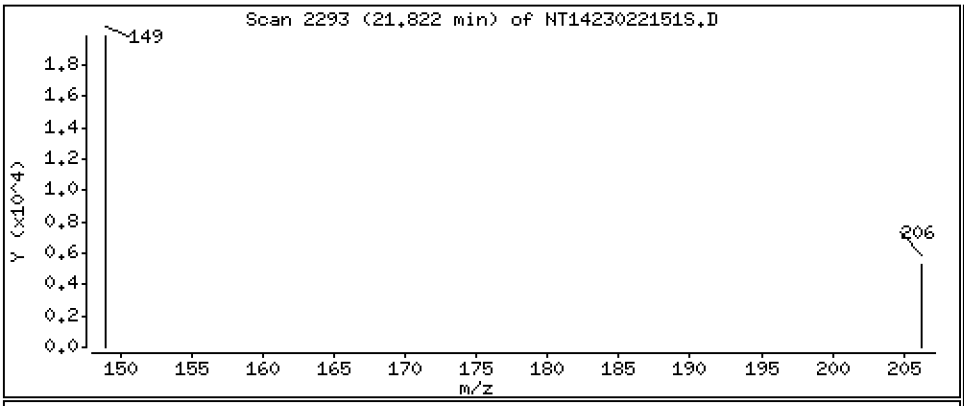
Operator: DSD

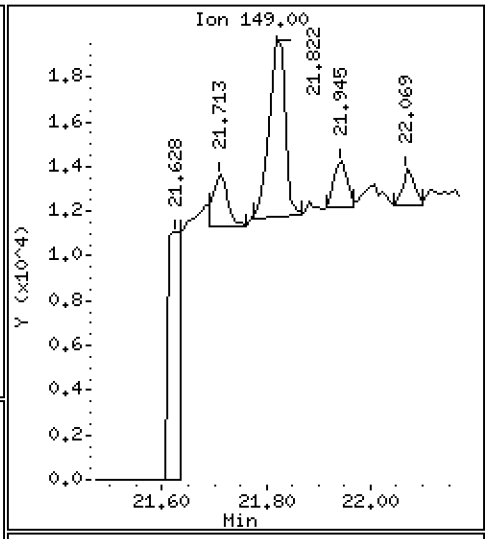
Column phase: ZB-5msi

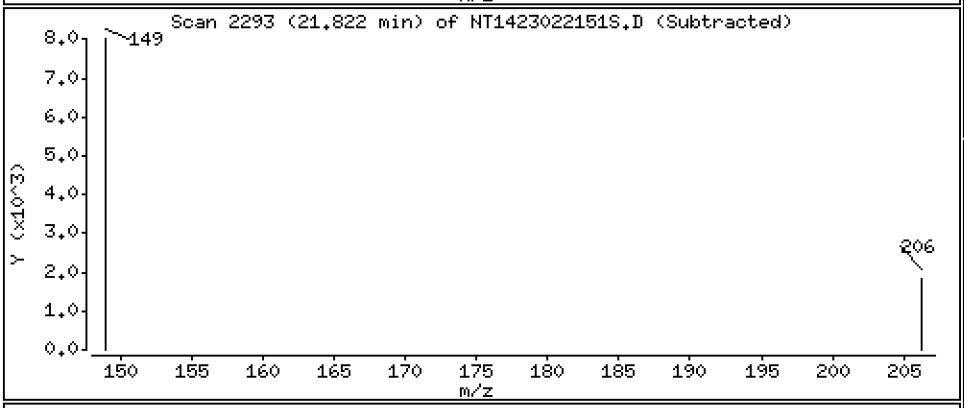
Column diameter: 0.25

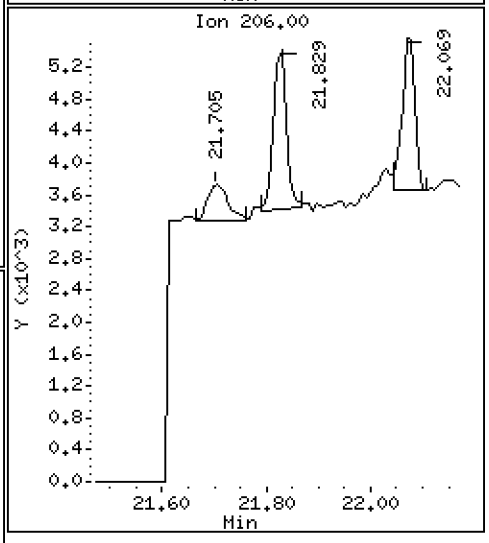
67 Butylbenzylphthalate

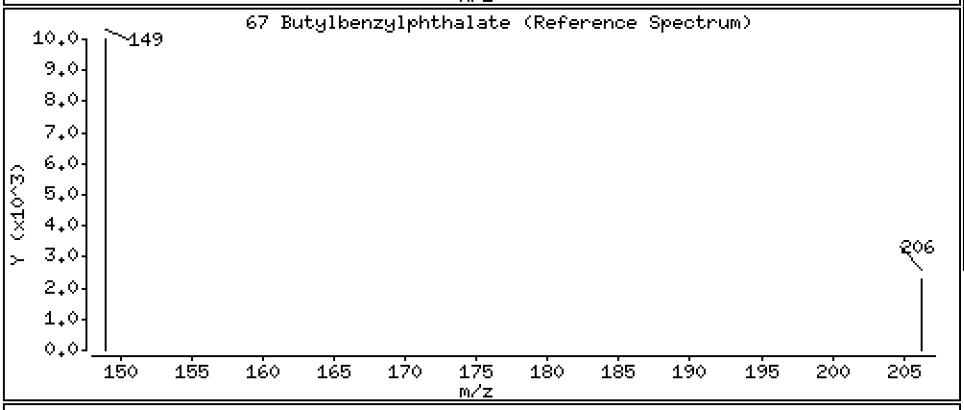
Concentration: 0.1817 ug/mL

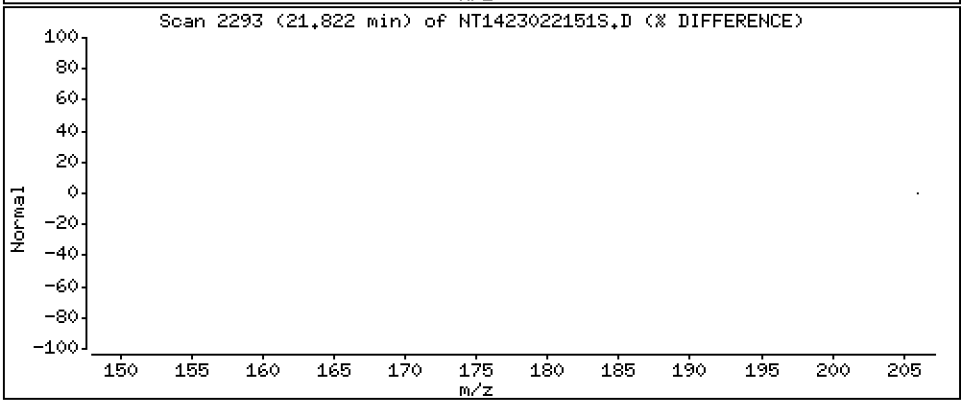












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221S1S.D

Date : 22-FEB-2023 19:36

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-08

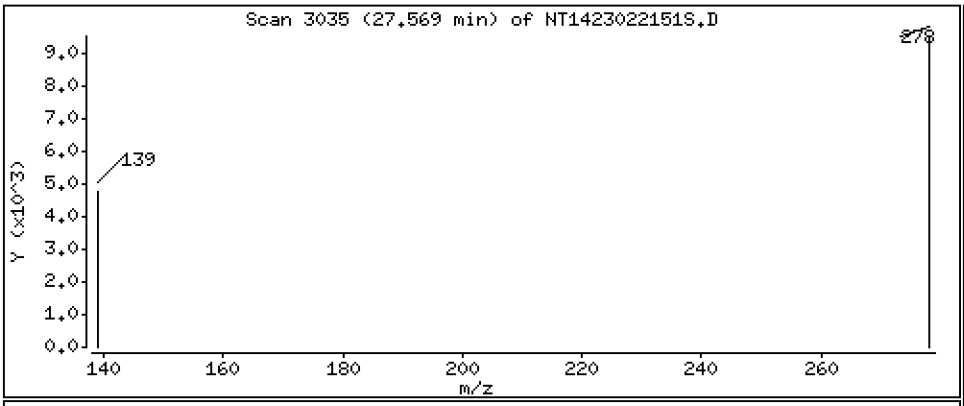
Operator: DSD

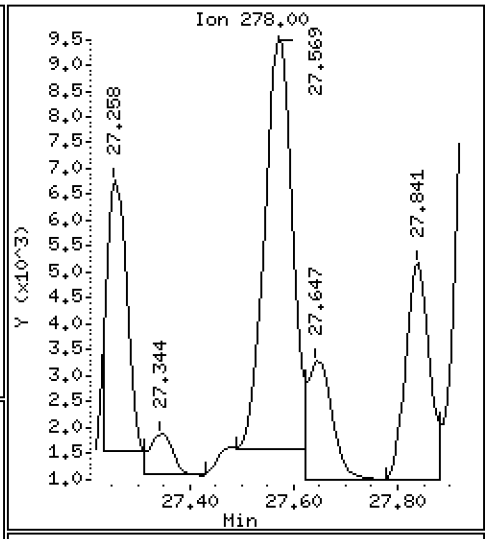
Column phase: ZB-5msi

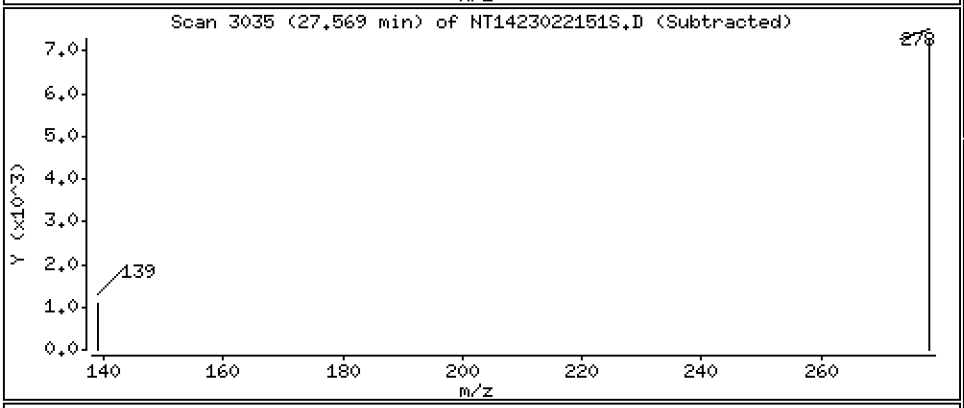
Column diameter: 0.25

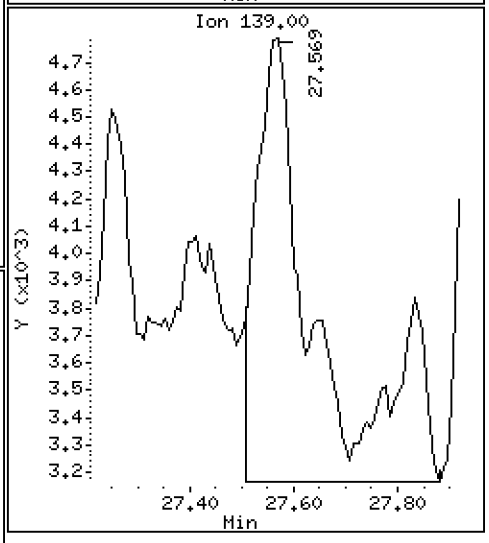
79 Dibenzo(a,h)anthracene

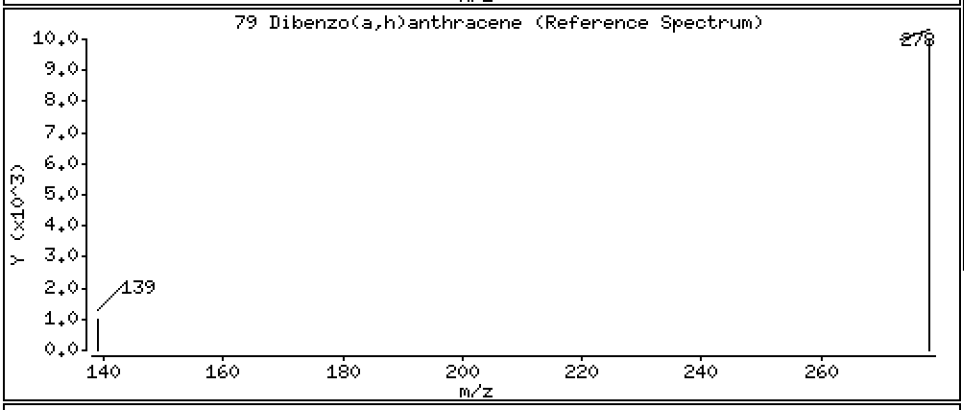
Concentration: 0.3009 ug/mL

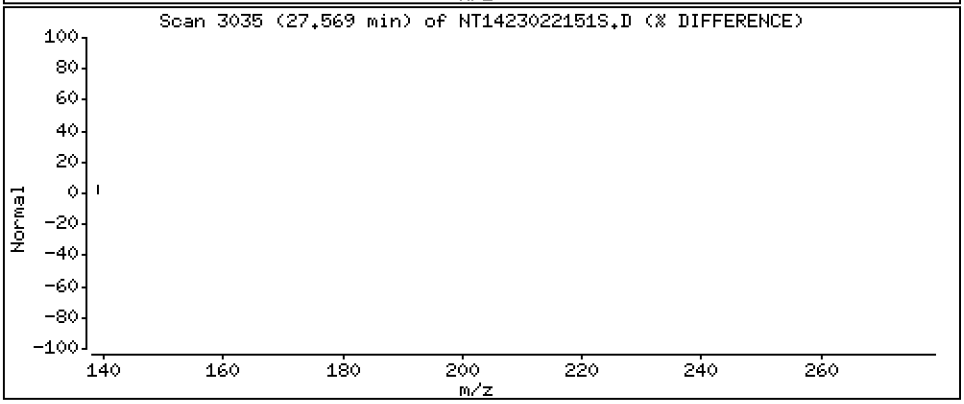












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT1423022151S.D
Lab Smp Id: 23A0133-08
Inj Date : 22-FEB-2023 19:36 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-08
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Meth Date : 25-May-2023 11:39 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 34
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
$	1	2-Fluorophenol	112	6.401	6.386	(0.747)	358114	4.65451	4.655(R)
	3	Phenol	94	7.993	7.993	(0.933)	133134	1.14417	1.144
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	8.565	8.573	(1.000)	270824	4.00000	
	9	1,4-Dichlorobenzene	146	8.596	8.596	(1.004)	2253	0.02563	0.02563(M)
	11	Benzyl alcohol	79	8.922	8.876	(1.042)	15027	0.20260	0.2026
	12	1,2-Dichlorobenzene	146	8.945	8.953	(1.044)	716	0.00819	0.008192
	13	2-Methylphenol	108	9.100	9.101	(1.063)	1348	0.01677	0.01677
	15	4-Methylphenol	108	9.372	9.373	(1.094)	25027	0.28408	0.2841
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22	2,4-Dimethylphenol	107	10.412	10.404	(0.943)	1884	0.02077	0.02077
	24	Benzoic acid	105	Compound Not Detected.					
	26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27	Naphthalene-d8	136	11.039	11.040	(1.000)	990171	4.00000	
	30	Hexachlorobutadiene	225	Compound Not Detected.					
	39	Dimethylphthalate	163	14.180	14.181	(0.968)	14785	0.09428	0.09428(M)
*	42	Acenaphthene-d10	162	14.652	14.653	(1.000)	514000	4.00000	
	50	Diethylphthalate	149	15.634	15.635	(1.067)	29810	0.15189	0.1519(M)
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	17.681	17.674	(1.000)	1186705	4.00000	
$	66	Terphenyl-d14	244	20.884	20.869	(0.917)	852039	4.50625	4.506(R)
	67	Butylbenzylphthalate	149	21.821	21.821	(0.958)	16216	0.18167	0.1817
*	69	Chrysene-d12	240	22.781	22.774	(1.000)	710237	4.00000	
*	77	Perylene-d12	264	25.235	25.220	(1.000)	551702	4.00000	
	79	Dibenzo(a,h)anthracene	278	27.568	27.569	(1.092)	29156	0.30093	0.3009
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022151S.D
Lab Smp Id: 23A0133-08
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 17:47
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	241018	120509	482036	270824	12.37
27 Naphthalene-d8	887165	443583	1774330	990171	11.61
42 Acenaphthene-d10	467553	233777	935106	514000	9.93
59 Phenanthrene-d10	1079793	539897	2159586	1186705	9.90
69 Chrysene-d12	754146	377073	1508292	710237	-5.82
77 Perylene-d12	558201	279101	1116402	551702	-1.16

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.10
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.67	17.17	18.17	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.03
77 Perylene-d12	25.22	24.72	25.72	25.24	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022151S.D

Lab ID: 23A0133-08
nt14.i, 20230221C.b\SIM.b\SIMABN2.m,   22-FEB-2023 19:36

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.042	1.035	0.0064	Benzyl alcohol

RRT check based on Ccal File: SIM.b/NT1423022148ICVS.d

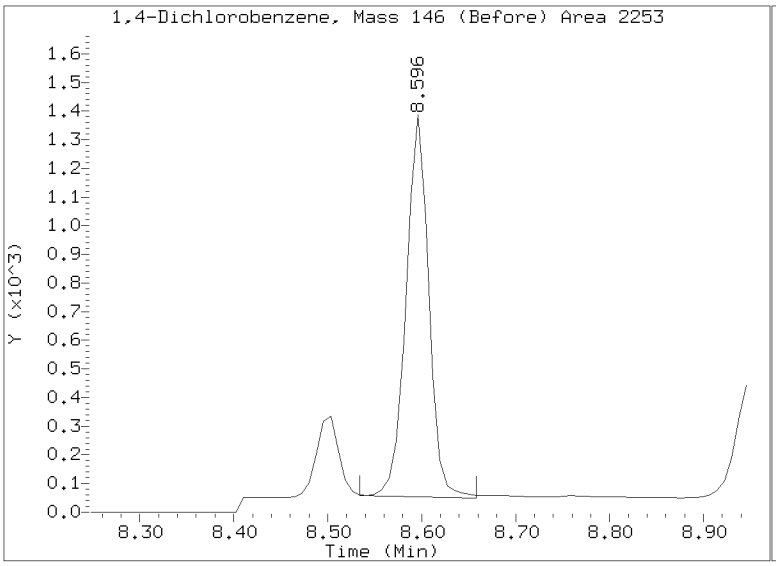
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

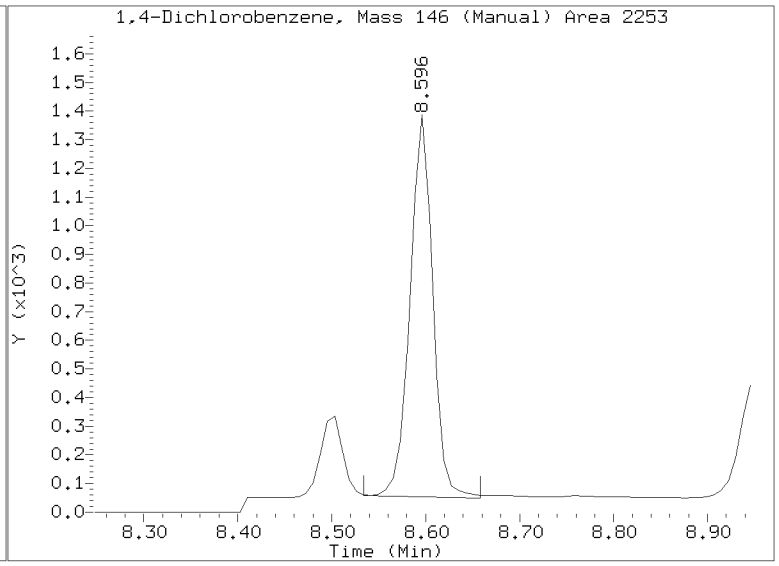
Exception: 1,2,4-Trichlorobenzene 0.0010

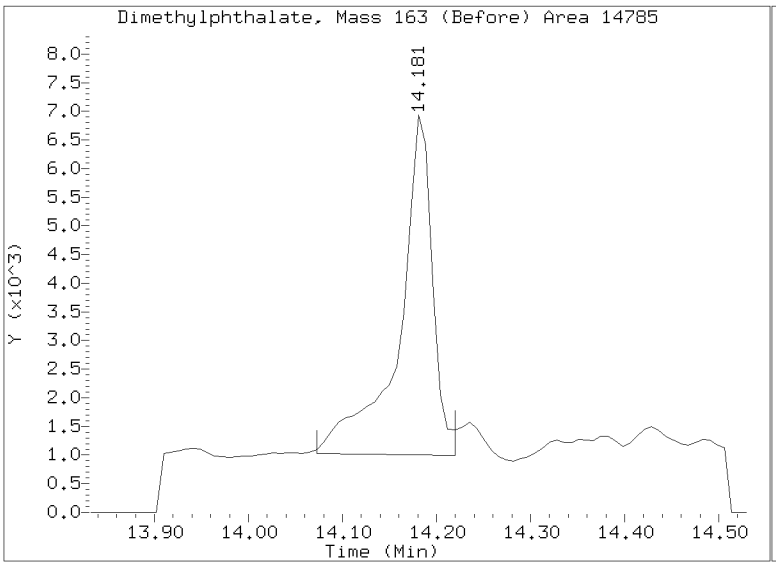
* Only compounds listed in the work order have been verified by the analyst *

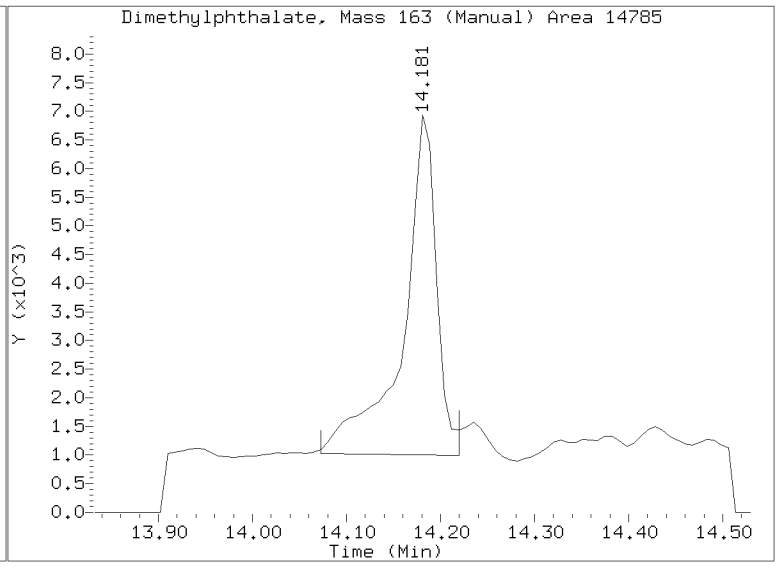
Quant Ion Manual Peak Adjustment Report

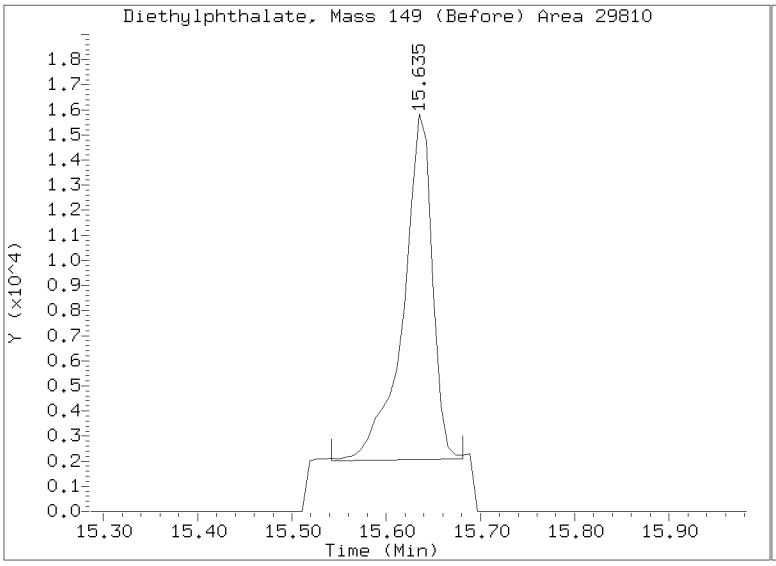
Datafile: //target/share/chem3/nt14.i/20230221C.b/SIM.b/NT1423022151S.D
Injection Date: 22-FEB-2023 19:36
Lab ID:23A0133-08 Client ID:
Report Date: 05/25/2023 11:47

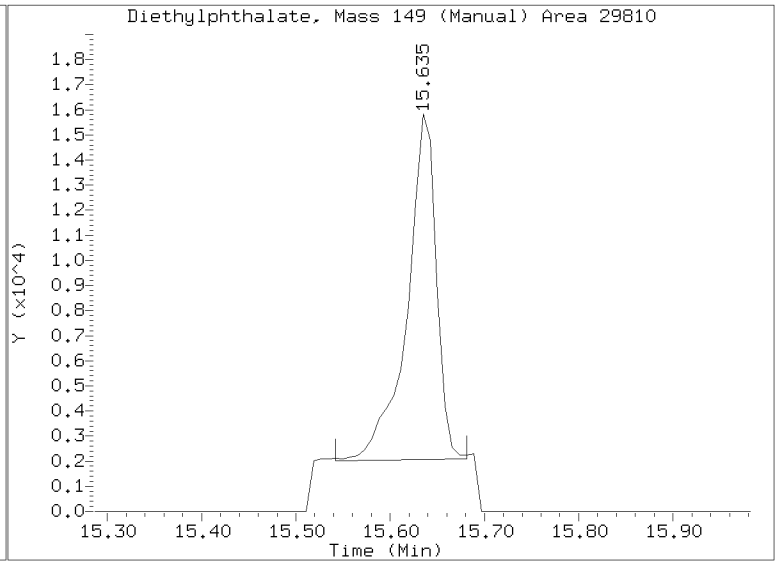












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1234

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-09 C	SDG:	23A0133
Sampled:	01/06/23 13:34	Prepared:	01/18/23 15:24	File ID:	NT1423022152S.D
% Solids:	53.74	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 20:12
Batch:	BLA0393	Sequence:	SLB0351	Initial/Final:	18.61 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GC00009
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.3	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	7.9	J	2.5	20.0
65-85-0	Benzoic acid	1	400	U	13.4	400
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	2.2	J	1.3	5.0
87-86-5	Pentachlorophenol	1	40.0	U	2.1	40.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.92	319	42.5	27 - 120	
p-Terphenyl-d14	499.95	305	61.0	37 - 120	Q

Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221528.D

Page 1

Date : 22-FEB-2023 20:12

Client ID:

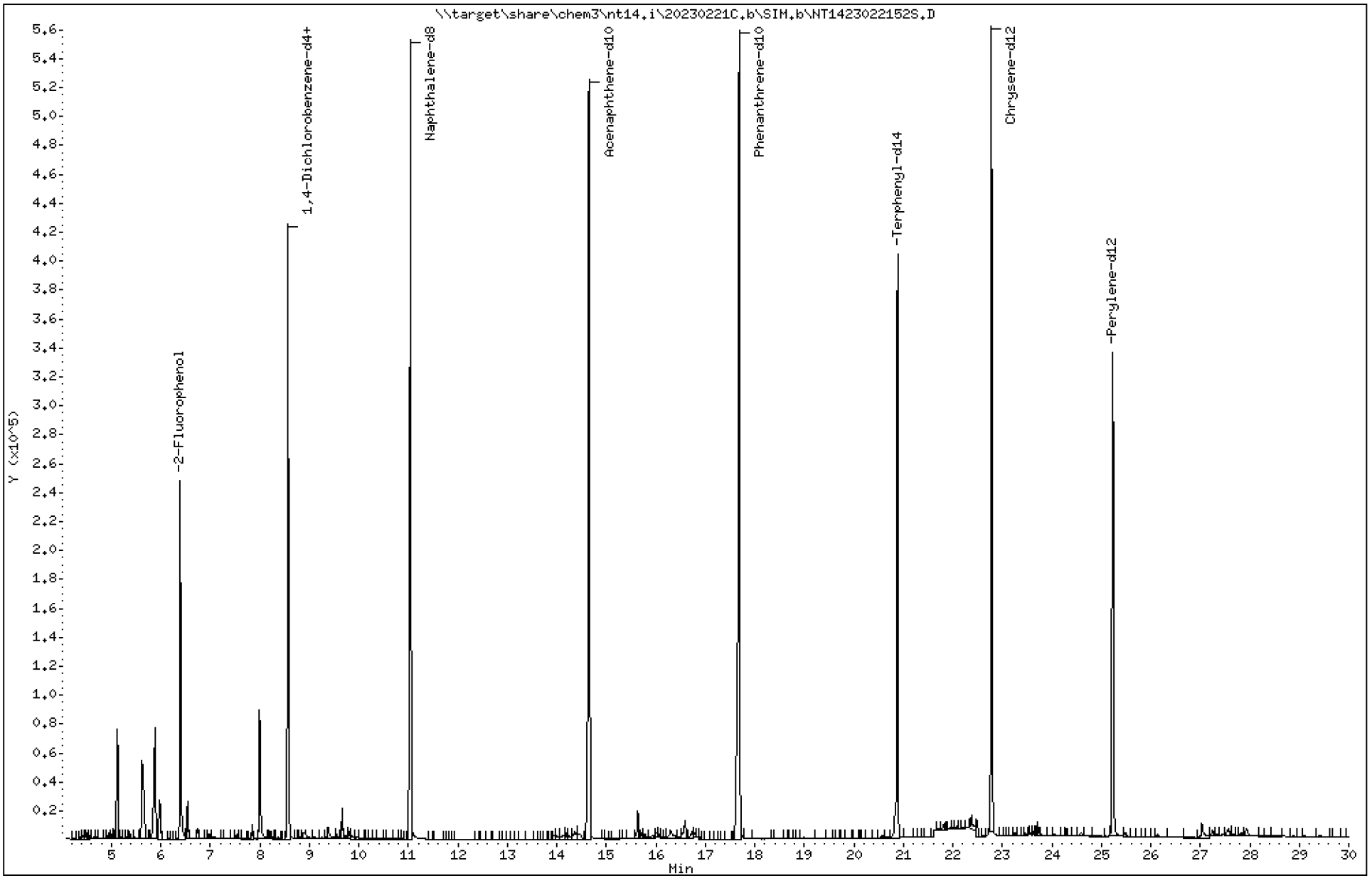
Instrument: nt14.i

Sample Info: 23A0133-09

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

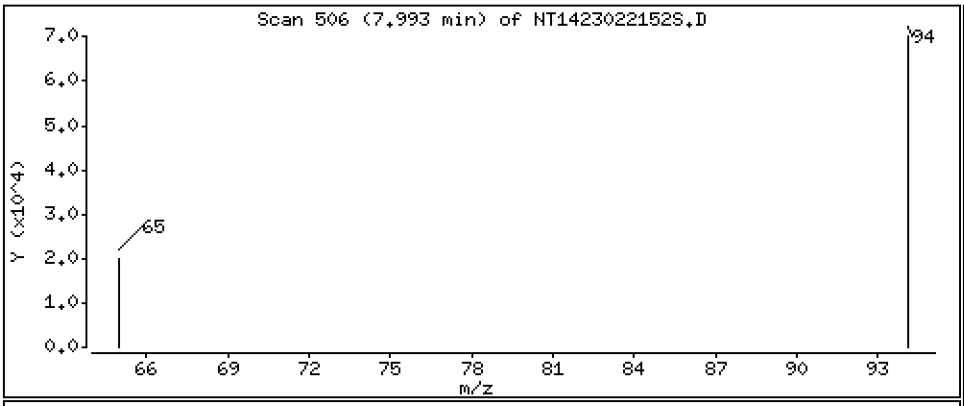
Operator: DSD

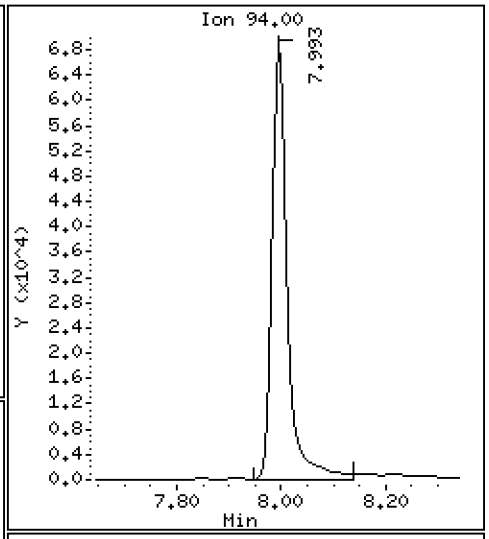
Column phase: ZB-5msi

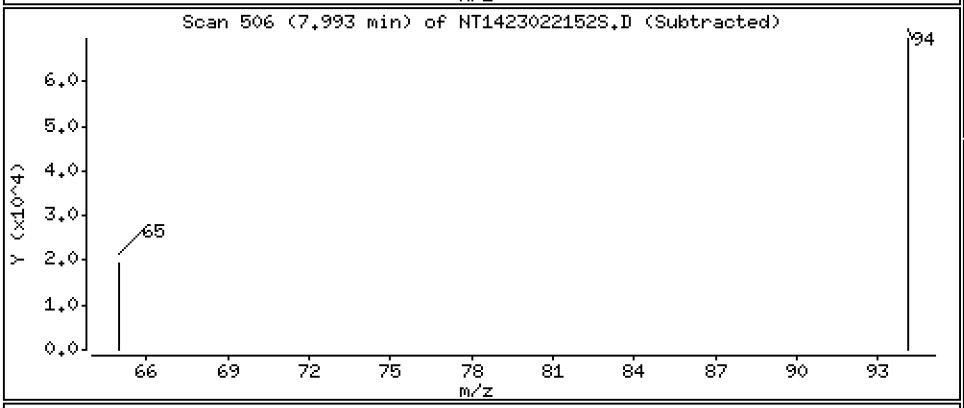
Column diameter: 0.25

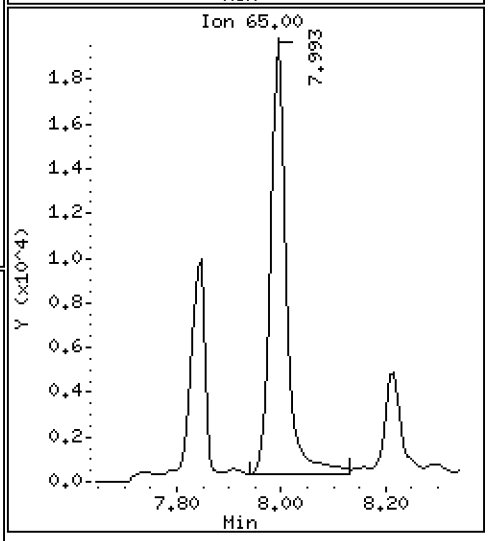
3 Phenol

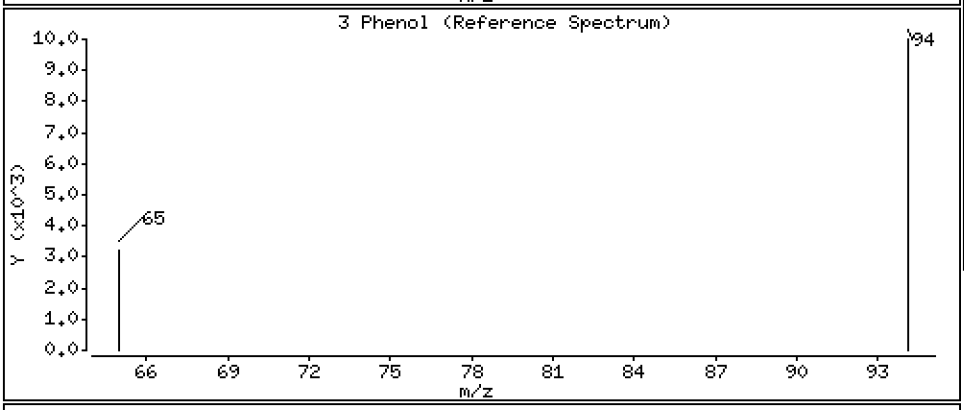
Concentration: 1.135 ug/mL

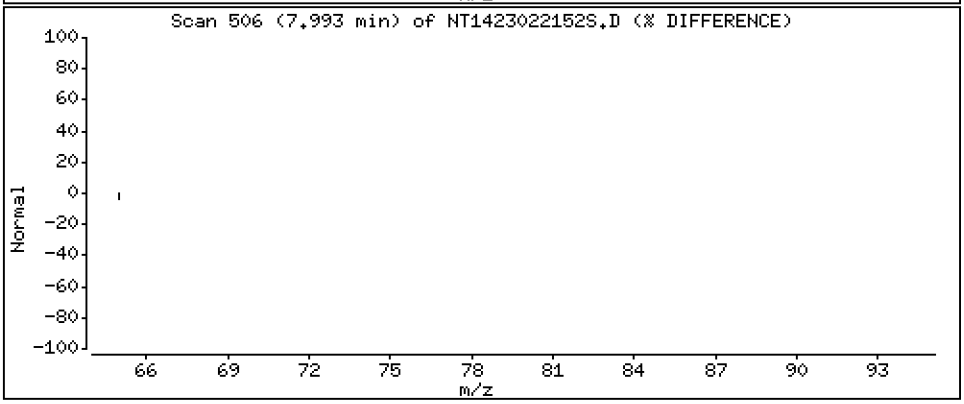












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

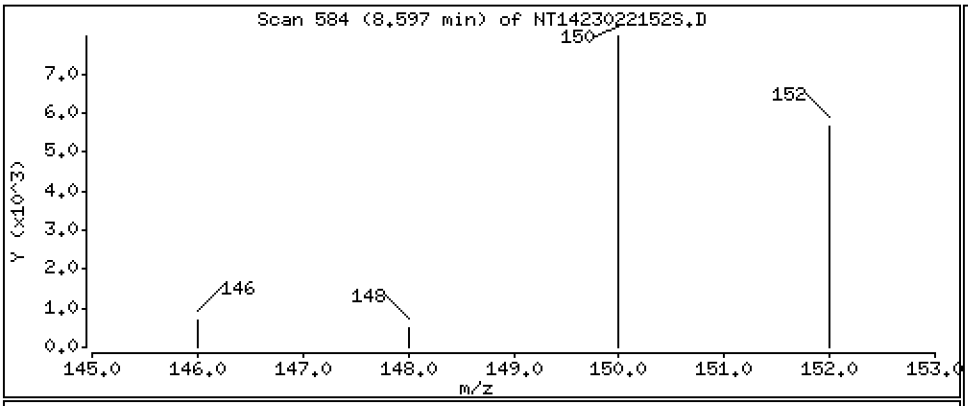
Operator: DSD

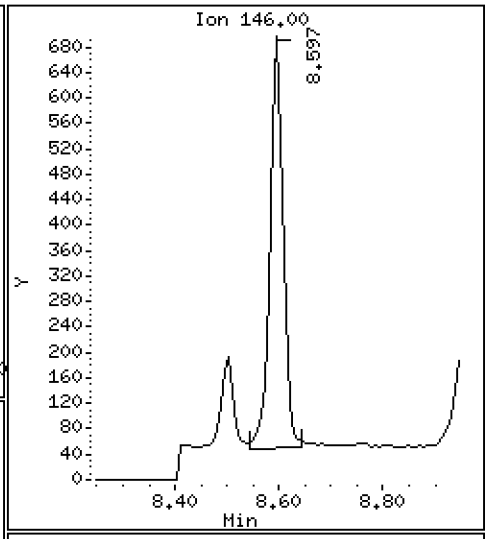
Column phase: ZB-5msi

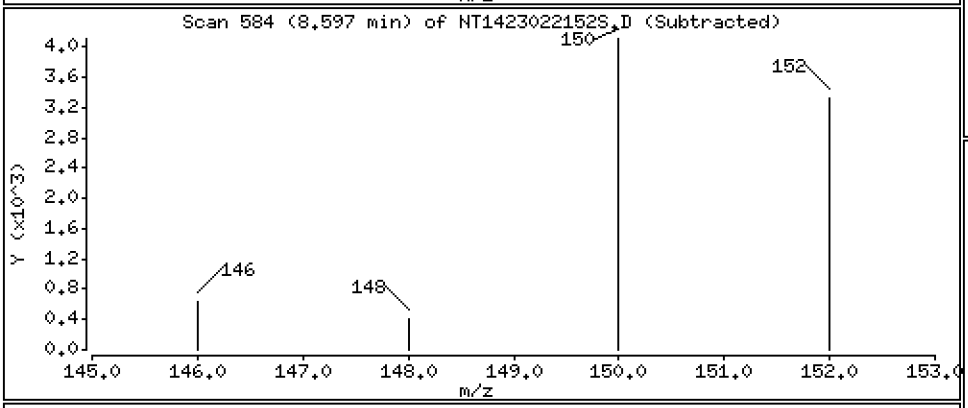
Column diameter: 0.25

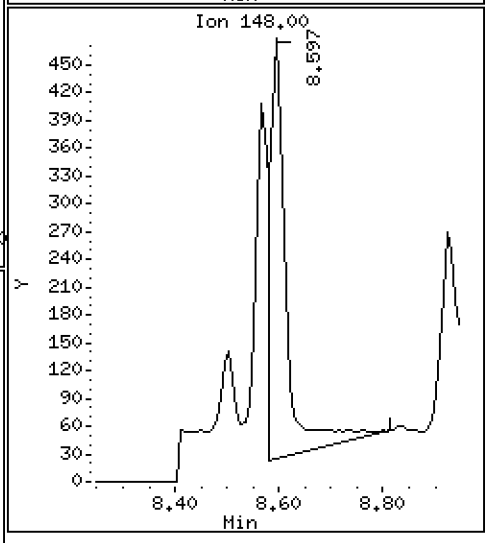
9 1,4-Dichlorobenzene

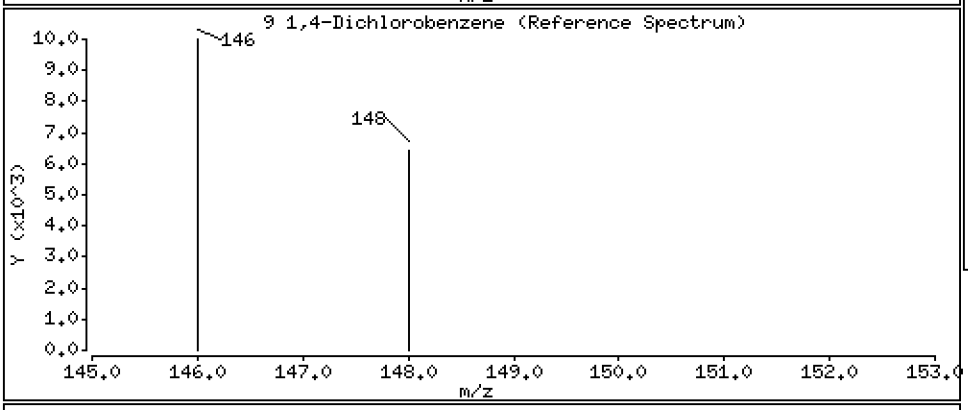
Concentration: 0.01255 ug/mL

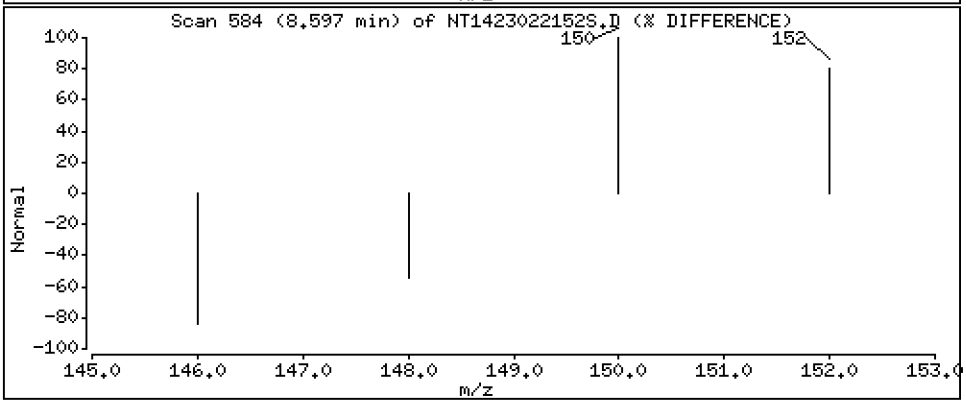












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

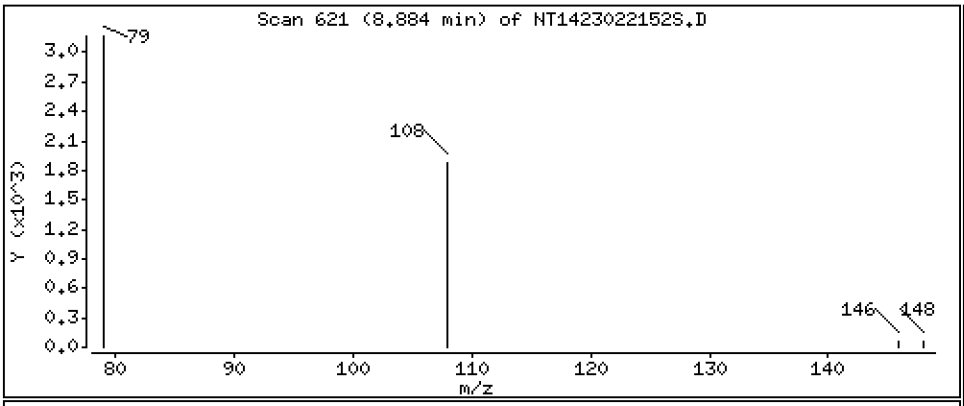
Operator: DSD

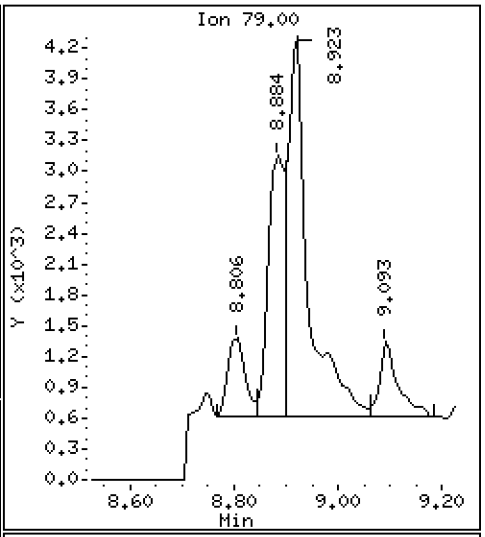
Column phase: ZB-5msi

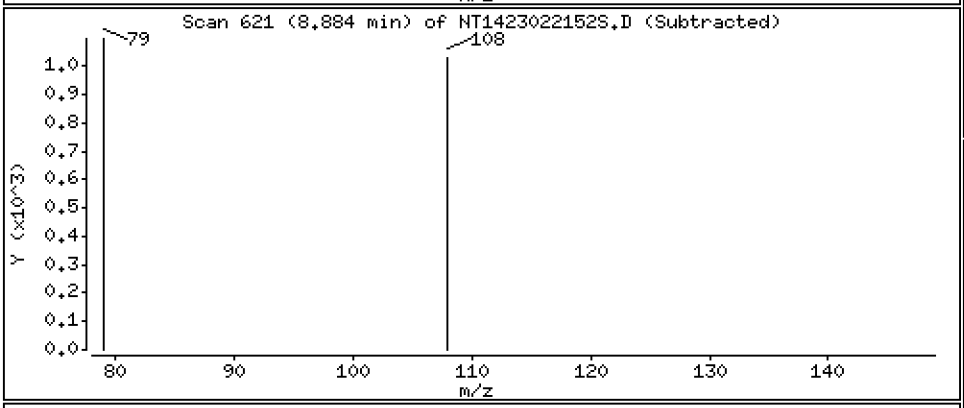
Column diameter: 0.25

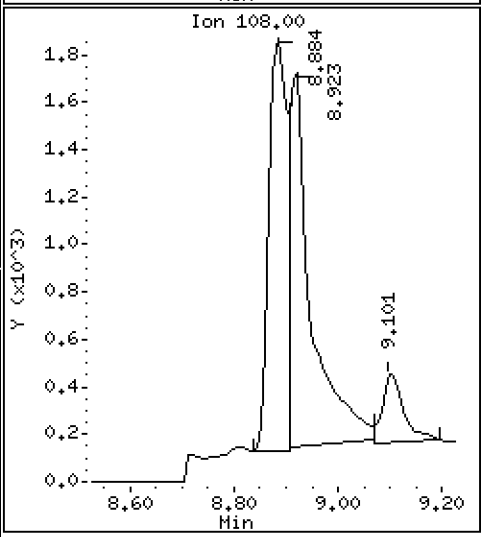
11 Benzyl alcohol

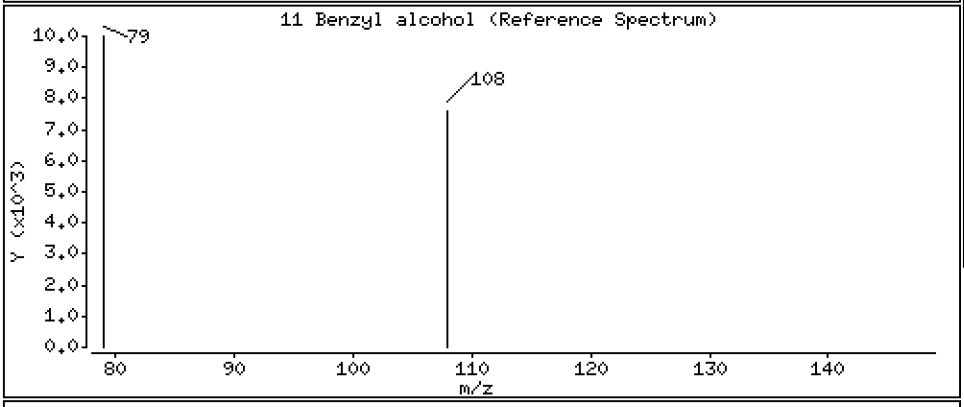
Concentration: 0.07861 ug/mL

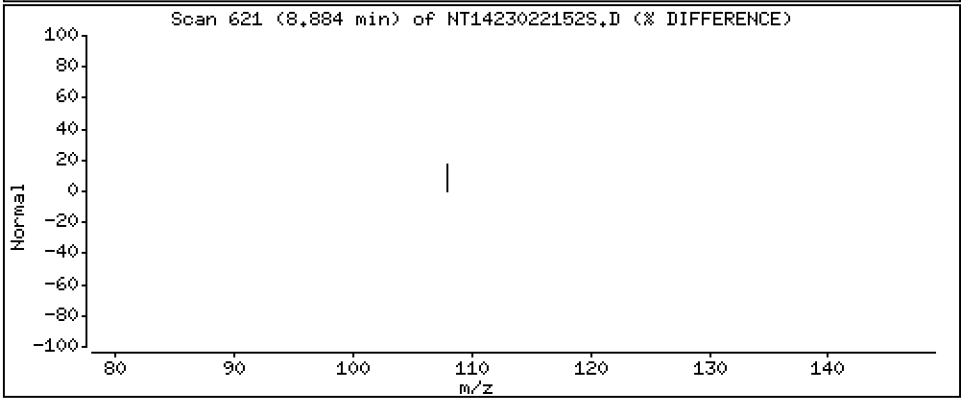












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

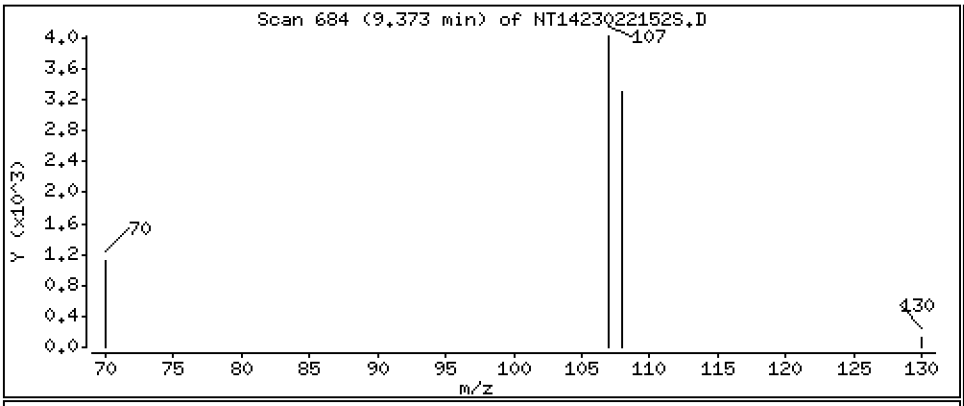
Operator: DSD

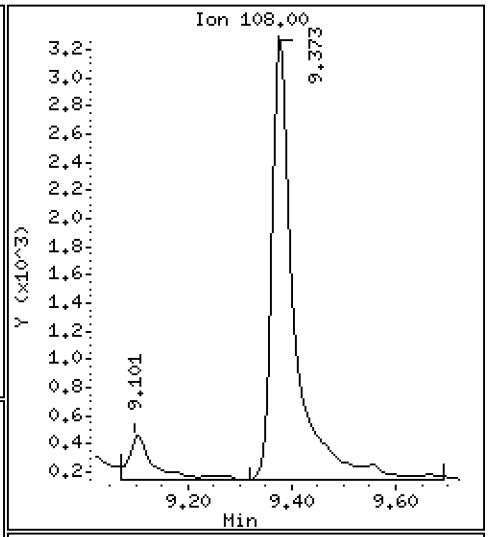
Column phase: ZB-5msi

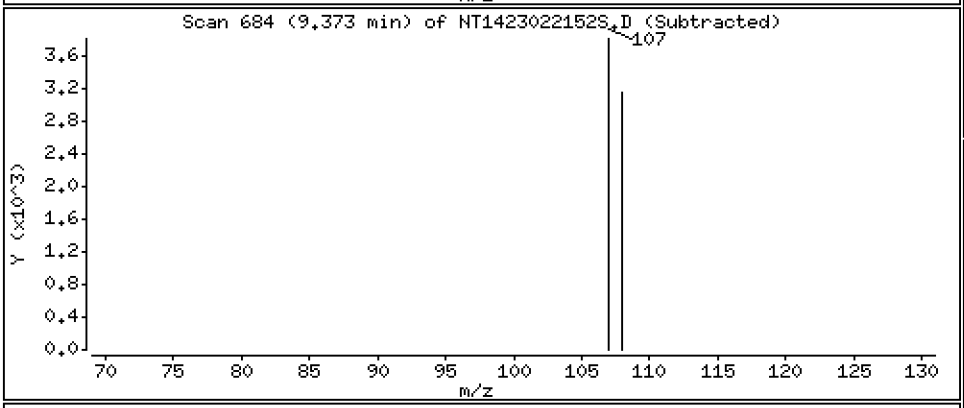
Column diameter: 0.25

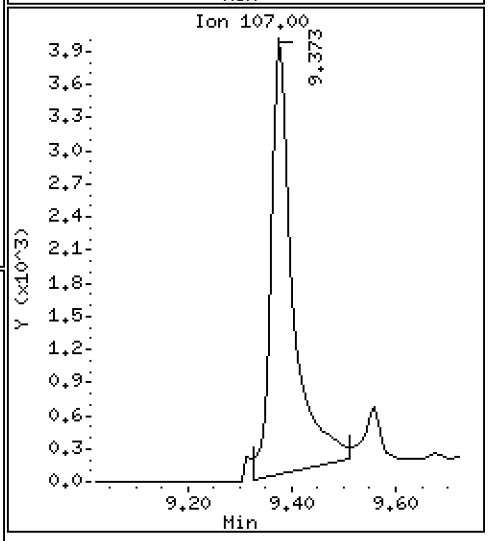
15 4-Methylphenol

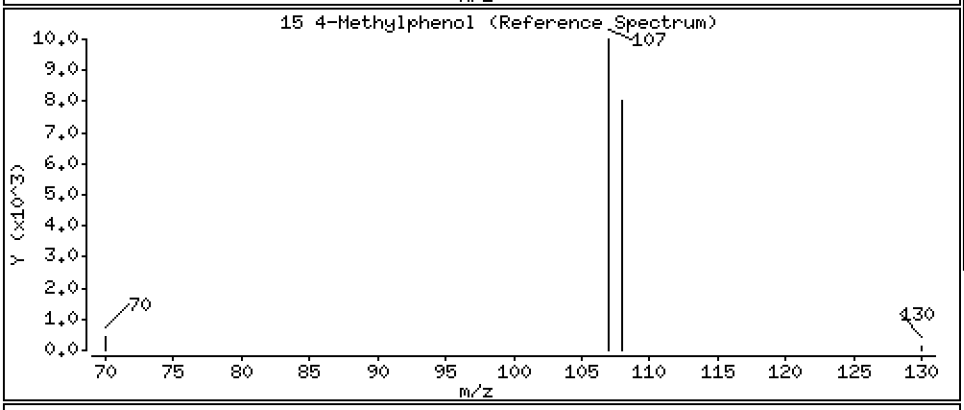
Concentration: 0.1053 ug/mL

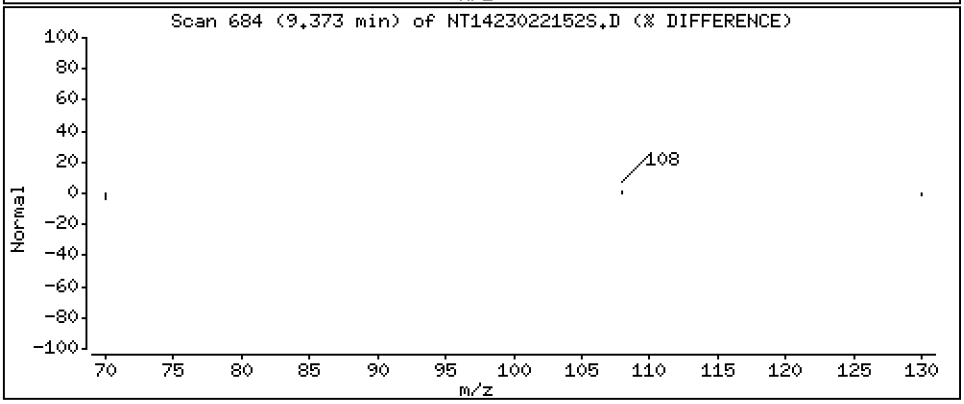












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

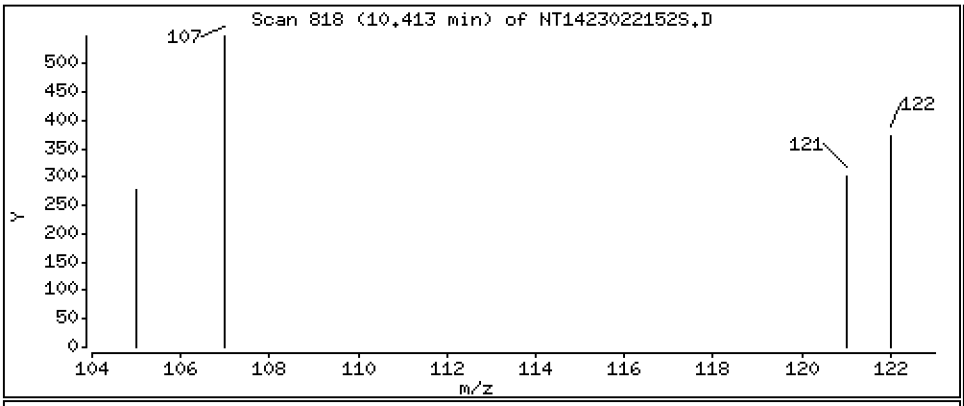
Operator: DSD

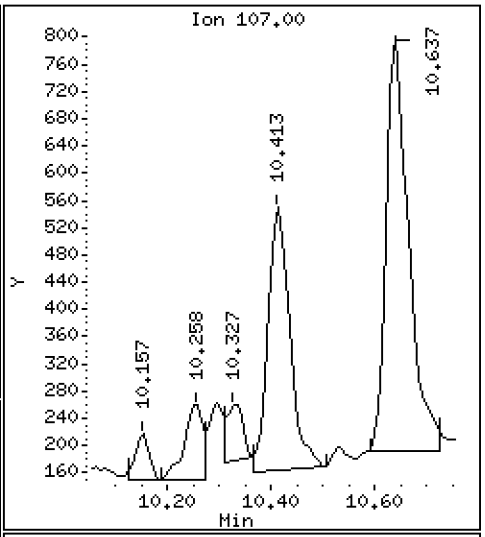
Column phase: ZB-5msi

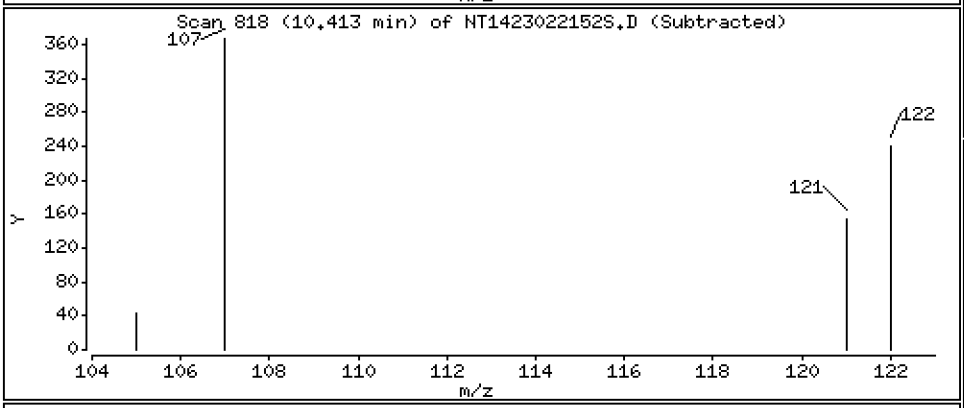
Column diameter: 0.25

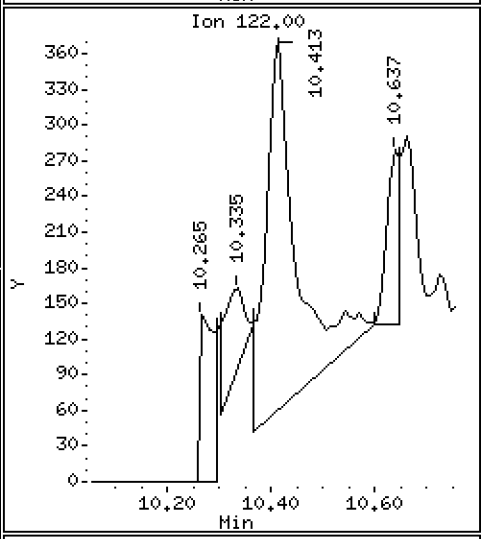
22 2,4-Dimethylphenol

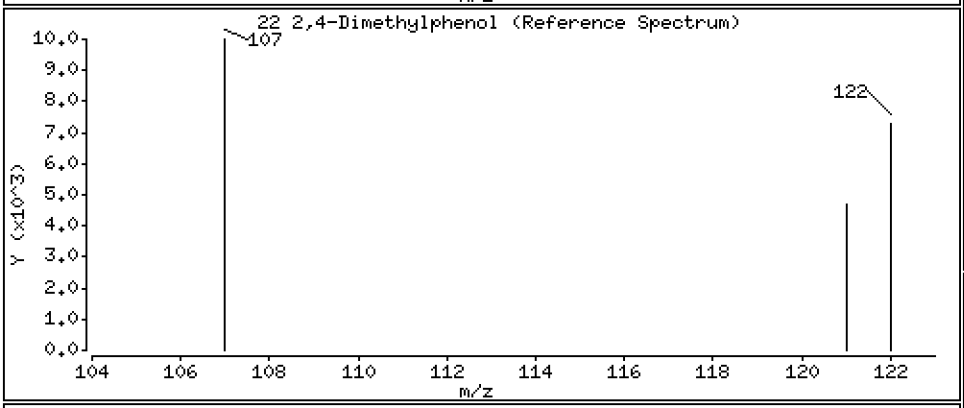
Concentration: 0.01214 ug/mL

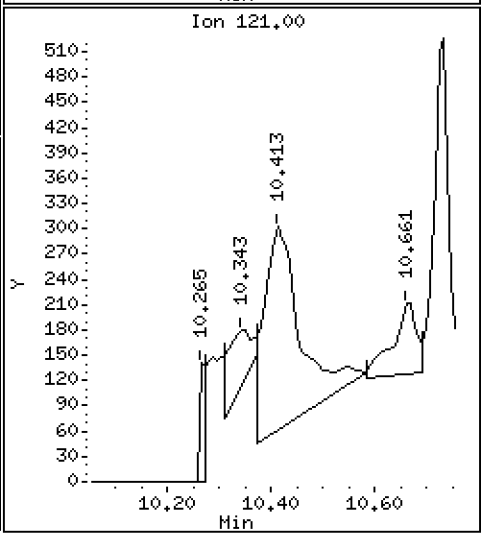


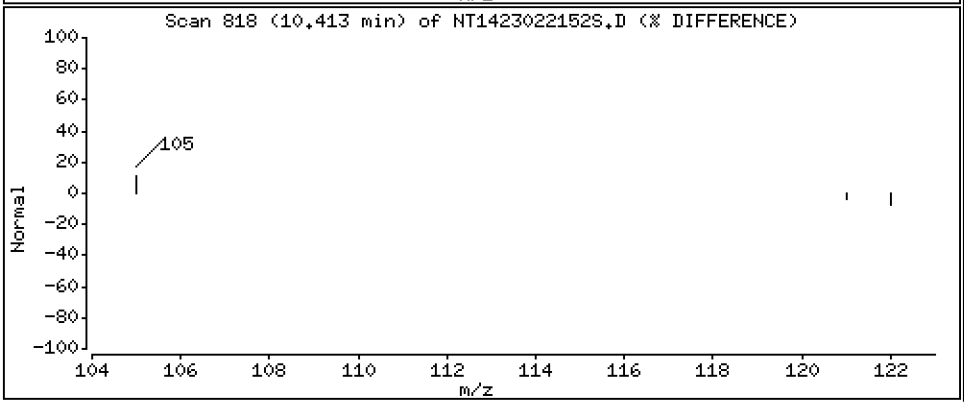












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

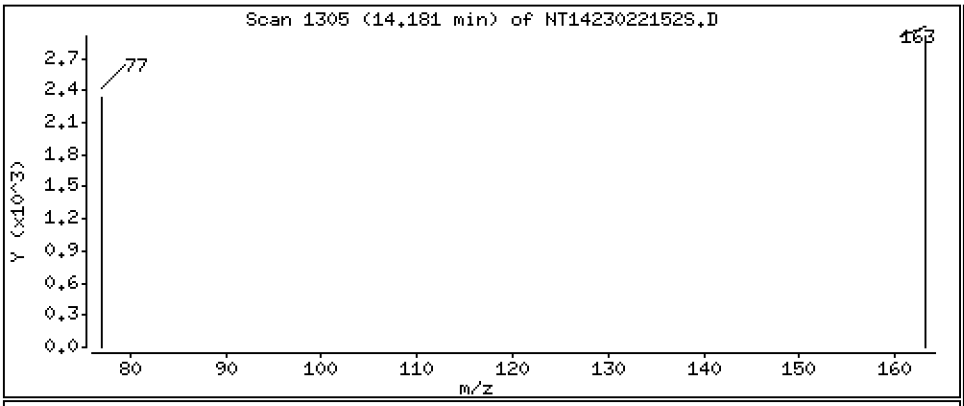
Operator: DSD

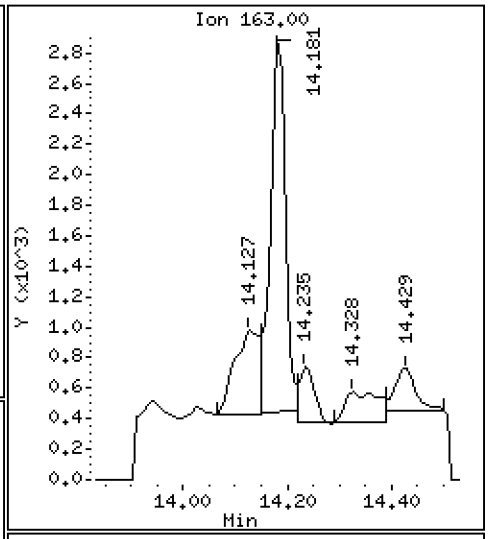
Column phase: ZB-5msi

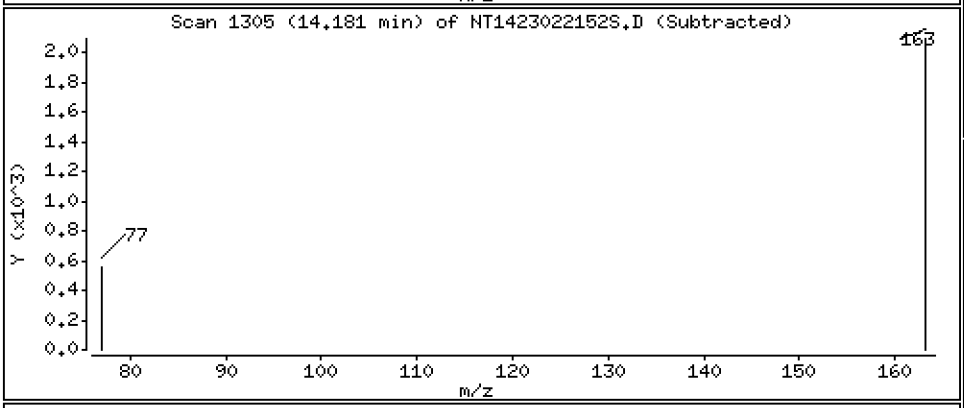
Column diameter: 0.25

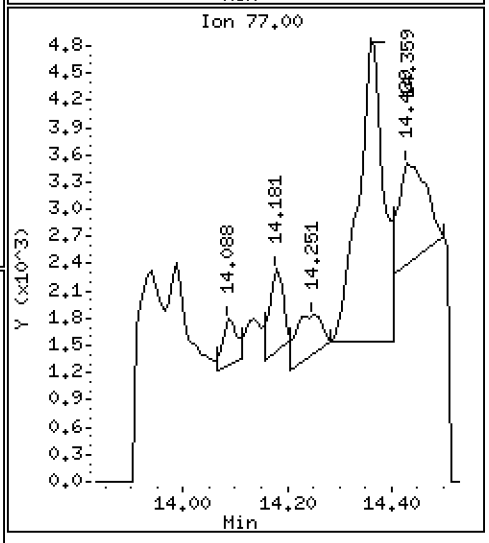
39 Dimethylphthalate

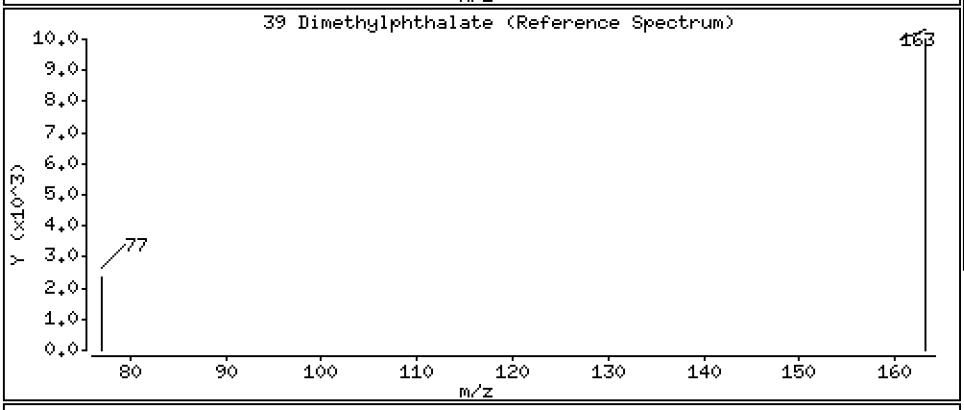
Concentration: 0.02968 ug/mL

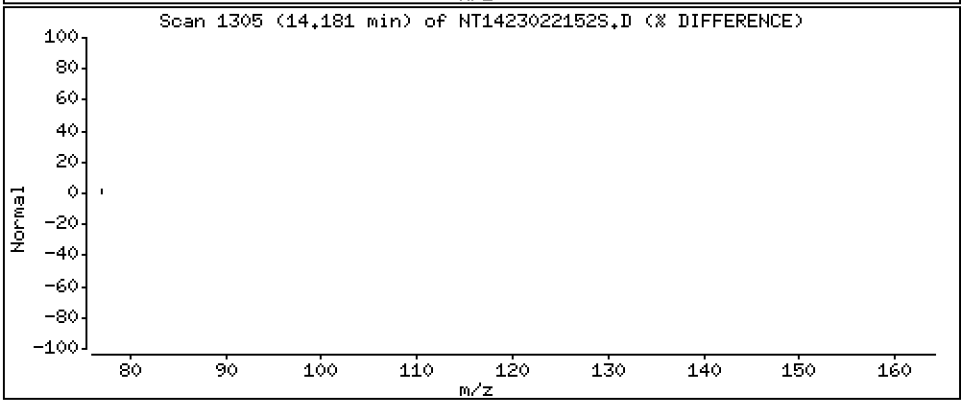












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

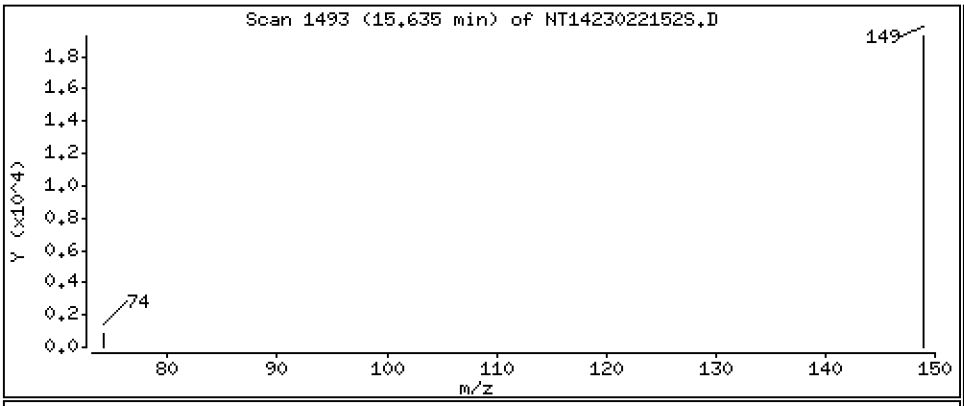
Operator: DSD

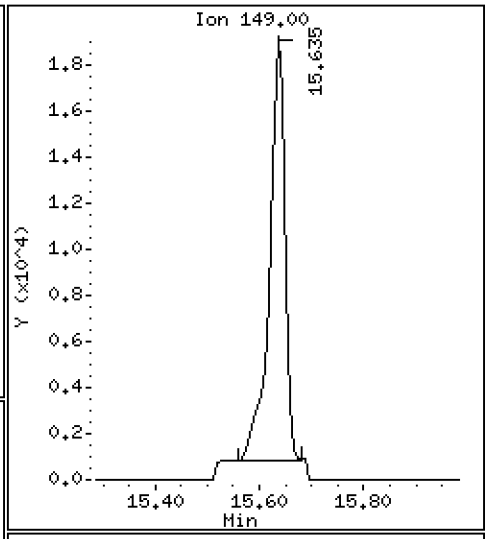
Column phase: ZB-5msi

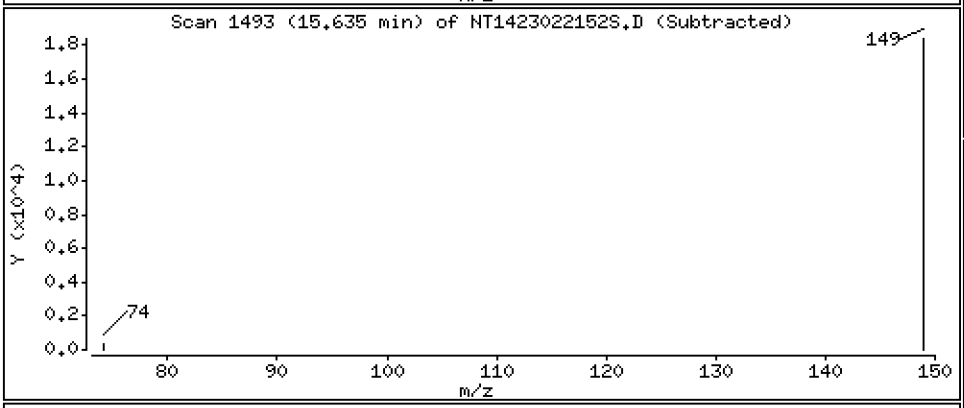
Column diameter: 0.25

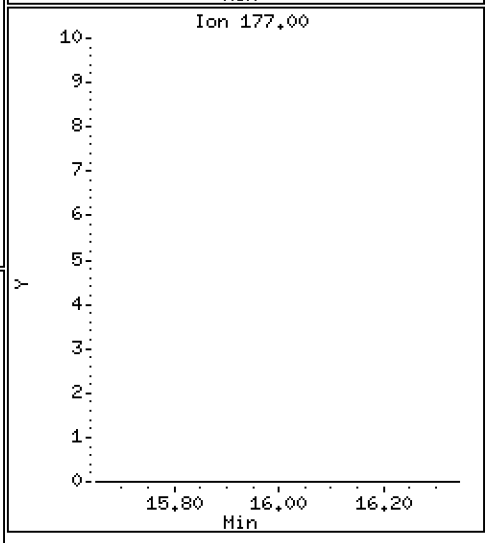
50 Diethylphthalate

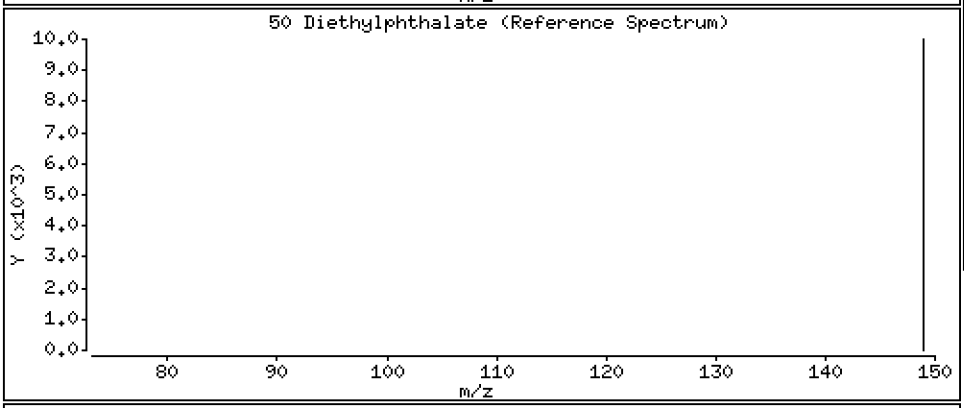
Concentration: 0.1805 ug/mL

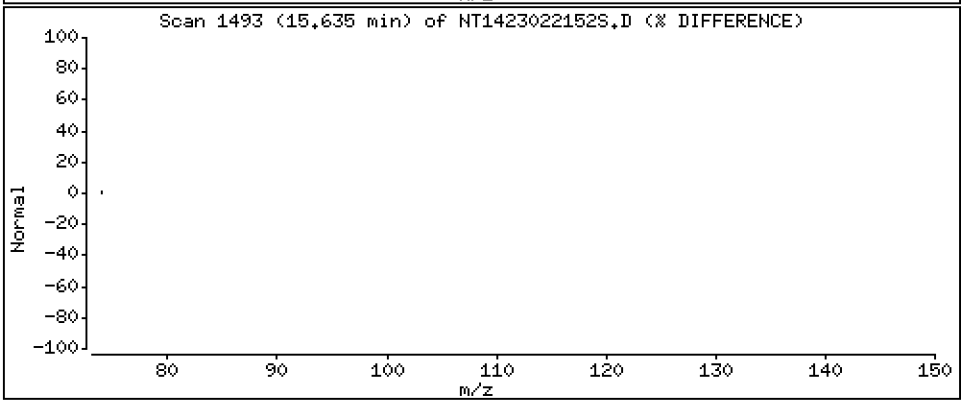












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022152S.D

Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

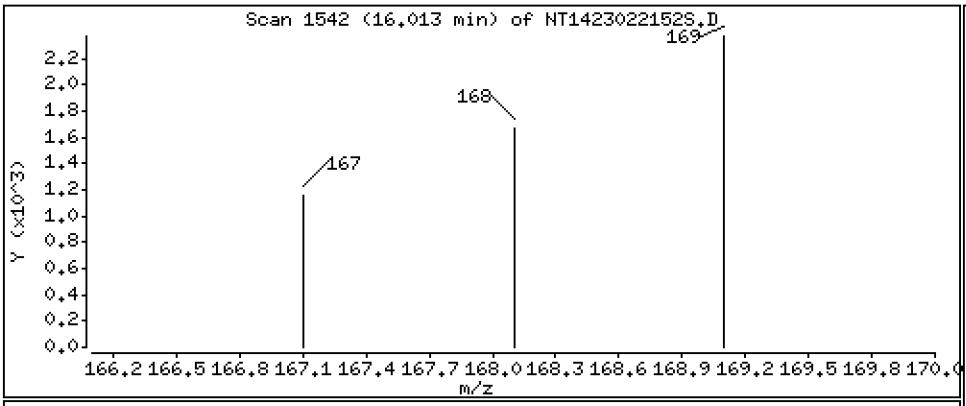
Operator: DSD

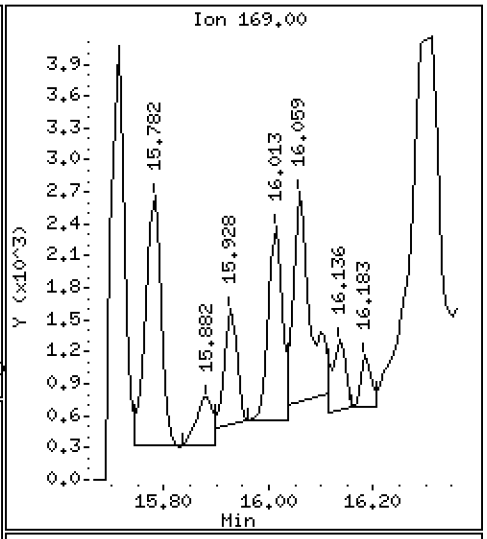
Column phase: ZB-5msi

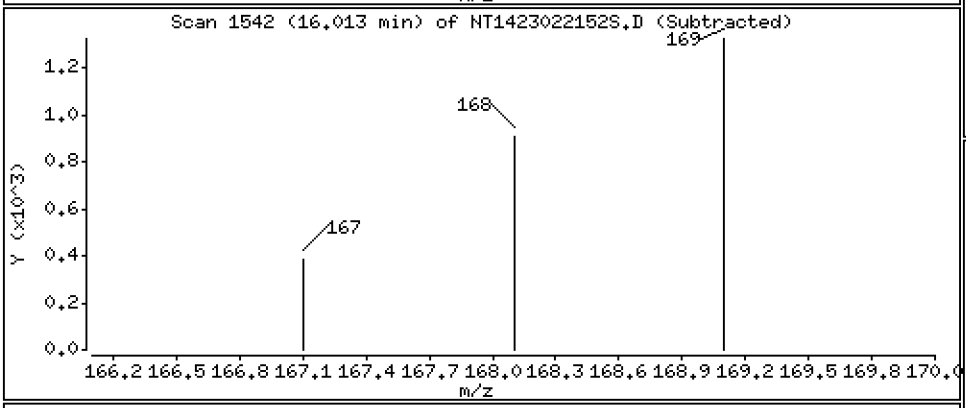
Column diameter: 0.25

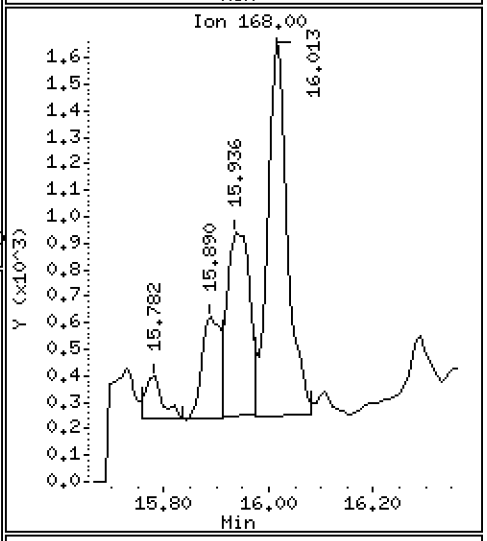
54 N-Nitrosodiphenylamine

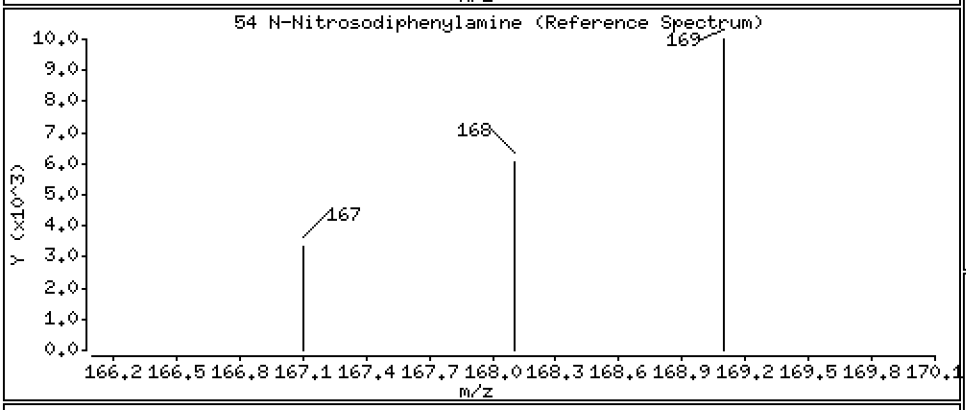
Concentration: 0.02219 ug/mL

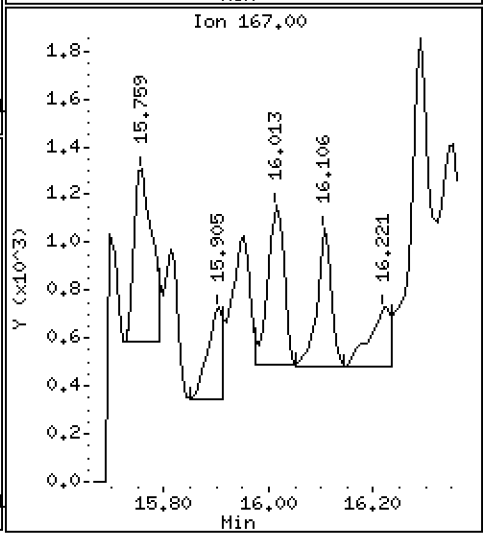


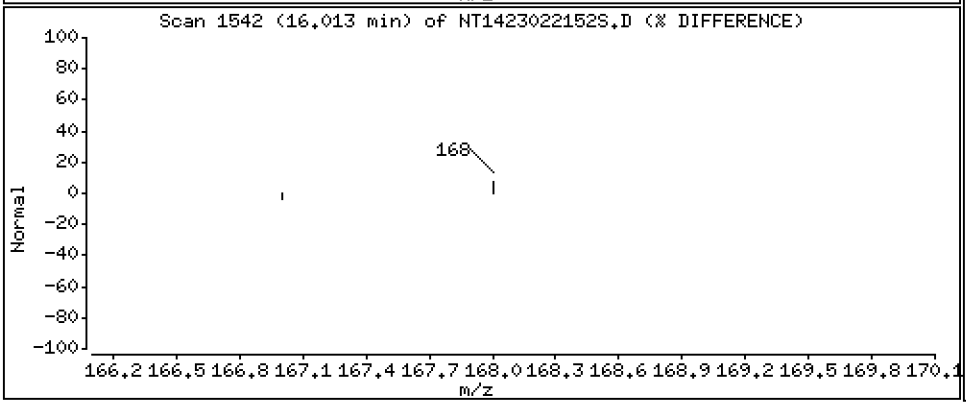












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Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

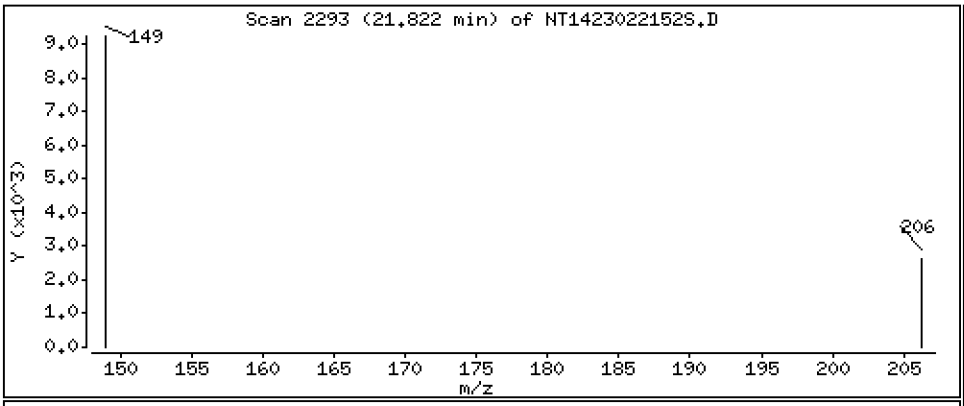
Operator: DSD

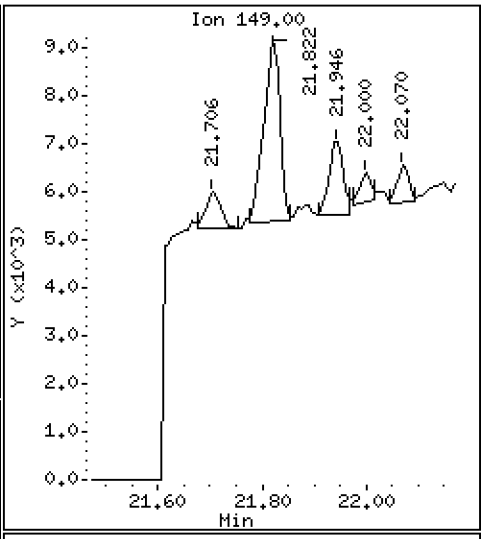
Column phase: ZB-5msi

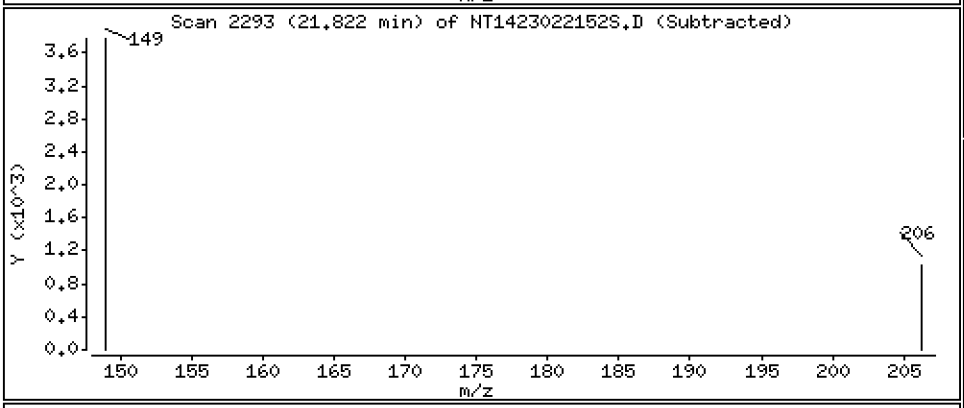
Column diameter: 0.25

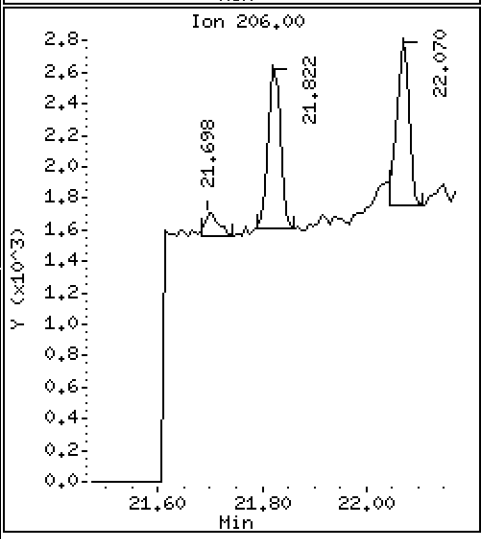
67 Butylbenzylphthalate

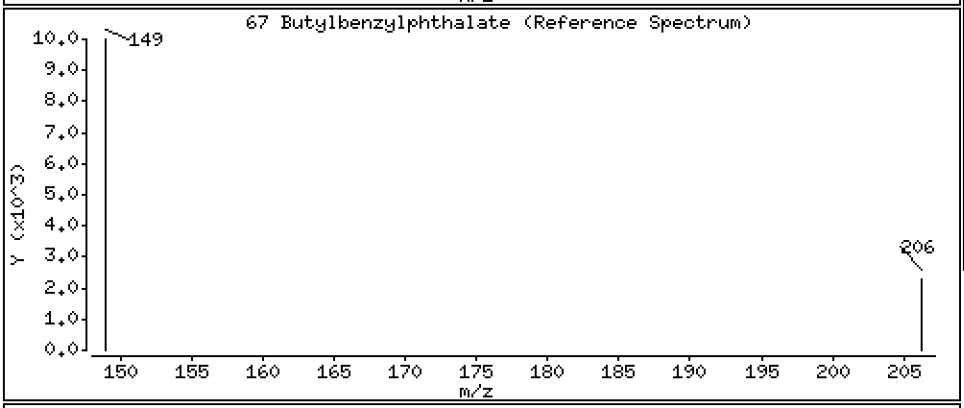
Concentration: 0.08480 ug/mL

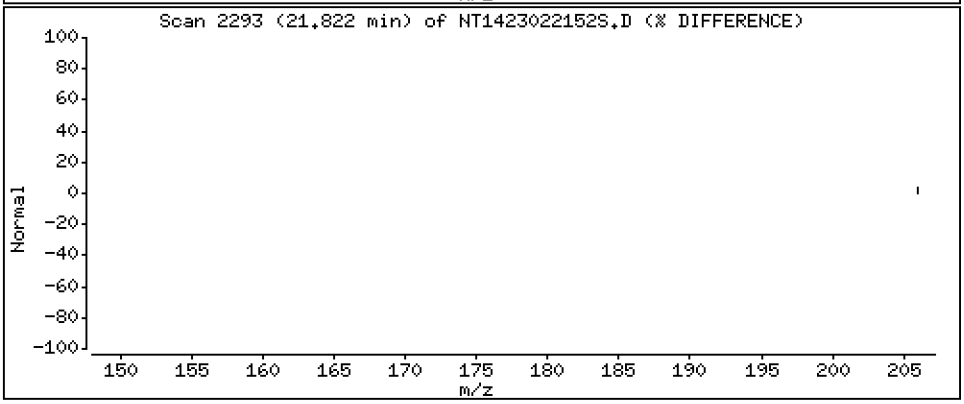












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022152S.D

Date : 22-FEB-2023 20:12

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-09

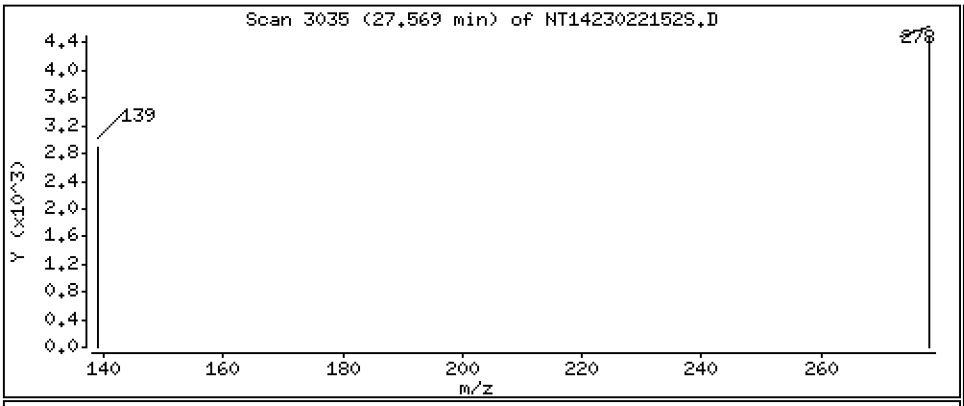
Operator: DSD

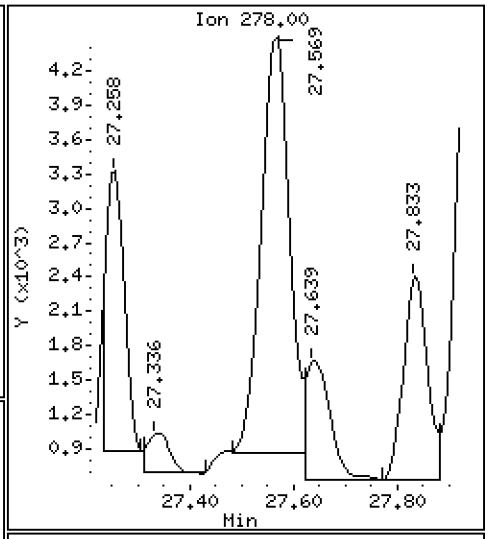
Column phase: ZB-5msi

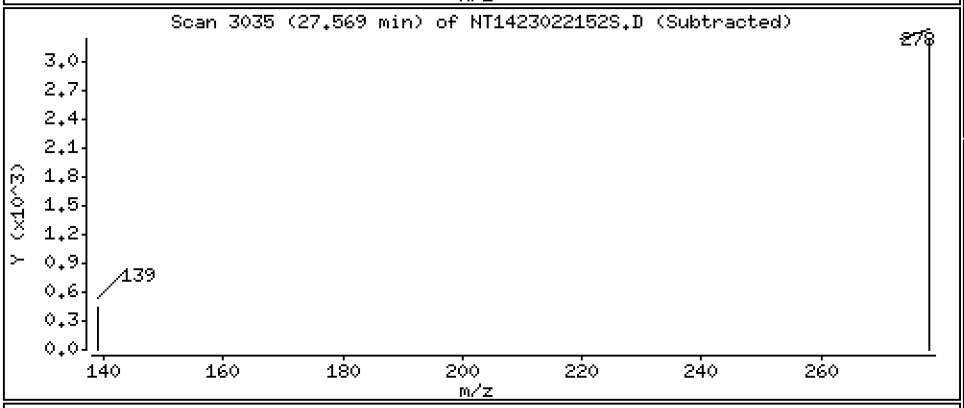
Column diameter: 0.25

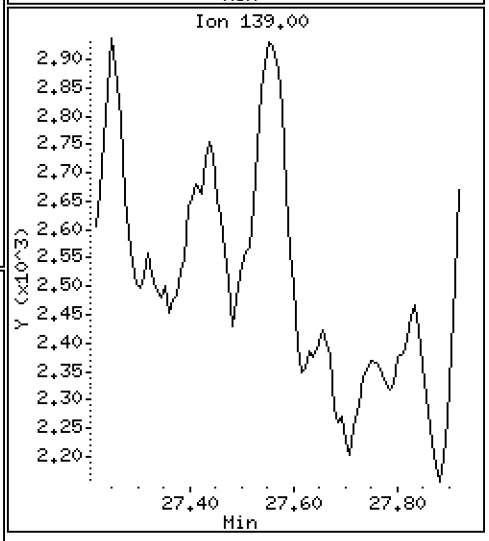
79 Dibenzo(a,h)anthracene

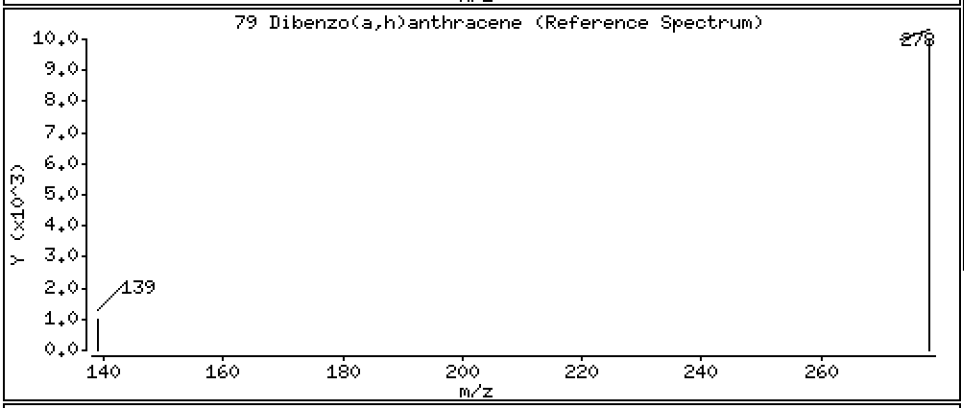
Concentration: 0.1385 ug/mL

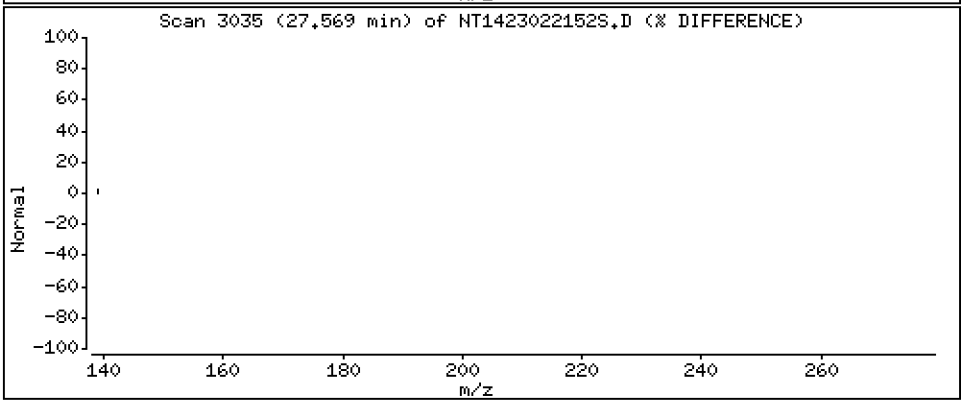












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT1423022152S.D
Lab Smp Id: 23A0133-09
Inj Date : 22-FEB-2023 20:12 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-09
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Meth Date : 25-May-2023 11:39 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 35
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.385	6.386	(0.746)	249426	3.18891	3.189(R)
	3 Phenol	94	7.993	7.993	(0.933)	133314	1.13475	1.135
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.565	8.573	(1.000)	273448	4.00000	
	9 1,4-Dichlorobenzene	146	8.596	8.596	(1.004)	1114	0.01255	0.01255(M)
	11 Benzyl alcohol	79	8.883	8.876	(1.037)	5887	0.07861	0.07861
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	15 4-Methylphenol	108	9.372	9.373	(1.094)	9358	0.10529	0.1053
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.412	10.404	(0.943)	1117	0.01214	0.01214
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.039	11.040	(1.000)	1004298	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	39 Dimethylphthalate	163	14.181	14.181	(0.968)	4743	0.02968	0.02968
*	42 Acenaphthene-d10	162	14.653	14.653	(1.000)	523741	4.00000	
	50 Diethylphthalate	149	15.635	15.635	(1.067)	36102	0.18053	0.1805
	54 N-Nitrosodiphenylamine	169	16.013	16.013	(0.906)	3351	0.02219	0.02219
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.681	17.674	(1.000)	1207259	4.00000	
$	66 Terphenyl-d14	244	20.885	20.869	(0.917)	594465	3.05137	3.051(R)
	67 Butylbenzylphthalate	149	21.821	21.821	(0.958)	7787	0.08480	0.08480
*	69 Chrysene-d12	240	22.782	22.774	(1.000)	731796	4.00000	
*	77 Perylene-d12	264	25.236	25.220	(1.000)	563094	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.569	27.569	(1.092)	13656	0.13852	0.1385
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022152S.D
Lab Smp Id: 23A0133-09
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 17:47
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	241018	120509	482036	273448	13.46
27 Naphthalene-d8	887165	443583	1774330	1004298	13.20
42 Acenaphthene-d10	467553	233777	935106	523741	12.02
59 Phenanthrene-d10	1079793	539897	2159586	1207259	11.80
69 Chrysene-d12	754146	377073	1508292	731796	-2.96
77 Perylene-d12	558201	279101	1116402	563094	0.88

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.09
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.67	17.17	18.17	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.03
77 Perylene-d12	25.22	24.72	25.72	25.24	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022152S.D

Lab ID: 23A0133-09
nt14.i, 20230221C.b\SIM.b\SIMABN2.m,   22-FEB-2023 20:12

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1423022148ICVS.d

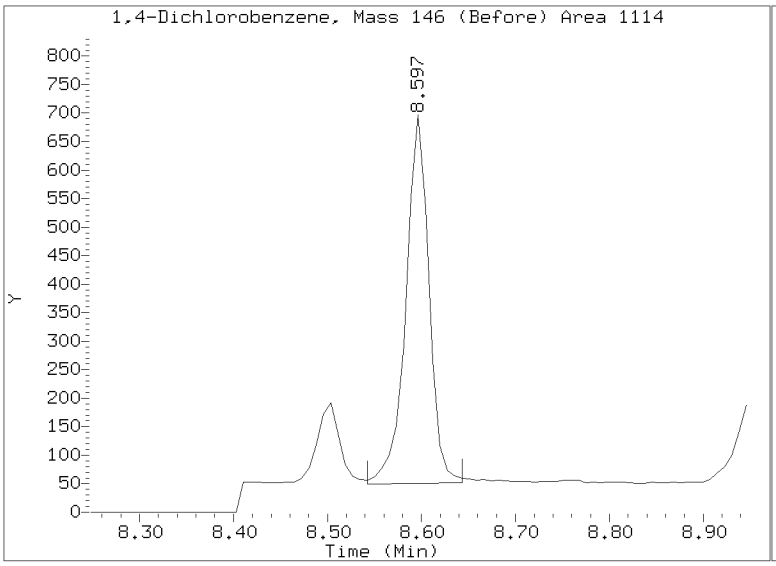
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

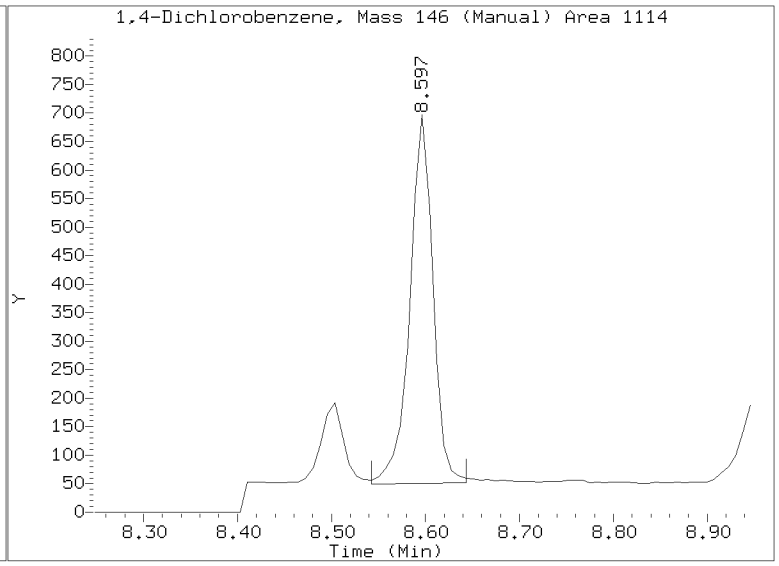
Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221C.b/SIM.b/NT1423022152S.D
Injection Date: 22-FEB-2023 20:12
Lab ID:23A0133-09 Client ID:
Report Date: 05/25/2023 11:48





Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1215

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-10 C	SDG:	23A0133
Sampled:	01/06/23 11:38	Prepared:	01/18/23 15:24	File ID:	NT1423022153S.D
% Solids:	53.49	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 20:48
Batch:	BLA0393	Sequence:	SLB0351	Initial/Final:	18.72 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GC00009
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	3.7	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	6.9	J	2.5	20.0
65-85-0	Benzoic acid	1	399	U	13.4	399
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	5.9	J	2.1	39.9

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.00	486	64.9	27 - 120	
p-Terphenyl-d14	499.33	383	76.7	37 - 120	Q

Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221S3S.D

Date : 22-FEB-2023 20:48

Client ID:

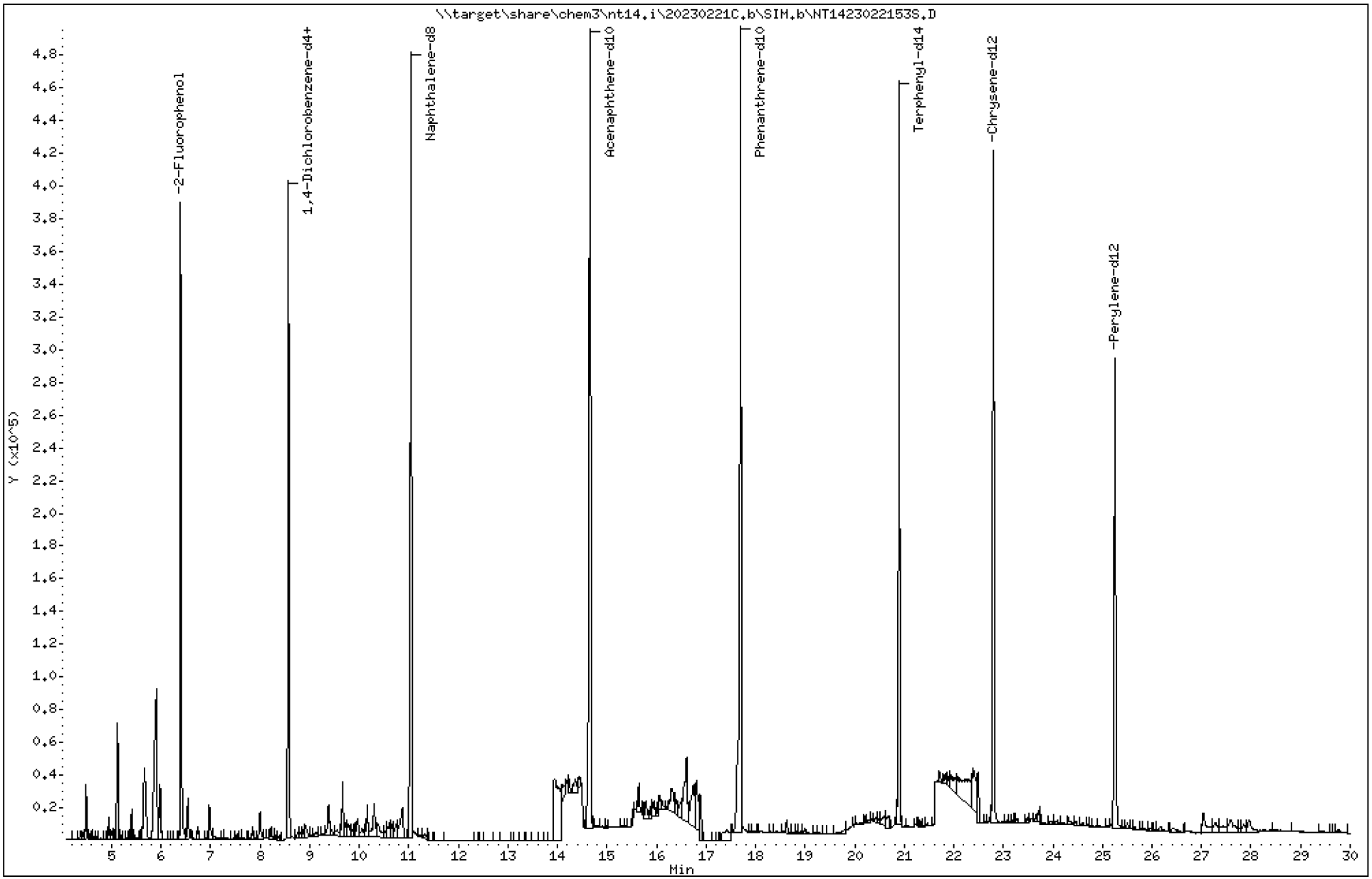
Instrument: nt14.i

Sample Info: 23A0133-10

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

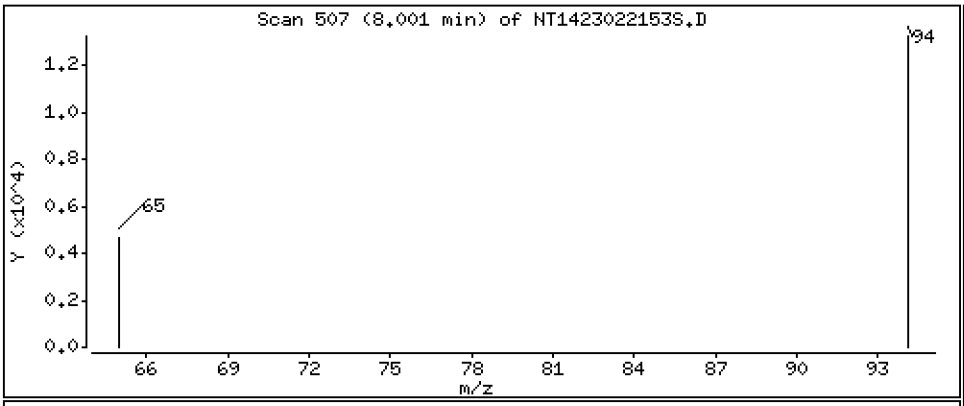
Operator: DSD

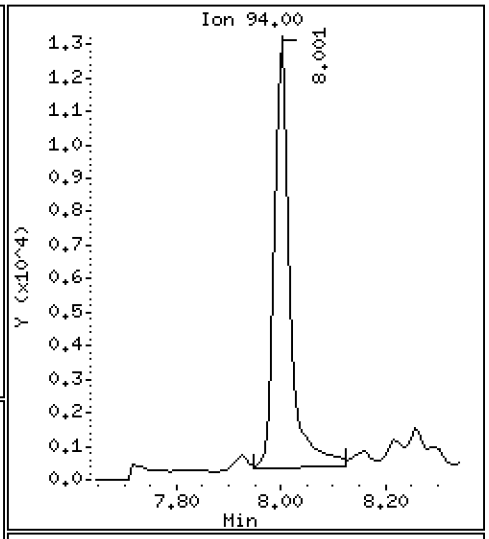
Column phase: ZB-5msi

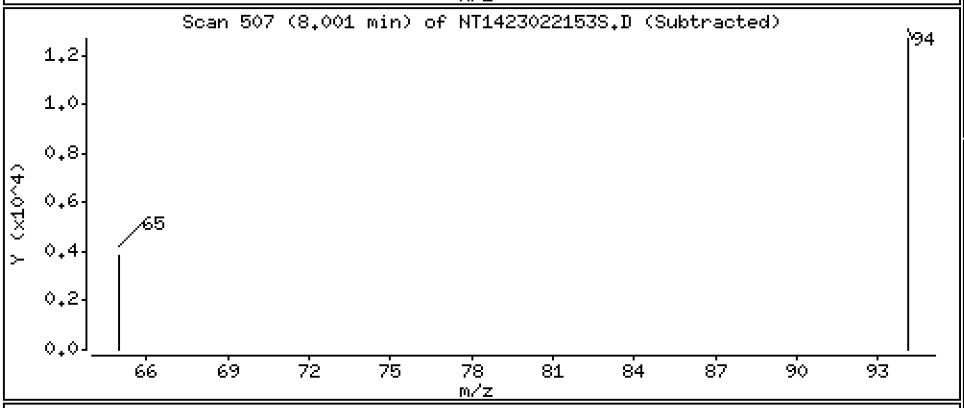
Column diameter: 0.25

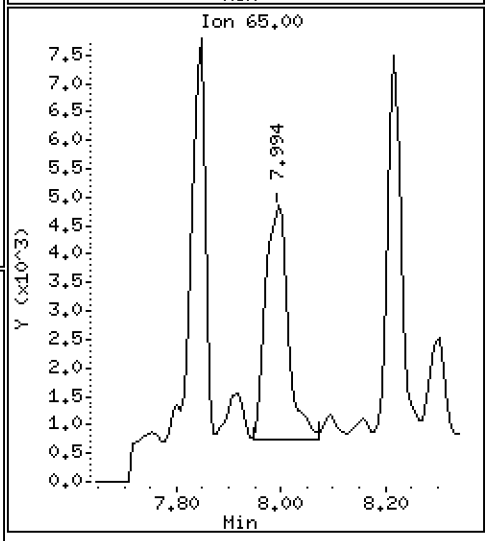
3 Phenol

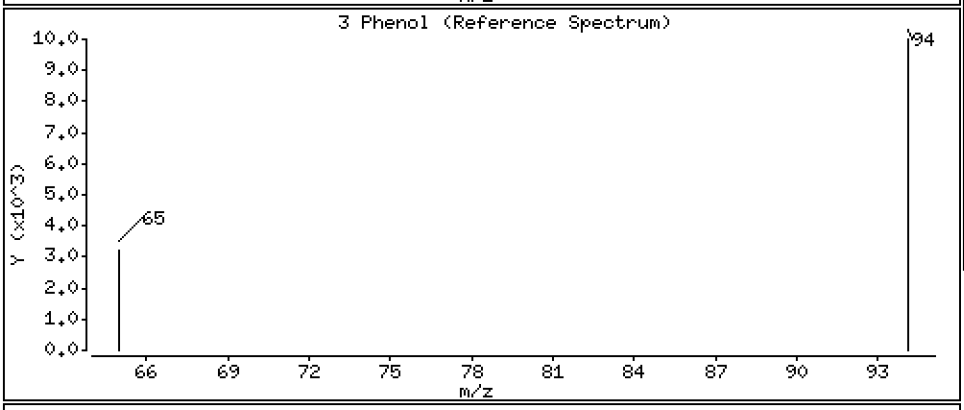
Concentration: 0.2313 ug/mL

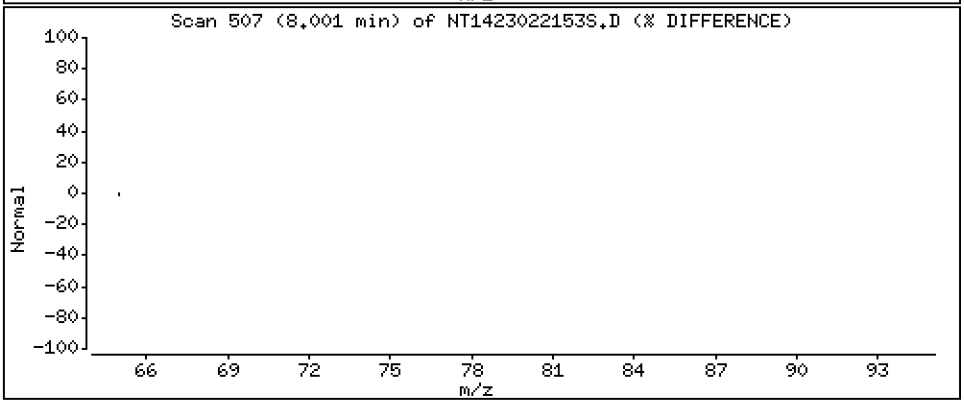












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

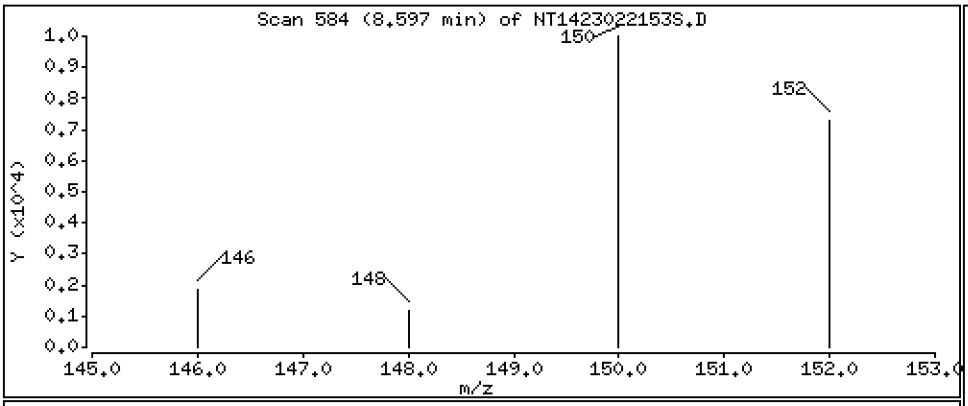
Operator: DSD

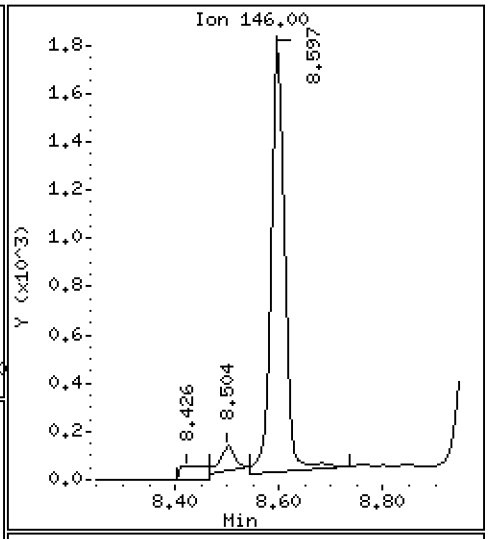
Column phase: ZB-5msi

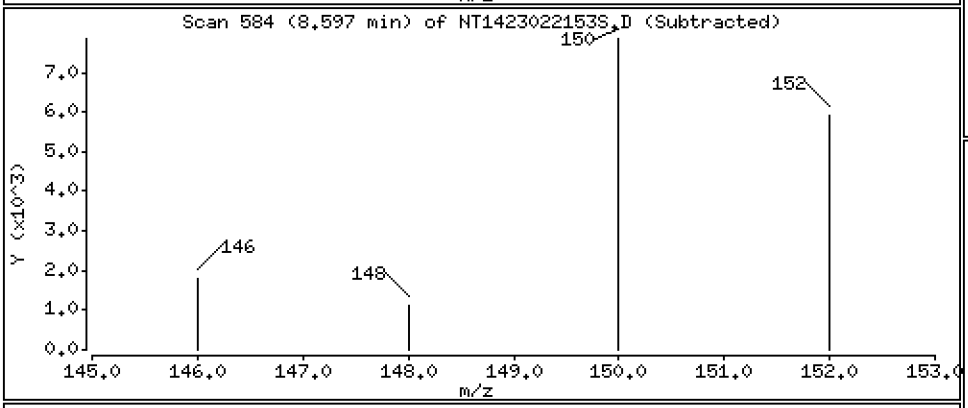
Column diameter: 0.25

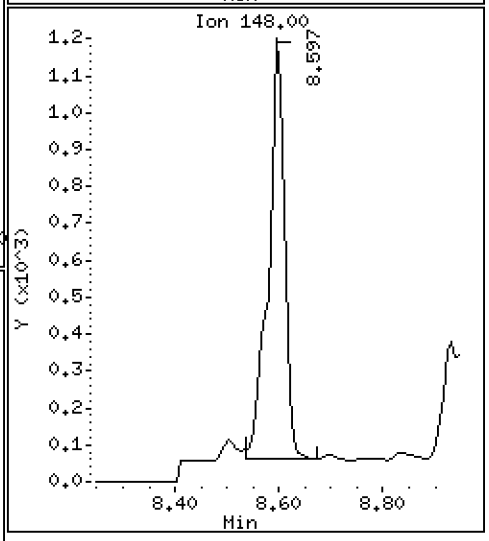
9 1,4-Dichlorobenzene

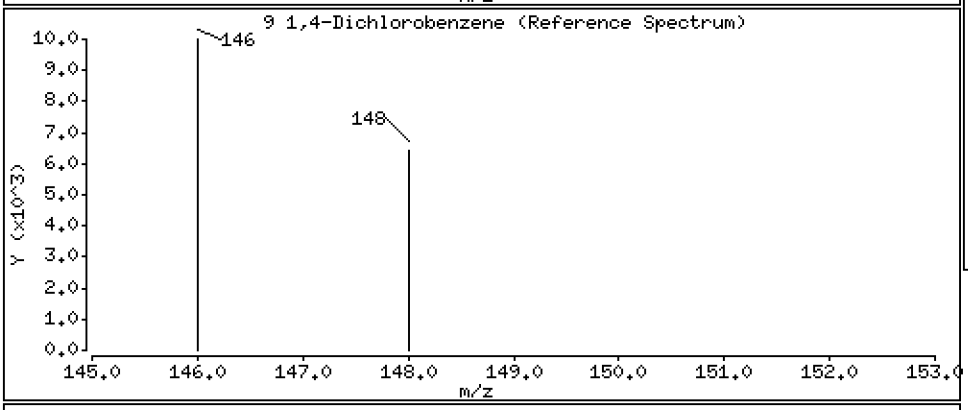
Concentration: 0.03693 ug/mL

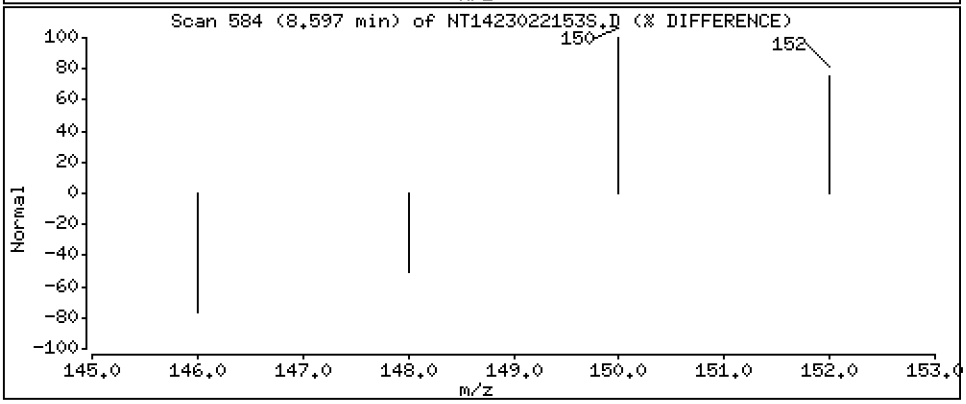












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

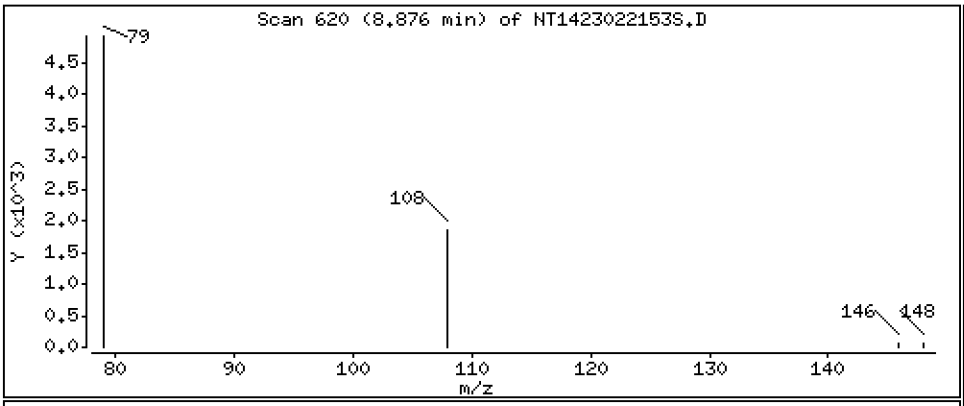
Operator: DSD

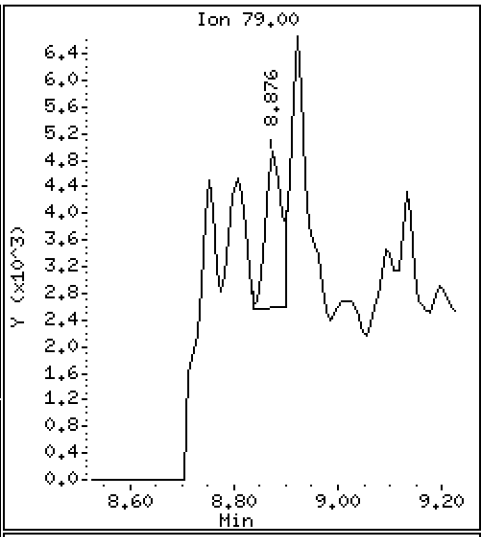
Column phase: ZB-5msi

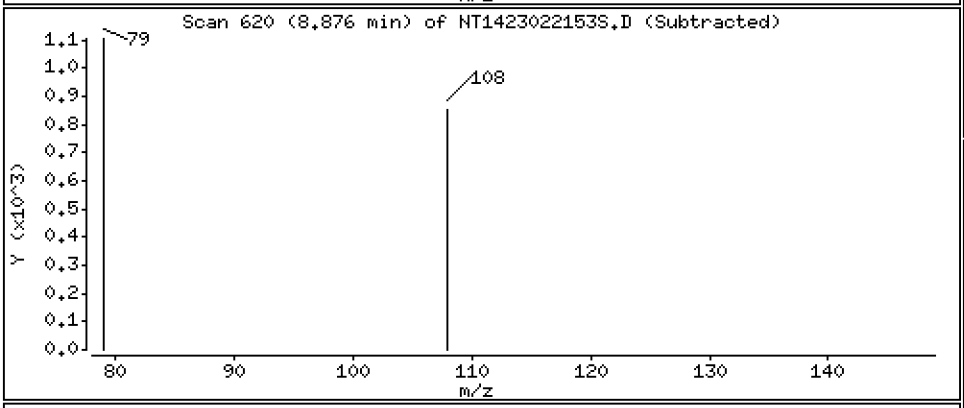
Column diameter: 0.25

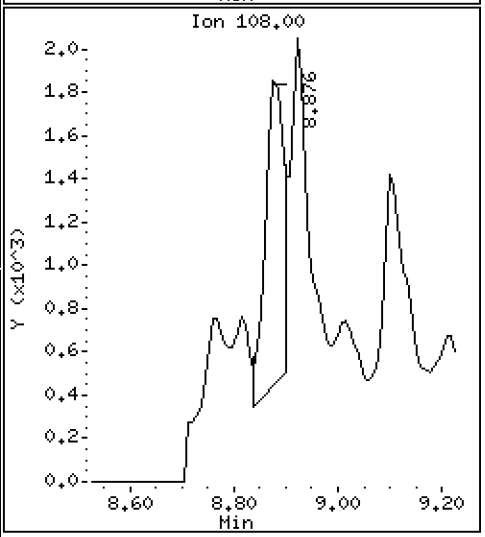
11 Benzyl alcohol

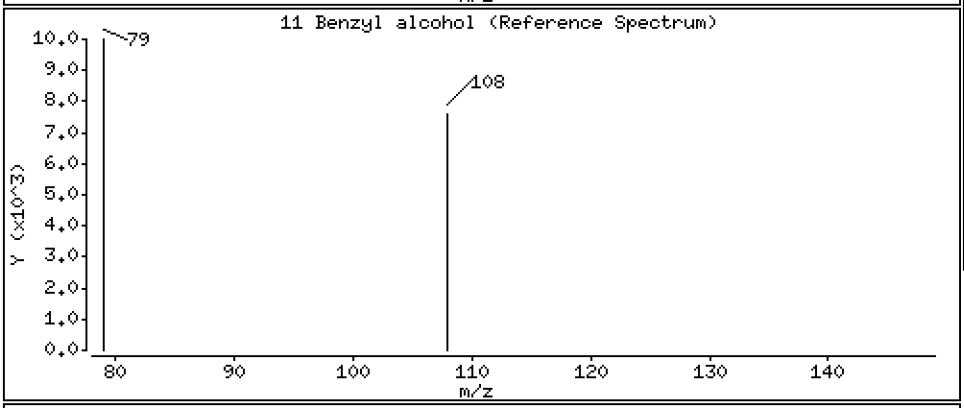
Concentration: 0.06947 ug/mL

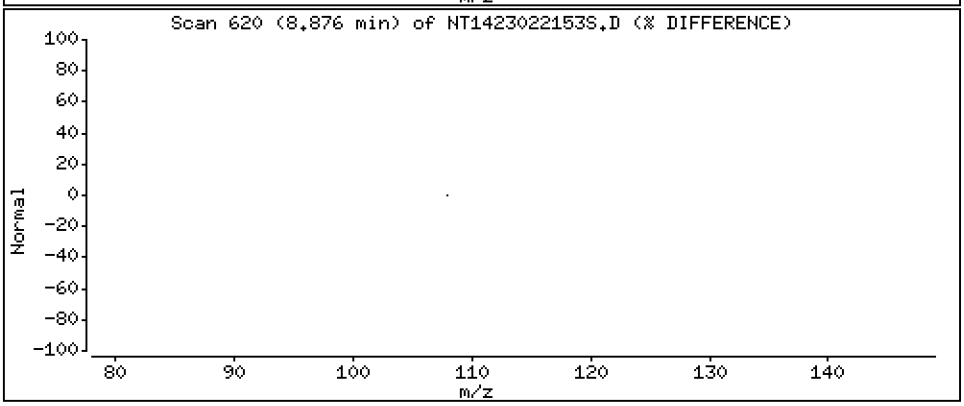












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022153S.D

Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

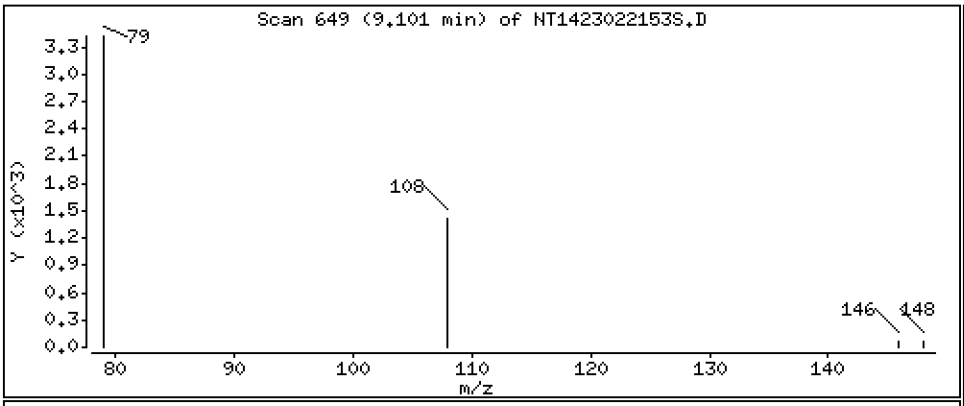
Operator: DSD

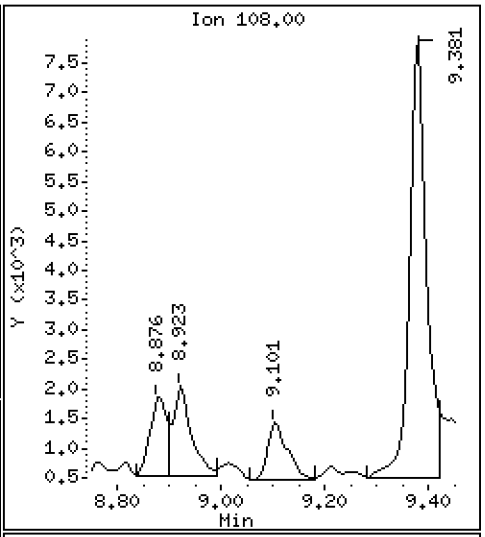
Column phase: ZB-5msi

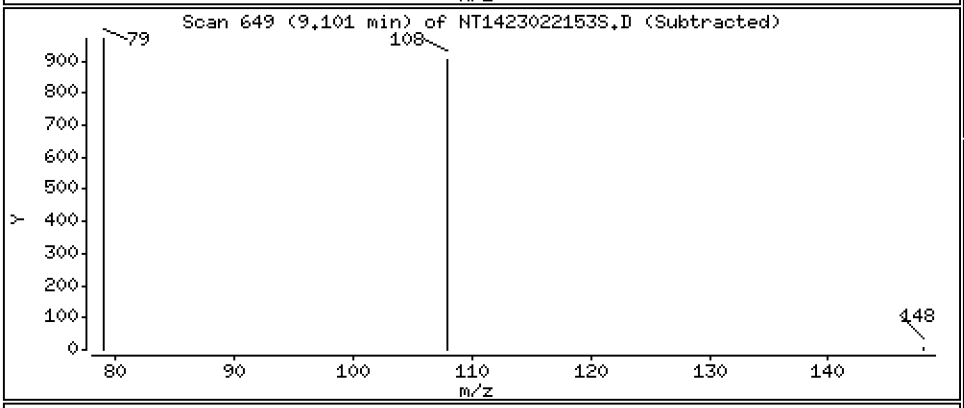
Column diameter: 0.25

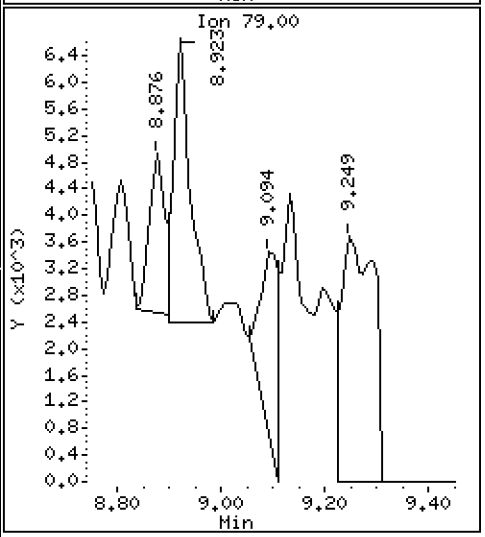
13 2-Methylphenol

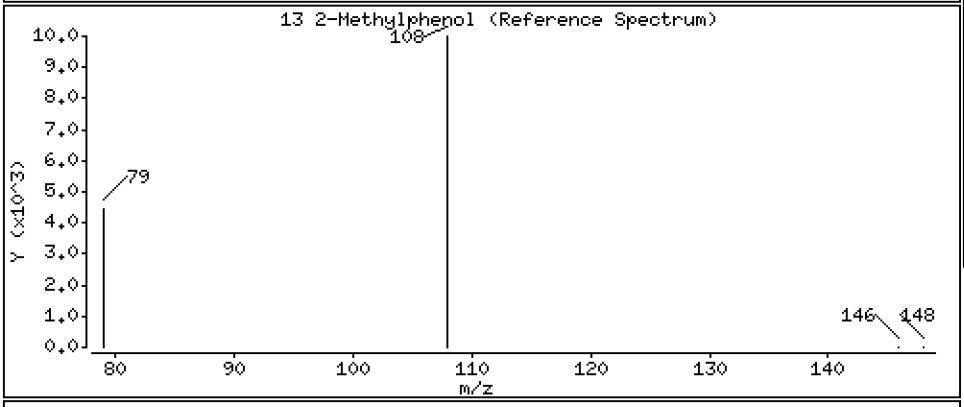
Concentration: 0.03192 ug/mL

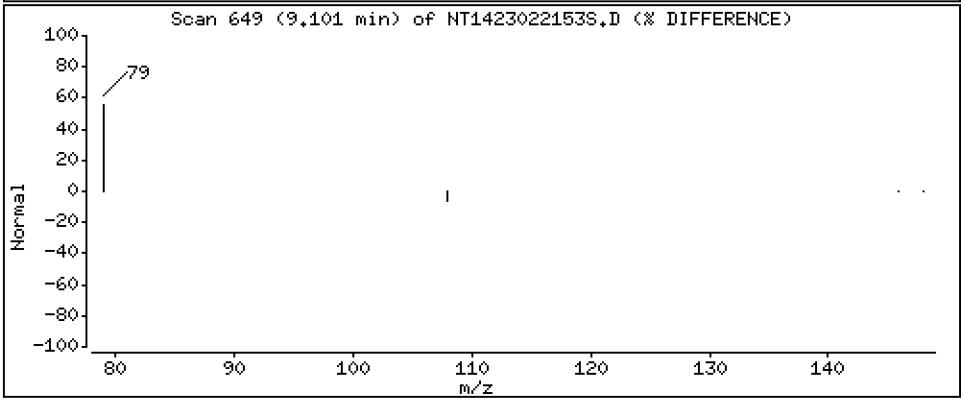












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

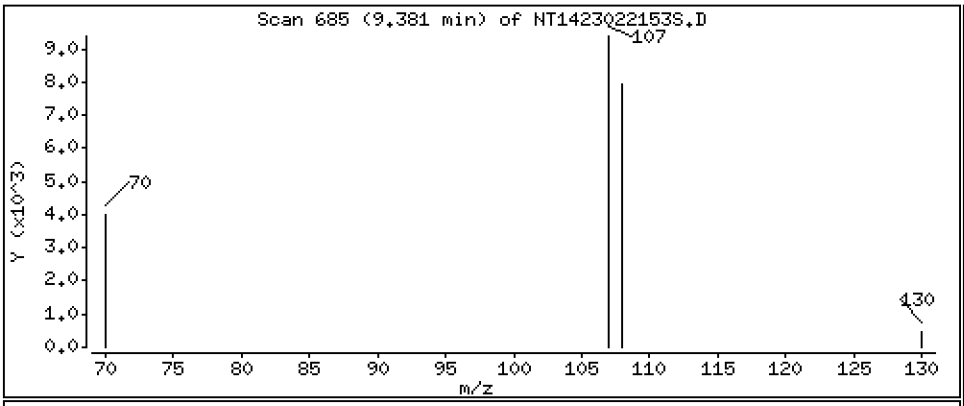
Operator: DSD

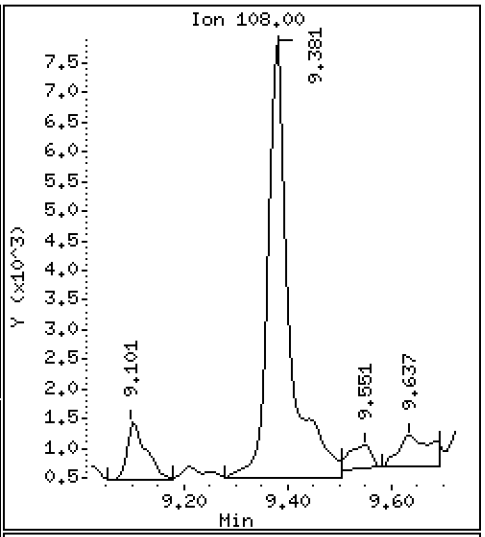
Column phase: ZB-5msi

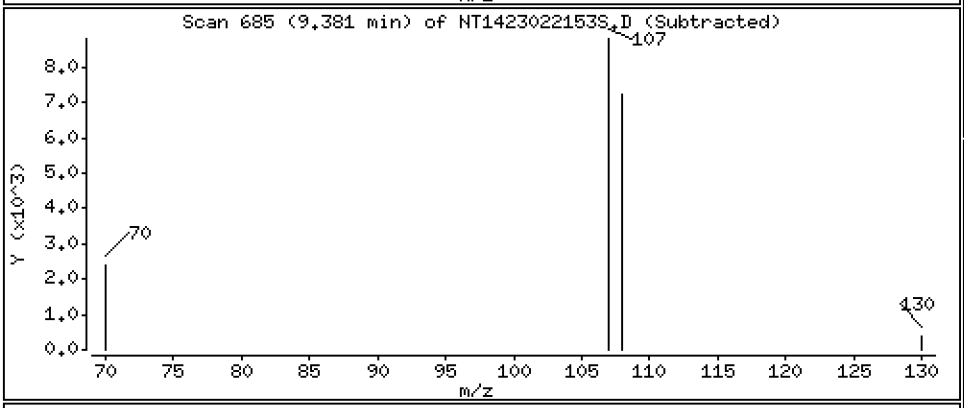
Column diameter: 0.25

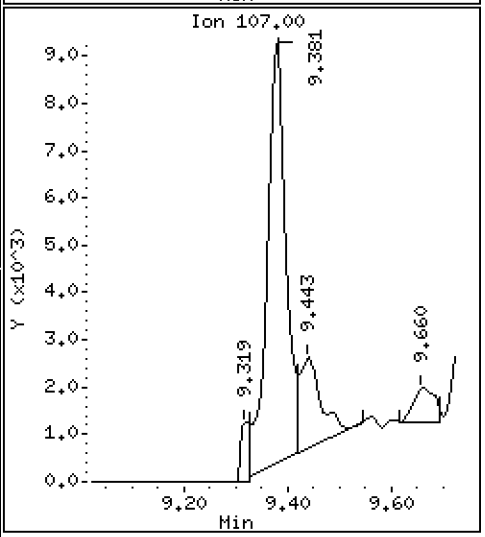
15 4-Methylphenol

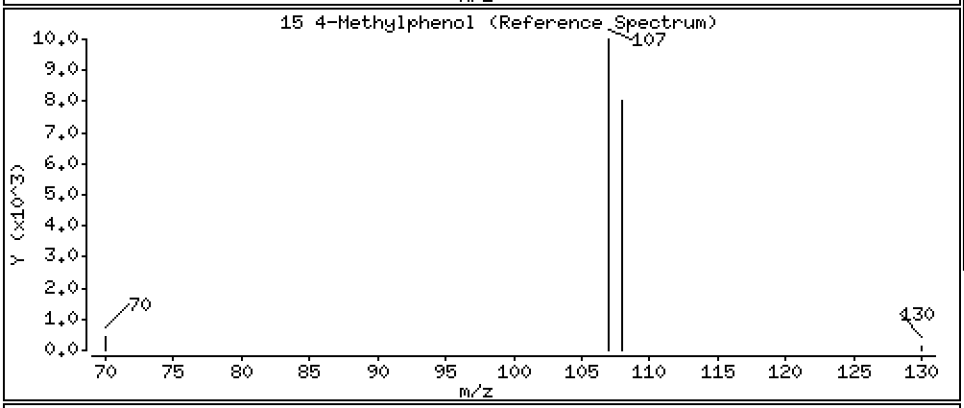
Concentration: 0.2421 ug/mL

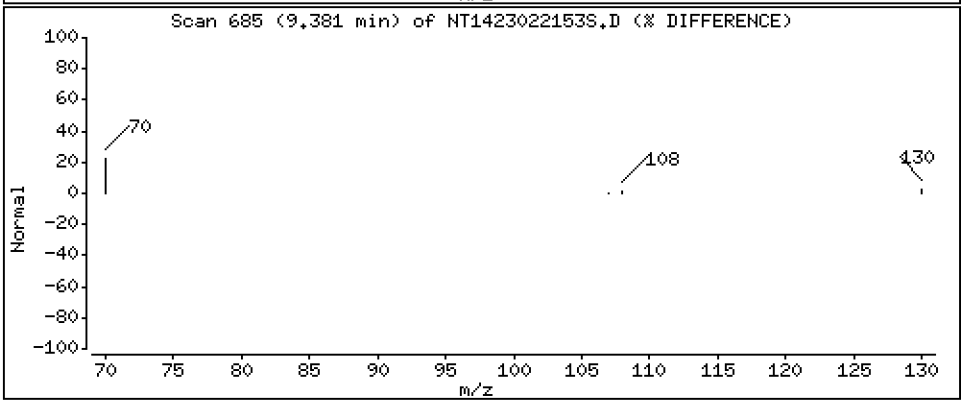












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

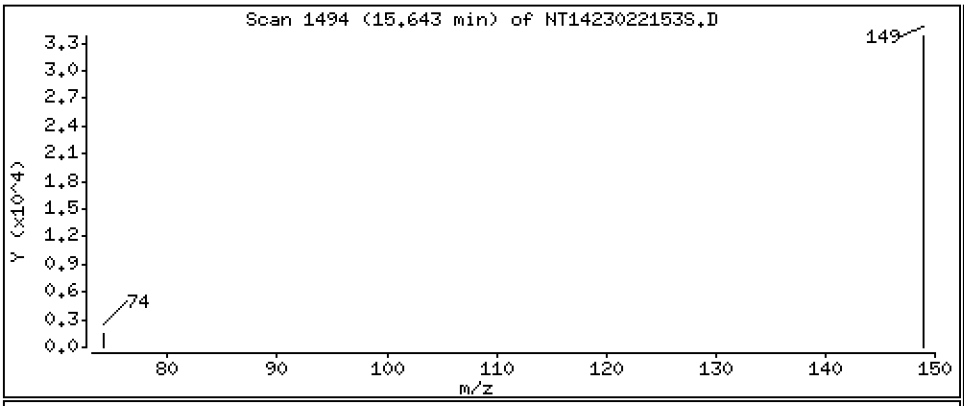
Operator: DSD

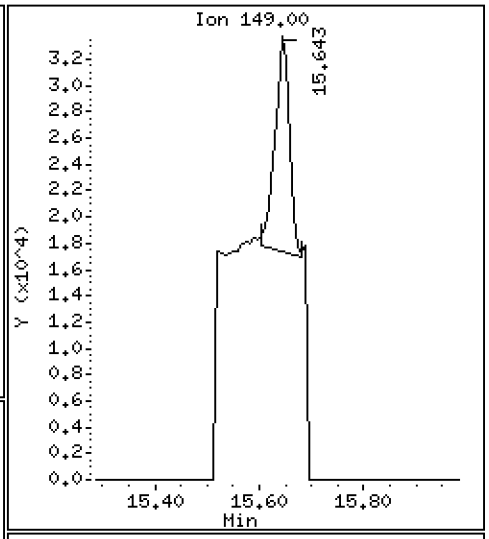
Column phase: ZB-5msi

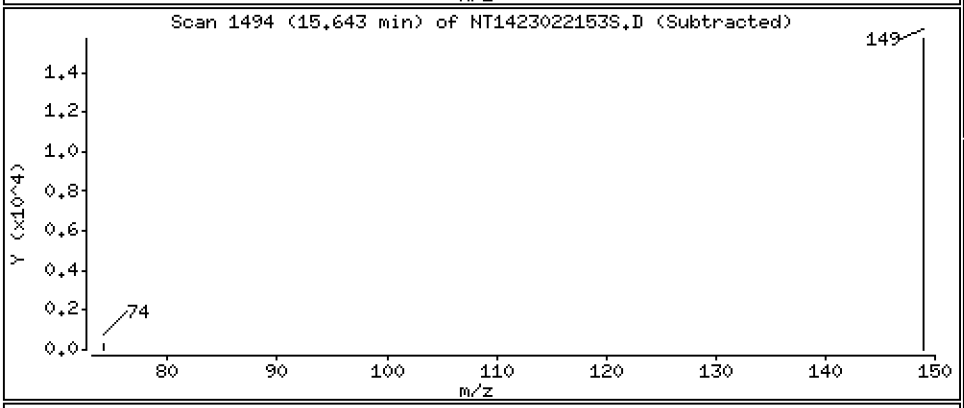
Column diameter: 0.25

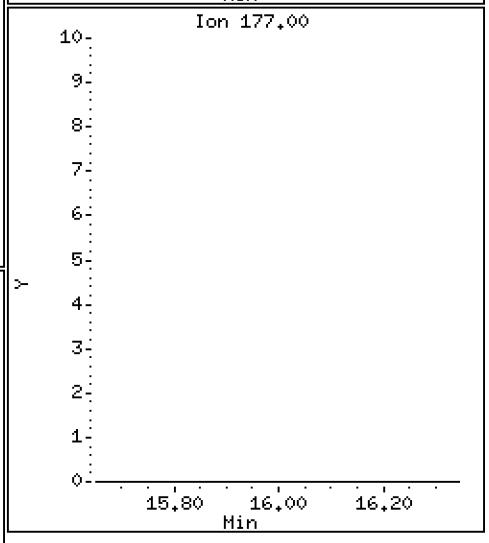
50 Diethylphthalate

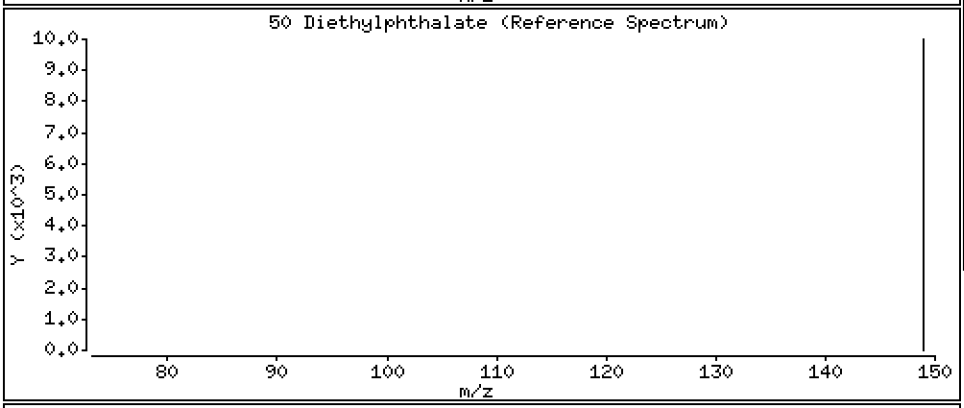
Concentration: 0.1635 ug/mL

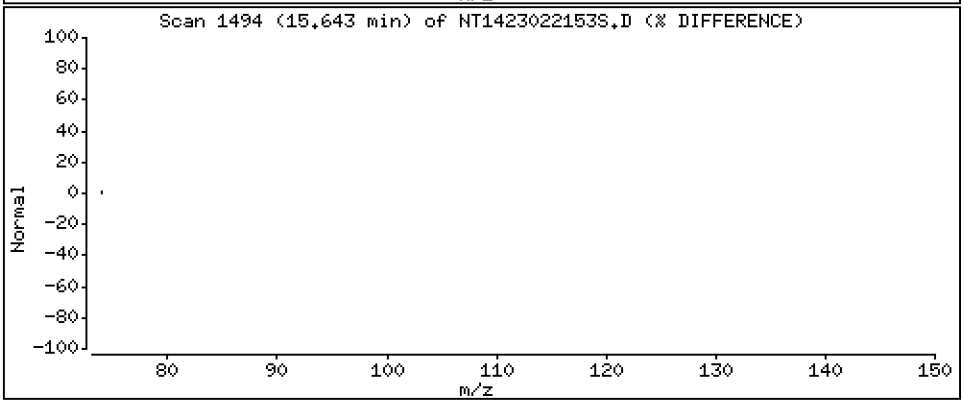












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

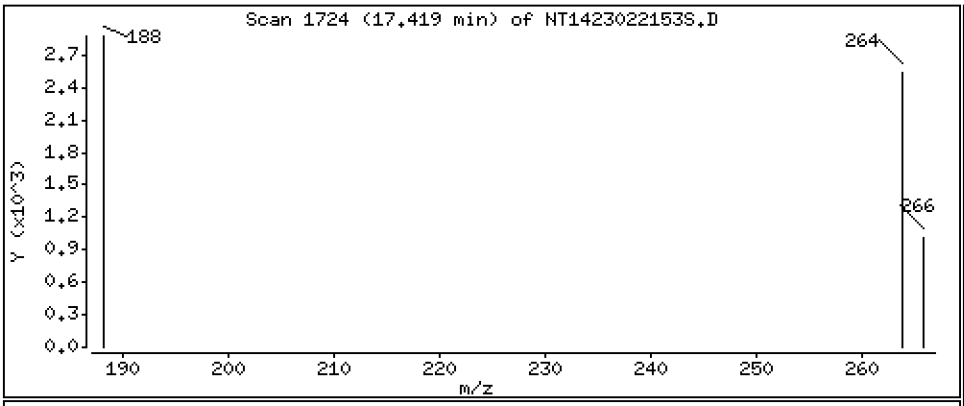
Operator: DSD

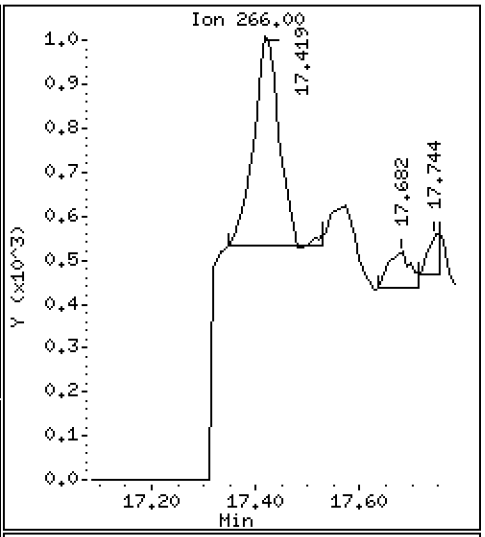
Column phase: ZB-5msi

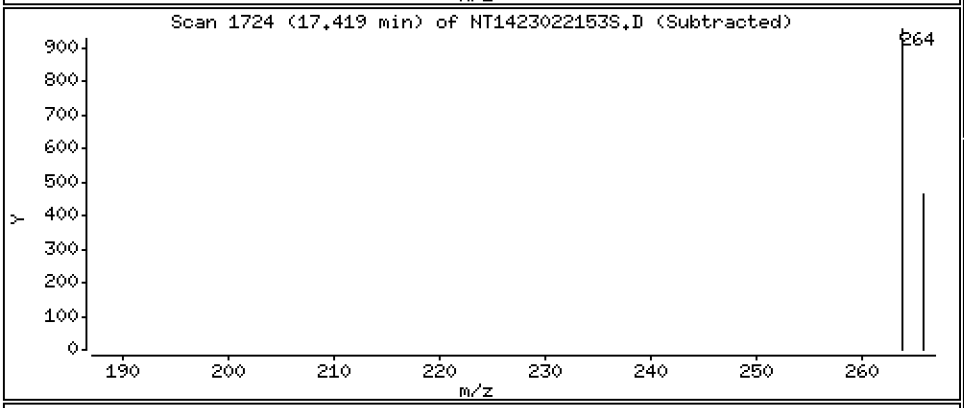
Column diameter: 0.25

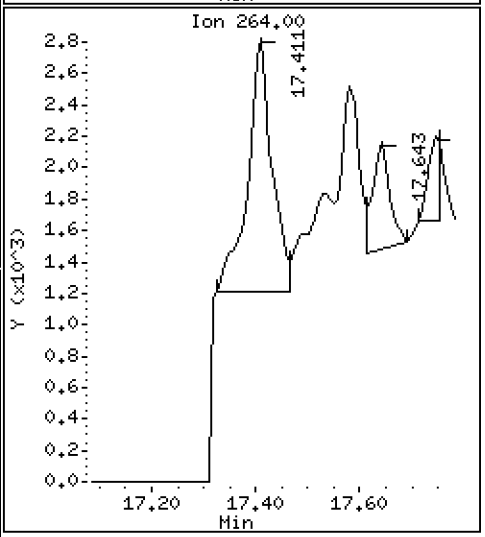
58 Pentachlorophenol

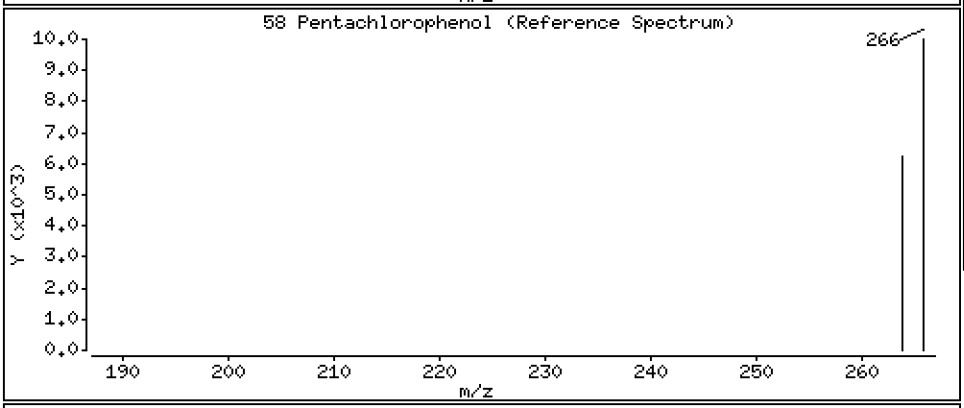
Concentration: 0.05926 ug/mL

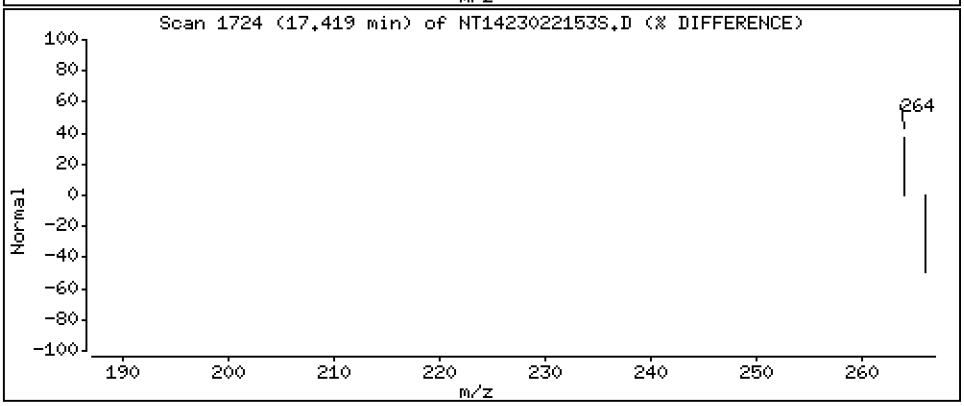












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Date : 22-FEB-2023 20:48

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-10

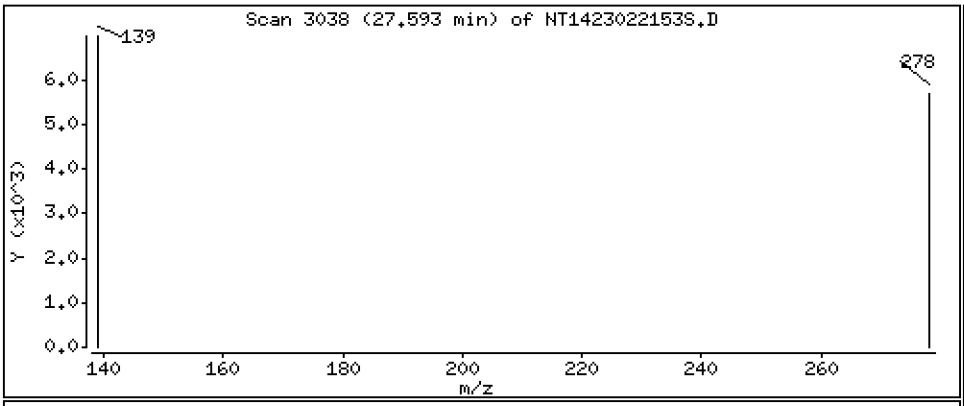
Operator: DSD

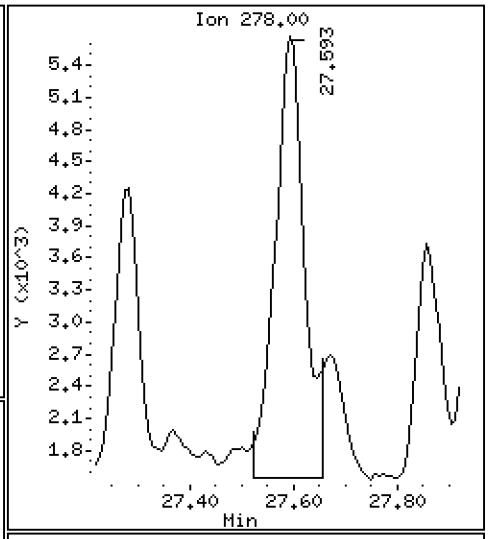
Column phase: ZB-5msi

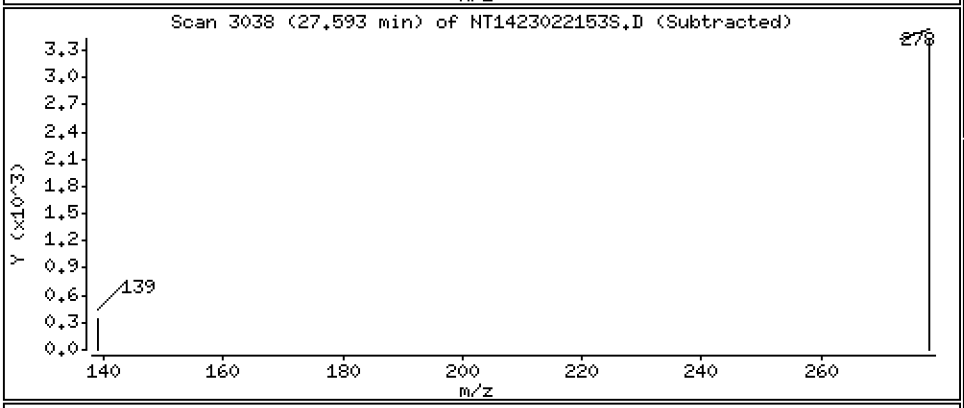
Column diameter: 0.25

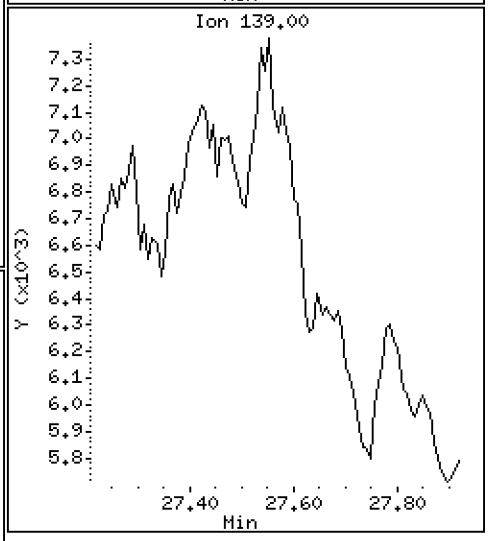
79 Dibenzo(a,h)anthracene

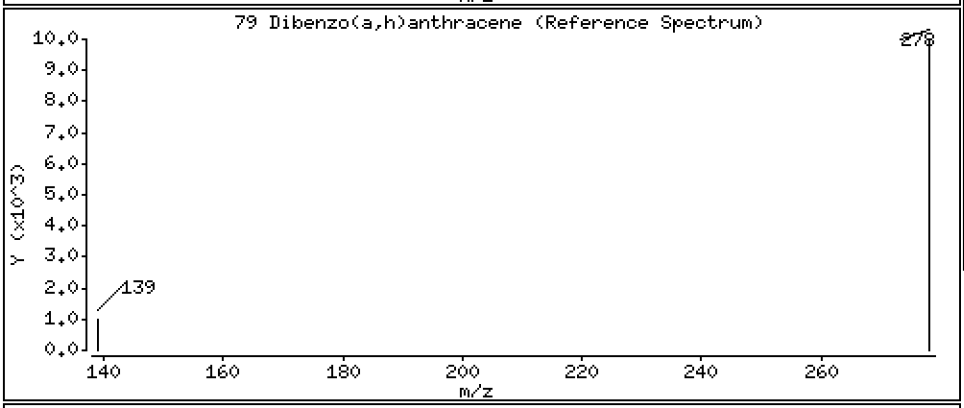
Concentration: 0.1703 ug/mL

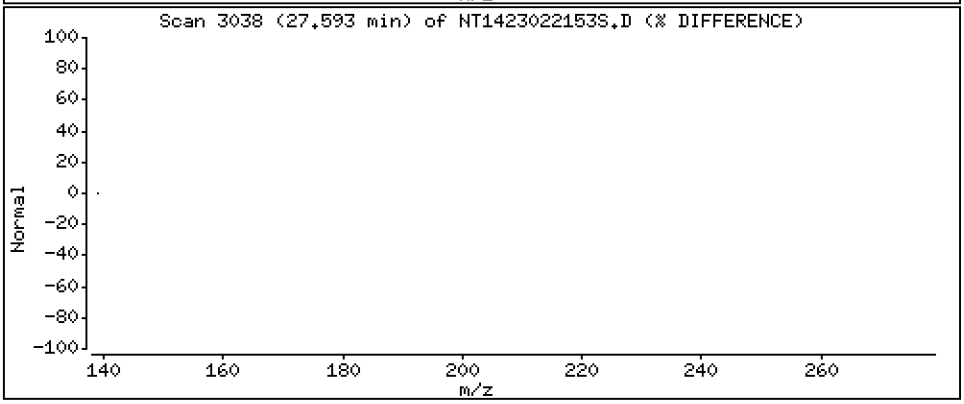












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT1423022153S.D
Lab Smp Id: 23A0133-10
Inj Date : 22-FEB-2023 20:48 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-10
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Meth Date : 25-May-2023 11:39 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 36
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
$	1	2-Fluorophenol	112	6.393	6.386	(0.746)	362348	4.86564	4.866(R)
	3	Phenol	94	8.001	7.993	(0.933)	26010	0.23129	0.2313
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	8.573	8.573	(1.000)	262390	4.00000	
	9	1,4-Dichlorobenzene	146	8.596	8.596	(1.003)	3145	0.03693	0.03693
	11	Benzyl alcohol	79	8.876	8.876	(1.035)	4992	0.06947	0.06947(M)
	12	1,2-Dichlorobenzene	146	Compound Not Detected.					
	13	2-Methylphenol	108	9.101	9.101	(1.062)	2486	0.03192	0.03192
	15	4-Methylphenol	108	9.380	9.373	(1.094)	20660	0.24210	0.2421
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22	2,4-Dimethylphenol	107	Compound Not Detected.					
	24	Benzoic acid	105	Compound Not Detected.					
	26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27	Naphthalene-d8	136	11.047	11.040	(1.000)	975907	4.00000	
	30	Hexachlorobutadiene	225	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
*	42	Acenaphthene-d10	162	14.661	14.653	(1.000)	501051	4.00000	
	50	Diethylphthalate	149	15.642	15.635	(1.067)	31276	0.16348	0.1635(M)
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	17.418	17.434	(0.984)	1608	0.05926	0.05926
*	59	Phenanthrene-d10	188	17.697	17.674	(1.000)	1026785	4.00000	
$	66	Terphenyl-d14	244	20.900	20.869	(0.917)	663358	3.83675	3.837(R)
	67	Butylbenzylphthalate	149	Compound Not Detected.					
*	69	Chrysene-d12	240	22.797	22.774	(1.000)	649447	4.00000	
*	77	Perylene-d12	264	25.251	25.220	(1.000)	553160	4.00000	
	79	Dibenzo(a,h)anthracene	278	27.592	27.569	(1.093)	16499	0.17026	0.1703(M)
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022153S.D
Lab Smp Id: 23A0133-10
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 17:47
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	241018	120509	482036	262390	8.87
27 Naphthalene-d8	887165	443583	1774330	975907	10.00
42 Acenaphthene-d10	467553	233777	935106	501051	7.16
59 Phenanthrene-d10	1079793	539897	2159586	1026785	-4.91
69 Chrysene-d12	754146	377073	1508292	649447	-13.88
77 Perylene-d12	558201	279101	1116402	553160	-0.90

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.05	0.07
42 Acenaphthene-d10	14.65	14.15	15.15	14.66	0.05
59 Phenanthrene-d10	17.67	17.17	18.17	17.70	0.13
69 Chrysene-d12	22.77	22.27	23.27	22.80	0.10
77 Perylene-d12	25.22	24.72	25.72	25.25	0.12

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022153S.D

Lab ID: 23A0133-10
nt14.i, 20230221C.b\SIM.b\SIMABN2.m,   22-FEB-2023 20:48

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1423022148ICVS.d

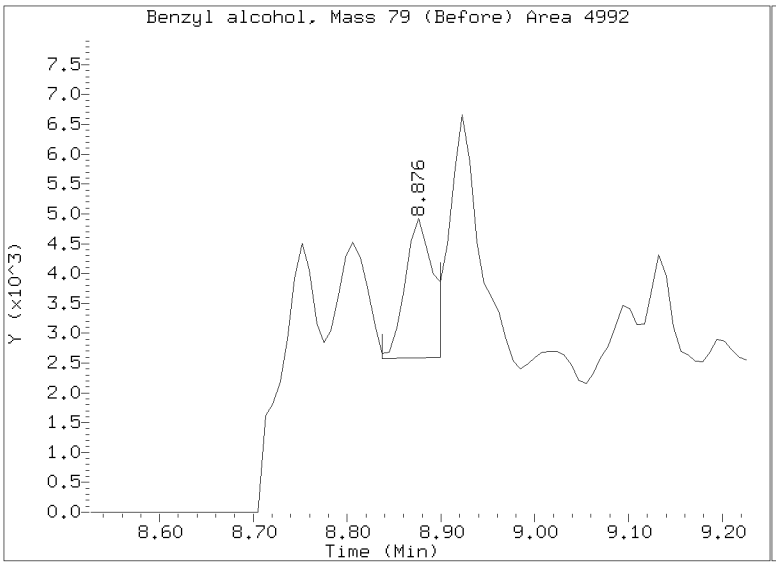
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

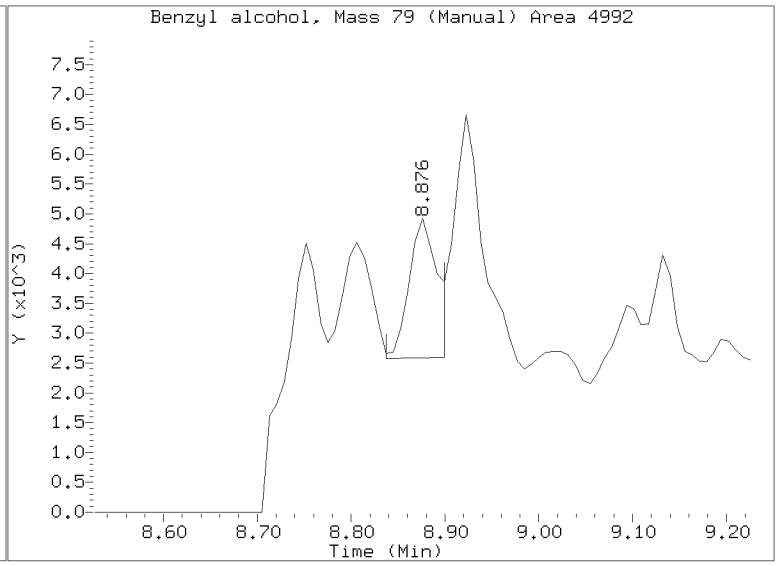
Exception: 1,2,4-Trichlorobenzene 0.0010

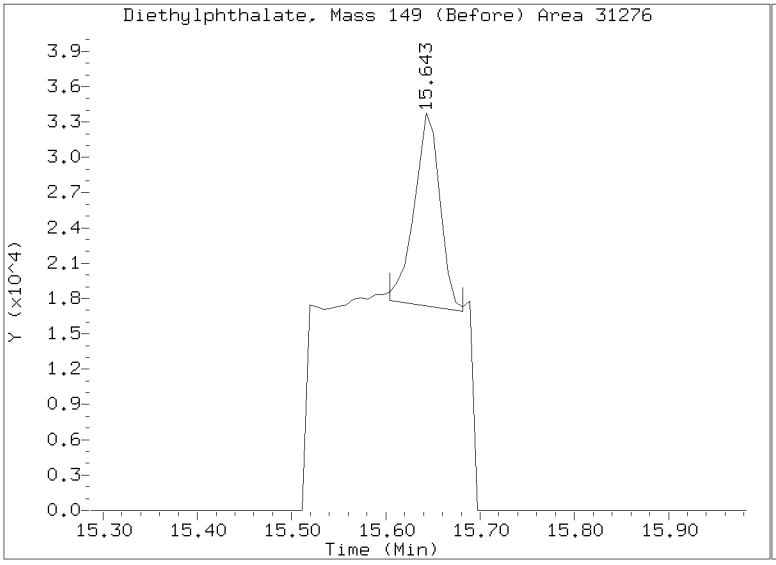
* Only compounds listed in the work order have been verified by the analyst *

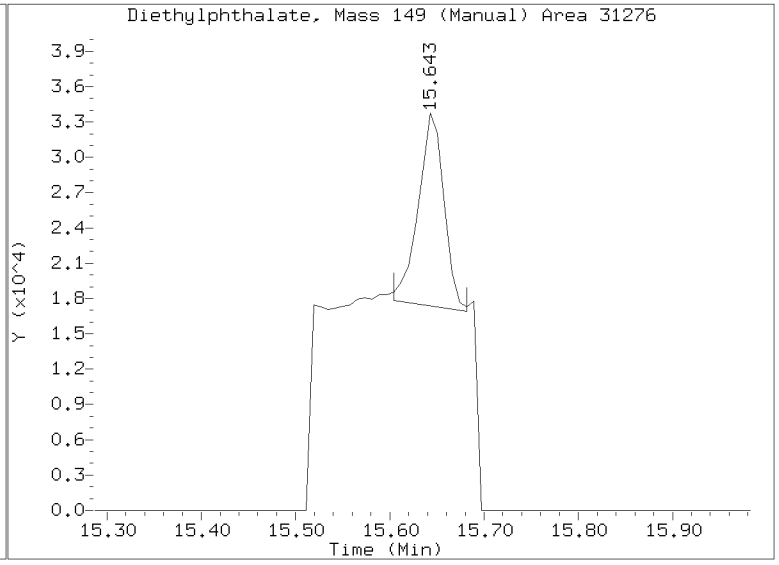
Quant Ion Manual Peak Adjustment Report

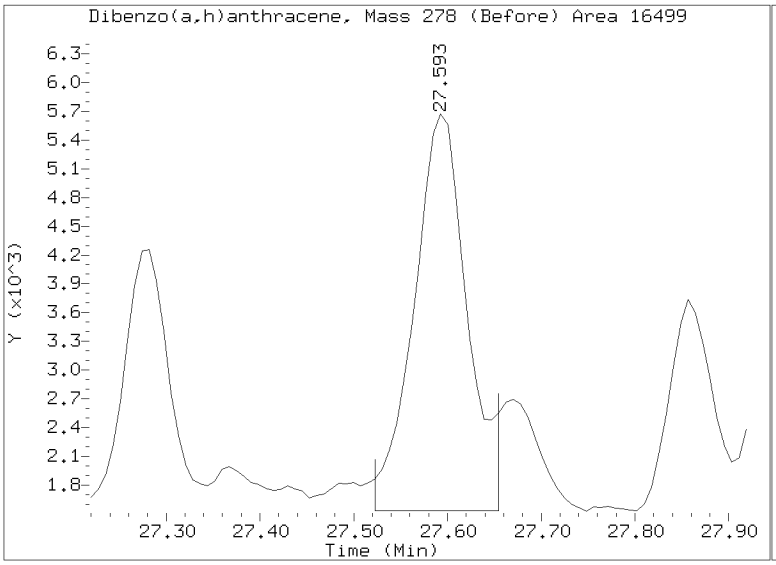
Datafile: //target/share/chem3/nt14.i/20230221C.b/SIM.b/NT1423022153S.D
Injection Date: 22-FEB-2023 20:48
Lab ID:23A0133-10 Client ID:
Report Date: 05/25/2023 11:48

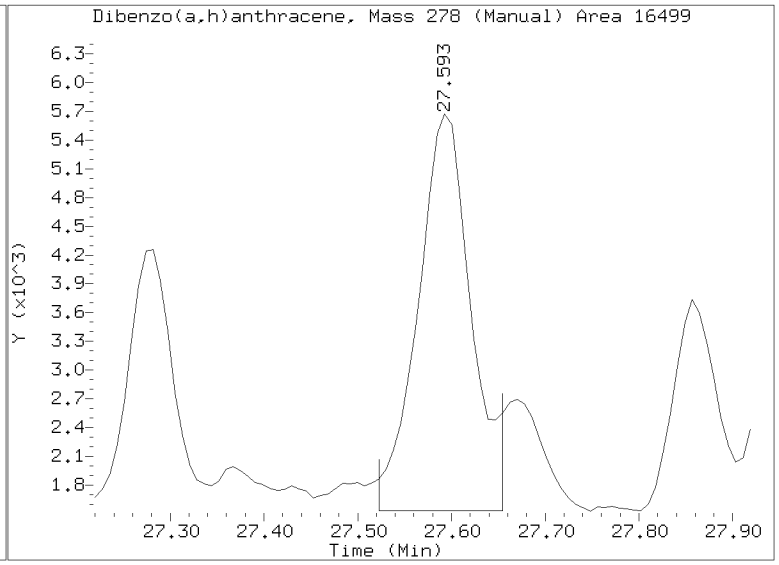












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1222

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-11 C	SDG:	23A0133
Sampled:	01/06/23 13:00	Prepared:	01/18/23 15:24	File ID:	NT1423022154S.D
% Solids:	52.13	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 21:24
Batch:	BLA0393	Sequence:	SLB0351	Initial/Final:	19.2 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GC00009
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	5.2		0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	2.6	J	0.7	5.0
100-51-6	Benzyl Alcohol	1	10.6	J	2.5	20.0
65-85-0	Benzoic acid	1	400	U	13.4	400
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	3.0	J	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.1		1.3	5.0
87-86-5	Pentachlorophenol	1	40.0	U	2.1	40.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.33	482	64.3	27 - 120	
p-Terphenyl-d14	499.55	420	84.1	37 - 120	Q

Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221545.D

Page 1

Date : 22-FEB-2023 21:24

Client ID:

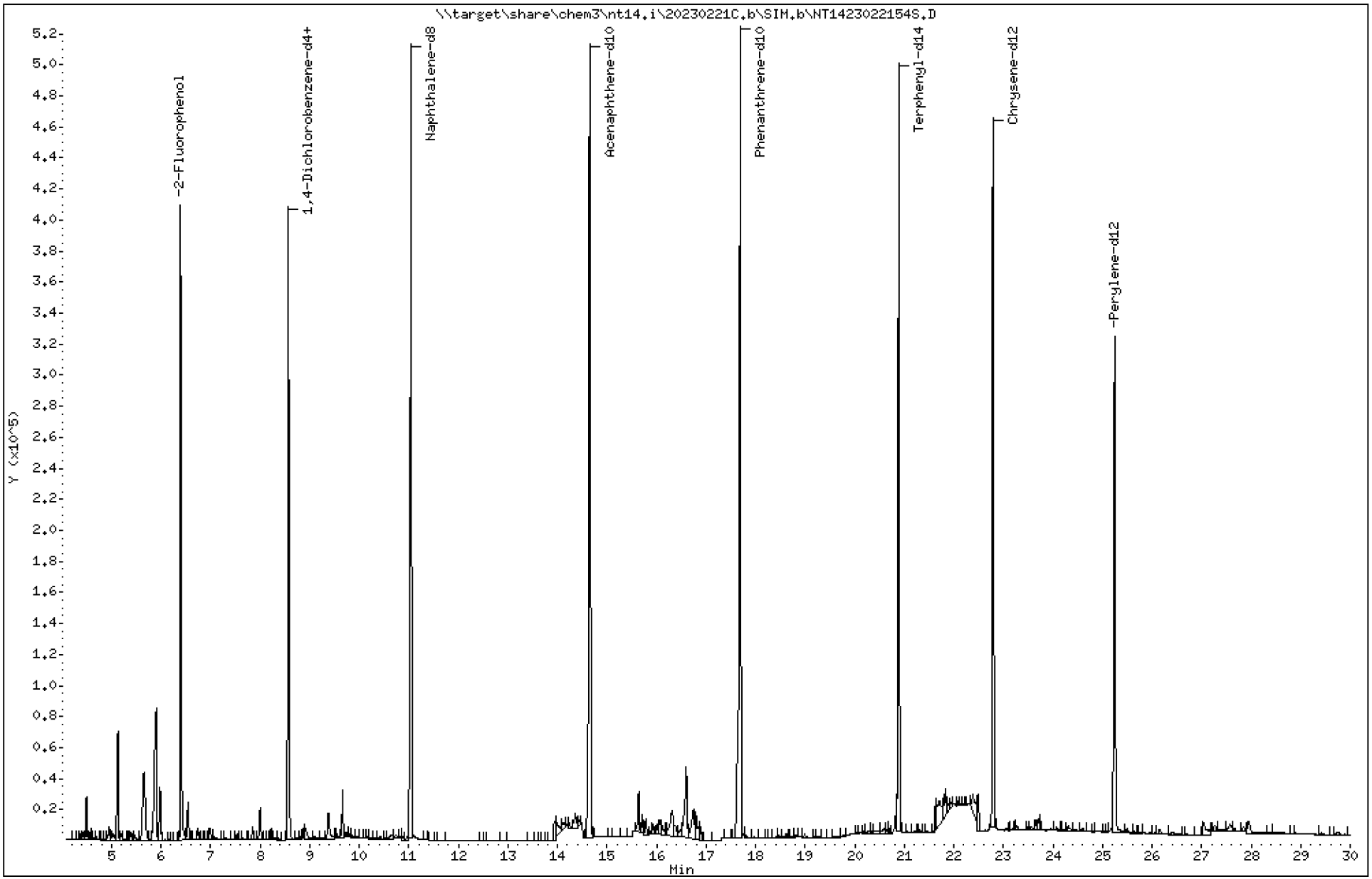
Instrument: nt14.i

Sample Info: 23A0133-11

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

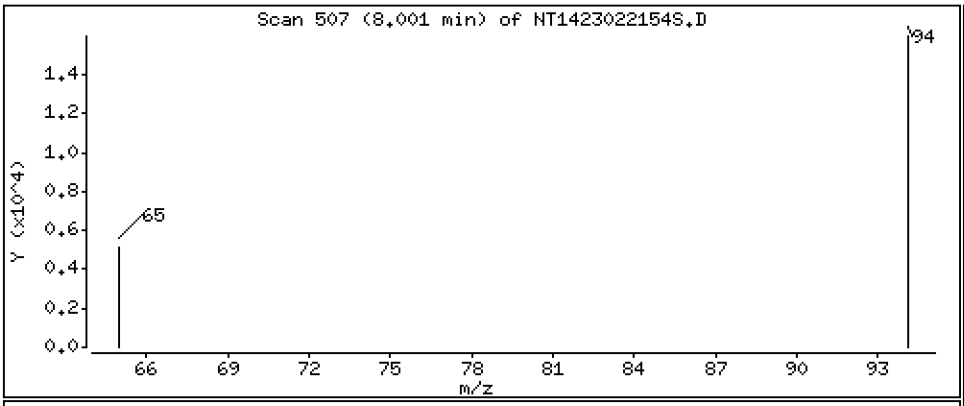
Operator: DSD

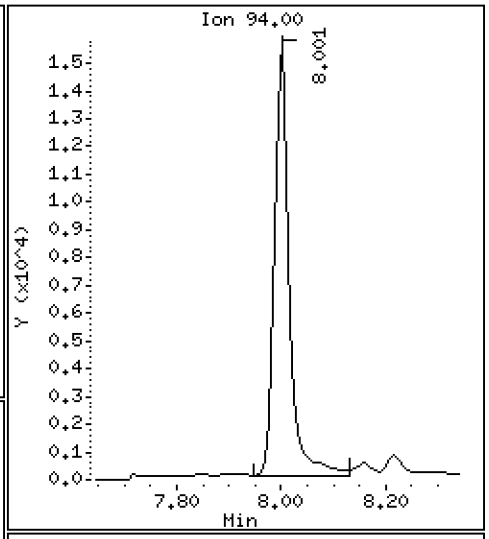
Column phase: ZB-5msi

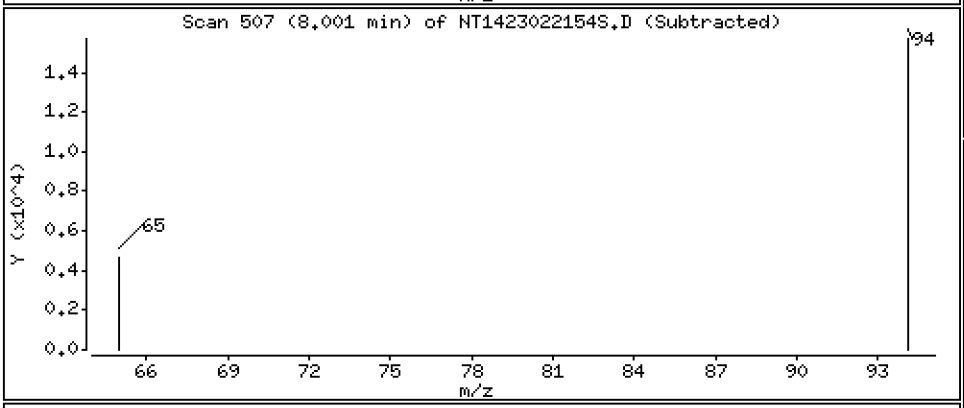
Column diameter: 0.25

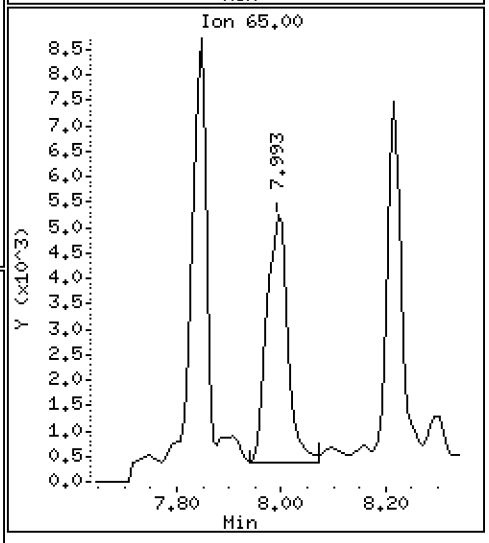
3 Phenol

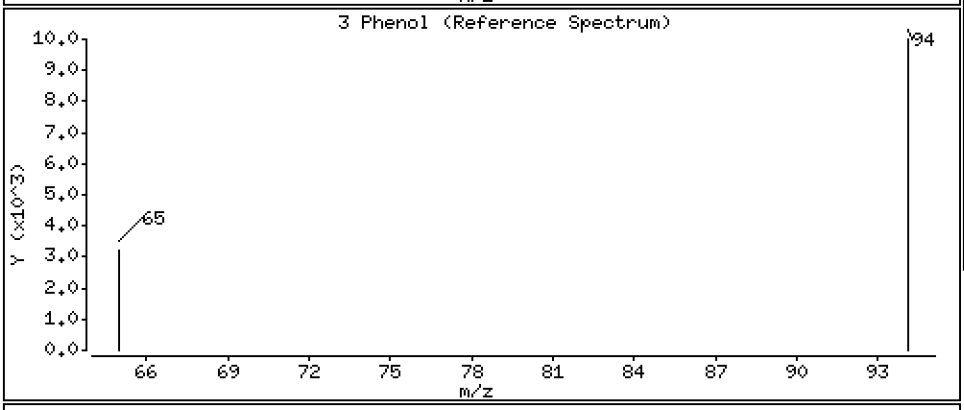
Concentration: 0.2537 ug/mL

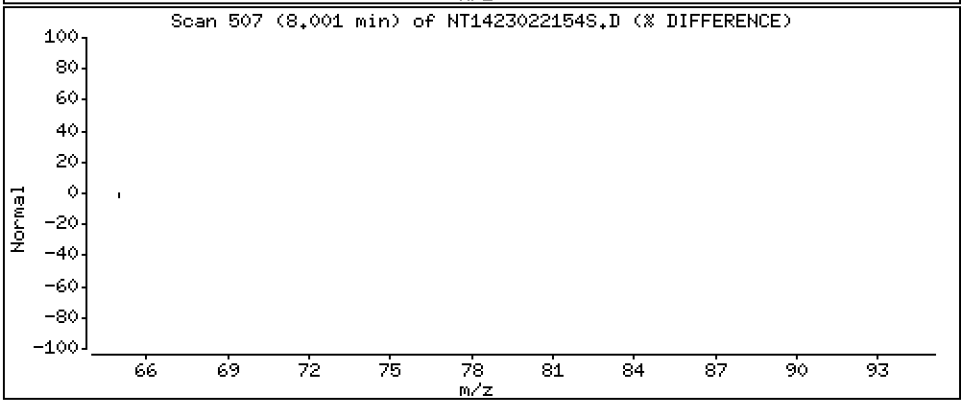












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

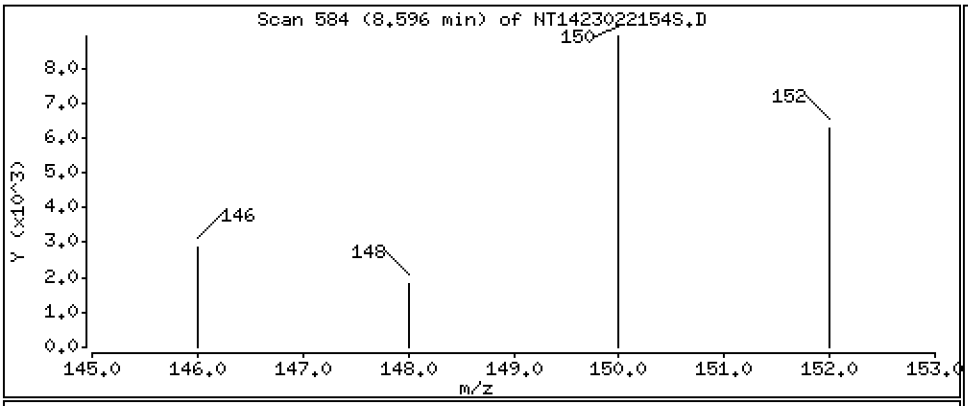
Operator: DSD

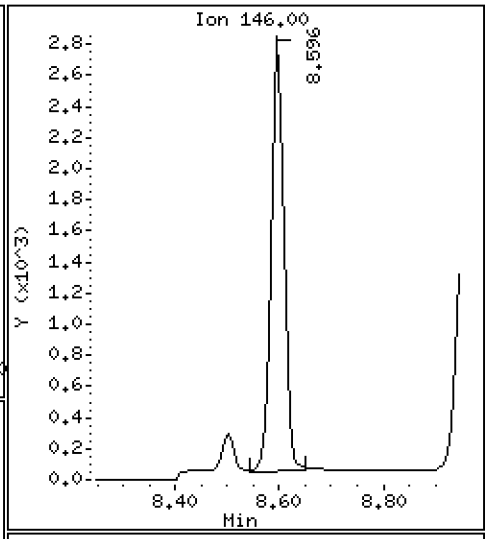
Column phase: ZB-5msi

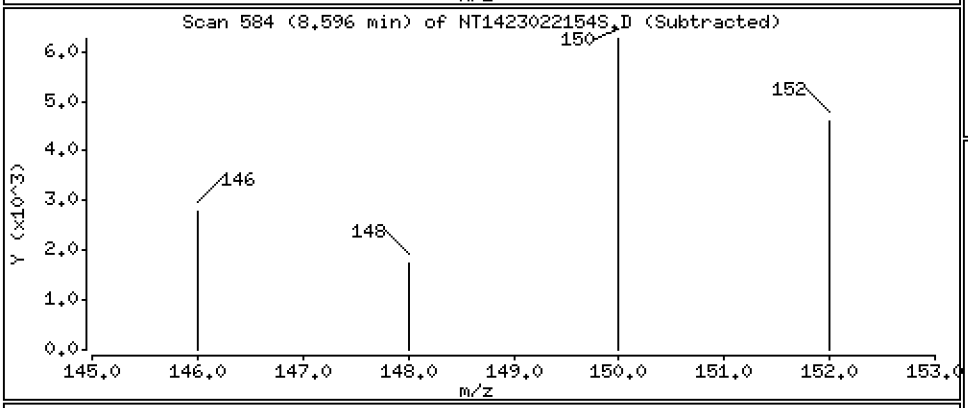
Column diameter: 0.25

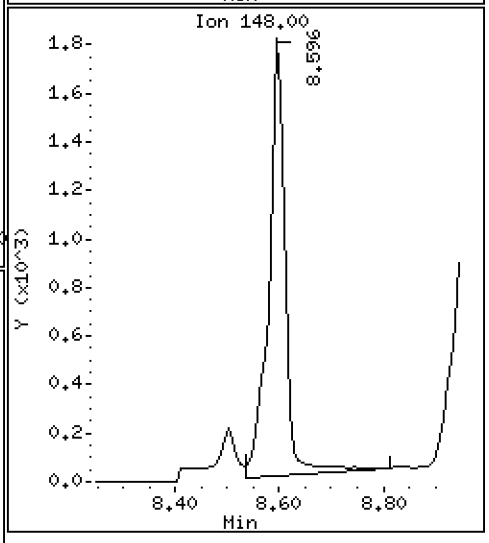
9 1,4-Dichlorobenzene

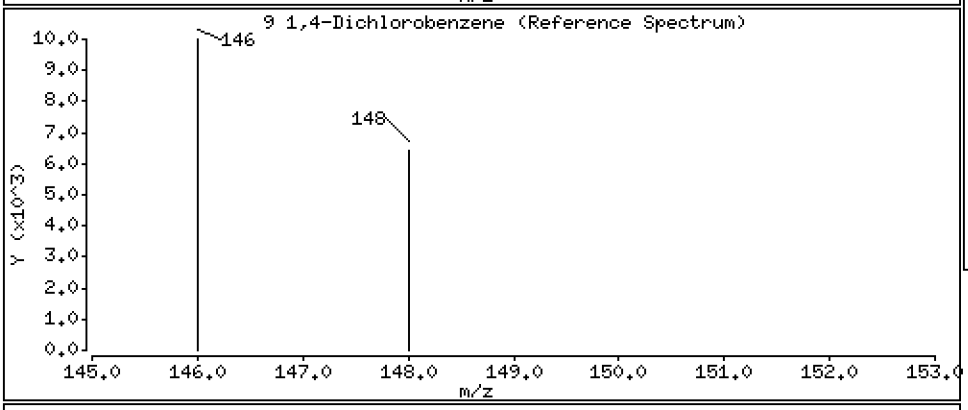
Concentration: 0.05176 ug/mL

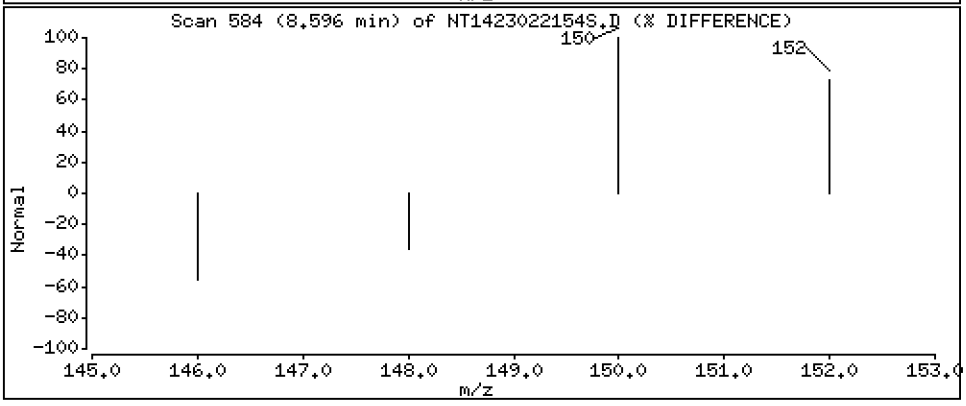












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

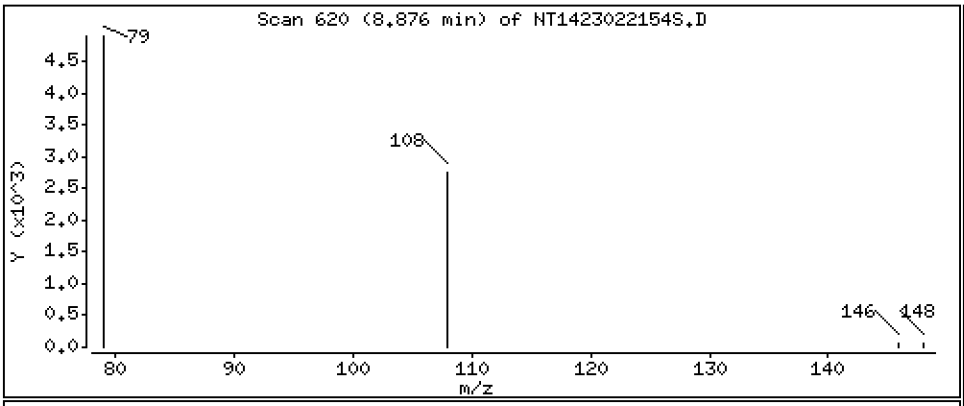
Operator: DSD

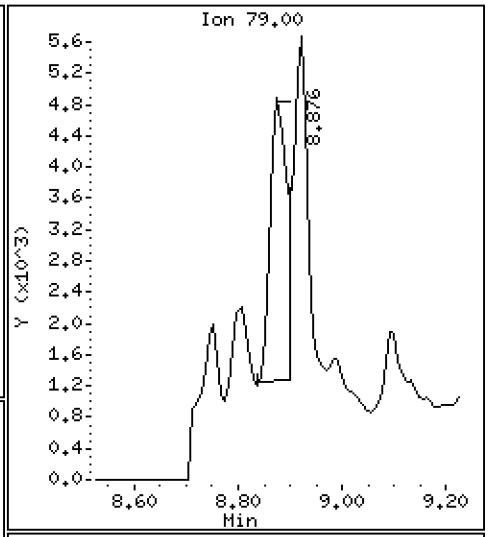
Column phase: ZB-5msi

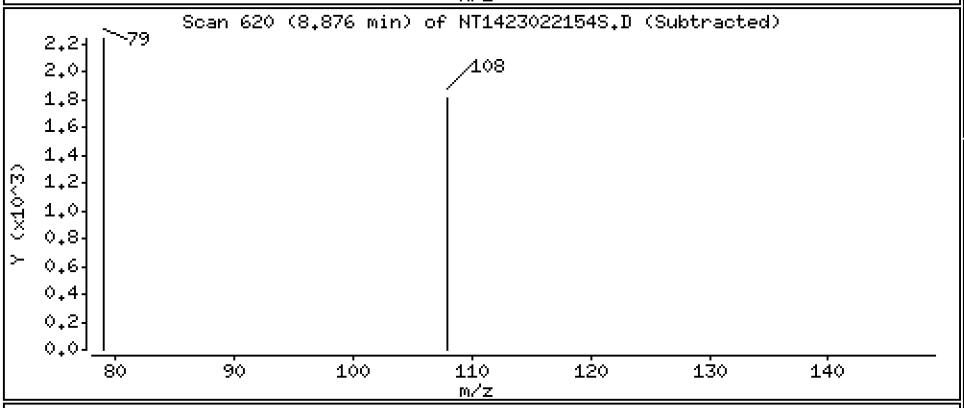
Column diameter: 0.25

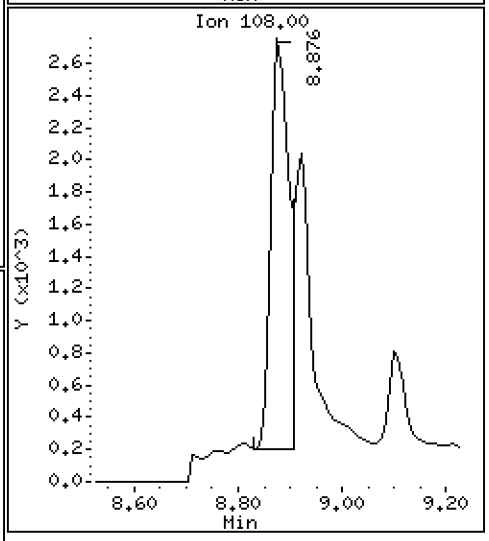
11 Benzyl alcohol

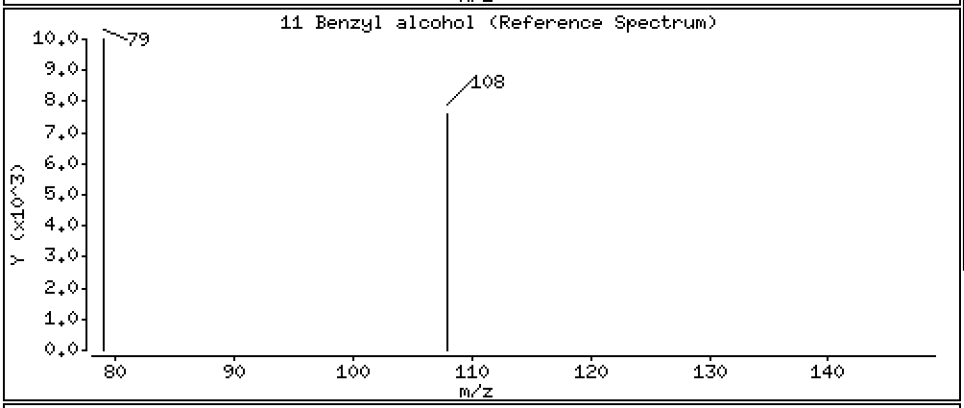
Concentration: 0.1061 ug/mL

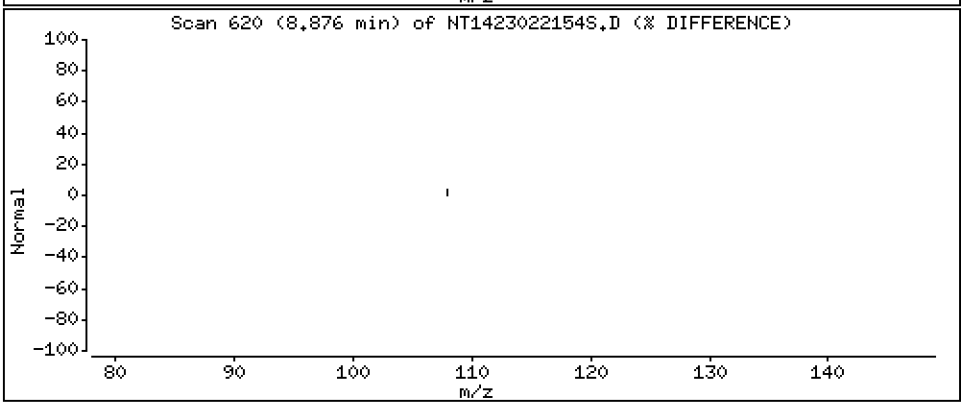












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

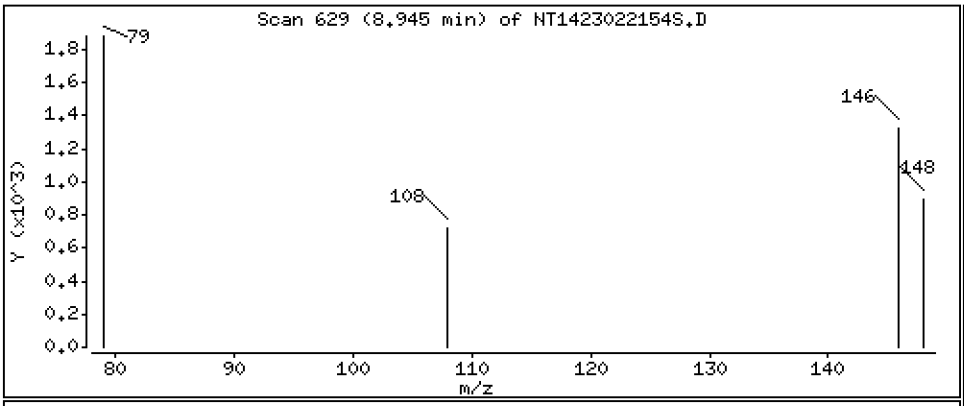
Operator: DSD

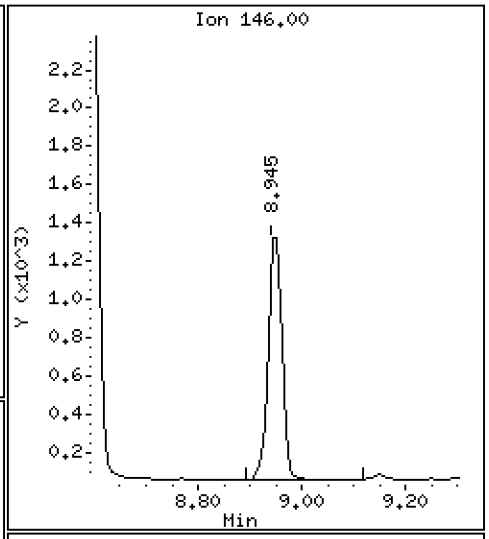
Column phase: ZB-5msi

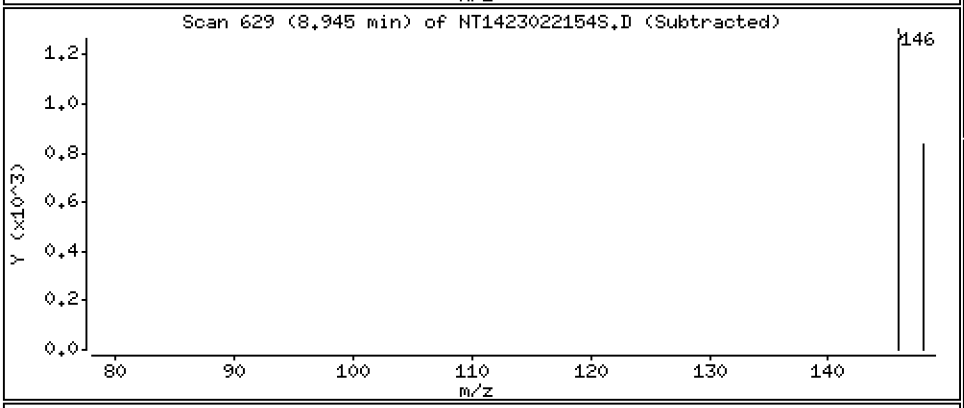
Column diameter: 0.25

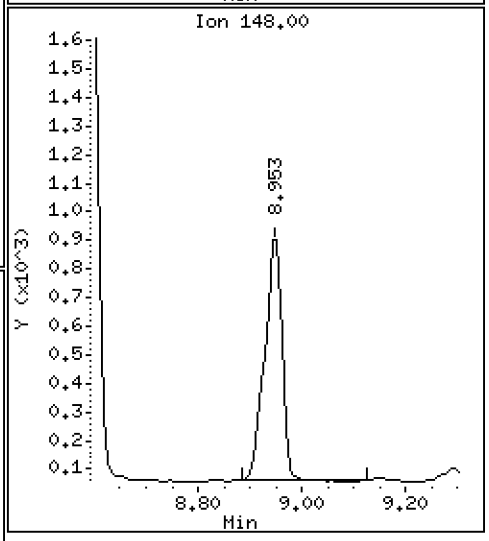
12 1,2-Dichlorobenzene

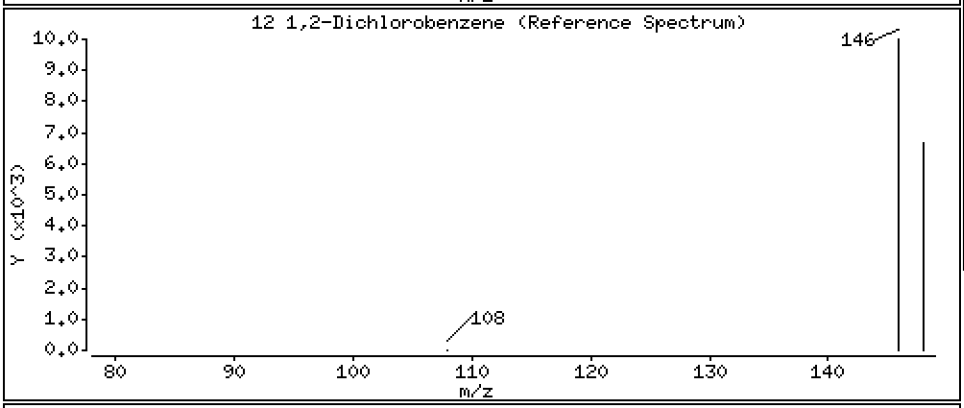
Concentration: 0.02574 ug/mL

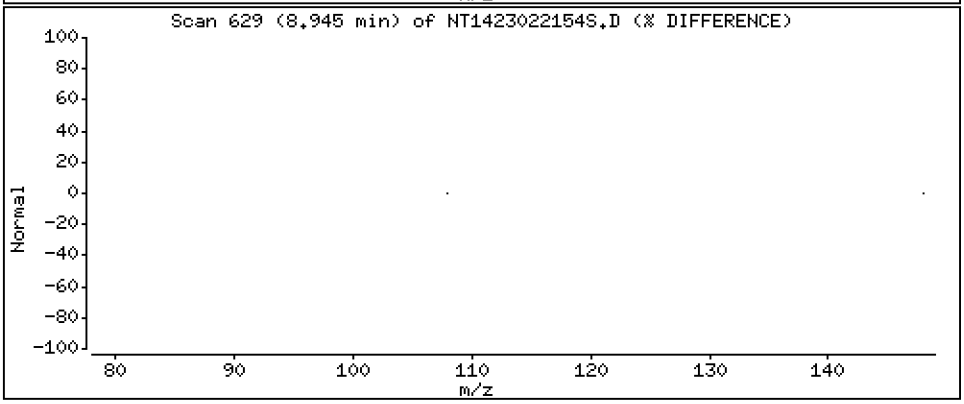












Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

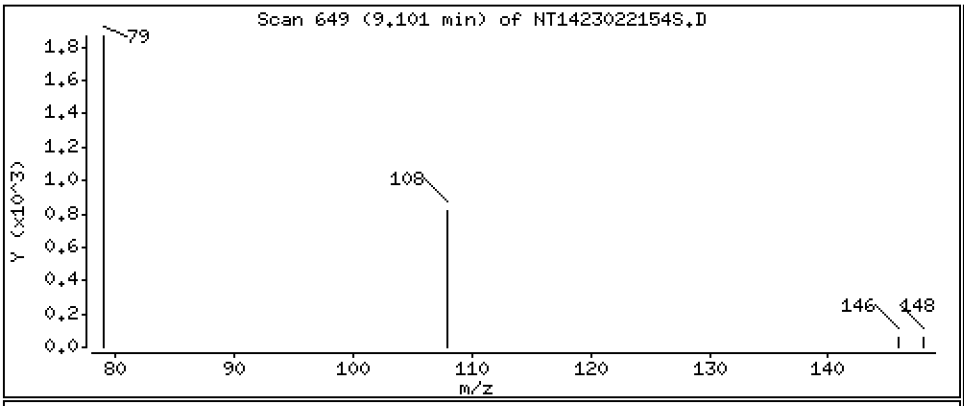
Operator: DSD

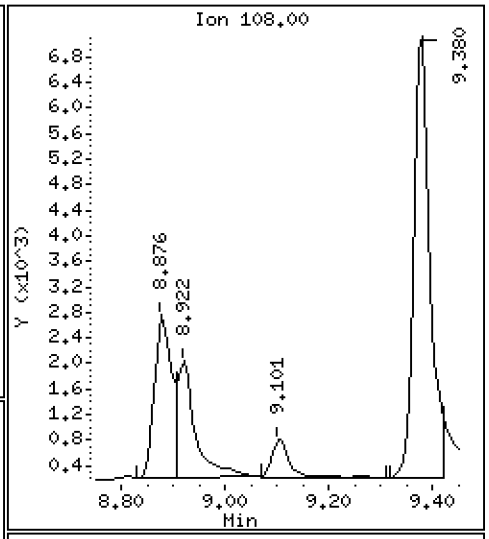
Column phase: ZB-5msi

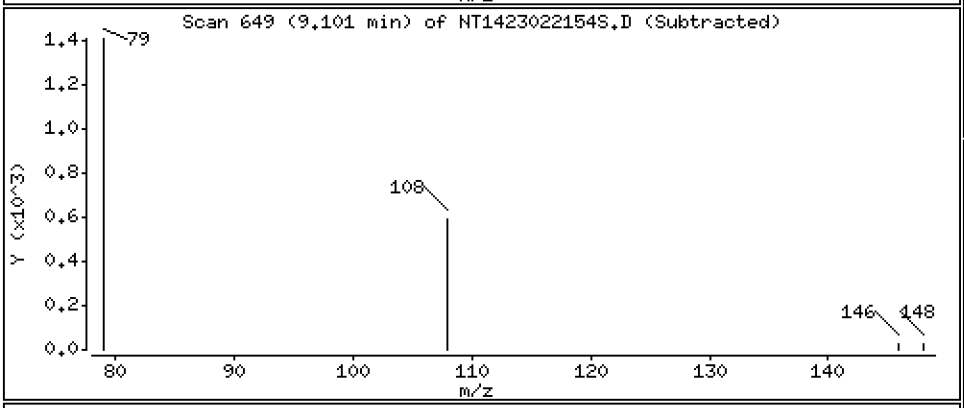
Column diameter: 0.25

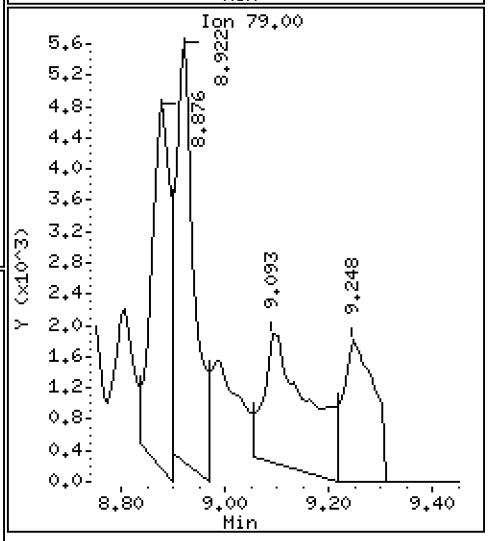
13 2-Methylphenol

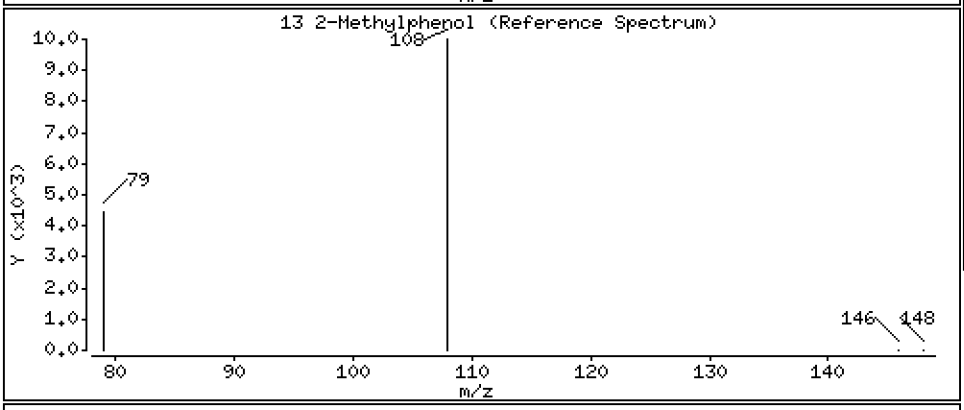
Concentration: 0.01842 ug/mL

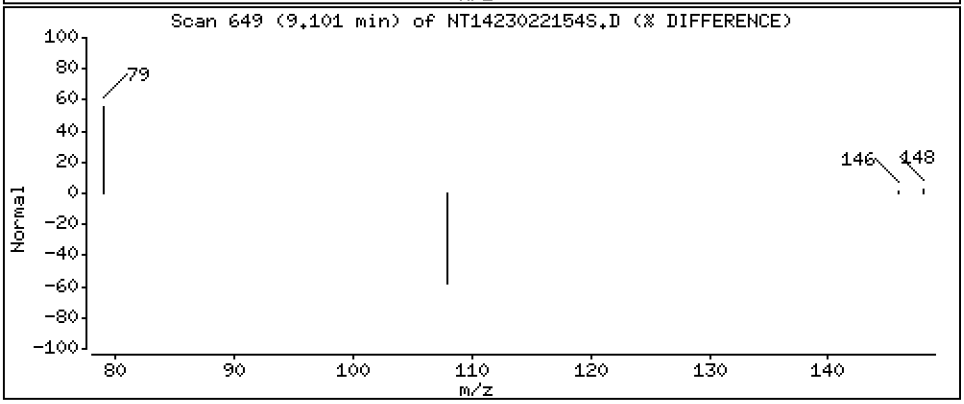












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

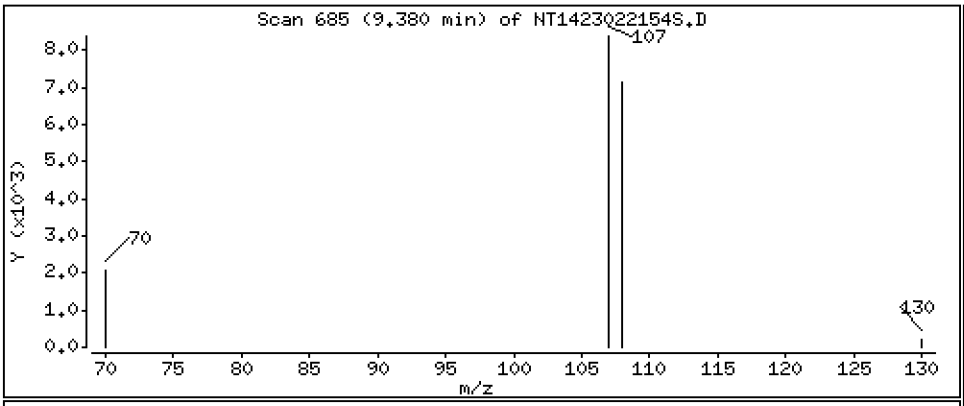
Operator: DSD

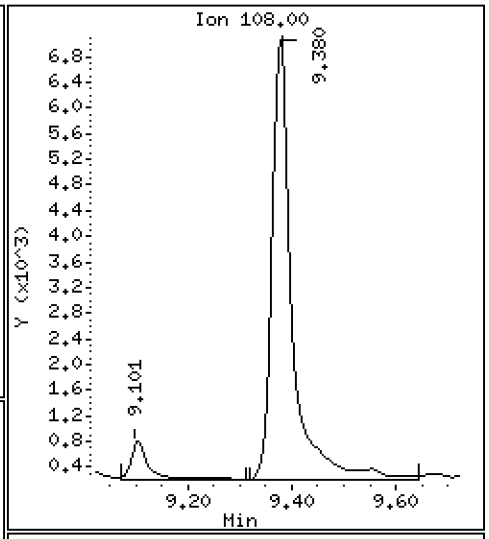
Column phase: ZB-5msi

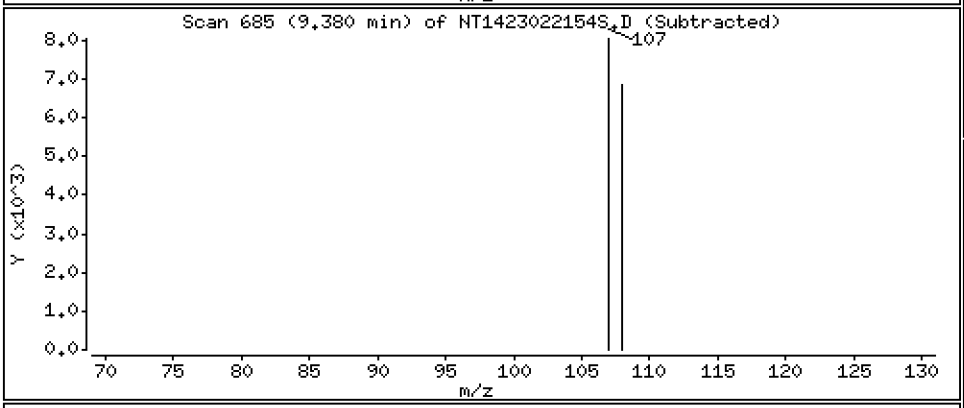
Column diameter: 0.25

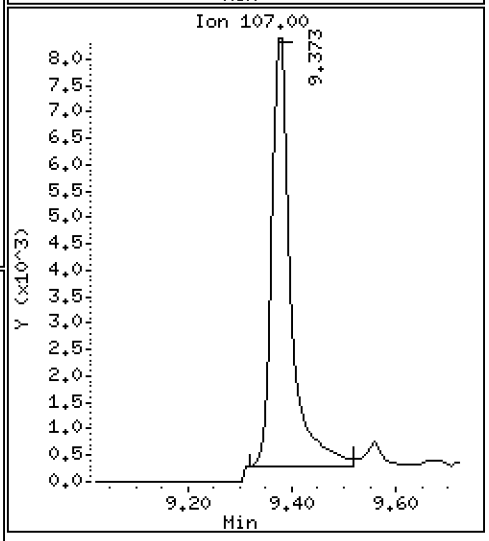
15 4-Methylphenol

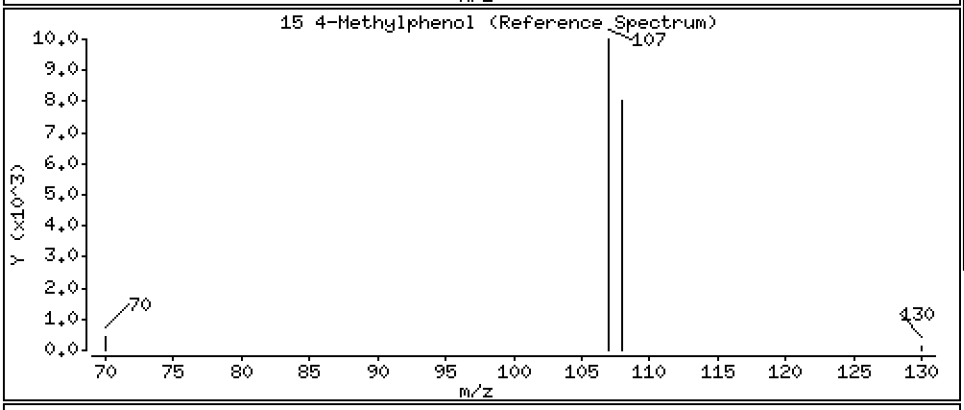
Concentration: 0.2054 ug/mL

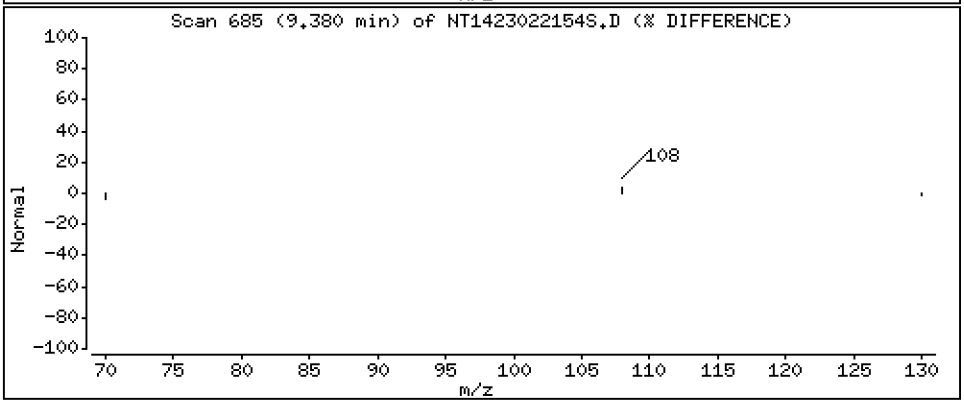












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

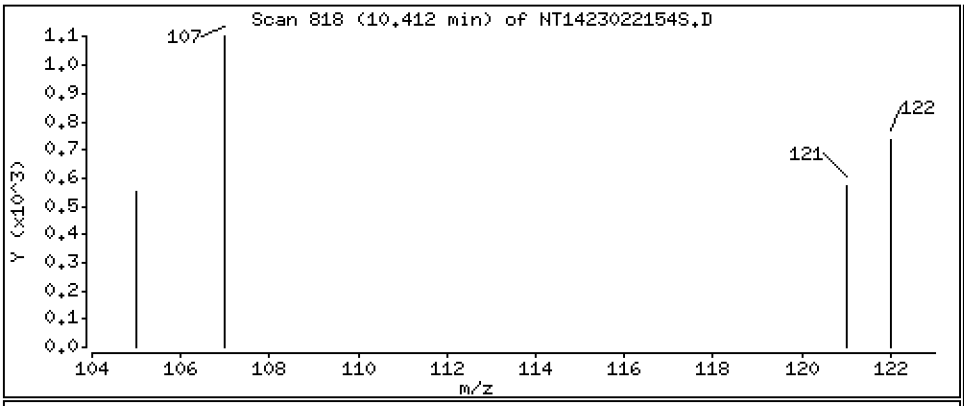
Operator: DSD

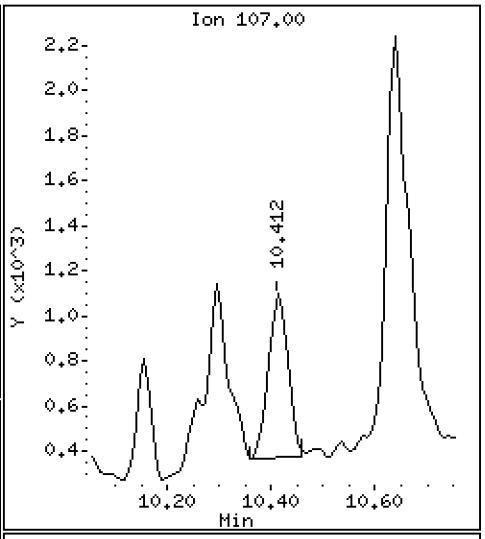
Column phase: ZB-5msi

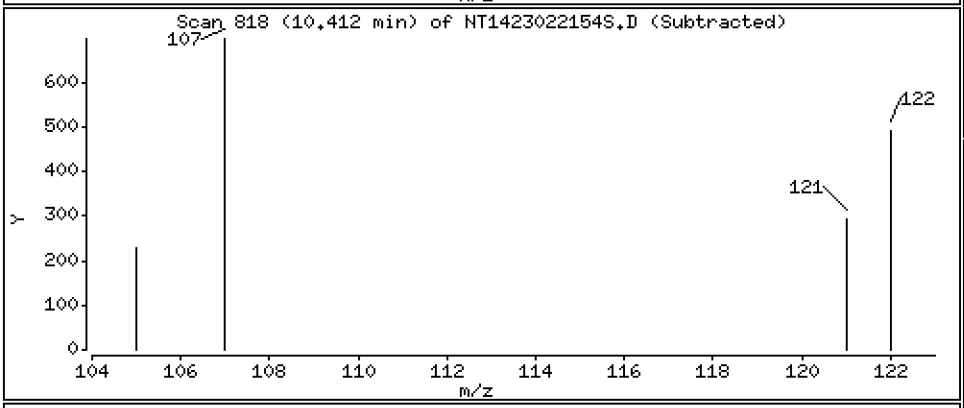
Column diameter: 0.25

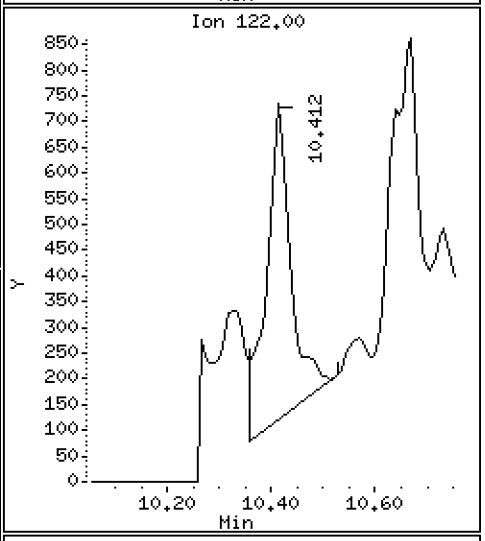
22 2,4-Dimethylphenol

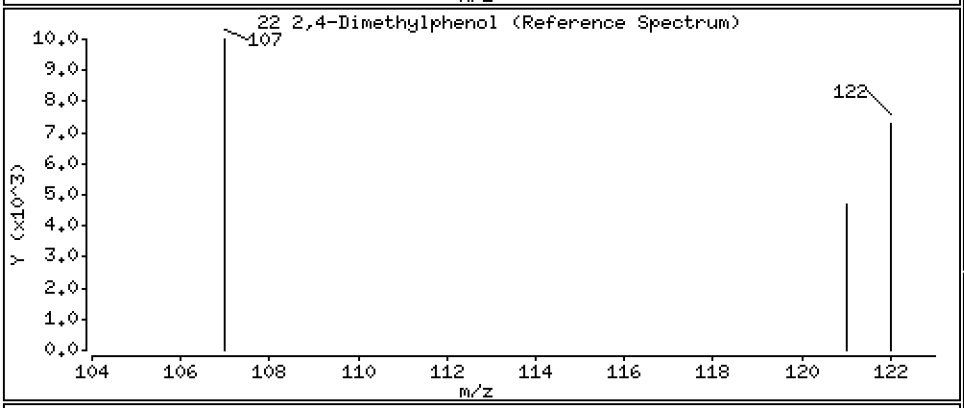
Concentration: 0.02085 ug/mL

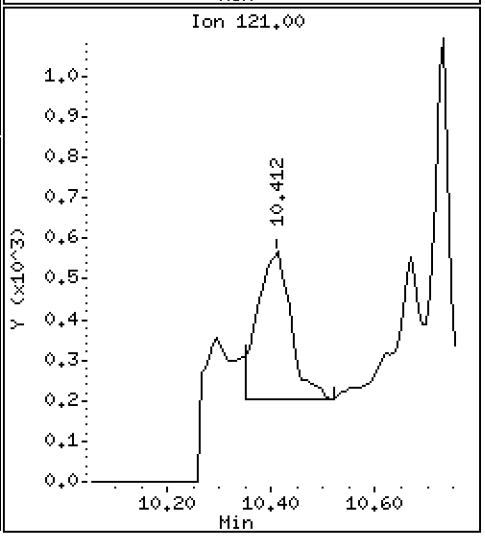


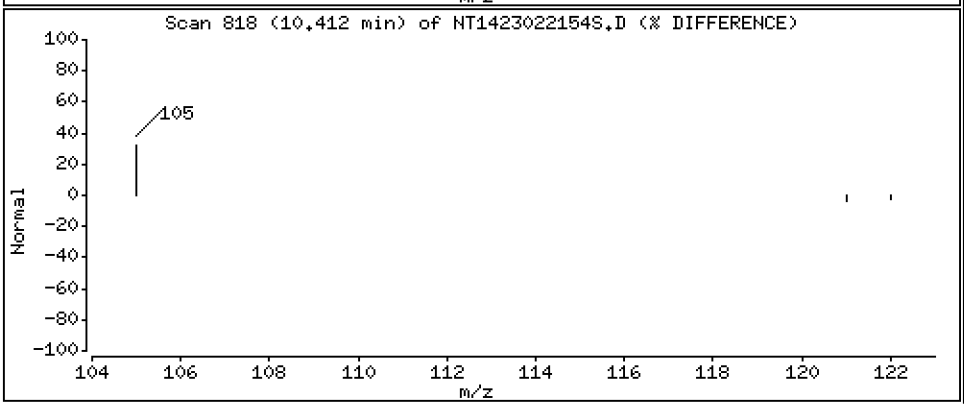












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

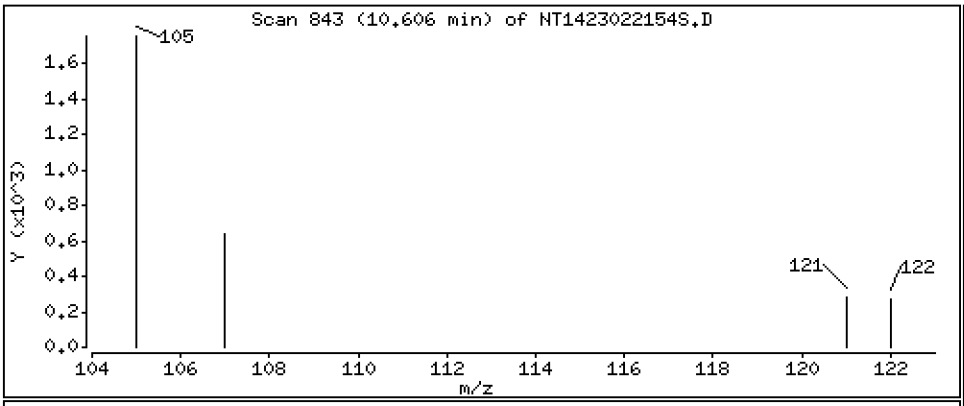
Operator: DSD

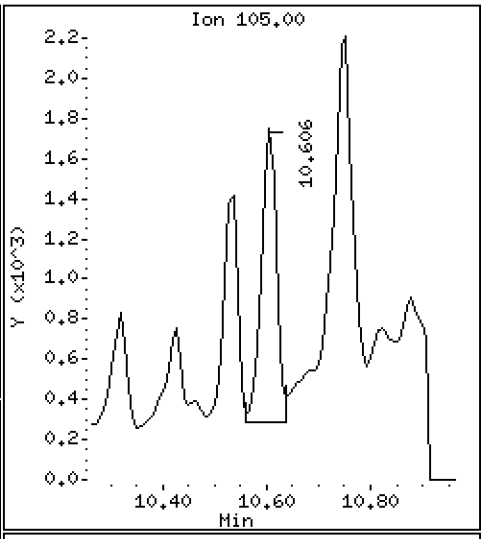
Column phase: ZB-5msi

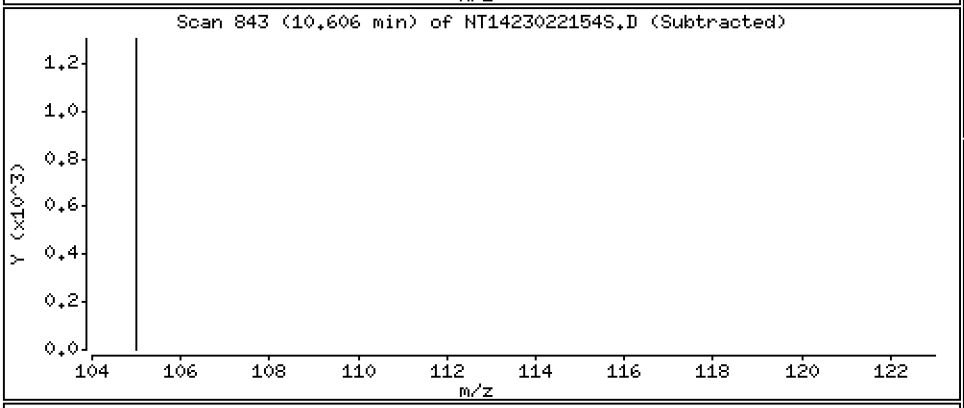
Column diameter: 0.25

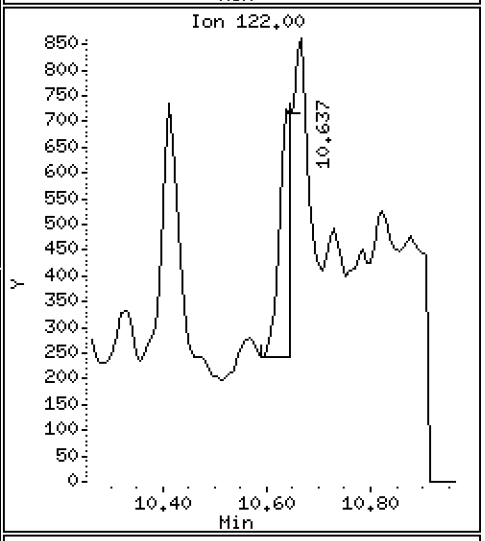
24 Benzoic acid

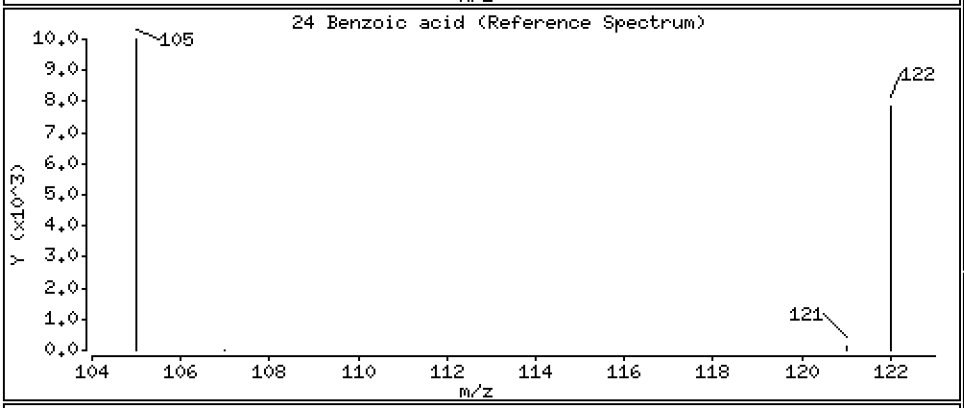
Concentration: 0.06058 ug/mL

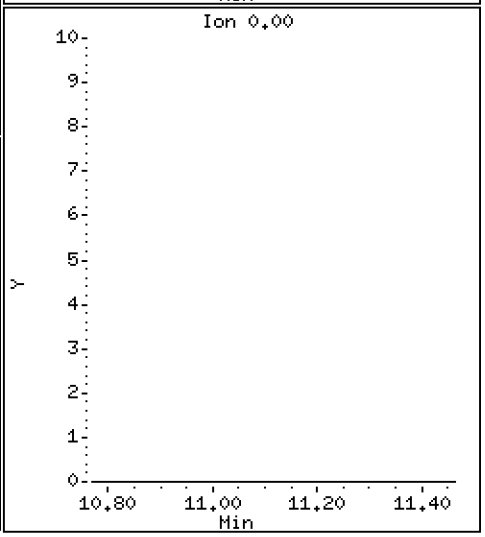


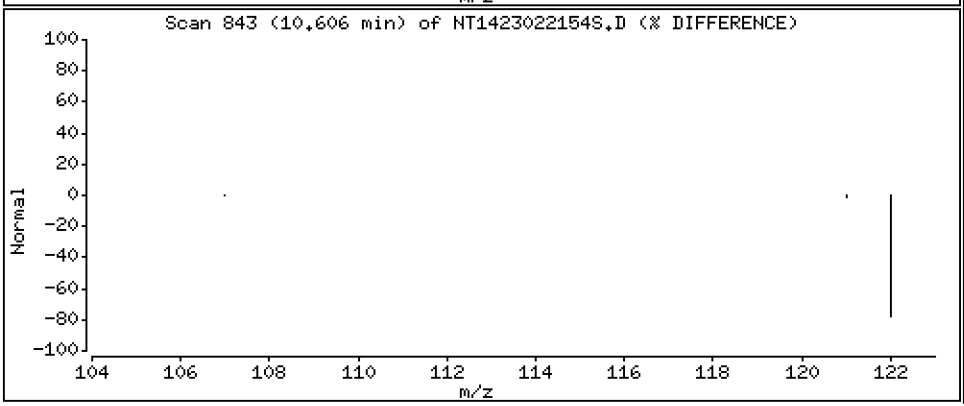












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

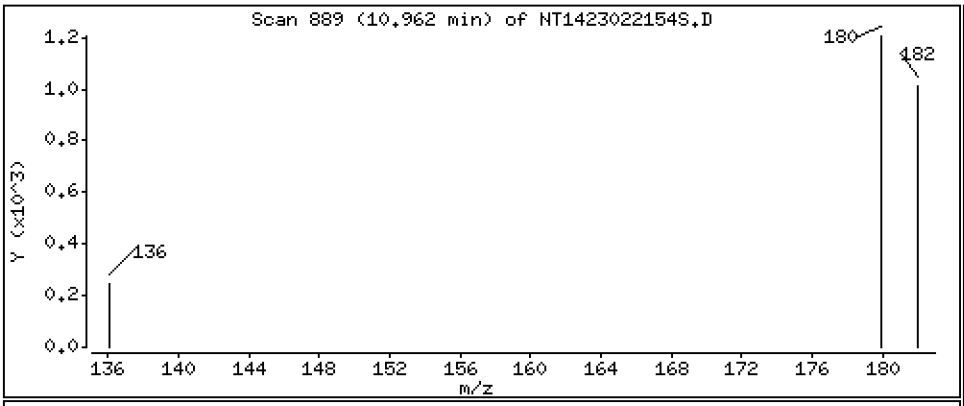
Operator: DSD

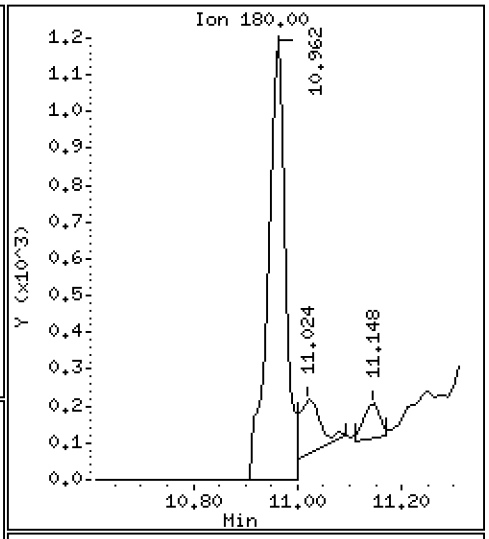
Column phase: ZB-5msi

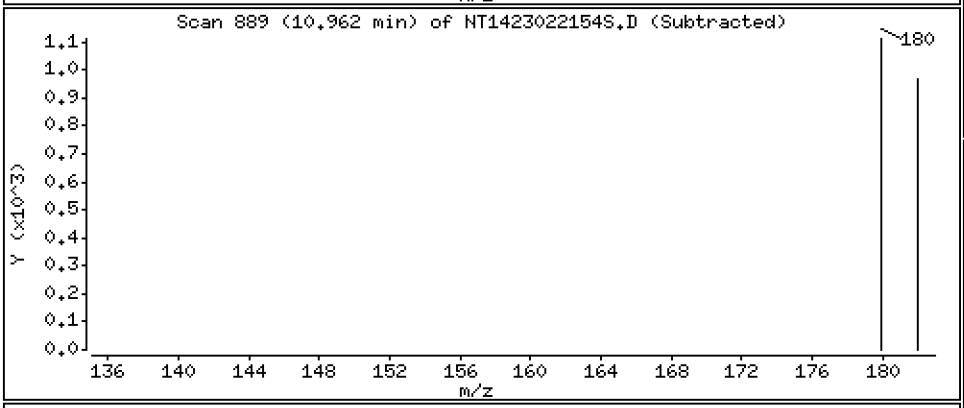
Column diameter: 0.25

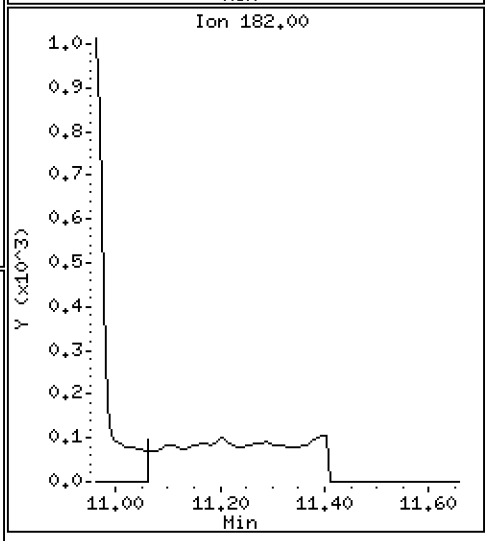
26 1,2,4-Trichlorobenzene

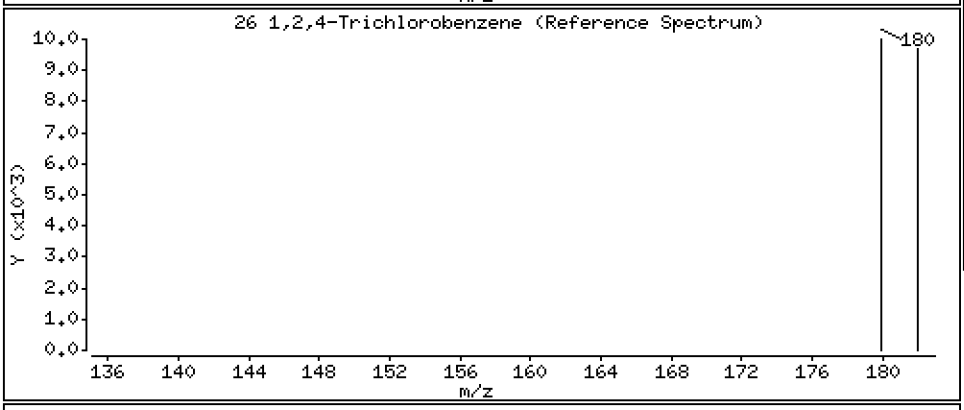
Concentration: 0.03016 ug/mL

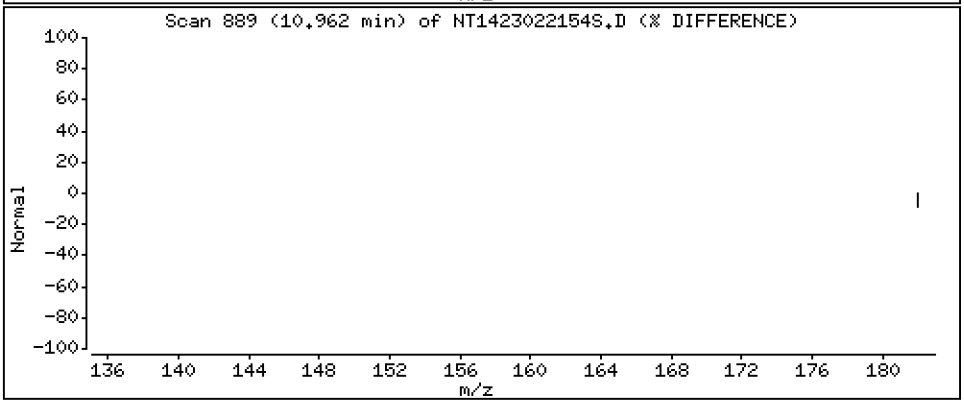












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

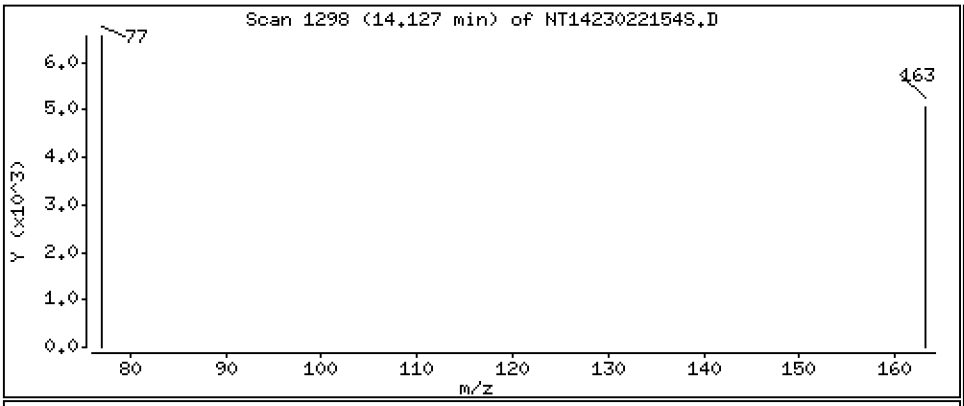
Operator: DSD

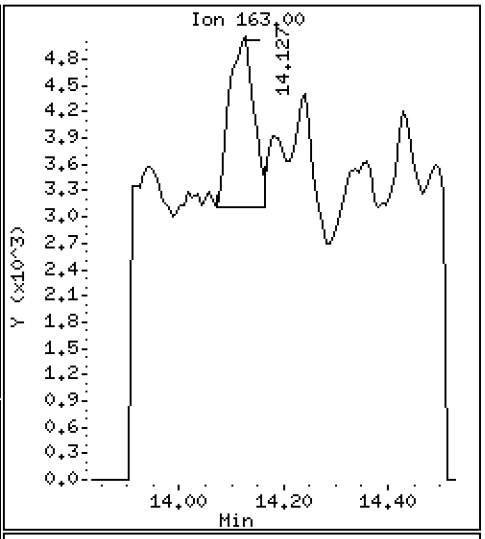
Column phase: ZB-5msi

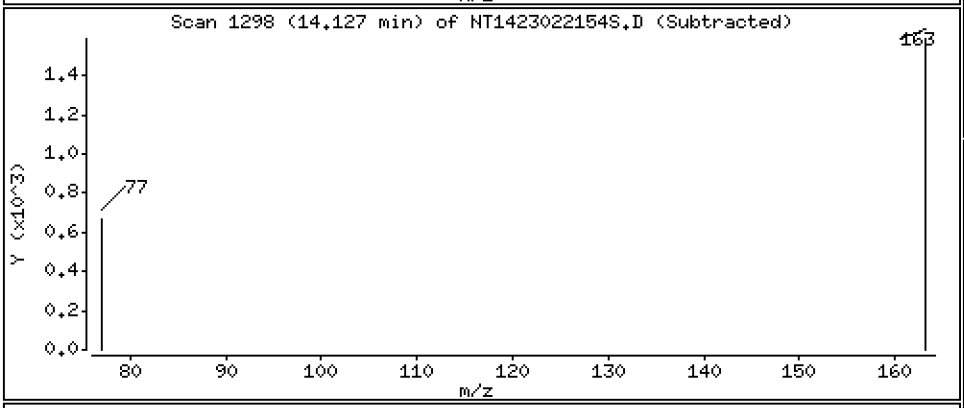
Column diameter: 0.25

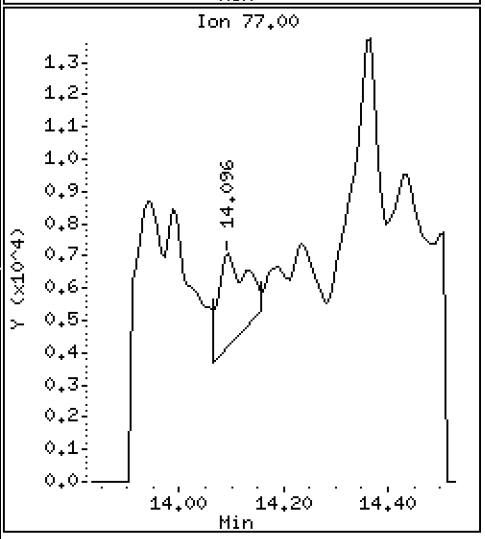
39 Dimethylphthalate

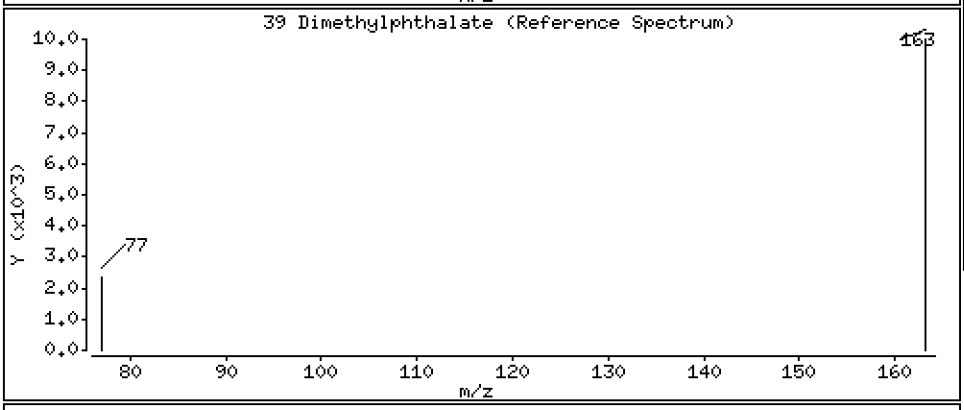
Concentration: 0.04112 ug/mL

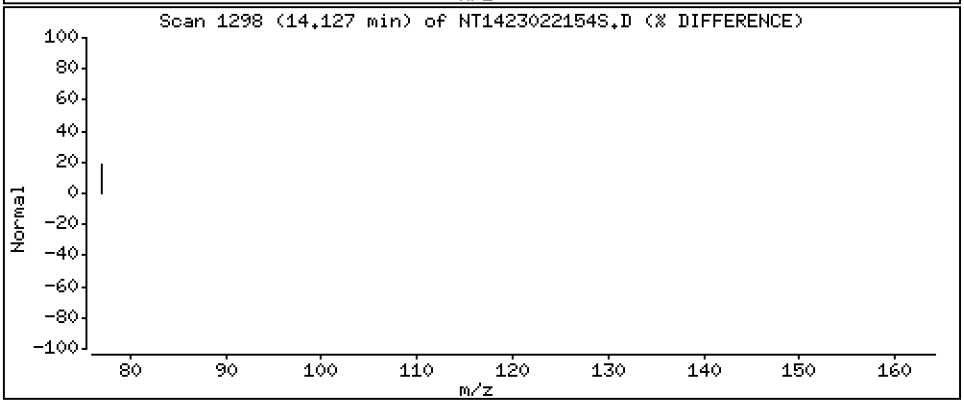












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

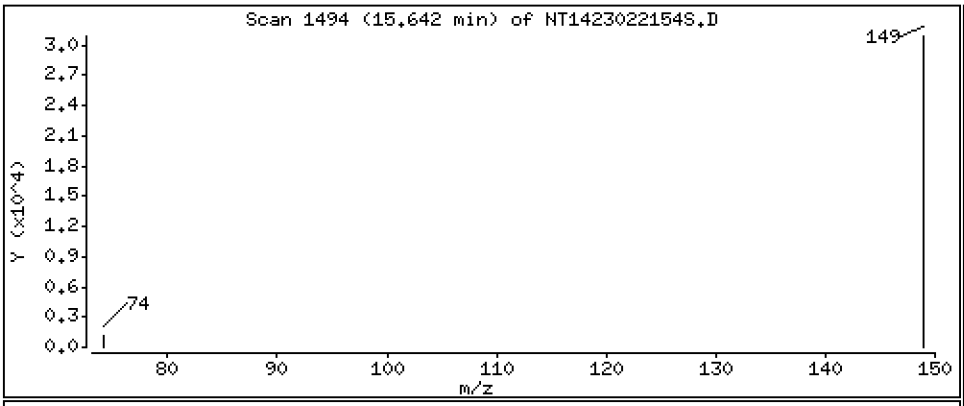
Operator: DSD

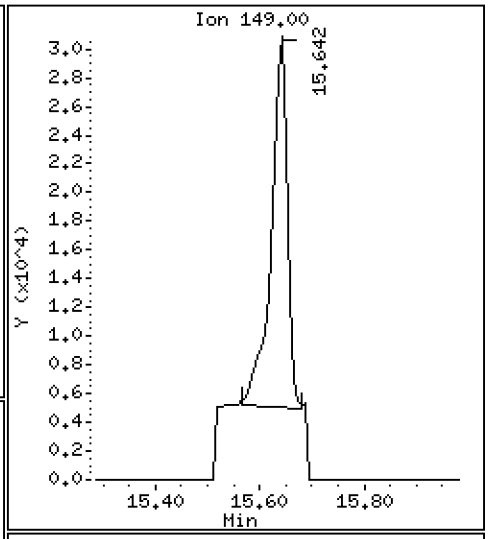
Column phase: ZB-5msi

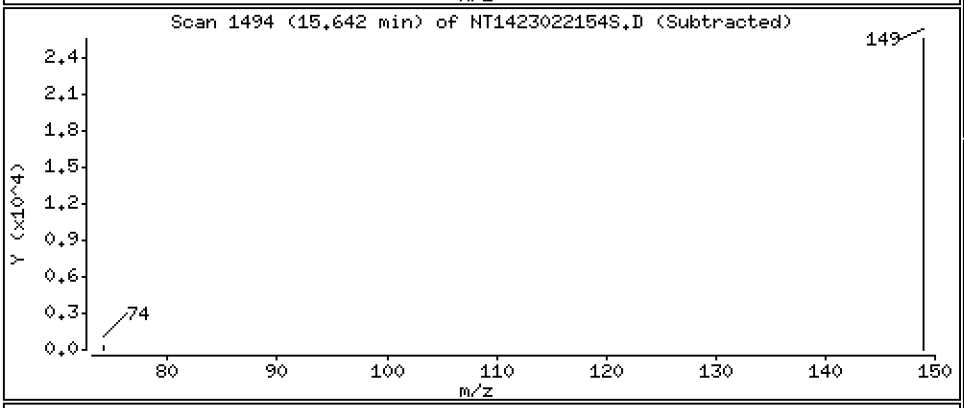
Column diameter: 0.25

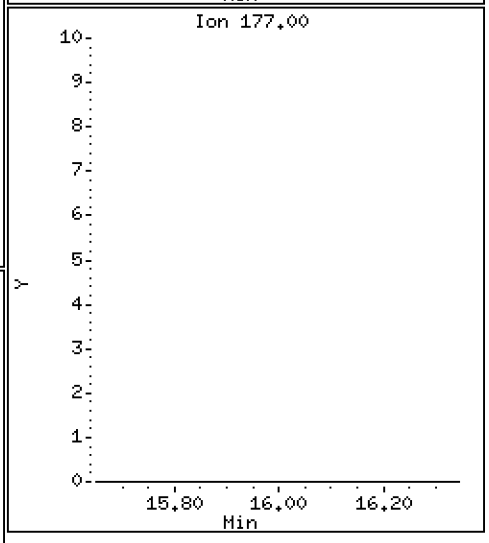
50 Diethylphthalate

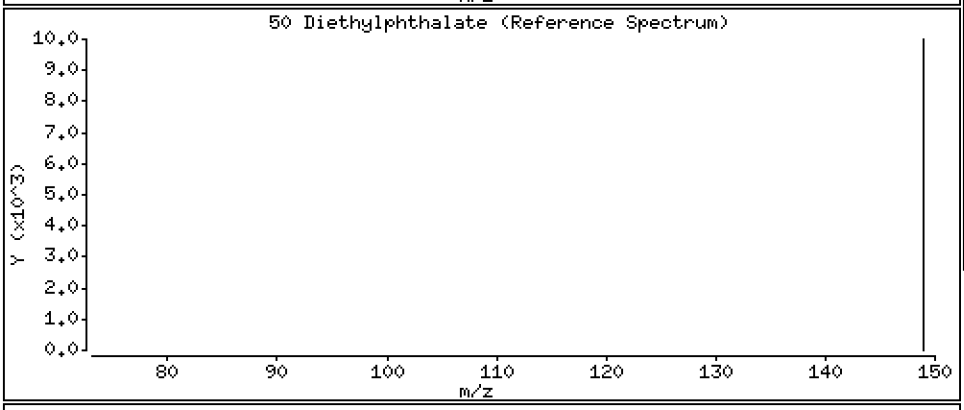
Concentration: 0.2795 ug/mL

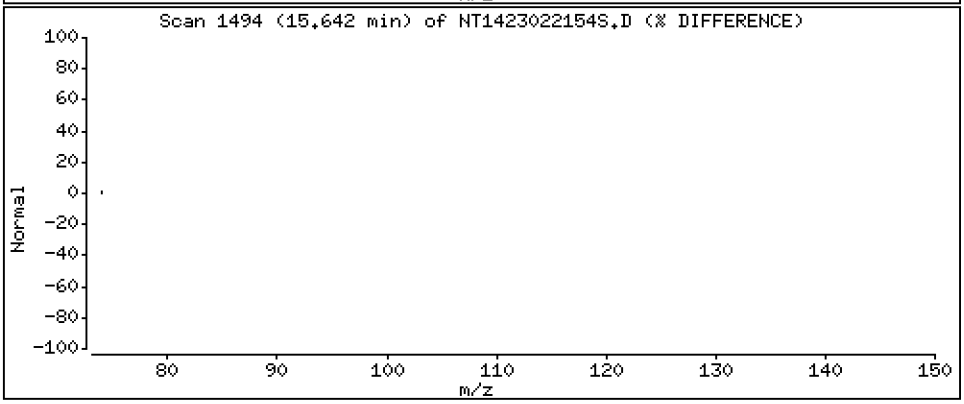












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

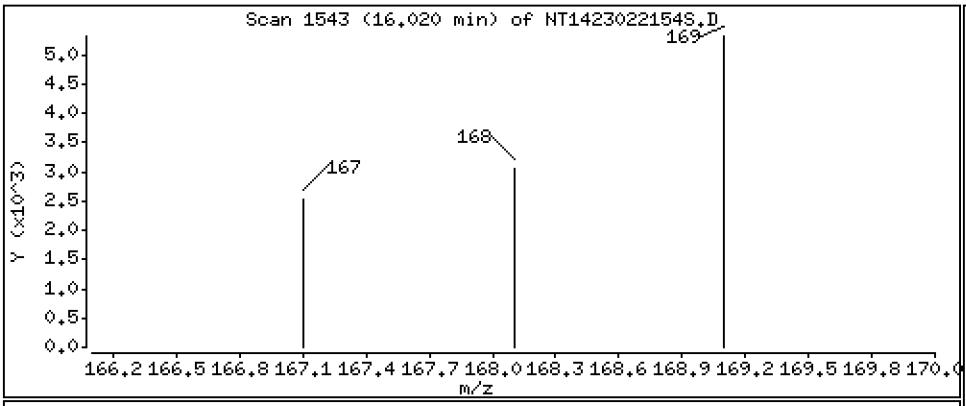
Operator: DSD

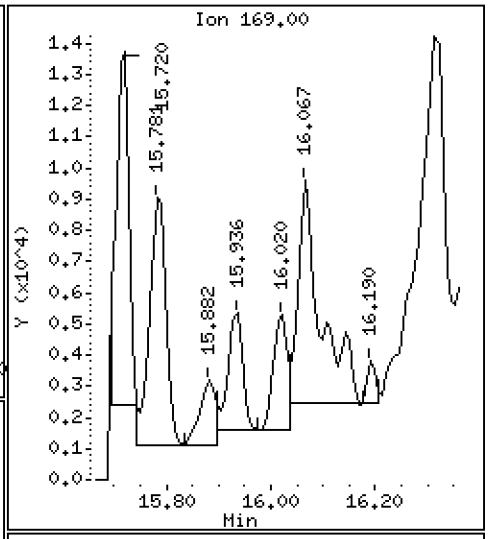
Column phase: ZB-5msi

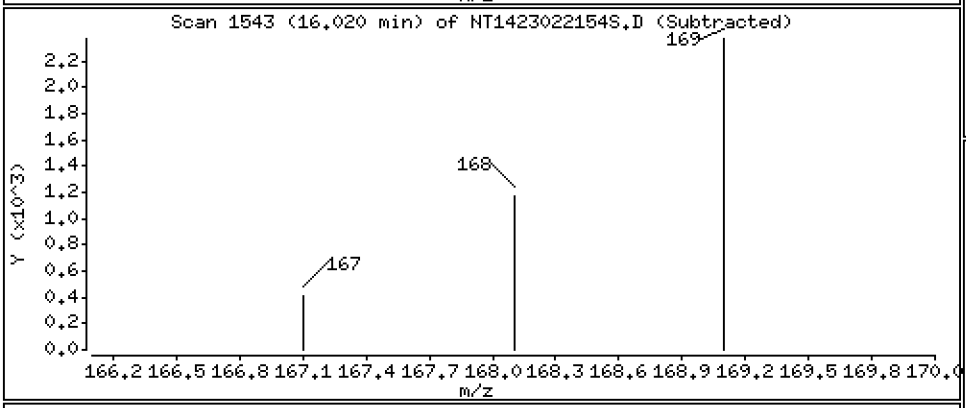
Column diameter: 0.25

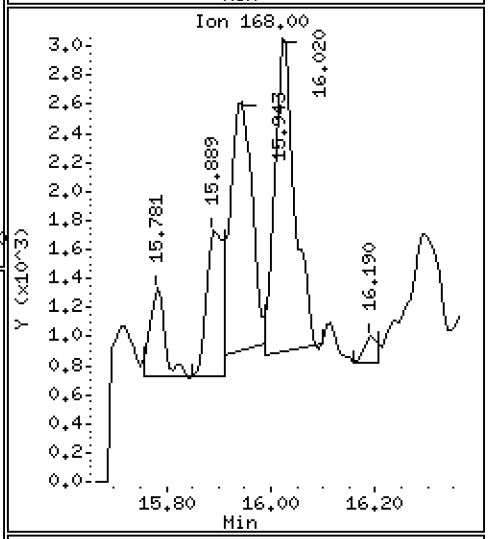
54 N-Nitrosodiphenylamine

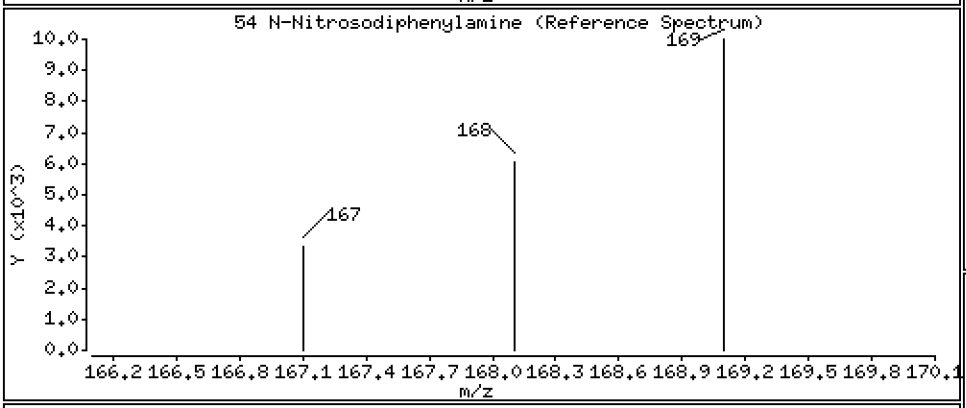
Concentration: 0.05136 ug/mL

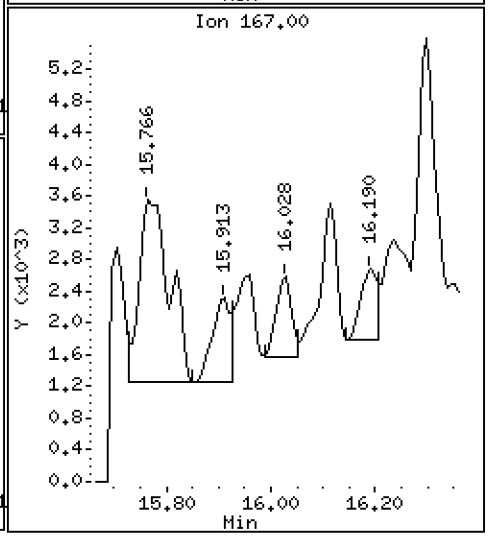


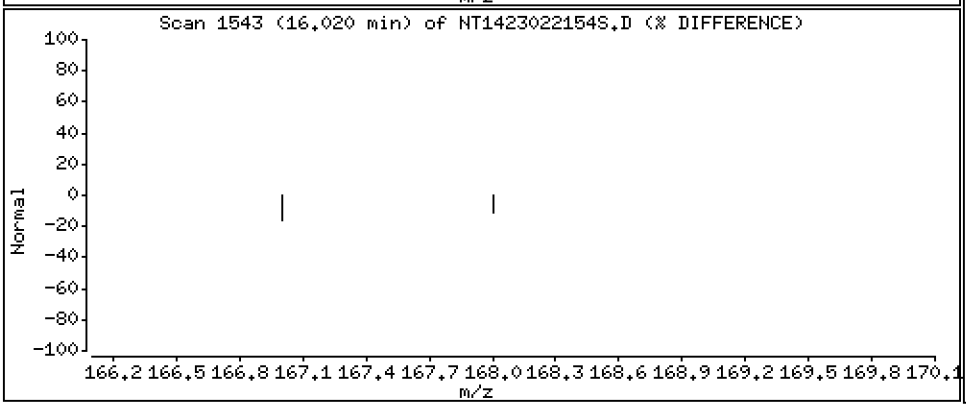












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Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

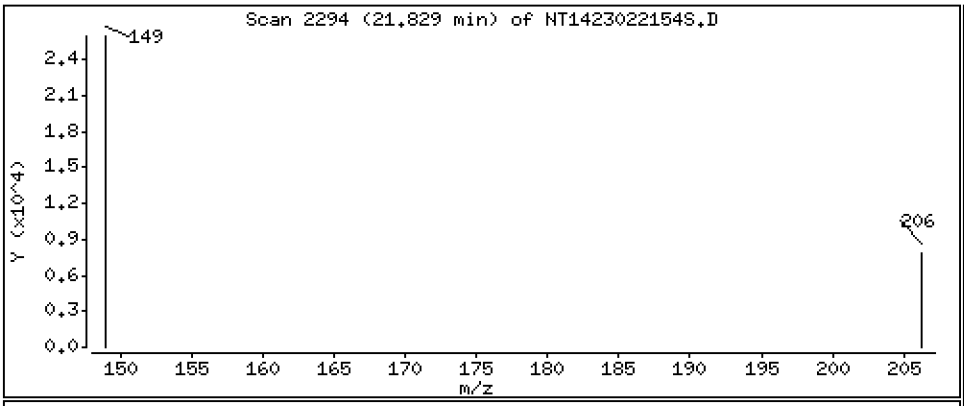
Operator: DSD

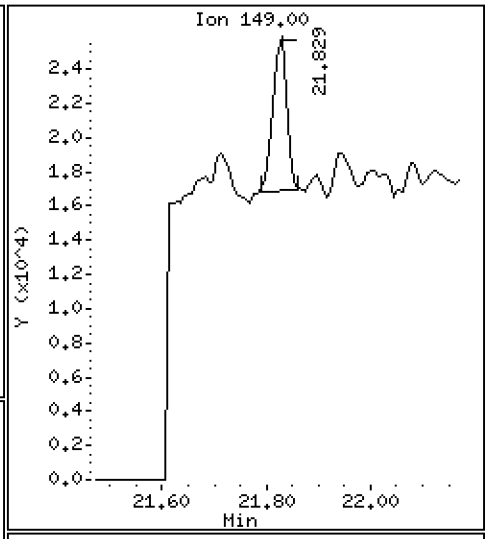
Column phase: ZB-5msi

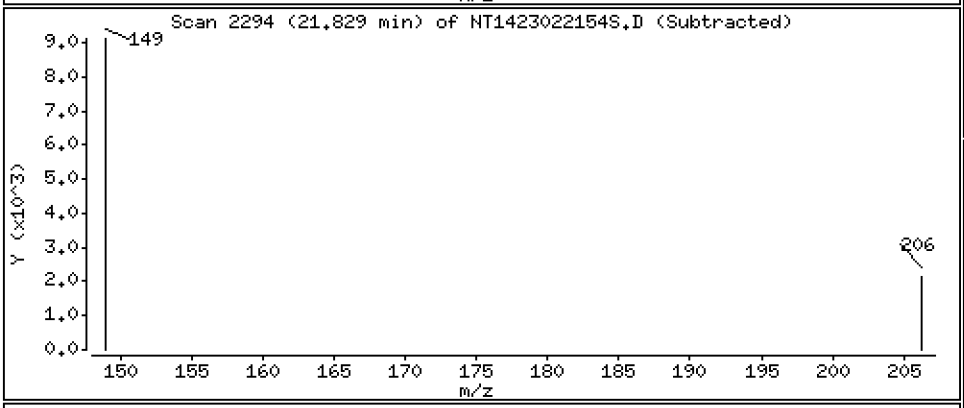
Column diameter: 0.25

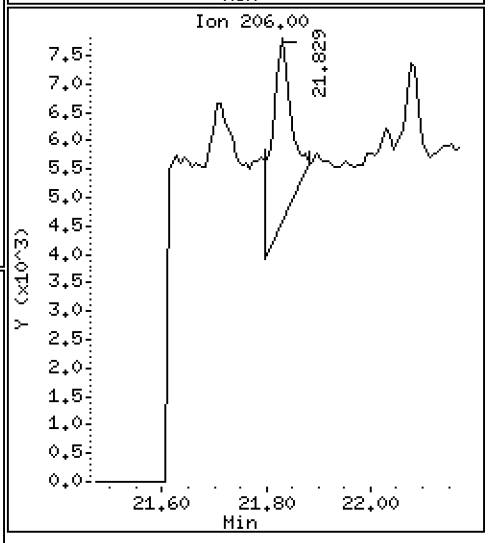
67 Butylbenzylphthalate

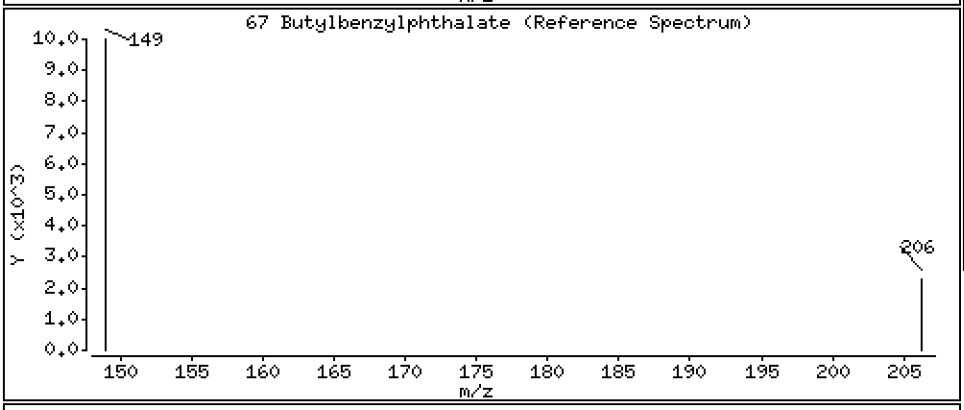
Concentration: 0.1847 ug/mL

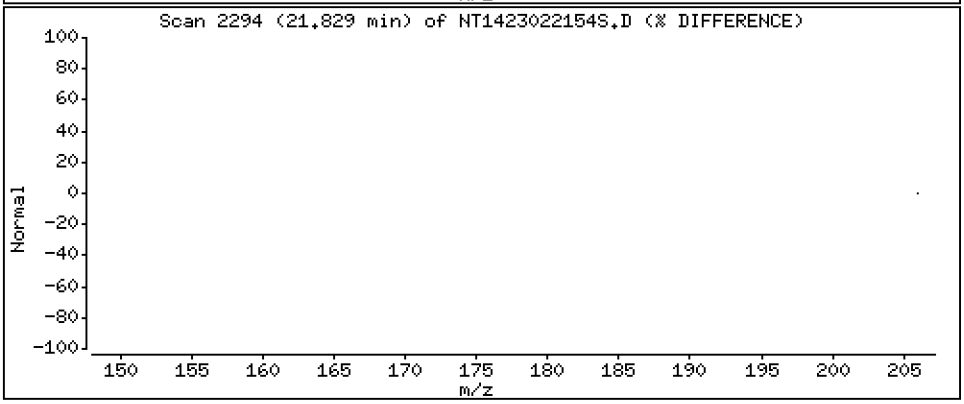












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221545.D

Date : 22-FEB-2023 21:24

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-11

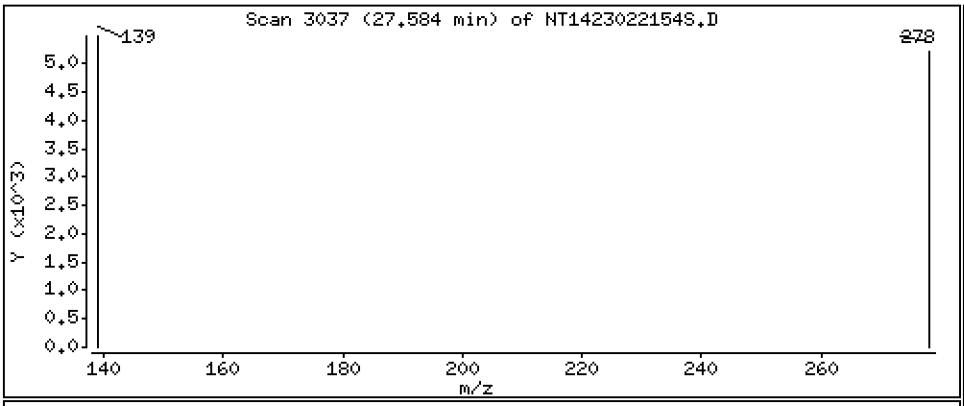
Operator: DSD

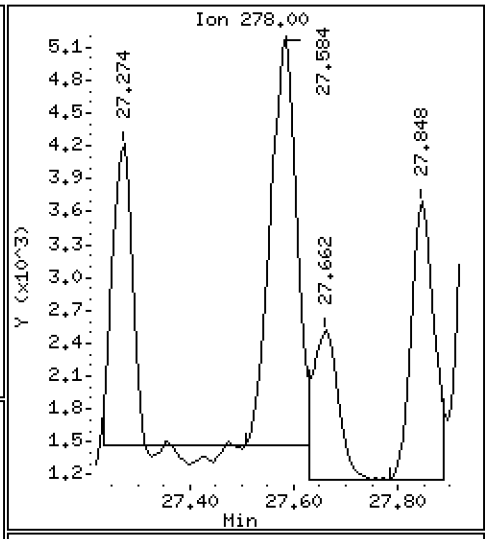
Column phase: ZB-5msi

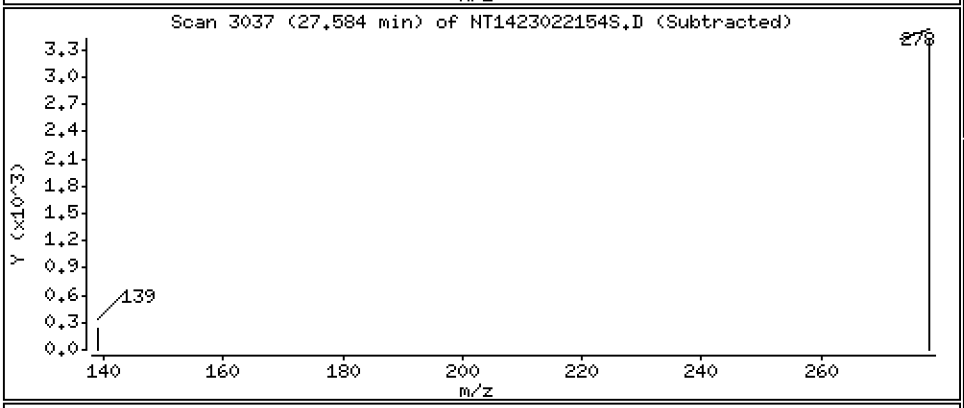
Column diameter: 0.25

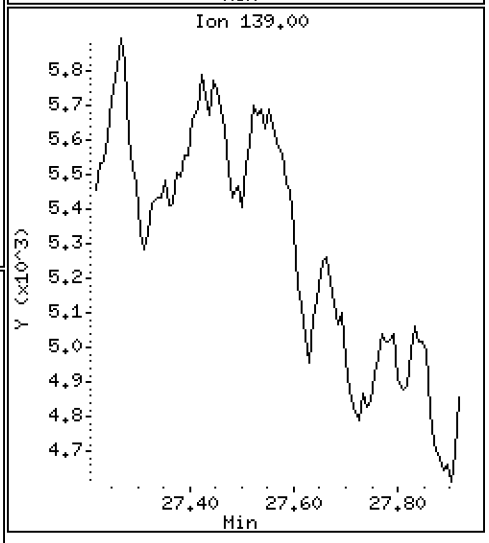
79 Dibenzo(a,h)anthracene

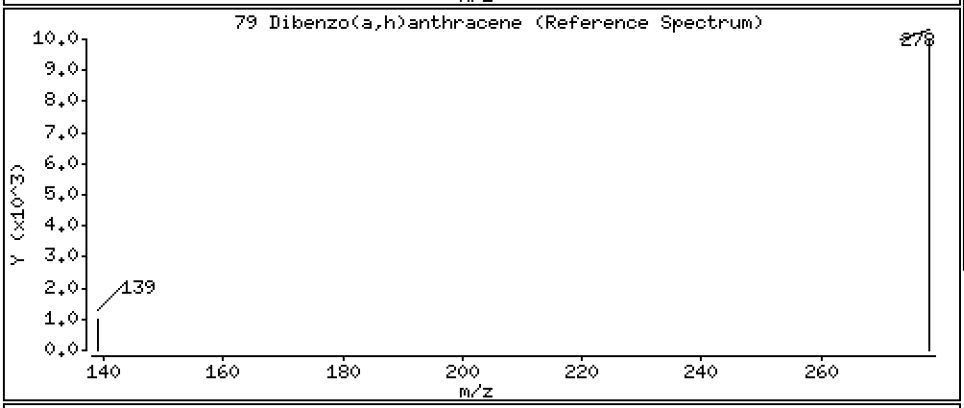
Concentration: 0.1360 ug/mL

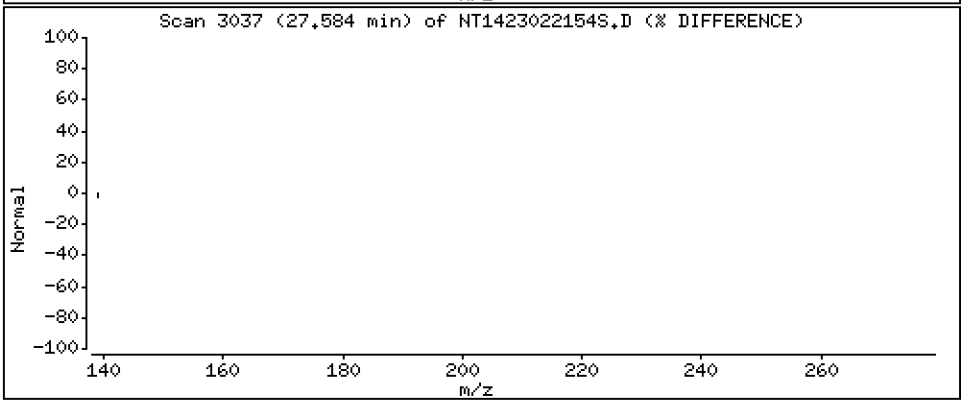












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT1423022154S.D
Lab Smp Id: 23A0133-11
Inj Date : 22-FEB-2023 21:24 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-11
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Meth Date : 25-May-2023 11:39 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 37
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
$	1	2-Fluorophenol	112	6.393	6.386	(0.746)	372951	4.82313	4.823(R)
	3	Phenol	94	8.000	7.993	(0.934)	29621	0.25371	0.2537
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	8.565	8.573	(1.000)	272395	4.00000	
	9	1,4-Dichlorobenzene	146	8.596	8.596	(1.004)	4576	0.05176	0.05176(M)
	11	Benzyl alcohol	79	8.875	8.876	(1.036)	7915	0.10610	0.1061(M)
	12	1,2-Dichlorobenzene	146	8.945	8.953	(1.044)	2263	0.02574	0.02574
	13	2-Methylphenol	108	9.100	9.101	(1.063)	1489	0.01842	0.01842
	15	4-Methylphenol	108	9.380	9.373	(1.095)	18198	0.20545	0.2054
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22	2,4-Dimethylphenol	107	10.412	10.404	(0.943)	1895	0.02085	0.02085(M)
	24	Benzoic acid	105	10.606	10.614	(0.961)	2842	0.06058	0.06058(M)
	26	1,2,4-Trichlorobenzene	180	10.962	10.962	(0.993)	2742	0.03016	0.03016
*	27	Naphthalene-d8	136	11.039	11.040	(1.000)	992323	4.00000	
	30	Hexachlorobutadiene	225	Compound Not Detected.					
	39	Dimethylphthalate	163	14.126	14.181	(0.964)	6365	0.04112	0.04112(M)
*	42	Acenaphthene-d10	162	14.652	14.653	(1.000)	507436	4.00000	
	50	Diethylphthalate	149	15.642	15.635	(1.068)	54163	0.27955	0.2795(M)
	54	N-Nitrosodiphenylamine	169	16.020	16.013	(0.906)	6839	0.05136	0.05136
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	17.689	17.674	(1.000)	1064402	4.00000	
$	66	Terphenyl-d14	244	20.892	20.869	(0.917)	745315	4.20544	4.205(R)
	67	Butylbenzylphthalate	149	21.829	21.821	(0.958)	15454	0.18470	0.1847(M)
*	69	Chrysene-d12	240	22.789	22.774	(1.000)	665713	4.00000	
*	77	Perylene-d12	264	25.243	25.220	(1.000)	551807	4.00000	
	79	Dibenzo(a,h)anthracene	278	27.584	27.569	(1.093)	13135	0.13596	0.1360
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022154S.D
Lab Smp Id: 23A0133-11
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 17:47
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	241018	120509	482036	272395	13.02
27 Naphthalene-d8	887165	443583	1774330	992323	11.85
42 Acenaphthene-d10	467553	233777	935106	507436	8.53
59 Phenanthrene-d10	1079793	539897	2159586	1064402	-1.43
69 Chrysene-d12	754146	377073	1508292	665713	-11.73
77 Perylene-d12	558201	279101	1116402	551807	-1.15

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.10
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.67	17.17	18.17	17.69	0.08
69 Chrysene-d12	22.77	22.27	23.27	22.79	0.07
77 Perylene-d12	25.22	24.72	25.72	25.24	0.09

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022154S.D

Lab ID: 23A0133-11
nt14.i, 20230221C.b\SIM.b\SIMABN2.m,   22-FEB-2023 21:24

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1423022148ICVS.d

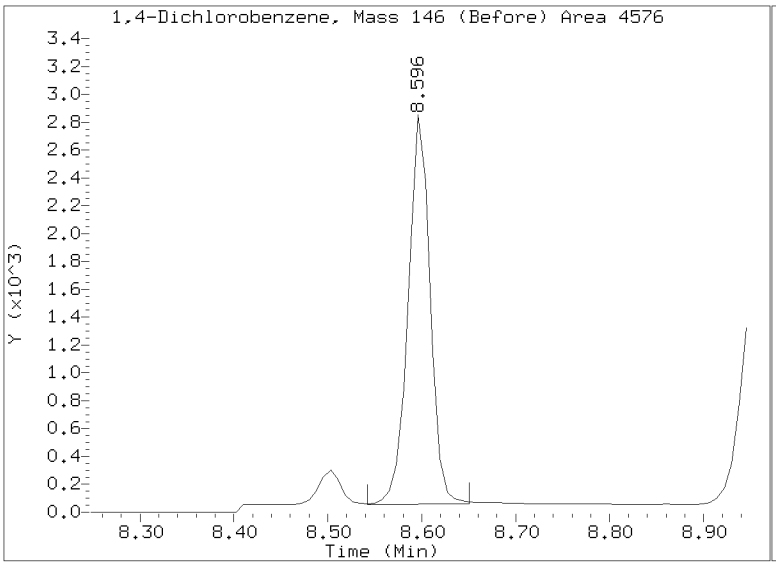
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

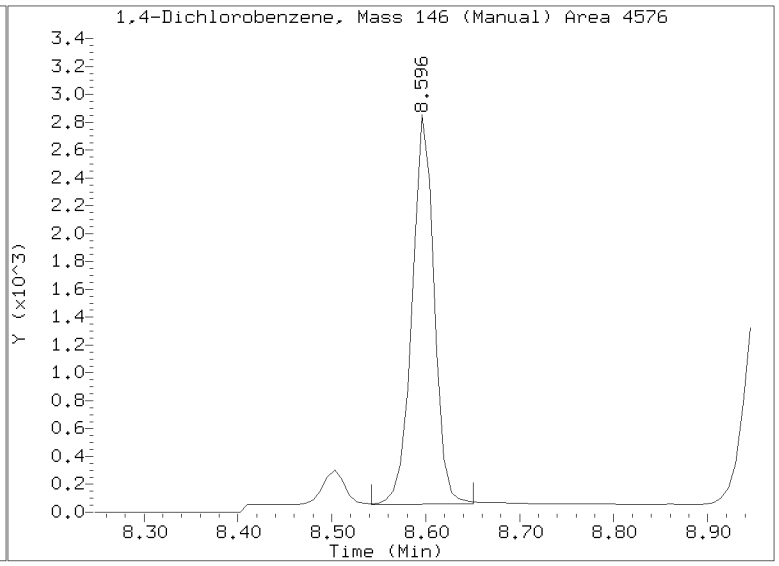
Exception: 1,2,4-Trichlorobenzene 0.0010

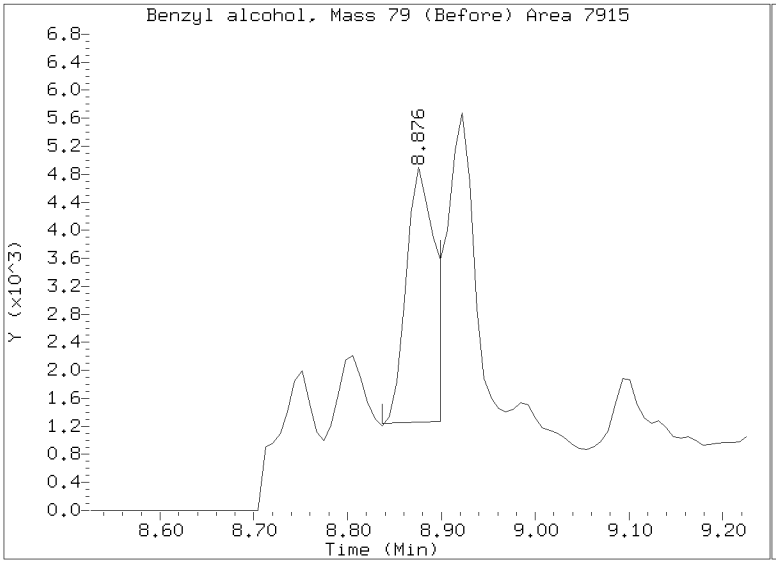
* Only compounds listed in the work order have been verified by the analyst *

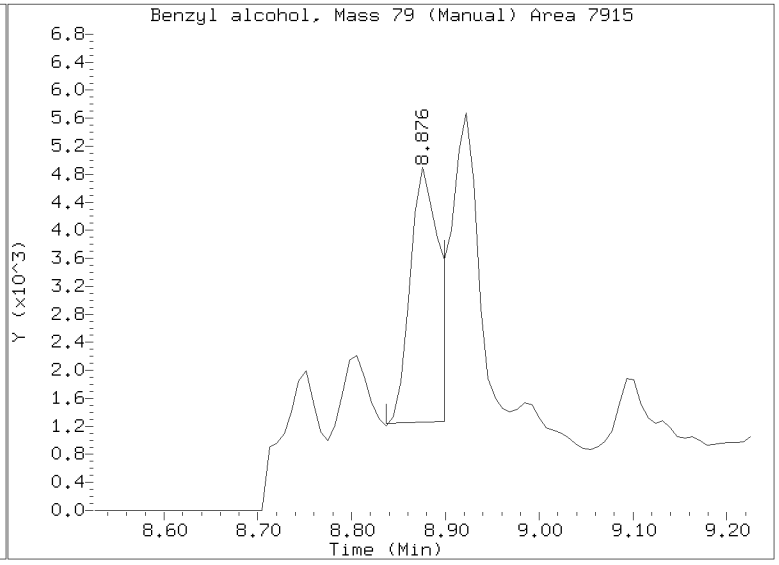
Quant Ion Manual Peak Adjustment Report

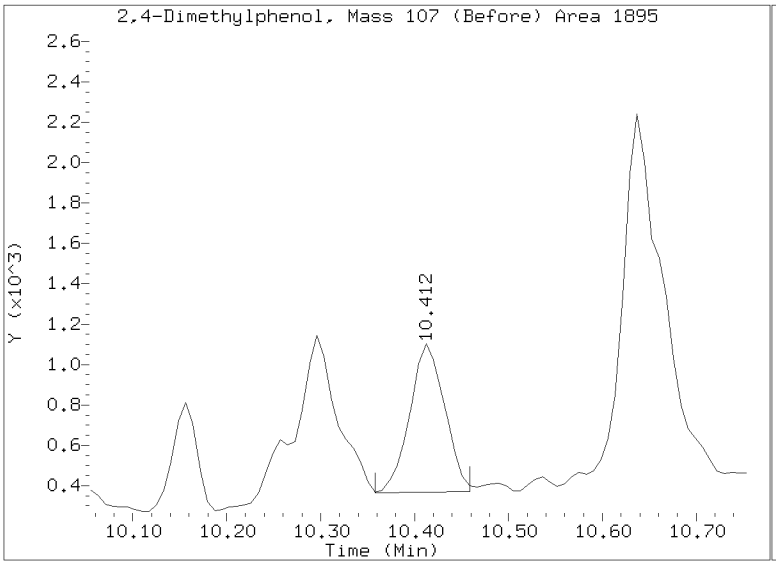
Datafile: //target/share/chem3/nt14.i/20230221C.b/SIM.b/NT1423022154S.D
Injection Date: 22-FEB-2023 21:24
Lab ID:23A0133-11 Client ID:
Report Date: 05/25/2023 11:48

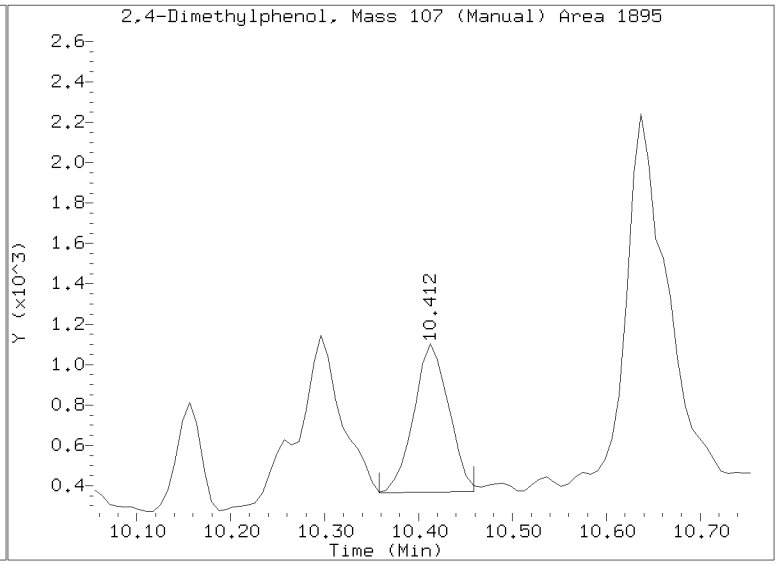












Quant Ion Manual Peak Adjustment Report

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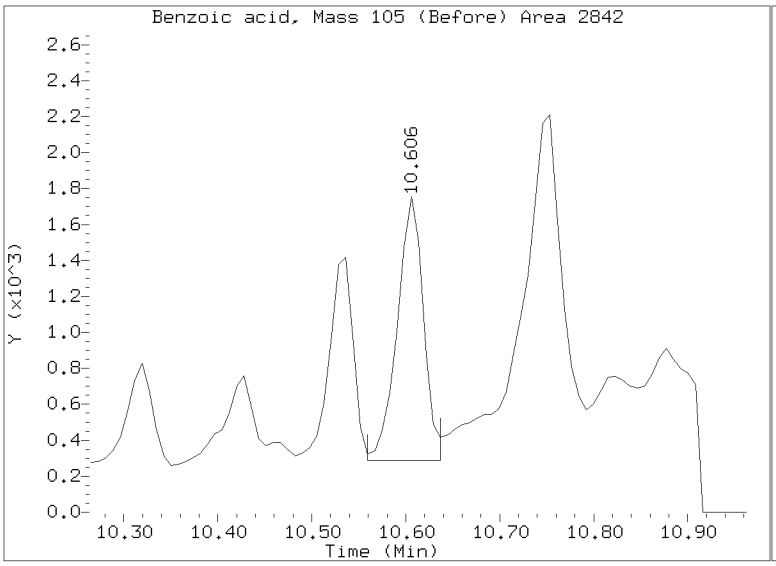
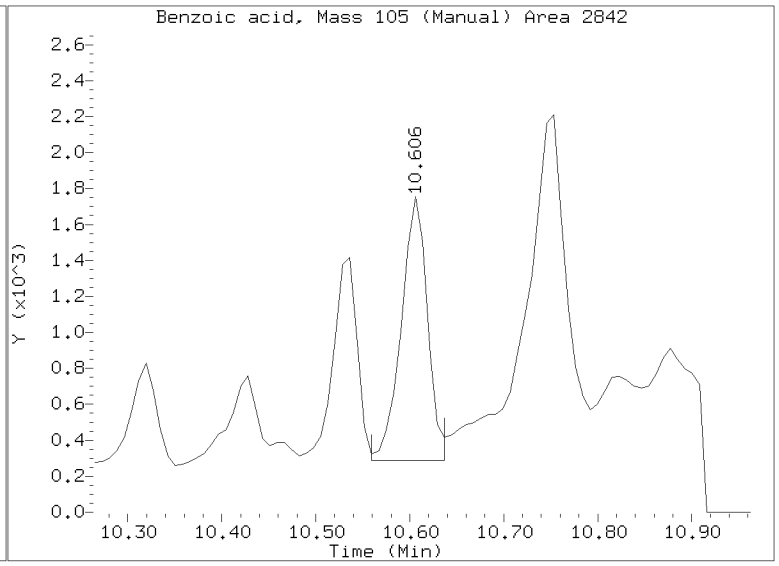
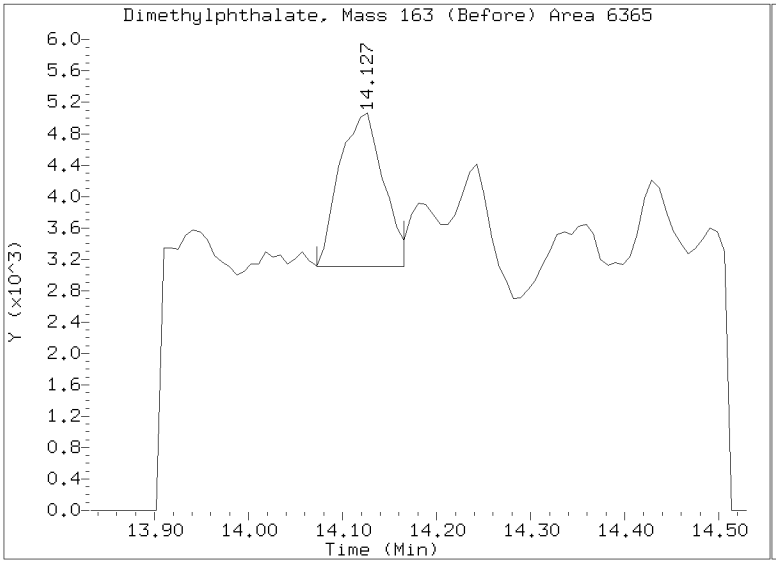
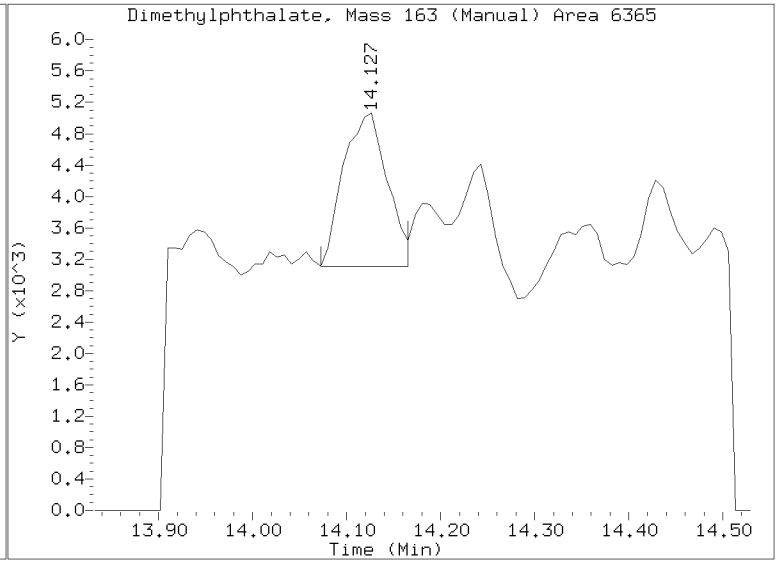
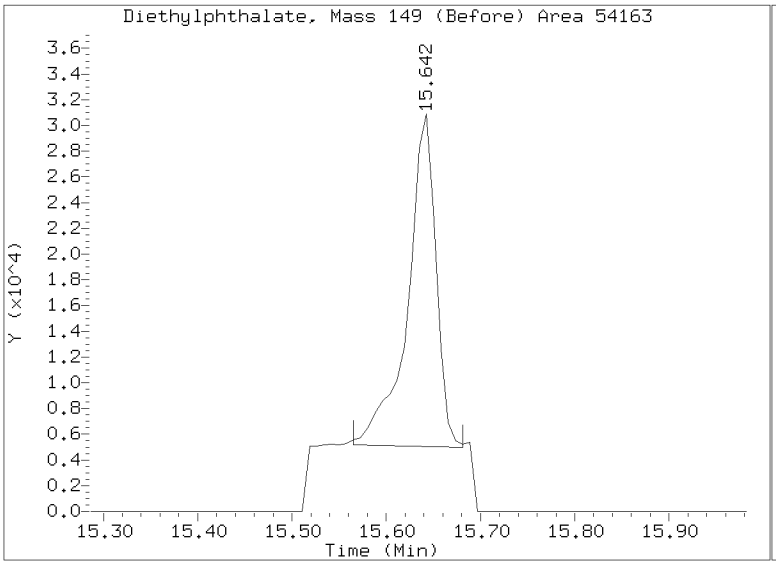
Injection Date: 22-FEB-2023 21:24
Lab ID:23A0133-11 Client ID:
Report Date: 05/25/2023 11:48

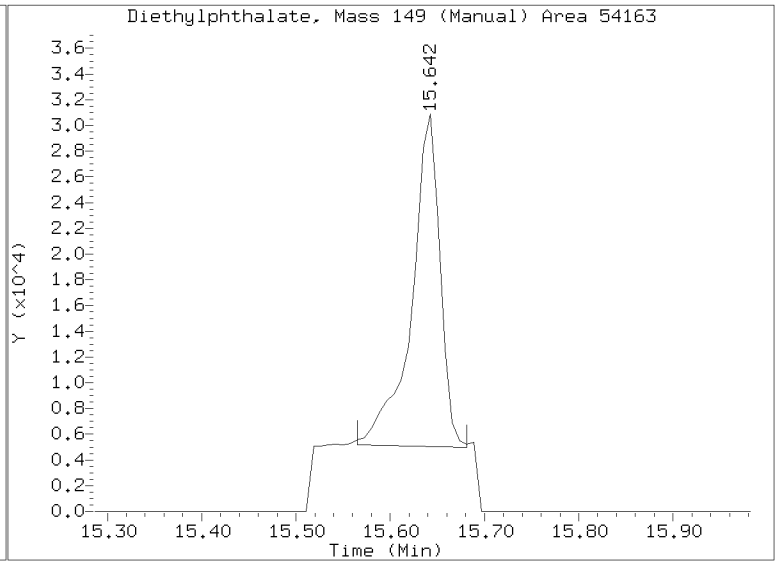






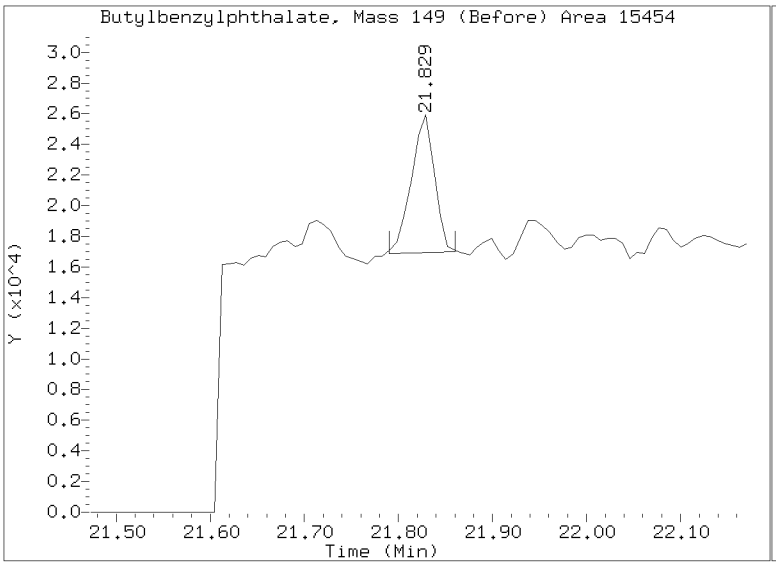


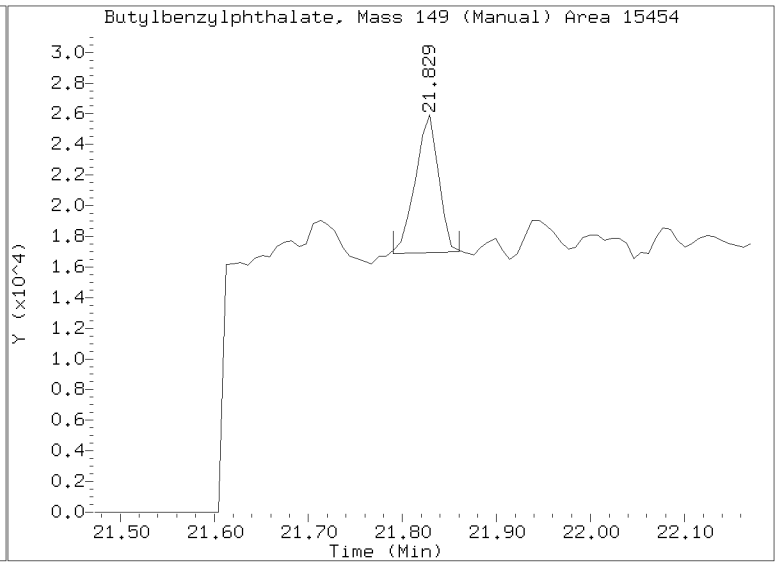




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221C.b/SIM.b/NT1423022154S.D
Injection Date: 22-FEB-2023 21:24
Lab ID:23A0133-11 Client ID:
Report Date: 05/25/2023 11:48





Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-12 C	SDG:	23A0133
Sampled:	01/06/23 13:18	Prepared:	01/18/23 15:24	File ID:	NT1423022155S.D
% Solids:	55.76	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 22:01
Batch:	BLA0393	Sequence:	SLB0351	Initial/Final:	17.96 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GC00009
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	2.7	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	1.7	J	0.7	5.0
100-51-6	Benzyl Alcohol	1	8.4	J	2.5	20.0
65-85-0	Benzoic acid	1	399	U	13.4	399
105-67-9	2,4-Dimethylphenol	1	3.3	J	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	4.9	J	1.3	5.0
87-86-5	Pentachlorophenol	1	39.9	U	2.1	39.9

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.91	303	40.5	27 - 120	
p-Terphenyl-d14	499.28	357	71.5	37 - 120	Q

Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221155S.D

Date : 22-FEB-2023 22:01

Client ID:

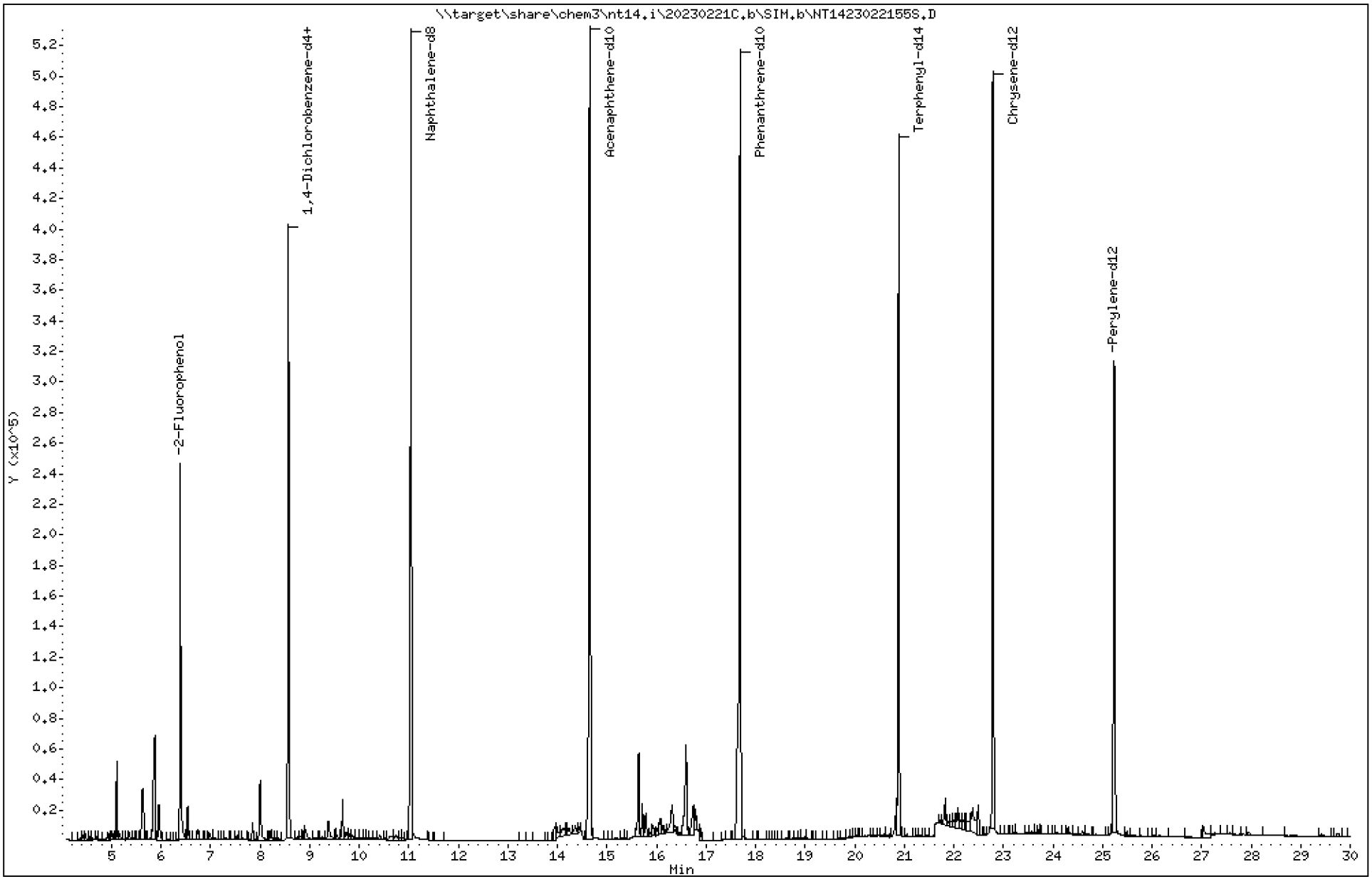
Sample Info: 23A0133-12

Instrument: nt14.i

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022155S.D

Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

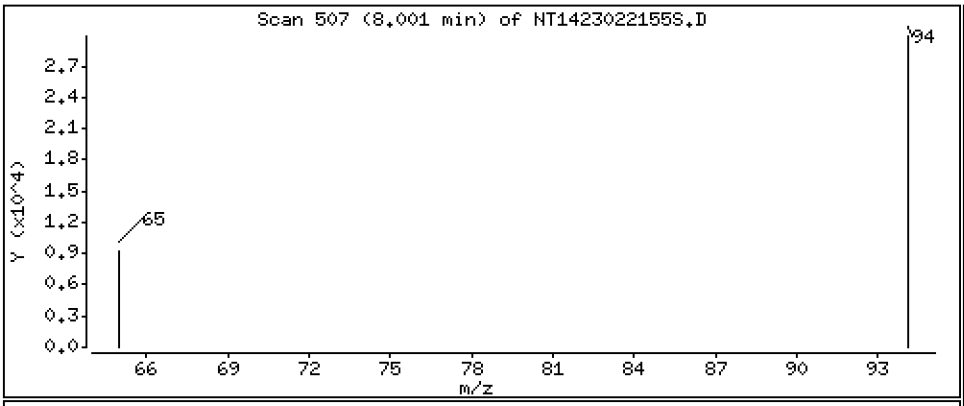
Operator: DSD

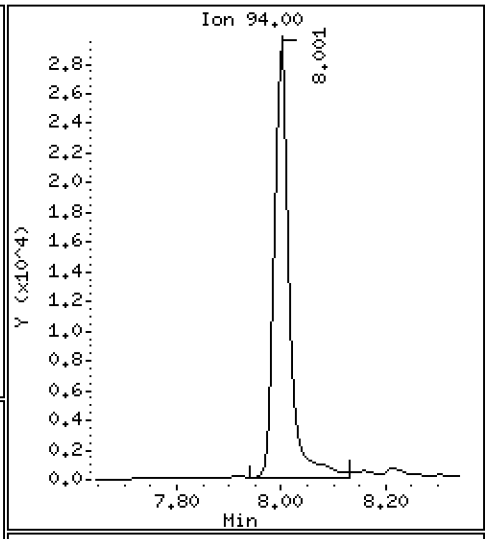
Column phase: ZB-5msi

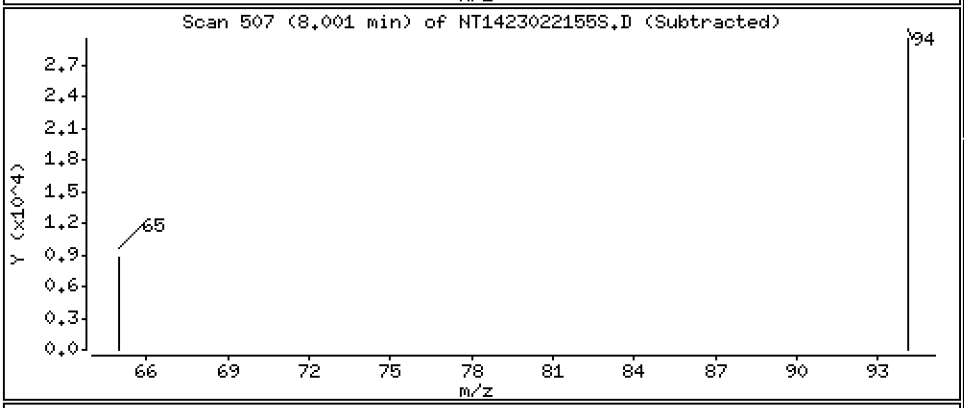
Column diameter: 0.25

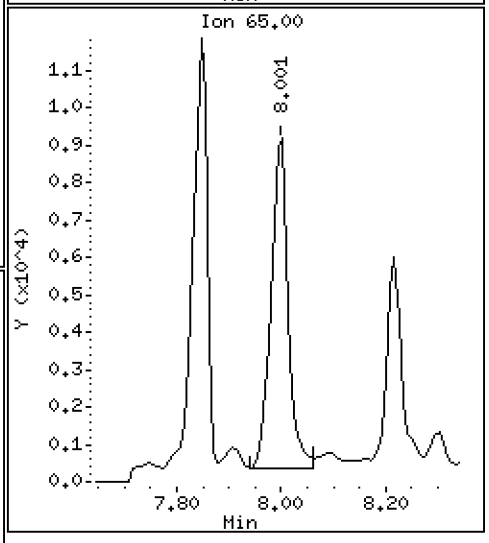
3 Phenol

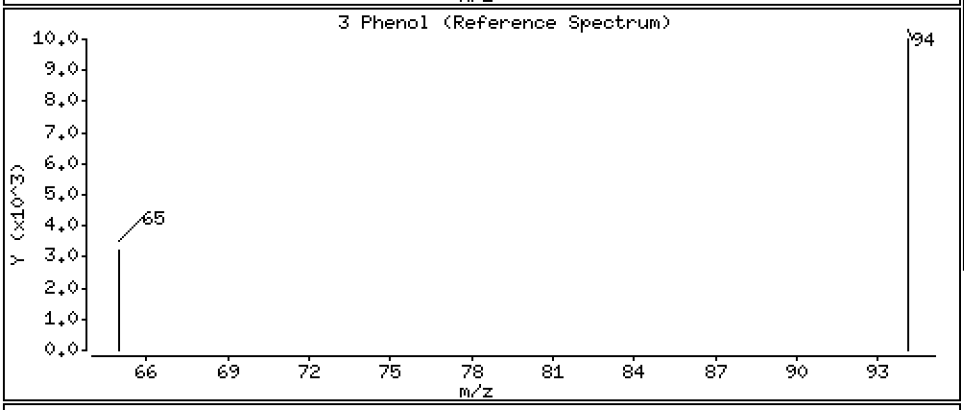
Concentration: 0.4984 ug/mL

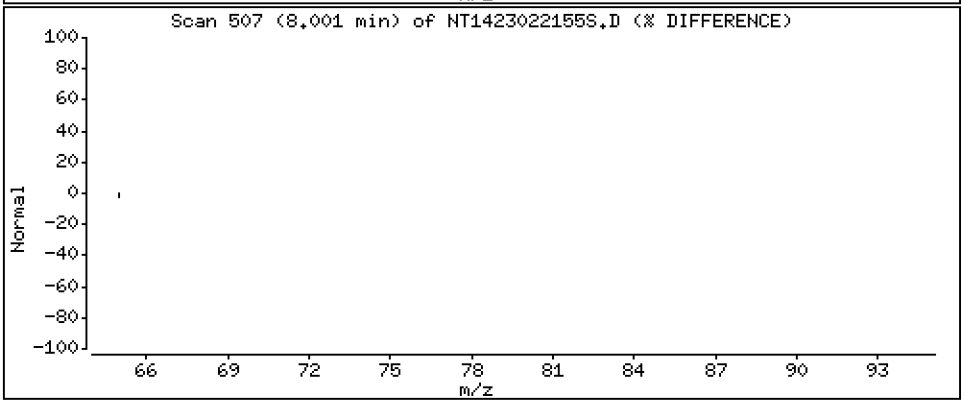












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221555.D

Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

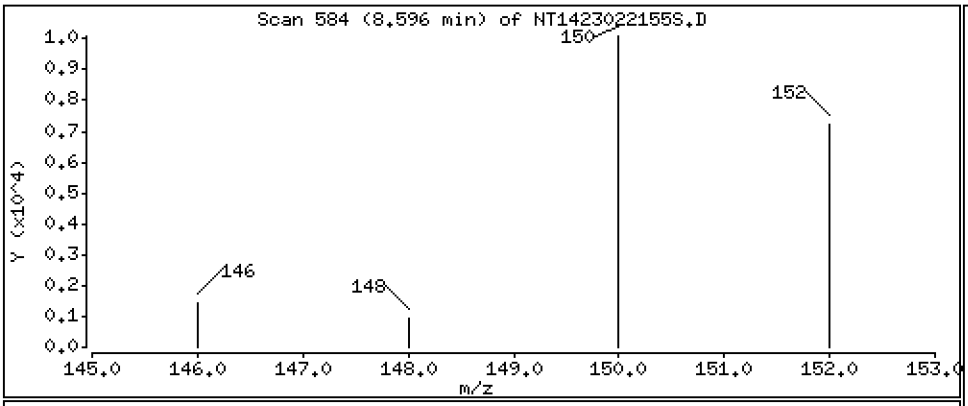
Operator: DSD

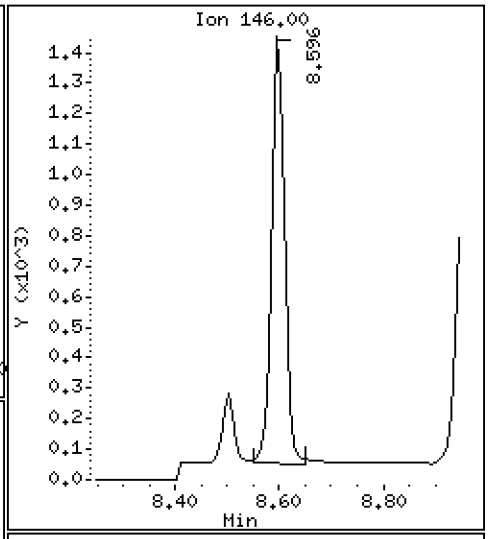
Column phase: ZB-5msi

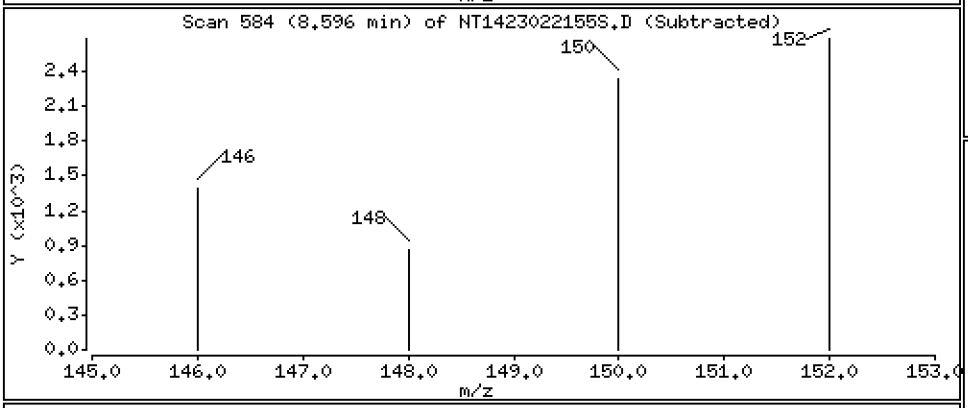
Column diameter: 0.25

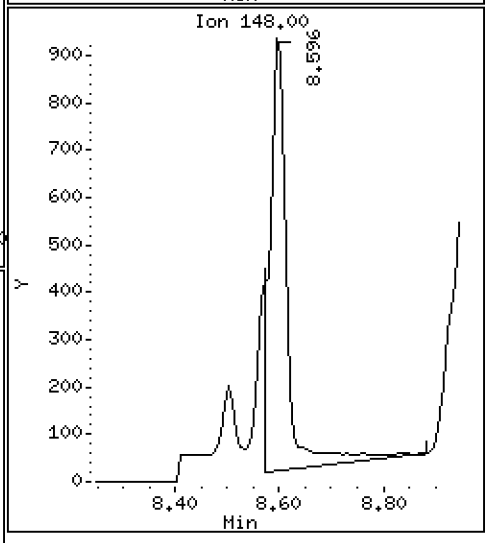
9 1,4-Dichlorobenzene

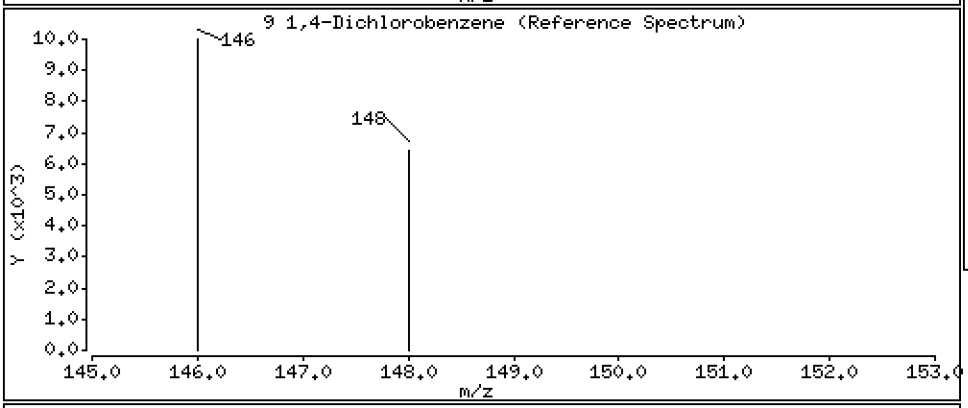
Concentration: 0.02728 ug/mL

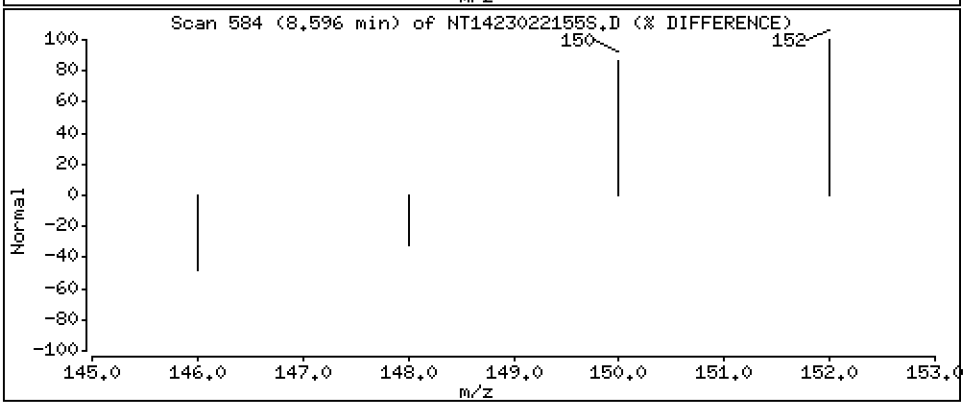












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221555.D

Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

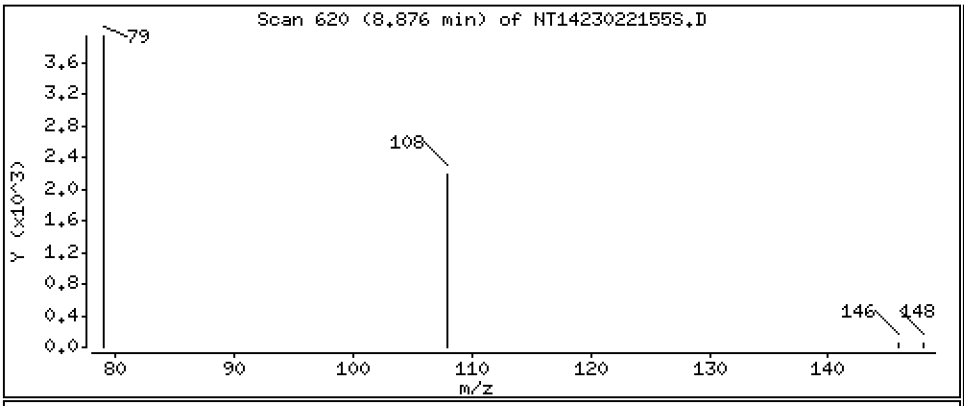
Operator: DSD

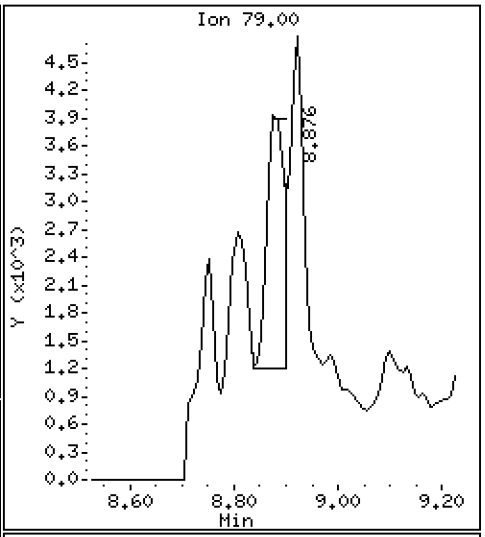
Column phase: ZB-5msi

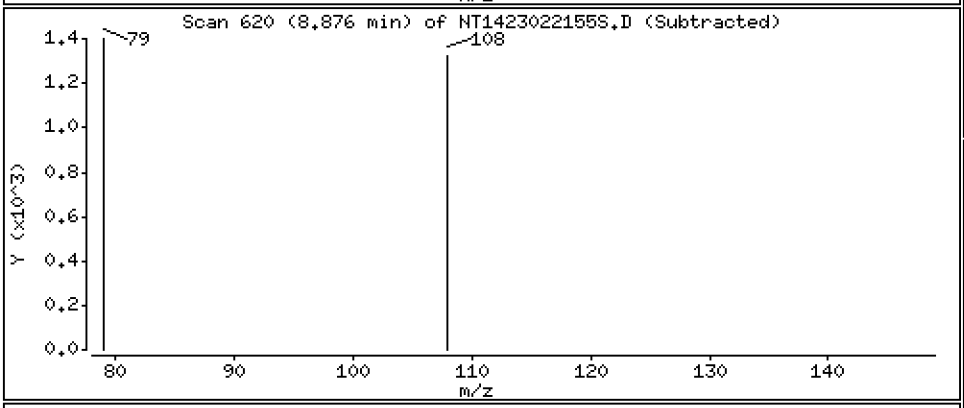
Column diameter: 0.25

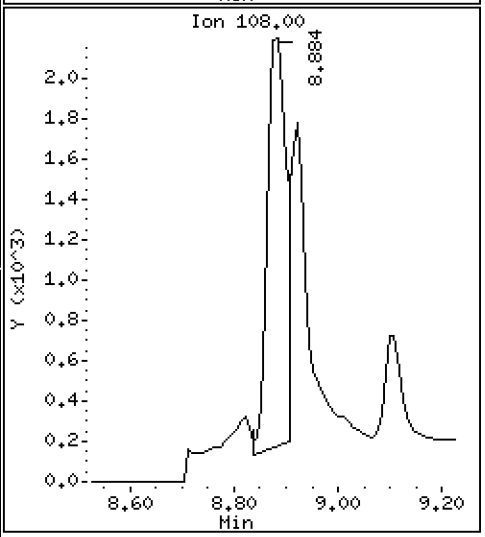
11 Benzyl alcohol

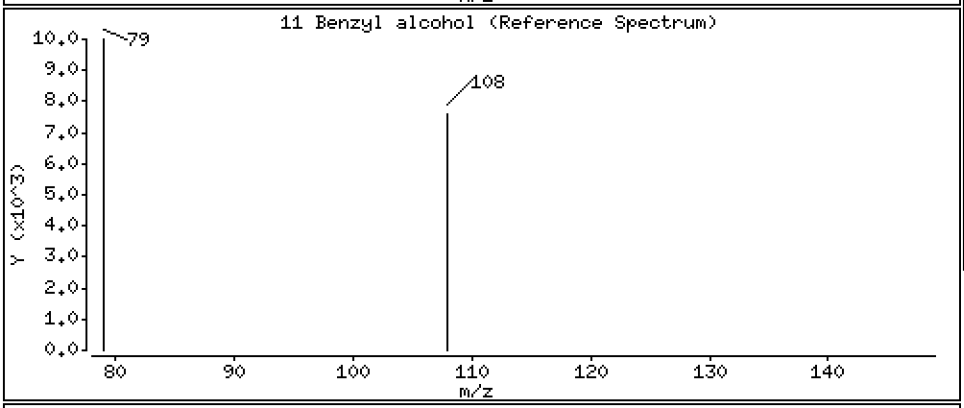
Concentration: 0.08363 ug/mL

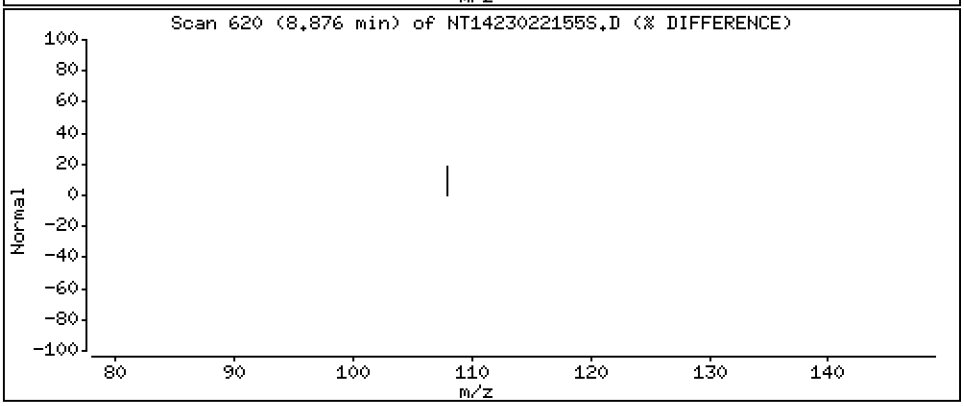












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230222155S.D

Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

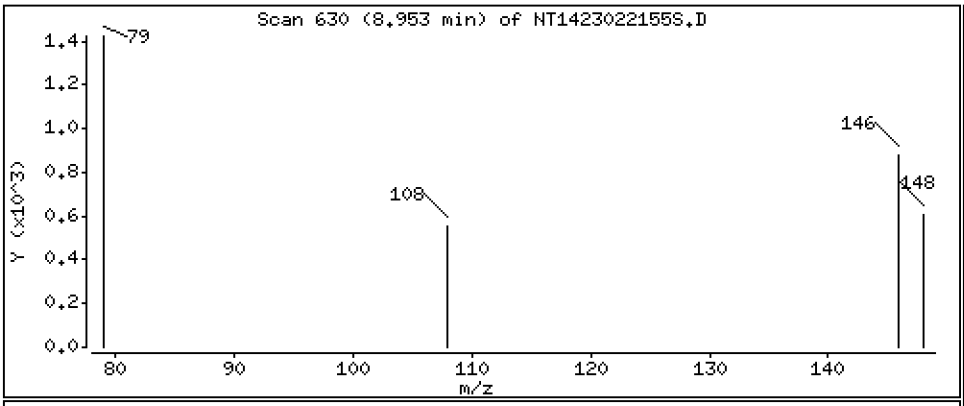
Operator: DSD

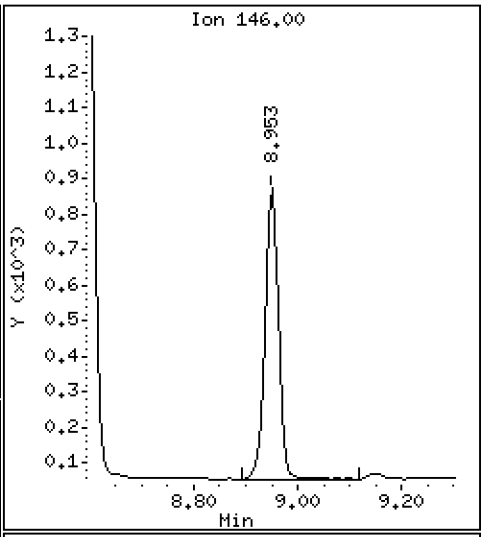
Column phase: ZB-5msi

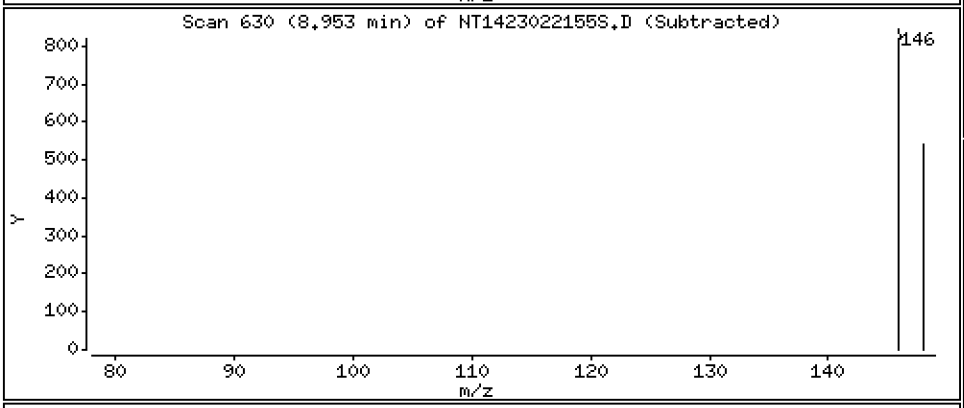
Column diameter: 0.25

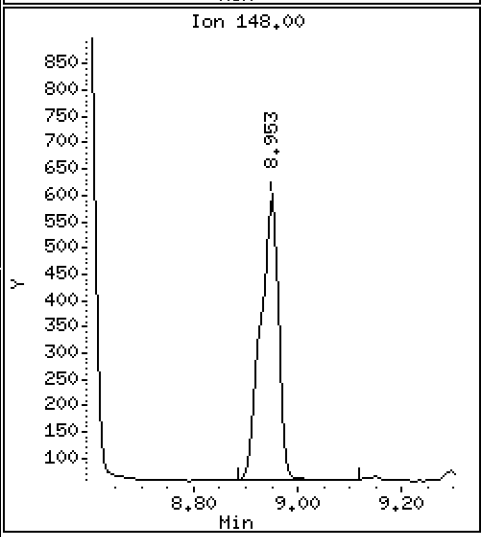
12 1,2-Dichlorobenzene

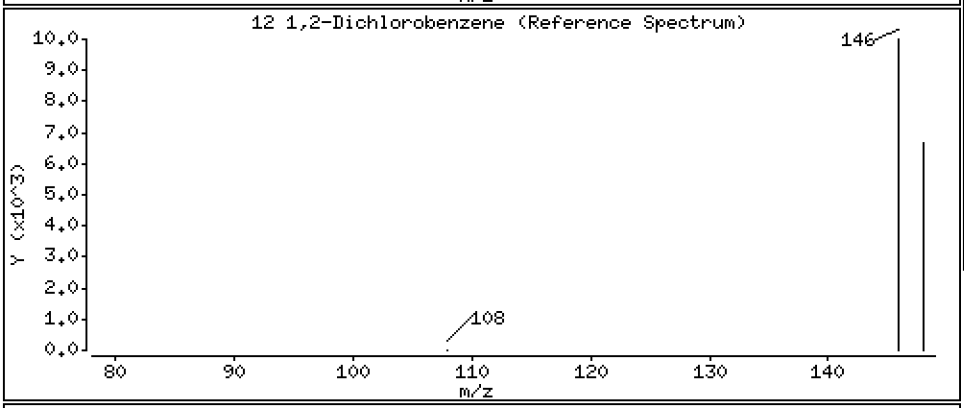
Concentration: 0.01659 ug/mL

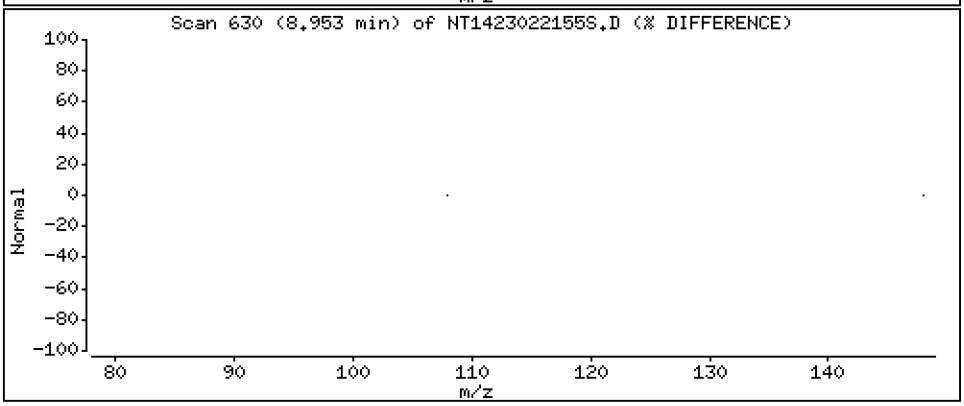












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221555.D

Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

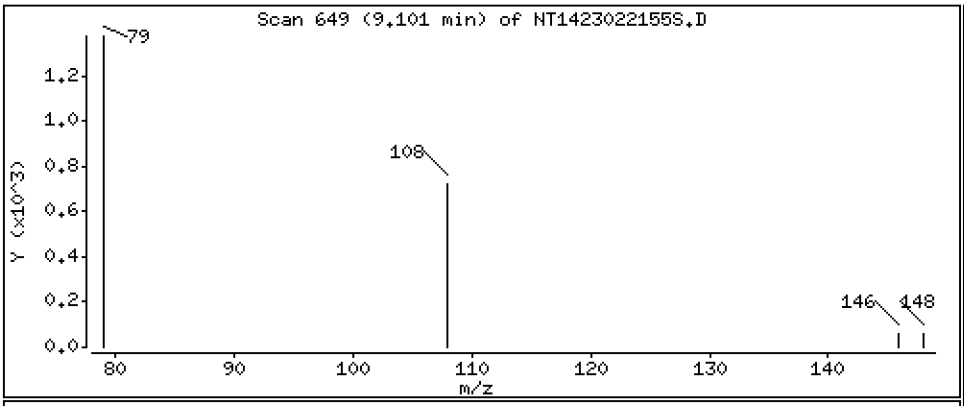
Operator: DSD

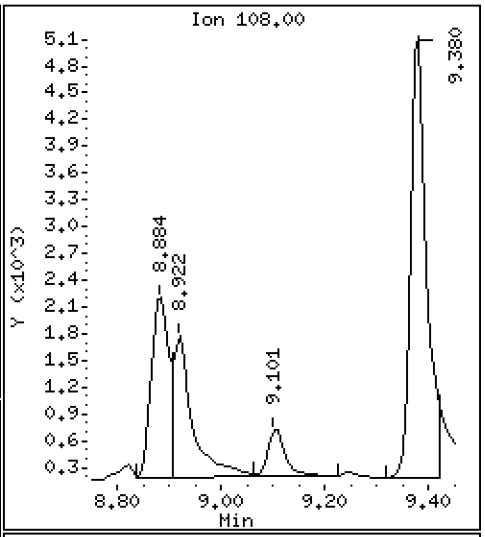
Column phase: ZB-5msi

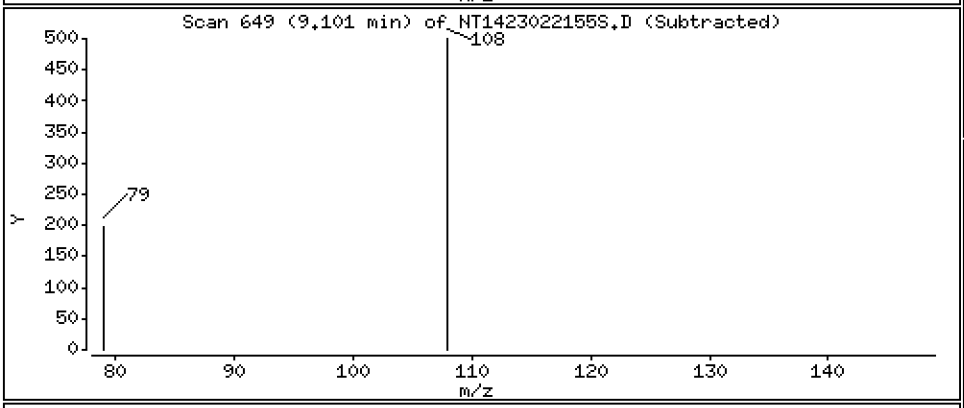
Column diameter: 0.25

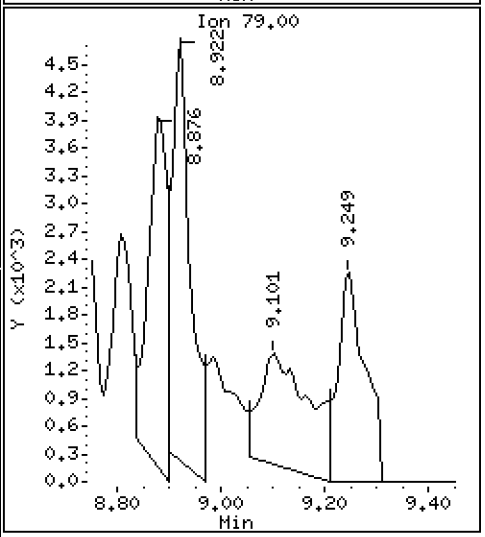
13 2-Methylphenol

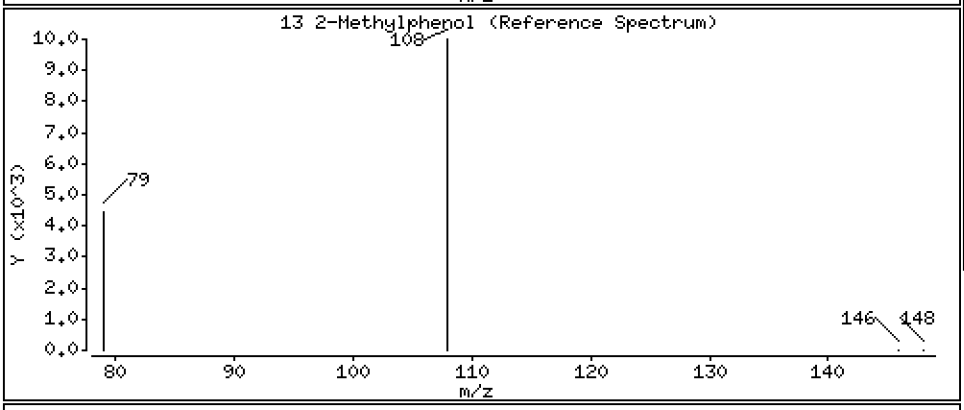
Concentration: 0.01498 ug/mL

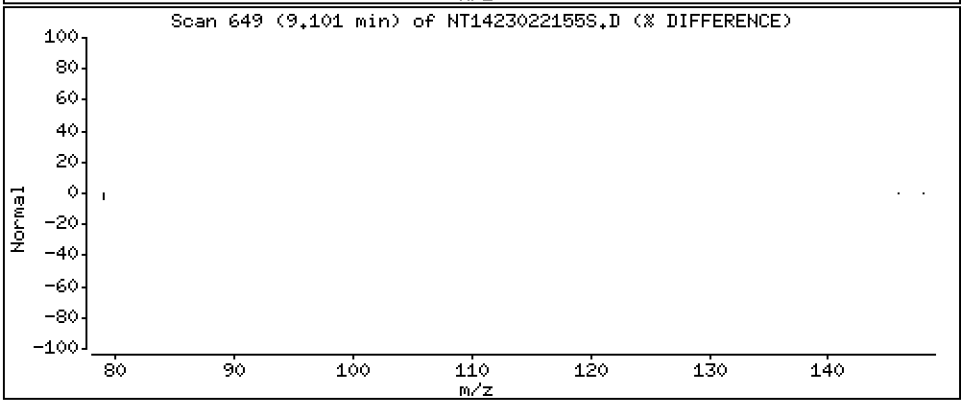












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

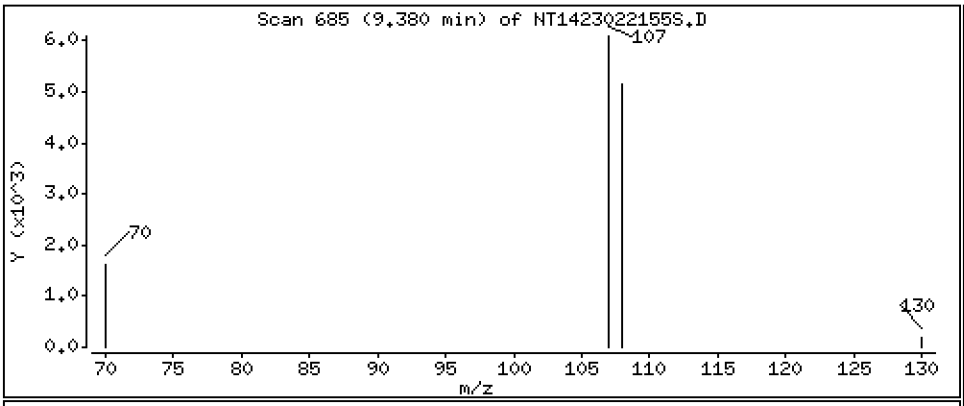
Operator: DSD

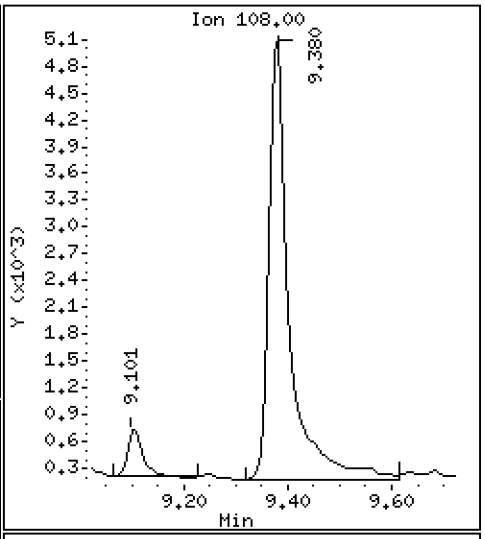
Column phase: ZB-5msi

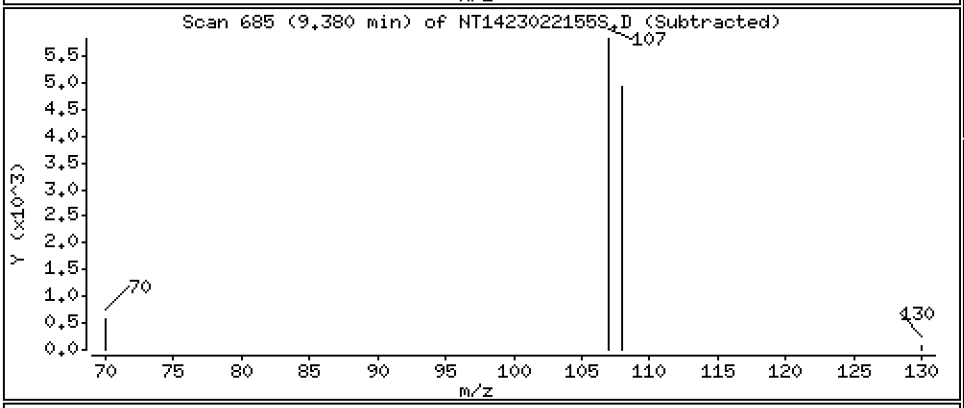
Column diameter: 0.25

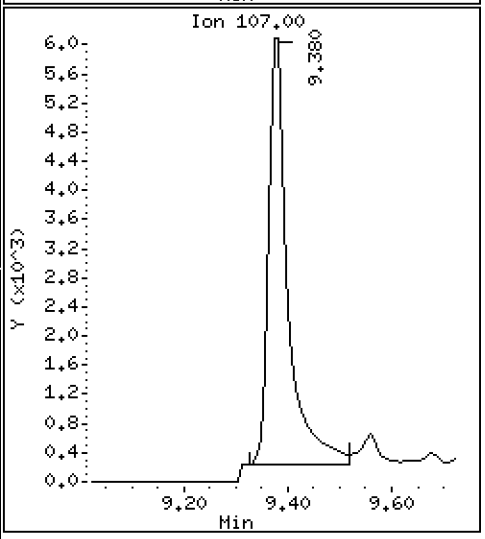
15 4-Methylphenol

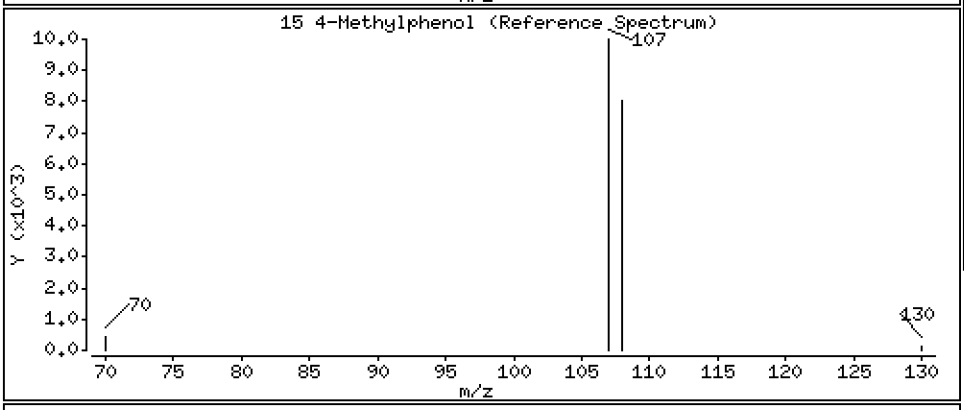
Concentration: 0.1525 ug/mL

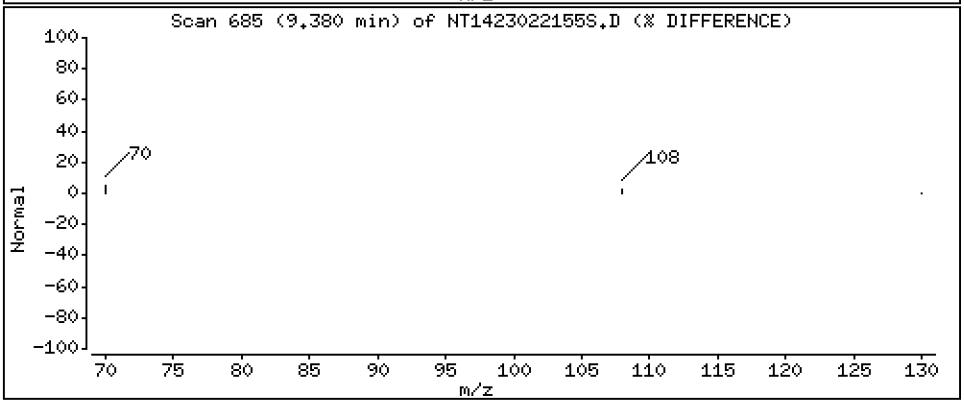












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

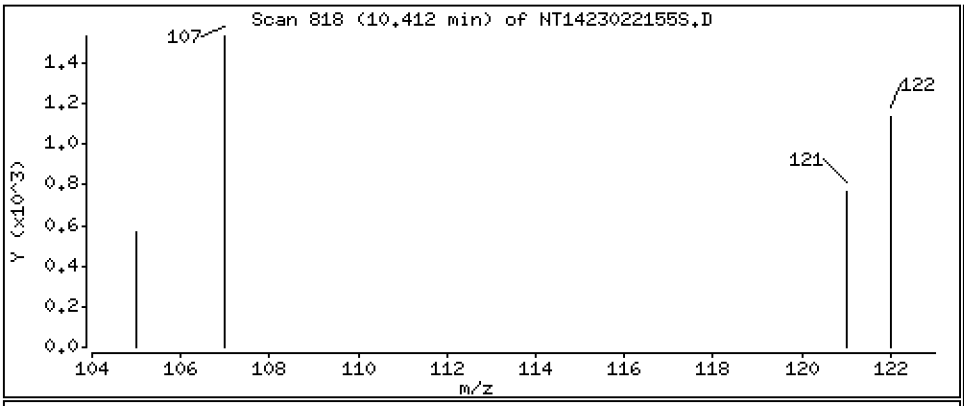
Operator: DSD

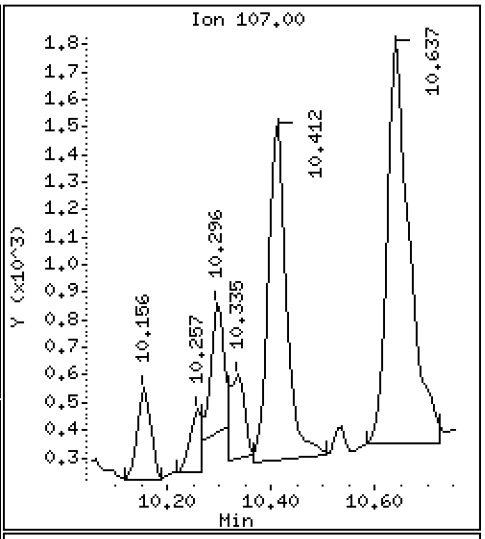
Column phase: ZB-5msi

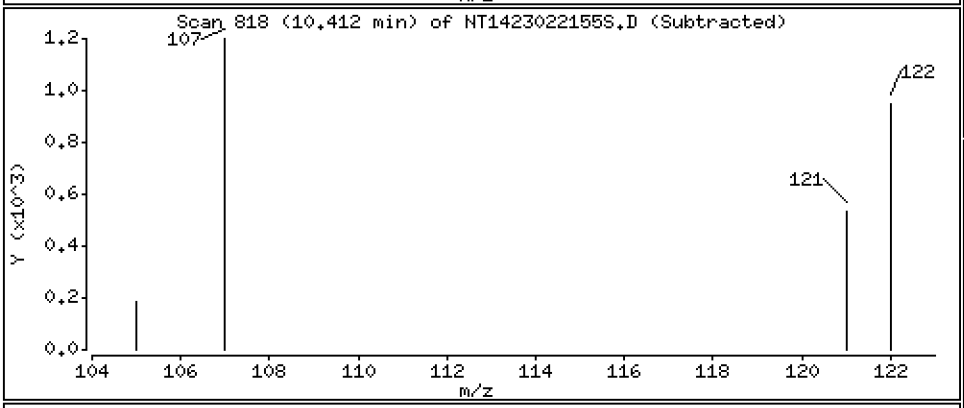
Column diameter: 0.25

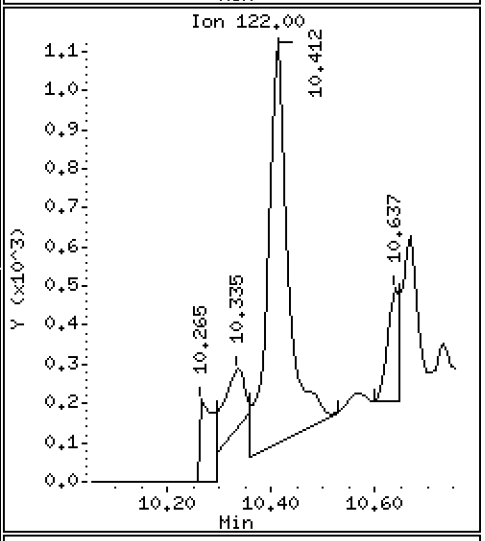
22 2,4-Dimethylphenol

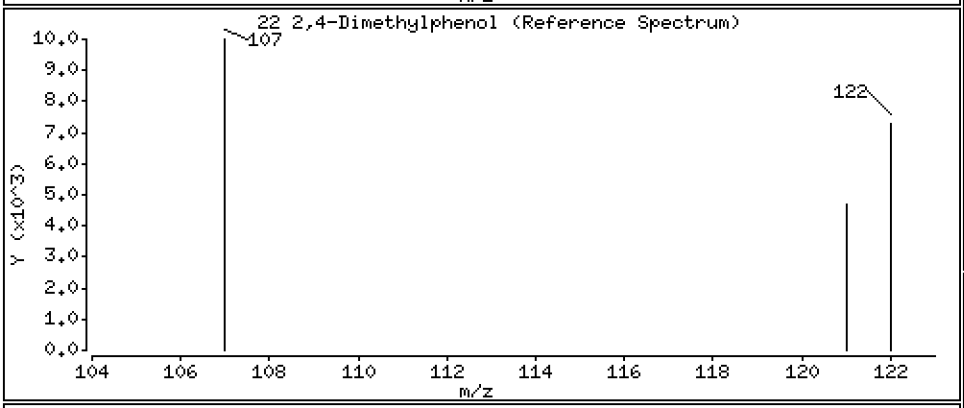
Concentration: 0.03267 ug/mL

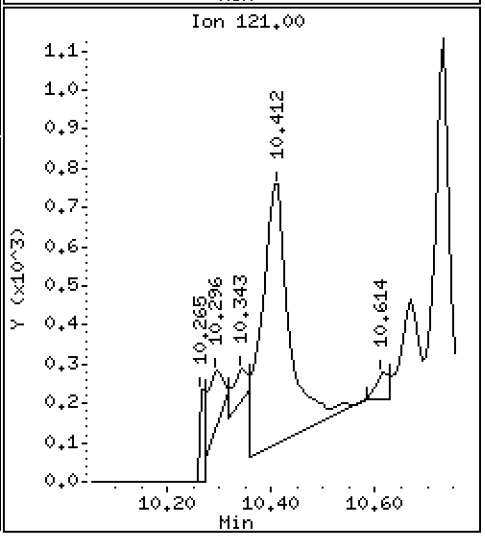


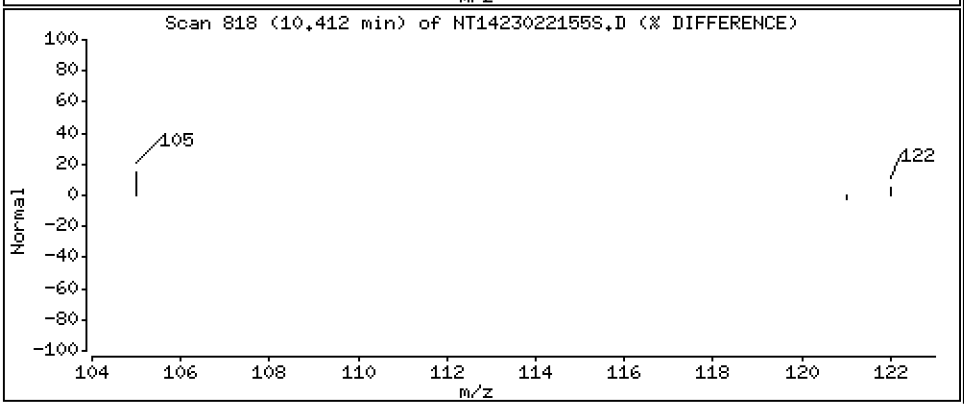












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Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

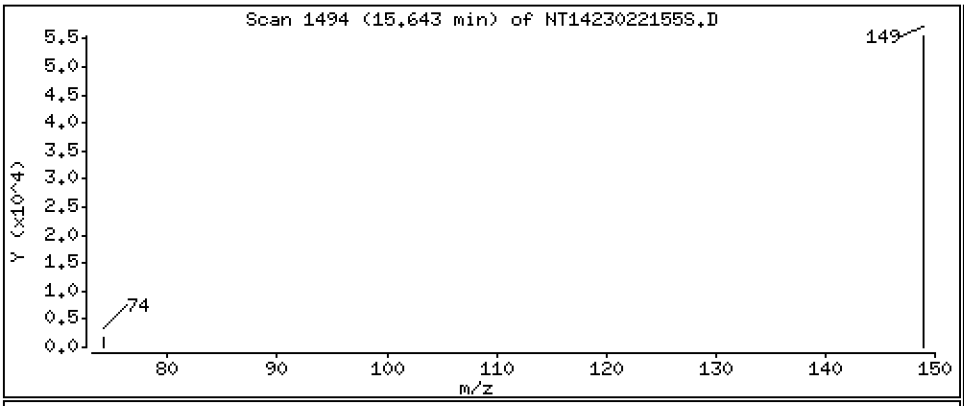
Operator: DSD

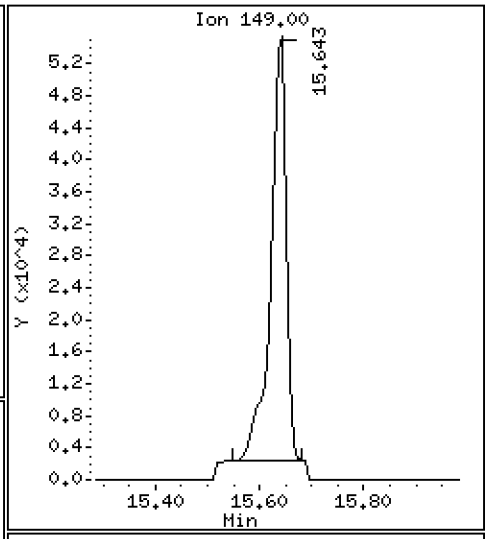
Column phase: ZB-5msi

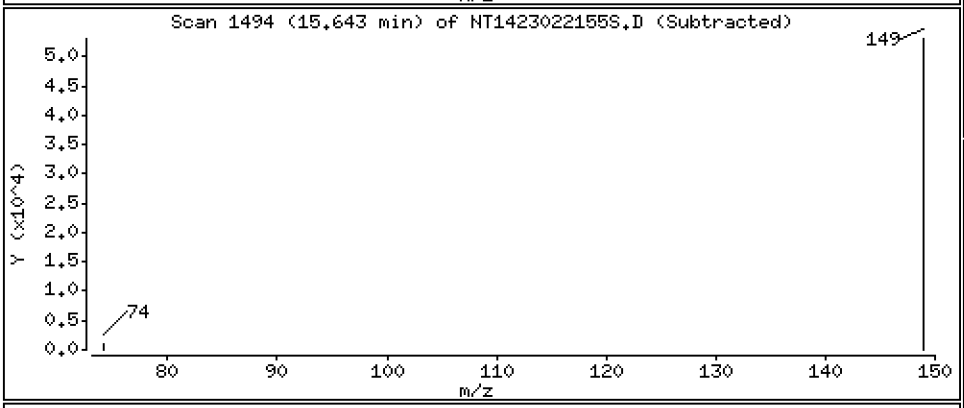
Column diameter: 0.25

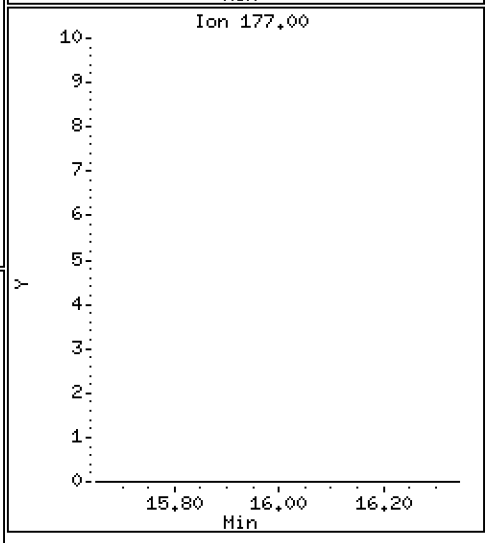
50 Diethylphthalate

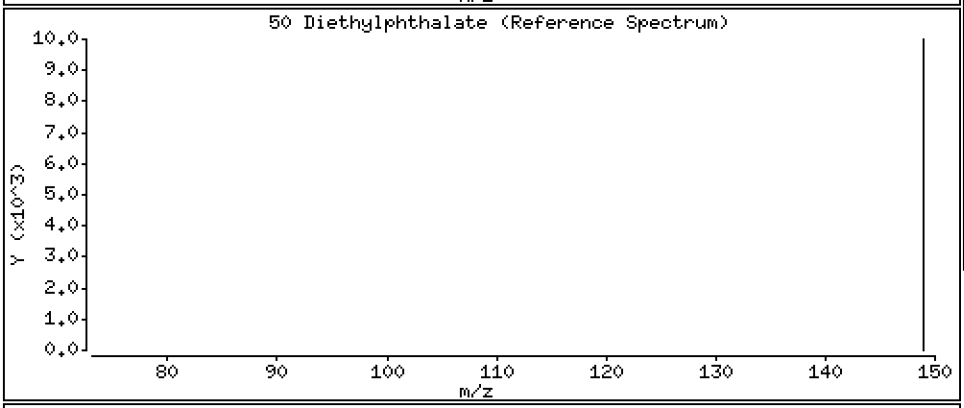
Concentration: 0.5559 ug/mL

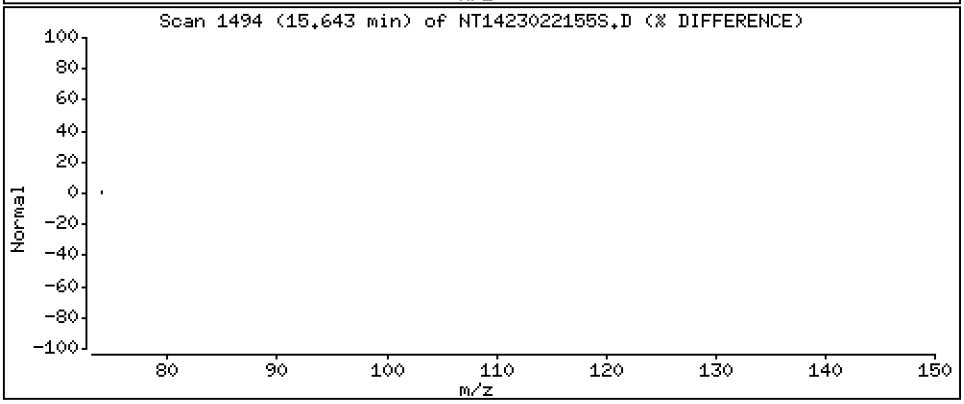












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022155S.D

Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

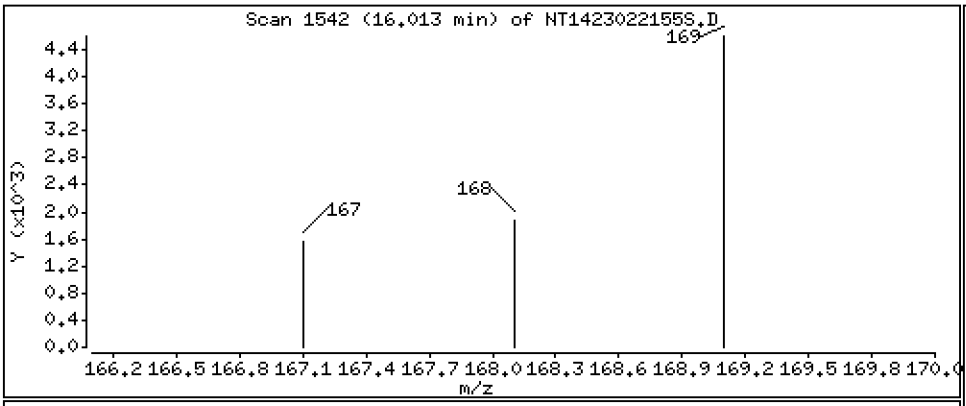
Operator: DSD

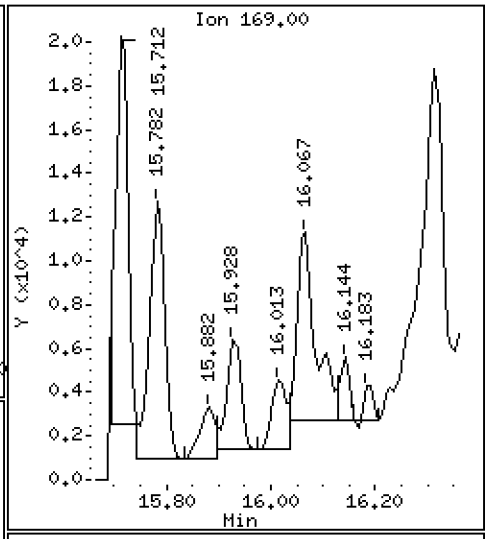
Column phase: ZB-5msi

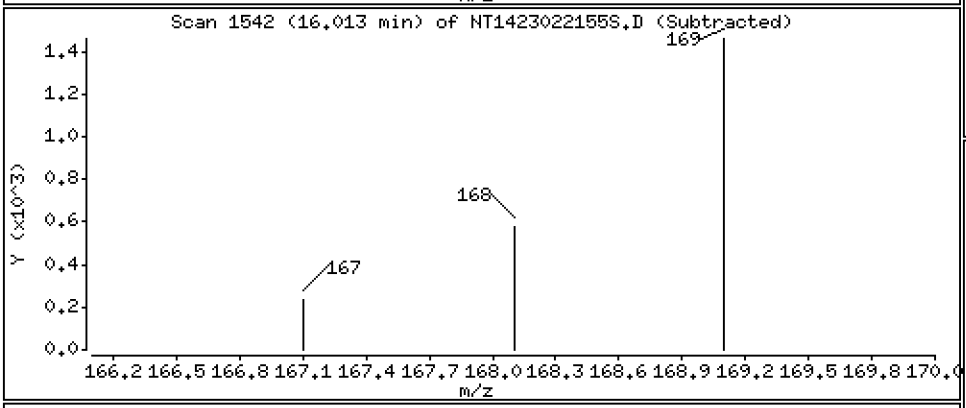
Column diameter: 0.25

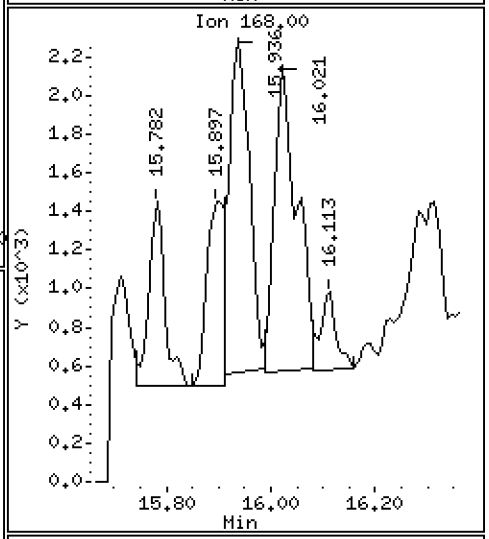
54 N-Nitrosodiphenylamine

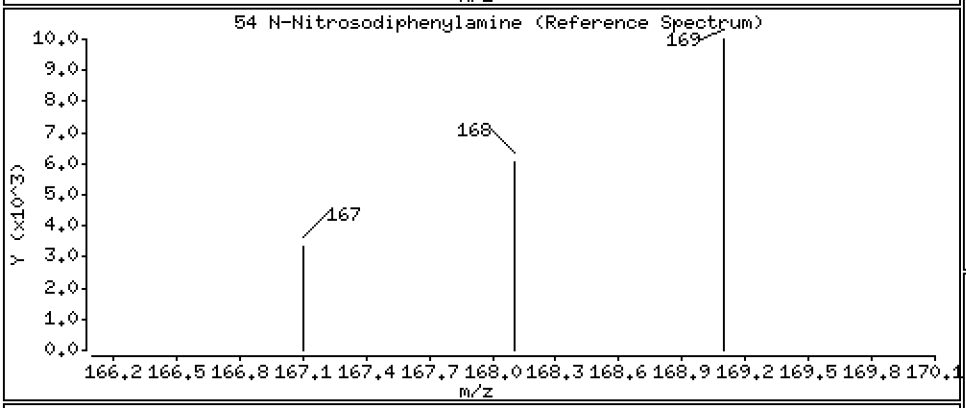
Concentration: 0.04870 ug/mL

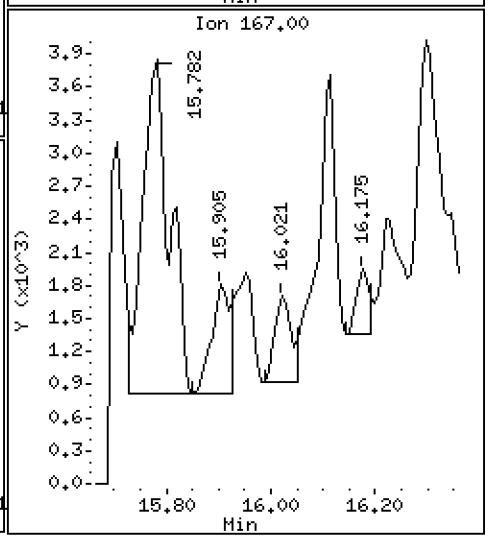


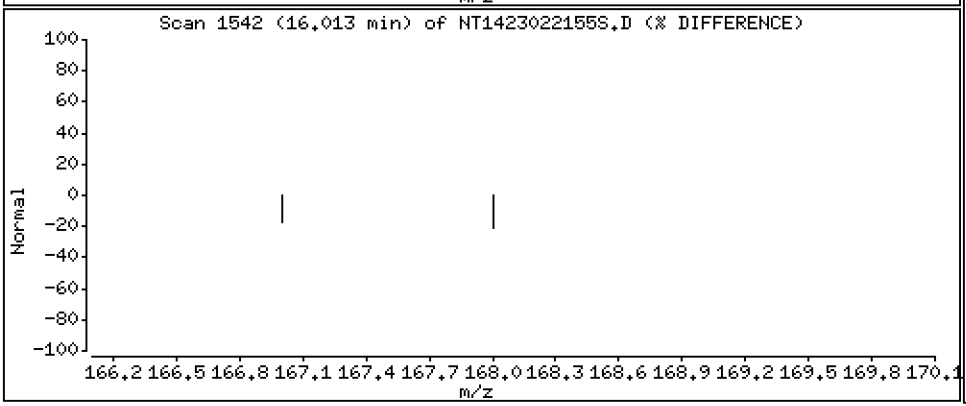












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221555.D

Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

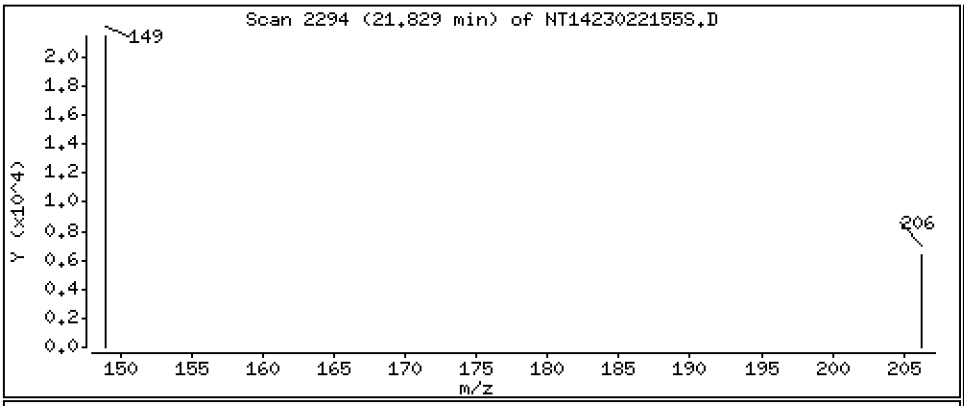
Operator: DSD

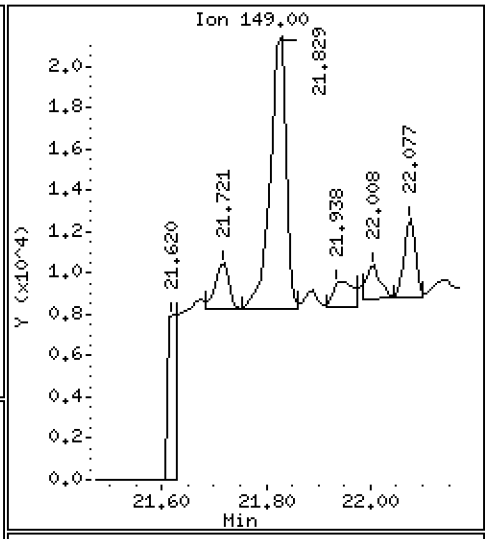
Column phase: ZB-5msi

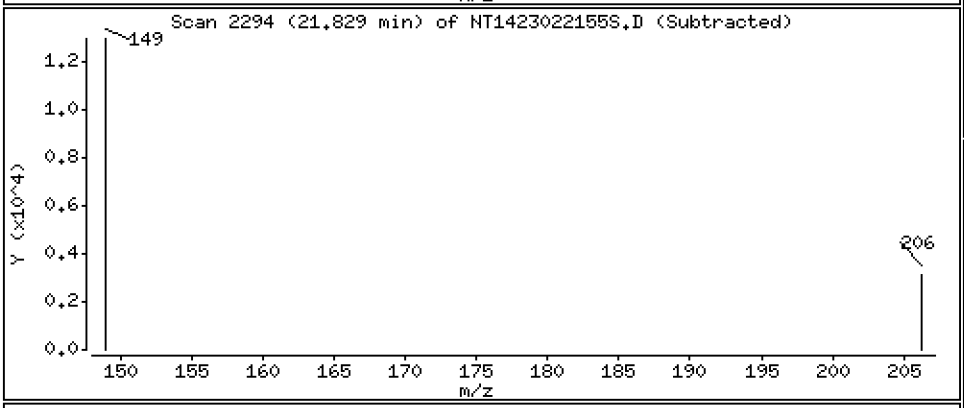
Column diameter: 0.25

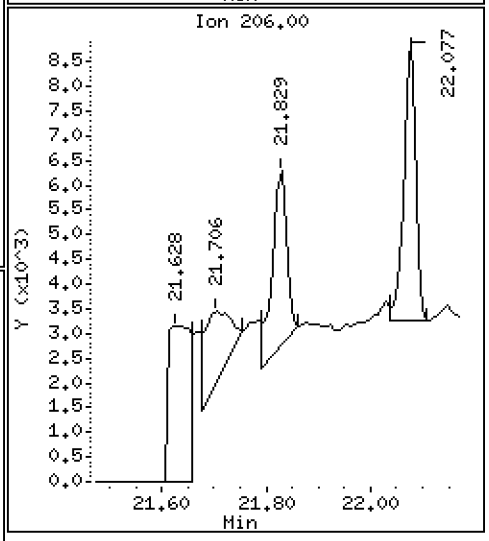
67 Butylbenzylphthalate

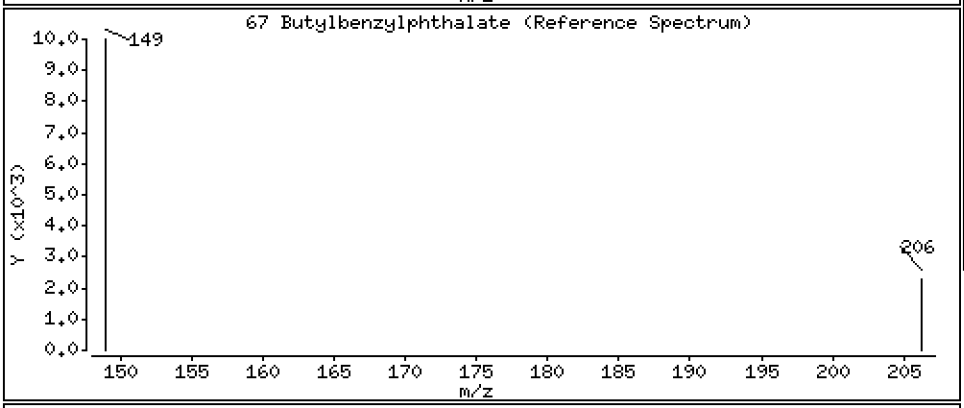
Concentration: 0.3081 ug/mL

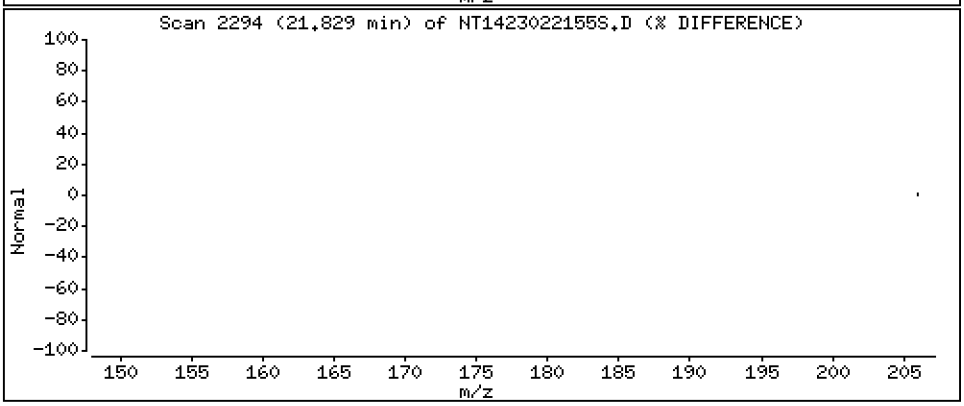












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022155S.D

Date : 22-FEB-2023 22:01

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-12

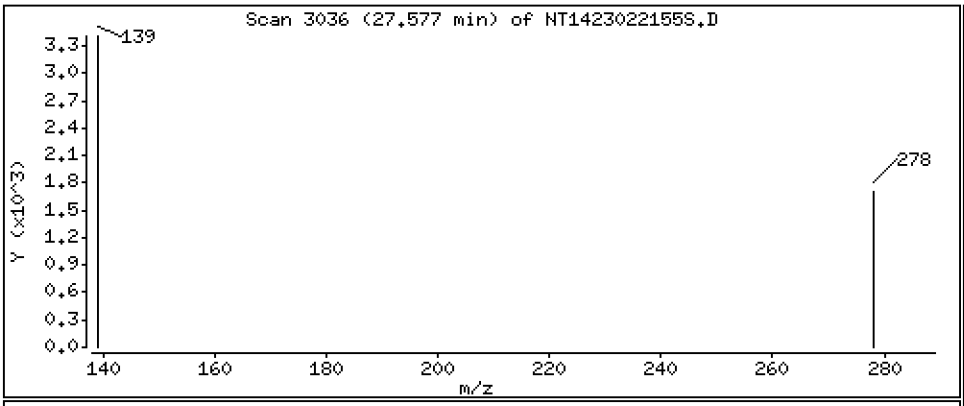
Operator: DSD

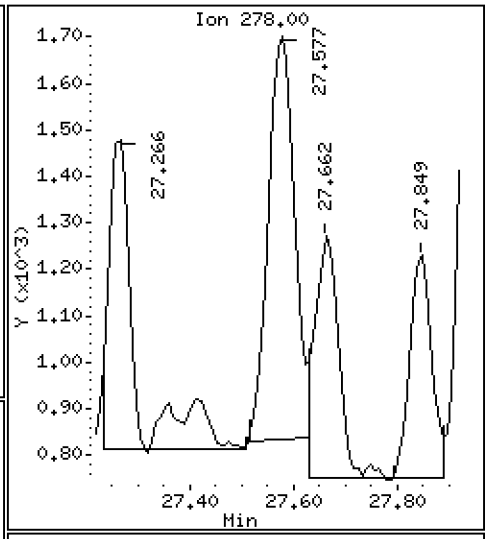
Column phase: ZB-5msi

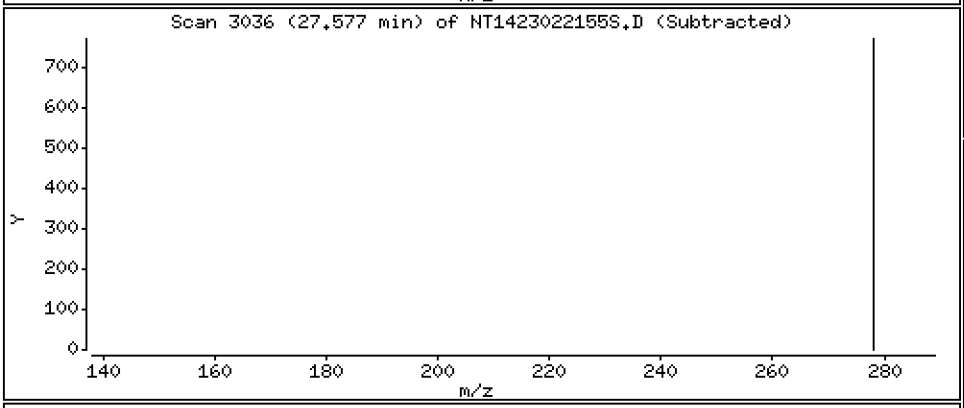
Column diameter: 0.25

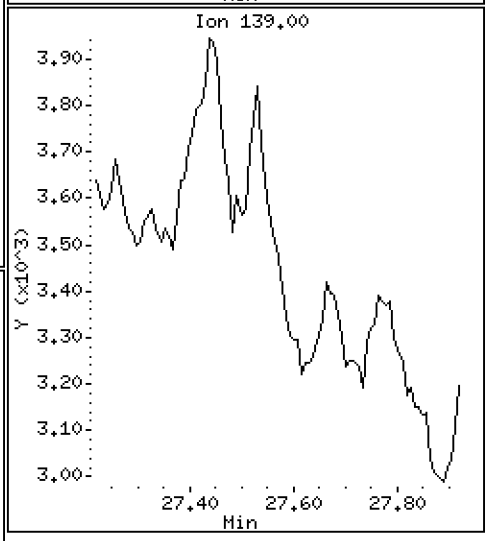
79 Dibenzo(a,h)anthracene

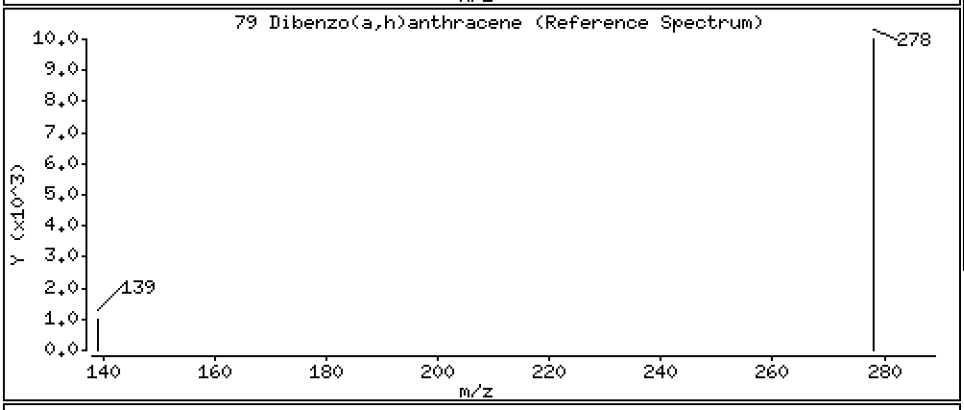
Concentration: 0.03368 ug/mL

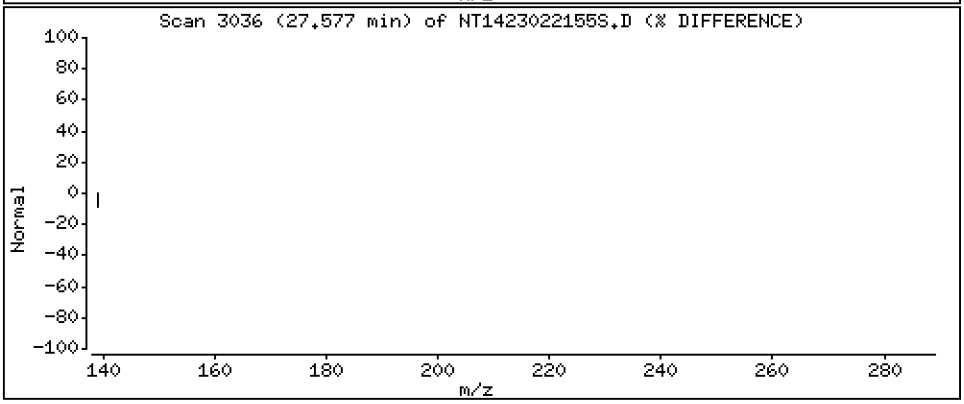












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT1423022155S.D
Lab Smp Id: 23A0133-12
Inj Date : 22-FEB-2023 22:01 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-12
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Meth Date : 25-May-2023 11:39 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 38
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.385	6.386	(0.745)	231727	3.03831	3.038(R)
	3 Phenol	94	8.000	7.993	(0.933)	56958	0.49842	0.4984
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.573	8.573	(1.000)	266448	4.00000	
	9 1,4-Dichlorobenzene	146	8.596	8.596	(1.003)	2359	0.02728	0.02728(M)
	11 Benzyl alcohol	79	8.875	8.876	(1.035)	6103	0.08363	0.08363(M)
	12 1,2-Dichlorobenzene	146	8.953	8.953	(1.044)	1427	0.01659	0.01659
	13 2-Methylphenol	108	9.100	9.101	(1.062)	1185	0.01498	0.01498
	15 4-Methylphenol	108	9.380	9.373	(1.094)	13207	0.15247	0.1525
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.412	10.404	(0.943)	2907	0.03267	0.03267
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.039	11.040	(1.000)	971682	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
*	42 Acenaphthene-d10	162	14.653	14.653	(1.000)	500599	4.00000	
	50 Diethylphthalate	149	15.642	15.635	(1.068)	106250	0.55587	0.5559
	54 N-Nitrosodiphenylamine	169	16.012	16.013	(0.906)	6380	0.04870	0.04870
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.681	17.674	(1.000)	1047221	4.00000	
$	66 Terphenyl-d14	244	20.892	20.869	(0.917)	651498	3.57588	3.576(R)
	67 Butylbenzylphthalate	149	21.829	21.821	(0.958)	26549	0.30807	0.3081
*	69 Chrysene-d12	240	22.789	22.774	(1.000)	684367	4.00000	
*	77 Perylene-d12	264	25.236	25.220	(1.000)	524845	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.576	27.569	(1.093)	3089	0.03368	0.03368
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022155S.D
Lab Smp Id: 23A0133-12
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 17:47
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	241018	120509	482036	266448	10.55
27 Naphthalene-d8	887165	443583	1774330	971682	9.53
42 Acenaphthene-d10	467553	233777	935106	500599	7.07
59 Phenanthrene-d10	1079793	539897	2159586	1047221	-3.02
69 Chrysene-d12	754146	377073	1508292	684367	-9.25
77 Perylene-d12	558201	279101	1116402	524845	-5.98

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.67	17.17	18.17	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.79	0.07
77 Perylene-d12	25.22	24.72	25.72	25.24	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022155S.D

Lab ID: 23A0133-12
nt14.i, 20230221C.b\SIM.b\SIMABN2.m,   22-FEB-2023 22:01

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1423022148ICVS.d

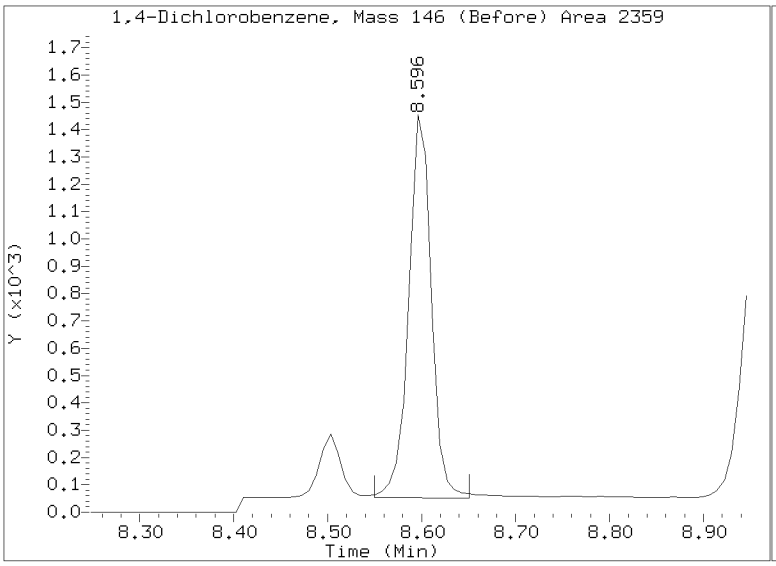
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

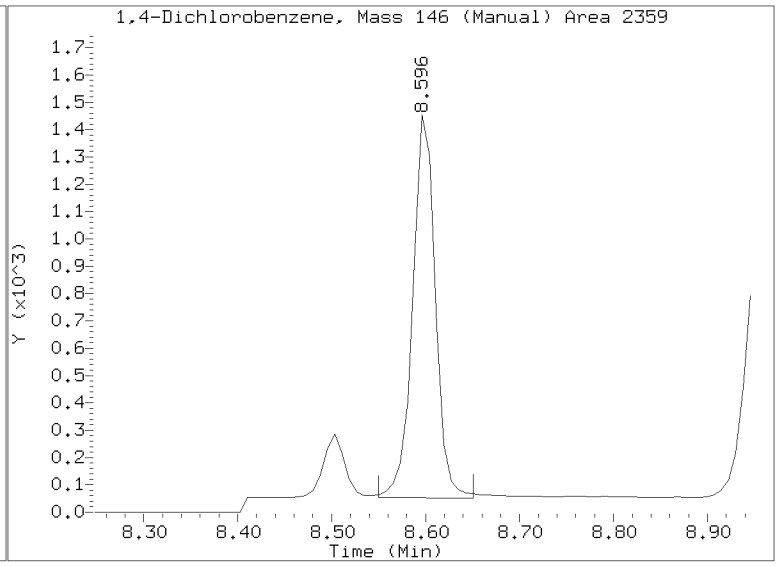
Exception: 1,2,4-Trichlorobenzene 0.0010

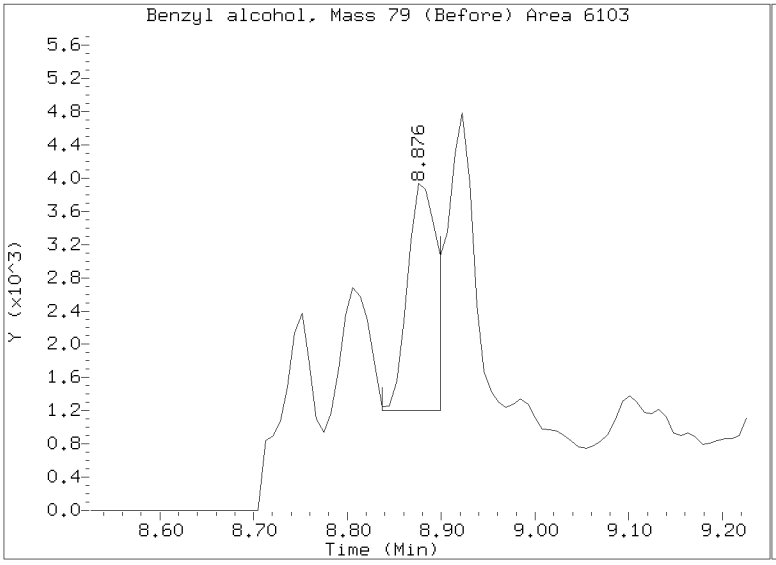
* Only compounds listed in the work order have been verified by the analyst *

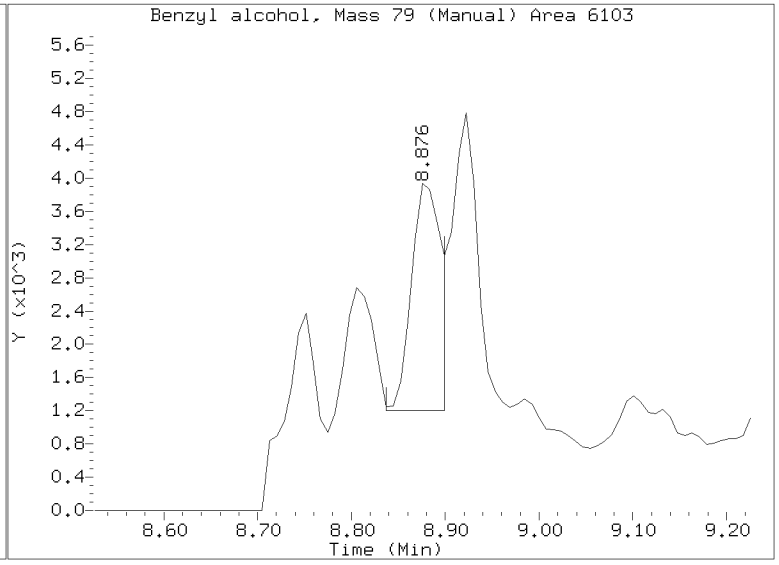
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221C.b/SIM.b/NT1423022155S.D
Injection Date: 22-FEB-2023 22:01
Lab ID:23A0133-12 Client ID:
Report Date: 05/25/2023 11:48









Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1110

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-13 C	SDG:	23A0133
Sampled:	01/06/23 14:00	Prepared:	01/18/23 15:24	File ID:	NT1423022156S.D
% Solids:	59.32	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 22:37
Batch:	BLA0393	Sequence:	SLB0351	Initial/Final:	16.87 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GC00009
Cleanups:	GPC				

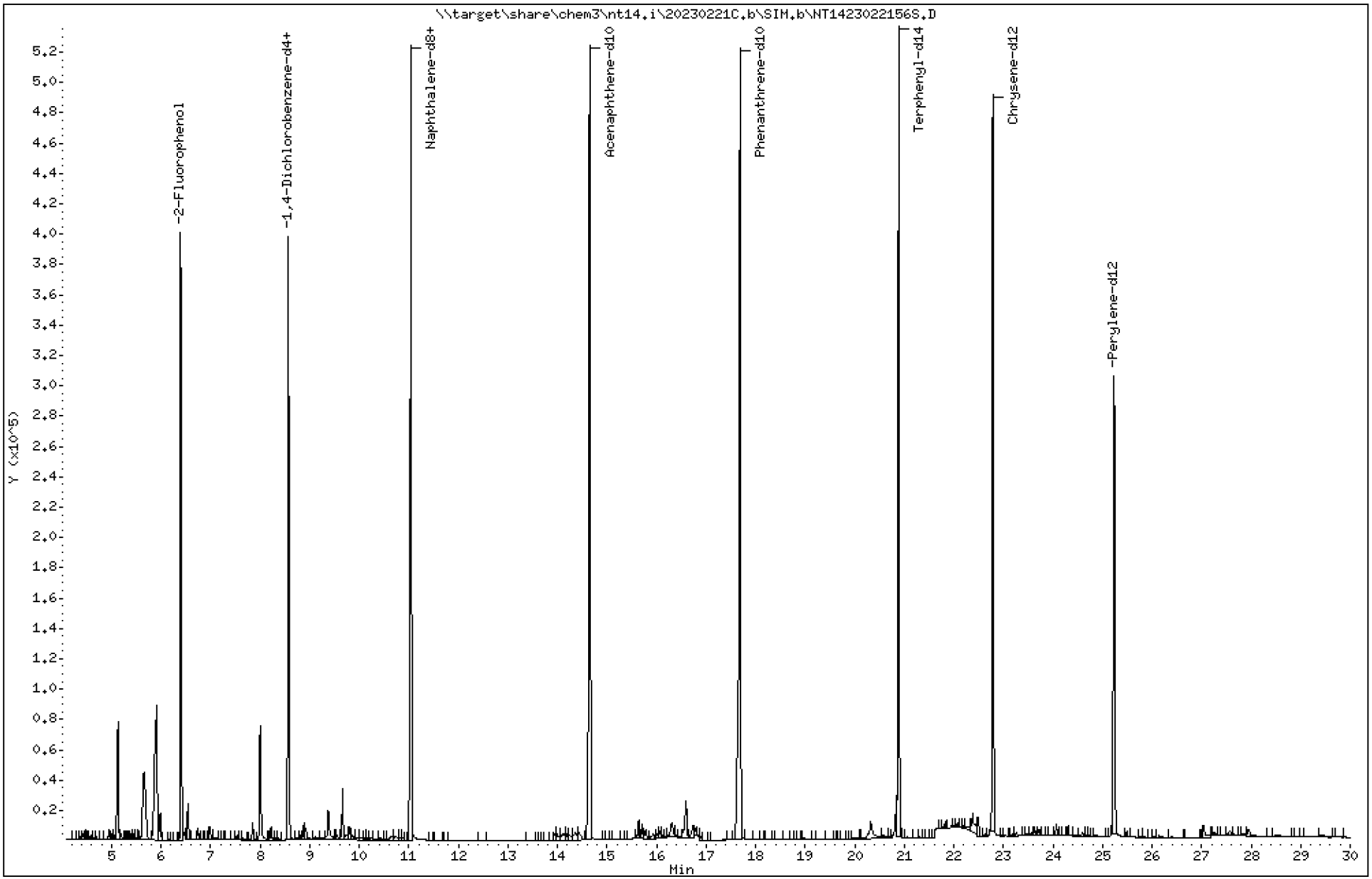
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.1	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	17.4	J	2.5	20.0
65-85-0	Benzoic acid	1	34.4	J	13.4	400
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	40.0	U	2.1	40.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.45	506	67.5	27 - 120	
p-Terphenyl-d14	499.64	455	91.2	37 - 120	Q

Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221S6S.D
Date : 22-FEB-2023 22:37
Client ID:
Sample Info: 23A0133-13

Instrument: nt14.i
Operator: DSD
Column diameter: 0.25

Column phase: ZB-5msi



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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

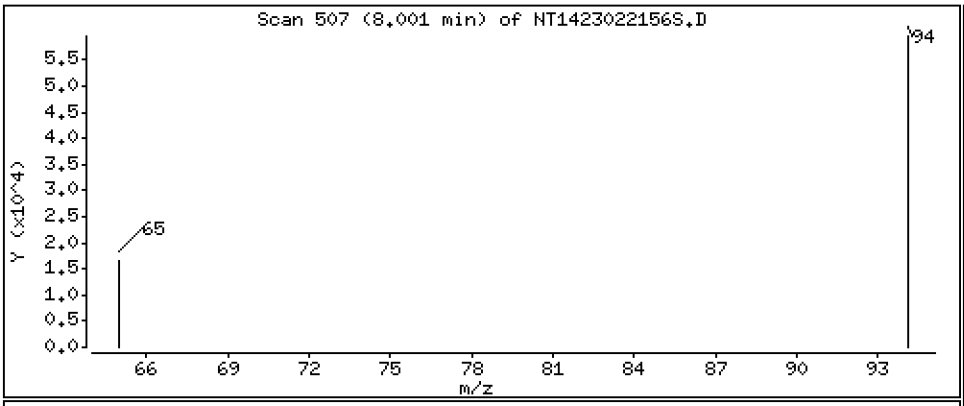
Operator: DSD

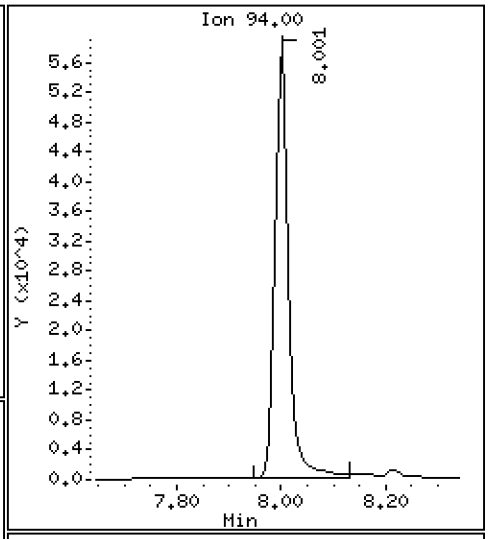
Column phase: ZB-5msi

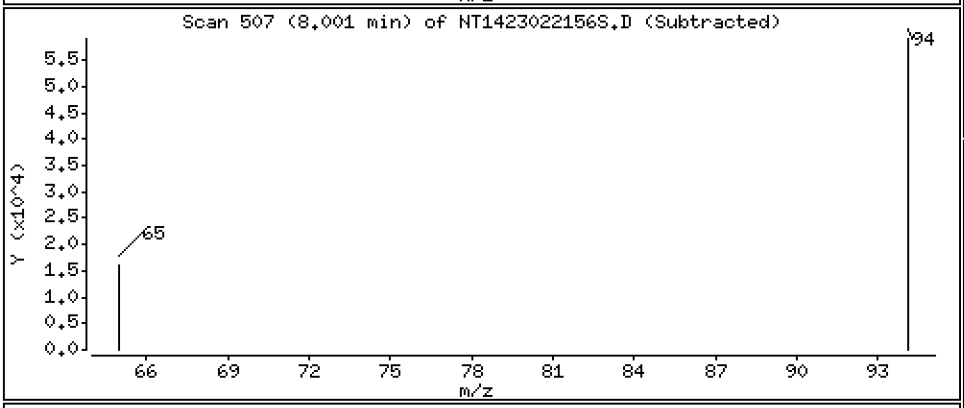
Column diameter: 0.25

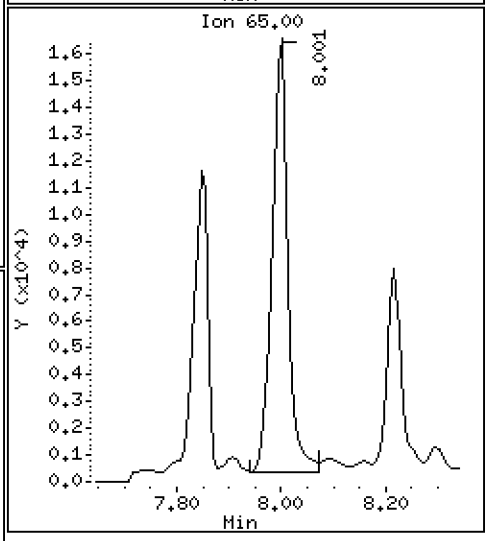
3 Phenol

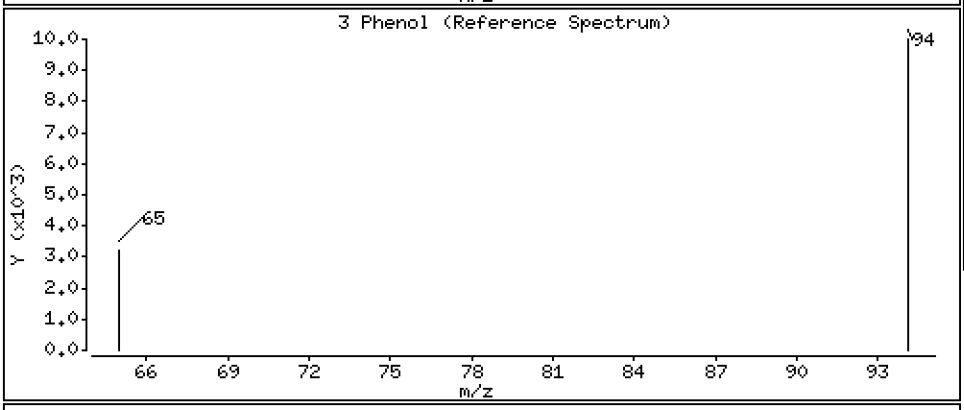
Concentration: 0.9239 ug/mL

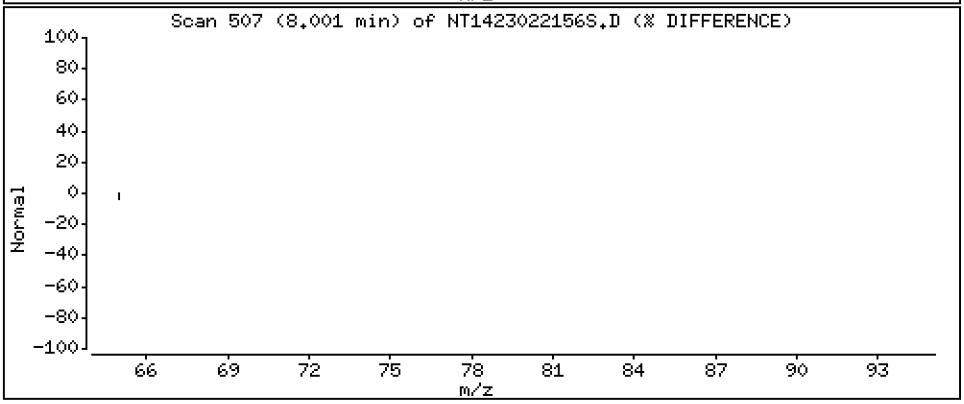












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022156S.D

Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

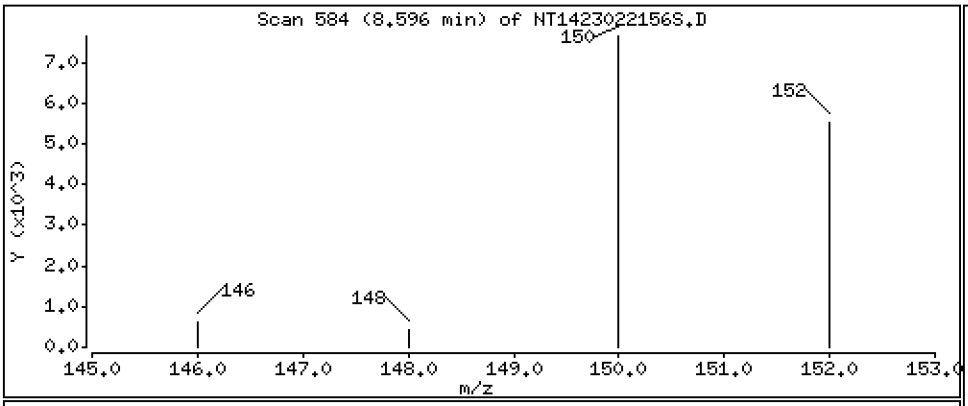
Operator: DSD

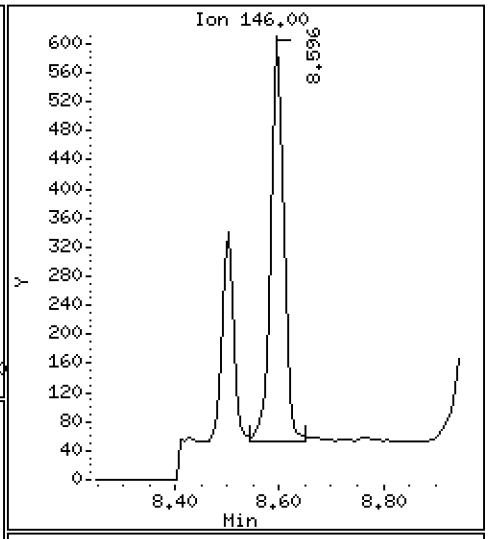
Column phase: ZB-5msi

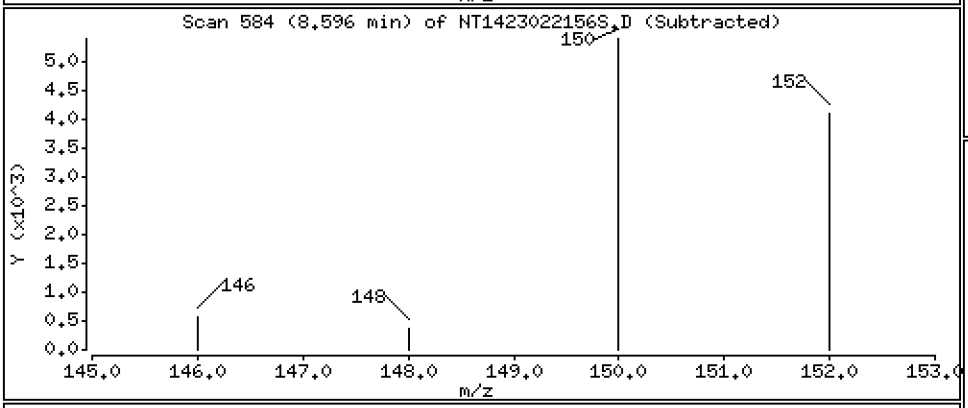
Column diameter: 0.25

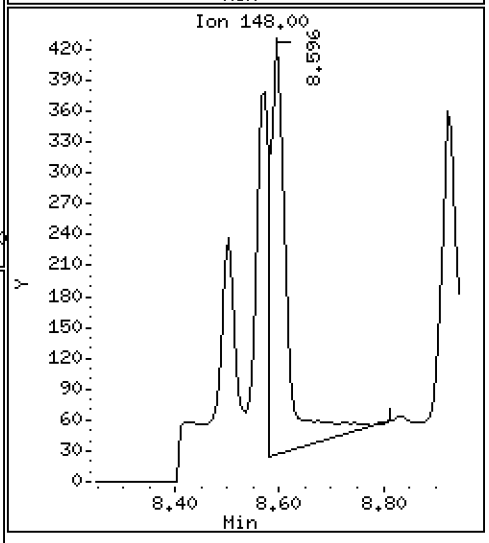
9 1,4-Dichlorobenzene

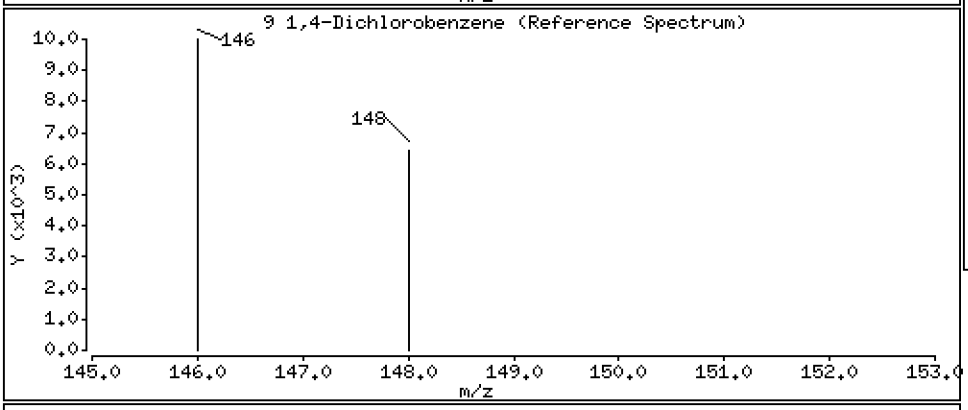
Concentration: 0.01107 ug/mL

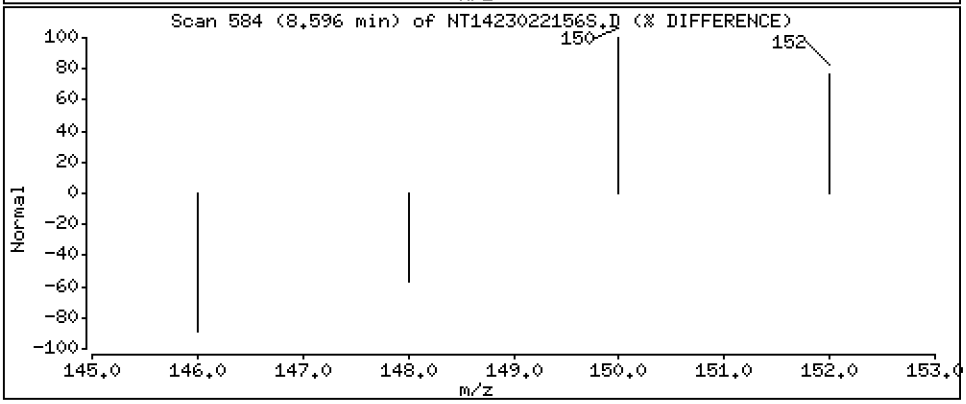












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

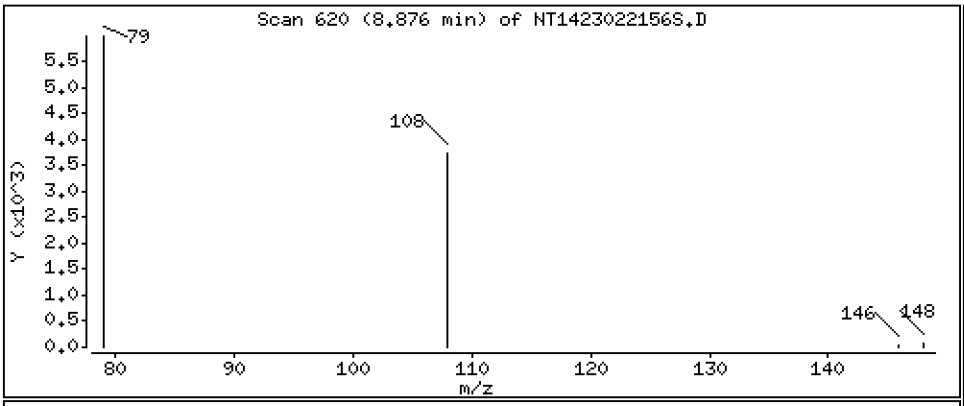
Operator: DSD

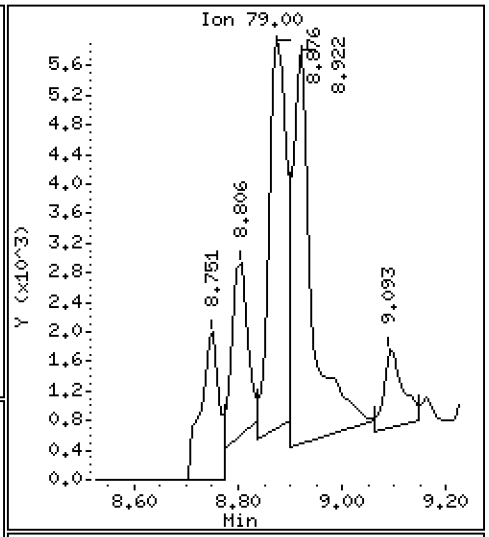
Column phase: ZB-5msi

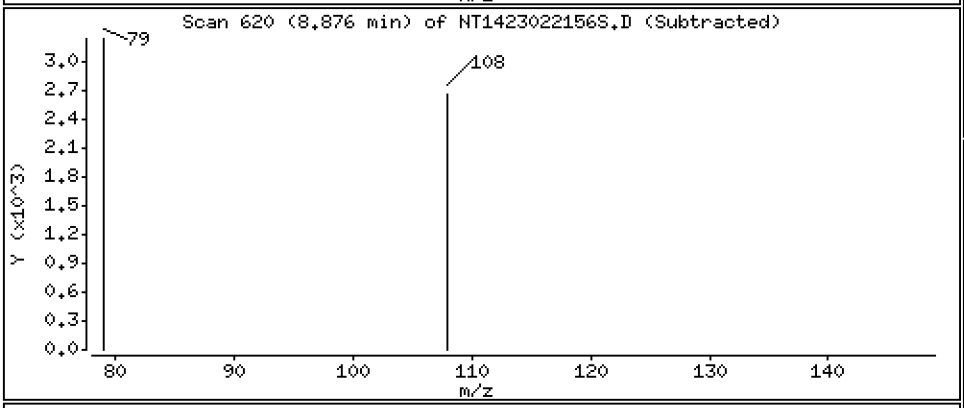
Column diameter: 0.25

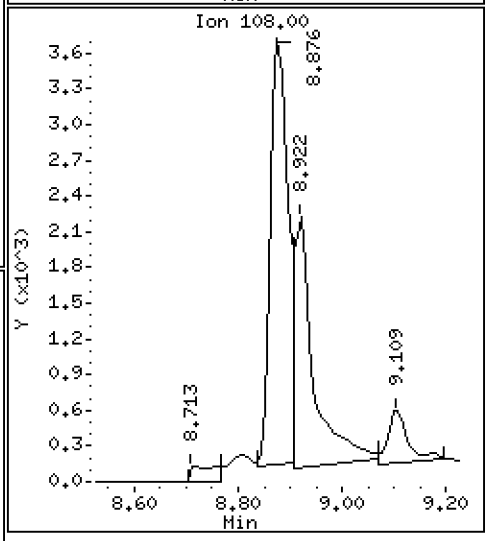
11 Benzyl alcohol

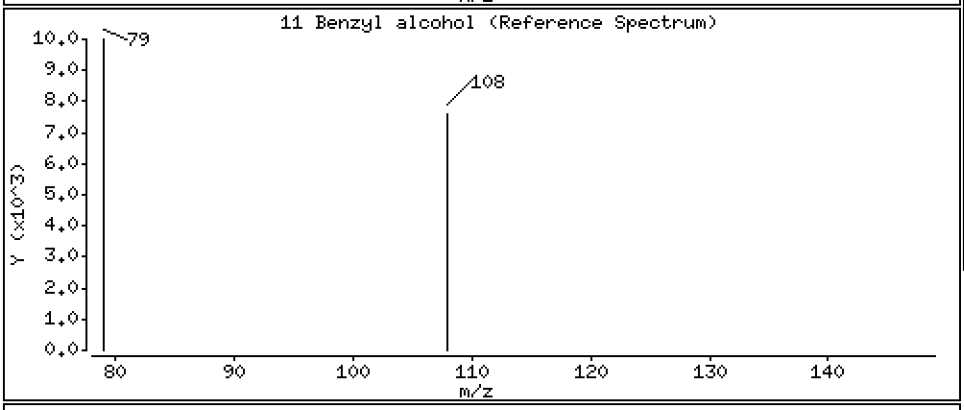
Concentration: 0.1739 ug/mL

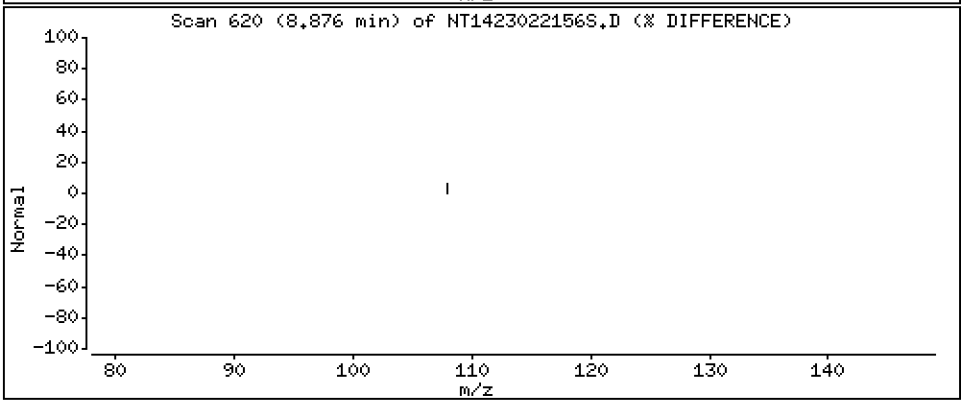












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

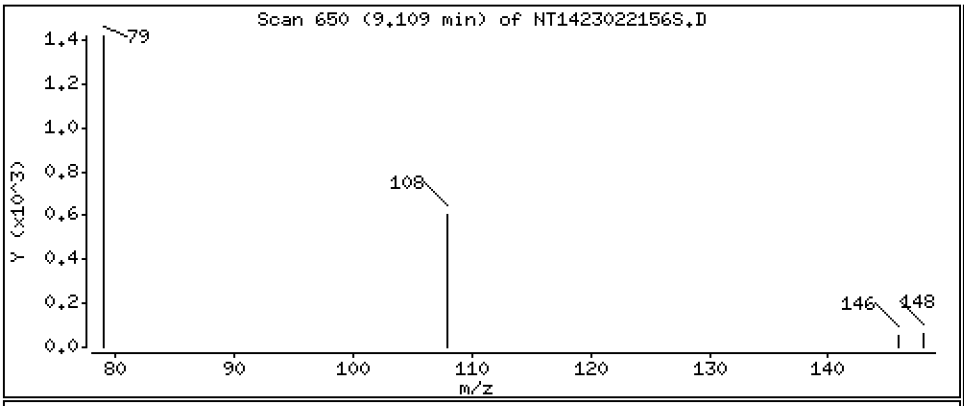
Operator: DSD

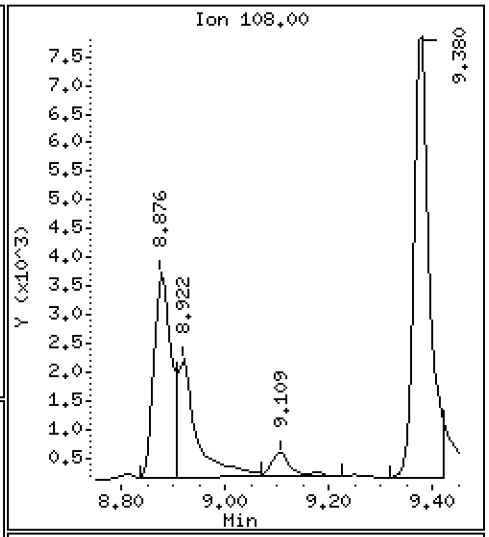
Column phase: ZB-5msi

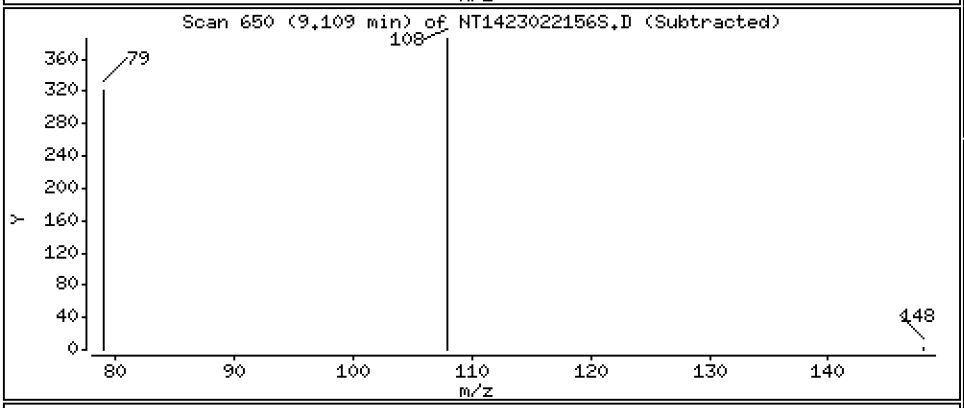
Column diameter: 0.25

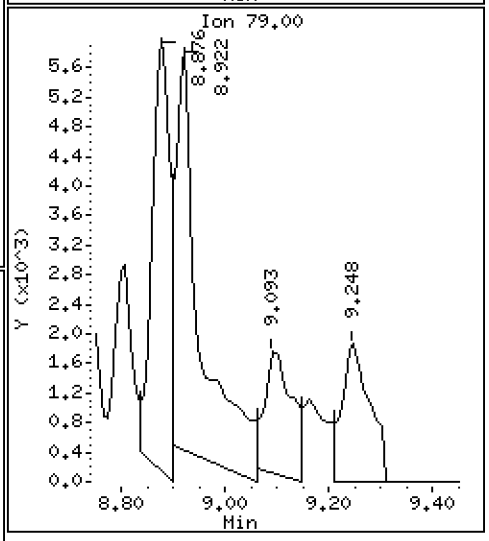
13 2-Methylphenol

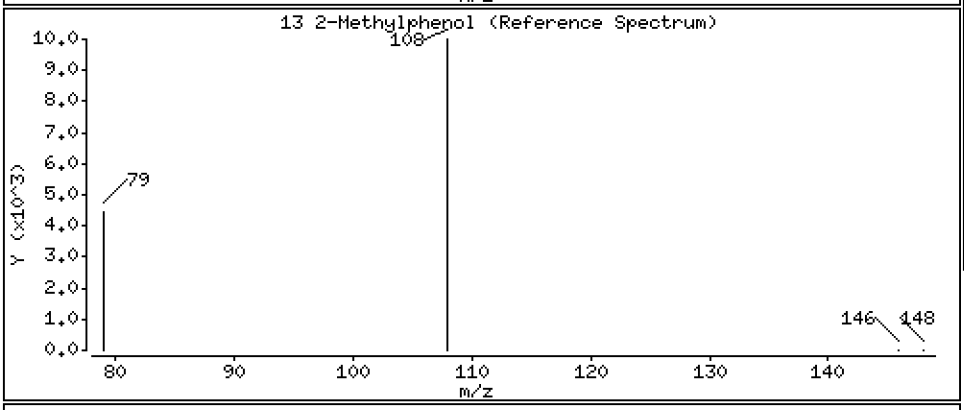
Concentration: 0.01430 ug/mL

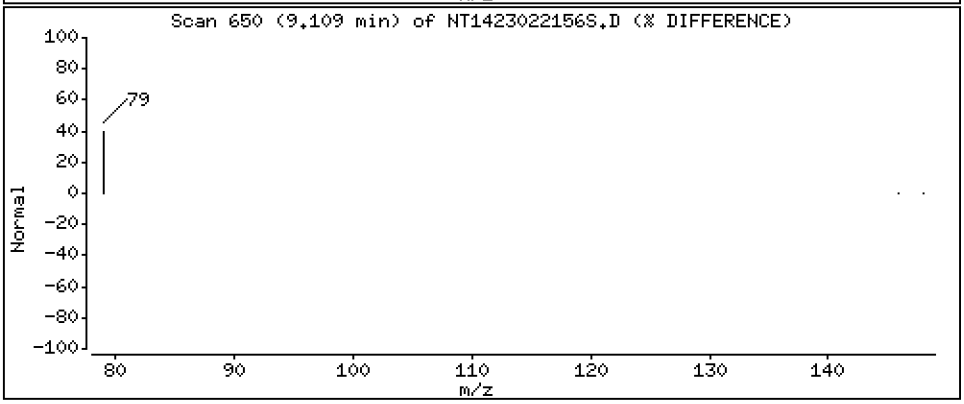












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

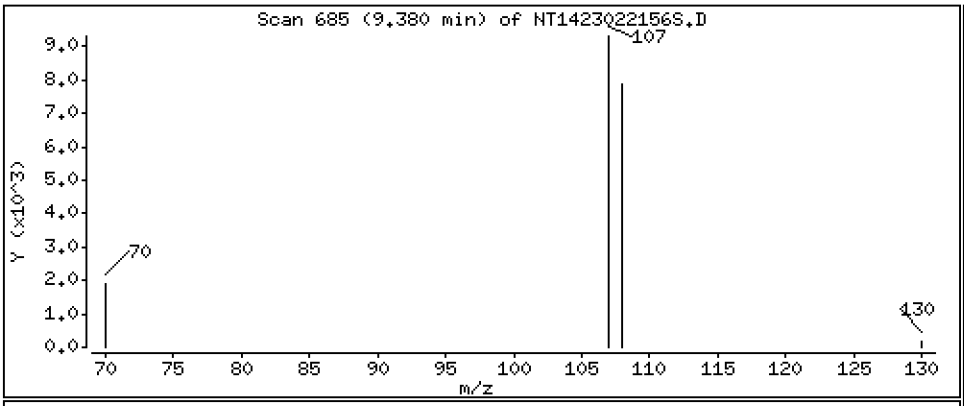
Operator: DSD

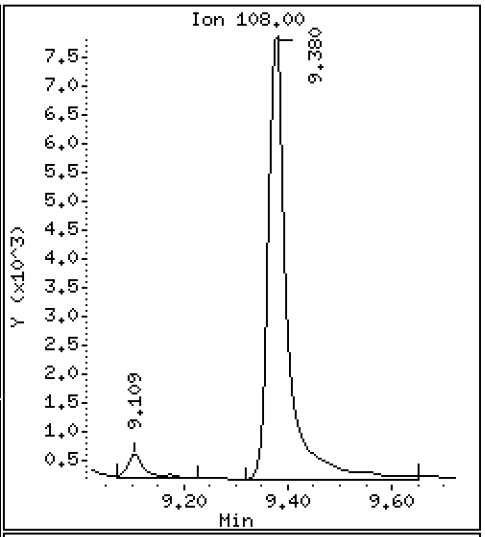
Column phase: ZB-5msi

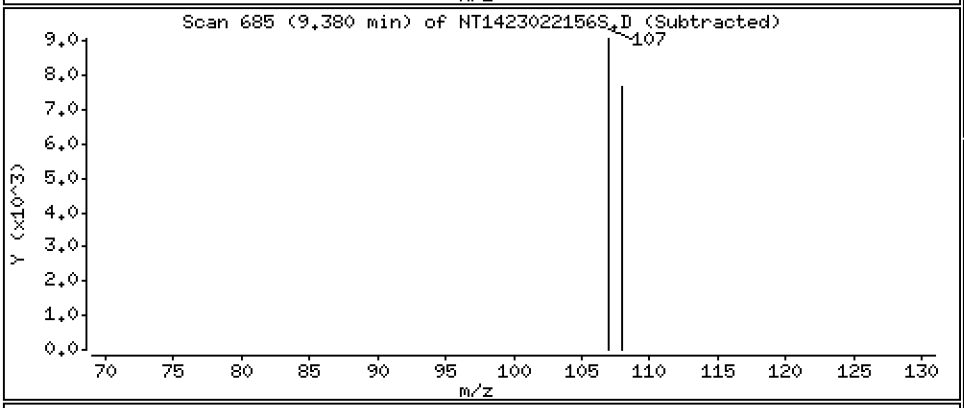
Column diameter: 0.25

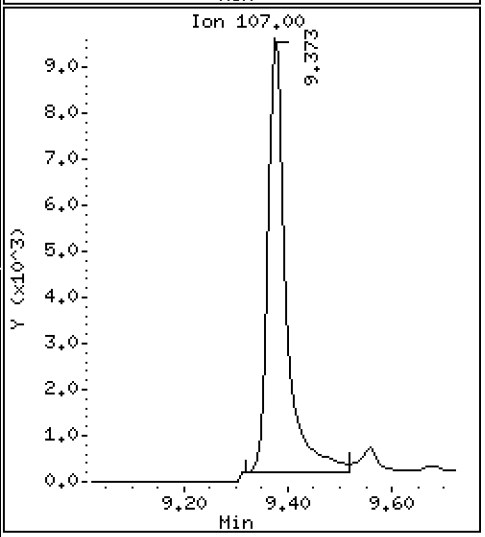
15 4-Methylphenol

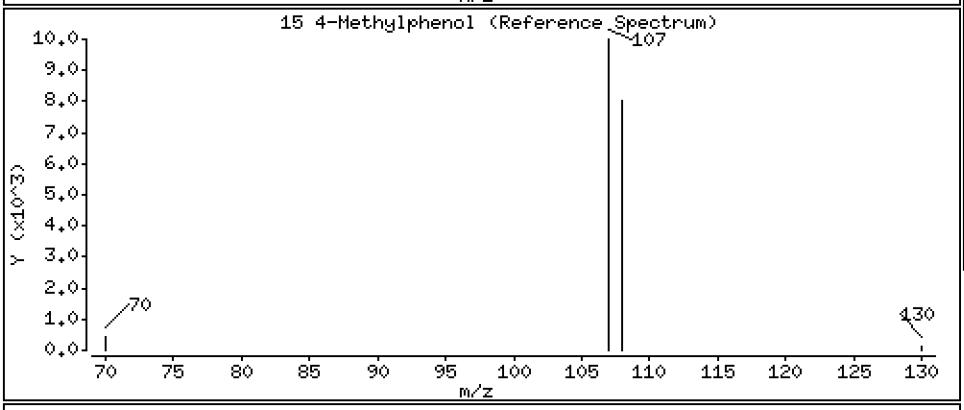
Concentration: 0.2273 ug/mL

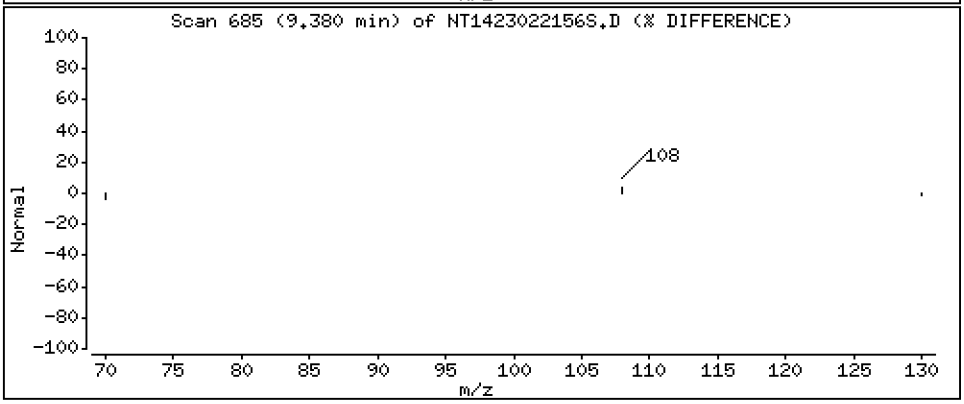












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

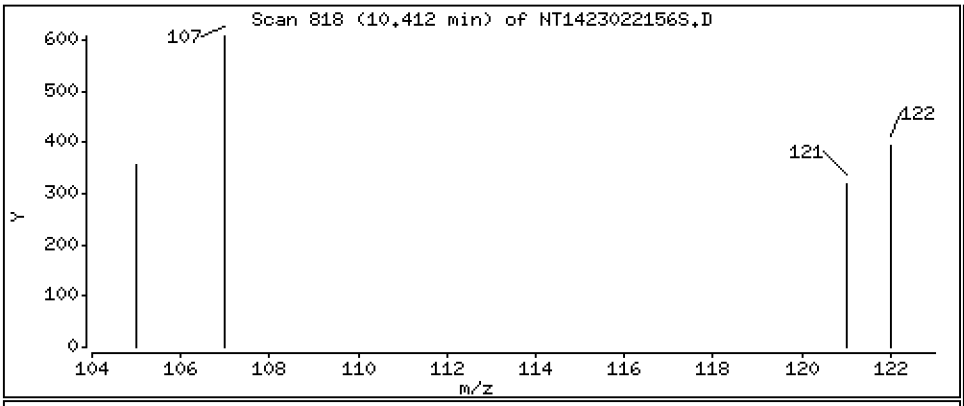
Operator: DSD

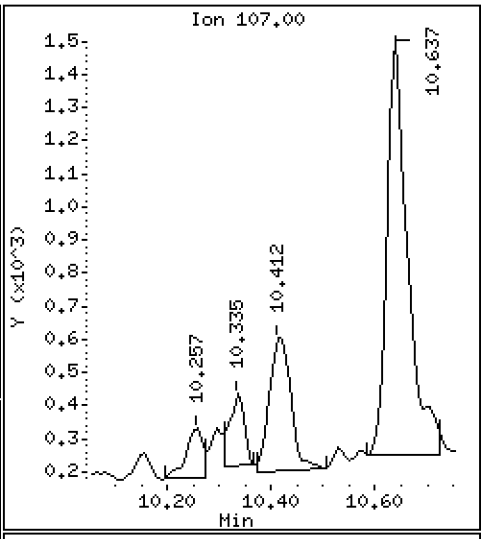
Column phase: ZB-5msi

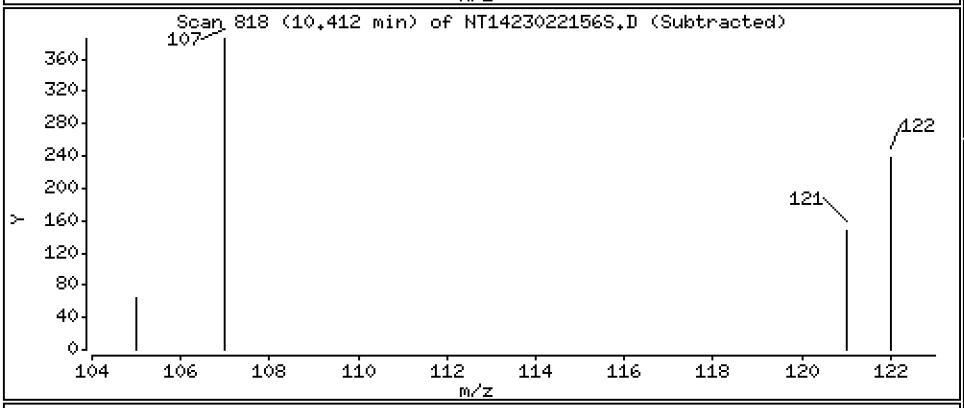
Column diameter: 0.25

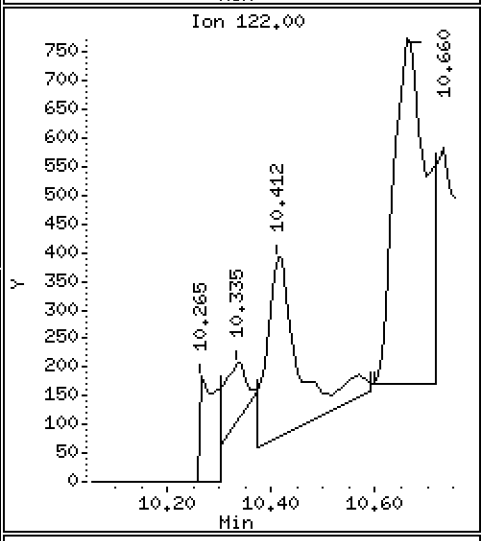
22 2,4-Dimethylphenol

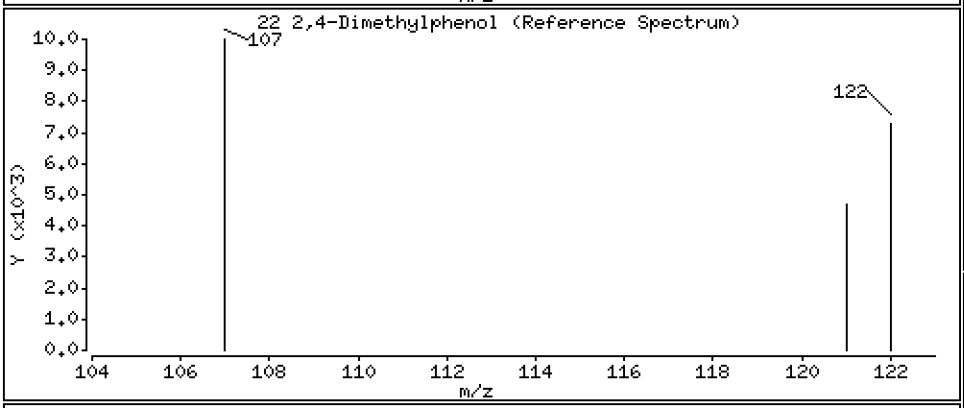
Concentration: 0.01305 ug/mL

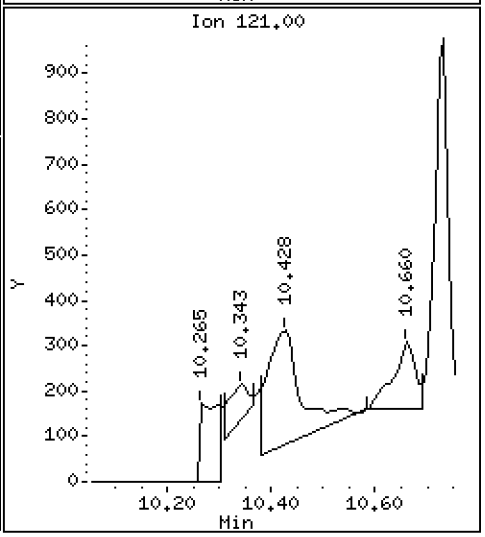


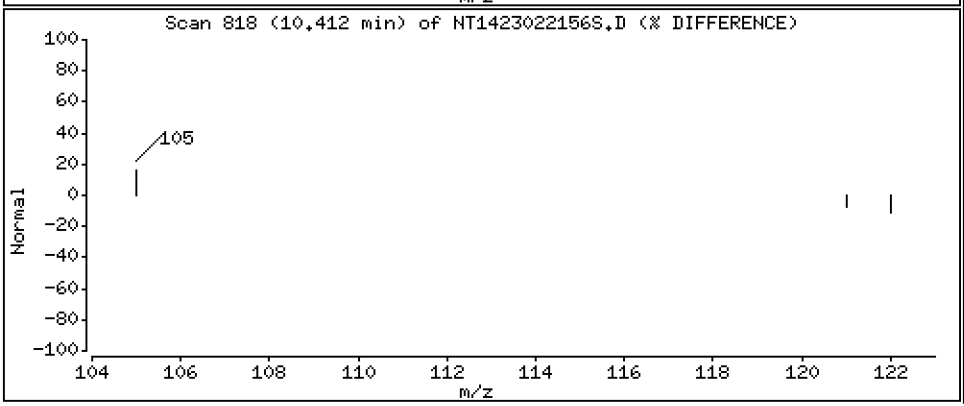












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

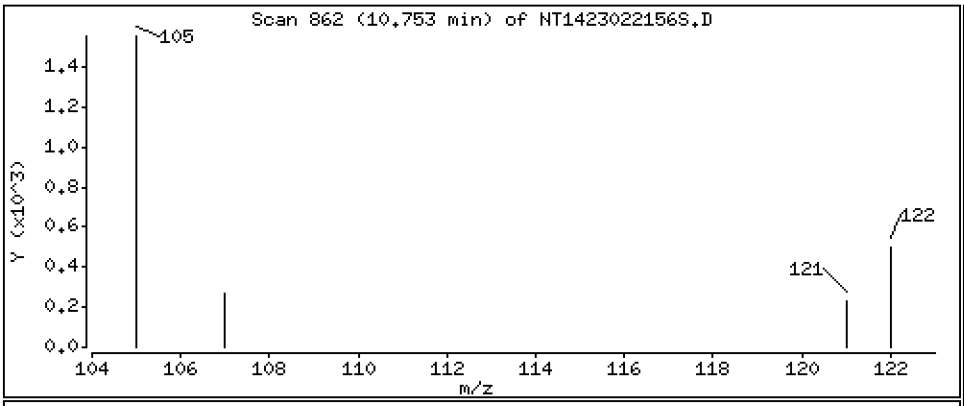
Operator: DSD

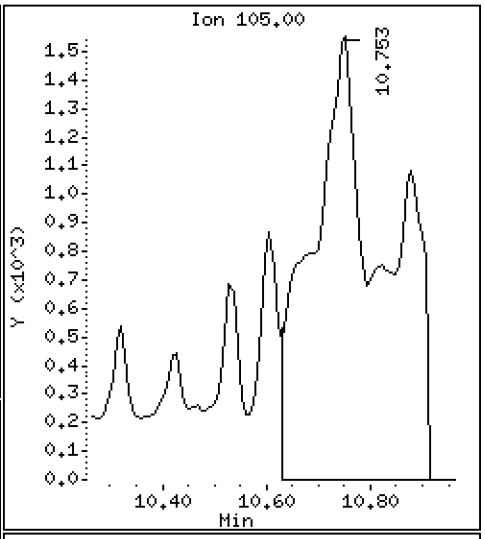
Column phase: ZB-5msi

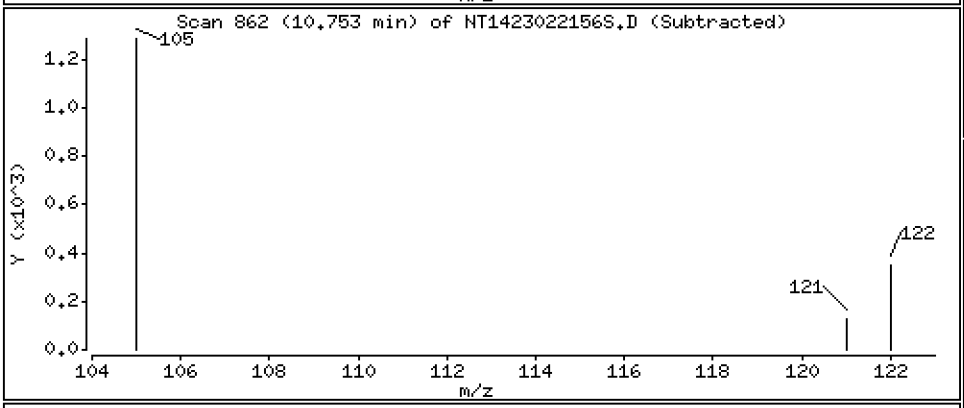
Column diameter: 0.25

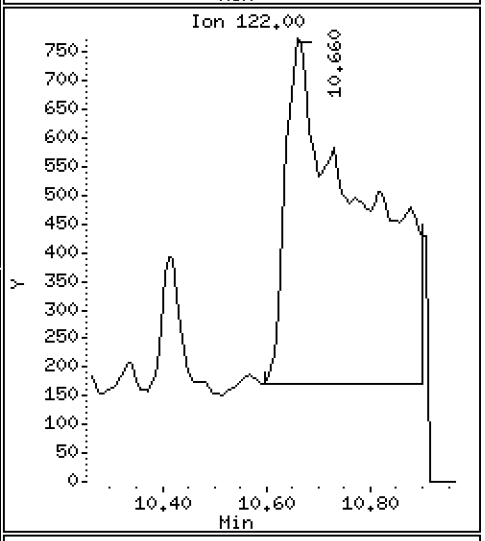
24 Benzoic acid

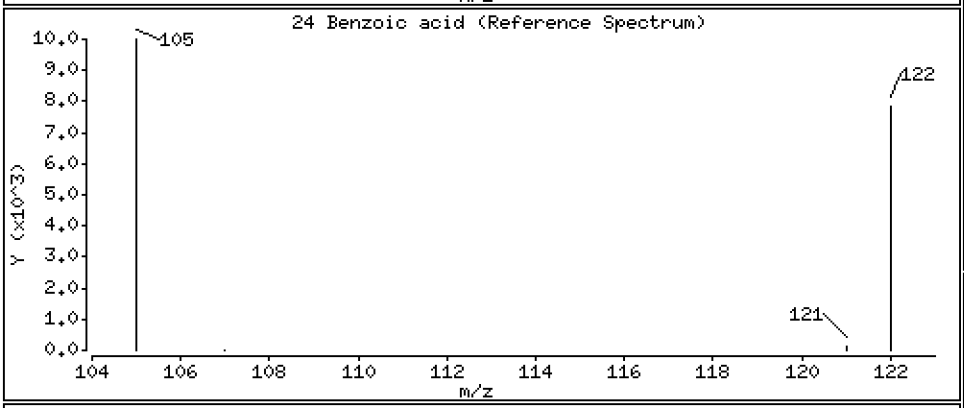
Concentration: 0.3438 ug/mL

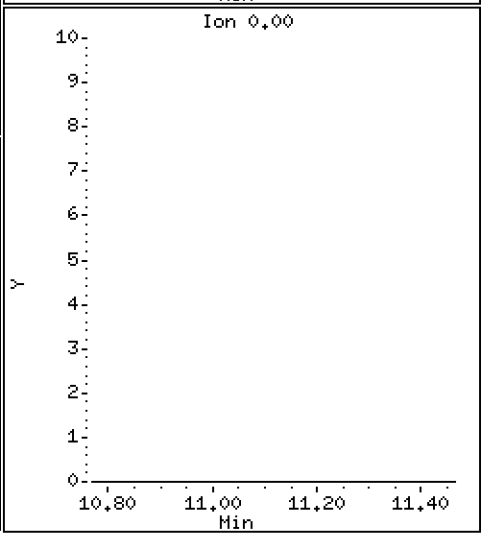


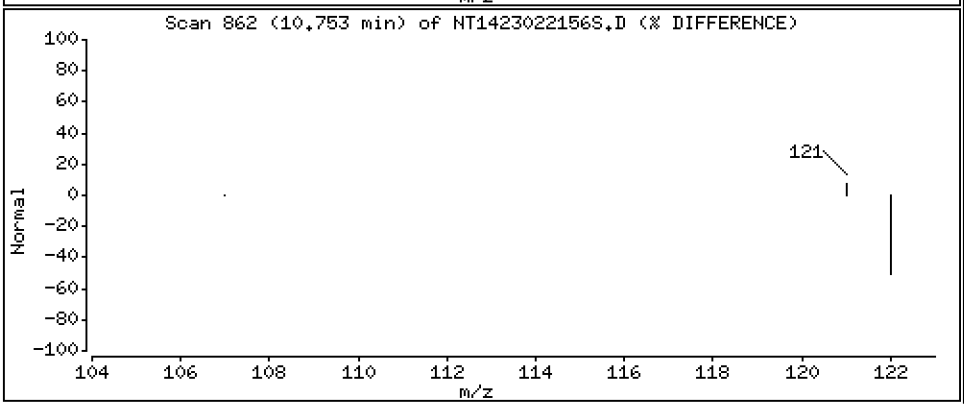












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

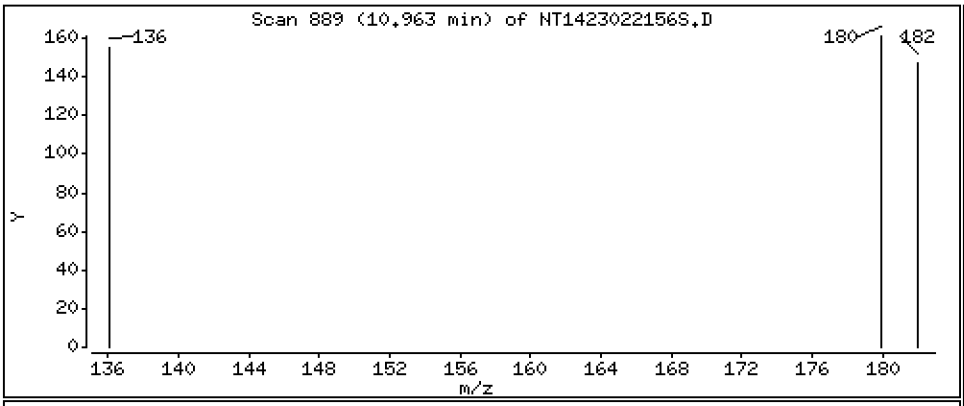
Operator: DSD

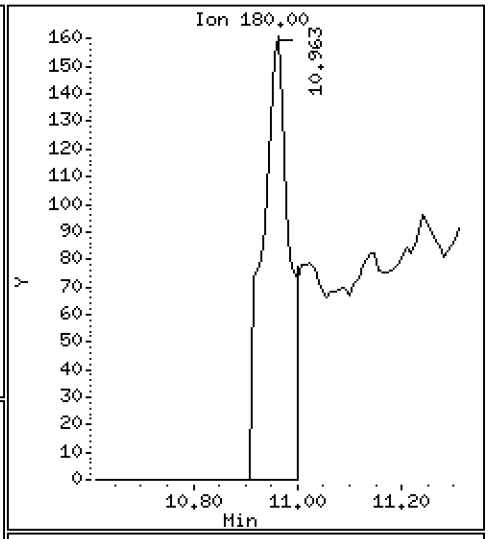
Column phase: ZB-5msi

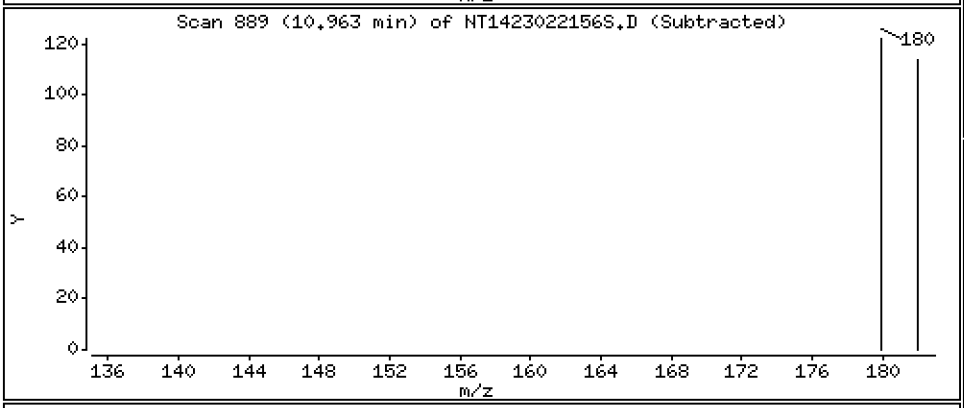
Column diameter: 0.25

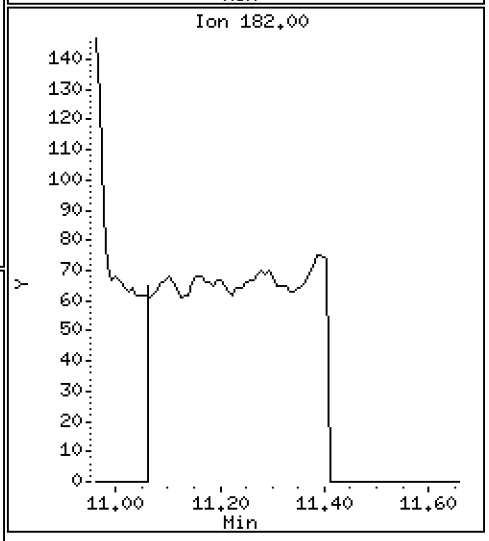
26 1,2,4-Trichlorobenzene

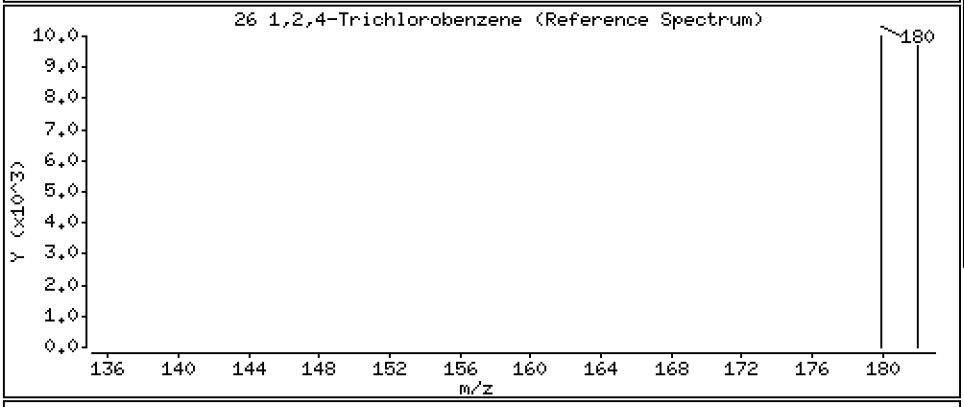
Concentration: 0.006454 ug/mL

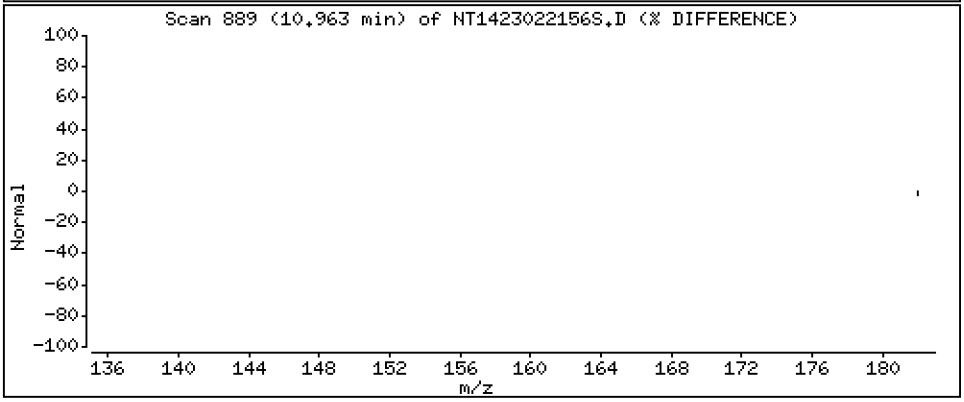












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

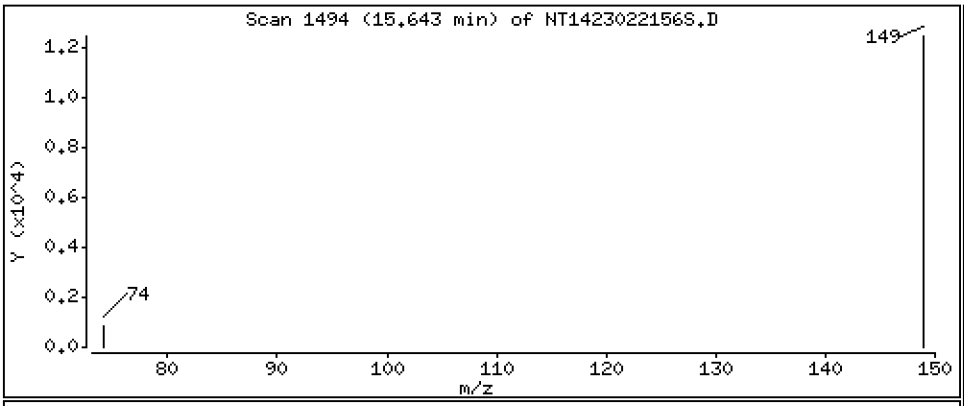
Operator: DSD

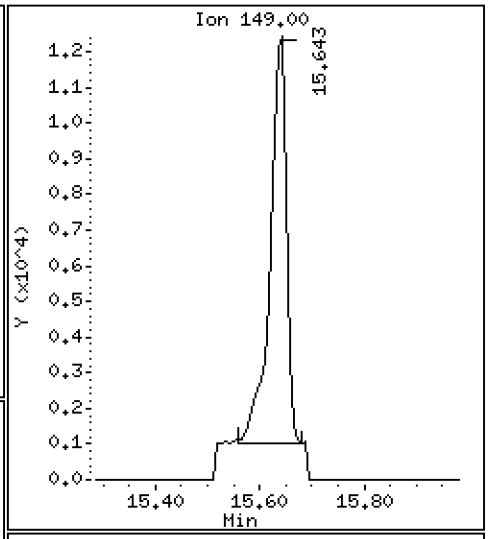
Column phase: ZB-5msi

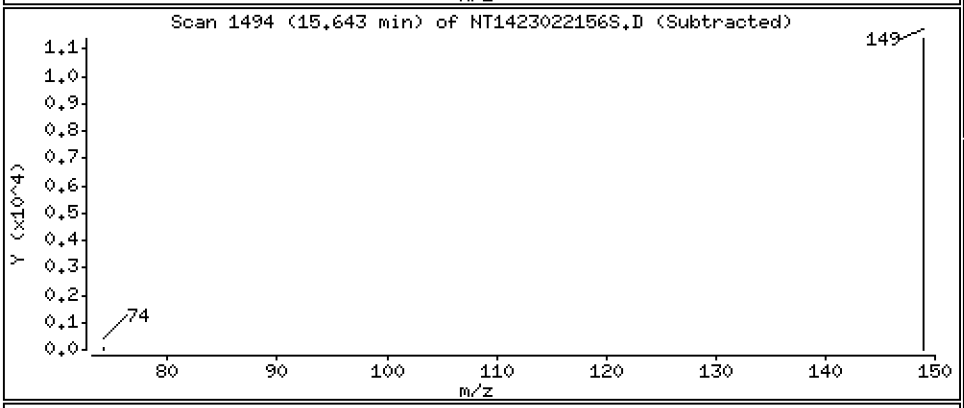
Column diameter: 0.25

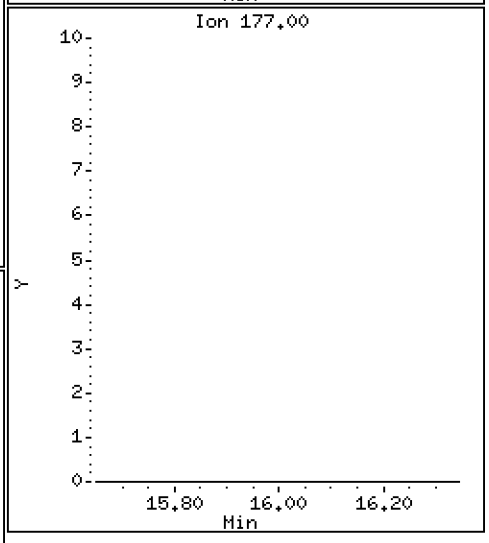
50 Diethylphthalate

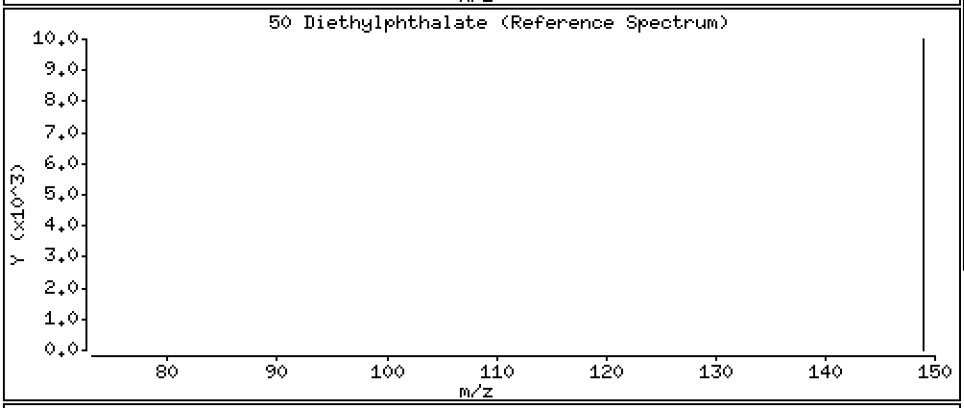
Concentration: 0.1272 ug/mL

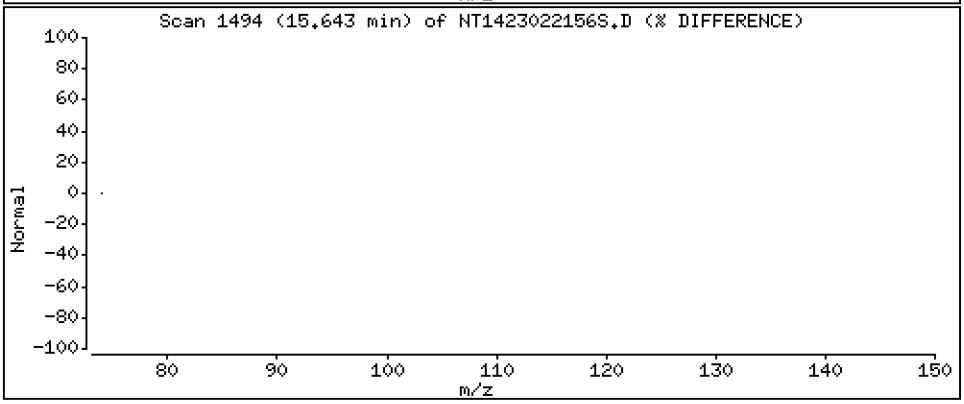












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

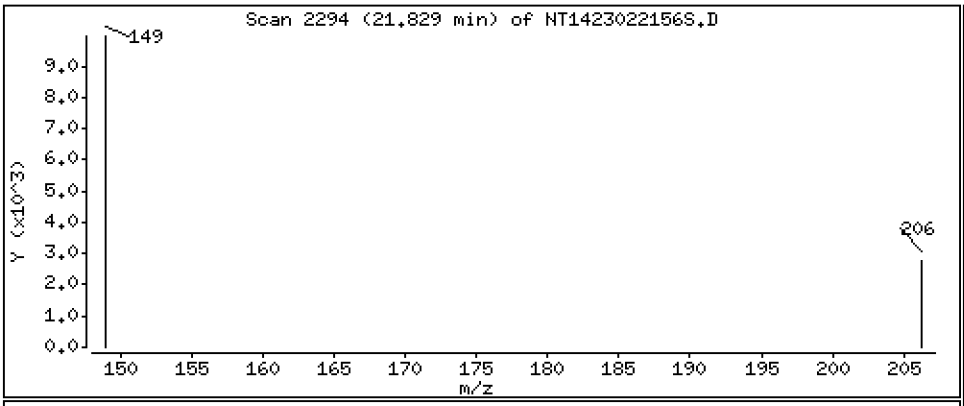
Operator: DSD

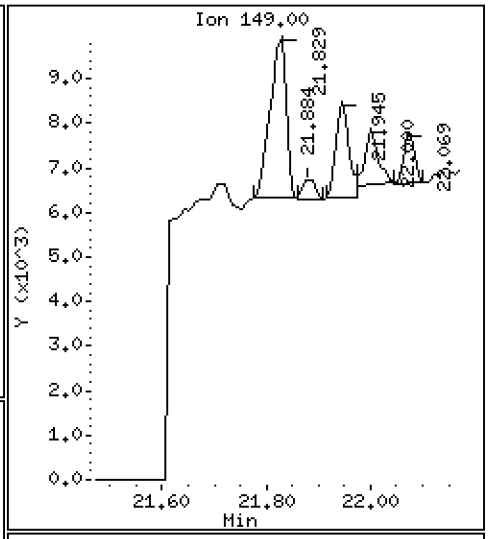
Column phase: ZB-5msi

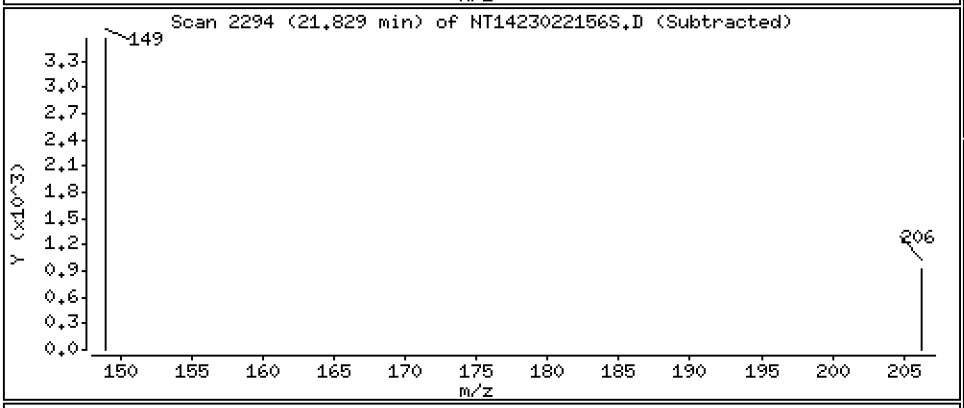
Column diameter: 0.25

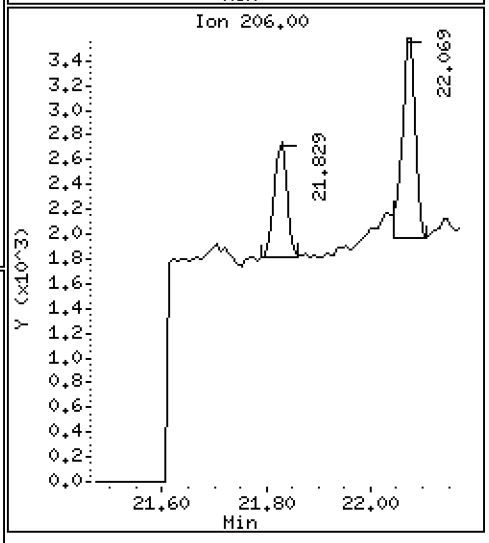
67 Butylbenzylphthalate

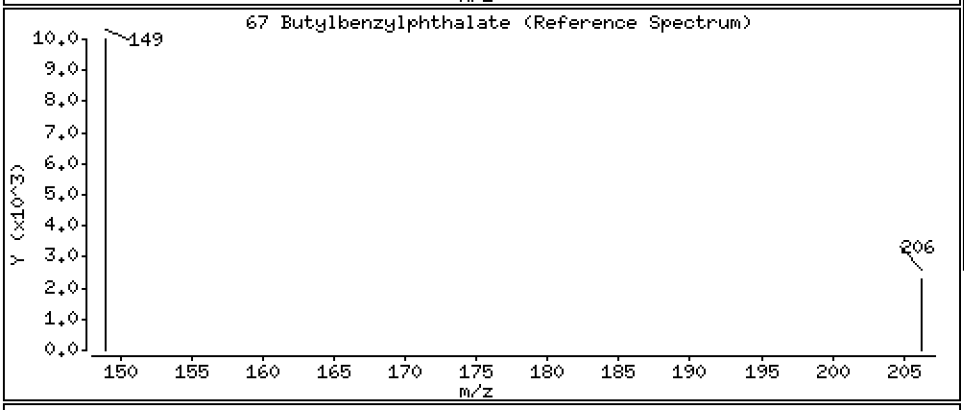
Concentration: 0.08814 ug/mL

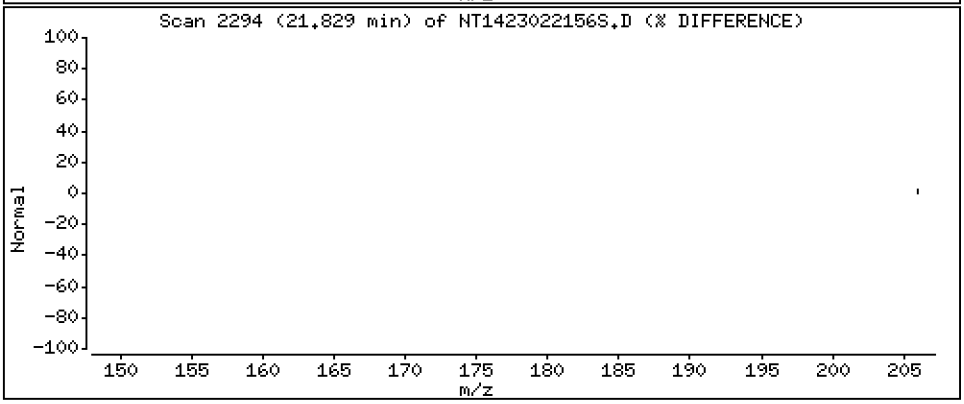












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Date : 22-FEB-2023 22:37

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-13

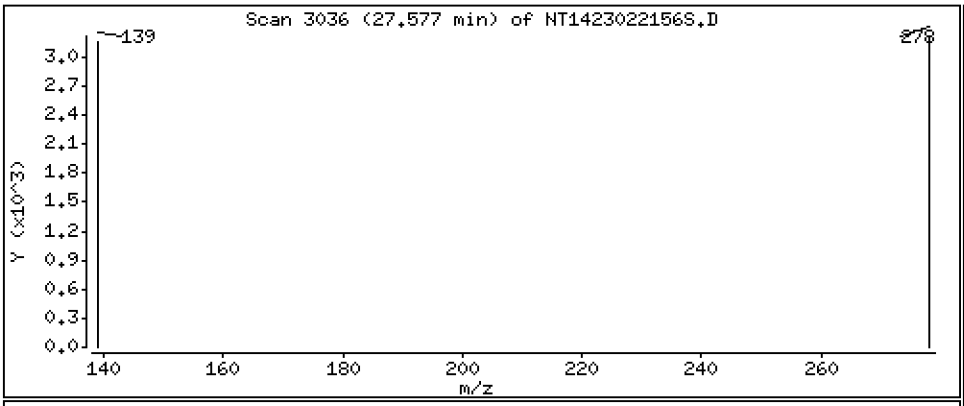
Operator: DSD

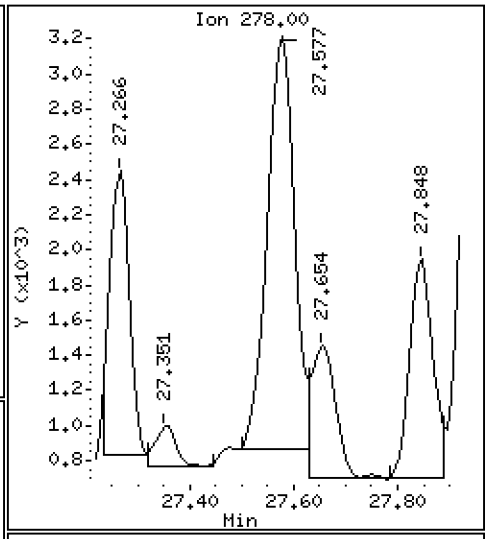
Column phase: ZB-5msi

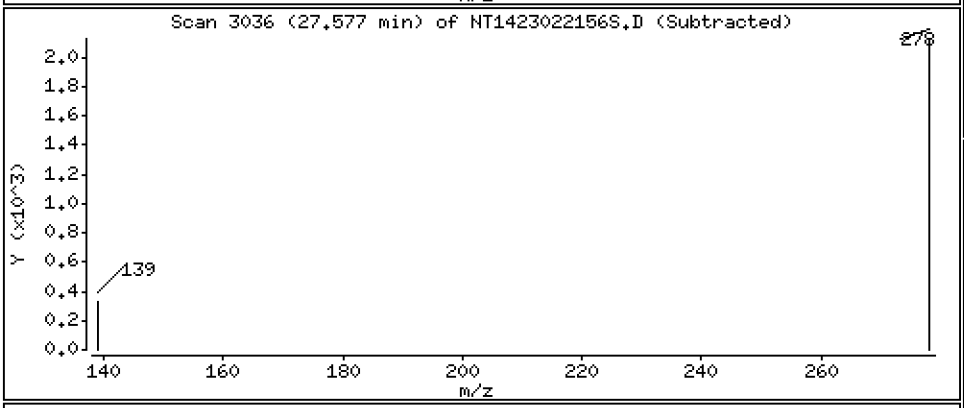
Column diameter: 0.25

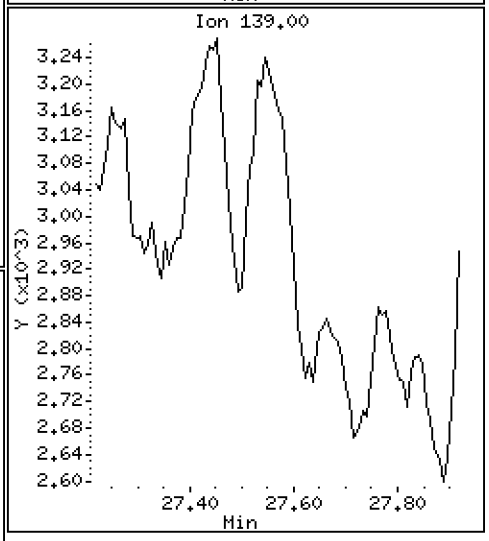
79 Dibenzo(a,h)anthracene

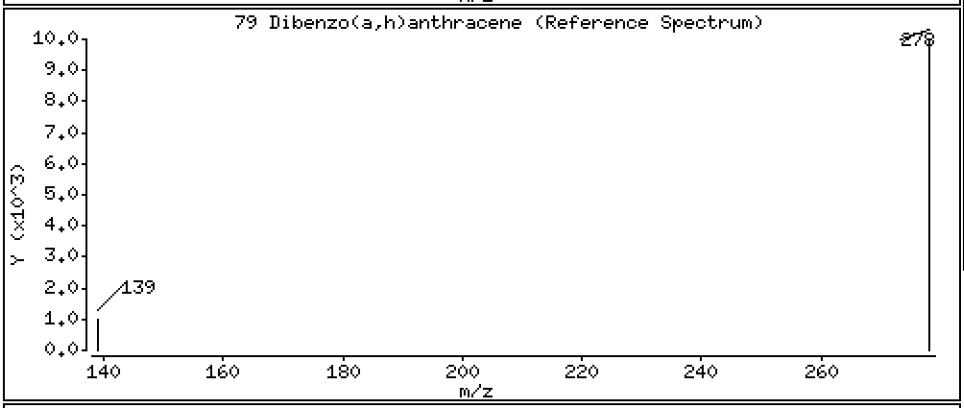
Concentration: 0.09789 ug/mL

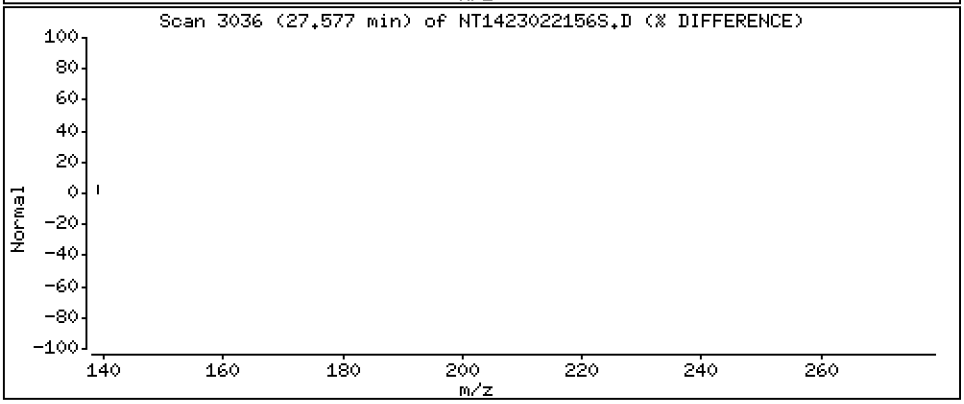












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT1423022156S.D
Lab Smp Id: 23A0133-13
Inj Date : 22-FEB-2023 22:37 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-13
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Meth Date : 25-May-2023 11:39 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 39
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.393	6.386	(0.746)	374056	5.06399	5.064(R)
	3 Phenol	94	8.000	7.993	(0.933)	103347	0.92394	0.9239
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.573	8.573	(1.000)	260496	4.00000	
	9 1,4-Dichlorobenzene	146	8.596	8.596	(1.003)	936	0.01107	0.01107(M)
	11 Benzyl alcohol	79	8.875	8.876	(1.035)	12405	0.17388	0.1739
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	9.108	9.101	(1.062)	1106	0.01430	0.01430
	15 4-Methylphenol	108	9.380	9.373	(1.094)	19255	0.22729	0.2273
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.412	10.404	(0.943)	1138	0.01305	0.01305
	24 Benzoic acid	105	10.753	10.614	(0.974)	15476	0.34378	0.3438(MH)
	26 1,2,4-Trichlorobenzene	180	10.962	10.962	(0.993)	563	0.00645	0.006454
*	27 Naphthalene-d8	136	11.039	11.040	(1.000)	952256	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
*	42 Acenaphthene-d10	162	14.653	14.653	(1.000)	492542	4.00000	
	50 Diethylphthalate	149	15.642	15.635	(1.068)	23918	0.12718	0.1272
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.681	17.674	(1.000)	1133001	4.00000	
$	66 Terphenyl-d14	244	20.892	20.869	(0.917)	809741	4.55820	4.558(R)
	67 Butylbenzylphthalate	149	21.829	21.821	(0.958)	7381	0.08814	0.08814
*	69 Chrysene-d12	240	22.789	22.774	(1.000)	667286	4.00000	
*	77 Perylene-d12	264	25.235	25.220	(1.000)	499012	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.576	27.569	(1.093)	8546	0.09789	0.09789
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022156S.D
Lab Smp Id: 23A0133-13
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 17:47
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	241018	120509	482036	260496	8.08
27 Naphthalene-d8	887165	443583	1774330	952256	7.34
42 Acenaphthene-d10	467553	233777	935106	492542	5.34
59 Phenanthrene-d10	1079793	539897	2159586	1133001	4.93
69 Chrysene-d12	754146	377073	1508292	667286	-11.52
77 Perylene-d12	558201	279101	1116402	499012	-10.60

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.67	17.17	18.17	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.79	0.07
77 Perylene-d12	25.22	24.72	25.72	25.24	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022156S.D

Lab ID: 23A0133-13
nt14.i, 20230221C.b\SIM.b\SIMABN2.m,   22-FEB-2023 22:37

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.974	0.961	0.0126	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1423022148ICVS.d

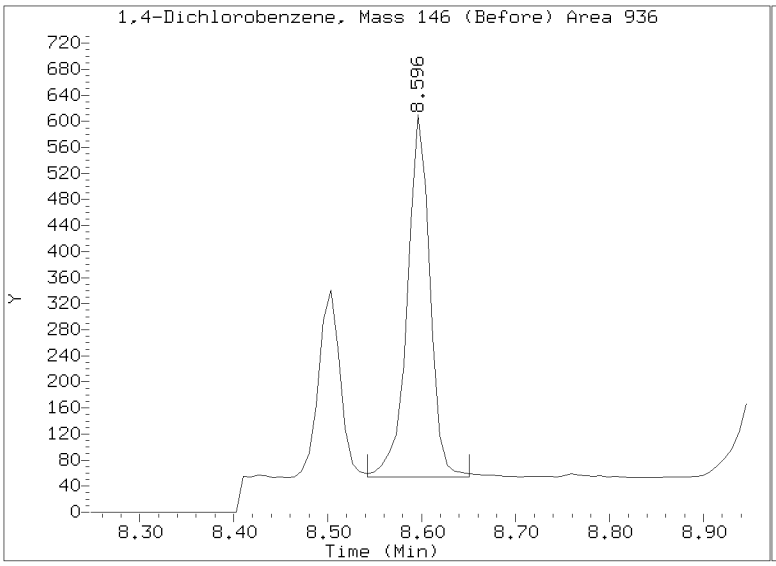
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

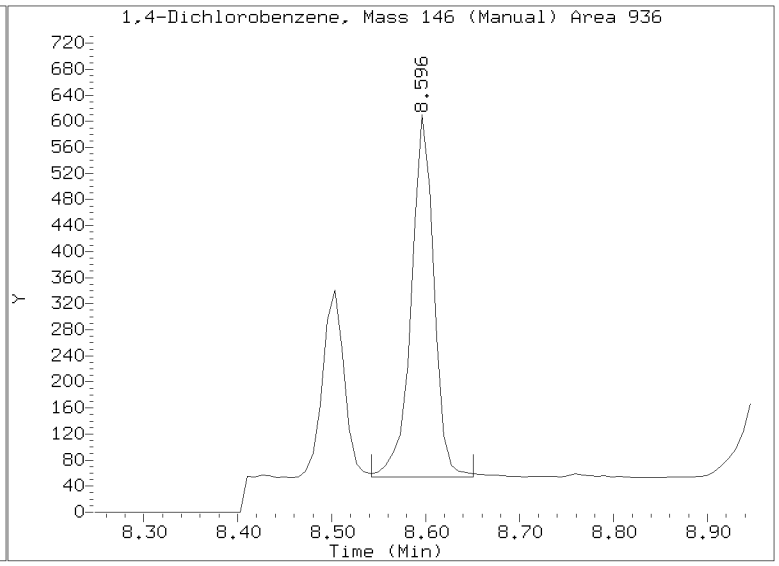
Exception: 1,2,4-Trichlorobenzene 0.0010

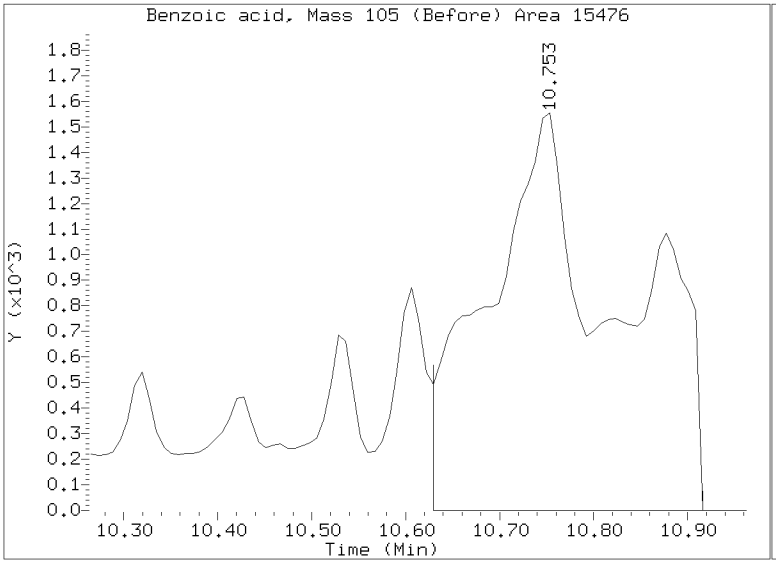
* Only compounds listed in the work order have been verified by the analyst *

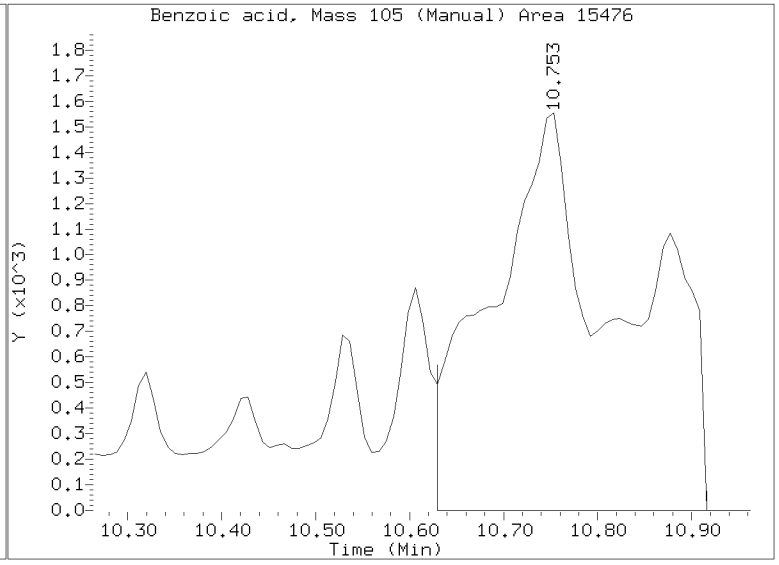
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221C.b/SIM.b/NT1423022156S.D
Injection Date: 22-FEB-2023 22:37
Lab ID:23A0133-13 Client ID:
Report Date: 05/25/2023 11:48









Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1109

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-14 C	SDG:	23A0133
Sampled:	01/06/23 14:13	Prepared:	01/18/23 15:24	File ID:	NT1423022157S.D
% Solids:	45.19	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 23:14
Batch:	BLA0393	Sequence:	SLB0351	Initial/Final:	22.15 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GC00009
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.0	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	26.3		2.5	20.0
65-85-0	Benzoic acid	1	46.3	J	13.4	400
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	40.0	U	2.1	40.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.28	497	66.3	27 - 120	
p-Terphenyl-d14	499.52	462	92.5	37 - 120	Q

Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221S7S.D

Page 1

Date : 22-FEB-2023 23:14

Client ID:

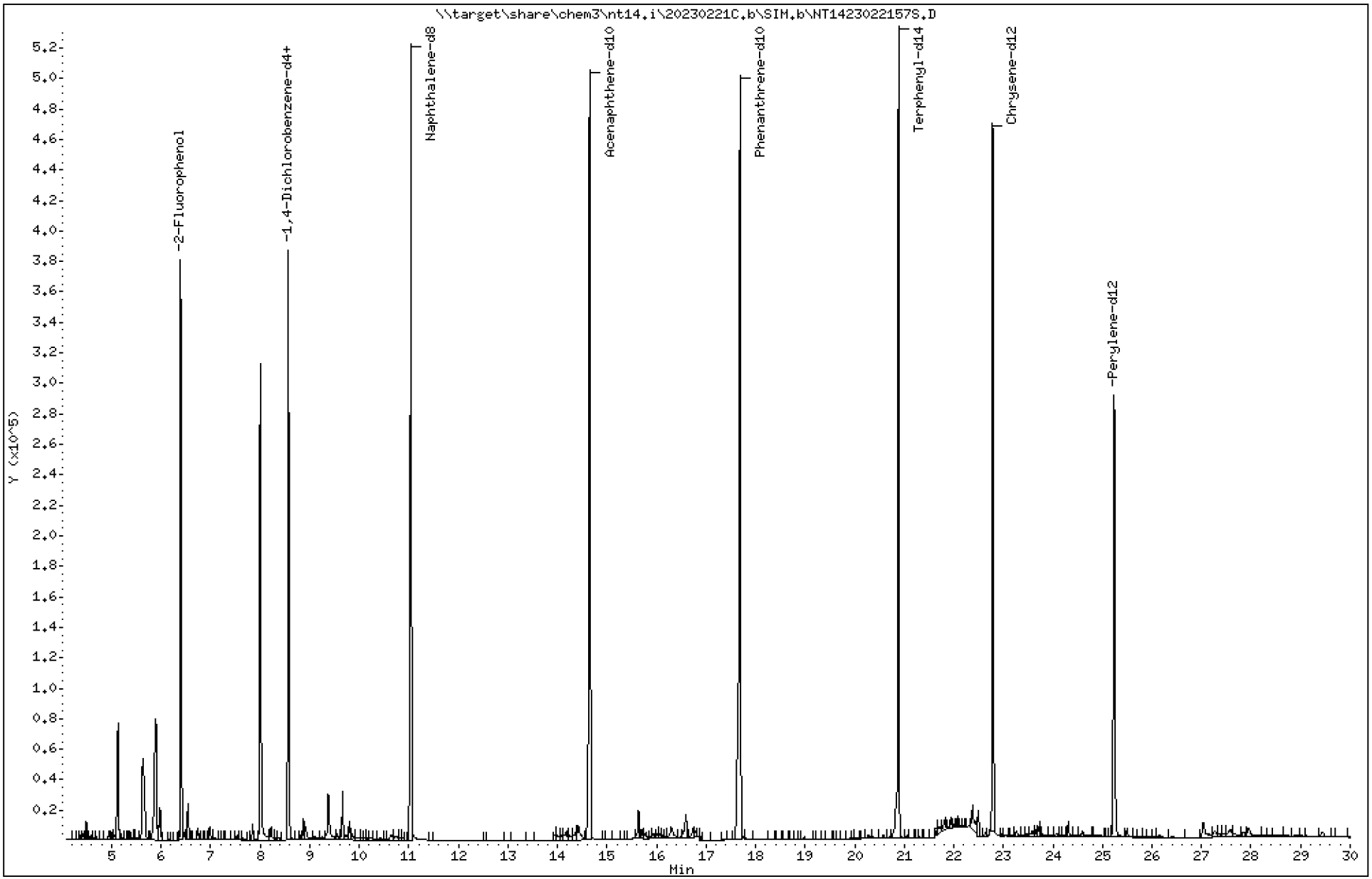
Instrument: nt14.i

Sample Info: 23A0133-14

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

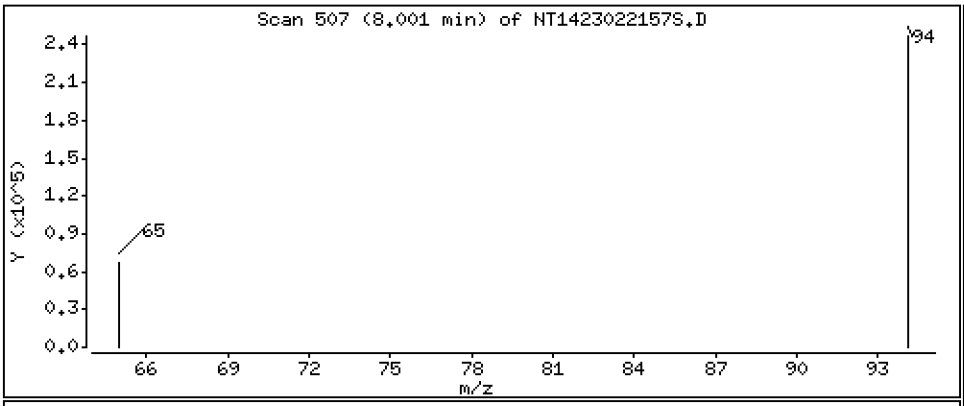
Operator: DSD

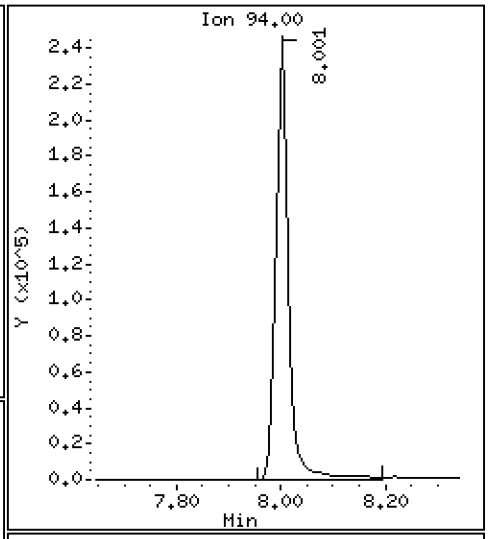
Column phase: ZB-5msi

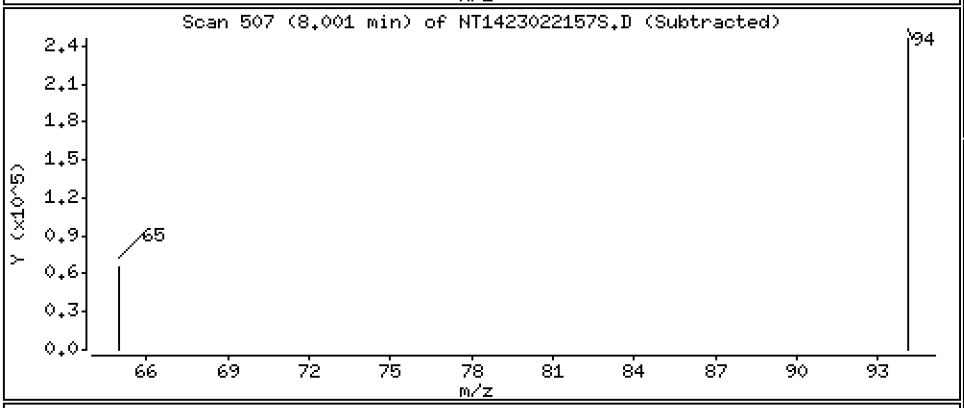
Column diameter: 0.25

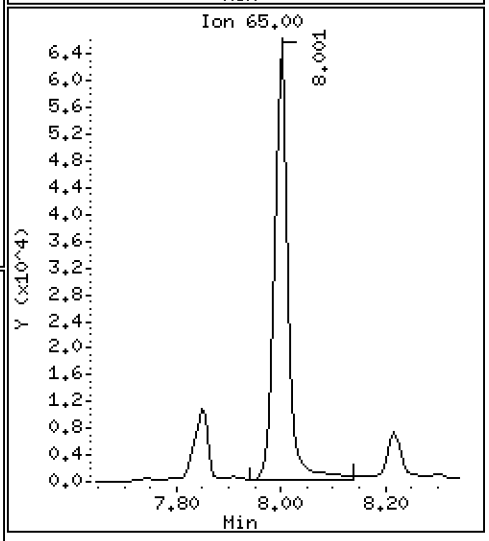
3 Phenol

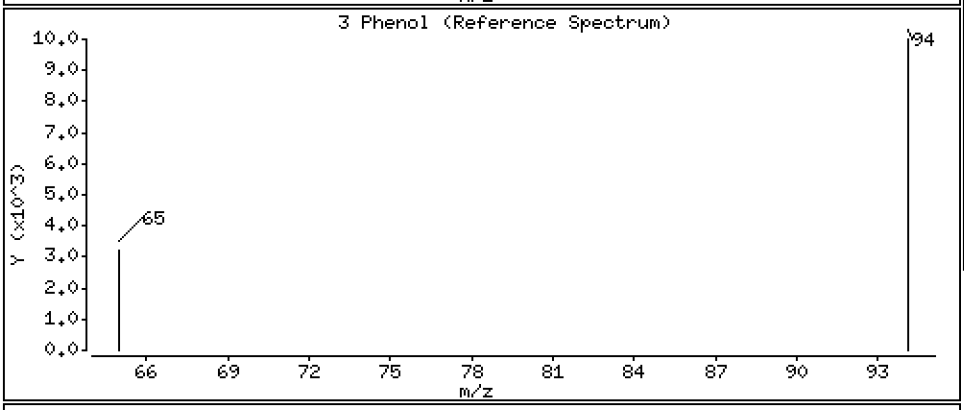
Concentration: 3.671 ug/mL

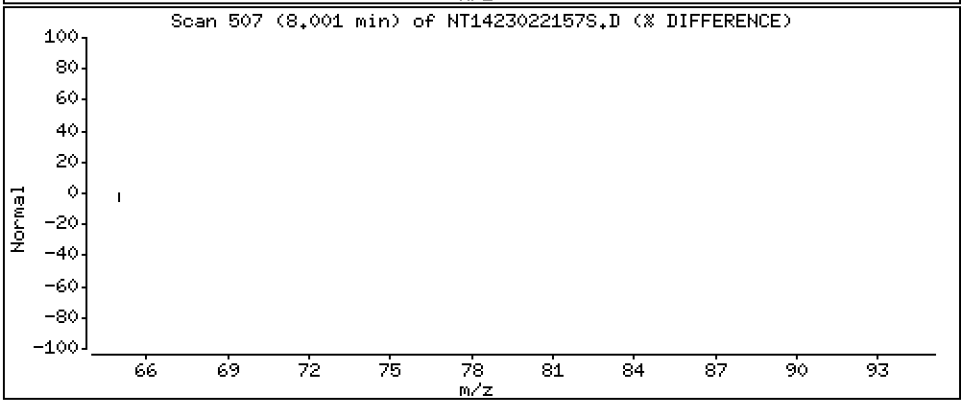












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

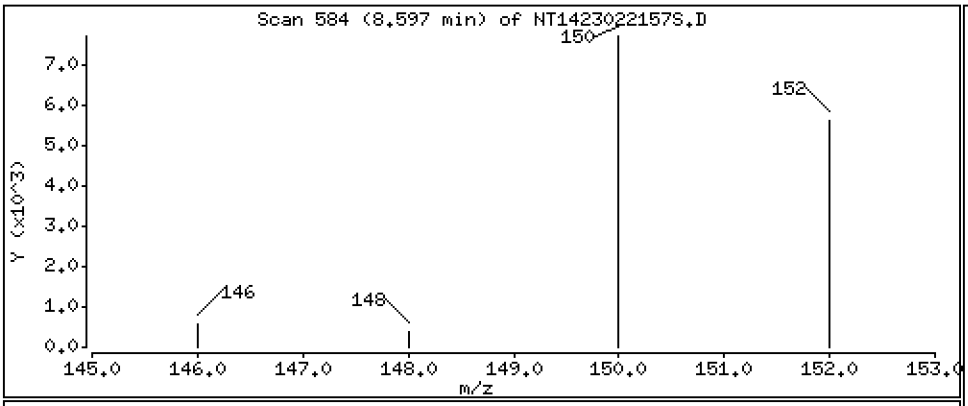
Operator: DSD

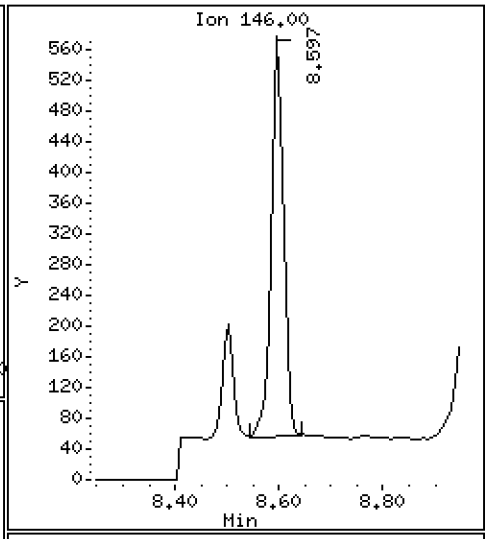
Column phase: ZB-5msi

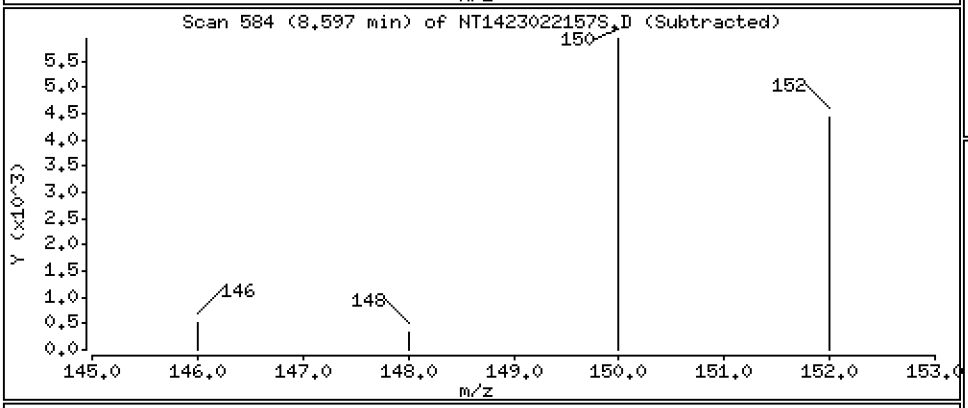
Column diameter: 0.25

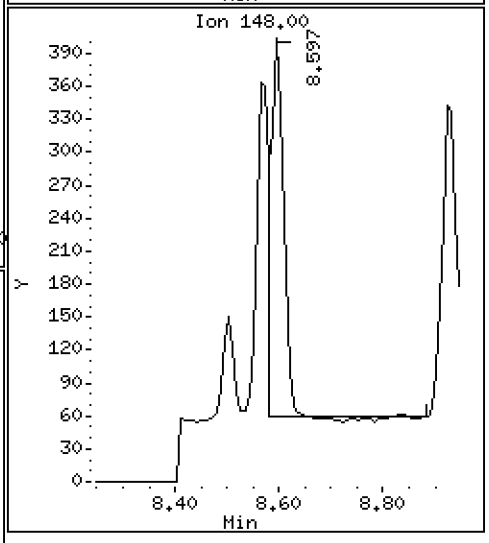
9 1,4-Dichlorobenzene

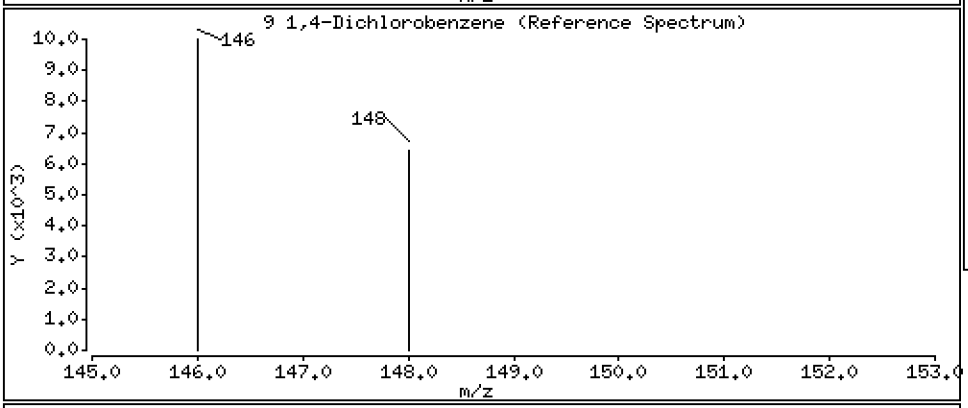
Concentration: 0.01010 ug/mL

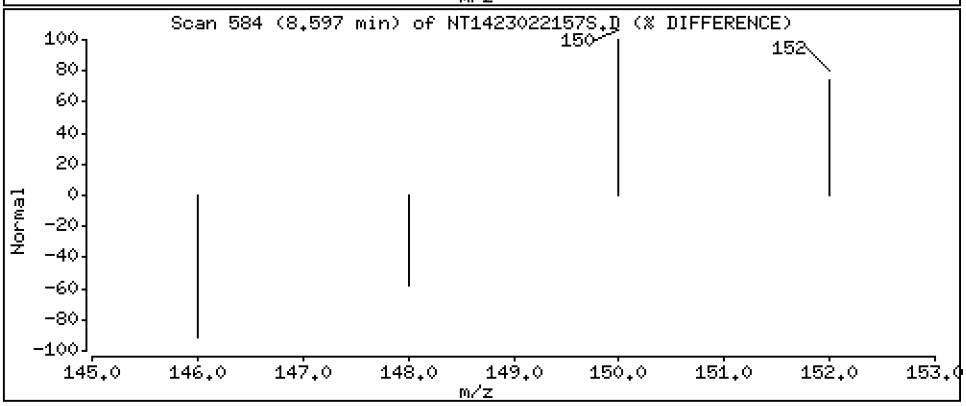












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022157S.D

Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

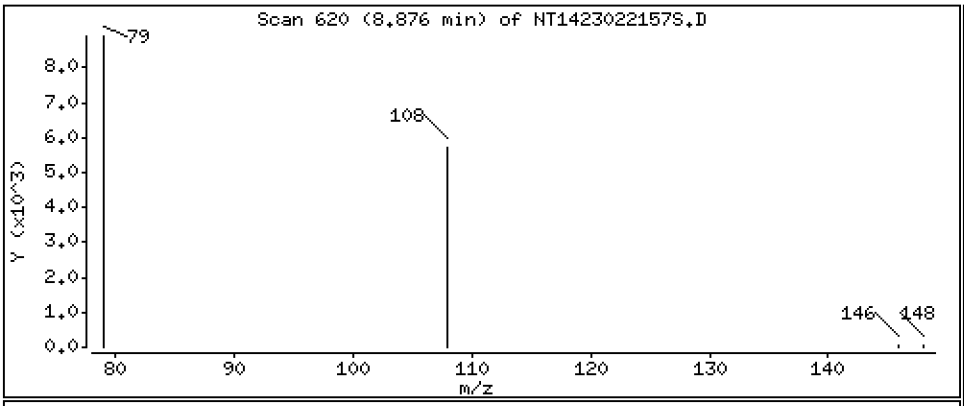
Operator: DSD

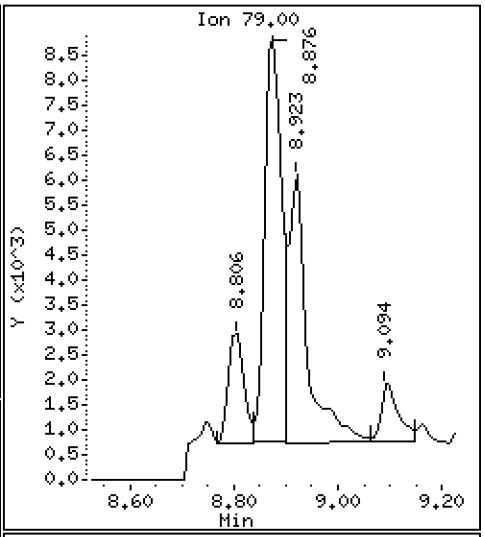
Column phase: ZB-5msi

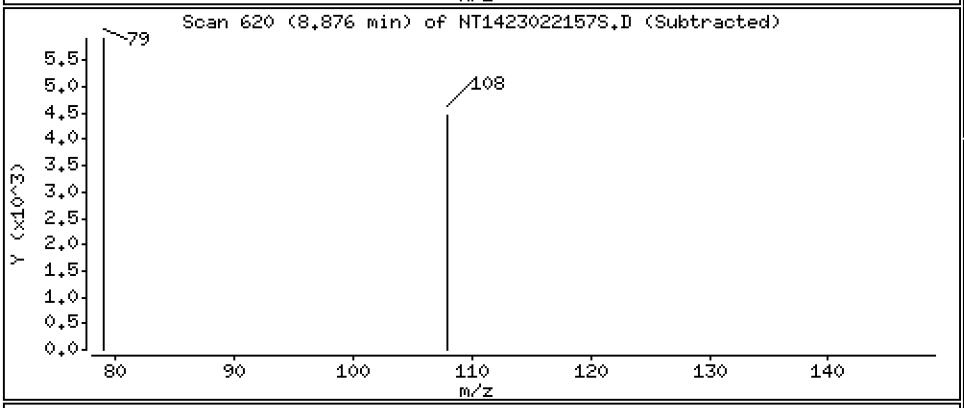
Column diameter: 0.25

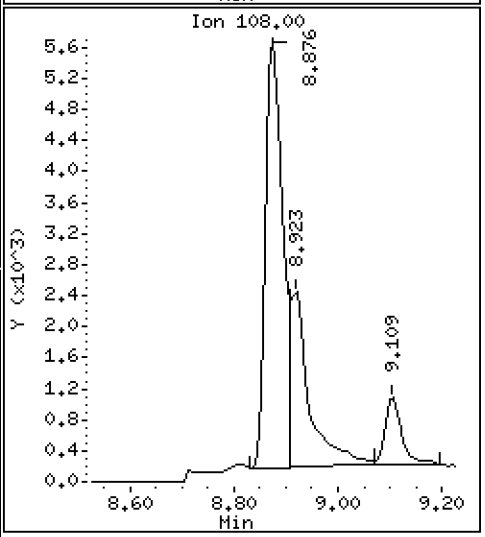
11 Benzyl alcohol

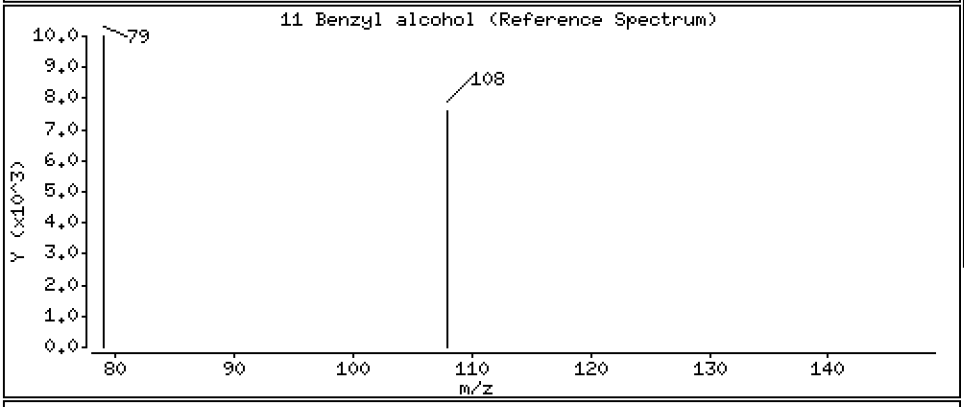
Concentration: 0.2629 ug/mL

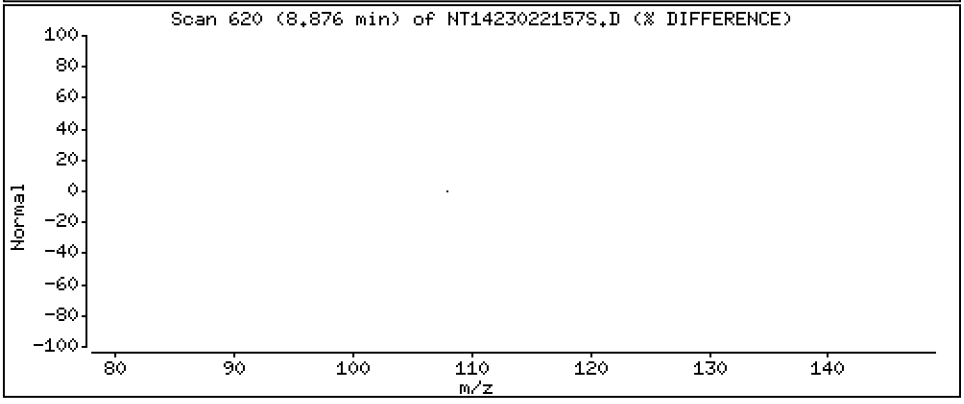












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022157S.D

Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

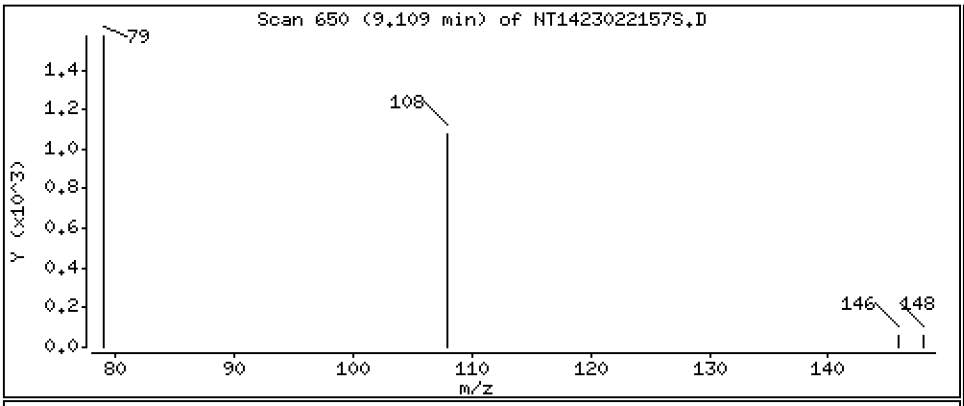
Operator: DSD

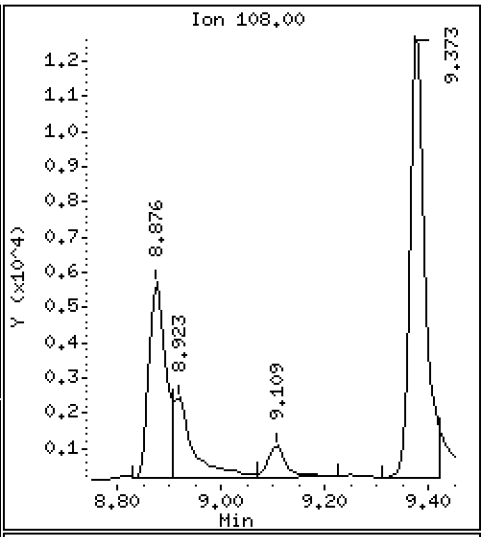
Column phase: ZB-5msi

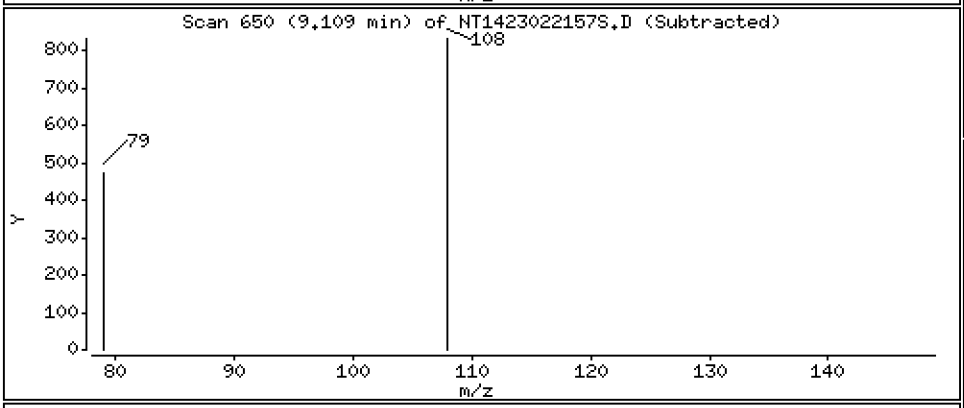
Column diameter: 0.25

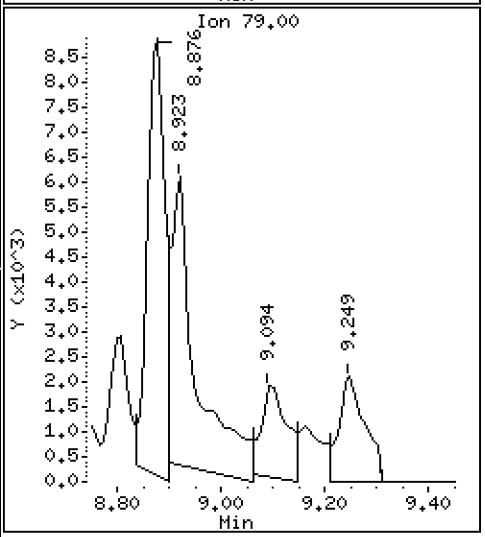
13 2-Methylphenol

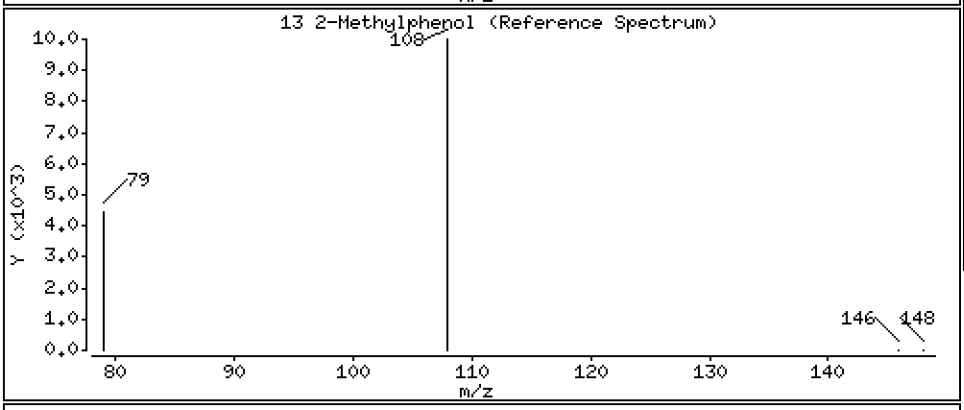
Concentration: 0.02815 ug/mL

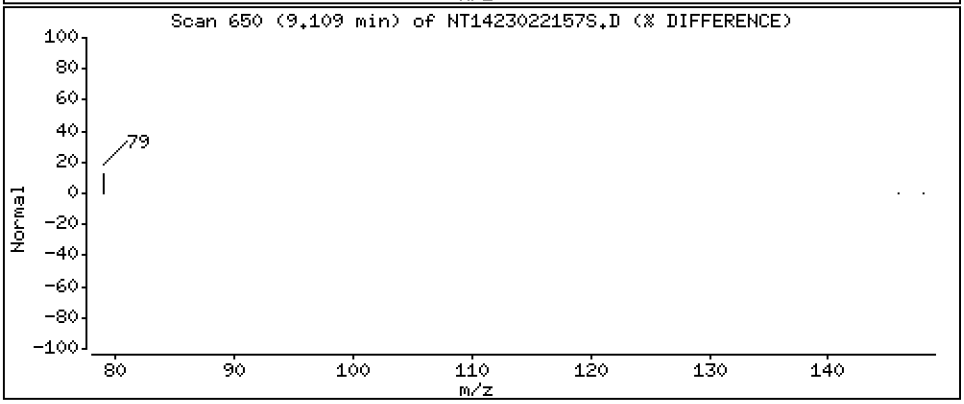












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

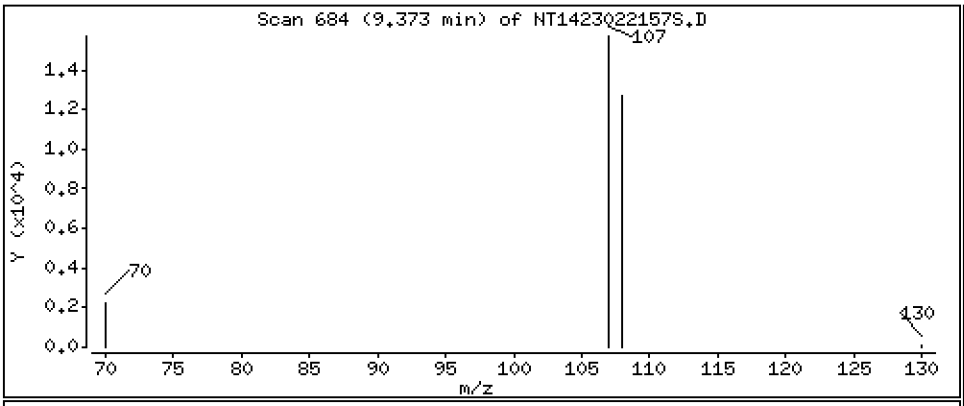
Operator: DSD

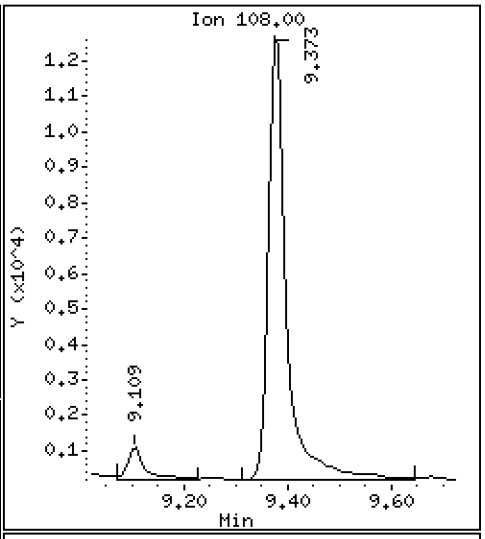
Column phase: ZB-5msi

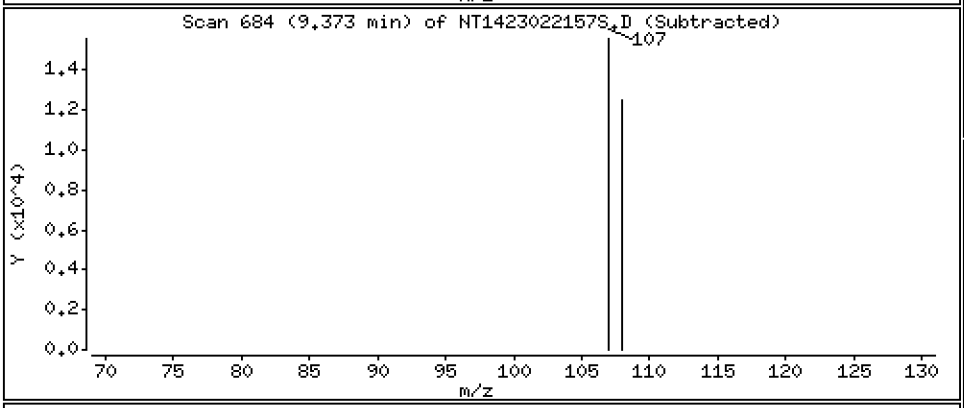
Column diameter: 0.25

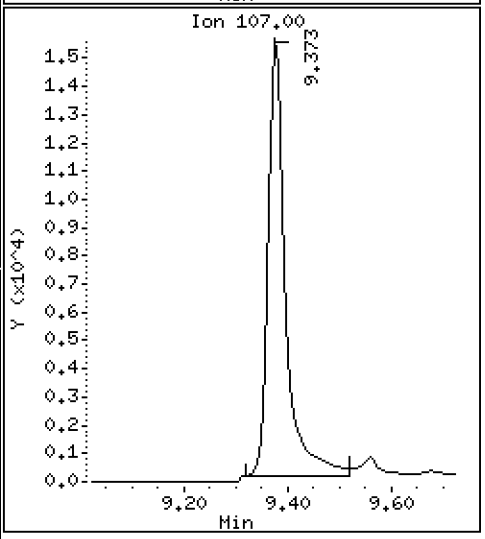
15 4-Methylphenol

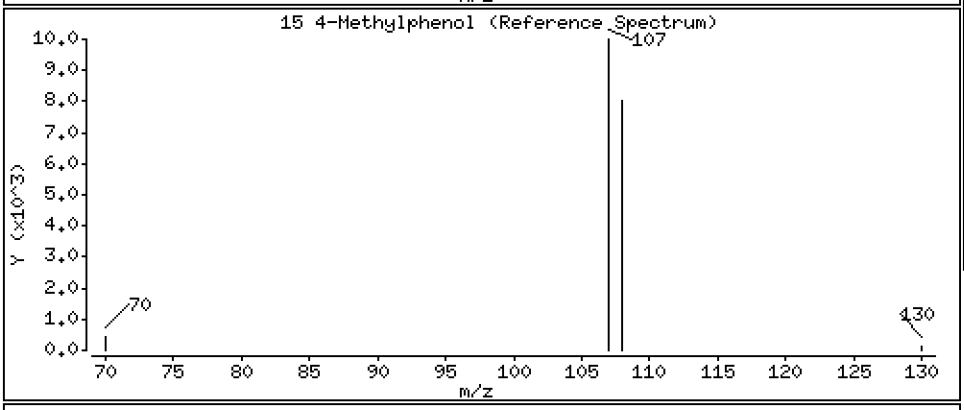
Concentration: 0.3628 ug/mL

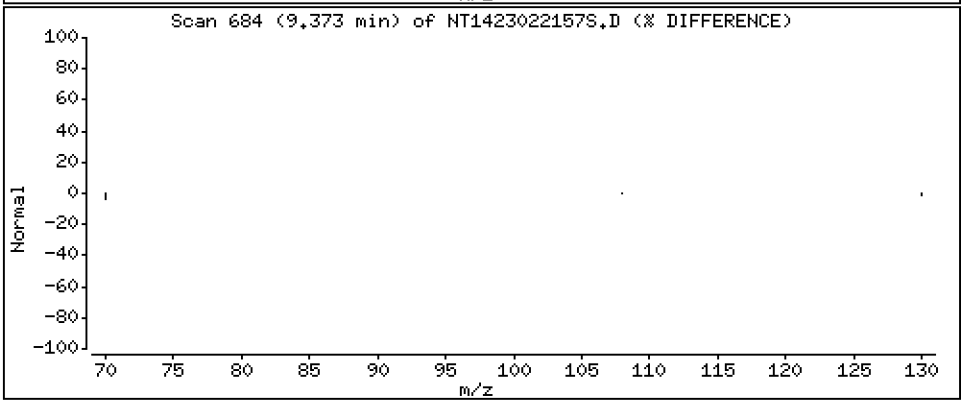












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

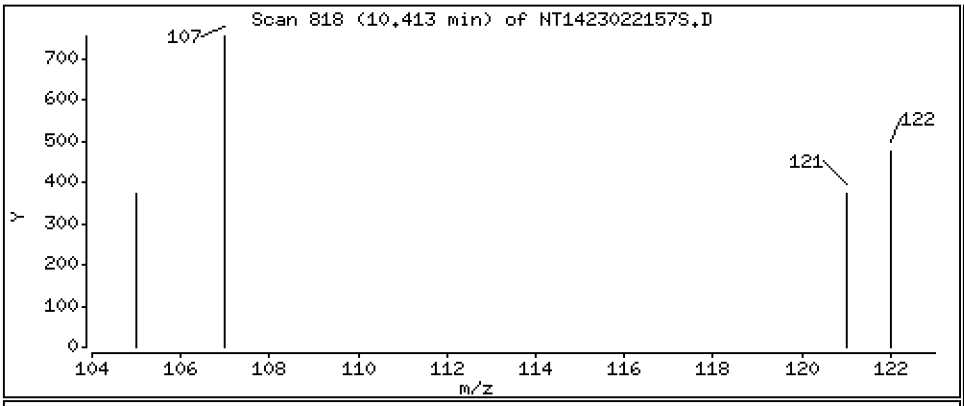
Operator: DSD

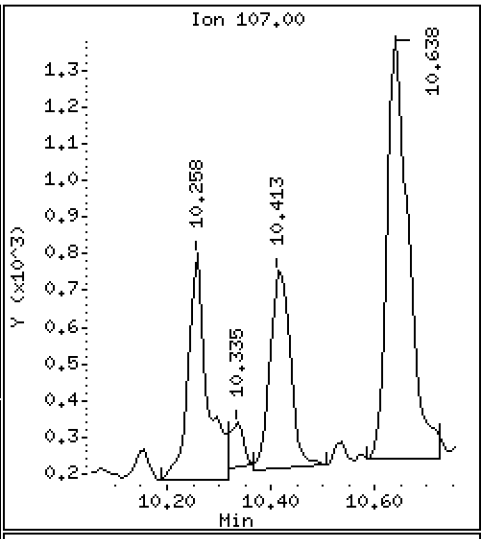
Column phase: ZB-5msi

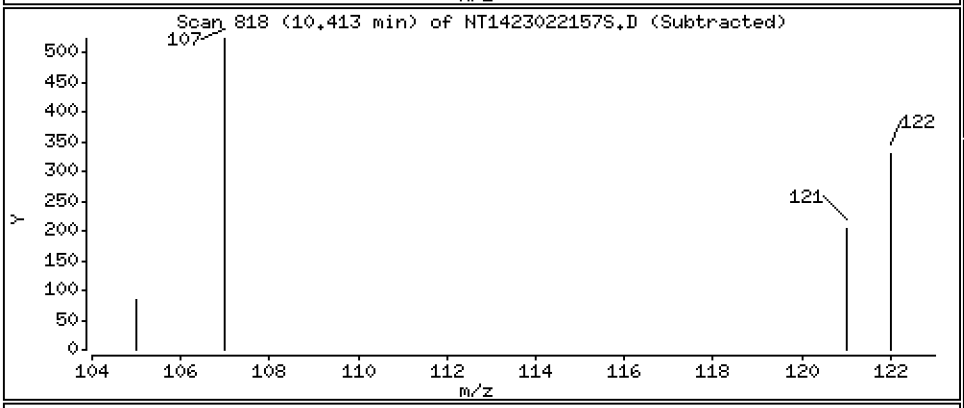
Column diameter: 0.25

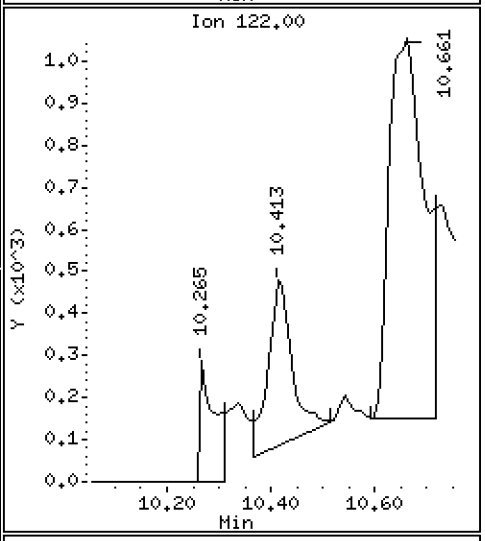
22 2,4-Dimethylphenol

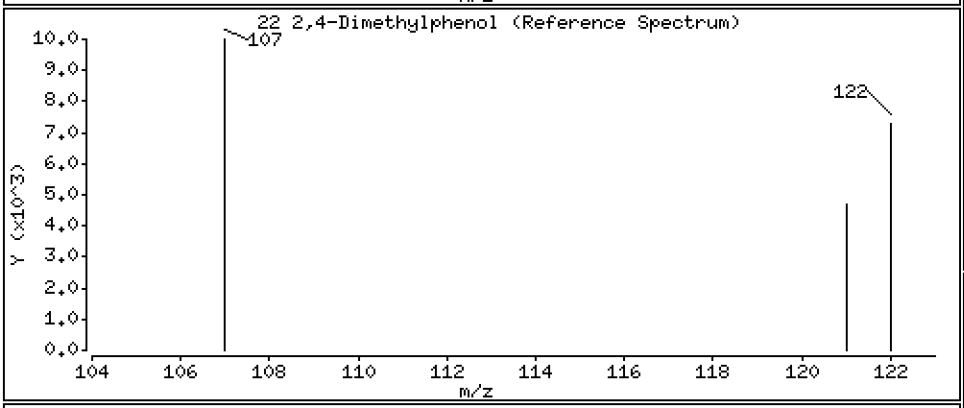
Concentration: 0.01735 ug/mL

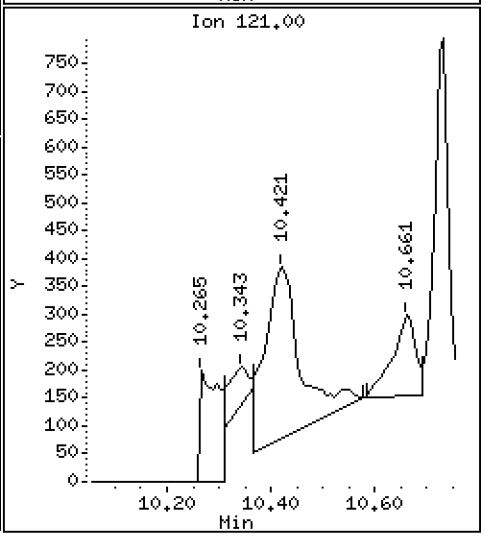


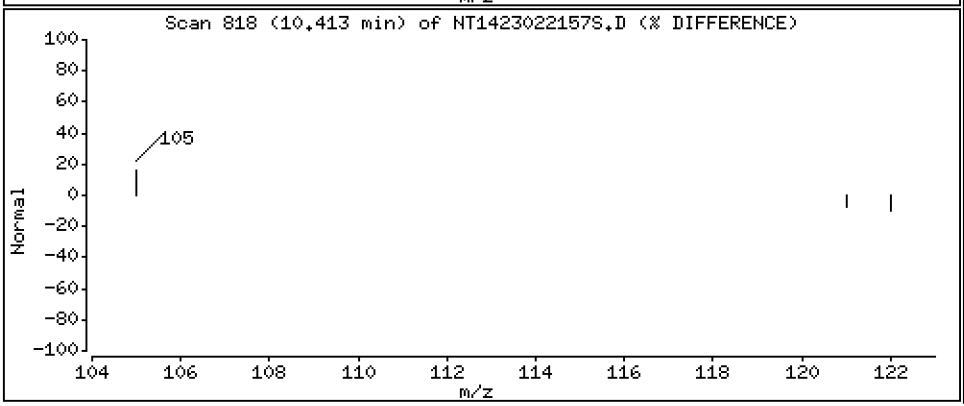












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

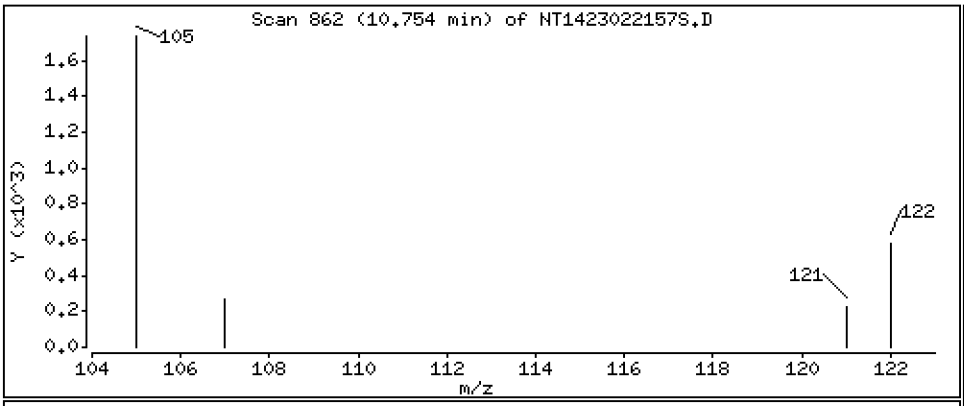
Operator: DSD

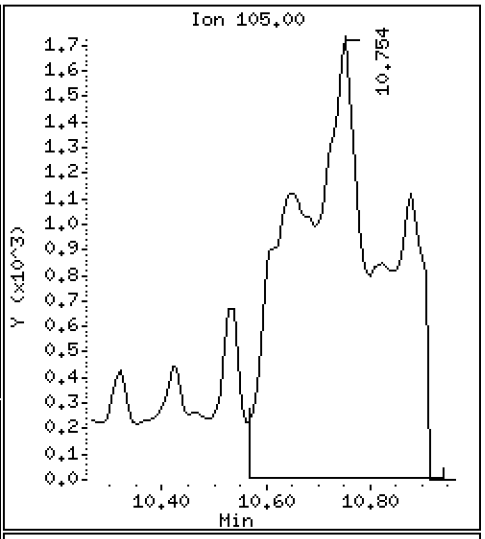
Column phase: ZB-5msi

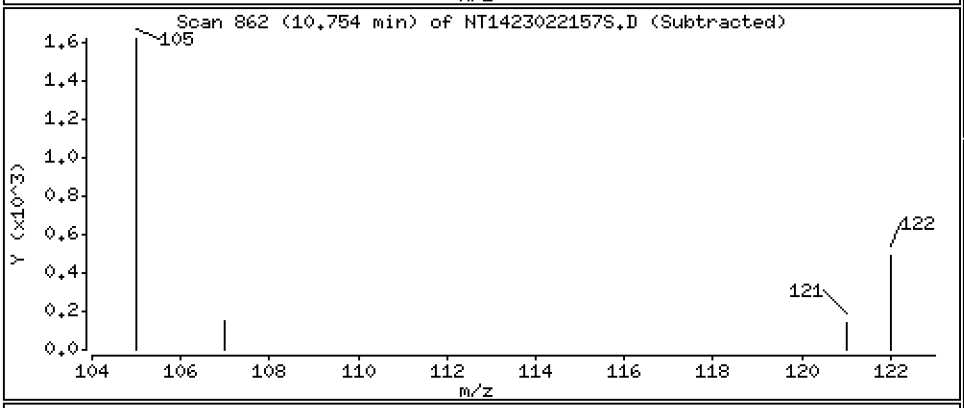
Column diameter: 0.25

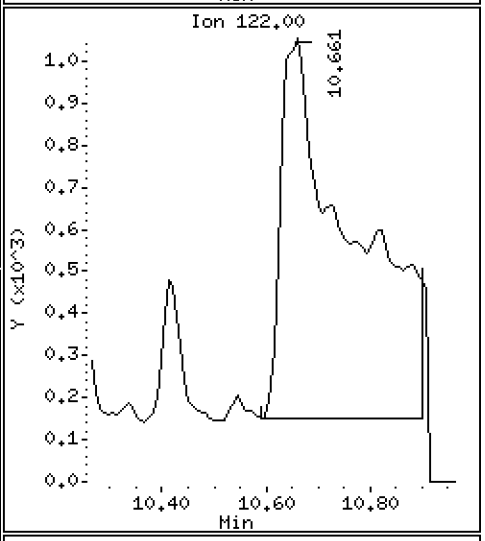
24 Benzoic acid

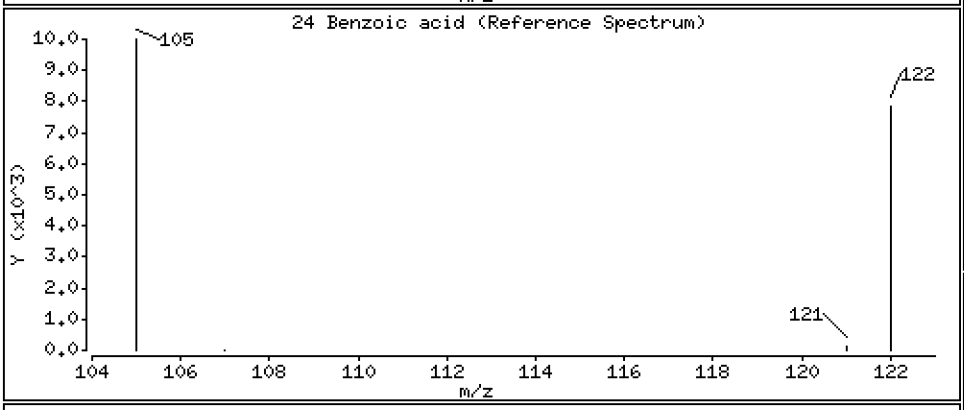
Concentration: 0.4638 ug/mL

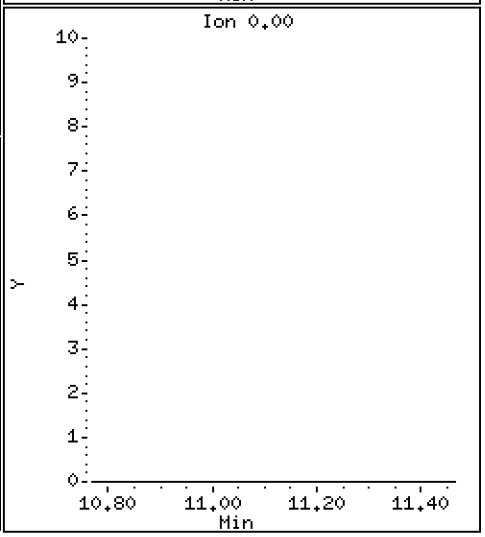


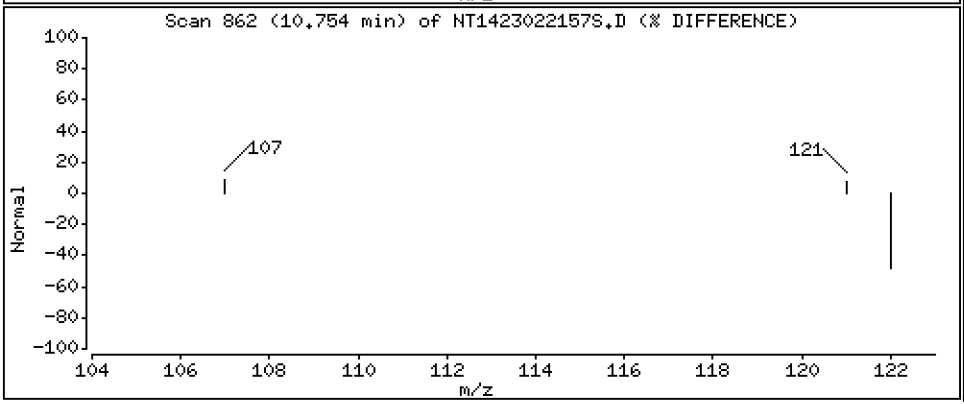












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

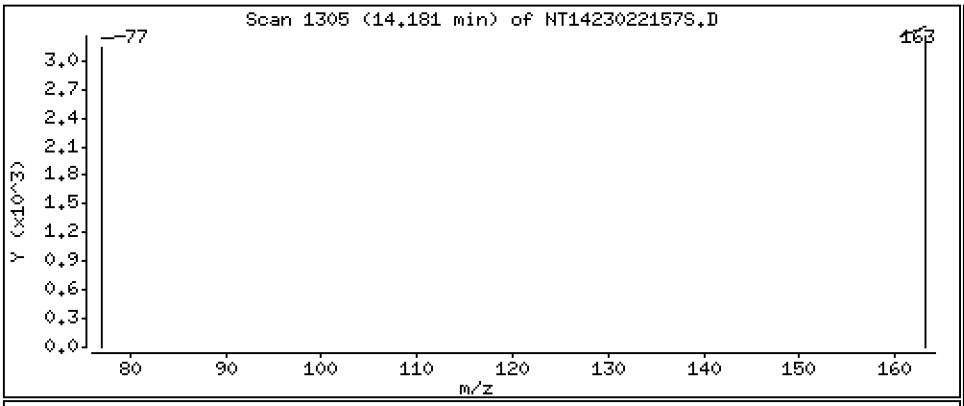
Operator: DSD

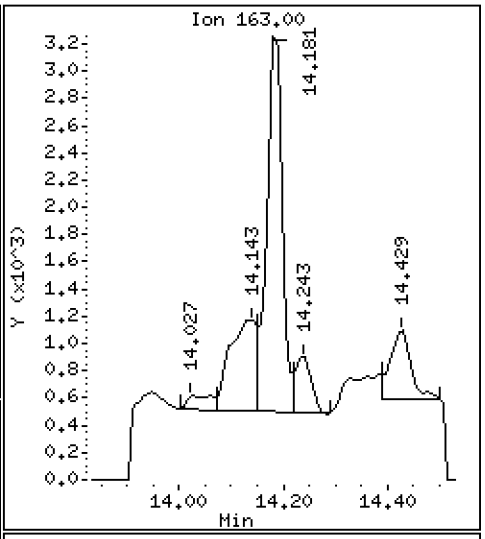
Column phase: ZB-5msi

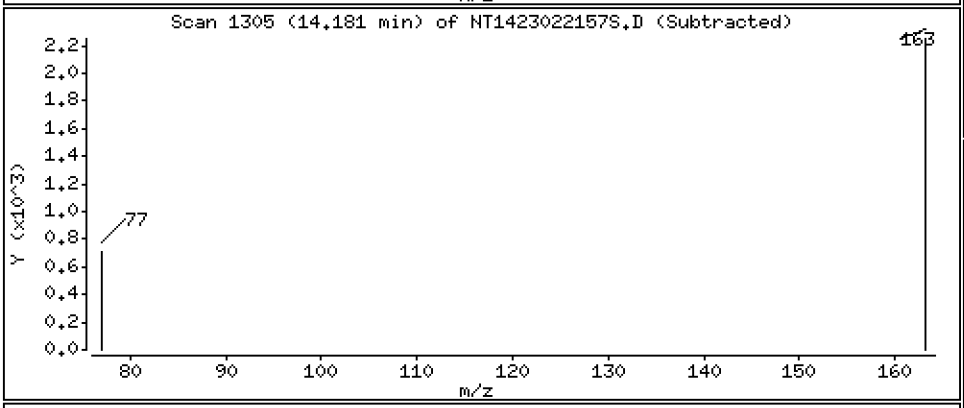
Column diameter: 0.25

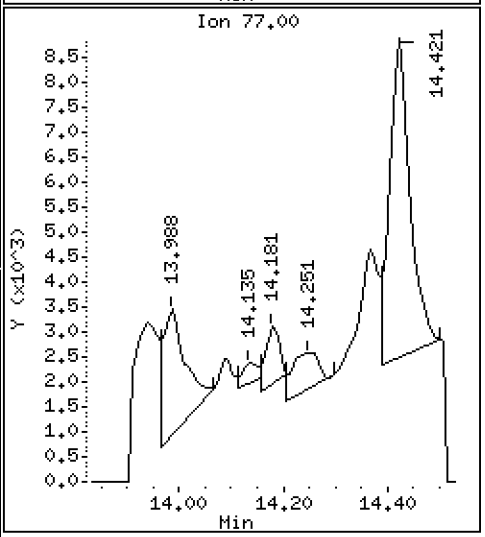
39 Dimethylphthalate

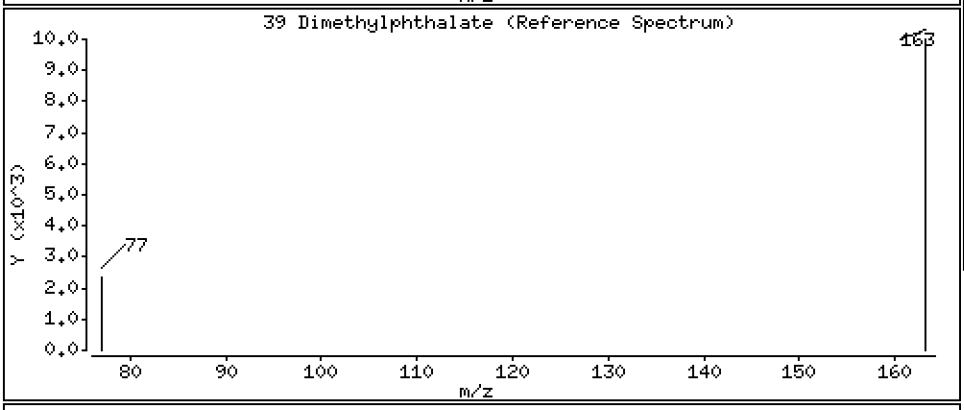
Concentration: 0.03879 ug/mL

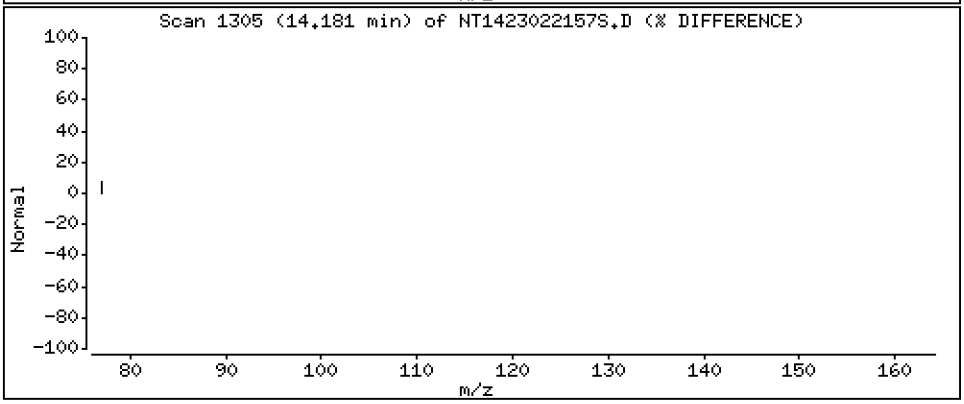












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

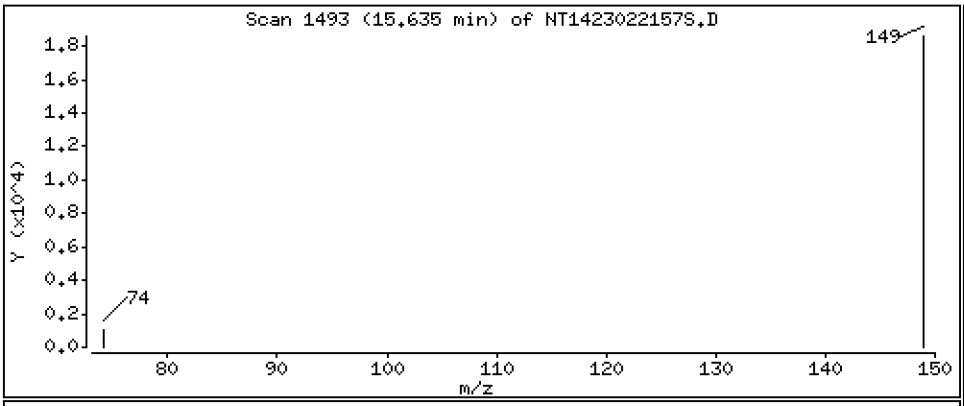
Operator: DSD

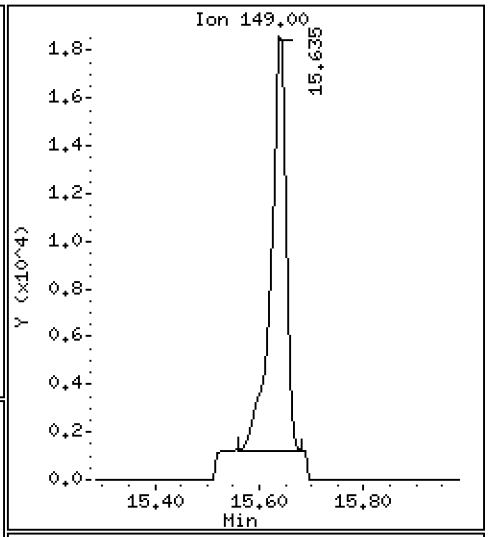
Column phase: ZB-5msi

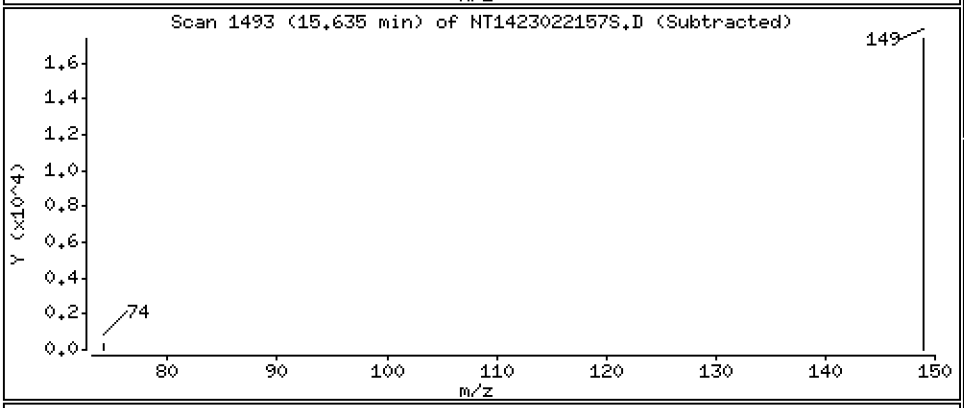
Column diameter: 0.25

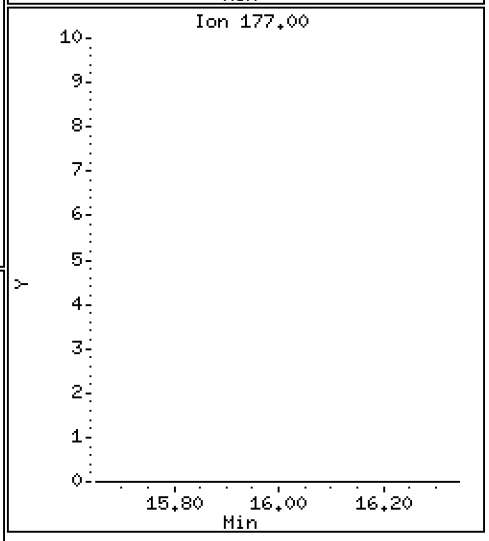
50 Diethylphthalate

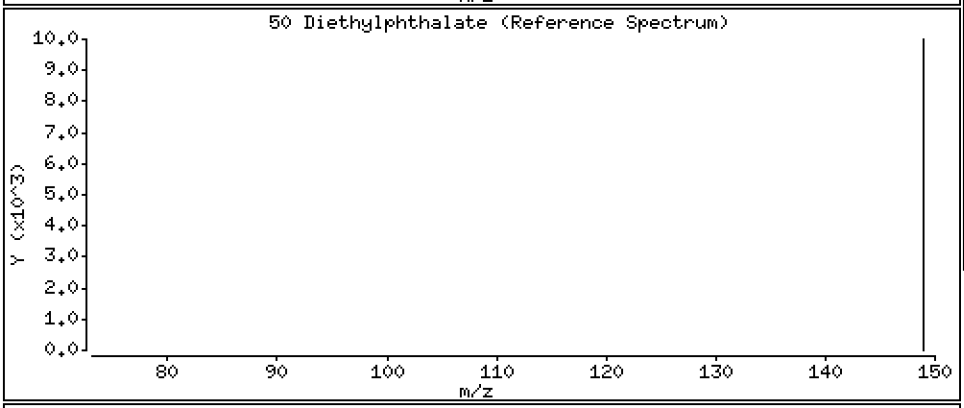
Concentration: 0.1925 ug/mL

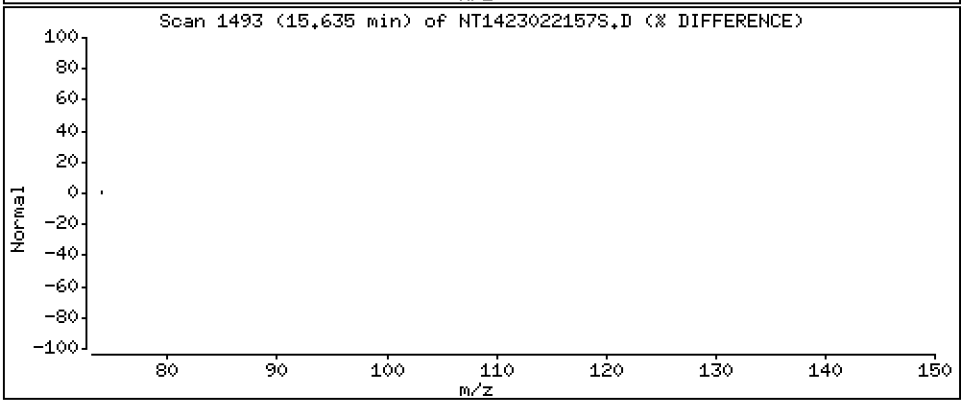












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

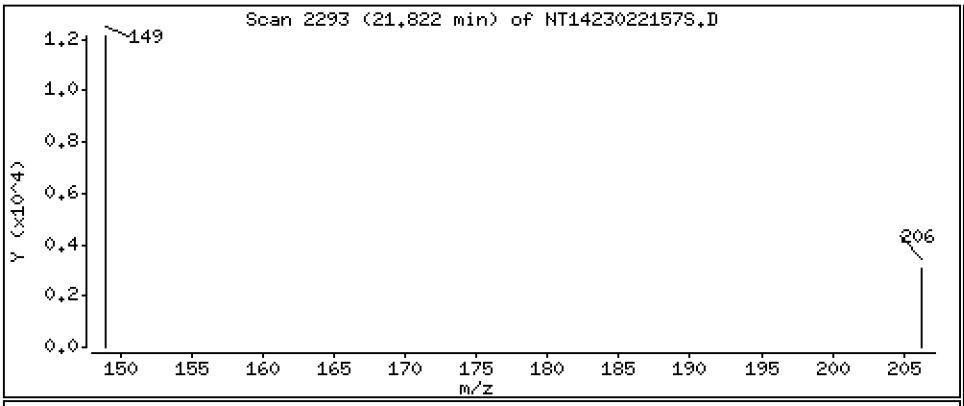
Operator: DSD

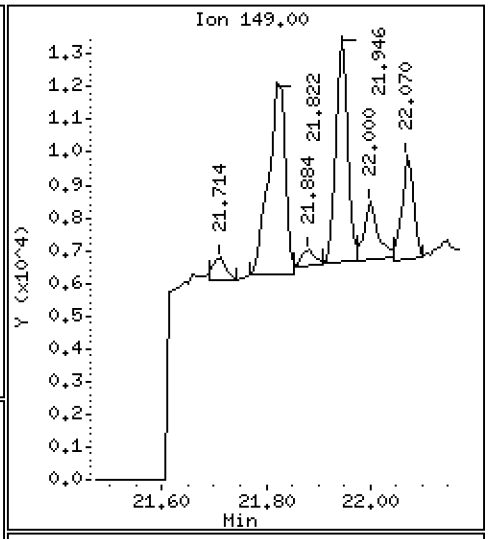
Column phase: ZB-5msi

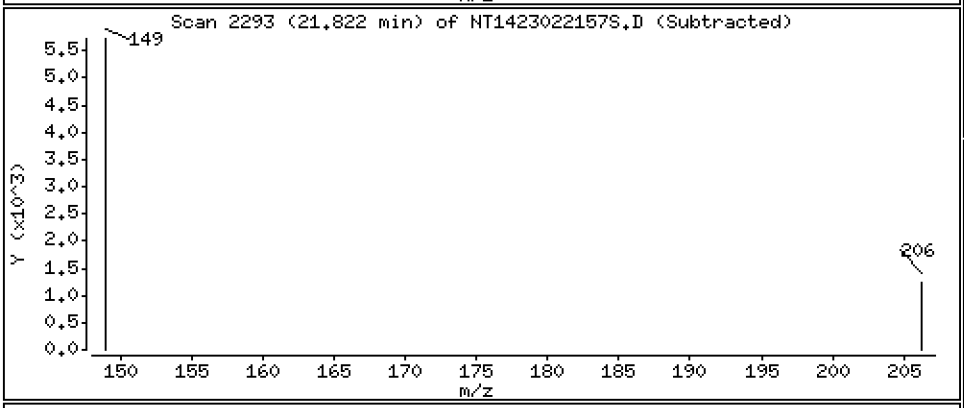
Column diameter: 0.25

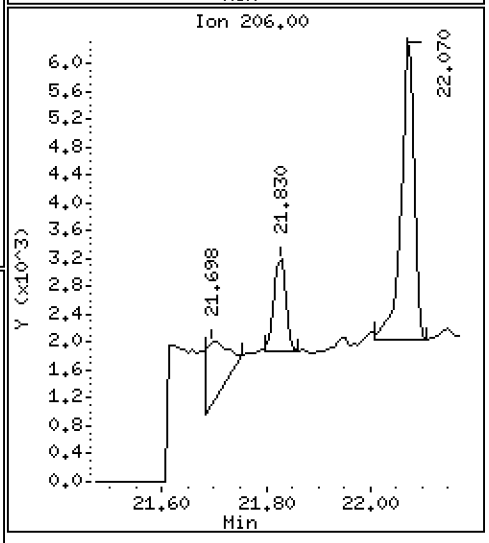
67 Butylbenzylphthalate

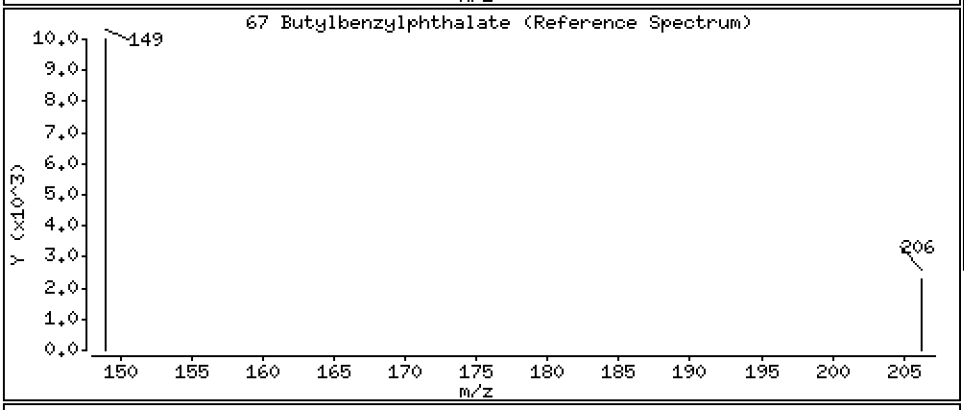
Concentration: 0.1556 ug/mL

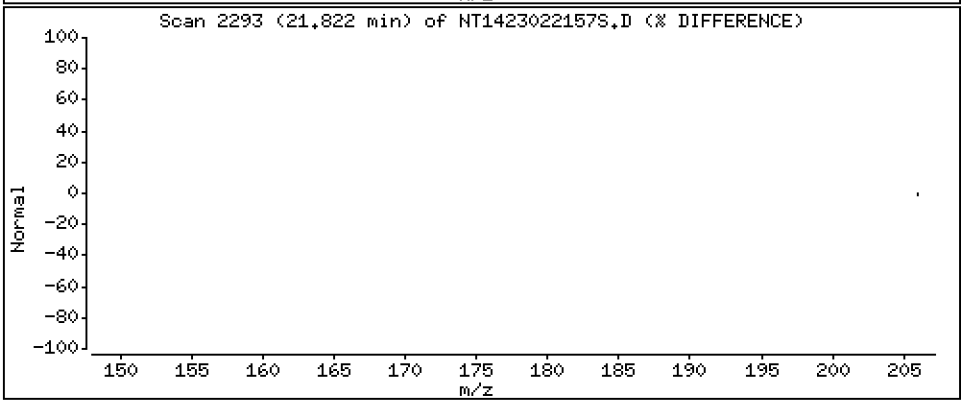












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Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

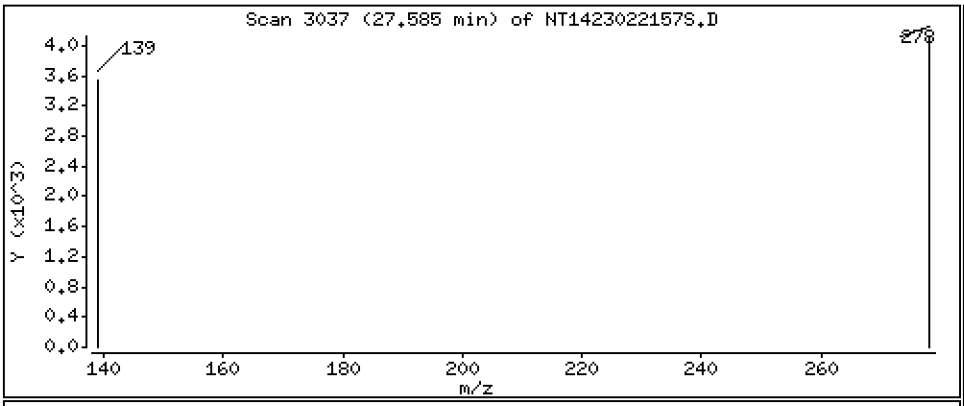
Operator: DSD

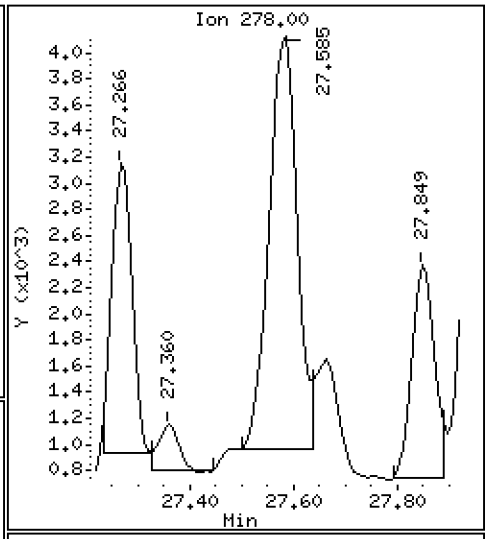
Column phase: ZB-5msi

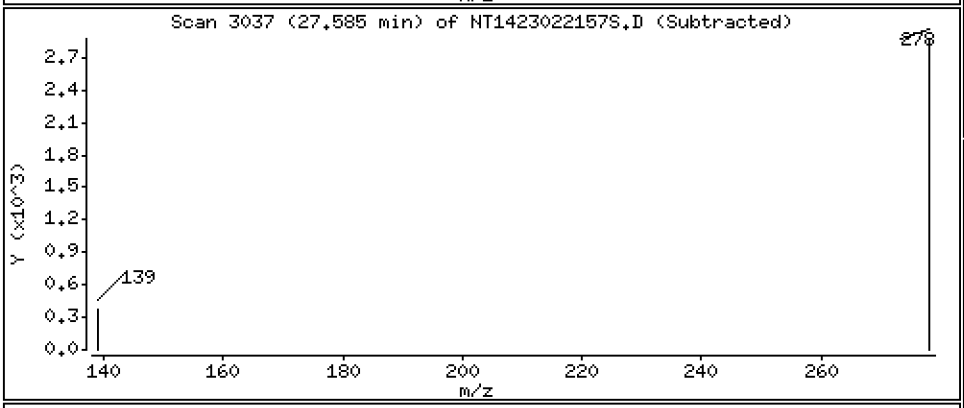
Column diameter: 0.25

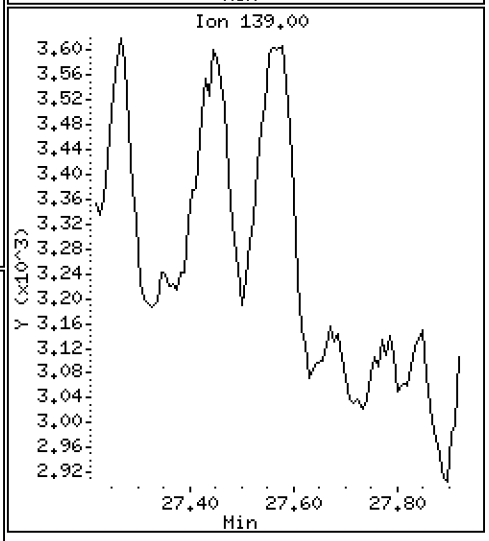
79 Dibenzo(a,h)anthracene

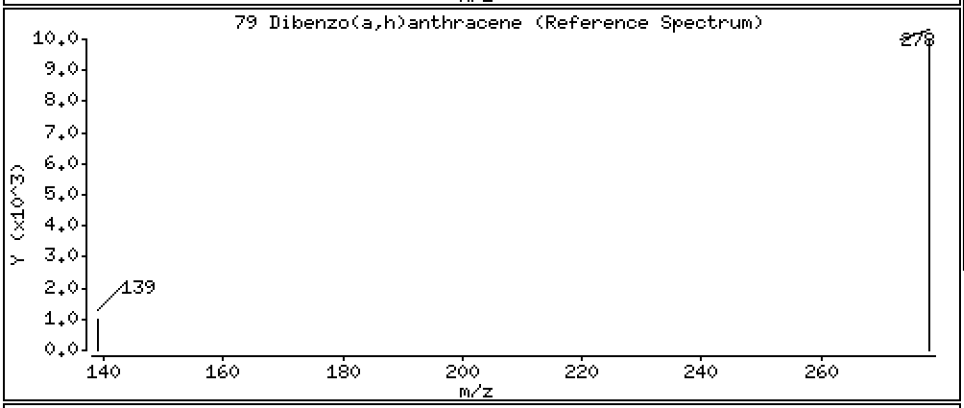
Concentration: 0.1382 ug/mL

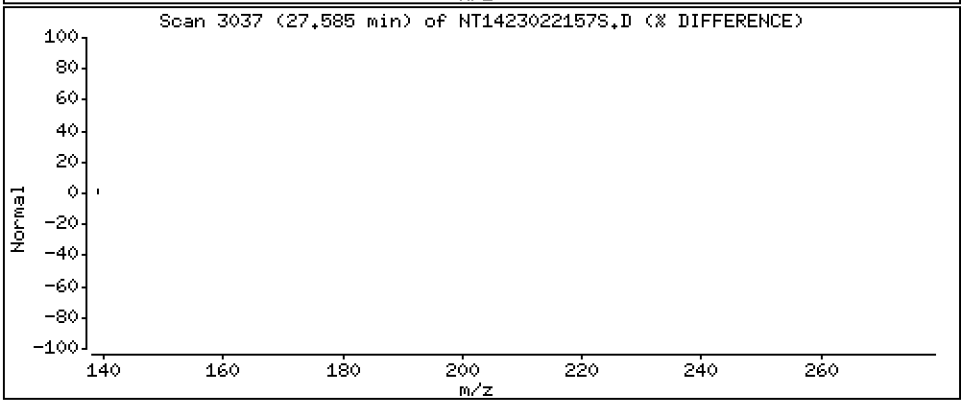












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022157S.D

Date : 22-FEB-2023 23:14

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-14

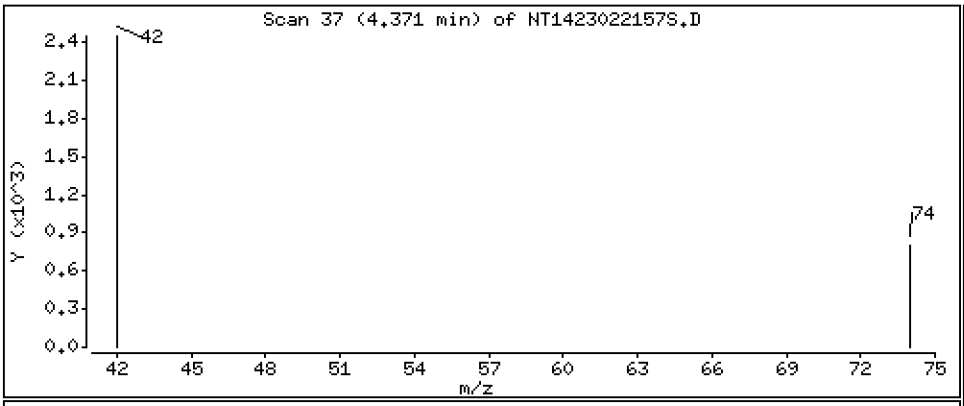
Operator: DSD

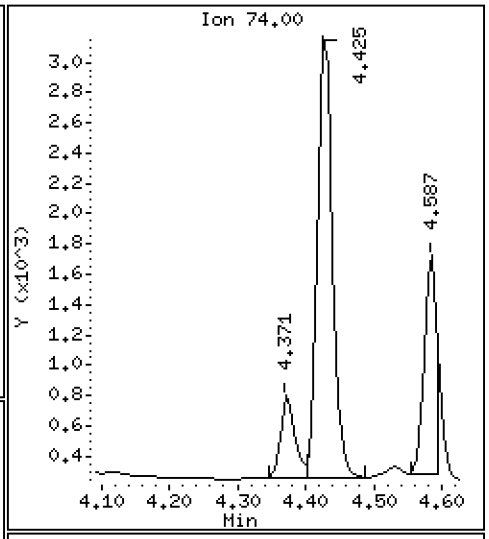
Column phase: ZB-5msi

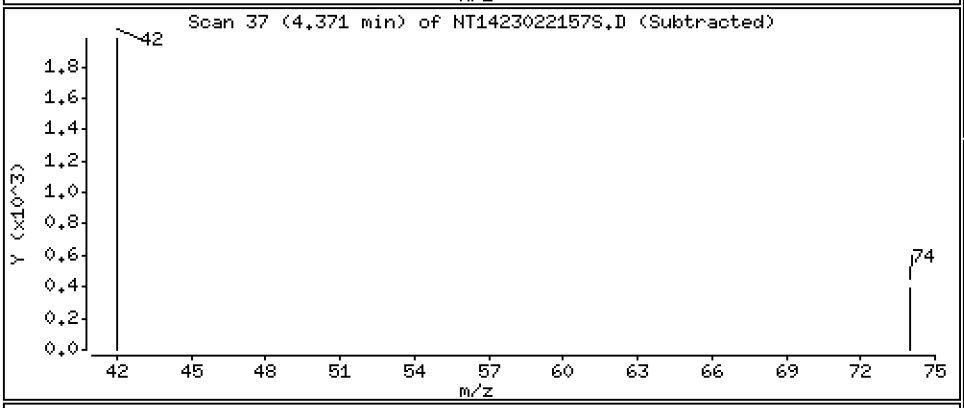
Column diameter: 0.25

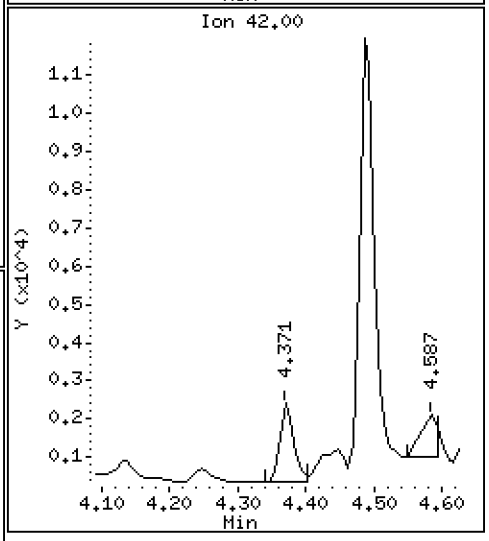
90 N-Nitrosodimethylamine

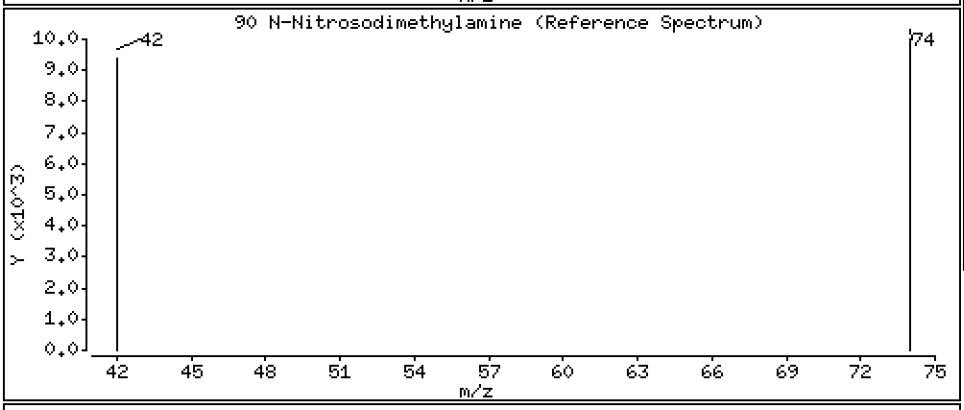
Concentration: 0.01460 ug/mL

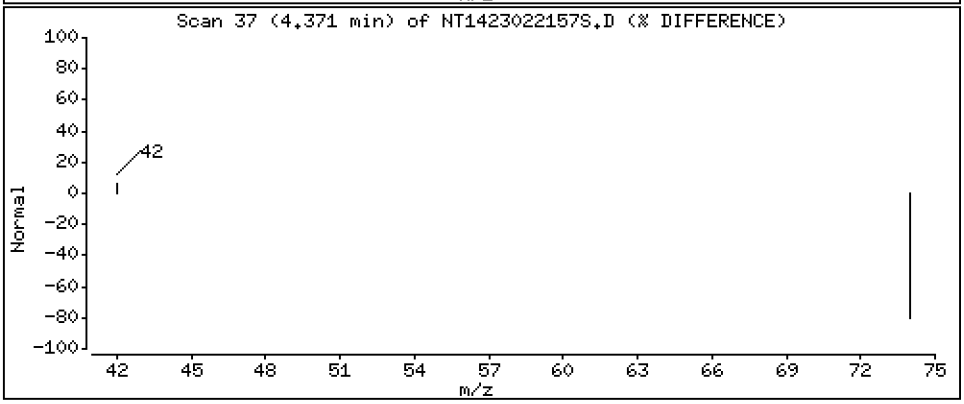












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT1423022157S.D
Lab Smp Id: 23A0133-14
Inj Date : 22-FEB-2023 23:14 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-14
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Meth Date : 25-May-2023 11:39 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 40
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)	
$	1	2-Fluorophenol	112	6.393	6.386	(0.746)	355441	4.97343	4.973	(R)
	3	Phenol	94	8.001	7.993	(0.934)	400169	3.67125	3.671	
	7	1,3-Dichlorobenzene	146	Compound Not Detected.						
*	8	1,4-Dichlorobenzene-d4	152	8.565	8.573	(1.000)	251935	4.00000		
	9	1,4-Dichlorobenzene	146	8.596	8.596	(1.004)	826	0.01010	0.01010	(M)
	11	Benzyl alcohol	79	8.876	8.876	(1.036)	18140	0.26291	0.2629	
	12	1,2-Dichlorobenzene	146	Compound Not Detected.						
	13	2-Methylphenol	108	9.109	9.101	(1.063)	2105	0.02815	0.02815	
	15	4-Methylphenol	108	9.373	9.373	(1.094)	29740	0.36276	0.3628	
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.						
	22	2,4-Dimethylphenol	107	10.412	10.404	(0.943)	1467	0.01735	0.01735	
	24	Benzoic acid	105	10.753	10.614	(0.974)	20246	0.46385	0.4638	(MH)
	26	1,2,4-Trichlorobenzene	180	Compound Not Detected.						
*	27	Naphthalene-d8	136	11.040	11.040	(1.000)	923304	4.00000		
	30	Hexachlorobutadiene	225	Compound Not Detected.						
	39	Dimethylphthalate	163	14.181	14.181	(0.968)	5664	0.03879	0.03879	
*	42	Acenaphthene-d10	162	14.653	14.653	(1.000)	478572	4.00000		
	50	Diethylphthalate	149	15.635	15.635	(1.067)	35183	0.19254	0.1925	
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.						
	57	Hexachlorobenzene	284	Compound Not Detected.						
	58	Pentachlorophenol	266	Compound Not Detected.						
*	59	Phenanthrene-d10	188	17.682	17.674	(1.000)	996576	4.00000		
$	66	Terphenyl-d14	244	20.885	20.869	(0.916)	786641	4.62362	4.624	(R)
	67	Butylbenzylphthalate	149	21.821	21.821	(0.958)	12493	0.15561	0.1556	
*	69	Chrysene-d12	240	22.789	22.774	(1.000)	639078	4.00000		
*	77	Perylene-d12	264	25.236	25.220	(1.000)	491951	4.00000		
	79	Dibenzo(a,h)anthracene	278	27.584	27.569	(1.093)	11905	0.13822	0.1382	
	90	N-Nitrosodimethylamine	74	4.370	4.277	(0.510)	820	0.01460	0.01460	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022157S.D
Lab Smp Id: 23A0133-14
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 17:47
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	241018	120509	482036	251935	4.53
27 Naphthalene-d8	887165	443583	1774330	923304	4.07
42 Acenaphthene-d10	467553	233777	935106	478572	2.36
59 Phenanthrene-d10	1079793	539897	2159586	996576	-7.71
69 Chrysene-d12	754146	377073	1508292	639078	-15.26
77 Perylene-d12	558201	279101	1116402	491951	-11.87

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.09
27 Naphthalene-d8	11.04	10.54	11.54	11.04	0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	0.00
59 Phenanthrene-d10	17.67	17.17	18.17	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.79	0.07
77 Perylene-d12	25.22	24.72	25.72	25.24	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022157S.D

Lab ID: 23A0133-14
nt14.i, 20230221C.b\SIM.b\SIMABN2.m,   22-FEB-2023 23:14

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.974	0.961	0.0126	Benzoic acid
0.510	0.499	0.0113	N-Nitrosodimethylamine

RRT check based on Ccal File: SIM.b/NT1423022148ICVS.d

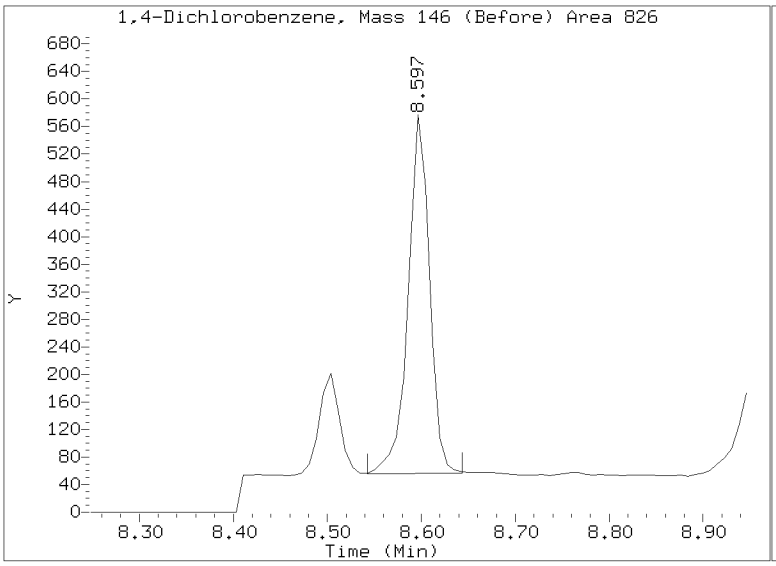
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

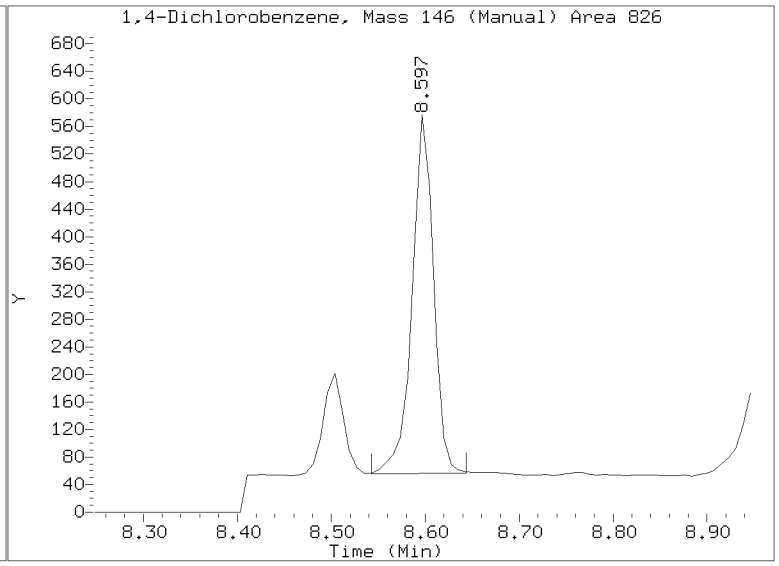
Exception: 1,2,4-Trichlorobenzene 0.0010

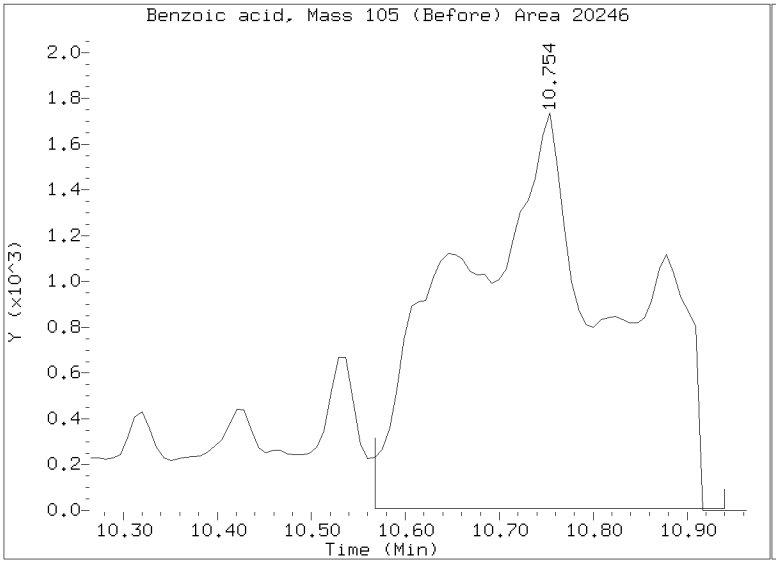
* Only compounds listed in the work order have been verified by the analyst *

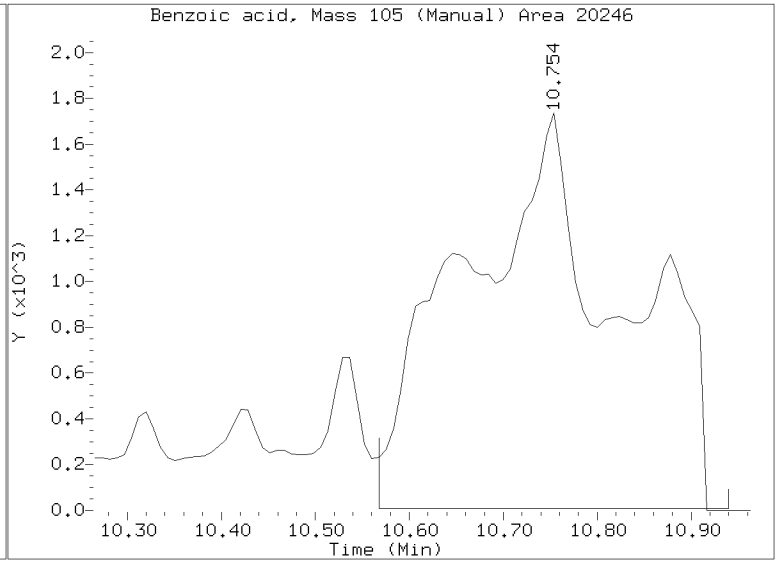
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221C.b/SIM.b/NT1423022157S.D
Injection Date: 22-FEB-2023 23:14
Lab ID:23A0133-14 Client ID:
Report Date: 05/25/2023 11:48









Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1092

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-15 C	SDG:	23A0133
Sampled:	01/06/23 14:26	Prepared:	01/18/23 15:24	File ID:	NT1423022158S.D
% Solids:	52.30	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/22/23 23:50
Batch:	BLA0393	Sequence:	SLB0351	Initial/Final:	19.14 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GC00009
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.6	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	24.1		2.5	20.0
65-85-0	Benzoic acid	1	52.6	J	13.4	400
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	2.2	J	1.3	5.0
87-86-5	Pentachlorophenol	1	40.0	U	2.1	40.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.23	460	61.4	27 - 120	
p-Terphenyl-d14	499.49	431	86.3	37 - 120	Q

Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221158S.D

Page 1

Date : 22-FEB-2023 23:50

Client ID:

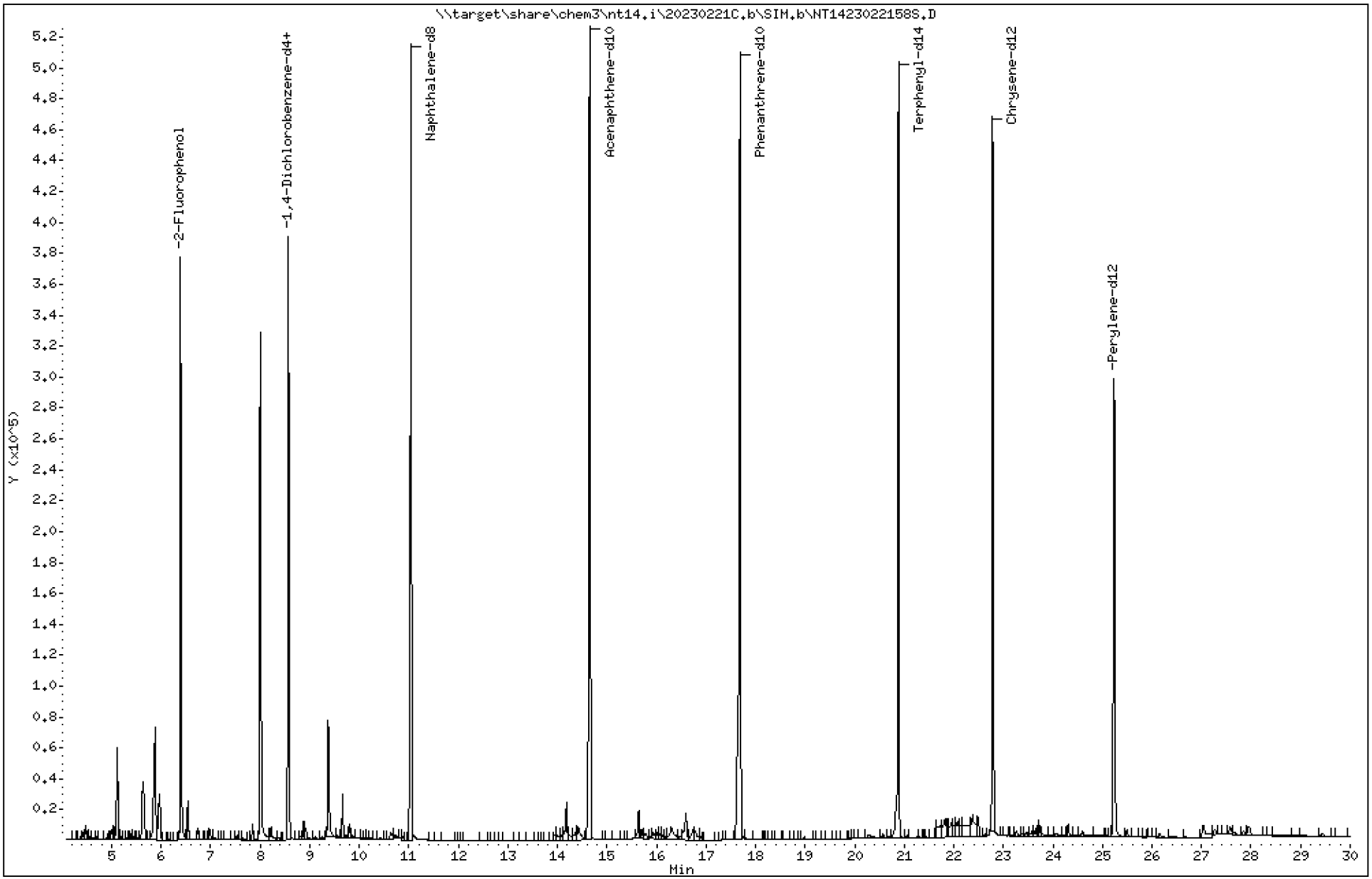
Instrument: nt14.i

Sample Info: 23A0133-15

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

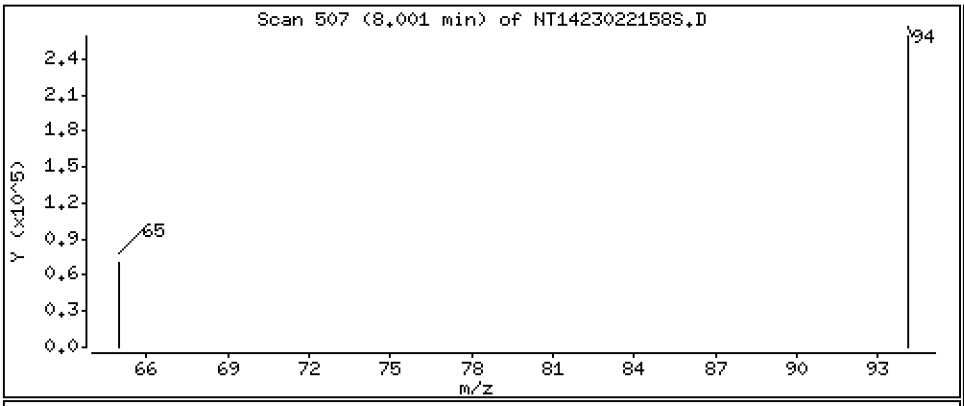
Operator: DSD

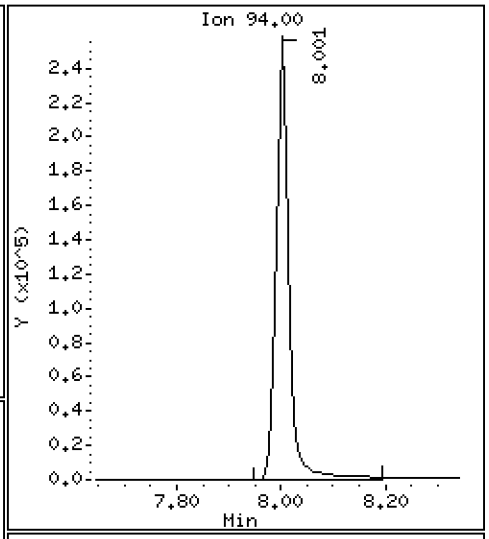
Column phase: ZB-5msi

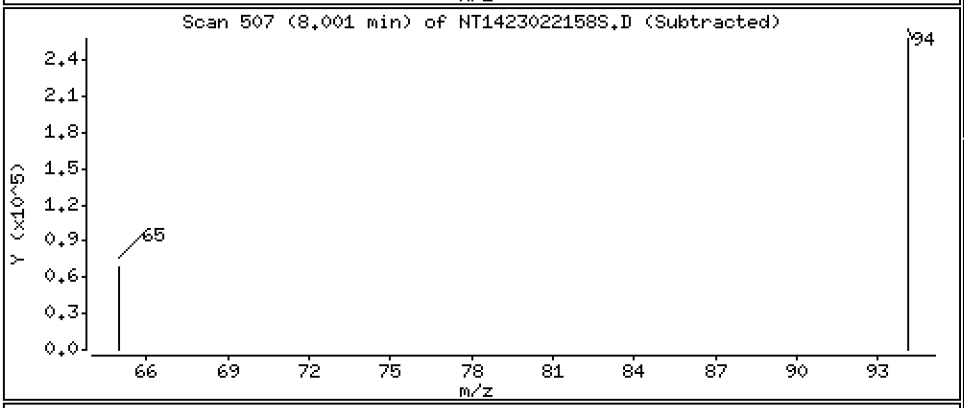
Column diameter: 0.25

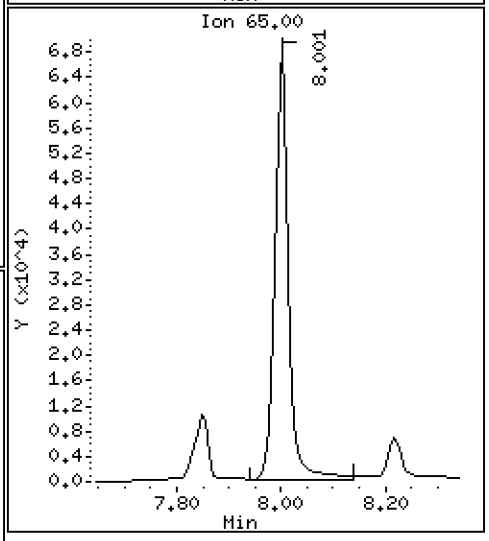
3 Phenol

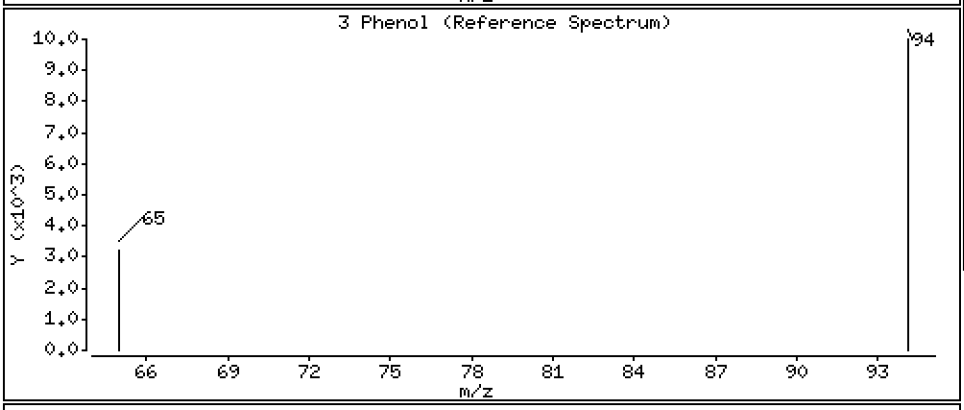
Concentration: 3.867 ug/mL

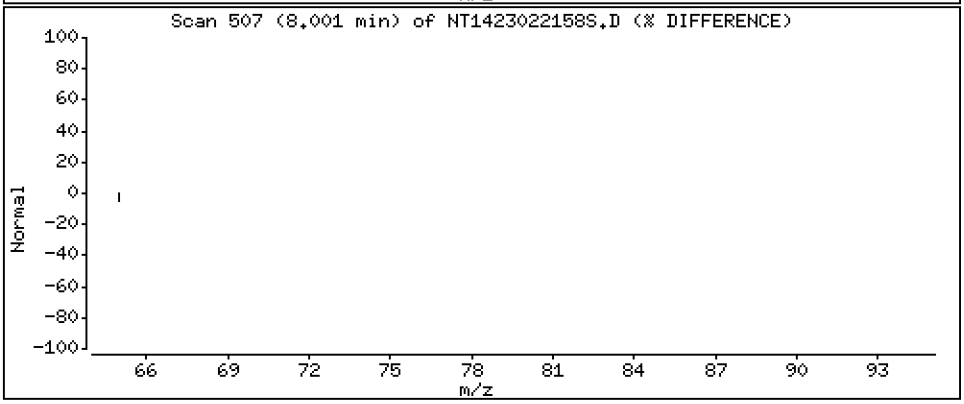












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

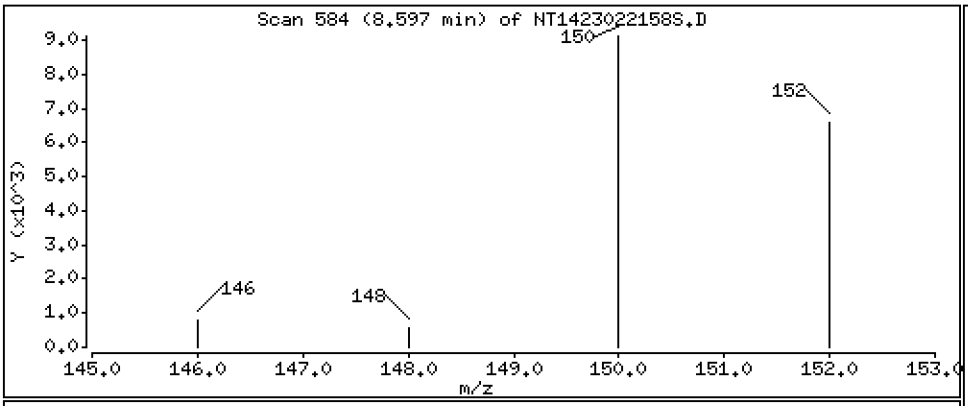
Operator: DSD

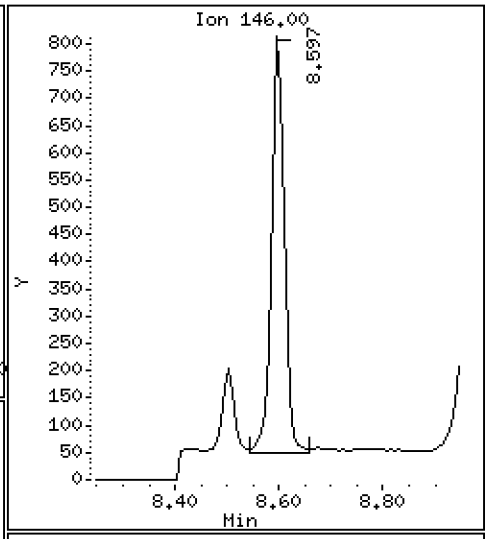
Column phase: ZB-5msi

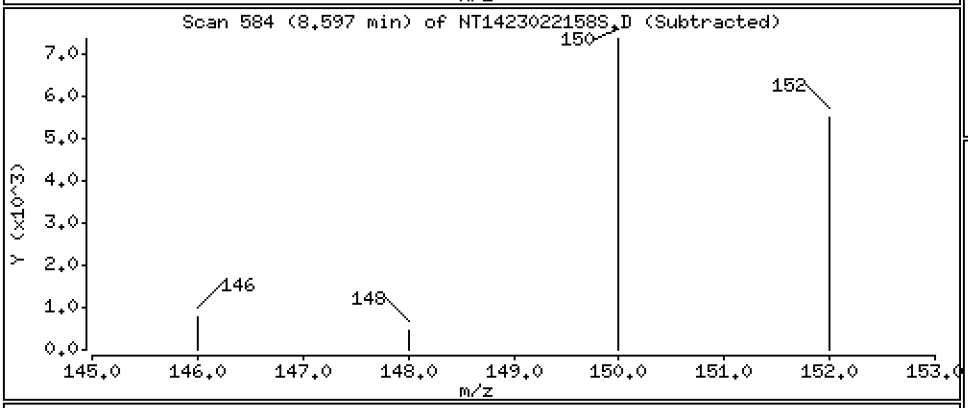
Column diameter: 0.25

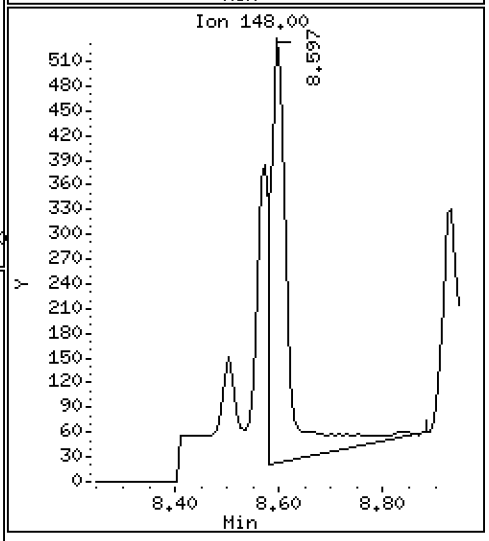
9 1,4-Dichlorobenzene

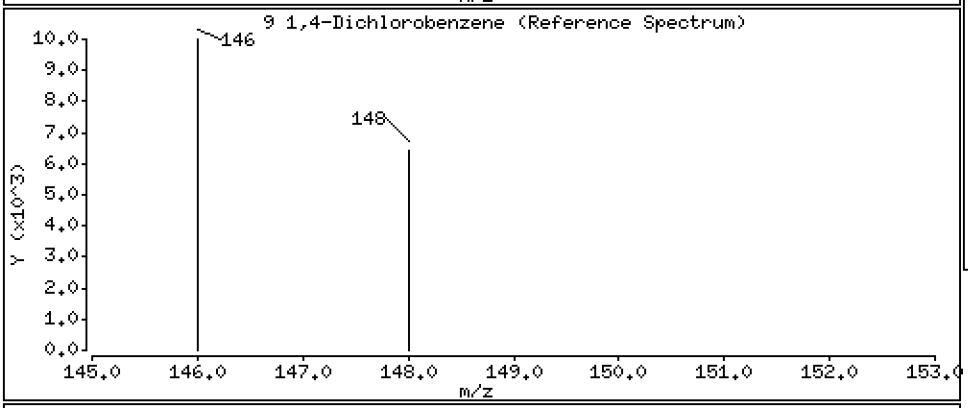
Concentration: 0.01553 ug/mL

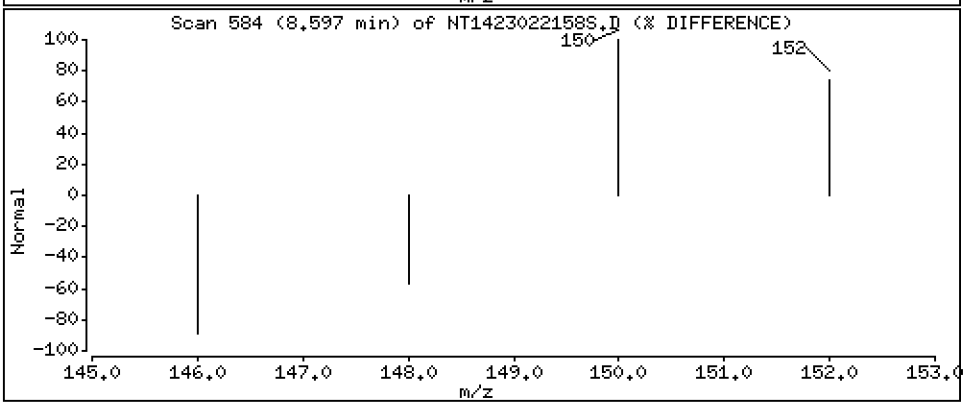












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230222158S.D

Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

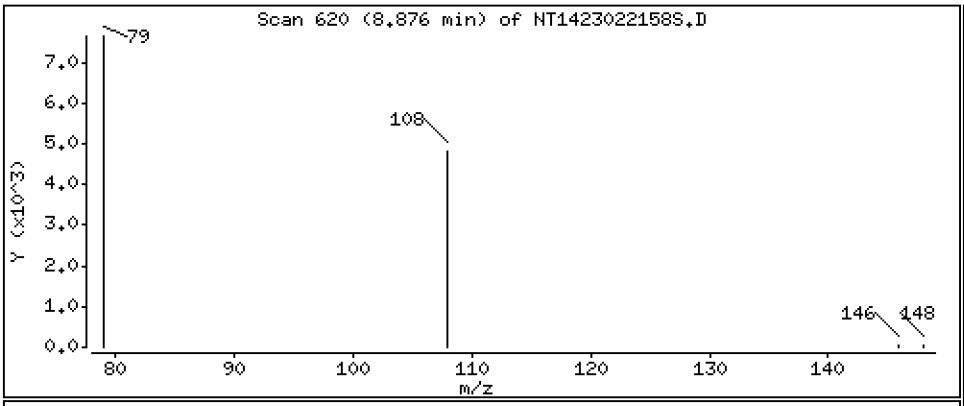
Operator: DSD

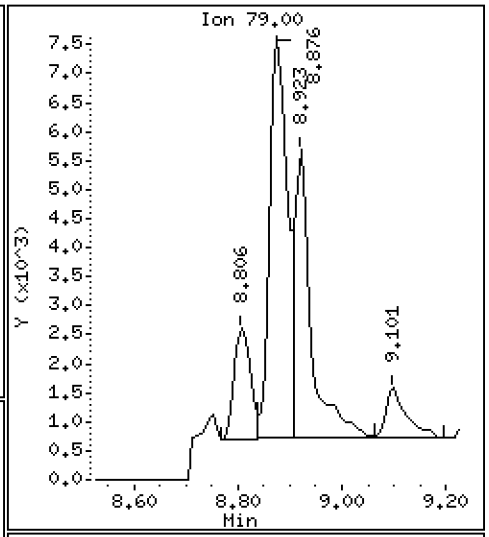
Column phase: ZB-5msi

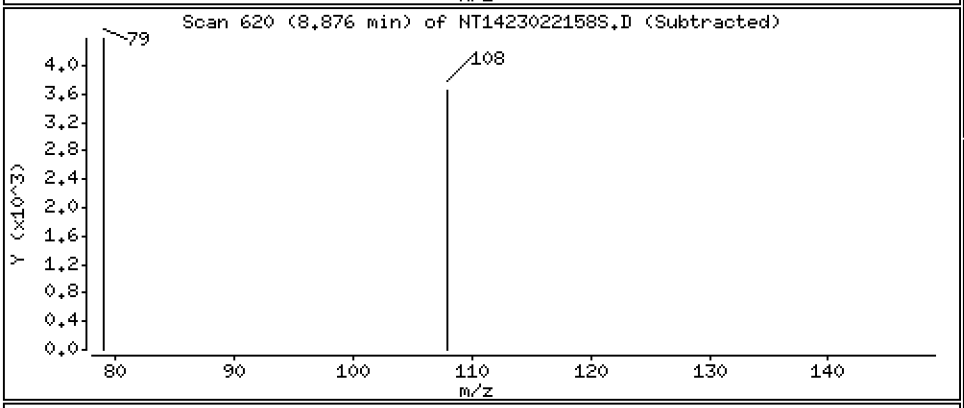
Column diameter: 0.25

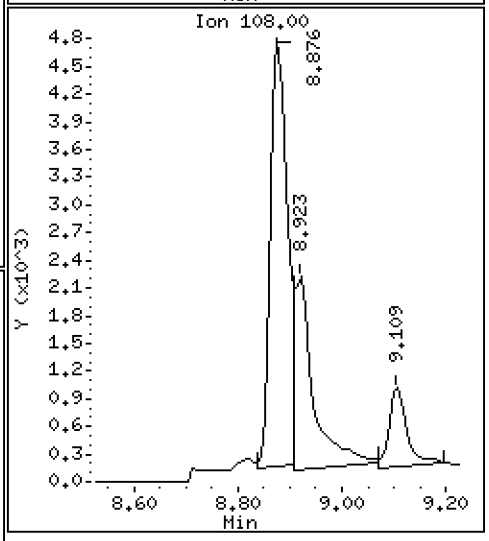
11 Benzyl alcohol

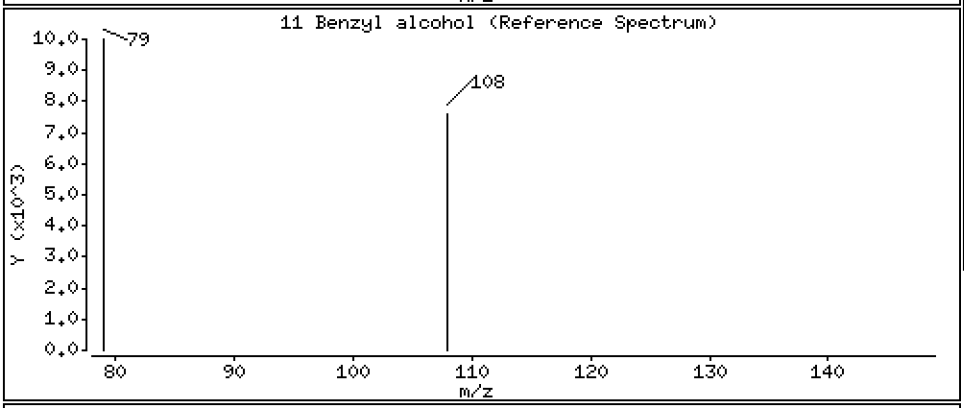
Concentration: 0.2409 ug/mL

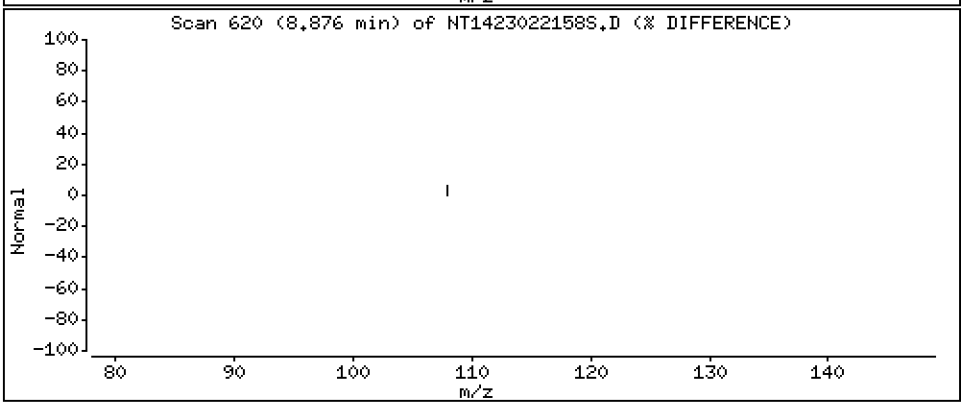












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230222158S.D

Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

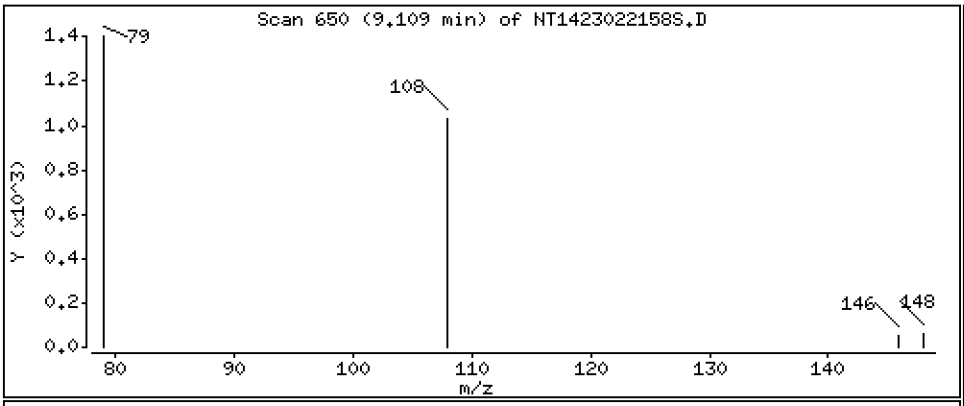
Operator: DSD

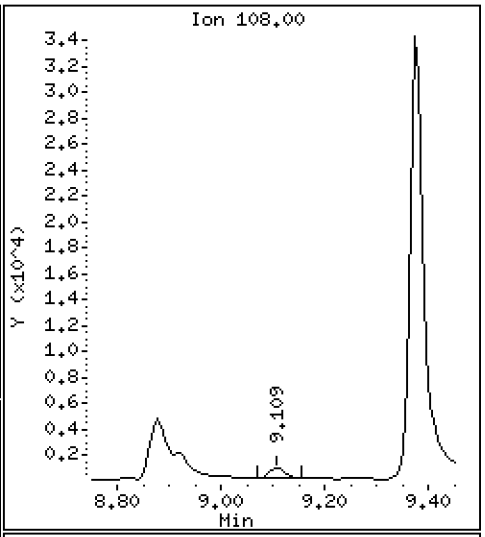
Column phase: ZB-5msi

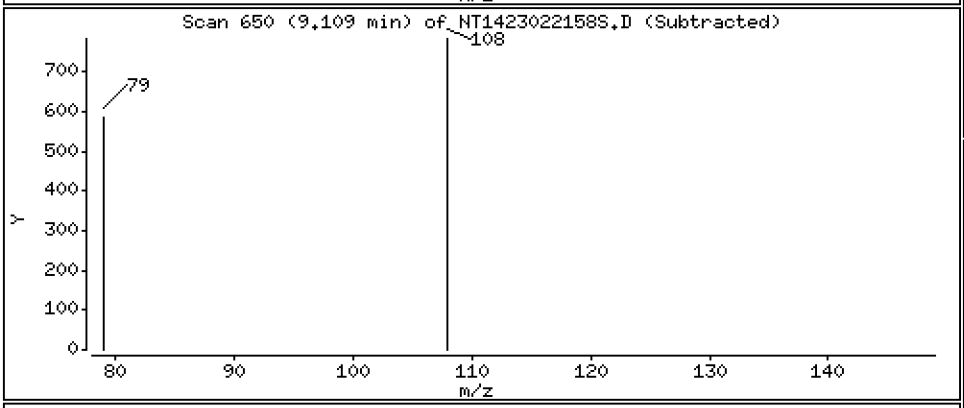
Column diameter: 0.25

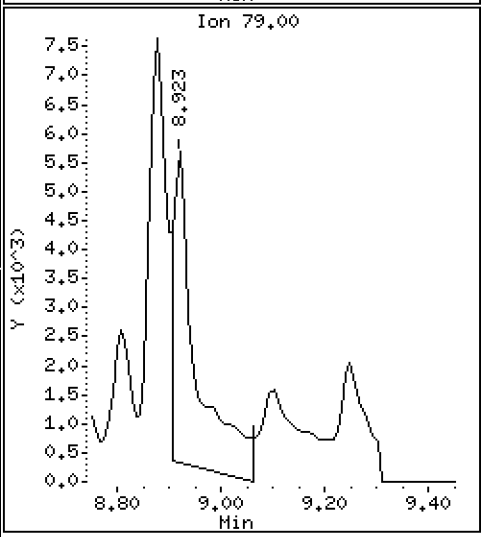
13 2-Methylphenol

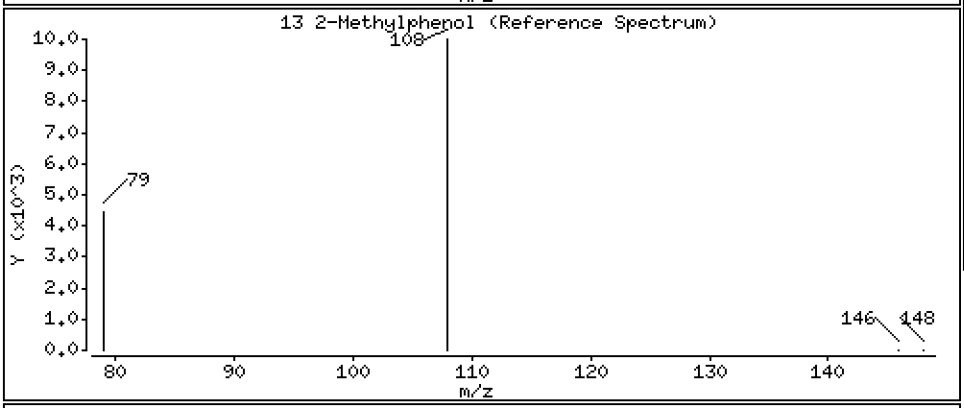
Concentration: 0.02263 ug/mL

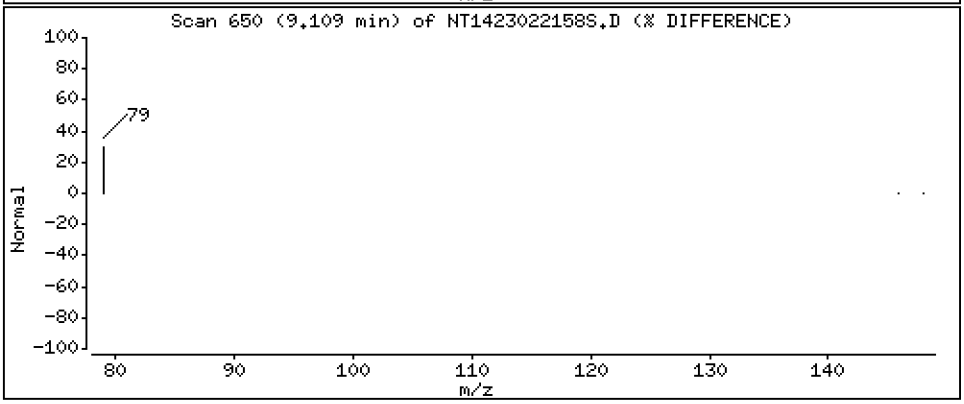












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

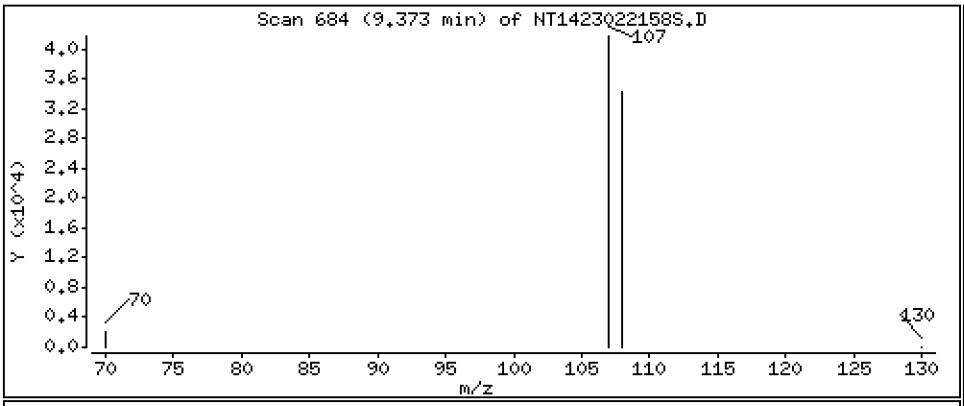
Operator: DSD

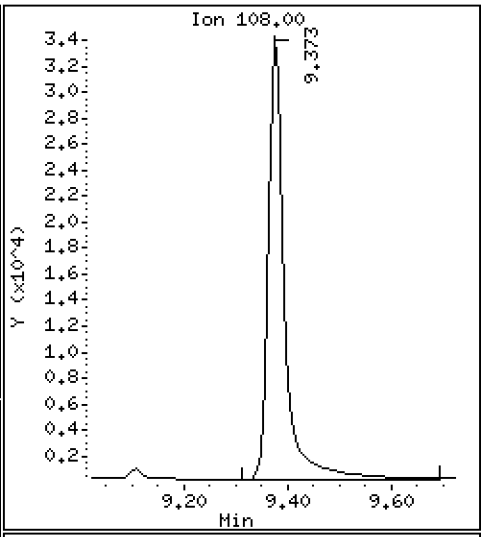
Column phase: ZB-5msi

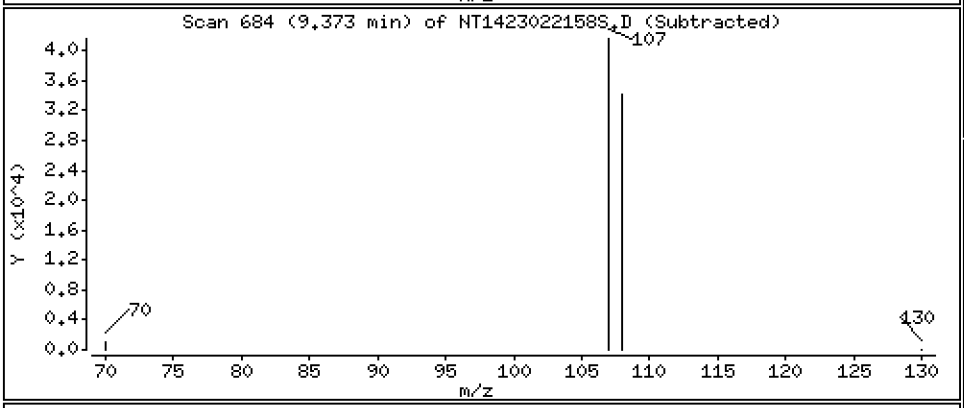
Column diameter: 0.25

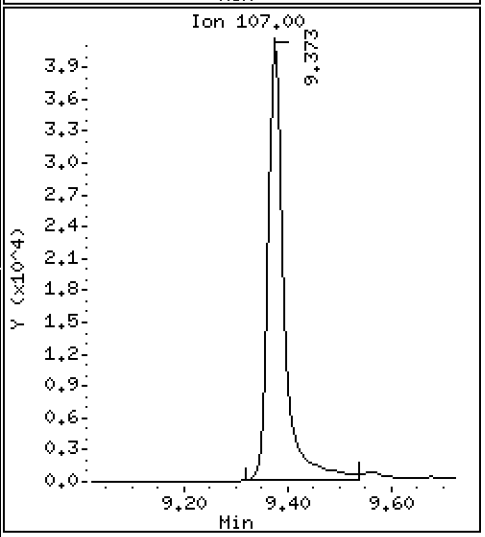
15 4-Methylphenol

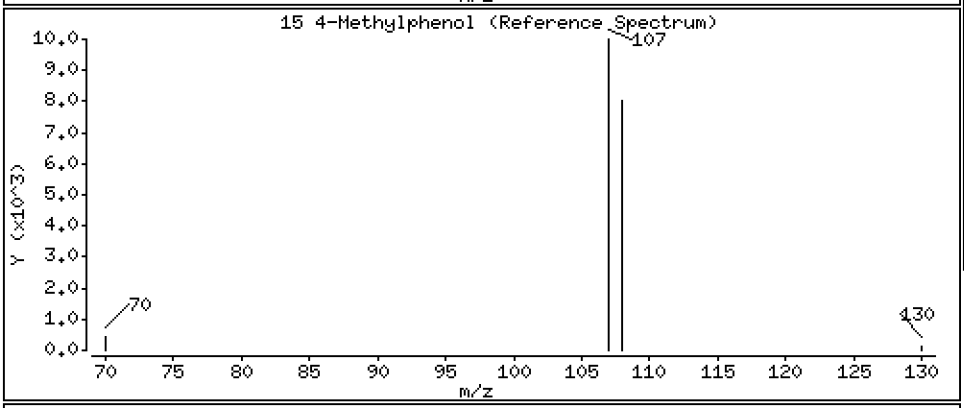
Concentration: 0.8742 ug/mL

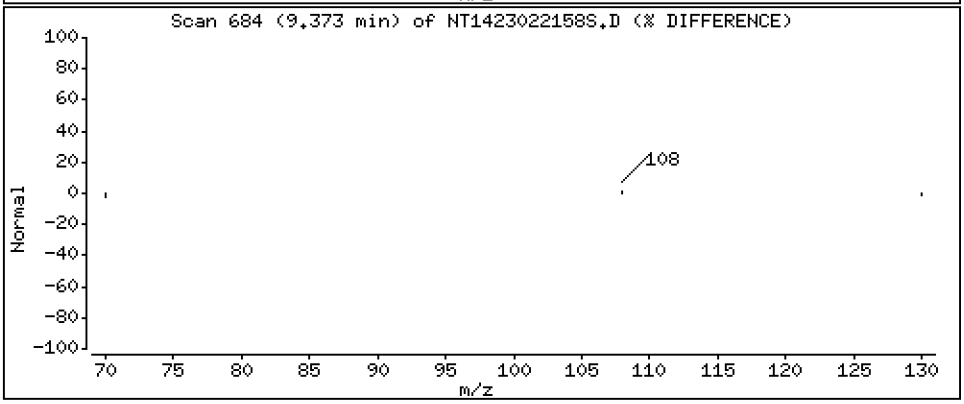












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

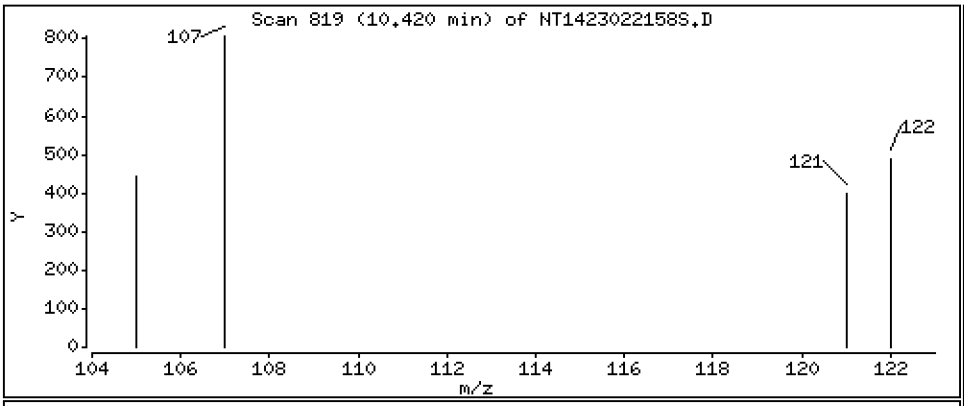
Operator: DSD

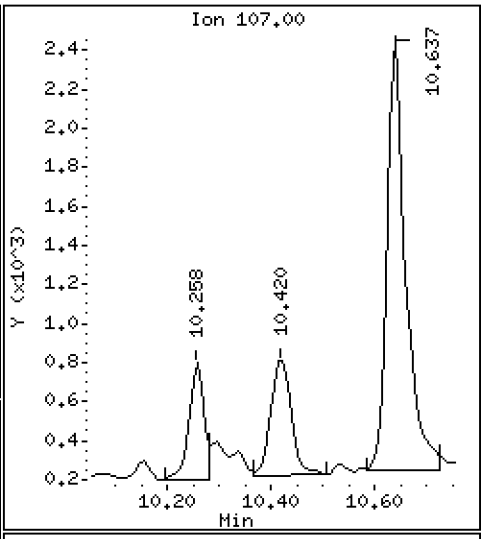
Column phase: ZB-5msi

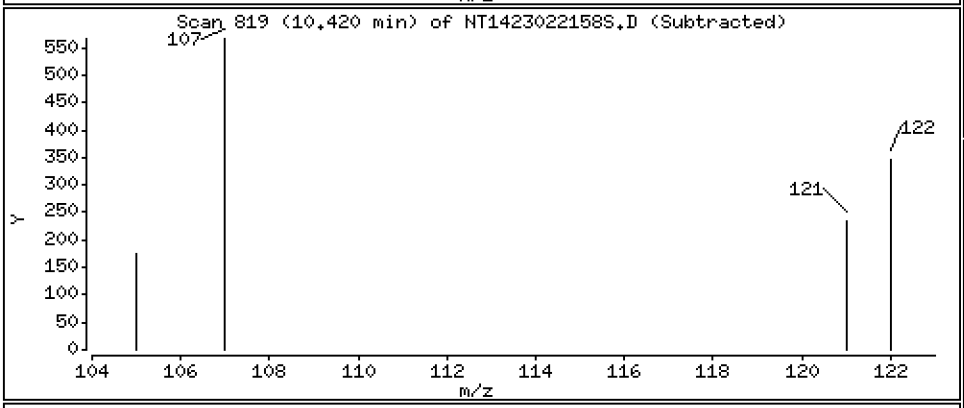
Column diameter: 0.25

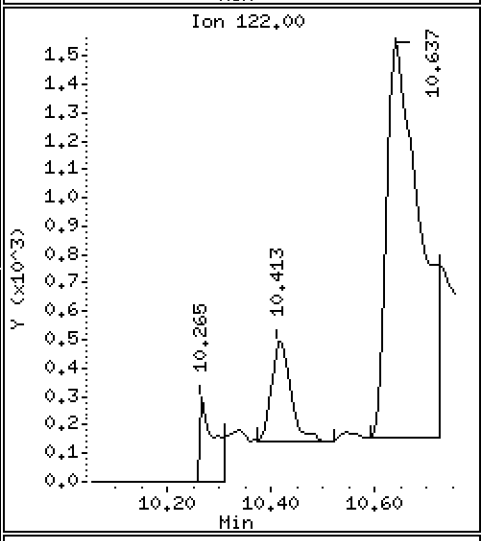
22 2,4-Dimethylphenol

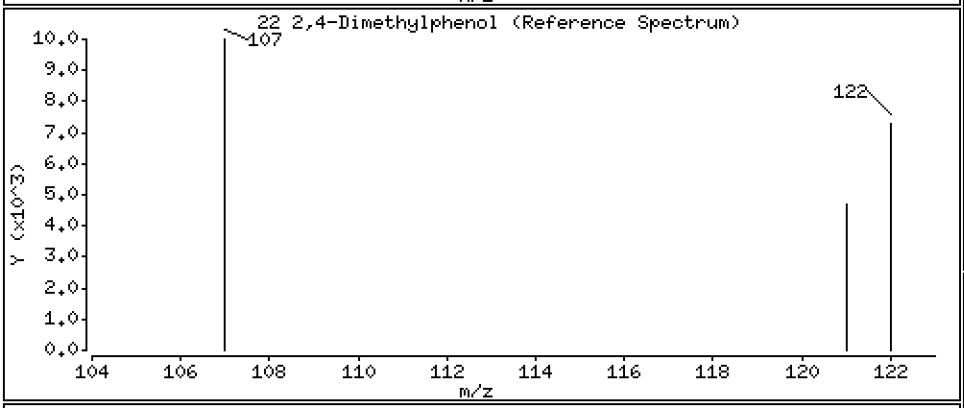
Concentration: 0.01914 ug/mL

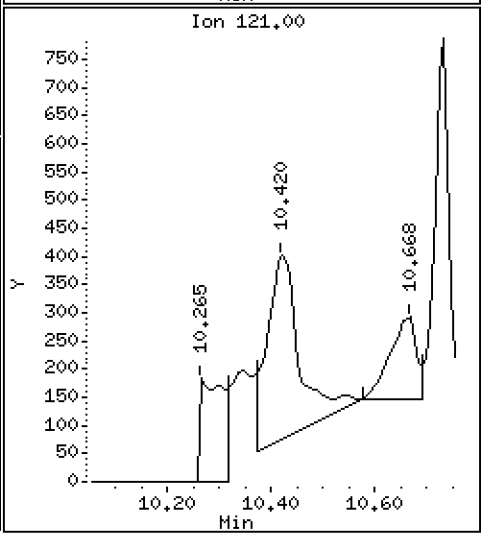


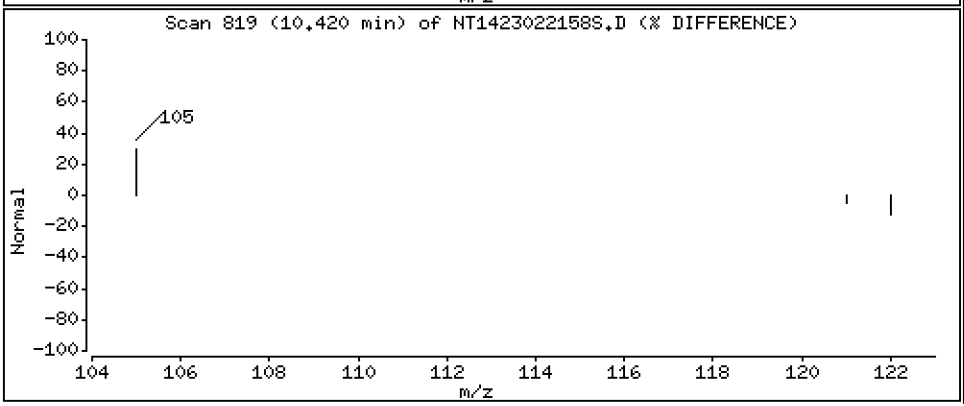












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

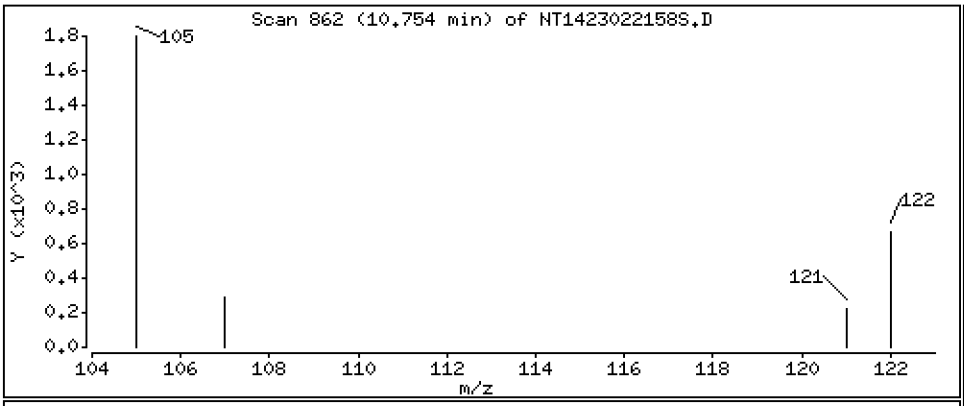
Operator: DSD

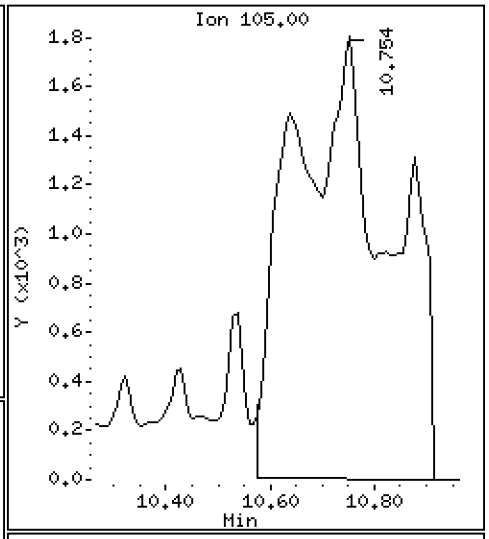
Column phase: ZB-5msi

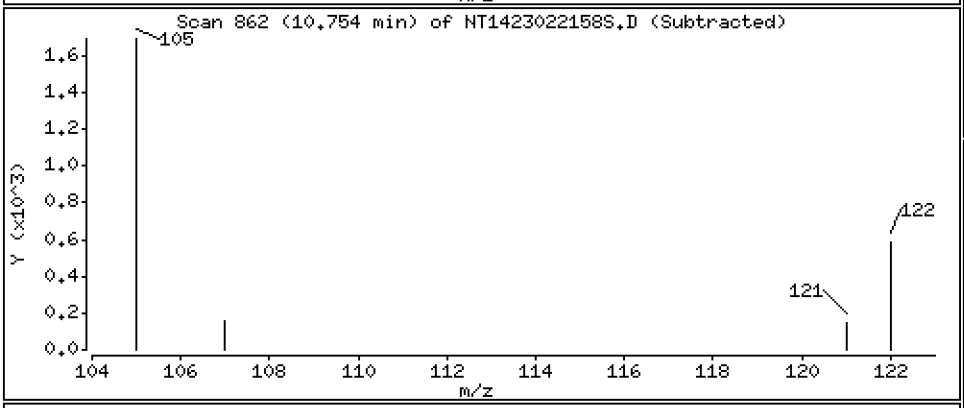
Column diameter: 0.25

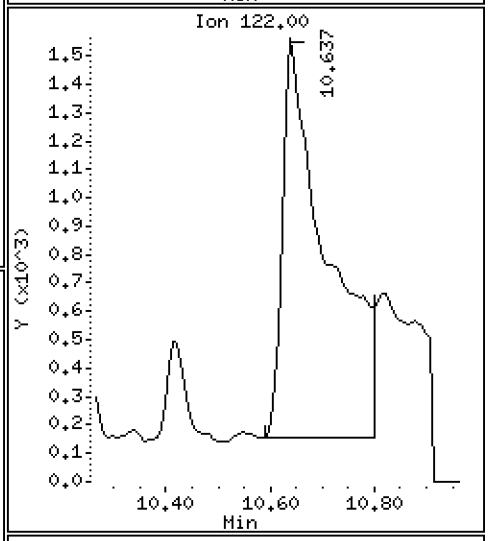
24 Benzoic acid

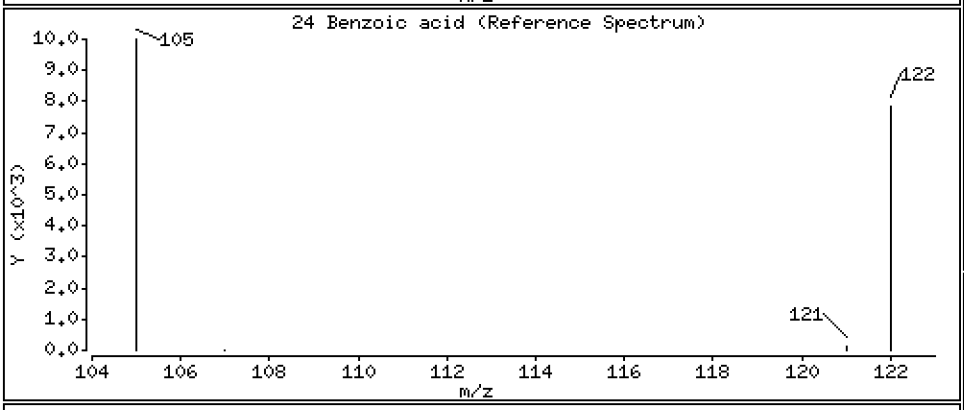
Concentration: 0.5267 ug/mL

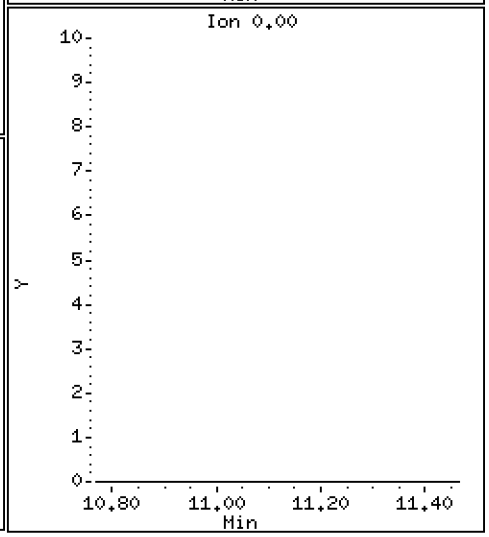


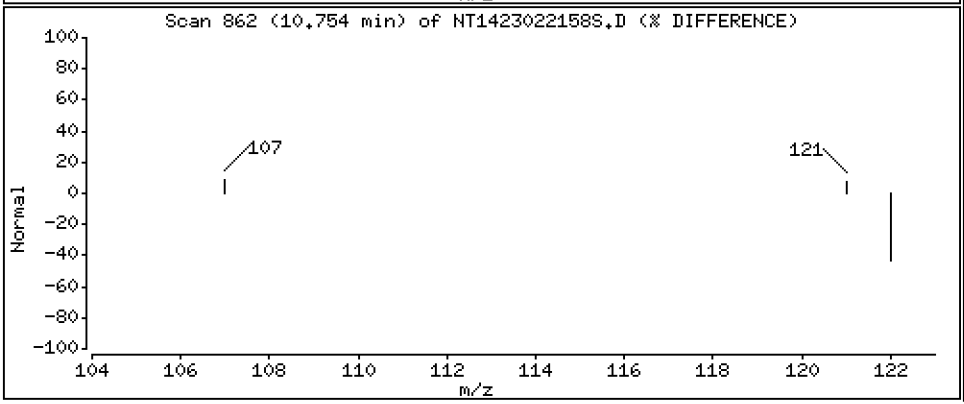












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

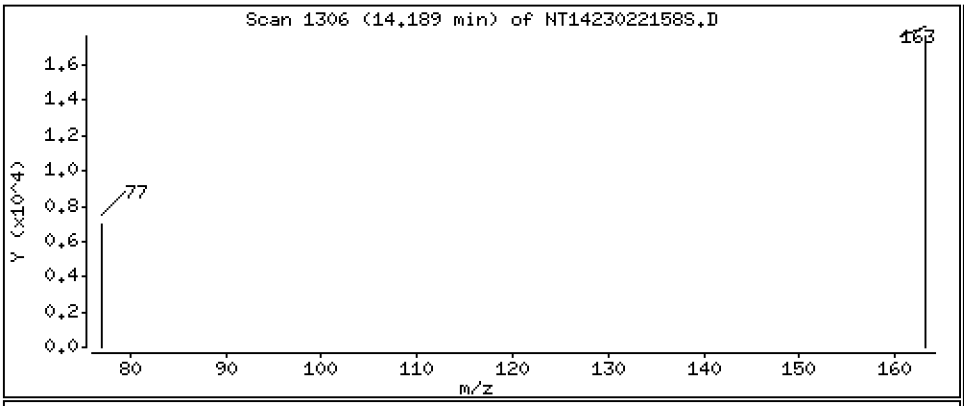
Operator: DSD

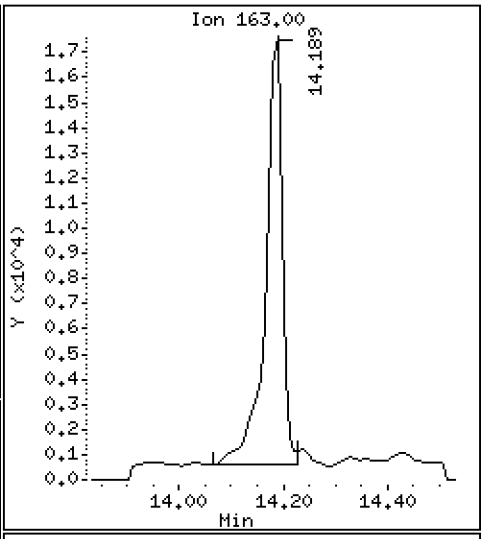
Column phase: ZB-5msi

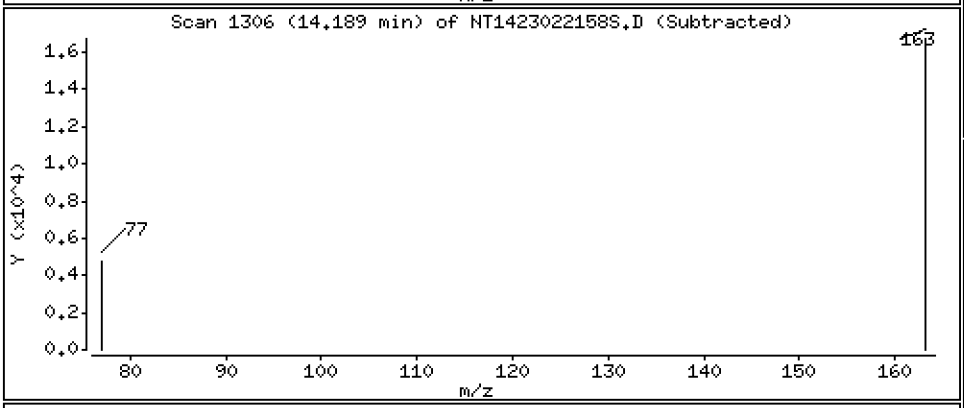
Column diameter: 0.25

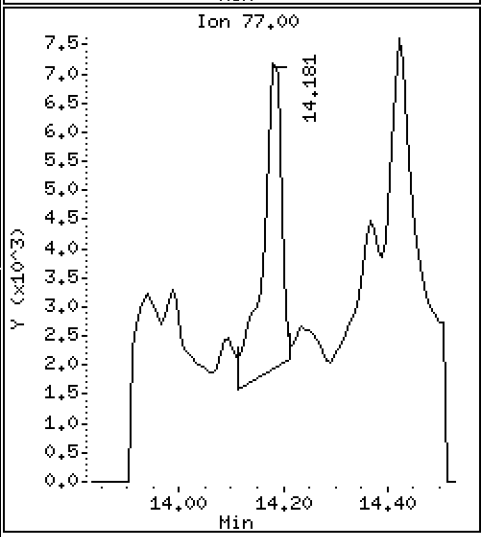
39 Dimethylphthalate

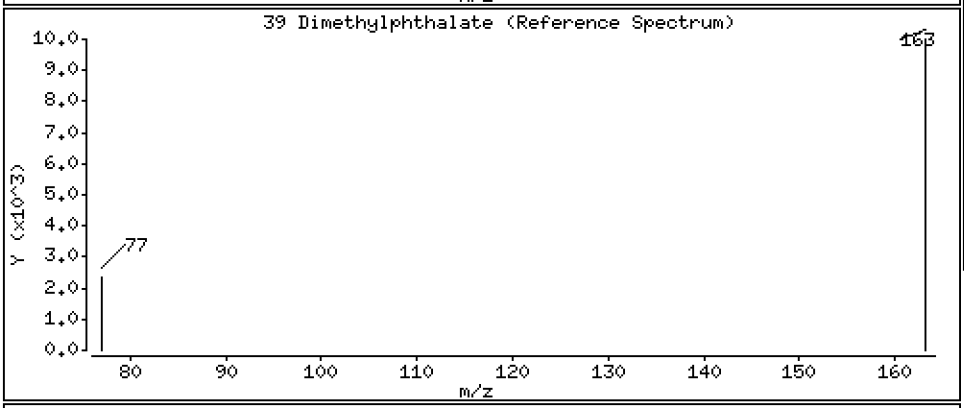
Concentration: 0.2477 ug/mL

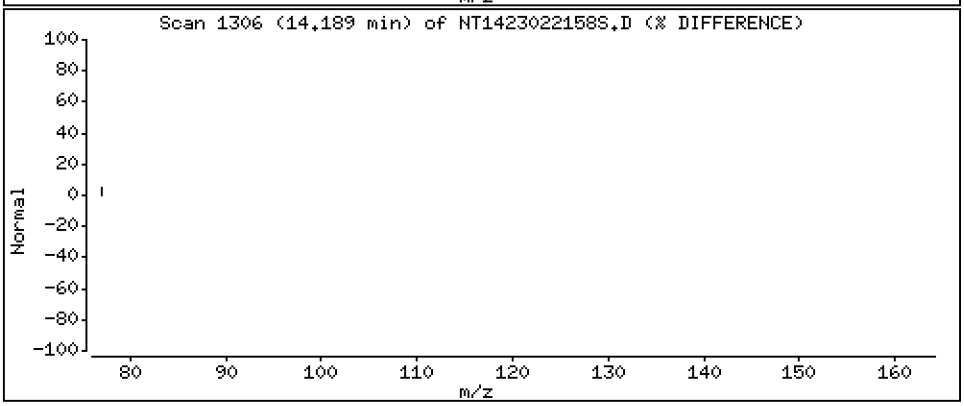












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

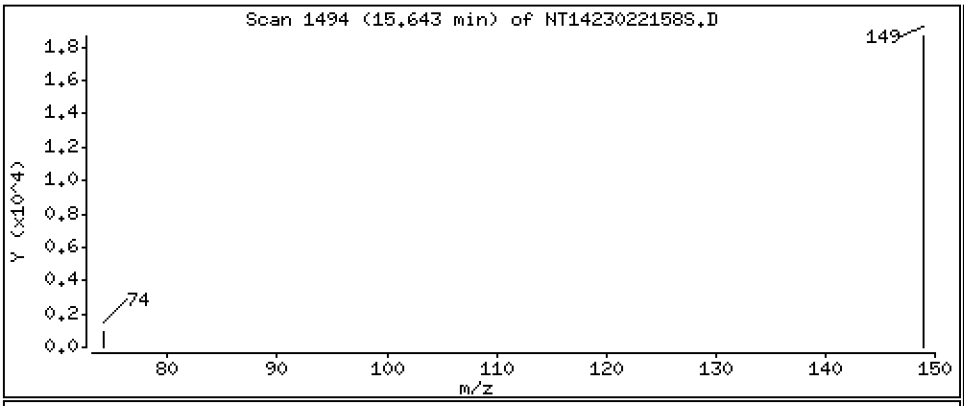
Operator: DSD

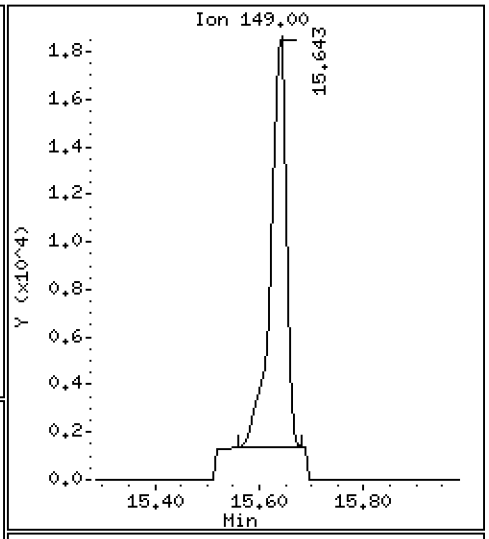
Column phase: ZB-5msi

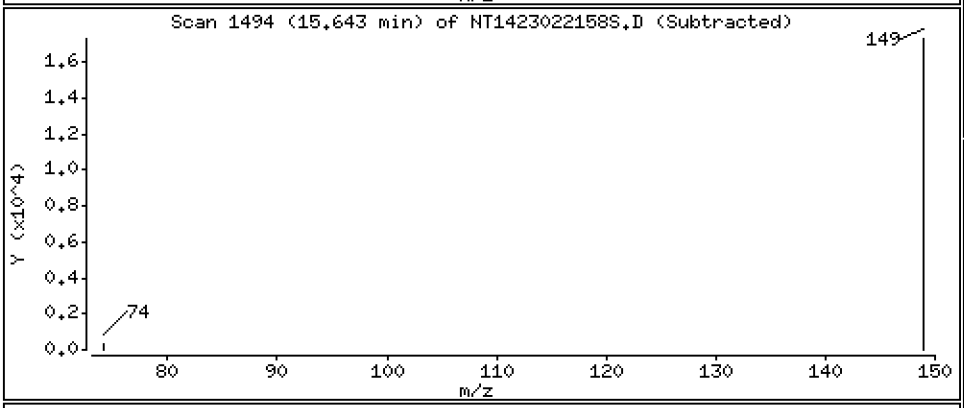
Column diameter: 0.25

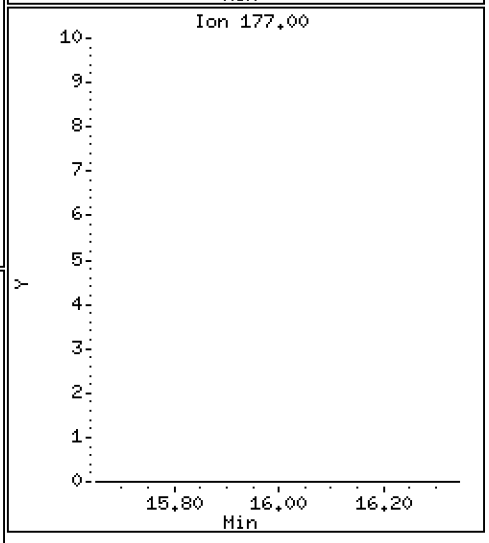
50 Diethylphthalate

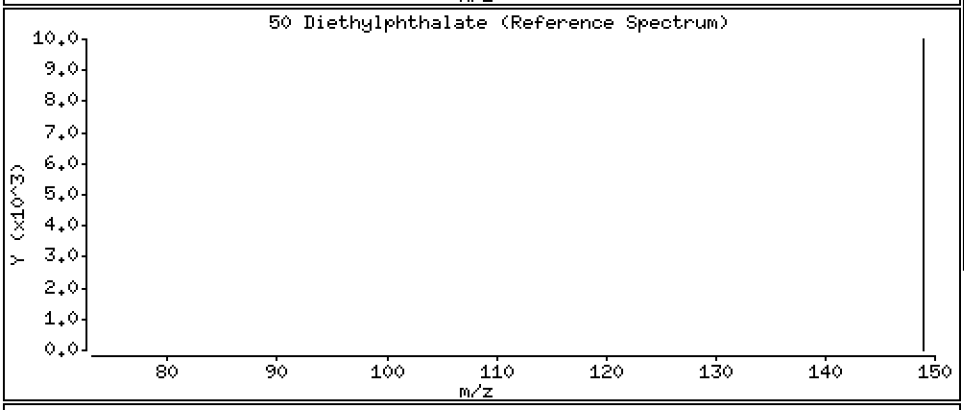
Concentration: 0.1895 ug/mL

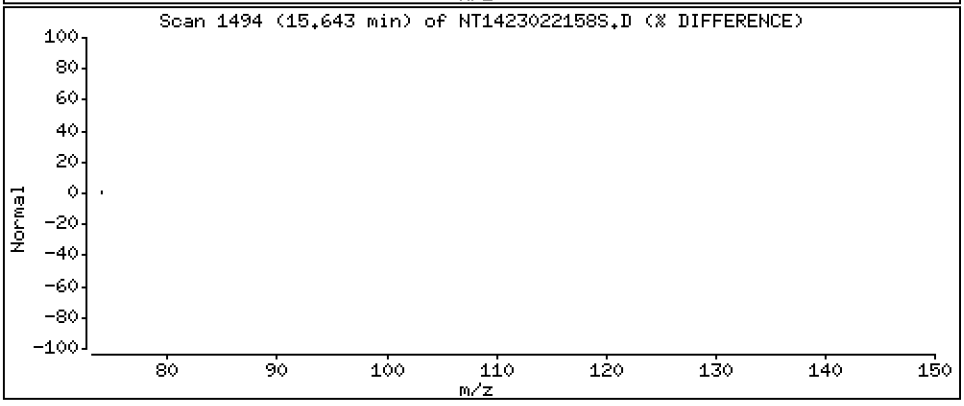












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Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

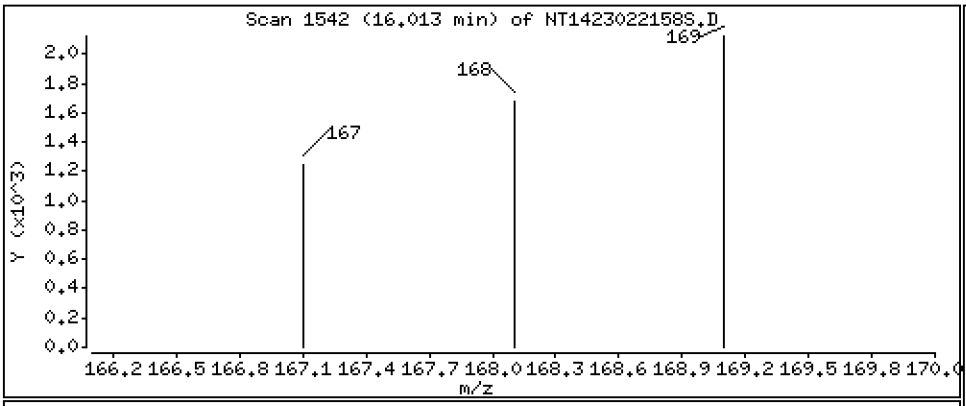
Operator: DSD

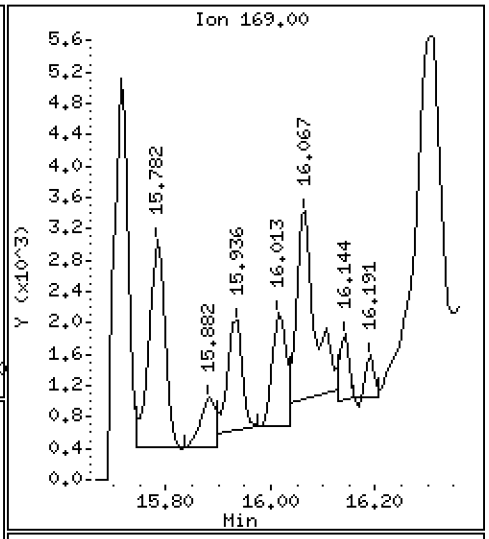
Column phase: ZB-5msi

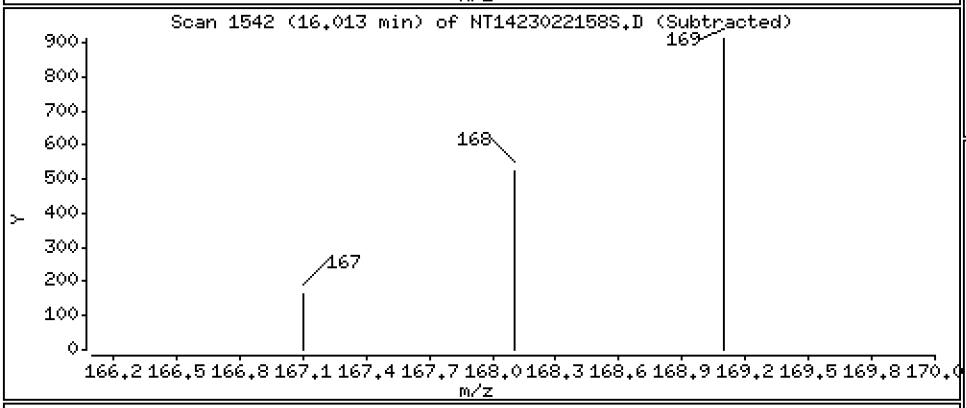
Column diameter: 0.25

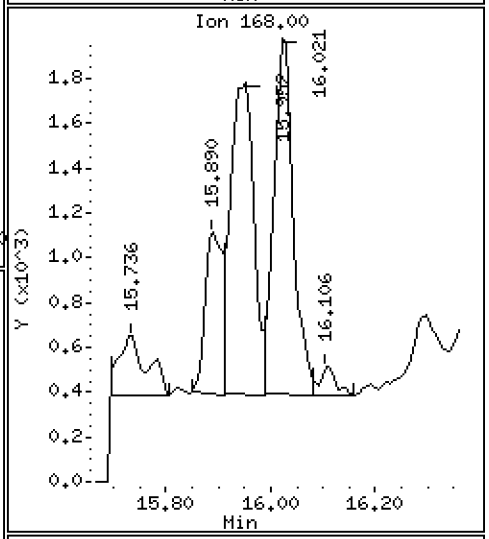
54 N-Nitrosodiphenylamine

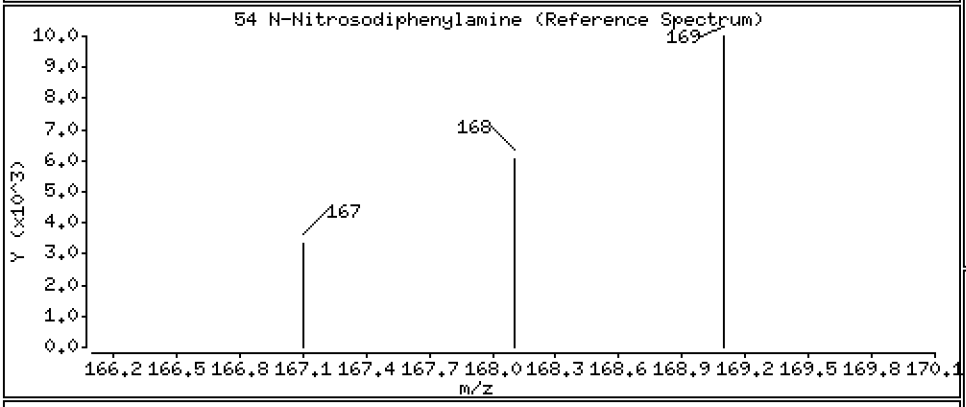
Concentration: 0.02172 ug/mL

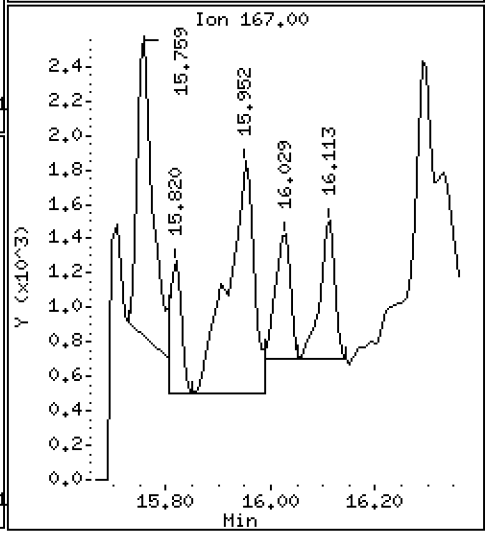


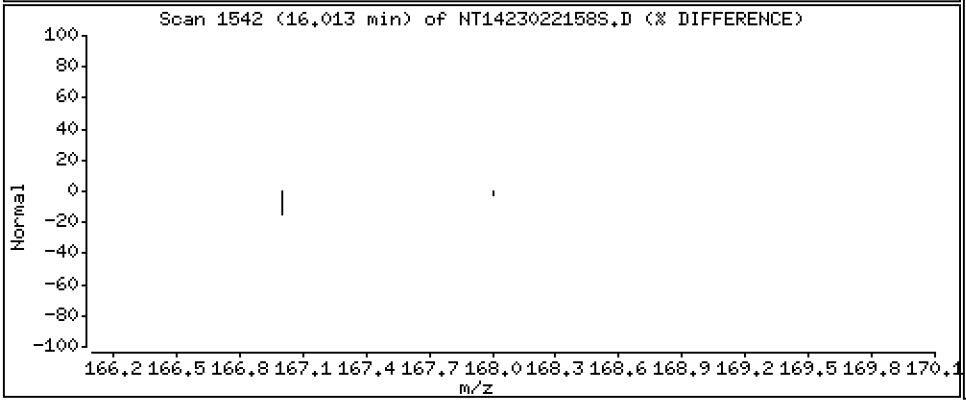












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221158S.D

Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

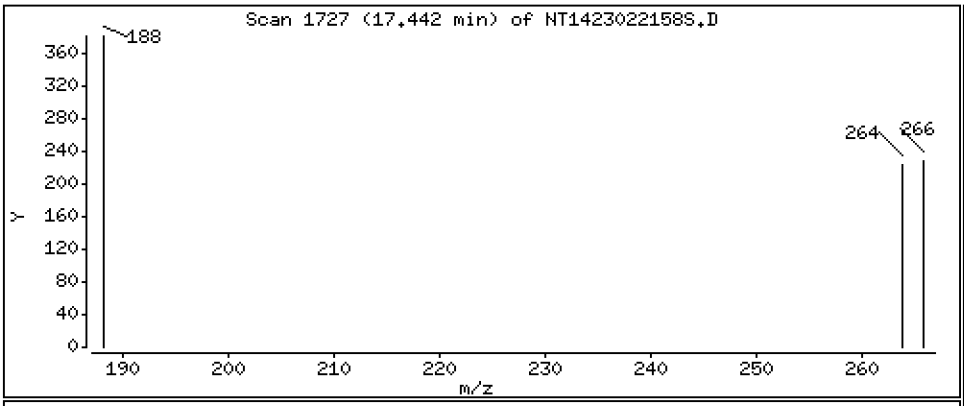
Operator: DSD

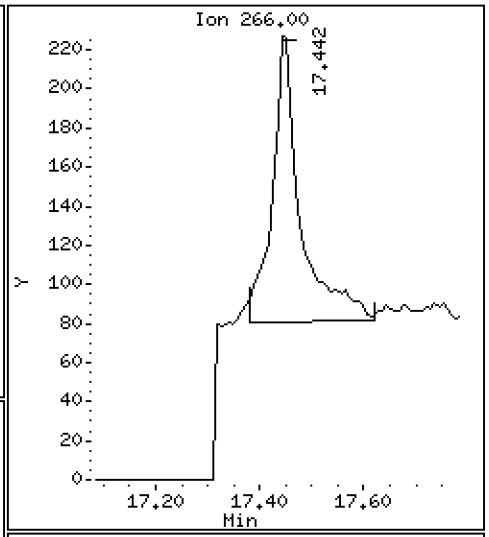
Column phase: ZB-5msi

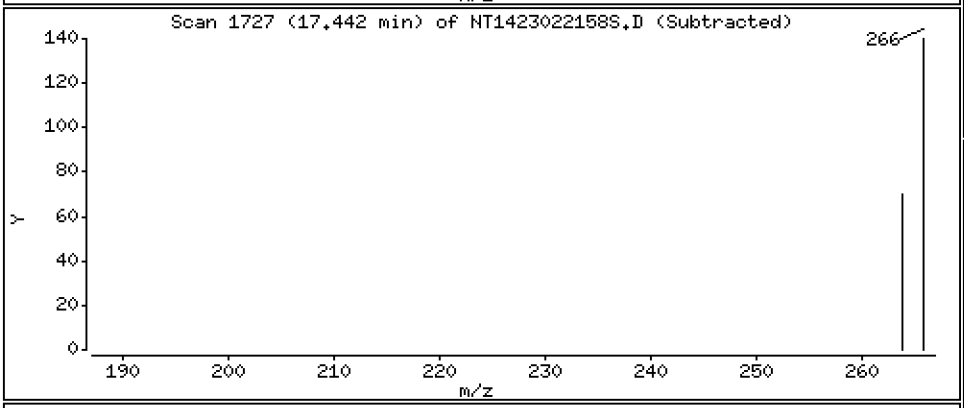
Column diameter: 0.25

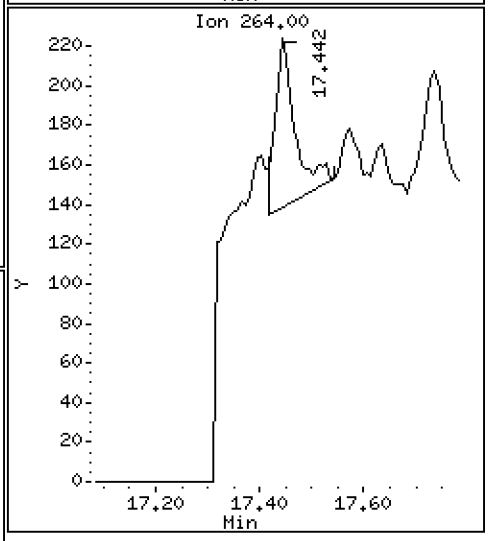
58 Pentachlorophenol

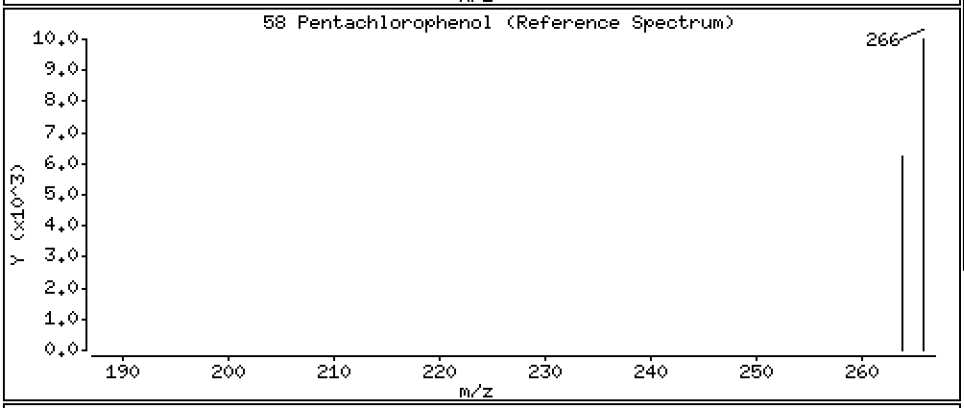
Concentration: 0.02058 ug/mL

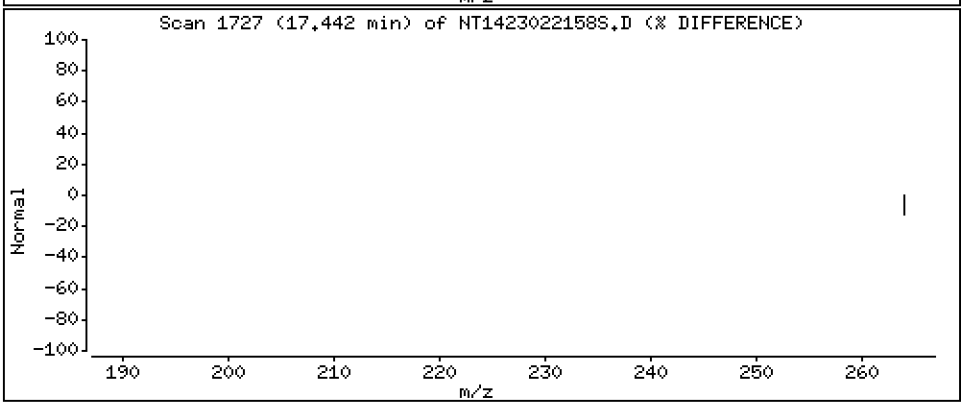












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230222158S.D

Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

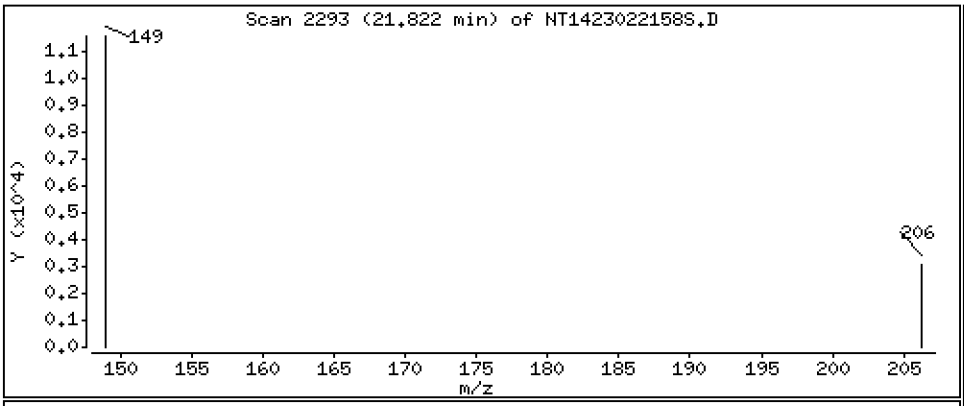
Operator: DSD

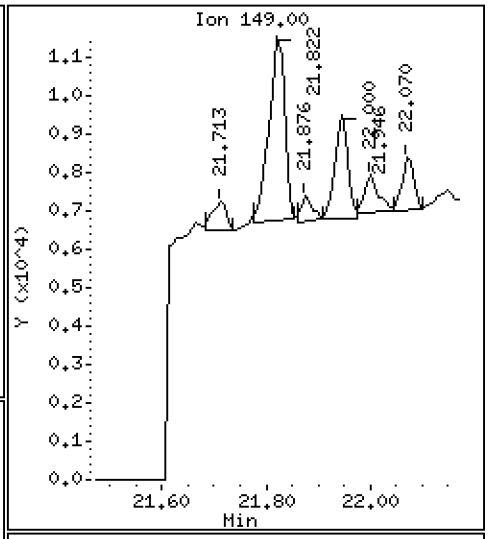
Column phase: ZB-5msi

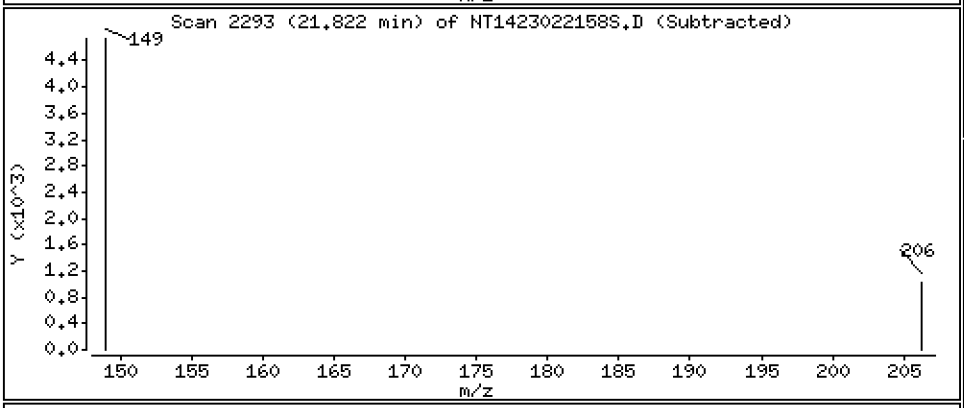
Column diameter: 0.25

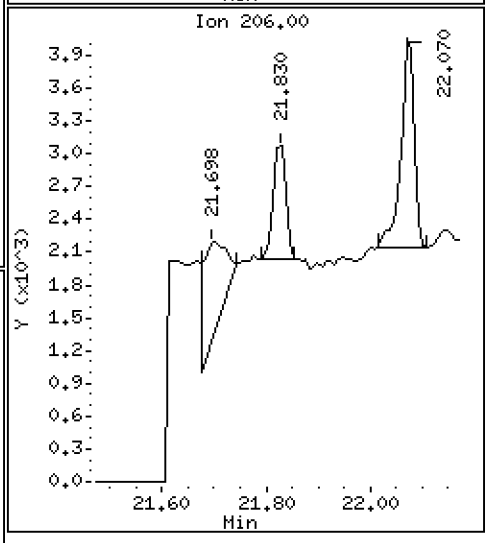
67 Butylbenzylphthalate

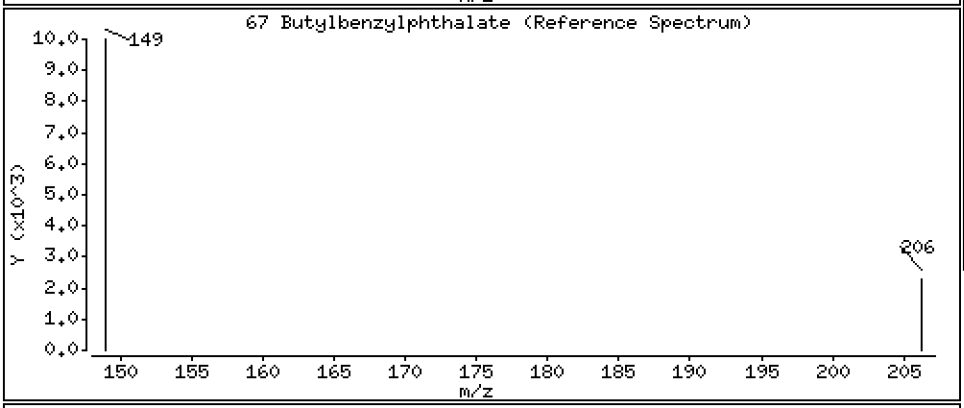
Concentration: 0.1207 ug/mL

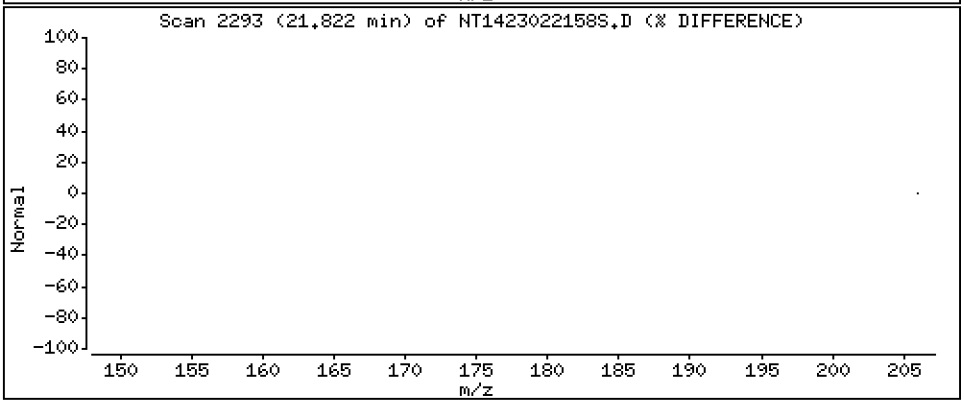












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221158S.D

Date : 22-FEB-2023 23:50

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-15

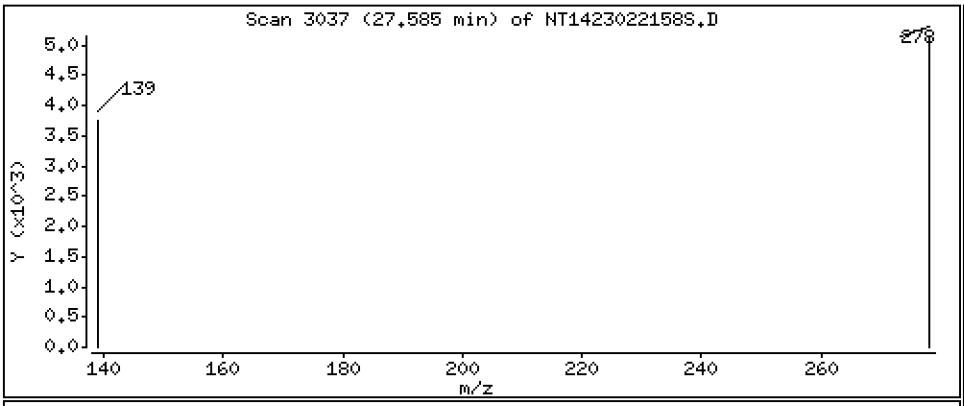
Operator: DSD

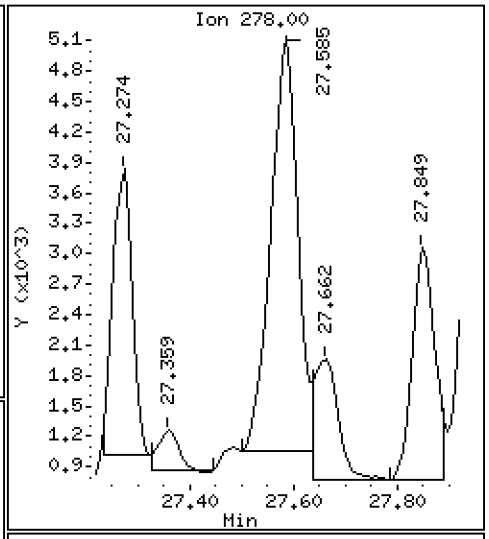
Column phase: ZB-5msi

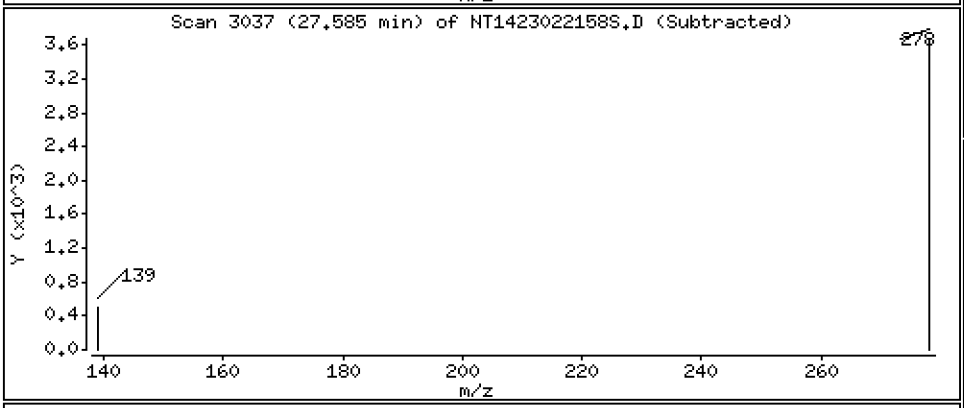
Column diameter: 0.25

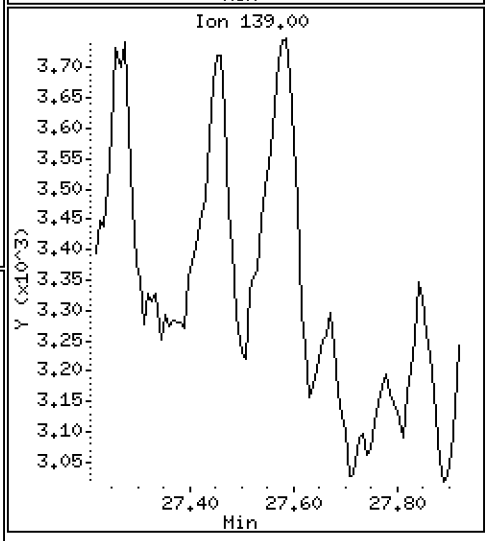
79 Dibenzo(a,h)anthracene

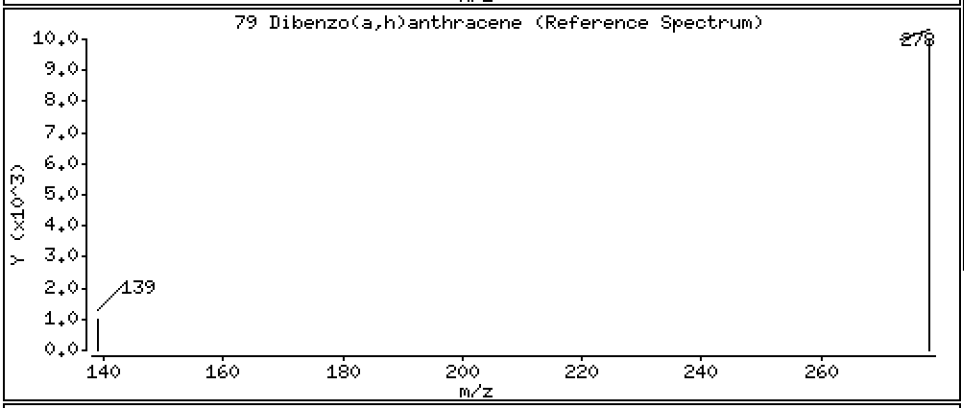
Concentration: 0.1705 ug/mL

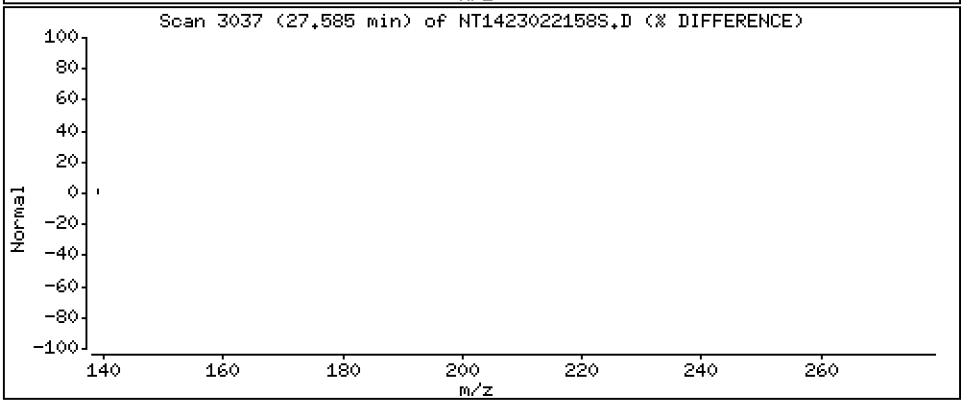












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT1423022158S.D
Lab Smp Id: 23A0133-15
Inj Date : 22-FEB-2023 23:50 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-15
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Meth Date : 25-May-2023 11:39 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 41
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
$	1	2-Fluorophenol	112	6.393	6.386	(0.746)	331371	4.60180	4.602(R)
	3	Phenol	94	8.001	7.993	(0.933)	424236	3.86730	3.867
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	8.573	8.573	(1.000)	253408	4.00000	
	9	1,4-Dichlorobenzene	146	8.596	8.596	(1.003)	1277	0.01553	0.01553(M)
	11	Benzyl alcohol	79	8.876	8.876	(1.035)	16719	0.24090	0.2409
	12	1,2-Dichlorobenzene	146	Compound Not Detected.					
	13	2-Methylphenol	108	9.108	9.101	(1.062)	1702	0.02263	0.02263(M)
	15	4-Methylphenol	108	9.372	9.373	(1.093)	72254	0.87419	0.8742
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22	2,4-Dimethylphenol	107	10.420	10.404	(0.944)	1640	0.01914	0.01914
	24	Benzoic acid	105	10.753	10.614	(0.974)	23294	0.52671	0.5267(M)
	26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27	Naphthalene-d8	136	11.040	11.040	(1.000)	935515	4.00000	
	30	Hexachlorobutadiene	225	Compound Not Detected.					
	39	Dimethylphthalate	163	14.189	14.181	(0.968)	36540	0.24770	0.2477
*	42	Acenaphthene-d10	162	14.653	14.653	(1.000)	483528	4.00000	
	50	Diethylphthalate	149	15.642	15.635	(1.068)	34995	0.18955	0.1895
	54	N-Nitrosodiphenylamine	169	16.013	16.013	(0.906)	2713	0.02172	0.02172
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	17.442	17.434	(0.986)	543	0.02058	0.02058(M)
*	59	Phenanthrene-d10	188	17.681	17.674	(1.000)	998884	4.00000	
$	66	Terphenyl-d14	244	20.885	20.869	(0.917)	728040	4.31607	4.316(R)
	67	Butylbenzylphthalate	149	21.821	21.821	(0.958)	9599	0.12066	0.1207
*	69	Chrysene-d12	240	22.782	22.774	(1.000)	633616	4.00000	
*	77	Perylene-d12	264	25.236	25.220	(1.000)	496970	4.00000	
	79	Dibenzo(a,h)anthracene	278	27.584	27.569	(1.093)	14846	0.17052	0.1705
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022158S.D
Lab Smp Id: 23A0133-15
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 17:47
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	241018	120509	482036	253408	5.14
27 Naphthalene-d8	887165	443583	1774330	935515	5.45
42 Acenaphthene-d10	467553	233777	935106	483528	3.42
59 Phenanthrene-d10	1079793	539897	2159586	998884	-7.49
69 Chrysene-d12	754146	377073	1508292	633616	-15.98
77 Perylene-d12	558201	279101	1116402	496970	-10.97

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.67	17.17	18.17	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.03
77 Perylene-d12	25.22	24.72	25.72	25.24	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022158S.D

Lab ID: 23A0133-15
nt14.i, 20230221C.b\SIM.b\SIMABN2.m,   22-FEB-2023 23:50

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.974	0.961	0.0126	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1423022148ICVS.d

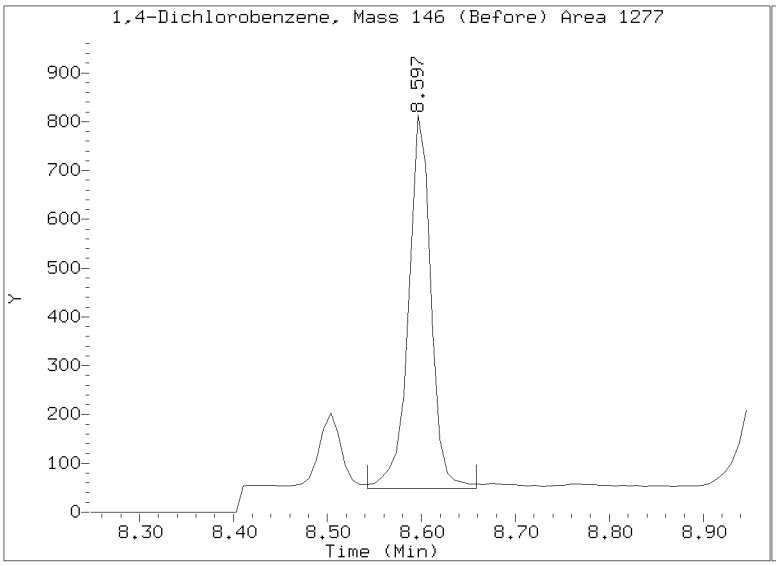
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

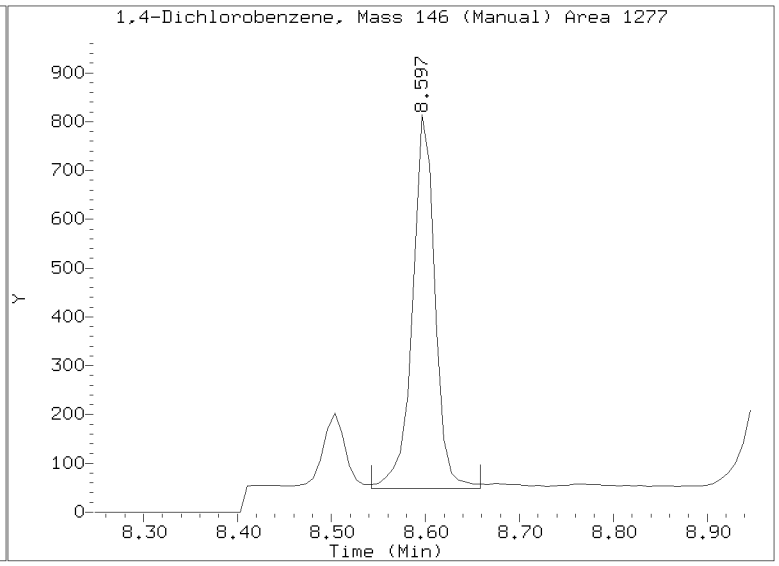
Exception: 1,2,4-Trichlorobenzene 0.0010

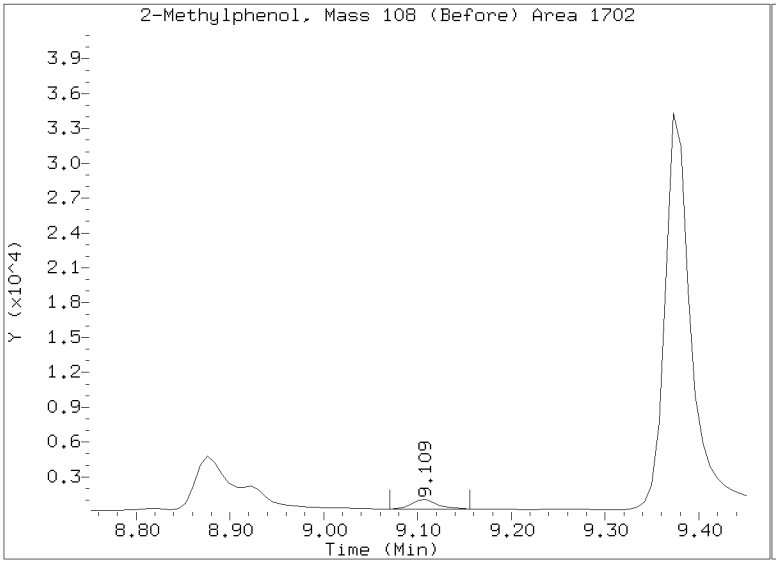
* Only compounds listed in the work order have been verified by the analyst *

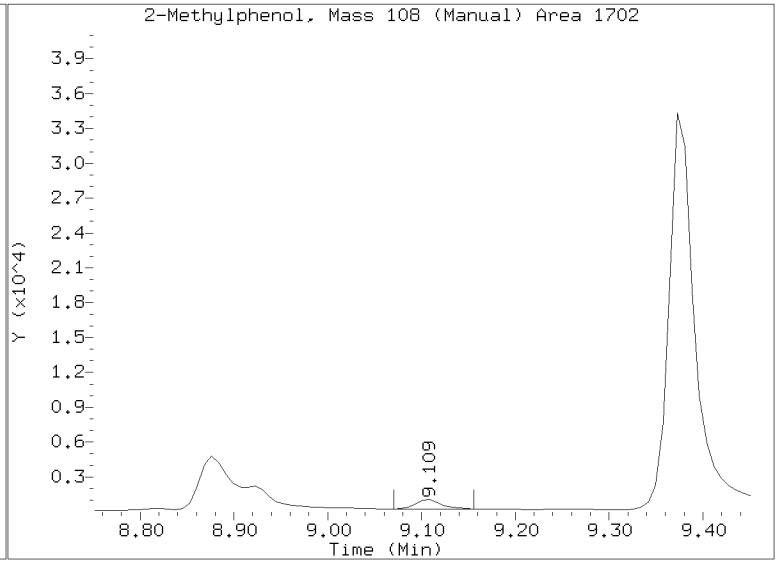
Quant Ion Manual Peak Adjustment Report

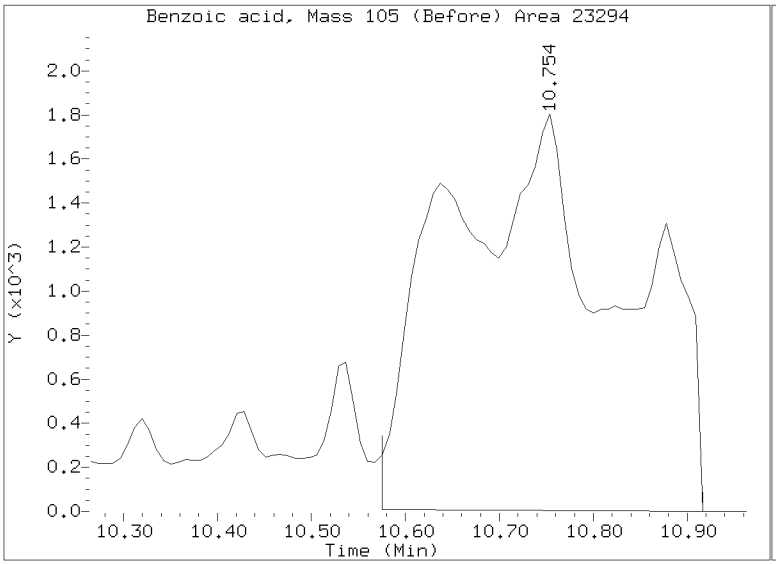
Datafile: //target/share/chem3/nt14.i/20230221C.b/SIM.b/NT1423022158S.D
Injection Date: 22-FEB-2023 23:50
Lab ID:23A0133-15 Client ID:
Report Date: 05/25/2023 11:48

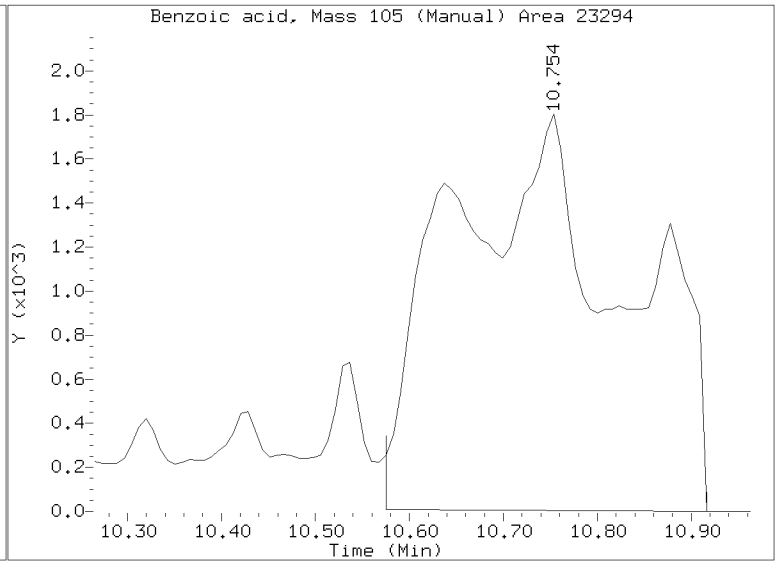






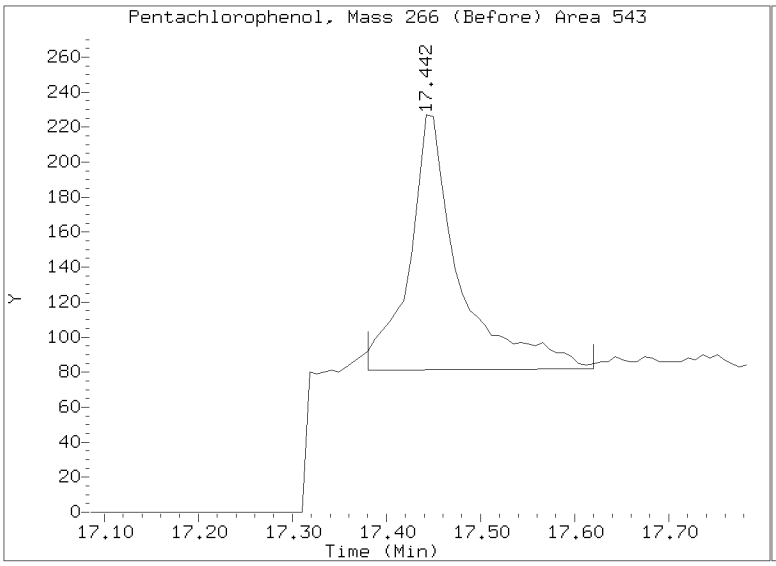


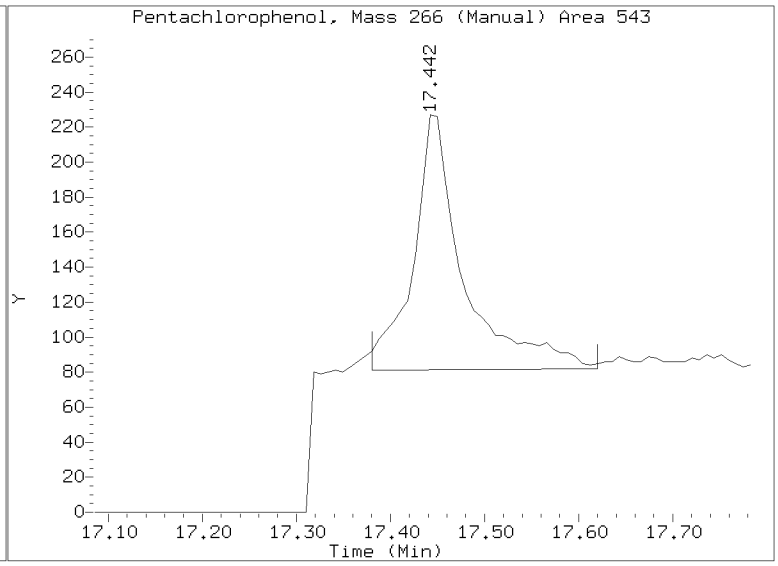




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221C.b/SIM.b/NT1423022158S.D
Injection Date: 22-FEB-2023 23:50
Lab ID:23A0133-15 Client ID:
Report Date: 05/25/2023 11:48





Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1091

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-16 C	SDG:	23A0133
Sampled:	01/06/23 14:50	Prepared:	01/18/23 15:24	File ID:	NT1423022159S.D
% Solids:	49.38	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/23/23 00:26
Batch:	BLA0393	Sequence:	SLB0351	Initial/Final:	12.27 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GC00009
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.3	J	1.0	8.3
95-50-1	1,2-Dichlorobenzene	1	8.3	U	1.2	8.3
100-51-6	Benzyl Alcohol	1	28.3	J	4.1	33.0
65-85-0	Benzoic acid	1	80.4	J	22.1	660
105-67-9	2,4-Dimethylphenol	1	33.0	U	3.6	33.0
120-82-1	1,2,4-Trichlorobenzene	1	8.3	U	4.4	8.3
86-30-6	N-Nitrosodiphenylamine	1	8.3	U	2.2	8.3
87-86-5	Pentachlorophenol	1	66.0	U	3.5	66.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	1237.8	786	63.5	27 - 120	
p-Terphenyl-d14	825.23	718	87.1	37 - 120	Q

Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221S9S.D

Date : 23-FEB-2023 00:26

Client ID:

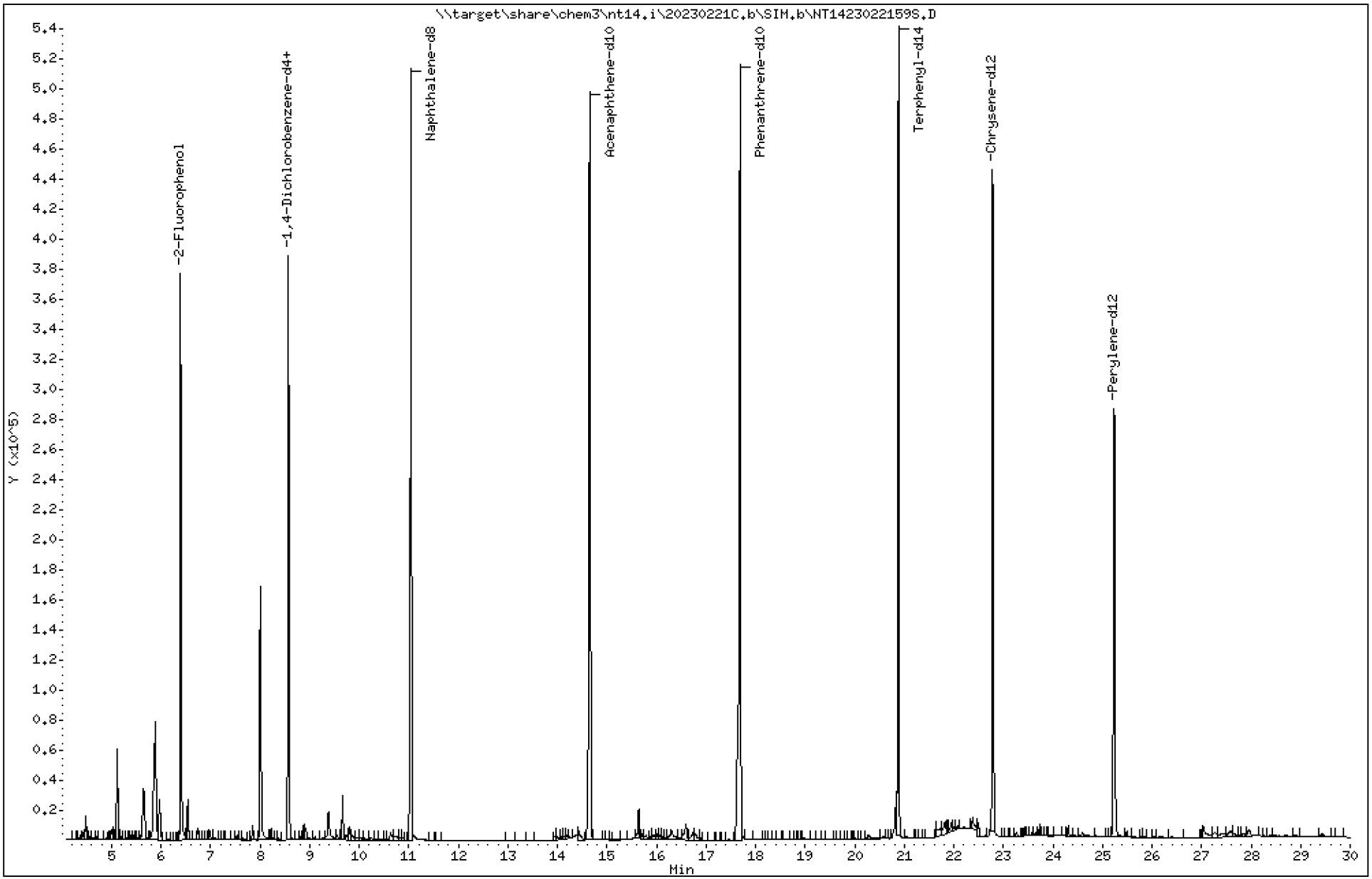
Instrument: nt14.i

Sample Info: 23A0133-16

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

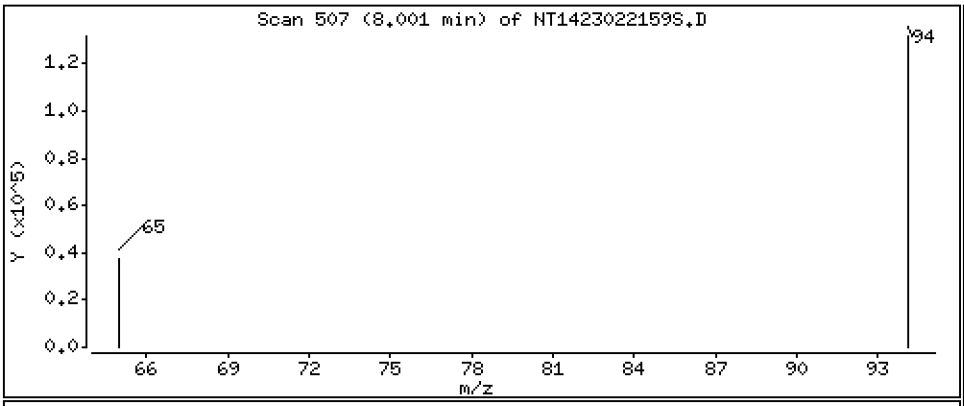
Operator: DSD

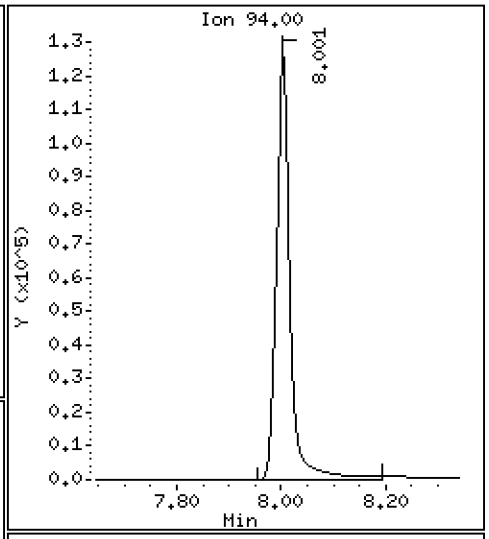
Column phase: ZB-5msi

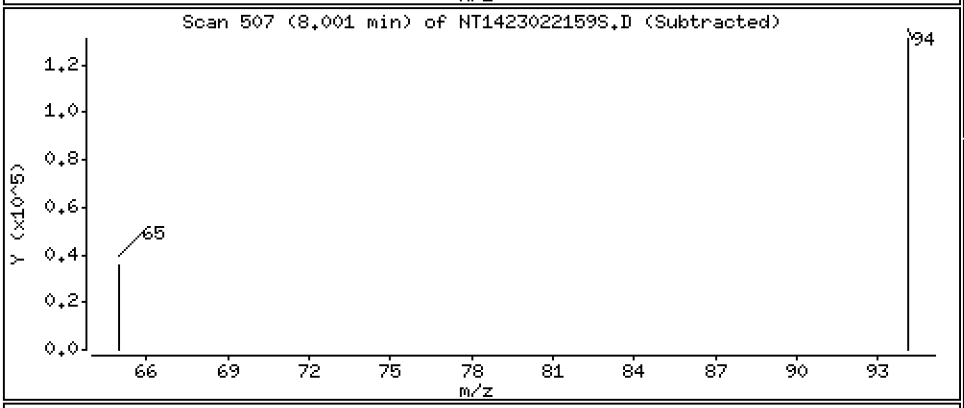
Column diameter: 0.25

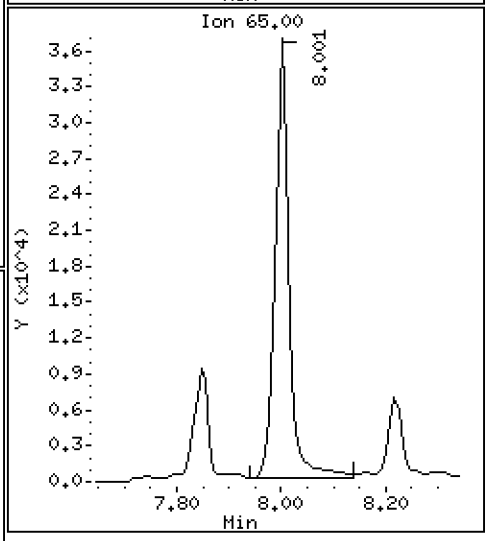
3 Phenol

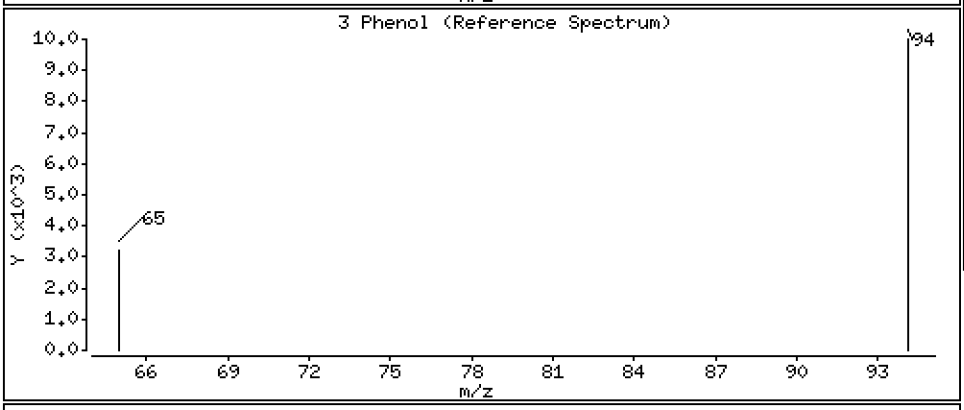
Concentration: 2.080 ug/mL

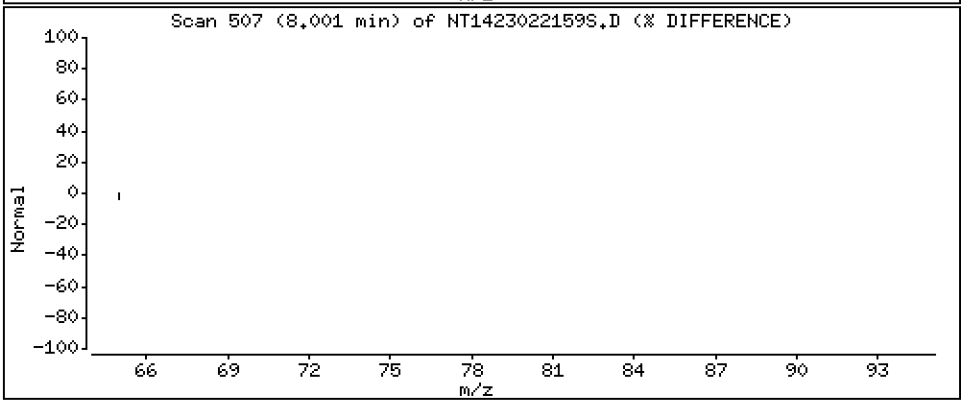












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221S9S.D

Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

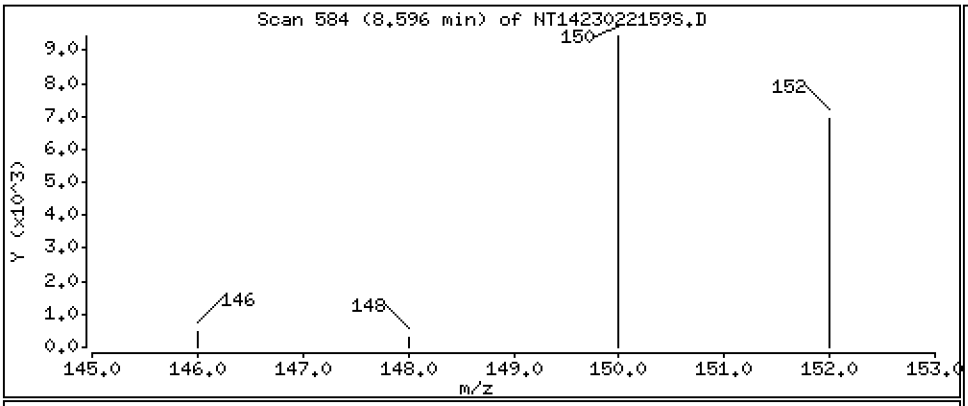
Operator: DSD

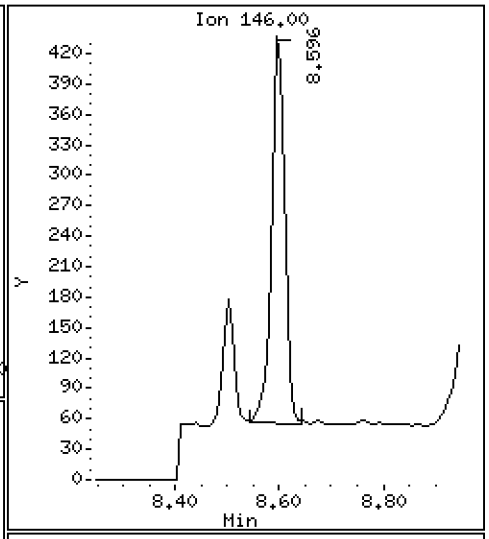
Column phase: ZB-5msi

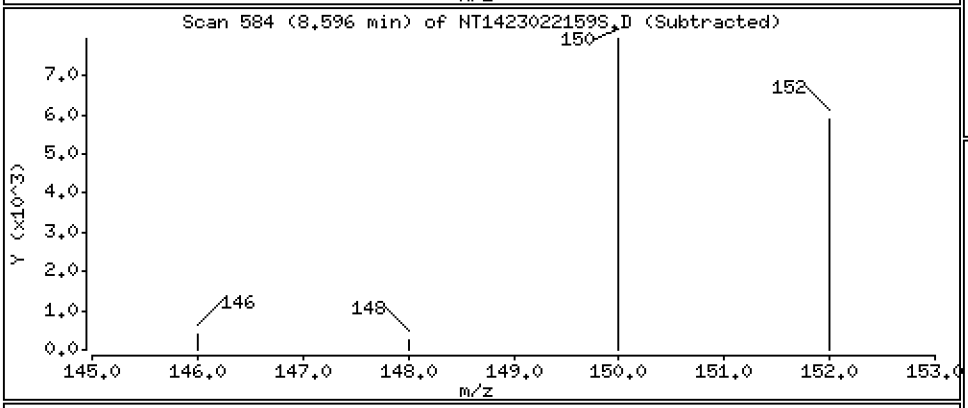
Column diameter: 0.25

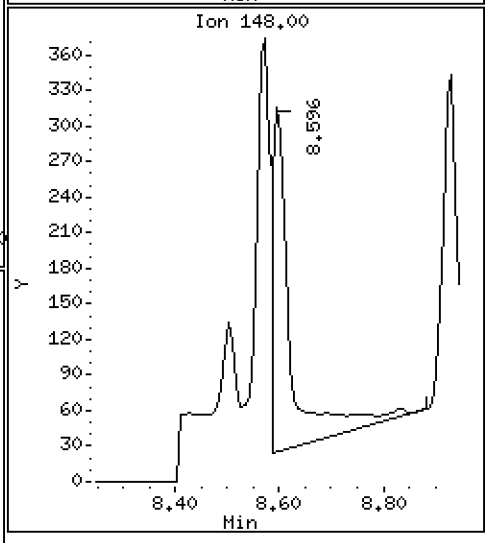
9 1,4-Dichlorobenzene

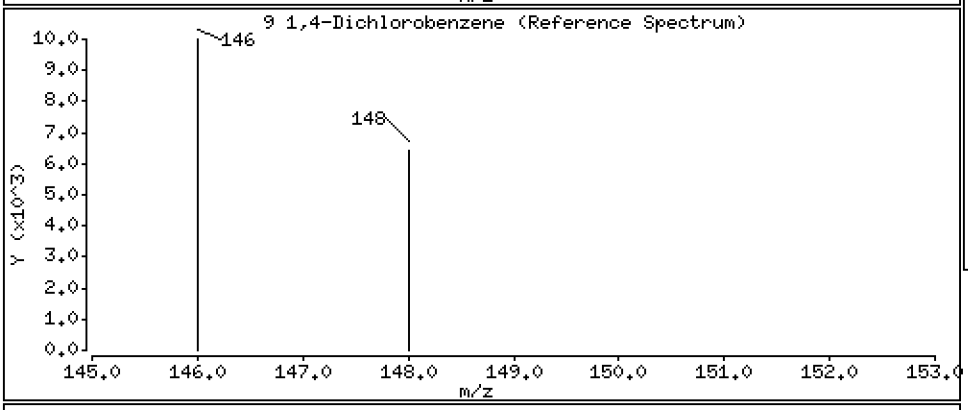
Concentration: 0.007949 ug/mL

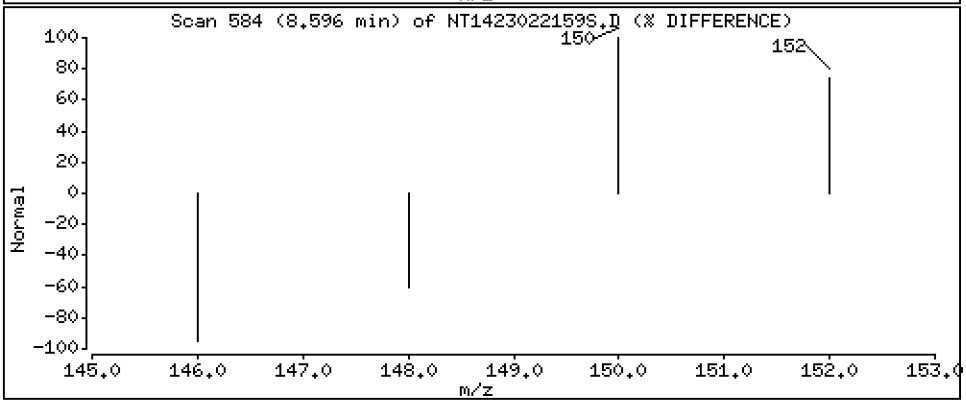












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022159S.D

Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

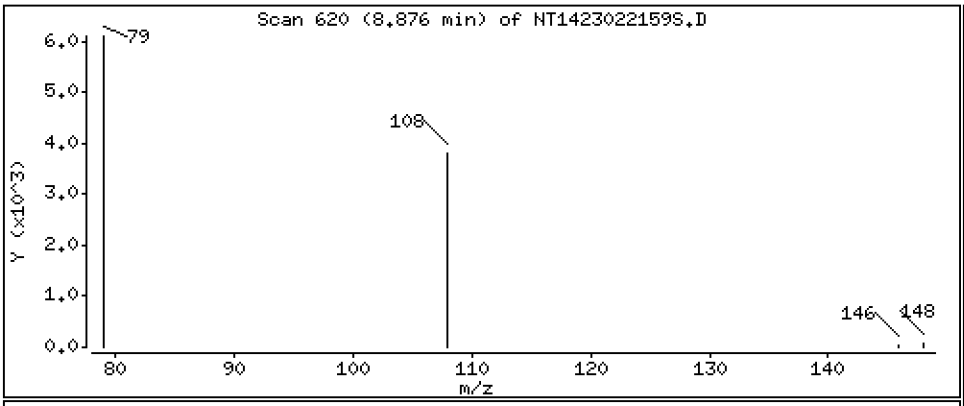
Operator: DSD

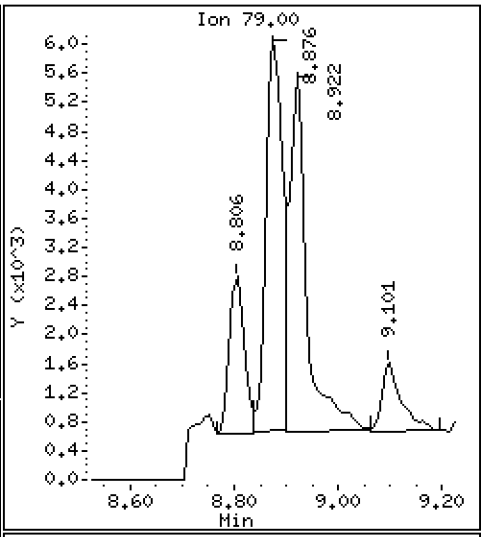
Column phase: ZB-5msi

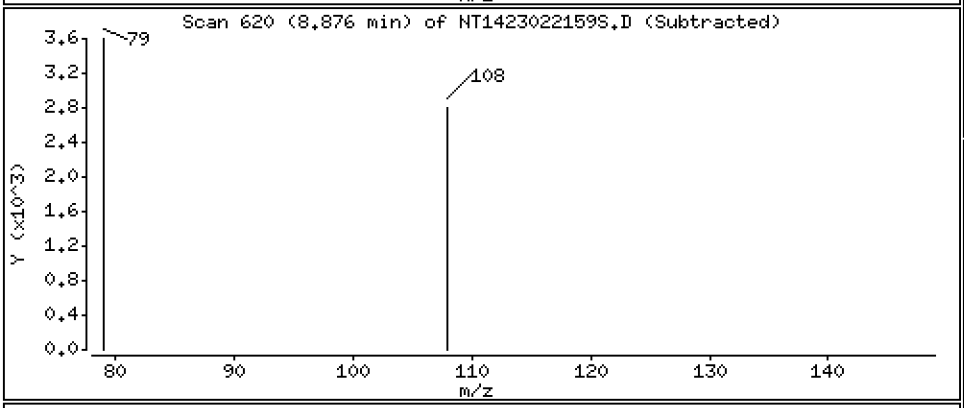
Column diameter: 0.25

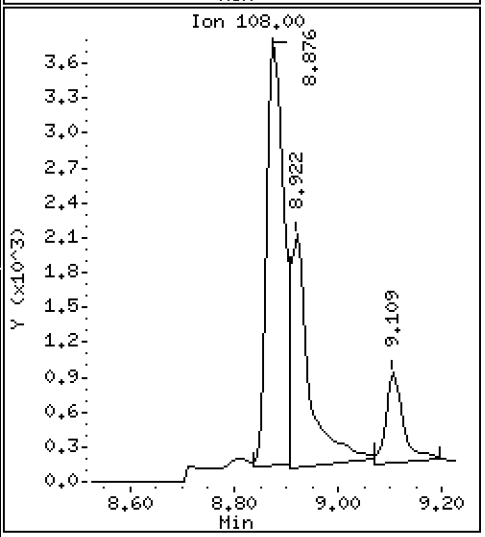
11 Benzyl alcohol

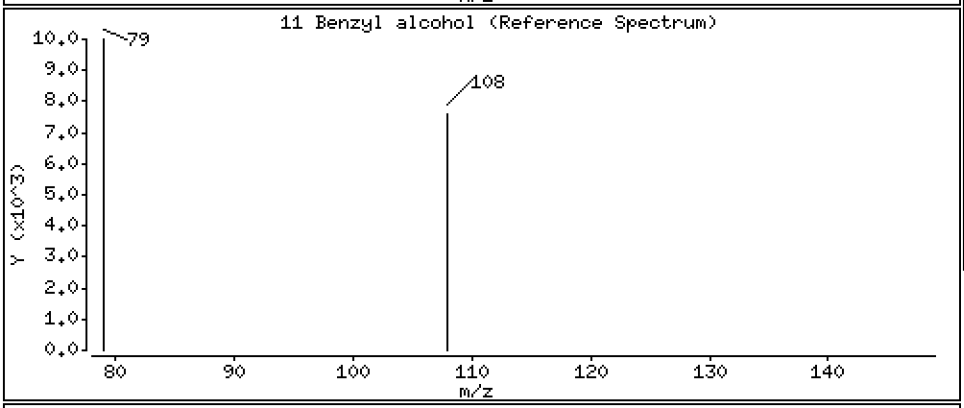
Concentration: 0.1716 ug/mL

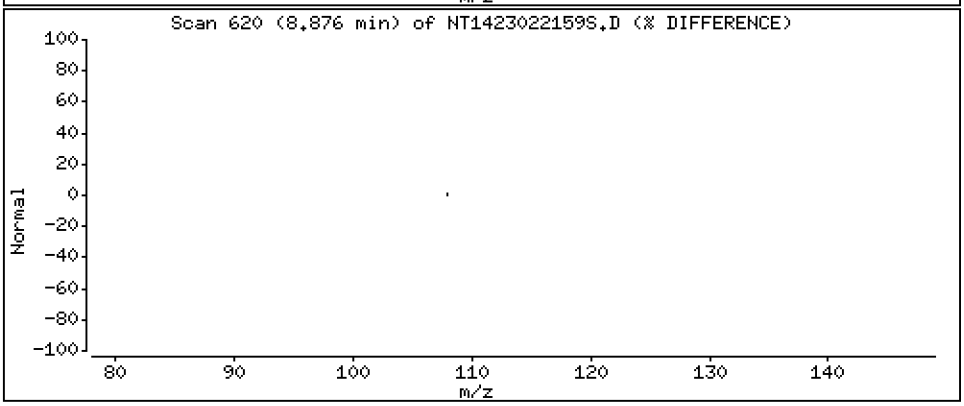












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022159S.D

Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

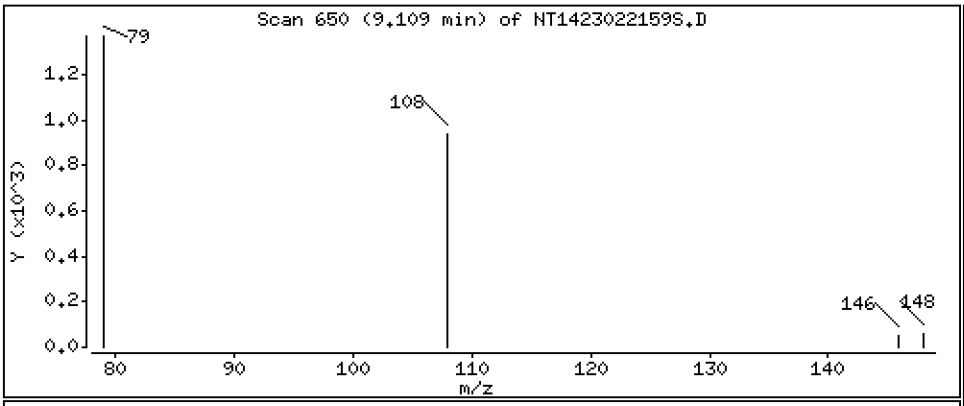
Operator: DSD

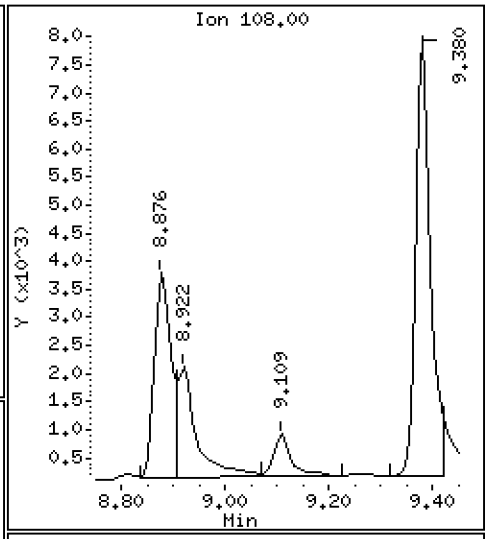
Column phase: ZB-5msi

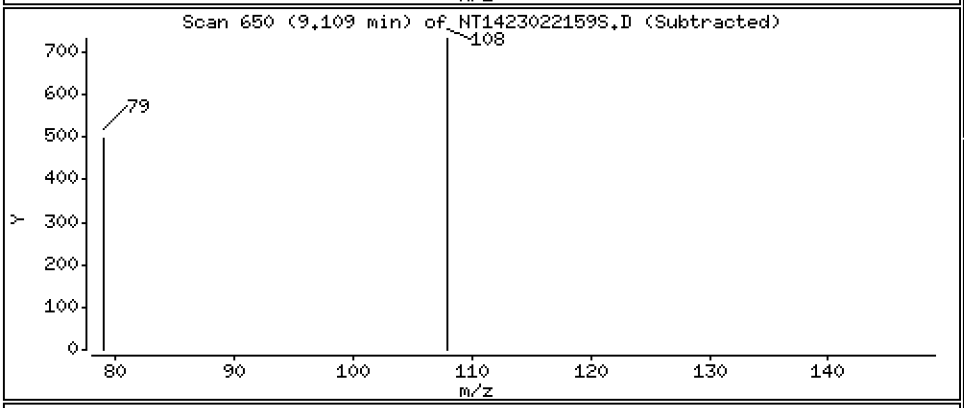
Column diameter: 0.25

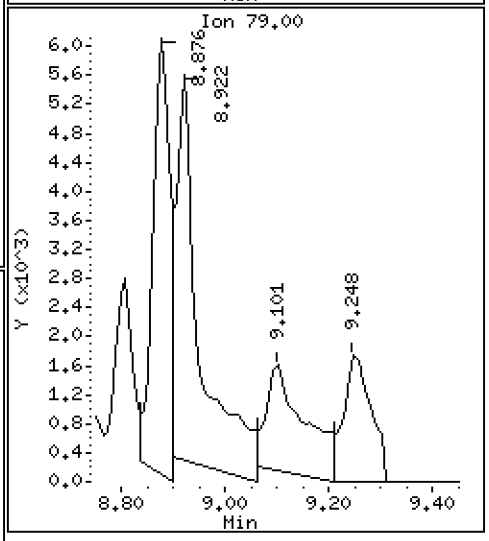
13 2-Methylphenol

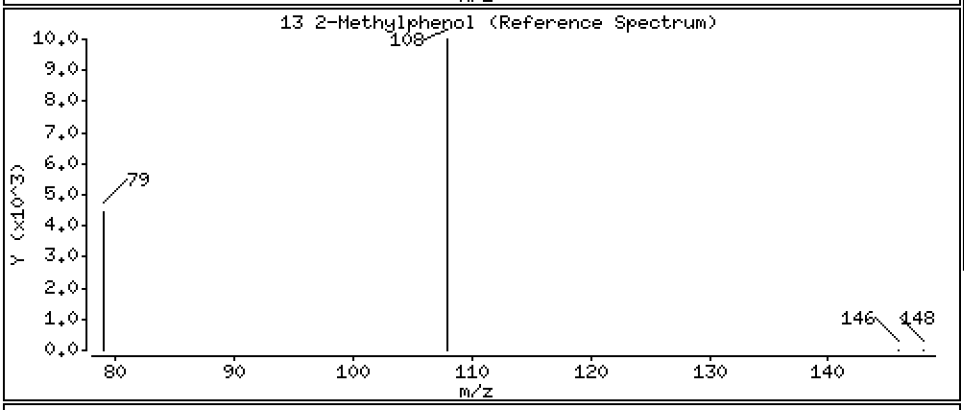
Concentration: 0.02322 ug/mL

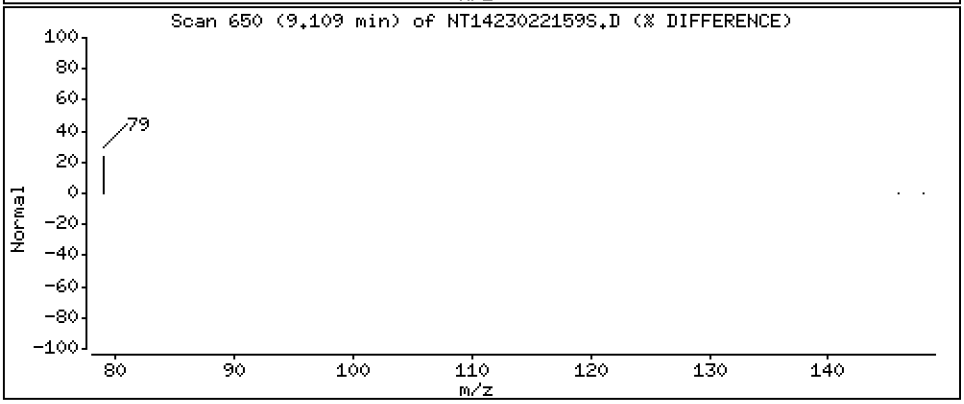












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

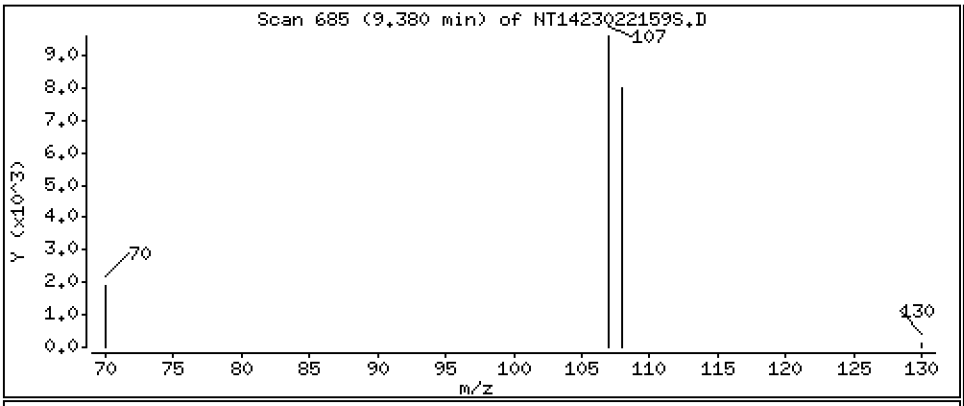
Operator: DSD

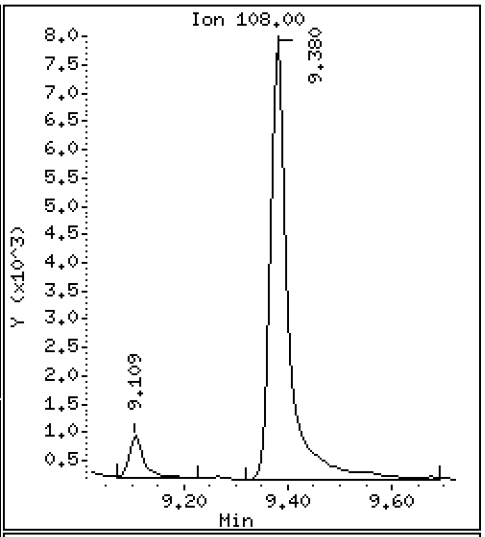
Column phase: ZB-5msi

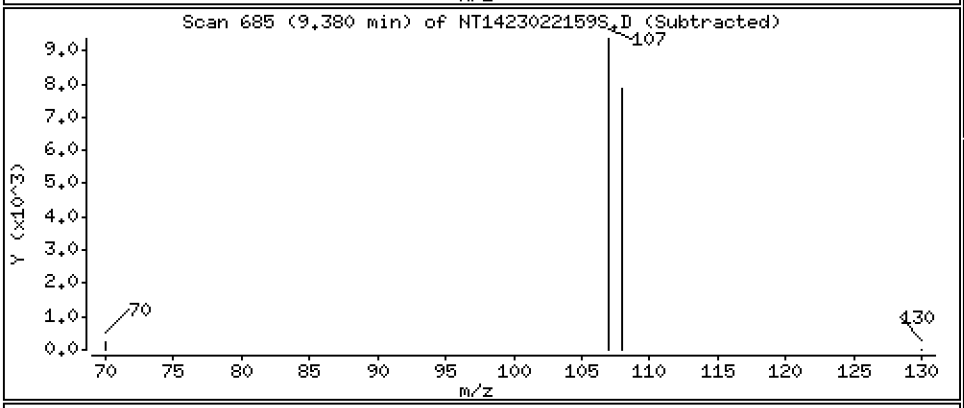
Column diameter: 0.25

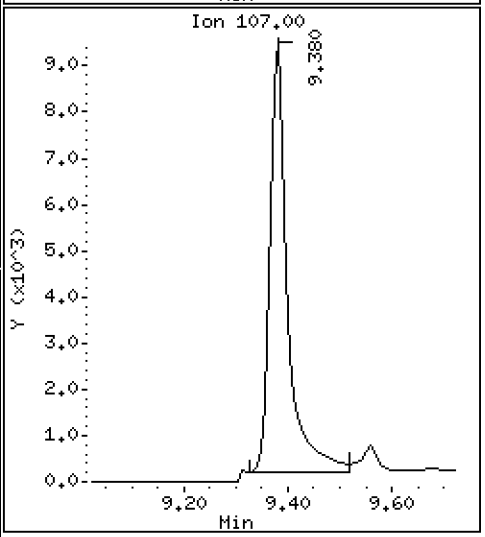
15 4-Methylphenol

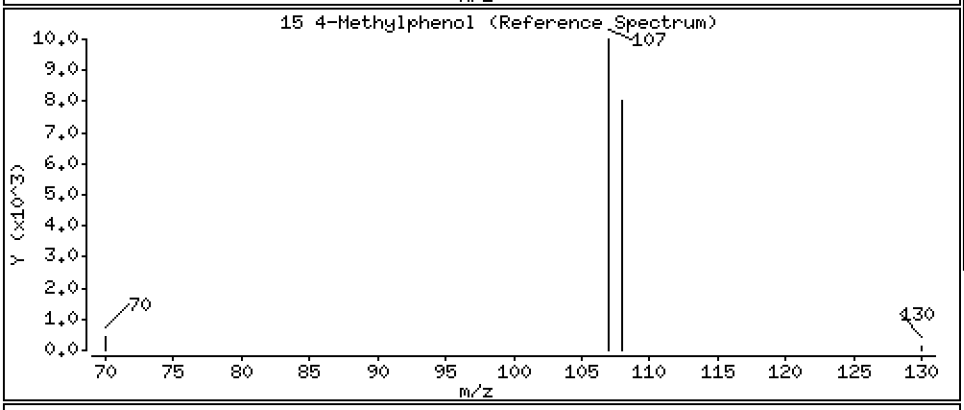
Concentration: 0.2282 ug/mL

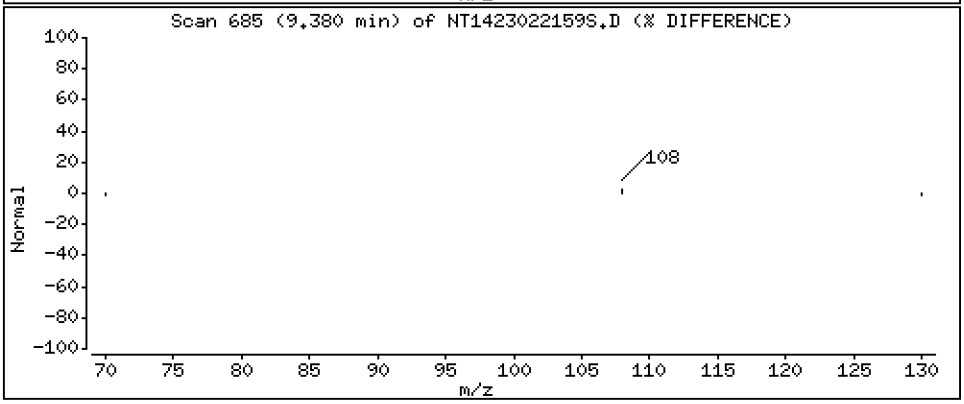












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

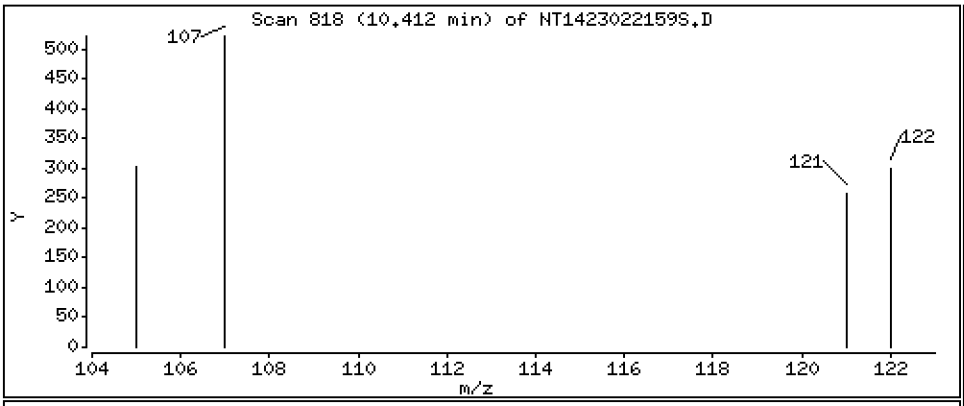
Operator: DSD

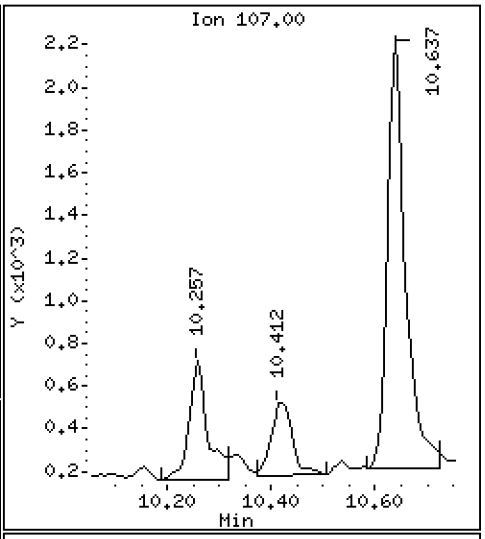
Column phase: ZB-5msi

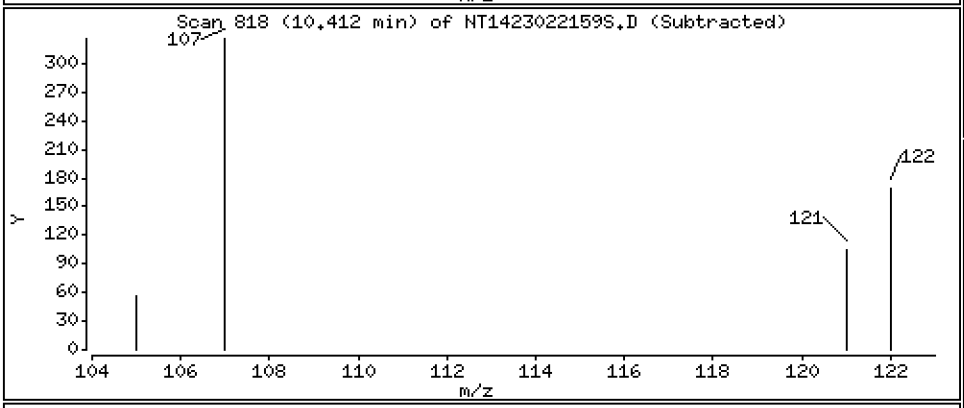
Column diameter: 0.25

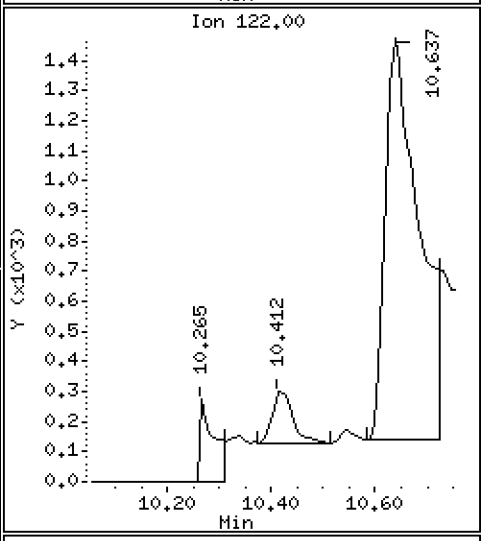
22 2,4-Dimethylphenol

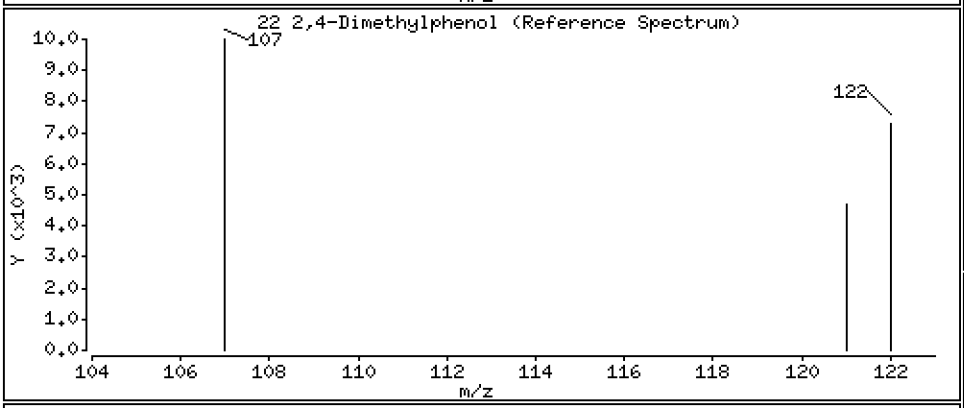
Concentration: 0.01143 ug/mL

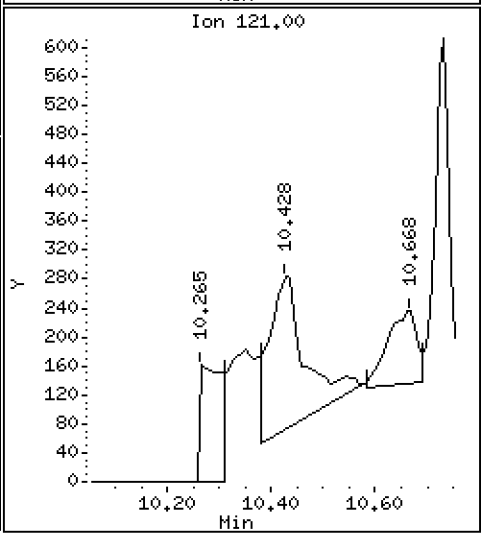


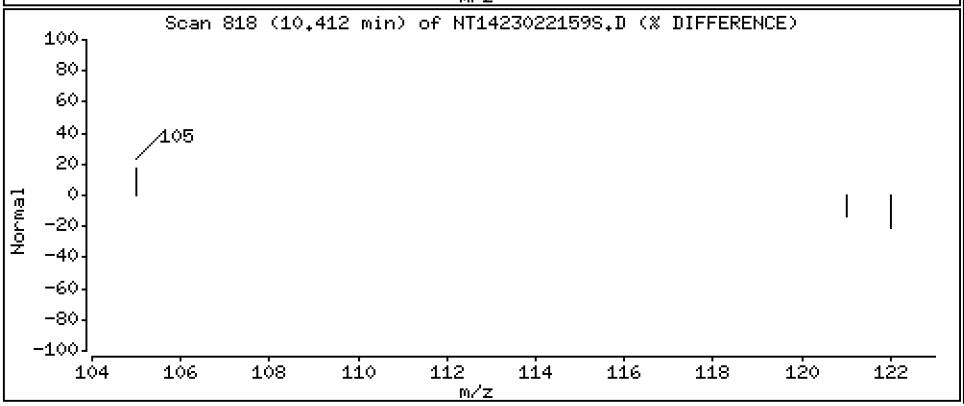












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

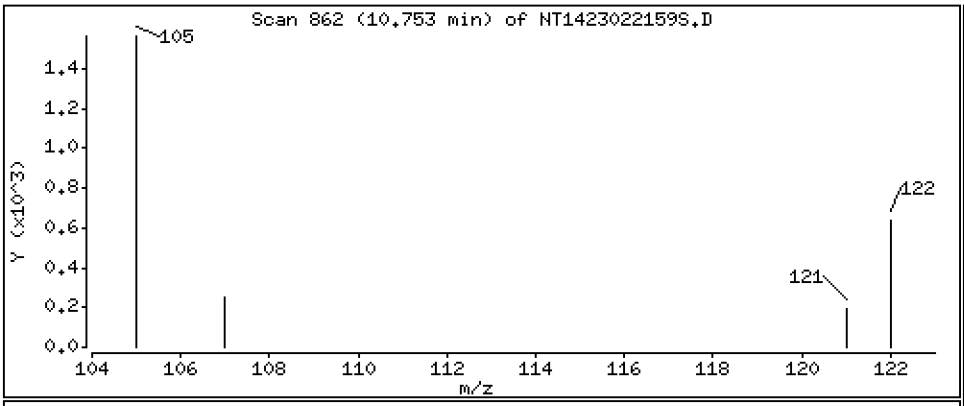
Operator: DSD

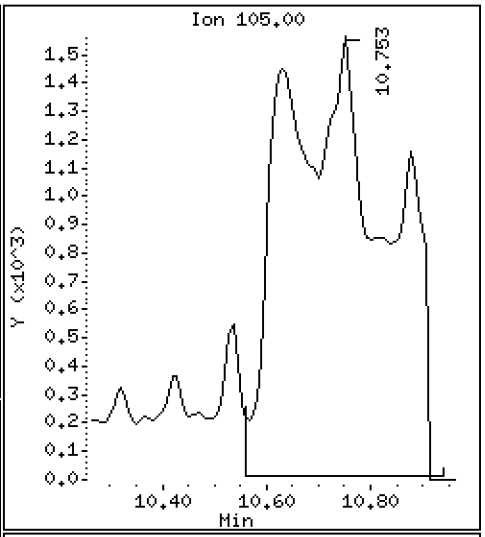
Column phase: ZB-5msi

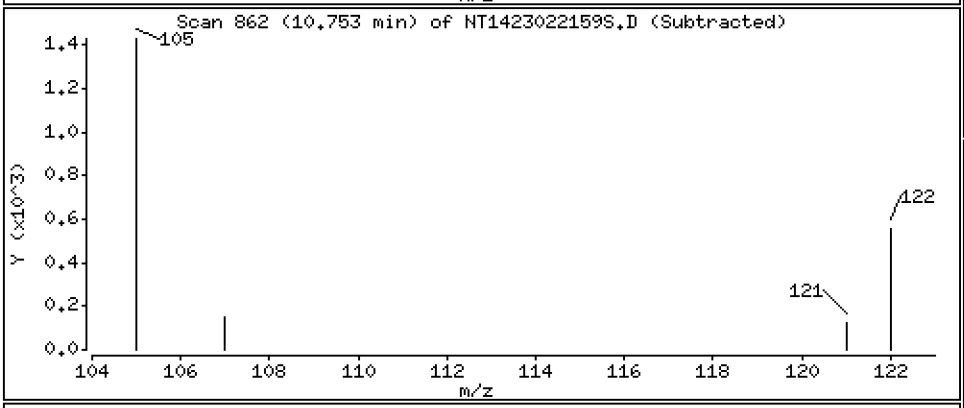
Column diameter: 0.25

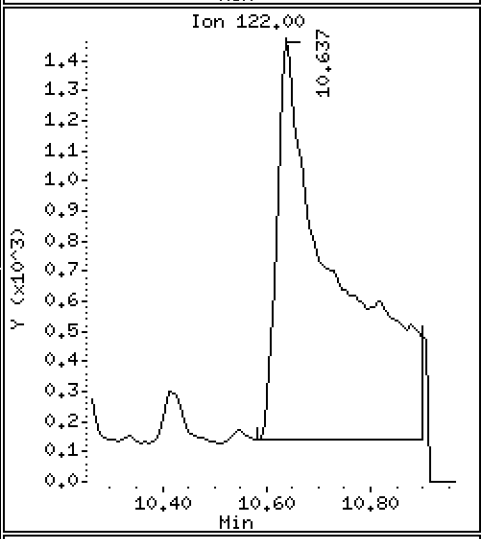
24 Benzoic acid

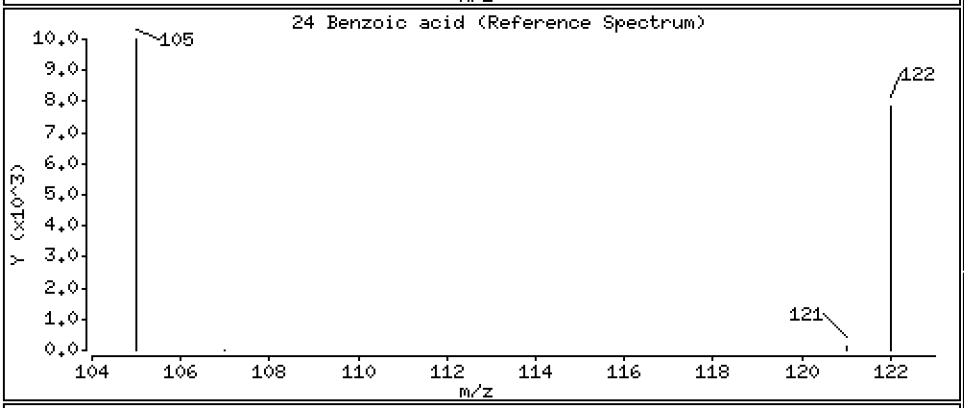
Concentration: 0.4872 ug/mL

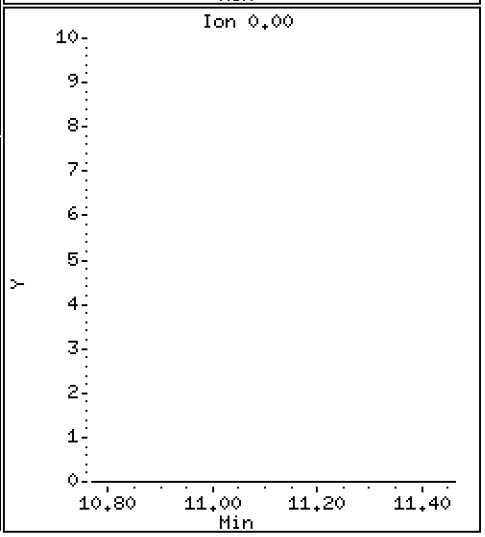


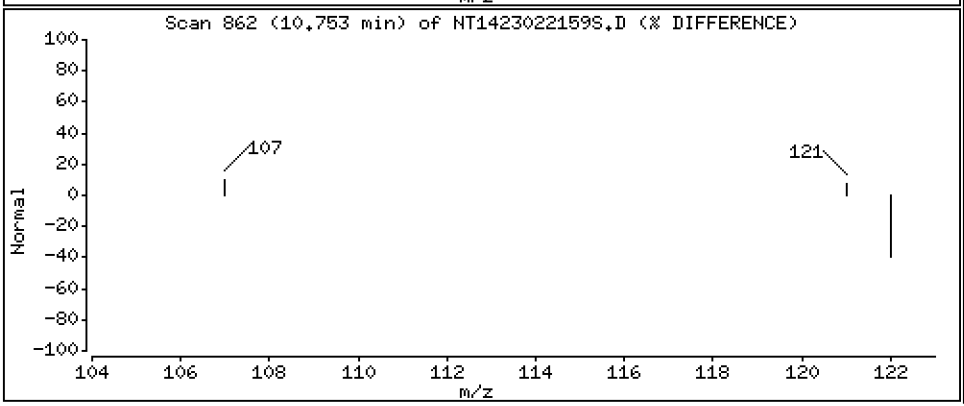












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Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

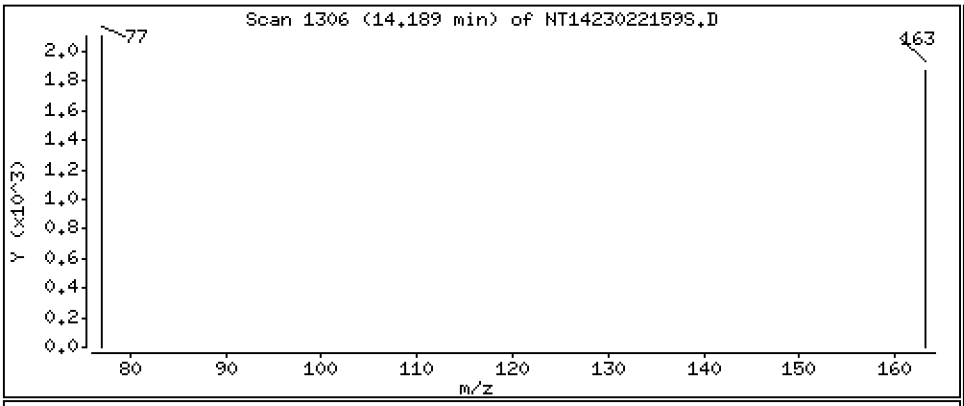
Operator: DSD

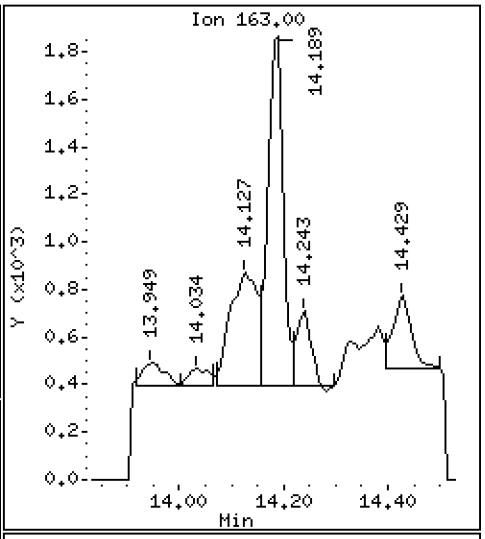
Column phase: ZB-5msi

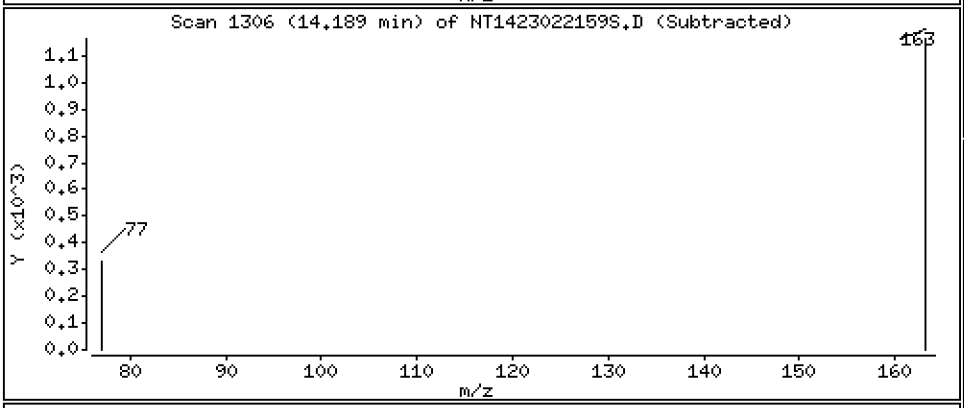
Column diameter: 0.25

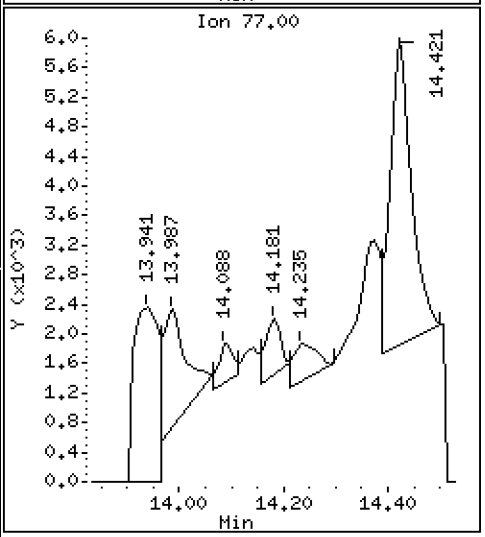
39 Dimethylphthalate

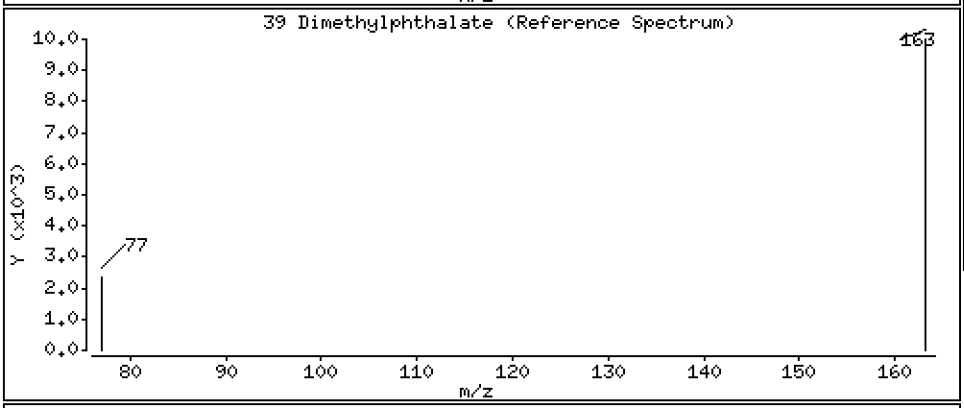
Concentration: 0.02067 ug/mL

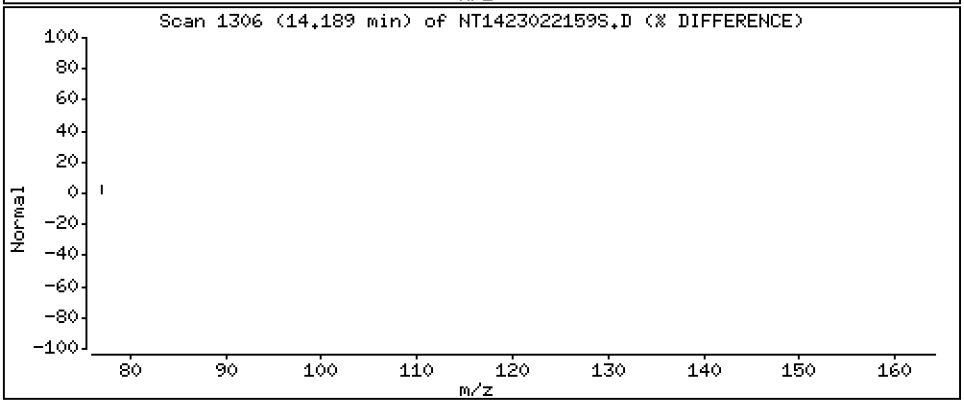












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221595.D

Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

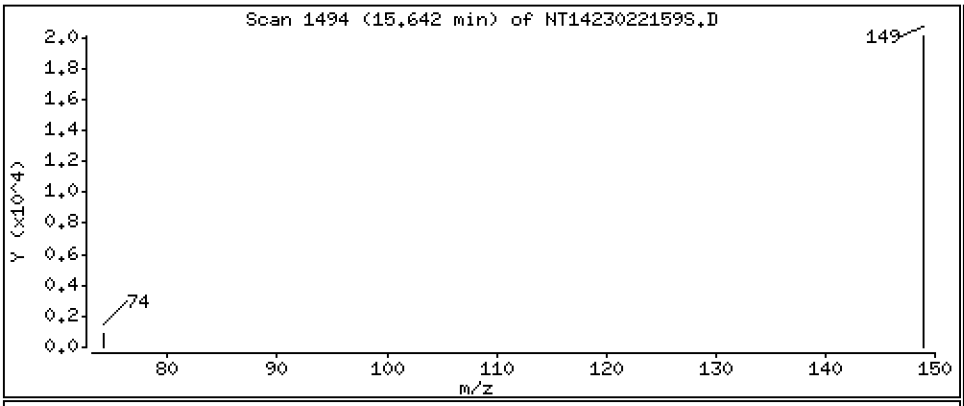
Operator: DSD

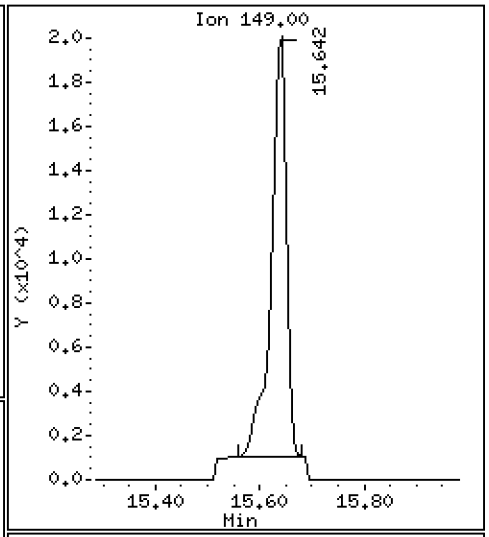
Column phase: ZB-5msi

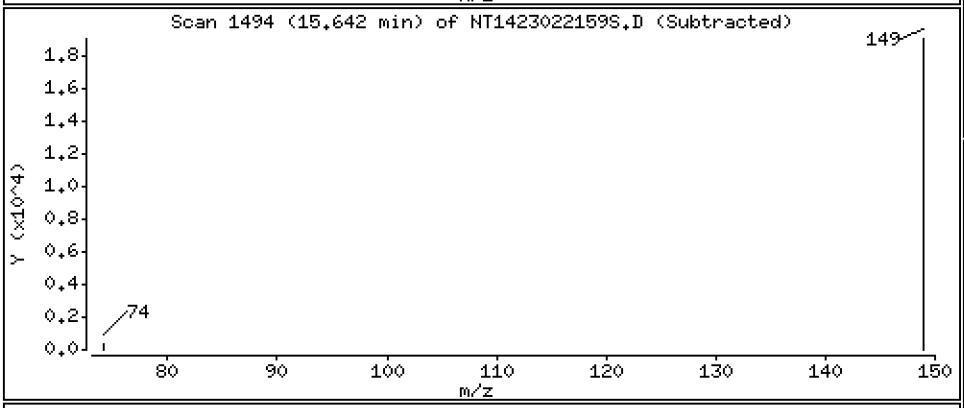
Column diameter: 0.25

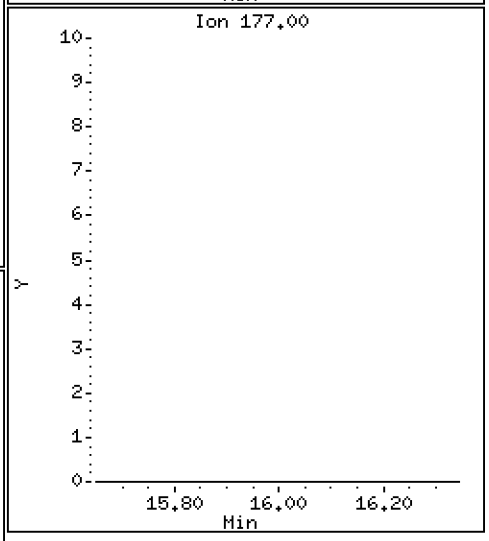
50 Diethylphthalate

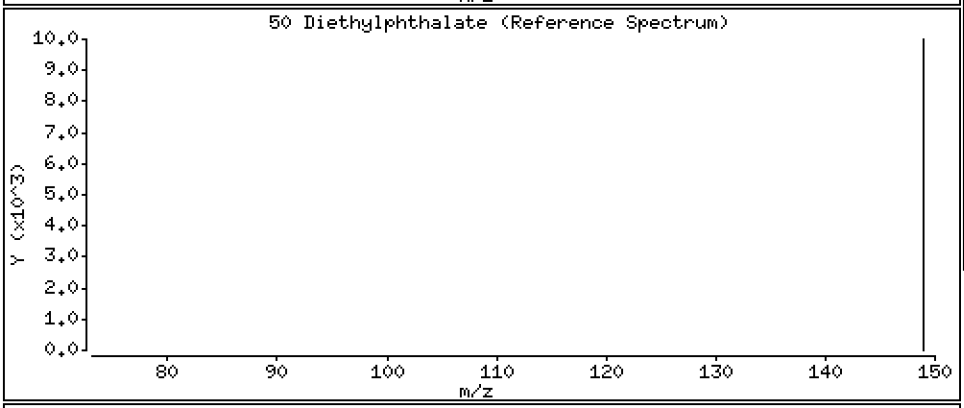
Concentration: 0.2082 ug/mL

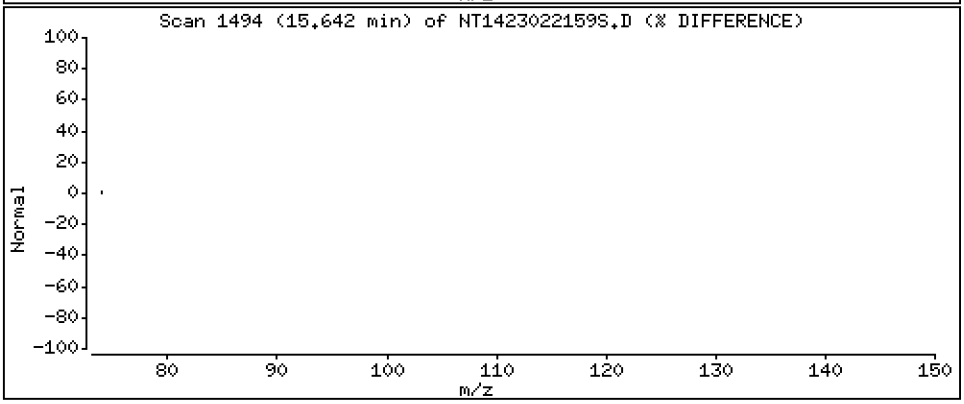












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221595.D

Date : 23-FEB-2023 00:26

Client ID:

Instrument: nt14.i

Sample Info: 23A0133-16

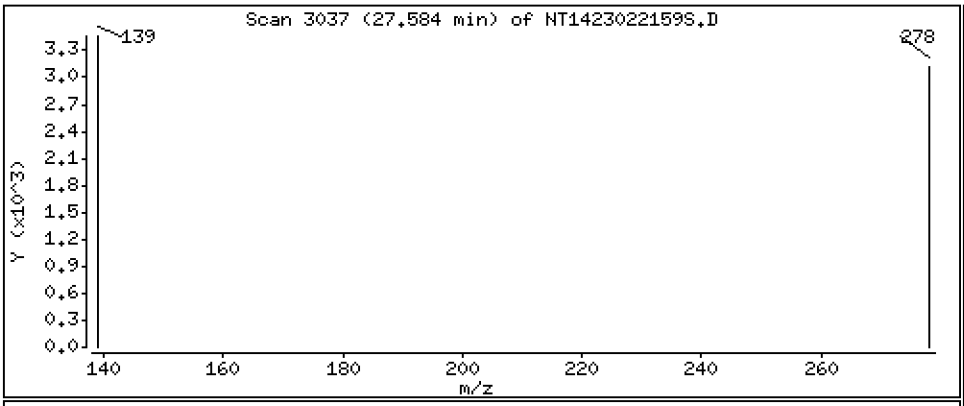
Operator: DSD

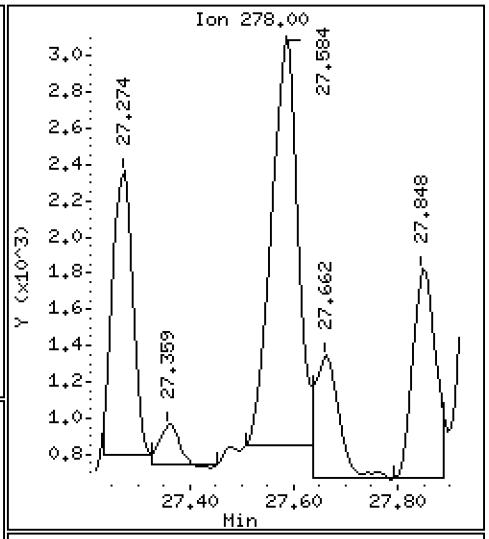
Column phase: ZB-5msi

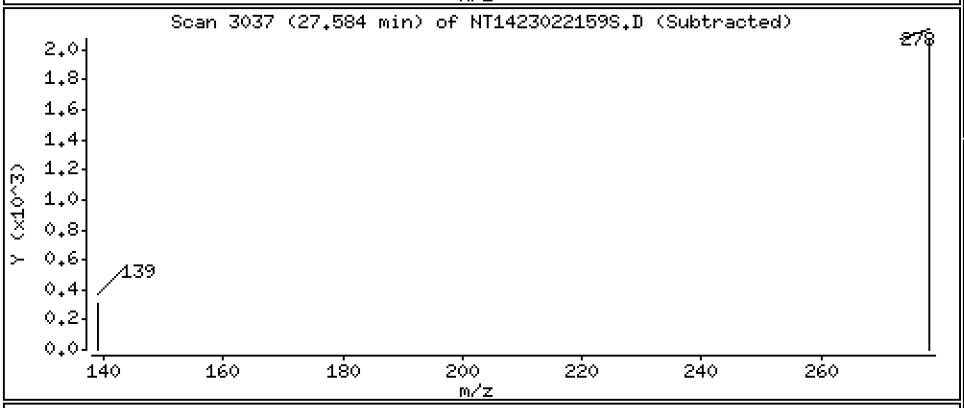
Column diameter: 0.25

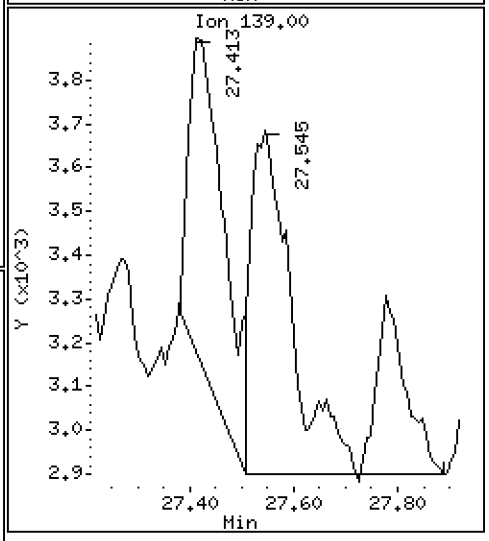
79 Dibenzo(a,h)anthracene

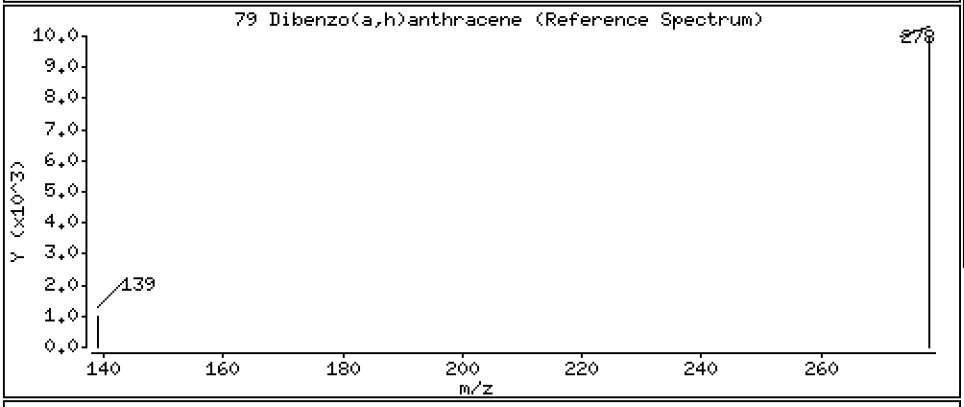
Concentration: 0.09438 ug/mL

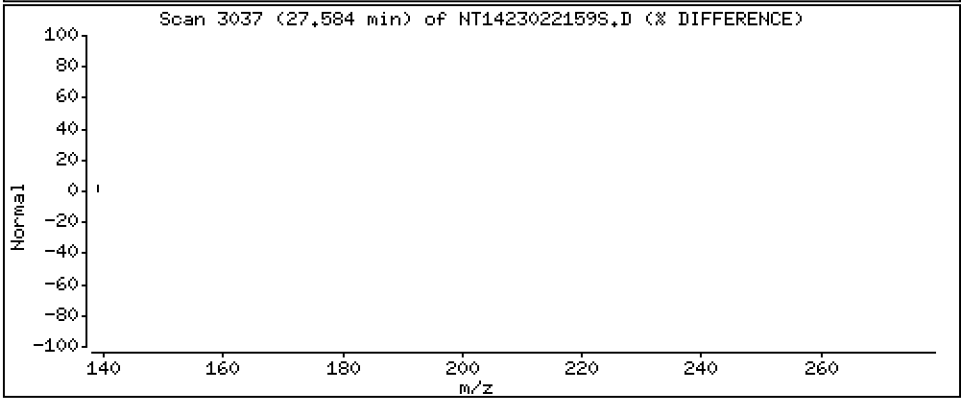












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT1423022159S.D
Lab Smp Id: 23A0133-16
Inj Date : 23-FEB-2023 00:26 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : 23A0133-16
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Meth Date : 25-May-2023 11:39 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 42
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.393	6.386	(0.746)	340214	4.76318	4.763(R)
	3 Phenol	94	8.000	7.993	(0.933)	225412	2.08036	2.080
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.572	8.573	(1.000)	251543	4.00000	
	9 1,4-Dichlorobenzene	146	8.596	8.596	(1.003)	649	0.00795	0.007949(M)
	11 Benzyl alcohol	79	8.875	8.876	(1.035)	11822	0.17161	0.1716
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	9.108	9.101	(1.062)	1734	0.02322	0.02322
	15 4-Methylphenol	108	9.380	9.373	(1.094)	18669	0.22821	0.2282
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.412	10.404	(0.943)	968	0.01143	0.01143
	24 Benzoic acid	105	10.753	10.614	(0.974)	21295	0.48724	0.4872(M)
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.039	11.040	(1.000)	924513	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	39 Dimethylphthalate	163	14.188	14.181	(0.968)	2991	0.02067	0.02067
*	42 Acenaphthene-d10	162	14.652	14.653	(1.000)	474298	4.00000	
	50 Diethylphthalate	149	15.642	15.635	(1.068)	37710	0.20823	0.2082
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.681	17.674	(1.000)	986809	4.00000	
$	66 Terphenyl-d14	244	20.884	20.869	(0.917)	720917	4.35297	4.353(R)
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	22.781	22.774	(1.000)	622098	4.00000	
*	77 Perylene-d12	264	25.235	25.220	(1.000)	486678	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.584	27.569	(1.093)	8035	0.09438	0.09438
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022159S.D
Lab Smp Id: 23A0133-16
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 17:47
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	241018	120509	482036	251543	4.37
27 Naphthalene-d8	887165	443583	1774330	924513	4.21
42 Acenaphthene-d10	467553	233777	935106	474298	1.44
59 Phenanthrene-d10	1079793	539897	2159586	986809	-8.61
69 Chrysene-d12	754146	377073	1508292	622098	-17.51
77 Perylene-d12	558201	279101	1116402	486678	-12.81

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.01
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.67	17.17	18.17	17.68	0.04
69 Chrysene-d12	22.77	22.27	23.27	22.78	0.03
77 Perylene-d12	25.22	24.72	25.72	25.24	0.06

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022159S.D

Lab ID: 23A0133-16
nt14.i, 20230221C.b\SIM.b\SIMABN2.m,   23-FEB-2023 00:26

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.974	0.961	0.0126	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1423022148ICVS.d

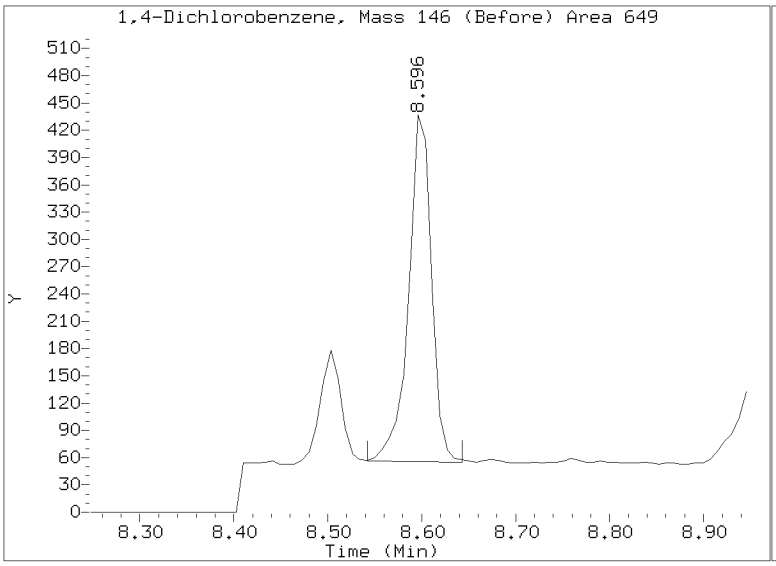
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

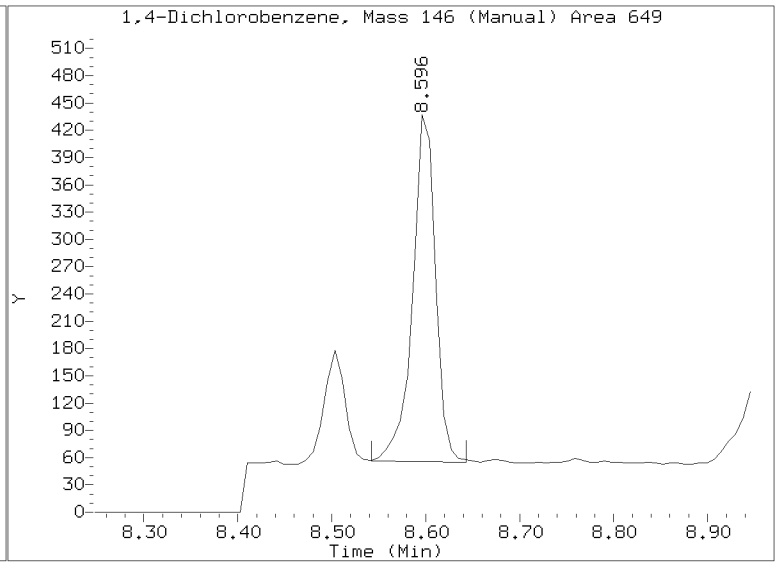
Exception: 1,2,4-Trichlorobenzene 0.0010

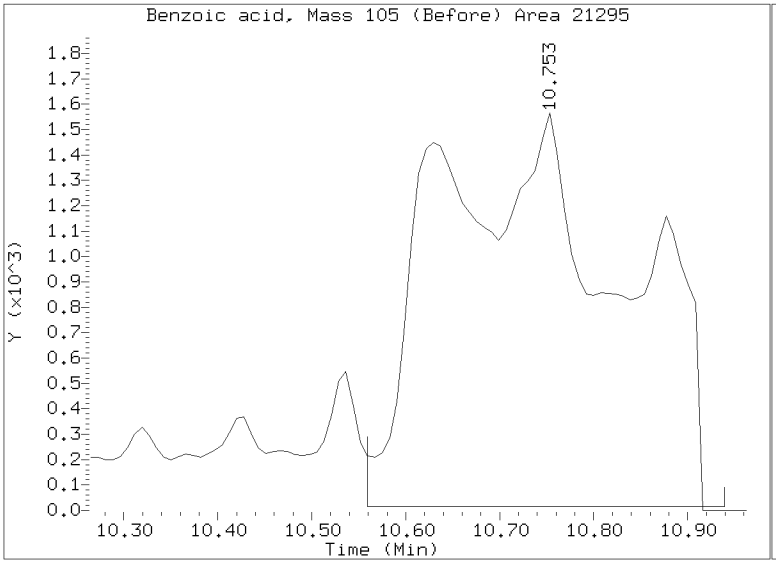
* Only compounds listed in the work order have been verified by the analyst *

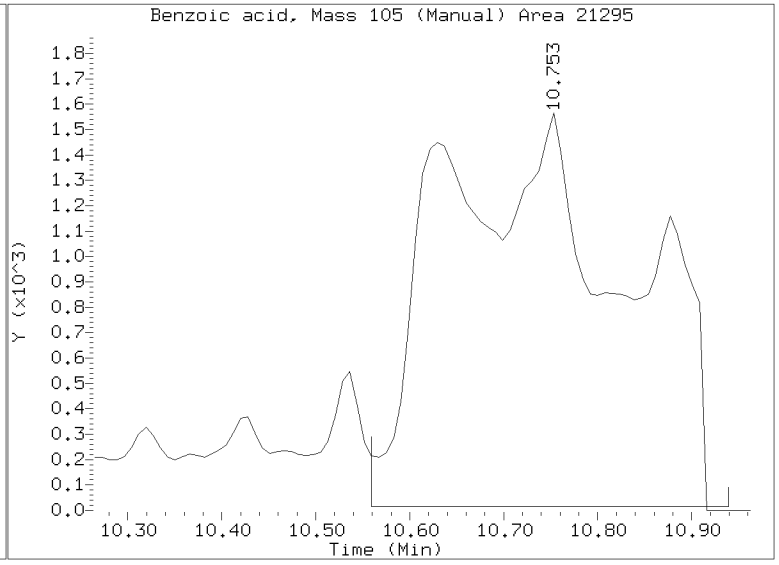
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221C.b/SIM.b/NT1423022159S.D
Injection Date: 23-FEB-2023 00:26
Lab ID:23A0133-16 Client ID:
Report Date: 05/25/2023 11:48









PREPARATION BATCH SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC SDG: 23A0133

Client: Anchor QEA, LLC Project: AOC5 MR Phase 1

Batch: BLA0393 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1250	23A0133-03	NT1423022141S.D	01/18/23 15:24	
LDW23-SC1241	23A0133-06	NT1423022142S.D	01/18/23 15:24	
LDW23-IT1217	23A0133-07	NT1423022143S.D	01/18/23 15:24	
LDW23-SC1185	23A0133-08	NT1423022151S.D	01/18/23 15:24	
LDW23-SC1234	23A0133-09	NT1423022152S.D	01/18/23 15:24	
LDW23-SC1215	23A0133-10	NT1423022153S.D	01/18/23 15:24	
LDW23-SC1222	23A0133-11	NT1423022154S.D	01/18/23 15:24	
LDW23-SC1227	23A0133-12	NT1423022155S.D	01/18/23 15:24	
LDW23-SS1110	23A0133-13	NT1423022156S.D	01/18/23 15:24	
LDW23-SS1109	23A0133-14	NT1423022157S.D	01/18/23 15:24	
LDW23-SS1092	23A0133-15	NT1423022158S.D	01/18/23 15:24	
LDW23-SS1091	23A0133-16	NT1423022159S.D	01/18/23 15:24	
Blank	BLA0393-BLK2	NT1423022134S.D	01/18/23 15:24	FOR DUAL SCAN
LCS	BLA0393-BS2	NT1423022135S.D	01/18/23 15:24	FOR DUAL SCAN
LCS Dup	BLA0393-BSD2	NT1423022136S.D	01/18/23 15:24	FOR DUAL SCAN
LDW23-IT1217	BLA0393-MS2	NT1423022144S.D	01/18/23 15:24	FOR DUAL SCAN
LDW23-IT1217	BLA0393-MSD2	NT1423022145S.D	01/18/23 15:24	FOR DUAL SCAN
Reference	BLA0393-SRM2	NT1423022137S.D	01/18/23 15:24	FOR DUAL SCAN

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0393

Prepared using: EPA 3546 (Microwave)

8270E SVOC (20ug/kg solid or 0.2ug/L low H2O Sepf) in Solid (Version:AOC4 List)

Matrix: Solid **Date Prepared:** 01/18/23 **Balance ID:** 131464614 **Set Up By:** QD 1/16/23

WO Comments

23A0133: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

Designator	Description
39	Benzidine Spike
QLS 14	QLS Spike (Freezer)

Analysis: 8270E SVOC (20ug/kg solid or 0.2ug/L low H2O Sepf)

Lab Number & Container	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ) GPC C/U (1:1) 1 (2) 3	Water Wash 1mL	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23A0133-03 C	51.1	(19.57) 19.60	(1:1)	1mL	1	0.5	
23A0133-06 C	49.0	(20.40) 20.40	(1:1)	1mL	1	0.5	
23A0133-07 C	59.5	(16.81) 16.88	(1:1)	1mL	1	0.5	
23A0133-08 C	58.6	(17.07) 17.09	(1:1)	1mL	1	0.5	
23A0133-09 C	53.7	(18.61) 18.61	(1:1)	1mL	1	0.5	
23A0133-10 C	53.5	(18.70) 18.72	(1:1)	1mL	1	0.5	
23A0133-11 C	52.1	(19.18) 19.20	(1:1)	1mL	1	0.5	
23A0133-12 C	55.8	(17.93) 17.96	(1:1)	1mL	1	0.5	
23A0133-13 C	59.3	(16.86) 16.87	(1:1)	1mL	1	0.5	
23A0133-14 C	45.2	(22.13) 22.15	(1:1)	1mL	1	0.5	
23A0133-15 C	52.3	(19.12) 19.14	(1:1)	1mL	1	0.5	
23A0133-16 C	49.4	(20.25) 12.27	(1:1)	1mL	1	0.5	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ) GPC C/U (1:1) 1 (2) 3	Water Wash 1mL	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLA0393-BLK1	100.0	(10.00) 10.00	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLA0393-BS1	100.0	(10.00) 10.00	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLA0393-BSD1	100.0	(10.00) 10.00	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLA0393-MS1	59.5	(16.81) 16.81	(1:1)	1mL	1	0.5	Use 23A0133-07
BLA0393-MSD1	59.5	(16.81) 16.81	(1:1)	1mL	1	0.5	Use 23A0133-07
BLA0393-SRM1	100.0	~~(10.00)~~ (1.00) 1.00	(1:1)	1mL	1	0.5	Use K003477

01/18/23
Client ID verified By Date

TWC 2/2/23
Preparation Reviewed By Date

01/18/23
1/18/23 01/18/23 15:24
Extraction Date and Time

Printed: 1/16/2023 3:08:01PM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0393

Prepared using: EPA 3546 (Microwave)

8270E SVOC (20ug/kg solid or 0.2ug/L low H2O Sepf) in Solid (Version:AOC4 List)

WO Comments

23A0133: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Steps

Microwave
1 2 3
Analyst/Date: 1/19/23

Pre-GPC KD
100°C
Exchange to Hexane
(add 10 mL to KD)
0 2 4 5 6
Analyst/Date: TWC 1/26/23

TurboVap
Pre GPC
1 2 3 4 5
Analyst/Date: 1/27/23

Post GPC KD
80-85°C
0 2 4 5 6
Analyst/Date: LJ 1/30/23

TurboVap
1 2 3 4 5
Analyst/Date: TWC 2/2/23

Water Wash
Analyst/Date: TWC 2/2/23

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: KG Date: 1/19/23	
Anhydrous Sodium Sulfate	L000453
1:1 Methylene Chloride/Acetone	K011507
Methylene Chloride	K005942
Pre-Deactivated Glass Wool	K016195
Pre GPC KD Analyst: TWC Date: 1/26/23	
Pre-Deactivated Glass Wool	N/A
Anhydrous Sodium Sulfate	N/A
Methylene Chloride	L000808
Hexane	K011373
GPC Filter Prep Analyst: N/A Date: 1/27/23	
Methylene Chloride	L000805
GPC Analyst: CTD Date: 1/28/23	
Methylene Chloride	L000808
GPC Calibration File	CLA0166-GPC1
Post GPC KD Analyst: LJ Date: 1/30/23	
Methylene Chloride	L000809
Vialing Analyst: TWC Date: 2/2/23	
Methylene Chloride	L000808

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 100/150µg/mL	A K010466 (V) Exp Date: 5/9/2023	50µL	CT	
Full List Spike (Freezer) 100µg/mL	7 K011369 (V) Exp K011297 Date: 8/31/2023	50µL	CT	
Base Spike 200µg/mL	56 K011369 (V) Exp K003759 Date: 4/19/2023	50µL	CT	
Acid Spike 100/200µg/mL	38 K011369 (V) Exp K003760 Date: 4/19/2023	50µL	CT	

MANUALLY ENTER EXPIRATION DATES!

(V) indicates a virtual standard combining two or more physical standards. In these cases the Standard ID refers to the virtual standard, not the parent standards.

If a Standard ID is missing, but should be present, check the standard definition in Element LIMS to be sure Standard Info 6 has the correct letter or number designator matching the vial designator inthe Standard ID column. If it is correct, check the batch and bench sheet in Element LIMS to be sure the correct standards are selected for surrogate(s) and spike(s).

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0393

Prepared using: EPA 3546 (Microwave)

8270E SVOC (20ug/kg solid or 0.2ug/L low H2O Sepf) in Solid (Version:AOC4 List)

WO Comments

23A0133: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. 3. Add DCM ONLY to the vessels (until solvent is 3 inches above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-re-homogenize while hot then let cool 10-15 min in Refridgerator 05. Re-homogenize while cool. 7. Decant DCM into Erlenmeyer flask with a funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using 1:1 DCM/ACE. 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD: Add 10 mL Hexane directly to extract in the KD. 12. GPC REQUIRED 100°C water bath (CLP) KD to 5mL. 13. Vialers to take 1:5 Split Pre- GPC. 14. (After GPC): KD at 80°C. 15. TurboVap to 1mL in DCM. 16. WATER WASH REQUIRED: 16a. Vial 1mL of all extracts in 2mL amber vials in DCM. 16b. Add ~0.5mL DI water and vortex for ~5 seconds each. 16c. Centrifuge extracts for 5 minutes at 1500-2000rpm. 16d. Transfer and vial 0.5mL to new 2mL amber vials (Avoiding collecting water in syringe and cleaning syringe with Acetone and DCM between each vial). 17. Archive water wahed vials and deliever new vials to GC Department for analysis. A. Need Total Solids Y/N B. Archive/Freeze Y/N	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: 8082A Extraction Batch BLA0423

Total Solids Batch: NA Work Order(s): 23A0133 01-16

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
[X] No Anomalies (standard soil/wet sediment/sand/gravel)= 01-16	CR 1/13/23
[X] Standing Water Decanted (Not shared)= 01-16	CR 1/13/23
[ ] Standing Water Homogenized (Shared samples)=	
[ ] Clay/Clumps (Difficult to homogenize)=	
[ ] Rocks (%+size)?	
[ ] Organics (Leaves/sticks/grass)=	
[ ] Oily, obvious fuel/sulfur odors=	
[ ] Received in 32oz jar(s)=Homogenized in Pyrex dish=	
[X] Previously Frozen = 01-16	CR 1/13/23
[ ] Other (Details)=	
Aqueous:	
[ ] No Anomalies	
[ ] Turbid/Color=	
[ ] Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
[ ] Emulsions (%)=	
[ ] Oily, obvious fuel/sulfur odors=	
[ ] Other (Details)=	
[ ] Received in 1.0L Bottle(s)=No Bottle Rinse=	
[ ] Other Notes/Comments= (Note problems, concerns, corrective actions).	
[X] Share Samples Y / (N)	CR 1/13/23
[X] Multiple Jars Y / (N)	CR 1/13/23
[ ] Sample Pre-Screens indicate analyte activity=	
[ ] Sample weights/volumes reduced based on Pre-Screen=	

BLA0393 23A0133 svoa

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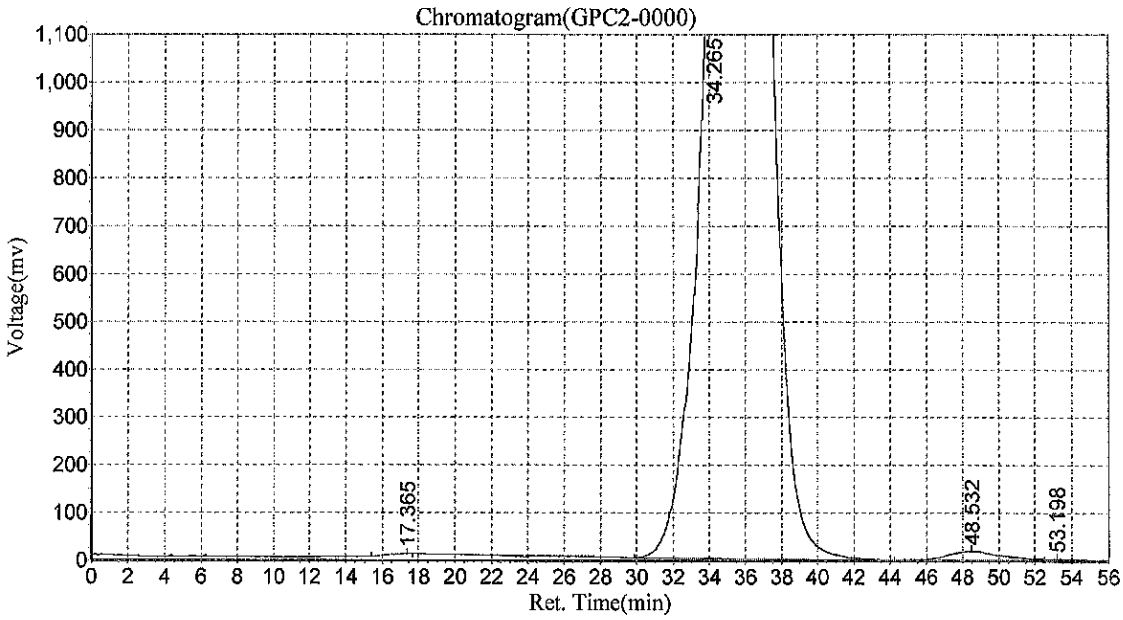

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	3500.491	270370.938	0.0658
2		34.265	1369559.250	406376608.000	98.8973
3		48.532	18845.715	3991164.000	0.9713
4		53.198	2878.464	269595.688	0.0656
Total			1394783.920	410907738.625	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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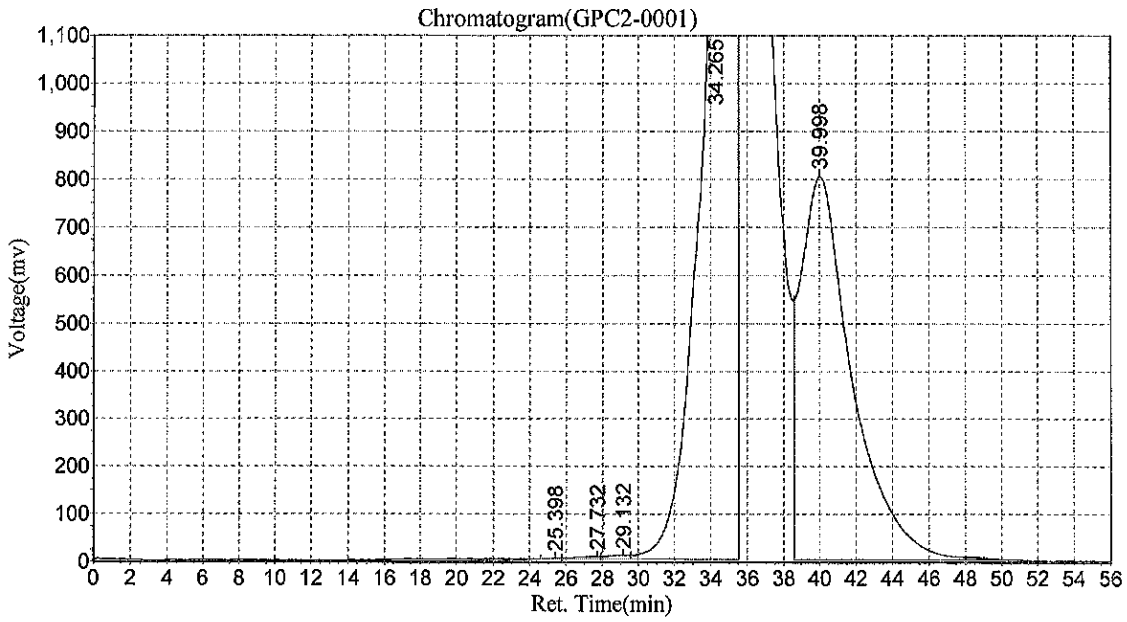

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		25.398	2786.372	153986.922	0.0429
2		27.732	6113.377	559779.875	0.1559
3		29.132	8451.381	754878.625	0.2103
4		34.265	1368558.375	200437664.000	55.8298
5		39.998	799791.688	157108992.000	43.7611
Total			2185701.193	359015301.422	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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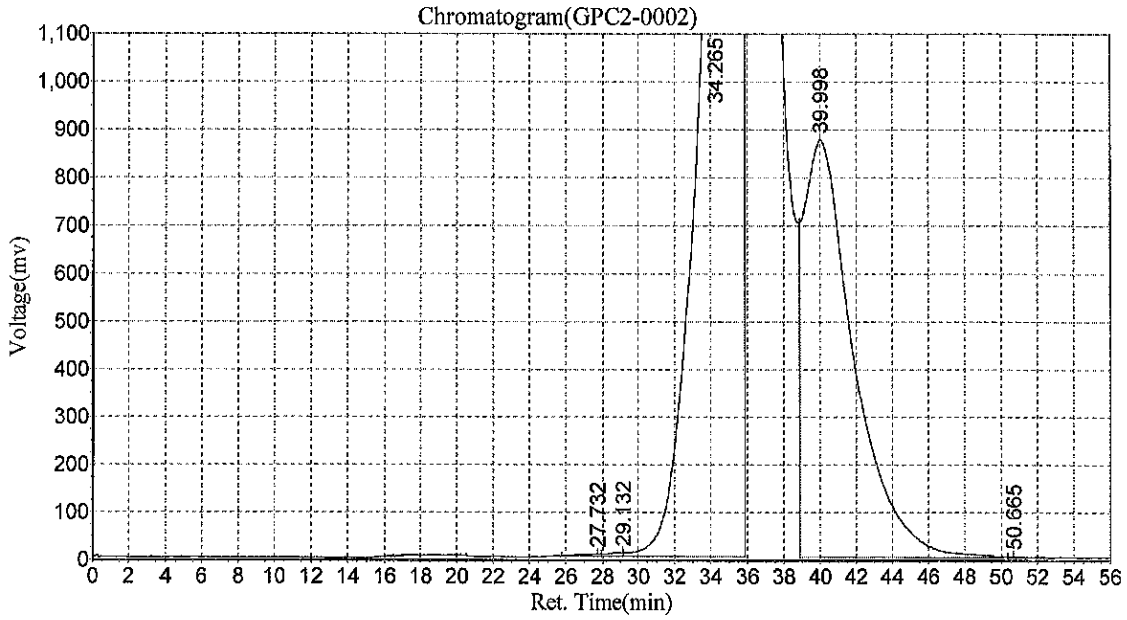

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		27.732	5718.056	511168.125	0.1210
2		29.132	8682.214	569031.000	0.1347
3		34.265	1367353.500	253147408.000	59.9168
4		39.998	871640.063	168103696.000	39.7880
5		50.665	2685.456	166931.844	0.0395
Total			2256079.288	422498234.969	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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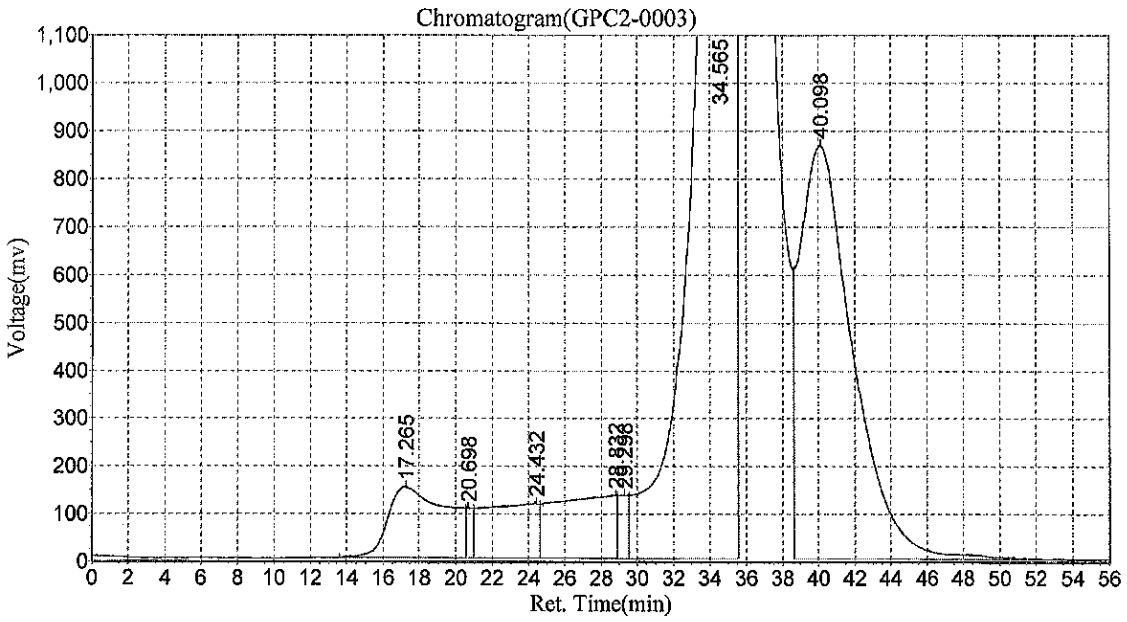

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.265	148674.063	33541946.000	6.3104
2		20.698	104333.375	2915562.000	0.5485
3		24.432	115749.883	23632794.000	4.4462
4		28.832	132610.844	31655022.000	5.9554
5		29.298	132860.156	5306229.000	0.9983
6		34.565	1367299.750	258450624.000	48.6236
7		40.098	861649.438	176030560.000	33.1175
Total			2863177.508	531532737.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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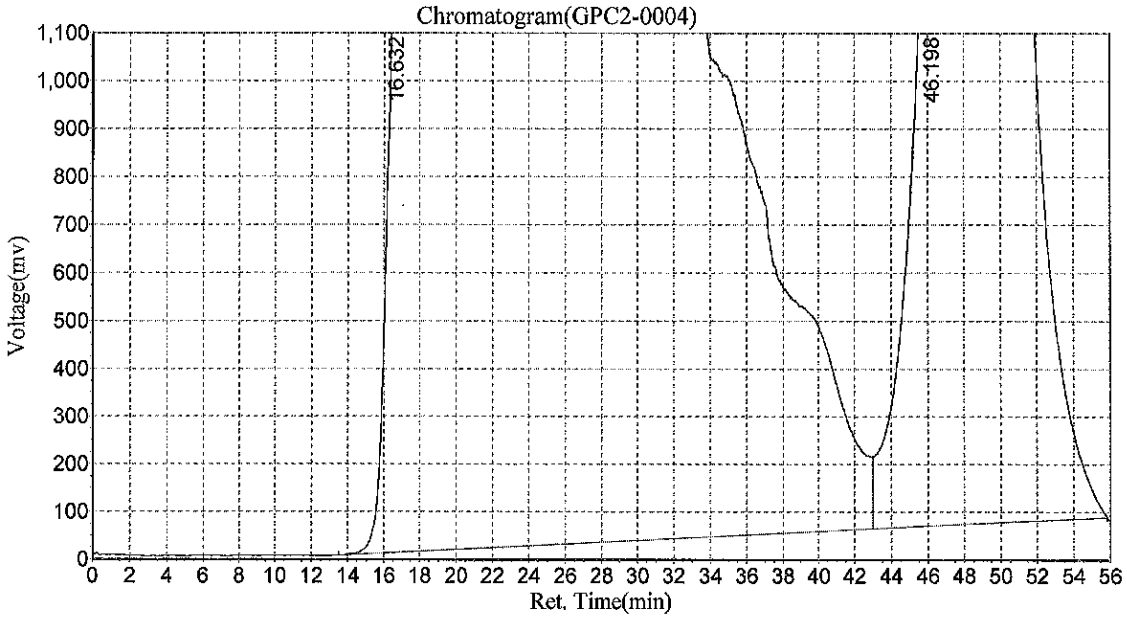

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.632	1364541.000	1633469824.000	72.3128
2		46.198	1305066.000	625425152.000	27.6872
Total			2669607.000	2258894976.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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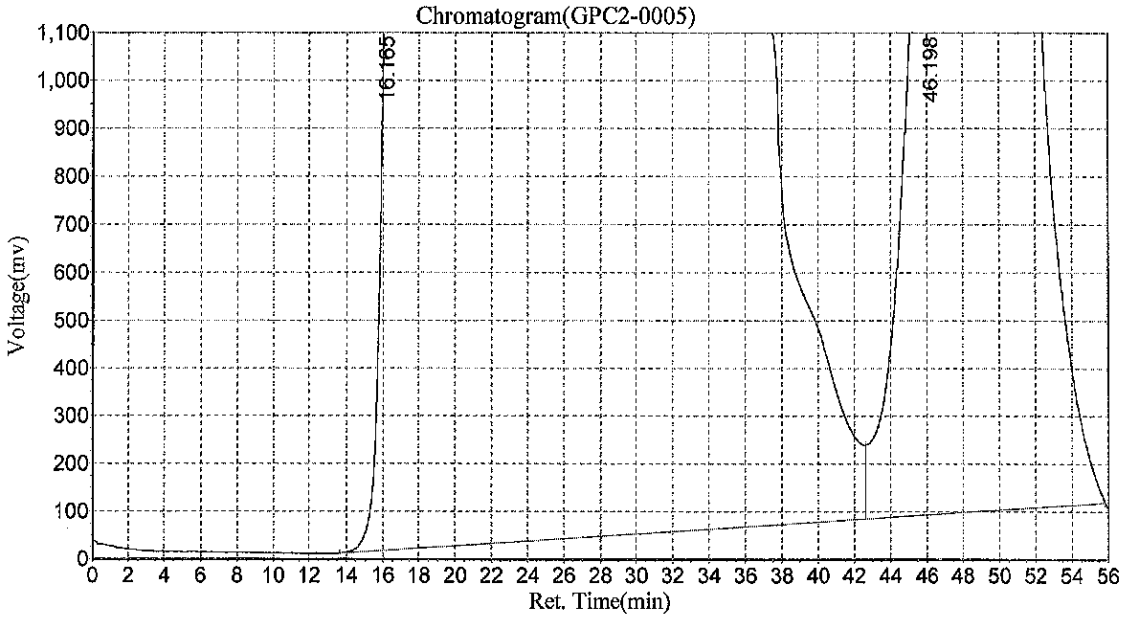

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.165	1361265.125	1797771776.000	72.4820
2		46.198	1281475.375	682530432.000	27.5180
Total			2642740.500	2480302208.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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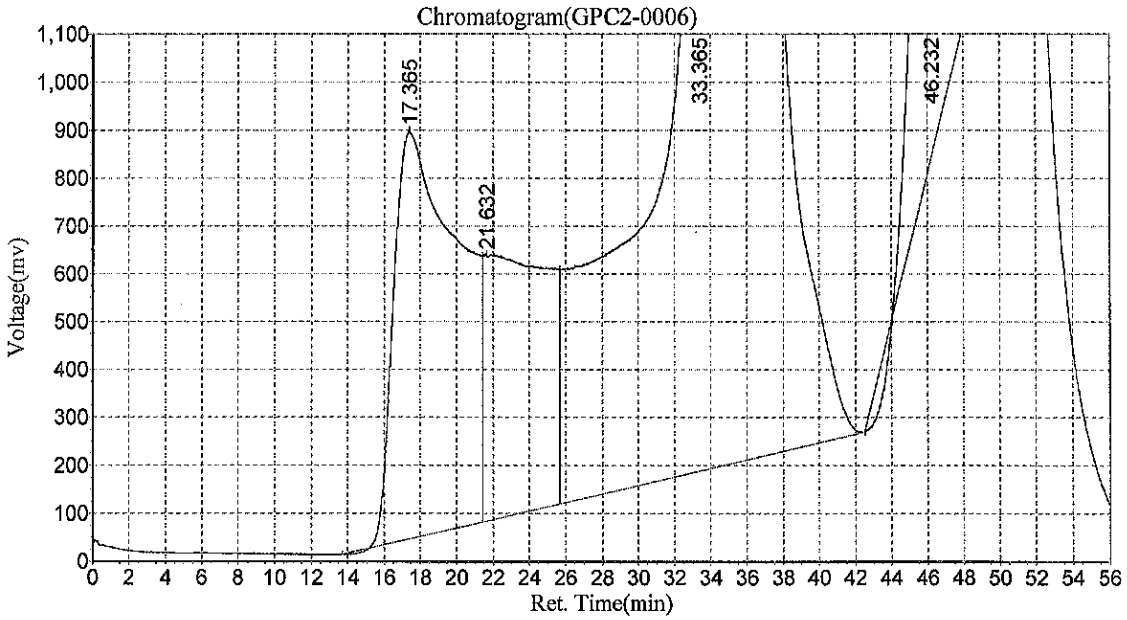

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	849956.313	209130896.000	18.3795
2		21.632	555122.125	134630512.000	11.8320
3		33.365	1185688.250	688140224.000	60.4773
4		46.232	533471.250	105948016.000	9.3112
Total			3124237.938	1137849648.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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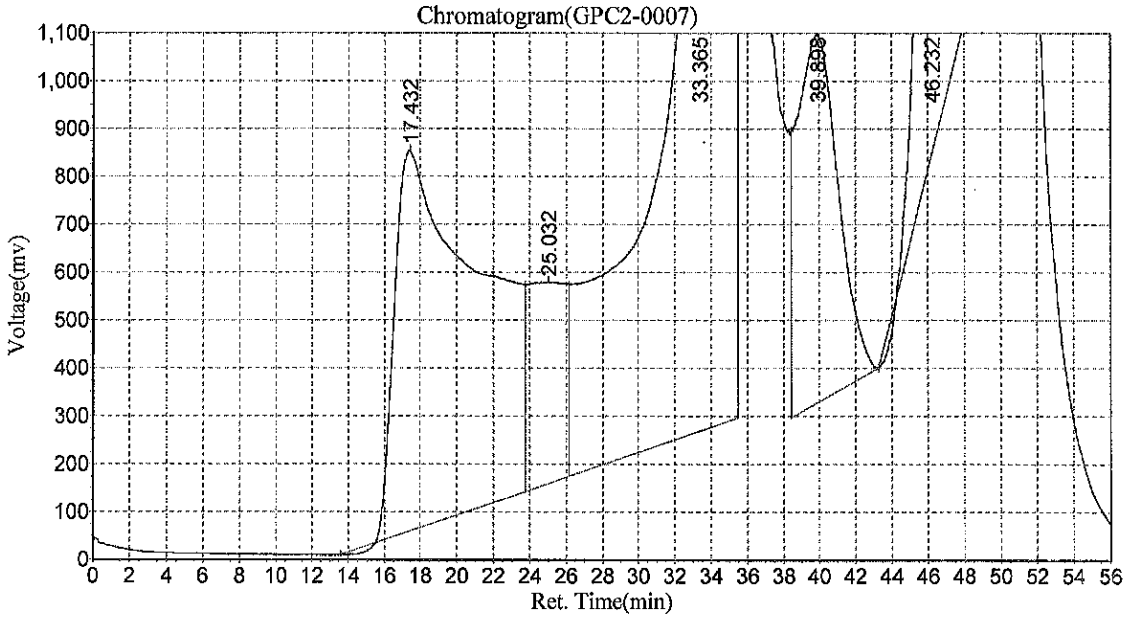

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.432	793538.563	252903408.000	27.6806
2		25.032	418198.094	60930744.000	6.6689
3		33.365	1103112.500	384206240.000	42.0518
4		39.898	739833.000	117336768.000	12.8427
5		46.232	528281.813	98271936.000	10.7560
Total			3582963.969	913649096.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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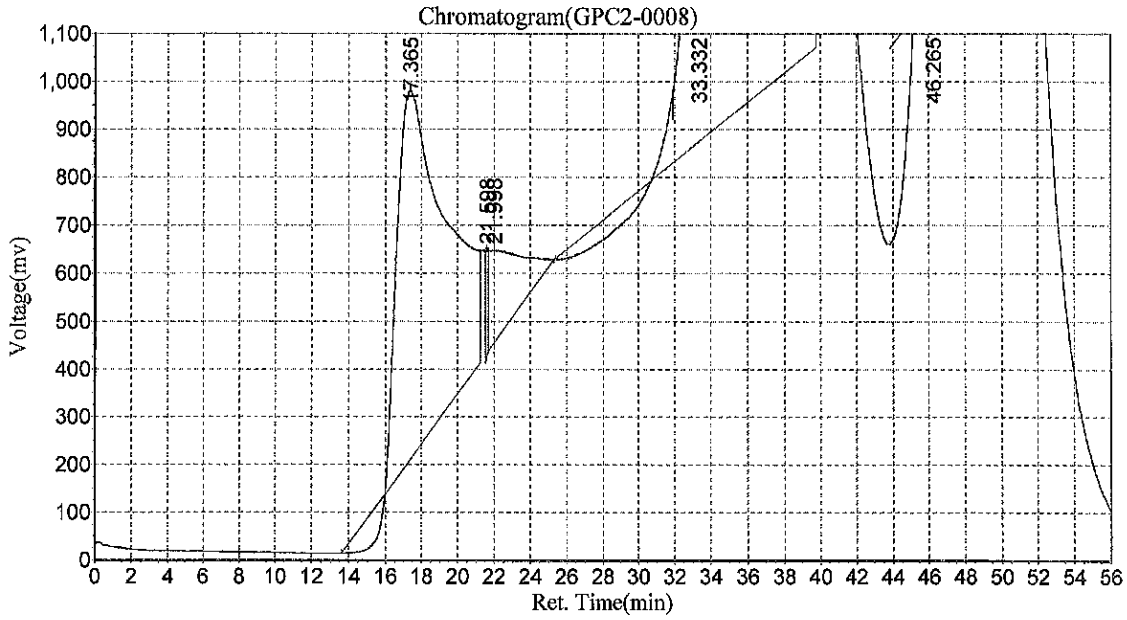

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	770119.938	135110064.000	37.9095
2		21.598	214530.078	1712577.875	0.4805
3		21.998	193751.859	23002938.000	6.4542
4		33.332	500410.188	182349856.000	51.1641
5		46.265	106359.305	14226478.000	3.9917
Total			1785171.367	356401913.875	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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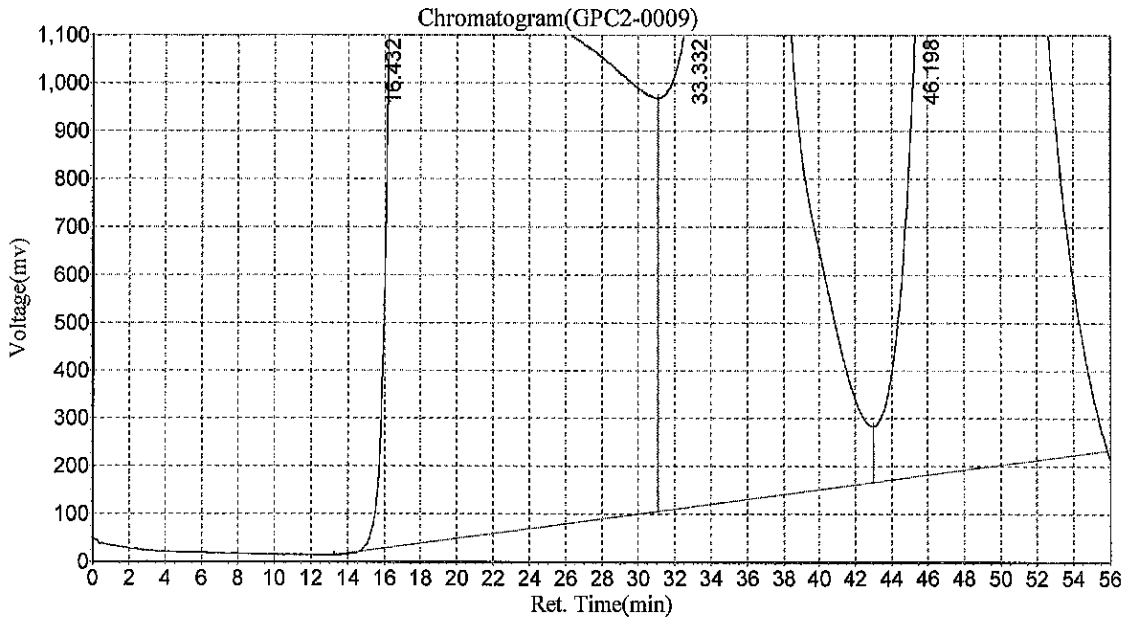

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.432	1348145.750	1030115968.000	45.2184
2		33.332	1254998.250	622634368.000	27.3314
3		46.198	1191784.125	625338176.000	27.4501
Total			3794928.125	2278088512.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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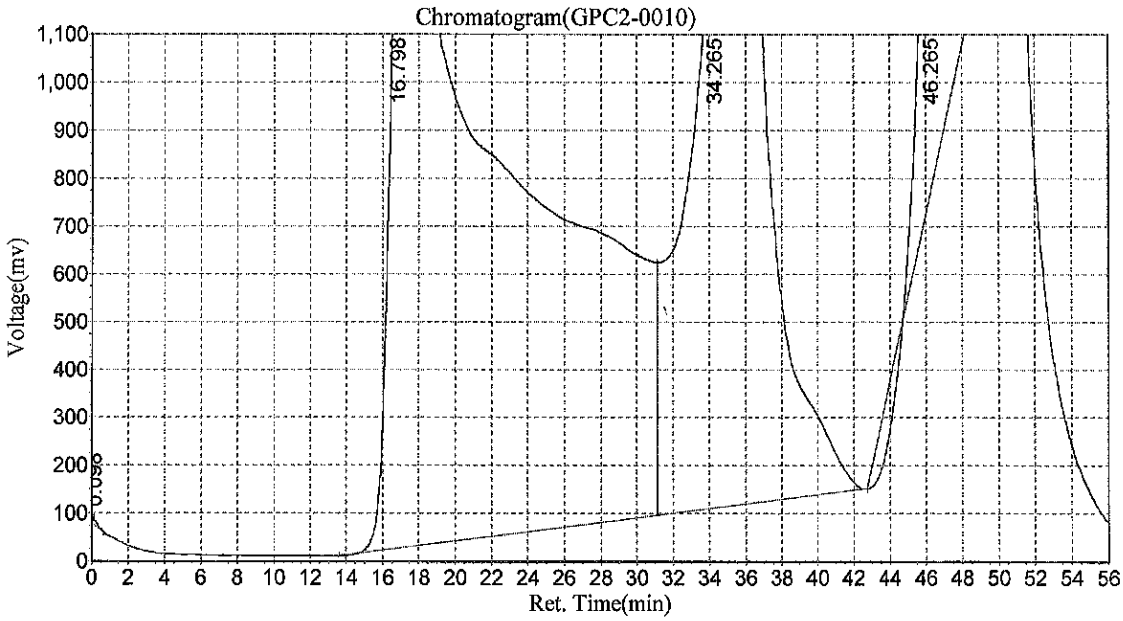

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.098	9564.579	171039.406	0.0137
2		16.798	1352921.375	733402496.000	58.8513
3		34.265	1263466.750	423951680.000	34.0197
4		46.265	606732.250	88670016.000	7.1153
Total			3232684.954	1246195231.406	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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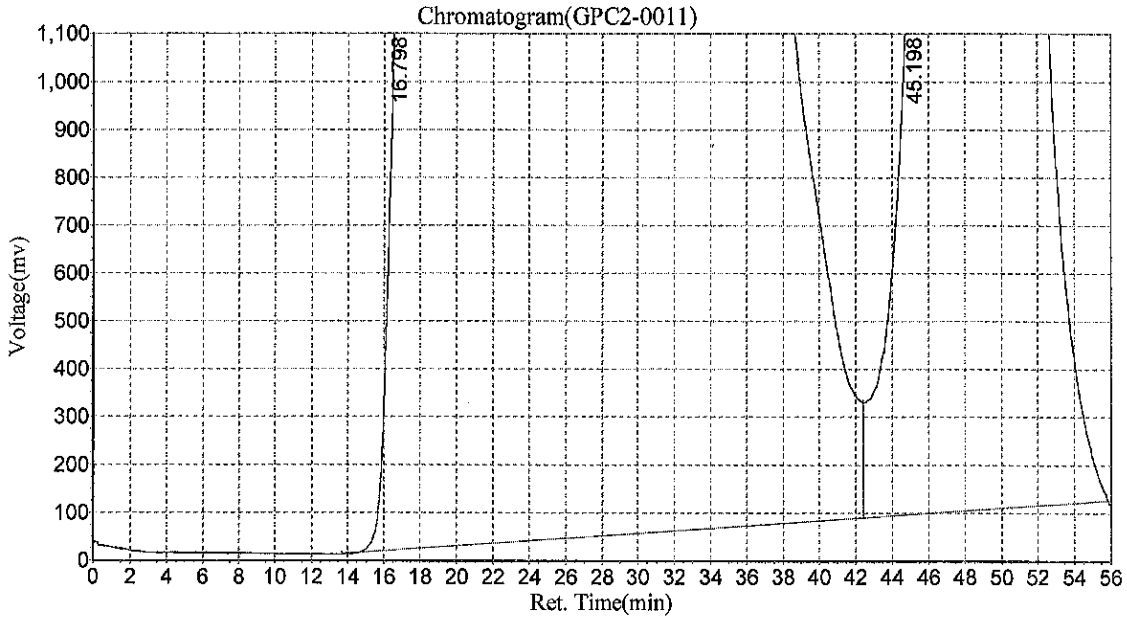

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.798	1357104.125	1803254272.000	71.4757
2		45.198	1277598.375	719637760.000	28.5243
Total			2634702.500	2522892032.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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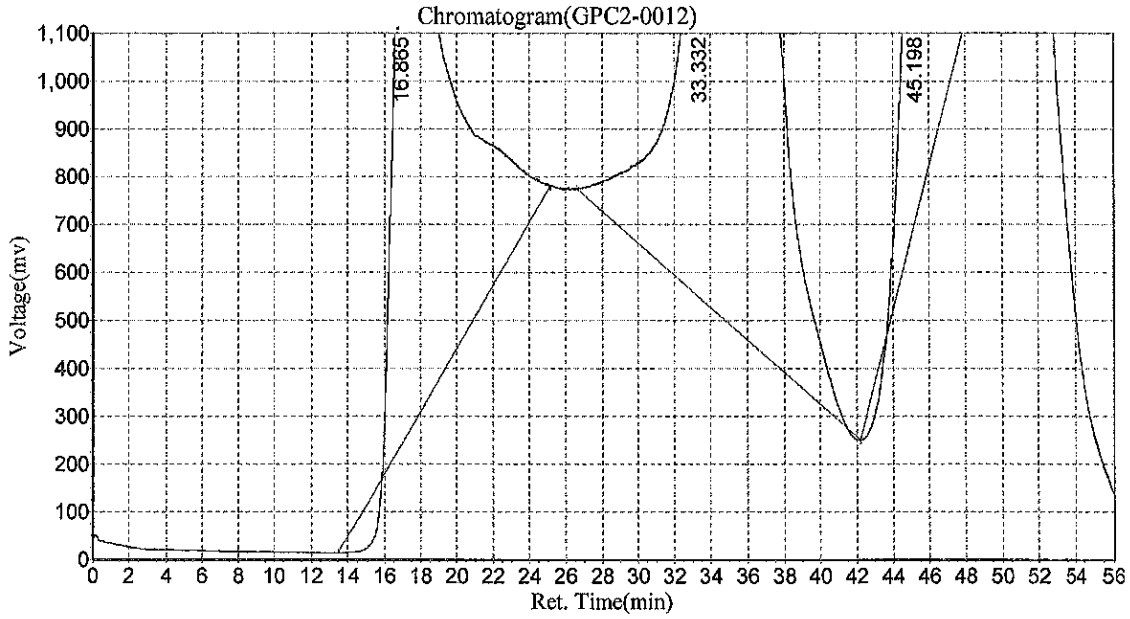

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.865	1143370.625	266933952.000	34.3376
2		33.332	825429.313	383963680.000	49.3920
3		45.198	677913.250	126482984.000	16.2704
Total			2646713.188	777380616.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

Date:2023-01-28,6:48:58 AM
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Method File:E:\GPC2_InHouse.mtd

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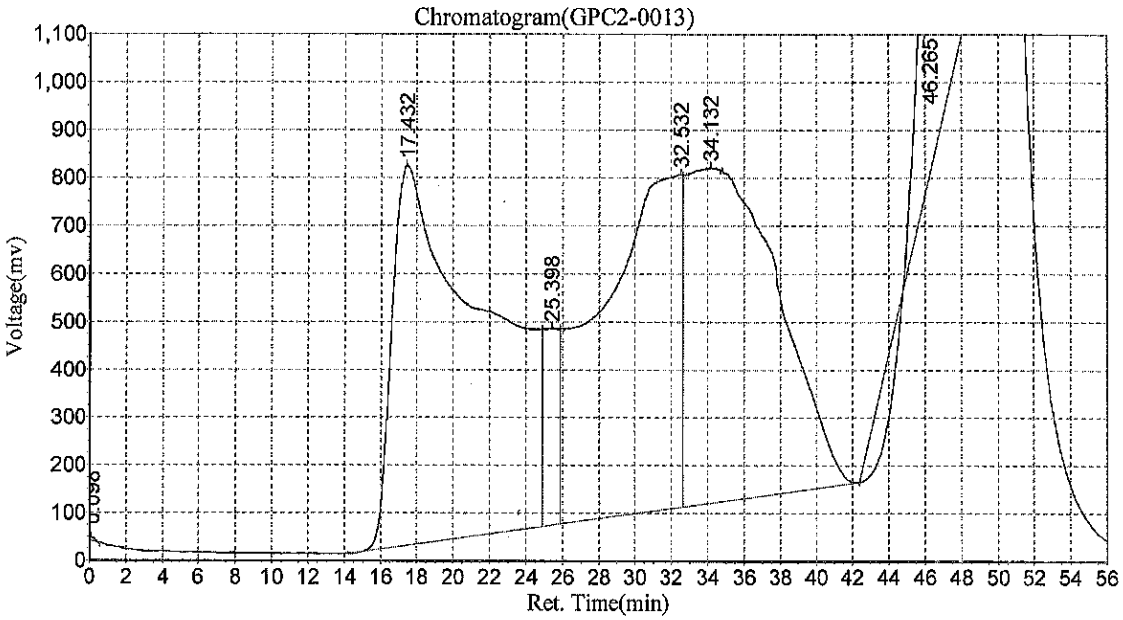

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.098	6137.733	109161.000	0.0130
2		17.432	793916.188	275632224.000	32.8020
3		25.398	412373.906	24703880.000	2.9399
4		32.532	695349.563	218738752.000	26.0313
5		34.132	700095.688	243405104.000	28.9668
6		46.265	573110.250	77701080.000	9.2469
Total			3180983.327	840290201.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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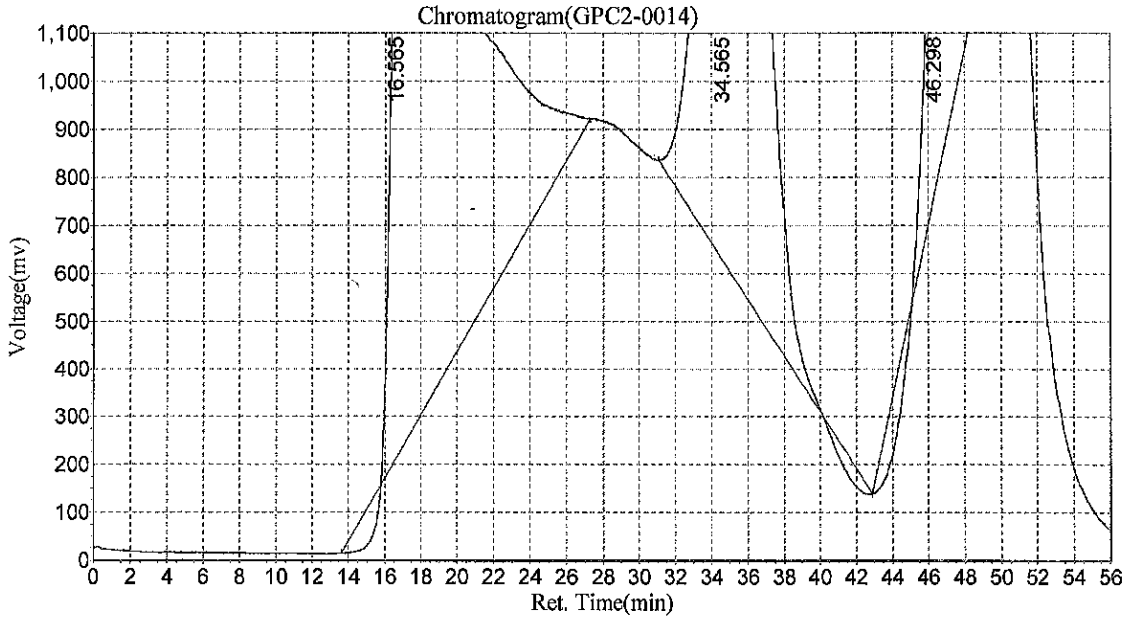
Date/Time2023-01-28,7:46:41 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.565	1170699.875	385039584.000	54.5110
2		34.565	743407.438	242121840.000	34.2778
3		46.298	624967.125	79191248.000	11.2113
Total			2539074.438	706352672.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

Date:2023-01-28,8:44:23 AM
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Method File:E:\GPC2_InHouse.mtd

Analyst£ºCTO
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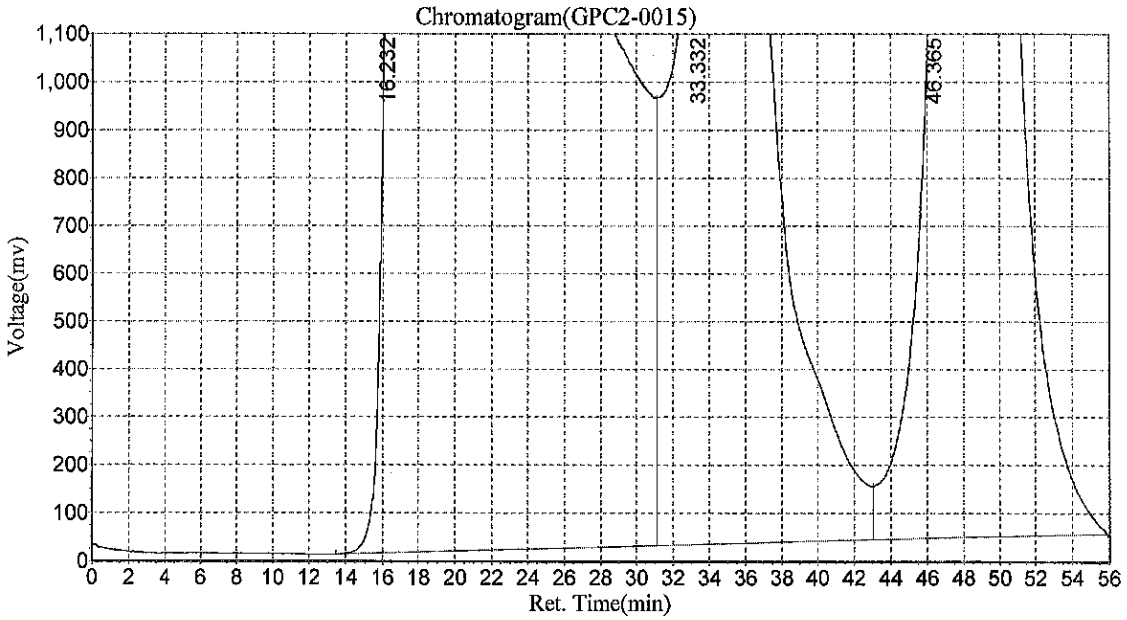

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.232	1362134.875	1135400576.000	50.0039
2		33.332	1338501.750	591854016.000	26.0657
3		46.365	1328132.000	543369408.000	23.9304
Total			4028768.625	2270624000.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

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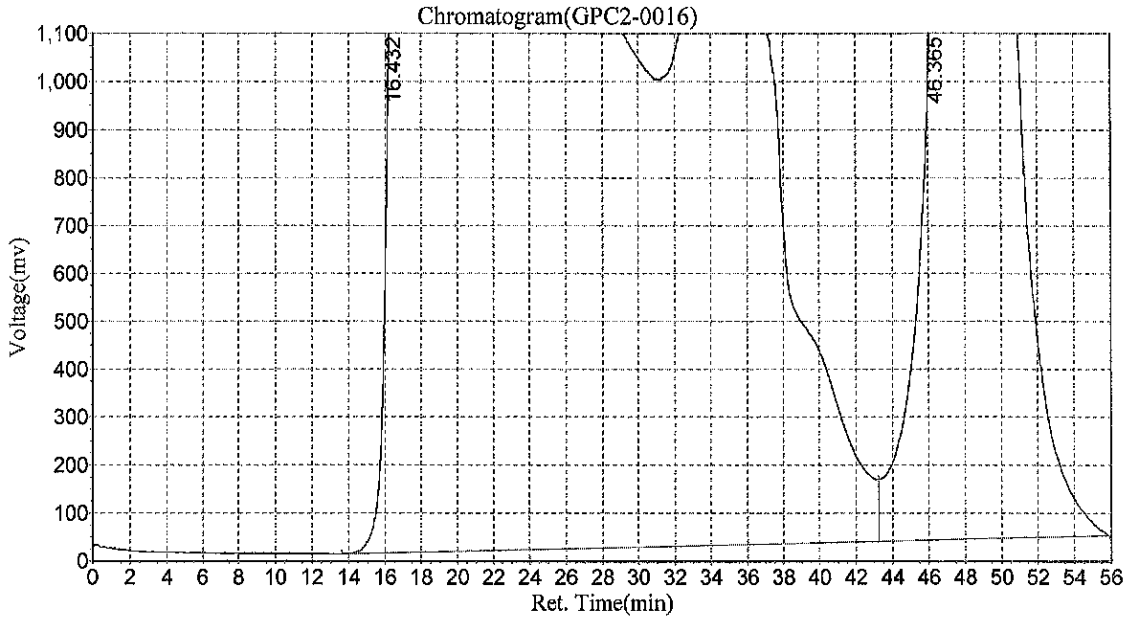

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.432	1362101.500	1724842752.000	76.9808
2		46.365	1332362.500	515771616.000	23.0192
Total			2694464.000	2240614368.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0393 23A0133 svoa

Date:2023-01-28,10:39:48 AM
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Method File:E:\GPC2_InHouse.mtd

Analyst£°CTO
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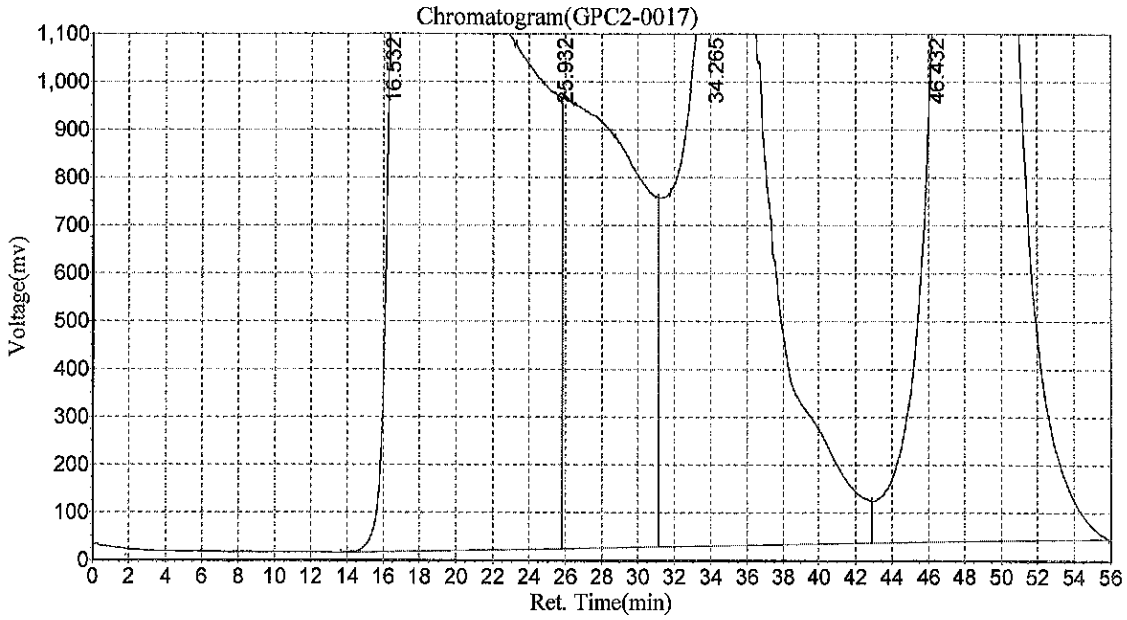


Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.532	1361180.500	690363968.000	35.1591
2		25.932	945081.688	271317120.000	13.8177
3		34.265	1343944.875	487445600.000	24.8248
4		46.432	1338246.500	514416928.000	26.1984
Total			4988453.563	1963543616.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0007	Cleanup Type:	GPC
Cleanup Method:	EPA 3640A GPC Cleanup 1:1	Analysis:	EPA 8270E-SIM

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1091	23A0133-16	NT1423022159S.D	01/28/2023	
Blank	BLA0393-BLK2	NT1423022134S.D	01/28/2023	
LCS	BLA0393-BS2	NT1423022135S.D	01/28/2023	
LCS Dup	BLA0393-BSD2	NT1423022136S.D	01/28/2023	
Matrix Spike Dup	BLA0393-MSD2	NT1423022145S.D	01/28/2023	
LDW23-SC1185	23A0133-08	NT1423022151S.D	01/28/2023	
LDW23-SS1110	23A0133-13	NT1423022156S.D	01/28/2023	
Matrix Spike	BLA0393-MS2	NT1423022144S.D	01/28/2023	
LDW23-SS1092	23A0133-15	NT1423022158S.D	01/28/2023	
LDW23-SC1222	23A0133-11	NT1423022154S.D	01/28/2023	
LDW23-SC1250	23A0133-03	NT1423022141S.D	01/28/2023	
LDW23-SC1241	23A0133-06	NT1423022142S.D	01/28/2023	
LDW23-SC1234	23A0133-09	NT1423022152S.D	01/28/2023	
LDW23-SC1227	23A0133-12	NT1423022155S.D	01/28/2023	
LDW23-SC1215	23A0133-10	NT1423022153S.D	01/28/2023	
LDW23-IT1217	23A0133-07	NT1423022143S.D	01/28/2023	
Reference	BLA0393-SRM2	NT1423022137S.D	01/28/2023	
LDW23-SS1109	23A0133-14	NT1423022157S.D	01/28/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0007

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLA0166-GPC1** **Printed: 2/2/2023 10:43:37AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0133-03	C	LDW23-SC1250	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-03	C	LDW23-SC1250	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-06	C	LDW23-SC1241	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-06	C	LDW23-SC1241	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-07	C	LDW23-IT1217	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-07	C	LDW23-IT1217	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-08	C	LDW23-SC1185	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-08	C	LDW23-SC1185	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-09	C	LDW23-SC1234	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-09	C	LDW23-SC1234	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-10	C	LDW23-SC1215	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-10	C	LDW23-SC1215	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-11	C	LDW23-SC1222	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-11	C	LDW23-SC1222	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-12	C	LDW23-SC1227	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-12	C	LDW23-SC1227	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-13	C	LDW23-SS1110	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-13	C	LDW23-SS1110	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-14	C	LDW23-SS1109	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-14	C	LDW23-SS1109	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-15	C	LDW23-SS1092	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
23A0133-15	C	LDW23-SS1092	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0007

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLA0166-GPC1** **Printed: 2/2/2023 10:43:37AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0133-16	C	LDW23-SS1091	C 04	1	1	8270E-SIM Dual Scan SVOC	1/28/2023	CTO	
23A0133-16	C	LDW23-SS1091	C 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	1/28/2023	CTO	
BLA0393-BLK1	-	Blank	-	1	1	-	1/28/2023	CTO	
BLA0393-BLK2	-	Blank	-	1	1	-	1/28/2023	CTO	
BLA0393-BS1	-	LCS	-	1	1	-	1/28/2023	CTO	
BLA0393-BS2	-	LCS	-	1	1	-	1/28/2023	CTO	
BLA0393-BSD1	-	LCS Dup	-	1	1	-	1/28/2023	CTO	
BLA0393-BSD2	-	LCS Dup	-	1	1	-	1/28/2023	CTO	
BLA0393-MS1	-	Matrix Spike	-	1	1	-	1/28/2023	CTO	
BLA0393-MS2	-	Matrix Spike	-	1	1	-	1/28/2023	CTO	
BLA0393-MSD1	-	Matrix Spike Dup	-	1	1	-	1/28/2023	CTO	
BLA0393-MSD2	-	Matrix Spike Dup	-	1	1	-	1/28/2023	CTO	
BLA0393-SRM1	-	Reference	-	1	1	-	1/28/2023	CTO	
BLA0393-SRM2	-	Reference	-	1	1	-	1/28/2023	CTO	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8270E-SIM

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLA0393-BLK2	File ID:	NT1423022134S.D
Sampled:	N/A	Prepared:	01/18/23 15:24	Analyzed:	02/22/23 09:21
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 1 mL
Batch:	BLA0393	Sequence:	SLB0349	Calibration:	GC00009
Instrument:	NT14	Column:	ZB-5MS	Cleanups:	GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	5.0	U	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	20.0	U	2.5	20.0
65-85-0	Benzoic acid	1	400	U	13.4	400
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	20.0	U	2.1	20.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	750.00	398	53.1	27 - 120	
p-Terphenyl-d14	500.00	361	72.2	37 - 120	Q

Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221345.D

Date : 22-FEB-2023 09:21

Client ID:

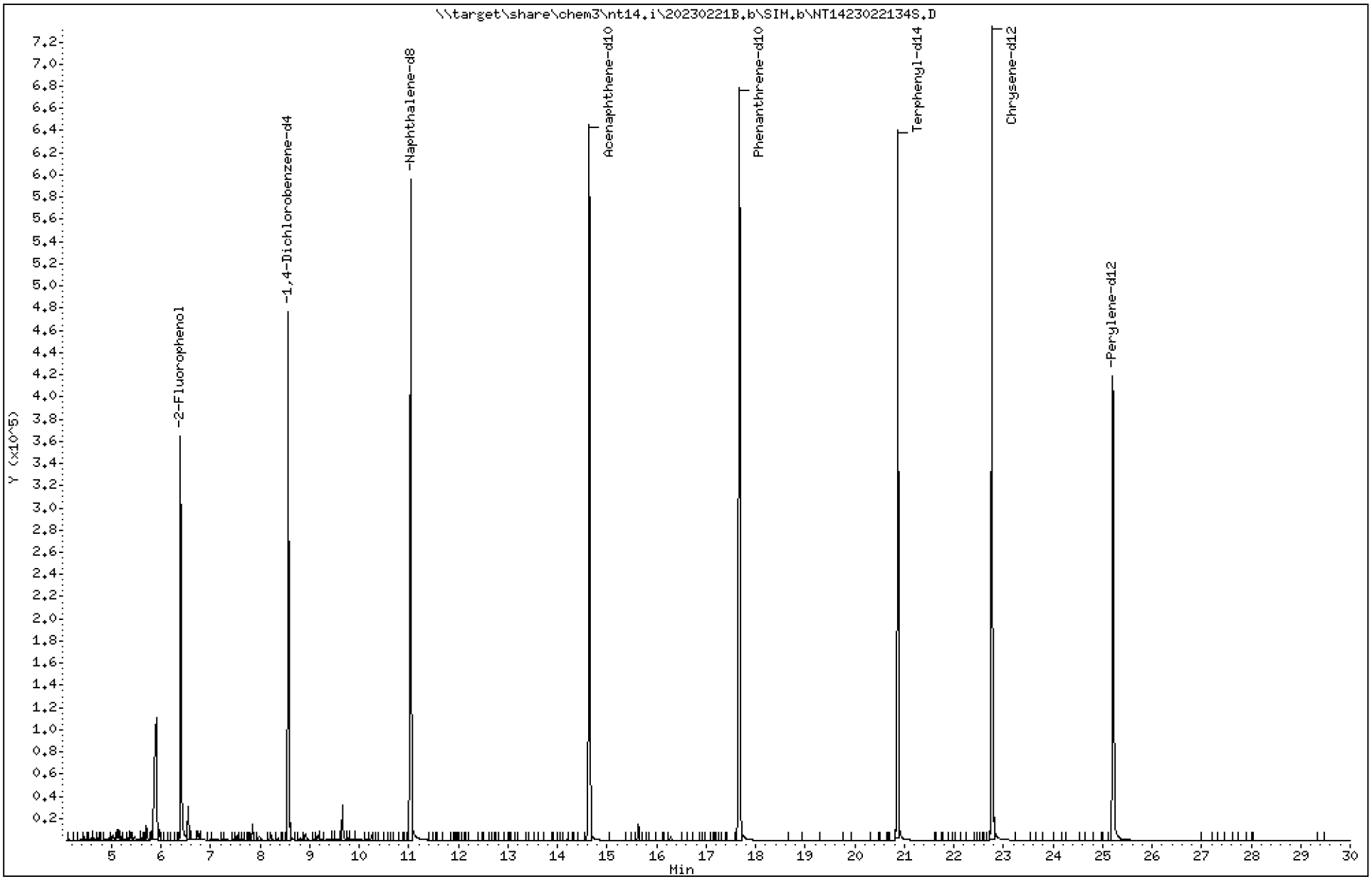
Sample Info: BLA0393-BLK1

Column phase: ZB-5msi

Instrument: nt14.i

Operator: DSD

Column diameter: 0.25



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Date : 22-FEB-2023 09:21

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BLK1

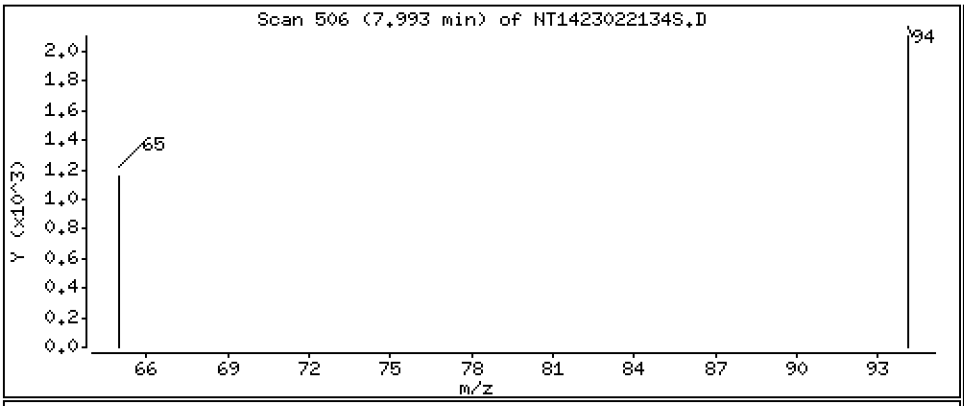
Operator: DSD

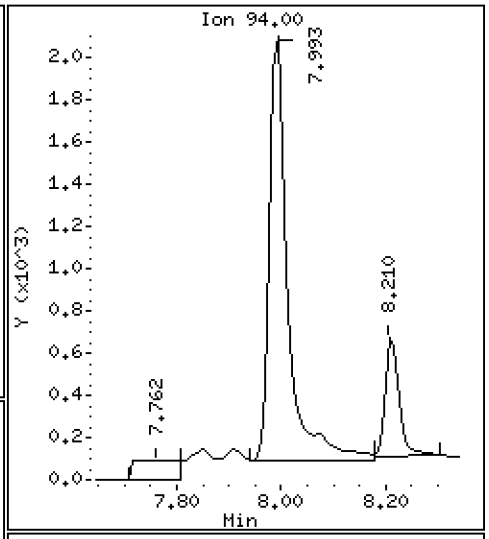
Column phase: ZB-5msi

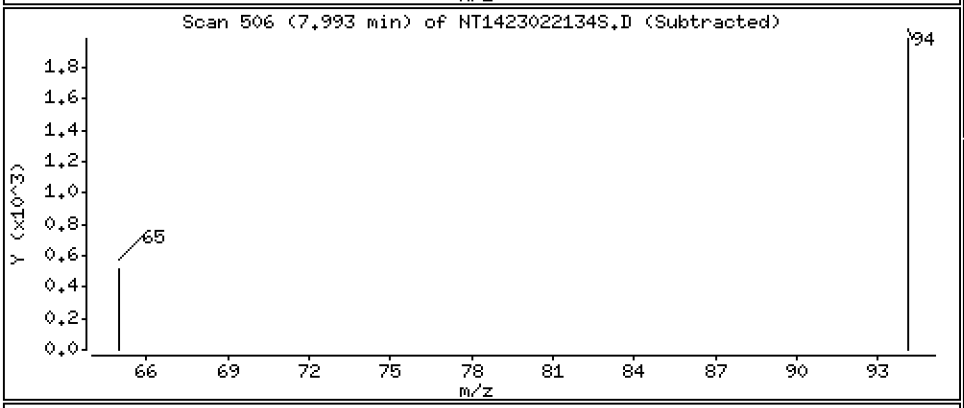
Column diameter: 0.25

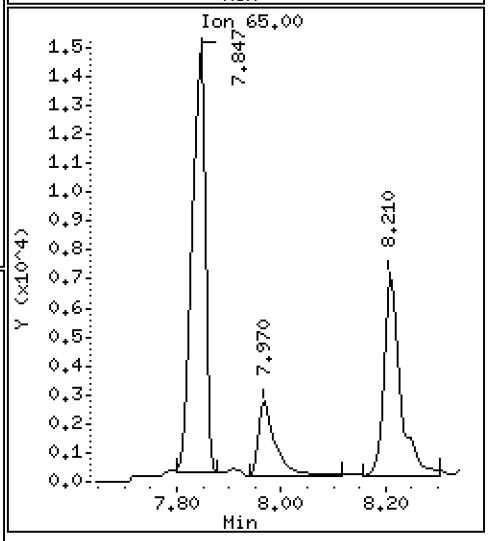
3 Phenol

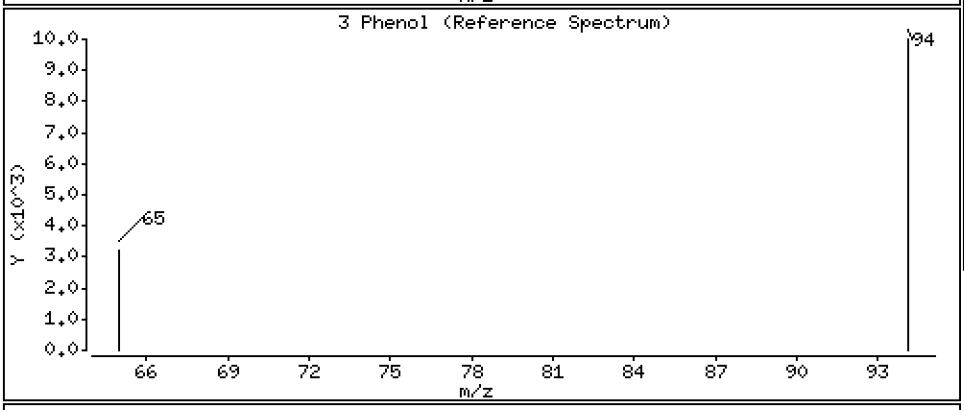
Concentration: 0.03636 ug/mL

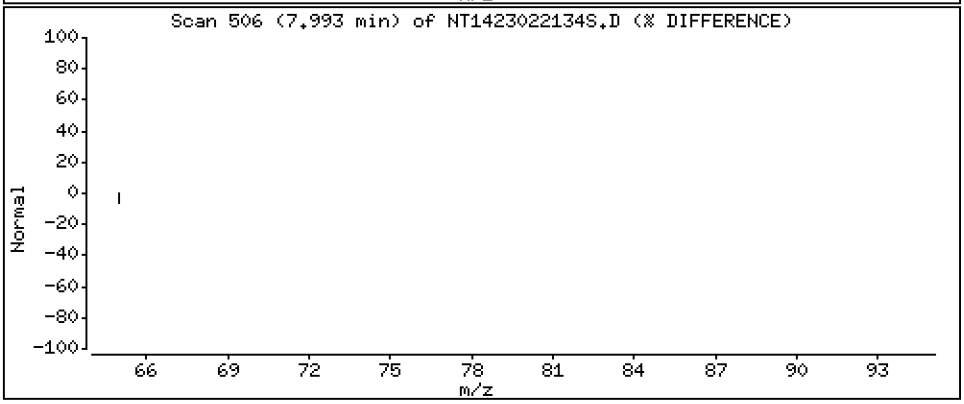












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Date : 22-FEB-2023 09:21

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BLK1

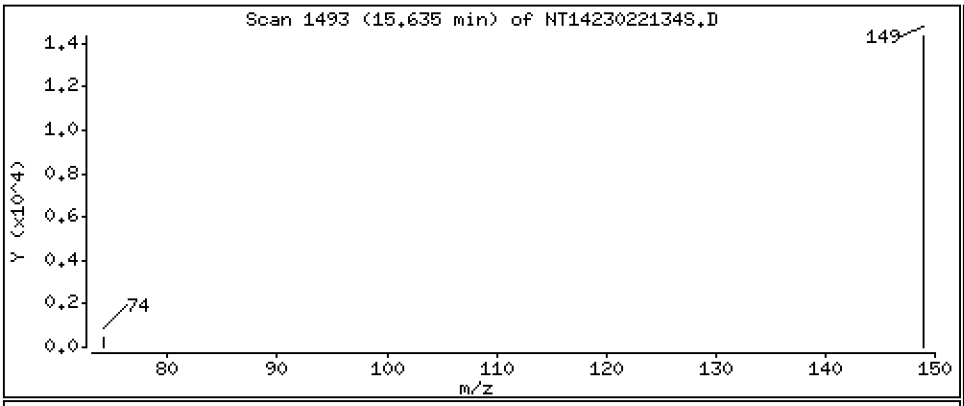
Operator: DSD

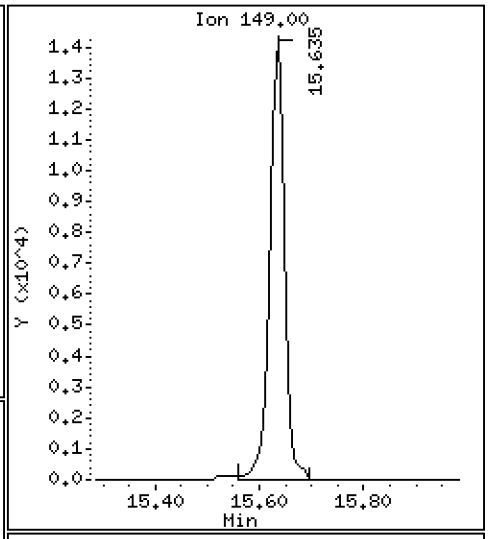
Column phase: ZB-5msi

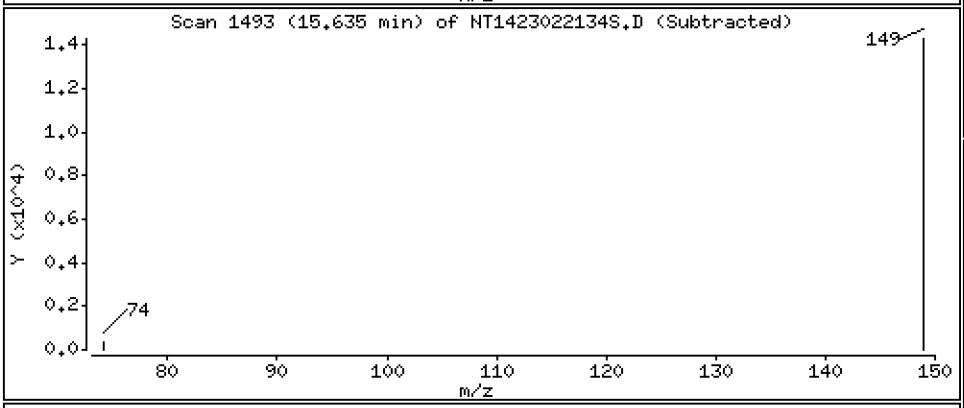
Column diameter: 0.25

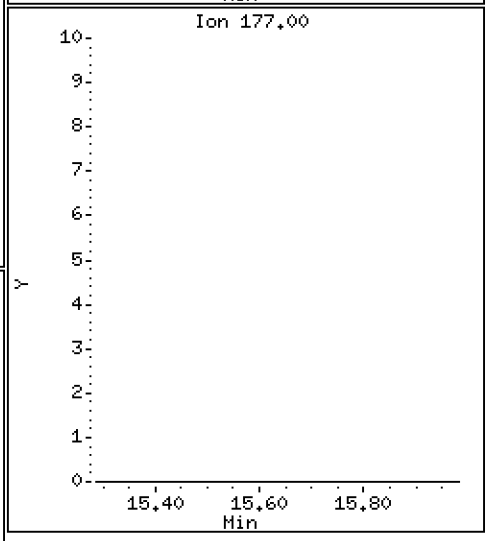
50 Diethylphthalate

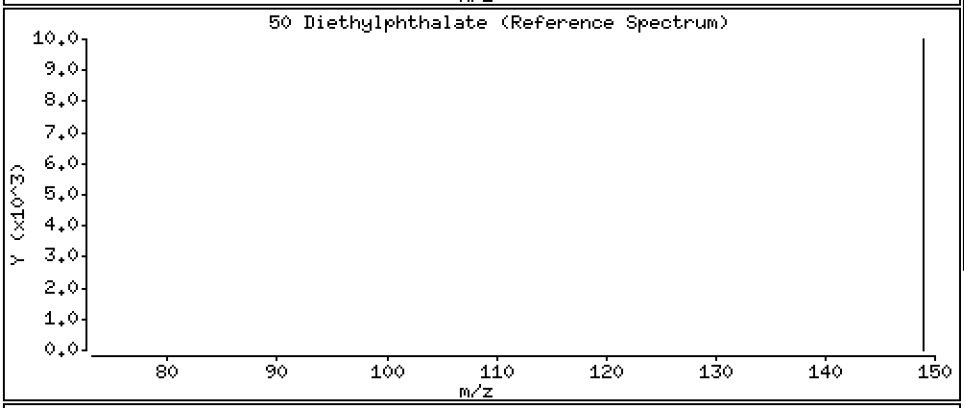
Concentration: 0.1230 ug/mL

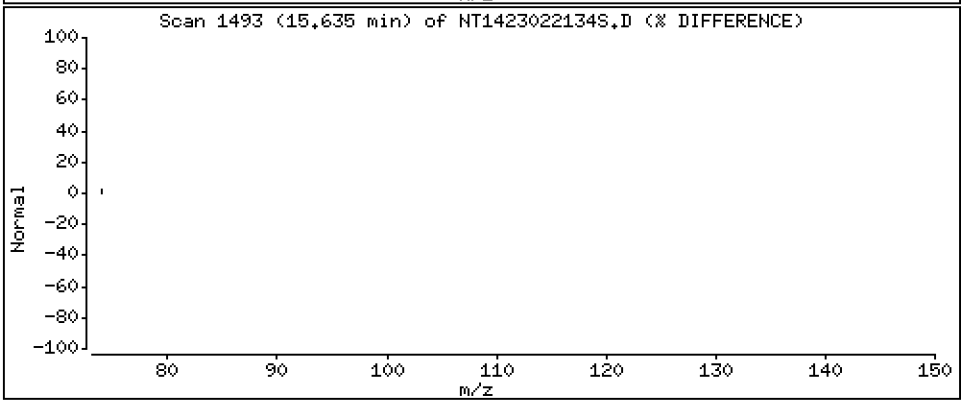












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT1423022134S.D
Lab Smp Id: BLA0393-BLK2
Inj Date : 22-FEB-2023 09:21 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : BLA0393-BLK1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Meth Date : 17-Jun-2023 09:15 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.393	6.385	(0.746)	346483	3.98200	3.982(R)
	3 Phenol	94	7.993	7.993	(0.933)	4756	0.03636	0.03636
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.565	8.573	(1.000)	305329	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	79	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.039	11.039	(1.000)	1097705	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
*	42 Acenaphthene-d10	162	14.645	14.645	(1.000)	569801	4.00000	
	50 Diethylphthalate	149	15.635	15.634	(1.068)	26750	0.12295	0.1230(H)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.674	17.673	(1.000)	1341702	4.00000	
$	66 Terphenyl-d14	244	20.869	20.869	(0.917)	943567	3.61242	3.612(R)
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	22.766	22.766	(1.000)	981145	4.00000	
*	77 Perylene-d12	264	25.212	25.212	(1.000)	724557	4.00000	
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022134S.D
Lab Smp Id: BLA0393-BLK2
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 08:08
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	261796	130898	523592	305329	16.63
27 Naphthalene-d8	959301	479651	1918602	1097705	14.43
42 Acenaphthene-d10	503659	251830	1007318	569801	13.13
59 Phenanthrene-d10	1179954	589977	2359908	1341702	13.71
69 Chrysene-d12	887360	443680	1774720	981145	10.57
77 Perylene-d12	652371	326186	1304742	724557	11.07

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.09
27 Naphthalene-d8	11.04	10.54	11.54	11.04	0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	0.00
59 Phenanthrene-d10	17.67	17.17	18.17	17.67	0.00
69 Chrysene-d12	22.77	22.27	23.27	22.77	0.00
77 Perylene-d12	25.21	24.71	25.71	25.21	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022134S.D

Lab ID: BLA0393-BLK2
nt14.i, 20230221B.b\SIM.b\SIMABN2.m,   22-FEB-2023 09:21

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1423022132S.D

On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

LCS / LCS DUPLICATE RECOVERY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/22/23 09:57
Batch:	BLA0393	Laboratory ID:	BLA0393-BS2
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	10 g / 1 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
1,4-Dichlorobenzene	500	328		65.6	36 - 120
1,2-Dichlorobenzene	500	323		64.6	36 - 120
Benzyl Alcohol	500	349		69.8	25 - 123
Benzoic acid	2300	1950	Q	84.6	10 - 160
2,4-Dimethylphenol	1300	569	Q	43.7	10 - 120
1,2,4-Trichlorobenzene	500	310		61.9	35 - 120
N-Nitrosodiphenylamine	500	343		68.6	27 - 120
Pentachlorophenol	1300	1190		91.7	26 - 120

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,4-Dichlorobenzene	500	364		72.8	10.4	30	36 - 120
1,2-Dichlorobenzene	500	359		71.7	10.4	30	36 - 120
Benzyl Alcohol	500	391		78.2	11.5	30	25 - 123
Benzoic acid	2300	2150	Q	93.5	9.99	30	10 - 160
2,4-Dimethylphenol	1300	195	*, Q	15.0	98.0 *	30	10 - 120
1,2,4-Trichlorobenzene	500	345		68.9	10.7	30	35 - 120
N-Nitrosodiphenylamine	500	350		70.1	2.10	30	27 - 120
Pentachlorophenol	1300	1220		93.8	2.22	30	26 - 120

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221358.D

Date : 22-FEB-2023 09:57

Client ID:

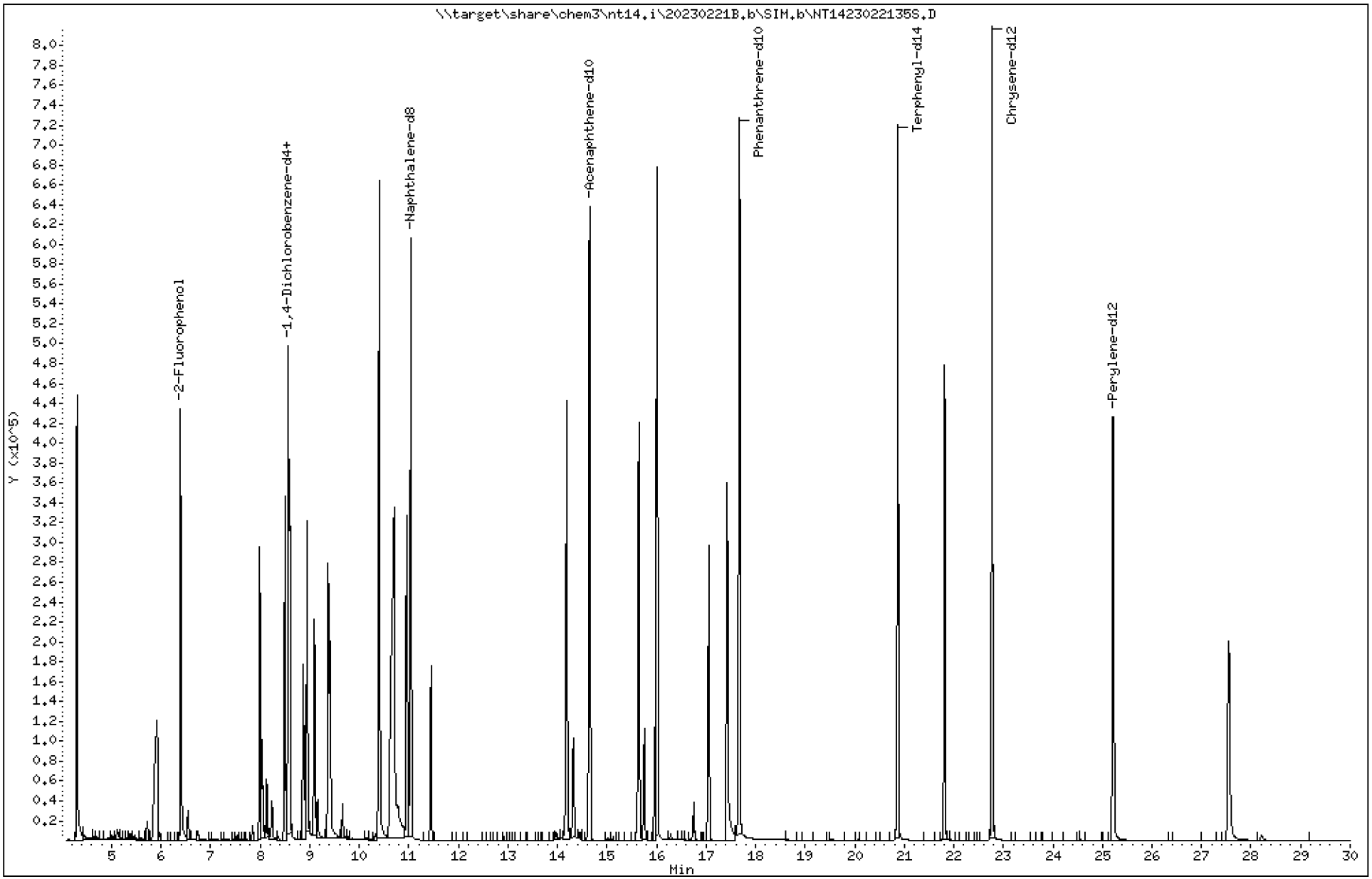
Instrument: nt14.i

Sample Info: BLA0393-BS1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221355.D

Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

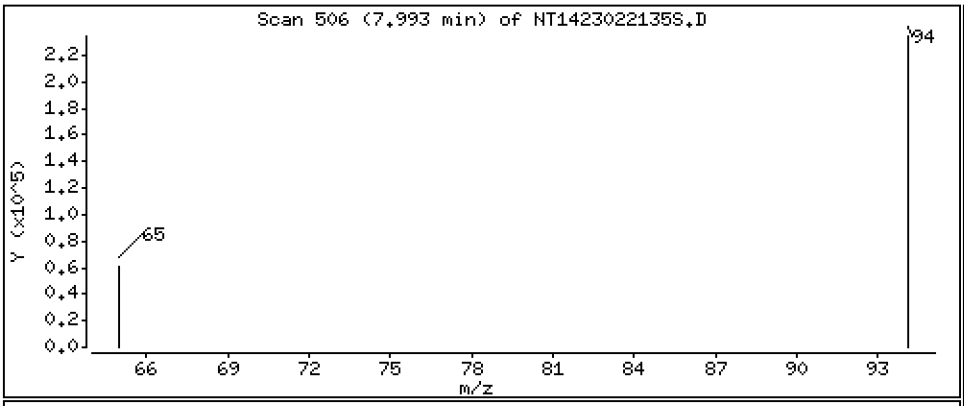
Operator: DSD

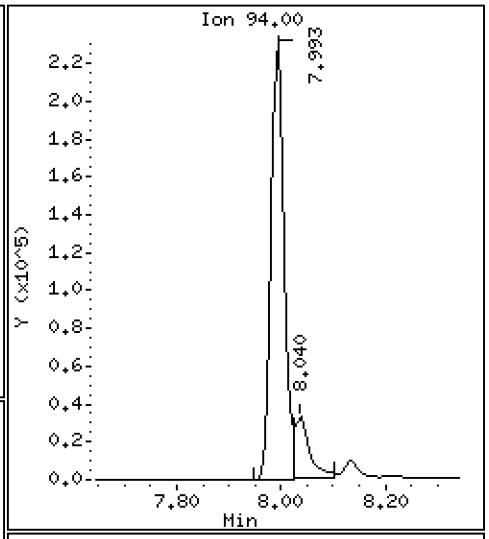
Column phase: ZB-5msi

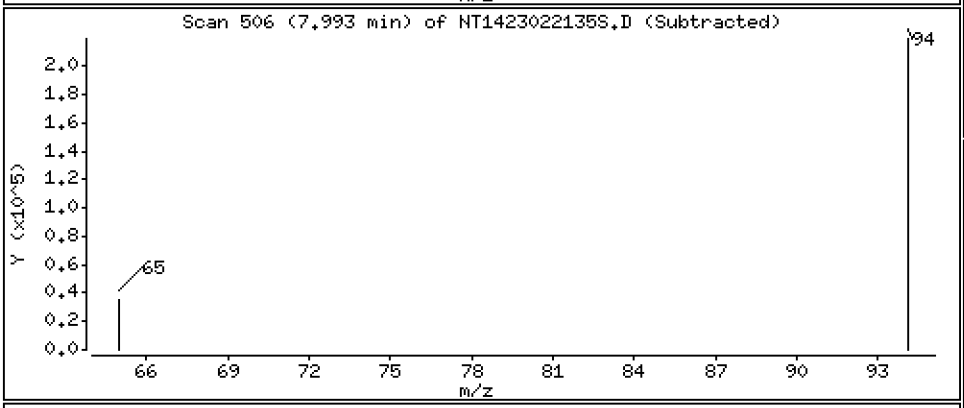
Column diameter: 0.25

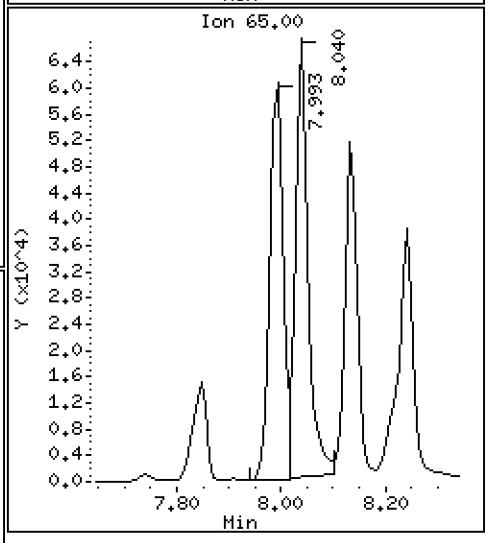
3 Phenol

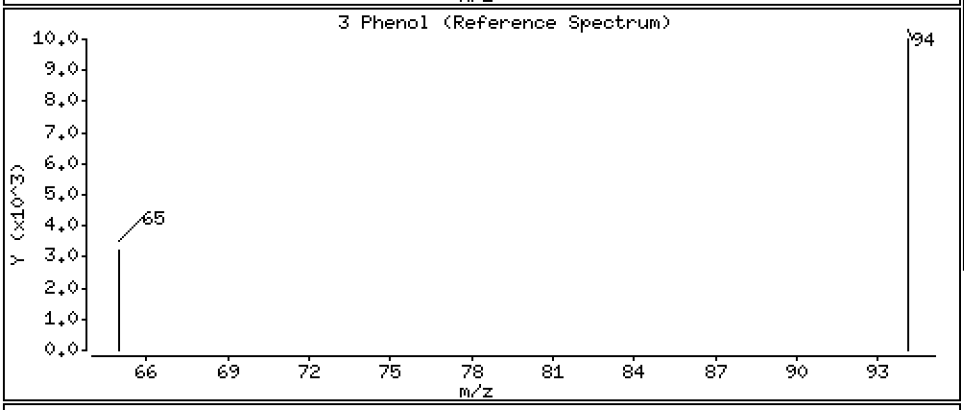
Concentration: 2.918 ug/mL

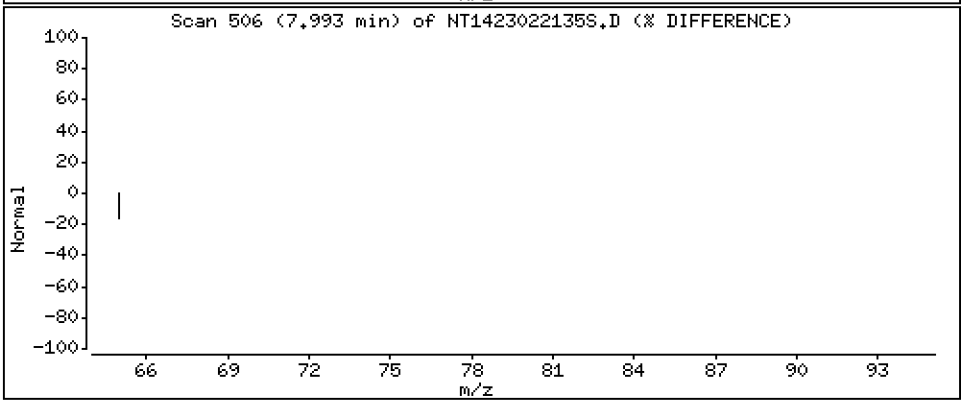












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221355.D

Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

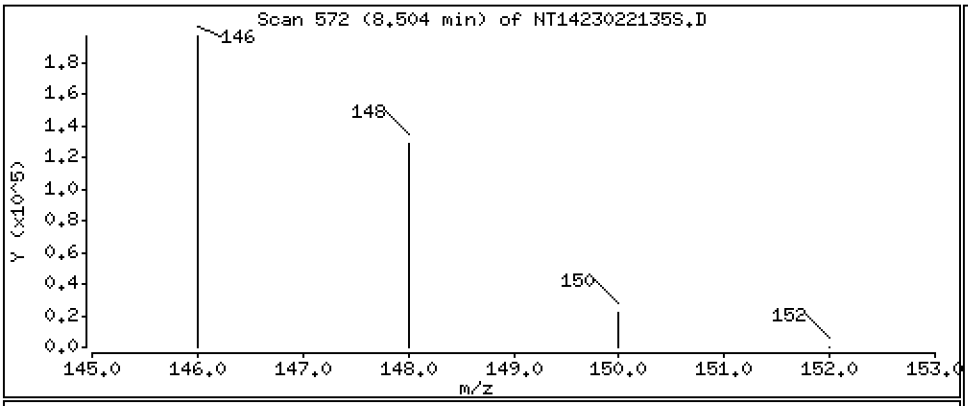
Operator: DSD

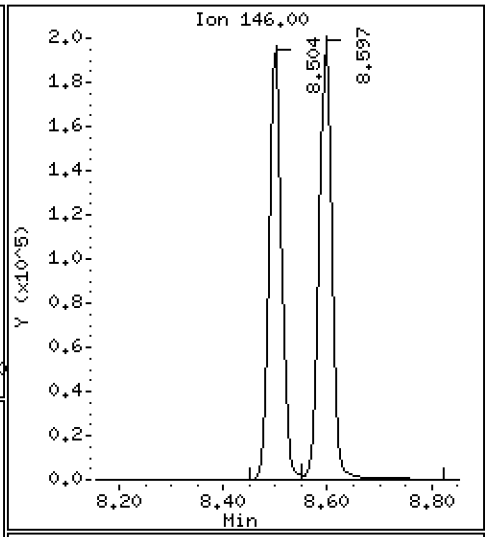
Column phase: ZB-5msi

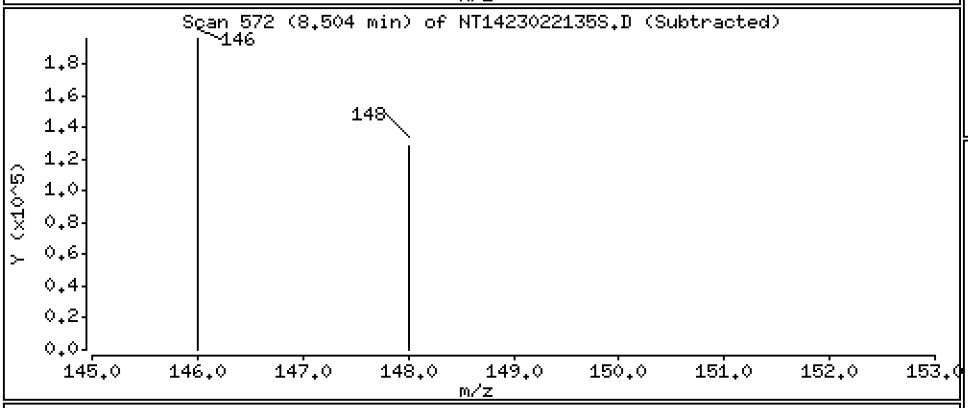
Column diameter: 0.25

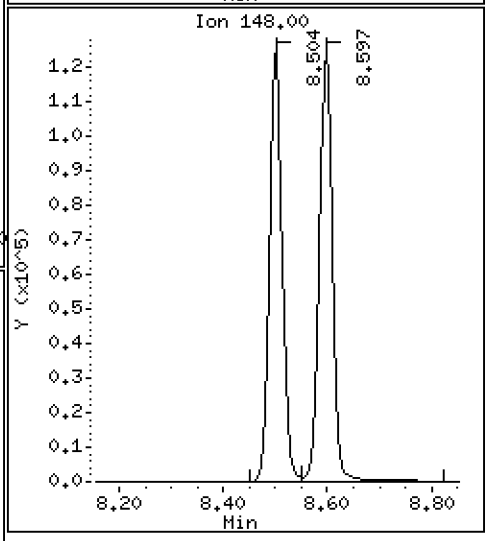
7 1,3-Dichlorobenzene

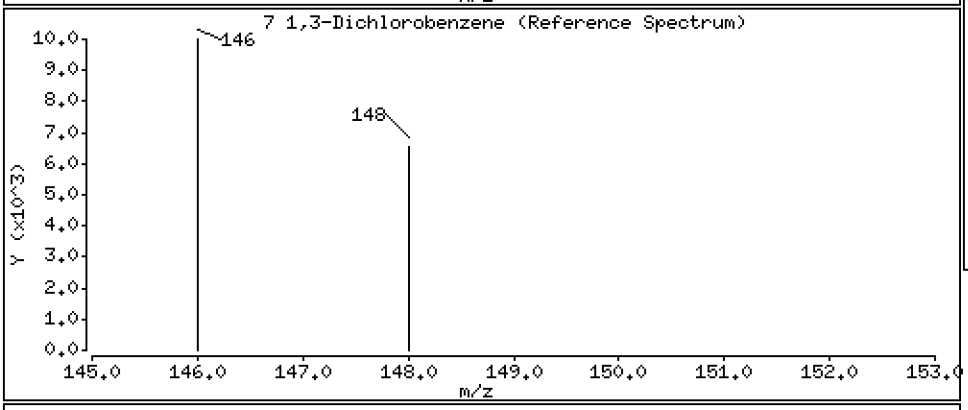
Concentration: 3.153 ug/mL

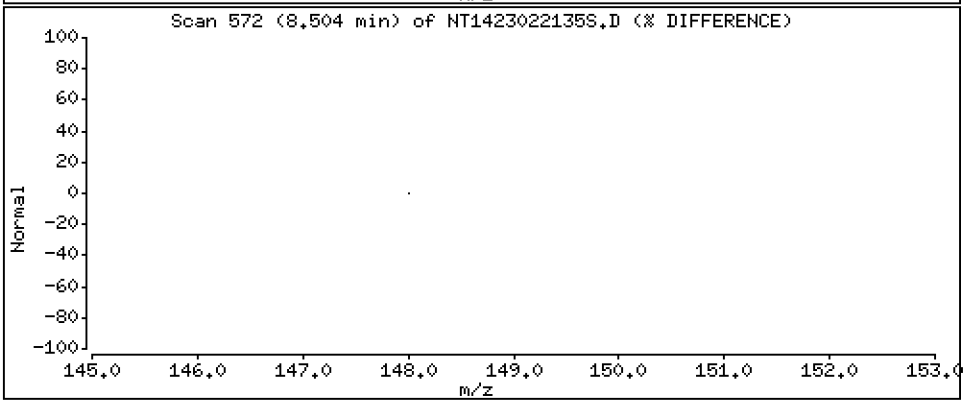












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

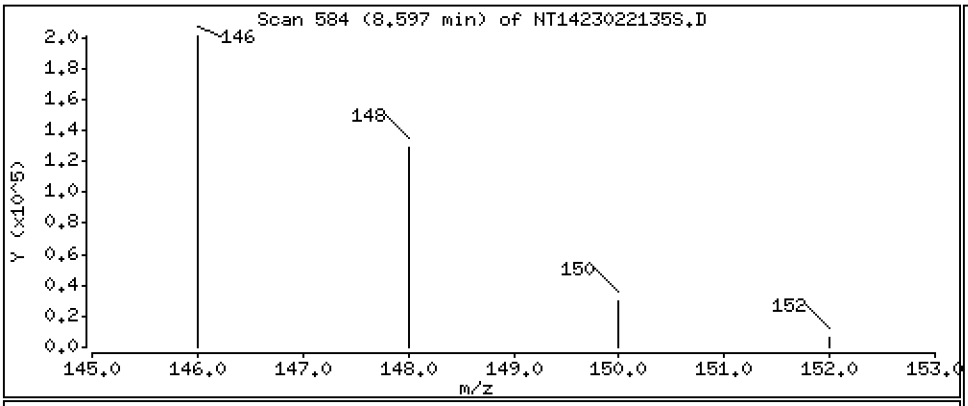
Operator: DSD

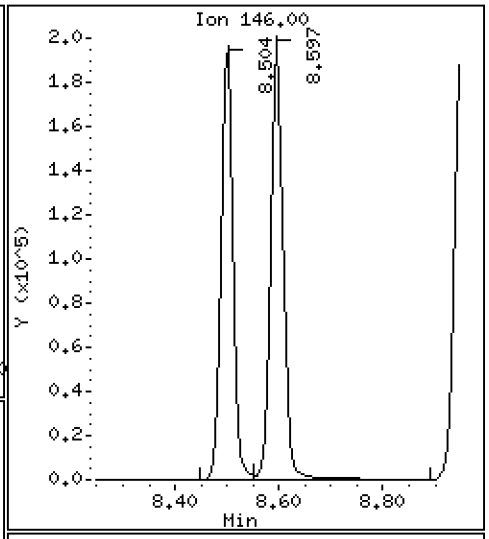
Column phase: ZB-5msi

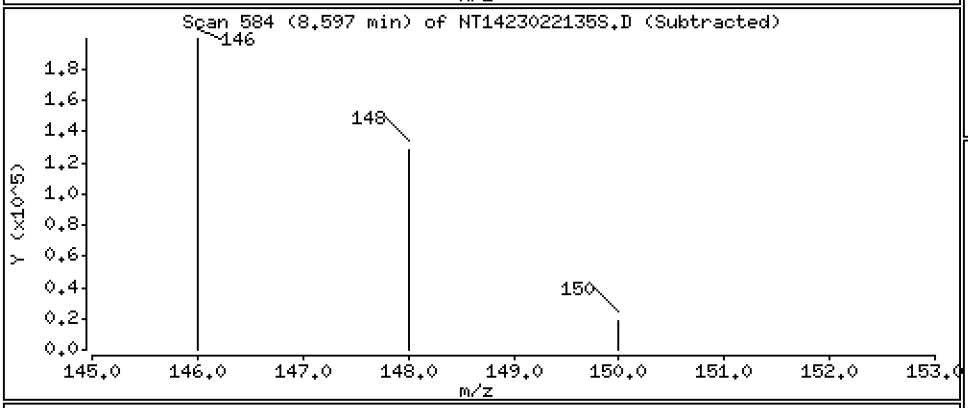
Column diameter: 0.25

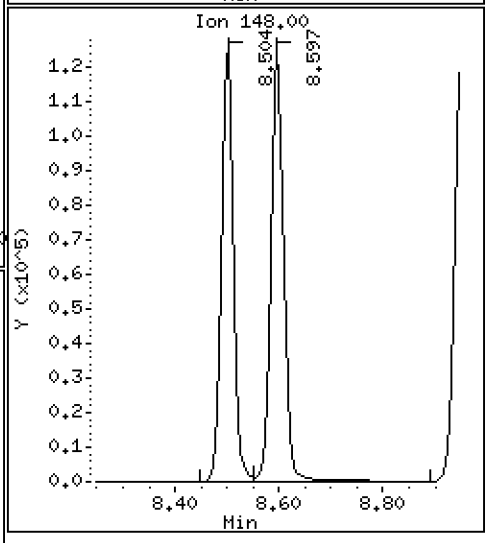
9 1,4-Dichlorobenzene

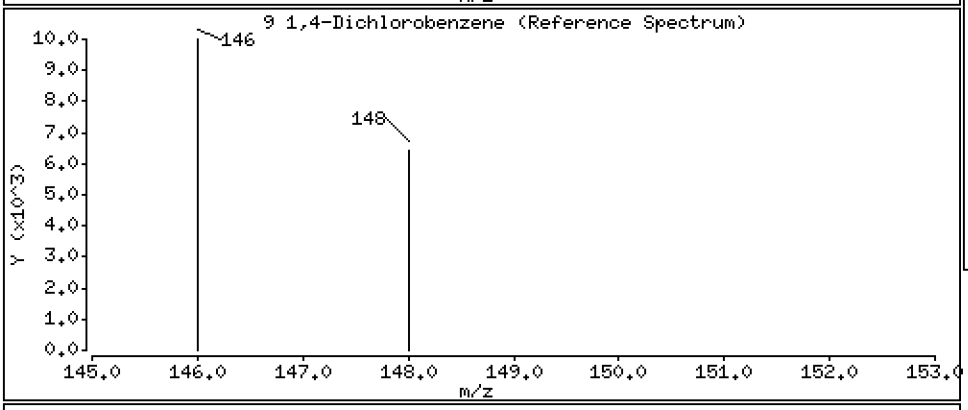
Concentration: 3.282 ug/mL

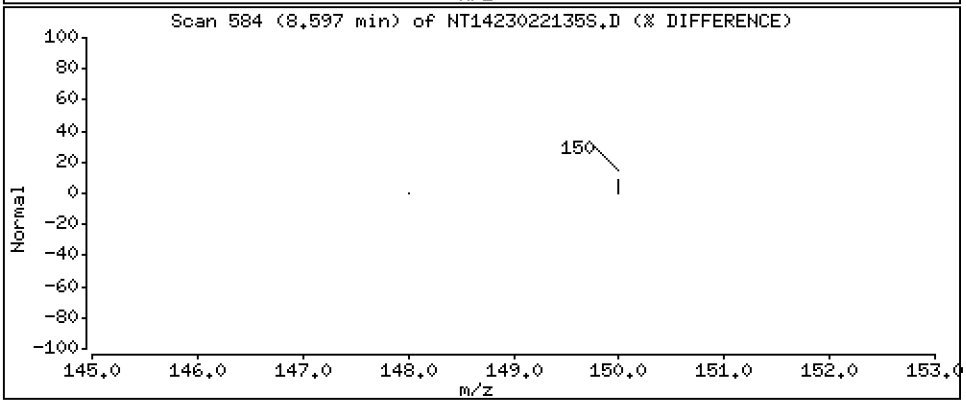












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221355.D

Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

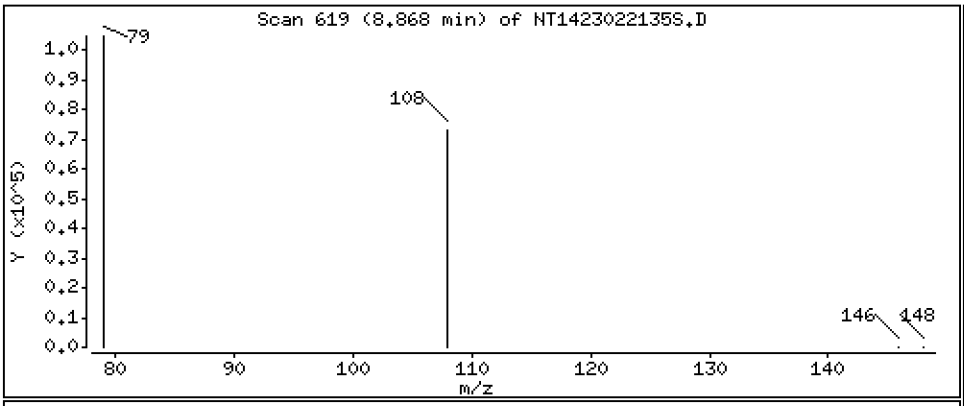
Operator: DSD

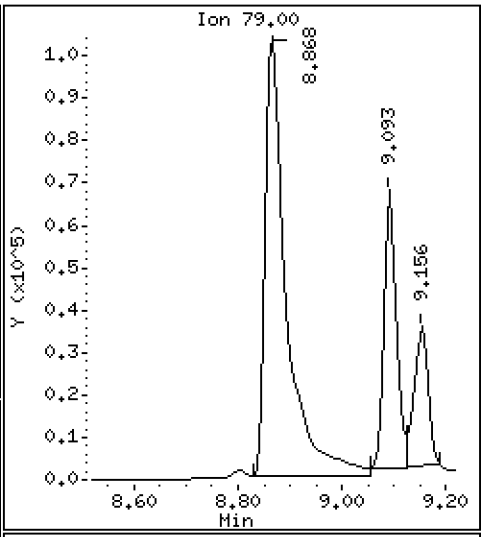
Column phase: ZB-5msi

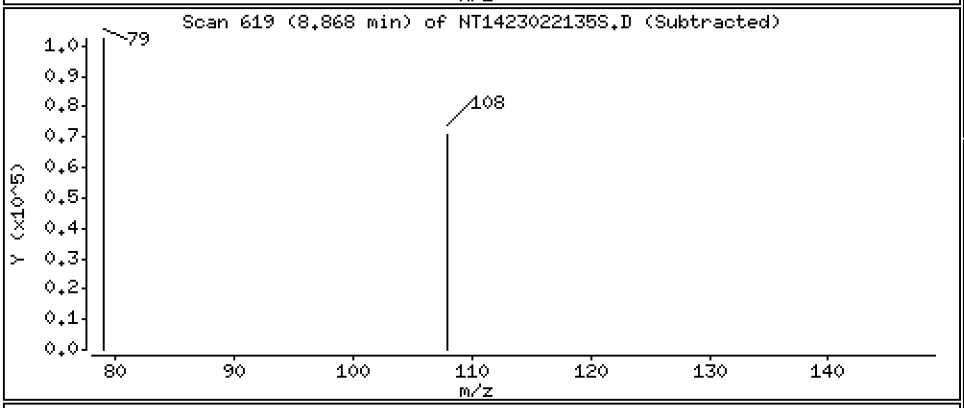
Column diameter: 0.25

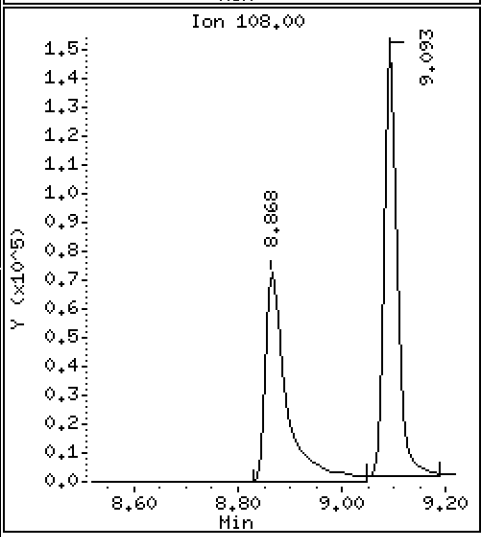
11 Benzyl alcohol

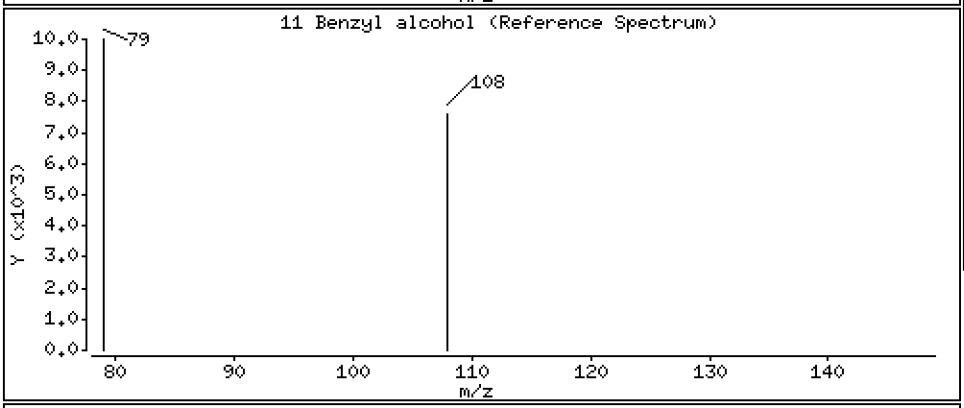
Concentration: 3.488 ug/mL

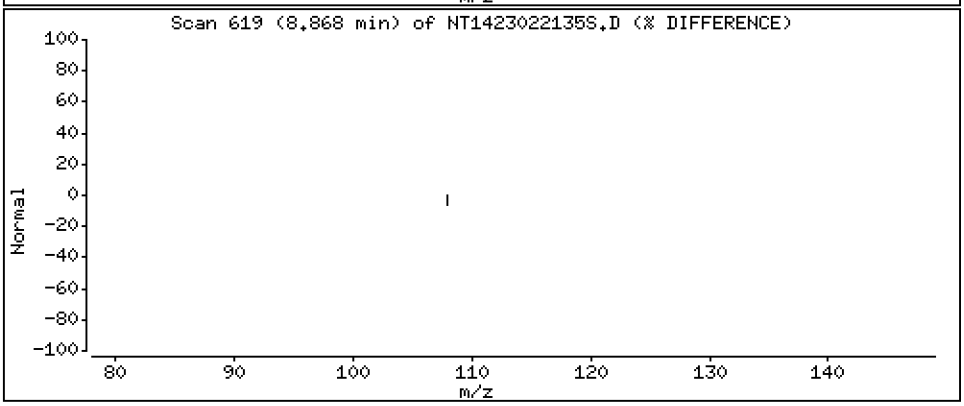












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221355.D

Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

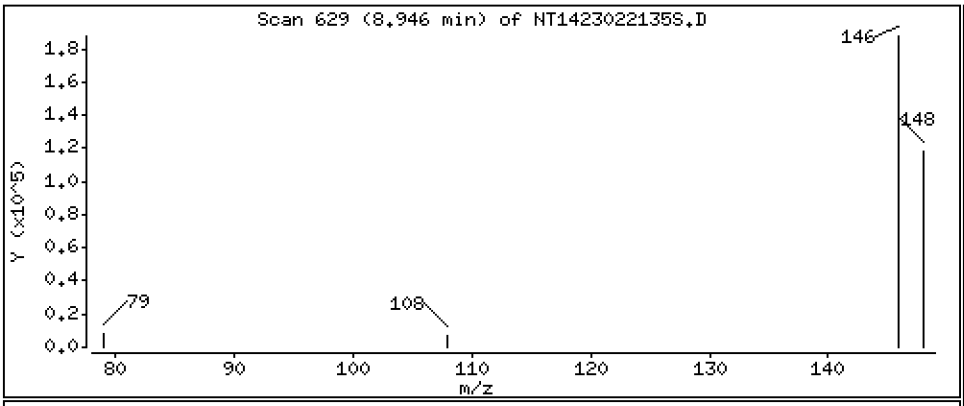
Operator: DSD

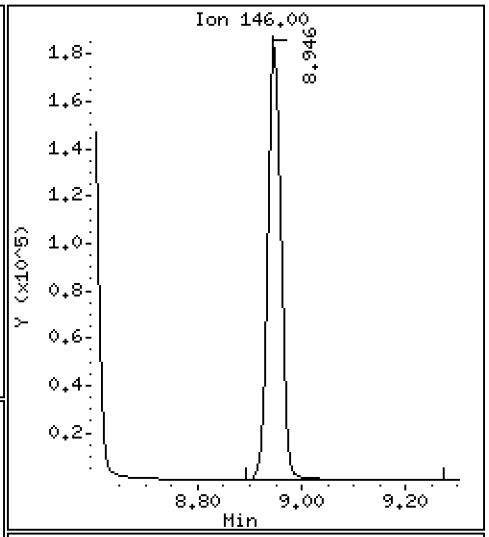
Column phase: ZB-5msi

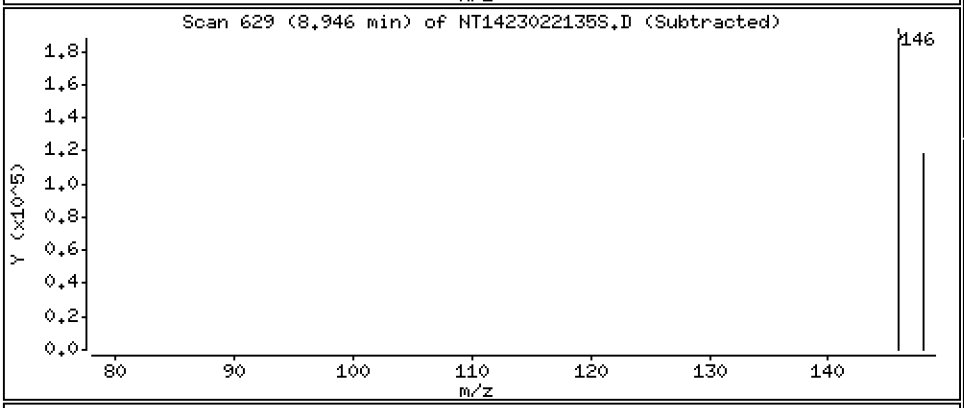
Column diameter: 0.25

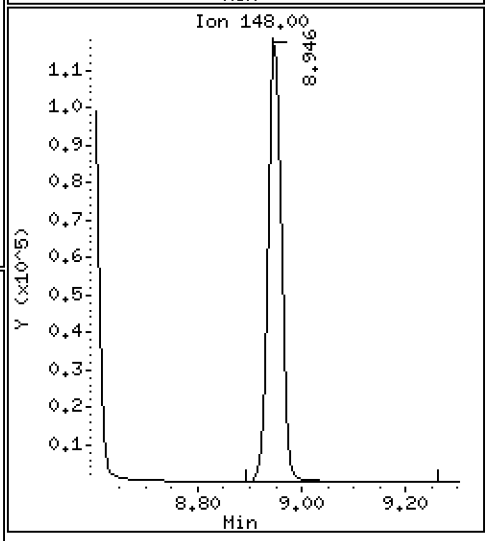
12 1,2-Dichlorobenzene

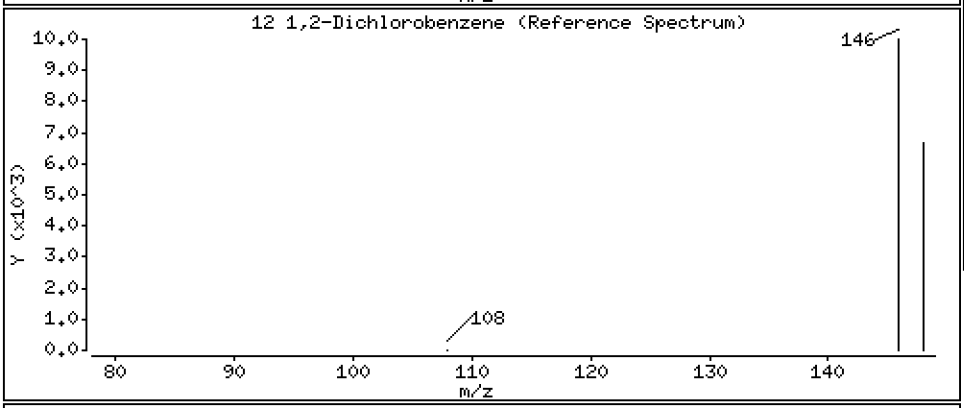
Concentration: 3.231 ug/mL

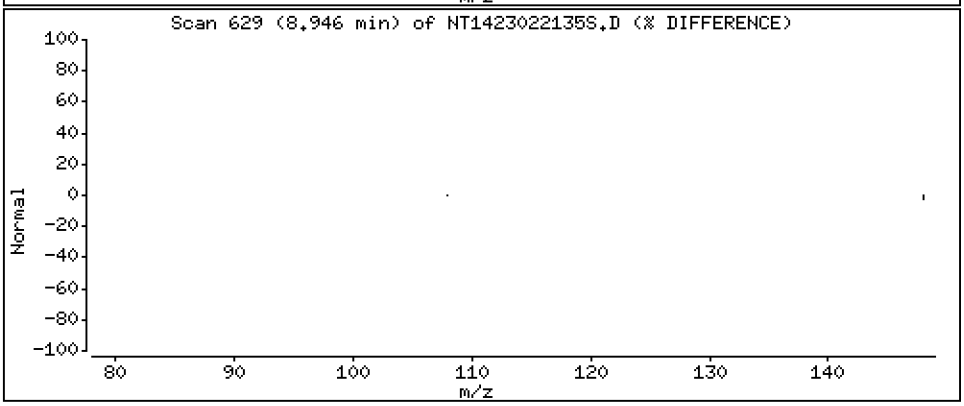












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221358.D

Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

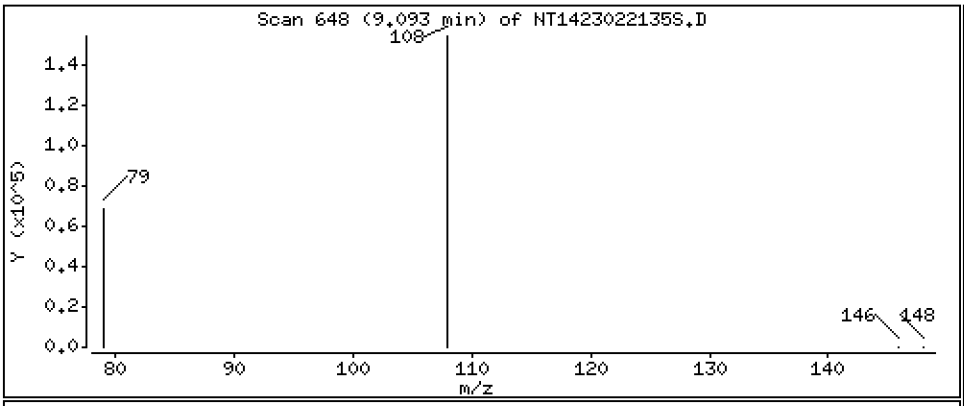
Operator: DSD

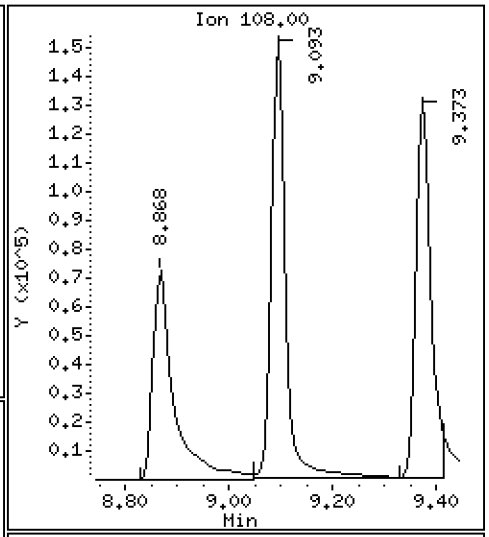
Column phase: ZB-5msi

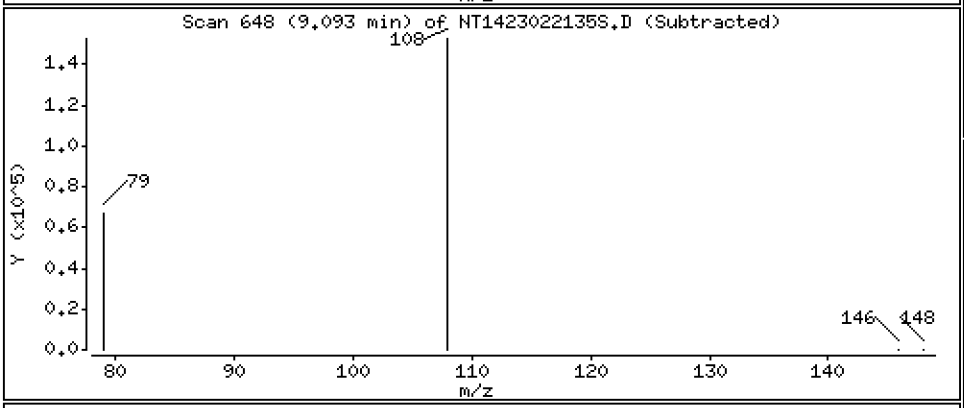
Column diameter: 0.25

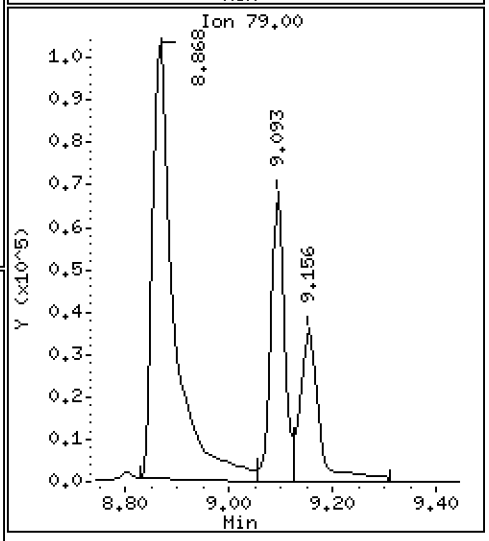
13 2-Methylphenol

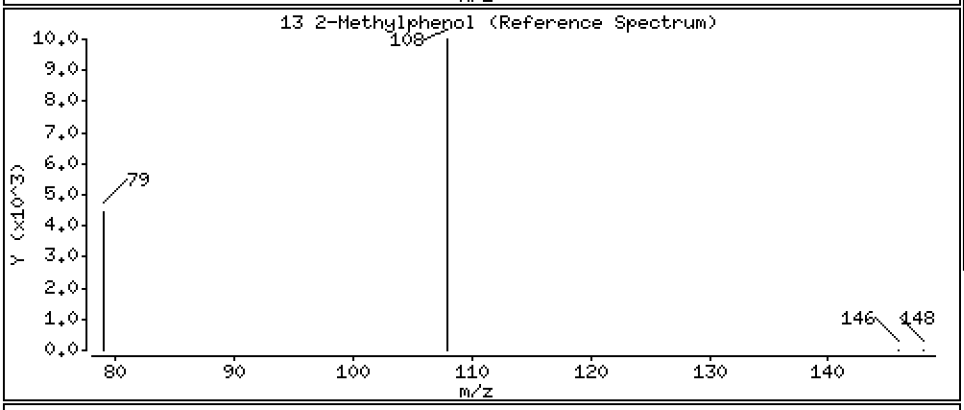
Concentration: 3.028 ug/mL

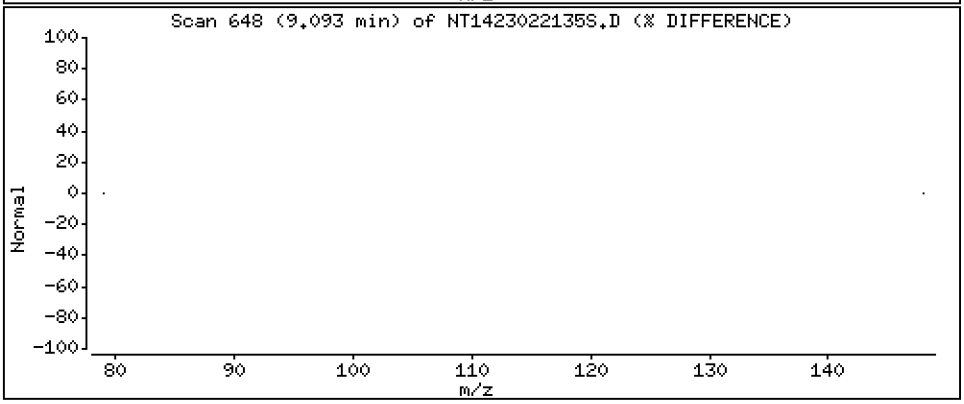












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221355.D

Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

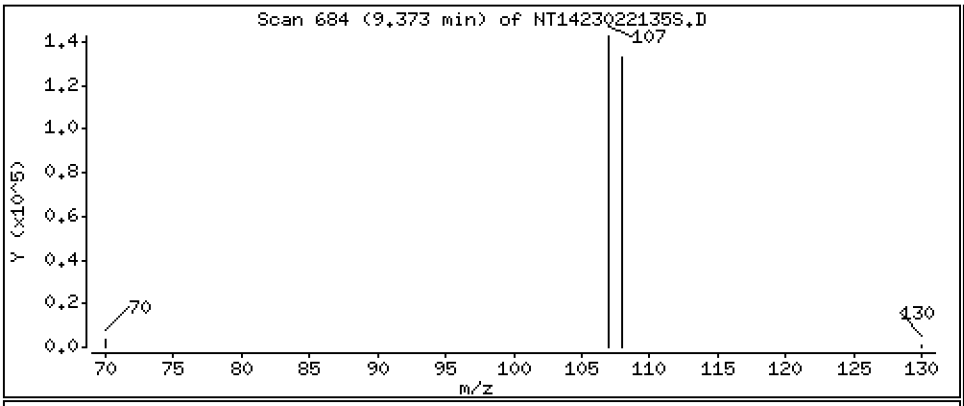
Operator: DSD

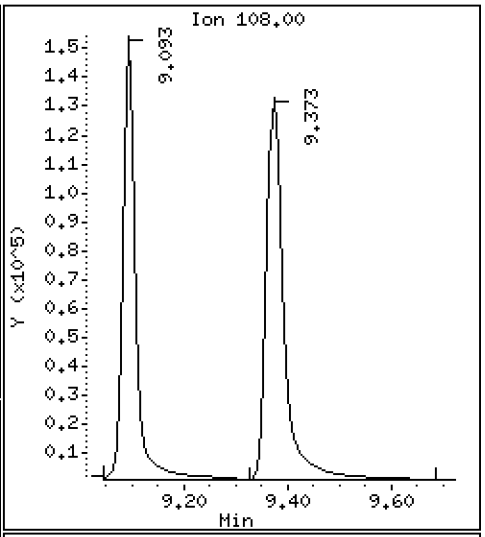
Column phase: ZB-5msi

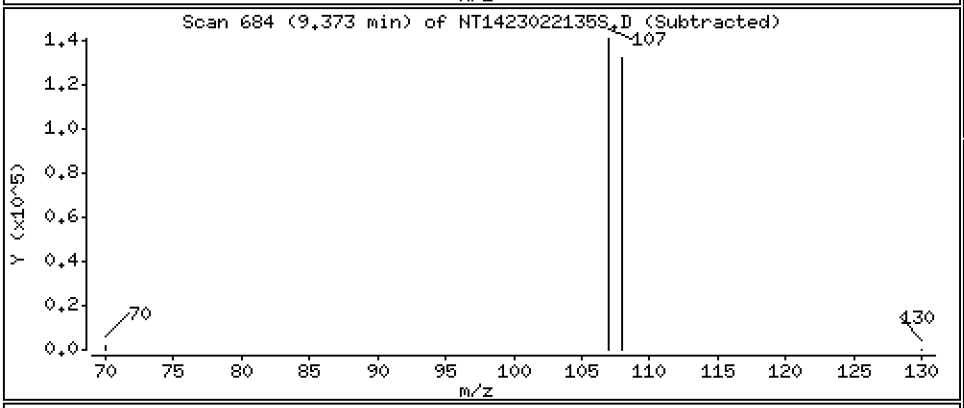
Column diameter: 0.25

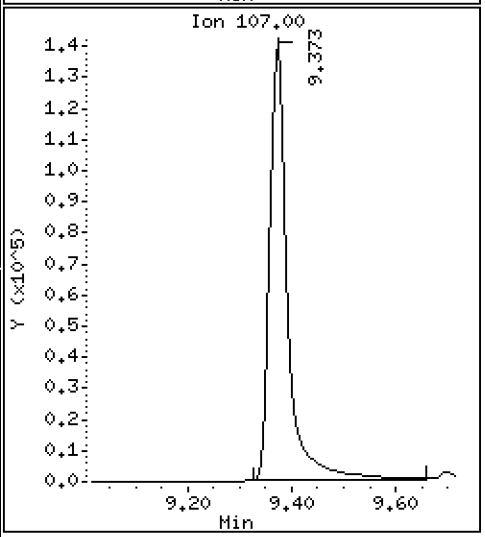
15 4-Methylphenol

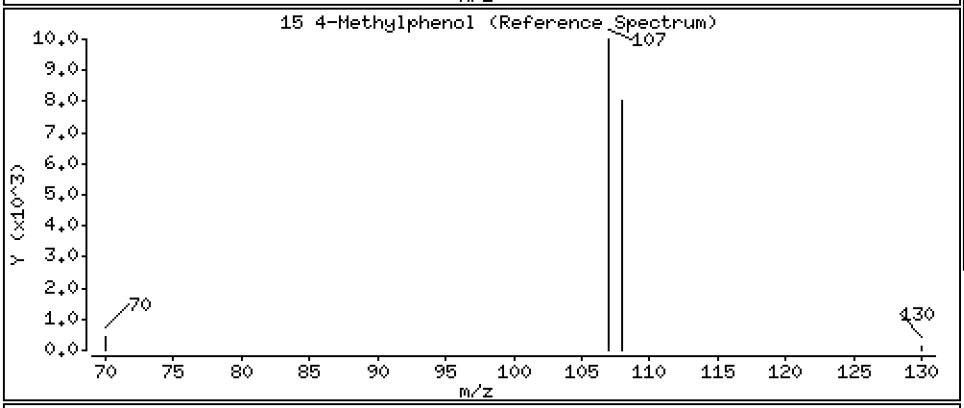
Concentration: 2.991 ug/mL

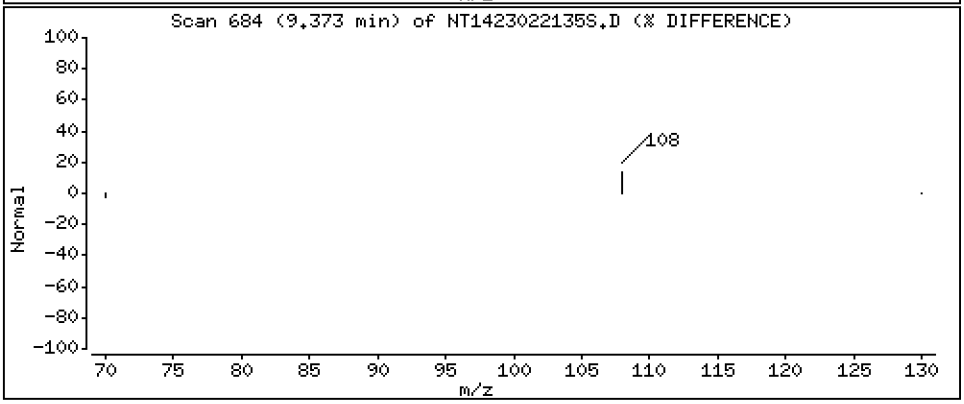












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

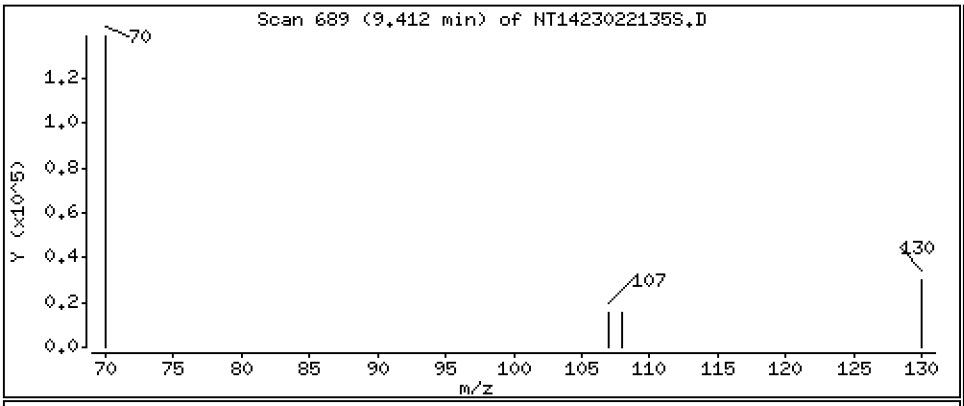
Operator: DSD

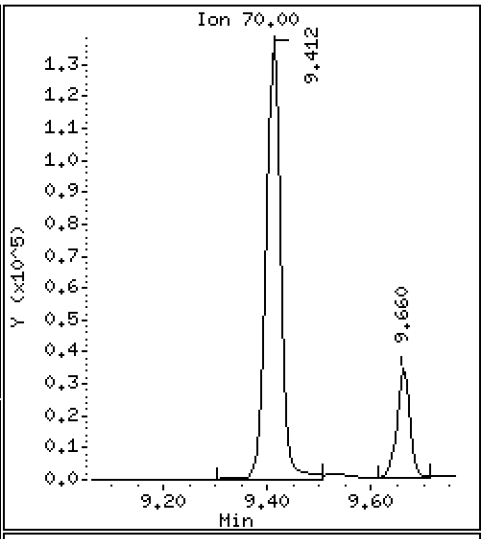
Column phase: ZB-5msi

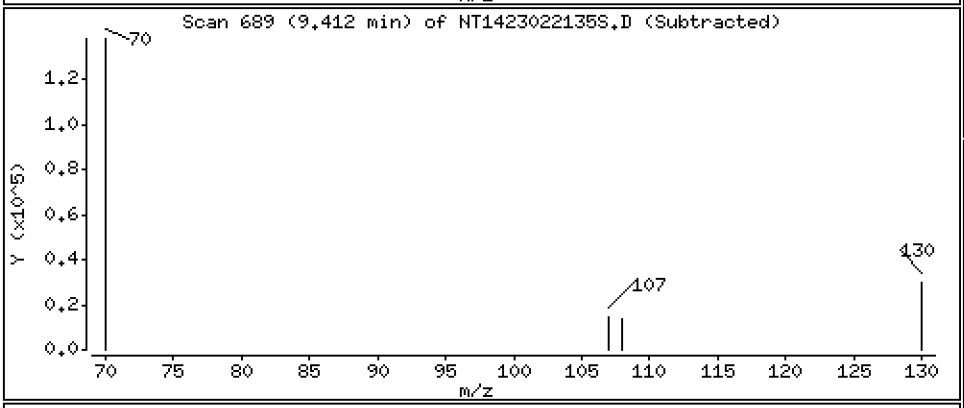
Column diameter: 0.25

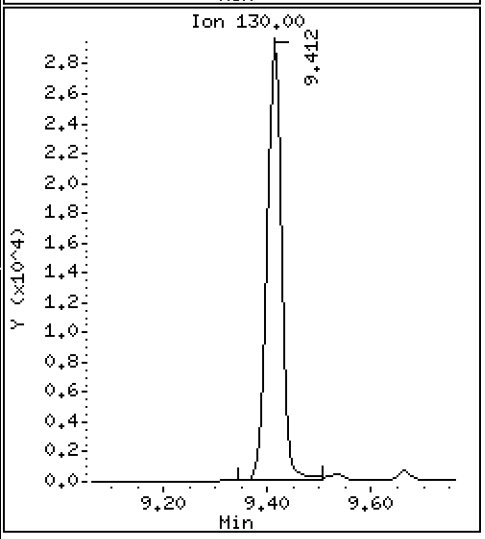
16 N-Nitroso-di-n-propylamine

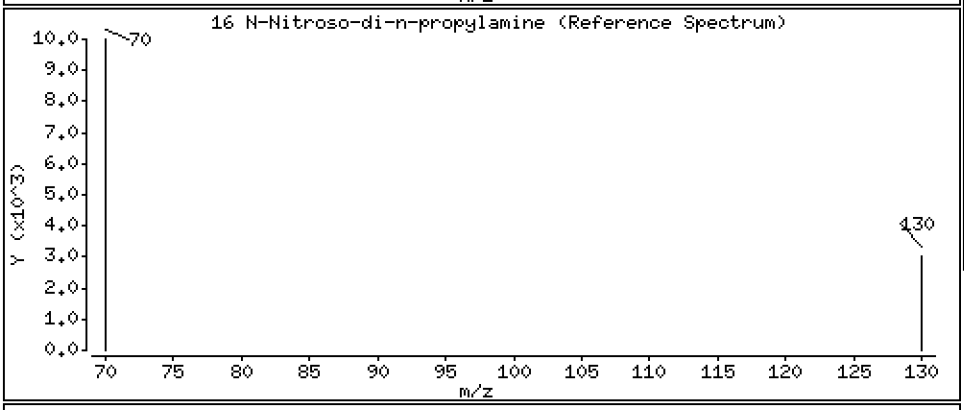
Concentration: 3.331 ug/mL

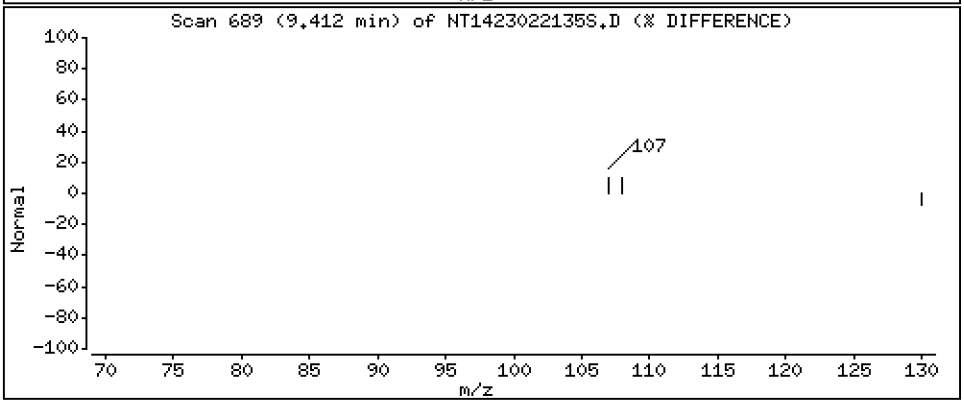












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

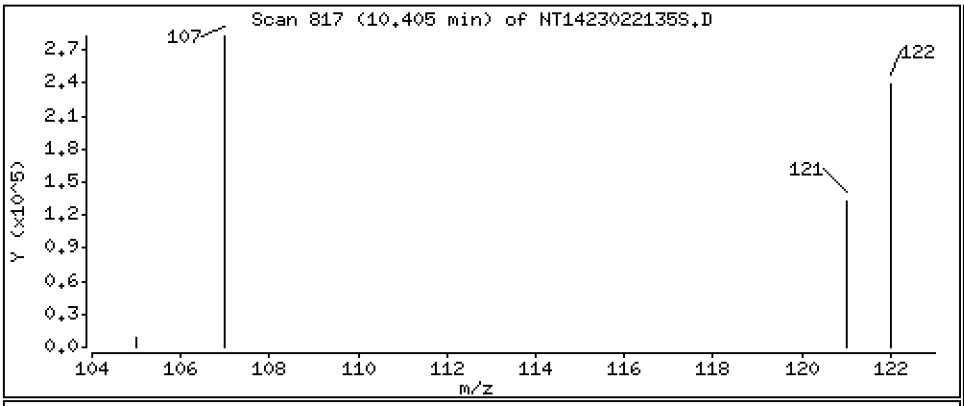
Operator: DSD

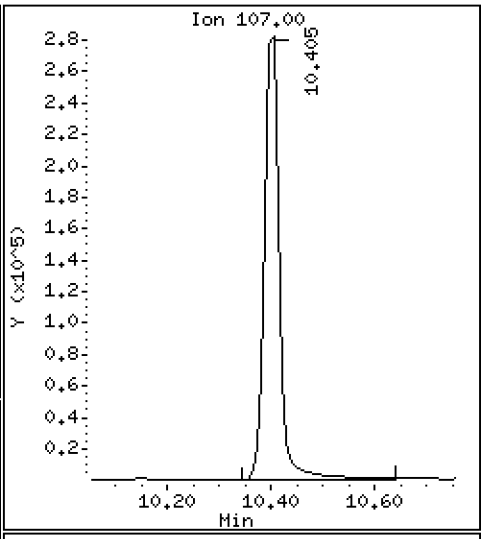
Column phase: ZB-5msi

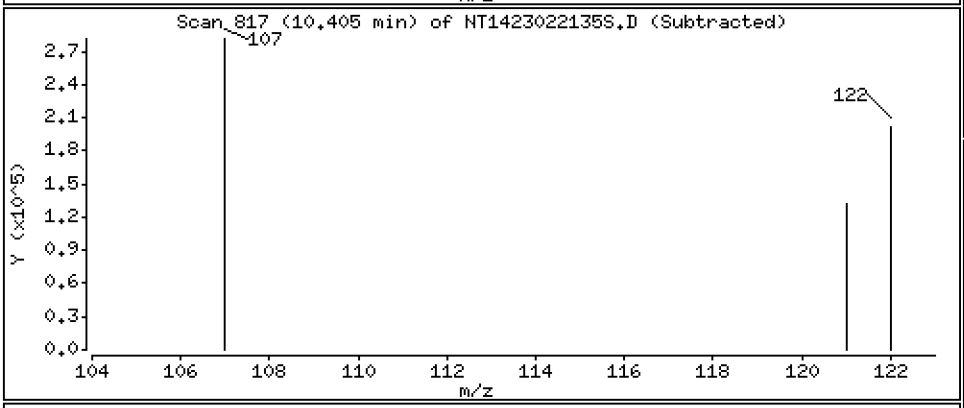
Column diameter: 0.25

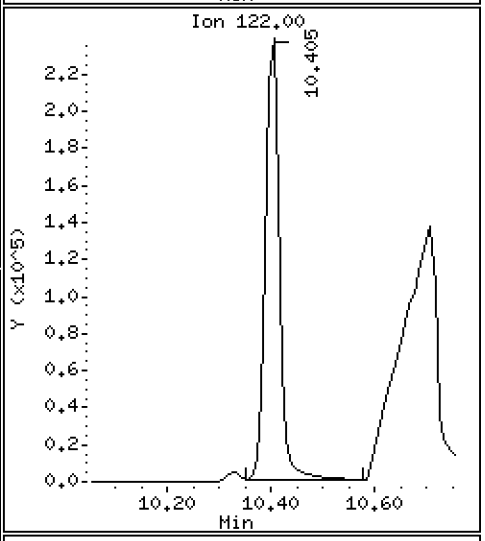
22 2,4-Dimethylphenol

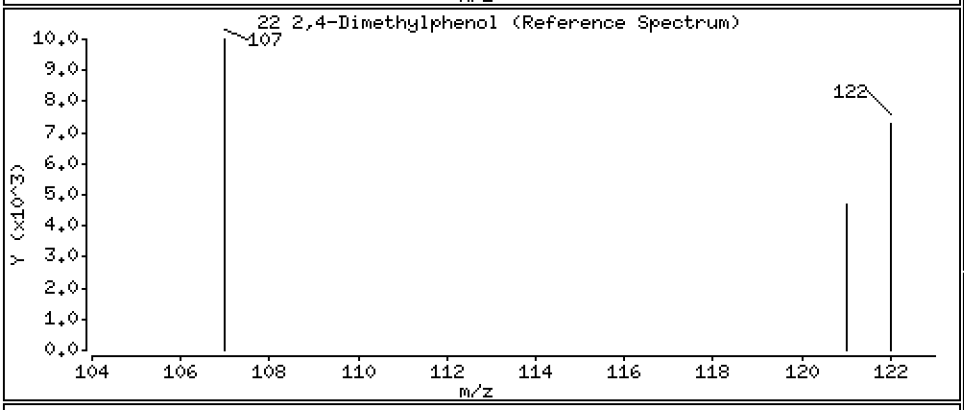
Concentration: 5.685 ug/mL

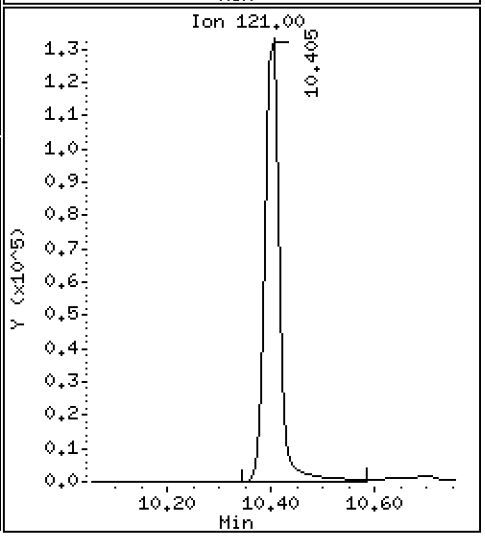


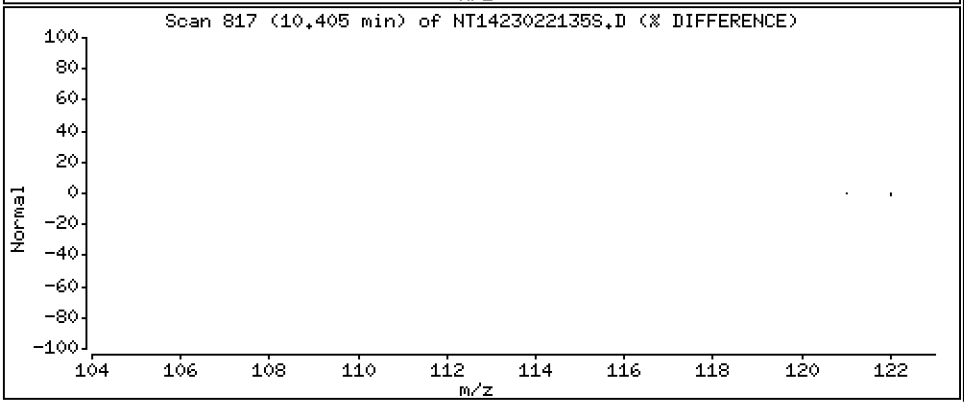












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

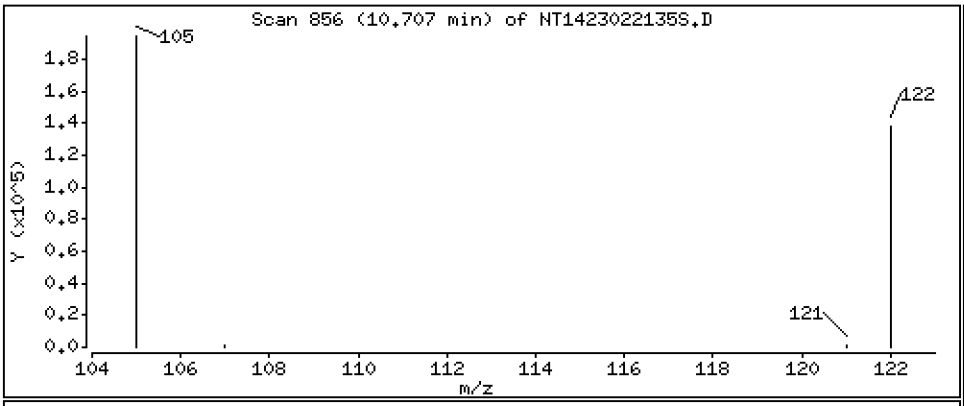
Operator: DSD

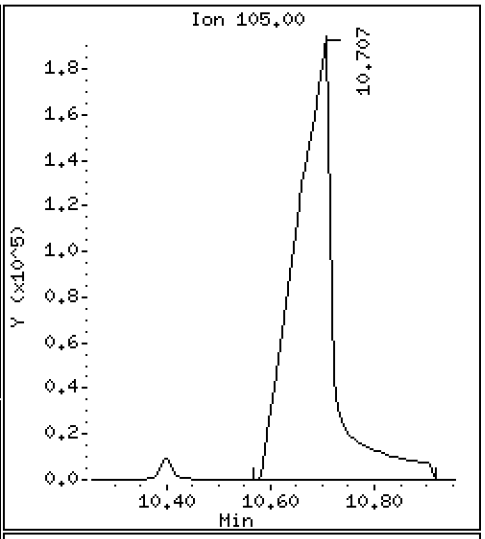
Column phase: ZB-5msi

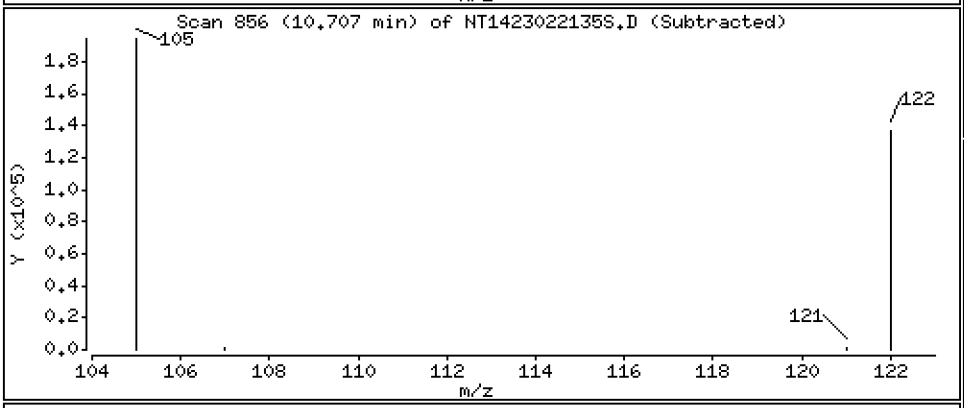
Column diameter: 0.25

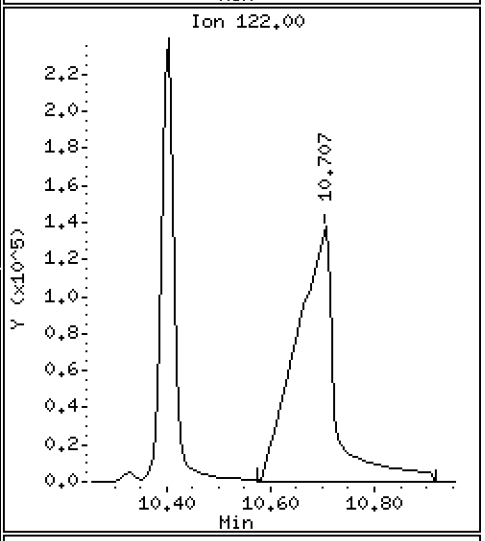
24 Benzoic acid

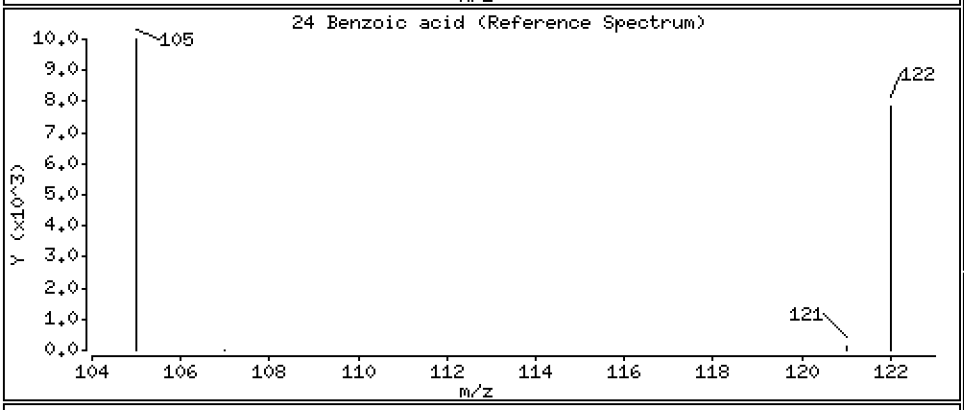
Concentration: 19.46 ug/mL

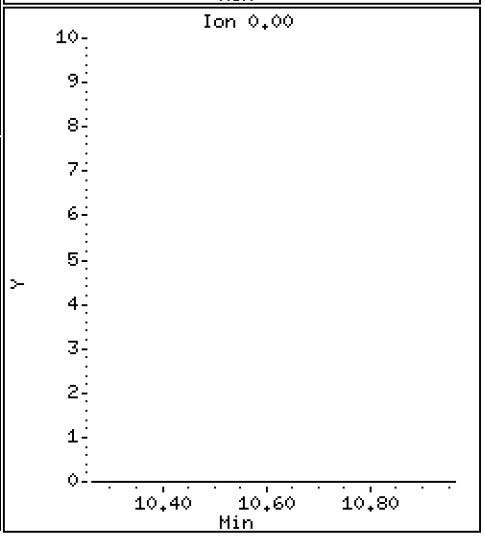


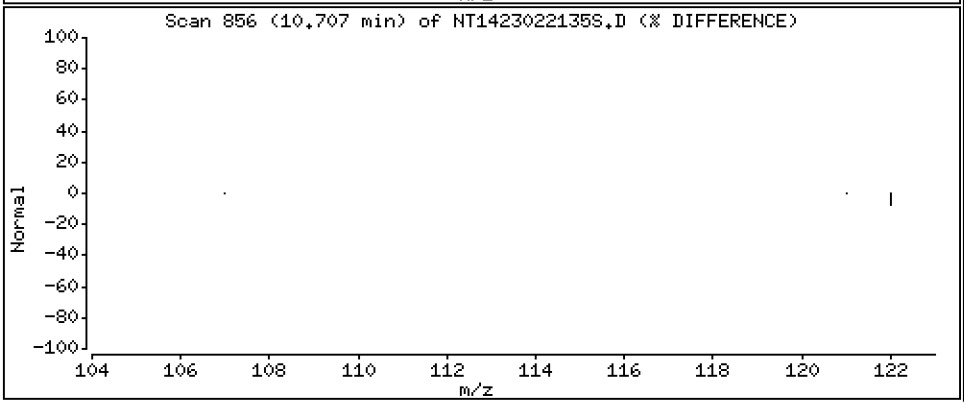












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

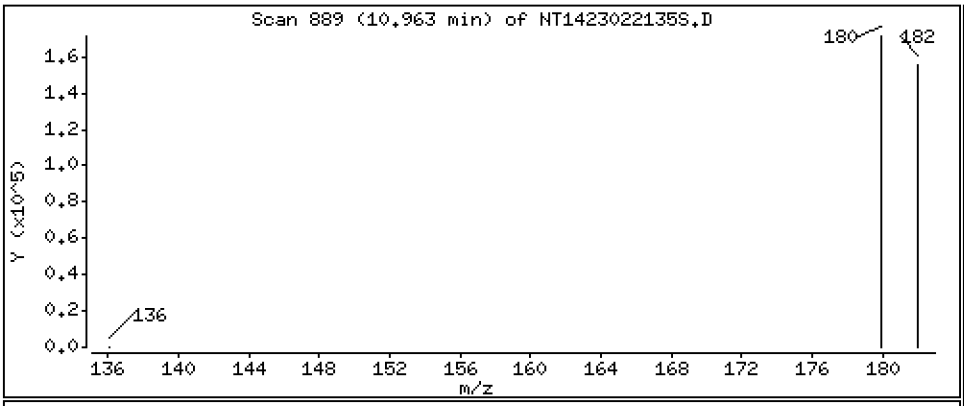
Operator: DSD

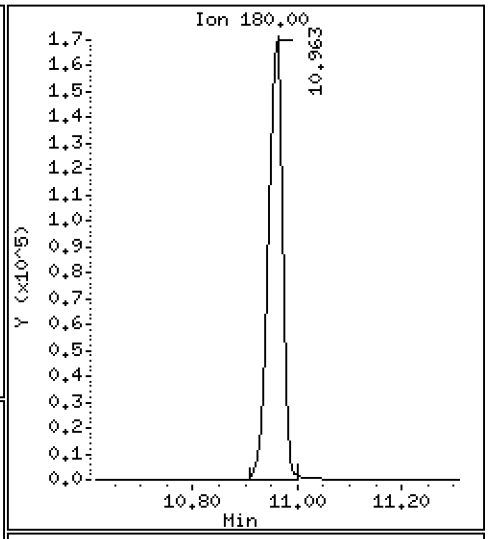
Column phase: ZB-5msi

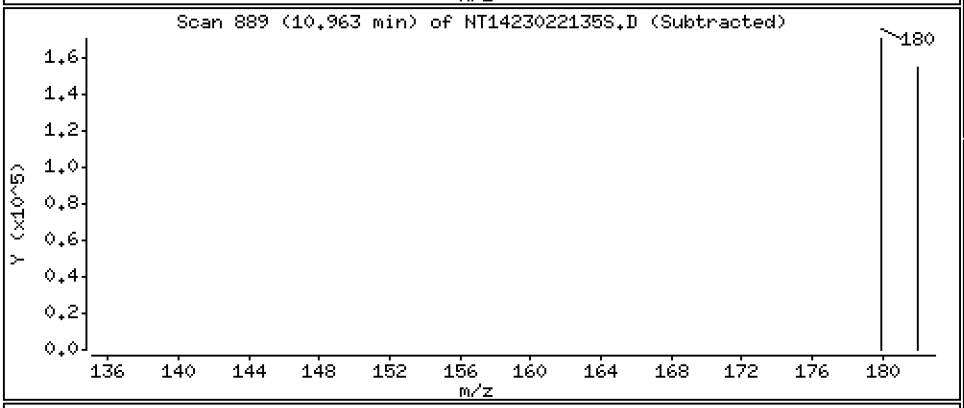
Column diameter: 0.25

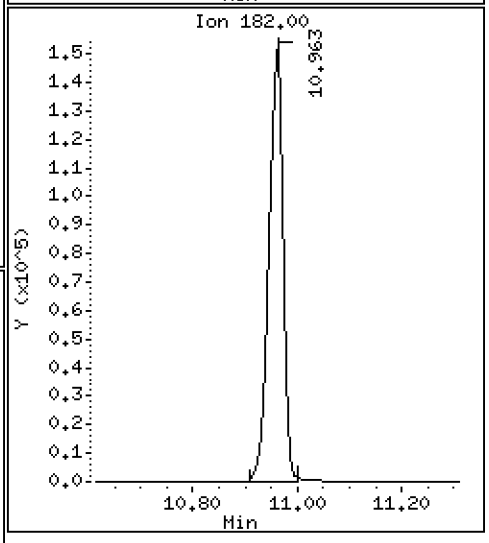
26 1,2,4-Trichlorobenzene

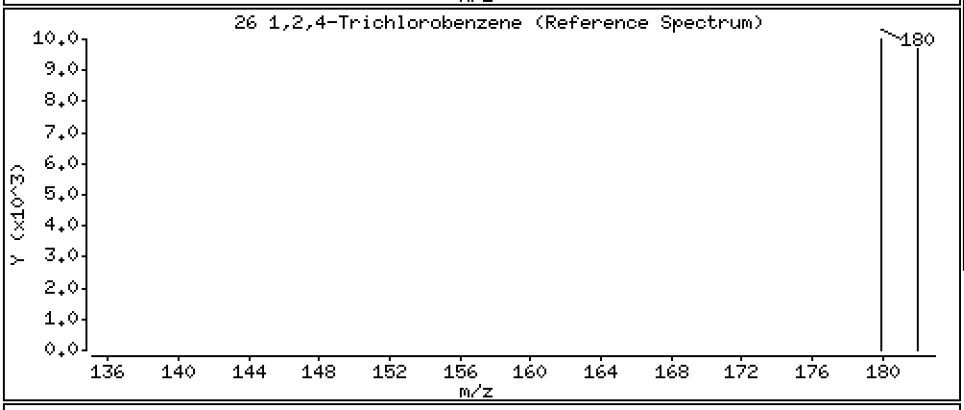
Concentration: 3.097 ug/mL

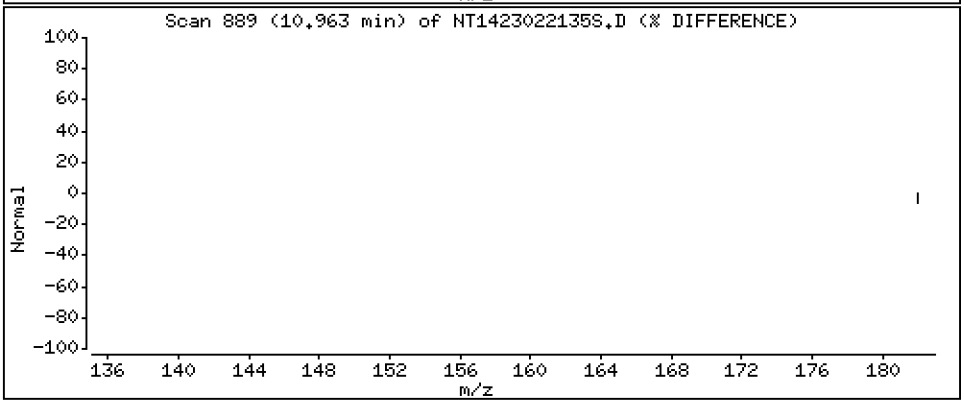












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

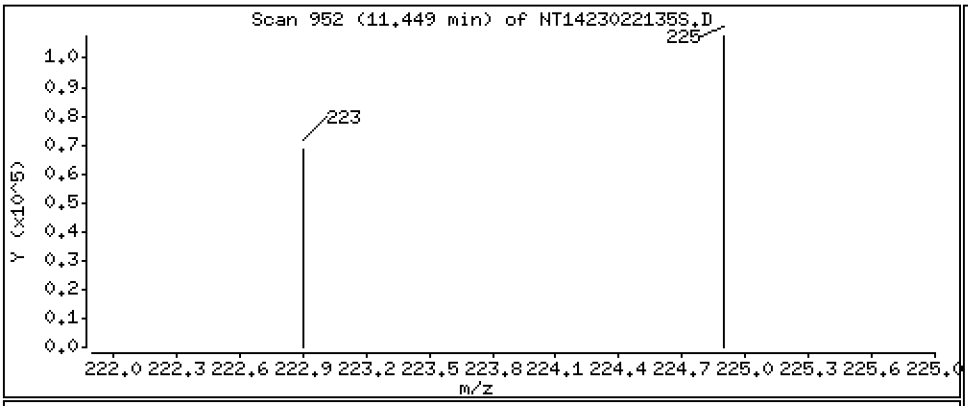
Operator: DSD

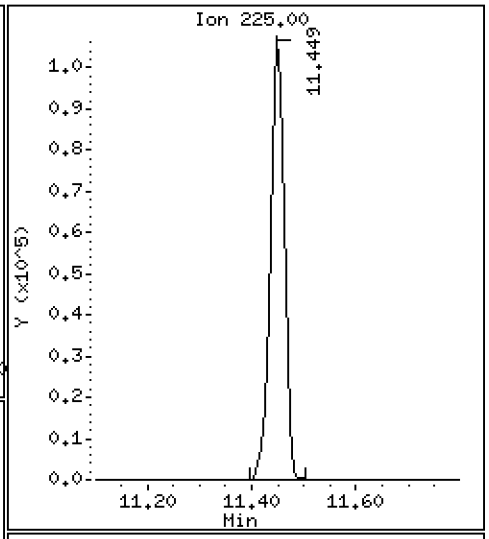
Column phase: ZB-5msi

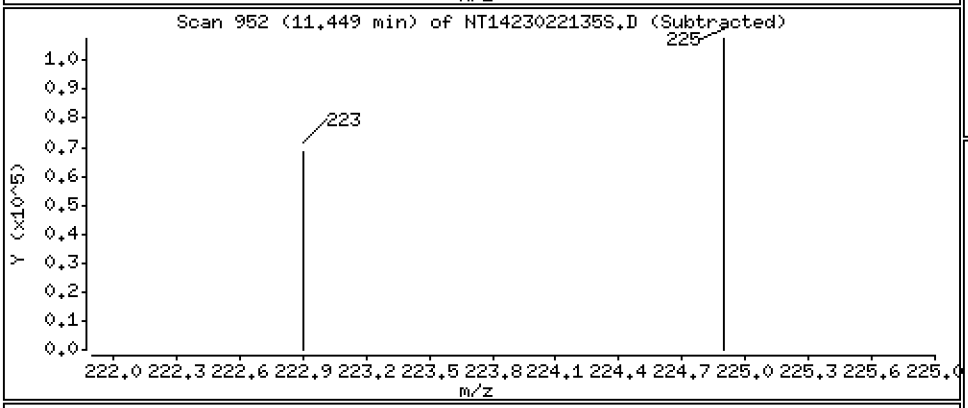
Column diameter: 0.25

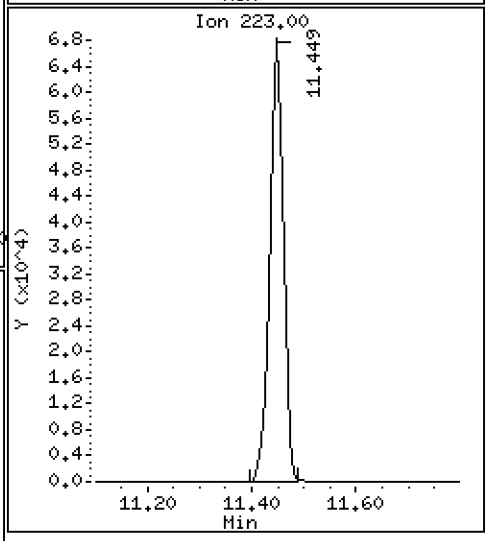
30 Hexachlorobutadiene

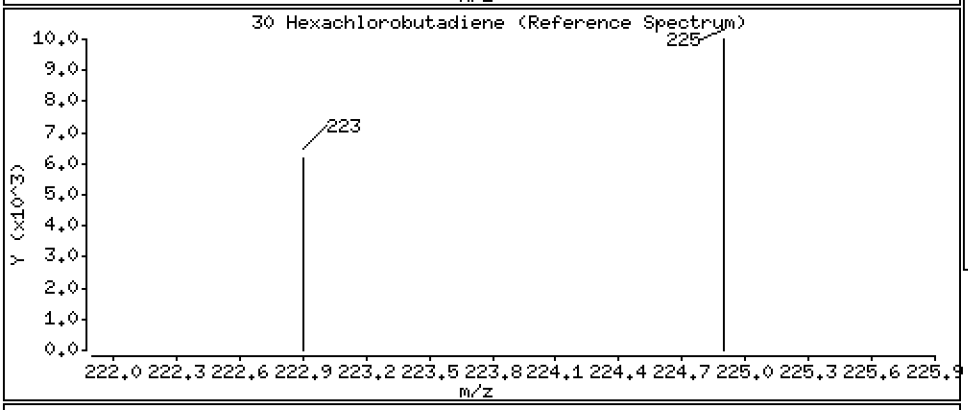
Concentration: 3.157 ug/mL

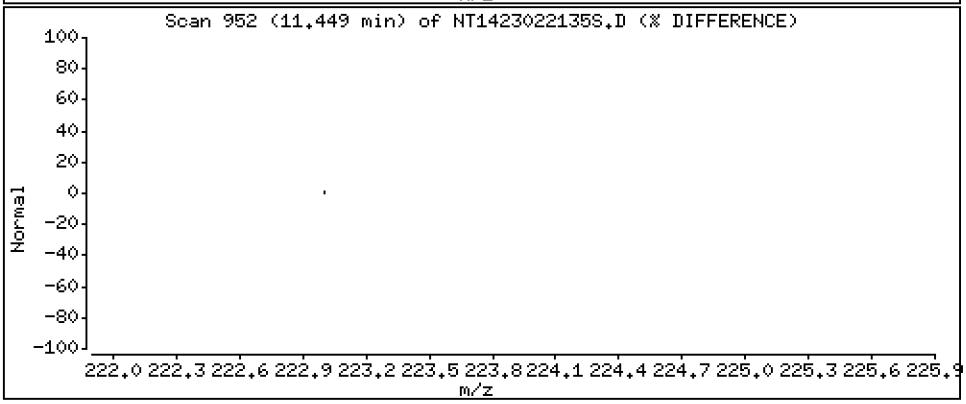












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

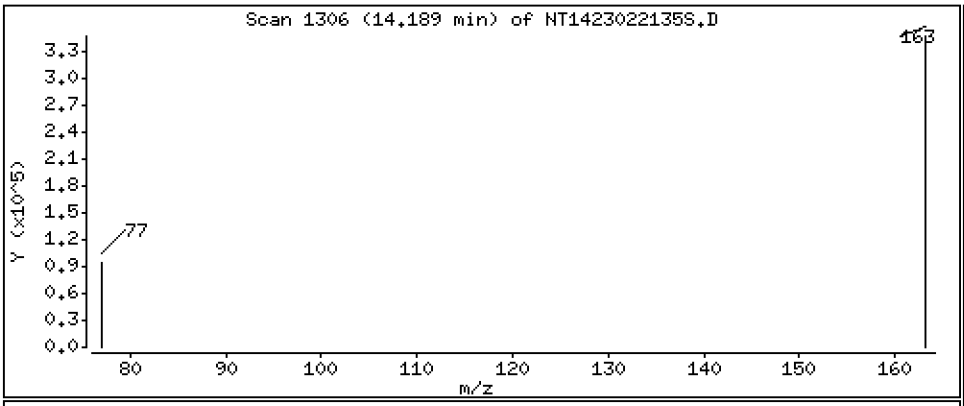
Operator: DSD

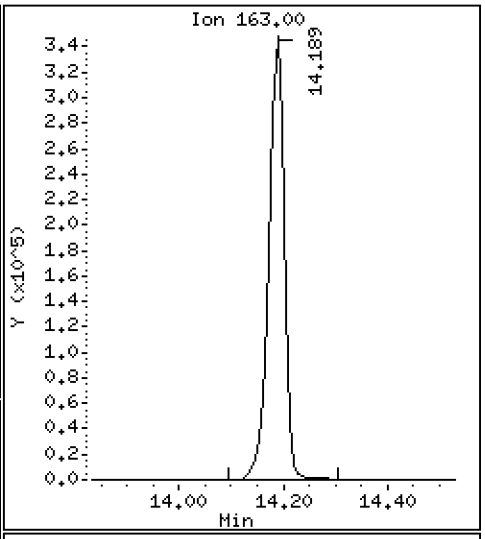
Column phase: ZB-5msi

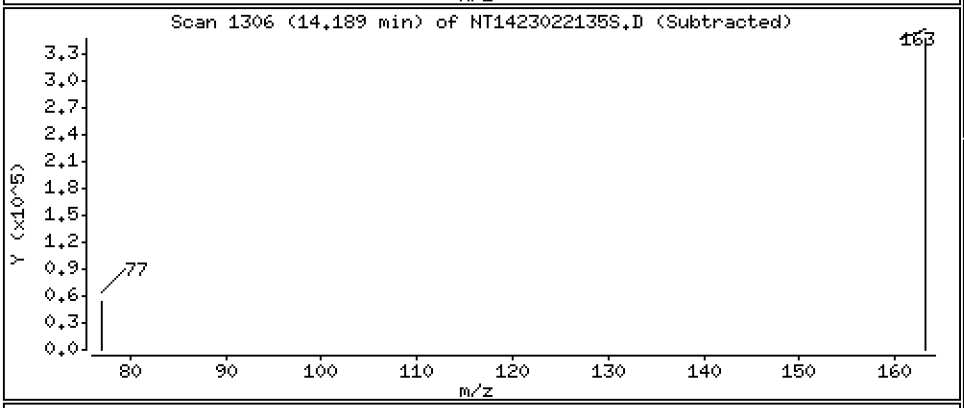
Column diameter: 0.25

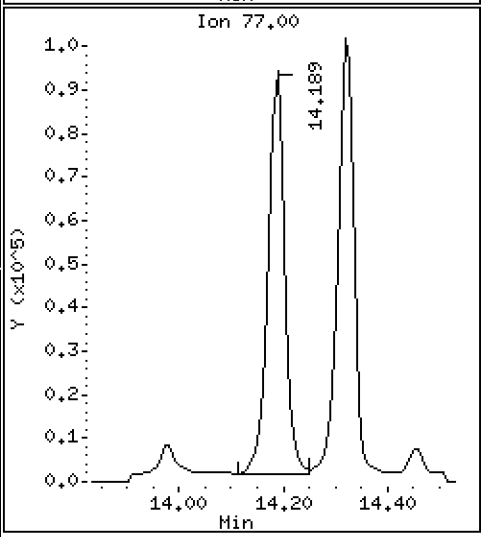
39 Dimethylphthalate

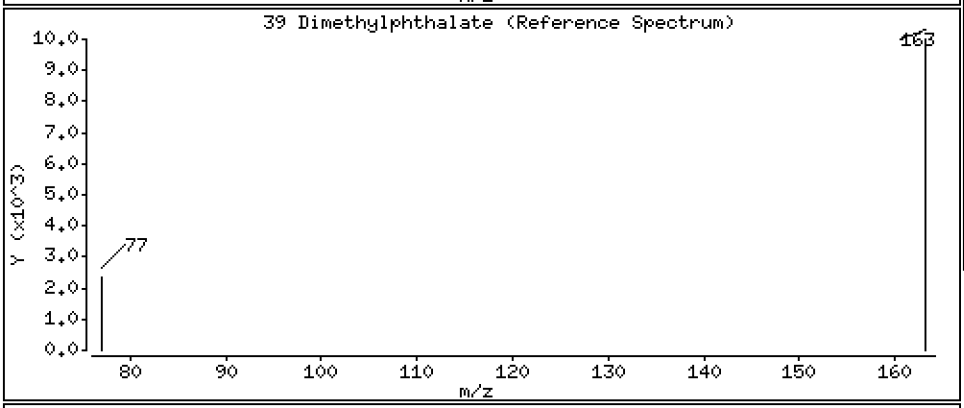
Concentration: 3.830 ug/mL

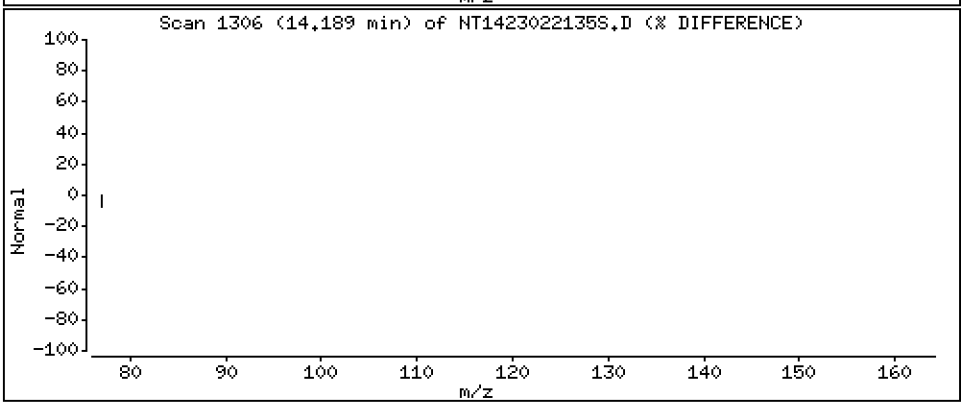












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221355.D

Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

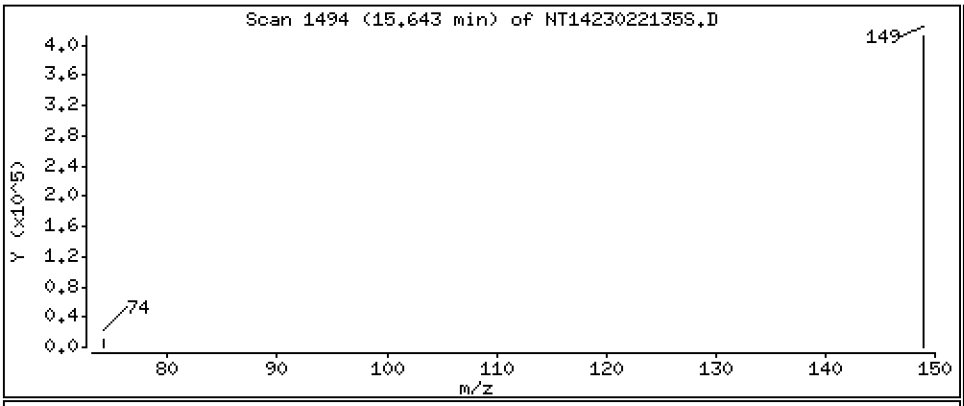
Operator: DSD

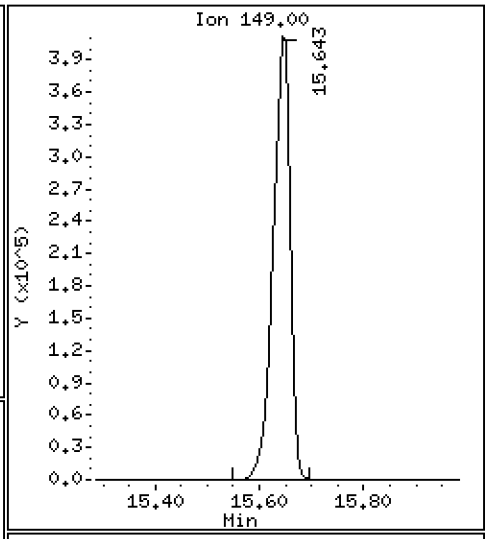
Column phase: ZB-5msi

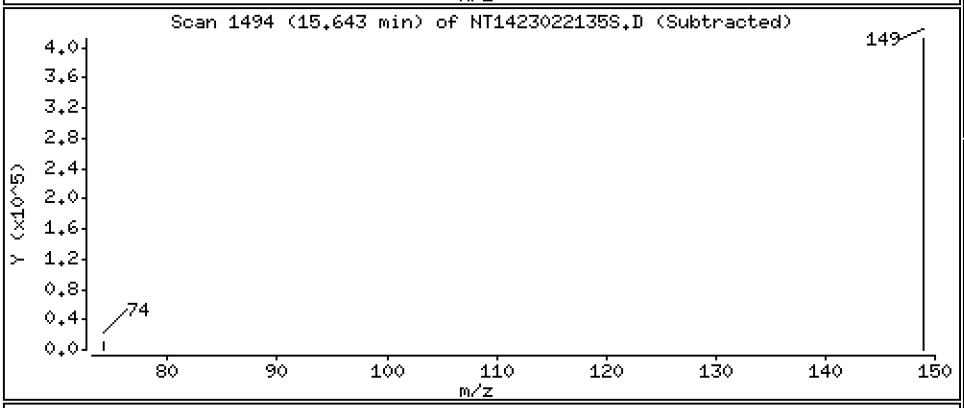
Column diameter: 0.25

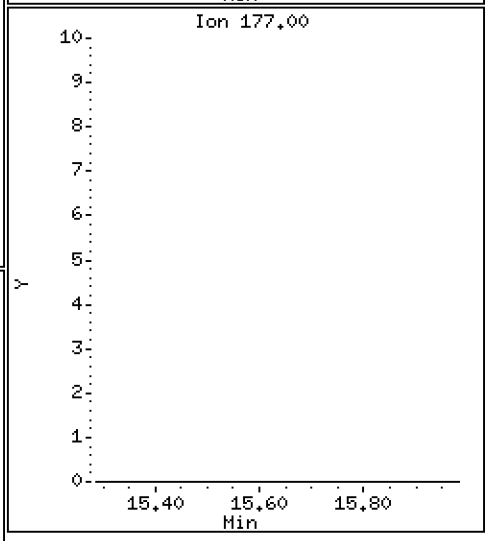
50 Diethylphthalate

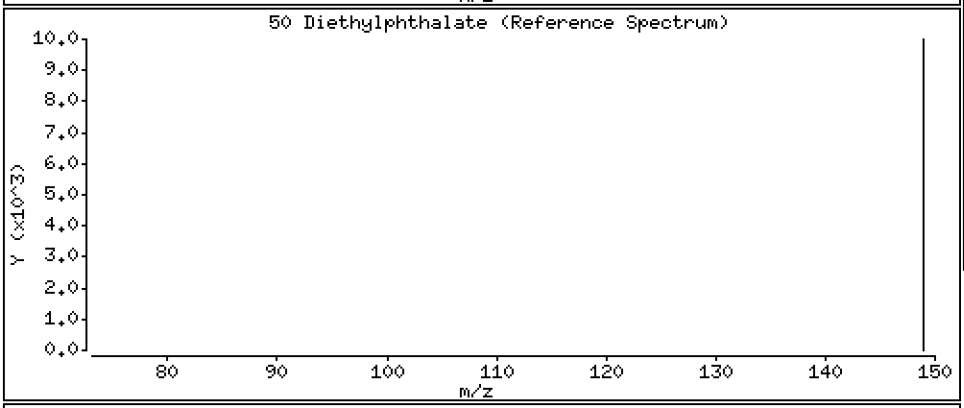
Concentration: 4.115 ug/mL

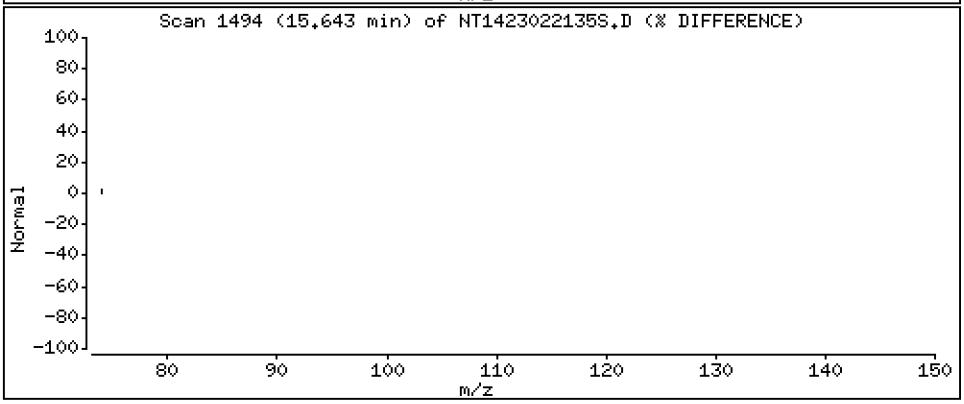












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

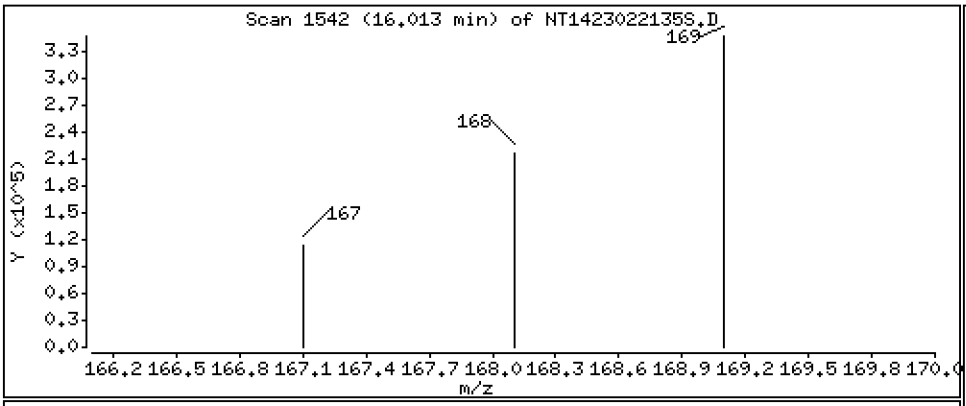
Operator: DSD

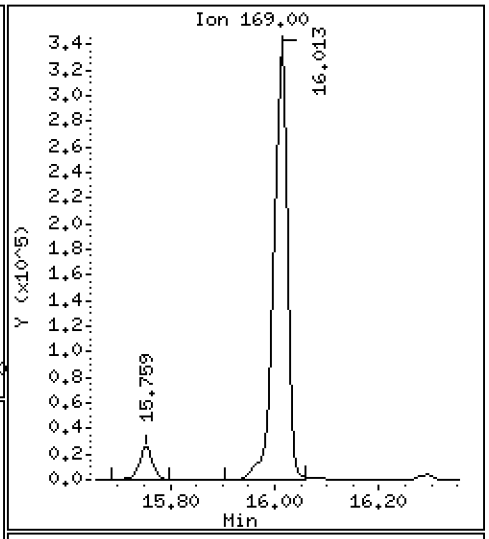
Column phase: ZB-5msi

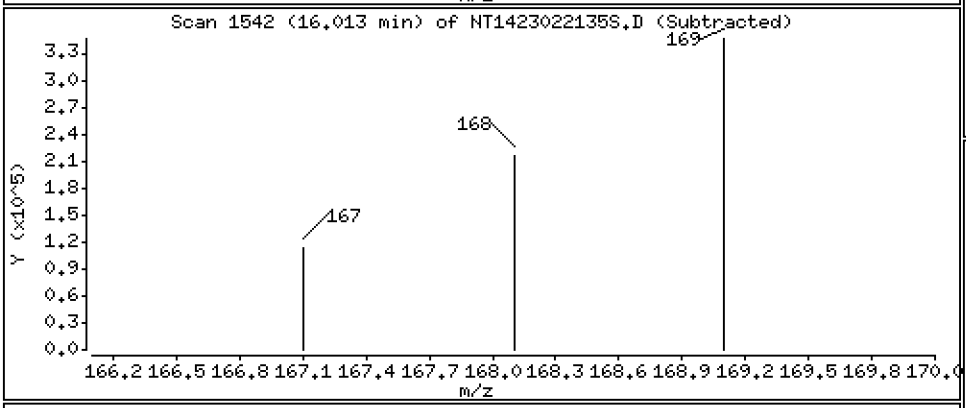
Column diameter: 0.25

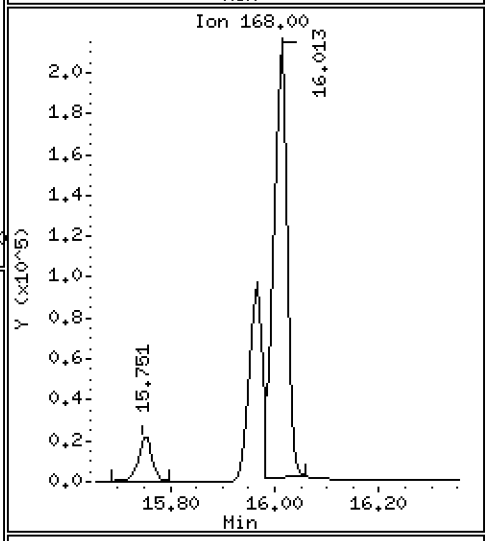
54 N-Nitrosodiphenylamine

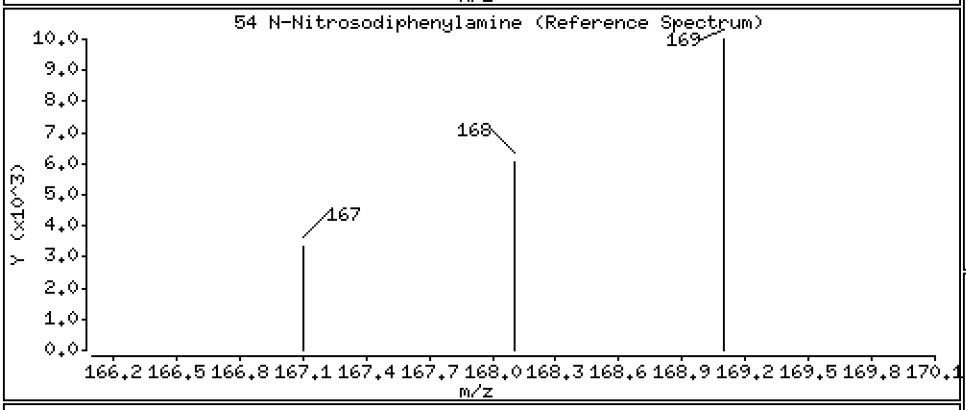
Concentration: 3.430 ug/mL

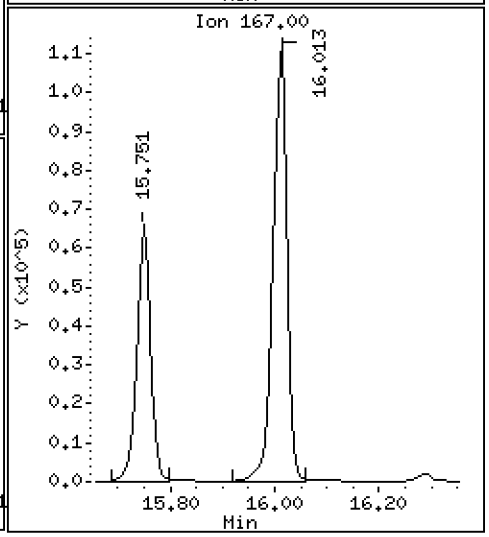


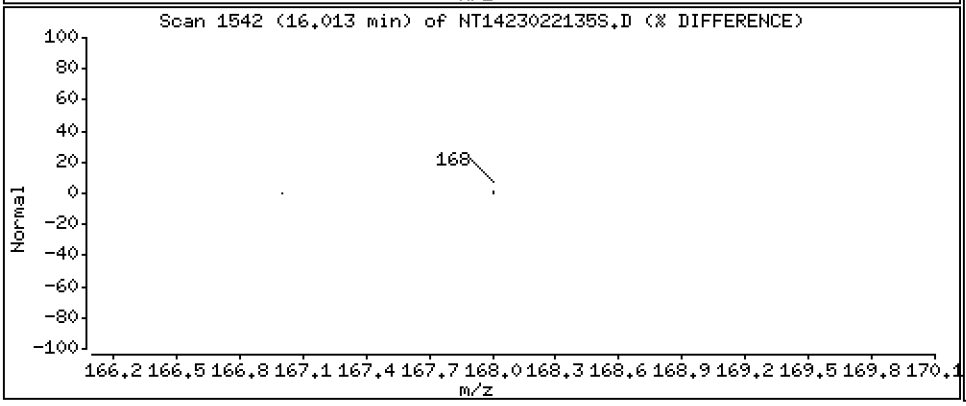












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221355.D

Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

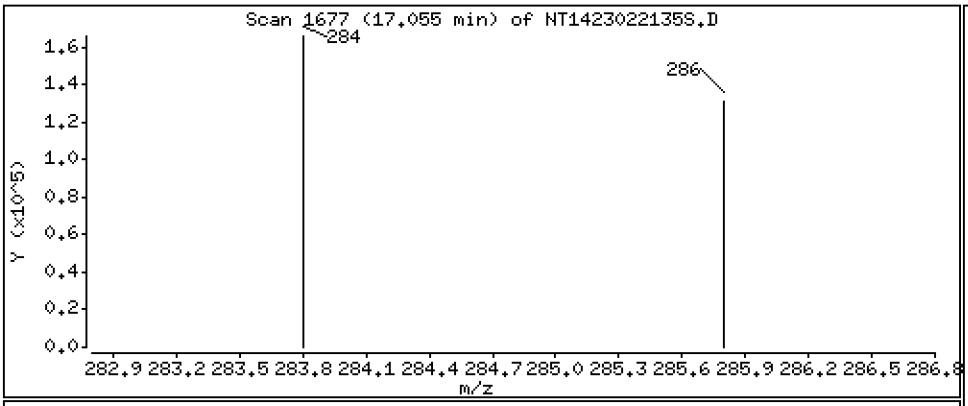
Operator: DSD

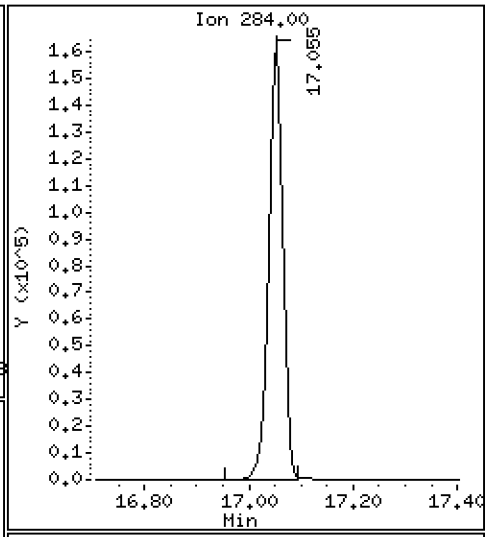
Column phase: ZB-5msi

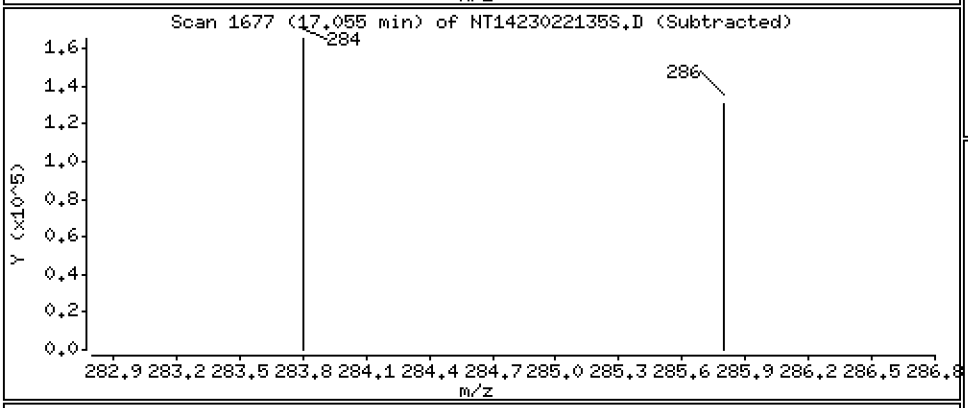
Column diameter: 0.25

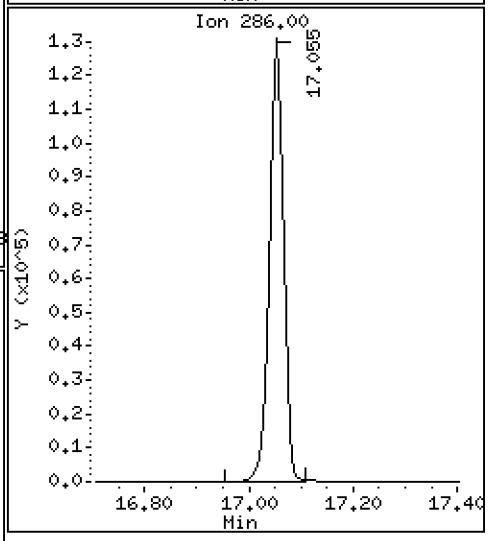
57 Hexachlorobenzene

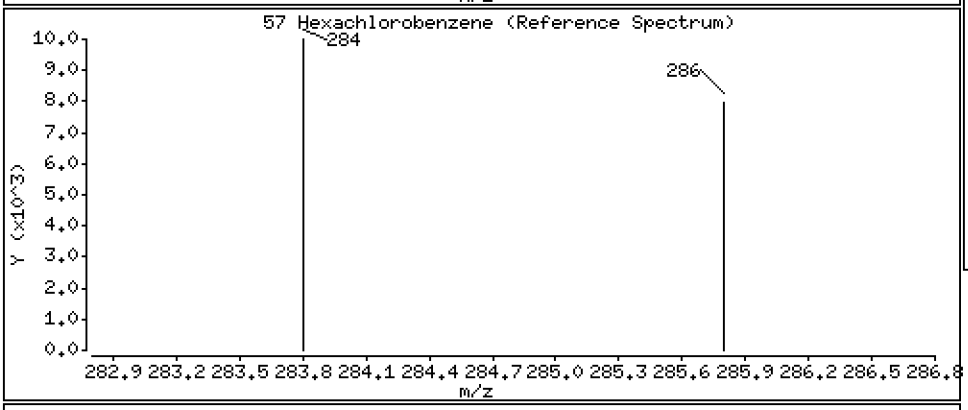
Concentration: 3.433 ug/mL

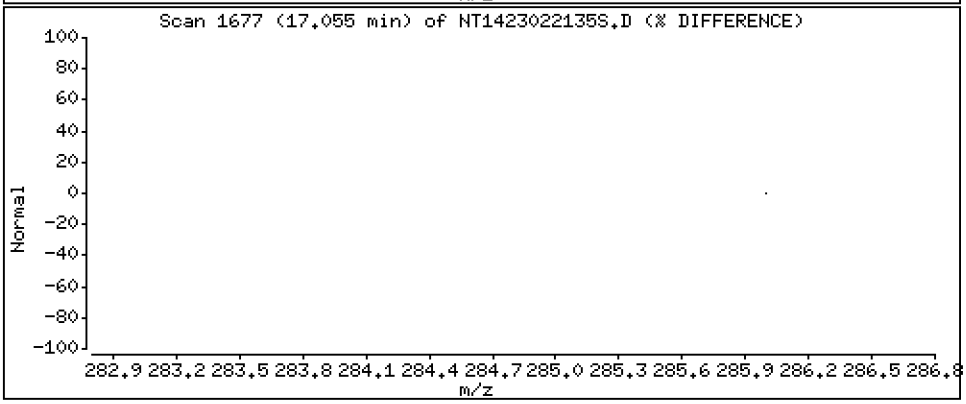












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221358.D

Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

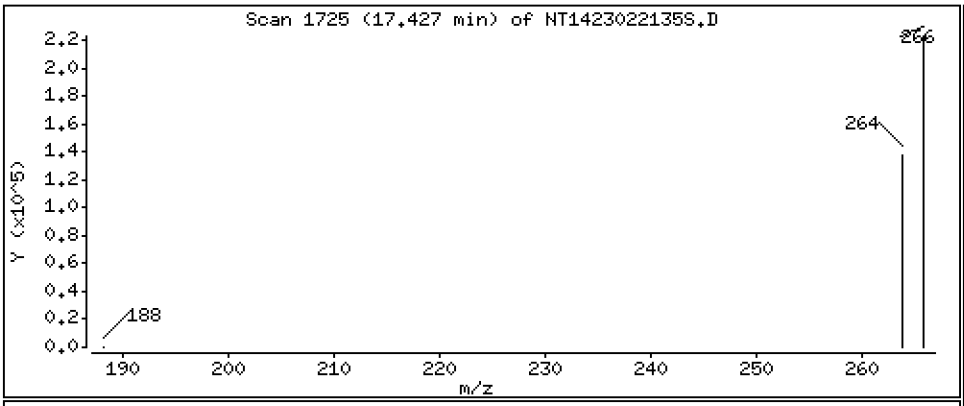
Operator: DSD

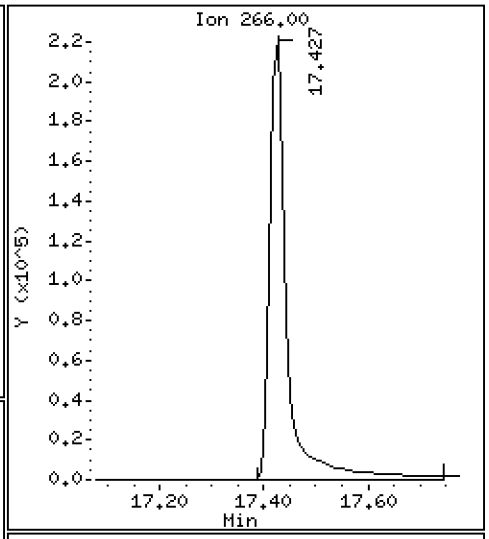
Column phase: ZB-5msi

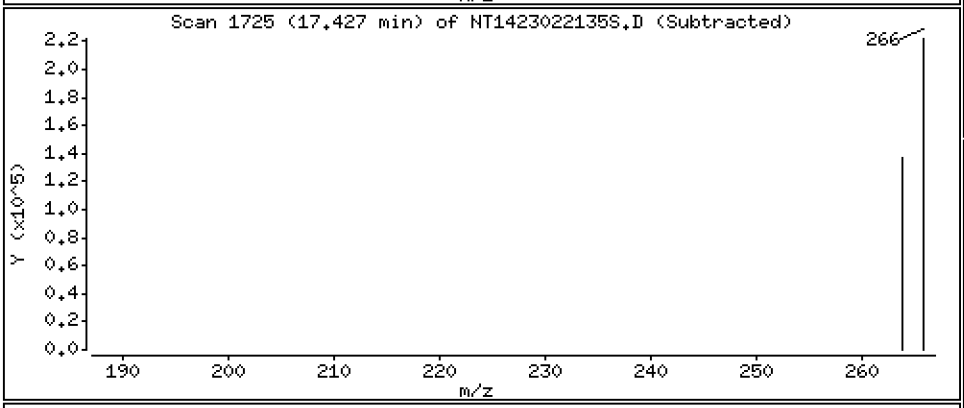
Column diameter: 0.25

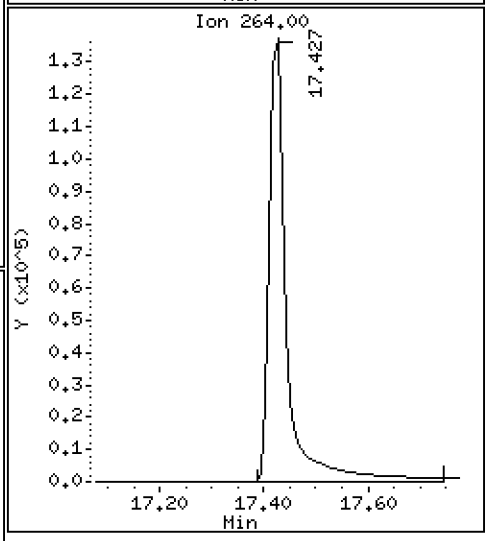
58 Pentachlorophenol

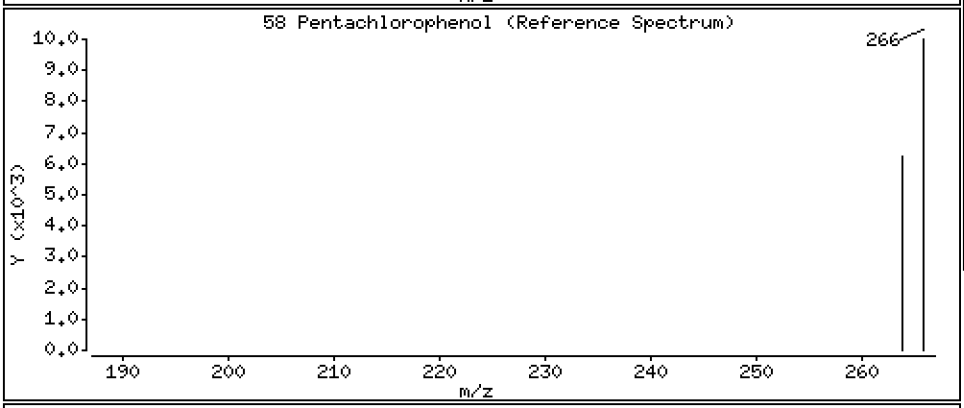
Concentration: 11.92 ug/mL

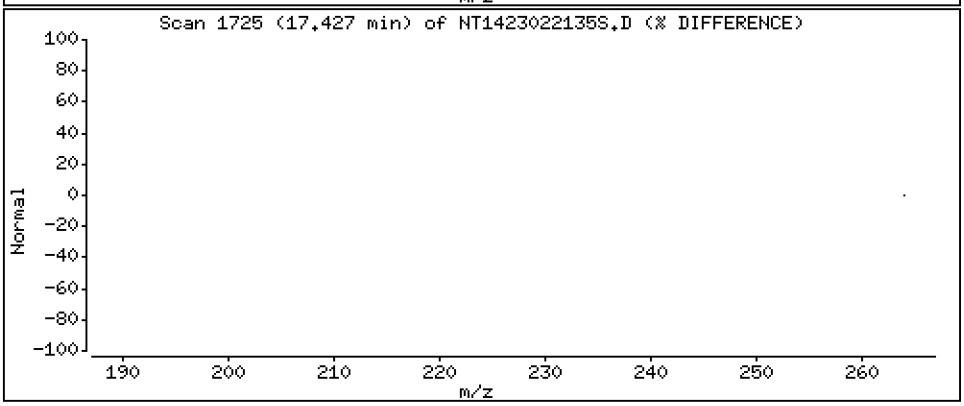












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

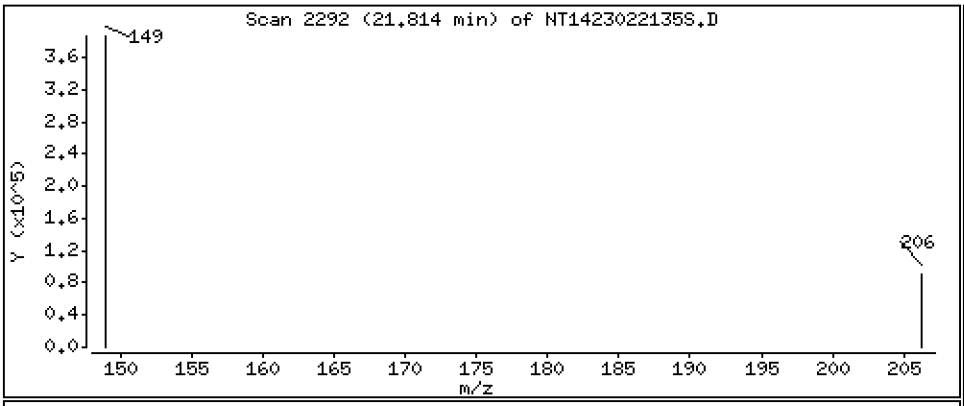
Operator: DSD

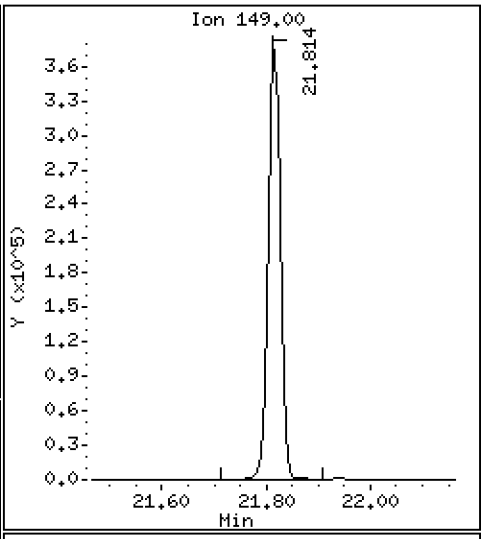
Column phase: ZB-5msi

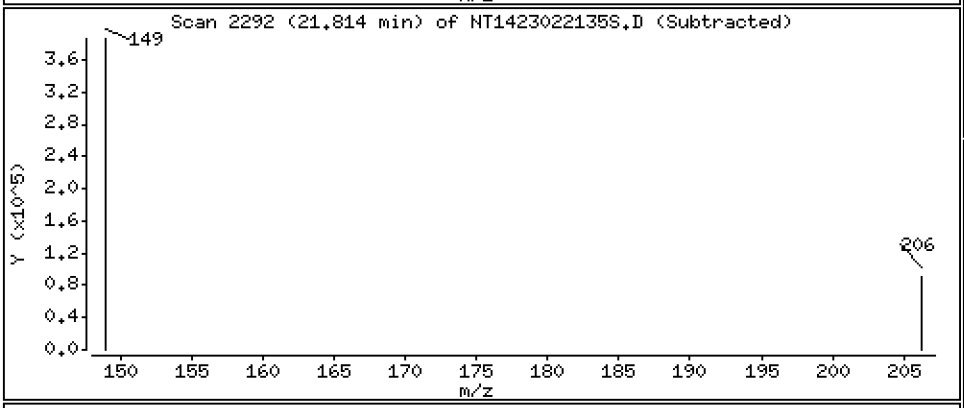
Column diameter: 0.25

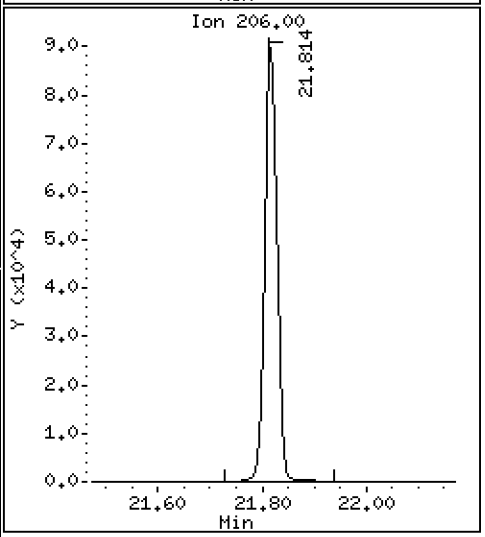
67 Butylbenzylphthalate

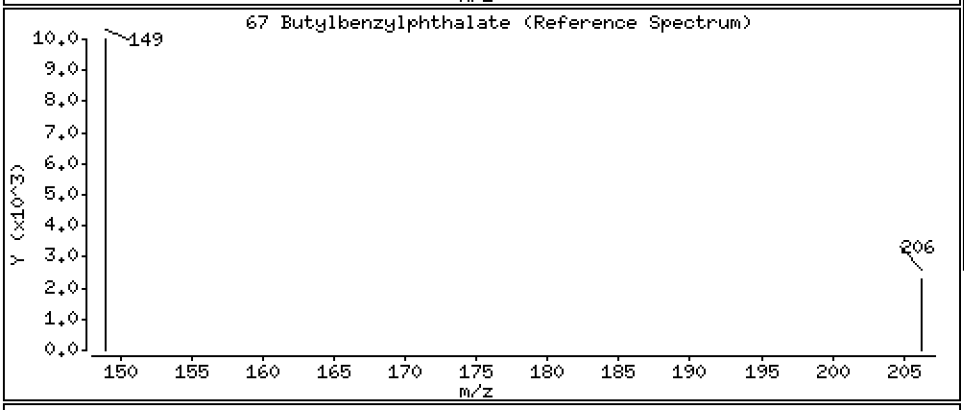
Concentration: 4.058 ug/mL

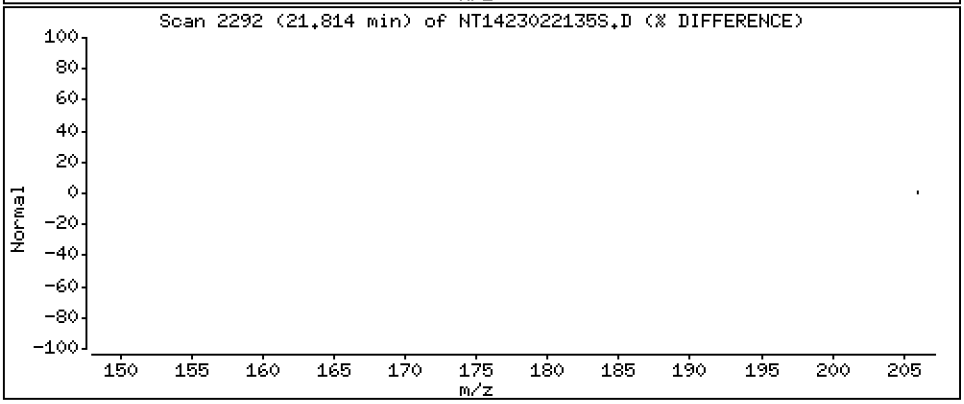












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Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

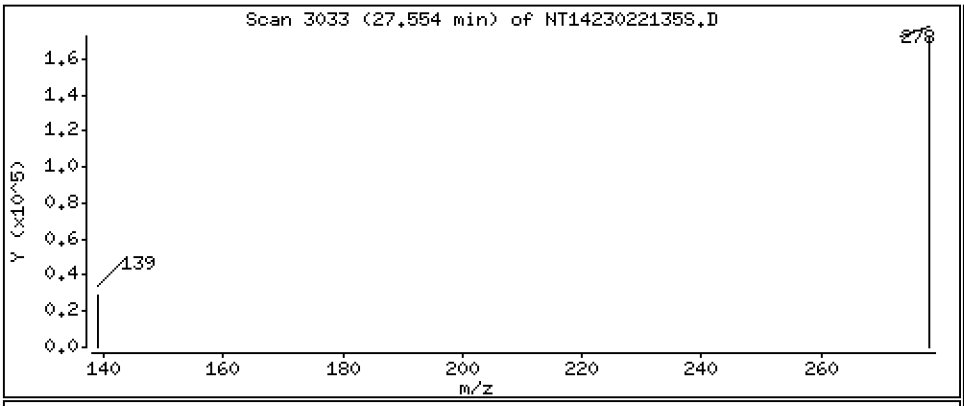
Operator: DSD

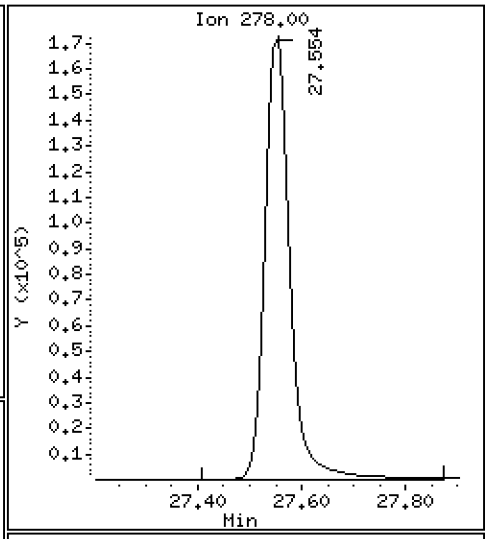
Column phase: ZB-5msi

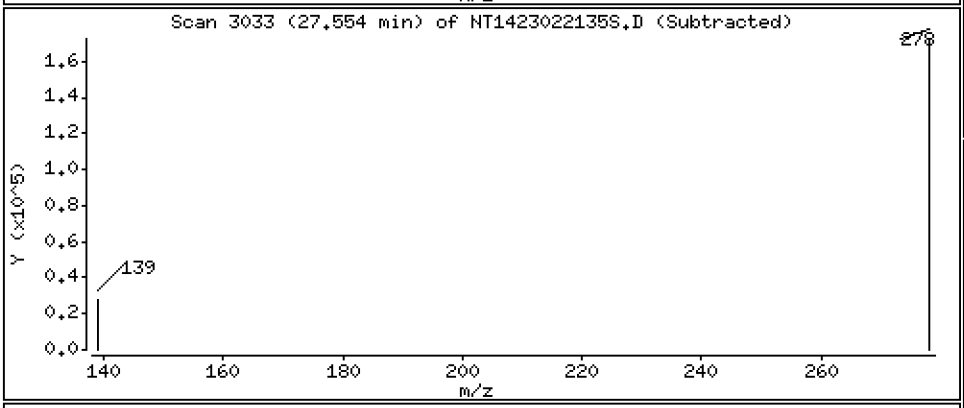
Column diameter: 0.25

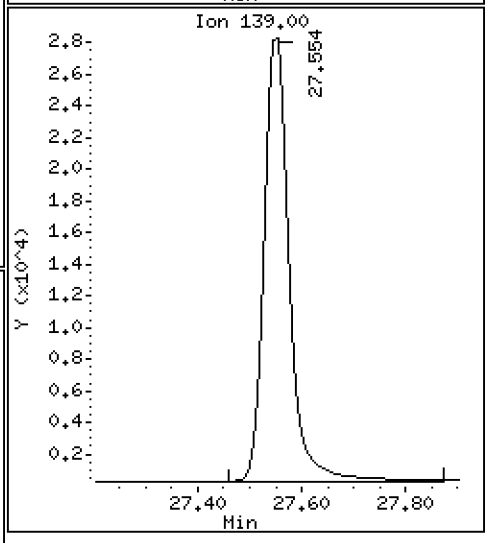
79 Dibenzo(a,h)anthracene

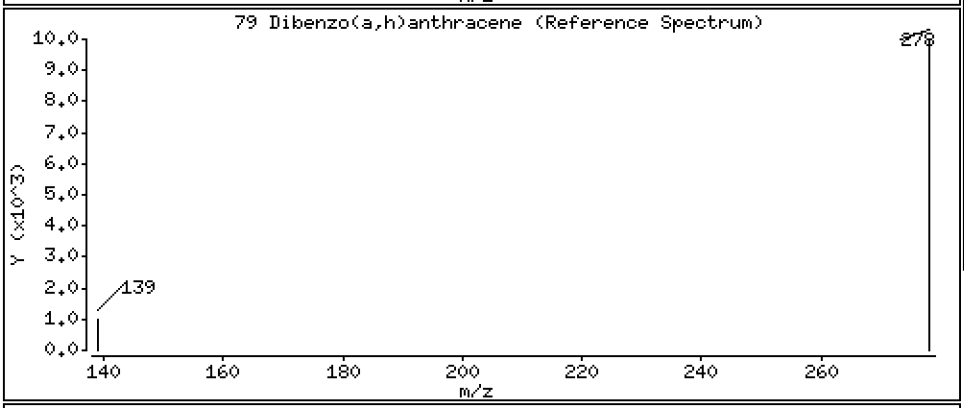
Concentration: 3.894 ug/mL

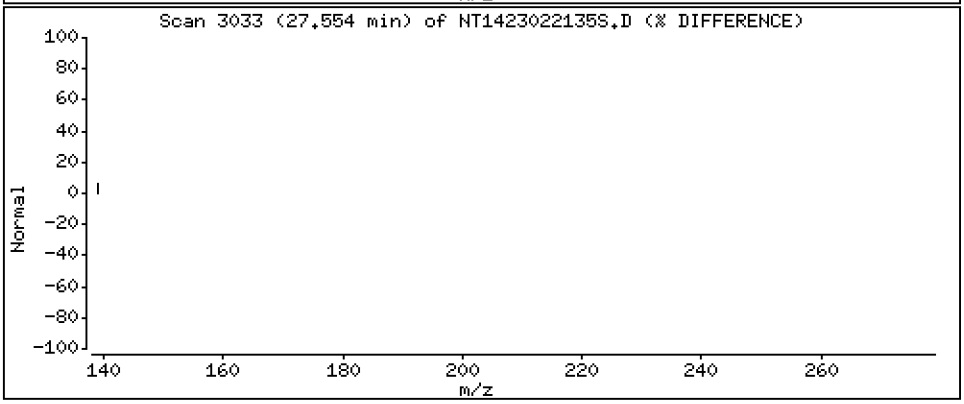












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221358.D

Date : 22-FEB-2023 09:57

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BS1

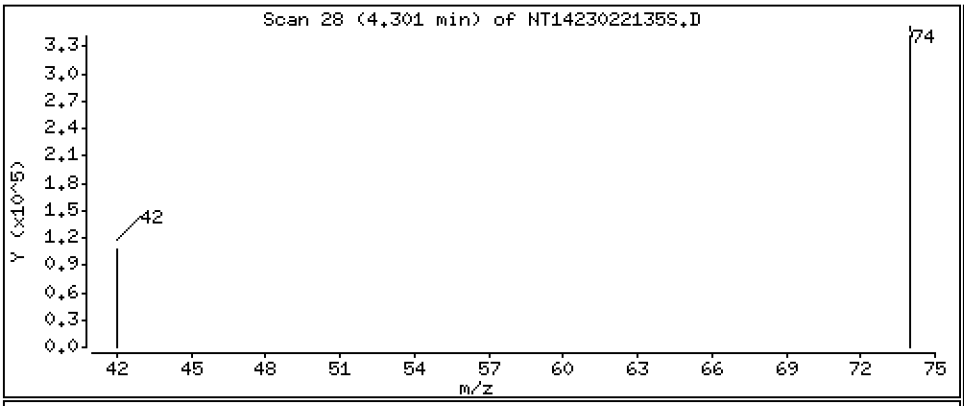
Operator: DSD

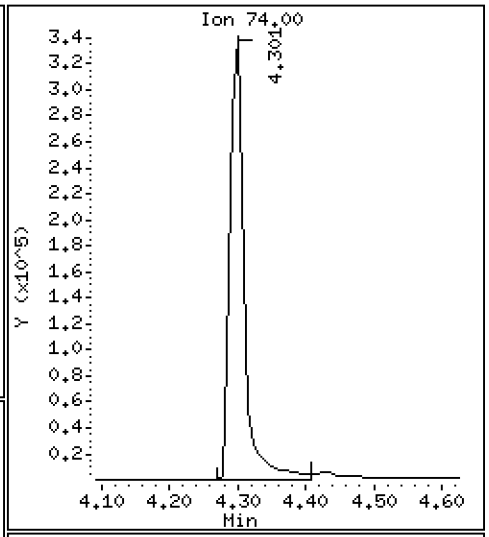
Column phase: ZB-5msi

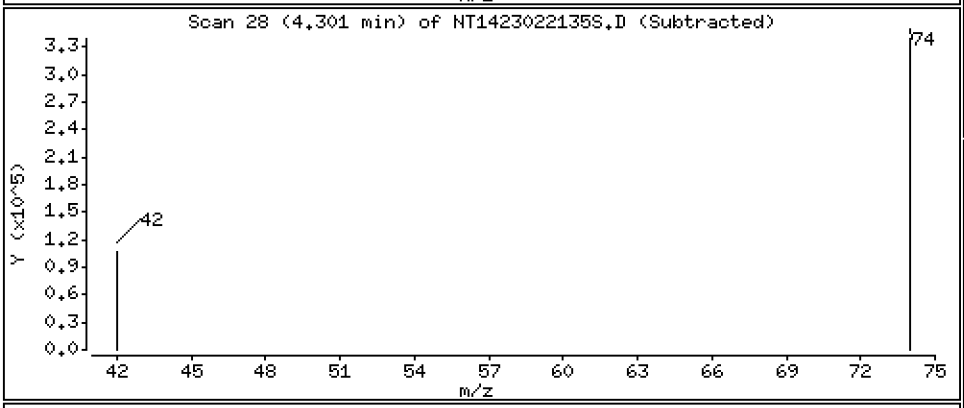
Column diameter: 0.25

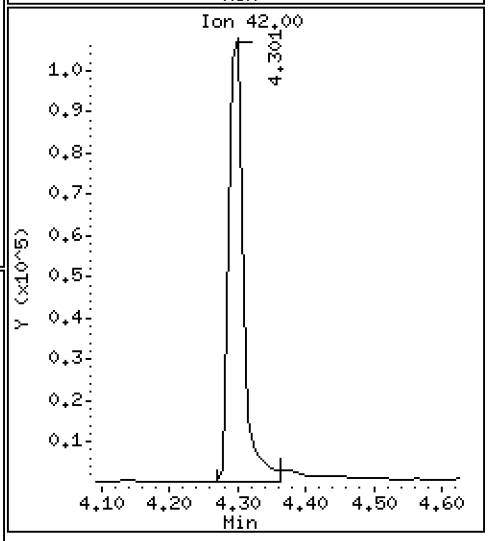
90 N-Nitrosodimethylamine

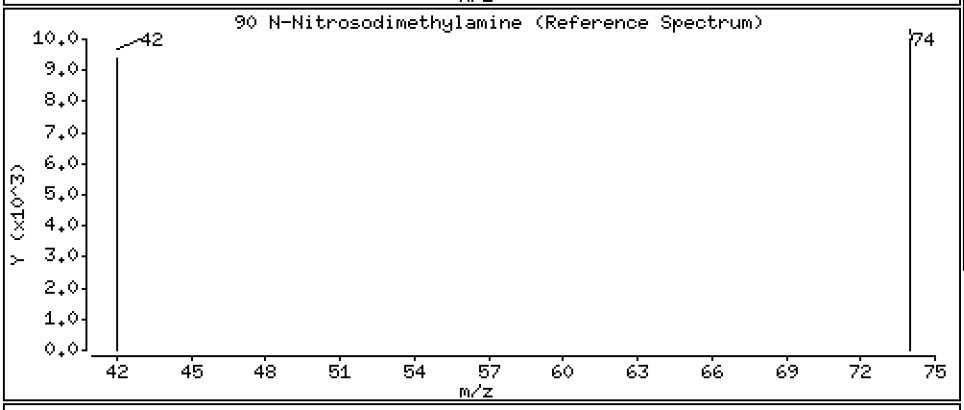
Concentration: 7.785 ug/mL

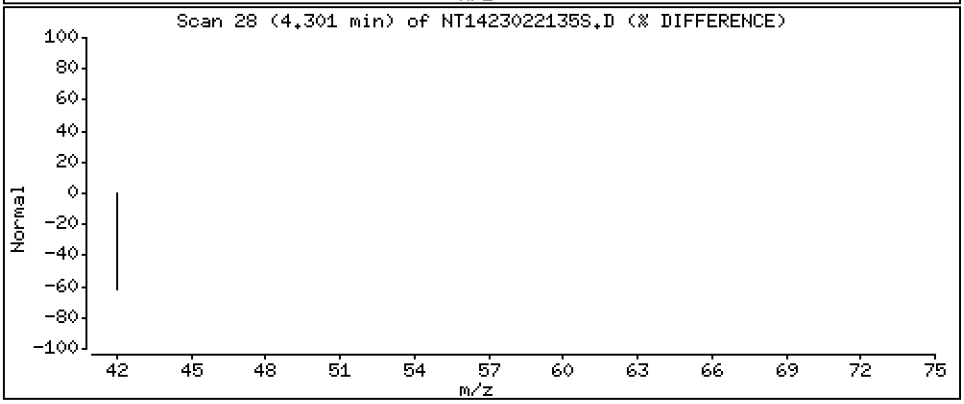












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT1423022135S.D
Lab Smp Id: BLA0393-BS2
Inj Date : 22-FEB-2023 09:57 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : BLA0393-BS1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Meth Date : 17-Jun-2023 09:15 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 26
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.393	6.385	(0.746)	420673	4.87989	4.880(R)
	3 Phenol	94	7.993	7.993	(0.933)	382724	2.91829	2.918
	7 1,3-Dichlorobenzene	146	8.503	8.503	(0.993)	325916	3.15330	3.153
*	8 1,4-Dichlorobenzene-d4	152	8.565	8.573	(1.000)	303756	4.00000	
	9 1,4-Dichlorobenzene	146	8.596	8.596	(1.004)	323627	3.28239	3.282
	11 Benzyl alcohol	79	8.868	8.867	(1.035)	290159	3.48791	3.488
	12 1,2-Dichlorobenzene	146	8.945	8.953	(1.044)	316753	3.23114	3.231
	13 2-Methylphenol	108	9.093	9.093	(1.062)	272994	3.02764	3.028
	15 4-Methylphenol	108	9.372	9.372	(1.094)	299242	2.99101	2.991
	16 N-Nitroso-di-n-propylamine	70	9.411	9.411	(1.099)	260150	3.33087	3.331
	22 2,4-Dimethylphenol	107	10.404	10.404	(0.942)	537809	5.68525	5.685
	24 Benzoic acid	105	10.707	10.606	(0.970)	1012682	19.4570	19.46
	26 1,2,4-Trichlorobenzene	180	10.962	10.962	(0.993)	312372	3.09697	3.097
*	27 Naphthalene-d8	136	11.040	11.039	(1.000)	1100976	4.00000	
	30 Hexachlorobutadiene	225	11.449	11.449	(1.037)	193685	3.15661	3.157
	39 Dimethylphthalate	163	14.188	14.180	(0.968)	688259	3.82955	3.830
*	42 Acenaphthene-d10	162	14.653	14.645	(1.000)	589097	4.00000	
	50 Diethylphthalate	149	15.642	15.634	(1.068)	925578	4.11489	4.115
	54 N-Nitrosodiphenylamine	169	16.013	16.005	(0.906)	600765	3.43006	3.430
	57 Hexachlorobenzene	284	17.054	17.054	(0.965)	302254	3.43314	3.433
	58 Pentachlorophenol	266	17.426	17.426	(0.986)	488608	11.9247	11.92
*	59 Phenanthrene-d10	188	17.674	17.673	(1.000)	1355563	4.00000	
$	66 Terphenyl-d14	244	20.869	20.869	(0.916)	1023379	3.63397	3.634(R)
	67 Butylbenzylphthalate	149	21.814	21.813	(0.958)	576257	4.05777	4.058
*	69 Chrysene-d12	240	22.774	22.766	(1.000)	1057826	4.00000	
*	77 Perylene-d12	264	25.220	25.212	(1.000)	773837	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.553	27.553	(1.092)	570569	3.89361	3.894
	90 N-Nitrosodimethylamine	74	4.300	4.277	(0.502)	492459	7.78479	7.785

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 22-FEB-2023
Lab File ID: NT1423022135S.D Calibration Time: 08:08
Lab Smp Id: BLA0393-BS2
Analysis Type: SV Level:
Quant Type: ISTD Sample Type:
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Misc Info:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	261796	130898	523592	303756	16.03
27 Naphthalene-d8	959301	479651	1918602	1100976	14.77
42 Acenaphthene-d10	503659	251830	1007318	589097	16.96
59 Phenanthrene-d10	1179954	589977	2359908	1355563	14.88
69 Chrysene-d12	887360	443680	1774720	1057826	19.21
77 Perylene-d12	652371	326186	1304742	773837	18.62

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.09
27 Naphthalene-d8	11.04	10.54	11.54	11.04	0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	0.05
59 Phenanthrene-d10	17.67	17.17	18.17	17.67	0.00
69 Chrysene-d12	22.77	22.27	23.27	22.77	0.04
77 Perylene-d12	25.21	24.71	25.71	25.22	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022135S.D

Lab ID: BLA0393-BS2
nt14.i, 20230221B.b\SIM.b\SIMABN2.m,   22-FEB-2023 09:57

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.970	0.961	0.0091	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1423022132S.D

On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221136S.D

Date : 22-FEB-2023 10:33

Client ID:

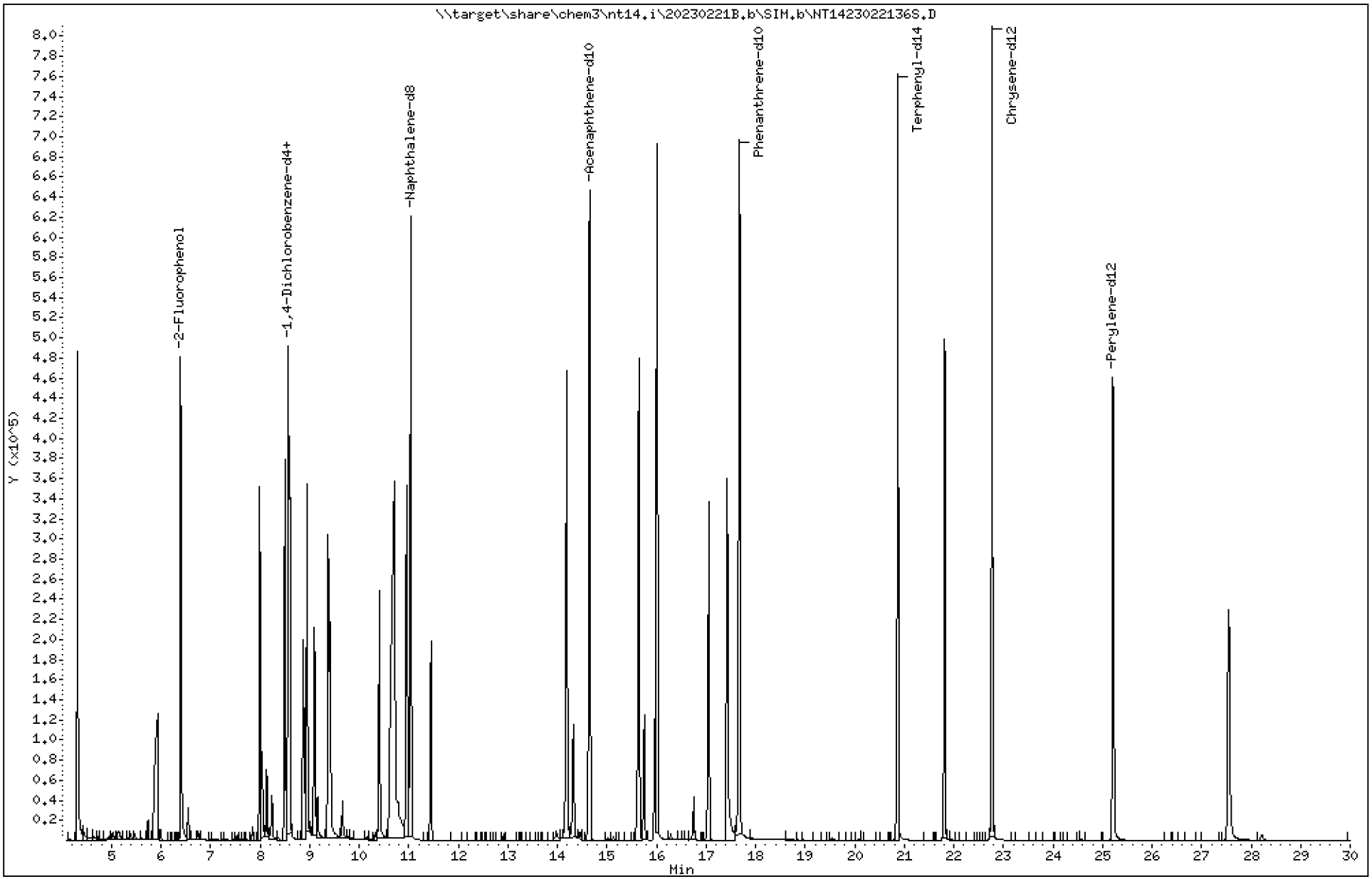
Instrument: nt14.i

Sample Info: BLA0393-BSD1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221136S.D

Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

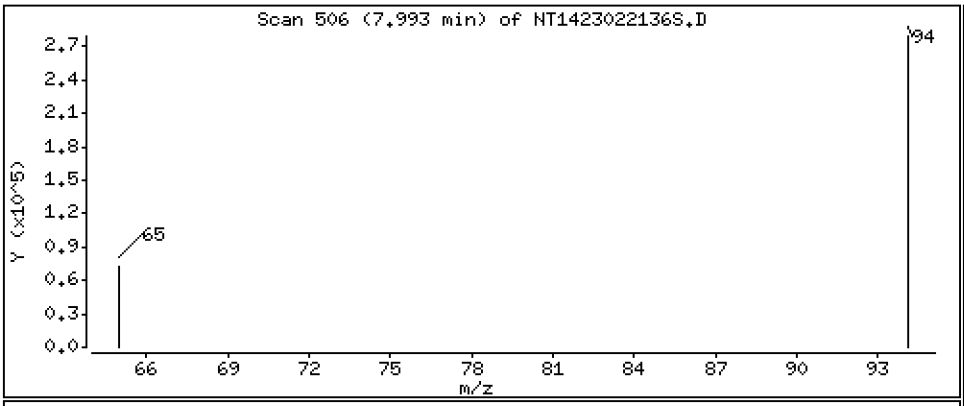
Operator: DSD

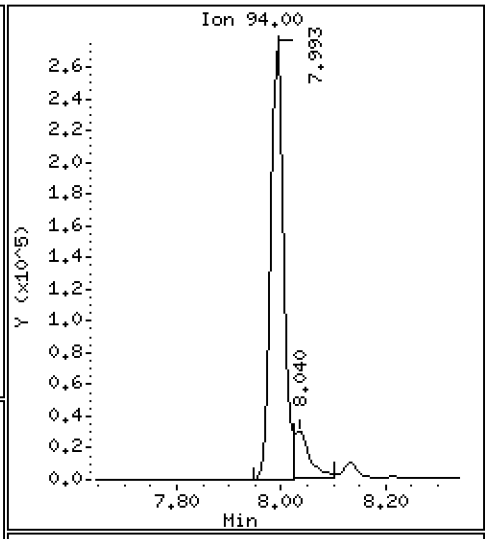
Column phase: ZB-5msi

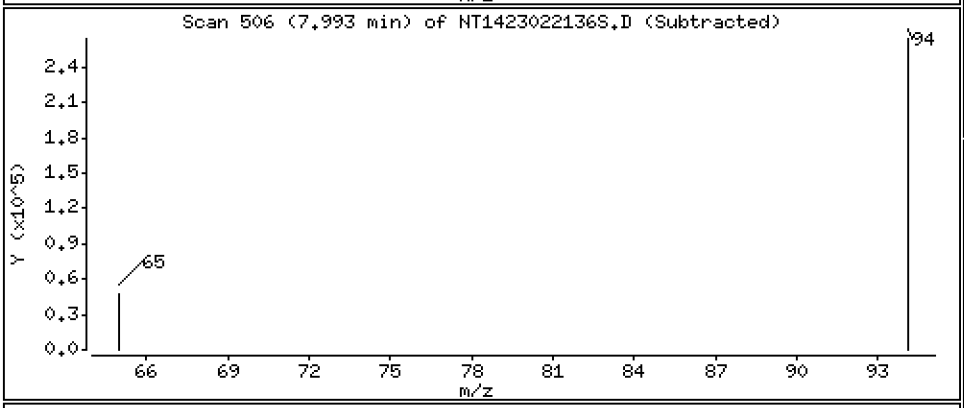
Column diameter: 0.25

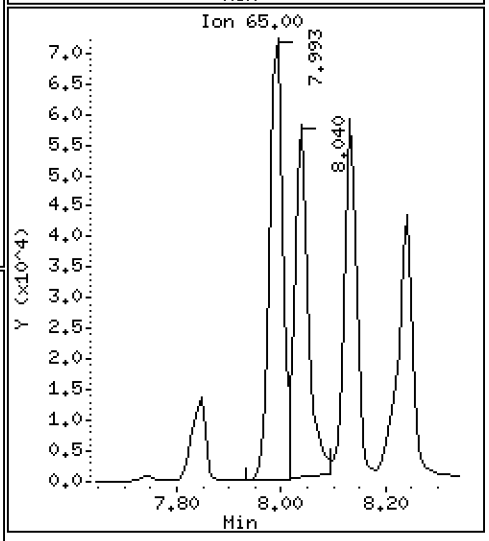
3 Phenol

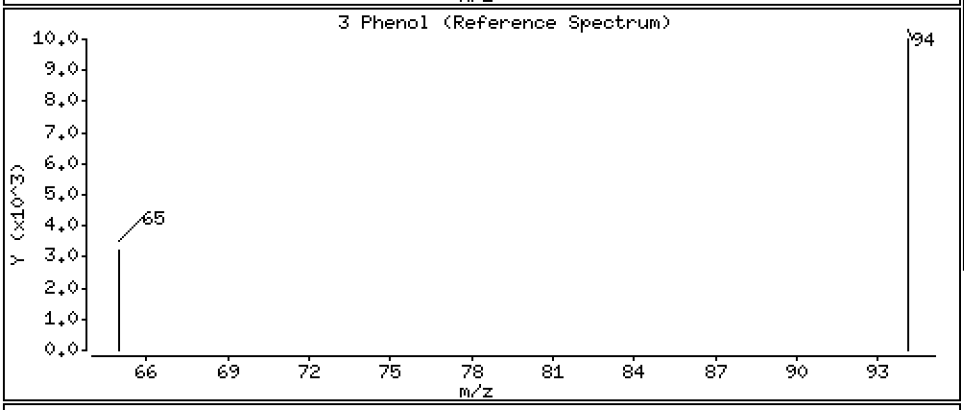
Concentration: 3.305 ug/mL

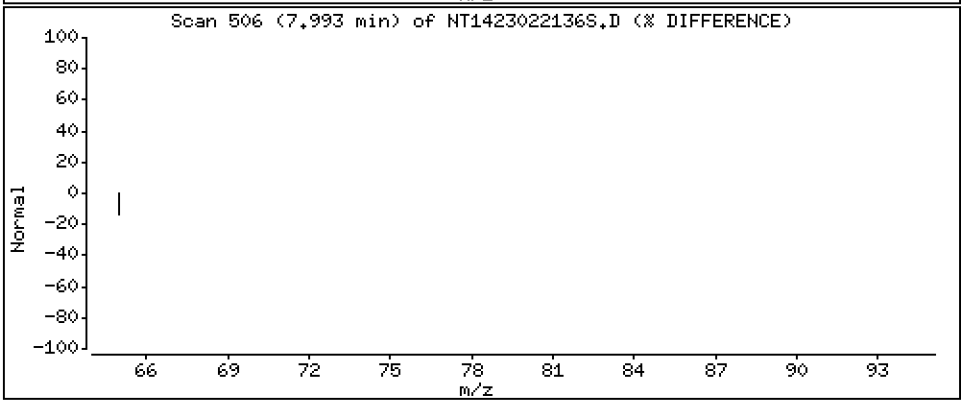












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230022136S.D

Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

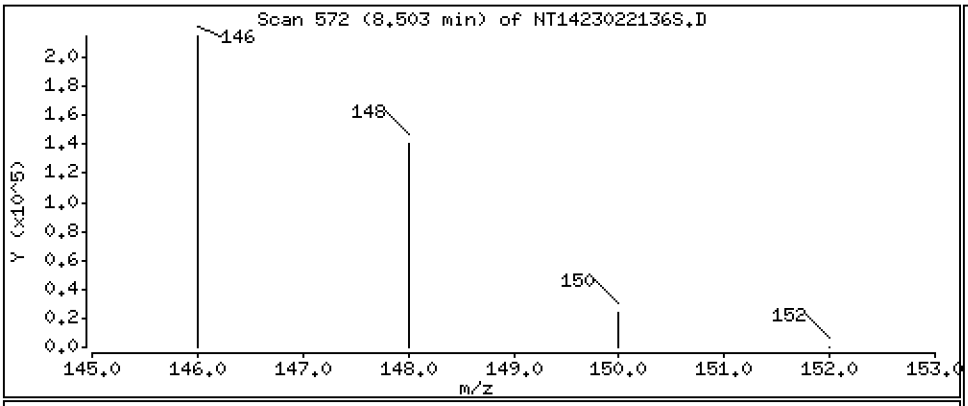
Operator: DSD

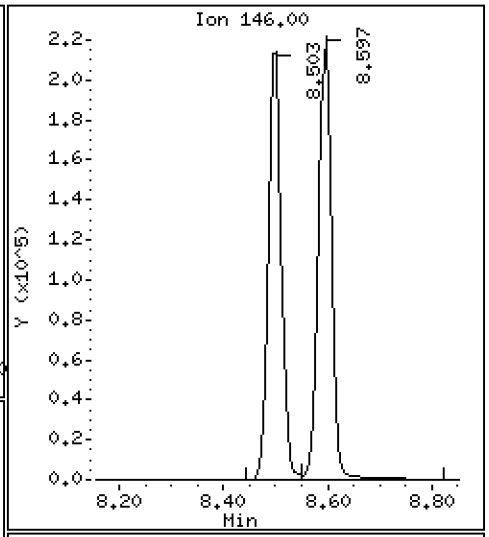
Column phase: ZB-5msi

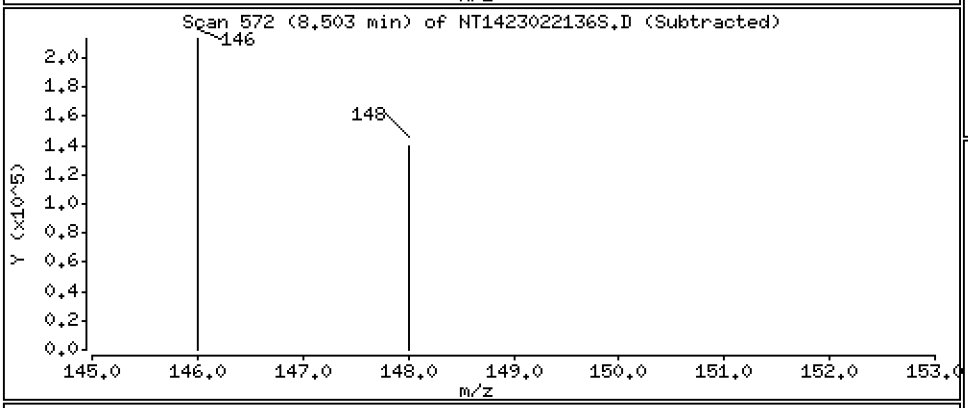
Column diameter: 0.25

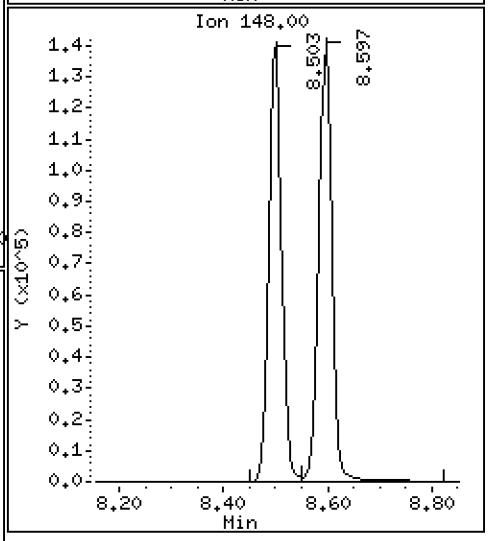
7 1,3-Dichlorobenzene

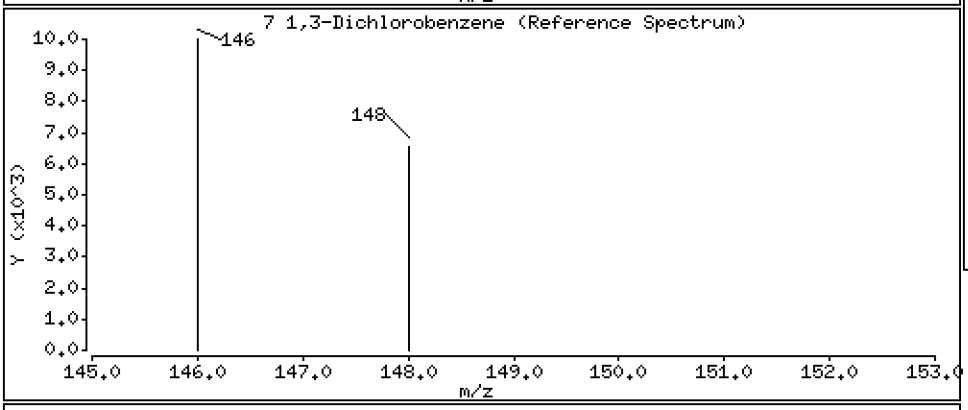
Concentration: 3.504 ug/mL

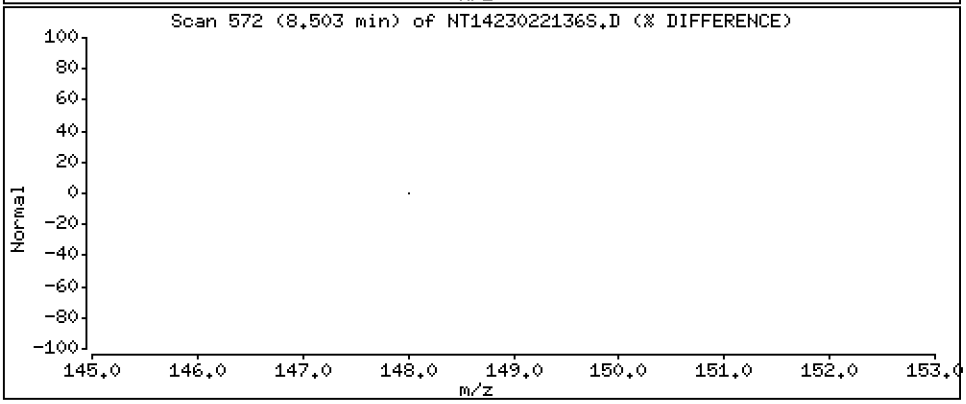












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230022136S.D

Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

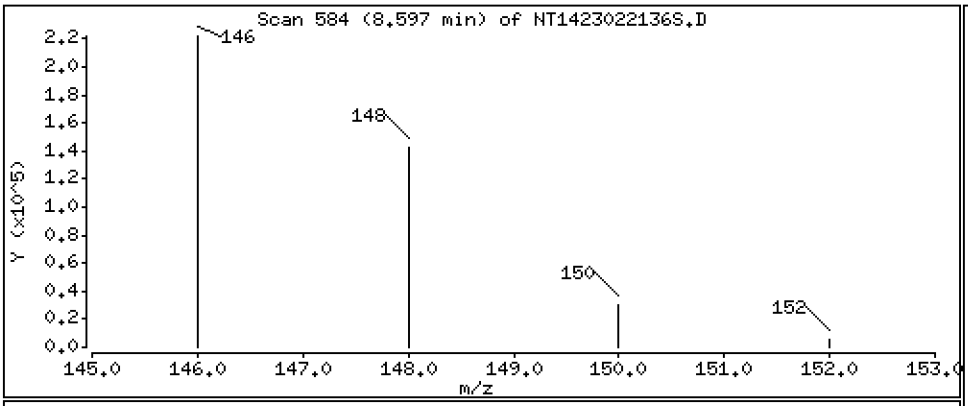
Operator: DSD

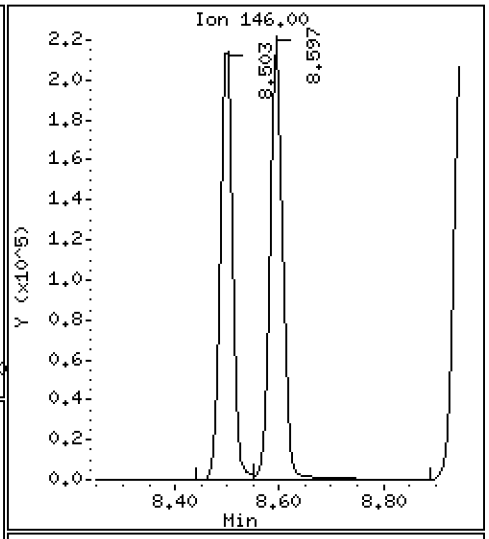
Column phase: ZB-5msi

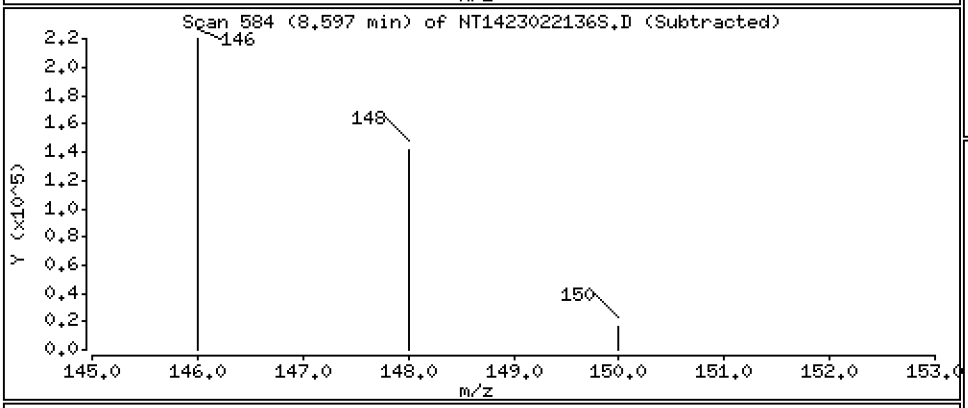
Column diameter: 0.25

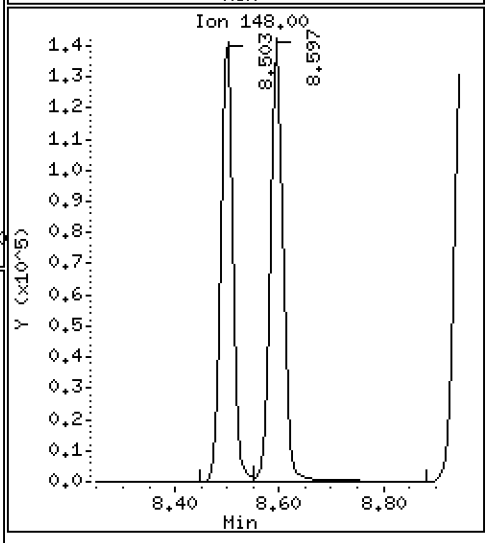
9 1,4-Dichlorobenzene

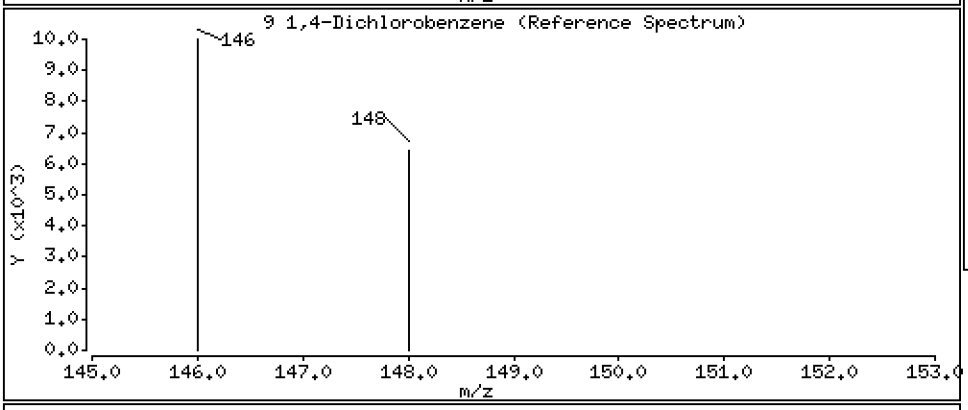
Concentration: 3.642 ug/mL

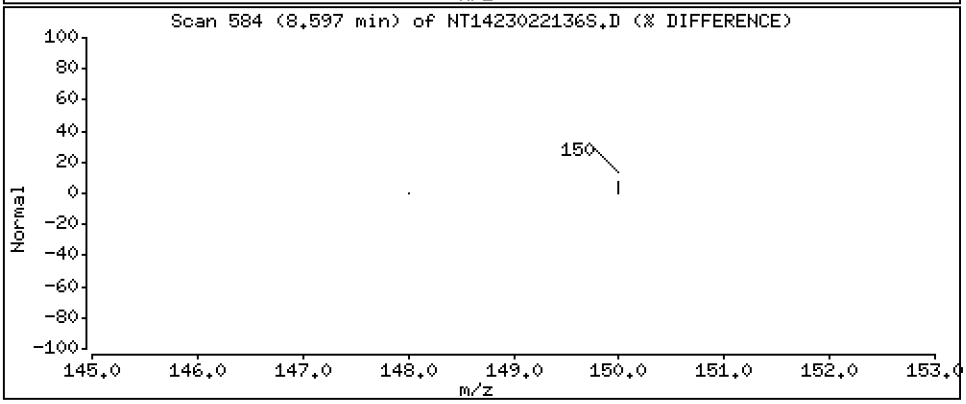












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

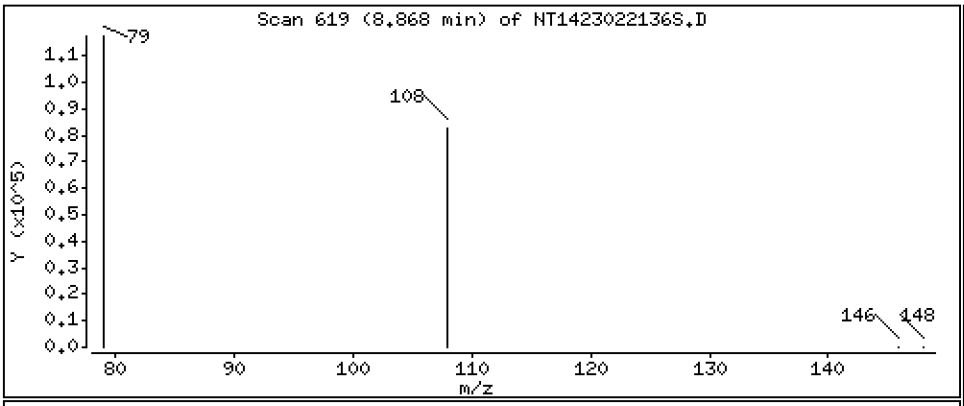
Operator: DSD

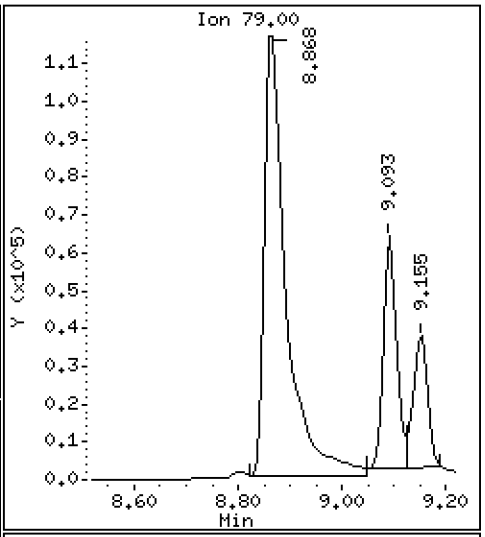
Column phase: ZB-5msi

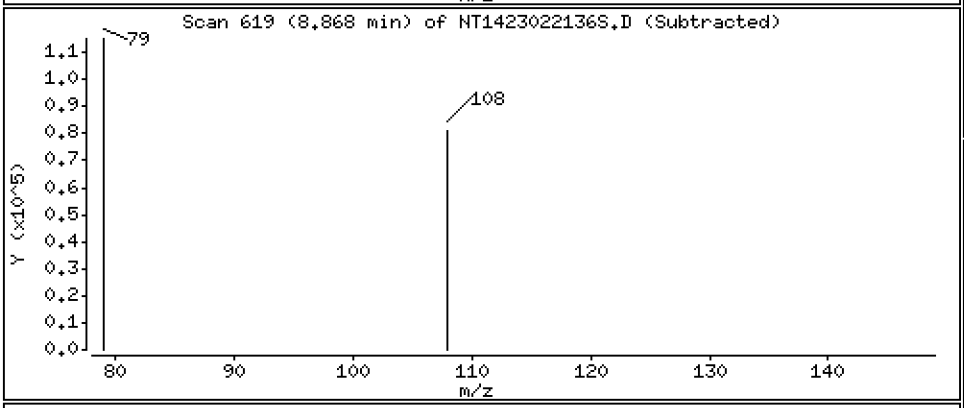
Column diameter: 0.25

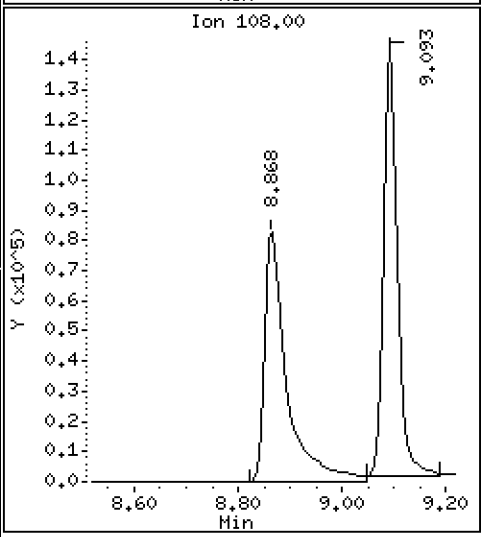
11 Benzyl alcohol

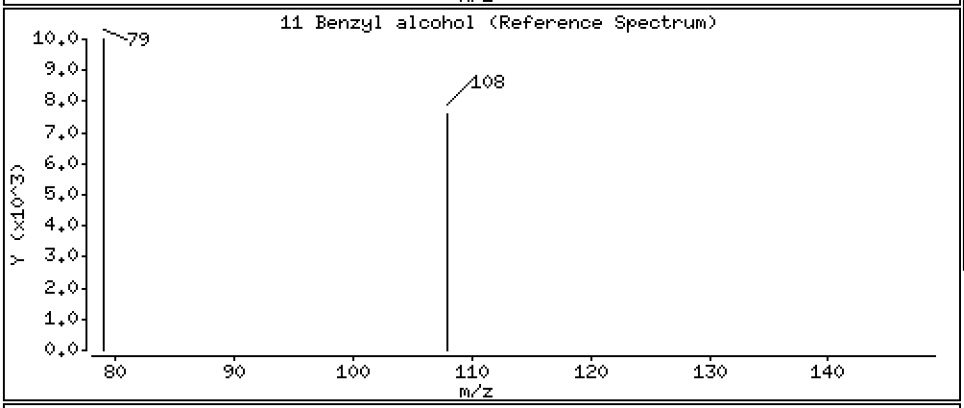
Concentration: 3.912 ug/mL

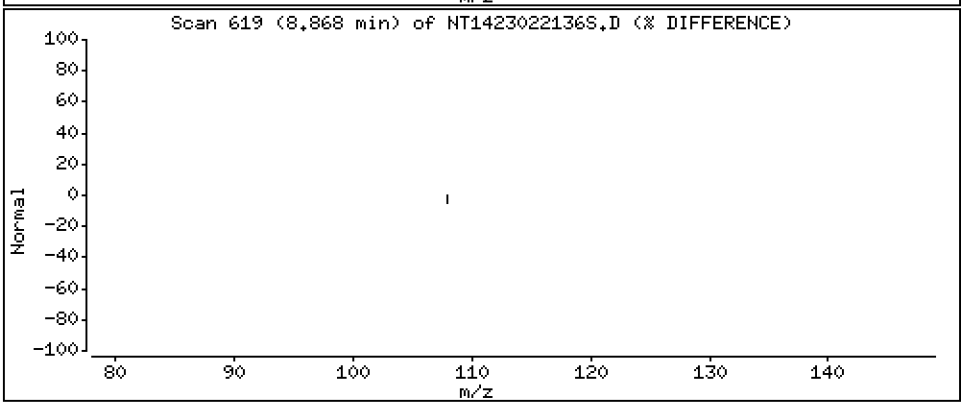












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

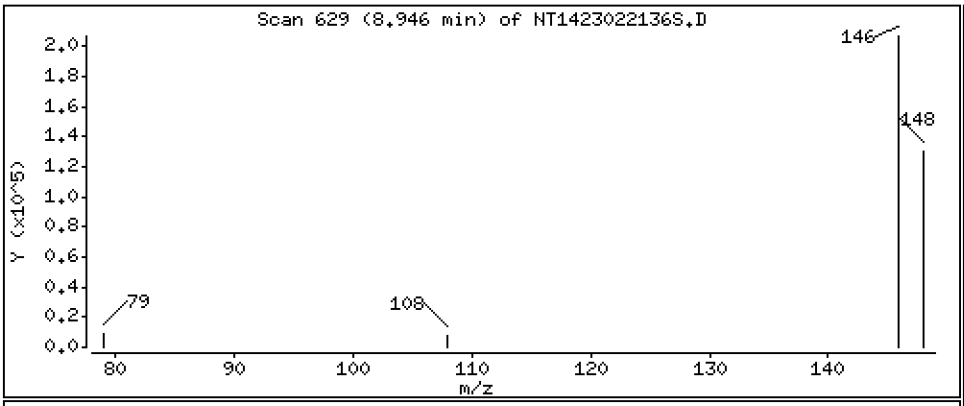
Operator: DSD

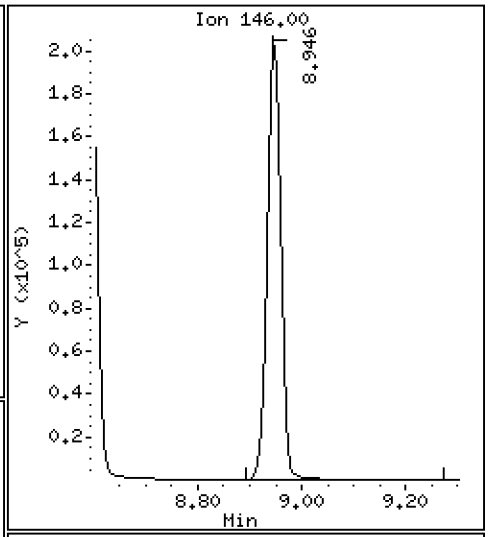
Column phase: ZB-5msi

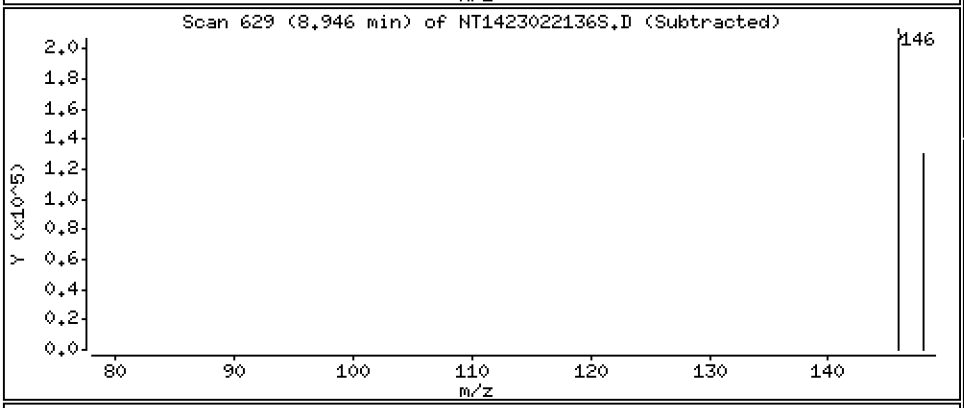
Column diameter: 0.25

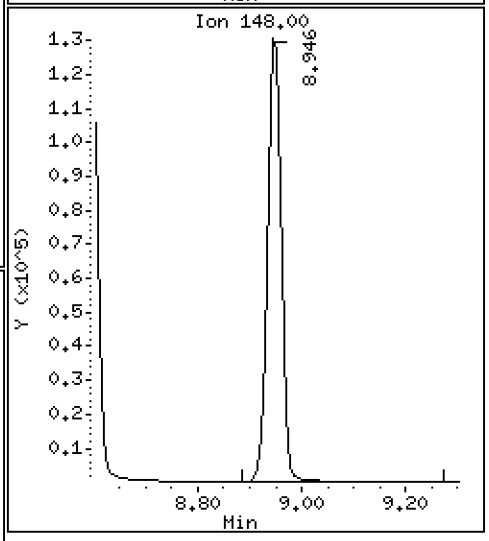
12 1,2-Dichlorobenzene

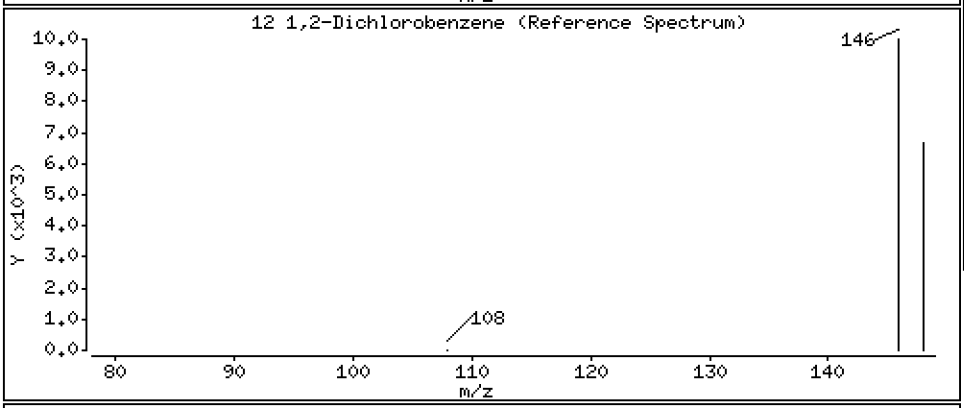
Concentration: 3.586 ug/mL

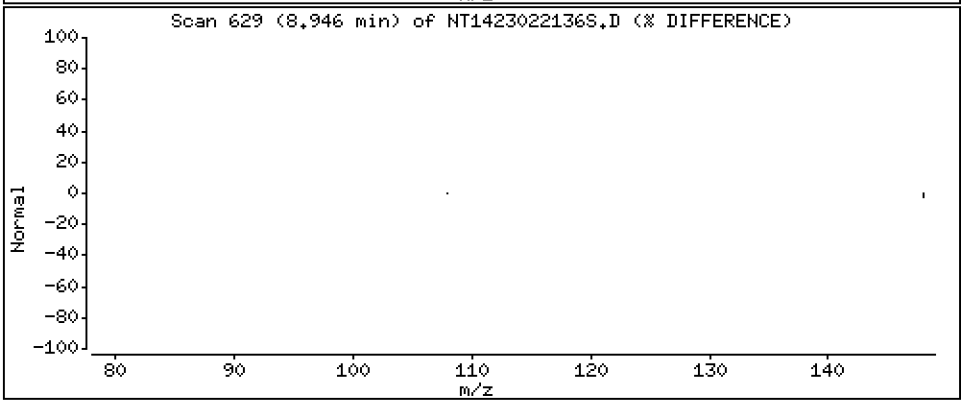












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

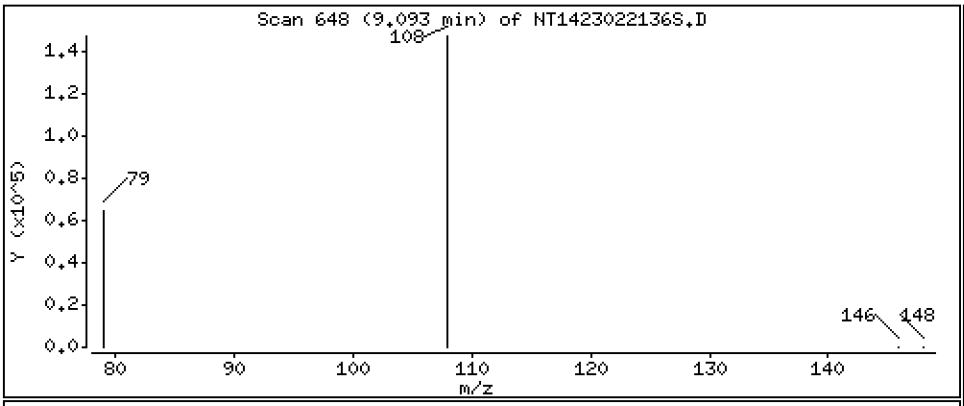
Operator: DSD

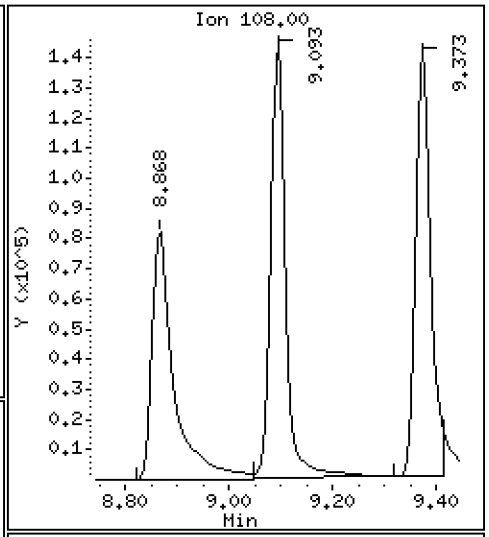
Column phase: ZB-5msi

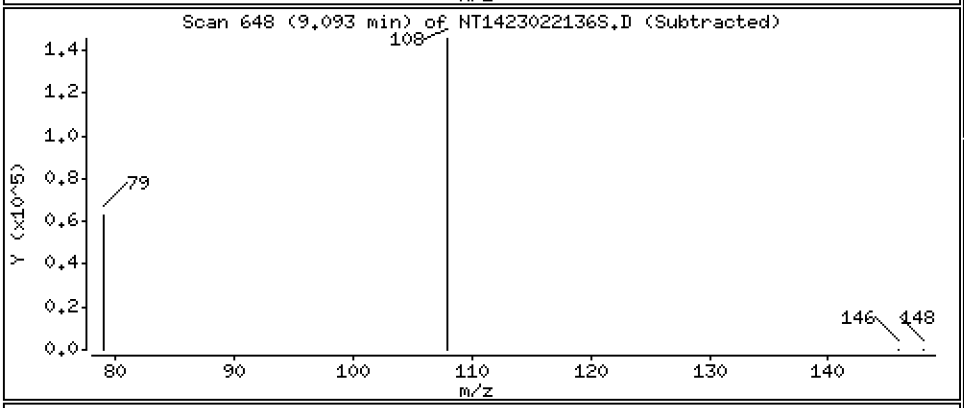
Column diameter: 0.25

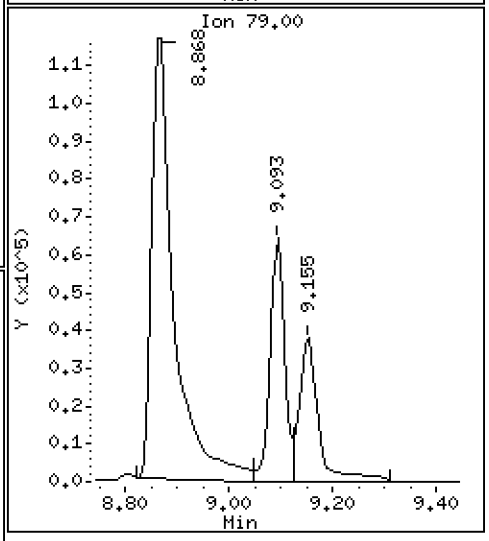
13 2-Methylphenol

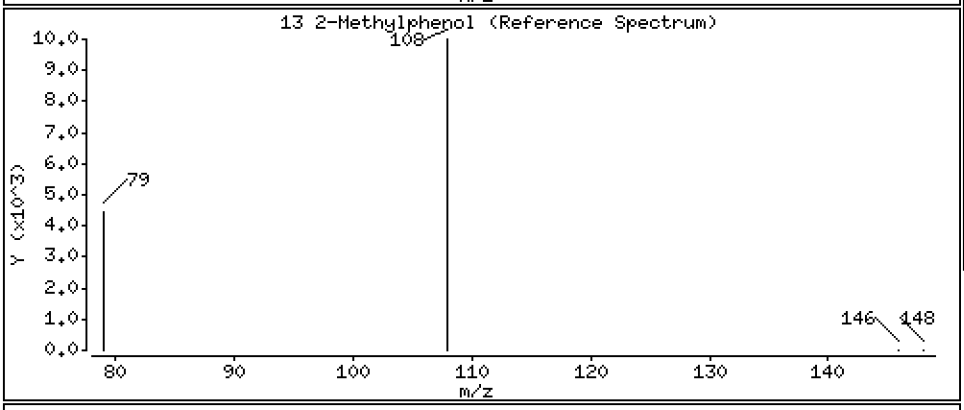
Concentration: 2.958 ug/mL

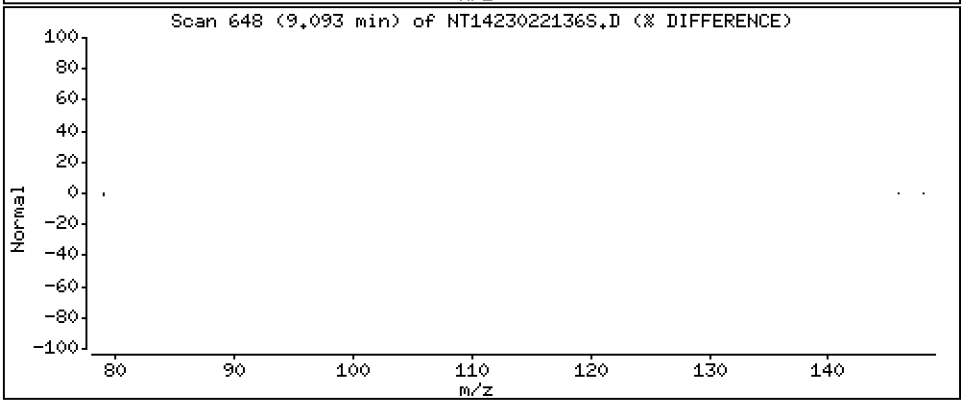












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

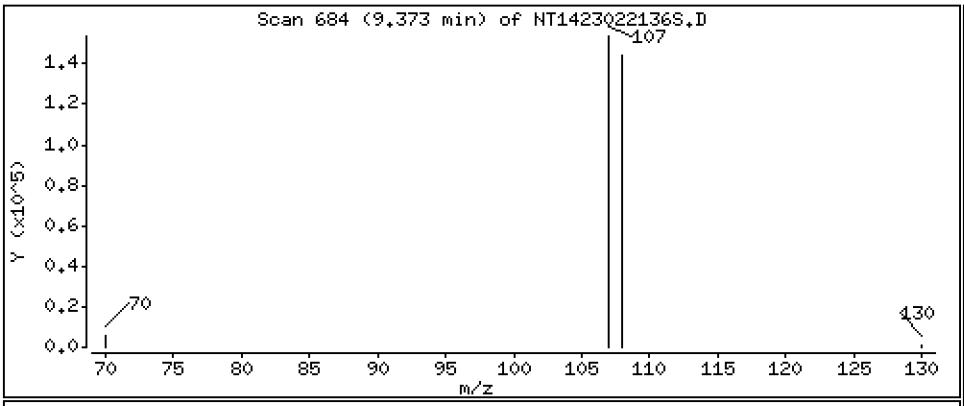
Operator: DSD

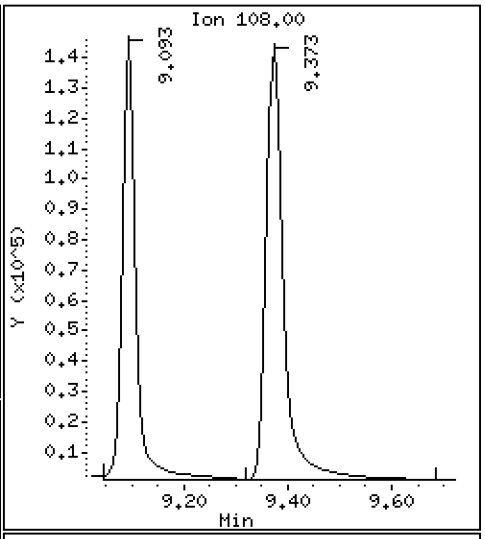
Column phase: ZB-5msi

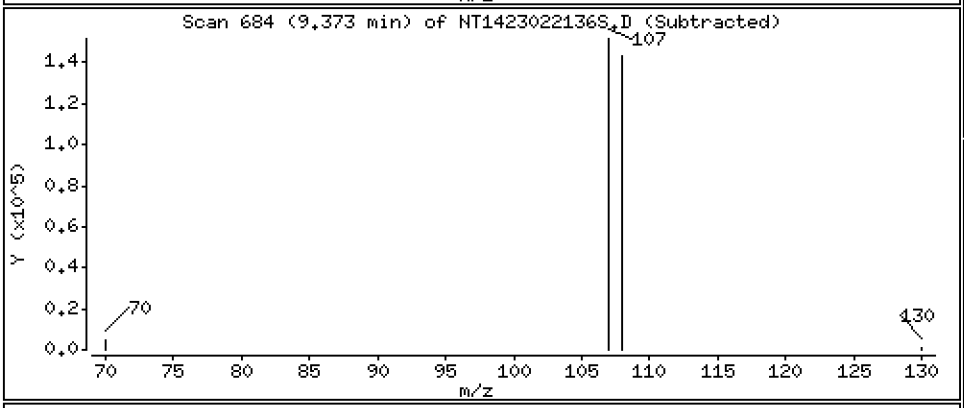
Column diameter: 0.25

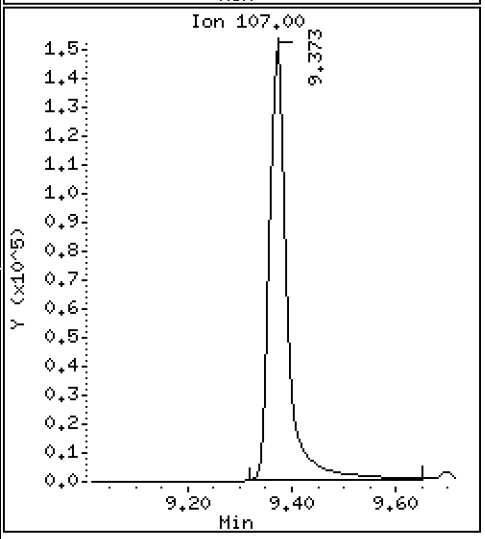
15 4-Methylphenol

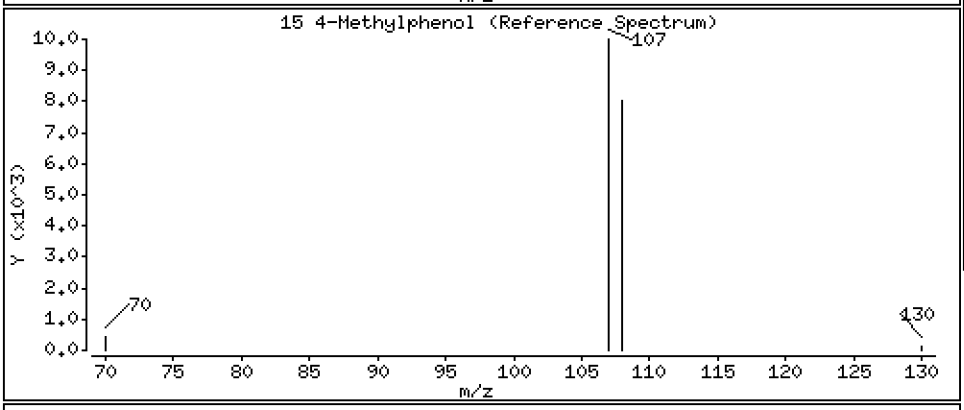
Concentration: 3.138 ug/mL

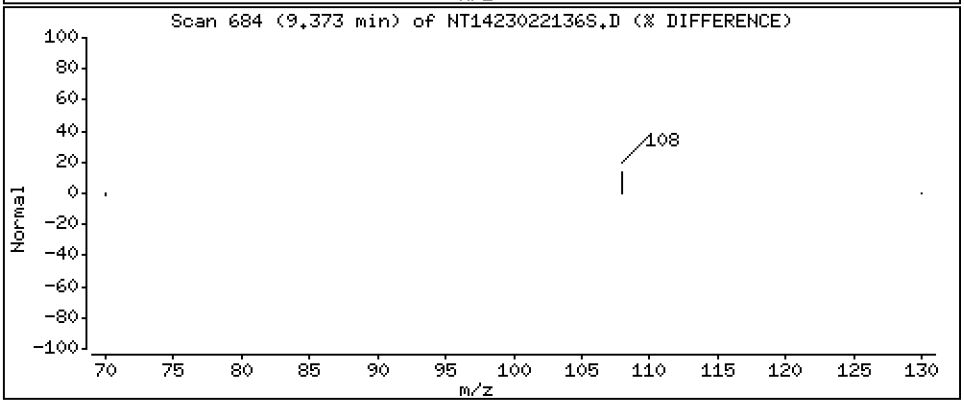












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

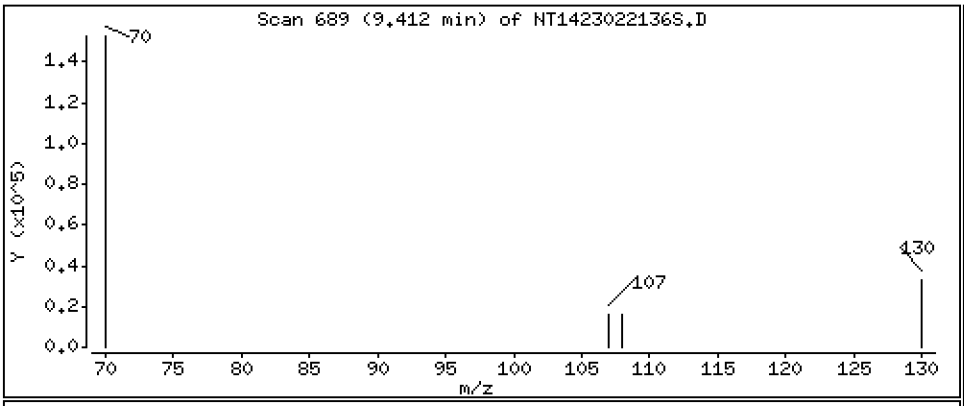
Operator: DSD

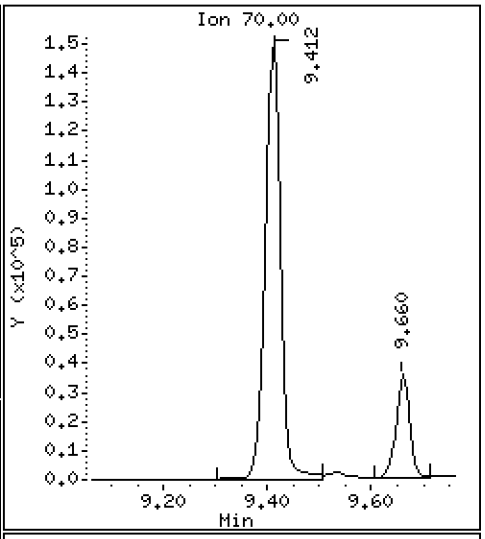
Column phase: ZB-5msi

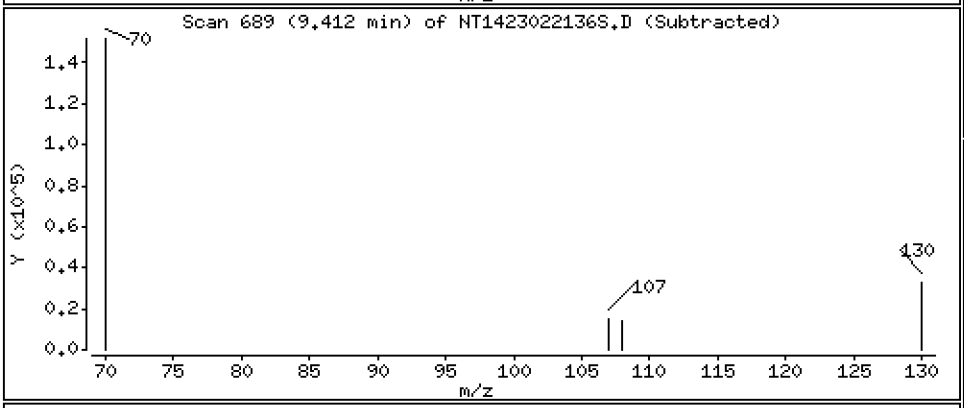
Column diameter: 0.25

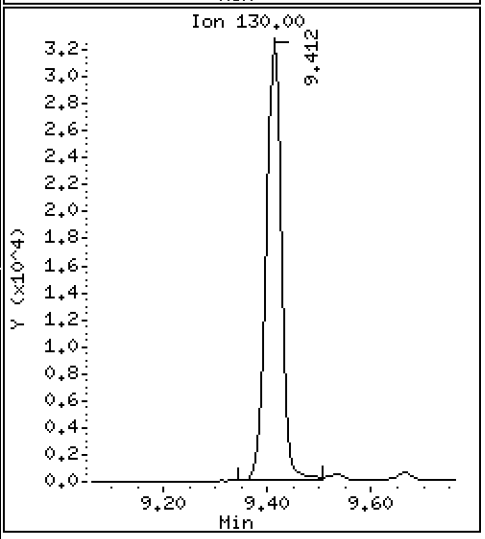
16 N-Nitroso-di-n-propylamine

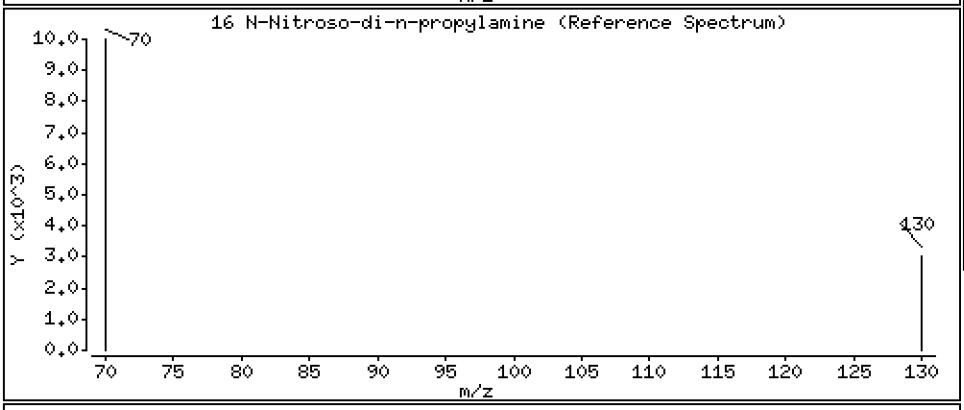
Concentration: 3.719 ug/mL

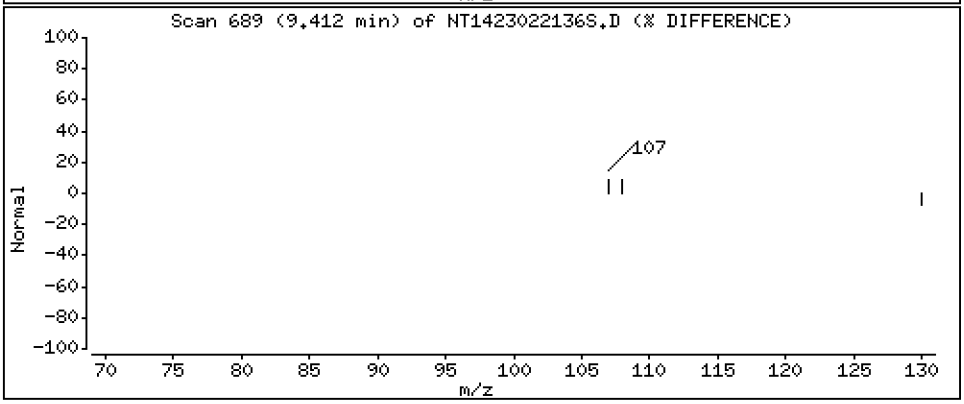












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

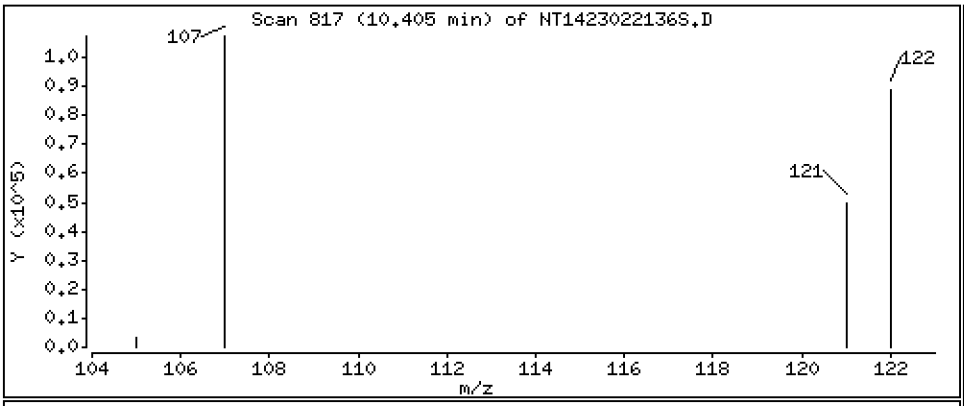
Operator: DSD

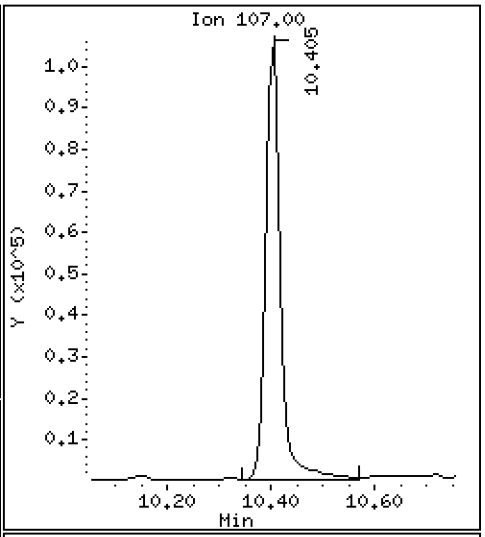
Column phase: ZB-5msi

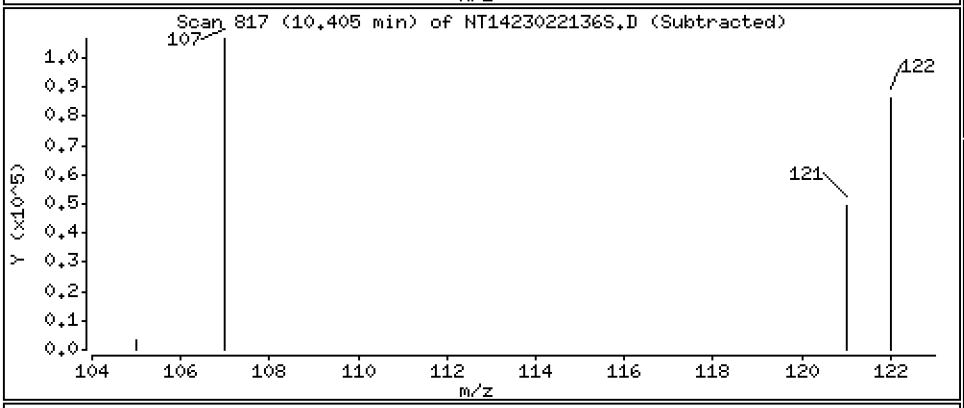
Column diameter: 0.25

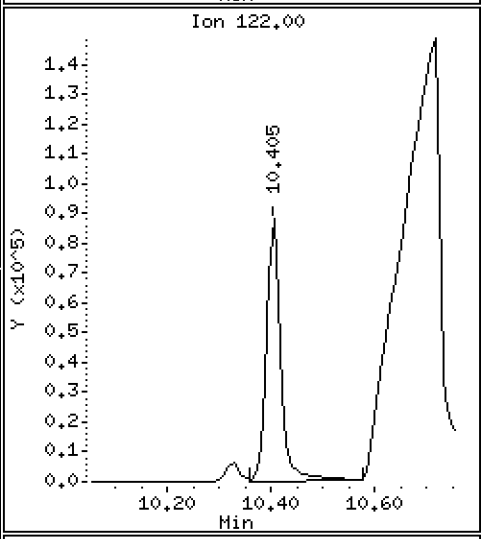
22 2,4-Dimethylphenol

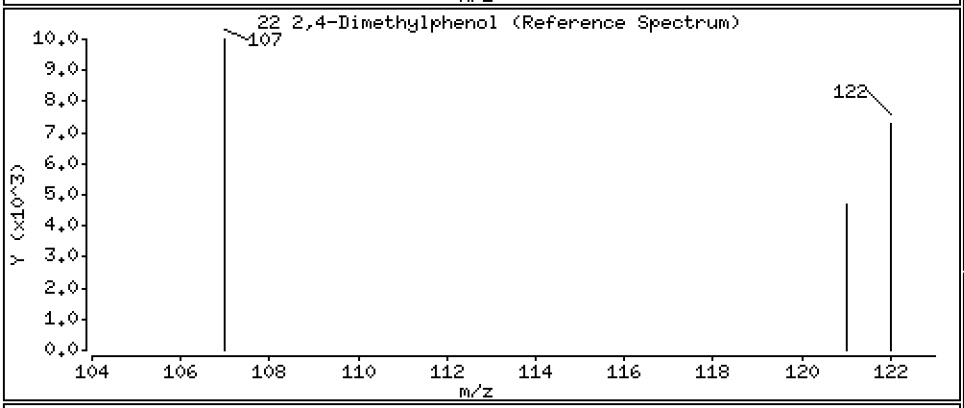
Concentration: 1.946 ug/mL

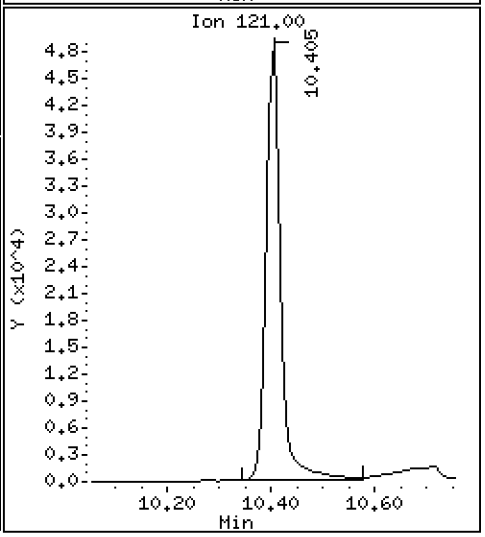


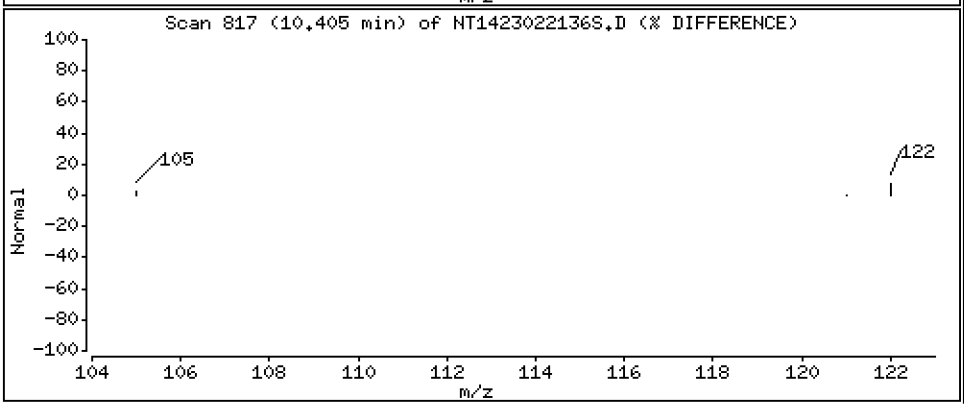












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

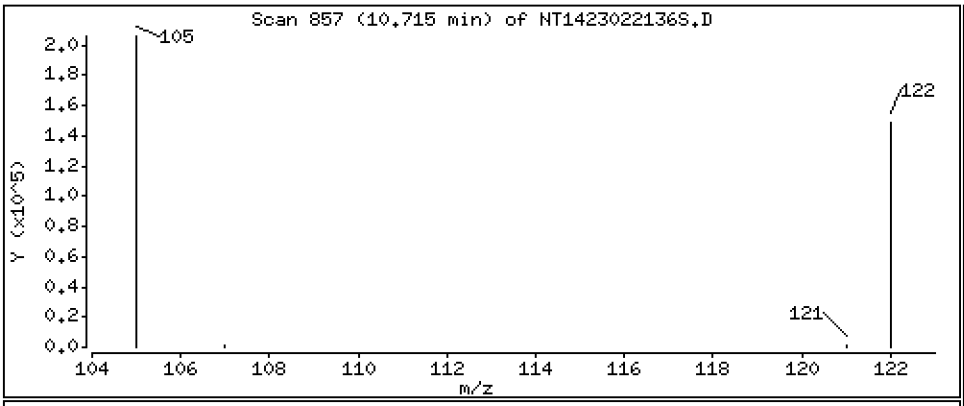
Operator: DSD

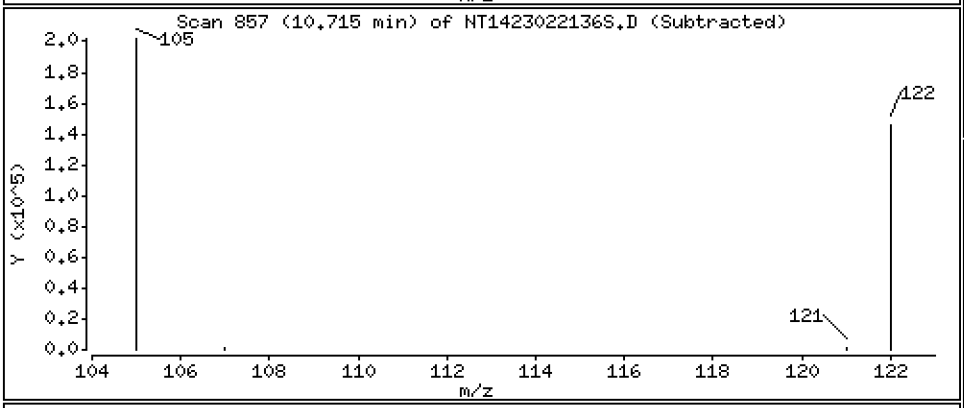
Column phase: ZB-5msi

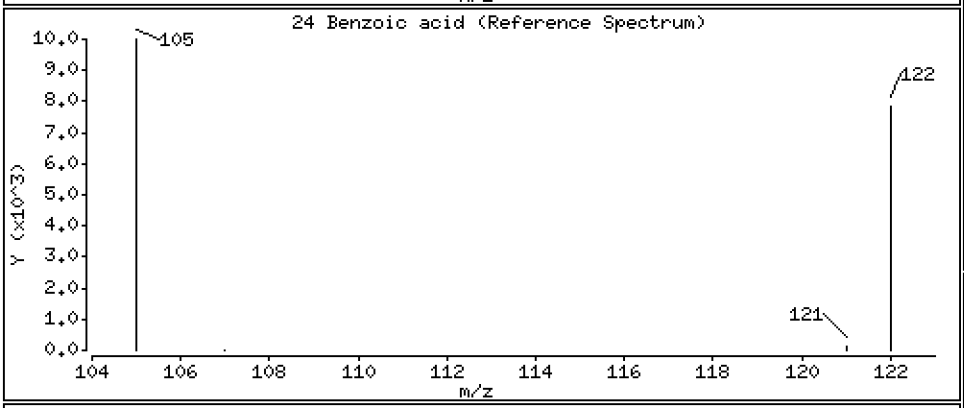
Column diameter: 0.25

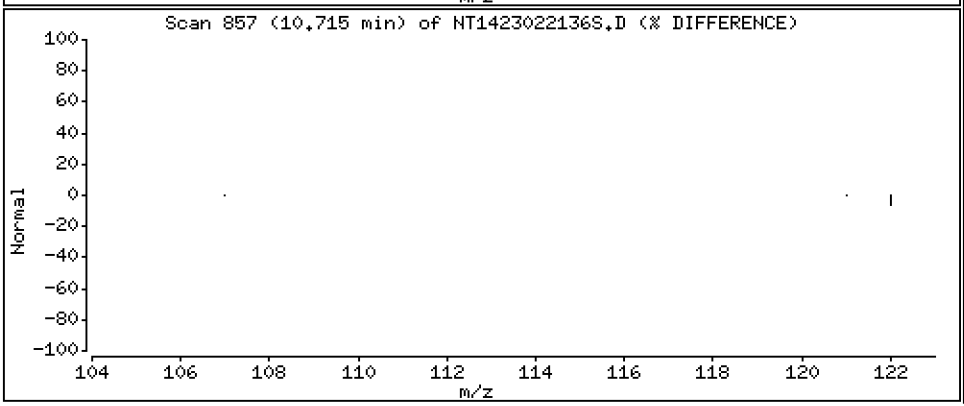
24 Benzoic acid

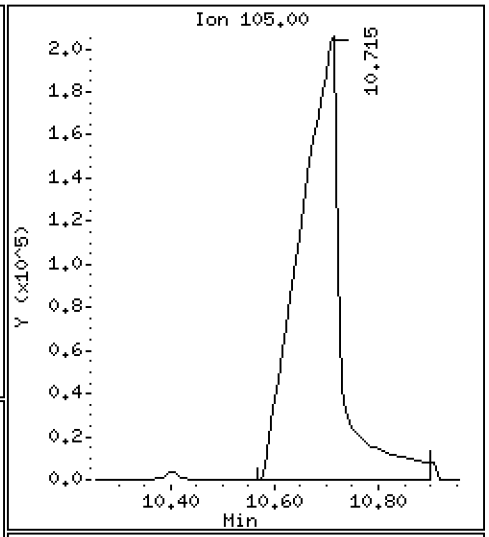
Concentration: 21.50 ug/mL

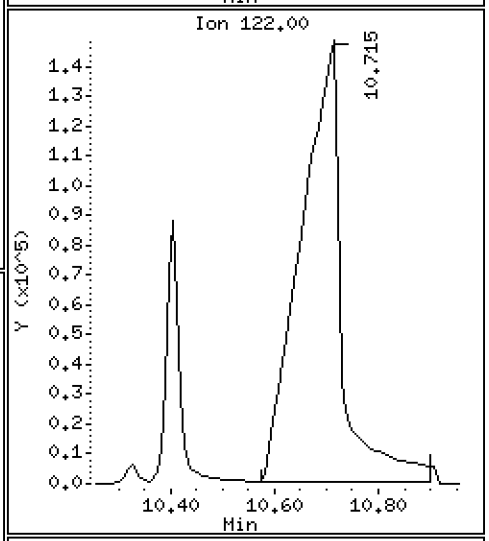


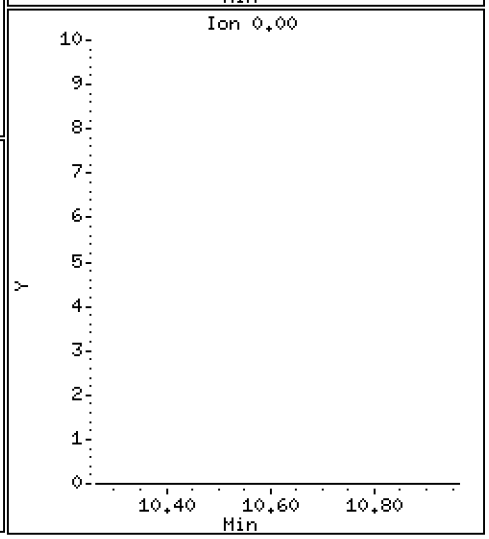












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

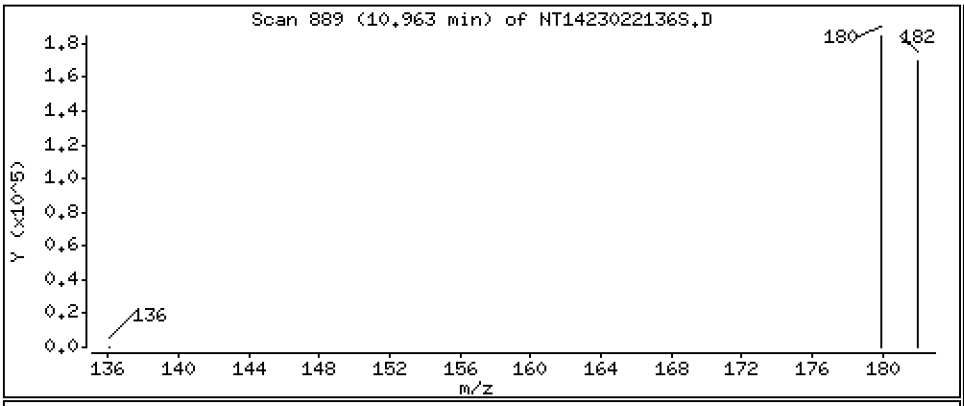
Operator: DSD

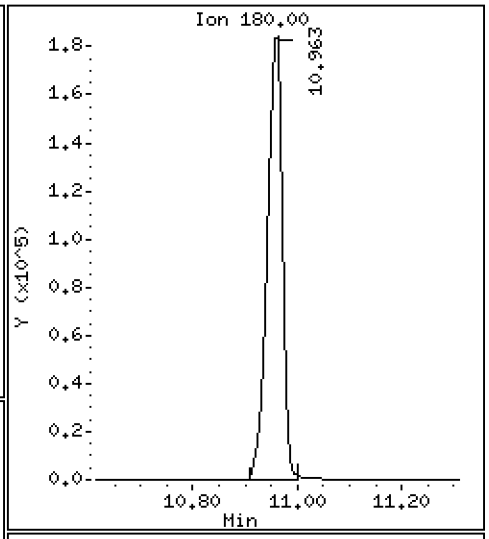
Column phase: ZB-5msi

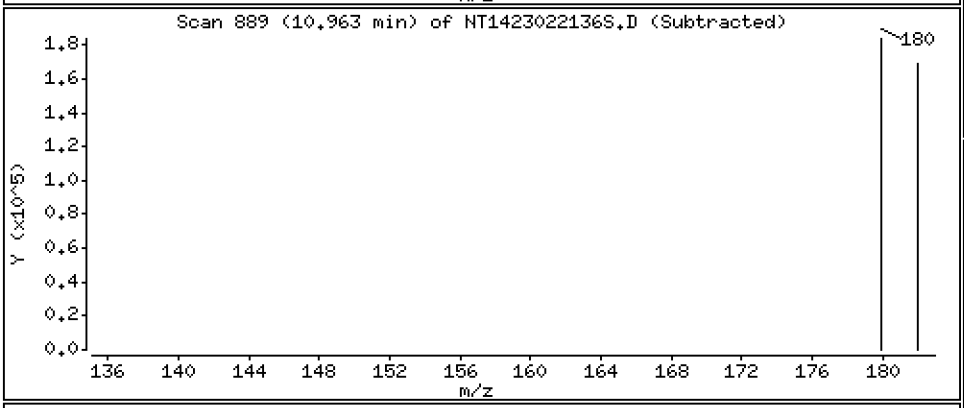
Column diameter: 0.25

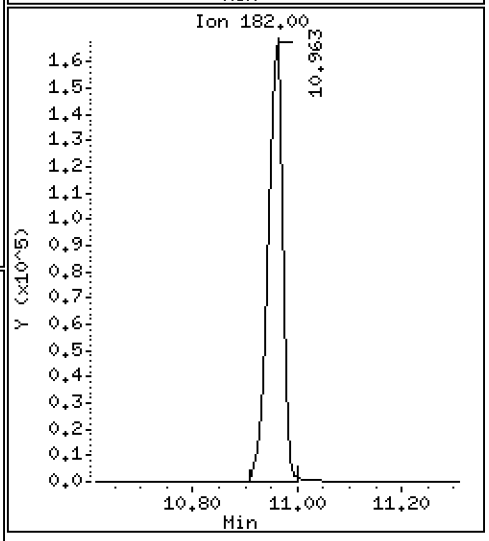
26 1,2,4-Trichlorobenzene

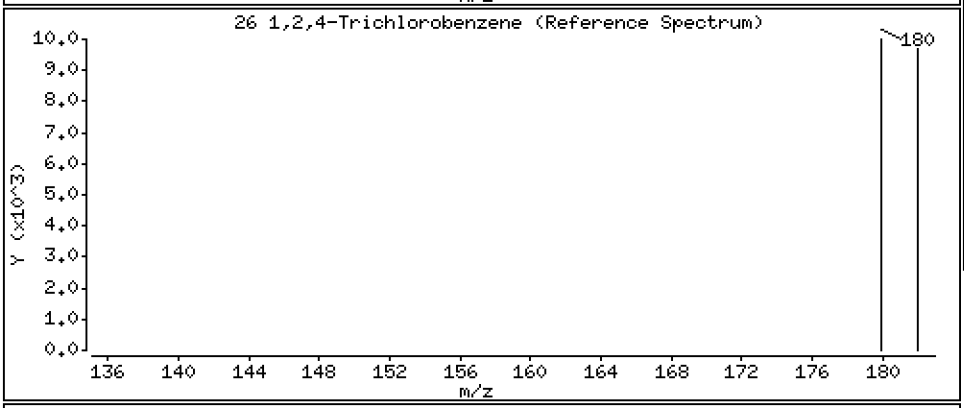
Concentration: 3.446 ug/mL

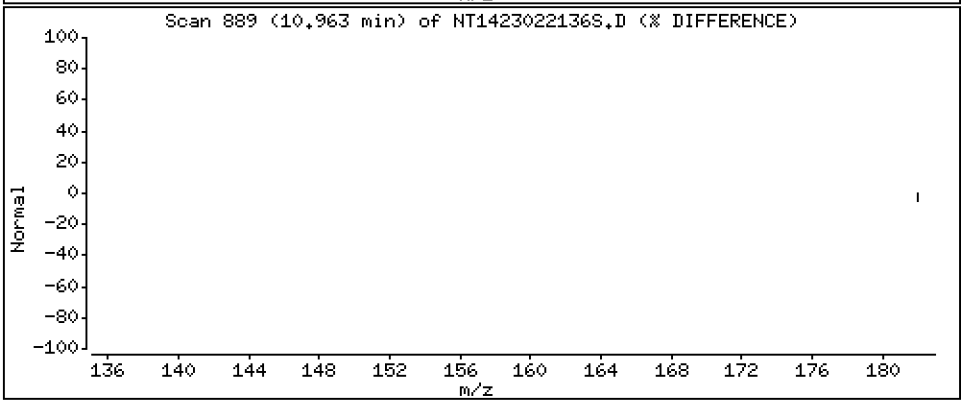












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

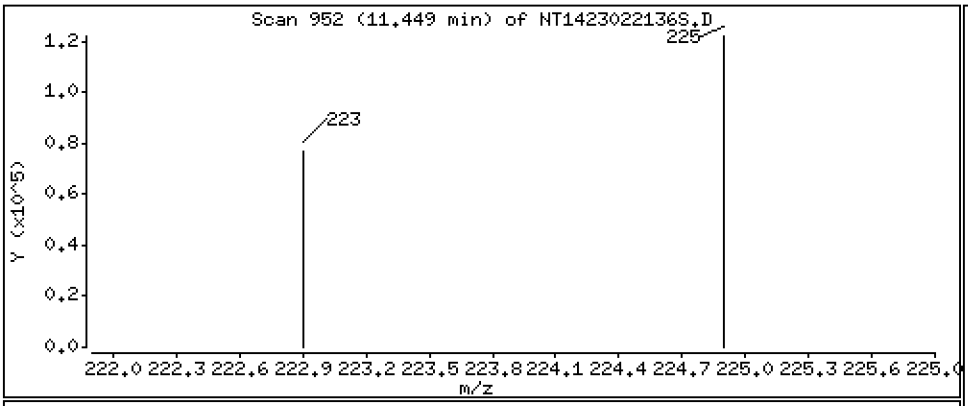
Operator: DSD

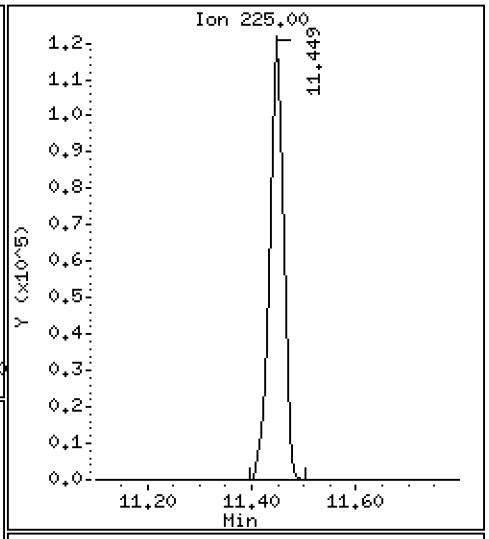
Column phase: ZB-5msi

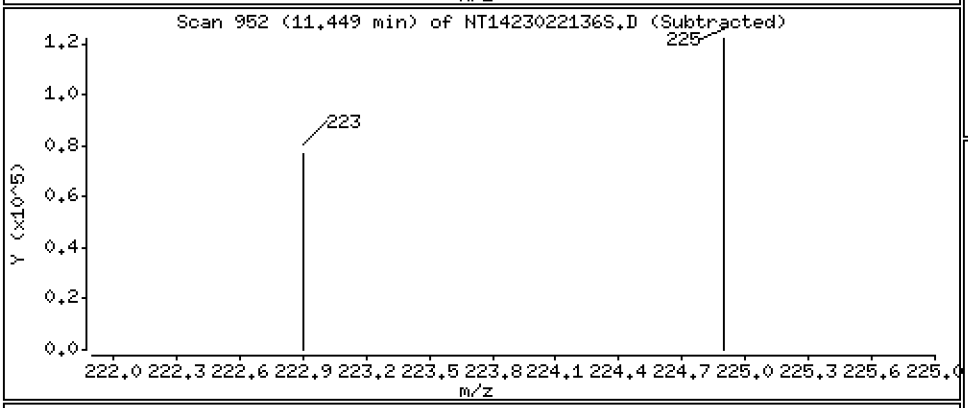
Column diameter: 0.25

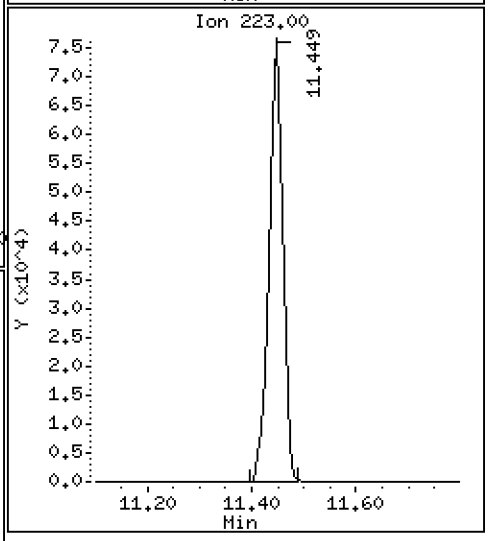
30 Hexachlorobutadiene

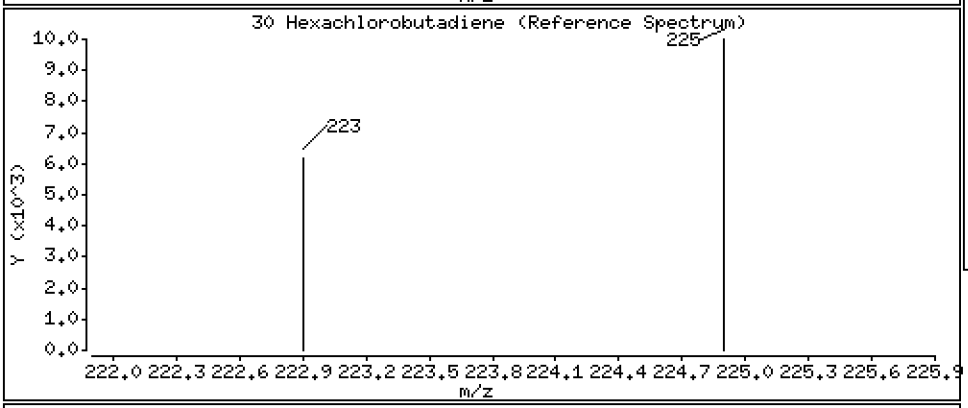
Concentration: 3.500 ug/mL

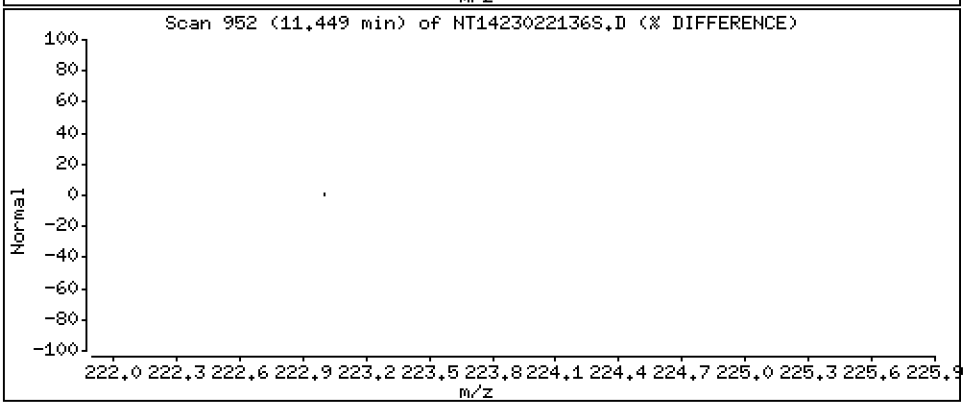












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

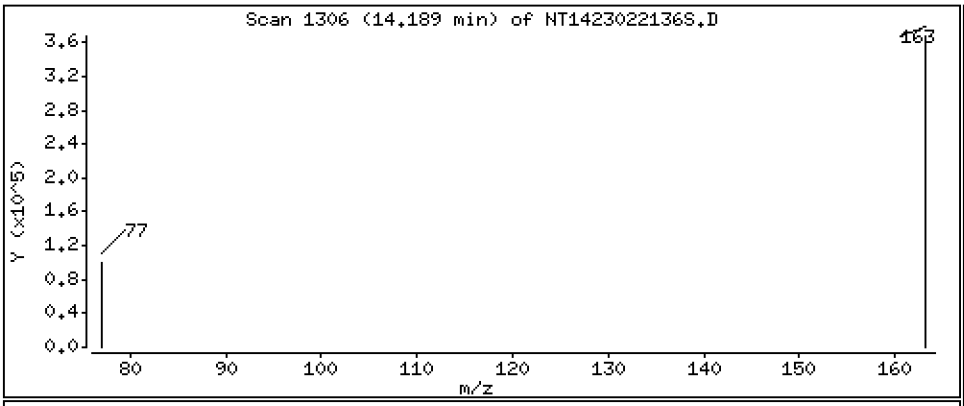
Operator: DSD

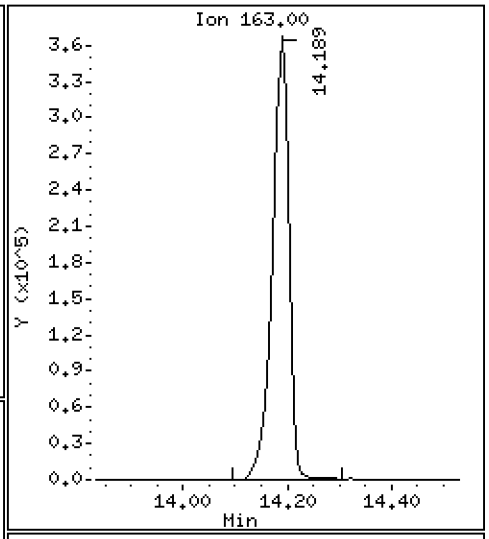
Column phase: ZB-5msi

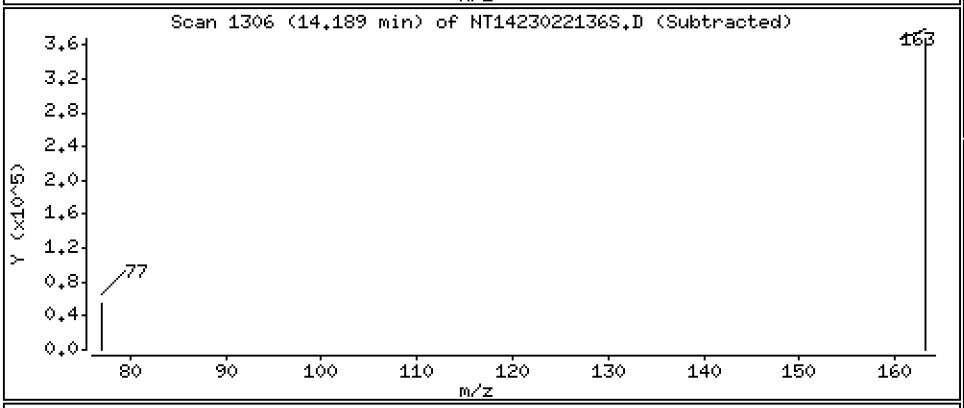
Column diameter: 0.25

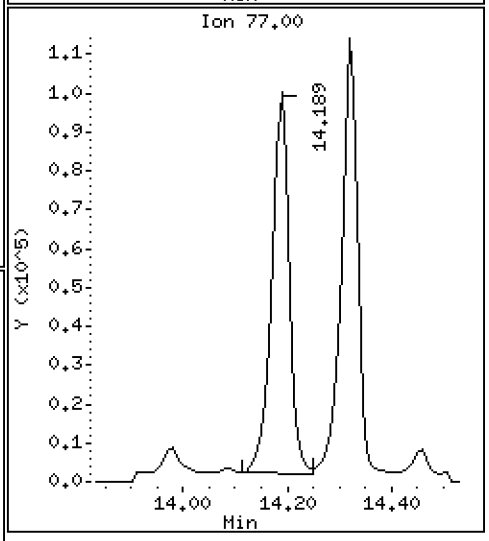
39 Dimethylphthalate

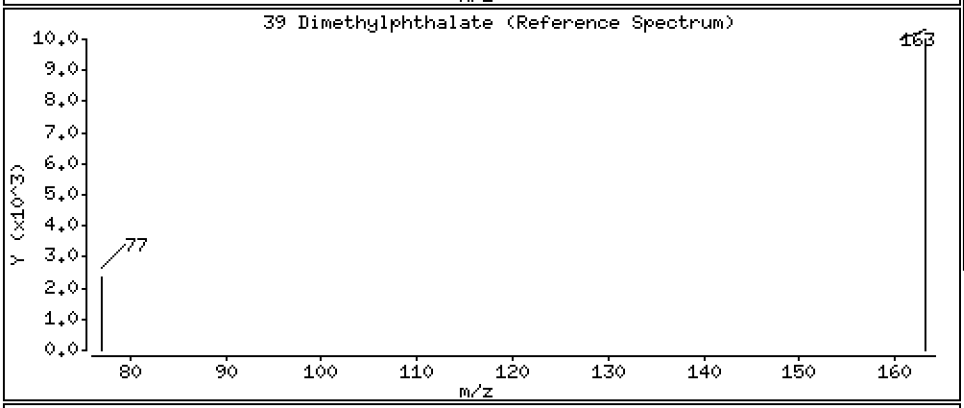
Concentration: 4.234 ug/mL

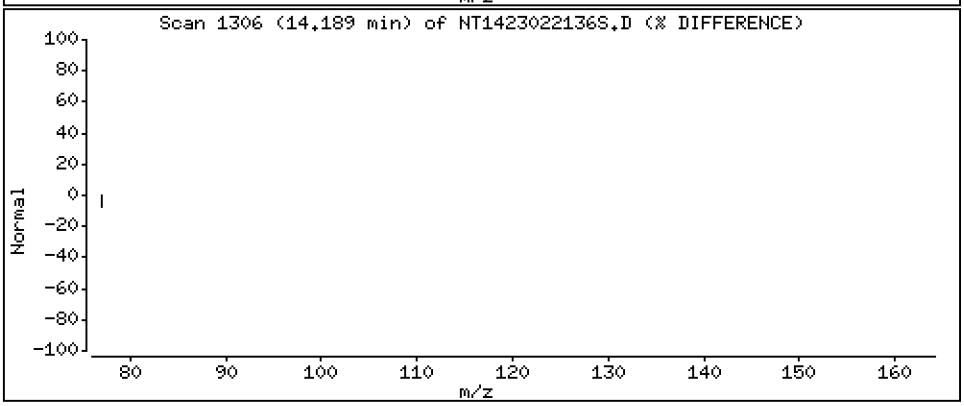












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221136S.D

Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

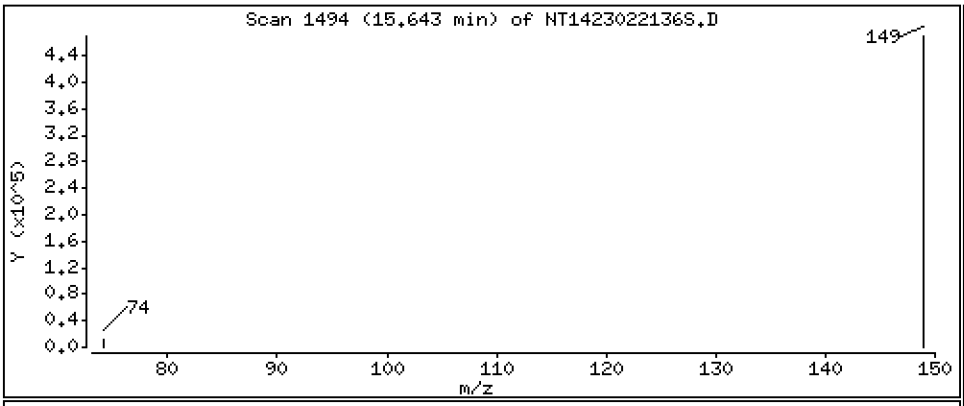
Operator: DSD

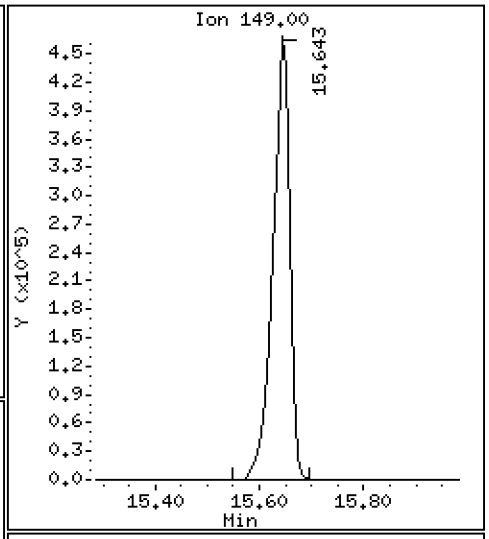
Column phase: ZB-5msi

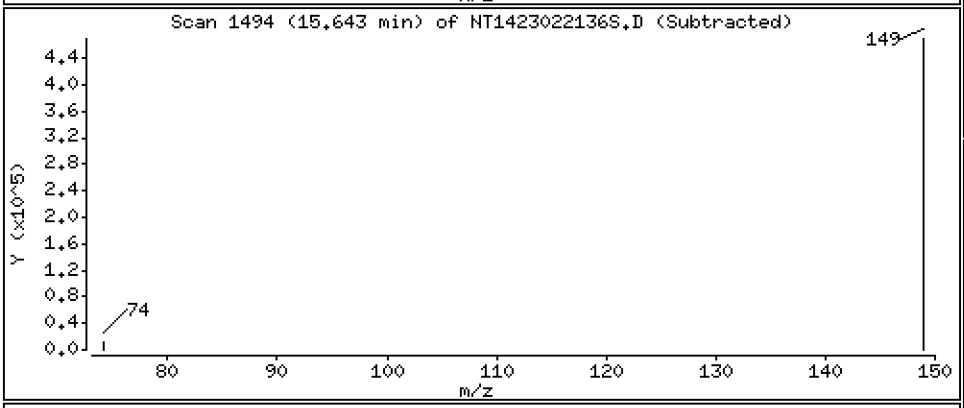
Column diameter: 0.25

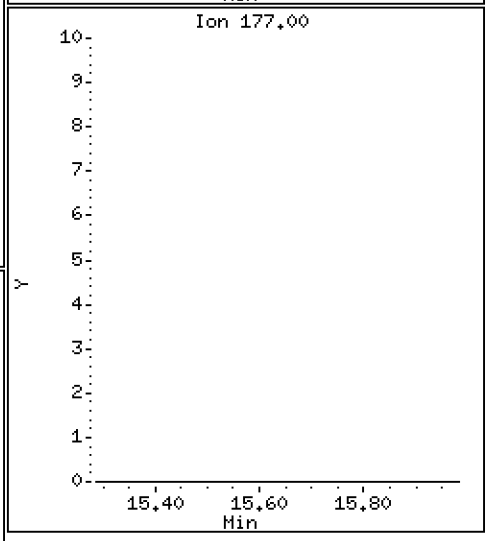
50 Diethylphthalate

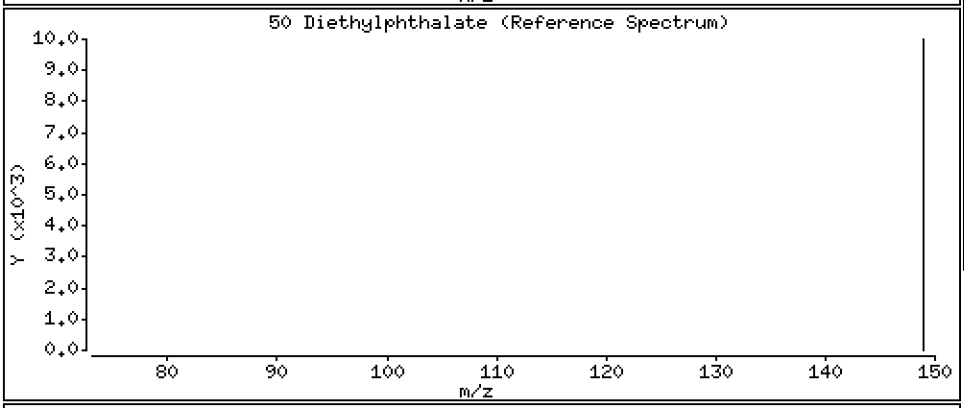
Concentration: 4.482 ug/mL

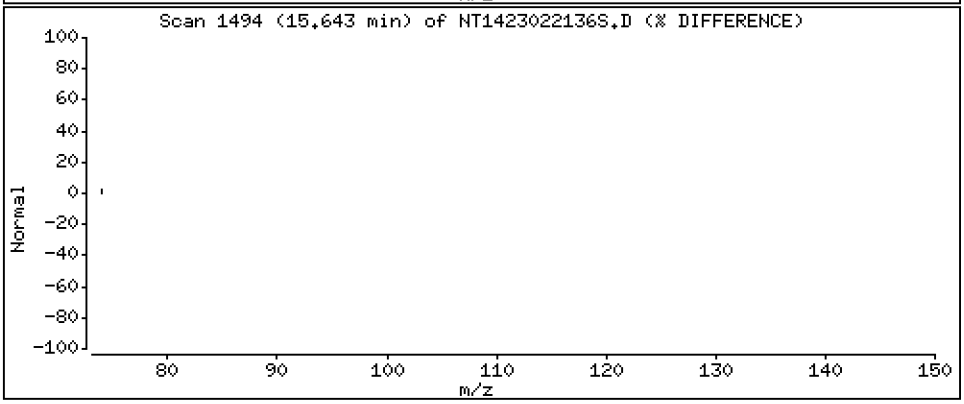












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221136S.D

Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

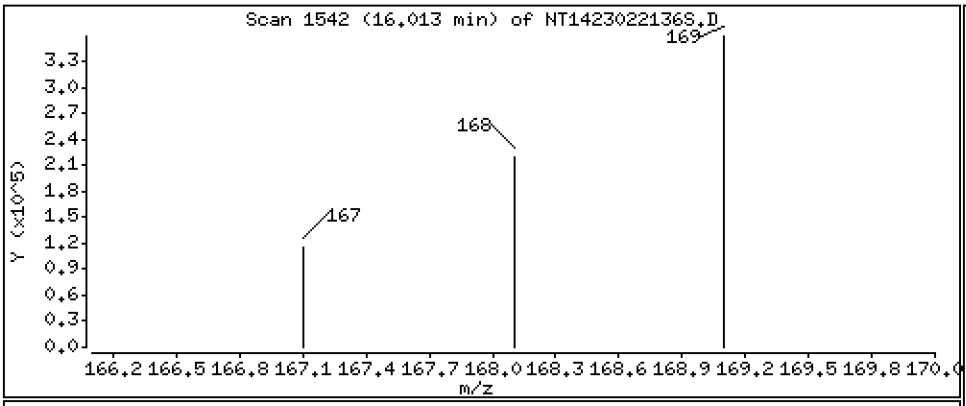
Operator: DSD

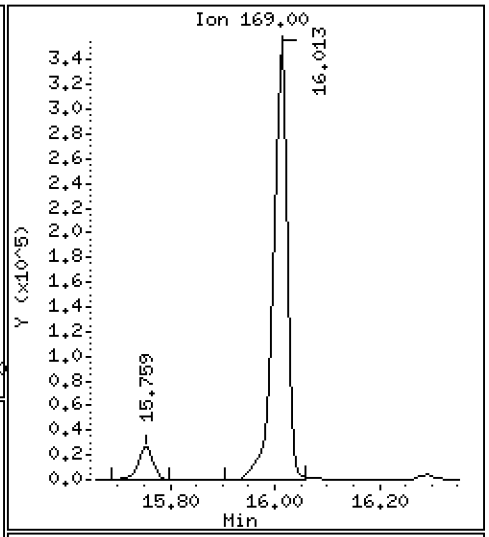
Column phase: ZB-5msi

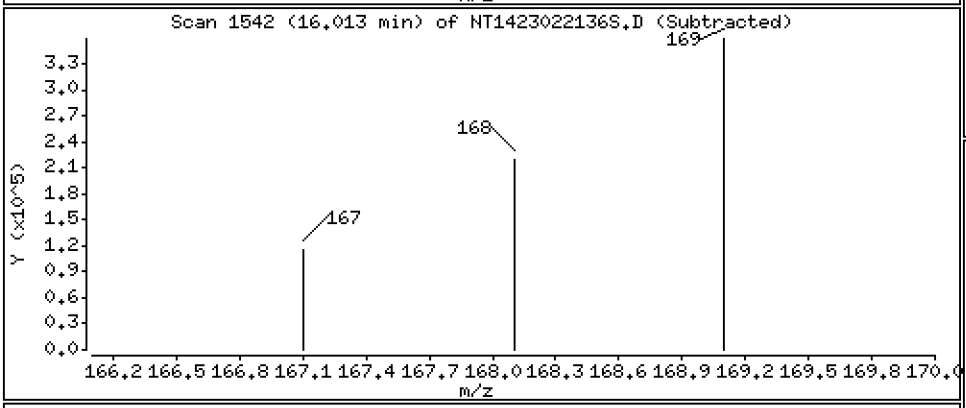
Column diameter: 0.25

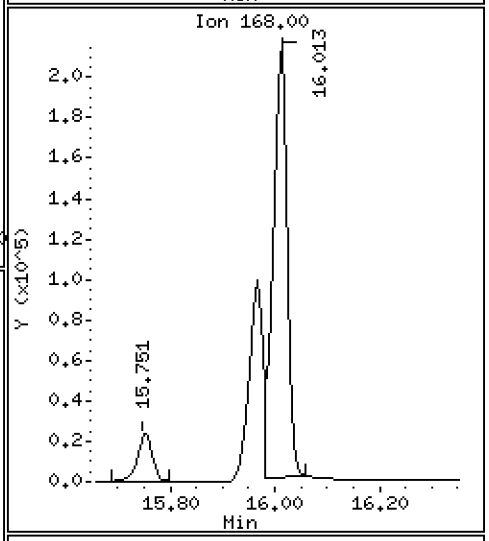
54 N-Nitrosodiphenylamine

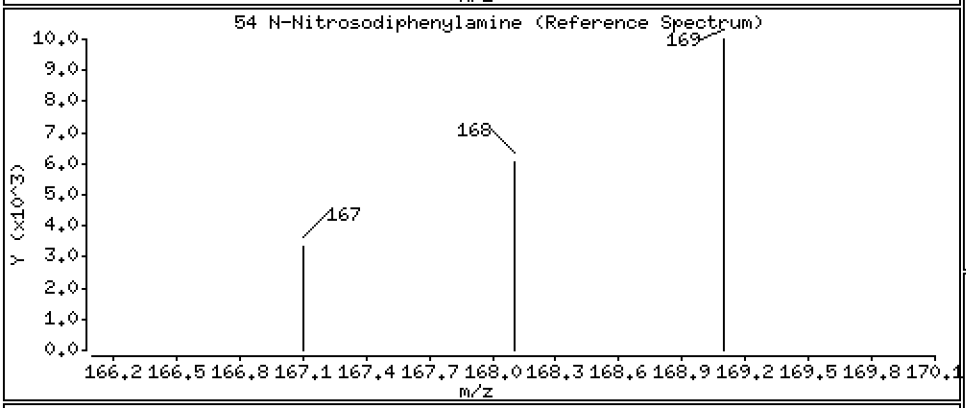
Concentration: 3.503 ug/mL

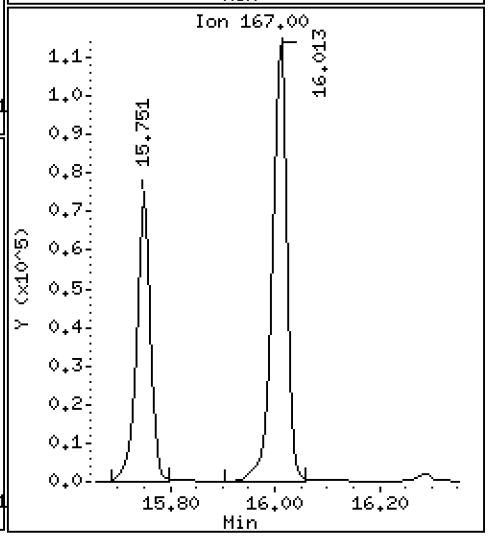


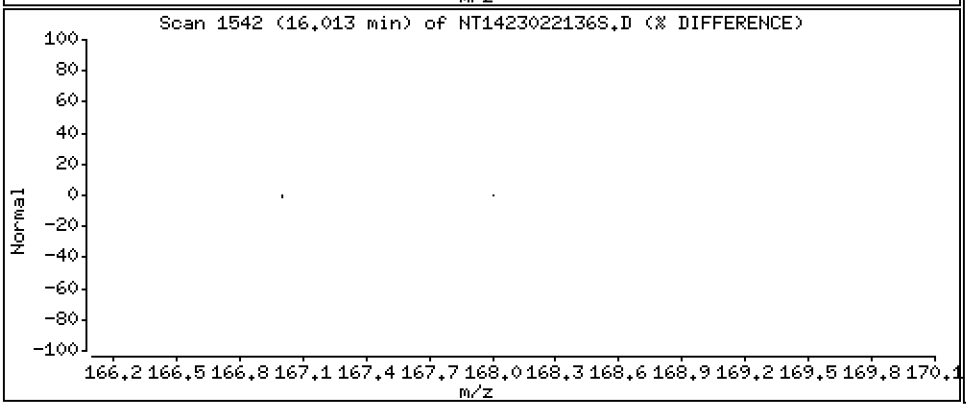












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

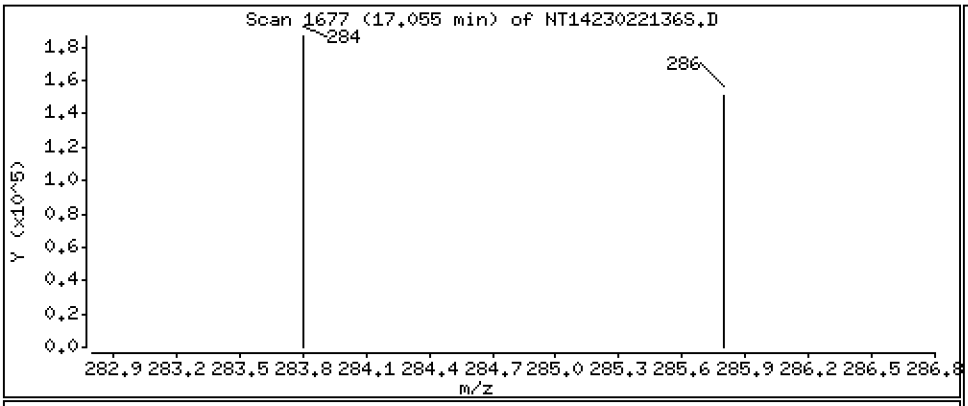
Operator: DSD

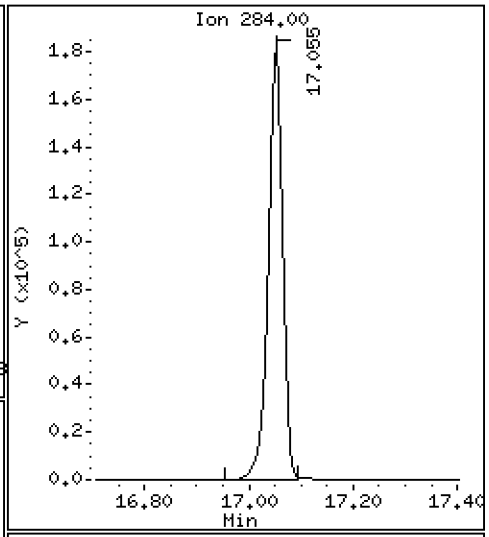
Column phase: ZB-5msi

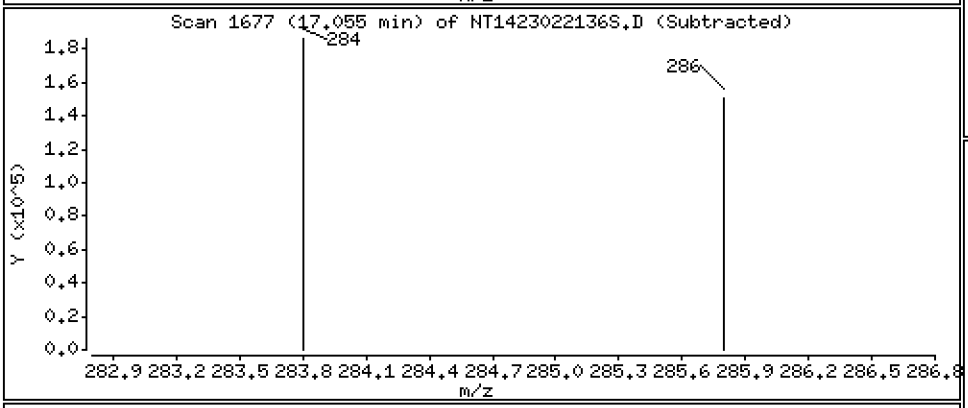
Column diameter: 0.25

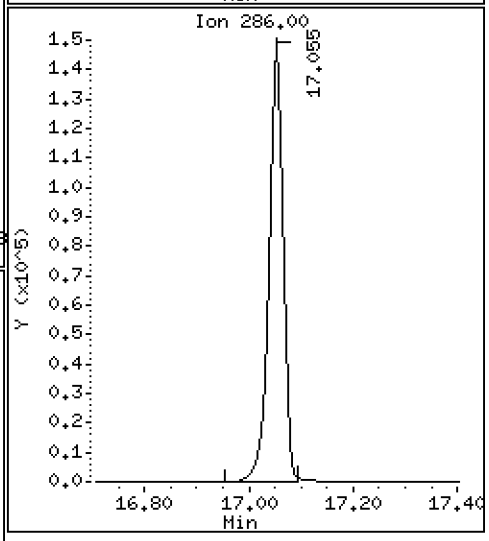
57 Hexachlorobenzene

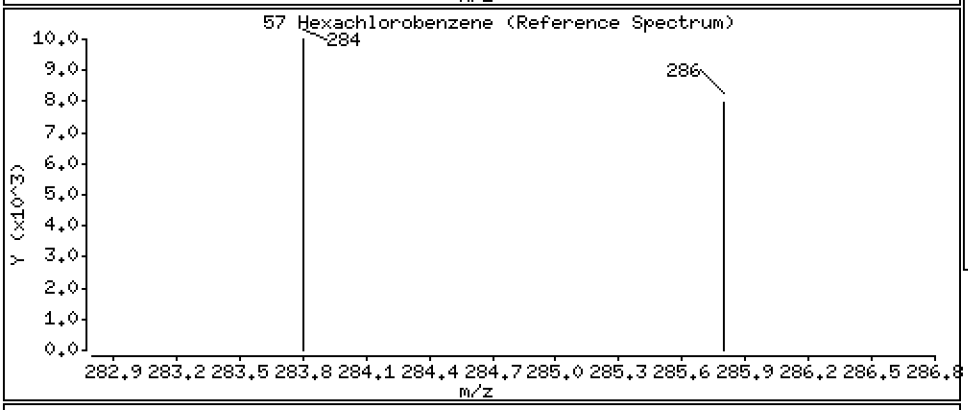
Concentration: 3.797 ug/mL

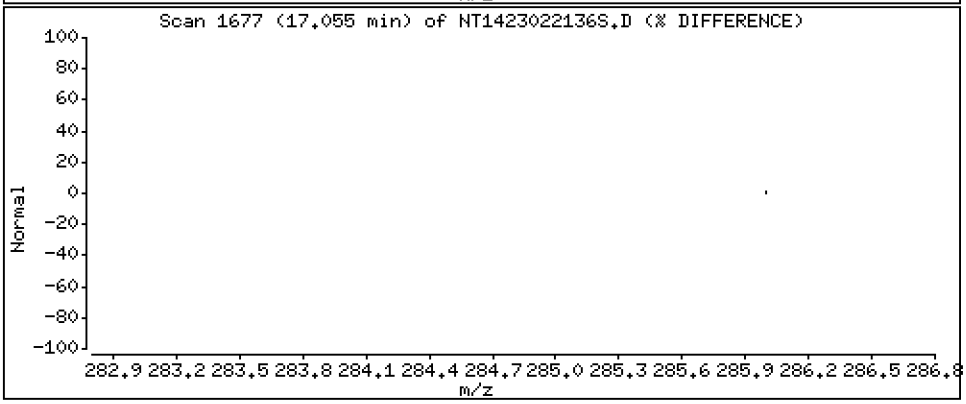












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221136S.D

Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

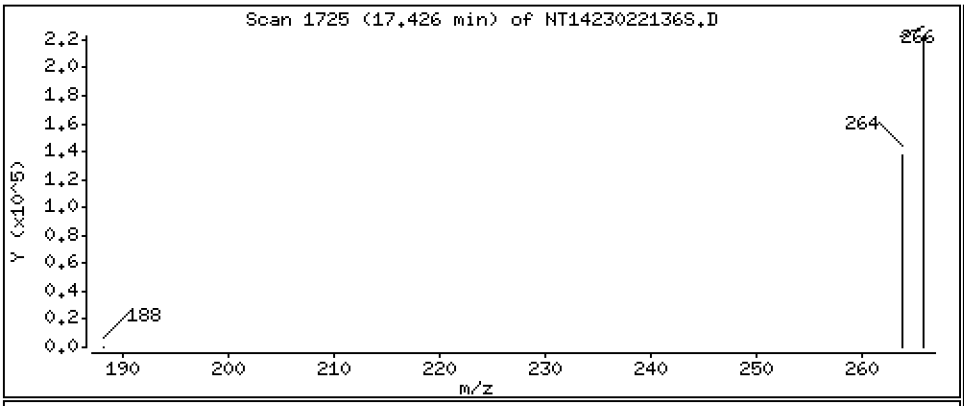
Operator: DSD

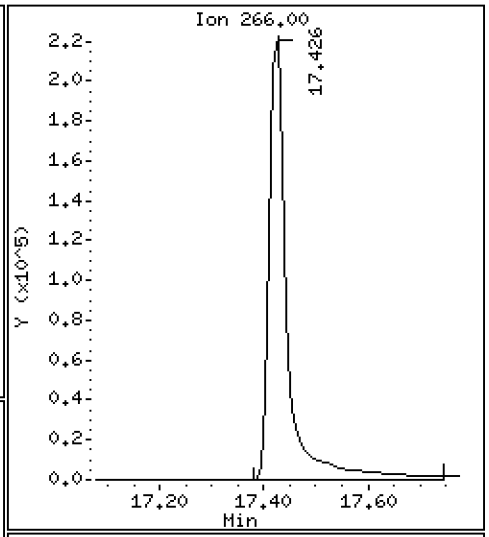
Column phase: ZB-5msi

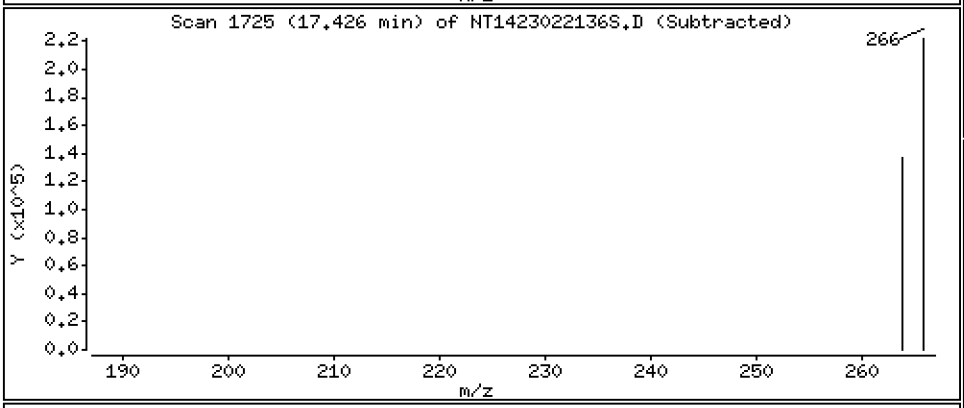
Column diameter: 0.25

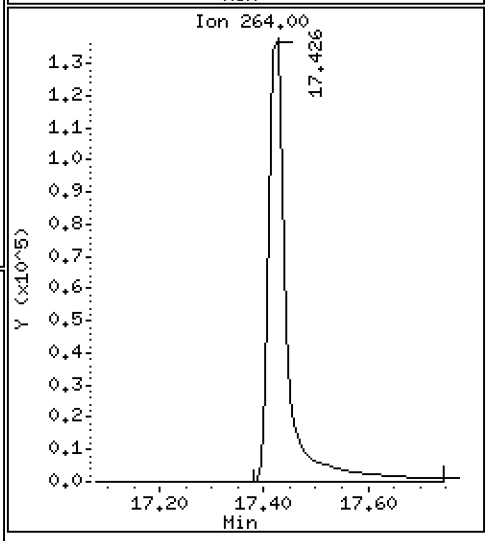
58 Pentachlorophenol

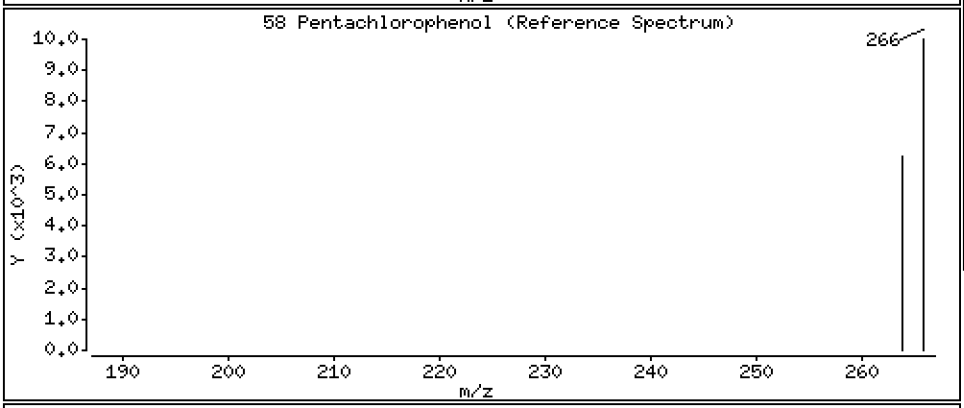
Concentration: 12.19 ug/mL

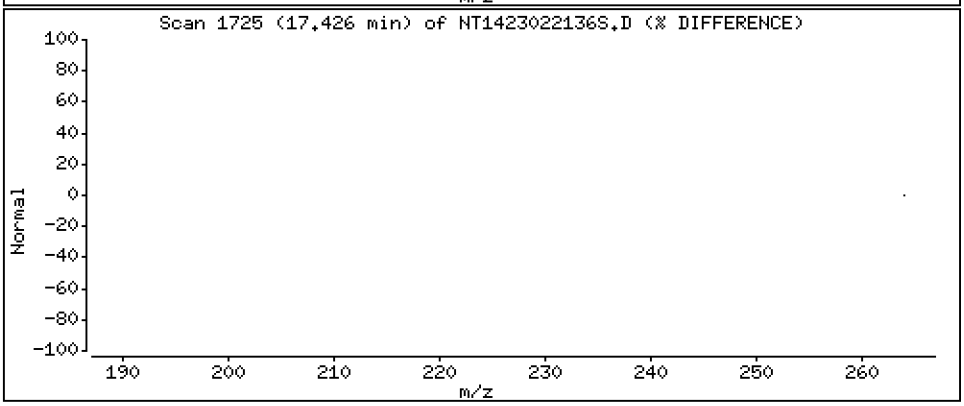












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

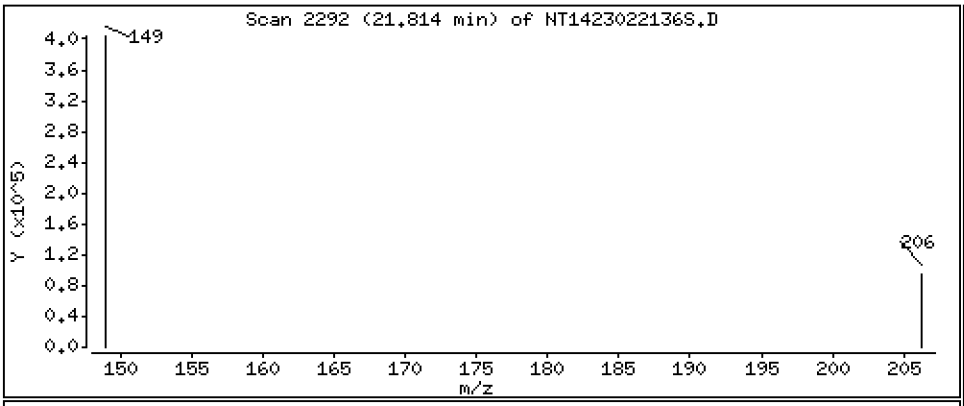
Operator: DSD

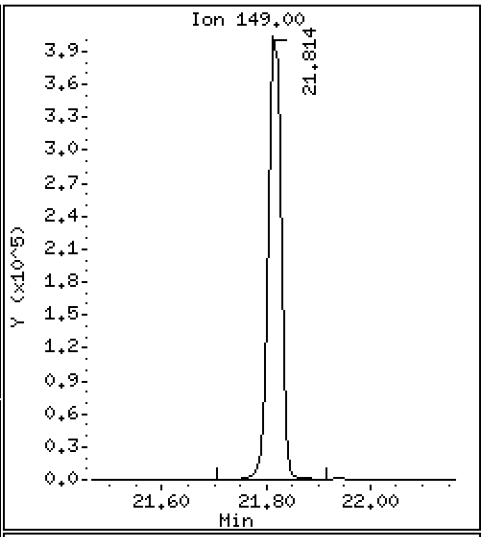
Column phase: ZB-5msi

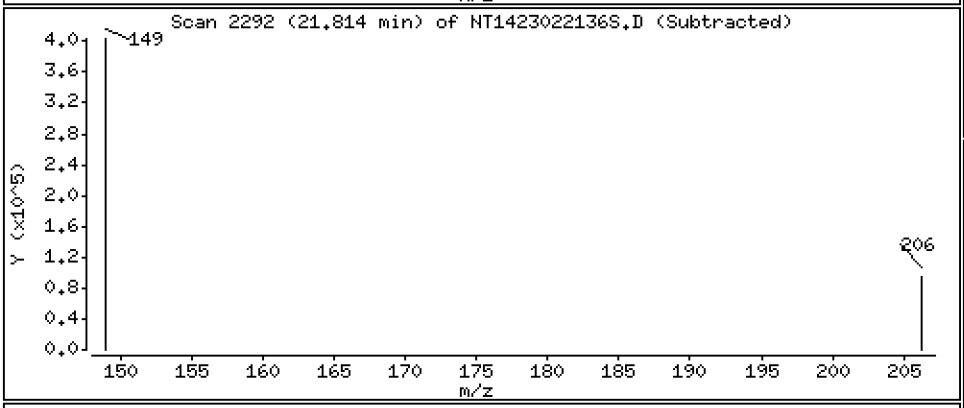
Column diameter: 0.25

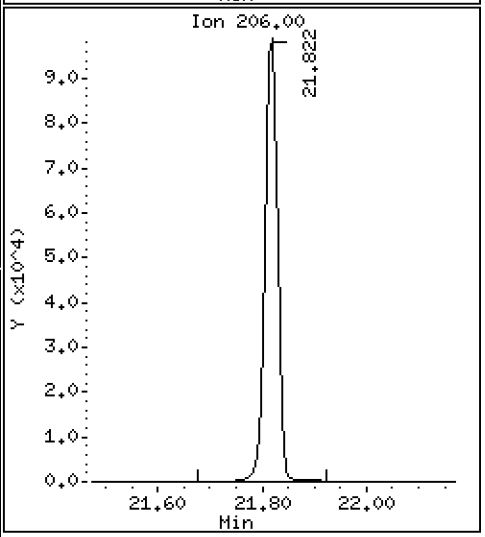
67 Butylbenzylphthalate

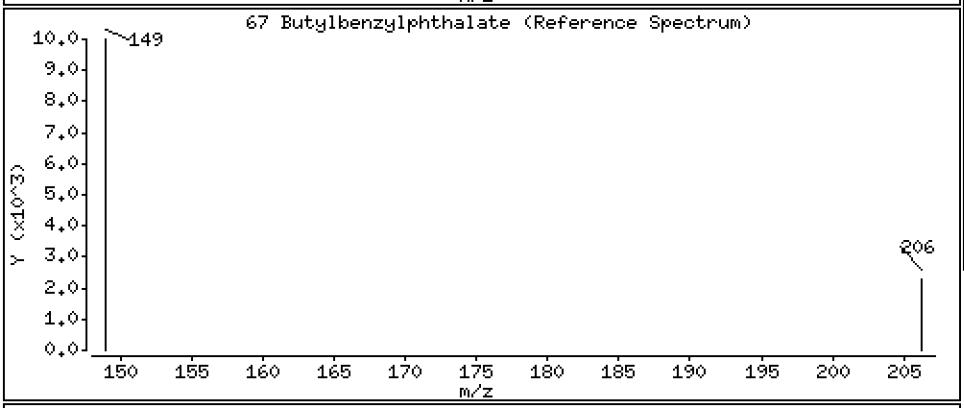
Concentration: 4.530 ug/mL

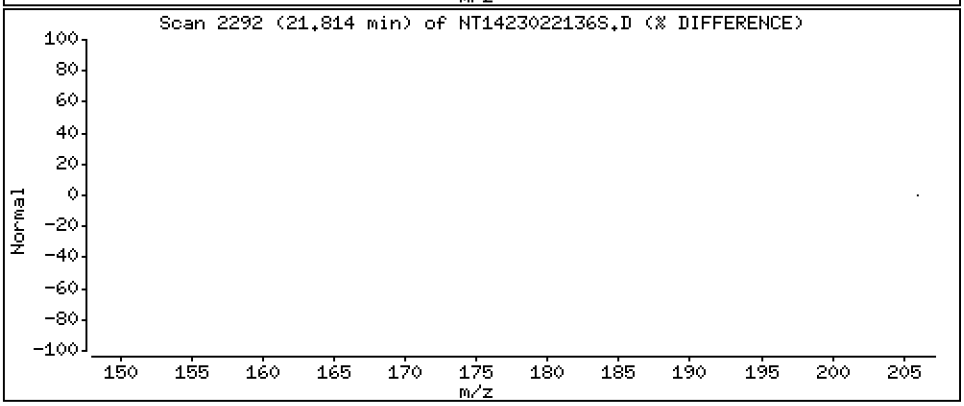












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

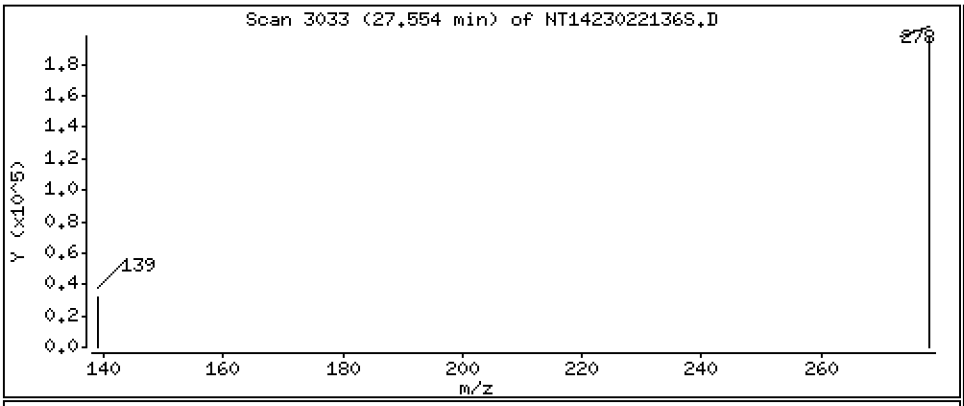
Operator: DSD

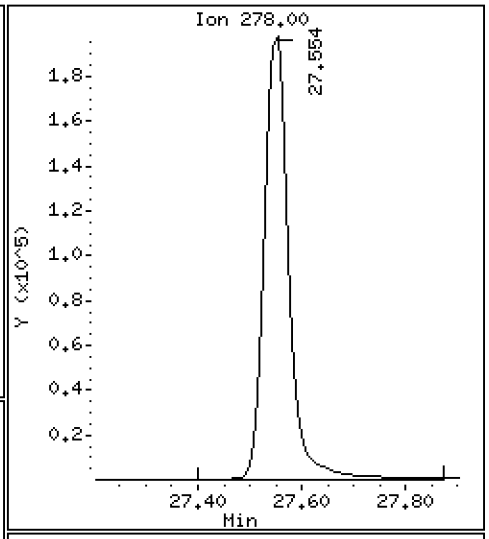
Column phase: ZB-5msi

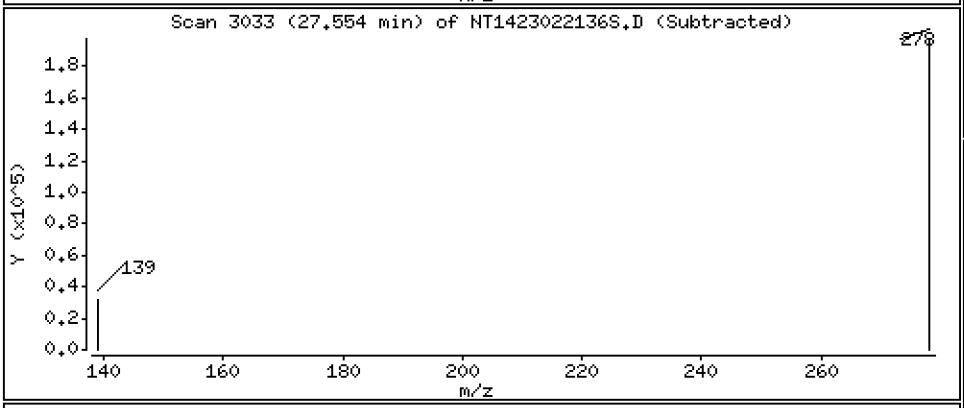
Column diameter: 0.25

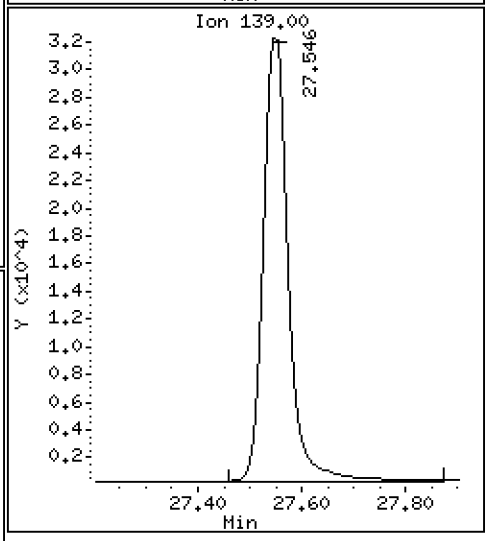
79 Dibenzo(a,h)anthracene

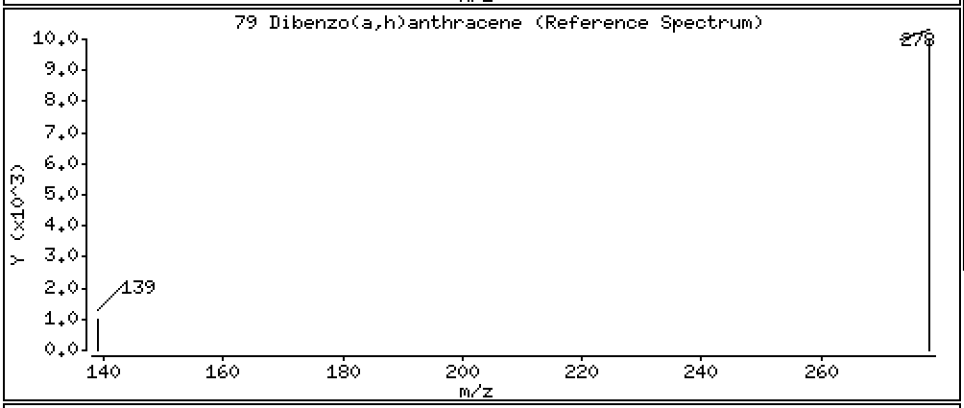
Concentration: 4.278 ug/mL

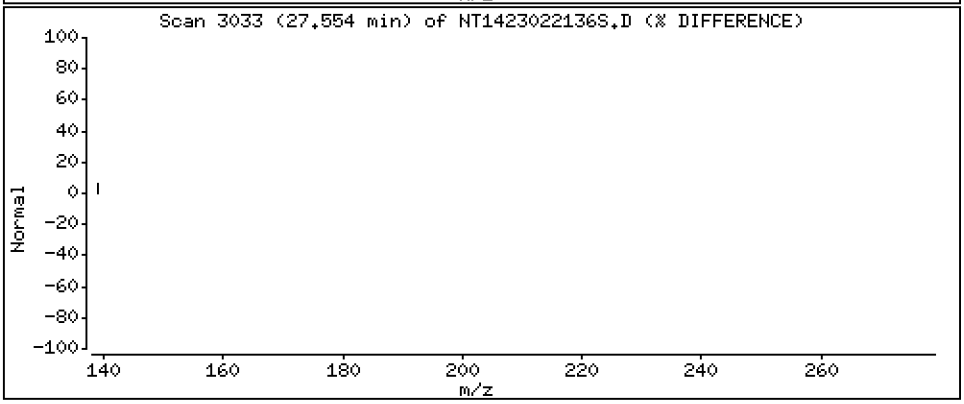












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Date : 22-FEB-2023 10:33

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-BSD1

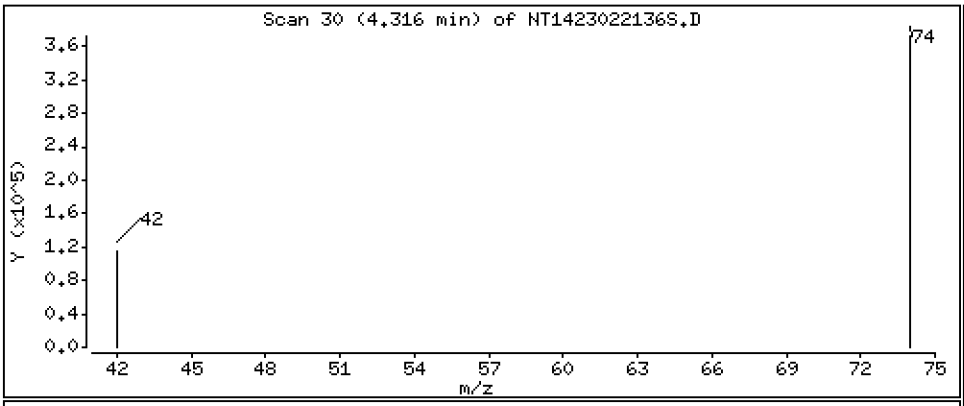
Operator: DSD

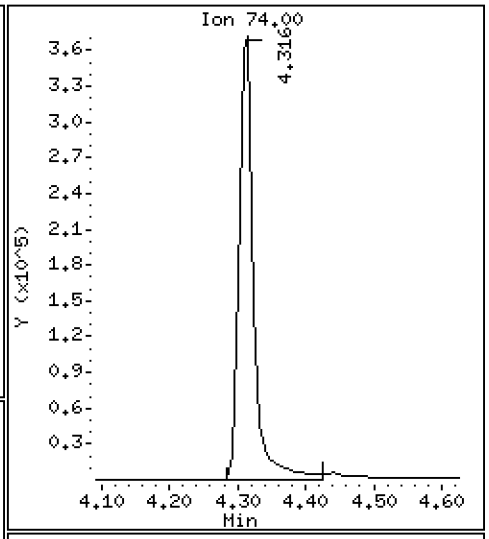
Column phase: ZB-5msi

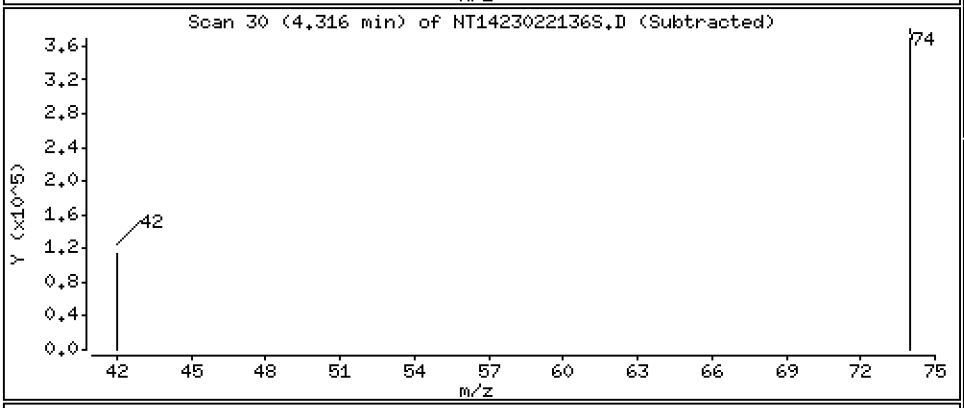
Column diameter: 0.25

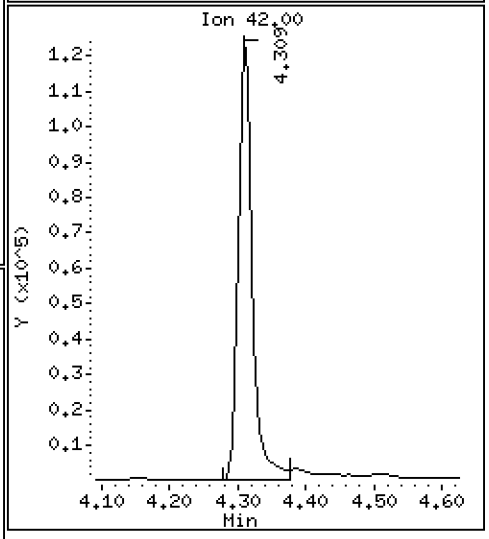
90 N-Nitrosodimethylamine

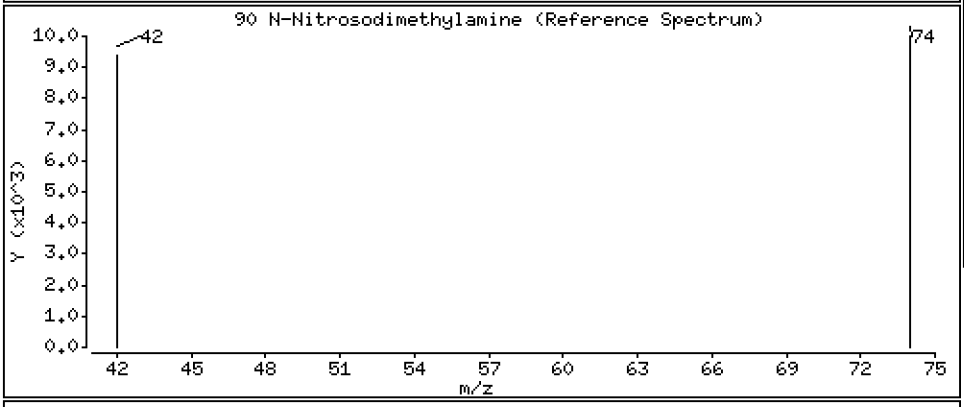
Concentration: 8.750 ug/mL

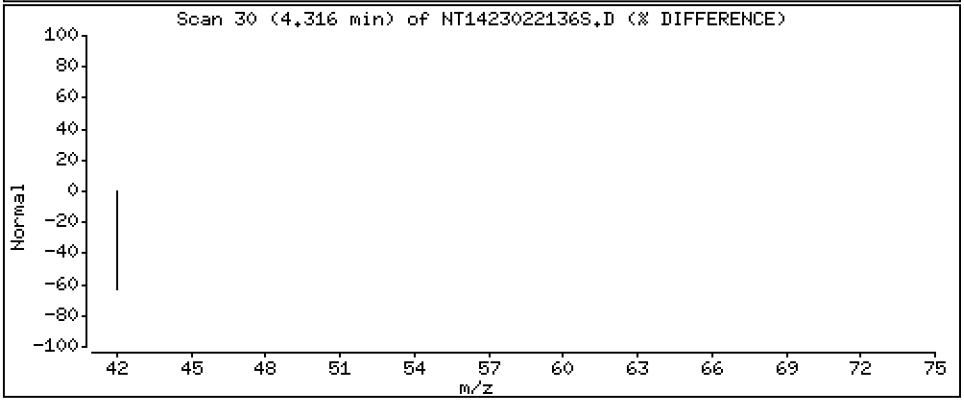












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT1423022136S.D
Lab Smp Id: BLA0393-BSD2
Inj Date : 22-FEB-2023 10:33 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : BLA0393-BSD1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Meth Date : 17-Jun-2023 09:15 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 27
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.393	6.385	(0.746)	457234	5.15541	5.155(R)
	3 Phenol	94	7.993	7.993	(0.933)	446958	3.30487	3.305
	7 1,3-Dichlorobenzene	146	8.503	8.503	(0.993)	373031	3.50361	3.504
*	8 1,4-Dichlorobenzene-d4	152	8.565	8.573	(1.000)	312906	4.00000	
	9 1,4-Dichlorobenzene	146	8.596	8.596	(1.004)	369888	3.64189	3.642
	11 Benzyl alcohol	79	8.868	8.867	(1.035)	335256	3.91216	3.912
	12 1,2-Dichlorobenzene	146	8.945	8.953	(1.044)	362112	3.58582	3.586
	13 2-Methylphenol	108	9.093	9.093	(1.062)	274748	2.95799	2.958
	15 4-Methylphenol	108	9.372	9.372	(1.094)	323610	3.13783	3.138
	16 N-Nitroso-di-n-propylamine	70	9.411	9.411	(1.099)	300384	3.71855	3.719
	22 2,4-Dimethylphenol	107	10.404	10.404	(0.942)	197271	1.94566	1.946
	24 Benzoic acid	105	10.714	10.606	(0.971)	1151572	21.5038	21.50
	26 1,2,4-Trichlorobenzene	180	10.962	10.962	(0.993)	357642	3.44616	3.446
*	27 Naphthalene-d8	136	11.039	11.039	(1.000)	1132810	4.00000	
	30 Hexachlorobutadiene	225	11.449	11.449	(1.037)	220971	3.50011	3.500
	39 Dimethylphthalate	163	14.188	14.180	(0.968)	783991	4.23354	4.234
*	42 Acenaphthene-d10	162	14.653	14.645	(1.000)	607003	4.00000	
	50 Diethylphthalate	149	15.642	15.634	(1.068)	1038891	4.48241	4.482
	54 N-Nitrosodiphenylamine	169	16.013	16.005	(0.906)	634121	3.50273	3.503
	57 Hexachlorobenzene	284	17.054	17.054	(0.965)	345246	3.79667	3.797
	58 Pentachlorophenol	266	17.426	17.426	(0.986)	517964	12.1922	12.19
*	59 Phenanthrene-d10	188	17.674	17.673	(1.000)	1400120	4.00000	
$	66 Terphenyl-d14	244	20.869	20.869	(0.916)	1070361	3.77162	3.772(R)
	67 Butylbenzylphthalate	149	21.814	21.813	(0.958)	654174	4.52989	4.530
*	69 Chrysene-d12	240	22.774	22.766	(1.000)	1066010	4.00000	
*	77 Perylene-d12	264	25.212	25.212	(1.000)	790323	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.553	27.553	(1.093)	646170	4.27787	4.278
	90 N-Nitrosodimethylamine	74	4.316	4.277	(0.504)	565900	8.75014	8.750

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022136S.D
Lab Smp Id: BLA0393-BSD2
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 08:08
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	261796	130898	523592	312906	19.52
27 Naphthalene-d8	959301	479651	1918602	1132810	18.09
42 Acenaphthene-d10	503659	251830	1007318	607003	20.52
59 Phenanthrene-d10	1179954	589977	2359908	1400120	18.66
69 Chrysene-d12	887360	443680	1774720	1066010	20.13
77 Perylene-d12	652371	326186	1304742	790323	21.15

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.09
27 Naphthalene-d8	11.04	10.54	11.54	11.04	0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	0.05
59 Phenanthrene-d10	17.67	17.17	18.17	17.67	0.00
69 Chrysene-d12	22.77	22.27	23.27	22.77	0.03
77 Perylene-d12	25.21	24.71	25.71	25.21	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022136S.D

Lab ID: BLA0393-BSD2
nt14.i, 20230221B.b\SIM.b\SIMABN2.m,   22-FEB-2023 10:33

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.971	0.961	0.0098	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1423022132S.D

On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

MS / MS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/22/23 15:22
Batch:	BLA0393	Laboratory ID:	BLA0393-MS2
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	16.81 g / 1 mL	Source Sample:	LDW23-IT1217

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
1,4-Dichlorobenzene	500	1.7	J	321		63.8	36 - 120
1,2-Dichlorobenzene	500	ND	U	315		63.0	36 - 120
Benzyl Alcohol	500	6.1	J	339		66.5	25 - 123
Benzoic acid	2300	ND	U	653	Q	28.4	10 - 160
2,4-Dimethylphenol	1300	2.3	J	878	Q	67.3	10 - 120
1,2,4-Trichlorobenzene	500	ND	U	298		59.6	35 - 120
N-Nitrosodiphenylamine	500	ND	U	350		70.1	27 - 120
Pentachlorophenol	1300	ND	U	1250		96.1	26 - 120

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/22/23 15:58
Batch:	BLA0393	Laboratory ID:	BLA0393-MSD2
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	16.81 g / 1 mL	Source Sample:	LDW23-IT1217

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,4-Dichlorobenzene	500	340		67.7	5.94	30	36 - 120
1,2-Dichlorobenzene	500	334		66.7	5.72	30	36 - 120
Benzyl Alcohol	500	367		72.3	8.16	30	25 - 123
Benzoic acid	2300	594	Q	25.8	9.39	30	10 - 160
2,4-Dimethylphenol	1300	1170	Q	90.0	28.7	30	10 - 120
1,2,4-Trichlorobenzene	500	320		63.9	6.93	30	35 - 120
N-Nitrosodiphenylamine	500	375		75.1	6.91	30	27 - 120
Pentachlorophenol	1300	1340		103	6.82	30	26 - 120

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT1423022144S.D

Date : 22-FEB-2023 15:22

Client ID:

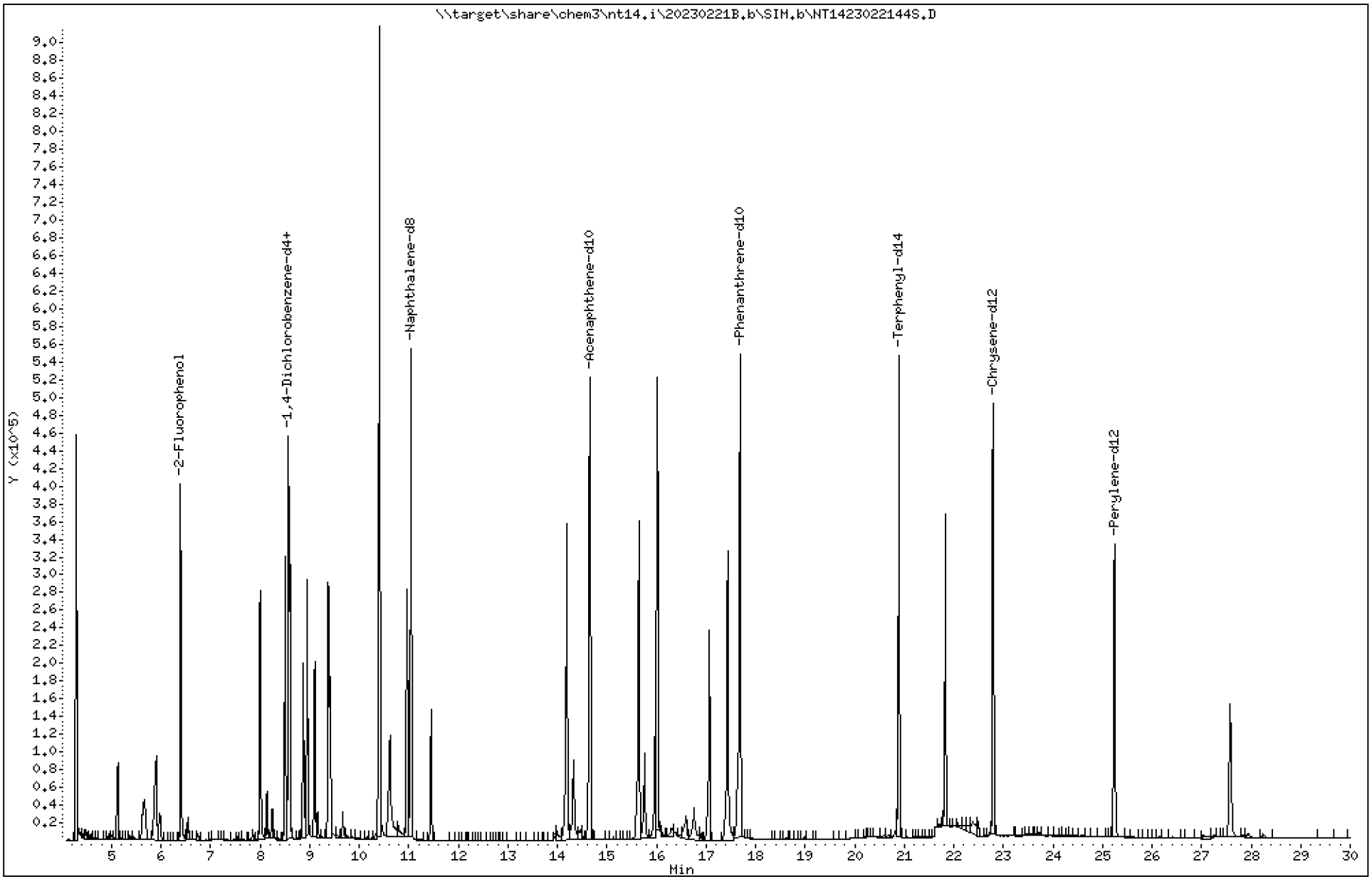
Instrument: nt14.i

Sample Info: BLA0393-MS1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221445.D

Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

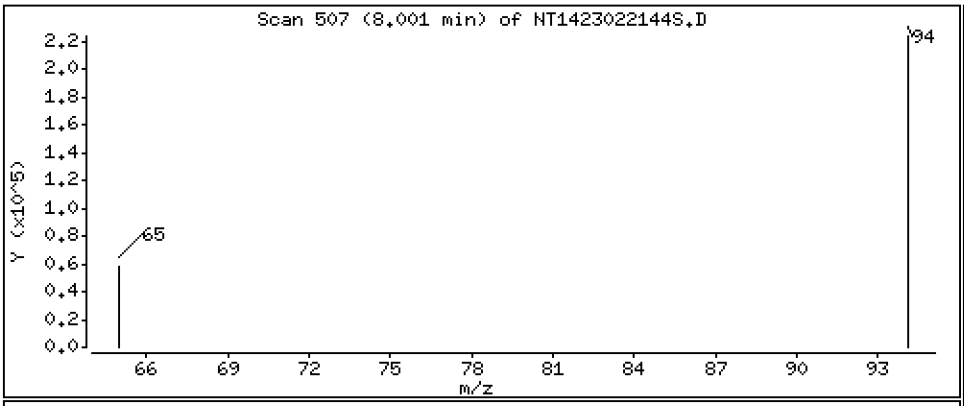
Operator: DSD

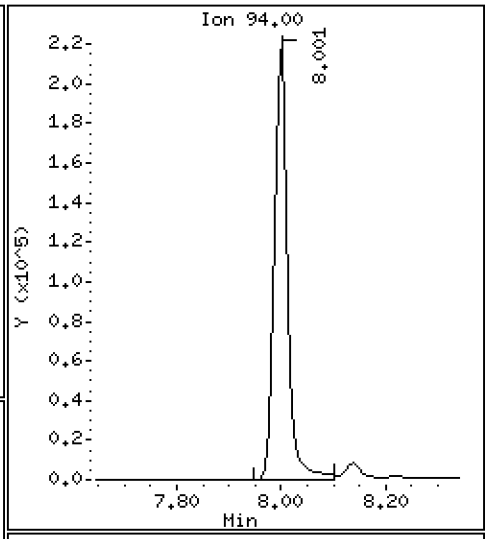
Column phase: ZB-5msi

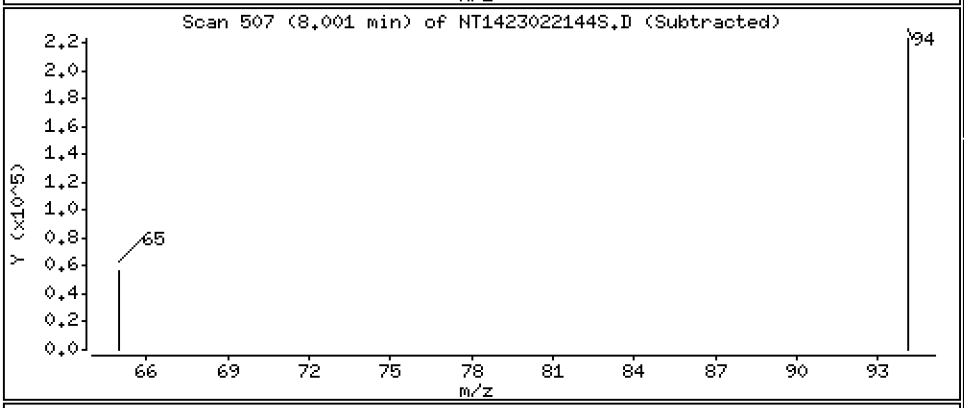
Column diameter: 0.25

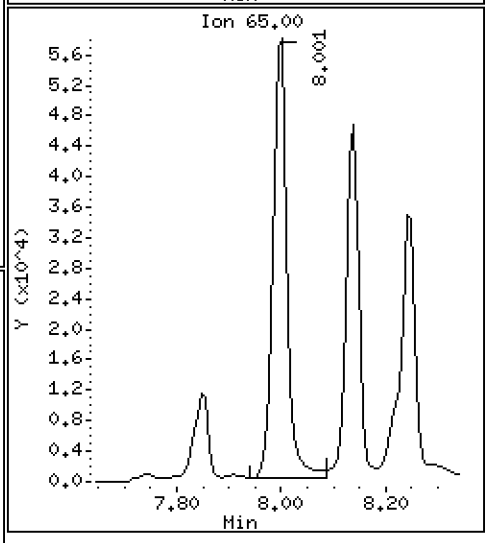
3 Phenol

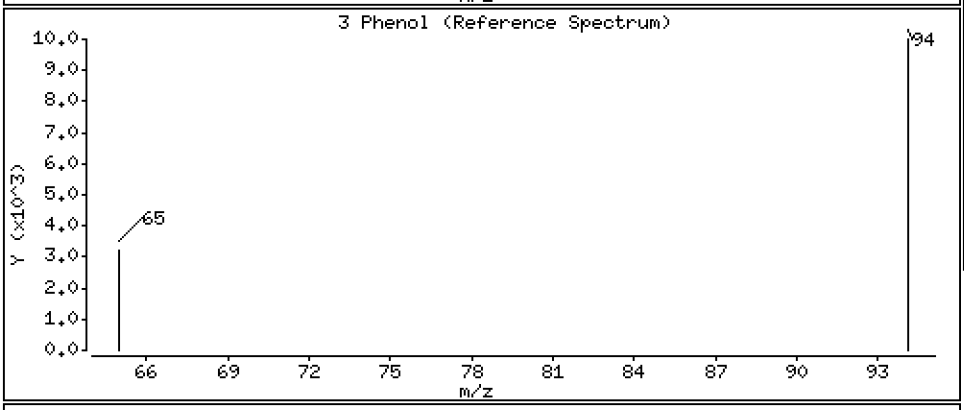
Concentration: 3.094 ug/mL

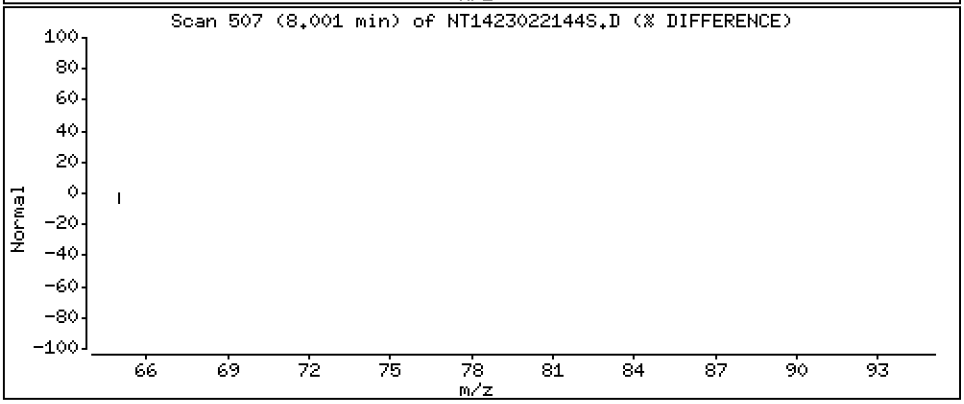












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221445.D

Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

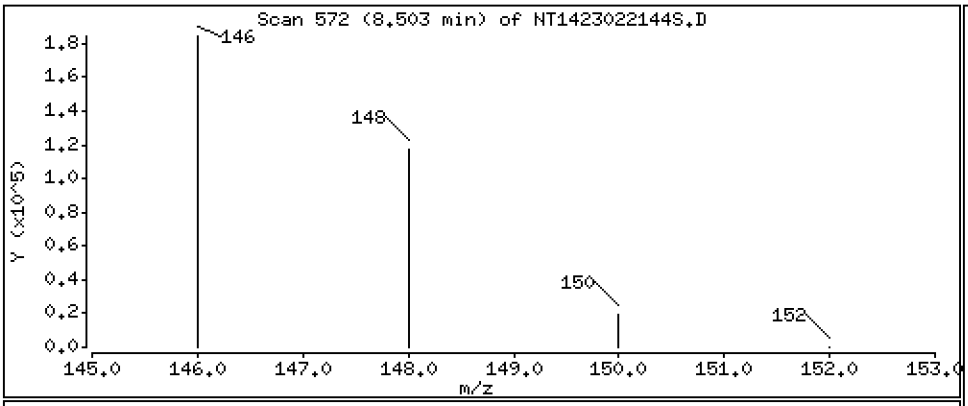
Operator: DSD

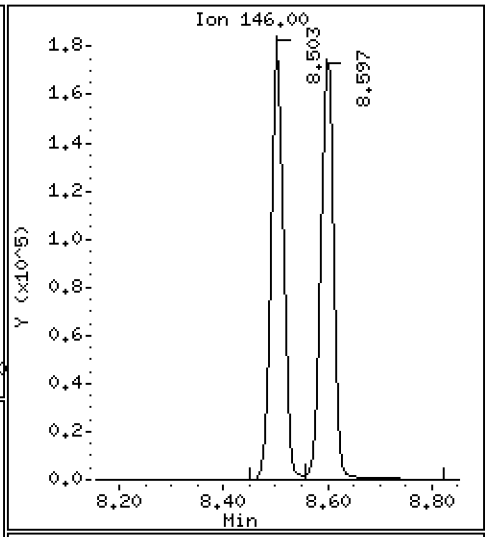
Column phase: ZB-5msi

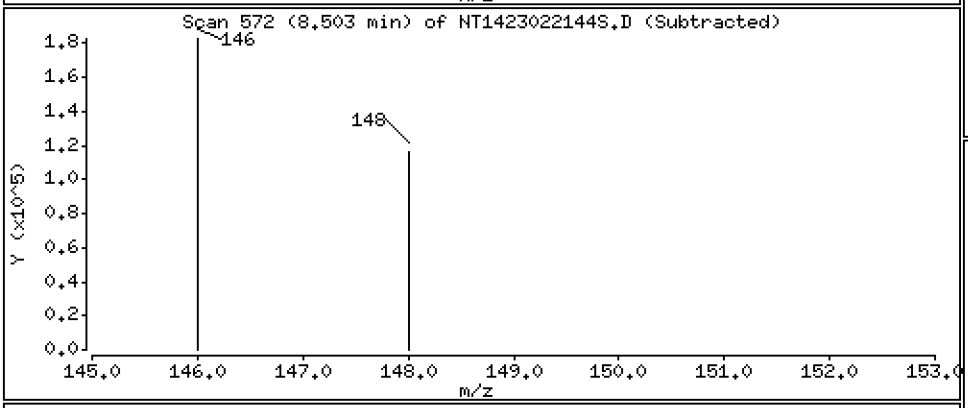
Column diameter: 0.25

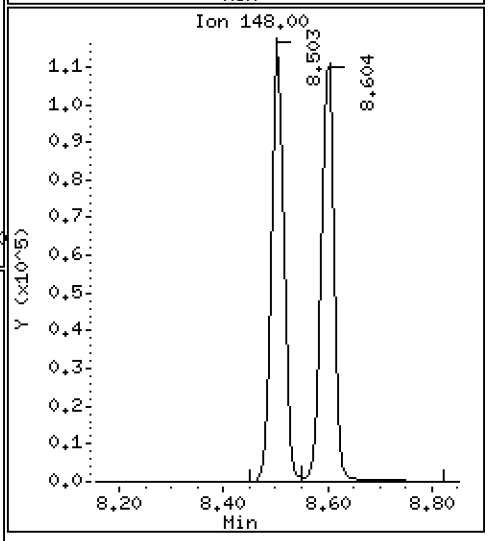
7 1,3-Dichlorobenzene

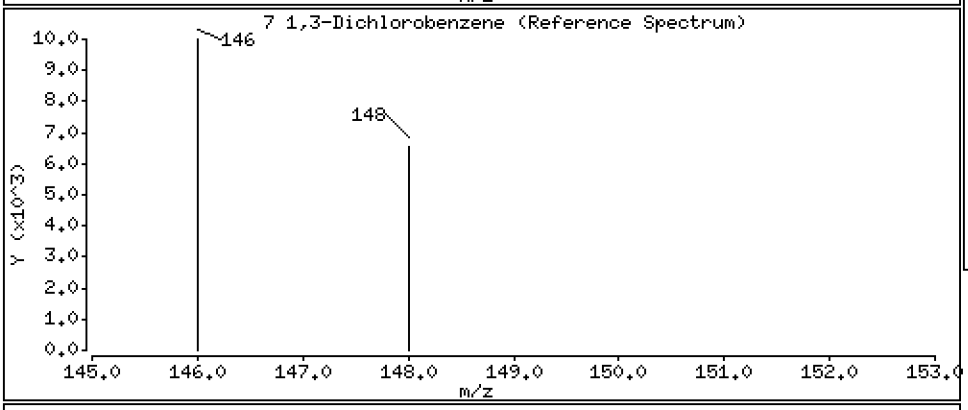
Concentration: 3.075 ug/mL

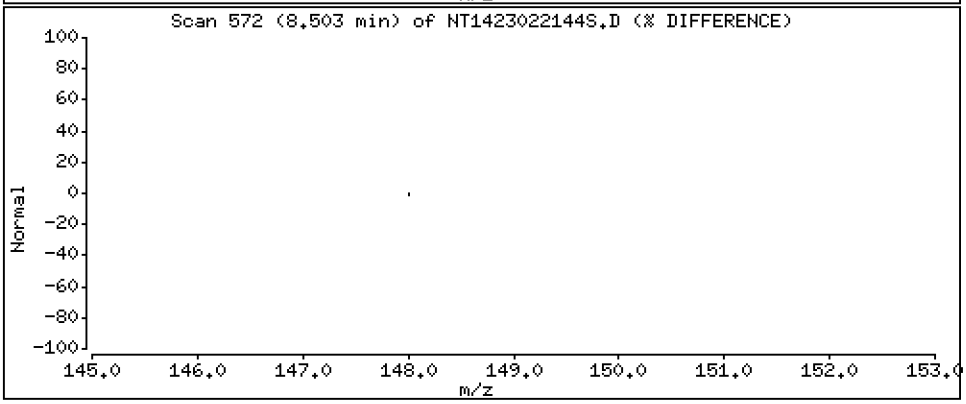












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221445.D

Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

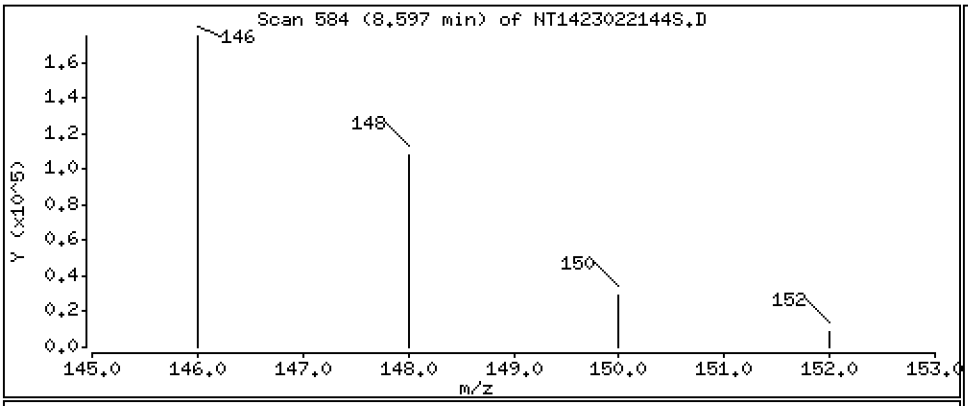
Operator: DSD

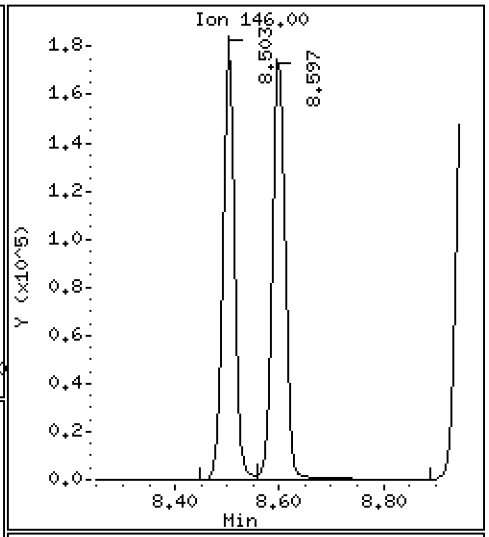
Column phase: ZB-5msi

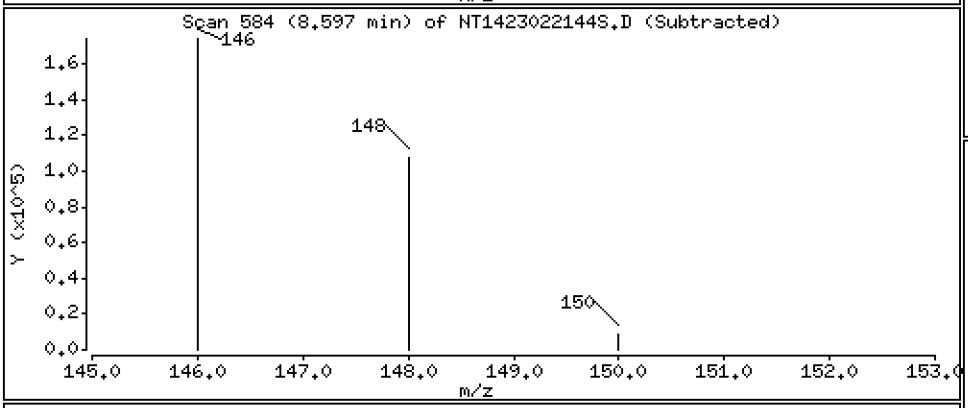
Column diameter: 0.25

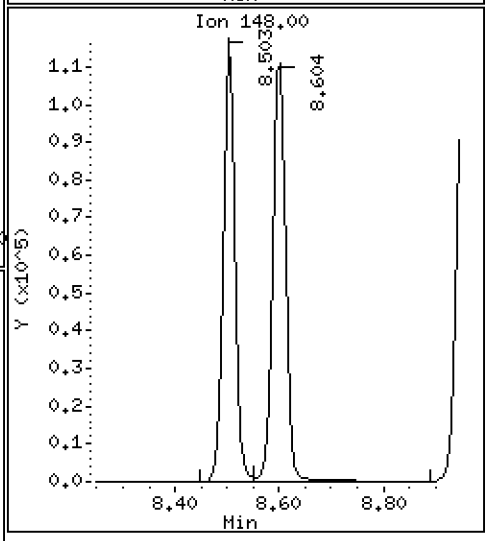
9 1,4-Dichlorobenzene

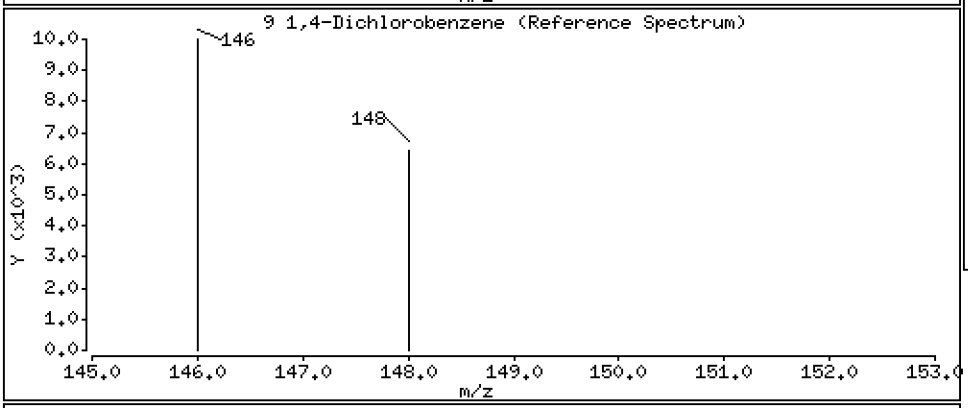
Concentration: 3.208 ug/mL

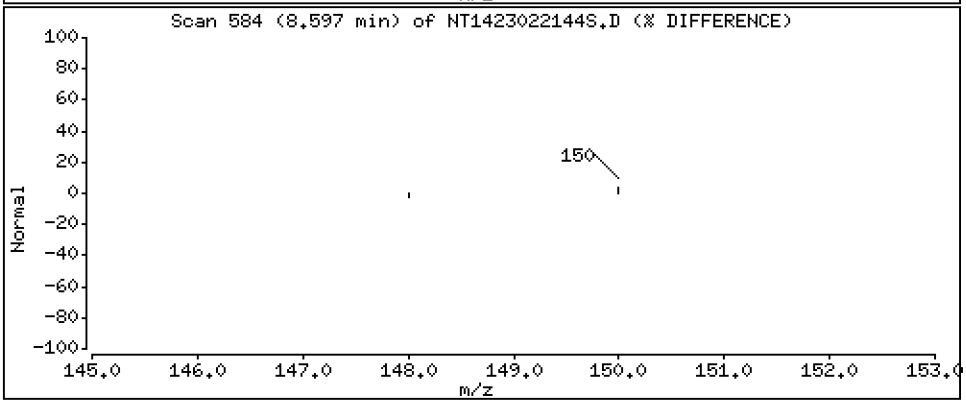












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221445.D

Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

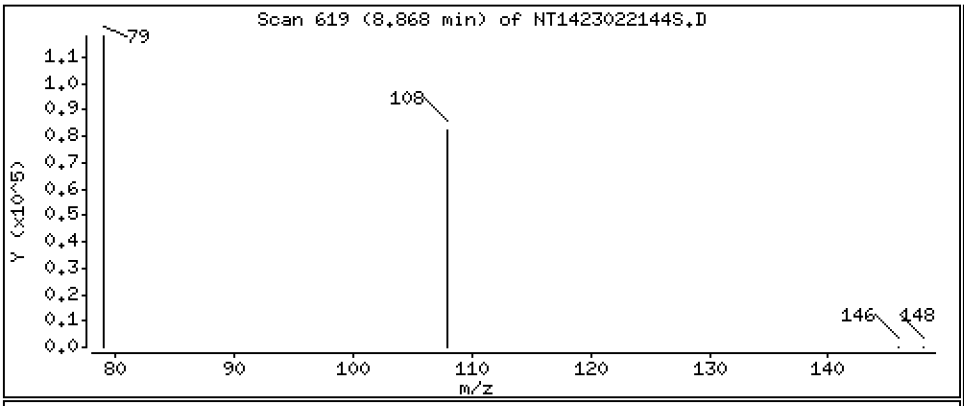
Operator: DSD

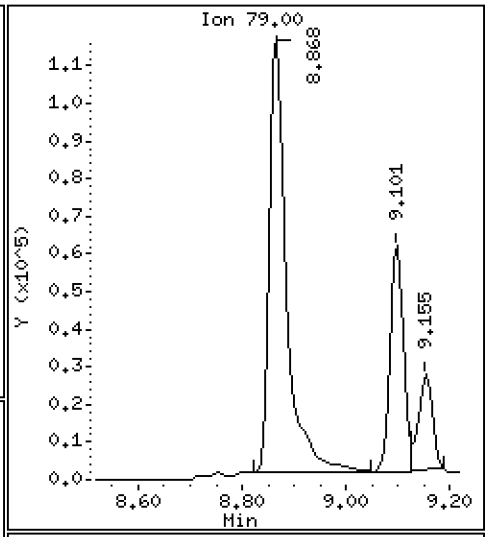
Column phase: ZB-5msi

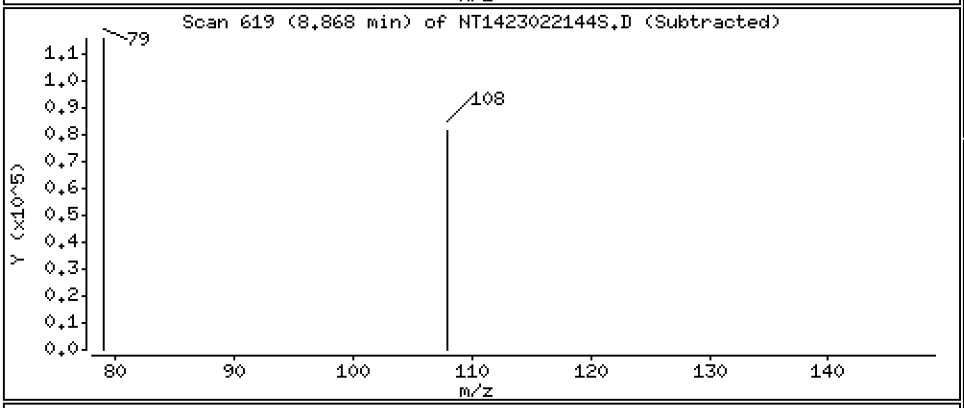
Column diameter: 0.25

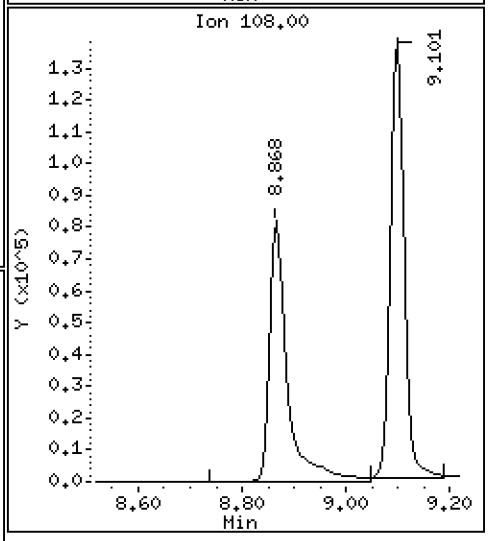
11 Benzyl alcohol

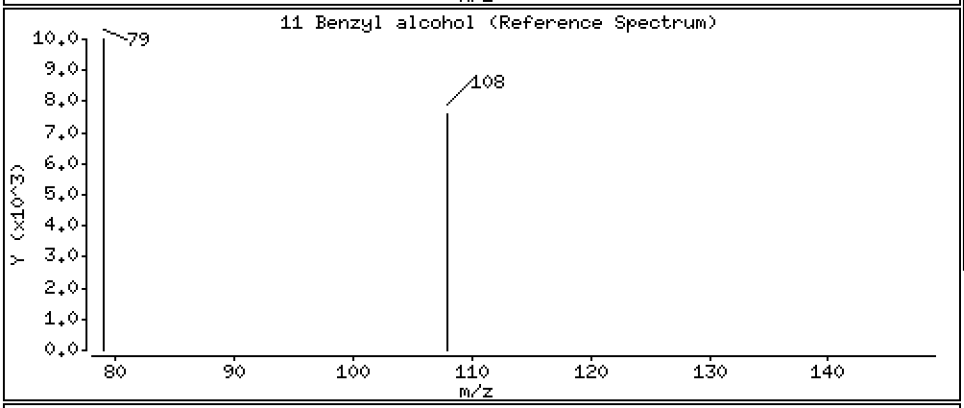
Concentration: 3.387 ug/mL

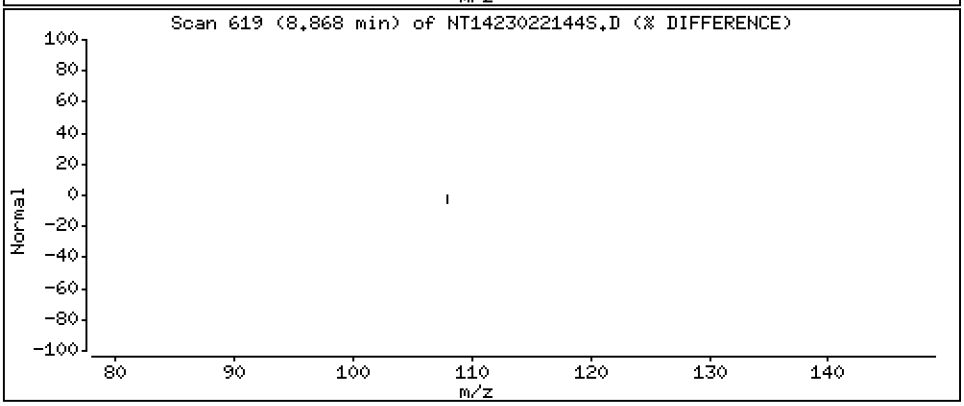












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221445.D

Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

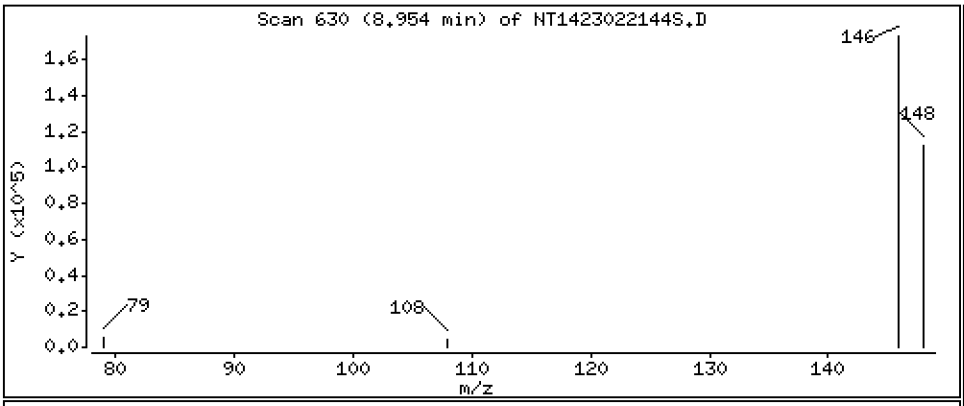
Operator: DSD

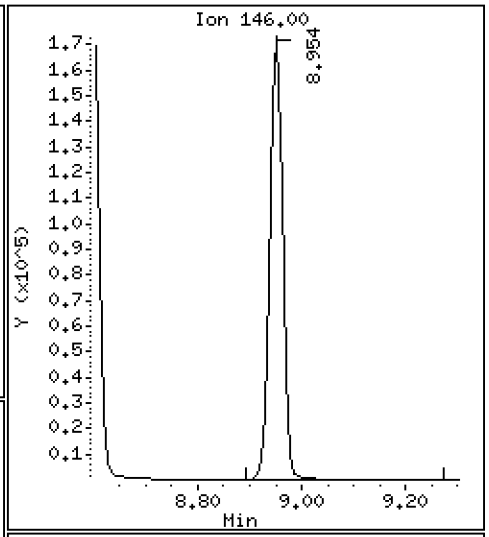
Column phase: ZB-5msi

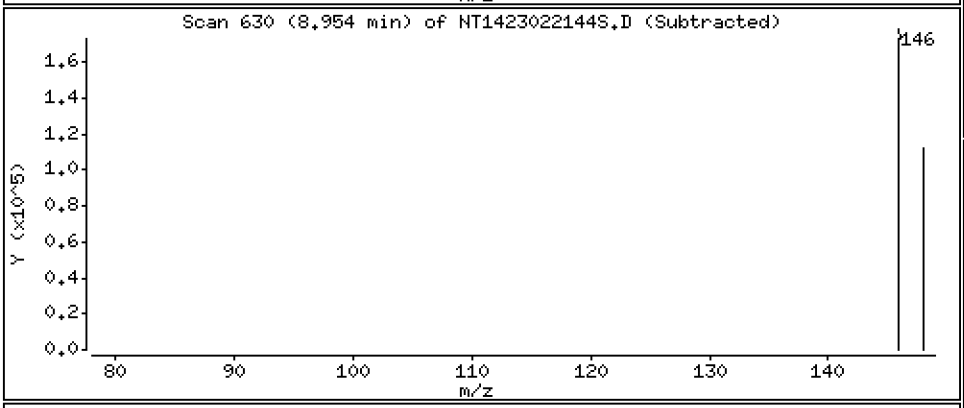
Column diameter: 0.25

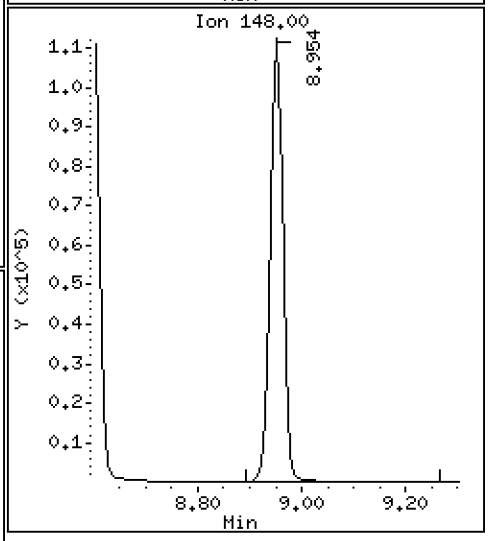
12 1,2-Dichlorobenzene

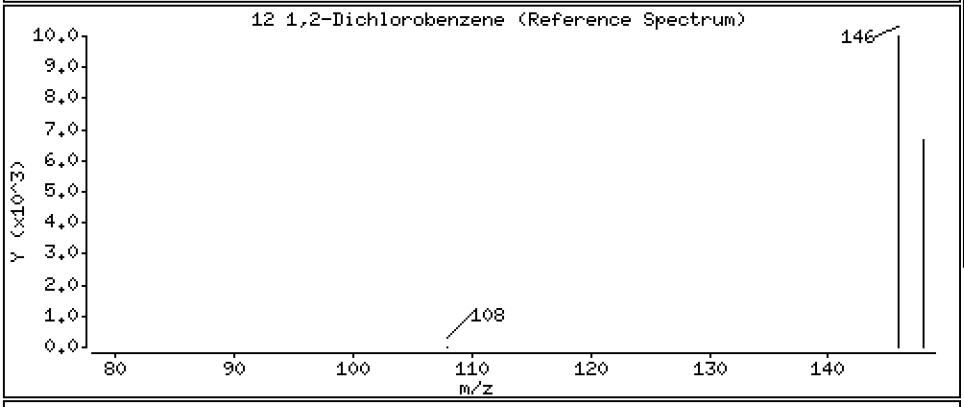
Concentration: 3.151 ug/mL

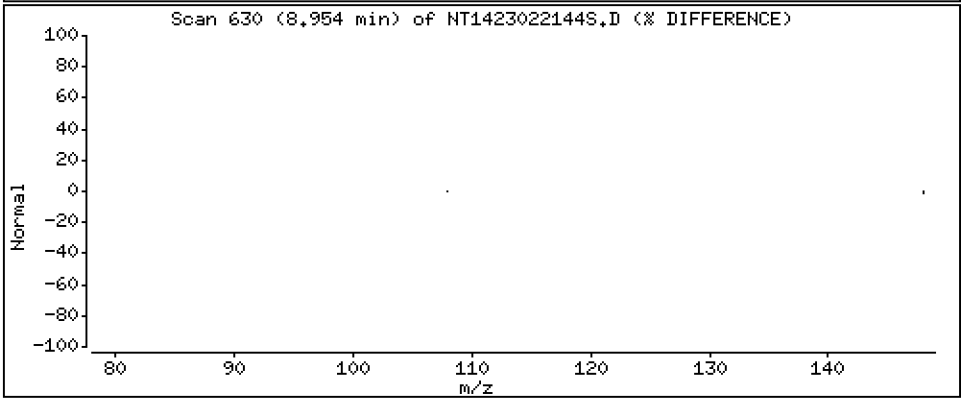












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221445.D

Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

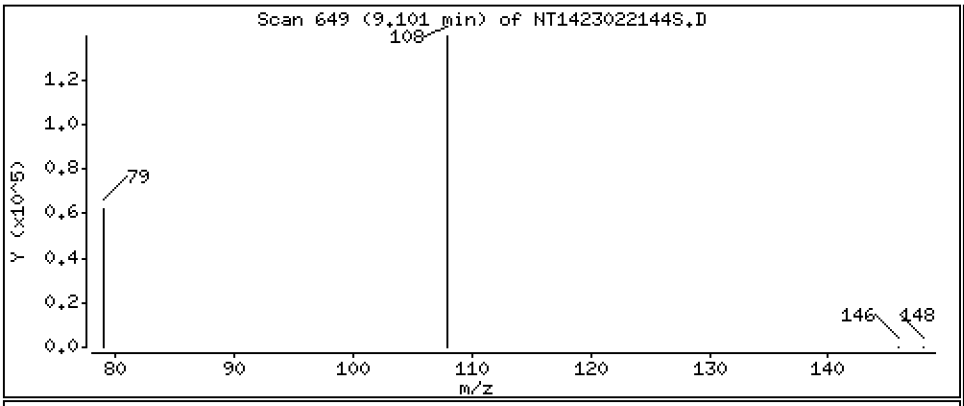
Operator: DSD

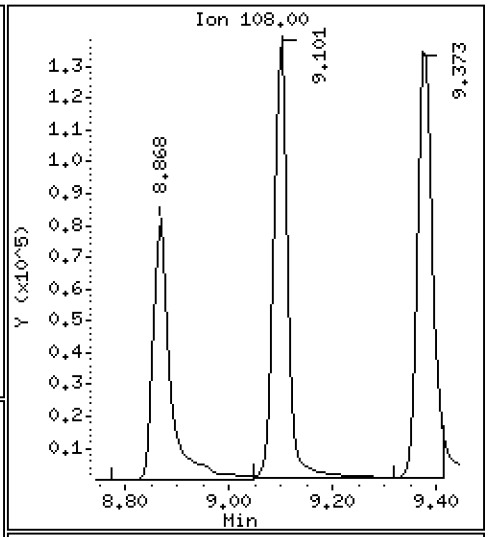
Column phase: ZB-5msi

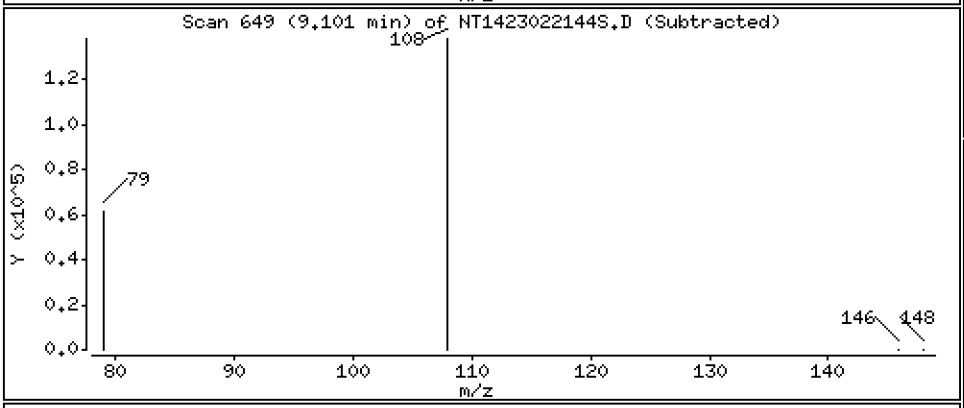
Column diameter: 0.25

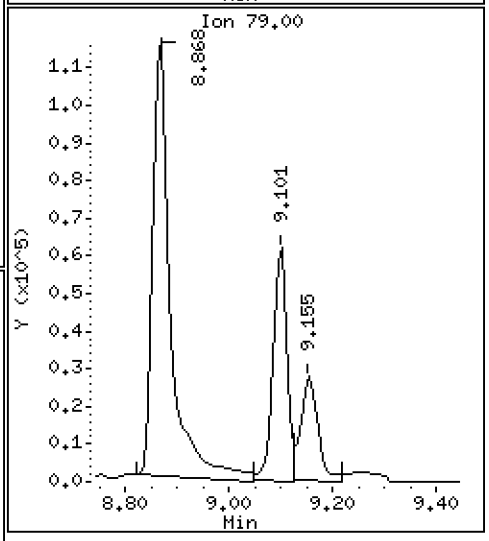
13 2-Methylphenol

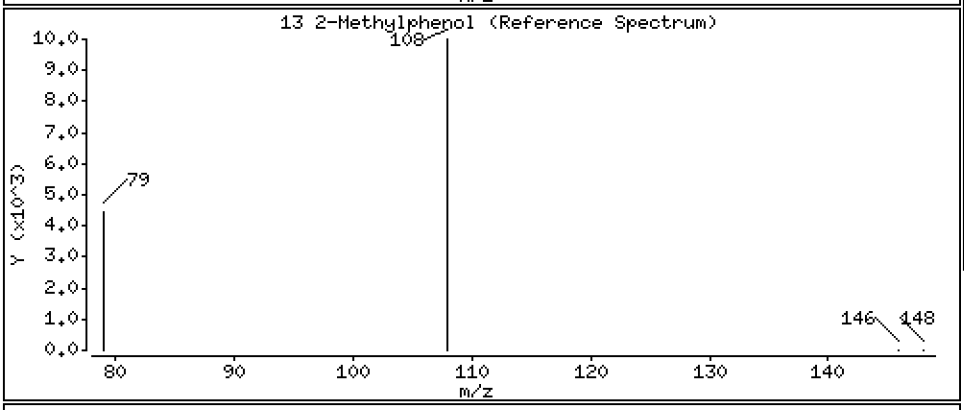
Concentration: 3.038 ug/mL

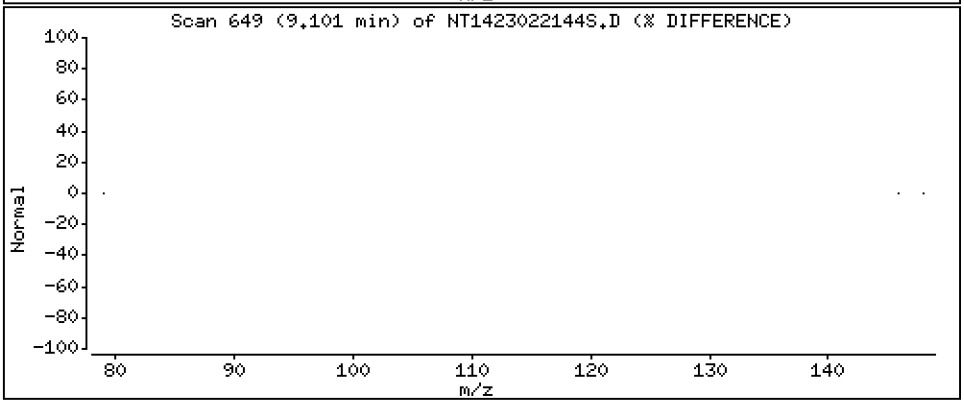












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

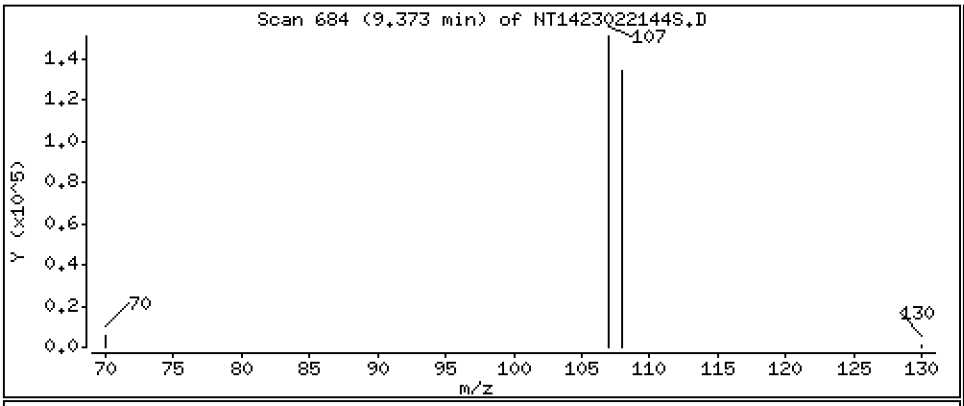
Operator: DSD

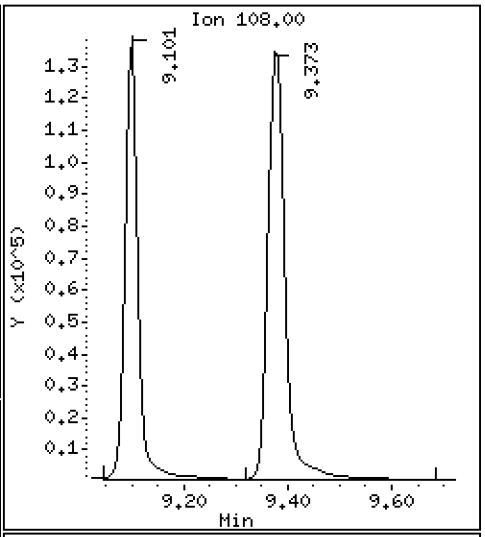
Column phase: ZB-5msi

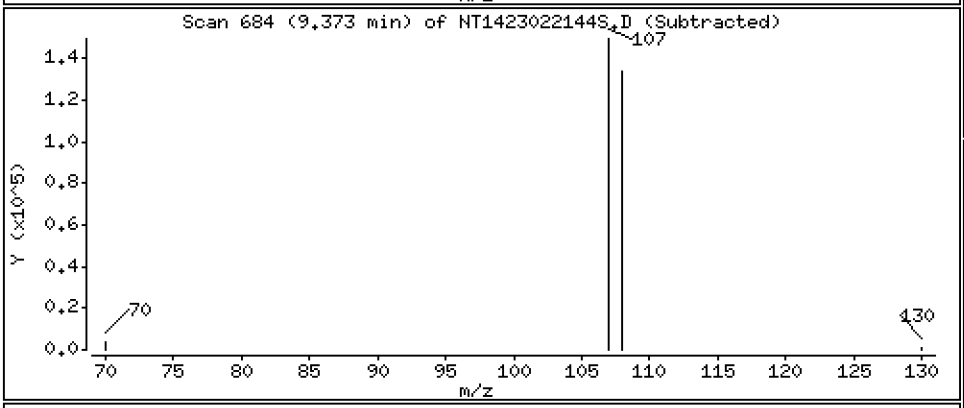
Column diameter: 0.25

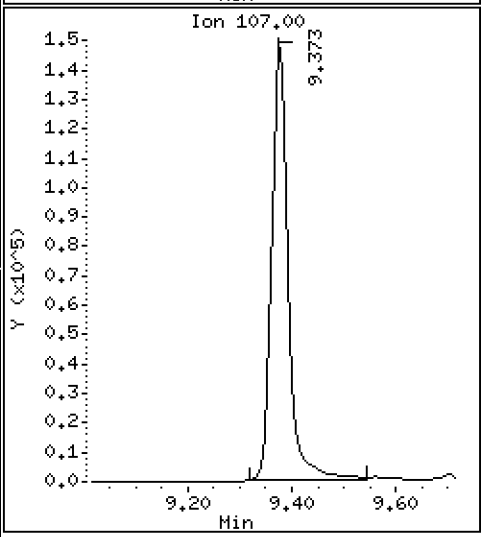
15 4-Methylphenol

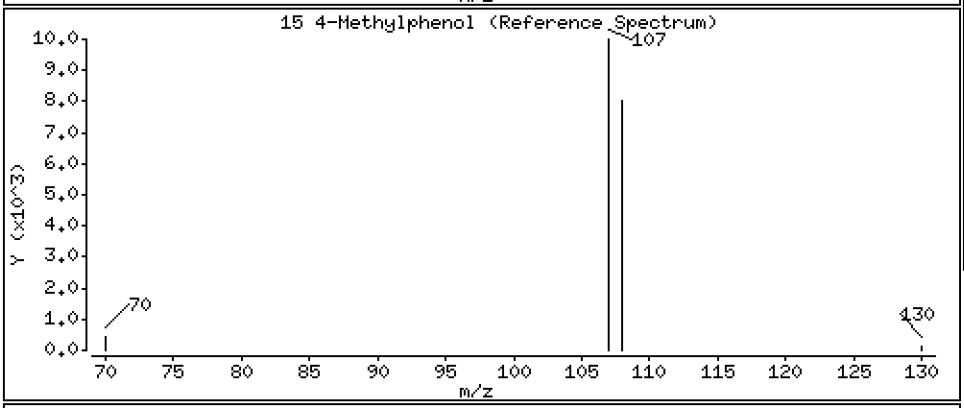
Concentration: 3.267 ug/mL

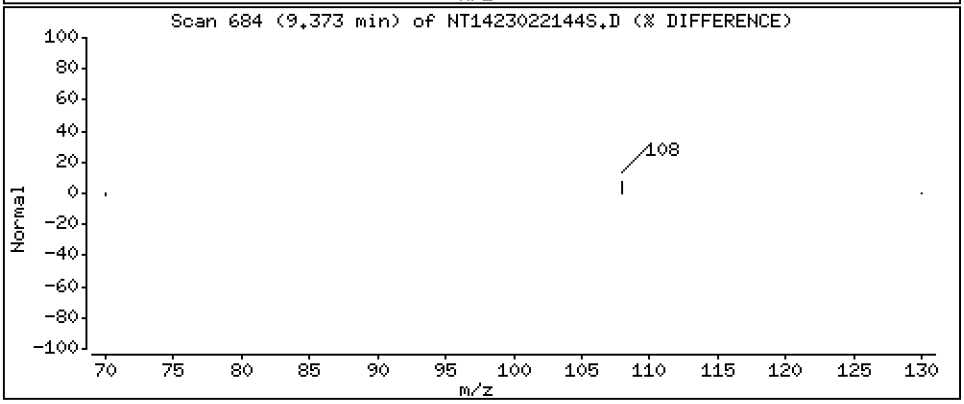












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

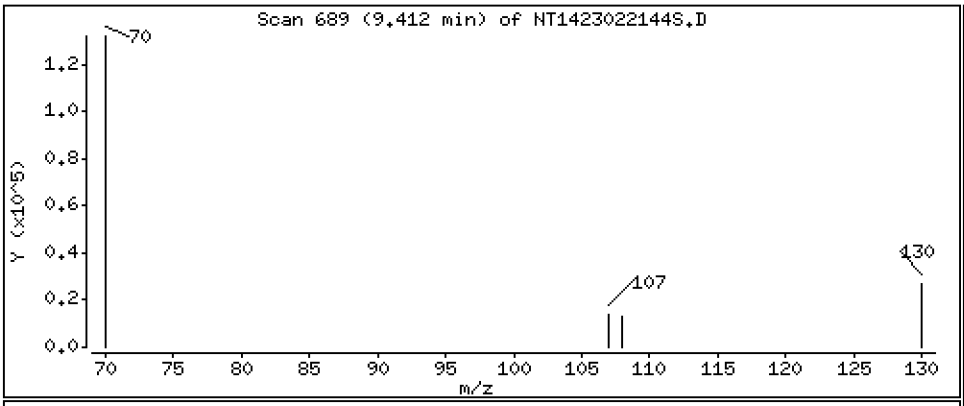
Operator: DSD

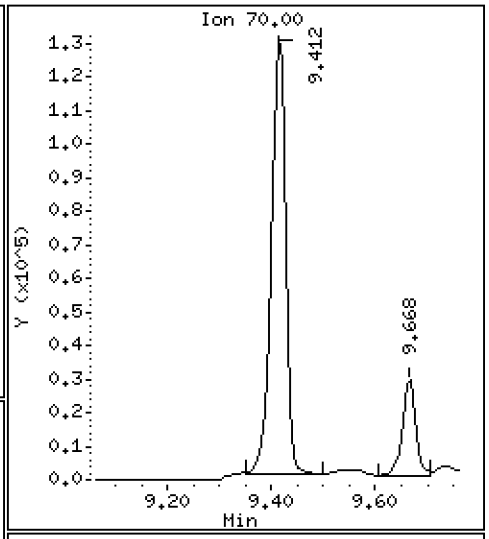
Column phase: ZB-5msi

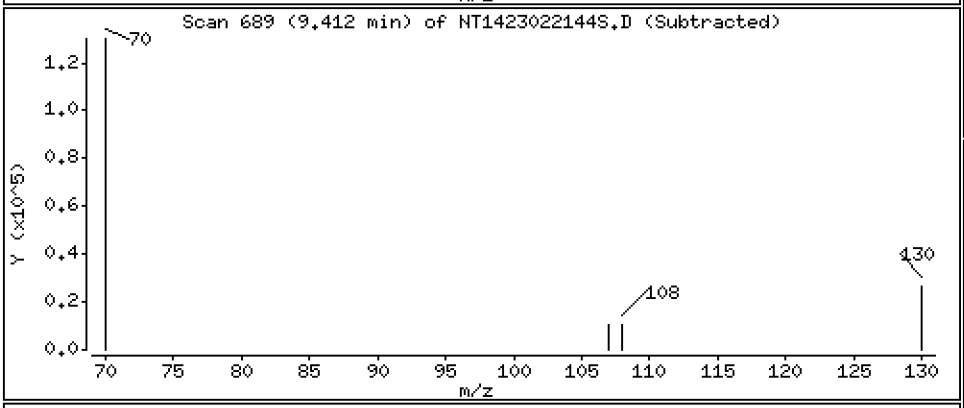
Column diameter: 0.25

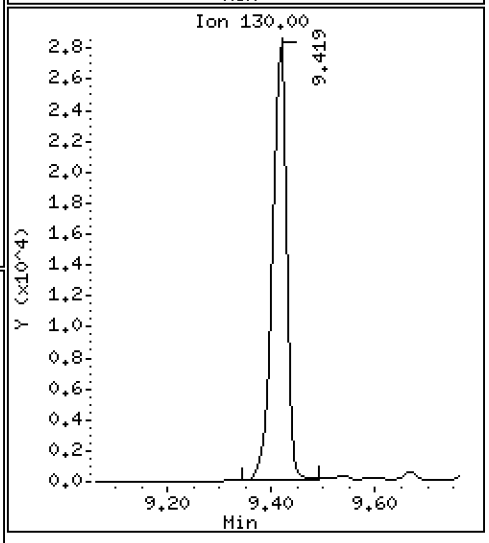
16 N-Nitroso-di-n-propylamine

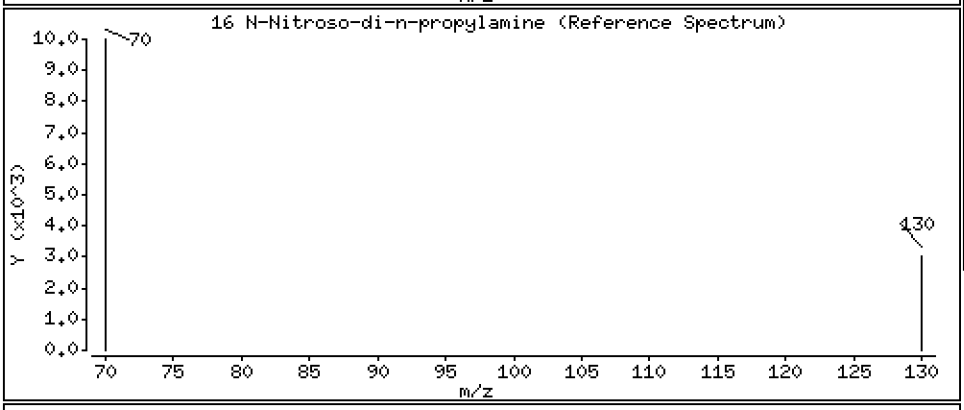
Concentration: 3.343 ug/mL

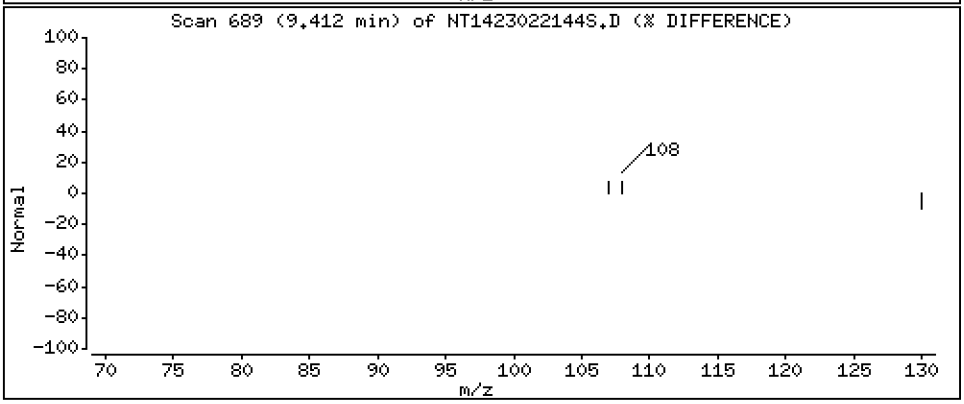












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

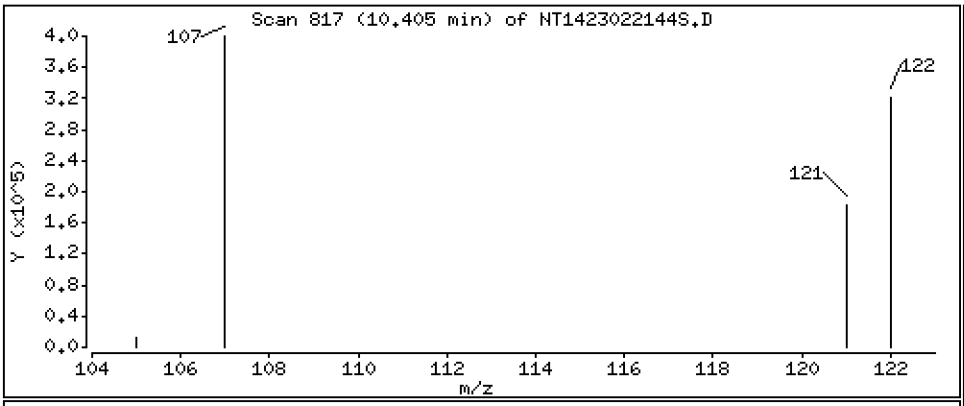
Operator: DSD

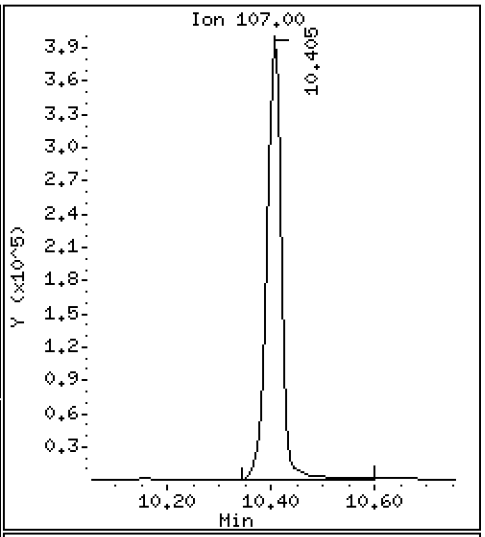
Column phase: ZB-5msi

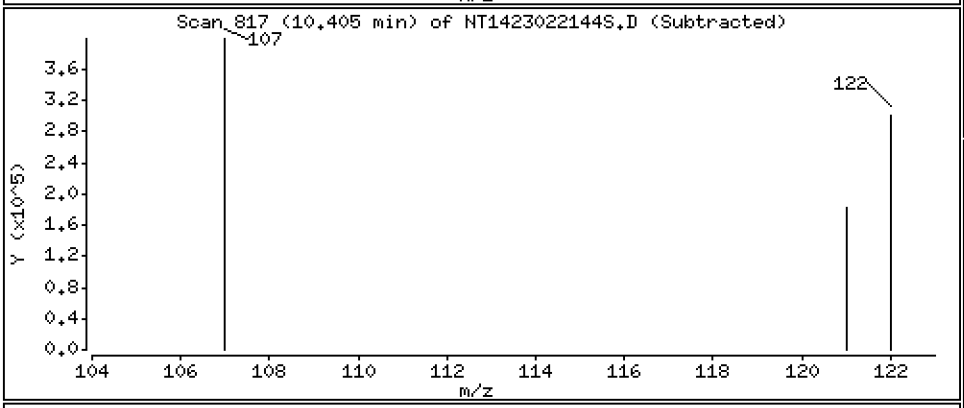
Column diameter: 0.25

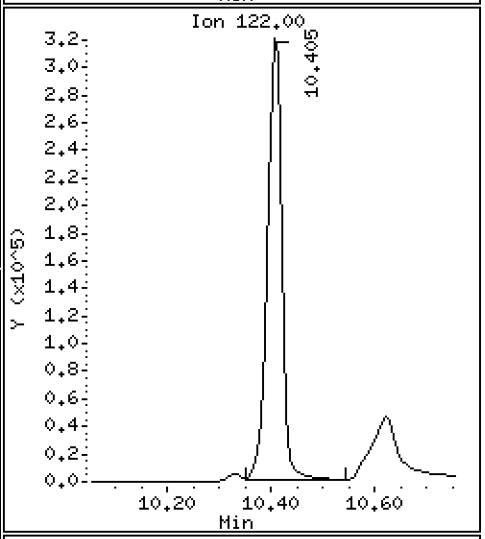
22 2,4-Dimethylphenol

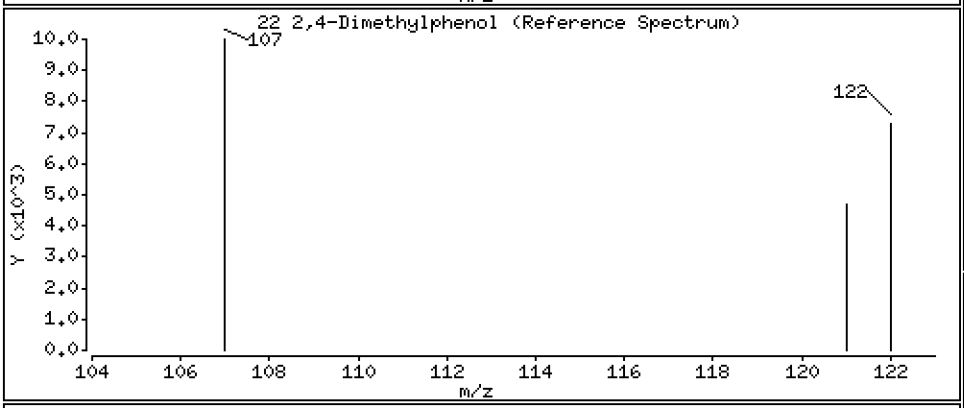
Concentration: 8.778 ug/mL

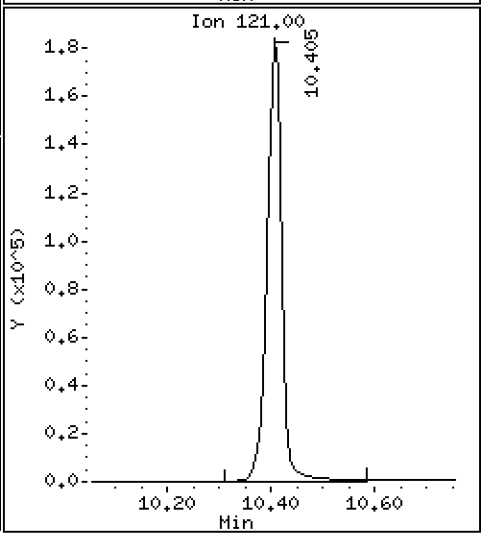


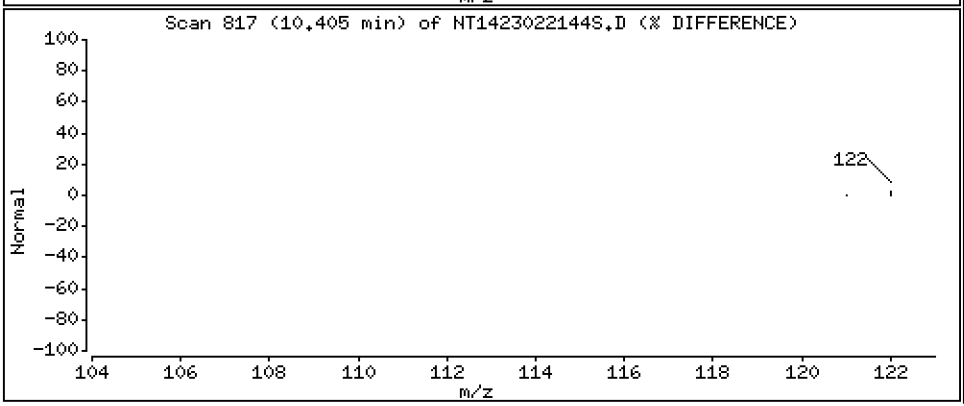












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

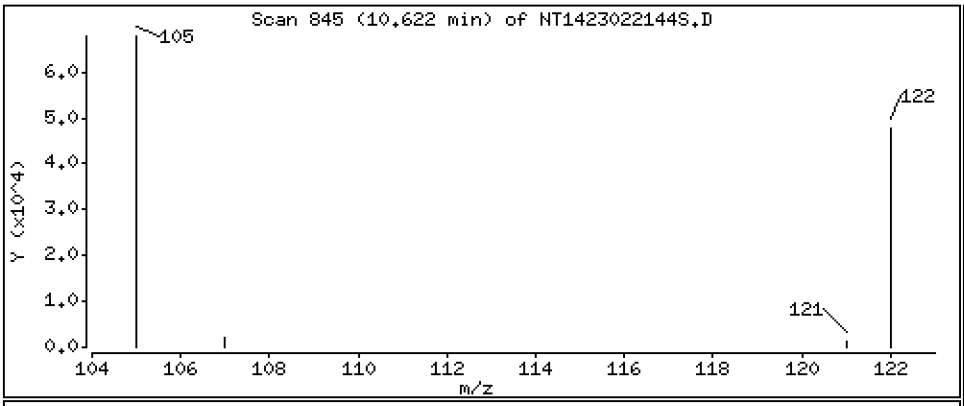
Operator: DSD

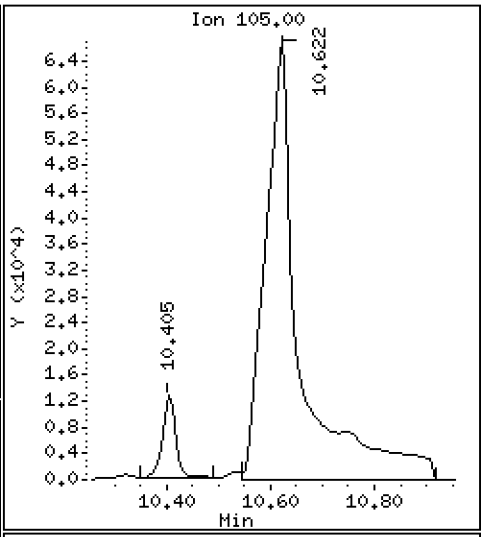
Column phase: ZB-5msi

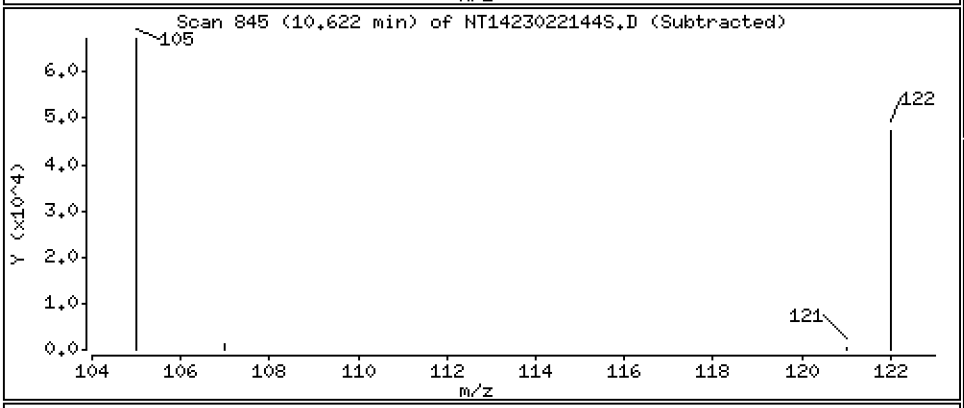
Column diameter: 0.25

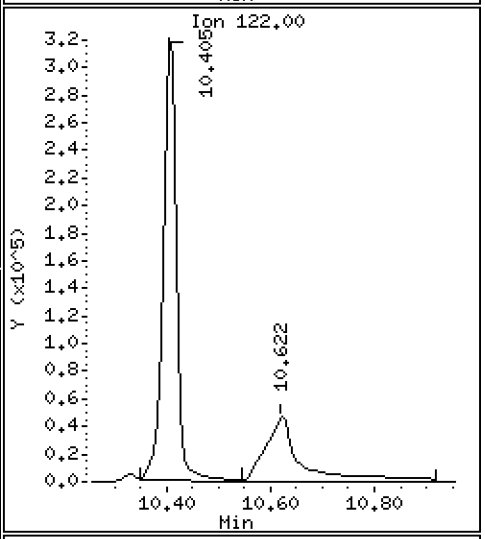
24 Benzoic acid

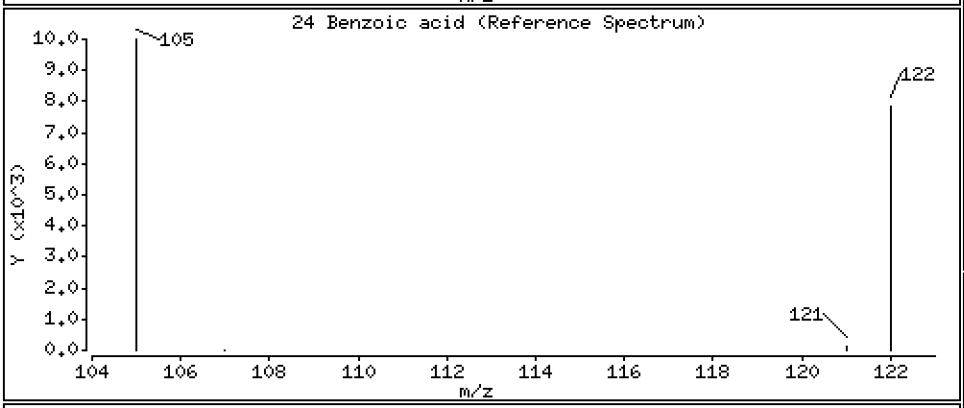
Concentration: 6.528 ug/mL

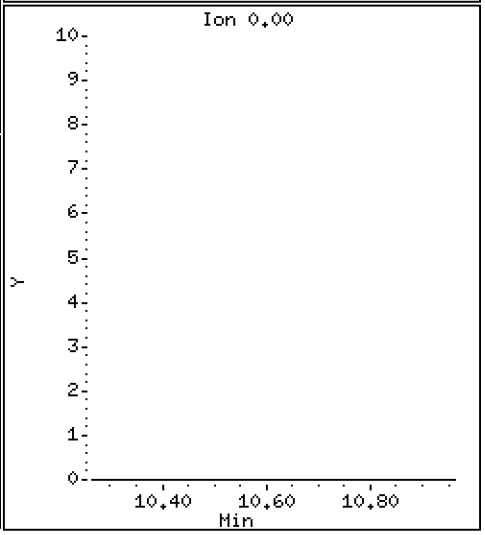


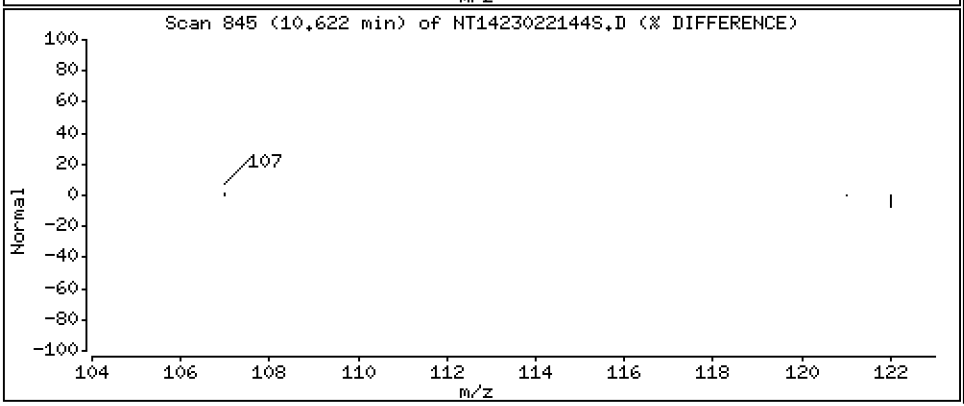












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

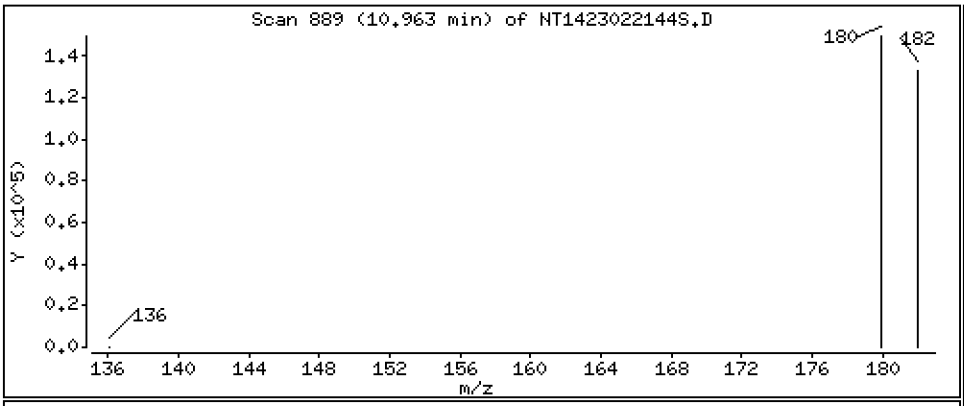
Operator: DSD

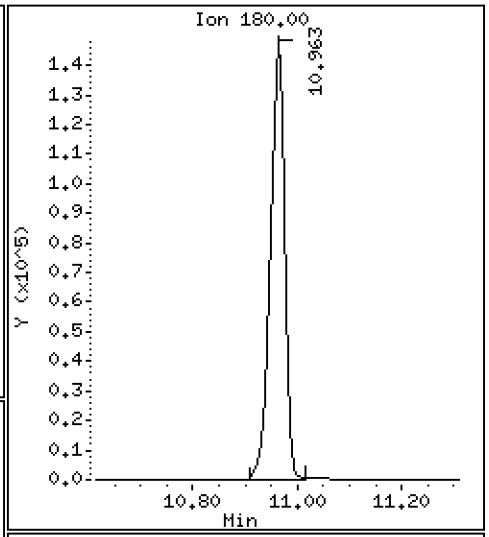
Column phase: ZB-5msi

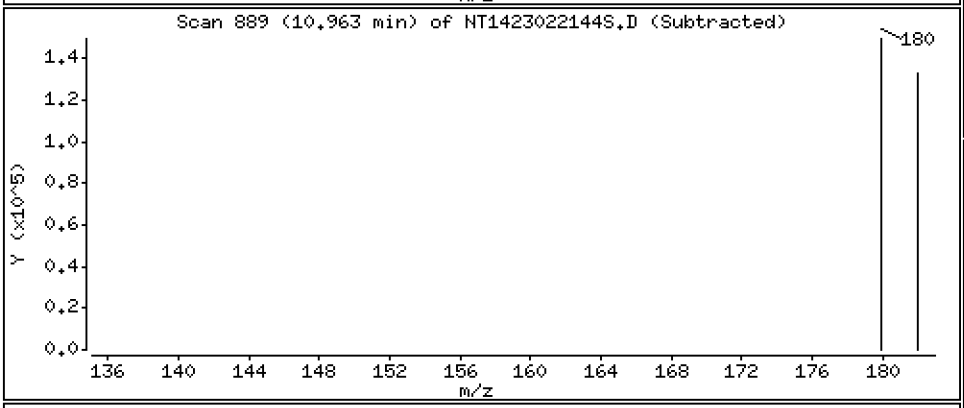
Column diameter: 0.25

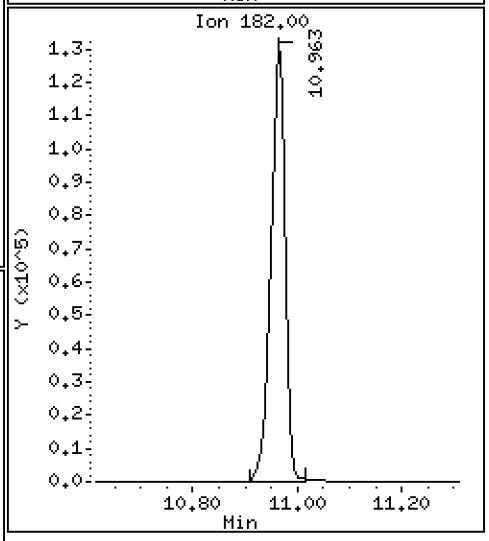
26 1,2,4-Trichlorobenzene

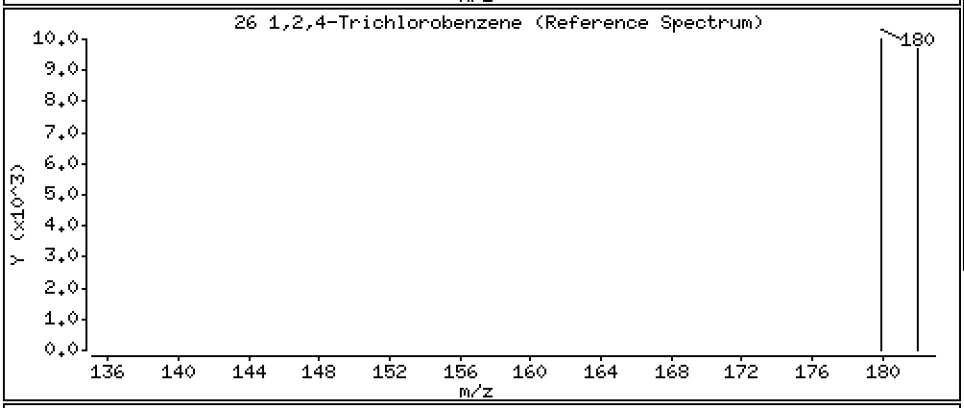
Concentration: 2.982 ug/mL

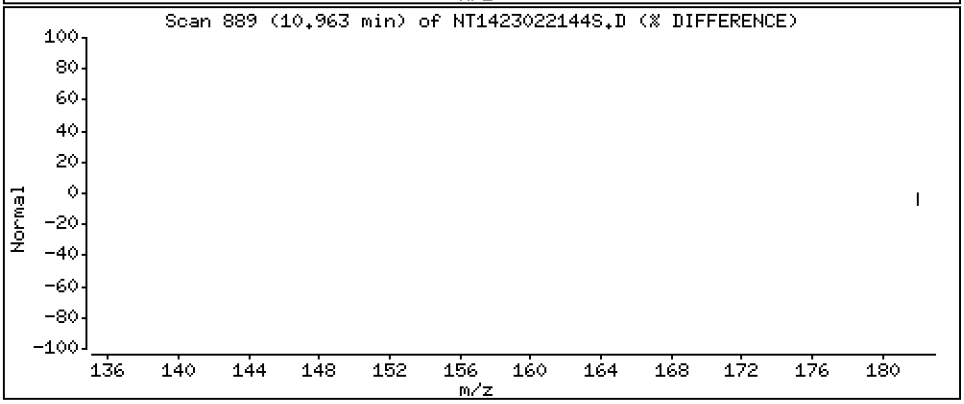












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

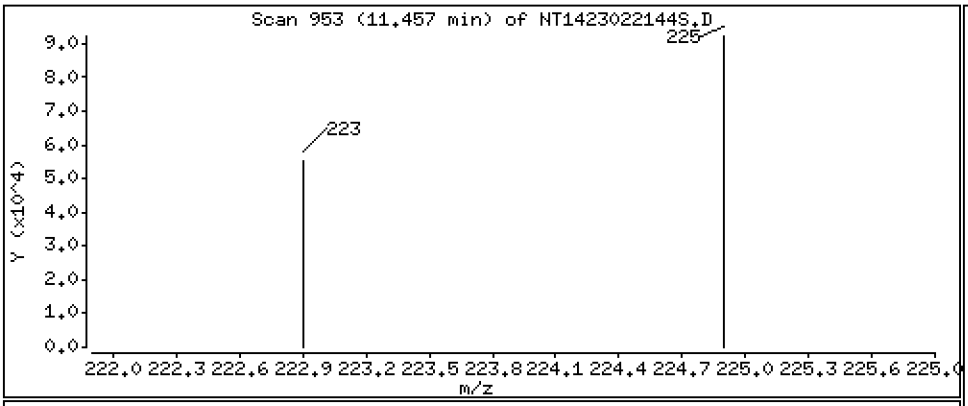
Operator: DSD

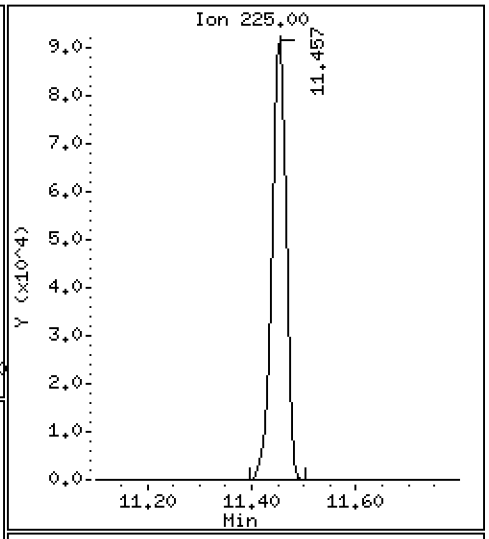
Column phase: ZB-5msi

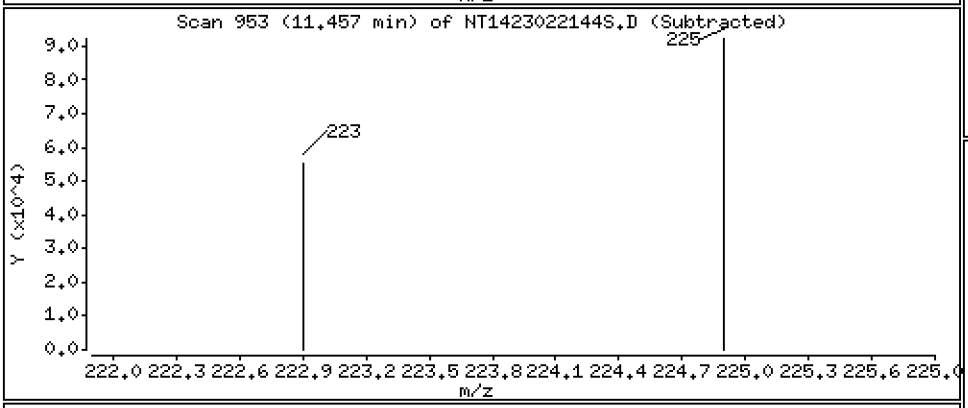
Column diameter: 0.25

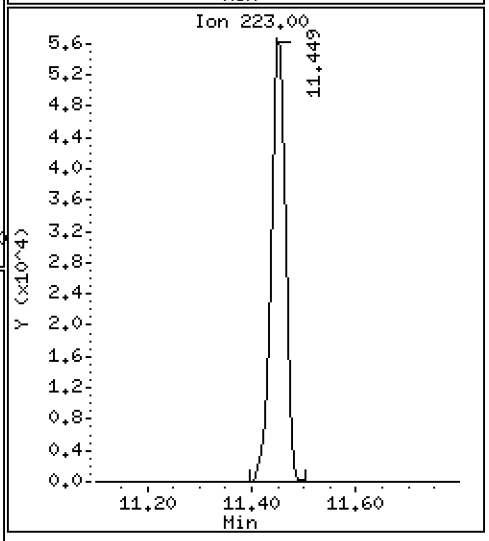
30 Hexachlorobutadiene

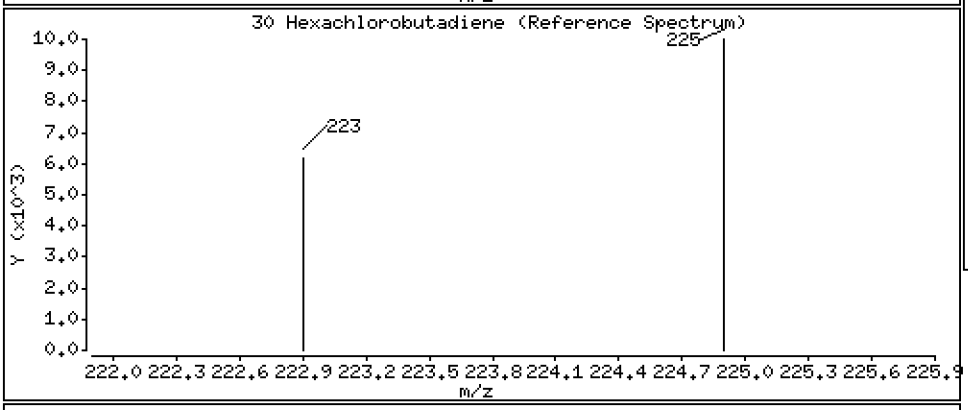
Concentration: 2.985 ug/mL

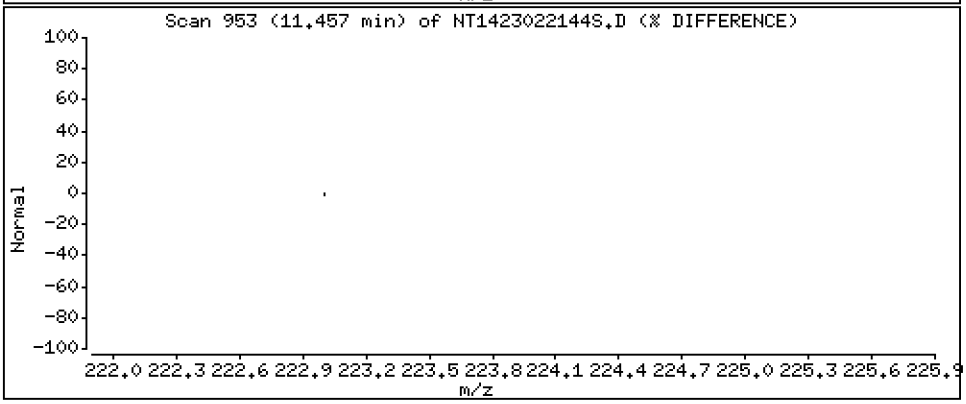












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

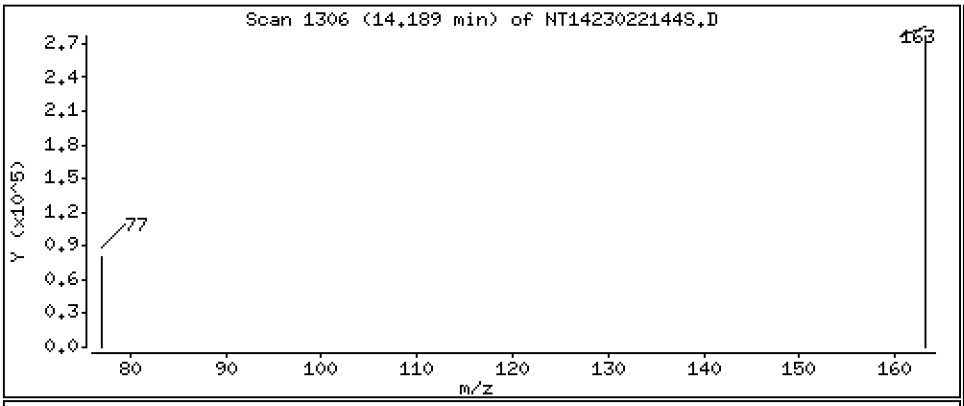
Operator: DSD

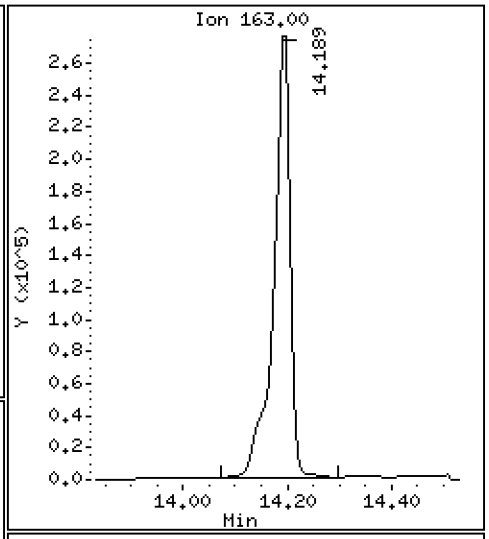
Column phase: ZB-5msi

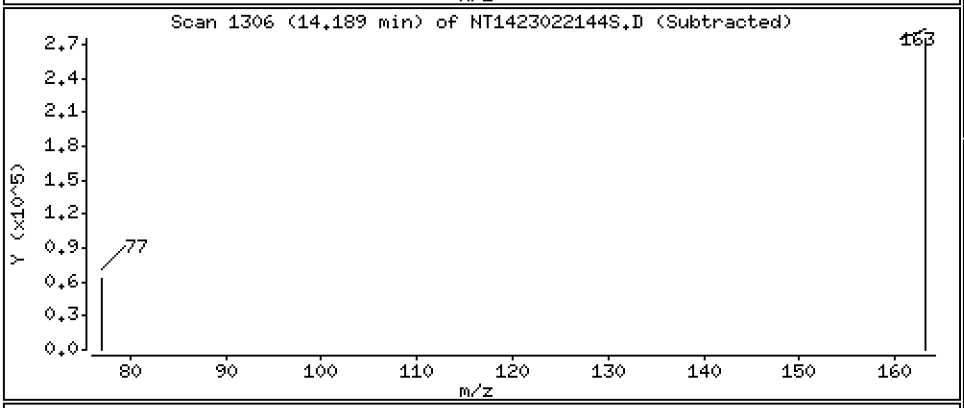
Column diameter: 0.25

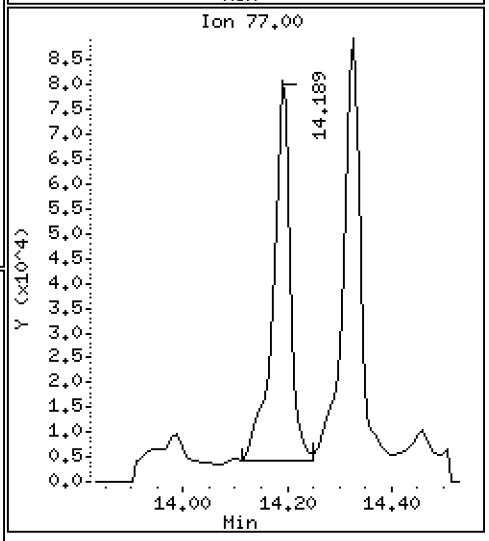
39 Dimethylphthalate

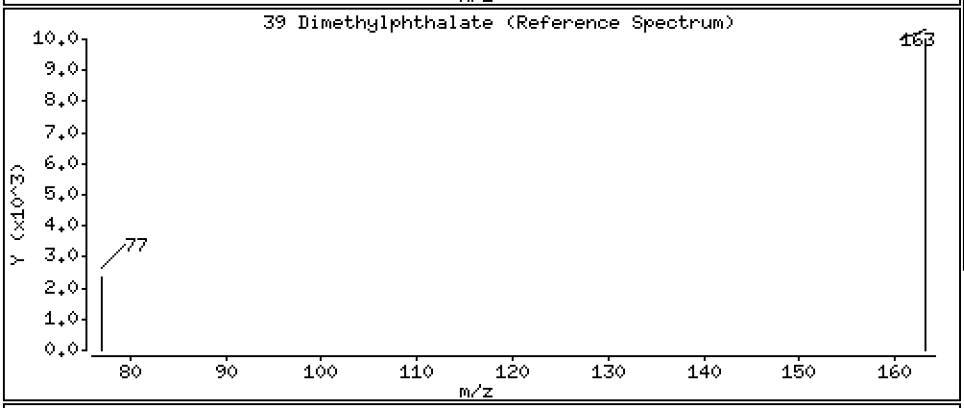
Concentration: 3.697 ug/mL

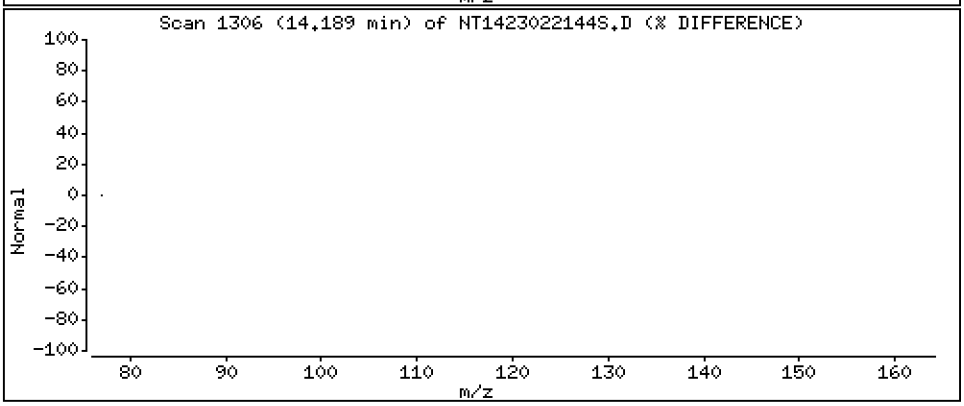












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

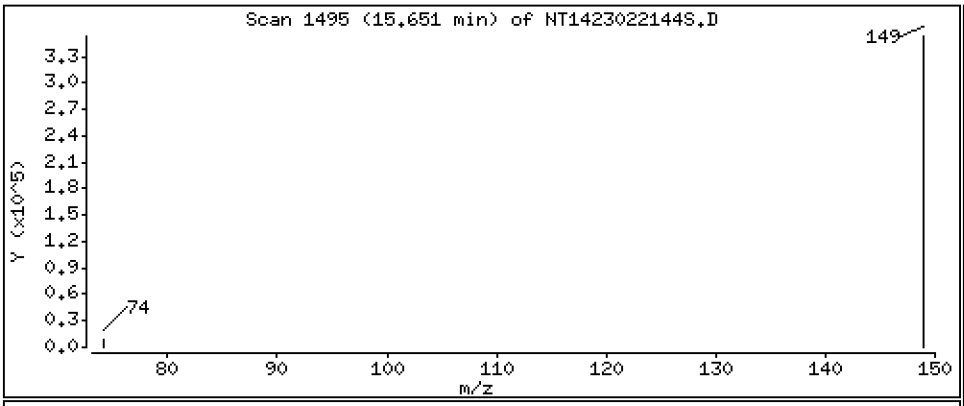
Operator: DSD

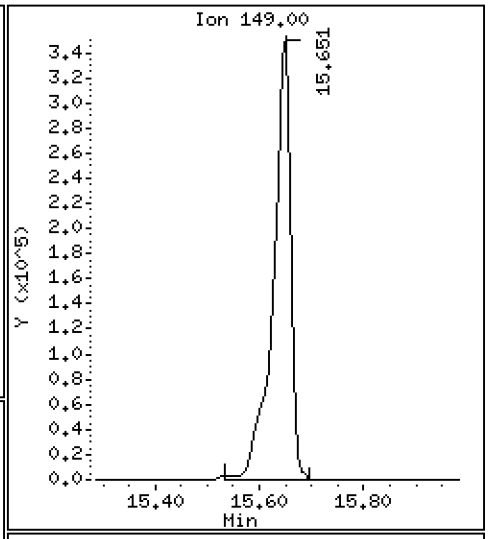
Column phase: ZB-5msi

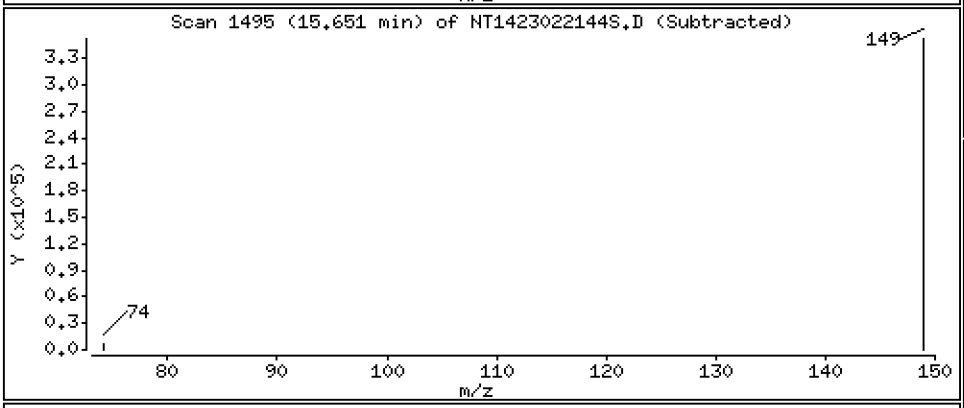
Column diameter: 0.25

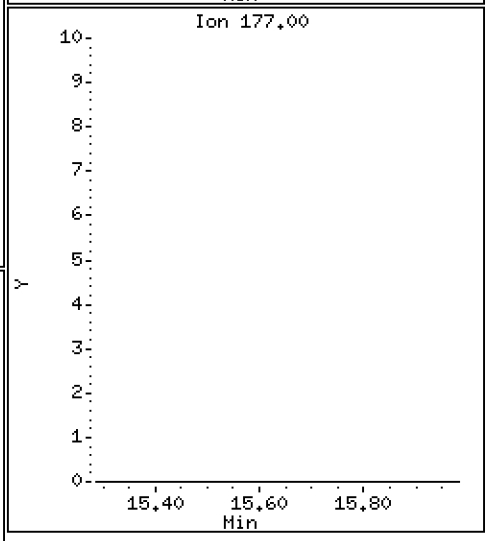
50 Diethylphthalate

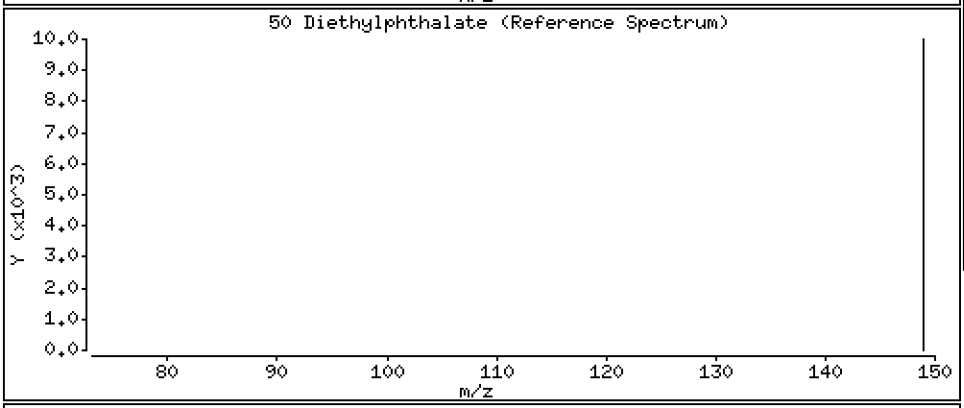
Concentration: 3.994 ug/mL

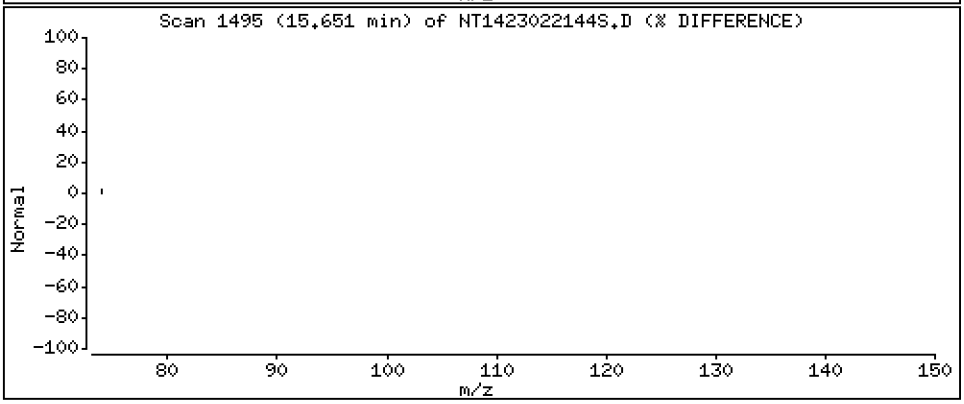












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

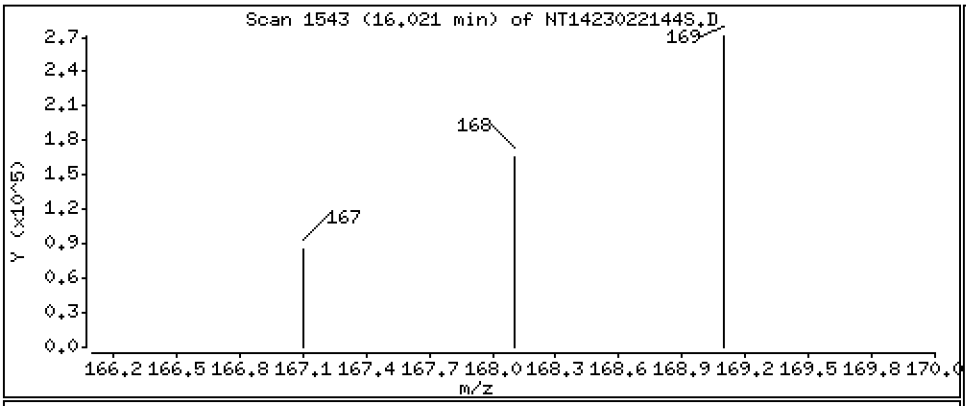
Operator: DSD

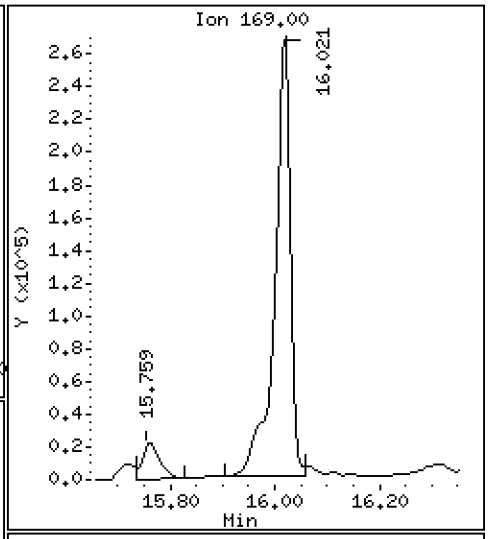
Column phase: ZB-5msi

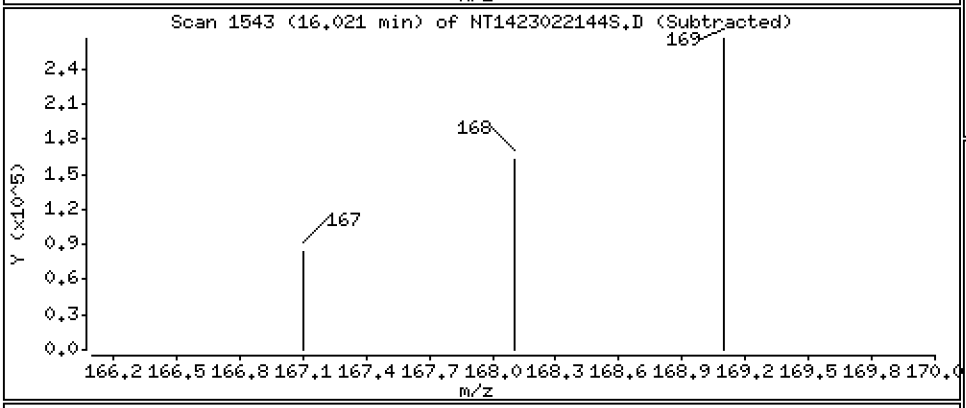
Column diameter: 0.25

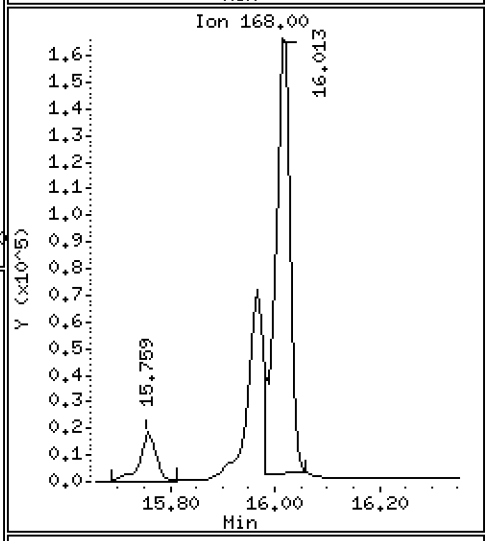
54 N-Nitrosodiphenylamine

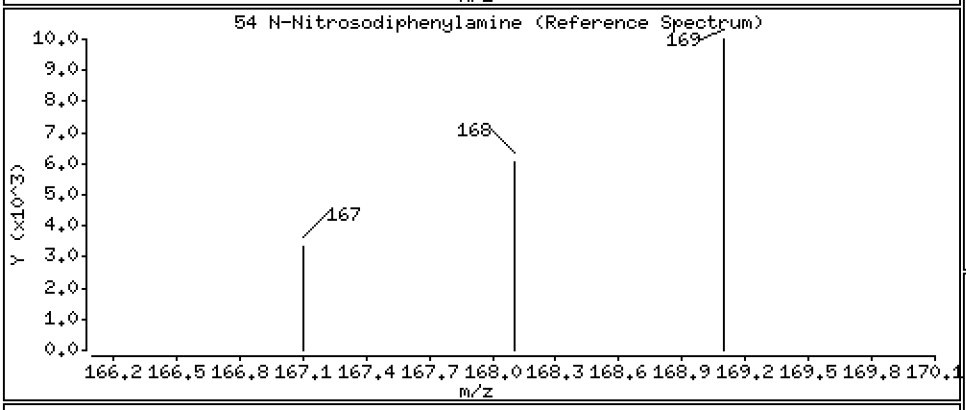
Concentration: 3.503 ug/mL

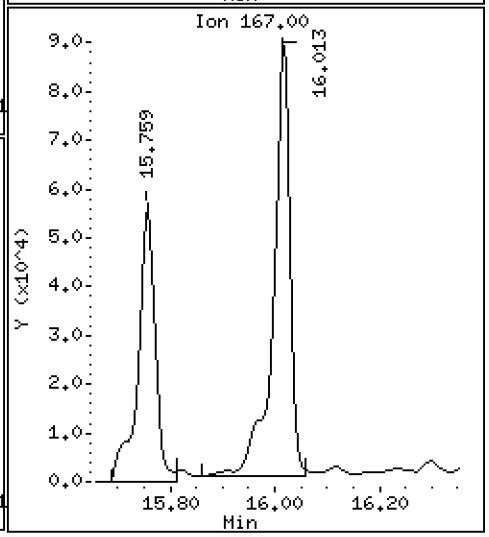


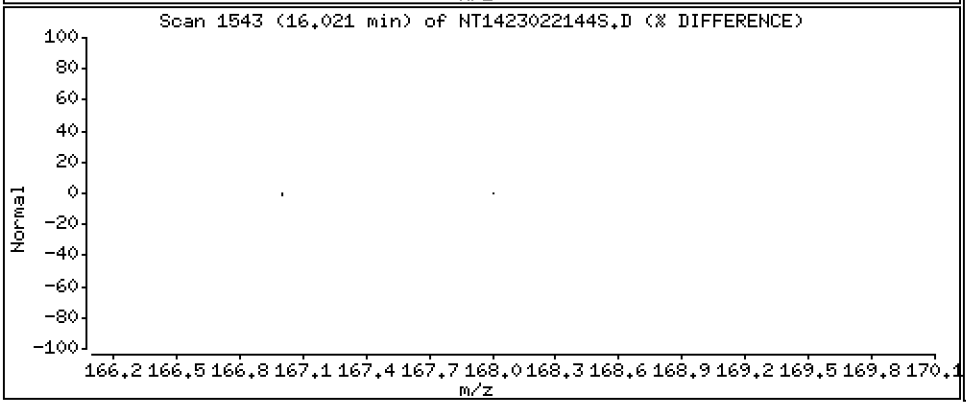












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

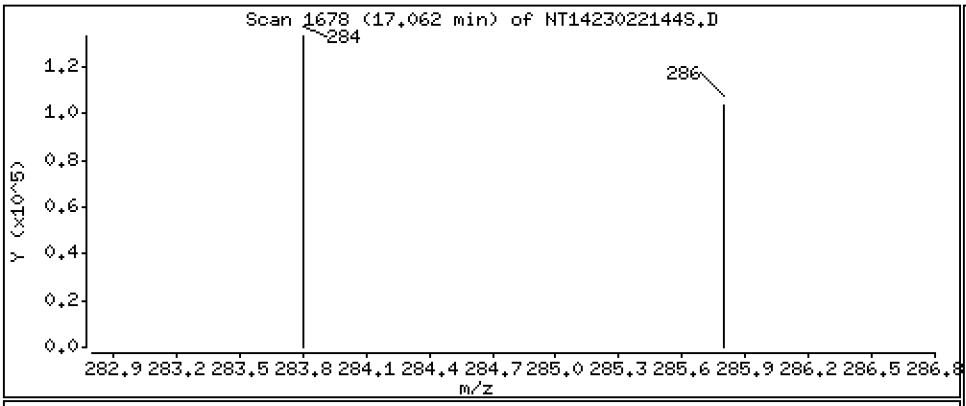
Operator: DSD

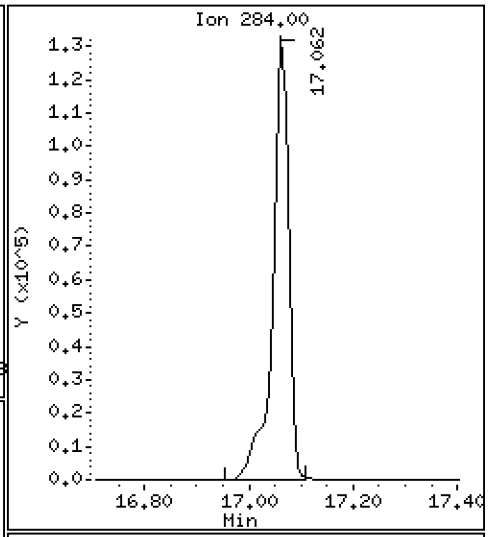
Column phase: ZB-5msi

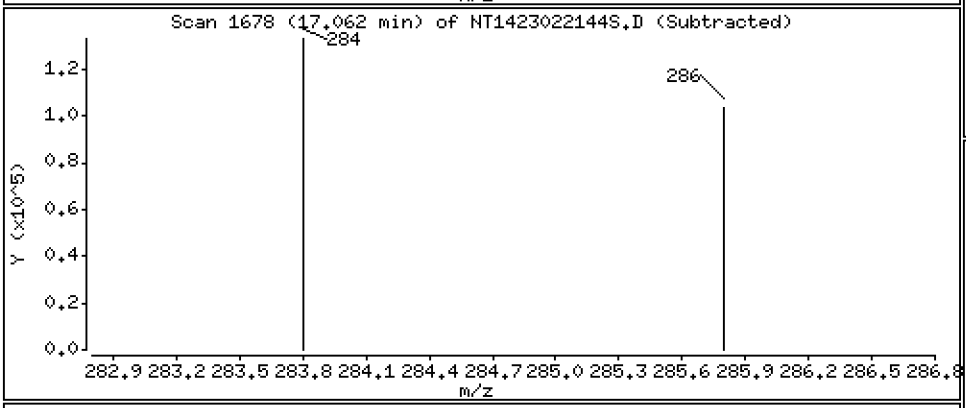
Column diameter: 0.25

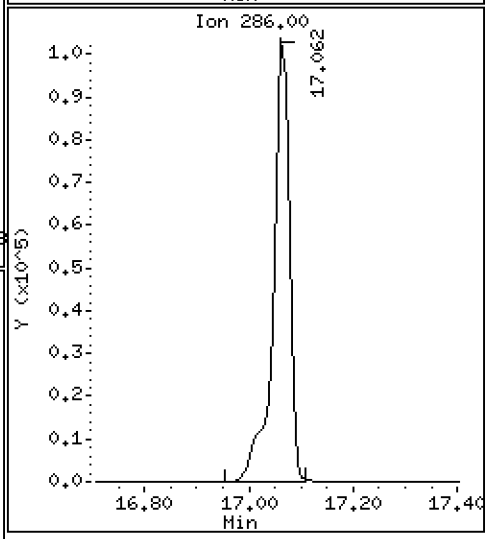
57 Hexachlorobenzene

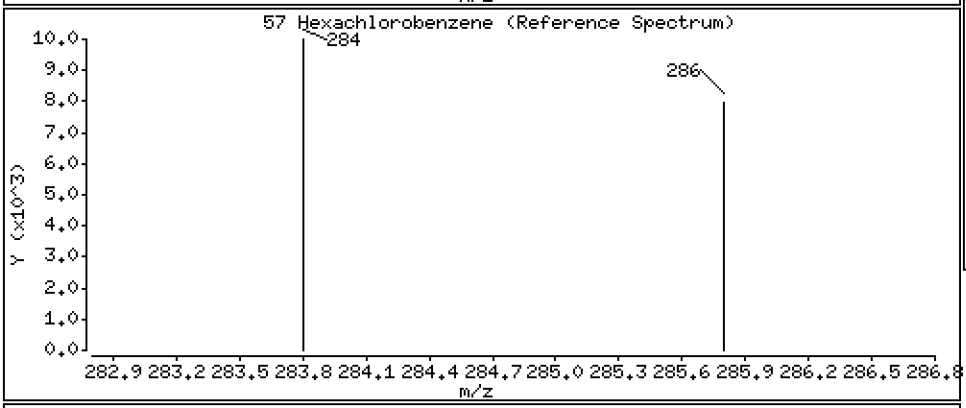
Concentration: 3.346 ug/mL

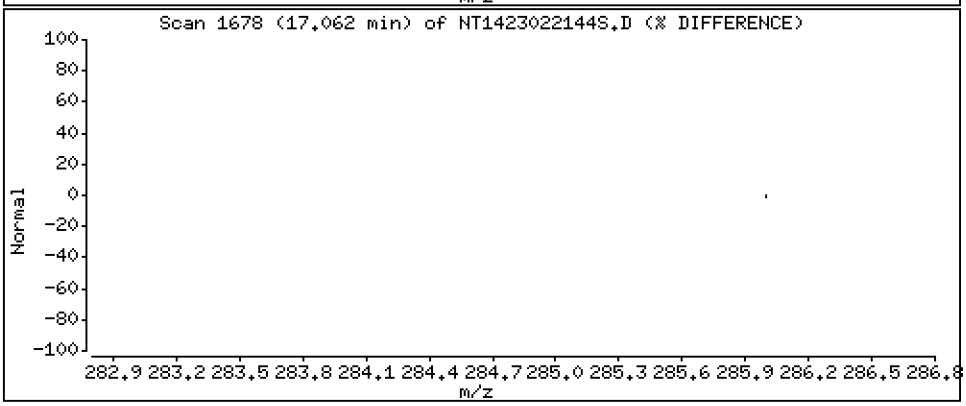












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221445.D

Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

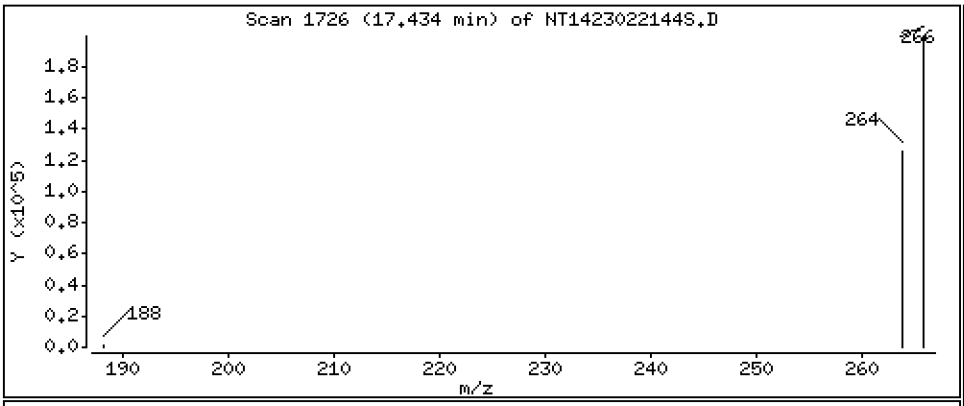
Operator: DSD

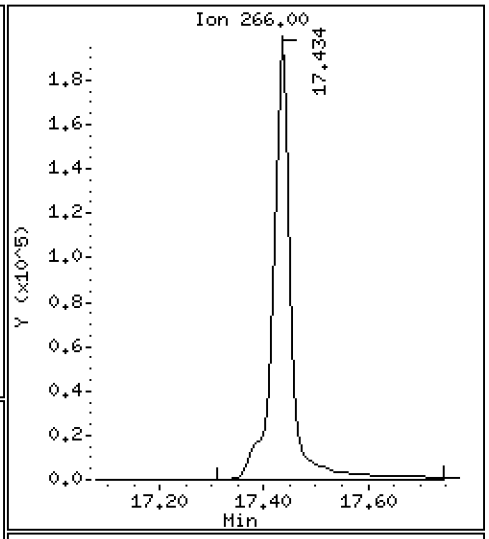
Column phase: ZB-5msi

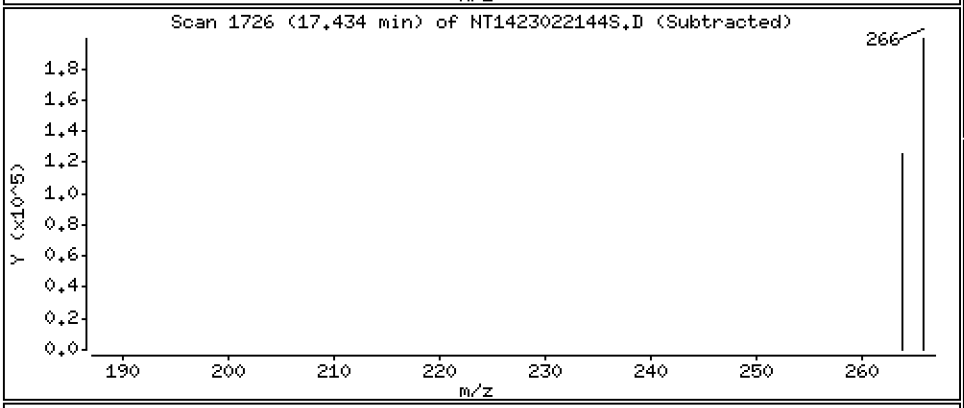
Column diameter: 0.25

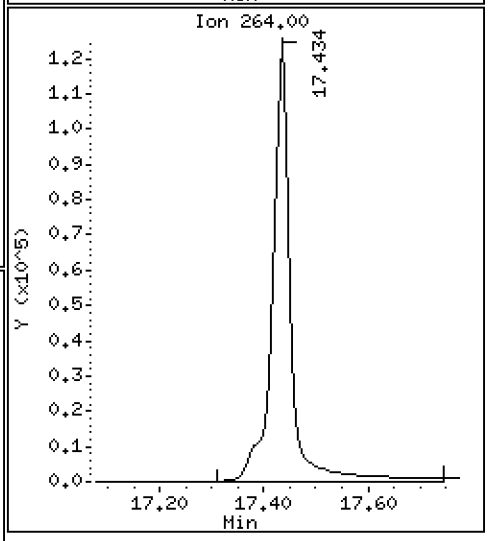
58 Pentachlorophenol

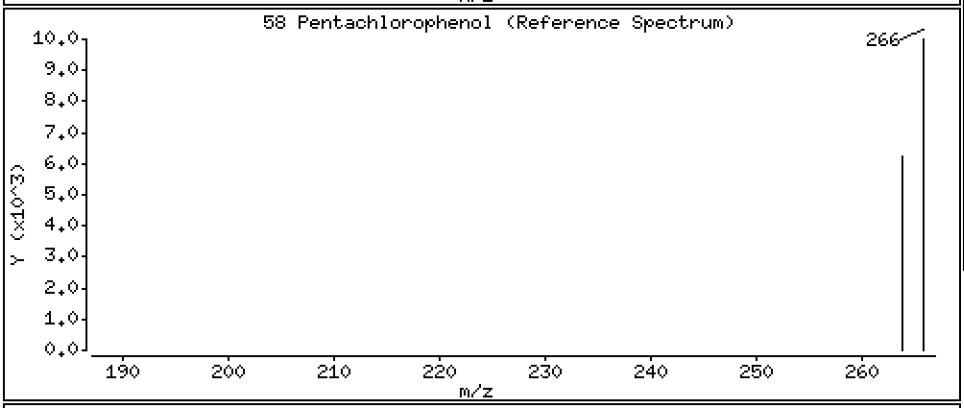
Concentration: 12.49 ug/mL

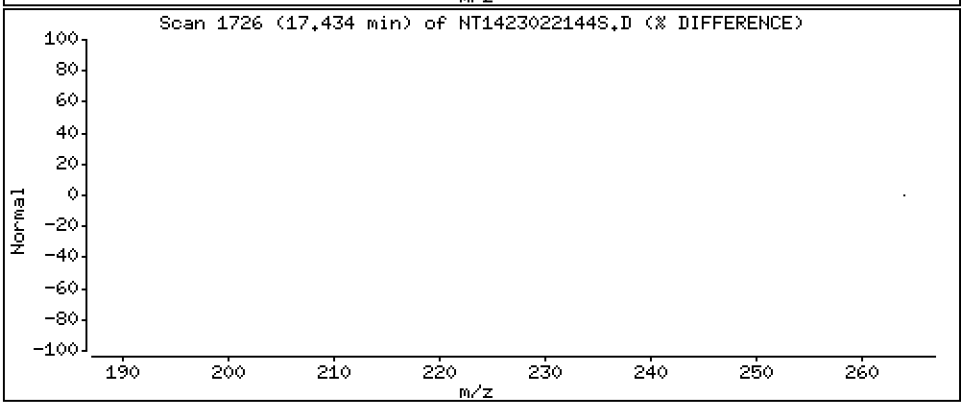












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

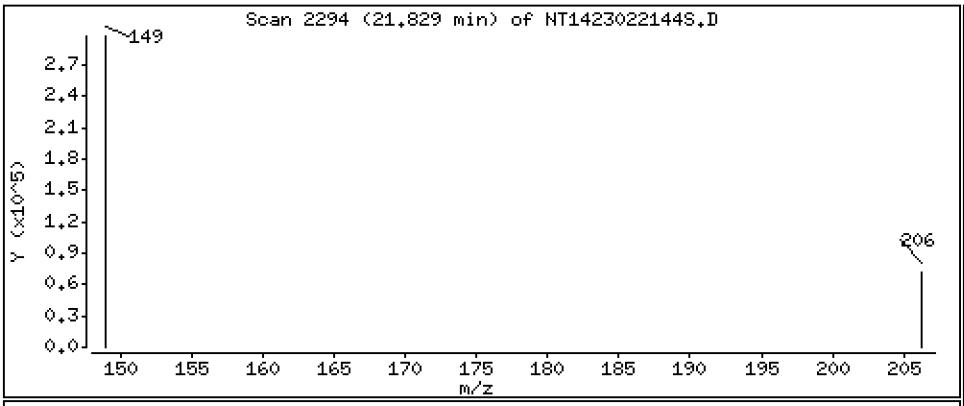
Operator: DSD

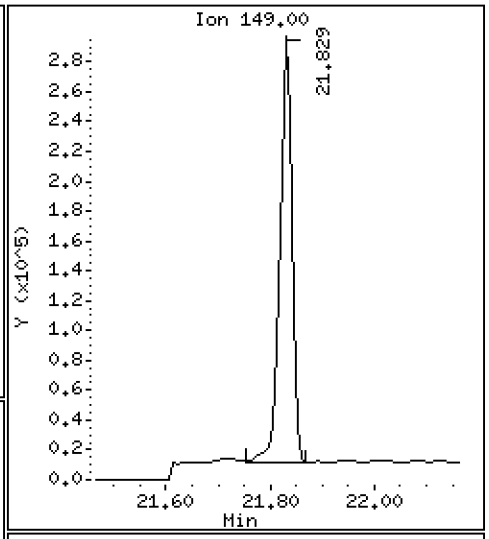
Column phase: ZB-5msi

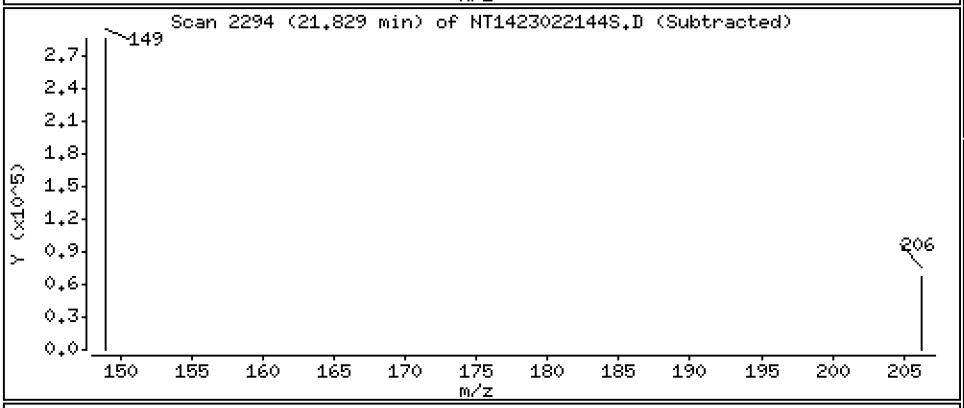
Column diameter: 0.25

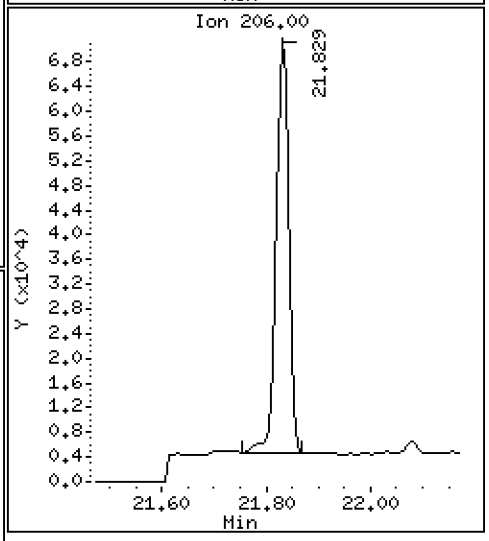
67 Butylbenzylphthalate

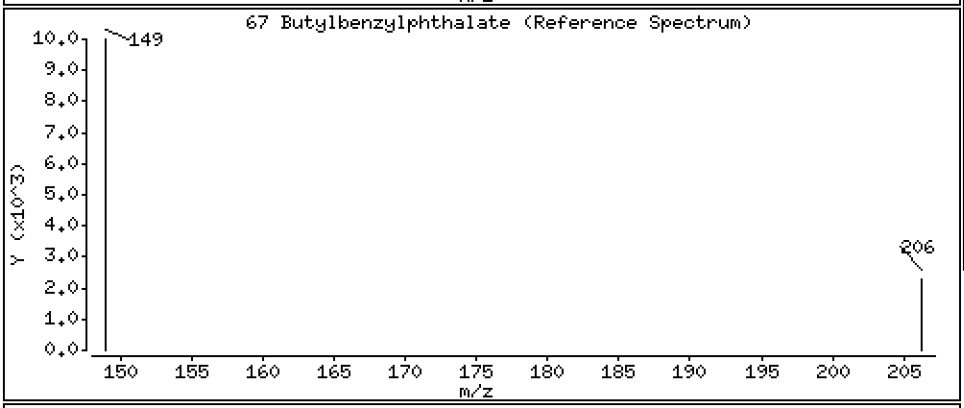
Concentration: 4.508 ug/mL

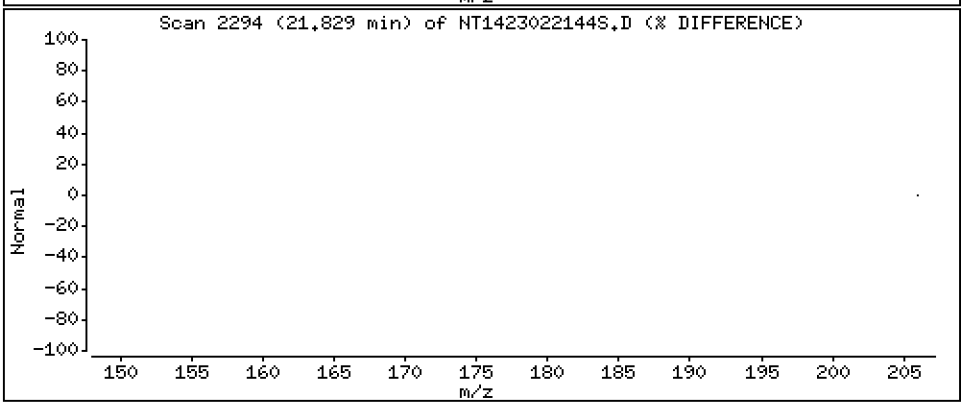












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

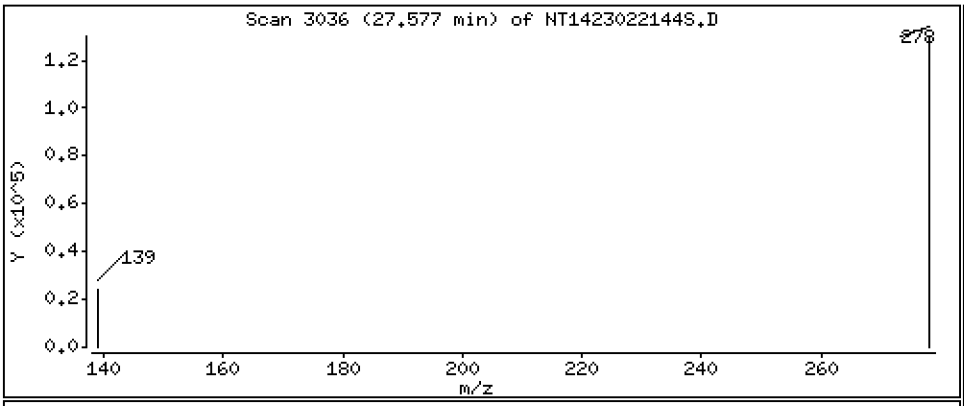
Operator: DSD

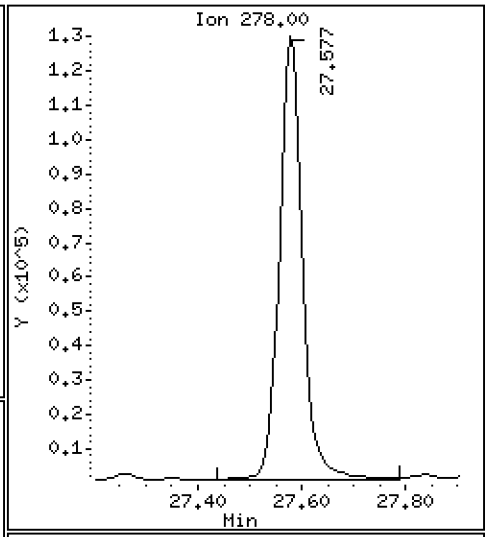
Column phase: ZB-5msi

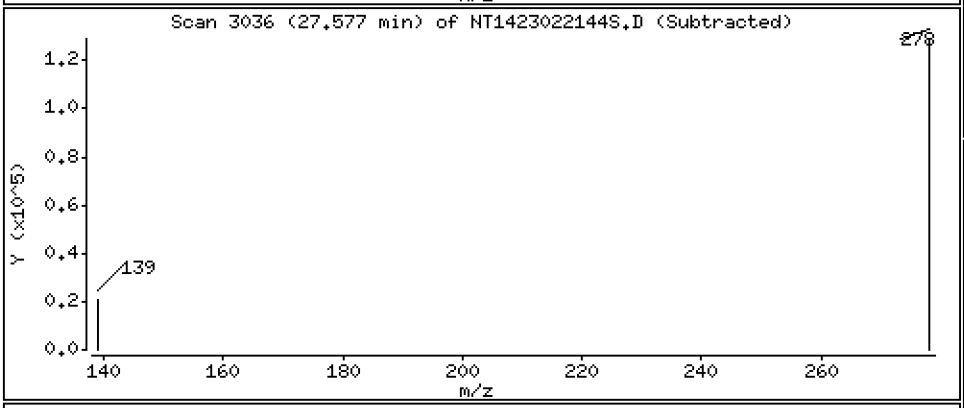
Column diameter: 0.25

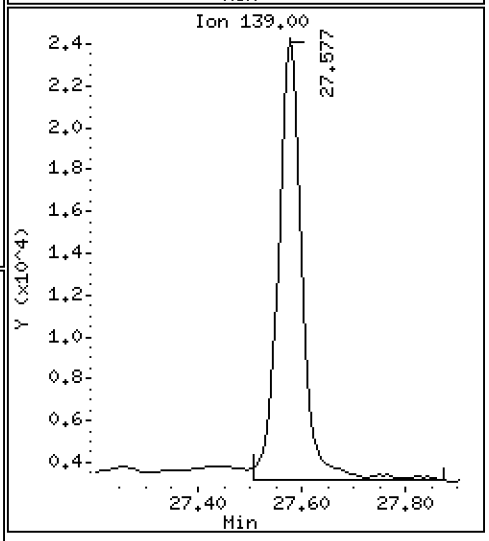
79 Dibenzo(a,h)anthracene

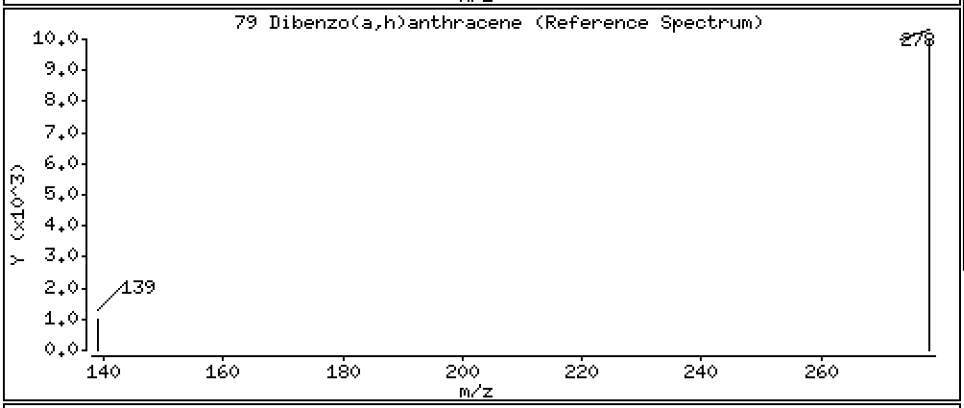
Concentration: 3.751 ug/mL

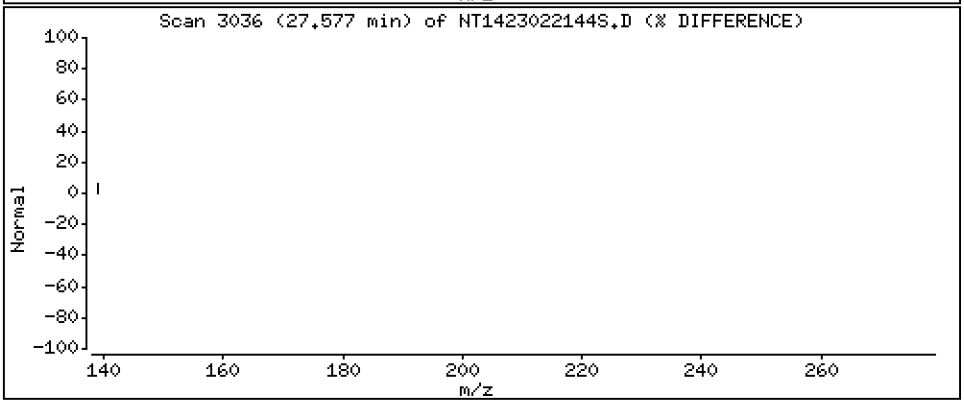












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Date : 22-FEB-2023 15:22

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MS1

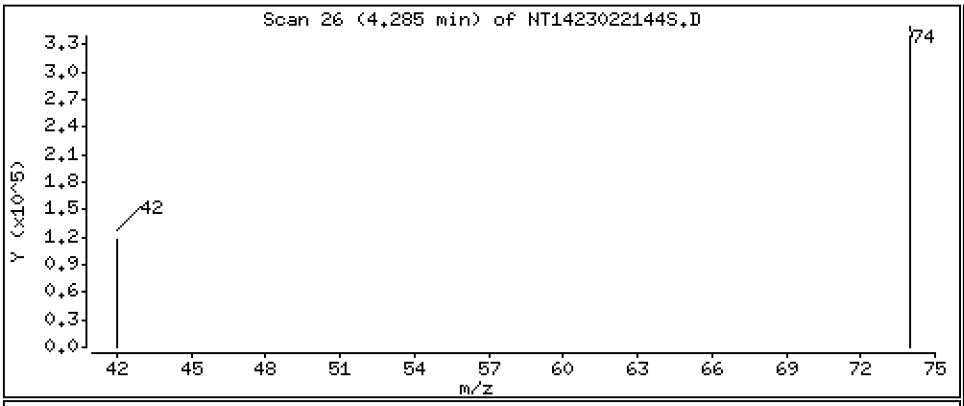
Operator: DSD

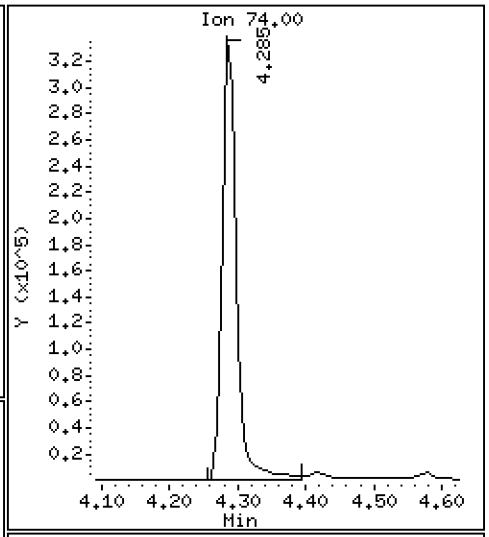
Column phase: ZB-5msi

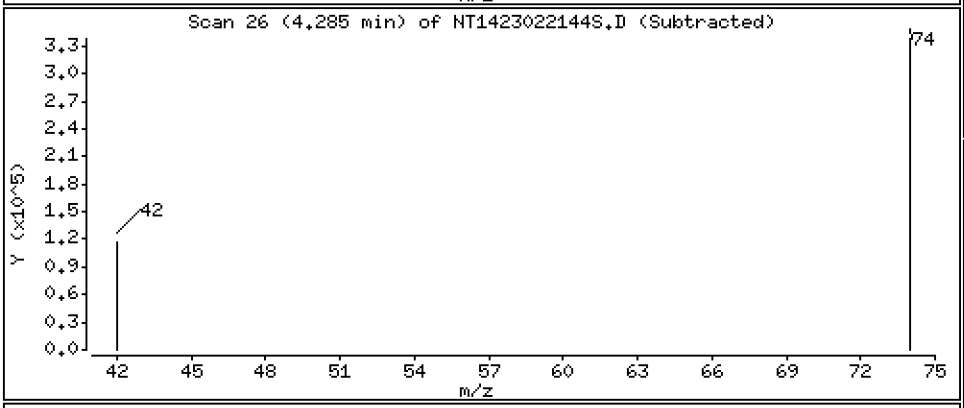
Column diameter: 0.25

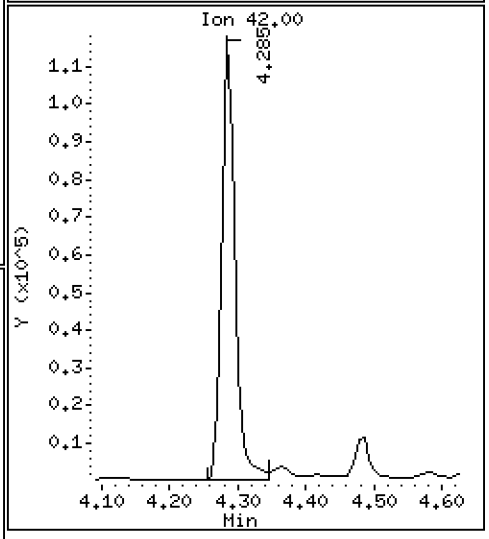
90 N-Nitrosodimethylamine

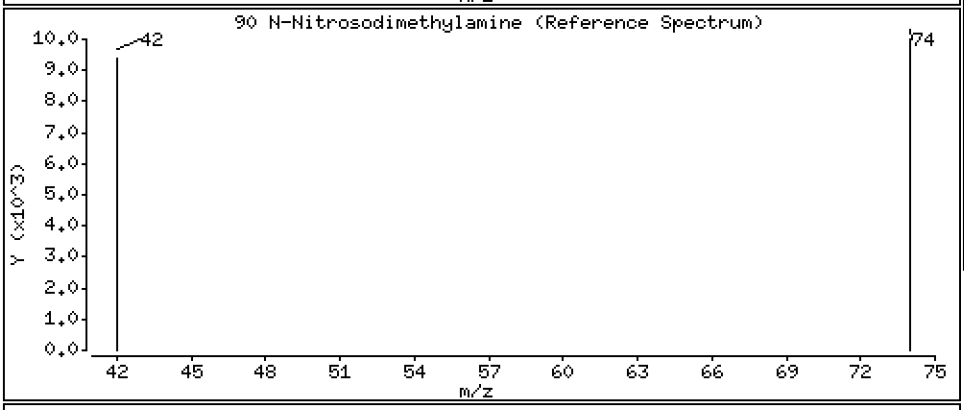
Concentration: 8.666 ug/mL

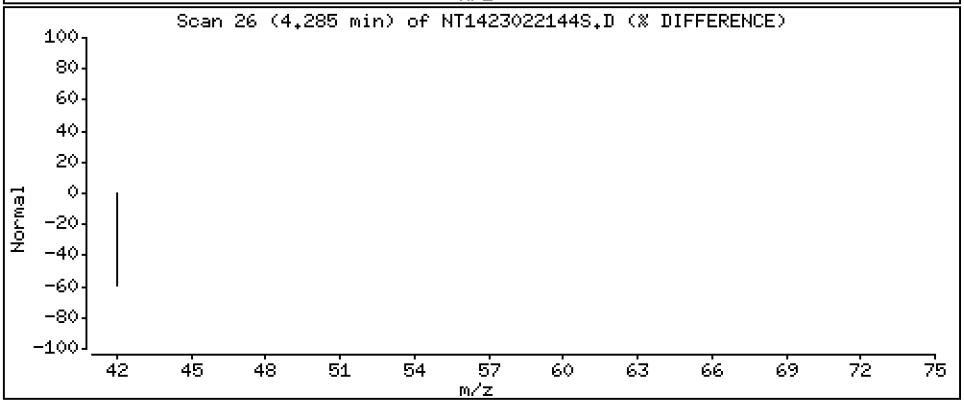












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT1423022144S.D
Lab Smp Id: BLA0393-MS2
Inj Date : 22-FEB-2023 15:22 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : BLA0393-MS1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Meth Date : 17-Jun-2023 09:15 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 32
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.393	6.385	(0.746)	362100	4.58351	4.584(R)
	3 Phenol	94	8.001	7.993	(0.933)	371473	3.09354	3.094
	7 1,3-Dichlorobenzene	146	8.503	8.503	(0.992)	290890	3.07529	3.075
*	8 1,4-Dichlorobenzene-d4	152	8.573	8.573	(1.000)	277989	4.00000	
	9 1,4-Dichlorobenzene	146	8.596	8.596	(1.003)	289437	3.20772	3.208
	11 Benzyl alcohol	79	8.868	8.867	(1.034)	257879	3.38721	3.387
	12 1,2-Dichlorobenzene	146	8.953	8.953	(1.044)	282653	3.15055	3.151
	13 2-Methylphenol	108	9.101	9.093	(1.062)	250688	3.03796	3.038
	15 4-Methylphenol	108	9.372	9.372	(1.093)	299473	3.26654	3.267
	16 N-Nitroso-di-n-propylamine	70	9.411	9.411	(1.098)	239000	3.34329	3.343
	22 2,4-Dimethylphenol	107	10.404	10.404	(0.942)	735211	8.77815	8.778
	24 Benzoic acid	105	10.621	10.606	(0.961)	310112	6.52757	6.528
	26 1,2,4-Trichlorobenzene	180	10.962	10.962	(0.992)	274542	2.98198	2.982
*	27 Naphthalene-d8	136	11.047	11.039	(1.000)	1004957	4.00000	
	30 Hexachlorobutadiene	225	11.456	11.449	(1.037)	167209	2.98549	2.985
	39 Dimethylphthalate	163	14.188	14.180	(0.968)	603439	3.69691	3.697
*	42 Acenaphthene-d10	162	14.660	14.645	(1.000)	535030	4.00000	
	50 Diethylphthalate	149	15.650	15.634	(1.067)	815846	3.99358	3.994
	54 N-Nitrosodiphenylamine	169	16.020	16.005	(0.906)	560979	3.50277	3.503
	57 Hexachlorobenzene	284	17.062	17.054	(0.965)	269158	3.34589	3.346
	58 Pentachlorophenol	266	17.434	17.426	(0.986)	471426	12.4899	12.49
*	59 Phenanthrene-d10	188	17.689	17.673	(1.000)	1238609	4.00000	
$	66 Terphenyl-d14	244	20.892	20.869	(0.917)	740920	3.75820	3.758(RH)
	67 Butylbenzylphthalate	149	21.829	21.813	(0.958)	452109	4.50847	4.508
*	69 Chrysene-d12	240	22.789	22.766	(1.000)	740543	4.00000	
*	77 Perylene-d12	264	25.243	25.212	(1.000)	573408	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.576	27.553	(1.092)	405954	3.75114	3.751
	90 N-Nitrosodimethylamine	74	4.285	4.277	(0.500)	498245	8.66605	8.666

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022144S.D
Lab Smp Id: BLA0393-MS2
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 08:08
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	261796	130898	523592	277989	6.19
27 Naphthalene-d8	959301	479651	1918602	1004957	4.76
42 Acenaphthene-d10	503659	251830	1007318	535030	6.23
59 Phenanthrene-d10	1179954	589977	2359908	1238609	4.97
69 Chrysene-d12	887360	443680	1774720	740543	-16.55
77 Perylene-d12	652371	326186	1304742	573408	-12.10

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.05	0.07
42 Acenaphthene-d10	14.65	14.15	15.15	14.66	0.11
59 Phenanthrene-d10	17.67	17.17	18.17	17.69	0.09
69 Chrysene-d12	22.77	22.27	23.27	22.79	0.10
77 Perylene-d12	25.21	24.71	25.71	25.24	0.12

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022144S.D

Lab ID: BLA0393-MS2
nt14.i, 20230221B.b\SIM.b\SIMABN2.m,   22-FEB-2023 15:22

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1423022132S.D

On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221145S.D

Date : 22-FEB-2023 15:58

Client ID:

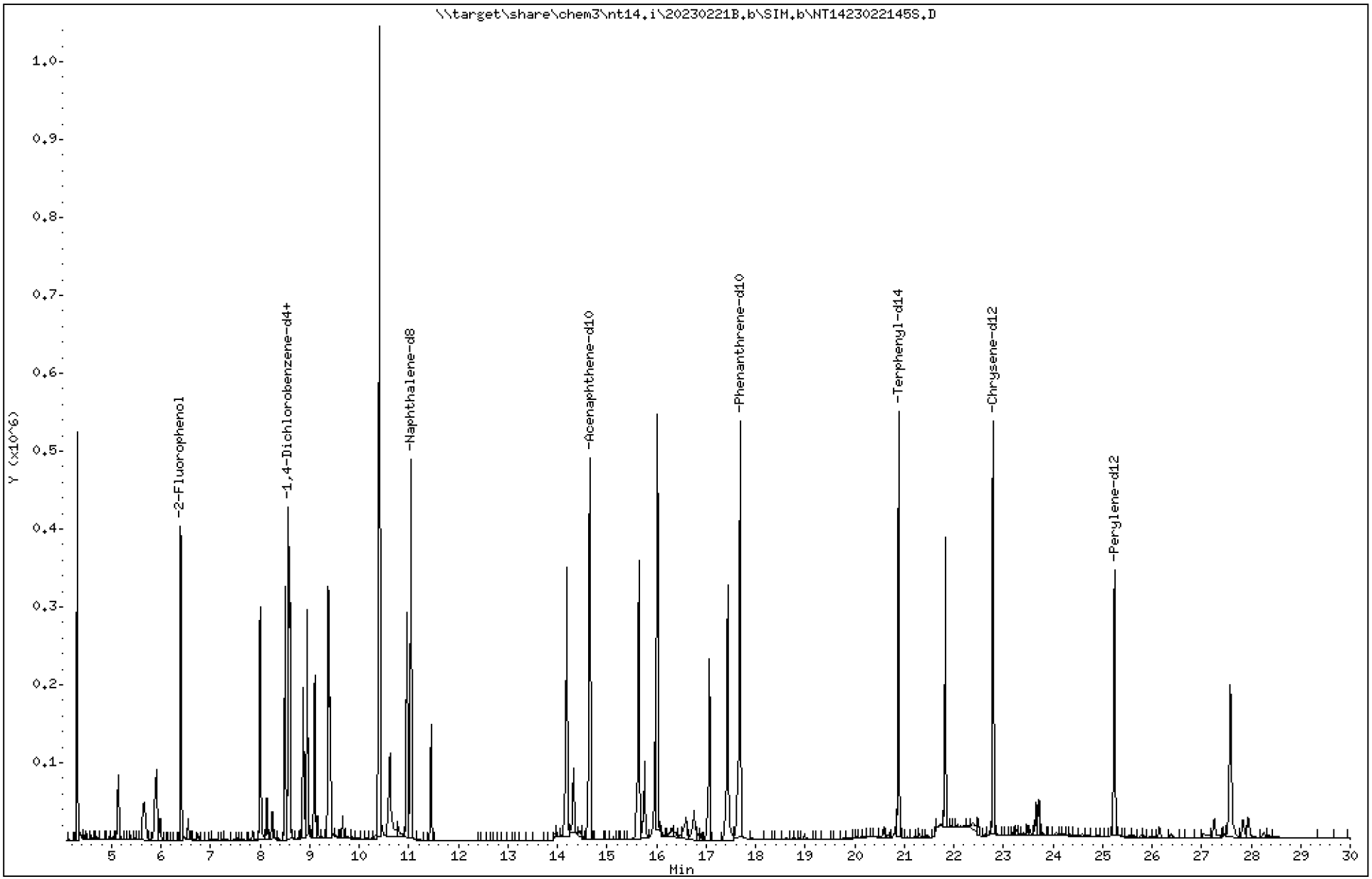
Instrument: nt14.i

Sample Info: BLA0393-MSD1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221455.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

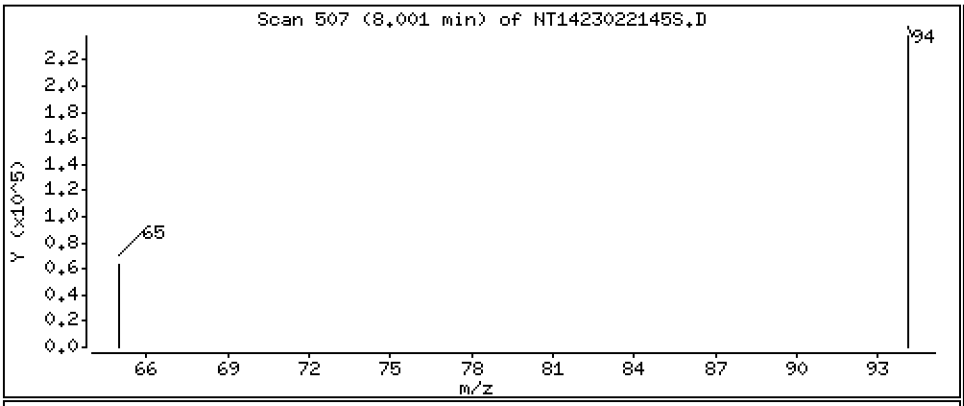
Operator: DSD

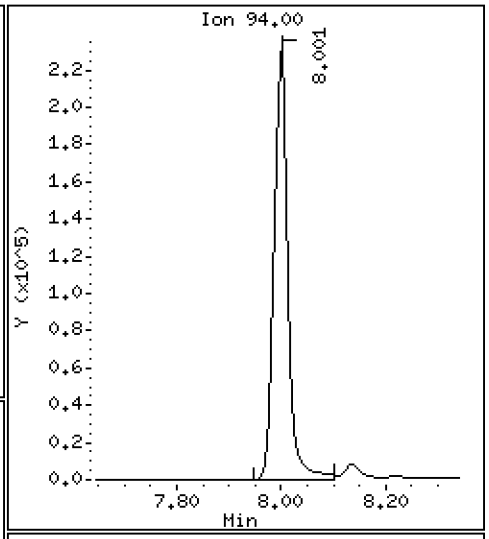
Column phase: ZB-5msi

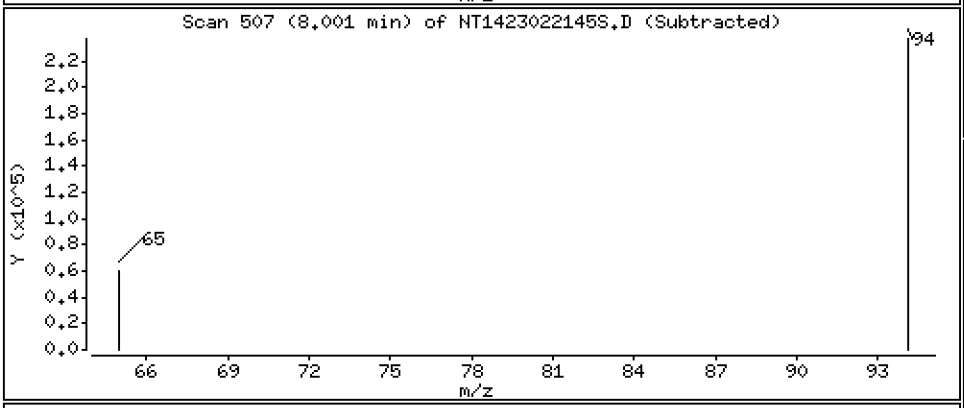
Column diameter: 0.25

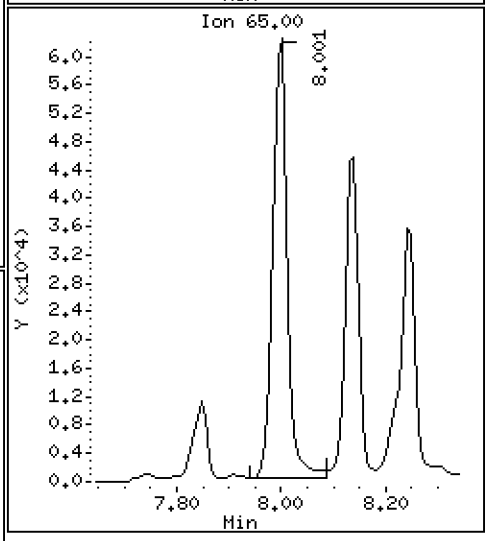
3 Phenol

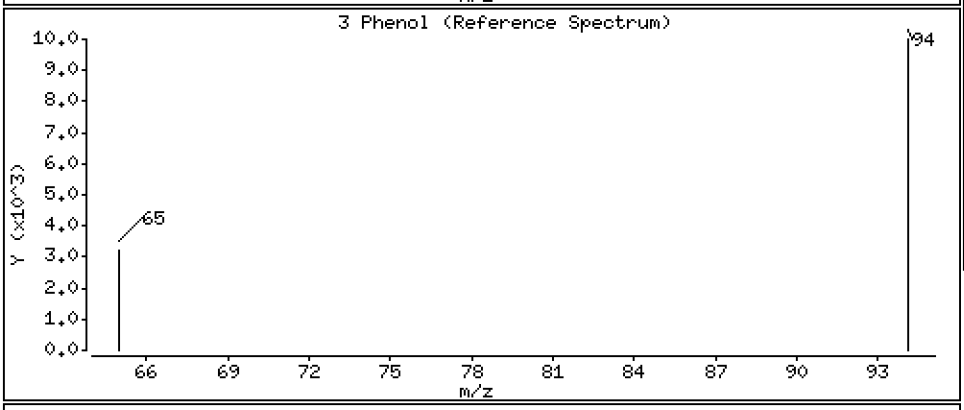
Concentration: 3.502 ug/mL

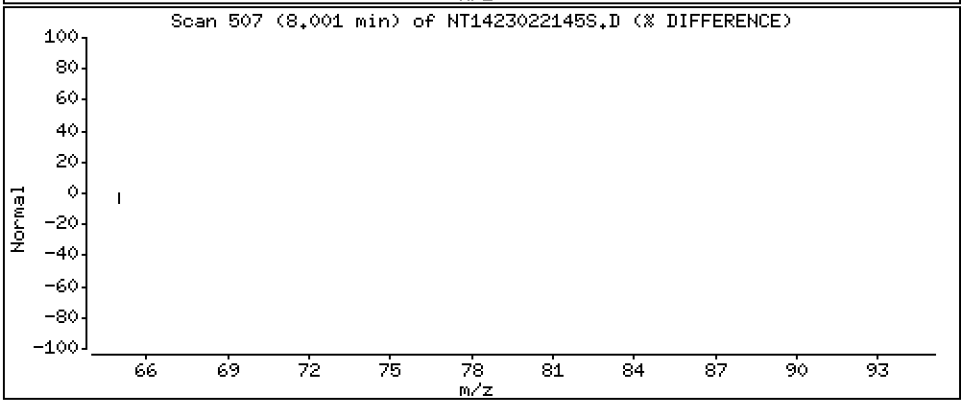












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221458.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

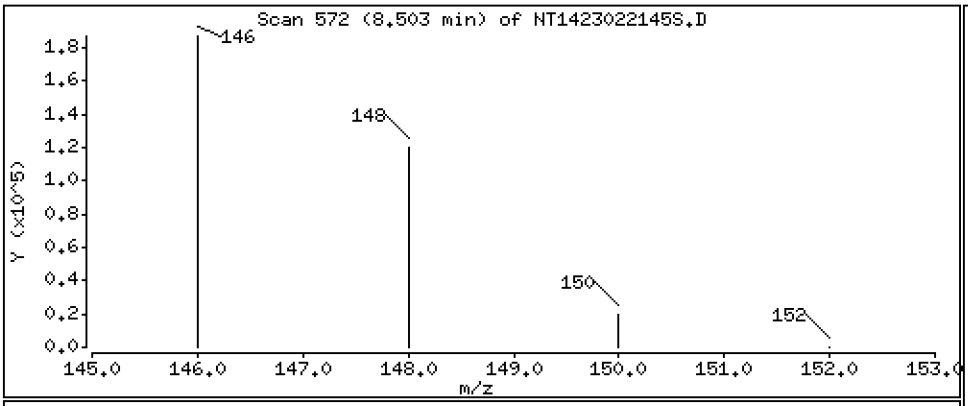
Operator: DSD

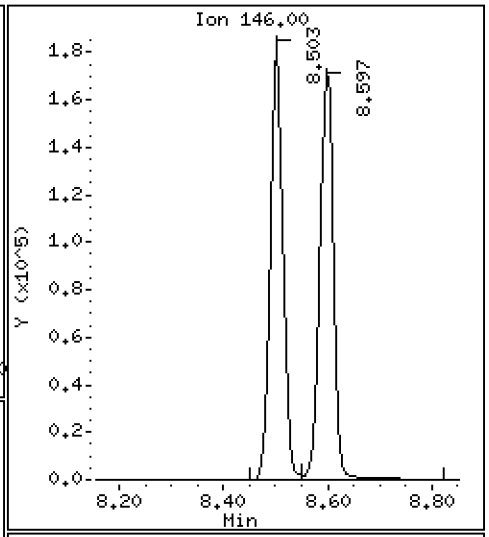
Column phase: ZB-5msi

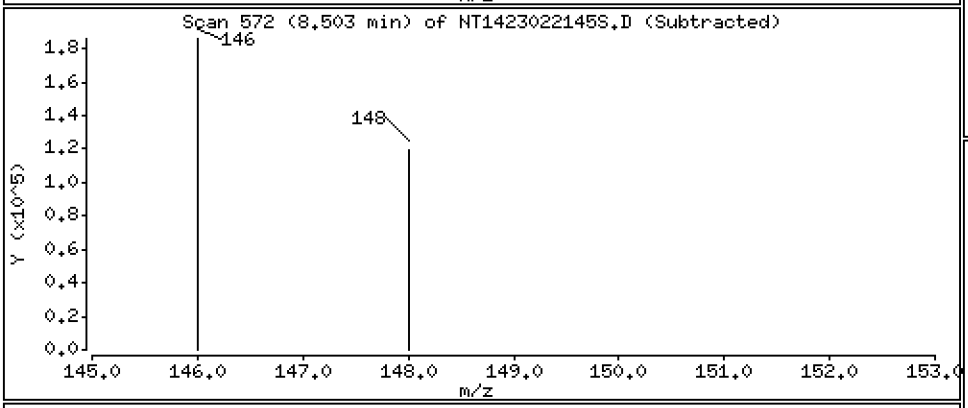
Column diameter: 0.25

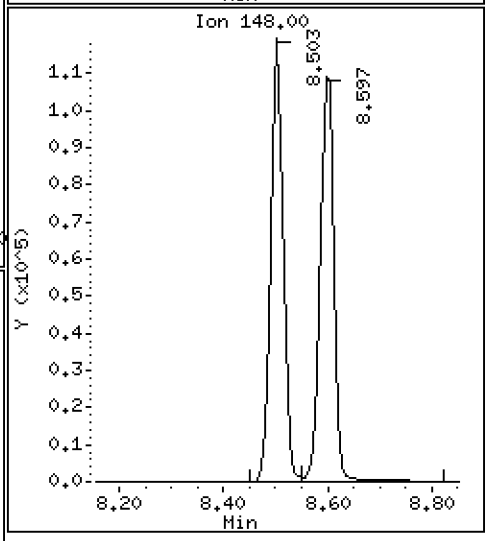
7 1,3-Dichlorobenzene

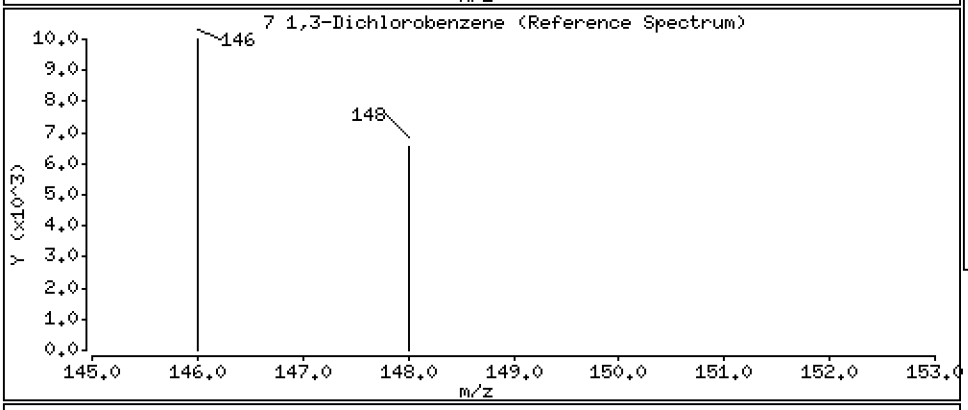
Concentration: 3.261 ug/mL

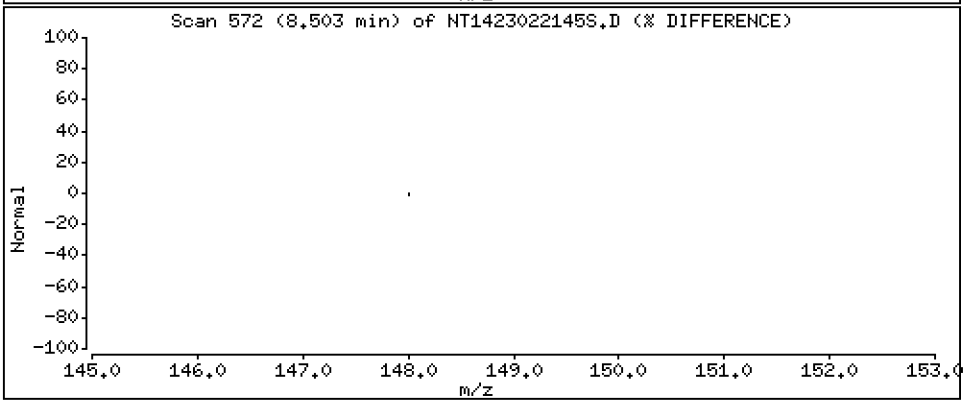












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221458.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

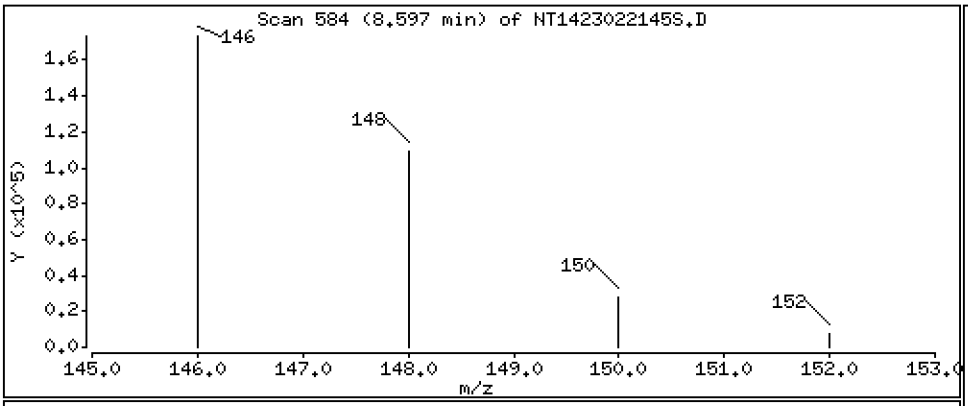
Operator: DSD

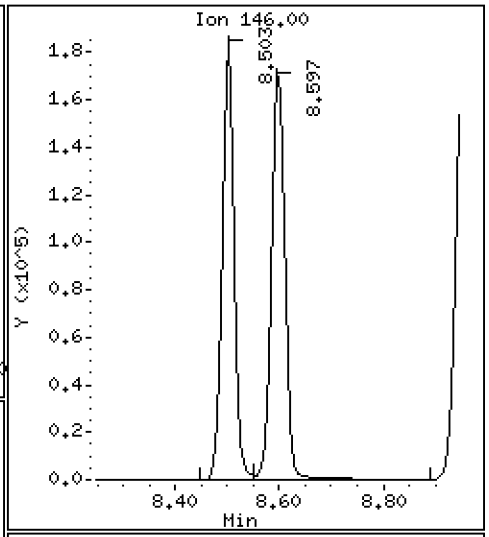
Column phase: ZB-5msi

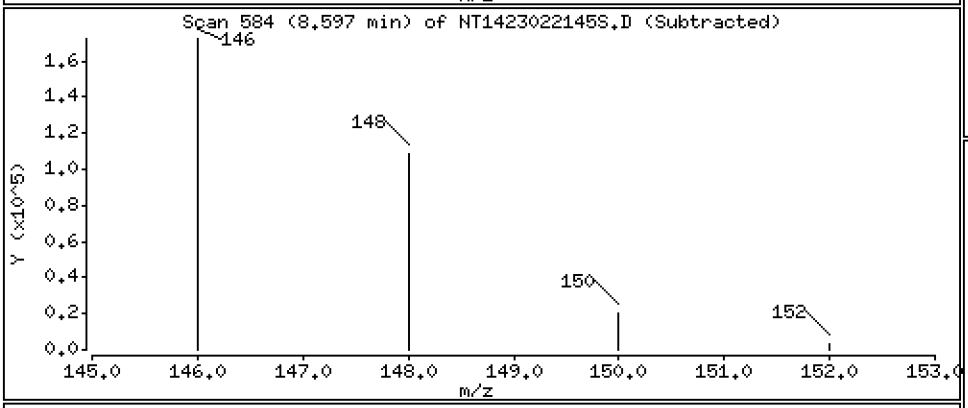
Column diameter: 0.25

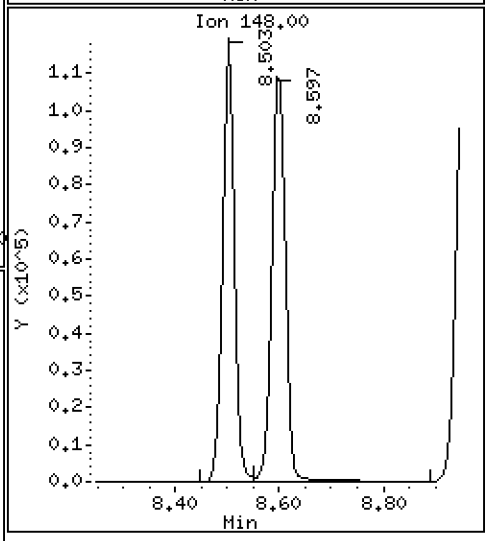
9 1,4-Dichlorobenzene

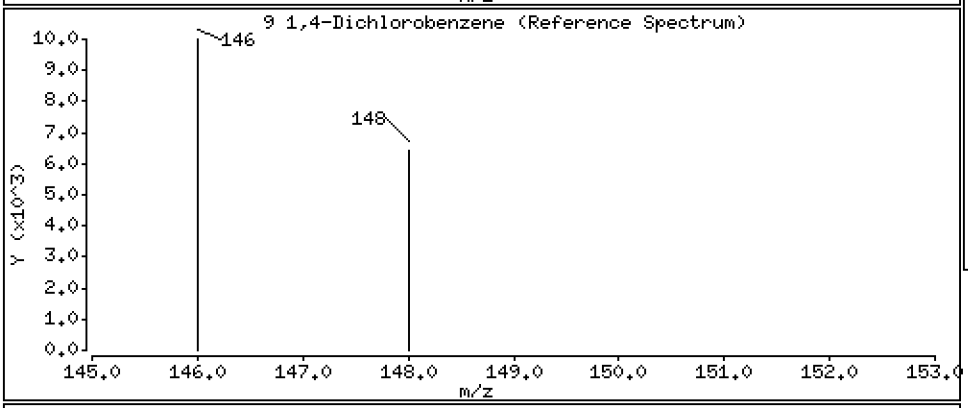
Concentration: 3.404 ug/mL

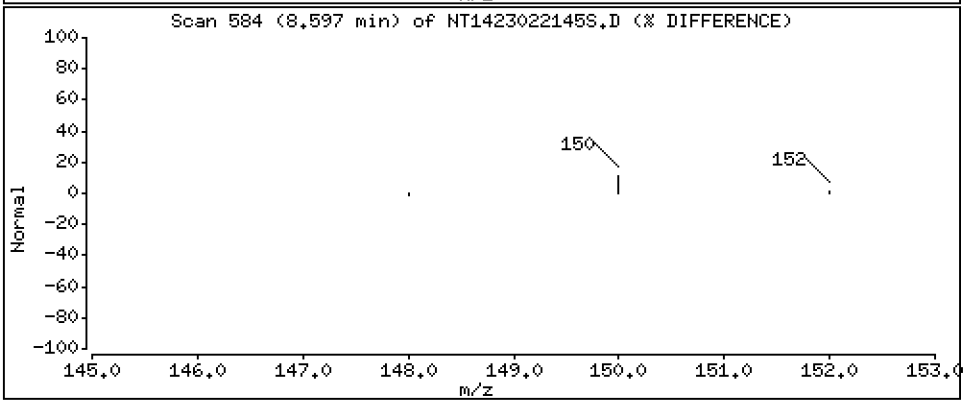












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221455.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

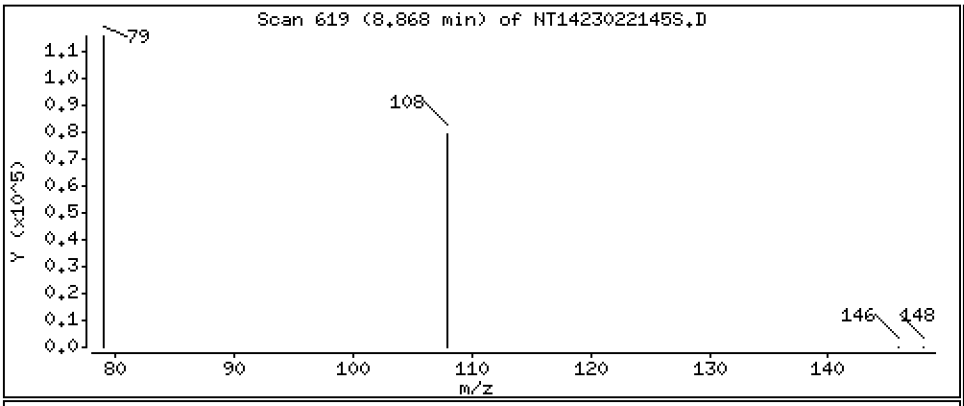
Operator: DSD

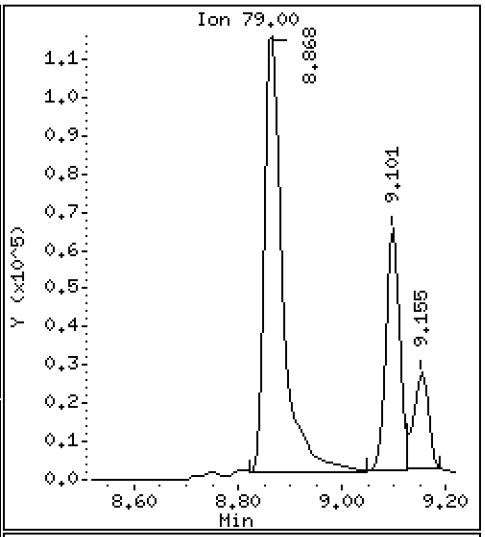
Column phase: ZB-5msi

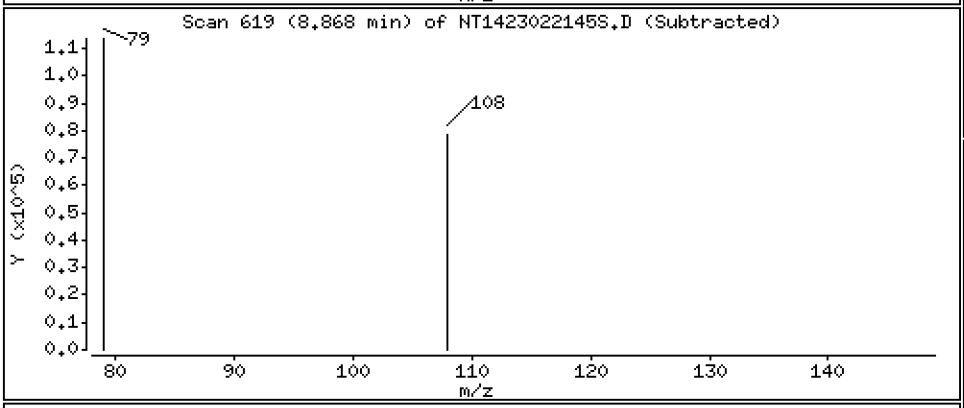
Column diameter: 0.25

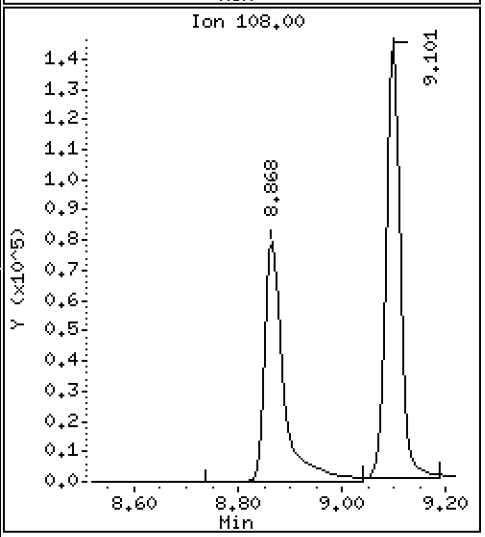
11 Benzyl alcohol

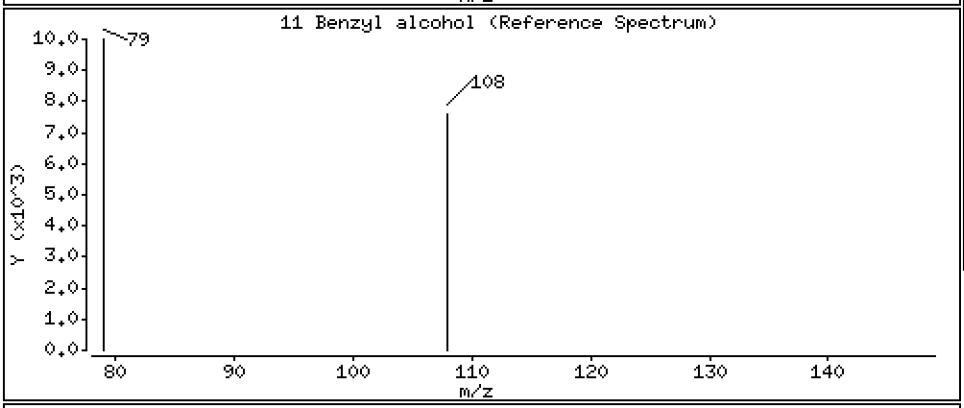
Concentration: 3.675 ug/mL

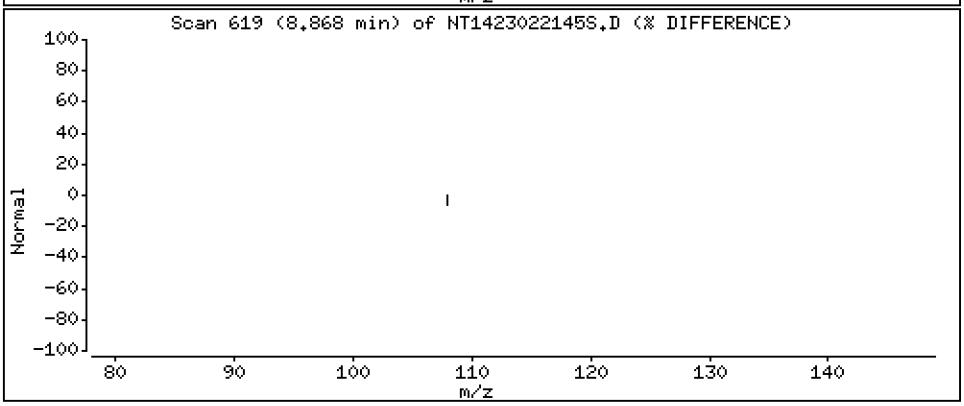












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221455.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

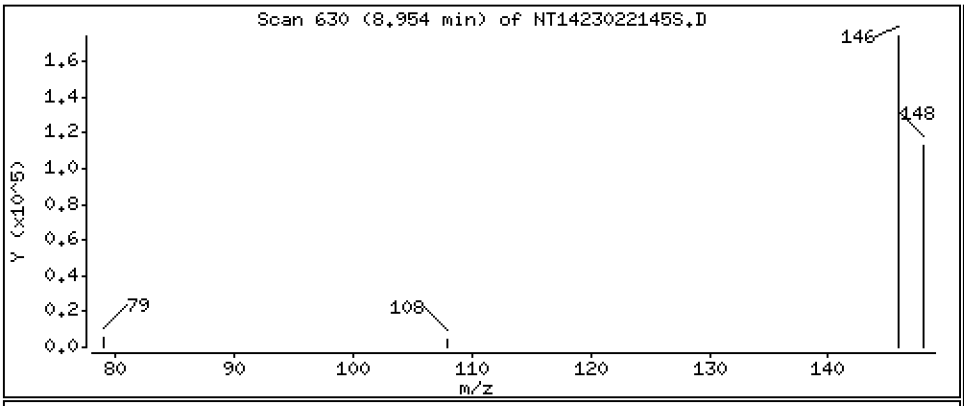
Operator: DSD

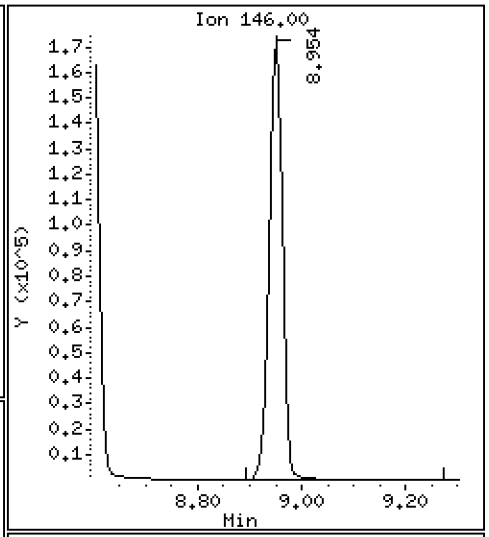
Column phase: ZB-5msi

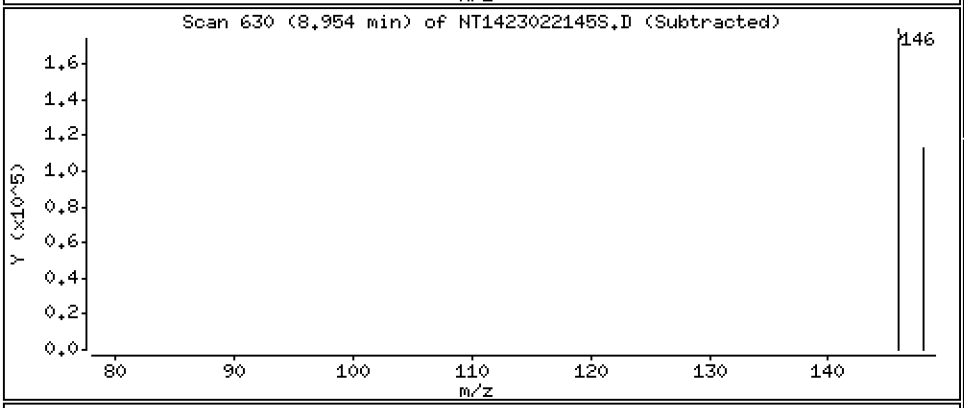
Column diameter: 0.25

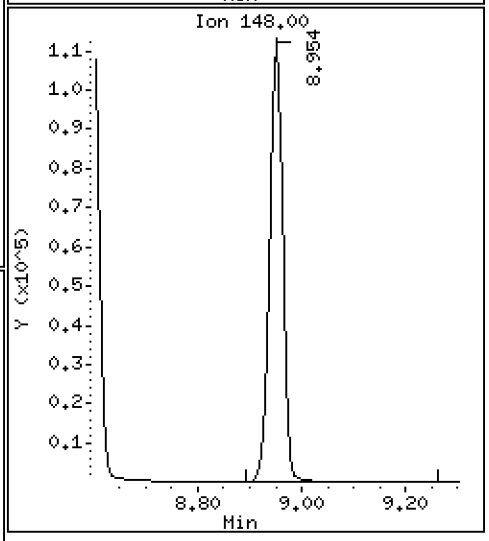
12 1,2-Dichlorobenzene

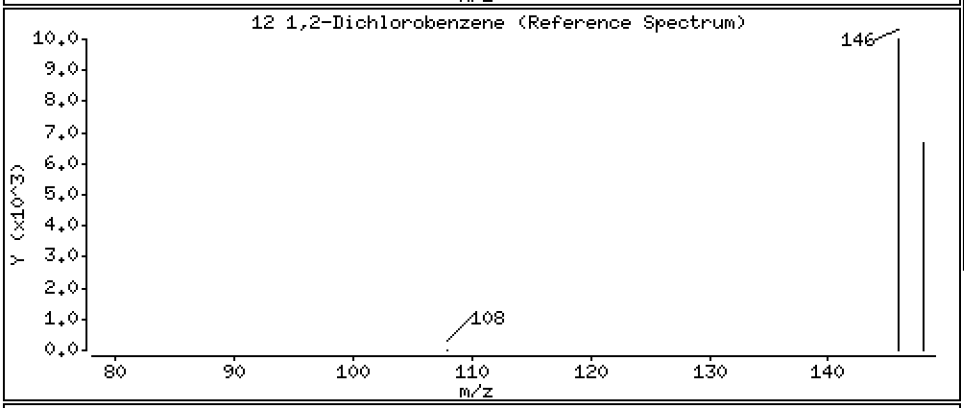
Concentration: 3.336 ug/mL

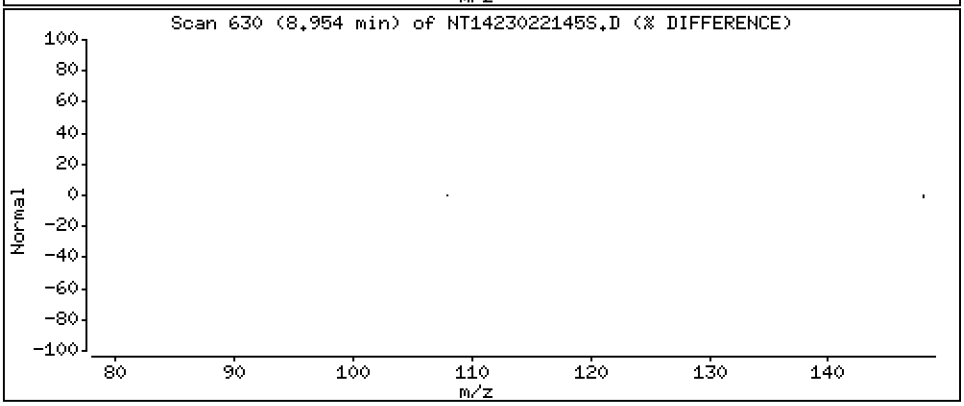












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221455.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

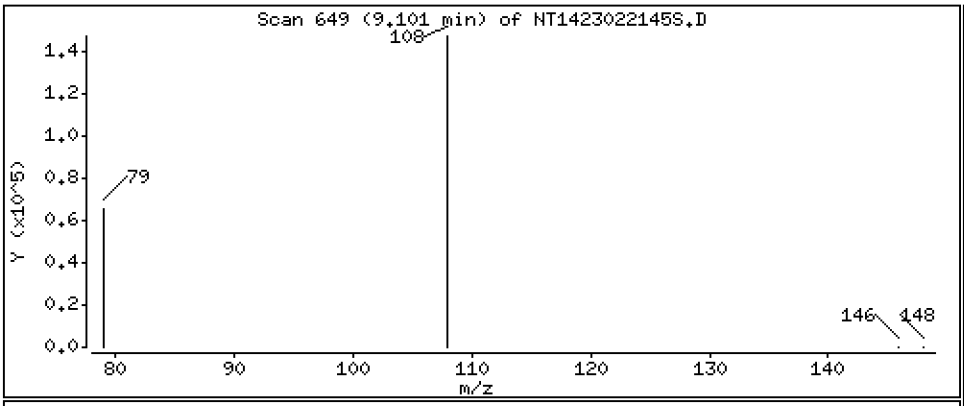
Operator: DSD

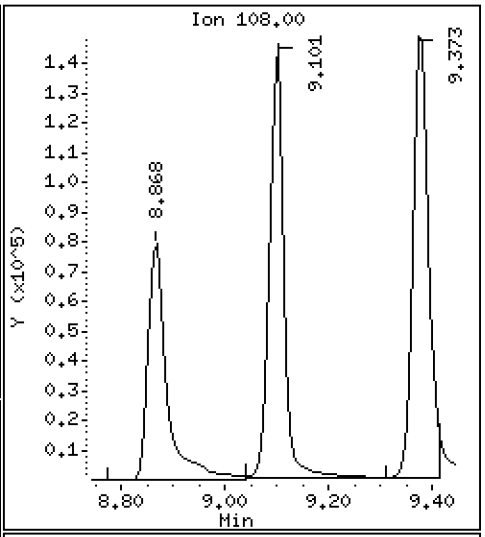
Column phase: ZB-5msi

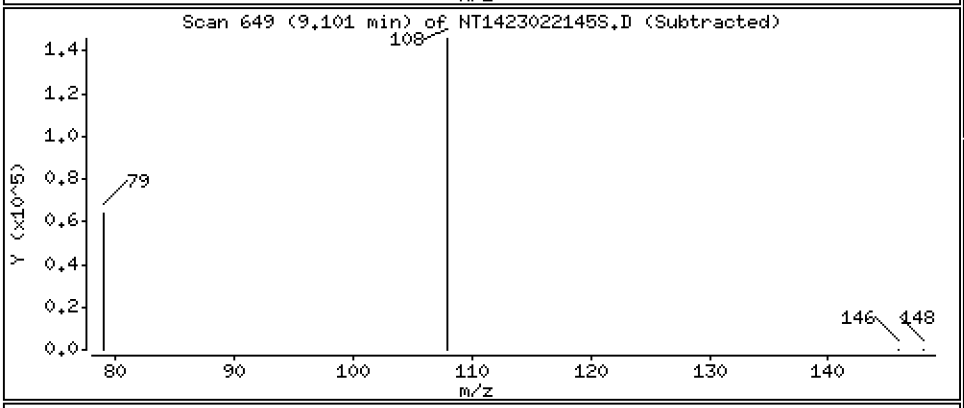
Column diameter: 0.25

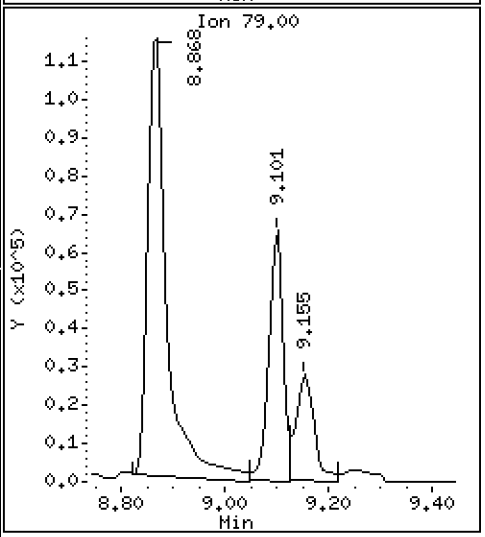
13 2-Methylphenol

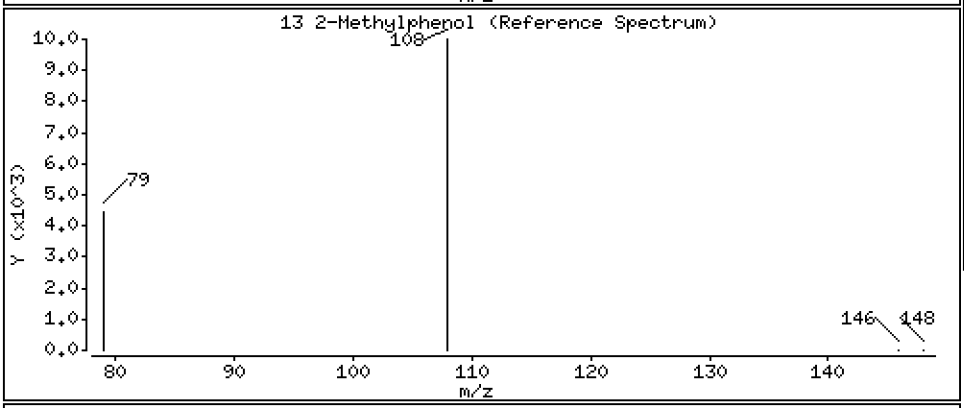
Concentration: 3.355 ug/mL

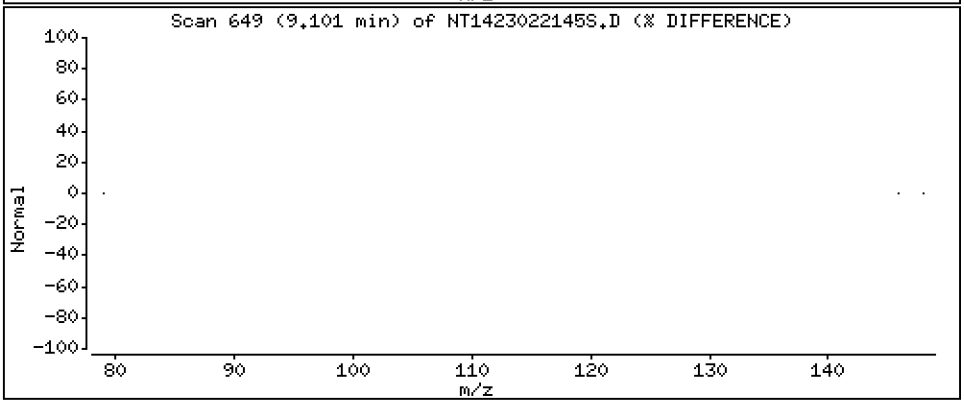












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221458.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

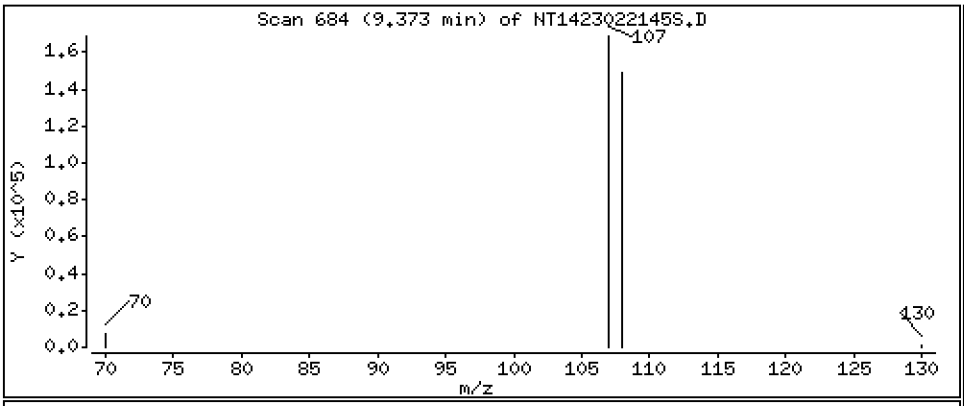
Operator: DSD

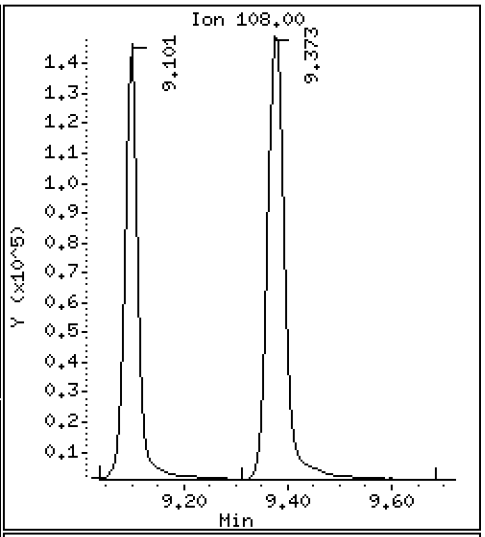
Column phase: ZB-5msi

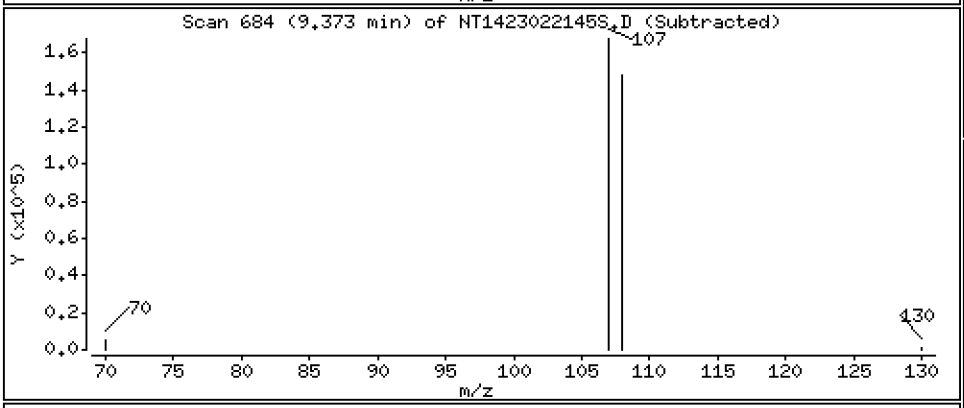
Column diameter: 0.25

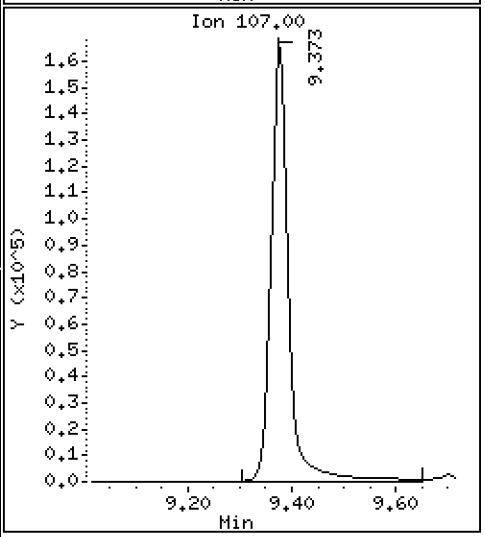
15 4-Methylphenol

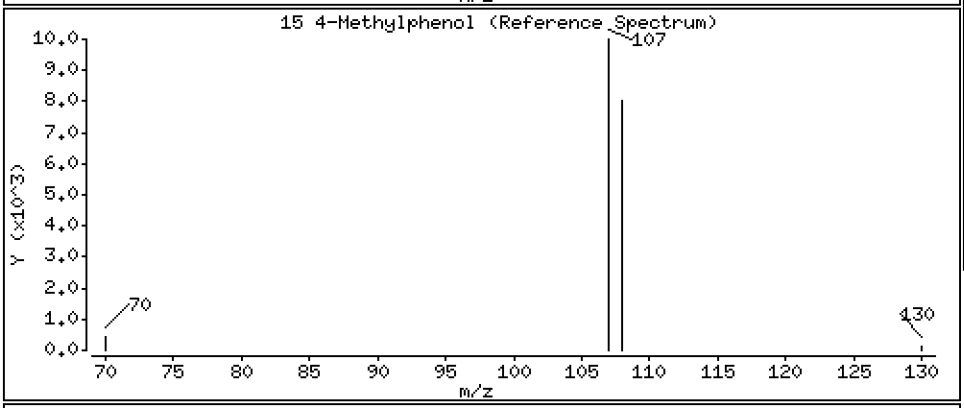
Concentration: 3.789 ug/mL

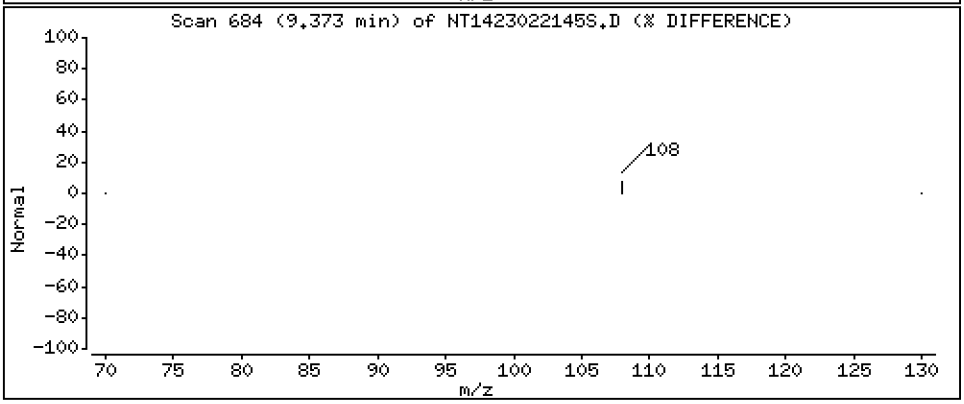












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221455.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

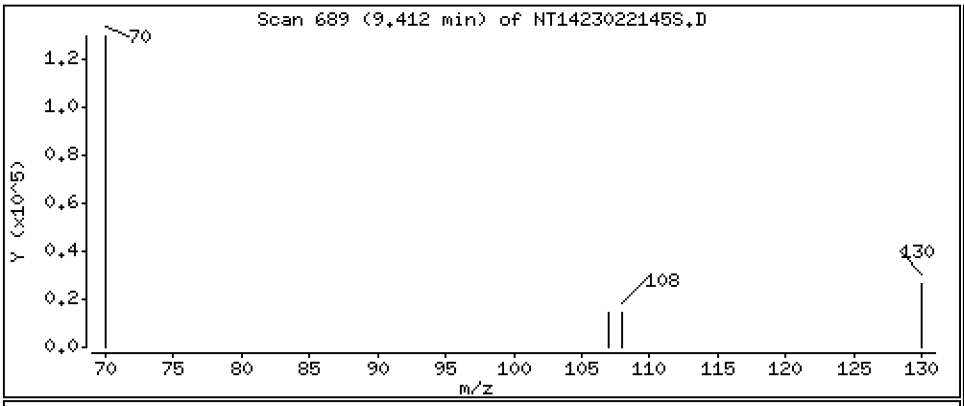
Operator: DSD

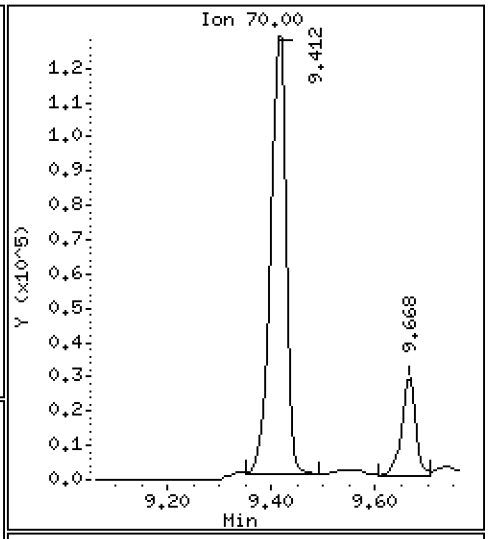
Column phase: ZB-5msi

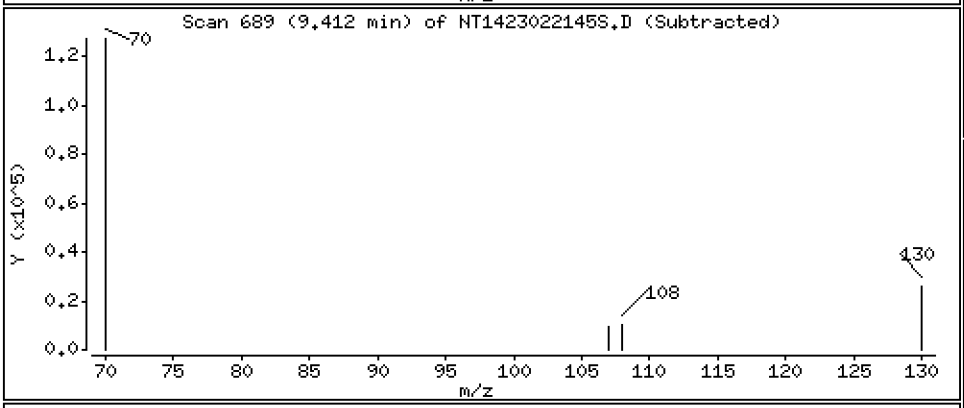
Column diameter: 0.25

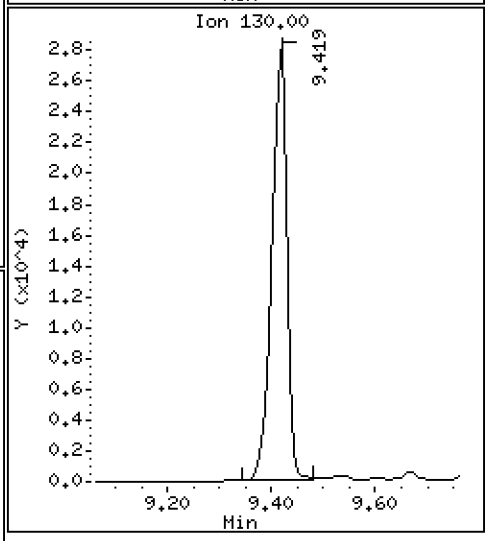
16 N-Nitroso-di-n-propylamine

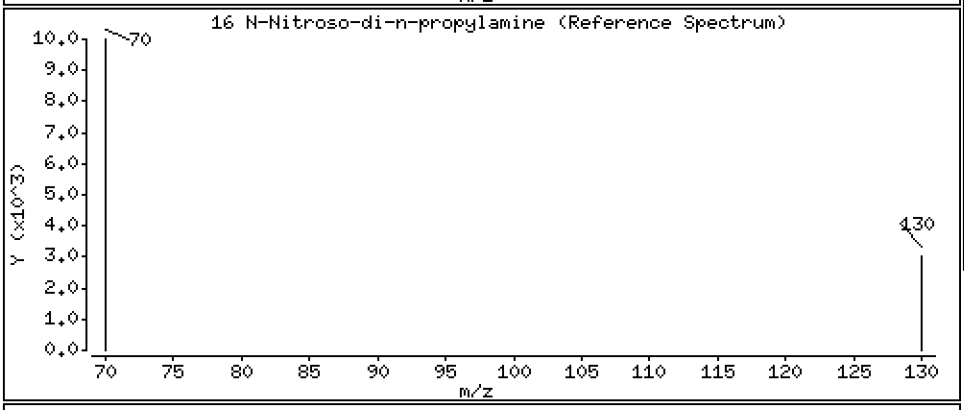
Concentration: 3.664 ug/mL

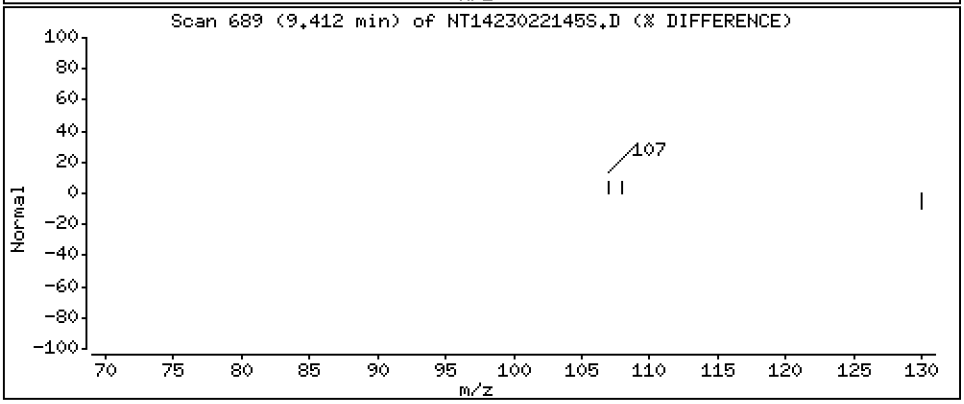












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

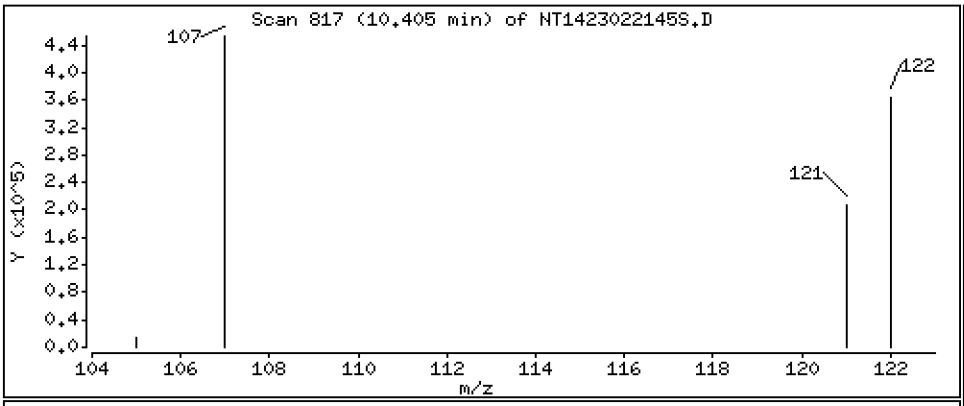
Operator: DSD

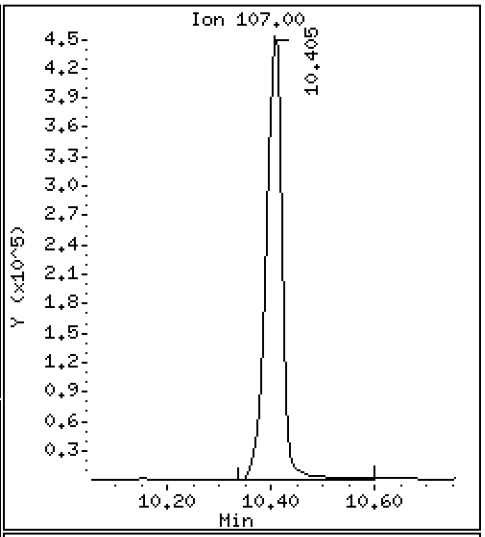
Column phase: ZB-5msi

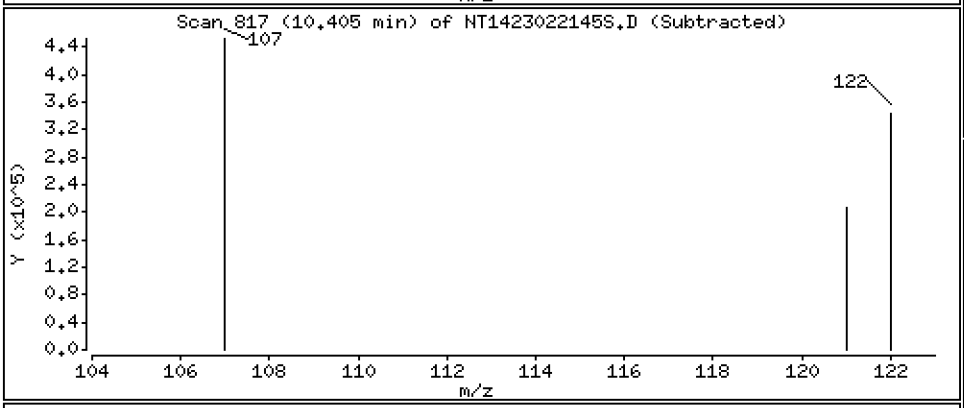
Column diameter: 0.25

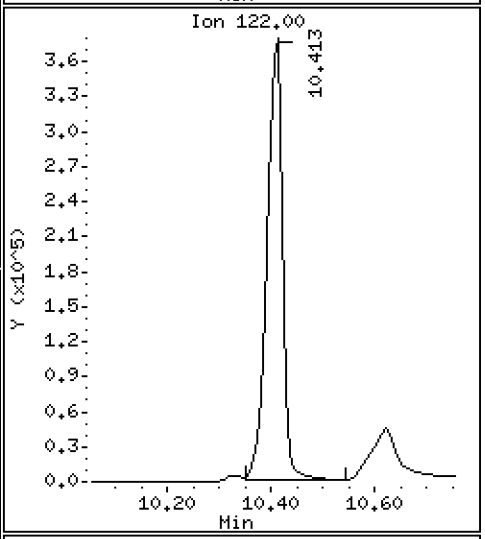
22 2,4-Dimethylphenol

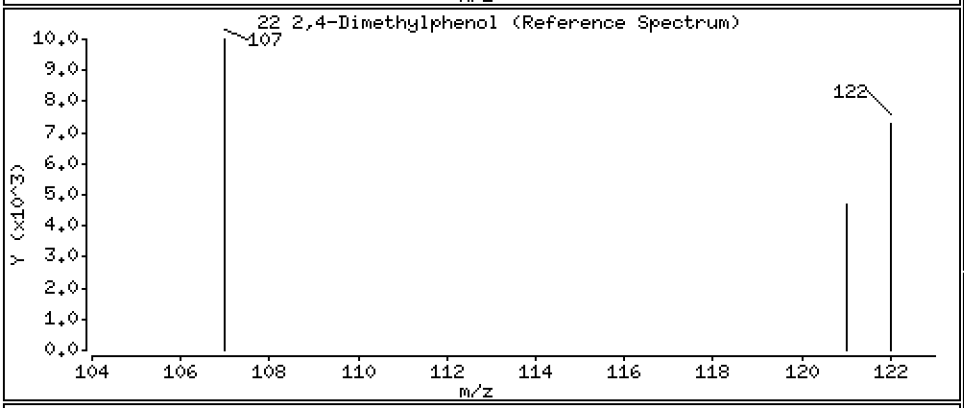
Concentration: 11.72 ug/mL

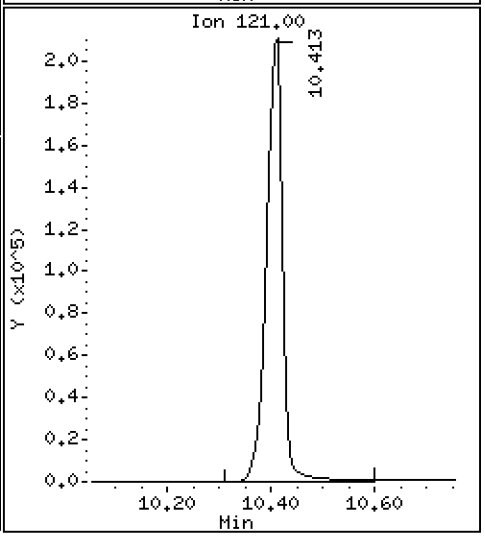


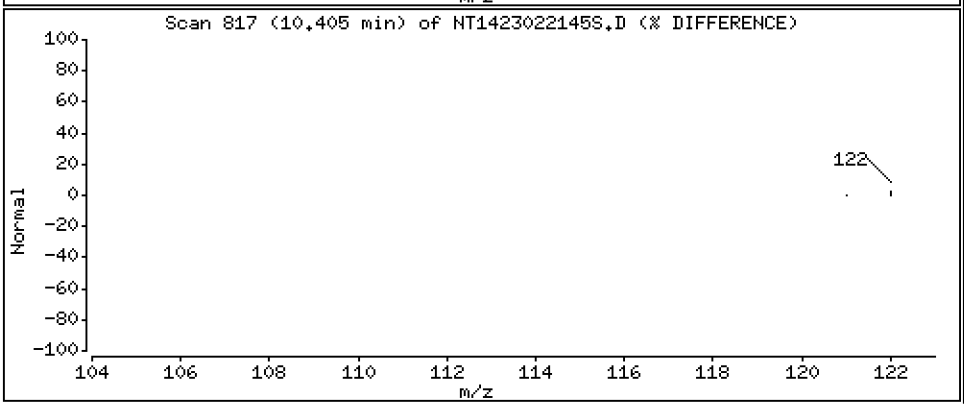












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

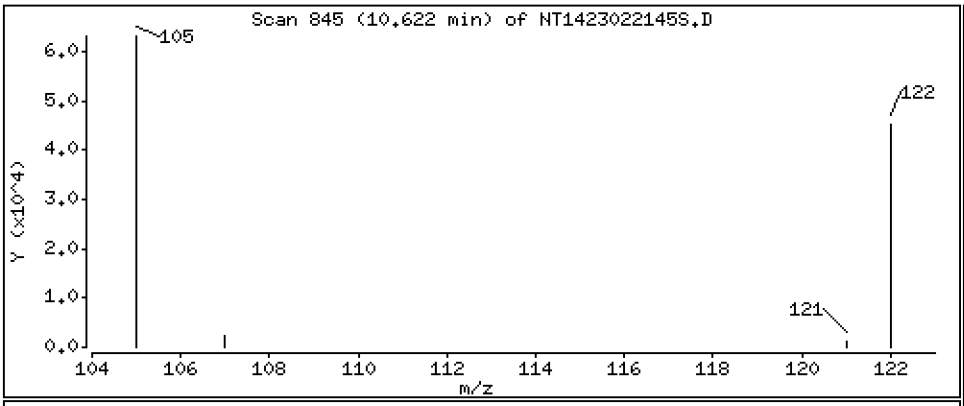
Operator: DSD

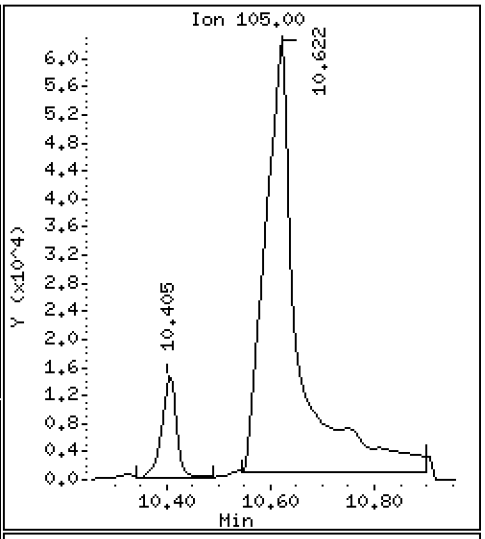
Column phase: ZB-5msi

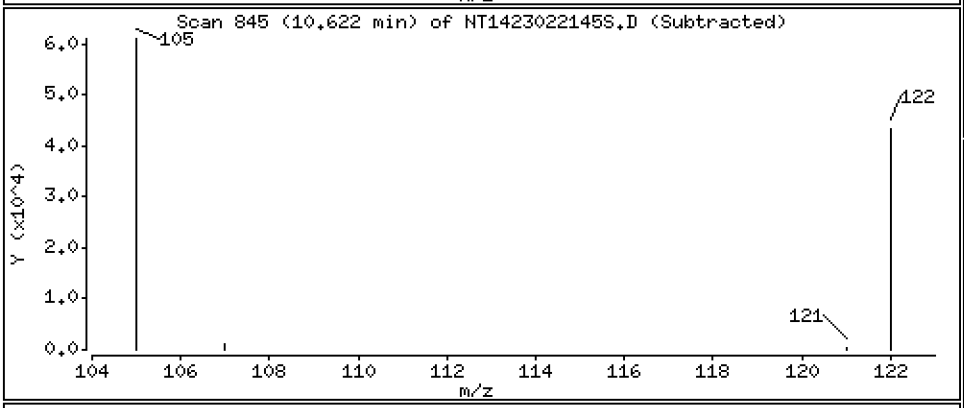
Column diameter: 0.25

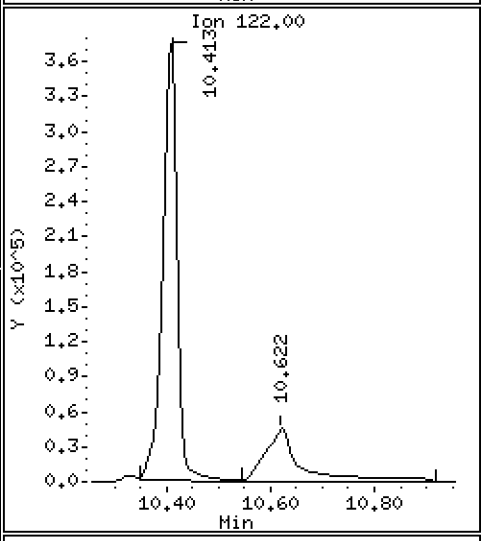
24 Benzoic acid

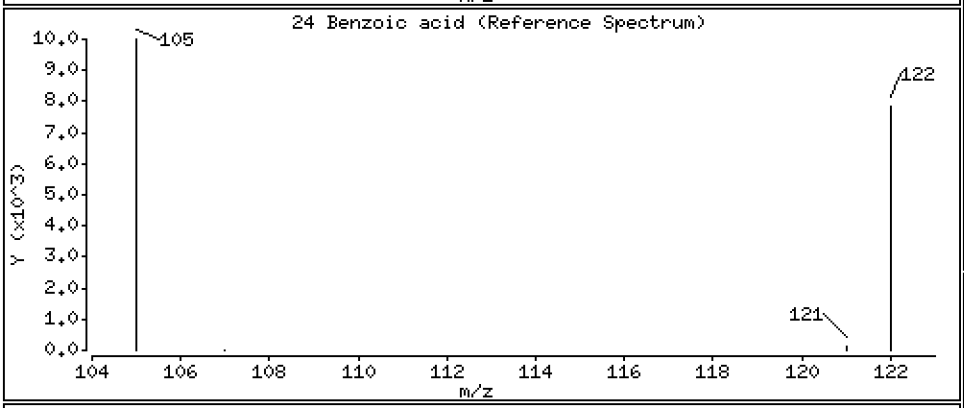
Concentration: 5.942 ug/mL

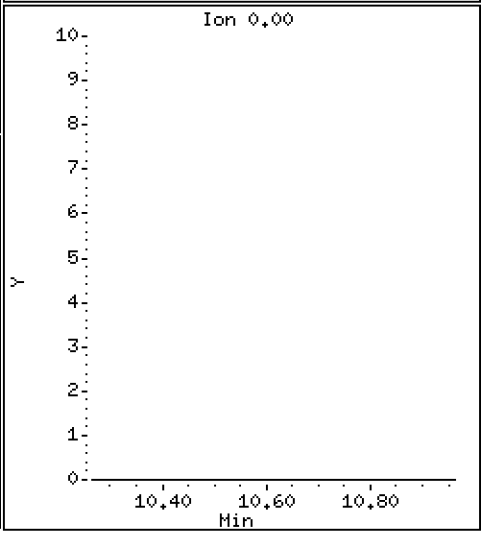


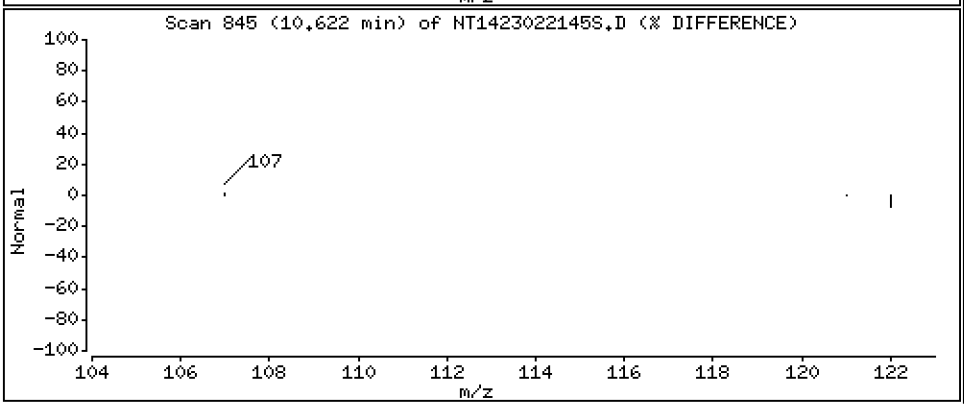












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

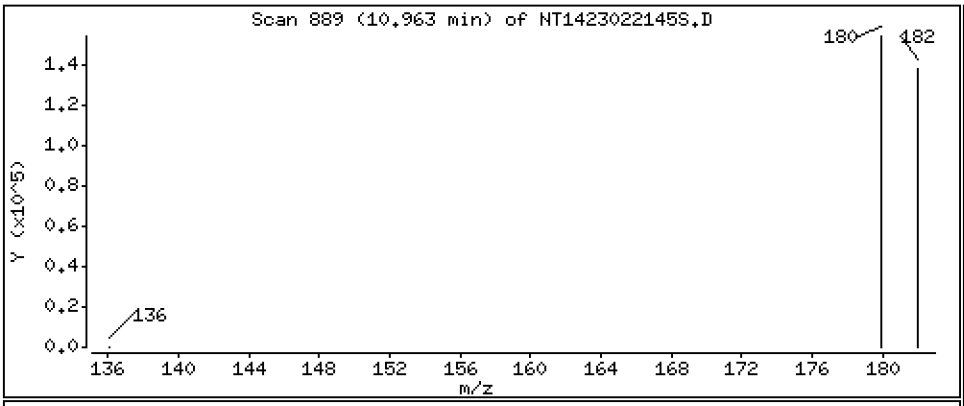
Operator: DSD

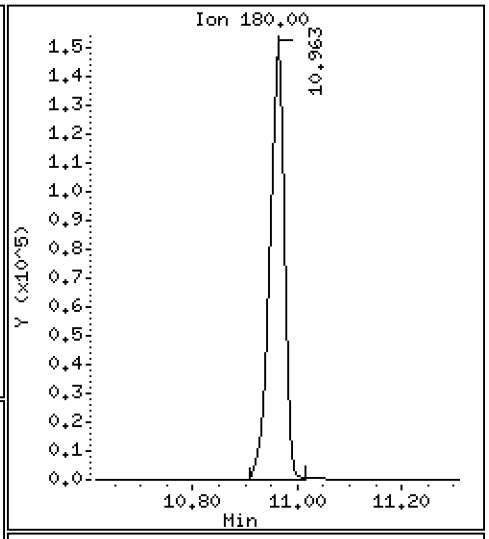
Column phase: ZB-5msi

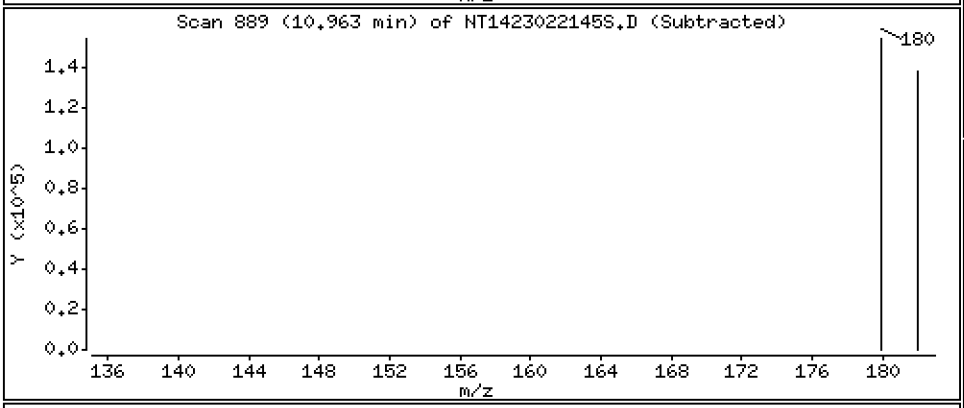
Column diameter: 0.25

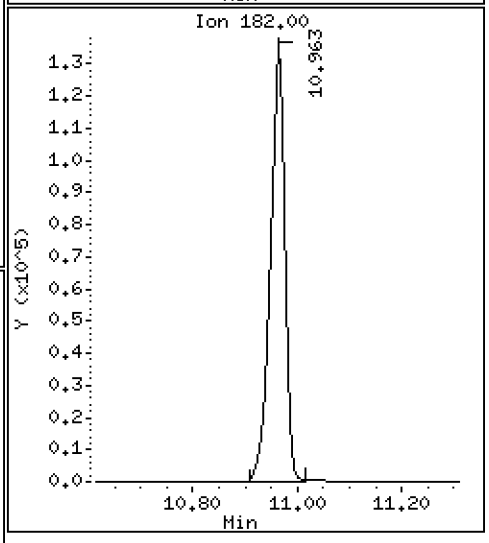
26 1,2,4-Trichlorobenzene

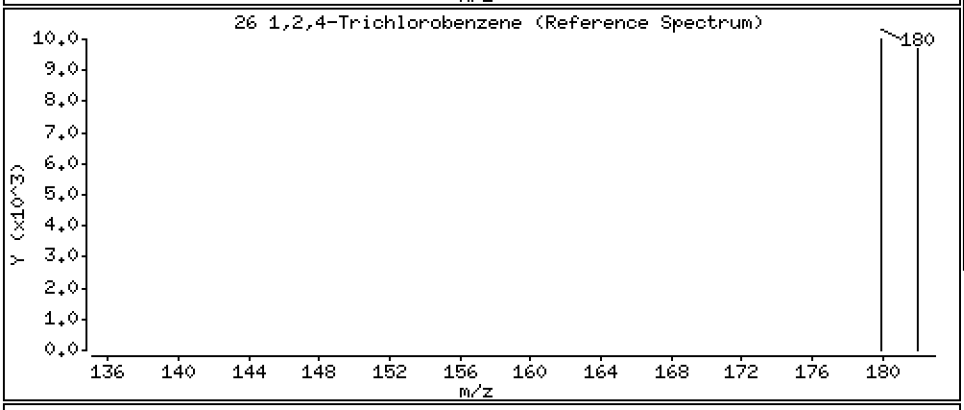
Concentration: 3.196 ug/mL

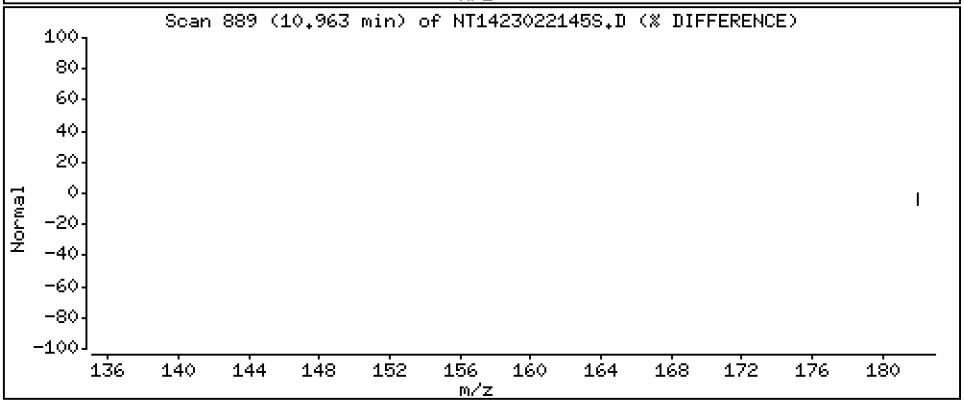












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

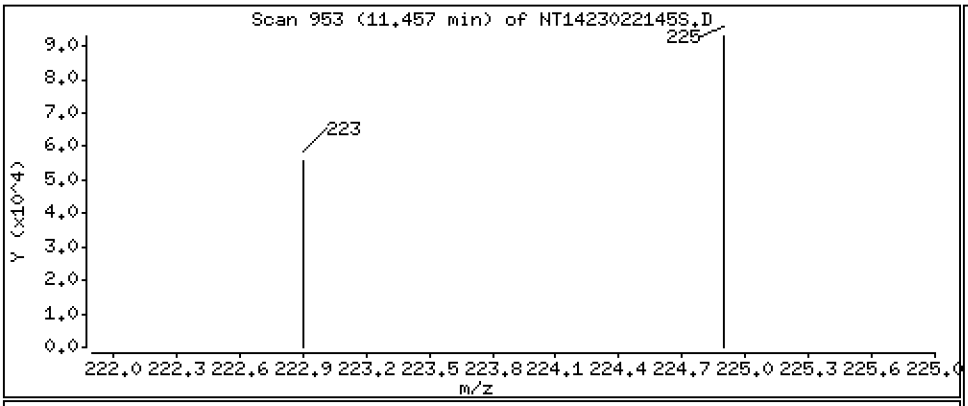
Operator: DSD

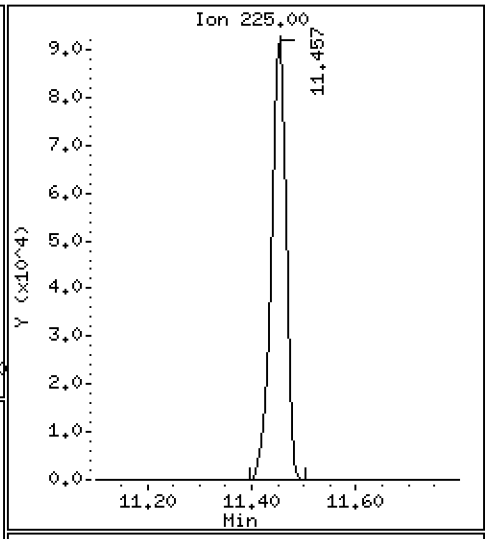
Column phase: ZB-5msi

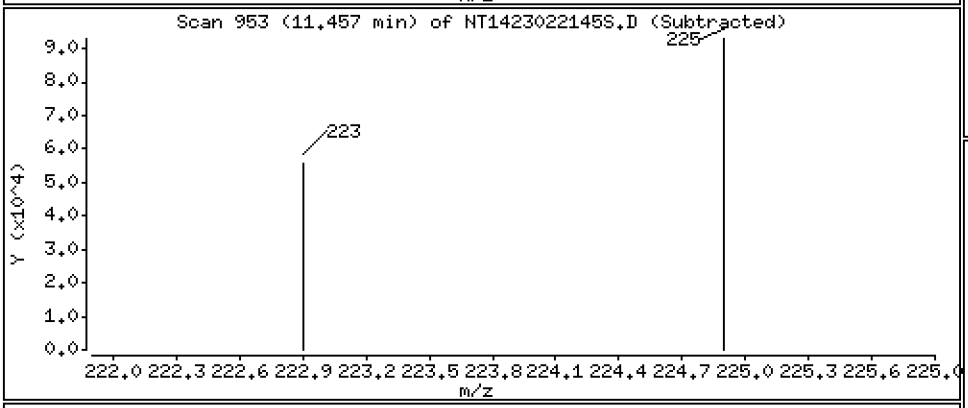
Column diameter: 0.25

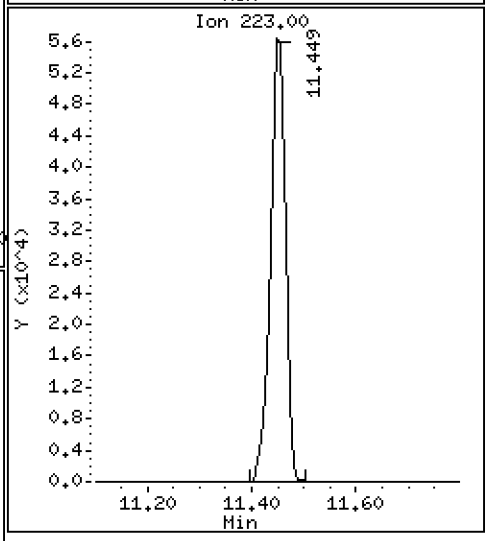
30 Hexachlorobutadiene

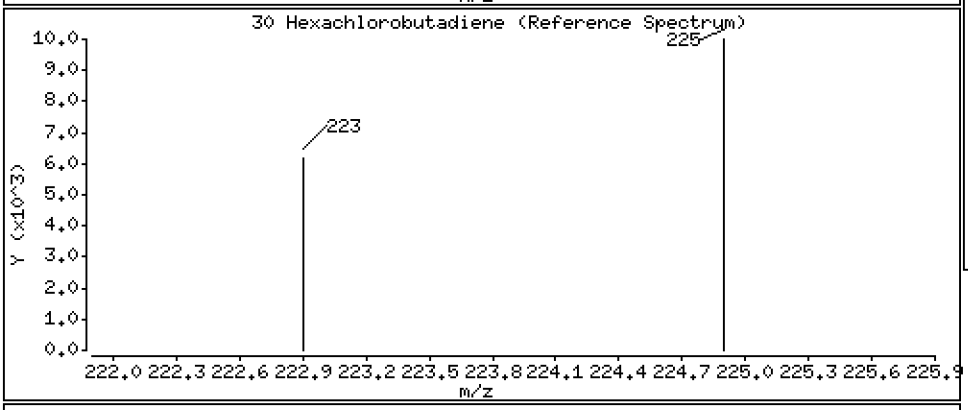
Concentration: 3.192 ug/mL

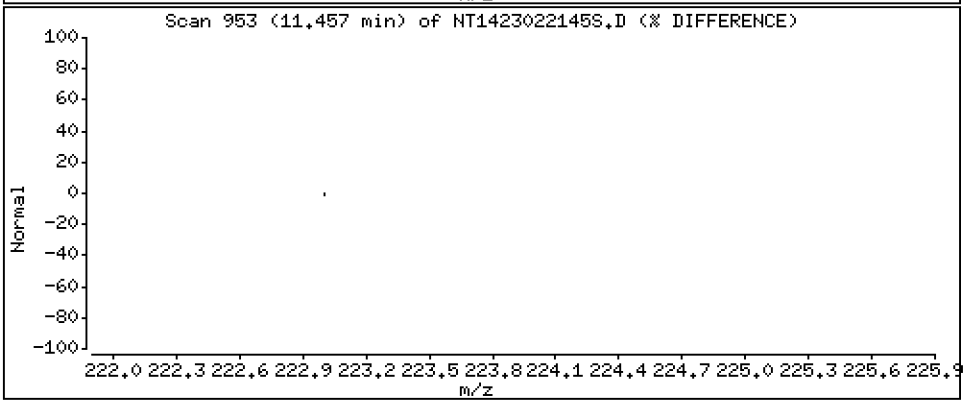












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

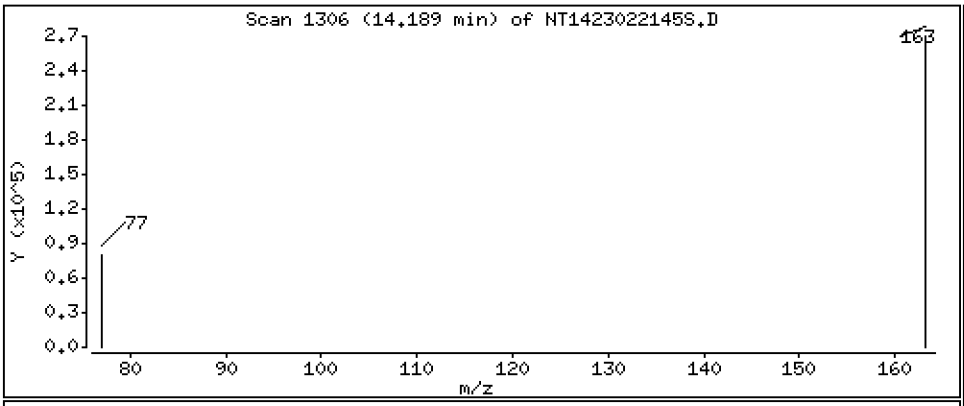
Operator: DSD

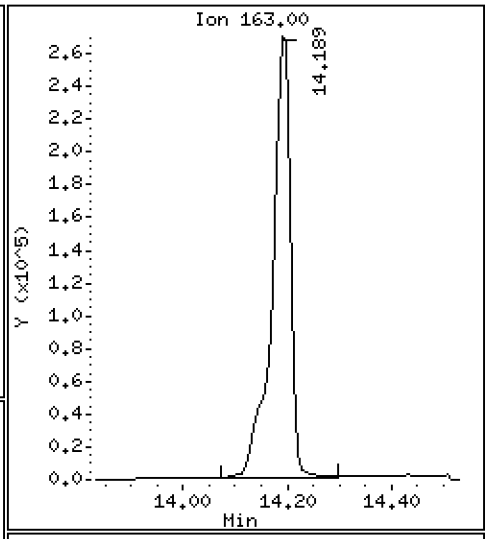
Column phase: ZB-5msi

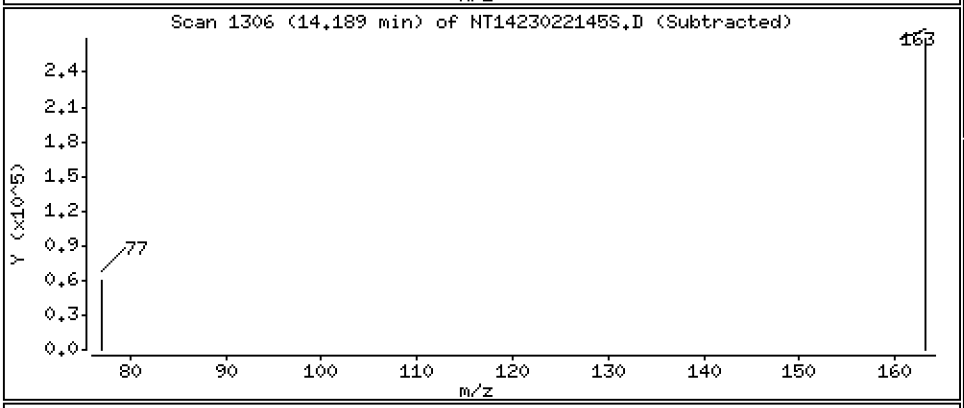
Column diameter: 0.25

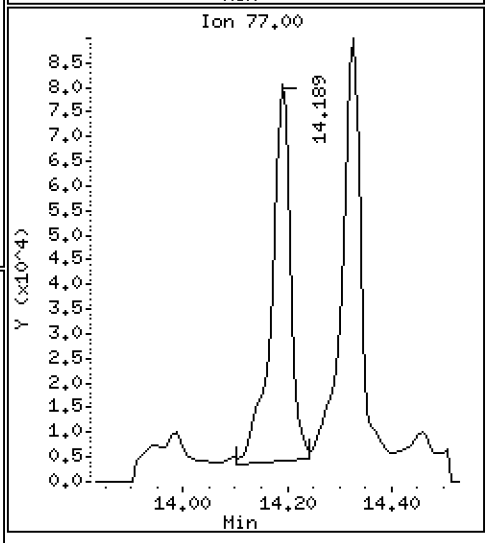
39 Dimethylphthalate

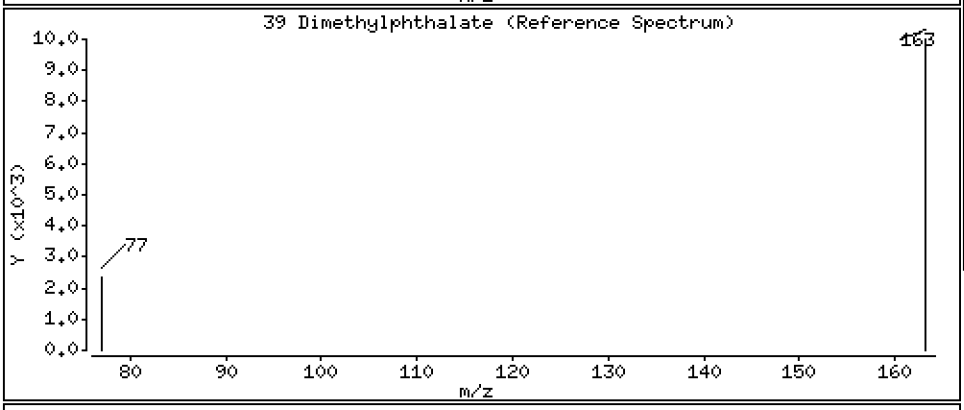
Concentration: 3.963 ug/mL

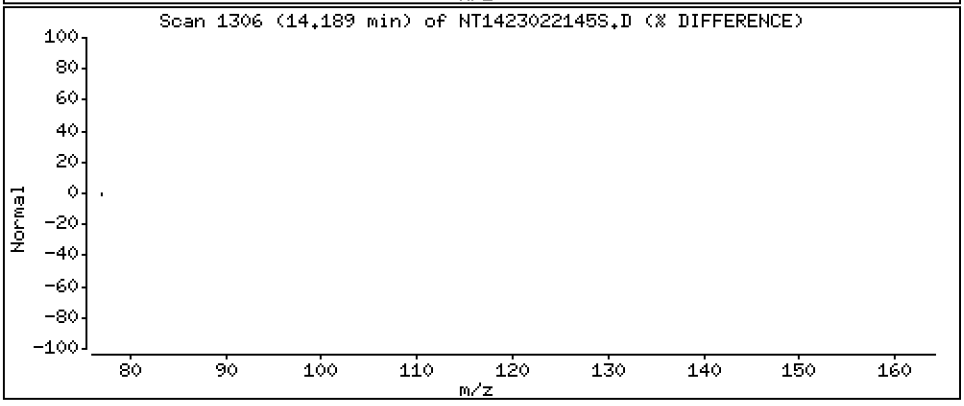












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

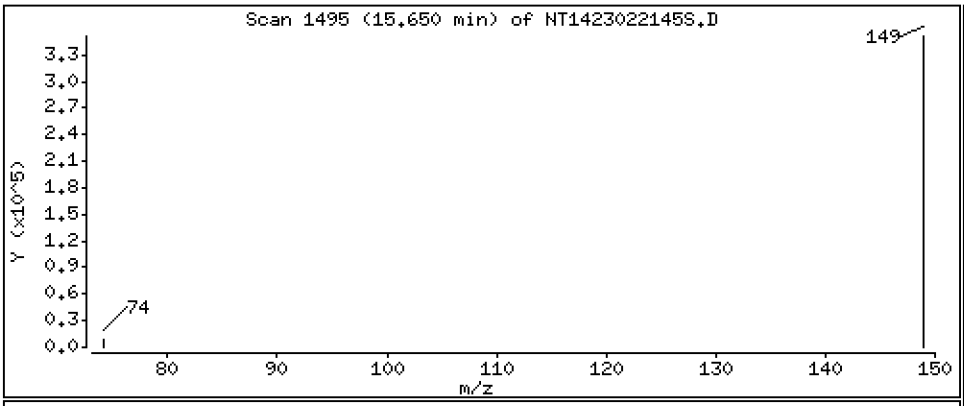
Operator: DSD

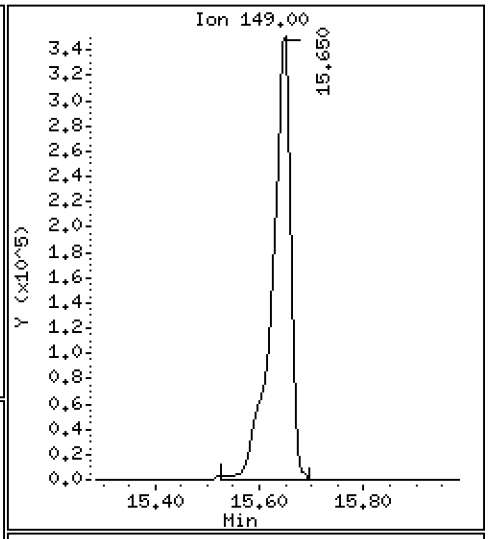
Column phase: ZB-5msi

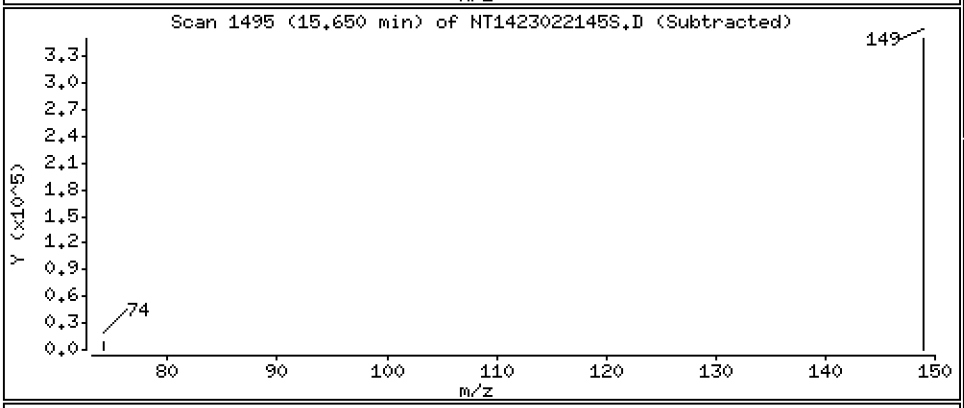
Column diameter: 0.25

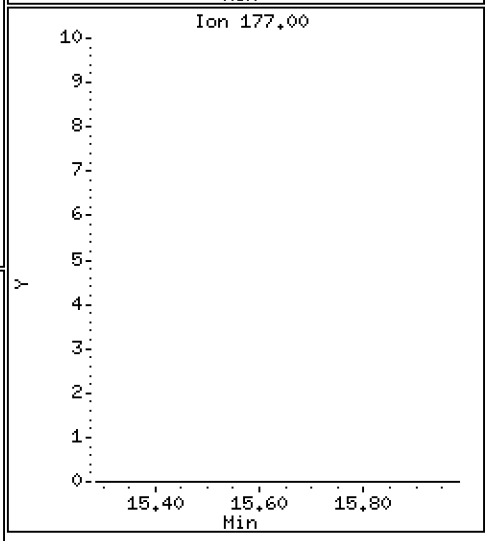
50 Diethylphthalate

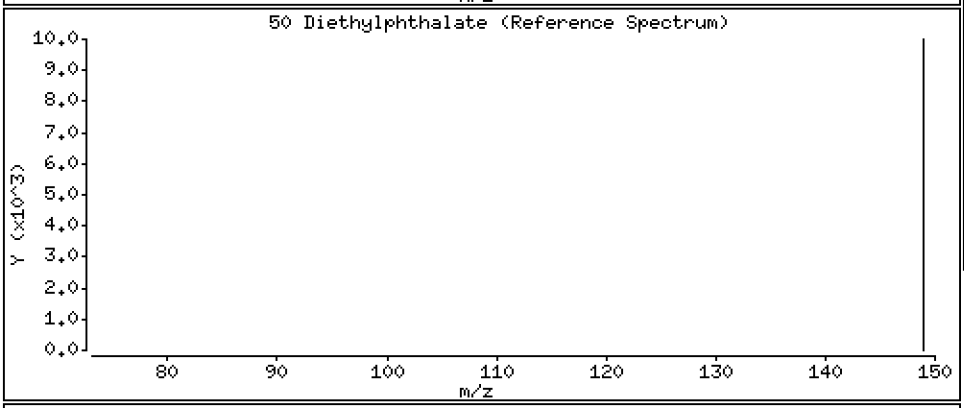
Concentration: 4.330 ug/mL

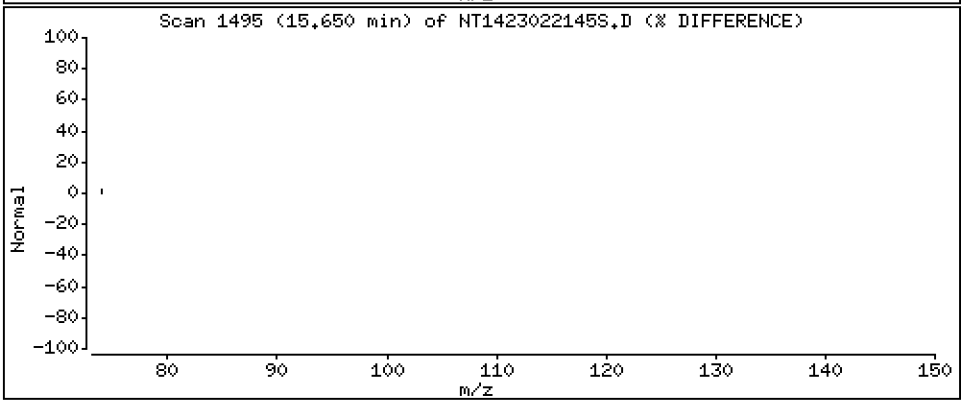












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

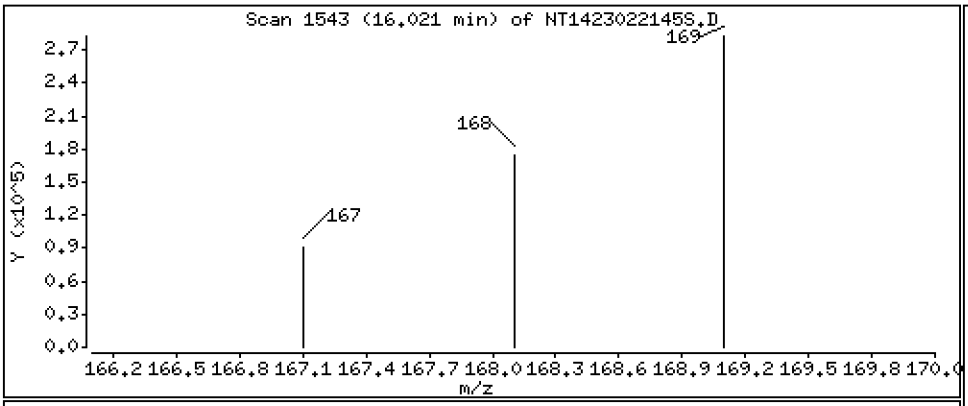
Operator: DSD

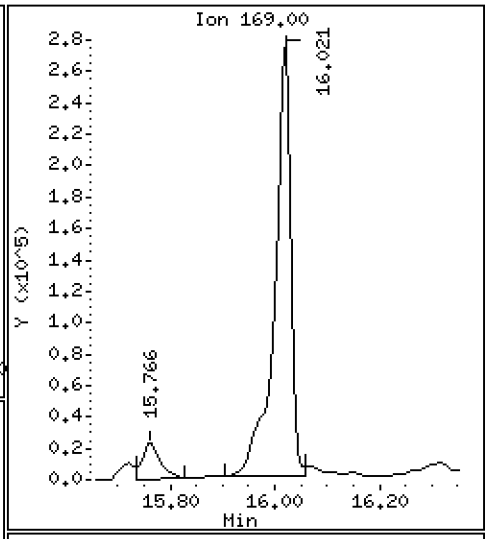
Column phase: ZB-5msi

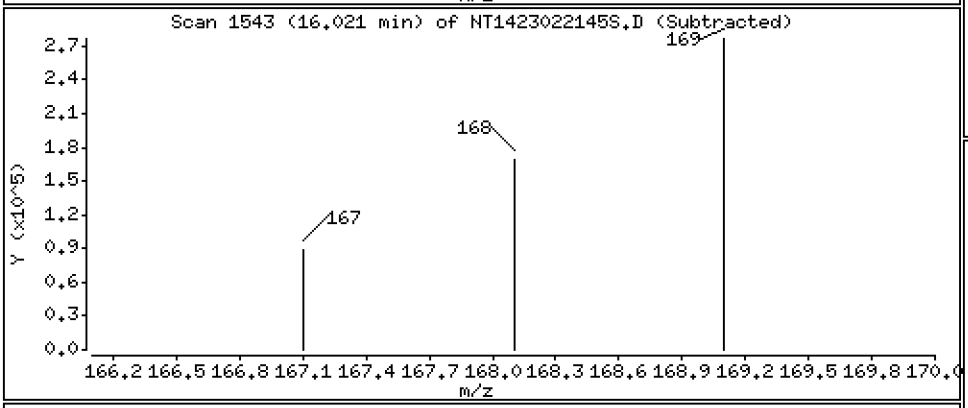
Column diameter: 0.25

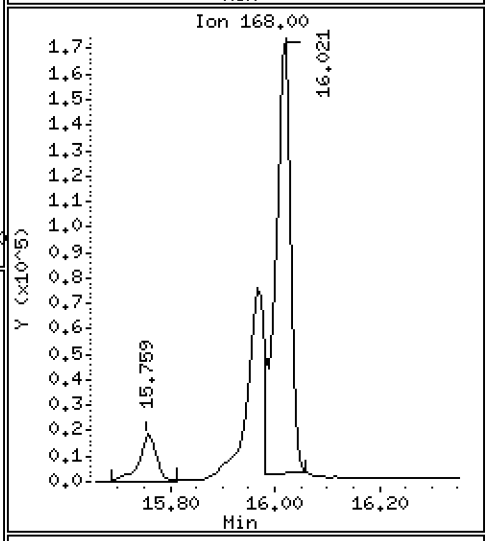
54 N-Nitrosodiphenylamine

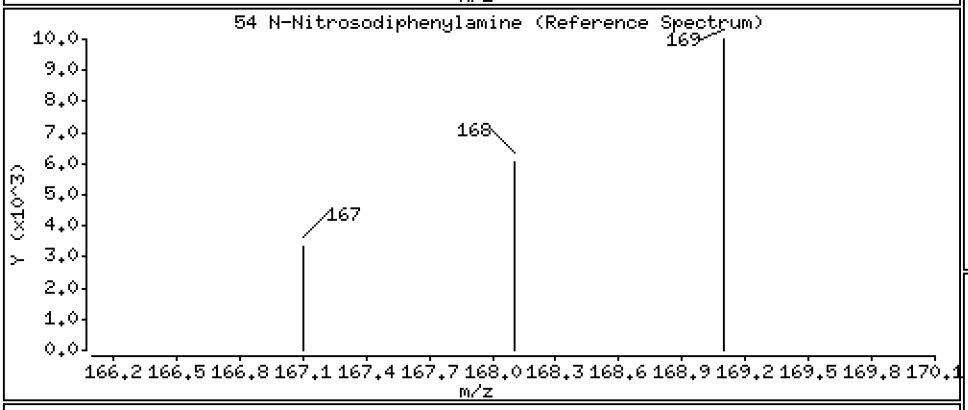
Concentration: 3.754 ug/mL

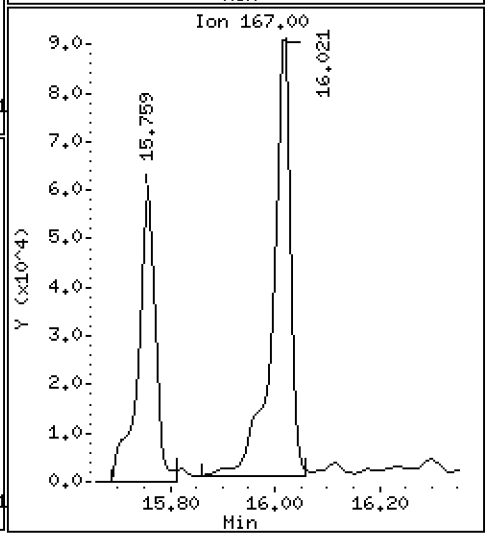


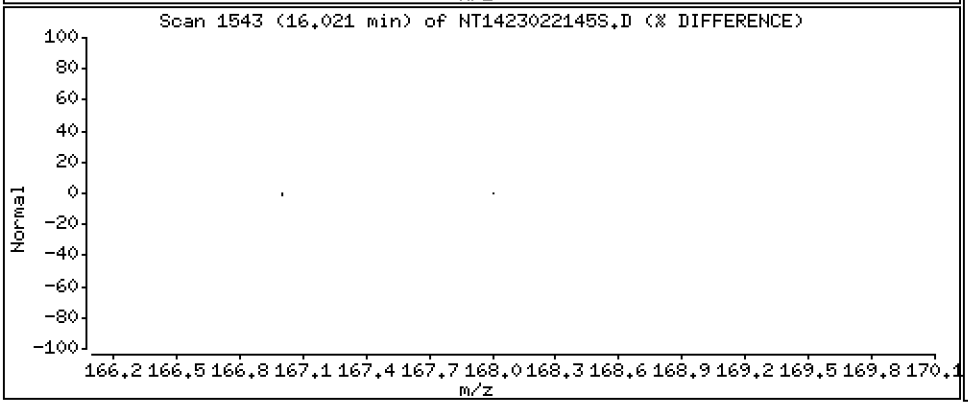












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221145S.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

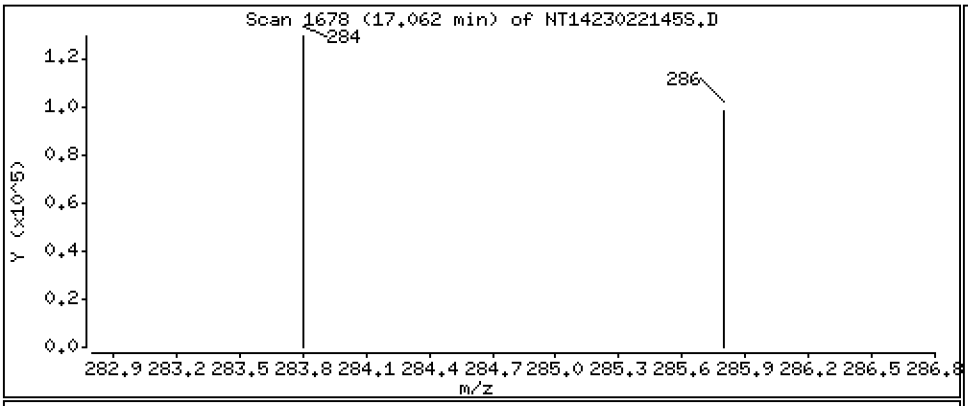
Operator: DSD

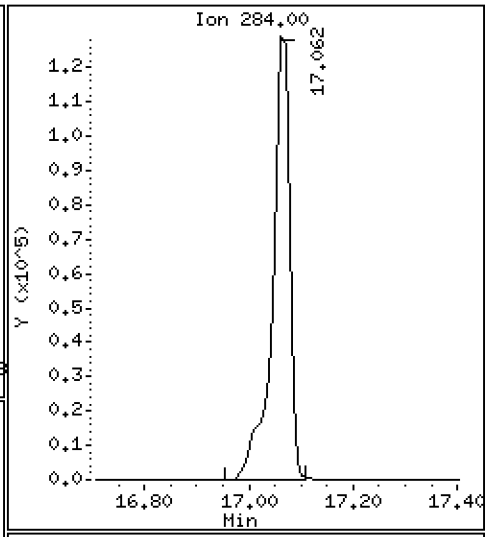
Column phase: ZB-5msi

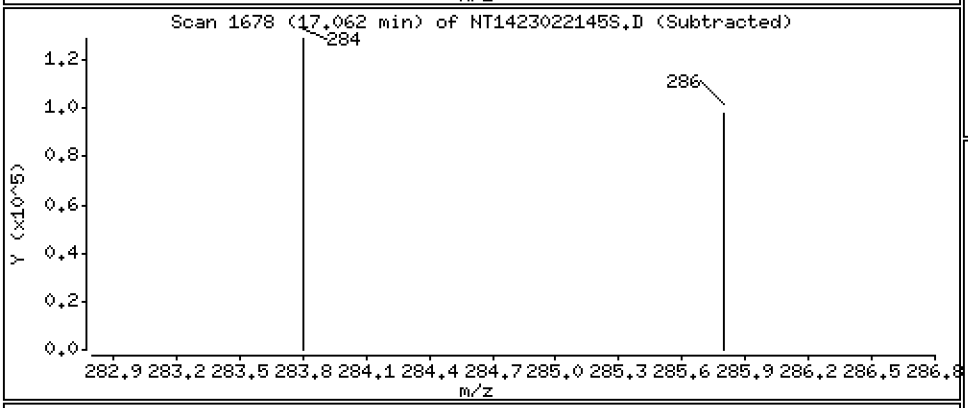
Column diameter: 0.25

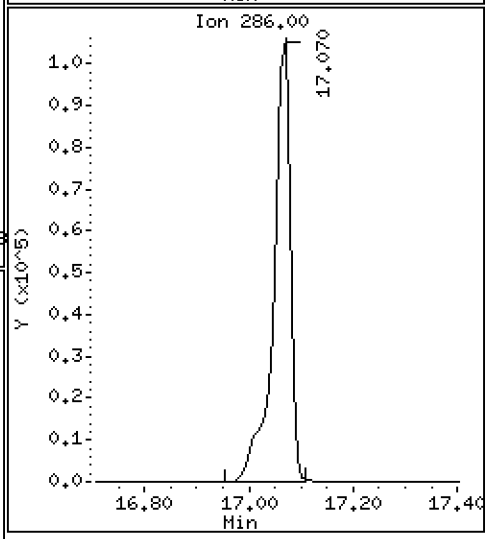
57 Hexachlorobenzene

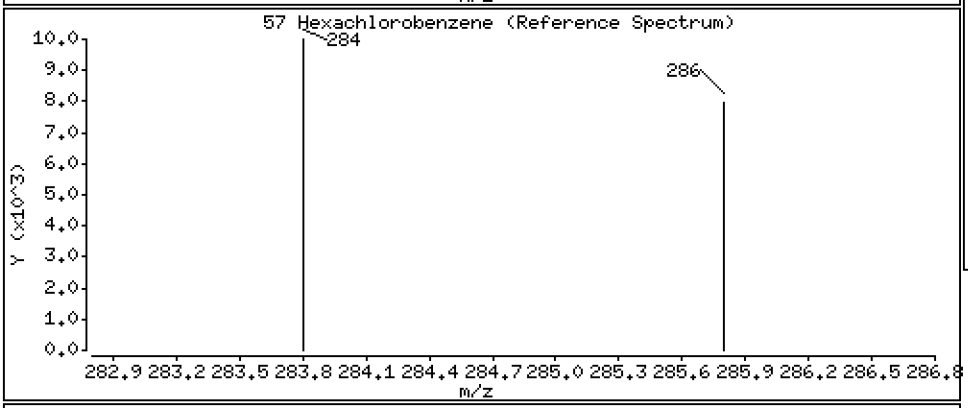
Concentration: 3.597 ug/mL

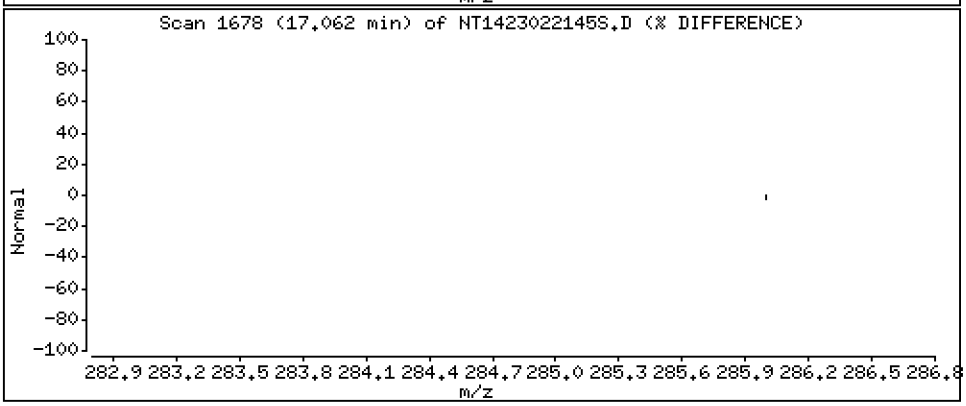












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221455.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

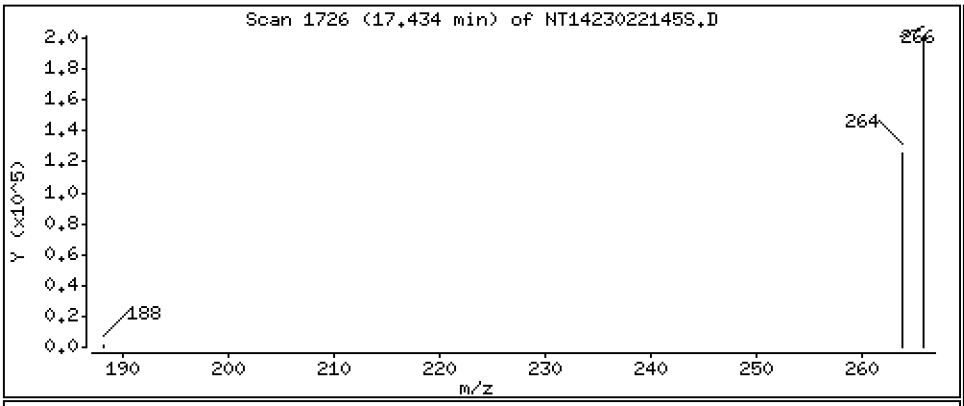
Operator: DSD

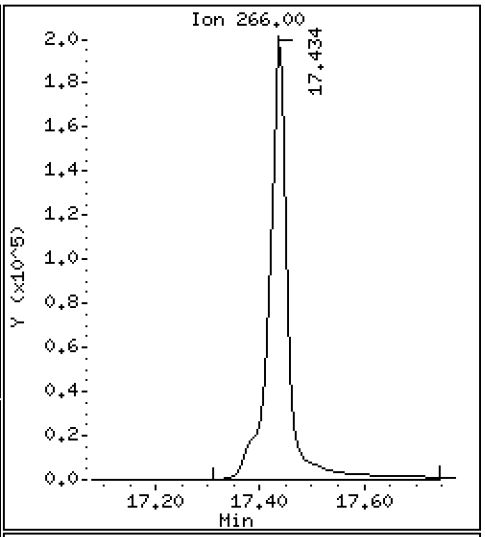
Column phase: ZB-5msi

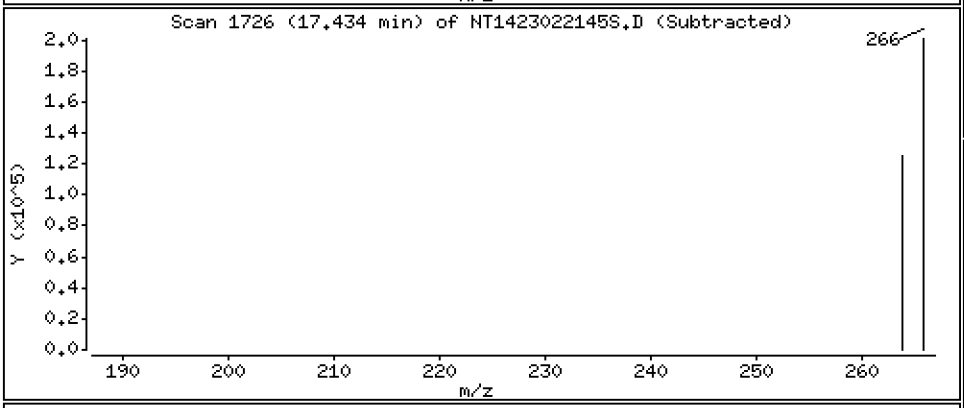
Column diameter: 0.25

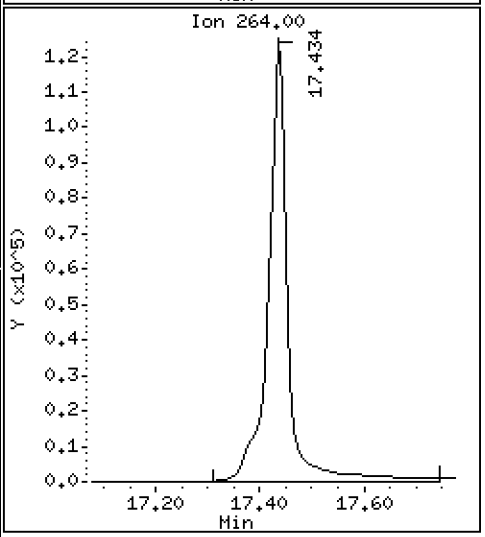
58 Pentachlorophenol

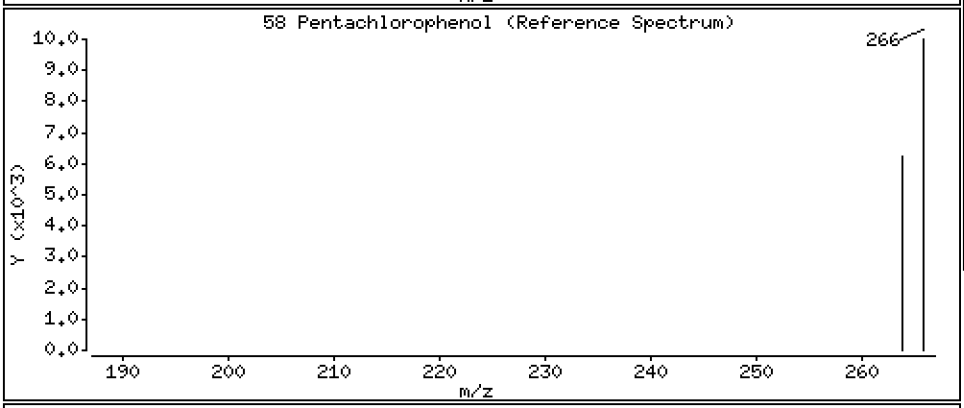
Concentration: 13.37 ug/mL

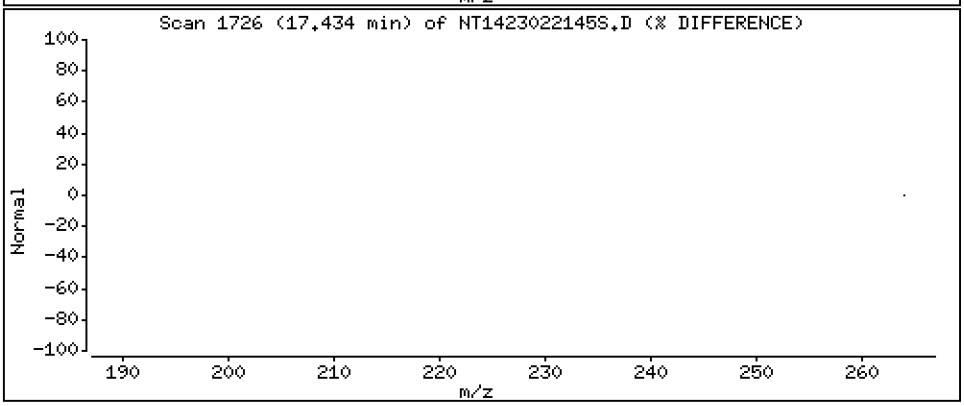












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221455.D

Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

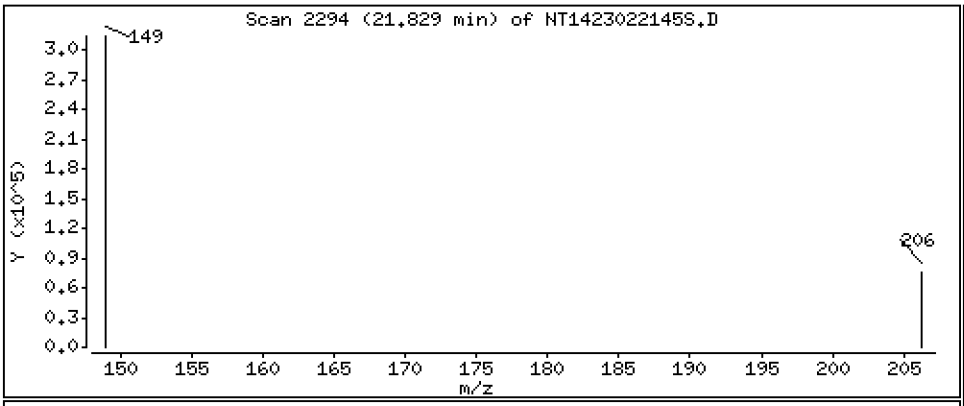
Operator: DSD

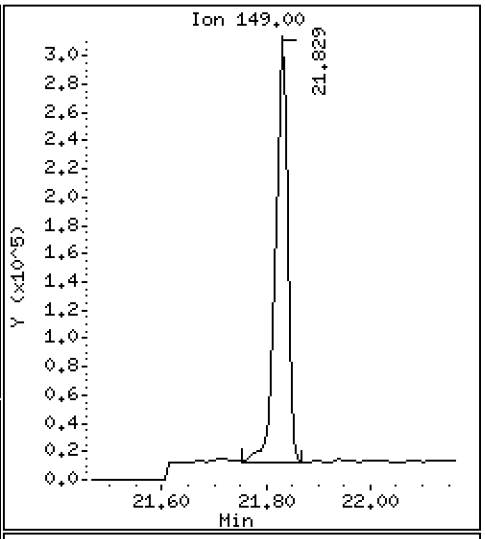
Column phase: ZB-5msi

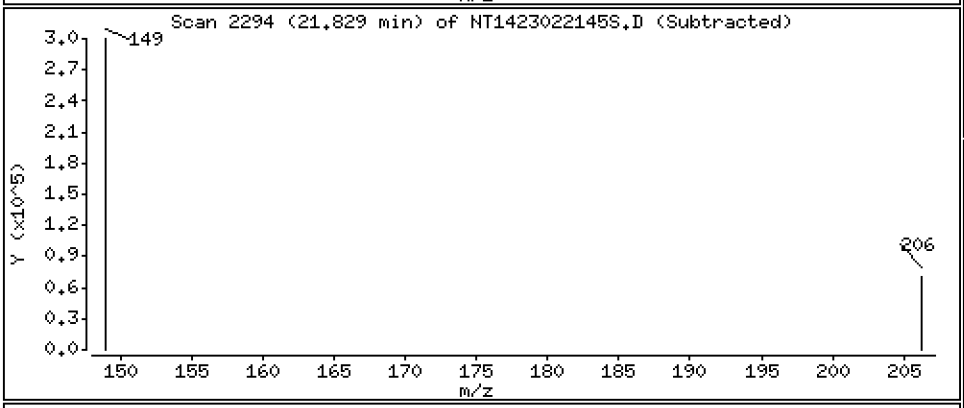
Column diameter: 0.25

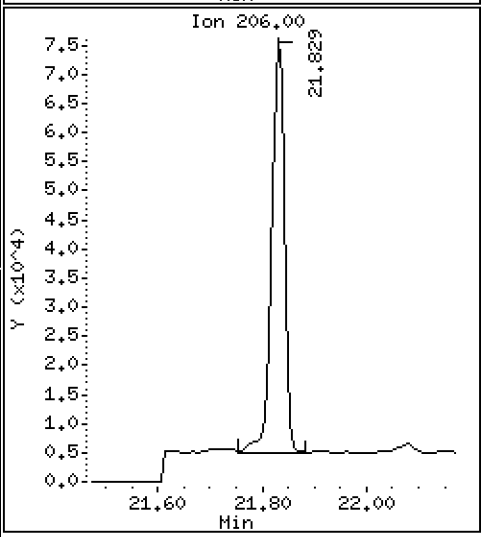
67 Butylbenzylphthalate

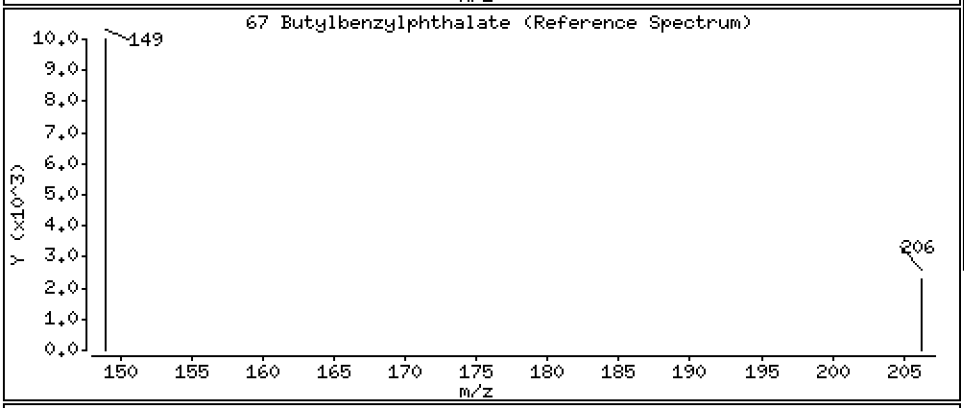
Concentration: 4.837 ug/mL

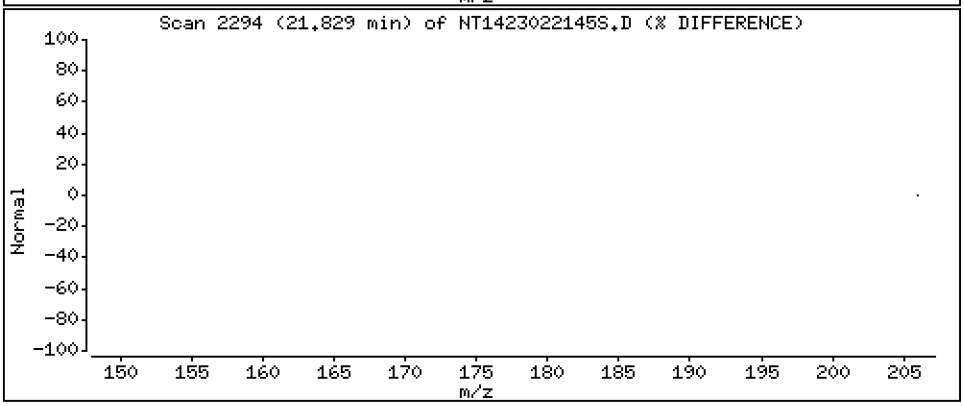












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

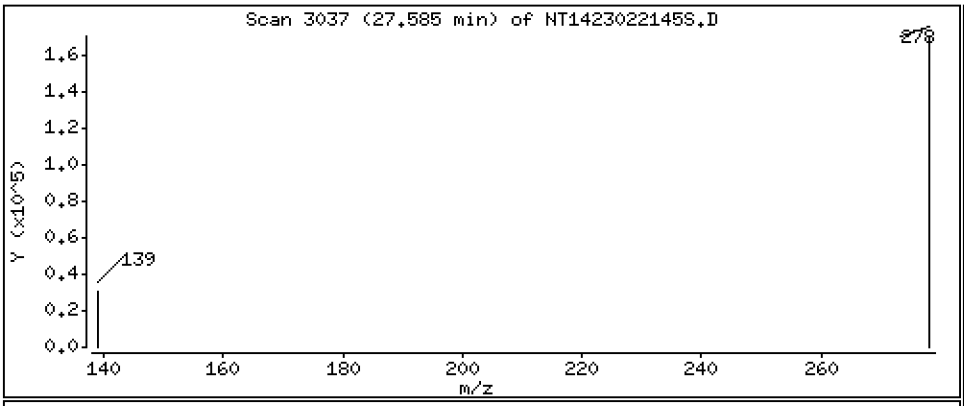
Operator: DSD

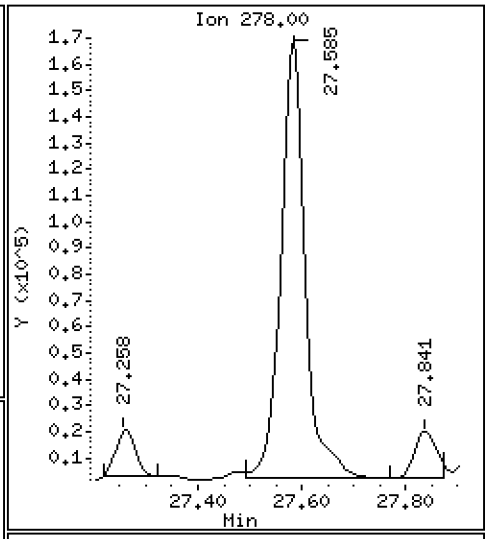
Column phase: ZB-5msi

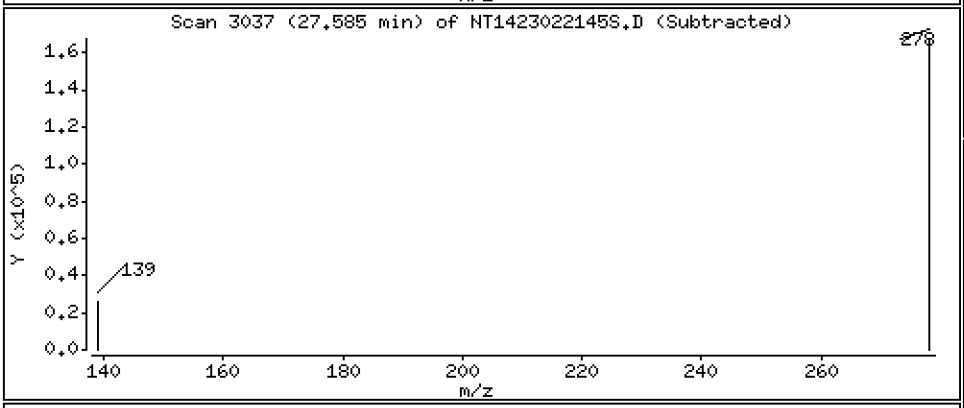
Column diameter: 0.25

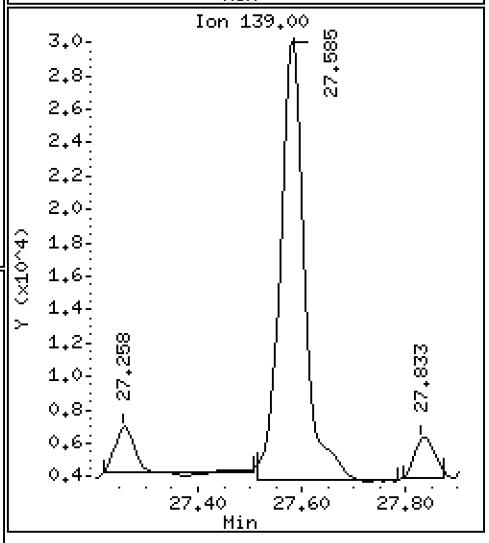
79 Dibenzo(a,h)anthracene

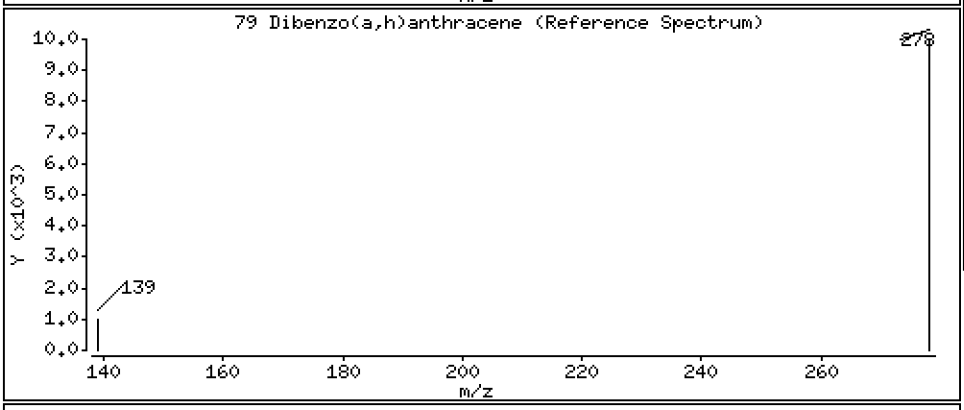
Concentration: 4.856 ug/mL

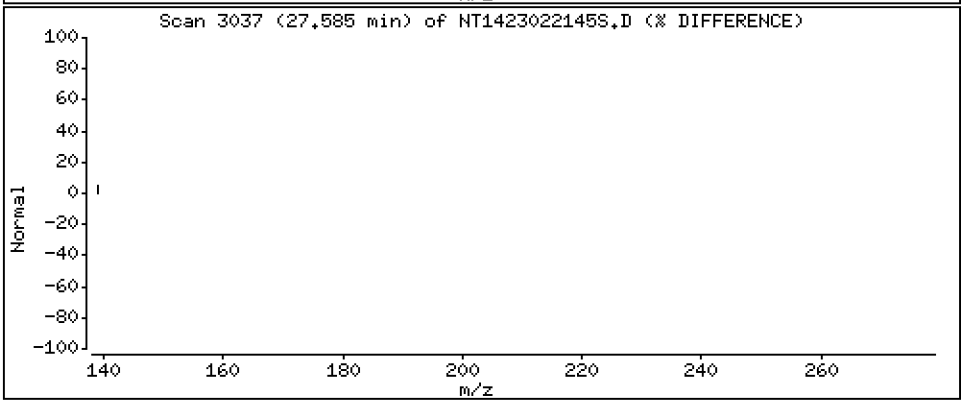












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Date : 22-FEB-2023 15:58

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-MSD1

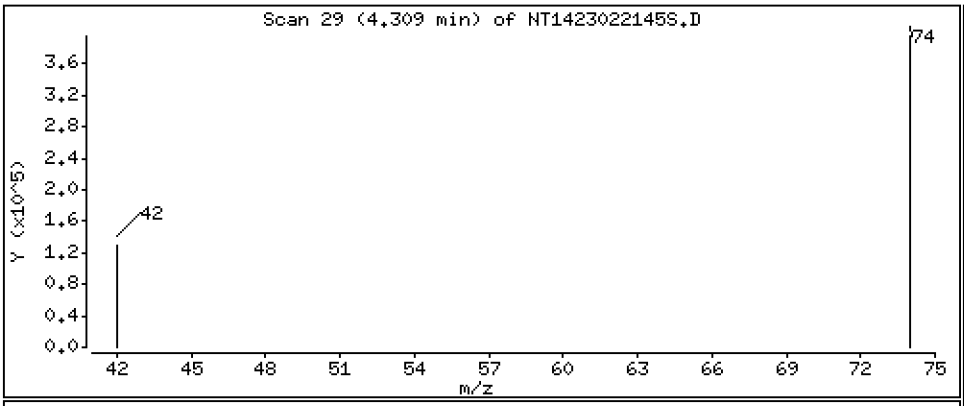
Operator: DSD

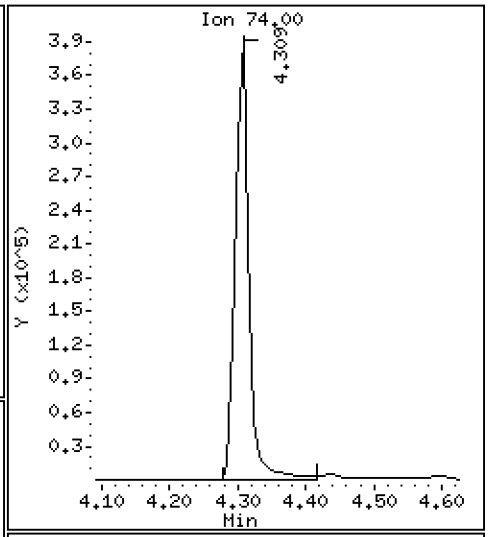
Column phase: ZB-5msi

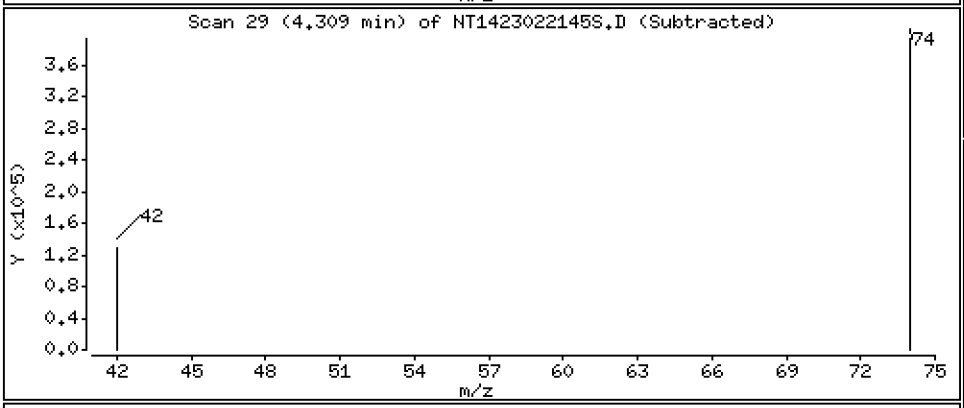
Column diameter: 0.25

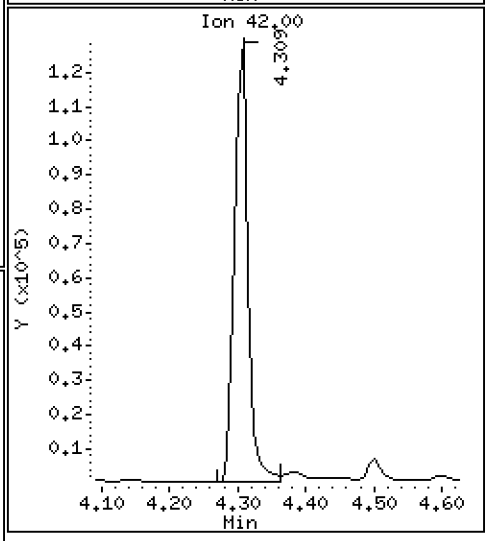
90 N-Nitrosodimethylamine

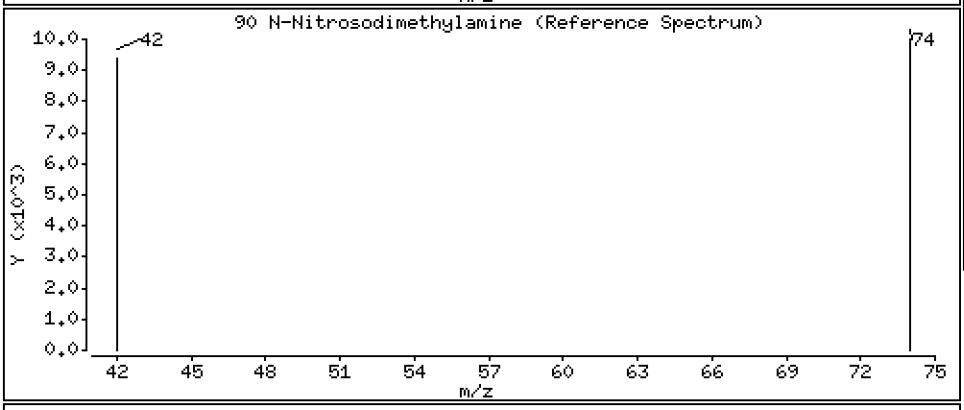
Concentration: 9.837 ug/mL

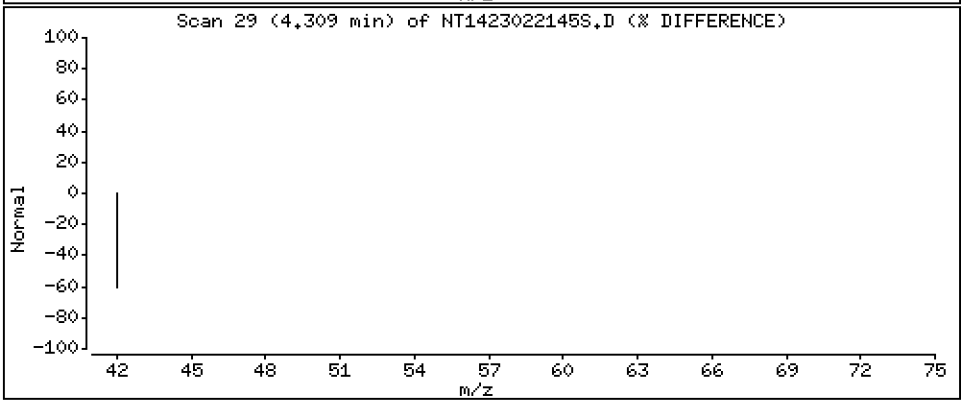












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT1423022145S.D
Lab Smp Id: BLA0393-MSD2
Inj Date : 22-FEB-2023 15:58 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : BLA0393-MSD1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Meth Date : 17-Jun-2023 09:15 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 33
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.393	6.385	(0.746)	386709	5.02955	5.030(R)
	3 Phenol	94	8.001	7.993	(0.933)	410620	3.50235	3.502
	7 1,3-Dichlorobenzene	146	8.503	8.503	(0.992)	300797	3.26073	3.261
*	8 1,4-Dichlorobenzene-d4	152	8.573	8.573	(1.000)	271109	4.00000	
	9 1,4-Dichlorobenzene	146	8.596	8.596	(1.003)	299569	3.40426	3.404
	11 Benzyl alcohol	79	8.868	8.867	(1.034)	272901	3.67549	3.675
	12 1,2-Dichlorobenzene	146	8.953	8.953	(1.044)	291878	3.33593	3.336
	13 2-Methylphenol	108	9.101	9.093	(1.062)	270025	3.35534	3.355
	15 4-Methylphenol	108	9.372	9.372	(1.093)	339651	3.78944	3.789
	16 N-Nitroso-di-n-propylamine	70	9.411	9.411	(1.098)	256294	3.66398	3.664
	22 2,4-Dimethylphenol	107	10.404	10.404	(0.942)	935720	11.7220	11.72
	24 Benzoic acid	105	10.621	10.606	(0.961)	276353	5.94213	5.942
	26 1,2,4-Trichlorobenzene	180	10.962	10.962	(0.992)	288052	3.19604	3.196
*	27 Naphthalene-d8	136	11.047	11.039	(1.000)	983790	4.00000	
	30 Hexachlorobutadiene	225	11.456	11.449	(1.037)	175031	3.19239	3.192
	39 Dimethylphthalate	163	14.188	14.180	(0.968)	636465	3.96291	3.963
*	42 Acenaphthene-d10	162	14.653	14.645	(1.000)	526434	4.00000	
	50 Diethylphthalate	149	15.650	15.634	(1.068)	870418	4.33028	4.330
	54 N-Nitrosodiphenylamine	169	16.020	16.005	(0.906)	592157	3.75352	3.754
	57 Hexachlorobenzene	284	17.062	17.054	(0.965)	284280	3.59657	3.597
	58 Pentachlorophenol	266	17.434	17.426	(0.986)	502448	13.3714	13.37
*	59 Phenanthrene-d10	188	17.689	17.673	(1.000)	1217018	4.00000	
$	66 Terphenyl-d14	244	20.892	20.869	(0.917)	854828	4.44260	4.443(R)
	67 Butylbenzylphthalate	149	21.829	21.813	(0.958)	476480	4.83707	4.837
*	69 Chrysene-d12	240	22.789	22.766	(1.000)	722770	4.00000	
*	77 Perylene-d12	264	25.243	25.212	(1.000)	593366	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.584	27.553	(1.093)	558664	4.85572	4.856
	90 N-Nitrosodimethylamine	74	4.308	4.277	(0.503)	546624	9.83674	9.837

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022145S.D
Lab Smp Id: BLA0393-MSD2
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 08:08
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	261796	130898	523592	271109	3.56
27 Naphthalene-d8	959301	479651	1918602	983790	2.55
42 Acenaphthene-d10	503659	251830	1007318	526434	4.52
59 Phenanthrene-d10	1179954	589977	2359908	1217018	3.14
69 Chrysene-d12	887360	443680	1774720	722770	-18.55
77 Perylene-d12	652371	326186	1304742	593366	-9.04

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.05	0.07
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	0.05
59 Phenanthrene-d10	17.67	17.17	18.17	17.69	0.09
69 Chrysene-d12	22.77	22.27	23.27	22.79	0.10
77 Perylene-d12	25.21	24.71	25.71	25.24	0.12

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022145S.D

Lab ID: BLA0393-MSD2
nt14.i, 20230221B.b\SIM.b\SIMABN2.m,   22-FEB-2023 15:58

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1423022132S.D

On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0393-SRM2
Batch: BLA0393
Initial/Final: 1 g / 1 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 02/22/2023 11:09
Standard ID: K003477
Expires: 01/31/2024
Standard Lot#: CRM 143 (LRAC8918)
Description: CRM 143 BNAs - Sandy Loam

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
2,4-Dimethylphenol	6357.0	7470	21.7	200	Q	117	0 - 220
1,2,4-Trichlorobenzene	1477.0	1550	26.8	50.0		105	10 - 193
N-Nitrosodiphenylamine	2854.0	4420	13.1	50.0		155	40 - 160
Pentachlorophenol	3411.0	3870	21.3	200		113	10 - 206

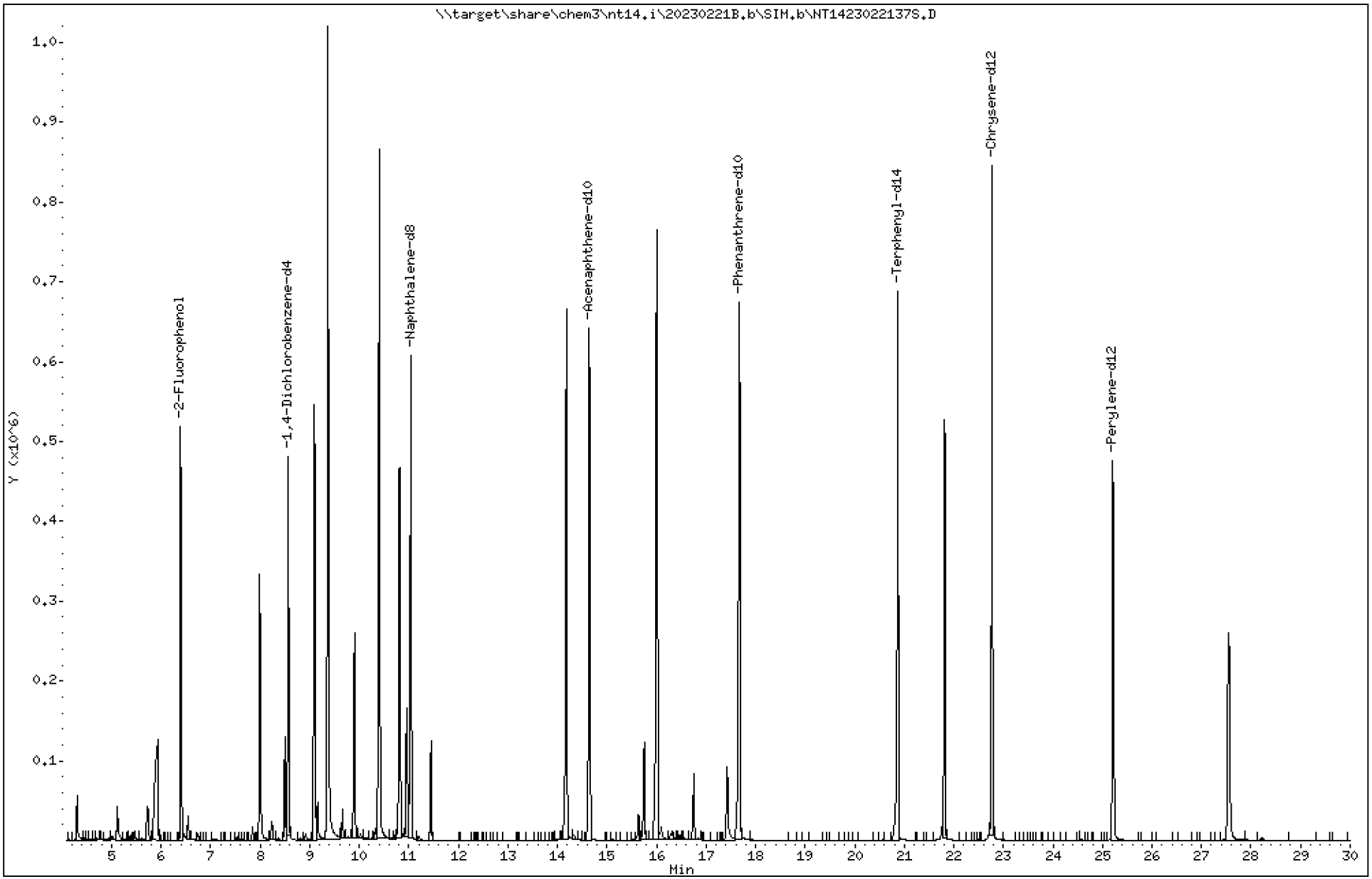
* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221137S.D
Date : 22-FEB-2023 11:09
Client ID:
Sample Info: BLA0393-SRM1

Column phase: ZB-5msi

Instrument: nt14.i

Operator: DSD
Column diameter: 0.25



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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

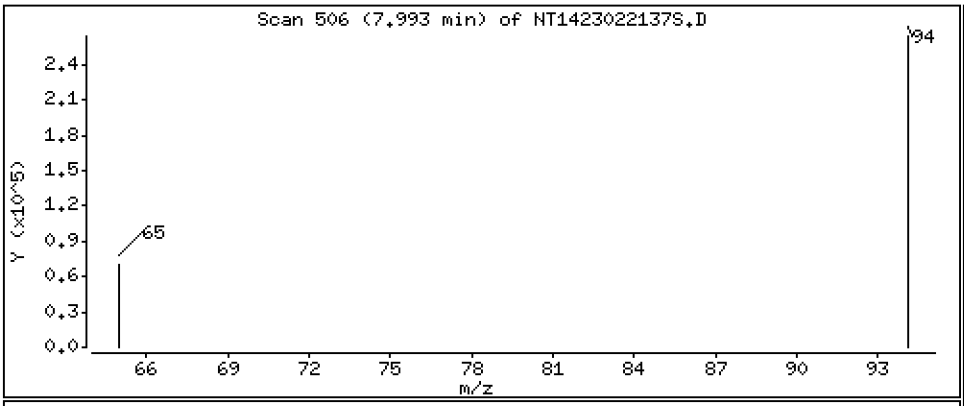
Operator: DSD

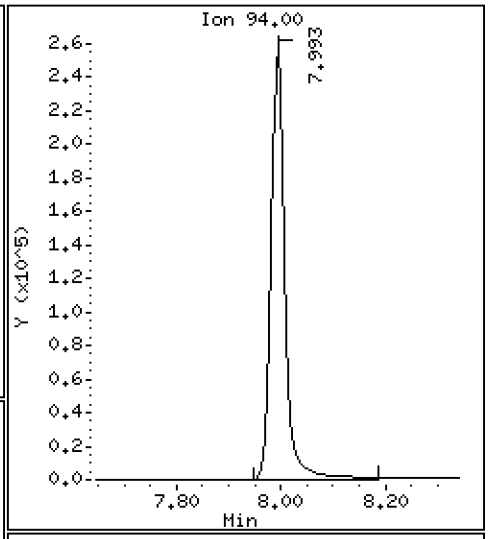
Column phase: ZB-5msi

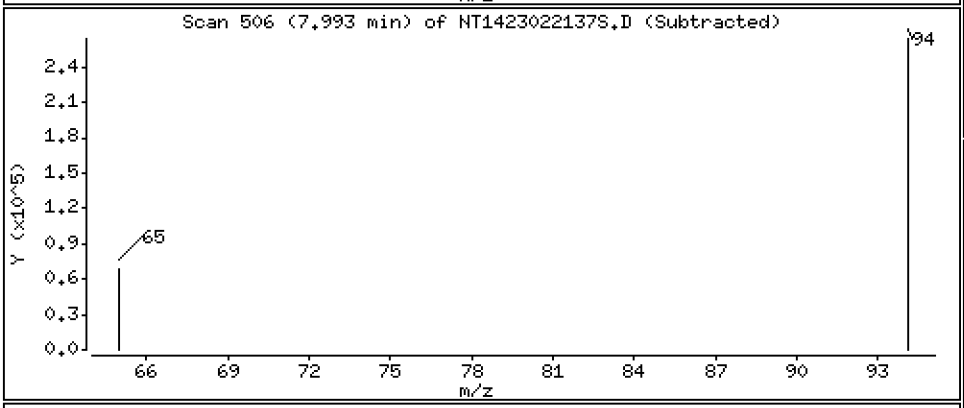
Column diameter: 0.25

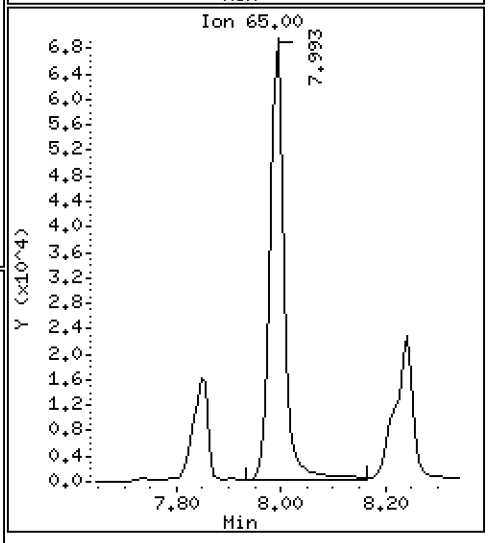
3 Phenol

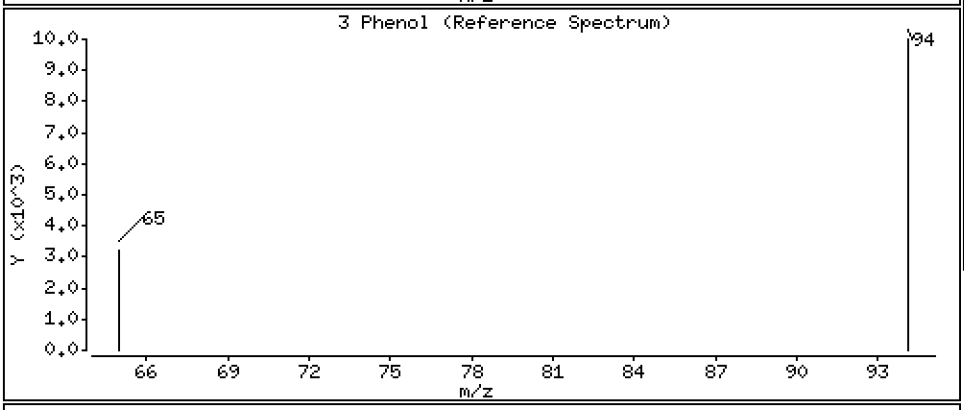
Concentration: 3.362 ug/mL

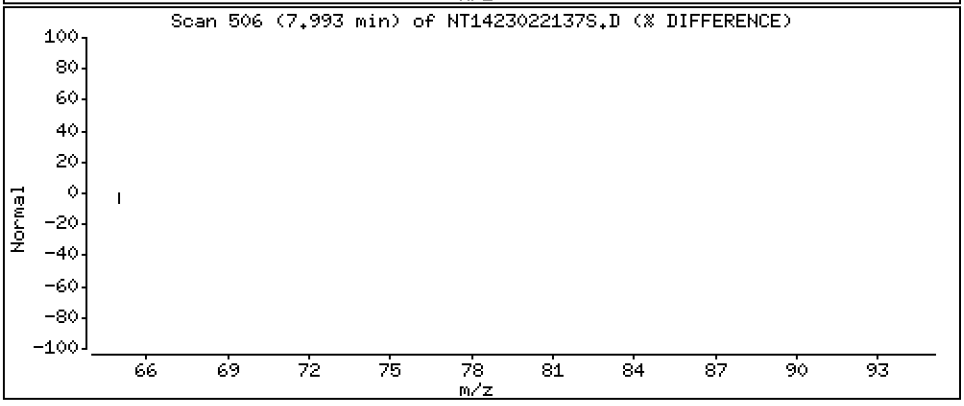












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

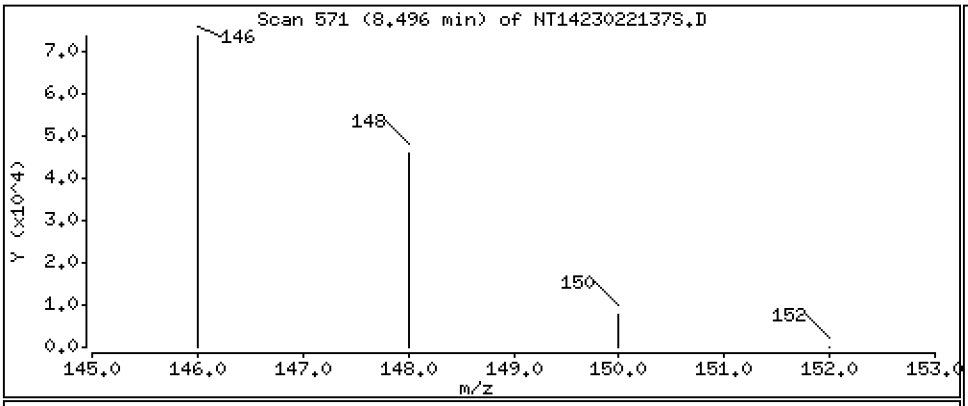
Operator: DSD

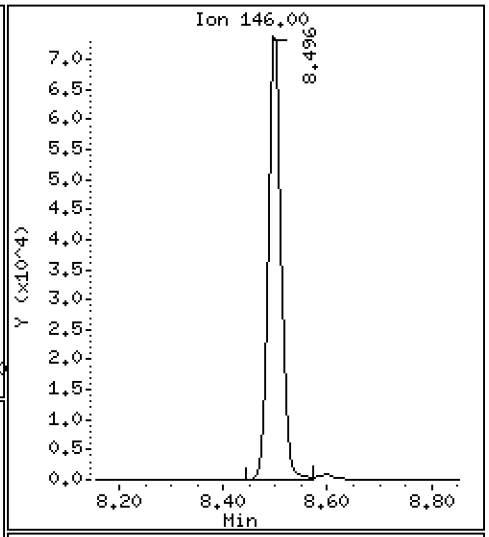
Column phase: ZB-5msi

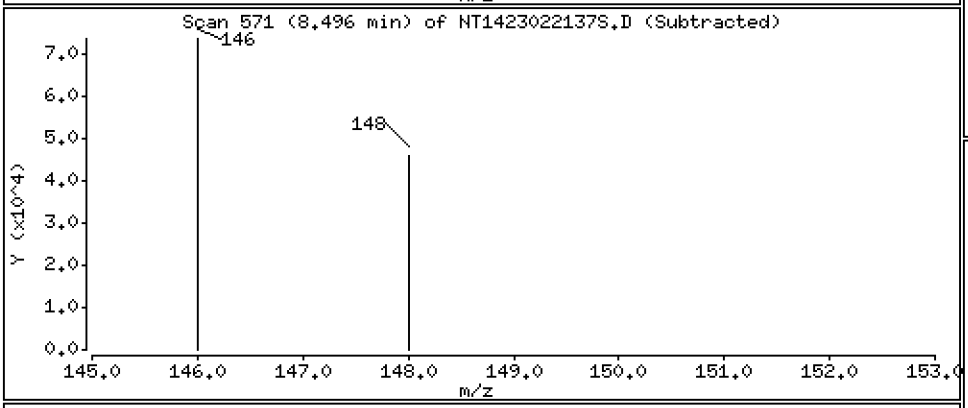
Column diameter: 0.25

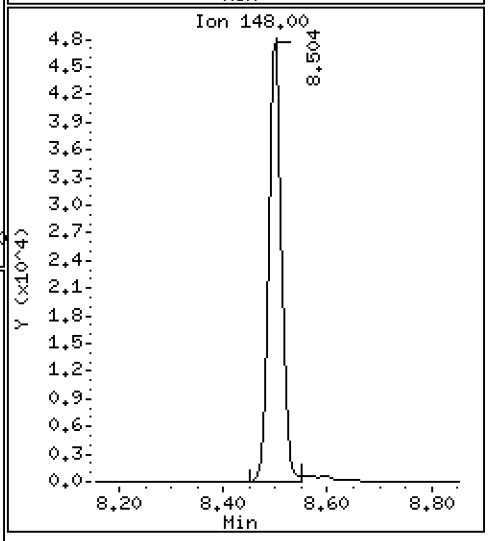
7 1,3-Dichlorobenzene

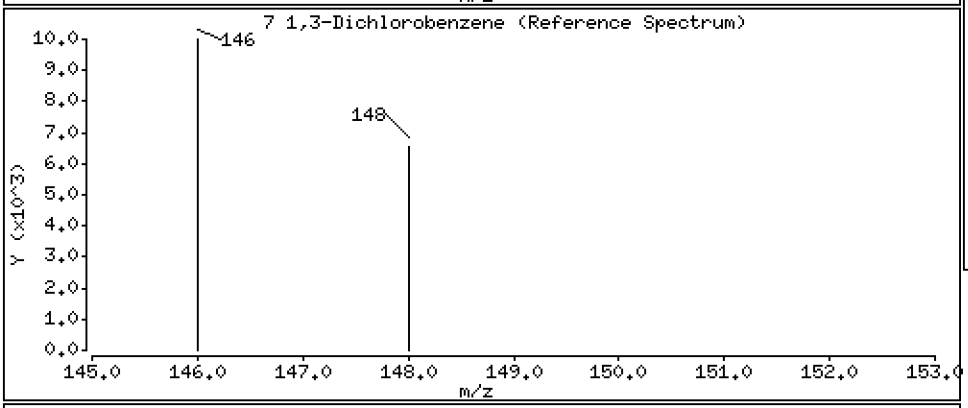
Concentration: 1.208 ug/mL

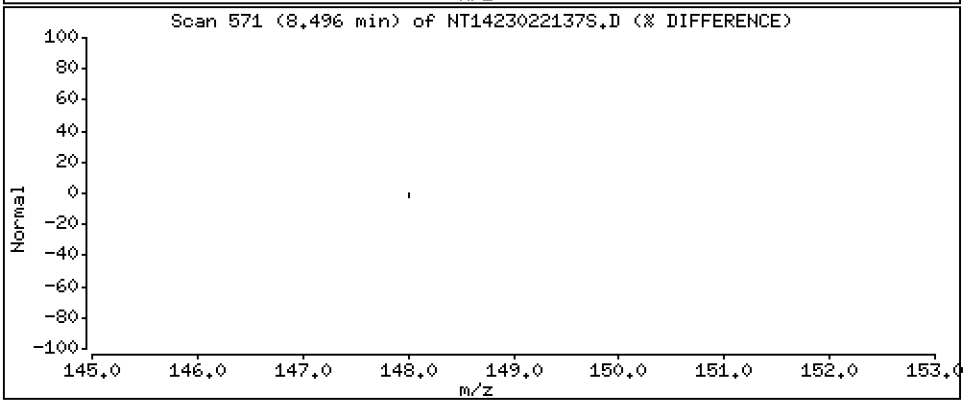












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

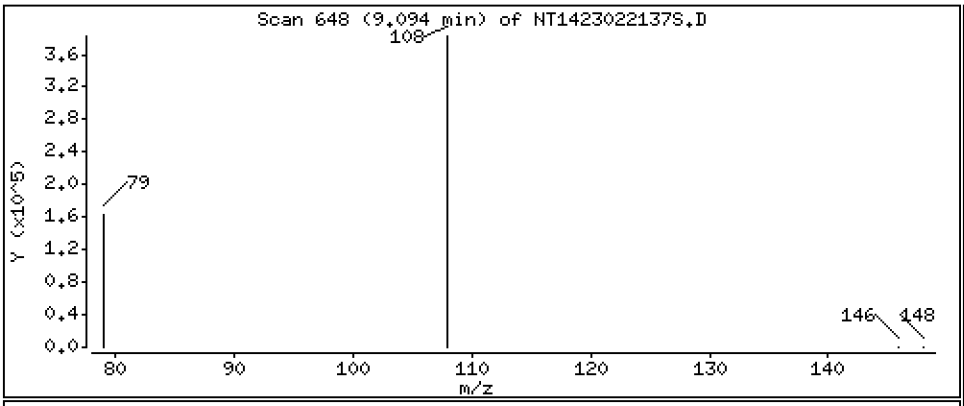
Operator: DSD

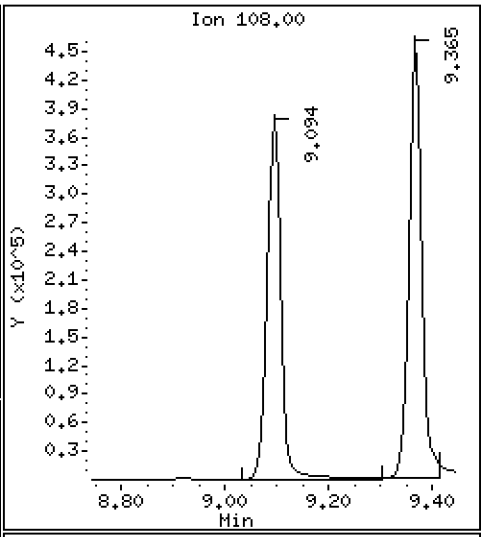
Column phase: ZB-5msi

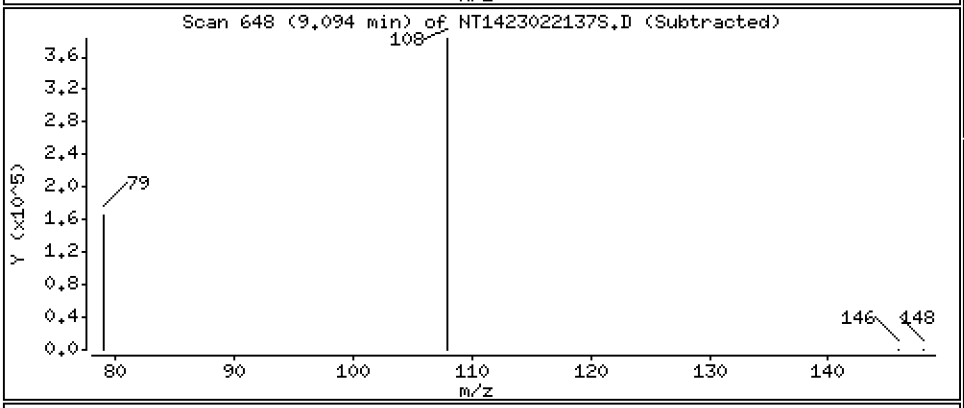
Column diameter: 0.25

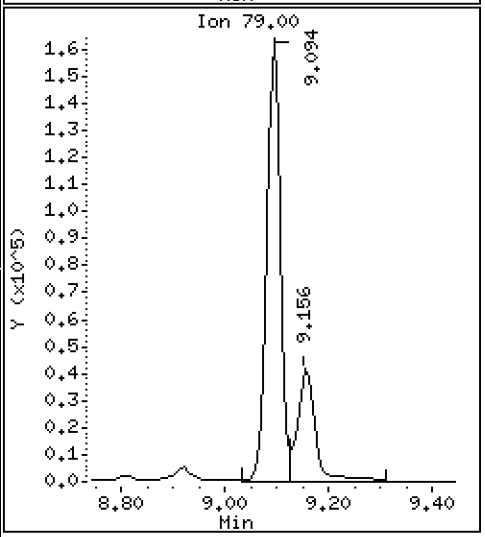
13 2-Methylphenol

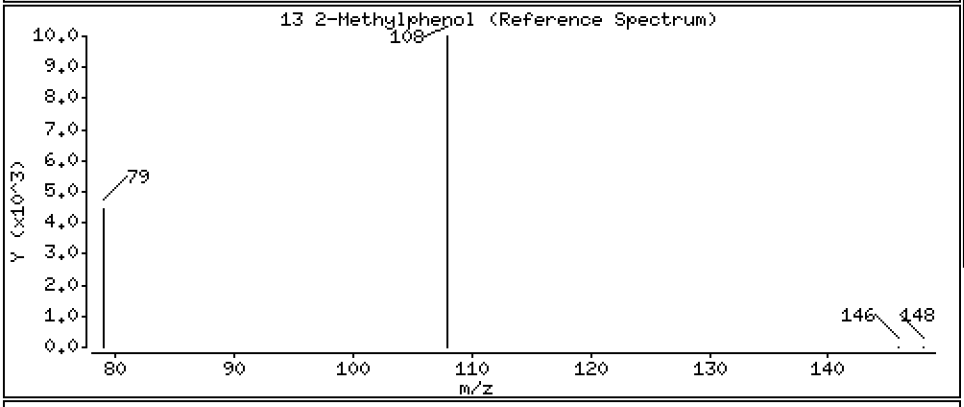
Concentration: 7.413 ug/mL

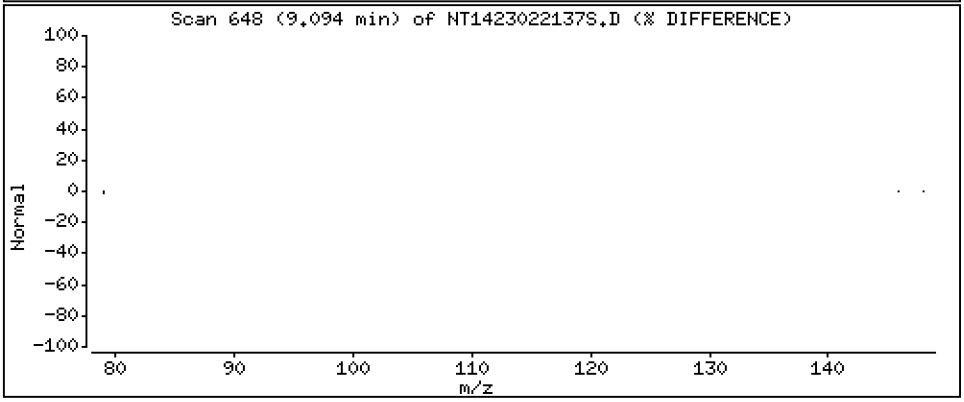












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

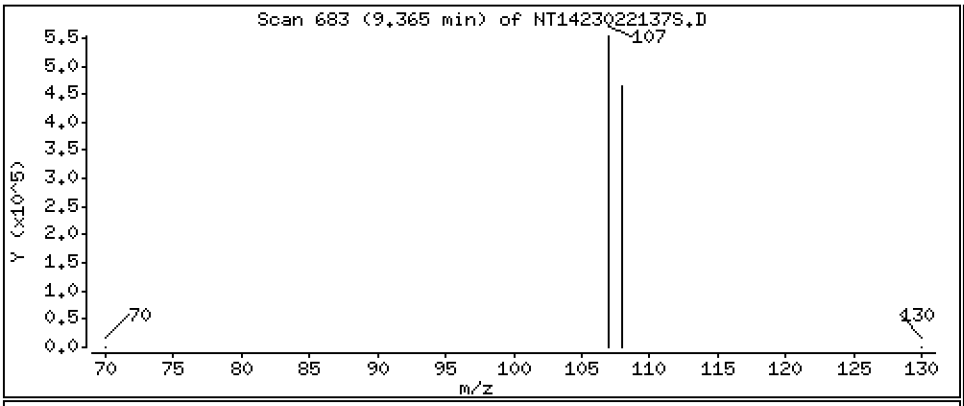
Operator: DSD

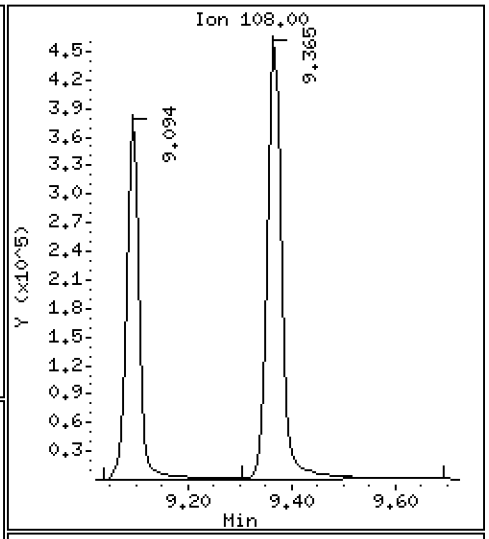
Column phase: ZB-5msi

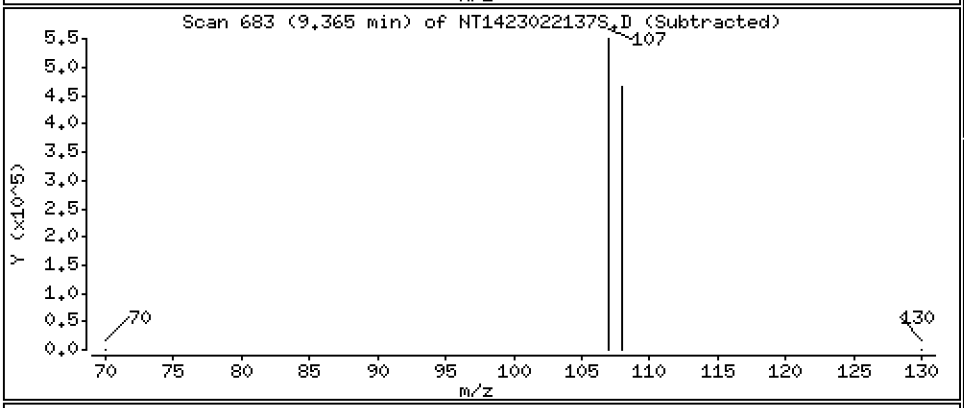
Column diameter: 0.25

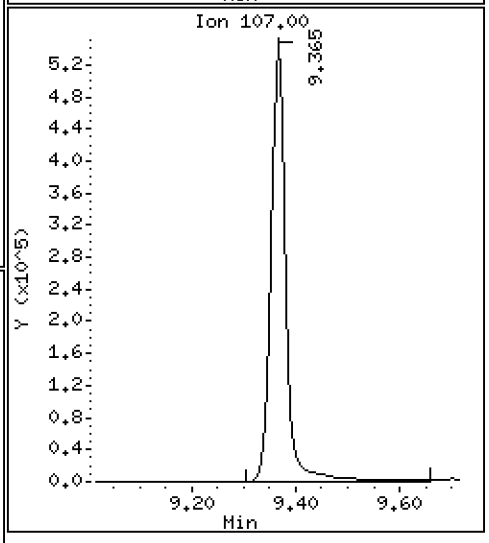
15 4-Methylphenol

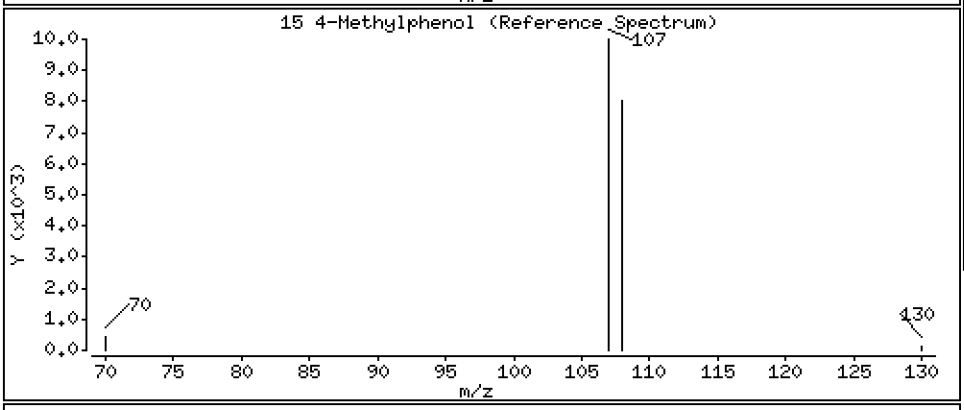
Concentration: 8.234 ug/mL

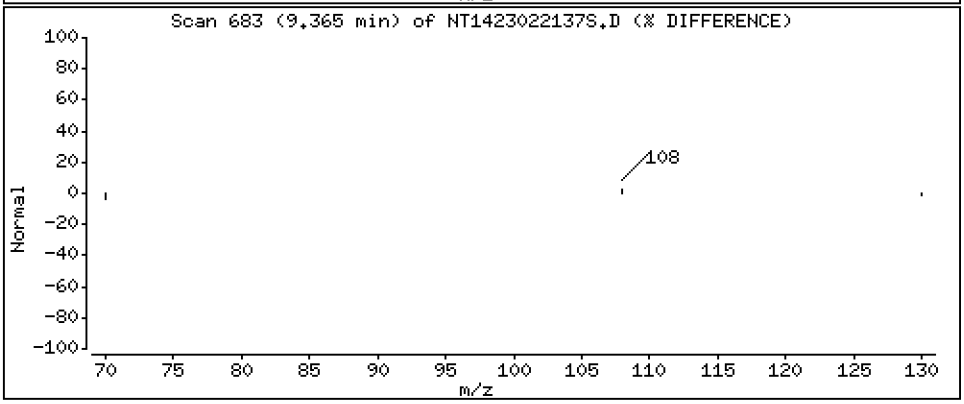












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

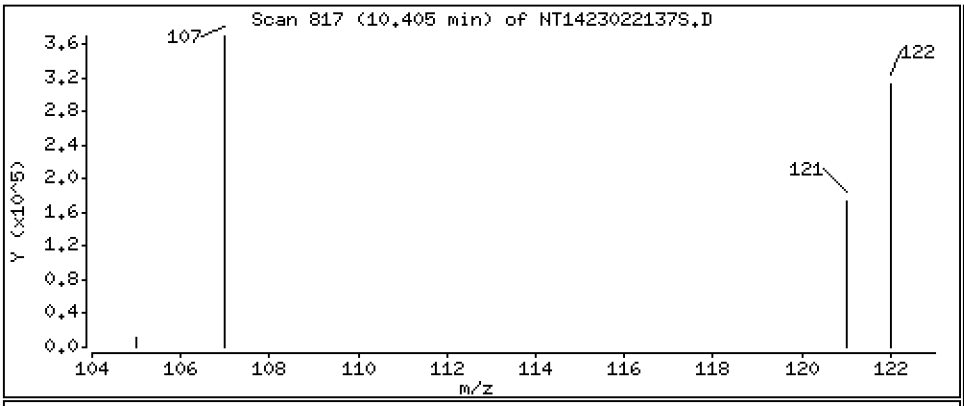
Operator: DSD

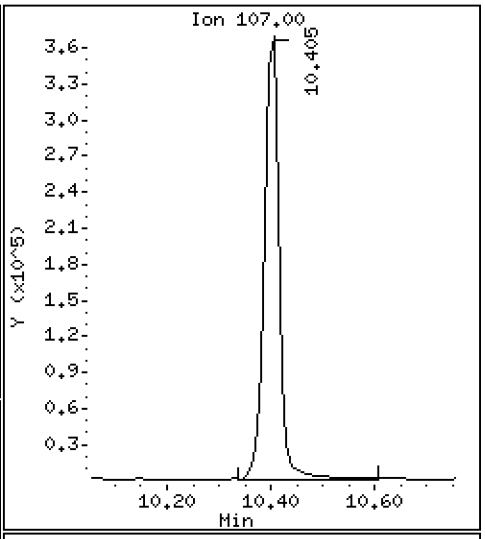
Column phase: ZB-5msi

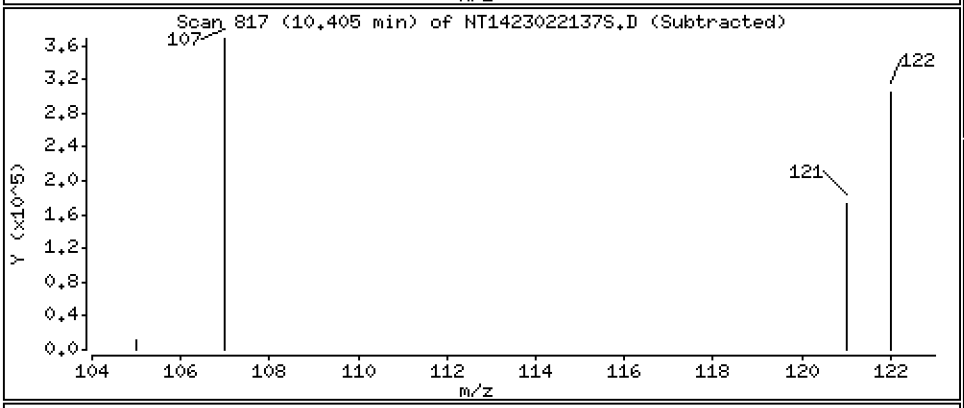
Column diameter: 0.25

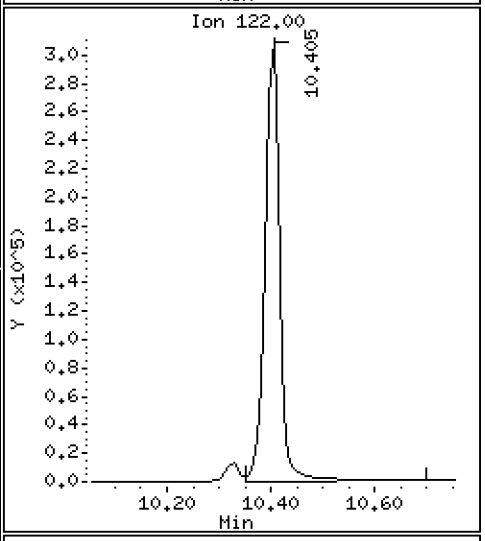
22 2,4-Dimethylphenol

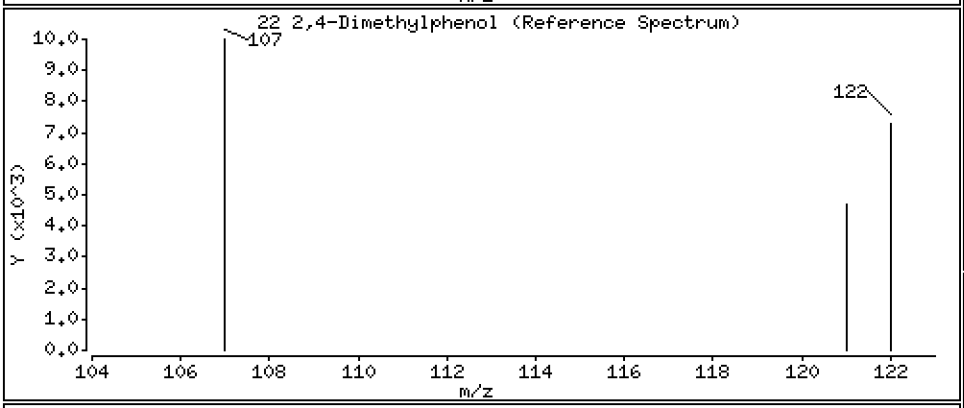
Concentration: 7.469 ug/mL

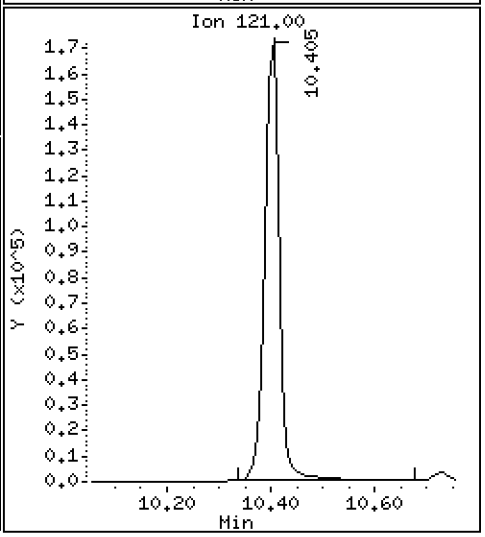


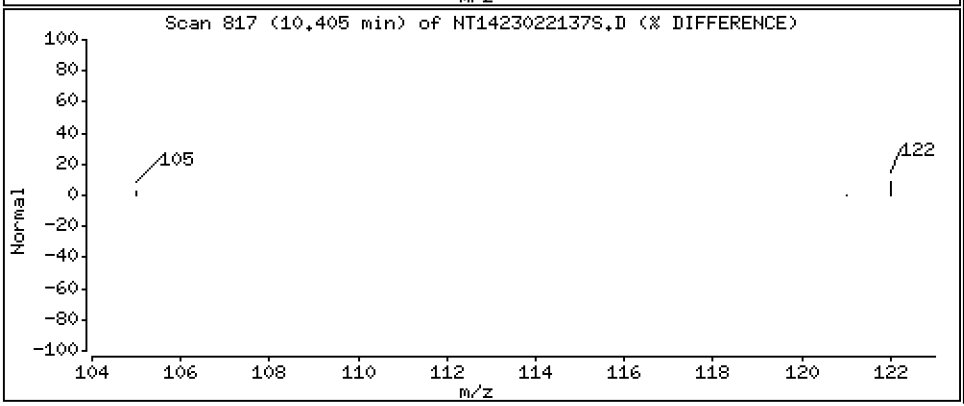












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

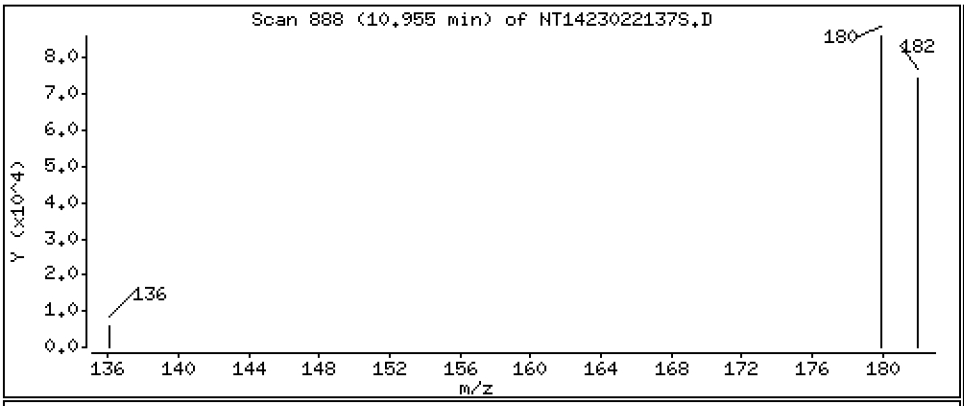
Operator: DSD

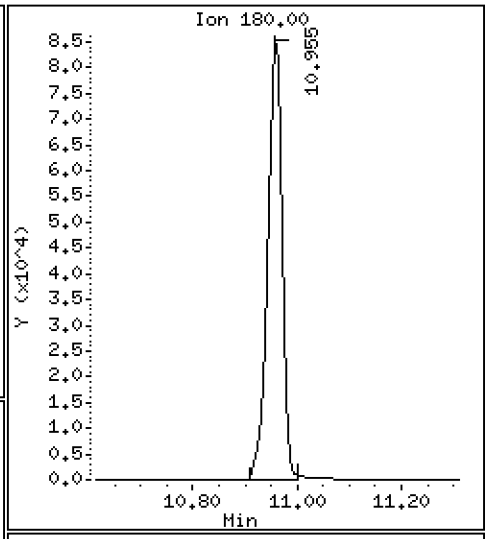
Column phase: ZB-5msi

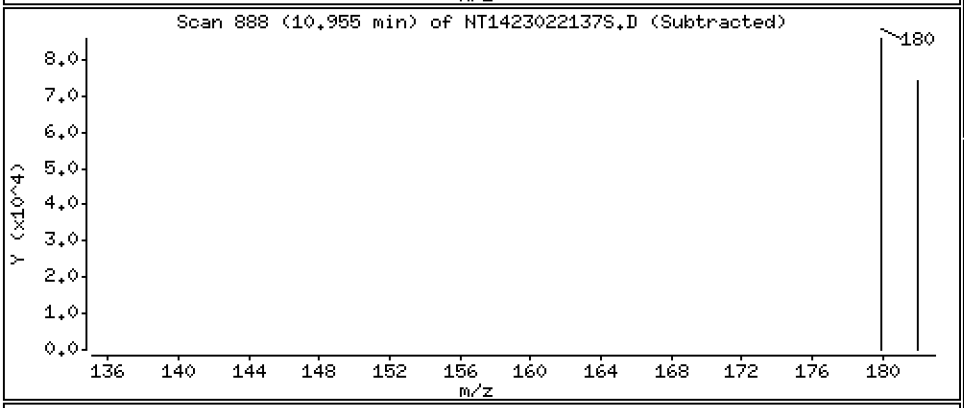
Column diameter: 0.25

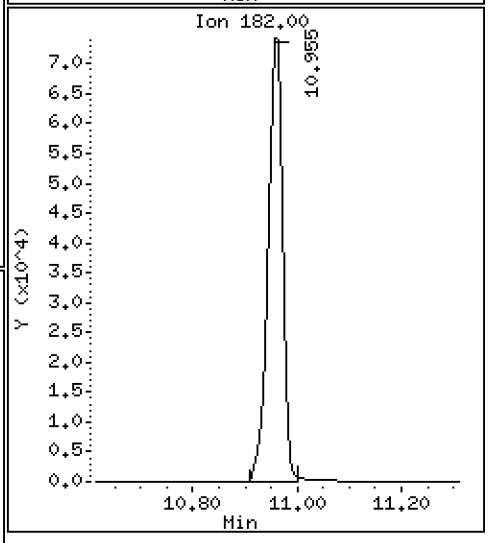
26 1,2,4-Trichlorobenzene

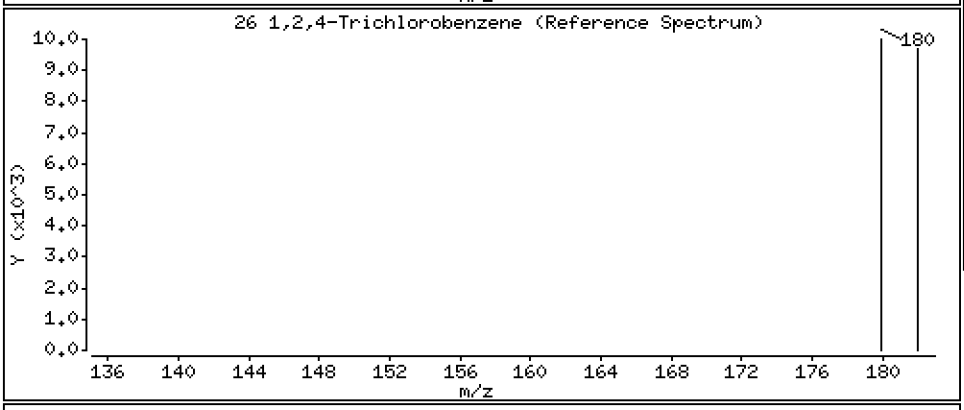
Concentration: 1.554 ug/mL

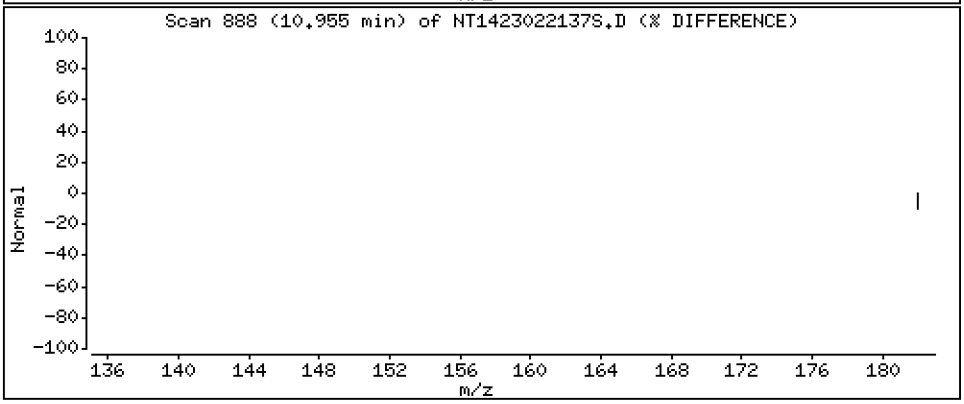












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221137S.D

Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

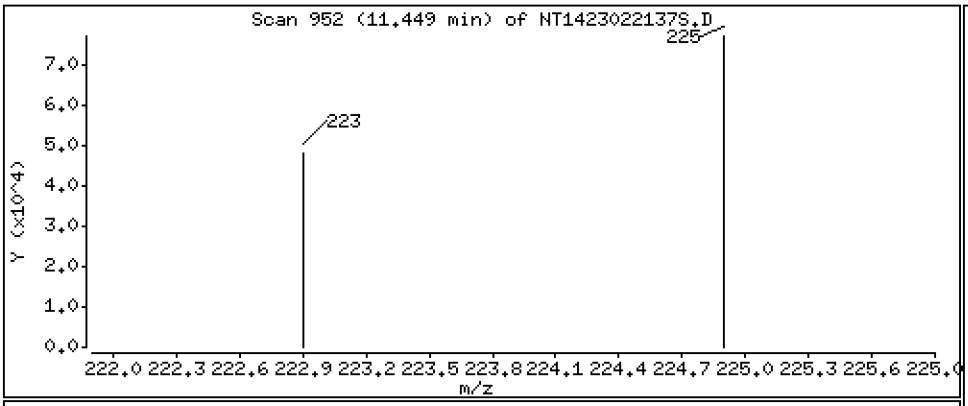
Operator: DSD

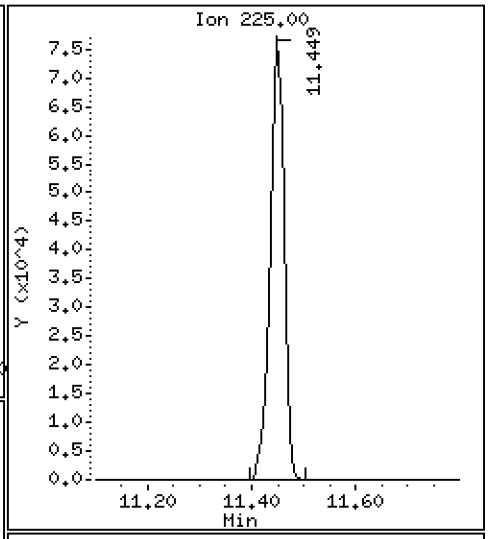
Column phase: ZB-5msi

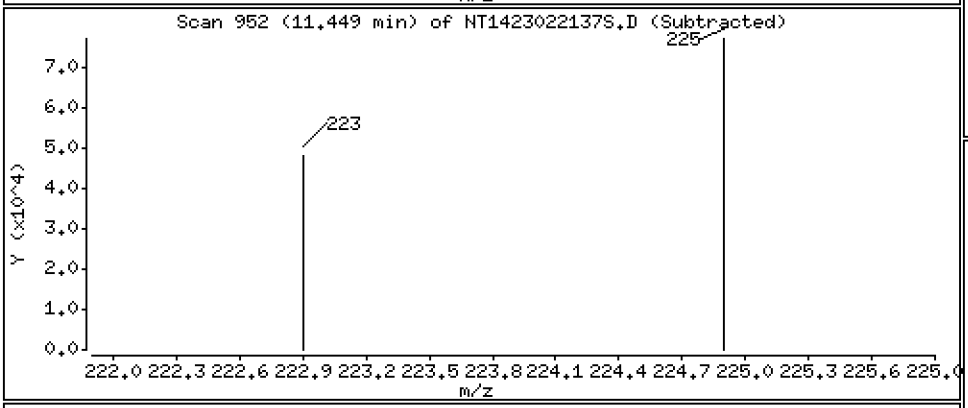
Column diameter: 0.25

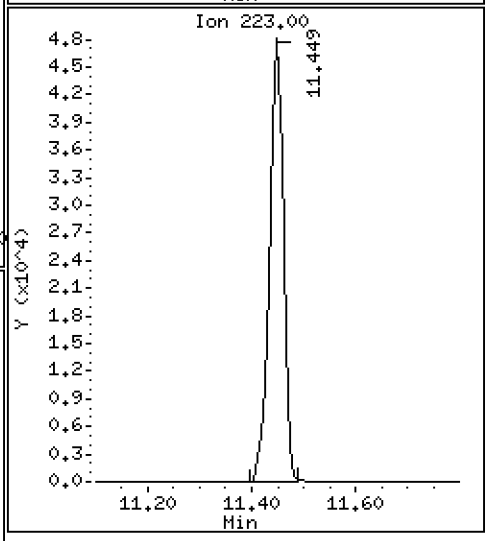
30 Hexachlorobutadiene

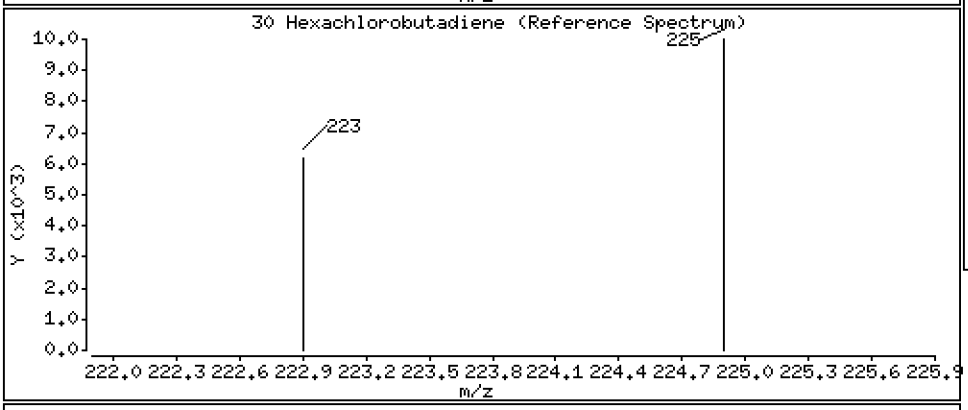
Concentration: 2.206 ug/mL

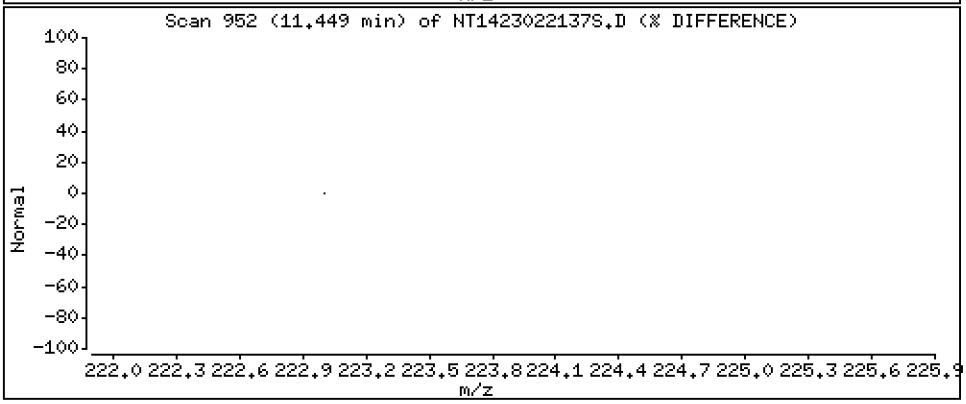












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221137S.D

Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

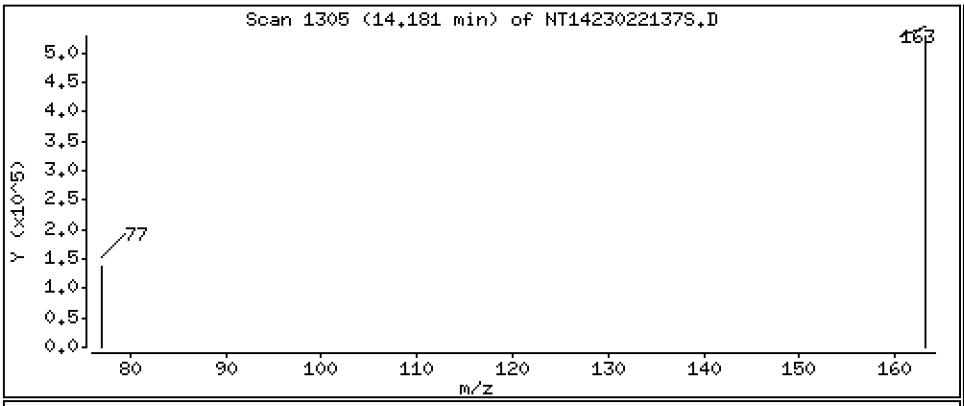
Operator: DSD

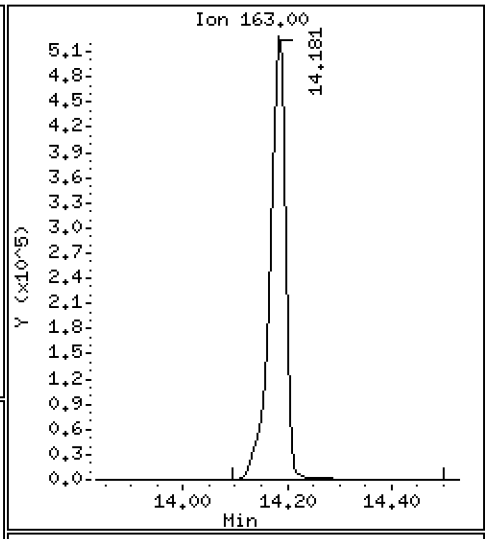
Column phase: ZB-5msi

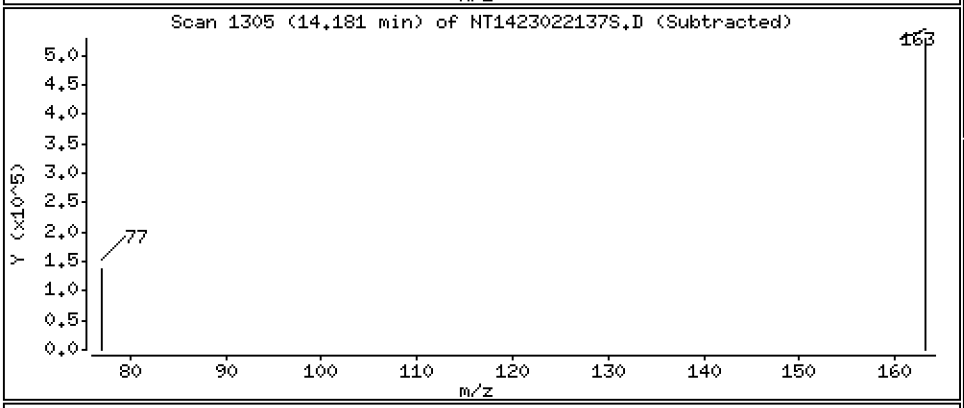
Column diameter: 0.25

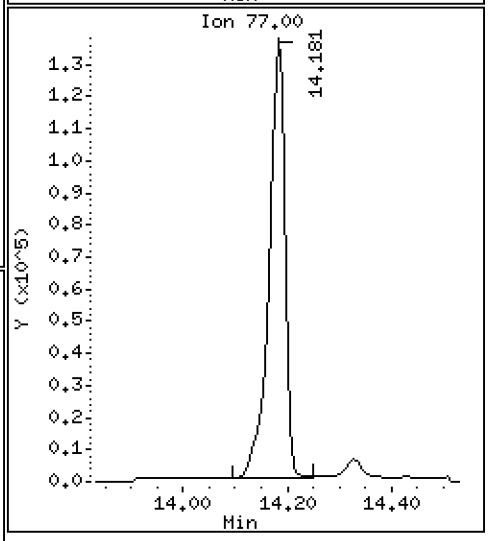
39 Dimethylphthalate

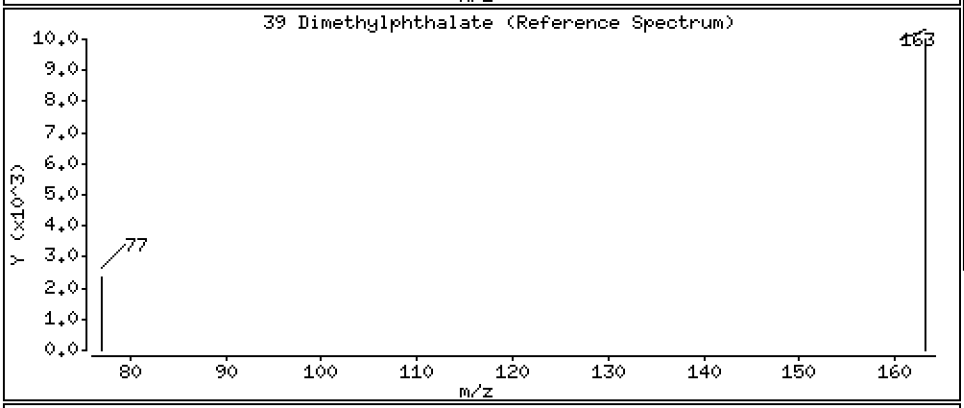
Concentration: 5.971 ug/mL

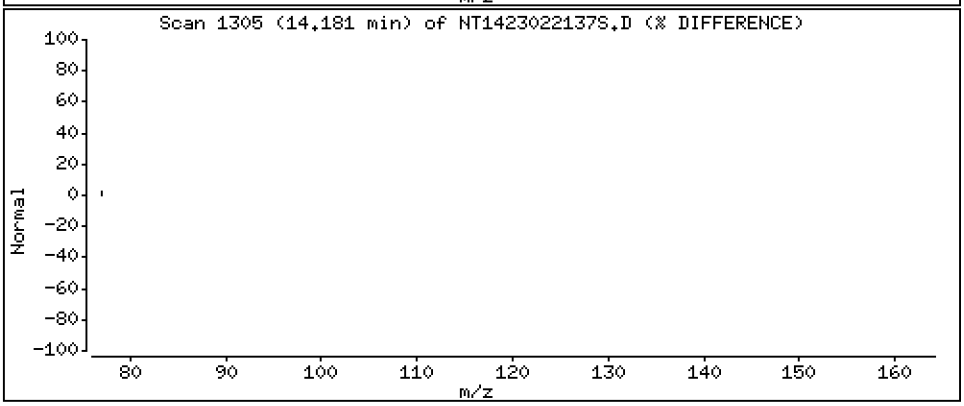












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

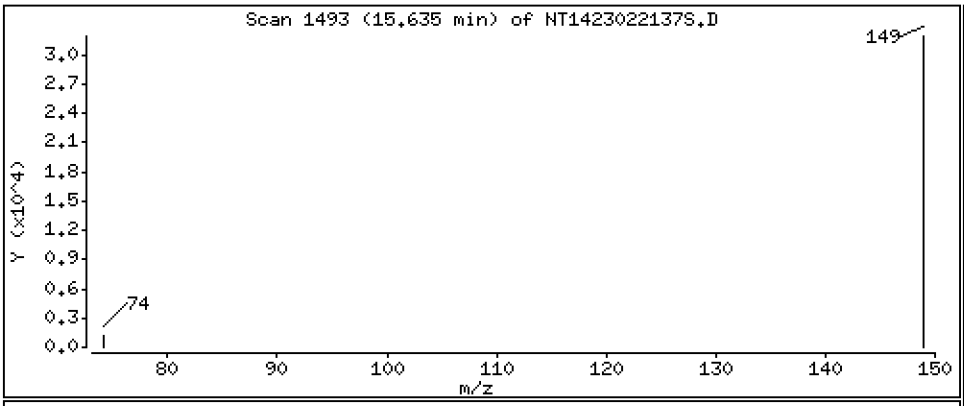
Operator: DSD

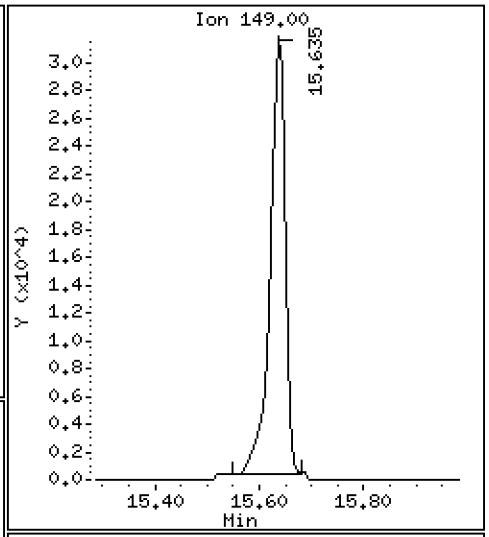
Column phase: ZB-5msi

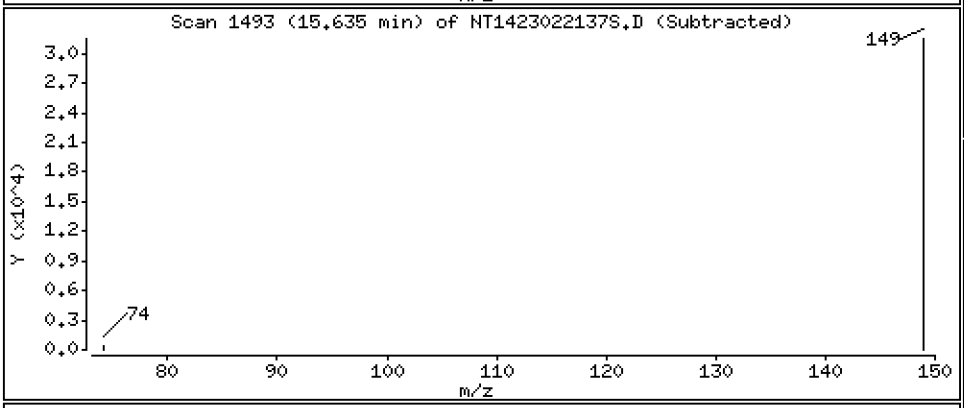
Column diameter: 0.25

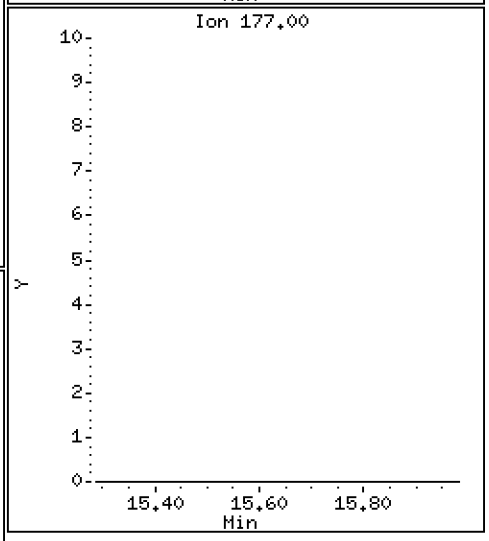
50 Diethylphthalate

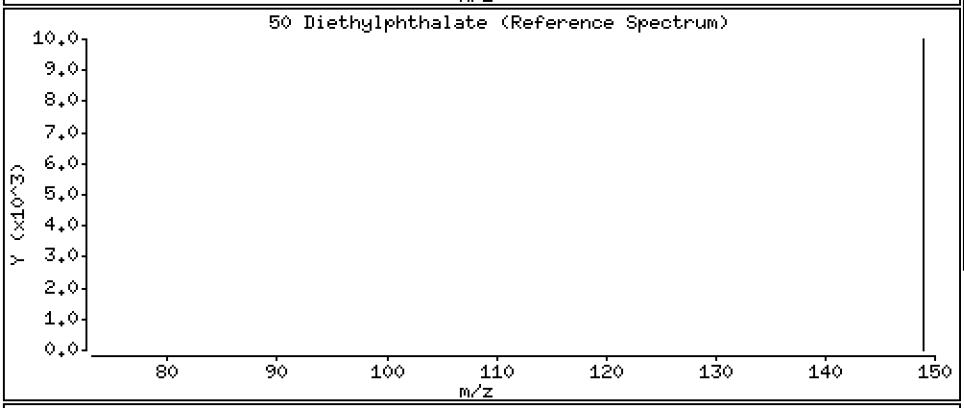
Concentration: 0.2720 ug/mL

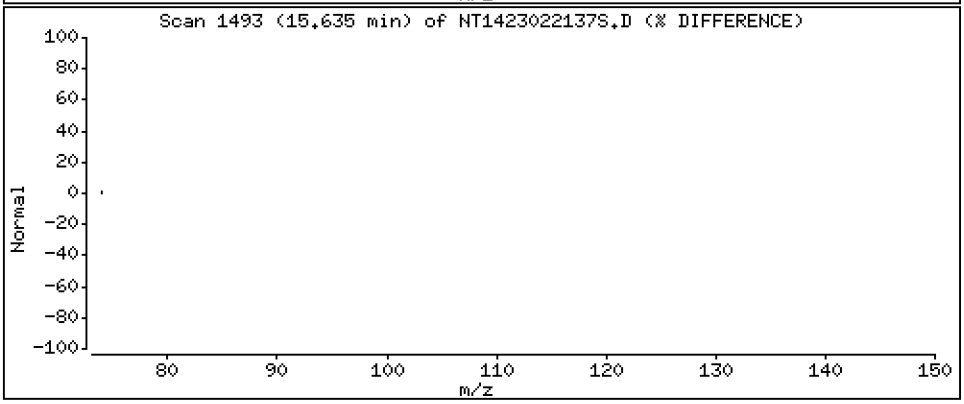












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

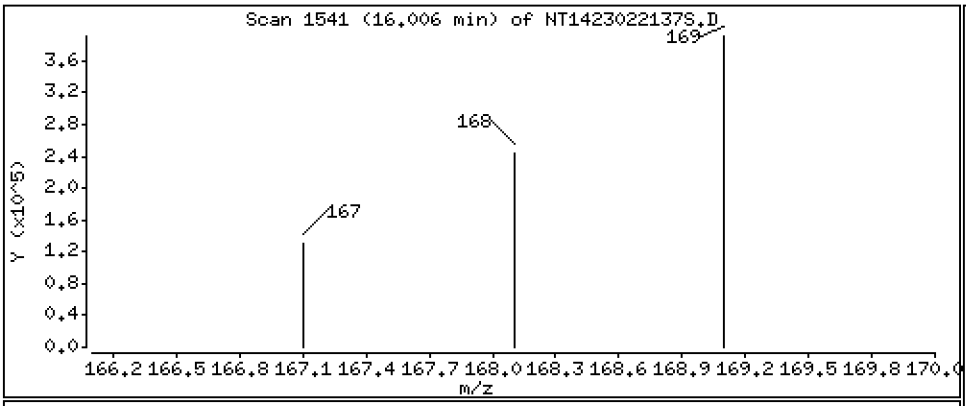
Operator: DSD

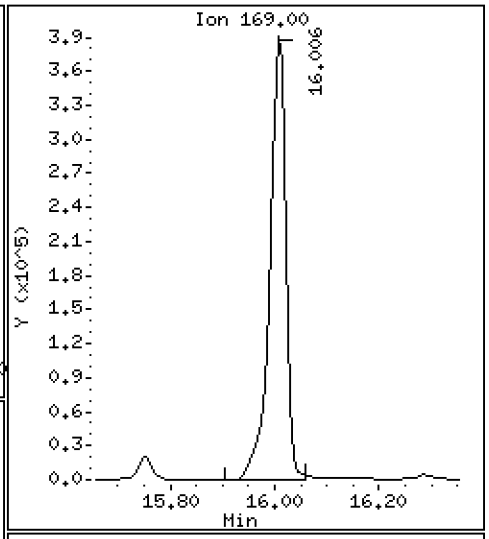
Column phase: ZB-5msi

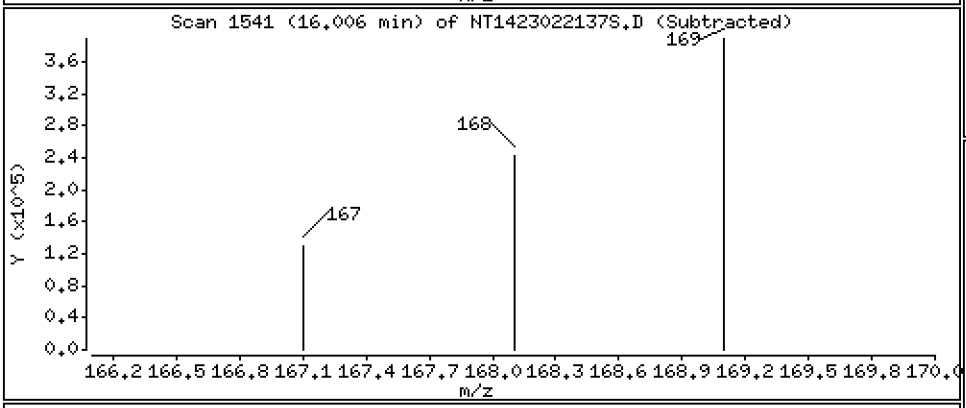
Column diameter: 0.25

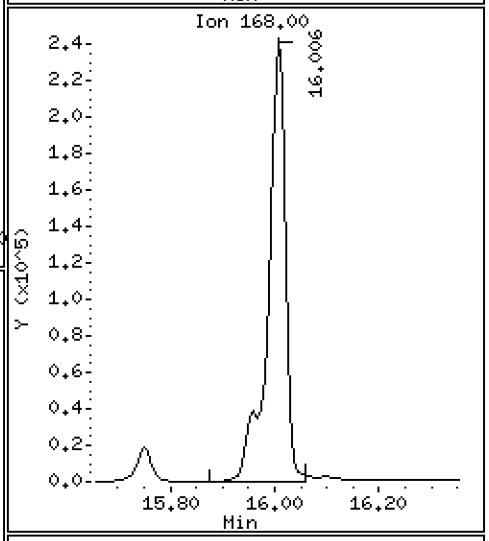
54 N-Nitrosodiphenylamine

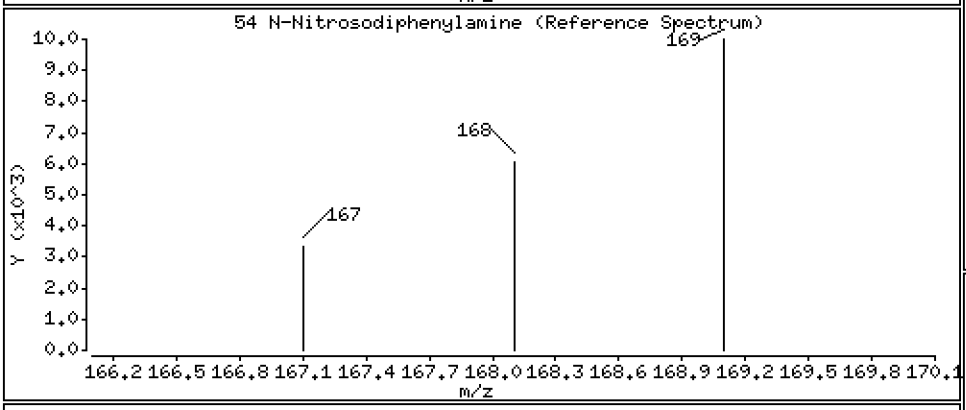
Concentration: 4.418 ug/mL

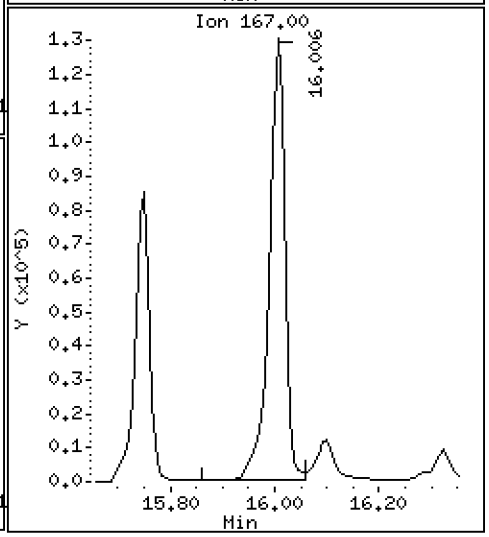


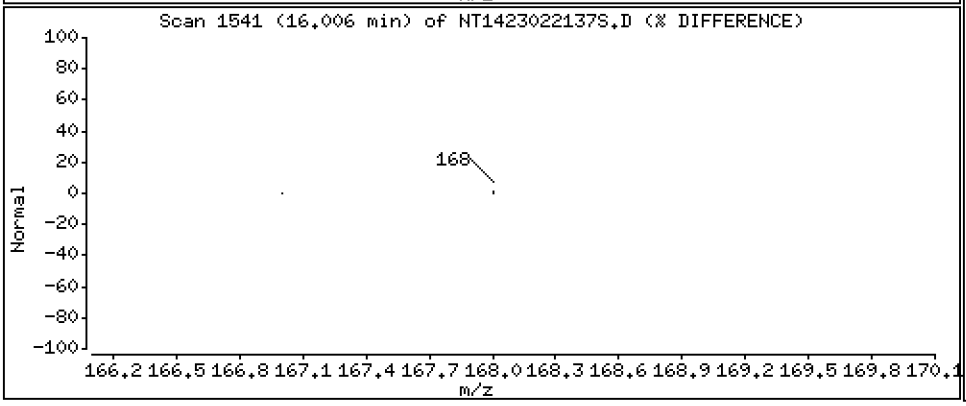












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

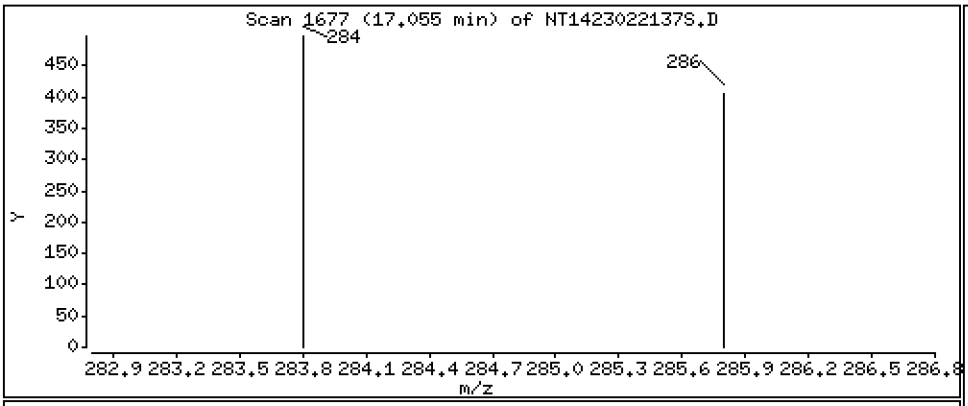
Operator: DSD

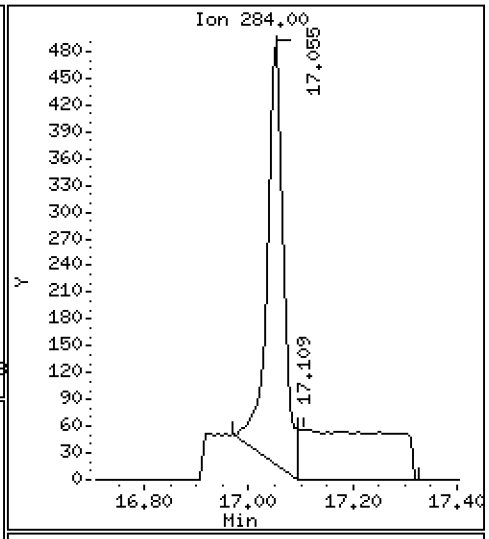
Column phase: ZB-5msi

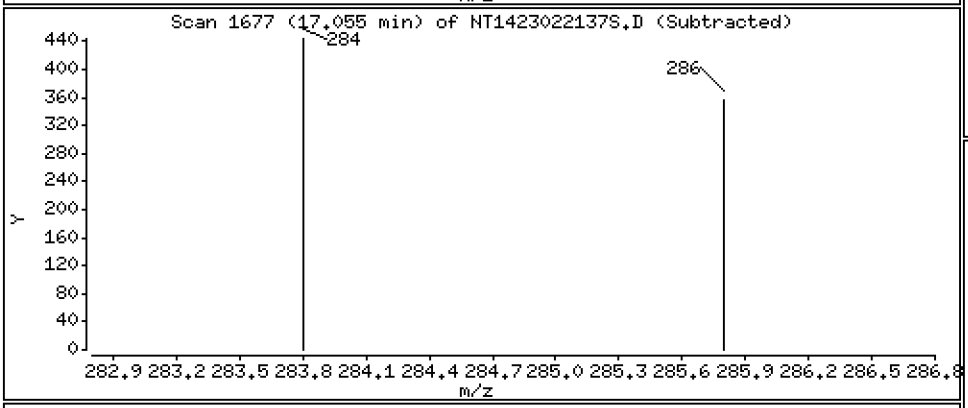
Column diameter: 0.25

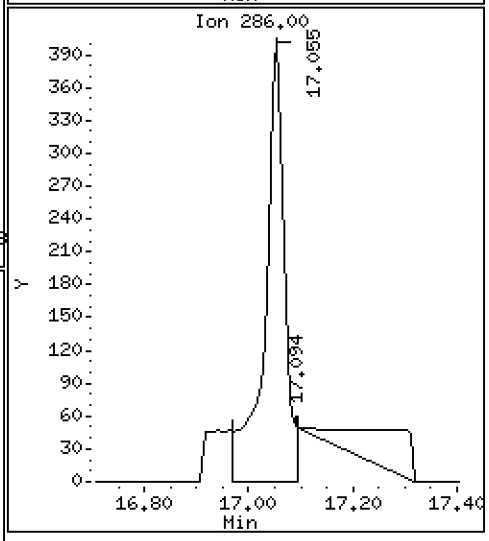
57 Hexachlorobenzene

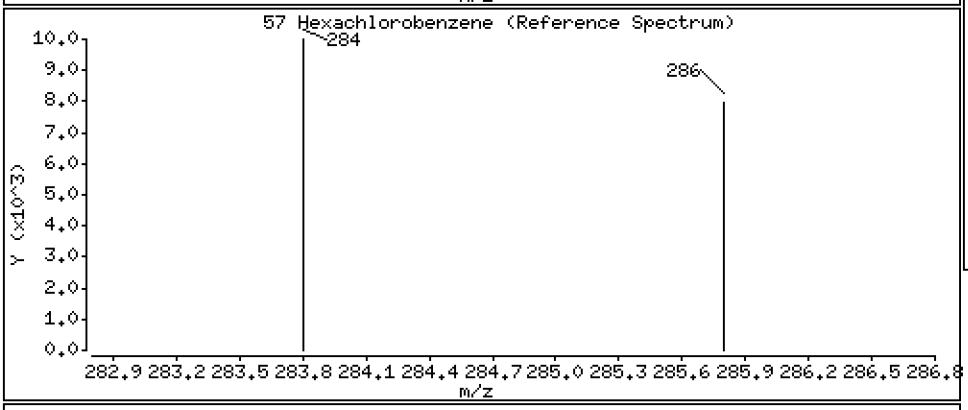
Concentration: 0.01168 ug/mL

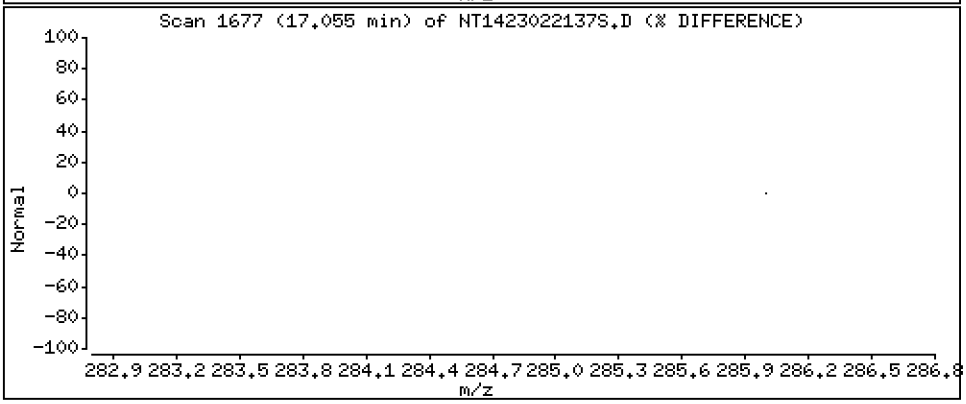












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

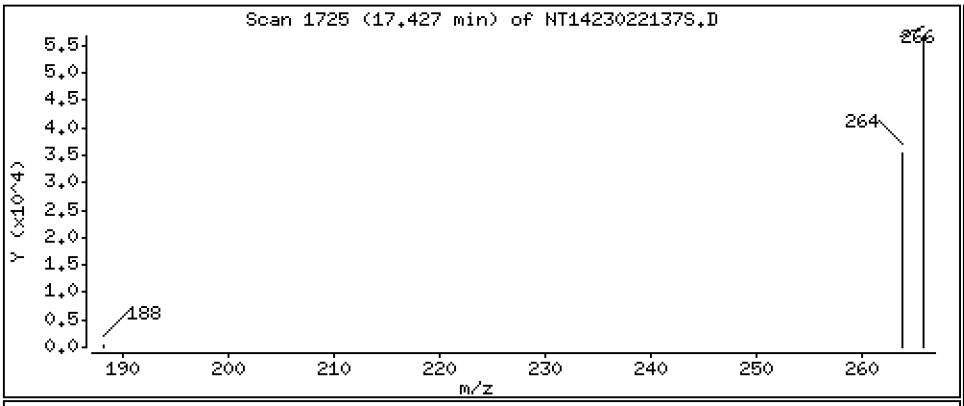
Operator: DSD

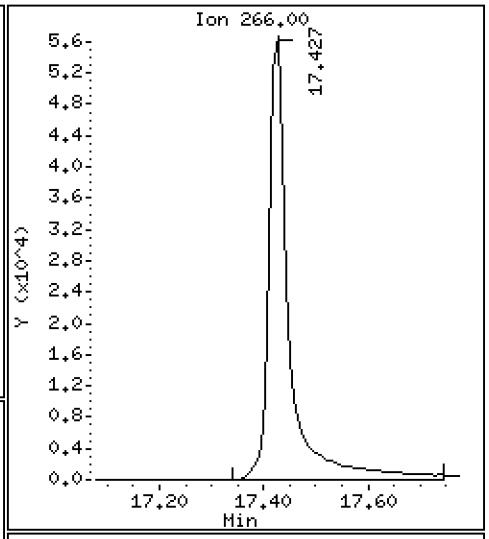
Column phase: ZB-5msi

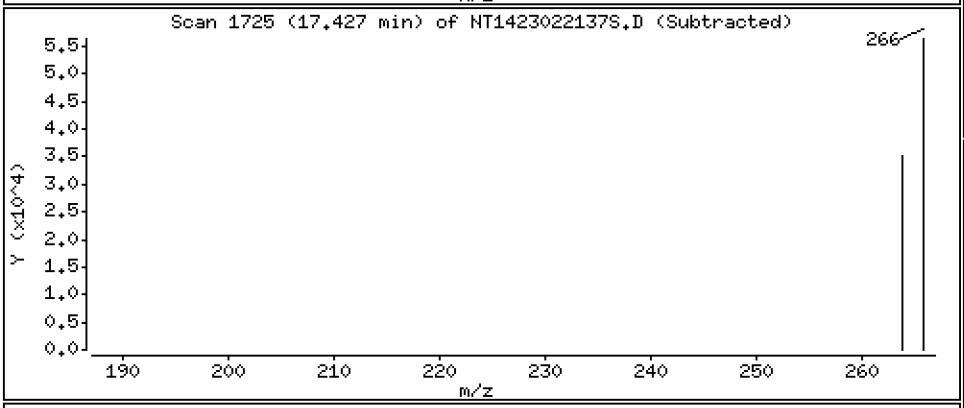
Column diameter: 0.25

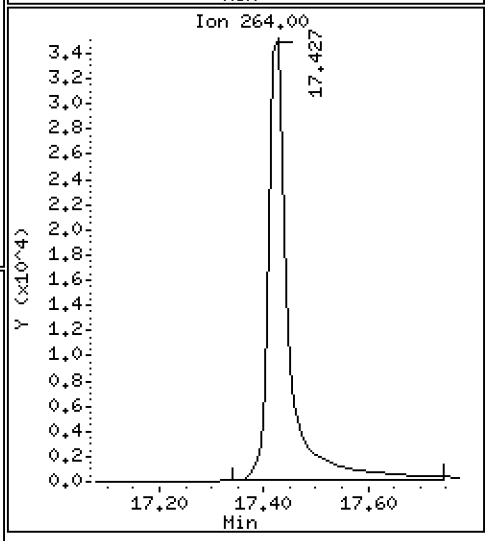
58 Pentachlorophenol

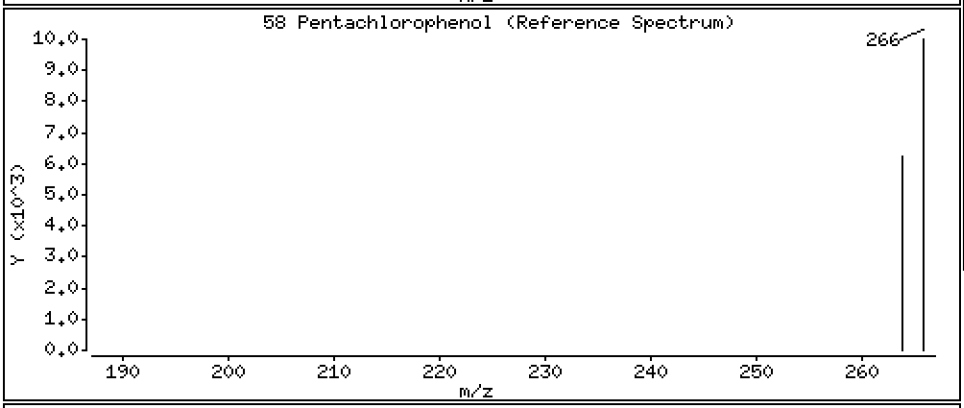
Concentration: 3.870 ug/mL

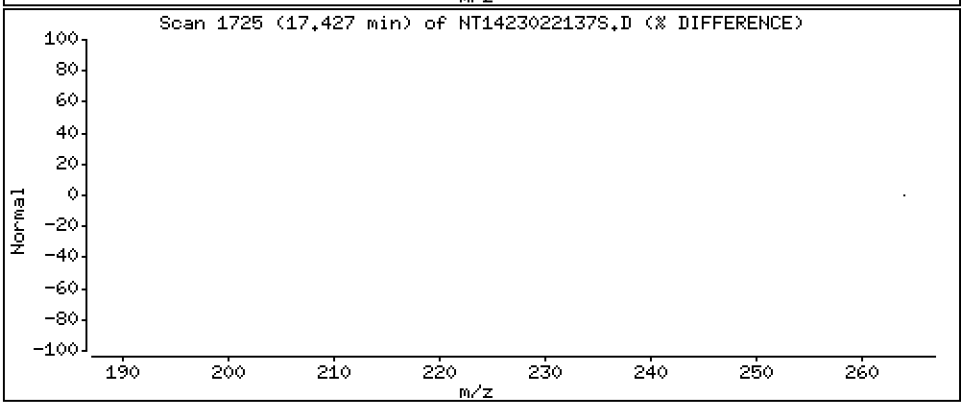












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

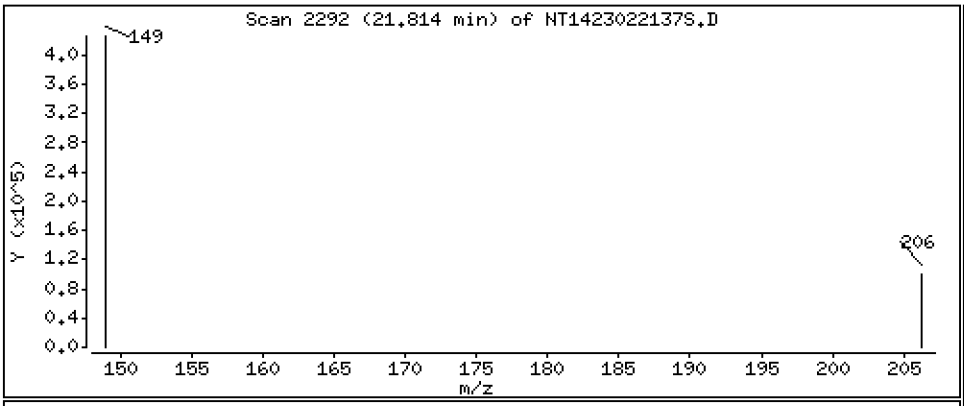
Operator: DSD

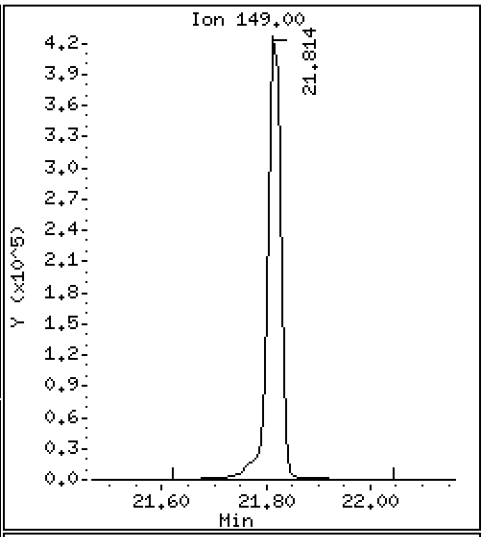
Column phase: ZB-5msi

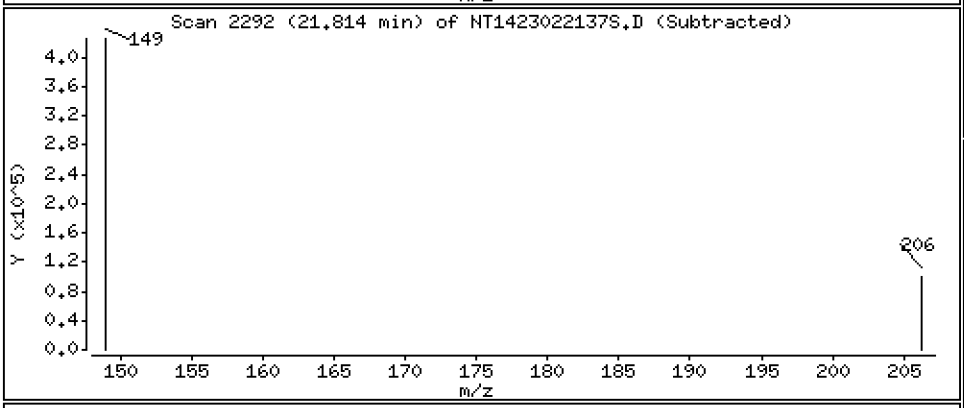
Column diameter: 0.25

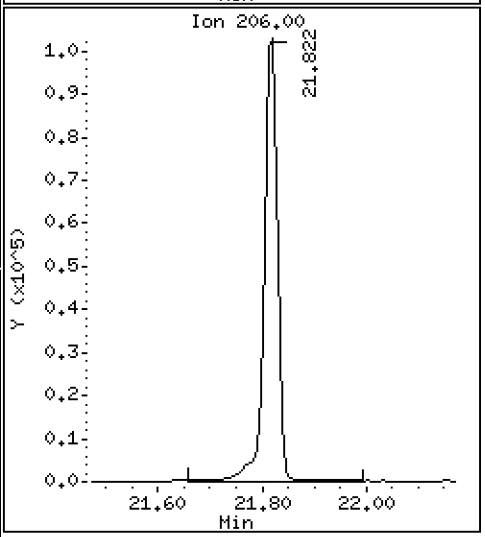
67 Butylbenzylphthalate

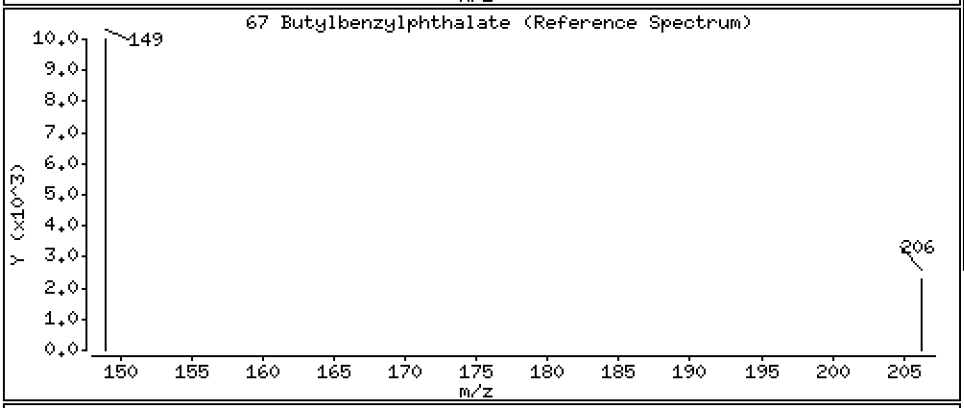
Concentration: 4.963 ug/mL

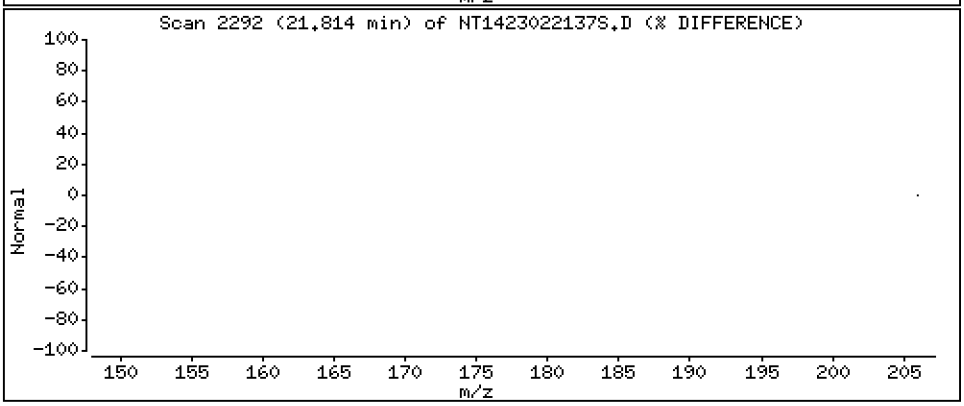












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

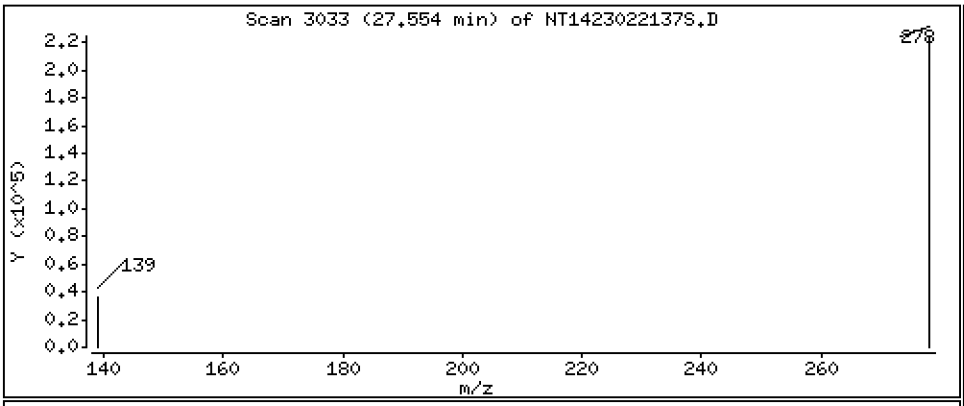
Operator: DSD

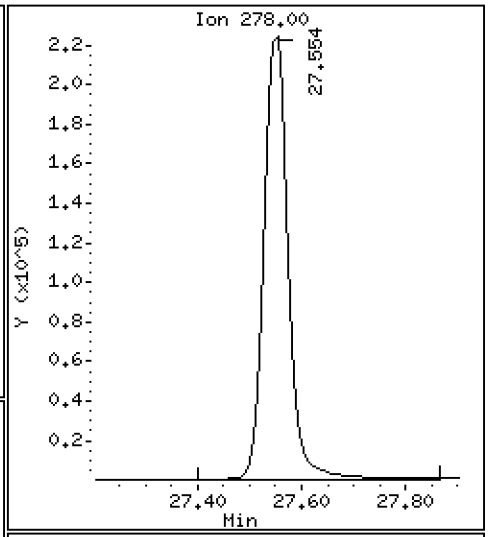
Column phase: ZB-5msi

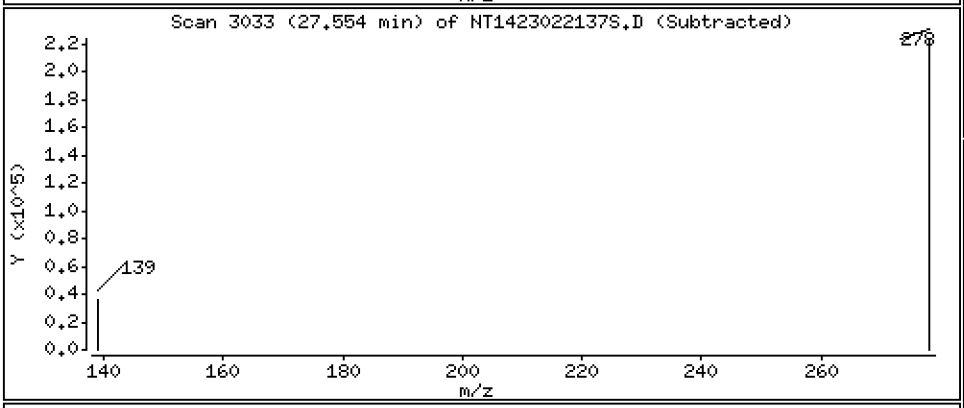
Column diameter: 0.25

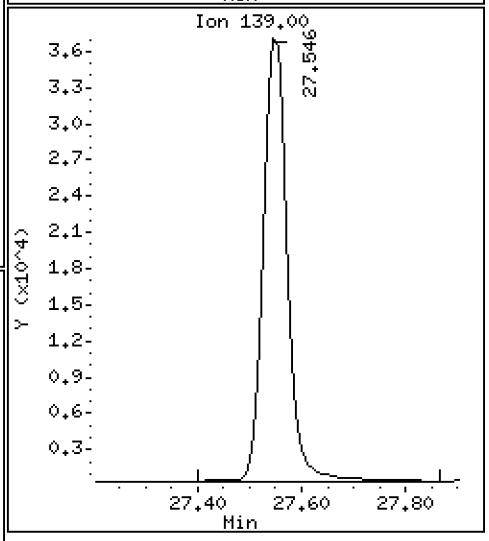
79 Dibenzo(a,h)anthracene

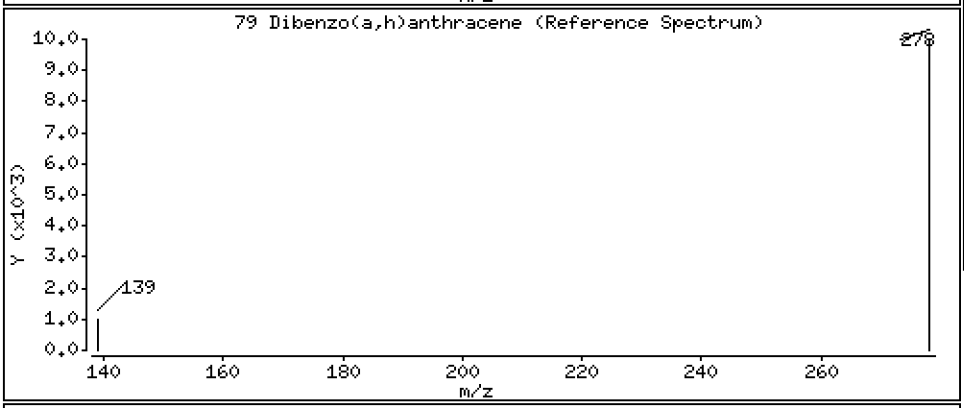
Concentration: 4.730 ug/mL

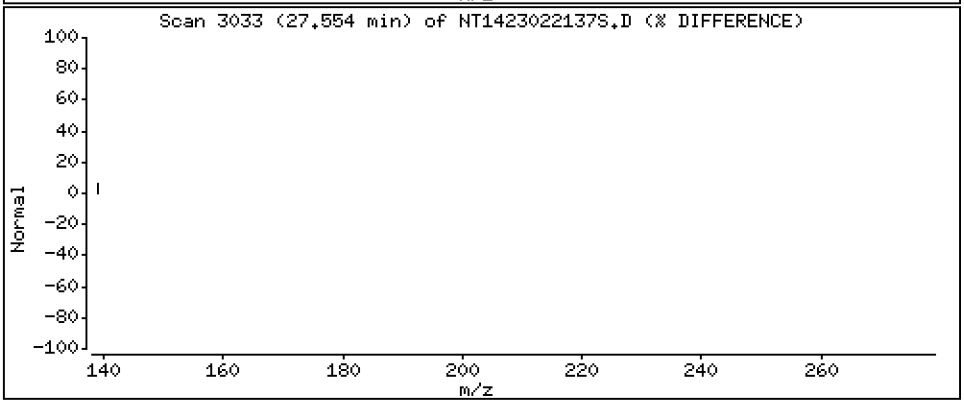












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Date : 22-FEB-2023 11:09

Client ID:

Instrument: nt14.i

Sample Info: BLA0393-SRM1

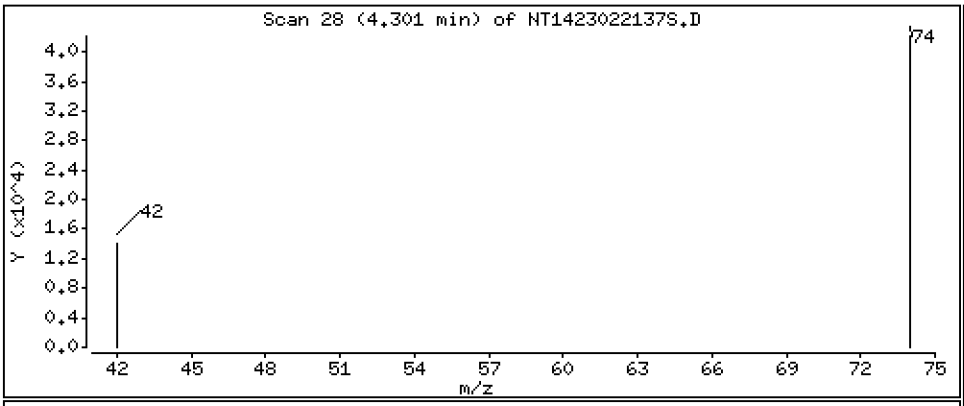
Operator: DSD

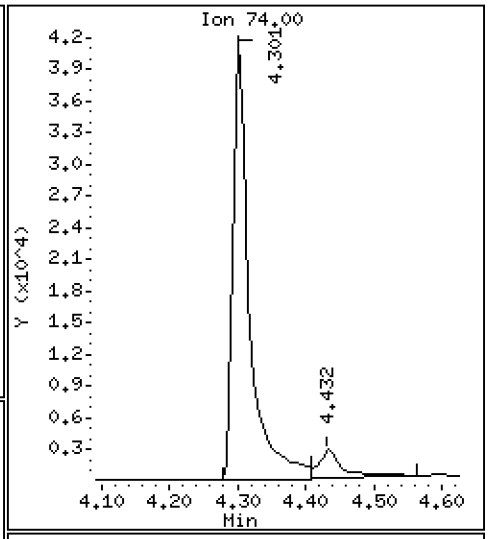
Column phase: ZB-5msi

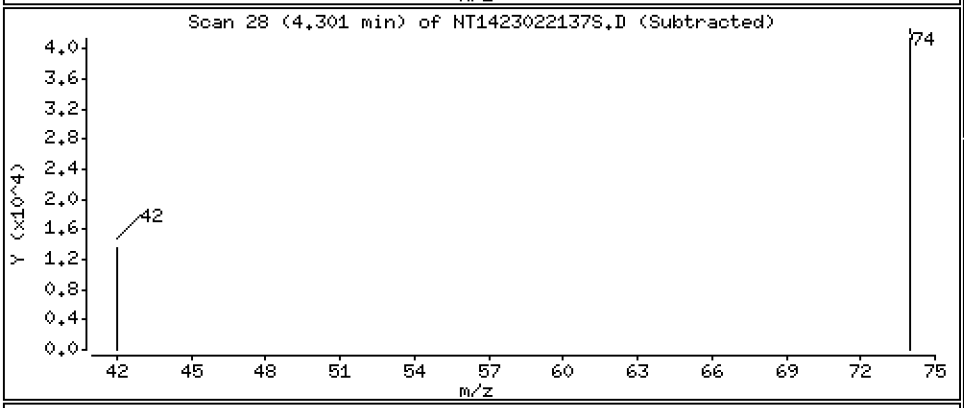
Column diameter: 0.25

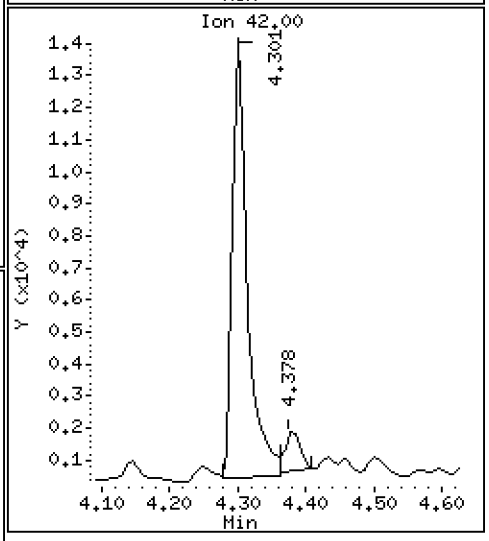
90 N-Nitrosodimethylamine

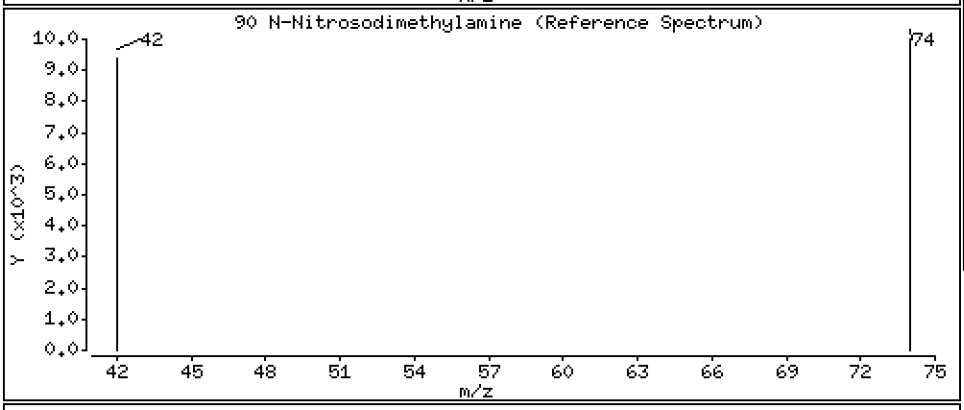
Concentration: 1.025 ug/mL

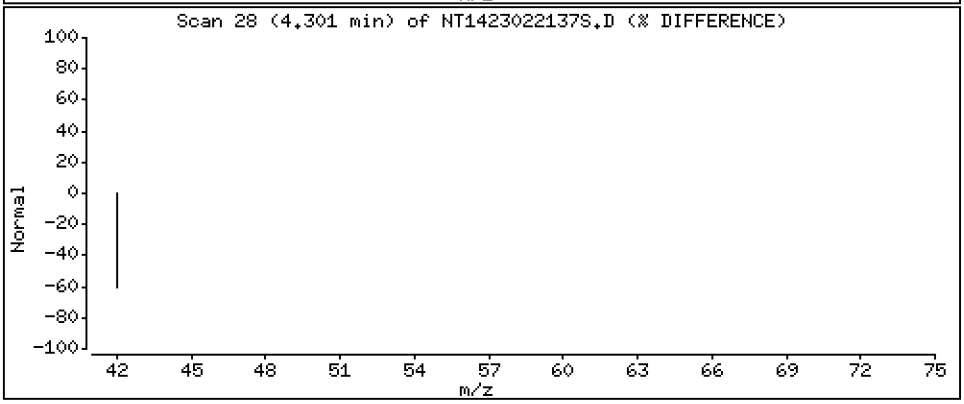












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT1423022137S.D
Lab Smp Id: BLA0393-SRM2
Inj Date : 22-FEB-2023 11:09 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : BLA0393-SRM1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Meth Date : 17-Jun-2023 09:15 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 28
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.393	6.385	(0.746)	476145	5.44589	5.446(R)
	3 Phenol	94	7.993	7.993	(0.933)	448890	3.36192	3.362
	7 1,3-Dichlorobenzene	146	8.495	8.503	(0.992)	127003	1.20841	1.208
*	8 1,4-Dichlorobenzene-d4	152	8.565	8.573	(1.000)	308877	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	79	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	9.093	9.093	(1.062)	679659	7.41279	7.413
	15 4-Methylphenol	108	9.365	9.372	(1.093)	859349	8.23408	8.234
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.404	10.404	(0.942)	692828	7.46946	7.469
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	10.955	10.962	(0.992)	156486	1.55420	1.554
*	27 Naphthalene-d8	136	11.040	11.039	(1.000)	1099039	4.00000	
	30 Hexachlorobutadiene	225	11.449	11.449	(1.037)	135137	2.20630	2.206
	39 Dimethylphthalate	163	14.181	14.180	(0.968)	1068185	5.97132	5.971
*	42 Acenaphthene-d10	162	14.645	14.645	(1.000)	586353	4.00000	
	50 Diethylphthalate	149	15.635	15.634	(1.068)	60888	0.27196	0.2720
	54 N-Nitrosodiphenylamine	169	16.005	16.005	(0.906)	794636	4.41804	4.418
	57 Hexachlorobenzene	284	17.054	17.054	(0.965)	1045	0.01168	0.01168
	58 Pentachlorophenol	266	17.426	17.426	(0.986)	146278	3.86967	3.870
*	59 Phenanthrene-d10	188	17.674	17.673	(1.000)	1378091	4.00000	
$	66 Terphenyl-d14	244	20.869	20.869	(0.917)	1014516	3.62294	3.623(R)
	67 Butylbenzylphthalate	149	21.814	21.813	(0.958)	713214	4.96266	4.963
*	69 Chrysene-d12	240	22.766	22.766	(1.000)	1051858	4.00000	
*	77 Perylene-d12	264	25.213	25.212	(1.000)	787258	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.553	27.553	(1.093)	719665	4.72966	4.730
	90 N-Nitrosodimethylamine	74	4.301	4.277	(0.502)	69916	1.02540	1.025

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022137S.D
Lab Smp Id: BLA0393-SRM2
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 08:08
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	261796	130898	523592	308877	17.98
27 Naphthalene-d8	959301	479651	1918602	1099039	14.57
42 Acenaphthene-d10	503659	251830	1007318	586353	16.42
59 Phenanthrene-d10	1179954	589977	2359908	1378091	16.79
69 Chrysene-d12	887360	443680	1774720	1051858	18.54
77 Perylene-d12	652371	326186	1304742	787258	20.68

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.09
27 Naphthalene-d8	11.04	10.54	11.54	11.04	0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	0.00
59 Phenanthrene-d10	17.67	17.17	18.17	17.67	0.00
69 Chrysene-d12	22.77	22.27	23.27	22.77	0.00
77 Perylene-d12	25.21	24.71	25.71	25.21	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022137S.D

Lab ID: BLA0393-SRM2
nt14.i, 20230221B.b\SIM.b\SIMABN2.m,   22-FEB-2023 11:09

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1423022132S.D

On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Analytical Resources, LLC
Analytical Chemists and Consultants

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270E-SIM

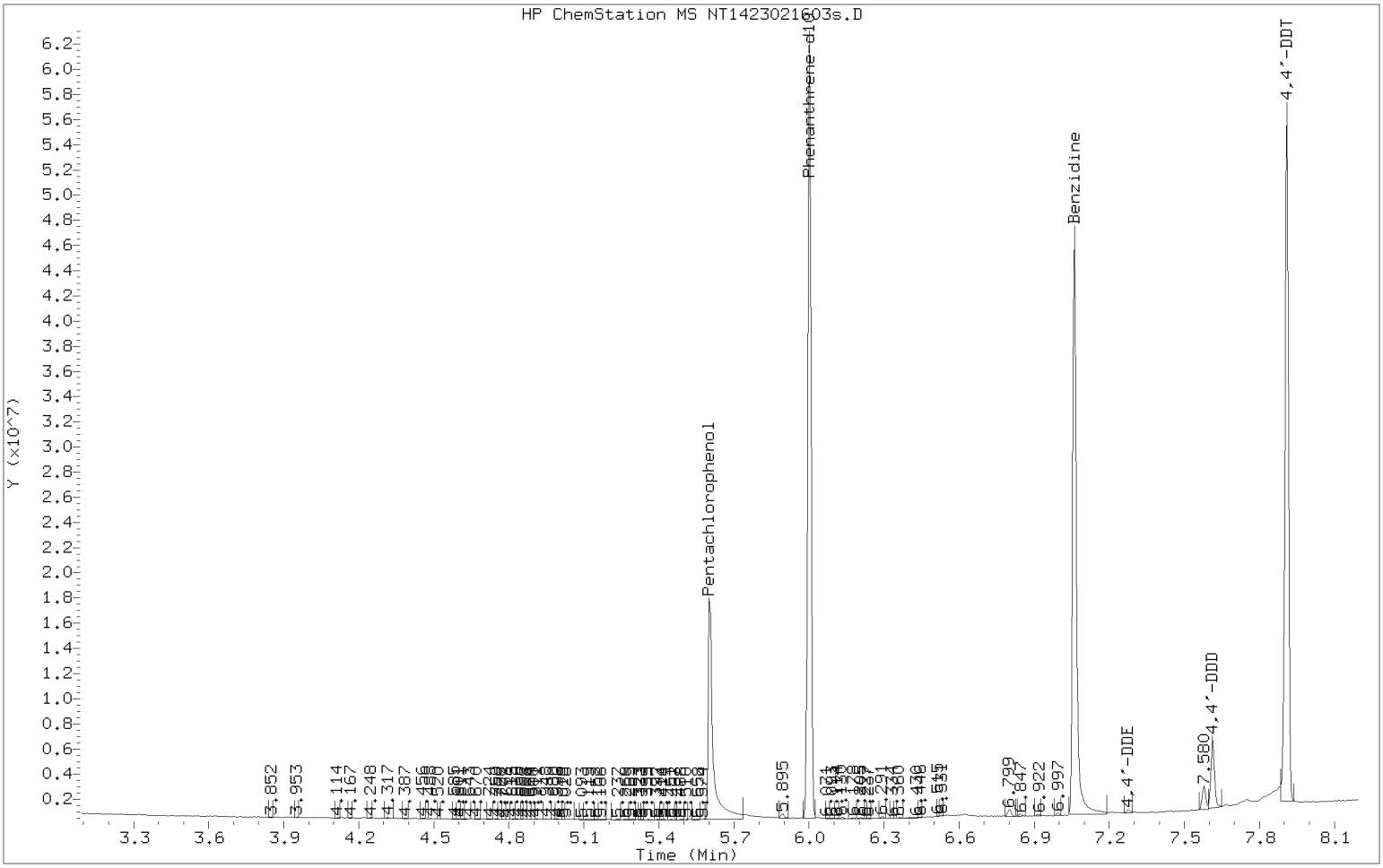
Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Lab File ID:	NT1423021603s.D	Injection Date:	02/16/23
Instrument ID:	NT14	Injection Time:	14:33
Sequence:	SLB0240	Lab Sample ID:	SLB0240-TUN1

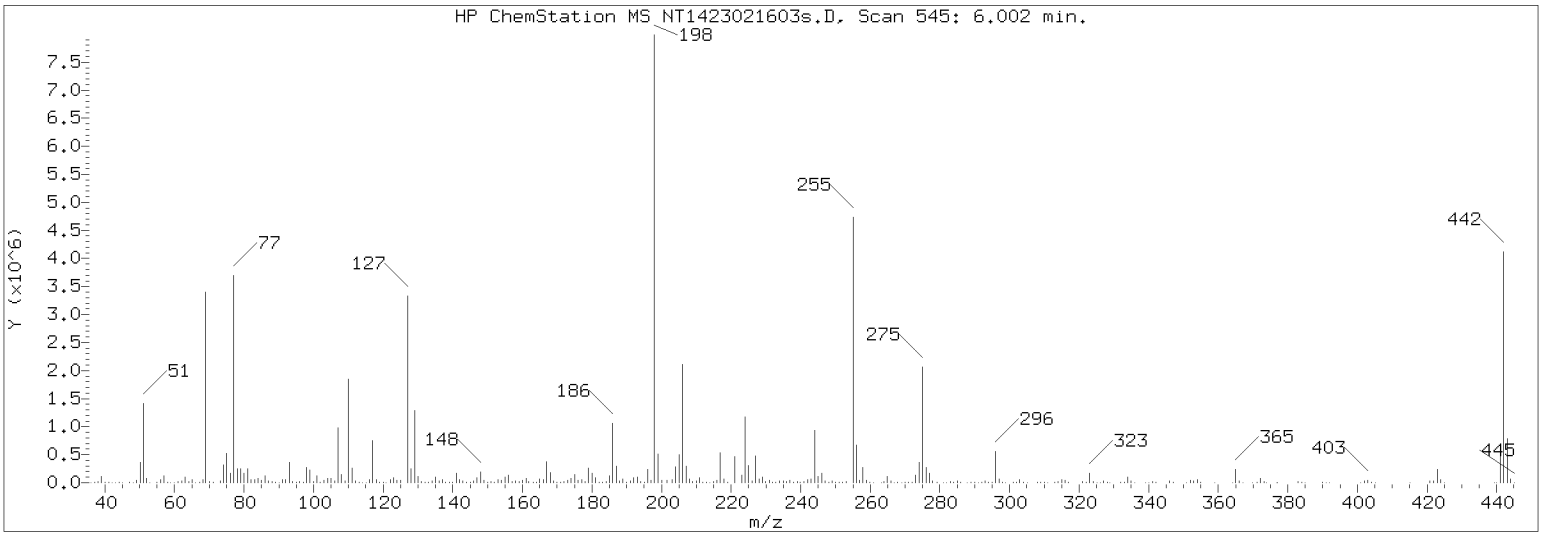
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	1.69	PASS
69	Less than 100% of 198	43.6	PASS
70	Less than 2% of 69	0.508	PASS
197	Less than 2% of 198	0.611	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.61	PASS
365	1 - 100% of 198	2.96	PASS
441	Less than 150% of 443	74.2	PASS
442	1 - 200% of 198	52	PASS
443	15 - 24% of 442	19	PASS
4,4'-DDD	Less than 20% of		
4,4'-DDE	Less than 20% of		
4,4'-DDT	Less than 200% of		

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SLB0240-TUN1	NT1423021603s.D	02/16/2023	14:33
Cal Standard	SLB0240-CAL9	NT1423021604s.D	02/16/2023	15:54
Cal Standard	SLB0240-CAL8	NT1423021605s.D	02/16/2023	16:30
Cal Standard	SLB0240-CAL7	NT1423021606s.D	02/16/2023	17:06
Cal Standard	SLB0240-CAL6	NT1423021607s.D	02/16/2023	17:42
Cal Standard	SLB0240-CAL5	NT1423021608s.D	02/16/2023	18:18
Cal Standard	SLB0240-CAL4	NT1423021609s.D	02/16/2023	18:54
Cal Standard	SLB0240-CAL3	NT1423021610s.D	02/16/2023	19:30
Cal Standard	SLB0240-CAL2	NT1423021611s.D	02/16/2023	20:06
Cal Standard	SLB0240-CAL1	NT1423021612s.D	02/16/2023	20:42
Secondary Cal Check	SLB0240-SCV1	NT1423021613s.D	02/16/2023	21:18
Initial Cal Blank	SLB0240-ICB1	NT1423021618s.D	02/17/2023	0:17

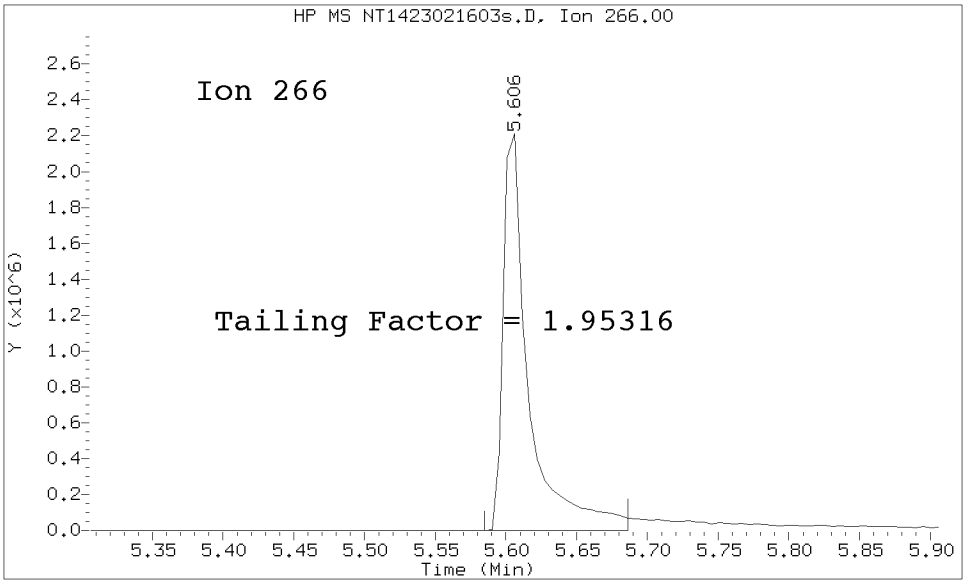
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230216.b/20230216.b/NT1423021603s.D/NT1423021603s.D
Method Used: \20230216.b\20230216.b\DFTPP8270E.m Inst: nt14
Injection Date: 16-FEB-2023 14:33 Operator: DSD
Sample Info: SLB0240-TUN1 SLB0240-TUN1
Report Date: 03/03/2023 14:18



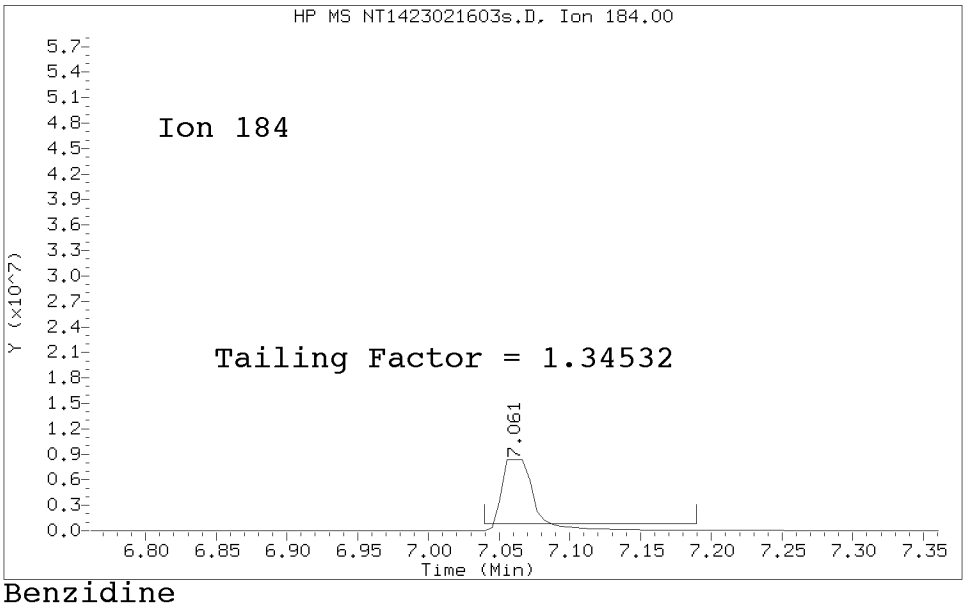


Datafile Analyzed: /20230216.b/20230216.b/NT1423021603s.D/NT1423021603s.D
Method Used: \20230216.b\DFTPP8270E.m\sw846ddt.m Inst: nt14
Injection Date: 16-FEB-2023 14:33 Operator: DSD
Sample Info: SEQ-TUN3
Report Date: 03/03/2023 14:18



Pentachlorophenol
==========
Exp. RT = 5.606
Found RT = 5.606

Tail Factor = 1.953 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.061
Found RT = 7.061

Tail Factor = 1.345 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.9531646	2.000	PASS
Benzidine	1.3453237	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	9391744			N/A
4,4-DDE	31744	0.3	20.0	PASS
4,4-DDD	1131675	10.8	20.0	PASS
4,4-DDD + DDE	1163419	11.0	20.0	PASS

Tuning Sample, nt14.i/20230216.b/20230216.b/NT1423021603s.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.74 (1.69)
69	Mass 69 relative abundance	43.59
70	Less than 2.00% of mass 69	0.22 (0.51)
197	Less than 2.00% of mass 198	0.61
199	5.00 - 9.00% of mass 198	6.61
365	1.00 - 100.00% of mass 198	2.96
441	Less than 150.00% of mass 443	7.33 (74.20)
442	Less than 200.00% of mass 198	52.01
443	15.00 - 24.00% of mass 442	9.87 (18.98)

Data File: NT1423021603s.D
Spectrum: Avg. Scans 544-546 (6.00), Background Scan 538
Location of Maximum: 198.00
Number of points: 325

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	234	127.00	2627072	210.00	30808	297.00	57304
37.00	4928	128.00	193536	211.00	66264	298.00	4346
38.00	16100	129.00	1002176	212.00	9012	299.00	778
39.00	86128	130.00	83024	213.00	4418	301.00	6536
40.00	1445	131.00	16110	214.00	2279	302.00	8309
41.00	1468	132.00	6808	215.00	17000	303.00	46096
42.00	911	133.00	2061	216.00	33704	304.00	12268
45.00	3191	134.00	28776	217.00	423104	305.00	985
48.00	1341	135.00	78176	218.00	55256	308.00	6175
49.00	6693	136.00	33232	219.00	5491	309.00	4166
50.00	287040	137.00	42088	221.00	341952	310.00	5991
51.00	1107456	138.00	8363	223.00	98976	311.00	732
52.00	60656	139.00	5700	224.00	901184	313.00	4780
53.00	2876	140.00	12940	225.00	232640	314.00	21184
55.00	10099	141.00	129168	226.00	25264	315.00	48568
56.00	44688	142.00	43080	227.00	360896	316.00	28648
57.00	99760	143.00	28672	228.00	53192	317.00	5757
58.00	6888	144.00	8339	229.00	80040	321.00	13596
59.00	1648	145.00	7386	230.00	9491	322.00	5967
60.00	1219	146.00	24536	231.00	35008	323.00	128608
61.00	23280	147.00	65392	232.00	5357	324.00	21648
62.00	28400	148.00	150720	233.00	6636	325.00	923
63.00	82528	149.00	32664	234.00	23312	326.00	1964
64.00	13066	150.00	10353	235.00	28000	327.00	25704
65.00	44920	151.00	16872	236.00	18056	328.00	12093
66.00	4461	152.00	11153	237.00	35552	329.00	3076
67.00	1649	153.00	42824	238.00	4722	332.00	9967
68.00	45176	154.00	34848	239.00	14633	333.00	12196
69.00	2675712	155.00	74600	240.00	12321	334.00	85224
70.00	13596	156.00	107384	241.00	22320	335.00	22864
73.00	21600	157.00	20016	242.00	47792	336.00	2619
74.00	251584	158.00	24240	243.00	50944	339.00	718
75.00	407680	159.00	22784	244.00	707776	340.00	1309
76.00	140096	160.00	40720	245.00	89264	341.00	14289
77.00	2915840	161.00	62672	246.00	131016	342.00	4394
78.00	200000	162.00	16872	247.00	28936	346.00	28552
79.00	186752	163.00	6683	248.00	6201	347.00	5145
80.00	136704	164.00	8065	249.00	26176	350.00	717
81.00	195200	165.00	49128	250.00	5926	351.00	823
82.00	47032	166.00	40400	251.00	5853	352.00	38056
83.00	45208	167.00	281088	252.00	7432	353.00	26224
85.00	31296	168.00	145536	253.00	15033	354.00	38056
86.00	54160	169.00	23504	254.00	9410	355.00	6985
87.00	26064	170.00	9632	255.00	3554304	359.00	2383
88.00	9527	171.00	12313	256.00	515328	364.00	1635
89.00	7167	172.00	22392	257.00	38256	365.00	181568
90.00	698	173.00	32920	258.00	210304	366.00	24640
91.00	40408	174.00	61832	259.00	31408	367.00	955
92.00	45528	175.00	112128	260.00	6139	370.00	3600

93.00	296960	176.00	31504	261.00	5764	371.00	8738
94.00	22352	177.00	48936	263.00	1078	372.00	60448
95.00	4027	178.00	18064	264.00	5808	373.00	16079
96.00	11069	179.00	205632	265.00	83712	374.00	1592
97.00	3421	180.00	139904	266.00	10984	377.00	1690
98.00	217408	181.00	66784	267.00	858	383.00	15955
99.00	183808	182.00	10904	268.00	681	384.00	4548
100.00	17952	183.00	6693	269.00	1031	385.00	782
101.00	98832	184.00	17728	270.00	3497	390.00	7317
102.00	4121	185.00	100784	271.00	7357	391.00	5379
103.00	32928	186.00	819968	272.00	11090	392.00	3751
104.00	64456	187.00	233216	273.00	102560	401.00	3177
105.00	58656	188.00	25416	274.00	276800	402.00	23400
106.00	20736	189.00	49520	275.00	1550848	403.00	32568
107.00	771648	190.00	8839	276.00	207552	404.00	11566
108.00	119928	191.00	20984	277.00	134784	405.00	2935
109.00	22672	192.00	68752	278.00	23960	415.00	674
110.00	1432064	193.00	74840	279.00	4579	421.00	24160
111.00	204544	194.00	19224	281.00	931	422.00	26616
112.00	24896	195.00	6565	282.00	3437	423.00	186048
113.00	8405	196.00	183680	283.00	14509	424.00	41216
114.00	1701	197.00	37512	284.00	9331	425.00	4321
115.00	1796	198.00	6138368	285.00	23984	438.00	1391
116.00	40928	199.00	405696	286.00	4717	439.00	1400
117.00	604736	200.00	30232	288.00	884	440.00	2550
118.00	44648	201.00	34040	289.00	5002	441.00	449664
119.00	8501	203.00	43656	290.00	4674	442.00	3192320
120.00	8877	204.00	213312	291.00	3293	443.00	606016
121.00	3538	205.00	381120	292.00	6118	444.00	54800
122.00	44736	206.00	1595904	293.00	25544	445.00	2486
123.00	73984	207.00	210944	294.00	6665		
124.00	34728	208.00	47112	295.00	9652		
125.00	32952	209.00	14622	296.00	426176		

INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00009	Instrument:	NT14
Calibration Date:	02/16/2023	Column (1):	ZB-5MS

Calibration Comments: sim svoa ical.
Several low points for Benzoic acid and PCP are not used due to low response.
Benzoic MRL=400
PCP MRL=40

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Phenol	0.05	0.7463768	0.1	0.9682036	0.2	1.664572	0.5	1.57532	1	1.721483	2.5	1.905709
1,3-Dichlorobenzene	0.05	1.260417	0.1	1.319029	0.2	1.613005	0.5	1.303125	1	1.34255	2.5	1.435467
1,4-Dichlorobenzene	0.05	1.225543	0.1	1.267161	0.2	1.530273	0.5	1.232272	1	1.269077	2.5	1.368515
1,2-Dichlorobenzene	0.05	1.198143	0.1	1.258917	0.2	1.522704	0.5	1.233033	1	1.271769	2.5	1.358405
Benzyl Alcohol					0.2	0.921109	0.5	0.9821514	1	1.051412	2.5	1.225375
Benzoic acid									4	3.723011E-02	10	0.156524
2-Methylphenol	0.05	0.8555254	0.1	1.023621	0.2	1.361321	0.5	1.182332	1	1.260291	2.5	1.341282
N-Nitroso-di-n-Propylamine	0.05	0.5835598	0.1	0.7950811	0.2	1.046005	0.5	0.9366186	1	1.016845	2.5	1.127267
4-Methylphenol	0.05	0.5679348	0.1	0.7978291	0.2	1.227731	0.5	1.161078	1	1.293832	2.5	1.420578
2,4-Dimethylphenol	0.1	0.2263032	0.2	0.2896173	0.4	0.3941579	1	0.3491102	2	0.3647015	5	0.3574719
1,2,4-Trichlorobenzene	0.05	0.3377525	0.1	0.3594359	0.2	0.4360415	0.5	0.357755	1	0.3633234	2.5	0.3786406
Hexachlorobutadiene	0.05	0.2241834	0.1	0.2215961	0.2	0.26126	0.5	0.211086	1	0.2158812	2.5	0.2263158
N-Nitrosodimethylamine	0.1	0.2182971	0.2	0.4203259	0.4	0.8164671	1	0.7572316	2	0.8524985	5	0.9395513
Dimethylphthalate	0.05	0.9659875	0.1	1.097785	0.2	1.40389	0.5	1.213347	1	1.266446	2.5	1.337955
Diethyl phthalate					0.2	1.606384	0.5	1.434605	1	1.507876	2.5	1.607258
N-Nitrosodiphenylamine	0.05	0.2973268	0.1	0.4098917	0.2	0.5470832	0.5	0.5062772	1	0.5314858	2.5	0.5878791
Hexachlorobenzene	0.05	0.2405018	0.1	0.2586088	0.2	0.3042554	0.5	0.2472603	1	0.2513695	2.5	0.2770139
Pentachlorophenol	0.1		0.2		0.4	8.429634E-03	1	3.780796E-02	2	6.917267E-02	5	0.1117452
Butylbenzylphthalate	0.05	0.1516566	0.1	0.2055874	0.2	0.350186	0.5	0.4018968	1	0.4859266	2.5	0.5692042
Dibenzo(a,h)anthracene	0.05	0.3299494	0.1	0.387074	0.2	0.5604694	0.5	0.5427045	1	0.6465483	2.5	0.7658298
2-Fluorophenol	0.075	0.1438708	0.15	0.3525043	0.3	0.8413143	0.75	0.9022569	1.5	1.083308	3.75	1.176899
p-Terphenyl-d14	0.05	0.8855079	0.1	1.022307	0.2	1.3089	0.5	1.098397	1	1.133004	2.5	1.061106

INITIAL CALIBRATION DATA
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00009	Instrument:	NT14
Calibration Date:	02/16/2023	Column (1):	ZB-5MS

Calibration Comments: sim svoa ical.
Several low points for Benzoic acid and PCP are not used due to low response.
Benzoic MRL=400
PCP MRL=40

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Phenol	5	1.667529	10	1.766873								
1,3-Dichlorobenzene	5	1.254601	10	1.360237								
1,4-Dichlorobenzene	5	1.193735	10	1.30018								
1,2-Dichlorobenzene	5	1.190575	10	1.293835								
Benzyl Alcohol	5	1.14425	10	1.248608								
Benzoic acid	20	0.2122677	40	0.2599972	80	0.2794551						
2-Methylphenol	5	1.198902	10	1.275636								
N-Nitroso-di-n-Propylamine	5	1.004046	10	1.114231								
4-Methylphenol	5	1.291985	10	1.366441								
2,4-Dimethylphenol	10	0.324976	20	0.3041884								
1,2,4-Trichlorobenzene	5	0.334654	10	0.3640097								
Hexachlorobutadiene	5	0.2030934	10	0.2199754								
N-Nitrosodimethylamine	10	0.7882201	20	0.766621								
Dimethylphthalate	5	1.17732	10	1.299899								
Diethyl phthalate	5	1.42713	10	1.58062								
N-Nitrosodiphenylamine	5	0.491873	10	0.5585721								
Hexachlorobenzene	5	0.2349334	10	0.264369								
Pentachlorophenol	10	0.1198322	20	0.1396602								
Butylbenzylphthalate	5	0.5318607	10	0.6186721								
Dibenzo(a,h)anthracene	5	0.7734346	10	0.9237297								
2-Fluorophenol	7.5	1.117705	15	1.086763								
p-Terphenyl-d14	5	1.014268	10	0.9955556								

INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00009	Instrument:	NT14
Calibration Date:	02/16/2023	Column (1):	ZB-5MS

Calibration Comments: sim svoa ical.
Several low points for Benzoic acid and PCP are not used due to low response.
Benzoic MRL=400
PCP MRL=40

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Phenol	1.502008	27.5		0.9987	QCOD (0.99)	
1,3-Dichlorobenzene	1.361054	8.6			RSD (15)	
1,4-Dichlorobenzene	1.298344	8.3			RSD (15)	
1,2-Dichlorobenzene	1.290923	8.4			RSD (15)	
Benzyl Alcohol	1.095484	12.1			RSD (15)	
Benzoic acid	0.1890948	51.4			RSD (15)	*
2-Methylphenol	1.187364	14.4			RSD (15)	
N-Nitroso-di-n-Propylamine	0.9529567	19.2		0.9988	QCOD (0.99)	
4-Methylphenol	1.140926	26.3		0.9992	QCOD (0.99)	
2,4-Dimethylphenol	0.3263158	16.1		0.9998	QCOD (0.99)	
1,2,4-Trichlorobenzene	0.3664516	8.6			RSD (15)	
Hexachlorobutadiene	0.2229239	7.7			RSD (15)	
N-Nitrosodimethylamine	0.6949015	35.2		0.9986	QCOD (0.99)	
Dimethylphthalate	1.220329	11.5			RSD (15)	
Diethyl phthalate	1.527312	5.4			RSD (15)	
N-Nitrosodiphenylamine	0.4912986	19.3		0.9974	QCOD (0.99)	
Hexachlorobenzene	0.259789	8.6			RSD (15)	
Pentachlorophenol	8.110798E-02	63.3		0.9962	QCOD (0.99)	
Butylbenzylphthalate	0.4143738	40.9		0.9990	QCOD (0.99)	
Dibenzo(a,h)anthracene	0.6162175	32.8		0.9996	QCOD (0.99)	
2-Fluorophenol	0.8380777	45.9		0.9996	QCOD (0.99)	
p-Terphenyl-d14	1.064881	11.6			RSD (15)	

ANALYSIS SEQUENCE

SLB0240

Instrument ID: NT14
Calibration ID: GC00009
MS EM Level: 1706 EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: L001045

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLB0240-TUN1	MS Tune	QC		1	K008469		02/16/2023 14:33	NT1423021603S.D	DSD	
SLB0240-CAL9	CAL 20.0	QC		2	K011111	K010831	02/16/2023 15:54	NT1423021604S.D	DSD	
SLB0240-CAL8	CAL 10.0	QC		3	K011110	K010831	02/16/2023 16:30	NT1423021605S.D	DSD	
SLB0240-CAL7	CAL 5.0	QC		4	K011109	K010831	02/16/2023 17:06	NT1423021606S.D	DSD	
SLB0240-CAL6	CAL 2.5	QC		5	K011108	K010831	02/16/2023 17:42	NT1423021607S.D	DSD	
SLB0240-CAL5	CAL 1.0	QC		6	K011107	K010831	02/16/2023 18:18	NT1423021608S.D	DSD	
SLB0240-CAL4	CAL 0.50	QC		7	K011106	K010831	02/16/2023 18:54	NT1423021609S.D	DSD	
SLB0240-CAL3	CAL 0.20	QC		8	K011105	K010831	02/16/2023 19:30	NT1423021610S.D	DSD	
SLB0240-CAL2	CAL 0.10	QC		9	K011452	K010831	02/16/2023 20:06	NT1423021611S.D	DSD	
SLB0240-CAL1	CAL 0.05	QC		10	K011453	K010831	02/16/2023 20:42	NT1423021612S.D	DSD	
SLB0240-SCV1	SCV 5.0	QC		11	K010066	K010831	02/16/2023 21:18	NT1423021613S.D	DSD	
SLB0240-ICB1	Initial Cal Blank	QC		12	K005156	K010831	02/17/2023 00:17	NT1423021618S.D	DSD	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230216.b\20230216.b

	Time	Filename	LabID	ClientId	DF																
1	1433	NT1423021603s.D	SLB0240-TUN1		1	|NO ISTDS FOUND||															
2	1554	NT1423021604s.D	SLB0240-CAL9		1	| 8.91	281412||	11.40	1028262||	15.03	557155||	18.07	1280257||	23.14	778986||	25.69	506790|			
3	1630	NT1423021605s.D	SLB0240-CAL8		1	| 8.91	314437||	11.40	1133072||	15.02	615002||	18.06	1402756||	23.13	858745||	25.69	567246|			
4	1706	NT1423021606s.D	SLB0240-CAL7		1	| 8.91	404552||	11.39	1448768||	15.02	788119||	18.06	1820509||	23.13	1172674||	25.69	801283|			
5	1742	NT1423021607s.D	SLB0240-CAL6		1	| 8.91	355167||	11.39	1288352||	15.02	710230||	18.06	1567702||	23.12	1084006||	25.68	717515|			
6	1818	NT1423021608s.D	SLB0240-CAL5		1	| 8.91	393779||	11.40	1399029||	15.02	759723||	18.06	1756156||	23.12	1174128||	25.68	826011|			
7	1854	NT1423021609s.D	SLB0240-CAL4		1	| 8.91	399360||	11.40	1408942||	15.02	769600||	18.06	1769892||	23.12	1177556||	25.69	823122|			
8	1930	NT1423021610s.D	SLB0240-CAL3		1	| 8.91	338201||	11.39	1194978||	15.02	642586||	18.05	1471001||	23.12	932019||	25.68	646922|			
9	2006	NT1423021611s.D	SLB0240-CAL2		1	| 8.91	349348||	11.39	1224029||	15.02	645081||	18.06	1496005||	23.12	973406||	25.69	661889|			
10	2042	NT1423021612s.D	SLB0240-CAL1		1	| 8.91	353280||	11.39	1245409||	15.02	663197||	18.06	1533128||	23.12	979054||	25.69	656343|			
11	2118	NT1423021613s.D	SLB0240-SCV1		1	| 8.91	391473||	11.39	1430650||	15.02	794620||	18.06	1759092||	23.13	1201603||	25.69	814421|			
12	0017	NT1423021618s.D	SLB0240-ICB1		1	| 8.91	296634||	11.39	1039961||	15.02	537777||	18.05	1239183||	23.12	789133||	25.69	528194|			

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230216.b\20230216.b

Instrument: nt14.i Date: 16-FEB-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
1433	NT1423021603s.D	SLB0240-TUN1	1	NO MANUAL INTEGRATION
1554	NT1423021604s.D	SLB0240-CAL9	1	Benzoic acid,
1630	NT1423021605s.D	SLB0240-CAL8	1	NO MANUAL INTEGRATION
1706	NT1423021606s.D	SLB0240-CAL7	1	NO MANUAL INTEGRATION
1742	NT1423021607s.D	SLB0240-CAL6	1	NO MANUAL INTEGRATION
1818	NT1423021608s.D	SLB0240-CAL5	1	NO MANUAL INTEGRATION
1854	NT1423021609s.D	SLB0240-CAL4	1	Benzoic acid, Pentachlorophenol,
1930	NT1423021610s.D	SLB0240-CAL3	1	NO MANUAL INTEGRATION
2006	NT1423021611s.D	SLB0240-CAL2	1	NO MANUAL INTEGRATION
2042	NT1423021612s.D	SLB0240-CAL1	1	Phenol, N-Nitroso-di-n-propylamine, 1,2,4-Trichlorobenzene, N-Nitrosodimethylamine, N-Nitrosodiphenylamine,
2118	NT1423021613s.D	SLB0240-SCV1	1	NO MANUAL INTEGRATION
0017	NT1423021618s.D	SLB0240-ICB1	1	NO MANUAL INTEGRATION

Security Status Report

Date: 03-Mar-2023 14:50

NT1423021603s.D	Data Locked	van, 03-Mar-2023 14:50
NT1423021604s.D	Data Locked	van, 03-Mar-2023 14:50
NT1423021605s.D	Data Locked	van, 03-Mar-2023 14:50
NT1423021606s.D	Data Locked	van, 03-Mar-2023 14:50
NT1423021607s.D	Data Locked	van, 03-Mar-2023 14:50
NT1423021608s.D	Data Locked	van, 03-Mar-2023 14:50
NT1423021609s.D	Data Locked	van, 03-Mar-2023 14:50
NT1423021610s.D	Data Locked	van, 03-Mar-2023 14:50
NT1423021611s.D	Data Locked	van, 03-Mar-2023 14:50
NT1423021612s.D	Data Locked	van, 03-Mar-2023 14:50
NT1423021613s.D	Data Locked	van, 03-Mar-2023 14:50
NT1423021618s.D	Data Locked	van, 03-Mar-2023 14:50

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-FEB-2023 15:54
End Cal Date : 16-FEB-2023 20:42
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Last Edit : 03-Mar-2023 13:16 van

Calibration File Names:
Level 1: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021612s.D
Level 2: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021611s.D
Level 3: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021610s.D
Level 4: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021609s.D
Level 5: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021608s.D
Level 6: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021607s.D
Level 7: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021606s.D
Level 8: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021605s.D
Level 9: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021604s.D

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-FEB-2023 15:54
End Cal Date : 16-FEB-2023 20:42
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Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Last Edit : 03-Mar-2023 13:16 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
141 Diallate B	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000
142 1,2-Dibromo-3-Chloropropane	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000
135 2,3,5,6-Tetrachlorophenol	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000
136 2,3,4,5-tetrachlorophenol	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000
137 NewCpnd_131	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000
133 Butylatedhydroxytoluene	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000
132 3,6-Dimethylphenanthrene	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-FEB-2023 15:54
End Cal Date : 16-FEB-2023 20:42
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Last Edit : 03-Mar-2023 13:16 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-FEB-2023 15:54
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Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Last Edit : 03-Mar-2023 13:16 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-FEB-2023 15:54
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Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Last Edit : 03-Mar-2023 13:16 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
120 2,3,4,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
117 Butyl Diphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
116 Dibutyl Phenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-FEB-2023 15:54
End Cal Date : 16-FEB-2023 20:42
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Last Edit : 03-Mar-2023 13:16 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
111 Azobenzene (1,2-DP-Hydrazine)	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
107 4,5-Dichloro-2-Methoxyphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000

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Quant Method : ISTD
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Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Last Edit : 03-Mar-2023 13:16 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
3 Phenol	3296	8456	28148	78640	169471	423028					
	843253	1388926	+++++				QUAD	0.000e+000	0.58369	-0.00369	0.99870
4 Bis(2-Chloroethyl)ether	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
7 1,3-Dichlorobenzene	1.26042	1.31903	1.61301	1.30313	1.34255	1.43547					
	1.25460	1.36024	+++++				AVRG		1.36105		8.60161
9 1,4-Dichlorobenzene	1.22554	1.26716	1.53027	1.23227	1.26908	1.36851					
	1.19374	1.30018	+++++				AVRG		1.29834		8.29318

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	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
11 Benzyl alcohol	+++++	+++++	0.92111	0.98215	1.05141	1.22538					
	1.14425	1.24861	+++++				AVRG		1.09548		12.10259
12 1,2-Dichlorobenzene	1.19814	1.25892	1.52270	1.23303	1.27177	1.35841					
	1.19058	1.29384	+++++				AVRG		1.29092		8.36903
13 2-Methylphenol	0.85553	1.02362	1.36132	1.18233	1.26029	1.34128					
	1.19890	1.27564	+++++				AVRG		1.18736		14.38272
14 2,2'-oxybis(1-Chloropropane)	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
15 4-Methylphenol	2508	6968	20761	57961	127371	315339					
	653344	1074149	+++++				QUAD	0.000e+000	0.76952	-0.01065	0.99925
16 N-Nitroso-di-n-propylamine	2577	6944	17688	46756	100103	250230					
	507736	875889	+++++				QUAD	0.000e+000	1.00460	-0.03771	0.99877
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000

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	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
19 Nitrobenzene	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000
20 Isophorone	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000
21 2-Nitrophenol	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000
22 2,4-Dimethylphenol	7046	17725	47101	122969	255114	575687					
	1177037	1723337	*****				QUAD	0.000e+000	2.72867	0.37048	0.99982
23 Bis(2-Chloroethoxy)methane	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000
24 Benzoic acid	*****	*****	*****	*****	0.03723	0.15652					
	0.21227	0.26000	0.27946				AVRG		0.18909		51.44459 <-
25 2,4-Dichlorophenol	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000

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	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
26 1,2,4-Trichlorobenzene	0.33775	0.35944	0.43604	0.35775	0.36332	0.37864					
	0.33465	0.36401	+++++				AVRG		0.36645		8.60888
28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
30 Hexachlorobutadiene	0.22418	0.22160	0.26126	0.21109	0.21588	0.22632					
	0.20309	0.21998	+++++				AVRG		0.22292		7.72553
31 4-Chloro-3-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
33 Hexachlorocyclopentadiene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000

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	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
39 Dimethylphthalate	0.96599	1.09778	1.40389	1.21335	1.26645	1.33796					
	1.17732	1.29990	+++++				AVRG		1.22033		11.48878
40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000

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	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000

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	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
50 Diethylphthalate	+++++	+++++	1.60638	1.43460	1.50788	1.60726					
	1.42713	1.58062	+++++				AVRG		1.52731		5.43828
51 4-Chlorophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
53 4,6-Dinitro-2-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
54 N-Nitrosodiphenylamine	5698	15330	40238	112007	233343	576012					
	1119324	1958851	+++++				QUAD	0.000e+000	1.99936	-0.14546	0.99740
56 4-Bromophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
57 Hexachlorobenzene	0.24050	0.25861	0.30426	0.24726	0.25137	0.27701					
	0.23493	0.26437	+++++				AVRG		0.25979		8.62442

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	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
58 Pentachlorophenol	+++++	+++++	1240	16729	60739	218979					
	545389	979546	+++++				QUAD	0.000e+000	9.46608	-3.31617	0.99872
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000

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	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
67 Butylbenzylphthalate	1856	5003	16319	59157	142635	385638					
	779624	1328204	+++++				QUAD	0.000e+000	1.99478	-0.24339	0.99912
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
72 bis(2-Ethylhexyl)phthalate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000

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	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
79 Dibenzo(a,h)anthracene	2707	6405	18129	55839	133514	343434					
	774675	1309955	+++++				QUAD	0.000e+000	1.43157	-0.15107	0.99970
80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
90 N-Nitrosodimethylamine	1928	7342	27613	75602	167848	417122					
	797190	1205270	+++++				QUAD	0.000e+000	1.12149	0.04870	0.99858
91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000

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	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000

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	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
101 Cholesterol	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000
102 beta-Sitosterol	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000
103 Pyridine	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000
$ 1 2-Fluorophenol	953	4618	21340	67561	159969	391871					
	847818	1281444	*****				QUAD	0.000e+000	0.86070	0.01459	0.99979
$ 145 d8-1,4-Dioxane	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000
$ 2 Phenol-d5	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000
$ 5 2-Chlorophenol-d4	*****	*****	*****	*****	*****	*****					
	*****	*****	*****				AVRG		0.000e+000		0.000e+000

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Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
$ 18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
$ 36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
$ 55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
$ 66 Terphenyl-d14	0.88551	1.02231	1.30890	1.09840	1.13300	1.06111					
	1.01427	0.99556	+++++				AVRG		1.06488		11.59282
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-FEB-2023 15:54
End Cal Date : 16-FEB-2023 20:42
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Last Edit : 03-Mar-2023 13:16 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8	20.0000 Level 9								
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-FEB-2023 15:54
End Cal Date : 16-FEB-2023 20:42
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Last Edit : 03-Mar-2023 13:16 van

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Batch File: \\target\share\chem3\nt14.i\20230216.b\20230216.b
Inst ID: nt14.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09
FILENAME:	NT1423021604s	NT1423021605s	NT1423021606s	NT1423021607s	NT1423021608s	NT1423021609s	NT1423021610s	NT1423021611s	NT1423021612s
INJ.DATE:	16-FEB-2023	16-FEB-2023	16-FEB-2023	16-FEB-2023	16-FEB-2023	16-FEB-2023	16-FEB-2023	16-FEB-2023	16-FEB-2023
INJ.TIME:	15:54	16:30	17:06	17:42	18:18	18:54	19:30	20:06	20:42

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$	1 2-Fluorophenol	6.679	6.679	6.679	6.679	6.679	6.679	6.687	6.710	6.764	6.764	6.264-7.264	6.693	0.029
	138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	33.580	33.080-34.080	+++++	+++++
	139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.873	30.373-31.373	+++++	+++++
	140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
	141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
	142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.496	14.996-15.996	+++++	+++++
	135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.428	19.928-20.928	+++++	+++++
	136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.471	19.971-20.971	+++++	+++++
	137 NewCpnd_131	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.828	7.328-8.328	+++++	+++++
*	134 Di-n-octylphthalate-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.768	23.268-24.268	+++++	+++++
	133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.190	13.690-14.690	+++++	+++++
	132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.262	30.762-31.762	+++++	+++++
	131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.954	29.454-30.454	+++++	+++++
	146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.752	23.252-24.252	+++++	+++++
	130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.717	27.217-28.217	+++++	+++++
	129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.566	20.066-21.066	+++++	+++++
	128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.796	19.296-20.296	+++++	+++++

Reviewer 1 _____ Date:_____
Reviewer 2 _____ Date:_____

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Batch File: \\target\share\chem3\nt14.i\20230216.b\20230216.b
Inst ID: nt14.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.349	22.849-23.849	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.474	21.974-22.974	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.191	10.691-11.691	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.779	17.279-18.279	+++++	+++++
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.310	15.810-16.810	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.707	17.207-18.207	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.921	8.421-9.421	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.736	3.236-4.236	+++++	+++++
$ 145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.914	2.414-3.414	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.148	19.648-20.648	+++++	+++++
120 2,3,4,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.588	15.088-16.088	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.587	38.087-39.087	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.382	19.882-20.882	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.734	18.234-19.234	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.987	16.487-17.487	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.204	14.704-15.704	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.586	21.086-22.086	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.692	17.192-18.192	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.268	15.768-16.768	+++++	+++++
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.055	17.555-18.555	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.228	16.728-17.728	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Batch File: \\target\share\chem3\nt14.i\20230216.b\20230216.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
108	4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.517	16.017-17.017	+++++	+++++
107	4,5-Dichloro-2-Methoxy	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
106	Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.843	11.343-12.343	+++++	+++++
105	1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.927	12.427-13.427	+++++	+++++
$ 2	Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.235	7.735-8.735	+++++	+++++
3	Phenol	8.310	8.302	8.294	8.286	8.287	8.287	8.294	8.302	8.379	8.379	7.879-8.879	8.305	0.029
4	Bis(2-Chloroethyl)ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.397	7.897-8.897	+++++	+++++
$ 5	2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.490	7.990-8.990	+++++	+++++
6	2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.521	8.021-9.021	+++++	+++++
7	1,3-Dichlorobenzene	8.843	8.843	8.836	8.835	8.836	8.836	8.836	8.836	8.836	8.836	8.336-9.336	8.837	0.003
* 8	1,4-Dichlorobenzene-d4	8.905	8.905	8.905	8.905	8.906	8.905	8.905	8.905	8.905	8.905	8.405-9.405	8.905	0.000
9	1,4-Dichlorobenzene	8.936	8.936	8.936	8.936	8.937	8.929	8.936	8.936	8.936	8.936	8.436-9.436	8.935	0.003
$ 10	1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.960	8.460-9.460	+++++	+++++
11	Benzyl alcohol	9.192	9.184	9.185	9.177	9.185	9.185	9.208	9.262	9.161	9.161	8.661-9.661	9.193	0.029
12	1,2-Dichlorobenzene	9.293	9.293	9.293	9.293	9.286	9.286	9.293	9.293	9.293	9.293	8.793-9.793	9.292	0.003
13	2-Methylphenol	9.417	9.410	9.410	9.410	9.402	9.410	9.410	9.418	9.433	9.433	8.933-9.933	9.413	0.009
14	2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.413	8.913-9.913	+++++	+++++
15	4-Methylphenol	9.697	9.689	9.682	9.681	9.674	9.682	9.689	9.705	9.720	9.720	9.220-10.220	9.691	0.014
16	N-Nitroso-di-n-propyla	9.774	9.759	9.744	9.743	9.736	9.744	9.744	9.751	9.767	9.767	9.267-10.267	9.751	0.013
17	Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.809	9.309-10.309	+++++	+++++
$ 18	Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.917	9.417-10.417	+++++	+++++
19	Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.948	9.448-10.448	+++++	+++++
20	Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.399	9.899-10.899	+++++	+++++
21	2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.575	10.075-11.075	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

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Batch File: \\target\share\chem3\nt14.i\20230216.b\20230216.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	22 2,4-Dimethylphenol	10.744	10.737	10.729	10.729	10.721	10.721	10.729	10.729	10.745	10.745	10.245-11.245	10.732	0.009
	23 Bis(2-Chloroethoxy)met	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.830	10.330-11.330	+++++	+++++
	24 Benzoic acid	11.147	11.062	11.000	10.930	10.884	11.117	+++++	+++++	+++++	11.117	10.617-11.617	11.024	0.104
	25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.033	10.533-11.533	+++++	+++++
	26 1,2,4-Trichlorobenzene	11.317	11.318	11.310	11.310	11.310	11.310	11.310	11.310	11.310	11.310	10.810-11.810	11.312	0.003
*	27 Naphthalene-d8	11.402	11.403	11.395	11.395	11.395	11.395	11.395	11.395	11.395	11.395	10.895-11.895	11.397	0.003
	28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.326	10.826-11.826	+++++	+++++
	29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.457	10.957-11.957	+++++	+++++
	30 Hexachlorobutadiene	11.804	11.804	11.804	11.804	11.804	11.804	11.804	11.804	11.804	11.804	11.304-12.304	11.804	0.000
	31 4-Chloro-3-methylpheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.432	11.932-12.932	+++++	+++++
	32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.710	12.210-13.210	+++++	+++++
	33 Hexachlorocyclopentadi	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.182	12.682-13.682	+++++	+++++
	34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.330	12.830-13.830	+++++	+++++
	35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.415	12.915-13.915	+++++	+++++
$	36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.484	12.984-13.984	+++++	+++++
	37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.686	13.186-14.186	+++++	+++++
	38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.941	13.441-14.441	+++++	+++++
	39 Dimethylphthalate	14.559	14.552	14.544	14.536	14.529	14.536	14.536	14.544	14.552	14.552	14.052-15.052	14.543	0.010
	40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.545	14.045-15.045	+++++	+++++
	41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.506	14.006-15.006	+++++	+++++
*	42 Acenaphthene-d10	15.031	15.024	15.024	15.023	15.016	15.016	15.016	15.016	15.016	15.016	14.516-15.516	15.020	0.005
	43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.785	14.285-15.285	+++++	+++++
	44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.924	14.424-15.424	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

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Batch File: \\target\share\chem3\nt14.i\20230216.b\20230216.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
45	2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.001	14.501-15.501	+++++	+++++
46	Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.248	14.748-15.748	+++++	+++++
47	4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.171	14.671-15.671	+++++	+++++
48	2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.302	14.802-15.802	+++++	+++++
49	Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.952	15.452-16.452	+++++	+++++
50	Diethylphthalate	16.021	16.013	16.005	15.998	15.990	15.990	15.990	15.990	15.998	15.998	15.498-16.498	15.999	0.011
51	4-Chlorophenyl-phenyle	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.952	15.452-16.452	+++++	+++++
52	4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.037	15.537-16.537	+++++	+++++
53	4,6-Dinitro-2-methylph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.145	15.645-16.645	+++++	+++++
54	N-Nitrosodiphenylamine	16.399	16.383	16.376	16.376	16.368	16.368	16.376	16.376	16.384	16.384	15.884-16.884	16.378	0.009
$ 55	2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.477	15.977-16.977	+++++	+++++
56	4-Bromophenyl-phenylet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.939	16.439-17.439	+++++	+++++
57	Hexachlorobenzene	17.448	17.440	17.433	17.433	17.433	17.433	17.433	17.433	17.433	17.433	16.933-17.933	17.435	0.005
58	Pentachlorophenol	17.812	17.797	17.797	17.796	17.805	17.812	17.944	+++++	+++++	17.944	17.444-18.444	17.823	0.054
* 59	Phenanthrene-d10	18.067	18.060	18.060	18.060	18.060	18.060	18.052	18.060	18.060	18.060	17.560-18.560	18.060	0.004
60	Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.899	17.399-18.399	+++++	+++++
61	Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.991	17.491-18.491	+++++	+++++
62	Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.324	17.824-18.824	+++++	+++++
63	Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.152	18.652-19.652	+++++	+++++
64	Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.289	19.789-20.789	+++++	+++++
65	Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.715	20.215-21.215	+++++	+++++
$ 66	Terphenyl-d14	21.224	21.224	21.217	21.216	21.217	21.217	21.217	21.224	21.224	21.224	20.724-21.724	21.220	0.004
67	Butylbenzylphthalate	22.161	22.153	22.153	22.153	22.153	22.153	22.153	22.153	22.153	22.153	21.653-22.653	22.154	0.002
68	Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.875	22.375-23.375	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Batch File: \\target\share\chem3\nt14.i\20230216.b\20230216.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	69 Chrysene-d12	23.136	23.129	23.129	23.121	23.121	23.121	23.121	23.121	23.121	23.121	22.621-23.621	23.125	0.006
	70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.844	22.344-23.344	+++++	+++++
	71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.952	22.452-23.452	+++++	+++++
	72 bis(2-Ethylhexyl)phtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.007	22.507-23.507	+++++	+++++
	73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.990	23.490-24.490	+++++	+++++
	74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.687	24.187-25.187	+++++	+++++
	75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.725	24.225-25.225	+++++	+++++
	76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.283	24.783-25.783	+++++	+++++
*	77 Perylene-d12	25.691	25.691	25.692	25.684	25.684	25.692	25.684	25.691	25.692	25.692	25.192-26.192	25.689	0.004
	78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.794	27.294-28.294	+++++	+++++
	79 Dibenzo(a,h)anthracene	28.273	28.257	28.250	28.249	28.250	28.250	28.265	28.273	28.288	28.288	27.788-28.788	28.262	0.014
	80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	28.494	27.994-28.994	+++++	+++++
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.238	16.738-17.738	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.316	28.816-29.816	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.007	25.507-26.507	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	44.609	44.109-45.109	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.085	15.585-16.585	+++++	+++++
	90 N-Nitrosodimethylamine	4.602	4.594	4.579	4.571	4.571	4.571	4.571	4.587	4.618	4.618	4.118-5.118	4.585	0.017
	91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.305	7.805-8.805	+++++	+++++
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.615	21.115-22.115	+++++	+++++
	93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.529	20.029-21.029	+++++	+++++
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.686	17.186-18.186	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.957	26.457-27.457	+++++	+++++

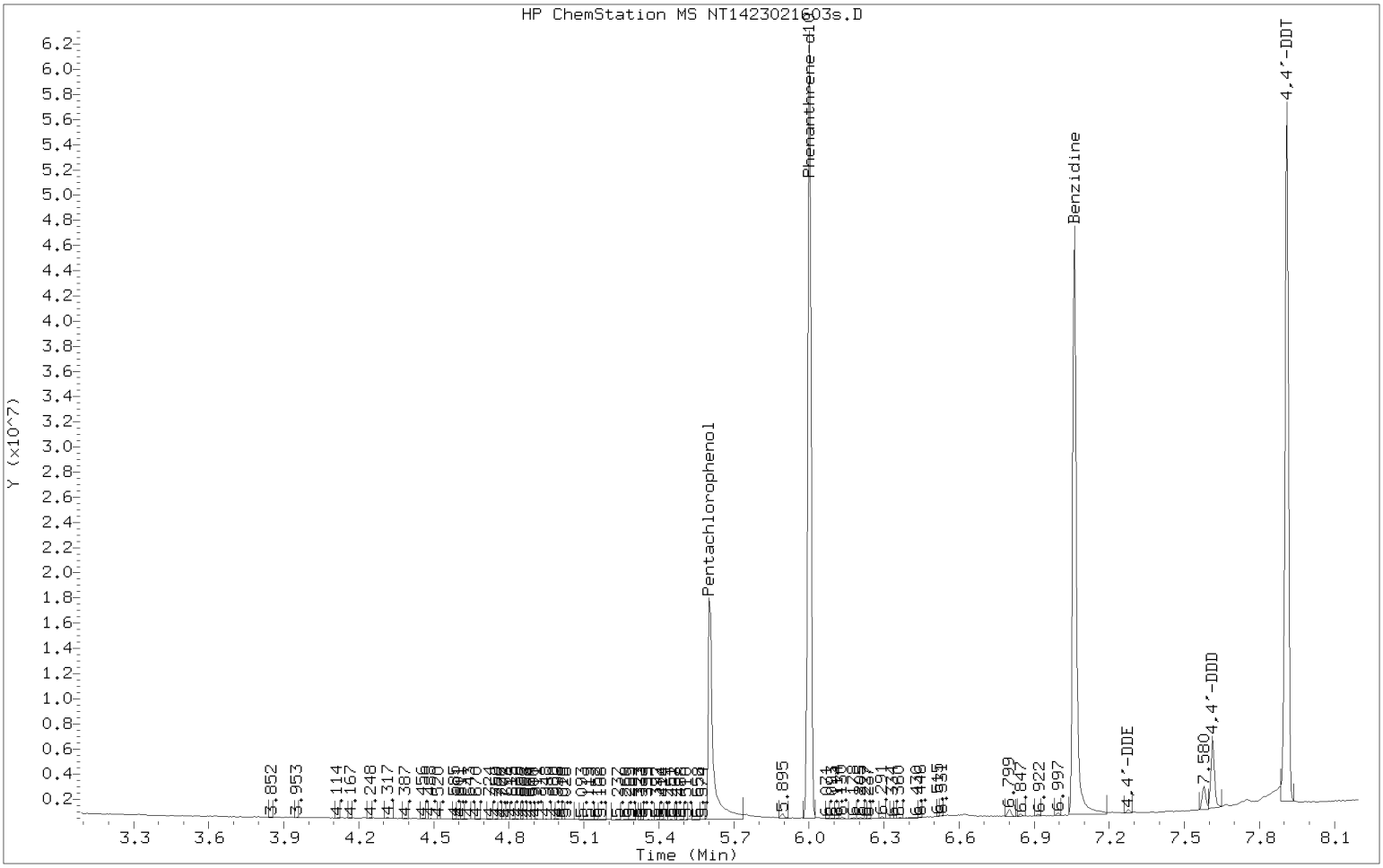
ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

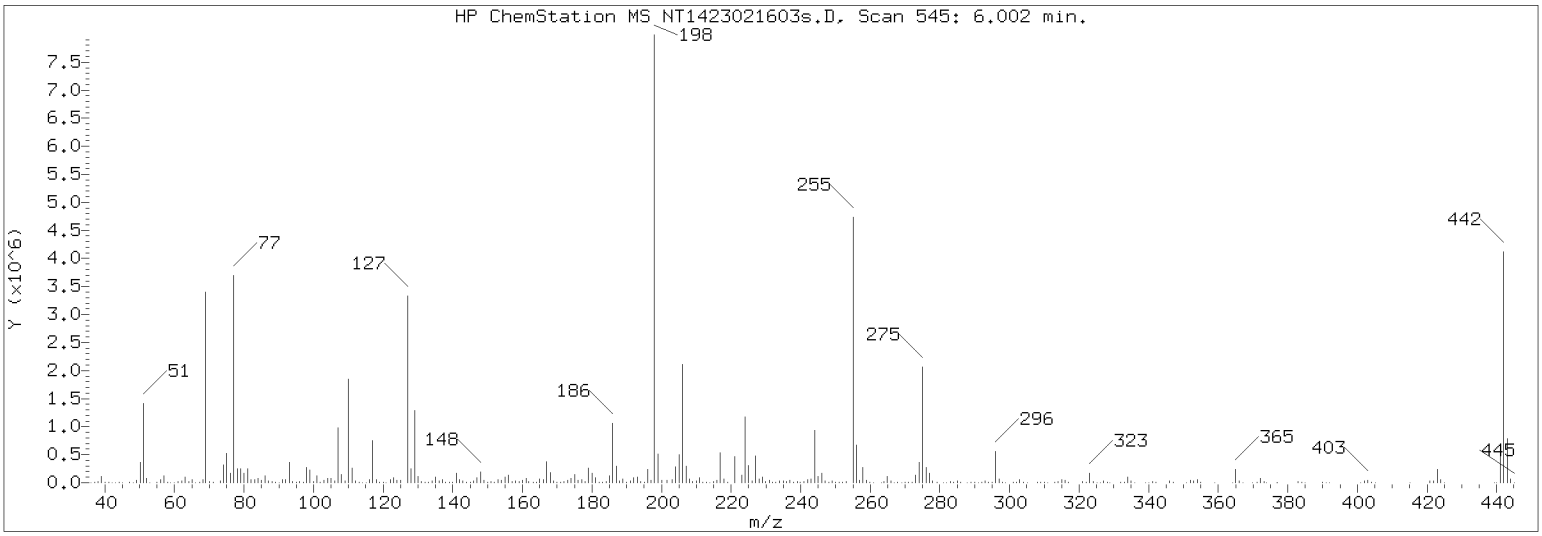
Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Batch File: \\target\share\chem3\nt14.i\20230216.b\20230216.b
Inst ID: nt14.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.609	19.109-20.109	+++++	+++++
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.438	24.938-25.938	+++++	+++++
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.384	25.884-26.884	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.881	43.381-44.381	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	45.573	45.073-46.073	+++++	+++++
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.535	4.035-5.035	+++++	+++++

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230216.b/20230216.b/NT1423021603s.D/NT1423021603s.D
Method Used: \20230216.b\20230216.b\DFTPP8270E.m Inst: nt14
Injection Date: 16-FEB-2023 14:33 Operator: DSD
Sample Info: SLB0240-TUN1 SLB0240-TUN1
Report Date: 03/03/2023 14:18





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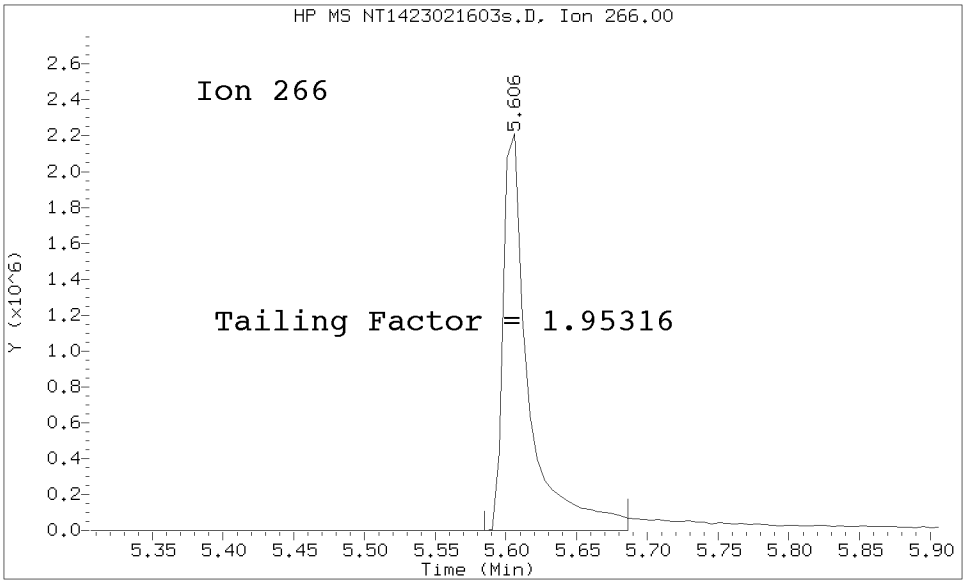
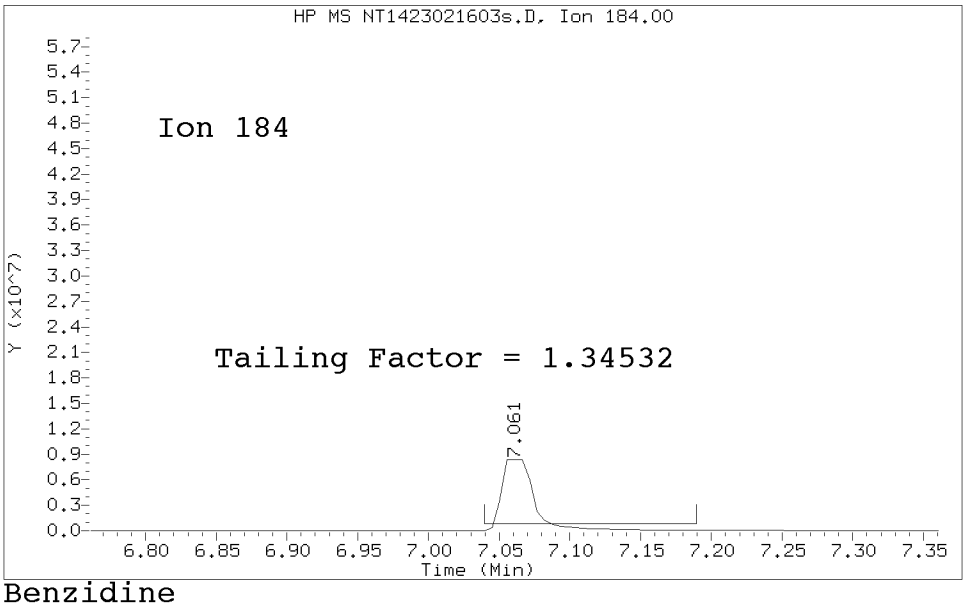
Method Used: \20230216.b\DFTPP8270E.m\sw846ddt.m Inst: nt14
Injection Date: 16-FEB-2023 14:33 Operator: DSD
Sample Info: SEQ-TUN3
Report Date: 03/03/2023 14:18



Pentachlorophenol
==========
Exp. RT = 5.606
Found RT = 5.606

Tail Factor = 1.953 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.061
Found RT = 7.061

Tail Factor = 1.345 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.9531646	2.000	PASS
Benzidine	1.3453237	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	9391744			N/A
4,4-DDE	31744	0.3	20.0	PASS
4,4-DDD	1131675	10.8	20.0	PASS
4,4-DDD + DDE	1163419	11.0	20.0	PASS

Tuning Sample, nt14.i/20230216.b/20230216.b/NT1423021603s.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.74 (1.69)
69	Mass 69 relative abundance	43.59
70	Less than 2.00% of mass 69	0.22 (0.51)
197	Less than 2.00% of mass 198	0.61
199	5.00 - 9.00% of mass 198	6.61
365	1.00 - 100.00% of mass 198	2.96
441	Less than 150.00% of mass 443	7.33 (74.20)
442	Less than 200.00% of mass 198	52.01
443	15.00 - 24.00% of mass 442	9.87 (18.98)

Data File: NT1423021603s.D
Spectrum: Avg. Scans 544-546 (6.00), Background Scan 538
Location of Maximum: 198.00
Number of points: 325

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	234	127.00	2627072	210.00	30808	297.00	57304
37.00	4928	128.00	193536	211.00	66264	298.00	4346
38.00	16100	129.00	1002176	212.00	9012	299.00	778
39.00	86128	130.00	83024	213.00	4418	301.00	6536
40.00	1445	131.00	16110	214.00	2279	302.00	8309
41.00	1468	132.00	6808	215.00	17000	303.00	46096
42.00	911	133.00	2061	216.00	33704	304.00	12268
45.00	3191	134.00	28776	217.00	423104	305.00	985
48.00	1341	135.00	78176	218.00	55256	308.00	6175
49.00	6693	136.00	33232	219.00	5491	309.00	4166
50.00	287040	137.00	42088	221.00	341952	310.00	5991
51.00	1107456	138.00	8363	223.00	98976	311.00	732
52.00	60656	139.00	5700	224.00	901184	313.00	4780
53.00	2876	140.00	12940	225.00	232640	314.00	21184
55.00	10099	141.00	129168	226.00	25264	315.00	48568
56.00	44688	142.00	43080	227.00	360896	316.00	28648
57.00	99760	143.00	28672	228.00	53192	317.00	5757
58.00	6888	144.00	8339	229.00	80040	321.00	13596
59.00	1648	145.00	7386	230.00	9491	322.00	5967
60.00	1219	146.00	24536	231.00	35008	323.00	128608
61.00	23280	147.00	65392	232.00	5357	324.00	21648
62.00	28400	148.00	150720	233.00	6636	325.00	923
63.00	82528	149.00	32664	234.00	23312	326.00	1964
64.00	13066	150.00	10353	235.00	28000	327.00	25704
65.00	44920	151.00	16872	236.00	18056	328.00	12093
66.00	4461	152.00	11153	237.00	35552	329.00	3076
67.00	1649	153.00	42824	238.00	4722	332.00	9967
68.00	45176	154.00	34848	239.00	14633	333.00	12196
69.00	2675712	155.00	74600	240.00	12321	334.00	85224
70.00	13596	156.00	107384	241.00	22320	335.00	22864
73.00	21600	157.00	20016	242.00	47792	336.00	2619
74.00	251584	158.00	24240	243.00	50944	339.00	718
75.00	407680	159.00	22784	244.00	707776	340.00	1309
76.00	140096	160.00	40720	245.00	89264	341.00	14289
77.00	2915840	161.00	62672	246.00	131016	342.00	4394
78.00	200000	162.00	16872	247.00	28936	346.00	28552
79.00	186752	163.00	6683	248.00	6201	347.00	5145
80.00	136704	164.00	8065	249.00	26176	350.00	717
81.00	195200	165.00	49128	250.00	5926	351.00	823
82.00	47032	166.00	40400	251.00	5853	352.00	38056
83.00	45208	167.00	281088	252.00	7432	353.00	26224
85.00	31296	168.00	145536	253.00	15033	354.00	38056
86.00	54160	169.00	23504	254.00	9410	355.00	6985
87.00	26064	170.00	9632	255.00	3554304	359.00	2383
88.00	9527	171.00	12313	256.00	515328	364.00	1635
89.00	7167	172.00	22392	257.00	38256	365.00	181568
90.00	698	173.00	32920	258.00	210304	366.00	24640
91.00	40408	174.00	61832	259.00	31408	367.00	955
92.00	45528	175.00	112128	260.00	6139	370.00	3600

93.00	296960	176.00	31504	261.00	5764	371.00	8738
94.00	22352	177.00	48936	263.00	1078	372.00	60448
95.00	4027	178.00	18064	264.00	5808	373.00	16079
96.00	11069	179.00	205632	265.00	83712	374.00	1592
97.00	3421	180.00	139904	266.00	10984	377.00	1690
98.00	217408	181.00	66784	267.00	858	383.00	15955
99.00	183808	182.00	10904	268.00	681	384.00	4548
100.00	17952	183.00	6693	269.00	1031	385.00	782
101.00	98832	184.00	17728	270.00	3497	390.00	7317
102.00	4121	185.00	100784	271.00	7357	391.00	5379
103.00	32928	186.00	819968	272.00	11090	392.00	3751
104.00	64456	187.00	233216	273.00	102560	401.00	3177
105.00	58656	188.00	25416	274.00	276800	402.00	23400
106.00	20736	189.00	49520	275.00	1550848	403.00	32568
107.00	771648	190.00	8839	276.00	207552	404.00	11566
108.00	119928	191.00	20984	277.00	134784	405.00	2935
109.00	22672	192.00	68752	278.00	23960	415.00	674
110.00	1432064	193.00	74840	279.00	4579	421.00	24160
111.00	204544	194.00	19224	281.00	931	422.00	26616
112.00	24896	195.00	6565	282.00	3437	423.00	186048
113.00	8405	196.00	183680	283.00	14509	424.00	41216
114.00	1701	197.00	37512	284.00	9331	425.00	4321
115.00	1796	198.00	6138368	285.00	23984	438.00	1391
116.00	40928	199.00	405696	286.00	4717	439.00	1400
117.00	604736	200.00	30232	288.00	884	440.00	2550
118.00	44648	201.00	34040	289.00	5002	441.00	449664
119.00	8501	203.00	43656	290.00	4674	442.00	3192320
120.00	8877	204.00	213312	291.00	3293	443.00	606016
121.00	3538	205.00	381120	292.00	6118	444.00	54800
122.00	44736	206.00	1595904	293.00	25544	445.00	2486
123.00	73984	207.00	210944	294.00	6665		
124.00	34728	208.00	47112	295.00	9652		
125.00	32952	209.00	14622	296.00	426176		

Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021604s.D

Date : 16-FEB-2023 15:54

Client ID:

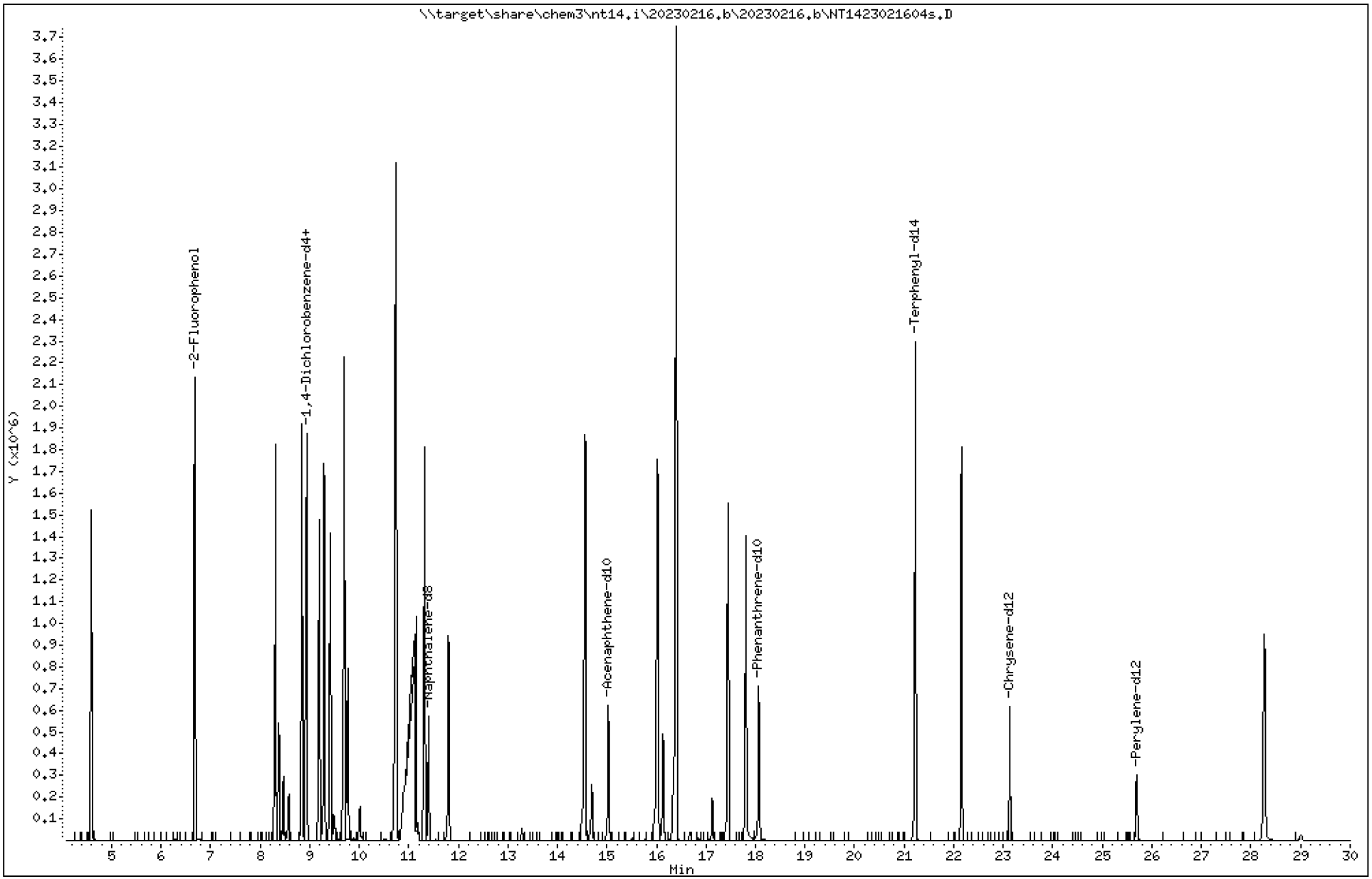
Instrument: nt14.i

Sample Info: SEQ-CAL7

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021604s.D
Lab Smp Id: SLB0240-CAL9
Inj Date : 16-FEB-2023 15:54 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SEQ-CAL7
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Meth Date : 03-Mar-2023 14:04 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 2 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.678	6.764	(0.750)	2109056	20.0000	29.08
	3 Phenol	94	8.309	8.379	(0.933)	2303240	20.0000	18.12(H)
	7 1,3-Dichlorobenzene	146	8.842	8.835	(0.993)	1796201	20.0000	18.76
*	8 1,4-Dichlorobenzene-d4	152	8.905	8.905	(1.000)	281412	4.00000	
	9 1,4-Dichlorobenzene	146	8.936	8.936	(1.003)	1742923	20.0000	19.08
	11 Benzyl alcohol	79	9.192	9.161	(1.032)	1718221	20.0000	22.29
	12 1,2-Dichlorobenzene	146	9.292	9.293	(1.044)	1699522	20.0000	18.71
	13 2-Methylphenol	108	9.417	9.433	(1.058)	1712457	20.0000	20.50
	15 4-Methylphenol	108	9.696	9.720	(1.089)	1848380	20.0000	18.38
	16 N-Nitroso-di-n-propylamine	70	9.774	9.767	(1.098)	1538203	20.0000	17.46
	22 2,4-Dimethylphenol	107	10.744	10.745	(0.942)	2837784	20.0000	41.41
	24 Benzoic acid	105	11.147	11.116	(0.978)	5747062	80.0000	118.2(M)
	26 1,2,4-Trichlorobenzene	180	11.317	11.310	(0.993)	1741162	20.0000	18.48
*	27 Naphthalene-d8	136	11.402	11.394	(1.000)	1028262	4.00000	
	30 Hexachlorobutadiene	225	11.804	11.804	(1.035)	1066922	20.0000	18.62
	39 Dimethylphthalate	163	14.559	14.551	(0.969)	3521062	20.0000	20.71
*	42 Acenaphthene-d10	162	15.031	15.016	(1.000)	557155	4.00000	
	50 Diethylphthalate	149	16.020	15.997	(1.066)	4255795	20.0000	20.00
	54 N-Nitrosodiphenylamine	169	16.398	16.384	(0.908)	3381832	20.0000	17.07
	57 Hexachlorobenzene	284	17.447	17.432	(0.966)	1585731	20.0000	19.07
	58 Pentachlorophenol	266	17.811	17.944	(0.986)	1801927	20.0000	27.02
*	59 Phenanthrene-d10	188	18.067	18.059	(1.000)	1280257	4.00000	
$	66 Terphenyl-d14	244	21.223	21.224	(0.917)	3438839	20.0000	16.58
	67 Butylbenzylphthalate	149	22.160	22.153	(0.958)	2268091	20.0000	14.98
*	69 Chrysene-d12	240	23.136	23.121	(1.000)	778986	4.00000	
*	77 Perylene-d12	264	25.691	25.691	(1.000)	506790	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.272	28.288	(1.100)	2342898	20.0000	13.56
	90 N-Nitrosodimethylamine	74	4.601	4.618	(0.517)	1936125	20.0000	40.08

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021604s.D
Lab Smp Id: SLB0240-CAL9
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 18:18
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	393779	196890	787558	281412	-28.54
27 Naphthalene-d8	1399029	699515	2798058	1028262	-26.50
42 Acenaphthene-d10	759723	379862	1519446	557155	-26.66
59 Phenanthrene-d10	1756156	878078	3512312	1280257	-27.10
69 Chrysene-d12	1174128	587064	2348256	778986	-33.65
77 Perylene-d12	826011	413006	1652022	506790	-38.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.91	8.41	9.41	8.91	-0.01
27 Naphthalene-d8	11.40	10.90	11.90	11.40	0.06
42 Acenaphthene-d10	15.02	14.52	15.52	15.03	0.10
59 Phenanthrene-d10	18.06	17.56	18.56	18.07	0.04
69 Chrysene-d12	23.12	22.62	23.62	23.14	0.07
77 Perylene-d12	25.68	25.18	26.18	25.69	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021604s.D

Lab ID: SLB0240-CAL9
nt14.i, 20230216.b\20230216.b\SIMABN2.m,   16-FEB-2023 15:54

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.933	0.941	-0.0078	Phenol
0.978	0.000	0.9776	Benzoic acid
0.986	0.000	0.9859	Pentachlorophenol
0.750	0.760	-0.0095	2-Fluorophenol

RRT check based on Ccal File: 20230216.b/NT1423021612s.D

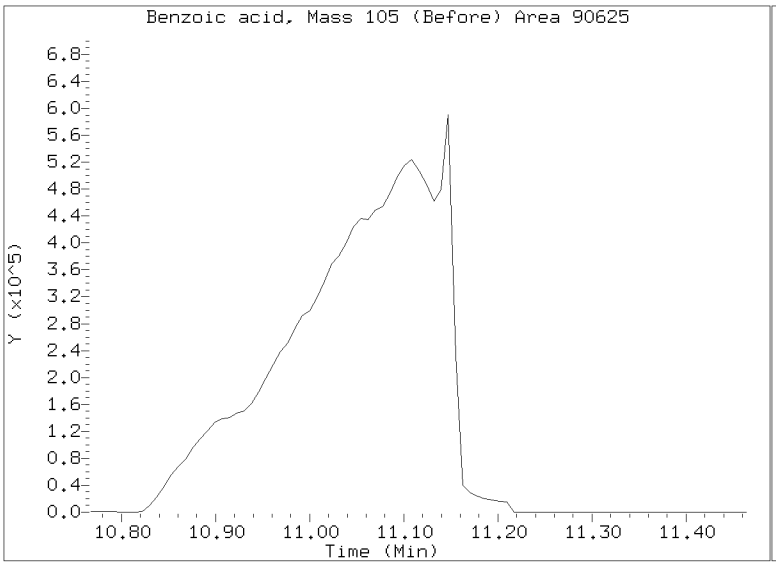
On Column LOD for nt14.i, 20230216.b\SIMABN2.m, PSDDA.sub = 0.0000

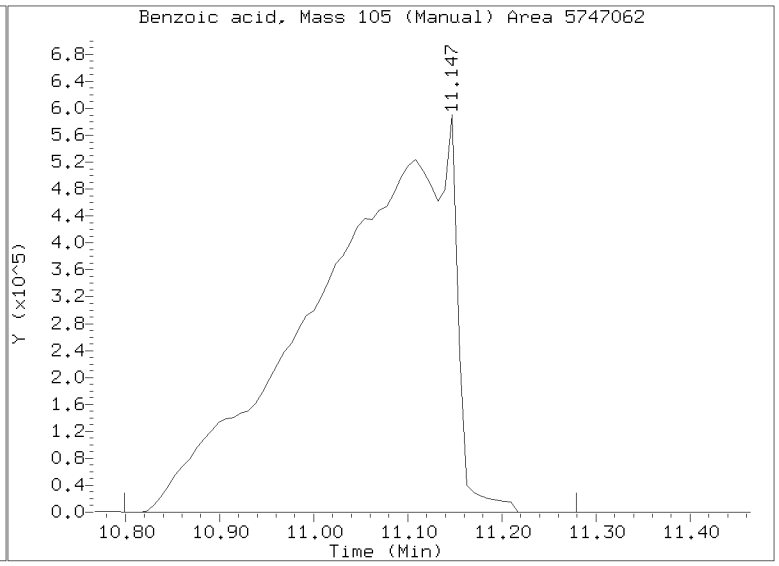
Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230216.b/20230216.b/NT1423021604s.D
Injection Date: 16-FEB-2023 15:54
Lab ID:SLB0240-CAL9 Client ID:
Report Date: 03/03/2023 14:07





Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021605s.D

Date : 16-FEB-2023 16:30

Client ID:

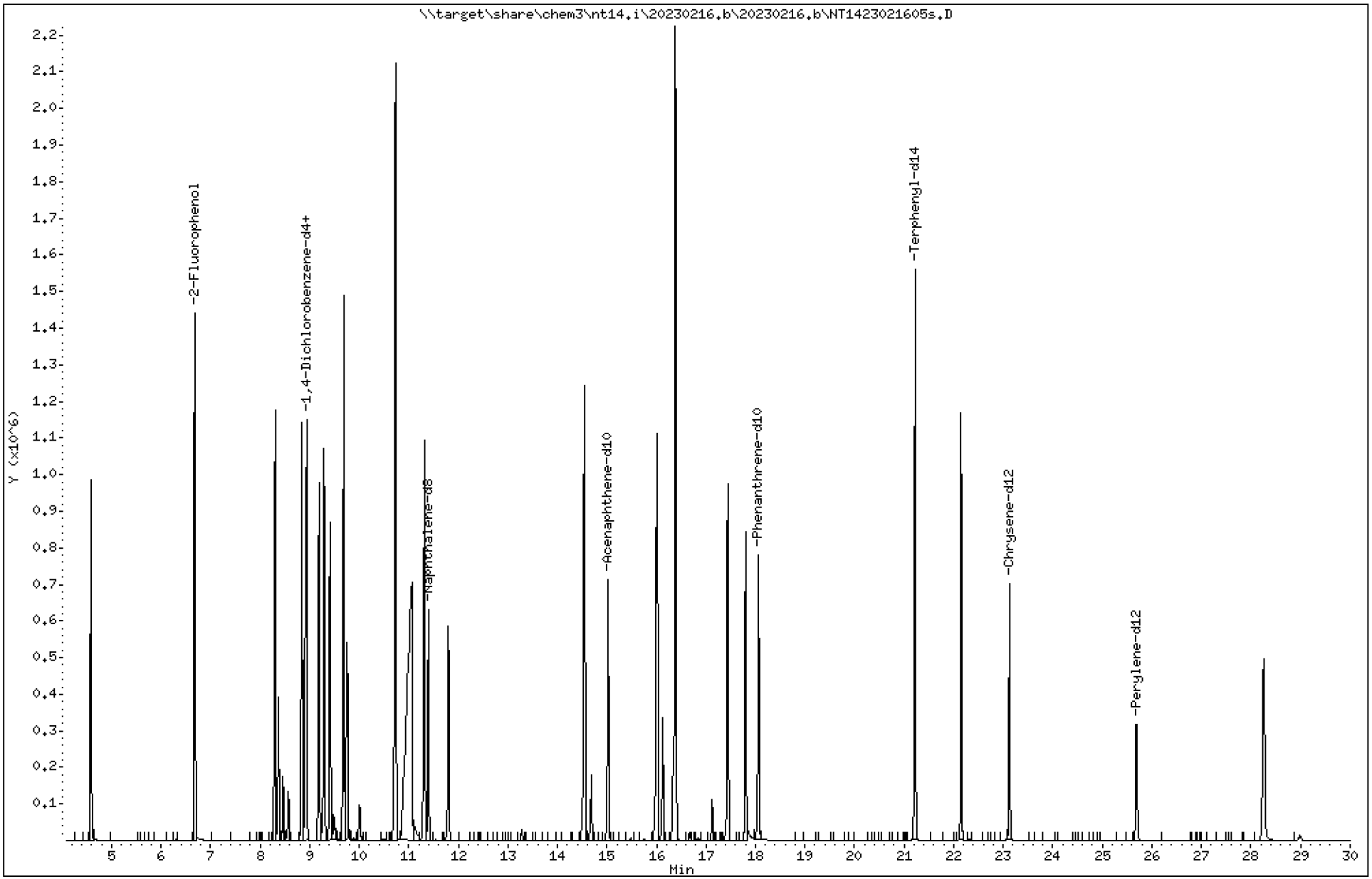
Instrument: nt14.i

Sample Info: SLB0240-CAL8

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021605s.D
Lab Smp Id: SLB0240-CAL8
Inj Date : 16-FEB-2023 16:30 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0240-CAL8
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Meth Date : 03-Mar-2023 14:04 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 3 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.679	6.764	(0.750)	1281444	15.0000	15.00
	3 Phenol	94	8.301	8.379	(0.932)	1388926	10.0000	10.03
	7 1,3-Dichlorobenzene	146	8.843	8.835	(0.993)	1069272	10.0000	9.994
*	8 1,4-Dichlorobenzene-d4	152	8.905	8.905	(1.000)	314437	4.00000	
	9 1,4-Dichlorobenzene	146	8.936	8.936	(1.003)	1022062	10.0000	10.01
	11 Benzyl alcohol	79	9.184	9.161	(1.031)	981521	10.0000	11.40
	12 1,2-Dichlorobenzene	146	9.293	9.293	(1.044)	1017074	10.0000	10.02
	13 2-Methylphenol	108	9.409	9.433	(1.057)	1002768	10.0000	10.74
	15 4-Methylphenol	108	9.689	9.720	(1.088)	1074149	10.0000	10.02
	16 N-Nitroso-di-n-propylamine	70	9.758	9.767	(1.096)	875889	10.0000	10.02
	22 2,4-Dimethylphenol	107	10.736	10.745	(0.942)	1723337	20.0000	20.03
	24 Benzoic acid	105	11.062	11.116	(0.970)	2945955	40.0000	55.00
	26 1,2,4-Trichlorobenzene	180	11.317	11.310	(0.993)	1031123	10.0000	9.933
*	27 Naphthalene-d8	136	11.402	11.394	(1.000)	1133072	4.00000	
	30 Hexachlorobutadiene	225	11.804	11.804	(1.035)	623120	10.0000	9.868
	39 Dimethylphthalate	163	14.551	14.551	(0.969)	1998602	10.0000	10.65
*	42 Acenaphthene-d10	162	15.023	15.016	(1.000)	615002	4.00000	
	50 Diethylphthalate	149	16.013	15.997	(1.066)	2430211	10.0000	10.35
	54 N-Nitrosodiphenylamine	169	16.383	16.384	(0.907)	1958851	10.0000	10.03
	57 Hexachlorobenzene	284	17.440	17.432	(0.966)	927113	10.0000	10.18
	58 Pentachlorophenol	266	17.796	17.944	(0.985)	979546	20.0000	19.97
*	59 Phenanthrene-d10	188	18.059	18.059	(1.000)	1402756	4.00000	
$	66 Terphenyl-d14	244	21.224	21.224	(0.918)	2137321	10.0000	9.349
	67 Butylbenzylphthalate	149	22.153	22.153	(0.958)	1328204	10.0000	10.01
*	69 Chrysene-d12	240	23.128	23.121	(1.000)	858745	4.00000	
*	77 Perylene-d12	264	25.691	25.691	(1.000)	567246	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.257	28.288	(1.100)	1309955	10.0000	10.00
	90 N-Nitrosodimethylamine	74	4.594	4.618	(0.516)	1205270	20.0000	20.06

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021605s.D
Lab Smp Id: SLB0240-CAL8
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 18:18
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	393779	196890	787558	314437	-20.15
27 Naphthalene-d8	1399029	699515	2798058	1133072	-19.01
42 Acenaphthene-d10	759723	379862	1519446	615002	-19.05
59 Phenanthrene-d10	1756156	878078	3512312	1402756	-20.12
69 Chrysene-d12	1174128	587064	2348256	858745	-26.86
77 Perylene-d12	826011	413006	1652022	567246	-31.33

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.91	8.41	9.41	8.91	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.40	0.07
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	0.05
59 Phenanthrene-d10	18.06	17.56	18.56	18.06	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.13	0.03
77 Perylene-d12	25.68	25.18	26.18	25.69	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021605s.D

Lab ID: SLB0240-CAL8
nt14.i, 20230216.b\20230216.b\SIMABN2.m,   16-FEB-2023 16:30

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.932	0.941	-0.0087	Phenol
0.970	0.000	0.9701	Benzoic acid
0.985	0.000	0.9854	Pentachlorophenol
0.750	0.760	-0.0095	2-Fluorophenol

RRT check based on Ccal File: 20230216.b/NT1423021612s.D

On Column LOD for nt14.i, 20230216.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021606s.D

Date : 16-FEB-2023 17:06

Client ID:

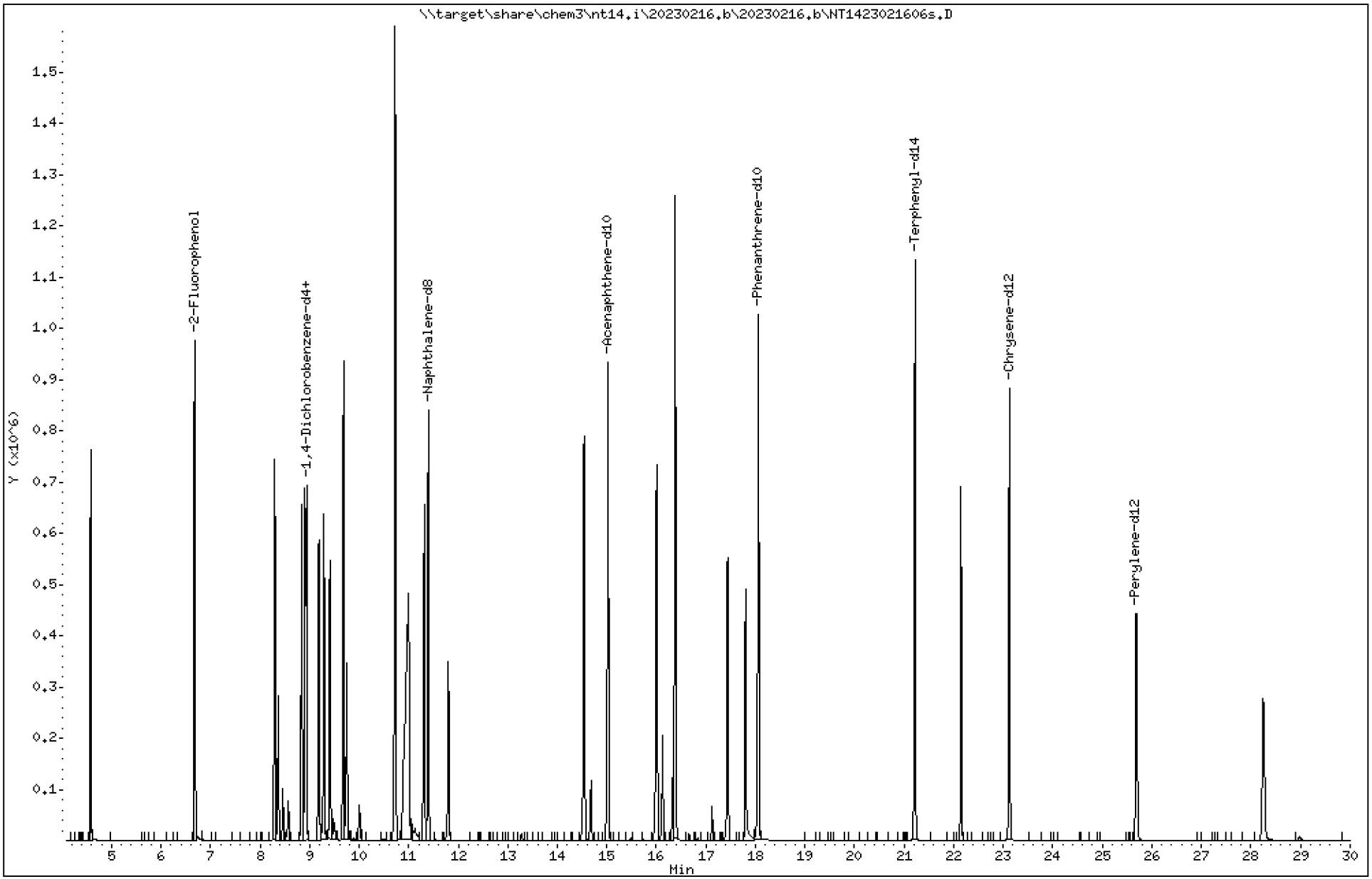
Instrument: nt14.i

Sample Info: SLB0240-CAL7

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021606s.D
Lab Smp Id: SLB0240-CAL7
Inj Date : 16-FEB-2023 17:06 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0240-CAL7
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Meth Date : 03-Mar-2023 14:04 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 4 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.679	6.764	(0.750)	847818	7.50000	7.471
	3 Phenol	94	8.294	8.379	(0.931)	843253	5.00000	4.802
	7 1,3-Dichlorobenzene	146	8.835	8.835	(0.992)	634439	5.00000	4.609
*	8 1,4-Dichlorobenzene-d4	152	8.905	8.905	(1.000)	404552	4.00000	
	9 1,4-Dichlorobenzene	146	8.936	8.936	(1.003)	603660	5.00000	4.597
	11 Benzyl alcohol	79	9.184	9.161	(1.031)	578636	5.00000	5.223
	12 1,2-Dichlorobenzene	146	9.293	9.293	(1.044)	602062	5.00000	4.611
	13 2-Methylphenol	108	9.409	9.433	(1.057)	606273	5.00000	5.049
	15 4-Methylphenol	108	9.681	9.720	(1.087)	653344	5.00000	4.860
	16 N-Nitroso-di-n-propylamine	70	9.743	9.767	(1.094)	507736	5.00000	4.806
	22 2,4-Dimethylphenol	107	10.729	10.745	(0.942)	1177037	10.0000	9.846
	24 Benzoic acid	105	11.000	11.116	(0.965)	1537633	20.0000	22.45
	26 1,2,4-Trichlorobenzene	180	11.310	11.310	(0.993)	606045	5.00000	4.566
*	27 Naphthalene-d8	136	11.394	11.394	(1.000)	1448768	4.00000	
	30 Hexachlorobutadiene	225	11.804	11.804	(1.036)	367794	5.00000	4.555
	39 Dimethylphthalate	163	14.544	14.551	(0.968)	1159835	5.00000	4.824
*	42 Acenaphthene-d10	162	15.023	15.016	(1.000)	788119	4.00000	
	50 Diethylphthalate	149	16.005	15.997	(1.065)	1405935	5.00000	4.672
	54 N-Nitrosodiphenylamine	169	16.375	16.384	(0.907)	1119324	5.00000	4.697
	57 Hexachlorobenzene	284	17.432	17.432	(0.965)	534623	5.00000	4.522
	58 Pentachlorophenol	266	17.796	17.944	(0.985)	545389	10.0000	10.15
*	59 Phenanthrene-d10	188	18.059	18.059	(1.000)	1820509	4.00000	
$	66 Terphenyl-d14	244	21.216	21.224	(0.917)	1486757	5.00000	4.762
	67 Butylbenzylphthalate	149	22.153	22.153	(0.958)	779624	5.00000	4.874
*	69 Chrysene-d12	240	23.128	23.121	(1.000)	1172674	4.00000	
*	77 Perylene-d12	264	25.691	25.691	(1.000)	801283	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.249	28.288	(1.100)	774675	5.00000	4.971
	90 N-Nitrosodimethylamine	74	4.578	4.618	(0.514)	797190	10.0000	9.596

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021606s.D
Lab Smp Id: SLB0240-CAL7
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 18:18
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	393779	196890	787558	404552	2.74
27 Naphthalene-d8	1399029	699515	2798058	1448768	3.56
42 Acenaphthene-d10	759723	379862	1519446	788119	3.74
59 Phenanthrene-d10	1756156	878078	3512312	1820509	3.66
69 Chrysene-d12	1174128	587064	2348256	1172674	-0.12
77 Perylene-d12	826011	413006	1652022	801283	-2.99

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.91	8.41	9.41	8.91	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	0.05
59 Phenanthrene-d10	18.06	17.56	18.56	18.06	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.13	0.03
77 Perylene-d12	25.68	25.18	26.18	25.69	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021606s.D

Lab ID: SLB0240-CAL7
nt14.i, 20230216.b\20230216.b\SIMABN2.m,   16-FEB-2023 17:06

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.931	0.941	-0.0095	Phenol
0.965	0.000	0.9654	Benzoic acid
0.985	0.000	0.9854	Pentachlorophenol
0.750	0.760	-0.0095	2-Fluorophenol

RRT check based on Ccal File: 20230216.b/NT1423021612s.D

On Column LOD for nt14.i, 20230216.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021607s.D

Date : 16-FEB-2023 17:42

Client ID:

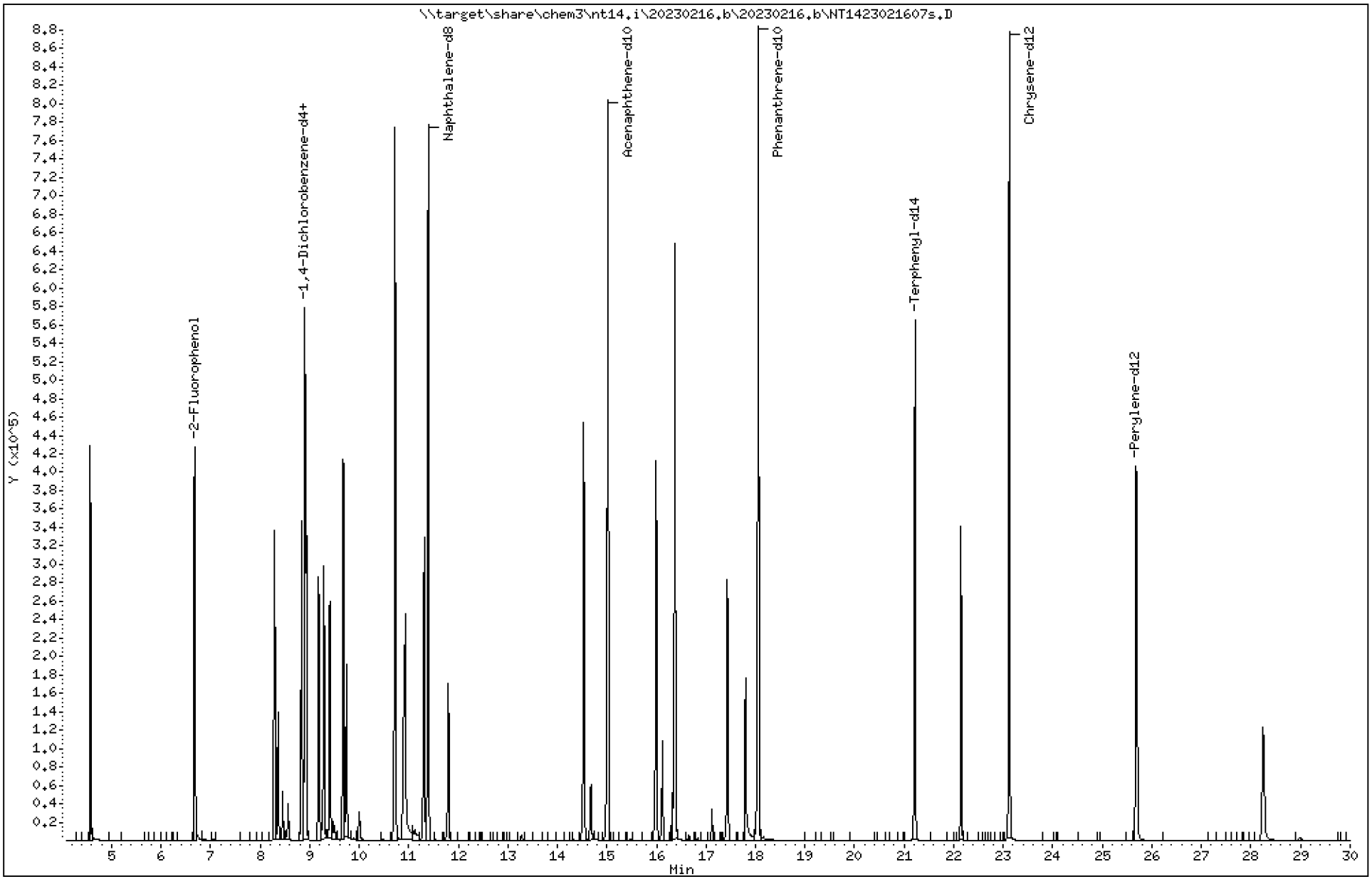
Instrument: nt14.i

Sample Info: SLB0240-CAL6

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021607s.D
Lab Smp Id: SLB0240-CAL6
Inj Date : 16-FEB-2023 17:42 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0240-CAL6
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Meth Date : 03-Mar-2023 14:04 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 5 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.679	6.764	(0.750)	391871	3.75000	3.870
	3 Phenol	94	8.286	8.379	(0.931)	423028	2.50000	2.760
	7 1,3-Dichlorobenzene	146	8.835	8.835	(0.992)	318644	2.50000	2.637
*	8 1,4-Dichlorobenzene-d4	152	8.905	8.905	(1.000)	355167	4.00000	
	9 1,4-Dichlorobenzene	146	8.936	8.936	(1.003)	303782	2.50000	2.635
	11 Benzyl alcohol	79	9.176	9.161	(1.030)	272008	2.50000	2.796
	12 1,2-Dichlorobenzene	146	9.293	9.293	(1.044)	301538	2.50000	2.631
	13 2-Methylphenol	108	9.409	9.433	(1.057)	297737	2.50000	2.824
	15 4-Methylphenol	108	9.681	9.720	(1.087)	315339	2.50000	2.699
	16 N-Nitroso-di-n-propylamine	70	9.743	9.767	(1.094)	250230	2.50000	2.756
	22 2,4-Dimethylphenol	107	10.728	10.745	(0.942)	575687	5.00000	5.173
	24 Benzoic acid	105	10.930	11.116	(0.959)	504145	10.0000	8.278
	26 1,2,4-Trichlorobenzene	180	11.309	11.310	(0.993)	304889	2.50000	2.583
*	27 Naphthalene-d8	136	11.394	11.394	(1.000)	1288352	4.00000	
	30 Hexachlorobutadiene	225	11.804	11.804	(1.036)	182234	2.50000	2.538
	39 Dimethylphthalate	163	14.536	14.551	(0.968)	593910	2.50000	2.741
*	42 Acenaphthene-d10	162	15.023	15.016	(1.000)	710230	4.00000	
	50 Diethylphthalate	149	15.997	15.997	(1.065)	713452	2.50000	2.631
	54 N-Nitrosodiphenylamine	169	16.375	16.384	(0.907)	576012	2.50000	2.860
	57 Hexachlorobenzene	284	17.432	17.432	(0.965)	271422	2.50000	2.666
	58 Pentachlorophenol	266	17.796	17.944	(0.985)	218979	5.00000	5.030
*	59 Phenanthrene-d10	188	18.059	18.059	(1.000)	1567702	4.00000	
$	66 Terphenyl-d14	244	21.216	21.224	(0.918)	718903	2.50000	2.491
	67 Butylbenzylphthalate	149	22.153	22.153	(0.958)	385638	2.50000	2.715
*	69 Chrysene-d12	240	23.121	23.121	(1.000)	1084006	4.00000	
*	77 Perylene-d12	264	25.683	25.691	(1.000)	717515	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.249	28.288	(1.100)	343434	2.50000	2.602
	90 N-Nitrosodimethylamine	74	4.570	4.618	(0.513)	417122	5.00000	5.537

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021607s.D
Lab Smp Id: SLB0240-CAL6
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 18:18
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	393779	196890	787558	355167	-9.81
27 Naphthalene-d8	1399029	699515	2798058	1288352	-7.91
42 Acenaphthene-d10	759723	379862	1519446	710230	-6.51
59 Phenanthrene-d10	1756156	878078	3512312	1567702	-10.73
69 Chrysene-d12	1174128	587064	2348256	1084006	-7.68
77 Perylene-d12	826011	413006	1652022	717515	-13.13

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.91	8.41	9.41	8.91	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	0.05
59 Phenanthrene-d10	18.06	17.56	18.56	18.06	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	-0.00
77 Perylene-d12	25.68	25.18	26.18	25.68	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021607s.D

Lab ID: SLB0240-CAL6
nt14.i, 20230216.b\20230216.b\SIMABN2.m,   16-FEB-2023 17:42

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.931	0.941	-0.0104	Phenol
0.959	0.000	0.9592	Benzoic acid
0.513	0.518	-0.0052	N-Nitrosodimethylamine
0.985	0.000	0.9854	Pentachlorophenol
0.750	0.760	-0.0095	2-Fluorophenol

RRT check based on Ccal File: 20230216.b/NT1423021612s.D

On Column LOD for nt14.i, 20230216.b\SIMABN2.m, PSDDA.sub = 0.0000

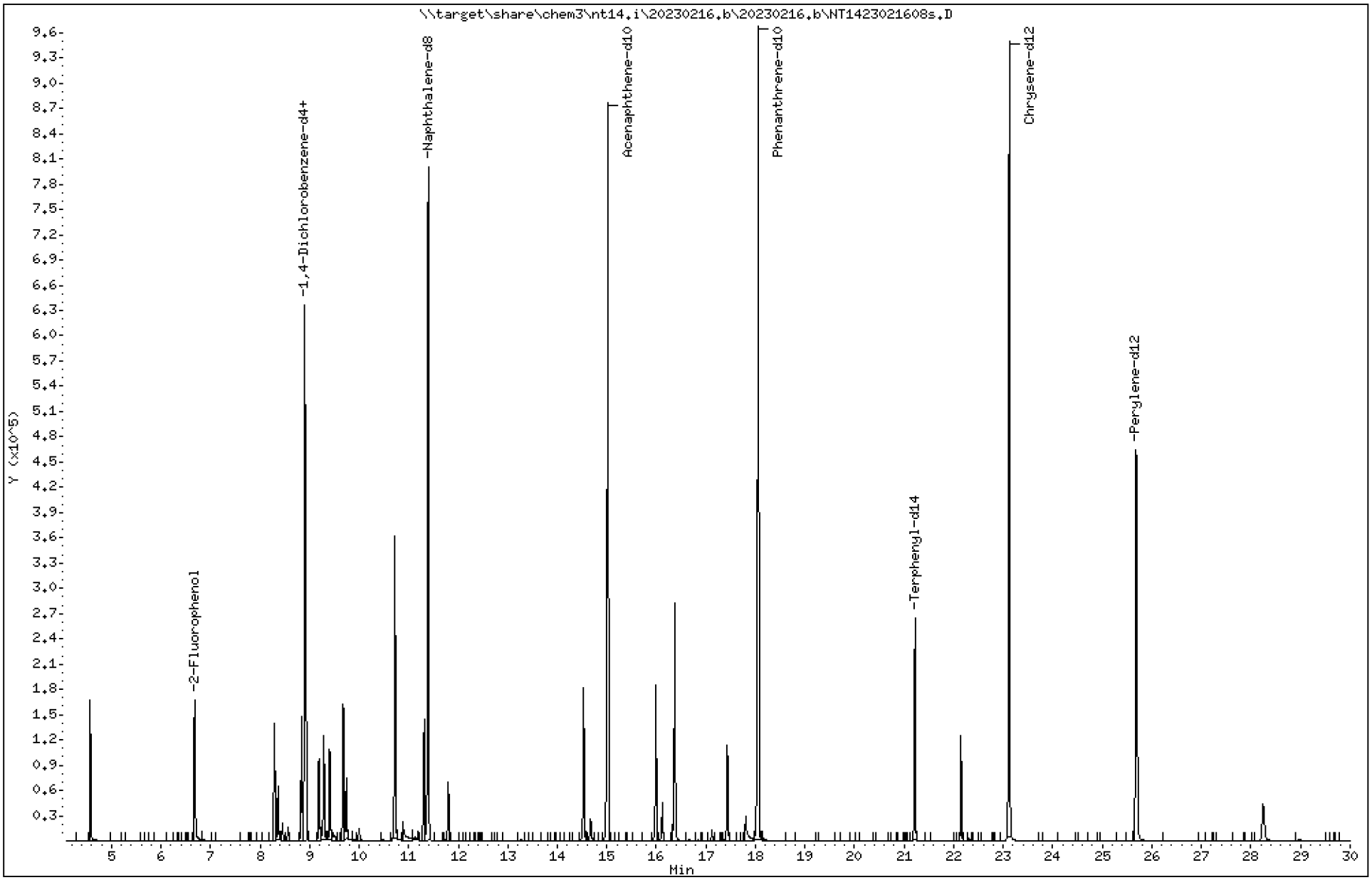
Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021608s.D
Date : 16-FEB-2023 18:18
Client ID:
Sample Info: SLB0240-CAL5

Instrument: nt14.i
Operator: DSD
Column diameter: 0.25

Column phase: ZB-5msi



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021608s.D
Lab Smp Id: SLB0240-CAL5
Inj Date : 16-FEB-2023 18:18 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0240-CAL5
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Meth Date : 03-Mar-2023 14:04 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.679	6.764	(0.750)	159969	1.50000	1.408
	3 Phenol	94	8.286	8.379	(0.931)	169471	1.00000	1.002
	7 1,3-Dichlorobenzene	146	8.835	8.835	(0.992)	132167	1.00000	0.9864
*	8 1,4-Dichlorobenzene-d4	152	8.905	8.905	(1.000)	393779	4.00000	
	9 1,4-Dichlorobenzene	146	8.936	8.936	(1.003)	124934	1.00000	0.9775
	11 Benzyl alcohol	79	9.184	9.161	(1.031)	103506	1.00000	0.9598
	12 1,2-Dichlorobenzene	146	9.285	9.293	(1.043)	125199	1.00000	0.9852
	13 2-Methylphenol	108	9.402	9.433	(1.056)	124069	1.00000	1.061
	15 4-Methylphenol	108	9.673	9.720	(1.086)	127371	1.00000	0.9912
	16 N-Nitroso-di-n-propylamine	70	9.735	9.767	(1.093)	100103	1.00000	1.012
	22 2,4-Dimethylphenol	107	10.721	10.745	(0.941)	255114	2.00000	2.040
	24 Benzoic acid	105	10.884	11.116	(0.955)	52086	4.00000	0.7875
	26 1,2,4-Trichlorobenzene	180	11.310	11.310	(0.993)	127075	1.00000	0.9915
*	27 Naphthalene-d8	136	11.395	11.394	(1.000)	1399029	4.00000	
	30 Hexachlorobutadiene	225	11.804	11.804	(1.036)	75506	1.00000	0.9684
	39 Dimethylphthalate	163	14.528	14.551	(0.968)	240537	1.00000	1.038
*	42 Acenaphthene-d10	162	15.016	15.016	(1.000)	759723	4.00000	
	50 Diethylphthalate	149	15.990	15.997	(1.065)	286392	1.00000	0.9873
	54 N-Nitrosodiphenylamine	169	16.368	16.384	(0.906)	233343	1.00000	1.052
	57 Hexachlorobenzene	284	17.432	17.432	(0.965)	110361	1.00000	0.9676
	58 Pentachlorophenol	266	17.804	17.944	(0.986)	60739	2.00000	1.294
*	59 Phenanthrene-d10	188	18.059	18.059	(1.000)	1756156	4.00000	
$	66 Terphenyl-d14	244	21.216	21.224	(0.918)	332573	1.00000	1.064
	67 Butylbenzylphthalate	149	22.153	22.153	(0.958)	142635	1.00000	0.9550
*	69 Chrysene-d12	240	23.121	23.121	(1.000)	1174128	4.00000	
*	77 Perylene-d12	264	25.683	25.691	(1.000)	826011	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.249	28.288	(1.100)	133514	1.00000	0.9098
	90 N-Nitrosodimethylamine	74	4.571	4.618	(0.513)	167848	2.00000	1.948

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021608s.D
Lab Smp Id: SLB0240-CAL5
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 18:18
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	393779	196890	787558	393779	0.00
27 Naphthalene-d8	1399029	699515	2798058	1399029	0.00
42 Acenaphthene-d10	759723	379862	1519446	759723	0.00
59 Phenanthrene-d10	1756156	878078	3512312	1756156	0.00
69 Chrysene-d12	1174128	587064	2348256	1174128	0.00
77 Perylene-d12	826011	413006	1652022	826011	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.91	8.41	9.41	8.91	0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.40	0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	0.00
59 Phenanthrene-d10	18.06	17.56	18.56	18.06	0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	0.00
77 Perylene-d12	25.68	25.18	26.18	25.68	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021608s.D

Lab ID: SLB0240-CAL5
nt14.i, 20230216.b\20230216.b\SIMABN2.m,   16-FEB-2023 18:18

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.931	0.941	-0.0104	Phenol
1.086	1.091	-0.0052	4-Methylphenol
0.955	0.000	0.9552	Benzoic acid
0.513	0.518	-0.0052	N-Nitrosodimethylamine
0.986	0.000	0.9859	Pentachlorophenol
0.750	0.760	-0.0095	2-Fluorophenol

RRT check based on Ccal File: 20230216.b/NT1423021612s.D

On Column LOD for nt14.i, 20230216.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021609s.D

Date : 16-FEB-2023 18:54

Client ID:

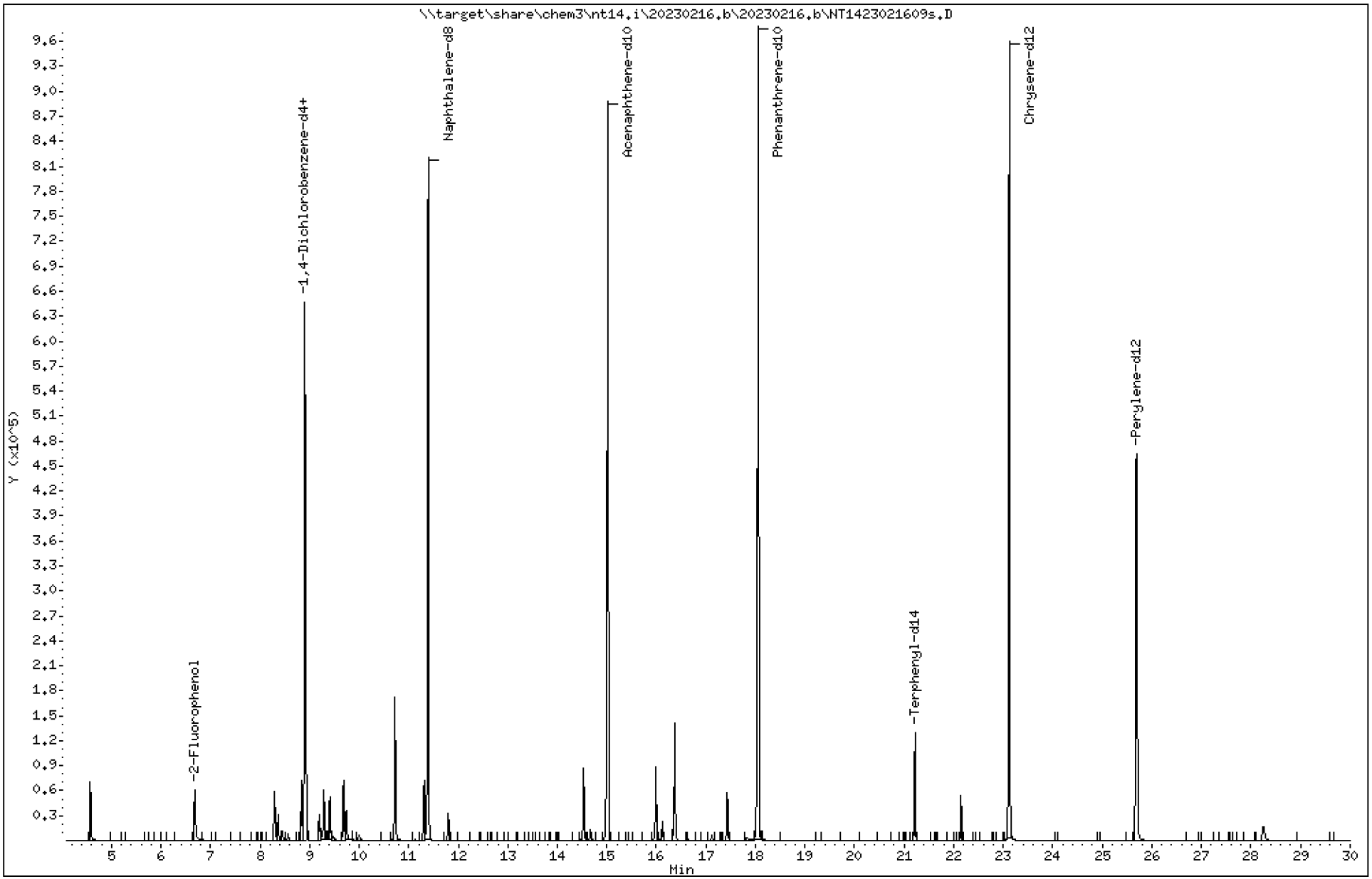
Instrument: nt14.i

Sample Info: SLB0240-CAL4

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021609s.D
Lab Smp Id: SLB0240-CAL4
Inj Date : 16-FEB-2023 18:54 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0240-CAL4
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Meth Date : 03-Mar-2023 14:04 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.679	6.764	(0.750)	67561	0.75000	0.5841
	3 Phenol	94	8.286	8.379	(0.931)	78640	0.50000	0.4592
	7 1,3-Dichlorobenzene	146	8.835	8.835	(0.992)	65052	0.50000	0.4787
*	8 1,4-Dichlorobenzene-d4	152	8.905	8.905	(1.000)	399360	4.00000	
	9 1,4-Dichlorobenzene	146	8.928	8.936	(1.003)	61515	0.50000	0.4746
	11 Benzyl alcohol	79	9.184	9.161	(1.031)	49029	0.50000	0.4483
	12 1,2-Dichlorobenzene	146	9.285	9.293	(1.043)	61553	0.50000	0.4776
	13 2-Methylphenol	108	9.409	9.433	(1.057)	59022	0.50000	0.4979
	15 4-Methylphenol	108	9.681	9.720	(1.087)	57961	0.50000	0.4458
	16 N-Nitroso-di-n-propylamine	70	9.743	9.767	(1.094)	46756	0.50000	0.4684
	22 2,4-Dimethylphenol	107	10.721	10.745	(0.941)	122969	1.00000	0.9639
	24 Benzoic acid	105	11.116	11.116	(0.976)	61	2.00000	0.0009158(MH)
	26 1,2,4-Trichlorobenzene	180	11.310	11.310	(0.993)	63007	0.50000	0.4881
*	27 Naphthalene-d8	136	11.395	11.394	(1.000)	1408942	4.00000	
	30 Hexachlorobutadiene	225	11.804	11.804	(1.036)	37176	0.50000	0.4734
	39 Dimethylphthalate	163	14.536	14.551	(0.968)	116724	0.50000	0.4971
*	42 Acenaphthene-d10	162	15.016	15.016	(1.000)	769600	4.00000	
	50 Diethylphthalate	149	15.990	15.997	(1.065)	138009	0.50000	0.4697
	54 N-Nitrosodiphenylamine	169	16.368	16.384	(0.906)	112007	0.50000	0.5038
	57 Hexachlorobenzene	284	17.432	17.432	(0.965)	54703	0.50000	0.4759
	58 Pentachlorophenol	266	17.812	17.944	(0.986)	16729	1.00000	0.3567(M)
*	59 Phenanthrene-d10	188	18.059	18.059	(1.000)	1769892	4.00000	
$	66 Terphenyl-d14	244	21.216	21.224	(0.918)	161678	0.50000	0.5157
	67 Butylbenzylphthalate	149	22.153	22.153	(0.958)	59157	0.50000	0.3984
*	69 Chrysene-d12	240	23.121	23.121	(1.000)	1177556	4.00000	
*	77 Perylene-d12	264	25.691	25.691	(1.000)	823122	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.249	28.288	(1.100)	55839	0.50000	0.3857
	90 N-Nitrosodimethylamine	74	4.571	4.618	(0.513)	75602	1.00000	0.8562

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021609s.D
Lab Smp Id: SLB0240-CAL4
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 18:18
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	393779	196890	787558	399360	1.42
27 Naphthalene-d8	1399029	699515	2798058	1408942	0.71
42 Acenaphthene-d10	759723	379862	1519446	769600	1.30
59 Phenanthrene-d10	1756156	878078	3512312	1769892	0.78
69 Chrysene-d12	1174128	587064	2348256	1177556	0.29
77 Perylene-d12	826011	413006	1652022	823122	-0.35

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.91	8.41	9.41	8.91	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.40	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	-0.00
59 Phenanthrene-d10	18.06	17.56	18.56	18.06	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	-0.00
77 Perylene-d12	25.68	25.18	26.18	25.69	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021609s.D

Lab ID: SLB0240-CAL4
nt14.i, 20230216.b\20230216.b\SIMABN2.m,   16-FEB-2023 18:54

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.931	0.941	-0.0104	Phenol
0.976	0.000	0.9756	Benzoic acid
0.513	0.518	-0.0052	N-Nitrosodimethylamine
0.986	0.000	0.9863	Pentachlorophenol
0.750	0.760	-0.0095	2-Fluorophenol

RRT check based on Ccal File: 20230216.b/NT1423021612s.D

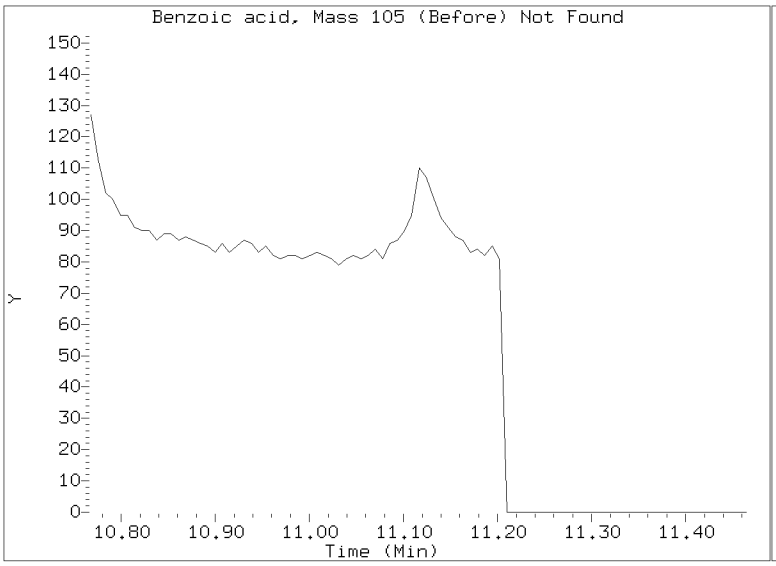
On Column LOD for nt14.i, 20230216.b\SIMABN2.m, PSDDA.sub = 0.0000

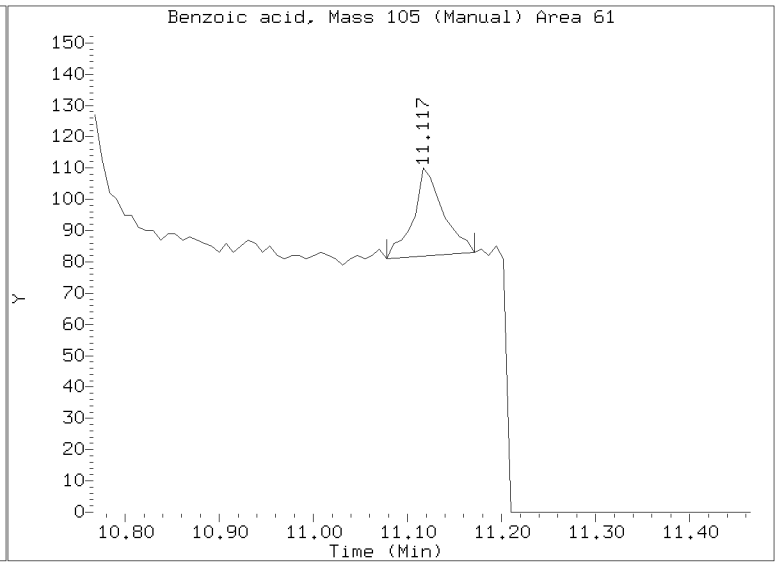
Exception: 1,2,4-Trichlorobenzene 0.0010

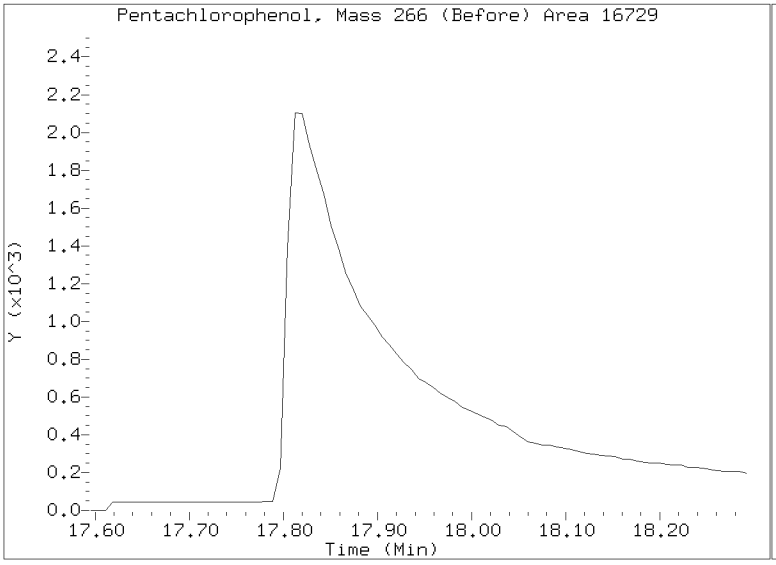
* Only compounds listed in the work order have been verified by the analyst *

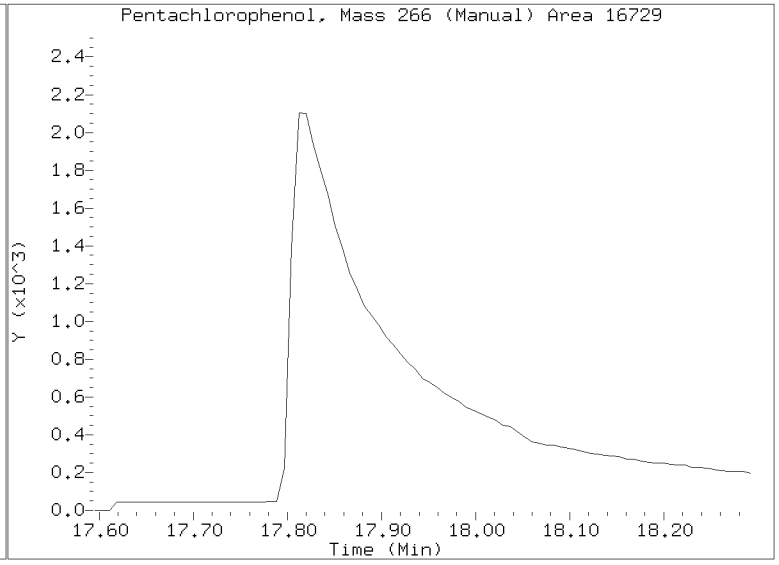
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230216.b/20230216.b/NT1423021609s.D
Injection Date: 16-FEB-2023 18:54
Lab ID:SLB0240-CAL4 Client ID:
Report Date: 03/03/2023 14:07









Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021610s.D

Date : 16-FEB-2023 19:30

Client ID:

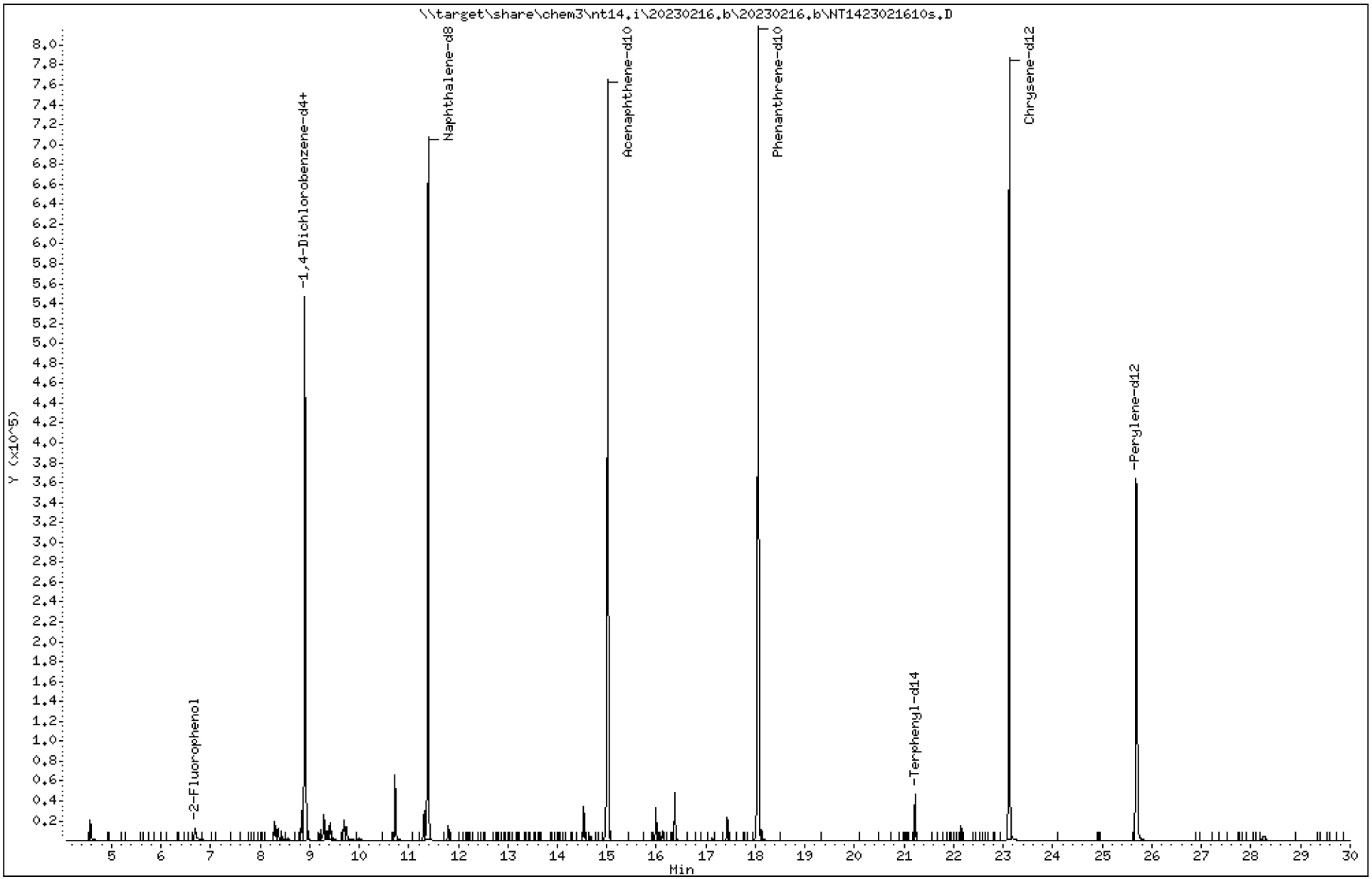
Instrument: nt14.i

Sample Info: SLB0240-CAL3

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021610s.D
Lab Smp Id: SLB0240-CAL3
Inj Date : 16-FEB-2023 19:30 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0240-CAL3
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Meth Date : 03-Mar-2023 14:04 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.687	6.764	(0.751)	21340	0.30000	0.2175
	3 Phenol	94	8.294	8.379	(0.931)	28148	0.20000	0.1942
	7 1,3-Dichlorobenzene	146	8.835	8.835	(0.992)	27276	0.20000	0.2370
*	8 1,4-Dichlorobenzene-d4	152	8.905	8.905	(1.000)	338201	4.00000	
	9 1,4-Dichlorobenzene	146	8.936	8.936	(1.003)	25877	0.20000	0.2357
	11 Benzyl alcohol	79	9.207	9.161	(1.034)	15576	0.20000	0.1682
	12 1,2-Dichlorobenzene	146	9.293	9.293	(1.044)	25749	0.20000	0.2359
	13 2-Methylphenol	108	9.409	9.433	(1.057)	23020	0.20000	0.2293
	15 4-Methylphenol	108	9.689	9.720	(1.088)	20761	0.20000	0.1888
	16 N-Nitroso-di-n-propylamine	70	9.743	9.767	(1.094)	17688	0.20000	0.2097
	22 2,4-Dimethylphenol	107	10.729	10.745	(0.942)	47101	0.40000	0.4325
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	11.310	11.310	(0.993)	26053	0.20000	0.2380
*	27 Naphthalene-d8	136	11.394	11.394	(1.000)	1194978	4.00000	
	30 Hexachlorobutadiene	225	11.804	11.804	(1.036)	15610	0.20000	0.2344
	39 Dimethylphthalate	163	14.536	14.551	(0.968)	45106	0.20000	0.2301
*	42 Acenaphthene-d10	162	15.015	15.016	(1.000)	642586	4.00000	
	50 Diethylphthalate	149	15.990	15.997	(1.065)	51612	0.20000	0.2104
	54 N-Nitrosodiphenylamine	169	16.375	16.384	(0.907)	40238	0.20000	0.2183
	57 Hexachlorobenzene	284	17.432	17.432	(0.966)	22378	0.20000	0.2342
	58 Pentachlorophenol	266	17.943	17.944	(0.994)	1240	0.40000	0.03191(H)
*	59 Phenanthrene-d10	188	18.052	18.059	(1.000)	1471001	4.00000	
$	66 Terphenyl-d14	244	21.216	21.224	(0.918)	60996	0.20000	0.2458
	67 Butylbenzylphthalate	149	22.153	22.153	(0.958)	16319	0.20000	0.1394
*	69 Chrysene-d12	240	23.121	23.121	(1.000)	932019	4.00000	
*	77 Perylene-d12	264	25.683	25.691	(1.000)	646922	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.265	28.288	(1.101)	18129	0.20000	0.1600
	90 N-Nitrosodimethylamine	74	4.571	4.618	(0.513)	27613	0.40000	0.3676

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021610s.D
Lab Smp Id: SLB0240-CAL3
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 18:18
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	393779	196890	787558	338201	-14.11
27 Naphthalene-d8	1399029	699515	2798058	1194978	-14.59
42 Acenaphthene-d10	759723	379862	1519446	642586	-15.42
59 Phenanthrene-d10	1756156	878078	3512312	1471001	-16.24
69 Chrysene-d12	1174128	587064	2348256	932019	-20.62
77 Perylene-d12	826011	413006	1652022	646922	-21.68

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.91	8.41	9.41	8.91	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	-0.00
59 Phenanthrene-d10	18.06	17.56	18.56	18.05	-0.04
69 Chrysene-d12	23.12	22.62	23.62	23.12	-0.00
77 Perylene-d12	25.68	25.18	26.18	25.68	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021610s.D

Lab ID: SLB0240-CAL3
nt14.i, 20230216.b\20230216.b\SIMABN2.m,   16-FEB-2023 19:30

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.931	0.941	-0.0095	Phenol
1.034	1.029	0.0052	Benzyl alcohol
0.513	0.518	-0.0052	N-Nitrosodimethylamine
0.994	0.000	0.9940	Pentachlorophenol
0.751	0.760	-0.0087	2-Fluorophenol

RRT check based on Ccal File: 20230216.b/NT1423021612s.D

On Column LOD for nt14.i, 20230216.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021611s.D

Date : 16-FEB-2023 20:06

Client ID:

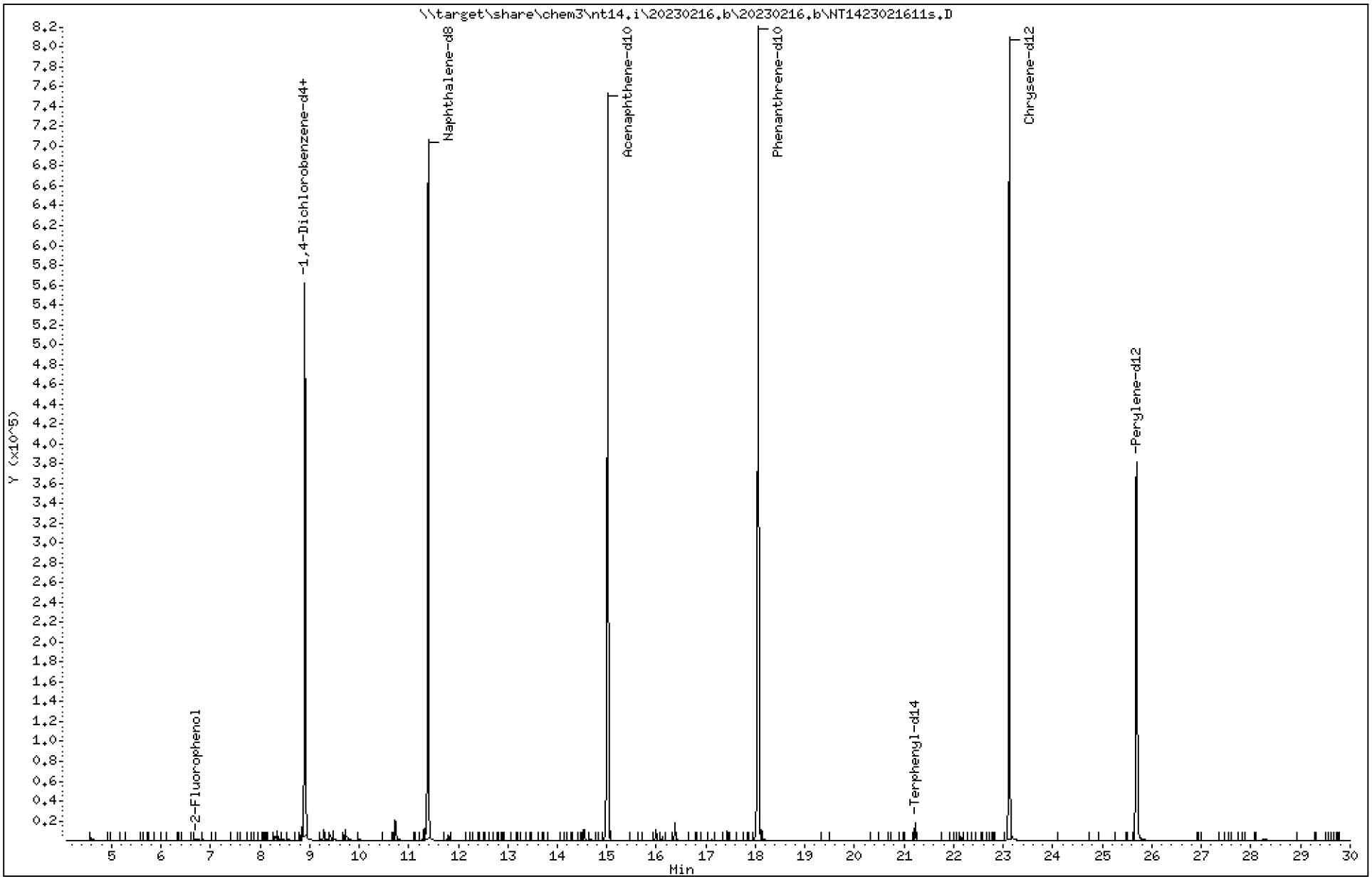
Instrument: nt14.i

Sample Info: SLB0240-CAL2

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021611s.D
Lab Smp Id: SLB0240-CAL2
Inj Date : 16-FEB-2023 20:06 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0240-CAL2
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Meth Date : 03-Mar-2023 14:04 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.710	6.764	(0.753)	4618	0.15000	0.04552
	3 Phenol	94	8.302	8.379	(0.932)	8456	0.10000	0.05650
	7 1,3-Dichlorobenzene	146	8.835	8.835	(0.992)	11520	0.10000	0.09691
*	8 1,4-Dichlorobenzene-d4	152	8.905	8.905	(1.000)	349348	4.00000	
	9 1,4-Dichlorobenzene	146	8.936	8.936	(1.003)	11067	0.10000	0.09760
	11 Benzyl alcohol	79	9.262	9.161	(1.040)	3860	0.10000	0.04034(H)
	12 1,2-Dichlorobenzene	146	9.293	9.293	(1.044)	10995	0.10000	0.09752
	13 2-Methylphenol	108	9.417	9.433	(1.058)	8940	0.10000	0.08621
	15 4-Methylphenol	108	9.704	9.720	(1.090)	6968	0.10000	0.06138
	16 N-Nitroso-di-n-propylamine	70	9.751	9.767	(1.095)	6944	0.10000	0.07981
	22 2,4-Dimethylphenol	107	10.728	10.745	(0.942)	17725	0.20000	0.1584
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	11.310	11.310	(0.993)	10999	0.10000	0.09809
*	27 Naphthalene-d8	136	11.394	11.394	(1.000)	1224029	4.00000	
	30 Hexachlorobutadiene	225	11.804	11.804	(1.036)	6781	0.10000	0.09940
	39 Dimethylphthalate	163	14.543	14.551	(0.969)	17704	0.10000	0.08996
*	42 Acenaphthene-d10	162	15.015	15.016	(1.000)	645081	4.00000	
	50 Diethylphthalate	149	15.989	15.997	(1.065)	19559	0.10000	0.07941
	54 N-Nitrosodiphenylamine	169	16.375	16.384	(0.907)	15330	0.10000	0.08189
	57 Hexachlorobenzene	284	17.432	17.432	(0.965)	9672	0.10000	0.09955
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.059	18.059	(1.000)	1496005	4.00000	
$	66 Terphenyl-d14	244	21.224	21.224	(0.918)	24878	0.10000	0.09600
	67 Butylbenzylphthalate	149	22.153	22.153	(0.958)	5003	0.10000	0.04098
*	69 Chrysene-d12	240	23.121	23.121	(1.000)	973406	4.00000	
*	77 Perylene-d12	264	25.691	25.691	(1.000)	661889	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.272	28.288	(1.100)	6405	0.10000	0.05536
	90 N-Nitrosodimethylamine	74	4.586	4.618	(0.515)	7342	0.20000	0.09436

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021611s.D
Lab Smp Id: SLB0240-CAL2
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 18:18
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	393779	196890	787558	349348	-11.28
27 Naphthalene-d8	1399029	699515	2798058	1224029	-12.51
42 Acenaphthene-d10	759723	379862	1519446	645081	-15.09
59 Phenanthrene-d10	1756156	878078	3512312	1496005	-14.81
69 Chrysene-d12	1174128	587064	2348256	973406	-17.10
77 Perylene-d12	826011	413006	1652022	661889	-19.87

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.91	8.41	9.41	8.91	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	-0.00
59 Phenanthrene-d10	18.06	17.56	18.56	18.06	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	-0.00
77 Perylene-d12	25.68	25.18	26.18	25.69	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021611s.D

Lab ID: SLB0240-CAL2
nt14.i, 20230216.b\20230216.b\SIMABN2.m,   16-FEB-2023 20:06

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.932	0.941	-0.0087	Phenol
1.040	1.029	0.0113	Benzyl alcohol
0.753	0.760	-0.0061	2-Fluorophenol

RRT check based on Ccal File: 20230216.b/NT1423021612s.D

On Column LOD for nt14.i, 20230216.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021612s.D

Date : 16-FEB-2023 20:42

Client ID:

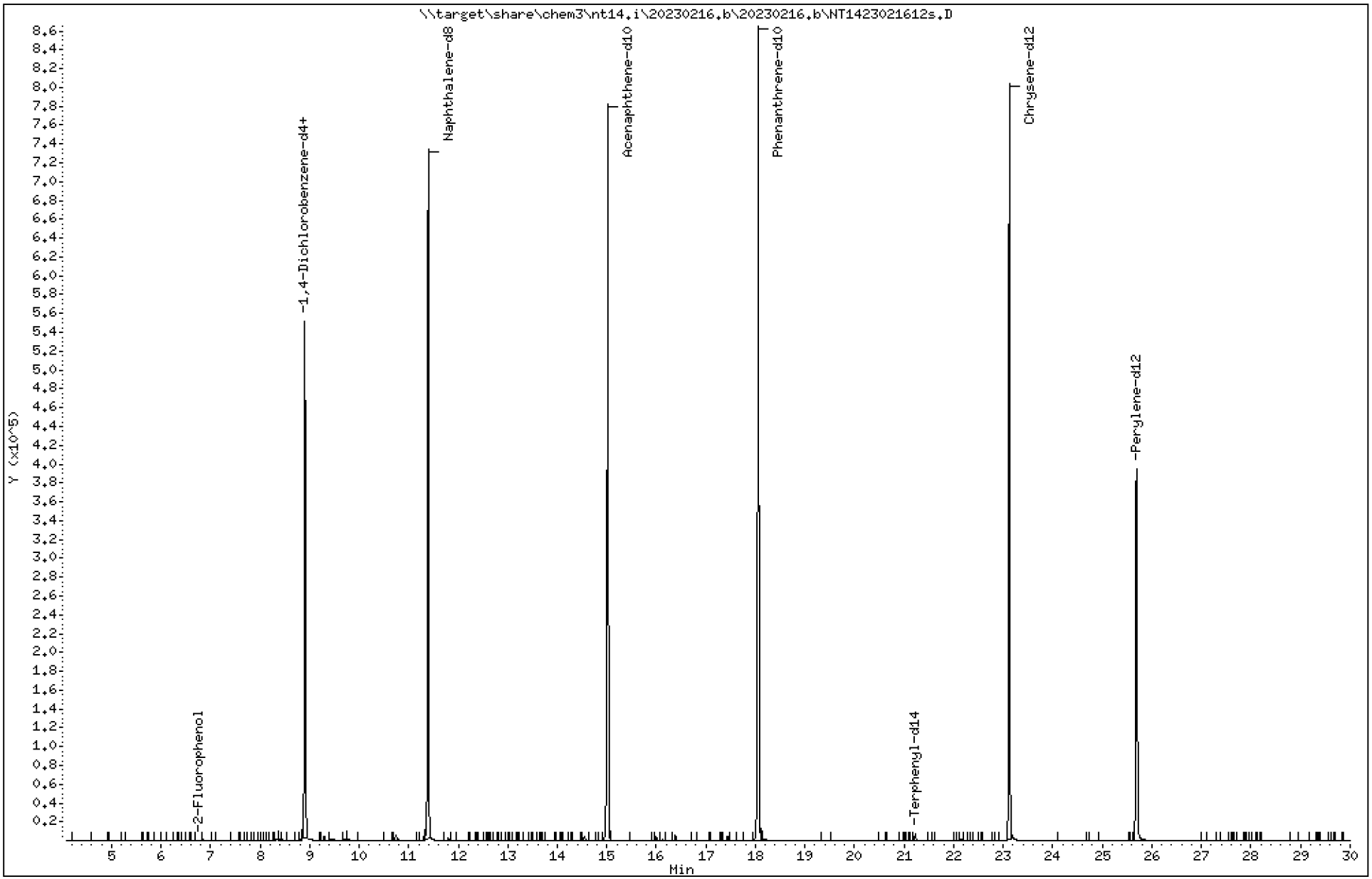
Instrument: nt14.i

Sample Info: SLB0240-CAL1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021612s.D
Lab Smp Id: SLB0240-CAL1
Inj Date : 16-FEB-2023 20:42 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0240-CAL1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Meth Date : 03-Mar-2023 14:04 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 10 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.764	6.764	(0.760)	953	0.07500	0.009288(H)
	3 Phenol	94	8.379	8.379	(0.941)	3296	0.05000	0.02178(M)
	7 1,3-Dichlorobenzene	146	8.835	8.835	(0.992)	5566	0.05000	0.04630
*	8 1,4-Dichlorobenzene-d4	152	8.905	8.905	(1.000)	353280	4.00000	
	9 1,4-Dichlorobenzene	146	8.936	8.936	(1.003)	5412	0.05000	0.04720
	11 Benzyl alcohol	79	9.161	9.161	(1.029)	444	0.05000	0.004589
	12 1,2-Dichlorobenzene	146	9.293	9.293	(1.044)	5291	0.05000	0.04641
	13 2-Methylphenol	108	9.433	9.433	(1.059)	3778	0.05000	0.03603
	15 4-Methylphenol	108	9.720	9.720	(1.092)	2508	0.05000	0.02185
	16 N-Nitroso-di-n-propylamine	70	9.766	9.767	(1.097)	2577	0.05000	0.02930(M)
	22 2,4-Dimethylphenol	107	10.744	10.745	(0.943)	7046	0.10000	0.06180
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	11.310	11.310	(0.993)	5258	0.05000	0.04608(M)
*	27 Naphthalene-d8	136	11.394	11.394	(1.000)	1245409	4.00000	
	30 Hexachlorobutadiene	225	11.804	11.804	(1.036)	3490	0.05000	0.05028
	39 Dimethylphthalate	163	14.551	14.551	(0.969)	8008	0.05000	0.03958
*	42 Acenaphthene-d10	162	15.016	15.016	(1.000)	663197	4.00000	
	50 Diethylphthalate	149	15.997	15.997	(1.065)	8335	0.05000	0.03292
	54 N-Nitrosodiphenylamine	169	16.383	16.384	(0.907)	5698	0.05000	0.02972(M)
	57 Hexachlorobenzene	284	17.432	17.432	(0.965)	4609	0.05000	0.04629
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.059	18.059	(1.000)	1533128	4.00000	
$	66 Terphenyl-d14	244	21.224	21.224	(0.918)	10837	0.05000	0.04158
	67 Butylbenzylphthalate	149	22.153	22.153	(0.958)	1856	0.05000	0.01512
*	69 Chrysene-d12	240	23.121	23.121	(1.000)	979054	4.00000	
*	77 Perylene-d12	264	25.691	25.691	(1.000)	656343	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.288	28.288	(1.101)	2707	0.05000	0.02361
	90 N-Nitrosodimethylamine	74	4.617	4.618	(0.519)	1928	0.10000	0.02449(M)

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021612s.D
Lab Smp Id: SLB0240-CAL1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 18:18
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	393779	196890	787558	353280	-10.28
27 Naphthalene-d8	1399029	699515	2798058	1245409	-10.98
42 Acenaphthene-d10	759723	379862	1519446	663197	-12.71
59 Phenanthrene-d10	1756156	878078	3512312	1533128	-12.70
69 Chrysene-d12	1174128	587064	2348256	979054	-16.61
77 Perylene-d12	826011	413006	1652022	656343	-20.54

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.91	8.41	9.41	8.91	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	-0.00
59 Phenanthrene-d10	18.06	17.56	18.56	18.06	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.12	-0.00
77 Perylene-d12	25.68	25.18	26.18	25.69	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021612s.D

Lab ID: SLB0240-CAL1
nt14.i, 20230216.b\20230216.b\SIMABN2.m,   16-FEB-2023 20:42

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230216.b/NT1423021612s.D

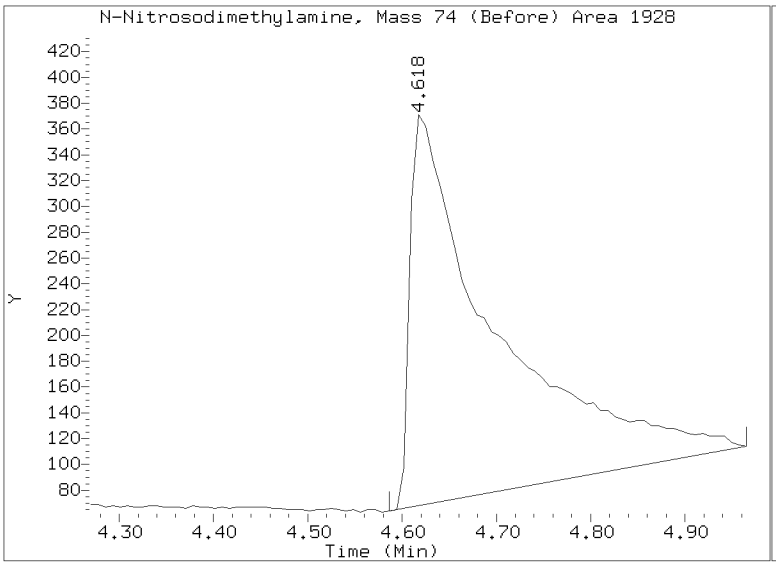
On Column LOD for nt14.i, 20230216.b\SIMABN2.m, PSDDA.sub = 0.0000

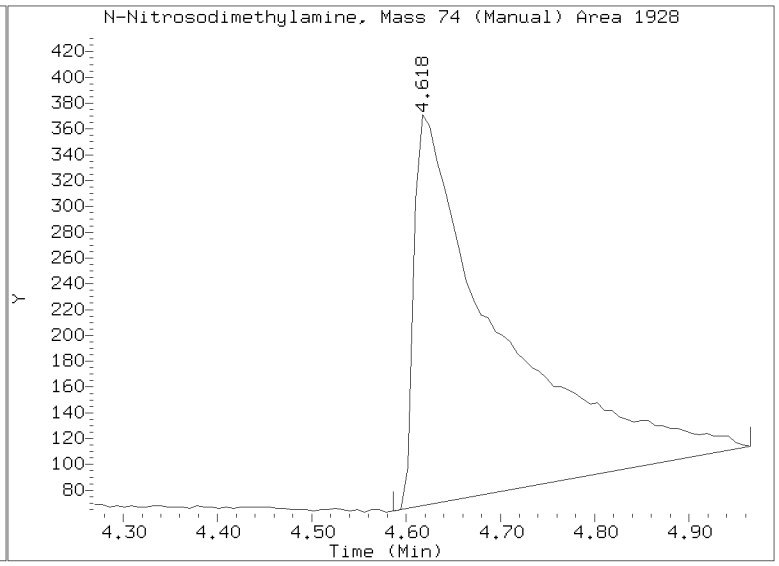
Exception: 1,2,4-Trichlorobenzene 0.0010

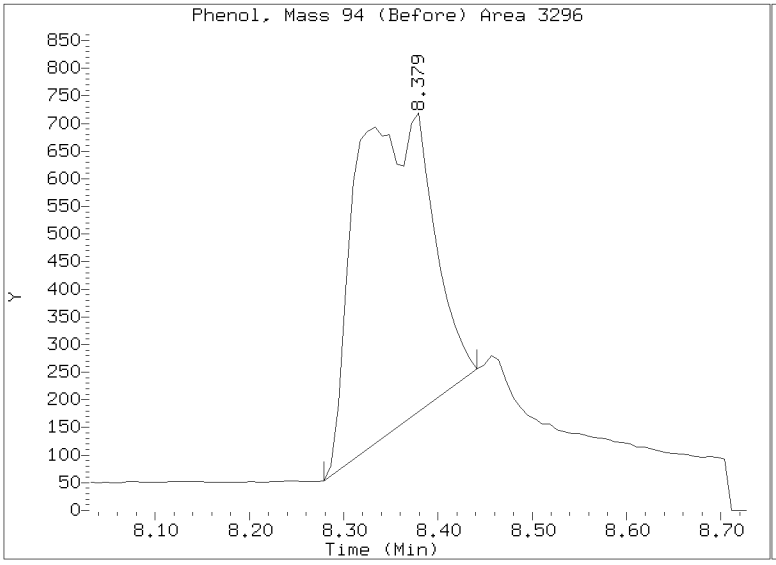
* Only compounds listed in the work order have been verified by the analyst *

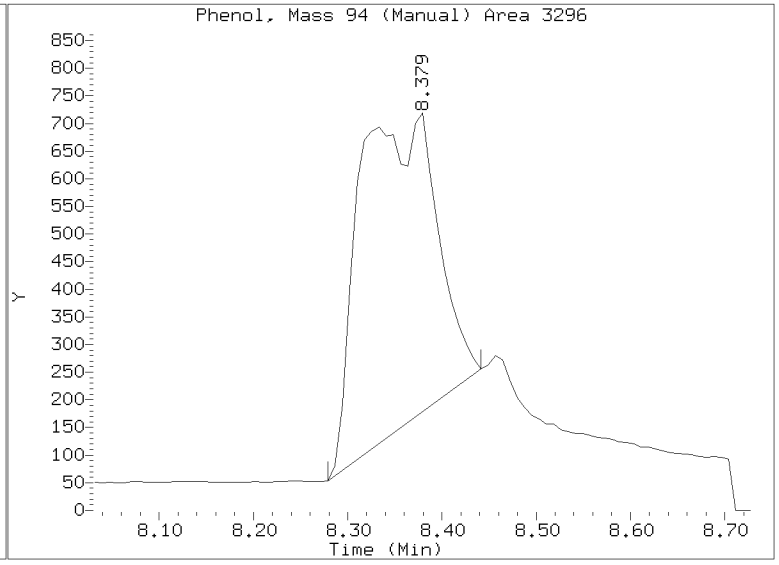
Quant Ion Manual Peak Adjustment Report

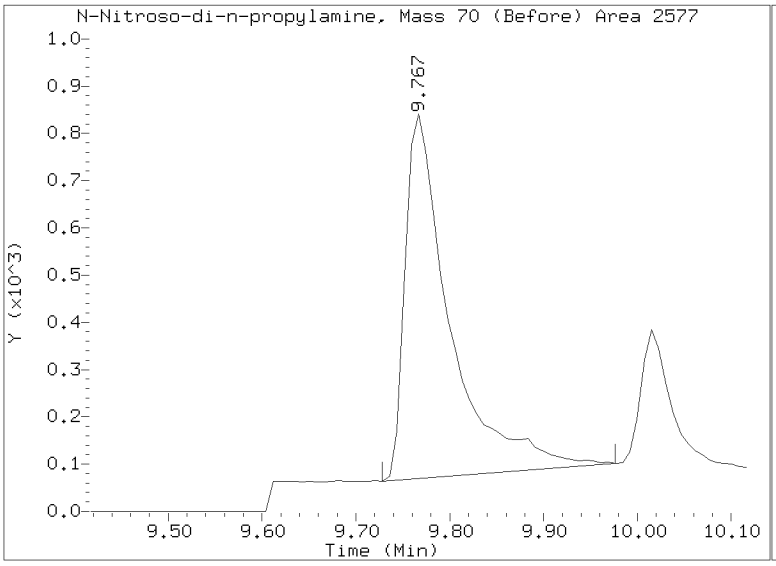
Datafile: //target/share/chem3/nt14.i/20230216.b/20230216.b/NT1423021612s.D
Injection Date: 16-FEB-2023 20:42
Lab ID:SLB0240-CAL1 Client ID:
Report Date: 03/03/2023 14:07

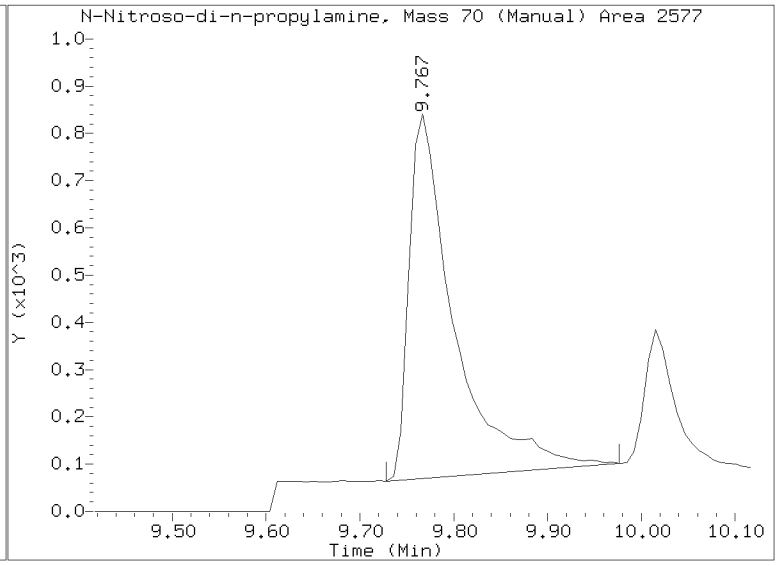






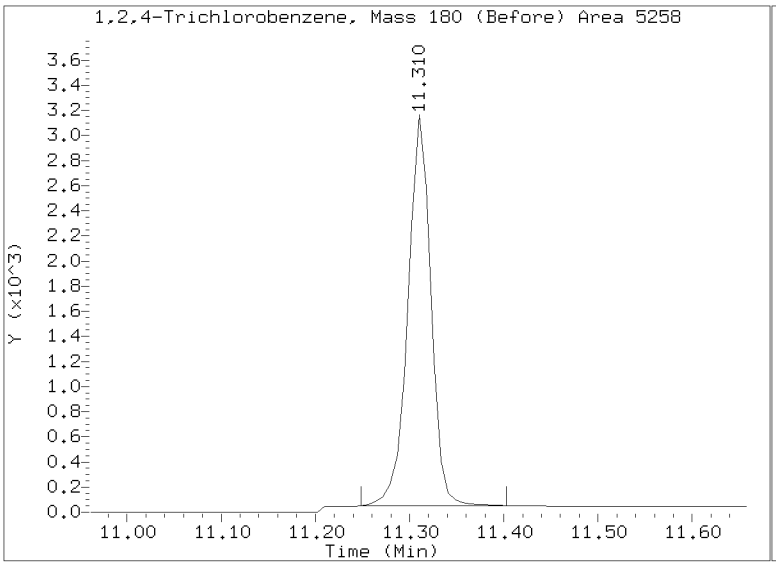


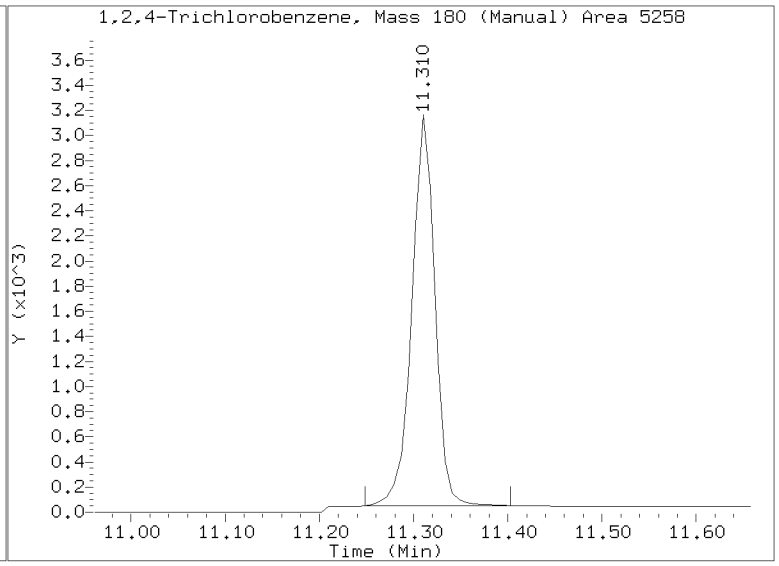


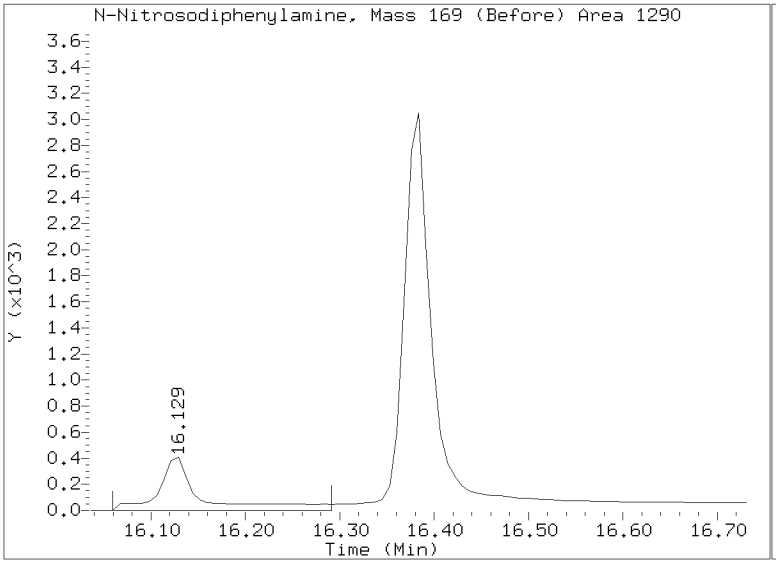


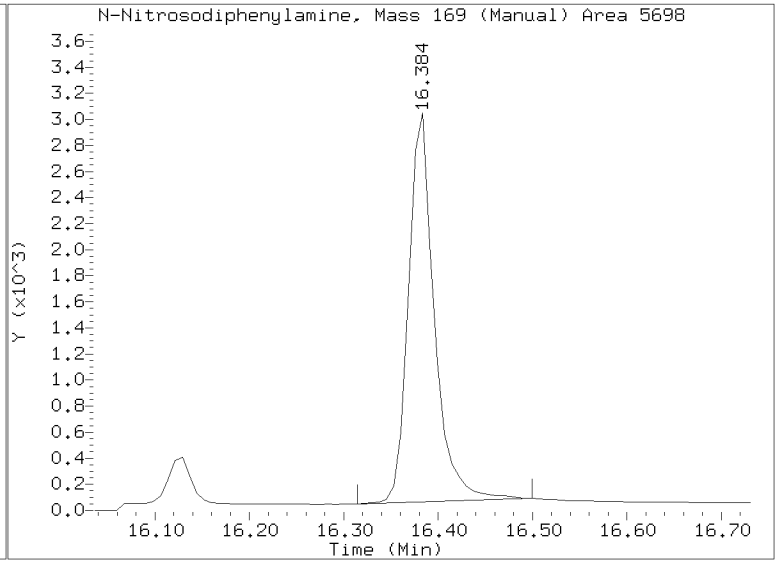
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230216.b/20230216.b/NT1423021612s.D
Injection Date: 16-FEB-2023 20:42
Lab ID:SLB0240-CAL1 Client ID:
Report Date: 03/03/2023 14:07









Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

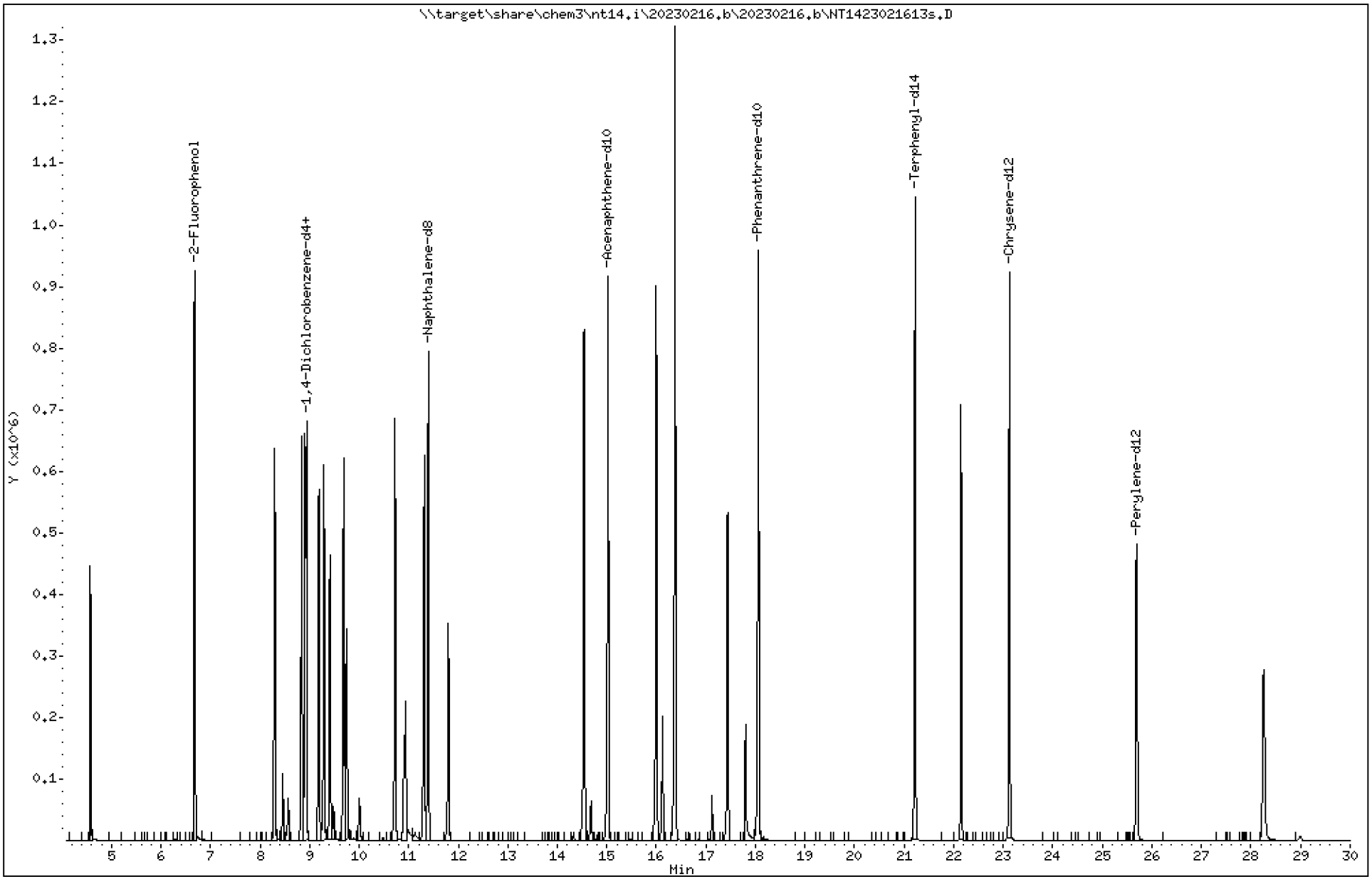
Instrument: nt14.i

Sample Info: SLB0240-SCV1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

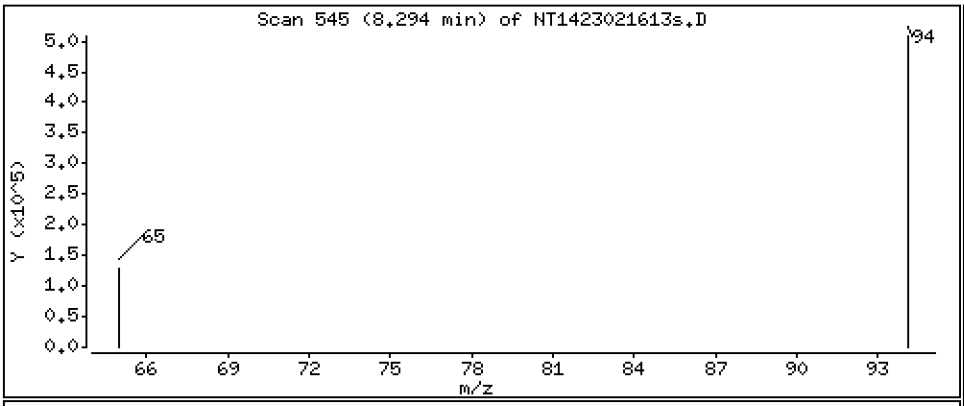
Operator: DSD

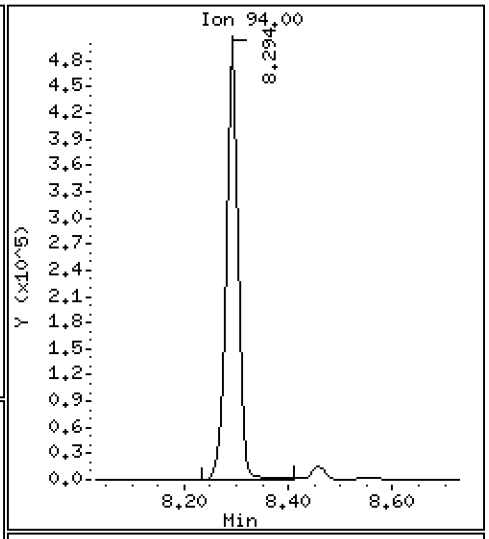
Column phase: ZB-5msi

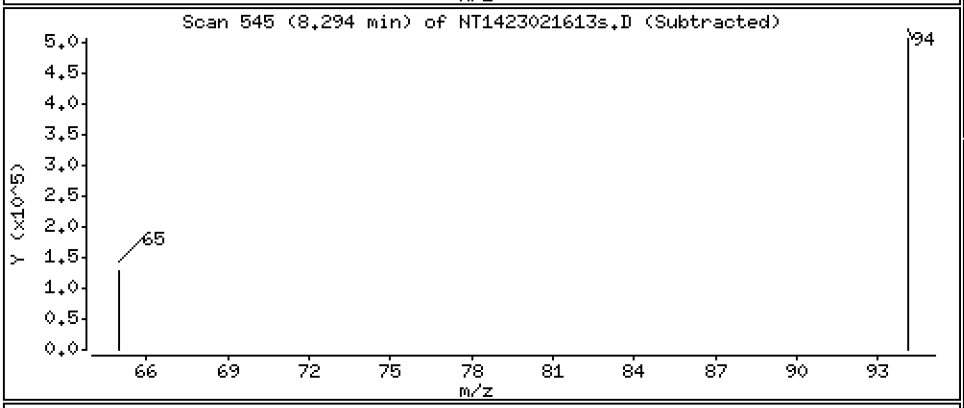
Column diameter: 0.25

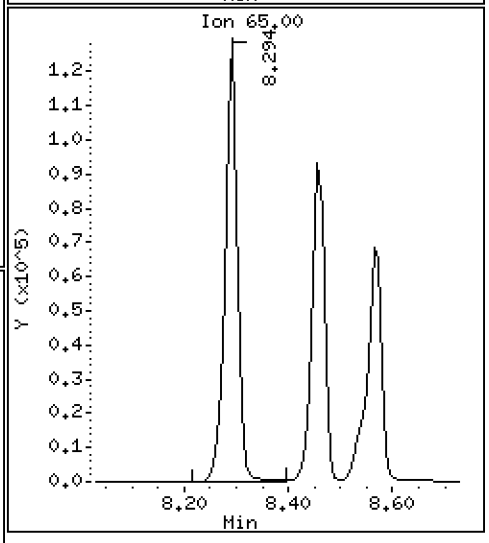
3 Phenol

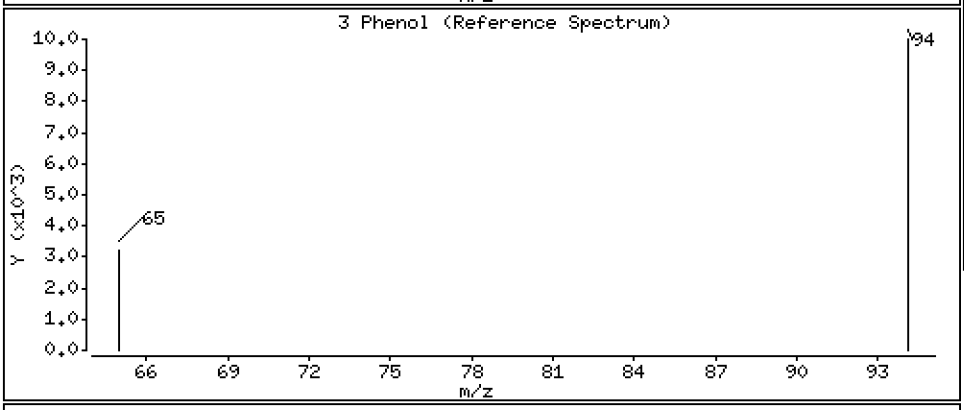
Concentration: 4.556 ug/mL

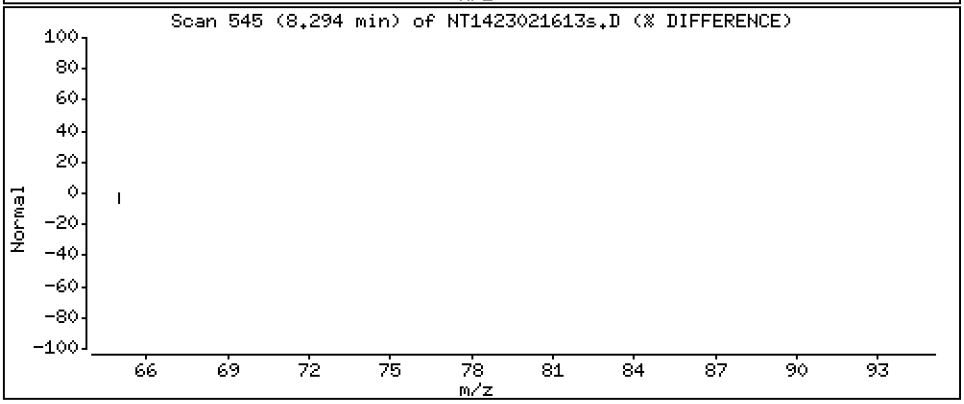












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

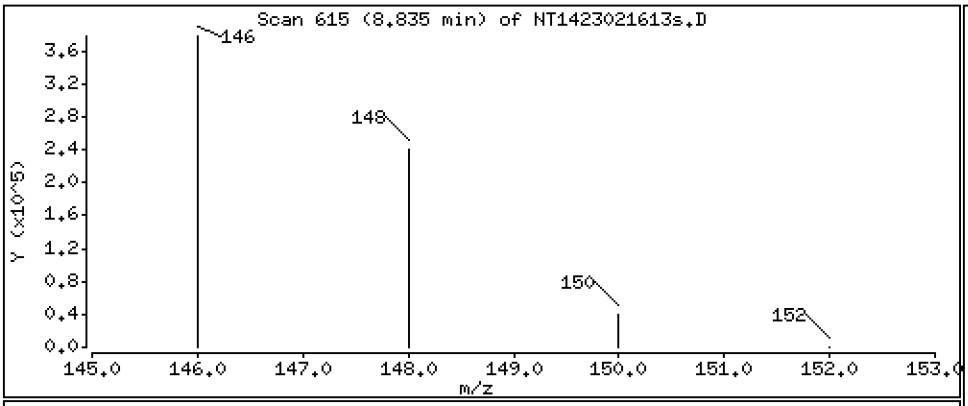
Operator: DSD

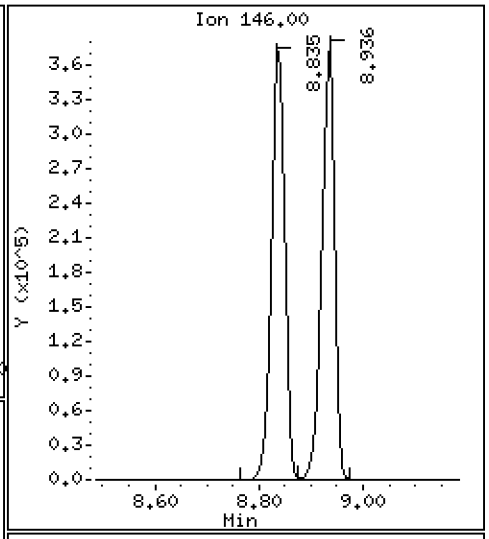
Column phase: ZB-5msi

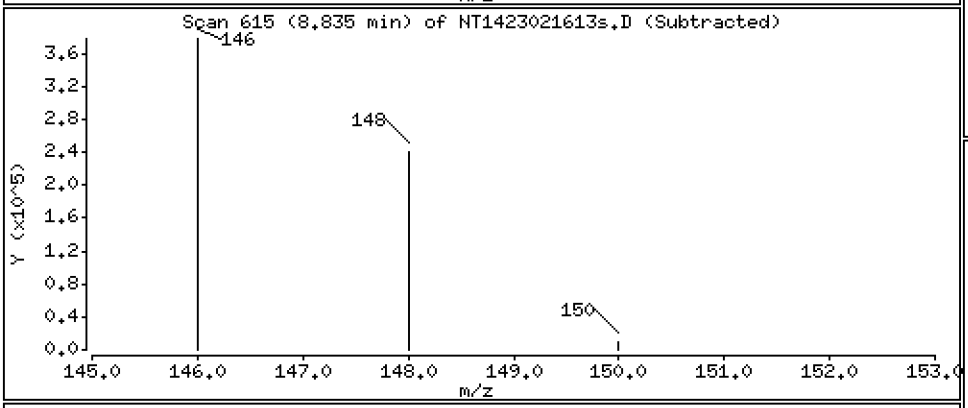
Column diameter: 0.25

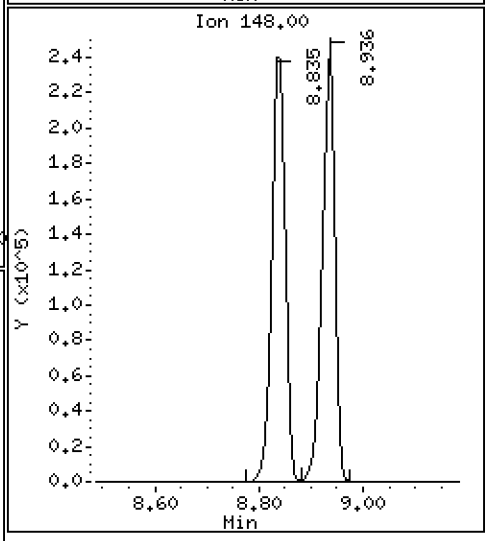
7 1,3-Dichlorobenzene

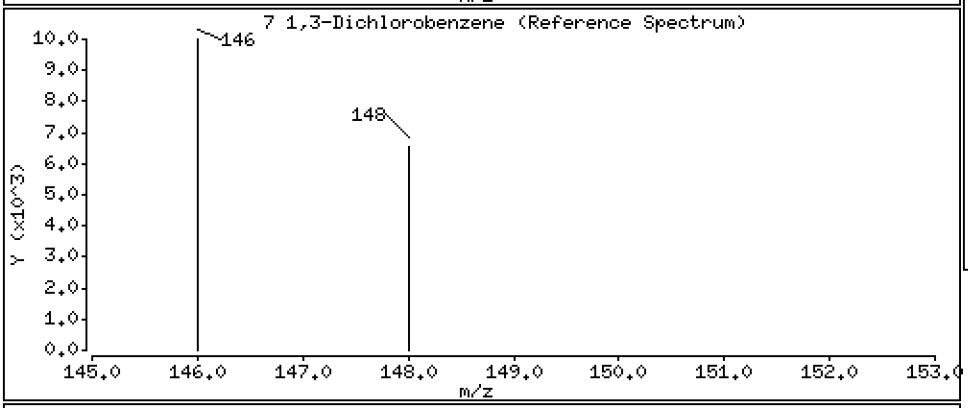
Concentration: 4.809 ug/mL

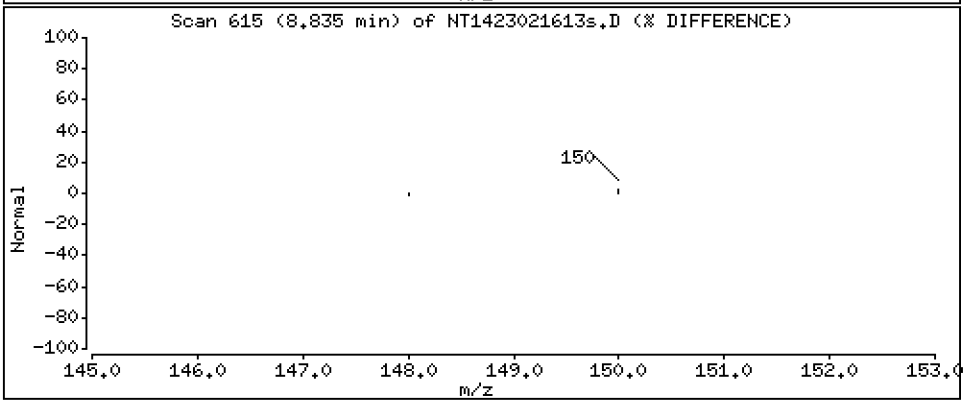












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

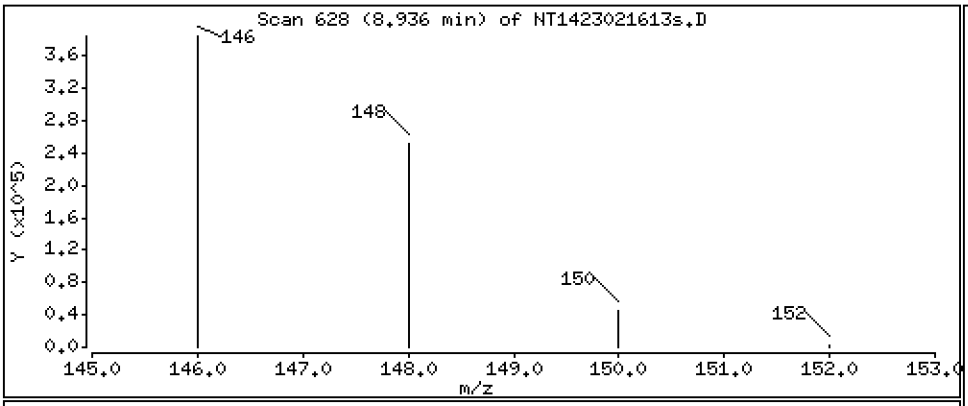
Operator: DSD

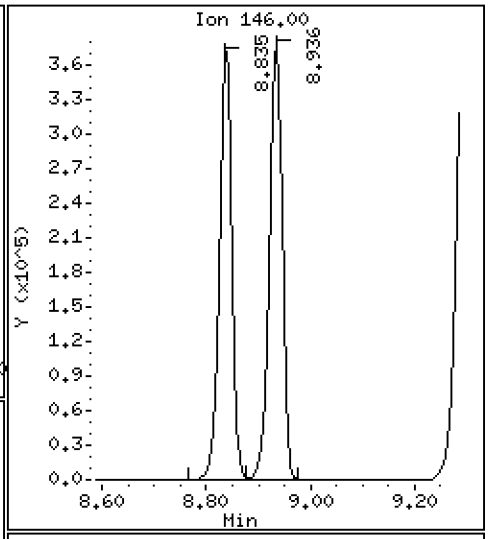
Column phase: ZB-5msi

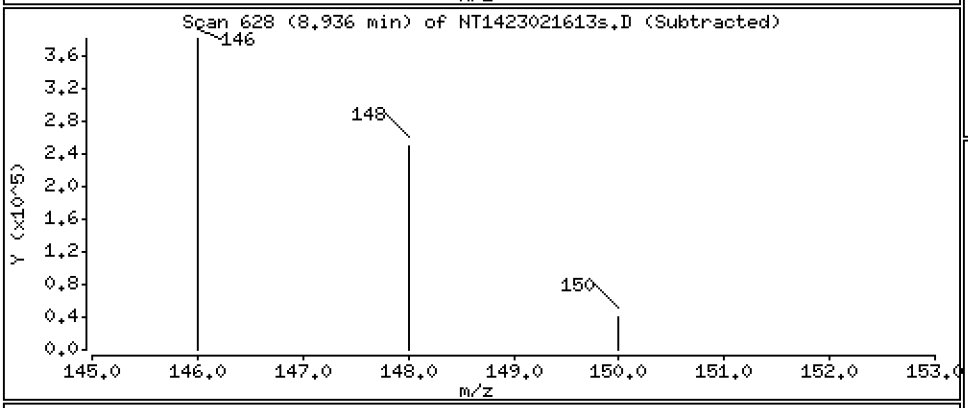
Column diameter: 0.25

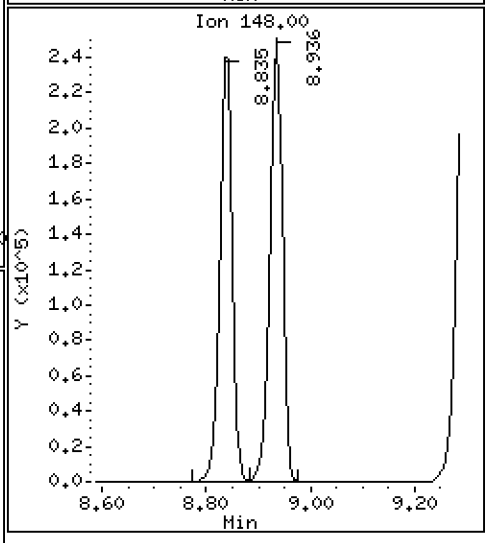
9 1,4-Dichlorobenzene

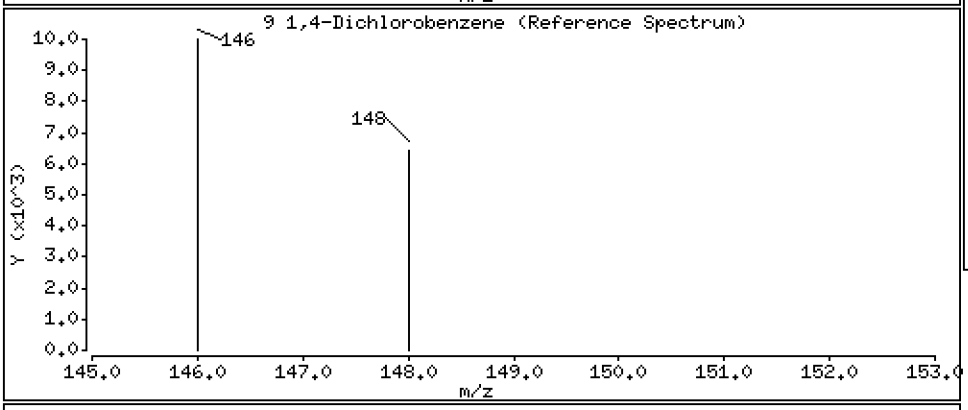
Concentration: 4.850 ug/mL

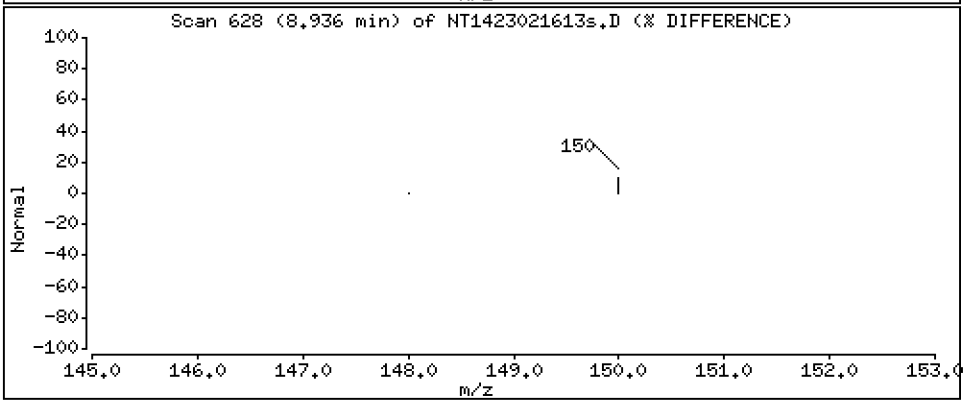












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

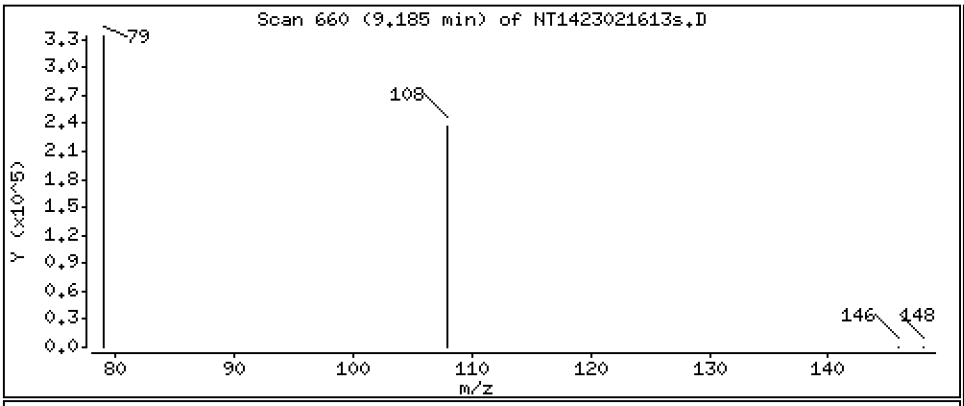
Operator: DSD

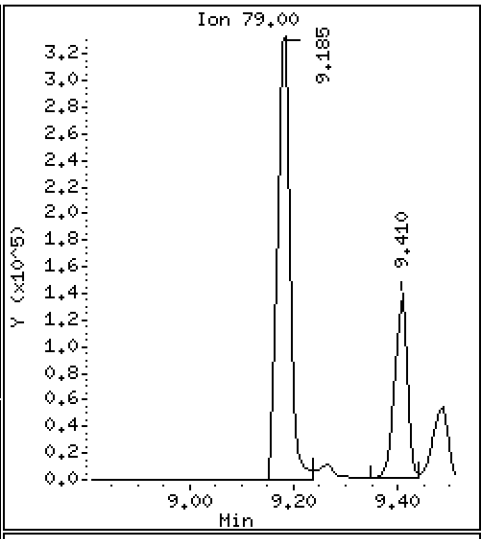
Column phase: ZB-5msi

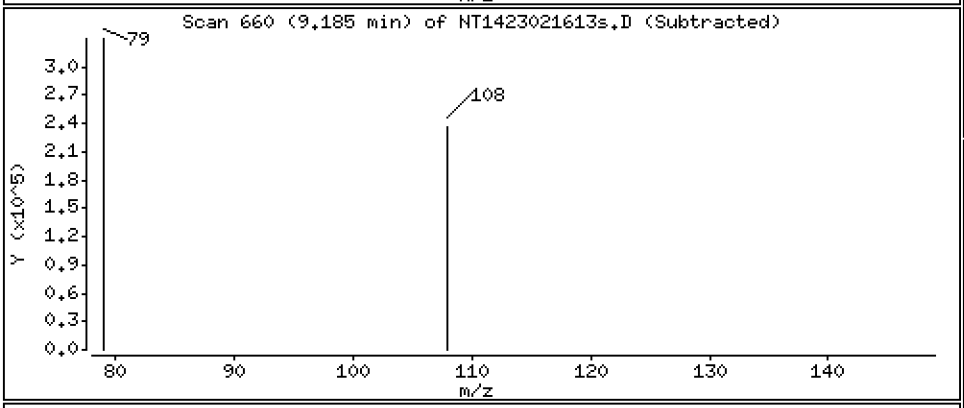
Column diameter: 0.25

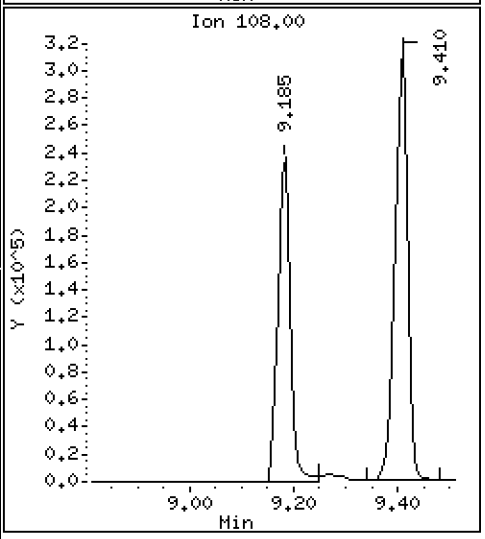
11 Benzyl alcohol

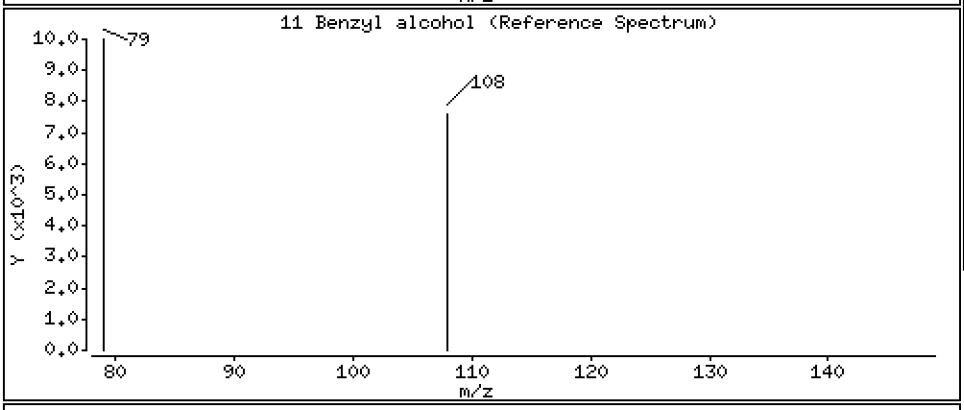
Concentration: 5.300 ug/mL

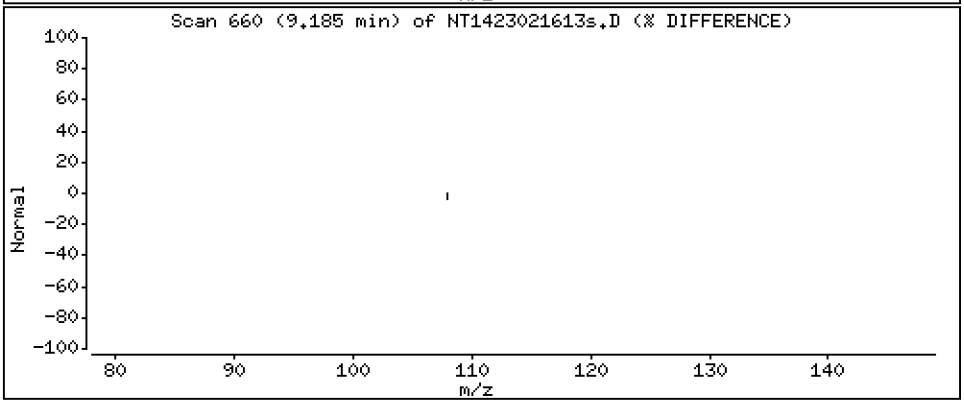












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

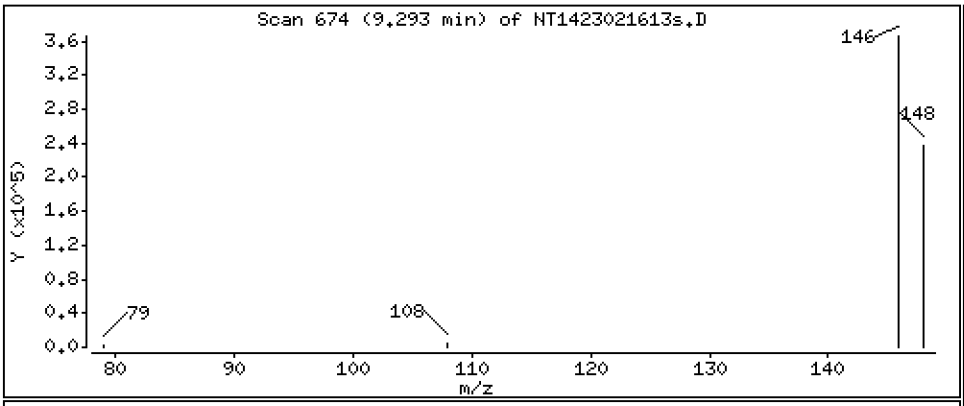
Operator: DSD

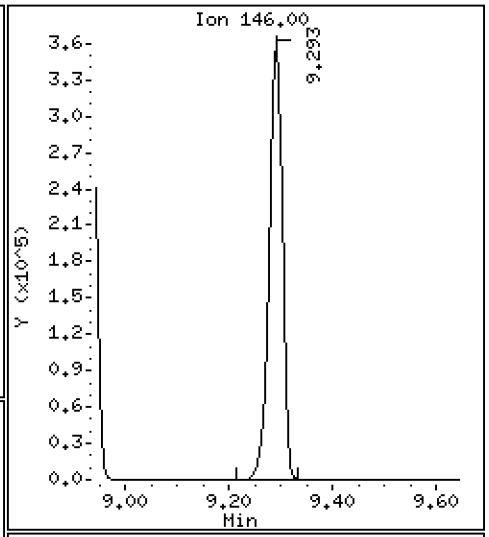
Column phase: ZB-5msi

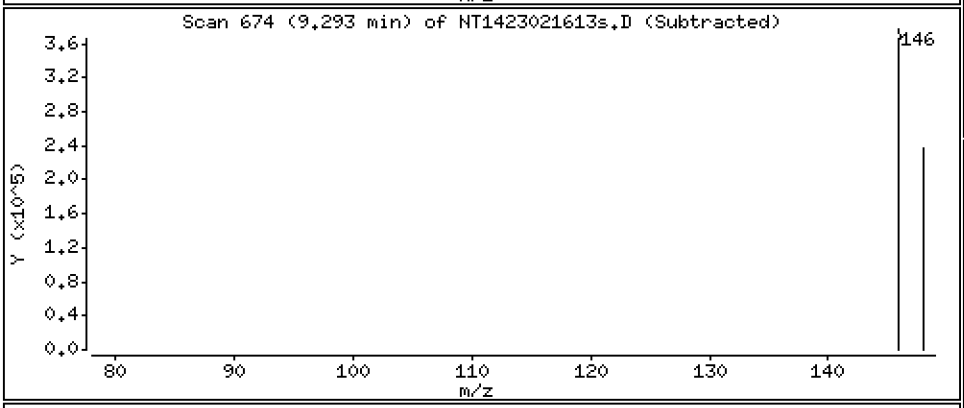
Column diameter: 0.25

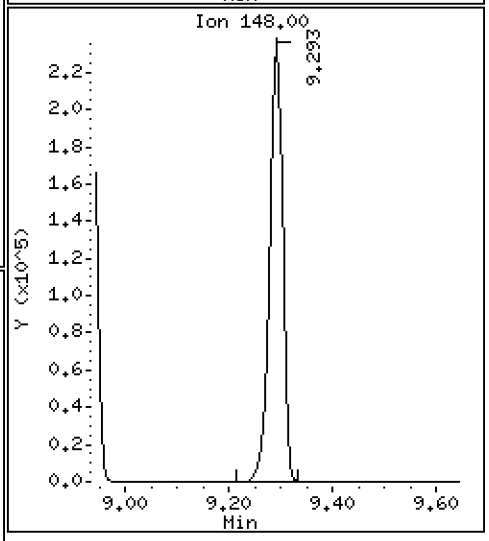
12 1,2-Dichlorobenzene

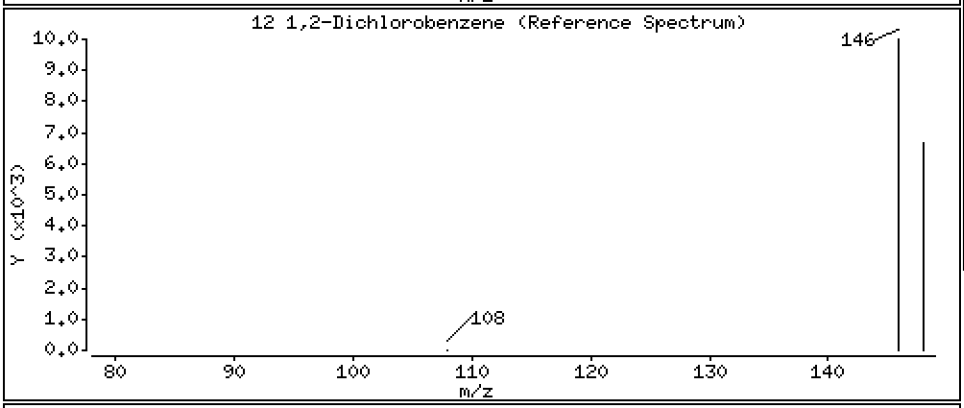
Concentration: 4.795 ug/mL

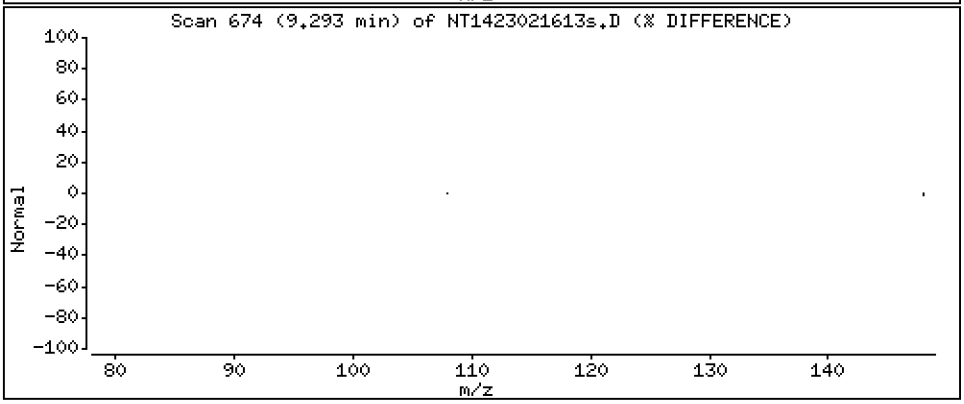












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

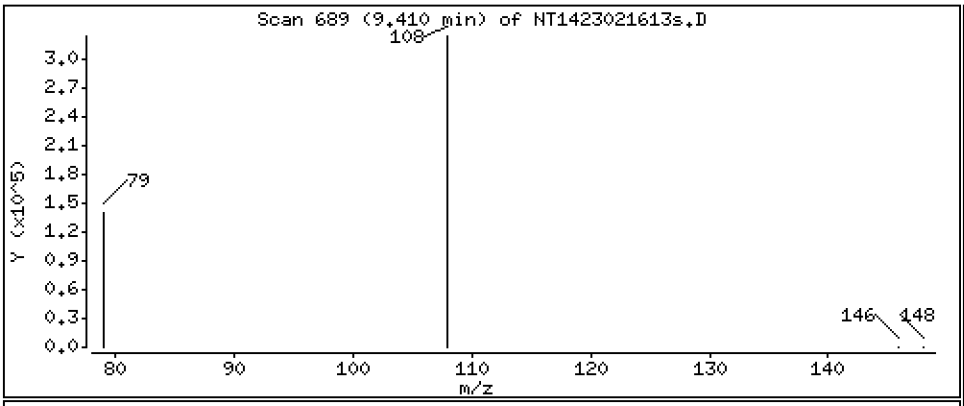
Operator: DSD

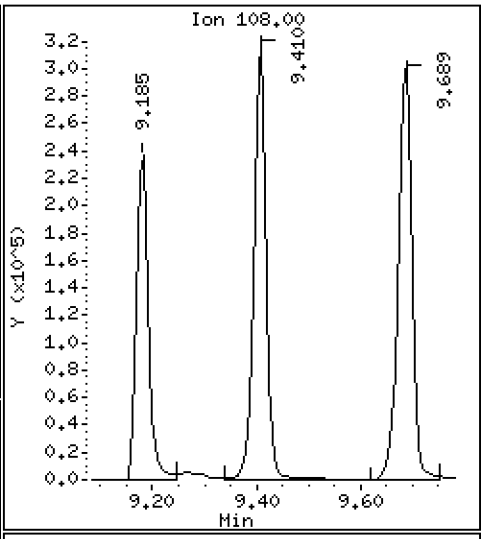
Column phase: ZB-5msi

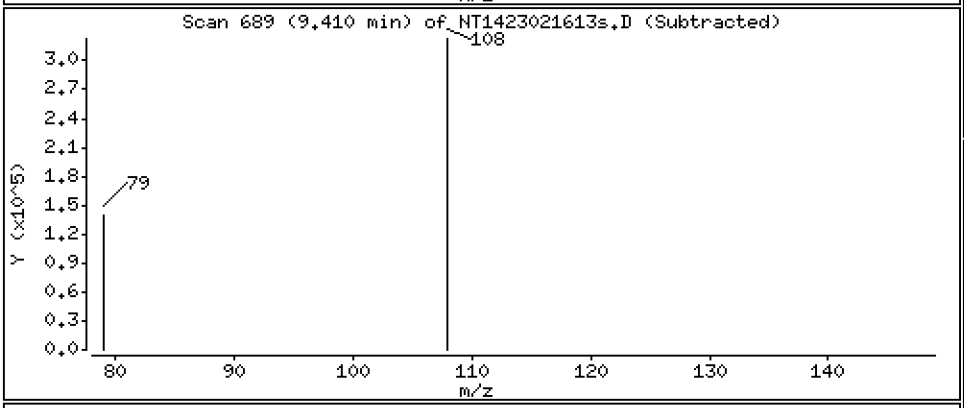
Column diameter: 0.25

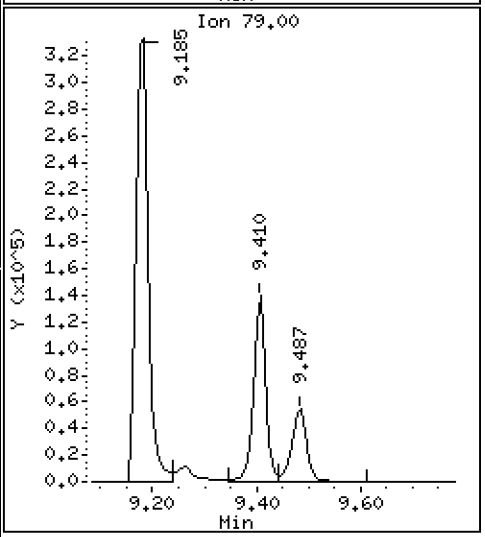
13 2-Methylphenol

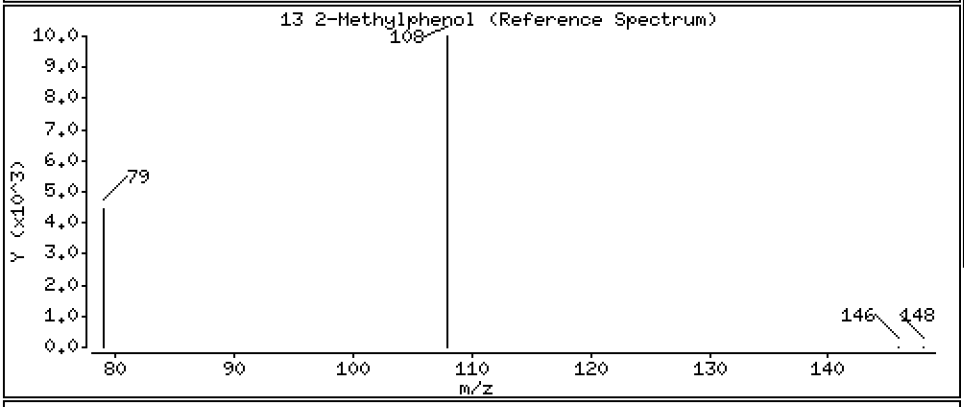
Concentration: 4.507 ug/mL

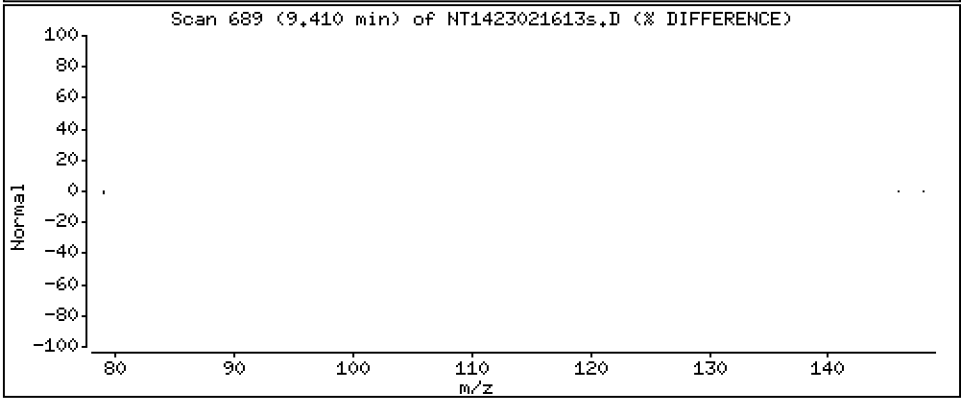












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

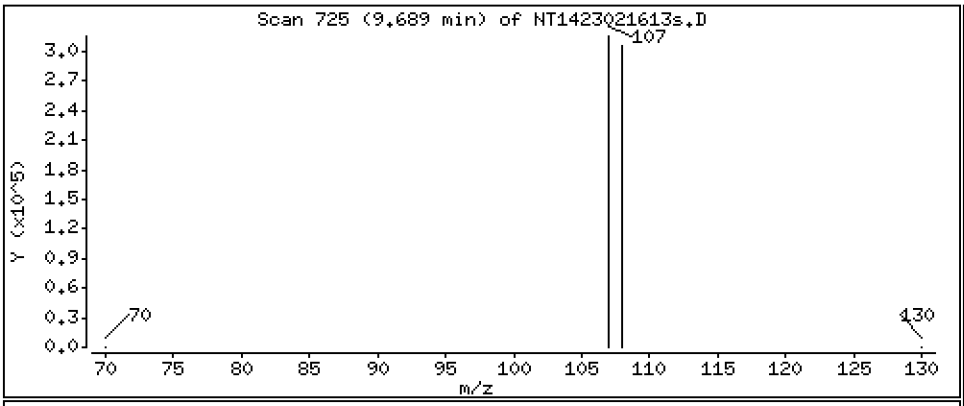
Operator: DSD

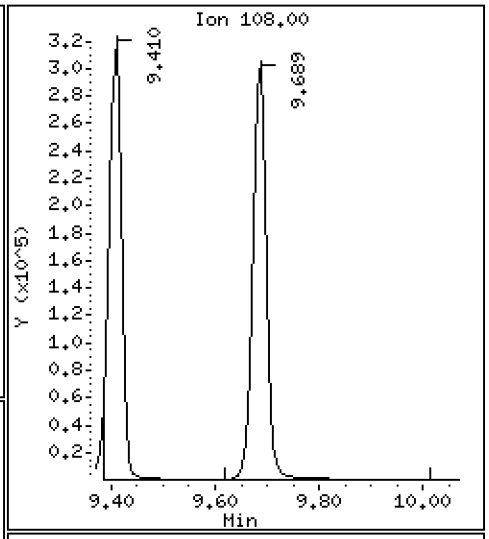
Column phase: ZB-5msi

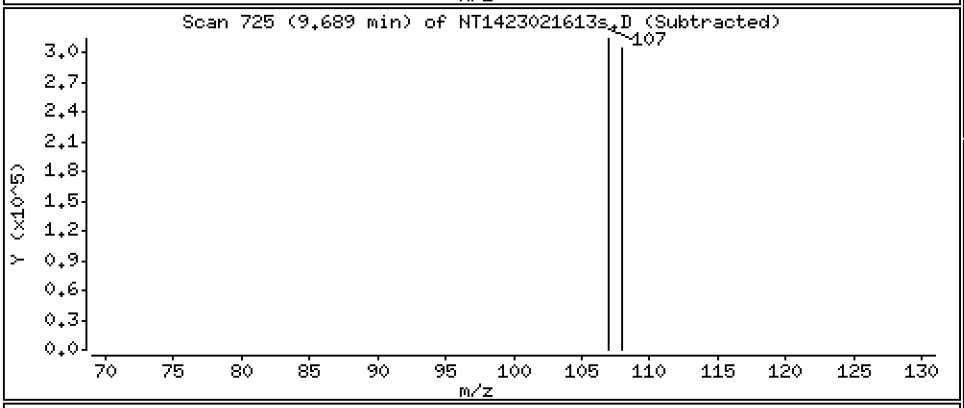
Column diameter: 0.25

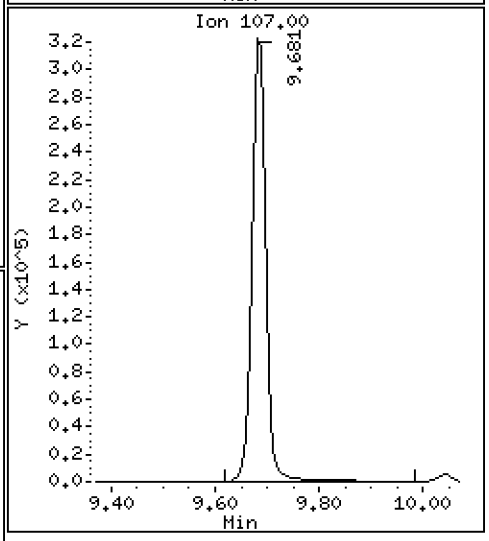
15 4-Methylphenol

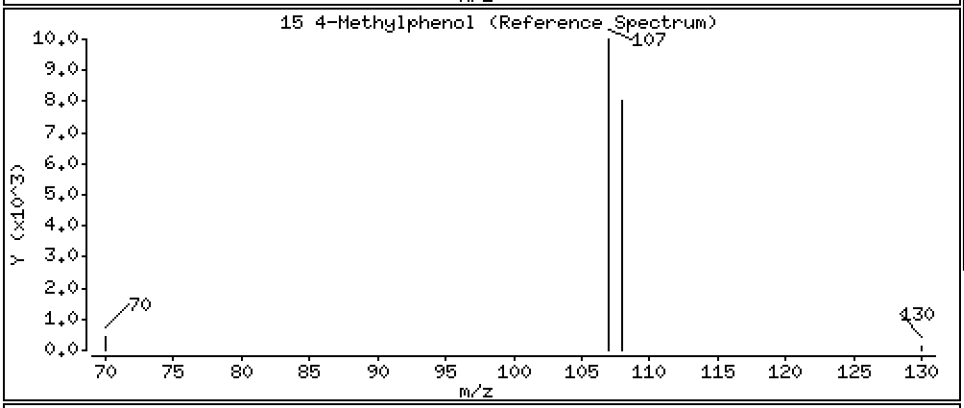
Concentration: 4.460 ug/mL

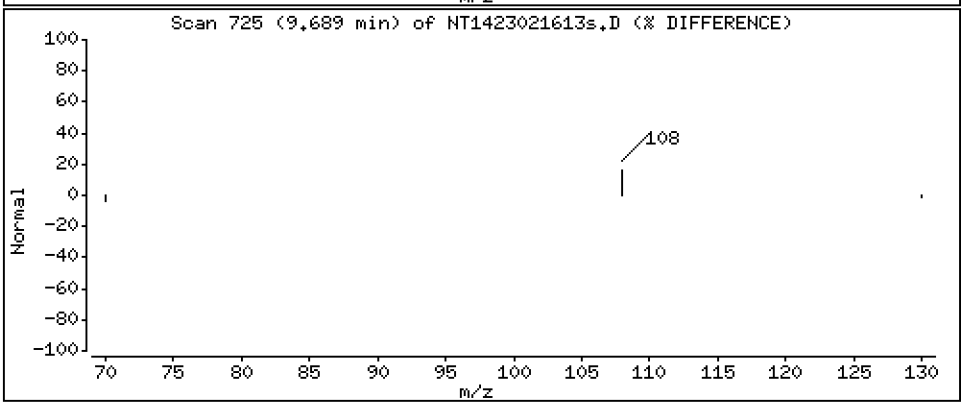












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

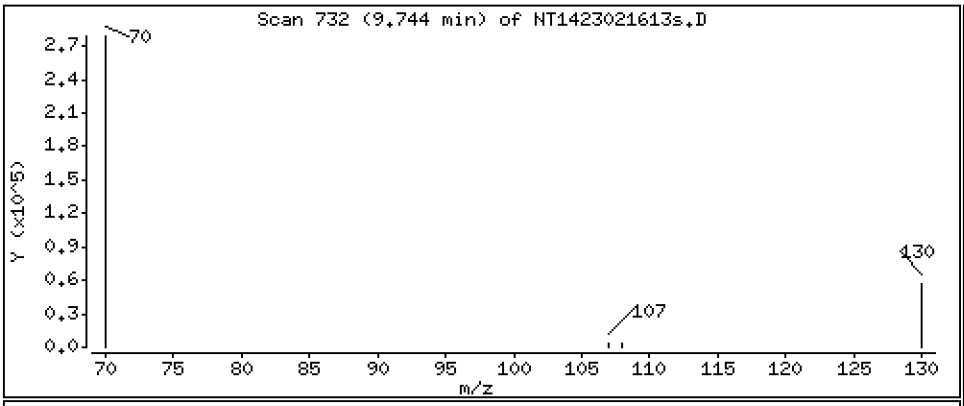
Operator: DSD

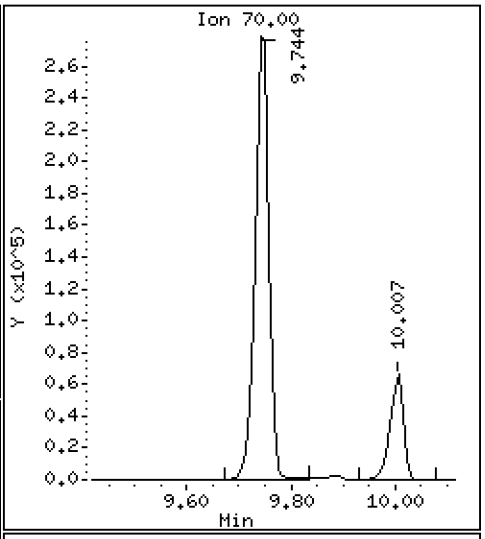
Column phase: ZB-5msi

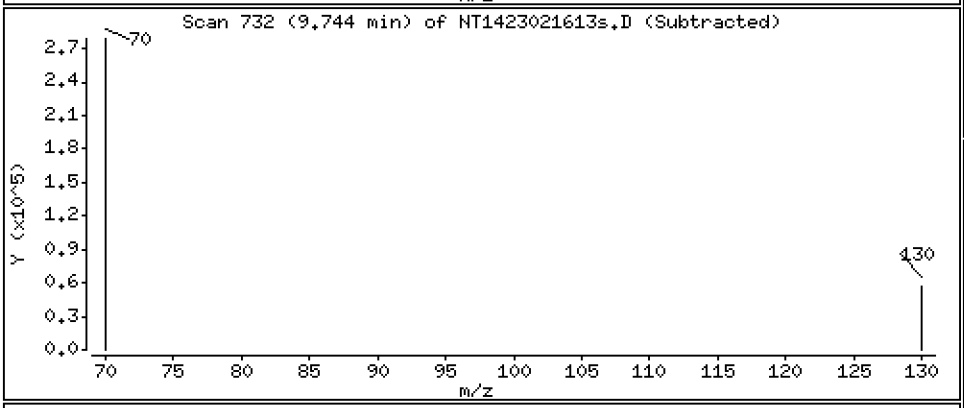
Column diameter: 0.25

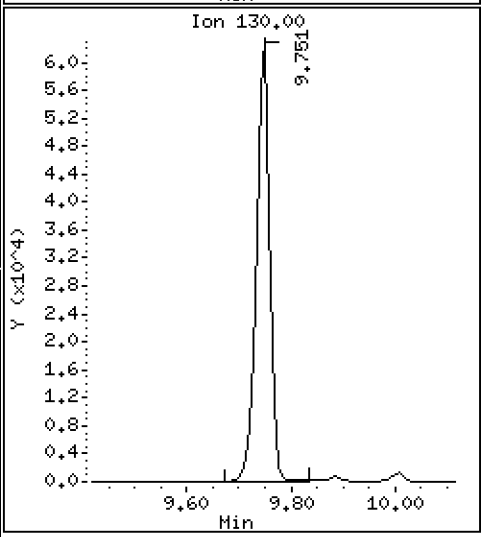
16 N-Nitroso-di-n-propylamine

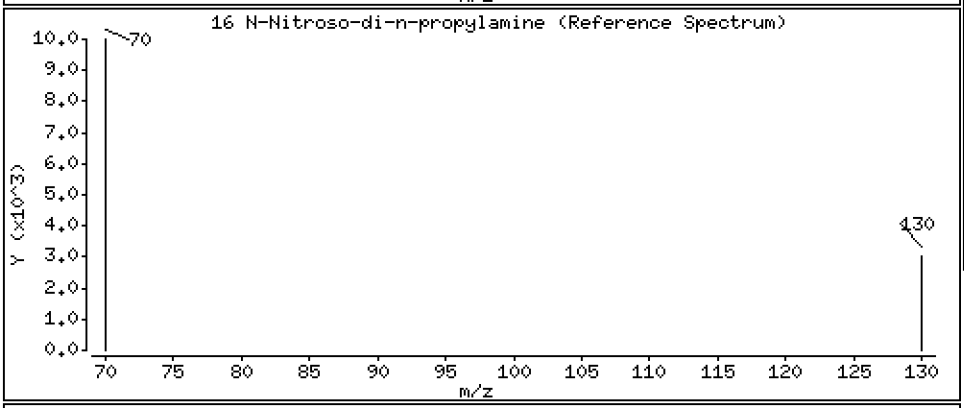
Concentration: 5.047 ug/mL

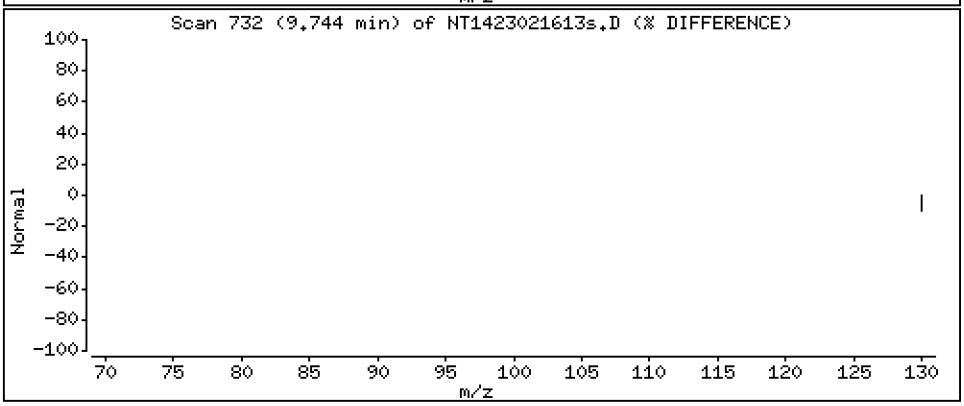












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

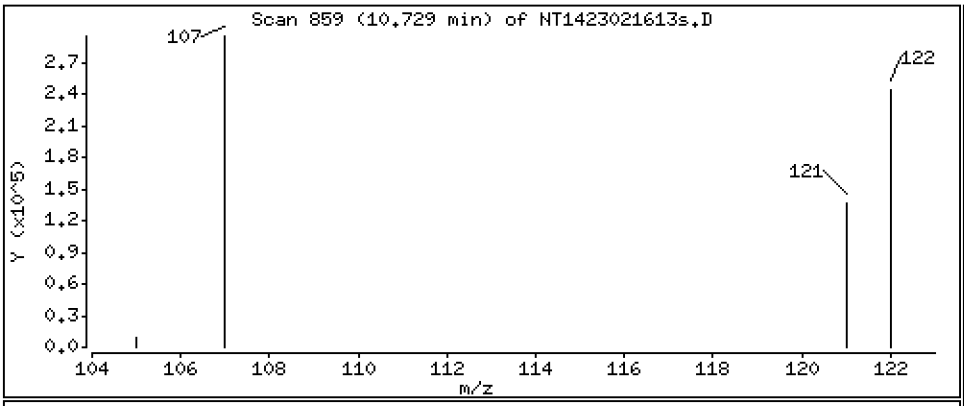
Operator: DSD

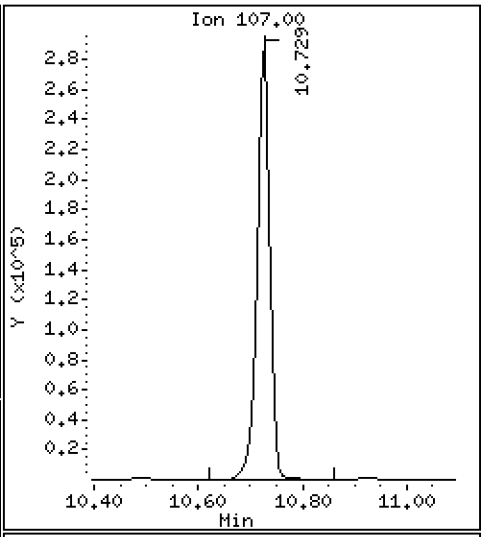
Column phase: ZB-5msi

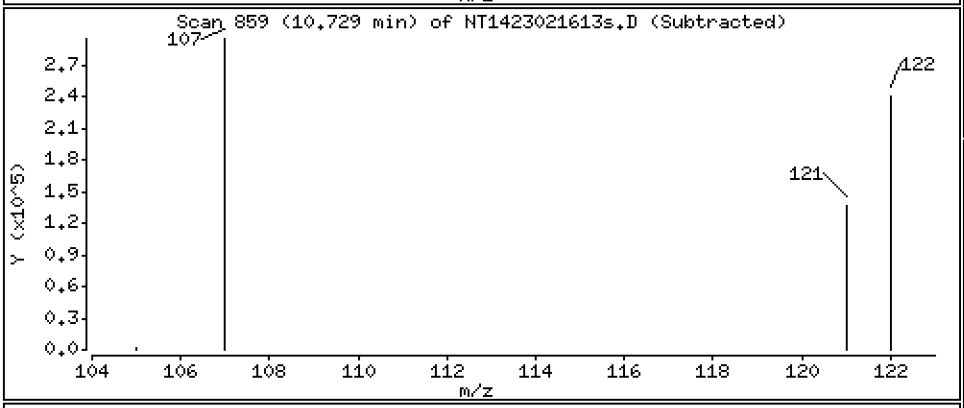
Column diameter: 0.25

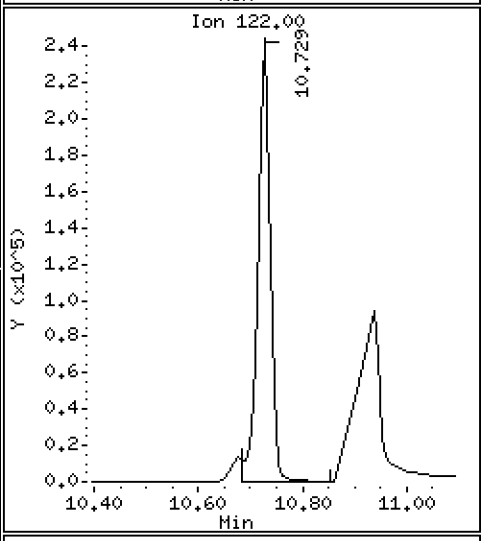
22 2,4-Dimethylphenol

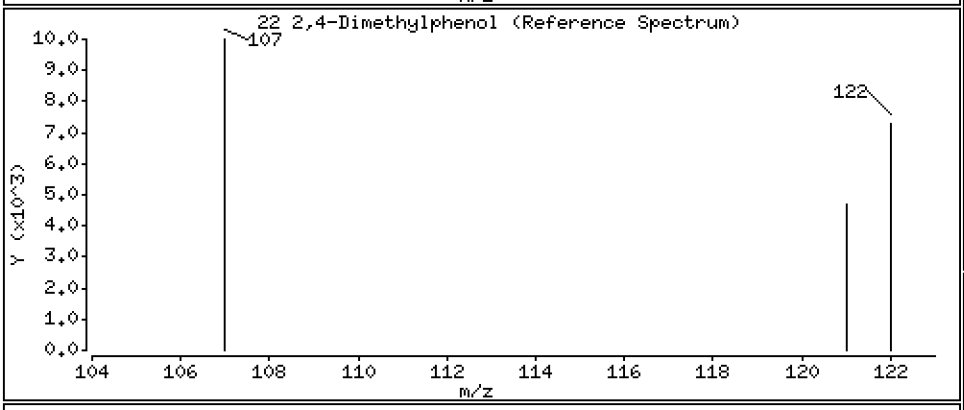
Concentration: 3.903 ug/mL

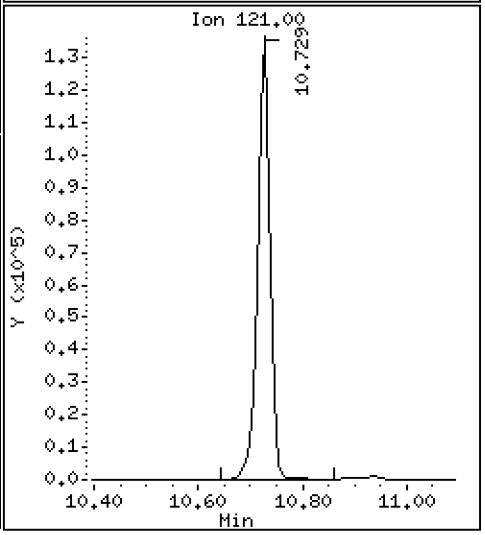


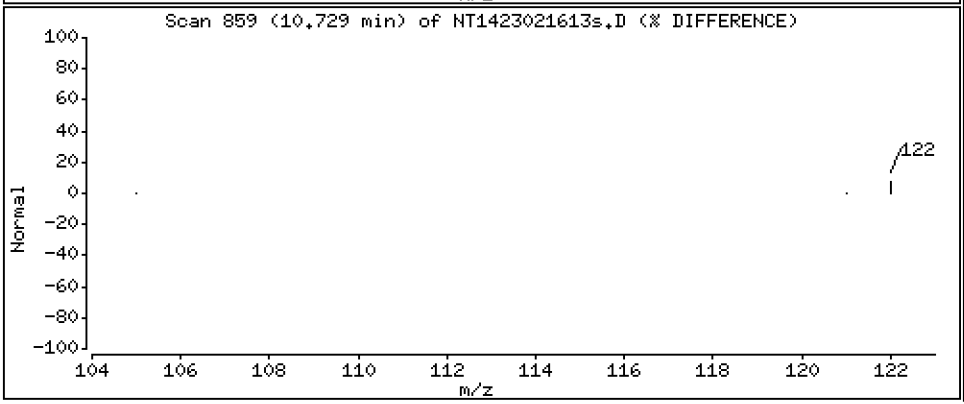












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

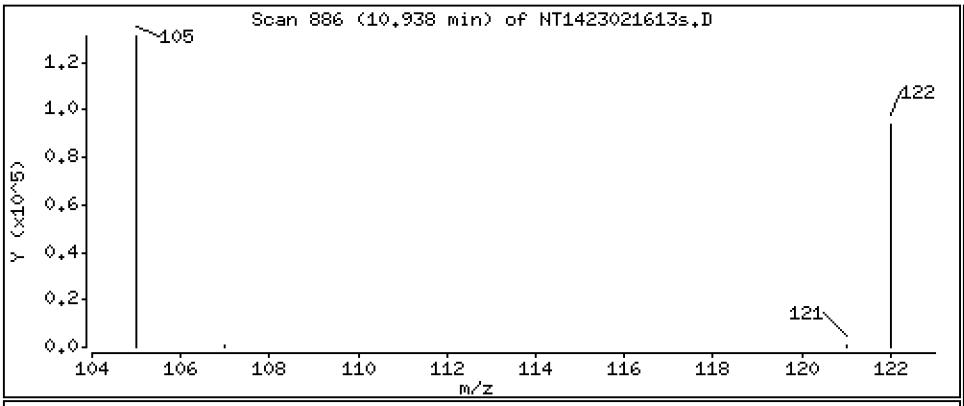
Operator: DSD

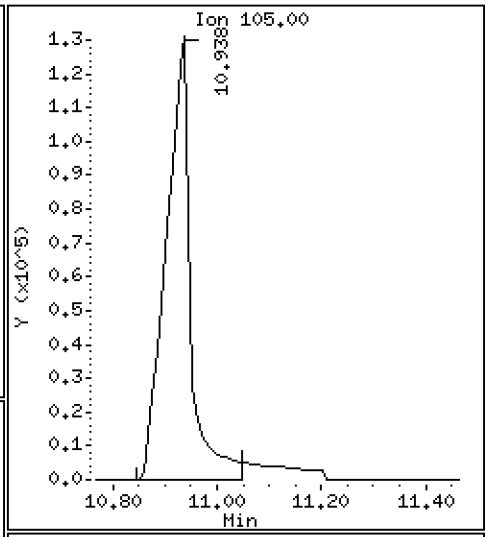
Column phase: ZB-5msi

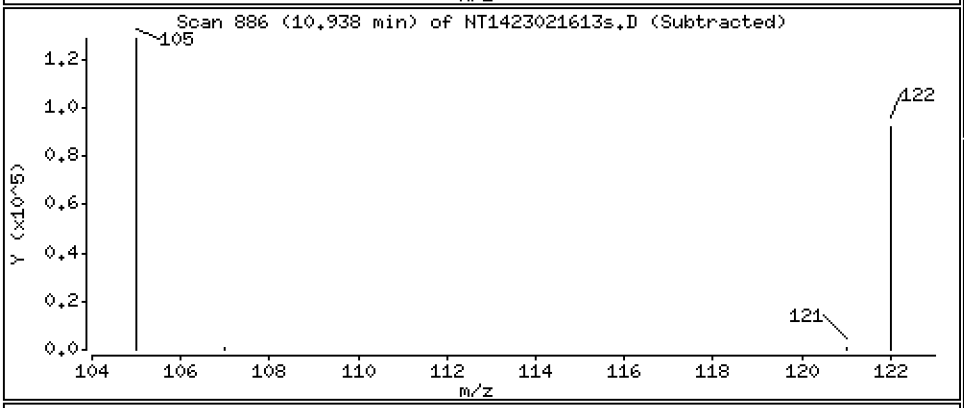
Column diameter: 0.25

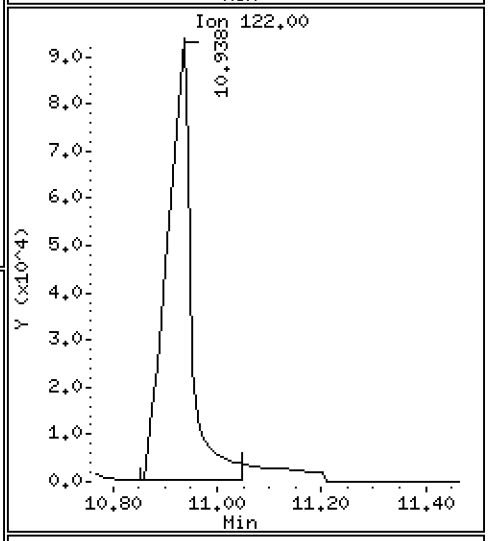
24 Benzoic acid

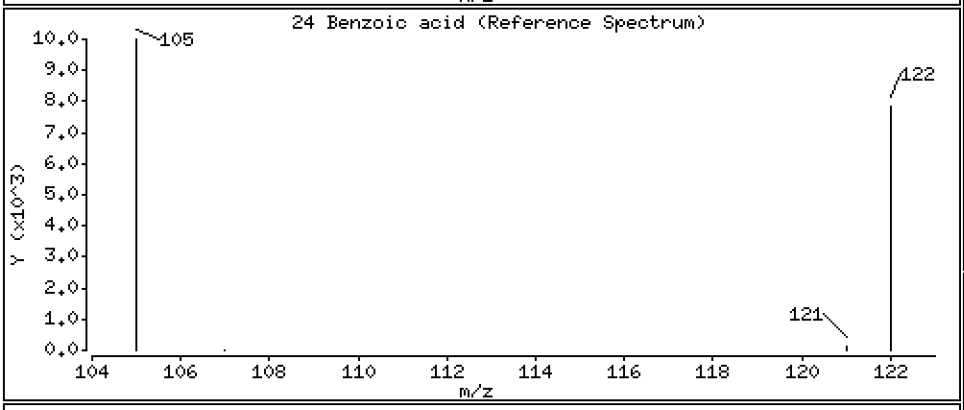
Concentration: 6.447 ug/mL

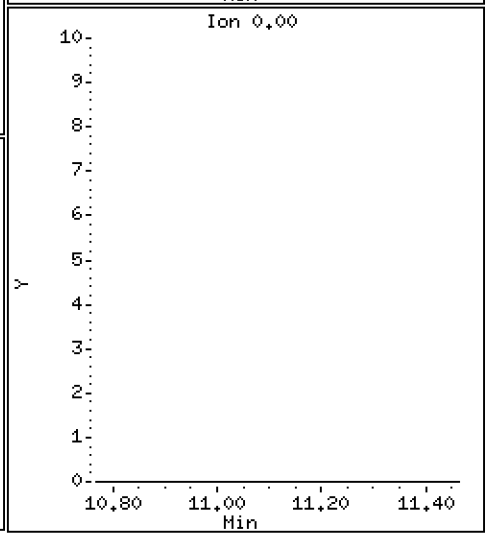


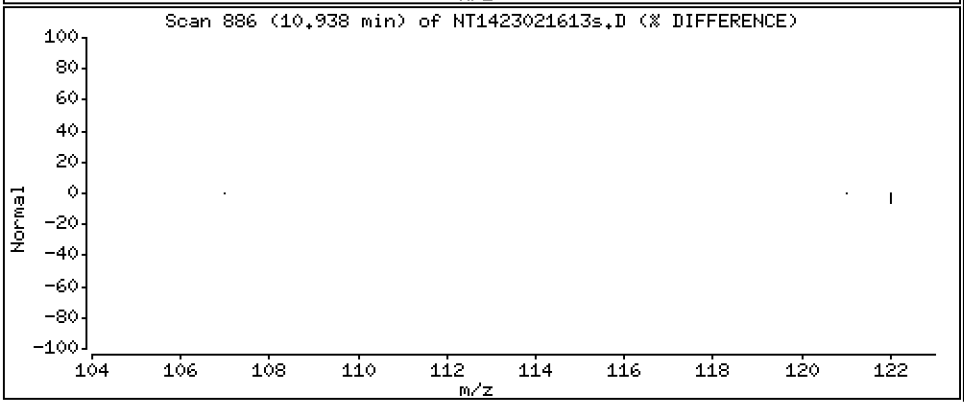












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

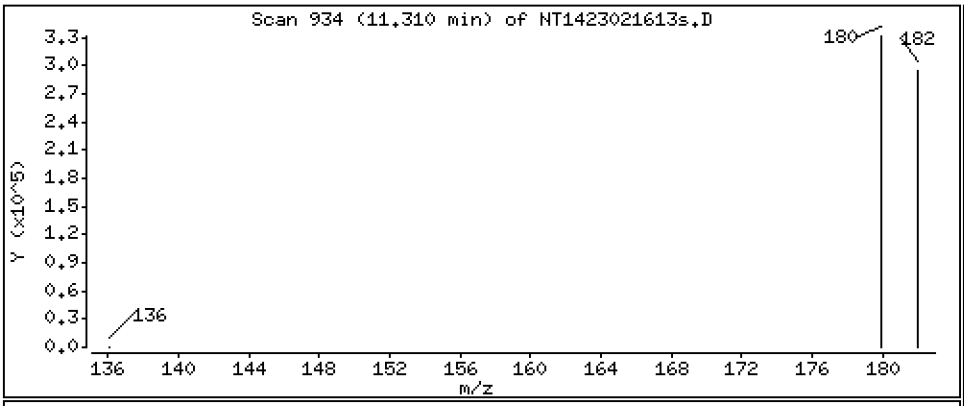
Operator: DSD

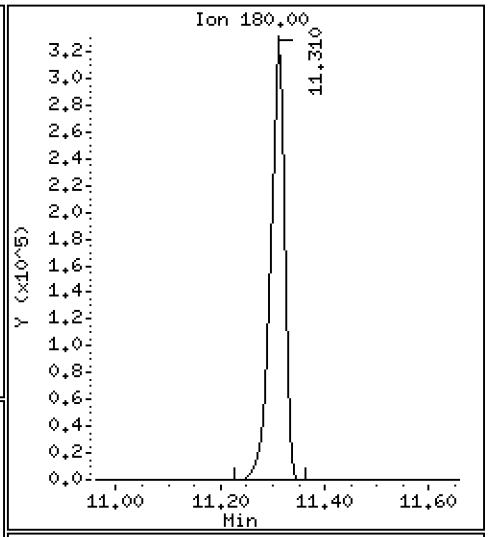
Column phase: ZB-5msi

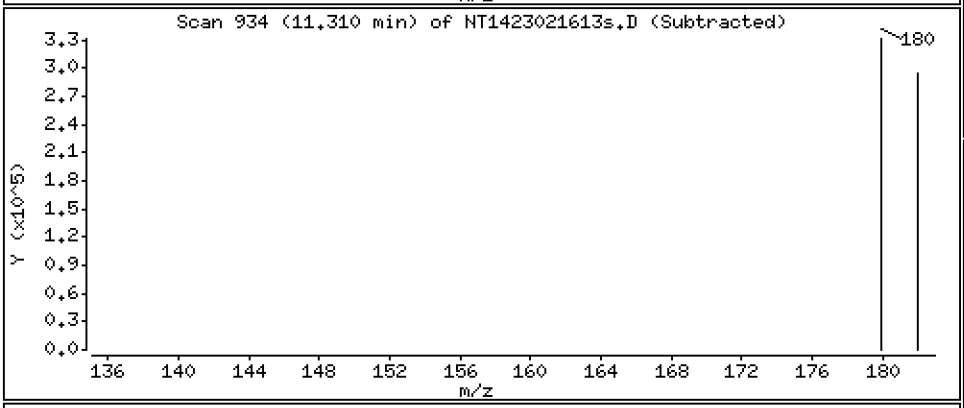
Column diameter: 0.25

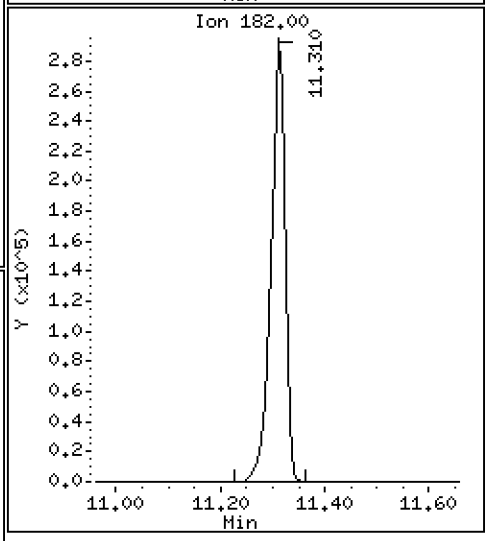
26 1,2,4-Trichlorobenzene

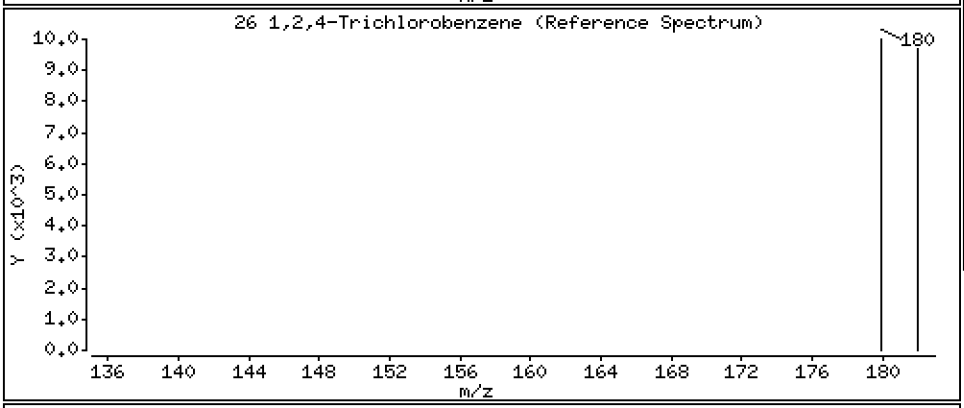
Concentration: 4.595 ug/mL

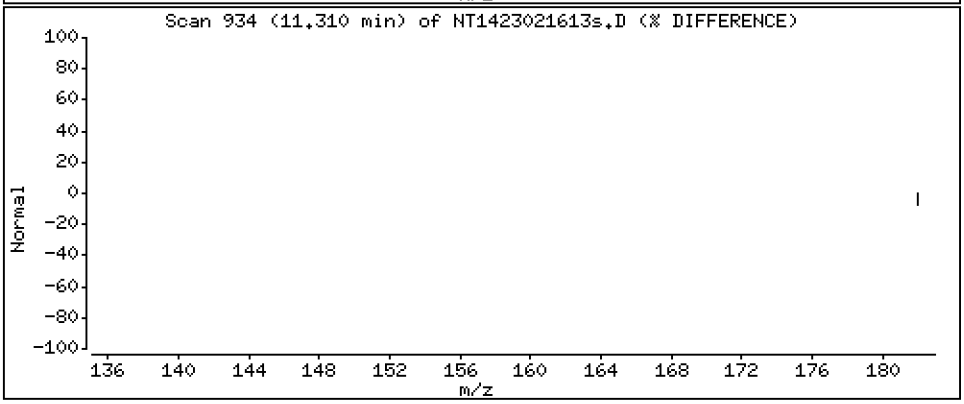












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

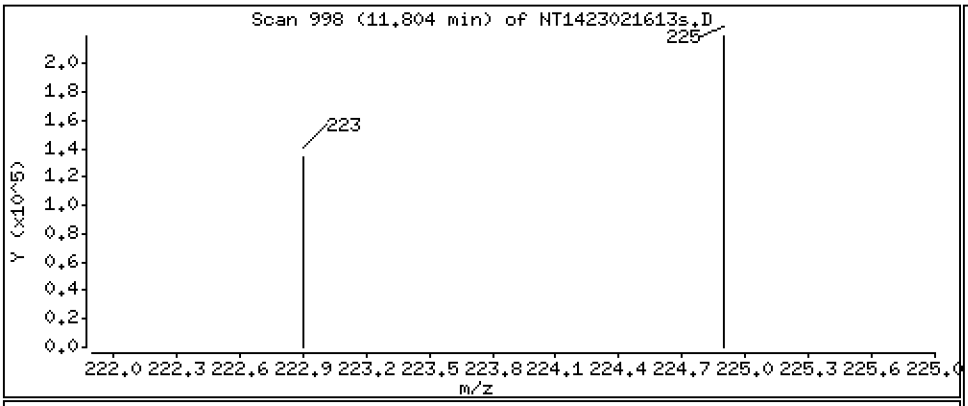
Operator: DSD

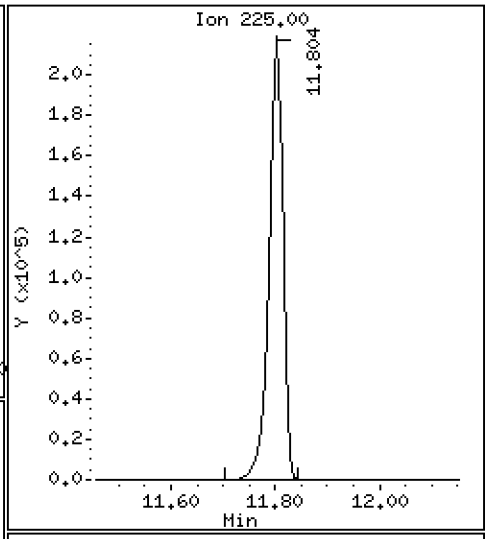
Column phase: ZB-5msi

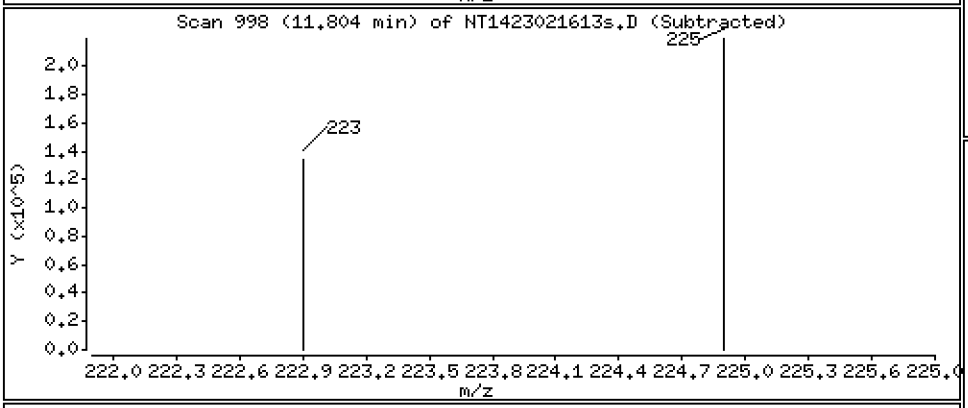
Column diameter: 0.25

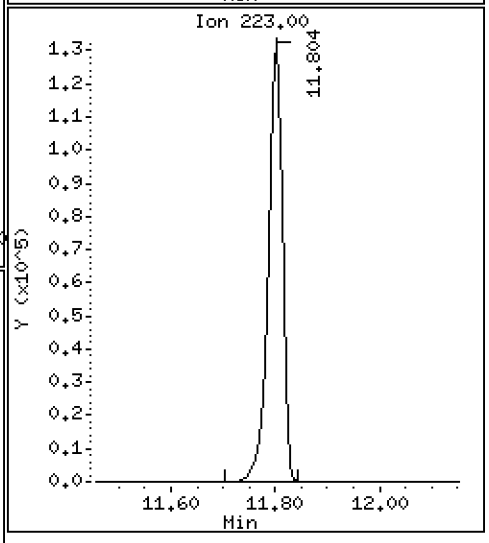
30 Hexachlorobutadiene

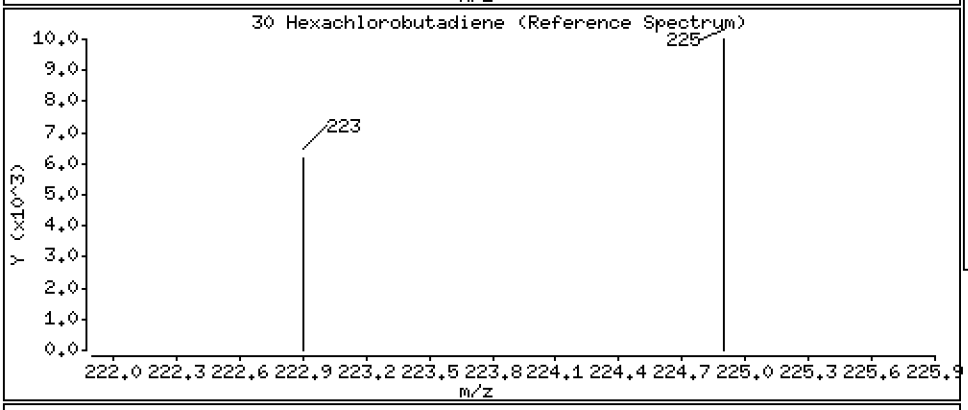
Concentration: 4.815 ug/mL

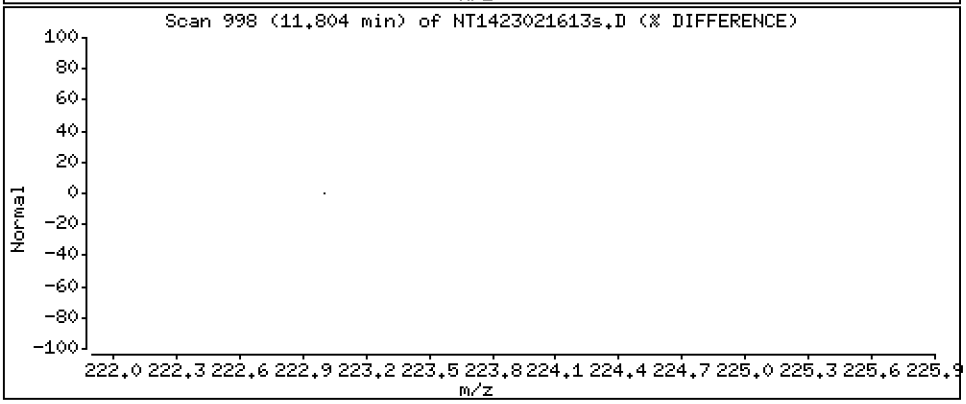












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

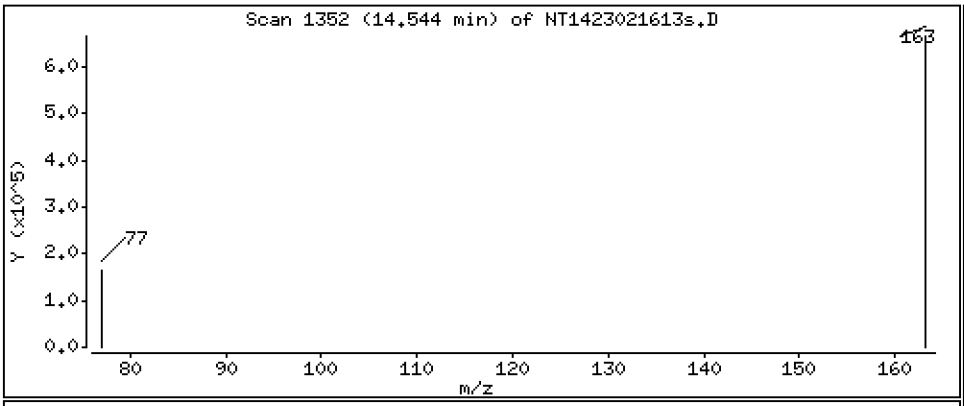
Operator: DSD

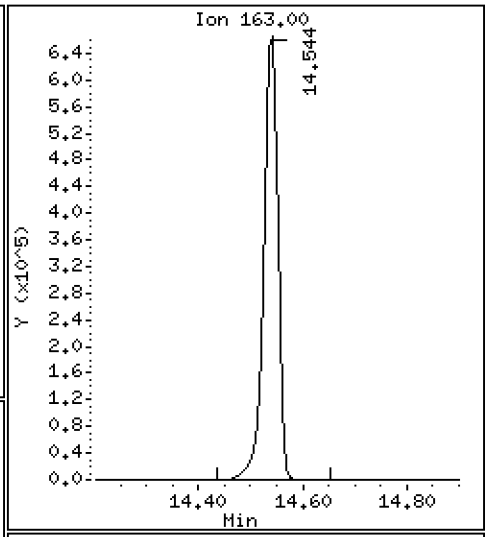
Column phase: ZB-5msi

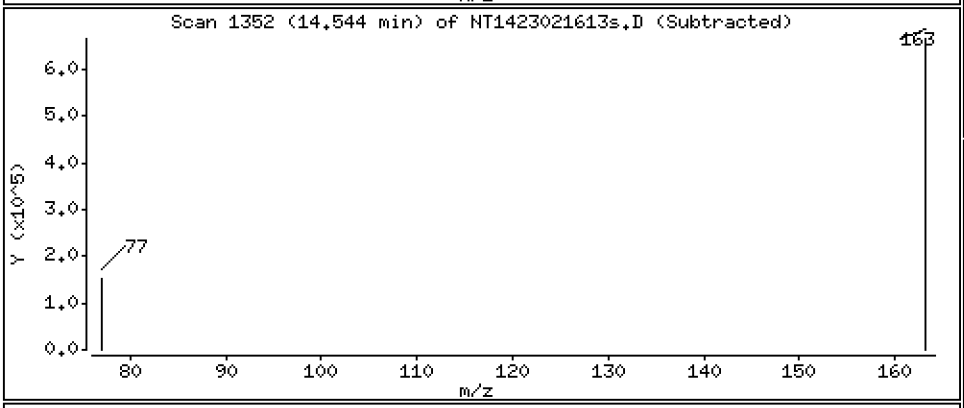
Column diameter: 0.25

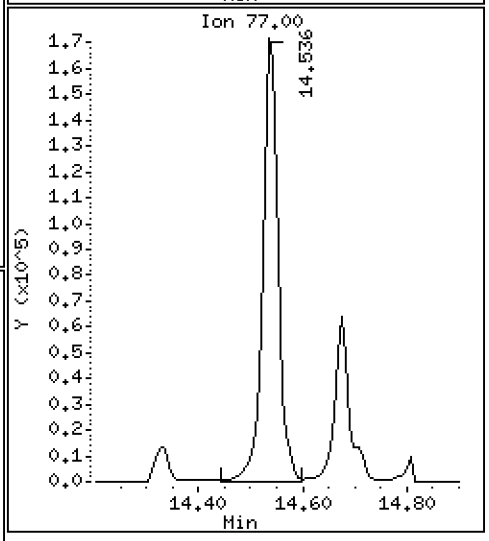
39 Dimethylphthalate

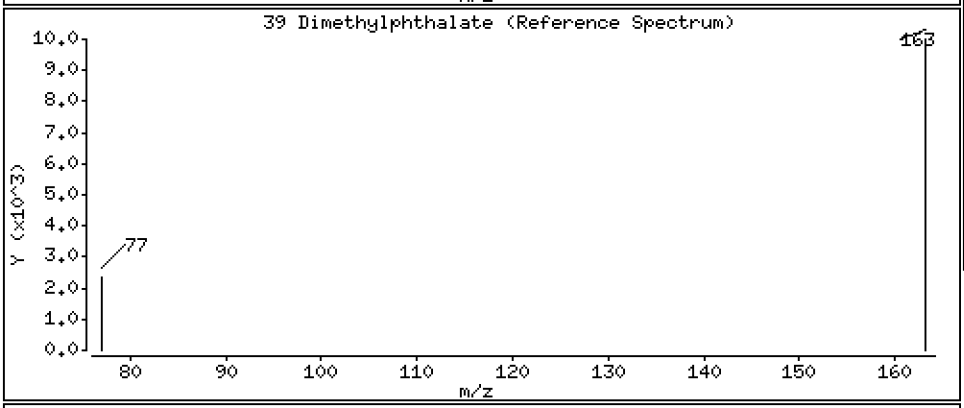
Concentration: 5.002 ug/mL

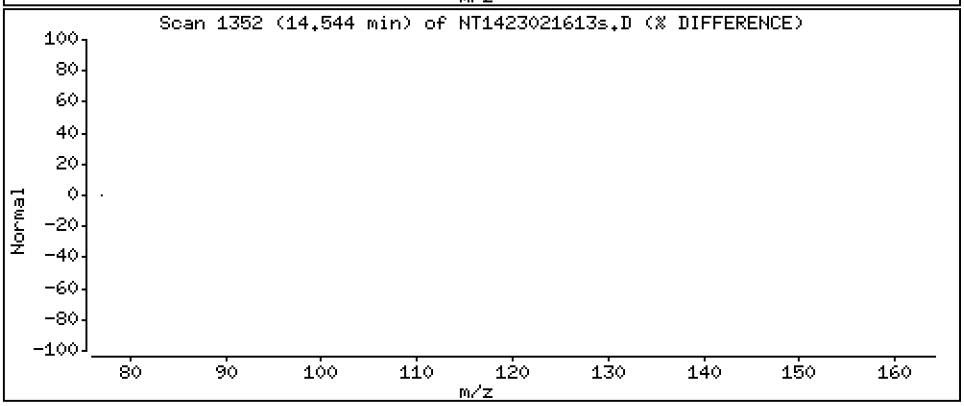












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

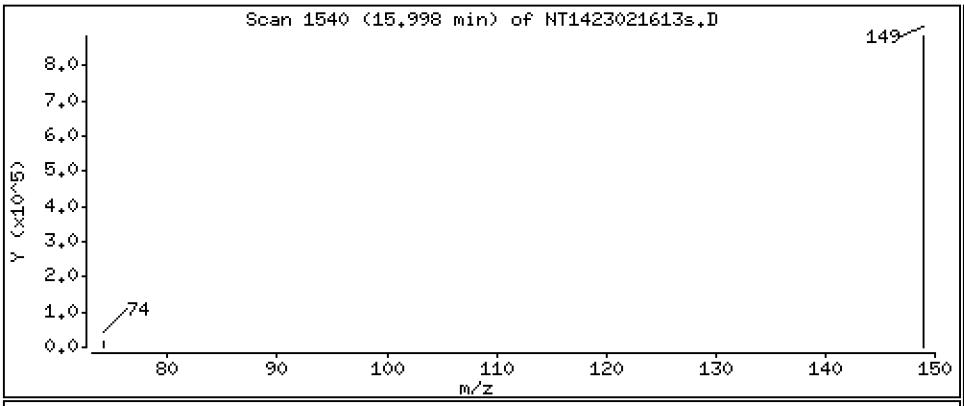
Operator: DSD

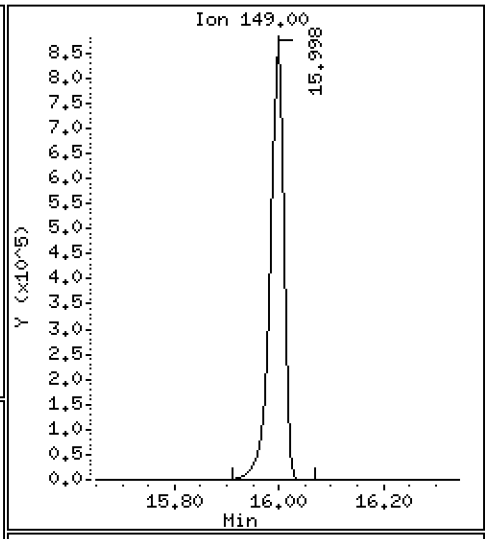
Column phase: ZB-5msi

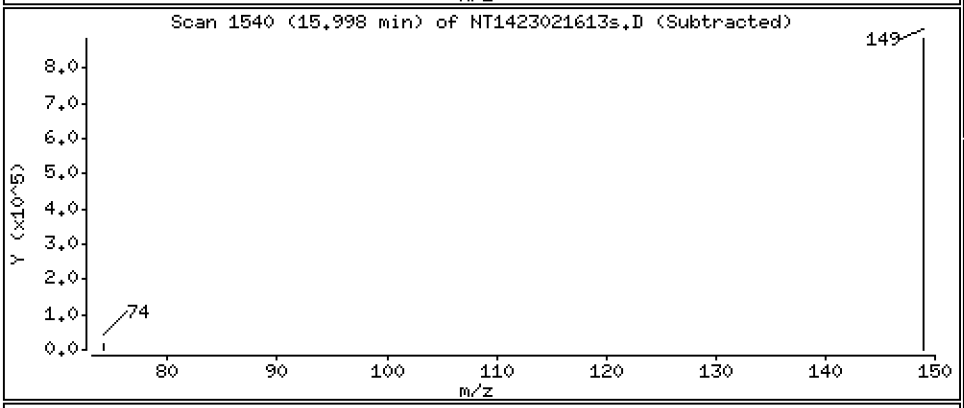
Column diameter: 0.25

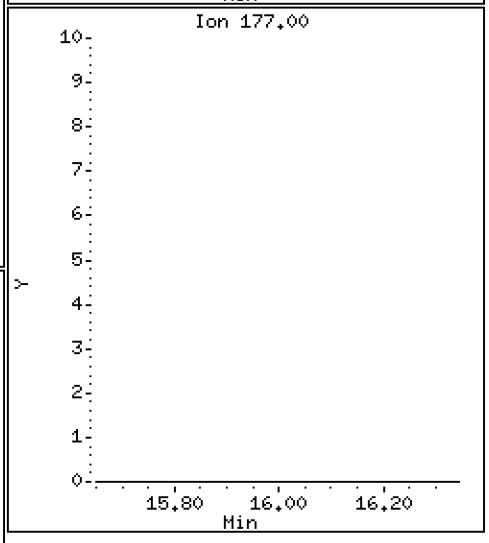
50 Diethylphthalate

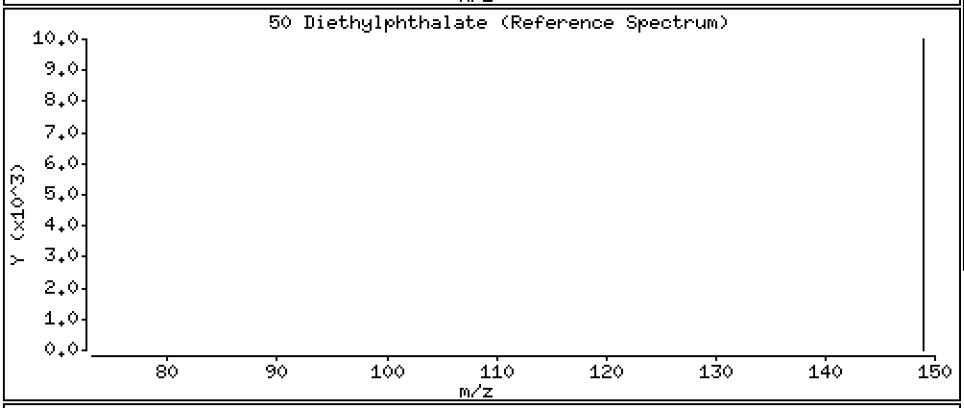
Concentration: 4.969 ug/mL

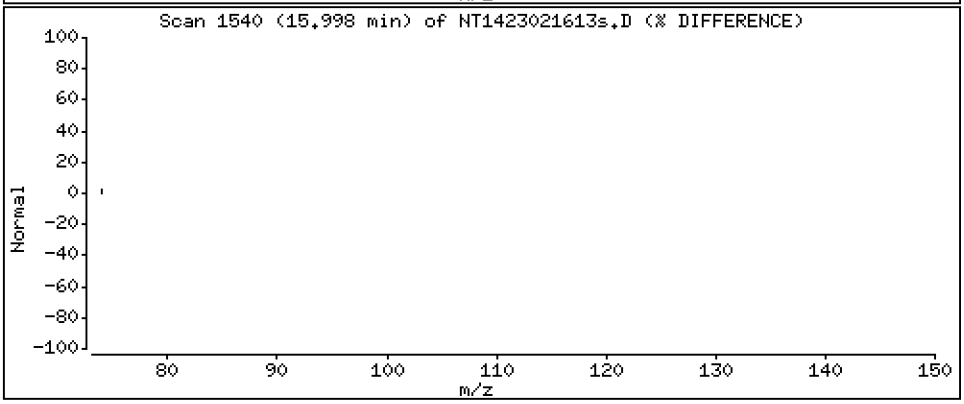












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

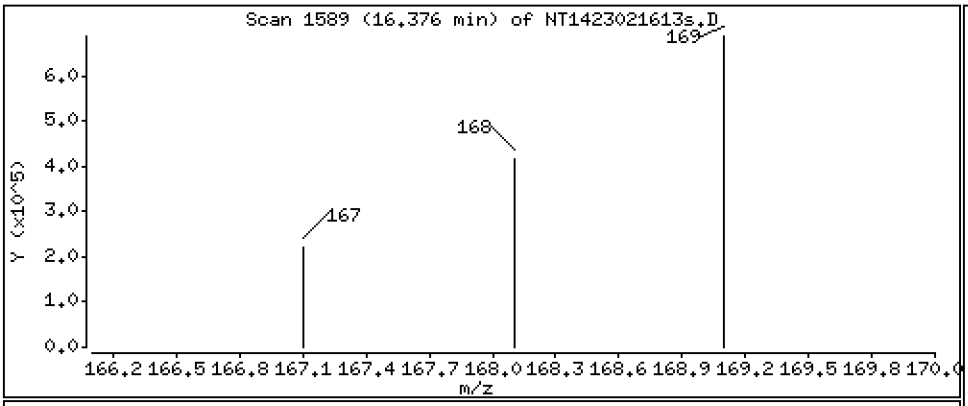
Operator: DSD

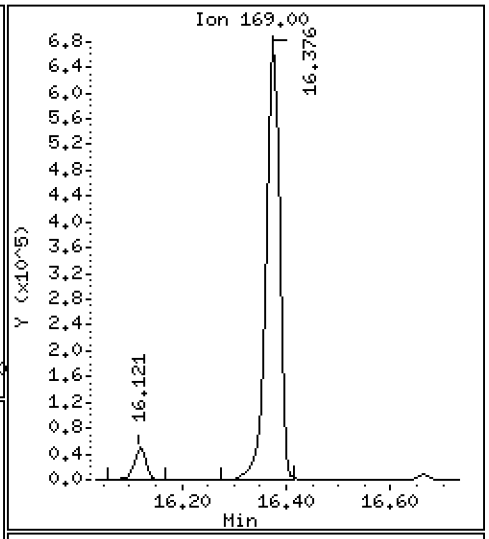
Column phase: ZB-5msi

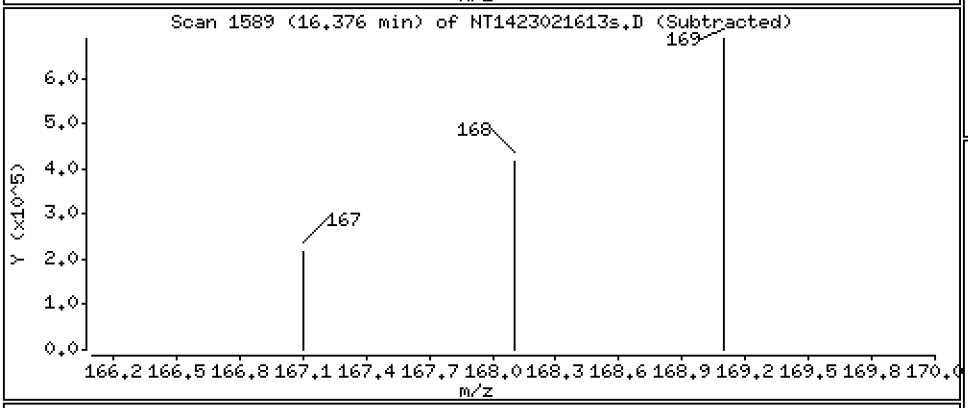
Column diameter: 0.25

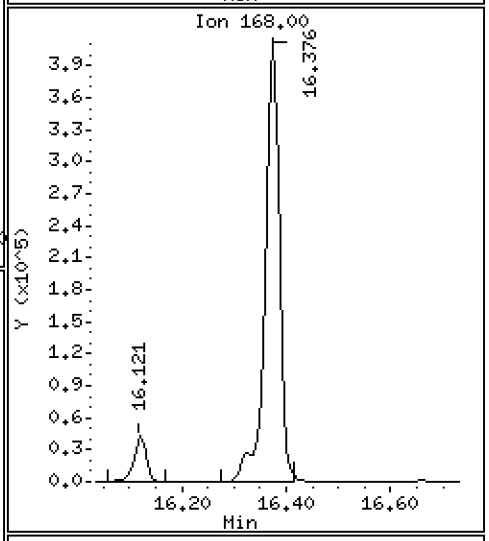
54 N-Nitrosodiphenylamine

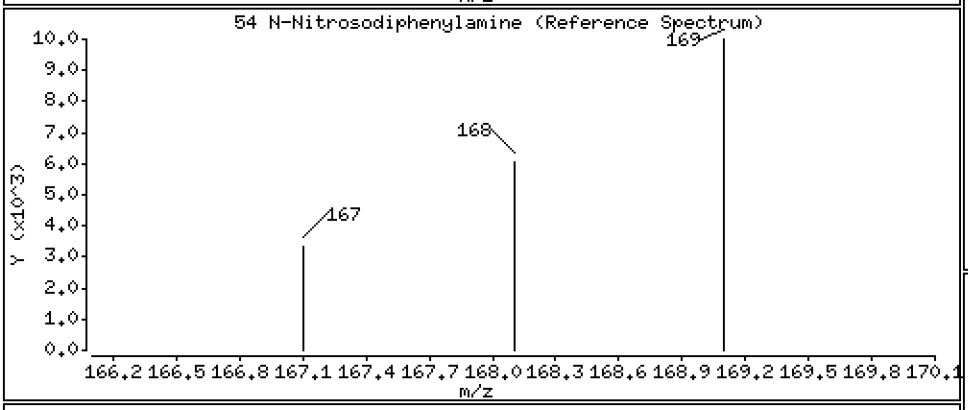
Concentration: 5.009 ug/mL

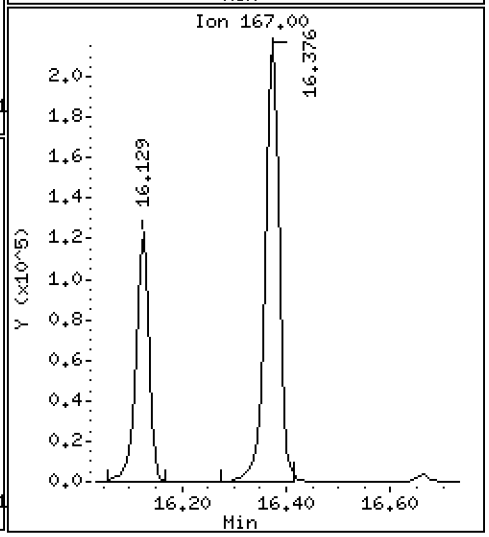


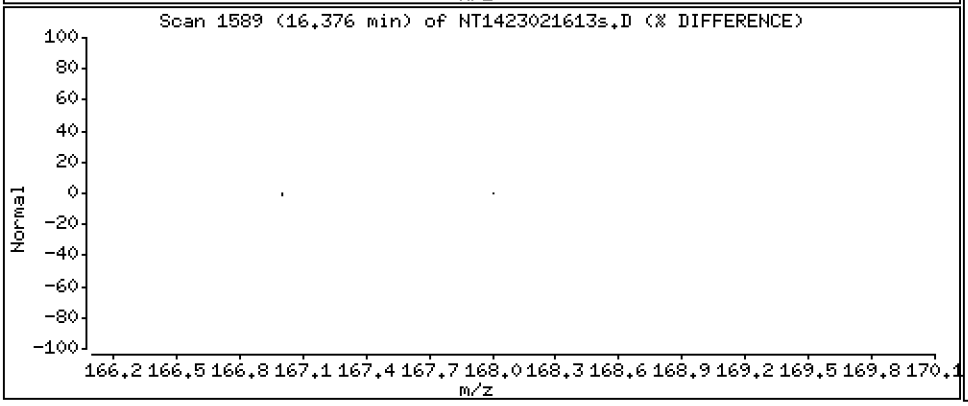












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

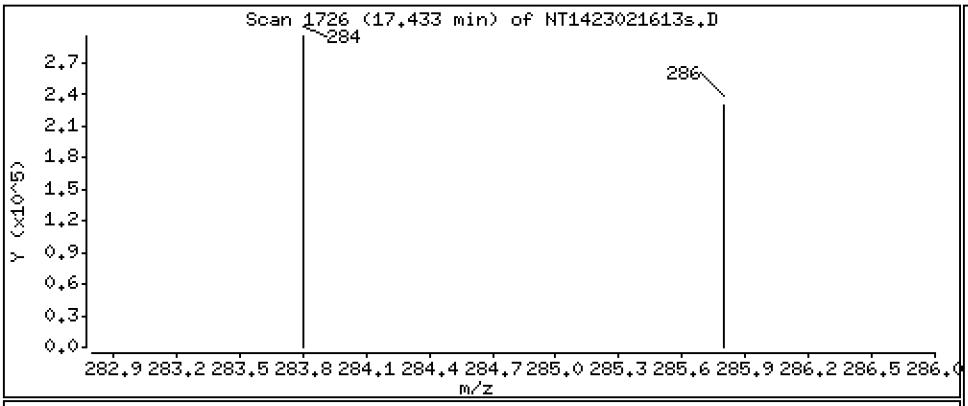
Operator: DSD

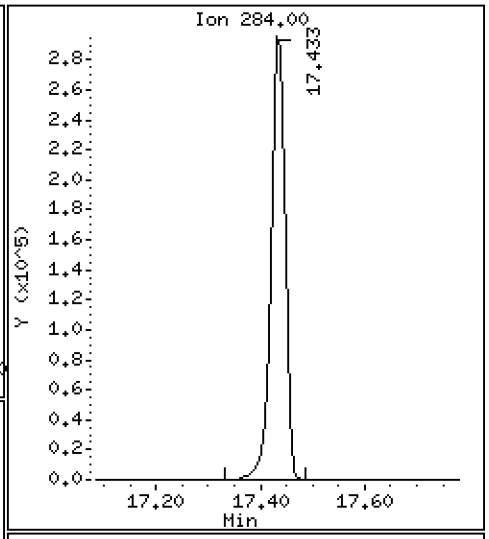
Column phase: ZB-5msi

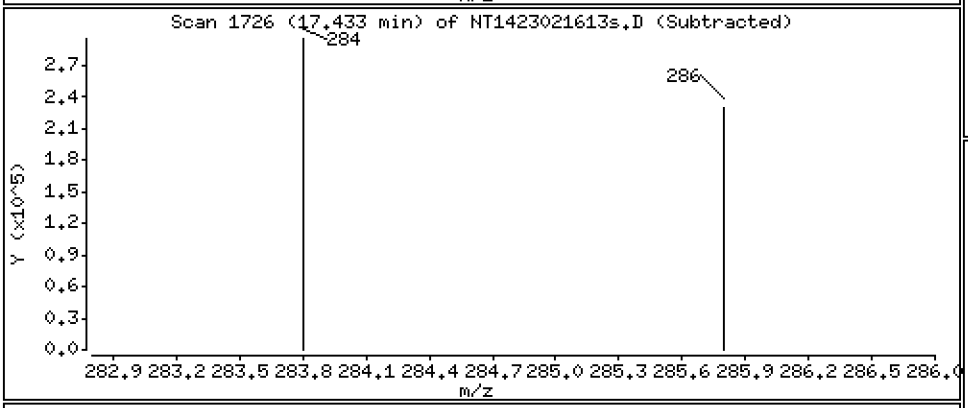
Column diameter: 0.25

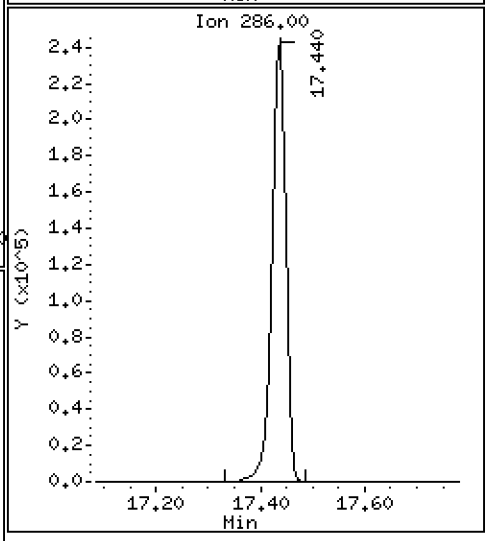
57 Hexachlorobenzene

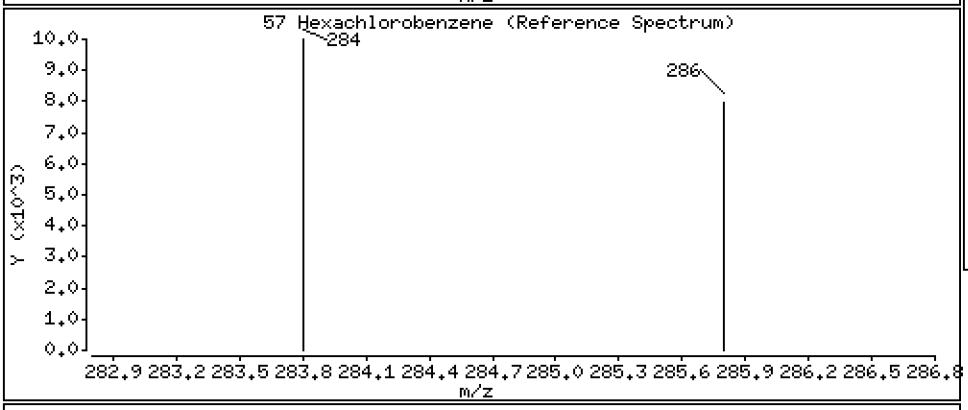
Concentration: 4.700 ug/mL

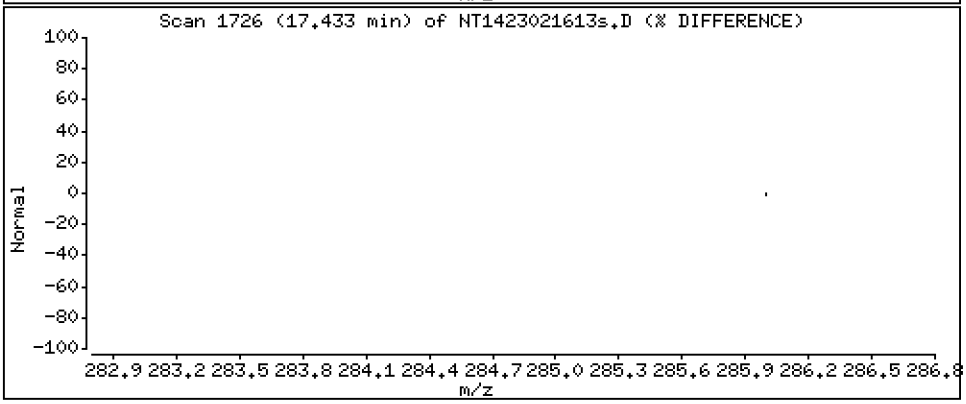












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

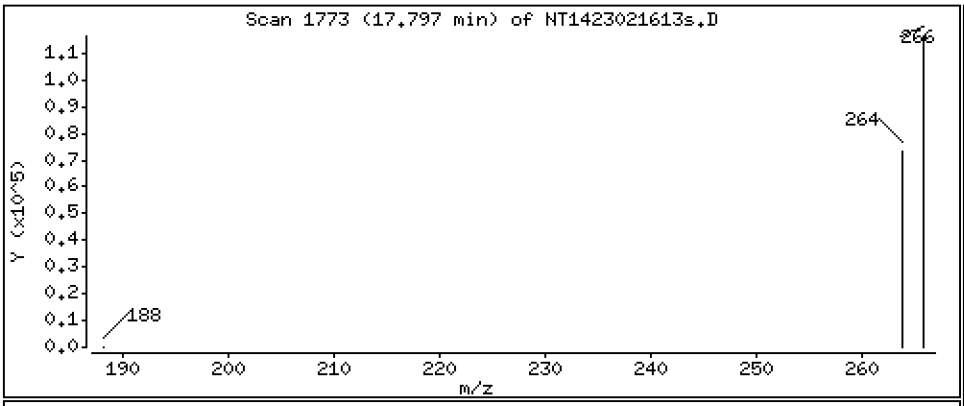
Operator: DSD

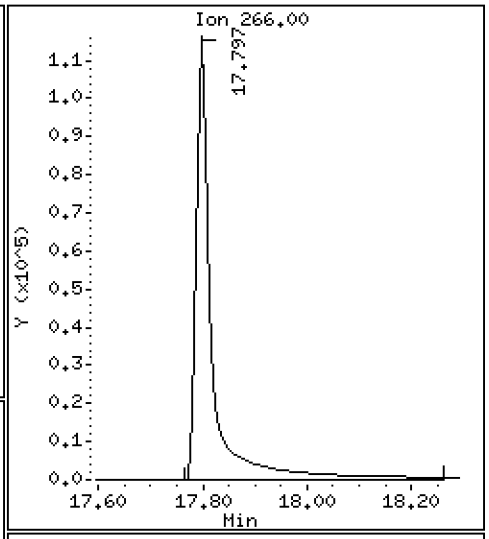
Column phase: ZB-5msi

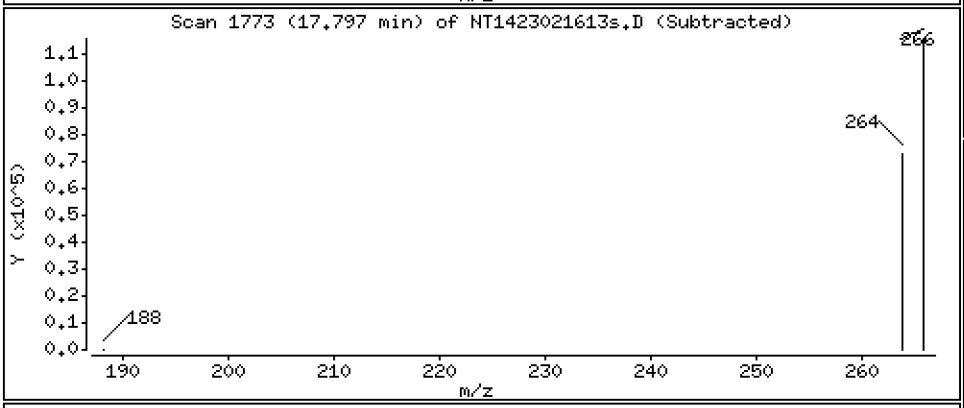
Column diameter: 0.25

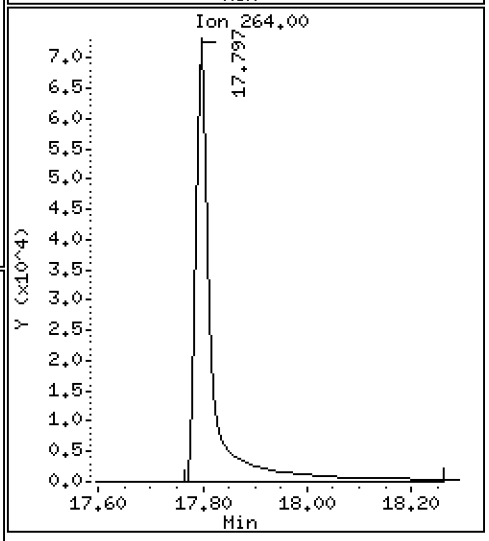
58 Pentachlorophenol

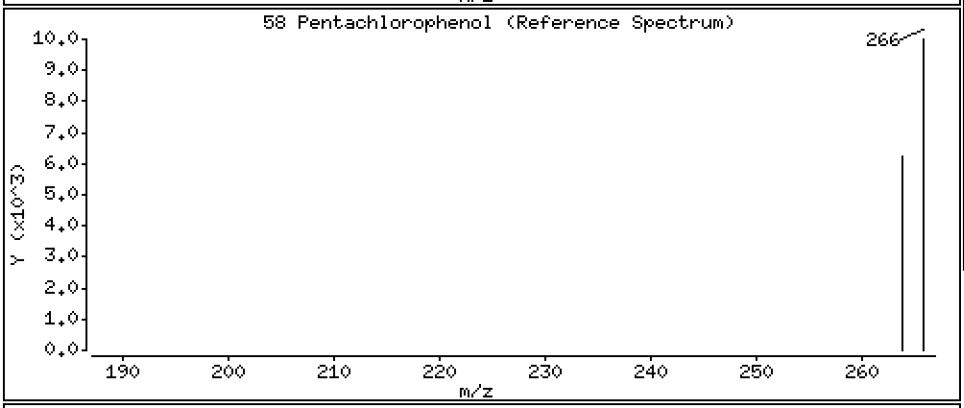
Concentration: 4.935 ug/mL

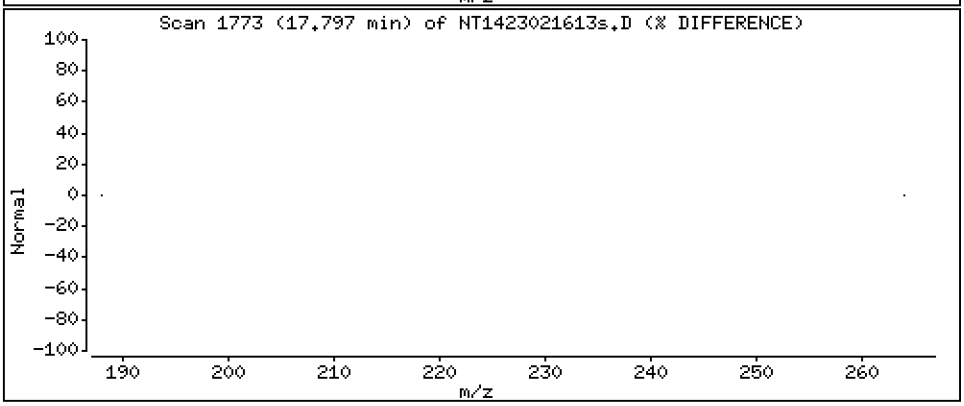












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

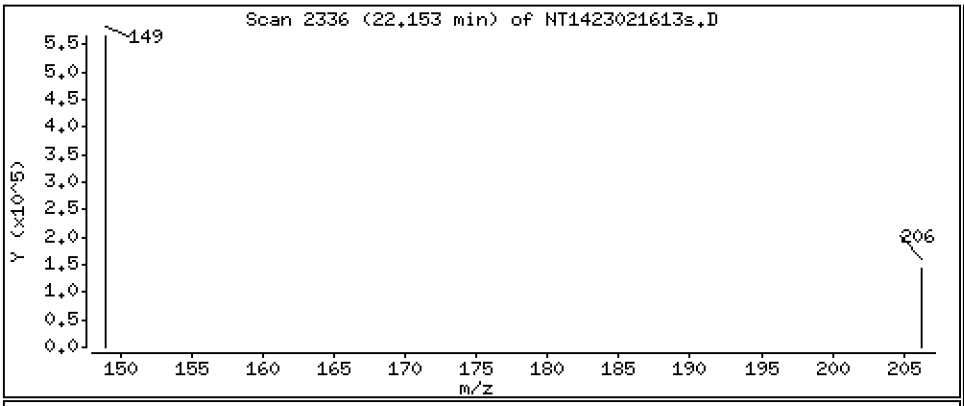
Operator: DSD

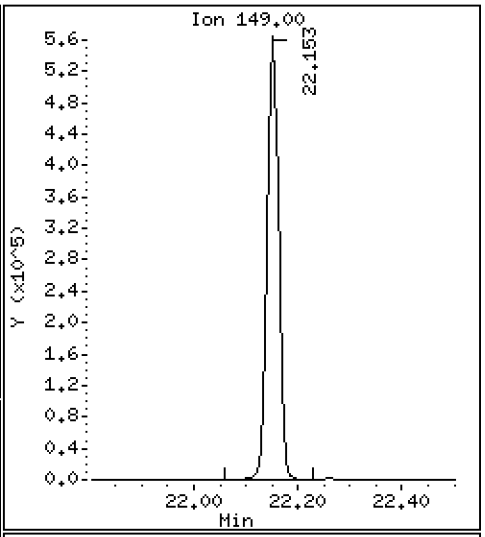
Column phase: ZB-5msi

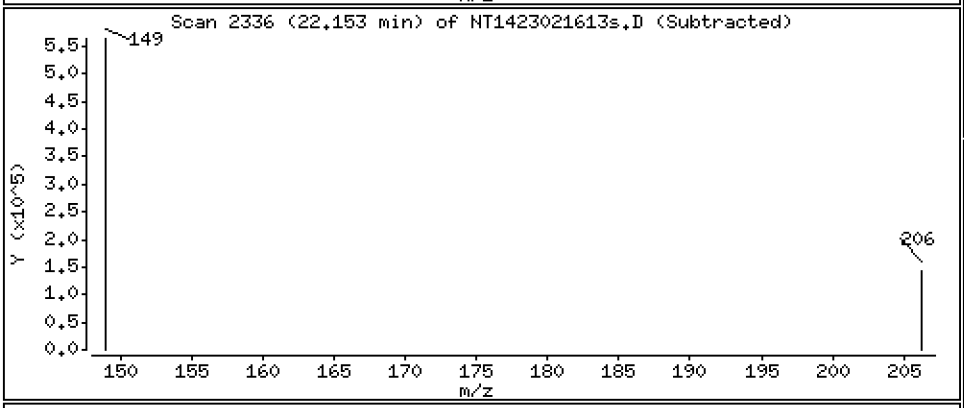
Column diameter: 0.25

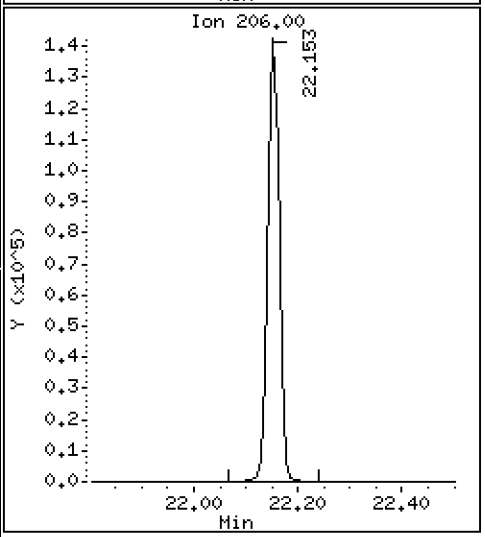
67 Butylbenzylphthalate

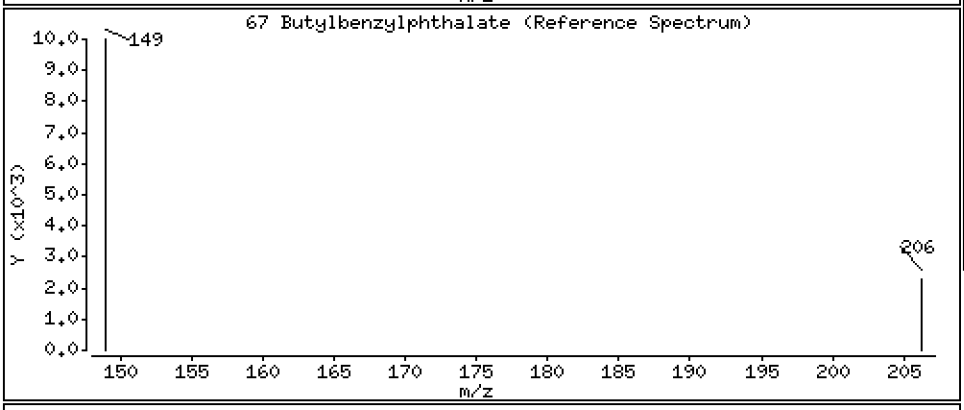
Concentration: 4.964 ug/mL

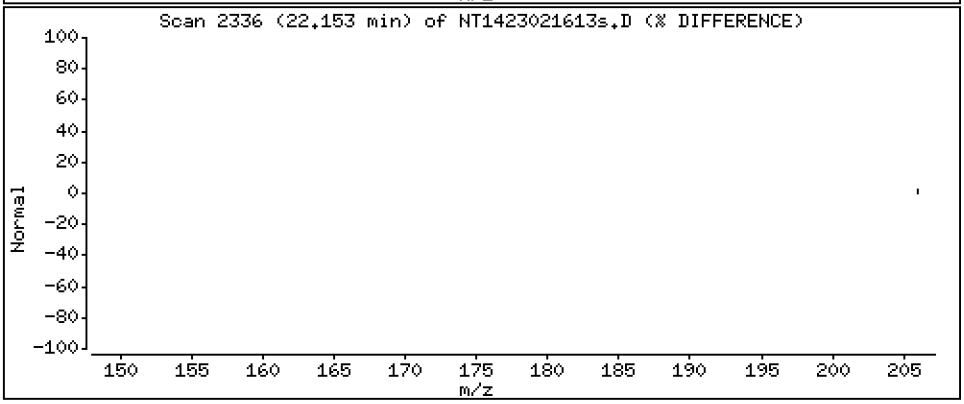












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

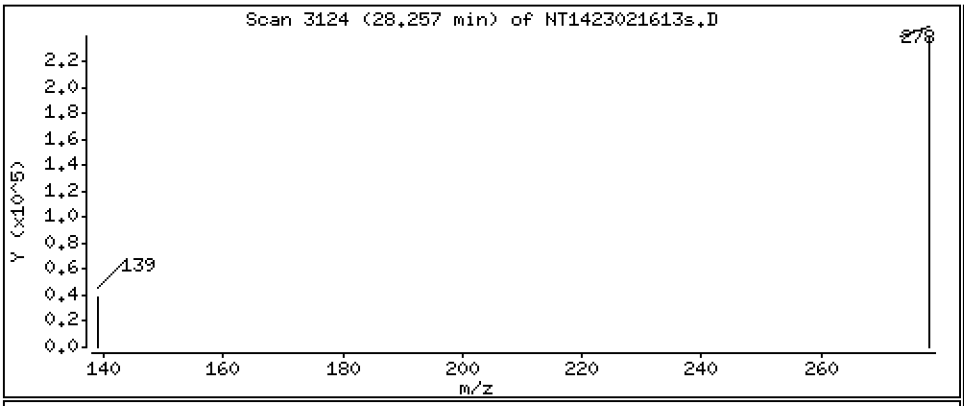
Operator: DSD

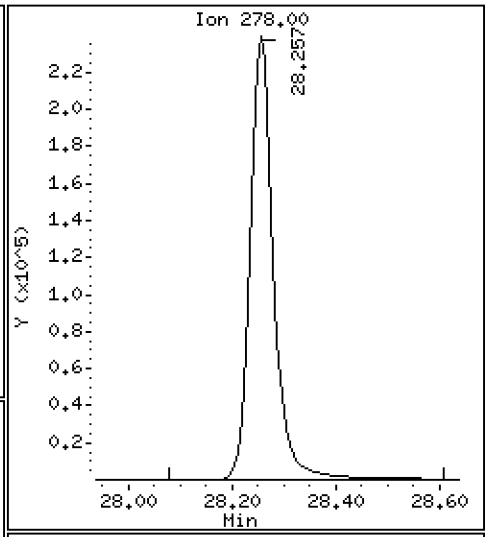
Column phase: ZB-5msi

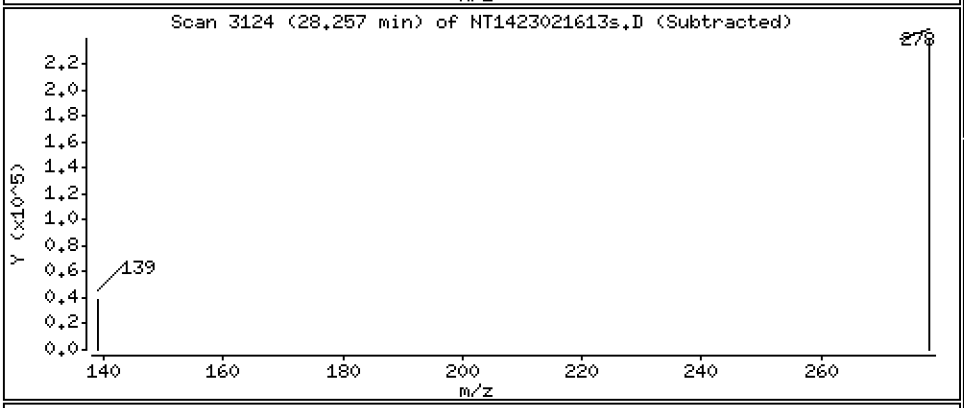
Column diameter: 0.25

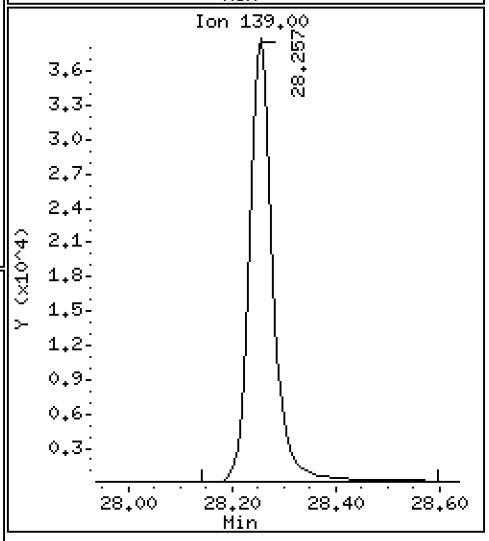
79 Dibenzo(a,h)anthracene

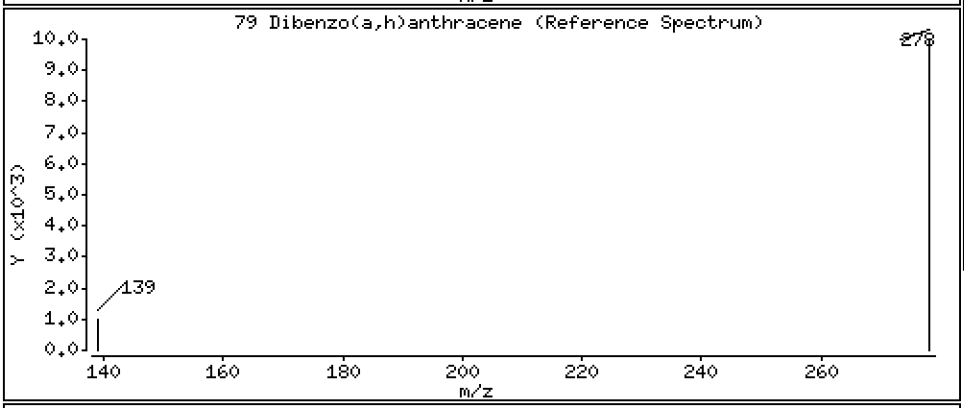
Concentration: 4.888 ug/mL

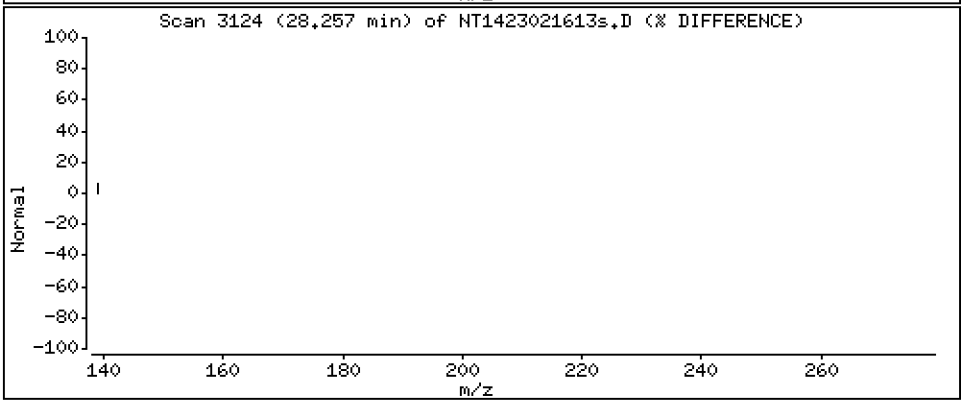












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

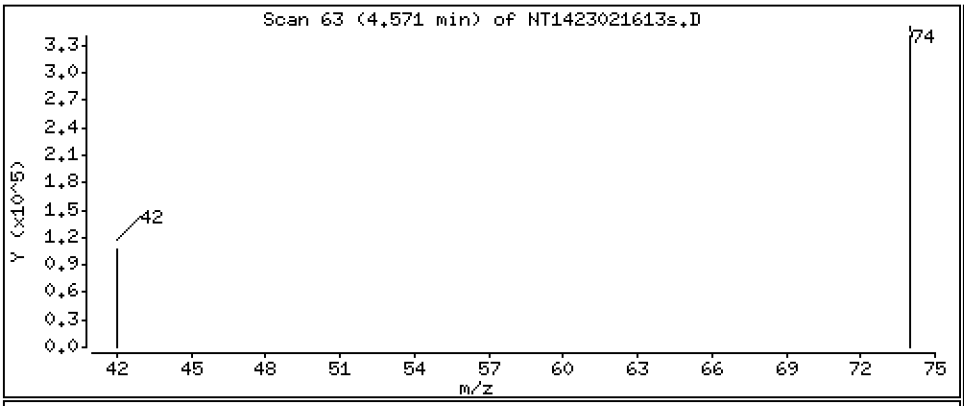
Operator: DSD

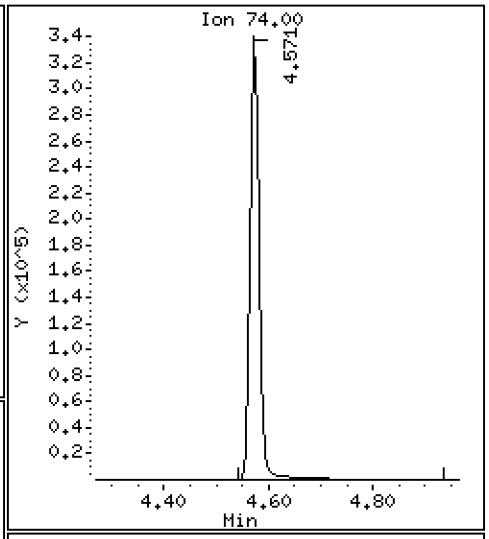
Column phase: ZB-5msi

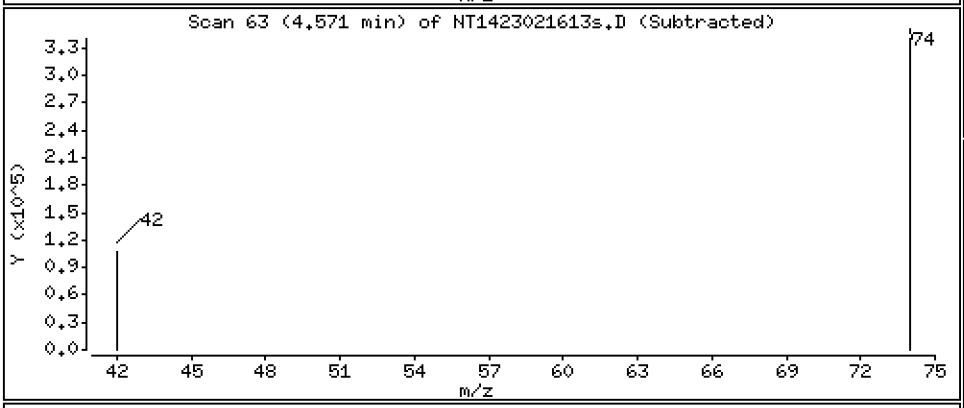
Column diameter: 0.25

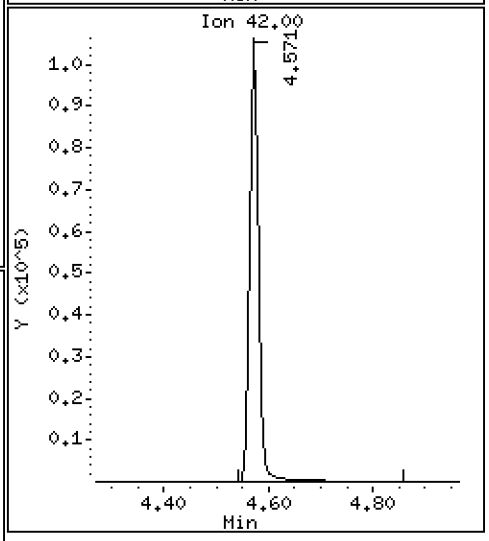
90 N-Nitrosodimethylamine

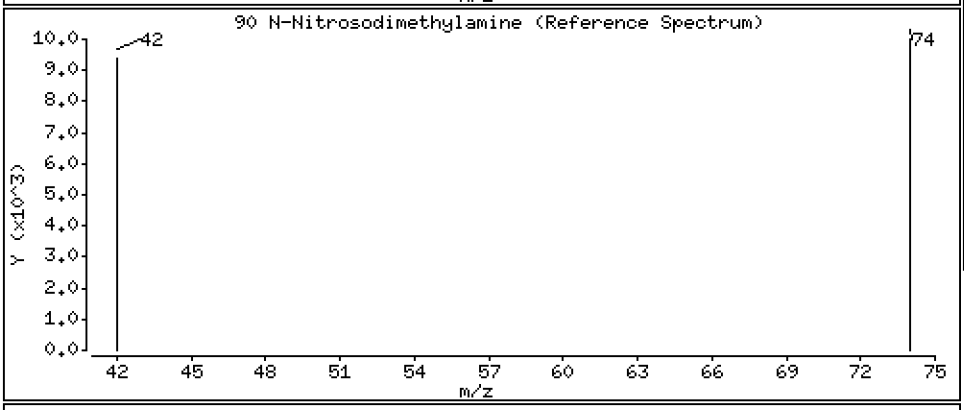
Concentration: 5.293 ug/mL

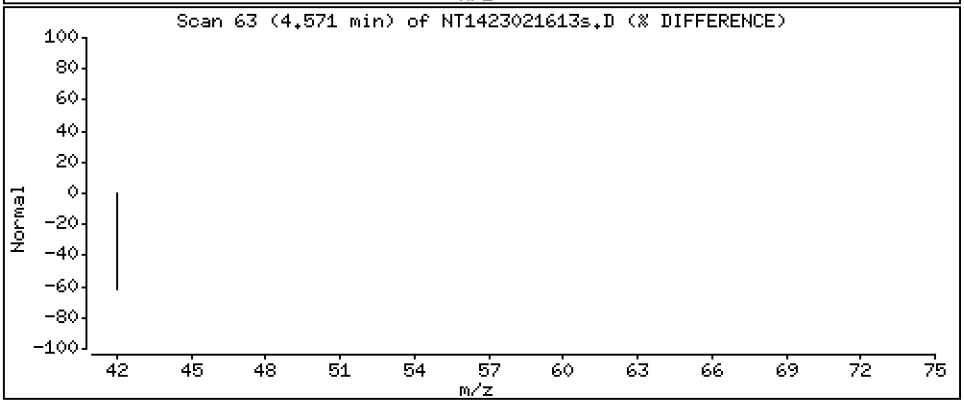












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D
Lab Smp Id: SLB0240-SCV1
Inj Date : 16-FEB-2023 21:18 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0240-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Meth Date : 03-Mar-2023 14:04 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.679	6.764	(0.750)	843875	7.69265	7.693(R)
	3 Phenol	94	8.294	8.379	(0.931)	773600	4.55614	4.556
	7 1,3-Dichlorobenzene	146	8.835	8.835	(0.992)	640622	4.80933	4.809
*	8 1,4-Dichlorobenzene-d4	152	8.905	8.905	(1.000)	391473	4.00000	
	9 1,4-Dichlorobenzene	146	8.936	8.936	(1.003)	616286	4.85010	4.850
	11 Benzyl alcohol	79	9.184	9.161	(1.031)	568264	5.30032	5.300
	12 1,2-Dichlorobenzene	146	9.293	9.293	(1.044)	605835	4.79526	4.795
	13 2-Methylphenol	108	9.409	9.433	(1.057)	523707	4.50674	4.507
	15 4-Methylphenol	108	9.689	9.720	(1.088)	579099	4.46016	4.460
	16 N-Nitroso-di-n-propylamine	70	9.743	9.767	(1.094)	517307	5.04663	5.047
	22 2,4-Dimethylphenol	107	10.728	10.745	(0.942)	488898	3.90295	3.903
	24 Benzoic acid	105	10.938	11.116	(0.960)	436009	6.44677	6.447
	26 1,2,4-Trichlorobenzene	180	11.309	11.310	(0.993)	602290	4.59532	4.595
*	27 Naphthalene-d8	136	11.394	11.394	(1.000)	1430650	4.00000	
	30 Hexachlorobutadiene	225	11.804	11.804	(1.036)	383880	4.81466	4.815
	39 Dimethylphthalate	163	14.543	14.551	(0.968)	1212628	5.00209	5.002
*	42 Acenaphthene-d10	162	15.023	15.016	(1.000)	794620	4.00000	
	50 Diethylphthalate	149	15.997	15.997	(1.065)	1507744	4.96936	4.969
	54 N-Nitrosodiphenylamine	169	16.375	16.384	(0.907)	1157201	5.00925	5.009(H)
	57 Hexachlorobenzene	284	17.432	17.432	(0.965)	537021	4.70048	4.700
	58 Pentachlorophenol	266	17.796	17.944	(0.985)	240806	4.93475	4.935
*	59 Phenanthrene-d10	188	18.059	18.059	(1.000)	1759092	4.00000	
$	66 Terphenyl-d14	244	21.224	21.224	(0.918)	1463833	4.57604	4.576(R)
	67 Butylbenzylphthalate	149	22.153	22.153	(0.958)	814994	4.96402	4.964
*	69 Chrysene-d12	240	23.128	23.121	(1.000)	1201603	4.00000	
*	77 Perylene-d12	264	25.691	25.691	(1.000)	814421	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.257	28.288	(1.100)	772593	4.88838	4.888
	90 N-Nitrosodimethylamine	74	4.571	4.618	(0.513)	440424	5.29346	5.293

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021613s.D
Lab Smp Id: SLB0240-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 18:18
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	393779	196890	787558	391473	-0.59
27 Naphthalene-d8	1399029	699515	2798058	1430650	2.26
42 Acenaphthene-d10	759723	379862	1519446	794620	4.59
59 Phenanthrene-d10	1756156	878078	3512312	1759092	0.17
69 Chrysene-d12	1174128	587064	2348256	1201603	2.34
77 Perylene-d12	826011	413006	1652022	814421	-1.40

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.91	8.41	9.41	8.91	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	0.05
59 Phenanthrene-d10	18.06	17.56	18.56	18.06	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.13	0.03
77 Perylene-d12	25.68	25.18	26.18	25.69	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021613s.D

Lab ID: SLB0240-SCV1
nt14.i, 20230216.b\20230216.b\SIMABN2.m,   16-FEB-2023 21:18

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.931	0.941	-0.0095	Phenol
0.960	0.000	0.9599	Benzoic acid
0.513	0.518	-0.0052	N-Nitrosodimethylamine
0.985	0.000	0.9854	Pentachlorophenol
0.750	0.760	-0.0095	2-Fluorophenol

RRT check based on Ccal File: 20230216.b/NT1423021612s.D

On Column LOD for nt14.i, 20230216.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021618s.D

Date : 17-FEB-2023 00:17

Client ID:

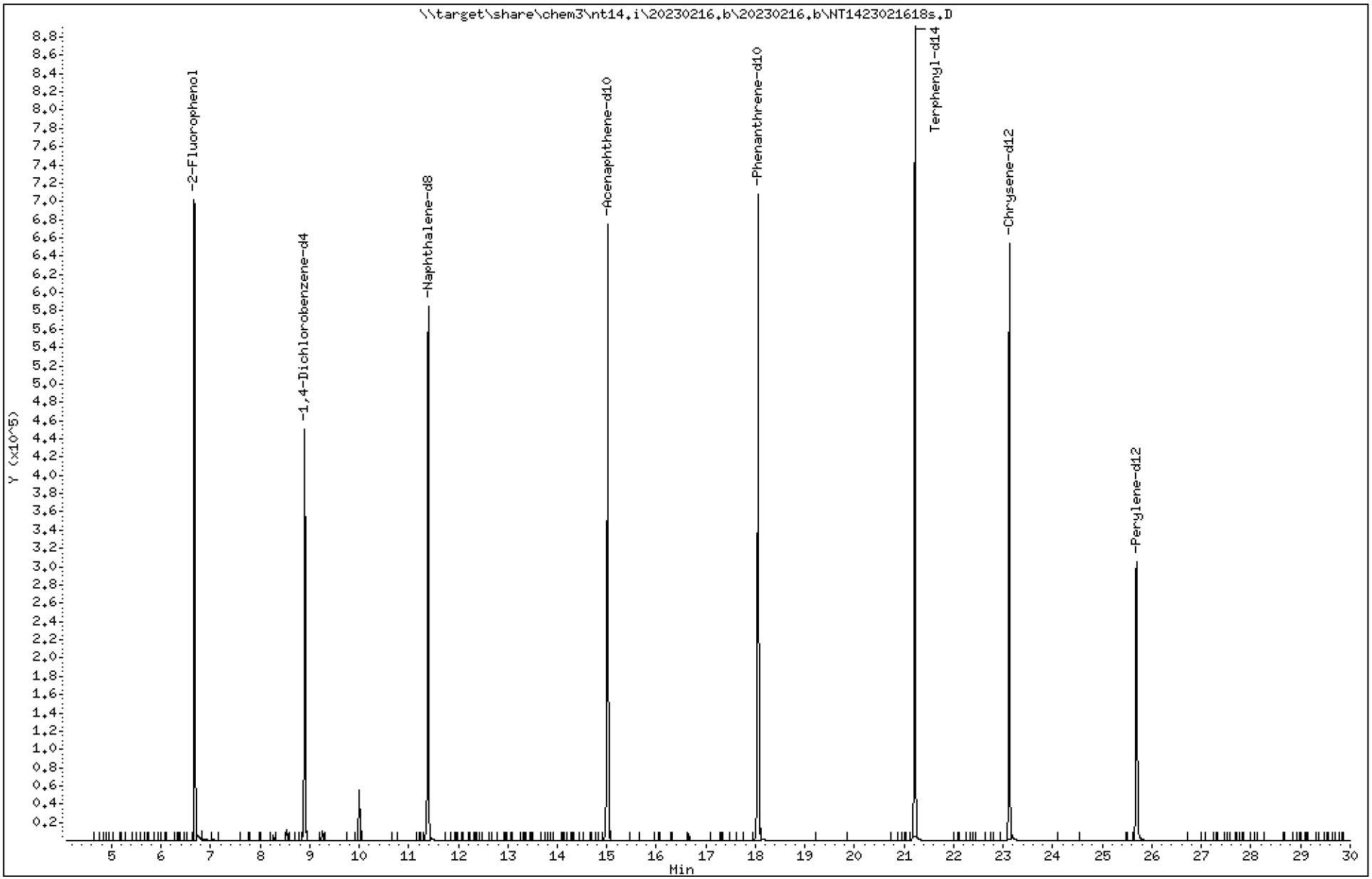
Instrument: nt14.i

Sample Info: SLB0240-ICB1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021618s.D
Lab Smp Id: SLB0240-ICB1
Inj Date : 17-FEB-2023 00:17 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0240-ICB1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Meth Date : 03-Mar-2023 14:04 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1	2-Fluorophenol	112	6.679	6.764	(0.750)	672461	8.10468	8.105(R)
	3	Phenol	94	Compound Not Detected.					
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	8.905	8.905	(1.000)	296634	4.00000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
	11	Benzyl alcohol	79	Compound Not Detected.					
	12	1,2-Dichlorobenzene	146	Compound Not Detected.					
	13	2-Methylphenol	108	Compound Not Detected.					
	15	4-Methylphenol	108	Compound Not Detected.					
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22	2,4-Dimethylphenol	107	Compound Not Detected.					
	24	Benzoic acid	105	Compound Not Detected.					
	26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27	Naphthalene-d8	136	11.394	11.394	(1.000)	1039961	4.00000	
	30	Hexachlorobutadiene	225	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
*	42	Acenaphthene-d10	162	15.015	15.016	(1.000)	537777	4.00000	
	50	Diethylphthalate	149	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.051	18.059	(1.000)	1239183	4.00000	
$	66	Terphenyl-d14	244	21.216	21.224	(0.918)	1175849	5.59707	5.597(R)
	67	Butylbenzylphthalate	149	Compound Not Detected.					
*	69	Chrysene-d12	240	23.121	23.121	(1.000)	789133	4.00000	
*	77	Perylene-d12	264	25.691	25.691	(1.000)	528194	4.00000	
	79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021618s.D
Lab Smp Id: SLB0240-ICB1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 18:18
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	393779	196890	787558	296634	-24.67
27 Naphthalene-d8	1399029	699515	2798058	1039961	-25.67
42 Acenaphthene-d10	759723	379862	1519446	537777	-29.21
59 Phenanthrene-d10	1756156	878078	3512312	1239183	-29.44
69 Chrysene-d12	1174128	587064	2348256	789133	-32.79
77 Perylene-d12	826011	413006	1652022	528194	-36.05

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.91	8.41	9.41	8.91	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	-0.00
59 Phenanthrene-d10	18.06	17.56	18.56	18.05	-0.04
69 Chrysene-d12	23.12	22.62	23.62	23.12	-0.00
77 Perylene-d12	25.68	25.18	26.18	25.69	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021618s.D

Lab ID: SLB0240-ICB1
nt14.i, 20230216.b\20230216.b\SIMABN2.m,   17-FEB-2023 00:17

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.750	0.760	-0.0095	2-Fluorophenol

RRT check based on Ccal File: 20230216.b/NT1423021612s.D

On Column LOD for nt14.i, 20230216.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00009
Laboratory ID: SLB0240-SCV1
Sequence: SLB0240
Sequence Name: SCV 5.0
Standard ID: K010066

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	5.0000	4.56	-8.9	20.00
1,3-Dichlorobenzene	5.0000	4.81	-3.8	20.00
1,4-Dichlorobenzene	5.0000	4.85	-3.0	20.00
1,2-Dichlorobenzene	5.0000	4.80	-4.1	20.00
Benzyl Alcohol	5.0000	5.30	6.0	20.00
Benzoic acid	10.000	6.45	-35.5 *	20.00
2-Methylphenol	5.0000	4.51	-9.9	20.00
N-Nitroso-di-n-Propylamine	5.0000	5.05	0.9	20.00
4-Methylphenol	5.0000	4.46	-10.8	20.00
2,4-Dimethylphenol	5.0000	3.90	-21.9 *	20.00
1,2,4-Trichlorobenzene	5.0000	4.60	-8.1	20.00
Hexachlorobutadiene	5.0000	4.81	-3.7	20.00
N-Nitrosodimethylamine	5.0000	5.29	5.9	20.00
Dimethylphthalate	5.0000	5.00	0.04	20.00
Diethyl phthalate	5.0000	4.97	-0.6	20.00
N-Nitrosodiphenylamine	5.0000	5.01	0.2	20.00
Hexachlorobenzene	5.0000	4.70	-6.0	20.00
Pentachlorophenol	5.0000	4.93	-1.3	20.00
Butylbenzylphthalate	5.0000	4.96	-0.7	20.00
Dibenzo(a,h)anthracene	5.0000	4.89	-2.2	20.00
2-Fluorophenol	7.5000	7.69	2.6	
p-Terphenyl-d14	5.0000	4.58	-8.5	

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

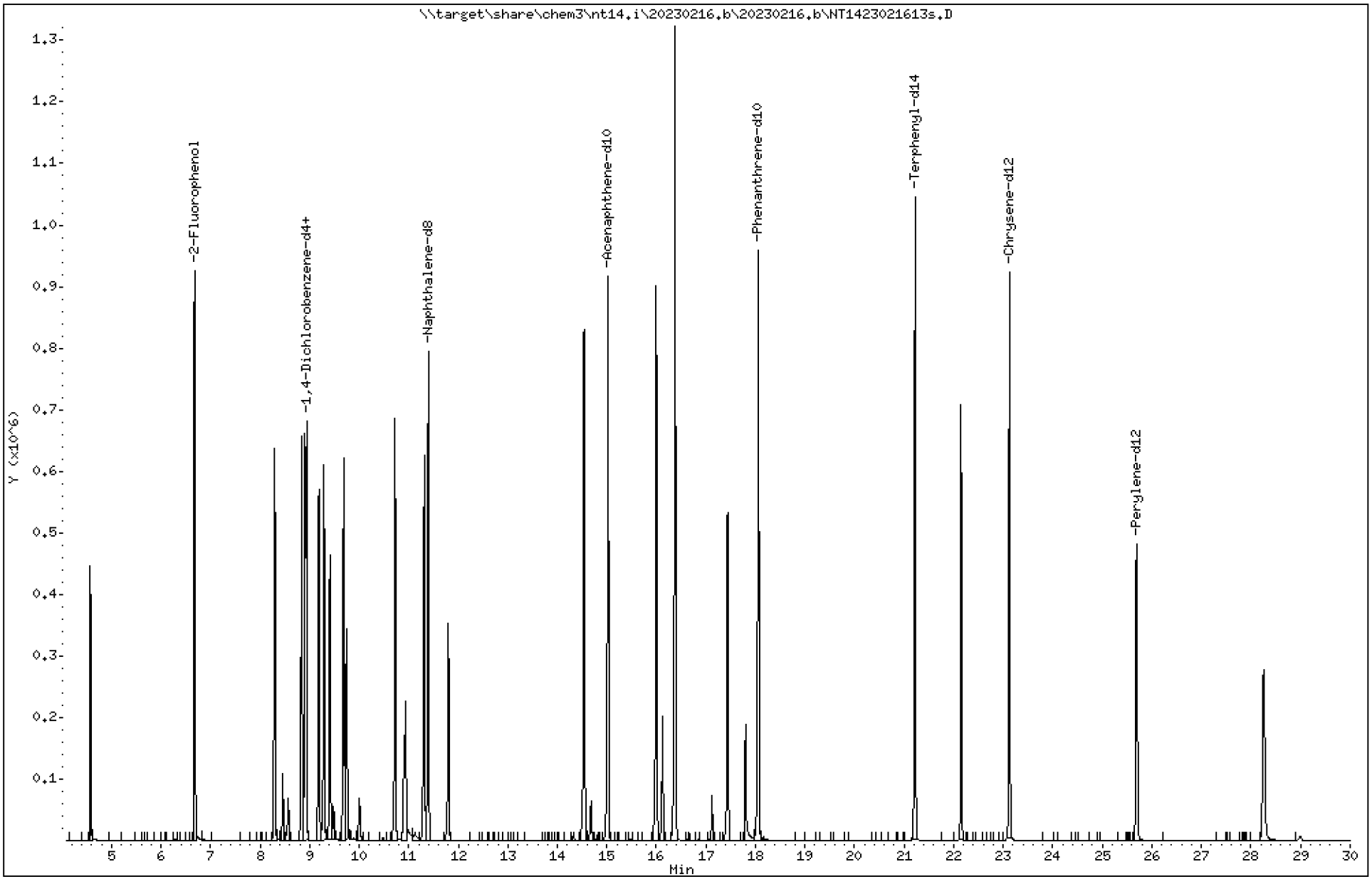
Instrument: nt14.i

Sample Info: SLB0240-SCV1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

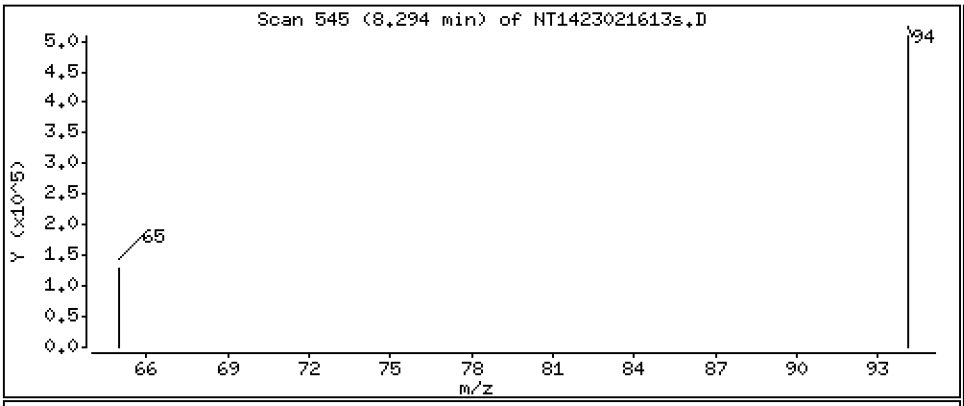
Operator: DSD

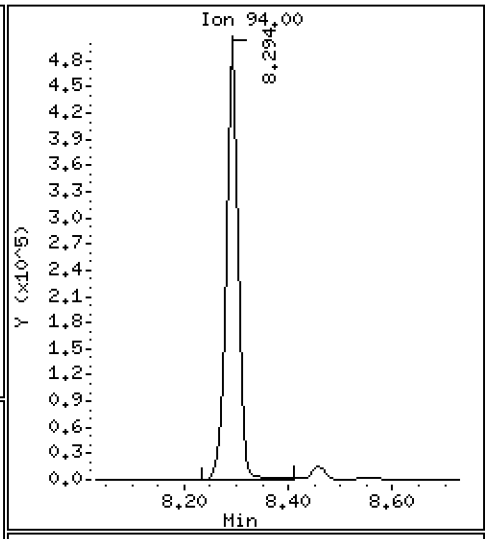
Column phase: ZB-5msi

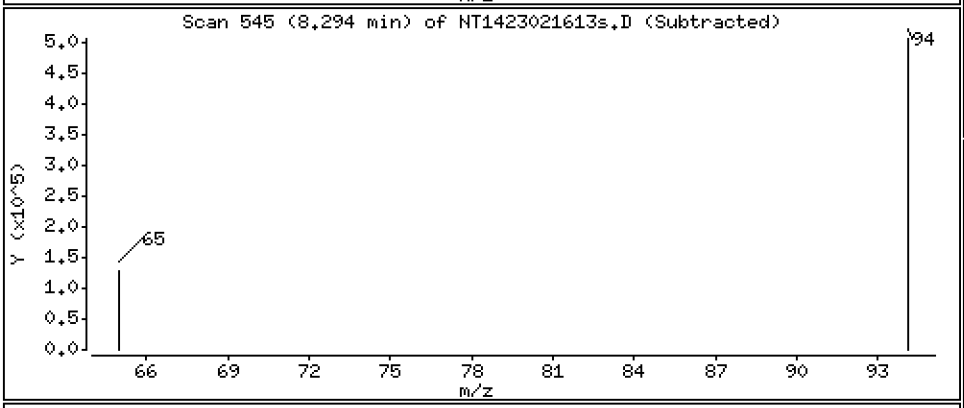
Column diameter: 0.25

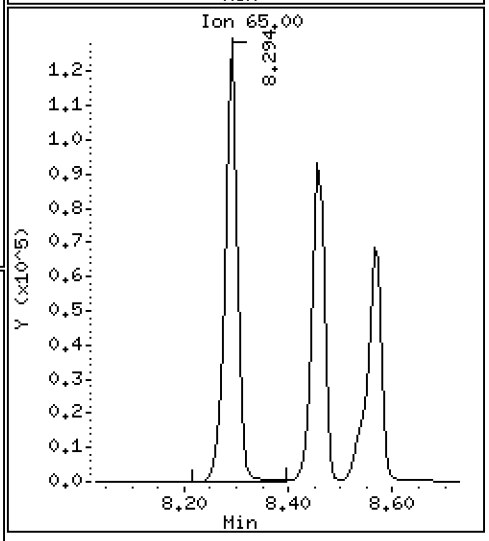
3 Phenol

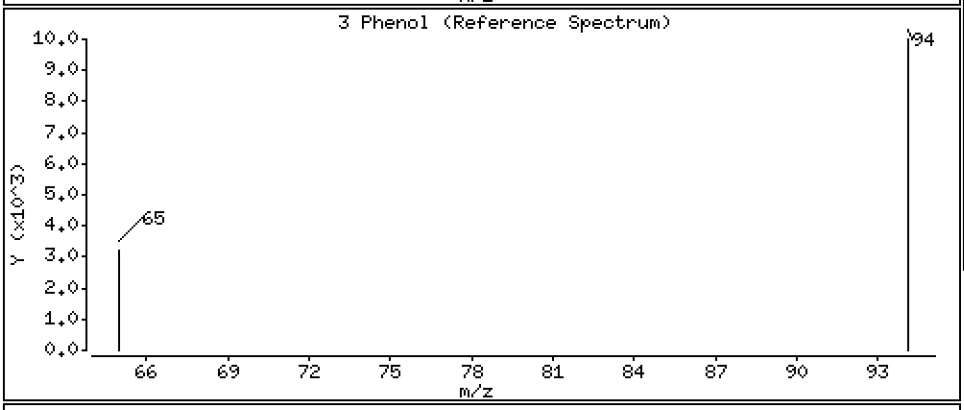
Concentration: 4.556 ug/mL

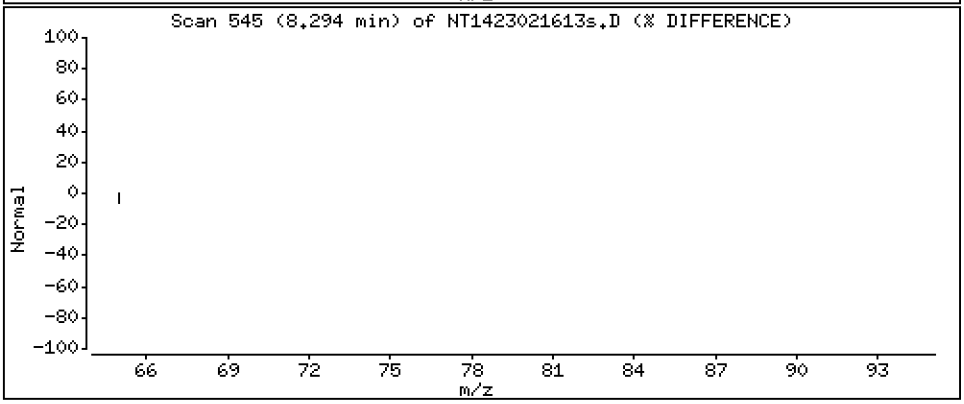












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

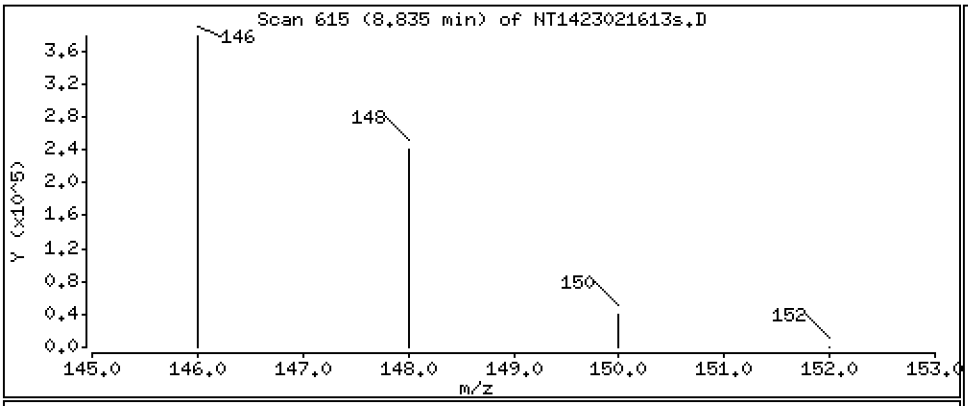
Operator: DSD

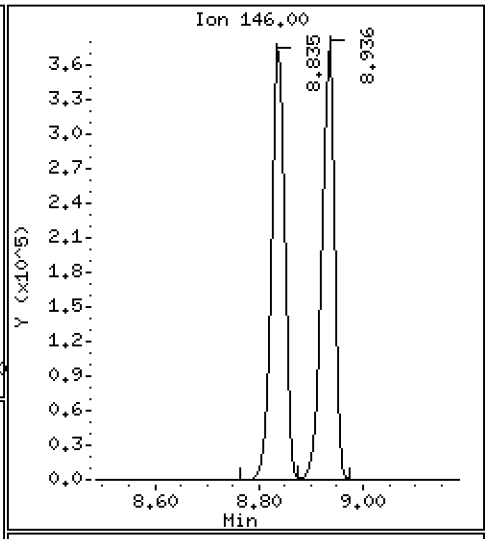
Column phase: ZB-5msi

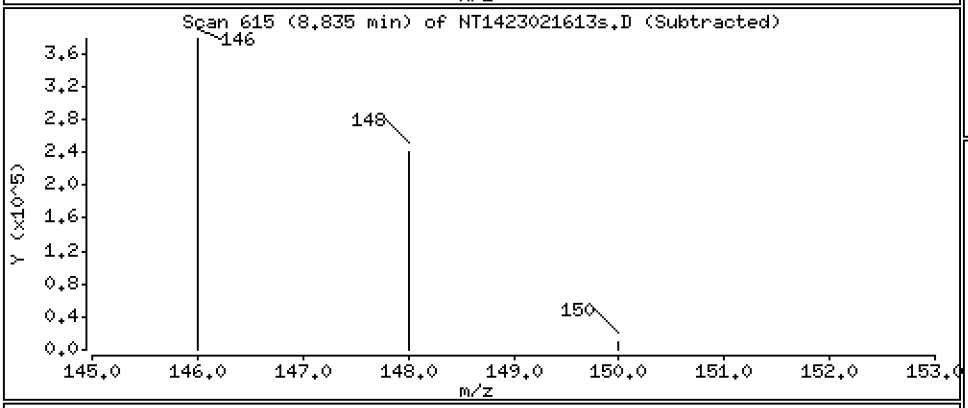
Column diameter: 0.25

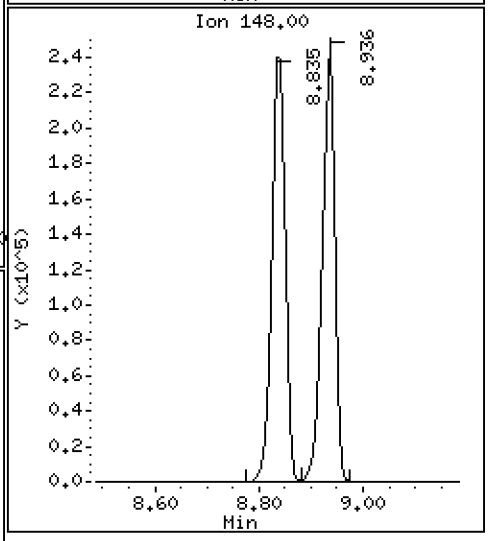
7 1,3-Dichlorobenzene

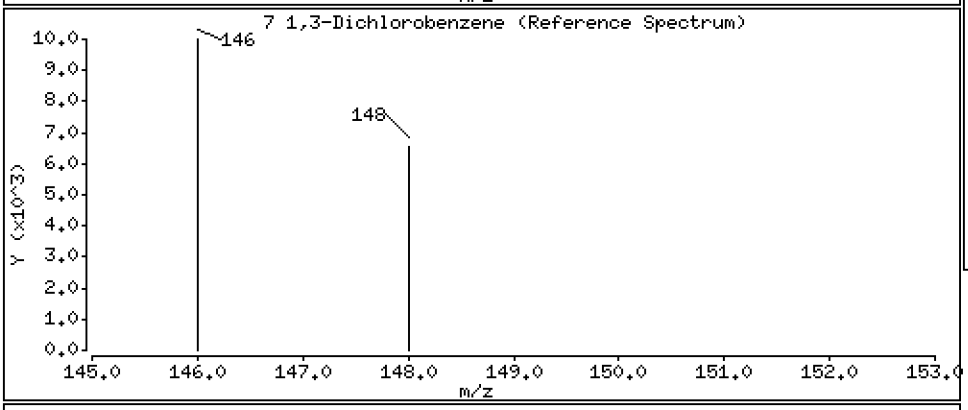
Concentration: 4.809 ug/mL

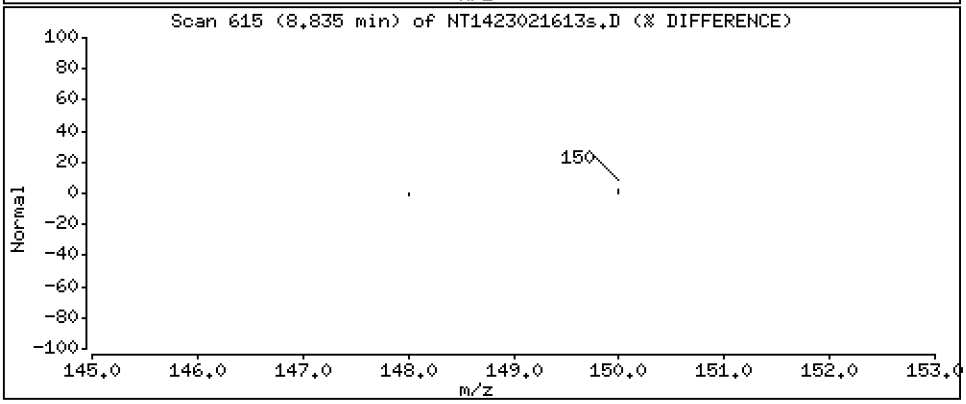












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

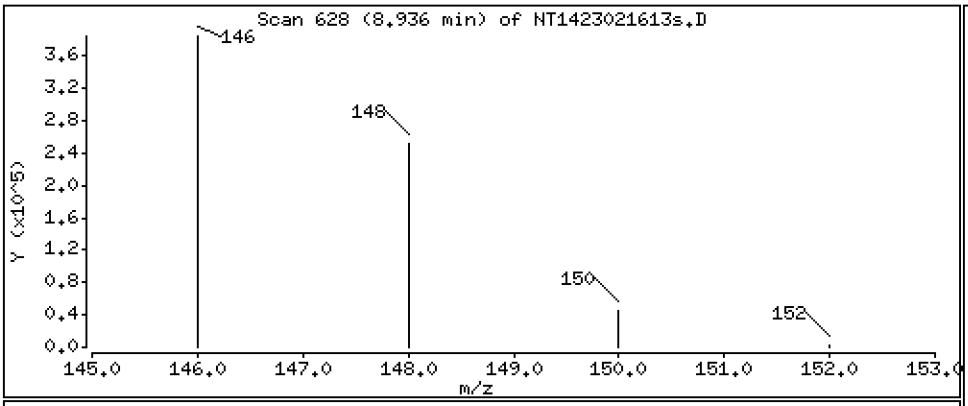
Operator: DSD

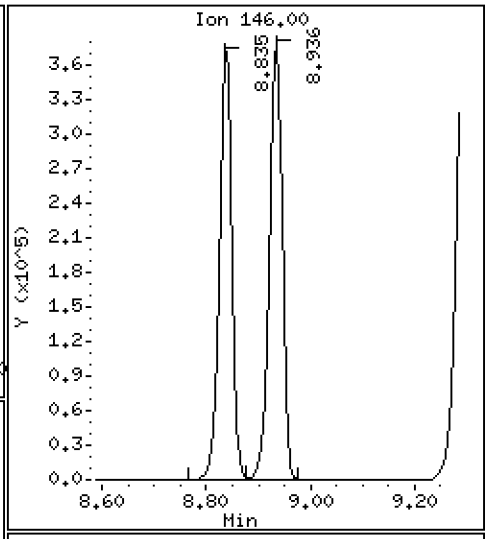
Column phase: ZB-5msi

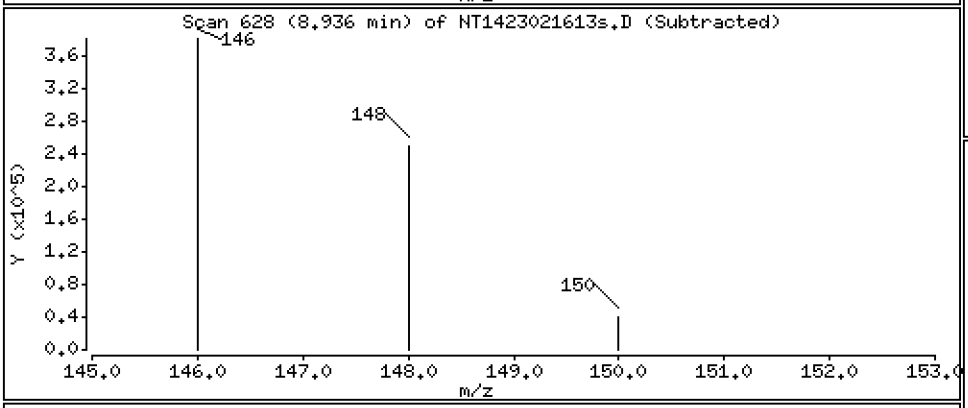
Column diameter: 0.25

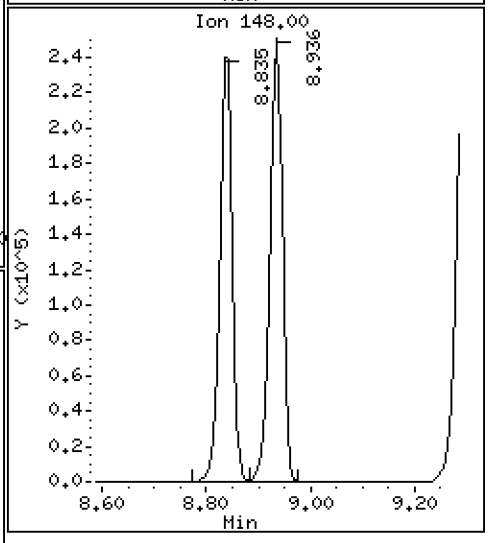
9 1,4-Dichlorobenzene

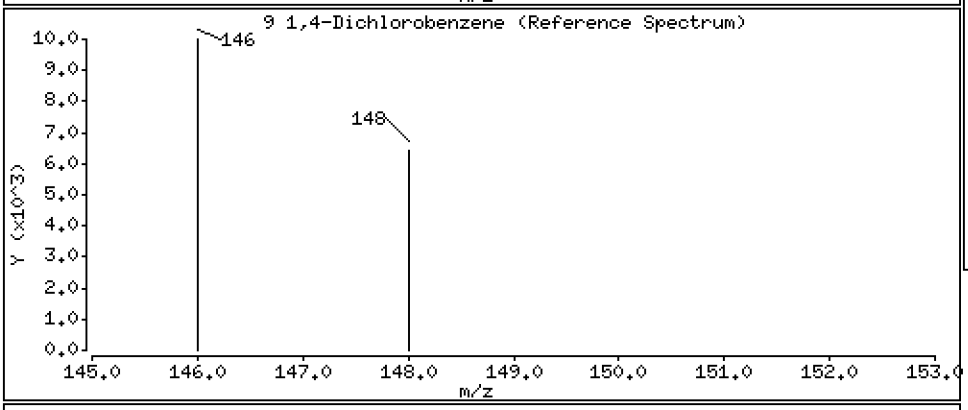
Concentration: 4.850 ug/mL

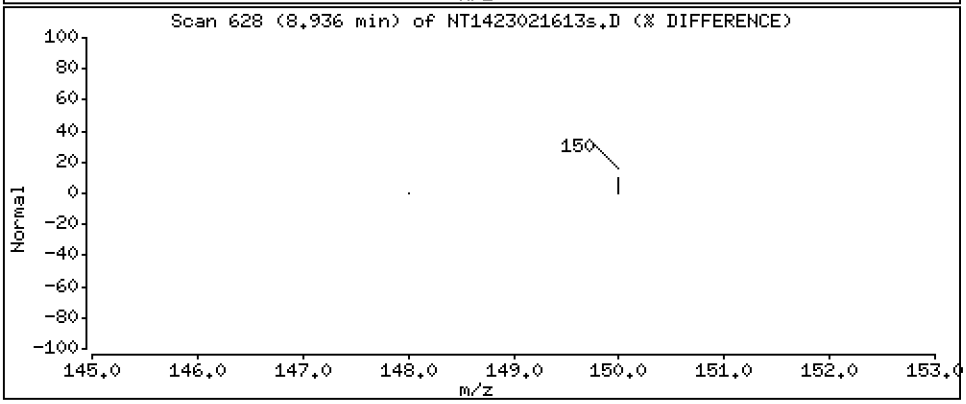












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

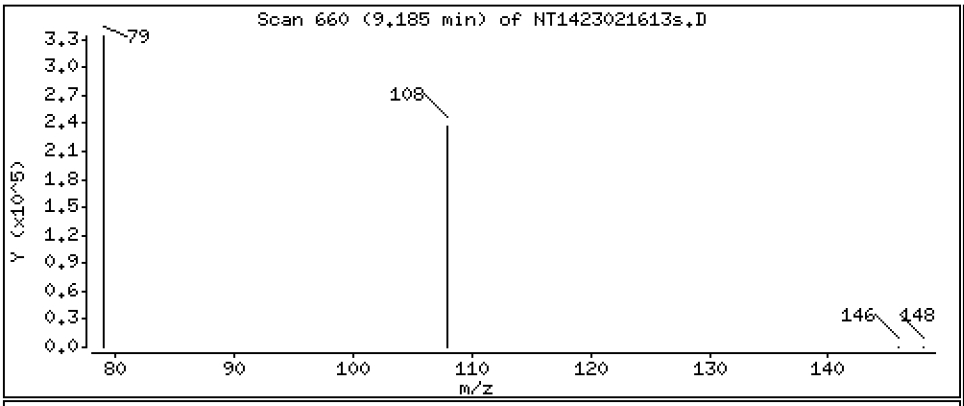
Operator: DSD

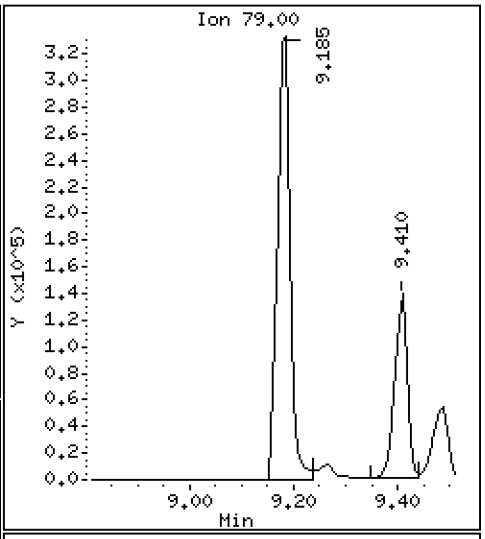
Column phase: ZB-5msi

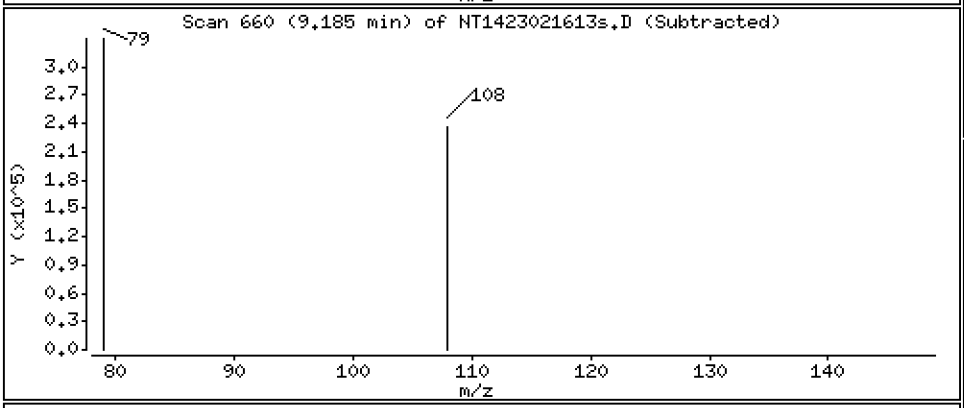
Column diameter: 0.25

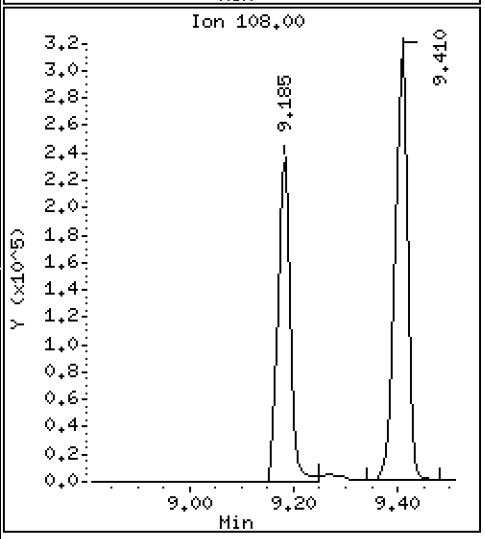
11 Benzyl alcohol

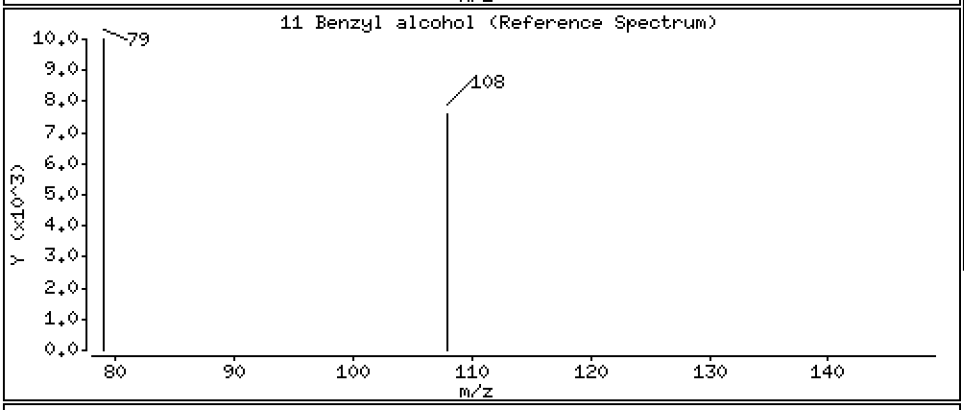
Concentration: 5.300 ug/mL

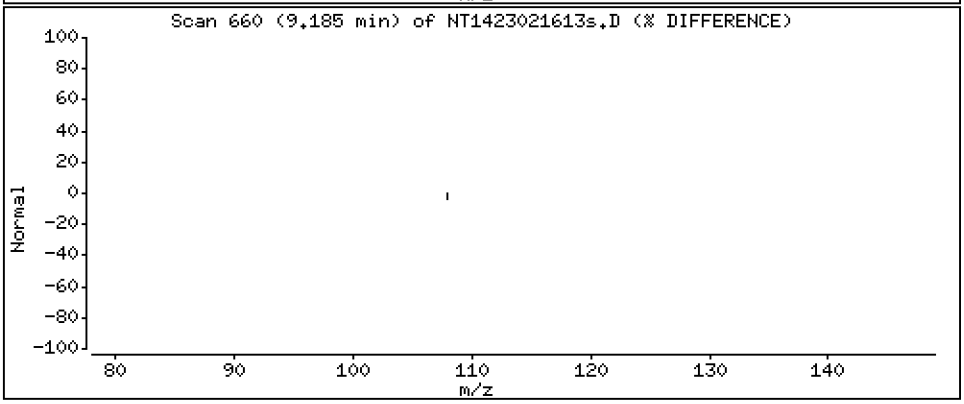












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

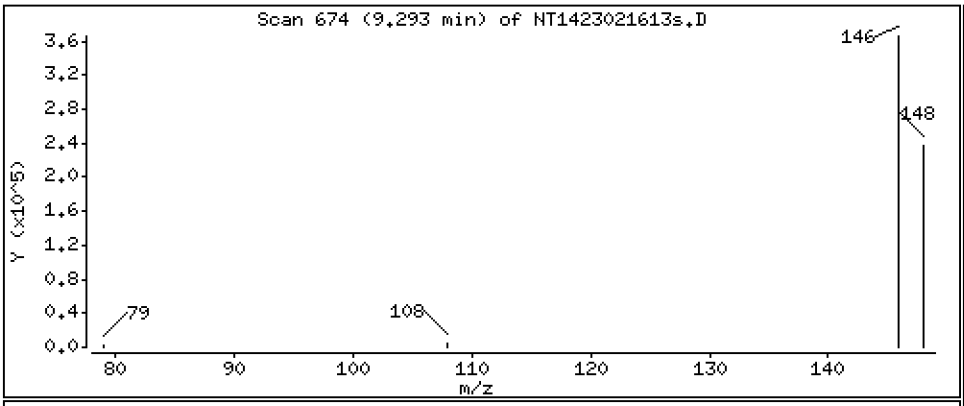
Operator: DSD

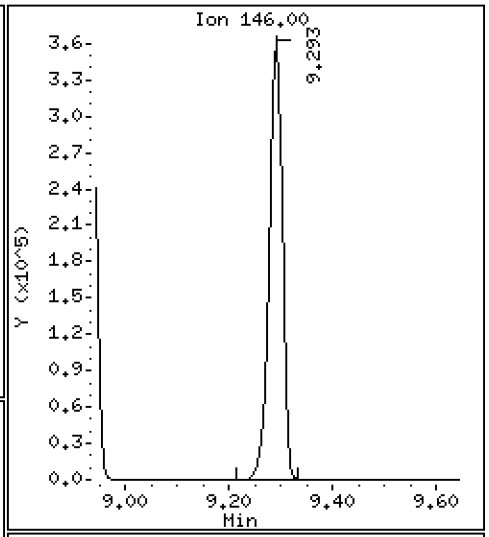
Column phase: ZB-5msi

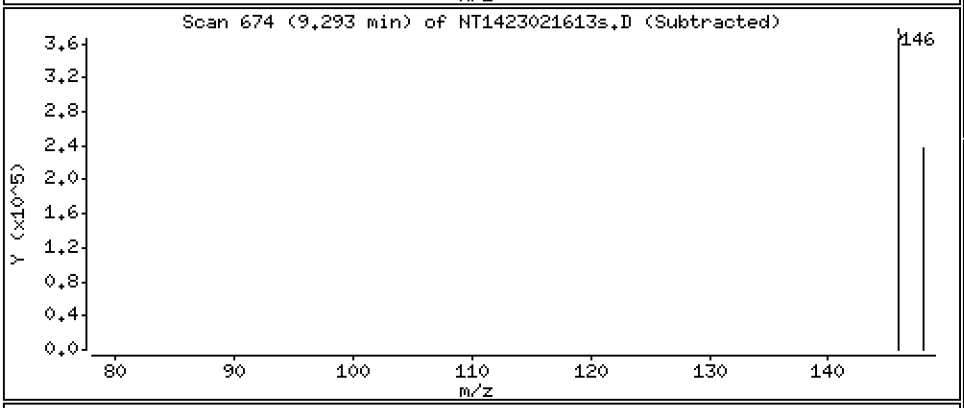
Column diameter: 0.25

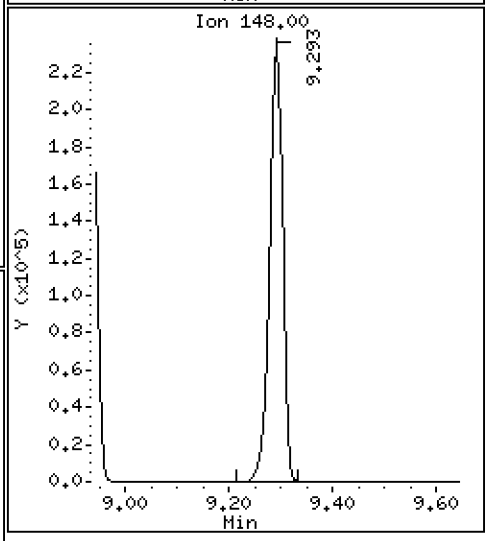
12 1,2-Dichlorobenzene

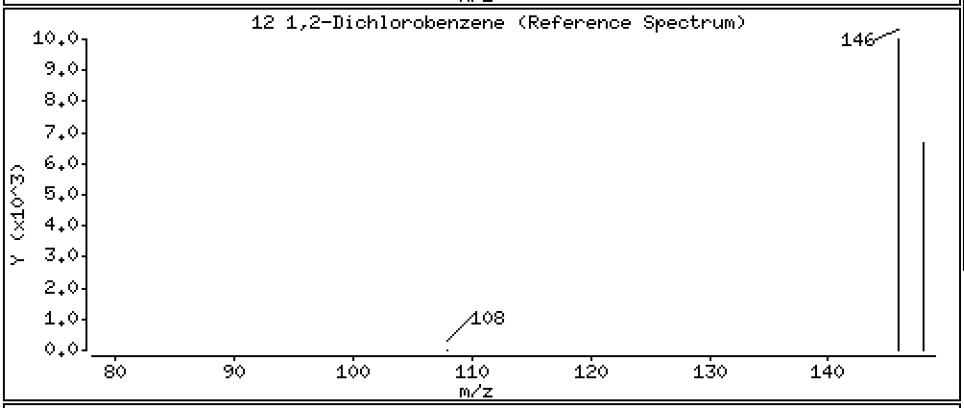
Concentration: 4.795 ug/mL

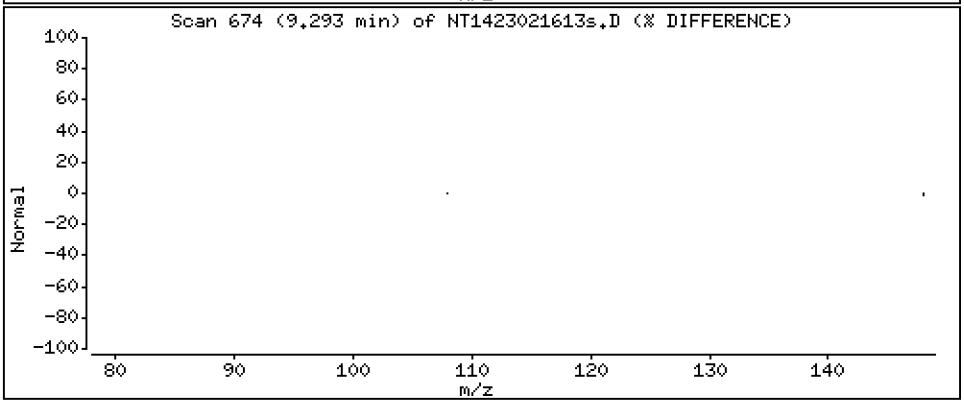












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

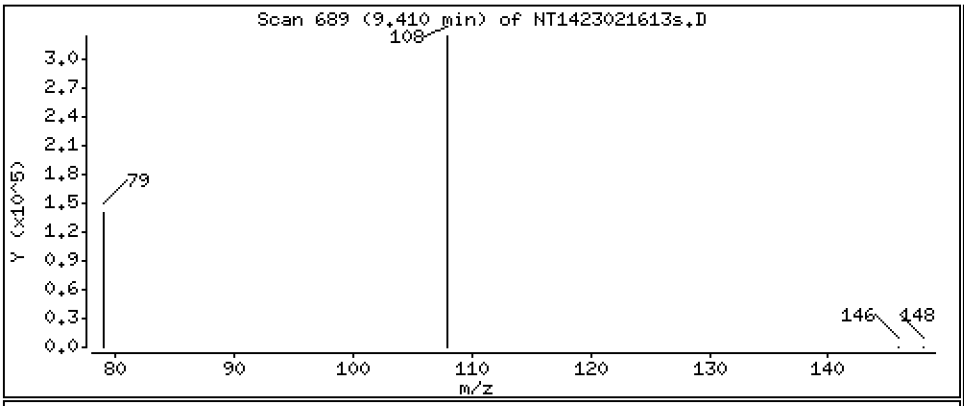
Operator: DSD

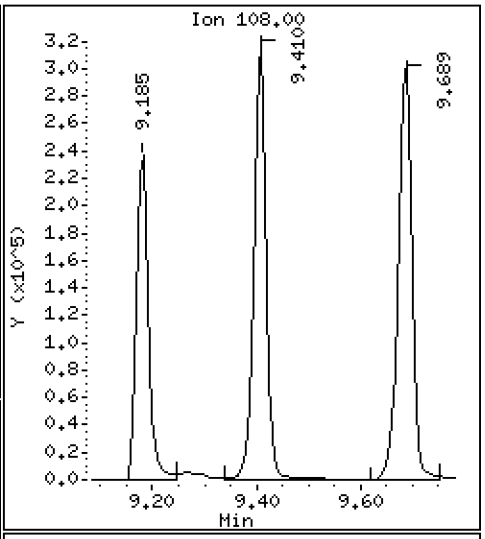
Column phase: ZB-5msi

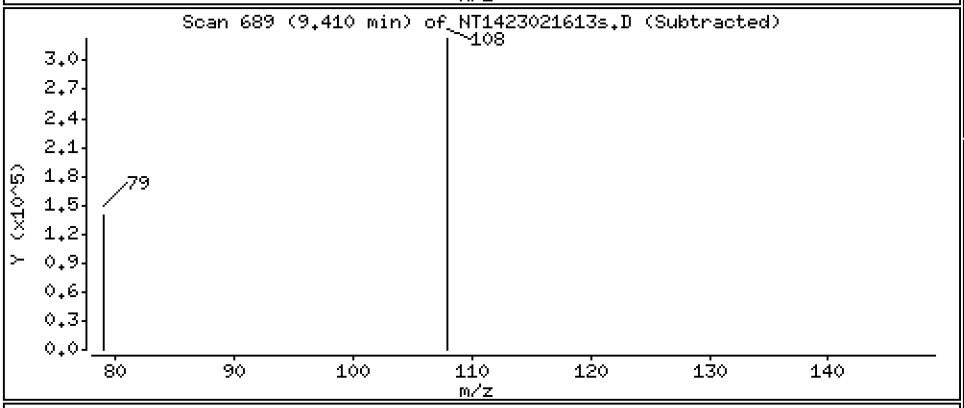
Column diameter: 0.25

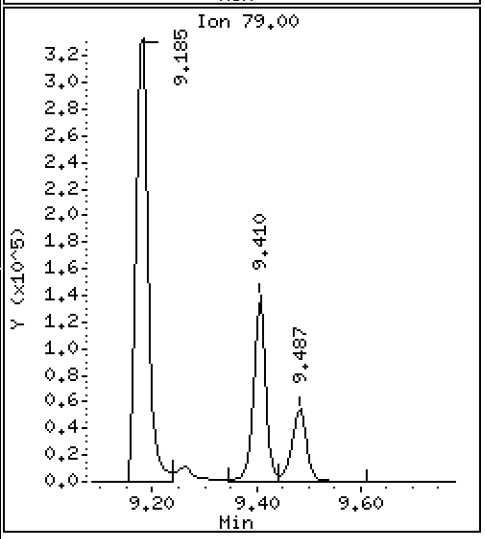
13 2-Methylphenol

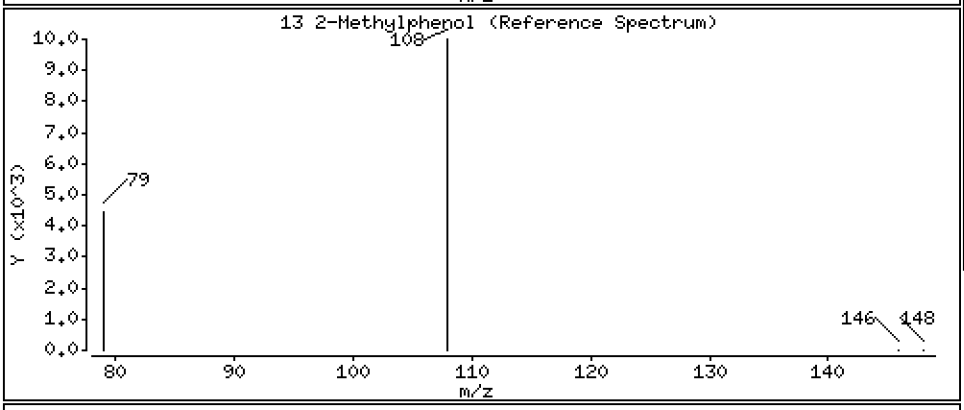
Concentration: 4.507 ug/mL

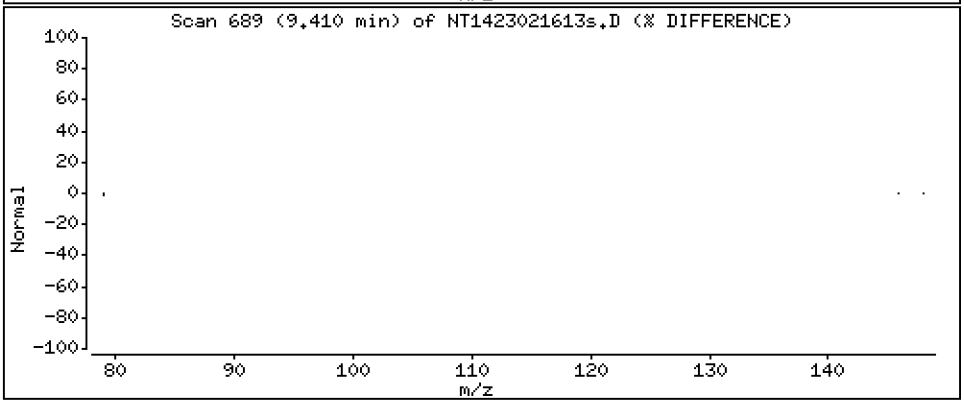












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

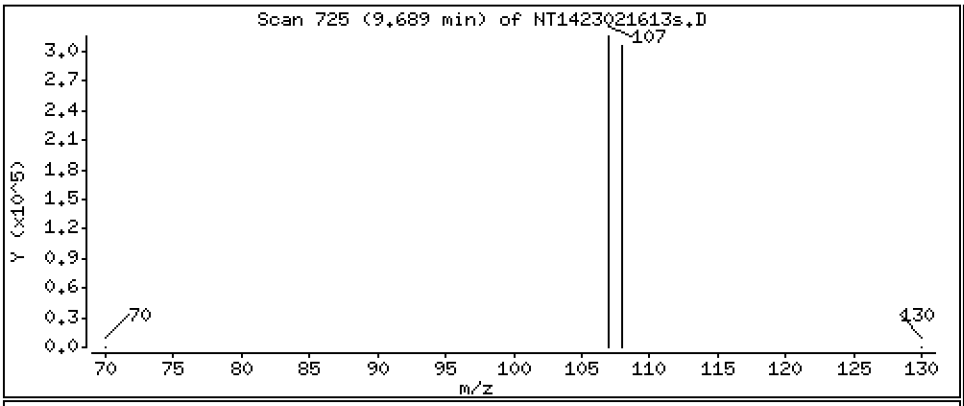
Operator: DSD

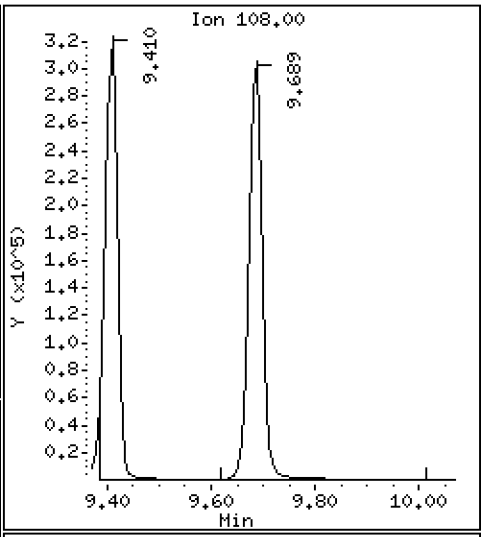
Column phase: ZB-5msi

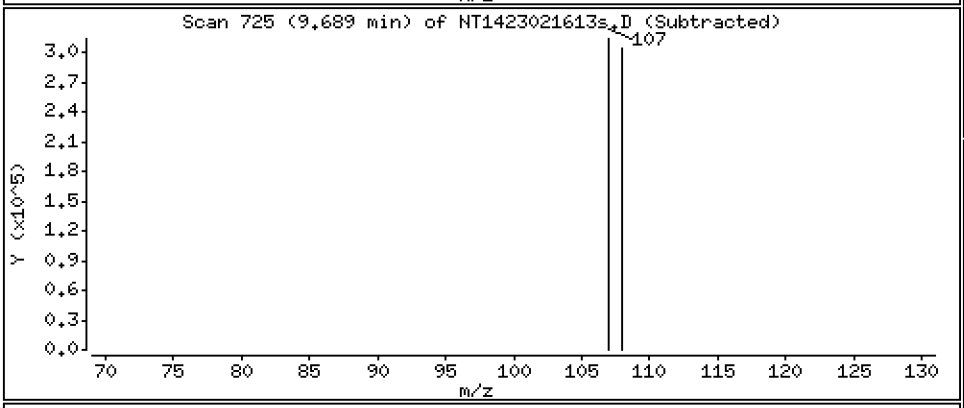
Column diameter: 0.25

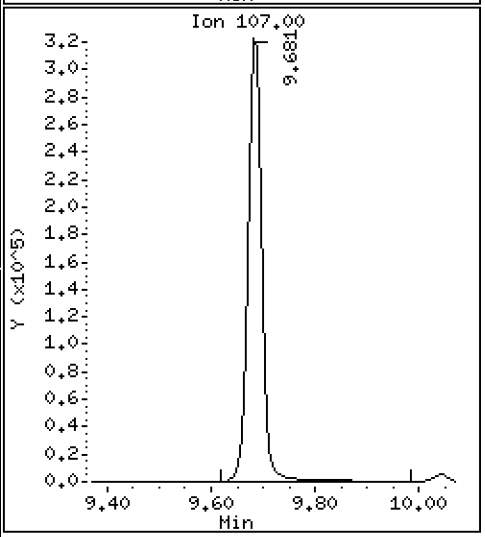
15 4-Methylphenol

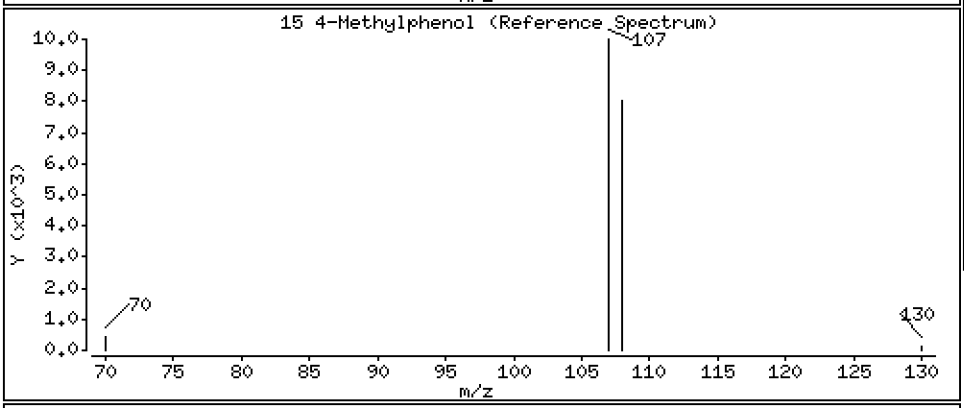
Concentration: 4.460 ug/mL

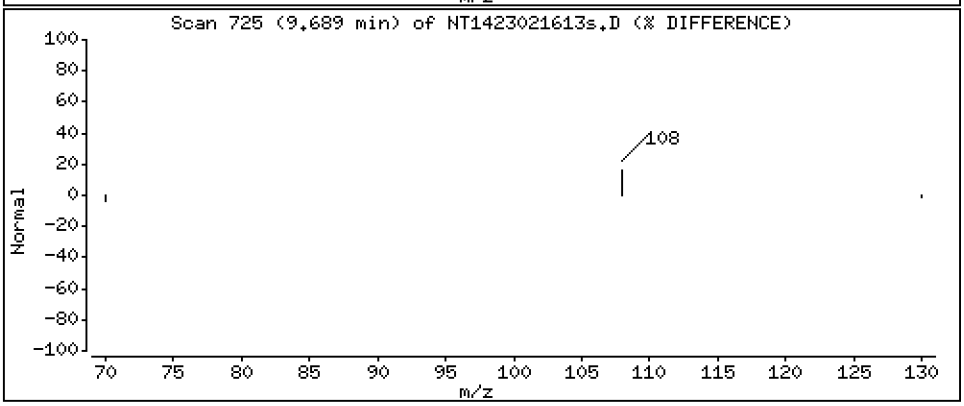












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

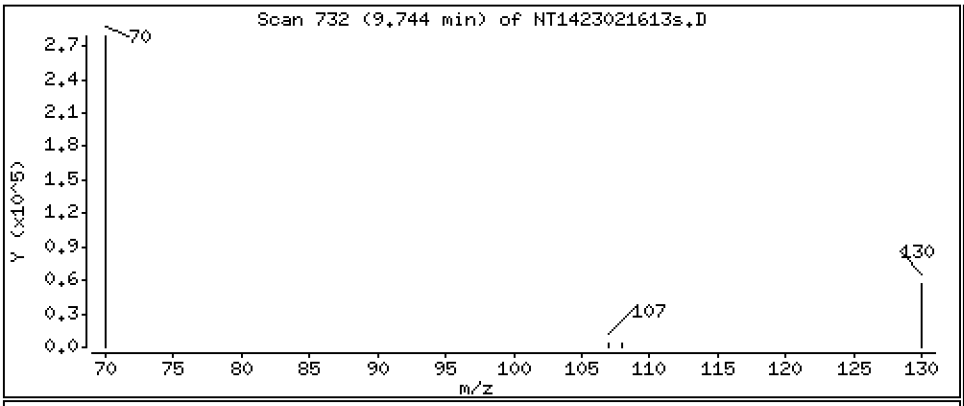
Operator: DSD

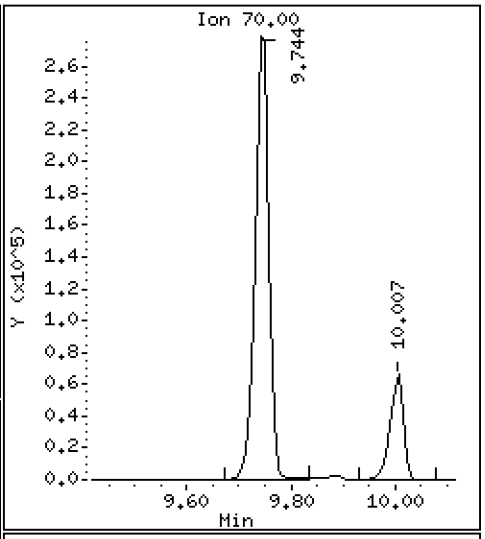
Column phase: ZB-5msi

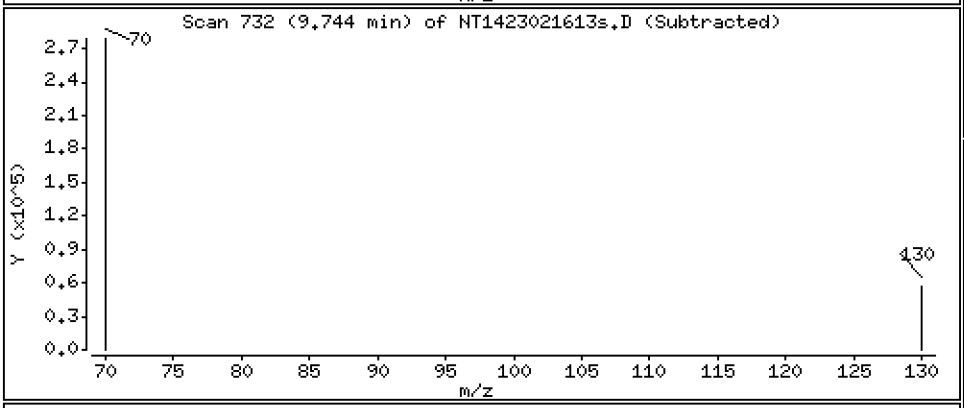
Column diameter: 0.25

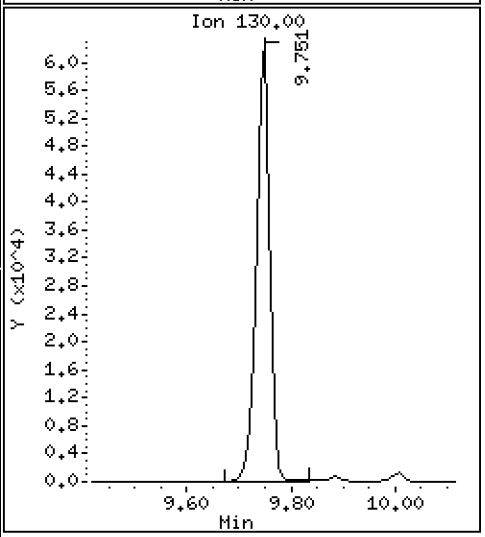
16 N-Nitroso-di-n-propylamine

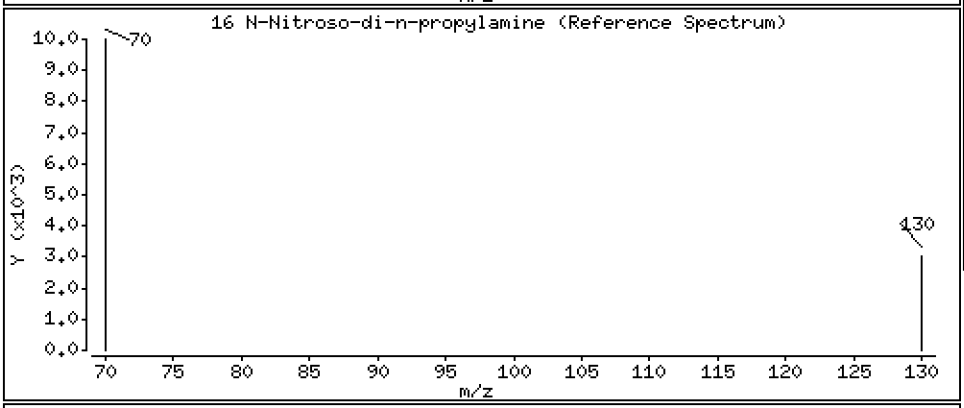
Concentration: 5.047 ug/mL

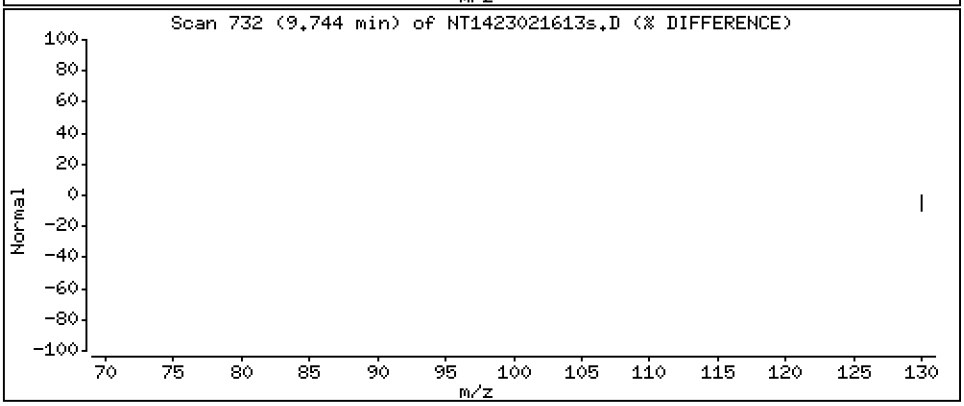












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

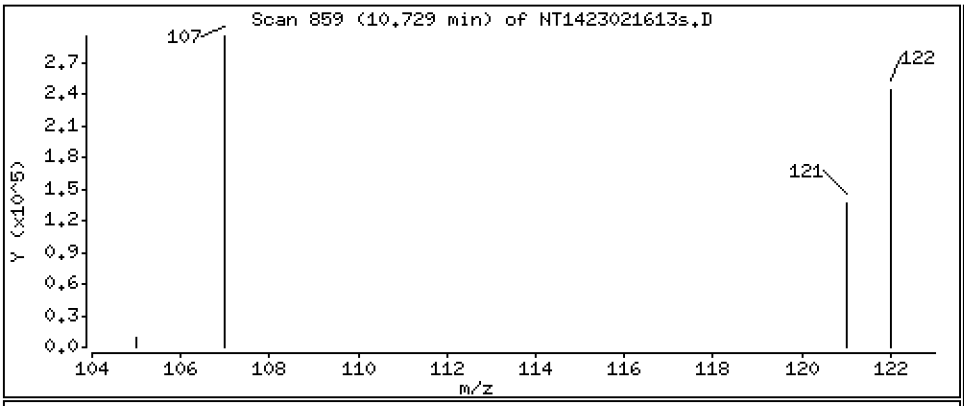
Operator: DSD

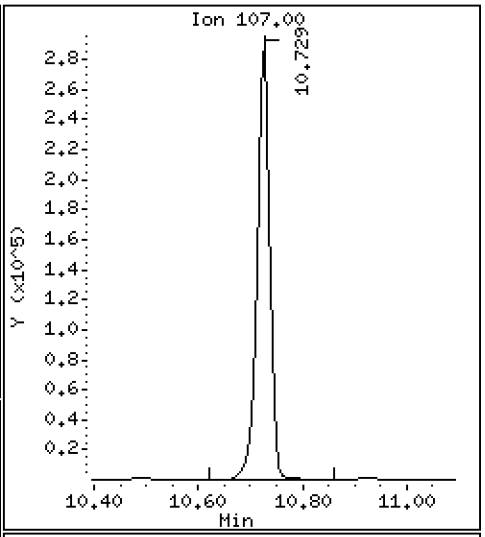
Column phase: ZB-5msi

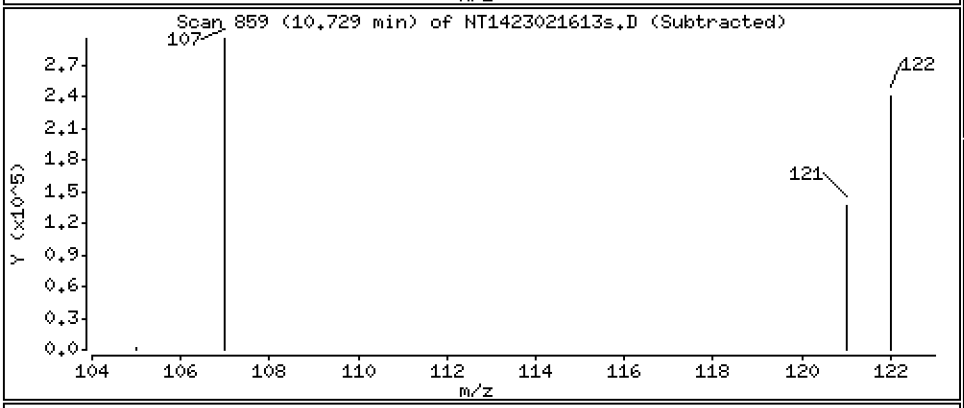
Column diameter: 0.25

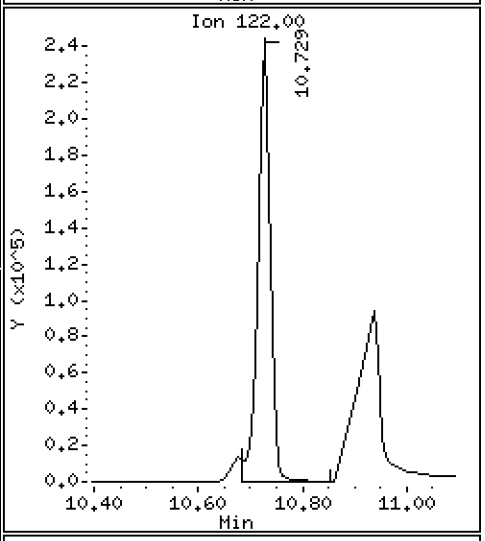
22 2,4-Dimethylphenol

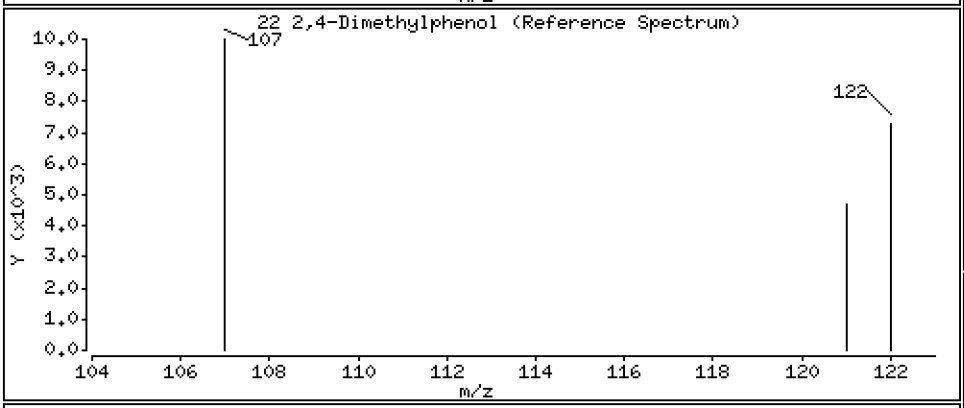
Concentration: 3.903 ug/mL

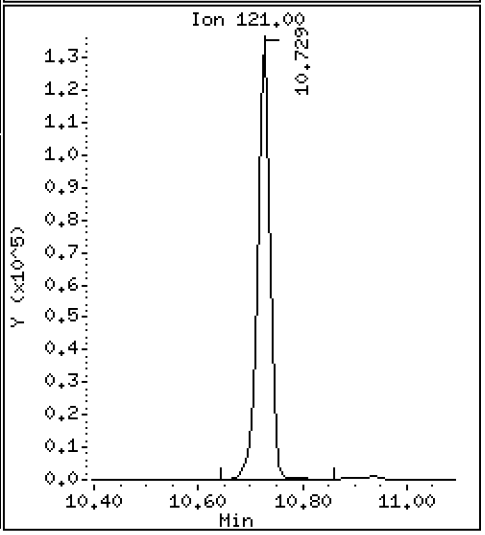


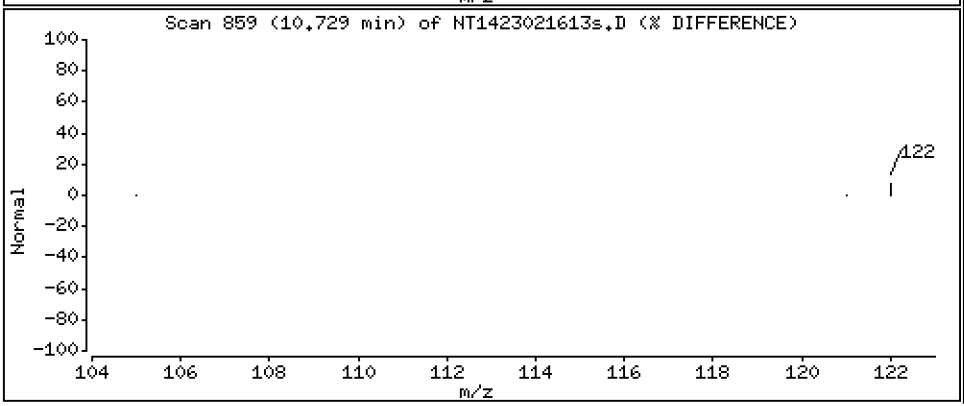












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

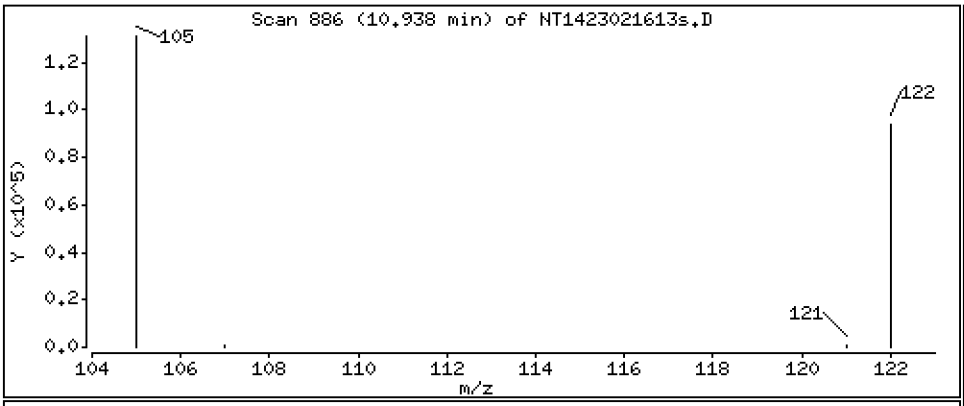
Operator: DSD

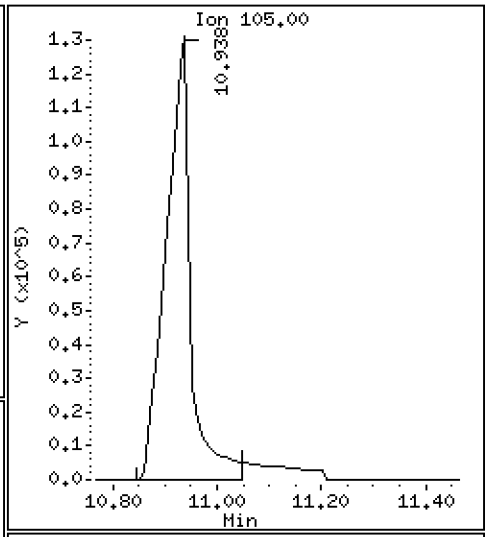
Column phase: ZB-5msi

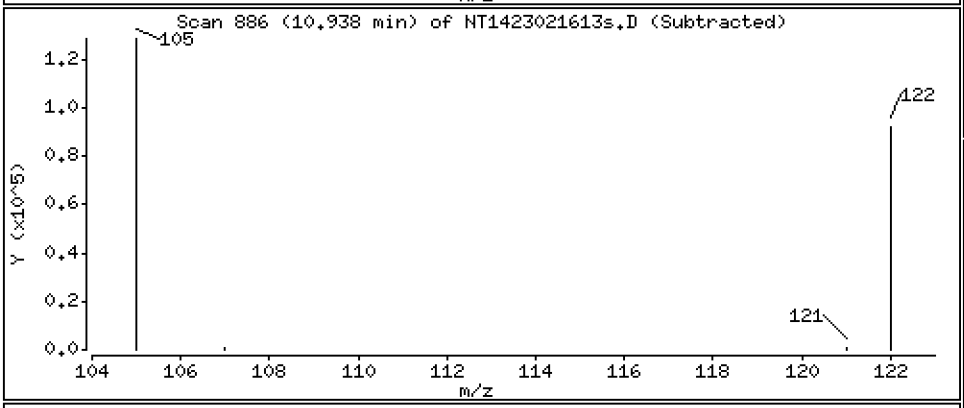
Column diameter: 0.25

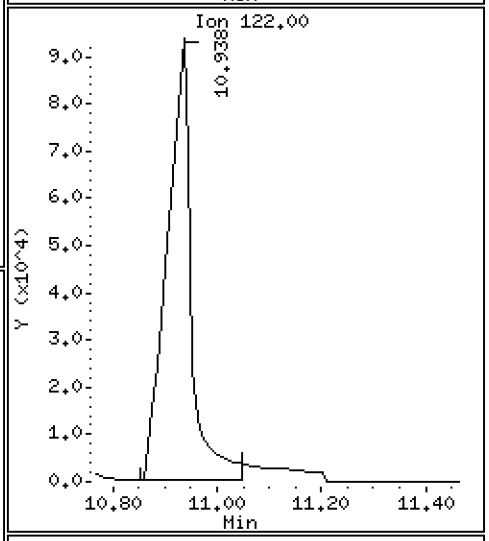
24 Benzoic acid

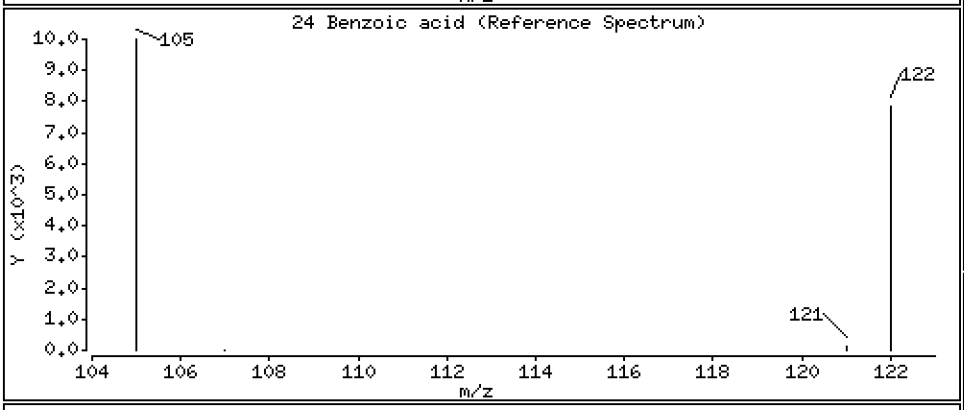
Concentration: 6.447 ug/mL

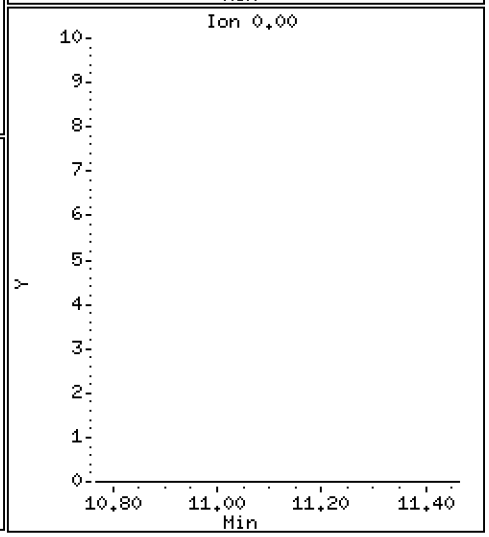


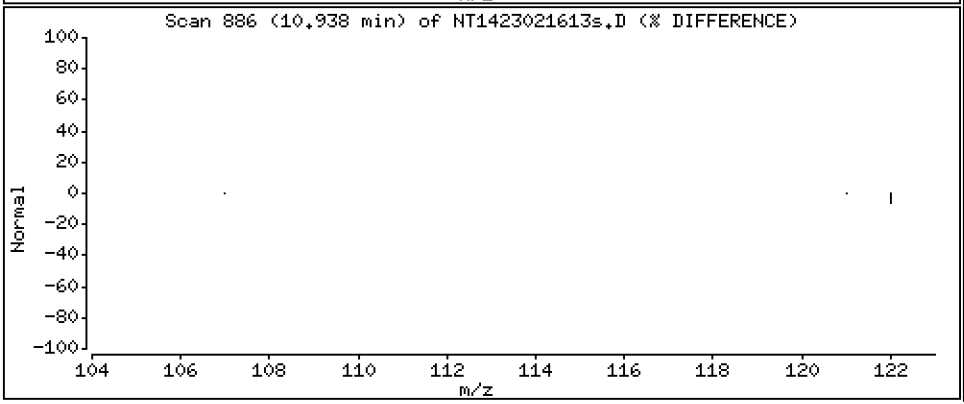












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

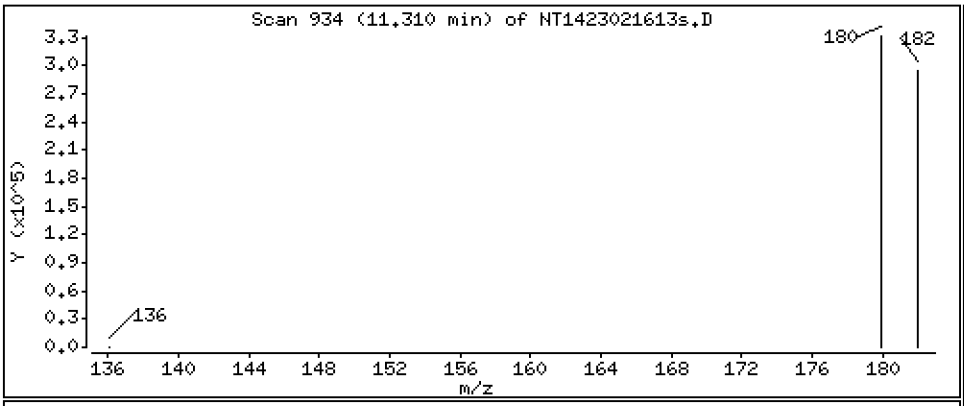
Operator: DSD

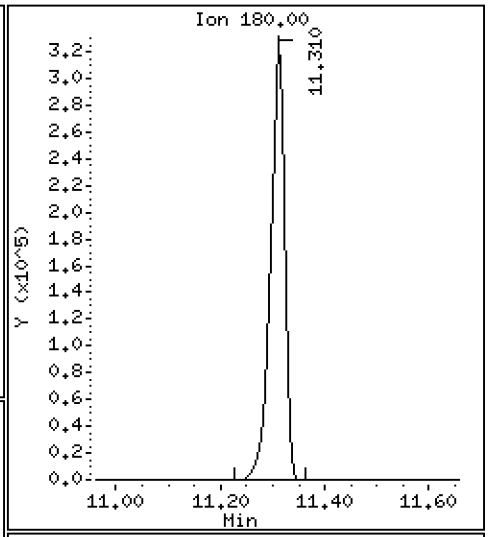
Column phase: ZB-5msi

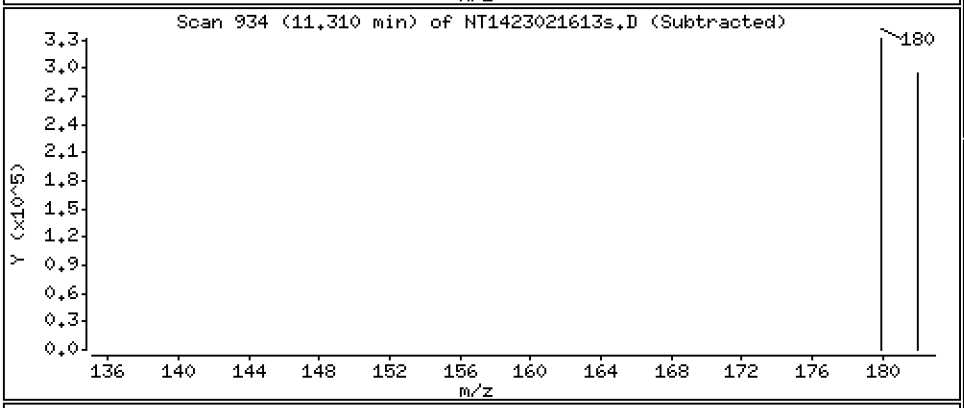
Column diameter: 0.25

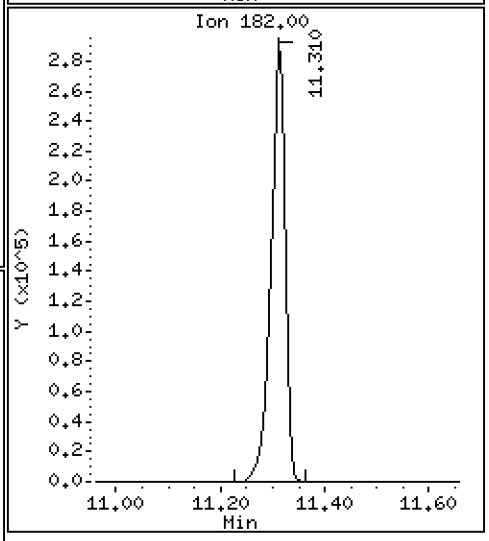
26 1,2,4-Trichlorobenzene

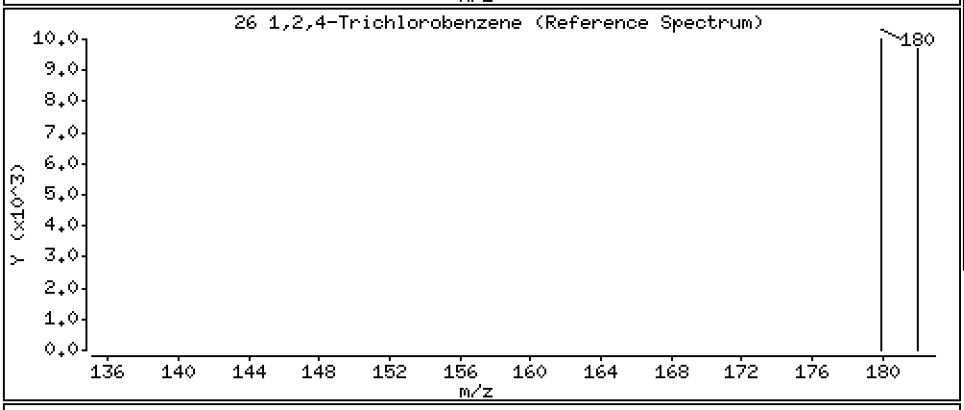
Concentration: 4.595 ug/mL

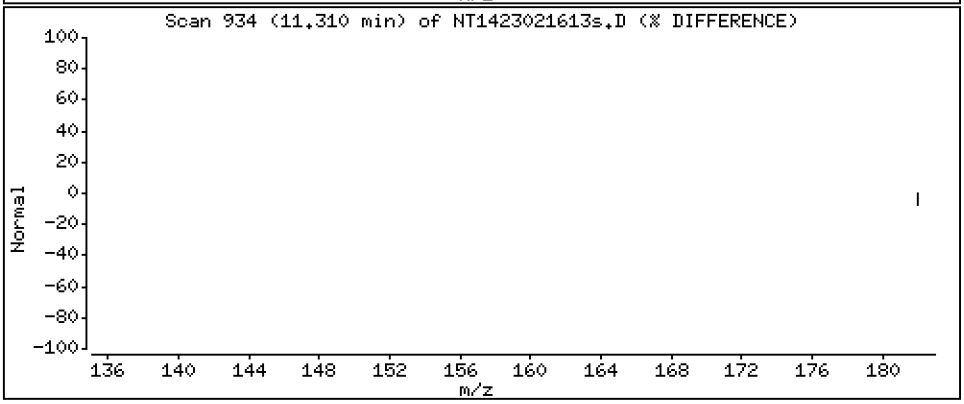












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

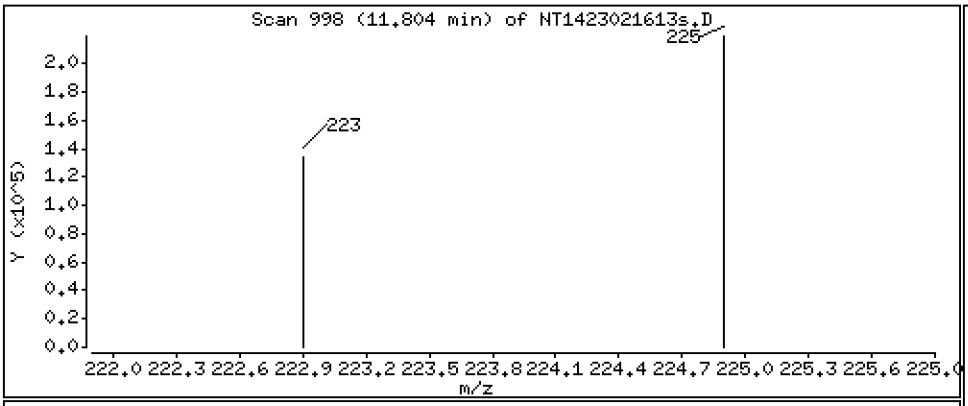
Operator: DSD

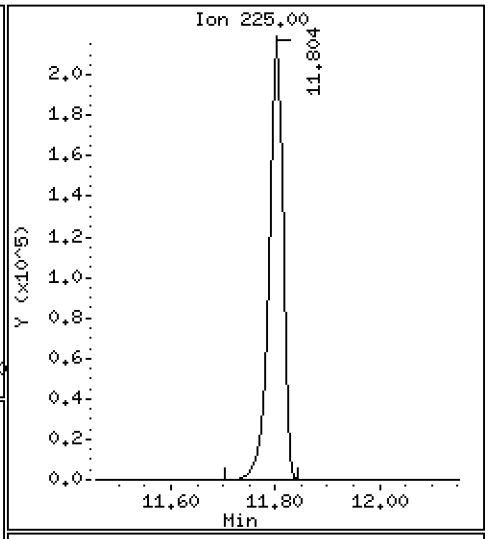
Column phase: ZB-5msi

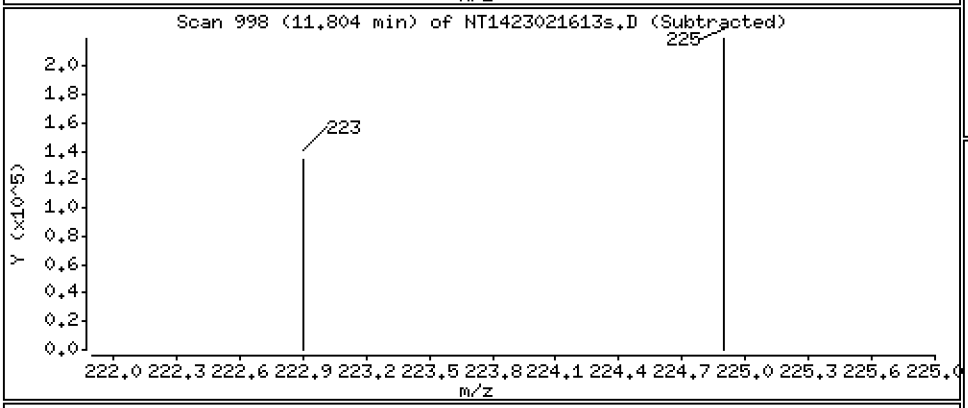
Column diameter: 0.25

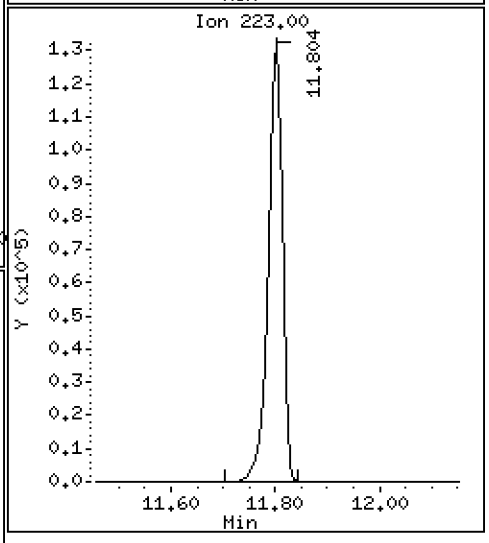
30 Hexachlorobutadiene

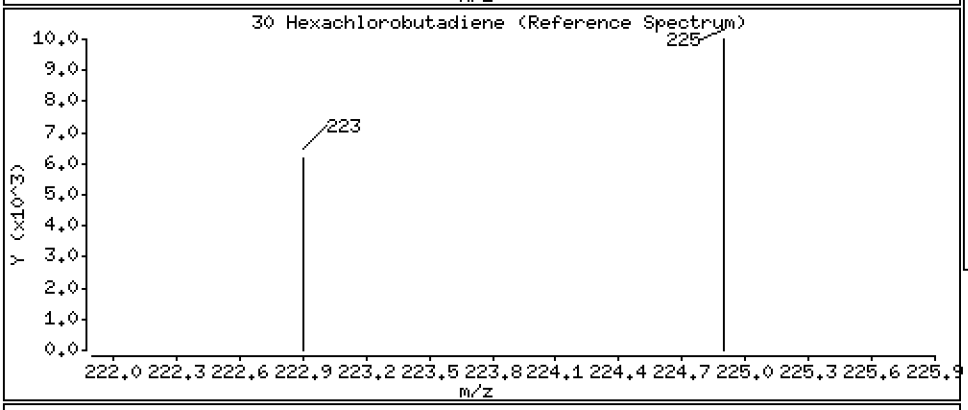
Concentration: 4.815 ug/mL

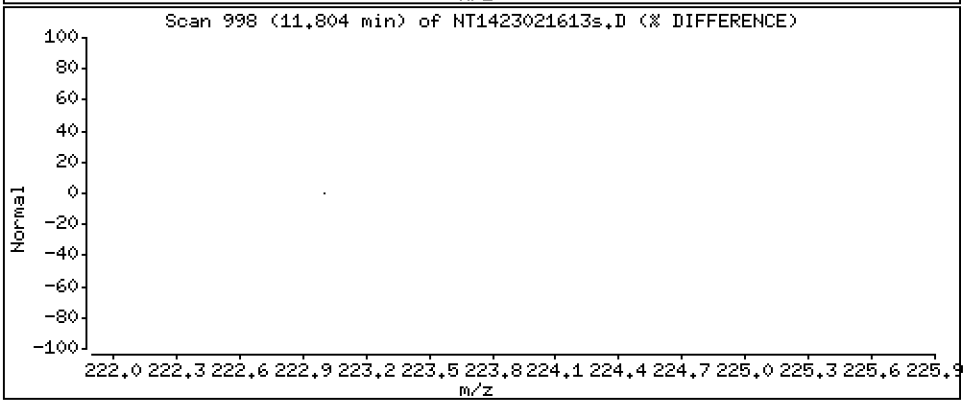












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

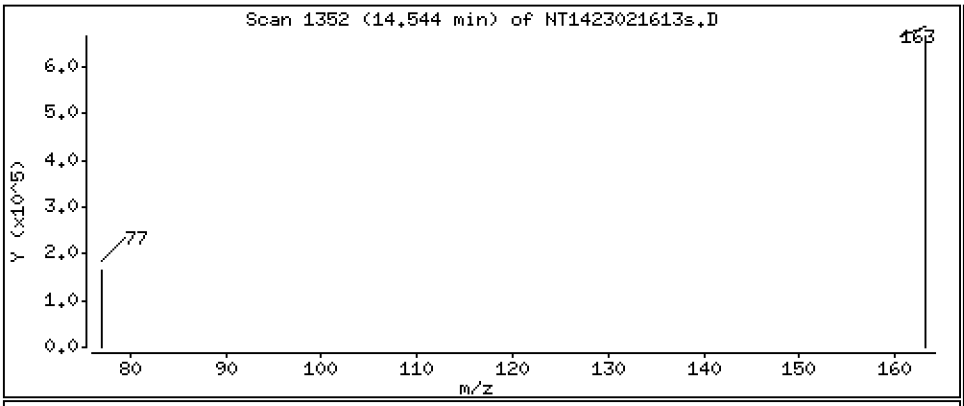
Operator: DSD

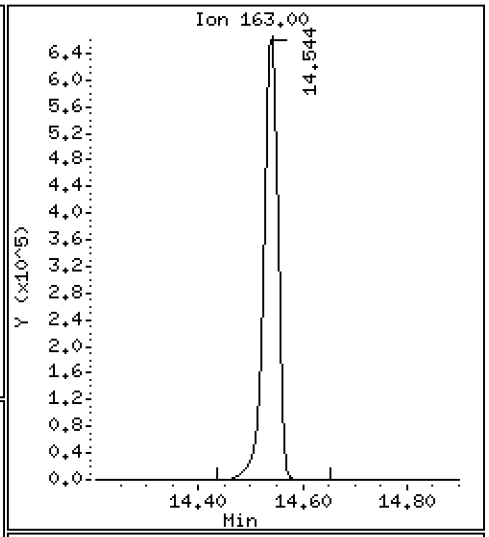
Column phase: ZB-5msi

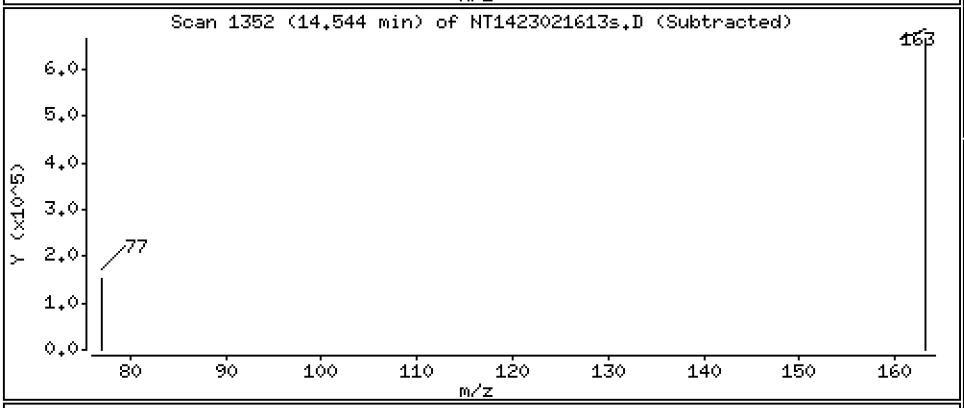
Column diameter: 0.25

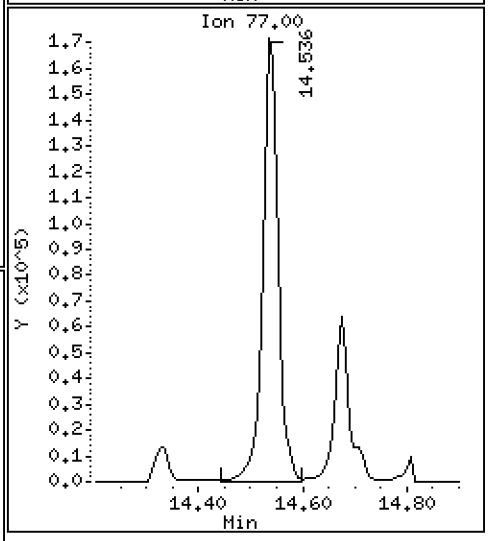
39 Dimethylphthalate

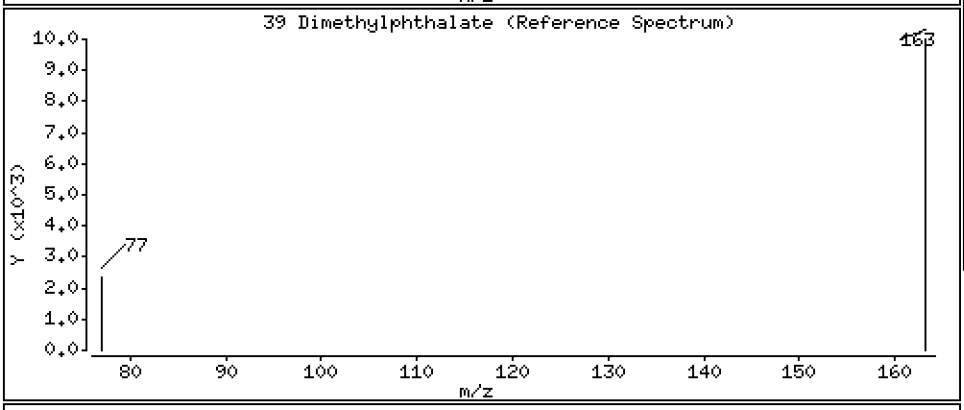
Concentration: 5.002 ug/mL

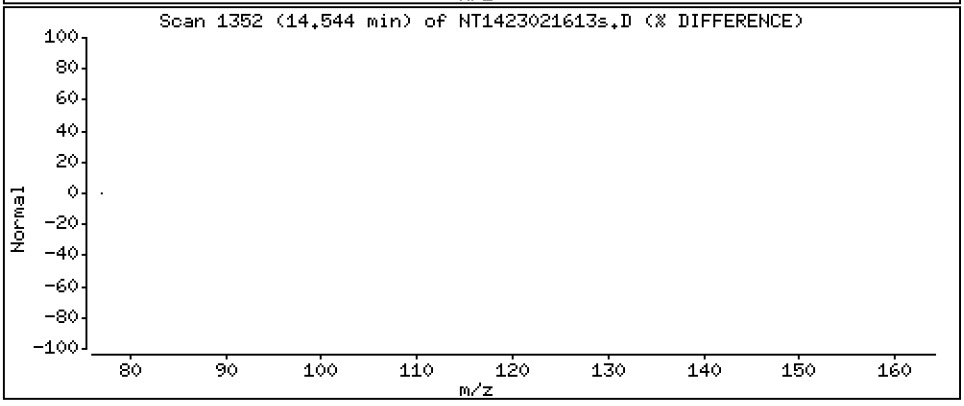












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

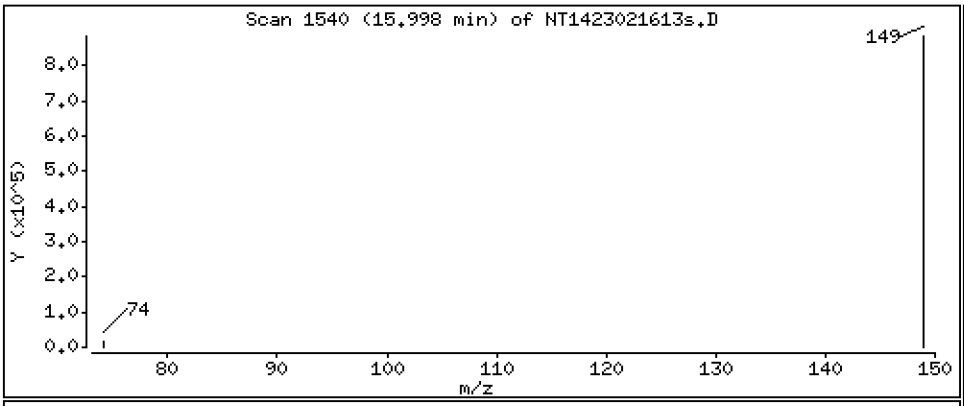
Operator: DSD

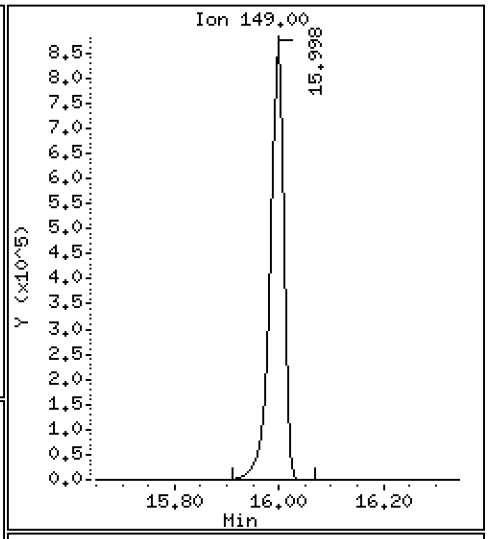
Column phase: ZB-5msi

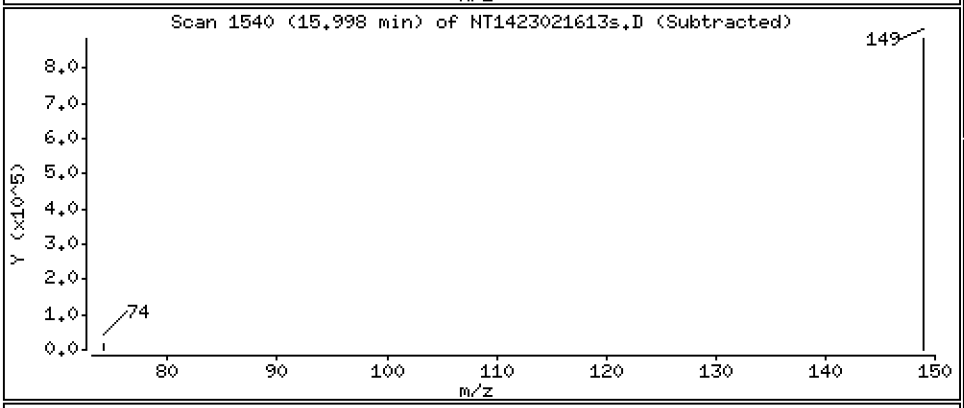
Column diameter: 0.25

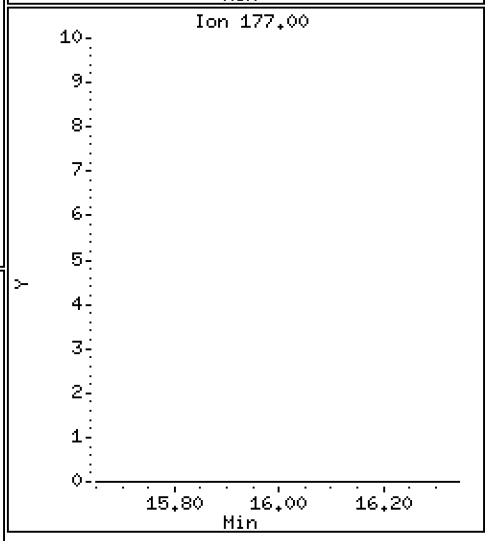
50 Diethylphthalate

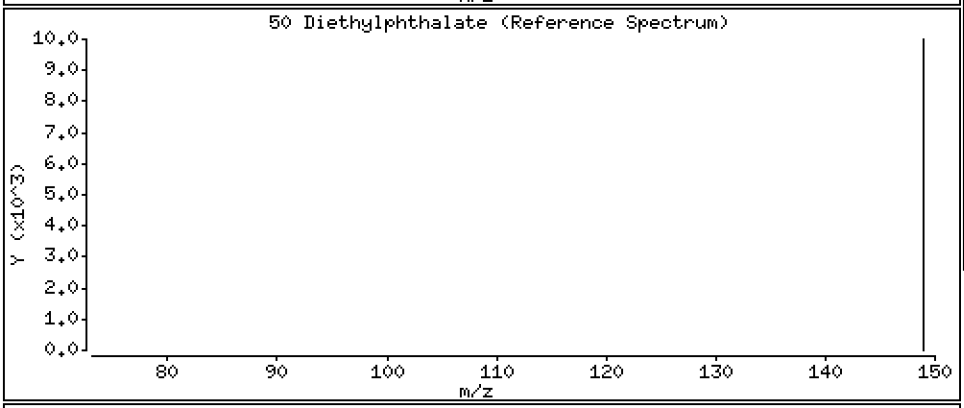
Concentration: 4.969 ug/mL

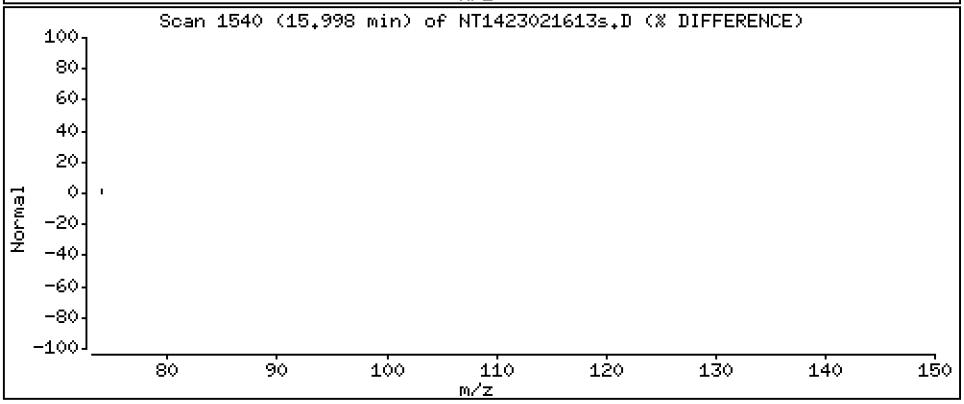












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

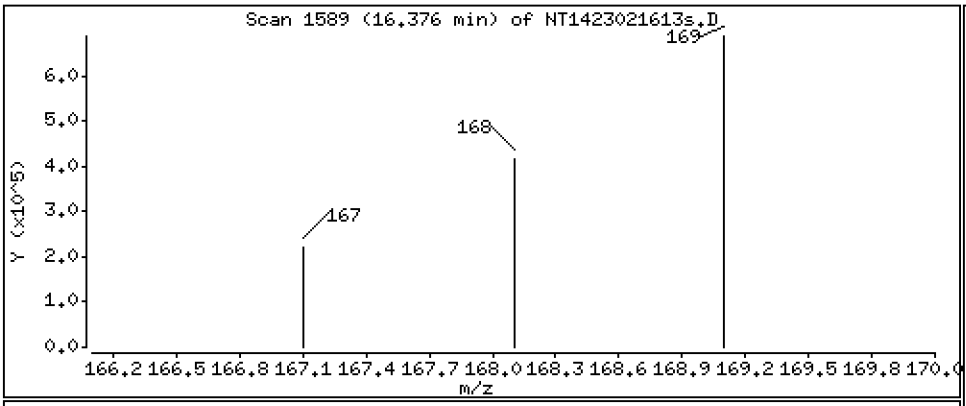
Operator: DSD

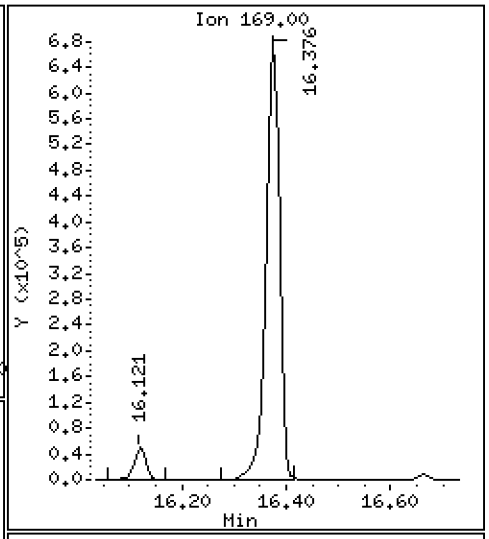
Column phase: ZB-5msi

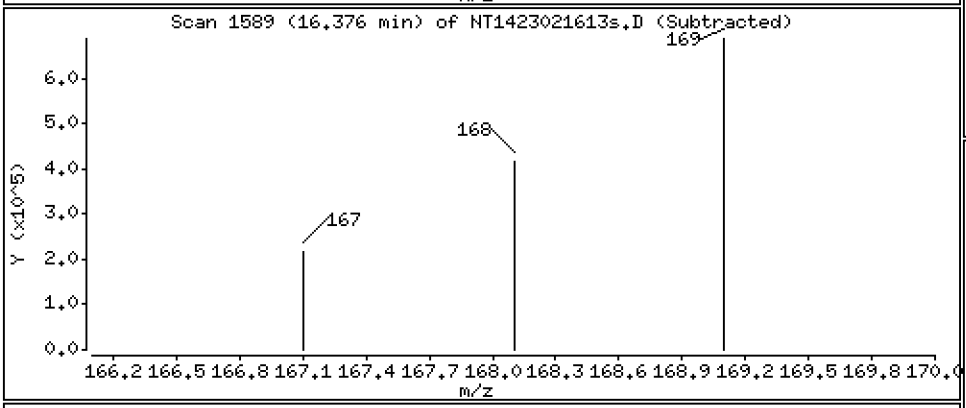
Column diameter: 0.25

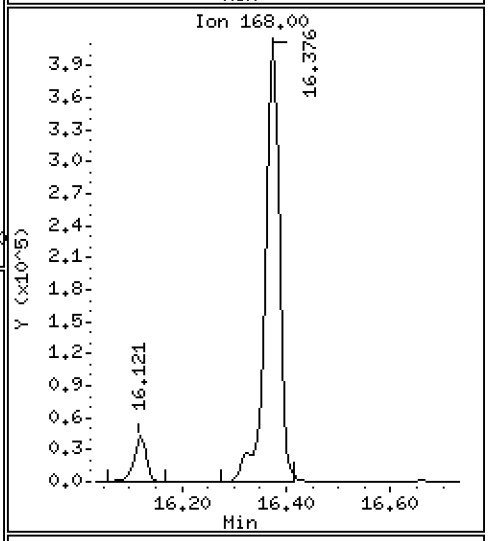
54 N-Nitrosodiphenylamine

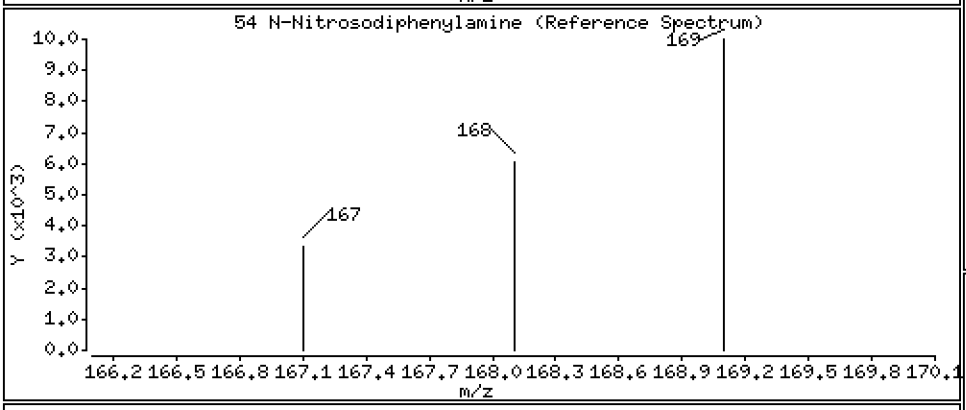
Concentration: 5.009 ug/mL

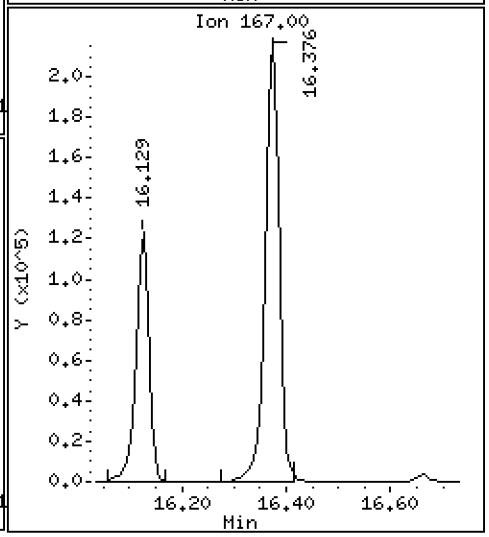


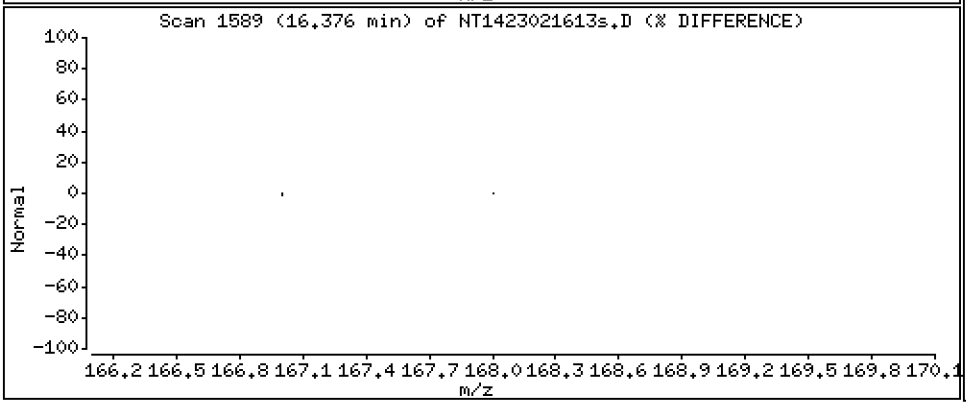












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

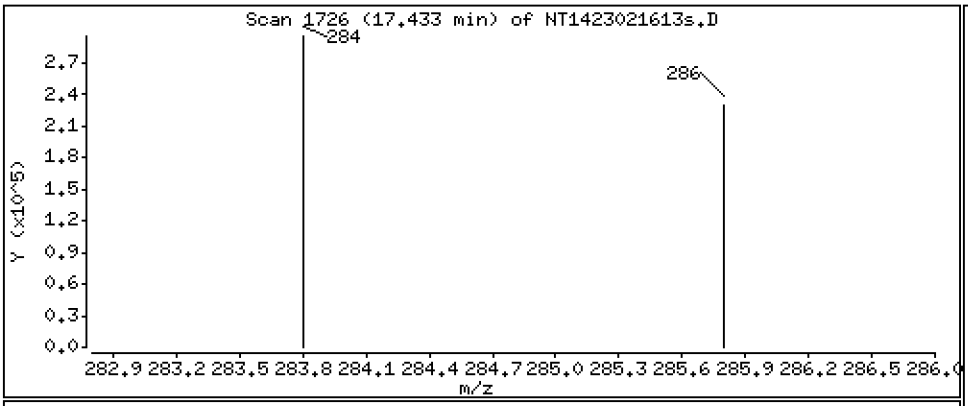
Operator: DSD

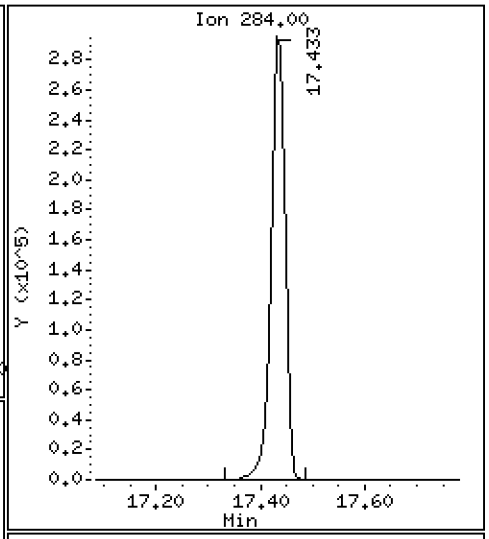
Column phase: ZB-5msi

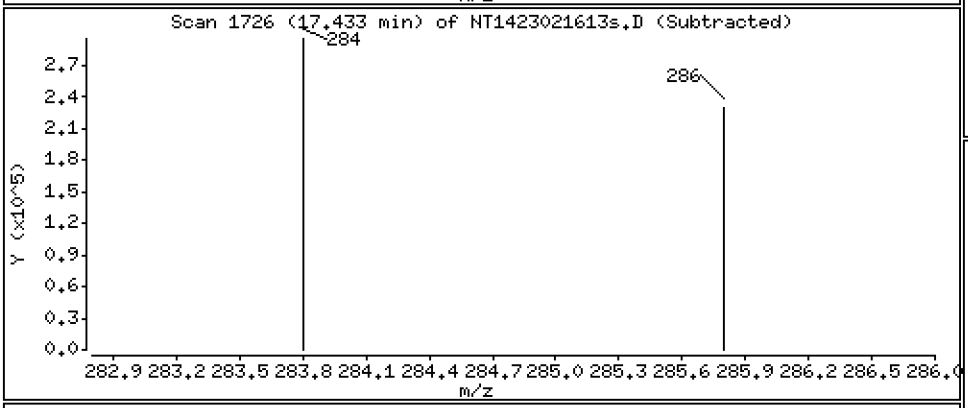
Column diameter: 0.25

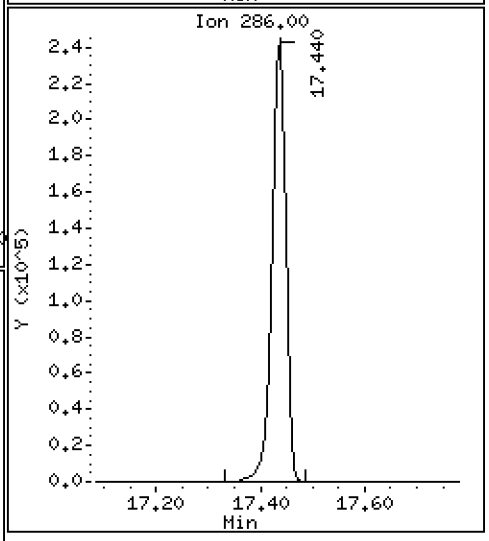
57 Hexachlorobenzene

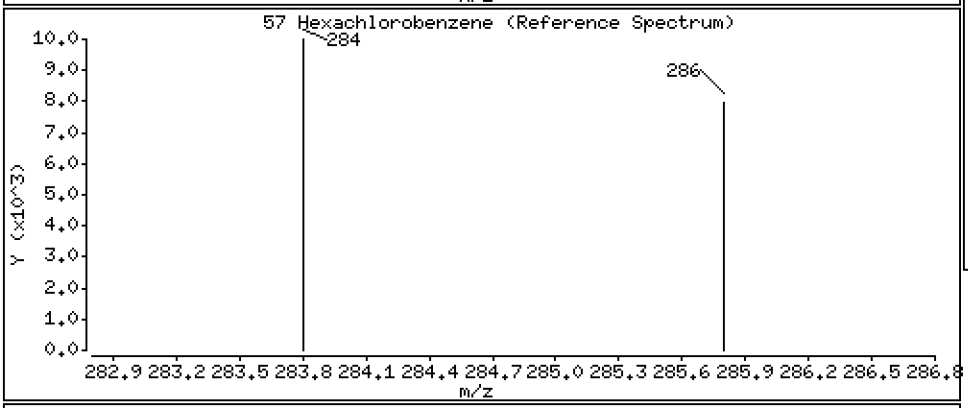
Concentration: 4.700 ug/mL

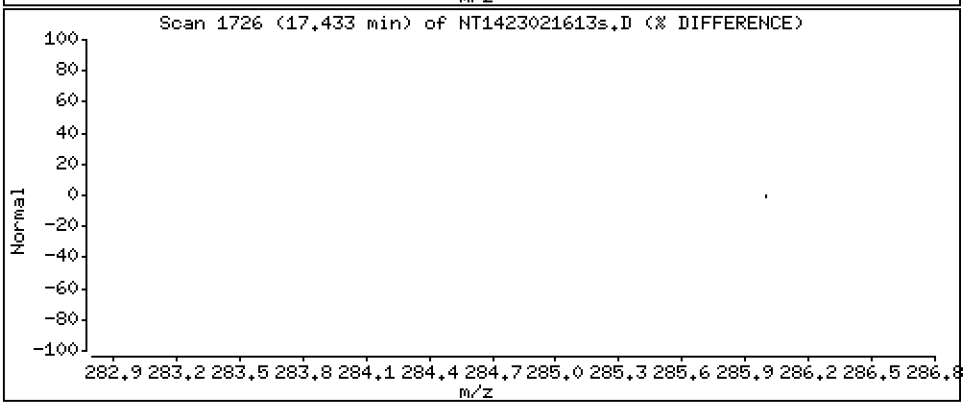












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

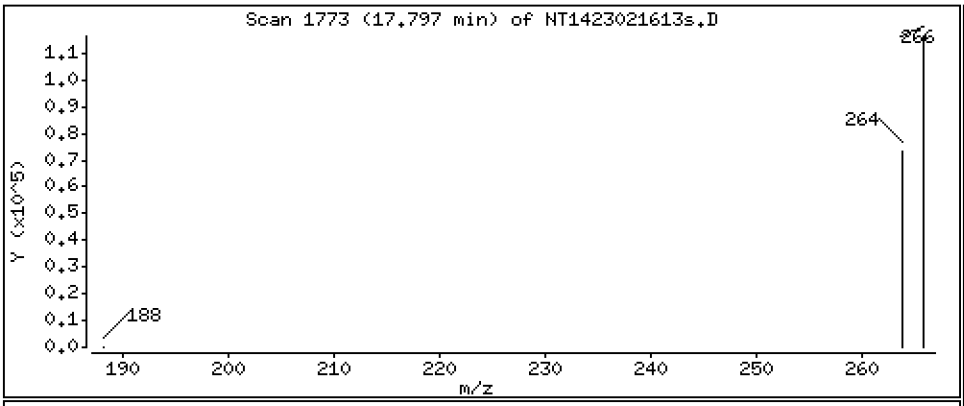
Operator: DSD

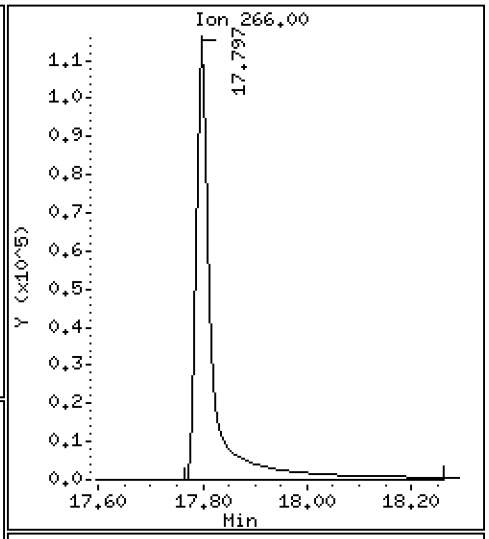
Column phase: ZB-5msi

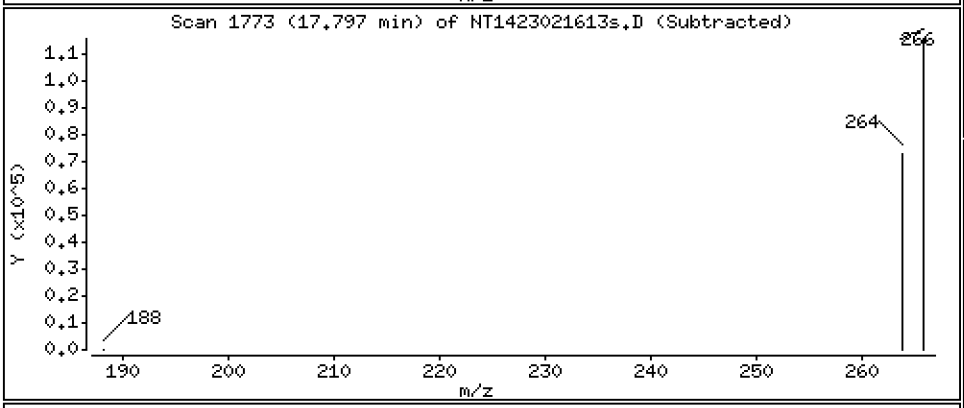
Column diameter: 0.25

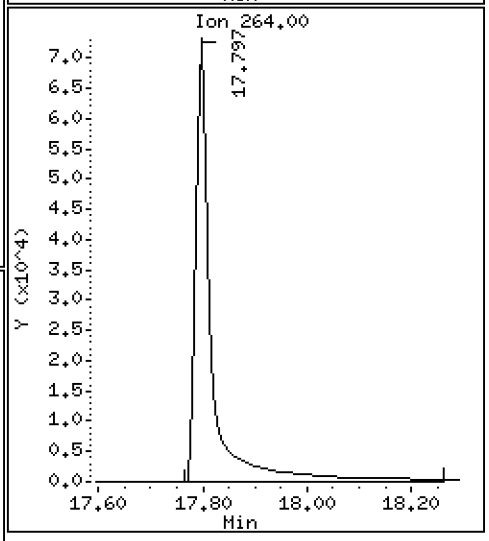
58 Pentachlorophenol

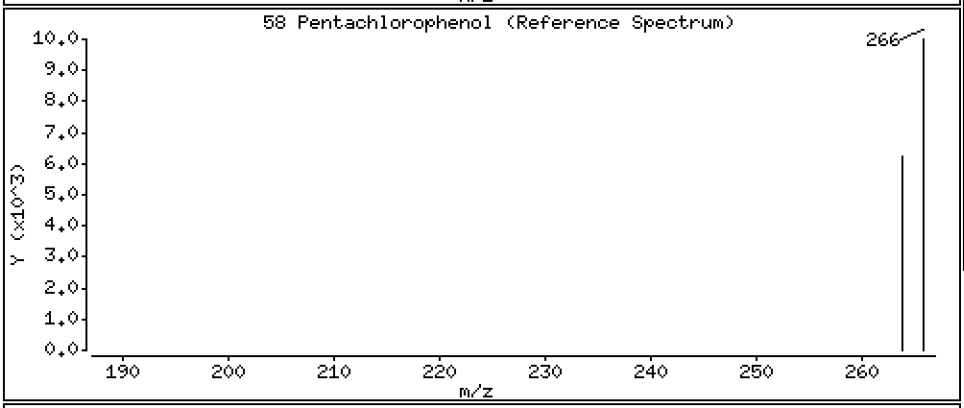
Concentration: 4.935 ug/mL

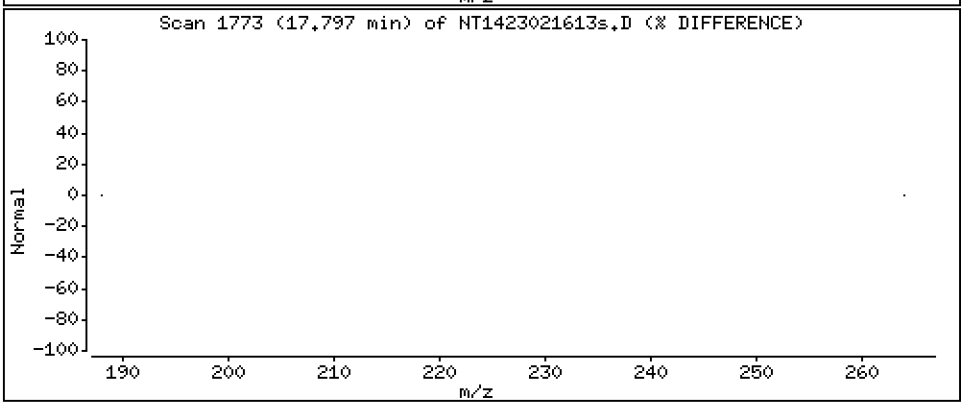












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

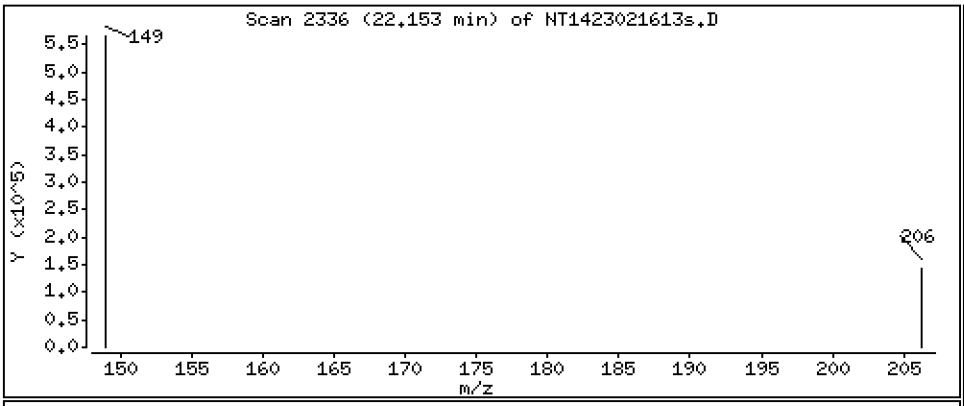
Operator: DSD

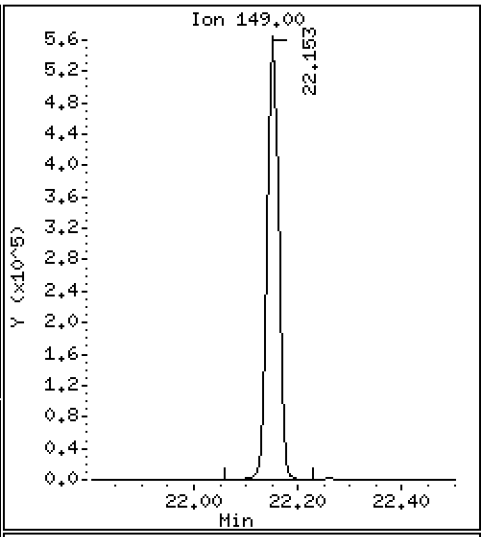
Column phase: ZB-5msi

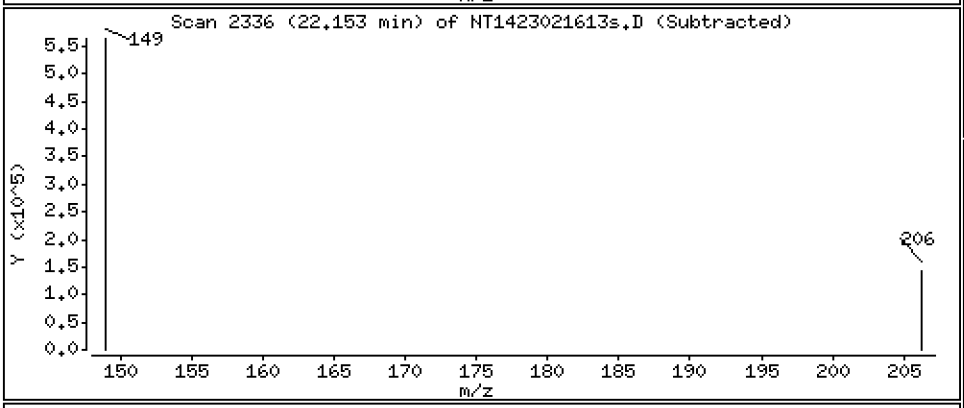
Column diameter: 0.25

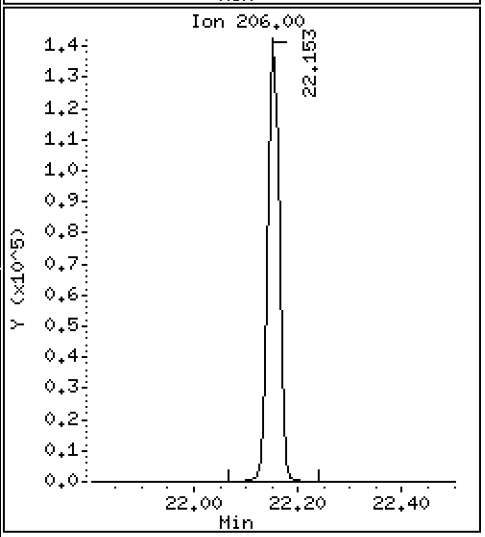
67 Butylbenzylphthalate

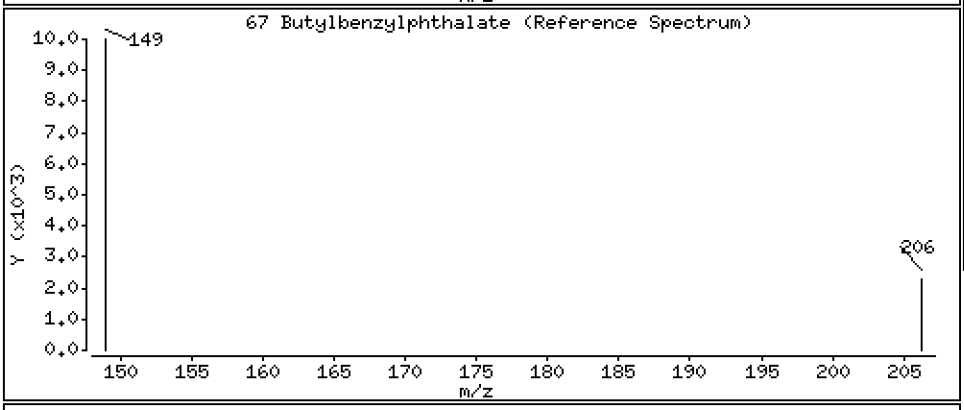
Concentration: 4.964 ug/mL

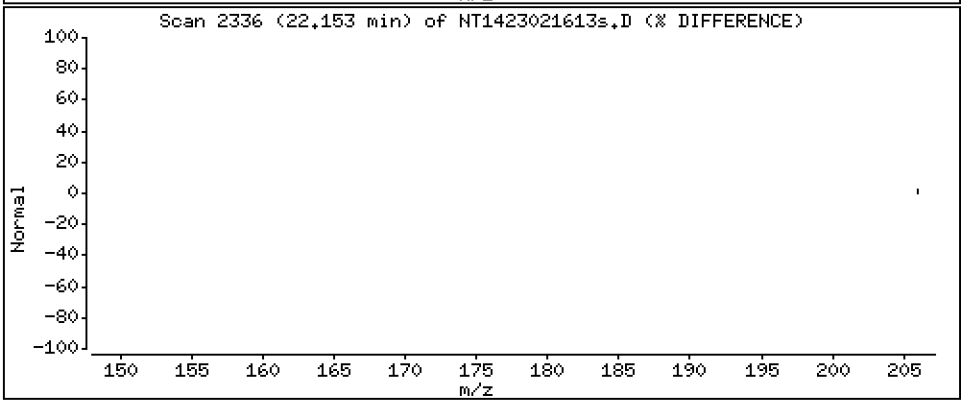












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

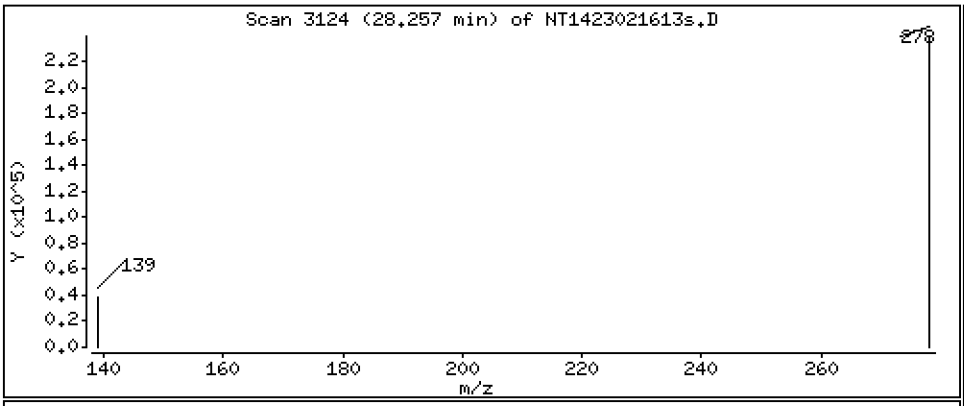
Operator: DSD

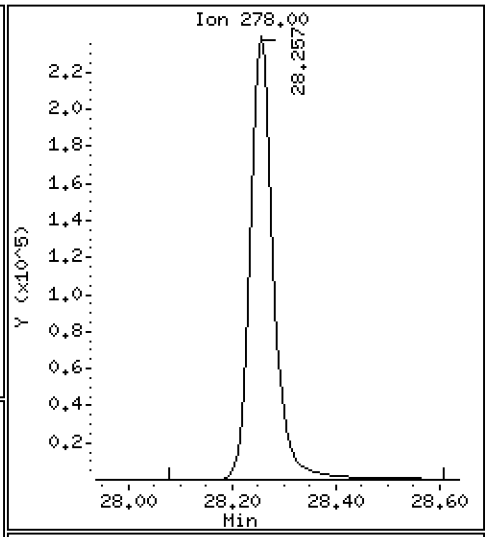
Column phase: ZB-5msi

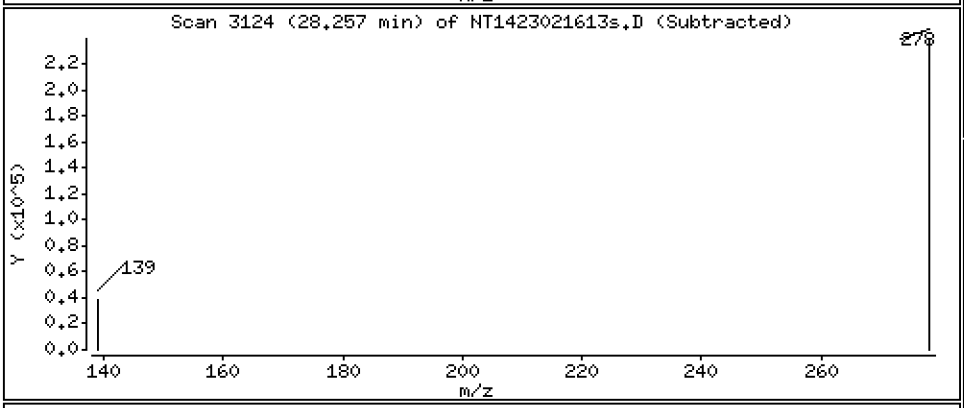
Column diameter: 0.25

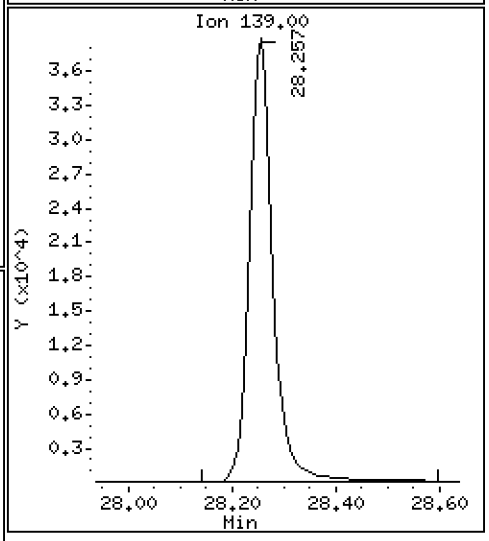
79 Dibenzo(a,h)anthracene

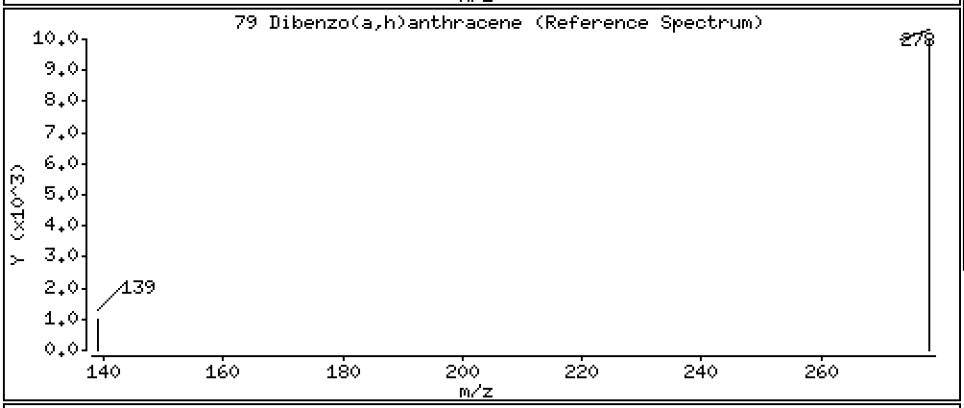
Concentration: 4.888 ug/mL

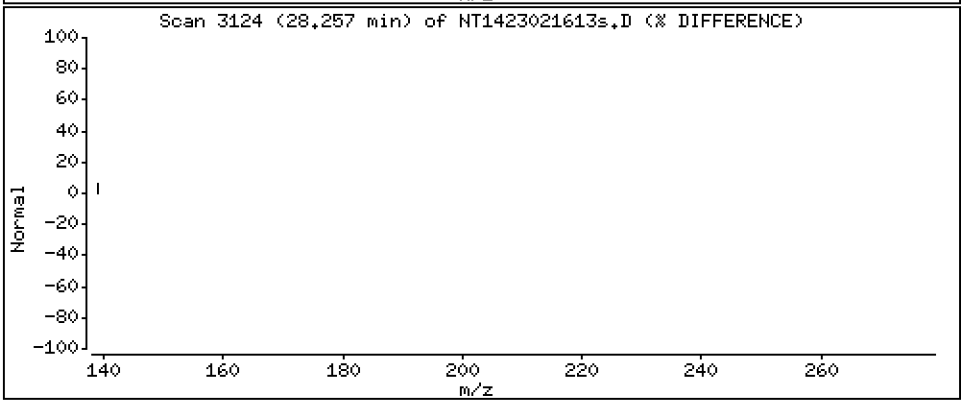












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

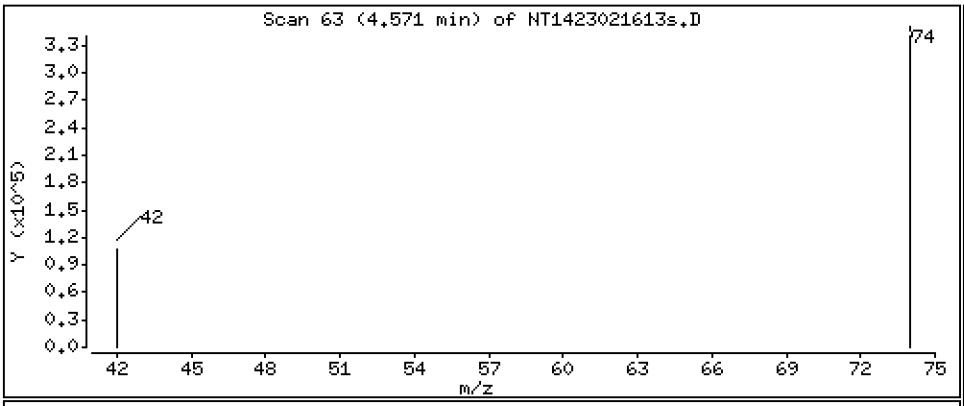
Operator: DSD

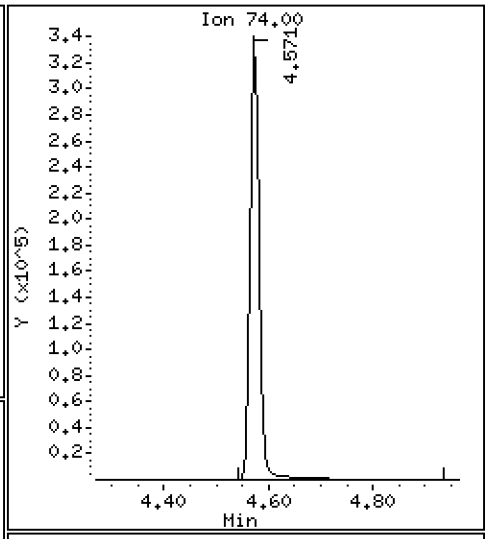
Column phase: ZB-5msi

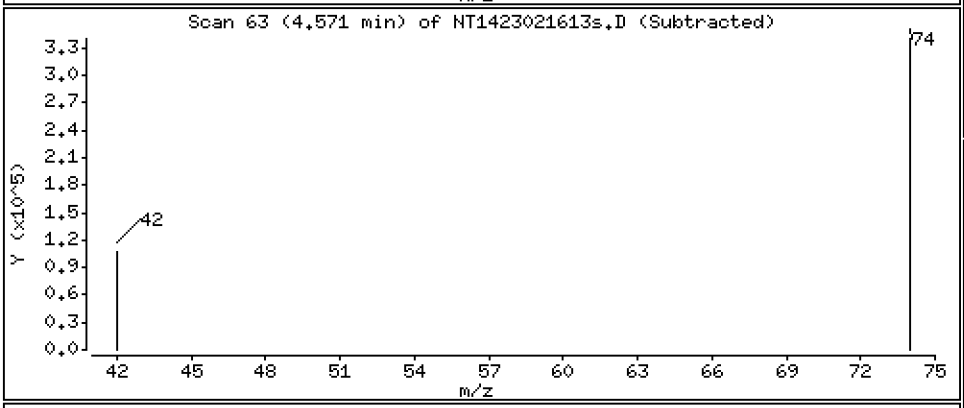
Column diameter: 0.25

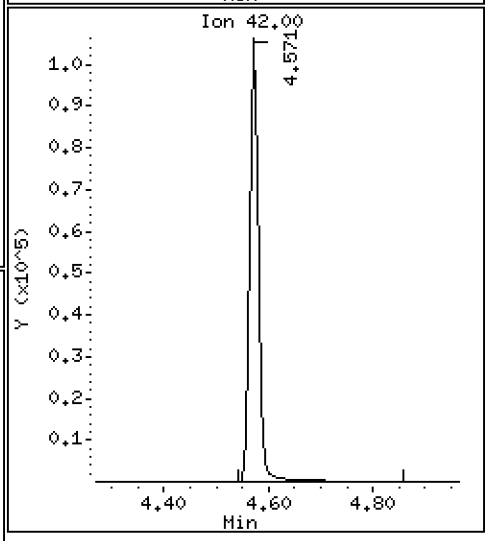
90 N-Nitrosodimethylamine

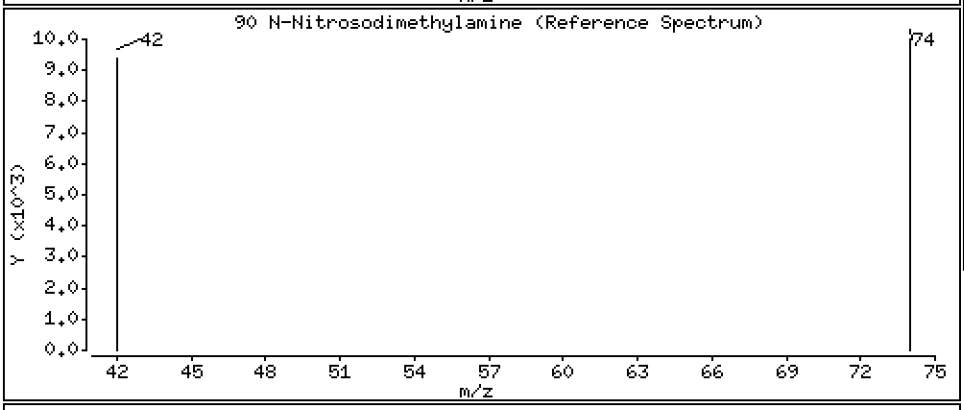
Concentration: 5.293 ug/mL

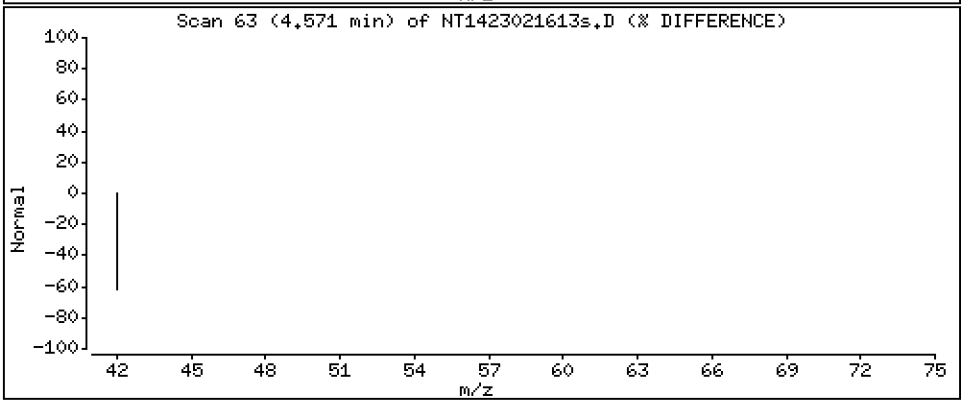












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D
Lab Smp Id: SLB0240-SCV1
Inj Date : 16-FEB-2023 21:18 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0240-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Meth Date : 03-Mar-2023 14:04 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.679	6.764	(0.750)	843875	7.69265	7.693(R)
	3 Phenol	94	8.294	8.379	(0.931)	773600	4.55614	4.556
	7 1,3-Dichlorobenzene	146	8.835	8.835	(0.992)	640622	4.80933	4.809
*	8 1,4-Dichlorobenzene-d4	152	8.905	8.905	(1.000)	391473	4.00000	
	9 1,4-Dichlorobenzene	146	8.936	8.936	(1.003)	616286	4.85010	4.850
	11 Benzyl alcohol	79	9.184	9.161	(1.031)	568264	5.30032	5.300
	12 1,2-Dichlorobenzene	146	9.293	9.293	(1.044)	605835	4.79526	4.795
	13 2-Methylphenol	108	9.409	9.433	(1.057)	523707	4.50674	4.507
	15 4-Methylphenol	108	9.689	9.720	(1.088)	579099	4.46016	4.460
	16 N-Nitroso-di-n-propylamine	70	9.743	9.767	(1.094)	517307	5.04663	5.047
	22 2,4-Dimethylphenol	107	10.728	10.745	(0.942)	488898	3.90295	3.903
	24 Benzoic acid	105	10.938	11.116	(0.960)	436009	6.44677	6.447
	26 1,2,4-Trichlorobenzene	180	11.309	11.310	(0.993)	602290	4.59532	4.595
*	27 Naphthalene-d8	136	11.394	11.394	(1.000)	1430650	4.00000	
	30 Hexachlorobutadiene	225	11.804	11.804	(1.036)	383880	4.81466	4.815
	39 Dimethylphthalate	163	14.543	14.551	(0.968)	1212628	5.00209	5.002
*	42 Acenaphthene-d10	162	15.023	15.016	(1.000)	794620	4.00000	
	50 Diethylphthalate	149	15.997	15.997	(1.065)	1507744	4.96936	4.969
	54 N-Nitrosodiphenylamine	169	16.375	16.384	(0.907)	1157201	5.00925	5.009(H)
	57 Hexachlorobenzene	284	17.432	17.432	(0.965)	537021	4.70048	4.700
	58 Pentachlorophenol	266	17.796	17.944	(0.985)	240806	4.93475	4.935
*	59 Phenanthrene-d10	188	18.059	18.059	(1.000)	1759092	4.00000	
$	66 Terphenyl-d14	244	21.224	21.224	(0.918)	1463833	4.57604	4.576(R)
	67 Butylbenzylphthalate	149	22.153	22.153	(0.958)	814994	4.96402	4.964
*	69 Chrysene-d12	240	23.128	23.121	(1.000)	1201603	4.00000	
*	77 Perylene-d12	264	25.691	25.691	(1.000)	814421	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.257	28.288	(1.100)	772593	4.88838	4.888
	90 N-Nitrosodimethylamine	74	4.571	4.618	(0.513)	440424	5.29346	5.293

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021613s.D
Lab Smp Id: SLB0240-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 18:18
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	393779	196890	787558	391473	-0.59
27 Naphthalene-d8	1399029	699515	2798058	1430650	2.26
42 Acenaphthene-d10	759723	379862	1519446	794620	4.59
59 Phenanthrene-d10	1756156	878078	3512312	1759092	0.17
69 Chrysene-d12	1174128	587064	2348256	1201603	2.34
77 Perylene-d12	826011	413006	1652022	814421	-1.40

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.91	8.41	9.41	8.91	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	0.05
59 Phenanthrene-d10	18.06	17.56	18.56	18.06	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.13	0.03
77 Perylene-d12	25.68	25.18	26.18	25.69	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021613s.D

Lab ID: SLB0240-SCV1
nt14.i, 20230216.b\20230216.b\SIMABN2.m,   16-FEB-2023 21:18

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.931	0.941	-0.0095	Phenol
0.960	0.000	0.9599	Benzoic acid
0.513	0.518	-0.0052	N-Nitrosodimethylamine
0.985	0.000	0.9854	Pentachlorophenol
0.750	0.760	-0.0095	2-Fluorophenol

RRT check based on Ccal File: 20230216.b/NT1423021612s.D

On Column LOD for nt14.i, 20230216.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00009
Laboratory ID: SLB0240-SCV1
Sequence: SLB0240
Standard ID: K010066

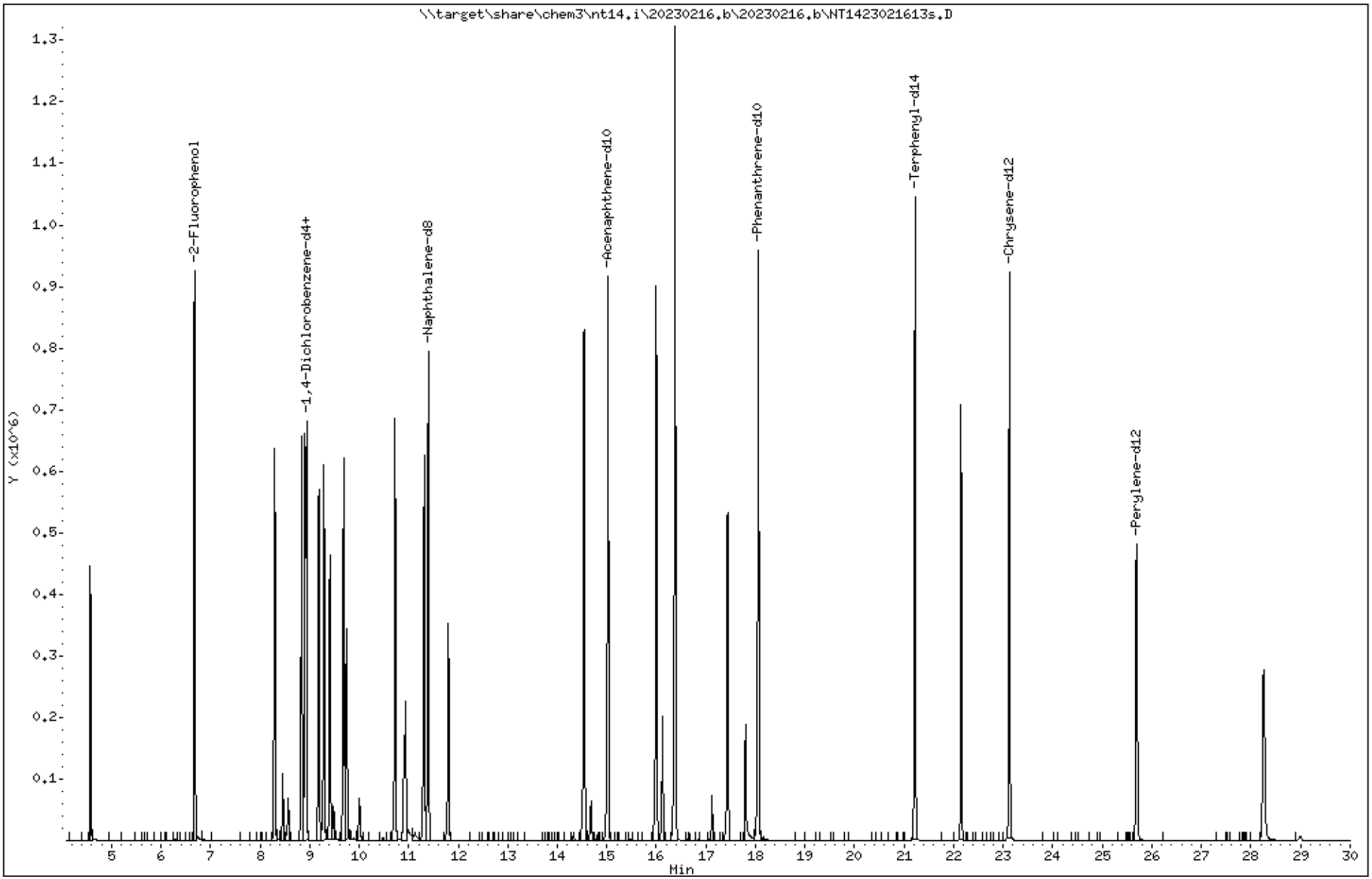
ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	5.0000	4.56	-8.9	20.00
1,3-Dichlorobenzene	5.0000	4.81	-3.8	20.00
1,4-Dichlorobenzene	5.0000	4.85	-3.0	20.00
1,2-Dichlorobenzene	5.0000	4.80	-4.1	20.00
Benzyl Alcohol	5.0000	5.30	6.0	20.00
Benzoic acid	10.000	6.45	-35.5 *	20.00
2-Methylphenol	5.0000	4.51	-9.9	20.00
N-Nitroso-di-n-Propylamine	5.0000	5.05	0.9	20.00
4-Methylphenol	5.0000	4.46	-10.8	20.00
2,4-Dimethylphenol	5.0000	3.90	-21.9 *	20.00
1,2,4-Trichlorobenzene	5.0000	4.60	-8.1	20.00
Hexachlorobutadiene	5.0000	4.81	-3.7	20.00
N-Nitrosodimethylamine	5.0000	5.29	5.9	20.00
Dimethylphthalate	5.0000	5.00	0.04	20.00
Diethyl phthalate	5.0000	4.97	-0.6	20.00
N-Nitrosodiphenylamine	5.0000	5.01	0.2	20.00
Hexachlorobenzene	5.0000	4.70	-6.0	20.00
Pentachlorophenol	5.0000	4.93	-1.3	20.00
Butylbenzylphthalate	5.0000	4.96	-0.7	20.00
Dibenzo(a,h)anthracene	5.0000	4.89	-2.2	20.00
2-Fluorophenol	7.5000	7.69	2.6	
p-Terphenyl-d14	5.0000	4.58	-8.5	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D
Date : 16-FEB-2023 21:18
Client ID:
Sample Info: SLB0240-SCV1

Instrument: nt14.i
Operator: DSD
Column diameter: 0.25

Column phase: ZB-5msi



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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

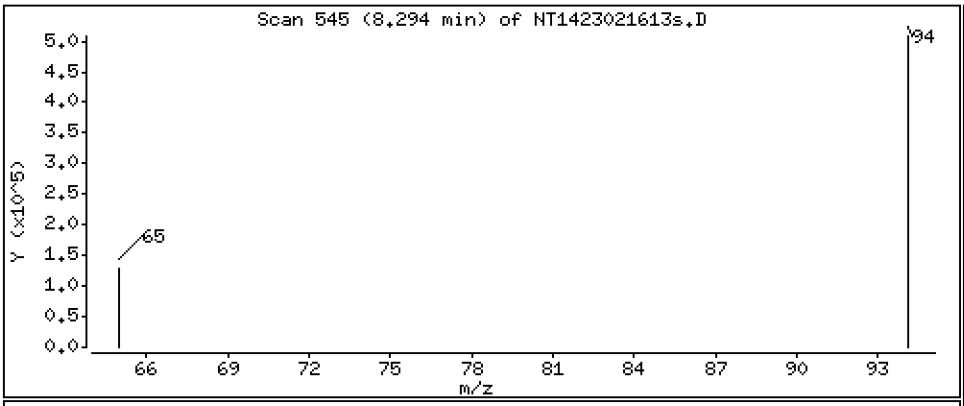
Operator: DSD

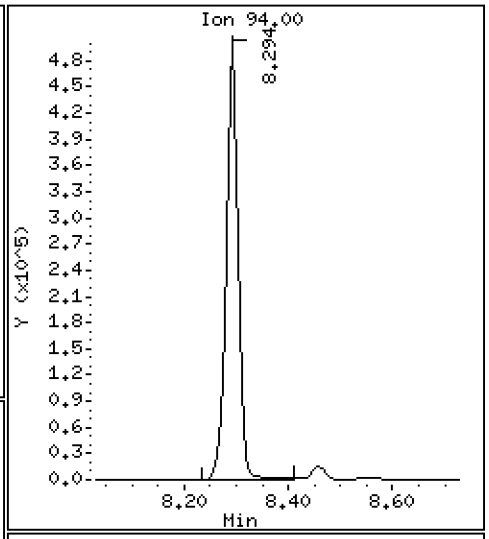
Column phase: ZB-5msi

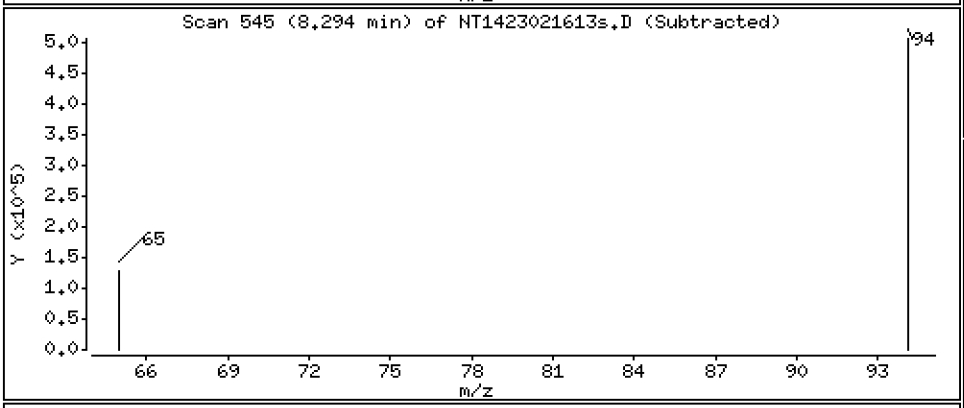
Column diameter: 0.25

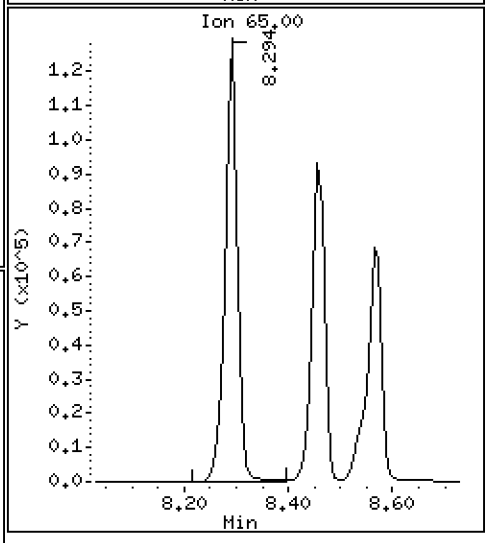
3 Phenol

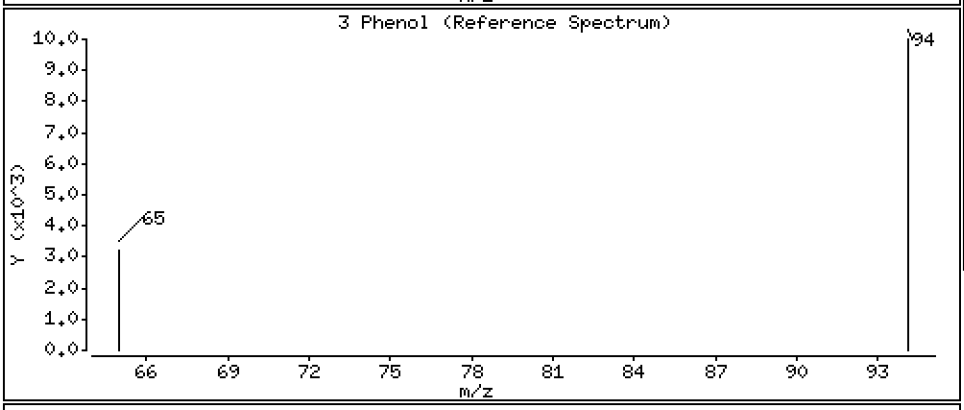
Concentration: 4.556 ug/mL

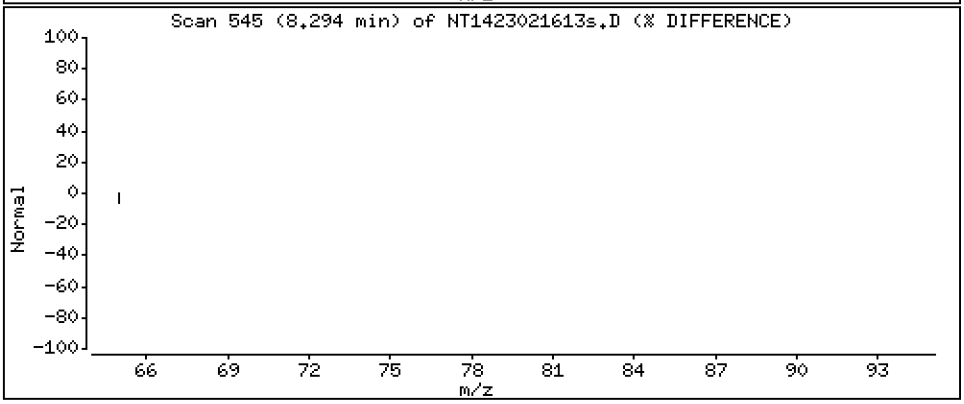












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

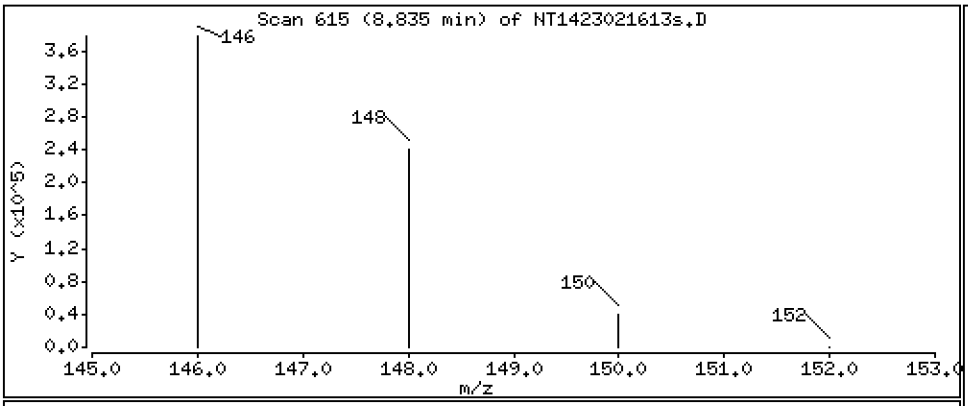
Operator: DSD

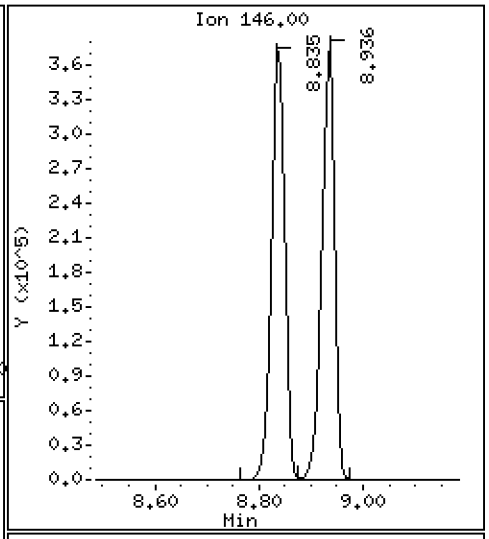
Column phase: ZB-5msi

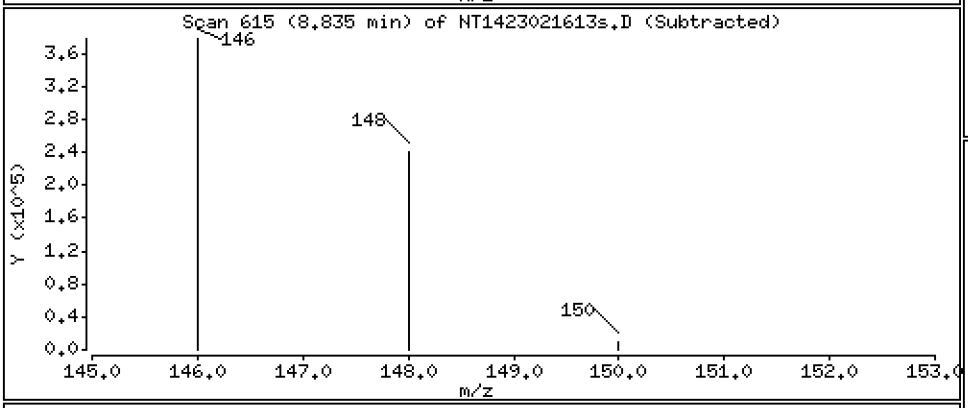
Column diameter: 0.25

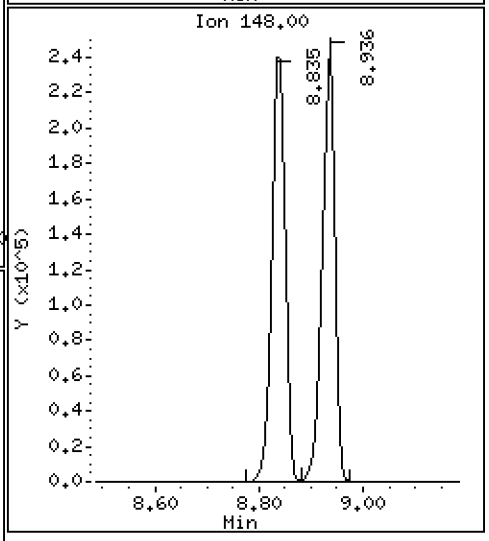
7 1,3-Dichlorobenzene

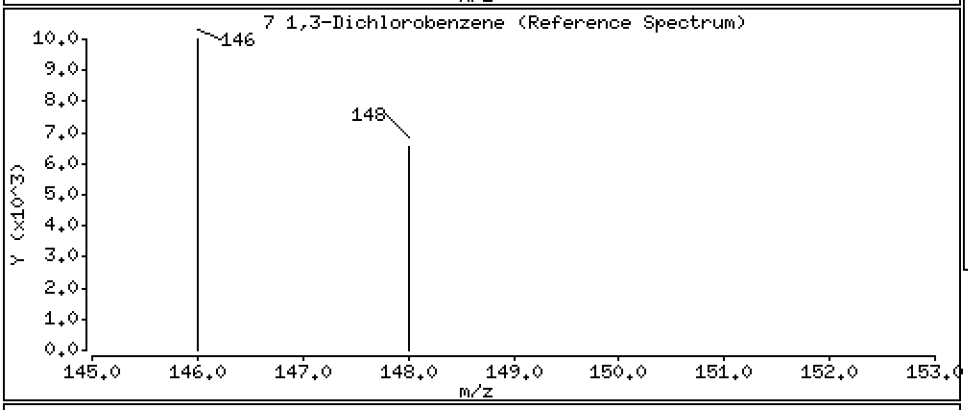
Concentration: 4.809 ug/mL

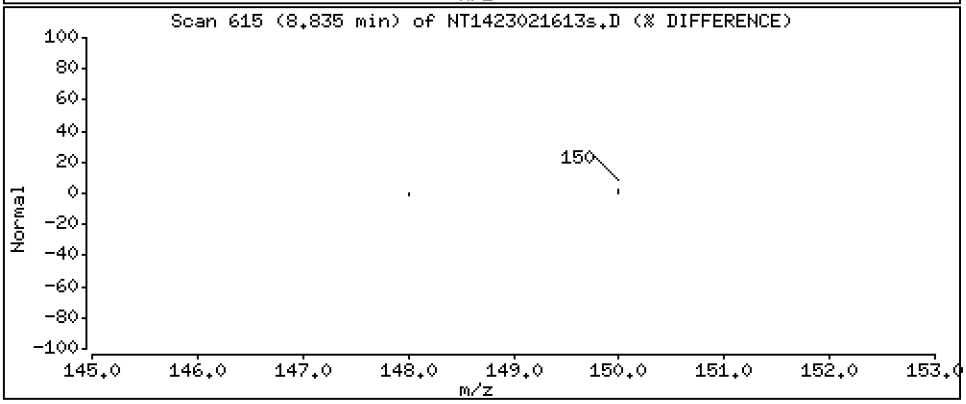












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

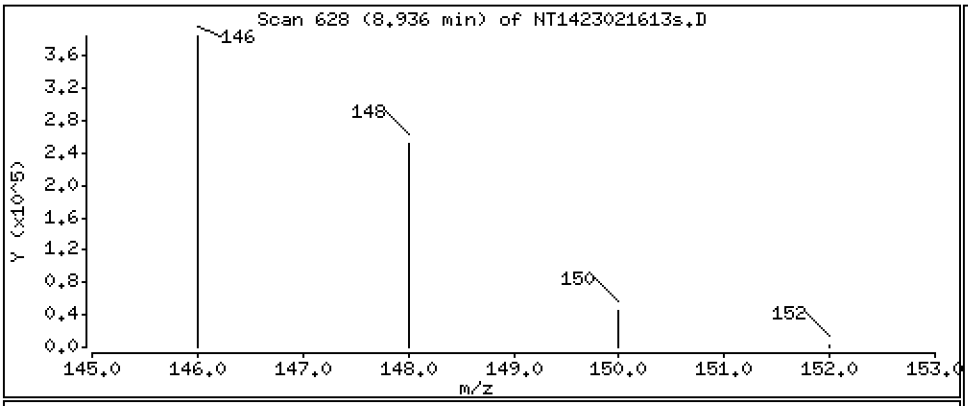
Operator: DSD

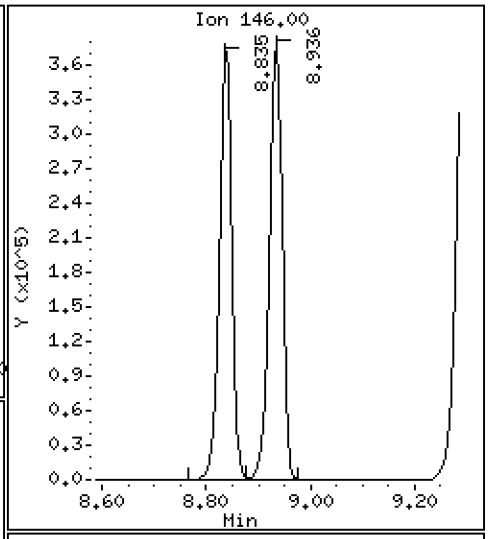
Column phase: ZB-5msi

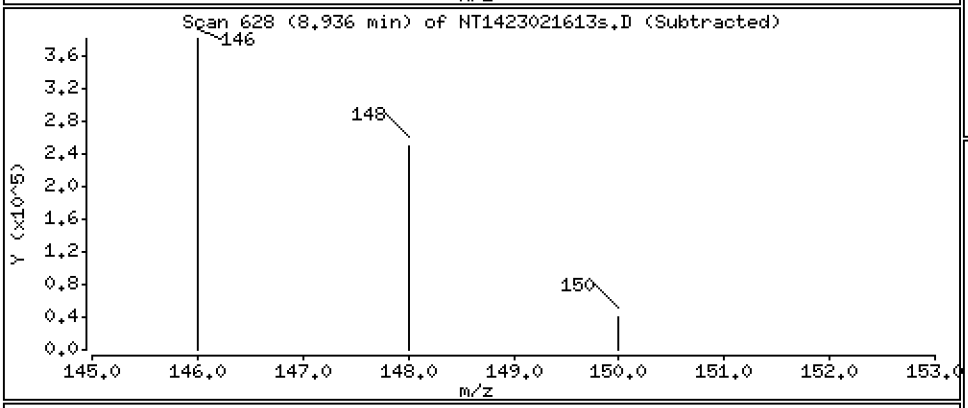
Column diameter: 0.25

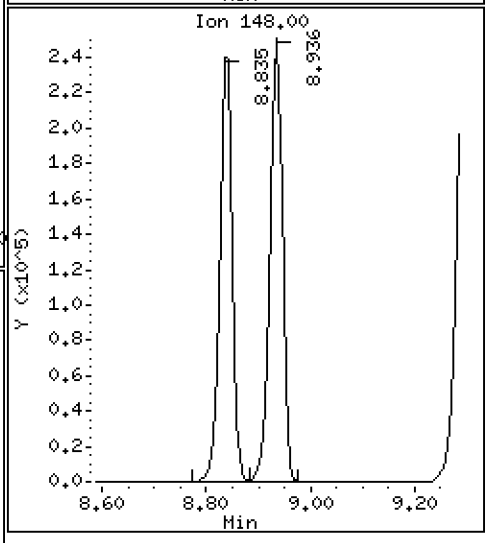
9 1,4-Dichlorobenzene

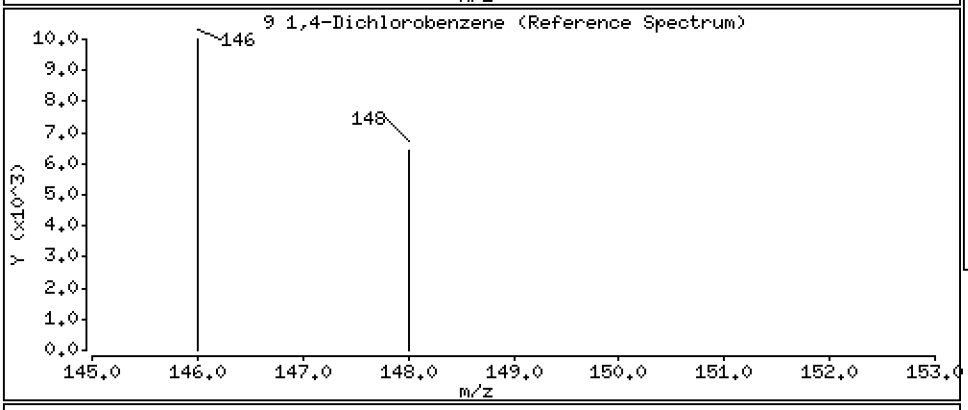
Concentration: 4.850 ug/mL

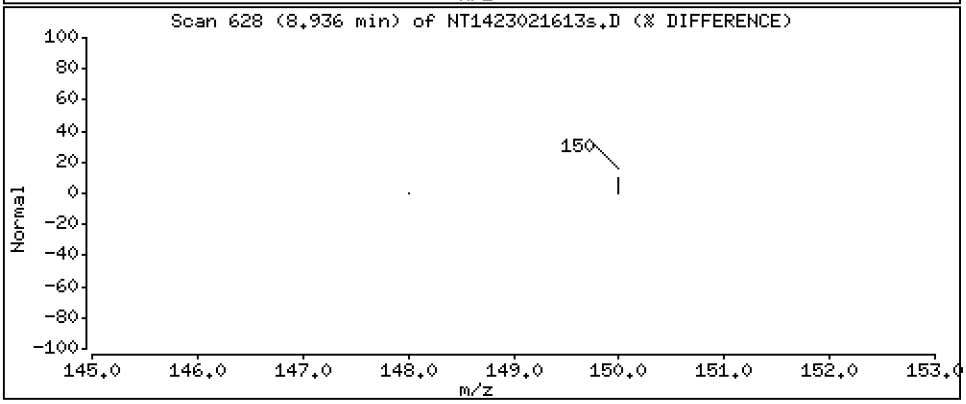












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

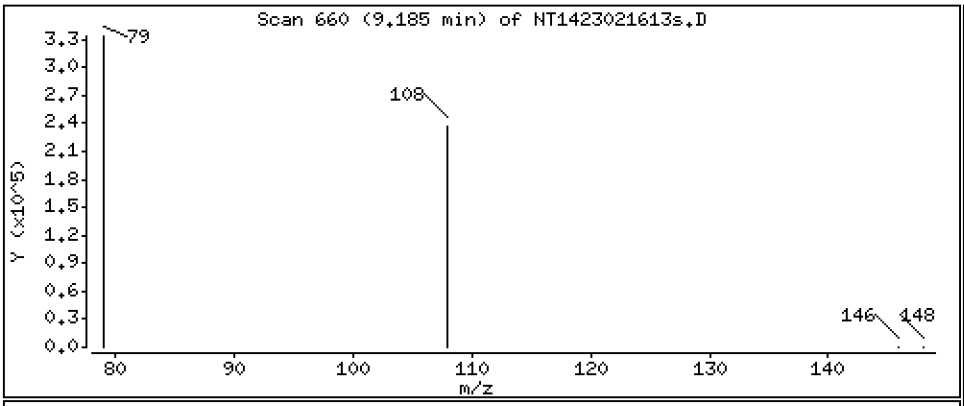
Operator: DSD

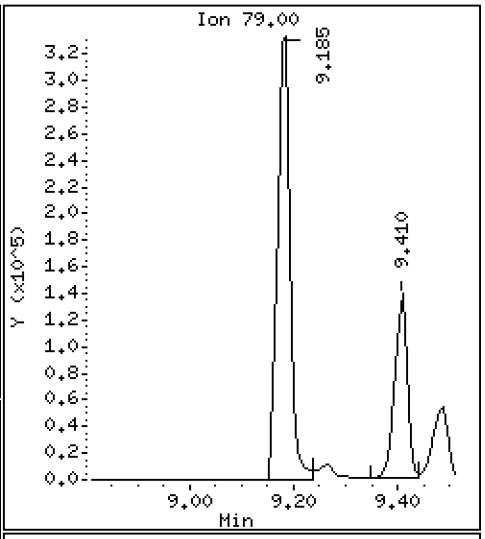
Column phase: ZB-5msi

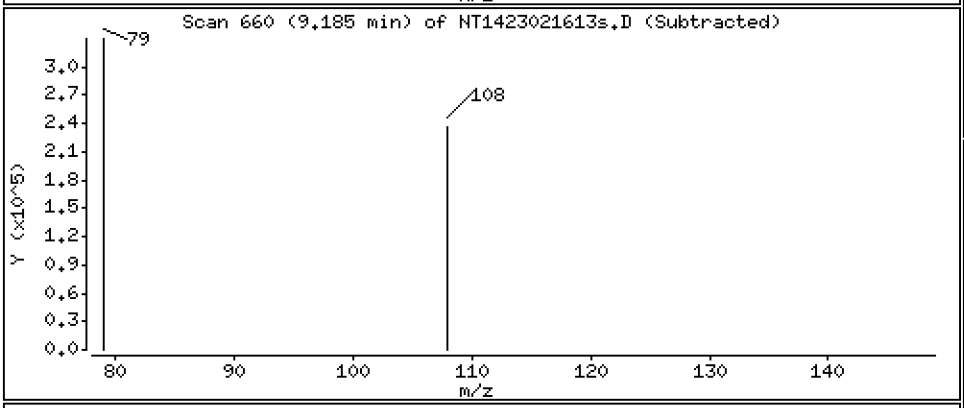
Column diameter: 0.25

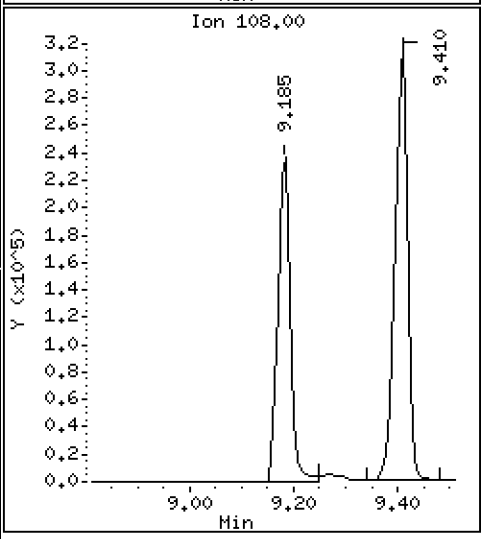
11 Benzyl alcohol

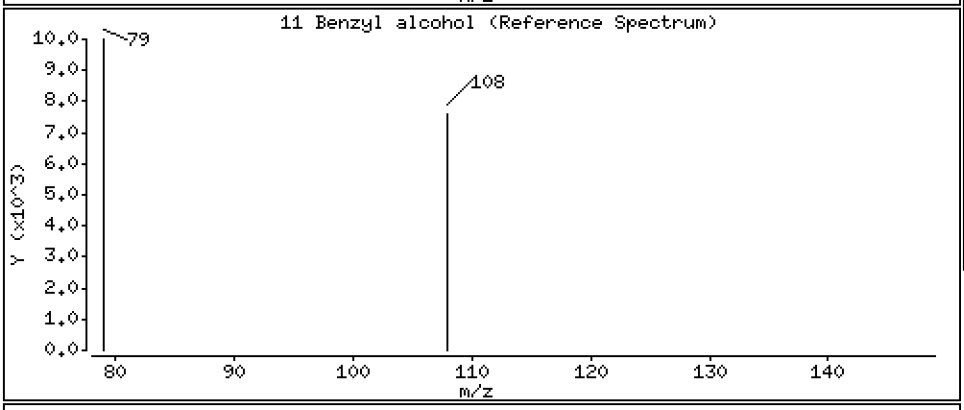
Concentration: 5.300 ug/mL

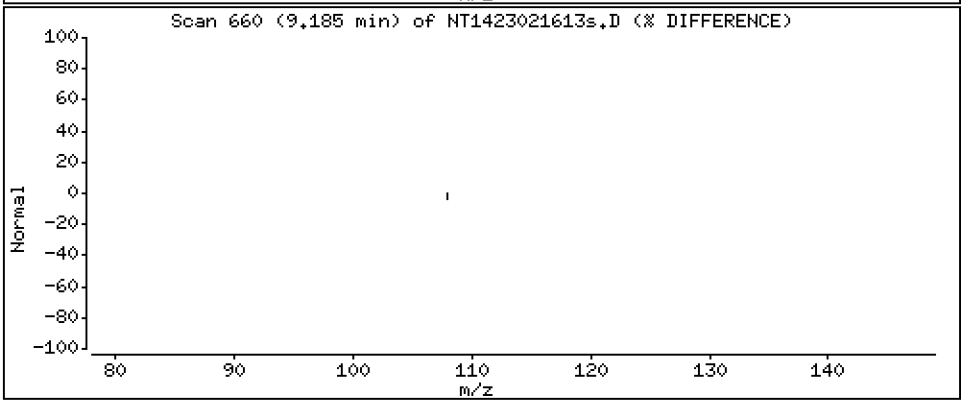












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

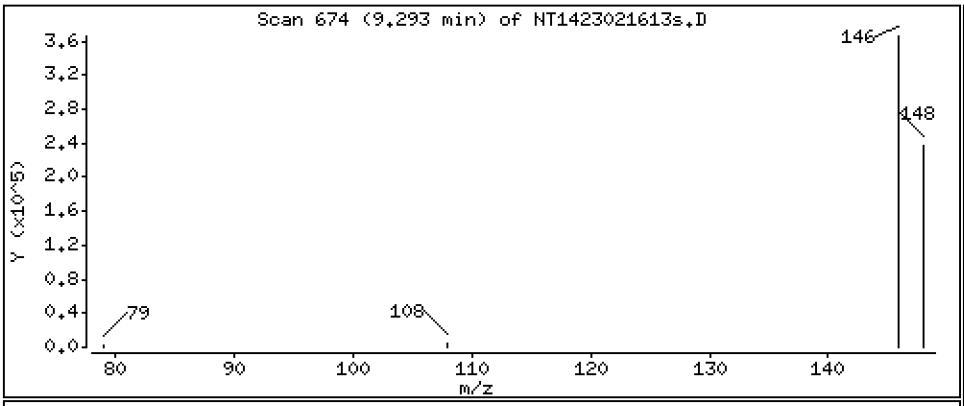
Operator: DSD

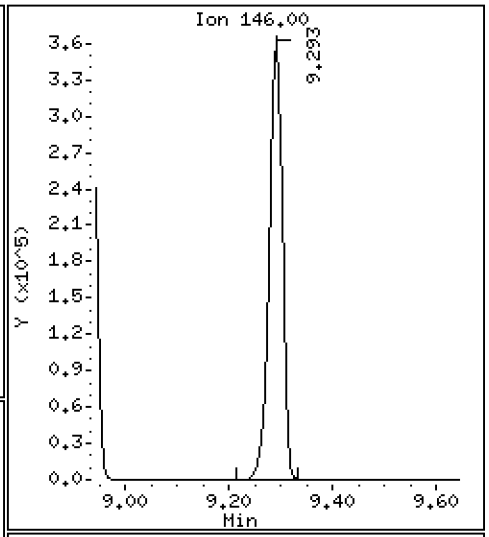
Column phase: ZB-5msi

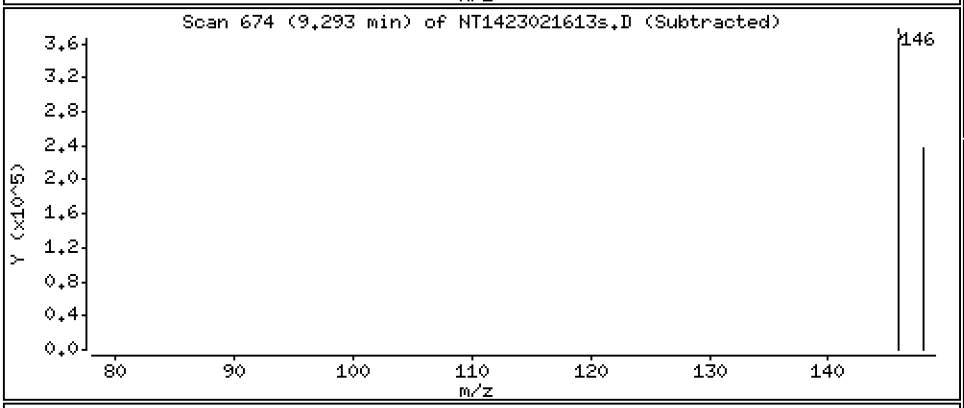
Column diameter: 0.25

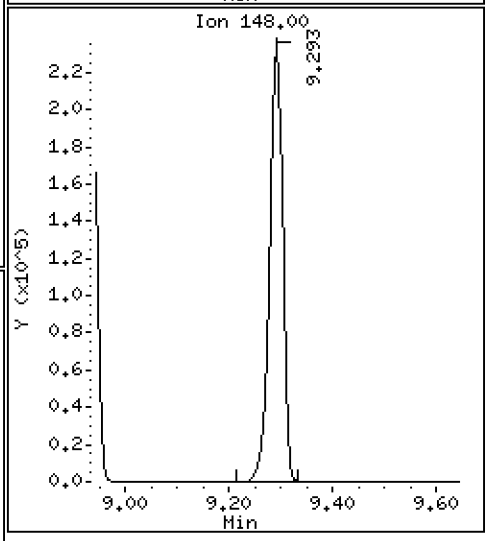
12 1,2-Dichlorobenzene

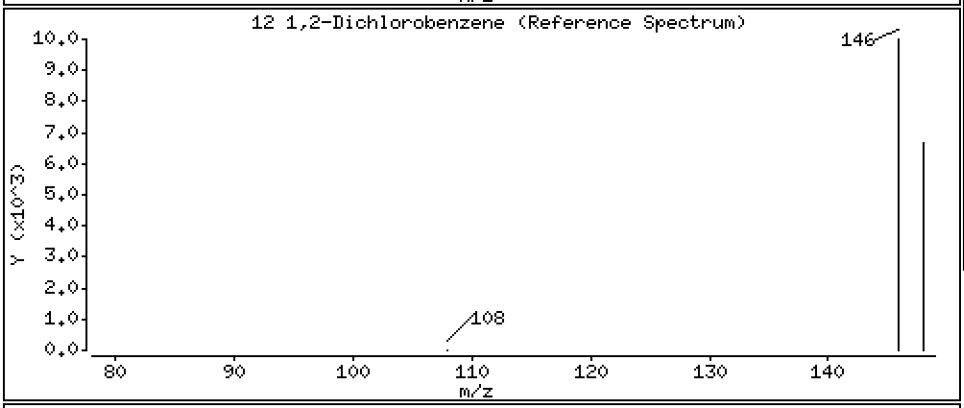
Concentration: 4.795 ug/mL

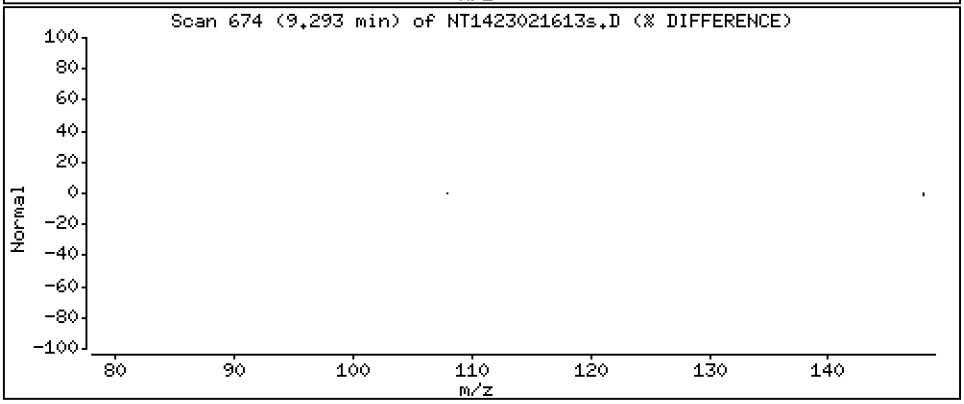












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

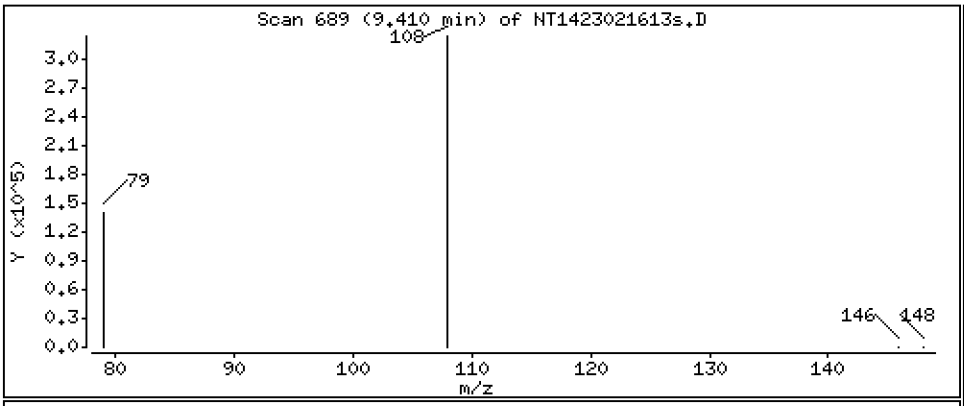
Operator: DSD

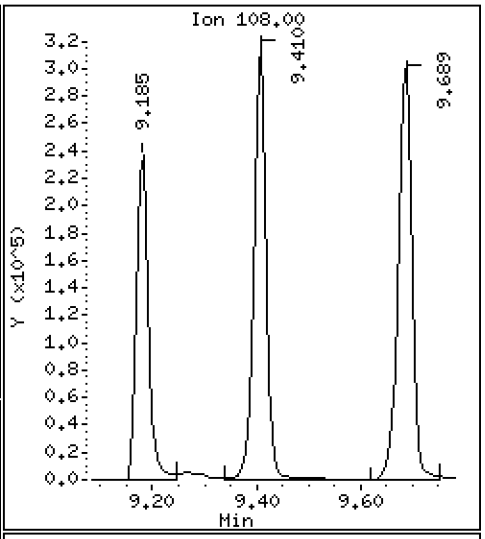
Column phase: ZB-5msi

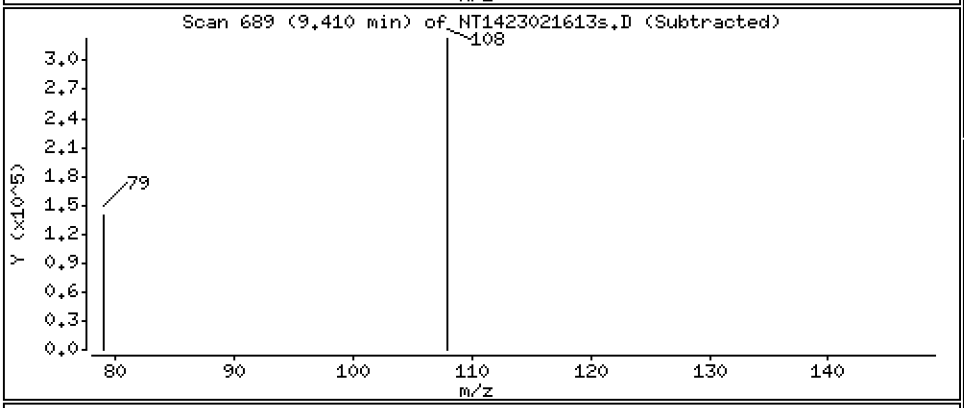
Column diameter: 0.25

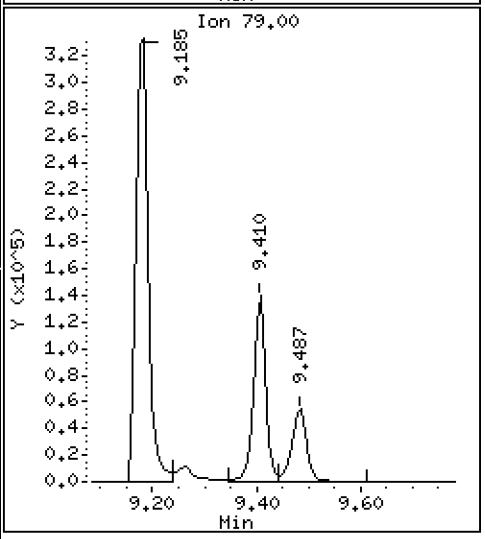
13 2-Methylphenol

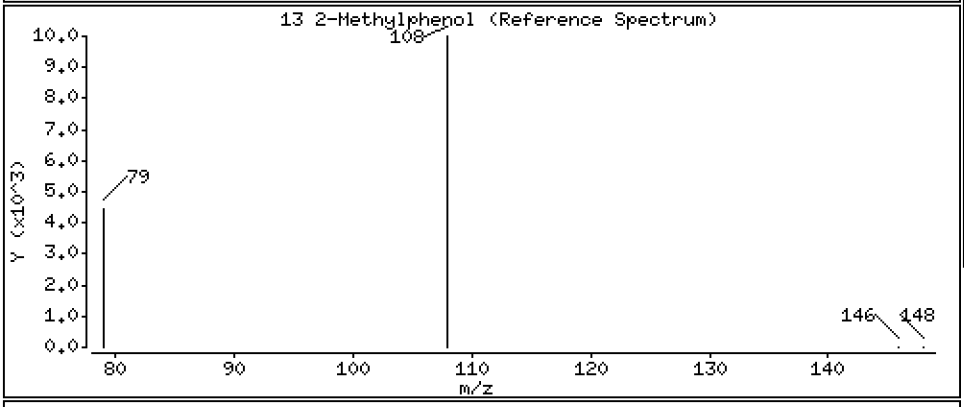
Concentration: 4.507 ug/mL

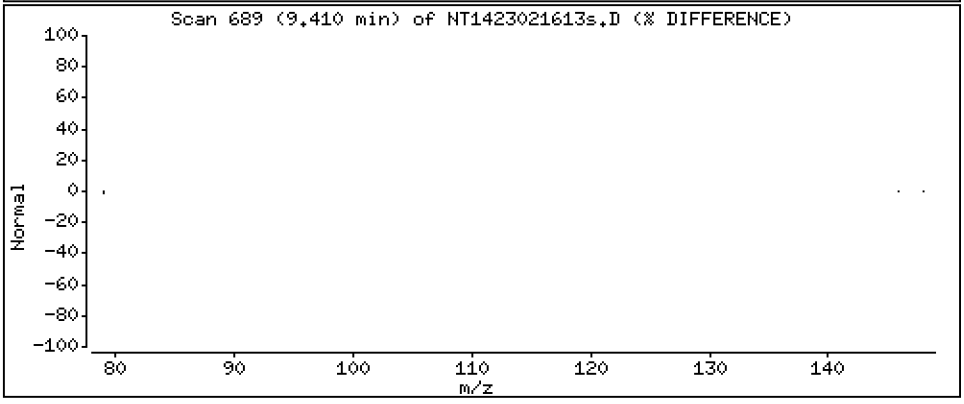












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

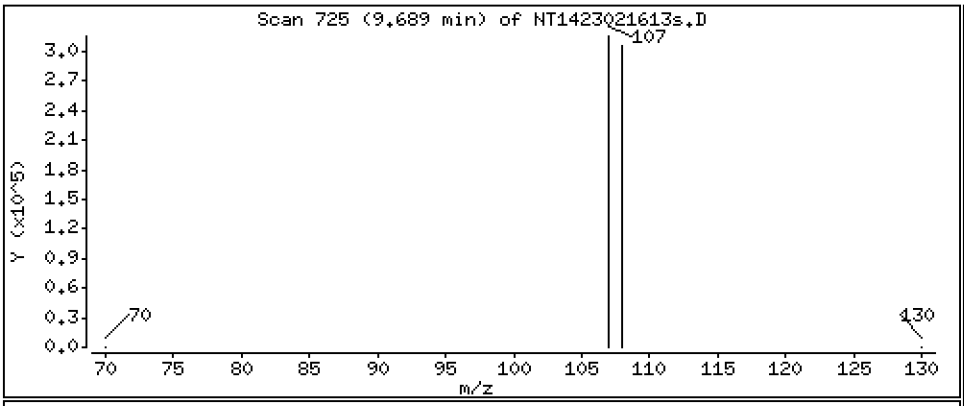
Operator: DSD

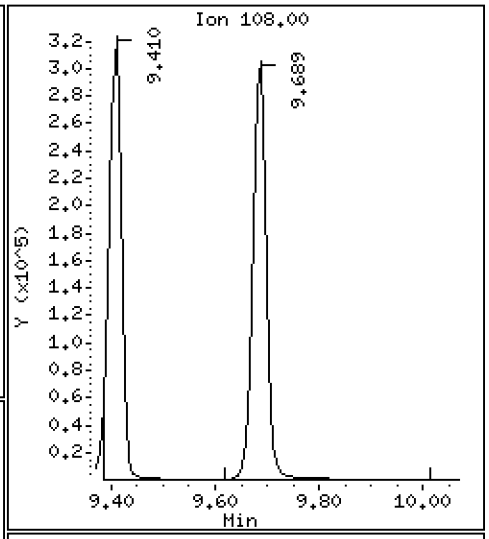
Column phase: ZB-5msi

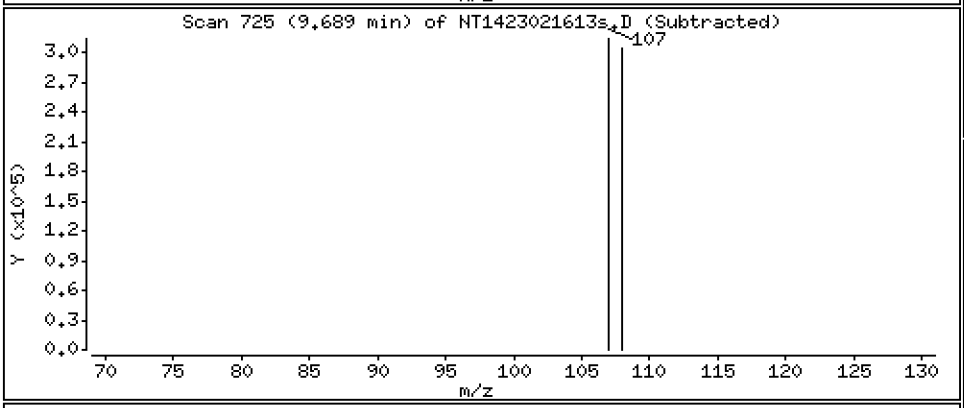
Column diameter: 0.25

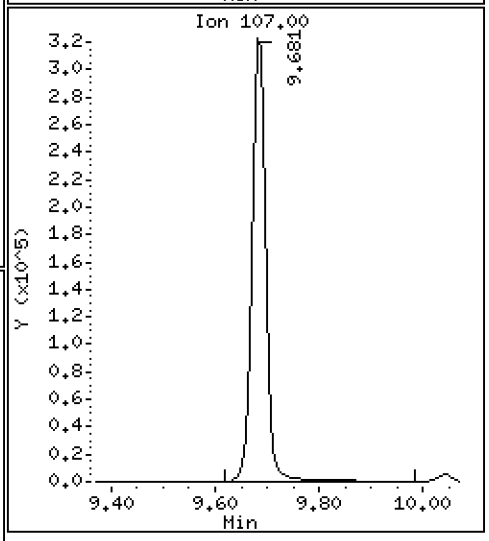
15 4-Methylphenol

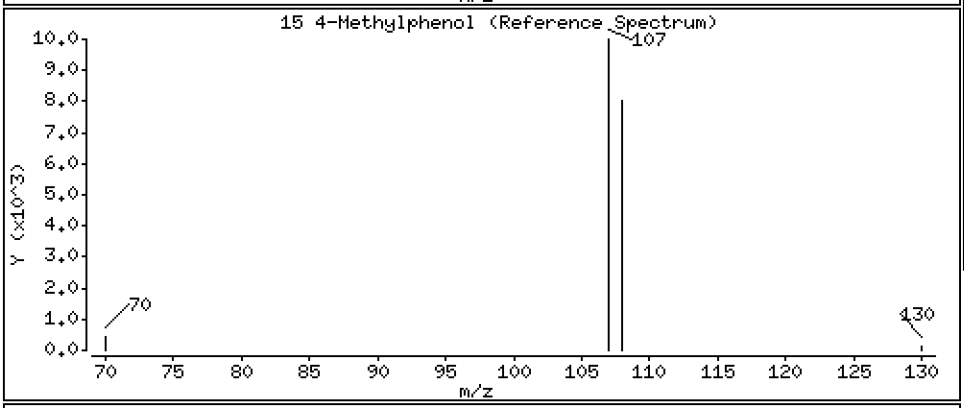
Concentration: 4.460 ug/mL

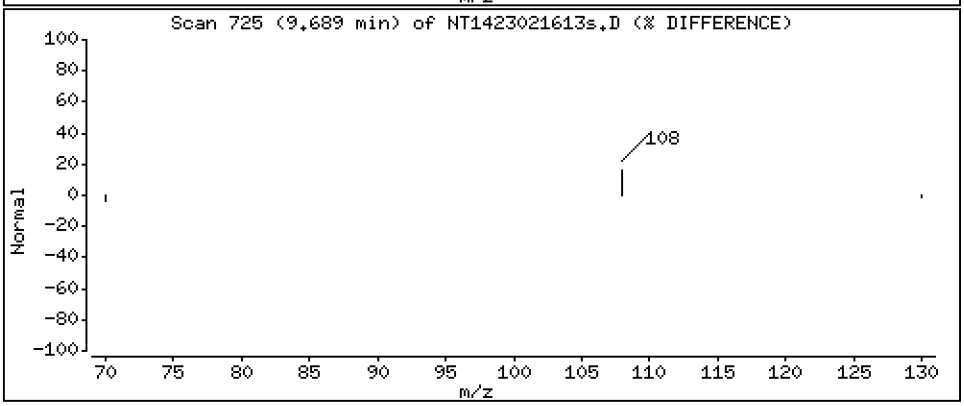












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

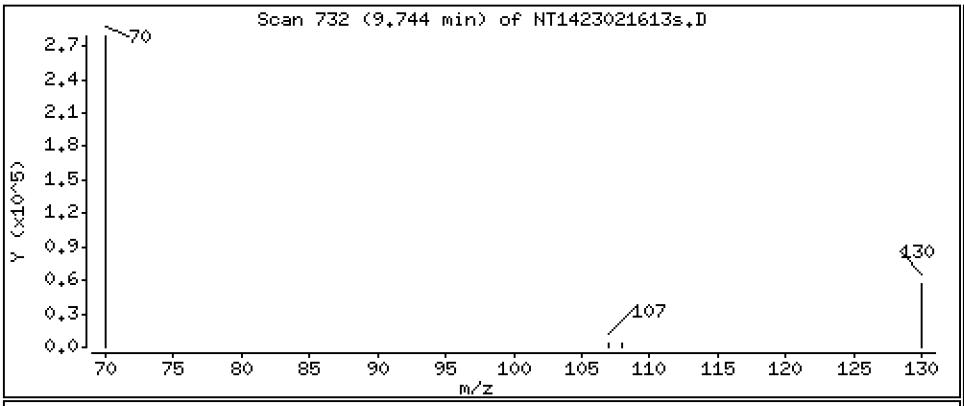
Operator: DSD

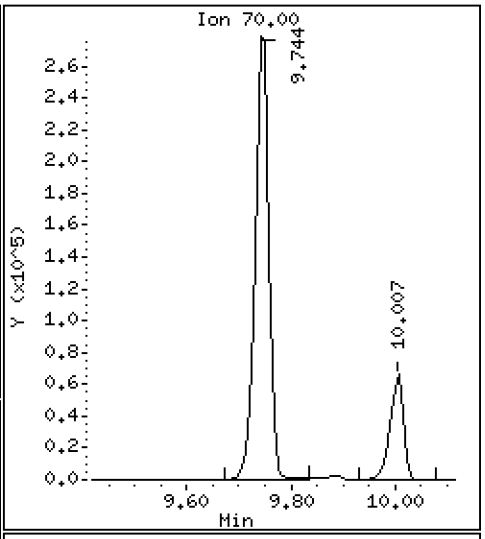
Column phase: ZB-5msi

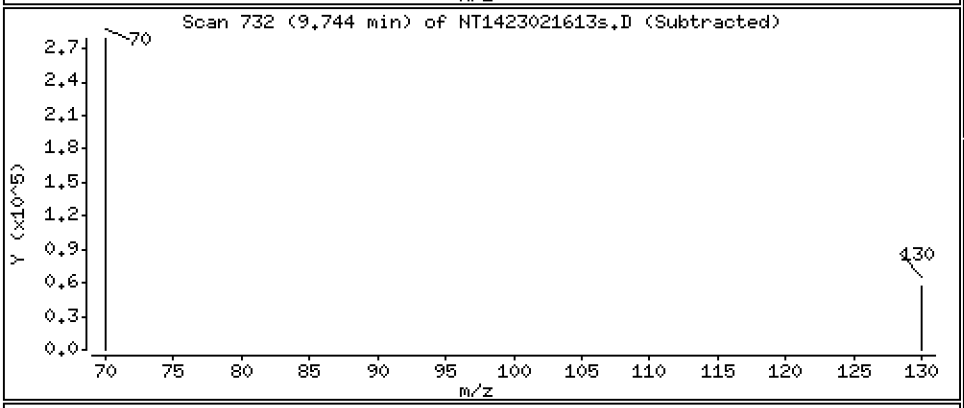
Column diameter: 0.25

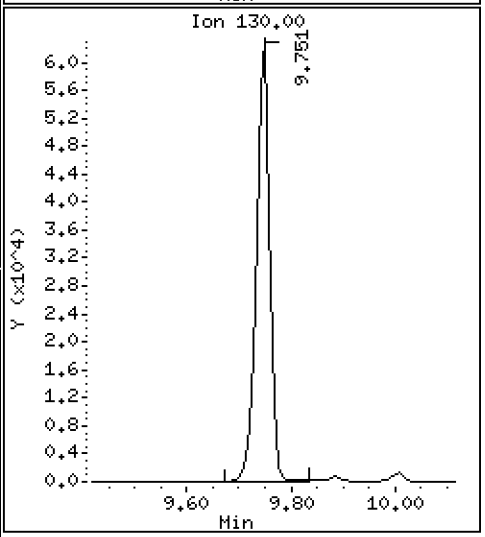
16 N-Nitroso-di-n-propylamine

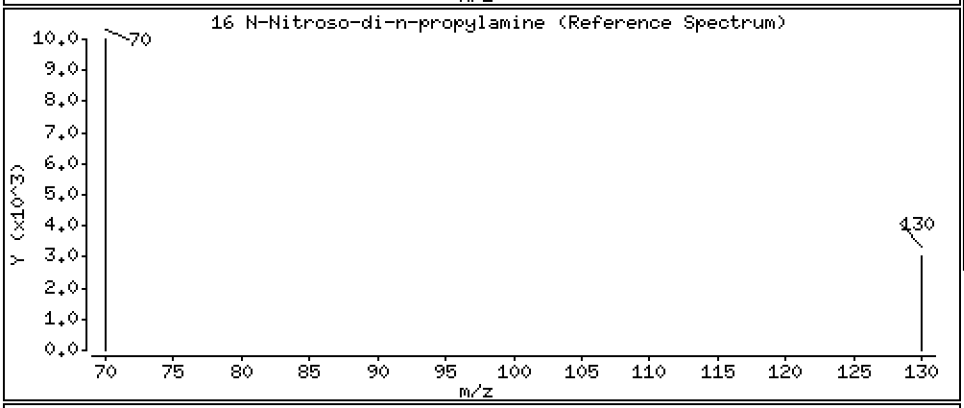
Concentration: 5.047 ug/mL

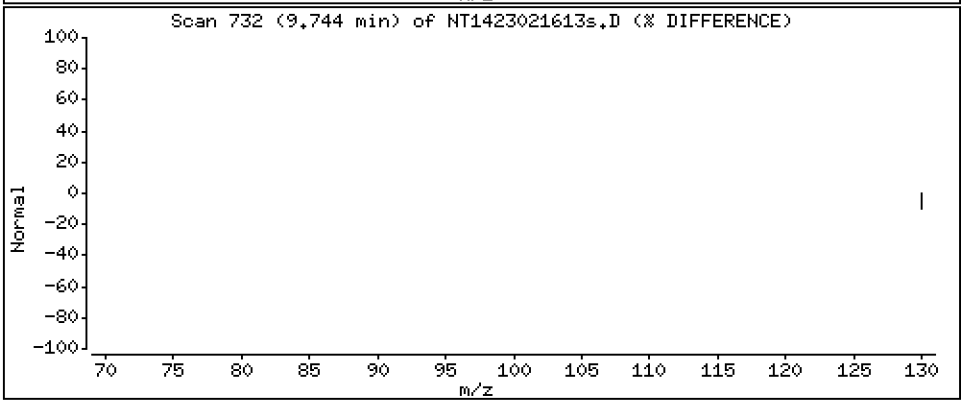












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

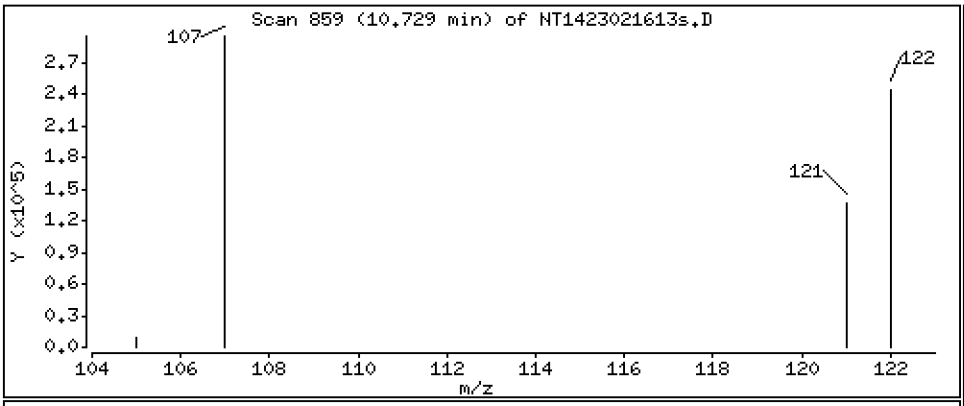
Operator: DSD

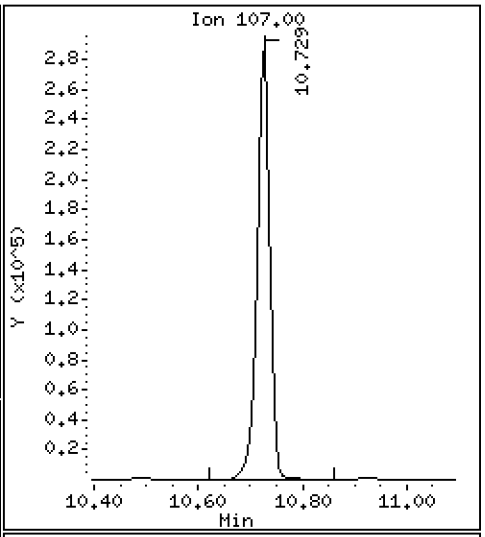
Column phase: ZB-5msi

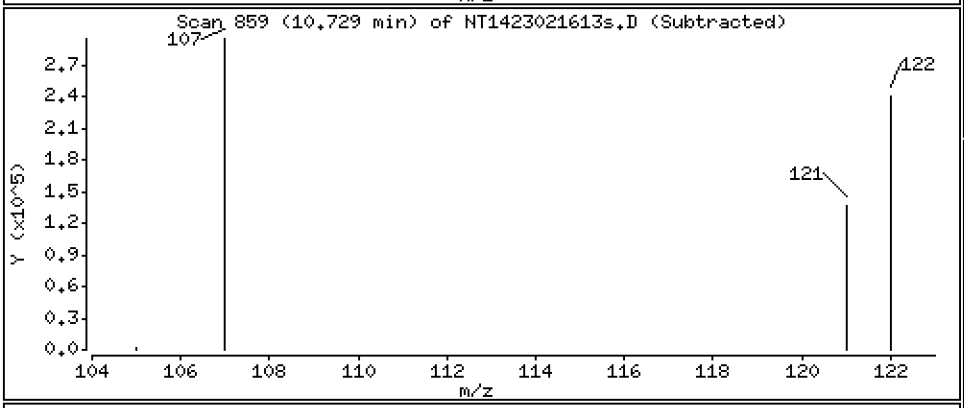
Column diameter: 0.25

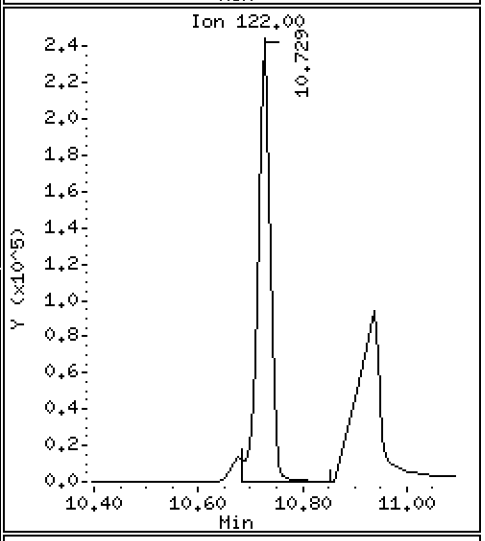
22 2,4-Dimethylphenol

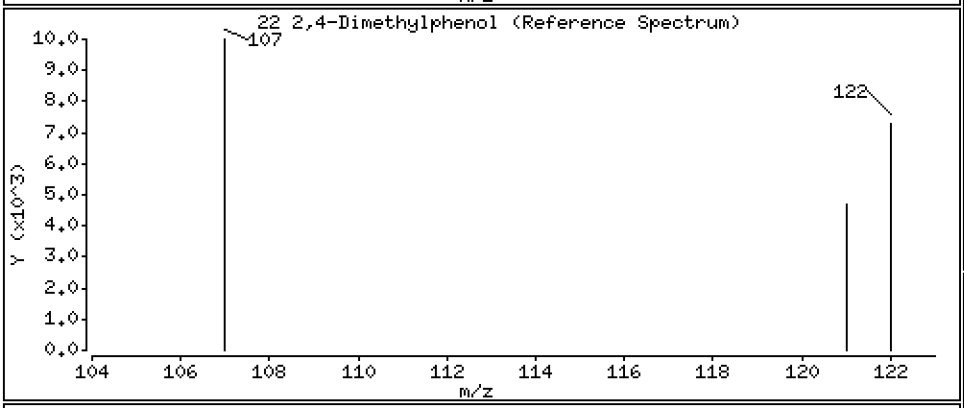
Concentration: 3.903 ug/mL

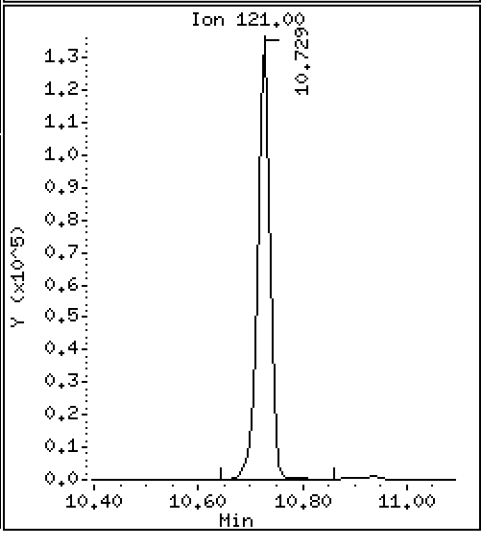


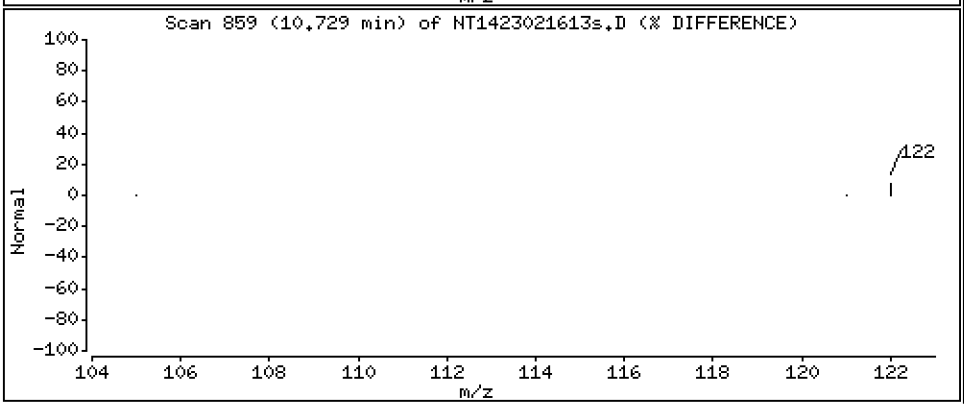












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

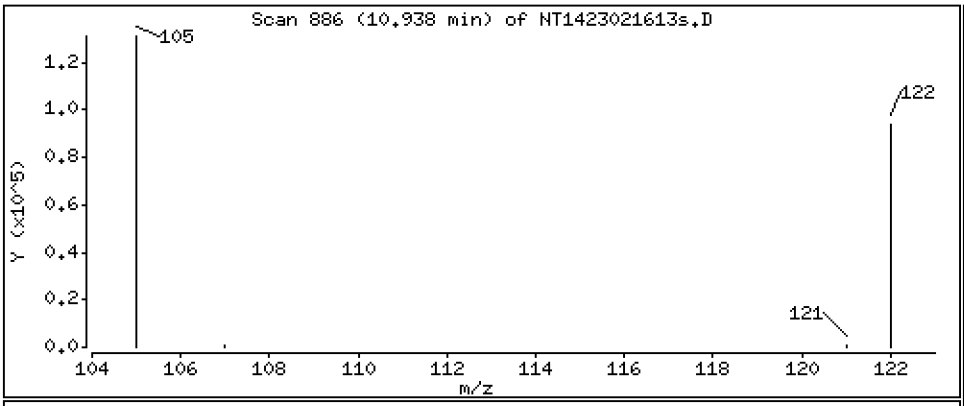
Operator: DSD

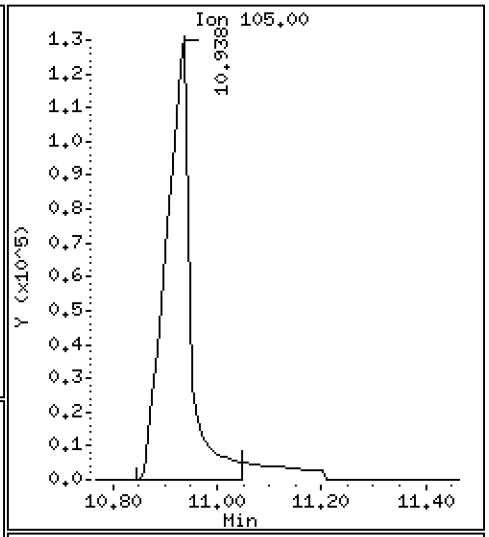
Column phase: ZB-5msi

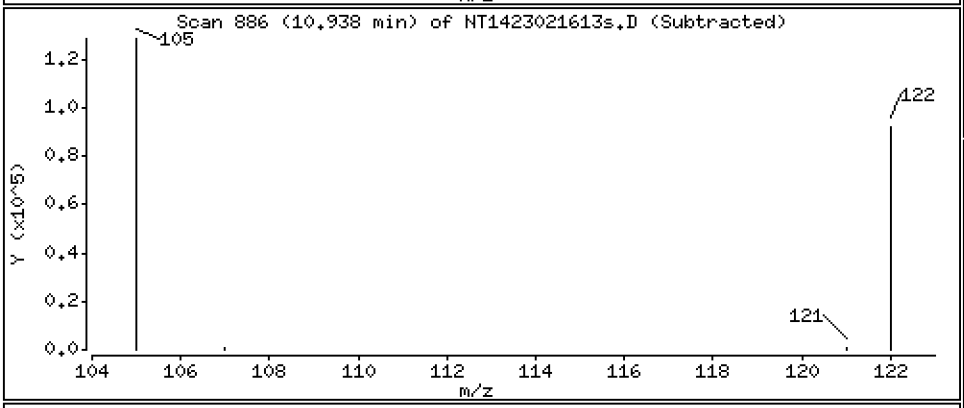
Column diameter: 0.25

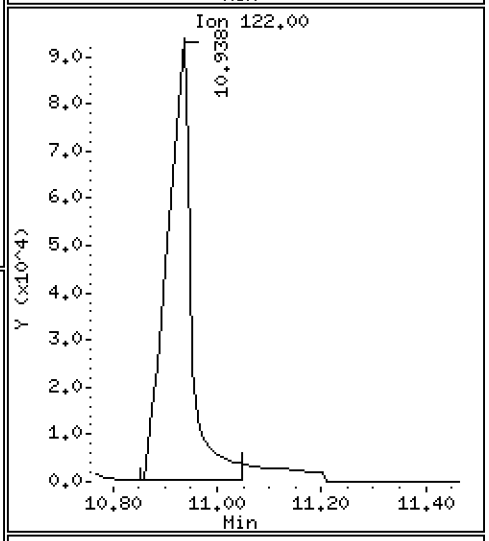
24 Benzoic acid

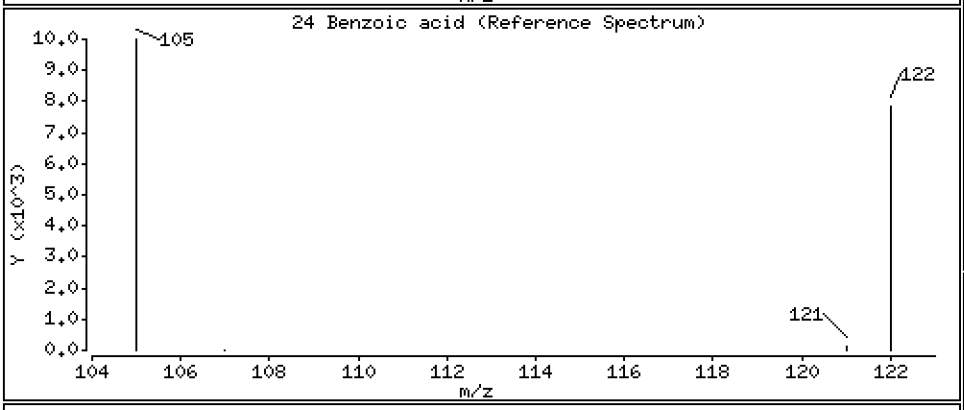
Concentration: 6.447 ug/mL

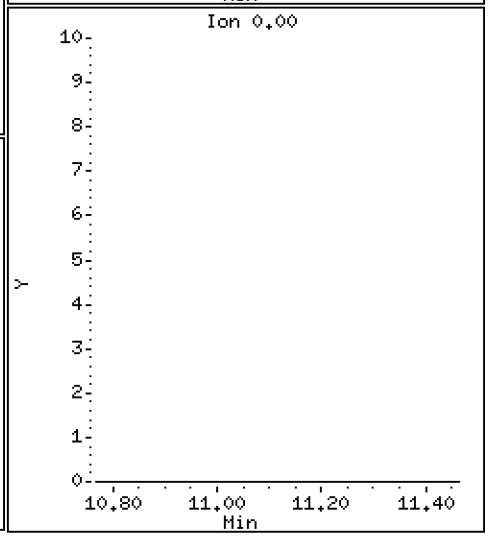


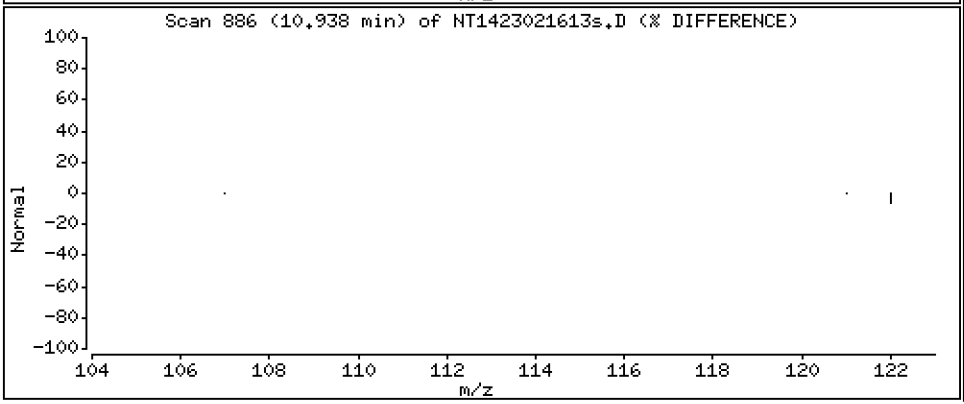












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

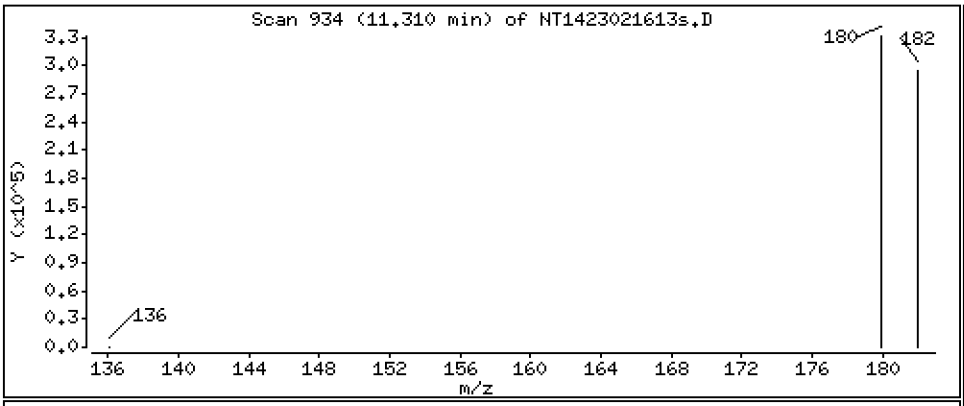
Operator: DSD

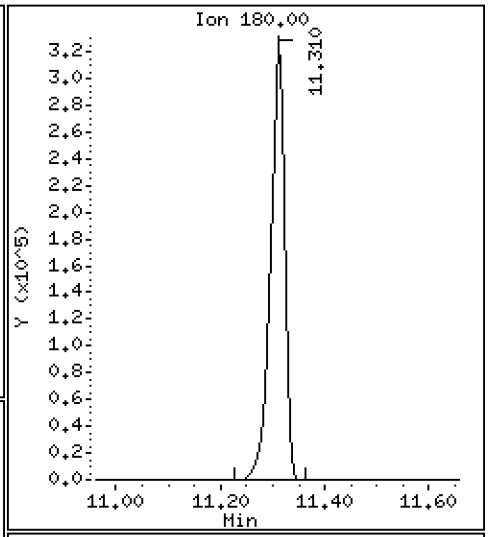
Column phase: ZB-5msi

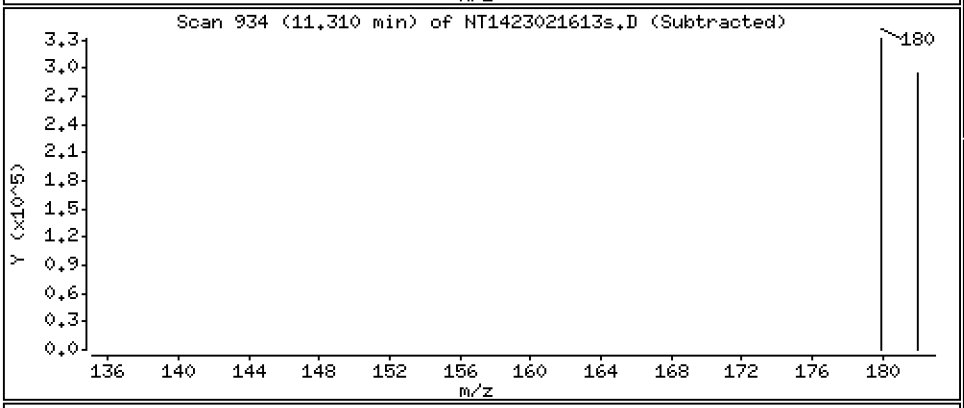
Column diameter: 0.25

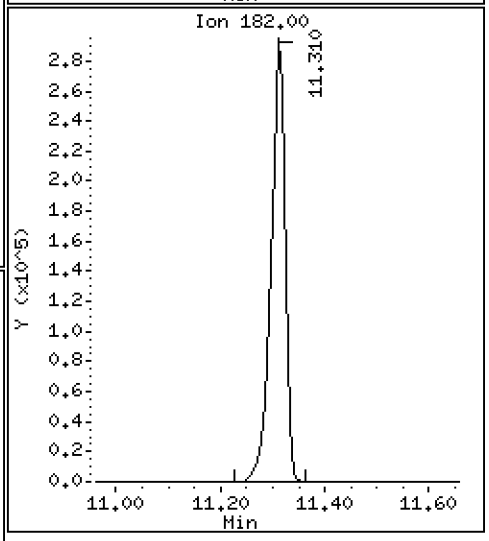
26 1,2,4-Trichlorobenzene

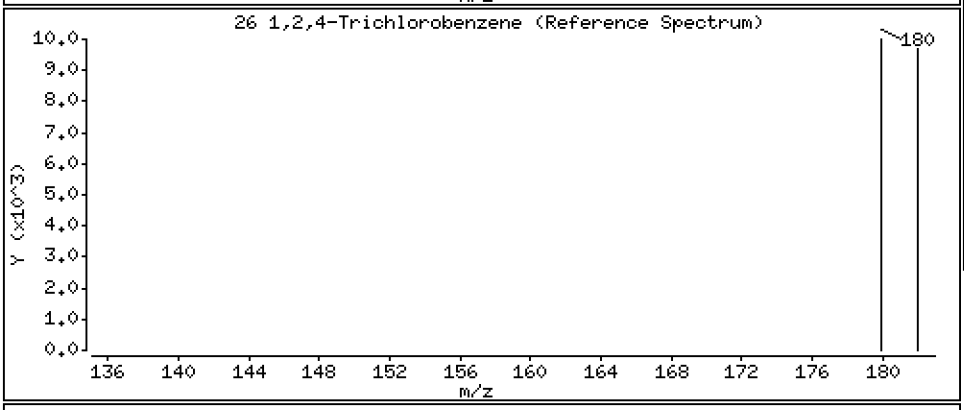
Concentration: 4.595 ug/mL

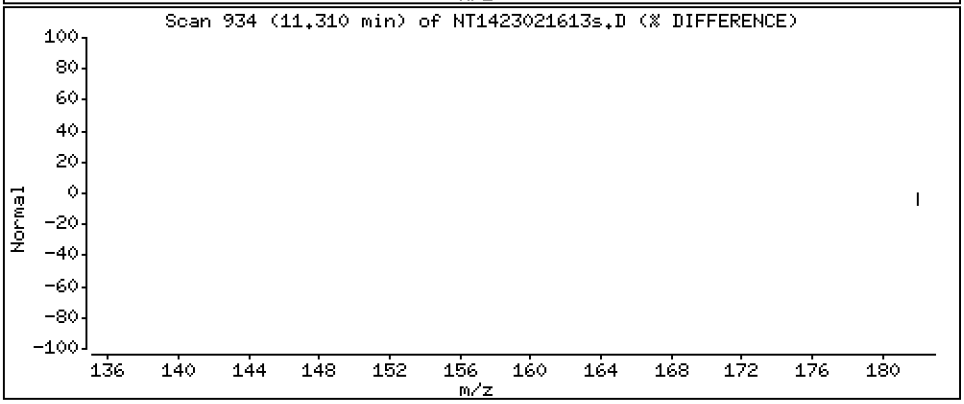












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

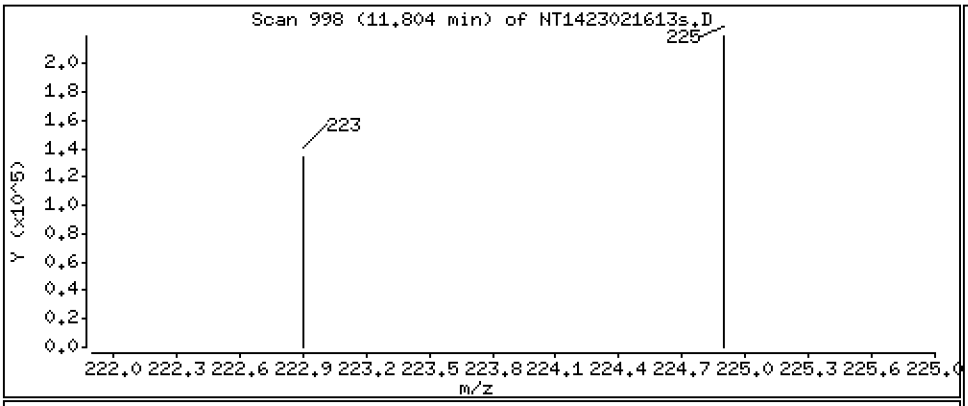
Operator: DSD

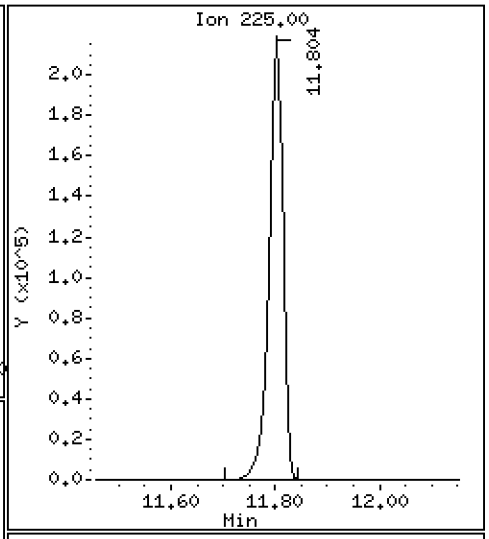
Column phase: ZB-5msi

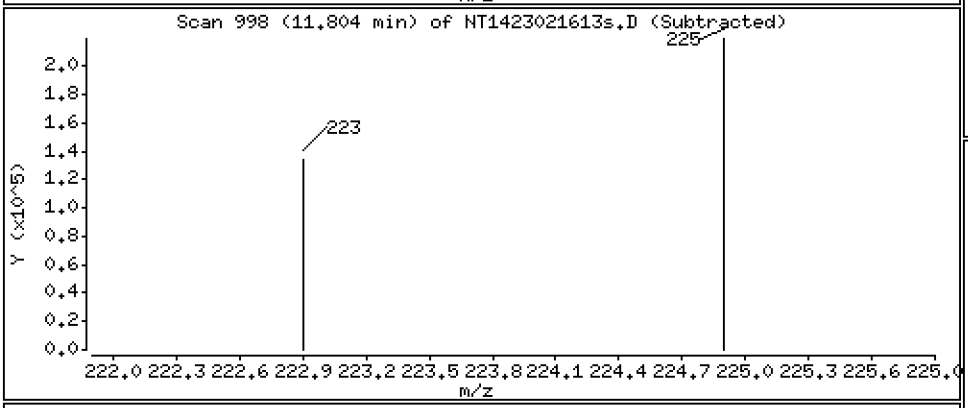
Column diameter: 0.25

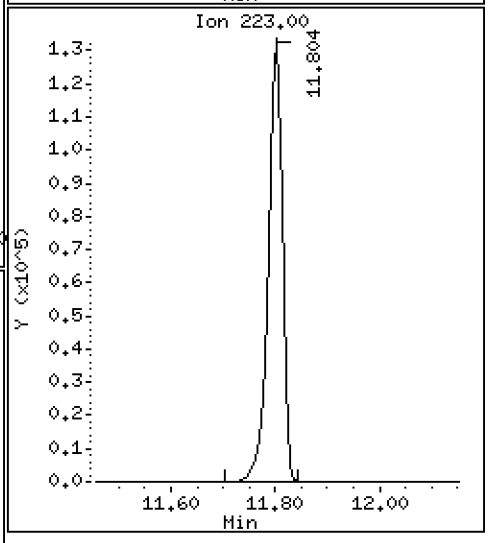
30 Hexachlorobutadiene

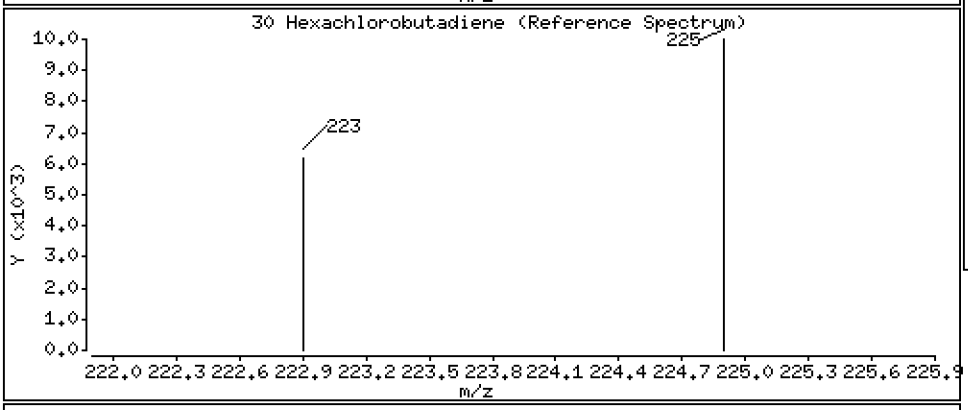
Concentration: 4.815 ug/mL

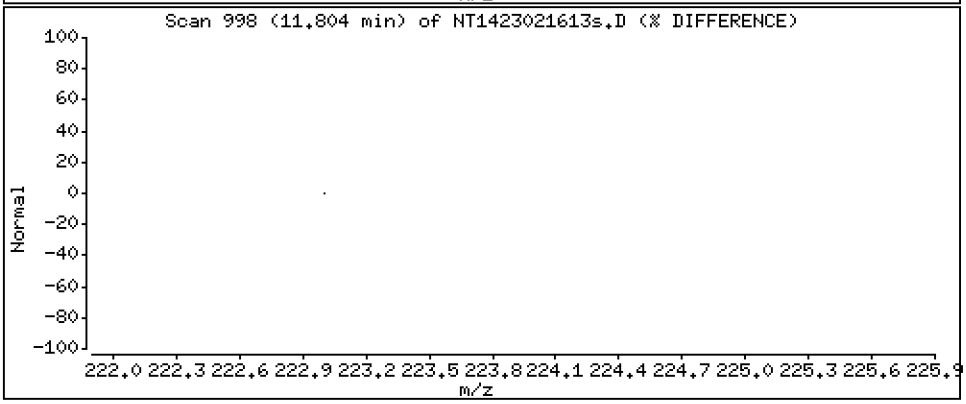












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

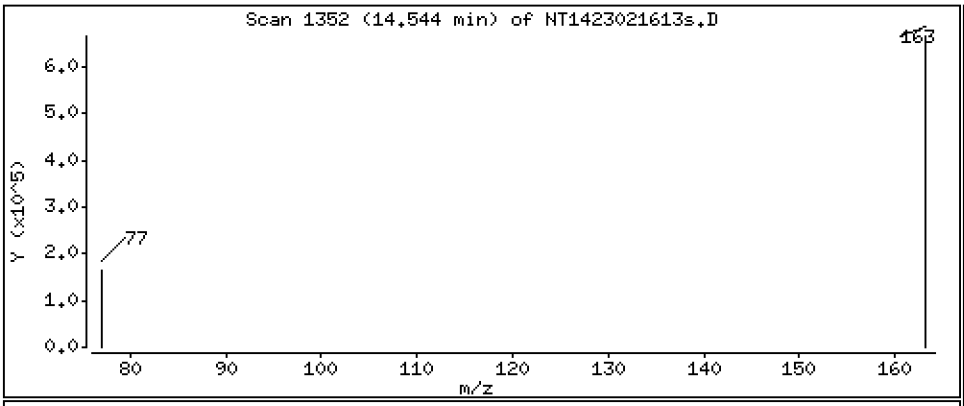
Operator: DSD

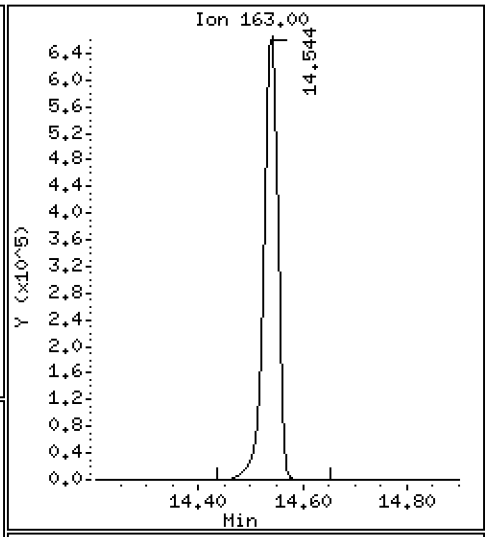
Column phase: ZB-5msi

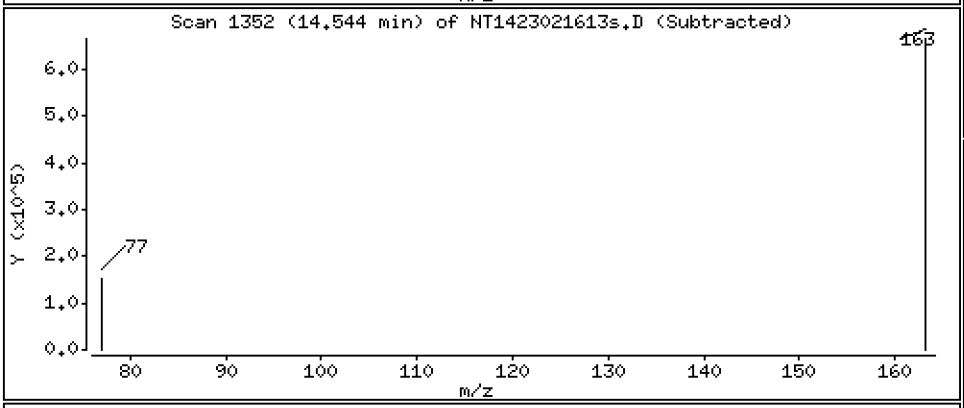
Column diameter: 0.25

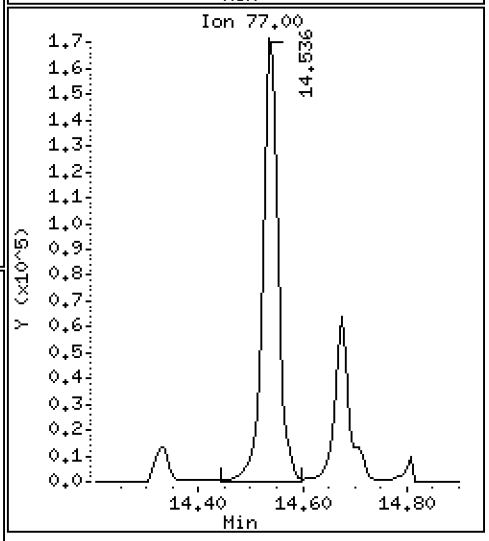
39 Dimethylphthalate

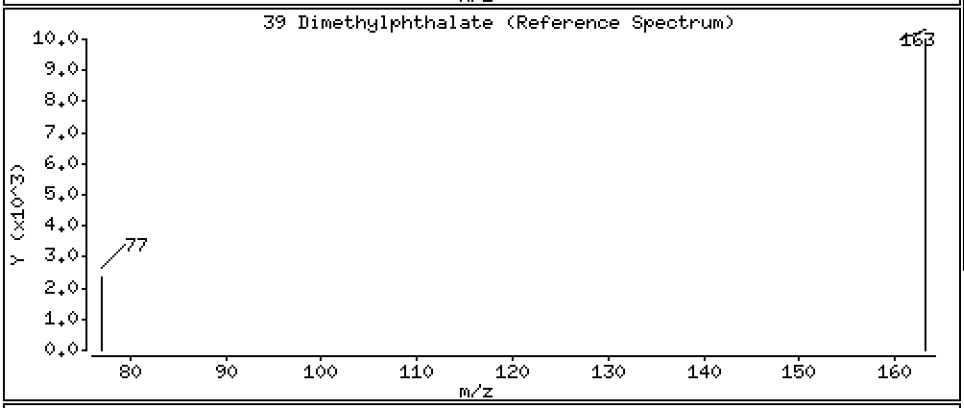
Concentration: 5.002 ug/mL

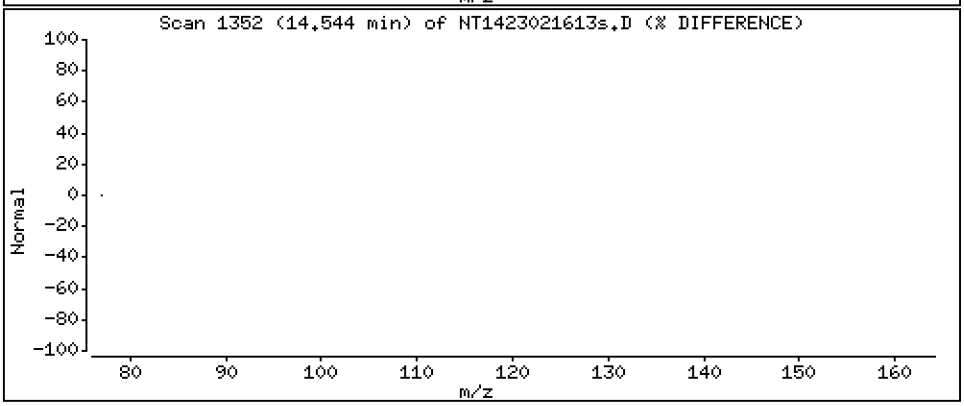












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

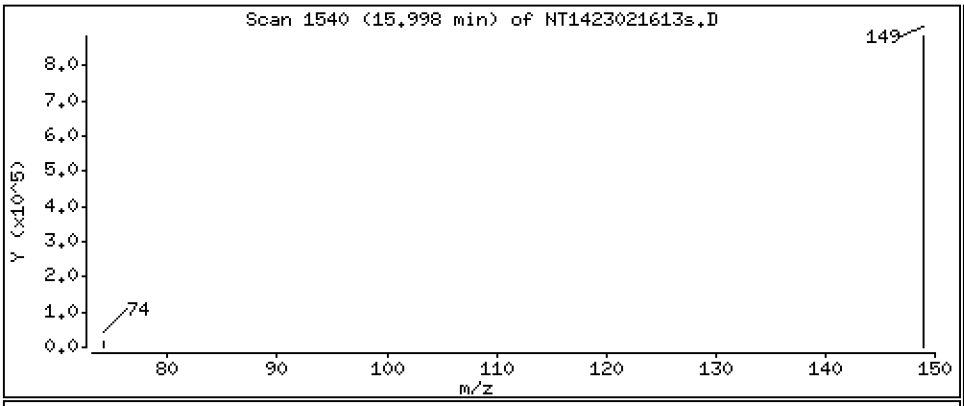
Operator: DSD

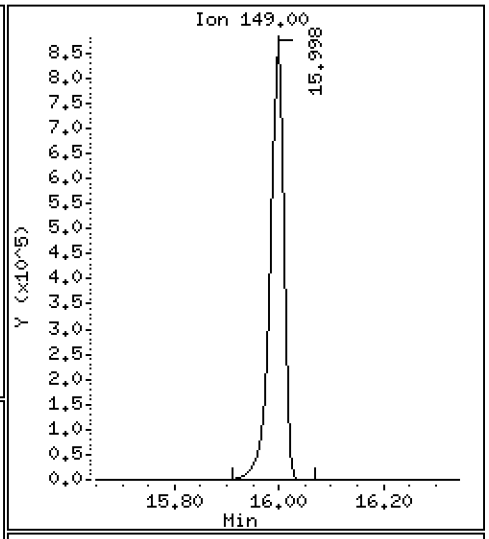
Column phase: ZB-5msi

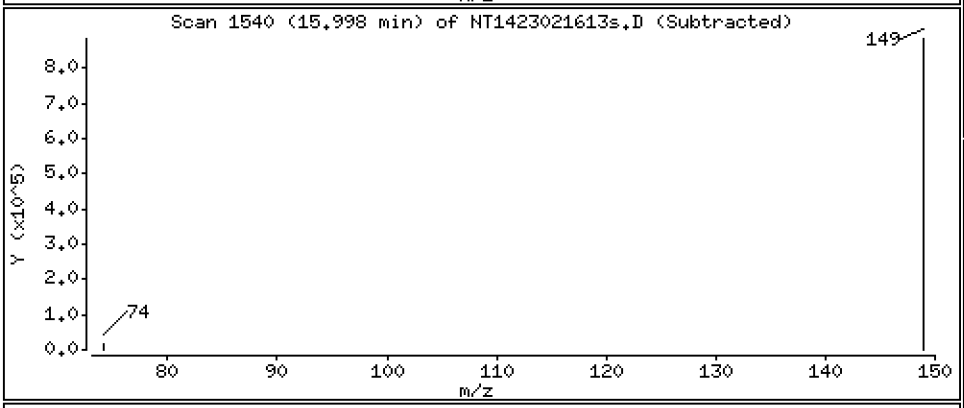
Column diameter: 0.25

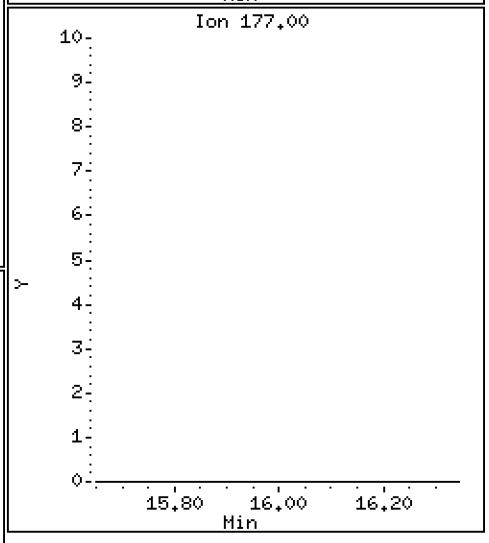
50 Diethylphthalate

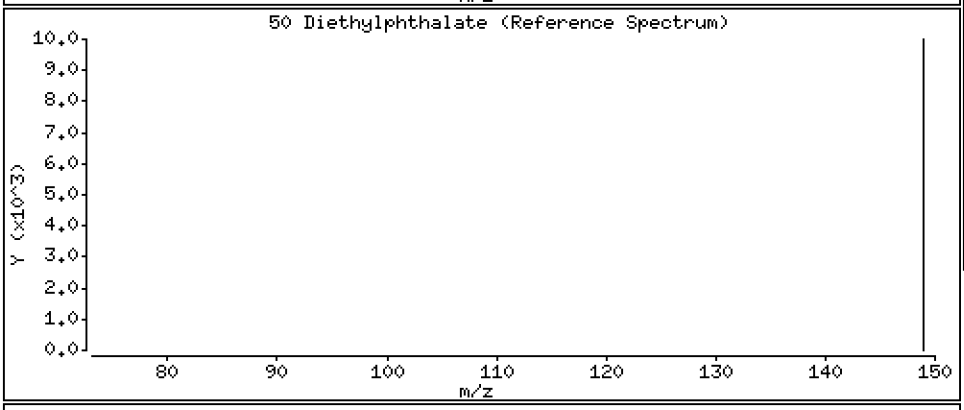
Concentration: 4.969 ug/mL

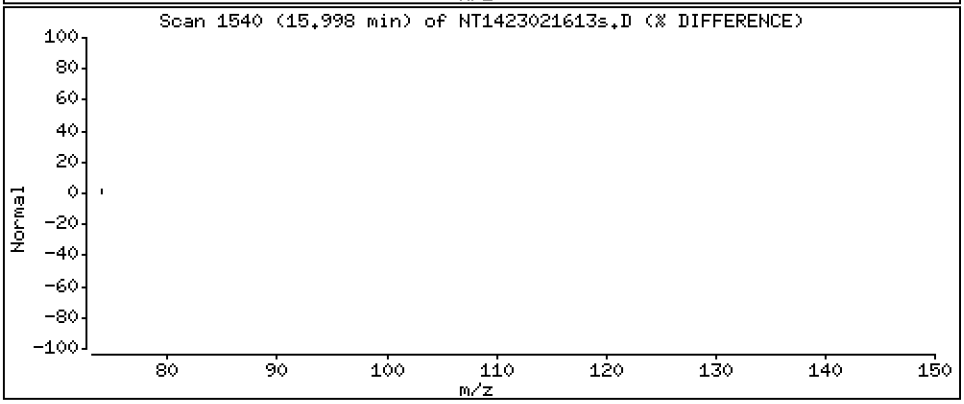












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

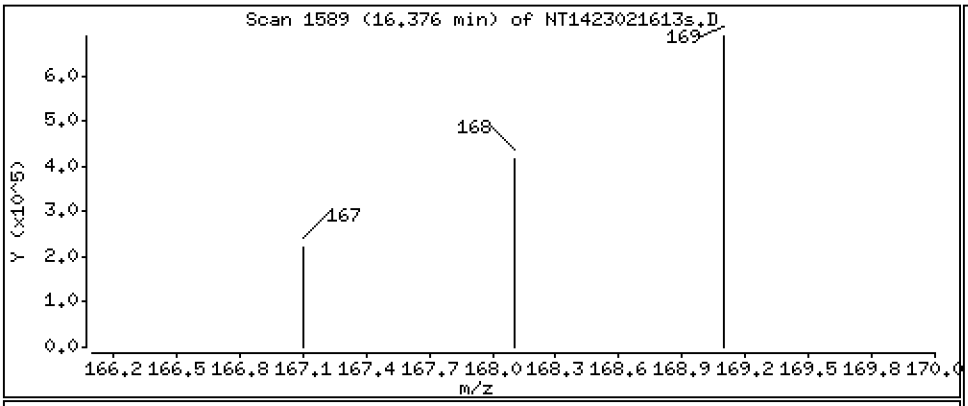
Operator: DSD

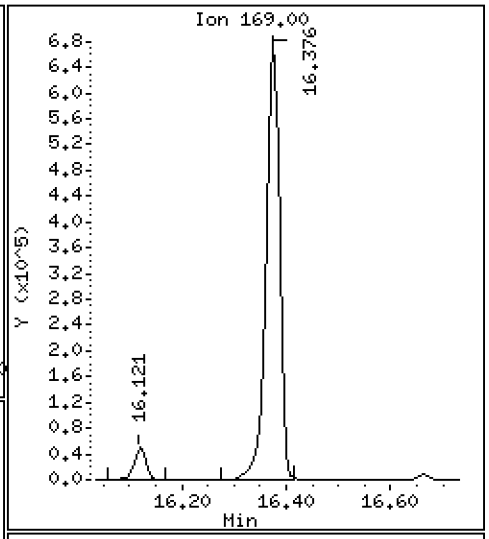
Column phase: ZB-5msi

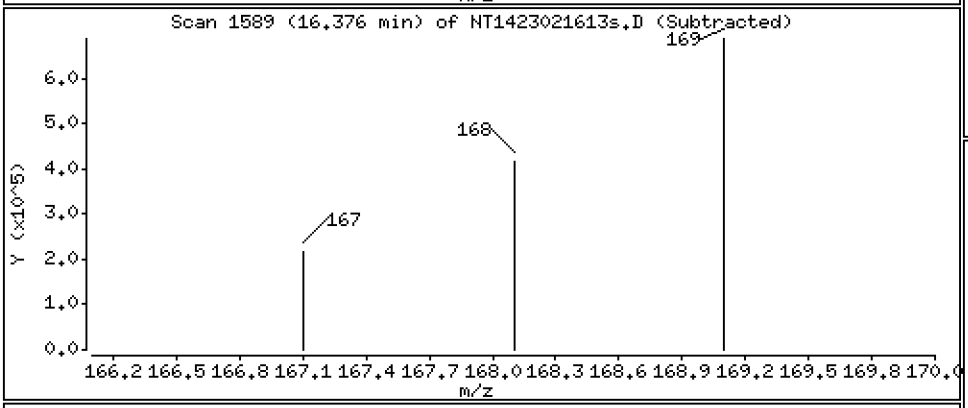
Column diameter: 0.25

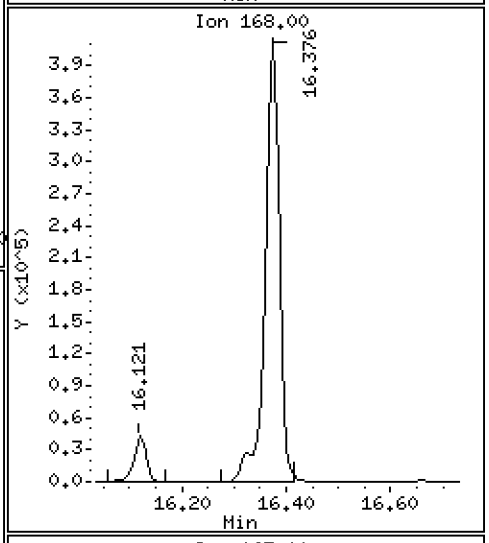
54 N-Nitrosodiphenylamine

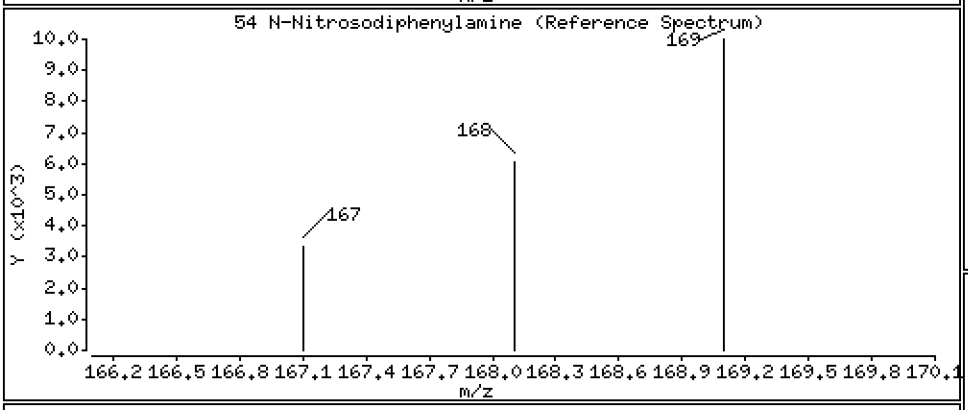
Concentration: 5.009 ug/mL

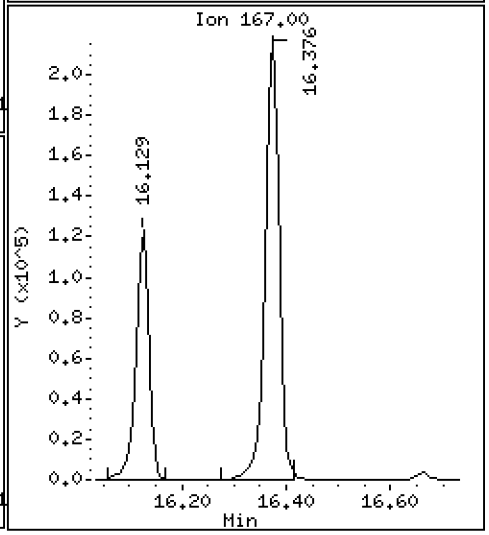


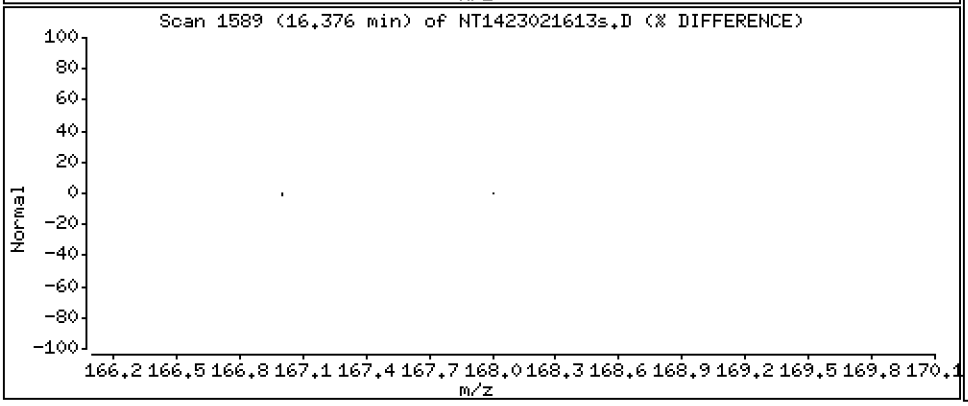












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

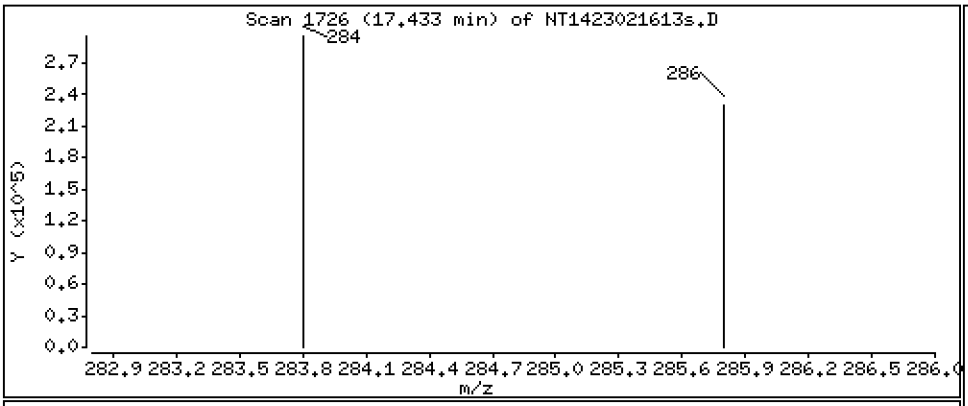
Operator: DSD

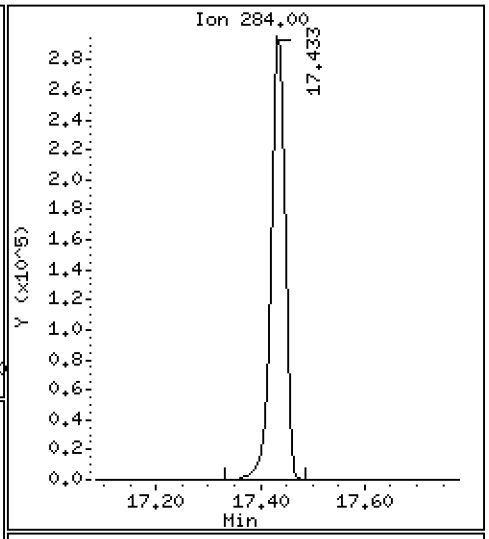
Column phase: ZB-5msi

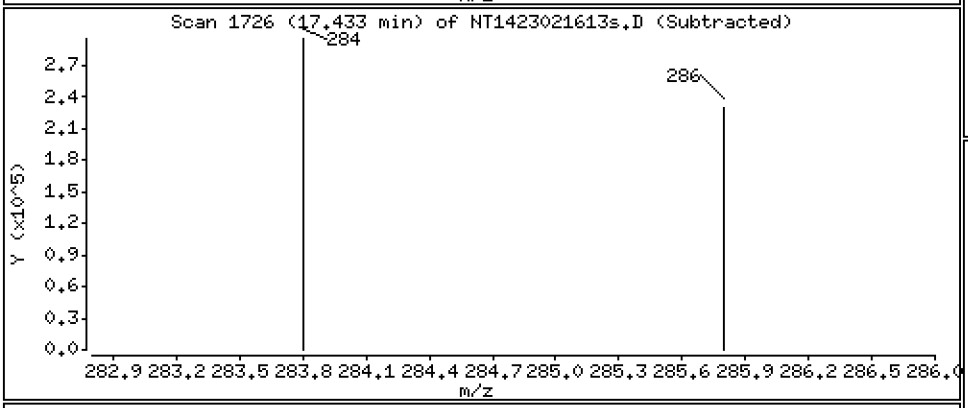
Column diameter: 0.25

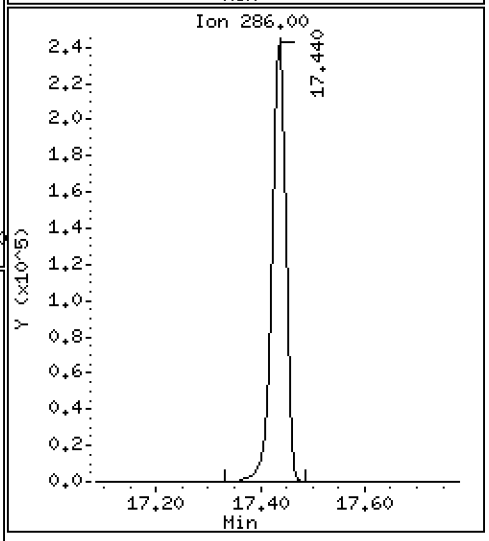
57 Hexachlorobenzene

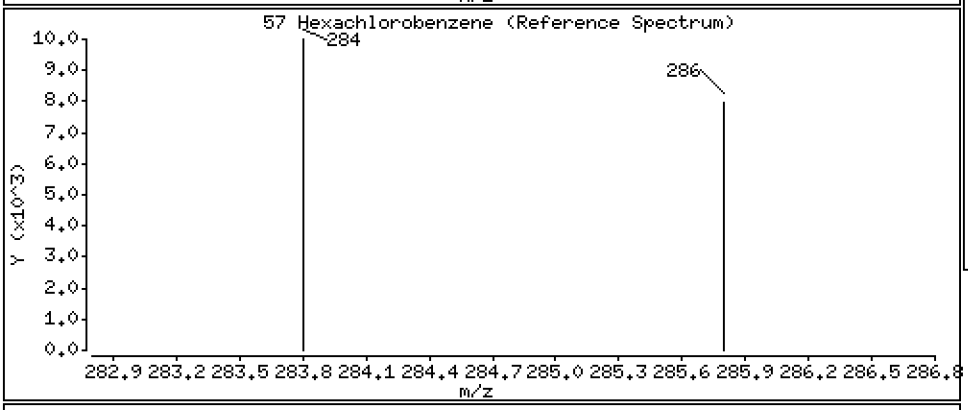
Concentration: 4.700 ug/mL

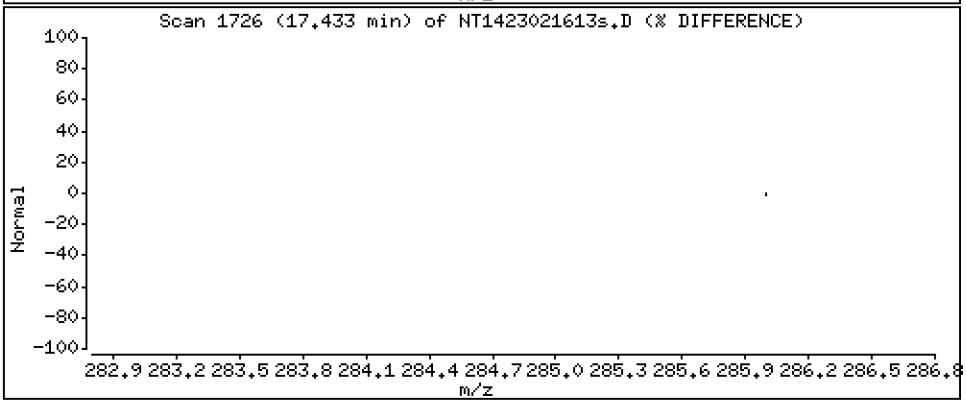












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

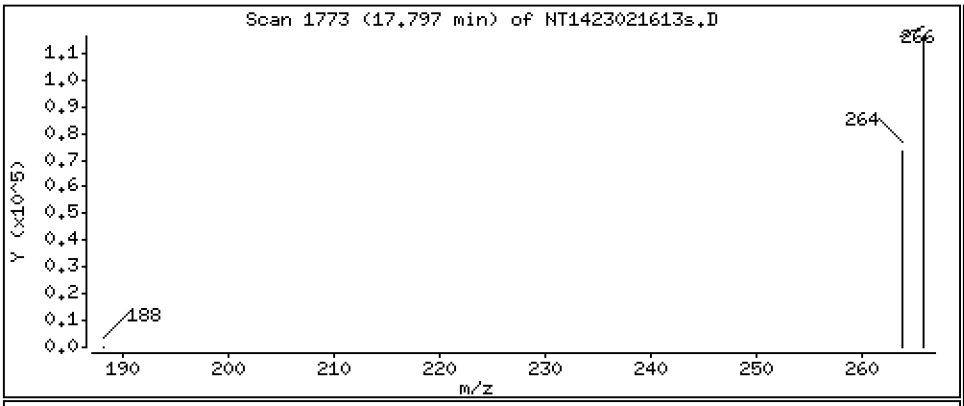
Operator: DSD

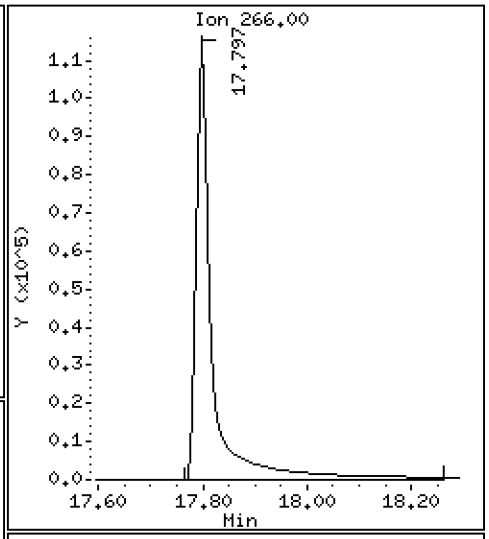
Column phase: ZB-5msi

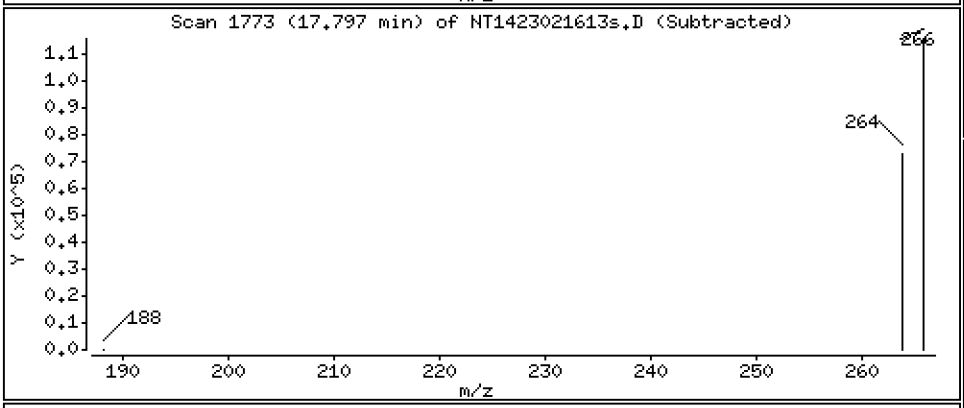
Column diameter: 0.25

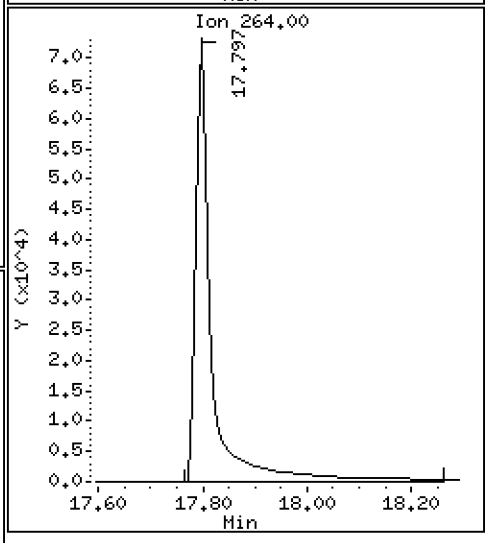
58 Pentachlorophenol

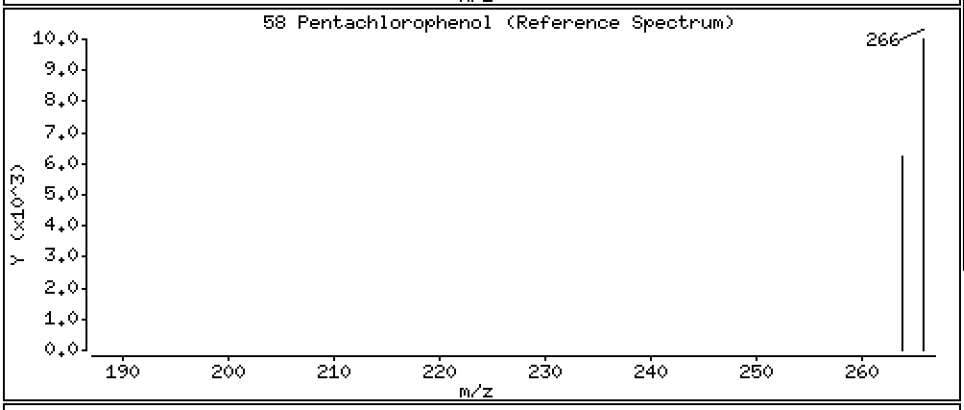
Concentration: 4.935 ug/mL

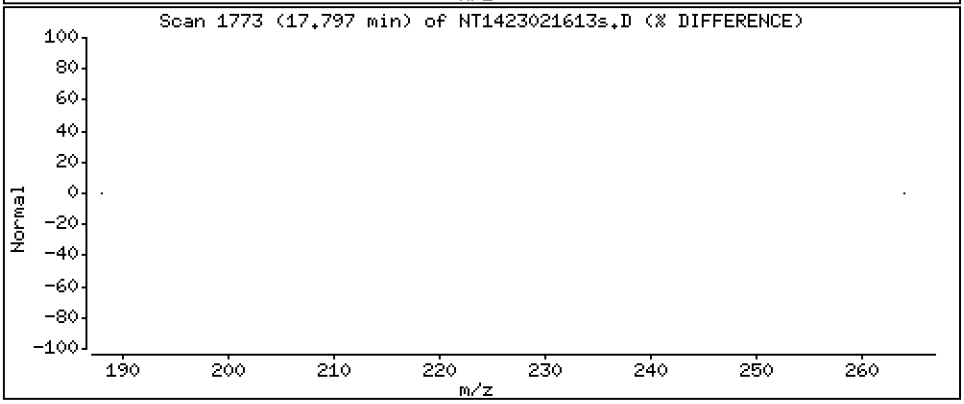












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

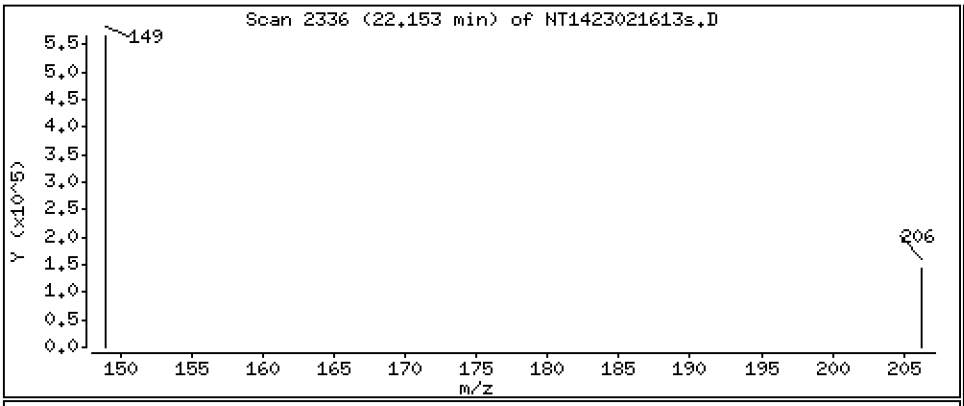
Operator: DSD

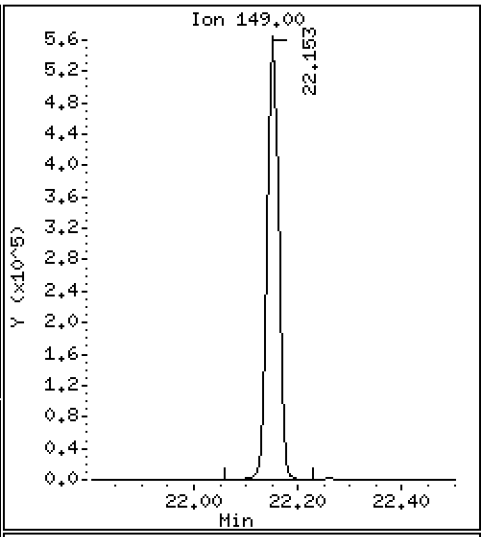
Column phase: ZB-5msi

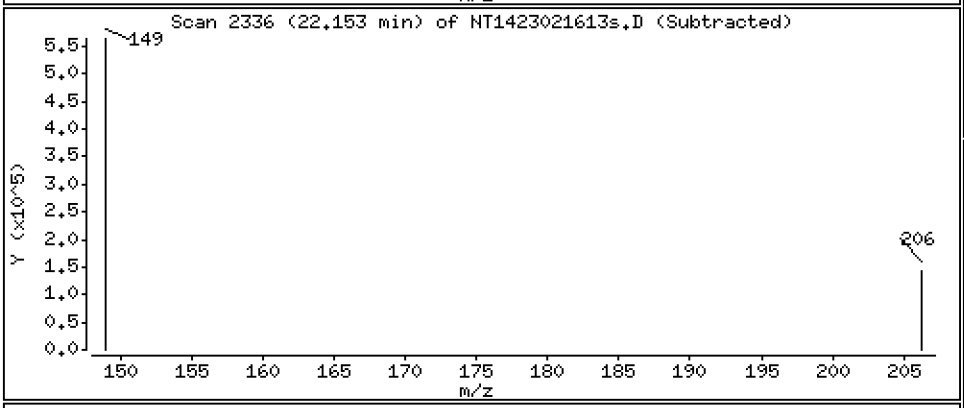
Column diameter: 0.25

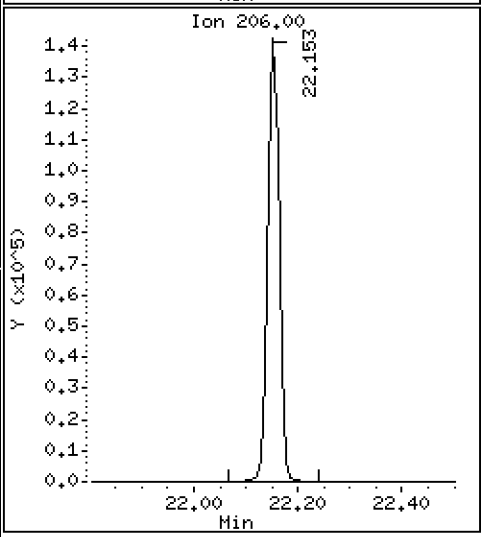
67 Butylbenzylphthalate

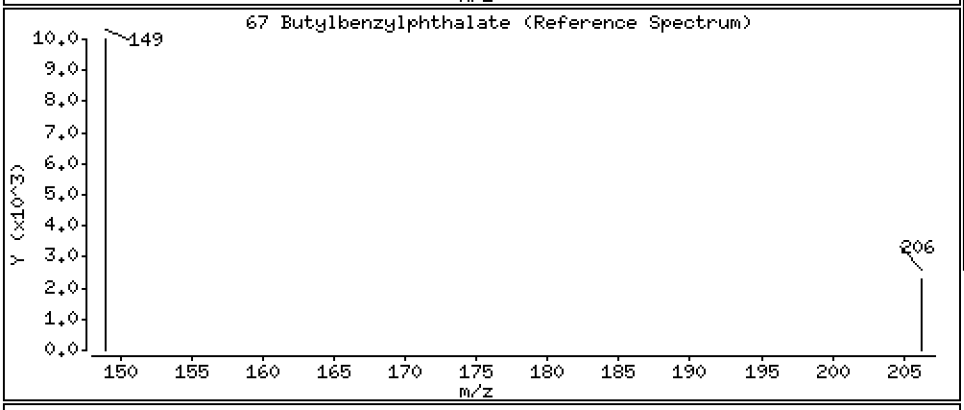
Concentration: 4.964 ug/mL

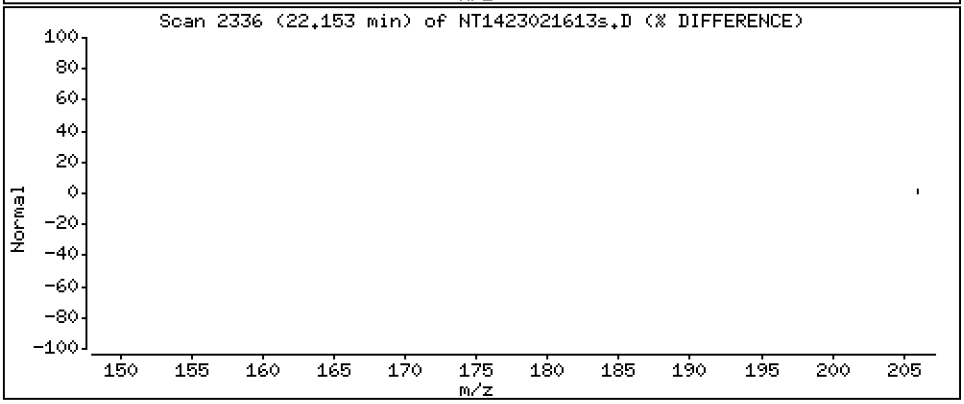












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

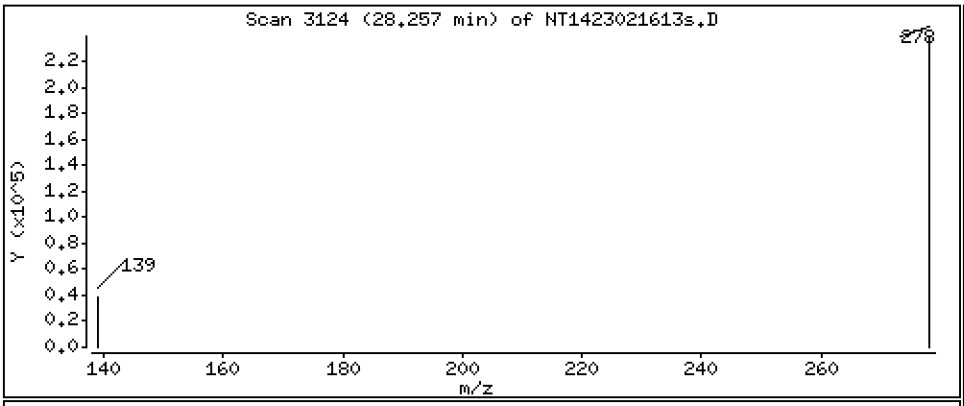
Operator: DSD

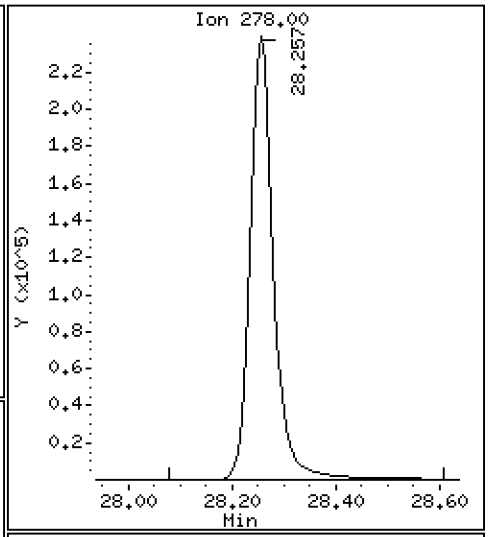
Column phase: ZB-5msi

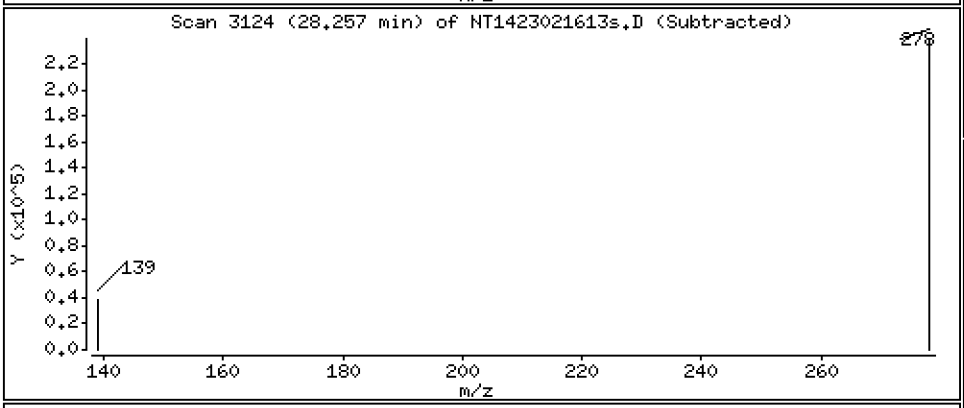
Column diameter: 0.25

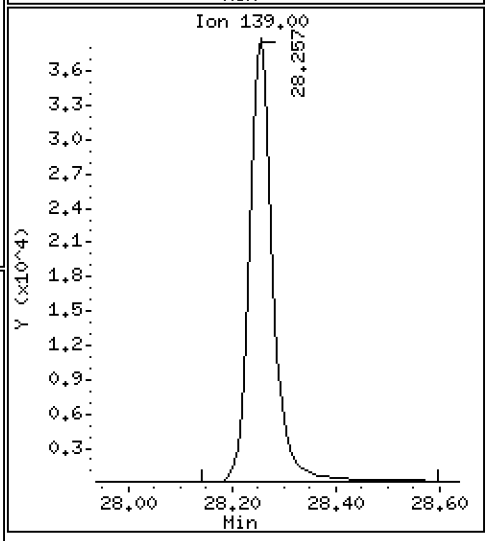
79 Dibenzo(a,h)anthracene

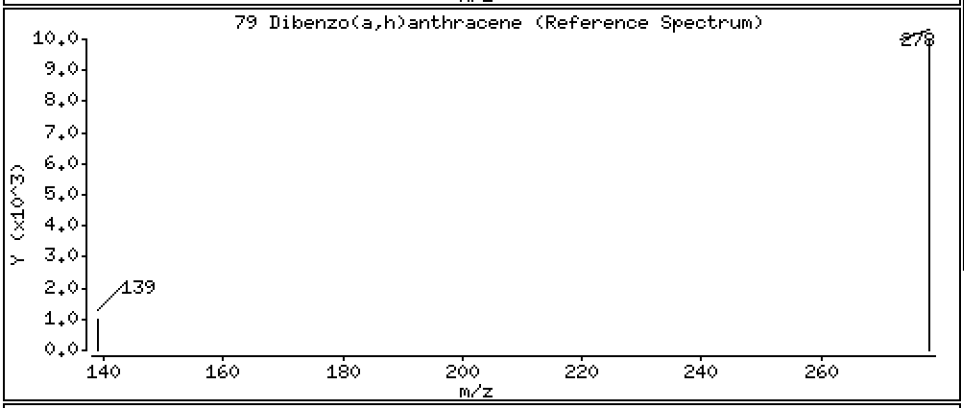
Concentration: 4.888 ug/mL

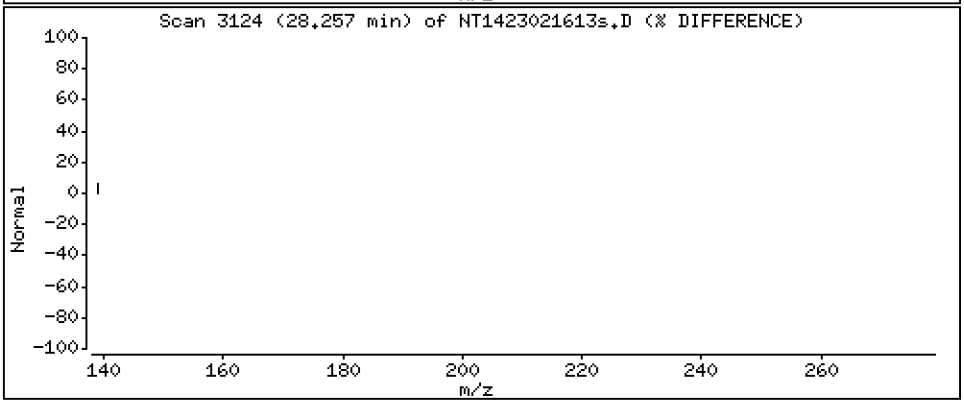












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

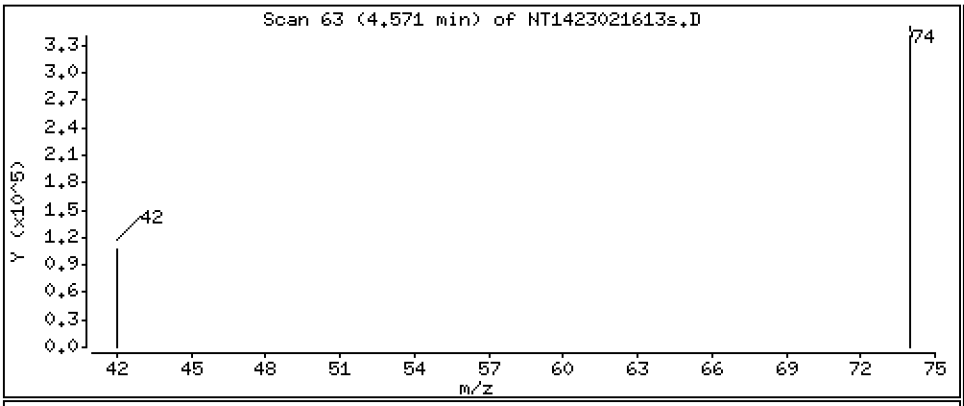
Operator: DSD

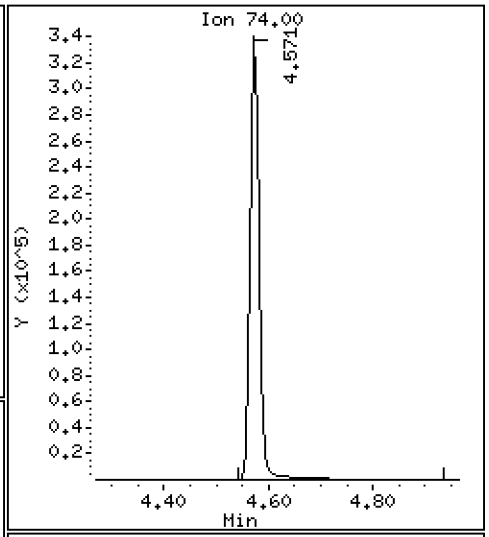
Column phase: ZB-5msi

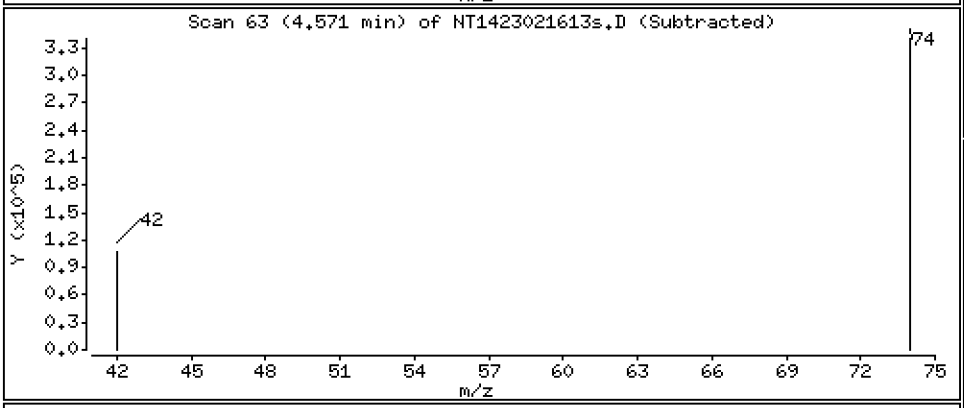
Column diameter: 0.25

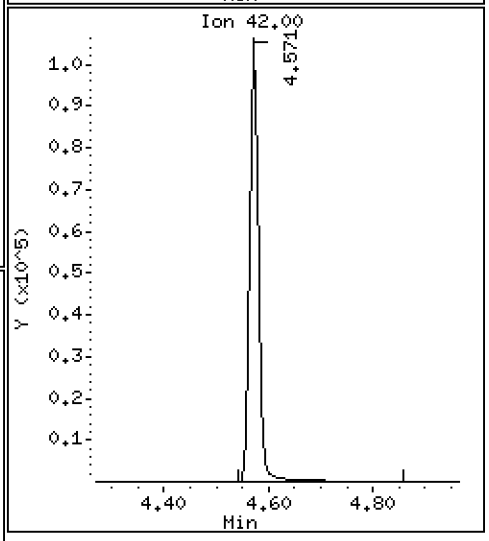
90 N-Nitrosodimethylamine

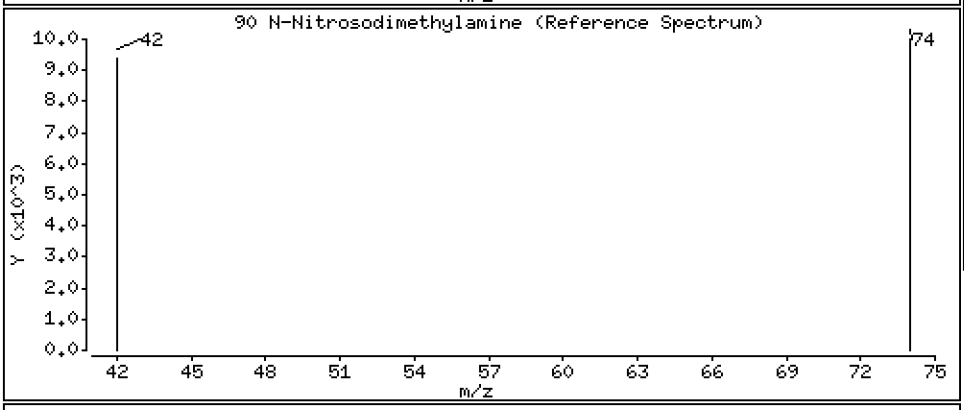
Concentration: 5.293 ug/mL

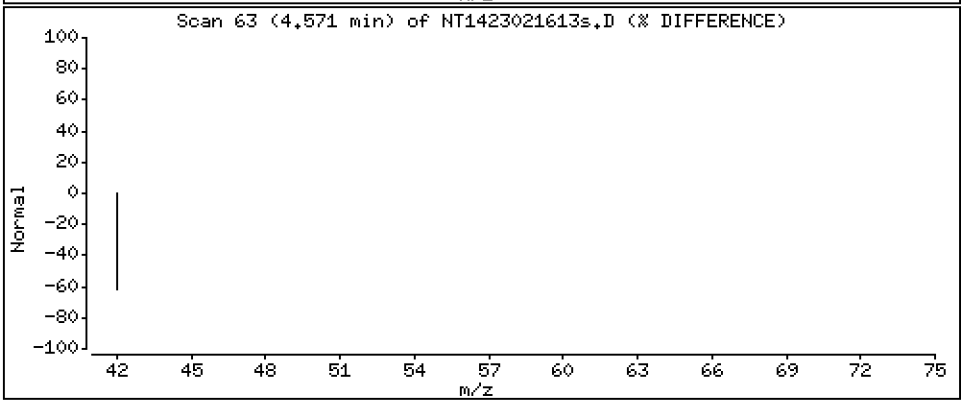












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D
Lab Smp Id: SLB0240-SCV1
Inj Date : 16-FEB-2023 21:18 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0240-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Meth Date : 03-Mar-2023 14:04 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.679	6.764	(0.750)	843875	7.69265	7.693(R)
	3 Phenol	94	8.294	8.379	(0.931)	773600	4.55614	4.556
	7 1,3-Dichlorobenzene	146	8.835	8.835	(0.992)	640622	4.80933	4.809
*	8 1,4-Dichlorobenzene-d4	152	8.905	8.905	(1.000)	391473	4.00000	
	9 1,4-Dichlorobenzene	146	8.936	8.936	(1.003)	616286	4.85010	4.850
	11 Benzyl alcohol	79	9.184	9.161	(1.031)	568264	5.30032	5.300
	12 1,2-Dichlorobenzene	146	9.293	9.293	(1.044)	605835	4.79526	4.795
	13 2-Methylphenol	108	9.409	9.433	(1.057)	523707	4.50674	4.507
	15 4-Methylphenol	108	9.689	9.720	(1.088)	579099	4.46016	4.460
	16 N-Nitroso-di-n-propylamine	70	9.743	9.767	(1.094)	517307	5.04663	5.047
	22 2,4-Dimethylphenol	107	10.728	10.745	(0.942)	488898	3.90295	3.903
	24 Benzoic acid	105	10.938	11.116	(0.960)	436009	6.44677	6.447
	26 1,2,4-Trichlorobenzene	180	11.309	11.310	(0.993)	602290	4.59532	4.595
*	27 Naphthalene-d8	136	11.394	11.394	(1.000)	1430650	4.00000	
	30 Hexachlorobutadiene	225	11.804	11.804	(1.036)	383880	4.81466	4.815
	39 Dimethylphthalate	163	14.543	14.551	(0.968)	1212628	5.00209	5.002
*	42 Acenaphthene-d10	162	15.023	15.016	(1.000)	794620	4.00000	
	50 Diethylphthalate	149	15.997	15.997	(1.065)	1507744	4.96936	4.969
	54 N-Nitrosodiphenylamine	169	16.375	16.384	(0.907)	1157201	5.00925	5.009(H)
	57 Hexachlorobenzene	284	17.432	17.432	(0.965)	537021	4.70048	4.700
	58 Pentachlorophenol	266	17.796	17.944	(0.985)	240806	4.93475	4.935
*	59 Phenanthrene-d10	188	18.059	18.059	(1.000)	1759092	4.00000	
$	66 Terphenyl-d14	244	21.224	21.224	(0.918)	1463833	4.57604	4.576(R)
	67 Butylbenzylphthalate	149	22.153	22.153	(0.958)	814994	4.96402	4.964
*	69 Chrysene-d12	240	23.128	23.121	(1.000)	1201603	4.00000	
*	77 Perylene-d12	264	25.691	25.691	(1.000)	814421	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.257	28.288	(1.100)	772593	4.88838	4.888
	90 N-Nitrosodimethylamine	74	4.571	4.618	(0.513)	440424	5.29346	5.293

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021613s.D
Lab Smp Id: SLB0240-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 18:18
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	393779	196890	787558	391473	-0.59
27 Naphthalene-d8	1399029	699515	2798058	1430650	2.26
42 Acenaphthene-d10	759723	379862	1519446	794620	4.59
59 Phenanthrene-d10	1756156	878078	3512312	1759092	0.17
69 Chrysene-d12	1174128	587064	2348256	1201603	2.34
77 Perylene-d12	826011	413006	1652022	814421	-1.40

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.91	8.41	9.41	8.91	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	0.05
59 Phenanthrene-d10	18.06	17.56	18.56	18.06	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.13	0.03
77 Perylene-d12	25.68	25.18	26.18	25.69	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021613s.D

Lab ID: SLB0240-SCV1
nt14.i, 20230216.b\20230216.b\SIMABN2.m,   16-FEB-2023 21:18

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.931	0.941	-0.0095	Phenol
0.960	0.000	0.9599	Benzoic acid
0.513	0.518	-0.0052	N-Nitrosodimethylamine
0.985	0.000	0.9854	Pentachlorophenol
0.750	0.760	-0.0095	2-Fluorophenol

RRT check based on Ccal File: 20230216.b/NT1423021612s.D

On Column LOD for nt14.i, 20230216.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00009
Lab File ID:	NT1423022132S.D	Calibration Date:	02/16/2023
Sequence:	SLB0349	Injection Date:	02/22/23
Lab Sample ID:	SLB0349-ICV1	Injection Time:	08:08
Sequence Name:	Initial Cal Check		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
1,4-Dichlorobenzene	A	1.0000	1.1	1.2983440	1.4098460		8.6	+/-20	
1,2-Dichlorobenzene	A	1.0000	1.1	1.2909230	1.3728090		6.3	+/-20	
Benzyl Alcohol	A	1.0000	1.1	1.0954840	1.2020050		9.7	+/-20	
Benzoic acid	A	4.0000	1.5	0.1890948	0.0707098		-62.6	+/-20	*
2,4-Dimethylphenol	A	2.0000	3.0	0.3263158	0.5239607		48.1	+/-20	*
1,2,4-Trichlorobenzene	A	1.0000	1.0	0.3664516	0.3742767		2.1	+/-20	
N-Nitrosodiphenylamine	A	1.0000	1.2	0.4912986	0.5819379		15.1	+/-20	
Pentachlorophenol	A	2.0000	1.8	0.0811080	0.0967648		-10.0	+/-20	
2-Fluorophenol	A	1.5000	1.34	0.8380777	1.0281390		-10.9	+/-20	
p-Terphenyl-d14	A	1.0000	1.27	1.0648810	1.3478950		26.6	+/-20	*

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221132S.D

Date : 22-FEB-2023 08:08

Client ID:

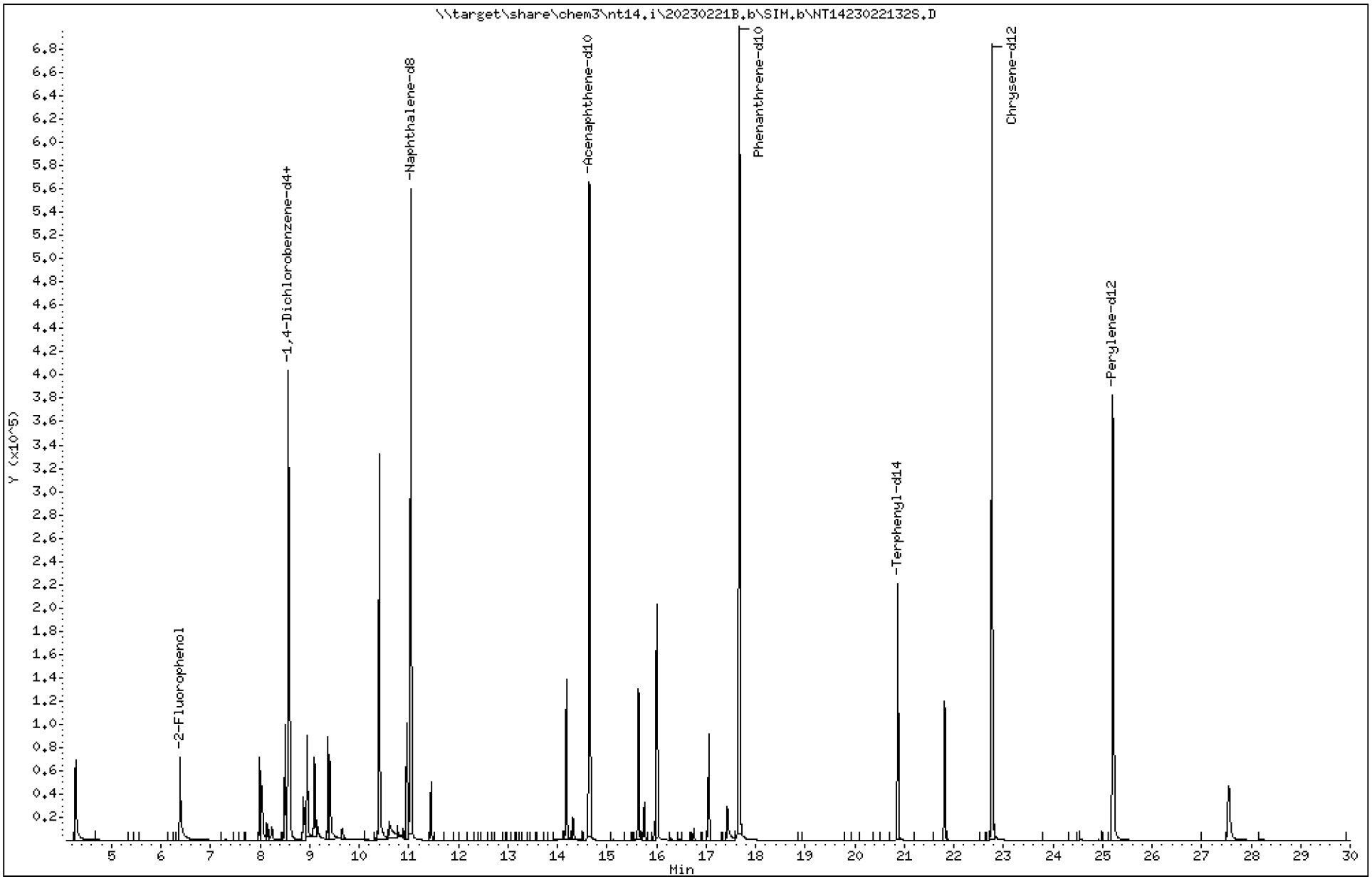
Instrument: nt14.i

Sample Info: SIM-ICV1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT1423022132S.D
Lab Smp Id: SLB0349-ICV1
Inj Date : 22-FEB-2023 08:08 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SIM-ICV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Meth Date : 17-Jun-2023 09:15 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.385	6.385	(0.745)	100936	1.50000	1.336
	3	Phenol	94	7.993	7.993	(0.932)	107881	1.00000	0.9596
	7	1,3-Dichlorobenzene	146	8.503	8.503	(0.992)	93039	1.00000	1.044
*	8	1,4-Dichlorobenzene-d4	152	8.573	8.573	(1.000)	261796	4.00000	
	9	1,4-Dichlorobenzene	146	8.596	8.596	(1.003)	92273	1.00000	1.086
	11	Benzyl alcohol	79	8.867	8.867	(1.034)	78670	1.00000	1.097
	12	1,2-Dichlorobenzene	146	8.953	8.953	(1.044)	89849	1.00000	1.063
	13	2-Methylphenol	108	9.093	9.093	(1.061)	87454	1.00000	1.125(M)
	15	4-Methylphenol	108	9.372	9.372	(1.093)	96269	1.00000	1.126
	16	N-Nitroso-di-n-propylamine	70	9.411	9.411	(1.098)	75034	1.00000	1.139
	22	2,4-Dimethylphenol	107	10.404	10.404	(0.942)	251318	2.00000	2.961
	24	Benzoic acid	105	10.606	10.606	(0.961)	67832	4.00000	1.496(M)
	26	1,2,4-Trichlorobenzene	180	10.962	10.962	(0.993)	89761	1.00000	1.021
*	27	Naphthalene-d8	136	11.039	11.039	(1.000)	959301	4.00000	
	30	Hexachlorobutadiene	225	11.449	11.449	(1.037)	52609	1.00000	0.9840
	39	Dimethylphthalate	163	14.180	14.180	(0.968)	182645	1.00000	1.189
*	42	Acenaphthene-d10	162	14.645	14.645	(1.000)	503659	4.00000	
	50	Diethylphthalate	149	15.634	15.634	(1.068)	223174	1.00000	1.160
	54	N-Nitrosodiphenylamine	169	16.005	16.005	(0.906)	171665	1.00000	1.151
	57	Hexachlorobenzene	284	17.054	17.054	(0.965)	81935	1.00000	1.069
	58	Pentachlorophenol	266	17.426	17.426	(0.986)	57089	2.00000	1.801
*	59	Phenanthrene-d10	188	17.673	17.673	(1.000)	1179954	4.00000	
$	66	Terphenyl-d14	244	20.869	20.869	(0.917)	299017	1.00000	1.266
	67	Butylbenzylphthalate	149	21.813	21.813	(0.958)	145311	1.00000	1.281
*	69	Chrysene-d12	240	22.766	22.766	(1.000)	887360	4.00000	
*	77	Perylene-d12	264	25.212	25.212	(1.000)	652371	4.00000	
	79	Dibenzo(a,h)anthracene	278	27.553	27.553	(1.093)	151984	1.00000	1.301
	90	N-Nitrosodimethylamine	74	4.277	4.277	(0.499)	85681	2.00000	1.489(M)

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022132S.D
Lab Smp Id: SLB0349-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 17:47
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	241018	120509	482036	261796	8.62
27 Naphthalene-d8	887165	443583	1774330	959301	8.13
42 Acenaphthene-d10	467553	233777	935106	503659	7.72
59 Phenanthrene-d10	1079793	539897	2159586	1179954	9.28
69 Chrysene-d12	754146	377073	1508292	887360	17.66
77 Perylene-d12	558201	279101	1116402	652371	16.87

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.06
59 Phenanthrene-d10	17.67	17.17	18.17	17.67	-0.00
69 Chrysene-d12	22.77	22.27	23.27	22.77	-0.04
77 Perylene-d12	25.22	24.72	25.72	25.21	-0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022132S.D

Lab ID: SLB0349-ICV1
nt14.i, 20230221B.b\SIM.b\SIMABN2.m,   22-FEB-2023 08:08

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

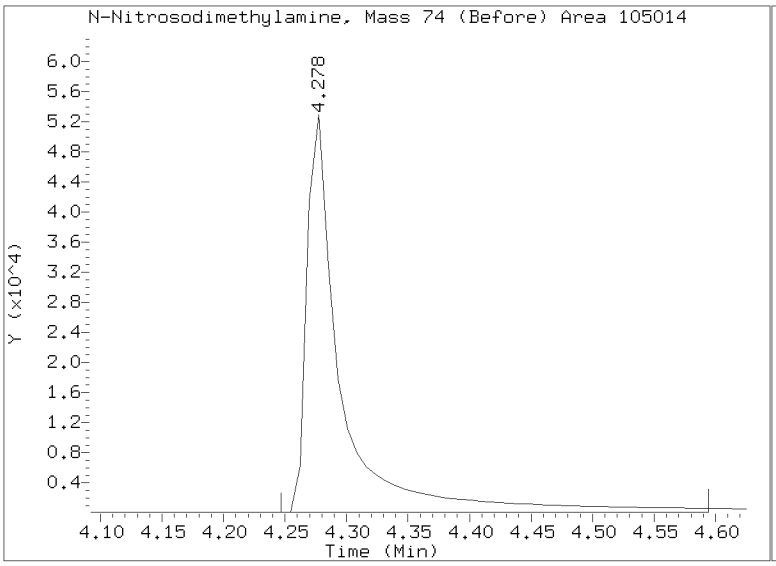
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

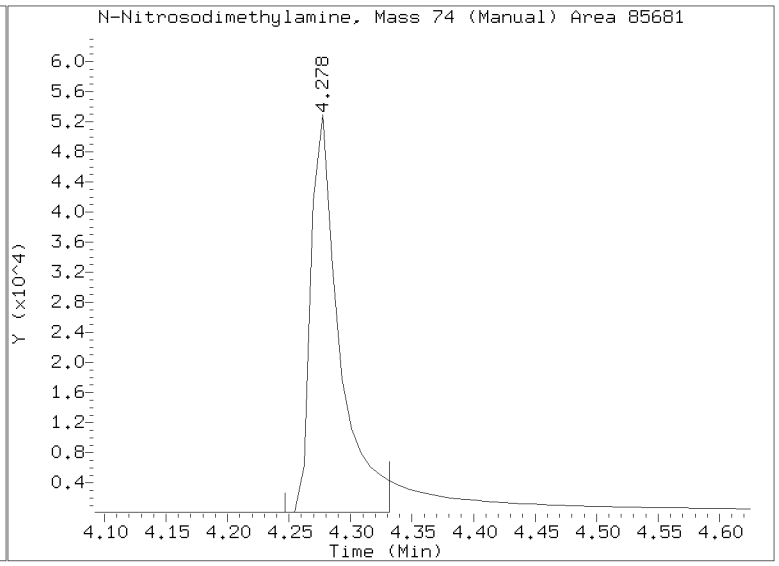
Exception: 1,2,4-Trichlorobenzene 0.0010

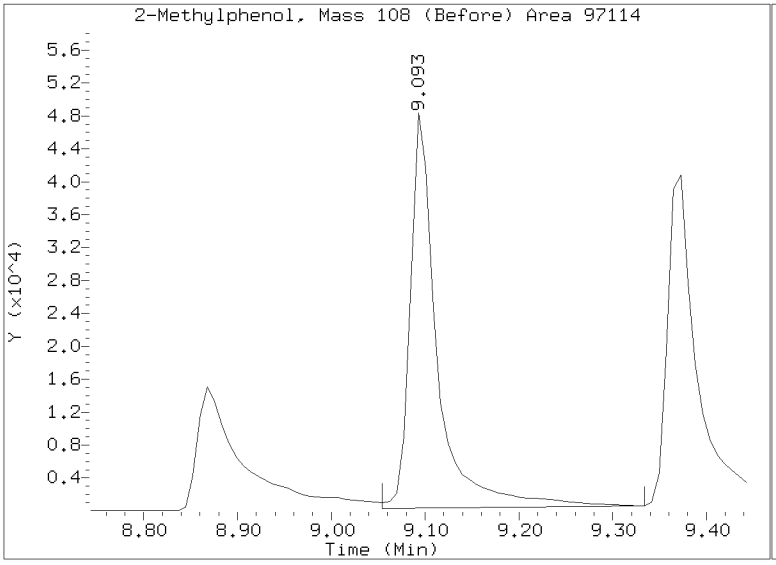
* Only compounds listed in the work order have been verified by the analyst *

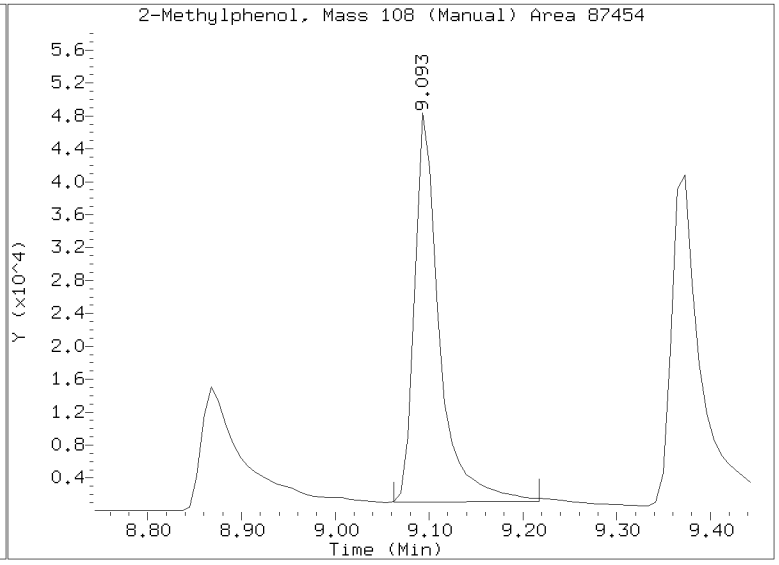
Quant Ion Manual Peak Adjustment Report

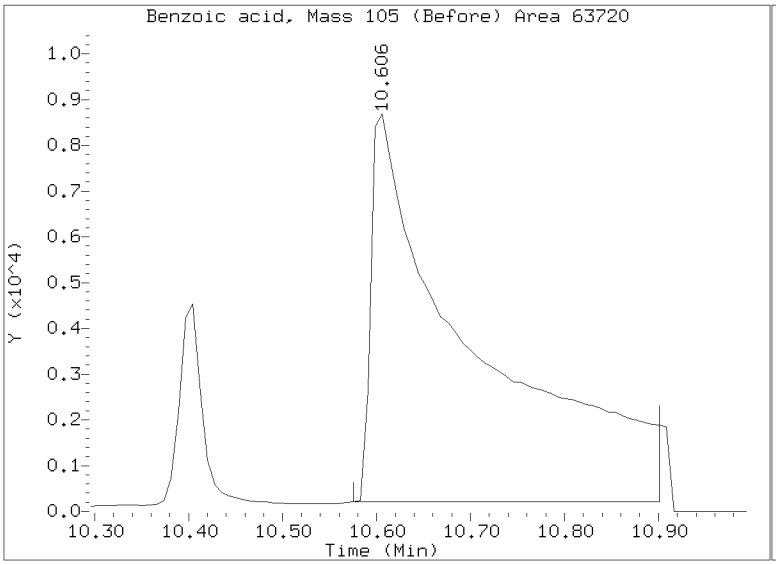
Datafile: //target/share/chem3/nt14.i/20230221B.b/SIM.b/NT1423022132S.D
Injection Date: 22-FEB-2023 08:08
Lab ID:SLB0349-ICV1 Client ID:
Report Date: 06/17/2023 09:47

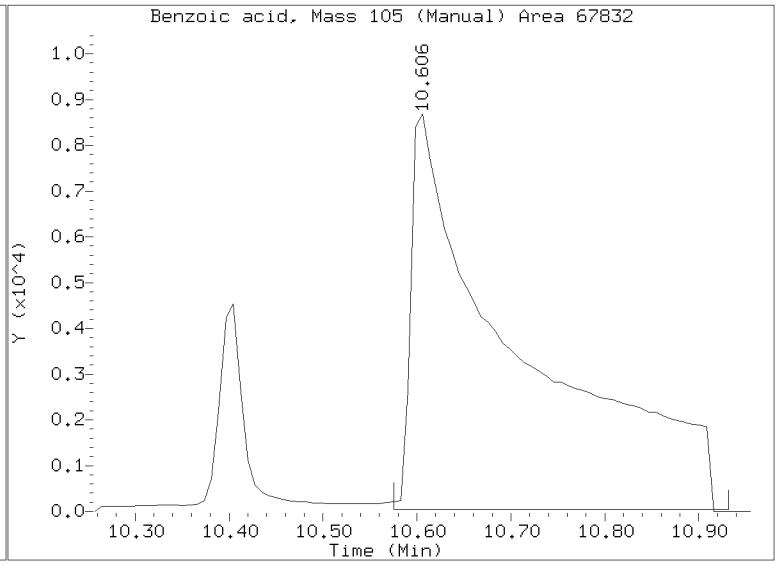












Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221B.b\SIM.b

Instrument: nt14.i Date: 22-FEB-2023 Method: SIM.b\SIMABN2.m

INITIAL CAL: 16-FEB-2023

Compound	%RSD or R^2
Benzoic acid	51.4

ICV CAL: NT1423022132S.D 22-FEB-2023 08:08

Compound	%D
2,4-Dimethylphenol	48.1
Benzoic acid	-62.6
N-Nitrosodimethylamine	-25.5
Dibenzo(a,h)anthracene	30.1
Butylbenzylphthalate	28.1
Terphenyl-d14	26.6

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00009
Lab File ID:	NT1423022148ICVS.D	Calibration Date:	02/16/2023
Sequence:	SLB0351	Injection Date:	02/22/23
Lab Sample ID:	SLB0351-ICV1	Injection Time:	17:47
Sequence Name:	Initial Cal Check		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
1,4-Dichlorobenzene	A	1.0000	1.1	1.2983440	1.4340170		10.4	+/-20	
1,2-Dichlorobenzene	A	1.0000	1.1	1.2909230	1.3894900		7.6	+/-20	
Benzyl Alcohol	A	1.0000	1.1	1.0954840	1.1526610		5.2	+/-20	
Benzoic acid	A	4.0000	1.6	0.1890948	0.0775527		-59.0	+/-20	*
2,4-Dimethylphenol	A	2.0000	3.0	0.3263158	0.5254716		48.5	+/-20	*
1,2,4-Trichlorobenzene	A	1.0000	1.0	0.3664516	0.3669306		0.1	+/-20	
N-Nitrosodiphenylamine	A	1.0000	1.1	0.4912986	0.5795444		14.7	+/-20	
Pentachlorophenol	A	2.0000	1.7	0.0811080	0.0900728		-16.1	+/-20	
2-Fluorophenol	A	1.5000	1.33	0.8380777	1.0204270		-11.6	+/-20	
p-Terphenyl-d14	A	1.0000	1.33	1.0648810	1.4167120		33.0	+/-20	*

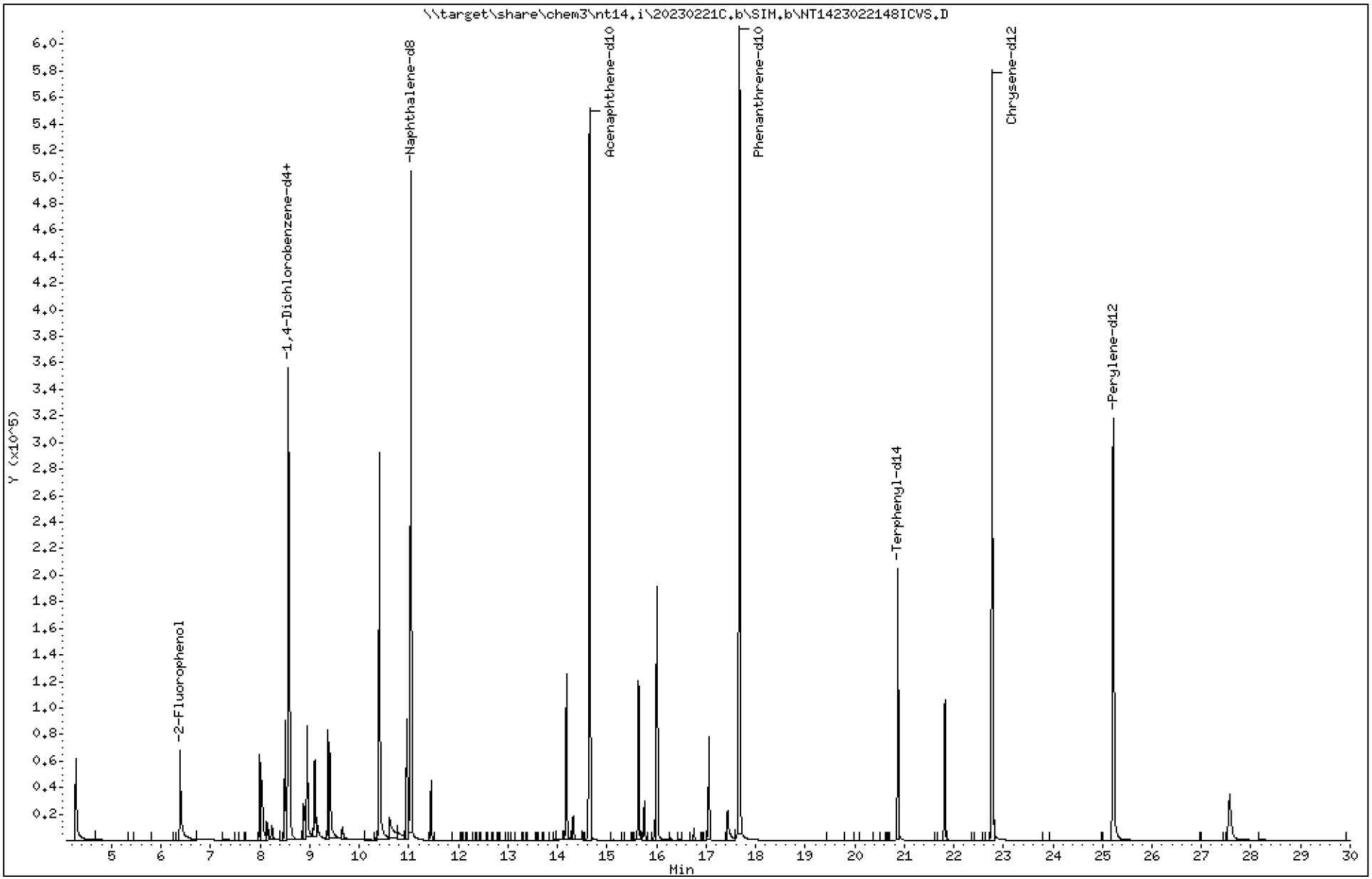
* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT1423022148ICVS.D
Date : 22-FEB-2023 17:47
Client ID:
Sample Info: SLB0351-ICV1

Column phase: ZB-5msi

Instrument: nt14.i

Operator: DSD
Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT1423022148ICVS.d
Lab Smp Id: SLB0351-ICV1
Inj Date : 22-FEB-2023 17:47 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0351-ICV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Meth Date : 25-May-2023 11:39 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.386	6.386	(0.745)	92228	1.50000	1.326(M)
	3	Phenol	94	7.993	7.993	(0.932)	94778	1.00000	0.9158
	7	1,3-Dichlorobenzene	146	8.503	8.503	(0.992)	86144	1.00000	1.050
*	8	1,4-Dichlorobenzene-d4	152	8.573	8.573	(1.000)	241018	4.00000	
	9	1,4-Dichlorobenzene	146	8.596	8.596	(1.003)	86406	1.00000	1.104
	11	Benzyl alcohol	79	8.876	8.876	(1.035)	69453	1.00000	1.052
	12	1,2-Dichlorobenzene	146	8.953	8.953	(1.044)	83723	1.00000	1.076
	13	2-Methylphenol	108	9.101	9.101	(1.062)	78025	1.00000	1.091(M)
	15	4-Methylphenol	108	9.373	9.373	(1.093)	88080	1.00000	1.119
	16	N-Nitroso-di-n-propylamine	70	9.411	9.411	(1.098)	69287	1.00000	1.143(M)
	22	2,4-Dimethylphenol	107	10.404	10.404	(0.942)	233090	2.00000	2.970
	24	Benzoic acid	105	10.614	10.614	(0.961)	68802	4.00000	1.641(M)
	26	1,2,4-Trichlorobenzene	180	10.962	10.962	(0.993)	81382	1.00000	1.001
*	27	Naphthalene-d8	136	11.040	11.040	(1.000)	887165	4.00000	
	30	Hexachlorobutadiene	225	11.449	11.449	(1.037)	47969	1.00000	0.9702
	39	Dimethylphthalate	163	14.181	14.181	(0.968)	168137	1.00000	1.179
*	42	Acenaphthene-d10	162	14.653	14.653	(1.000)	467553	4.00000	
	50	Diethylphthalate	149	15.635	15.635	(1.067)	207684	1.00000	1.163
	54	N-Nitrosodiphenylamine	169	16.013	16.013	(0.906)	156447	1.00000	1.147
	57	Hexachlorobenzene	284	17.054	17.054	(0.965)	75373	1.00000	1.075
	58	Pentachlorophenol	266	17.434	17.434	(0.986)	48630	2.00000	1.678
*	59	Phenanthrene-d10	188	17.674	17.674	(1.000)	1079793	4.00000	
$	66	Terphenyl-d14	244	20.869	20.869	(0.916)	267102	1.00000	1.330
	67	Butylbenzylphthalate	149	21.821	21.821	(0.958)	131311	1.00000	1.360
*	69	Chrysene-d12	240	22.774	22.774	(1.000)	754146	4.00000	
*	77	Perylene-d12	264	25.220	25.220	(1.000)	558201	4.00000	
	79	Dibenzo(a,h)anthracene	278	27.569	27.569	(1.093)	121413	1.00000	1.217
	90	N-Nitrosodimethylamine	74	4.277	4.277	(0.499)	80942	2.00000	1.529(M)

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022148ICVS.d
Lab Smp Id: SLB0351-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 18:18
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	393779	196890	787558	241018	-38.79
27 Naphthalene-d8	1399029	699515	2798058	887165	-36.59
42 Acenaphthene-d10	759723	379862	1519446	467553	-38.46
59 Phenanthrene-d10	1756156	878078	3512312	1079793	-38.51
69 Chrysene-d12	1174128	587064	2348256	754146	-35.77
77 Perylene-d12	826011	413006	1652022	558201	-32.42

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.91	8.41	9.41	8.57	-3.73
27 Naphthalene-d8	11.40	10.90	11.90	11.04	-3.11
42 Acenaphthene-d10	15.02	14.52	15.52	14.65	-2.42
59 Phenanthrene-d10	18.06	17.56	18.56	17.67	-2.14
69 Chrysene-d12	23.12	22.62	23.62	22.77	-1.50
77 Perylene-d12	25.68	25.18	26.18	25.22	-1.80

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022148ICVS.d

Lab ID: SLB0351-ICV1
nt14.i, 20230221C.b\SIM.b\SIMABN2.m,   22-FEB-2023 17:47

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

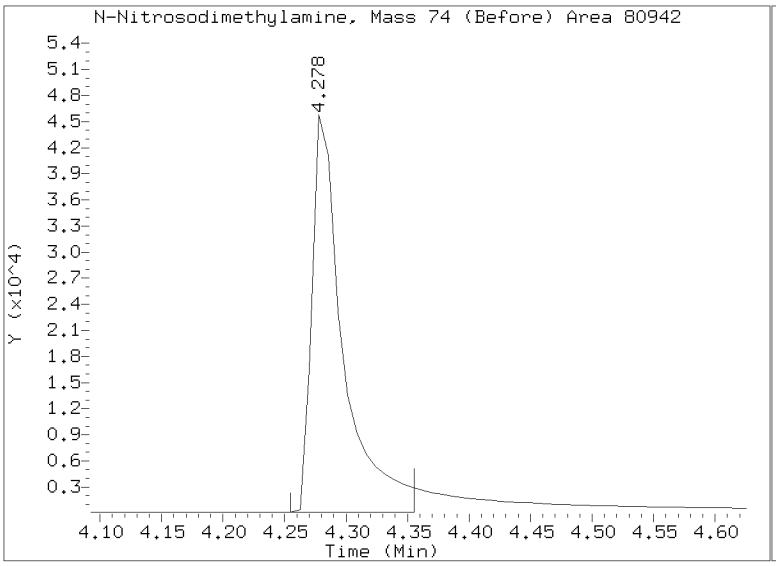
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

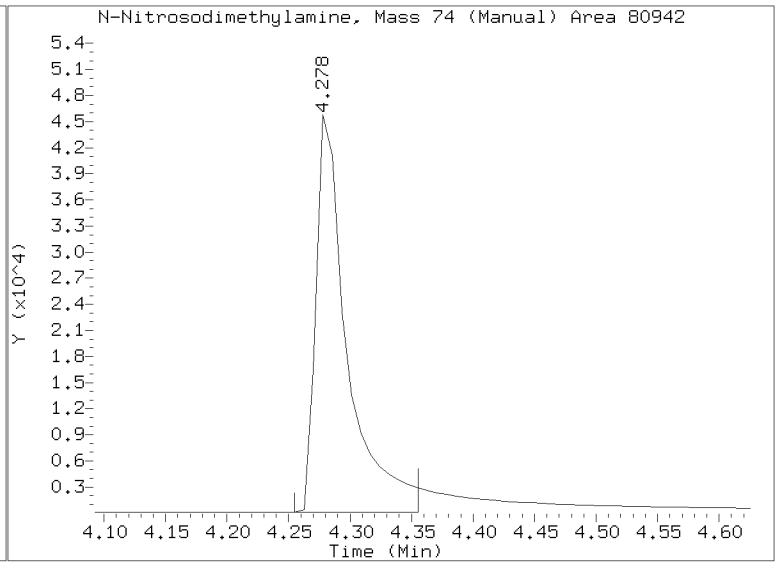
Exception: 1,2,4-Trichlorobenzene 0.0010

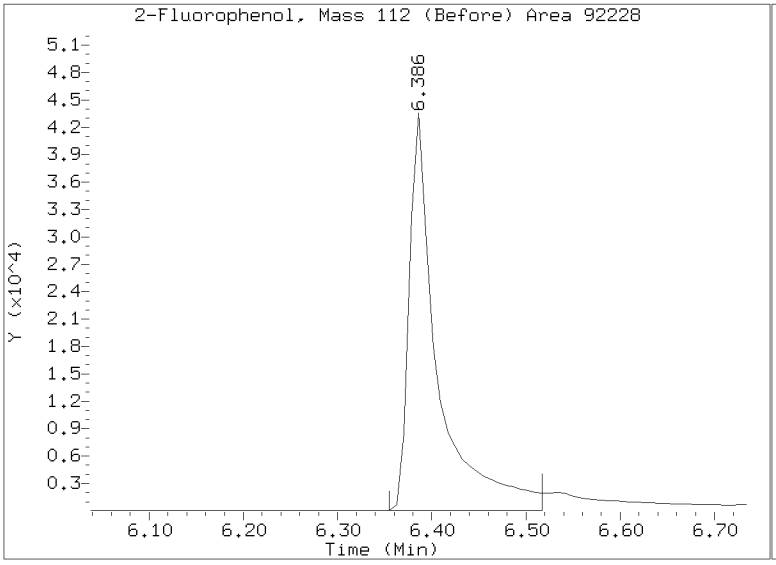
* Only compounds listed in the work order have been verified by the analyst *

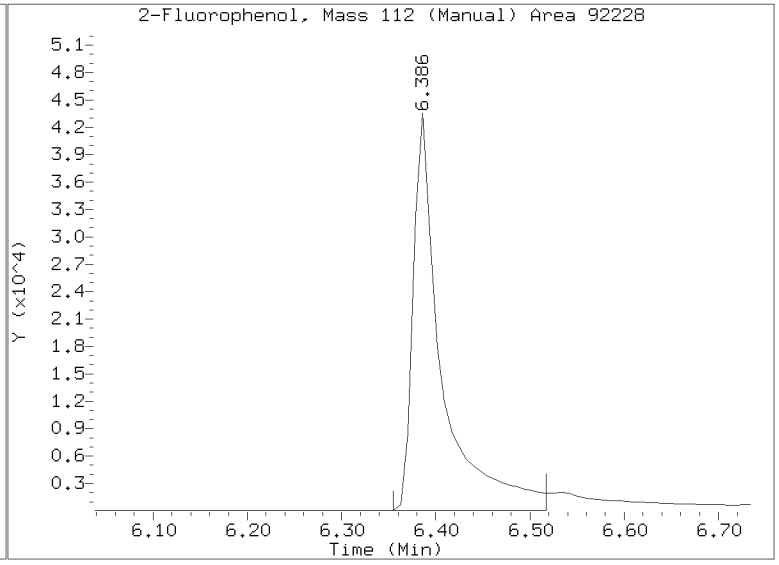
Quant Ion Manual Peak Adjustment Report

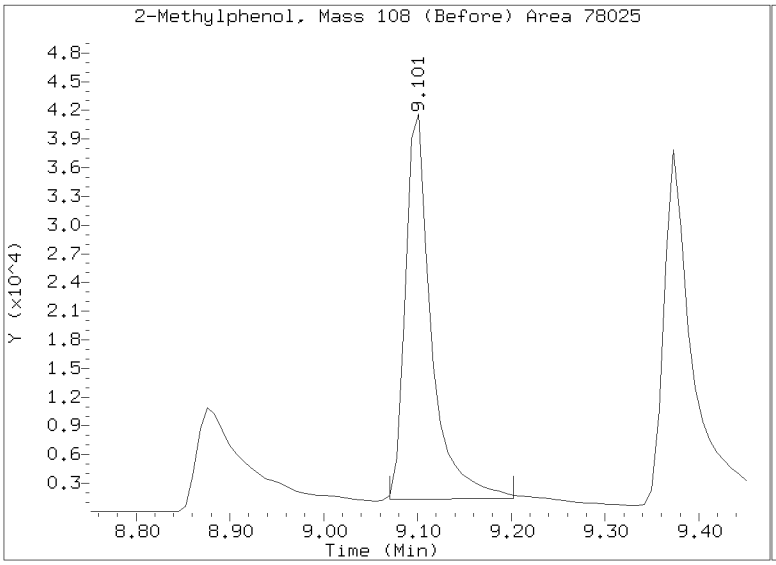
Datafile: //target/share/chem3/nt14.i/20230221C.b/SIM.b/NT1423022148ICVS.D
Injection Date: 22-FEB-2023 17:47
Lab ID:SLB0351-ICV1 Client ID:
Report Date: 05/25/2023 11:47

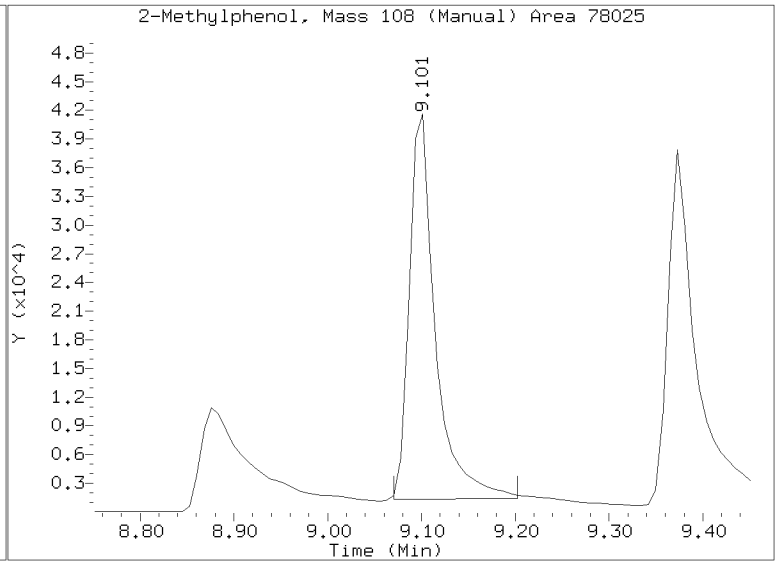












Quant Ion Manual Peak Adjustment Report

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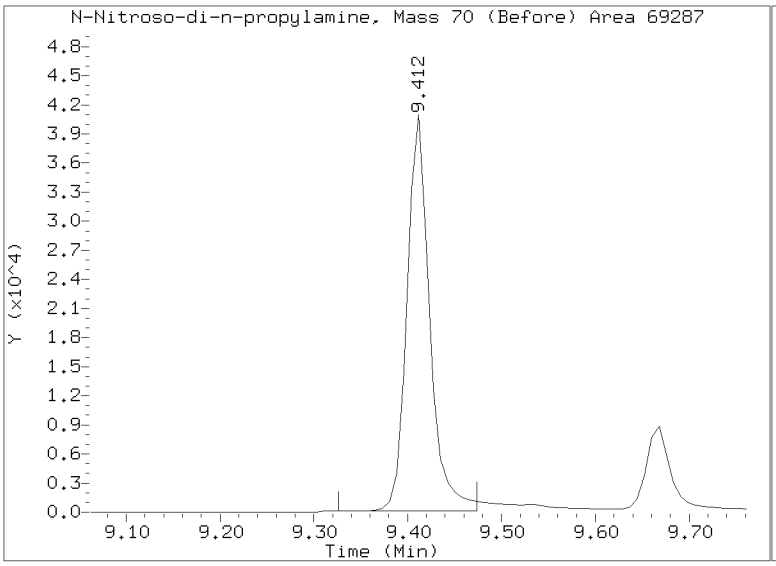
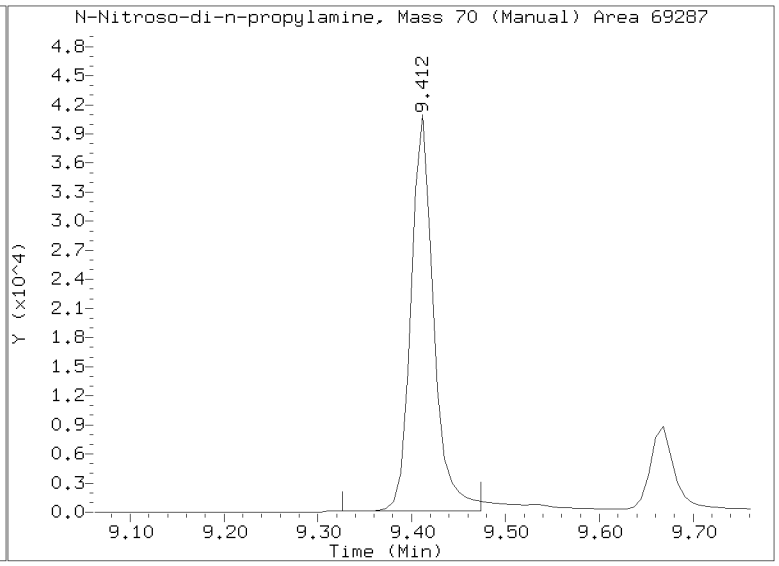
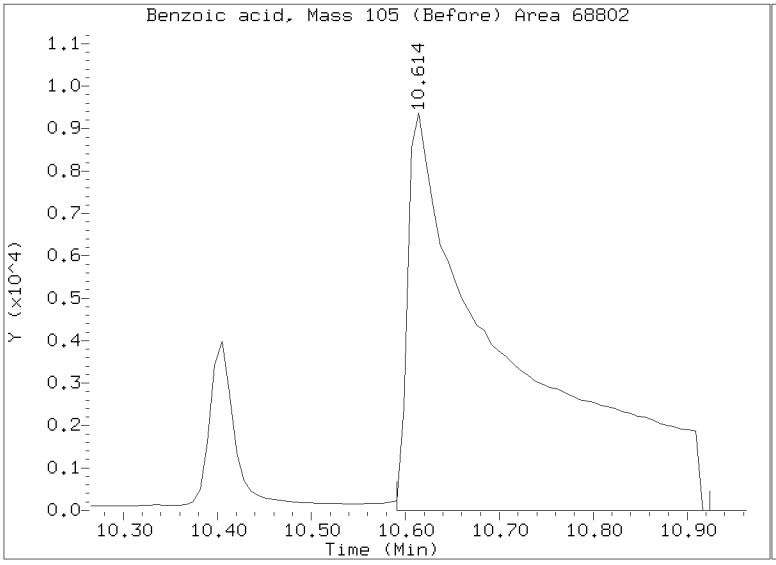
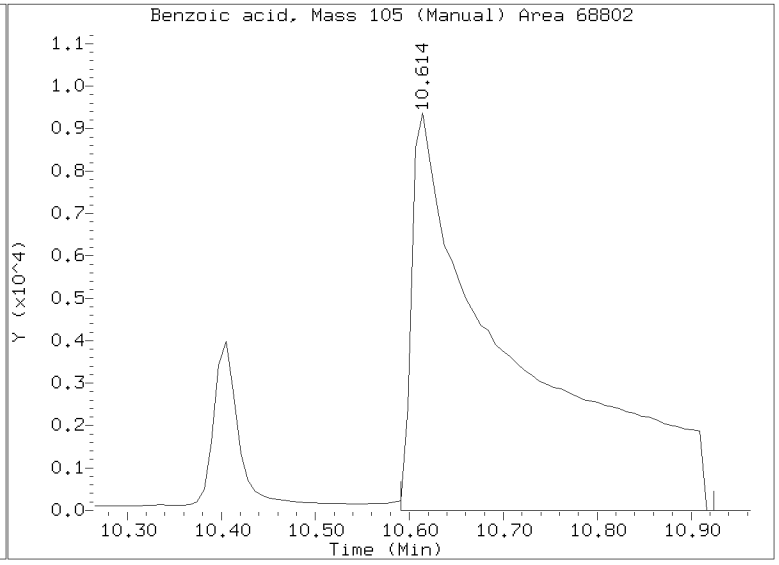
Injection Date: 22-FEB-2023 17:47
Lab ID:SLB0351-ICV1 Client ID:
Report Date: 05/25/2023 11:47









Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221C.b\SIM.b

Instrument: nt14.i Date: 22-FEB-2023 Method: SIM.b\SIMABN2.m

INITIAL CAL: 16-FEB-2023

Compound	%RSD or R^2
Benzoic acid	51.4

ICV CAL: NT1423022148ICVS.d 22-FEB-2023 17:47

Compound	%D
2,4-Dimethylphenol	48.5
Benzoic acid	-59.0
N-Nitrosodimethylamine	-23.6
Dibenzo(a,h)anthracene	21.7
Butylbenzylphthalate	36.0
Terphenyl-d14	33.0

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00009
Lab File ID:	NT1423021613s.D	Calibration Date:	02/16/2023
Sequence:	SLB0240	Injection Date:	02/16/23
Lab Sample ID:	SLB0240-SCV1	Injection Time:	21:18
Sequence Name:	SCV 5.0		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Phenol	A	5.0000	4.56	1.5020080	1.5809010		-8.9	+/-20	
1,3-Dichlorobenzene	A	5.0000	4.81	1.3610540	1.3091520		-3.8	+/-20	
1,4-Dichlorobenzene	A	5.0000	4.85	1.2983440	1.2594200		-3.0	+/-20	
1,2-Dichlorobenzene	A	5.0000	4.80	1.2909230	1.2380620		-4.1	+/-20	
Benzyl Alcohol	A	5.0000	5.30	1.0954840	1.1612840		6.0	+/-20	
Benzoic acid	A	10.000	6.45	0.1890948	0.1219051		-35.5	+/-20	*
2-Methylphenol	A	5.0000	4.51	1.1873640	1.0702290		-9.9	+/-20	
N-Nitroso-di-n-Propylamine	A	5.0000	5.05	0.9529567	1.0571500		0.9	+/-20	
4-Methylphenol	A	5.0000	4.46	1.1409260	1.1834260		-10.8	+/-20	
2,4-Dimethylphenol	A	5.0000	3.90	0.3263158	0.2733851		-21.9	+/-20	*
1,2,4-Trichlorobenzene	A	5.0000	4.60	0.3664516	0.3367924		-8.1	+/-20	
Hexachlorobutadiene	A	5.0000	4.81	0.2229239	0.2146605		-3.7	+/-20	
N-Nitrosodimethylamine	A	5.0000	5.29	0.6949015	0.9000345		5.9	+/-20	
Dimethylphthalate	A	5.0000	5.00	1.2203290	1.2208380		0.04	+/-20	
Diethyl phthalate	A	5.0000	4.97	1.5273120	1.5179520		-0.6	+/-20	
N-Nitrosodiphenylamine	A	5.0000	5.01	0.4912986	0.5262720		0.2	+/-20	
Hexachlorobenzene	A	5.0000	4.70	0.2597890	0.2442265		-6.0	+/-20	
Pentachlorophenol	A	5.0000	4.93	0.0811080	0.1095138		-1.3	+/-20	
Butylbenzylphthalate	A	5.0000	4.96	0.4143738	0.5426045		-0.7	+/-20	
Dibenzo(a,h)anthracene	A	5.0000	4.89	0.6162175	0.7589127		-2.2	+/-20	
2-Fluorophenol	A	7.5000	7.69	0.8380777	1.1496750		2.6		
p-Terphenyl-d14	A	5.0000	4.58	1.0648810	0.9745868		-8.5		

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

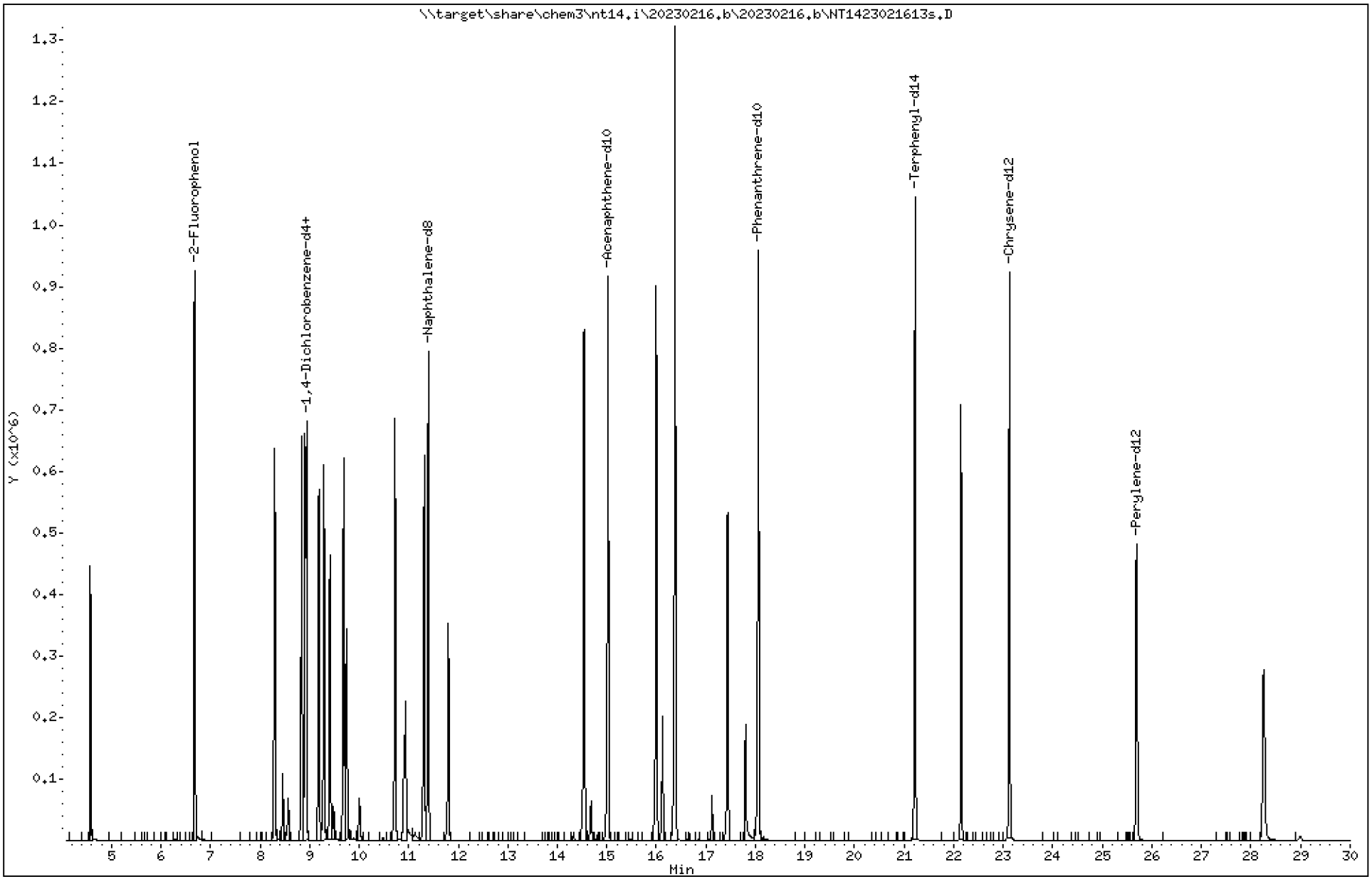
Instrument: nt14.i

Sample Info: SLB0240-SCV1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

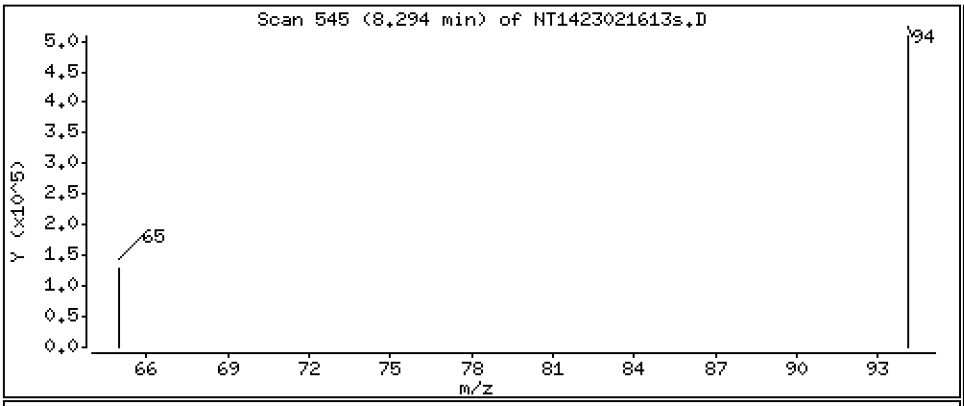
Operator: DSD

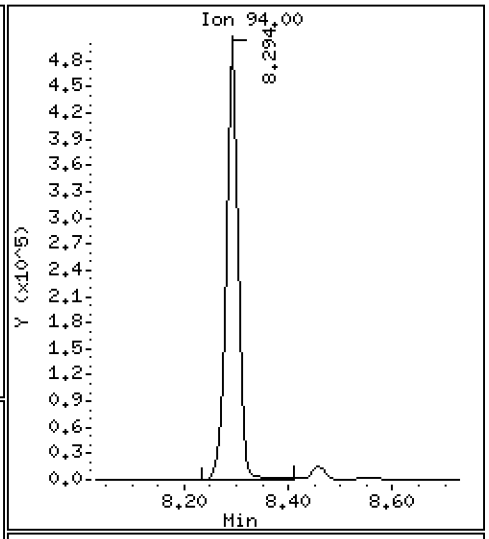
Column phase: ZB-5msi

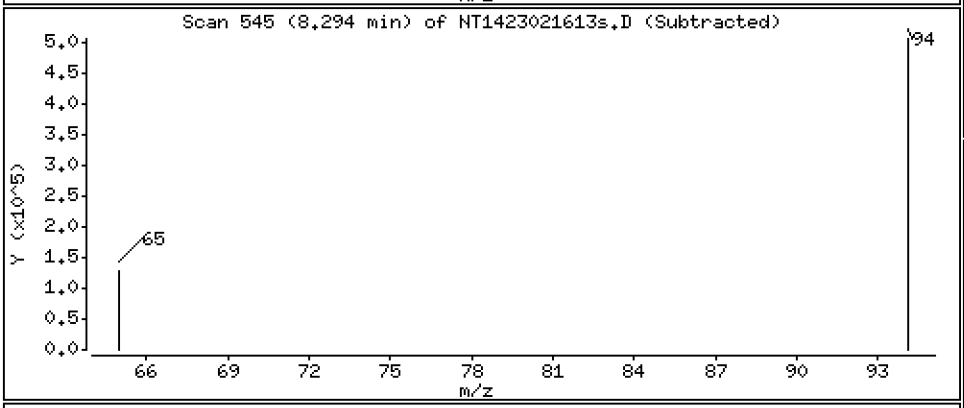
Column diameter: 0.25

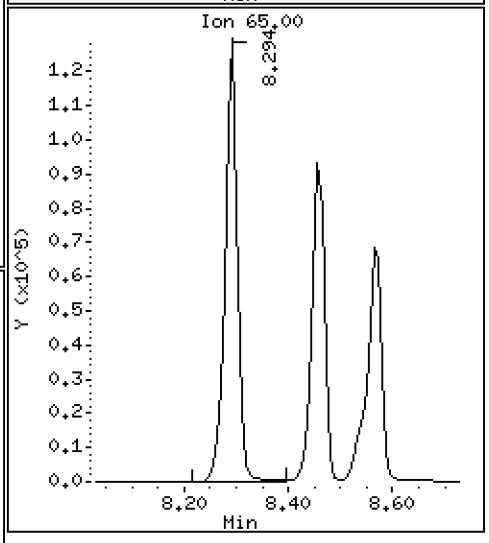
3 Phenol

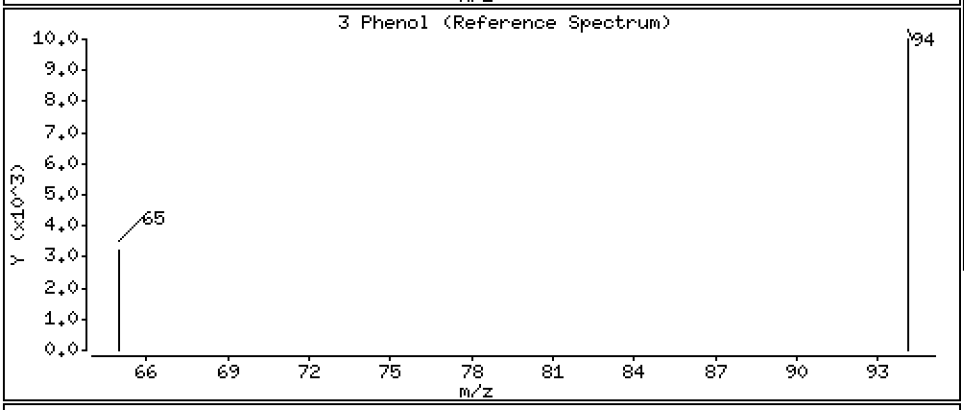
Concentration: 4.556 ug/mL

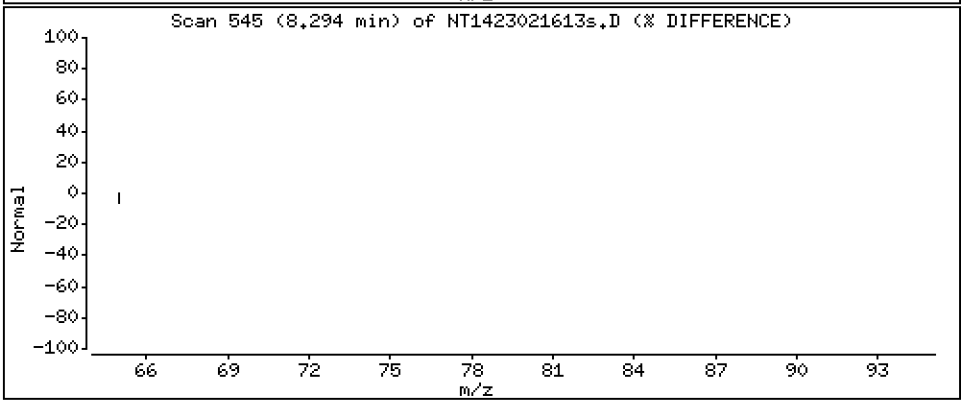












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

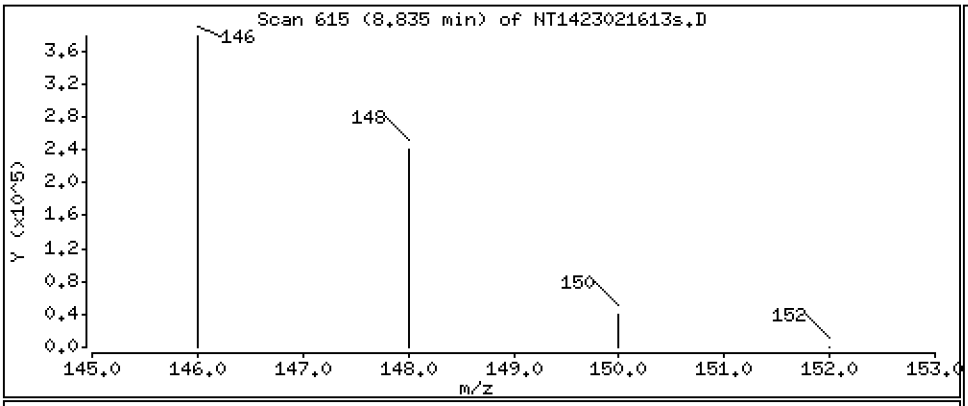
Operator: DSD

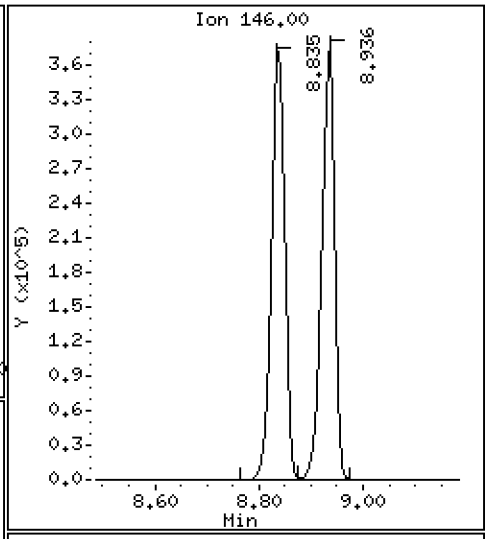
Column phase: ZB-5msi

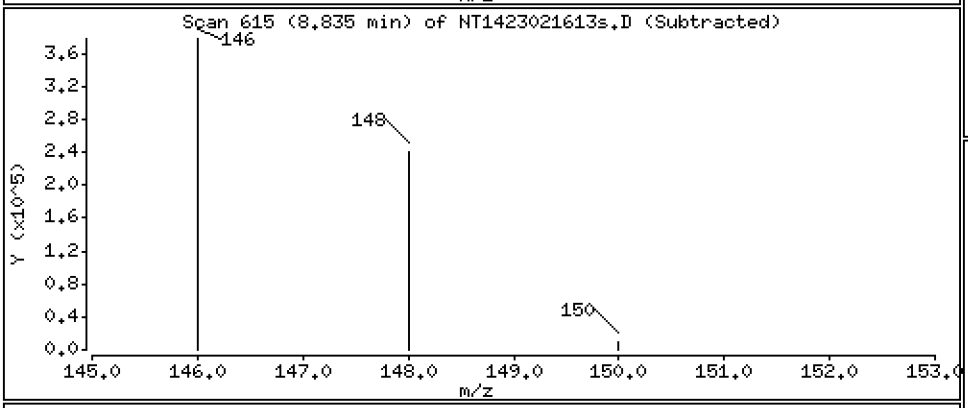
Column diameter: 0.25

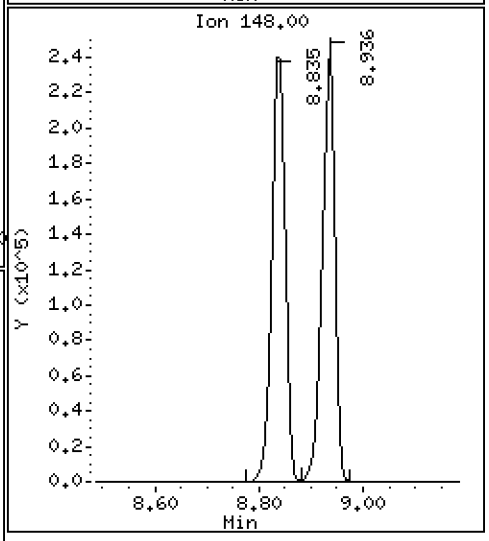
7 1,3-Dichlorobenzene

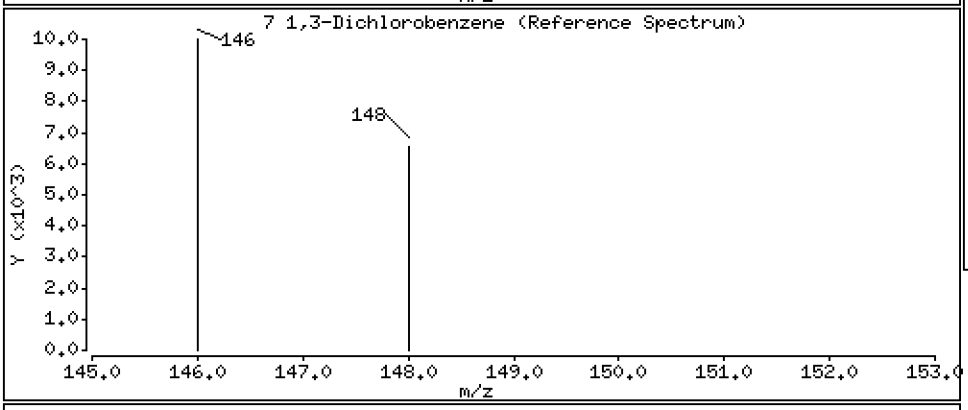
Concentration: 4.809 ug/mL

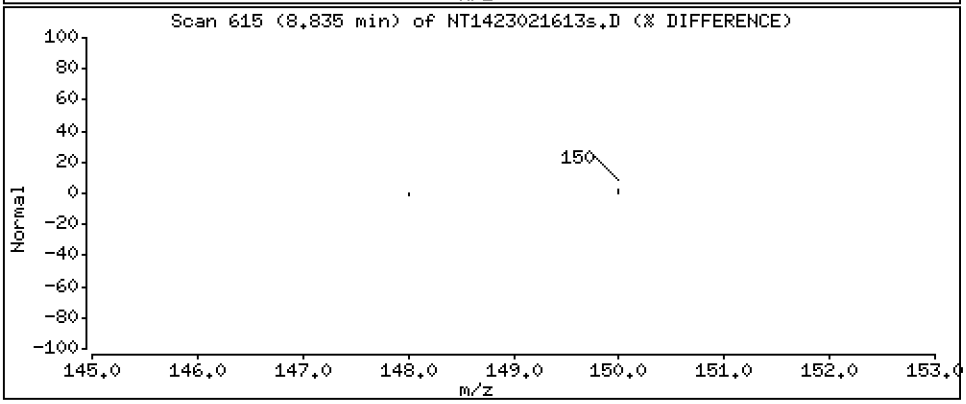












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

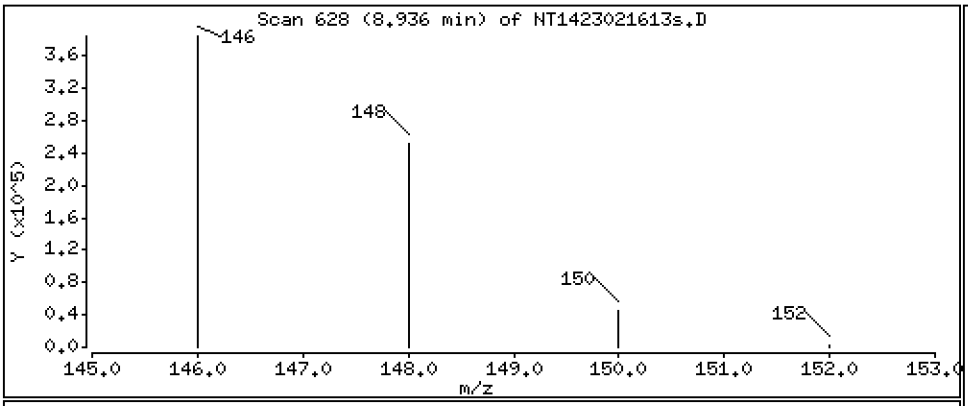
Operator: DSD

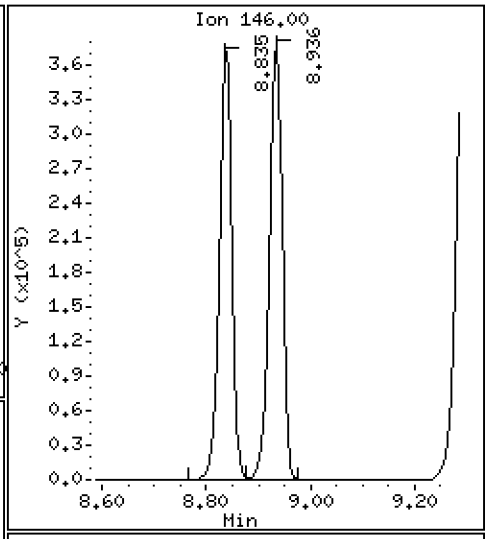
Column phase: ZB-5msi

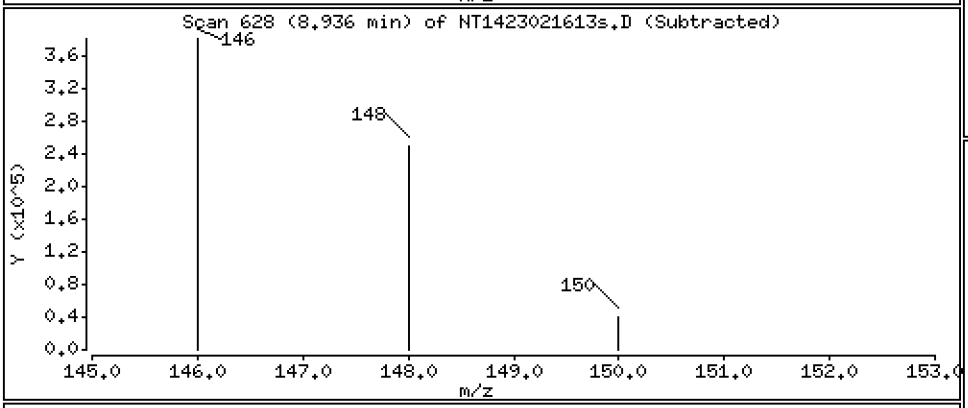
Column diameter: 0.25

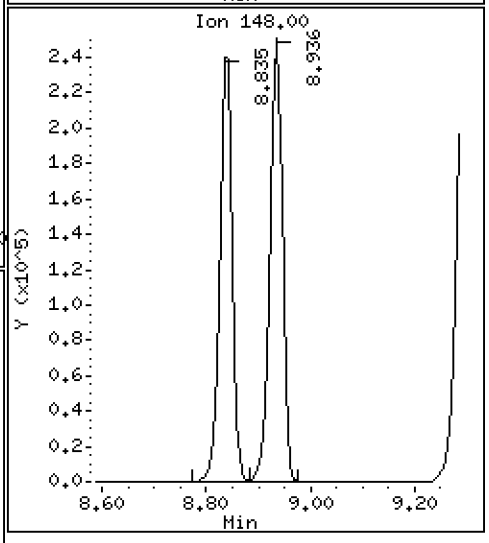
9 1,4-Dichlorobenzene

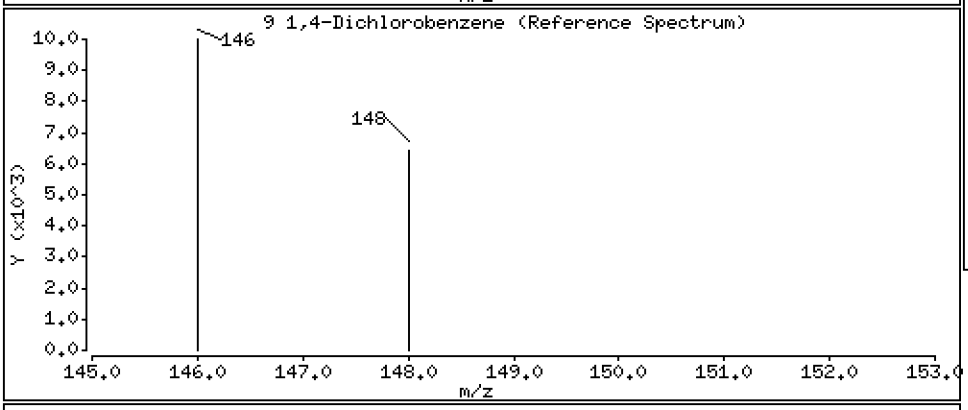
Concentration: 4.850 ug/mL

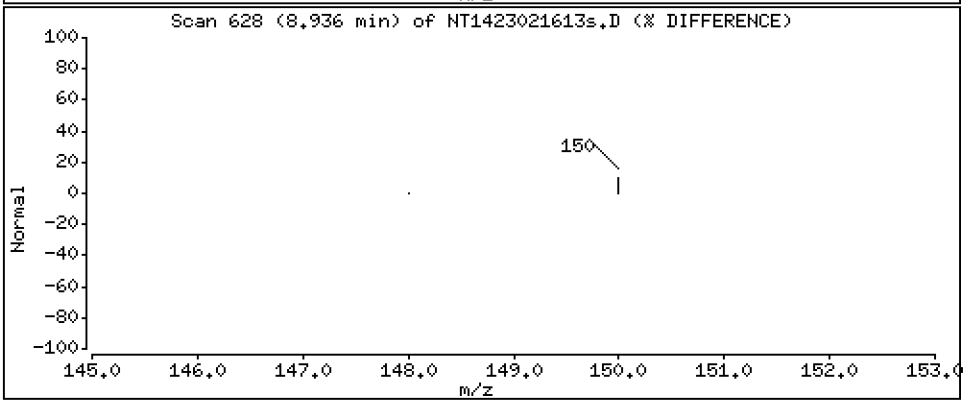












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

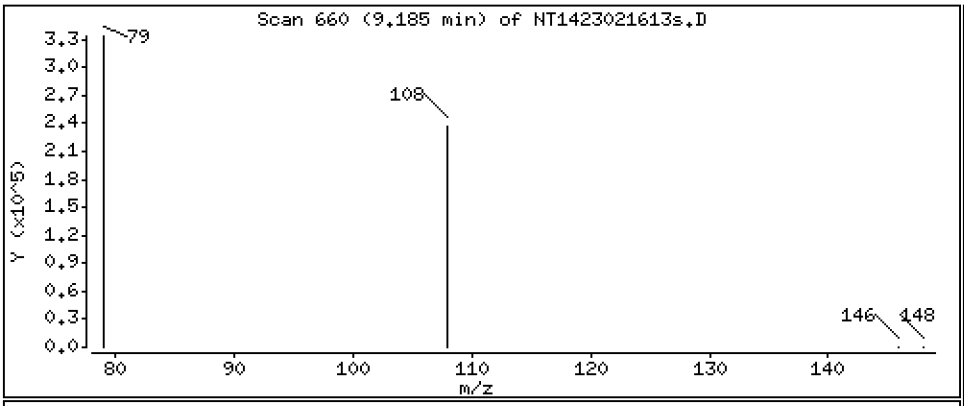
Operator: DSD

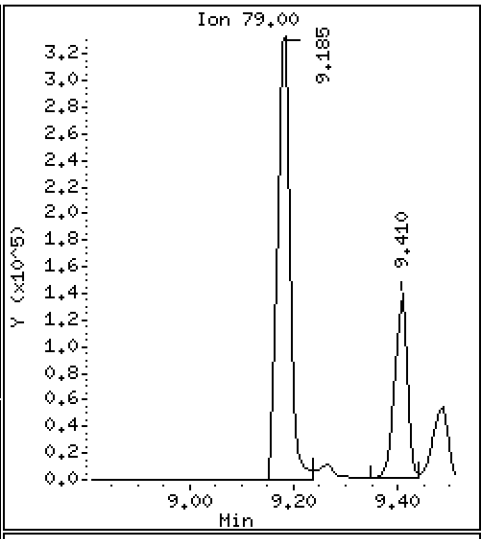
Column phase: ZB-5msi

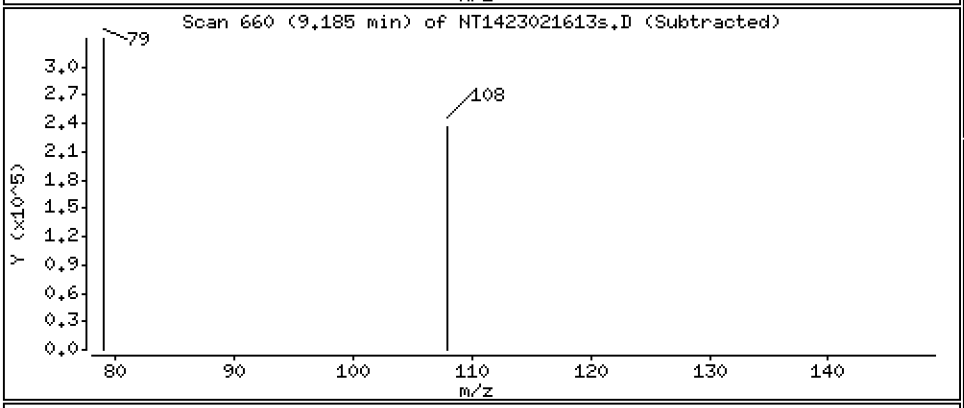
Column diameter: 0.25

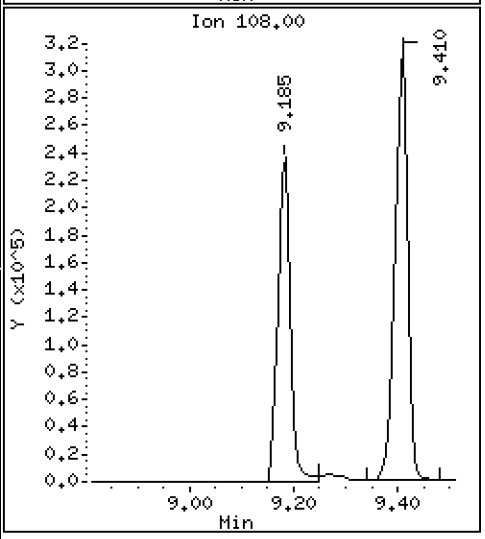
11 Benzyl alcohol

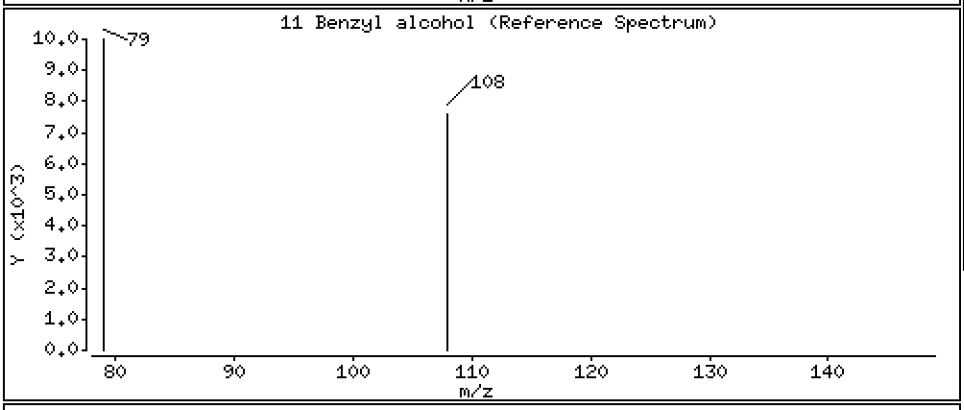
Concentration: 5.300 ug/mL

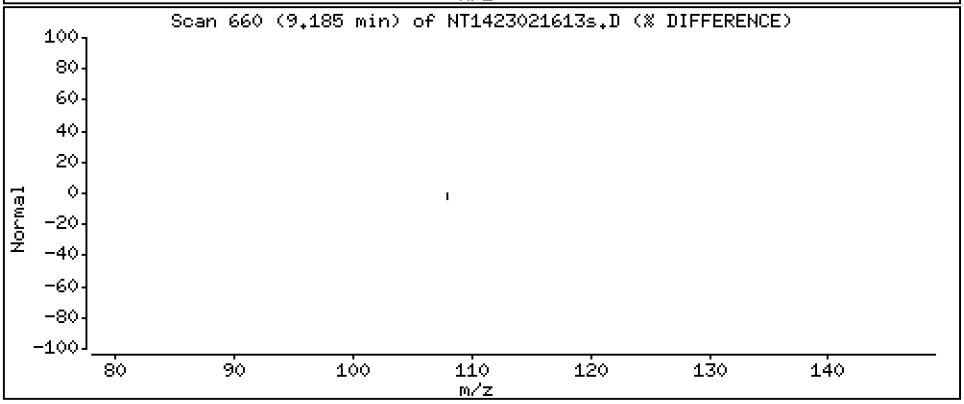












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

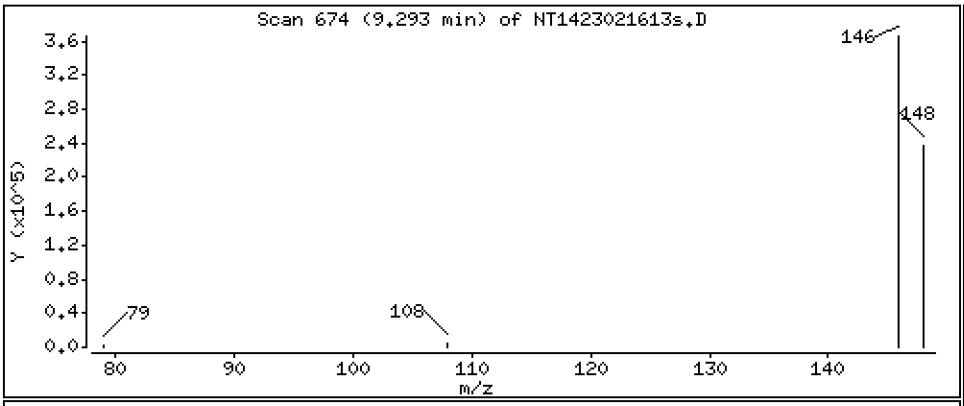
Operator: DSD

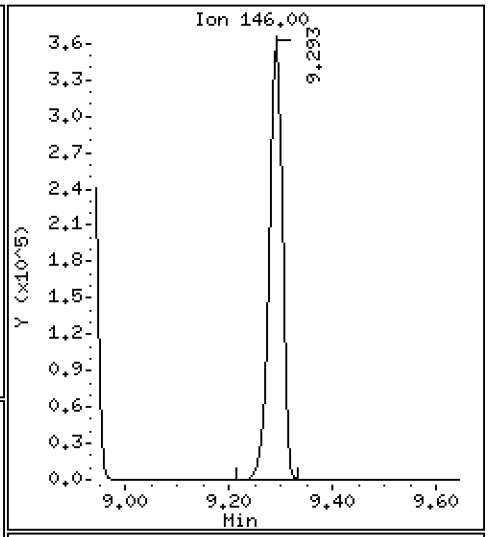
Column phase: ZB-5msi

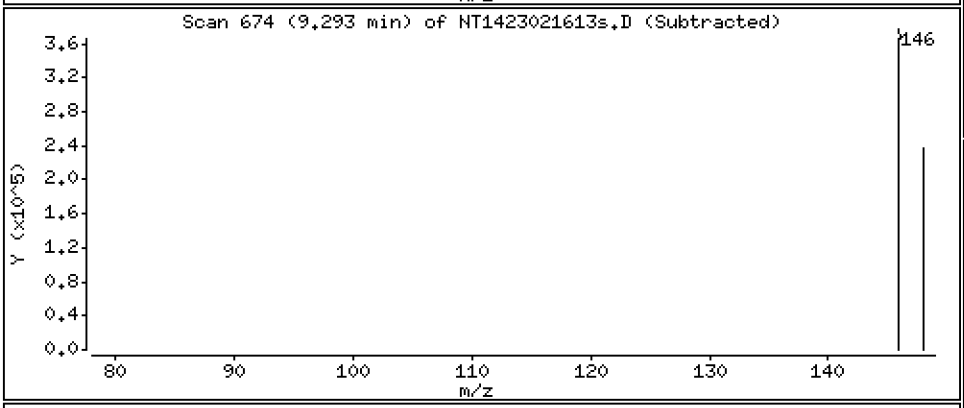
Column diameter: 0.25

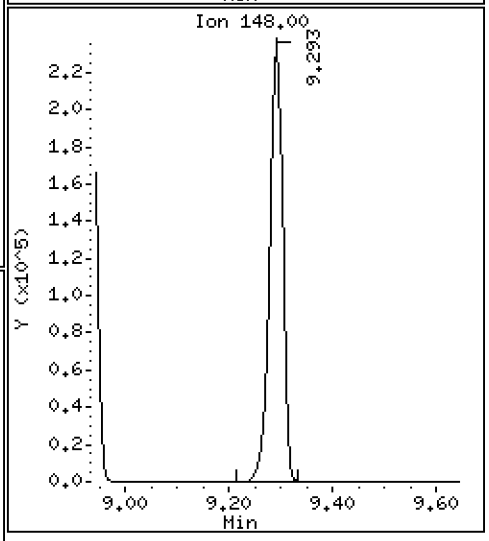
12 1,2-Dichlorobenzene

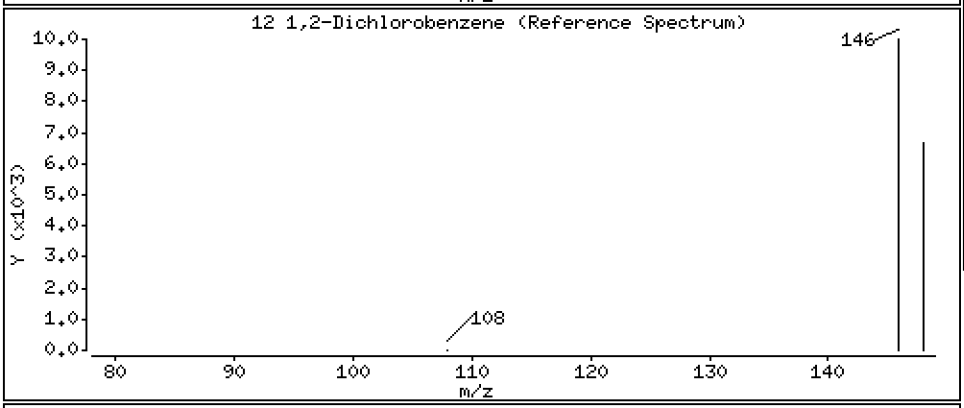
Concentration: 4.795 ug/mL

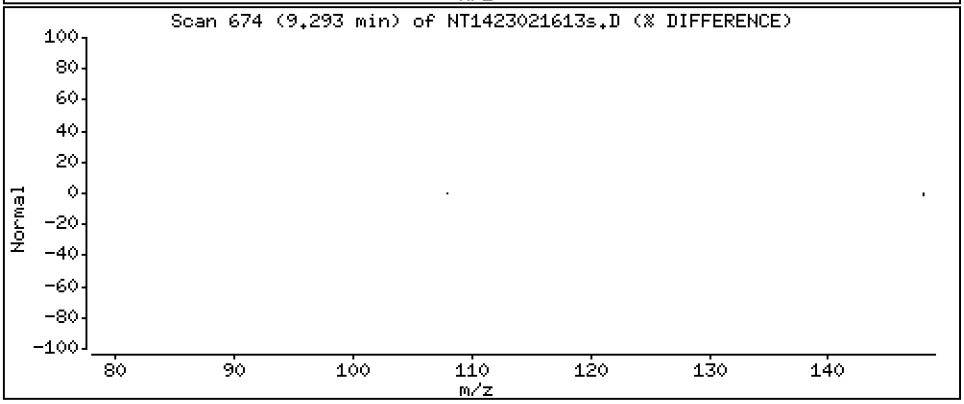












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

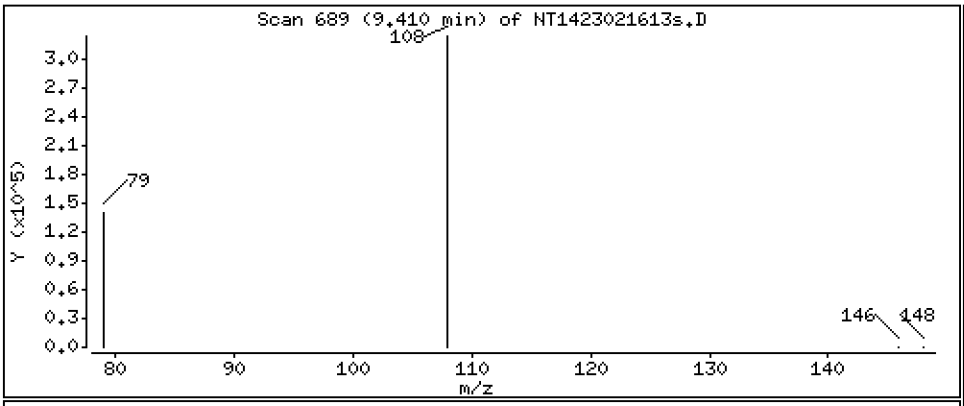
Operator: DSD

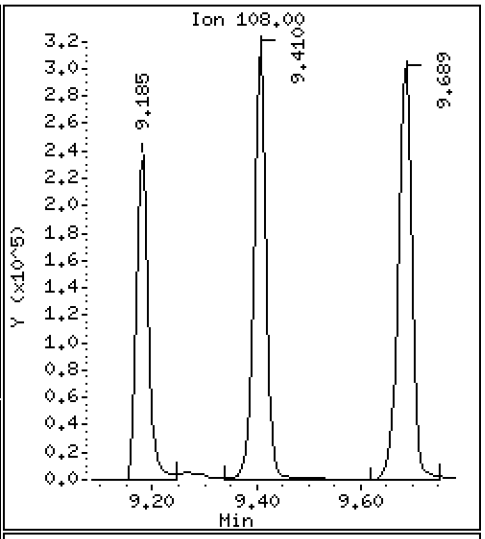
Column phase: ZB-5msi

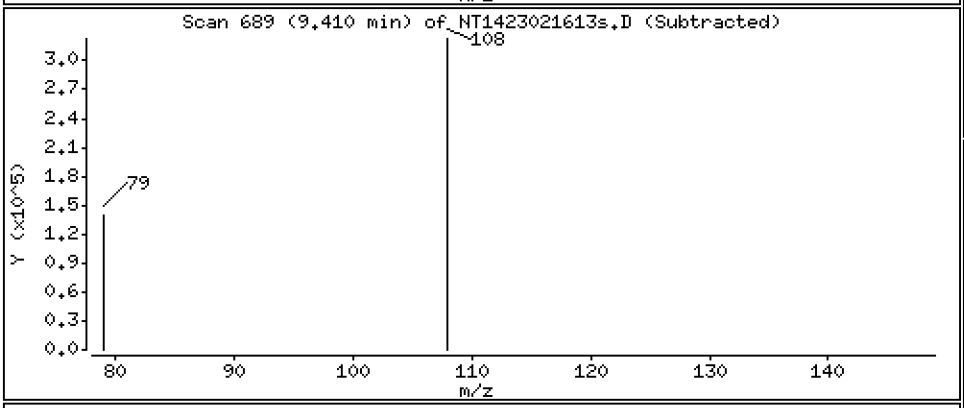
Column diameter: 0.25

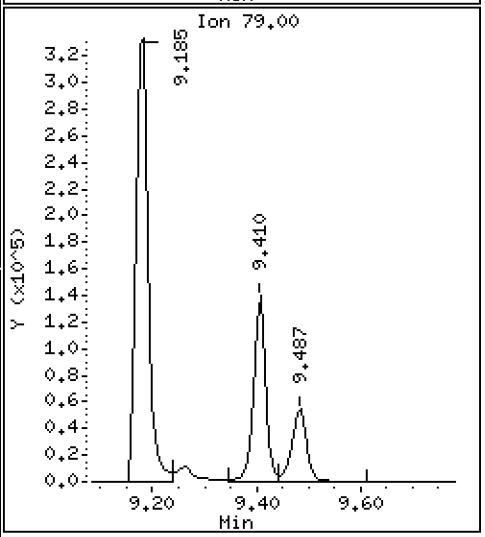
13 2-Methylphenol

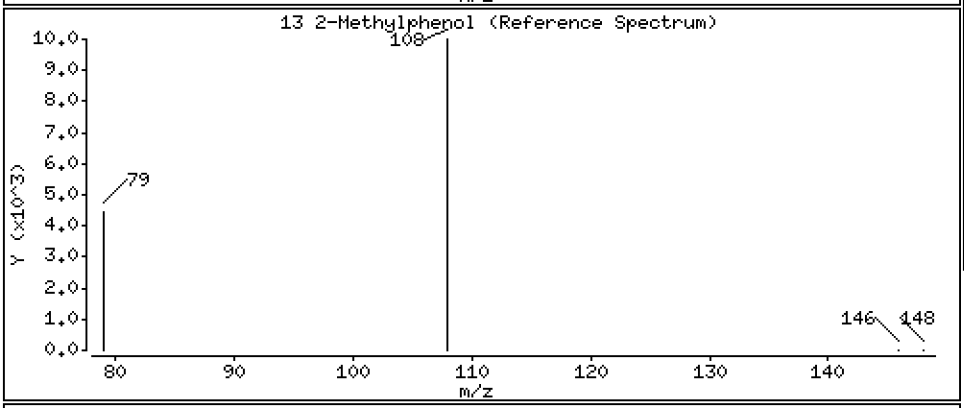
Concentration: 4.507 ug/mL

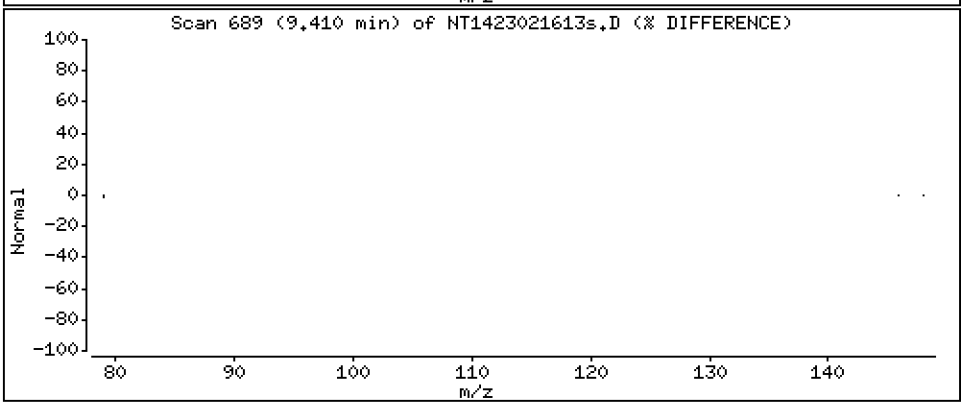












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

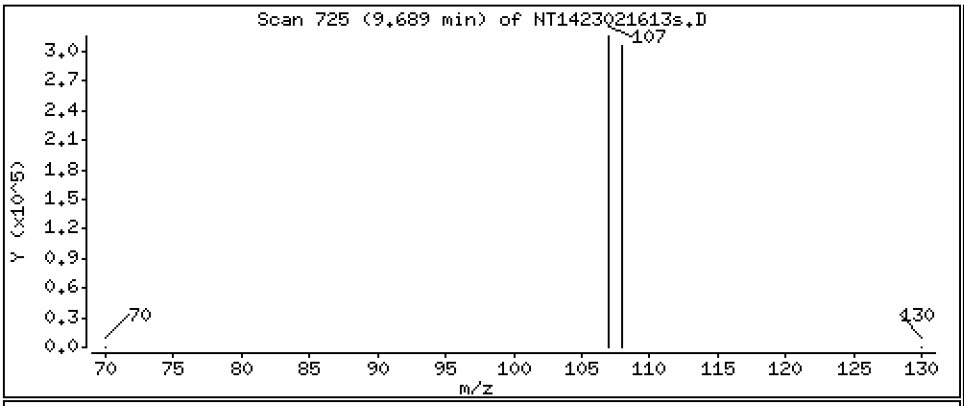
Operator: DSD

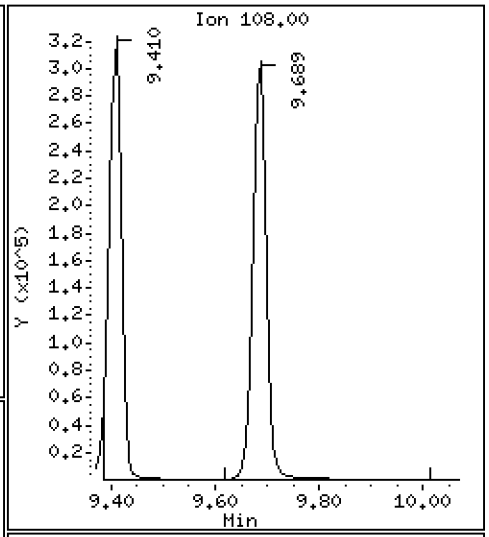
Column phase: ZB-5msi

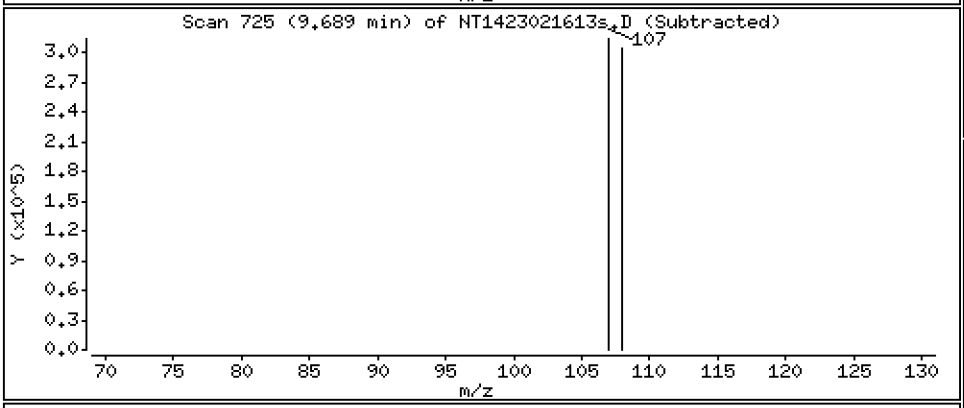
Column diameter: 0.25

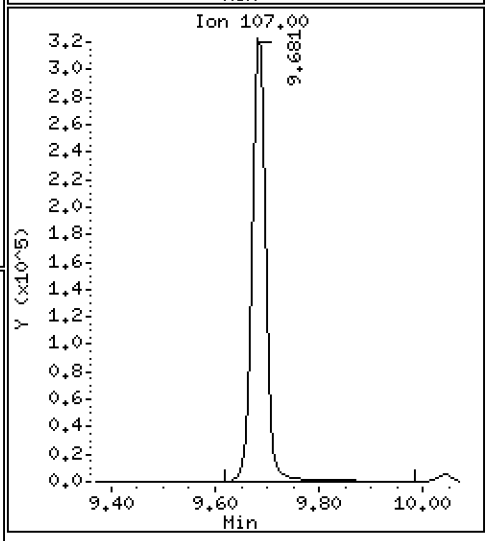
15 4-Methylphenol

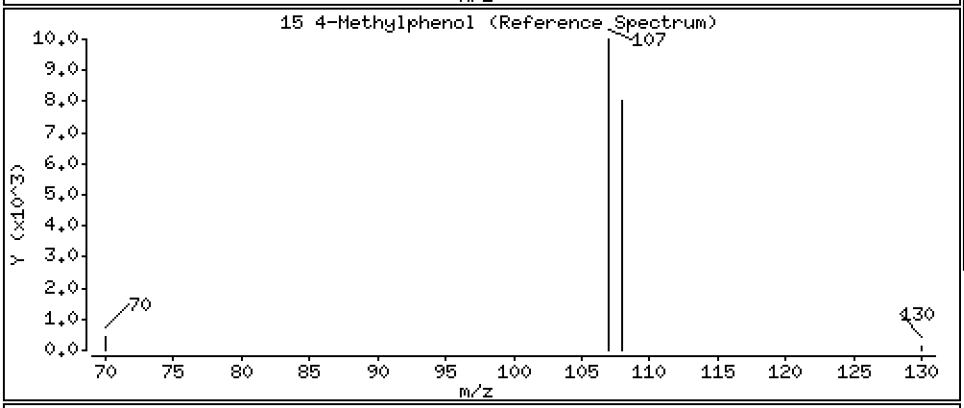
Concentration: 4.460 ug/mL

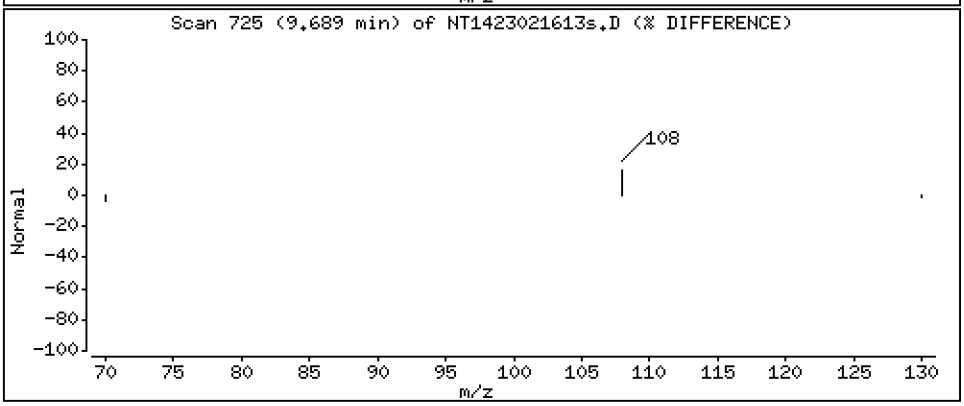












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

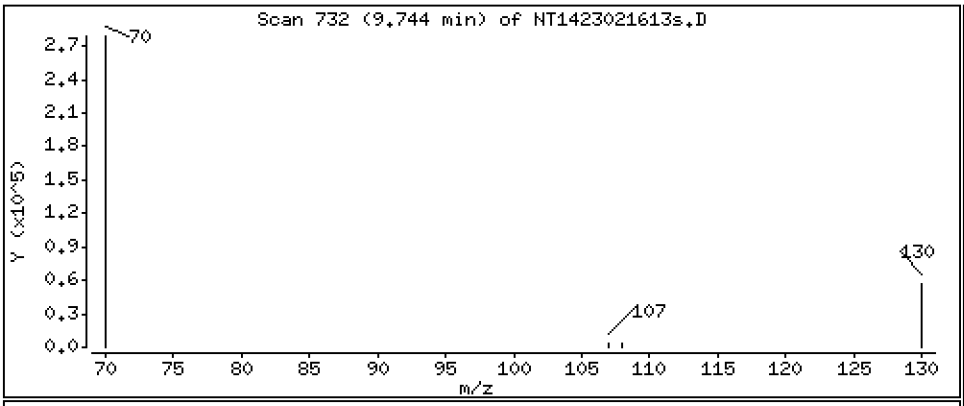
Operator: DSD

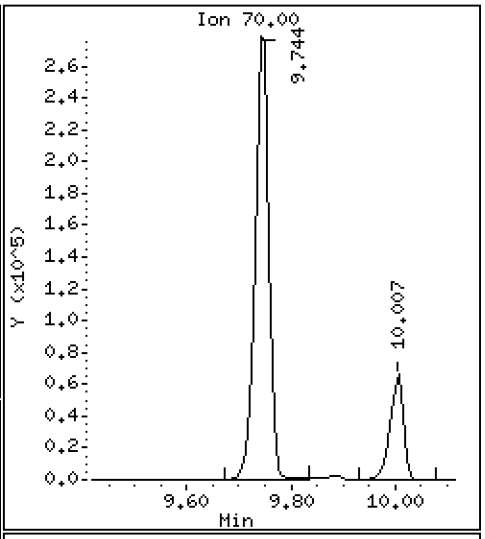
Column phase: ZB-5msi

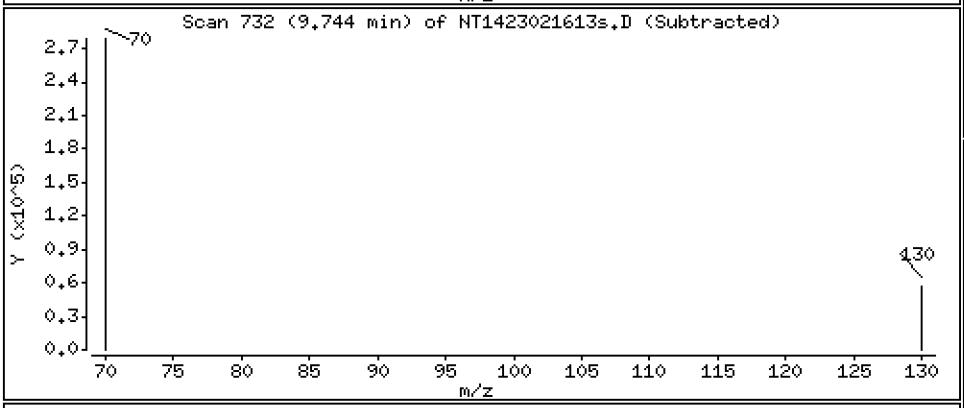
Column diameter: 0.25

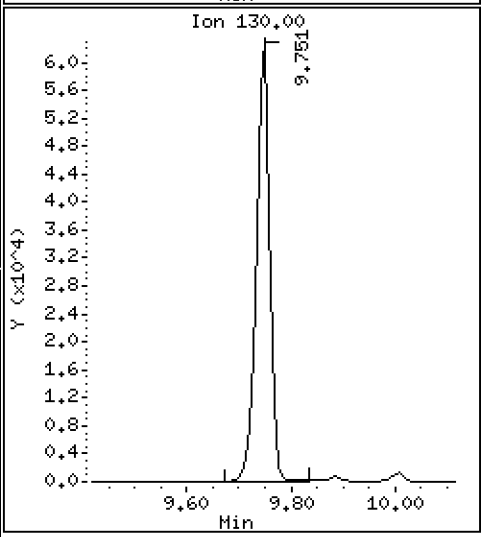
16 N-Nitroso-di-n-propylamine

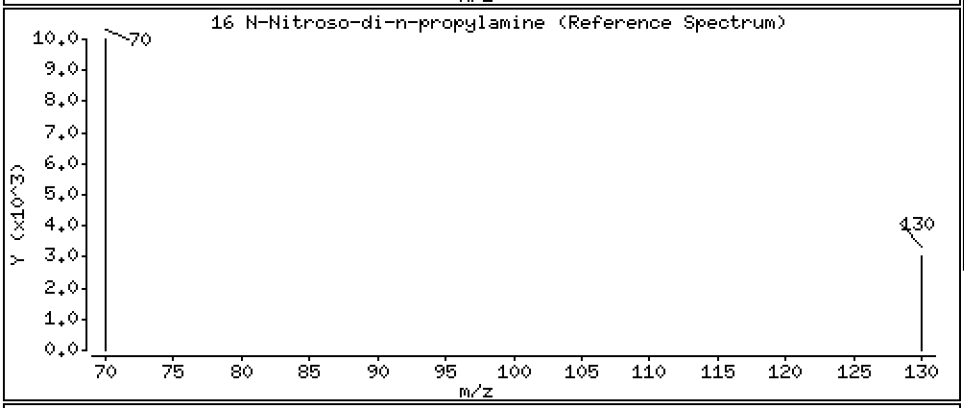
Concentration: 5.047 ug/mL

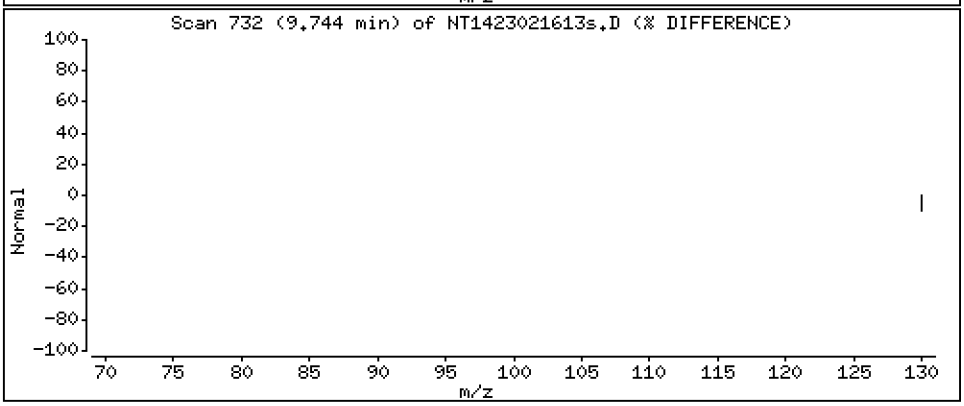












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

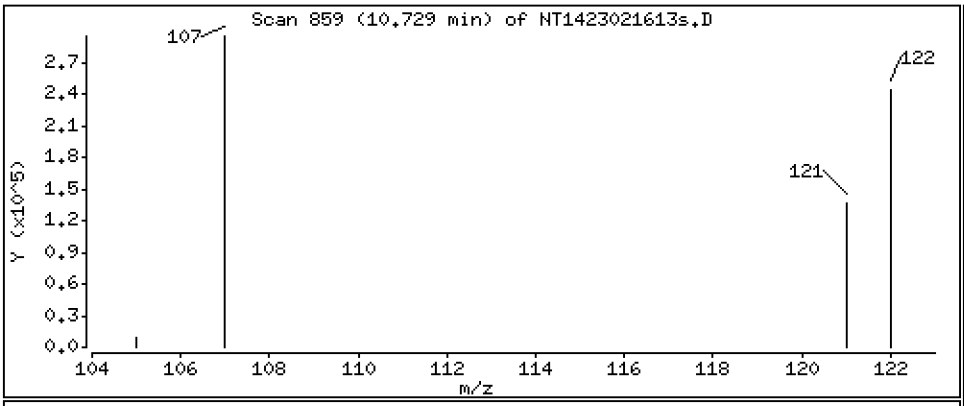
Operator: DSD

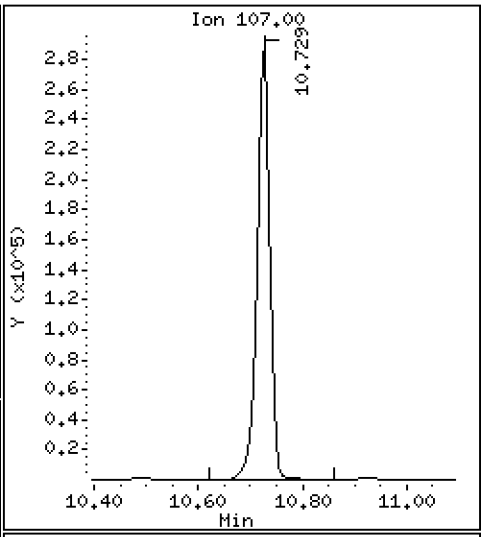
Column phase: ZB-5msi

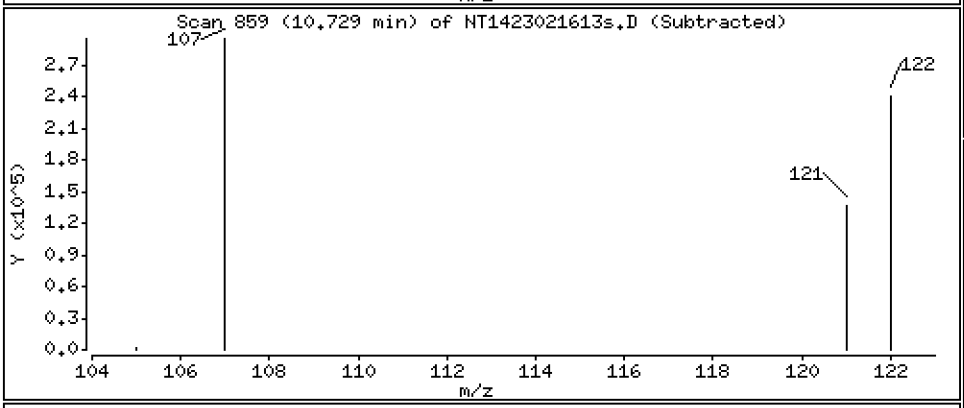
Column diameter: 0.25

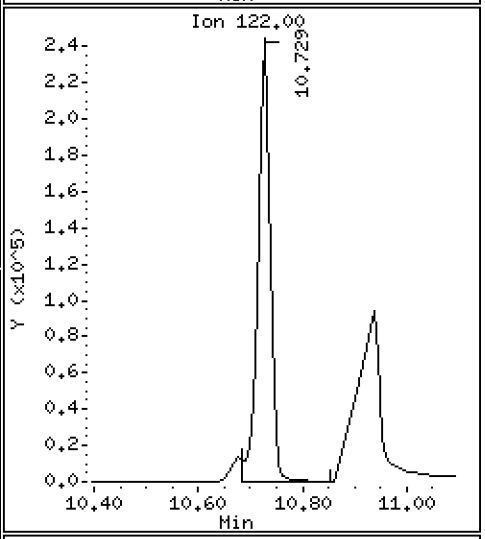
22 2,4-Dimethylphenol

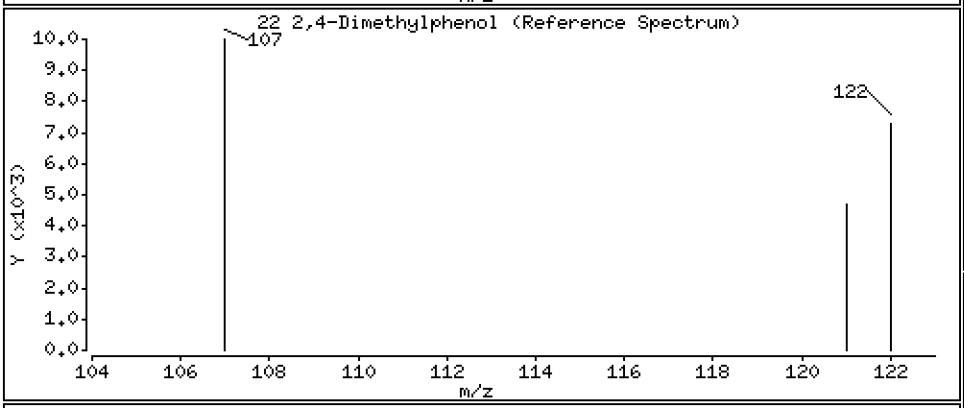
Concentration: 3.903 ug/mL

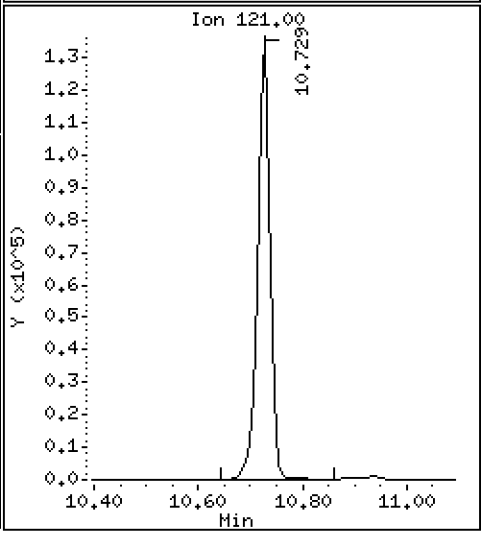


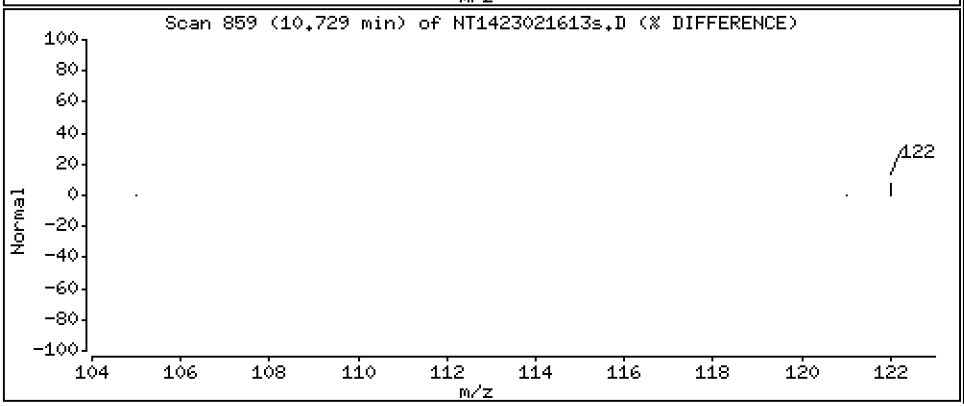












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

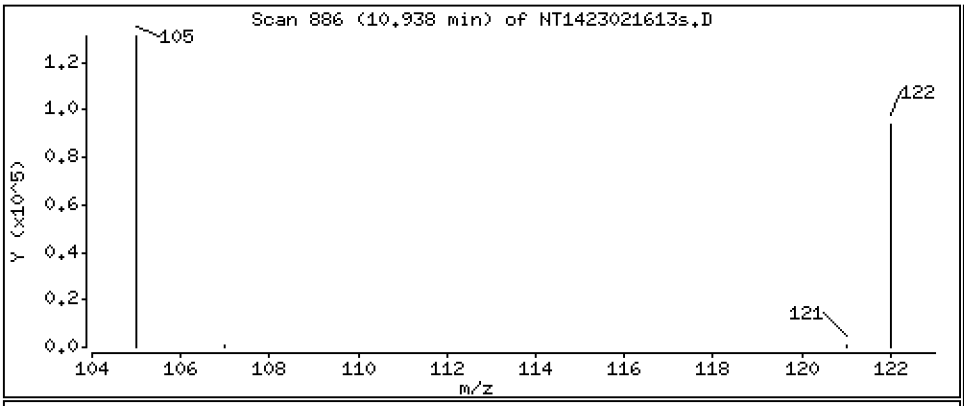
Operator: DSD

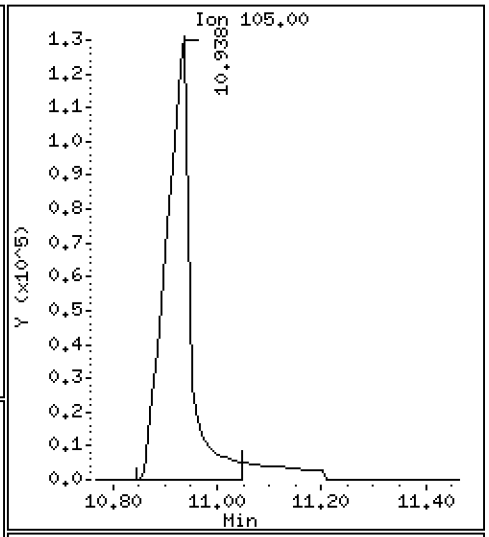
Column phase: ZB-5msi

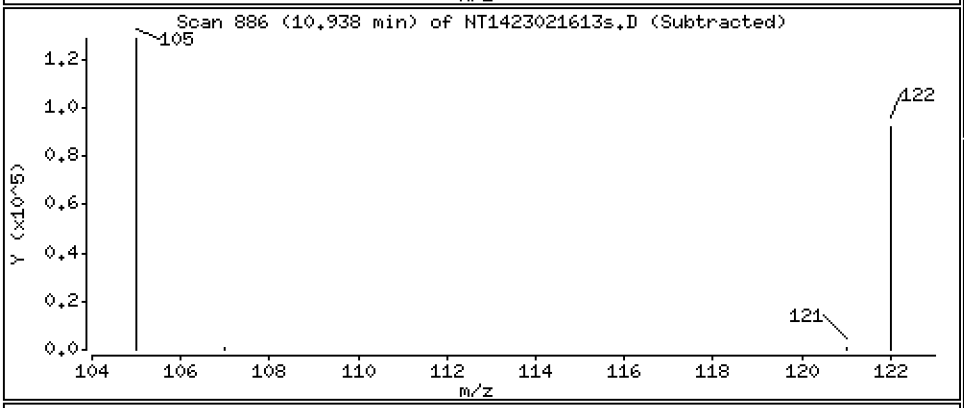
Column diameter: 0.25

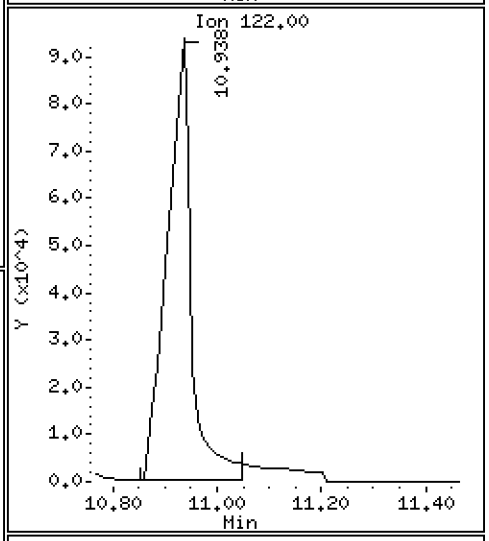
24 Benzoic acid

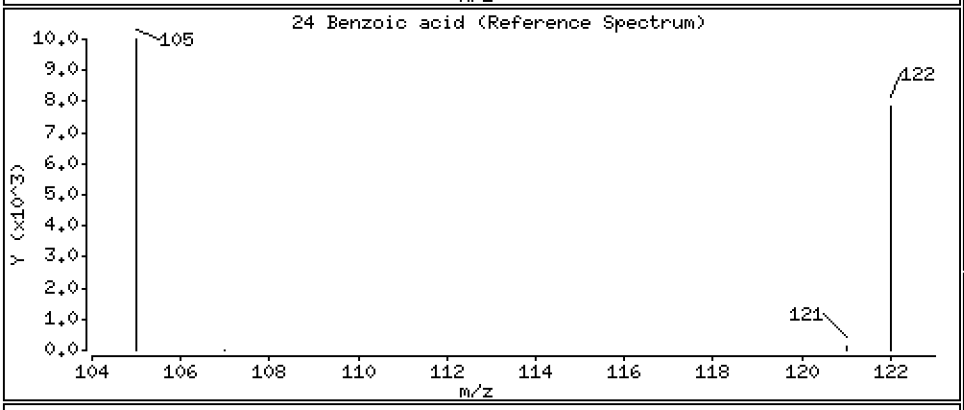
Concentration: 6.447 ug/mL

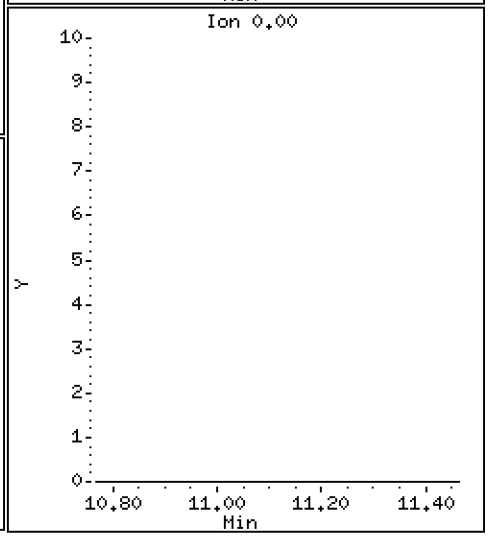


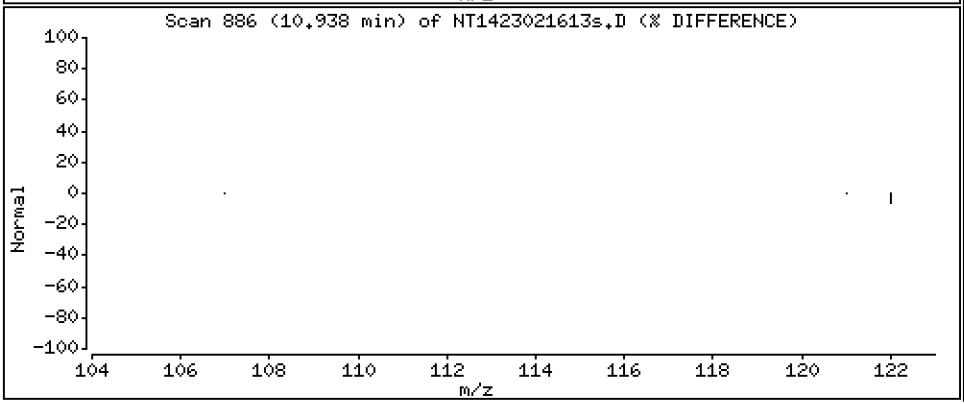












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

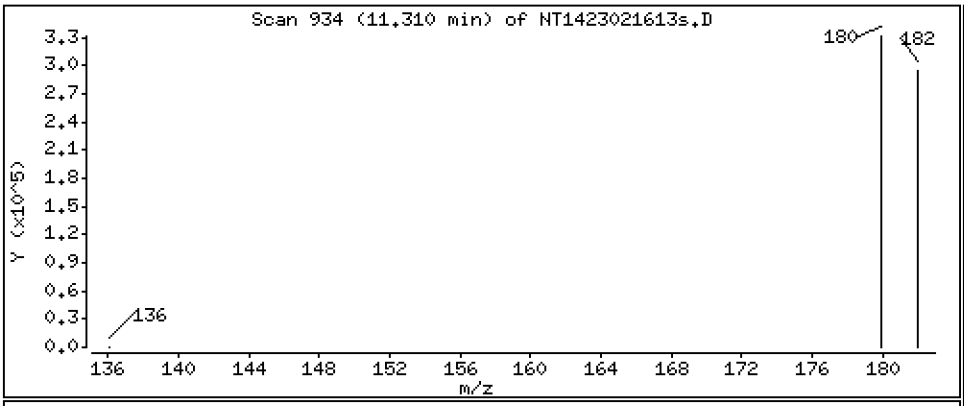
Operator: DSD

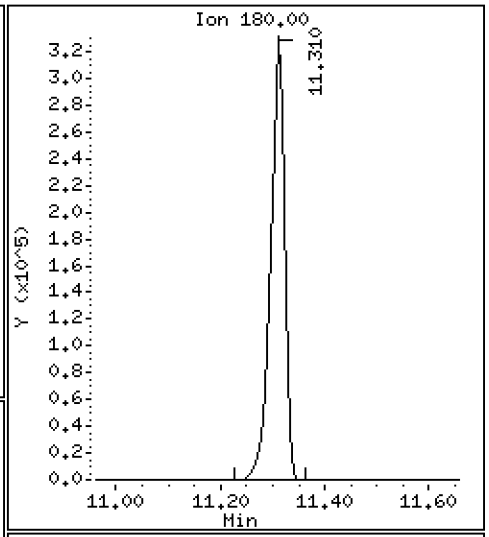
Column phase: ZB-5msi

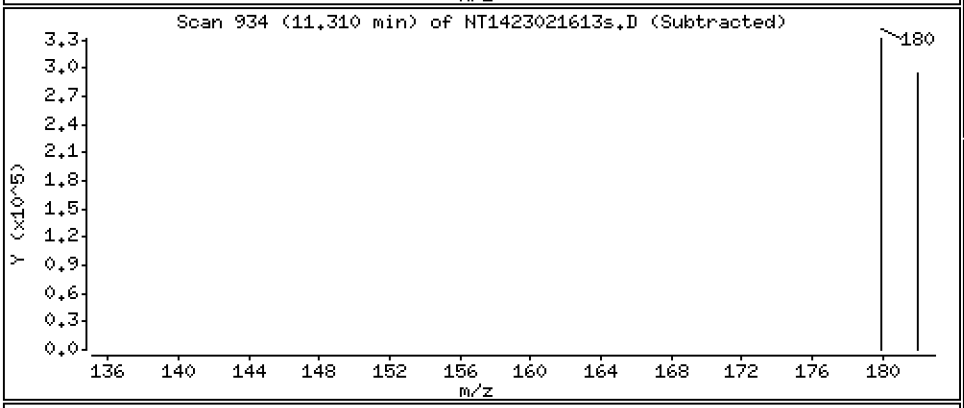
Column diameter: 0.25

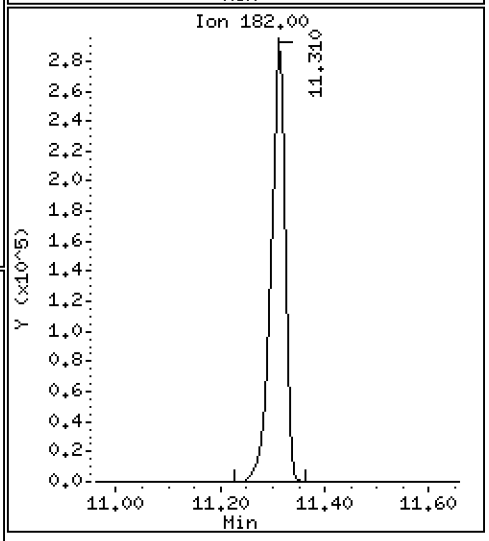
26 1,2,4-Trichlorobenzene

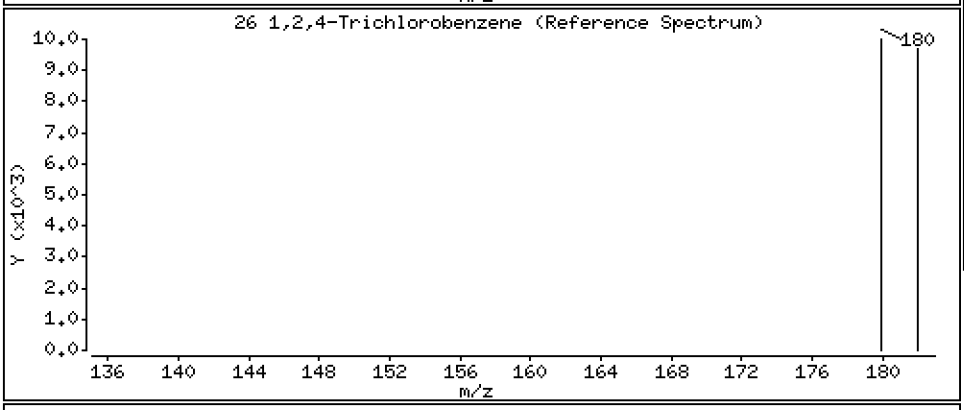
Concentration: 4.595 ug/mL

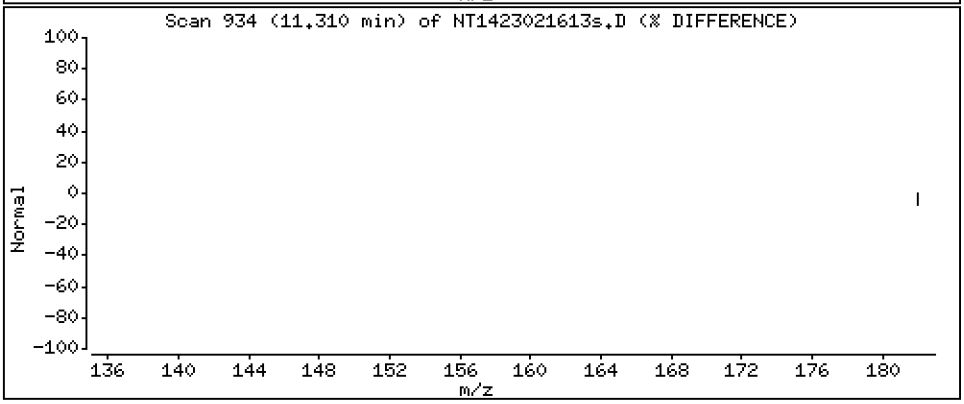












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

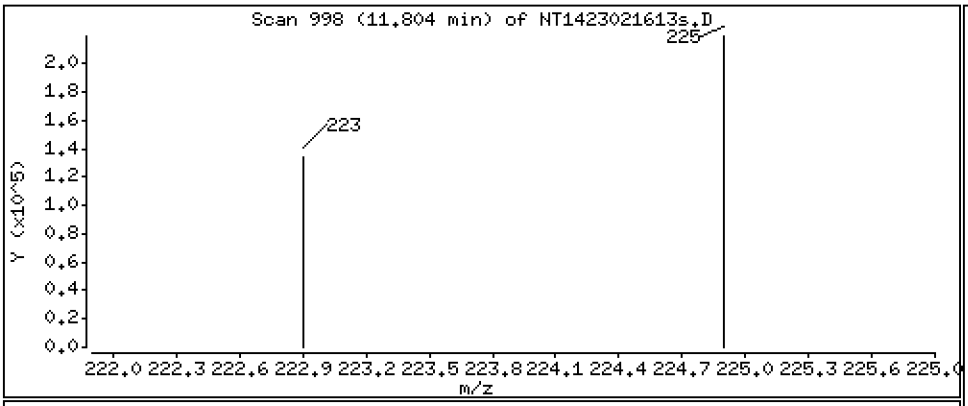
Operator: DSD

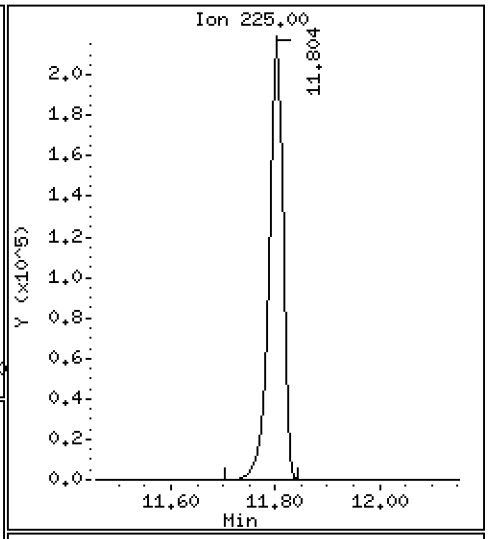
Column phase: ZB-5msi

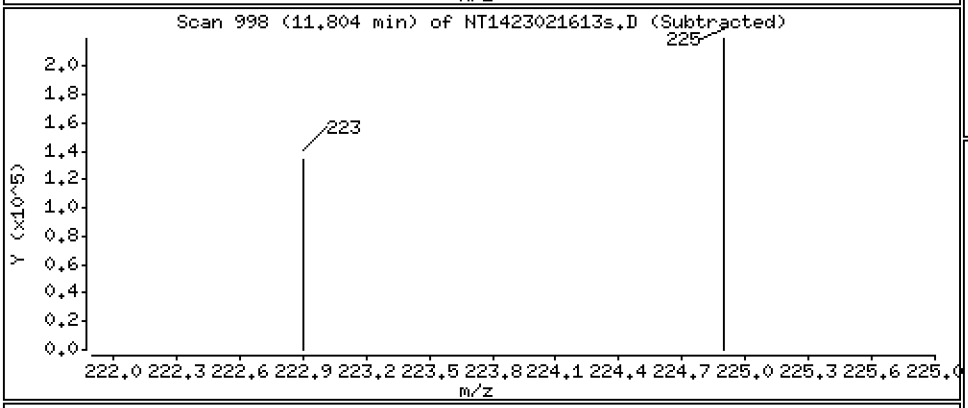
Column diameter: 0.25

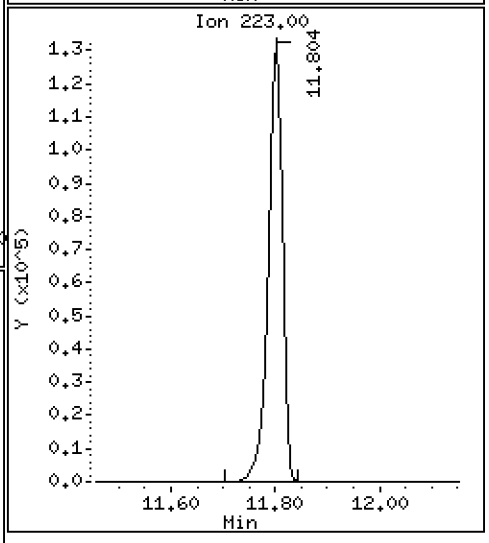
30 Hexachlorobutadiene

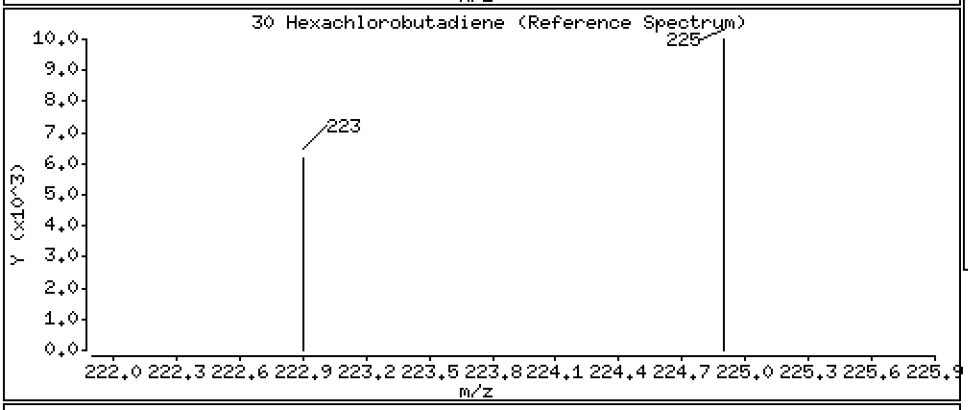
Concentration: 4.815 ug/mL

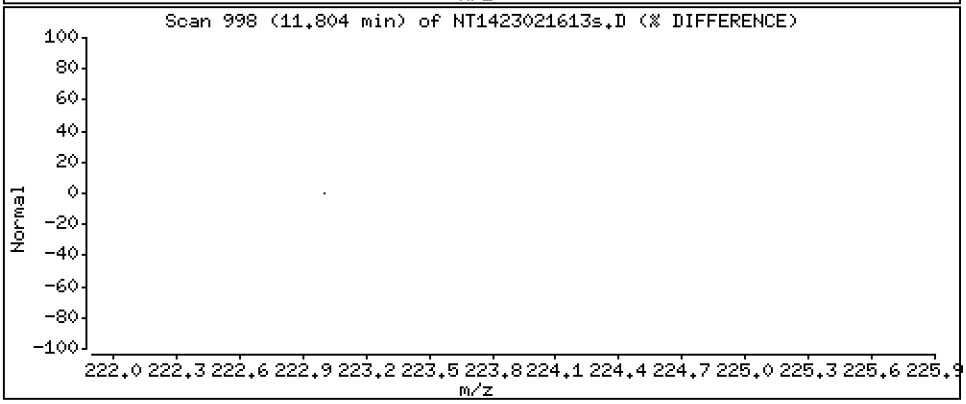












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

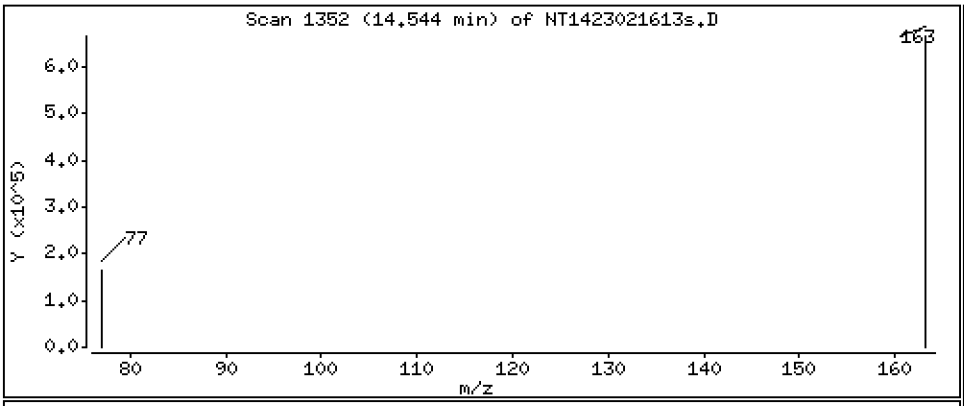
Operator: DSD

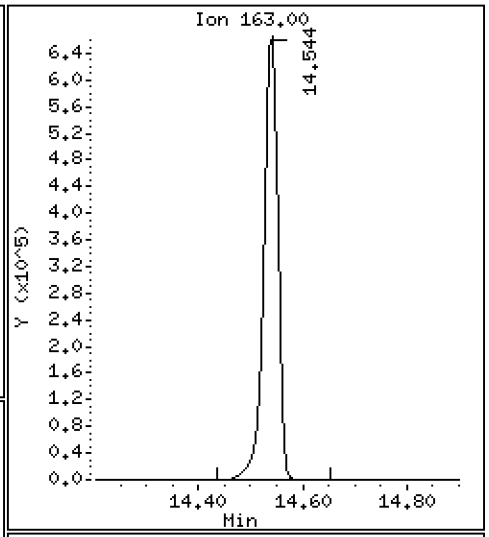
Column phase: ZB-5msi

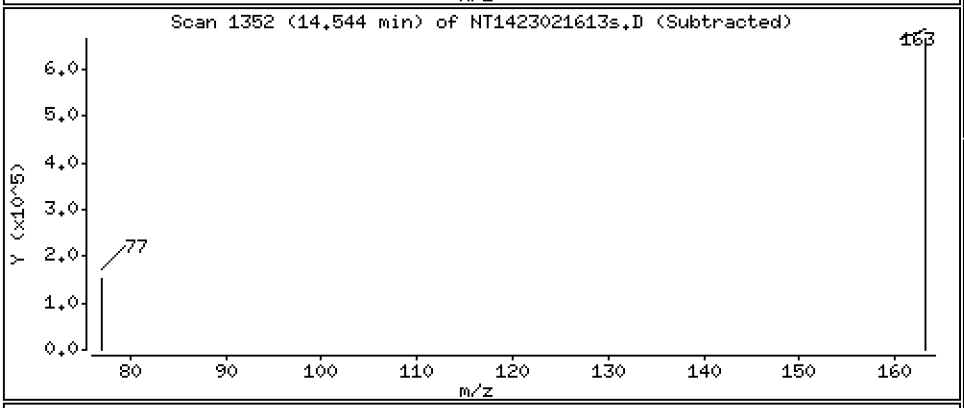
Column diameter: 0.25

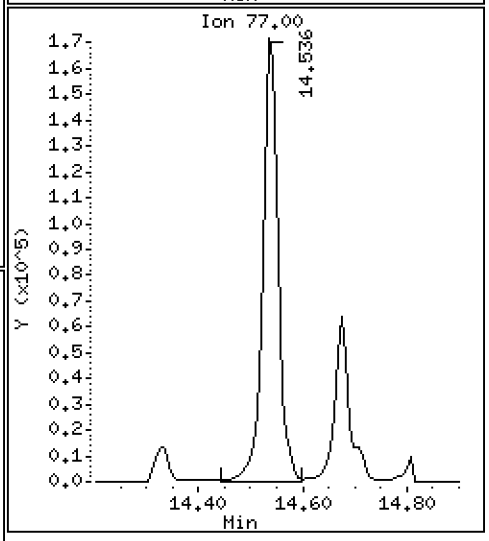
39 Dimethylphthalate

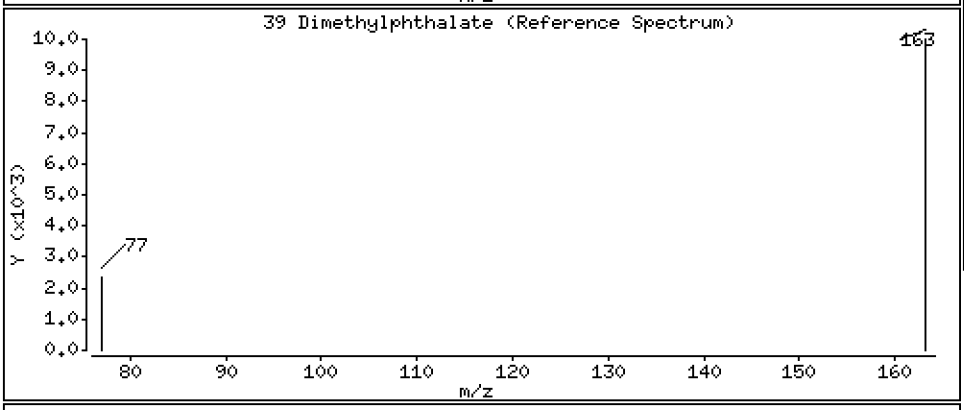
Concentration: 5.002 ug/mL

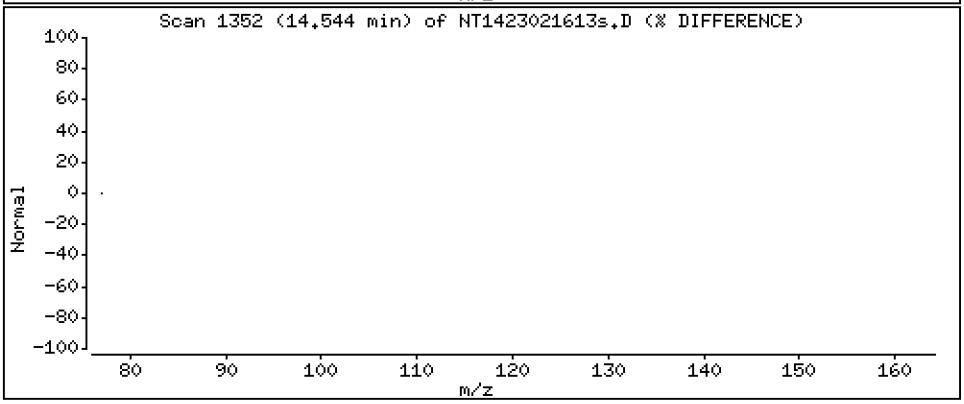












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

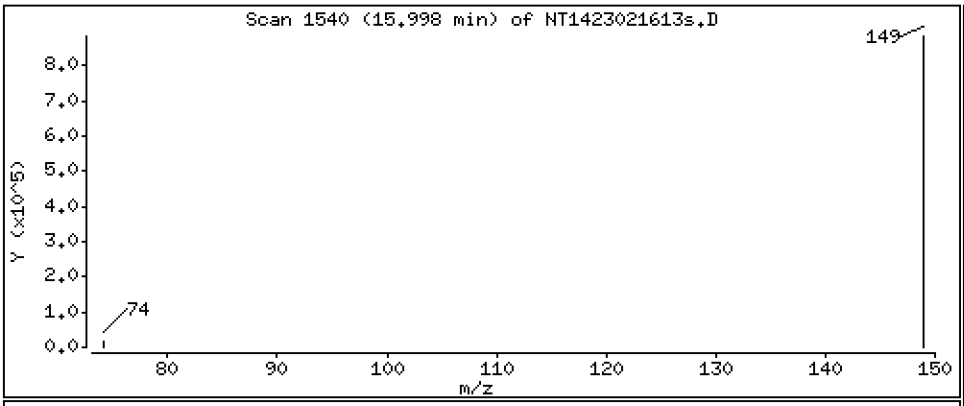
Operator: DSD

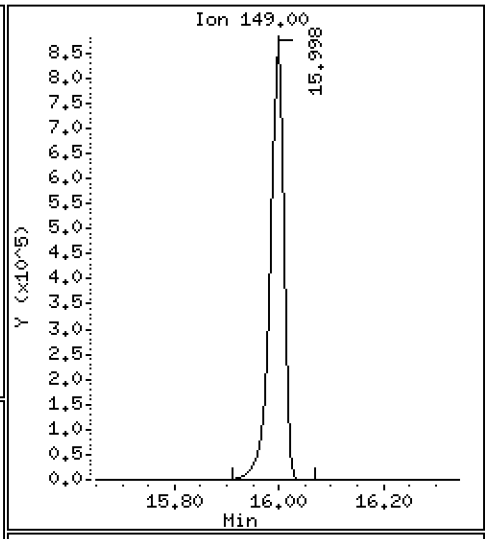
Column phase: ZB-5msi

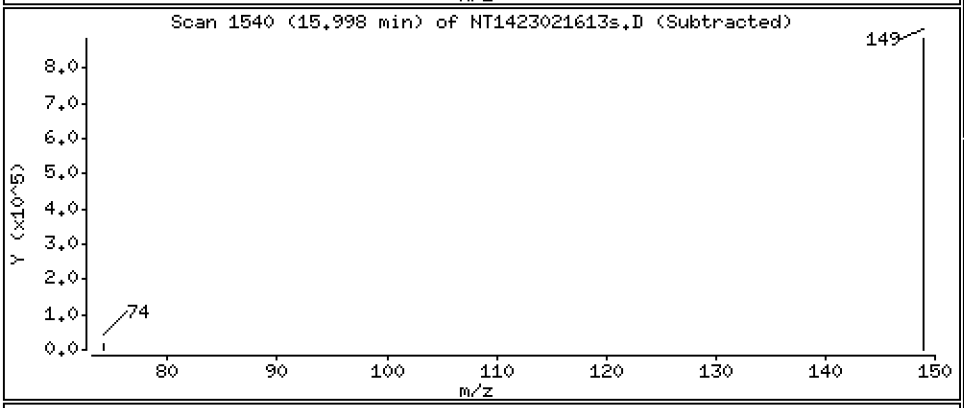
Column diameter: 0.25

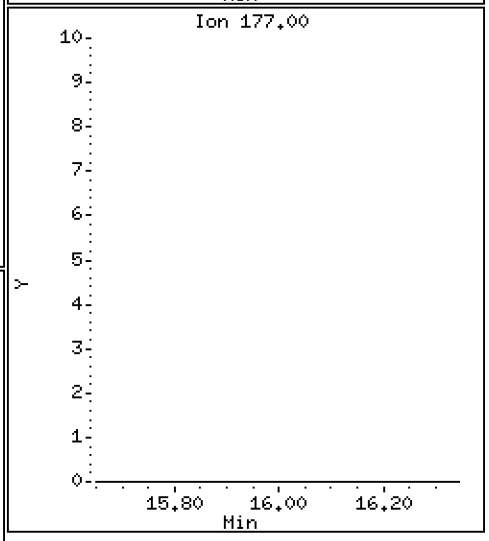
50 Diethylphthalate

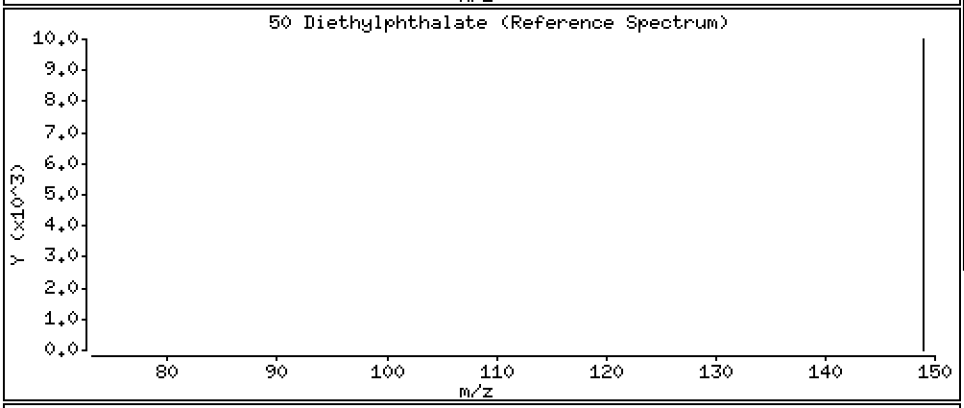
Concentration: 4.969 ug/mL

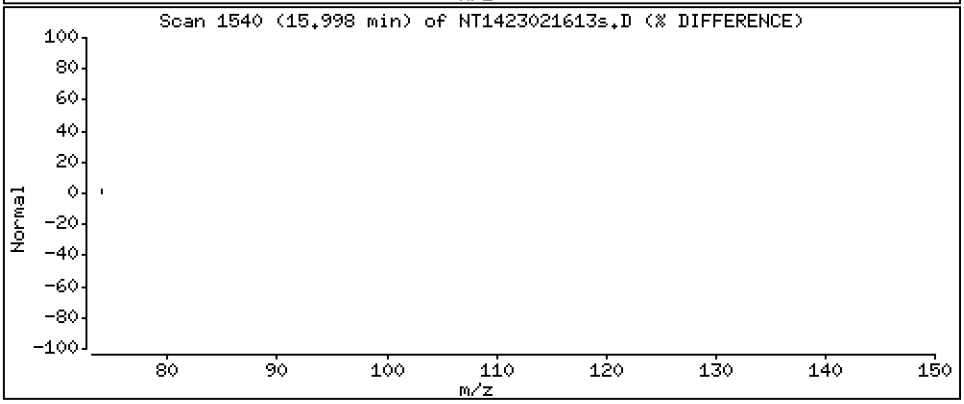












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

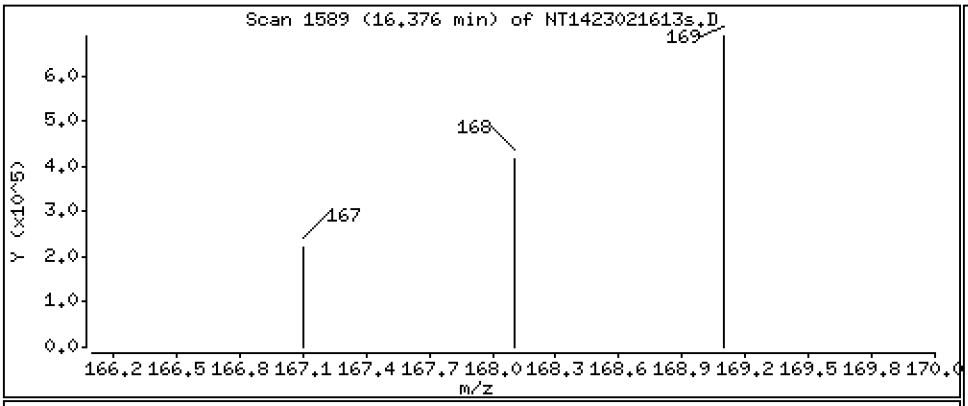
Operator: DSD

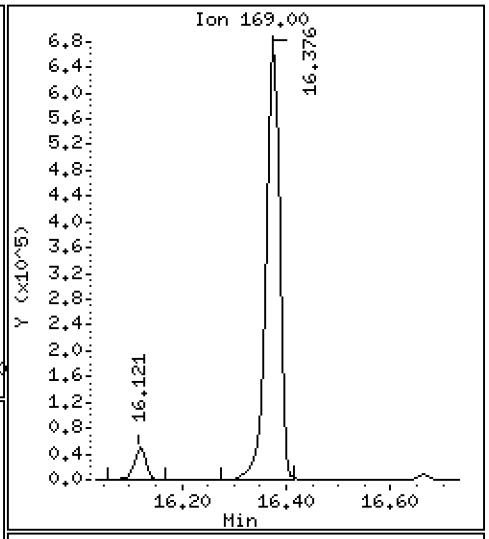
Column phase: ZB-5msi

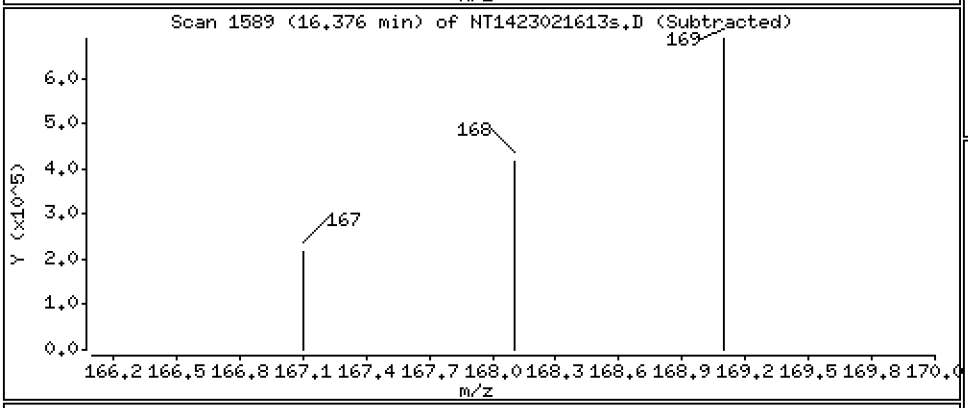
Column diameter: 0.25

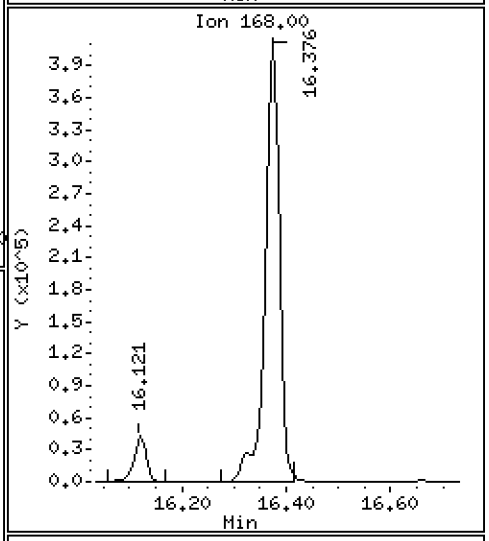
54 N-Nitrosodiphenylamine

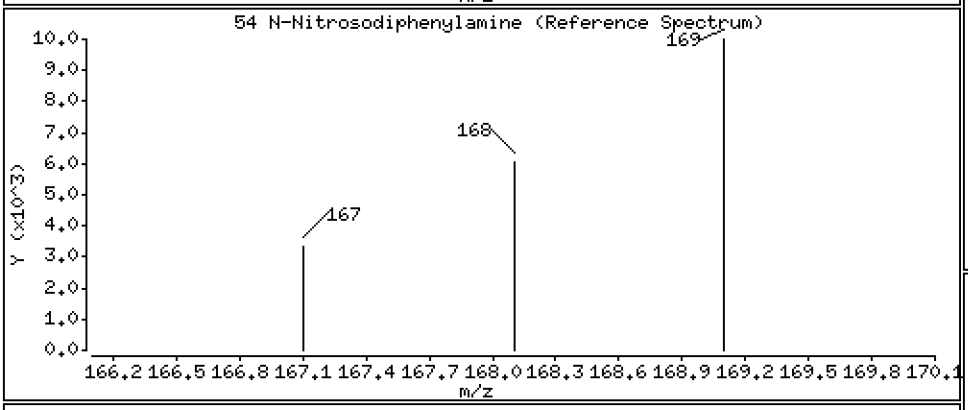
Concentration: 5.009 ug/mL

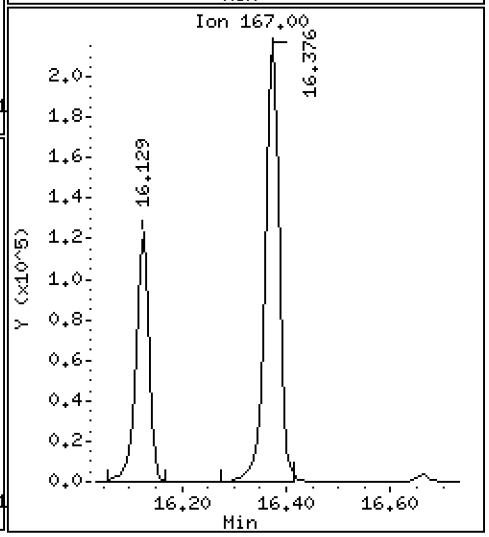


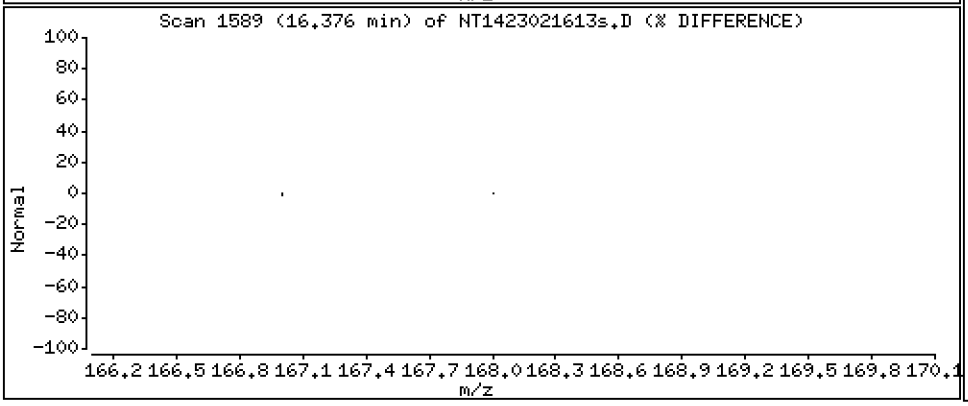












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

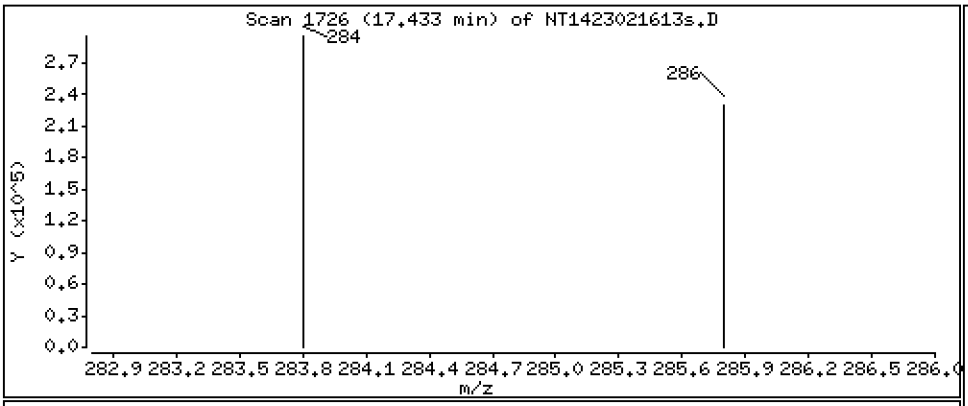
Operator: DSD

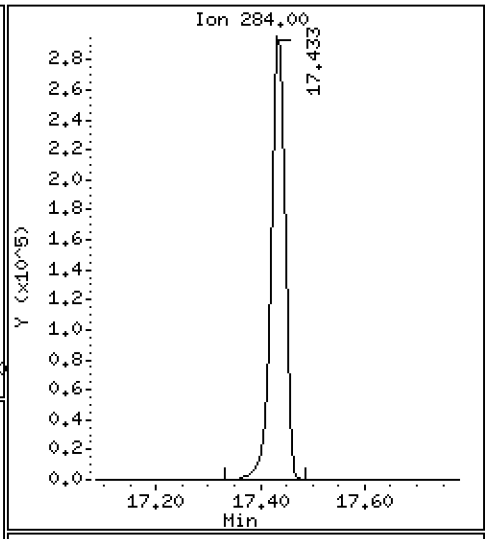
Column phase: ZB-5msi

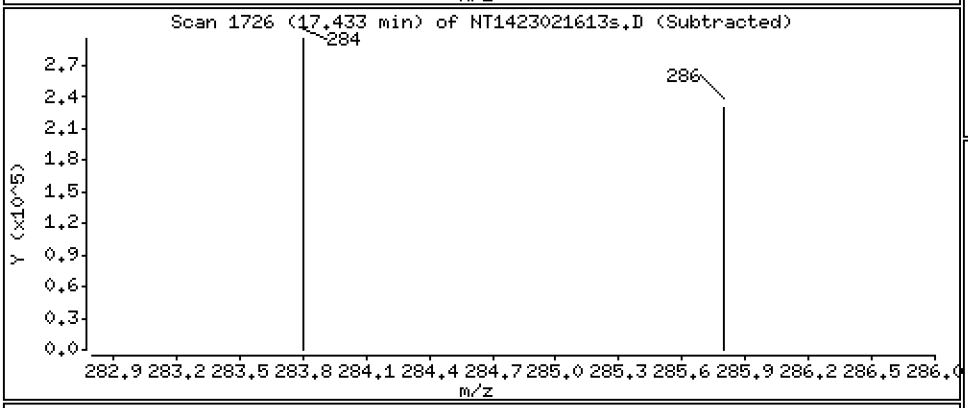
Column diameter: 0.25

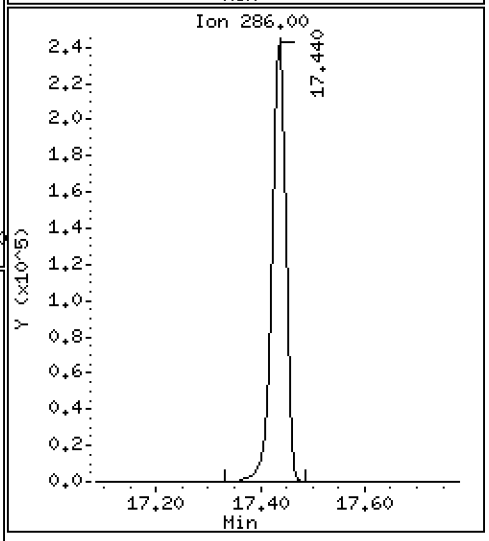
57 Hexachlorobenzene

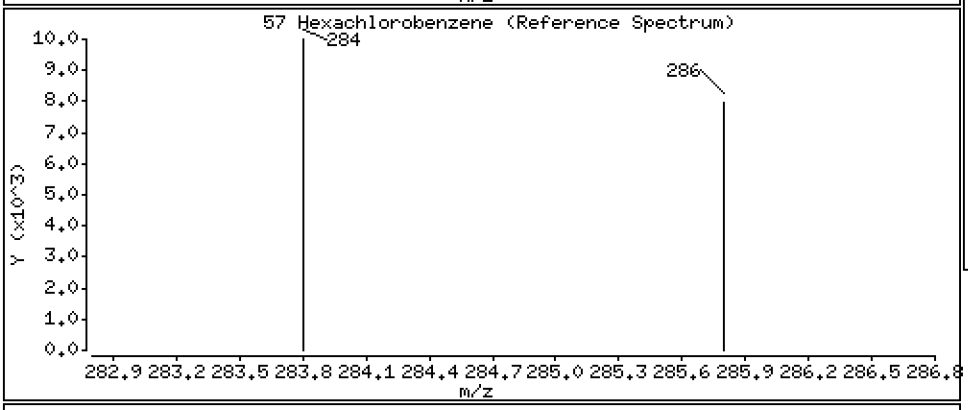
Concentration: 4.700 ug/mL

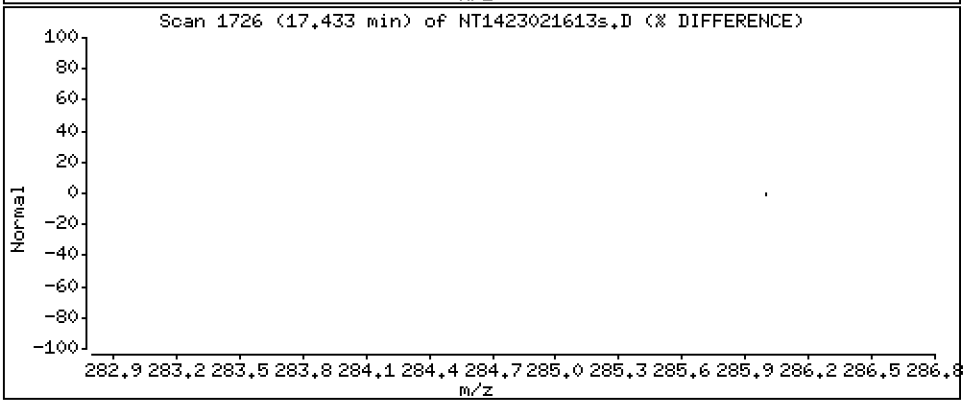












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

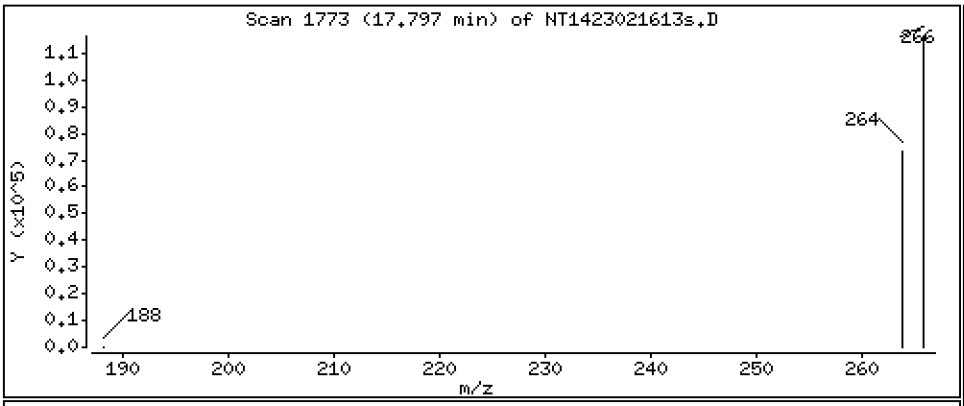
Operator: DSD

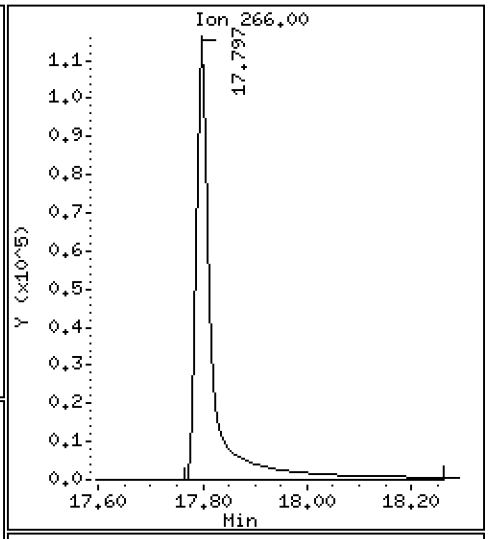
Column phase: ZB-5msi

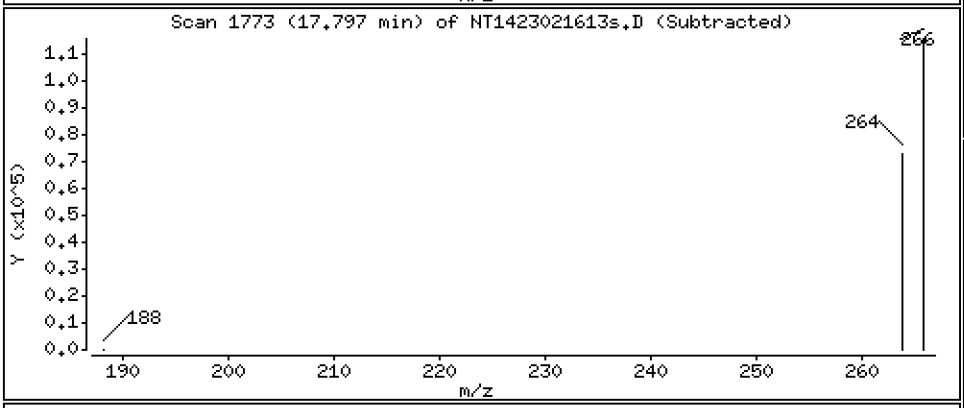
Column diameter: 0.25

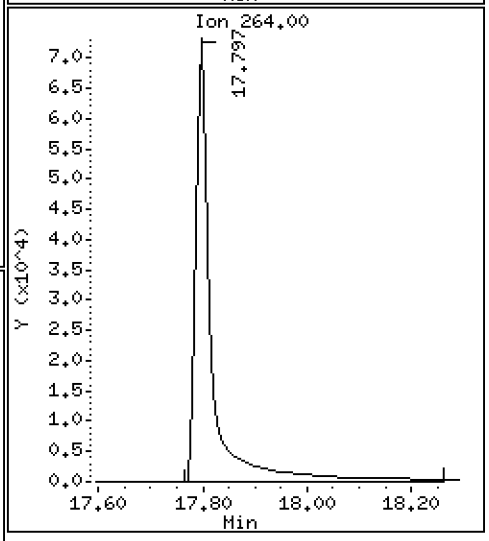
58 Pentachlorophenol

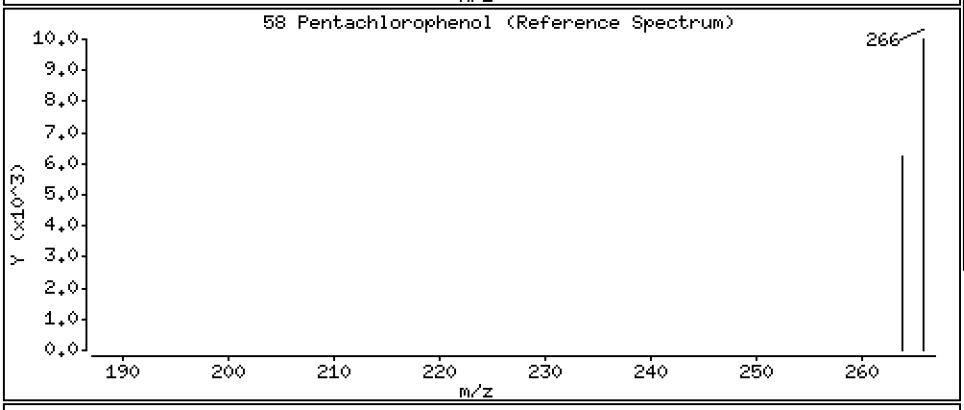
Concentration: 4.935 ug/mL

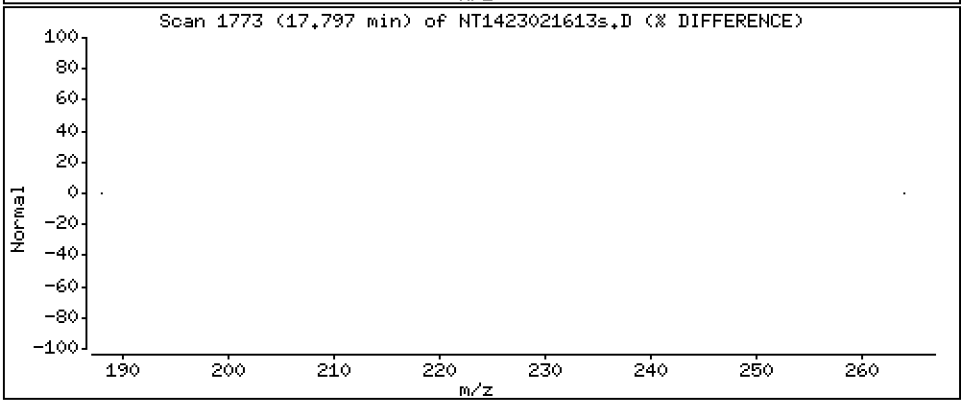












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Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

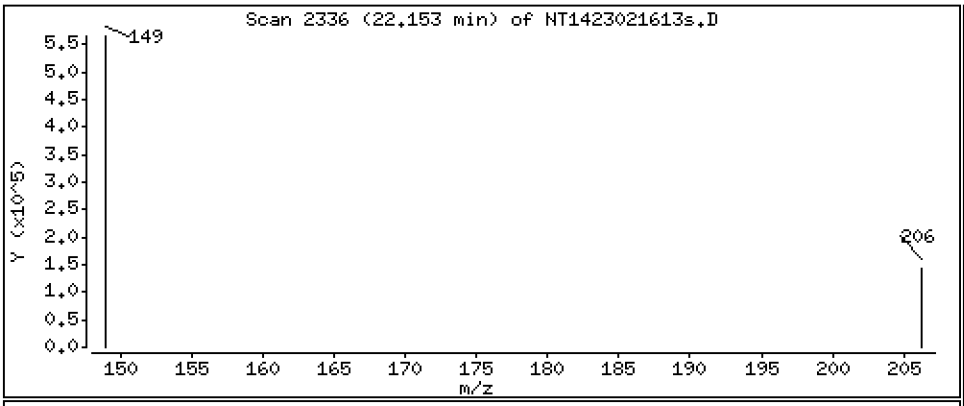
Operator: DSD

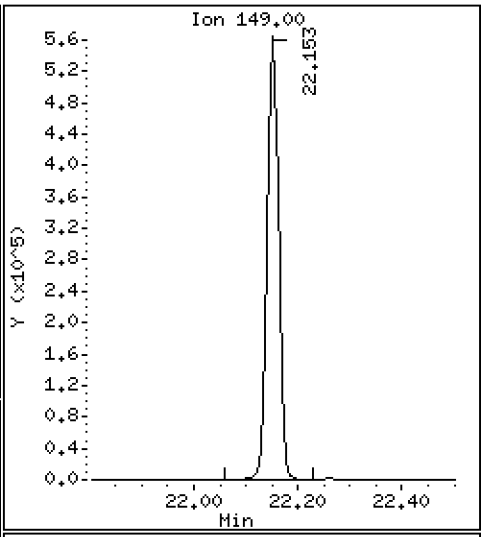
Column phase: ZB-5msi

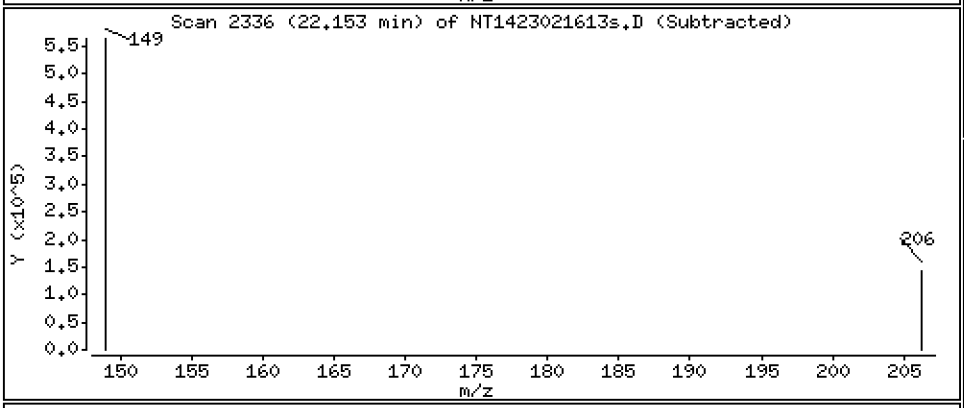
Column diameter: 0.25

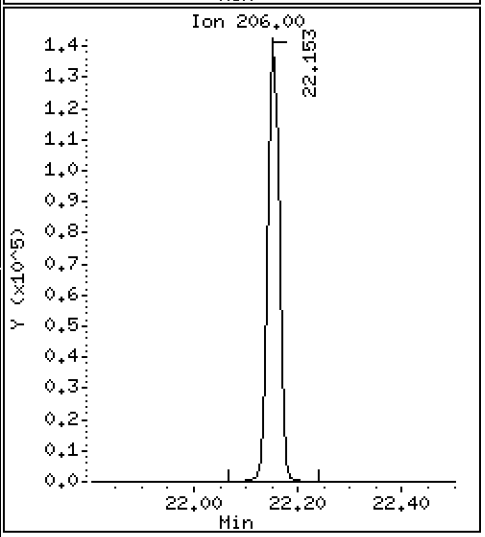
67 Butylbenzylphthalate

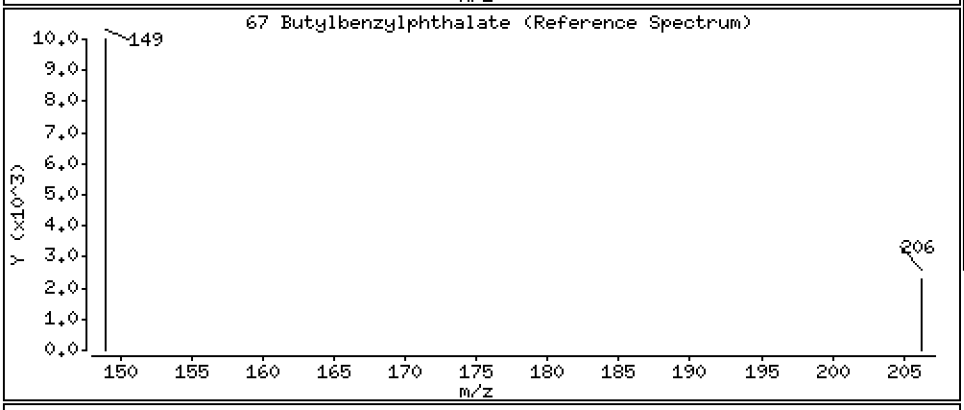
Concentration: 4.964 ug/mL

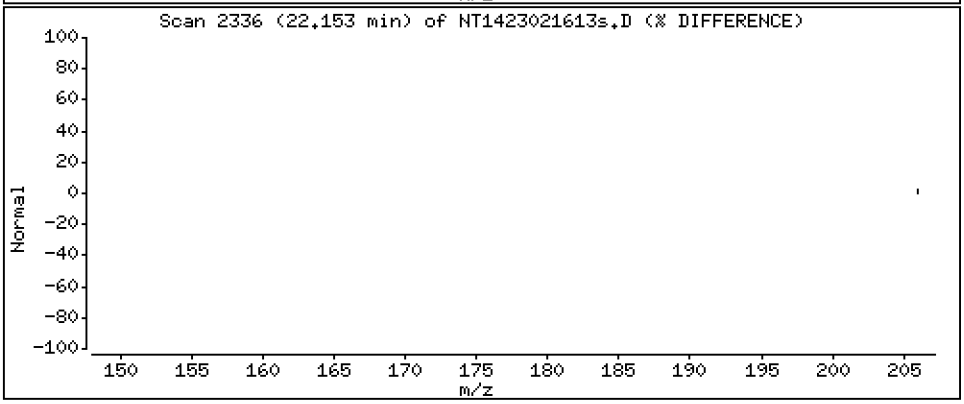












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

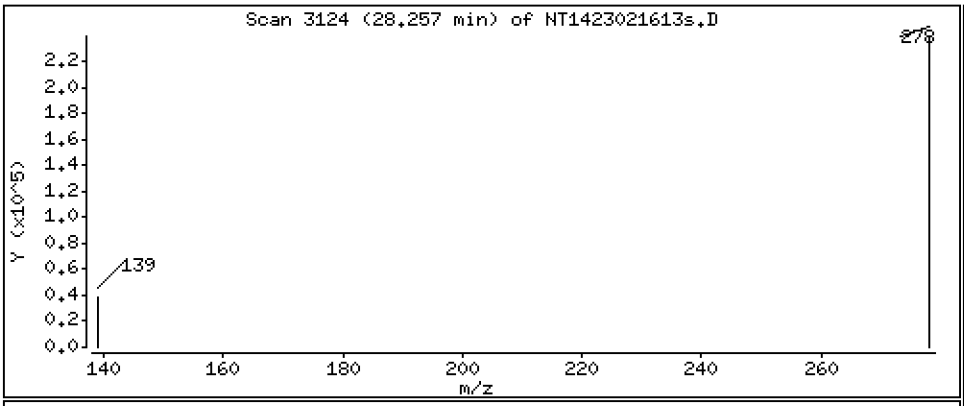
Operator: DSD

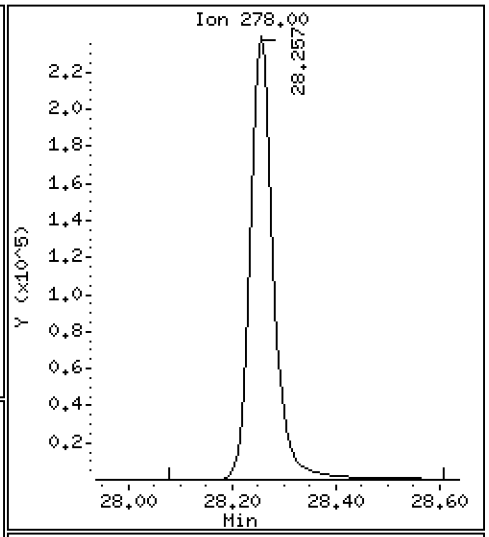
Column phase: ZB-5msi

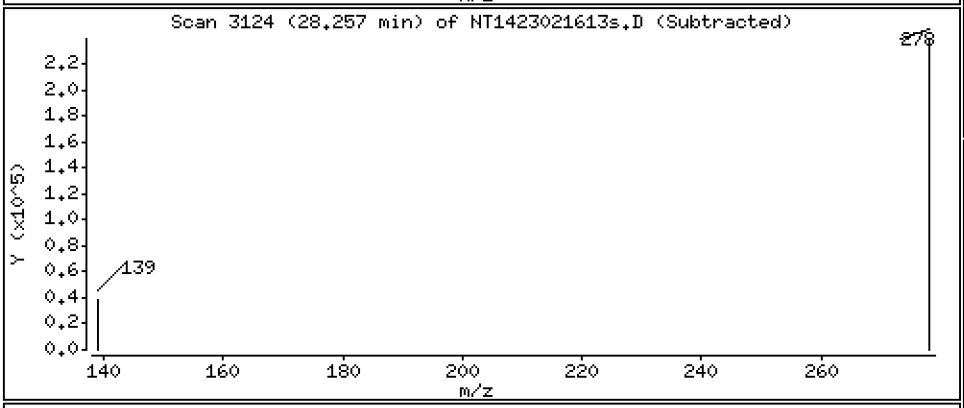
Column diameter: 0.25

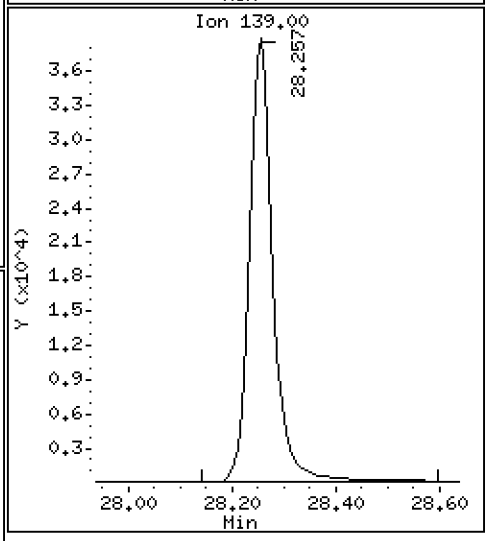
79 Dibenzo(a,h)anthracene

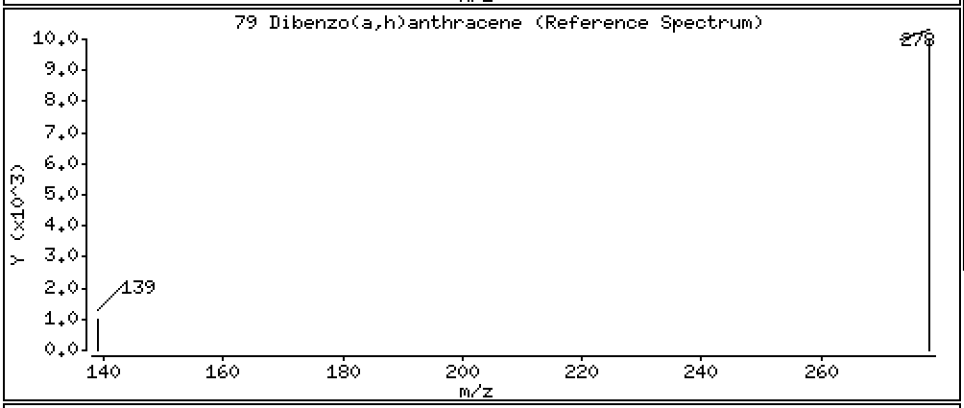
Concentration: 4.888 ug/mL

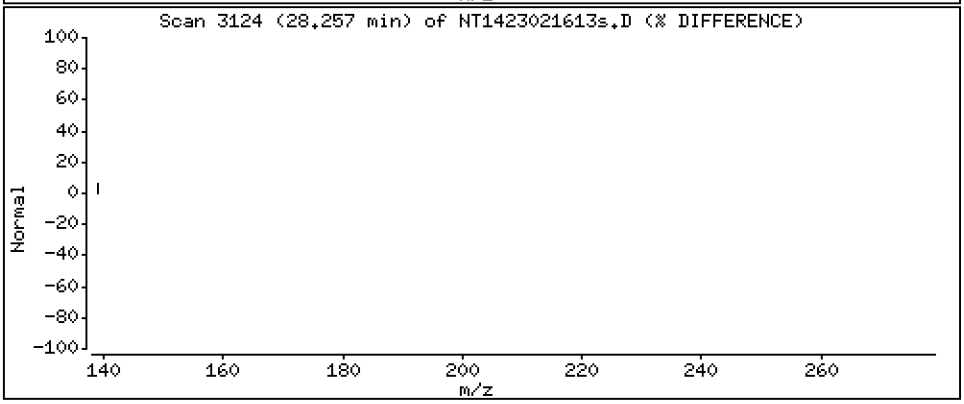












Data File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D

Date : 16-FEB-2023 21:18

Client ID:

Instrument: nt14.i

Sample Info: SLB0240-SCV1

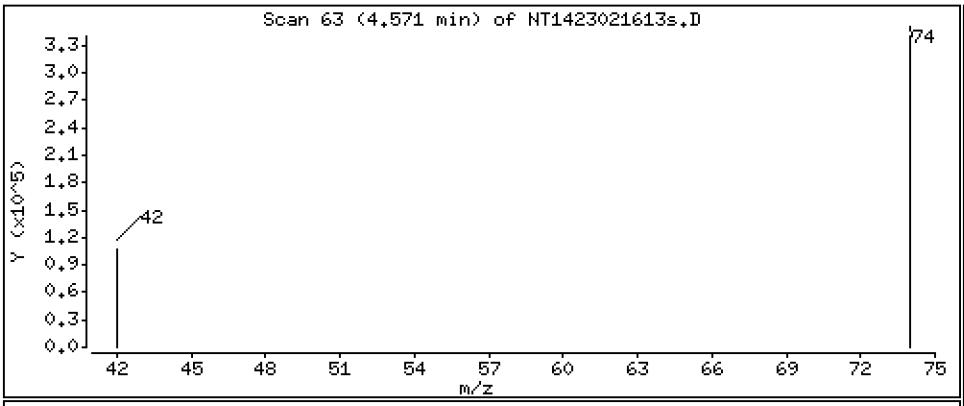
Operator: DSD

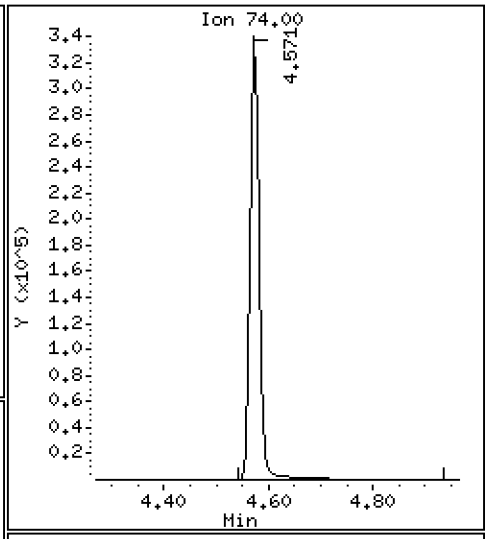
Column phase: ZB-5msi

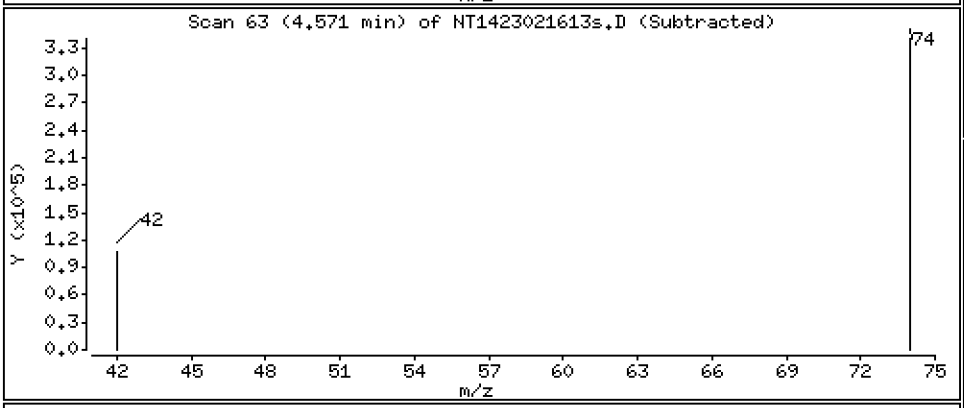
Column diameter: 0.25

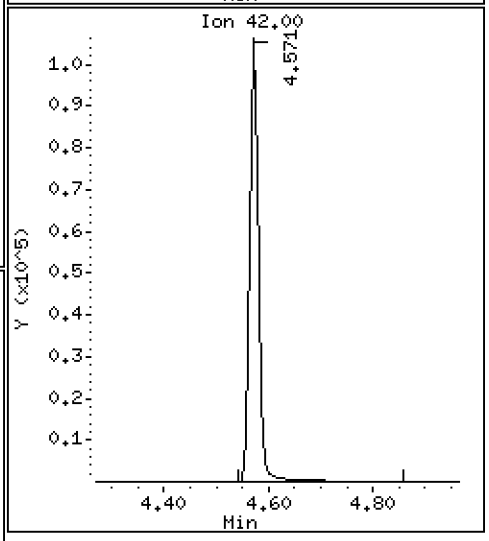
90 N-Nitrosodimethylamine

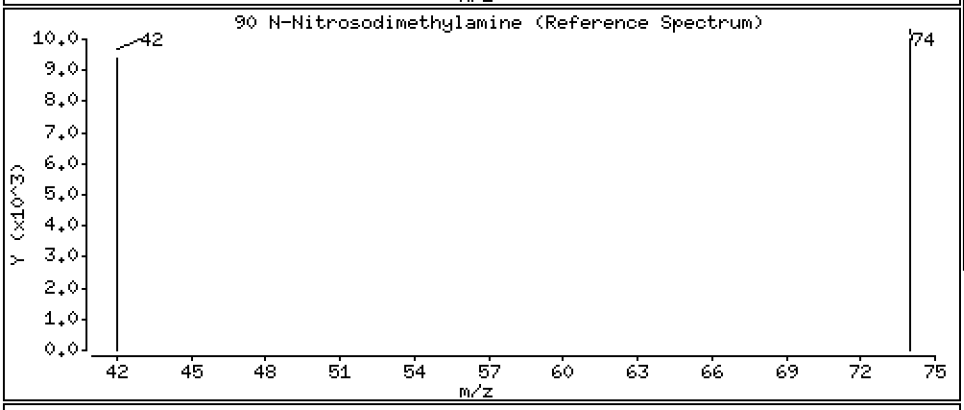
Concentration: 5.293 ug/mL

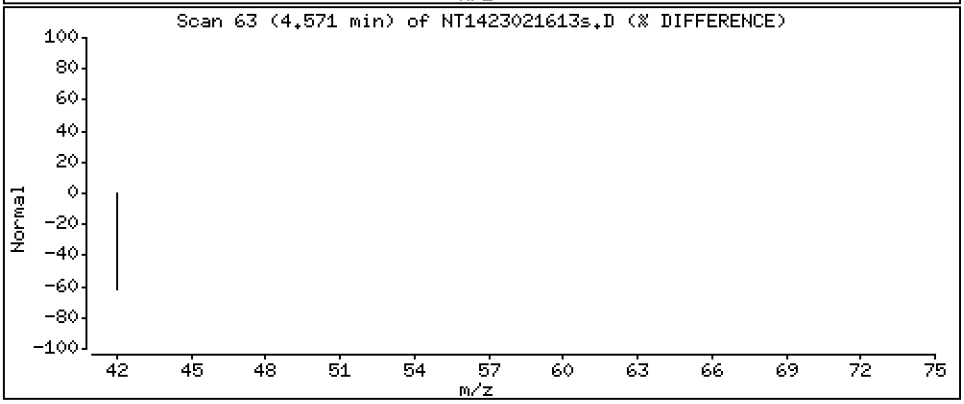












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230216.b\20230216.b\NT1423021613s.D
Lab Smp Id: SLB0240-SCV1
Inj Date : 16-FEB-2023 21:18 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0240-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Meth Date : 03-Mar-2023 14:04 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.679	6.764	(0.750)	843875	7.69265	7.693(R)
	3 Phenol	94	8.294	8.379	(0.931)	773600	4.55614	4.556
	7 1,3-Dichlorobenzene	146	8.835	8.835	(0.992)	640622	4.80933	4.809
*	8 1,4-Dichlorobenzene-d4	152	8.905	8.905	(1.000)	391473	4.00000	
	9 1,4-Dichlorobenzene	146	8.936	8.936	(1.003)	616286	4.85010	4.850
	11 Benzyl alcohol	79	9.184	9.161	(1.031)	568264	5.30032	5.300
	12 1,2-Dichlorobenzene	146	9.293	9.293	(1.044)	605835	4.79526	4.795
	13 2-Methylphenol	108	9.409	9.433	(1.057)	523707	4.50674	4.507
	15 4-Methylphenol	108	9.689	9.720	(1.088)	579099	4.46016	4.460
	16 N-Nitroso-di-n-propylamine	70	9.743	9.767	(1.094)	517307	5.04663	5.047
	22 2,4-Dimethylphenol	107	10.728	10.745	(0.942)	488898	3.90295	3.903
	24 Benzoic acid	105	10.938	11.116	(0.960)	436009	6.44677	6.447
	26 1,2,4-Trichlorobenzene	180	11.309	11.310	(0.993)	602290	4.59532	4.595
*	27 Naphthalene-d8	136	11.394	11.394	(1.000)	1430650	4.00000	
	30 Hexachlorobutadiene	225	11.804	11.804	(1.036)	383880	4.81466	4.815
	39 Dimethylphthalate	163	14.543	14.551	(0.968)	1212628	5.00209	5.002
*	42 Acenaphthene-d10	162	15.023	15.016	(1.000)	794620	4.00000	
	50 Diethylphthalate	149	15.997	15.997	(1.065)	1507744	4.96936	4.969
	54 N-Nitrosodiphenylamine	169	16.375	16.384	(0.907)	1157201	5.00925	5.009(H)
	57 Hexachlorobenzene	284	17.432	17.432	(0.965)	537021	4.70048	4.700
	58 Pentachlorophenol	266	17.796	17.944	(0.985)	240806	4.93475	4.935
*	59 Phenanthrene-d10	188	18.059	18.059	(1.000)	1759092	4.00000	
$	66 Terphenyl-d14	244	21.224	21.224	(0.918)	1463833	4.57604	4.576(R)
	67 Butylbenzylphthalate	149	22.153	22.153	(0.958)	814994	4.96402	4.964
*	69 Chrysene-d12	240	23.128	23.121	(1.000)	1201603	4.00000	
*	77 Perylene-d12	264	25.691	25.691	(1.000)	814421	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.257	28.288	(1.100)	772593	4.88838	4.888
	90 N-Nitrosodimethylamine	74	4.571	4.618	(0.513)	440424	5.29346	5.293

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423021613s.D
Lab Smp Id: SLB0240-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230216.b\20230216.b\SIMABN2.m
Misc Info:

Calibration Date: 16-FEB-2023
Calibration Time: 18:18
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	393779	196890	787558	391473	-0.59
27 Naphthalene-d8	1399029	699515	2798058	1430650	2.26
42 Acenaphthene-d10	759723	379862	1519446	794620	4.59
59 Phenanthrene-d10	1756156	878078	3512312	1759092	0.17
69 Chrysene-d12	1174128	587064	2348256	1201603	2.34
77 Perylene-d12	826011	413006	1652022	814421	-1.40

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.91	8.41	9.41	8.91	-0.00
27 Naphthalene-d8	11.40	10.90	11.90	11.39	-0.00
42 Acenaphthene-d10	15.02	14.52	15.52	15.02	0.05
59 Phenanthrene-d10	18.06	17.56	18.56	18.06	-0.00
69 Chrysene-d12	23.12	22.62	23.62	23.13	0.03
77 Perylene-d12	25.68	25.18	26.18	25.69	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423021613s.D

Lab ID: SLB0240-SCV1
nt14.i, 20230216.b\20230216.b\SIMABN2.m,   16-FEB-2023 21:18

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.931	0.941	-0.0095	Phenol
0.960	0.000	0.9599	Benzoic acid
0.513	0.518	-0.0052	N-Nitrosodimethylamine
0.985	0.000	0.9854	Pentachlorophenol
0.750	0.760	-0.0095	2-Fluorophenol

RRT check based on Ccal File: 20230216.b/NT1423021612s.D

On Column LOD for nt14.i, 20230216.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00009
Lab File ID:	NT1423022148S.D	Calibration Date:	02/16/2023
Sequence:	SLB0349	Injection Date:	02/22/23
Lab Sample ID:	SLB0349-CCV1	Injection Time:	17:47
Sequence Name:	Calibration Check		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
1,4-Dichlorobenzene	A	1.0000	1.1	1.2983440	1.4340170		10.5	+/-50	
1,2-Dichlorobenzene	A	1.0000	1.1	1.2909230	1.3894900		7.6	+/-50	
Benzyl Alcohol	A	1.0000	1.1	1.0954840	1.1526610		5.2	+/-50	
Benzoic acid	A	4.0000	1.6	0.1890948	0.0775527		-59.0	+/-50	*
2,4-Dimethylphenol	A	2.0000	3.0	0.3263158	0.5254716		48.5	+/-50	
1,2,4-Trichlorobenzene	A	1.0000	1.0	0.3664516	0.3669306		0.1	+/-50	
N-Nitrosodiphenylamine	A	1.0000	1.1	0.4912986	0.5795444		14.7	+/-50	
Pentachlorophenol	A	2.0000	1.7	0.0811080	0.0900728		-16.1	+/-50	
2-Fluorophenol	A	1.5000	1.33	0.8380777	1.0204270		-11.6	+/-50	
p-Terphenyl-d14	A	1.0000	1.33	1.0648810	1.4167120		33.0	+/-50	

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221485.D

Page 1

Date : 22-FEB-2023 17:47

Client ID:

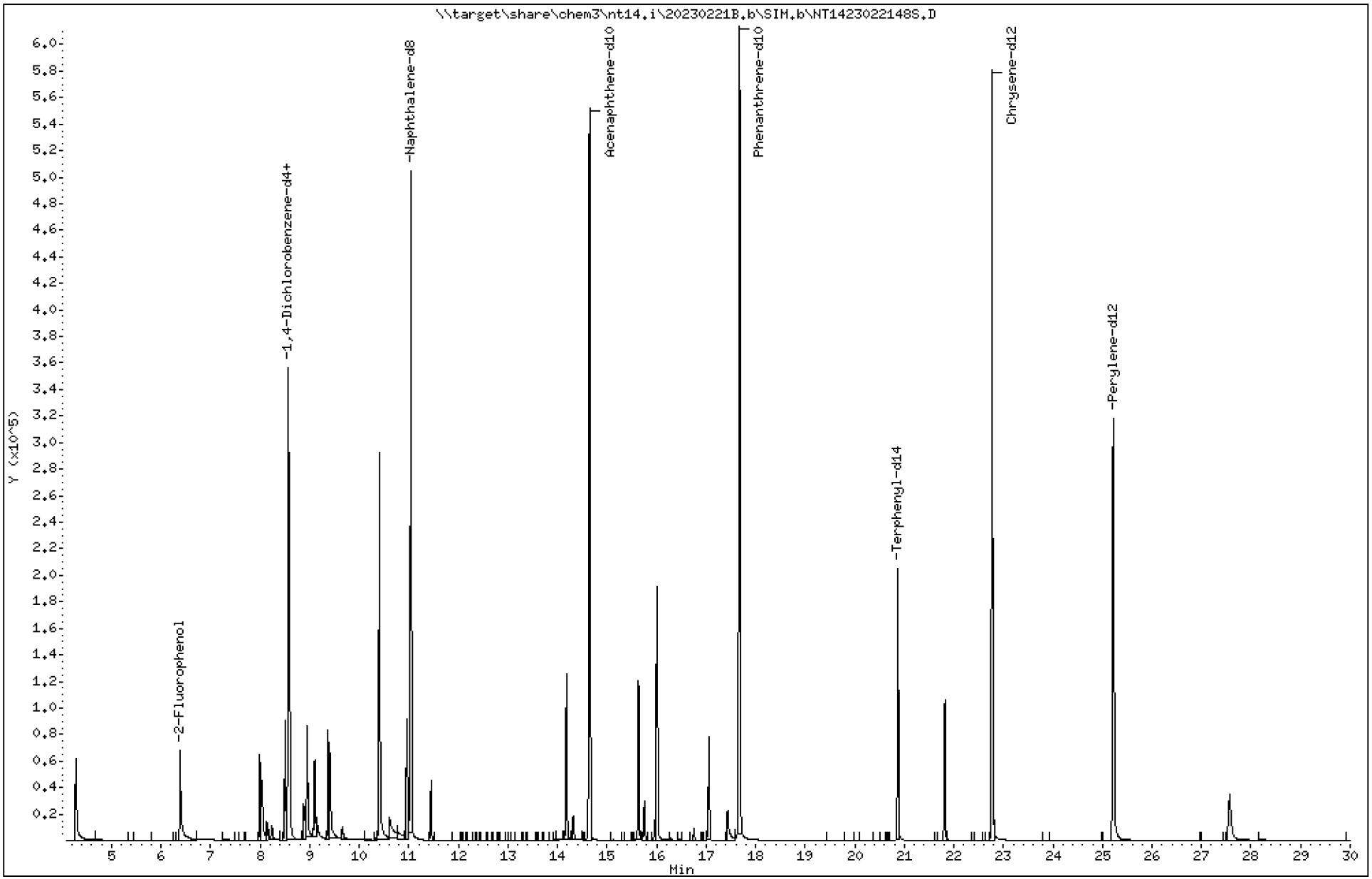
Instrument: nt14.i

Sample Info: SIM-ICV4

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

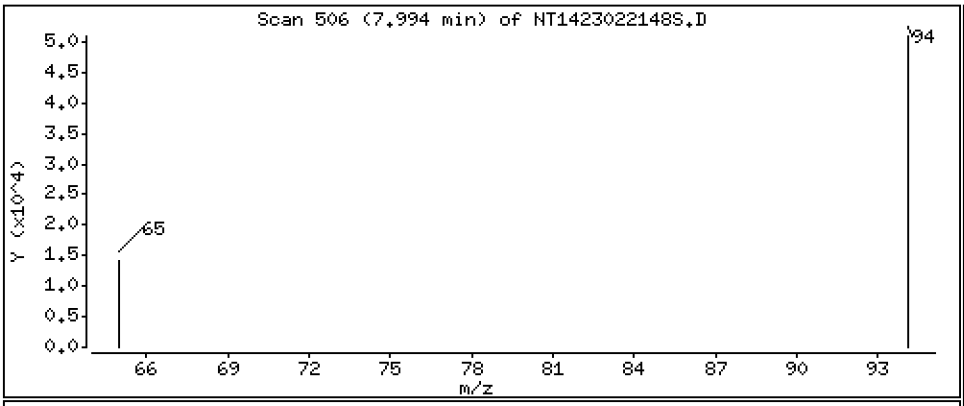
Operator: DSD

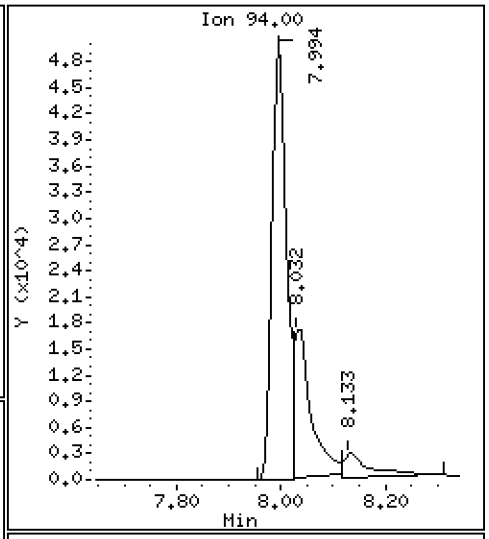
Column phase: ZB-5msi

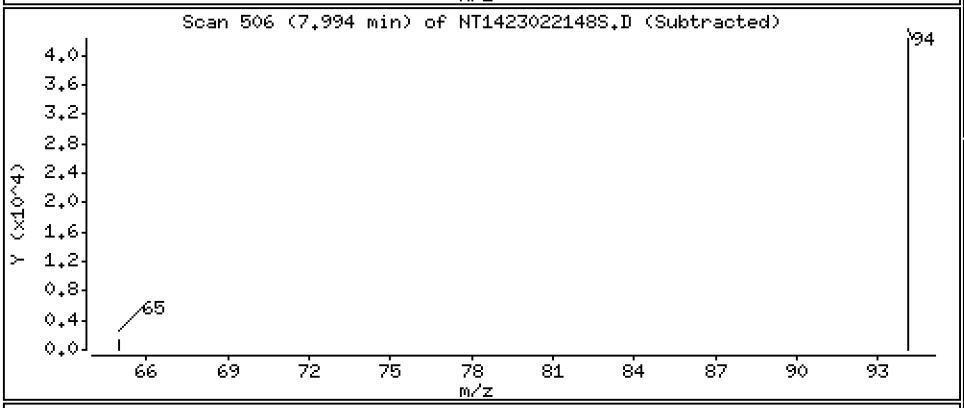
Column diameter: 0.25

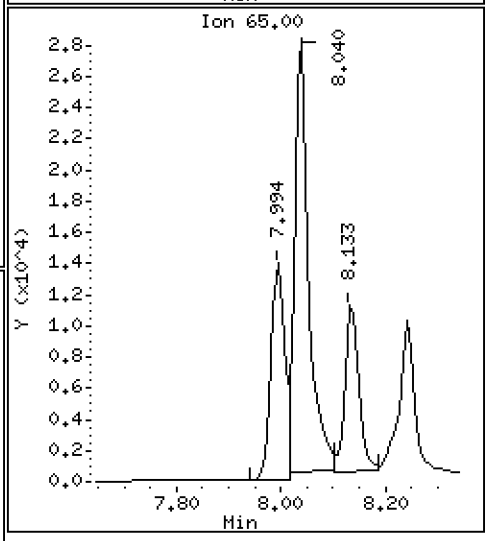
3 Phenol

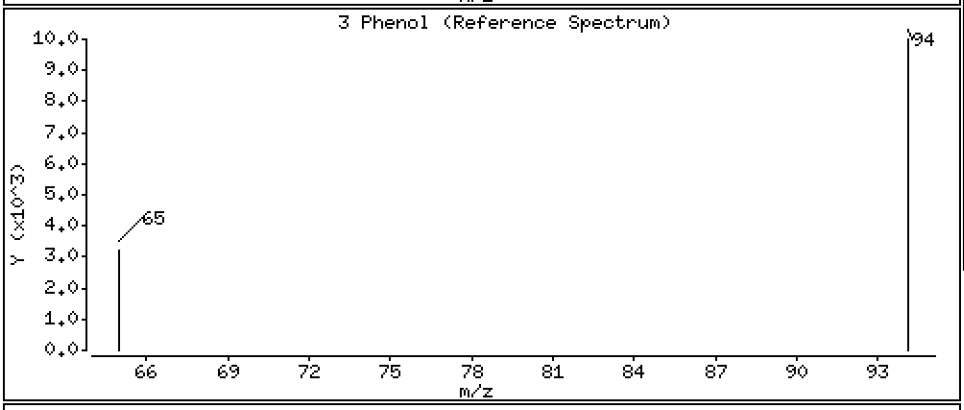
Concentration: 0.9158 ug/mL

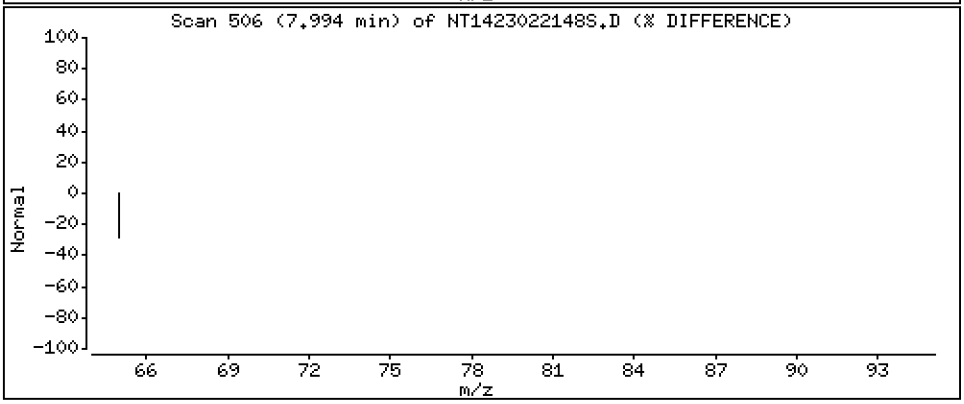












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Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

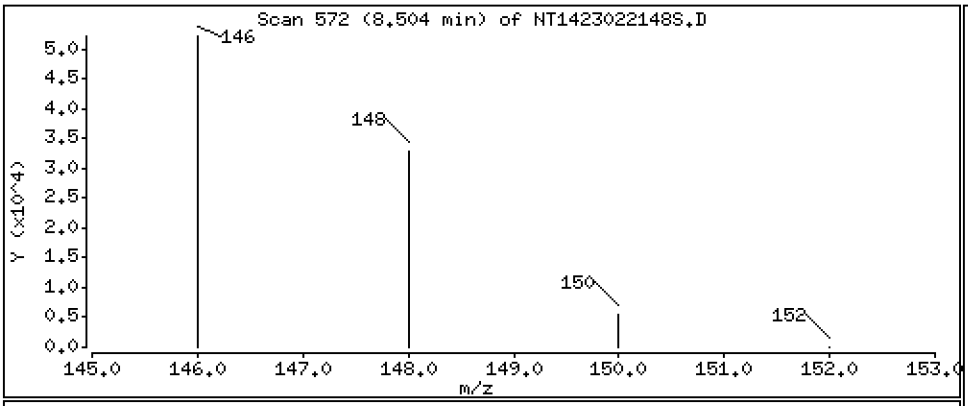
Operator: DSD

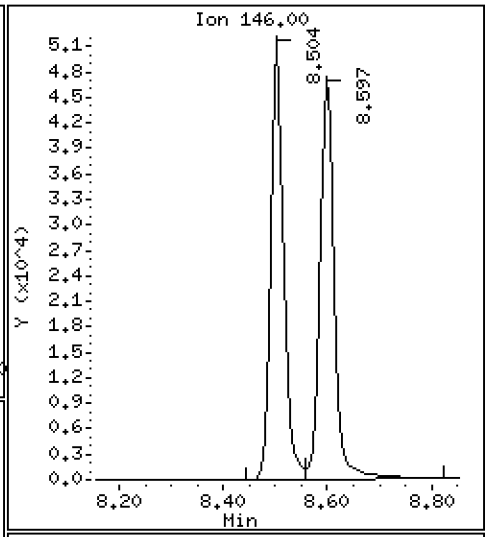
Column phase: ZB-5msi

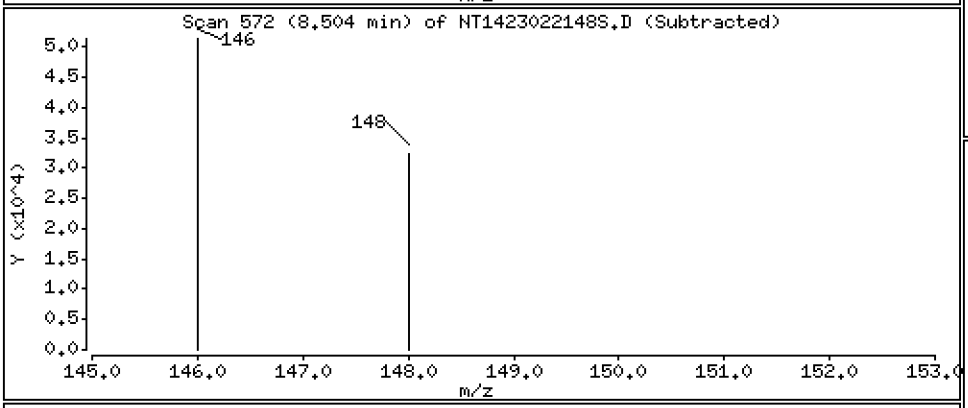
Column diameter: 0.25

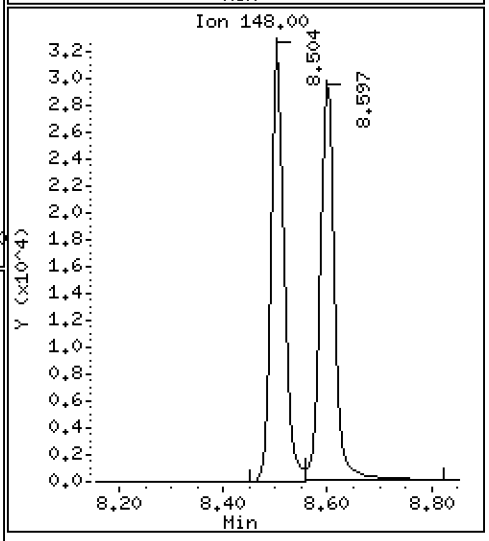
7 1,3-Dichlorobenzene

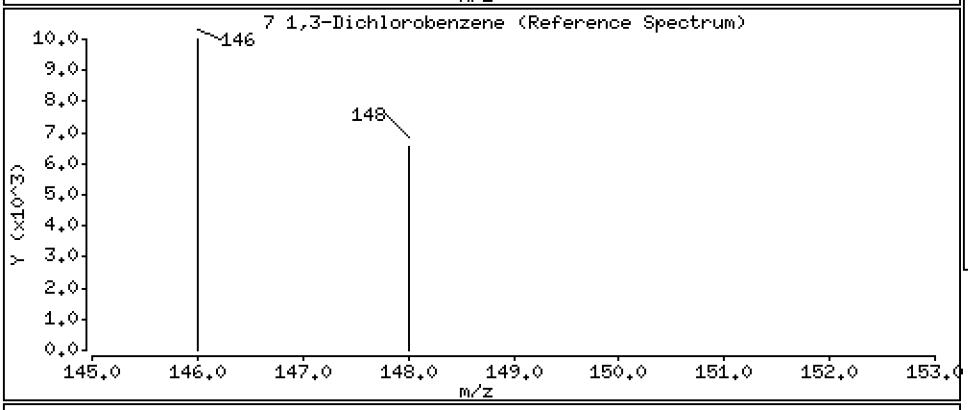
Concentration: 1.050 ug/mL

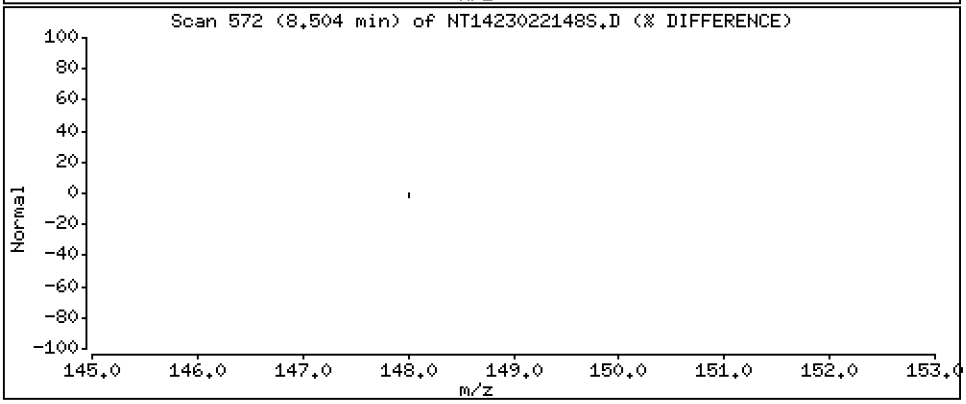












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Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

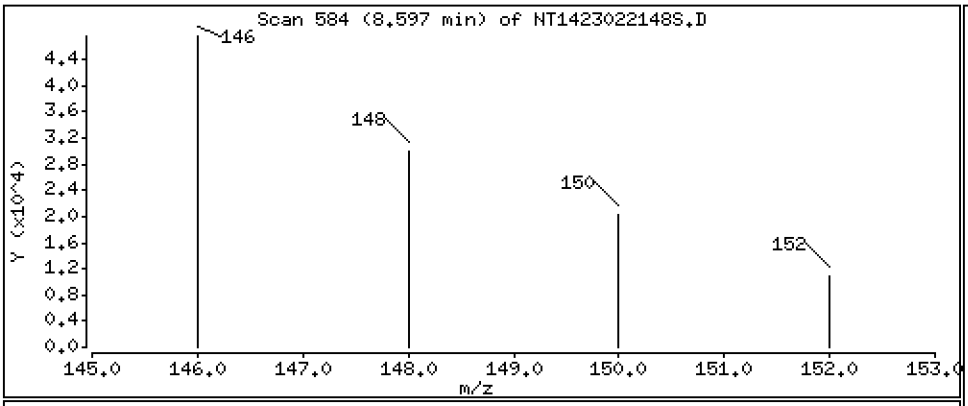
Operator: DSD

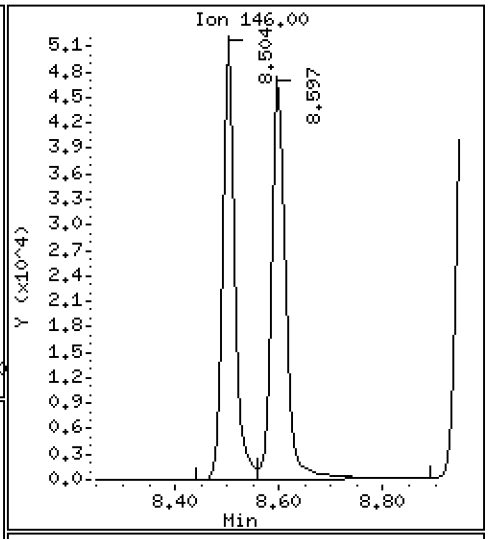
Column phase: ZB-5msi

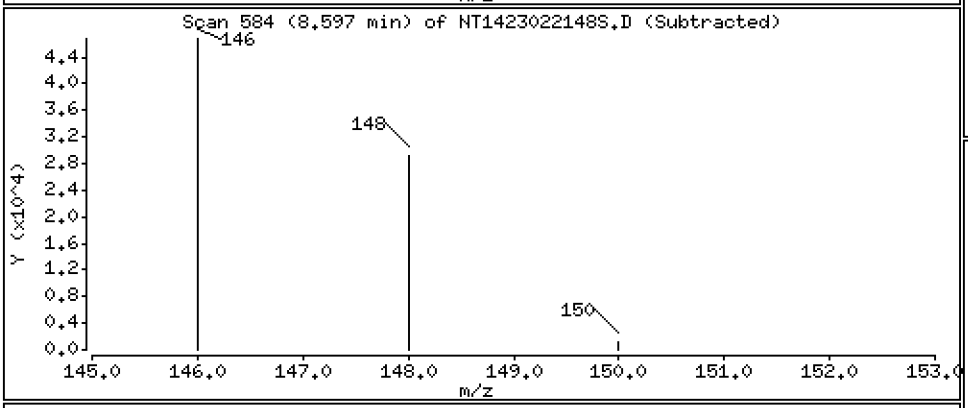
Column diameter: 0.25

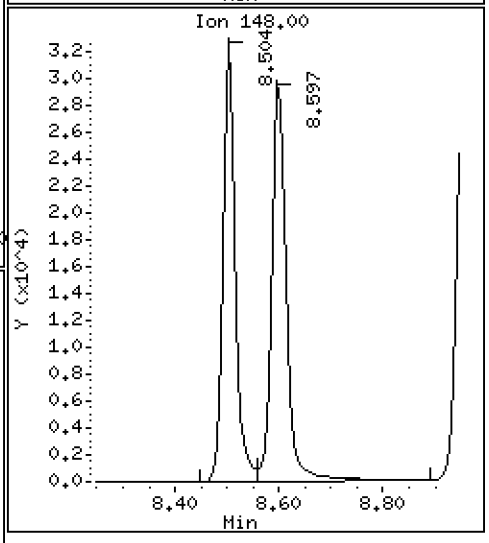
9 1,4-Dichlorobenzene

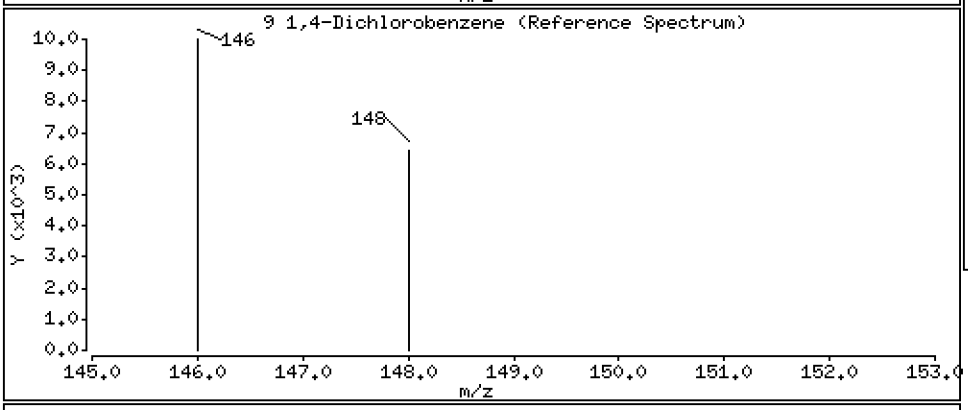
Concentration: 1.104 ug/mL

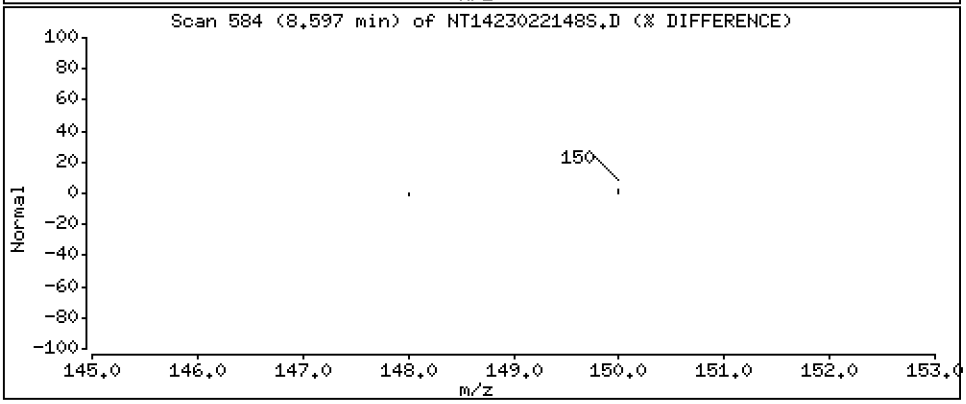












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221485.D

Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

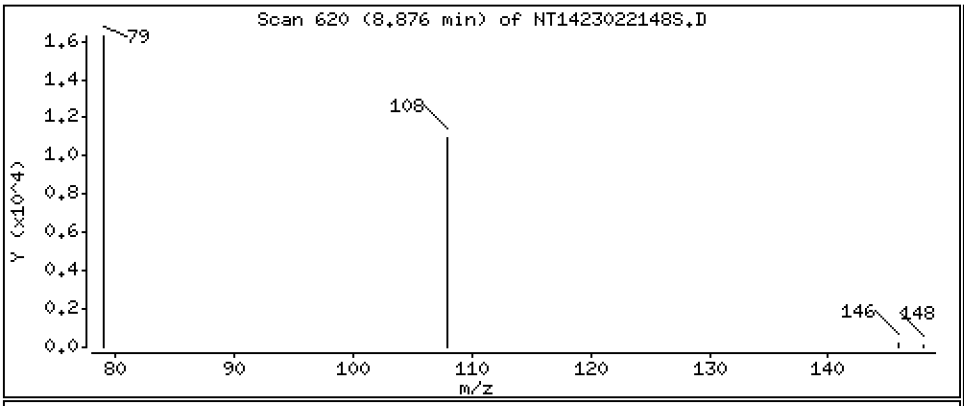
Operator: DSD

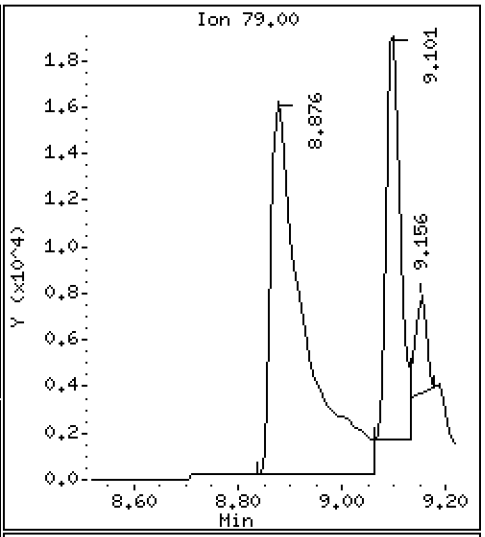
Column phase: ZB-5msi

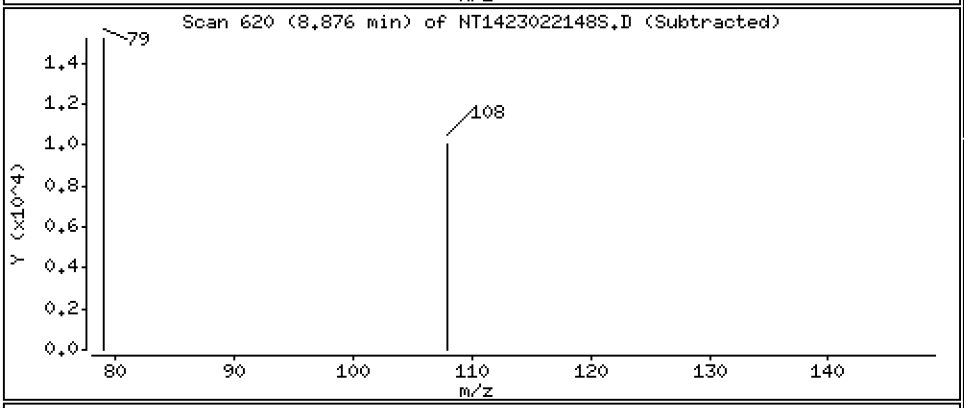
Column diameter: 0.25

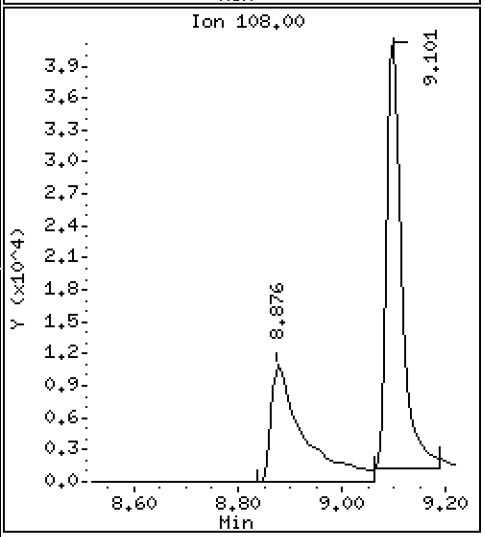
11 Benzyl alcohol

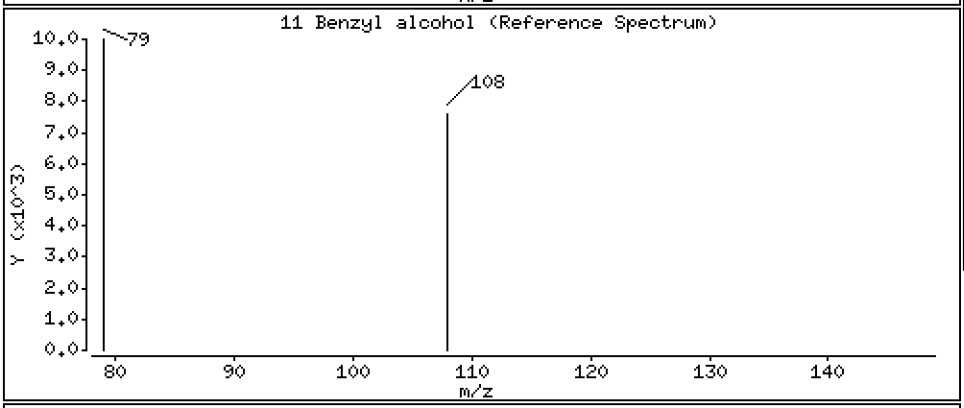
Concentration: 1.052 ug/mL

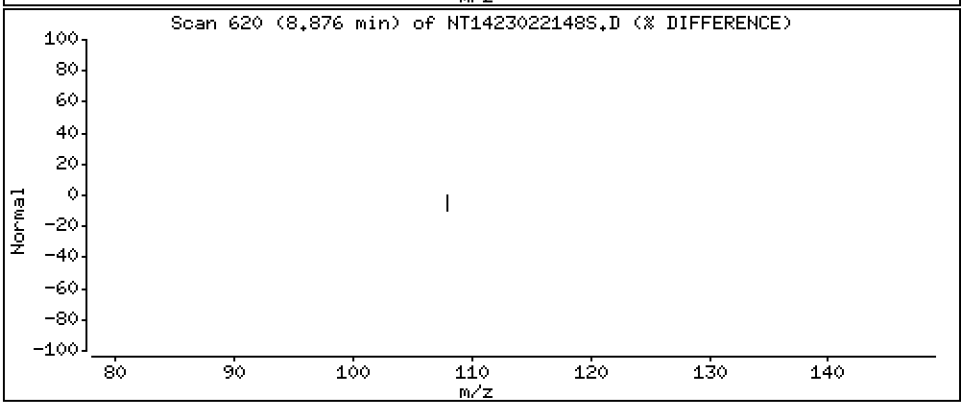












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221485.D

Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

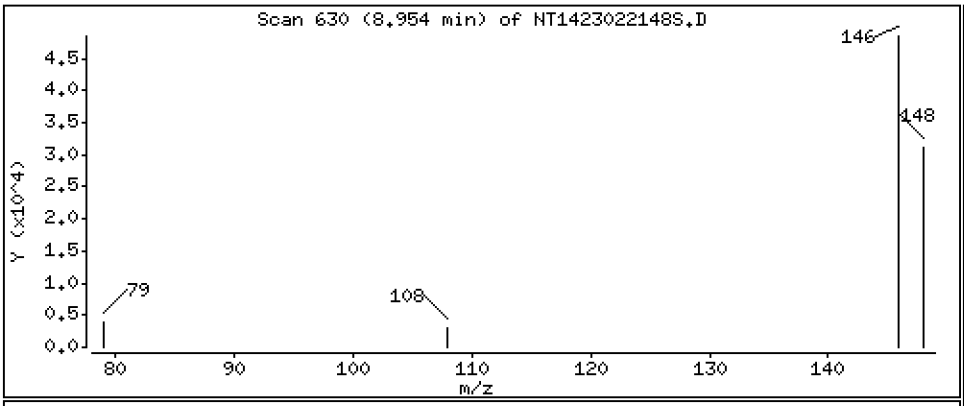
Operator: DSD

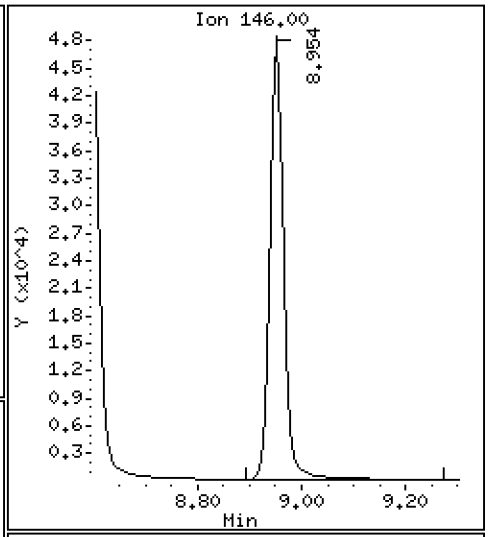
Column phase: ZB-5msi

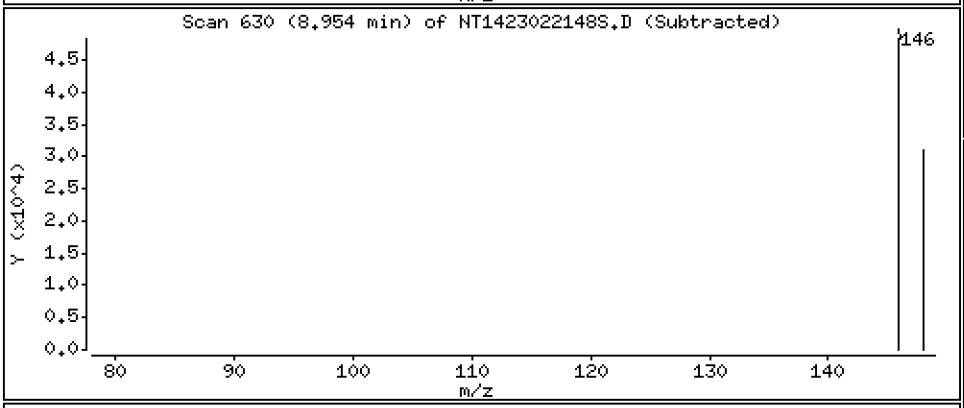
Column diameter: 0.25

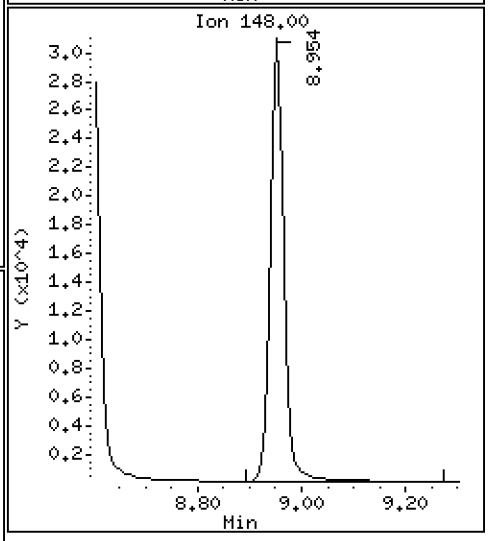
12 1,2-Dichlorobenzene

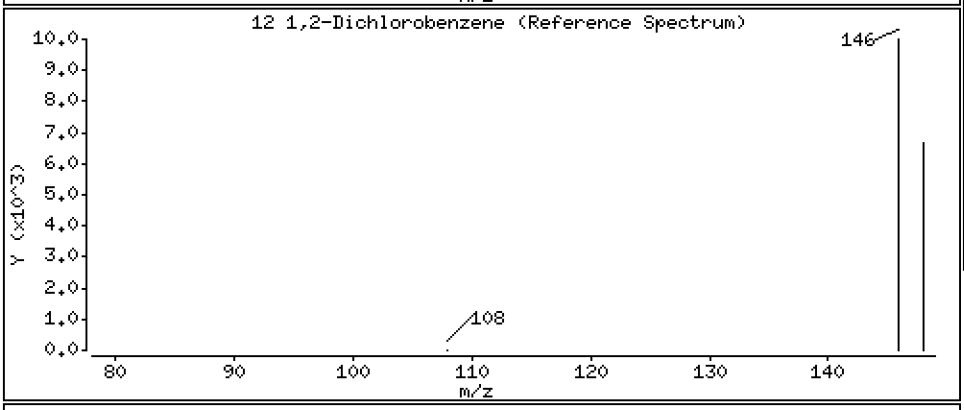
Concentration: 1.076 ug/mL

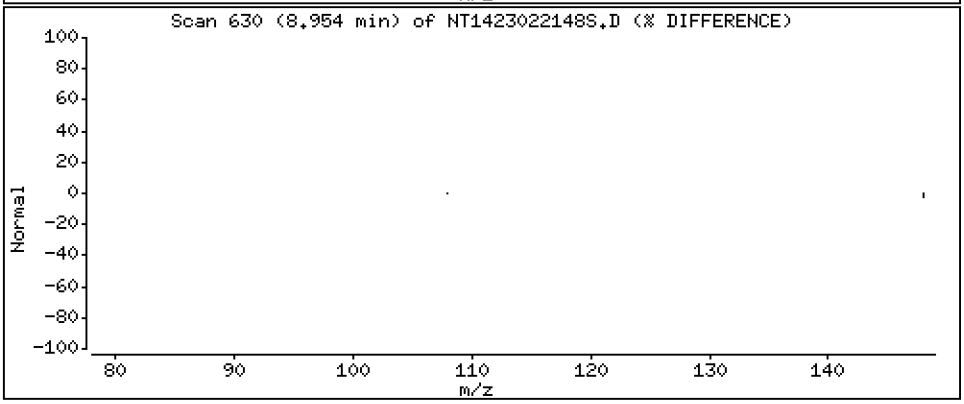












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221485.D

Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

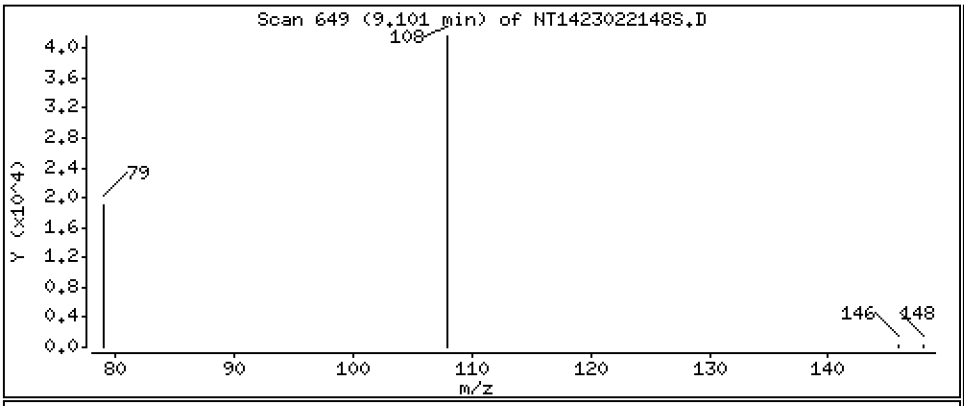
Operator: DSD

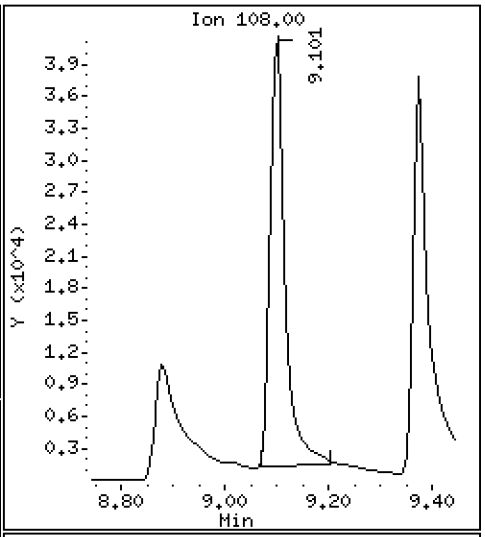
Column phase: ZB-5msi

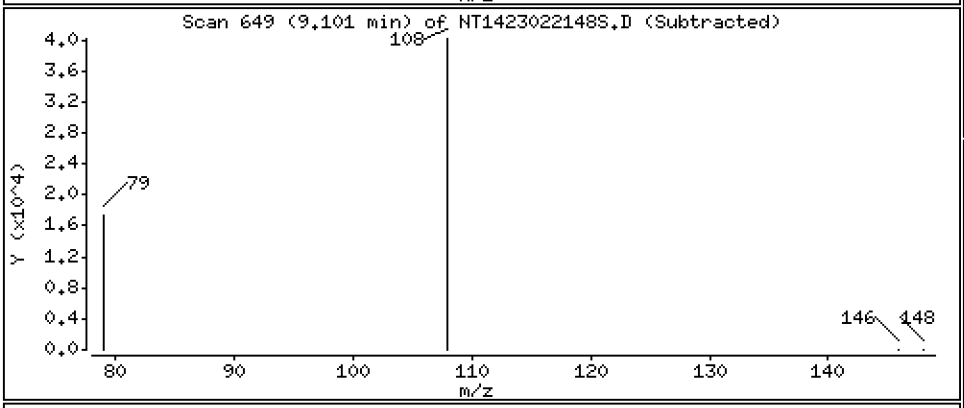
Column diameter: 0.25

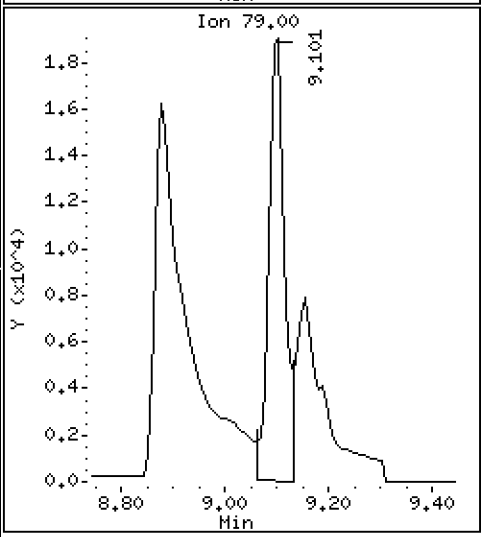
13 2-Methylphenol

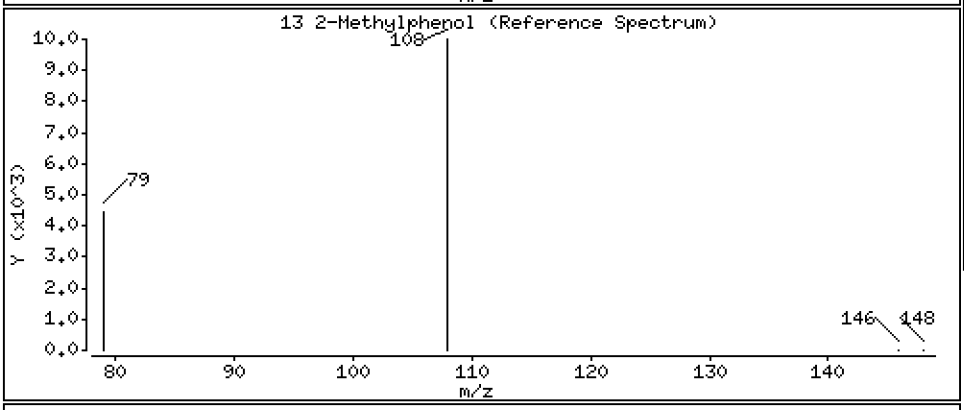
Concentration: 1.091 ug/mL

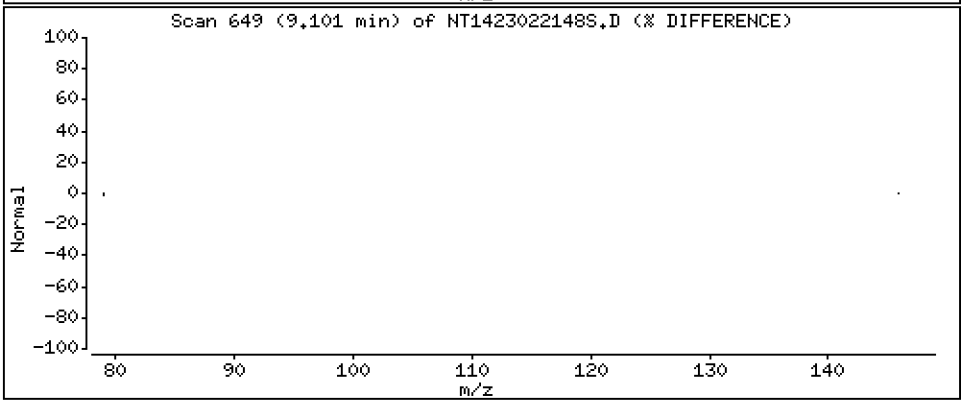












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230222148S.D

Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

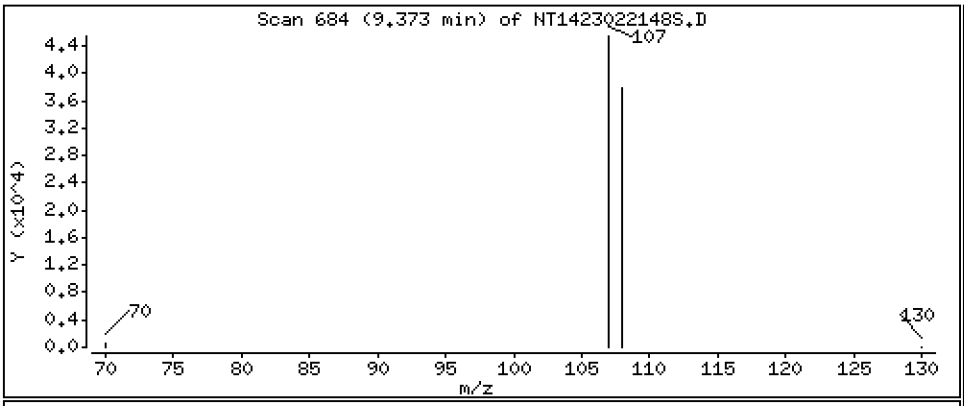
Operator: DSD

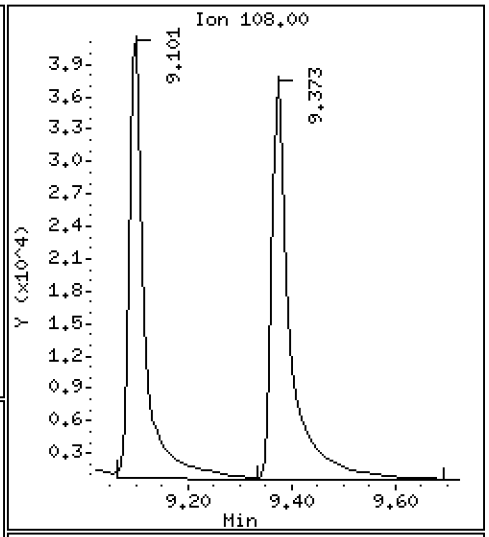
Column phase: ZB-5msi

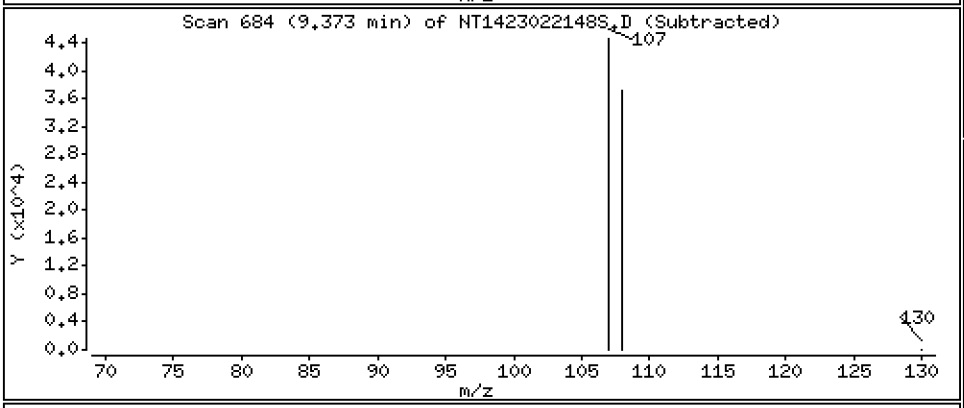
Column diameter: 0.25

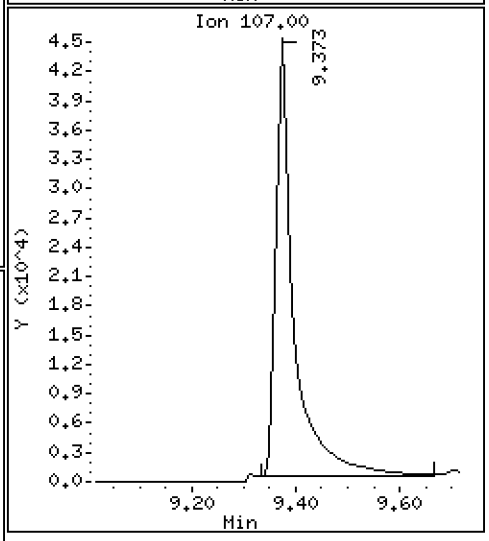
15 4-Methylphenol

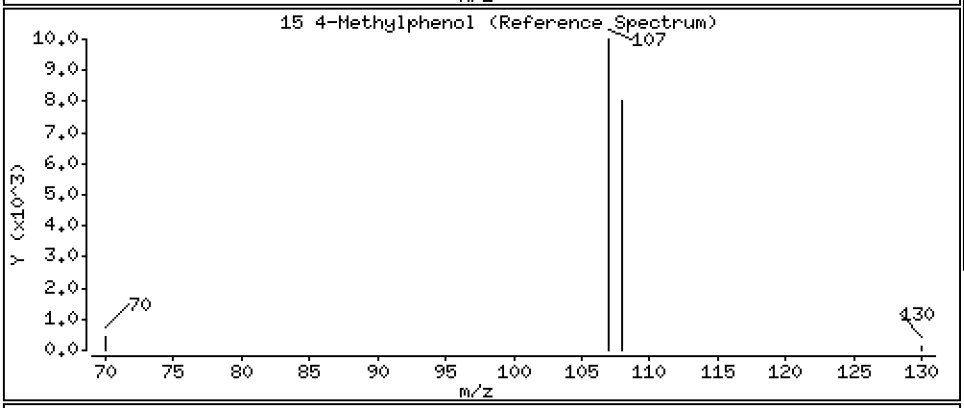
Concentration: 1.119 ug/mL

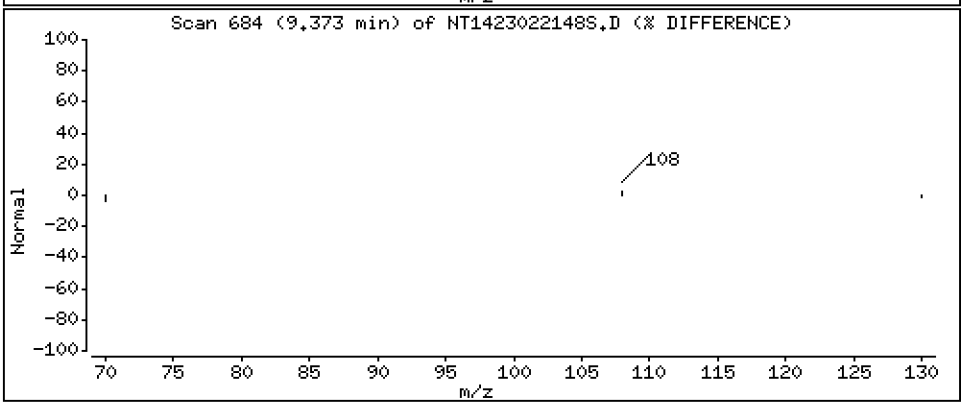












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221485.D

Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

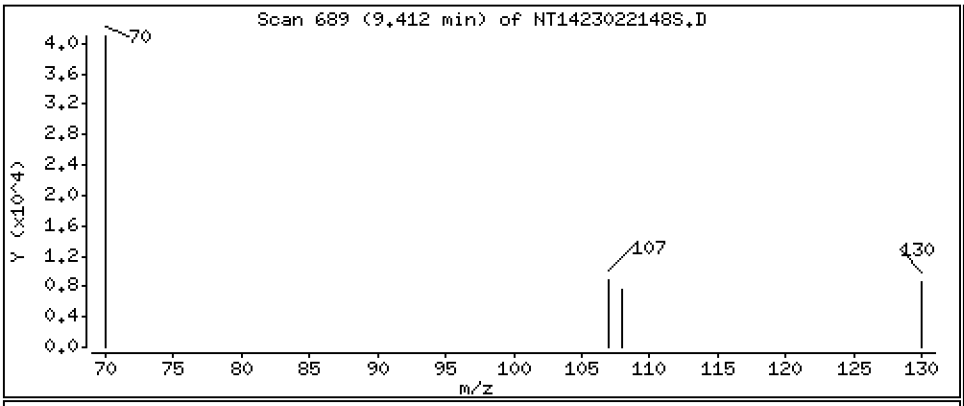
Operator: DSD

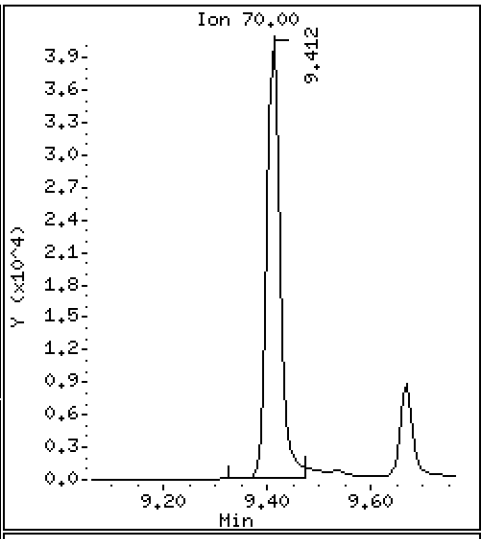
Column phase: ZB-5msi

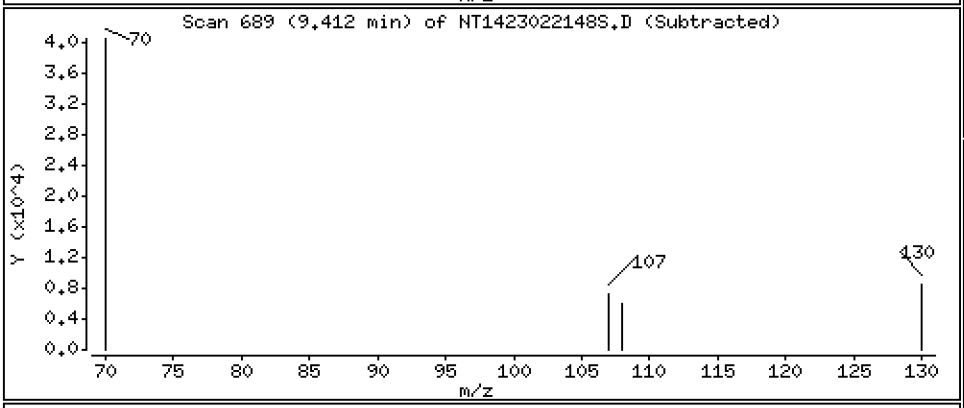
Column diameter: 0.25

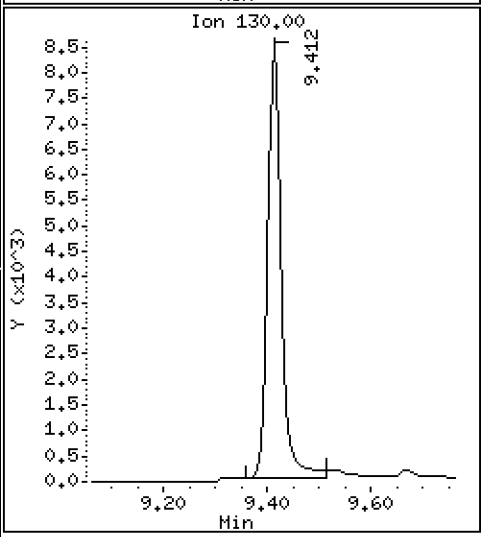
16 N-Nitroso-di-n-propylamine

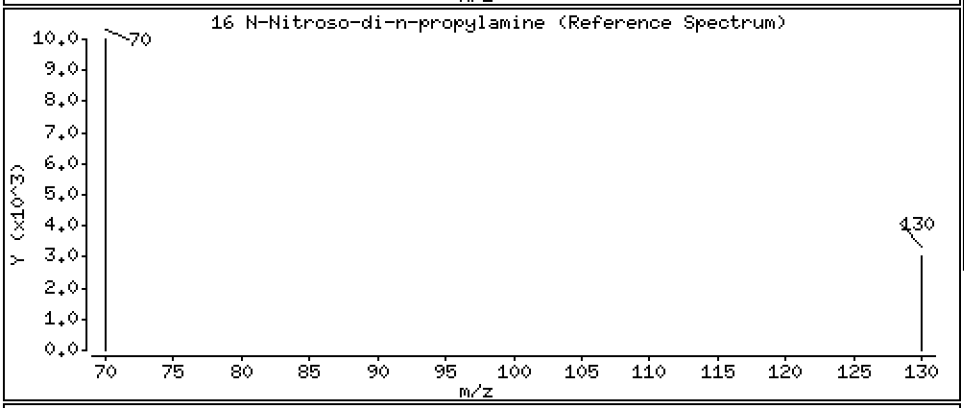
Concentration: 1.143 ug/mL

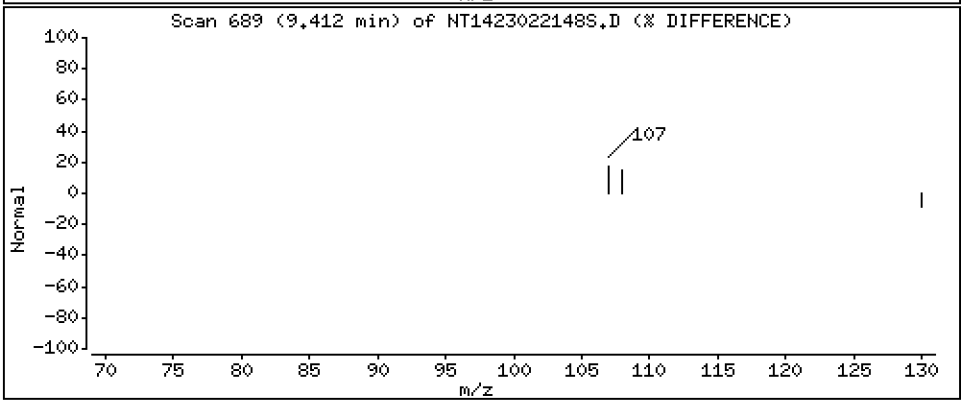












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Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

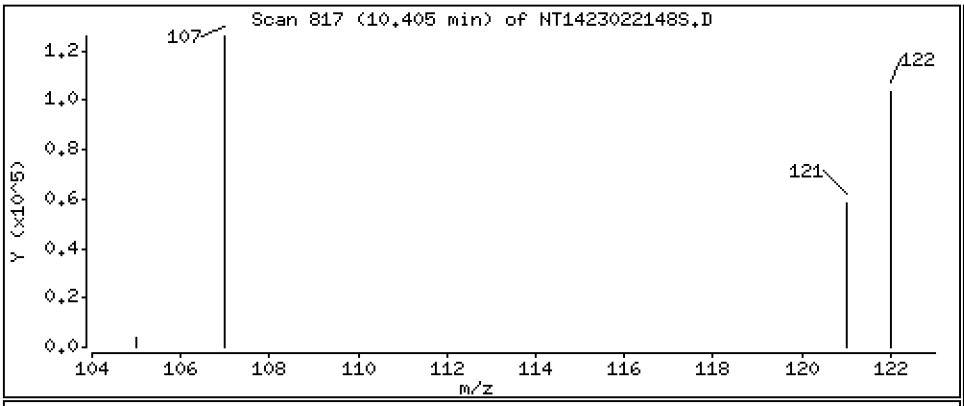
Operator: DSD

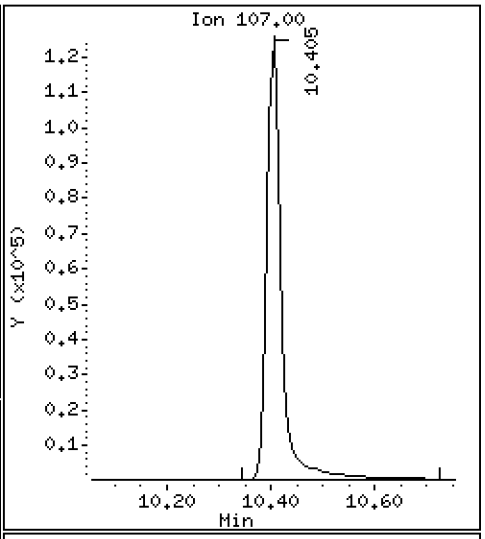
Column phase: ZB-5msi

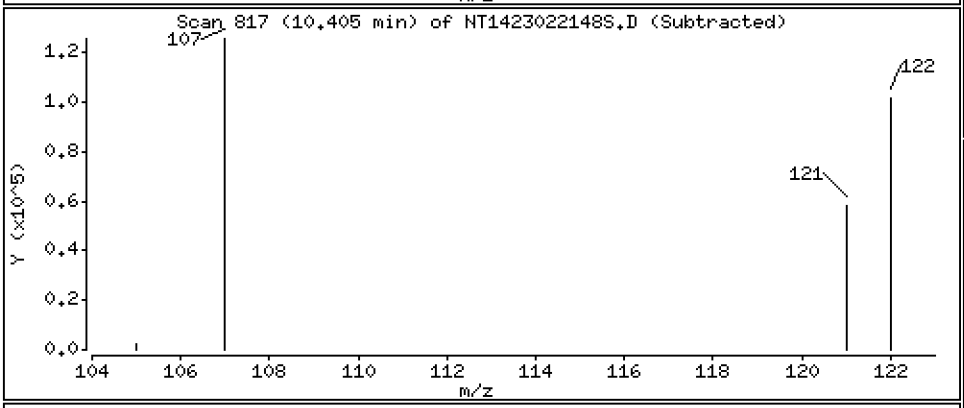
Column diameter: 0.25

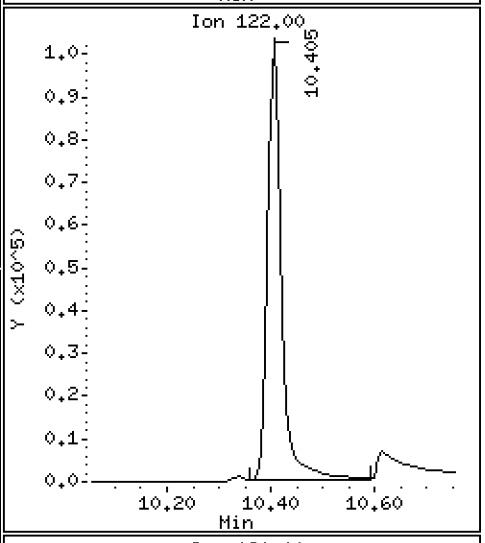
22 2,4-Dimethylphenol

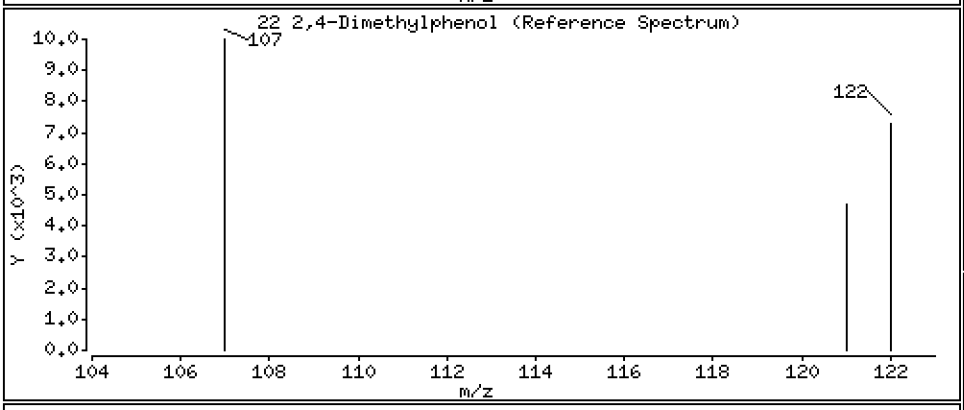
Concentration: 2.970 ug/mL

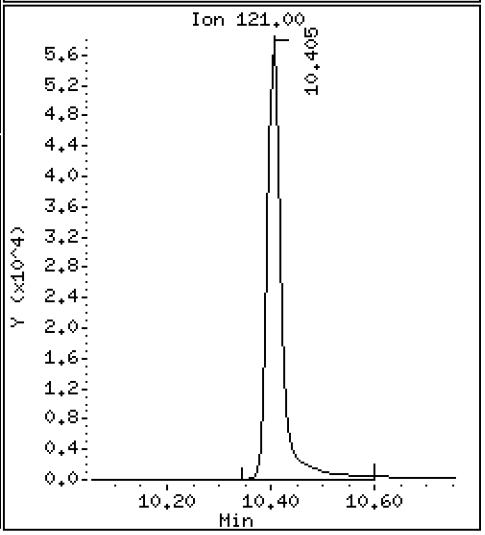


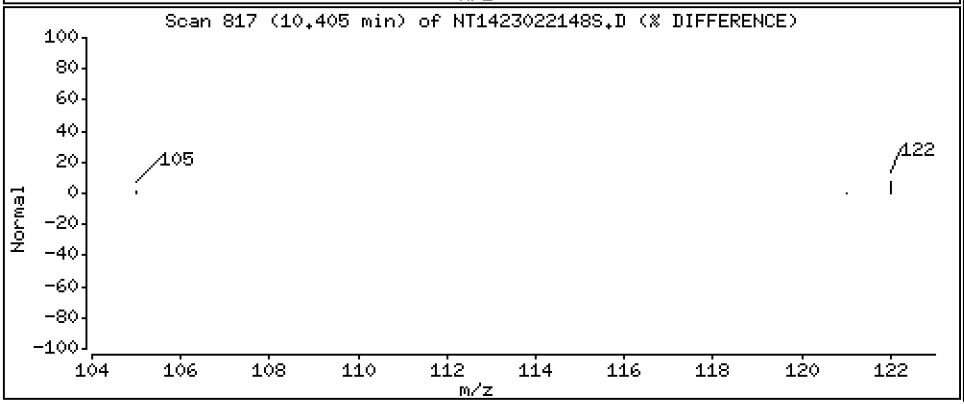












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Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

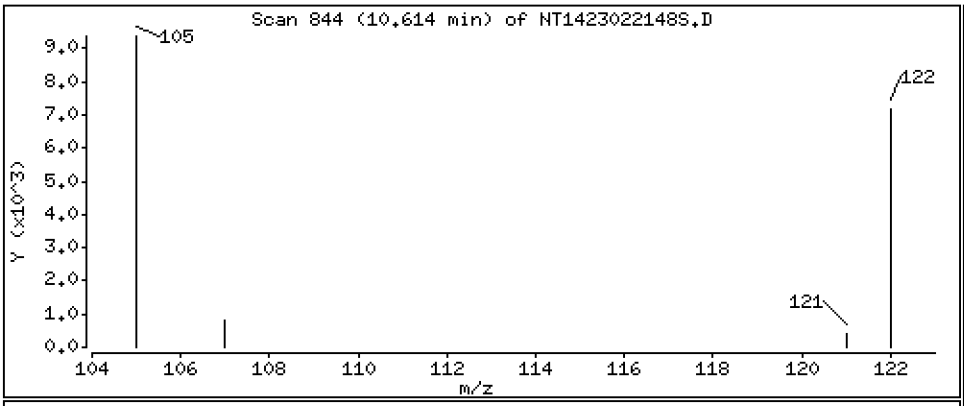
Operator: DSD

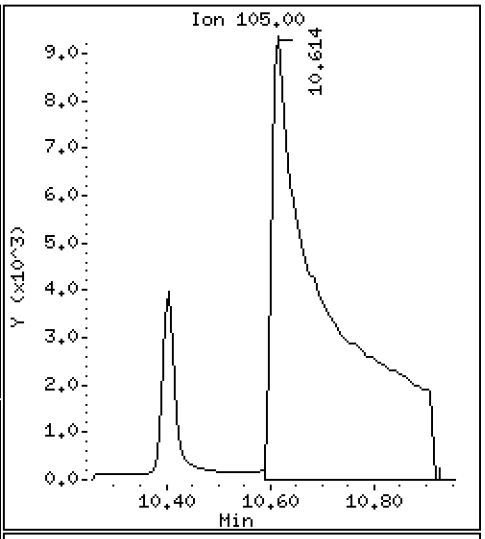
Column phase: ZB-5msi

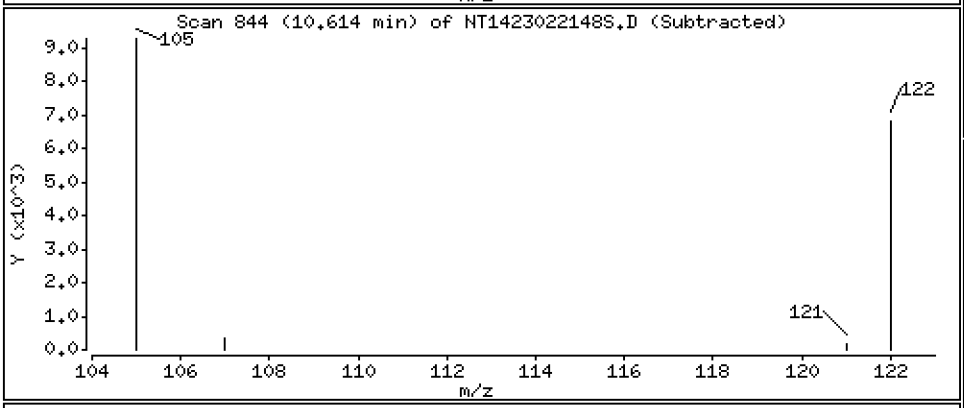
Column diameter: 0.25

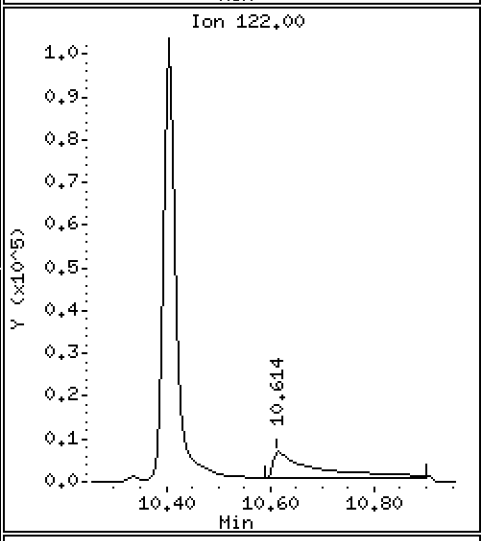
24 Benzoic acid

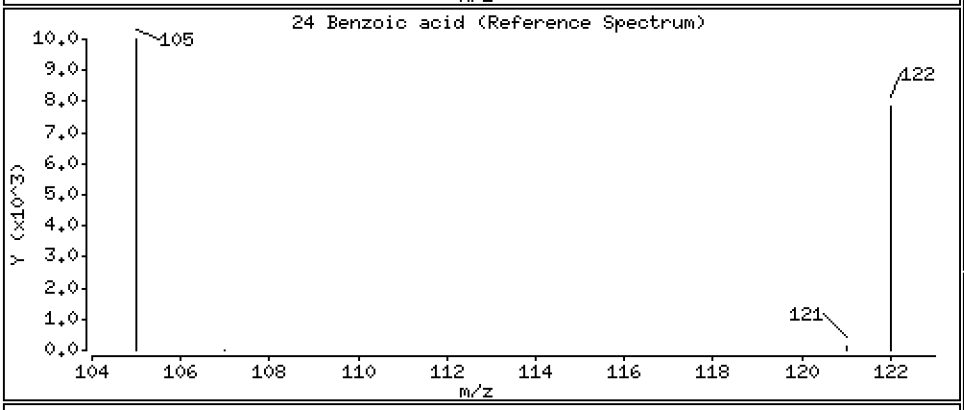
Concentration: 1.641 ug/mL

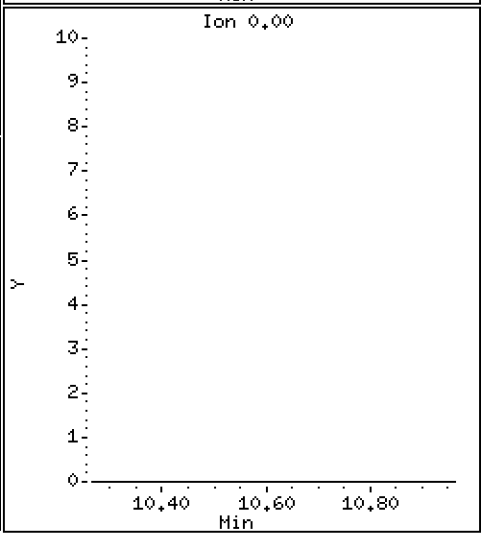


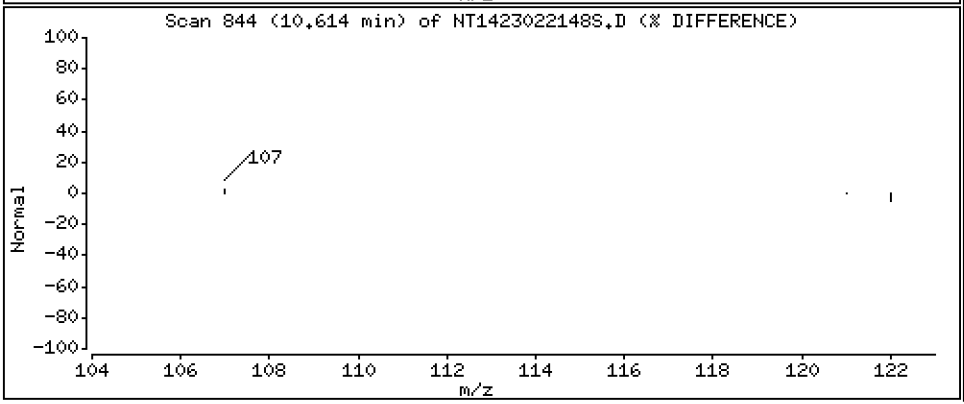












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Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

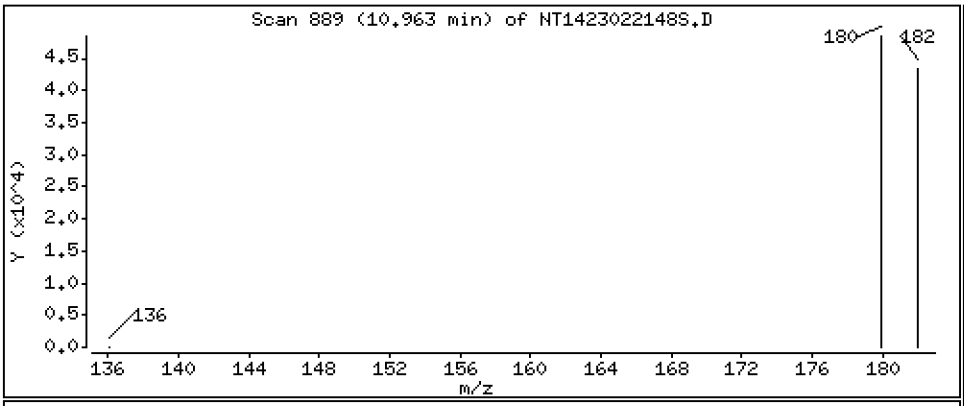
Operator: DSD

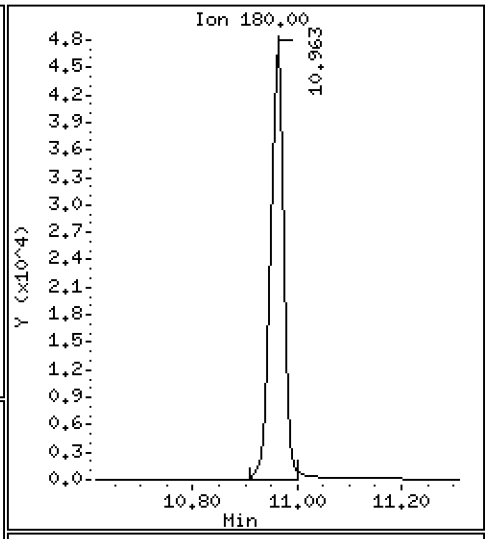
Column phase: ZB-5msi

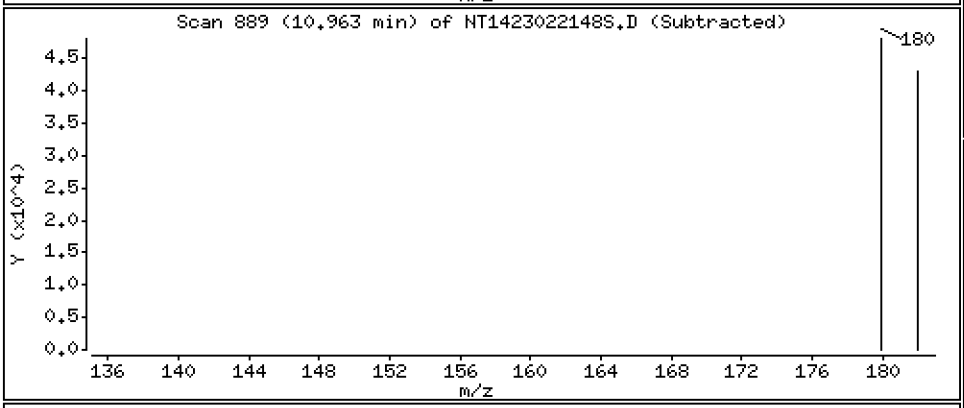
Column diameter: 0.25

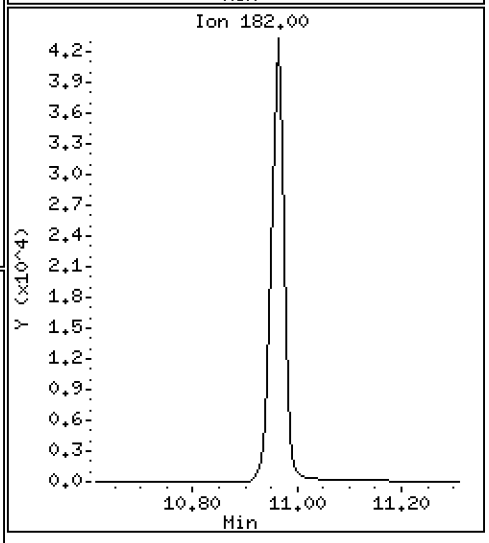
26 1,2,4-Trichlorobenzene

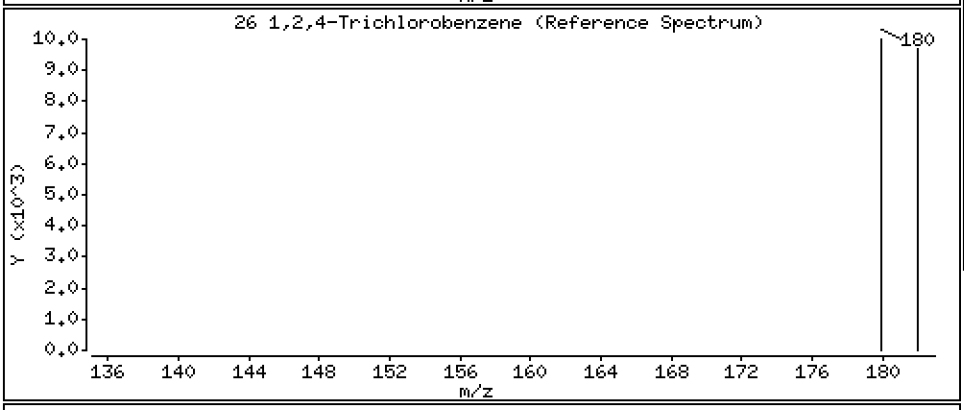
Concentration: 1.001 ug/mL

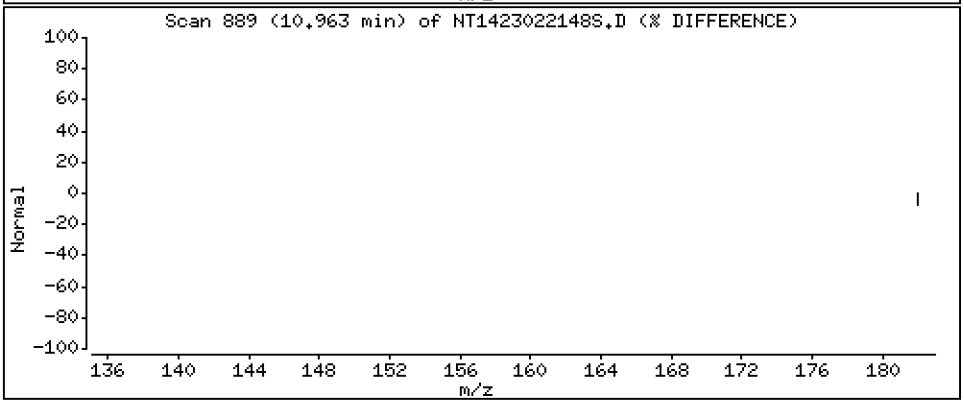












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221148S.D

Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

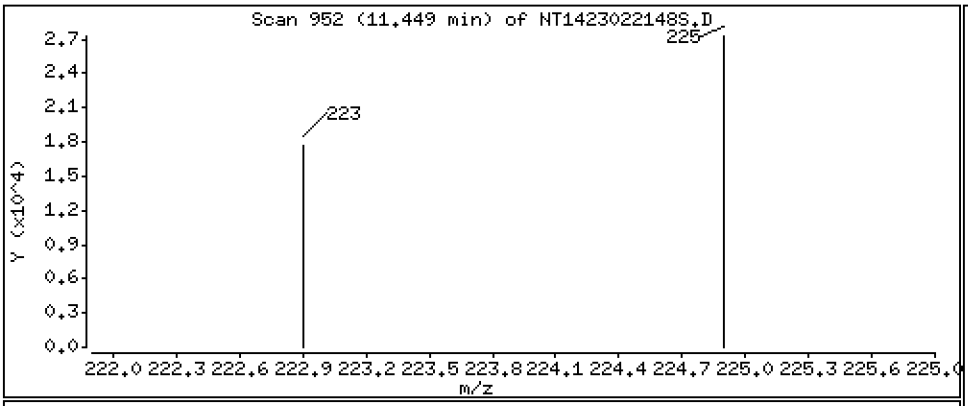
Operator: DSD

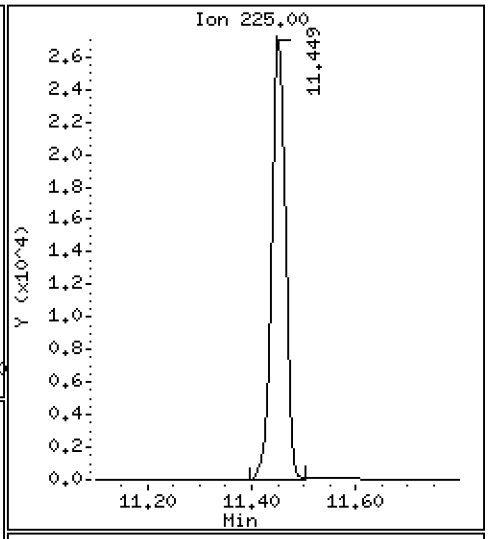
Column phase: ZB-5msi

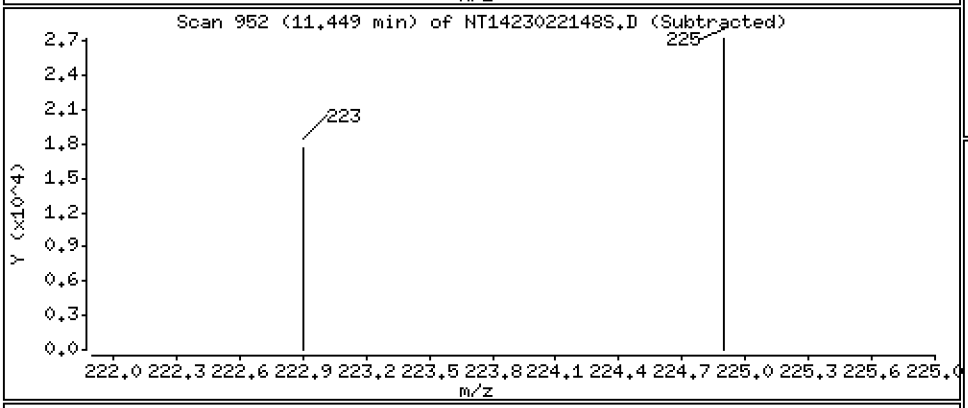
Column diameter: 0.25

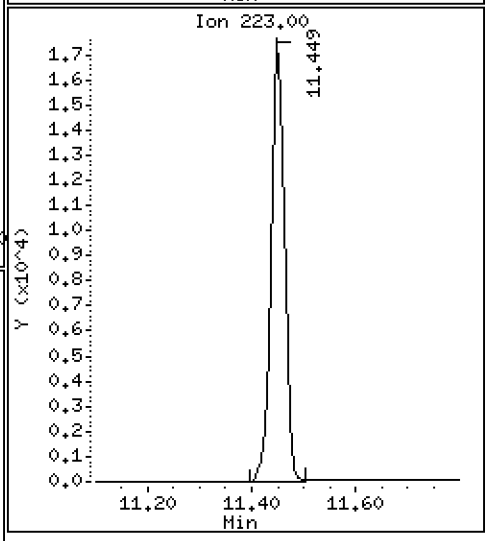
30 Hexachlorobutadiene

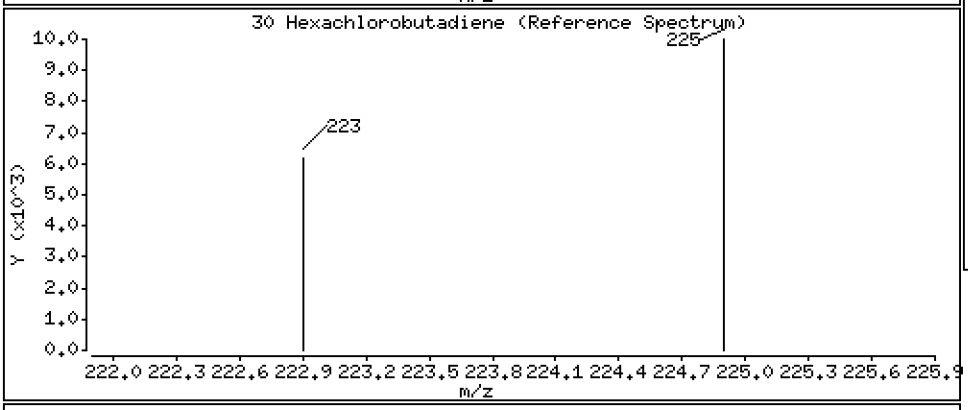
Concentration: 0.9702 ug/mL

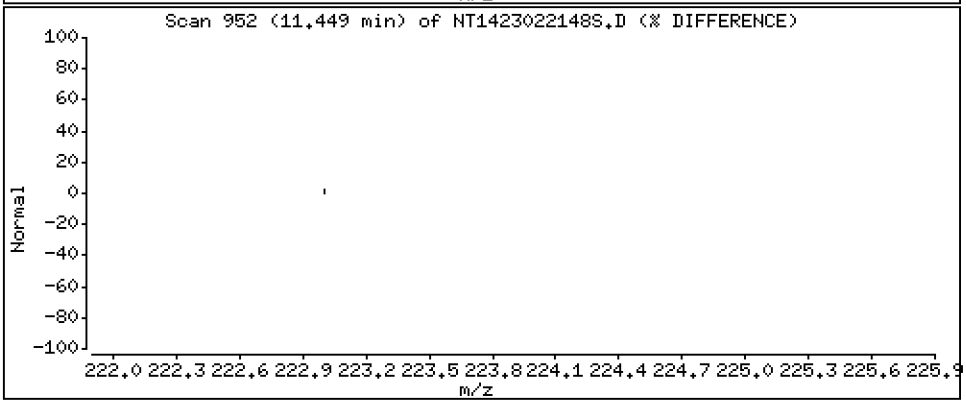












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221485.D

Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

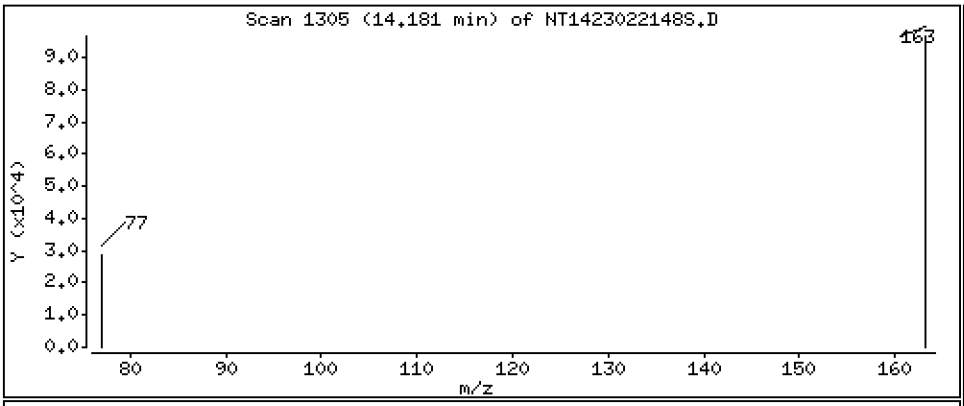
Operator: DSD

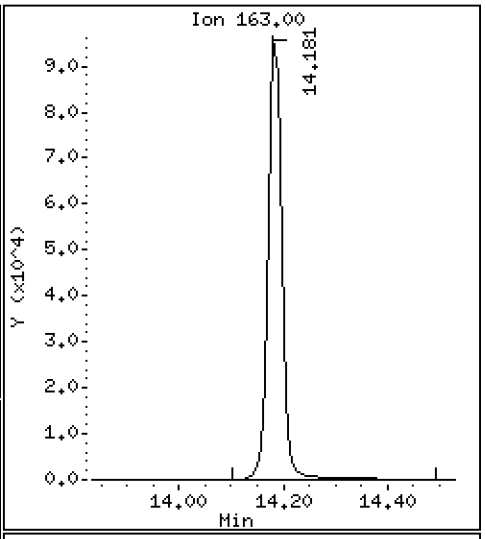
Column phase: ZB-5msi

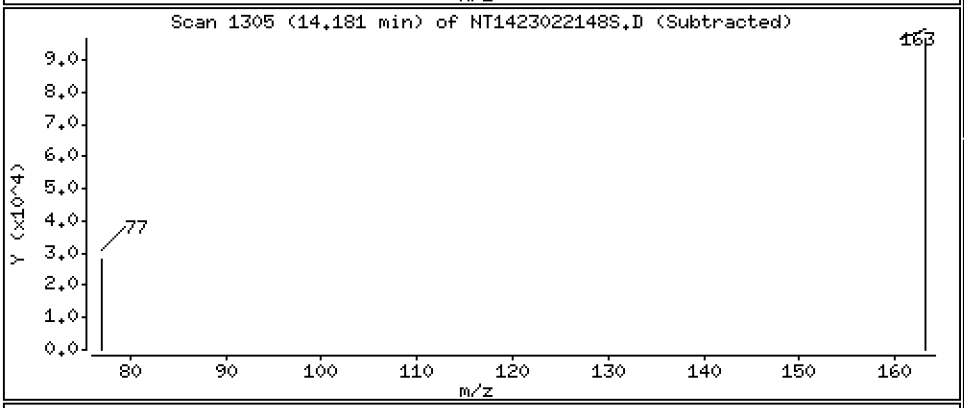
Column diameter: 0.25

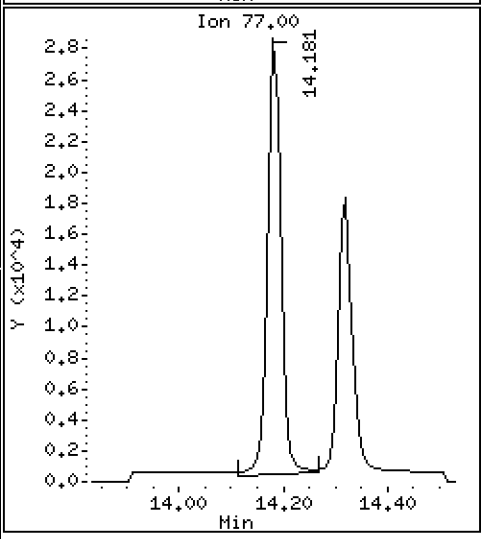
39 Dimethylphthalate

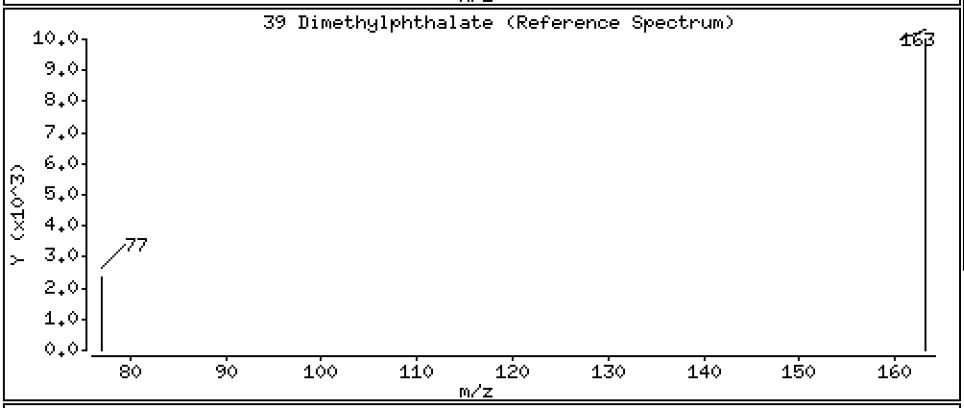
Concentration: 1.179 ug/mL

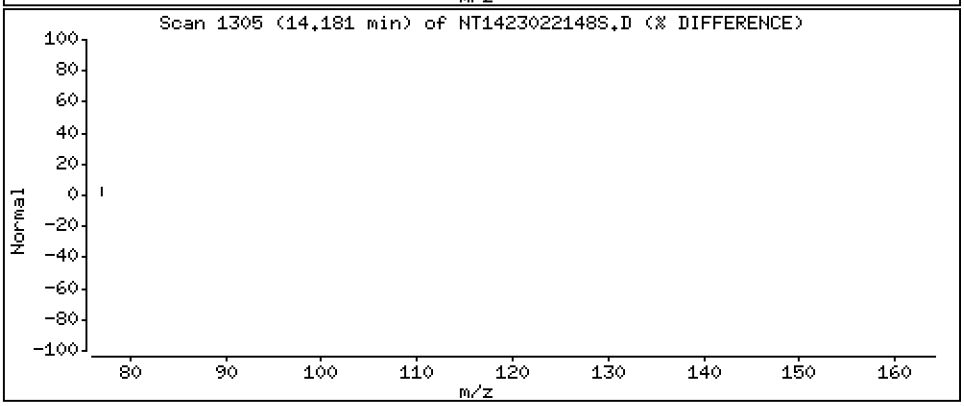












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Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

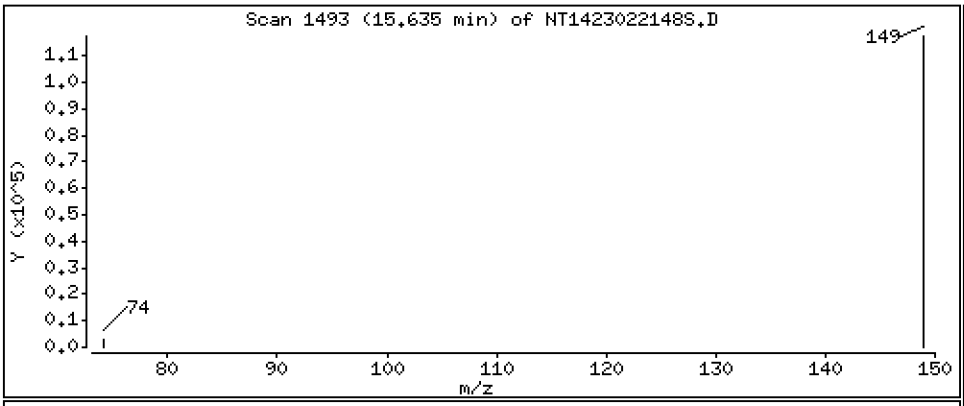
Operator: DSD

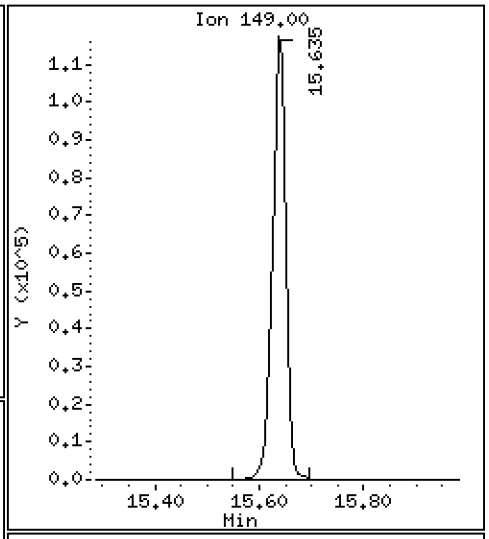
Column phase: ZB-5msi

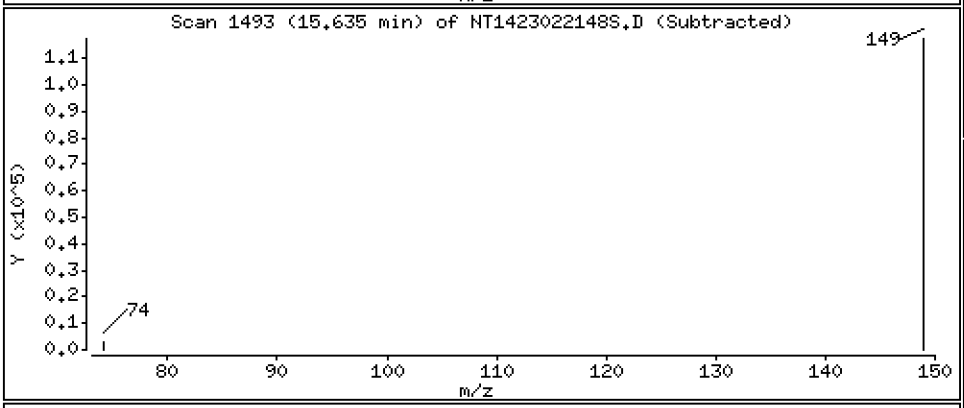
Column diameter: 0.25

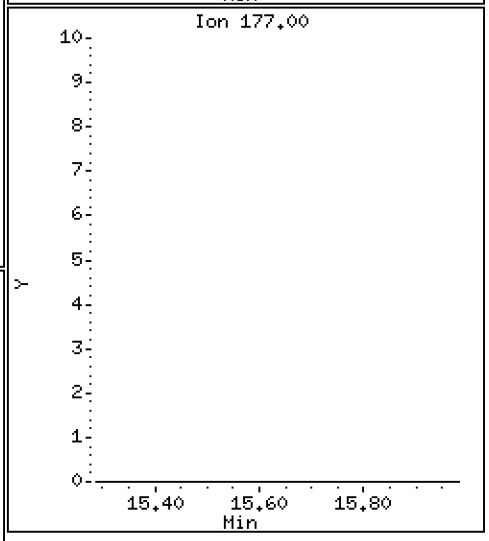
50 Diethylphthalate

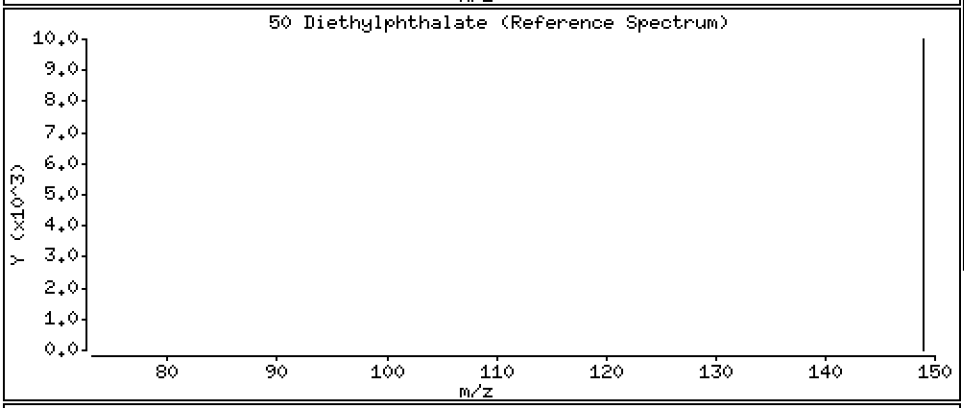
Concentration: 1.163 ug/mL

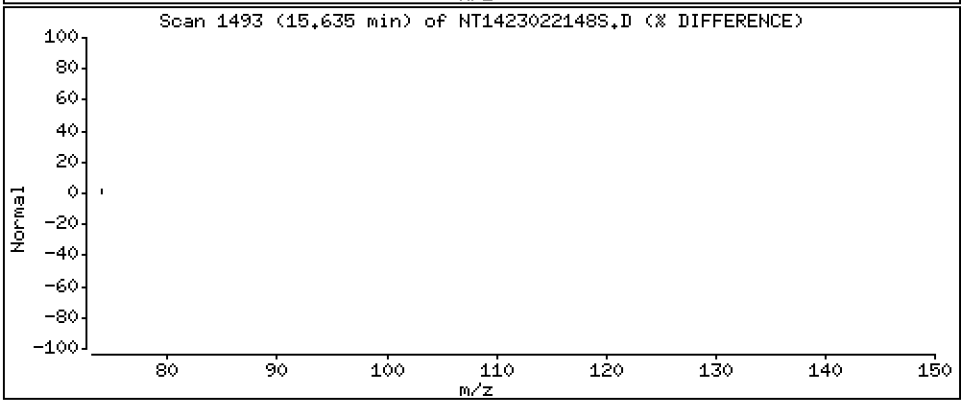












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221485.D

Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

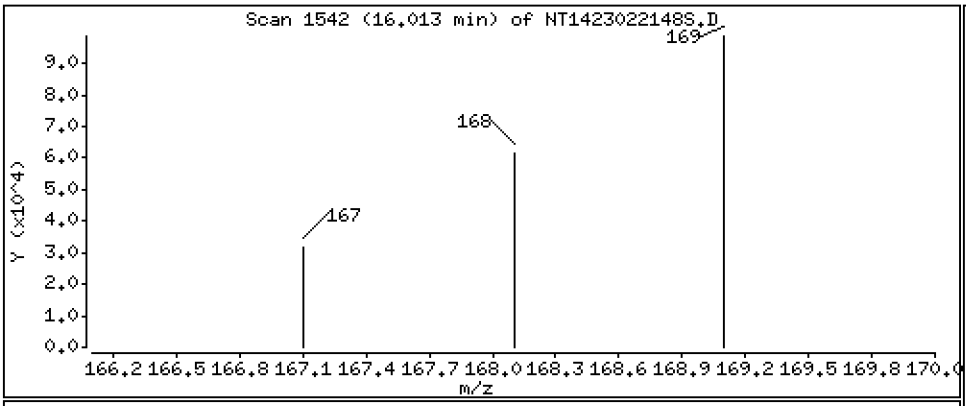
Operator: DSD

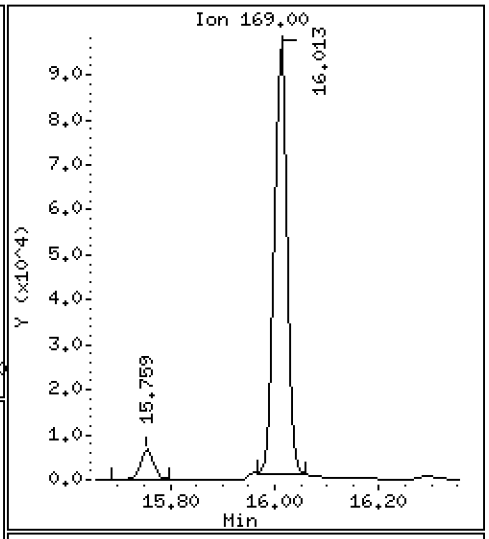
Column phase: ZB-5msi

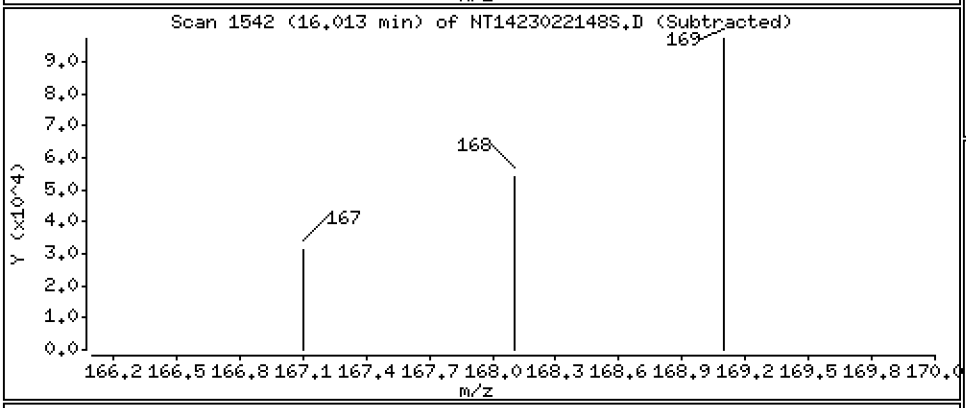
Column diameter: 0.25

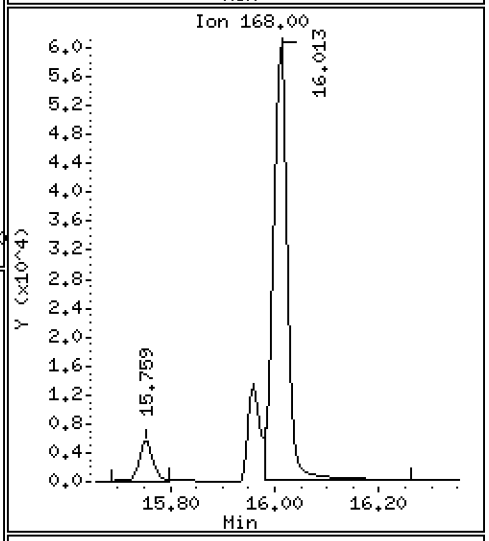
54 N-Nitrosodiphenylamine

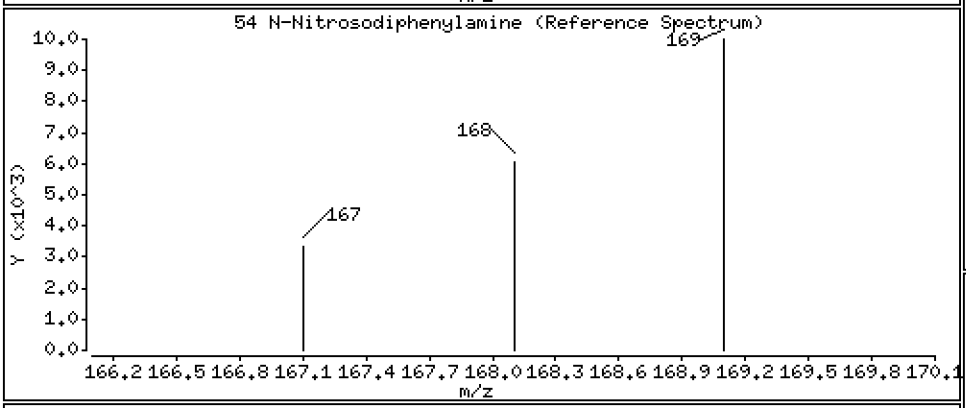
Concentration: 1.147 ug/mL

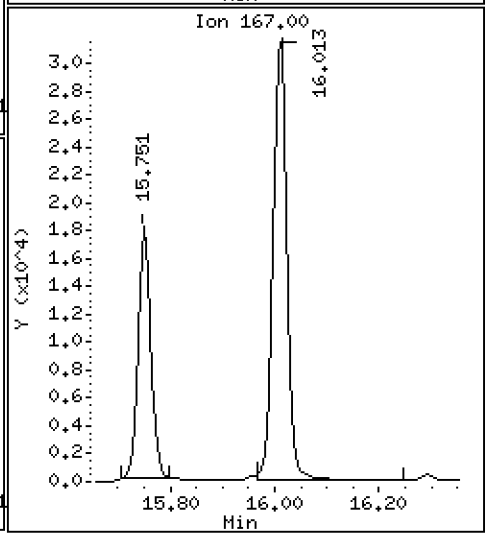


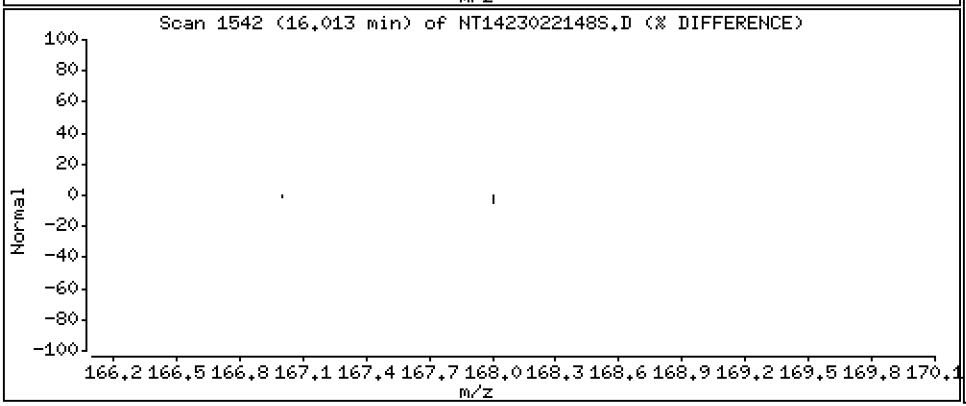












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Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

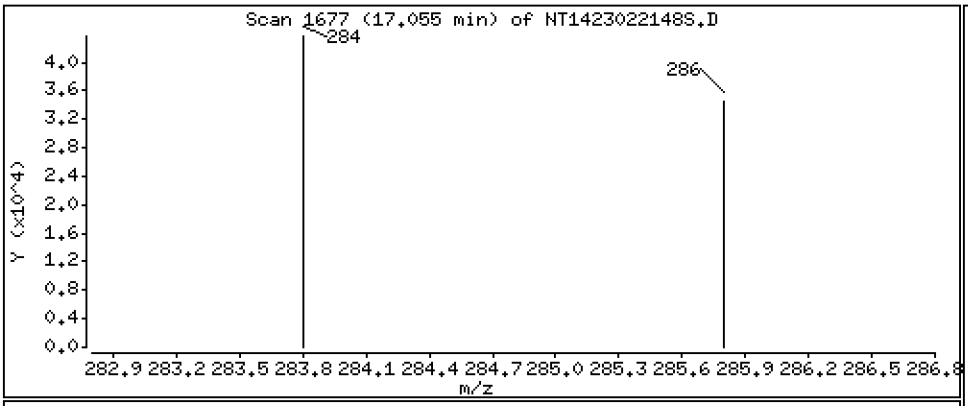
Operator: DSD

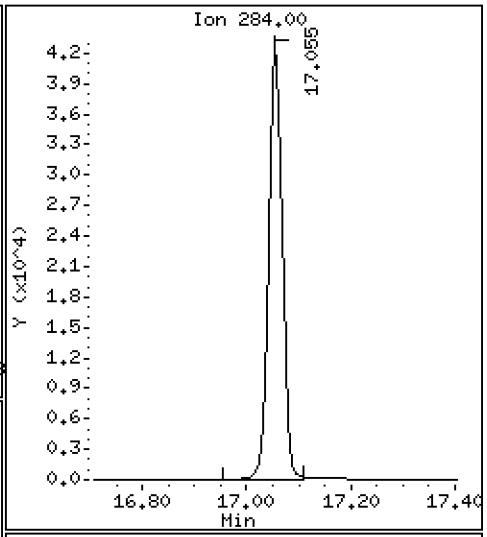
Column phase: ZB-5msi

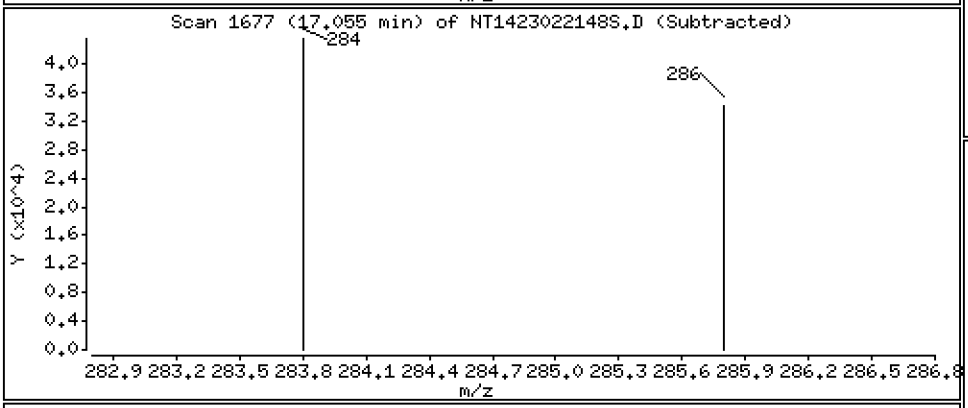
Column diameter: 0.25

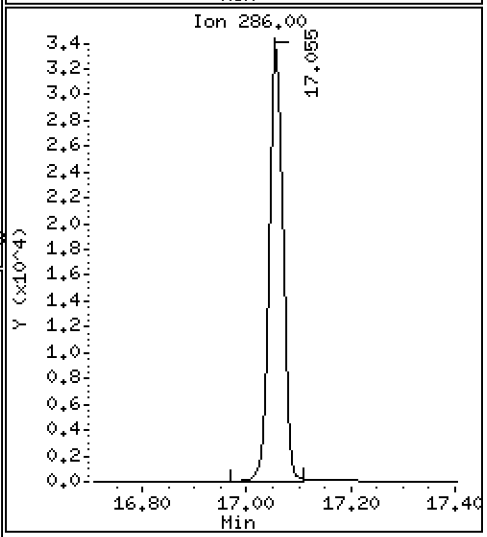
57 Hexachlorobenzene

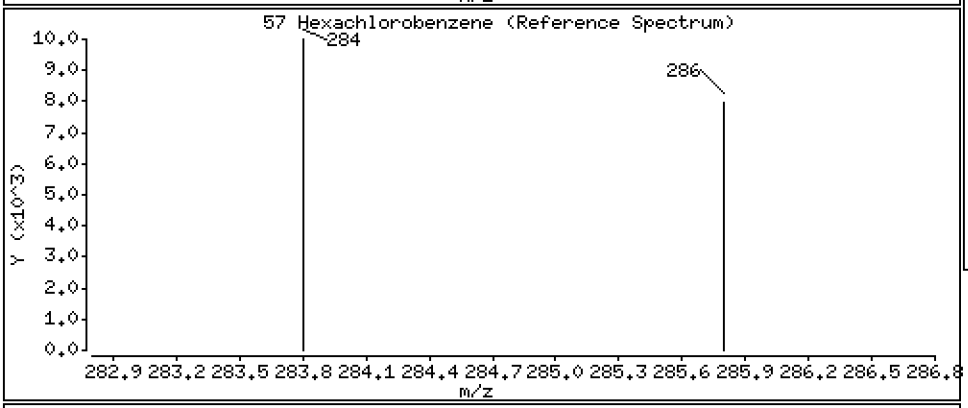
Concentration: 1.075 ug/mL

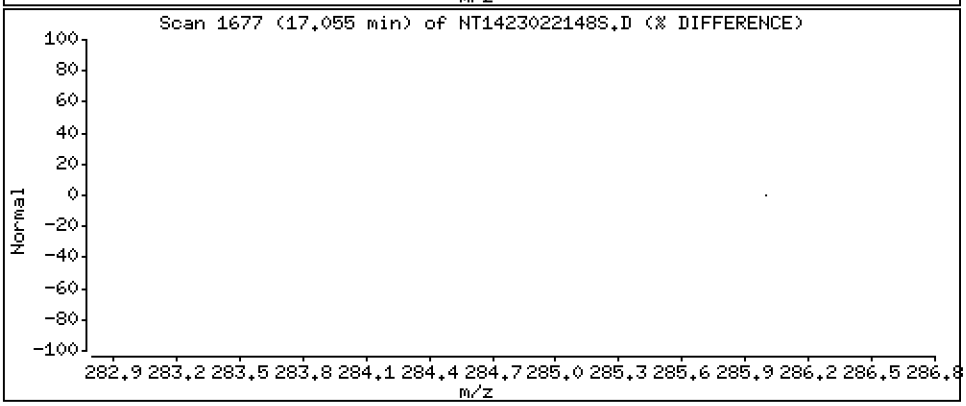












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Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

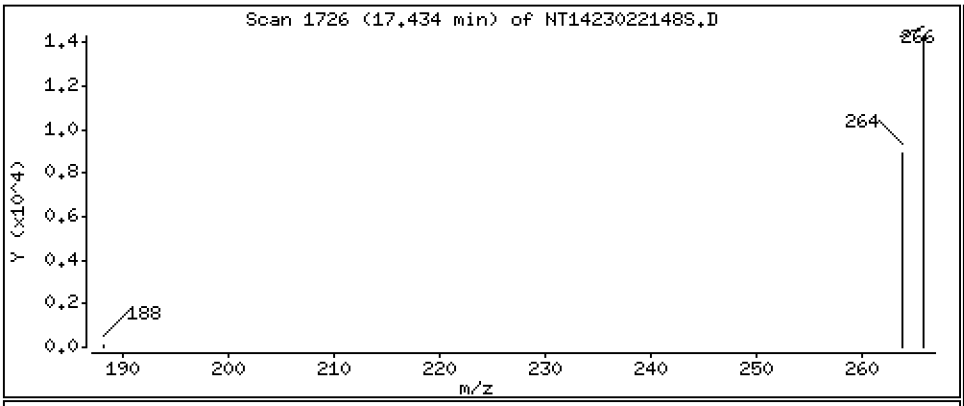
Operator: DSD

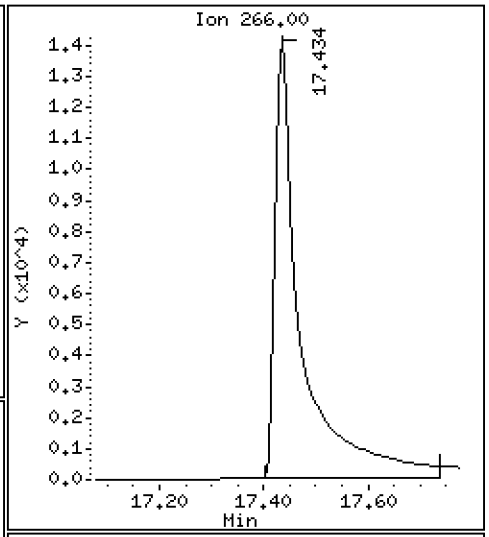
Column phase: ZB-5msi

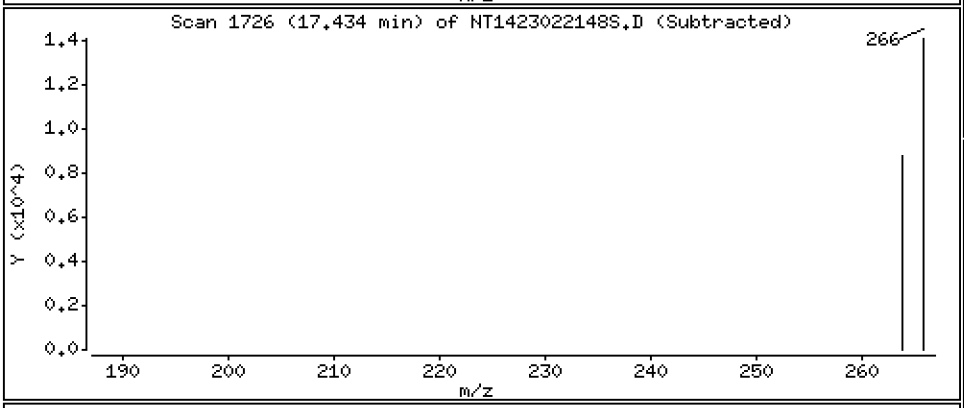
Column diameter: 0.25

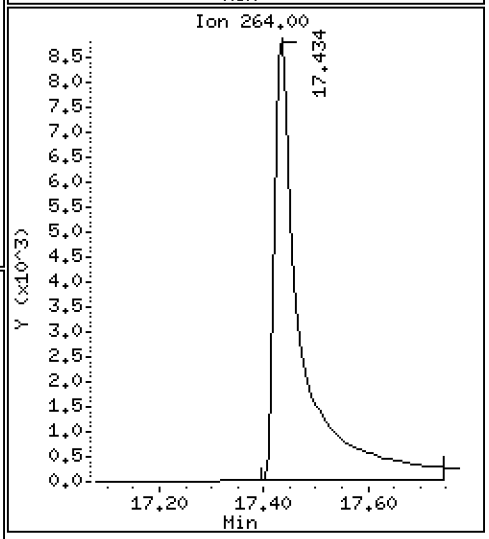
58 Pentachlorophenol

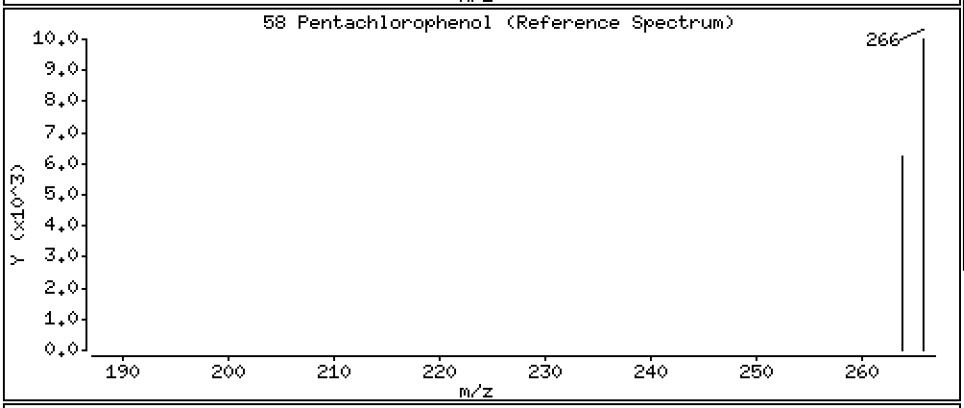
Concentration: 1.678 ug/mL

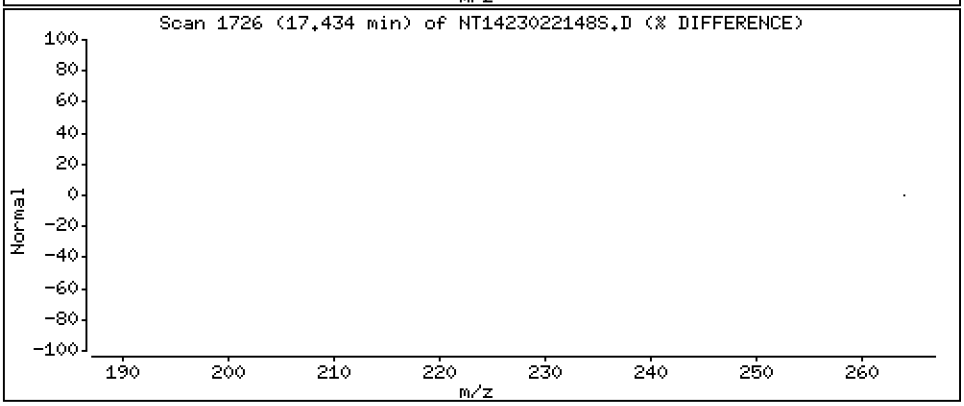












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221485.D

Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

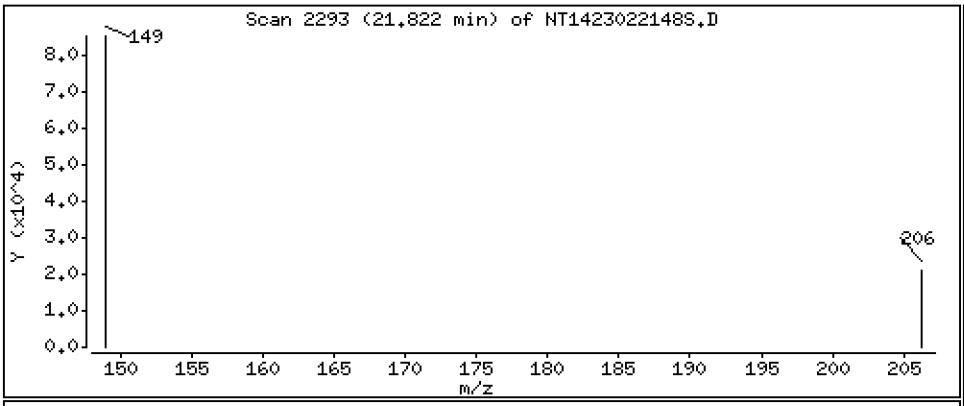
Operator: DSD

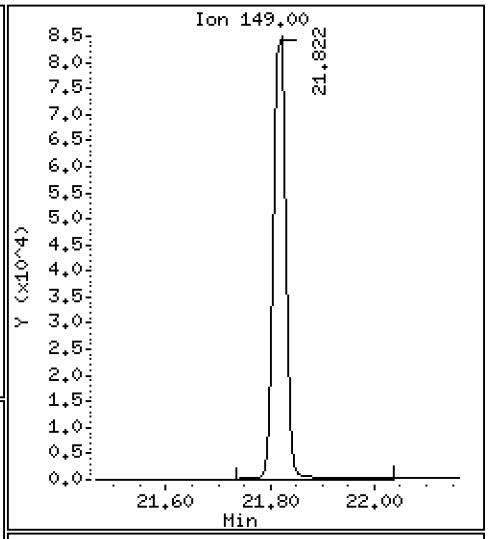
Column phase: ZB-5msi

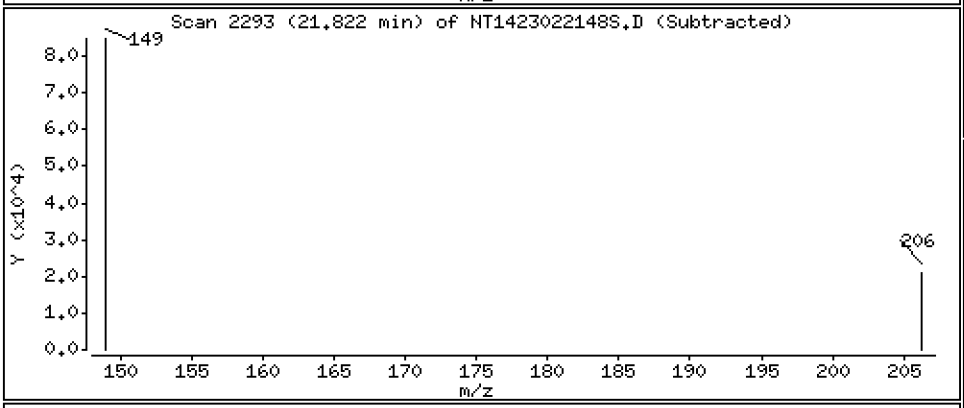
Column diameter: 0.25

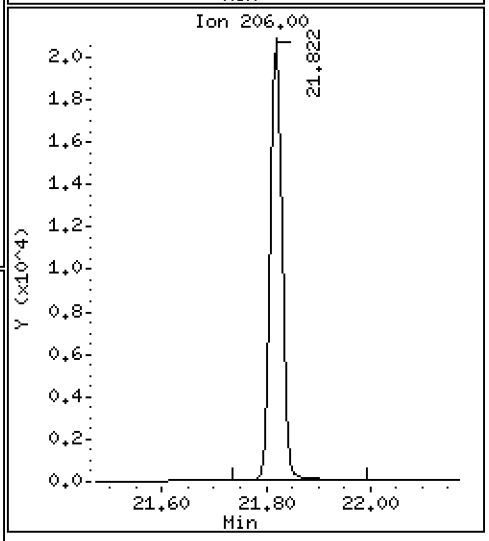
67 Butylbenzylphthalate

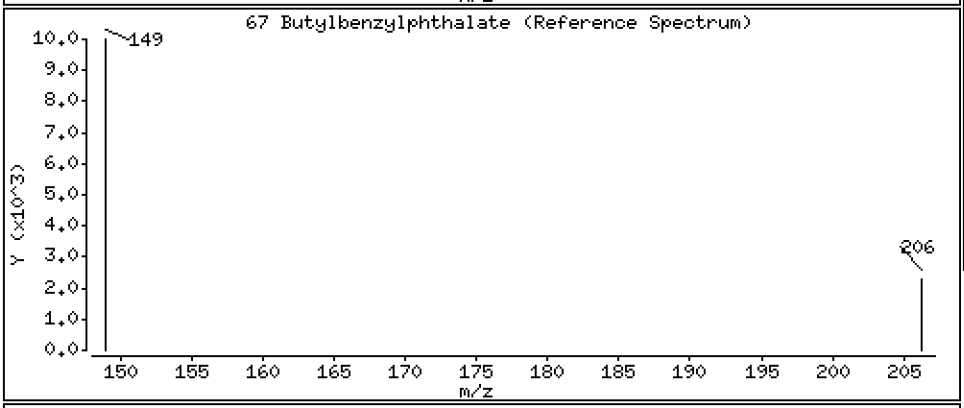
Concentration: 1.360 ug/mL

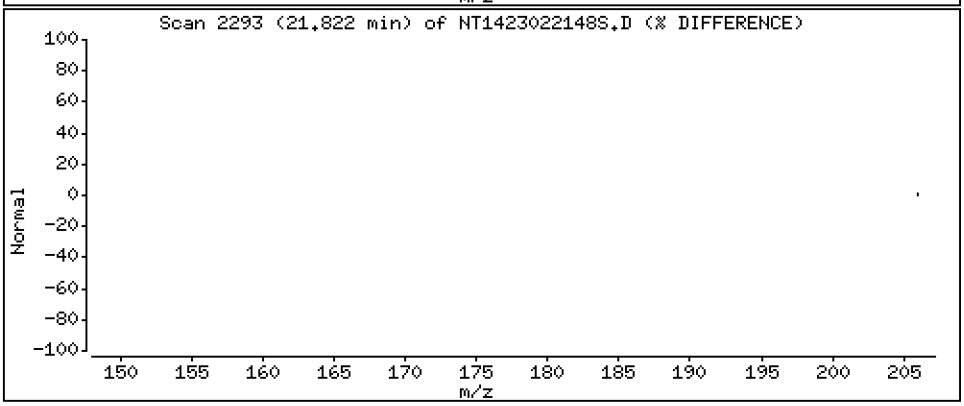












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221485.D

Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

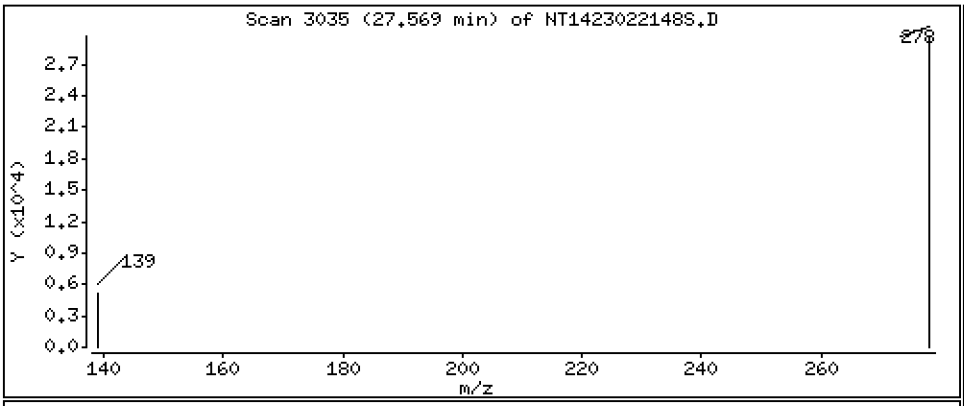
Operator: DSD

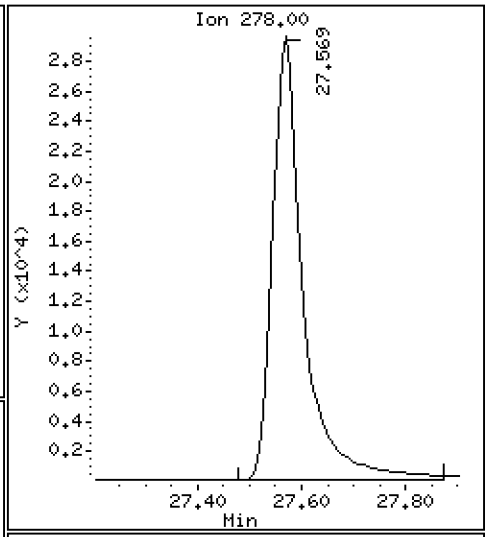
Column phase: ZB-5msi

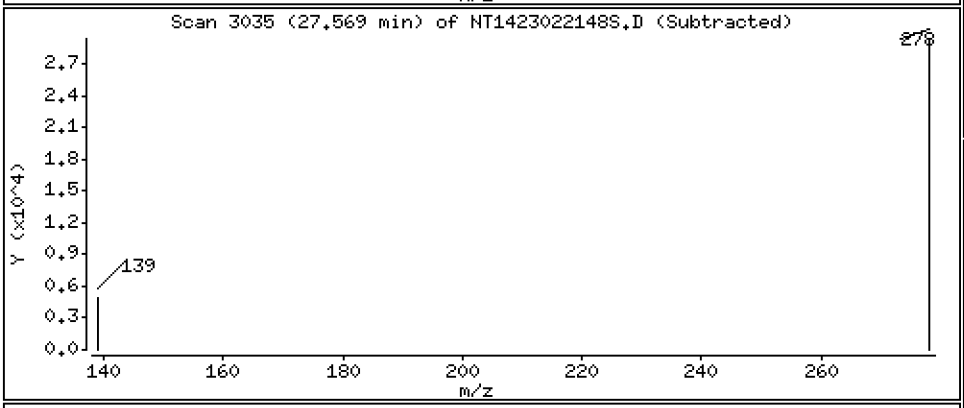
Column diameter: 0.25

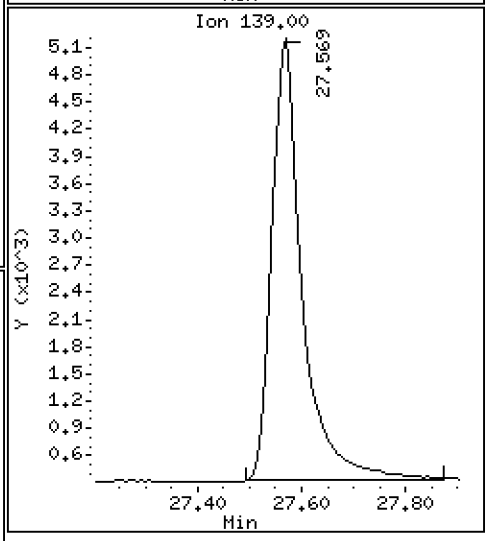
79 Dibenzo(a,h)anthracene

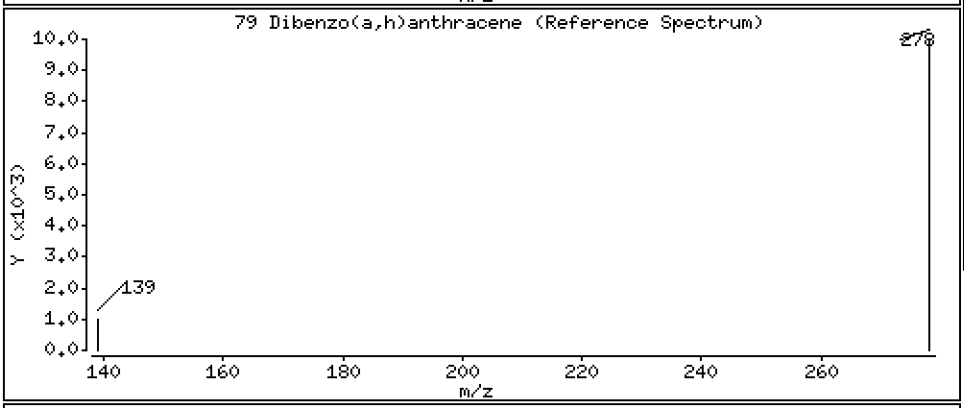
Concentration: 1.217 ug/mL

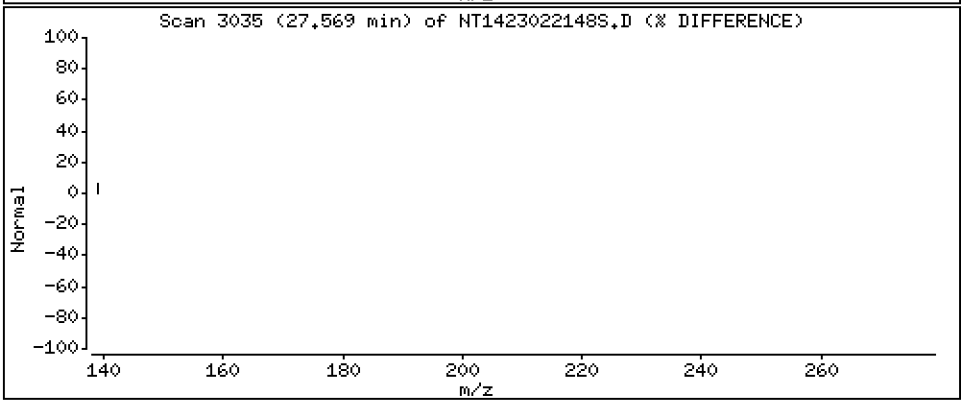












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221485.D

Date : 22-FEB-2023 17:47

Client ID:

Instrument: nt14.i

Sample Info: SIM-ICV4

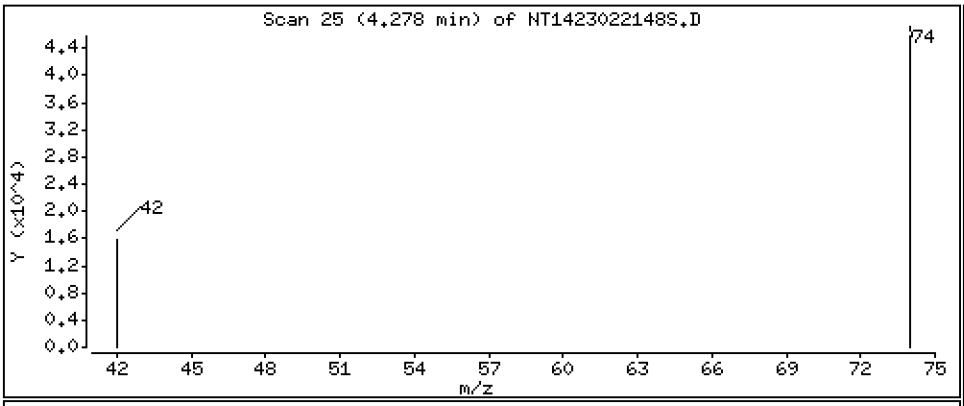
Operator: DSD

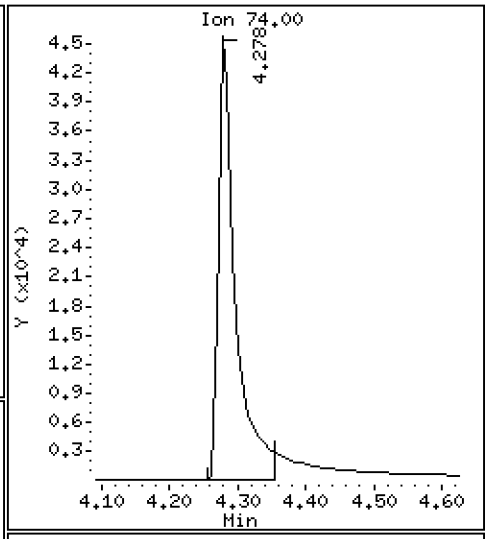
Column phase: ZB-5msi

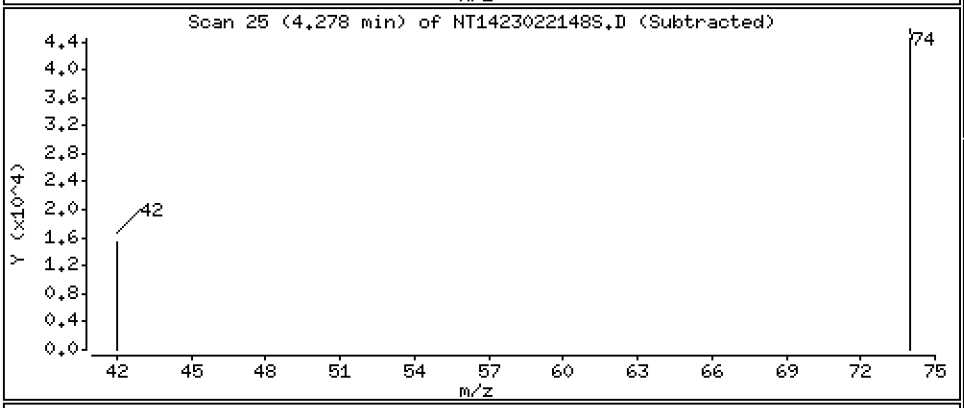
Column diameter: 0.25

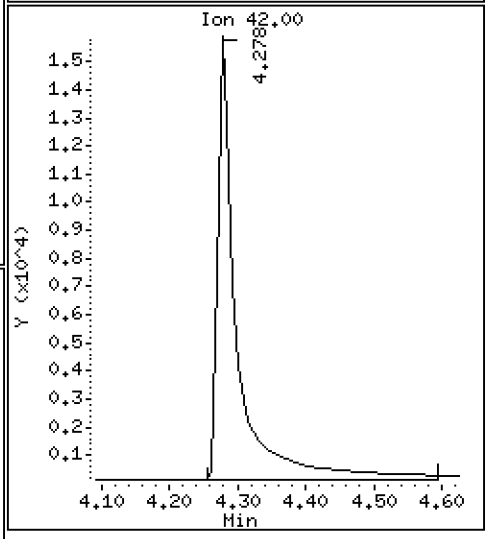
90 N-Nitrosodimethylamine

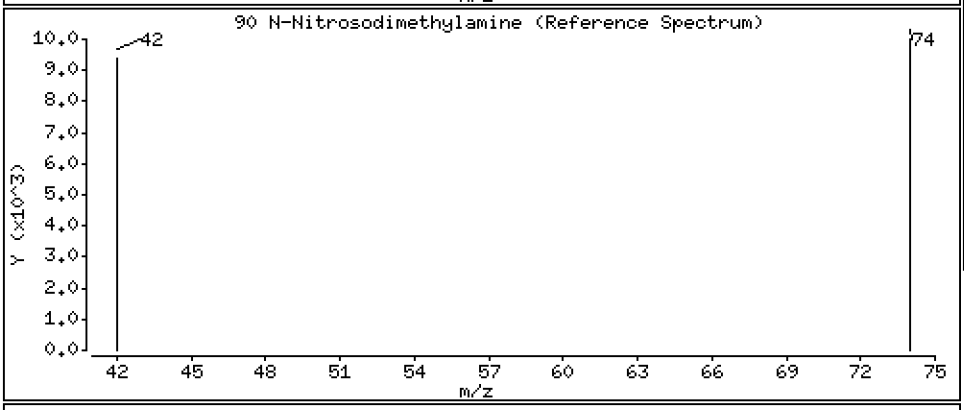
Concentration: 1.529 ug/mL

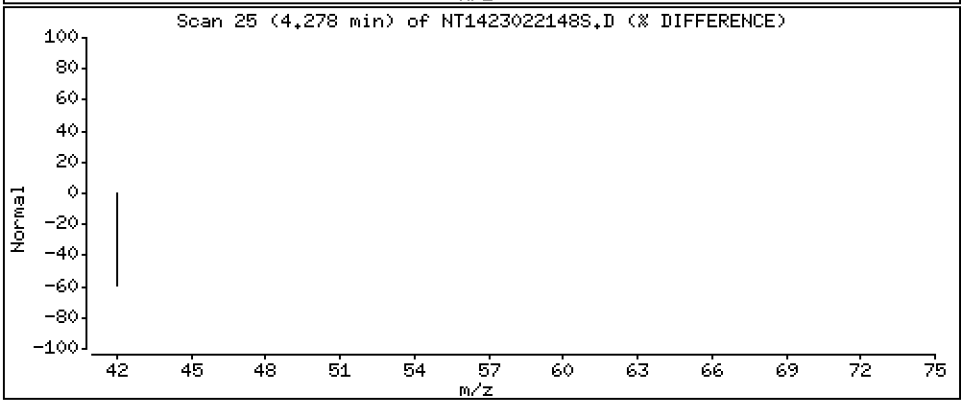












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT1423022148S.D
Lab Smp Id: SLB0293-CCV1
Inj Date : 22-FEB-2023 17:47 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SIM-ICV4
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Meth Date : 17-Jun-2023 09:15 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.386	6.385	(0.745)	92228	1.32597	1.326(RM)
	3 Phenol	94	7.993	7.993	(0.932)	94778	0.91583	0.9158
	7 1,3-Dichlorobenzene	146	8.503	8.503	(0.992)	86144	1.05041	1.050
*	8 1,4-Dichlorobenzene-d4	152	8.573	8.573	(1.000)	241018	4.00000	
	9 1,4-Dichlorobenzene	146	8.596	8.596	(1.003)	86406	1.10450	1.104
	11 Benzyl alcohol	79	8.876	8.867	(1.035)	69453	1.05219	1.052
	12 1,2-Dichlorobenzene	146	8.953	8.953	(1.044)	83723	1.07635	1.076
	13 2-Methylphenol	108	9.101	9.093	(1.062)	78025	1.09059	1.091(M)
	15 4-Methylphenol	108	9.373	9.372	(1.093)	88080	1.11920	1.119
	16 N-Nitroso-di-n-propylamine	70	9.411	9.411	(1.098)	69287	1.14272	1.143(M)
	22 2,4-Dimethylphenol	107	10.404	10.404	(0.942)	233090	2.96997	2.970
	24 Benzoic acid	105	10.614	10.606	(0.961)	68802	1.64050	1.641(M)
	26 1,2,4-Trichlorobenzene	180	10.962	10.962	(0.993)	81382	1.00131	1.001
*	27 Naphthalene-d8	136	11.040	11.039	(1.000)	887165	4.00000	
	30 Hexachlorobutadiene	225	11.449	11.449	(1.037)	47969	0.97020	0.9702
	39 Dimethylphthalate	163	14.181	14.180	(0.968)	168137	1.17873	1.179
*	42 Acenaphthene-d10	162	14.653	14.645	(1.000)	467553	4.00000	
	50 Diethylphthalate	149	15.635	15.634	(1.067)	207684	1.16333	1.163
	54 N-Nitrosodiphenylamine	169	16.013	16.005	(0.906)	156447	1.14650	1.147
	57 Hexachlorobenzene	284	17.054	17.054	(0.965)	75373	1.07477	1.075
	58 Pentachlorophenol	266	17.434	17.426	(0.986)	48630	1.67837	1.678
*	59 Phenanthrene-d10	188	17.674	17.673	(1.000)	1079793	4.00000	
$	66 Terphenyl-d14	244	20.869	20.869	(0.916)	267102	1.33040	1.330(R)
	67 Butylbenzylphthalate	149	21.821	21.813	(0.958)	131311	1.35980	1.360
*	69 Chrysene-d12	240	22.774	22.766	(1.000)	754146	4.00000	
*	77 Perylene-d12	264	25.220	25.212	(1.000)	558201	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.569	27.553	(1.093)	121413	1.21692	1.217
	90 N-Nitrosodimethylamine	74	4.277	4.277	(0.499)	80942	1.52851	1.529(M)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022148S.D
Lab Smp Id: SLB0293-CCV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 08:08
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	261796	130898	523592	241018	-7.94
27 Naphthalene-d8	959301	479651	1918602	887165	-7.52
42 Acenaphthene-d10	503659	251830	1007318	467553	-7.17
59 Phenanthrene-d10	1179954	589977	2359908	1079793	-8.49
69 Chrysene-d12	887360	443680	1774720	754146	-15.01
77 Perylene-d12	652371	326186	1304742	558201	-14.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	0.06
59 Phenanthrene-d10	17.67	17.17	18.17	17.67	0.00
69 Chrysene-d12	22.77	22.27	23.27	22.77	0.04
77 Perylene-d12	25.21	24.71	25.71	25.22	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022148S.D

Lab ID: SLB0293-CCV1
nt14.i, 20230221B.b\SIM.b\SIMABN2.m,   22-FEB-2023 17:47

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1423022132S.D

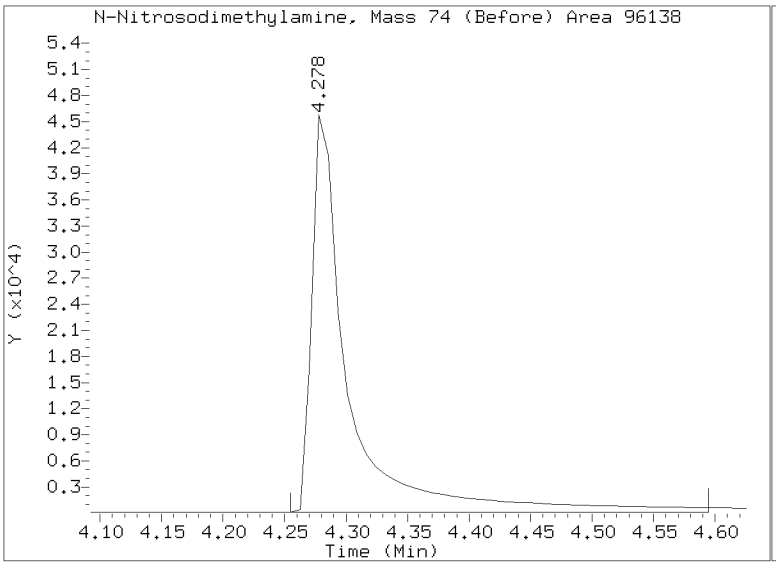
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

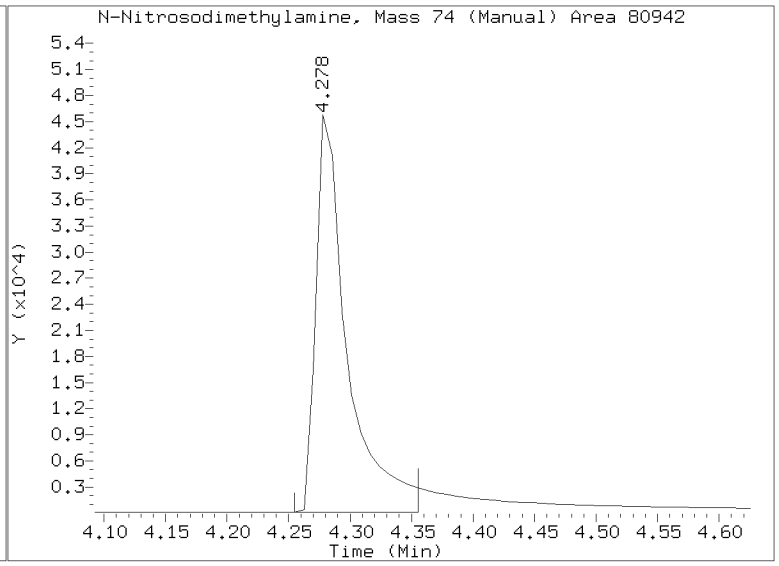
Exception: 1,2,4-Trichlorobenzene 0.0010

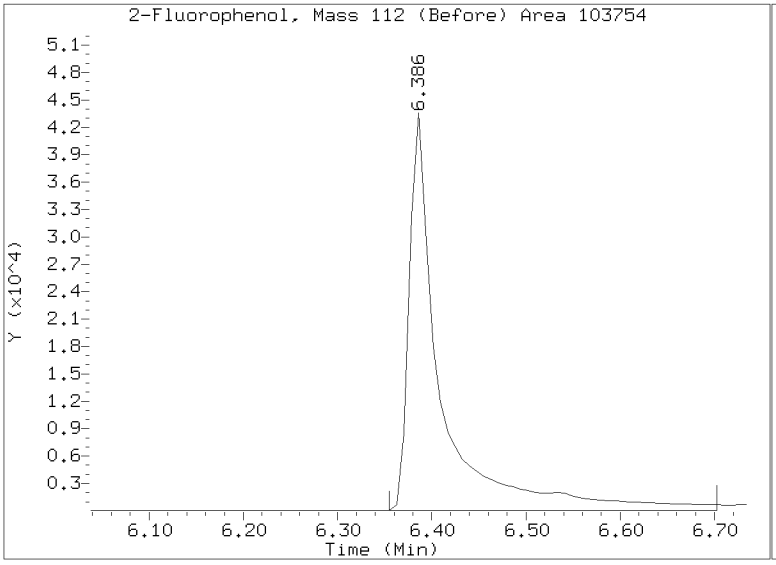
* Only compounds listed in the work order have been verified by the analyst *

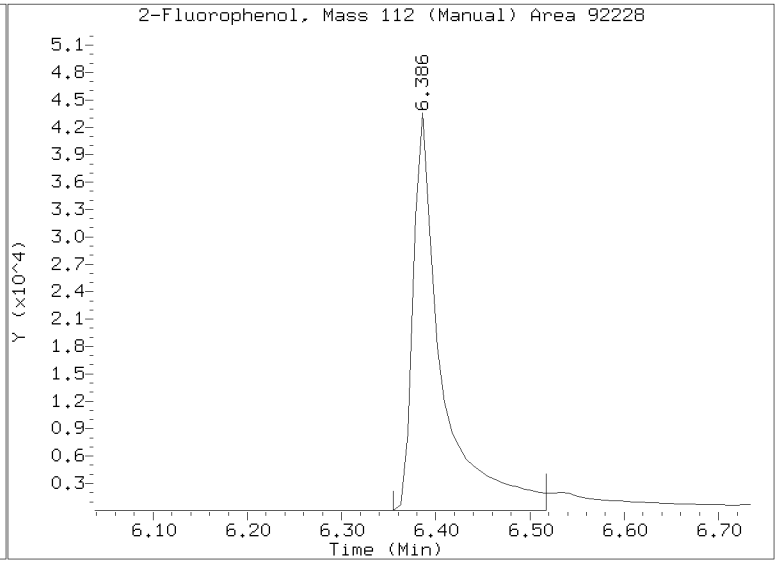
Quant Ion Manual Peak Adjustment Report

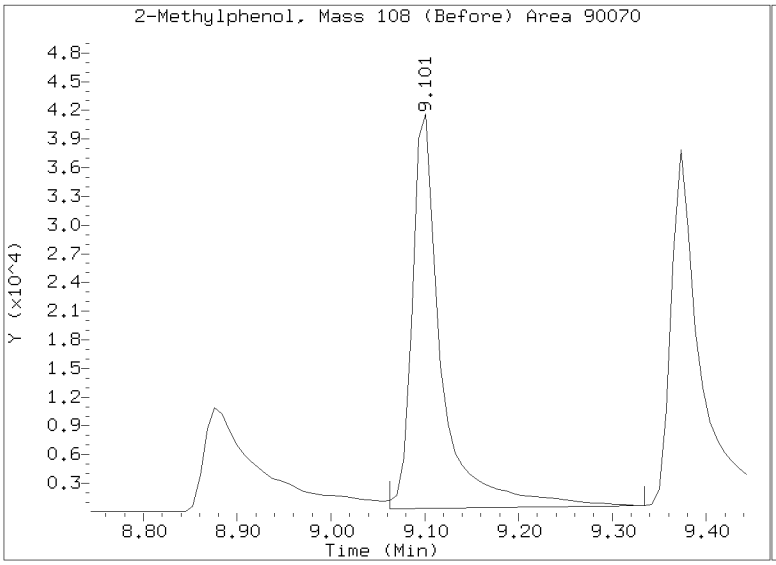
Datafile: //target/share/chem3/nt14.i/20230221B.b/SIM.b/NT1423022148S.D
Injection Date: 22-FEB-2023 17:47
Lab ID:SLB0293-CCV1 Client ID:
Report Date: 06/17/2023 09:48

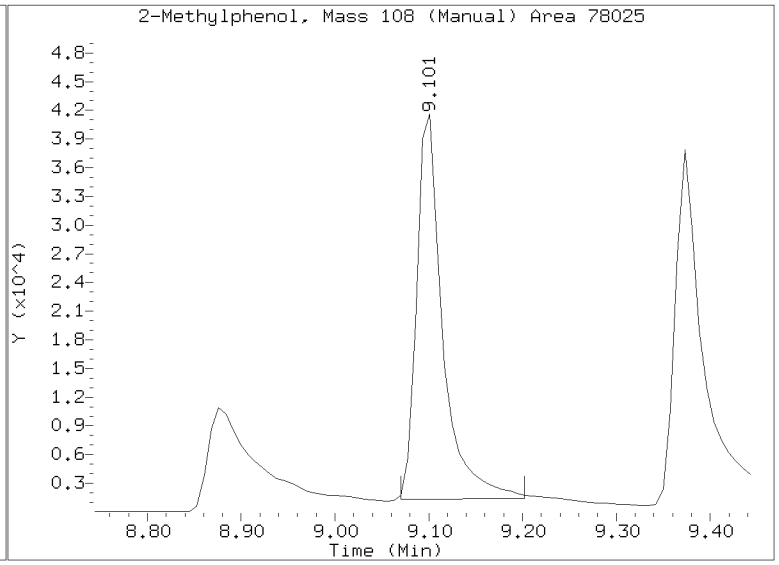






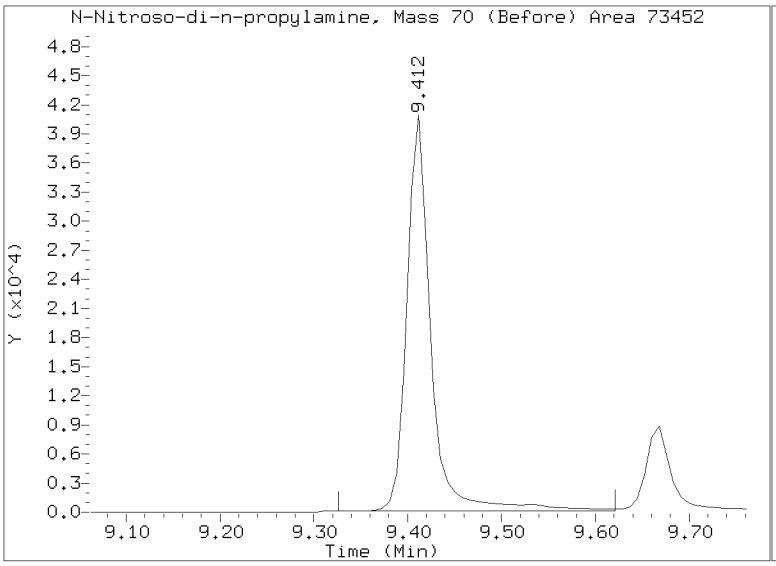


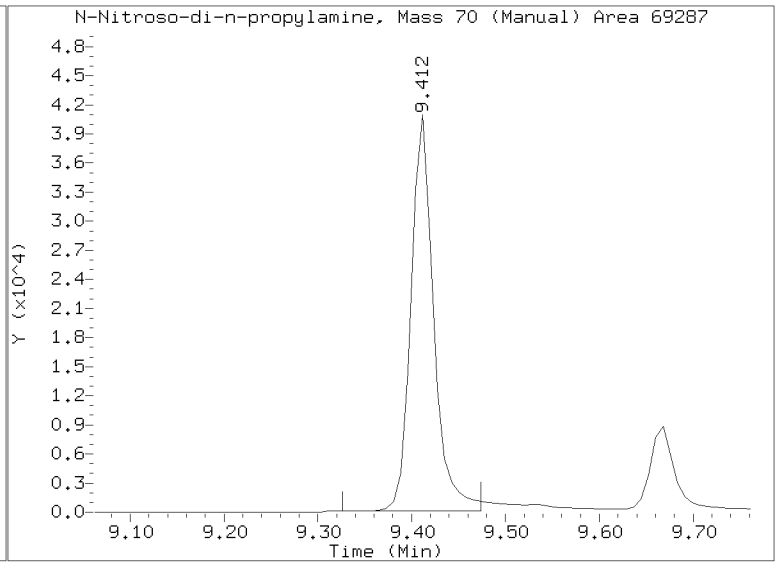


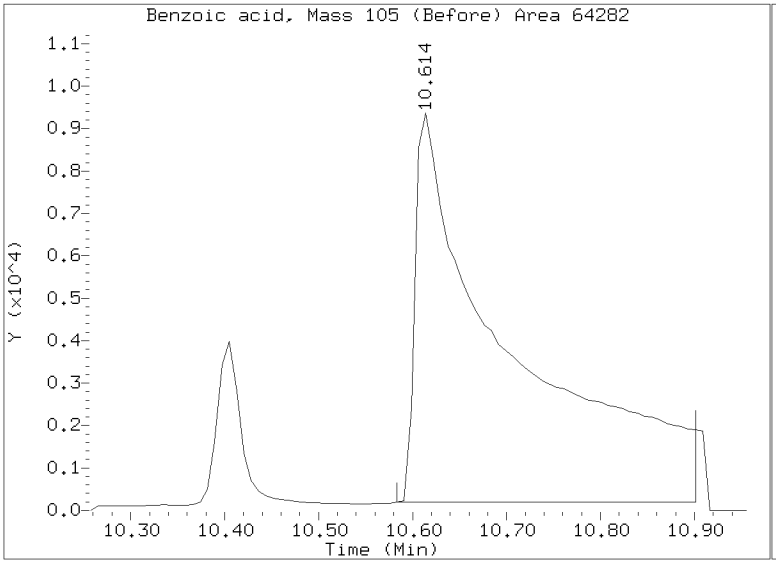


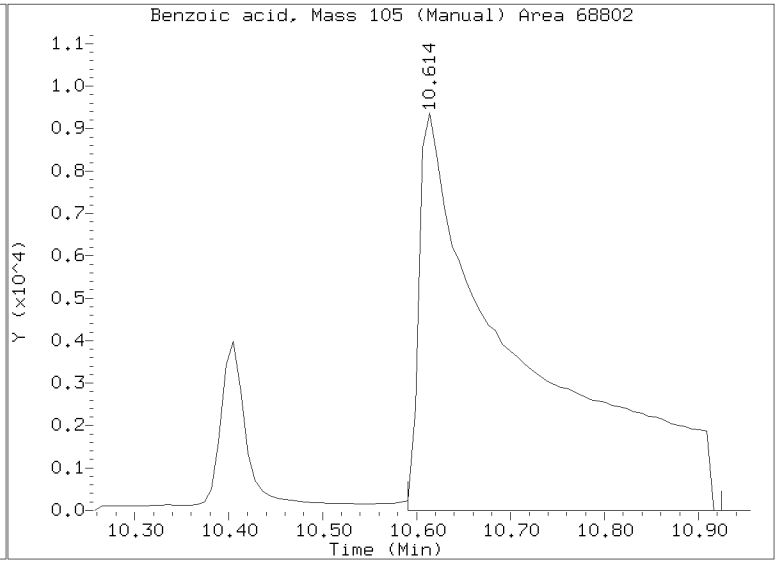
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221B.b/SIM.b/NT1423022148S.D
Injection Date: 22-FEB-2023 17:47
Lab ID:SLB0293-CCV1 Client ID:
Report Date: 06/17/2023 09:48









Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION CONTINUING CALIBRATION CHECK

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00009
Lab File ID:	NT1423022133S.D	Calibration Date:	02/16/2023
Sequence:	SLB0349	Injection Date:	02/22/23
Lab Sample ID:	SLB0349-LCV1	Injection Time:	08:44
Sequence Name:	Low Cal Check		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	0.10000	0.1	1.2983440	1.6759150		29.1	
1,2-Dichlorobenzene	A	0.10000	0.1	1.2909230	1.5899090		23.2	
Benzyl Alcohol	A	0.10000	0.05	1.0954840	0.5367778		-51.0	
Benzoic acid	A	0.40000	0.9	0.1890948	0.4201919		122	
2,4-Dimethylphenol	A	0.20000	0.2	0.3263158	0.4211267		15.2	
1,2,4-Trichlorobenzene	A	0.10000	0.1	0.3664516	0.4419249		20.6	
N-Nitrosodiphenylamine	A	0.10000	0.1	0.4912986	0.5950624		18.9	
Pentachlorophenol	A	0.20000	0.03	0.0811080	0.0160643		-84.8	
2-Fluorophenol	A	0.15000	0.0624	0.8380777	0.4828447		-58.4	
p-Terphenyl-d14	A	0.10000	0.134	1.0648810	1.4231450		33.6	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221133S.D

Date : 22-FEB-2023 08:44

Client ID:

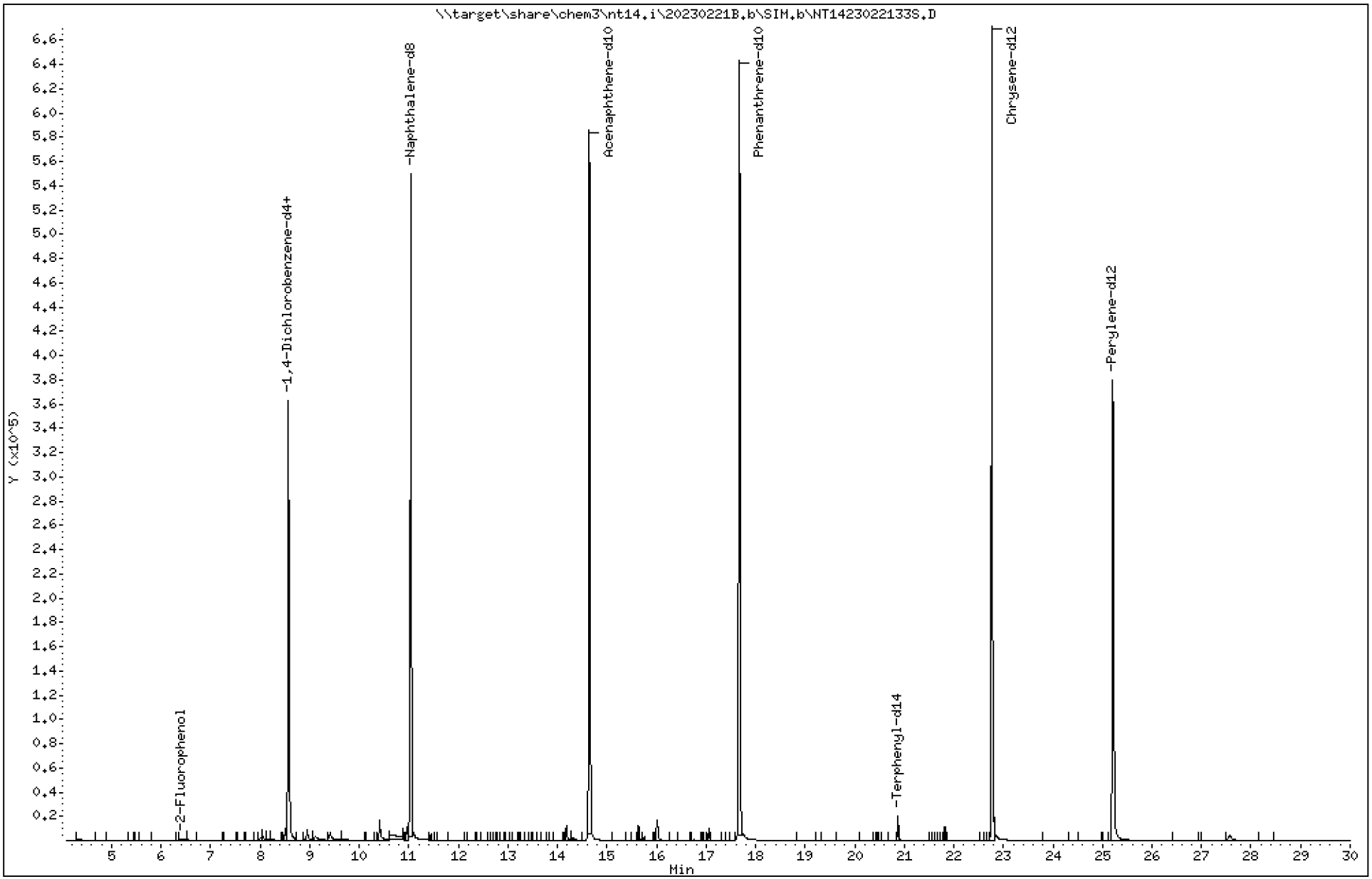
Instrument: nt14.i

Sample Info: SIM-LCV3

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221133S.D

Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

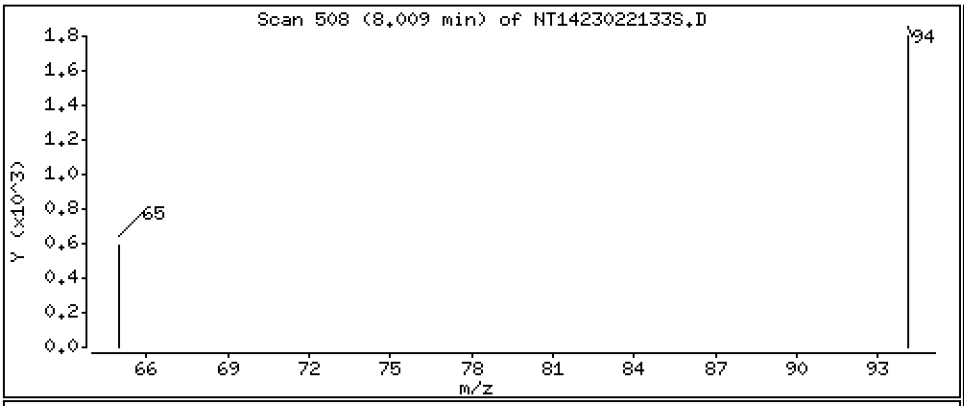
Operator: DSD

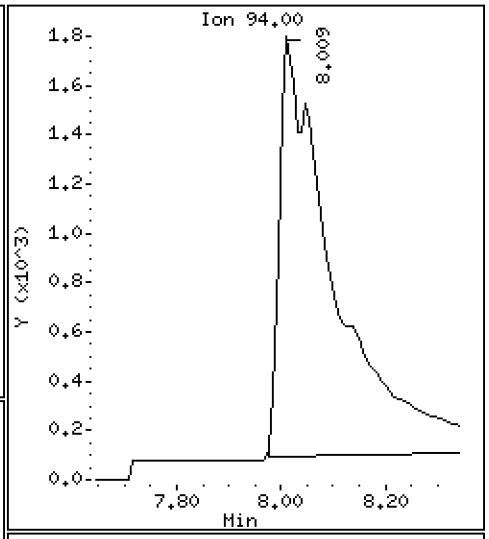
Column phase: ZB-5msi

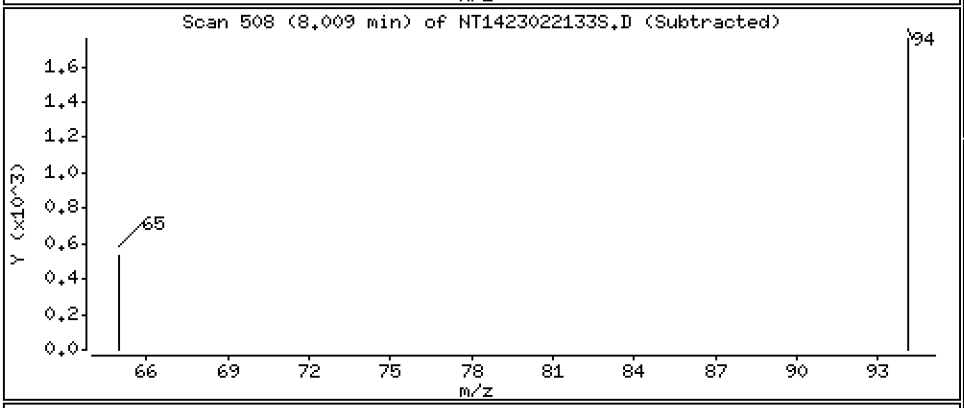
Column diameter: 0.25

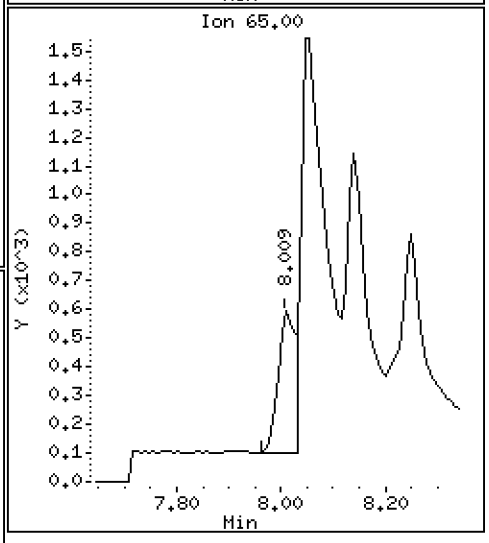
3 Phenol

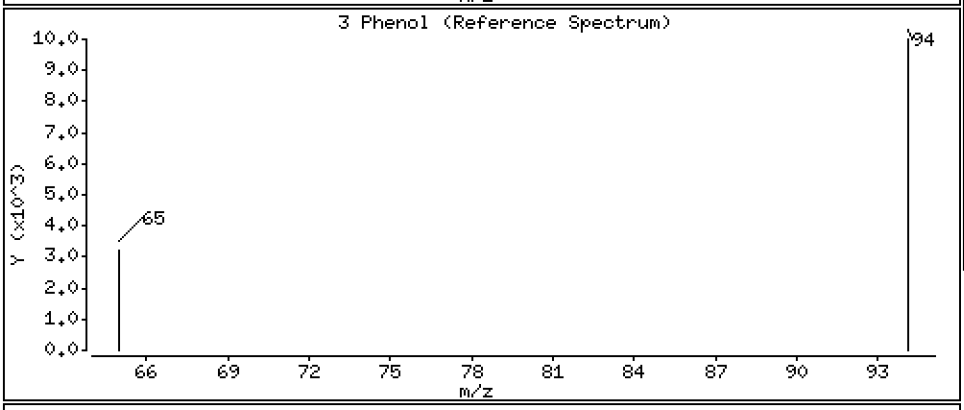
Concentration: 0.1183 ug/mL

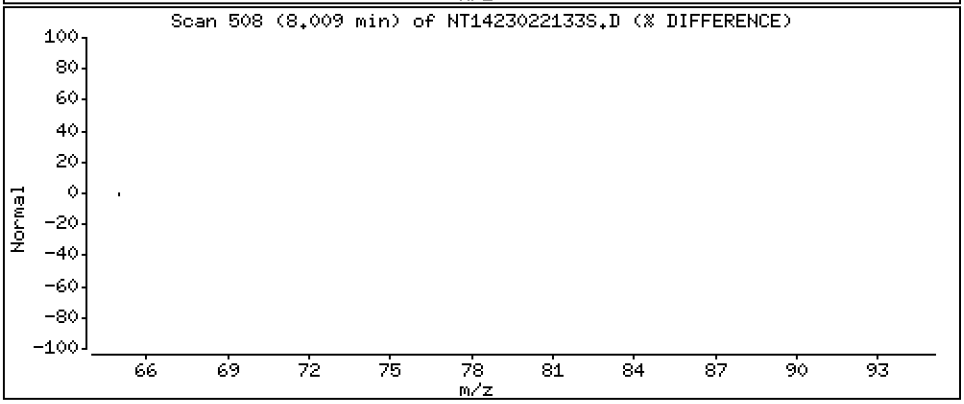












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221133S.D

Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

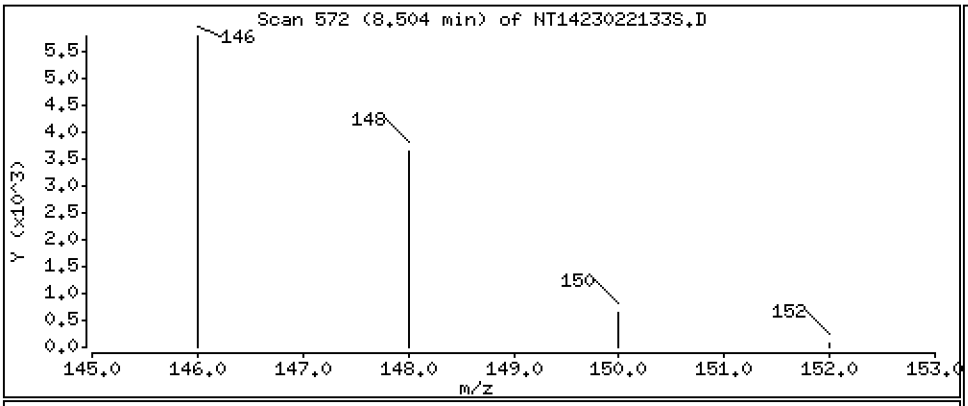
Operator: DSD

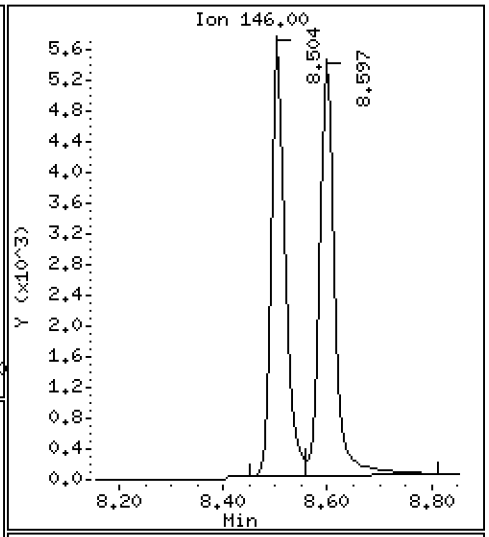
Column phase: ZB-5msi

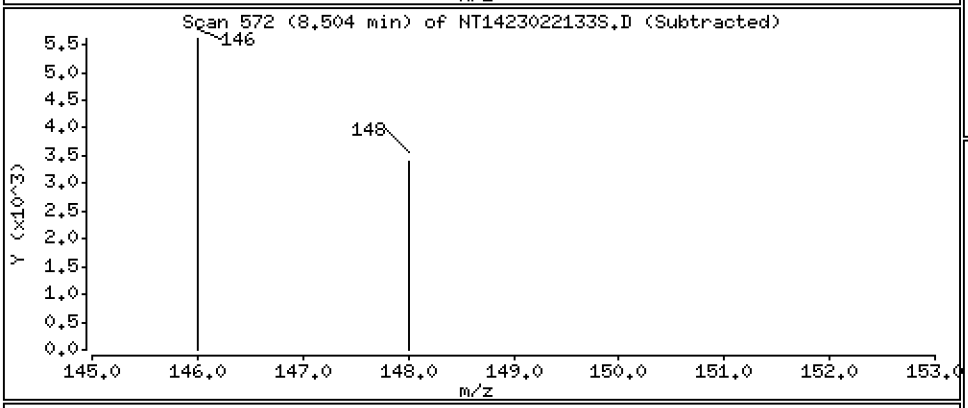
Column diameter: 0.25

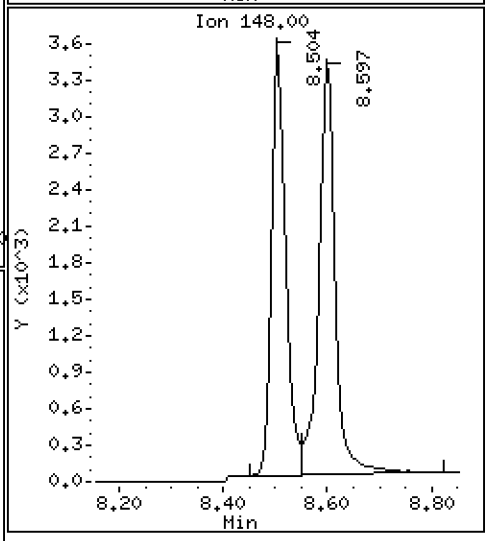
7 1,3-Dichlorobenzene

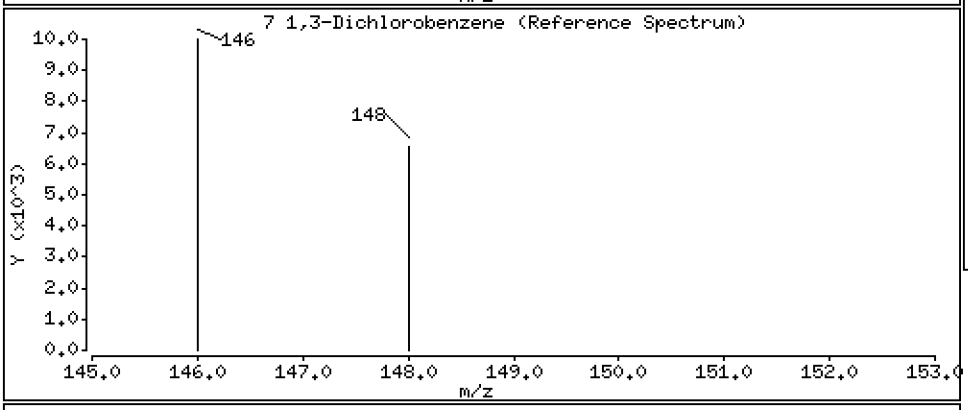
Concentration: 0.1194 ug/mL

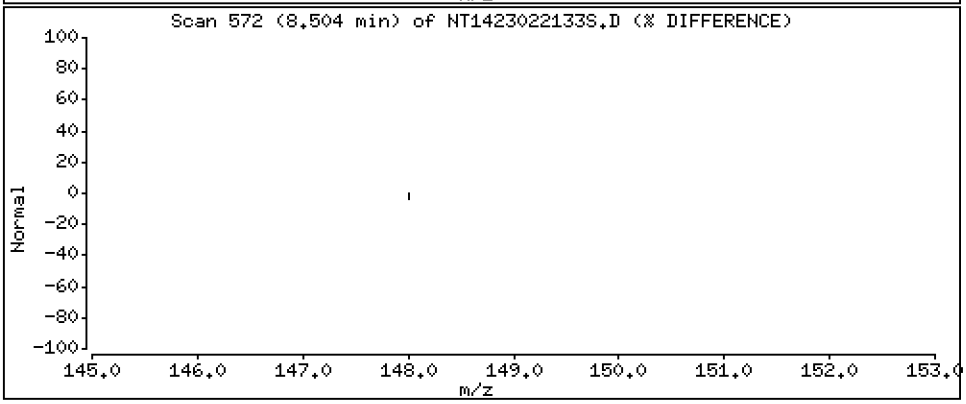












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221133S.D

Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

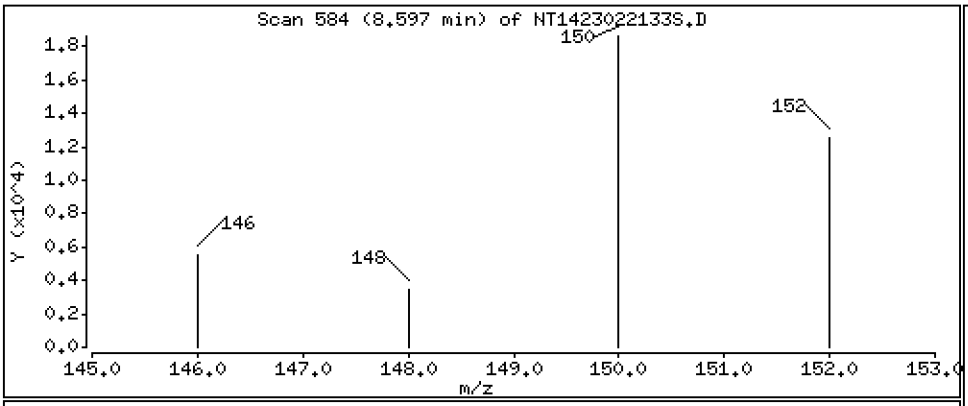
Operator: DSD

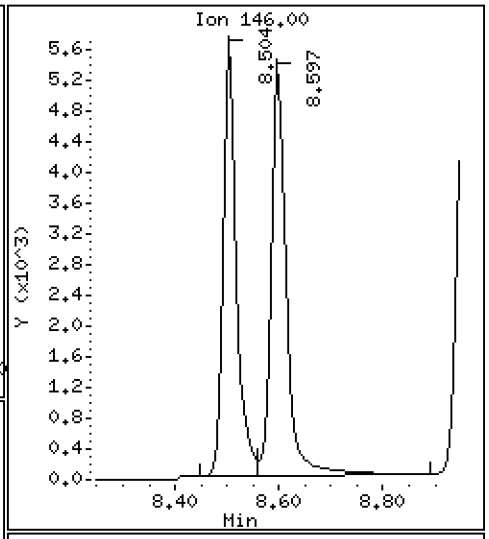
Column phase: ZB-5msi

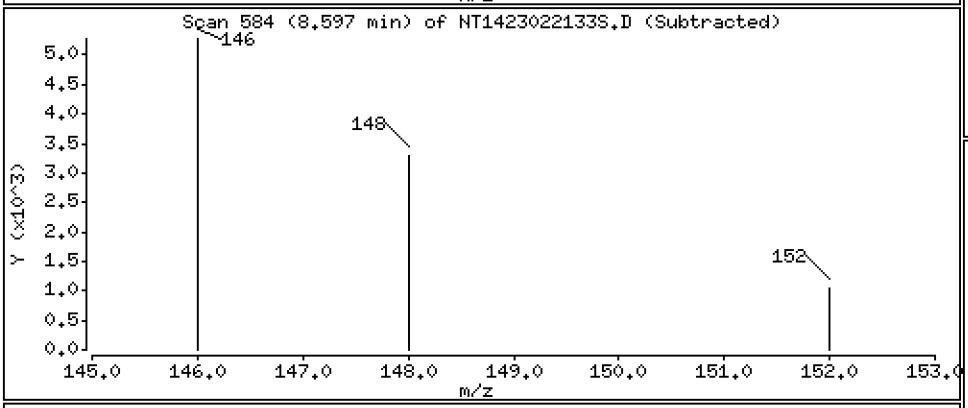
Column diameter: 0.25

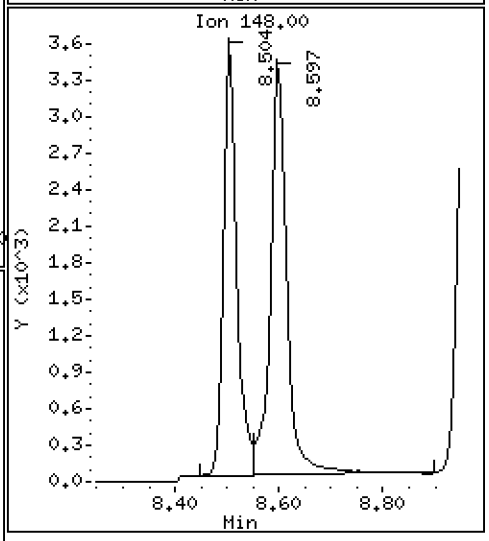
9 1,4-Dichlorobenzene

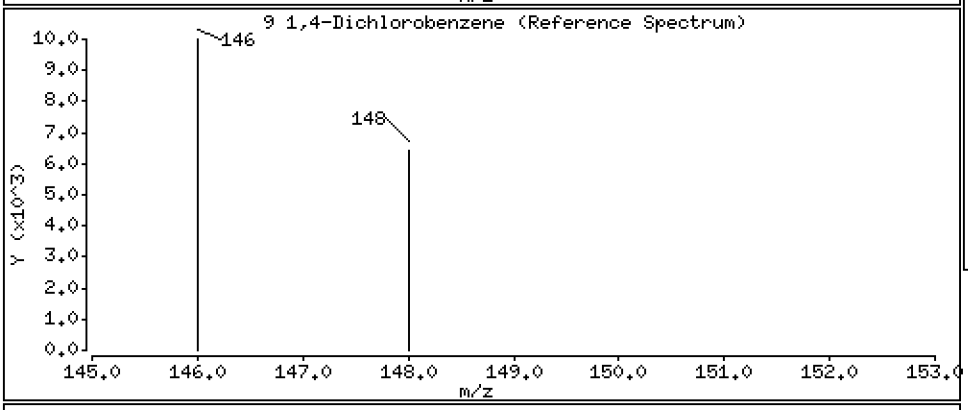
Concentration: 0.1291 ug/mL

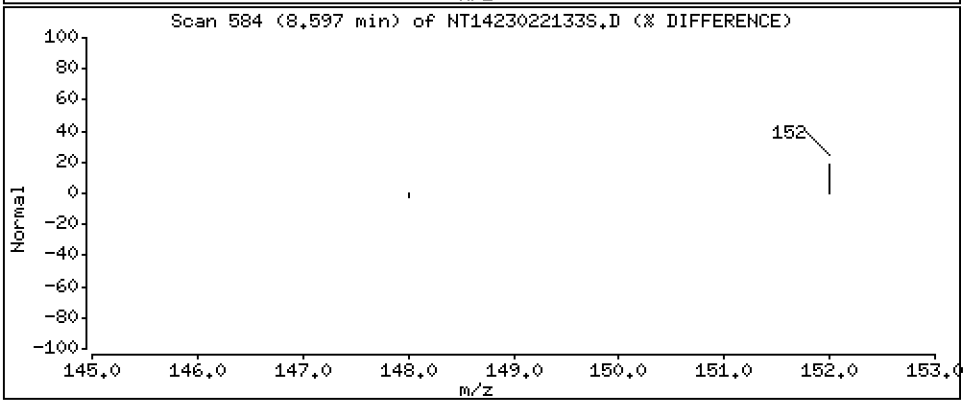












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221133S.D

Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

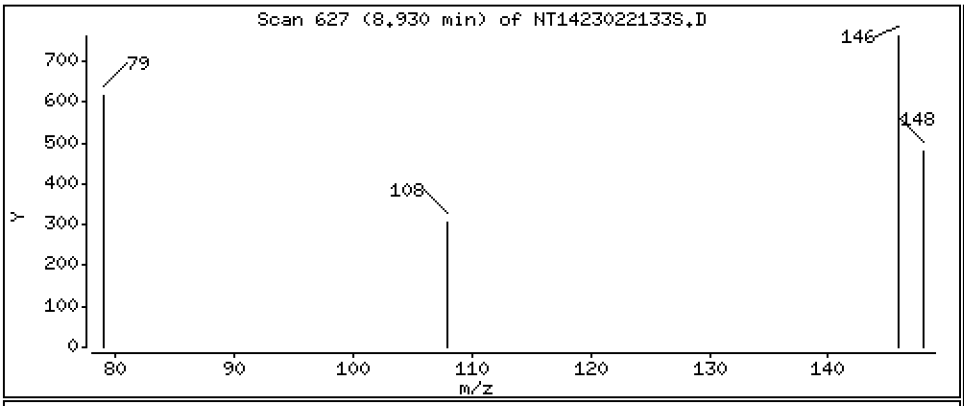
Operator: DSD

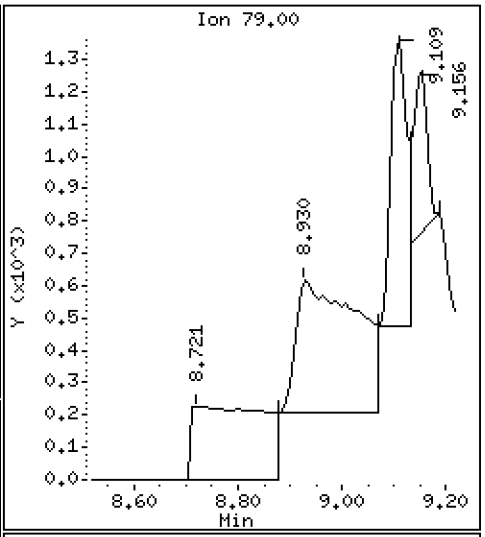
Column phase: ZB-5msi

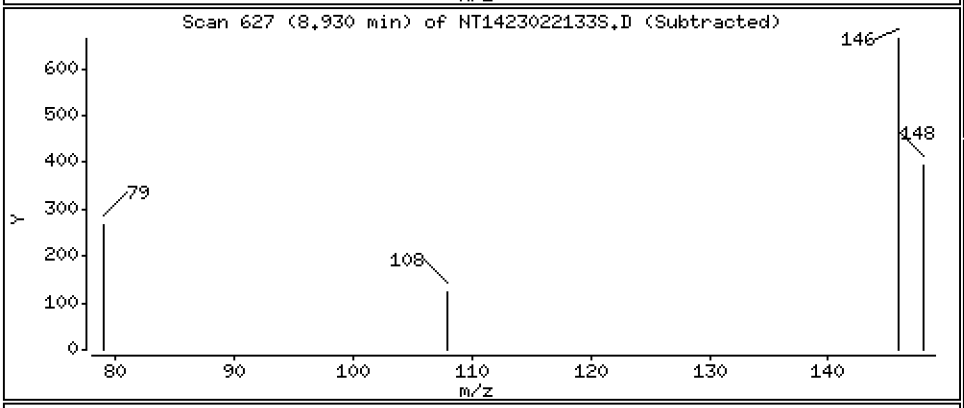
Column diameter: 0.25

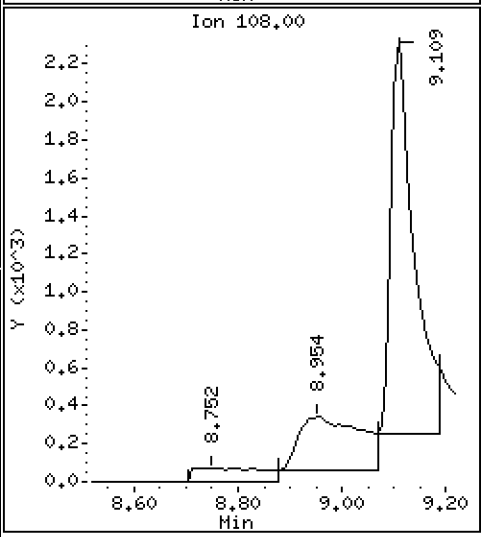
11 Benzyl alcohol

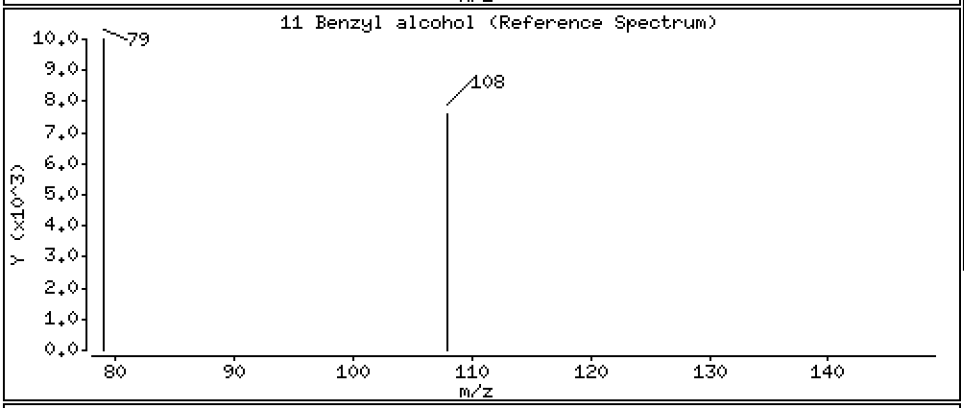
Concentration: 0.04900 ug/mL

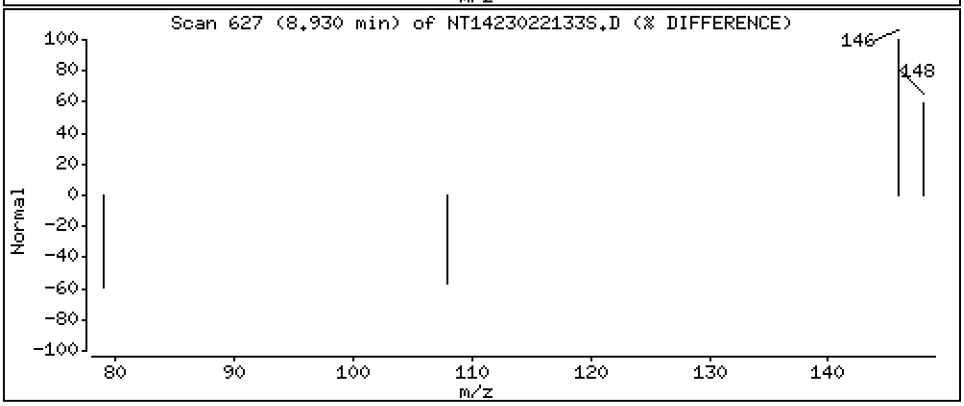












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Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

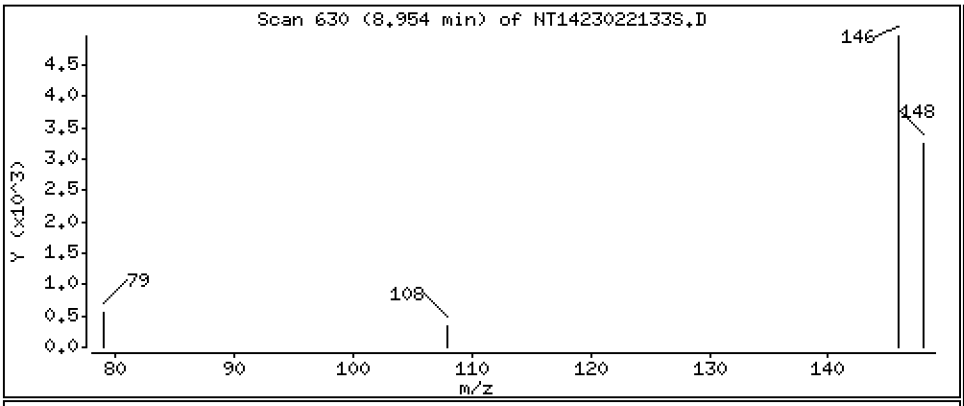
Operator: DSD

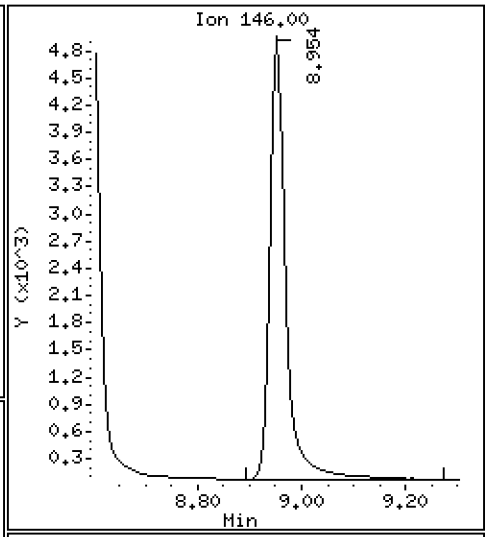
Column phase: ZB-5msi

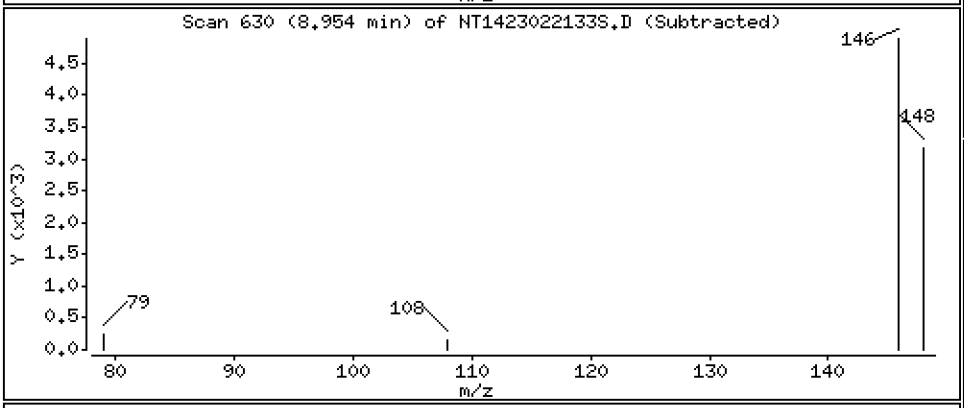
Column diameter: 0.25

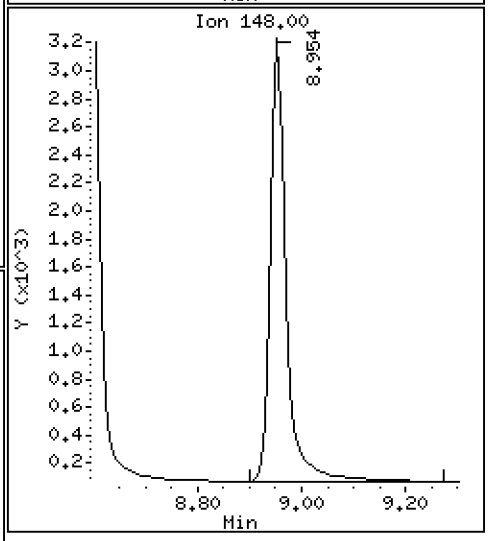
12 1,2-Dichlorobenzene

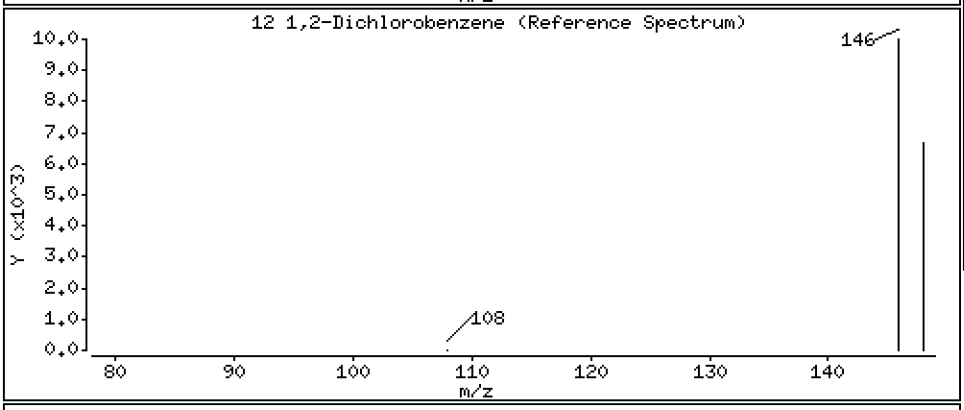
Concentration: 0.1232 ug/mL

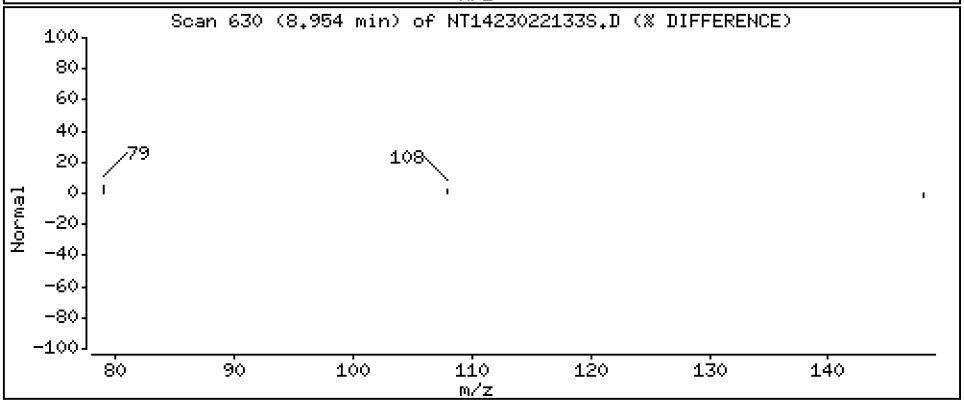












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Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

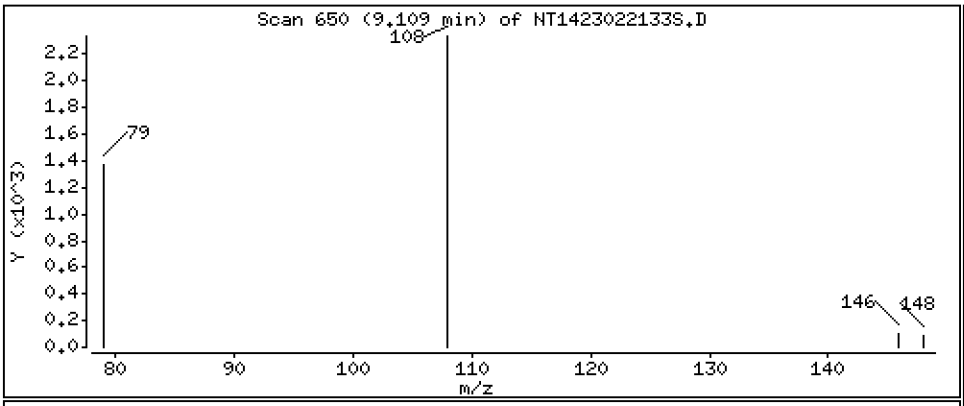
Operator: DSD

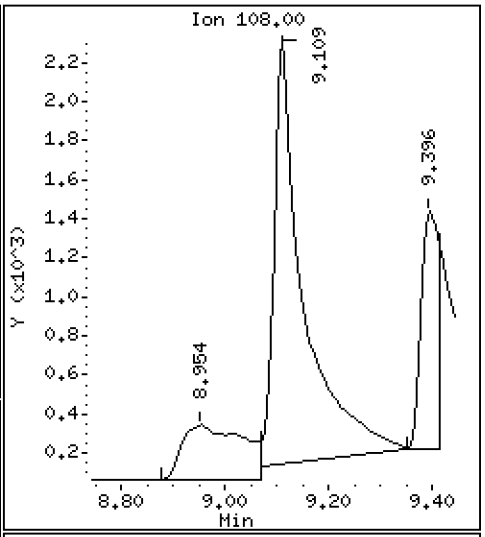
Column phase: ZB-5msi

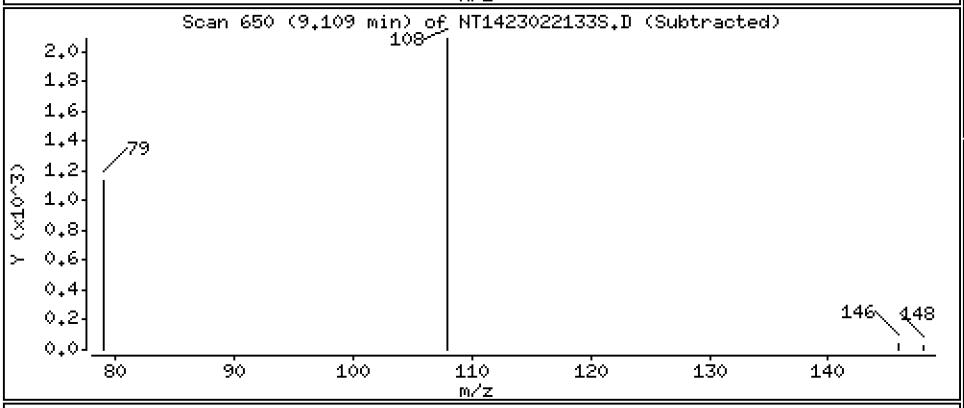
Column diameter: 0.25

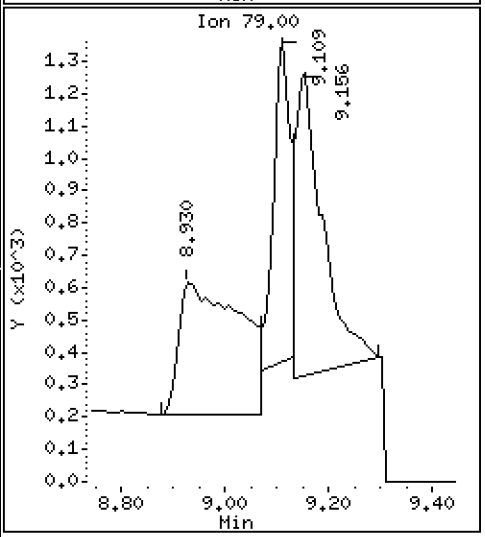
13 2-Methylphenol

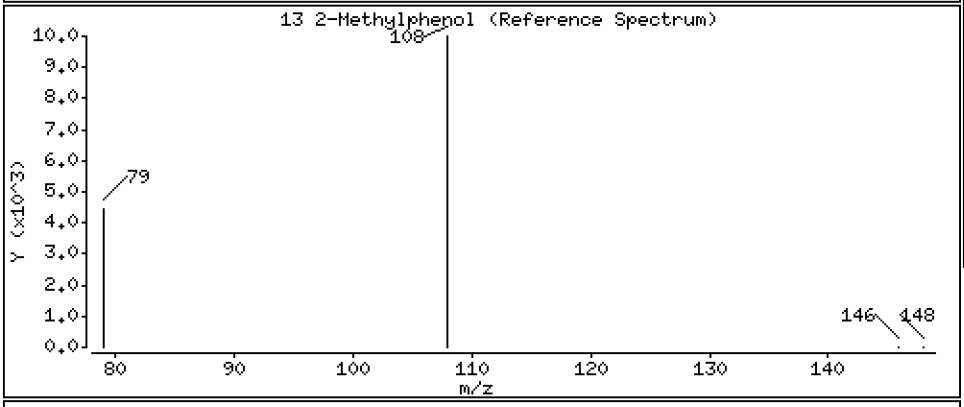
Concentration: 0.1151 ug/mL

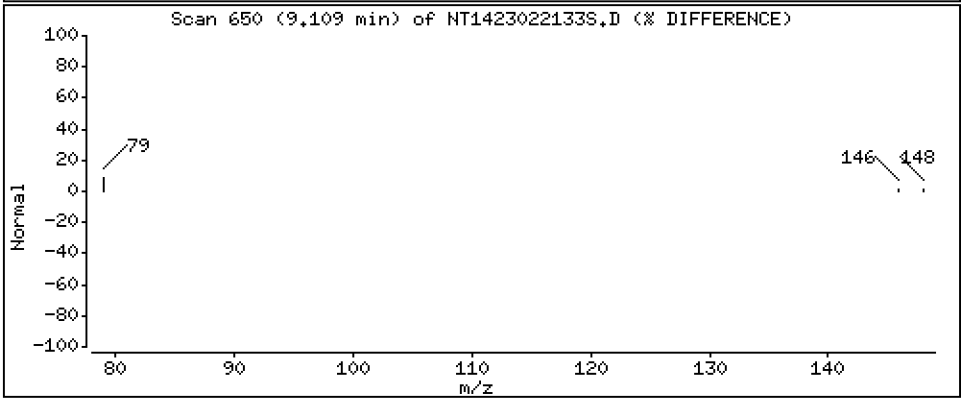












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221133S.D

Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

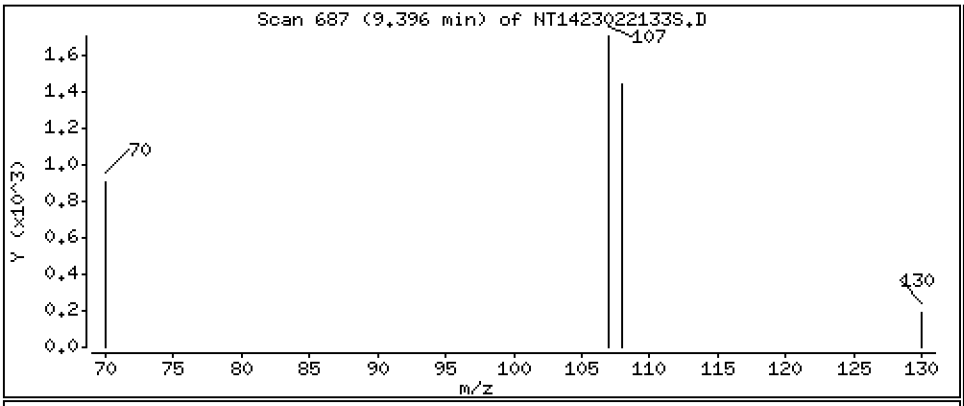
Operator: DSD

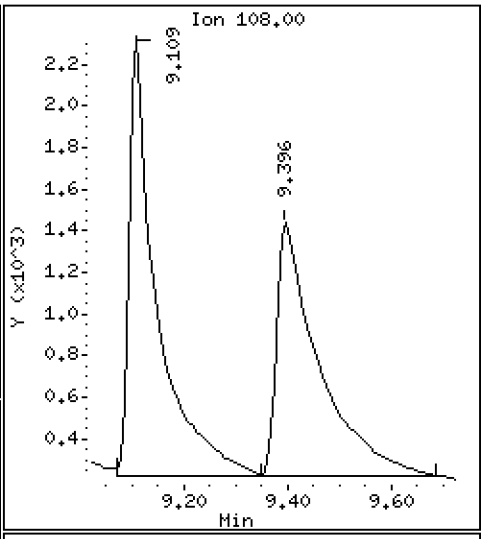
Column phase: ZB-5msi

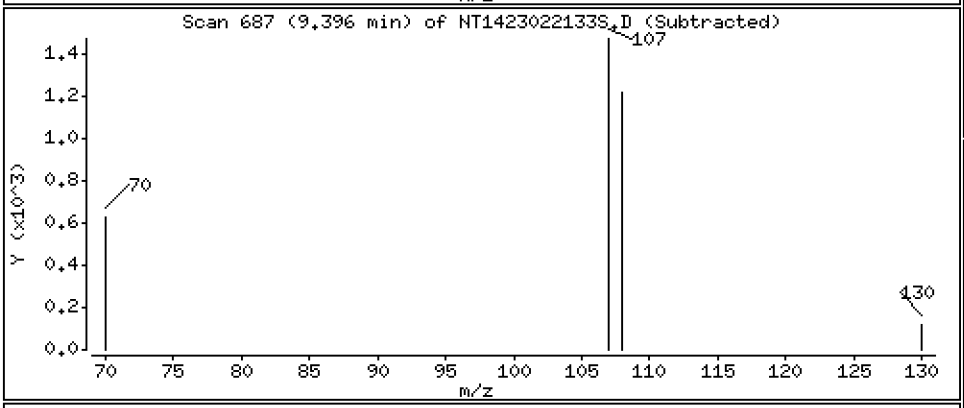
Column diameter: 0.25

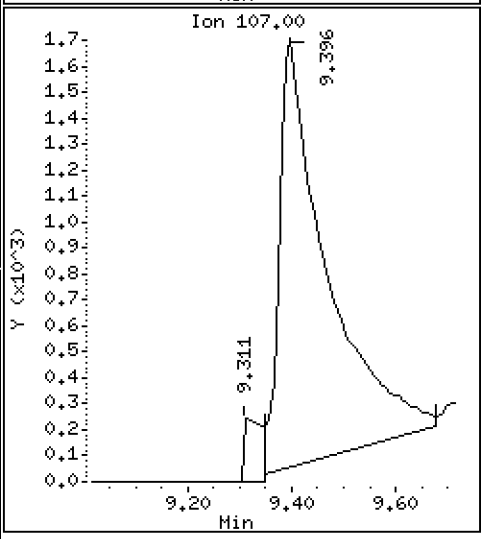
15 4-Methylphenol

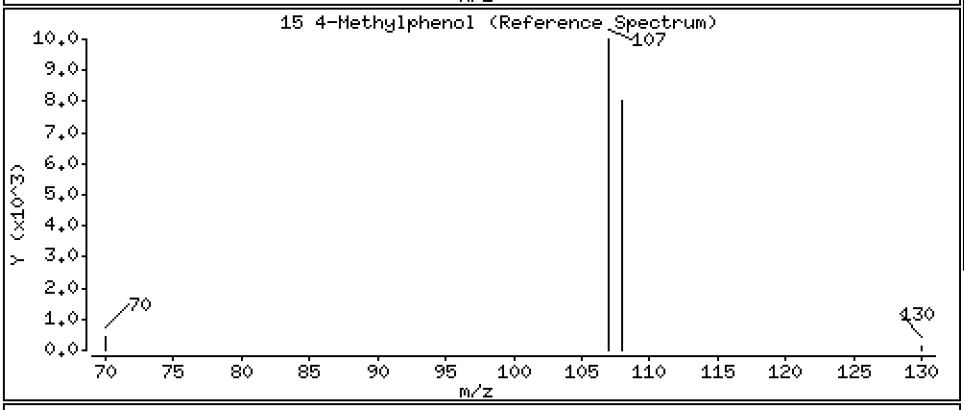
Concentration: 0.08391 ug/mL

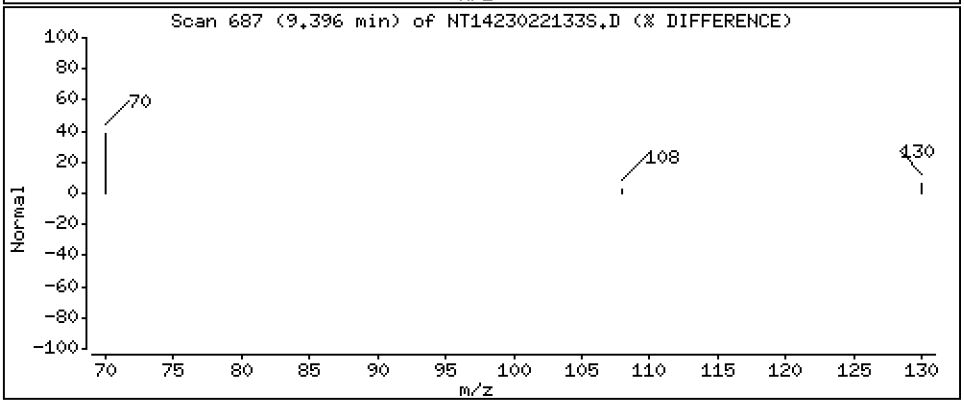












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Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

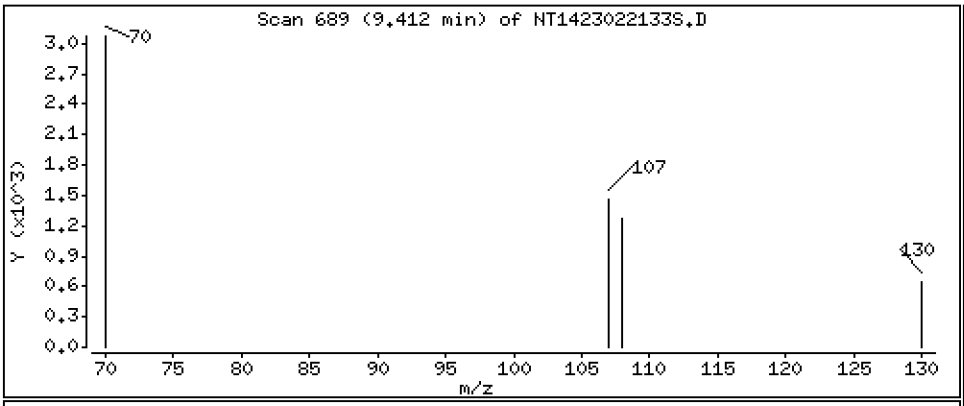
Operator: DSD

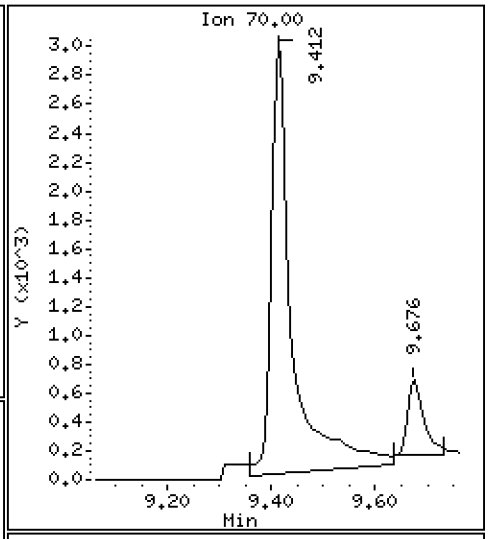
Column phase: ZB-5msi

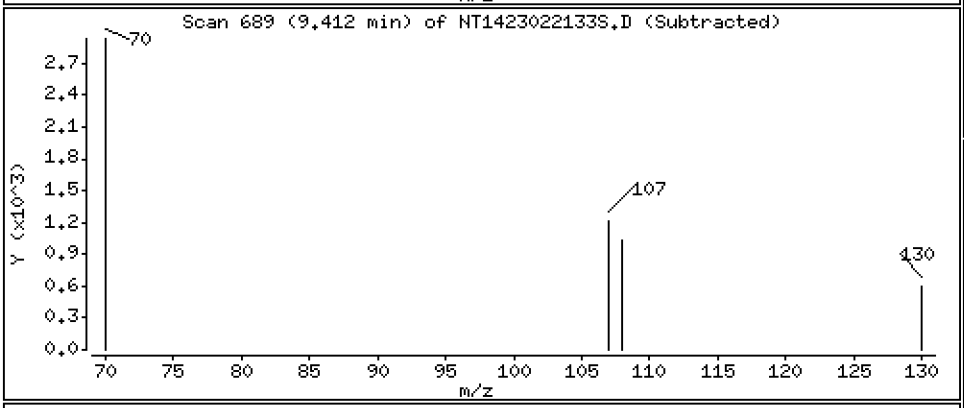
Column diameter: 0.25

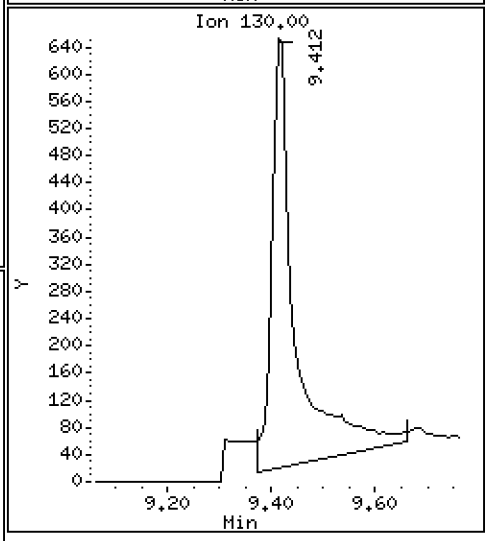
16 N-Nitroso-di-n-propylamine

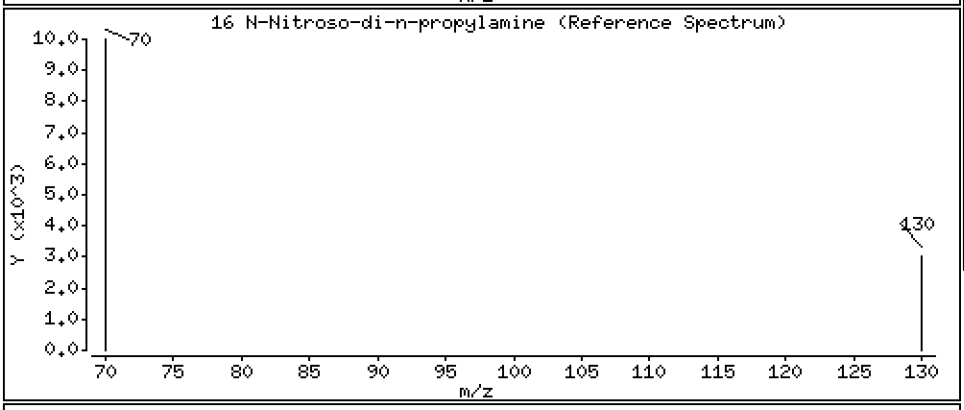
Concentration: 0.1311 ug/mL

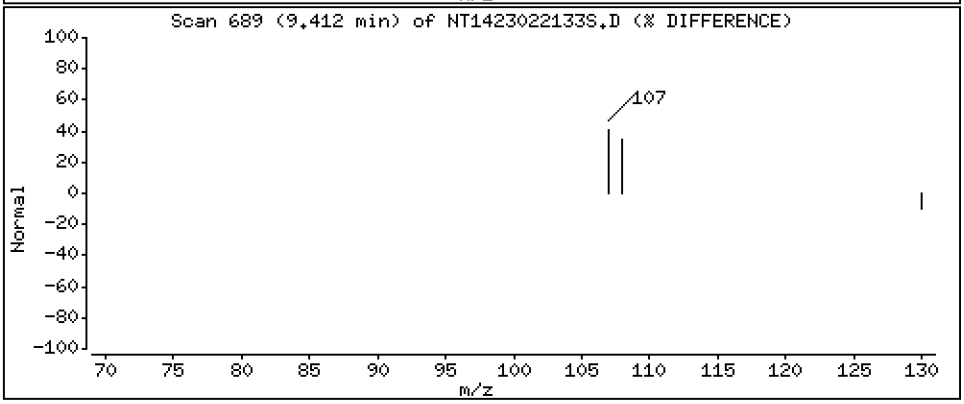












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Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

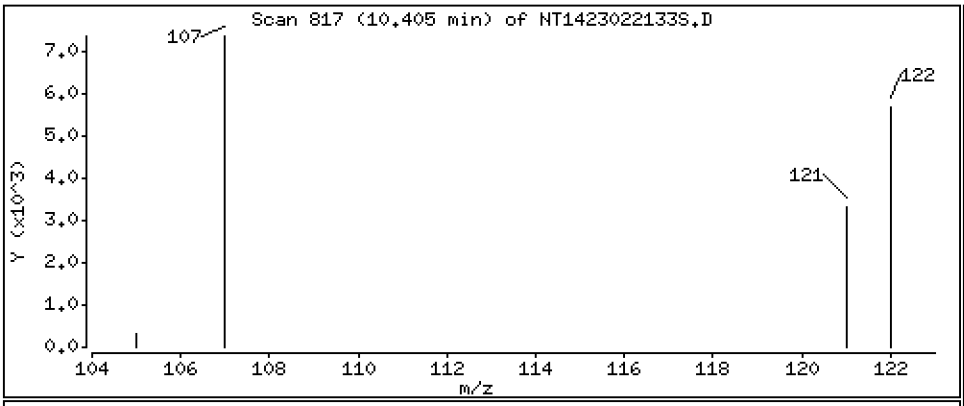
Operator: DSD

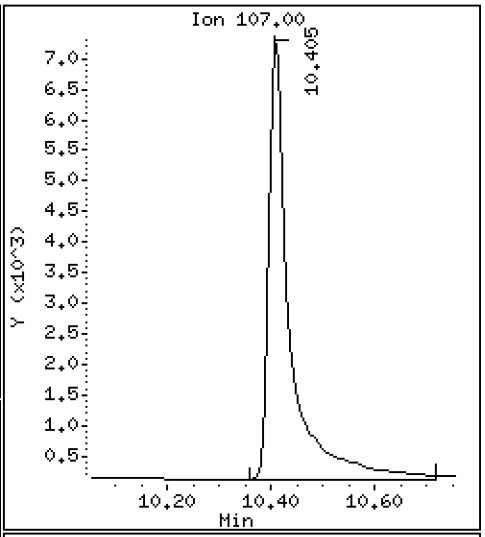
Column phase: ZB-5msi

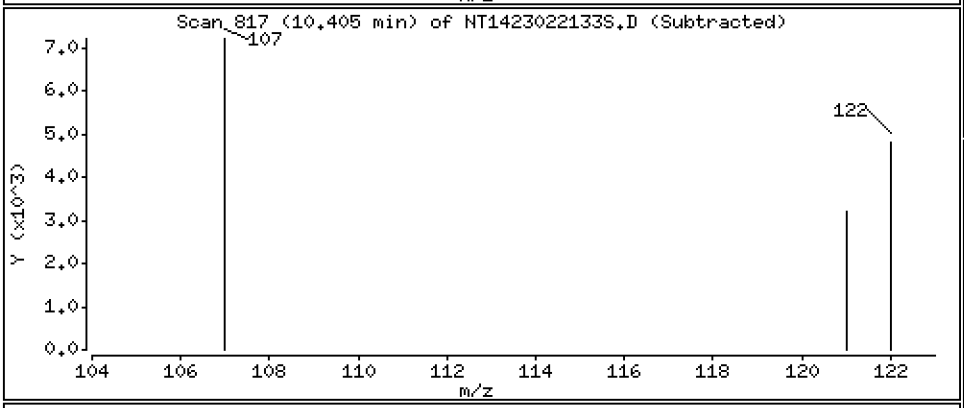
Column diameter: 0.25

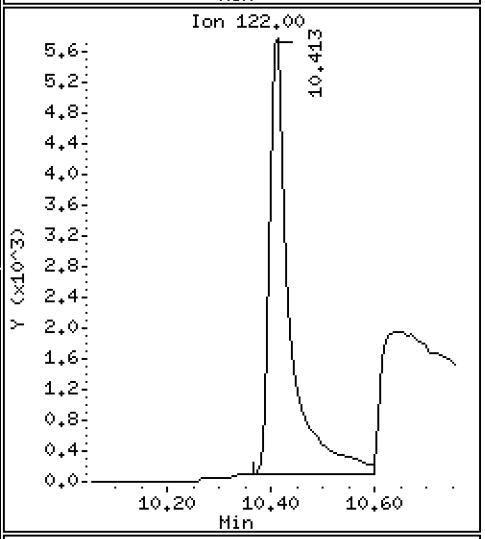
22 2,4-Dimethylphenol

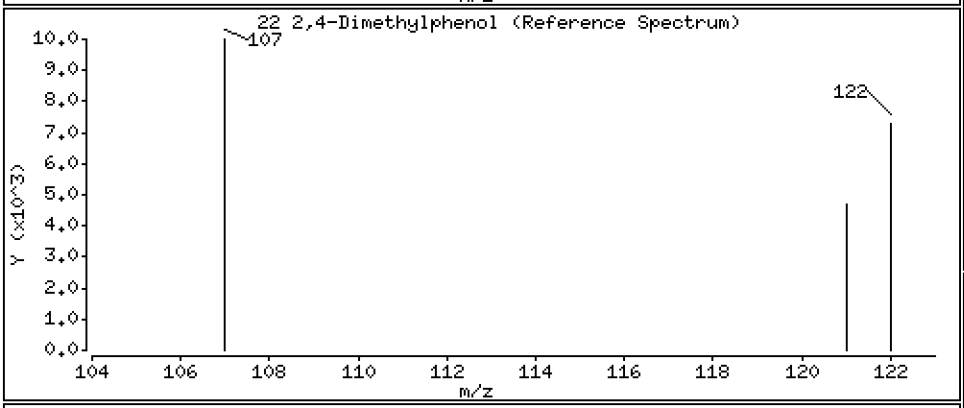
Concentration: 0.2305 ug/mL

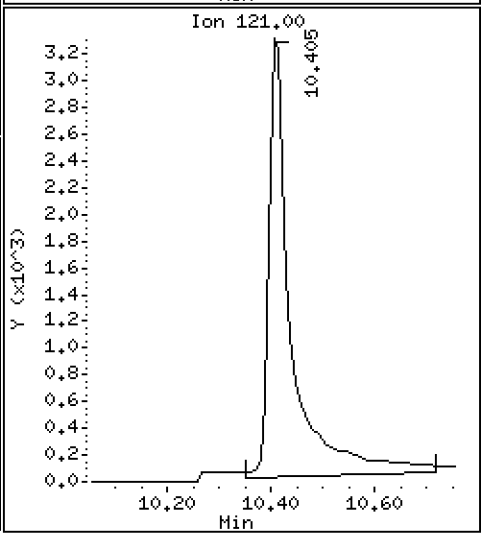


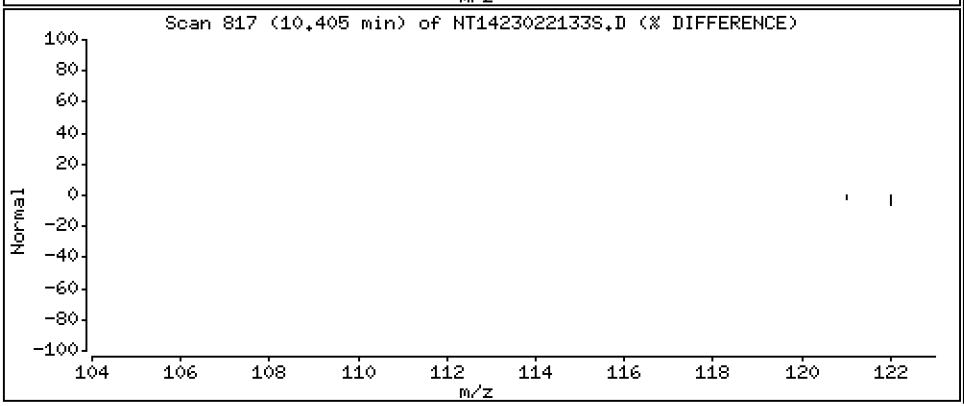












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Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

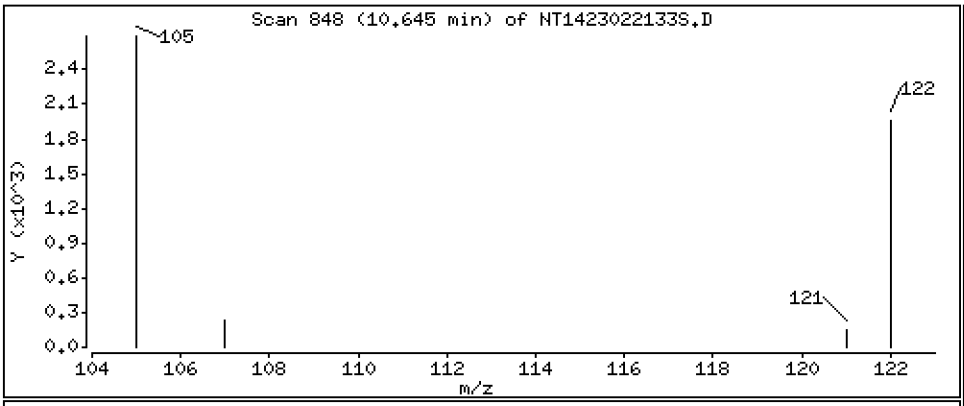
Operator: DSD

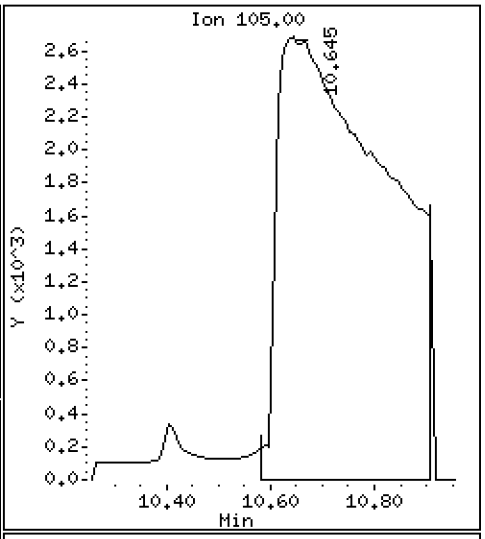
Column phase: ZB-5msi

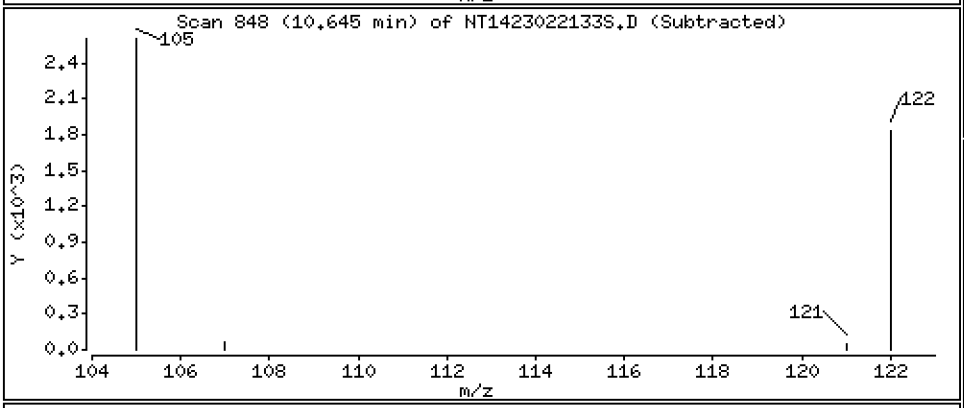
Column diameter: 0.25

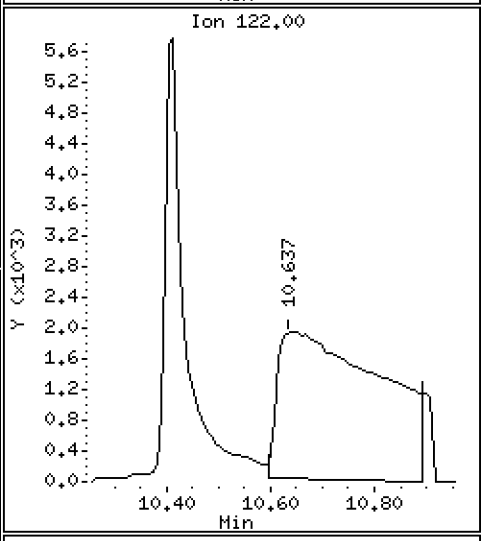
24 Benzoic acid

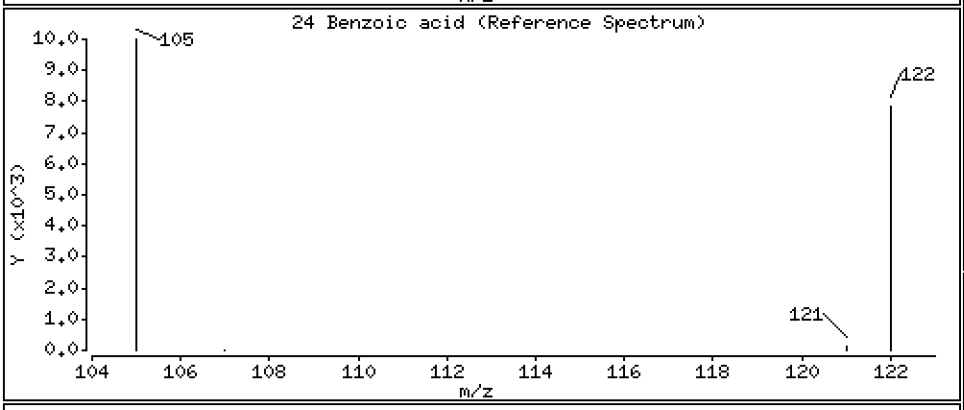
Concentration: 0.8888 ug/mL

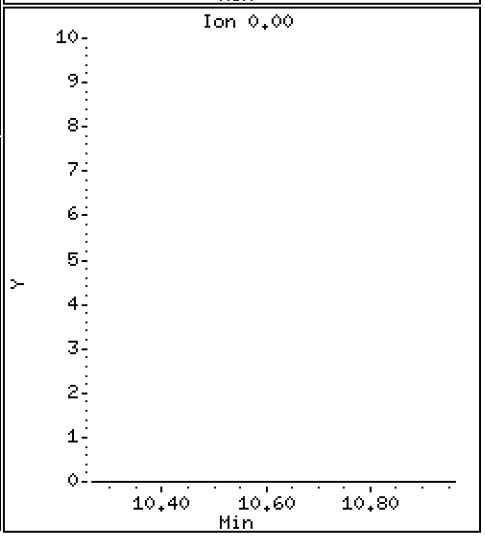


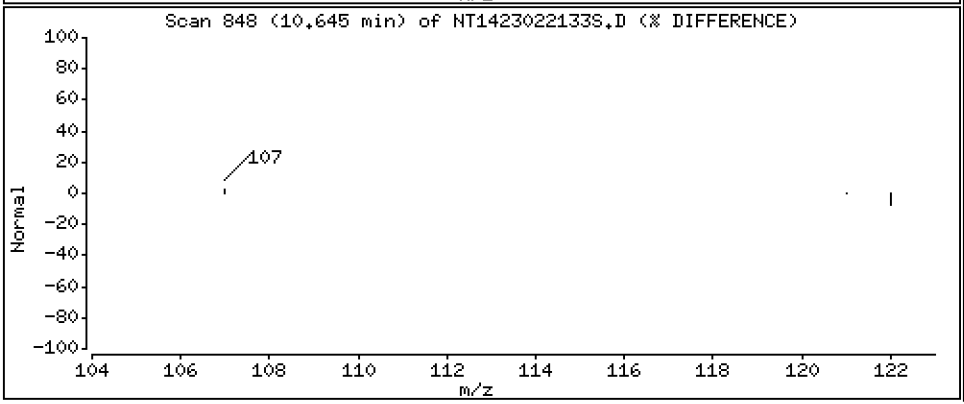












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221133S.D

Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

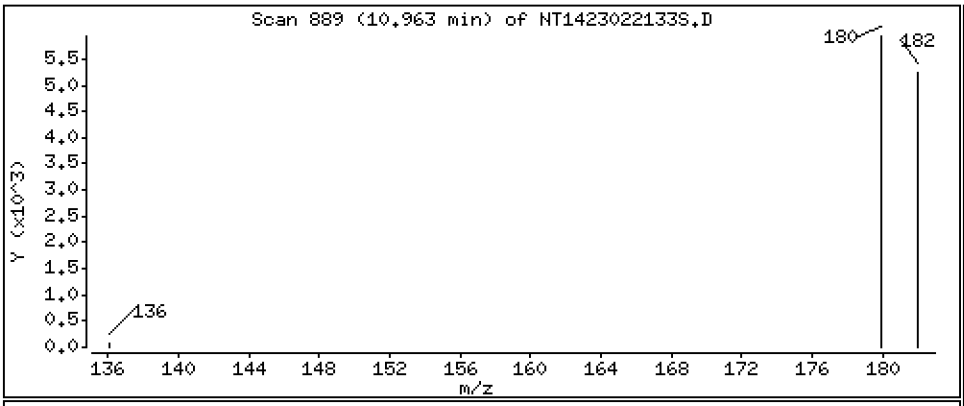
Operator: DSD

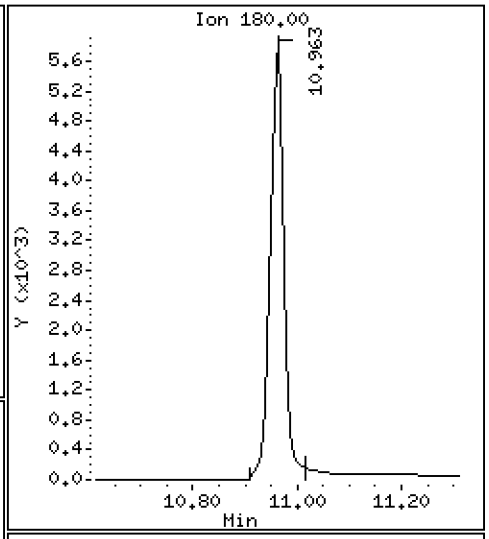
Column phase: ZB-5msi

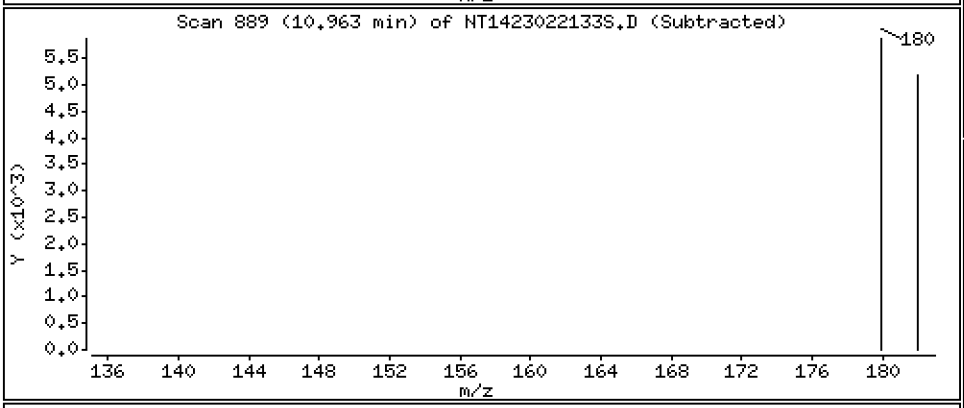
Column diameter: 0.25

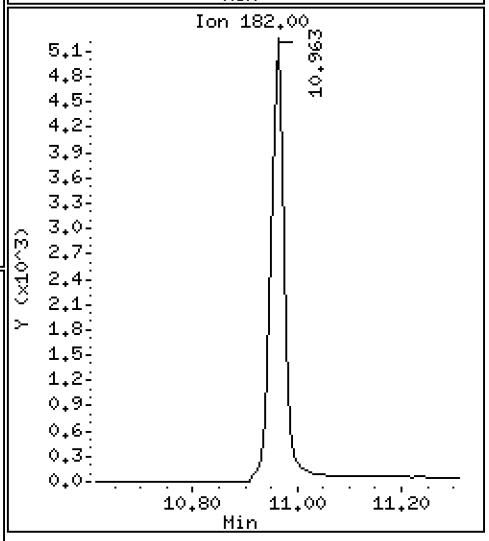
26 1,2,4-Trichlorobenzene

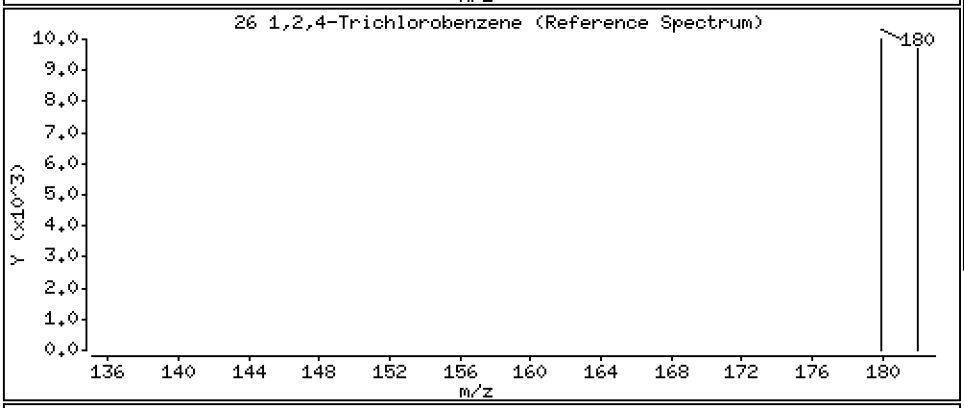
Concentration: 0.1206 ug/mL

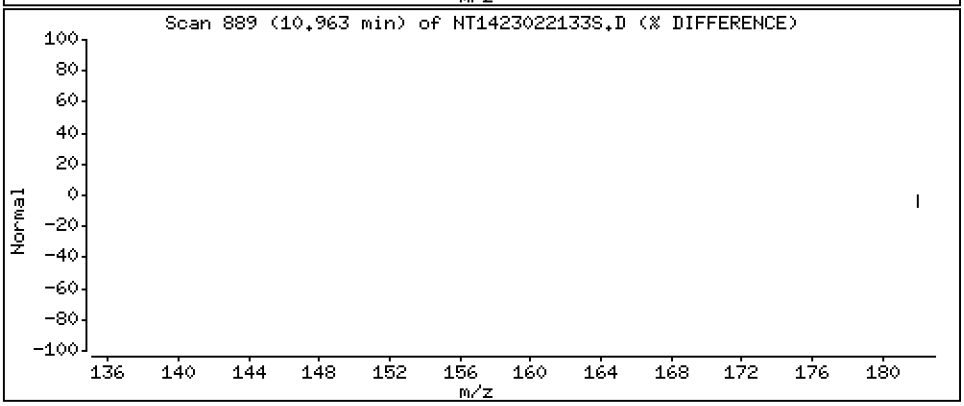












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221133S.D

Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

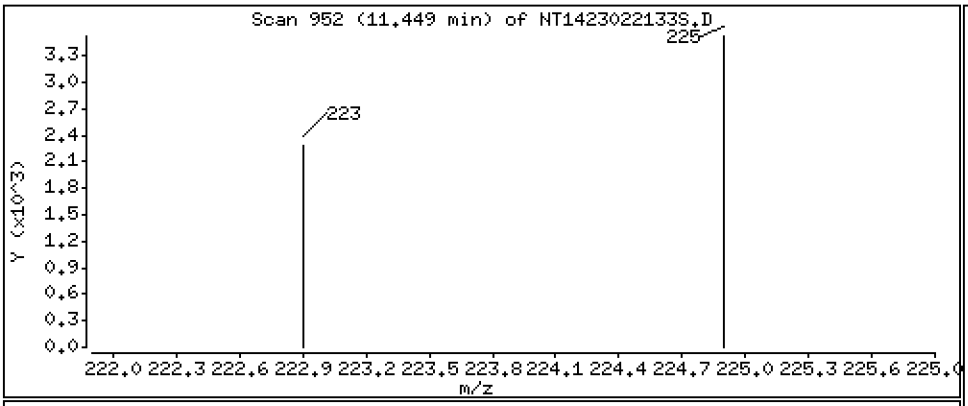
Operator: DSD

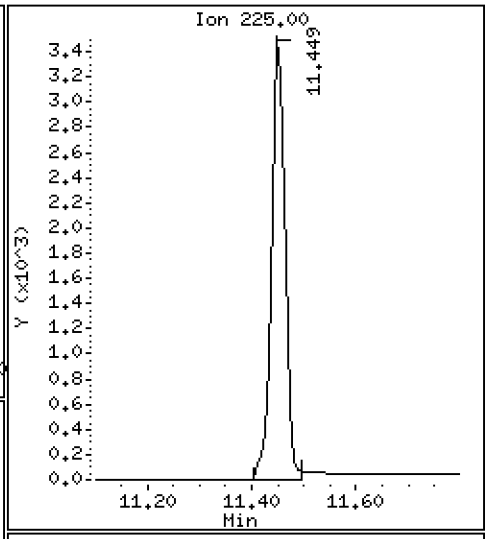
Column phase: ZB-5msi

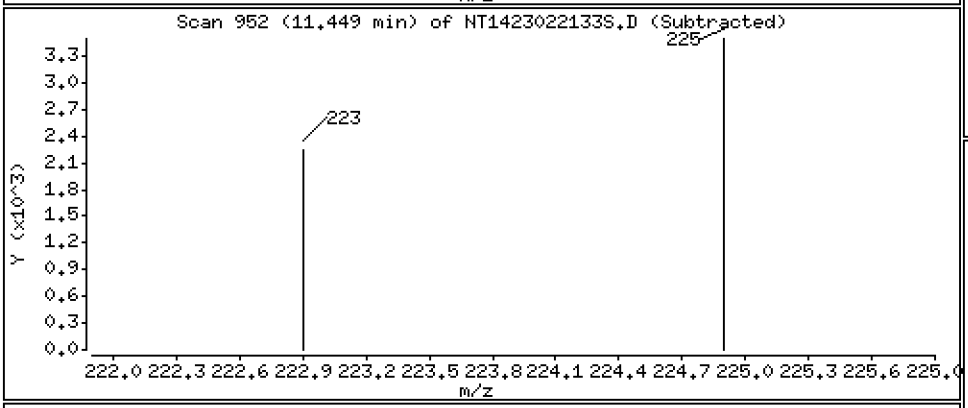
Column diameter: 0.25

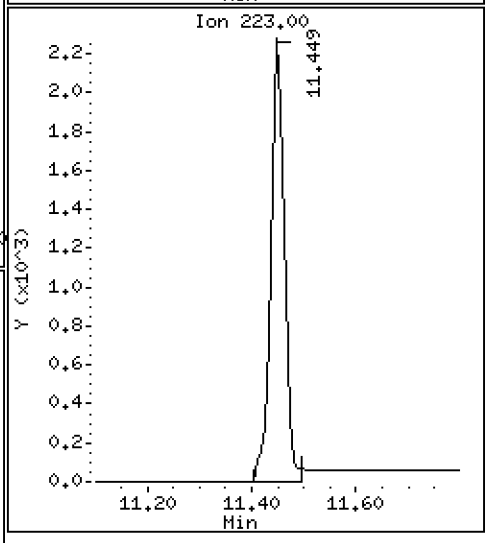
30 Hexachlorobutadiene

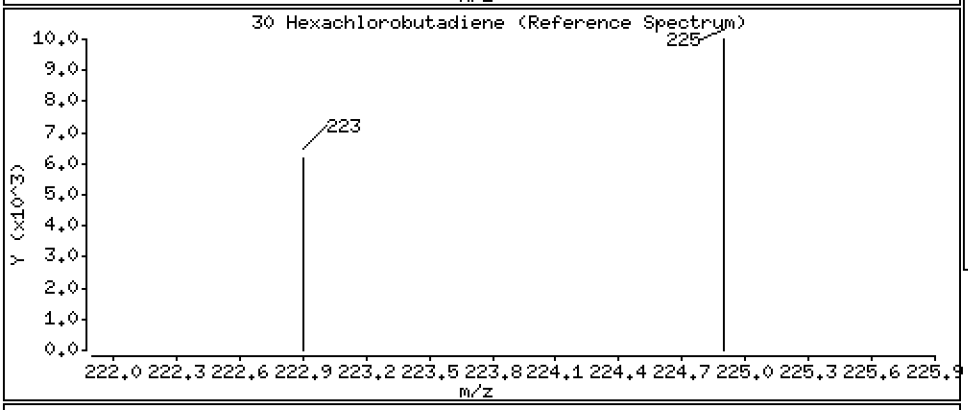
Concentration: 0.1163 ug/mL

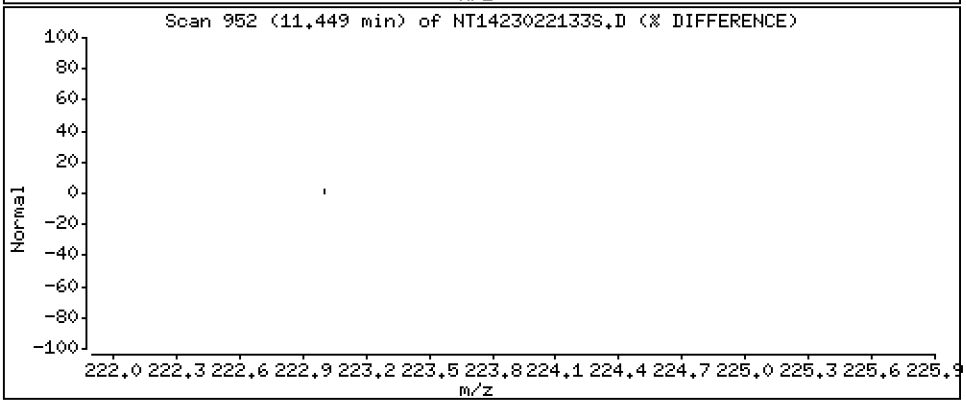












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Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

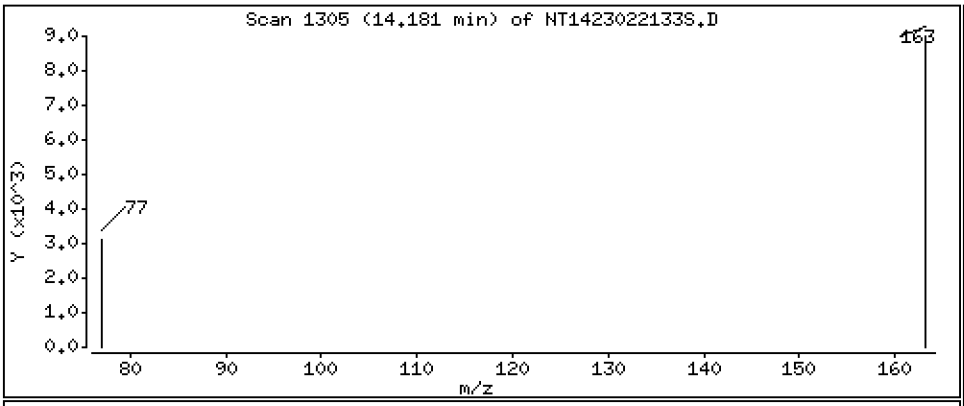
Operator: DSD

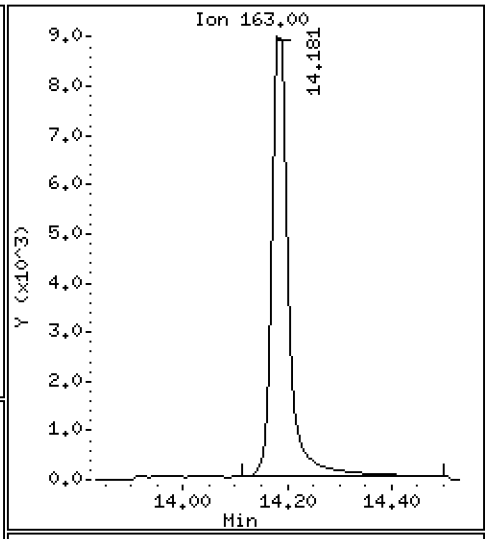
Column phase: ZB-5msi

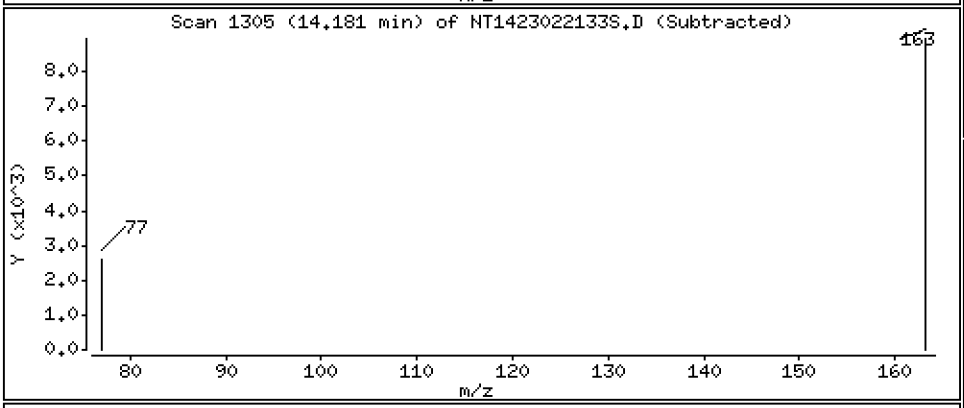
Column diameter: 0.25

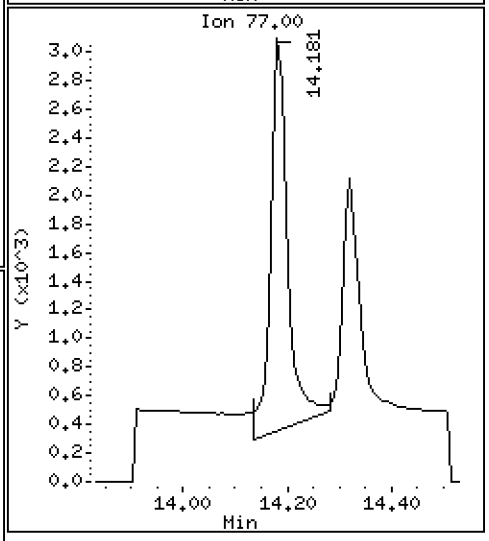
39 Dimethylphthalate

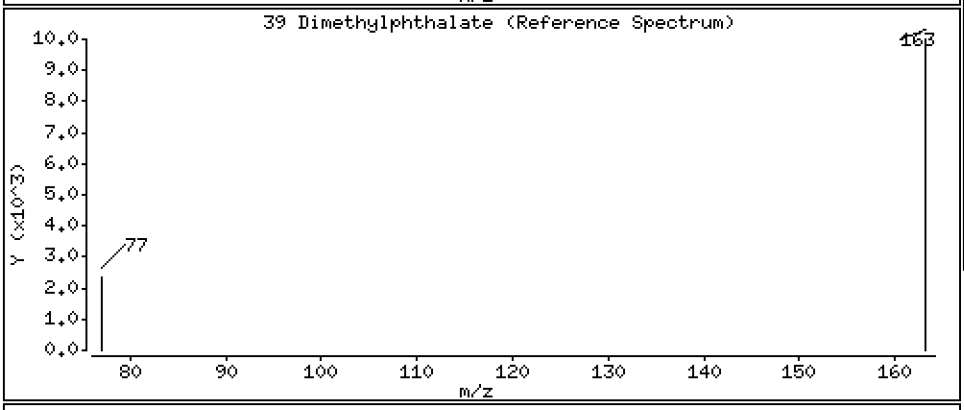
Concentration: 0.1275 ug/mL

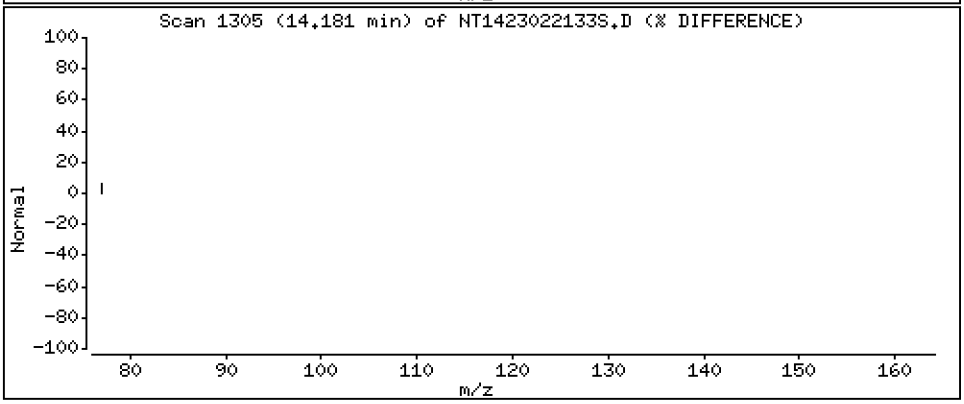












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Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

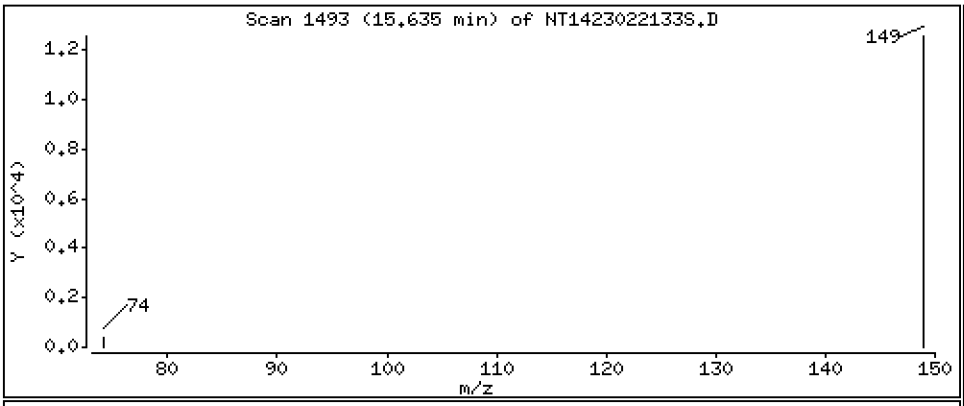
Operator: DSD

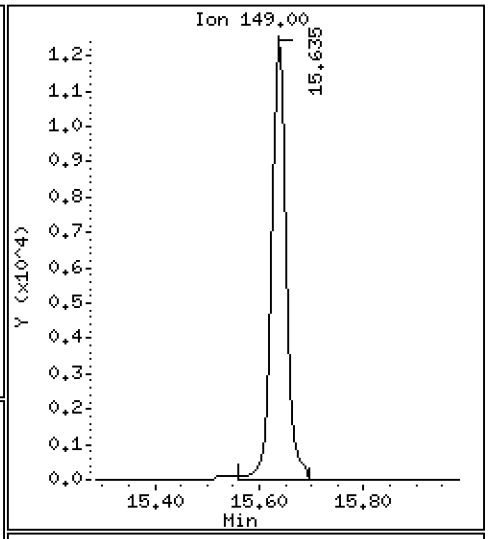
Column phase: ZB-5msi

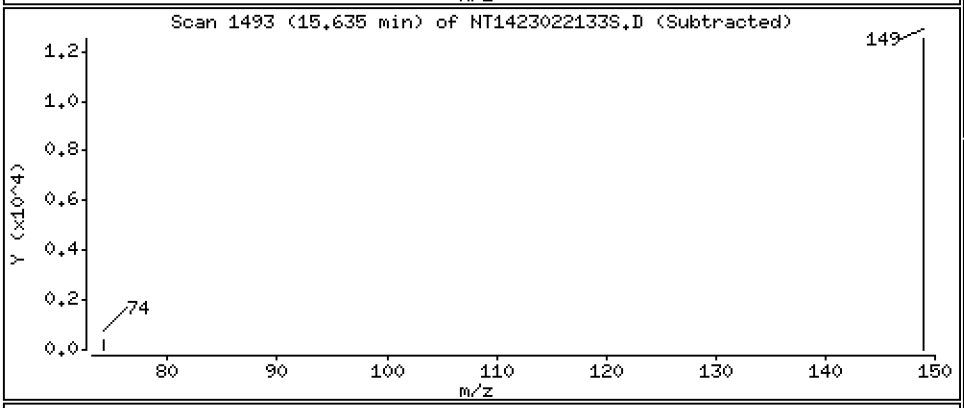
Column diameter: 0.25

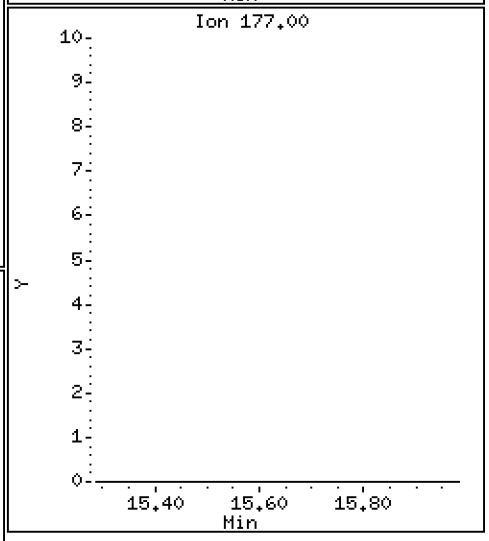
50 Diethylphthalate

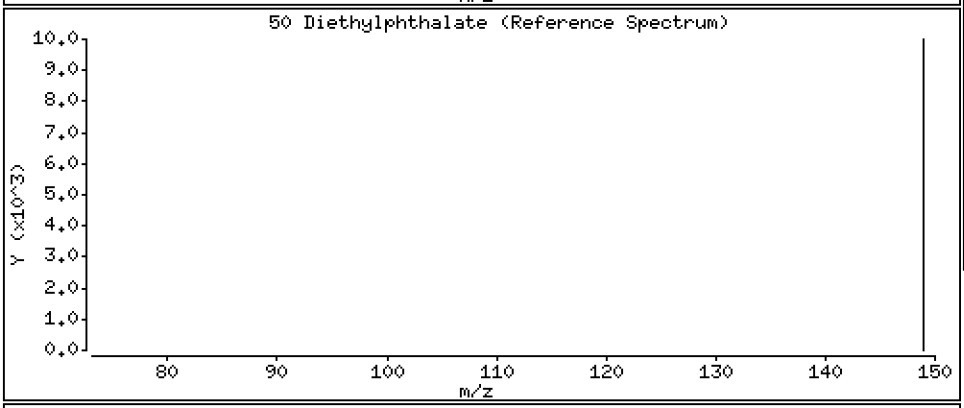
Concentration: 0.1215 ug/mL

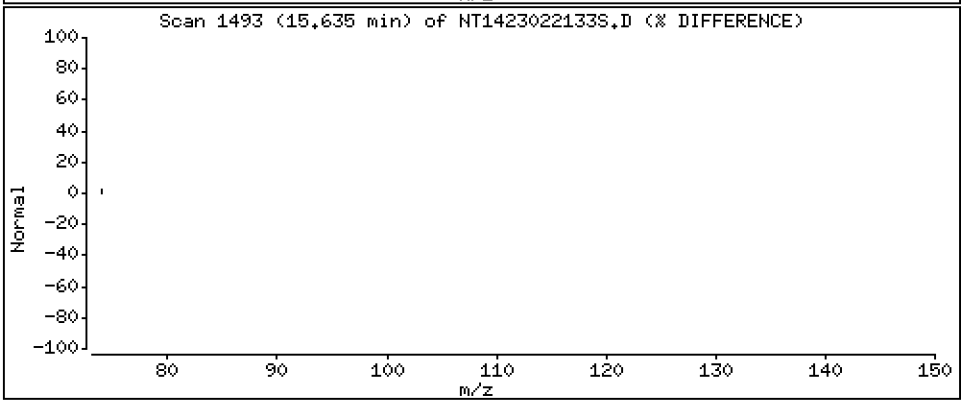












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Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

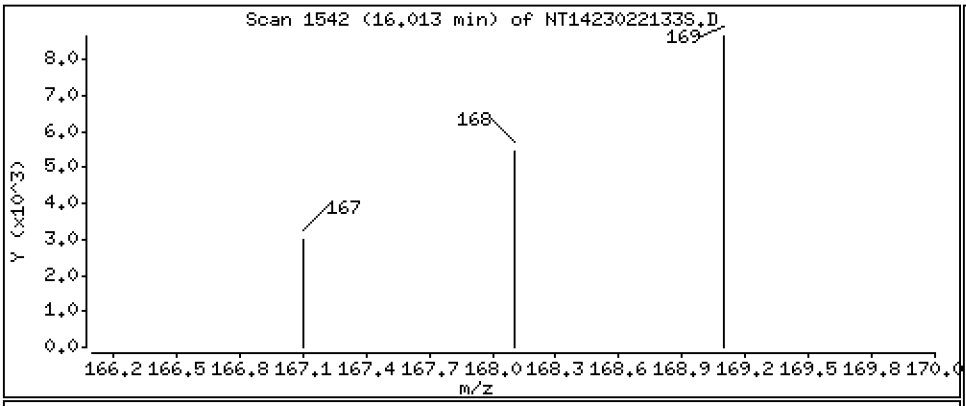
Operator: DSD

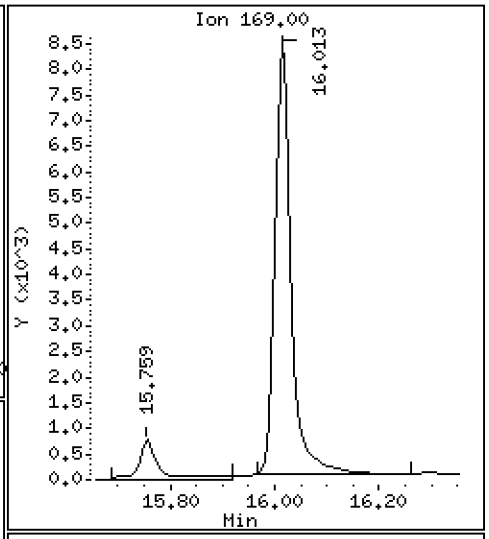
Column phase: ZB-5msi

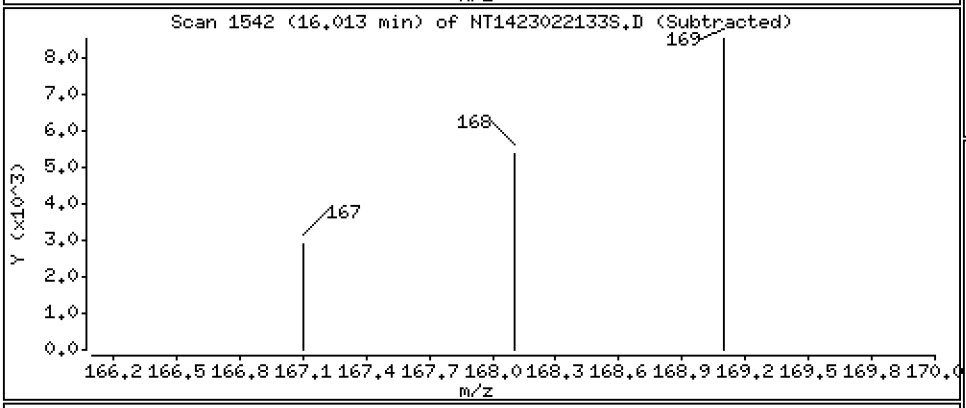
Column diameter: 0.25

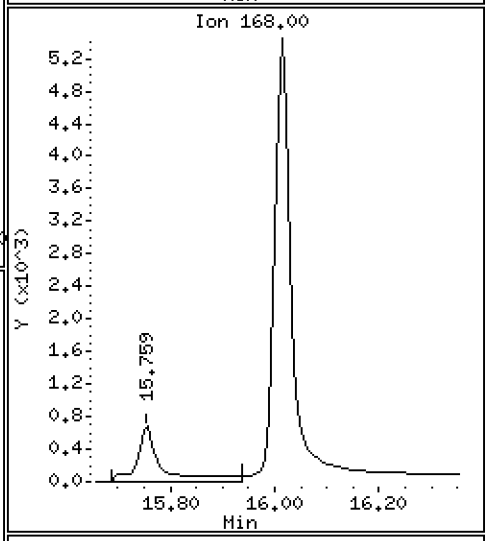
54 N-Nitrosodiphenylamine

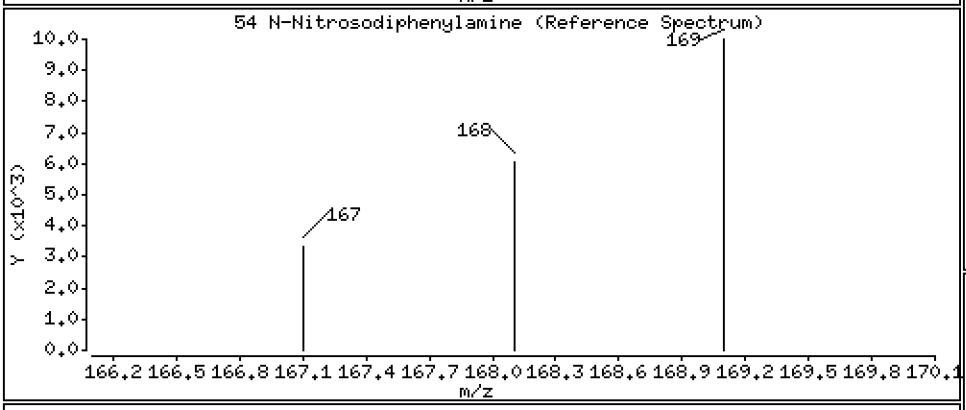
Concentration: 0.1188 ug/mL

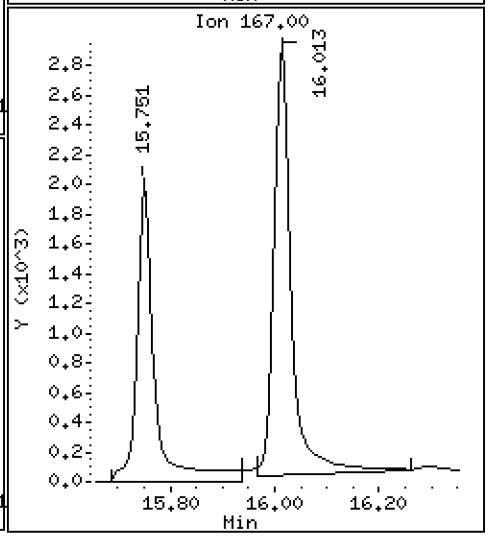


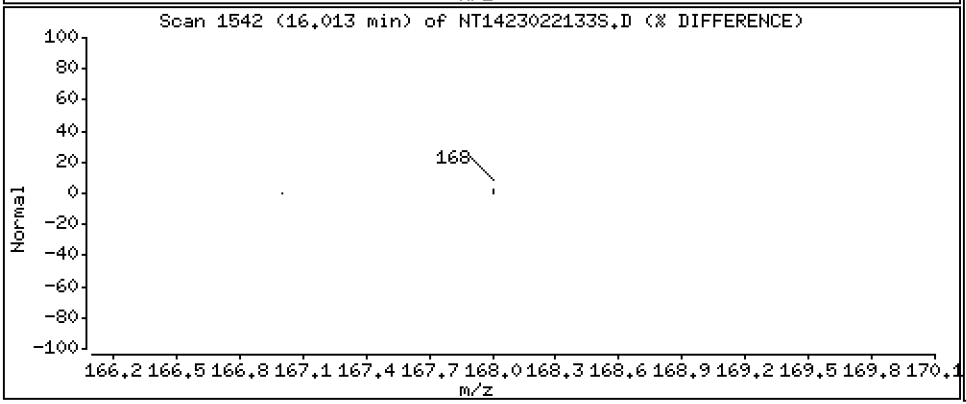












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Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

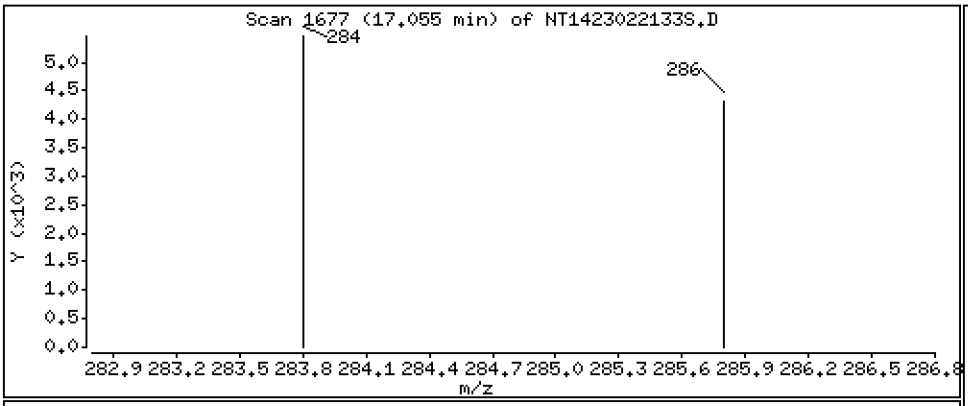
Operator: DSD

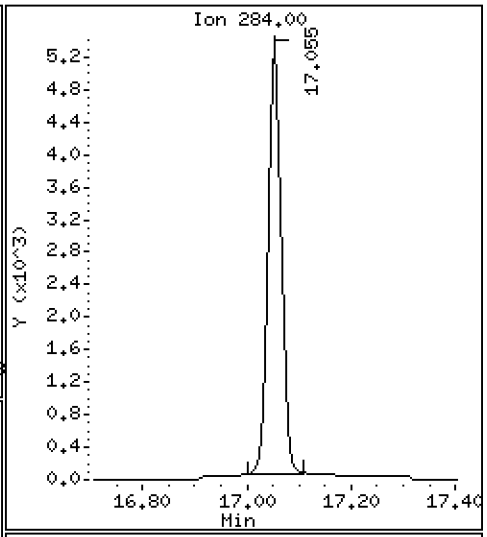
Column phase: ZB-5msi

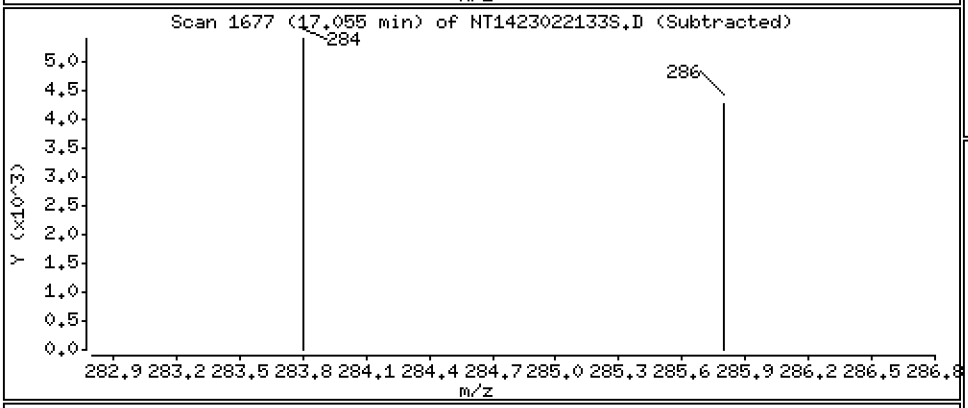
Column diameter: 0.25

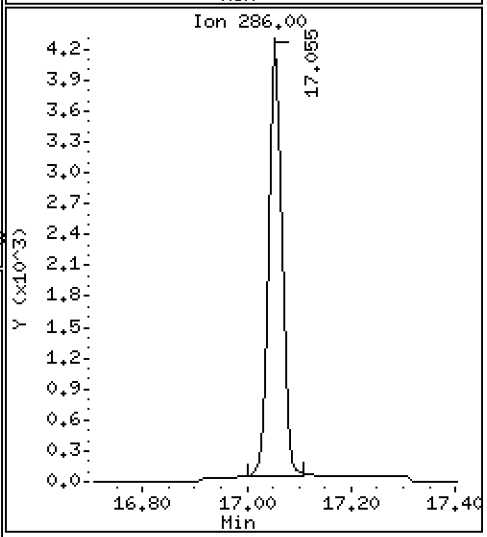
57 Hexachlorobenzene

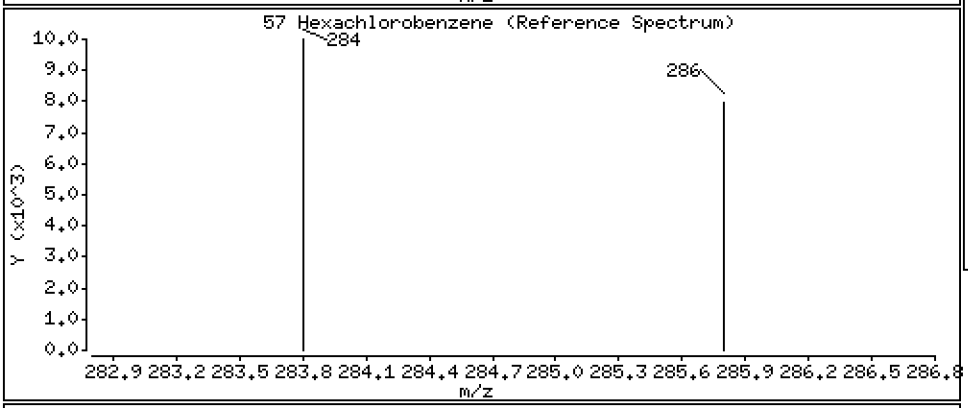
Concentration: 0.1166 ug/mL

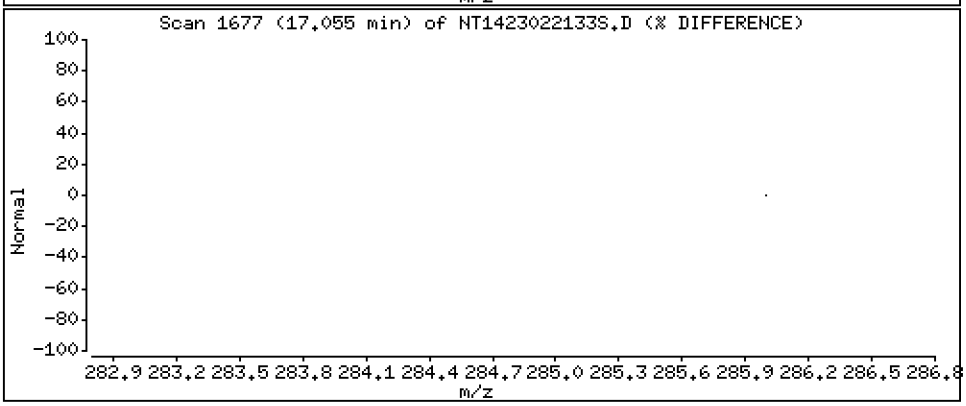












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Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

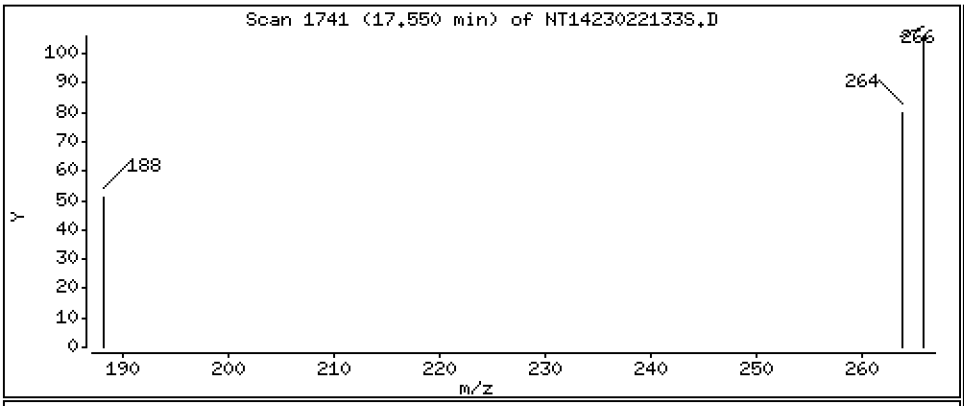
Operator: DSD

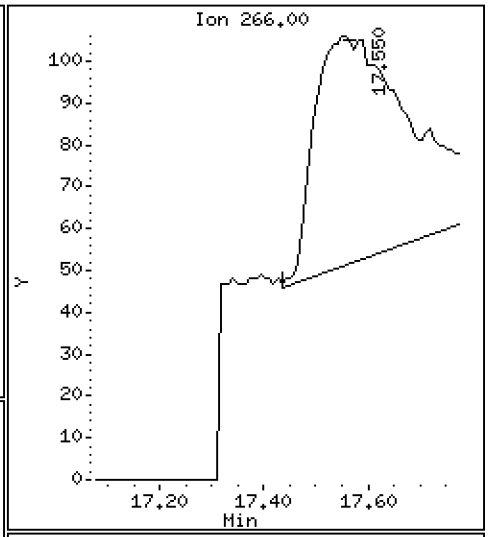
Column phase: ZB-5msi

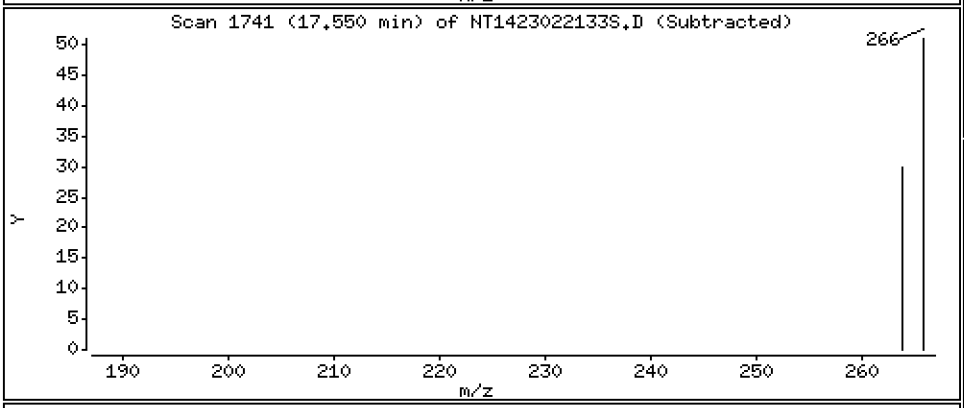
Column diameter: 0.25

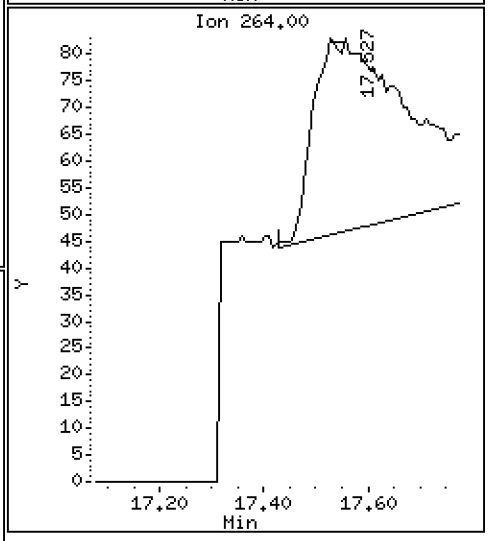
58 Pentachlorophenol

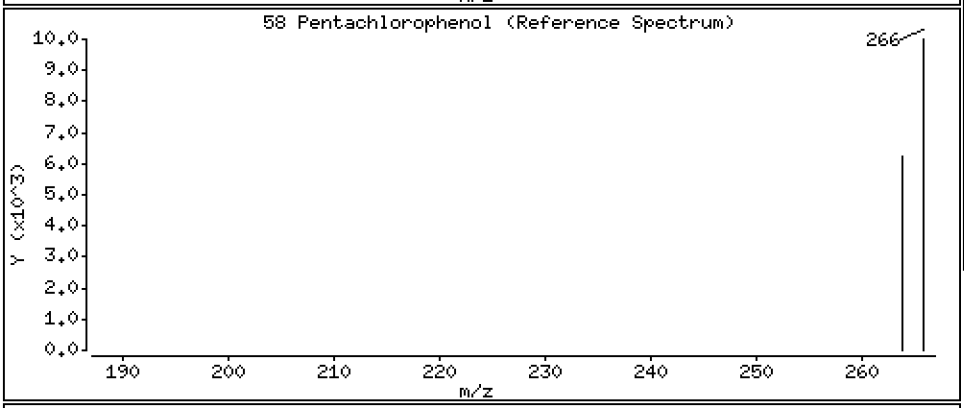
Concentration: 0.03040 ug/mL

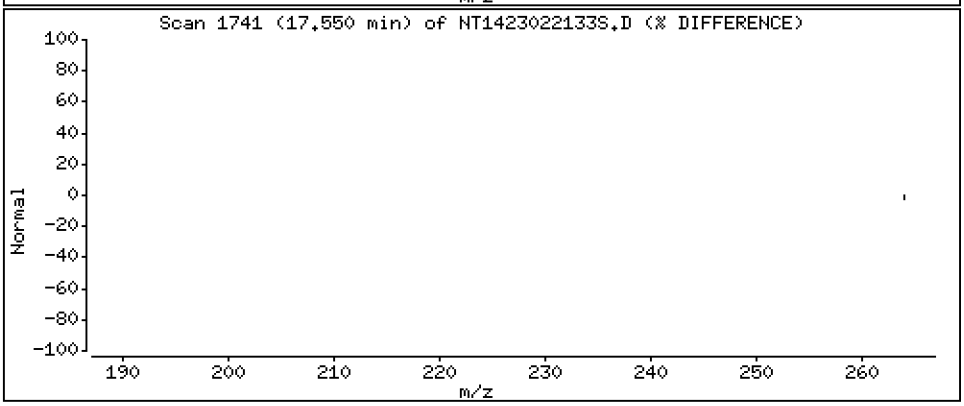












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Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

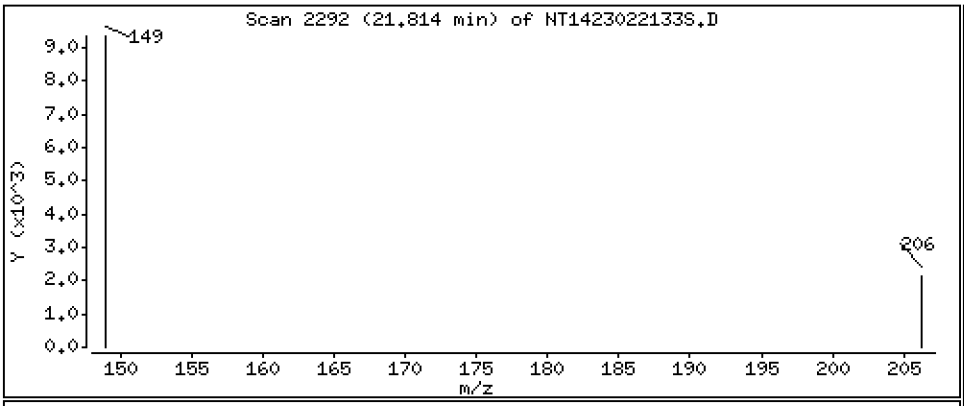
Operator: DSD

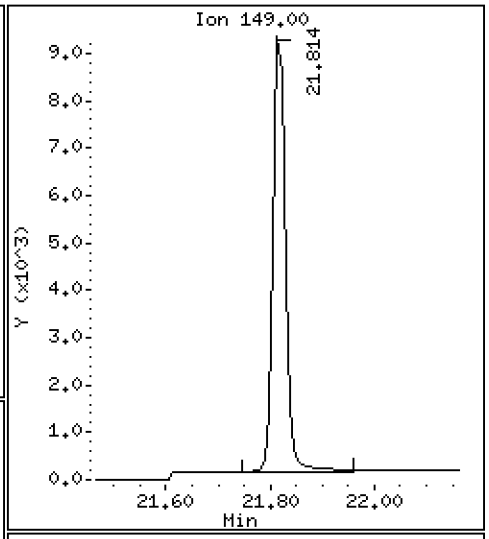
Column phase: ZB-5msi

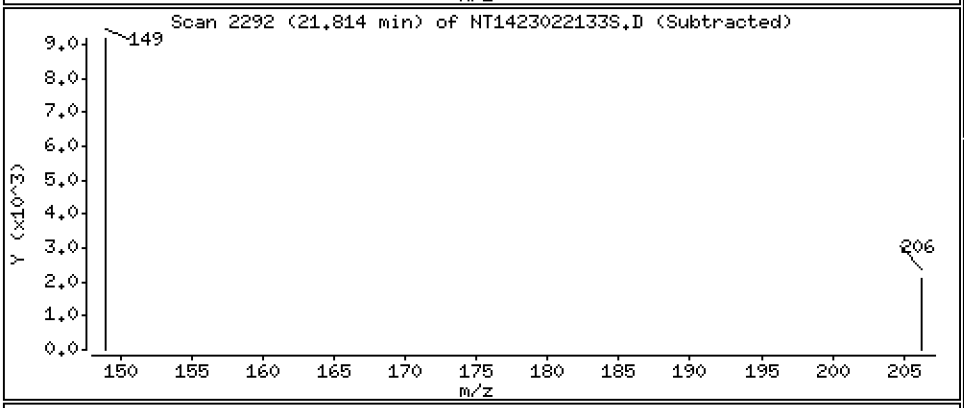
Column diameter: 0.25

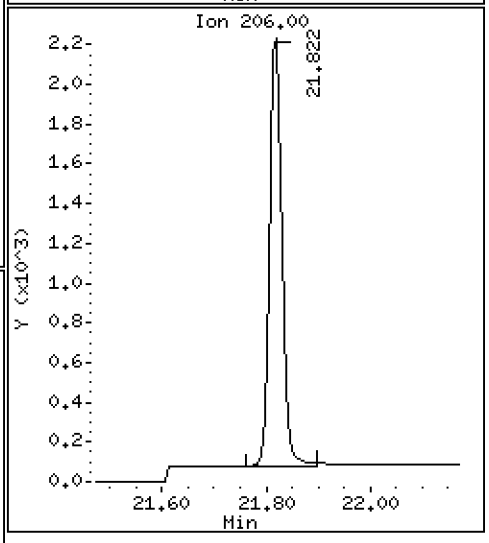
67 Butylbenzylphthalate

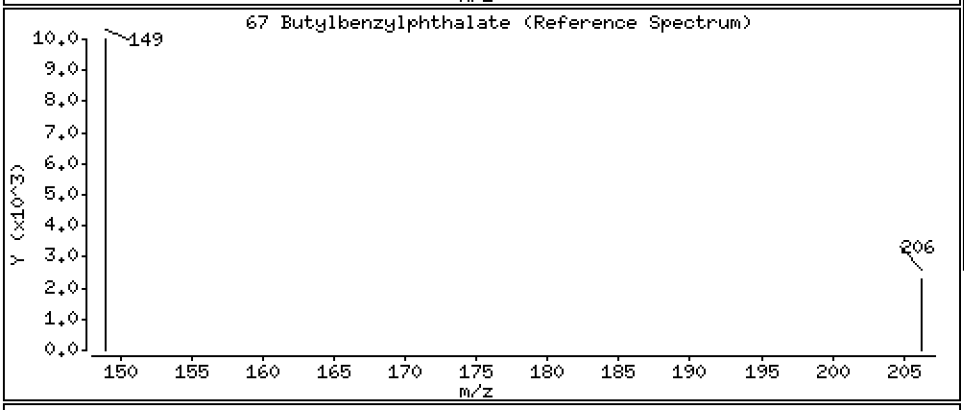
Concentration: 0.1314 ug/mL

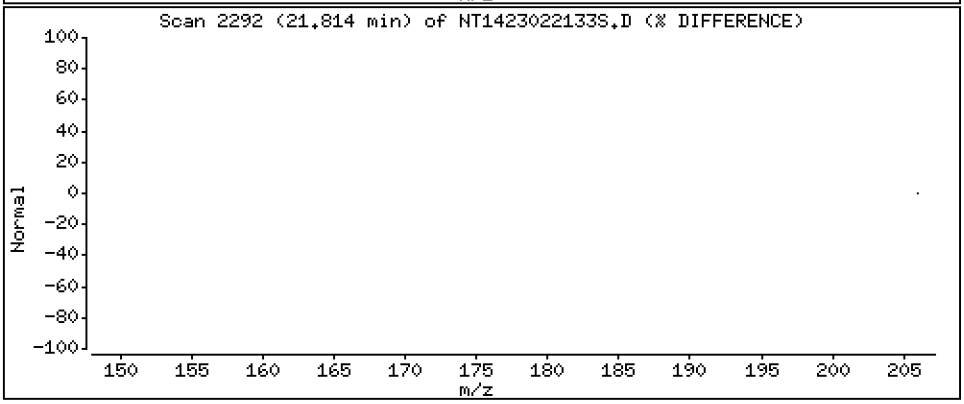












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Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

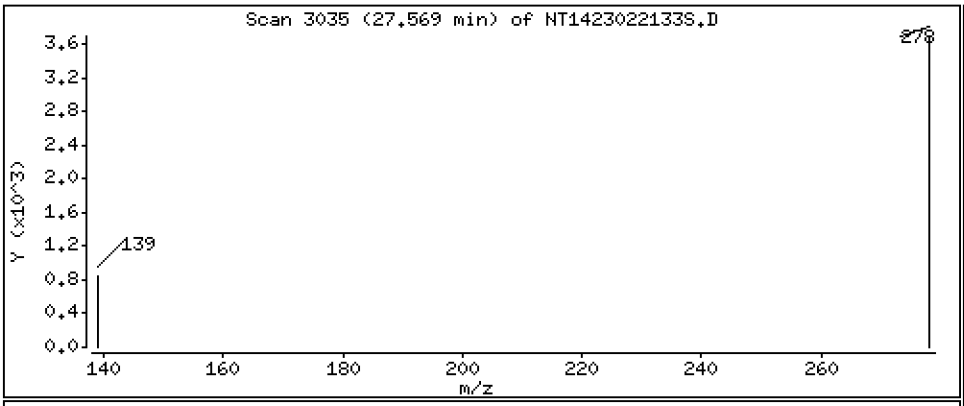
Operator: DSD

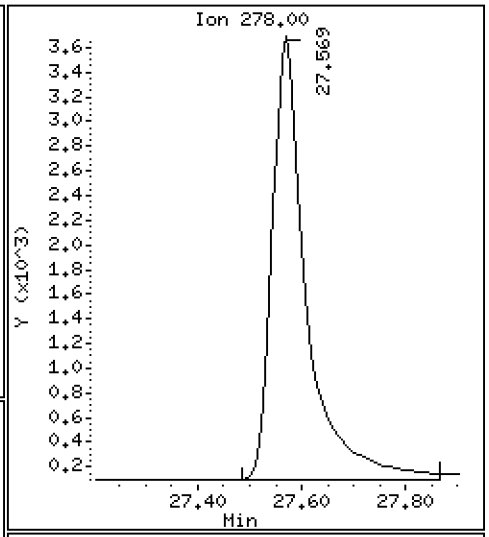
Column phase: ZB-5msi

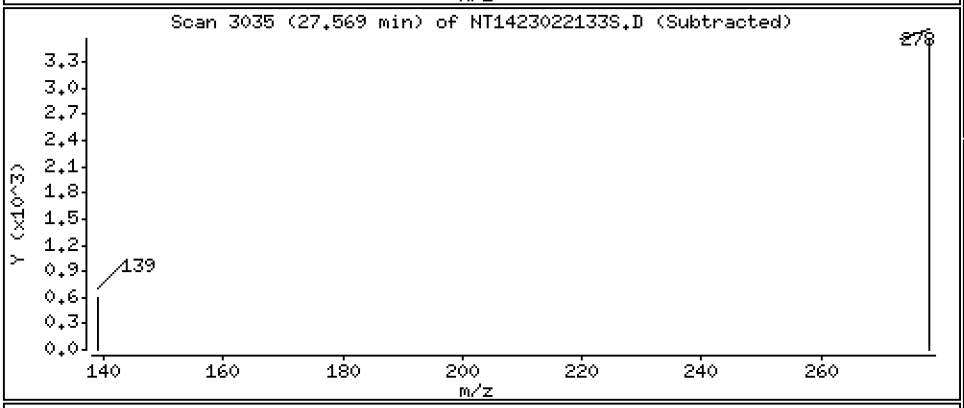
Column diameter: 0.25

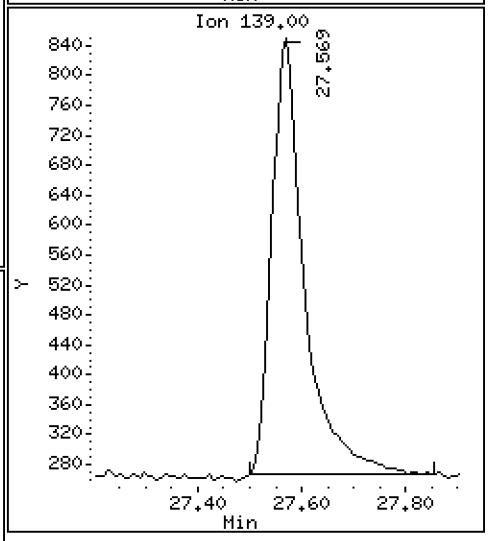
79 Dibenzo(a,h)anthracene

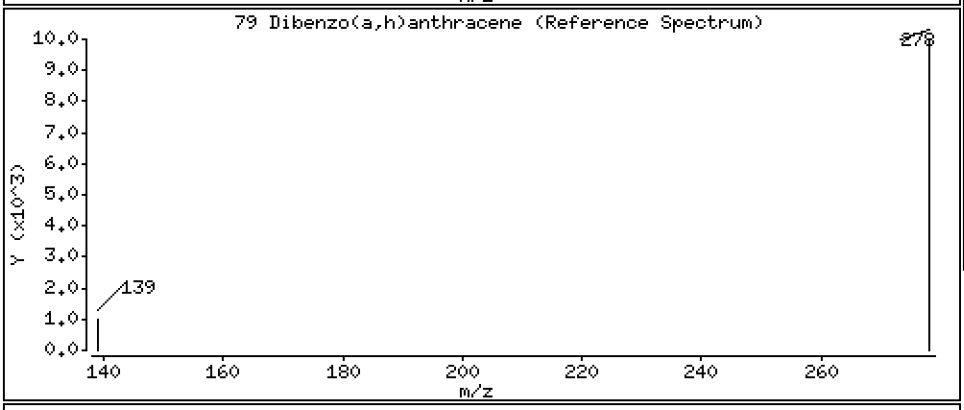
Concentration: 0.1434 ug/mL

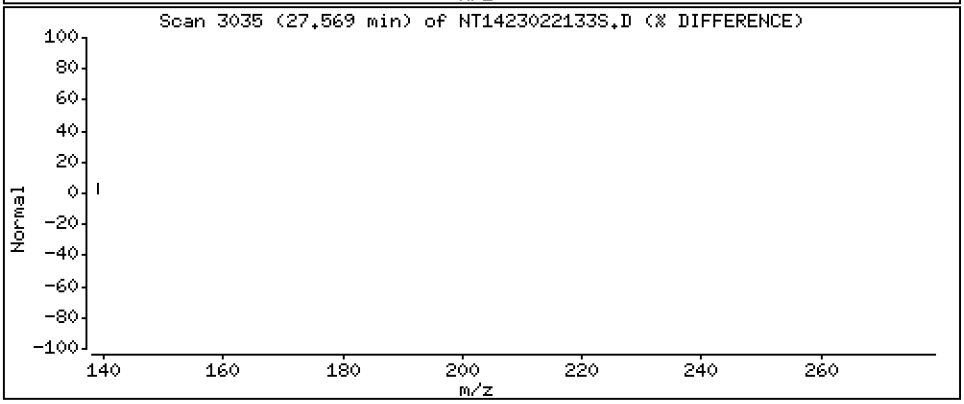












Data File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT14230221133S.D

Date : 22-FEB-2023 08:44

Client ID:

Instrument: nt14.i

Sample Info: SIM-LCV3

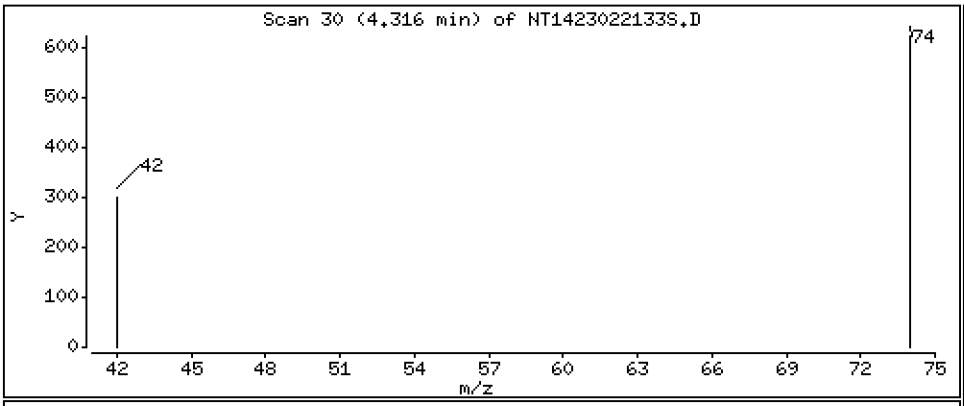
Operator: DSD

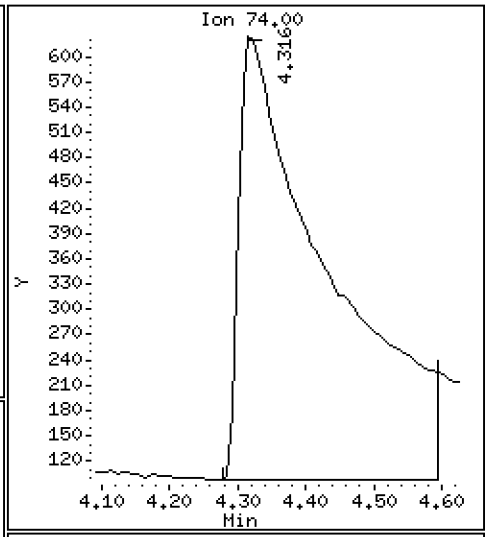
Column phase: ZB-5msi

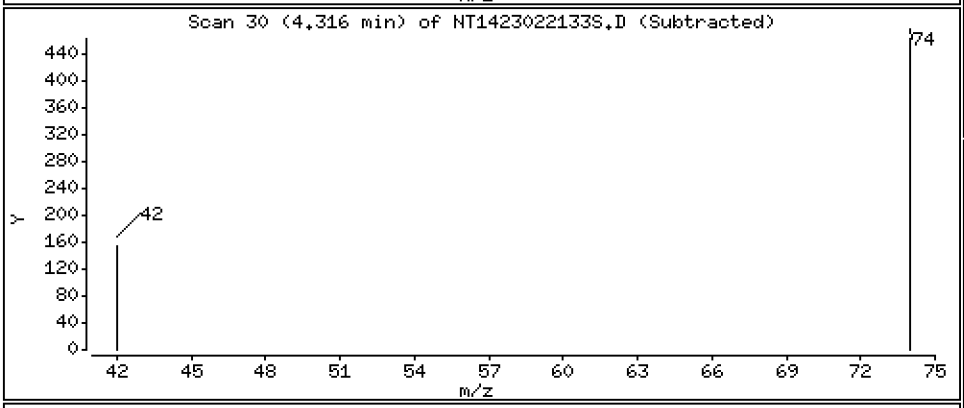
Column diameter: 0.25

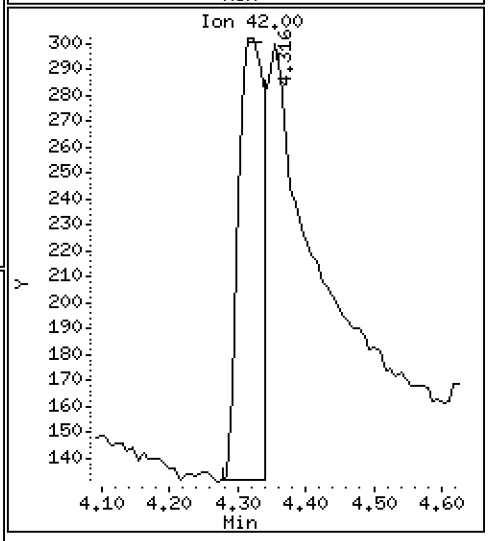
90 N-Nitrosodimethylamine

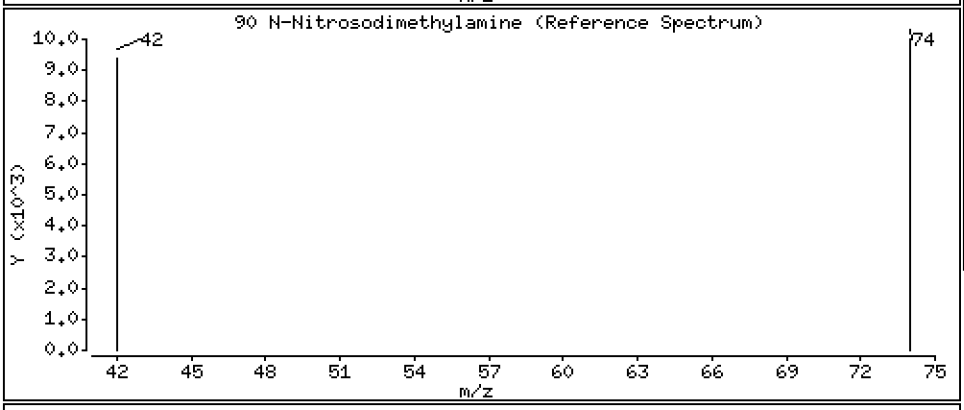
Concentration: 0.08563 ug/mL

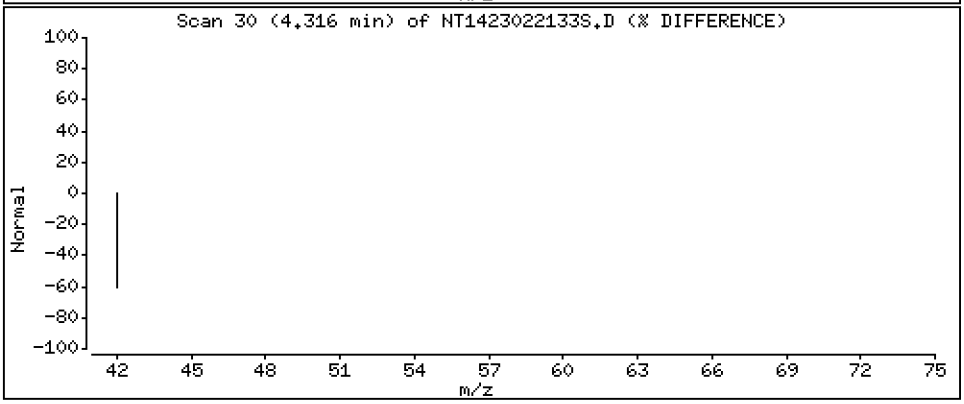












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\NT1423022133S.D
Lab Smp Id: SLB0349-LCV1
Inj Date : 22-FEB-2023 08:44 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SIM-LCV3
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Meth Date : 17-Jun-2023 09:15 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

							CONCENTRATIONS	
		QUANT SIG					ON-COLUMN	FINAL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
$	1 2-Fluorophenol	112	6.401	6.385	(0.747)	4539	0.06236	0.06236(R)
	3 Phenol	94	8.008	7.993	(0.934)	12704	0.11828	0.1183(M)
	7 1,3-Dichlorobenzene	146	8.503	8.503	(0.992)	10188	0.11944	0.1194
*	8 1,4-Dichlorobenzene-d4	152	8.573	8.573	(1.000)	250681	4.00000	
	9 1,4-Dichlorobenzene	146	8.596	8.596	(1.003)	10503	0.12908	0.1291
	11 Benzyl alcohol	79	8.930	8.867	(1.042)	3364	0.04900	0.04900
	12 1,2-Dichlorobenzene	146	8.953	8.953	(1.044)	9964	0.12316	0.1232
	13 2-Methylphenol	108	9.108	9.093	(1.062)	8566	0.11512	0.1151
	15 4-Methylphenol	108	9.396	9.372	(1.096)	6836	0.08391	0.08391
	16 N-Nitroso-di-n-propylamine	70	9.411	9.411	(1.098)	8187	0.13108	0.1311
	22 2,4-Dimethylphenol	107	10.404	10.404	(0.942)	19823	0.23048	0.2305
	24 Benzoic acid	105	10.645	10.606	(0.964)	39558	0.88885	0.8888(M)
	26 1,2,4-Trichlorobenzene	180	10.962	10.962	(0.993)	10401	0.12060	0.1206(M)
*	27 Naphthalene-d8	136	11.040	11.039	(1.000)	941427	4.00000	
	30 Hexachlorobutadiene	225	11.449	11.449	(1.037)	6101	0.11628	0.1163
	39 Dimethylphthalate	163	14.181	14.180	(0.968)	19490	0.12745	0.1275
*	42 Acenaphthene-d10	162	14.645	14.645	(1.000)	501249	4.00000	
	50 Diethylphthalate	149	15.635	15.634	(1.068)	23250	0.12148	0.1215
	54 N-Nitrosodiphenylamine	169	16.013	16.005	(0.906)	17836	0.11885	0.1188
	57 Hexachlorobenzene	284	17.054	17.054	(0.965)	9083	0.11665	0.1166
	58 Pentachlorophenol	266	17.550	17.426	(0.993)	963	0.03040	0.03040(M)
*	59 Phenanthrene-d10	188	17.674	17.673	(1.000)	1198933	4.00000	
$	66 Terphenyl-d14	244	20.869	20.869	(0.917)	31049	0.13364	0.1336(R)
	67 Butylbenzylphthalate	149	21.814	21.813	(0.958)	14399	0.13139	0.1314
*	69 Chrysene-d12	240	22.766	22.766	(1.000)	872687	4.00000	
*	77 Perylene-d12	264	25.213	25.212	(1.000)	655540	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.569	27.553	(1.093)	16456	0.14337	0.1434
	90 N-Nitrosodimethylamine	74	4.316	4.277	(0.503)	4781	0.08563	0.08563

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022133S.D
Lab Smp Id: SLB0349-LCV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221B.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 08:08
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	261796	130898	523592	250681	-4.25
27 Naphthalene-d8	959301	479651	1918602	941427	-1.86
42 Acenaphthene-d10	503659	251830	1007318	501249	-0.48
59 Phenanthrene-d10	1179954	589977	2359908	1198933	1.61
69 Chrysene-d12	887360	443680	1774720	872687	-1.65
77 Perylene-d12	652371	326186	1304742	655540	0.49

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	0.00
59 Phenanthrene-d10	17.67	17.17	18.17	17.67	0.00
69 Chrysene-d12	22.77	22.27	23.27	22.77	0.00
77 Perylene-d12	25.21	24.71	25.71	25.21	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022133S.D

Lab ID: SLB0349-LCV1
nt14.i, 20230221B.b\SIM.b\SIMABN2.m,   22-FEB-2023 08:44

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.042	1.034	0.0072	Benzyl alcohol
0.993	0.986	0.0070	Pentachlorophenol

RRT check based on Ccal File: SIM.b/NT1423022132S.D

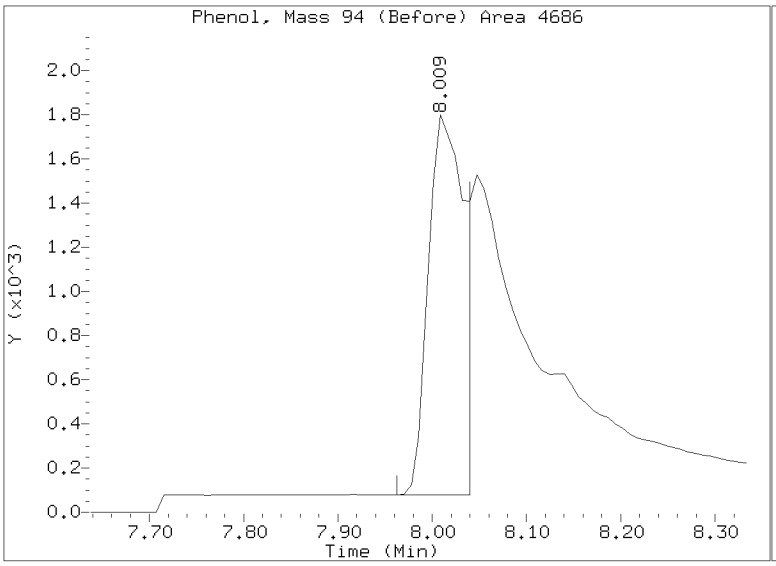
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

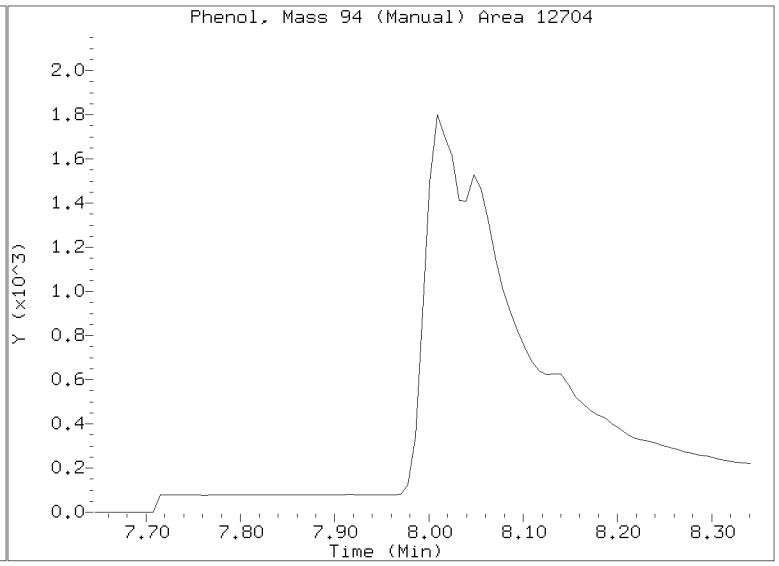
Exception: 1,2,4-Trichlorobenzene 0.0010

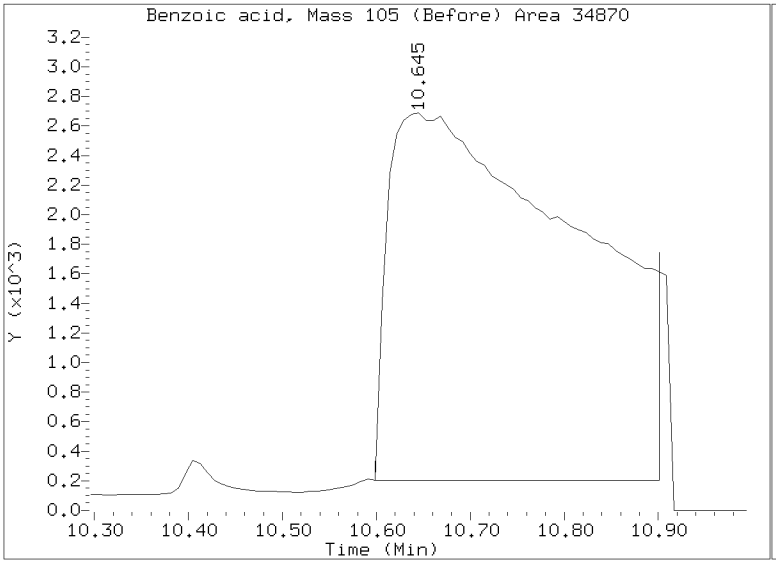
* Only compounds listed in the work order have been verified by the analyst *

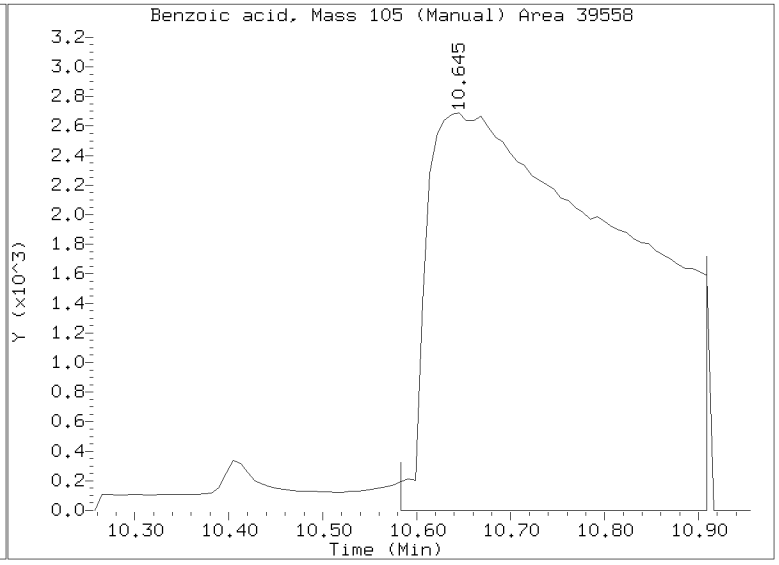
Quant Ion Manual Peak Adjustment Report

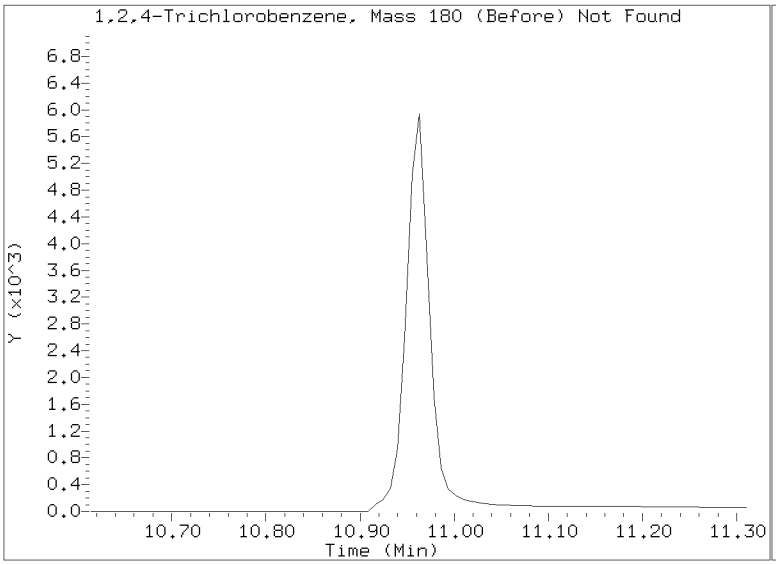
Datafile: //target/share/chem3/nt14.i/20230221B.b/SIM.b/NT1423022133S.D
Injection Date: 22-FEB-2023 08:44
Lab ID:SLB0349-LCV1 Client ID:
Report Date: 06/17/2023 09:47

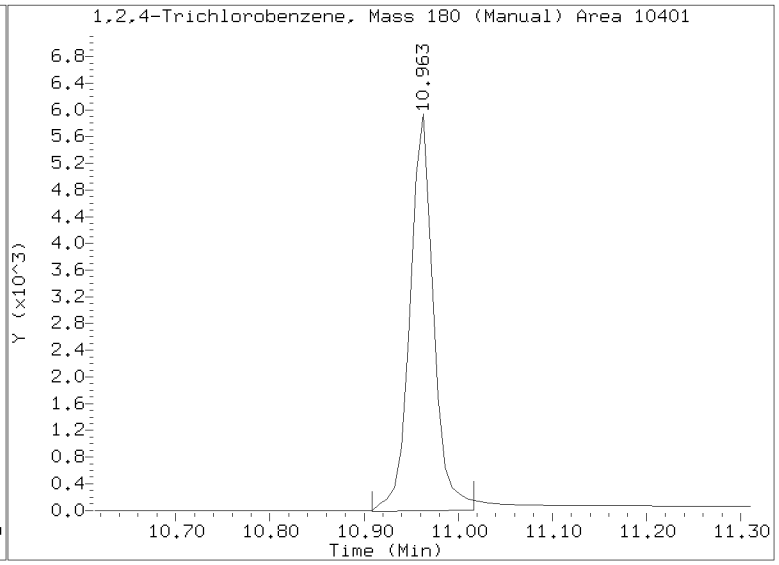






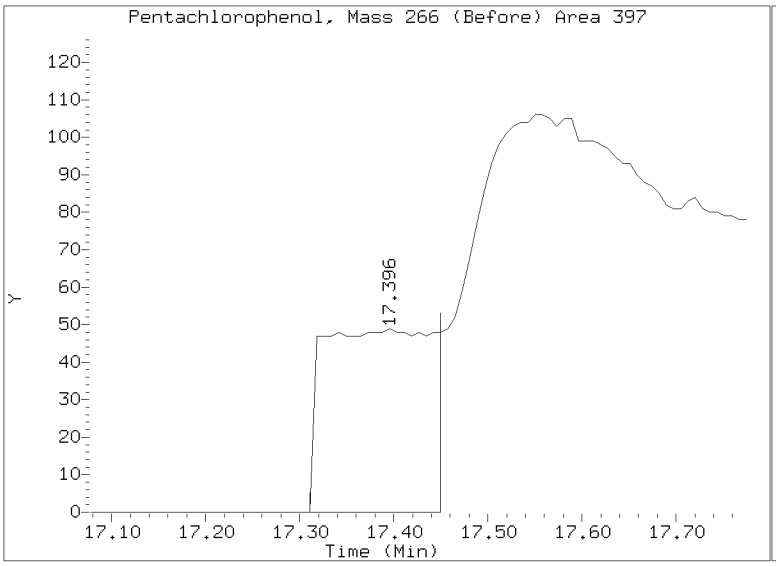


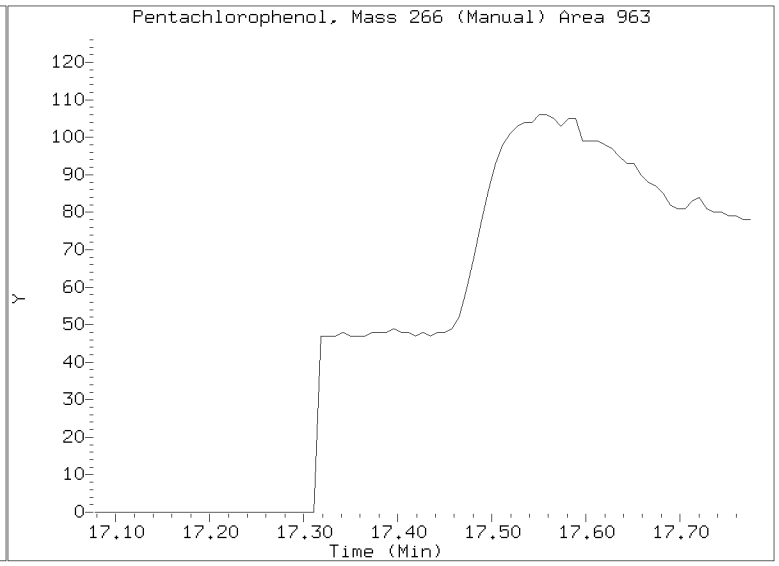




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221B.b/SIM.b/NT1423022133S.D
Injection Date: 22-FEB-2023 08:44
Lab ID:SLB0349-LCV1 Client ID:
Report Date: 06/17/2023 09:47





Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00009
Lab File ID:	NT1423022162S.D	Calibration Date:	02/16/2023
Sequence:	SLB0351	Injection Date:	02/23/23
Lab Sample ID:	SLB0351-CCV1	Injection Time:	02:14
Sequence Name:	Calibration Check		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	1.0000	1.1	1.2983440	1.4335330		10.4	+/-50
1,2-Dichlorobenzene	A	1.0000	1.1	1.2909230	1.3887270		7.6	+/-50
Benzyl Alcohol	A	1.0000	1.1	1.0954840	1.1826370		8.0	+/-50
Benzoic acid	A	4.0000	2.4	0.1890948	0.1128025		-40.3	+/-50
2,4-Dimethylphenol	A	2.0000	3.0	0.3263158	0.5297863		49.8	+/-50
1,2,4-Trichlorobenzene	A	1.0000	1.0	0.3664516	0.3710211		1.2	+/-50
N-Nitrosodiphenylamine	A	1.0000	1.2	0.4912986	0.6131323		21.2	+/-50
Pentachlorophenol	A	2.0000	1.8	0.0811080	0.0981403		-8.7	+/-50
2-Fluorophenol	A	1.5000	1.59	0.8380777	1.2210890		5.9	+/-50
p-Terphenyl-d14	A	1.0000	1.36	1.0648810	1.4485650		36.0	+/-50

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230222162S.D

Page 1

Date : 23-FEB-2023 02:14

Client ID:

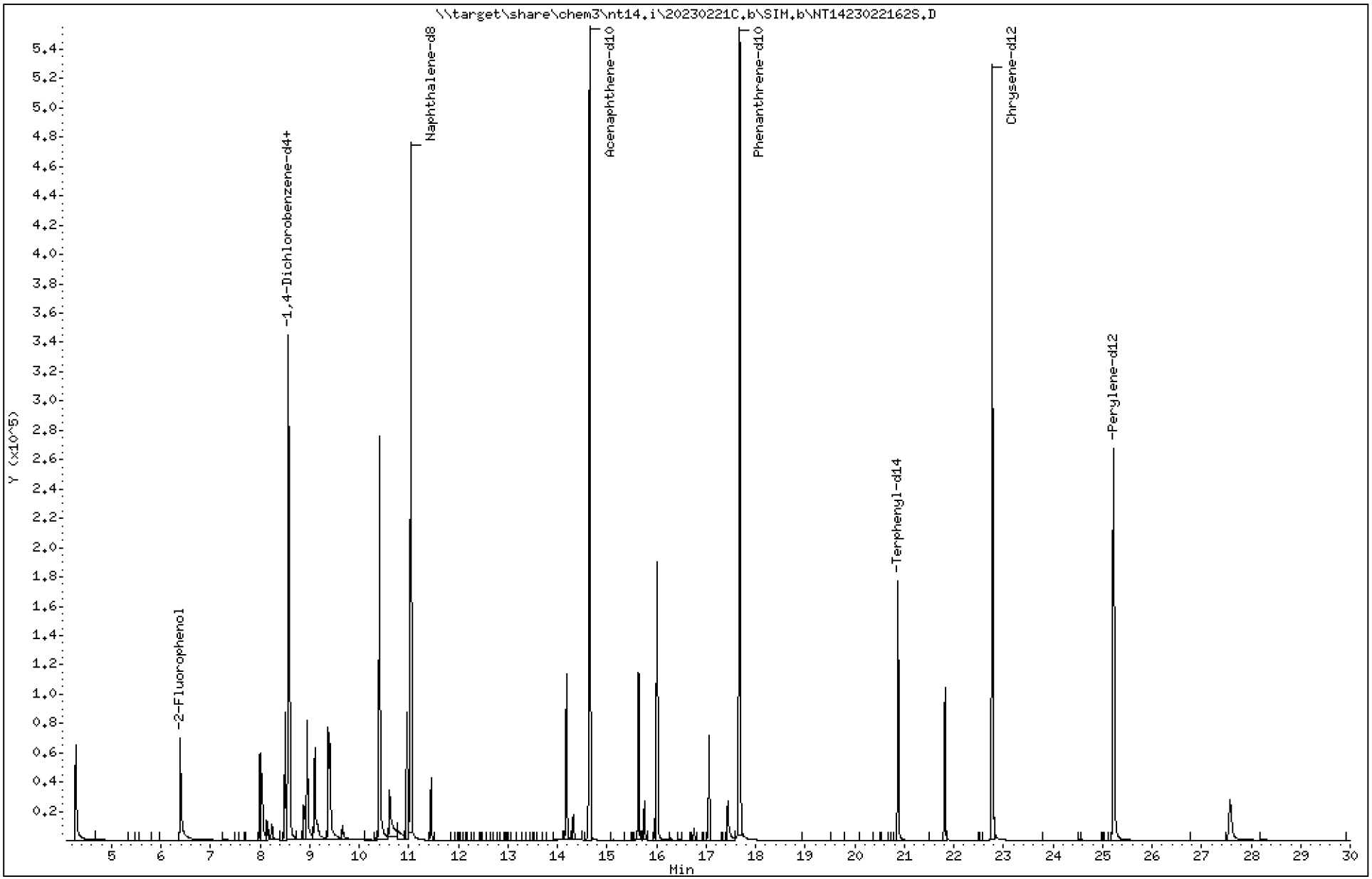
Instrument: nt14.i

Sample Info: SLB0351-CCV1

Operator: DSD

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

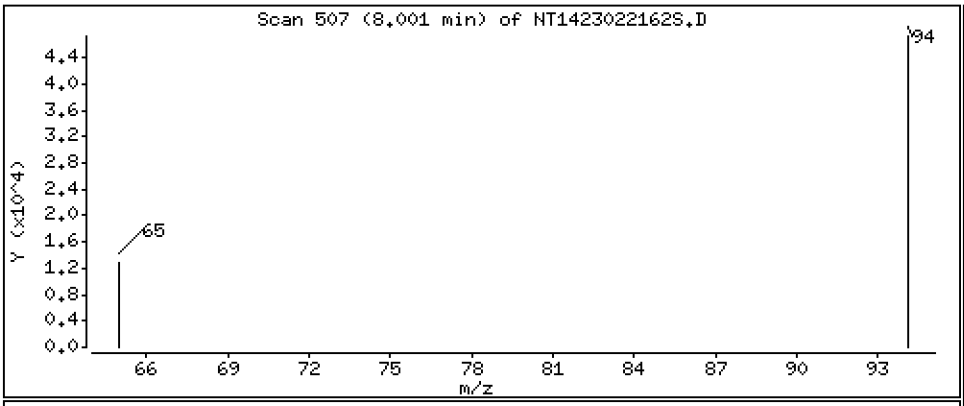
Operator: DSD

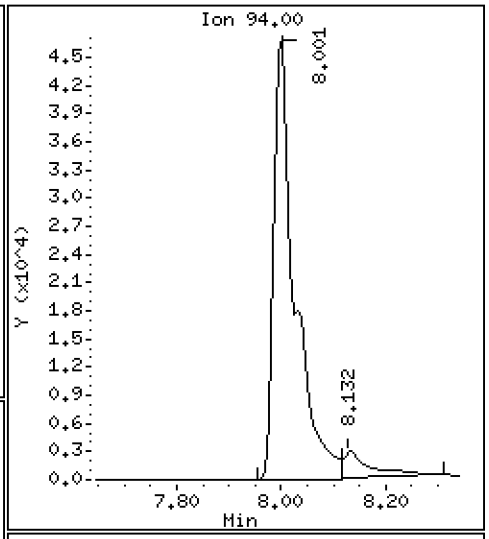
Column phase: ZB-5msi

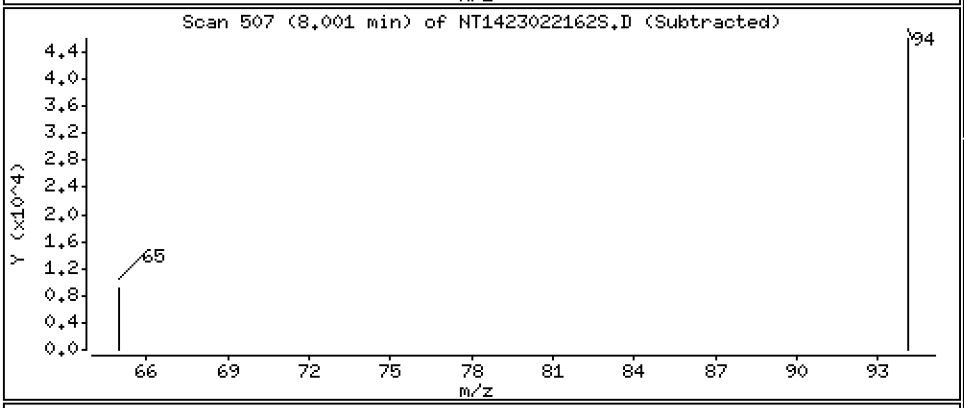
Column diameter: 0.25

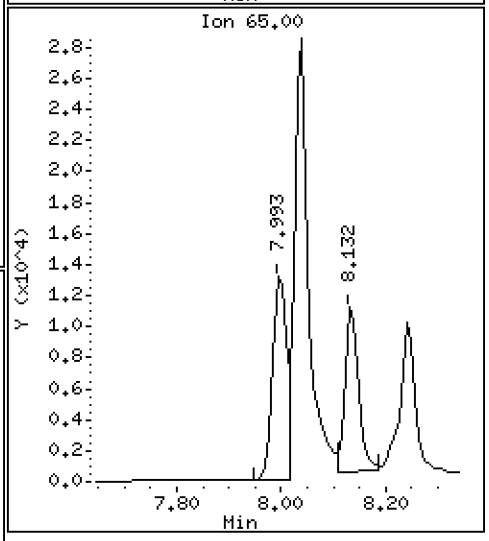
3 Phenol

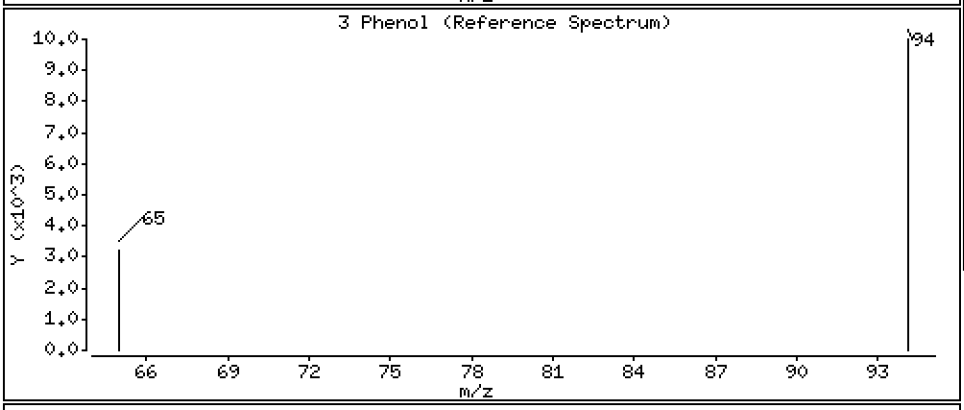
Concentration: 1.324 ug/mL

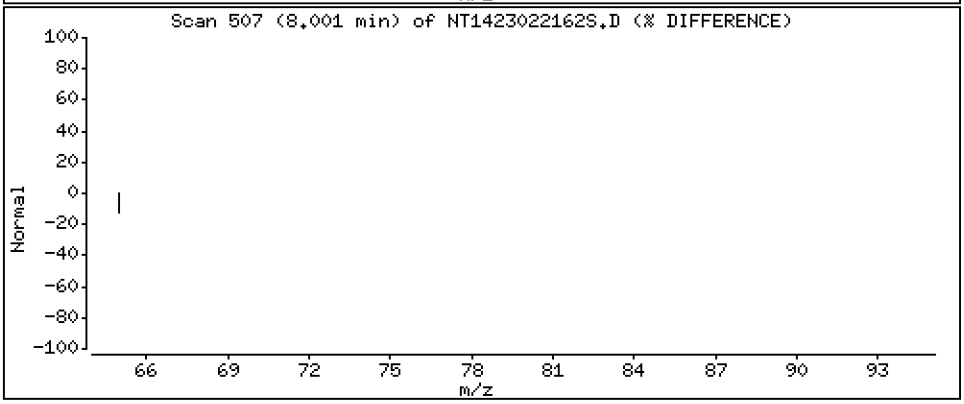












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022162S.D

Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

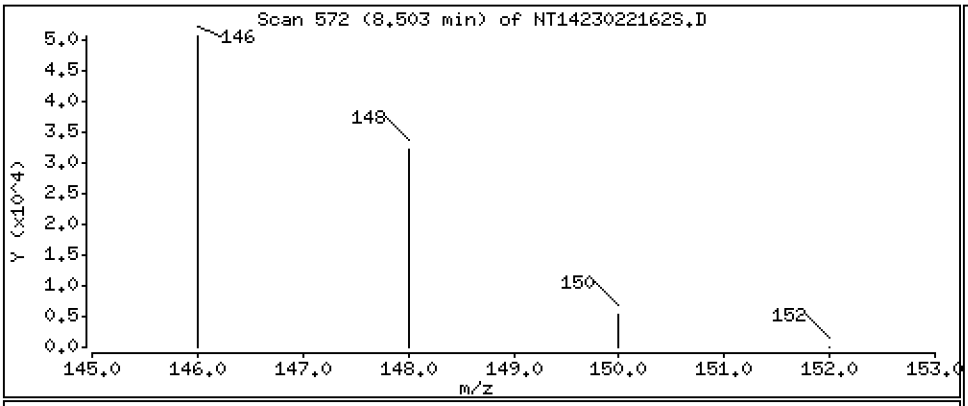
Operator: DSD

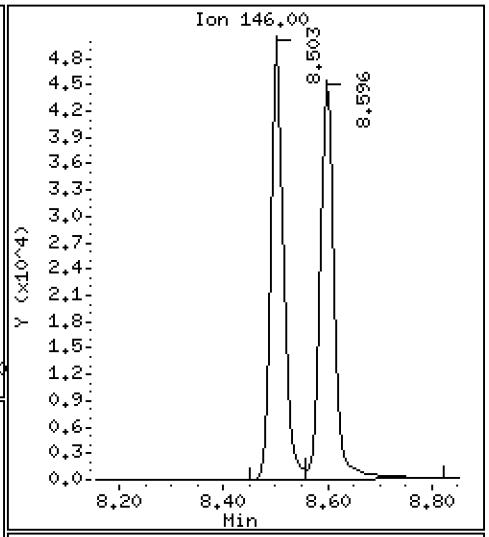
Column phase: ZB-5msi

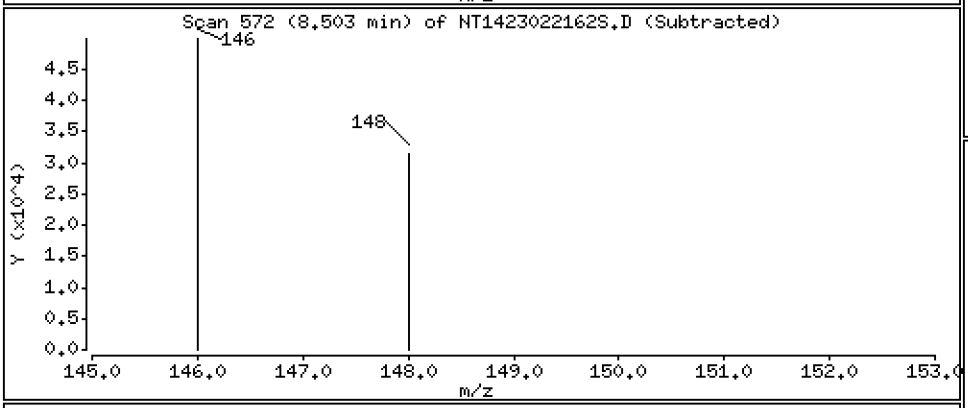
Column diameter: 0.25

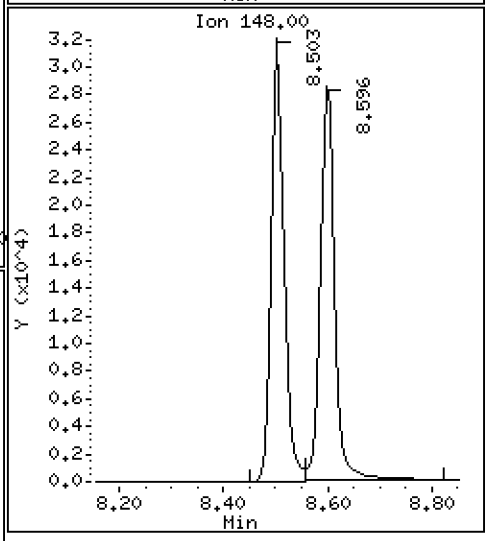
7 1,3-Dichlorobenzene

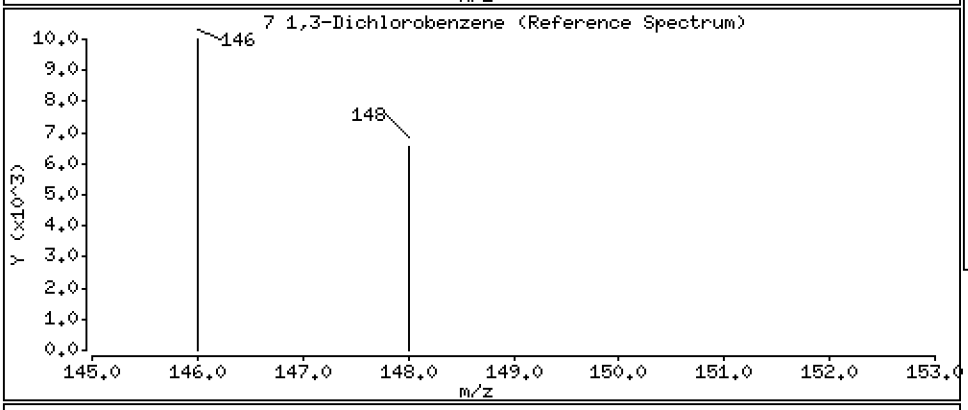
Concentration: 1.059 ug/mL

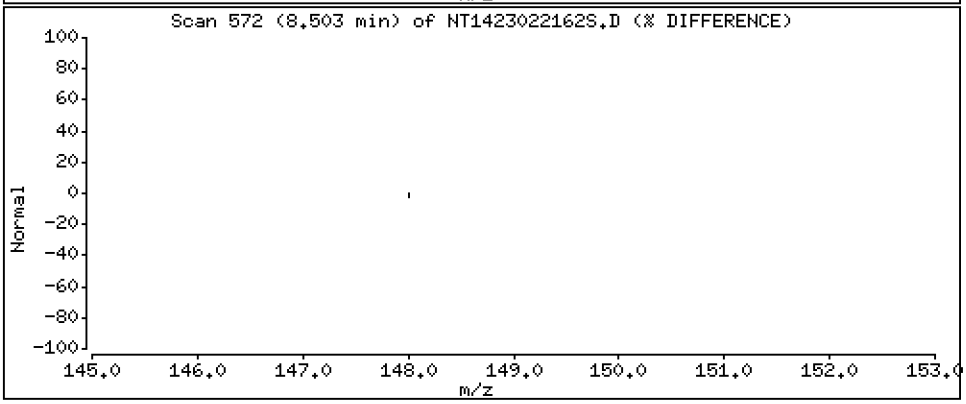












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022162S.D

Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

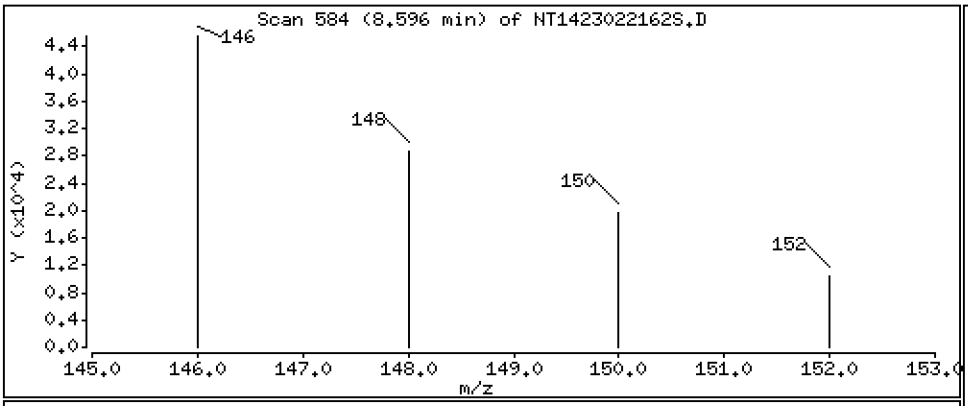
Operator: DSD

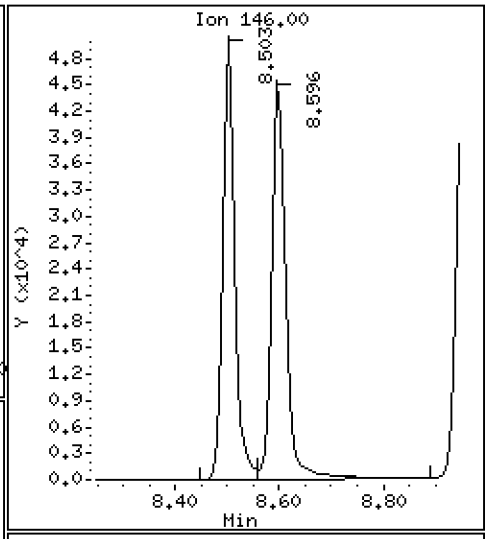
Column phase: ZB-5msi

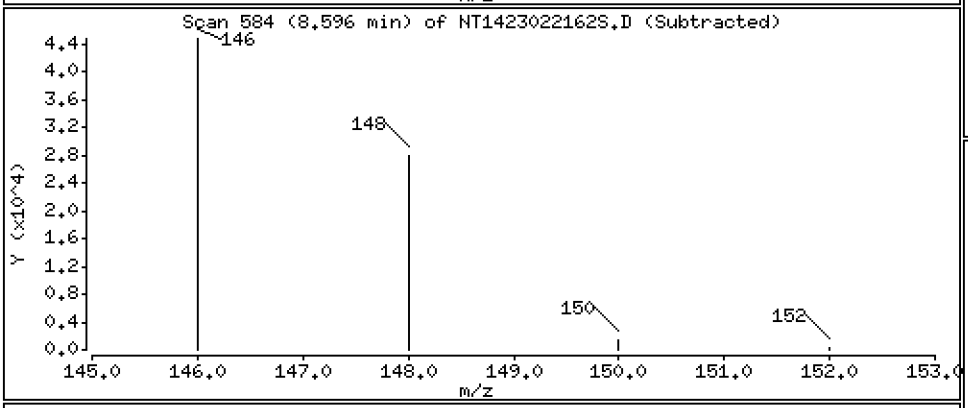
Column diameter: 0.25

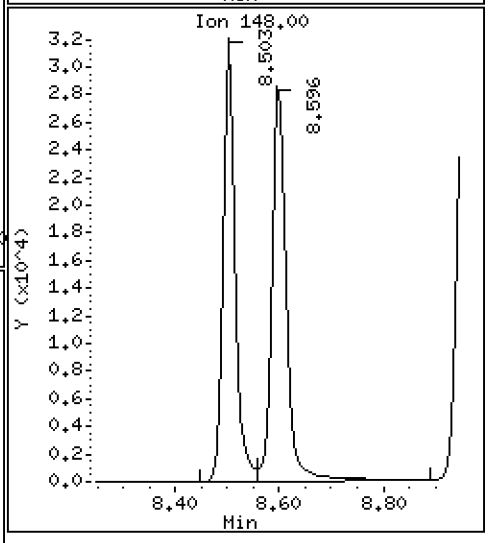
9 1,4-Dichlorobenzene

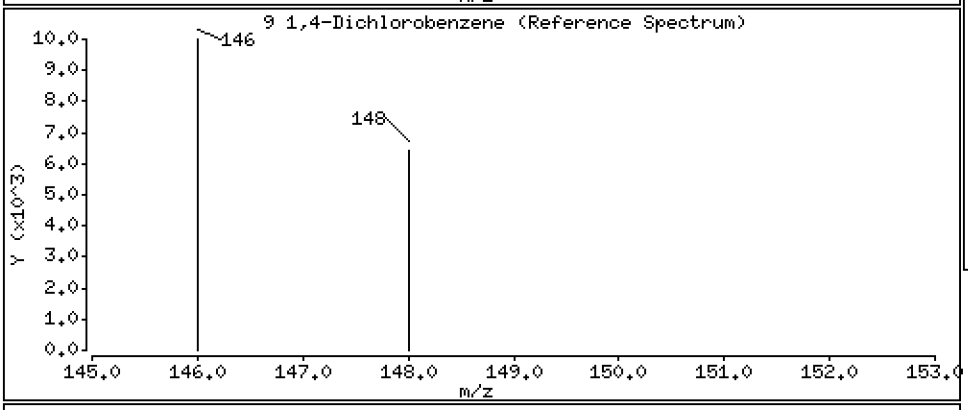
Concentration: 1.104 ug/mL

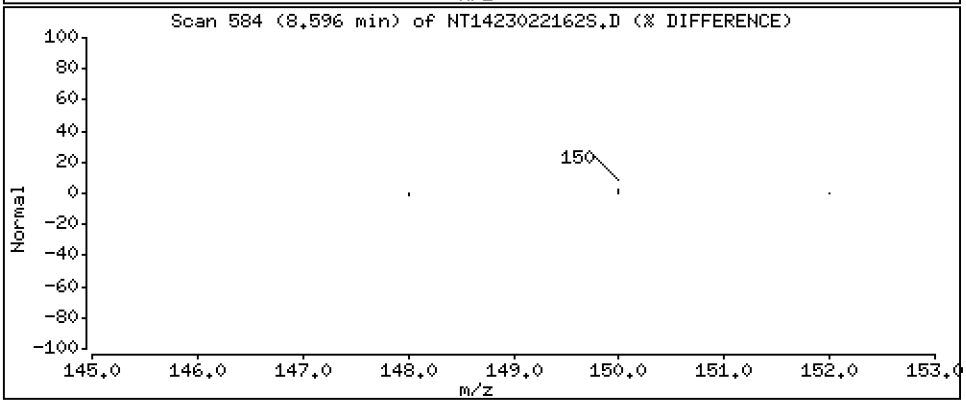












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022162S.D

Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

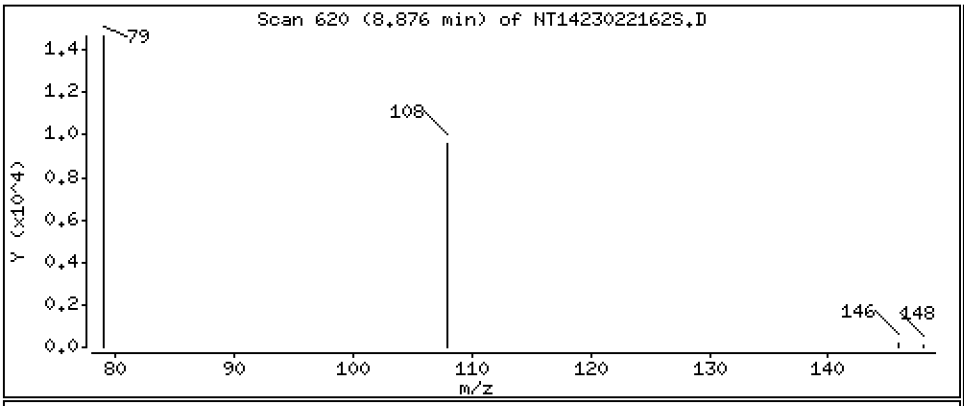
Operator: DSD

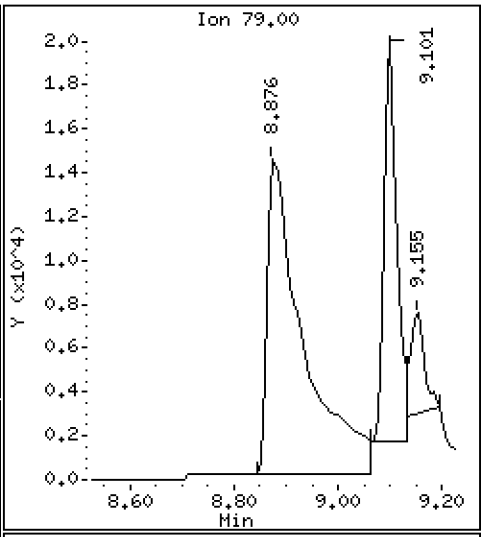
Column phase: ZB-5msi

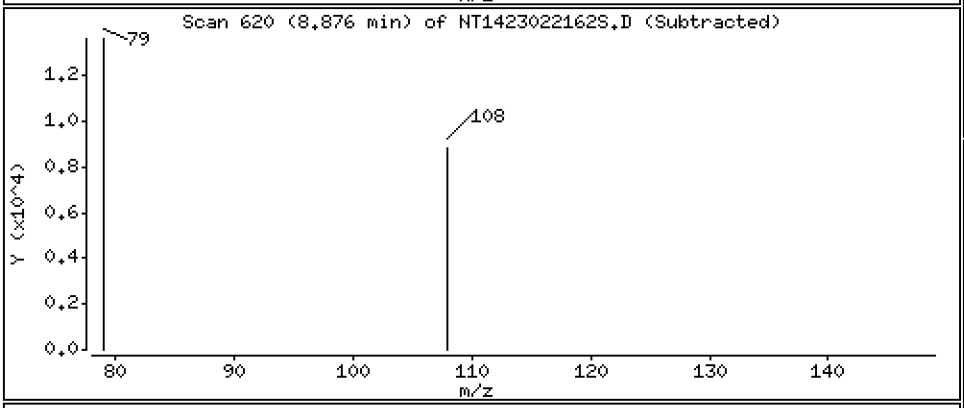
Column diameter: 0.25

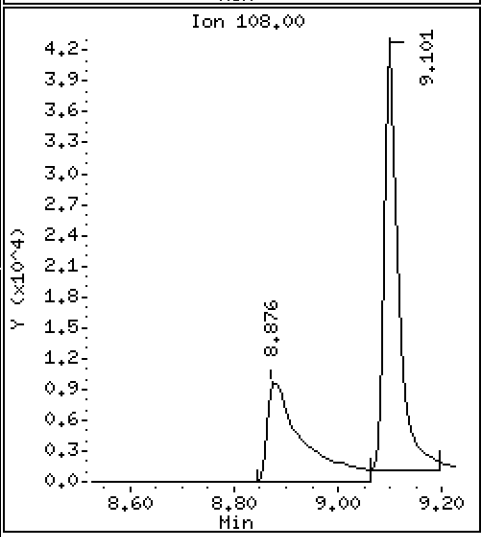
11 Benzyl alcohol

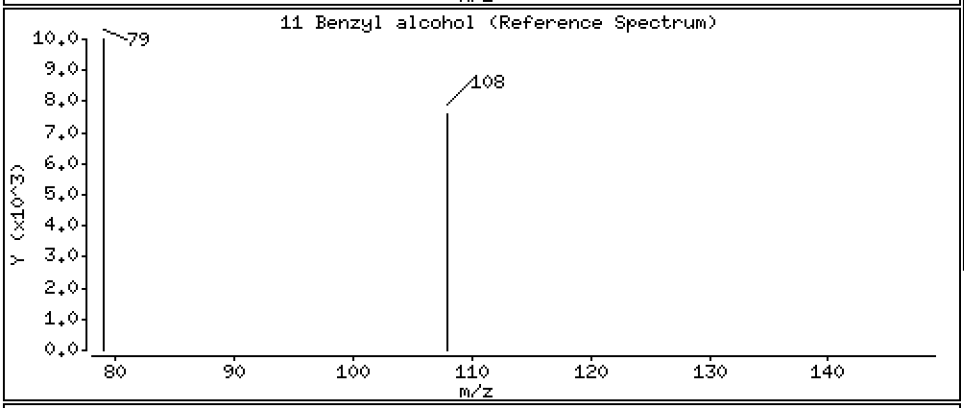
Concentration: 1.080 ug/mL

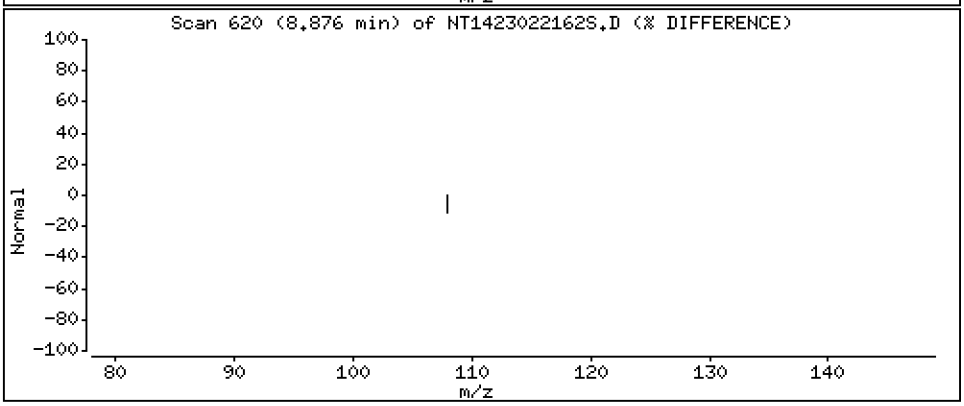












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230222162S.D

Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

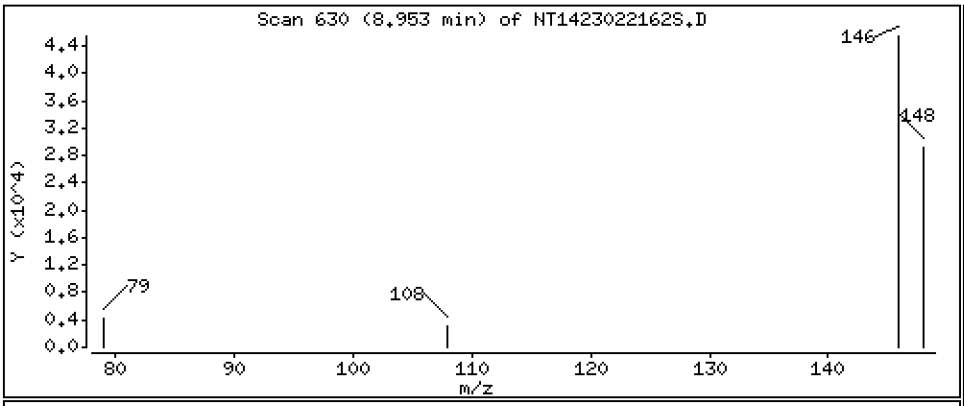
Operator: DSD

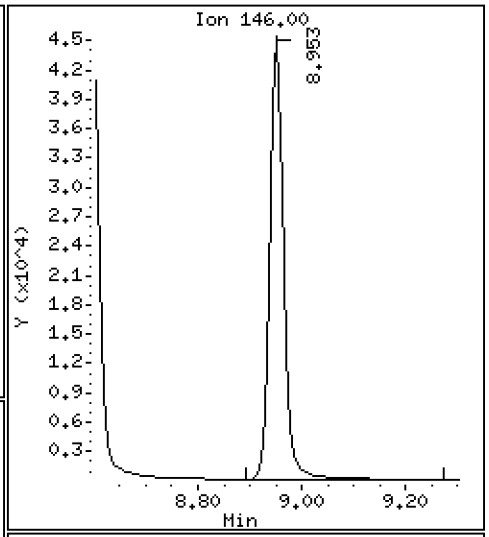
Column phase: ZB-5msi

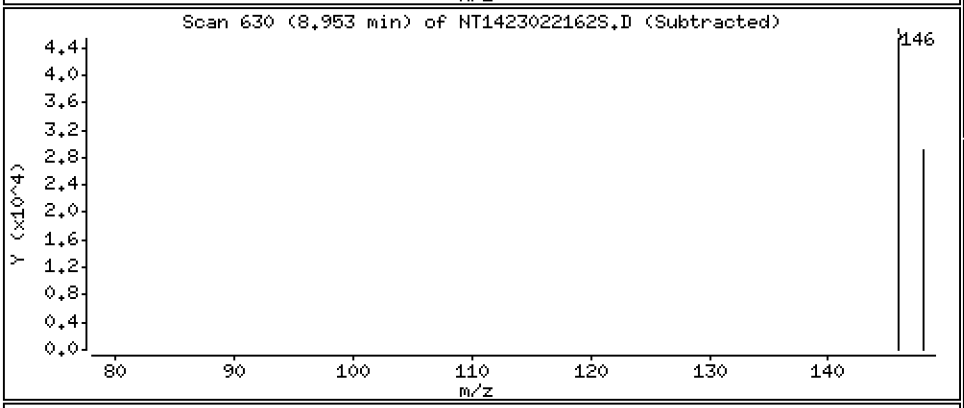
Column diameter: 0.25

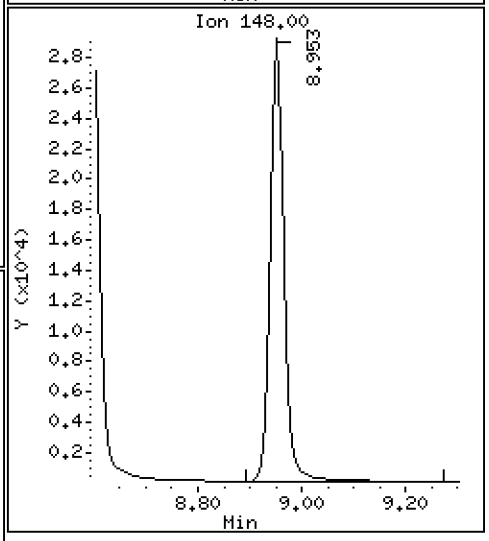
12 1,2-Dichlorobenzene

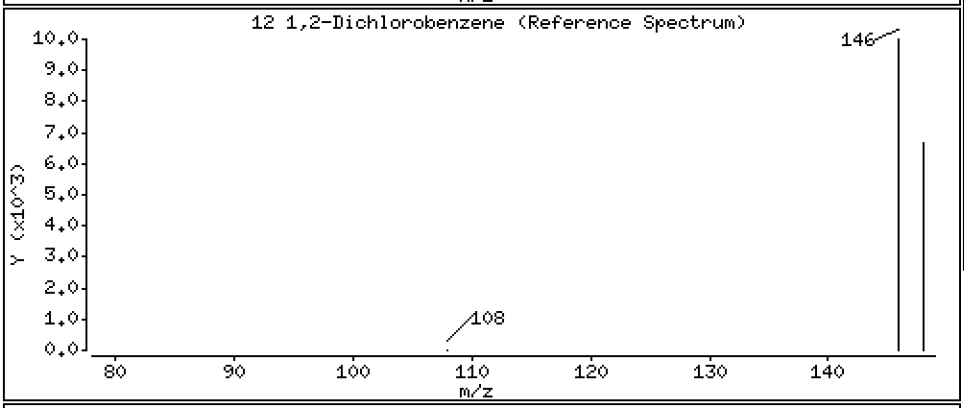
Concentration: 1.076 ug/mL

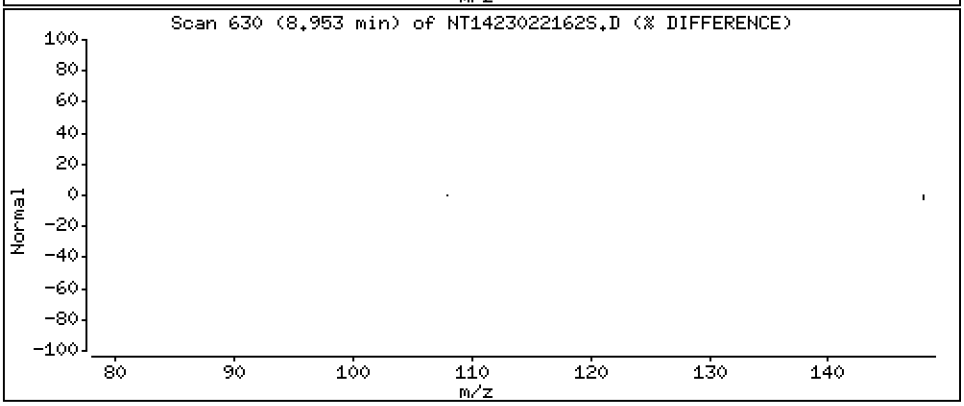












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Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

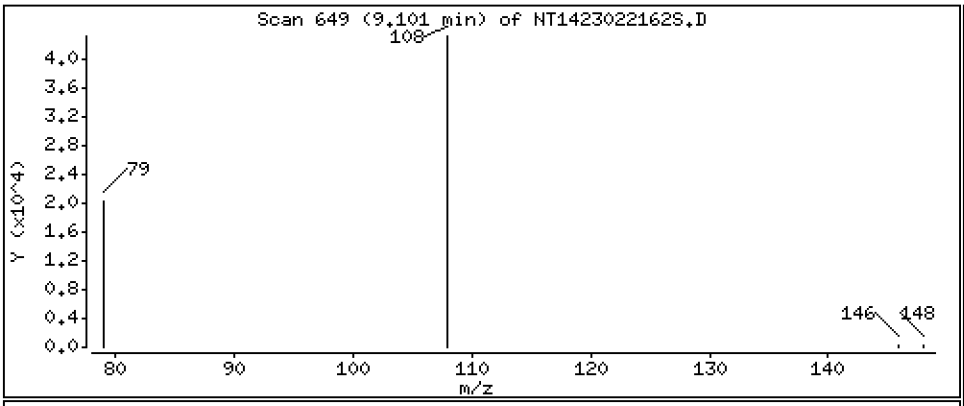
Operator: DSD

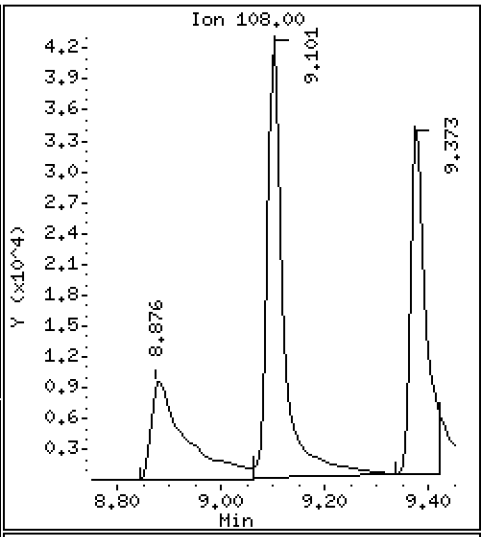
Column phase: ZB-5msi

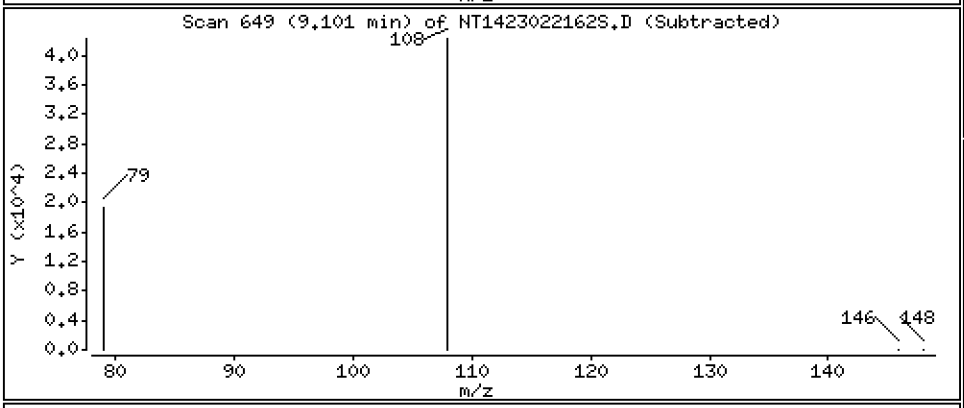
Column diameter: 0.25

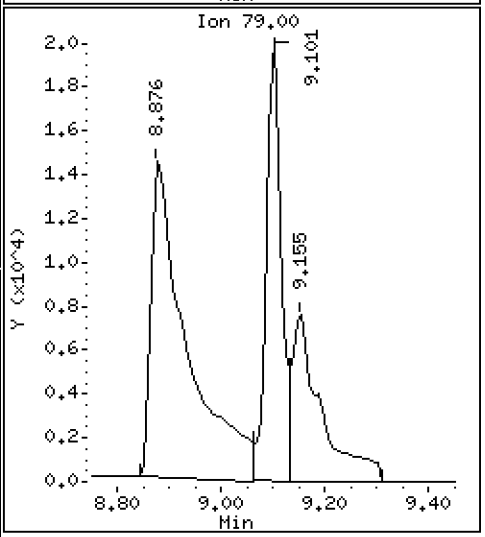
13 2-Methylphenol

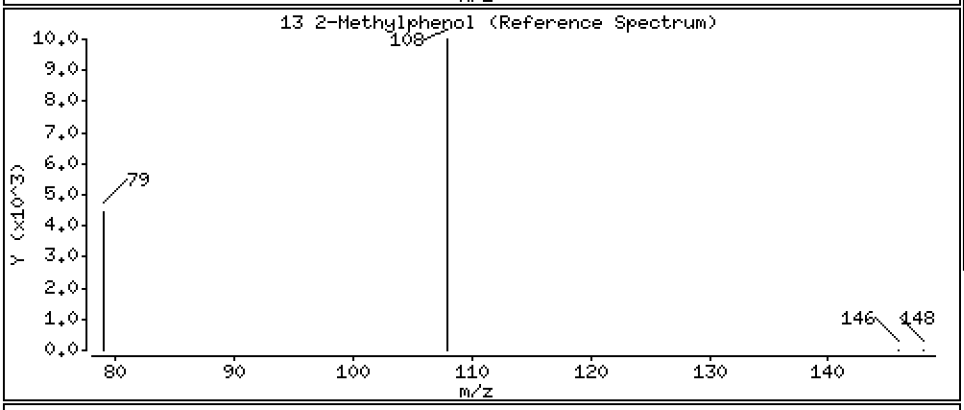
Concentration: 1.289 ug/mL

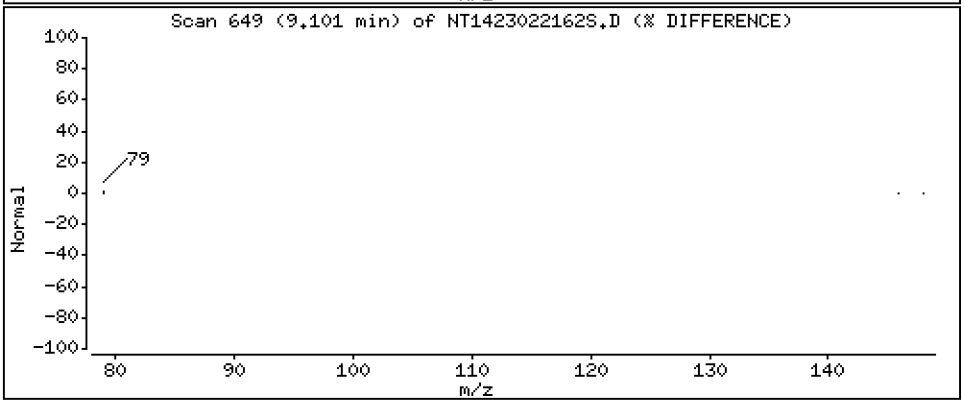












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Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

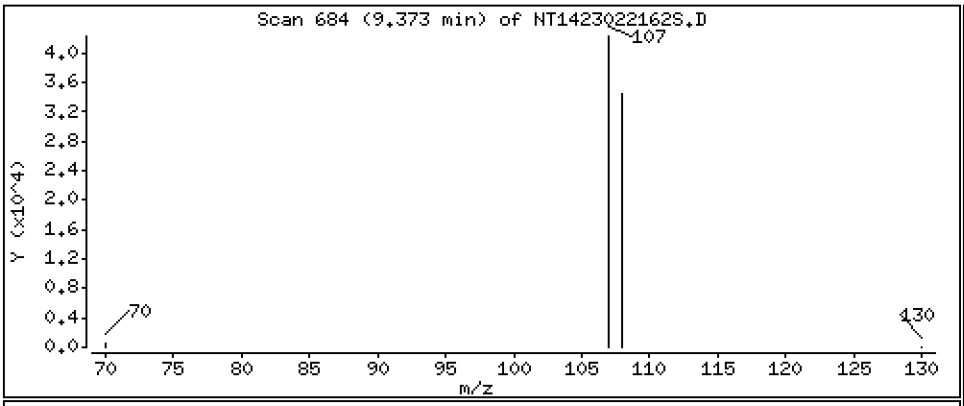
Operator: DSD

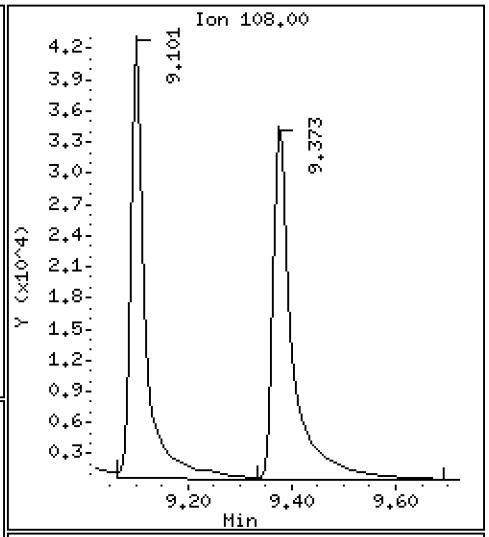
Column phase: ZB-5msi

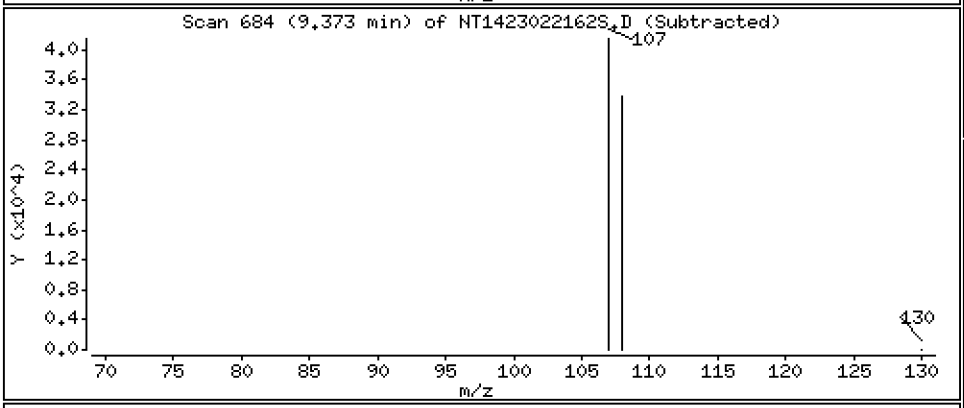
Column diameter: 0.25

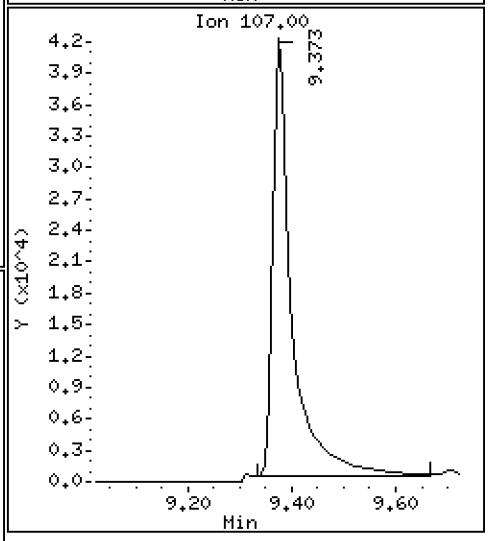
15 4-Methylphenol

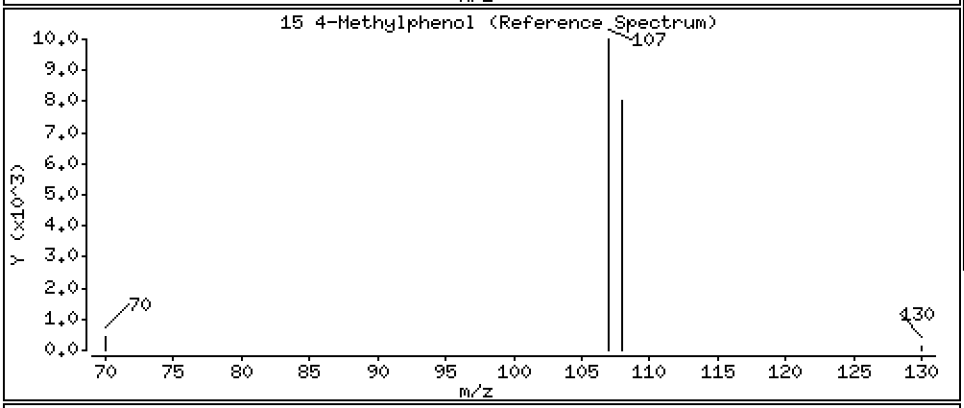
Concentration: 1.149 ug/mL

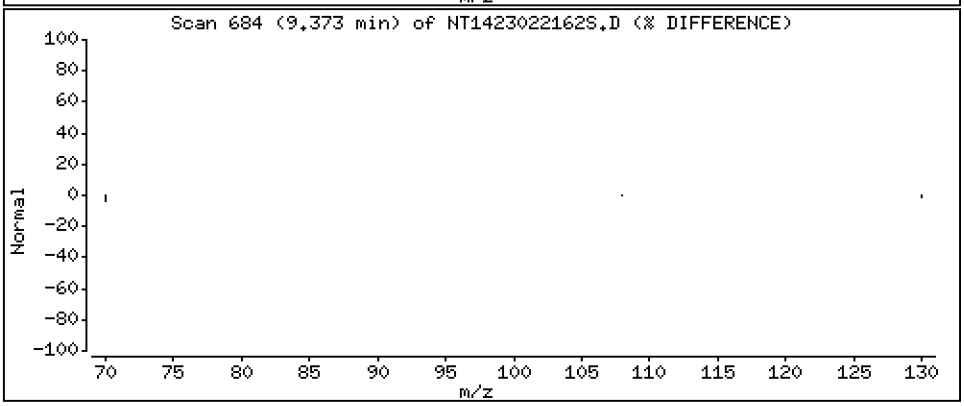












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Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

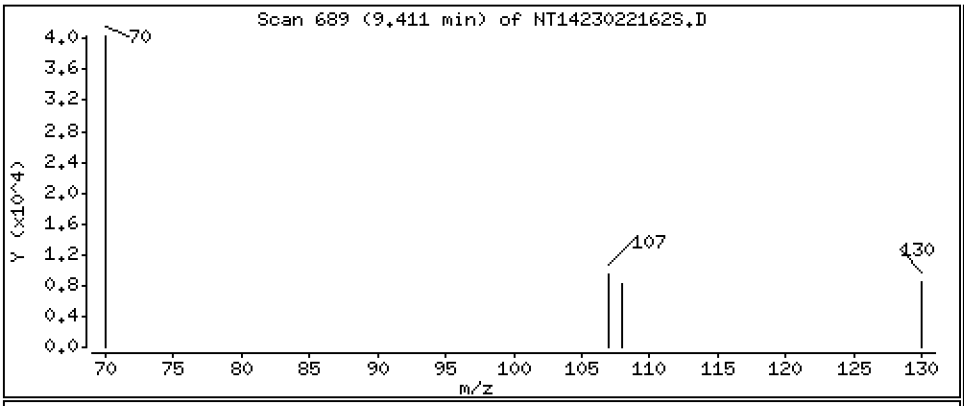
Operator: DSD

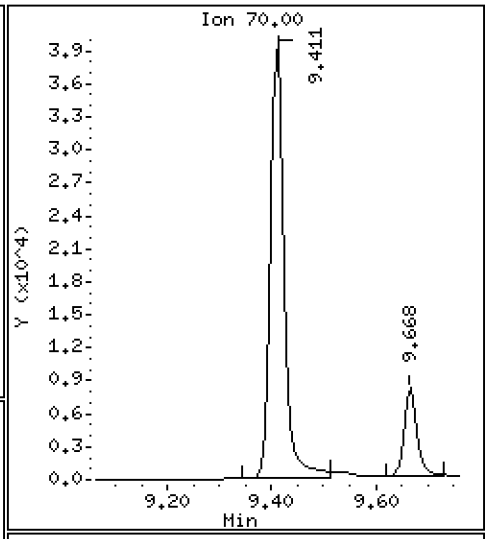
Column phase: ZB-5msi

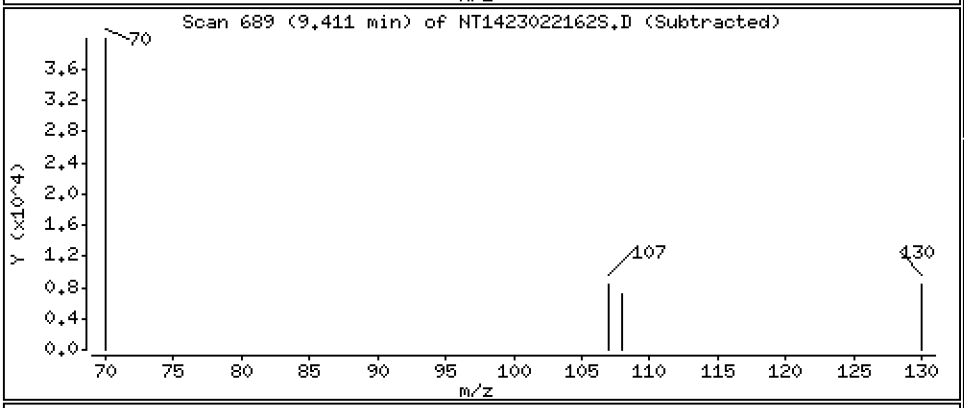
Column diameter: 0.25

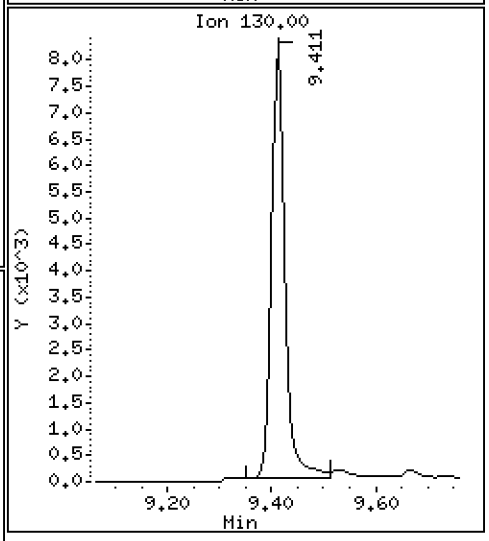
16 N-Nitroso-di-n-propylamine

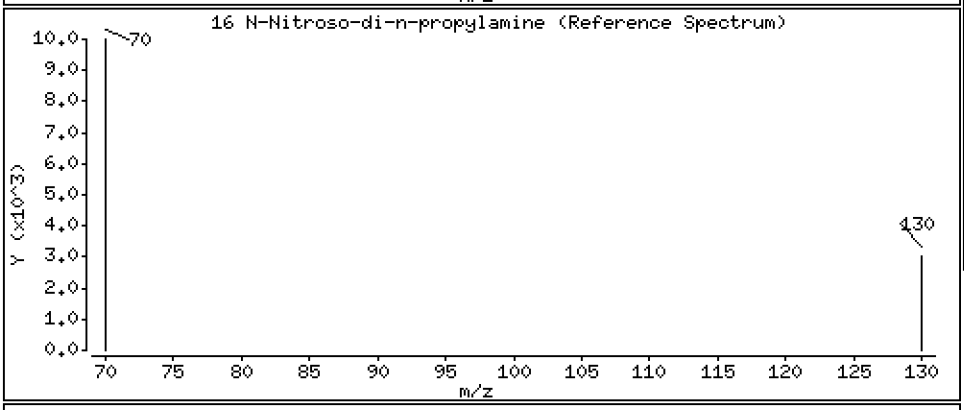
Concentration: 1.195 ug/mL

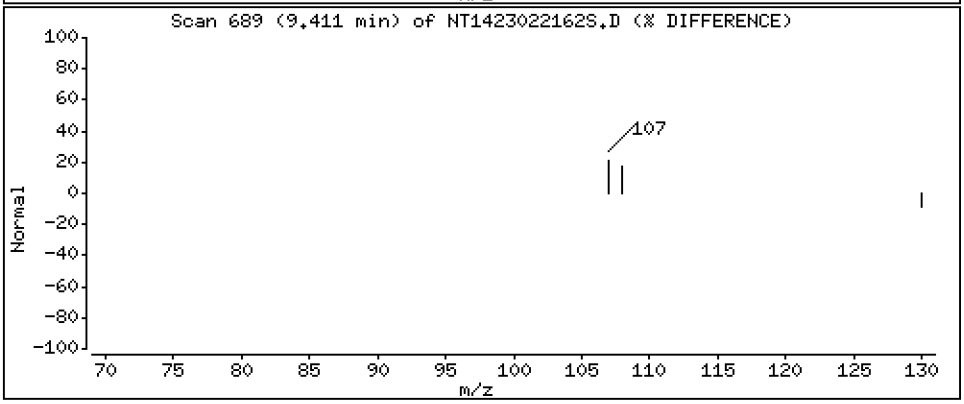












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Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

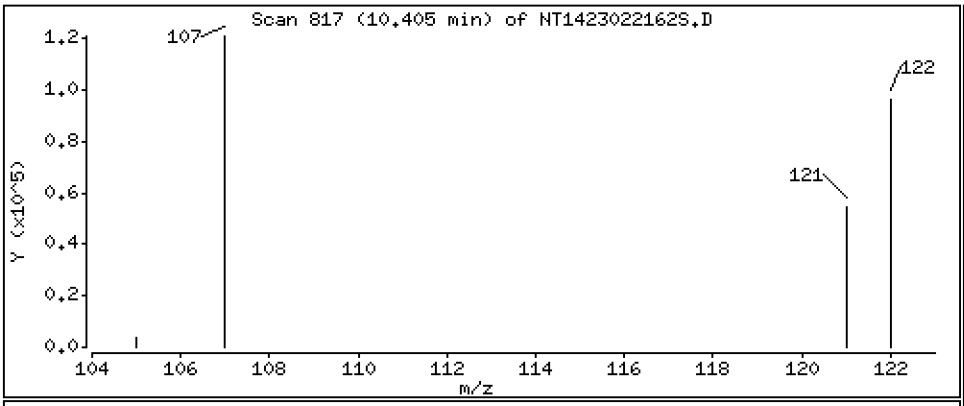
Operator: DSD

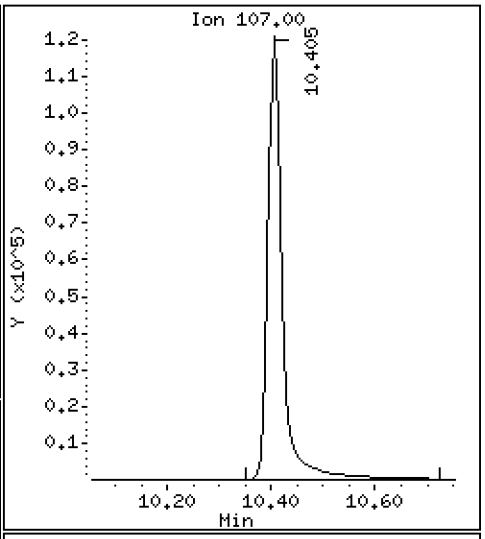
Column phase: ZB-5msi

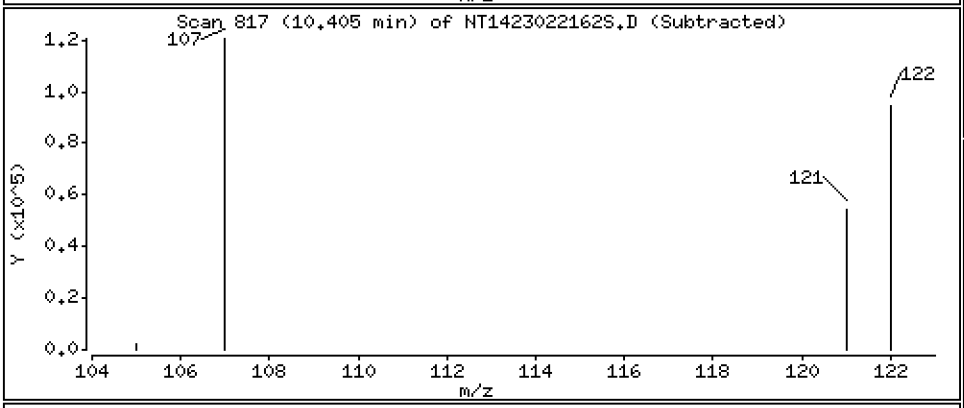
Column diameter: 0.25

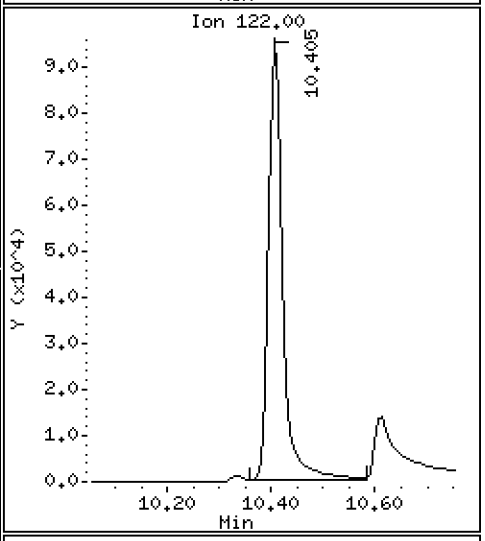
22 2,4-Dimethylphenol

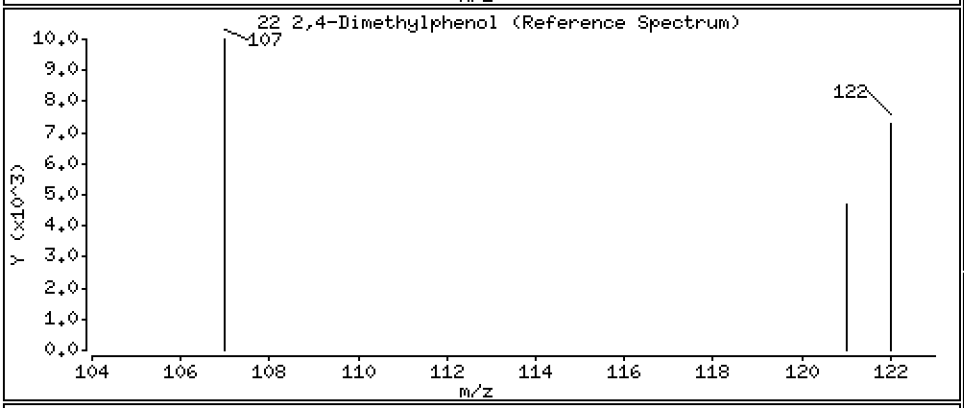
Concentration: 2.995 ug/mL

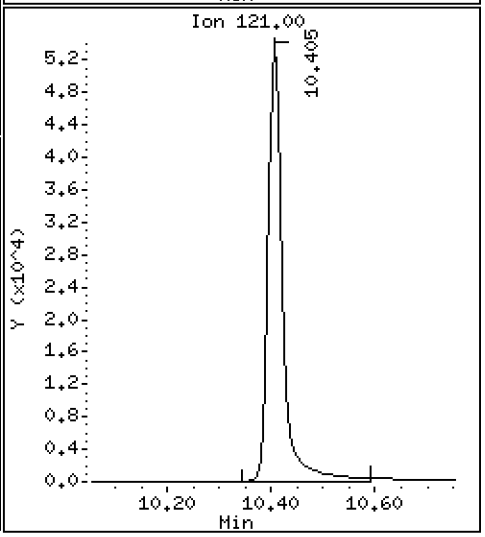


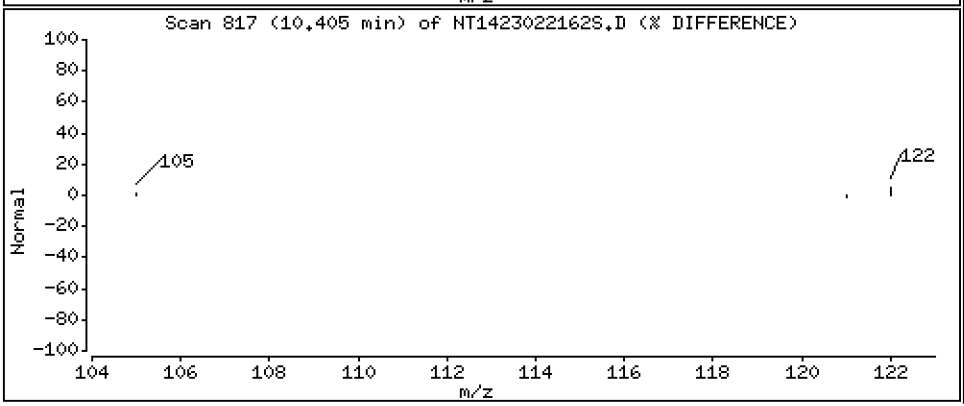












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022162S.D

Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

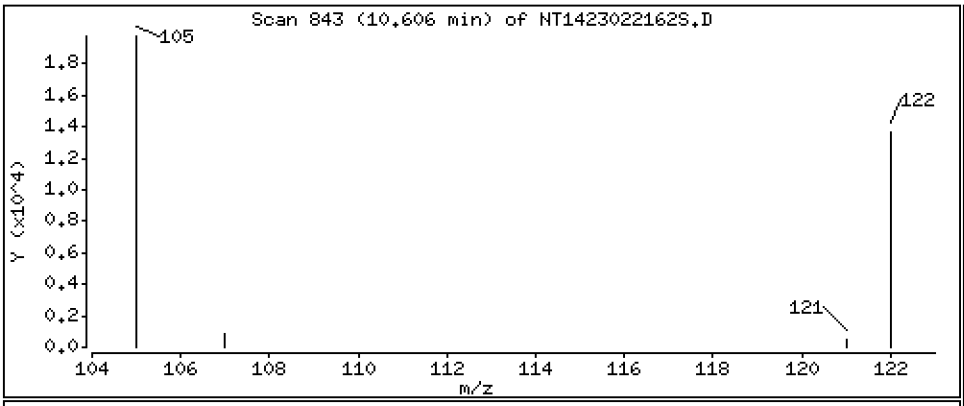
Operator: DSD

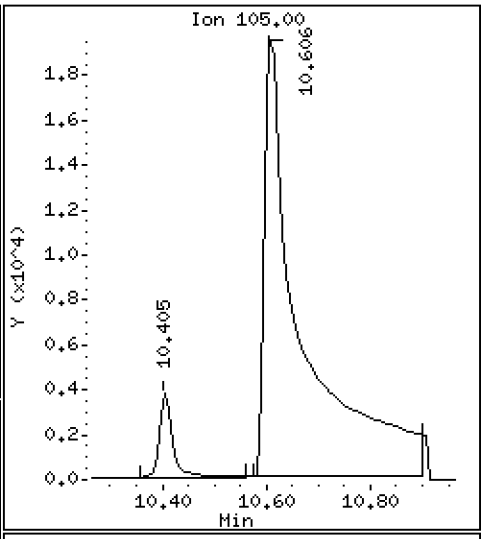
Column phase: ZB-5msi

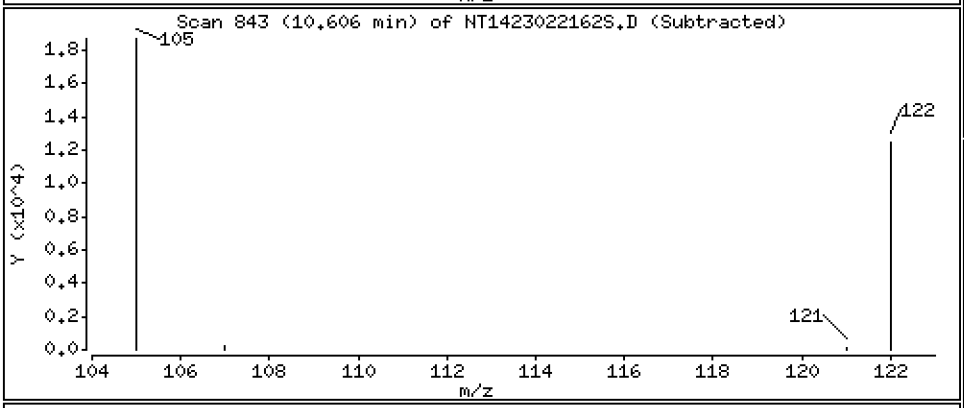
Column diameter: 0.25

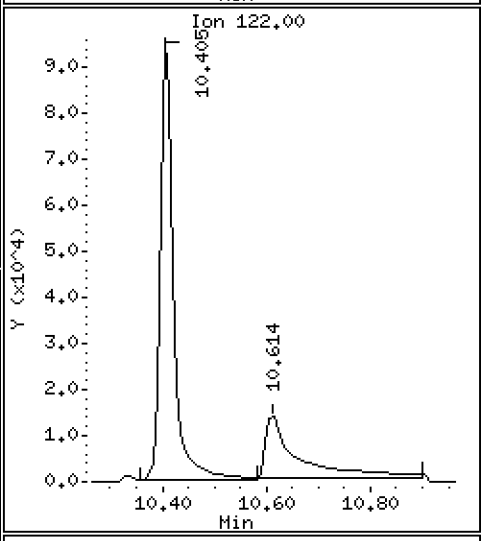
24 Benzoic acid

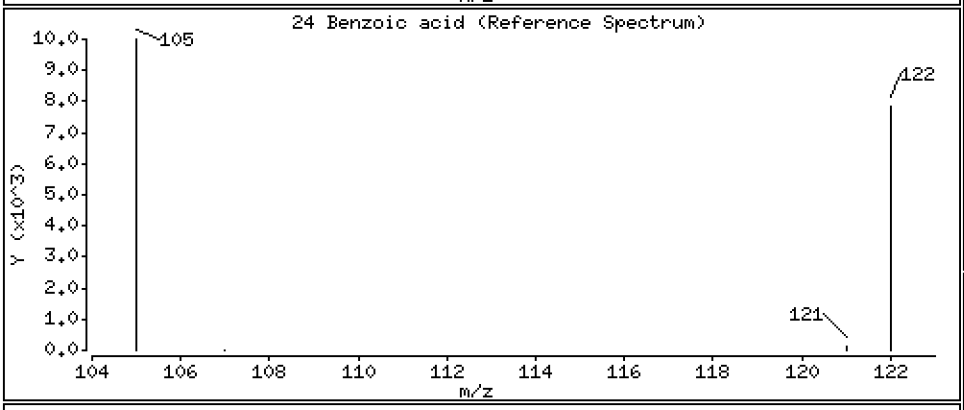
Concentration: 2.386 ug/mL

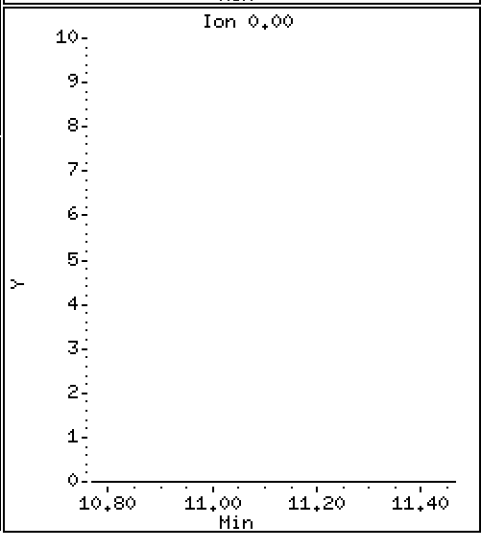


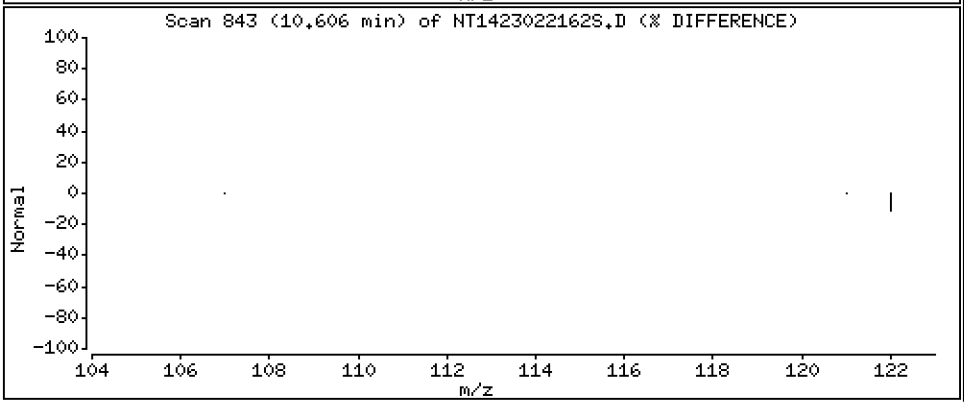












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Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

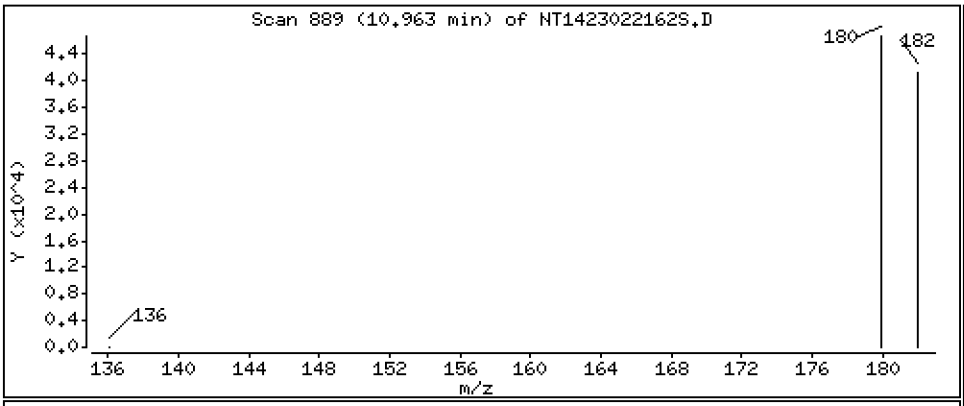
Operator: DSD

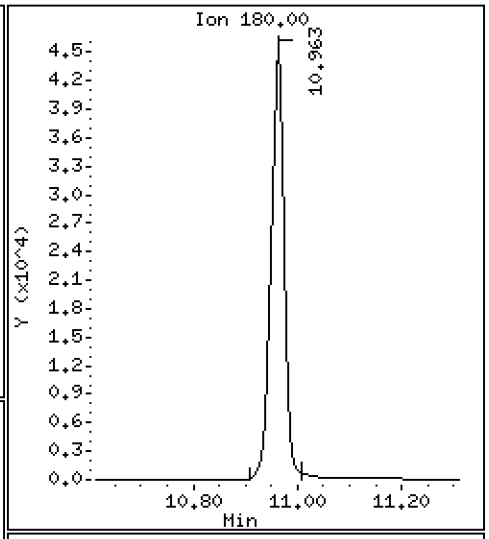
Column phase: ZB-5msi

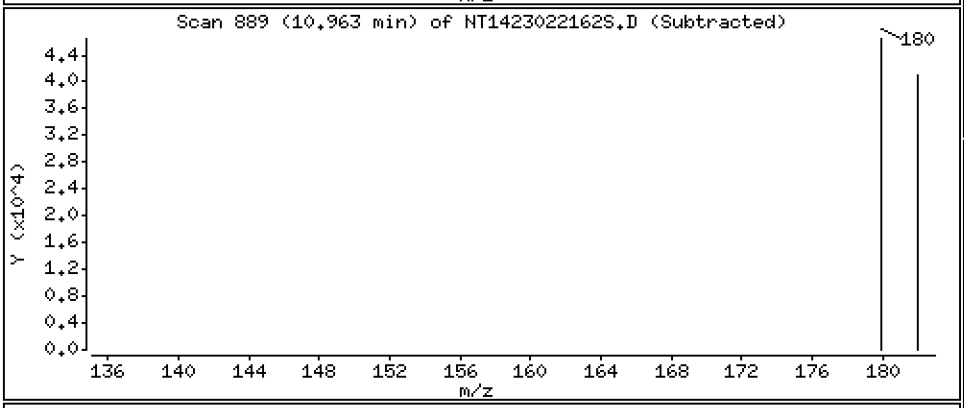
Column diameter: 0.25

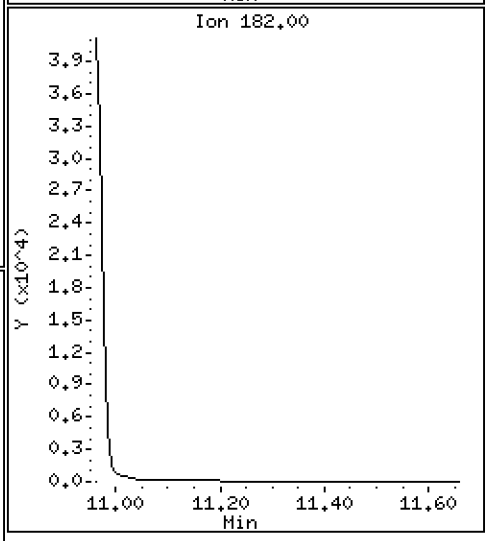
26 1,2,4-Trichlorobenzene

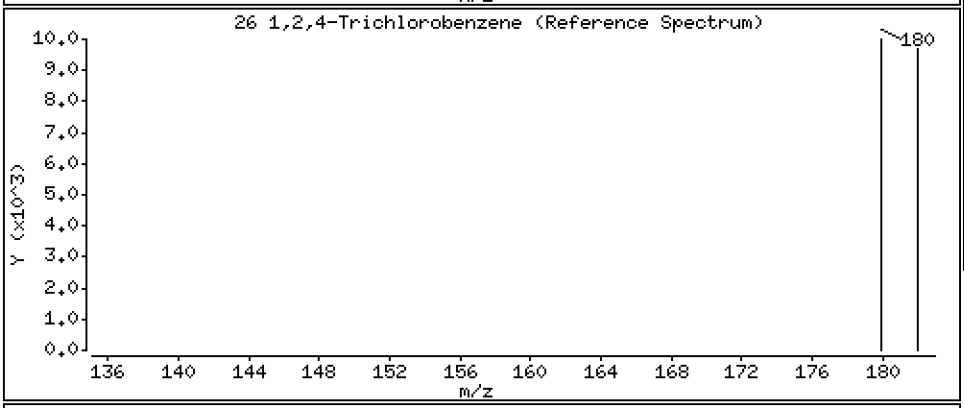
Concentration: 1.012 ug/mL

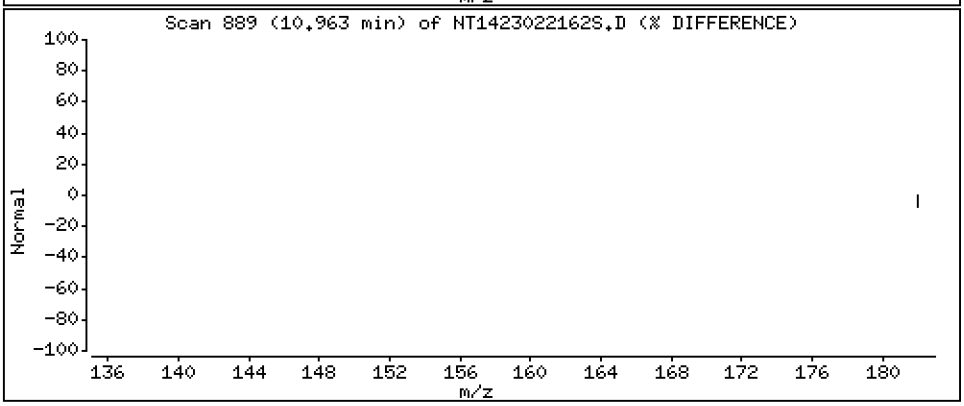












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230222162S.D

Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

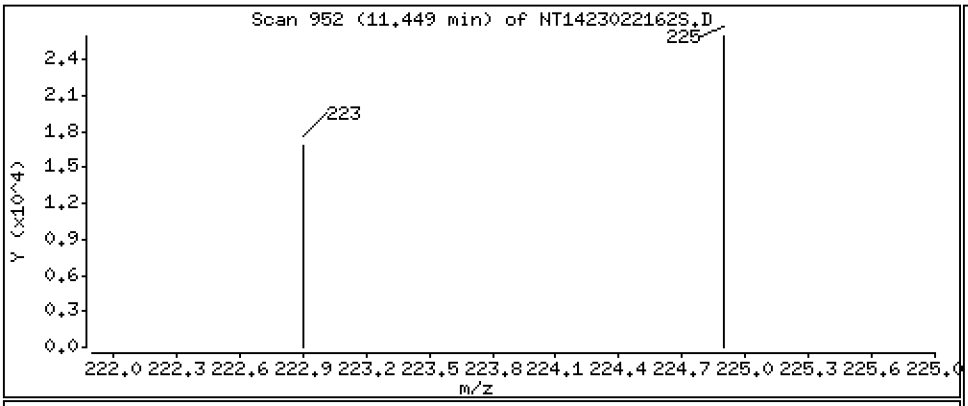
Operator: DSD

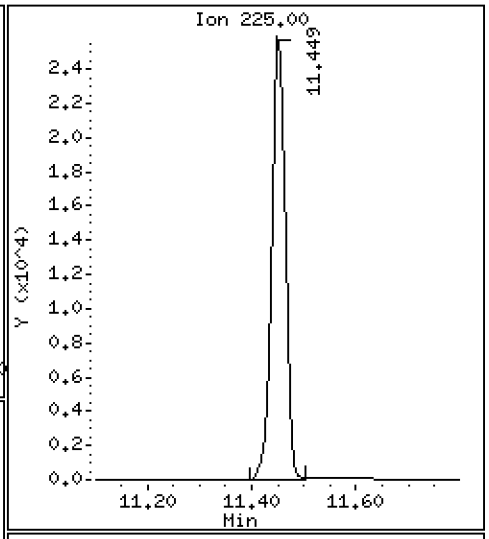
Column phase: ZB-5msi

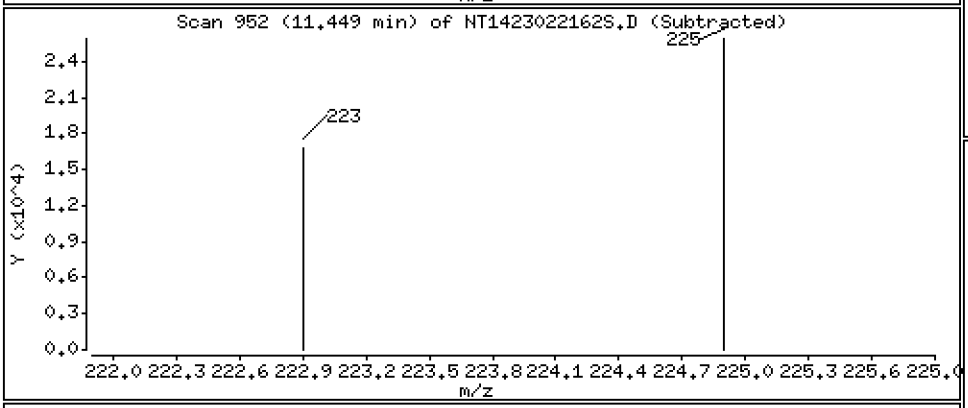
Column diameter: 0.25

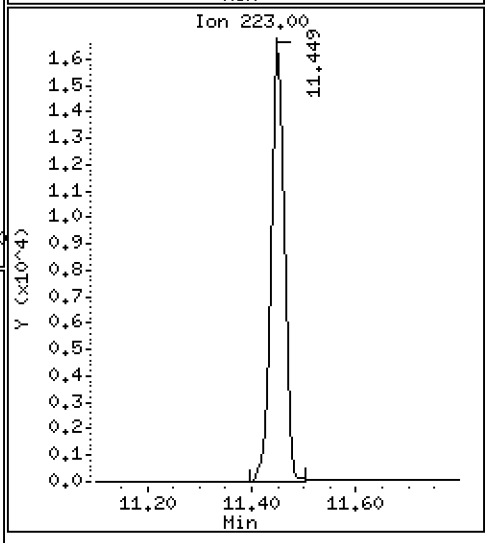
30 Hexachlorobutadiene

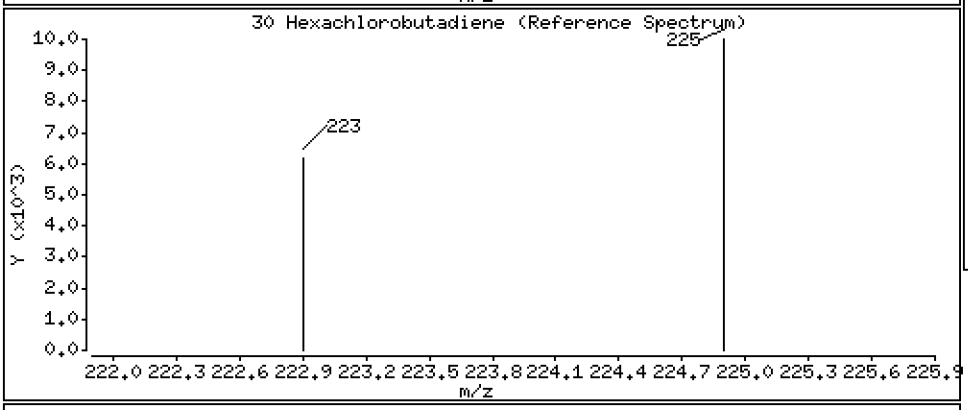
Concentration: 0.9626 ug/mL

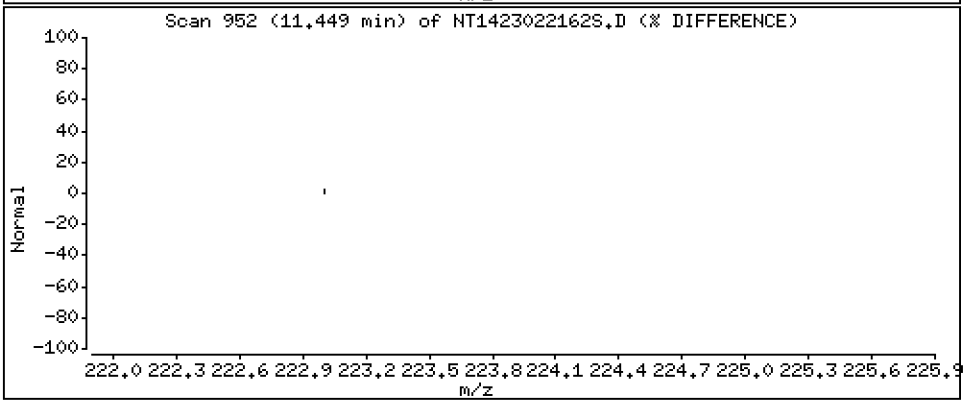












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022162S.D

Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

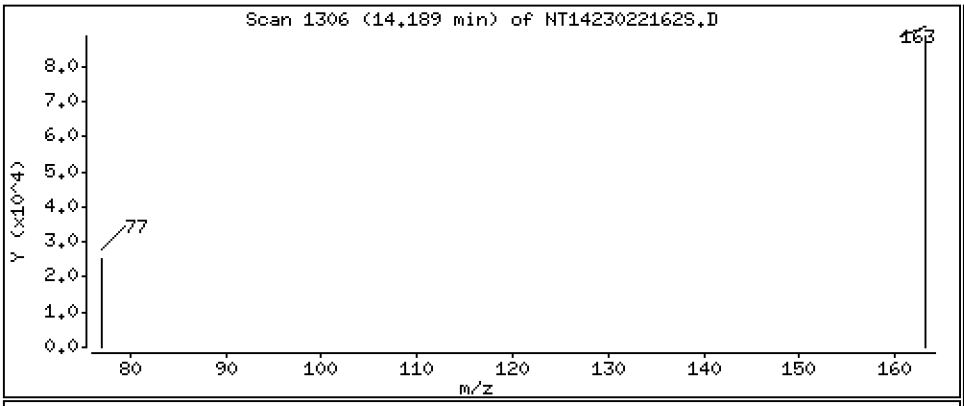
Operator: DSD

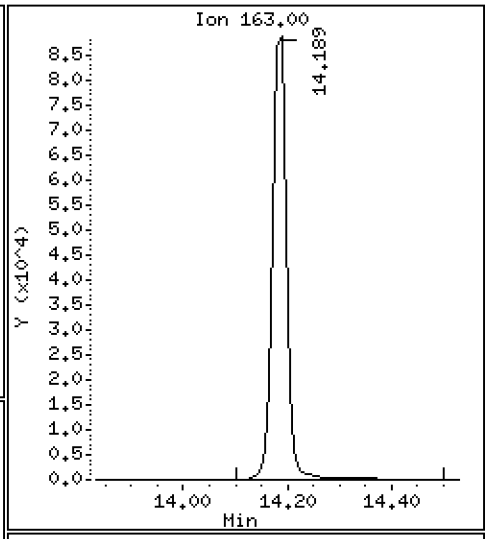
Column phase: ZB-5msi

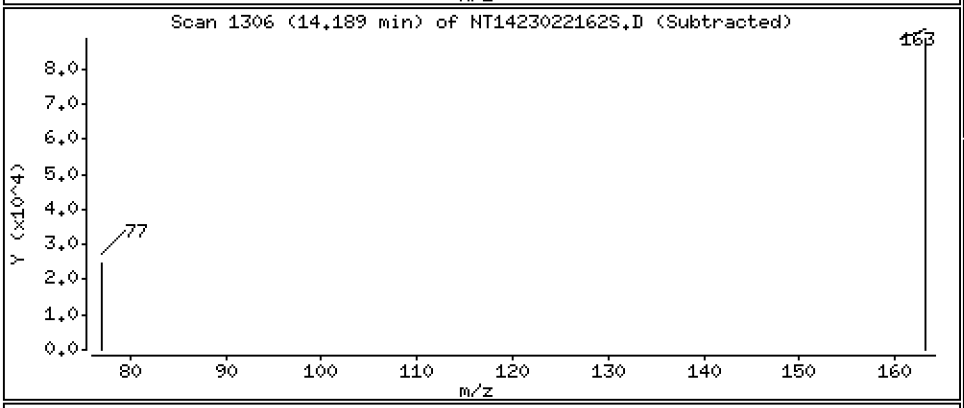
Column diameter: 0.25

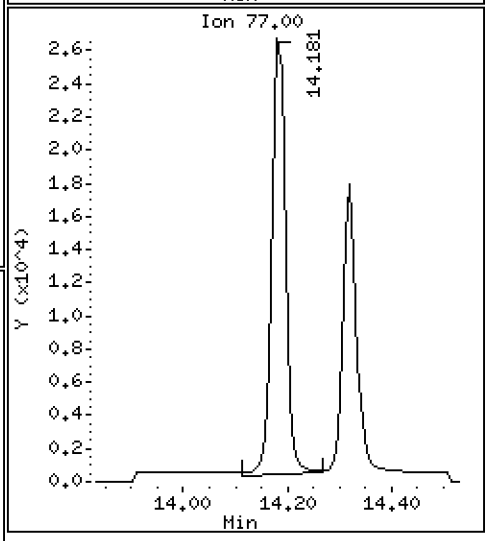
39 Dimethylphthalate

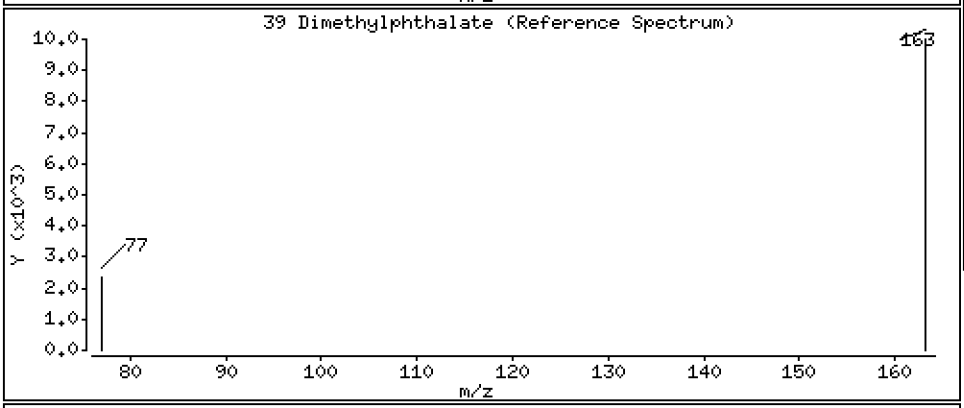
Concentration: 1.170 ug/mL

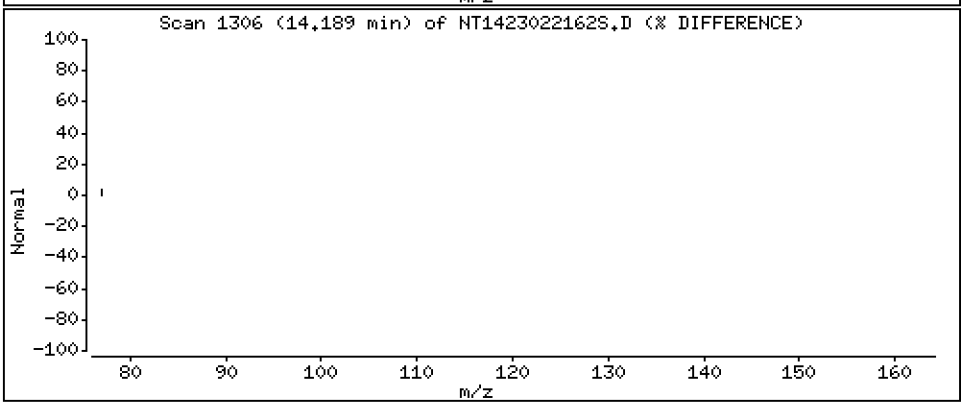












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221625.D

Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

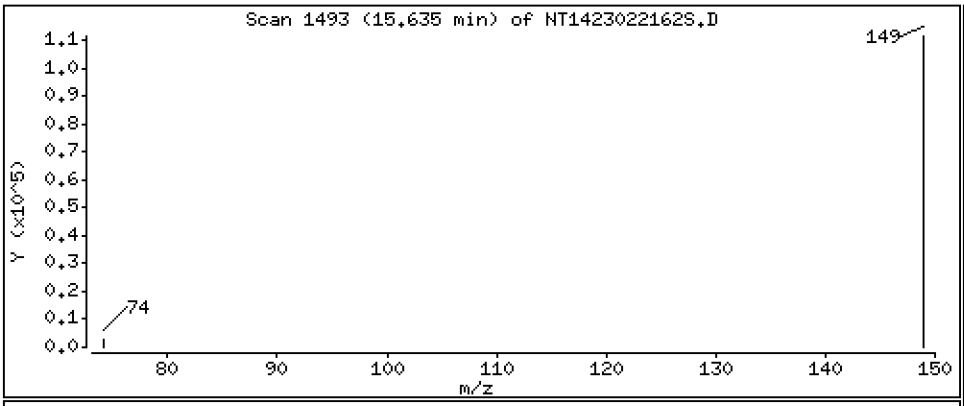
Operator: DSD

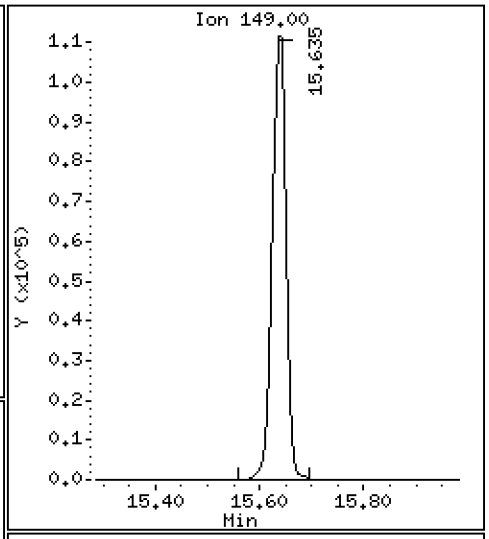
Column phase: ZB-5msi

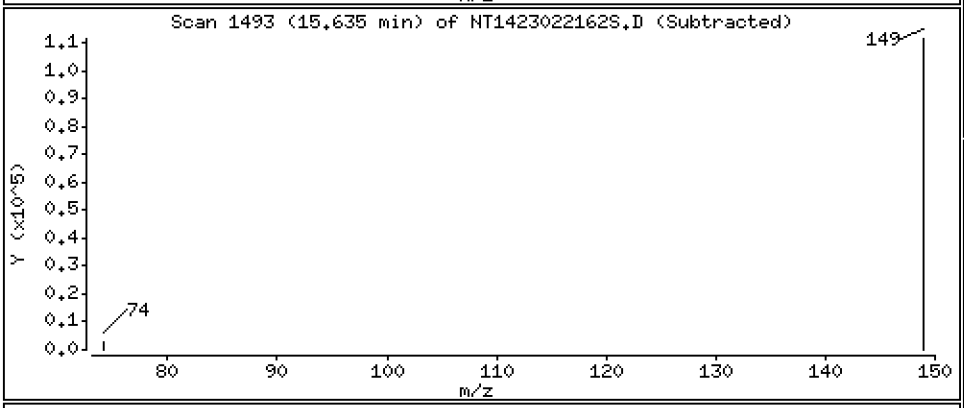
Column diameter: 0.25

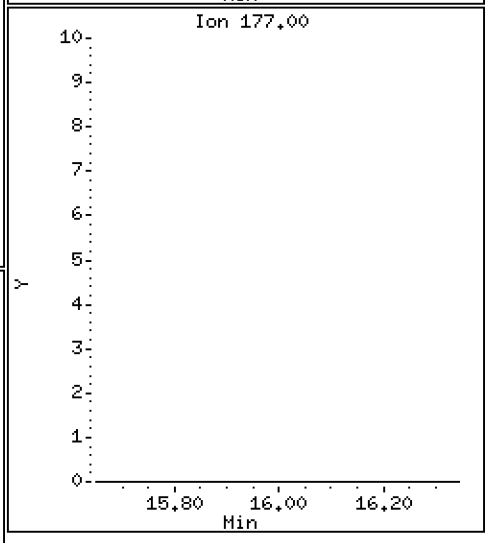
50 Diethylphthalate

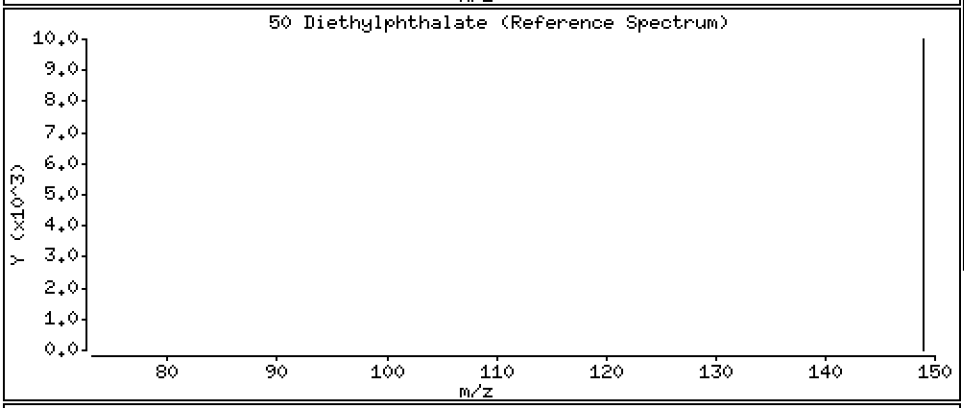
Concentration: 1.164 ug/mL

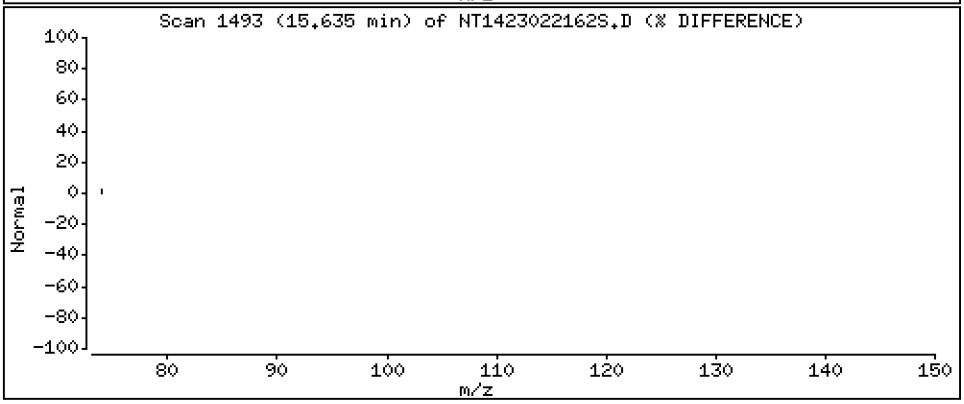












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221625.D

Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

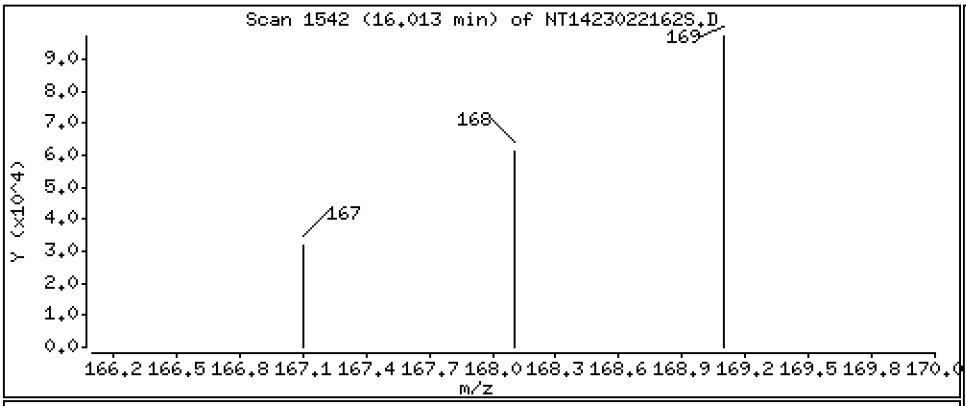
Operator: DSD

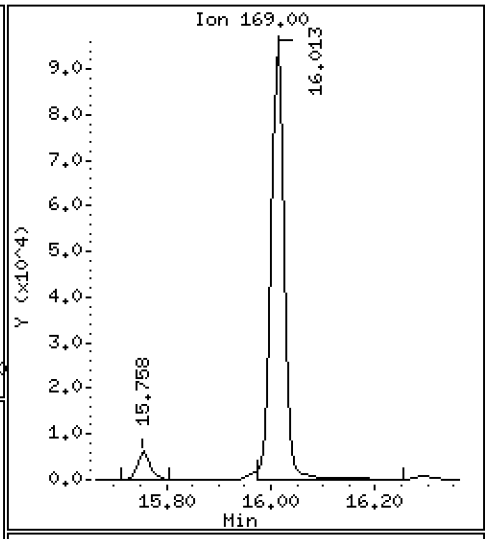
Column phase: ZB-5msi

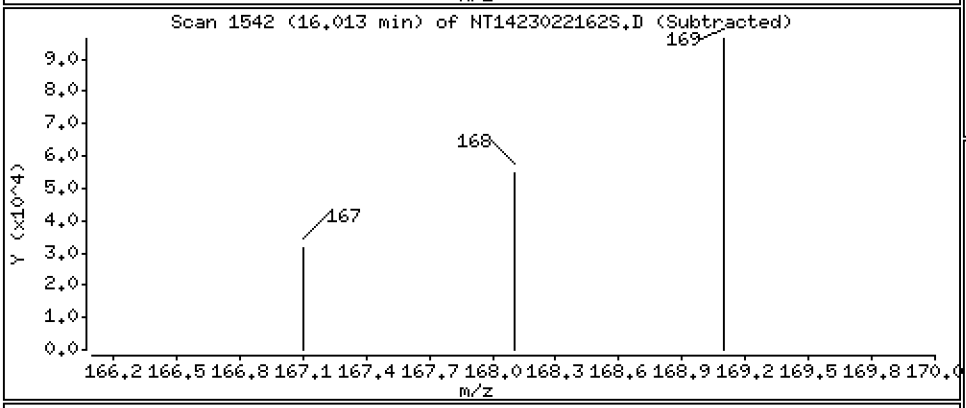
Column diameter: 0.25

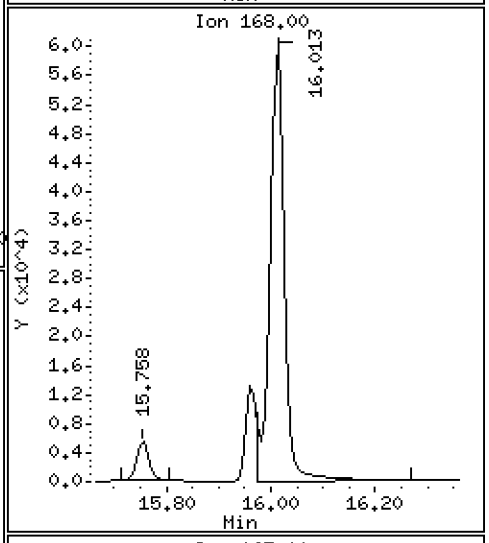
54 N-Nitrosodiphenylamine

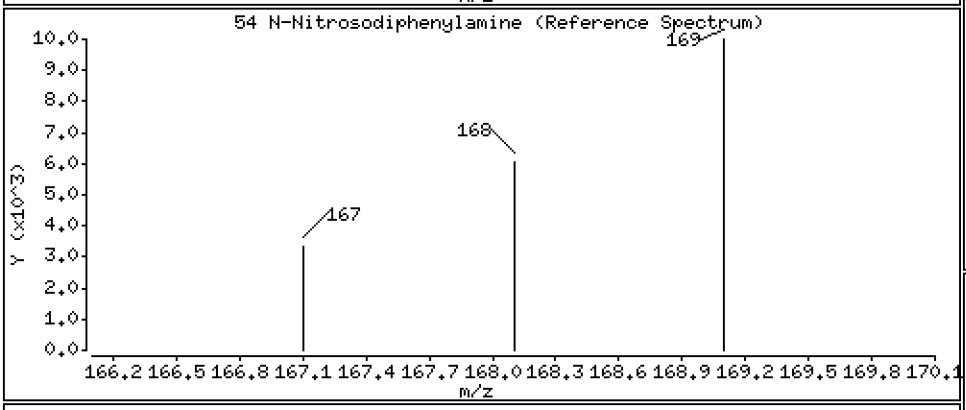
Concentration: 1.212 ug/mL

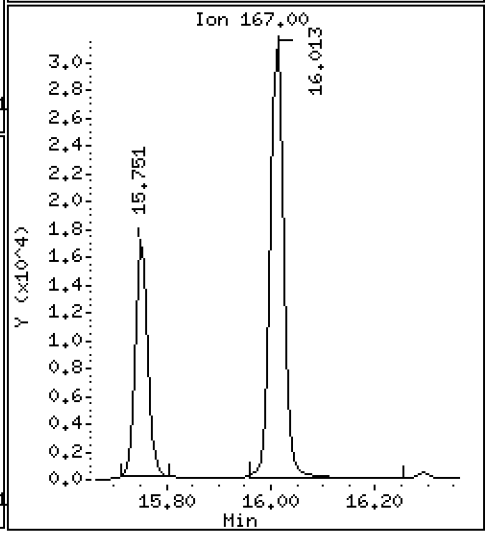


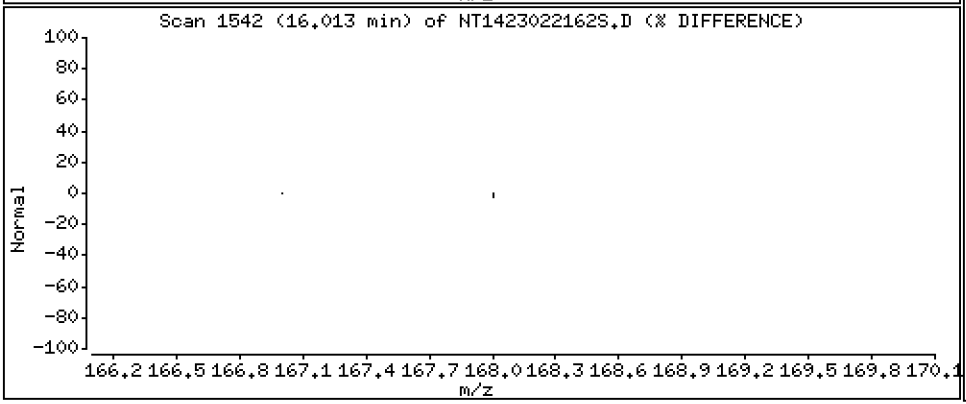












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Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

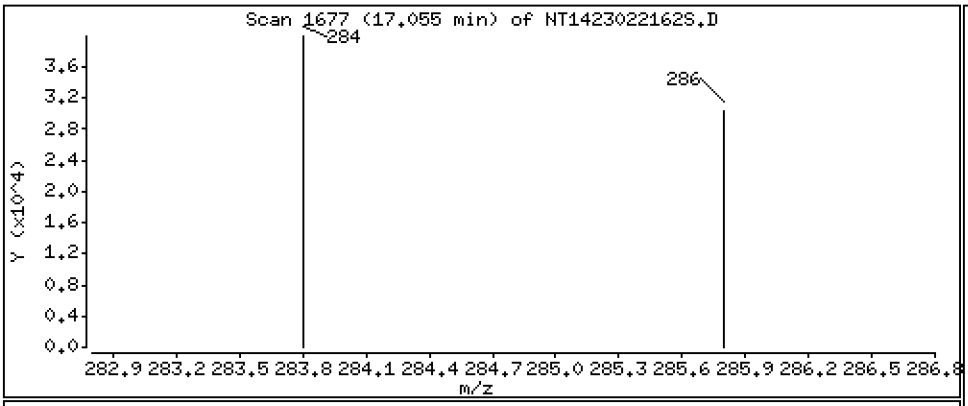
Operator: DSD

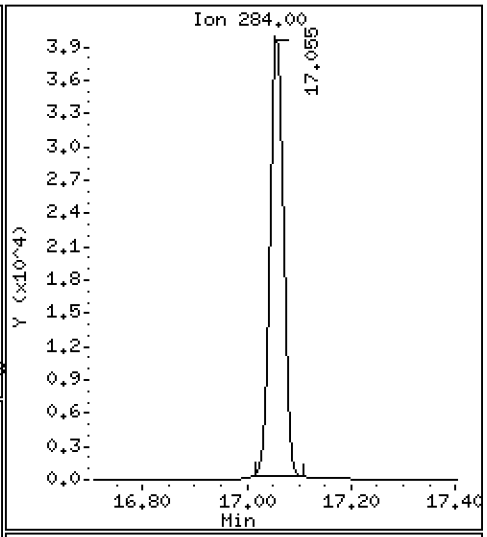
Column phase: ZB-5msi

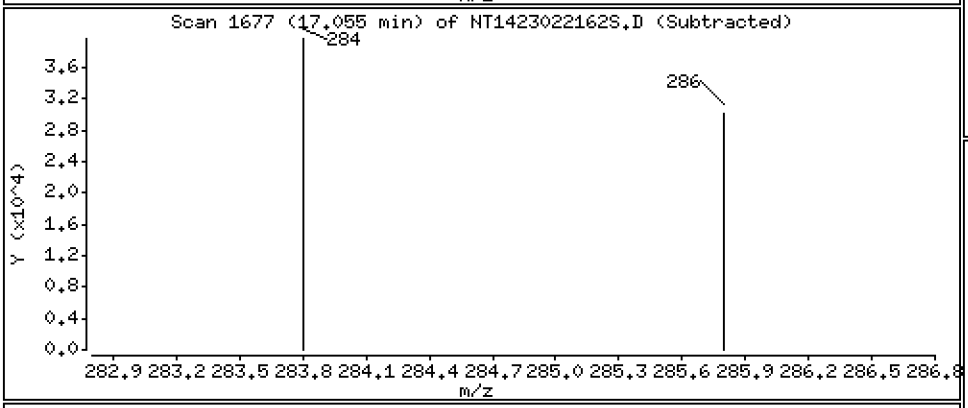
Column diameter: 0.25

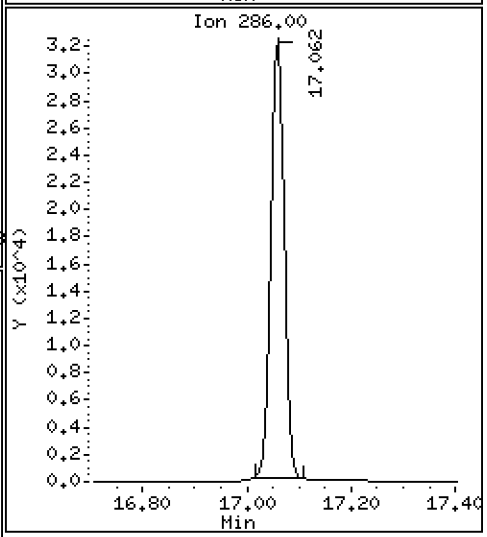
57 Hexachlorobenzene

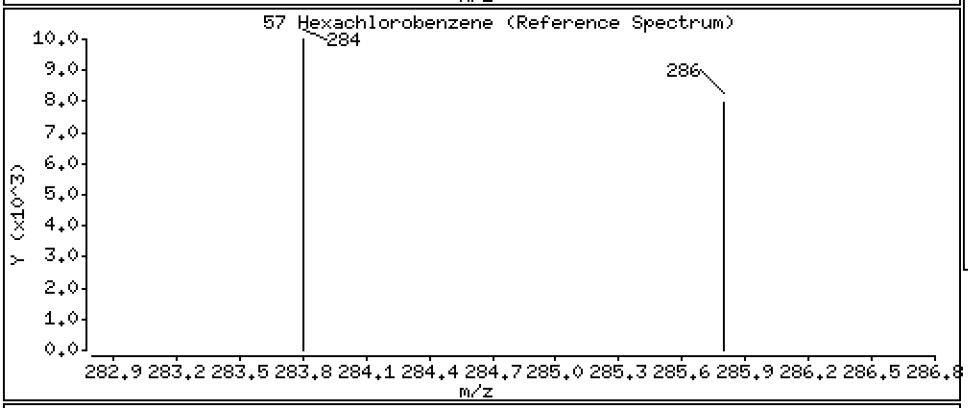
Concentration: 1.035 ug/mL

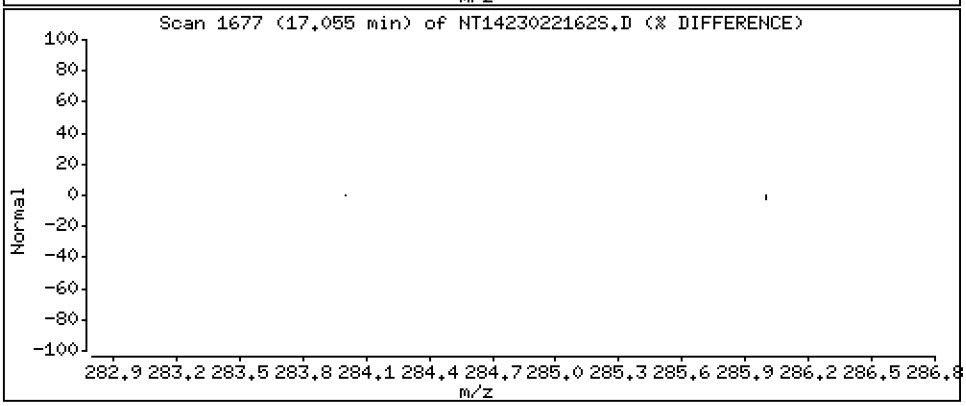












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022162S.D

Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

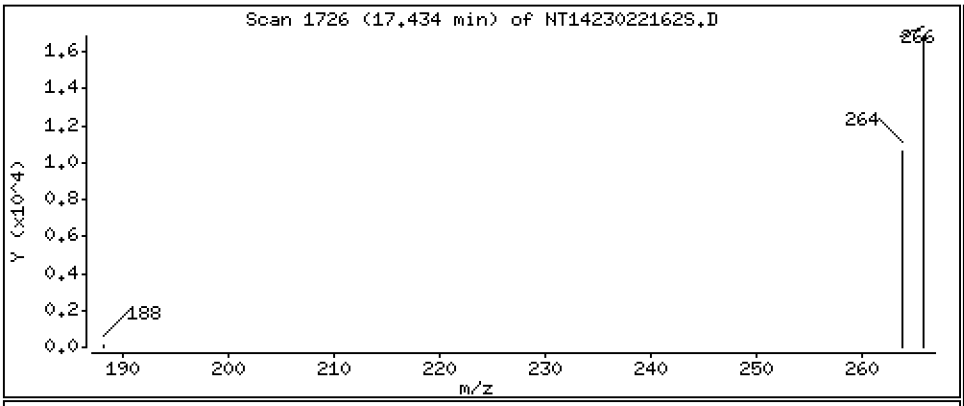
Operator: DSD

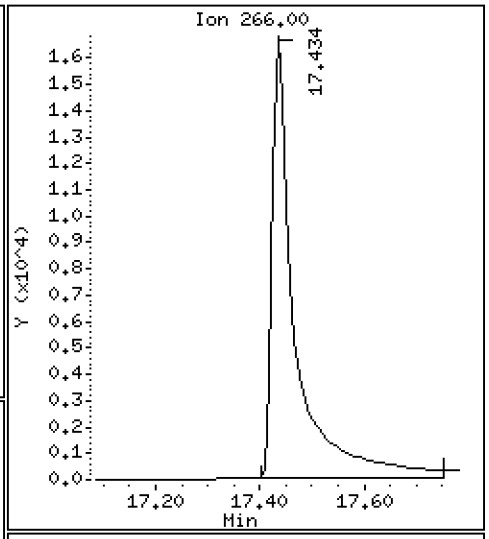
Column phase: ZB-5msi

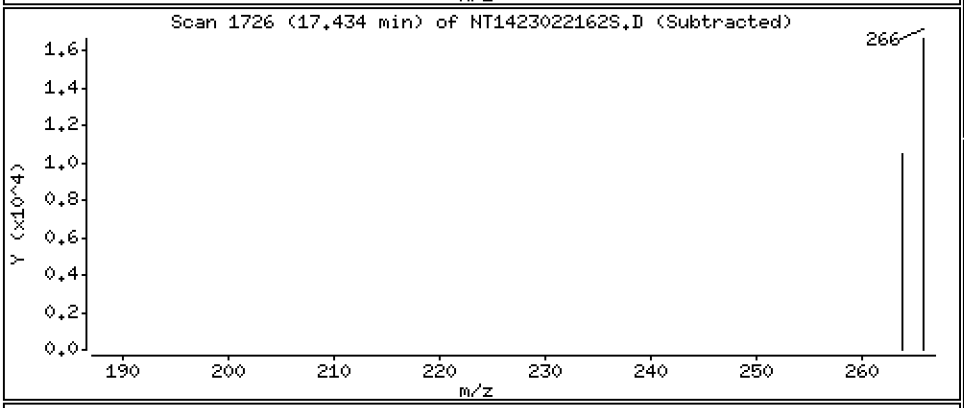
Column diameter: 0.25

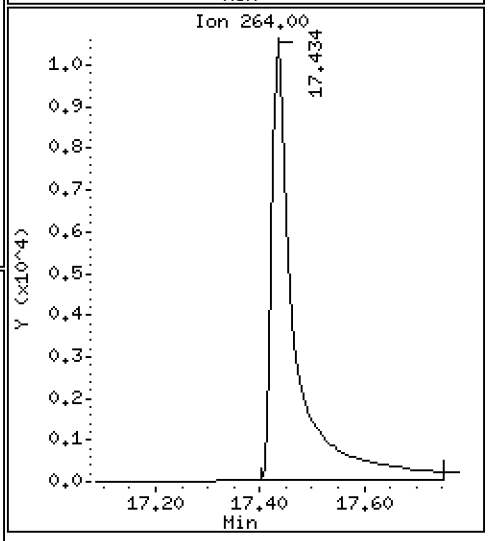
58 Pentachlorophenol

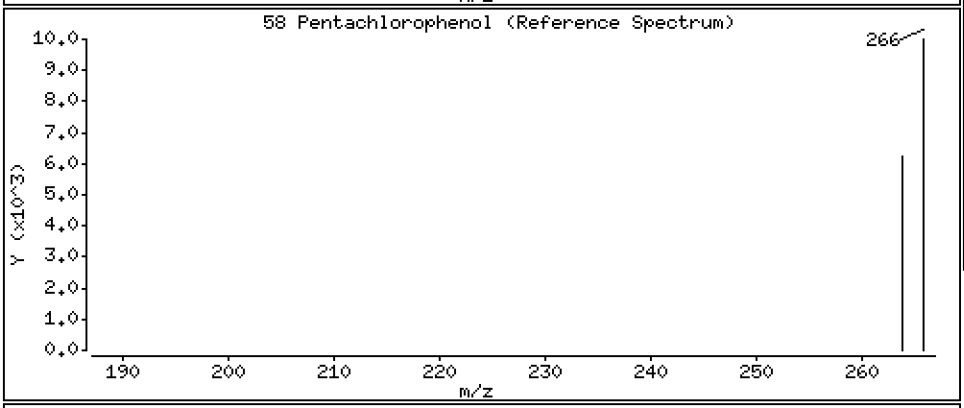
Concentration: 1.826 ug/mL

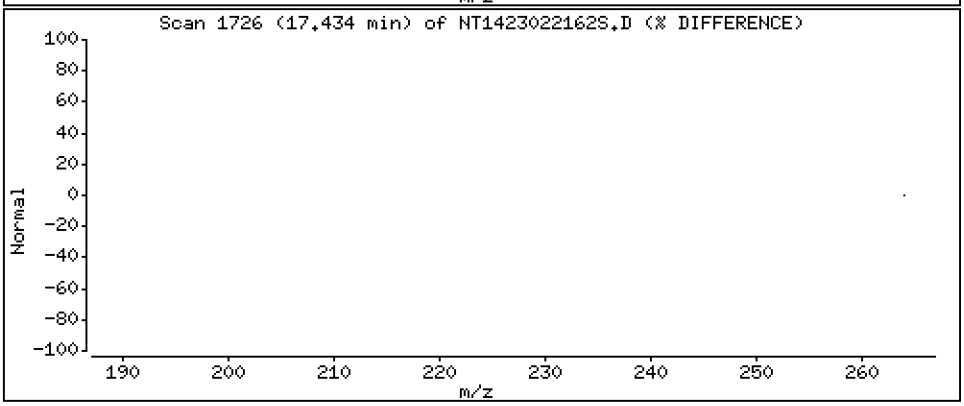












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022162S.D

Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

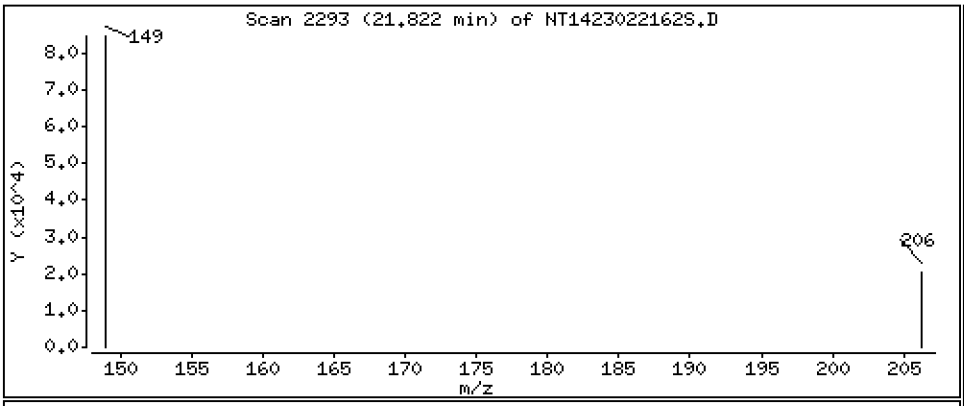
Operator: DSD

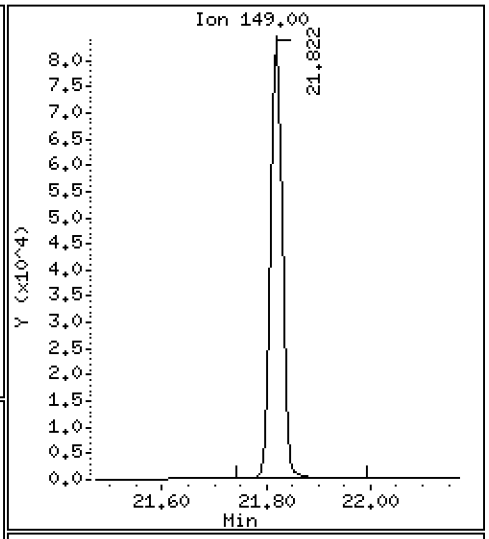
Column phase: ZB-5msi

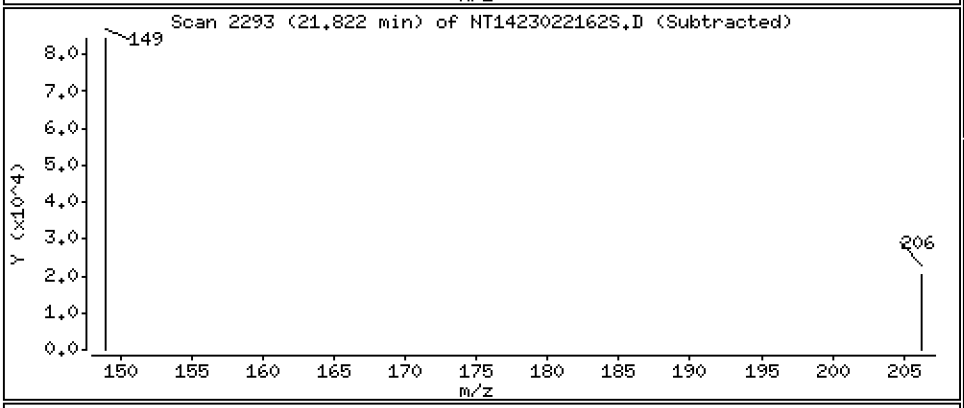
Column diameter: 0.25

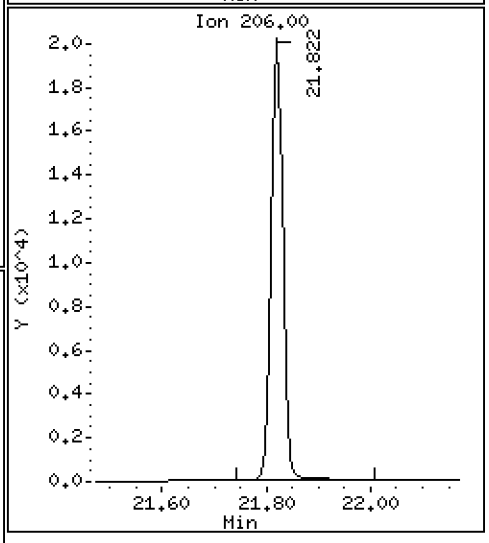
67 Butylbenzylphthalate

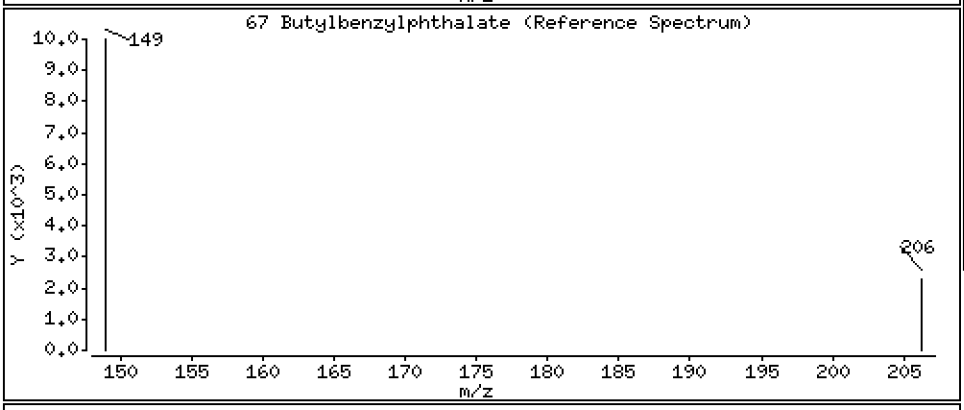
Concentration: 1.439 ug/mL

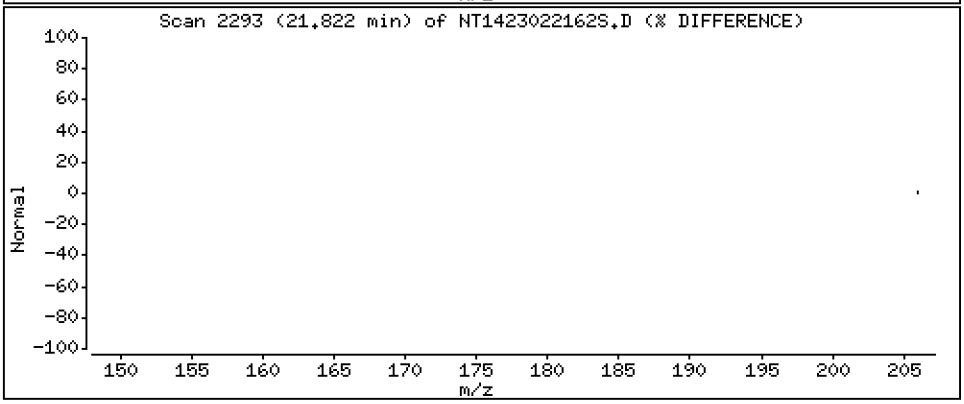












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221625.D

Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

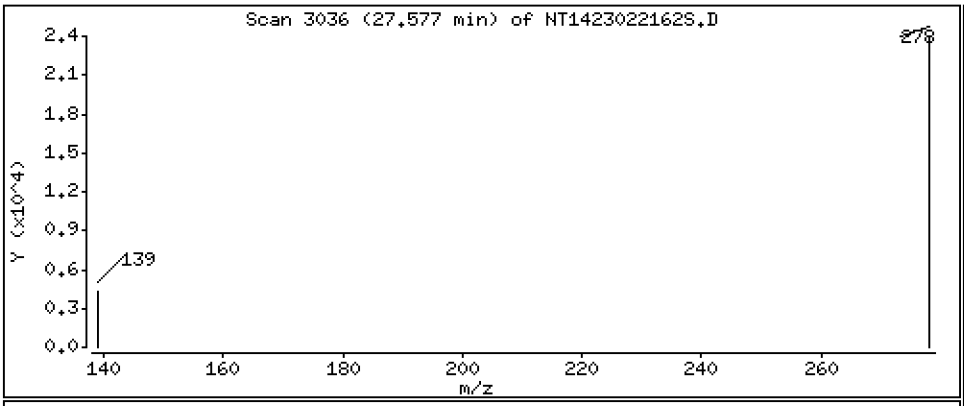
Operator: DSD

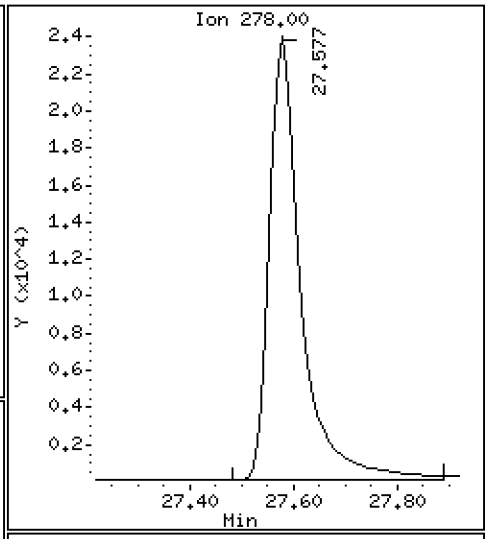
Column phase: ZB-5msi

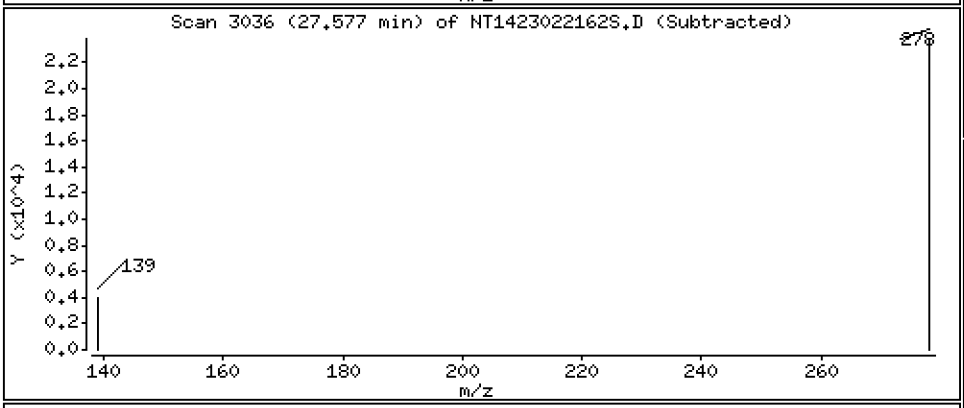
Column diameter: 0.25

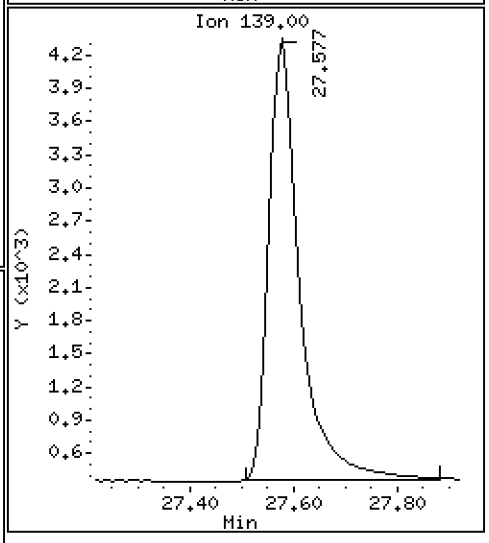
79 Dibenzo(a,h)anthracene

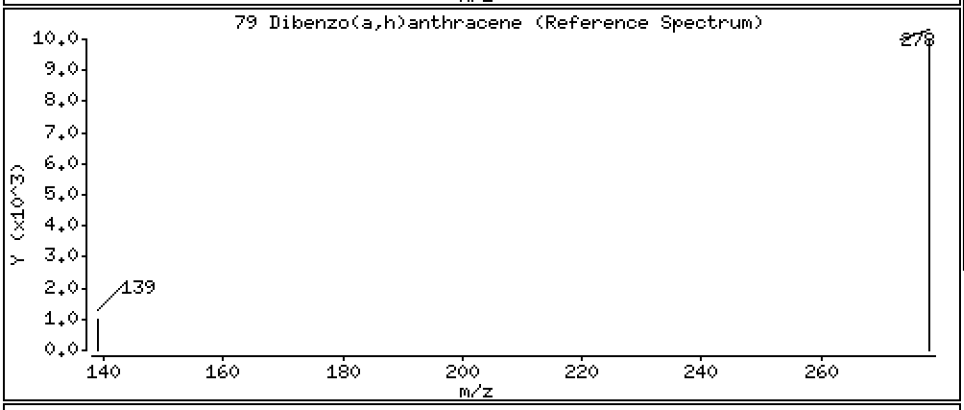
Concentration: 1.150 ug/mL

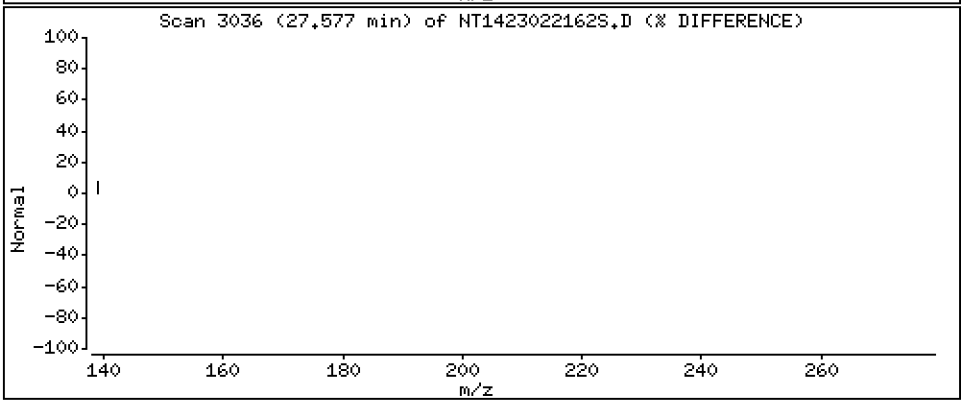












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230222162S.D

Date : 23-FEB-2023 02:14

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-CCV1

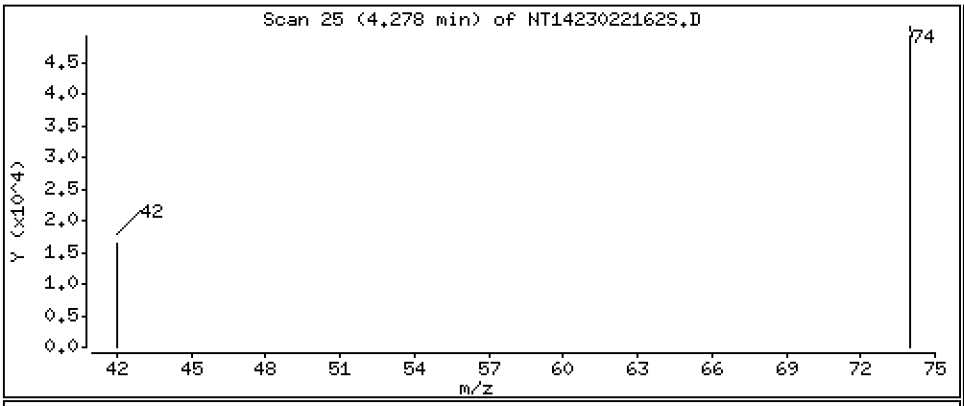
Operator: DSD

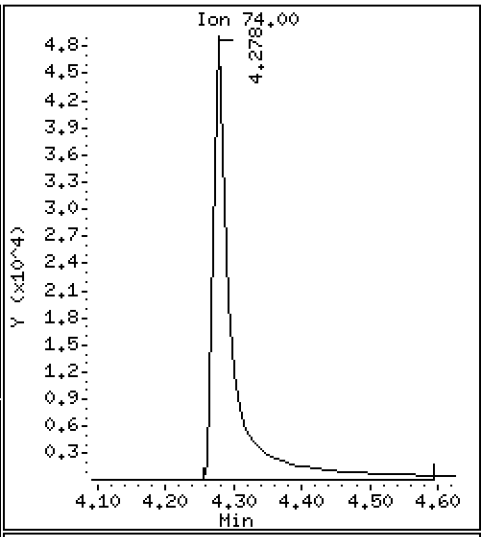
Column phase: ZB-5msi

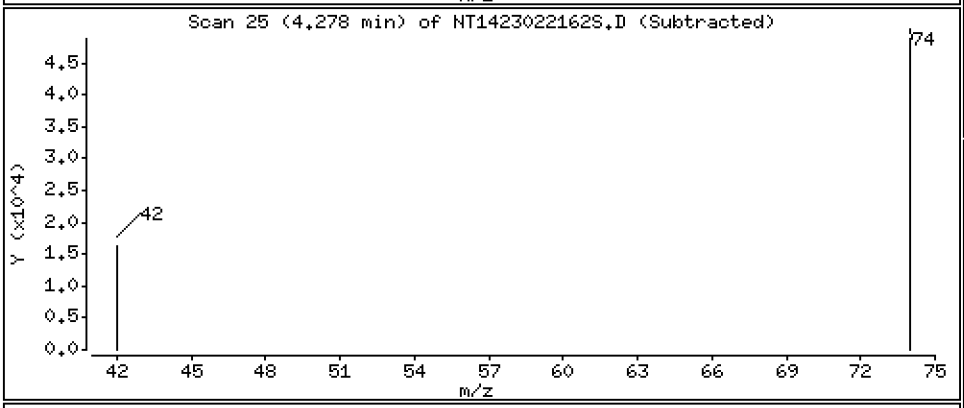
Column diameter: 0.25

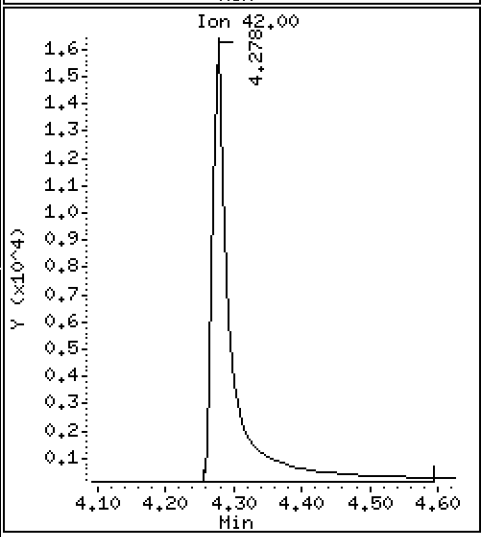
90 N-Nitrosodimethylamine

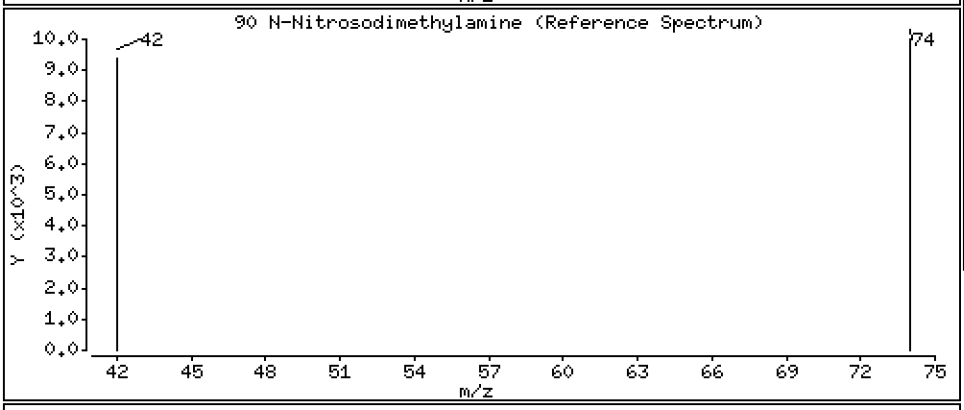
Concentration: 1.918 ug/mL

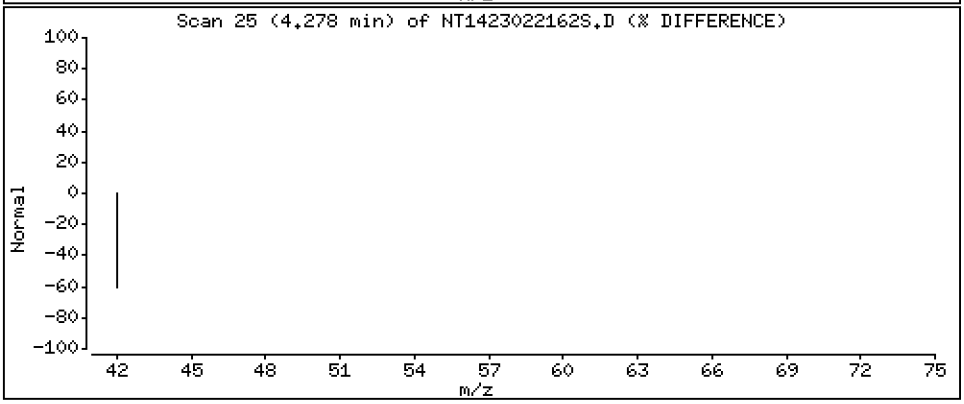












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT1423022162S.D
Lab Smp Id: SLB0351-CCV1
Inj Date : 23-FEB-2023 02:14 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0351-CCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Meth Date : 25-May-2023 11:39 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.385	6.386	(0.745)	104731	1.58872	1.589(R)
	3 Phenol	94	8.000	7.993	(0.933)	130150	1.32380	1.324
	7 1,3-Dichlorobenzene	146	8.503	8.503	(0.992)	82431	1.05920	1.059
*	8 1,4-Dichlorobenzene-d4	152	8.573	8.573	(1.000)	228716	4.00000	
	9 1,4-Dichlorobenzene	146	8.596	8.596	(1.003)	81968	1.10412	1.104
	11 Benzyl alcohol	79	8.875	8.876	(1.035)	67622	1.07956	1.080
	12 1,2-Dichlorobenzene	146	8.953	8.953	(1.044)	79406	1.07576	1.076
	13 2-Methylphenol	108	9.100	9.101	(1.062)	87529	1.28923	1.289
	15 4-Methylphenol	108	9.372	9.373	(1.093)	85785	1.14851	1.149
	16 N-Nitroso-di-n-propylamine	70	9.411	9.411	(1.098)	68805	1.19520	1.195
	22 2,4-Dimethylphenol	107	10.404	10.404	(0.942)	223440	2.99521	2.995
	24 Benzoic acid	105	10.606	10.614	(0.961)	95150	2.38616	2.386
	26 1,2,4-Trichlorobenzene	180	10.962	10.962	(0.993)	78240	1.01247	1.012(M)
*	27 Naphthalene-d8	136	11.039	11.040	(1.000)	843510	4.00000	
	30 Hexachlorobutadiene	225	11.449	11.449	(1.037)	45253	0.96263	0.9626
	39 Dimethylphthalate	163	14.188	14.181	(0.968)	158693	1.17011	1.170
*	42 Acenaphthene-d10	162	14.653	14.653	(1.000)	444542	4.00000	
	50 Diethylphthalate	149	15.634	15.635	(1.067)	197568	1.16395	1.164
	54 N-Nitrosodiphenylamine	169	16.012	16.013	(0.906)	156928	1.21220	1.212
	57 Hexachlorobenzene	284	17.054	17.054	(0.965)	68828	1.03514	1.035
	58 Pentachlorophenol	266	17.434	17.434	(0.986)	50237	1.82607	1.826
*	59 Phenanthrene-d10	188	17.673	17.674	(1.000)	1023779	4.00000	
$	66 Terphenyl-d14	244	20.869	20.869	(0.916)	245936	1.36031	1.360(R)
	67 Butylbenzylphthalate	149	21.821	21.821	(0.958)	125302	1.43907	1.439
*	69 Chrysene-d12	240	22.774	22.774	(1.000)	679116	4.00000	
*	77 Perylene-d12	264	25.228	25.220	(1.000)	489232	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.576	27.569	(1.093)	100411	1.14982	1.150
	90 N-Nitrosodimethylamine	74	4.277	4.277	(0.499)	96018	1.91760	1.918

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022162S.D
Lab Smp Id: SLB0351-CCV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 17:47
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	241018	120509	482036	228716	-5.10
27 Naphthalene-d8	887165	443583	1774330	843510	-4.92
42 Acenaphthene-d10	467553	233777	935106	444542	-4.92
59 Phenanthrene-d10	1079793	539897	2159586	1023779	-5.19
69 Chrysene-d12	754146	377073	1508292	679116	-9.95
77 Perylene-d12	558201	279101	1116402	489232	-12.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.00
59 Phenanthrene-d10	17.67	17.17	18.17	17.67	-0.00
69 Chrysene-d12	22.77	22.27	23.27	22.77	-0.00
77 Perylene-d12	25.22	24.72	25.72	25.23	0.03

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022162S.D

Lab ID: SLB0351-CCV1
nt14.i, 20230221C.b\SIM.b\SIMABN2.m,   23-FEB-2023 02:14

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1423022148ICVS.d

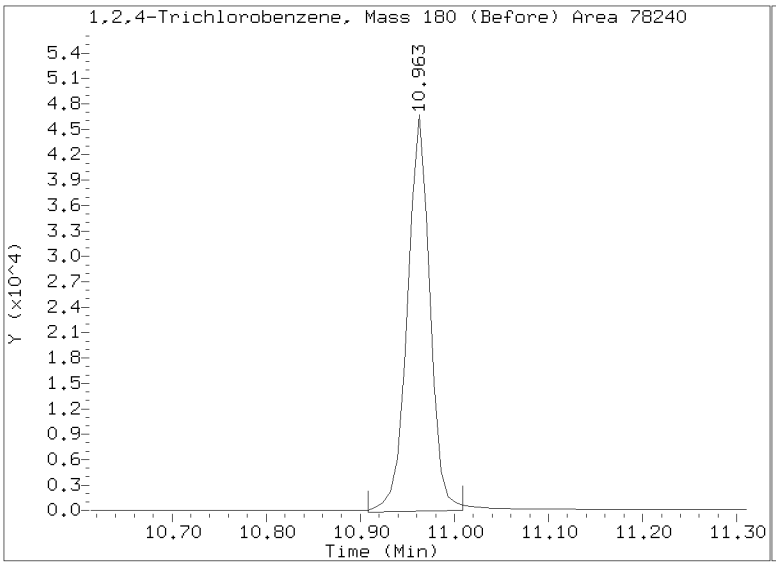
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

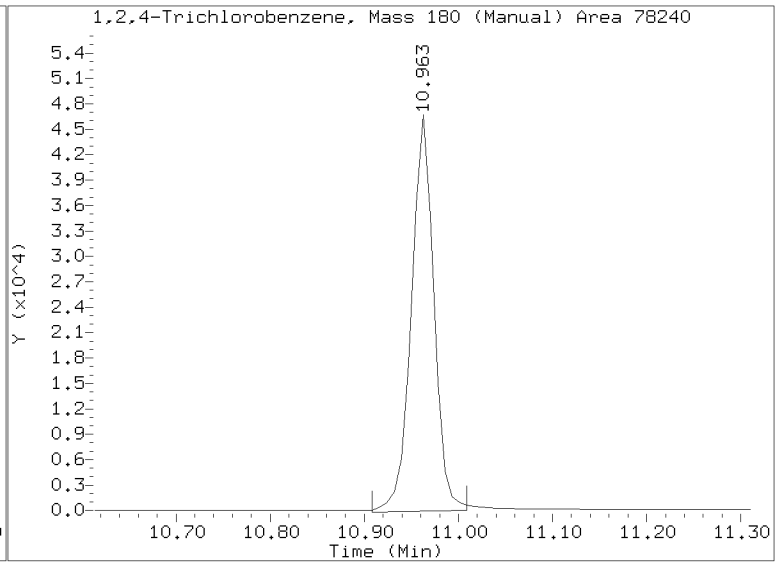
Exception: 1,2,4-Trichlorobenzene 0.0010

* Only compounds listed in the work order have been verified by the analyst *

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230221C.b/SIM.b/NT1423022162S.D
Injection Date: 23-FEB-2023 02:14
Lab ID:SLB0351-CCV1 Client ID:
Report Date: 05/25/2023 11:48





Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION CONTINUING CALIBRATION CHECK

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00009
Lab File ID:	NT1423022149S.D	Calibration Date:	02/16/2023
Sequence:	SLB0351	Injection Date:	02/22/23
Lab Sample ID:	SLB0351-LCV1	Injection Time:	18:23
Sequence Name:	Low Cal Check		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	0.10000	0.1	1.2983440	1.6866860		29.9	
1,2-Dichlorobenzene	A	0.10000	0.1	1.2909230	1.5713130		21.7	
Benzyl Alcohol	A	0.10000	0.04	1.0954840	0.4139009		-62.2	
Benzoic acid	A	0.40000	0.8	0.1890948	0.3942639		109	
2,4-Dimethylphenol	A	0.20000	0.2	0.3263158	0.4165339		14.0	
1,2,4-Trichlorobenzene	A	0.10000	0.1	0.3664516	0.4435250		21.0	
N-Nitrosodiphenylamine	A	0.10000	0.1	0.4912986	0.5864260		17.1	
Pentachlorophenol	A	0.20000	0.03	0.0811080	0.0173661		-83.6	
2-Fluorophenol	A	0.15000	0.0969	0.8380777	0.7501844		-35.4	
p-Terphenyl-d14	A	0.10000	0.137	1.0648810	1.4580720		36.9	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221495.D

Date : 22-FEB-2023 18:23

Client ID:

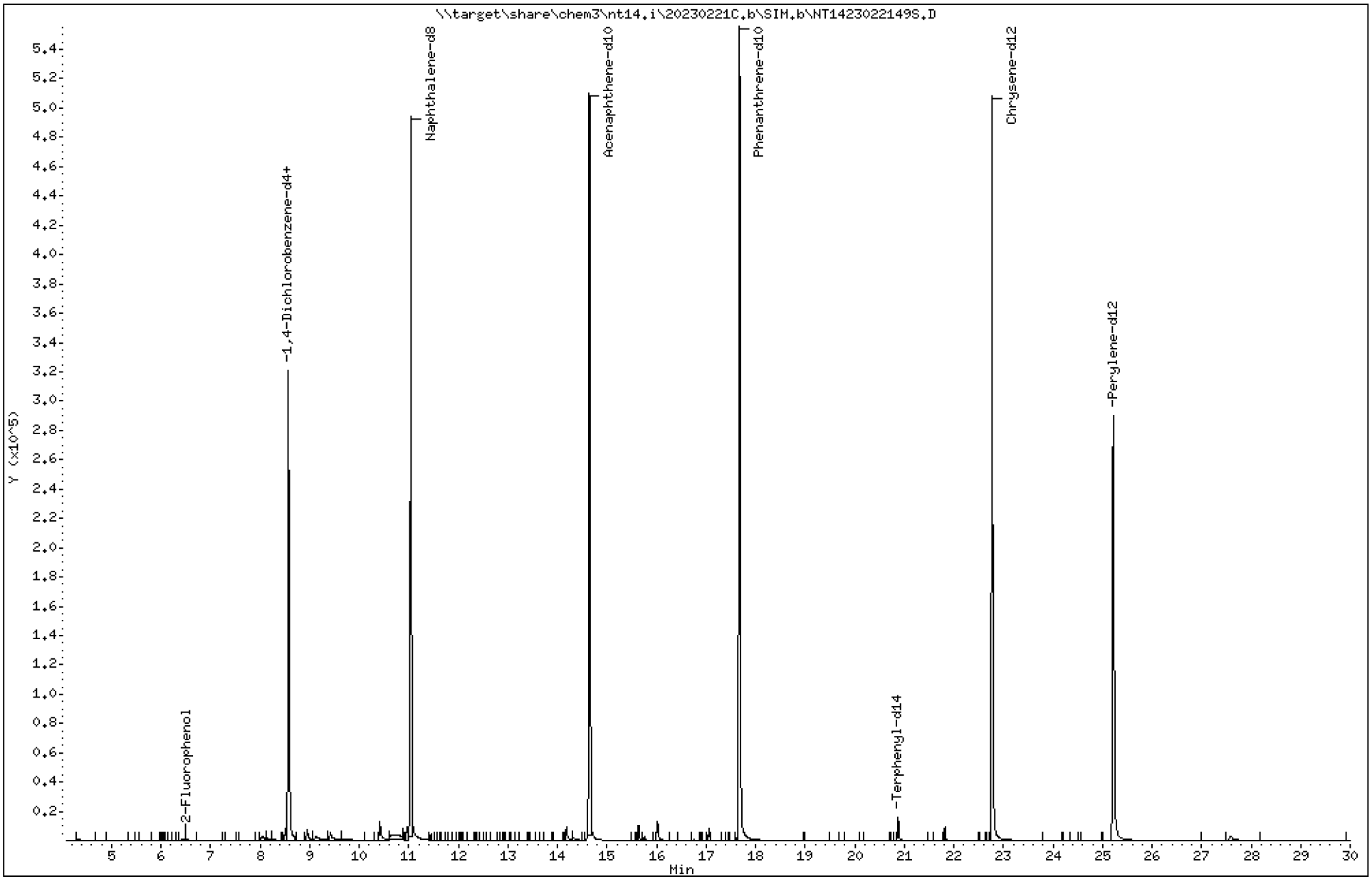
Sample Info: SLB0351-LCV1

Column phase: ZB-5msi

Instrument: nt14.i

Operator: DSD

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022149S.D

Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

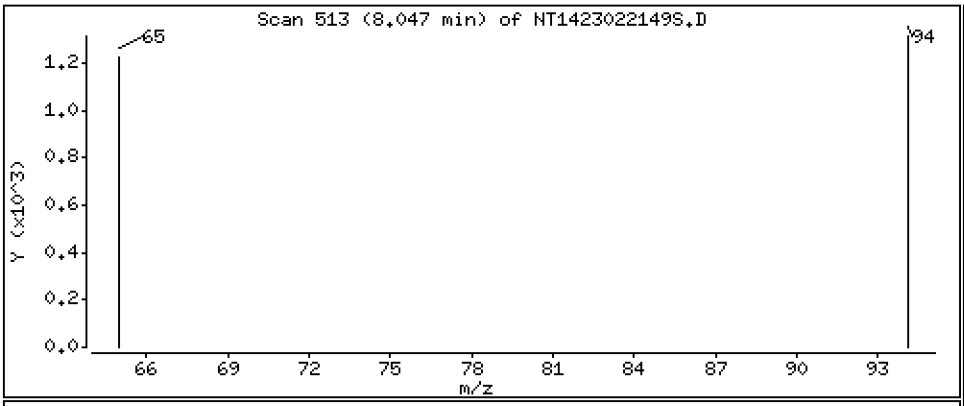
Operator: DSD

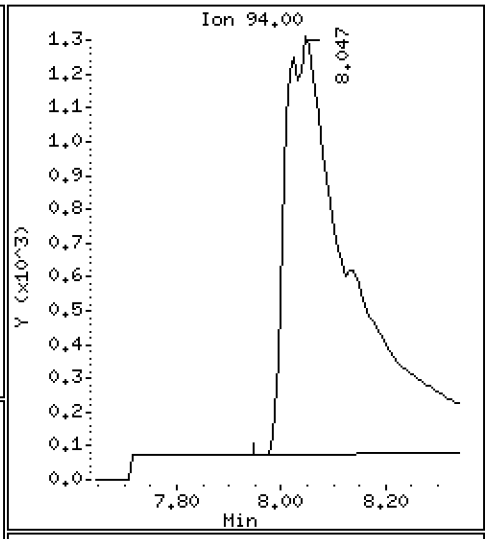
Column phase: ZB-5msi

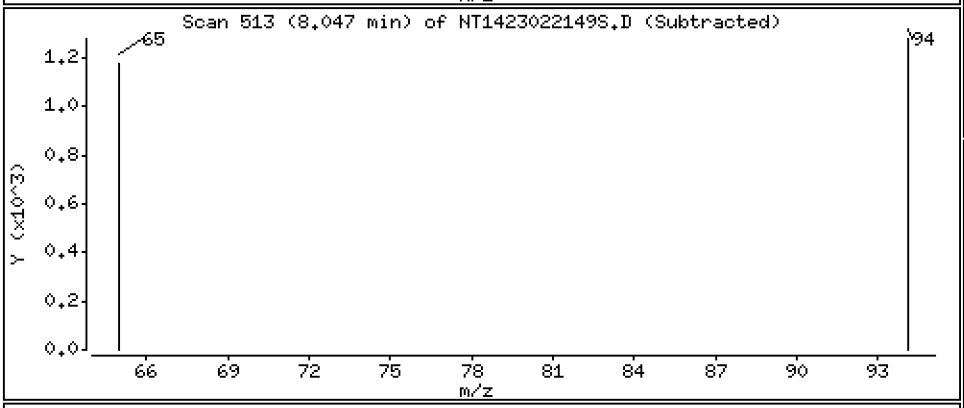
Column diameter: 0.25

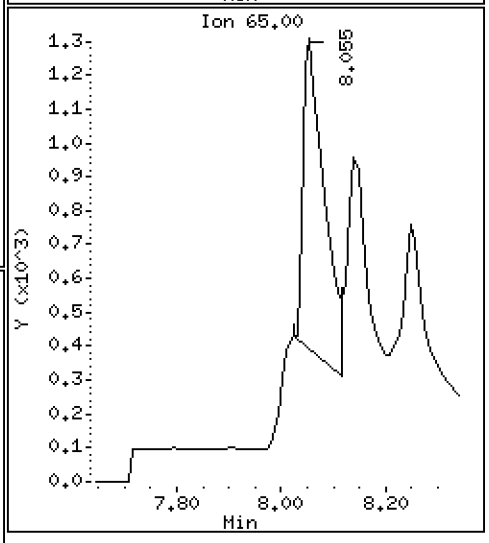
3 Phenol

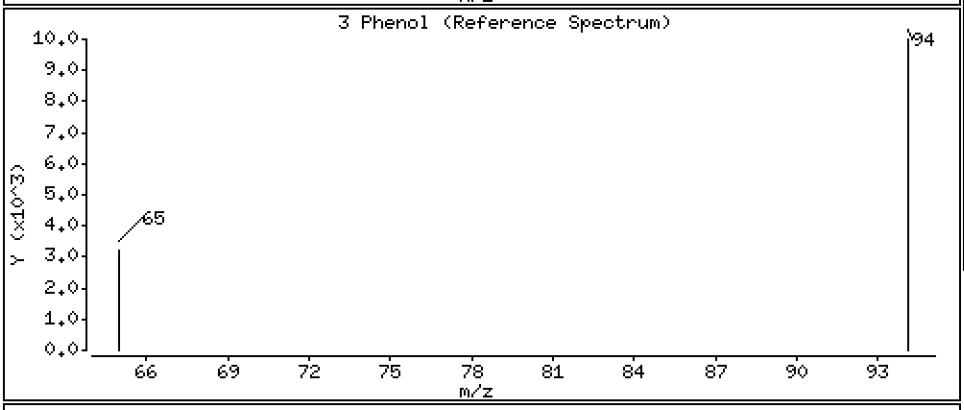
Concentration: 0.1190 ug/mL

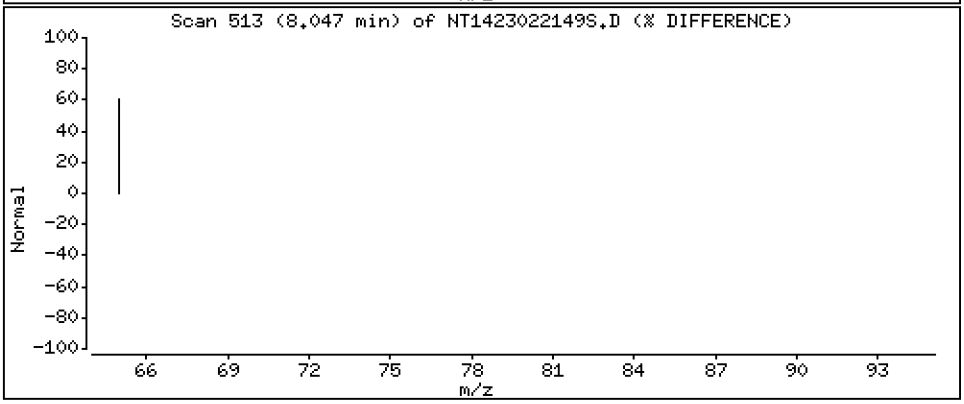












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Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

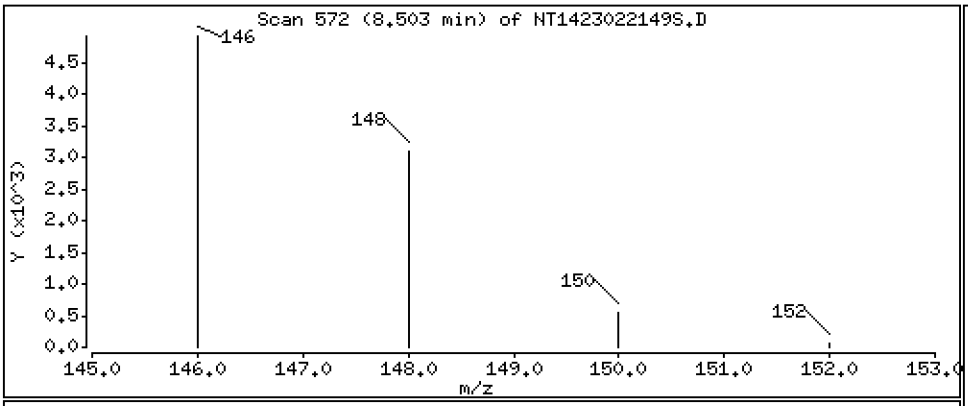
Operator: DSD

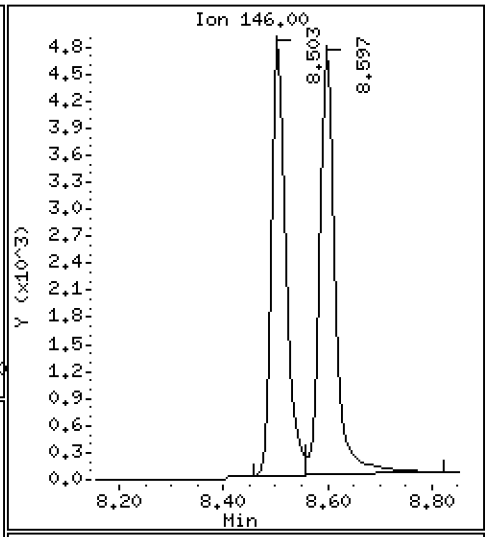
Column phase: ZB-5msi

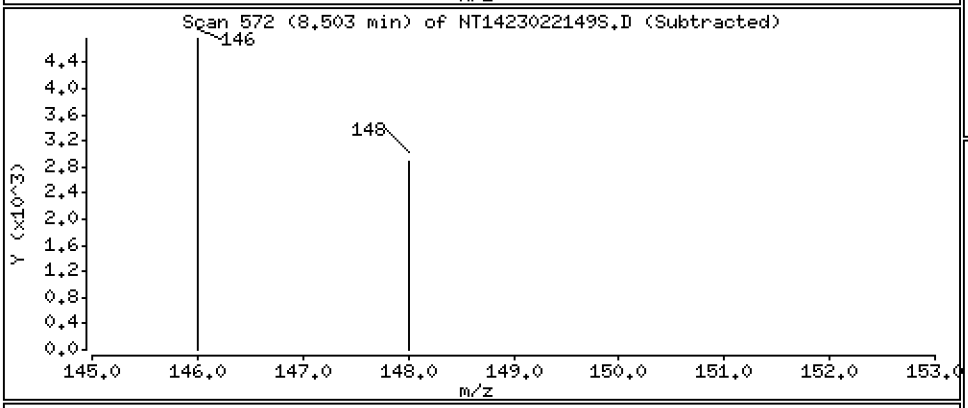
Column diameter: 0.25

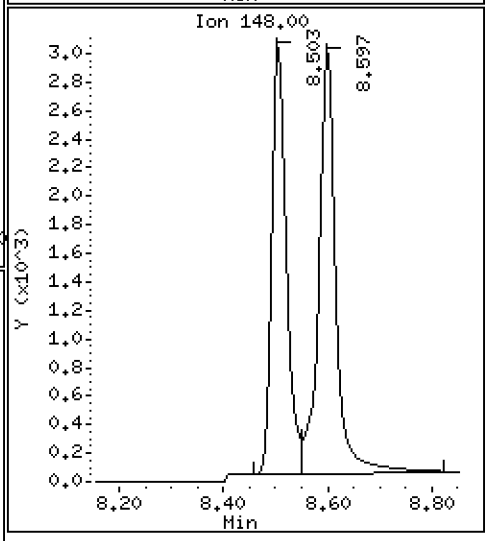
7 1,3-Dichlorobenzene

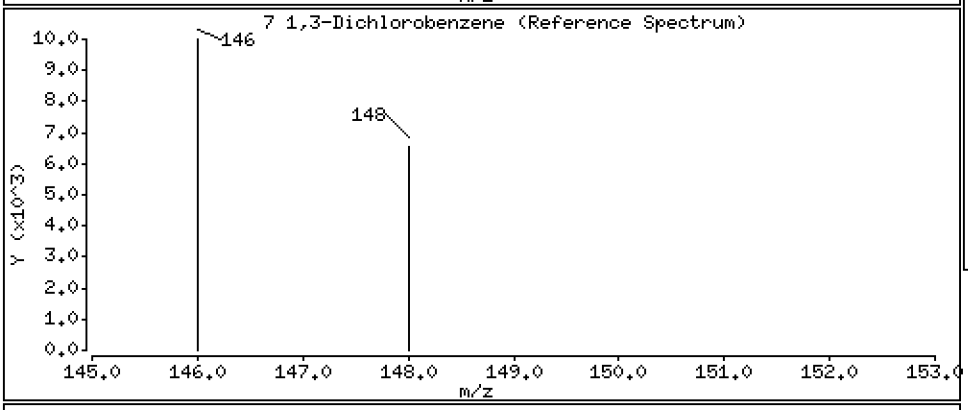
Concentration: 0.1167 ug/mL

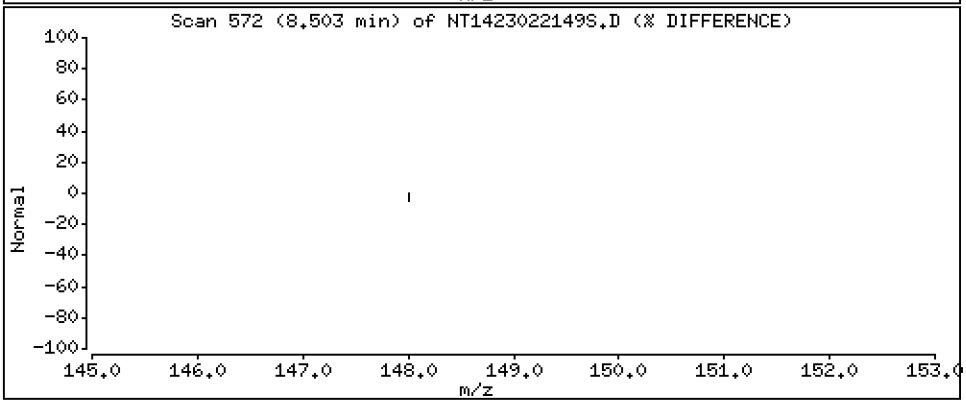












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221495.D

Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

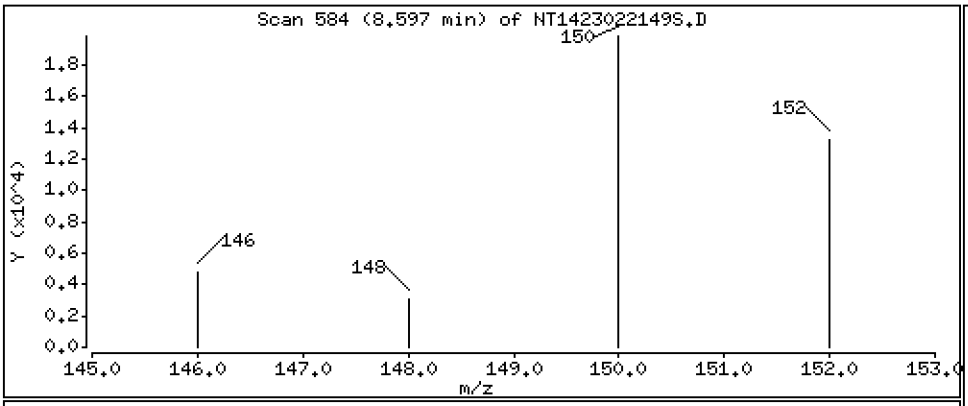
Operator: DSD

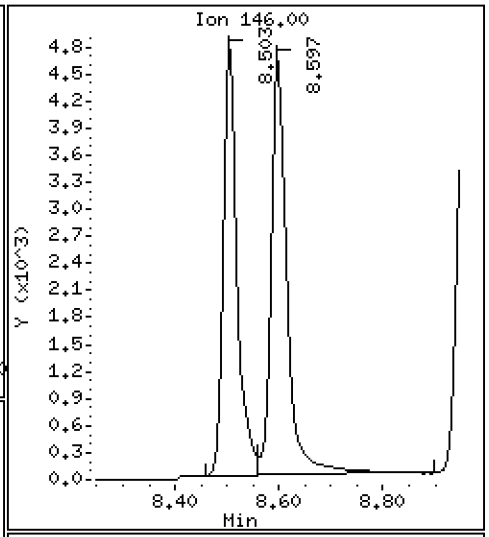
Column phase: ZB-5msi

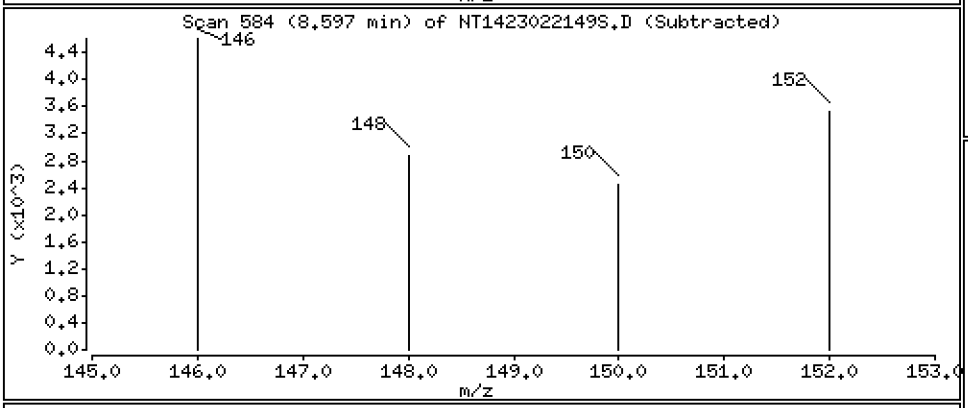
Column diameter: 0.25

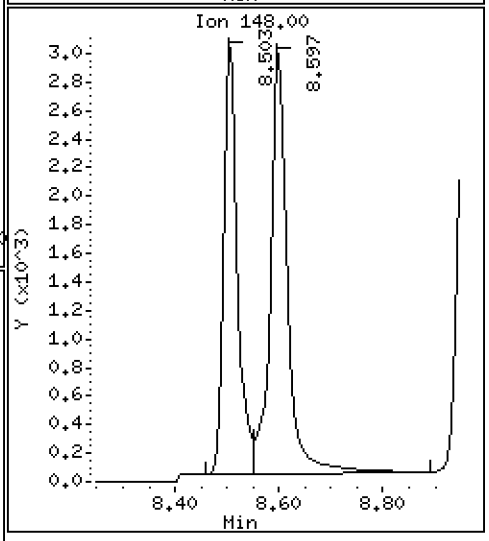
9 1,4-Dichlorobenzene

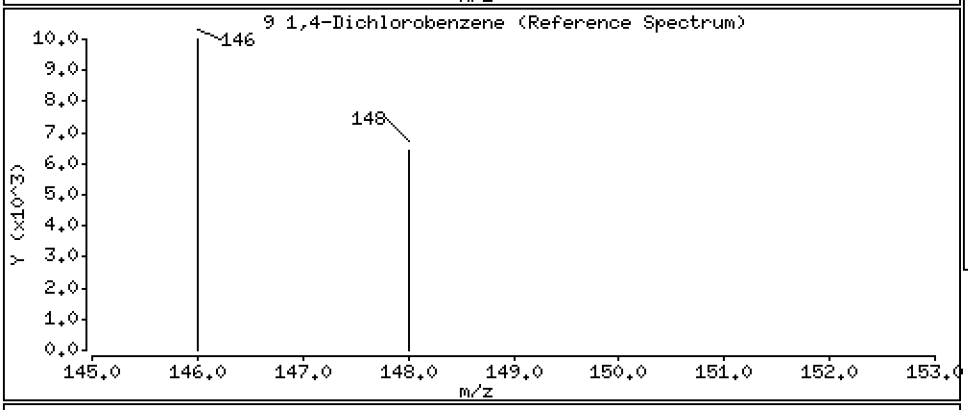
Concentration: 0.1299 ug/mL

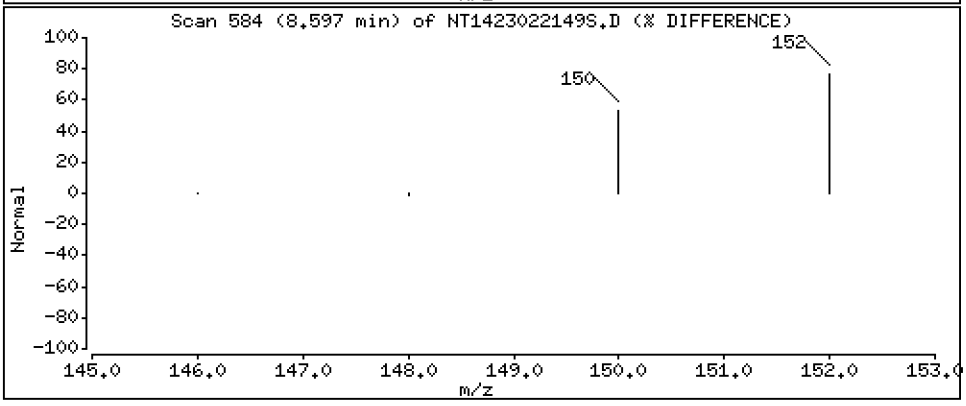












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221495.D

Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

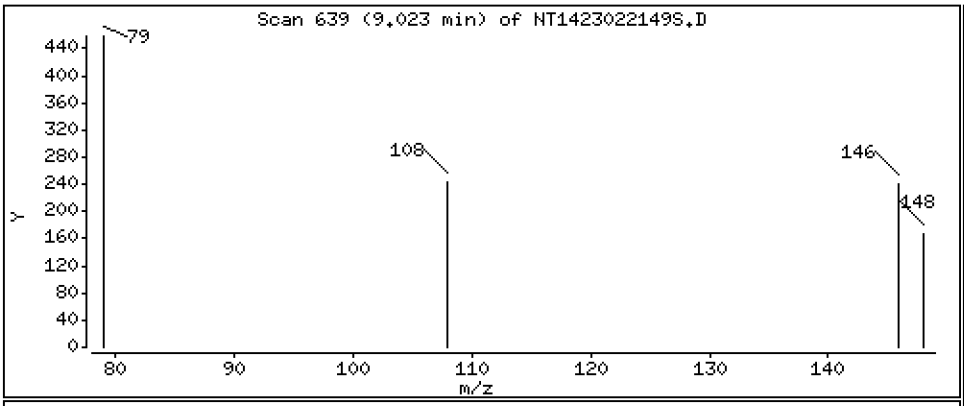
Operator: DSD

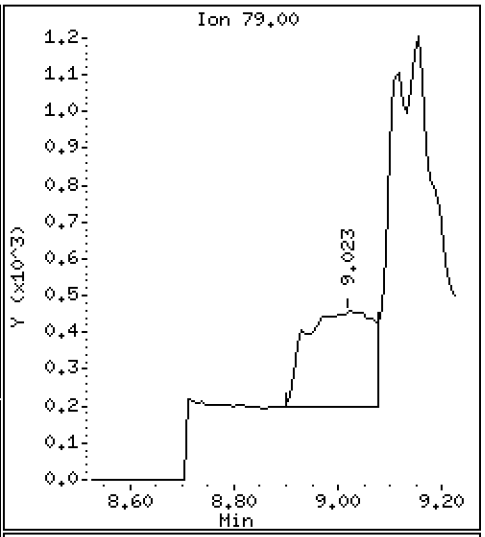
Column phase: ZB-5msi

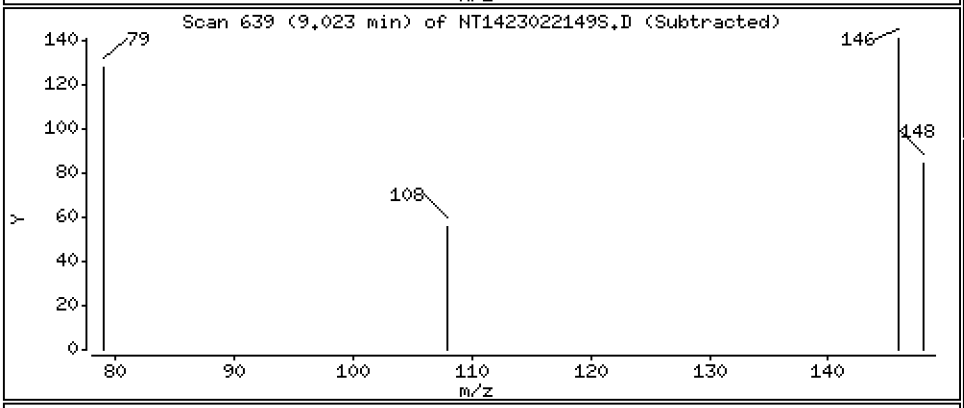
Column diameter: 0.25

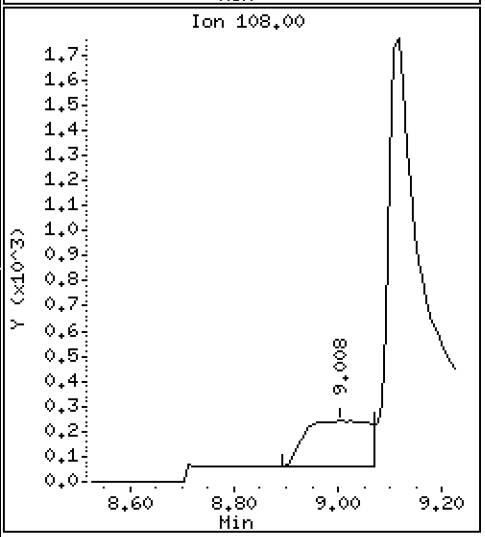
11 Benzyl alcohol

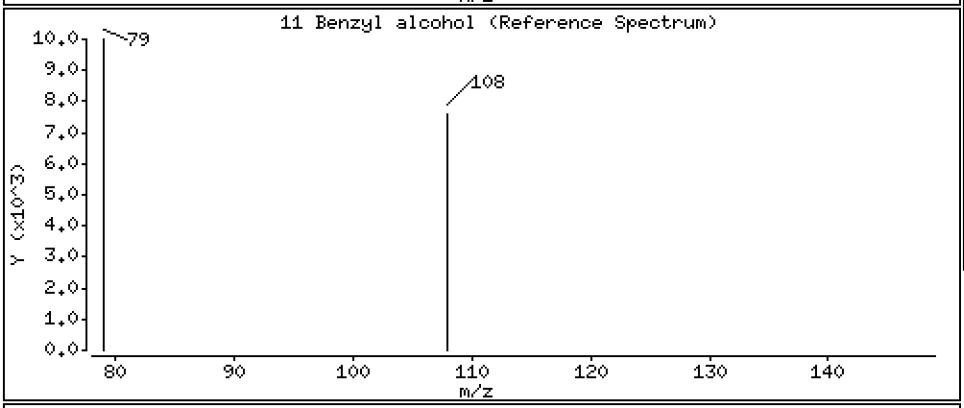
Concentration: 0.03778 ug/mL

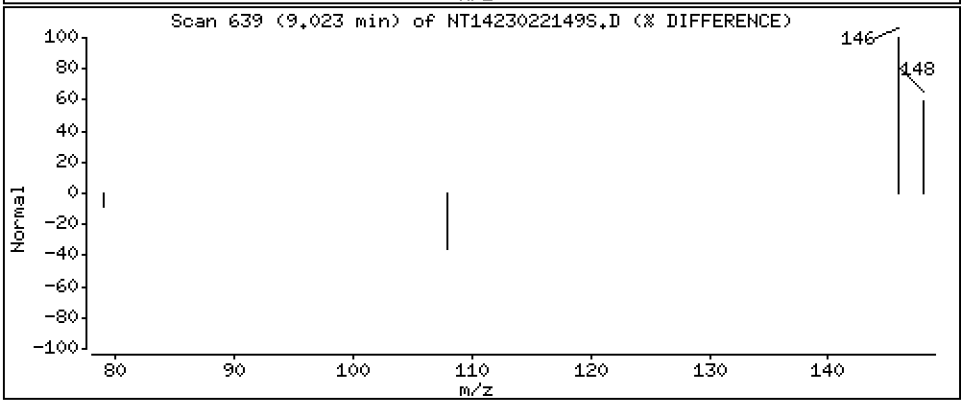












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221495.D

Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

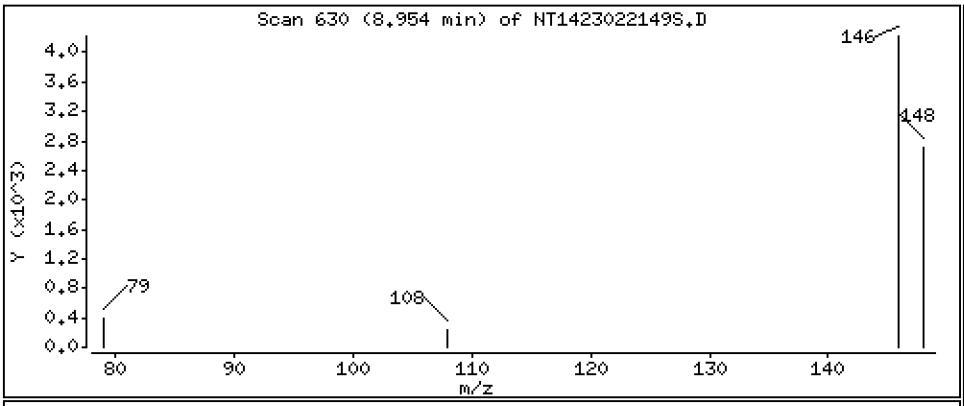
Operator: DSD

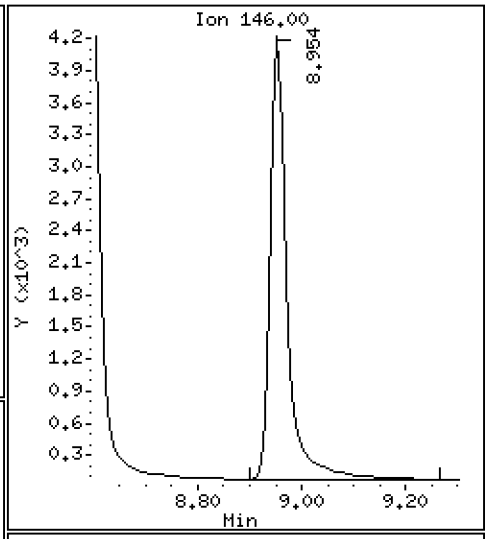
Column phase: ZB-5msi

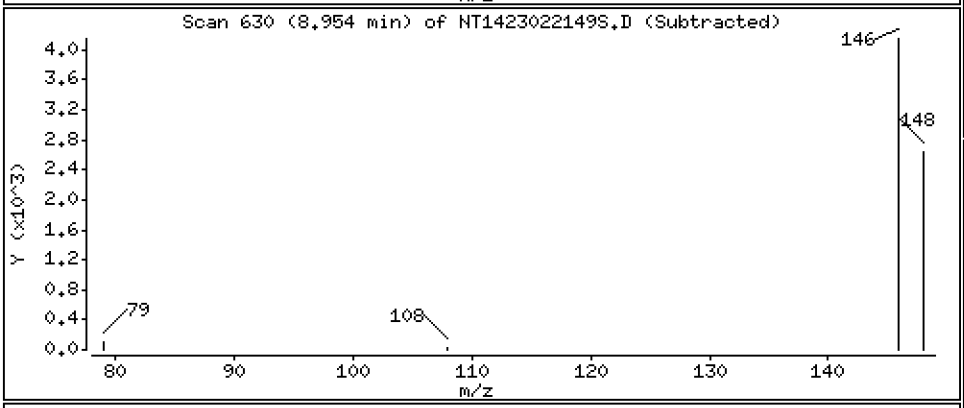
Column diameter: 0.25

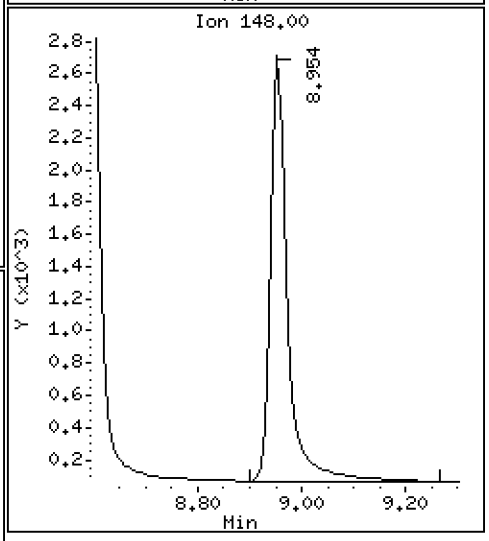
12 1,2-Dichlorobenzene

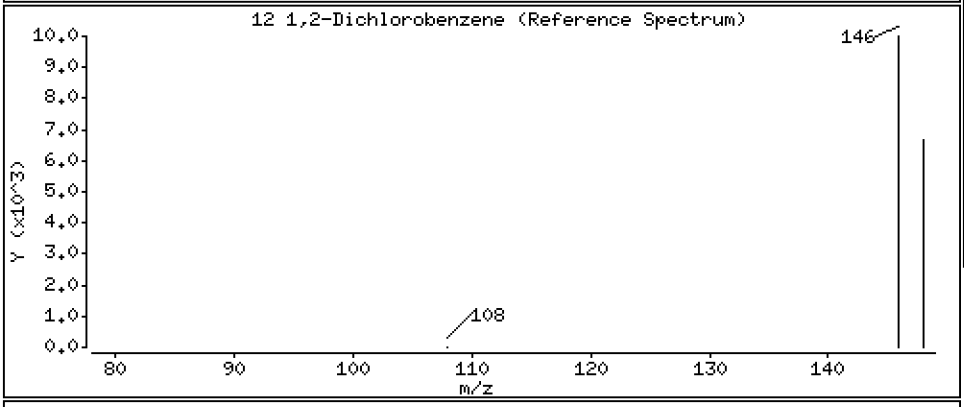
Concentration: 0.1217 ug/mL

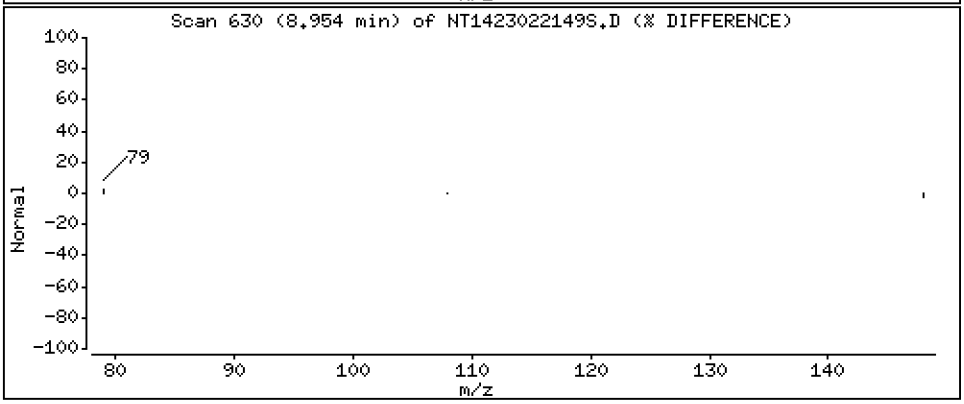












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022149S.D

Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

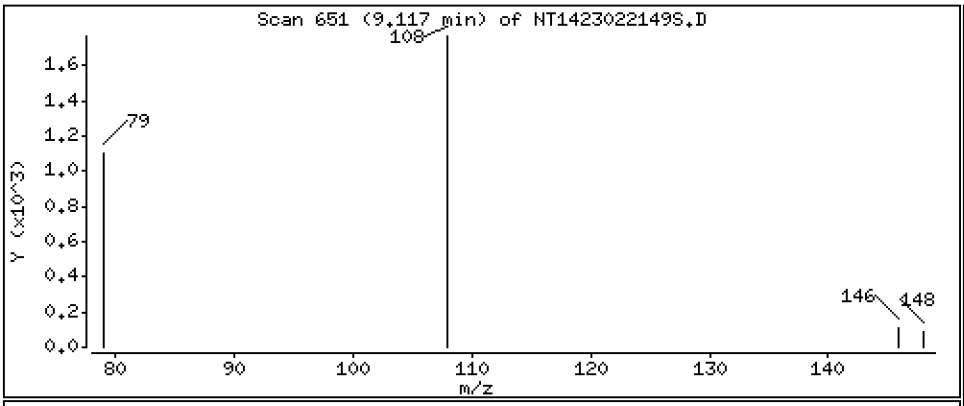
Operator: DSD

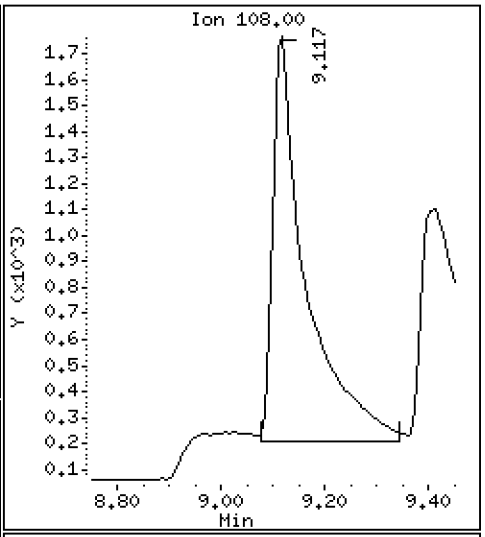
Column phase: ZB-5msi

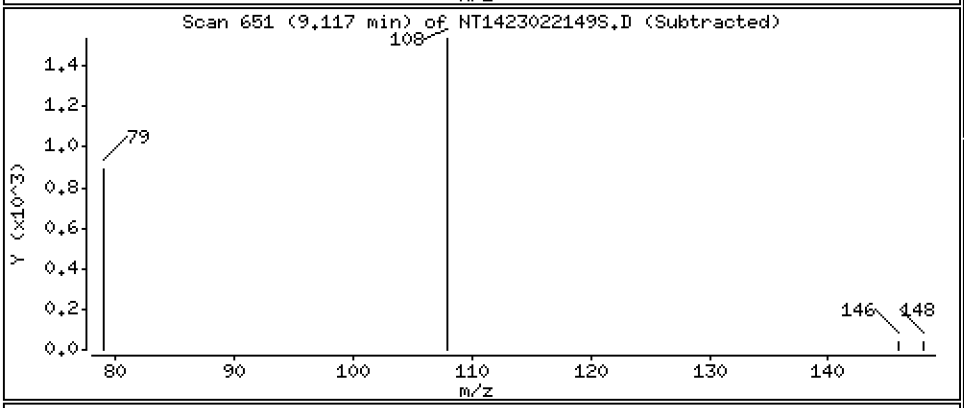
Column diameter: 0.25

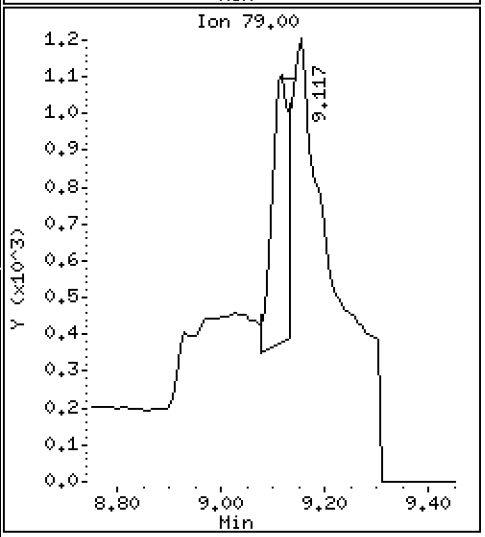
13 2-Methylphenol

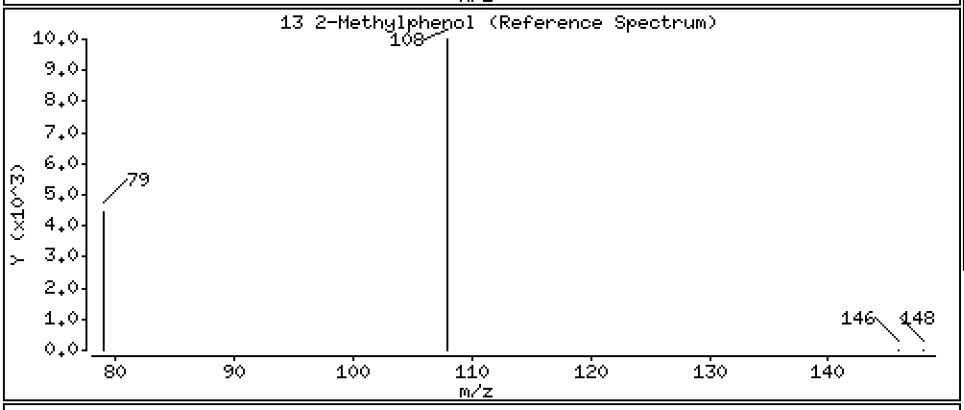
Concentration: 0.1022 ug/mL

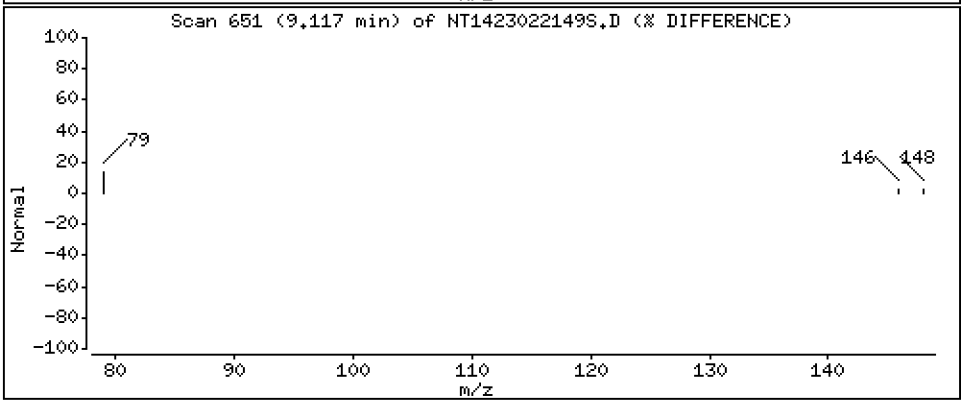












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Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

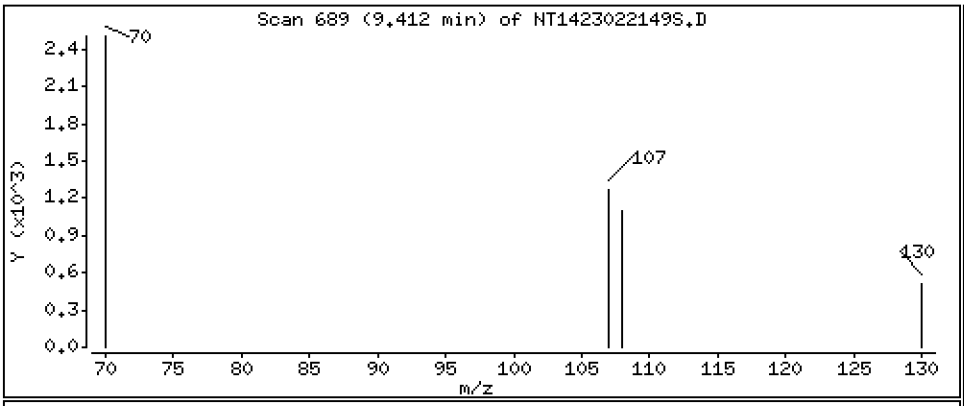
Operator: DSD

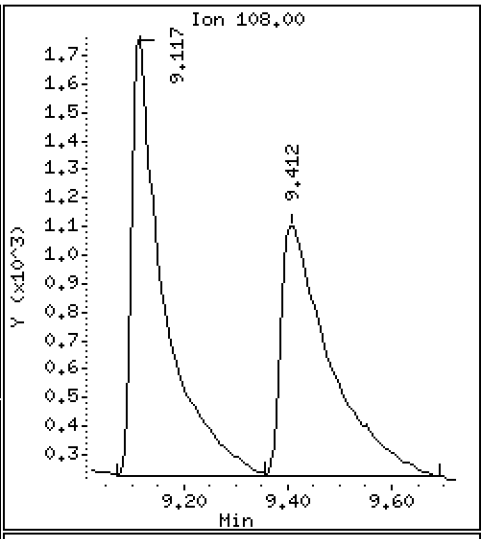
Column phase: ZB-5msi

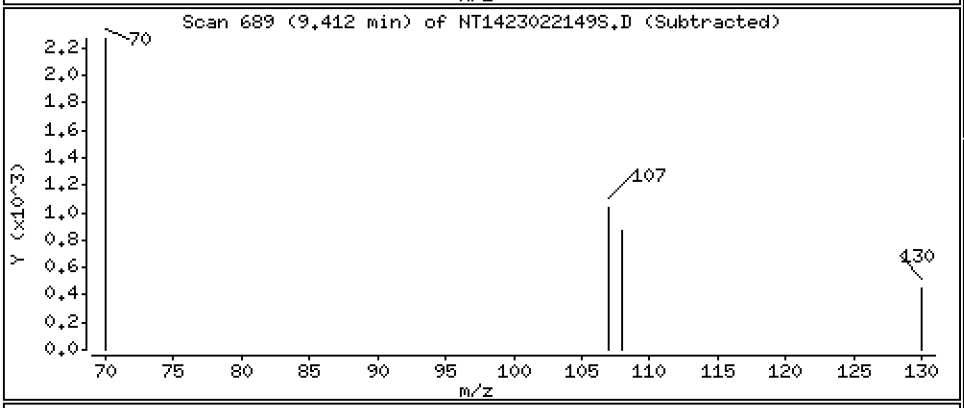
Column diameter: 0.25

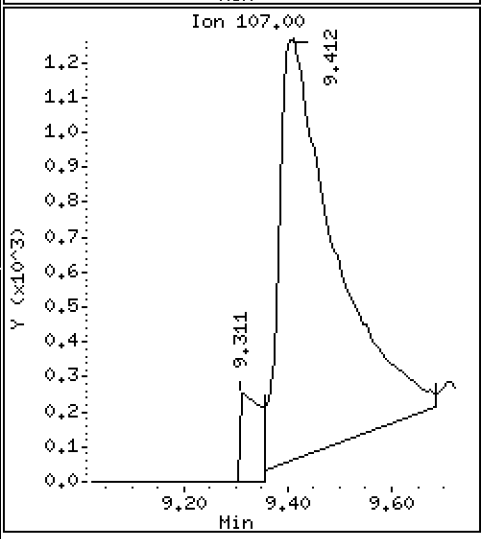
15 4-Methylphenol

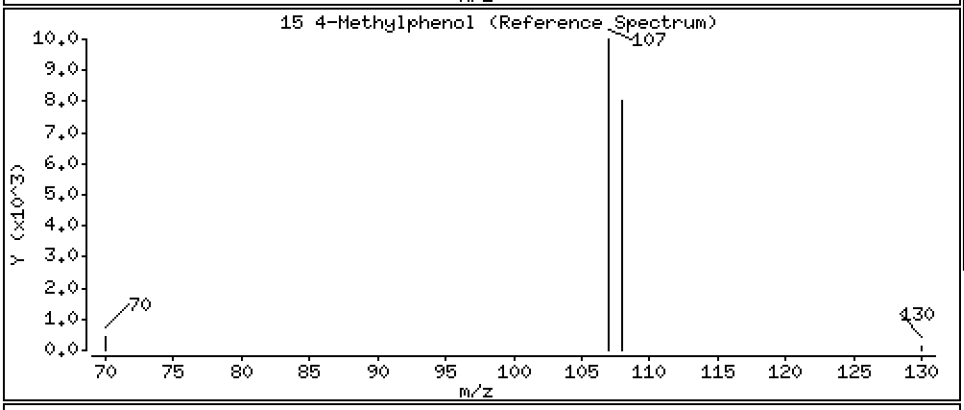
Concentration: 0.07789 ug/mL

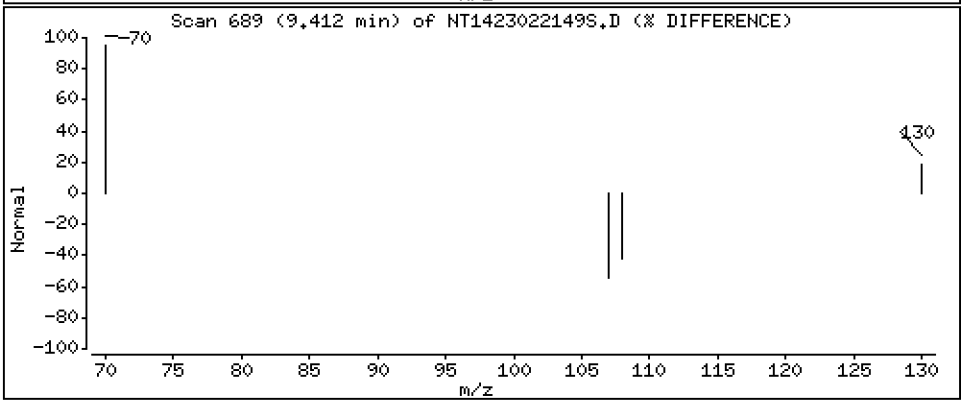












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Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

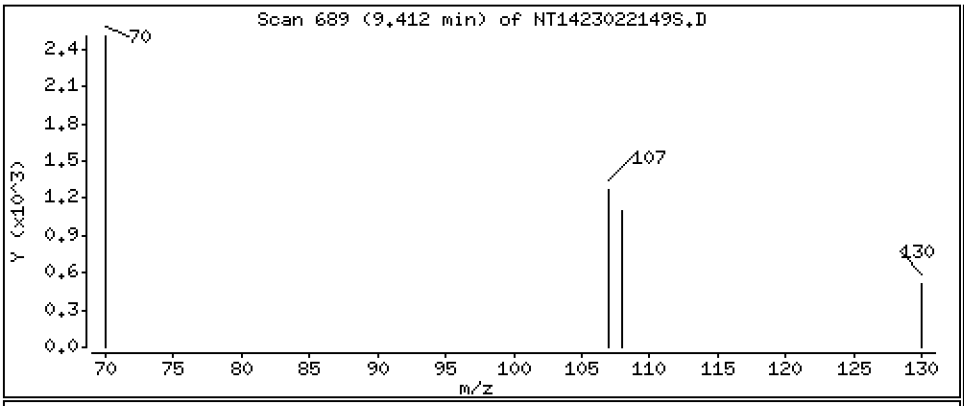
Operator: DSD

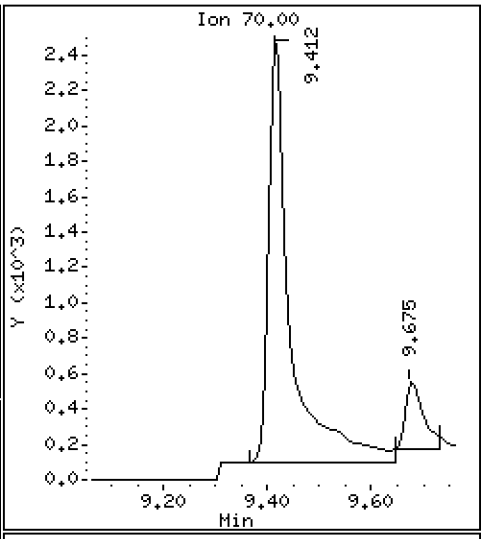
Column phase: ZB-5msi

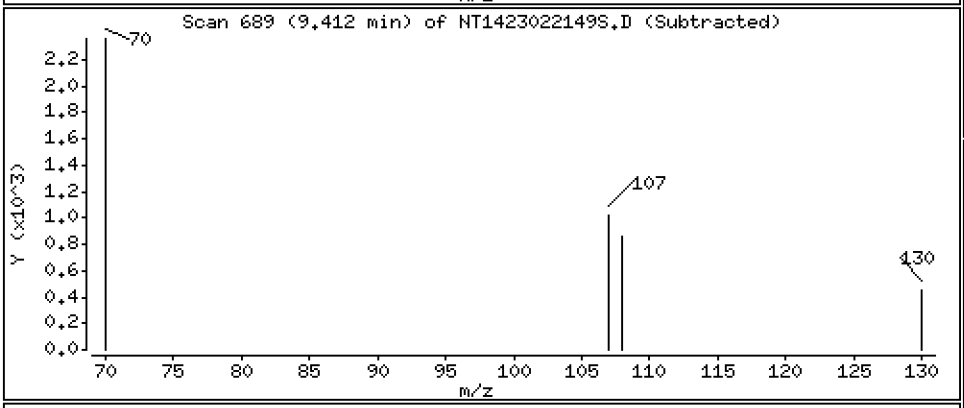
Column diameter: 0.25

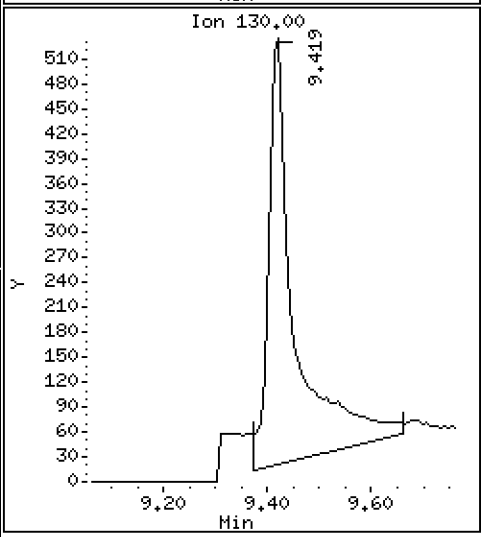
16 N-Nitroso-di-n-propylamine

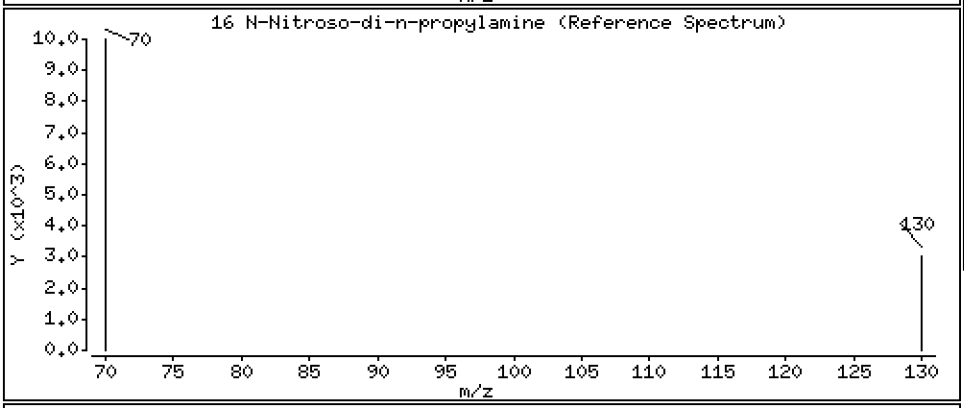
Concentration: 0.1198 ug/mL

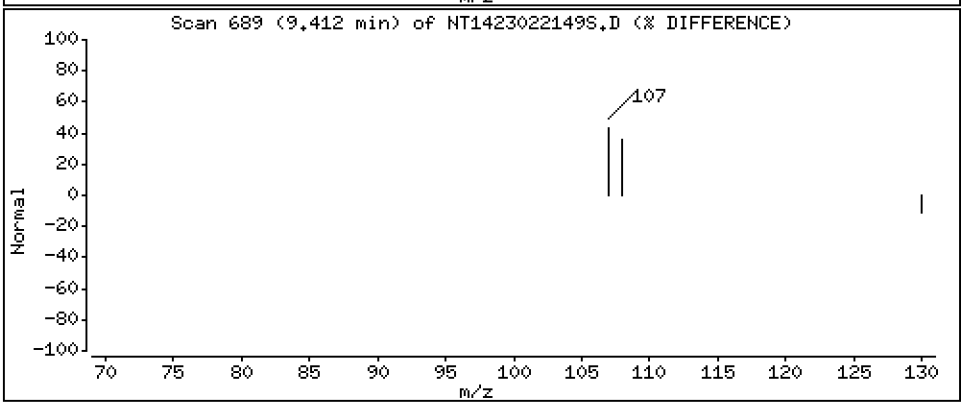












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221495.D

Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

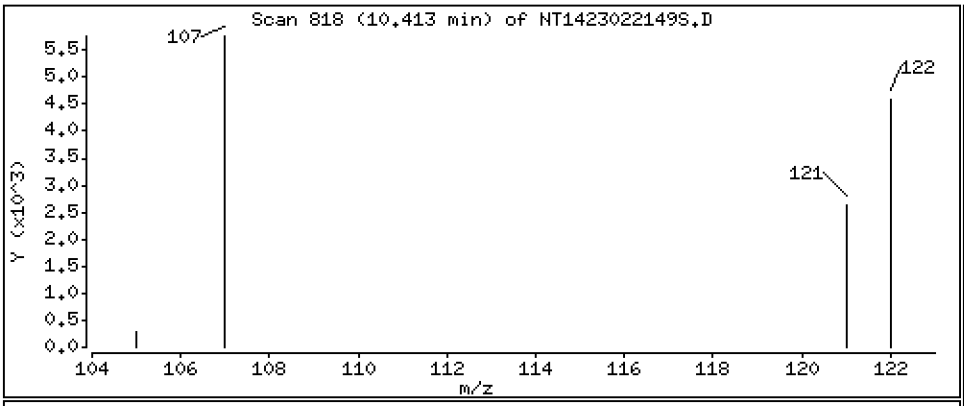
Operator: DSD

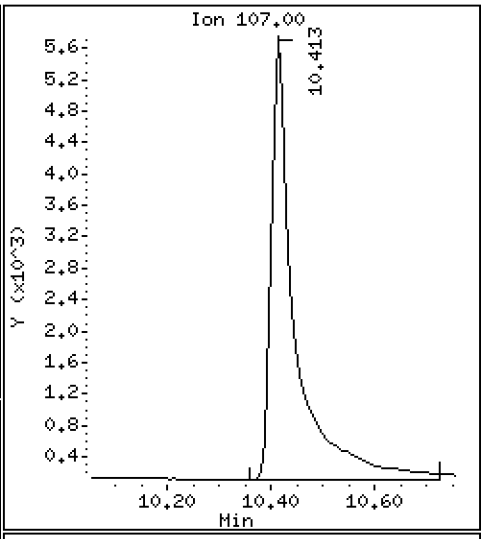
Column phase: ZB-5msi

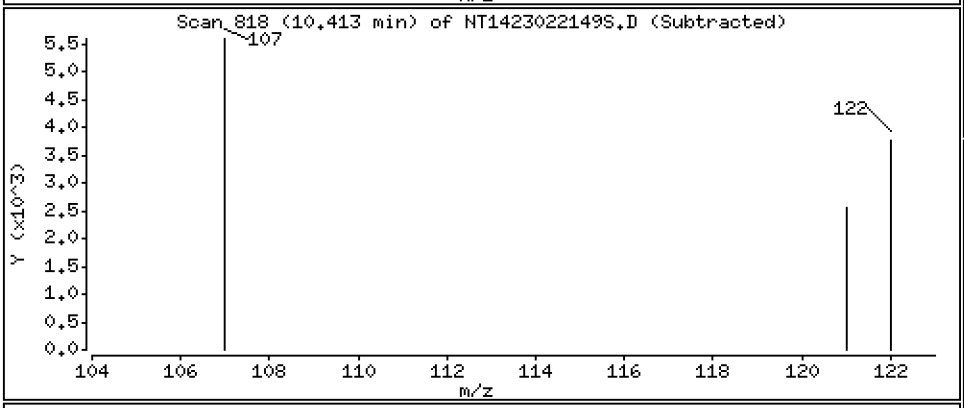
Column diameter: 0.25

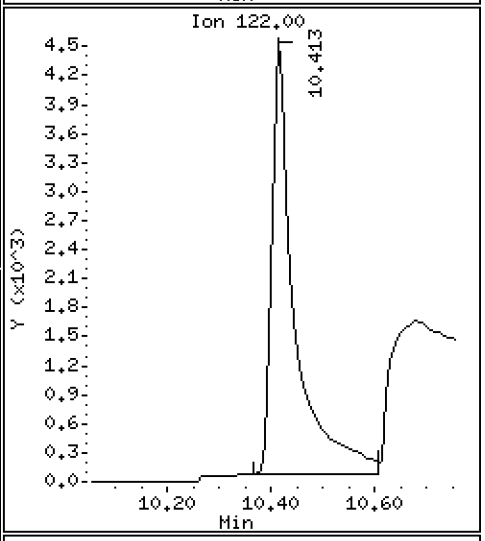
22 2,4-Dimethylphenol

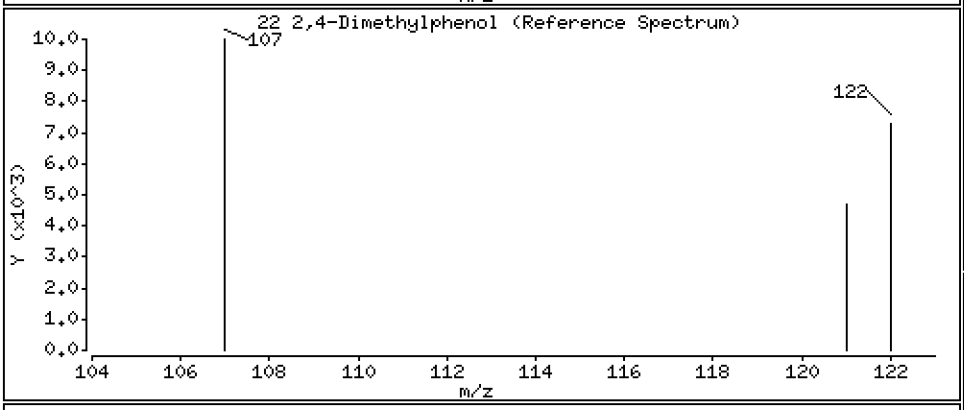
Concentration: 0.2280 ug/mL

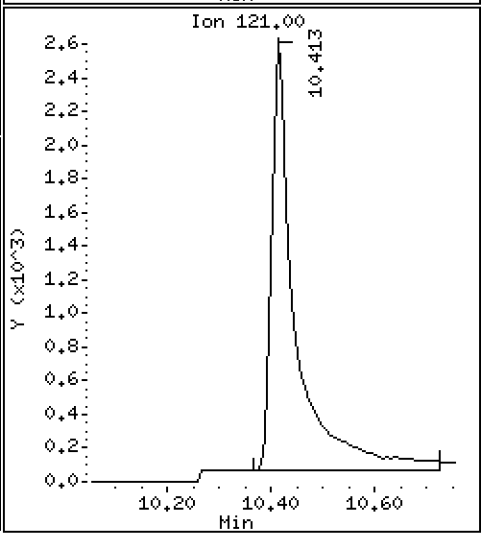


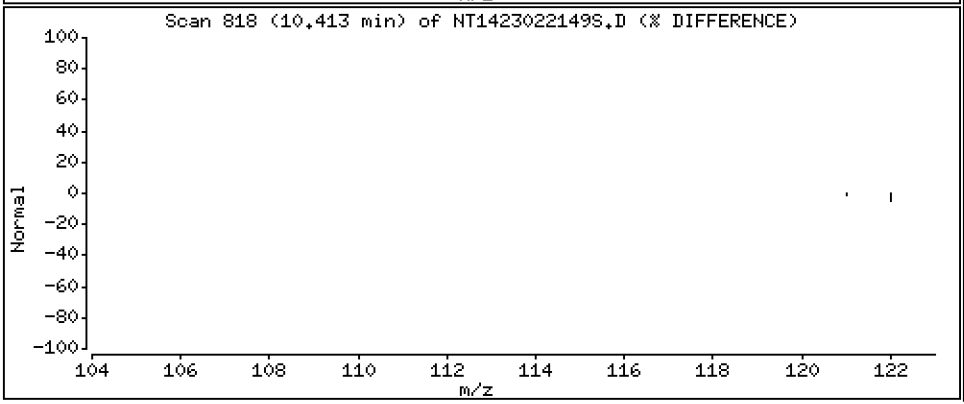












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Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

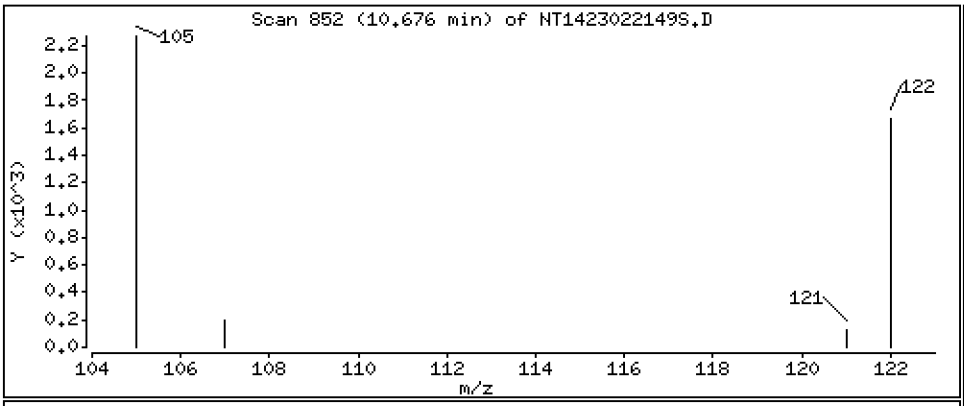
Operator: DSD

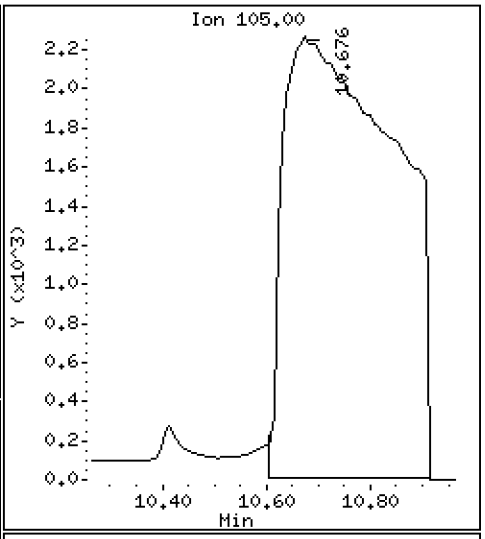
Column phase: ZB-5msi

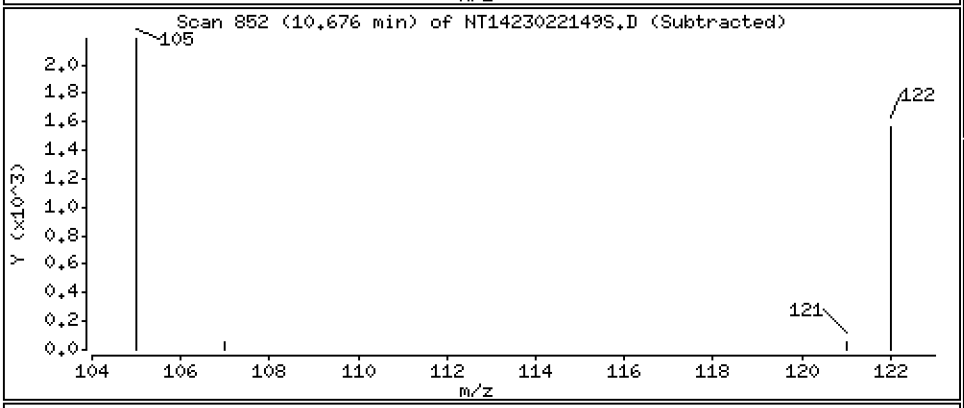
Column diameter: 0.25

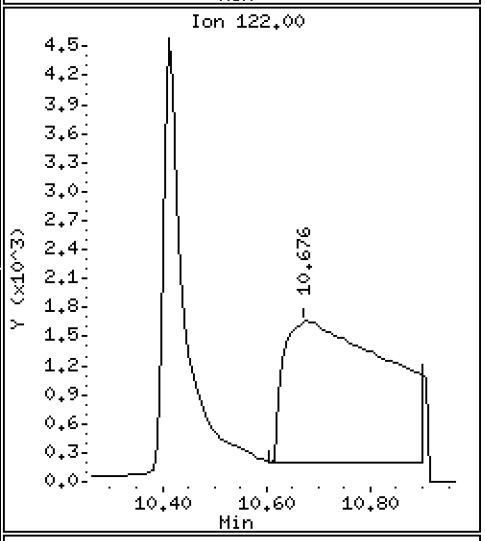
24 Benzoic acid

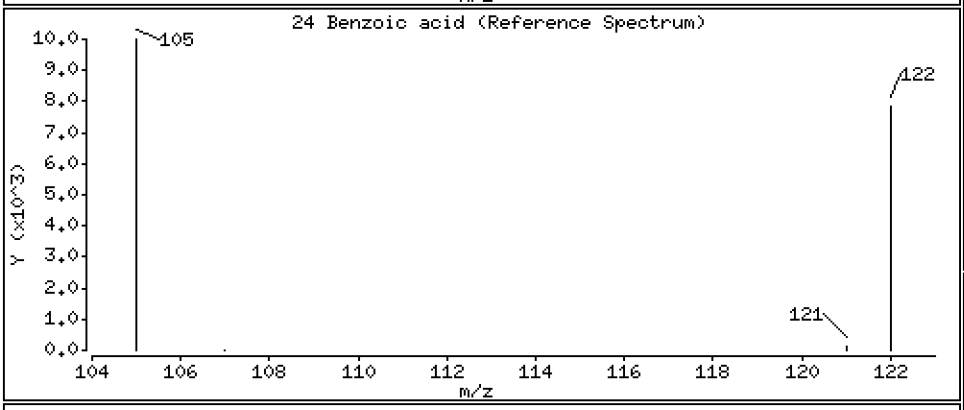
Concentration: 0.8340 ug/mL

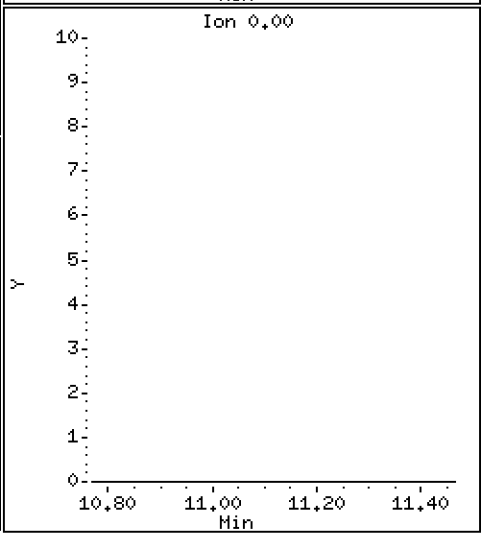


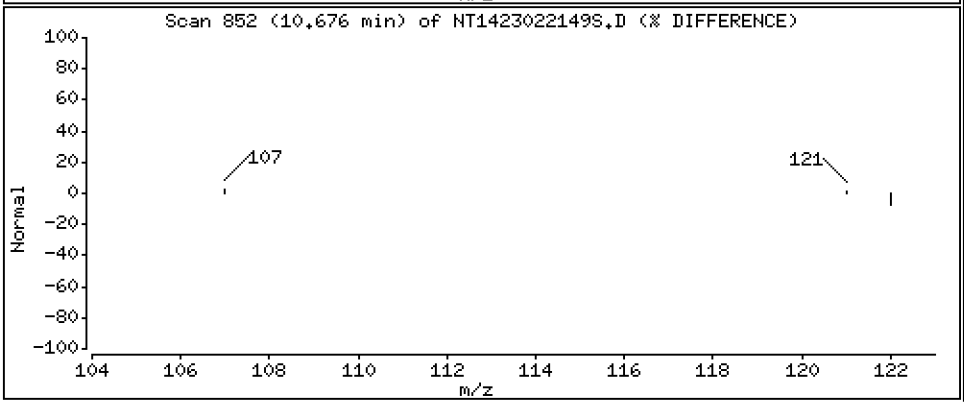












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Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

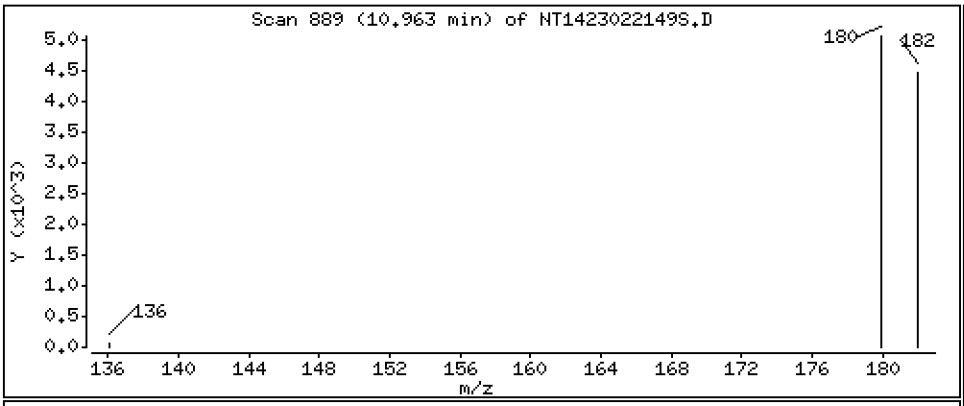
Operator: DSD

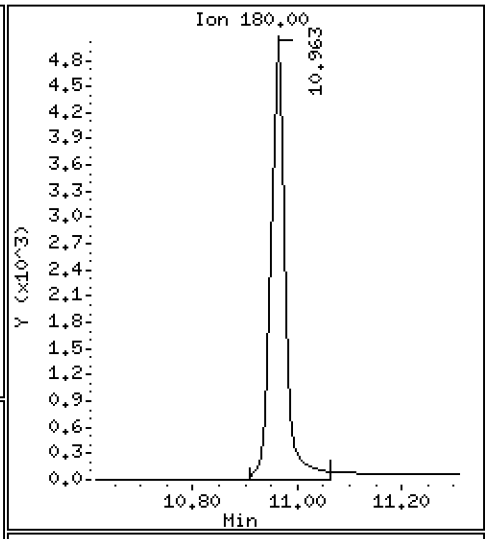
Column phase: ZB-5msi

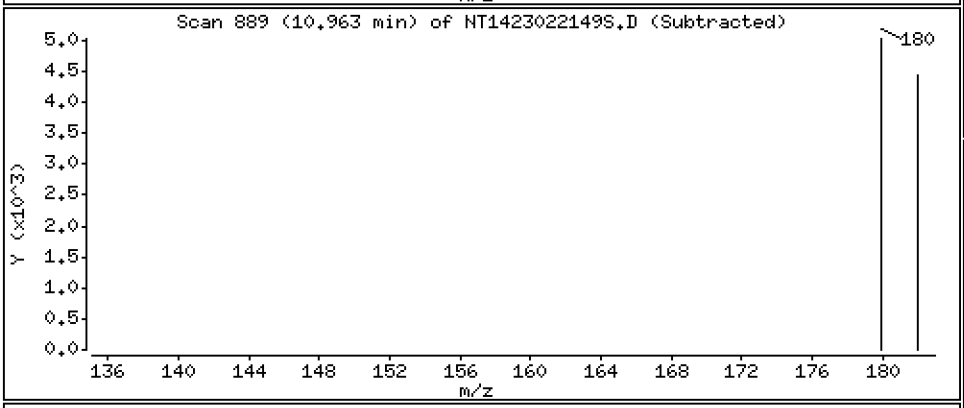
Column diameter: 0.25

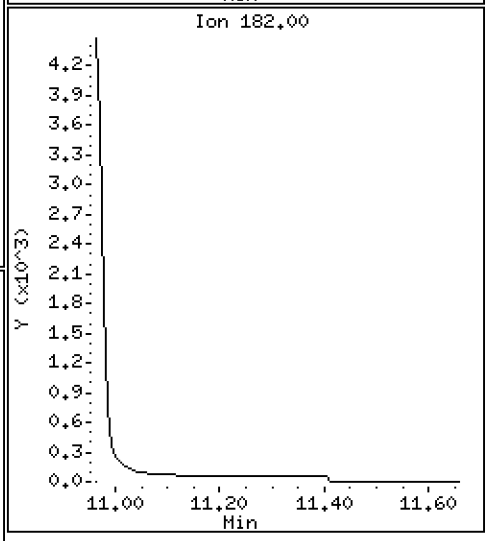
26 1,2,4-Trichlorobenzene

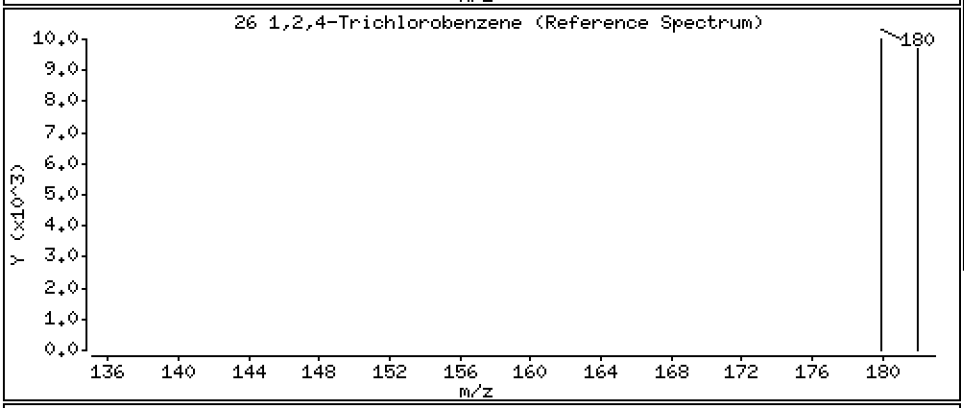
Concentration: 0.1210 ug/mL

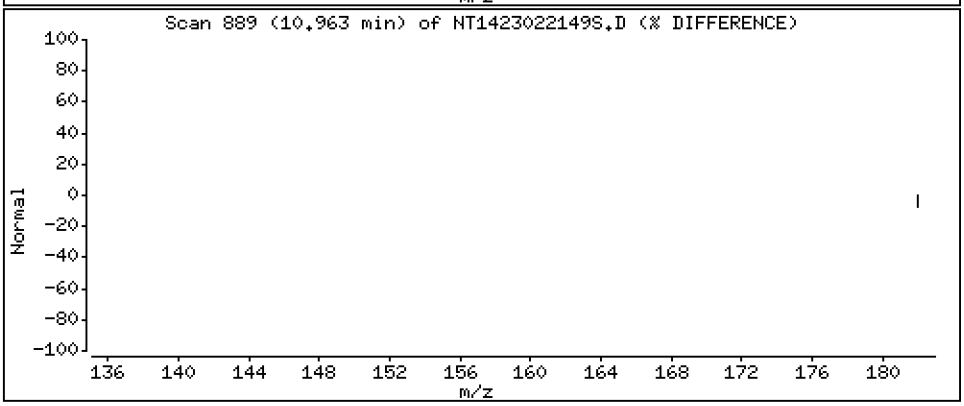












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230022149S.D

Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

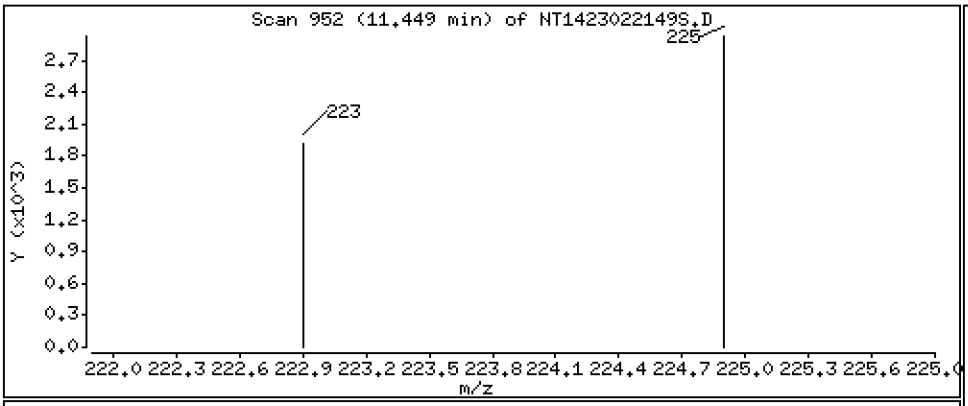
Operator: DSD

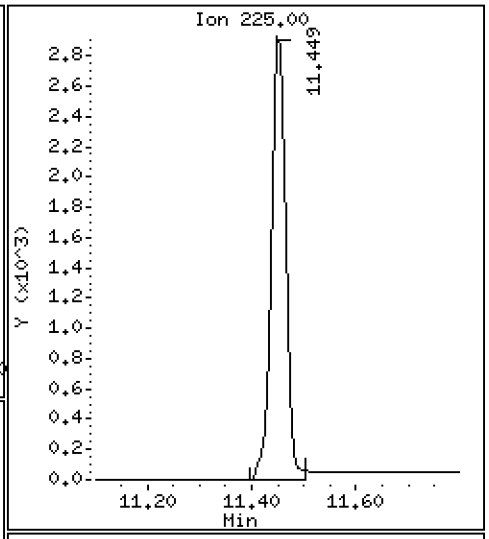
Column phase: ZB-5msi

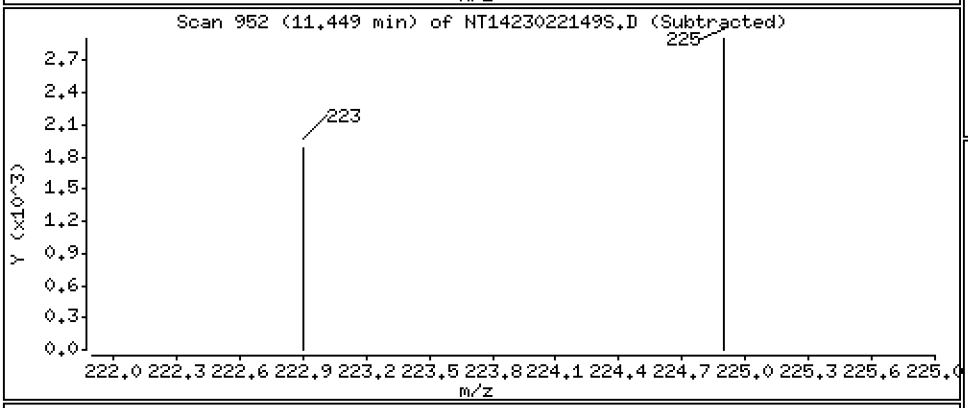
Column diameter: 0.25

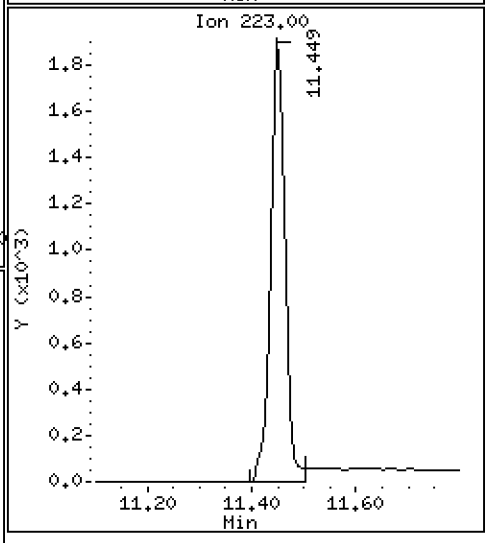
30 Hexachlorobutadiene

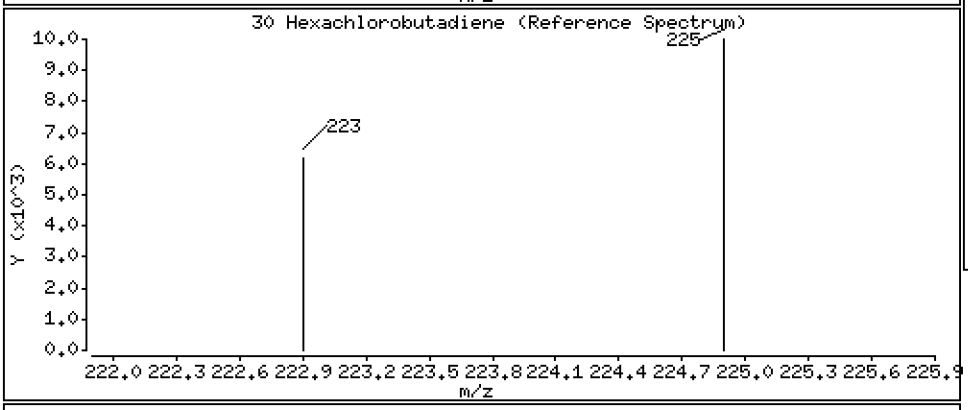
Concentration: 0.1147 ug/mL

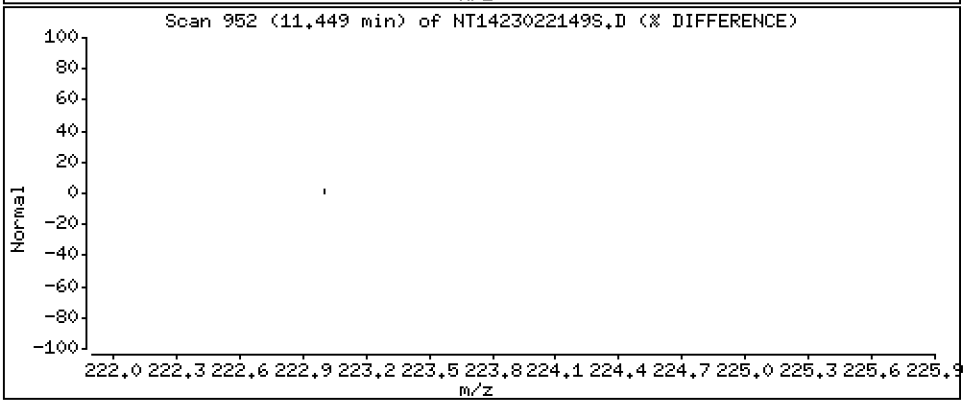












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221495.D

Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

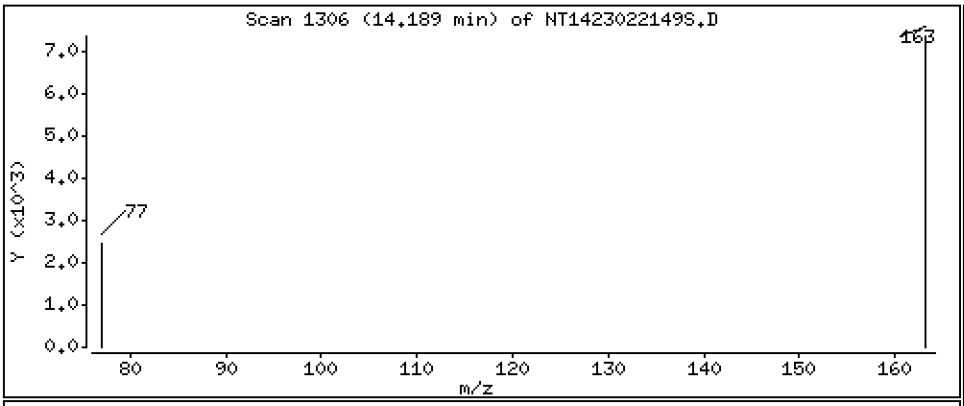
Operator: DSD

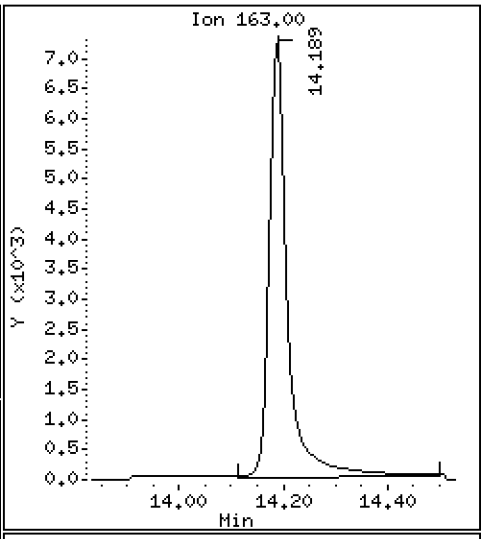
Column phase: ZB-5msi

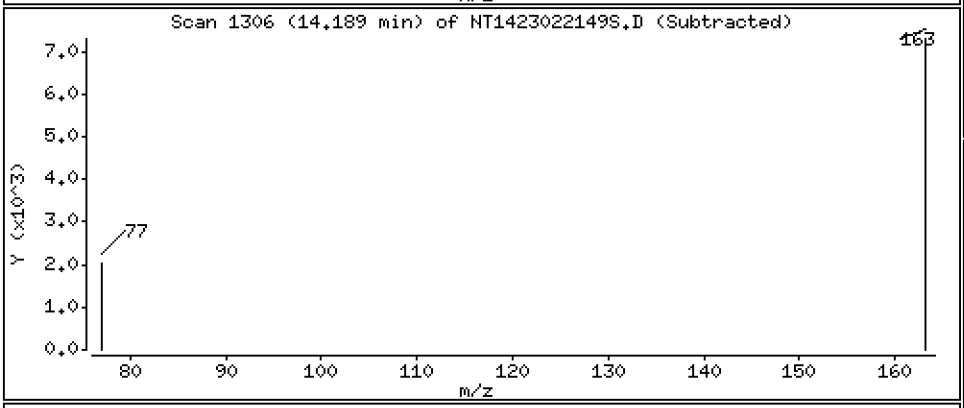
Column diameter: 0.25

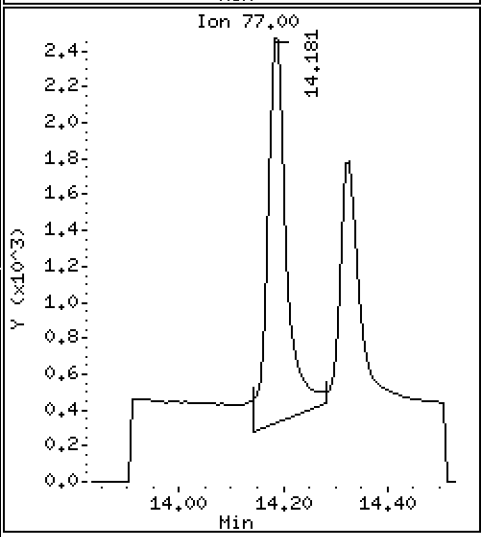
39 Dimethylphthalate

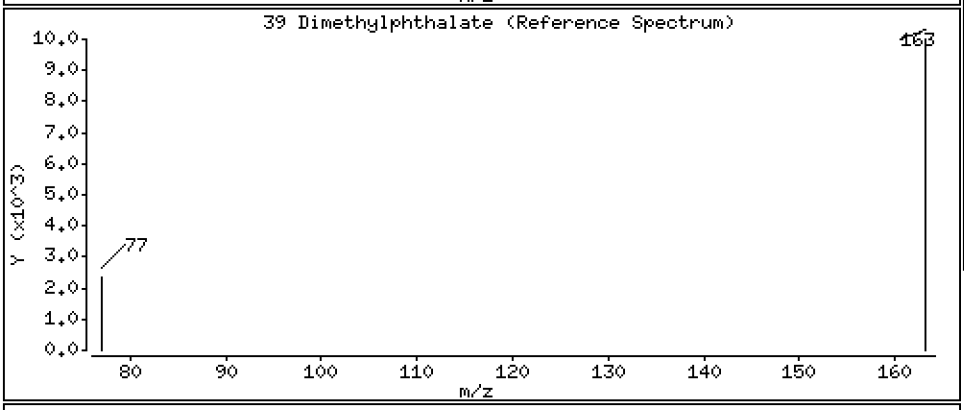
Concentration: 0.1266 ug/mL

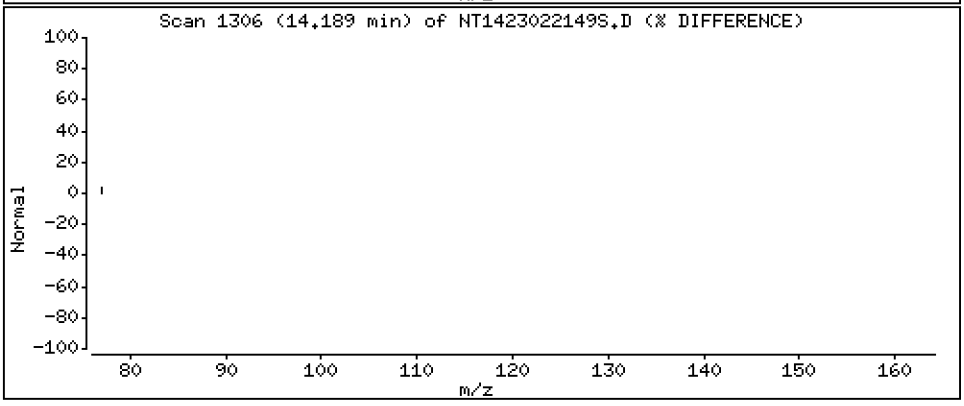












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Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

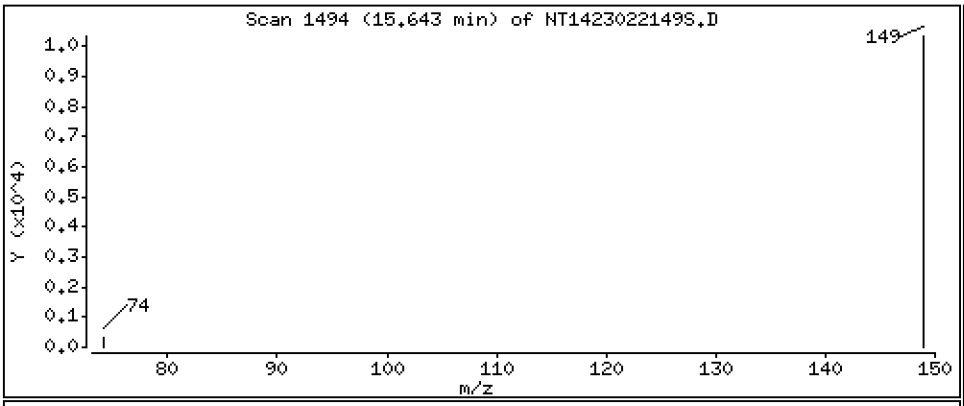
Operator: DSD

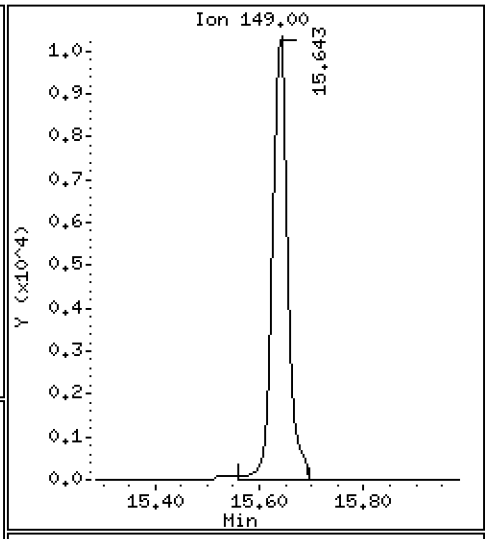
Column phase: ZB-5msi

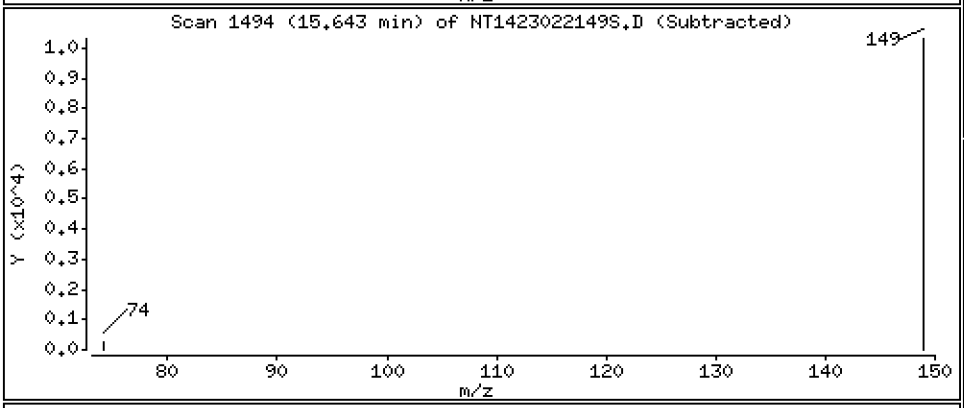
Column diameter: 0.25

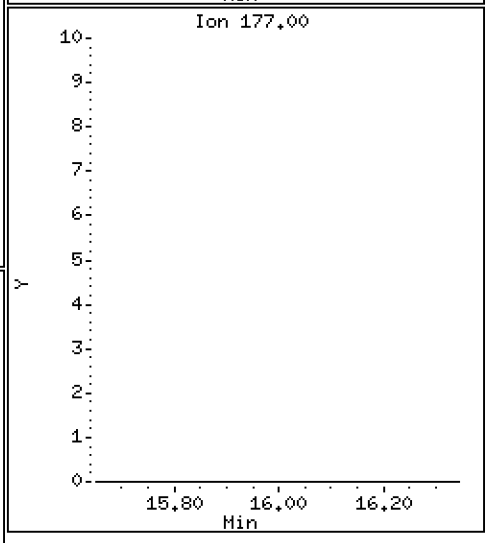
50 Diethylphthalate

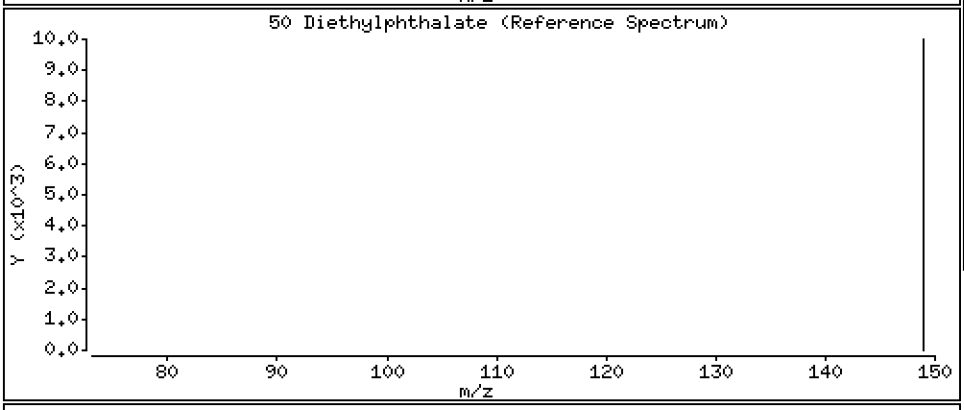
Concentration: 0.1173 ug/mL

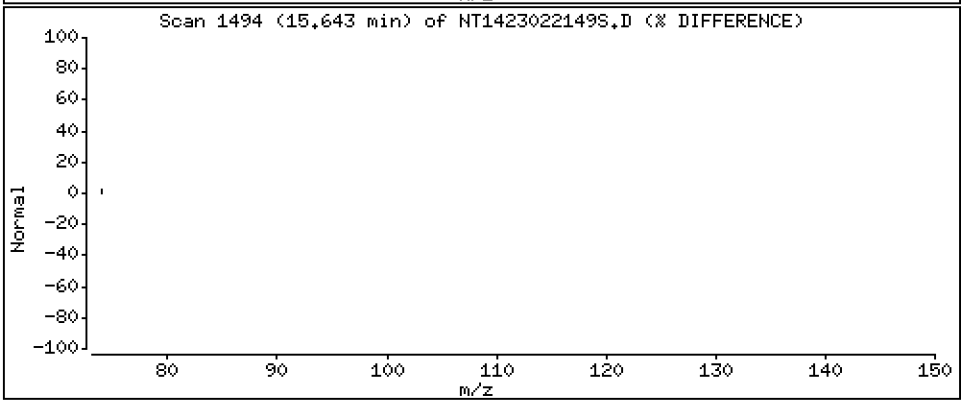












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Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

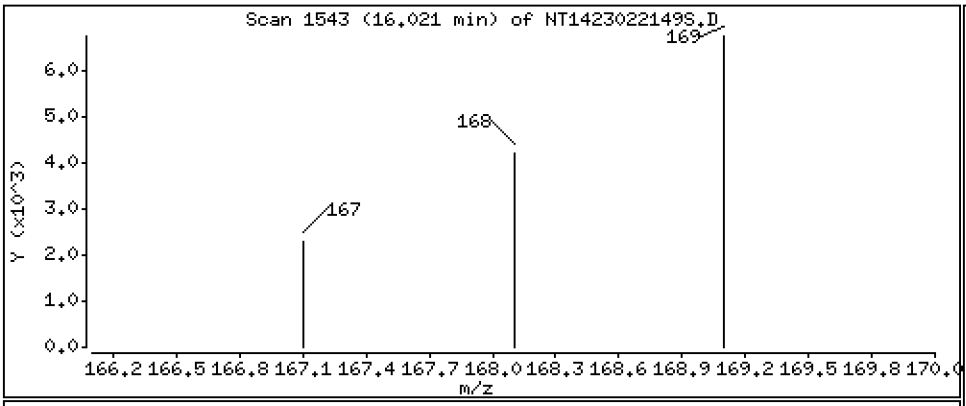
Operator: DSD

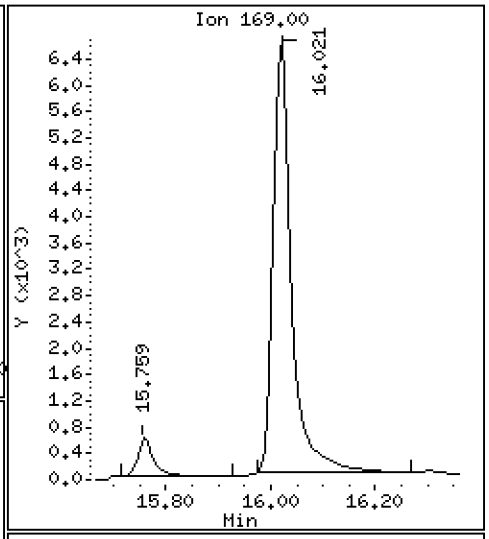
Column phase: ZB-5msi

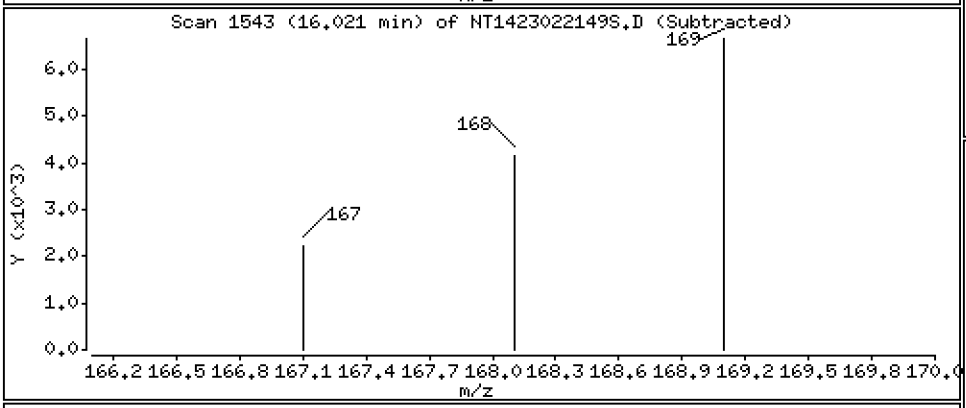
Column diameter: 0.25

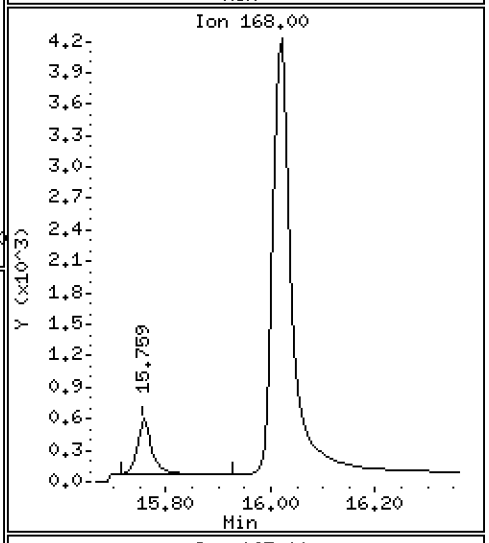
54 N-Nitrosodiphenylamine

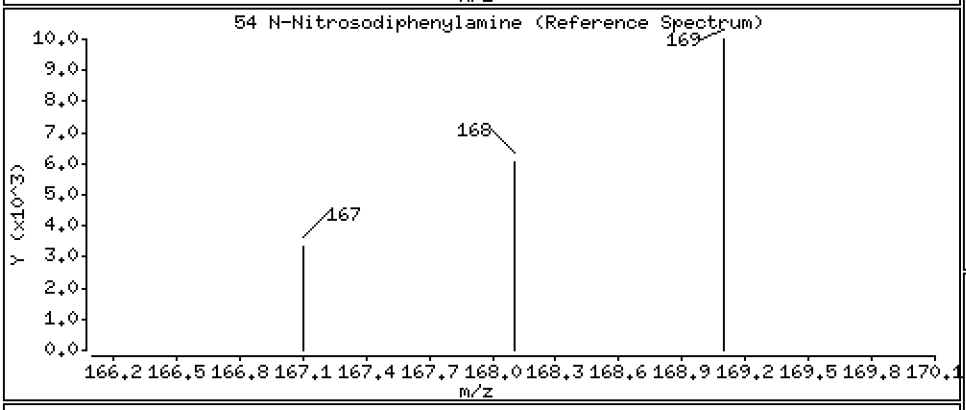
Concentration: 0.1171 ug/mL

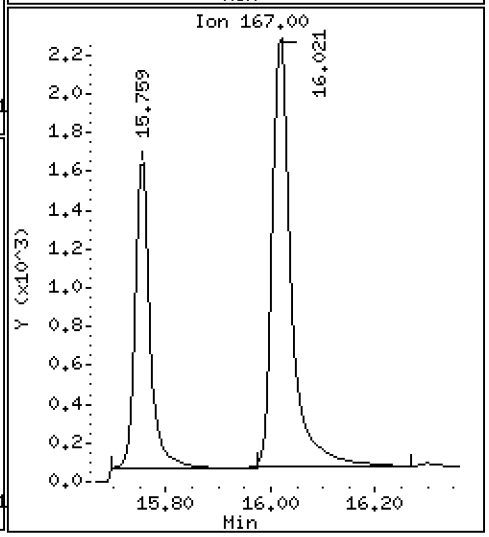


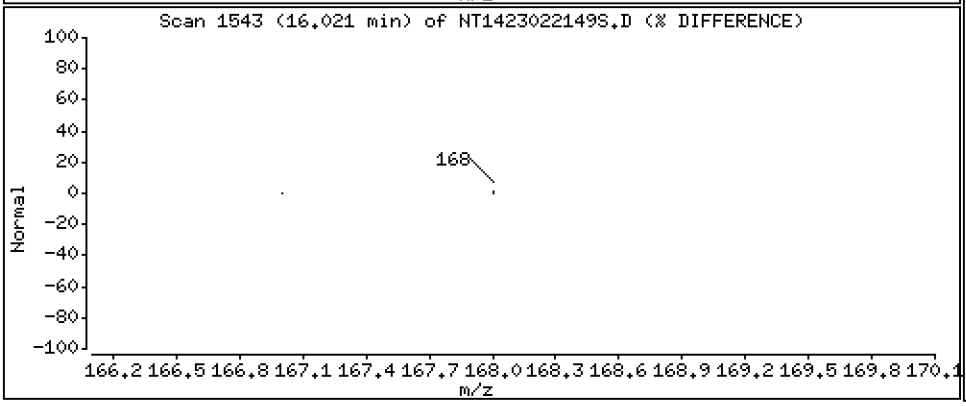












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Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

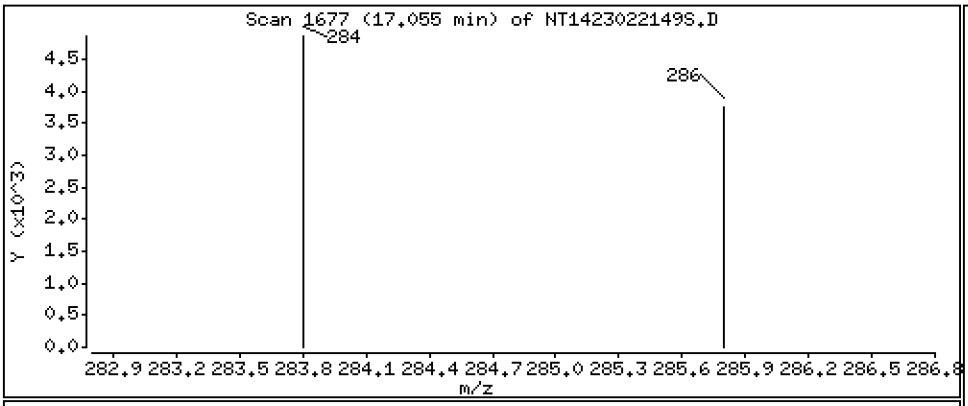
Operator: DSD

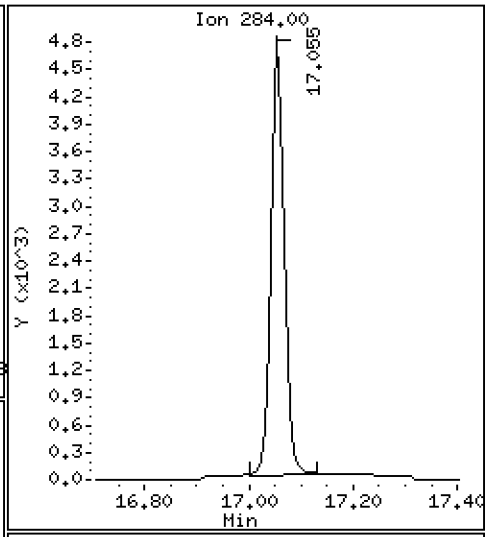
Column phase: ZB-5msi

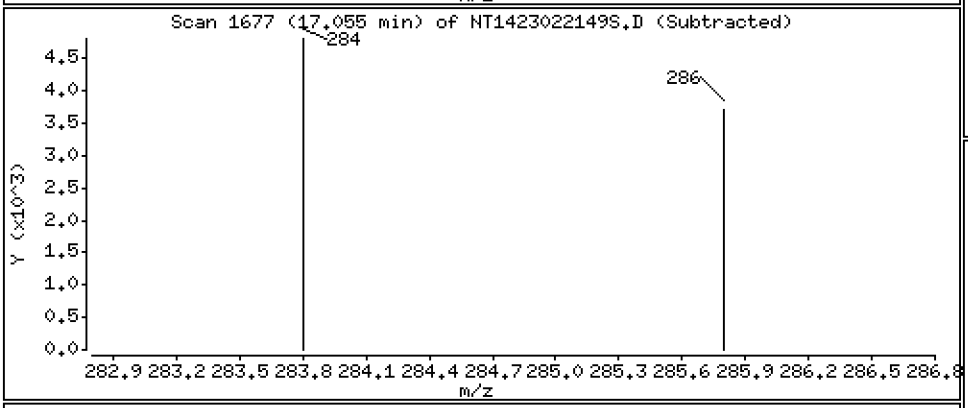
Column diameter: 0.25

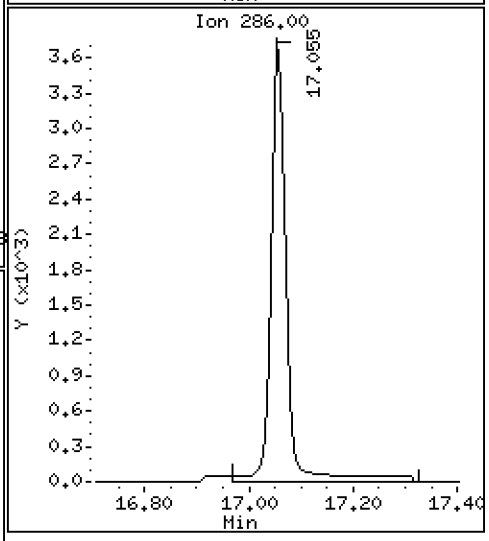
57 Hexachlorobenzene

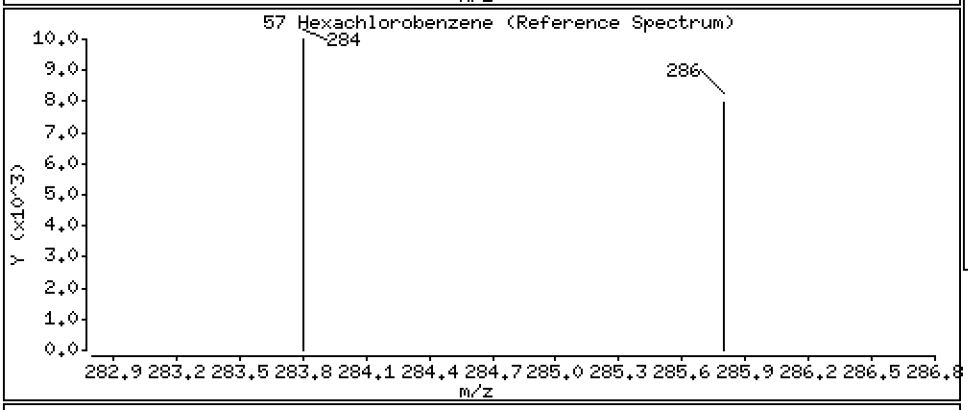
Concentration: 0.1162 ug/mL

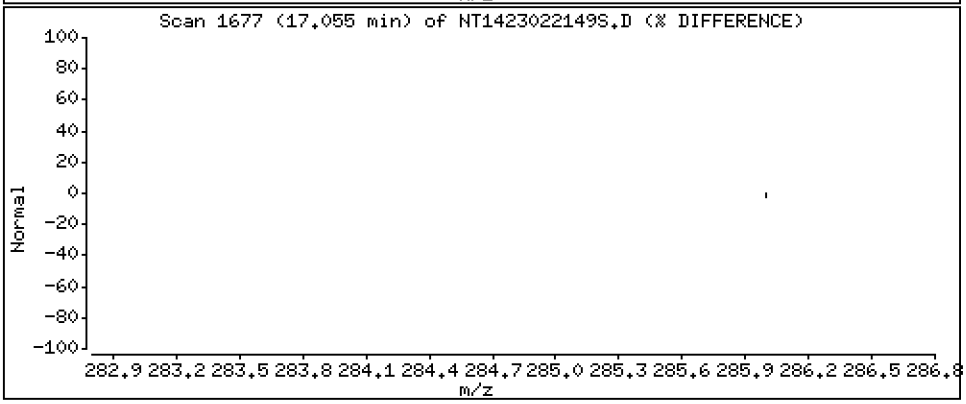












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221495.D

Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

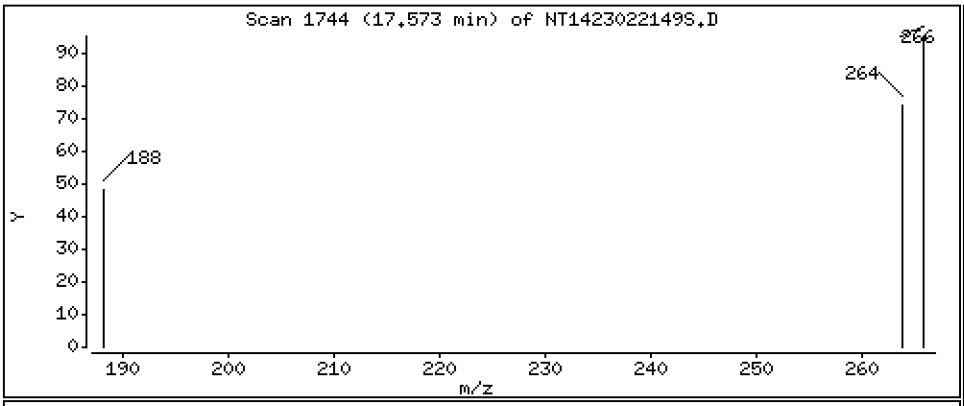
Operator: DSD

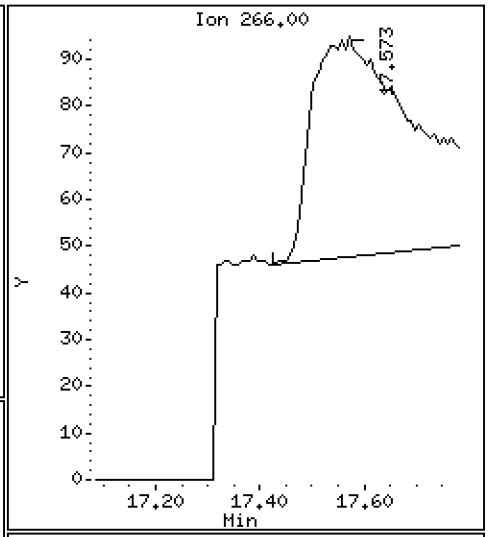
Column phase: ZB-5msi

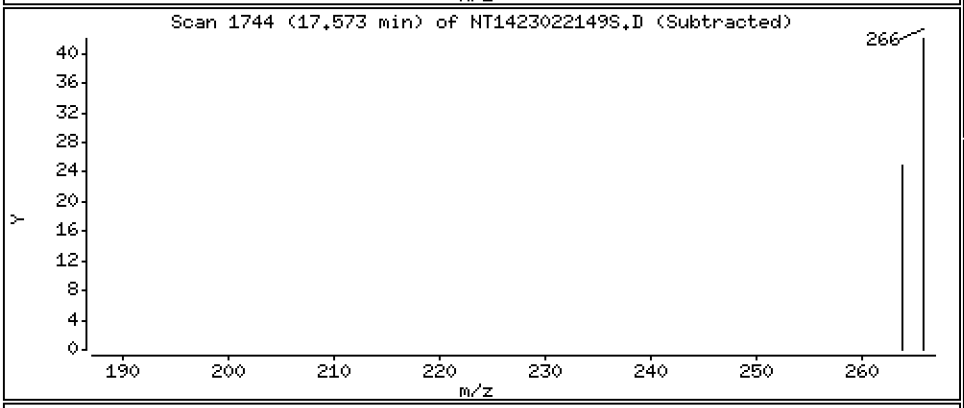
Column diameter: 0.25

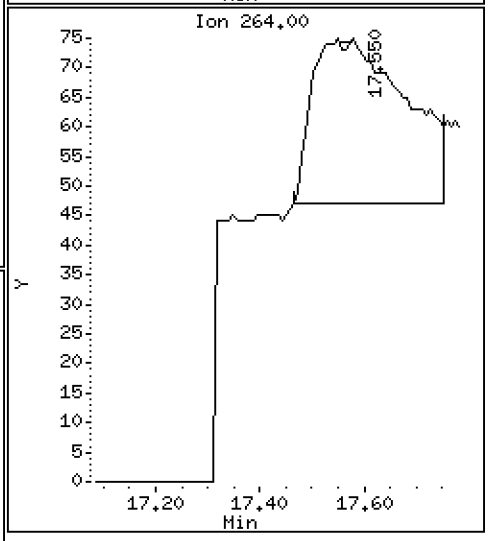
58 Pentachlorophenol

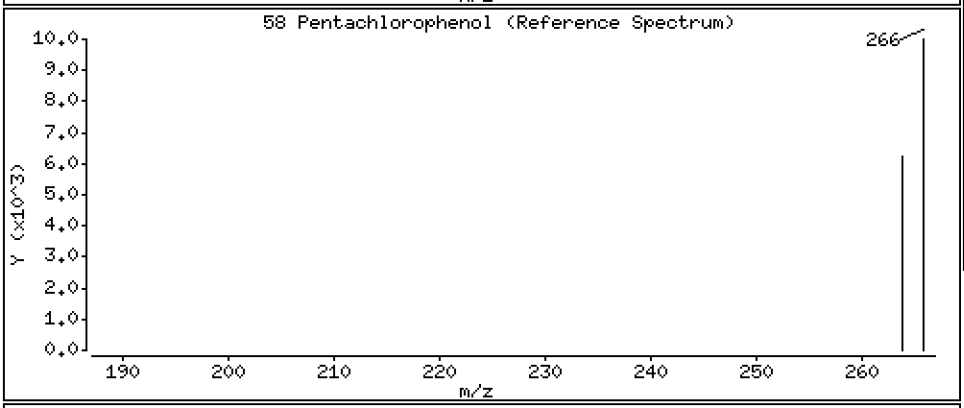
Concentration: 0.03287 ug/mL

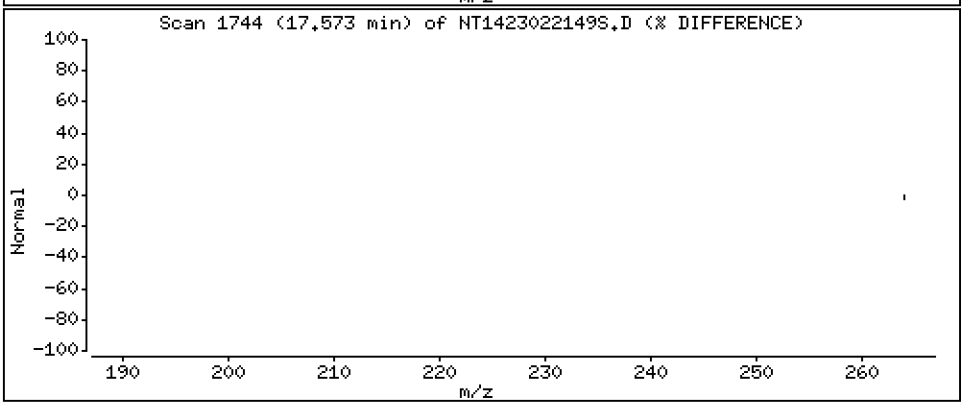












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Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

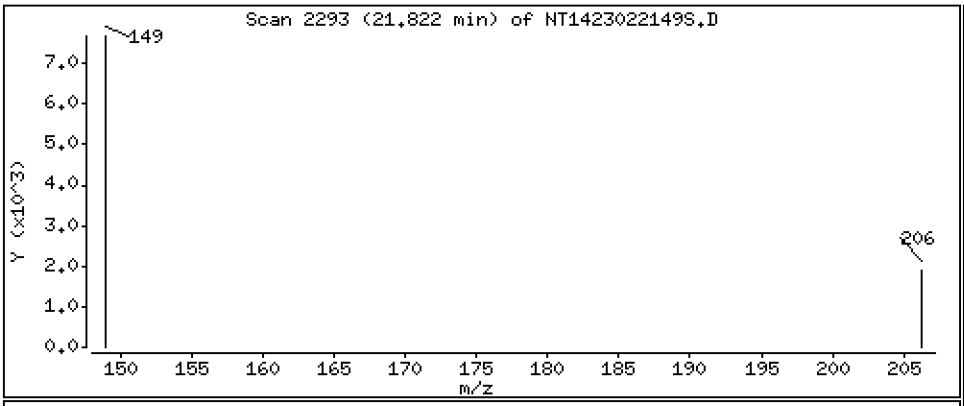
Operator: DSD

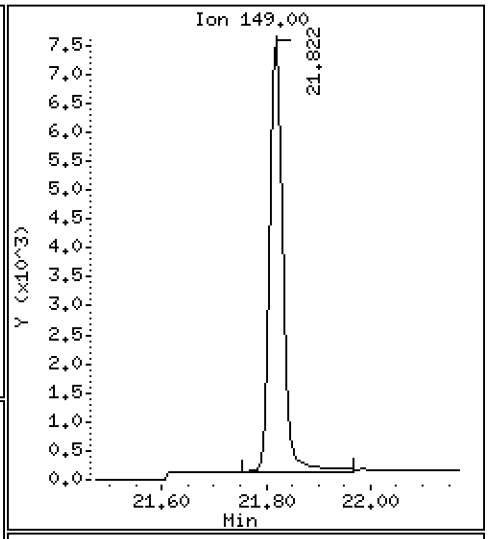
Column phase: ZB-5msi

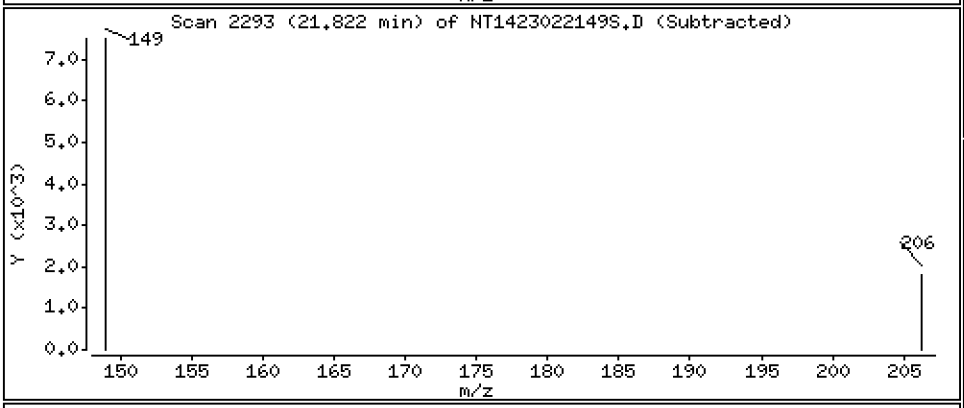
Column diameter: 0.25

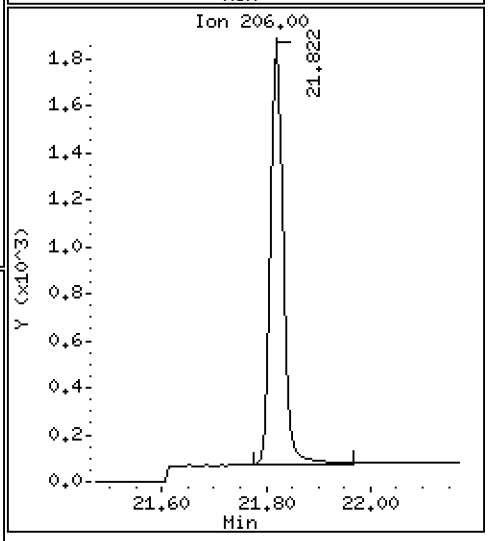
67 Butylbenzylphthalate

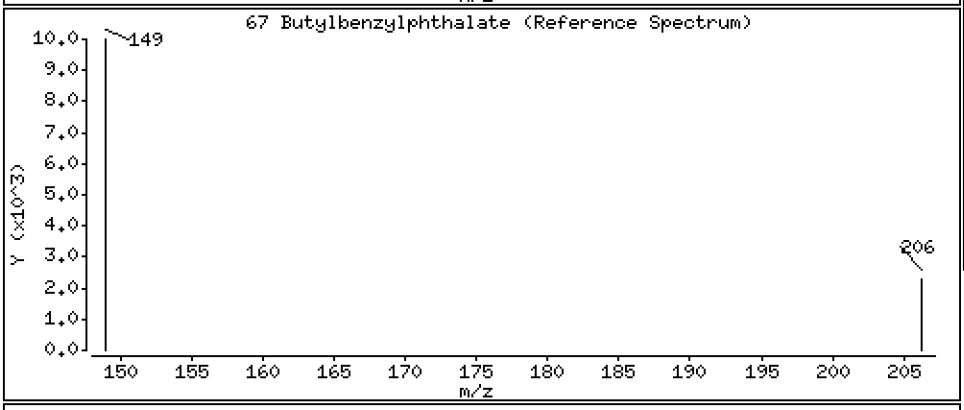
Concentration: 0.1365 ug/mL

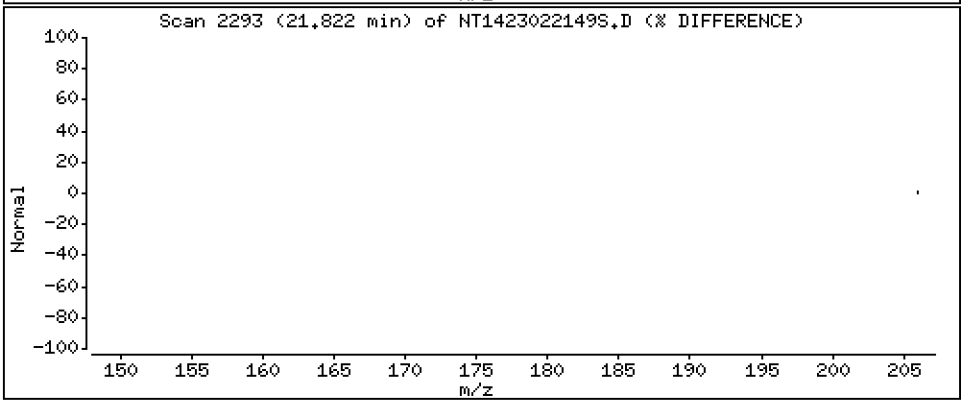












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221495.D

Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

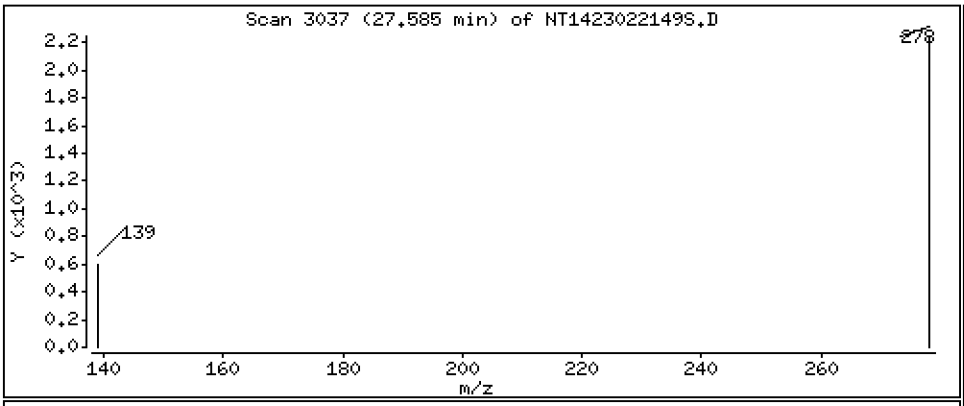
Operator: DSD

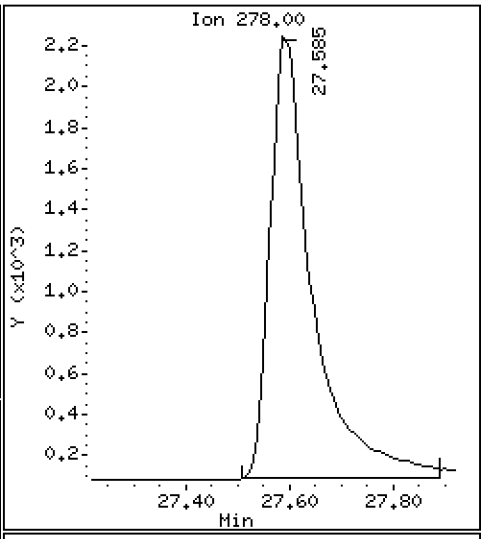
Column phase: ZB-5msi

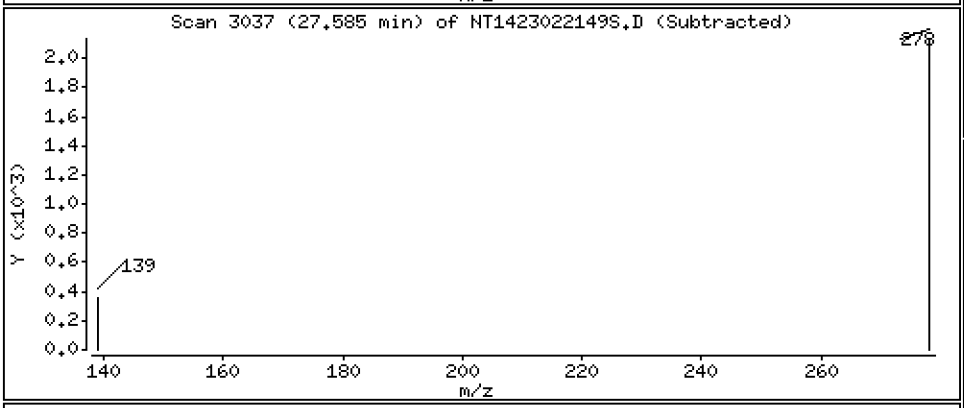
Column diameter: 0.25

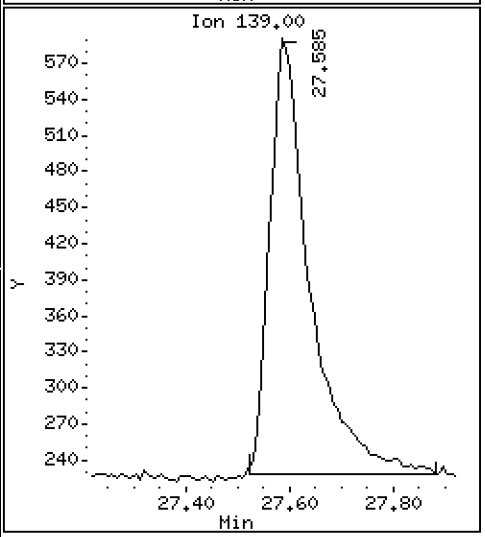
79 Dibenzo(a,h)anthracene

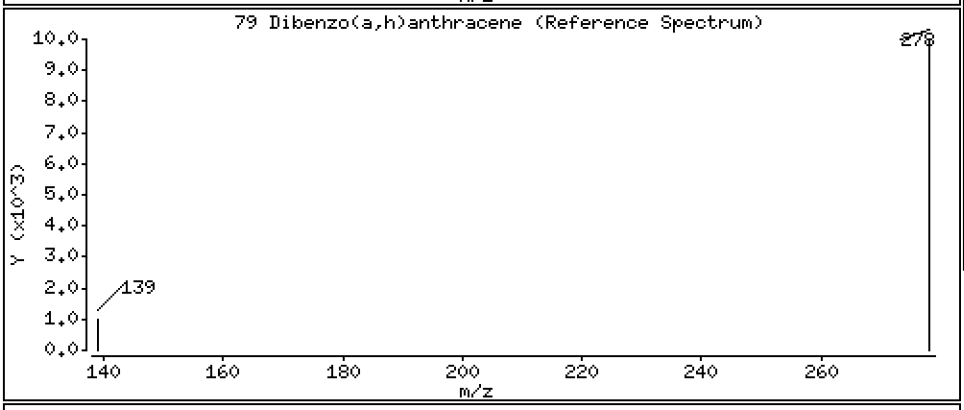
Concentration: 0.1310 ug/mL

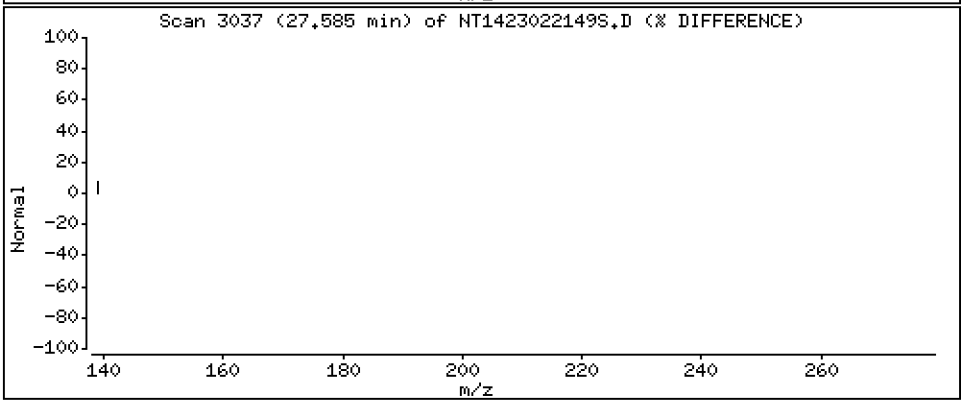












Data File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT14230221495.D

Date : 22-FEB-2023 18:23

Client ID:

Instrument: nt14.i

Sample Info: SLB0351-LCV1

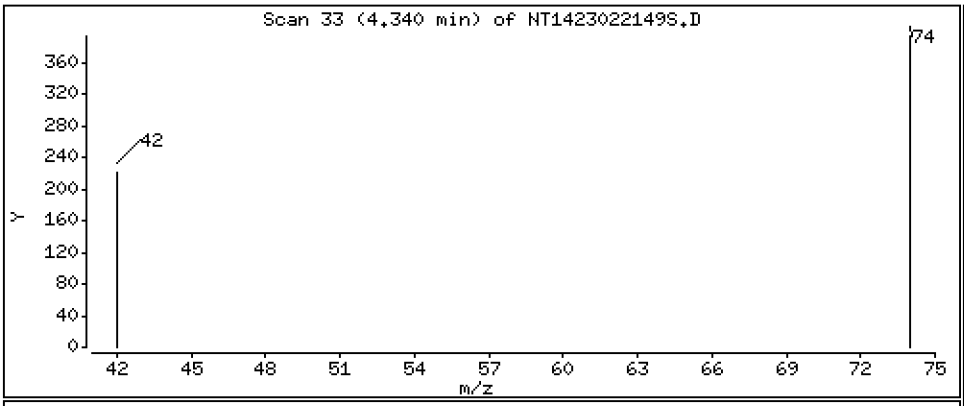
Operator: DSD

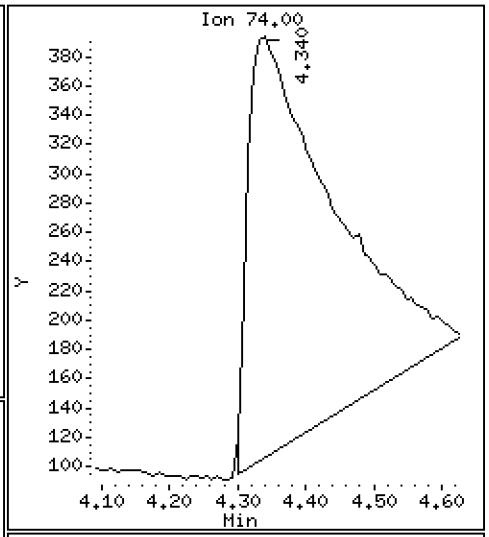
Column phase: ZB-5msi

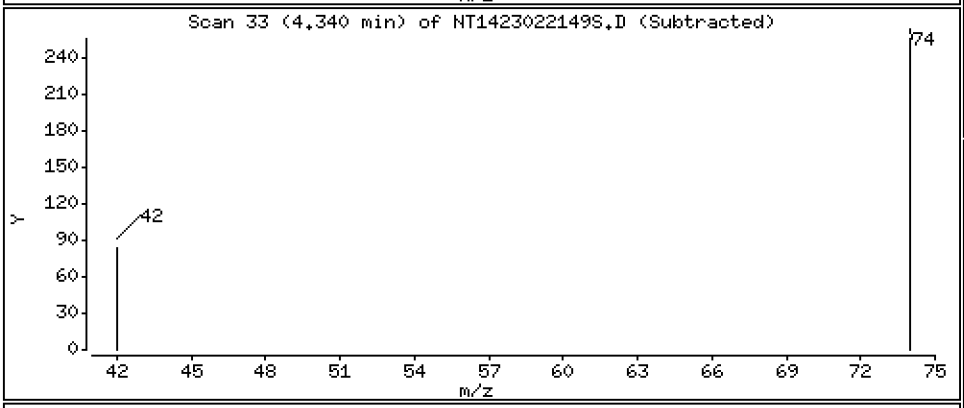
Column diameter: 0.25

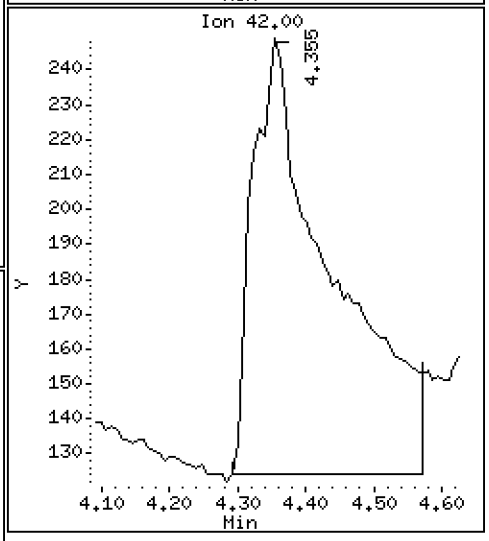
90 N-Nitrosodimethylamine

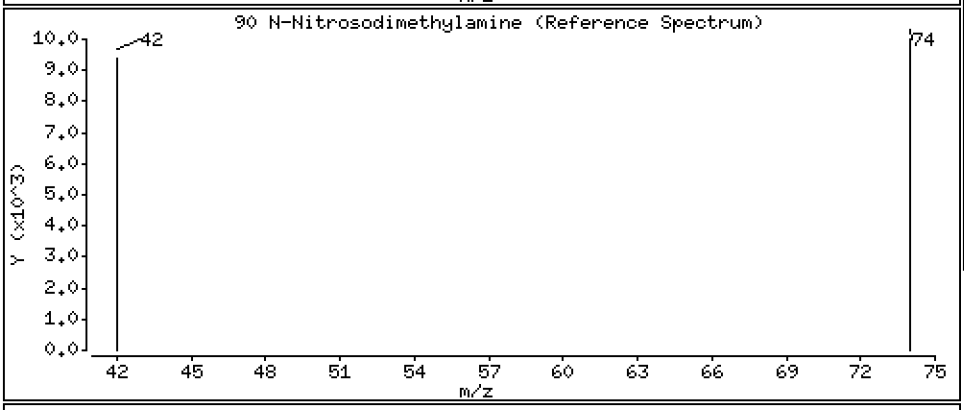
Concentration: 0.04967 ug/mL

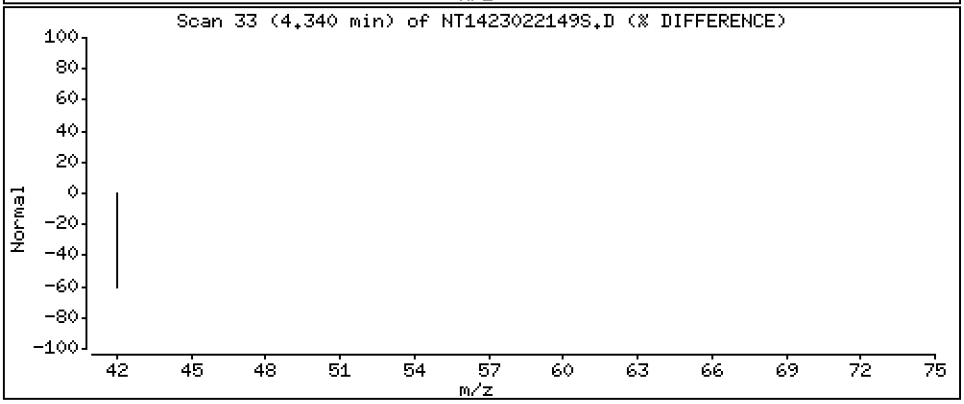












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\NT1423022149S.D
Lab Smp Id: SLB0351-LCV1
Inj Date : 22-FEB-2023 18:23 MS Autotune Date: 17-MAY-2011 01:22
Operator : DSD Inst ID: nt14.i
Smp Info : SLB0351-LCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Meth Date : 25-May-2023 11:39 van Quant Type: ISTD
Cal Date : 16-FEB-2023 20:42 Cal File: NT1423021612s.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.532	6.386	(0.762)	6408	0.09690	0.09690(RM)
	3 Phenol	94	8.047	7.993	(0.939)	11614	0.11900	0.1190(M)
	7 1,3-Dichlorobenzene	146	8.503	8.503	(0.992)	9046	0.11671	0.1167
*	8 1,4-Dichlorobenzene-d4	152	8.573	8.573	(1.000)	227784	4.00000	
	9 1,4-Dichlorobenzene	146	8.596	8.596	(1.003)	9605	0.12991	0.1299
	11 Benzyl alcohol	79	9.023	8.876	(1.053)	2357	0.03778	0.03778(M)
	12 1,2-Dichlorobenzene	146	8.953	8.953	(1.044)	8948	0.12172	0.1217
	13 2-Methylphenol	108	9.116	9.101	(1.063)	6908	0.10217	0.1022(M)
	15 4-Methylphenol	108	9.411	9.373	(1.098)	5766	0.07789	0.07789
	16 N-Nitroso-di-n-propylamine	70	9.411	9.411	(1.098)	6801	0.11984	0.1198
	22 2,4-Dimethylphenol	107	10.412	10.404	(0.943)	17778	0.22796	0.2280
	24 Benzoic acid	105	10.676	10.614	(0.967)	33655	0.83400	0.8340(M)
	26 1,2,4-Trichlorobenzene	180	10.962	10.962	(0.993)	9465	0.12103	0.1210(M)
*	27 Naphthalene-d8	136	11.039	11.040	(1.000)	853616	4.00000	
	30 Hexachlorobutadiene	225	11.449	11.449	(1.037)	5457	0.11471	0.1147
	39 Dimethylphthalate	163	14.188	14.181	(0.969)	17661	0.12663	0.1266
*	42 Acenaphthene-d10	162	14.645	14.653	(1.000)	457152	4.00000	
	50 Diethylphthalate	149	15.642	15.635	(1.068)	20473	0.11729	0.1173
	54 N-Nitrosodiphenylamine	169	16.020	16.013	(0.906)	15753	0.11712	0.1171
	57 Hexachlorobenzene	284	17.054	17.054	(0.965)	8109	0.11620	0.1162(M)
	58 Pentachlorophenol	266	17.573	17.434	(0.994)	933	0.03287	0.03287(M)
*	59 Phenanthrene-d10	188	17.674	17.674	(1.000)	1074509	4.00000	
$	66 Terphenyl-d14	244	20.877	20.869	(0.917)	26584	0.13692	0.1369(R)
	67 Butylbenzylphthalate	149	21.821	21.821	(0.958)	12501	0.13649	0.1365
*	69 Chrysene-d12	240	22.774	22.774	(1.000)	729292	4.00000	
*	77 Perylene-d12	264	25.220	25.220	(1.000)	537072	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.584	27.569	(1.094)	12321	0.13105	0.1310
	90 N-Nitrosodimethylamine	74	4.339	4.277	(0.506)	2521	0.04967	0.04967(M)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1423022149S.D
Lab Smp Id: SLB0351-LCV1
Analysis Type: SV
Quant Type: ISTD
Operator: DSD
Method File: \\target\share\chem3\nt14.i\20230221C.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 22-FEB-2023
Calibration Time: 17:47
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	241018	120509	482036	227784	-5.49
27 Naphthalene-d8	887165	443583	1774330	853616	-3.78
42 Acenaphthene-d10	467553	233777	935106	457152	-2.22
59 Phenanthrene-d10	1079793	539897	2159586	1074509	-0.49
69 Chrysene-d12	754146	377073	1508292	729292	-3.30
77 Perylene-d12	558201	279101	1116402	537072	-3.79

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.57	8.07	9.07	8.57	-0.00
27 Naphthalene-d8	11.04	10.54	11.54	11.04	-0.00
42 Acenaphthene-d10	14.65	14.15	15.15	14.65	-0.05
59 Phenanthrene-d10	17.67	17.17	18.17	17.67	-0.00
69 Chrysene-d12	22.77	22.27	23.27	22.77	-0.00
77 Perylene-d12	25.22	24.72	25.72	25.22	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - NT1423022149S.D

Lab ID: SLB0351-LCV1
nt14.i, 20230221C.b\SIM.b\SIMABN2.m,   22-FEB-2023 18:23

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.939	0.932	0.0063	Phenol
1.053	1.035	0.0172	Benzyl alcohol
0.967	0.961	0.0056	Benzoic acid
0.506	0.499	0.0072	N-Nitrosodimethylamine
0.994	0.986	0.0079	Pentachlorophenol
0.762	0.745	0.0171	2-Fluorophenol

RRT check based on Ccal File: SIM.b/NT1423022148ICVS.d

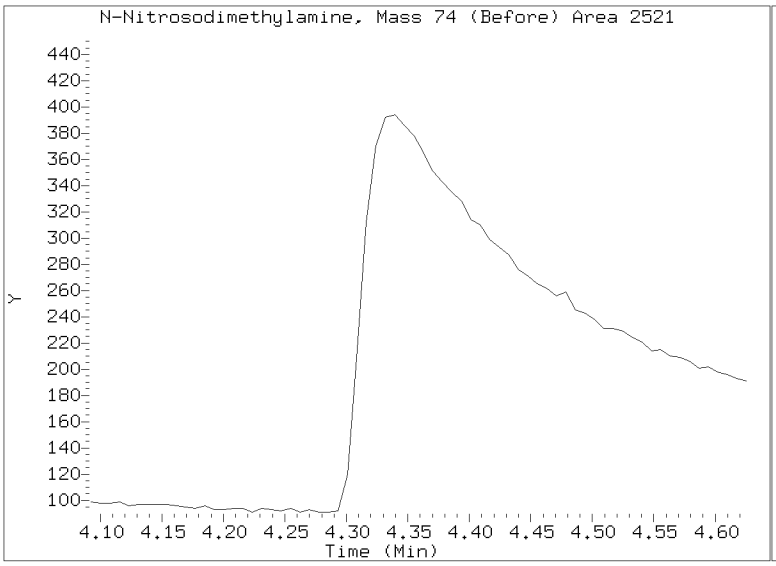
On Column LOD for nt14.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

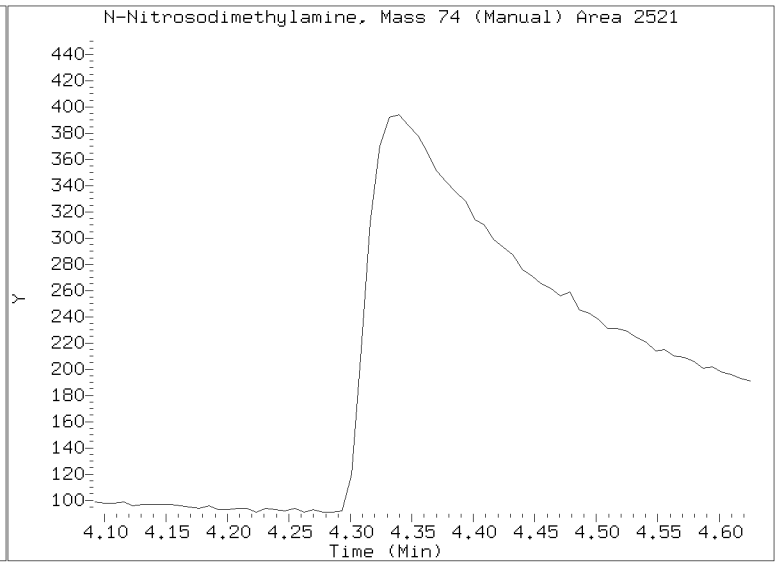
Exception: 1,2,4-Trichlorobenzene 0.0010

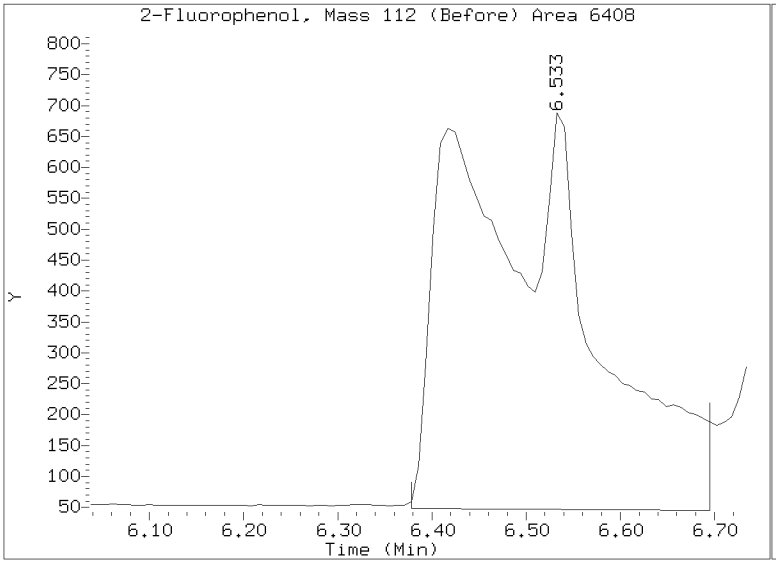
* Only compounds listed in the work order have been verified by the analyst *

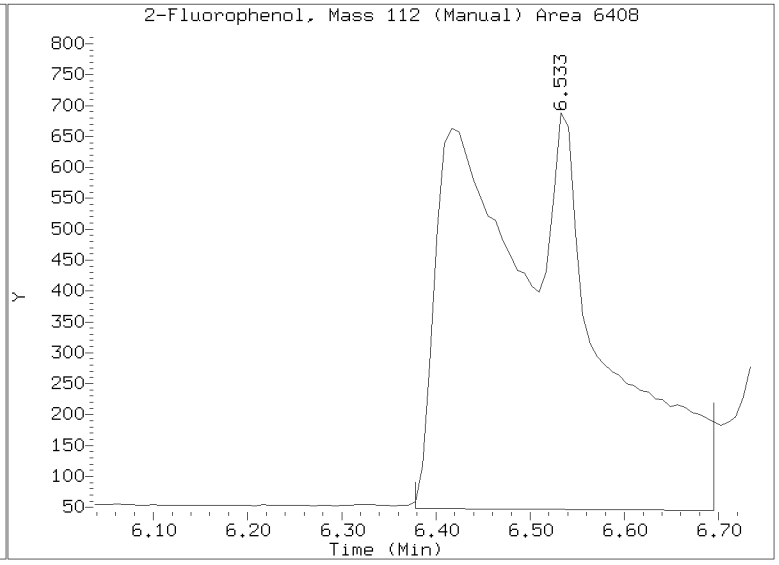
Quant Ion Manual Peak Adjustment Report

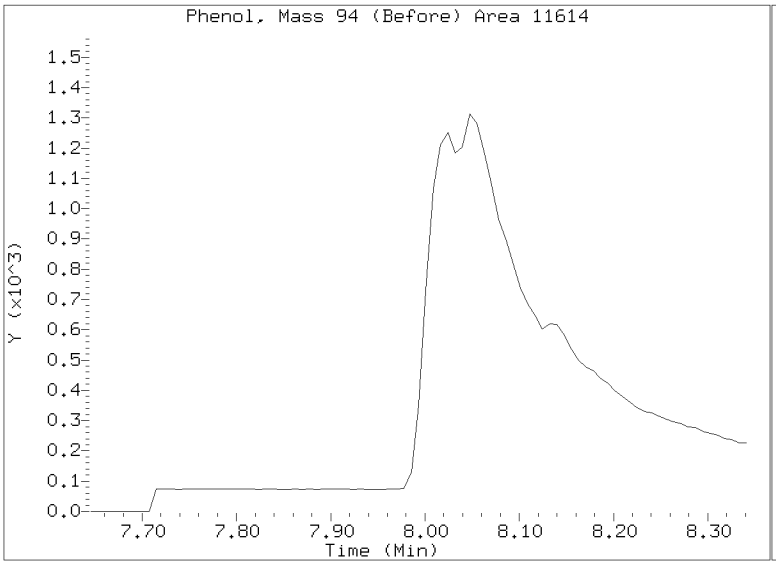
Datafile: //target/share/chem3/nt14.i/20230221C.b/SIM.b/NT1423022149S.D
Injection Date: 22-FEB-2023 18:23
Lab ID:SLB0351-LCV1 Client ID:
Report Date: 05/25/2023 11:47

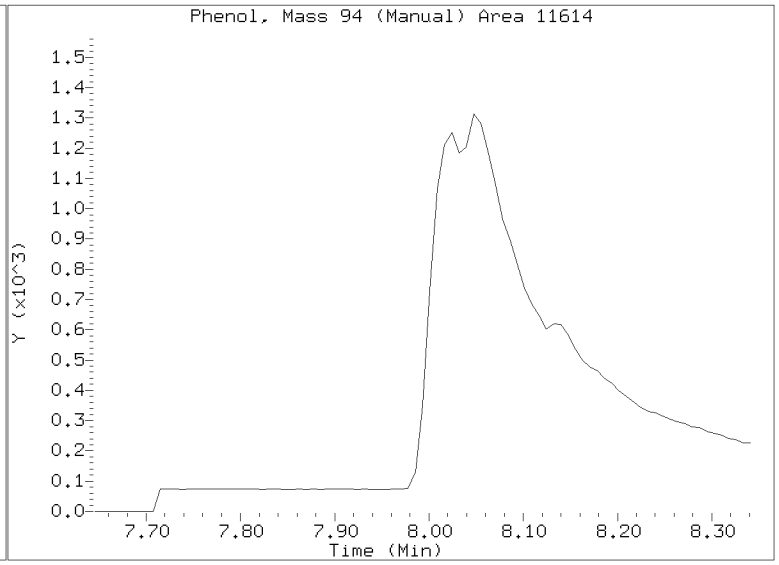






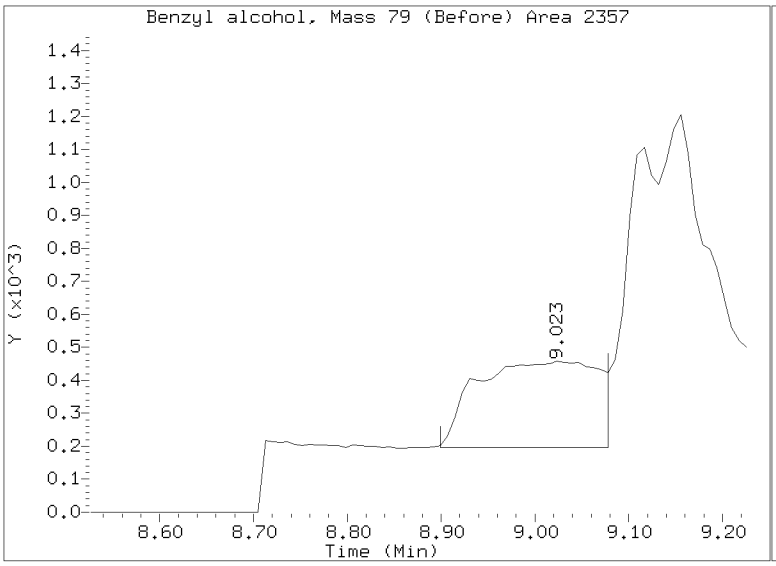


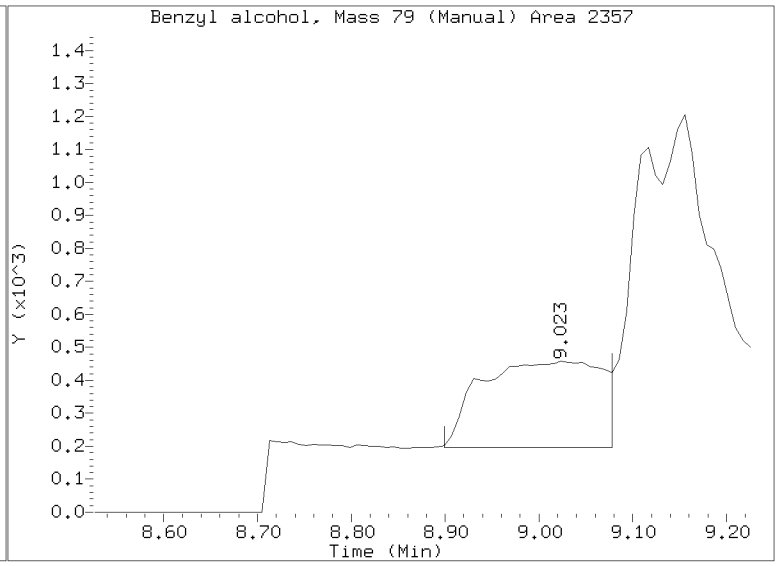


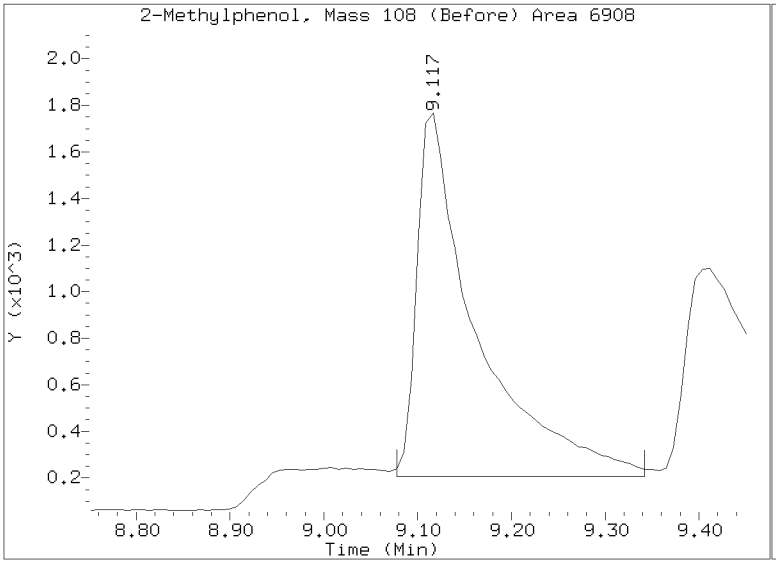


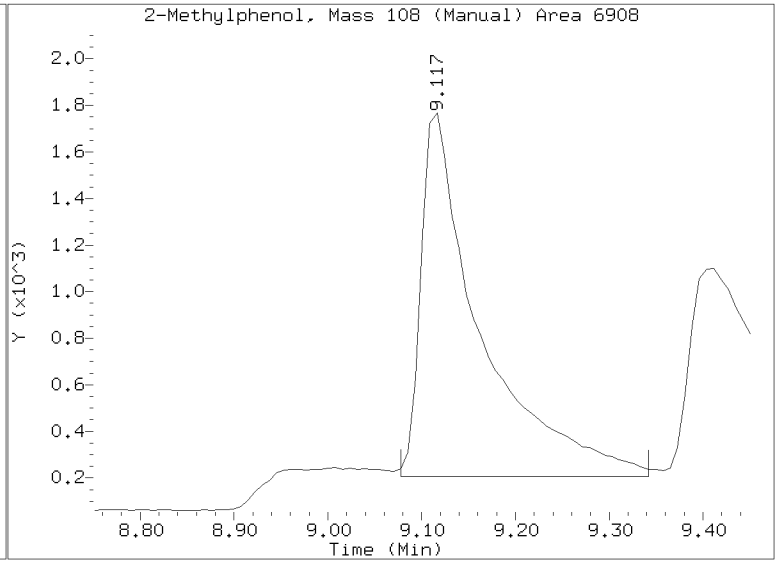
Quant Ion Manual Peak Adjustment Report

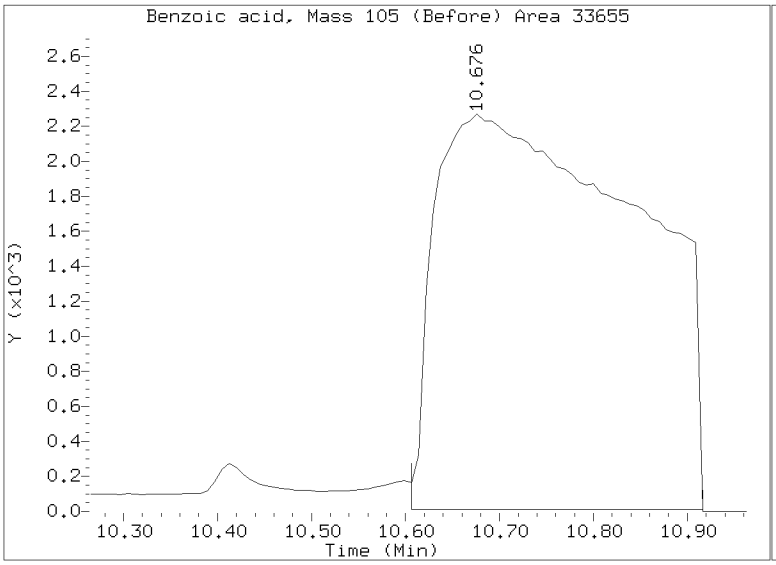
Datafile: //target/share/chem3/nt14.i/20230221C.b/SIM.b/NT1423022149S.D
Injection Date: 22-FEB-2023 18:23
Lab ID:SLB0351-LCV1 Client ID:
Report Date: 05/25/2023 11:47

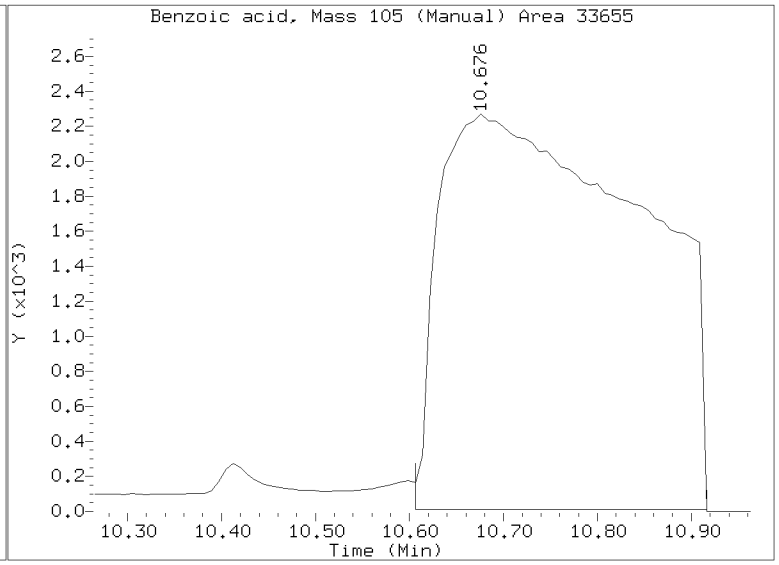






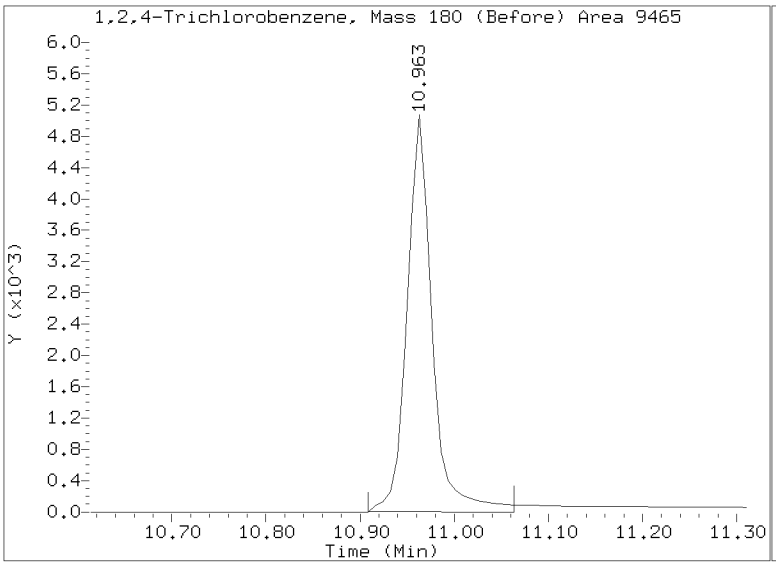


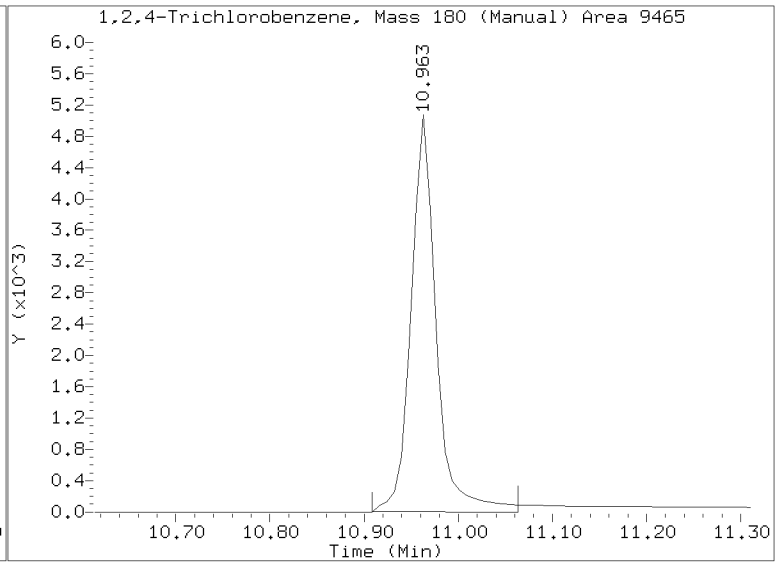


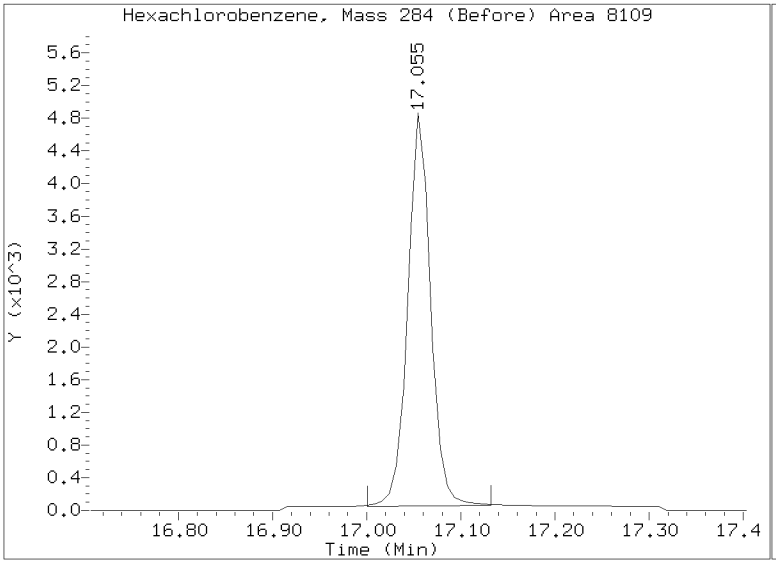


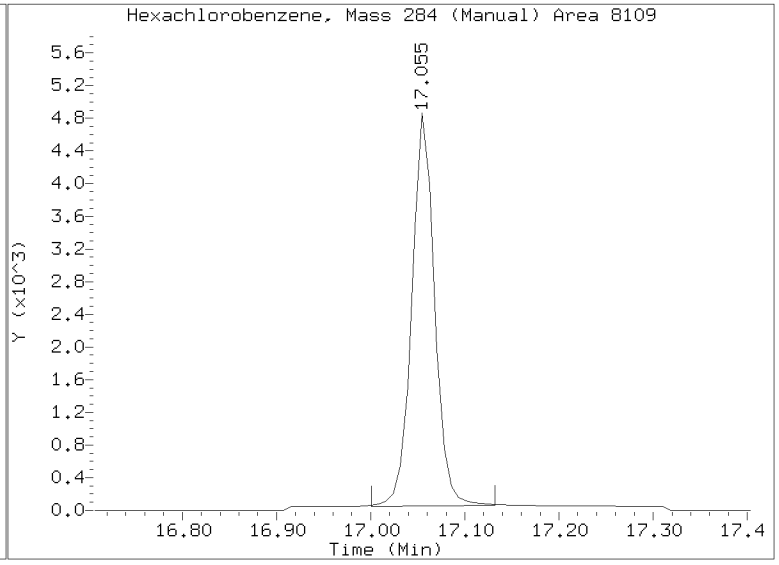
Quant Ion Manual Peak Adjustment Report

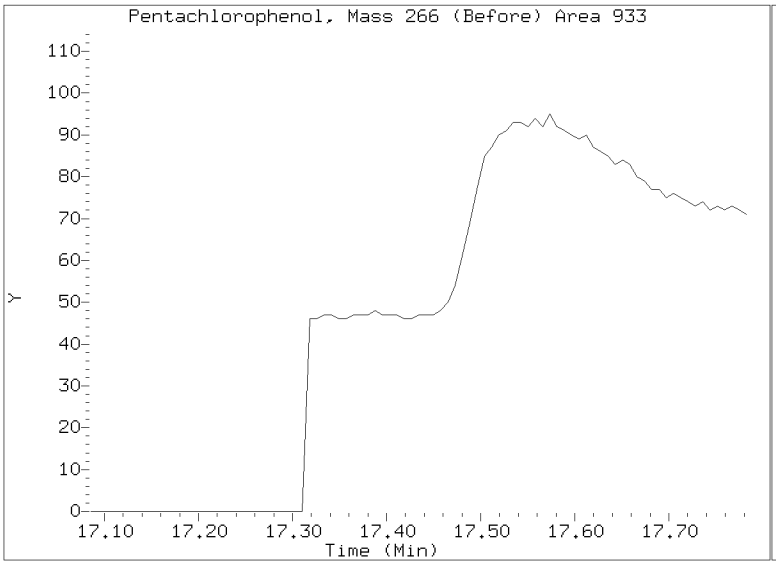
Datafile: //target/share/chem3/nt14.i/20230221C.b/SIM.b/NT1423022149S.D
Injection Date: 22-FEB-2023 18:23
Lab ID:SLB0351-LCV1 Client ID:
Report Date: 05/25/2023 11:47

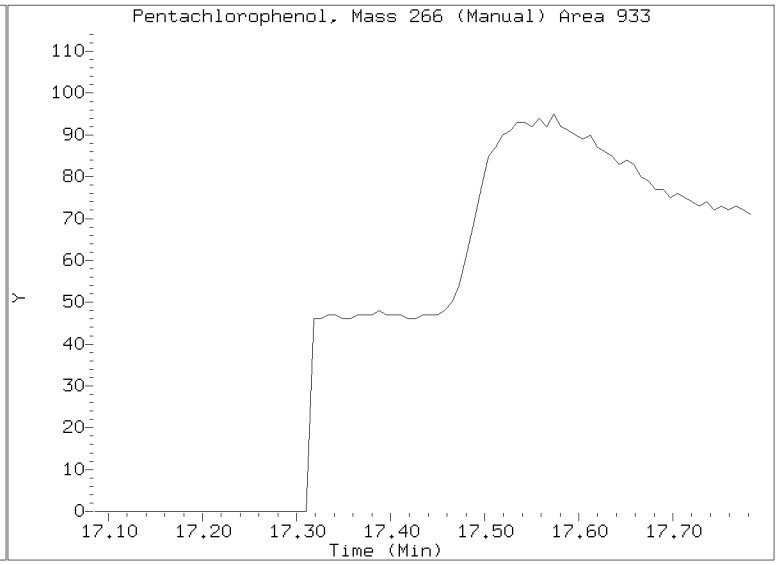












Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0240	Instrument:	NT14
		Calibration:	GC00009

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLB0240-TUN1	NT1423021603s.D	NA	02/16/23 14:33
CAL 20.0	SLB0240-CAL9	NT1423021604s.D	NA	02/16/23 15:54
CAL 10.0	SLB0240-CAL8	NT1423021605s.D	NA	02/16/23 16:30
CAL 5.0	SLB0240-CAL7	NT1423021606s.D	NA	02/16/23 17:06
CAL 2.5	SLB0240-CAL6	NT1423021607s.D	NA	02/16/23 17:42
CAL 1.0	SLB0240-CAL5	NT1423021608s.D	NA	02/16/23 18:18
CAL 0.50	SLB0240-CAL4	NT1423021609s.D	NA	02/16/23 18:54
CAL 0.20	SLB0240-CAL3	NT1423021610s.D	NA	02/16/23 19:30
CAL 0.10	SLB0240-CAL2	NT1423021611s.D	NA	02/16/23 20:06
CAL 0.05	SLB0240-CAL1	NT1423021612s.D	NA	02/16/23 20:42
SCV 5.0	SLB0240-SCV1	NT1423021613s.D	NA	02/16/23 21:18
Initial Cal Blank	SLB0240-ICB1	NT1423021618s.D	NA	02/17/23 00:17

Printed: 3/3/2023 2:49:26PM

ANALYSIS SEQUENCE

SLB0240

Instrument ID: NT14
Calibration ID: GC00009
MS EM Level: 1706 EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: L001045

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLB0240-TUN1	MS Tune	QC		1	K008469		02/16/2023 14:33	NT1423021603S.D	DSD	
SLB0240-CAL9	CAL 20.0	QC		2	K011111	K010831	02/16/2023 15:54	NT1423021604S.D	DSD	
SLB0240-CAL8	CAL 10.0	QC		3	K011110	K010831	02/16/2023 16:30	NT1423021605S.D	DSD	
SLB0240-CAL7	CAL 5.0	QC		4	K011109	K010831	02/16/2023 17:06	NT1423021606S.D	DSD	
SLB0240-CAL6	CAL 2.5	QC		5	K011108	K010831	02/16/2023 17:42	NT1423021607S.D	DSD	
SLB0240-CAL5	CAL 1.0	QC		6	K011107	K010831	02/16/2023 18:18	NT1423021608S.D	DSD	
SLB0240-CAL4	CAL 0.50	QC		7	K011106	K010831	02/16/2023 18:54	NT1423021609S.D	DSD	
SLB0240-CAL3	CAL 0.20	QC		8	K011105	K010831	02/16/2023 19:30	NT1423021610S.D	DSD	
SLB0240-CAL2	CAL 0.10	QC		9	K011452	K010831	02/16/2023 20:06	NT1423021611S.D	DSD	
SLB0240-CAL1	CAL 0.05	QC		10	K011453	K010831	02/16/2023 20:42	NT1423021612S.D	DSD	
SLB0240-SCV1	SCV 5.0	QC		11	K010066	K010831	02/16/2023 21:18	NT1423021613S.D	DSD	
SLB0240-ICB1	Initial Cal Blank	QC		12	K005156	K010831	02/17/2023 00:17	NT1423021618S.D	DSD	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230216.b\20230216.b

	Time	Filename	LabID	ClientId	DF												
1	1433	NT1423021603s.D	SLB0240-TUN1		1	|NO ISTDS FOUND||											
2	1554	NT1423021604s.D	SLB0240-CAL9		1	| 8.91	281412||11.40	1028262||15.03	557155||18.07	1280257||23.14	778986||25.69	506790|					
3	1630	NT1423021605s.D	SLB0240-CAL8		1	| 8.91	314437||11.40	1133072||15.02	615002||18.06	1402756||23.13	858745||25.69	567246|					
4	1706	NT1423021606s.D	SLB0240-CAL7		1	| 8.91	404552||11.39	1448768||15.02	788119||18.06	1820509||23.13	1172674||25.69	801283|					
5	1742	NT1423021607s.D	SLB0240-CAL6		1	| 8.91	355167||11.39	1288352||15.02	710230||18.06	1567702||23.12	1084006||25.68	717515|					
6	1818	NT1423021608s.D	SLB0240-CAL5		1	| 8.91	393779||11.40	1399029||15.02	759723||18.06	1756156||23.12	1174128||25.68	826011|					
7	1854	NT1423021609s.D	SLB0240-CAL4		1	| 8.91	399360||11.40	1408942||15.02	769600||18.06	1769892||23.12	1177556||25.69	823122|					
8	1930	NT1423021610s.D	SLB0240-CAL3		1	| 8.91	338201||11.39	1194978||15.02	642586||18.05	1471001||23.12	932019||25.68	646922|					
9	2006	NT1423021611s.D	SLB0240-CAL2		1	| 8.91	349348||11.39	1224029||15.02	645081||18.06	1496005||23.12	973406||25.69	661889|					
10	2042	NT1423021612s.D	SLB0240-CAL1		1	| 8.91	353280||11.39	1245409||15.02	663197||18.06	1533128||23.12	979054||25.69	656343|					
11	2118	NT1423021613s.D	SLB0240-SCV1		1	| 8.91	391473||11.39	1430650||15.02	794620||18.06	1759092||23.13	1201603||25.69	814421|					
12	0017	NT1423021618s.D	SLB0240-ICB1		1	| 8.91	296634||11.39	1039961||15.02	537777||18.05	1239183||23.12	789133||25.69	528194|					

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230216.b\20230216.b

Instrument: nt14.i Date: 16-FEB-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
1433	NT1423021603s.D	SLB0240-TUN1	1	NO MANUAL INTEGRATION
1554	NT1423021604s.D	SLB0240-CAL9	1	Benzoic acid,
1630	NT1423021605s.D	SLB0240-CAL8	1	NO MANUAL INTEGRATION
1706	NT1423021606s.D	SLB0240-CAL7	1	NO MANUAL INTEGRATION
1742	NT1423021607s.D	SLB0240-CAL6	1	NO MANUAL INTEGRATION
1818	NT1423021608s.D	SLB0240-CAL5	1	NO MANUAL INTEGRATION
1854	NT1423021609s.D	SLB0240-CAL4	1	Benzoic acid, Pentachlorophenol,
1930	NT1423021610s.D	SLB0240-CAL3	1	NO MANUAL INTEGRATION
2006	NT1423021611s.D	SLB0240-CAL2	1	NO MANUAL INTEGRATION
2042	NT1423021612s.D	SLB0240-CAL1	1	Phenol, N-Nitroso-di-n-propylamine, 1,2,4-Trichlorobenzene, N-Nitrosodimethylamine, N-Nitrosodiphenylamine,
2118	NT1423021613s.D	SLB0240-SCV1	1	NO MANUAL INTEGRATION
0017	NT1423021618s.D	SLB0240-ICB1	1	NO MANUAL INTEGRATION

Security Status Report

Date: 03-Mar-2023 14:50

NT1423021603s.D	Data Locked	van, 03-Mar-2023 14:50
NT1423021604s.D	Data Locked	van, 03-Mar-2023 14:50
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NT1423021613s.D	Data Locked	van, 03-Mar-2023 14:50
NT1423021618s.D	Data Locked	van, 03-Mar-2023 14:50

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0349	Instrument:	NT14
		Calibration:	GC00009

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLB0349-ICV1	NT1423022132S.D	NA	02/22/23 08:08
Low Cal Check	SLB0349-LCV1	NT1423022133S.D	NA	02/22/23 08:44
Blank	BLA0393-BLK2	NT1423022134S.D	Solid	02/22/23 09:21
LCS	BLA0393-BS2	NT1423022135S.D	Solid	02/22/23 09:57
LCS Dup	BLA0393-BSD2	NT1423022136S.D	Solid	02/22/23 10:33
Reference	BLA0393-SRM2	NT1423022137S.D	Solid	02/22/23 11:09
LDW23-SC1250	23A0133-03	NT1423022141S.D	Solid	02/22/23 13:34
LDW23-SC1241	23A0133-06	NT1423022142S.D	Solid	02/22/23 14:10
LDW23-IT1217	23A0133-07	NT1423022143S.D	Solid	02/22/23 14:46
LDW23-IT1217	BLA0393-MS2	NT1423022144S.D	Solid	02/22/23 15:22
LDW23-IT1217	BLA0393-MSD2	NT1423022145S.D	Solid	02/22/23 15:58
Calibration Check	SLB0349-CCV1	NT1423022148S.D	NA	02/22/23 17:47

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLB0349

Instrument: NT14
Calibration ID: GB00047

Printed: 2/25/2023 11:41:46AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0349-ICV1	QC		1		K011107	K010831		
SLB0349-LCV1	QC		2		K011452	K010831		
BLA0393-BLK2	QC		3			K010831		
BLA0393-BS2	QC		4			K010831		
BLA0393-BSD2	QC		5			K010831		
BLA0393-SRM2	QC		6			K010831		
BLA0393-MS2	QC		7			K010831		
BLA0393-MSD2	QC		8			K010831		
23A0133-03	8270E-SIM Dual Scan SVOC	C 04	9			K010831	Anchor QEA, LLC	
23A0133-06	8270E-SIM Dual Scan SVOC	C 04	10			K010831	Anchor QEA, LLC	
23A0133-07	8270E-SIM Dual Scan SVOC	C 04	11			K010831	Anchor QEA, LLC	
SLB0349-CCV1	QC		12		K011107	K010831		

Samples Loaded By Date

Data Processed By Date

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221B.b\SIM.b

	Time	Filename	LabID	ClientId	DF																
1	0808	NT1423022132S.D	SLB0349-ICV1		1	8.57	261796	11.04	959301	14.65	503659	17.67	1179954	22.77	887360	25.21	652371				
2	0844	NT1423022133S.D	SLB0349-LCV1		1	8.57	250681	11.04	941427	14.65	501249	17.67	1198933	22.77	872687	25.21	655540				
3	0921	NT1423022134S.D	BLA0393-BLK2		1	8.57	305329	11.04	1097705	14.65	569801	17.67	1341702	22.77	981145	25.21	724557				
4	0957	NT1423022135S.D	BLA0393-BS2		1	8.57	303756	11.04	1100976	14.65	589097	17.67	1355563	22.77	1057826	25.22	773837				
5	1033	NT1423022136S.D	BLA0393-BSD2		1	8.57	312906	11.04	1132810	14.65	607003	17.67	1400120	22.77	1066010	25.21	790323				
6	1109	NT1423022137S.D	BLA0393-SRM2		1	8.57	308877	11.04	1099039	14.65	586353	17.67	1378091	22.77	1051858	25.21	787258				
7	1145	NT1423022138S.D	SEQ-ICB3		1	8.57	279753	11.04	1033166	14.65	558610	17.67	1278244	22.77	958103	25.21	685911				
8	1222	NT1423022139S.D	BLA0216-BLK2		1	8.57	476068	11.04	1782735	14.65	1024773	17.67	2314781	22.77	1942677	25.22	1444344				
9	1258	NT1423022140S.D	BLA0339-BLK2		1	8.57	320586	11.04	1155302	14.65	593650	17.67	1399186	22.77	1032153	25.21	735833				
10	1334	NT1423022141S.D	23A0133-03		1	8.57	306861	11.04	1117860	14.65	583150	17.68	1223903	22.78	812823	25.24	639897				
11	1410	NT1423022142S.D	23A0133-06		1	8.57	292896	11.04	1064153	14.65	556751	17.68	1124300	22.78	730051	25.24	591653				
12	1446	NT1423022143S.D	23A0133-07		1	8.57	296383	11.04	1069932	14.65	552424	17.68	1198526	22.79	796921	25.24	630918				
13	1522	NT1423022144S.D	BLA0393-MS2		1	8.57	277989	11.05	1004957	14.66	535030	17.69	1238609	22.79	740543	25.24	573408				
14	1558	NT1423022145S.D	BLA0393-MSD2		1	8.57	271109	11.05	983790	14.65	526434	17.69	1217018	22.79	722770	25.24	593366				
15	1635	NT1423022146S.D	SEQ-ICV4		1	8.57	231248	11.05	850675	14.65	455458	17.68	1045228	22.77	743612	25.22	546846				
16	1711	NT1423022147S.D	SEQ-ICV4		1	8.57	218377	11.04	810952	14.65	424595	17.67	994464	22.77	671091	25.22	495034				
17	1747	NT1423022148S.D	SLB0293-CCV1		1	8.57	241018	11.04	887165	14.65	467553	17.67	1079793	22.77	754146	25.22	558201				

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221B.b\SIM.b

ARI Job No.: SLB0 Method: SIM.b\SIMABN2.m Instrument: nt14.i Date: 22-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0808	NT14230221 32S.D	SLB0349-ICV1		1	2-Methylphenol, Benzoic acid, N-Nitrosodimethylamine,
0844	NT14230221 33S.D	SLB0349-LCV1		1	Benzoic acid, Pertachlorophenol,
0921	NT14230221 34S.D	BLA0393-BLK2		1	NO MANUAL INTEGRATION
0957	NT14230221 35S.D	BLA0393-BS2		1	NO MANUAL INTEGRATION
1033	NT14230221 36S.D	BLA0393-BSD2		1	NO MANUAL INTEGRATION
1109	NT14230221 37S.D	BLA0393-SRM2		1	NO MANUAL INTEGRATION
1145	NT14230221 38S.D	SEQ-ICB3		1	NO MANUAL INTEGRATION
1222	NT14230221 39S.D	BLA0216-BLK2		1	NO MANUAL INTEGRATION
1258	NT14230221 40S.D	BLA0339-BLK2		1	NO MANUAL INTEGRATION
1334	NT14230221 41S.D	23A0133-03		1	1,4-Dichlorobenzene, Benzyl alcohol,
1410	NT14230221 42S.D	23A0133-06		1	Hexachlorobutadiene, Diethylphthalate, Pentachlorophenol,
1446	NT14230221 43S.D	23A0133-07		1	1,4-Dichlorobenzene, 2-Methylphenol, Diethylphthalate,
1522	NT14230221 44S.D	BLA0393-MS2		1	NO MANUAL INTEGRATION
1558	NT14230221 45S.D	BLA0393-MSD2		1	NO MANUAL INTEGRATION
1635	NT14230221 46S.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
1711	NT14230221 47S.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
1747	NT14230221 48S.D	SLB0293-CCV1		1	2-Methylphenol, N-Nitroso-di-n-propylamine, Benzoic acid, N-Nitrosodimethylamine, 2-Fluorophenol,

Security Status Report

Date: 25-Feb-2023 11:33

NT1423022132S.D	Data Locked	yev, 25-
NT1423022133S.D	Data Locked	yev, 25-
NT1423022134S.D	Data Locked	yev, 25-
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NT1423022137S.D	Data Locked	yev, 25-
NT1423022138S.D	Data Locked	yev, 25-
NT1423022139S.D	Data Locked	yev, 25-
NT1423022140S.D	Data Locked	yev, 25-
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NT1423022143S.D	Data Locked	yev, 25-
NT1423022144S.D	Data Locked	yev, 25-
NT1423022145S.D	Data Locked	yev, 25-
NT1423022146S.D	Data Locked	yev, 25-
NT1423022147S.D	Data Locked	yev, 25-
NT1423022148S.D	Data Locked	yev, 25-

Analytical Resources, LLC
Analytical Chemists and Consultants

Printed: 3/2/2023 1:32:15PM

ANALYSIS SEQUENCE

SLB0349

Instrument ID: NT14
Calibration ID: GB00047
MS EM Level: EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: ZB-5MS

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLB0349-ICV1	Initial Cal Check	QC		1	K011107	K010831	02/22/2023 08:08	NT1423022132S.D	DSD	
SLB0349-LCV1	Low Cal Check	QC		2	K011452	K010831	02/22/2023 08:44	NT1423022133S.D	DSD	
BLA0393-BLK2	Blank	QC		3		K010831	02/22/2023 09:21	NT1423022134S.D	DSD	
BLA0393-BS2	LCS	QC		4		K010831	02/22/2023 09:57	NT1423022135S.D	DSD	
BLA0393-BSD2	LCS Dup	QC		5		K010831	02/22/2023 10:33	NT1423022136S.D	DSD	
BLA0393-SRM2	Reference	QC		6		K010831	02/22/2023 11:09	NT1423022137S.D	DSD	
BLA0393-MS2	Matrix Spike	QC		7		K010831	02/22/2023 15:22	NT1423022144S.D	DSD	
BLA0393-MSD2	Matrix Spike Dup	QC		8		K010831	02/22/2023 15:58	NT1423022145S.D	DSD	
23A0133-03	LDW23-SC1250	270E-SIM Dual Scan SVO	C 04	9		K010831	02/22/2023 13:34	NT1423022141S.D	DSD	
23A0133-06	LDW23-SC1241	270E-SIM Dual Scan SVO	C 04	10		K010831	02/22/2023 14:10	NT1423022142S.D	DSD	
23A0133-07	LDW23-IT1217	270E-SIM Dual Scan SVO	C 04	11		K010831	02/22/2023 14:46	NT1423022143S.D	DSD	
SLB0349-CCV1	Calibration Check	QC		12	K011107	K010831	02/22/2023 17:47	NT1423022148S.D	DSD	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221B.b\SIM.b

	Time	Filename	LabID	ClientId	DF											
1	0808	NT1423022132S.D	SLB0349-ICV1		1	8.57	261796	11.04	959301	14.65	503659	17.67	1179954	22.77	887360	25.21	652371
2	0844	NT1423022133S.D	SLB0349-LCV1		1	8.57	250681	11.04	941427	14.65	501249	17.67	1198933	22.77	872687	25.21	655540
3	0921	NT1423022134S.D	BLA0393-BLK2		1	8.57	305329	11.04	1097705	14.65	569801	17.67	1341702	22.77	981145	25.21	724557
4	0957	NT1423022135S.D	BLA0393-BS2		1	8.57	303756	11.04	1100976	14.65	589097	17.67	1355563	22.77	1057826	25.22	773837
5	1033	NT1423022136S.D	BLA0393-BSD2		1	8.57	312906	11.04	1132810	14.65	607003	17.67	1400120	22.77	1066010	25.21	790323
6	1109	NT1423022137S.D	BLA0393-SRM2		1	8.57	308877	11.04	1099039	14.65	586353	17.67	1378091	22.77	1051858	25.21	787258
7	1145	NT1423022138S.D	SEQ-ICB3		1	8.57	279753	11.04	1033166	14.65	558610	17.67	1278244	22.77	958103	25.21	685911
8	1222	NT1423022139S.D	BLA0216-BLK2		1	8.57	476068	11.04	1782735	14.65	1024773	17.67	2314781	22.77	1942677	25.22	1444344
9	1258	NT1423022140S.D	BLA0339-BLK2		1	8.57	320586	11.04	1155302	14.65	593650	17.67	1399186	22.77	1032153	25.21	735833
10	1334	NT1423022141S.D	23A0133-03		1	8.57	306861	11.04	1117860	14.65	583150	17.68	1223903	22.78	812823	25.24	639897
11	1410	NT1423022142S.D	23A0133-06		1	8.57	292896	11.04	1064153	14.65	556751	17.68	1124300	22.78	730051	25.24	591653
12	1446	NT1423022143S.D	23A0133-07		1	8.57	296383	11.04	1069932	14.65	552424	17.68	1198526	22.79	796921	25.24	630918
13	1522	NT1423022144S.D	BLA0393-MS2		1	8.57	277989	11.05	1004957	14.66	535030	17.69	1238609	22.79	740543	25.24	573408
14	1558	NT1423022145S.D	BLA0393-MSD2		1	8.57	271109	11.05	983790	14.65	526434	17.69	1217018	22.79	722770	25.24	593366
15	1635	NT1423022146S.D	SEQ-ICV4		1	8.57	231248	11.05	850675	14.65	455458	17.68	1045228	22.77	743612	25.22	546846
16	1711	NT1423022147S.D	SEQ-ICV4		1	8.57	218377	11.04	810952	14.65	424595	17.67	994464	22.77	671091	25.22	495034
17	1747	NT1423022148S.D	SLB0293-CCV1		1	8.57	241018	11.04	887165	14.65	467553	17.67	1079793	22.77	754146	25.22	558201

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221B.b\SIM.b

ARI Job No.: SLB0 Method: SIM.b\SIMABN2.m Instrument: nt14.i Date: 22-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0808	NT14230221 32S.D	SLB0349-ICV1		1	2-Methylphenol, Benzoic acid, N-Nitrosodimethylamine,
0844	NT14230221 33S.D	SLB0349-LCV1		1	Benzoic acid, Pentachlorophenol,
0921	NT14230221 34S.D	BLA0393-BLK2		1	NO MANUAL INTEGRATION
0957	NT14230221 35S.D	BLA0393-BS2		1	NO MANUAL INTEGRATION
1033	NT14230221 36S.D	BLA0393-BSD2		1	NO MANUAL INTEGRATION
1109	NT14230221 37S.D	BLA0393-SRM2		1	NO MANUAL INTEGRATION
1145	NT14230221 38S.D	SEQ-ICB3		1	NO MANUAL INTEGRATION
1222	NT14230221 39S.D	BLA0216-BLK2		1	NO MANUAL INTEGRATION
1258	NT14230221 40S.D	BLA0339-BLK2		1	NO MANUAL INTEGRATION
1334	NT14230221 41S.D	23A0133-03		1	1,4-Dichlorobenzene, Benzyl alcohol,
1410	NT14230221 42S.D	23A0133-06		1	Hexachlorobutadiene, Diethylphthalate, Pentachlorophenol,
1446	NT14230221 43S.D	23A0133-07		1	1,4-Dichlorobenzene, 2-Methylphenol, Diethylphthalate,
1522	NT14230221 44S.D	BLA0393-MS2		1	NO MANUAL INTEGRATION
1558	NT14230221 45S.D	BLA0393-MSD2		1	NO MANUAL INTEGRATION
1635	NT14230221 46S.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
1711	NT14230221 47S.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
1747	NT14230221 48S.D	SLB0293-CCV1		1	2-Methylphenol, N-Nitroso-di-n-propylamine, Benzoic acid, N-Nitrosodimethylamine, 2-Fluorophenol,

Security Status Report

Date: 02-Mar-2023 13:33

NT1423022132S.D	Data Locked	deenayd, 02-
NT1423022133S.D	Data Locked	deenayd, 02-
NT1423022134S.D	Data Locked	deenayd, 02-
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NT1423022136S.D	Data Locked	deenayd, 02-
NT1423022137S.D	Data Locked	deenayd, 02-
NT1423022138S.D	Data Locked	deenayd, 02-
NT1423022139S.D	Data Locked	deenayd, 02-
NT1423022140S.D	Data Locked	deenayd, 02-
NT1423022141S.D	Data Locked	deenayd, 02-
NT1423022142S.D	Data Locked	deenayd, 02-
NT1423022143S.D	Data Locked	deenayd, 02-
NT1423022144S.D	Data Locked	deenayd, 02-
NT1423022145S.D	Data Locked	deenayd, 02-
NT1423022146S.D	Data Locked	deenayd, 02-
NT1423022147S.D	Data Locked	deenayd, 02-
NT1423022148S.D	Data Locked	deenayd, 02-

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0351	Instrument:	NT14
		Calibration:	GC00009

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLB0351-ICV1	NT1423022148ICVS.D	NA	02/22/23 17:47
Low Cal Check	SLB0351-LCV1	NT1423022149S.D	NA	02/22/23 18:23
Instrument Blank	SLB0351-IBL1	NT1423022150S.D	NA	02/22/23 18:59
LDW23-SC1185	23A0133-08	NT1423022151S.D	Solid	02/22/23 19:36
LDW23-SC1234	23A0133-09	NT1423022152S.D	Solid	02/22/23 20:12
LDW23-SC1215	23A0133-10	NT1423022153S.D	Solid	02/22/23 20:48
LDW23-SC1222	23A0133-11	NT1423022154S.D	Solid	02/22/23 21:24
LDW23-SC1227	23A0133-12	NT1423022155S.D	Solid	02/22/23 22:01
LDW23-SS1110	23A0133-13	NT1423022156S.D	Solid	02/22/23 22:37
LDW23-SS1109	23A0133-14	NT1423022157S.D	Solid	02/22/23 23:14
LDW23-SS1092	23A0133-15	NT1423022158S.D	Solid	02/22/23 23:50
LDW23-SS1091	23A0133-16	NT1423022159S.D	Solid	02/23/23 00:26
Calibration Check	SLB0351-CCV1	NT1423022162S.D	NA	02/23/23 02:14

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLB0351

Instrument: NT14
Calibration ID: GB00047

Printed: 2/26/2023 2:39:01PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0351-ICV1	QC		1		K011107	K010831		
SLB0351-LCV1	QC		2		K011452	K010831		
SLB0351-IBL1	QC		3		J008838	K010831		
23A0133-08	8270E-SIM Dual Scan SVOC	C 04	4			K010831	Anchor QEA, LLC	
23A0133-09	8270E-SIM Dual Scan SVOC	C 04	5			K010831	Anchor QEA, LLC	
23A0133-10	8270E-SIM Dual Scan SVOC	C 04	6			K010831	Anchor QEA, LLC	
23A0133-11	8270E-SIM Dual Scan SVOC	C 04	7			K010831	Anchor QEA, LLC	
23A0133-12	8270E-SIM Dual Scan SVOC	C 04	8			K010831	Anchor QEA, LLC	
23A0133-13	8270E-SIM Dual Scan SVOC	C 04	9			K010831	Anchor QEA, LLC	
23A0133-14	8270E-SIM Dual Scan SVOC	C 04	10			K010831	Anchor QEA, LLC	
23A0133-15	8270E-SIM Dual Scan SVOC	C 04	11			K010831	Anchor QEA, LLC	
23A0133-16	8270E-SIM Dual Scan SVOC	C 04	12			K010831	Anchor QEA, LLC	
SLB0351-CCV1	QC		13		K011107	K010831		

Samples Loaded By Date

Data Processed By Date

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221C.b\SIM.b

	Time	Filename	LabID	ClientId	DF											
1	1747	NT1423022148ICVS.d	SLB0351-ICV1		1	8.57	241018	11.04	887165	14.65	467553	17.67	1079793	22.77	754146	25.22	558201
2	1823	NT1423022149S.D	SLB0351-LCV1		1	8.57	227784	11.04	853616	14.65	457152	17.67	1074509	22.77	729292	25.22	537072
3	1859	NT1423022150S.D	SLB0351-IBL1		1	8.57	274833	11.04	1000172	14.65	513878	17.67	1199126	22.77	805758	25.22	573948
4	1936	NT1423022151S.D	23A0133-08		1	8.57	270824	11.04	990171	14.65	514000	17.68	1186705	22.78	710237	25.24	551702
5	2012	NT1423022152S.D	23A0133-09		1	8.57	273448	11.04	1004298	14.65	523741	17.68	1207259	22.78	731796	25.24	563094
6	2048	NT1423022153S.D	23A0133-10		1	8.57	262390	11.05	975907	14.66	501051	17.70	1026785	22.80	649447	25.25	553160
7	2124	NT1423022154S.D	23A0133-11		1	8.57	272395	11.04	992323	14.65	507436	17.69	1064402	22.79	665713	25.24	551807
8	2201	NT1423022155S.D	23A0133-12		1	8.57	266448	11.04	971682	14.65	500599	17.68	1047221	22.79	684367	25.24	524845
9	2237	NT1423022156S.D	23A0133-13		1	8.57	260496	11.04	952256	14.65	492542	17.68	1133001	22.79	667286	25.24	499012
10	2314	NT1423022157S.D	23A0133-14		1	8.57	251935	11.04	923304	14.65	478572	17.68	996576	22.79	639078	25.24	491951
11	2350	NT1423022158S.D	23A0133-15		1	8.57	253408	11.04	935515	14.65	483528	17.68	998884	22.78	633616	25.24	496970
12	0026	NT1423022159S.D	23A0133-16		1	8.57	251543	11.04	924513	14.65	474298	17.68	986809	22.78	622098	25.24	486678
13	0214	NT1423022162S.D	SLB0351-CCV1		1	8.57	228716	11.04	843510	14.65	444542	17.67	1023779	22.77	679116	25.23	489232

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221C.b\SIM.b

ARI Job No.: SLB0 Method: SIM.b\SIMABN2.m Instrument: nt14.i Date: 22-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1747	NT1423022148ICVS.d	SLB0351-ICV1		1	2-Methylphenol, N-Nitroso-di-n-propylamine, Benzoic acid, N-Nitrosodimethylamine, 2-Fluorophenol,
1823	NT1423022149S.D	SLB0351-LCV1		1	Phenol, Benzyl alcohol, 2-Methylphenol, Benzoic acid, 1,2,4-Trichlorobenzene, N-Nitrosodimethylamine, Hexachlorobenzene, Pentachlorophenol, 2-Fluorophenol,
1859	NT1423022150S.D	SLB0351-IBL1		1	NO MANUAL INTEGRATION
1936	NT1423022151S.D	23A0133-08		1	1,4-Dichlorobenzene, Dimethylphthalate, Diethylphthalate,
2012	NT1423022152S.D	23A0133-09		1	1,4-Dichlorobenzene,
2048	NT1423022153S.D	23A0133-10		1	Benzyl alcohol, Diethylphthalate, Dibenzo(a,h)anthracene,
2124	NT1423022154S.D	23A0133-11		1	1,4-Dichlorobenzene, Benzyl alcohol, 2,4-Dimethylphenol, Benzoic acid, Dimethylphthalate, Diethylphthalate, Butylbenzylphthalate,
2201	NT1423022155S.D	23A0133-12		1	1,4-Dichlorobenzene, Benzyl alcohol,
2237	NT1423022156S.D	23A0133-13		1	1,4-Dichlorobenzene, Benzoic acid,
2314	NT1423022157S.D	23A0133-14		1	1,4-Dichlorobenzene, Benzoic acid,
2350	NT1423022158S.D	23A0133-15		1	1,4-Dichlorobenzene, 2-Methylphenol, Benzoic acid, Pentachlorophenol,
0026	NT1423022159S.D	23A0133-16		1	1,4-Dichlorobenzene, Benzoic acid,
0214	NT1423022162S.D	SLB0351-CCV1		1	1,2,4-Trichlorobenzene,

Security Status Report

Date: 26-Feb-2023 14:43

NT1423022148ICVS.d	Data Locked	yev, 26-
NT1423022149S.D	Data Locked	yev, 26-
NT1423022150S.D	Data Locked	yev, 26-
NT1423022151S.D	Data Locked	yev, 26-
NT1423022152S.D	Data Locked	yev, 26-
NT1423022153S.D	Data Locked	yev, 26-
NT1423022154S.D	Data Locked	yev, 26-
NT1423022155S.D	Data Locked	yev, 26-
NT1423022156S.D	Data Locked	yev, 26-
NT1423022157S.D	Data Locked	yev, 26-
NT1423022158S.D	Data Locked	yev, 26-
NT1423022159S.D	Data Locked	yev, 26-
NT1423022162S.D	Data Locked	yev, 26-

ANALYSIS SEQUENCE

SLB0351

Instrument ID: NT14
Calibration ID: GB00047
MS EM Level: 1706 EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: L001045

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLB0351-ICV1	Initial Cal Check	QC		1	K011107	K010831	02/22/2023 17:47	T14230221481CVS.I	DSD	
SLB0351-LCV1	Low Cal Check	QC		2	K011452	K010831	02/22/2023 18:23	NT1423022149S.D	DSD	
SLB0351-IBL1	Instrument Blank	QC		3	J008838	K010831	02/22/2023 18:59	NT1423022150S.D	DSD	
23A0133-08	LDW23-SC1185	270E-SIM Dual Scan SVO	C 04	4		K010831	02/22/2023 19:36	NT1423022151S.D	DSD	
23A0133-09	LDW23-SC1234	270E-SIM Dual Scan SVO	C 04	5		K010831	02/22/2023 20:12	NT1423022152S.D	DSD	
23A0133-10	LDW23-SC1215	270E-SIM Dual Scan SVO	C 04	6		K010831	02/22/2023 20:48	NT1423022153S.D	DSD	
23A0133-11	LDW23-SC1222	270E-SIM Dual Scan SVO	C 04	7		K010831	02/22/2023 21:24	NT1423022154S.D	DSD	
23A0133-12	LDW23-SC1227	270E-SIM Dual Scan SVO	C 04	8		K010831	02/22/2023 22:01	NT1423022155S.D	DSD	
23A0133-13	LDW23-SS1110	270E-SIM Dual Scan SVO	C 04	9		K010831	02/22/2023 22:37	NT1423022156S.D	DSD	
23A0133-14	LDW23-SS1109	270E-SIM Dual Scan SVO	C 04	10		K010831	02/22/2023 23:14	NT1423022157S.D	DSD	
23A0133-15	LDW23-SS1092	270E-SIM Dual Scan SVO	C 04	11		K010831	02/22/2023 23:50	NT1423022158S.D	DSD	
23A0133-16	LDW23-SS1091	270E-SIM Dual Scan SVO	C 04	12		K010831	02/23/2023 00:26	NT1423022159S.D	DSD	
SLB0351-CCV1	Calibration Check	QC		13	K011107	K010831	02/23/2023 02:14	NT1423022162S.D	DSD	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221C.b\SIM.b

	Time	Filename	LabID	ClientId	DF											
1	1747	NT1423022148ICVS.d	SLB0351-ICV1		1	8.57	241018	11.04	887165	14.65	467553	17.67	1079793	22.77	754146	25.22	558201
2	1823	NT1423022149S.D	SLB0351-LCV1		1	8.57	227784	11.04	853616	14.65	457152	17.67	1074509	22.77	729292	25.22	537072
3	1859	NT1423022150S.D	SLB0351-IBL1		1	8.57	274833	11.04	1000172	14.65	513878	17.67	1199126	22.77	805758	25.22	573948
4	1936	NT1423022151S.D	23A0133-08		1	8.57	270824	11.04	990171	14.65	514000	17.68	1186705	22.78	710237	25.24	551702
5	2012	NT1423022152S.D	23A0133-09		1	8.57	273448	11.04	1004298	14.65	523741	17.68	1207259	22.78	731796	25.24	563094
6	2048	NT1423022153S.D	23A0133-10		1	8.57	262390	11.05	975907	14.66	501051	17.70	1026785	22.80	649447	25.25	553160
7	2124	NT1423022154S.D	23A0133-11		1	8.57	272395	11.04	992323	14.65	507436	17.69	1064402	22.79	665713	25.24	551807
8	2201	NT1423022155S.D	23A0133-12		1	8.57	266448	11.04	971682	14.65	500599	17.68	1047221	22.79	684367	25.24	524845
9	2237	NT1423022156S.D	23A0133-13		1	8.57	260496	11.04	952256	14.65	492542	17.68	1133001	22.79	667286	25.24	499012
10	2314	NT1423022157S.D	23A0133-14		1	8.57	251935	11.04	923304	14.65	478572	17.68	996576	22.79	639078	25.24	491951
11	2350	NT1423022158S.D	23A0133-15		1	8.57	253408	11.04	935515	14.65	483528	17.68	998884	22.78	633616	25.24	496970
12	0026	NT1423022159S.D	23A0133-16		1	8.57	251543	11.04	924513	14.65	474298	17.68	986809	22.78	622098	25.24	486678
13	0214	NT1423022162S.D	SLB0351-CCV1		1	8.57	228716	11.04	843510	14.65	444542	17.67	1023779	22.77	679116	25.23	489232

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230221C.b\SIM.b

ARI Job No.: SLB0 Method: SIM.b\SIMABN2.m Instrument: nt14.i Date: 22-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1747	NT14230221481CVS.d	SLB0351-ICV1		1	2-Methylphenol, N-Nitroso-di-n-propylamine, Benzoic acid, N-Nitrosodimethylamine, 2-Fluorophenol,
1823	NT14230221495.D	SLB0351-LCV1		1	Phenol, Benzyl alcohol, 2-Methylphenol, Benzoic acid, 1,2,4-Trichlorobenzene, N-Nitrosodimethylamine, Hexachlorobenzene, Pentachlorophenol, 2-Fluorophenol,
1859	NT14230221505.D	SLB0351-IBL1		1	NO MANUAL INTEGRATION
1936	NT14230221515.D	23A0133-08		1	1,4-Dichlorobenzene, Dimethylphthalate, Diethylphthalate,
2012	NT14230221525.D	23A0133-09		1	1,4-Dichlorobenzene,
2048	NT14230221535.D	23A0133-10		1	Benzyl alcohol, Diethylphthalate, Dibenzo(a,h)anthracene,
2124	NT14230221545.D	23A0133-11		1	1,4-Dichlorobenzene, Benzyl alcohol, 2,4-Dimethylphenol, Benzoic acid, Dimethylphthalate, Diethylphthalate, Butylbenzylphthalate,
2201	NT14230221555.D	23A0133-12		1	1,4-Dichlorobenzene, Benzyl alcohol,
2237	NT14230221565.D	23A0133-13		1	1,4-Dichlorobenzene, Benzoic acid,
2314	NT14230221575.D	23A0133-14		1	1,4-Dichlorobenzene, Benzoic acid,
2350	NT14230221585.D	23A0133-15		1	1,4-Dichlorobenzene, 2-Methylphenol, Benzoic acid, Pentachlorophenol,
0026	NT14230221595.D	23A0133-16		1	1,4-Dichlorobenzene, Benzoic acid,
0214	NT14230221625.D	SLB0351-CCV1		1	1,2,4-Trichlorobenzene,

Security Status Report

Date: 01-Mar-2023 14:58

NT1423022148ICVS.d	Data Locked	deenayd, 01-
NT1423022149S.D	Data Locked	deenayd, 01-
NT1423022150S.D	Data Locked	deenayd, 01-
NT1423022151S.D	Data Locked	deenayd, 01-
NT1423022152S.D	Data Locked	deenayd, 01-
NT1423022153S.D	Data Locked	deenayd, 01-
NT1423022154S.D	Data Locked	deenayd, 01-
NT1423022155S.D	Data Locked	deenayd, 01-
NT1423022156S.D	Data Locked	deenayd, 01-
NT1423022157S.D	Data Locked	deenayd, 01-
NT1423022158S.D	Data Locked	deenayd, 01-
NT1423022159S.D	Data Locked	deenayd, 01-
NT1423022162S.D	Data Locked	deenayd, 01-

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0240	Instrument:	NT14
Calibration:	GC00009	Calibration Date:	02/16/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0240-SCV1 (Water)			Lab File ID: NT1423021613s.D				Analyzed: 02/16/23 21:18	
2-Fluorophenol	7.5000	103	0 - 200	6.679	6.6945	-0.0155	N/A	
p-Terphenyl-d14	5.0000	91.5	0 - 200	21.224	21.219	0.0050	N/A	
SLB0240-ICB1 (Water)			Lab File ID: NT1423021618s.D				Analyzed: 02/17/23 00:17	
2-Fluorophenol	7.5000	108	30 - 160	6.679	6.6945	-0.0155	N/A	
p-Terphenyl-d14	5.0000	112	30 - 160	21.216	21.219	-0.0030	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0349	Instrument:	NT14
Calibration:	GC00009	Calibration Date:	02/16/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0349-ICV1 (Solid)			Lab File ID: NT1423022132S.D			Analyzed: 02/22/23 08:08		
2-Fluorophenol	1.5000	89.1	80 - 120	6.385	6.6945	-0.3095	N/A	
p-Terphenyl-d14	1.0000	127	80 - 120	20.869	21.219	-0.3500	N/A	*
SLB0349-LCV1 (Solid)			Lab File ID: NT1423022133S.D			Analyzed: 02/22/23 08:44		
2-Fluorophenol	0.15000	41.6	0 - 200	6.401	6.6945	-0.2935	N/A	
p-Terphenyl-d14	0.10000	134	0 - 200	20.869	21.219	-0.3500	N/A	
BLA0393-BLK2 (Solid)			Lab File ID: NT1423022134S.D			Analyzed: 02/22/23 09:21		
2-Fluorophenol	750.00	53.1	27 - 120	6.393	6.6945	-0.3015	N/A	
p-Terphenyl-d14	500.00	72.2	37 - 120	20.869	21.219	-0.3500	N/A	
BLA0393-BS2 (Solid)			Lab File ID: NT1423022135S.D			Analyzed: 02/22/23 09:57		
2-Fluorophenol	750.00	65.1	27 - 120	6.393	6.6945	-0.3015	N/A	
p-Terphenyl-d14	500.00	72.7	37 - 120	20.869	21.219	-0.3500	N/A	
BLA0393-BSD2 (Solid)			Lab File ID: NT1423022136S.D			Analyzed: 02/22/23 10:33		
2-Fluorophenol	750.00	68.7	27 - 120	6.393	6.6945	-0.3015	N/A	
p-Terphenyl-d14	500.00	75.4	37 - 120	20.869	21.219	-0.3500	N/A	
BLA0393-SRM2 (Solid)			Lab File ID: NT1423022137S.D			Analyzed: 02/22/23 11:09		
2-Fluorophenol	7500.0	72.6	27 - 120	6.393	6.6945	-0.3015	N/A	
p-Terphenyl-d14	5000.0	72.5	37 - 120	20.869	21.219	-0.3500	N/A	
23A0133-03 (Solid)			Lab File ID: NT1423022141S.D			Analyzed: 02/22/23 13:34		
2-Fluorophenol	748.69	54.2	27 - 120	6.386	6.6945	-0.3085	N/A	
p-Terphenyl-d14	499.12	82.3	37 - 120	20.885	21.219	-0.3340	N/A	
23A0133-06 (Solid)			Lab File ID: NT1423022142S.D			Analyzed: 02/22/23 14:10		
2-Fluorophenol	750.15	67.2	27 - 120	6.393	6.6945	-0.3015	N/A	
p-Terphenyl-d14	500.10	92.3	37 - 120	20.884	21.219	-0.3350	N/A	
23A0133-07 (Solid)			Lab File ID: NT1423022143S.D			Analyzed: 02/22/23 14:46		
2-Fluorophenol	746.74	65.9	27 - 120	6.401	6.6945	-0.2935	N/A	
p-Terphenyl-d14	497.83	76.9	37 - 120	20.885	21.219	-0.3340	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0349	Instrument:	NT14
Calibration:	GC00009	Calibration Date:	02/16/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLA0393-MS2 (Solid)			Lab File ID: NT1423022144S.D				Analyzed: 02/22/23 15:22	
2-Fluorophenol	749.85	61.1	27 - 120	6.393	6.6945	-0.3015	N/A	
p-Terphenyl-d14	499.90	75.2	37 - 120	20.892	21.219	-0.3270	N/A	
BLA0393-MSD2 (Solid)			Lab File ID: NT1423022145S.D				Analyzed: 02/22/23 15:58	
2-Fluorophenol	749.85	67.1	27 - 120	6.393	6.6945	-0.3015	N/A	
p-Terphenyl-d14	499.90	88.9	37 - 120	20.892	21.219	-0.3270	N/A	
SLB0349-CCV1 (Solid)			Lab File ID: NT1423022148S.D				Analyzed: 02/22/23 17:47	
2-Fluorophenol	1.5000	88.4	50 - 150	6.386	6.6945	-0.3085	N/A	
p-Terphenyl-d14	1.0000	133	50 - 150	20.869	21.219	-0.3500	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0351	Instrument:	NT14
Calibration:	GC00009	Calibration Date:	02/16/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0351-ICV1 (Solid)			Lab File ID: NT1423022148ICVS.D			Analyzed: 02/22/23 17:47		
2-Fluorophenol	1.5000	88.4	80 - 120	6.386	6.6945	-0.3085	N/A	
p-Terphenyl-d14	1.0000	133	80 - 120	20.869	21.219	-0.3500	N/A	*
SLB0351-LCV1 (Solid)			Lab File ID: NT1423022149S.D			Analyzed: 02/22/23 18:23		
2-Fluorophenol	0.15000	64.6	0 - 200	6.532	6.6945	-0.1625	N/A	
p-Terphenyl-d14	0.10000	137	0 - 200	20.877	21.219	-0.3420	N/A	
SLB0351-IBL1 (Solid)			Lab File ID: NT1423022150S.D			Analyzed: 02/22/23 18:59		
2-Fluorophenol	7.5000	53.7	27 - 120	6.393	6.6945	-0.3015	N/A	
p-Terphenyl-d14	5.0000	77.7	37 - 120	20.869	21.219	-0.3500	N/A	
23A0133-08 (Solid)			Lab File ID: NT1423022151S.D			Analyzed: 02/22/23 19:36		
2-Fluorophenol	748.90	62.1	27 - 120	6.401	6.6945	-0.2935	N/A	
p-Terphenyl-d14	499.26	90.1	37 - 120	20.884	21.219	-0.3350	N/A	
23A0133-09 (Solid)			Lab File ID: NT1423022152S.D			Analyzed: 02/22/23 20:12		
2-Fluorophenol	749.92	42.5	27 - 120	6.385	6.6945	-0.3095	N/A	
p-Terphenyl-d14	499.95	61.0	37 - 120	20.885	21.219	-0.3340	N/A	
23A0133-10 (Solid)			Lab File ID: NT1423022153S.D			Analyzed: 02/22/23 20:48		
2-Fluorophenol	749.00	64.9	27 - 120	6.393	6.6945	-0.3015	N/A	
p-Terphenyl-d14	499.33	76.7	37 - 120	20.9	21.219	-0.3190	N/A	
23A0133-11 (Solid)			Lab File ID: NT1423022154S.D			Analyzed: 02/22/23 21:24		
2-Fluorophenol	749.33	64.3	27 - 120	6.393	6.6945	-0.3015	N/A	
p-Terphenyl-d14	499.55	84.1	37 - 120	20.892	21.219	-0.3270	N/A	
23A0133-12 (Solid)			Lab File ID: NT1423022155S.D			Analyzed: 02/22/23 22:01		
2-Fluorophenol	748.91	40.5	27 - 120	6.385	6.6945	-0.3095	N/A	
p-Terphenyl-d14	499.28	71.5	37 - 120	20.892	21.219	-0.3270	N/A	
23A0133-13 (Solid)			Lab File ID: NT1423022156S.D			Analyzed: 02/22/23 22:37		
2-Fluorophenol	749.45	67.5	27 - 120	6.393	6.6945	-0.3015	N/A	
p-Terphenyl-d14	499.64	91.2	37 - 120	20.892	21.219	-0.3270	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0351	Instrument:	NT14
Calibration:	GC00009	Calibration Date:	02/16/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0133-14 (Solid)			Lab File ID: NT1423022157S.D			Analyzed: 02/22/23 23:14		
2-Fluorophenol	749.28	66.3	27 - 120	6.393	6.6945	-0.3015	N/A	
p-Terphenyl-d14	499.52	92.5	37 - 120	20.885	21.219	-0.3340	N/A	
23A0133-15 (Solid)			Lab File ID: NT1423022158S.D			Analyzed: 02/22/23 23:50		
2-Fluorophenol	749.23	61.4	27 - 120	6.393	6.6945	-0.3015	N/A	
p-Terphenyl-d14	499.49	86.3	37 - 120	20.885	21.219	-0.3340	N/A	
23A0133-16 (Solid)			Lab File ID: NT1423022159S.D			Analyzed: 02/23/23 00:26		
2-Fluorophenol	1237.8	63.5	27 - 120	6.393	6.6945	-0.3015	N/A	
p-Terphenyl-d14	825.23	87.1	37 - 120	20.884	21.219	-0.3350	N/A	
SLB0351-CCV1 (Solid)			Lab File ID: NT1423022162S.D			Analyzed: 02/23/23 02:14		
2-Fluorophenol	1.5000	106	50 - 150	6.385	6.6945	-0.3095	N/A	
p-Terphenyl-d14	1.0000	136	50 - 150	20.869	21.219	-0.3500	N/A	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0240	Instrument:	NT14
		Calibration:	GC00009

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SLB0240-SCV1)		(Water)		Lab File ID: NT1423021613s.D				Analyzed: 02/16/23 21:18	
1,4-Dichlorobenzene-d4	391473	8.905	393779	8.905	99	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1430650	11.394	1399029	11.395	102	50 - 200	-0.001	+/-0.50	
Acenaphthene-d10	794620	15.023	759723	15.016	105	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	1759092	18.059	1756156	18.059	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	1201603	23.128	1174128	23.121	102	50 - 200	0.007	+/-0.50	
Perylene-d12	814421	25.691	826011	25.683	99	50 - 200	0.008	+/-0.50	
Initial Cal Blank (SLB0240-ICB1)		(Water)		Lab File ID: NT1423021618s.D				Analyzed: 02/17/23 00:17	
1,4-Dichlorobenzene-d4	296634	8.905	393779	8.905	75	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1039961	11.394	1399029	11.395	74	50 - 200	-0.001	+/-0.50	
Acenaphthene-d10	537777	15.015	759723	15.016	71	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	1239183	18.051	1756156	18.059	71	50 - 200	-0.008	+/-0.50	
Chrysene-d12	789133	23.121	1174128	23.121	67	50 - 200	0.000	+/-0.50	
Perylene-d12	528194	25.691	826011	25.683	64	50 - 200	0.008	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0349	Instrument:	NT14
		Calibration:	GC00009

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLB0349-ICV1)		(Solid)	Lab File ID: NT1423022132S.D				Analyzed: 02/22/23 08:08		
1,4-Dichlorobenzene-d4	261796	8.573	261796	8.573	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	959301	11.039	959301	11.039	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	503659	14.645	503659	14.645	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1179954	17.673	1179954	17.673	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	887360	22.766	887360	22.766	100	50 - 200	0.000	+/-0.50	
Perylene-d12	652371	25.212	652371	25.212	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLB0349-LCV1)		(Solid)	Lab File ID: NT1423022133S.D				Analyzed: 02/22/23 08:44		
1,4-Dichlorobenzene-d4	250681	8.573	261796	8.573	96	50 - 200	0.000	+/-0.50	
Naphthalene-d8	941427	11.04	959301	11.039	98	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	501249	14.645	503659	14.645	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1198933	17.674	1179954	17.673	102	50 - 200	0.001	+/-0.50	
Chrysene-d12	872687	22.766	887360	22.766	98	50 - 200	0.000	+/-0.50	
Perylene-d12	655540	25.213	652371	25.212	100	50 - 200	0.001	+/-0.50	
Blank (BLA0393-BLK2)		(Solid)	Lab File ID: NT1423022134S.D				Analyzed: 02/22/23 09:21		
1,4-Dichlorobenzene-d4	305329	8.565	261796	8.573	117	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	1097705	11.039	959301	11.039	114	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	569801	14.645	503659	14.645	113	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1341702	17.674	1179954	17.673	114	50 - 200	0.001	+/-0.50	
Chrysene-d12	981145	22.766	887360	22.766	111	50 - 200	0.000	+/-0.50	
Perylene-d12	724557	25.212	652371	25.212	111	50 - 200	0.000	+/-0.50	
LCS (BLA0393-BS2)		(Solid)	Lab File ID: NT1423022135S.D				Analyzed: 02/22/23 09:57		
1,4-Dichlorobenzene-d4	303756	8.565	261796	8.573	116	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	1100976	11.04	959301	11.039	115	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	589097	14.653	503659	14.645	117	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	1355563	17.674	1179954	17.673	115	50 - 200	0.001	+/-0.50	
Chrysene-d12	1057826	22.774	887360	22.766	119	50 - 200	0.008	+/-0.50	
Perylene-d12	773837	25.22	652371	25.212	119	50 - 200	0.008	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0349	Instrument:	NT14
		Calibration:	GC00009

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (BLA0393-BSD2)		(Solid)	Lab File ID: NT1423022136S.D				Analyzed: 02/22/23 10:33		
1,4-Dichlorobenzene-d4	312906	8.565	261796	8.573	120	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	1132810	11.039	959301	11.039	118	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	607003	14.653	503659	14.645	121	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	1400120	17.674	1179954	17.673	119	50 - 200	0.001	+/-0.50	
Chrysene-d12	1066010	22.774	887360	22.766	120	50 - 200	0.008	+/-0.50	
Perylene-d12	790323	25.212	652371	25.212	121	50 - 200	0.000	+/-0.50	
Reference (BLA0393-SRM2)		(Solid)	Lab File ID: NT1423022137S.D				Analyzed: 02/22/23 11:09		
1,4-Dichlorobenzene-d4	308877	8.565	261796	8.573	118	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	1099039	11.04	959301	11.039	115	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	586353	14.645	503659	14.645	116	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1378091	17.674	1179954	17.673	117	50 - 200	0.001	+/-0.50	
Chrysene-d12	1051858	22.766	887360	22.766	119	50 - 200	0.000	+/-0.50	
Perylene-d12	787258	25.213	652371	25.212	121	50 - 200	0.001	+/-0.50	
LDW23-SC1250 (23A0133-03)		(Solid)	Lab File ID: NT1423022141S.D				Analyzed: 02/22/23 13:34		
1,4-Dichlorobenzene-d4	306861	8.573	261796	8.573	117	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1117860	11.04	959301	11.039	117	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	583150	14.653	503659	14.645	116	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	1223903	17.681	1179954	17.673	104	50 - 200	0.008	+/-0.50	
Chrysene-d12	812823	22.782	887360	22.766	92	50 - 200	0.016	+/-0.50	
Perylene-d12	639897	25.236	652371	25.212	98	50 - 200	0.024	+/-0.50	
LDW23-SC1241 (23A0133-06)		(Solid)	Lab File ID: NT1423022142S.D				Analyzed: 02/22/23 14:10		
1,4-Dichlorobenzene-d4	292896	8.572	261796	8.573	112	50 - 200	-0.001	+/-0.50	
Naphthalene-d8	1064153	11.039	959301	11.039	111	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	556751	14.652	503659	14.645	111	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	1124300	17.681	1179954	17.673	95	50 - 200	0.008	+/-0.50	
Chrysene-d12	730051	22.781	887360	22.766	82	50 - 200	0.015	+/-0.50	
Perylene-d12	591653	25.235	652371	25.212	91	50 - 200	0.023	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0349	Instrument:	NT14
		Calibration:	GC00009

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-IT1217 (23A0133-07)		(Solid)	Lab File ID: NT1423022143S.D				Analyzed: 02/22/23 14:46		
1,4-Dichlorobenzene-d4	296383	8.573	261796	8.573	113	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1069932	11.04	959301	11.039	112	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	552424	14.653	503659	14.645	110	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	1198526	17.681	1179954	17.673	102	50 - 200	0.008	+/-0.50	
Chrysene-d12	796921	22.789	887360	22.766	90	50 - 200	0.023	+/-0.50	
Perylene-d12	630918	25.236	652371	25.212	97	50 - 200	0.024	+/-0.50	
Matrix Spike (BLA0393-MS2)		(Solid)	Lab File ID: NT1423022144S.D				Analyzed: 02/22/23 15:22		
1,4-Dichlorobenzene-d4	277989	8.573	261796	8.573	106	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1004957	11.047	959301	11.039	105	50 - 200	0.008	+/-0.50	
Acenaphthene-d10	535030	14.66	503659	14.645	106	50 - 200	0.015	+/-0.50	
Phenanthrene-d10	1238609	17.689	1179954	17.673	105	50 - 200	0.016	+/-0.50	
Chrysene-d12	740543	22.789	887360	22.766	83	50 - 200	0.023	+/-0.50	
Perylene-d12	573408	25.243	652371	25.212	88	50 - 200	0.031	+/-0.50	
Matrix Spike Dup (BLA0393-MSD2)		(Solid)	Lab File ID: NT1423022145S.D				Analyzed: 02/22/23 15:58		
1,4-Dichlorobenzene-d4	271109	8.573	261796	8.573	104	50 - 200	0.000	+/-0.50	
Naphthalene-d8	983790	11.047	959301	11.039	103	50 - 200	0.008	+/-0.50	
Acenaphthene-d10	526434	14.653	503659	14.645	105	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	1217018	17.689	1179954	17.673	103	50 - 200	0.016	+/-0.50	
Chrysene-d12	722770	22.789	887360	22.766	81	50 - 200	0.023	+/-0.50	
Perylene-d12	593366	25.243	652371	25.212	91	50 - 200	0.031	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0351	Instrument:	NT14
		Calibration:	GC00009

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLB0351-ICV1)		(Solid)	Lab File ID: NT1423022148ICVS.D				Analyzed: 02/22/23 17:47		
1,4-Dichlorobenzene-d4	241018	8.573	241018	8.573	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	887165	11.04	887165	11.04	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	467553	14.653	467553	14.653	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1079793	17.674	1079793	17.674	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	754146	22.774	754146	22.774	100	50 - 200	0.000	+/-0.50	
Perylene-d12	558201	25.22	558201	25.22	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLB0351-LCV1)		(Solid)	Lab File ID: NT1423022149S.D				Analyzed: 02/22/23 18:23		
1,4-Dichlorobenzene-d4	227784	8.573	241018	8.573	95	50 - 200	0.000	+/-0.50	
Naphthalene-d8	853616	11.039	887165	11.04	96	50 - 200	-0.001	+/-0.50	
Acenaphthene-d10	457152	14.645	467553	14.653	98	50 - 200	-0.008	+/-0.50	
Phenanthrene-d10	1074509	17.674	1079793	17.674	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	729292	22.774	754146	22.774	97	50 - 200	0.000	+/-0.50	
Perylene-d12	537072	25.22	558201	25.22	96	50 - 200	0.000	+/-0.50	
Instrument Blank (SLB0351-IBL1)		(Solid)	Lab File ID: NT1423022150S.D				Analyzed: 02/22/23 18:59		
1,4-Dichlorobenzene-d4	274833	8.565	241018	8.573	114	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	1000172	11.039	887165	11.04	113	50 - 200	-0.001	+/-0.50	
Acenaphthene-d10	513878	14.645	467553	14.653	110	50 - 200	-0.008	+/-0.50	
Phenanthrene-d10	1199126	17.673	1079793	17.674	111	50 - 200	-0.001	+/-0.50	
Chrysene-d12	805758	22.773	754146	22.774	107	50 - 200	-0.001	+/-0.50	
Perylene-d12	573948	25.22	558201	25.22	103	50 - 200	0.000	+/-0.50	
LDW23-SC1185 (23A0133-08)		(Solid)	Lab File ID: NT1423022151S.D				Analyzed: 02/22/23 19:36		
1,4-Dichlorobenzene-d4	270824	8.565	241018	8.573	112	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	990171	11.039	887165	11.04	112	50 - 200	-0.001	+/-0.50	
Acenaphthene-d10	514000	14.652	467553	14.653	110	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	1186705	17.681	1079793	17.674	110	50 - 200	0.007	+/-0.50	
Chrysene-d12	710237	22.781	754146	22.774	94	50 - 200	0.007	+/-0.50	
Perylene-d12	551702	25.235	558201	25.22	99	50 - 200	0.015	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0351	Instrument:	NT14
		Calibration:	GC00009

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SC1234 (23A0133-09)		(Solid)	Lab File ID: NT1423022152S.D				Analyzed: 02/22/23 20:12		
1,4-Dichlorobenzene-d4	273448	8.565	241018	8.573	113	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	1004298	11.039	887165	11.04	113	50 - 200	-0.001	+/-0.50	
Acenaphthene-d10	523741	14.653	467553	14.653	112	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1207259	17.681	1079793	17.674	112	50 - 200	0.007	+/-0.50	
Chrysene-d12	731796	22.782	754146	22.774	97	50 - 200	0.008	+/-0.50	
Perylene-d12	563094	25.236	558201	25.22	101	50 - 200	0.016	+/-0.50	
LDW23-SC1215 (23A0133-10)		(Solid)	Lab File ID: NT1423022153S.D				Analyzed: 02/22/23 20:48		
1,4-Dichlorobenzene-d4	262390	8.573	241018	8.573	109	50 - 200	0.000	+/-0.50	
Naphthalene-d8	975907	11.047	887165	11.04	110	50 - 200	0.007	+/-0.50	
Acenaphthene-d10	501051	14.661	467553	14.653	107	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	1026785	17.697	1079793	17.674	95	50 - 200	0.023	+/-0.50	
Chrysene-d12	649447	22.797	754146	22.774	86	50 - 200	0.023	+/-0.50	
Perylene-d12	553160	25.251	558201	25.22	99	50 - 200	0.031	+/-0.50	
LDW23-SC1222 (23A0133-11)		(Solid)	Lab File ID: NT1423022154S.D				Analyzed: 02/22/23 21:24		
1,4-Dichlorobenzene-d4	272395	8.565	241018	8.573	113	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	992323	11.039	887165	11.04	112	50 - 200	-0.001	+/-0.50	
Acenaphthene-d10	507436	14.652	467553	14.653	109	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	1064402	17.689	1079793	17.674	99	50 - 200	0.015	+/-0.50	
Chrysene-d12	665713	22.789	754146	22.774	88	50 - 200	0.015	+/-0.50	
Perylene-d12	551807	25.243	558201	25.22	99	50 - 200	0.023	+/-0.50	
LDW23-SC1227 (23A0133-12)		(Solid)	Lab File ID: NT1423022155S.D				Analyzed: 02/22/23 22:01		
1,4-Dichlorobenzene-d4	266448	8.573	241018	8.573	111	50 - 200	0.000	+/-0.50	
Naphthalene-d8	971682	11.039	887165	11.04	110	50 - 200	-0.001	+/-0.50	
Acenaphthene-d10	500599	14.653	467553	14.653	107	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1047221	17.681	1079793	17.674	97	50 - 200	0.007	+/-0.50	
Chrysene-d12	684367	22.789	754146	22.774	91	50 - 200	0.015	+/-0.50	
Perylene-d12	524845	25.236	558201	25.22	94	50 - 200	0.016	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0351	Instrument:	NT14
		Calibration:	GC00009

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SS1110 (23A0133-13)		(Solid)	Lab File ID: NT1423022156S.D				Analyzed: 02/22/23 22:37		
1,4-Dichlorobenzene-d4	260496	8.573	241018	8.573	108	50 - 200	0.000	+/-0.50	
Naphthalene-d8	952256	11.039	887165	11.04	107	50 - 200	-0.001	+/-0.50	
Acenaphthene-d10	492542	14.653	467553	14.653	105	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1133001	17.681	1079793	17.674	105	50 - 200	0.007	+/-0.50	
Chrysene-d12	667286	22.789	754146	22.774	88	50 - 200	0.015	+/-0.50	
Perylene-d12	499012	25.235	558201	25.22	89	50 - 200	0.015	+/-0.50	
LDW23-SS1109 (23A0133-14)		(Solid)	Lab File ID: NT1423022157S.D				Analyzed: 02/22/23 23:14		
1,4-Dichlorobenzene-d4	251935	8.565	241018	8.573	105	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	923304	11.04	887165	11.04	104	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	478572	14.653	467553	14.653	102	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	996576	17.682	1079793	17.674	92	50 - 200	0.008	+/-0.50	
Chrysene-d12	639078	22.789	754146	22.774	85	50 - 200	0.015	+/-0.50	
Perylene-d12	491951	25.236	558201	25.22	88	50 - 200	0.016	+/-0.50	
LDW23-SS1092 (23A0133-15)		(Solid)	Lab File ID: NT1423022158S.D				Analyzed: 02/22/23 23:50		
1,4-Dichlorobenzene-d4	253408	8.573	241018	8.573	105	50 - 200	0.000	+/-0.50	
Naphthalene-d8	935515	11.04	887165	11.04	105	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	483528	14.653	467553	14.653	103	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	998884	17.681	1079793	17.674	93	50 - 200	0.007	+/-0.50	
Chrysene-d12	633616	22.782	754146	22.774	84	50 - 200	0.008	+/-0.50	
Perylene-d12	496970	25.236	558201	25.22	89	50 - 200	0.016	+/-0.50	
LDW23-SS1091 (23A0133-16)		(Solid)	Lab File ID: NT1423022159S.D				Analyzed: 02/23/23 00:26		
1,4-Dichlorobenzene-d4	251543	8.572	241018	8.573	104	50 - 200	-0.001	+/-0.50	
Naphthalene-d8	924513	11.039	887165	11.04	104	50 - 200	-0.001	+/-0.50	
Acenaphthene-d10	474298	14.652	467553	14.653	101	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	986809	17.681	1079793	17.674	91	50 - 200	0.007	+/-0.50	
Chrysene-d12	622098	22.781	754146	22.774	82	50 - 200	0.007	+/-0.50	
Perylene-d12	486678	25.235	558201	25.22	87	50 - 200	0.015	+/-0.50	

HOLDING TIME SUMMARY

Analysis: EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1250 23A0133-03	01/06/23 10:32	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 13:34	35	40	
LDW23-SC1241 23A0133-06	01/06/23 10:51	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 14:10	35	40	
LDW23-IT1217 23A0133-07	01/06/23 11:14	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 14:46	35	40	
LDW23-SC1185 23A0133-08	01/06/23 12:00	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 19:36	35	40	
LDW23-SC1234 23A0133-09	01/06/23 13:34	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 20:12	35	40	
LDW23-SC1215 23A0133-10	01/06/23 11:38	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 20:48	35	40	
LDW23-SC1222 23A0133-11	01/06/23 13:00	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 21:24	35	40	
LDW23-SC1227 23A0133-12	01/06/23 13:18	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 22:01	35	40	
LDW23-SS1110 23A0133-13	01/06/23 14:00	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 22:37	35	40	
LDW23-SS1109 23A0133-14	01/06/23 14:13	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 23:14	35	40	
LDW23-SS1092 23A0133-15	01/06/23 14:26	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 23:50	35	40	
LDW23-SS1091 23A0133-16	01/06/23 14:50	01/06/23 17:26	01/18/23 15:24	12	365	02/23/23 00:26	35	40	
Matrix Spike BLA0393-MS2	01/06/23 11:14	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 15:22	35	40	
Matrix Spike Dup BLA0393-MSD2	01/06/23 11:14	01/06/23 17:26	01/18/23 15:24	12	365	02/22/23 15:58	35	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: NT14

Analyte	MDL	RL	Units
1,4-Dichlorobenzene	0.6	5.0	ug/kg
1,2-Dichlorobenzene	0.7	5.0	ug/kg
Benzyl Alcohol	2.5	20.0	ug/kg
Benzoic acid	13.4	100	ug/kg
2,4-Dimethylphenol	2.2	20.0	ug/kg
1,2,4-Trichlorobenzene	2.7	5.0	ug/kg
N-Nitrosodiphenylamine	1.3	5.0	ug/kg
Pentachlorophenol	2.1	20.0	ug/kg

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: NA

Chemical: Tributyl Phosphate

Manufacturer: Chemservice

Product #: O-916

Lot #: 59-57A

Purity: 99%

Analyst: VB

Element: B000954

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001873

Printed: 9/23/2013 11:47:03AM

Description:	SVOC 4,4 DDT	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	23-Sep-13
Solvent:	N/A	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 11:46 by JZ
Vendor:	Chem Service	Lot #:	198-128A
Vendor Catalog #:			

Comments

Neat, Purity @ 99.2%. (ARI#: 790A)

Analyte	CAS Number	Concentration	Units
4,4'-DDT	50-29-3	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 4,4' DDT

Manufacturer: Chem Service

Product #: _____

Lot #: 198-128A

Purity: 99.2%

Analyst: AB

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001875

Printed: 9/23/2013 12:13:55PM

Description:	SVOC alpha-Terpineol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	N/A	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 12:13 by JZ
Vendor:	ACROS Organics	Lot #:	AD16481201
Vendor Catalog #:			

Comments

Neat, Purity @ 98%. (ARI#: I1582A)

Analyte	CAS Number	Concentration	Units
alpha-Terpineol	98-55-5	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: alpha-Terpineol

Manufacturer: Acros Organics

Product #: _____

Lot #: A0648170 1

Purity: 98%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001885

Printed: 9/23/2013 3:45:57PM

Description:	SVOA Dibutyl Phenyl phosphate	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 15:45 by JZ
Vendor:	Monsanto	Lot #:	N/A
Vendor Catalog #:			

Comments

Neat, Purity @ 98.9%.

Analyte	CAS Number	Concentration	Units
Dibutyl Phenyl Phosphate	2528-36-1	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Dibutyl Phenyl Phosphate

Manufacturer: Monsanto

Product #: N/A

Lot #: N/A

Purity: 98.9%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001886

Printed: 9/23/2013 3:59:35PM

Description:	SVOC Triphenyl Phosphate	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 15:59 by JZ
Vendor:	Aldrich	Lot #:	04902CM
Vendor Catalog #:			

Comments

Neat, Purity @ 99%.

Analyte	CAS Number	Concentration	Units
Triphenyl Phosphate	115-86-6	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Triphenyl Phosphate

Manufacturer: Aldrich

Product #: _____

Lot #: 04907CM

Purity: 99%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001887

Printed: 9/23/2013 4:18:55PM

Description:	SVOC Butylated Hydroxytoluene	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 16:18 by JZ
Vendor:	SIGMA	Lot #:	39F-0197
Vendor Catalog #:			

Comments

neat,Purity @ 99.9%.

Analyte	CAS Number	Concentration	Units
Butylated Hydroxytoluene	128-37-0	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: Butylated Hydroxytoluene

Manufacturer: Sigma

Product #: _____

Lot #: 39F-0197

Purity: 99.8%

Analyst: AR

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001890

Printed: 9/23/2013 5:02:53PM

Description:	SVOC Butyl Diphenyl Phosphate	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 17:02 by JZ
Vendor:	Monsanto	Lot #:	N/A
Vendor Catalog #:			

Comments

Neat, Purity @ 98%.

Analyte	CAS Number	Concentration	Units
Butyl Diphenyl Phosphate	2752-95-6	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: Butyl Diphenyl Phosphate

Manufacturer: Monsanto

Product #: NA

Lot #: NA

Purity: 98%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001941

Printed: 9/25/2013 1:45:31PM

Description:	SVOC 2,4-Dinitrophenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 13:45 by JZ
Vendor:	SIGMA	Lot #:	65H5021
Vendor Catalog #:			

Comments

Neat, Purity @ 90-95%. (ARI#: 0466)

Analyte	CAS Number	Concentration	Units
2,4-Dinitrophenol	51-28-5	1000000	ug/mL

B001941
SVOA 2,4-Dinitrophenol
Expires 12/31/2029
Prepared By Jianqing Zhou 9/25/2013

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 2,4-Dinitrophenol

Manufacturer: Sigma

Product #: _____

Lot #: bFH502I

Purity: 90 ~ 94%

Analyst: _____

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001945

Printed: 9/25/2013 3:23:22PM

Description:	SVOC Benzoic Acid	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:23 by JZ
Vendor:	ACROS Organics	Lot #:	A0224339
Vendor Catalog #:			

Comments

Neat, Purity @ 98%.

Analyte	CAS Number	Concentration	Units
Benzoic acid	65-85-0	1000000	ug/mL

B001945
SVOC Benzoic Acid
Expires 12/31/2029
Prepared By Jianqing Zhou 12/31/2012

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Benzoic Acid

Manufacturer: Acros Organics

Product #: _____

Lot #: A0214339

Purity: 98%

Analyst: _____

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001948

Printed: 9/25/2013 3:37:51PM

Description:	SVOC 4,6-Dinitro-2-Methylphenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:37 by JZ
Vendor:	Chem Service	Lot #:	179-31A
Vendor Catalog #:			

Comments

Neat, Purity @ 99%. (ARI#: 009A)

Analyte	CAS Number	Concentration	Units
4,6-Dinitro-2-methylphenol	534-52-1	1000000	ug/mL

B001948
SVOA 4,6-Dinitro-2-Methylphenol
Expires 12/31/2029
Prepared By Jianqing Zhou 9/25/2013

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: 4,6-Dinitro-2-Methylphenol

Manufacturer: Chem Service

Product #: _____

Lot #: 179-31A

Purity: 99%

Analyst: KB

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B002054

Printed: 10/4/2013 6:32:21PM

Description:	SVOA 1-Methylnaphthalene	Expires:	02-Apr-14
Standard Type:	Analyte Spike	Prepared:	13-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	04-Oct-13 18:32 by JZ
Vendor:	Chem Service	Lot #:	62-5B
Vendor Catalog #:			

Comments

Neat, Purity @ 99%

Analyte	CAS Number	Concentration	Units
1-Methylnaphthalene	90-12-0	1000000	ug/mL

B002054
SVOA 1-Methylnaphthalene
Solvent / Lot: NA
Prep: 12/13/2012 by JZ
Exp: 12/31/2029
Location:

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 1-Methyl naphthalene

Manufacturer: Chem Service

Product #: 0787

Lot #: 67-53

Purity: 99%

Analyst: AZ

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B002135

Printed: 10/15/2013 12:07:39PM

Description:	SVOA Benzidine	Expires:	31-Dec-29
Standard Type:	Analyte Spike	Prepared:	15-Oct-13
Solvent:	N/A	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	15-Oct-13 12:07 by JZ
Vendor:	SIGMA	Lot #:	18C0024
Vendor Catalog #:			

Comments

Purity @ 95%. ARI#: 0467.

Analyte	CAS Number	Concentration	Units
Benzidine	92-87-5	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Benzidine

Manufacturer: Sigma

Product #: B-3503

Lot #: 18C0024

Purity: 98%

Analyst: [signature]

Certificate of Analysis

Product Name:	1,2,4,5-Tetrachlorobenzene
Product Description:	98%
Product Brand:	Sigma-Aldrich
Product Number:	131857
Molecular Weight:	215.89
CAS Number:	95-94-3

TEST	SPECIFICATION	LOT 19309JR RESULTS
APPEARANCE	WHITE POWDER, CHIPS OR CRYSTALS	WHITE CHIPS
INFRARED SPECTRUM	CONFORMS TO STRUCTURE.	CONFORMS TO STRUCTURE AND STANDARD AS
** **		ILLUSTRATED ON PAGE 1011C OF EDITION I,
** **		VOLUME 1 OF "THE ALDRICH LIBRARY OF FT-IR
** **		SPECTRA".
GAS LIQUID	97.5% (MINIMUM)	99.9 %
QUALITY CONTROL		JULY 1997

Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

F009172
SVOC 1,2,4,5-Tetrachlorobenzene
Expires 12/31/2079
Prepared By Joshua Rains 10/6/2017

H000691

Data File: \\target\share\chem2\fid4a.i\20230317.b\423C1703.D

Page 1

Date : 17-MAR-2023 10:46

Client ID:

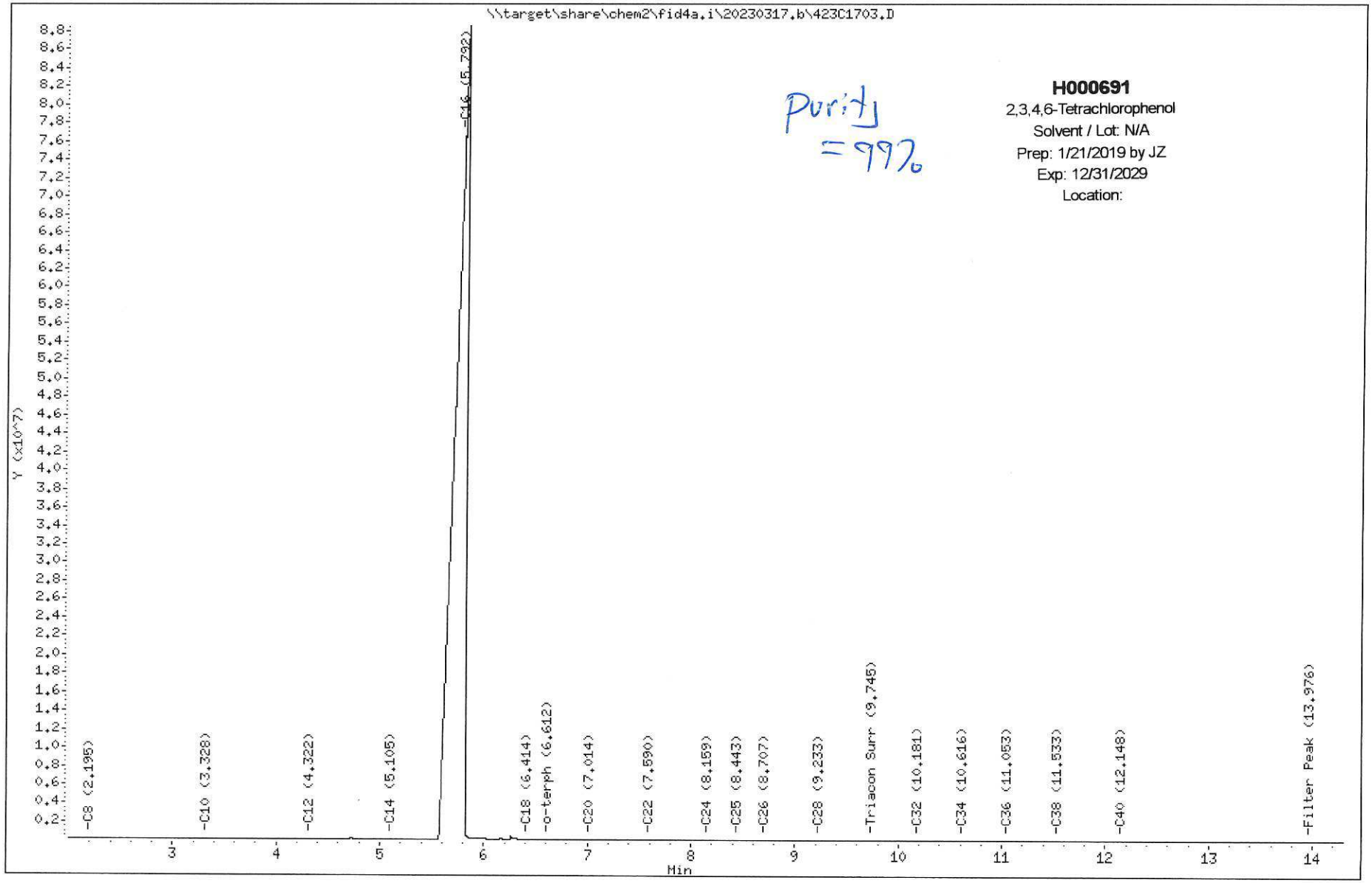
Instrument: fid4a.i

Sample Info: K007226

Operator: AA

Column phase: RTX-1

Column diameter: 0.25



Purity = 99%

H000691
2,3,4,6-Tetrachlorophenol
Solvent / Lot: N/A
Prep: 1/21/2019 by JZ
Exp: 12/31/2029
Location:

ARI Labs, Inc.

Data file : \\target\share\chem2\fid4a.i\20230317.b\423C1703.D
Lab Smp Id: K007226
Inj Date : 17-MAR-2023 10:46
Operator : AA Inst ID: fid4a.i
Smp Info : K007226
Misc Info :
Comment   :
Method   : \\target\share\chem2\fid4a.i\20230317.b\FID4TPH.m
Meth Date : 17-Mar-2023 16:58 alfonso Quant Type: AREA%
Cal Date : 18-AUG-2022 11:51 Cal File: 422H1803.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: Falcon+ Compound Sublist: tph.sub
Target Version: 4.14
Processing Host: ALFONSO-201901

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.043	81395	55677	0.684	0.012	1 Toluene
2.074	68503	39991	0.584	0.010	
2.104	85451	37158	0.435	0.012	
2.146	59381	25207	0.424	0.008	
2.181	11414	22862	2.003	0.001	
2.195	34939	23199	0.664	0.005	2 C8
2.218	8679	21808	2.513	0.001	
2.224	21070	21832	1.036	0.003	
2.243	45086	20191	0.448	0.006	
2.286	3130	15677	5.009	0.000	
2.291	12615	15880	1.259	0.001	
2.313	20979	15888	0.757	0.003	
2.333	7621	15373	2.017	0.001	
2.348	31874	17112	0.537	0.004	
2.373	4619	13267	2.872	0.000	
2.380	12003	13446	1.120	0.001	
2.393	10327	13347	1.292	0.001	
2.408	9963	12697	1.274	0.001	
2.446	24366	11882	0.488	0.003	
2.498	24898	10214	0.410	0.003	
2.557	1592	6395	4.017	0.000	
2.570	4427	6384	1.442	0.000	
2.583	4275	6215	1.454	0.000	
2.595	1208	6068	5.024	0.000	
2.602	3076	6230	2.025	0.000	
2.607	1560	6270	4.019	0.000	
2.631	17195	8933	0.520	0.002	
2.654	17386	7637	0.439	0.002	
2.703	4531	5468	1.207	0.000	
2.717	9156	5741	0.627	0.001	
2.740	3955	5045	1.275	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.768	1029	4134	4.017	0.000	
2.771	830	4189	5.050	0.000	
2.778	1924	4438	2.307	0.000	
2.784	5498	4564	0.830	0.000	
2.846	25970	8400	0.323	0.003	
2.880	939	3165	3.370	0.000	
2.884	1885	3183	1.688	0.000	
2.901	4805	3504	0.729	0.000	
2.938	581	1990	3.423	0.000	
2.944	1450	2016	1.390	0.000	
2.955	449	1816	4.043	0.000	
2.967	1234	2009	1.629	0.000	
2.982	712	2087	2.931	0.000	
2.988	1000	2338	2.337	0.000	
3.001	3475	3541	1.019	0.000	
3.018	3528	3705	1.050	0.000	
3.033	983	2521	2.564	0.000	
3.038	1297	2686	2.070	0.000	
3.044	2547	2541	0.997	0.000	
3.069	389	1330	3.418	0.000	
3.078	728	1545	2.123	0.000	
3.085	1244	1637	1.316	0.000	
3.098	1115	1624	1.457	0.000	
3.108	926	1475	1.593	0.000	
3.119	239	1202	5.036	0.000	
3.125	540	1251	2.315	0.000	
3.133	409	1219	2.978	0.000	
3.144	2600	1886	0.725	0.000	
3.165	620	1604	2.588	0.000	
3.173	554	1647	2.972	0.000	
3.192	2423	2273	0.938	0.000	
3.197	582	2418	4.158	0.000	
3.204	1161	2723	2.346	0.000	
3.208	825	2777	3.364	0.000	
3.228	4472	3391	0.758	0.000	
3.246	1586	2676	1.688	0.000	
3.279	1194	2070	1.734	0.000	
3.293	854	1951	2.285	0.000	
3.298	595	2029	3.408	0.000	
3.315	2640	2597	0.984	0.000	
3.320	1015	2542	2.504	0.000	
3.328	1549	2593	1.674	0.000	3 C10
3.338	1314	2533	1.928	0.000	
3.350	523	2159	4.130	0.000	
3.358	1776	2105	1.185	0.000	
3.371	356	1797	5.043	0.000	
3.378	914	1880	2.057	0.000	
3.383	380	1927	5.068	0.000	
3.387	595	2023	3.399	0.000	
3.395	1390	2270	1.633	0.000	
3.405	1490	1994	1.338	0.000	
3.423	690	1601	2.321	0.000	
3.435	821	1554	1.894	0.000	
3.441	387	1583	4.087	0.000	
3.444	401	1625	4.051	0.000	
3.448	403	1636	4.060	0.000	
3.455	1216	1700	1.398	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
3.478	235	1185	5.047	0.000	
3.482	412	1229	2.986	0.000	
3.488	695	1177	1.694	0.000	
3.501	239	969	4.063	0.000	
3.509	914	1149	1.258	0.000	
3.520	1078	1069	0.992	0.000	
3.540	301	927	3.079	0.000	
3.556	406	849	2.089	0.000	
3.567	370	873	2.359	0.000	
3.572	178	939	5.270	0.000	
3.578	591	1171	1.981	0.000	
3.591	869	1353	1.556	0.000	
3.596	741	1352	1.826	0.000	
3.606	471	1401	2.976	0.000	
3.613	548	1411	2.577	0.000	
3.618	433	1521	3.511	0.000	
3.625	710	1635	2.303	0.000	
3.630	910	1667	1.832	0.000	
3.652	661	1562	2.362	0.000	
3.670	462	1214	2.627	0.000	
3.686	1036	1453	1.403	0.000	
3.690	829	1374	1.658	0.000	
3.702	531	1191	2.241	0.000	
3.712	452	1355	3.001	0.000	
3.716	820	1423	1.736	0.000	
3.736	2685	2093	0.780	0.000	
3.752	689	2030	2.946	0.000	
3.760	4109	2349	0.572	0.000	
3.805	3183	2036	0.640	0.000	
3.823	496	1686	3.401	0.000	
3.835	1641	2314	1.410	0.000	
3.859	9243	4616	0.499	0.001	
3.897	851	1745	2.051	0.000	
3.904	503	1721	3.419	0.000	
3.927	3866	3293	0.852	0.000	
3.941	5520	3558	0.645	0.000	
3.980	573	1715	2.991	0.000	
3.992	1027	1794	1.748	0.000	
3.995	1494	1860	1.245	0.000	
4.010	887	1639	1.847	0.000	
4.021	663	1724	2.602	0.000	
4.026	1380	1776	1.287	0.000	
4.045	306	1546	5.059	0.000	
4.053	1001	1758	1.757	0.000	
4.061	1137	1804	1.586	0.000	
4.072	779	1773	2.275	0.000	
4.080	989	1896	1.917	0.000	
4.087	561	1905	3.396	0.000	
4.098	1956	2156	1.103	0.000	
4.106	1168	2044	1.750	0.000	
4.127	1049	1627	1.551	0.000	
4.142	587	1545	2.633	0.000	
4.148	1155	1572	1.361	0.000	
4.173	3682	2398	0.651	0.000	
4.189	1023	1738	1.700	0.000	
4.204	549	1627	2.961	0.000	
4.213	628	1658	2.641	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
4.221	1039	1830	1.761	0.000	
4.227	447	1814	4.058	0.000	
4.248	2703	2638	0.976	0.000	
4.256	1387	2945	2.123	0.000	
4.260	743	2988	4.022	0.000	
4.265	912	3081	3.378	0.000	
4.268	779	3140	4.031	0.000	
4.275	1736	3217	1.853	0.000	
4.289	2688	3495	1.300	0.000	
4.295	3466	3448	0.995	0.000	
4.322	1054	2680	2.543	0.000	4 C12
4.330	1686	2627	1.558	0.000	
4.358	1066	1974	1.852	0.000	
4.378	434	1758	4.054	0.000	
4.384	1324	1879	1.419	0.000	
4.403	860	1608	1.869	0.000	
4.414	457	1567	3.431	0.000	
4.421	1117	1675	1.499	0.000	
4.433	910	1538	1.690	0.000	
4.439	865	1534	1.774	0.000	
4.449	764	1302	1.705	0.000	
4.471	433	1123	2.593	0.000	
4.476	734	1135	1.546	0.000	
4.490	385	1005	2.610	0.000	
4.498	555	1186	2.137	0.000	
4.502	695	1166	1.677	0.000	
4.518	587	949	1.618	0.000	
4.526	316	925	2.924	0.000	
4.533	560	989	1.765	0.000	
4.543	469	1001	2.135	0.000	
4.548	222	916	4.130	0.000	
4.553	188	980	5.207	0.000	
4.558	255	1038	4.076	0.000	
4.568	652	1157	1.775	0.000	
4.573	338	1151	3.409	0.000	
4.580	487	1283	2.636	0.000	
4.596	3801	1950	0.513	0.000	
4.631	531	1429	2.692	0.000	
4.663	4548	3737	0.822	0.000	
4.667	2815	3822	1.358	0.000	
4.679	2199	3760	1.710	0.000	
4.688	1068	3585	3.356	0.000	
4.694	2166	3742	1.727	0.000	
4.723	372603	172476	0.463	0.055	
4.894	47034	21828	0.464	0.006	
4.956	80510	28154	0.350	0.011	
4.999	54273	16950	0.312	0.008	
5.068	1137	5713	5.027	0.000	
5.072	8415	5792	0.688	0.001	
5.105	4203	4316	1.027	0.000	5 C14
5.146	660	2685	4.070	0.000	
5.153	2524	2649	1.050	0.000	
5.170	1076	2437	2.265	0.000	
5.174	2371	2438	1.028	0.000	
5.201	1013	2011	1.986	0.000	
5.210	2064	2332	1.130	0.000	
5.224	1083	2304	2.127	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.228	2027	2354	1.162	0.000	
5.276	4673	2682	0.574	0.000	
5.322	195	844	4.328	0.000	
5.331	977	1203	1.231	0.000	
5.356	490	993	2.027	0.000	
5.361	814	1044	1.283	0.000	
5.382	115	387	3.351	0.000	
5.399	619	960	1.551	0.000	
5.406	402	1035	2.576	0.000	
5.410	378	1122	2.968	0.000	
5.423	1663	1555	0.935	0.000	
5.452	5951	5020	0.844	0.000	
5.501	290	797	2.753	0.000	
5.523	2317	2472	1.067	0.000	
5.538	5946	6823	1.147	0.000	
5.792	501855376	76456669	0.152	74.449	6 C16
5.807	79757019	82319946	1.032	11.775	
5.823	77929961	88539160	1.136	11.505	
5.962	75333	84828	1.126	0.011	
5.986	474748	124326	0.262	0.070	
6.070	17103	57180	3.343	0.002	
6.074	120761	57565	0.477	0.017	
6.113	90233	47140	0.522	0.013	
6.165	407438	218439	0.536	0.060	
6.263	944101	374166	0.396	0.139	
6.414	114839	39498	0.344	0.016	7 C18
6.464	53190	31177	0.586	0.007	
6.523	31509	25870	0.821	0.004	
6.551	4785	23963	5.008	0.000	
6.559	51194	25409	0.496	0.007	
6.590	21354	21666	1.015	0.003	
6.612	35061	21127	0.603	0.005	$ 8 o-terph
6.638	17712	19934	1.125	0.002	
6.672	22159	19651	0.887	0.003	
6.683	26846	19268	0.718	0.003	
6.708	5413	18142	3.351	0.000	
6.713	24941	18247	0.732	0.003	
6.747	50657	18478	0.365	0.007	
6.795	23973	17444	0.728	0.003	
6.814	28457	17895	0.629	0.004	
6.837	10746	15445	1.437	0.001	
6.871	29974	21406	0.714	0.004	
6.874	4287	21471	5.009	0.000	
6.882	20520	21675	1.056	0.003	
6.944	32864	17445	0.531	0.004	
6.978	9138	15347	1.679	0.001	
7.014	4130	13830	3.348	0.000	9 C20
7.025	12567	14083	1.121	0.001	
7.038	4952	14274	2.882	0.000	
7.044	6508	14578	2.240	0.000	
7.050	25344	14736	0.581	0.003	
7.099	5531	12365	2.236	0.000	
7.108	16440	12371	0.752	0.002	
7.129	9415	11275	1.198	0.001	
7.175	3589	10327	2.878	0.000	
7.182	7285	10474	1.438	0.001	
7.212	11252	10002	0.889	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.227	5193	9506	1.830	0.000	
7.237	5172	9476	1.832	0.000	
7.247	4652	9357	2.011	0.000	
7.254	3258	9369	2.875	0.000	
7.259	7003	9455	1.350	0.001	
7.272	5540	9252	1.670	0.000	
7.283	4511	9087	2.014	0.000	
7.296	5828	9031	1.550	0.000	
7.308	4850	8866	1.828	0.000	
7.318	3111	9014	2.897	0.000	
7.324	3191	9168	2.873	0.000	
7.328	2775	9325	3.360	0.000	
7.339	6190	9713	1.569	0.000	
7.344	2920	9761	3.343	0.000	
7.350	17091	9874	0.578	0.002	
7.379	7217	8616	1.194	0.001	
7.395	5430	8408	1.548	0.000	
7.404	2492	8342	3.348	0.000	
7.409	1666	8354	5.014	0.000	
7.415	2955	8500	2.877	0.000	
7.423	3887	8782	2.259	0.000	
7.465	28160	14253	0.506	0.004	
7.471	6466	14499	2.242	0.000	
7.480	6649	15111	2.273	0.000	
7.484	26595	15197	0.571	0.003	
7.514	13964	13621	0.975	0.002	
7.539	8118	12614	1.554	0.001	
7.553	10540	12495	1.185	0.001	
7.584	2820	11307	4.010	0.000	
7.590	4522	11429	2.527	0.000	10 C22
7.620	16634	10435	0.627	0.002	
7.653	6793	9783	1.440	0.001	
7.663	8606	9666	1.123	0.001	
7.675	2827	9464	3.347	0.000	
7.683	9373	9620	1.026	0.001	
7.699	3657	9205	2.517	0.000	
7.708	5071	9290	1.832	0.000	
7.713	10483	9274	0.885	0.001	
7.735	10686	9257	0.866	0.001	
7.752	4732	8664	1.831	0.000	
7.765	5624	8765	1.558	0.000	
7.773	5614	8686	1.547	0.000	
7.784	3375	8506	2.520	0.000	
7.793	2118	8517	4.021	0.000	
7.799	10086	8544	0.847	0.001	
7.817	7761	8325	1.073	0.001	
7.833	2415	8088	3.350	0.000	
7.838	2838	8160	2.875	0.000	
7.844	3649	8173	2.240	0.000	
7.858	2009	8069	4.017	0.000	
7.864	4482	8197	1.829	0.000	
7.871	3688	8223	2.230	0.000	
7.879	4875	8269	1.696	0.000	
7.889	2009	8061	4.013	0.000	
7.897	4080	8308	2.036	0.000	
7.916	17828	10103	0.567	0.002	
7.935	4052	9086	2.242	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.940	2229	8948	4.015	0.000	
7.945	5765	8973	1.556	0.000	
7.954	6458	8765	1.357	0.000	
7.976	2099	8428	4.016	0.000	
7.984	10213	8807	0.862	0.001	
7.999	4897	8282	1.691	0.000	
8.013	8782	8112	0.924	0.001	
8.028	5860	7858	1.341	0.000	
8.040	3929	7871	2.003	0.000	
8.054	9161	8146	0.889	0.001	
8.067	2701	7766	2.876	0.000	
8.074	3069	7702	2.510	0.000	
8.081	2694	7742	2.874	0.000	
8.088	2705	7793	2.881	0.000	
8.095	5842	7832	1.341	0.000	
8.104	5419	7841	1.447	0.000	
8.119	5740	7735	1.348	0.000	
8.134	4986	7768	1.558	0.000	
8.141	5893	8009	1.359	0.000	
8.159	9098	8027	0.882	0.001	11 C24
8.174	3156	7971	2.526	0.000	
8.185	2376	7967	3.353	0.000	
8.190	4739	7937	1.675	0.000	
8.202	5181	8028	1.549	0.000	
8.212	1994	8027	4.025	0.000	
8.223	6137	8270	1.348	0.000	
8.236	6864	8171	1.190	0.001	
8.248	2383	7986	3.351	0.000	
8.253	2405	8059	3.351	0.000	
8.259	5294	8207	1.550	0.000	
8.268	2866	8235	2.874	0.000	
8.280	6583	8312	1.263	0.000	
8.289	4538	8296	1.828	0.000	
8.295	2060	8300	4.029	0.000	
8.300	2063	8291	4.020	0.000	
8.313	7062	8400	1.189	0.001	
8.318	1667	8375	5.023	0.000	
8.332	11362	9100	0.801	0.001	
8.343	4357	8741	2.006	0.000	
8.358	1267	8458	6.676	0.000	
8.363	2991	8621	2.882	0.000	
8.371	3980	8983	2.257	0.000	
8.379	6330	9083	1.435	0.000	
8.385	3111	8963	2.881	0.000	
8.393	6706	9050	1.349	0.000	
8.404	4903	8943	1.824	0.000	
8.417	8437	8972	1.063	0.001	
8.438	7166	9103	1.270	0.001	
8.443	3211	9227	2.873	0.000	12 C25
8.450	3688	9295	2.521	0.000	
8.455	2313	9276	4.010	0.000	
8.475	30054	13714	0.456	0.004	
8.504	5760	9733	1.690	0.000	
8.519	2799	9376	3.350	0.000	
8.529	4766	9710	2.037	0.000	
8.537	4875	9815	2.013	0.000	
8.543	8411	9973	1.186	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
8.555	2969	9916	3.340	0.000	
8.560	3974	9987	2.513	0.000	
8.568	2483	9997	4.026	0.000	
8.572	5007	10043	2.006	0.000	
8.591	14074	10725	0.762	0.002	
8.602	2648	10665	4.028	0.000	
8.606	2159	10862	5.032	0.000	
8.609	2183	10952	5.017	0.000	
8.633	7361	10561	1.435	0.001	
8.647	6774	10495	1.549	0.001	
8.658	2596	10420	4.014	0.000	
8.663	4723	10573	2.239	0.000	
8.669	3156	10589	3.355	0.000	
8.687	15405	11334	0.736	0.002	
8.699	6103	11158	1.828	0.000	
8.707	2223	11136	5.009	0.000	13 C26
8.730	28697	12536	0.437	0.004	
8.754	8658	11553	1.334	0.001	
8.763	2896	11612	4.010	0.000	
8.780	15029	12352	0.822	0.002	
8.788	1833	12243	6.680	0.000	
8.798	11854	12679	1.070	0.001	
8.806	1873	12509	6.677	0.000	
8.809	3133	12565	4.011	0.000	
8.813	2506	12550	5.008	0.000	
8.819	7588	12757	1.681	0.001	
8.829	4418	12679	2.870	0.000	
8.835	6988	12762	1.826	0.001	
8.848	13711	13258	0.967	0.002	
8.872	26625	13656	0.513	0.003	
8.894	4575	13127	2.869	0.000	
8.898	2631	13188	5.013	0.000	
8.902	5918	13262	2.241	0.000	
8.914	8577	13313	1.552	0.001	
8.922	4011	13433	3.349	0.000	
8.926	4724	13546	2.867	0.000	
8.933	6787	13651	2.011	0.001	
8.946	9614	13923	1.448	0.001	
8.951	6274	14004	2.232	0.000	
8.960	5592	14036	2.510	0.000	
8.966	3513	14090	4.011	0.000	
8.969	2829	14171	5.009	0.000	
8.973	4976	14233	2.860	0.000	
8.980	4289	14365	3.350	0.000	
8.996	27708	16441	0.593	0.004	
9.013	8129	14847	1.827	0.001	
9.025	8129	14840	1.826	0.001	
9.036	7503	15229	2.030	0.001	
9.040	4559	15225	3.340	0.000	
9.057	14920	16251	1.089	0.002	
9.067	9915	16831	1.698	0.001	
9.076	8535	17331	2.031	0.001	
9.081	5250	17596	3.352	0.000	
9.084	10558	17675	1.674	0.001	
9.095	4386	17601	4.013	0.000	
9.111	30564	19262	0.630	0.004	
9.128	8346	18722	2.243	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.139	15095	18986	1.258	0.002	
9.149	6655	19050	2.862	0.000	
9.158	23240	19719	0.848	0.003	
9.171	1903	19042	10.005	0.000	
9.175	4773	19156	4.013	0.000	
9.187	23630	19927	0.843	0.003	
9.199	4925	19763	4.013	0.000	
9.208	14115	20394	1.445	0.002	
9.219	12303	20691	1.682	0.001	
9.226	7266	20831	2.867	0.001	
9.233	15622	21000	1.344	0.002	14 C28
9.247	9280	20714	2.232	0.001	
9.262	45057	27849	0.618	0.006	
9.281	22651	23200	1.024	0.003	
9.304	13489	22820	1.692	0.001	
9.307	18038	22862	1.267	0.002	
9.328	8656	21778	2.516	0.001	
9.334	8635	21650	2.507	0.001	
9.343	16240	21738	1.339	0.002	
9.354	5409	21709	4.013	0.000	
9.367	16481	22234	1.349	0.002	
9.370	6683	22346	3.344	0.000	
9.382	14775	23166	1.568	0.002	
9.390	11679	23531	2.015	0.001	
9.394	12888	23584	1.830	0.001	
9.408	18752	23645	1.261	0.002	
9.416	4675	23396	5.004	0.000	
9.428	25138	24392	0.970	0.003	
9.438	20233	24095	1.191	0.002	
9.468	67429	26696	0.396	0.009	
9.496	8413	24122	2.867	0.001	
9.507	12049	24259	2.013	0.001	
9.527	36362	25771	0.709	0.005	
9.538	12891	25911	2.010	0.001	
9.543	6452	25853	4.007	0.000	
9.551	10420	26202	2.515	0.001	
9.557	29750	26593	0.894	0.004	
9.574	6252	25071	4.010	0.000	
9.593	29143	27655	0.949	0.004	
9.599	40783	27905	0.684	0.006	
9.620	13159	26364	2.004	0.001	
9.632	17259	26799	1.553	0.002	
9.640	13210	26592	2.013	0.001	
9.664	35362	28170	0.797	0.005	
9.672	27890	28134	1.009	0.004	
9.696	26737	28634	1.071	0.003	
9.711	53475	30848	0.577	0.007	
9.745	33266	29504	0.887	0.004	$ 15 Triacon Surr
9.752	7348	29501	4.015	0.001	
9.756	20542	29565	1.439	0.003	
9.768	7255	29059	4.005	0.001	
9.773	7275	29173	4.010	0.001	
9.785	31543	30611	0.970	0.004	
9.803	46804	32832	0.701	0.006	
9.821	10456	30060	2.875	0.001	
9.833	30772	31156	1.012	0.004	
9.860	77784	33514	0.431	0.011	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.881	12779	32069	2.510	0.001	
9.892	14531	32668	2.248	0.002	
9.896	8201	32902	4.012	0.001	
9.908	23357	33882	1.451	0.003	
9.912	27050	34095	1.260	0.003	
9.939	14585	32570	2.233	0.002	
9.951	23032	33095	1.437	0.003	
9.956	11596	33292	2.871	0.001	
9.966	16544	33271	2.011	0.002	
9.971	11660	33391	2.864	0.001	
9.975	10051	33617	3.345	0.001	
9.983	15209	33983	2.234	0.002	
9.988	15177	33830	2.229	0.002	
9.996	10128	33907	3.348	0.001	
10.018	43348	35629	0.822	0.006	
10.021	7133	35693	5.004	0.001	
10.025	8960	35988	4.016	0.001	
10.034	42064	36944	0.878	0.006	
10.063	65447	38699	0.591	0.009	
10.077	7375	36906	5.004	0.001	
10.083	16743	37428	2.235	0.002	
10.095	34467	38665	1.122	0.005	
10.118	90921	40621	0.447	0.013	
10.151	37738	38047	1.008	0.005	
10.158	11383	38037	3.342	0.001	
10.168	36074	38274	1.061	0.005	
10.181	15072	37809	2.509	0.002	16 C32
10.185	5655	37746	6.675	0.000	
10.198	43905	38471	0.876	0.006	
10.208	24771	38177	1.541	0.003	
10.218	19031	38113	2.003	0.002	
10.228	13353	38279	2.867	0.001	
10.237	21225	38826	1.829	0.003	
10.243	30946	38929	1.258	0.004	
10.266	43064	39733	0.923	0.006	
10.275	11912	39784	3.340	0.001	
10.278	19932	39886	2.001	0.002	
10.293	46366	40725	0.878	0.006	
10.318	46465	41024	0.883	0.006	
10.328	24720	41353	1.673	0.003	
10.334	10308	41278	4.005	0.001	
10.343	29100	41866	1.439	0.004	
10.354	22822	41695	1.827	0.003	
10.360	16568	41490	2.504	0.002	
10.376	31388	42321	1.348	0.004	
10.384	36478	43119	1.182	0.005	
10.393	21427	43144	2.014	0.003	
10.416	82339	44731	0.543	0.012	
10.434	23173	42257	1.824	0.003	
10.455	42801	43684	1.021	0.006	
10.459	19648	44004	2.240	0.002	
10.469	19632	43883	2.235	0.002	
10.492	56113	45807	0.816	0.008	
10.497	20626	45915	2.226	0.003	
10.503	27439	45837	1.671	0.004	
10.513	31833	45842	1.440	0.004	
10.523	6773	45190	6.672	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
10.529	22697	45513	2.005	0.003	
10.543	39087	46432	1.188	0.005	
10.552	16284	46719	2.869	0.002	
10.558	18796	47158	2.509	0.002	
10.576	69878	48769	0.698	0.010	
10.586	12085	48384	4.004	0.001	
10.592	21757	48469	2.228	0.003	
10.609	46960	50482	1.075	0.006	
10.616	40486	50812	1.255	0.005	17 C34
10.628	52392	50284	0.960	0.007	
10.665	99744	52644	0.528	0.014	
10.680	20832	52264	2.509	0.003	
10.699	126137	55939	0.443	0.018	
10.723	18258	52316	2.865	0.002	
10.733	65550	52928	0.807	0.009	
10.751	49102	51903	1.057	0.007	
10.765	10288	51490	5.005	0.001	
10.777	73220	52877	0.722	0.010	
10.791	15621	52150	3.338	0.002	
10.799	46819	52190	1.115	0.006	
10.817	52000	52328	1.006	0.007	
10.828	13014	52167	4.008	0.001	
10.833	18275	52280	2.861	0.002	
10.838	67284	52271	0.777	0.009	
10.860	15395	51401	3.339	0.002	
10.867	15366	51252	3.335	0.002	
10.874	25712	51608	2.007	0.003	
10.885	59363	52064	0.877	0.008	
10.901	33199	51247	1.544	0.004	
10.911	35859	51446	1.435	0.005	
10.925	15150	50526	3.335	0.002	
10.936	27761	50508	1.819	0.004	
10.954	40634	51235	1.261	0.005	
10.958	17973	51428	2.861	0.002	
10.982	101216	54997	0.543	0.014	
10.999	80380	54264	0.675	0.011	
11.022	15822	52869	3.342	0.002	
11.029	23878	53171	2.227	0.003	
11.032	23908	53219	2.226	0.003	
11.044	39793	53228	1.338	0.005	
11.053	13218	52959	4.007	0.001	19 C36
11.057	26491	53088	2.004	0.003	
11.069	47933	53454	1.115	0.007	
11.079	78088	52997	0.679	0.011	
11.132	4853	48537	10.002	0.000	
11.138	21933	48845	2.227	0.003	
11.148	46678	49317	1.057	0.006	
11.158	12248	49060	4.006	0.001	
11.164	14711	49102	3.338	0.002	
11.179	64473	49939	0.775	0.009	
11.192	19751	49439	2.503	0.002	
11.197	14848	49541	3.337	0.002	
11.202	17336	49566	2.859	0.002	
11.206	12400	49639	4.003	0.001	
11.212	56808	49881	0.878	0.008	
11.230	26830	48794	1.819	0.003	
11.263	19014	47590	2.503	0.002	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
11.267	11927	47790	4.007	0.001	
11.285	66432	50042	0.753	0.009	
11.308	17214	49235	2.860	0.002	
11.312	19684	49285	2.504	0.002	
11.322	19740	49570	2.511	0.002	
11.331	27467	50208	1.828	0.004	
11.334	12565	50301	4.003	0.001	
11.338	17617	50367	2.859	0.002	
11.356	50450	50688	1.005	0.007	
11.383	31641	48774	1.541	0.004	
11.392	14562	48589	3.337	0.002	
11.398	14566	48593	3.336	0.002	
11.405	21947	48858	2.226	0.003	
11.418	36961	49602	1.342	0.005	
11.428	52174	49838	0.955	0.007	
11.438	46900	49605	1.058	0.006	
11.456	66003	49218	0.746	0.009	
11.481	84312	48818	0.579	0.012	
11.518	39837	46996	1.180	0.005	
11.533	55836	46822	0.839	0.008	20 C38
11.560	30101	46465	1.544	0.004	
11.568	20916	46512	2.224	0.003	
11.573	11637	46596	4.004	0.001	
11.579	23274	46598	2.002	0.003	
11.586	13953	46531	3.335	0.002	
11.591	9318	46631	5.004	0.001	
11.623	97892	48831	0.499	0.014	
11.631	17107	48984	2.863	0.002	
11.638	22090	49260	2.230	0.003	
11.642	32050	49351	1.540	0.004	
11.669	95446	50981	0.534	0.014	
11.685	95822	49865	0.520	0.014	
11.788	8918	44609	5.002	0.001	
11.791	35704	44768	1.254	0.005	
11.804	11082	44350	4.002	0.001	
11.813	22172	44403	2.003	0.003	
11.823	19993	44543	2.228	0.002	
11.829	13395	44754	3.341	0.001	
11.837	20184	44981	2.228	0.002	
11.852	26933	44942	1.669	0.003	
11.866	36041	45224	1.255	0.005	
11.877	15835	45355	2.864	0.002	
11.883	18222	45726	2.509	0.002	
11.889	15985	45741	2.861	0.002	
11.896	20679	46117	2.230	0.003	
11.905	23259	46896	2.016	0.003	
11.929	70146	49826	0.710	0.010	
11.936	52288	50085	0.958	0.007	
11.951	14787	49369	3.339	0.002	
11.957	17313	49595	2.865	0.002	
11.961	32199	49647	1.542	0.004	
11.971	19578	49063	2.506	0.002	
11.980	34244	49065	1.433	0.005	
12.019	96987	51133	0.527	0.014	
12.025	48685	51499	1.058	0.007	
12.053	38386	51386	1.339	0.005	
12.062	38575	51549	1.336	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
12.070	17923	51300	2.862	0.002	
12.078	45780	51141	1.117	0.006	
12.105	31495	48817	1.550	0.004	
12.118	85510	48295	0.565	0.012	
12.148	55474	46657	0.841	0.008	21 C40
12.172	34299	45899	1.338	0.005	
12.181	18286	45754	2.502	0.002	
12.188	20565	45727	2.223	0.003	
12.198	29701	45787	1.542	0.004	
12.212	11377	45530	4.002	0.001	
12.218	29576	45566	1.541	0.004	
12.237	41054	45750	1.114	0.006	
12.243	13695	45701	3.337	0.002	
12.253	27528	46122	1.675	0.004	
12.260	16149	46201	2.861	0.002	
12.272	32473	46571	1.434	0.004	
12.347	231342	54259	0.235	0.034	
12.355	96470	54322	0.563	0.014	
12.383	13155	52687	4.005	0.001	
12.389	52817	52930	1.002	0.007	
12.434	117936	55204	0.468	0.017	
12.440	19323	55283	2.861	0.002	
12.448	22049	55156	2.502	0.003	
12.460	127044	56114	0.442	0.018	
12.500	63536	55700	0.877	0.009	
12.519	44746	56237	1.257	0.006	
12.523	16928	56556	3.341	0.002	
12.528	14154	56666	4.003	0.002	
12.532	14154	56644	4.002	0.002	
12.538	25607	57089	2.229	0.003	
12.543	31284	57010	1.822	0.004	
12.560	76588	57084	0.745	0.011	
12.574	22463	56167	2.500	0.003	
12.583	192414	56305	0.293	0.028	
12.668	201456	54098	0.269	0.029	
12.722	63529	49368	0.777	0.009	
12.744	14574	48683	3.340	0.002	
12.757	68233	49046	0.719	0.010	
12.777	29106	48653	1.672	0.004	
12.802	69072	49884	0.722	0.010	
12.805	19947	49915	2.502	0.002	
12.813	12457	49907	4.006	0.001	
12.826	42860	50672	1.182	0.006	
12.830	15192	50711	3.338	0.002	
12.835	63121	50727	0.804	0.009	
12.856	30109	50299	1.671	0.004	
12.871	12459	49875	4.003	0.001	
12.876	24950	49913	2.001	0.003	
12.883	12458	49860	4.002	0.001	
12.892	24999	50091	2.004	0.003	
12.904	37682	50442	1.339	0.005	
12.918	60965	51059	0.838	0.009	
12.929	15268	50972	3.338	0.002	
12.950	101236	52476	0.518	0.014	
12.991	32619	50285	1.542	0.004	
13.030	23826	47690	2.002	0.003	
13.047	49429	47410	0.959	0.007	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.072	11668	46709	4.003	0.001	
13.077	14056	46964	3.341	0.002	
13.083	21201	47214	2.227	0.003	
13.092	45034	47490	1.055	0.006	
13.103	33139	47401	1.430	0.004	
13.119	58622	47300	0.807	0.008	
13.136	61979	46406	0.749	0.009	
13.163	36232	45399	1.253	0.005	
13.172	13552	45219	3.337	0.002	
13.178	13550	45211	3.337	0.002	
13.183	13581	45318	3.337	0.002	
13.188	15867	45365	2.859	0.002	
13.193	11350	45433	4.003	0.001	
13.206	54879	45909	0.837	0.008	
13.233	74220	46899	0.632	0.010	
13.246	18724	46923	2.506	0.002	
13.250	14089	47028	3.338	0.002	
13.254	9392	46999	5.004	0.001	
13.261	35241	47103	1.337	0.005	
13.270	21093	46884	2.223	0.003	
13.278	16404	46889	2.858	0.002	
13.284	28108	46937	1.670	0.004	
13.309	27777	46575	1.677	0.004	
13.313	11643	46617	4.004	0.001	
13.323	30391	46938	1.544	0.004	
13.337	49696	47554	0.957	0.007	
13.345	11906	47686	4.005	0.001	
13.352	21499	47921	2.229	0.003	
13.358	14416	48133	3.339	0.002	
13.366	24163	48487	2.007	0.003	
13.391	108474	49842	0.459	0.016	
13.411	39818	49922	1.254	0.005	
13.421	140245	49882	0.356	0.020	
13.468	75433	46221	0.613	0.011	
13.519	59701	44435	0.744	0.008	
13.538	26345	44021	1.671	0.003	
13.553	17475	43727	2.502	0.002	
13.559	19699	43828	2.225	0.002	
13.566	15324	43832	2.860	0.002	
13.574	28519	43956	1.541	0.004	
13.585	21950	43943	2.002	0.003	
13.595	26497	44341	1.673	0.003	
13.603	22230	44574	2.005	0.003	
13.608	11135	44585	4.004	0.001	
13.633	100703	46371	0.460	0.014	
13.650	25255	45974	1.820	0.003	
13.663	20511	45675	2.227	0.003	
13.670	15945	45584	2.859	0.002	
13.677	40973	45642	1.114	0.006	
13.688	4544	45448	10.002	0.000	
13.693	29520	45508	1.542	0.004	
13.718	24720	44995	1.820	0.003	
13.727	11216	44890	4.002	0.001	
13.735	29185	45025	1.543	0.004	
13.752	17874	44782	2.505	0.002	
13.767	35874	45020	1.255	0.005	
13.775	36036	45104	1.252	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.785	11226	44939	4.003	0.001	
13.790	47016	44953	0.956	0.006	
13.813	11118	44516	4.004	0.001	
13.818	37641	44507	1.182	0.005	
13.832	15424	44192	2.865	0.002	
13.838	17564	43967	2.503	0.002	
13.844	26339	43892	1.666	0.003	
13.855	30567	43821	1.434	0.004	
13.865	23854	43526	1.825	0.003	
13.882	28266	43639	1.544	0.004	
13.886	30418	43629	1.434	0.004	
13.901	34702	43472	1.253	0.005	
13.920	48162	44005	0.914	0.007	
13.928	17577	43956	2.501	0.002	
13.941	15410	44084	2.861	0.002	
13.946	11045	44251	4.006	0.001	
13.949	24369	44341	1.820	0.003	
13.959	22103	44264	2.003	0.003	
13.967	22088	44195	2.001	0.003	
13.976	33207	44336	1.335	0.004	18 Filter Peak
13.998	24195	44018	1.819	0.003	
14.007	15335	43888	2.862	0.002	
14.014	17519	43863	2.504	0.002	
14.019	54335	43870	0.807	0.008	
14.046	10722	42915	4.003	0.001	
14.052	19305	42955	2.225	0.002	
14.058	8568	42864	5.003	0.001	
14.067	38739	43159	1.114	0.005	
14.077	15012	42931	2.860	0.002	
14.083	25753	42977	1.669	0.003	
14.102	25682	42913	1.671	0.003	
14.108	19267	42865	2.225	0.002	
14.116	12834	42815	3.336	0.001	
14.126	25874	43369	1.676	0.003	
14.133	56339	43595	0.774	0.008	
14.161	32503	43582	1.341	0.004	
14.165	10909	43696	4.006	0.001	
14.170	15313	43822	2.862	0.002	
14.175	10960	43911	4.007	0.001	
14.178	13176	43945	3.335	0.001	
14.183	19785	43976	2.223	0.002	
14.191	8796	44018	5.005	0.001	
14.197	17636	44177	2.505	0.002	
14.208	28815	44459	1.543	0.004	
14.219	8873	44379	5.002	0.001	
14.223	13318	44445	3.337	0.001	
14.229	28860	44456	1.540	0.004	
14.247	15436	44194	2.863	0.002	
14.260	37147	43758	1.178	0.005	
14.274	45685	43705	0.957	0.006	
	677340272	268782821		100.000	

Total unknown % area = 25.478

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Certificate of Composition - Analytical Standard

BASE STOCK

Product no.: 22523051
Lot no.: LRAC9813
Expiry Date: May 2023
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: Dichloromethane
Certificate version: LRAC9813.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

J005199
SVOA-ABN BASE STOCK-200-800ug/ml
Expires 5/31/2023
Prepared By Jianqing Zhou 5/18/2021

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
3,3'-DICHLOROBENZIDINE CAS# 91-94-1	802	µg/mL	99.9	LC27068
2,4-DINITROTOLUENE CAS# 121-14-2	802	µg/mL	97.8	LB46632
2,6-DINITROTOLUENE CAS# 606-20-2	801	µg/mL	99.9	LB79891
HEXACHLOROCYCLOPENTADIENE CAS# 77-47-4	802	µg/mL	96.0	LB95525
N-NITROSODIMETHYLAMINE CAS# 62-75-9	801	µg/mL	95.0	2019-030598 5
PERYLENE CAS# 198-55-0	201	µg/mL	99.6	04101PG
ANILINE CAS# 62-53-3	803	µg/mL	100.0	10126MG
4-CHLOROANILINE CAS# 106-47-8	803	µg/mL	100.0	MKBZ6909V
2-NITROANILINE CAS# 88-74-4	802	µg/mL	99.9	LC05068
3-NITROANILINE CAS# 99-09-2	802	µg/mL	99.9	LC09264
4-NITROANILINE CAS# 100-01-6	802	µg/mL	99.9	LC11400
PYRIDINE (LOW WATER) CAS# 110-86-1	802	µg/mL	100.0	SHBJ9218

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Certificate issue date: 12-May-2021

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAC9813.01	12-May-2021	Original Release Date

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Certificate of Composition - Analytical Standard

ACID STOC"

Product no.: 22523046
Lot no.: LRAC9812
Expiry Date: May 2023
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: Dichloromethane
Certificate version: LRAC9812.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

J005200
SVOA-ABN ACID STOCK-200-800ug/ml
Solvent / Lot: DCM
Prep: 5/18/2021 by JZ
Exp: 5/31/2023
Location:

JZ 5/18/21

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2,4-DIMETHYLPHENOL CAS# 105-67-9	802	µg/mL	99.9	LB88935
2,4-DICHLOROPHENOL CAS# 120-83-2	802	µg/mL	100.0	BCBZ6787
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	802	µg/mL	99.9	JS00008
2,4-DINITROPHENOL CAS# 51-28-5	1806	µg/mL	75.9	MKBP5833V
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	803	µg/mL	98.7	LB82983
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	801	µg/mL	99.9	JS00013
4-NITROPHENOL CAS# 100-02-7	801	µg/mL	99.9	LC10889
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	1804	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	803	µg/mL	98.7	MKCK8156
BENZOIC ACID CAS# 65-85-0	1805	µg/mL	99.9	LC16514

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31493 **Lot No.:** A0167617

Description : CLP 04.1 BNA Surrogate Mix

CLP 04.1 BNA Surrogate Mix 1000-1500 µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2024 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

J005610
CLP 04.1 BNA SURR MIX
Expires 9/30/2024
Prepared By Jianqing Zhou 5/26/2021

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Fluorophenol	1,506.0 µg/mL	+/- 8.9452 µg/mL	Gravimetric
	CAS # 367-12-4 (Lot STBF3761V)		+/- 43.9882 µg/mL	Unstressed
	Purity 99%		+/- 53.3632 µg/mL	Stressed
2	Phenol-d6	1,512.0 µg/mL	+/- 8.9808 µg/mL	Gravimetric
	CAS # 13127-88-3 (Lot PR-31658)		+/- 44.1635 µg/mL	Unstressed
	Purity 99%		+/- 53.5758 µg/mL	Stressed
3	2-Chlorophenol-d4	1,502.0 µg/mL	+/- 8.9214 µg/mL	Gravimetric
	CAS # 93951-73-6 (Lot PR-30568)		+/- 43.8714 µg/mL	Unstressed
	Purity 99%		+/- 53.2214 µg/mL	Stressed
4	1,2-Dichlorobenzene-d4	1,006.0 µg/mL	+/- 5.9753 µg/mL	Gravimetric
	CAS # 2199-69-1 (Lot M-2097)		+/- 29.3839 µg/mL	Unstressed
	Purity 99%		+/- 35.6463 µg/mL	Stressed
5	Nitrobenzene-d5	1,002.0 µg/mL	+/- 5.9516 µg/mL	Gravimetric
	CAS # 4165-60-0 (Lot PR-29940B)		+/- 29.2671 µg/mL	Unstressed
	Purity 99%		+/- 35.5046 µg/mL	Stressed
6	2-Fluorobiphenyl	1,002.0 µg/mL	+/- 5.9516 µg/mL	Gravimetric
	CAS # 321-60-8 (Lot 00019169)		+/- 29.2671 µg/mL	Unstressed
	Purity 99%		+/- 35.5046 µg/mL	Stressed
7	2,4,6-Tribromophenol	1,502.0 µg/mL	+/- 8.9214 µg/mL	Gravimetric
	CAS # 118-79-6 (Lot S55013V)		+/- 43.8714 µg/mL	Unstressed
	Purity 99%		+/- 53.2214 µg/mL	Stressed

8	p-Terphenyl-d14		1,002.0	µg/mL	+/-	5.9516	µg/mL	Gravimetric
	CAS # 1718-51-0	(Lot PR-30504)			+/-	29.2671	µg/mL	Unstressed
	Purity 99%				+/-	35.5046	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

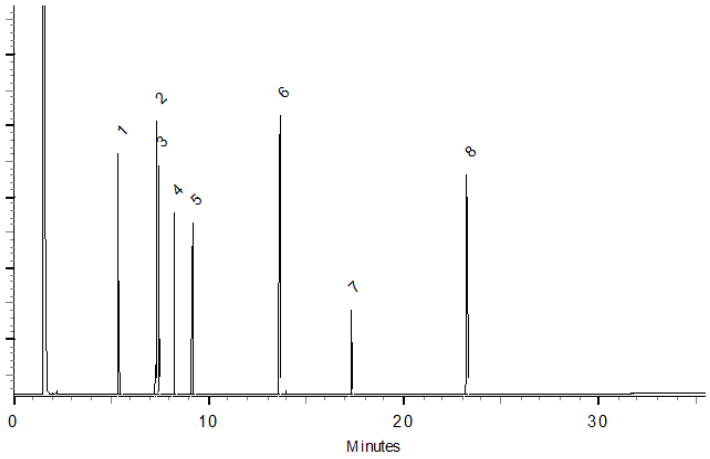
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 29-Dec-2020 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

Date Passed: 31-Dec-2020

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Agilent

Certificate of Analysis

J008074

SVOA PAH STD 2000ug/ml
Expires 6/30/2023
Prepared By Joshua Rains 8/5/2021

Product Name: PAH Standard

Product Number: US-106N-1

Lot Number: 0006540449

Lot Issue Date: 11-Jun-2020

Expiration Date: 30-Jun-2023

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
acenaphthene	000083-32-9	RM10879	2008 ± 10 µg/mL
acenaphthylene	000208-96-8	RM10891	2003 ± 10 µg/mL
anthracene	000120-12-7	RM14212	2006 ± 10 µg/mL
benz[a]anthracene	000056-55-3	RM16072	2006 ± 10 µg/mL
benzo[b]fluoranthene	000205-99-2	RM14571	2005 ± 10 µg/mL
benzo[k]fluoranthene	000207-08-9	RM14321	2009 ± 10 µg/mL
benzo[ghi]perylene	000191-24-2	RM15761	2008 ± 10 µg/mL
benzo[a]pyrene	000050-32-8	RM12669	2009 ± 10 µg/mL
chrysene	000218-01-9	RM12260	2009 ± 10 µg/mL
dibenz[a,h]anthracene	000053-70-3	RM06786	2009 ± 10 µg/mL
fluoranthene	000206-44-0	RM12277	2004 ± 10 µg/mL
fluorene	000086-73-7	RM09441	2009 ± 10 µg/mL
indeno[1,2,3-cd]pyrene	000193-39-5	RM14192	2009 ± 10 µg/mL
naphthalene	000091-20-3	NT00970	2008 ± 10 µg/mL
phenanthrene	000085-01-8	RM10495	2009 ± 10 µg/mL
pyrene	000129-00-0	RM03479	2008 ± 10 µg/mL

Matrix: methylene chloride/benzene (1:1)

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No.
AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert
No. AT-1937

Certificate of Analysis

Product Number: US-106N-1 **Lot Number:** 0006540449

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ISO 17034 Cert No.
AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/

ISO 17025 Cert
No. AT-1937

Certificate of Analysis

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL16062
Certification Date: November 19, 2020
Expiration Date: November 30, 2030

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 2.740%
3,3'-Dichlorobenzidine	91-94-1	2000	± 3.229%

J008310
Benzidines std @2000ug/ml
Expires 11/30/2030
Prepared By Van Spohn 8/12/2021

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

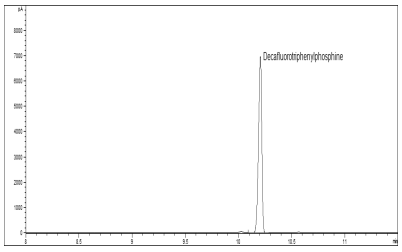
References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis - Certified Reference Material

Decafluorotriphenylphosphine solution

Product no.: 48724-U
Lot no.: LRAD0628
Expiry Date: October 2024
Manufacturing Date: September 2021
Storage: ROOM TEMPERATURE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD0628.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

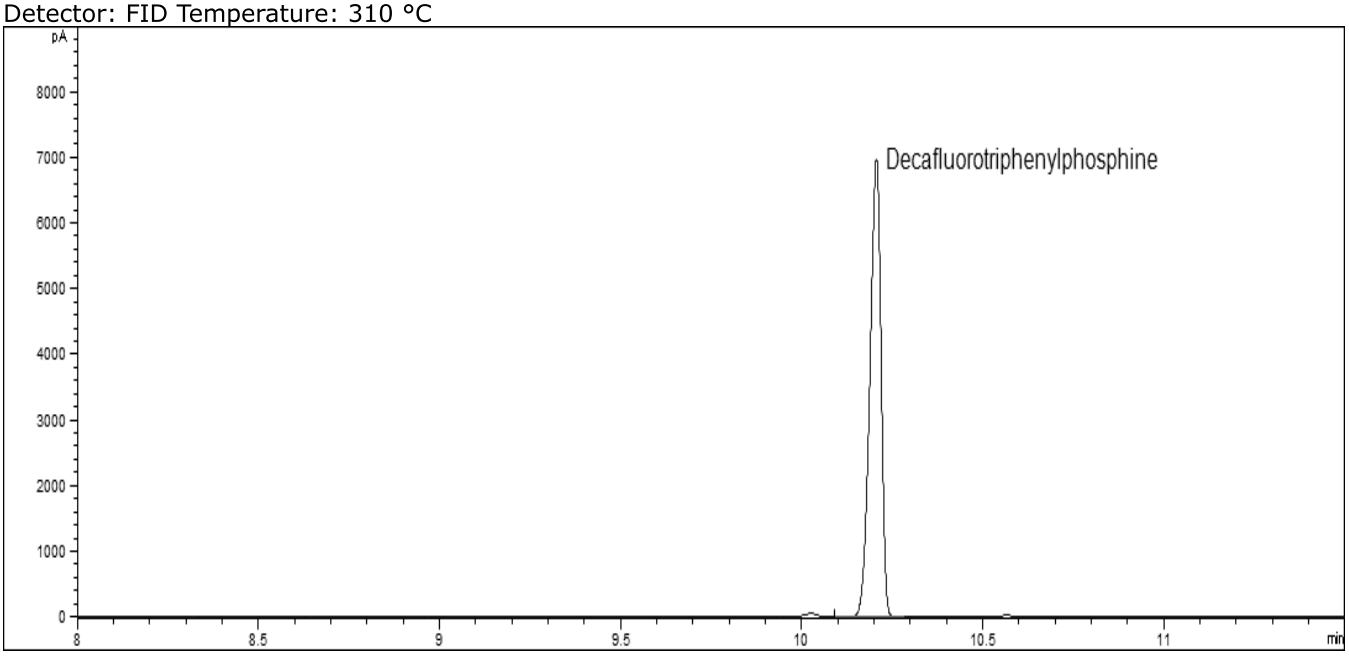


Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
DFTPP CAS# 5074-71-5	25.2 ± 2.6	mg/mL	97.0	10220909

ASSAY Method

METHOD: GC (BELLEFONTE)
Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness
Carrier Gas: H_2 Flow Rate: 4.3 mL/min
Inlet Temperature: 250 °C Injection Volume: 1 µL
Injection Mode: 25:1
Temperature Program: 120 °C (Hold 0 min) @ 12 °C/min to 260 °C (Hold 0 min)
Detector: FID Temperature: 310 °C



Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Elution details:

EO	RT(MIN)	ANALYTE
1	10.206	Decafluorotriphenylphosphine

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Minimum sample size: 1 µL

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 30-Sep-2021

Andy Ommen - QC Manager

Scott Stetler - QA Manager

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom } ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD0628.01	30-Sep-2021	Original Release Date

.

Certificate of Analysis

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101246
Description: Benzoic Acid
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL16693
Certification Date: May 6, 2021
Expiration Date: April 30, 2031

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 4.383%

K3238

A2LA ACCREDITED
Reference Material Producer
Certicate No. 2427.02

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 25 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

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[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
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[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101443
Description: Aniline
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL17696
Certification Date: December 14, 2021
Expiration Date: December 31, 2029

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aniline	62-53-3	1000	± 0.760%

K 3239

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

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Chemical Testing Laboratory
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3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

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[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID CRM143-50G
Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Certified Values

Analyte	*Units*	*Certified Value* [1,4]
1,2,4-Trichlorobenzene	µg/Kg	1477 ± 181
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	1625 ± 292
1-Chloronaphthalene	µg/Kg	2809 ± 84
2,3-Dimethylphenol	µg/Kg	4552 ± 137
2,4,5-Trichlorophenol	µg/Kg	3438 ± 245
2,4,6-Trichlorophenol	µg/Kg	2194 ± 251
2,4-Dichlorophenol	µg/Kg	6991 ± 394
2,4-Dimethylphenol	µg/Kg	6357 ± 879
2,4-Dinitrophenol	µg/Kg	2922 ± 523
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	3318 ± 442
2,6-Dichlorophenol	µg/Kg	4578 ± 874
2,6-Dimethylphenol	µg/Kg	7582 ± 228
2-Chloronaphthalene	µg/Kg	2223 ± 168
2-Chlorophenol	µg/Kg	1678 ± 202
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	5148 ± 685
2-Methylphenol (o-Cresol)	µg/Kg	6004 ± 573
2-Nitrophenol	µg/Kg	6456 ± 383
3,4-Dimethylphenol	µg/Kg	7185 ± 216
3+4-Methylphenol (m+p-Cresol)	µg/Kg	8033 ± 1613
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	7169 ± 310
4-Chloro-3-methylphenol	µg/Kg	2071 ± 110
4-Chlorophenyl phenylether	µg/Kg	2052 ± 113
4-Methylphenol (p-Cresol)	µg/Kg	6617 ± 1371
4-Nitrophenol	µg/Kg	6812 ± 595
Acenaphthene	µg/Kg	5489 ± 380

Description

Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Acenaphthylene	µg/Kg	1948 ± 240
Anthracene	µg/Kg	2866 ± 237
Benzo(a)anthracene	µg/Kg	5751 ± 552
Benzo(a)pyrene	µg/Kg	5902 ± 612
Benzo(b)fluoranthene	µg/Kg	3010 ± 409
Benzo(b+k)fluoranthene	µg/Kg	6534 ± 196
Benzo(g,h,i)perylene	µg/Kg	1380 ± 136
Benzo(k)fluoranthene	µg/Kg	2215 ± 237
Butyl benzyl phthalate	µg/Kg	3511 ± 384
Carbazole	µg/Kg	5412 ± 407
Chrysene	µg/Kg	1477 ± 72
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	2905 ± 321
Dibenzo(a,h)anthracene	µg/Kg	3420 ± 302
Dibenzofuran	µg/Kg	6130 ± 253
Dimethyl phthalate	µg/Kg	4537 ± 250
Di-n-butyl phthalate	µg/Kg	1721 ± 154
Di-n-octyl phthalate	µg/Kg	2744 ± 288
Fluoranthene	µg/Kg	2497 ± 222
Fluorene	µg/Kg	3724 ± 222
Hexachlorobutadiene	µg/Kg	1877 ± 245
Indeno(1,2,3-cd) pyrene	µg/Kg	3914 ± 409
Isophorone	µg/Kg	1615 ± 170
Naphthalene	µg/Kg	4458 ± 480
Nitrobenzene	µg/Kg	3539 ± 266
n-Nitrosodimethylamine	µg/Kg	1580 ± 402
n-Nitrosodiphenylamine	µg/Kg	2854 ± 379
Pentachlorophenol	µg/Kg	3411 ± 358
Phenanthrene	µg/Kg	5052 ± 385
Phenol	µg/Kg	2660 ± 184
Pyrene	µg/Kg	2964 ± 256
Pyridine	µg/Kg	1008 ± 30

Informational Values

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID CRM143-50G
Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Analyte	*Units*	*Suggested Acceptance Windows*	*Standard Deviation*
1,2,4-Trichlorobenzene	µg/Kg	148 to 2853	459
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	163 to 3440	605
1-Chloronaphthalene	µg/Kg	1123 to 4494	562
2,3-Dimethylphenol	µg/Kg	1821 to 7284	910
2,4,5-Trichlorophenol	µg/Kg	1003 to 5872	811
2,4,6-Trichlorophenol	µg/Kg	640 to 3748	518
2,4-Dichlorophenol	µg/Kg	2391 to 11591	1533
2,4-Dimethylphenol	µg/Kg	0.00 to 13959	2534
2,4-Dinitrophenol	µg/Kg	1169 to 4675	584
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	1248 to 5388	690
2,6-Dichlorophenol	µg/Kg	1831 to 7324	916
2,6-Dimethylphenol	µg/Kg	3033 to 12132	1516
2-Chloronaphthalene	µg/Kg	748 to 3699	492
2-Chlorophenol	µg/Kg	415 to 2942	421
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	0.00 to 10347	1733
2-Methylphenol (o-Cresol)	µg/Kg	1306 to 10702	1566
2-Nitrophenol	µg/Kg	1534 to 11379	1641
3,4-Dimethylphenol	µg/Kg	2874 to 11495	1437
3+4-Methylphenol (m+p-Cresol)	µg/Kg	4054 to 16218	2027
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	2901 to 11437	1423
4-Chloro-3-methylphenol	µg/Kg	677 to 3464	464
4-Chlorophenyl phenylether	µg/Kg	756 to 3348	432
4-Methylphenol (p-Cresol)	µg/Kg	2647 to 10587	1323
4-Nitrophenol	µg/Kg	681 to 14762	2650
Acenaphthene	µg/Kg	2243 to 8736	1082
Acenaphthylene	µg/Kg	712 to 3183	412
Anthracene	µg/Kg	1218 to 4515	550
Benzo(a)anthracene	µg/Kg	2806 to 8696	982
Benzo(a)pyrene	µg/Kg	2512 to 9292	1130
Benzo(b)fluoranthene	µg/Kg	1197 to 4822	604
Benzo(b+k)fluoranthene	µg/Kg	2614 to 10454	1307

Description

Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Benzo(g,h,i)perylene	µg/Kg	489 to 2271	297
Benzo(k)fluoranthene	µg/Kg	892 to 3537	441
Butyl benzyl phthalate	µg/Kg	1255 to 5766	752
Carbazole	µg/Kg	2032 to 8792	1127
Chrysene	µg/Kg	669 to 2284	269
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	765 to 5045	713
Dibenzo(a,h)anthracene	µg/Kg	1257 to 5583	721
Dibenzofuran	µg/Kg	2766 to 9493	1121
Dimethyl phthalate	µg/Kg	1842 to 7231	898
Di-n-butyl phthalate	µg/Kg	495 to 2947	409
Di-n-octyl phthalate	µg/Kg	690 to 4798	685
Fluoranthene	µg/Kg	984 to 4009	504
Fluorene	µg/Kg	1638 to 5810	695
Hexachlorobutadiene	µg/Kg	425 to 3329	484
Indeno(1,2,3-cd) pyrene	µg/Kg	870 to 6957	1015
Isophorone	µg/Kg	437 to 2792	392
Naphthalene	µg/Kg	1131 to 7784	1109
Nitrobenzene	µg/Kg	1024 to 6054	838
n-Nitrosodimethylamine	µg/Kg	632 to 2528	316
n-Nitrosodiphenylamine	µg/Kg	1142 to 4567	571
Pentachlorophenol	µg/Kg	341 to 7037	1209
Phenanthrene	µg/Kg	2307 to 7798	915
Phenol	µg/Kg	681 to 4639	660
Pyrene	µg/Kg	1118 to 4810	615
Pyridine	µg/Kg	403 to 1613	202

Additional Information:

DESCRIPTION

The organic sample is a soil containing extractable BNAs for analysis by 8100, 8270, 8310 or equivalent methods.

This product consist of a 5 vials each containing 10g of soil for analysis of PAHs. Each vial is identical and has been tested how homogeneity. Only one vial is need for test the remaining vials are to be used for multiple methods or routine testing.

The soil has been sterilized to minimize degradation of the sample.

The sample has been sized to 100 mesh.

Required storage condition is 4ºC.

The sample has been intentionally prepared with an apparent headspace.

STORAGE

The sample should be stored at 4ºC. It has been determined to be stable for the duration of the expiration date.

After sub-sampling replace cap securely and store remaining sample at 4ºC.

The shelf life of the product was determined by historic stability of similar CRM's. The expiration date may be extended based on stock and popularity upon successful stability testing by a 17025 accredited laboratory.

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID	CRM143-50G
Lot	**LRAC8918**
Expiration Date	January 2024
Manufacturing Date	January 2021
Storage Conditions	Refrigerate
Solvent/Matrix	SOIL

Stability and shelf life after opening must be determined by the user, taking into account sampling frequency/volume and all local conditions.

SAMPLE PREPARATION

Extract the complete contents of a single vial. Transfer entire contents of one vial to extraction vessel. Rinse vial and cap with extraction solvent.

Assume a 10g sample size for all calculations.

Note: Sample extracts and calibration solutions should be in the same solvent.

Report all results on a wet weight basis, do not correct for moisture.

NOTE: For method 8100 and using a packed column gas chromatographic method or cannot adequately resolve the following may coelute in four pairs of compounds: anthracene and phenanthrene; chrysene and benzo(a)anthracene; benzo(b)fluoranthene and benzo(k)fluoranthene; and dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene.

SCOPE AND APPLICATION

The BNAs in Soil Certified Reference Material (CRM) consists of 5 10mL VOA vials, with a Teflon lined closures containing approximately 10 grams of soil, fortified with BNAs. Being a natural matrix waste sample the analyst is challenged by the same preparation problems, analytical interferences, etc. as is typical for similar matrices received by the laboratory for analysis.

Description

Lot	**LRAC8918**
Expiration Date	January 2024
Manufacturing Date	January 2021
Storage Conditions	Refrigerate
Solvent/Matrix	SOIL

1 **Metrological traceability:** Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.
4 Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. K=2 unless specified. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom } ogeneity}^2 + u_{stability}^2}$$

***k*:** Coverage factor derived from a t-distribution table, based on the degrees of freedom of the data set. Assume 2.0 for a **Confidence interval = 95%**

6 Analytical Value- For QC verification of the certified value only- not to be used in calculations. Represents the analytical data obtained by comparison to a standard as analyzed by the method described in the CoA or another acceptable method. The result may differ from the certified value and UCRM based on method uncertainty as well as the uncertainty associated with the standard used for comparison.

Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were preformed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Homogeneity: Homogeneity was assessed in accordance with ISO 17034:2016. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared using a one-way analysis of variance approach as described by TNI EL-V3-2009 Appendix A.2. See Instructions for minimum sub-sample size.

Expiration is at end of month given on certificate and label.

MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

THIS PRODUCT WAS DESIGNED, PRODUCED AND VERIFIED FOR ACCURACY AND STABILITY IN ACCORDANCE WITH **ISO/IEC 17025:2017 (ANAB Cert AT-1467)** and **ISO 17034:2016 (ANAB Cert AR-1470).**

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certification Date	January 05, 2021
Version	0-152021

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Agilent

Certificate of Analysis

Product Name: Toxic Substances Standard

Product Number: US-103N-1 **Lot Issue Date:** 25-May-2021

Lot Number: 0006609664 **Expiration Date:** 30-Jun-2024

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
benzoic acid	000065-85-0	RM01884	2005 ± 10 µg/mL
o-cresol	000095-48-7	RM12877	2005 ± 10 µg/mL
p-cresol	000106-44-5	RM01988	2005 ± 10 µg/mL
2,4,5-trichlorophenol	000095-95-4	NT00344	2004 ± 10 µg/mL

Matrix: methylene chloride (dichloromethane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

5/11/22

K004539
toxic sub mix#1
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 6/30/2024
Location:

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name: Phenols Standard
Product Number: US-107N-1
Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006648297
Lot Issue Date: 17-Nov-2021
Expiration Date: 31-Dec-2024

Component Name	CERTIFIED VALUES Concentration	Expanded Uncertainty	CAS#	Analyte Lot
4-chloro-3-methylphenol	2006 ±	10 µg/mL	000059-50-7	RM01885
2-chlorophenol	2007 ±	10 µg/mL	000095-57-8	RM01871
2,4-dichlorophenol	2005 ±	10 µg/mL	000120-83-2	RM13878
2,4-dimethylphenol	2006 ±	10 µg/mL	000105-67-9	RM13009
2,4-dinitrophenol	2006 ±	10 µg/mL	000051-28-5	RM02112
2-methyl-4,6-dinitrophenol	2005 ±	10 µg/mL	000534-52-1	RM02292
2-nitrophenol	2007 ±	10 µg/mL	000088-75-5	RM13445
4-nitrophenol	2006 ±	10 µg/mL	000100-02-7	RM03752
pentachlorophenol	2006 ±	10 µg/mL	000087-86-5	RM02474
phenol	2006 ±	10 µg/mL	000108-95-2	RM11471
2,4,6-trichlorophenol	2006 ±	10 µg/mL	000088-06-2	RM18096

Matrix: methylene chloride (dichloromethane)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

5/11/22

CSD-QA-015.1

K004540
phenols mix
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 12/31/2024
Location:

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name: PAH Standard
Product Number: US-106N-1
Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006627349
Lot Issue Date: 17-Sep-2021
Expiration Date: 31-Oct-2024

Component Name	CERTIFIED VALUES Concentration		Expanded Uncertainty	CAS#	Analyte Lot
acenaphthene	2007	±	10 µg/mL	000083-32-9	RM10879
acenaphthylene	2004	±	10 µg/mL	000208-96-8	RM10891
anthracene	2006	±	10 µg/mL	000120-12-7	RM14212
benz[a]anthracene	2006	±	10 µg/mL	000056-55-3	RM16072
benzo[b]fluoranthene	2006	±	10 µg/mL	000205-99-2	RM14571
benzo[k]fluoranthene	2006	±	10 µg/mL	000207-08-9	RM18376
benzo[ghi]perylene	2006	±	10 µg/mL	000191-24-2	RM15761
benzo[a]pyrene	2006	±	10 µg/mL	000050-32-8	RM17573
chrysene	2007	±	10 µg/mL	000218-01-9	RM13771
dibenz[a,h]anthracene	2006	±	10 µg/mL	000053-70-3	RM06786
fluoranthene	2006	±	10 µg/mL	000206-44-0	RM12277
fluorene	2006	±	10 µg/mL	000086-73-7	RM09441
indeno[1,2,3-cd]pyrene	2006	±	10 µg/mL	000193-39-5	RM14192
naphthalene	2007	±	10 µg/mL	000091-20-3	RM10445
phenanthrene	2005	±	10 µg/mL	000085-01-8	RM10495
pyrene	2005	±	10 µg/mL	000129-00-0	RM16126

Matrix: methylene chloride/benzene (1:1)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

K004541
SVOA PAH STD 2000ug/ml
Solvent / Lot: DCM/BENZENE
Prep: 5/11/2022 by JZ
Exp: 10/31/2024
Location: Fridge 19

CSD-QA-015.1

11/22

Reference Materials Producer
Cert #2495.01

Certificate of Analysis

Chemical Testing
Cert #2495.02

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This **SPEXOrganics**® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

Certificate of Reference Material

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021 Certifying Officer: Shannon Mora

Report of Certification

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory , please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5 µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i, where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

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Accredited to 17025 & Guide 34 ISO Certified to 9001

ACCREDITED
Reference Materials Producer
Cert #2495.01

ECS

Certificate of Analysis

ilac-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This **SPEXOrganics®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

K004542

Certificate of Reference Material

Catalog Number: ECS-A-030

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Lot No. AA210126005

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021

Certifying Officer: Shannon Nave

Report of Certification

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory, please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

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Phone: 1-732-549-7144 • Fax 1-732-603-9647

Accredited to 17025 & Guide 34 ISO Certified to 9001

Agilent

Certificate of Analysis

Product Name: 1-Methylnaphthalene Standard

Product Number: EPA-1225-1 **Lot Issue Date:** 19-Jul-2021

Lot Number: 0006624769 **Expiration Date:** 31-Jul-2023

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
1-methylnaphthalene	000090-12-0	RM07712	999.3 ± 5.0 µg/mL

Matrix: methanol (methyl alcohol)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

K004543
1-Methylnaphthalene
Solvent / Lot: MEOH
Prep: 5/11/2022 by JZ
Exp: 7/31/2023
Location:

5/11/22

Sample lot approver:
Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026
Page: 1 of 1
www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert
No. AT-1937

Agilent

Certificate of Analysis

Product Name: Toxic Substances Standard

Product Number: US-104N-1 **Lot Issue Date:** 02-Jul-2021

Lot Number: 0006620643 **Expiration Date:** 31-Jul-2023

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
aniline	000062-53-3	RM12853	2005 ± 10 µg/mL
benzyl alcohol	000100-51-6	RM10547	2004 ± 10 µg/mL
4-chloroaniline	000106-47-8	RM01886	2002 ± 10 µg/mL
dibenzofuran	000132-64-9	RM02077	2002 ± 10 µg/mL
2-methylnaphthalene	000091-57-6	RM01258	2006 ± 10 µg/mL
2-nitroaniline	000088-74-4	RM02402	2003 ± 10 µg/mL
3-nitroaniline	000099-09-2	RM02424	2003 ± 10 µg/mL
4-nitroaniline	000100-01-6	RM02425	2003 ± 10 µg/mL

Matrix: methylene chloride (dichloromethane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

K004544
toxic sub mix#2
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 7/31/2023
Location:

05/11/22

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31493 **Lot No.:** A0181243

Description : CLP 04.1 BNA Surrogate Mix

CLP 04.1 BNA Surrogate Mix 1000-1500 µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2025 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

05/11/22

K004545
CLP 04.1 BNA SURR MIX
Solvent / Lot: AO175316
Prep: 5/11/2022 by JZ
Exp: 10/20/2025
Location:

Elution Order	Compound	Gr (weig					
1	2-Fluorophenol **CAS #** 367-12-4 (Lot STBJ2508) **Purity** 99%	1,50				µg/mL	Stressed
				+/-	53.3632	µg/mL	Stressed
2	Phenol-d6 **CAS #** 13127-88-3 (Lot PR-31262) **Purity** 99%	1,506.0	µg/mL	+/-	8.9452	µg/mL	Gravimetric
				+/-	43.9882	µg/mL	Unstressed
				+/-	53.3632	µg/mL	Stressed
3	2-Chlorophenol-d4 **CAS #** 93951-73-6 (Lot PR-30568) **Purity** 99%	1,510.0	µg/mL	+/-	8.9689	µg/mL	Gravimetric
				+/-	44.1050	µg/mL	Unstressed
				+/-	53.5049	µg/mL	Stressed
4	1,2-Dichlorobenzene-d4 **CAS #** 2199-69-1 (Lot PR-32542/022621DB1 **Purity** 99%	1,004.0	µg/mL	+/-	5.9635	µg/mL	Gravimetric
				+/-	29.3255	µg/mL	Unstressed
				+/-	35.5754	µg/mL	Stressed
5	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-29940A) **Purity** 99%	1,008.0	µg/mL	+/-	5.9872	µg/mL	Gravimetric
				+/-	29.4423	µg/mL	Unstressed
				+/-	35.7172	µg/mL	Stressed
6	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot 19169) **Purity** 99%	1,006.0	µg/mL	+/-	5.9753	µg/mL	Gravimetric
				+/-	29.3839	µg/mL	Unstressed
				+/-	35.6463	µg/mL	Stressed
7	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot MKCJ7664) **Purity** 99%	1,506.0	µg/mL	+/-	8.9452	µg/mL	Gravimetric
				+/-	43.9882	µg/mL	Unstressed
				+/-	53.3632	µg/mL	Stressed

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101246
Description: Benzoic Acid
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL17953
Certification Date: January 31, 2022
Expiration Date: January 31, 2032

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 2.714%

K004603
Benzoic Acid @2000ug/ml
Solvent / Lot: N/A
Prep: 5/13/2022 by JZ
Exp: 1/31/2032
Location: GC

5/13/22

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

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Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

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Certificate of Analysis

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL17662
Certification Date: December 2, 2021
Expiration Date: November 30, 2031

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 0.211%
3,3'-Dichlorobenzidine	91-94-1	2000	± 1.305%

K004604
Benzidines std @2000ug/ml
Solvent / Lot: MeCl2
Prep: 5/13/2022 by JZ
Exp: 11/30/2031
Location: GC

5/13/22

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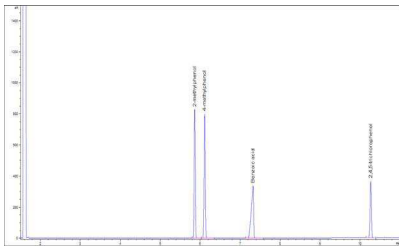
Certificate of Analysis - Certified Reference Material

EPA TCL Hazardous Substances Mix 1

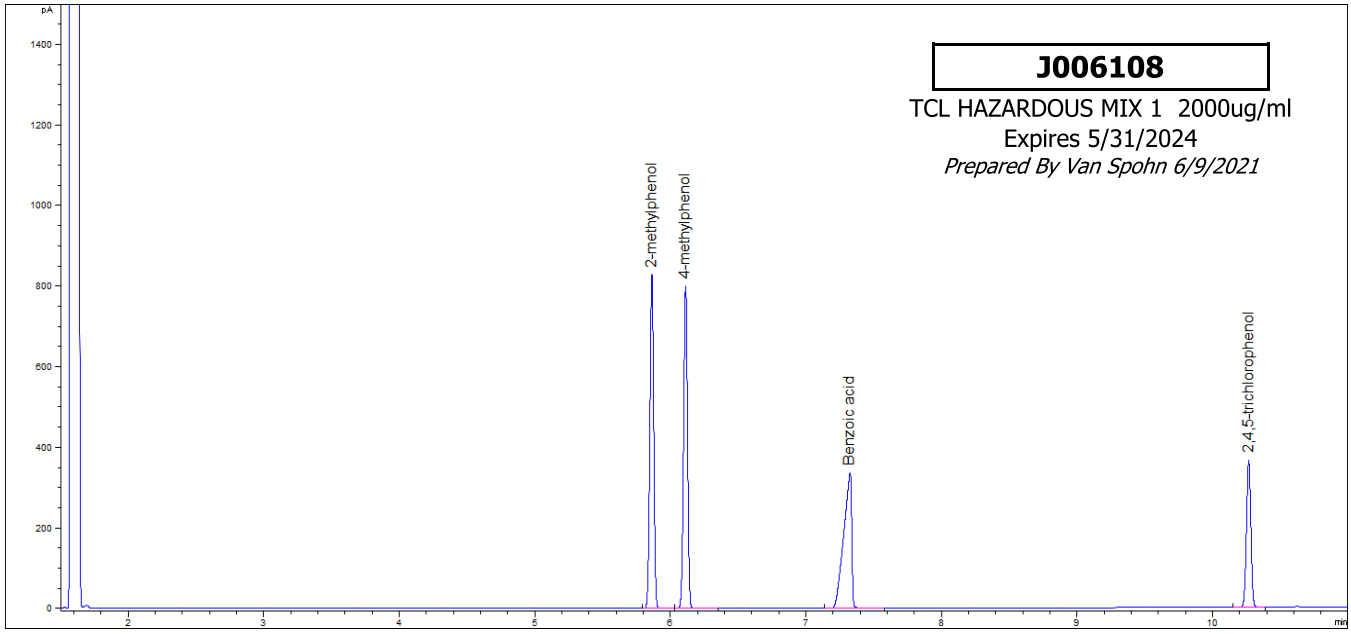
Product no.: 48907
Lot no.: LRAC9610
Expiry Date: May 2024
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAC9610.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*



Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Elution order*	*Raw Material Lot*
2-METHYLPHENOL CAS# 95-48-7	2004 ± 9	µg/mL	99.0	1	G1735A
4-METHYLPHENOL CAS# 106-44-5	2004 ± 13	µg/mL	98.9	2	06921MG
BENZOIC ACID CAS# 65-85-0	2012 ± 6	µg/mL	99.9	3	LC16514
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	2003 ± 6	µg/mL	99.9	4	JS00008

Informational Values:



Additional Information:
Analytical Method Parameters:
Column: Equity-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #98)
Carrier Gas: H2, Flow: 4.5 mL/min
Inlet Temperature: 170 °C, Injection Volume: 1 µL
Injection Mode: Split, Split Ratio: 20:1

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Temperature Program: 80 °C @ 10 °C/min to 190 °C (Hold 5 min)
Detector: FID
Detector Temperature: 310 °C

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 20-May-2021

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom } ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAC9610.01	20-May-2021	Original Release Date

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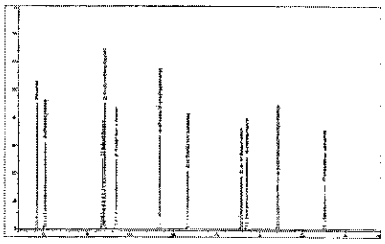
Certificate of Analysis - Certified Reference Material

EPA TCL Phenols Mix

Product no.: 48904
Lot no.: LRAD0139
Expiry Date: July 2024
Manufacturing Date: July 2021
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD0139.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*



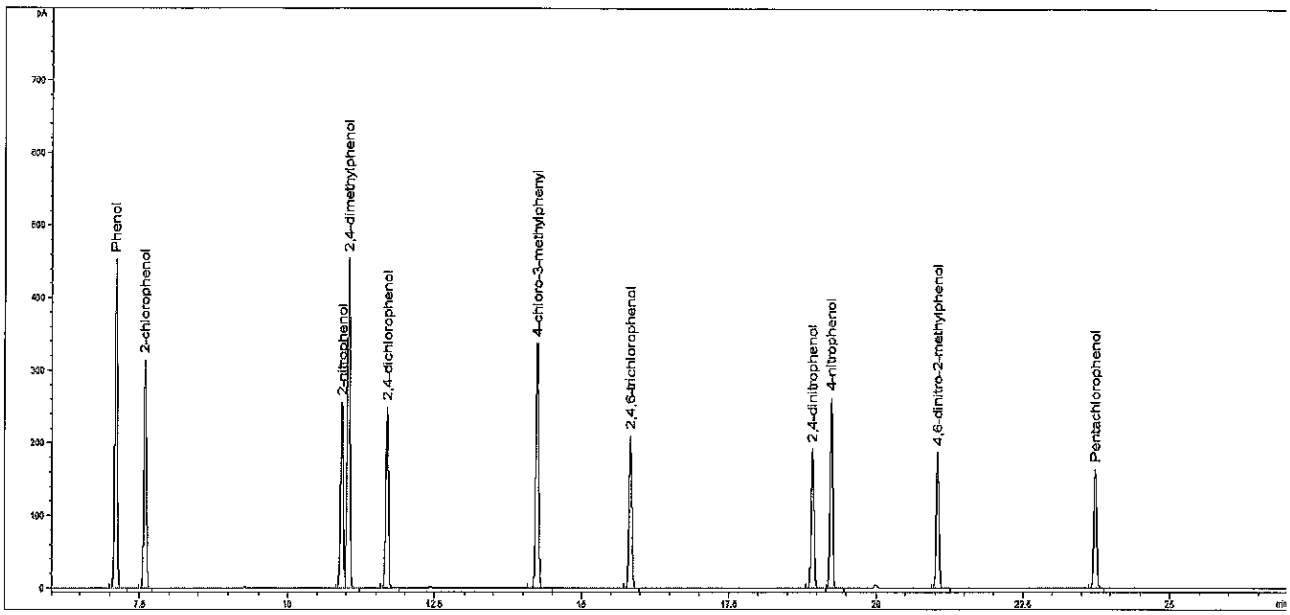
Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2-CHLOROPHENOL CAS# 95-57-8	2001 ± 25	µg/mL	99.9	STBG3033V
2-NITROPHENOL CAS# 88-75-5	1999 ± 18	µg/mL	99.3	15905BB
2,4-DIMETHYLPHENOL CAS# 105-67-9	2000 ± 14	µg/mL	99.2	05421CO
2,4-DICHLOROPHENOL CAS# 120-83-2	2000 ± 17	µg/mL	99.5	03221TN
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	2000 ± 5	µg/mL	99.9	JS00013
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	2002 ± 5	µg/mL	99.5	04212PS
2,4-DINITROPHENOL CAS# 51-28-5	2000 ± 28	µg/mL	66.9	STBJ5751
4-NITROPHENOL CAS# 100-02-7	2000 ± 33	µg/mL	99.0	04628LT
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	2000 ± 27	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	1999 ± 25	µg/mL	97.9	MKCD2150

ASSAY Method

J013597
TCL Phenols Mix 2000ug/ml
Solvent / Lot: LRAD0139
Prep: 12/30/2021 by VS
Exp: 7/31/2024
Location:

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.



METHOD: GC (Bellefonte Method)

Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness
Carrier Gas: H_2 Flow Rate: 4.5 mL/min
Inlet Temperature: 200 °C Injection Volume: 1.0 µL
Injection Mode: 25:1
Temperature Program: 80 °C (Hold 2 min) @ 6 °C/min to 260 °C (Hold 5 min)
Detector: FID Temperature: 310 °C

Elution details:

EO	RT(MIN)	ANALYTE
1	7.095	Phenol
2	7.585	2-chlorophenol
3	10.925	2-nitrophenol
4	11.037	2,4-dimethylphenol
5	11.696	2,4-dichlorphenol
6	14.242	4-chloro-3-m3thylphenol
7	15.842	2,4,6-trichlorophenol
8	18.93	2,4-dinitrophenol
9	19.25	4-nitrophenol
10	21.05	4,6-dinitro-2-methylphenol
11	23.752	Pentachlorophenol

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 12-Jul-2021

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{hom\ ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD0139.01	12-Jul-2021	Original Release Date

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Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18355
Certification Date: July 25, 2022
Expiration Date: August 31, 2023

K007995
SVOA-8270 LCS MIX 1000ug/ml
Solvent / Lot: N/A
Prep: 8/29/2022 by JZ
Exp: 8/31/2023
Location: FREEZER 44

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Acenaphthene	83-32-9	1000	± 0.300%
Acenaphthylene	208-96-8	1000	± 0.225%
Anthracene	120-12-7	1000	± 6.858%
Azobenzene	103-33-3	1000	± 0.224%
Benzo(a)anthracene	56-55-3	1000	± 0.247%
Benzo(a)pyrene	50-32-8	1000	± 0.270%
Benzo(b)fluoranthene	205-99-2	1000	± 0.635%
Benzo(k)fluoranthene	207-08-9	1000	± 0.682%
Benzo(g,h,i)perylene	191-24-2	1000	± 0.272%
Benzyl alcohol	100-51-6	1000	± 0.231%
Benzyl butyl phthalate	85-68-7	1000	± 0.480%
bis(2-Chloroethoxy)methane	111-91-1	1000	± 0.479%
bis(2-Chloroethyl) ether	111-44-4	1000	± 0.479%
bis(2-Chloroisopropyl) ether	108-60-1	1000	± 0.550%
bis(2-Ethylhexyl) adipate	103-23-1	1000	± 0.479%
bis(2-Ethylhexyl) phthalate	117-81-7	1000	± 0.479%
4-Bromophenyl phenyl ether	101-55-3	1000	± 0.479%
Carbazole	86-74-8	1000	± 0.146%

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Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
4-Chloroaniline	106-47-8	1000	± 0.300%
4-Chloro-3-methylphenol	59-50-7	1000	± 0.545%
2-Chloronaphthalene	91-58-7	1000	± 0.224%
2-Chlorophenol	95-57-8	1000	± 0.507%
4-Chlorophenyl phenyl ether	7005-72-3	1000	± 0.479%
Chrysene	218-01-9	1000	± 0.145%
Dibenz(a,h)anthracene	53-70-3	1000	± 1.058%
Dibenzofuran	132-64-9	1000	± 0.302%
Di-n-butyl phthalate	84-74-2	1000	± 0.518%
1,2-Dichlorobenzene	95-50-1	1000	± 0.247%
1,3-Dichlorobenzene	541-73-1	1000	± 0.225%
1,4-Dichlorobenzene	106-46-7	1000	± 0.224%
2,4-Dichlorophenol	120-83-2	1000	± 0.545%
Diethyl phthalate	84-66-2	1000	± 0.518%
2,4-Dimethylphenol	105-67-9	1000	± 0.507%
Dimethyl phthalate	131-11-3	1000	± 0.518%
1,2-Dinitrobenzene	528-29-0	1000	± 0.361%
1,3-Dinitrobenzene	99-65-0	1000	± 0.300%
1,4-Dinitrobenzene	100-25-4	1000	± 0.242%
2,4-Dinitrophenol	51-28-5	1000	± 0.545%
2,4-Dinitrotoluene	121-14-2	1000	± 1.128%

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Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2,6-Dinitrotoluene	606-20-2	1000	± 0.224%
Di-n-octyl phthalate	117-84-0	1000	± 0.486%
Fluoranthene	206-44-0	1000	± 0.224%
Fluorene	86-73-7	1000	± 0.224%
Hexachlorobenzene	118-74-1	1000	± 0.152%
Hexachlorobutadiene	87-68-3	1000	± 0.746%
Hexachlorocyclopentadiene	77-47-4	1000	± 0.153%
Hexachloroethane	67-72-1	1000	± 0.300%
Indeno(1,2,3-cd)pyrene	193-39-5	1000	± 0.883%
Isophorone	78-59-1	1000	± 0.145%
2-Methyl-4,6-dinitrophenol	534-52-1	1000	± 0.508%
1-Methylnaphthalene	90-12-0	1000	± 0.479%
2-Methylnaphthalene	91-57-6	1000	± 0.487%
2-Methylphenol	95-48-7	1000	± 0.545%
3-Methylphenol	108-39-4	500	± 0.279%
4-Methylphenol	106-44-5	500	± 0.399%
Naphthalene	91-20-3	1000	± 0.226%
2-Nitroaniline	88-74-4	1000	± 0.224%
3-Nitroaniline	99-09-2	1000	± 0.235%
4-Nitroaniline	100-01-6	1000	± 0.300%
Nitrobenzene	98-95-3	1000	± 0.300%

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2-Nitrophenol	88-75-5	1000	± 0.514%
4-Nitrophenol	100-02-7	1000	± 0.519%
N-Nitrosodimethylamine	62-75-9	1000	± 0.503%
N-Nitrosodiphenylamine	86-30-6	1000	± 0.476%
N-Nitrosodi-n-propylamine	621-64-7	1000	± 0.461%
Pentachlorophenol	87-86-5	1000	± 0.202%
Phenanthrene	85-01-8	1000	± 0.145%
Phenol	108-95-2	1000	± 0.545%
Pyrene	129-00-0	1000	± 0.147%
Pyridine	110-86-1	1000	± 0.503%
2,3,4,6-Tetrachlorophenol	58-90-2	1000	± 0.247%
2,3,5,6-Tetrachlorophenol	935-95-5	1000	± 0.247%
1,2,4-Trichlorobenzene	120-82-1	1000	± 0.224%
2,4,5-Trichlorophenol	95-95-4	1000	± 0.507%
2,4,6-Trichlorophenol	88-06-2	1000	± 0.509%

Notes: The proper chemical name for Bis(2-Chloroiospropyl) ether is 2,2'-oxybis(1-chloropropane). The analytical uncertainty contribution to the expanded uncertainty for 3 and 4-Methylphenol is measured as the total of the two analytes. N-Nitrosodiphenylamine presents as Diphenylamine at 854 µg/mL.

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Supelco®

www.sigmaaldrich.com

Certificate of Composition - Analytical Standard

BASE STOCK

Product no.: 22523051
Lot no.: LRAD2751
Expiry Date: June 2024
Manufacturing Date: June 2022
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD2751.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at:* www.sigma-aldrich.com *for the most current version.)*

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
3,3'-DICHLOROBENZIDINE, 100MG, NEAT CAS# 91-94-1	799	µg/mL	99.8	LRAD2376
2,4-DINITROTOLUENE CAS# 121-14-2	801	µg/mL	97.8	LB46632
2,6-DINITROTOLUENE CAS# 606-20-2	800	µg/mL	99.2	11231AN
HEXACHLOROCYCLOPENTADIENE CAS# 77-47-4	800	µg/mL	96.0	LB95525
N-NITROSODIMETHYLAMINE CAS# 62-75-9	800	µg/mL	95.0	2019-030598 5
PERYLENE CAS# 198-55-0	200	µg/mL	99.6	04101PG
ANILINE CAS# 62-53-3	800	µg/mL	99.9	LA41596
4-CHLOROANILINE CAS# 106-47-8	800	µg/mL	100.0	MKBZ6909V
2-NITROANILINE CAS# 88-74-4	799	µg/mL	99.9	07411KN
3-NITROANILINE CAS# 99-09-2	800	µg/mL	99.9	LC09264
4-NITROANILINE CAS# 100-01-6	800	µg/mL	99.9	15609AA
PYRIDINE (LOW WATER) CAS# 110-86-1	800	µg/mL	100.0	SHBJ9218

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Certificate issue date: 03 JUN 2022

Andy Ommen - QC Manager

Scott Stetler - QA Manager

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD2751.01	03 JUN 2022	Original Release Date

Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1250

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-03 C	File ID:	23013137.D
Sampled:	01/06/23 10:32	Prepared:	01/19/23 13:44	Analyzed:	02/01/23 01:36
% Solids:	51.11	Preparation:	EPA 3546 (Microwave)	Initial/Final:	24.51 g Wet / 2.5 mL
Batch:	BLA0392	Sequence:	SLB0046	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9827*	*7.70*	*96.5*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9827*	*7.76*	*97.2*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9827*	*5.66*	*70.9*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9827*	*5.74*	*71.8*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013137.D
Data file 2: /20230131.b/B20230131.b/23013137.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: 23A0133-03
Client ID:
Injection Date: 01-FEB-2023 01:36
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.303	-0.008	41152	4.821	-0.012	10344	2.45	0.38	146.8*	alpha-BHC
----			5.325	0.016	21481	0.00	2.05	---	beta-BHC
4.879	0.004	85436	----			6.22	0.00	---	delta-BHC
4.609	-0.002	43544	5.221	-0.008	12218	2.99	0.52	140.5*	gamma-BHC (Lindane)
5.076	-0.017	21238	5.757	0.002	44182	1.64	2.09	24.0	Heptachlor
5.428	0.014	65761	6.151	-0.006	24343	4.53	1.01	127.2*	Aldrin
6.072	-0.017	29863	6.784	-0.030	223188	2.37	11.16	129.9*	Heptachlor epoxide b
----			7.237	-0.020	14082	0.00	0.80	---	Endosulfan I
6.769	-0.022	123427	7.525	-0.026	81336	9.94	4.18	81.6*	Dieldrin
6.442	-0.009	129540	7.330	-0.011	78444	11.23	4.39	87.6*	4,4'-DDE
7.062	0.021	290910	7.897	0.021	250856	31.37	19.29	47.7*	Endrin
7.302	0.024	19209	8.088	0.001	123889	2.30	9.29	120.6*	Endosulfan II
----			7.938	-0.011	77017	0.00	6.09	---	4,4'-DDD
8.170	0.029	15848	8.713	0.027	73060	2.00	6.24	103.0*	Endosulfan sulfate
----			8.266	-0.001	449390	0.00	36.80	---	4,4'-DDT
7.905	0.028	35429	8.938	0.029	15989	9.47	2.96	104.8*	Methoxychlor
----			9.219	0.009	253194	0.00	20.02	---	Endrin ketone
7.727	0.020	73170	8.404	-0.014	73574	10.99	7.82	33.6	Endrin aldehyde
----			7.050	0.025	188908	0.00	9.47	---	trans-Chlordane
6.392	0.016	77224	7.174	-0.011	18972	6.02	0.97	144.4*	cis-Chlordane
2.283	-0.020	4049	2.511	0.029	5575	0.23	0.21	7.6	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.797	-0.003	336583	4.189	-0.007	556193	28.35	28.74	1.4	Tetrachloro-m-xylene
9.318	-0.001	276555	10.417	-0.012	393096	38.58	38.88	0.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

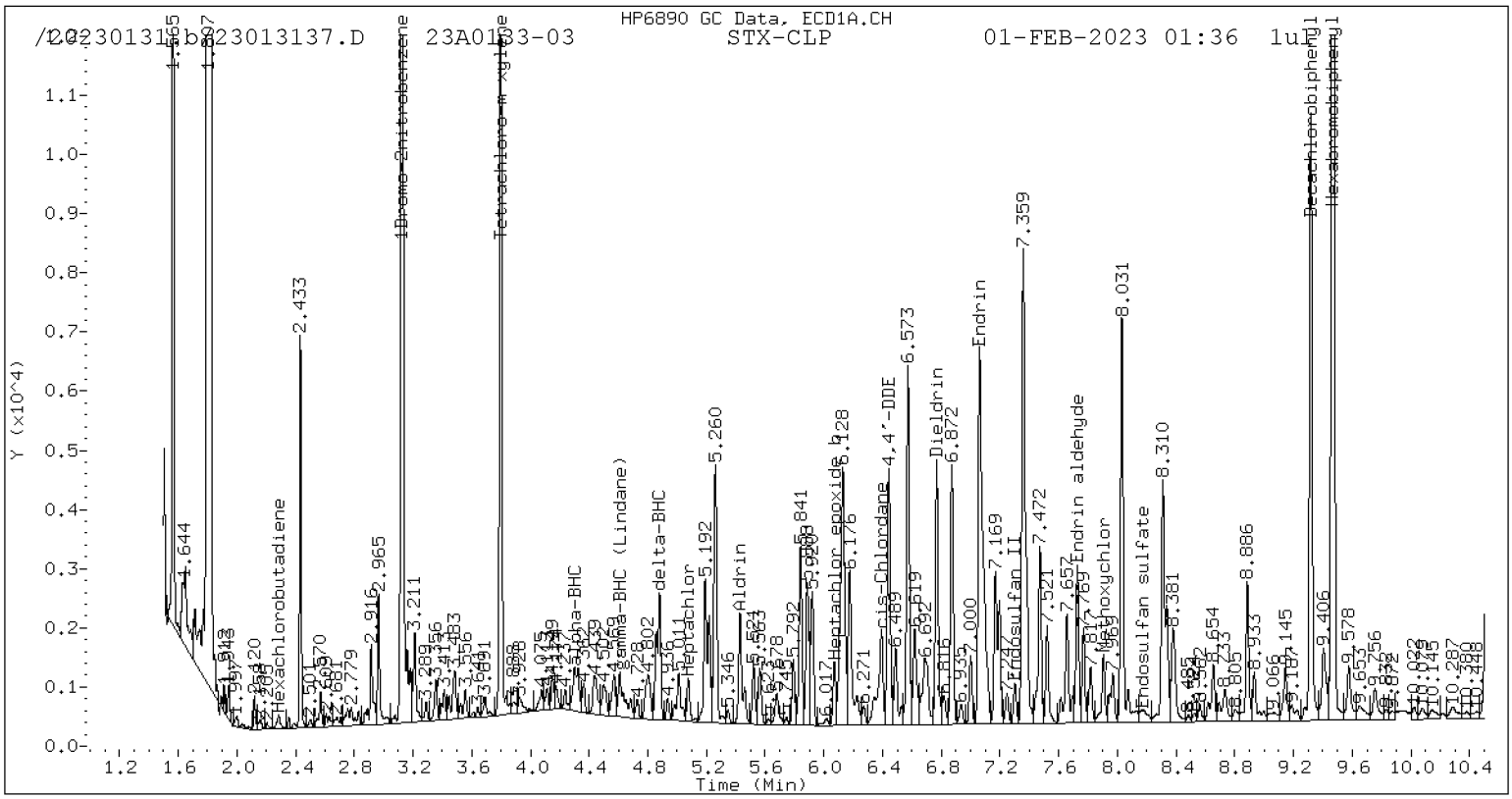
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	872990	29.8
Hexabromobiphenyl	609723	707453	16.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1374958	36.6
Hexabromobiphenyl	769764	914719	18.8

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



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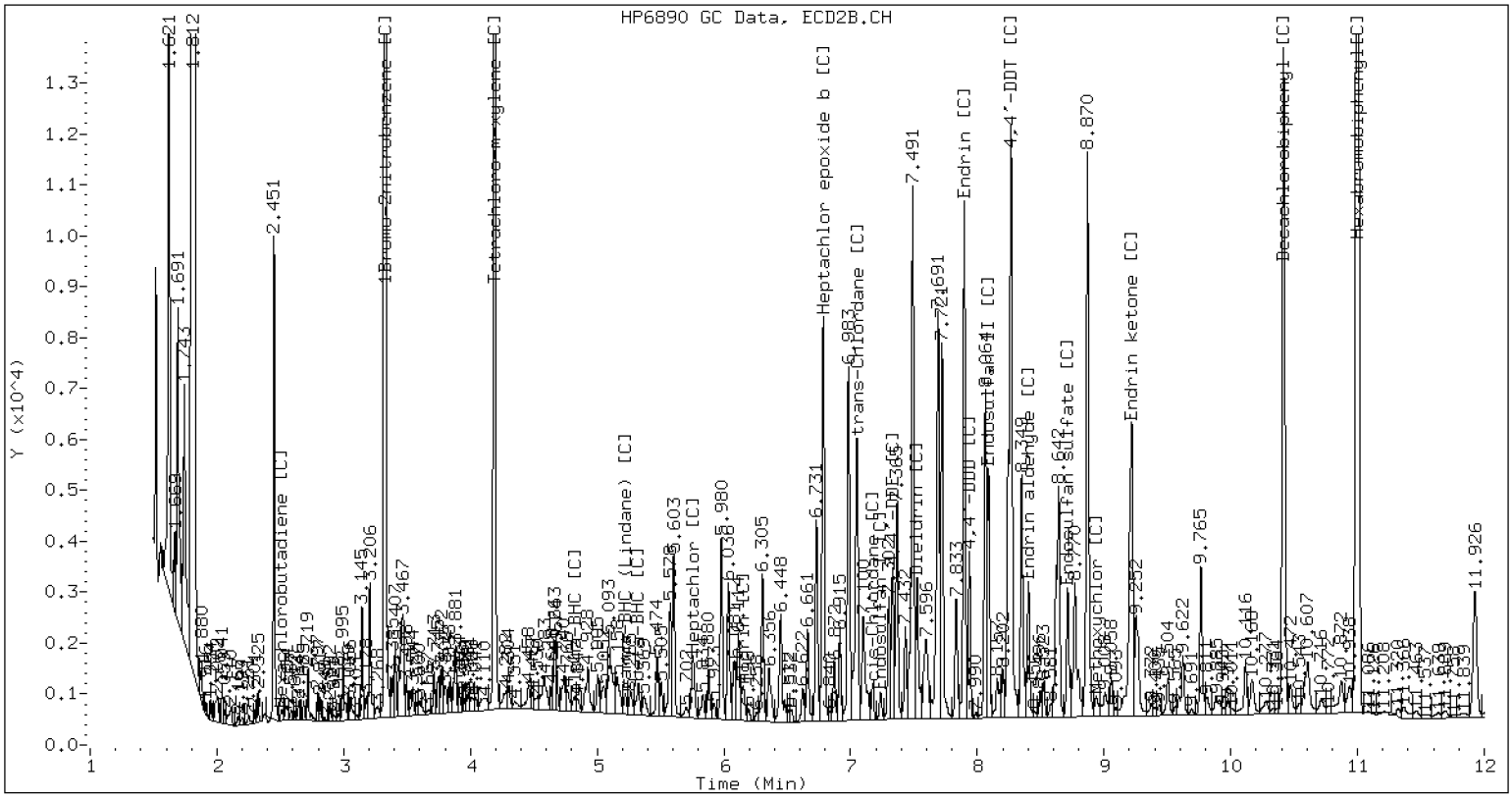
/20230131.b/B20230131.b/23013137.D 23A0133-03 CLP2



CLP-2 Manual Integration: NO

Manual Peak Adjustment Report, CLP-2

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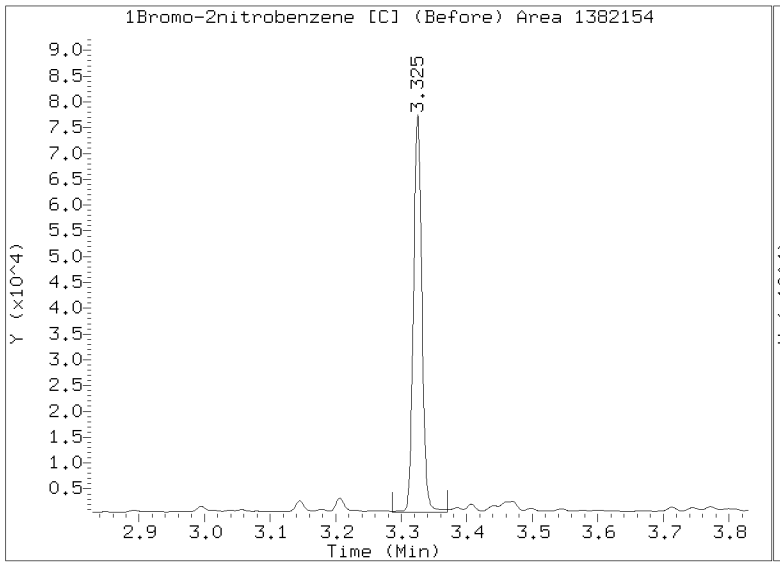
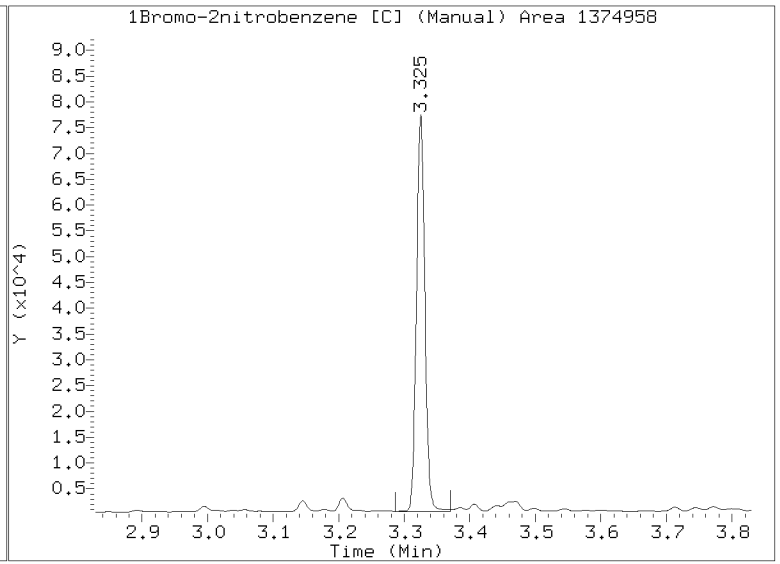
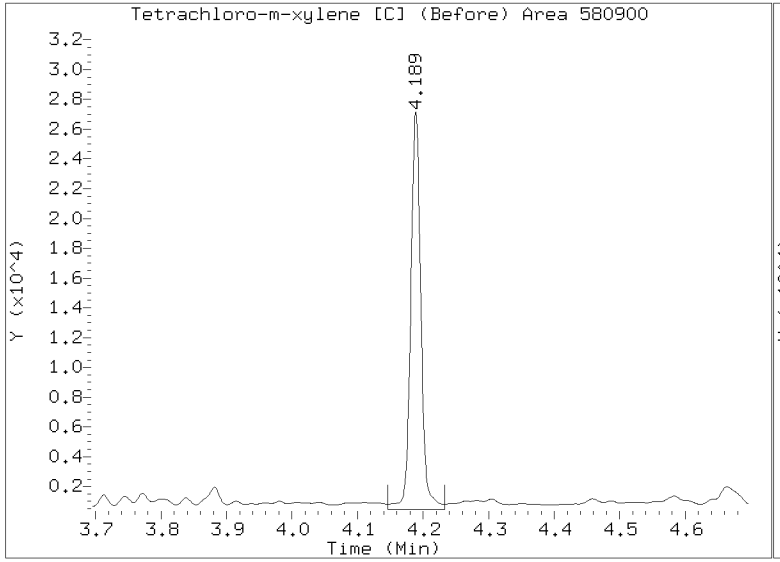
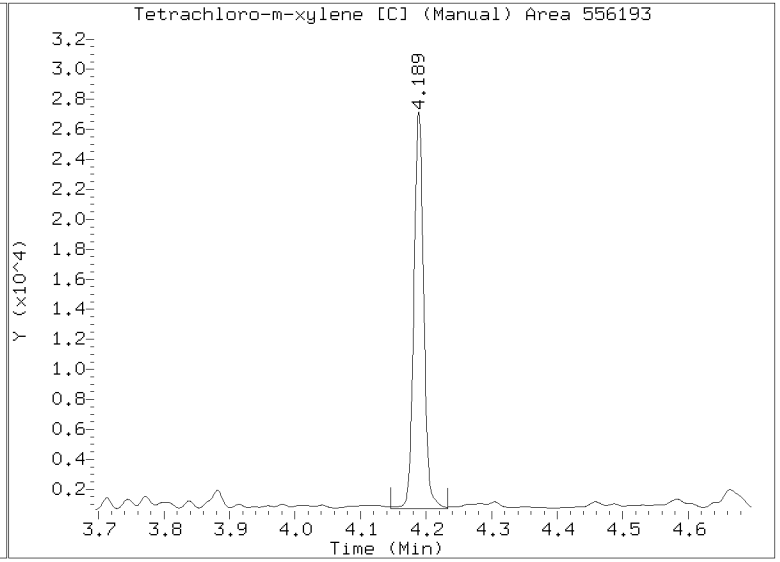
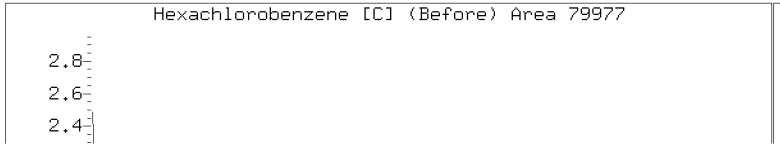
Lab ID:23A0133-03 Client ID:

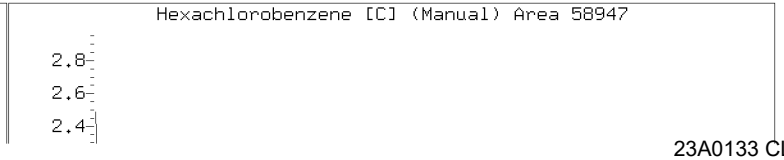












Manual Peak Adjustment Report, CLP-2

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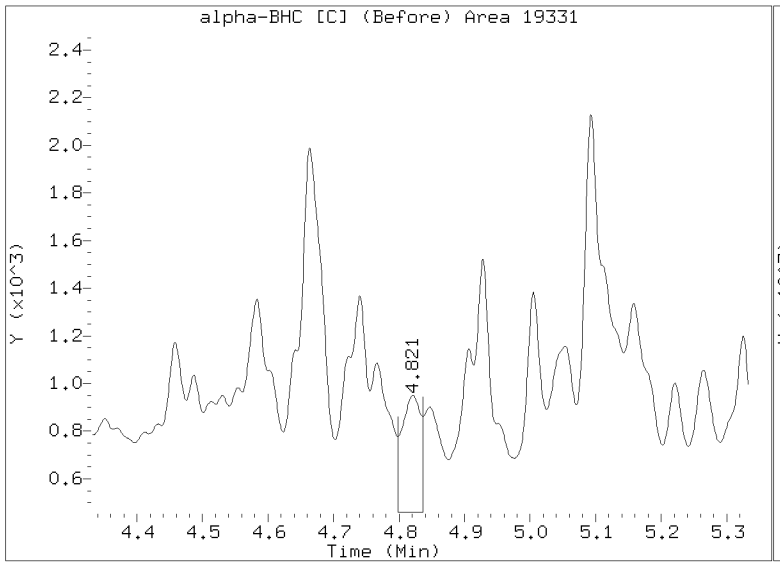

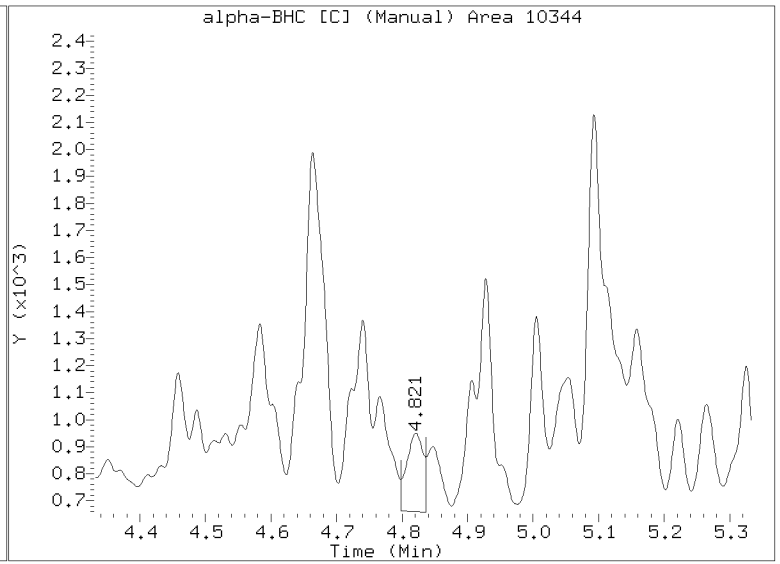

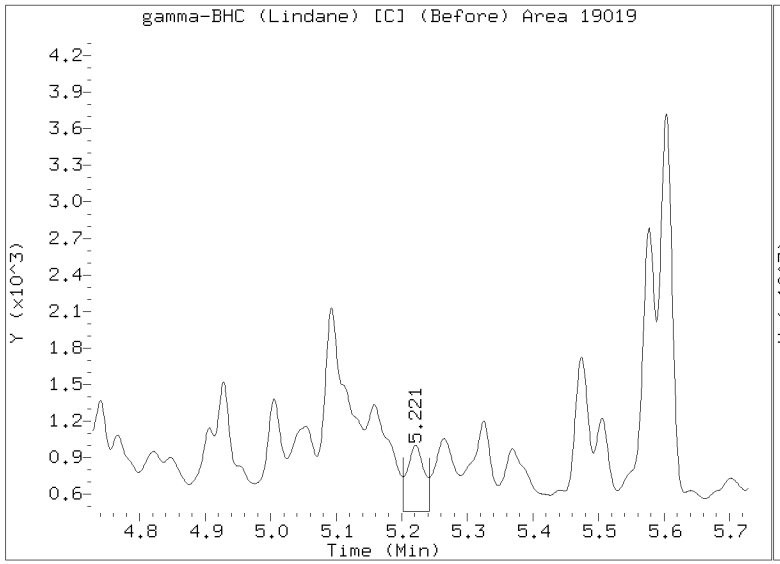

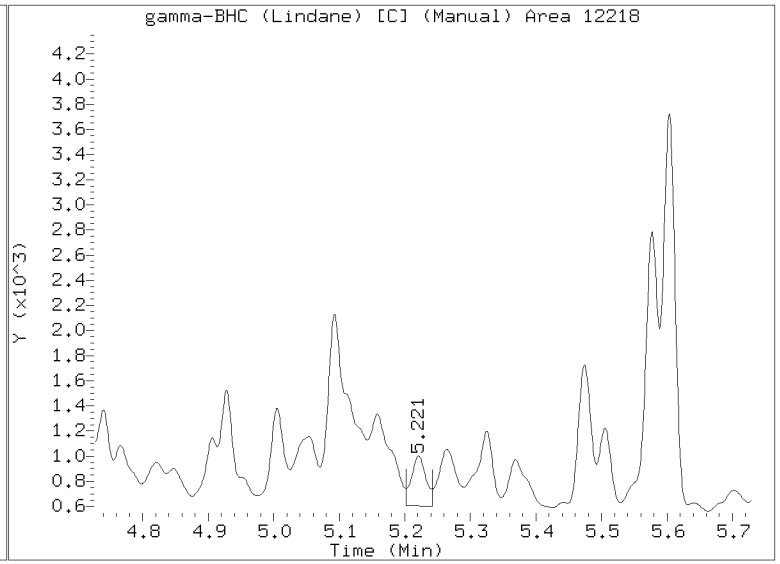

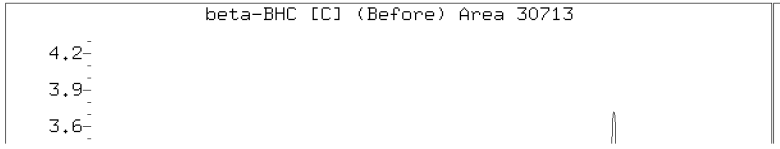

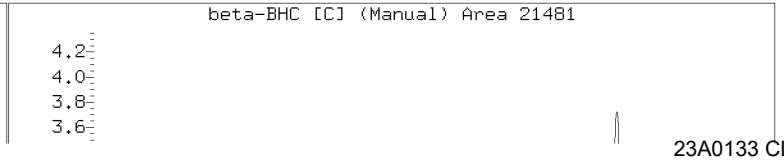

Manual Peak Adjustment Report, CLP-2

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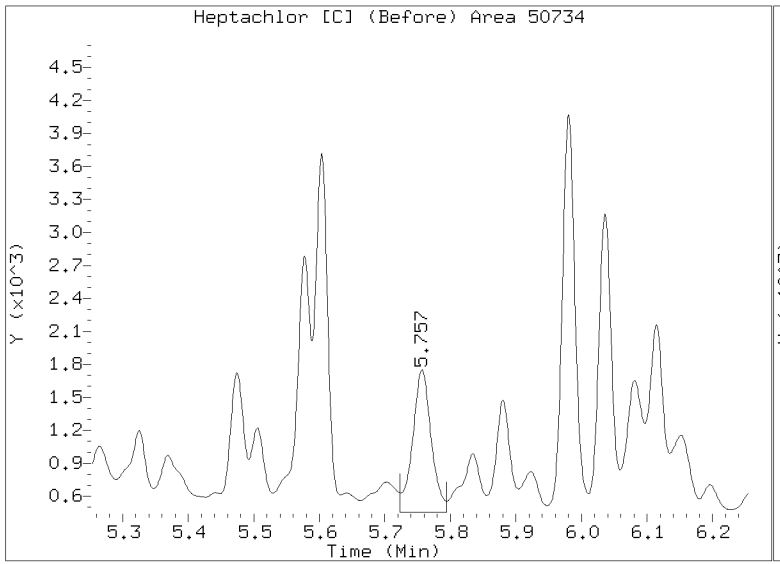

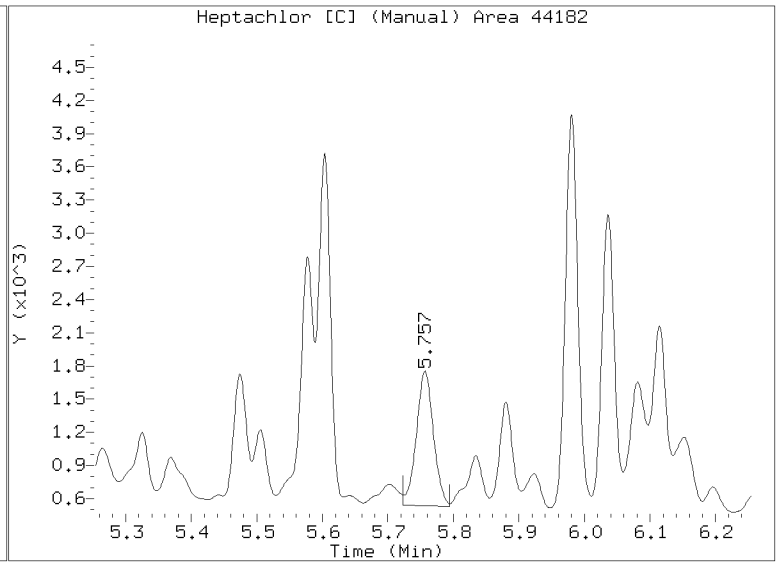

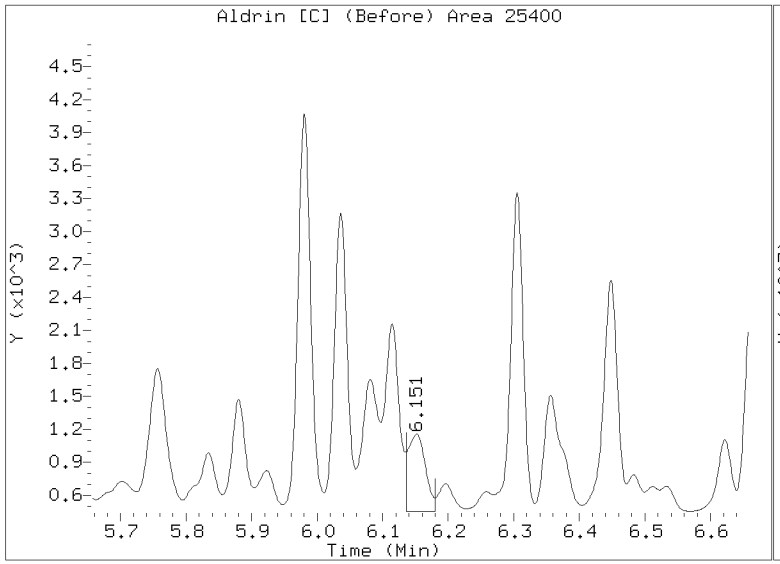

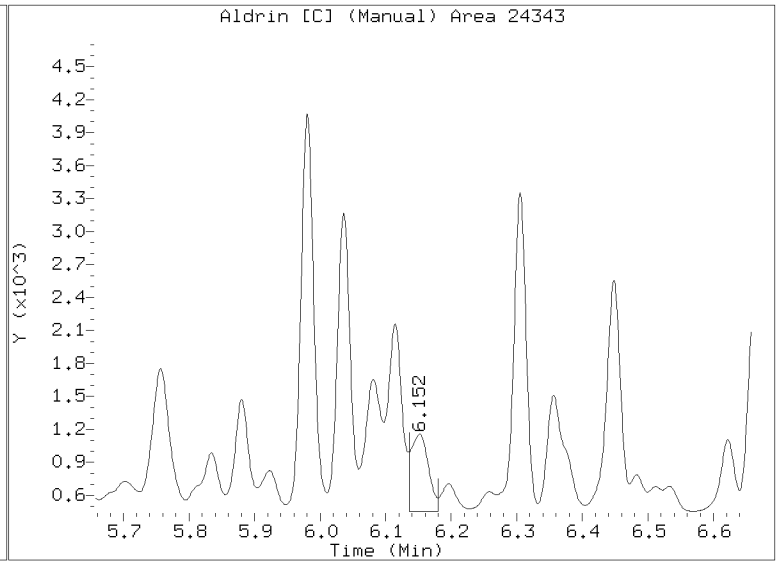

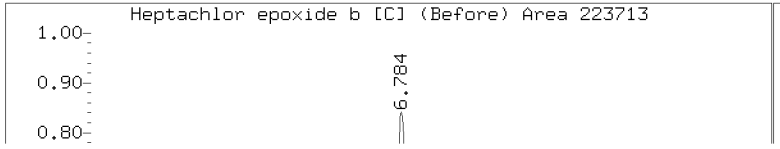

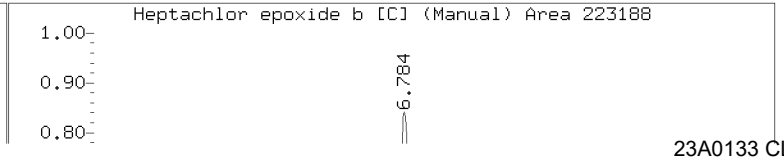

Manual Peak Adjustment Report, CLP-2

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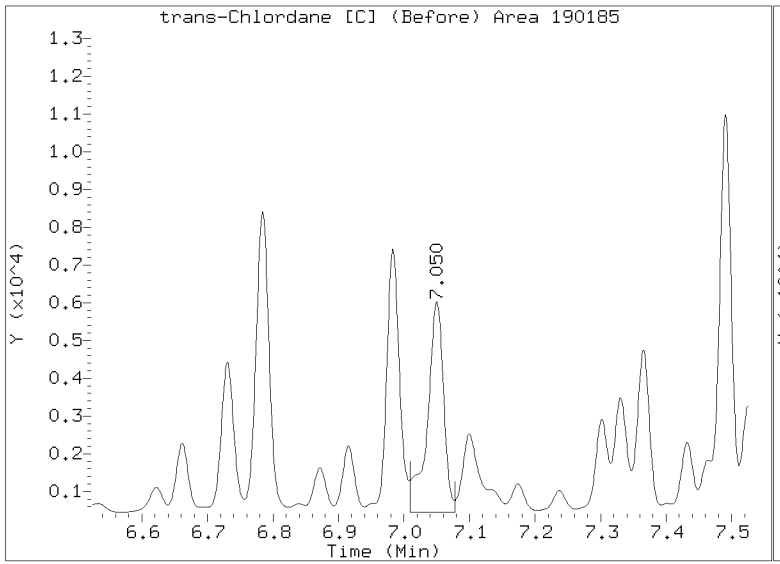

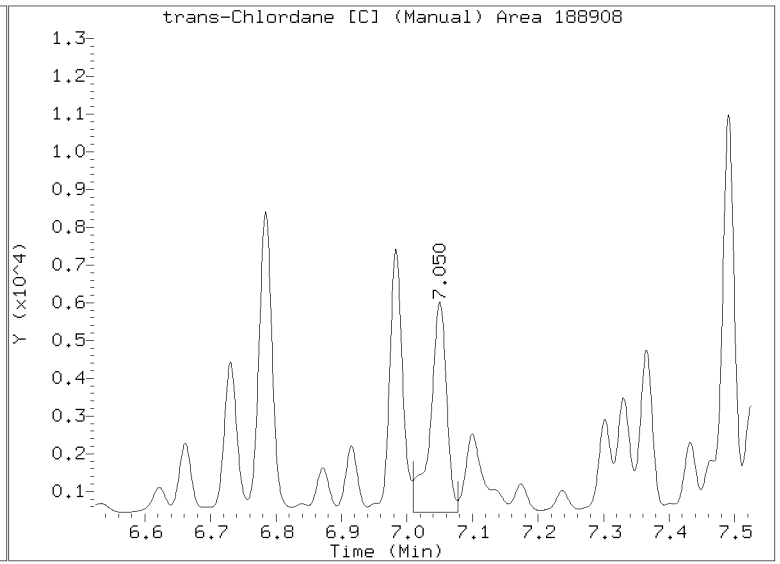

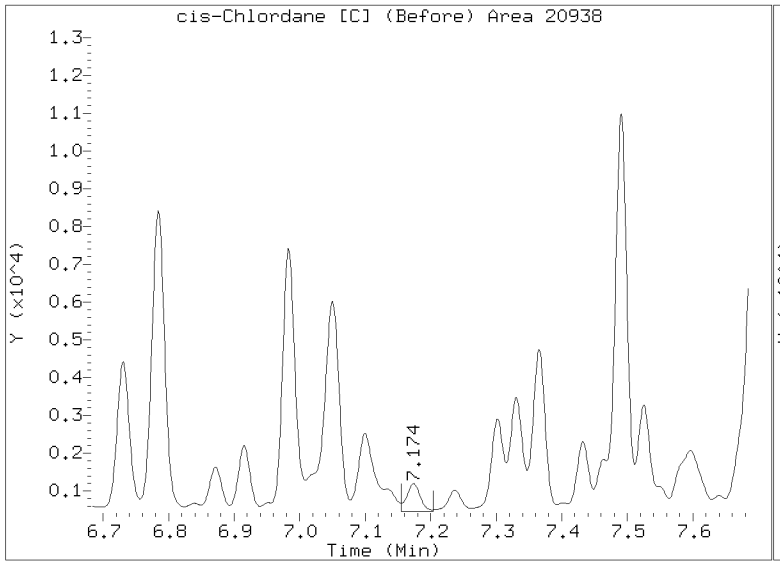

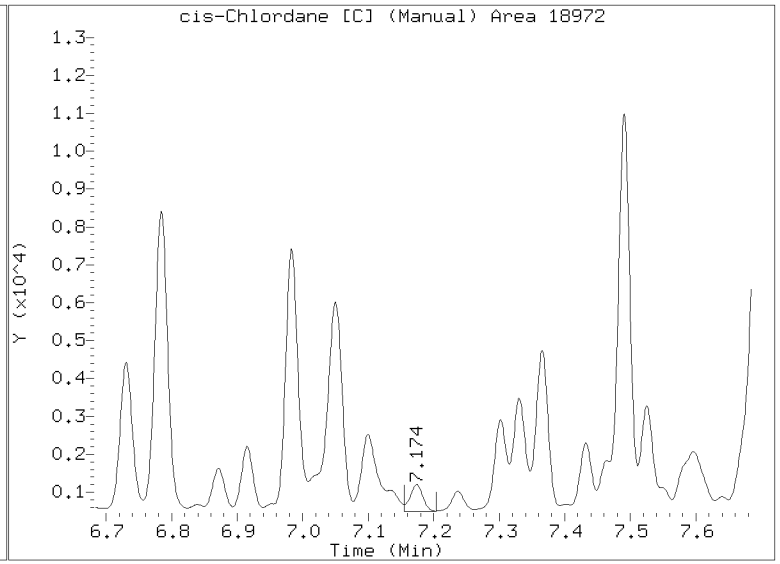

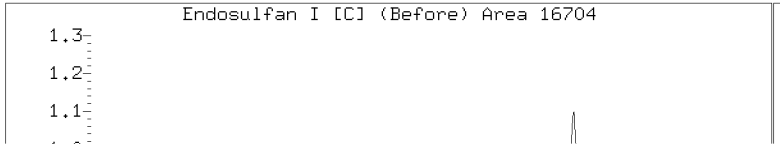

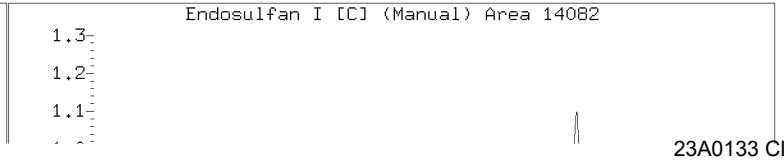

Manual Peak Adjustment Report, CLP-2

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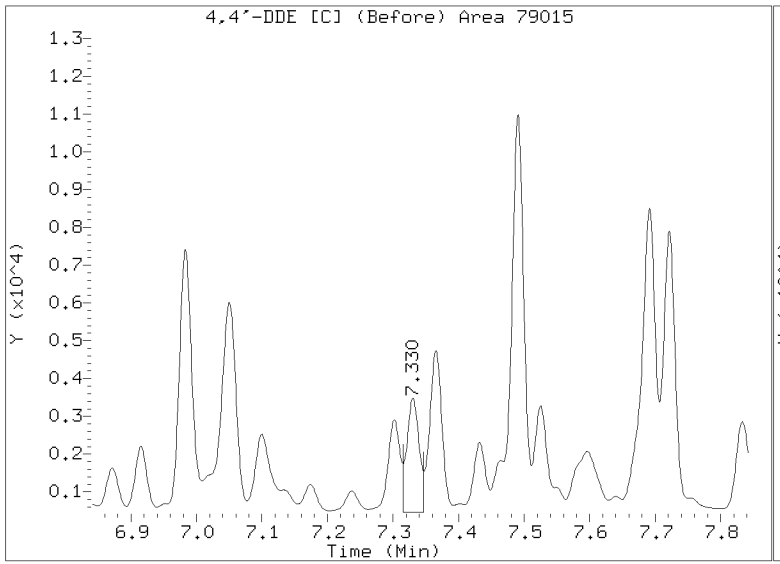

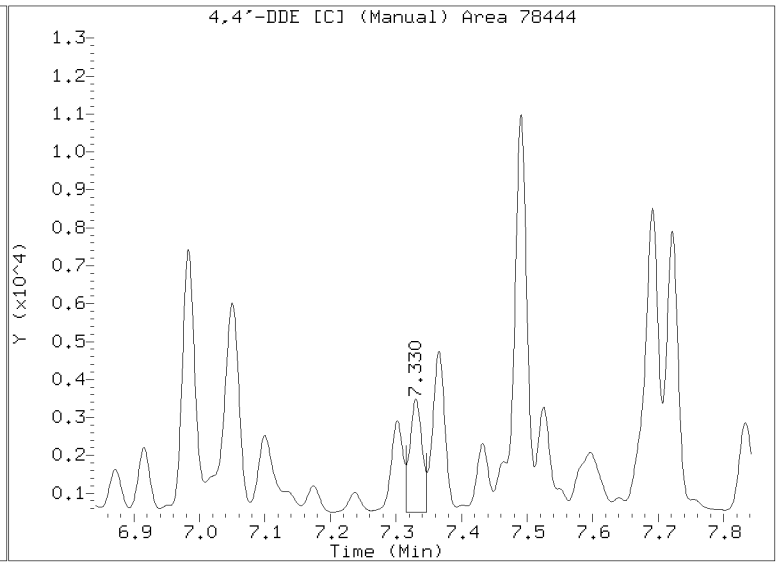

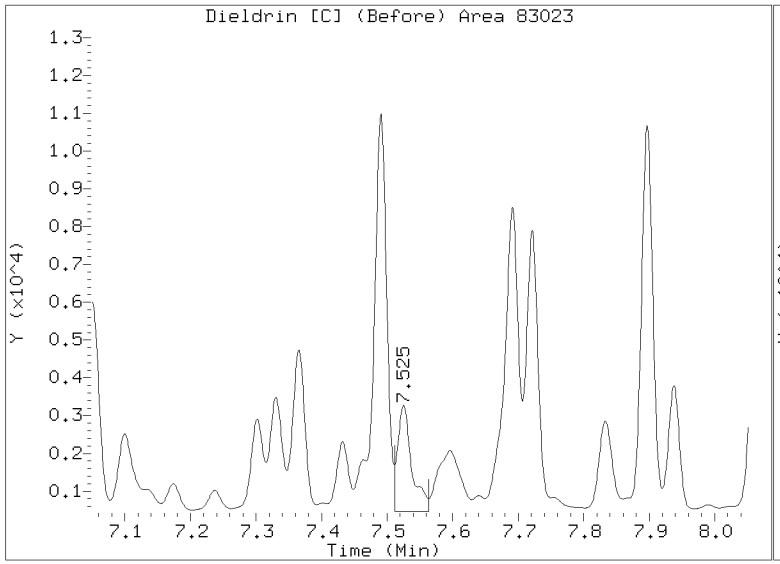

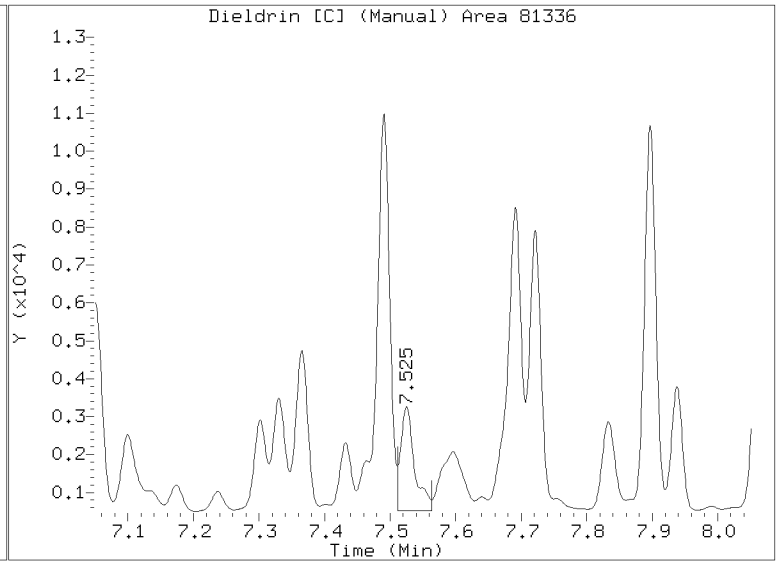

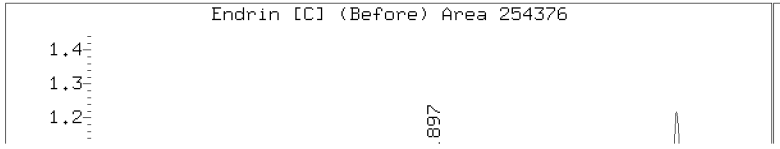

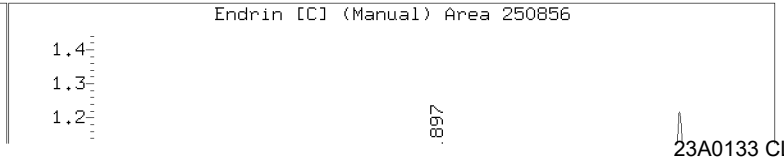

Manual Peak Adjustment Report, CLP-2

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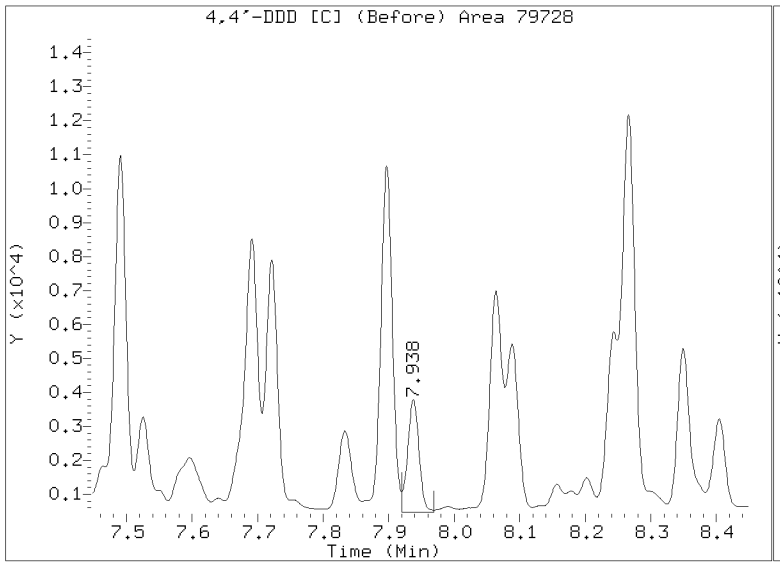

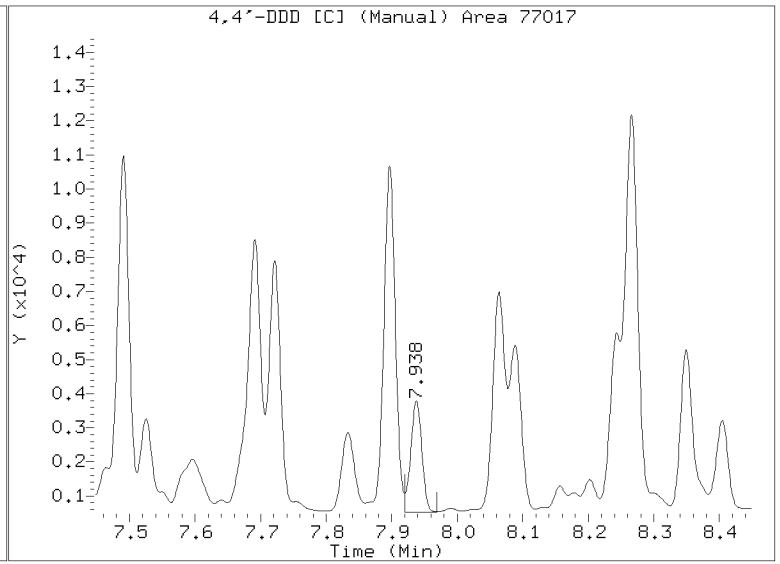

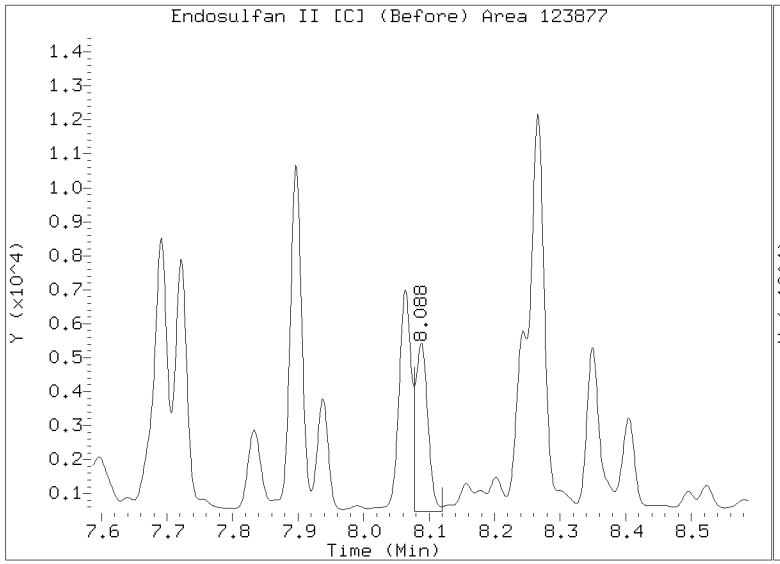

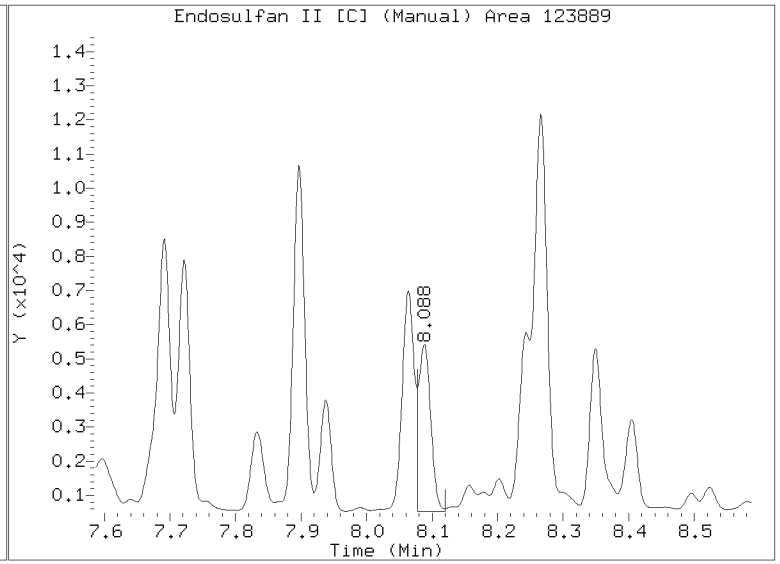

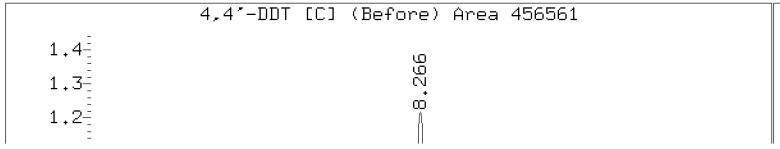

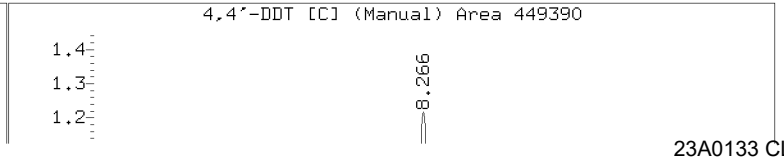

Manual Peak Adjustment Report, CLP-2

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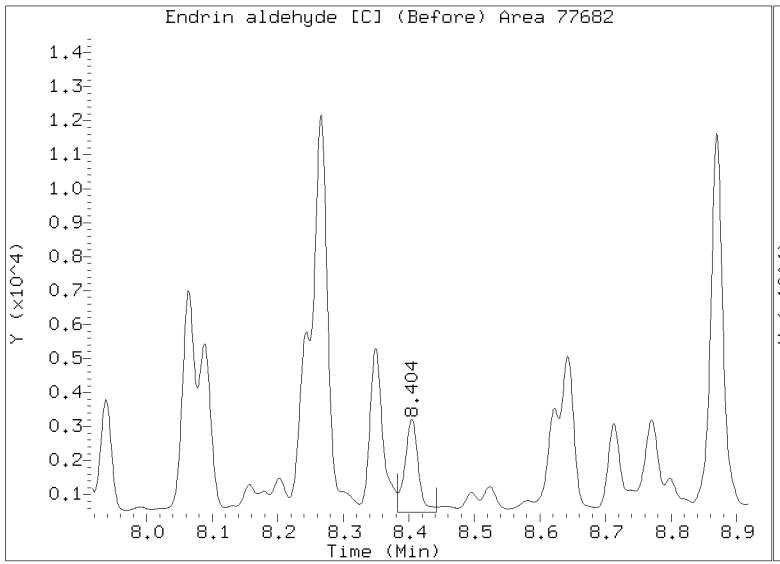

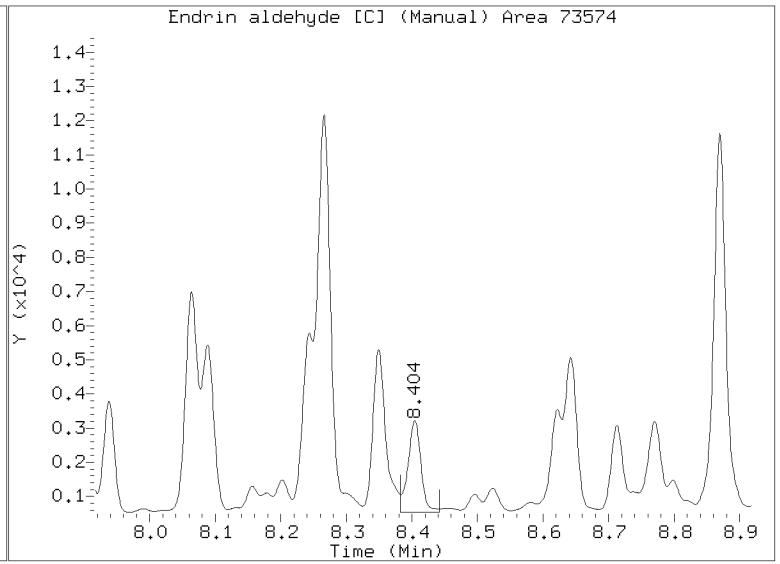

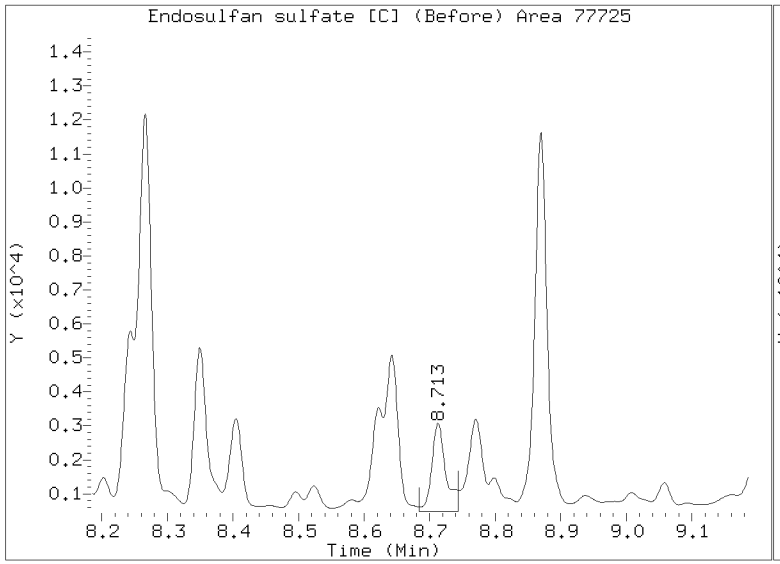

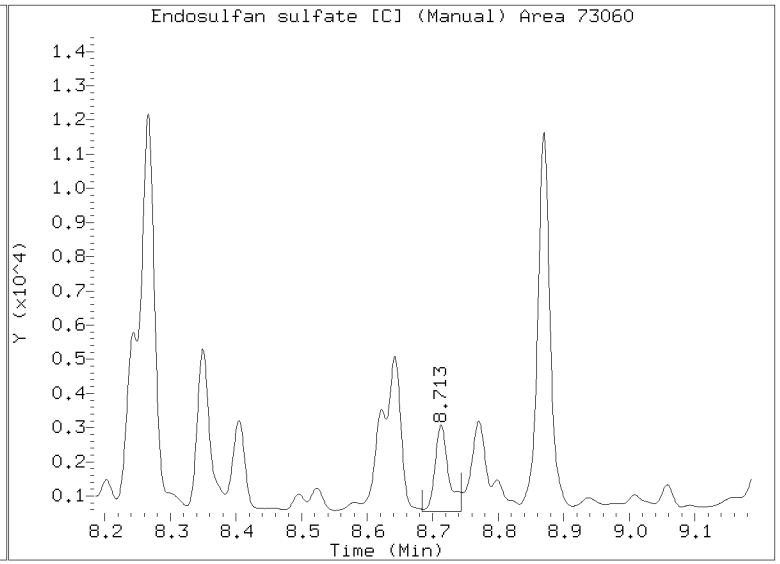

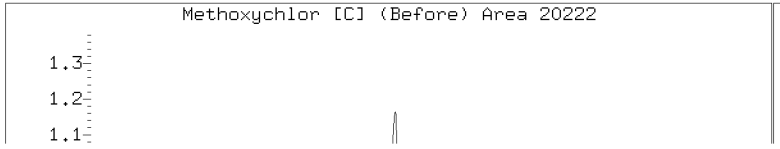

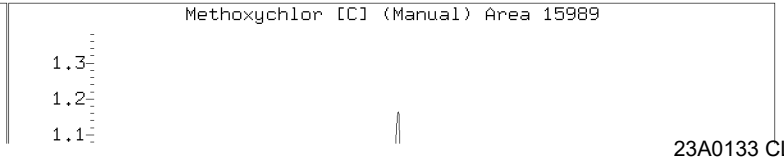

Manual Peak Adjustment Report, CLP-2

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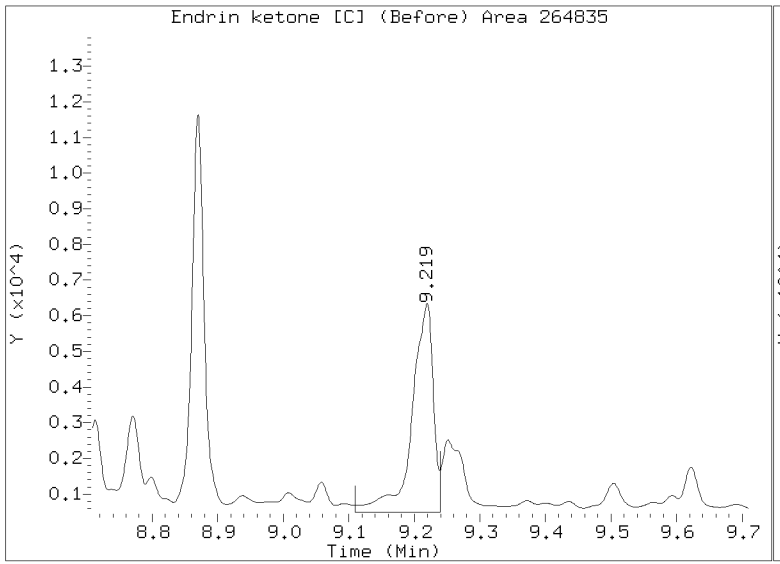

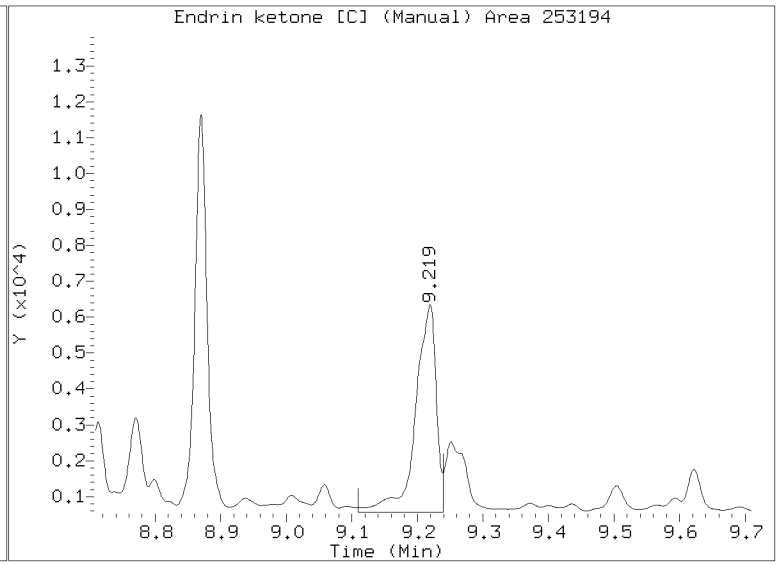

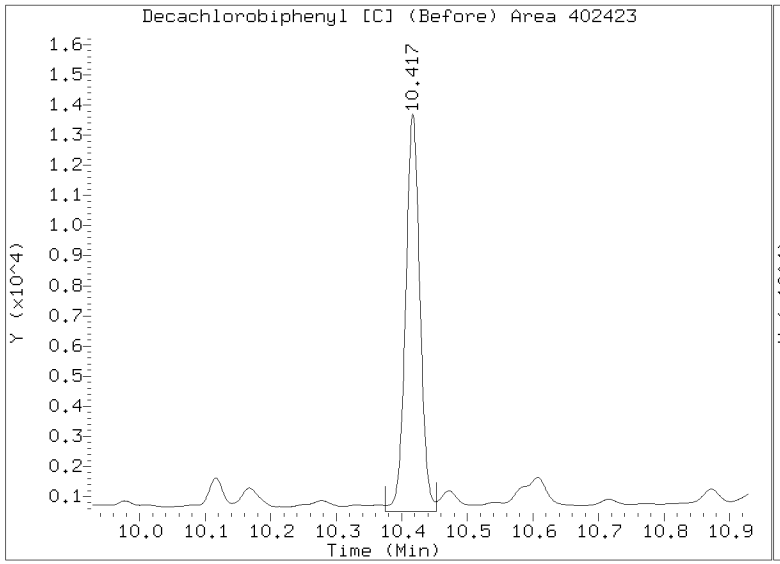

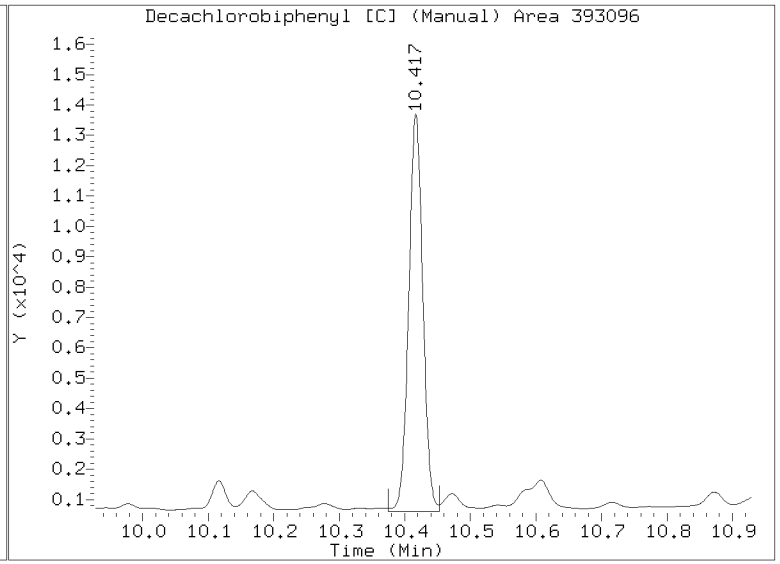

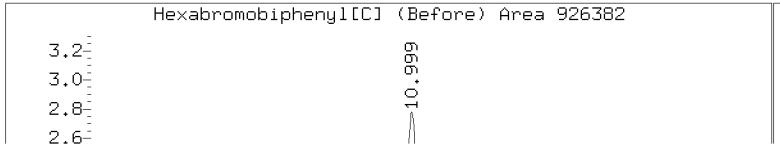

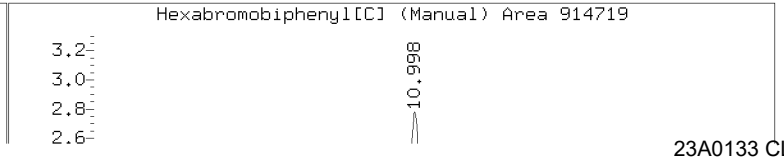

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1241

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
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Sampled:	01/06/23 10:51	Prepared:	01/19/23 13:44	Analyzed:	02/01/23 01:54
% Solids:	49.01	Preparation:	EPA 3546 (Microwave)	Initial/Final:	25.57 g Wet / 2.5 mL
Batch:	BLA0392	Sequence:	SLB0046	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9797*	*7.69*	*96.4*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9797*	*7.71*	*96.7*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9797*	*5.30*	*66.4*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9797*	*5.52*	*69.1*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013138.D
Data file 2: /20230131.b/B20230131.b/23013138.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: 23A0133-06
Client ID:
Injection Date: 01-FEB-2023 01:54
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.301	-0.010	46440	4.816	-0.016	20831	2.20	0.64	110.4*	alpha-BHC
----			5.326	0.017	25864	0.00	2.08	---	beta-BHC
4.879	0.004	104813	----			6.09	0.00	---	delta-BHC
4.610	-0.002	74573	5.222	-0.007	16378	4.08	0.59	149.5*	gamma-BHC (Lindane)
5.076	-0.017	26498	5.756	0.002	48086	1.63	1.91	15.9	Heptachlor
5.429	0.015	82032	----			4.50	0.00	---	Aldrin
6.072	-0.016	32313	6.784	-0.030	253428	2.05	10.67	135.7*	Heptachlor epoxide b
----			7.237	-0.021	16951	0.00	0.81	---	Endosulfan I
6.769	-0.022	164346	7.525	-0.027	96546	10.55	4.17	86.6*	Dieldrin
6.442	-0.010	139078	7.331	-0.011	77086	9.62	3.63	90.3*	4,4'-DDE
7.062	0.021	330360	7.897	0.021	284304	29.36	18.38	46.0*	Endrin
7.301	0.023	18708	8.088	0.001	125277	1.85	7.90	124.2*	Endosulfan II
----			7.938	-0.011	83950	0.00	5.58	---	4,4'-DDD
8.125	-0.016	5544	8.712	0.026	82468	0.58	5.92	164.5*	Endosulfan sulfate
----			8.266	-0.001	481812	0.00	33.17	---	4,4'-DDT
7.905	0.028	40175	8.939	0.030	23389	8.85	3.64	83.5*	Methoxychlor
----			9.218	0.008	241796	0.00	16.08	---	Endrin ketone
7.727	0.020	81730	8.404	-0.014	96798	10.12	8.65	15.6	Endrin aldehyde
----			7.050	0.025	232150	0.00	9.80	---	trans-Chlordane
6.391	0.016	89192	7.174	-0.011	26374	5.54	1.14	131.9*	cis-Chlordane
2.283	-0.021	9893	2.510	0.028	6850	0.45	0.22	68.1*	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.797	-0.003	395181	4.189	-0.007	635364	26.55	27.65	4.0	Tetrachloro-m-xylene
9.318	-0.001	335397	10.416	-0.013	465030	38.57	38.67	0.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

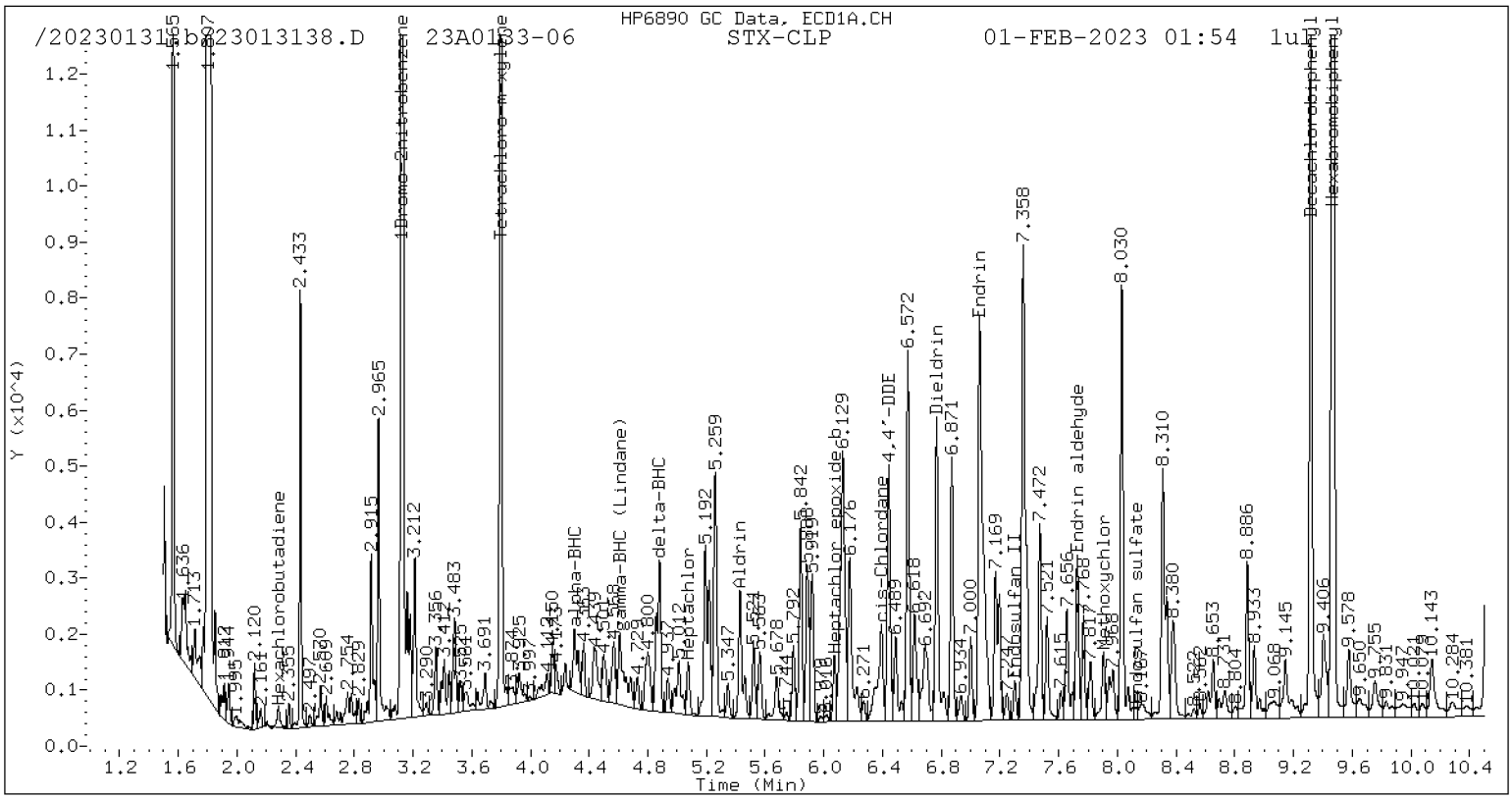
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	1094393	62.8
Hexabromobiphenyl	609723	858208	40.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1632607	62.2
Hexabromobiphenyl	769764	1088085	41.4

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



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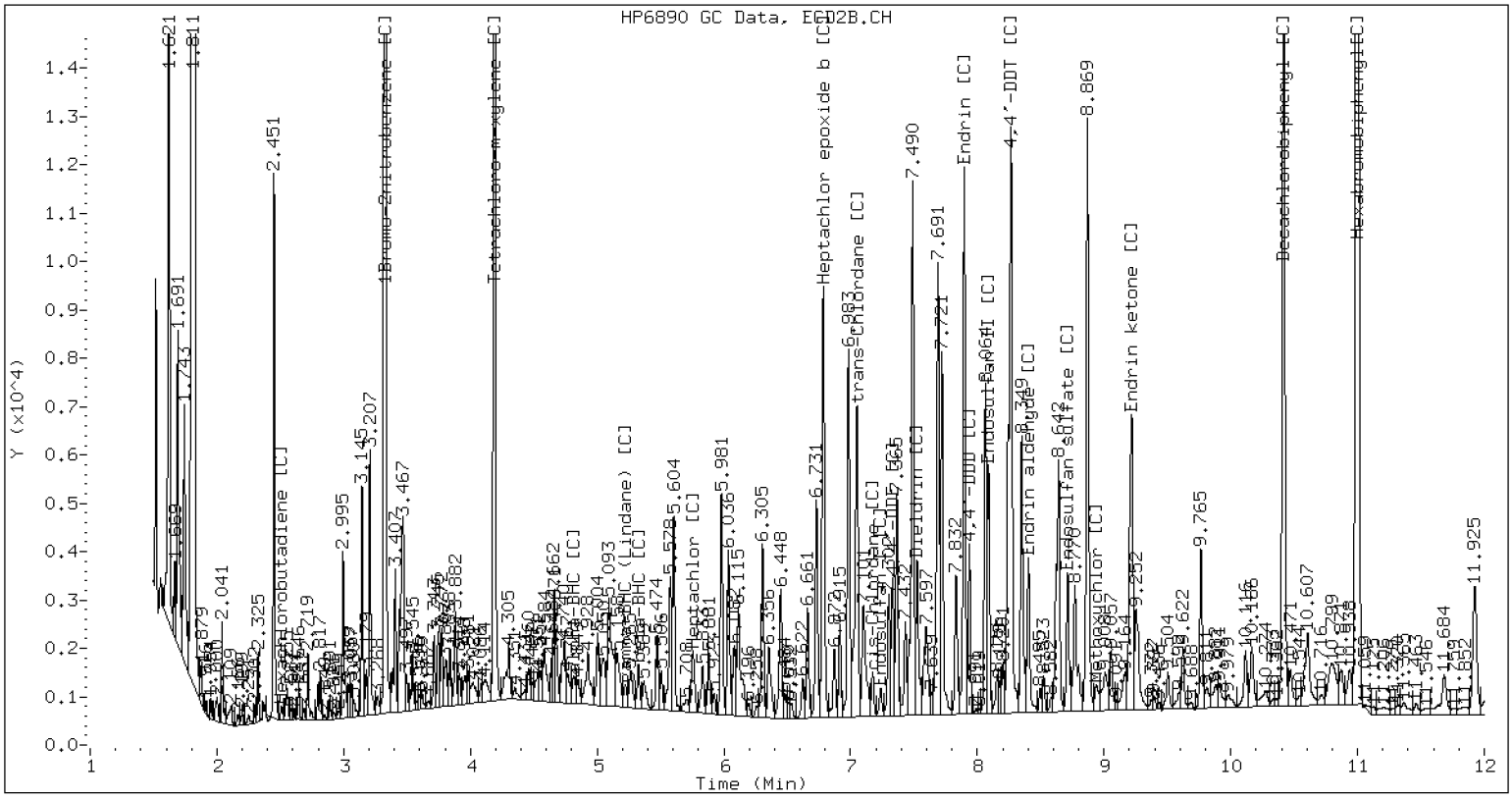
/20230131.b/B20230131.b/23013138.D 23A0133-06 CLP2



CLP-2 Manual Integration: NO

Manual Peak Adjustment Report, CLP-2

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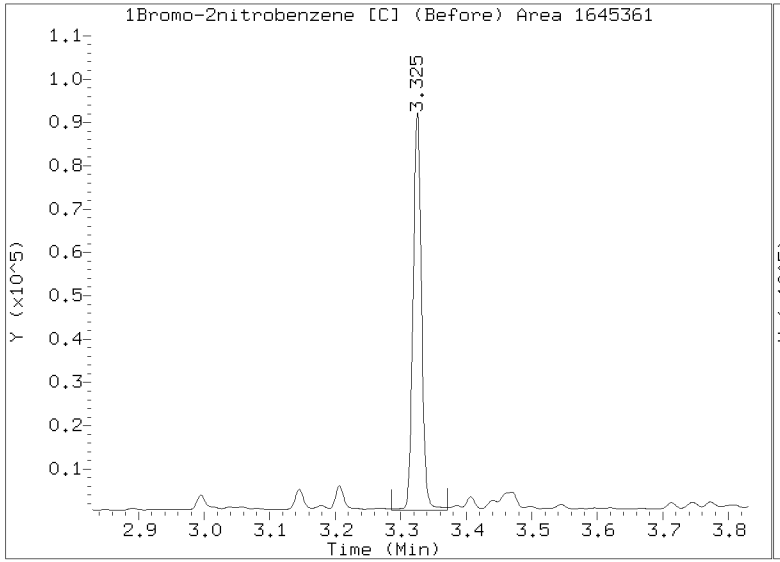
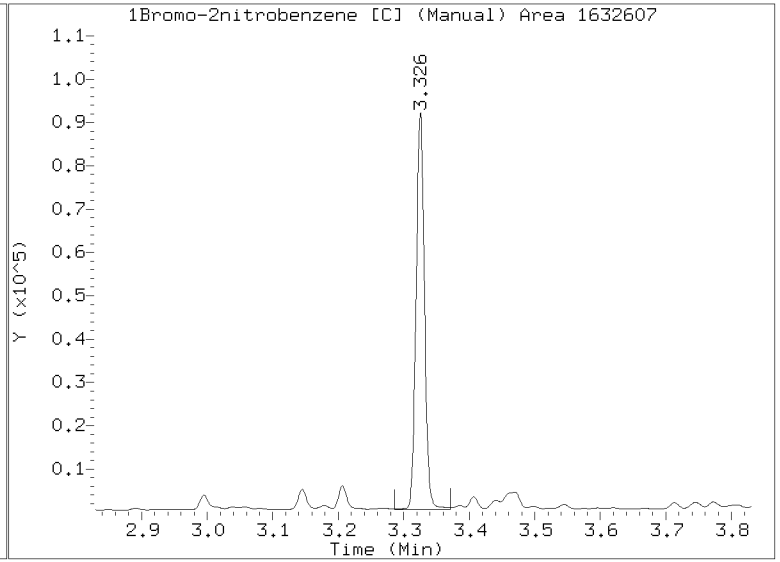
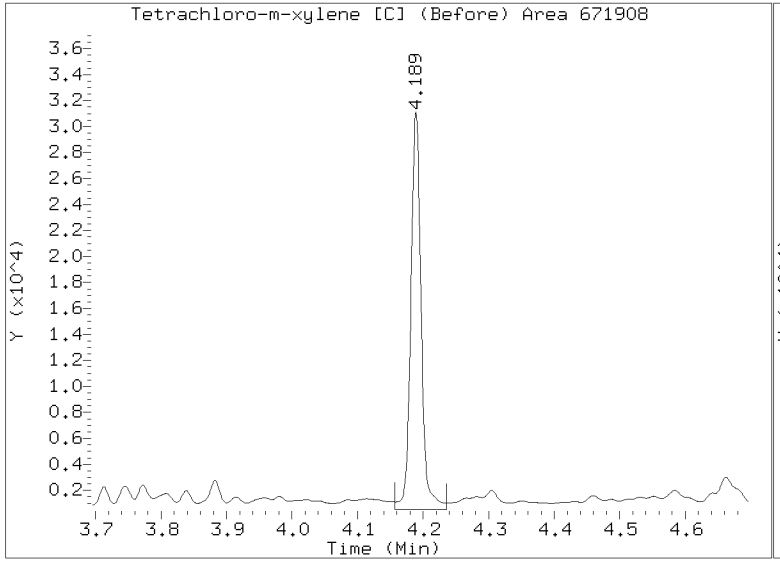
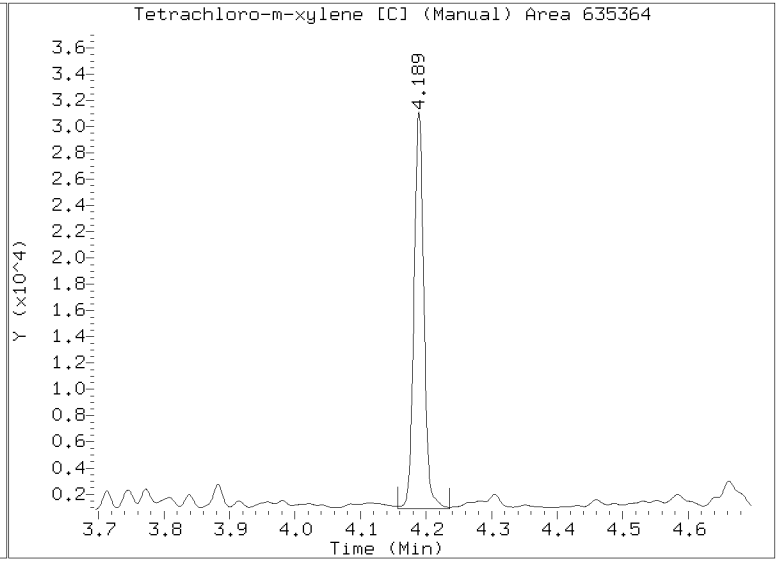
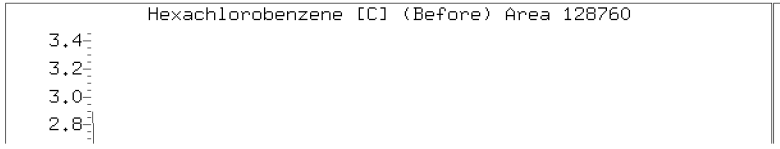
Lab ID:23A0133-06 Client ID:

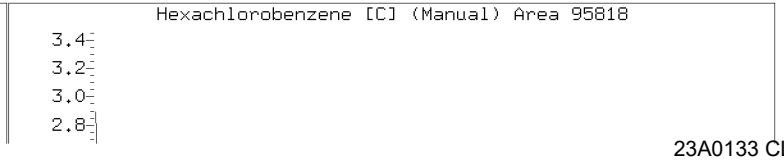












Manual Peak Adjustment Report, CLP-2

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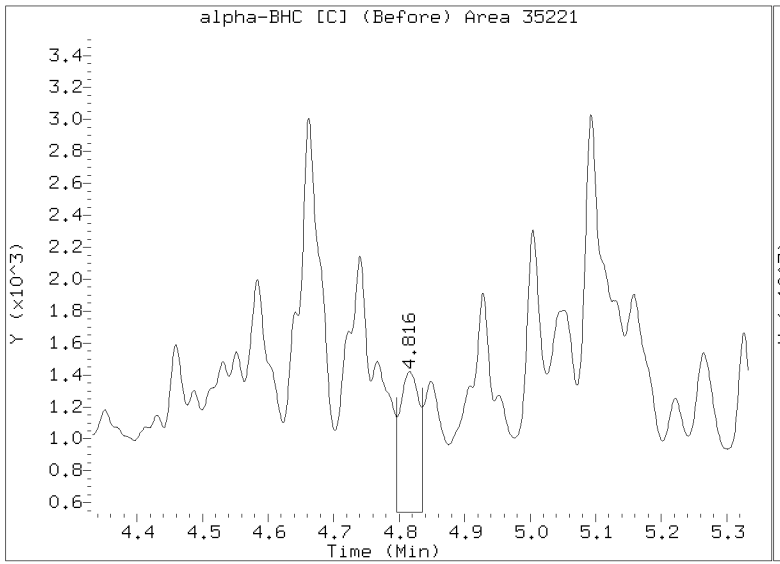

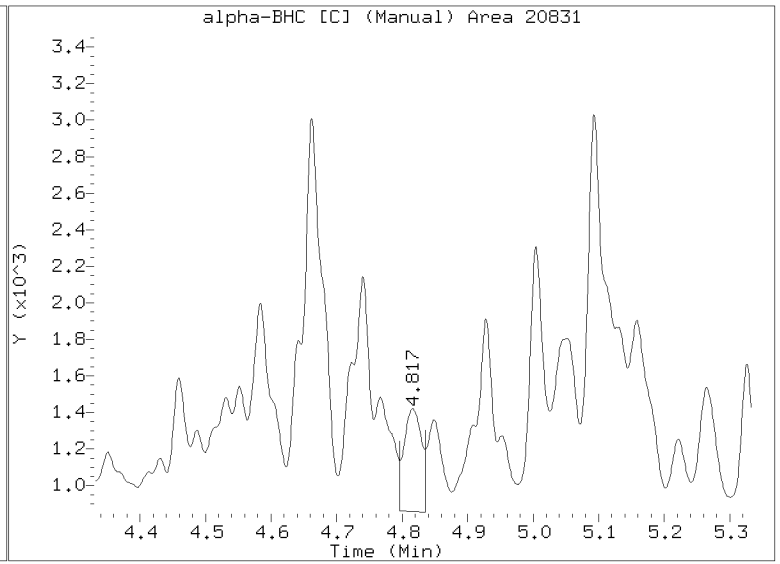

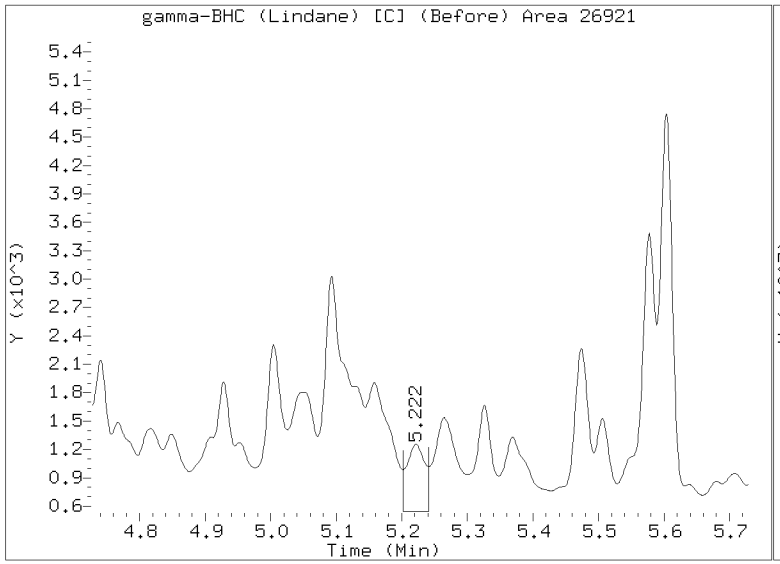

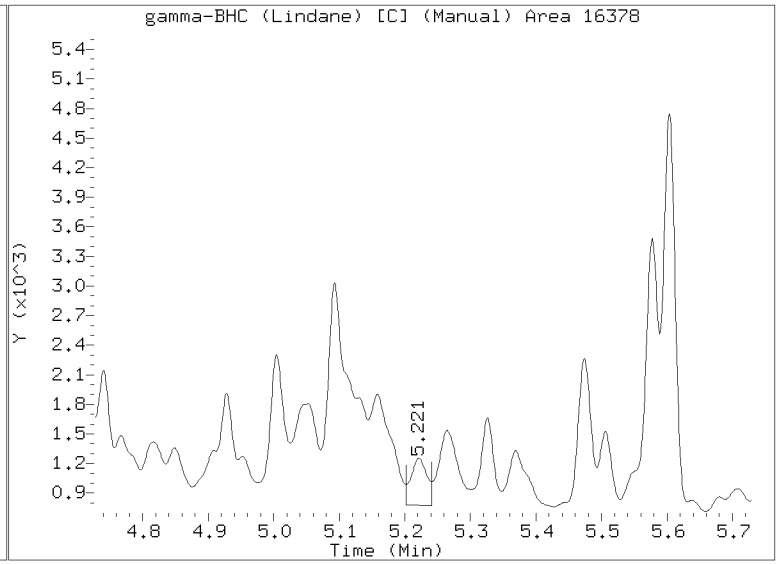

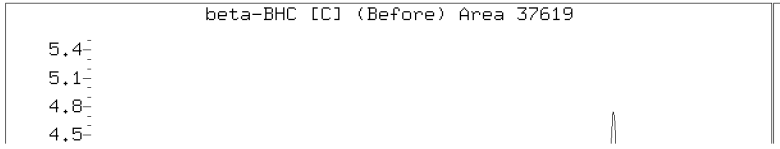

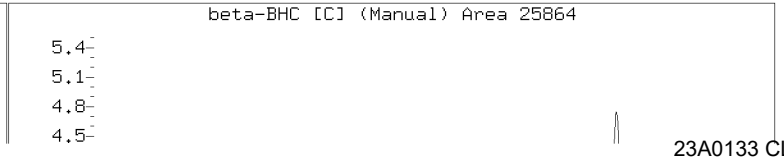

Manual Peak Adjustment Report, CLP-2

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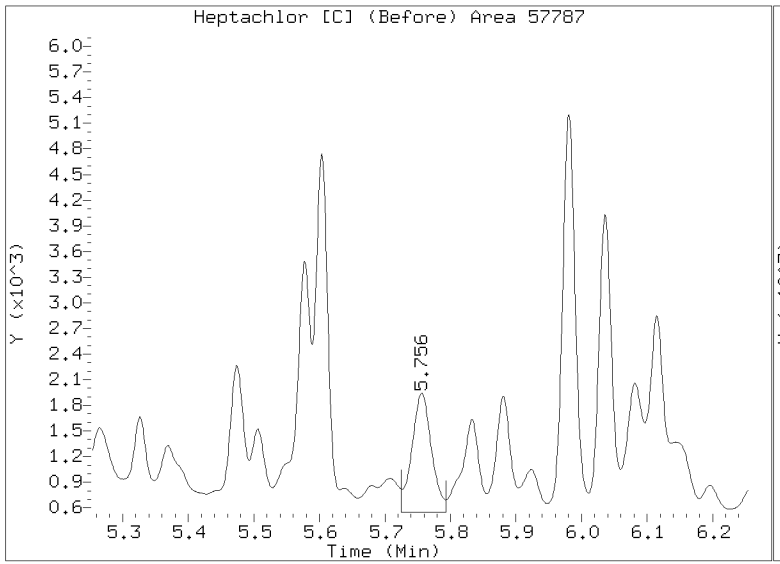

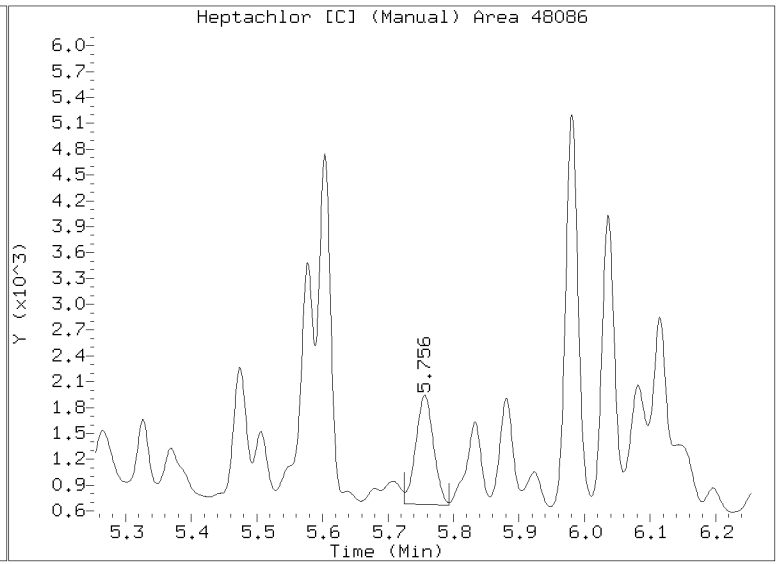

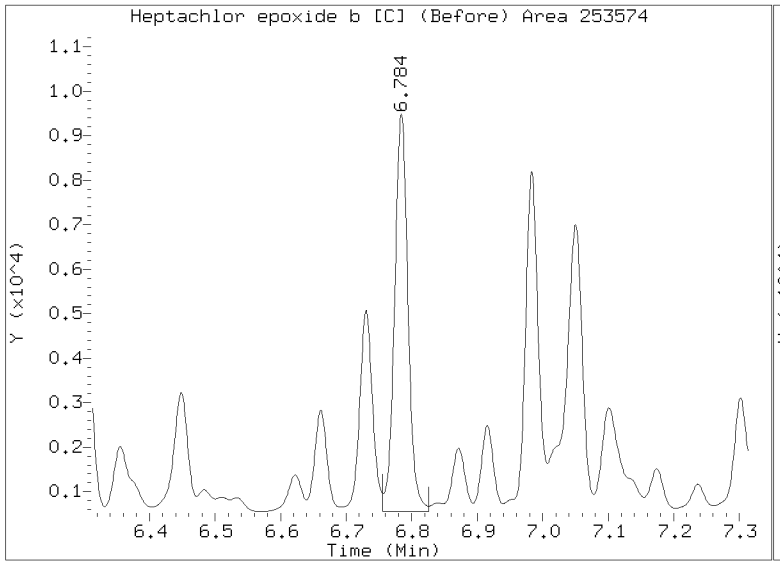

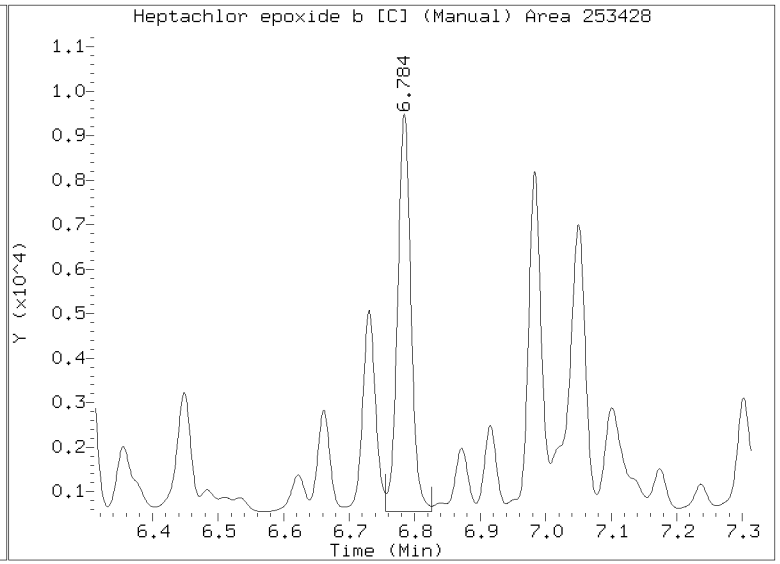

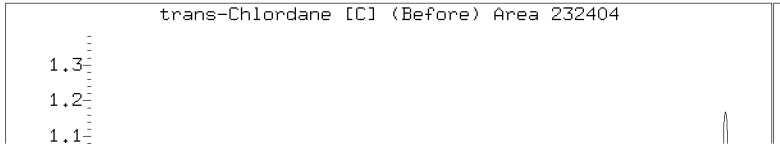

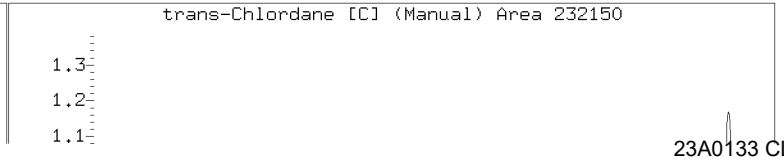

Manual Peak Adjustment Report, CLP-2

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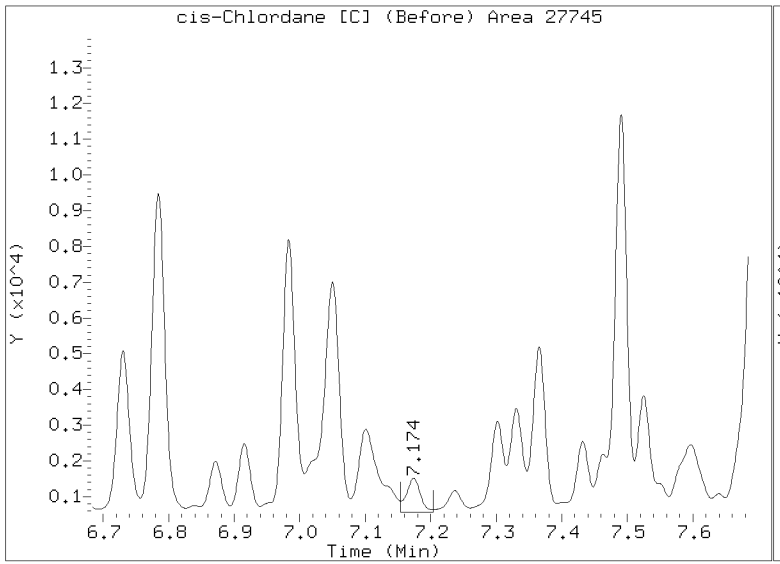

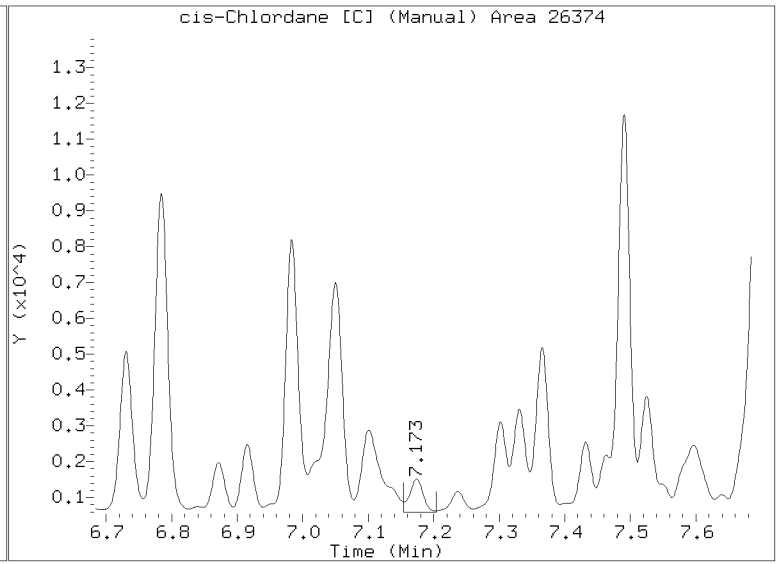

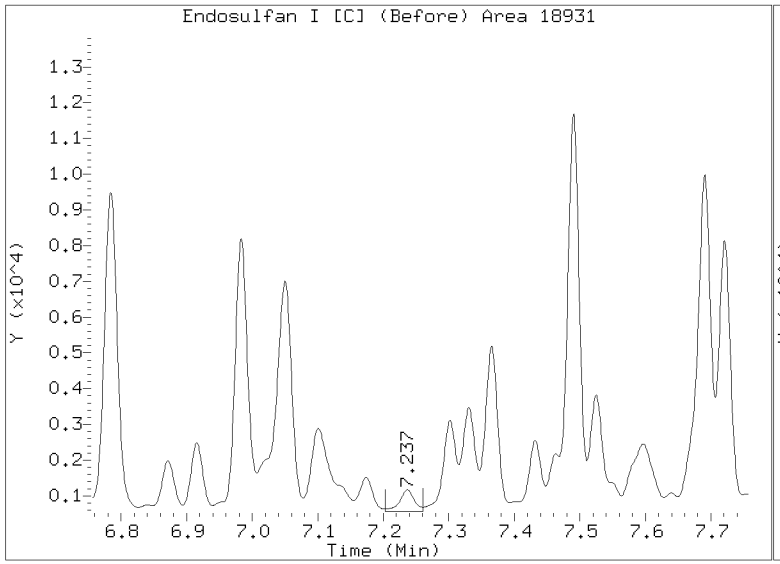

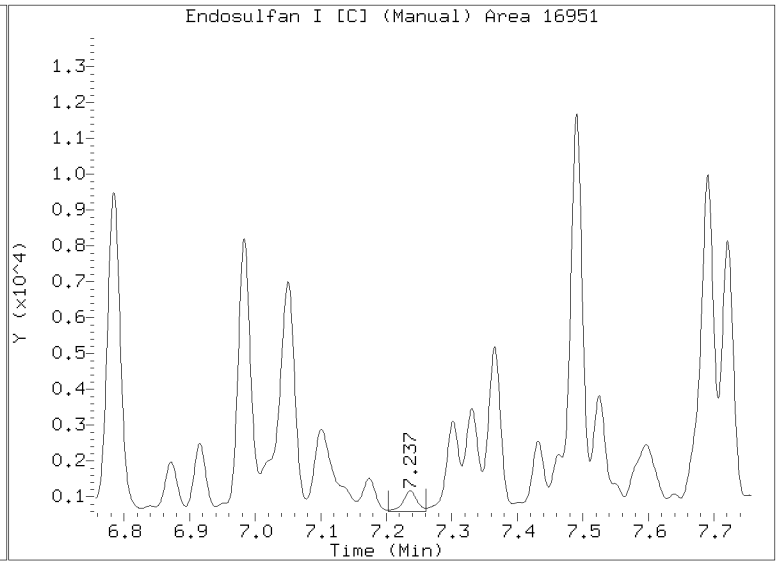

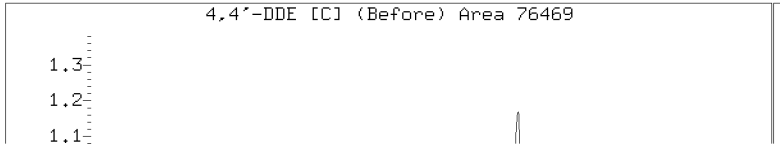

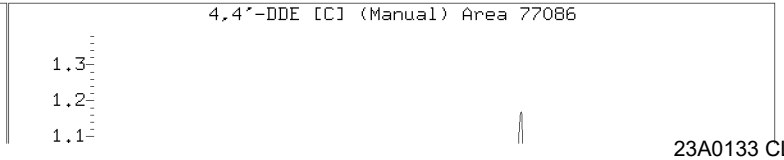

Manual Peak Adjustment Report, CLP-2

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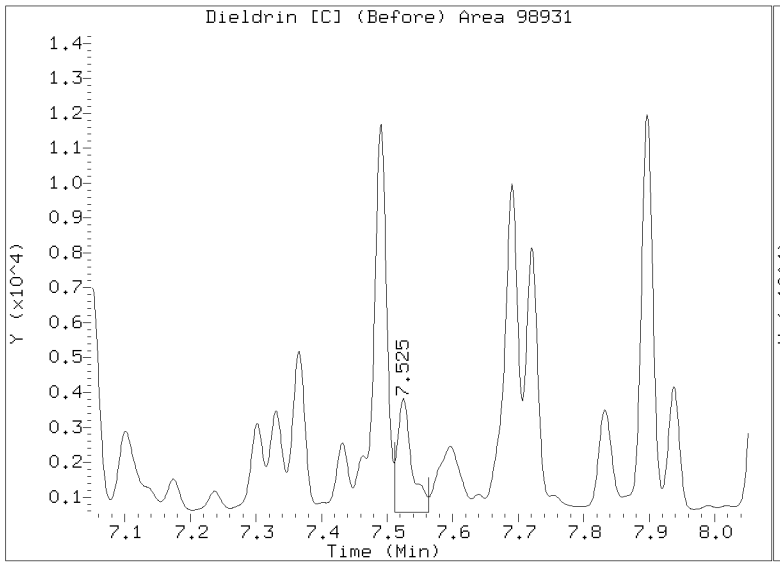

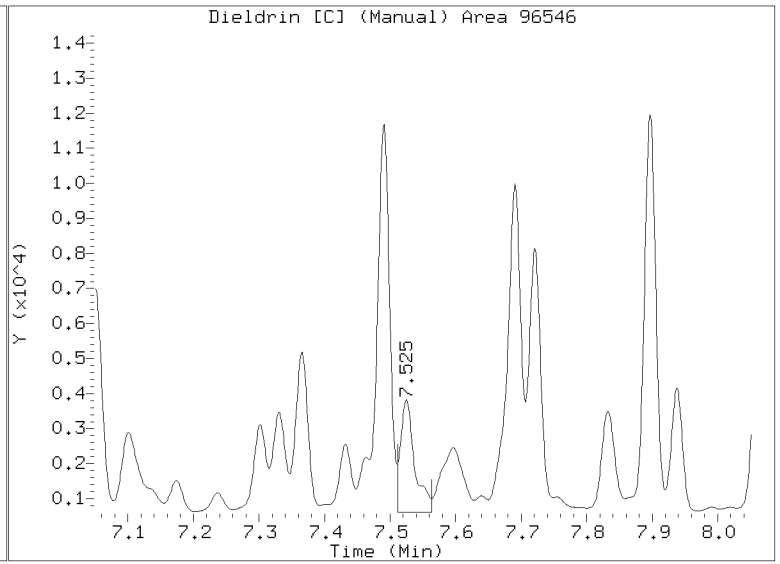

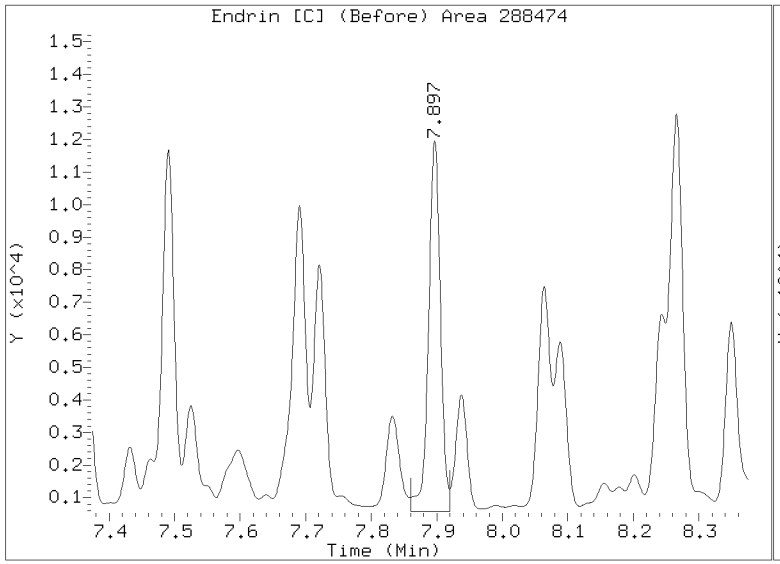

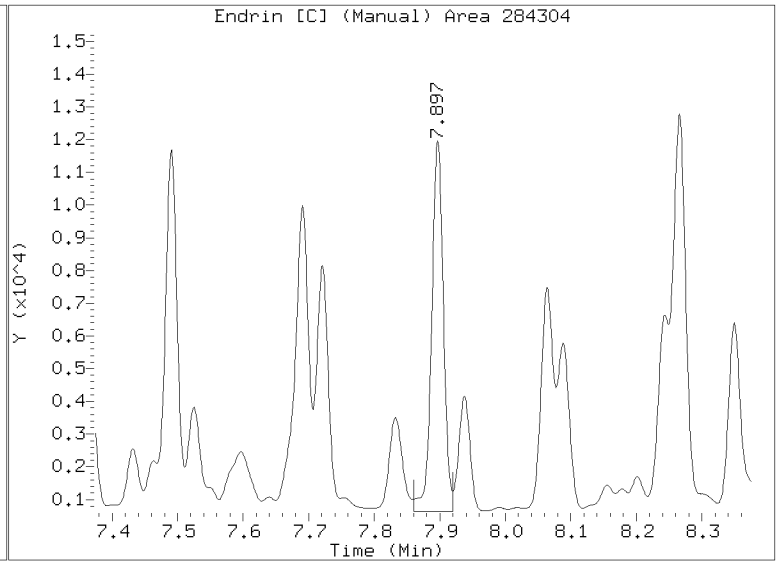

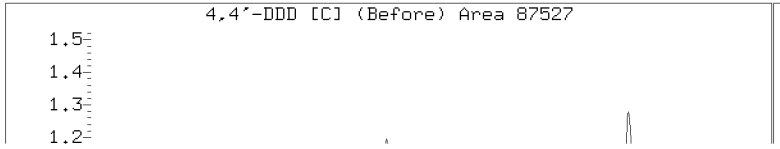

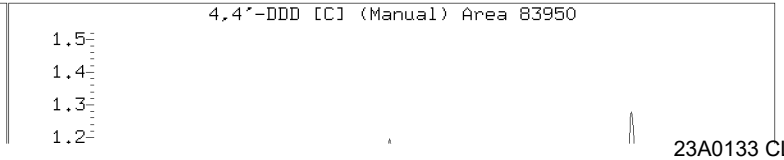

Manual Peak Adjustment Report, CLP-2

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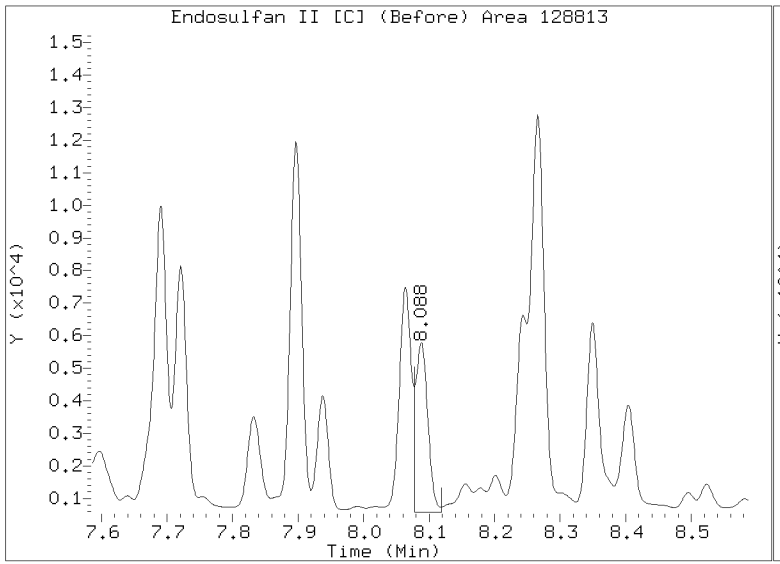

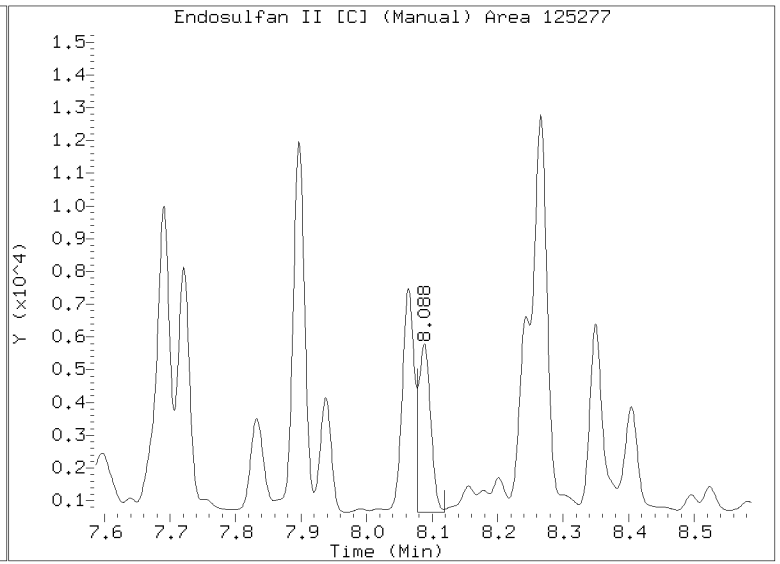

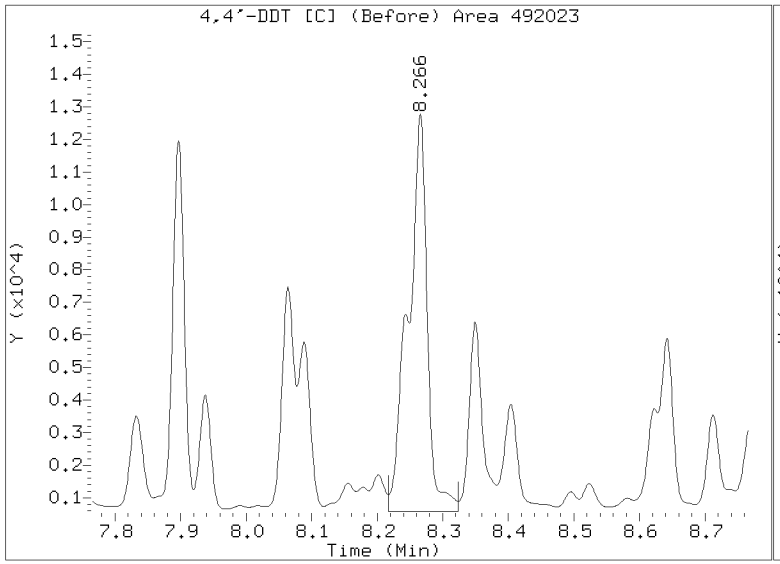

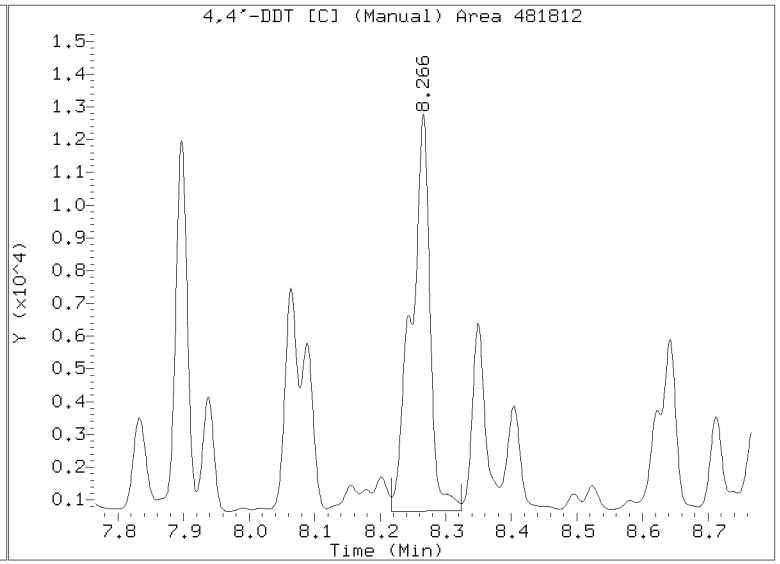

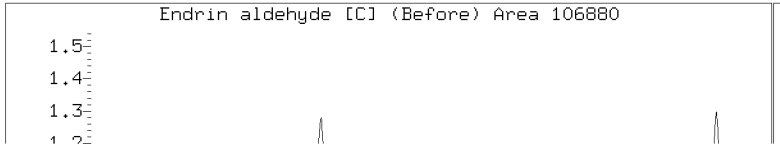

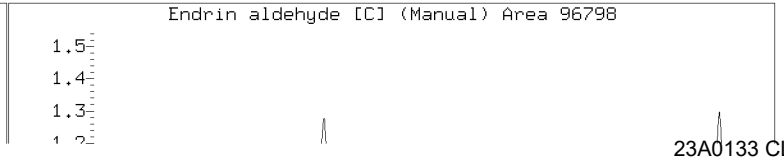

Manual Peak Adjustment Report, CLP-2

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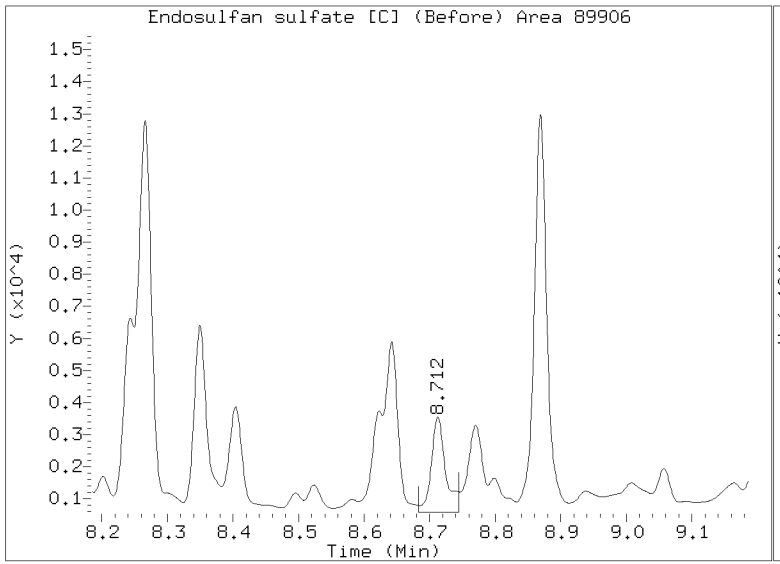

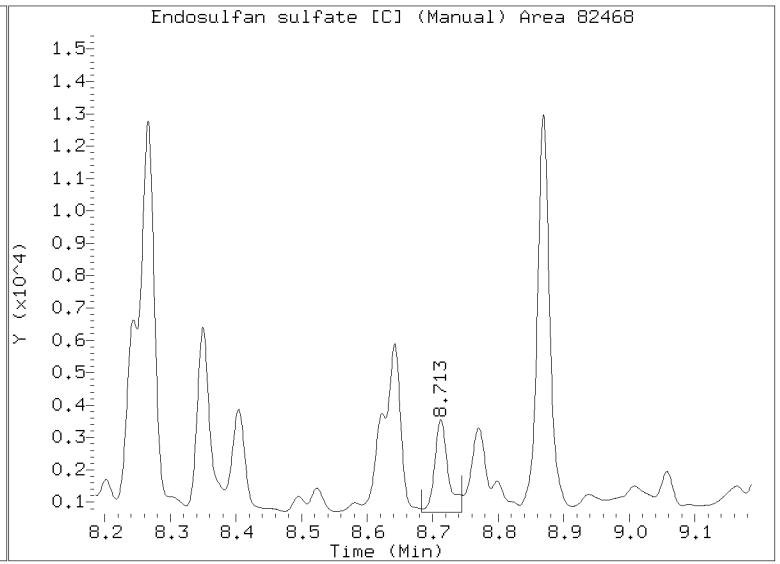

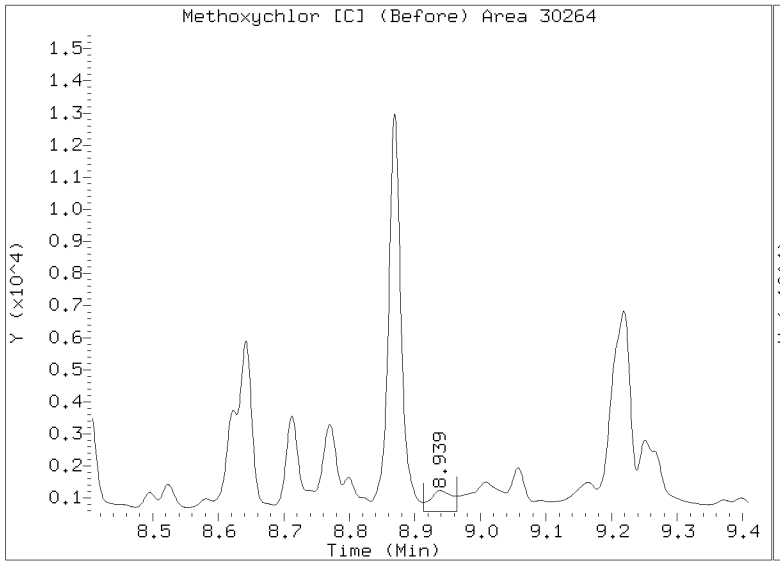

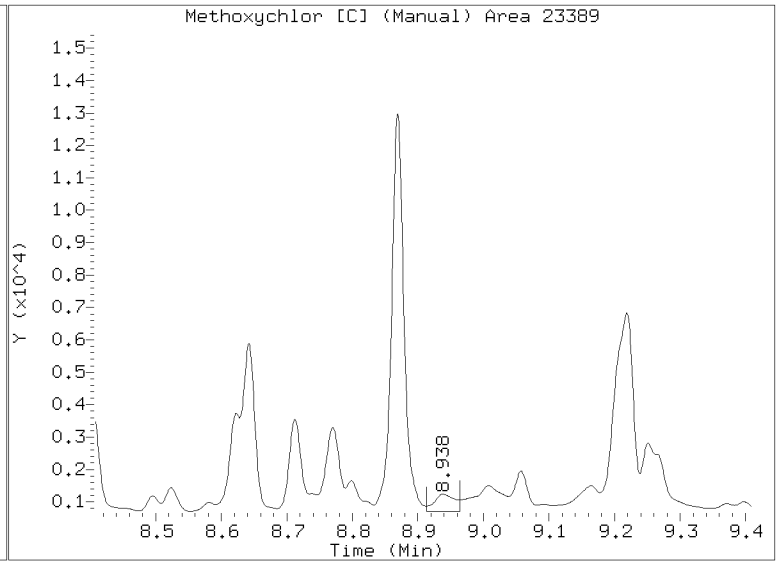

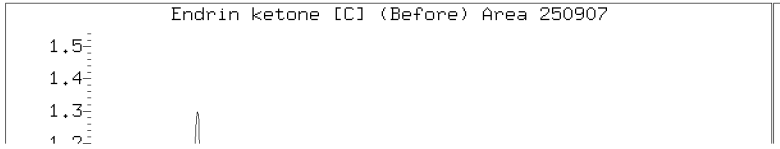

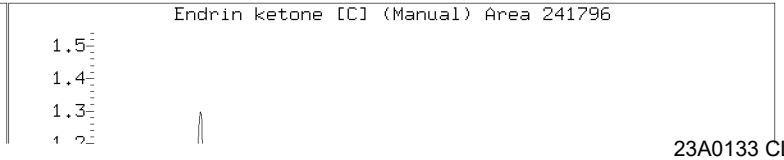

Manual Peak Adjustment Report, CLP-2

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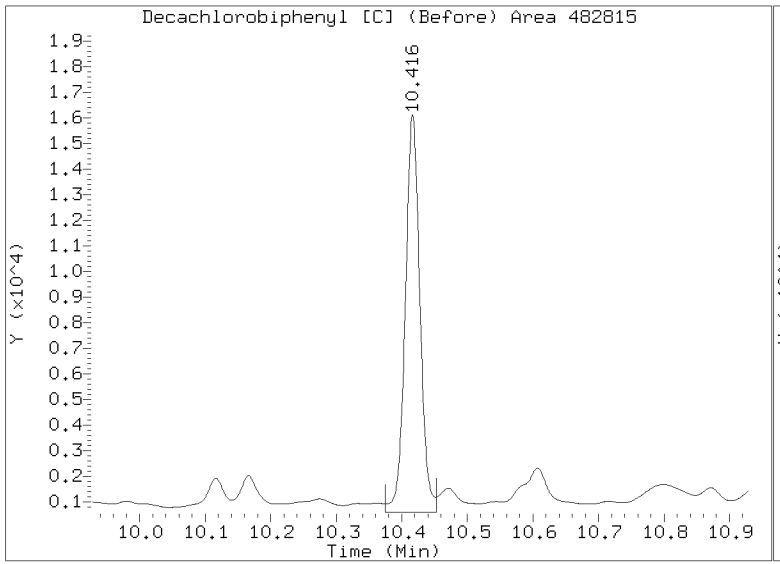
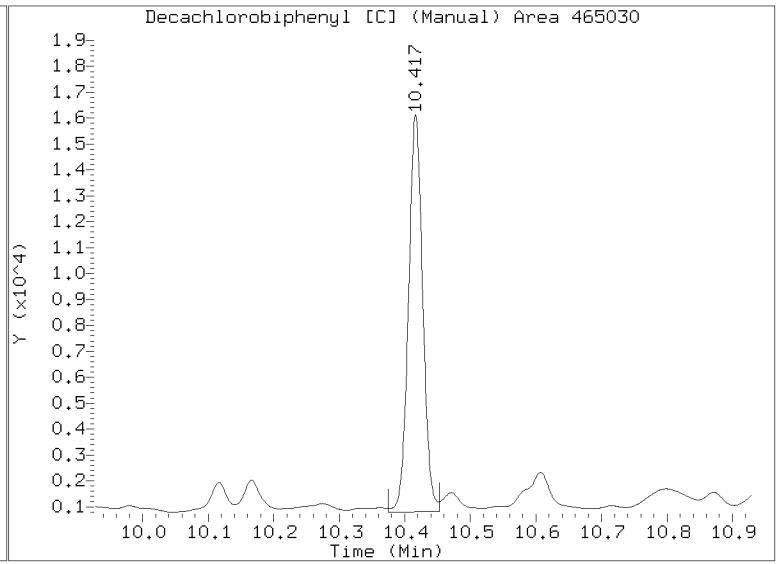
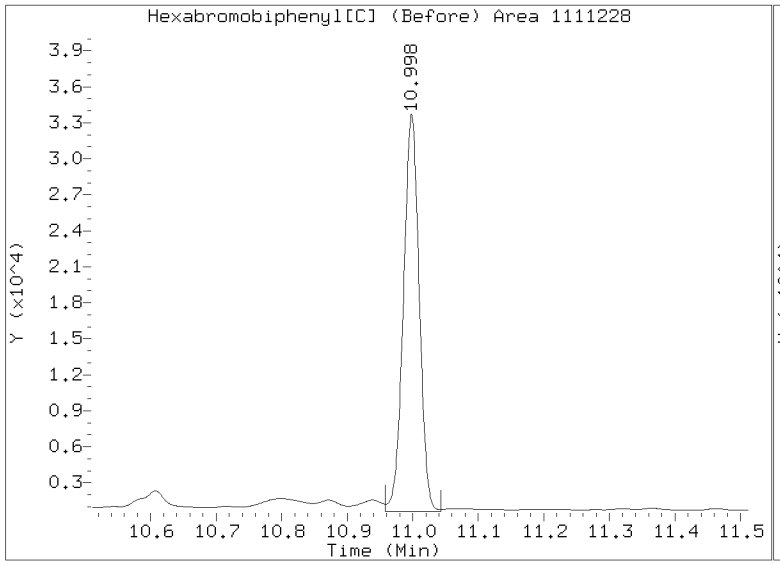
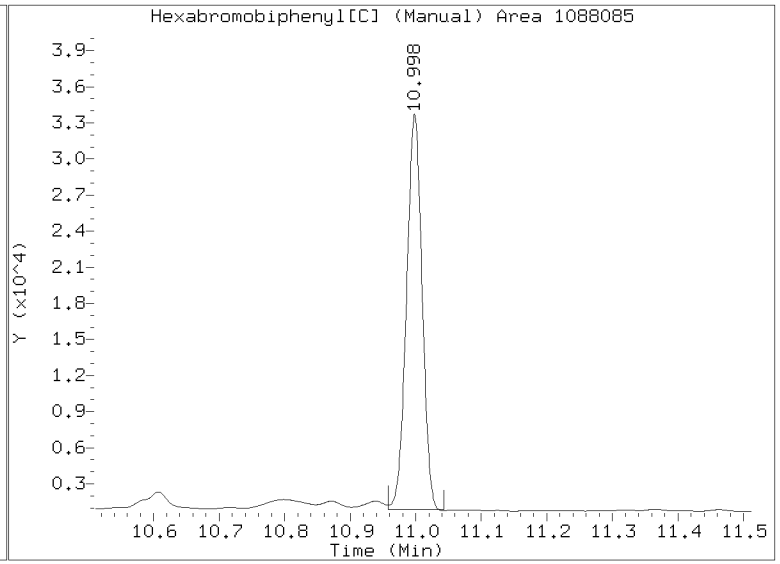
Lab ID:23A0133-06 Client ID:









Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-IT1217

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-07 C	File ID:	23013139.D
Sampled:	01/06/23 11:14	Prepared:	01/19/23 13:44	Analyzed:	02/01/23 02:12
% Solids:	59.50	Preparation:	EPA 3546 (Microwave)	Initial/Final:	21.01 g Wet / 2.5 mL
Batch:	BLA0392	Sequence:	SLB0046	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.59	0.14	0.50	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9994*	*9.05*	*113*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9994*	*8.96*	*112*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9994*	*5.52*	*69.1*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9994*	*5.78*	*72.2*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013139.D
Data file 2: /20230131.b/B20230131.b/23013139.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: 23A0133-07
Client ID:
Injection Date: 01-FEB-2023 02:12
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.301	-0.010	49257	4.816	-0.016	12376	2.85	0.47	143.4*	alpha-BHC N
----			5.325	0.015	2065	0.00	0.21	---	beta-BHC
4.876	0.000	21424	5.640	-0.022	3481	1.52	0.16	161.7*	delta-BHC N
4.612	-0.000	68141	----			4.55	0.00	---	gamma-BHC (Lindane)
5.082	-0.011	9762	5.755	0.000	11842	0.73	0.59	22.3	Heptachlor N
5.429	0.015	23300	6.151	-0.007	29919	1.56	1.30	18.5	Aldrin N
6.073	-0.015	33550	6.841	0.026	1977	2.59	0.10	184.6*	Heptachlor epoxide b N
----			7.237	-0.020	7584	0.00	0.45	---	Endosulfan I
6.770	-0.021	169876	7.526	-0.025	119673	13.30	6.43	69.6*	Dieldrin N
6.441	-0.011	79180	7.331	-0.011	10379	6.68	0.61	166.6*	4,4'-DDE N
7.063	0.022	226369	7.898	0.022	257937	25.93	21.02	20.9	Endrin N
7.302	0.024	15264	8.066	-0.022	189947	1.94	15.10	154.4*	Endosulfan II N
7.115	0.016	58080	7.938	-0.011	12303	7.38	1.03	151.0*	4,4'-DDD N
----			8.713	0.027	157010	0.00	14.22	---	Endosulfan sulfate
----			8.266	-0.000	397780	0.00	34.54	---	4,4'-DDT
7.907	0.030	33298	8.938	0.029	21098	9.45	4.14	78.2*	Methoxychlor N
----			9.218	0.008	425401	0.00	35.67	---	Endrin ketone
7.727	0.020	161231	8.406	-0.013	156746	25.72	17.67	37.1	Endrin aldehyde N
----			7.053	0.028	68981	0.00	3.62	---	trans-Chlordane
6.394	0.018	26002	----			1.97	0.00	---	cis-Chlordane
2.301	-0.003	34862	2.478	-0.004	45314	1.93	1.81	6.0	Hexachlorobutadiene
4.150	-0.003	47310	4.683	-0.009	54419	2.95	2.27	25.9	Hexachlorobenzene N
3.798	-0.003	337241	4.189	-0.007	534046	27.62	28.89	4.5	Tetrachloro-m-xylene N
9.319	0.001	305308	10.418	-0.011	427050	45.24	44.78	1.0	Decachlorobiphenyl N

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

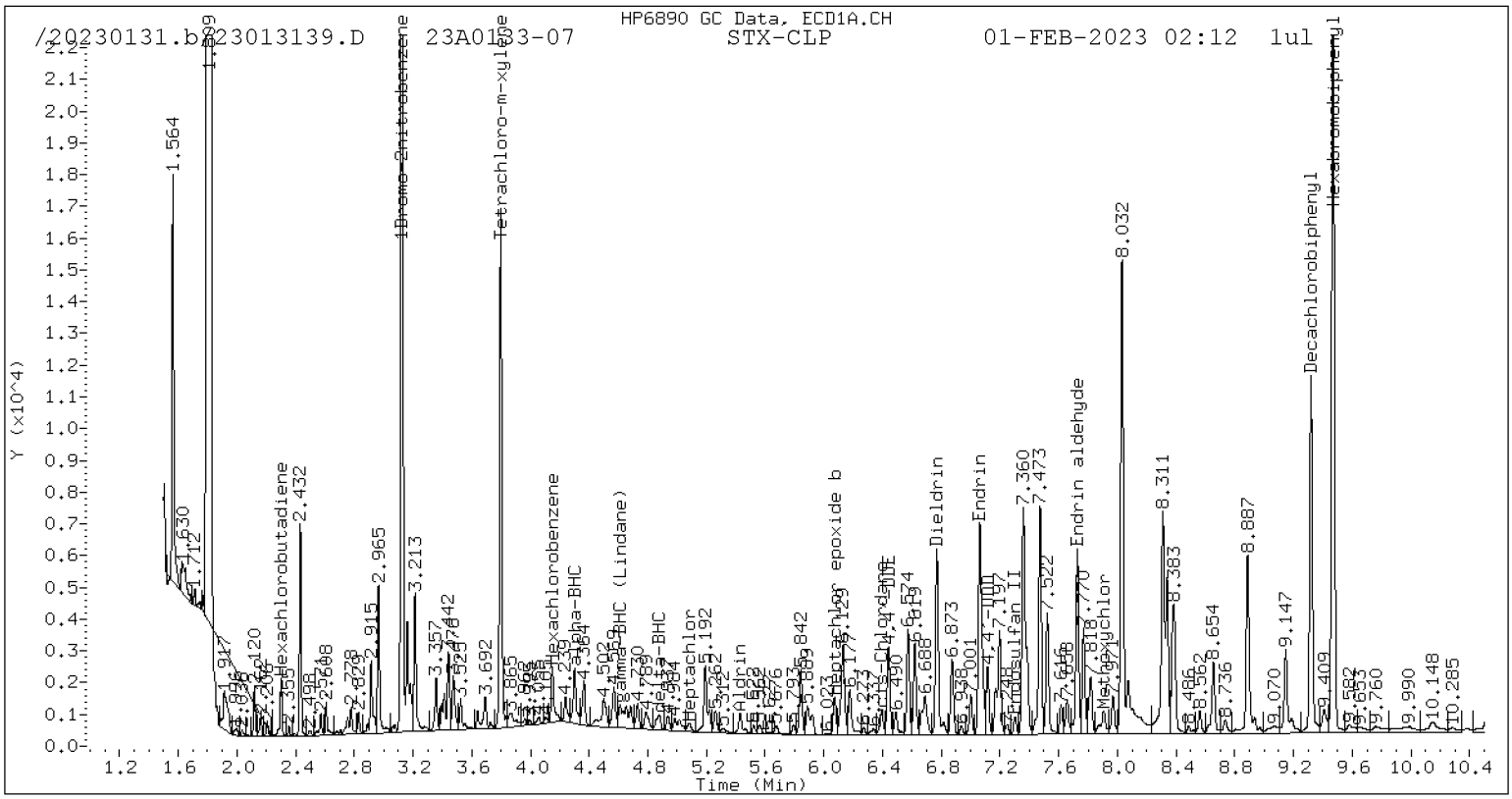
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	897706	33.5
Hexabromobiphenyl	609723	665986	9.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1313326	30.5
Hexabromobiphenyl	769764	862839	12.1

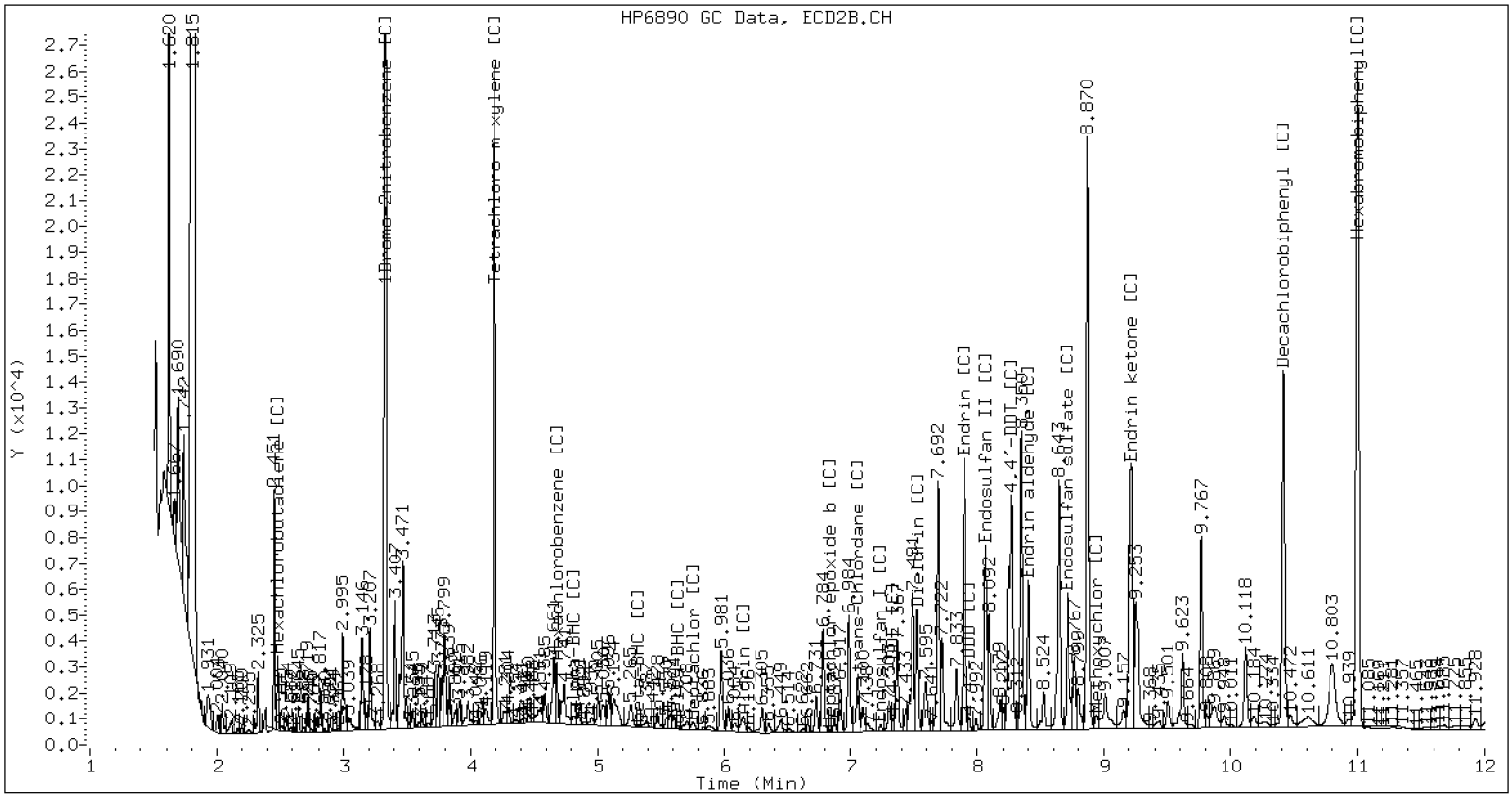
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230131.b/B20230131.b/23013139.D 23A0133-07 CLP2



CLP-2 Manual Integration: YES

Manual Peak Adjustment Report, CLP-2

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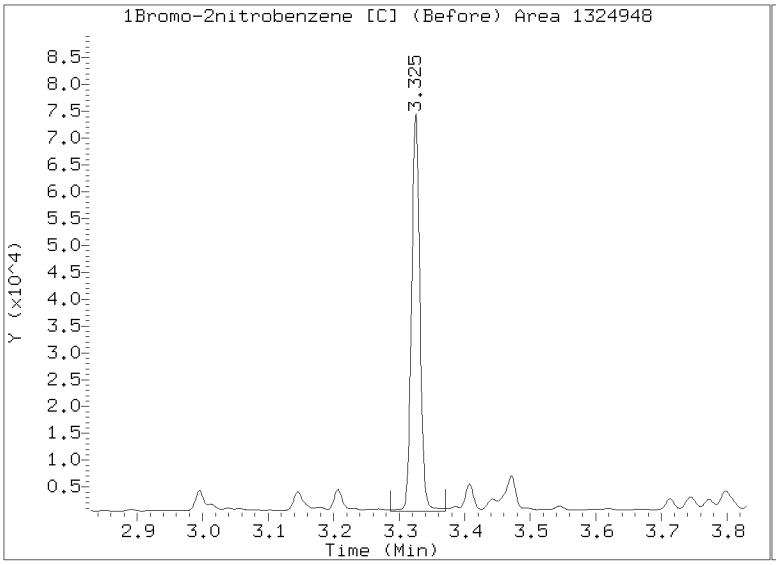
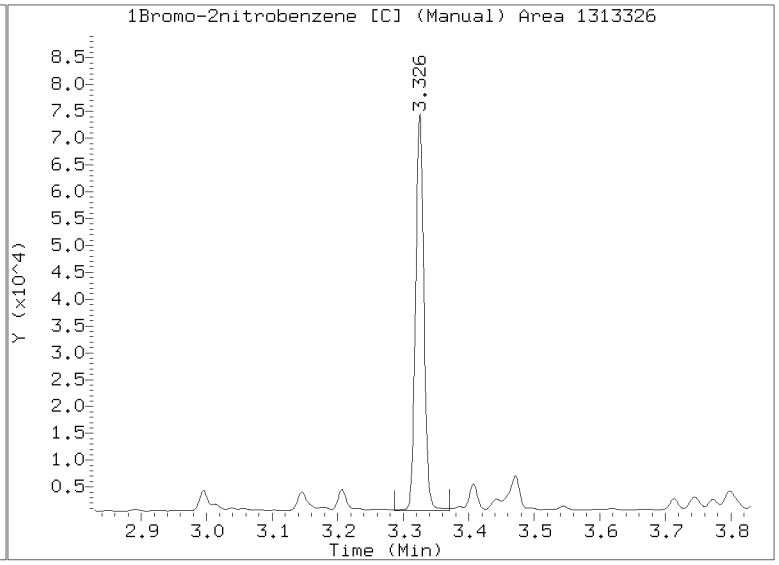
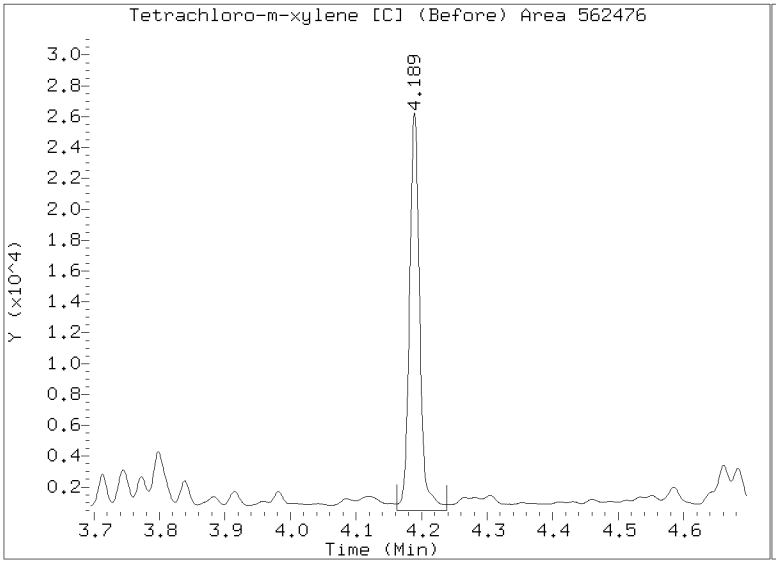
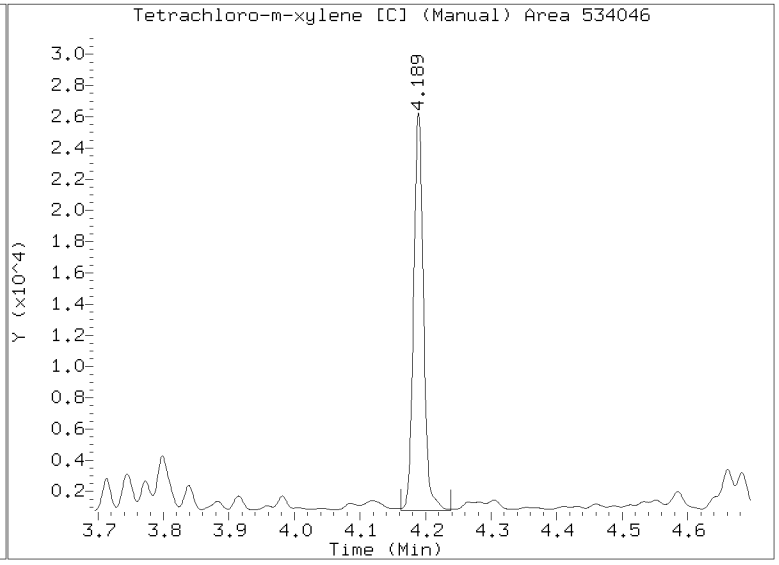
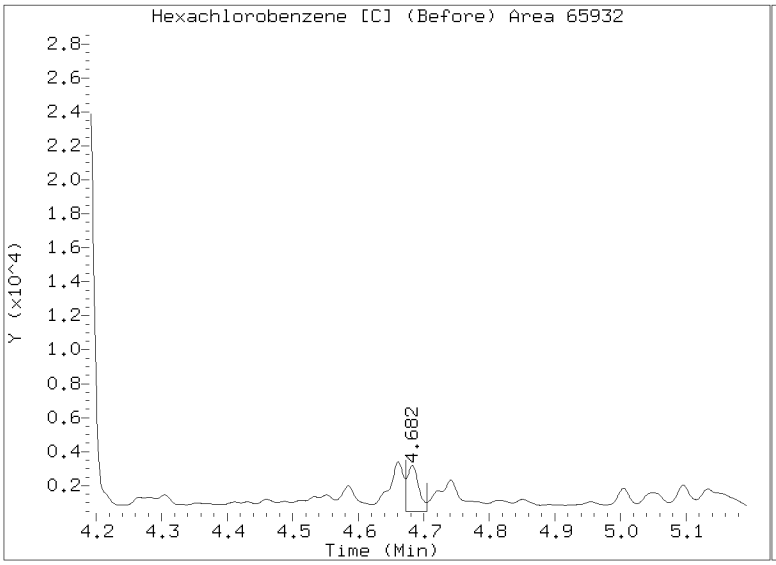
Injection Date: 01-FEB-2023 02:12
Lab ID:23A0133-07 Client ID:

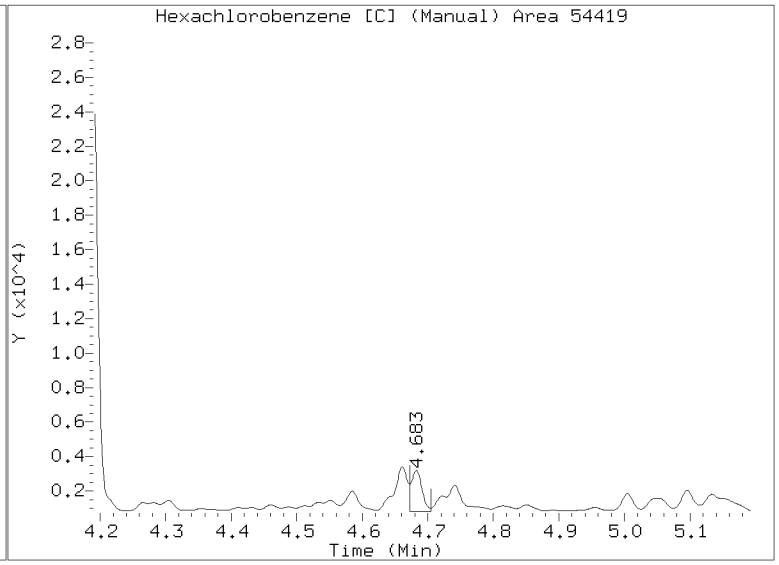












Manual Peak Adjustment Report, CLP-2

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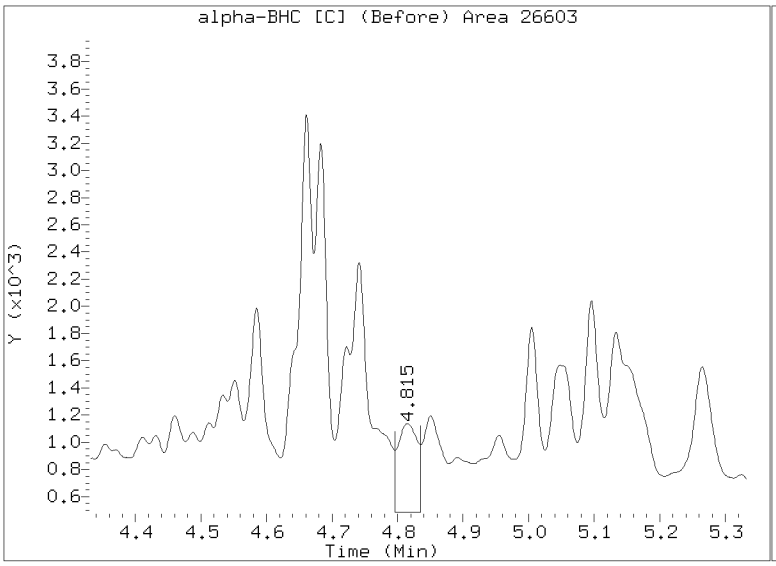

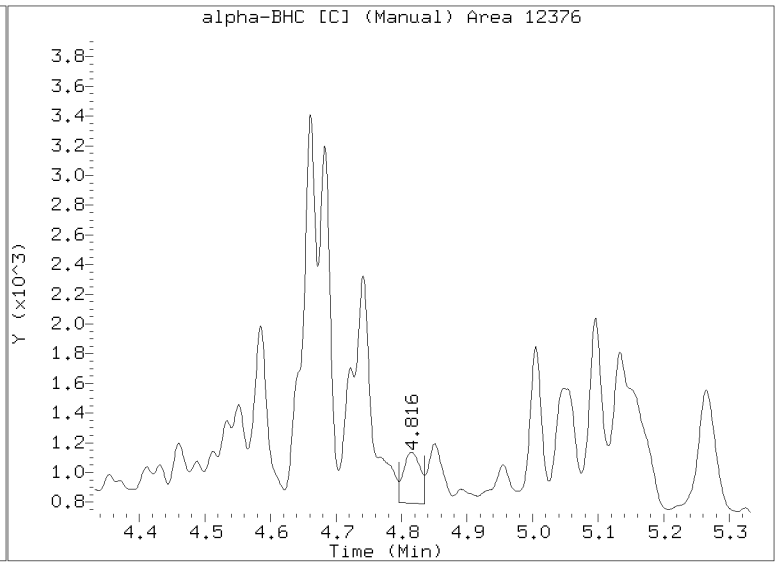

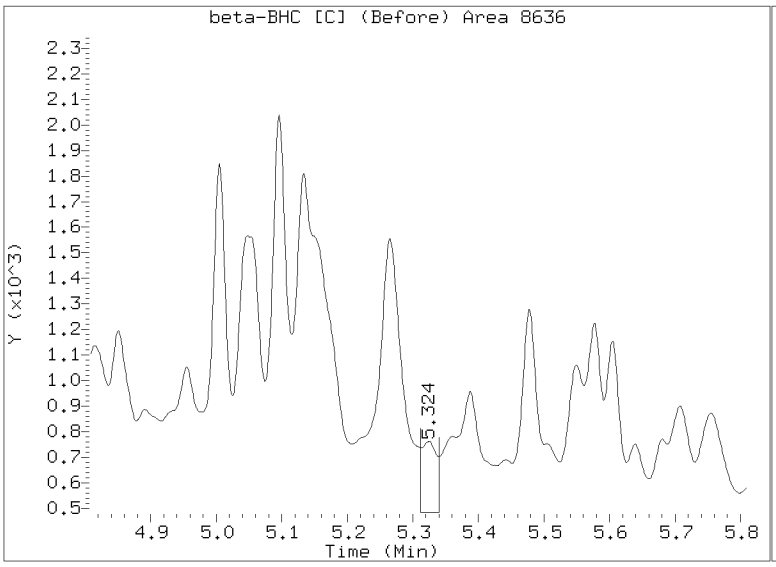

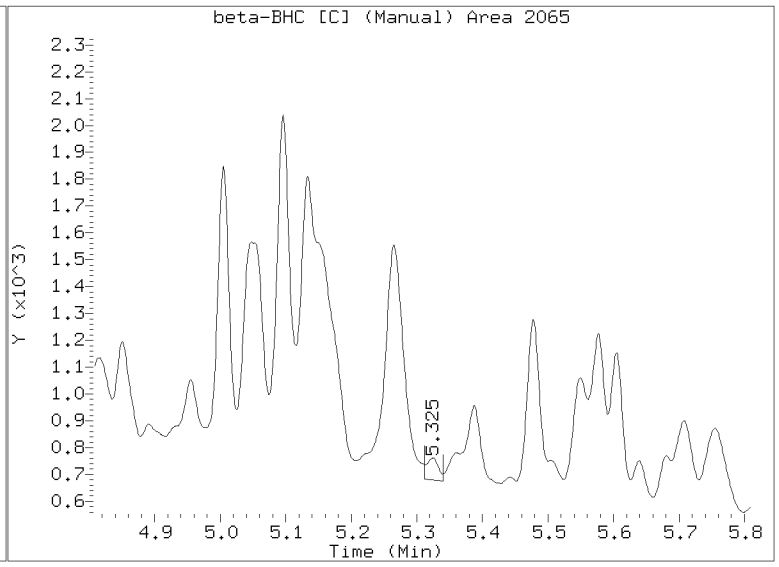

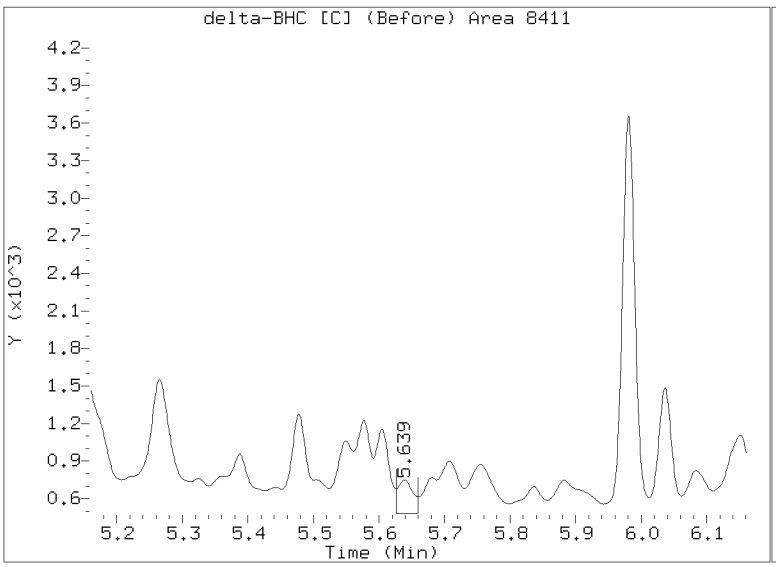

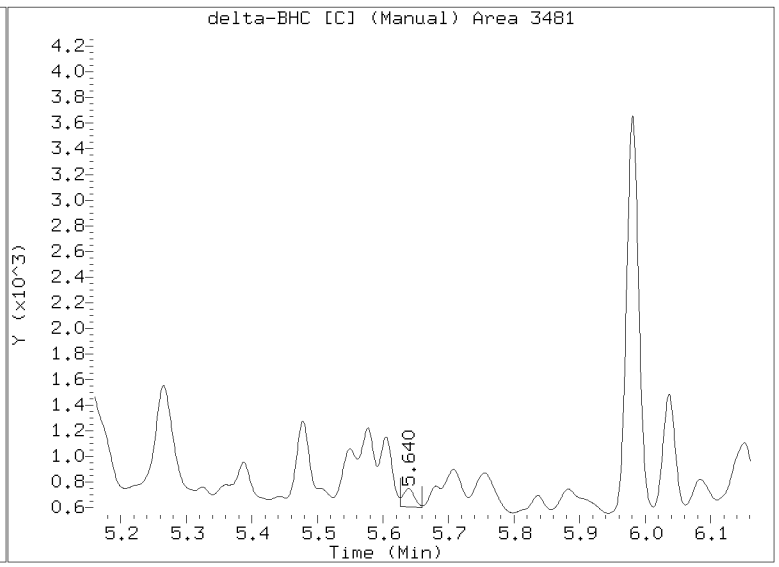

Manual Peak Adjustment Report, CLP-2

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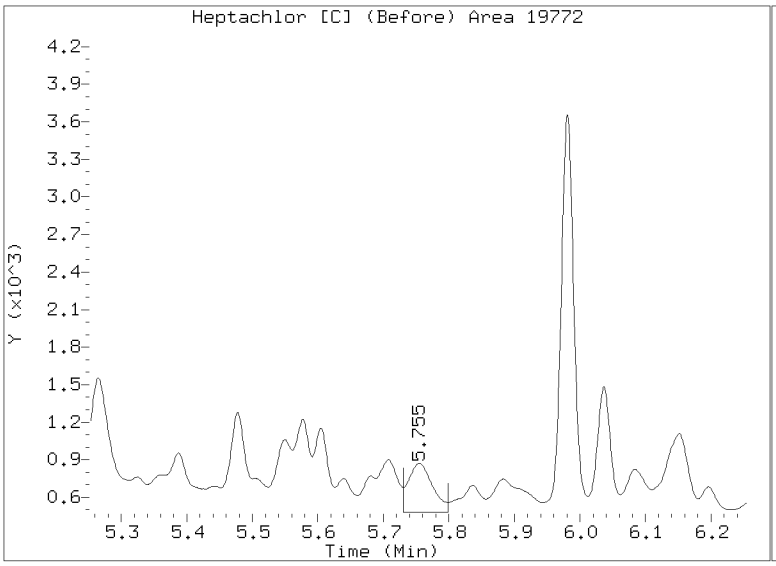

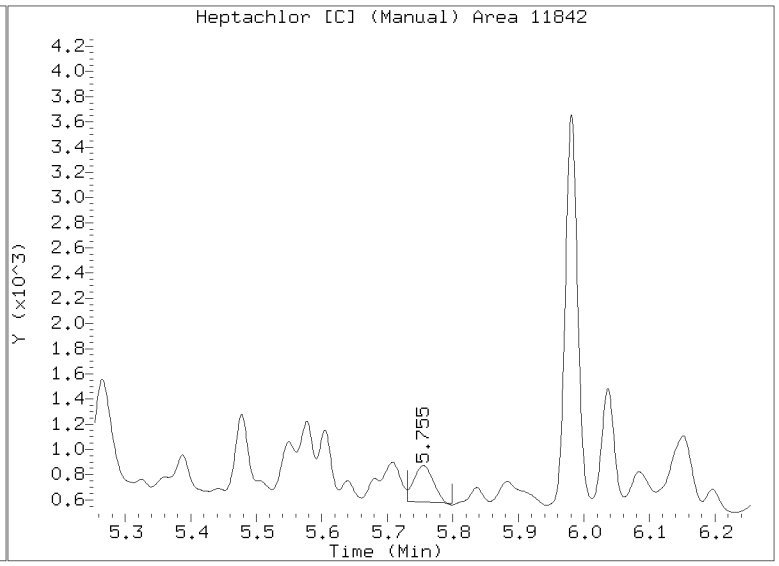

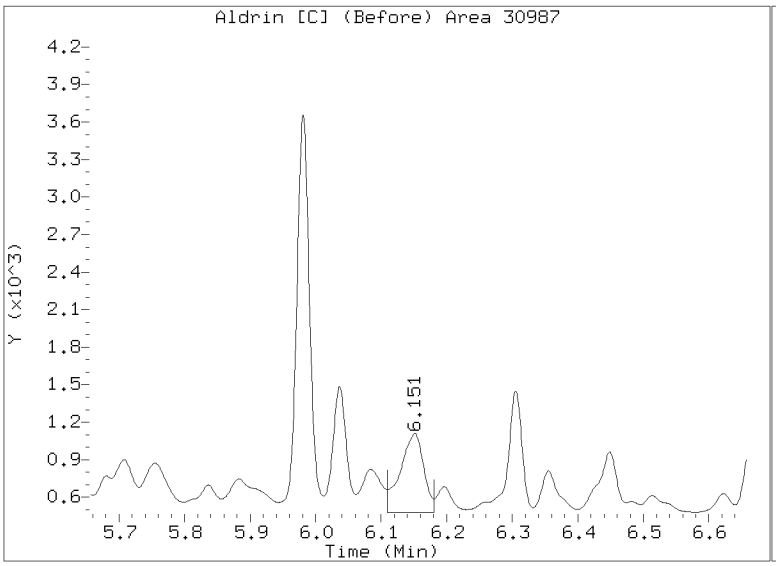

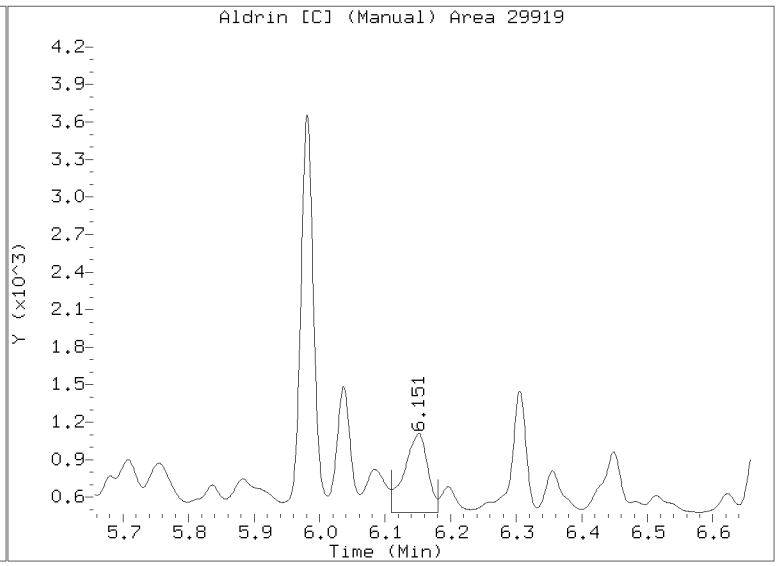

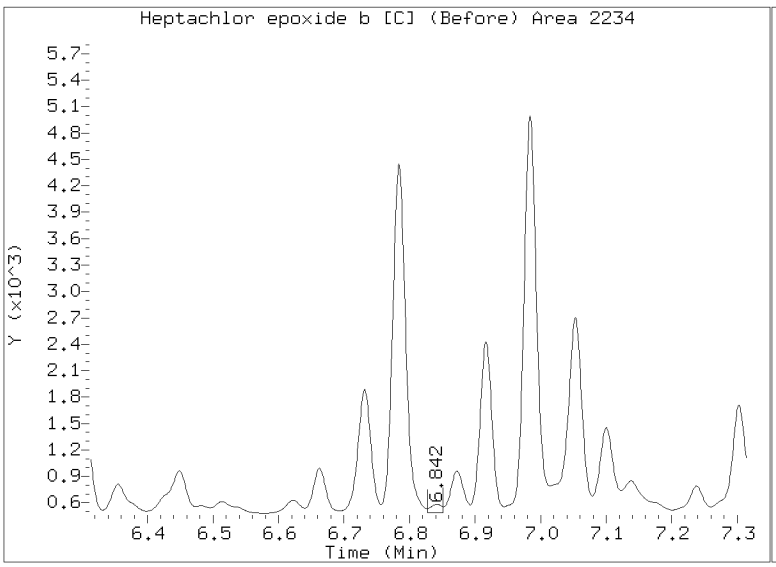

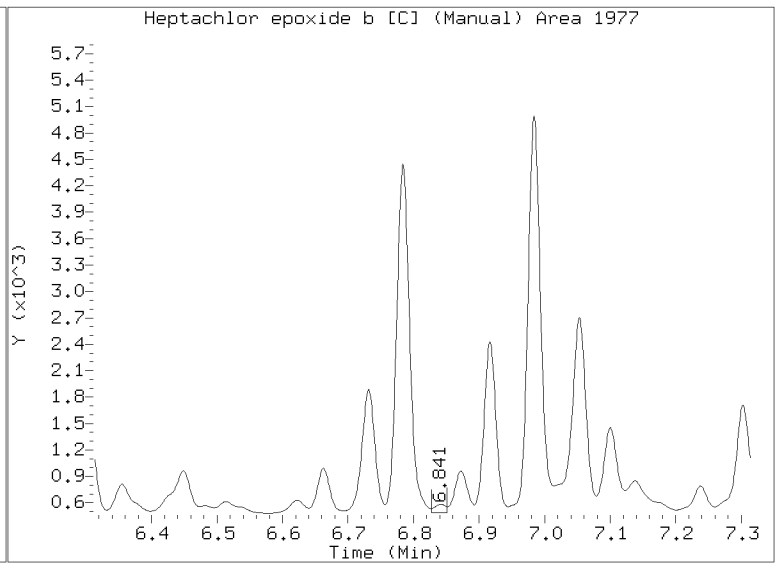

Manual Peak Adjustment Report, CLP-2

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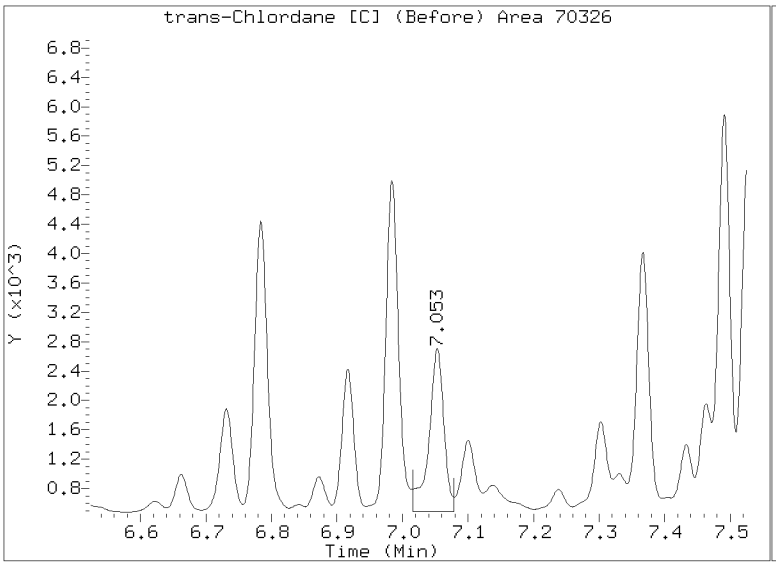

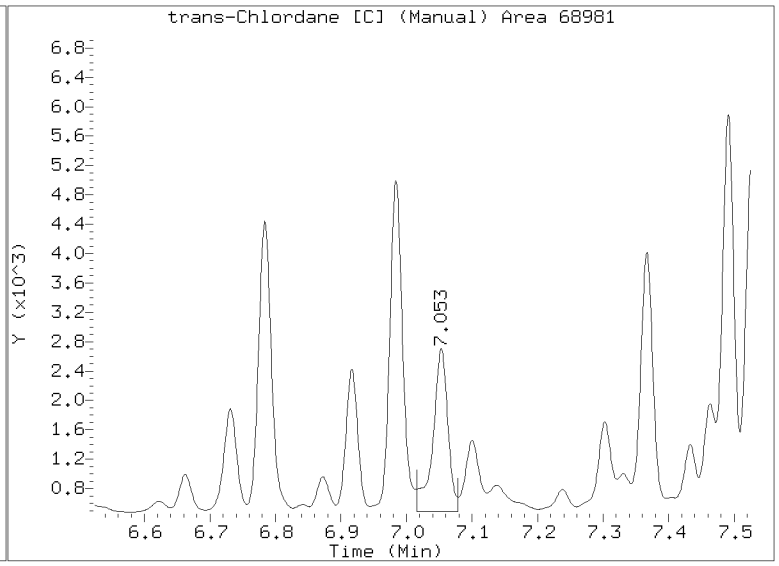

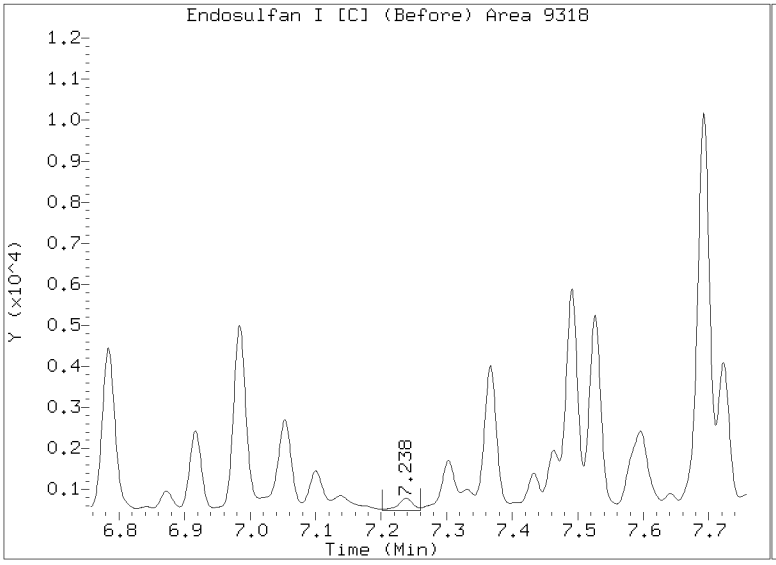

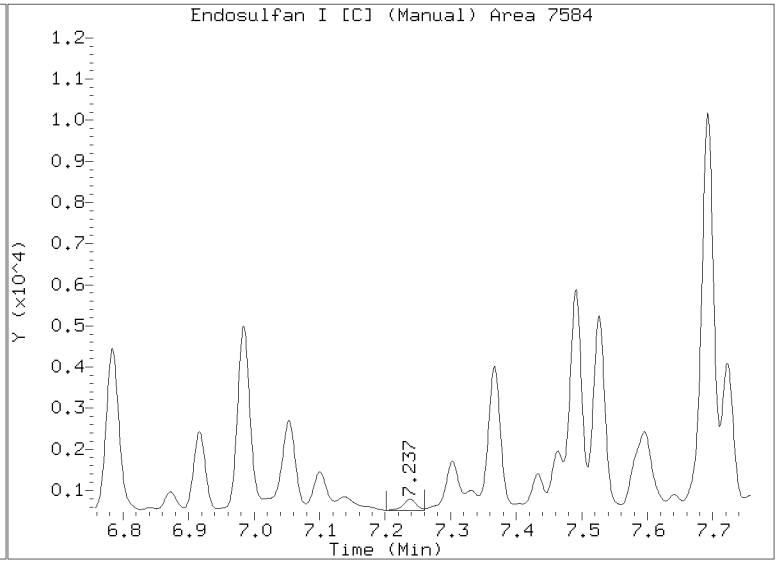

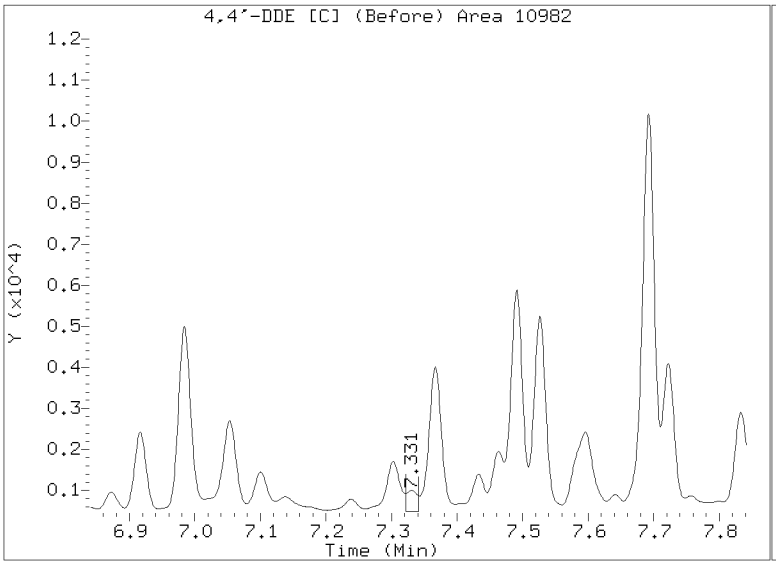

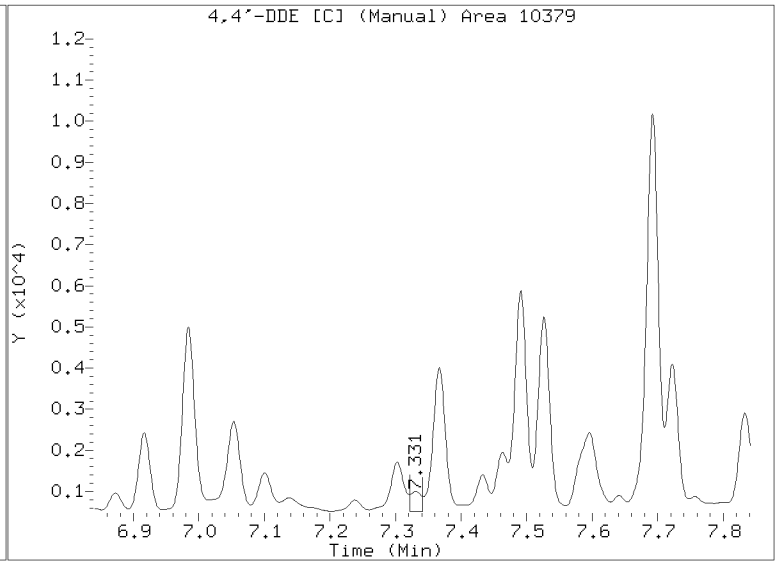

Manual Peak Adjustment Report, CLP-2

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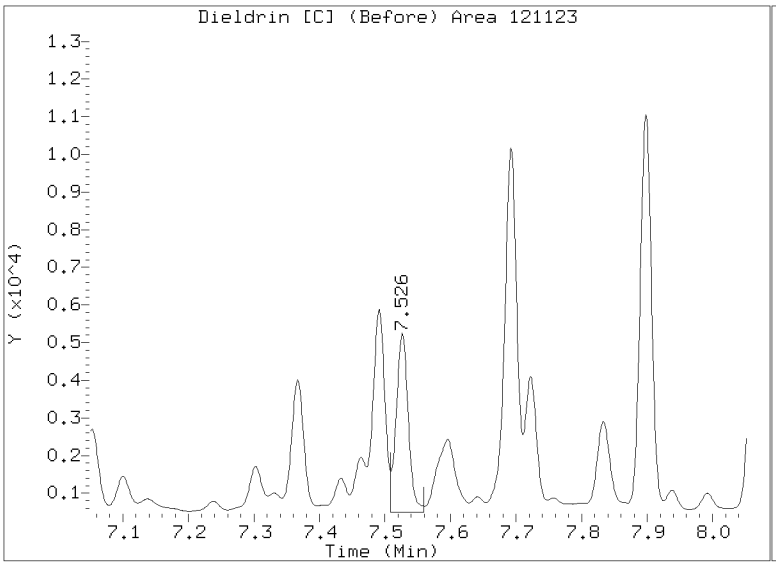

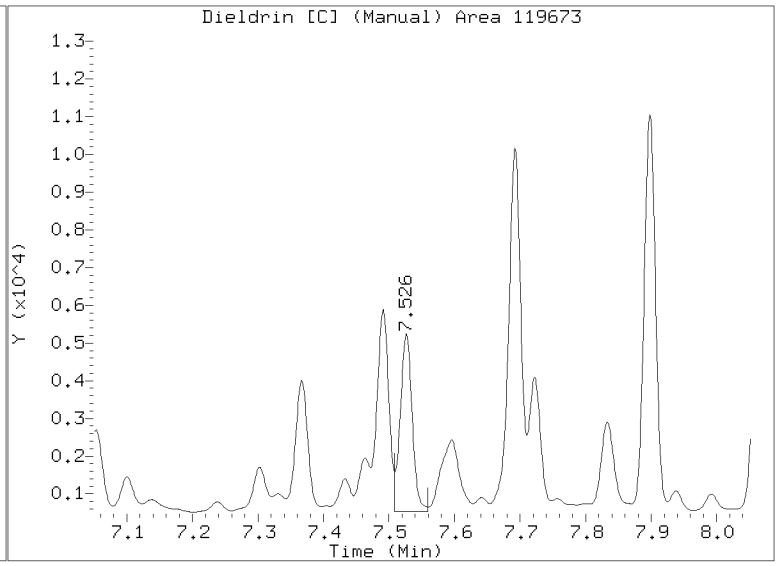

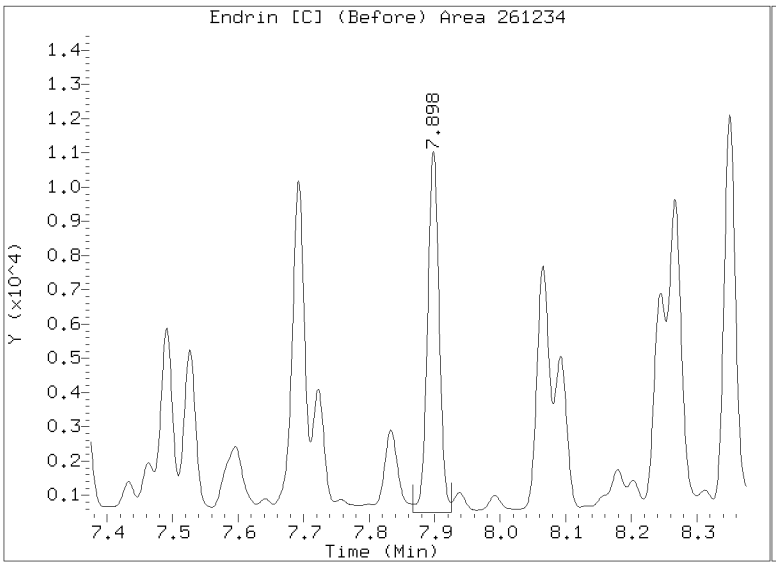

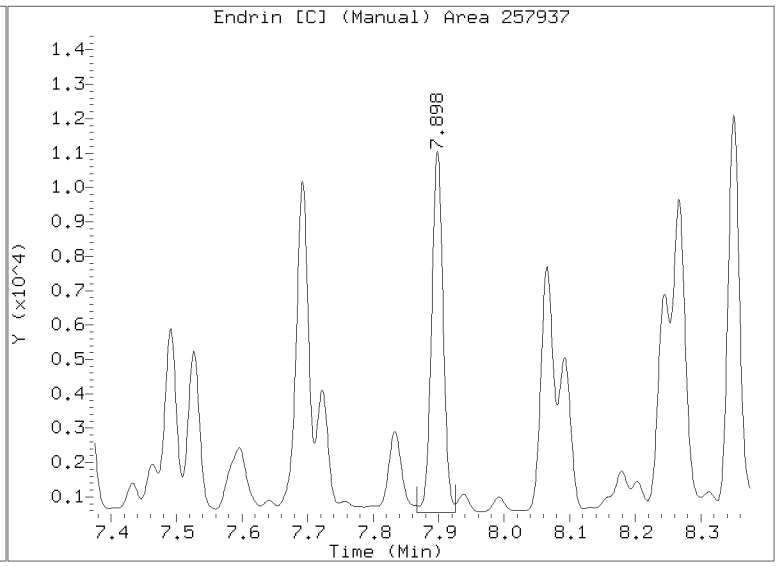

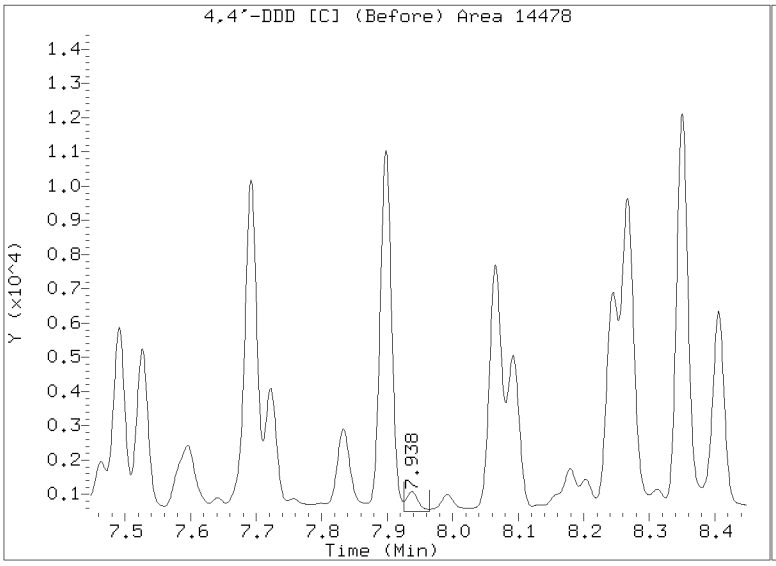

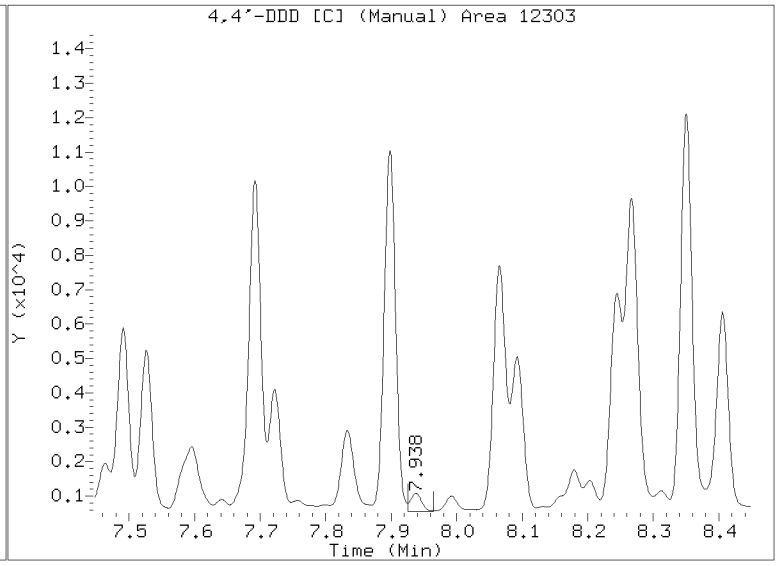

Manual Peak Adjustment Report, CLP-2

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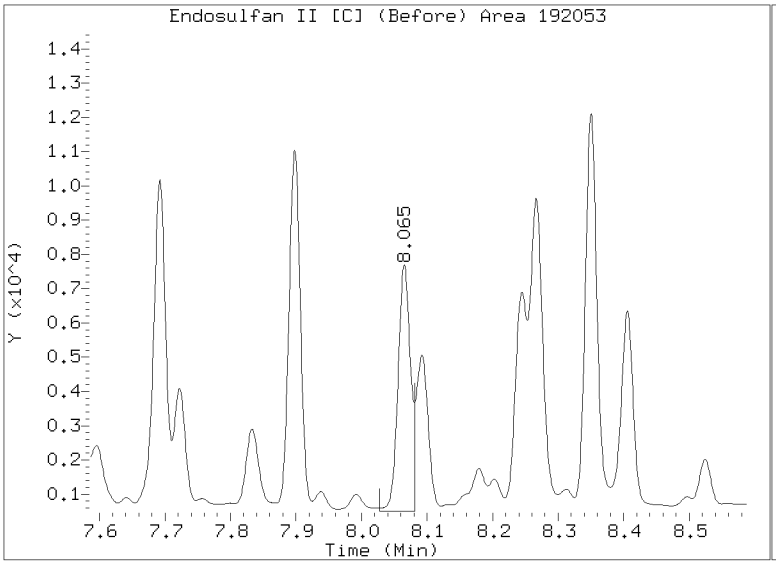
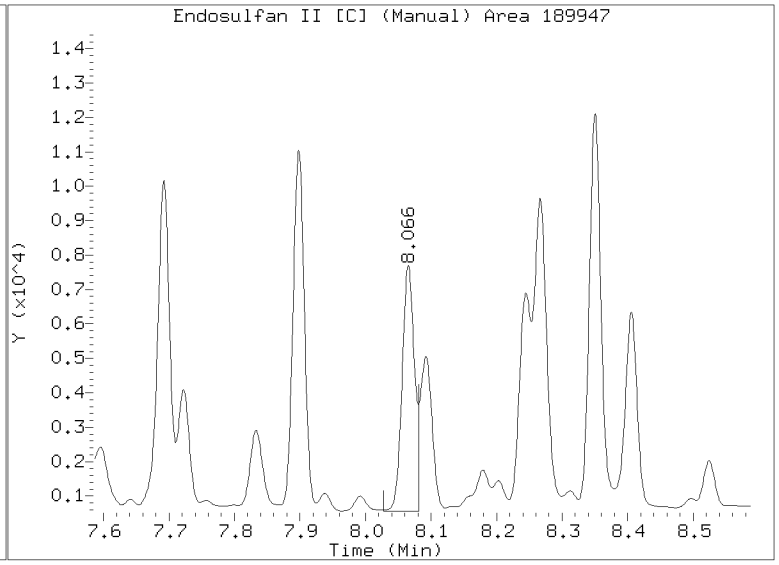
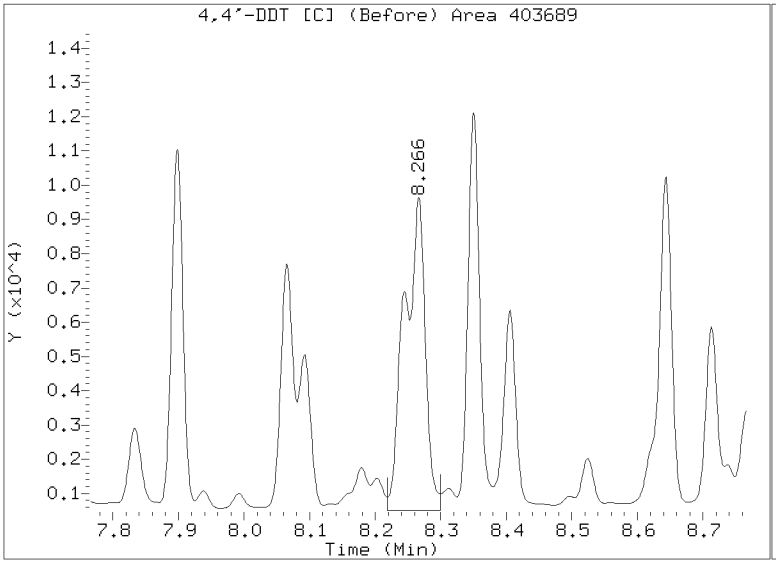
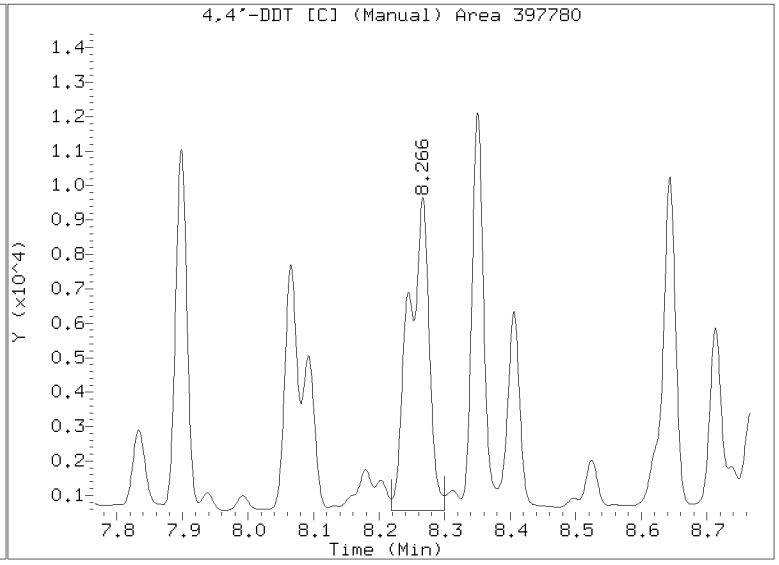
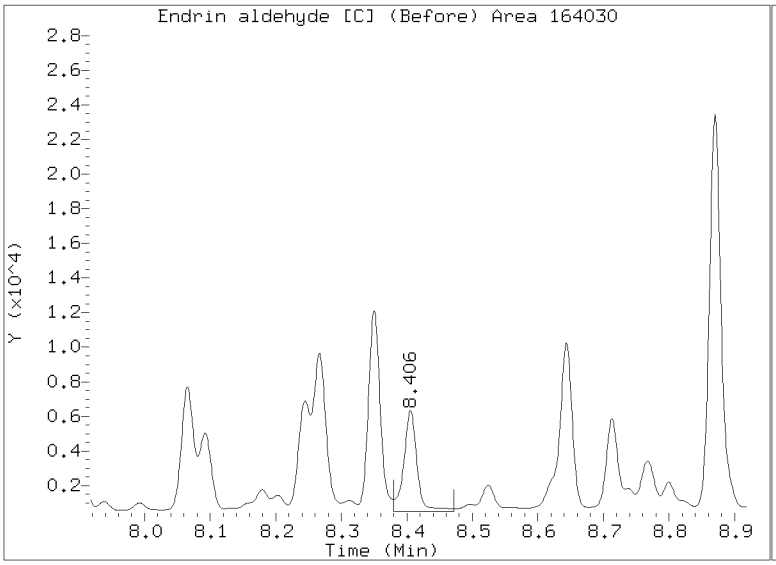
Lab ID:23A0133-07 Client ID:

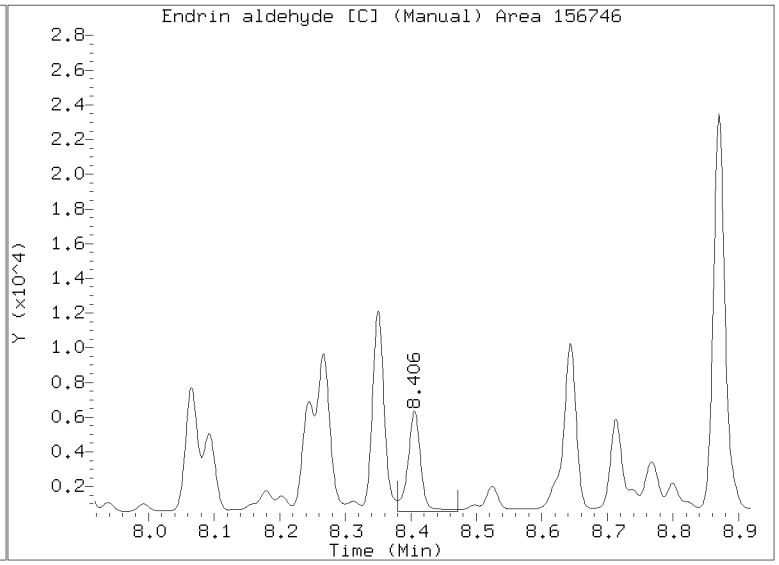












Manual Peak Adjustment Report, CLP-2

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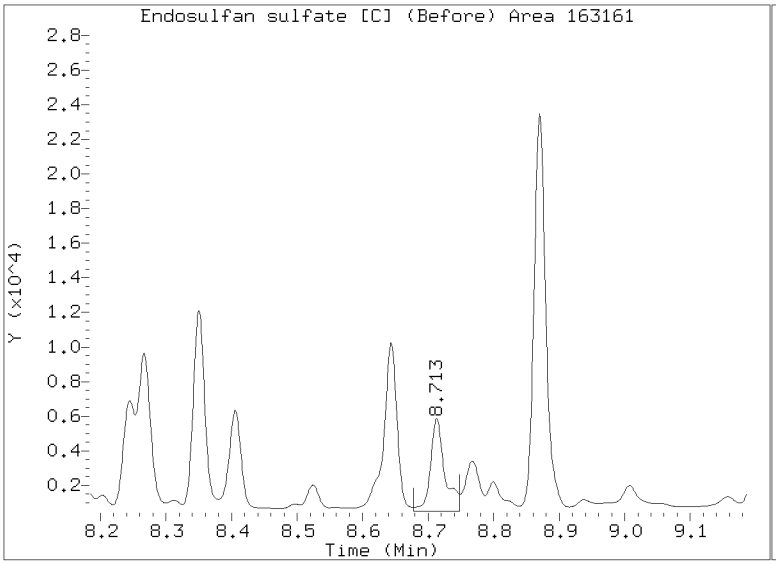
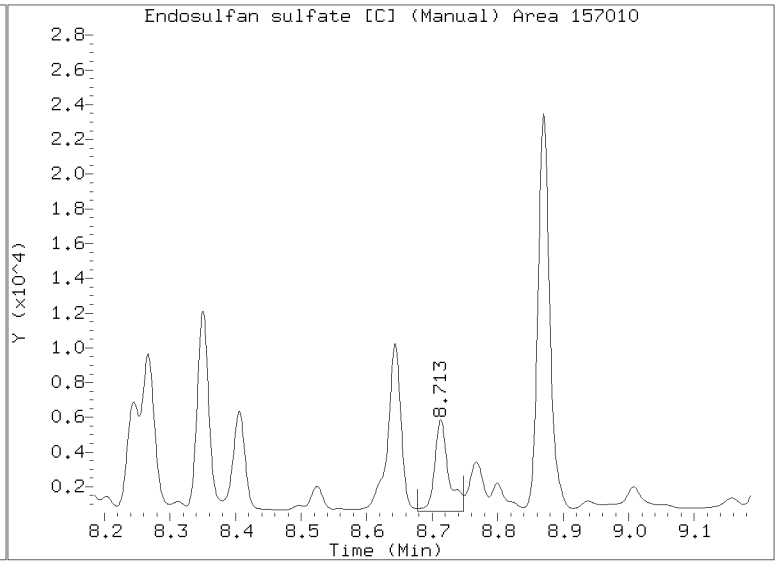
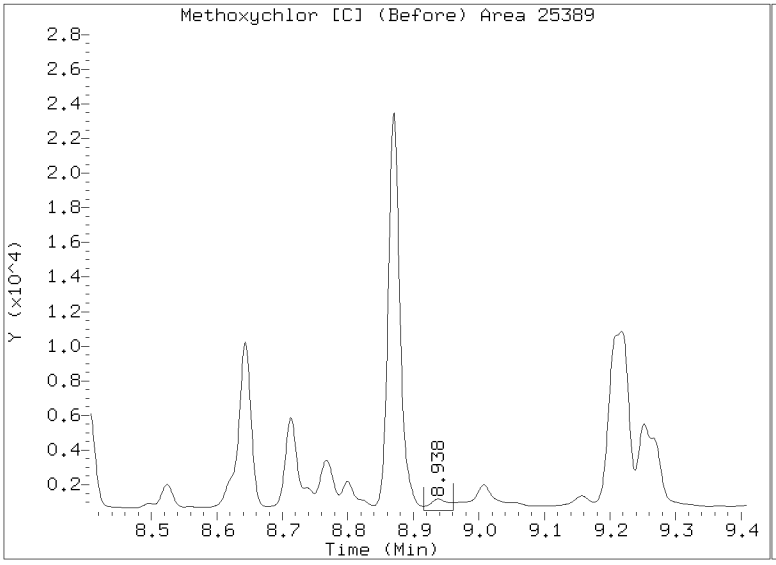
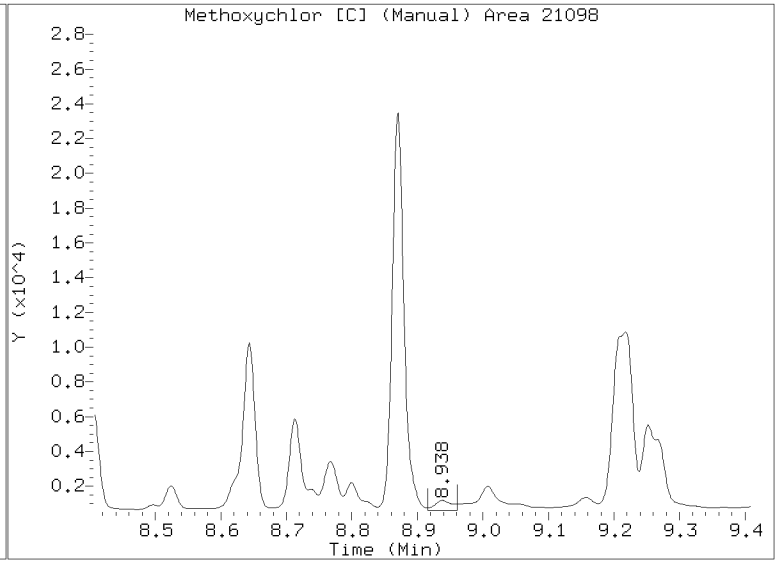
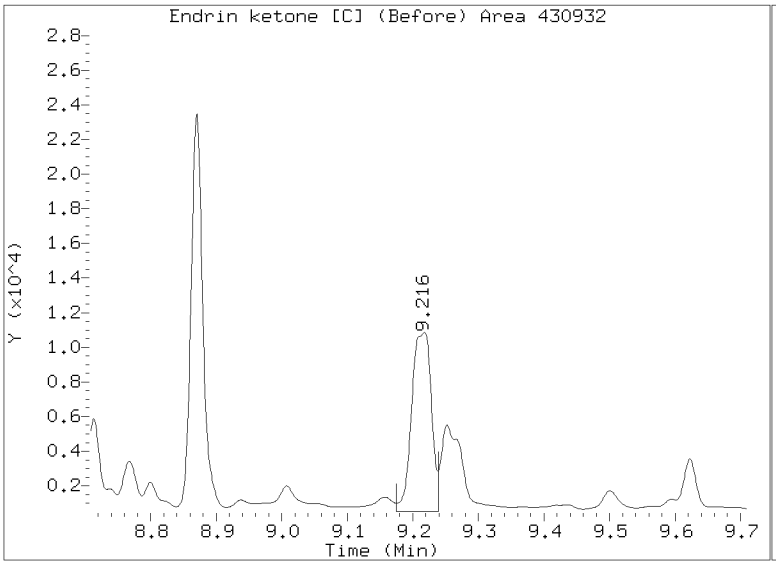
Lab ID:23A0133-07 Client ID:

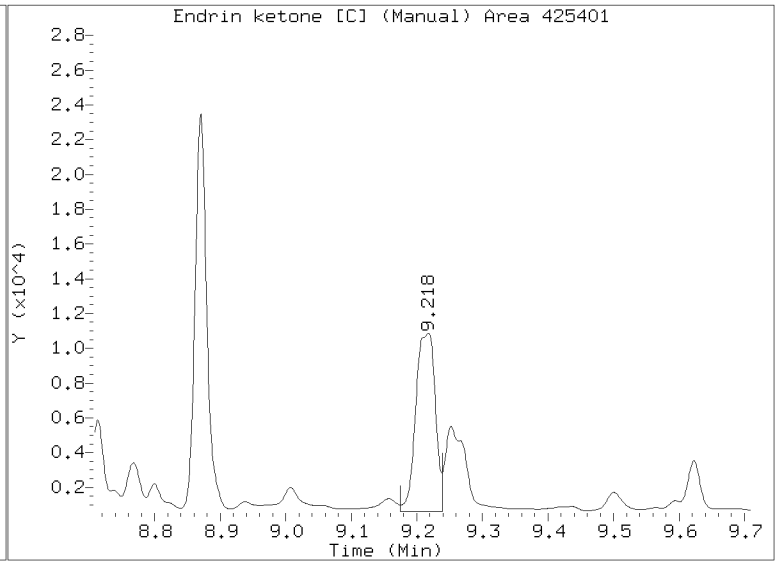












Manual Peak Adjustment Report, CLP-2

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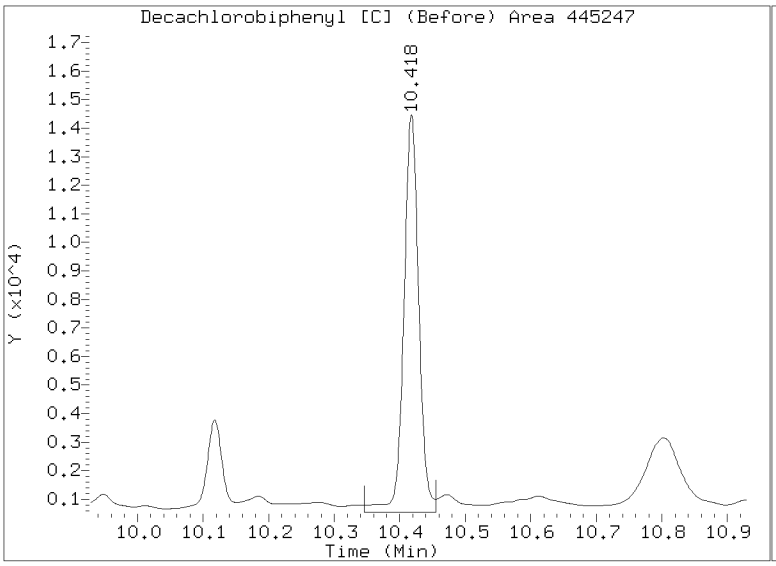
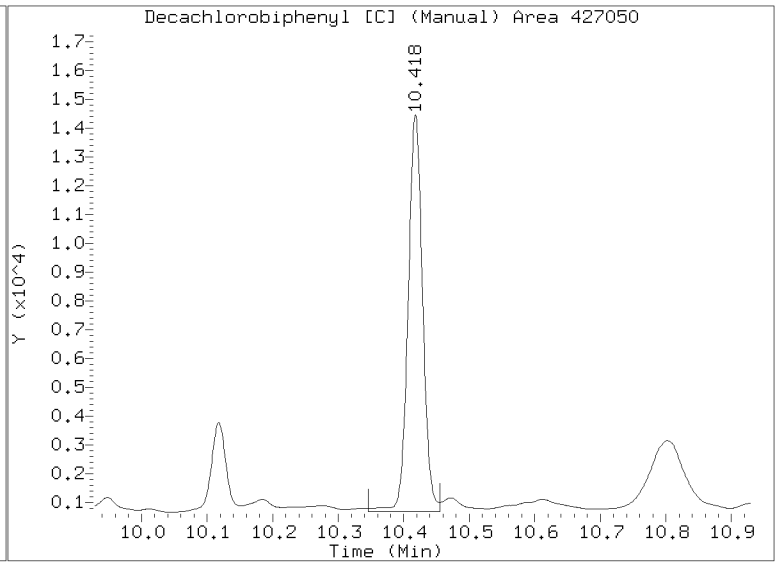
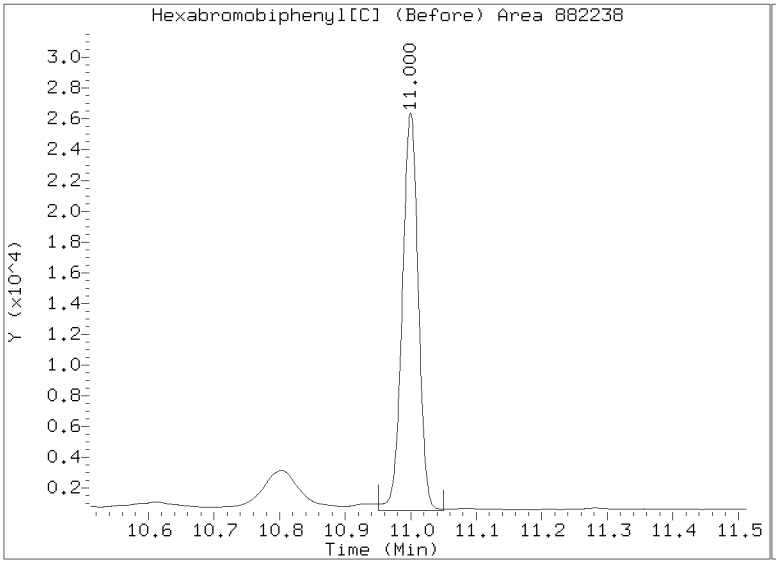
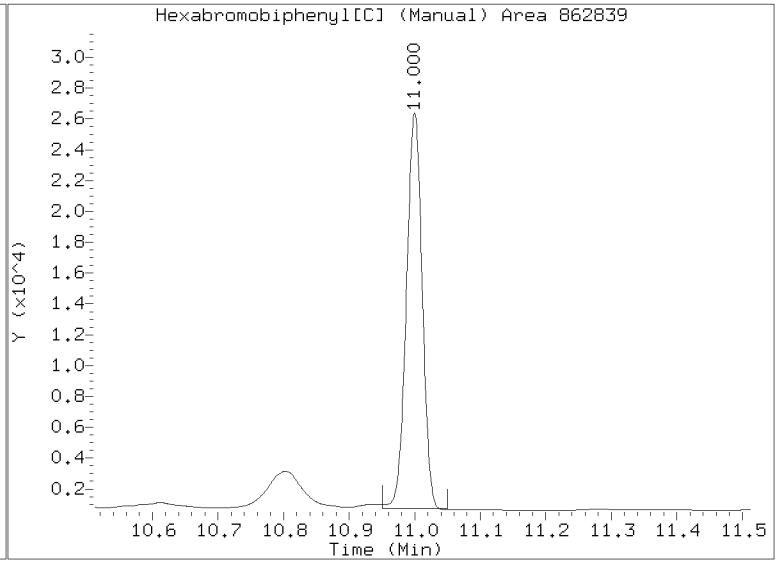
Lab ID:23A0133-07 Client ID:









Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1185

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-08 C	File ID:	23013140.D
Sampled:	01/06/23 12:00	Prepared:	01/19/23 13:44	Analyzed:	02/01/23 02:30
% Solids:	58.60	Preparation:	EPA 3546 (Microwave)	Initial/Final:	21.35 g Wet / 2.5 mL
Batch:	BLA0392	Sequence:	SLB0046	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9929*	*7.26*	*90.8*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9929*	*7.36*	*92.1*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9929*	*5.60*	*70.1*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9929*	*5.20*	*65.1*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013140.D
Data file 2: /20230131.b/B20230131.b/23013140.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: 23A0133-08
Client ID:
Injection Date: 01-FEB-2023 02:30
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.323	0.013	78762	4.819	-0.014	10733	4.88	0.40	169.5*	alpha-BHC
4.682	-0.011	29900	5.326	0.017	16687	4.81	1.65	97.9*	beta-BHC
4.879	0.004	99115	----			7.52	0.00	---	delta-BHC
4.610	-0.001	46538	5.222	-0.007	10768	3.33	0.48	149.9*	gamma-BHC (Lindane)
5.076	-0.017	32792	5.756	0.002	49944	2.63	2.44	7.6	Heptachlor
5.428	0.014	68905	----			4.94	0.00	---	Aldrin
6.072	-0.017	46519	----			3.85	0.00	---	Heptachlor epoxide b
----			7.237	-0.021	21806	0.00	1.28	---	Endosulfan I
6.769	-0.022	183916	----			15.42	0.00	---	Dieldrin
6.442	-0.009	162878	7.366	0.024	162513	14.71	9.42	43.8*	4,4'-DDE
7.063	0.022	408478	7.897	0.022	339623	45.39	27.67	48.5*	Endrin
7.301	0.023	25231	8.065	-0.022	409499	3.11	32.55	165.1*	Endosulfan II
----			7.938	-0.011	86108	0.00	7.21	---	4,4'-DDD
8.168	0.027	57631	8.713	0.026	92108	7.49	8.34	10.7	Endosulfan sulfate
----			8.266	-0.000	635953	0.00	55.20	---	4,4'-DDT
7.905	0.028	49970	8.939	0.030	20499	13.76	4.02	109.6*	Methoxychlor
----			9.218	0.008	414566	0.00	34.75	---	Endrin ketone
7.727	0.020	114142	8.405	-0.014	91891	17.66	10.36	52.2*	Endrin aldehyde
6.223	-0.007	20650	7.051	0.026	245606	1.68	12.75	153.4*	trans-Chlordane
6.392	0.016	111575	7.174	-0.011	28036	9.06	1.49	143.6*	cis-Chlordane
2.285	-0.018	13788	----			0.82	0.00	---	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.797	-0.003	319413	4.189	-0.007	486629	28.03	26.04	7.4	Tetrachloro-m-xylene
9.319	0.000	252609	10.418	-0.011	351403	36.32	36.84	1.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

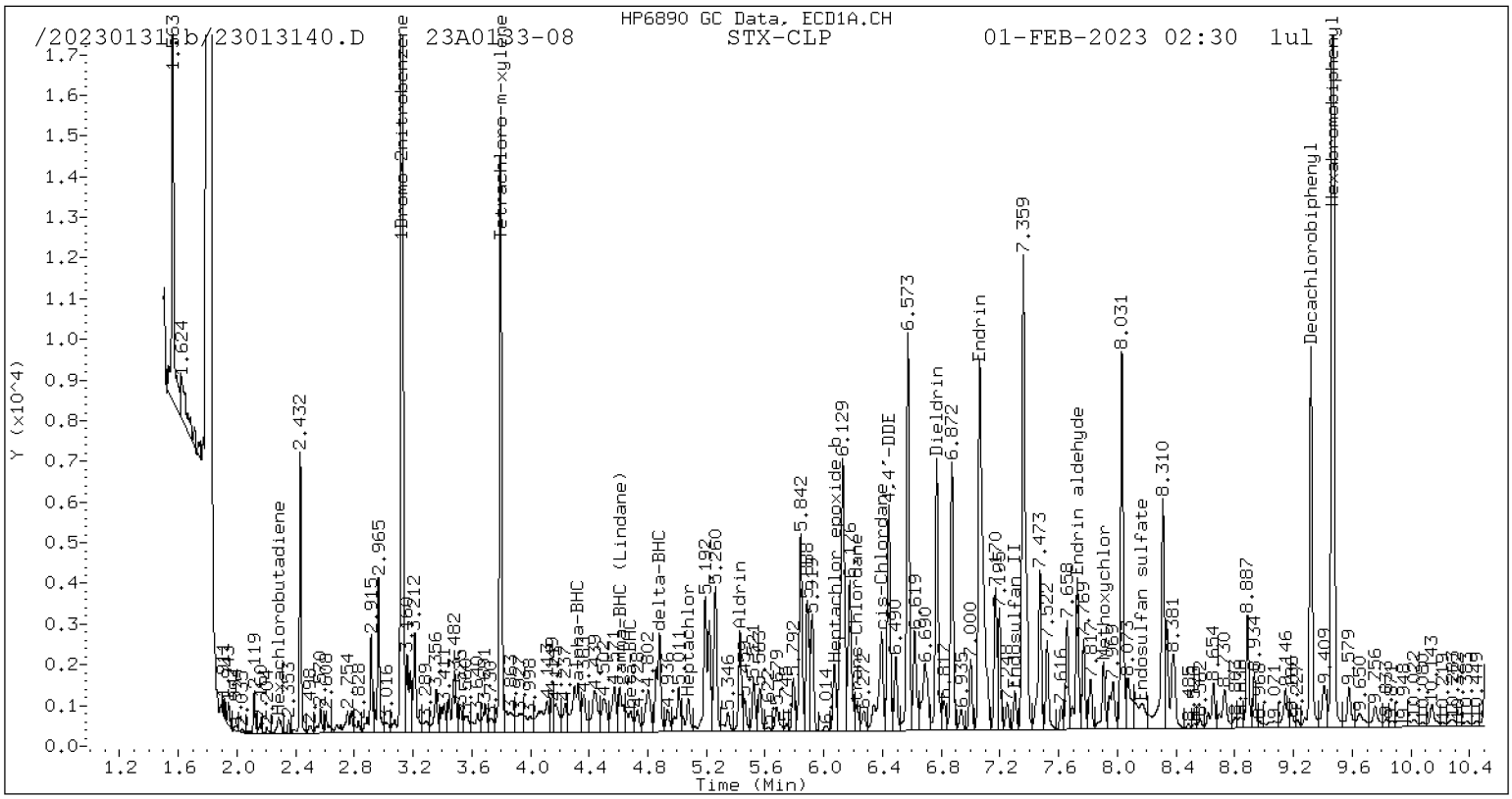
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	838064	24.6
Hexabromobiphenyl	609723	686455	12.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1327682	31.9
Hexabromobiphenyl	769764	863112	12.1

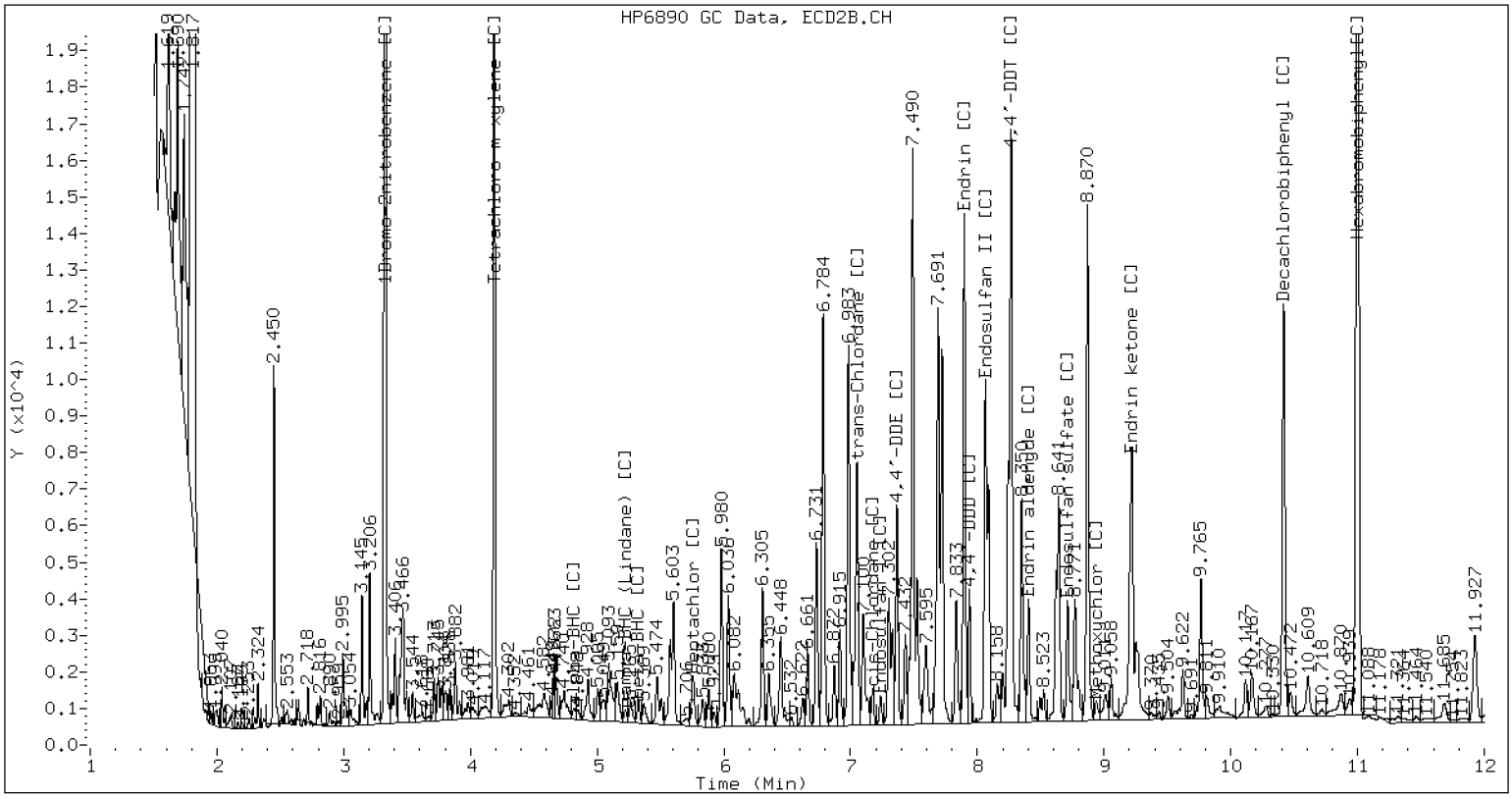
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230131.b/B20230131.b/23013140.D 23A0133-08 CLP2



CLP-2 Manual Integration: NO

Manual Peak Adjustment Report, CLP-2

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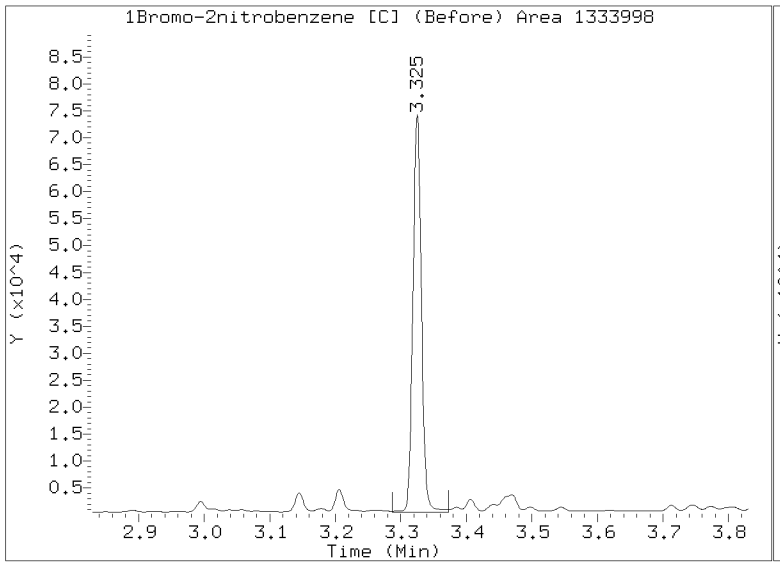
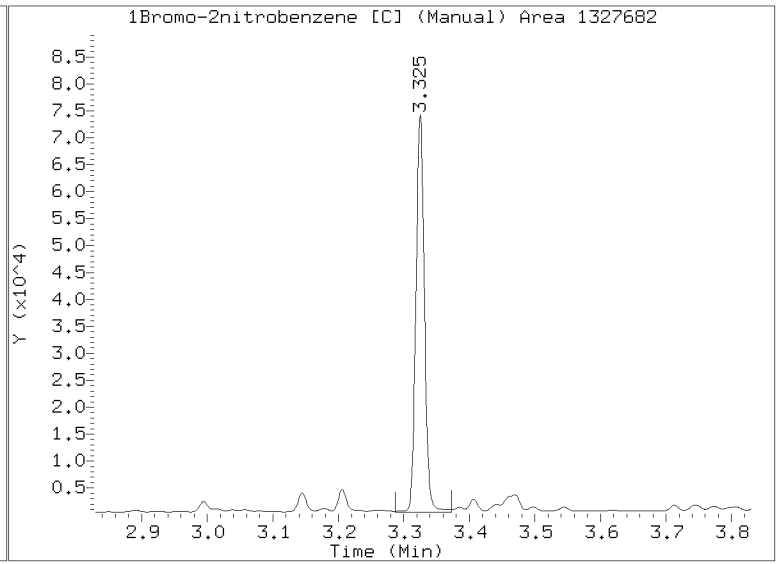
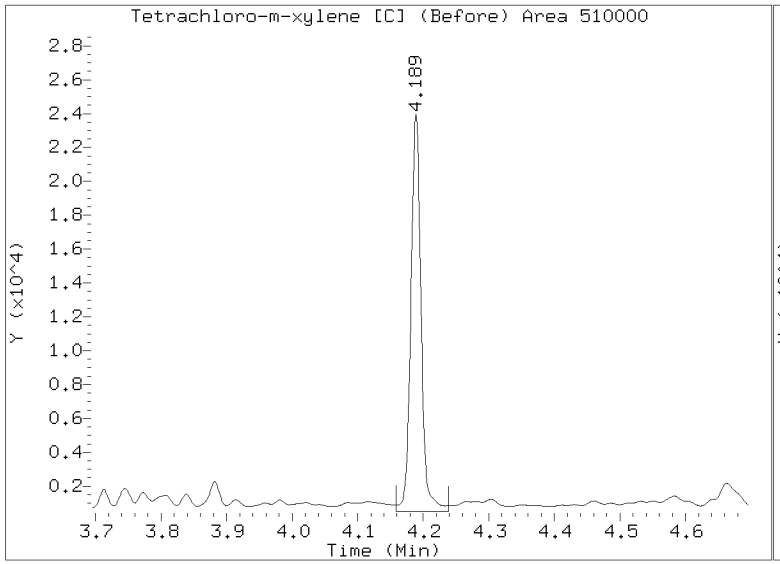
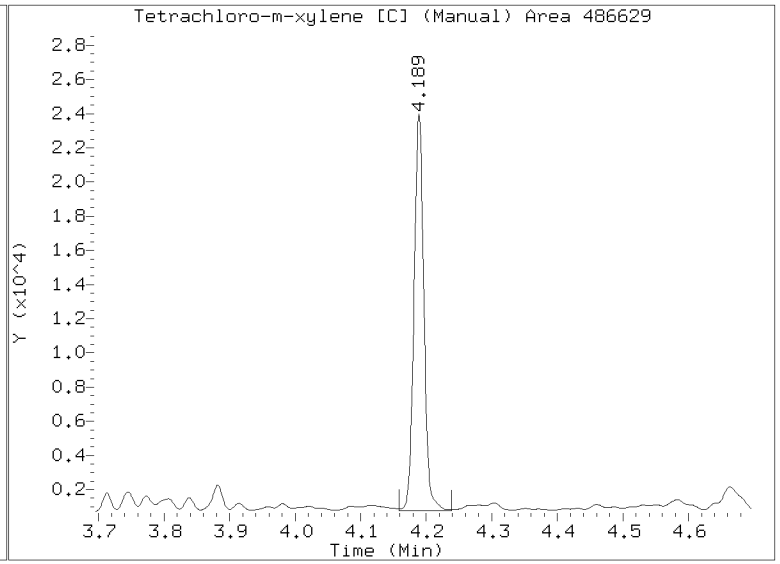
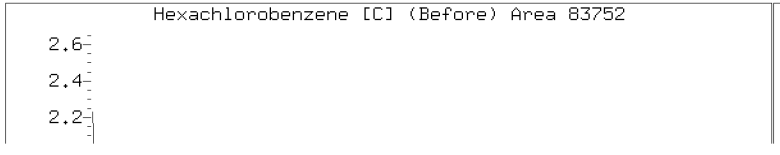
Lab ID:23A0133-08 Client ID:

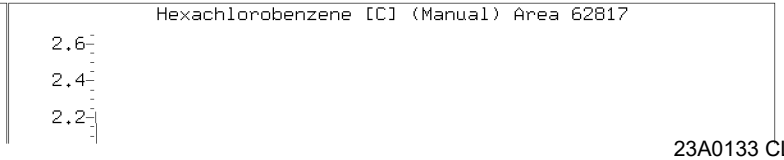












Manual Peak Adjustment Report, CLP-2

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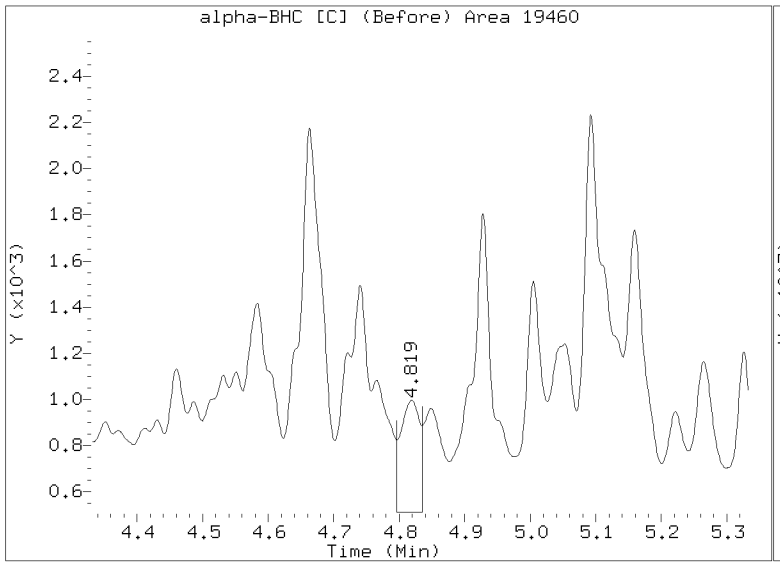
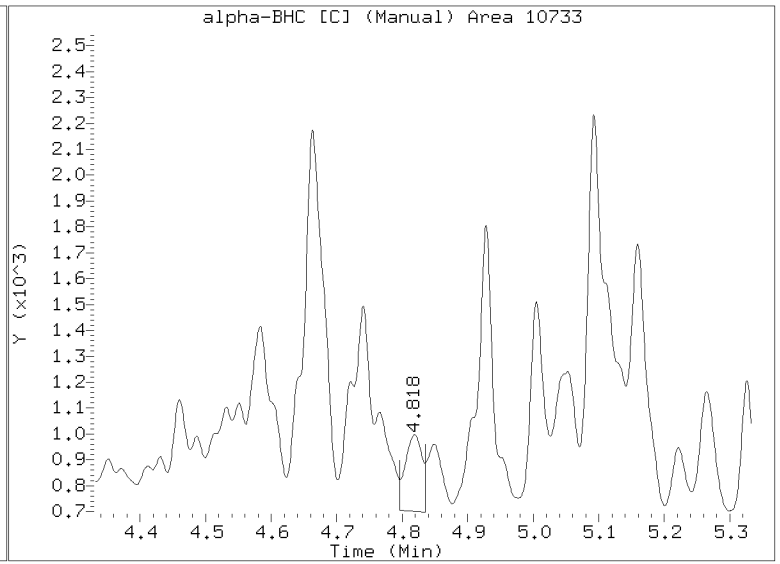
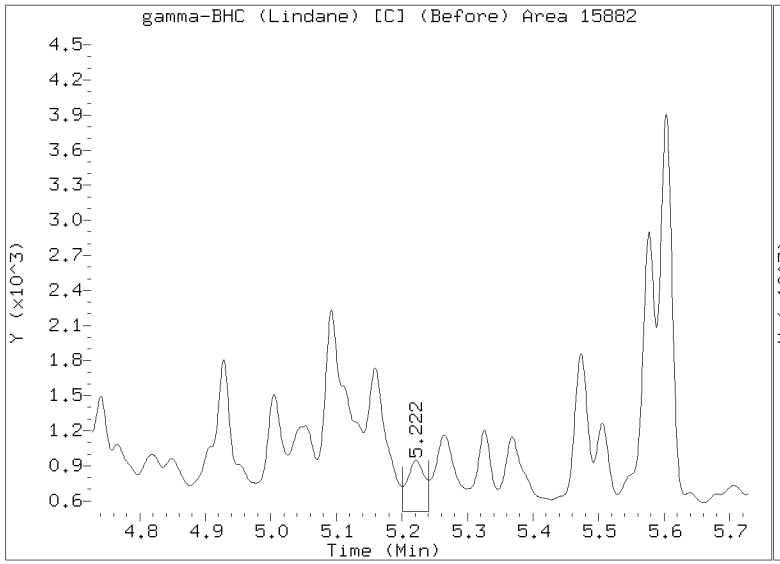
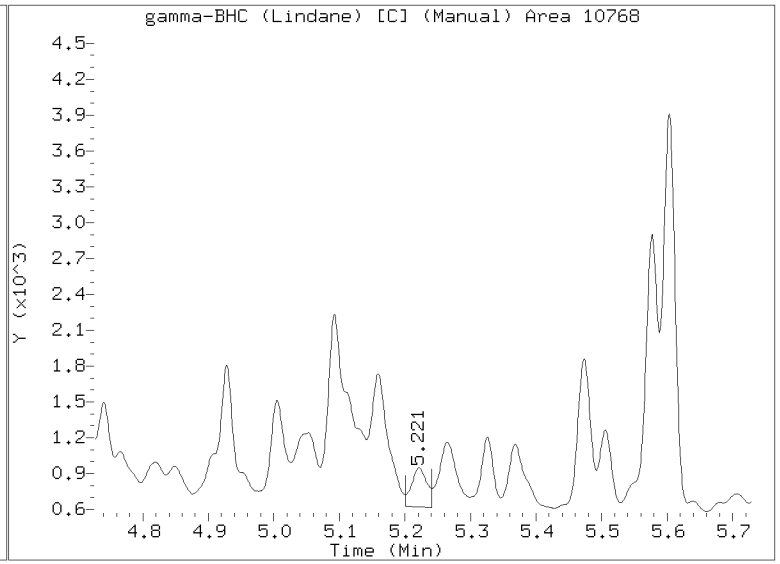
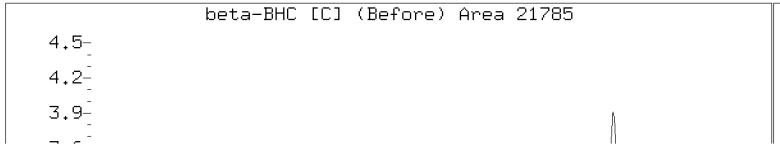
Lab ID:23A0133-08 Client ID:

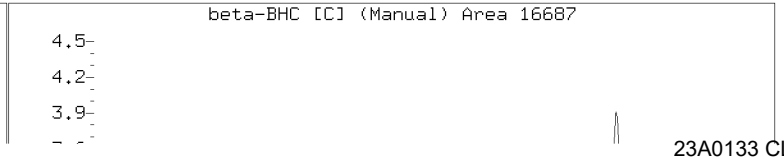












Manual Peak Adjustment Report, CLP-2

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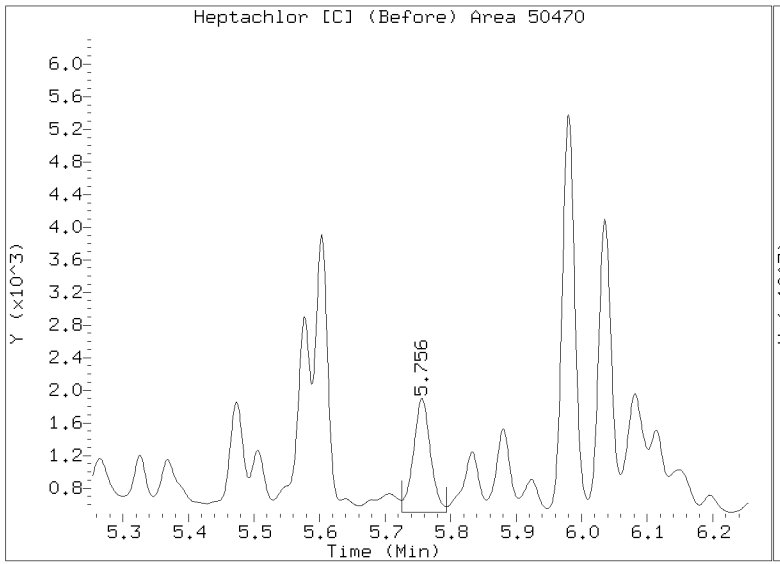
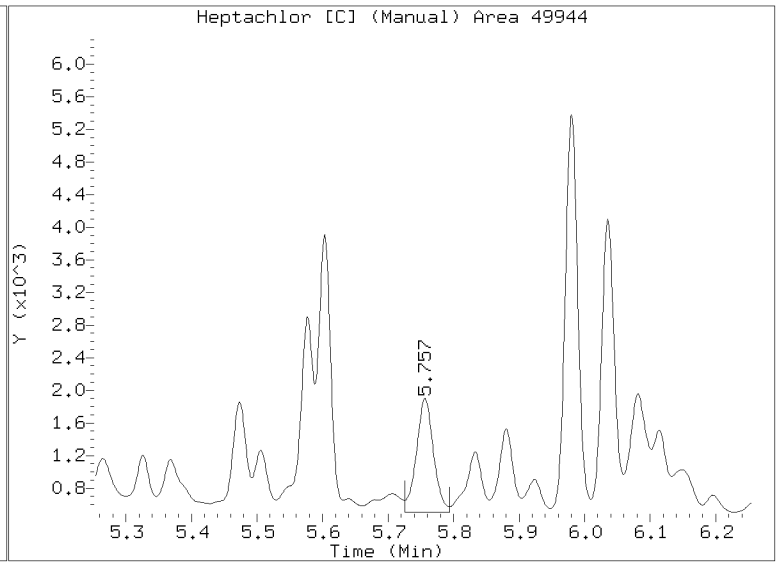
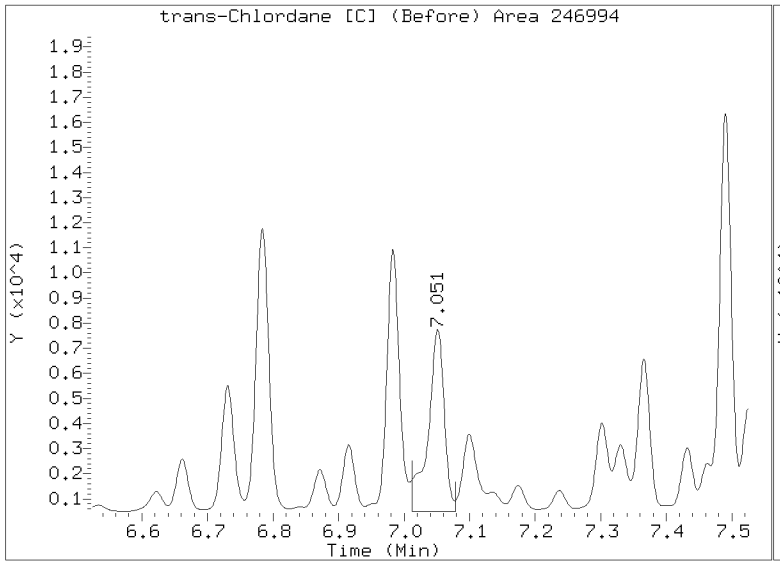
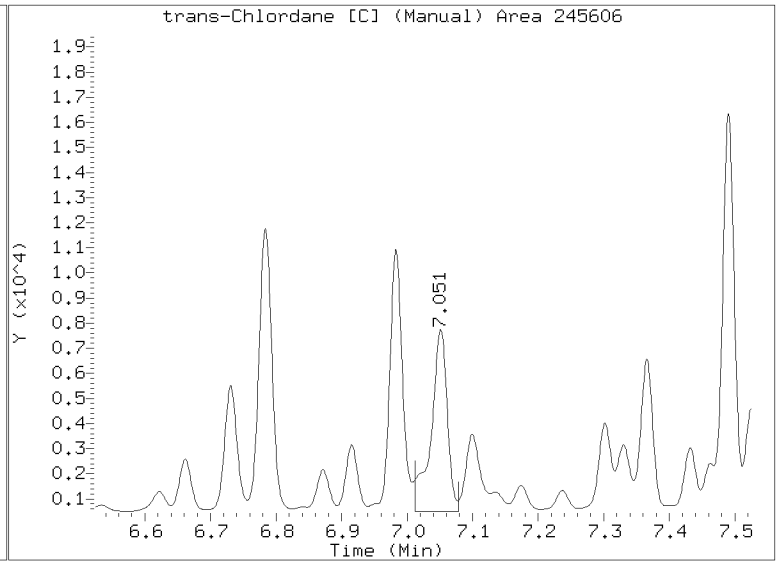
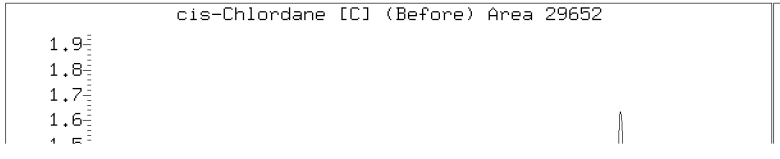
Lab ID:23A0133-08 Client ID:

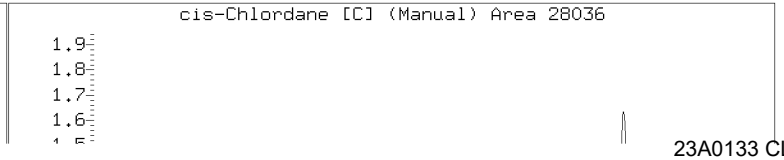












Manual Peak Adjustment Report, CLP-2

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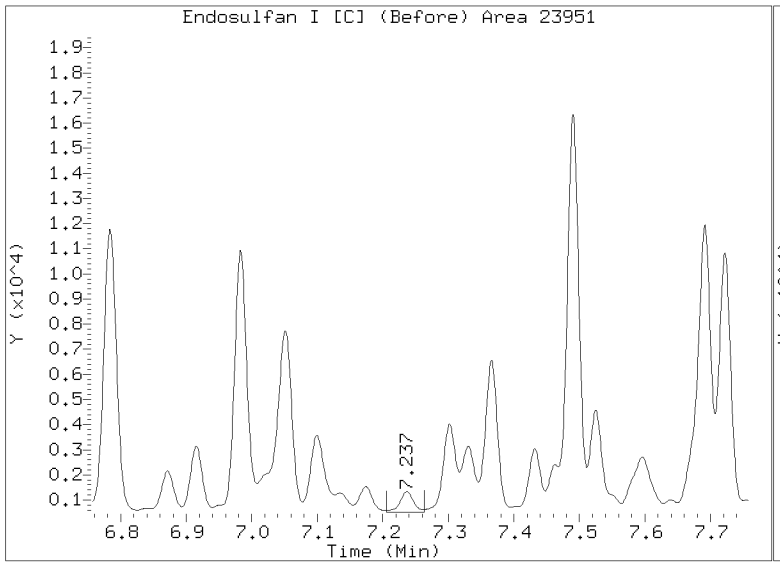
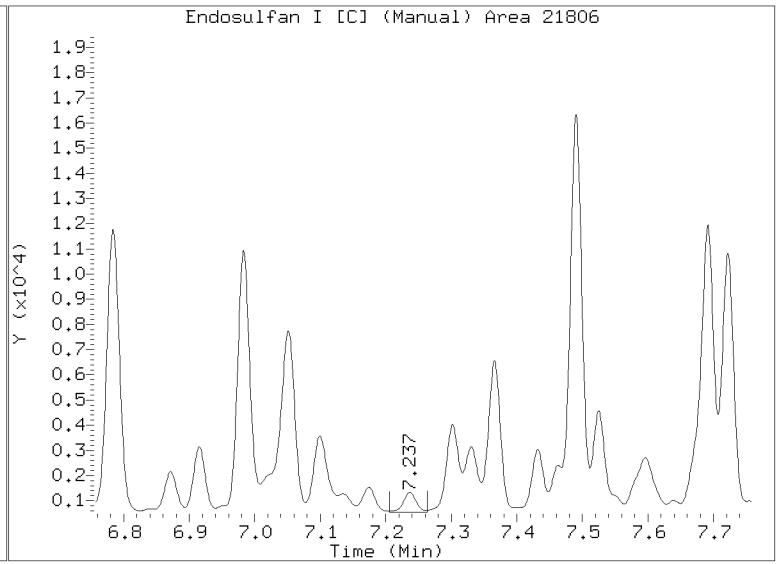
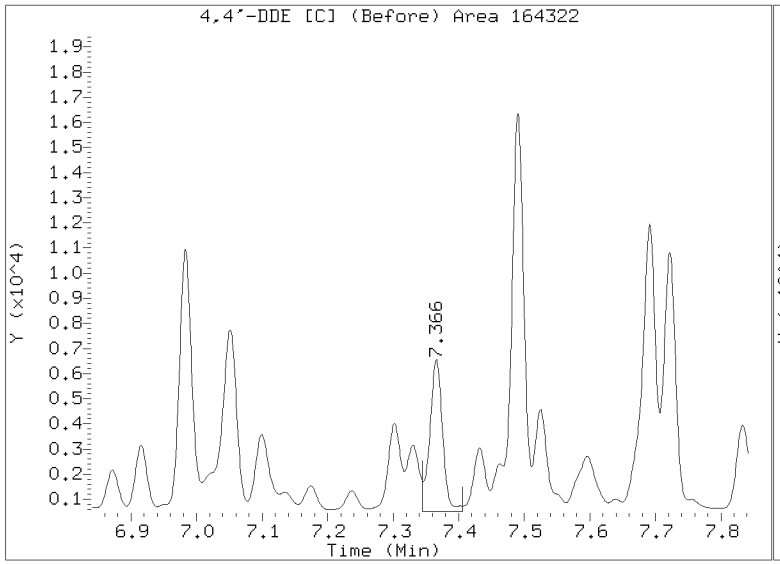
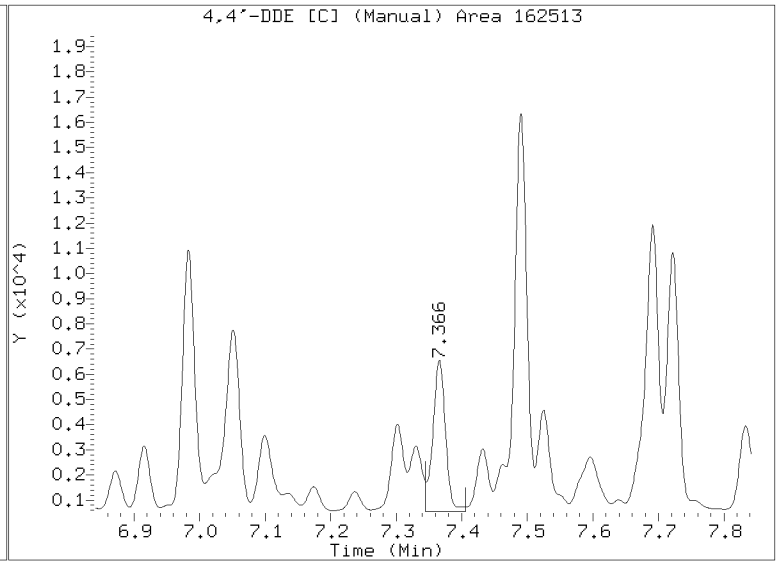
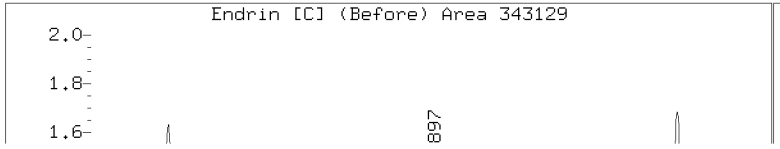
Injection Date: 01-FEB-2023 02:30
Lab ID:23A0133-08 Client ID:

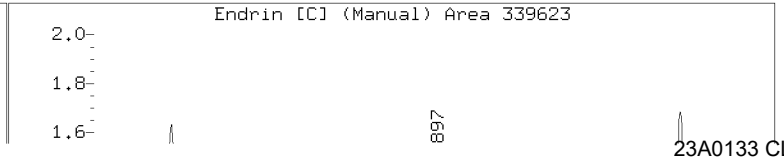












Manual Peak Adjustment Report, CLP-2

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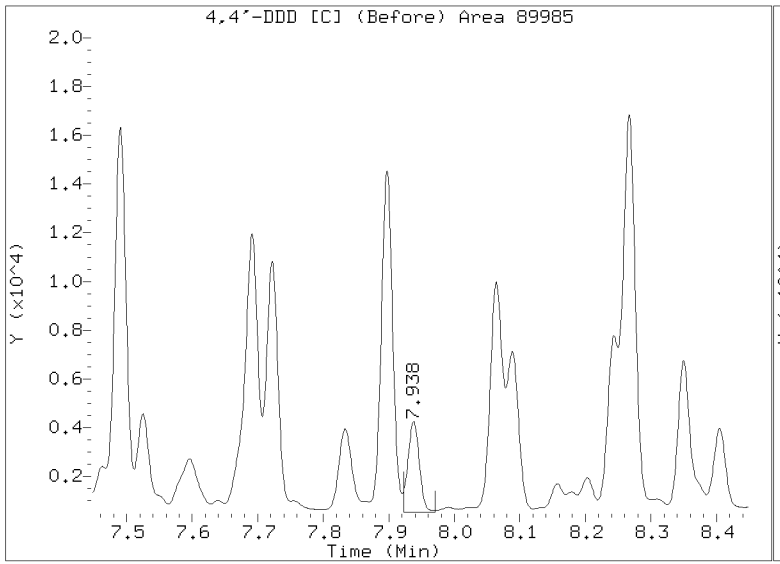
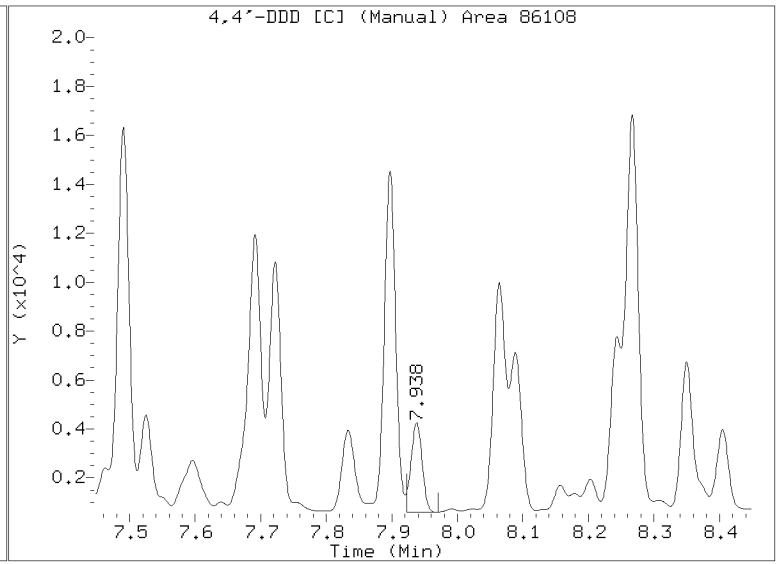
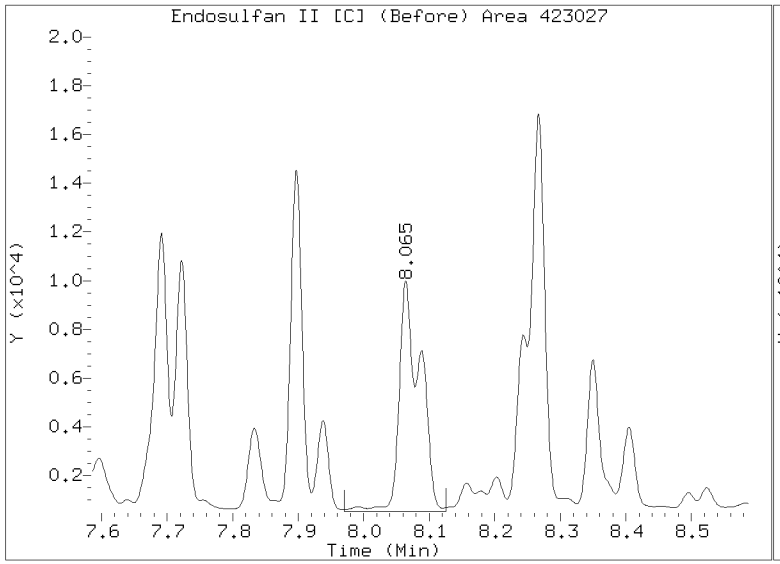
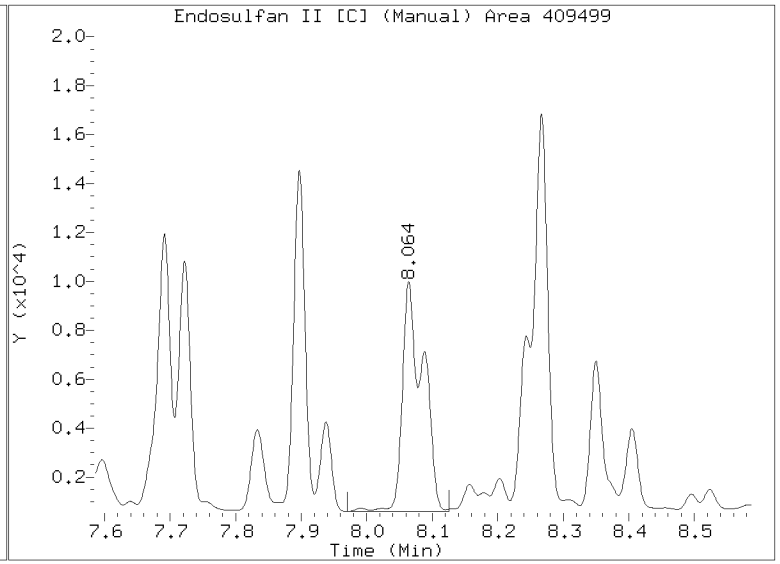
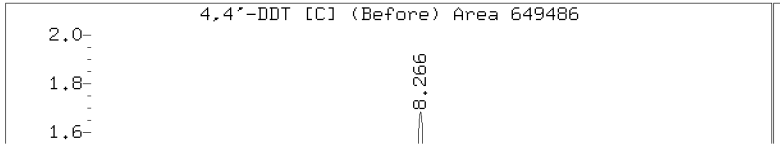
Lab ID:23A0133-08 Client ID:

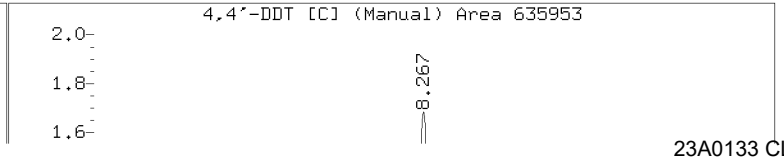












Manual Peak Adjustment Report, CLP-2

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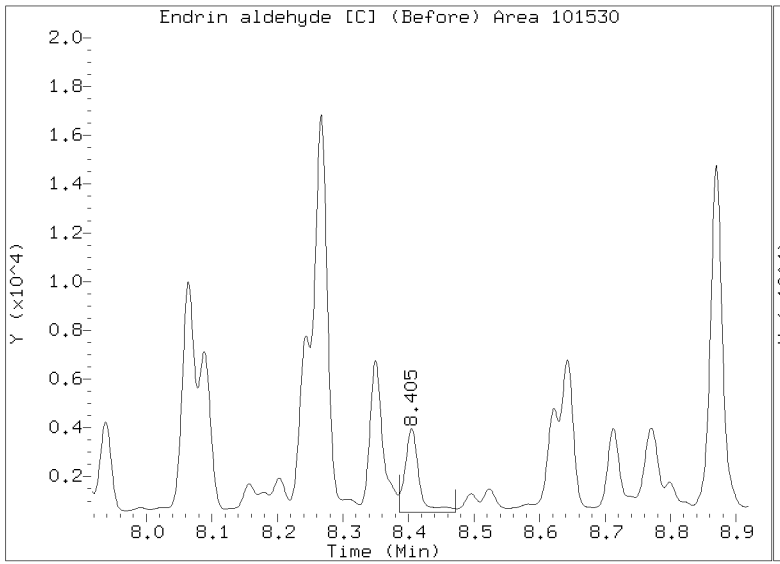
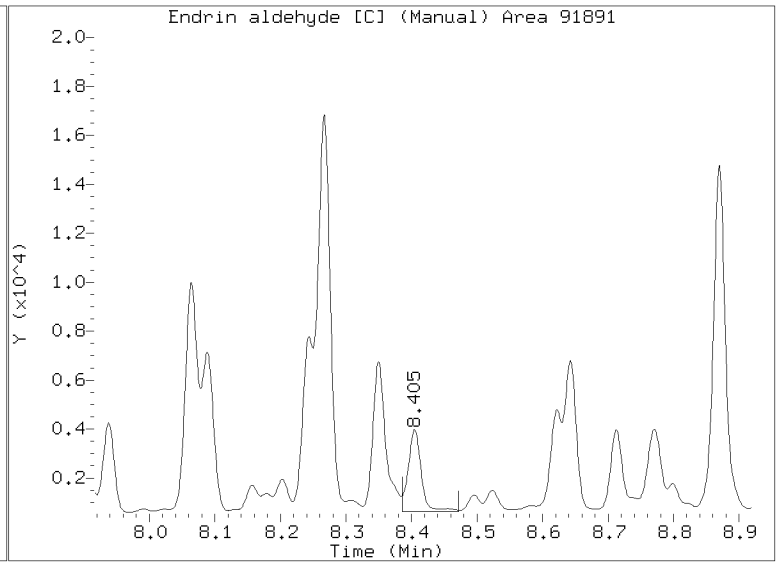
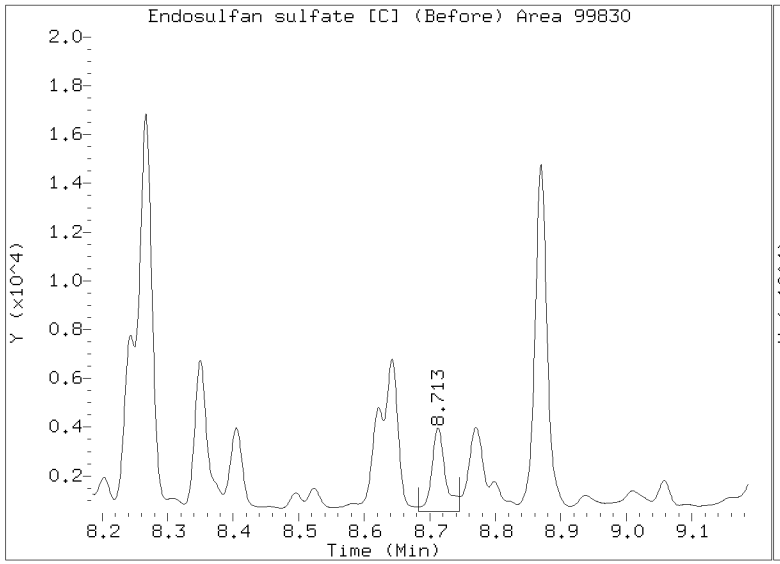
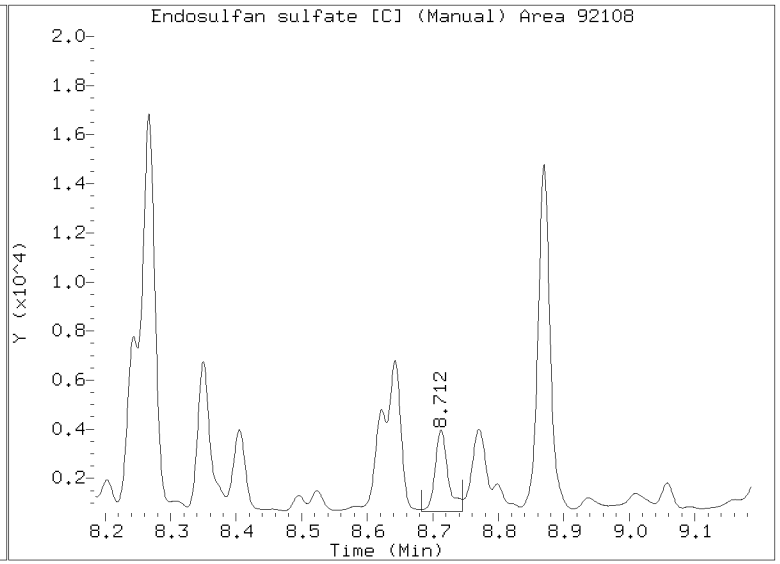
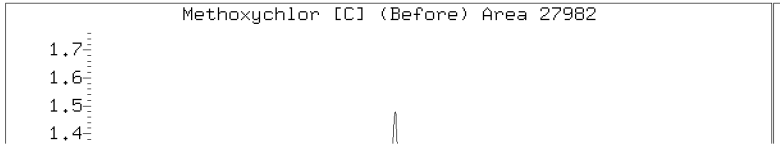
Lab ID:23A0133-08 Client ID:

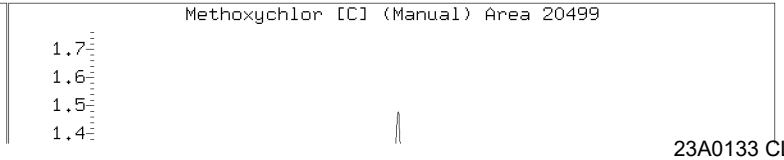












Manual Peak Adjustment Report, CLP-2

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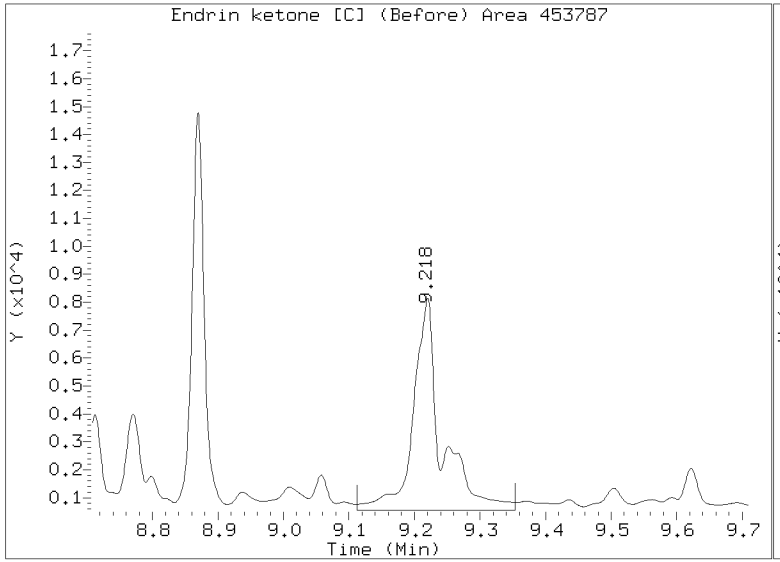
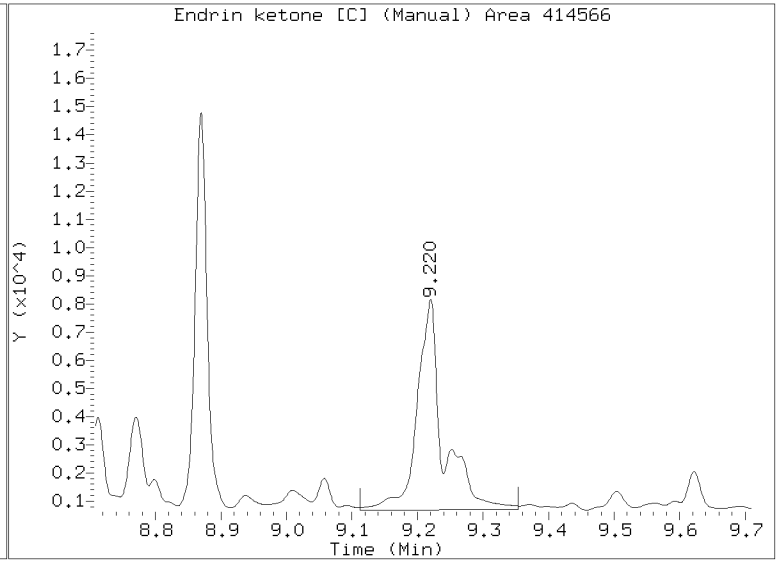
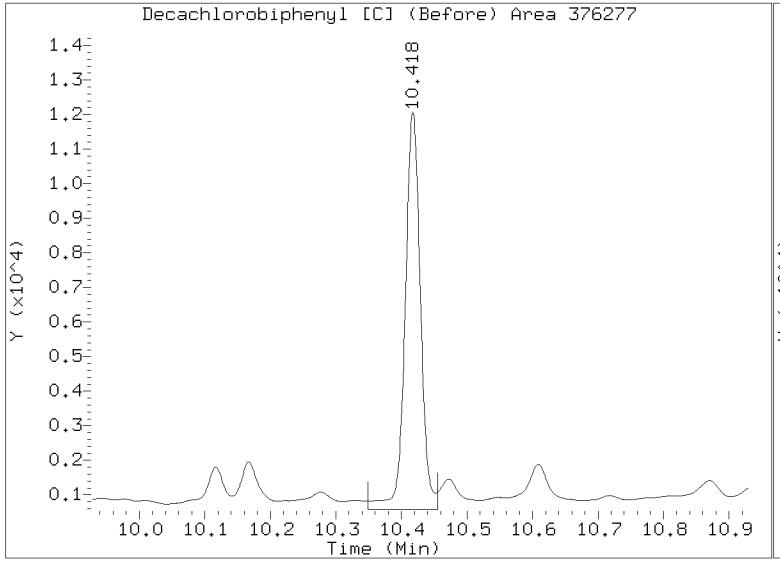
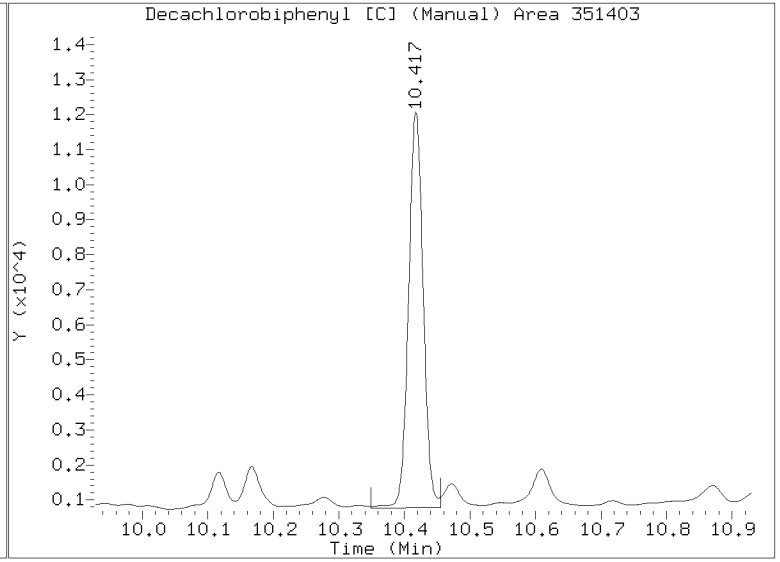
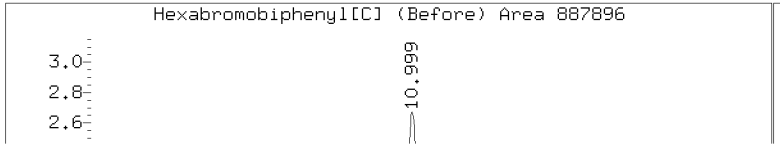
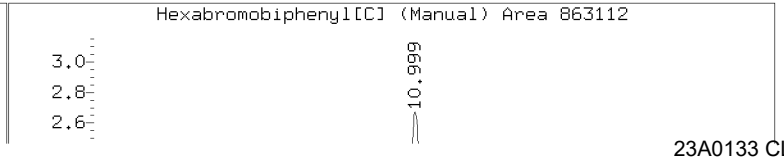












Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1234

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-09 C	File ID:	23013143.D
Sampled:	01/06/23 13:34	Prepared:	01/19/23 13:44	Analyzed:	02/01/23 03:23
% Solids:	53.74	Preparation:	EPA 3546 (Microwave)	Initial/Final:	23.3 g Wet / 2.5 mL
Batch:	BLA0392	Sequence:	SLB0046	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9863*	*7.45*	*93.3*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9863*	*7.81*	*97.8*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9863*	*5.22*	*65.3*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9863*	*5.38*	*67.4*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013143.D
Data file 2: /20230131.b/B20230131.b/23013143.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: 23A0133-09
Client ID:
Injection Date: 01-FEB-2023 03:23
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.301	-0.010	54621	4.822	-0.010	7841	3.10	0.29	165.7*	alpha-BHC
----			5.326	0.017	12529	0.00	1.22	---	beta-BHC
4.879	0.003	67155	----			4.67	0.00	---	delta-BHC
4.610	-0.002	60717	5.222	-0.007	9074	3.98	0.40	163.7*	gamma-BHC (Lindane)
5.077	-0.016	18052	5.755	0.001	31745	1.33	1.53	14.2	Heptachlor
5.429	0.015	60021	6.151	-0.007	28182	3.94	1.19	107.2*	Aldrin
6.073	-0.016	29064	6.784	-0.030	193998	2.20	9.92	127.3*	Heptachlor epoxide b
----			7.237	-0.020	14441	0.00	0.84	---	Endosulfan I
6.769	-0.022	134291	7.525	-0.026	73384	10.32	3.85	91.3*	Dieldrin
6.442	-0.010	105642	7.331	-0.011	54555	8.74	3.12	94.7*	4,4'-DDE
7.062	0.021	261141	7.897	0.021	217019	28.41	17.54	47.3*	Endrin
7.301	0.023	15107	8.088	0.001	94212	1.83	7.43	121.1*	Endosulfan II
----			7.938	-0.011	62872	0.00	5.22	---	4,4'-DDD
----			8.713	0.027	71529	0.00	6.42	---	Endosulfan sulfate
----			8.266	-0.000	366476	0.00	31.55	---	4,4'-DDT
7.905	0.028	33598	----			9.06	0.00	---	Methoxychlor
----			9.218	0.009	194785	0.00	16.19	---	Endrin ketone
7.727	0.020	69907	8.405	-0.014	72722	10.59	8.13	26.3	Endrin aldehyde
----			7.051	0.026	174769	0.00	8.96	---	trans-Chlordane
6.392	0.016	69834	7.174	-0.011	18227	5.19	0.95	137.9*	cis-Chlordane
2.284	-0.020	7420	2.511	0.029	5491	0.40	0.21	60.9*	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.797	-0.003	325083	4.189	-0.007	510126	26.13	26.94	3.1	Tetrachloro-m-xylene
9.318	-0.000	265000	10.418	-0.012	376145	37.30	39.11	4.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

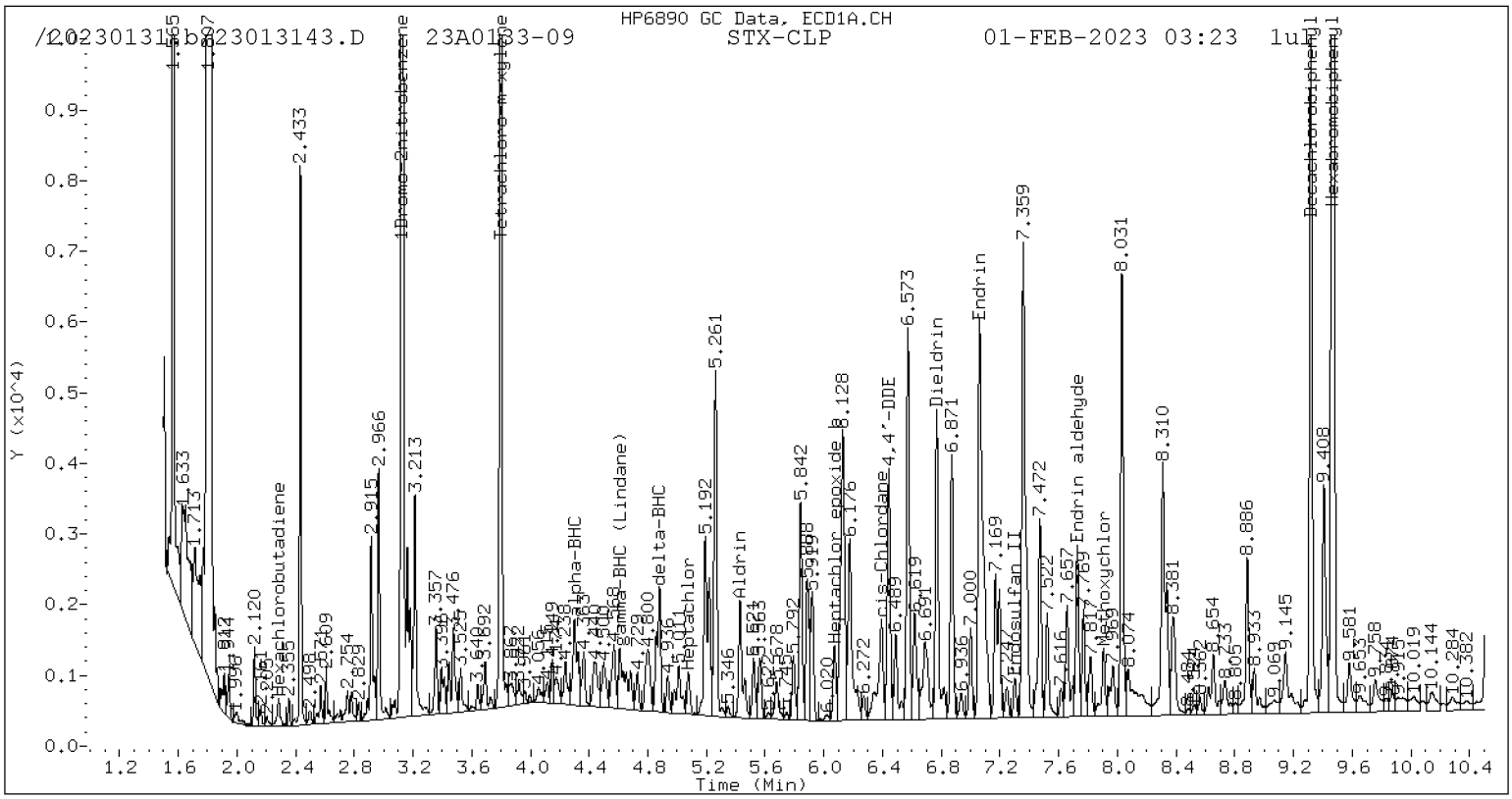
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	914815	36.0
Hexabromobiphenyl	609723	701103	15.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1345157	33.6
Hexabromobiphenyl	769764	870138	13.0

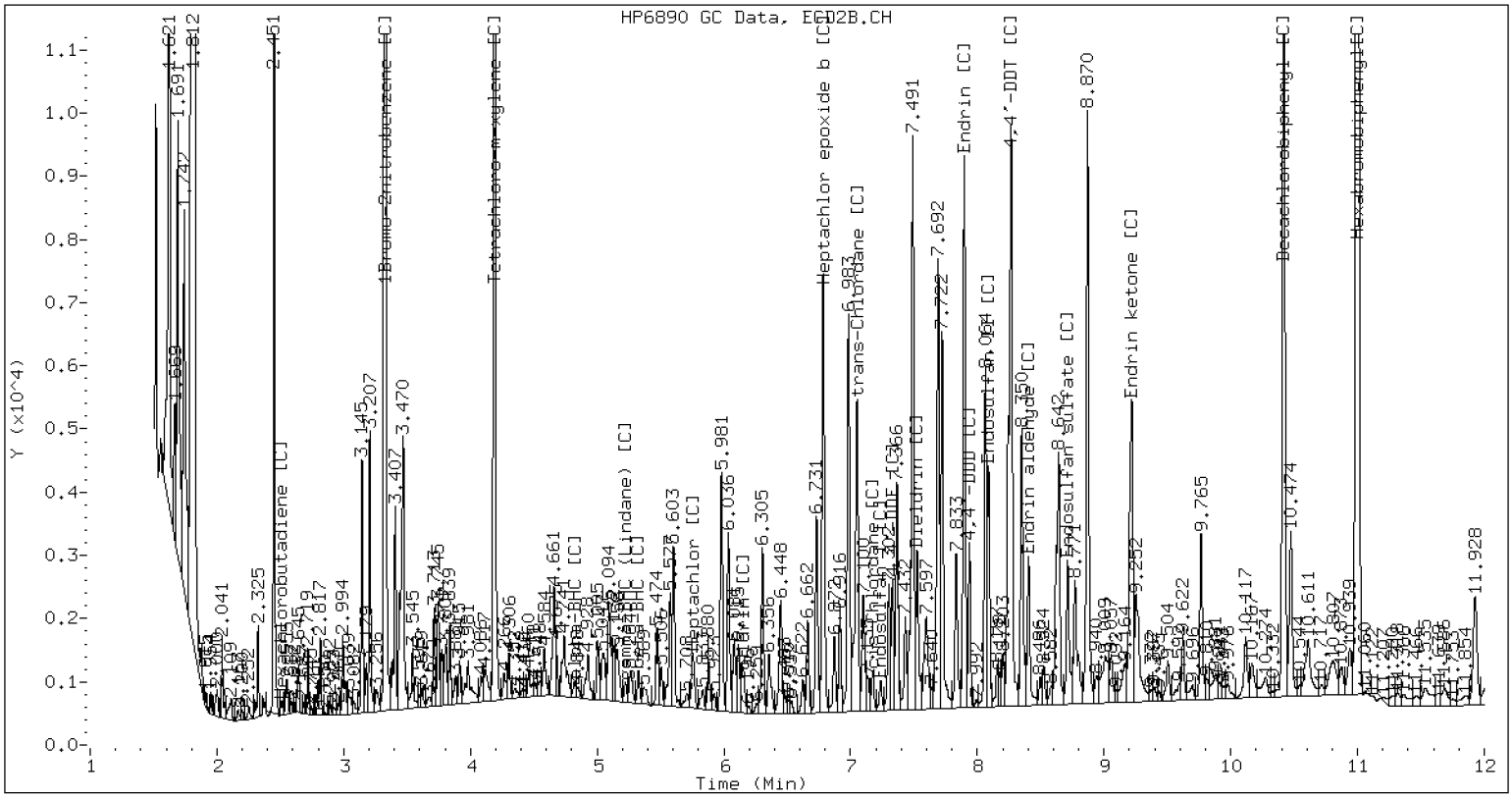
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230131.b/B20230131.b/23013143.D 23A0133-09 CLP2



CLP-2 Manual Integration: NO

Manual Peak Adjustment Report, CLP-2

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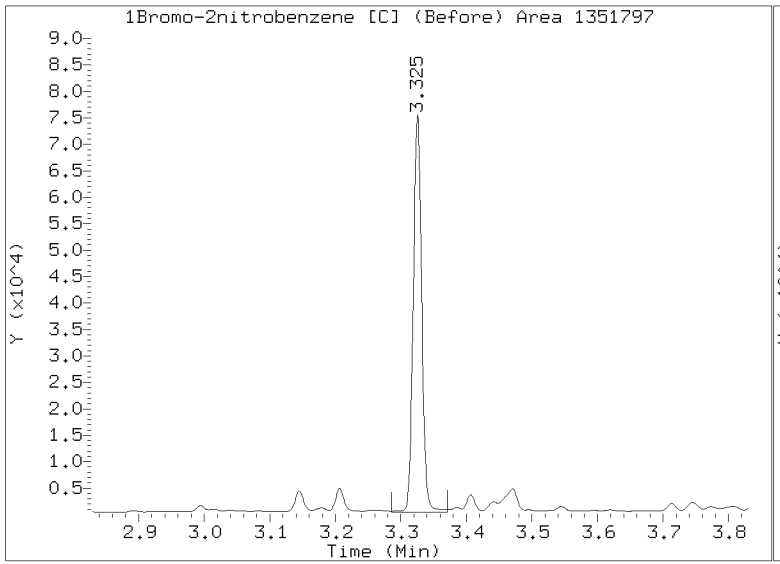
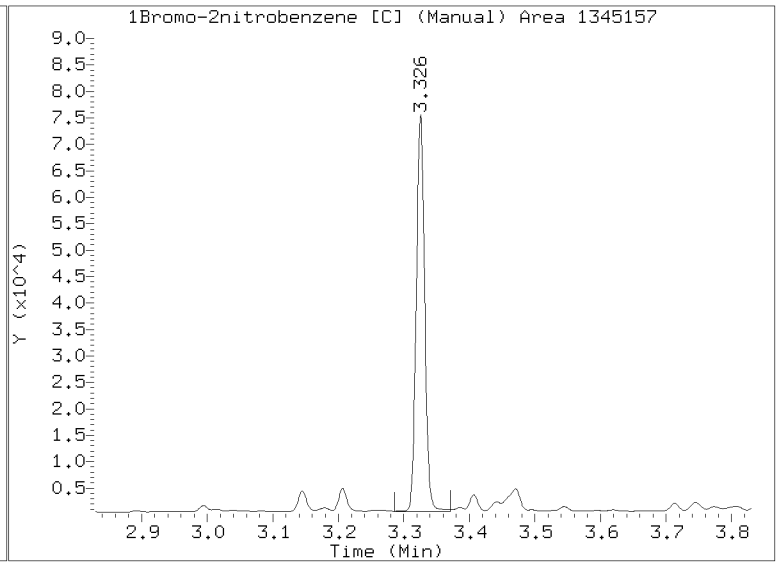
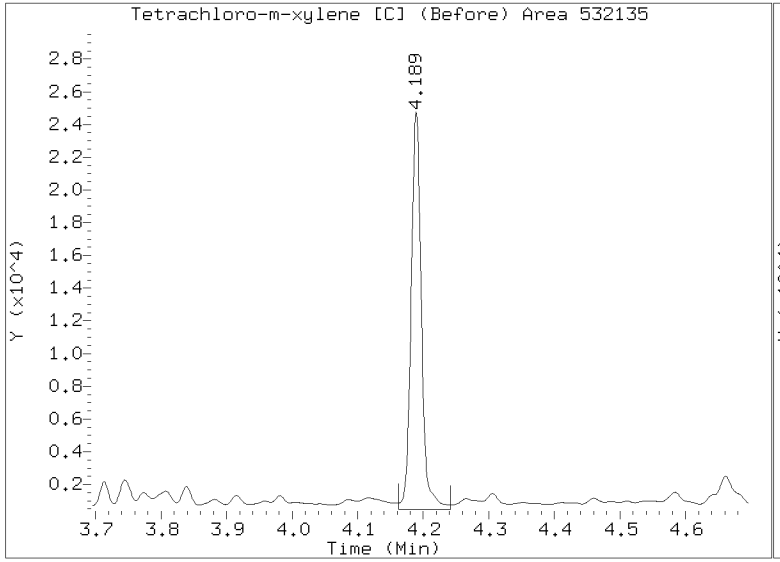
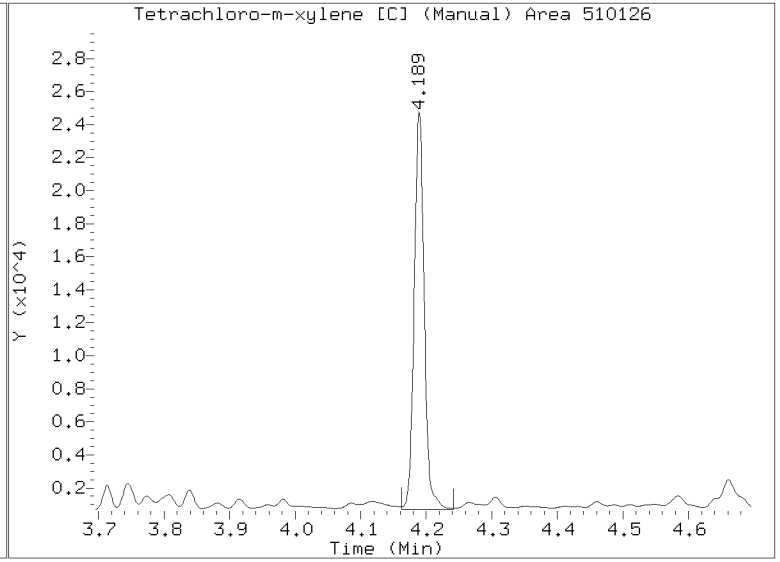
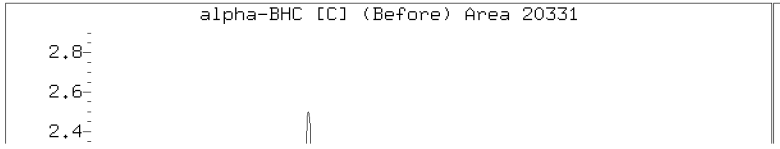
Lab ID:23A0133-09 Client ID:

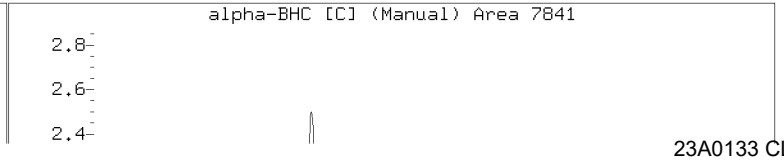












Manual Peak Adjustment Report, CLP-2

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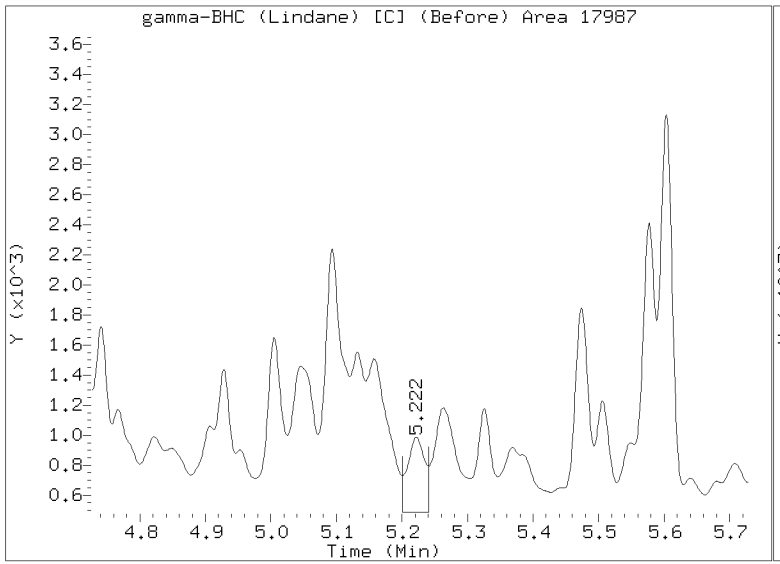
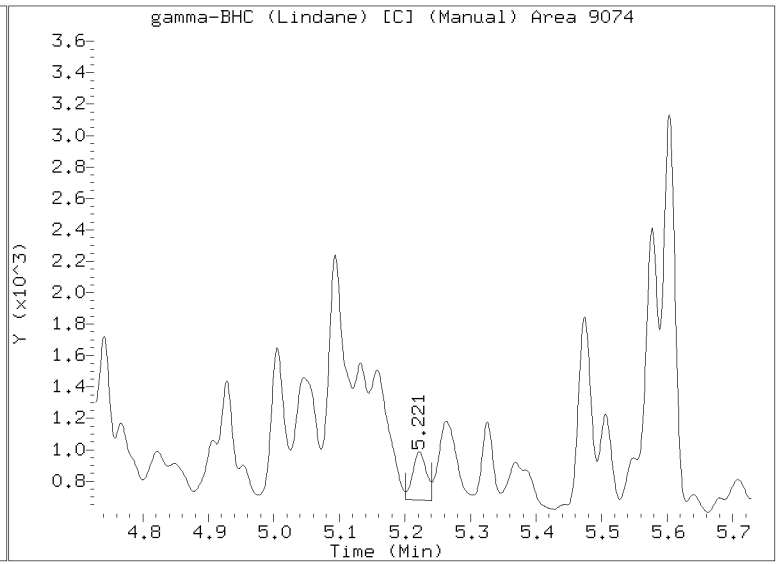
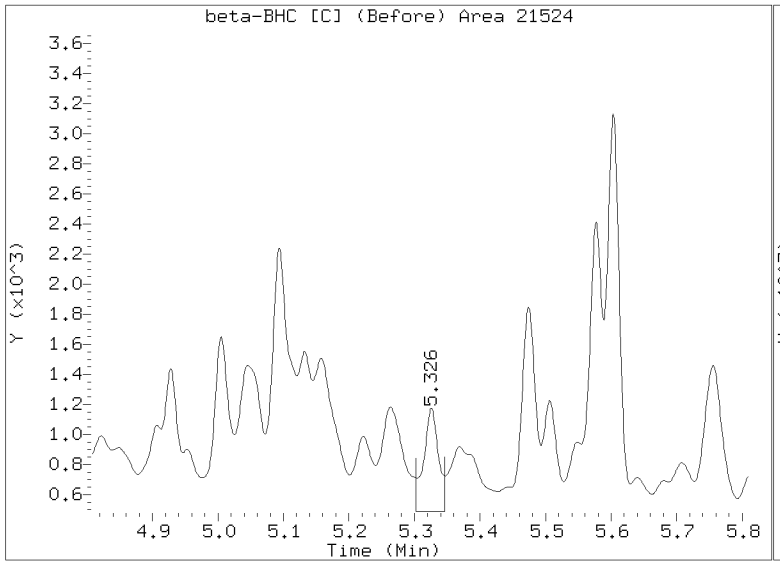
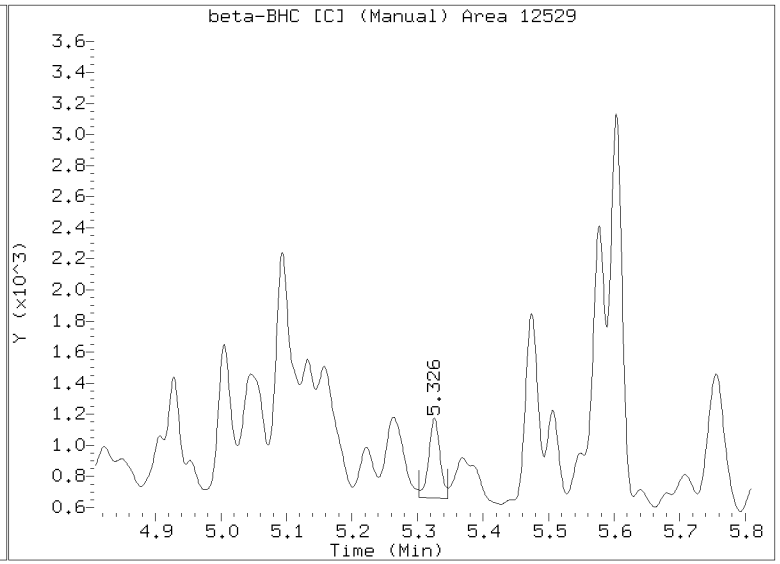
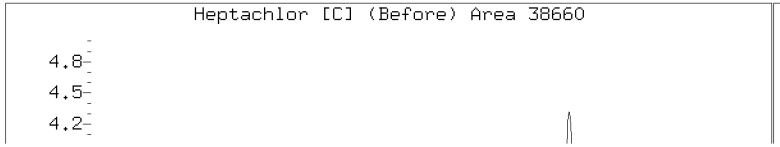
Lab ID:23A0133-09 Client ID:

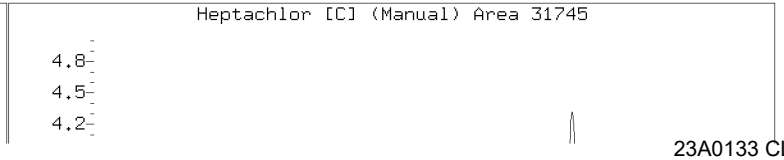






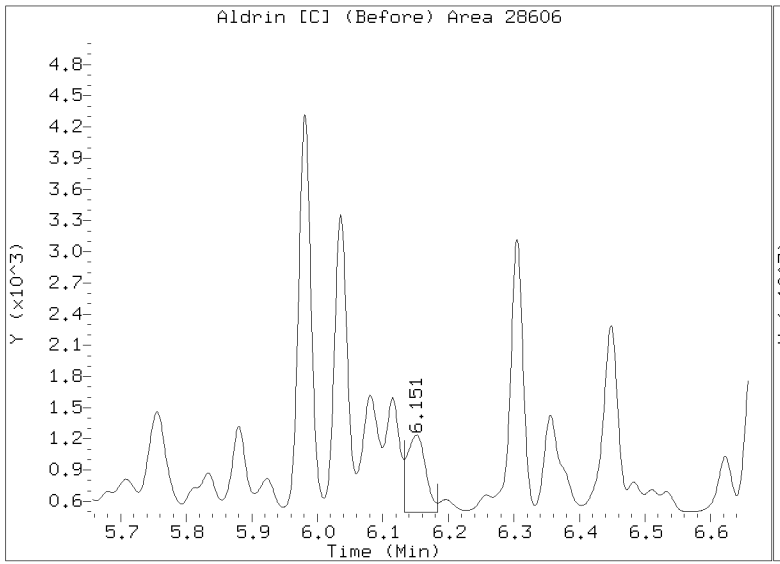


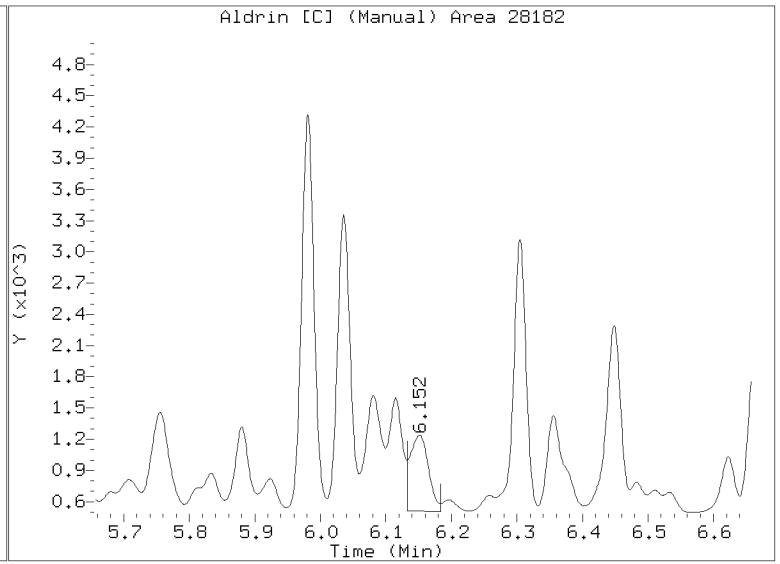


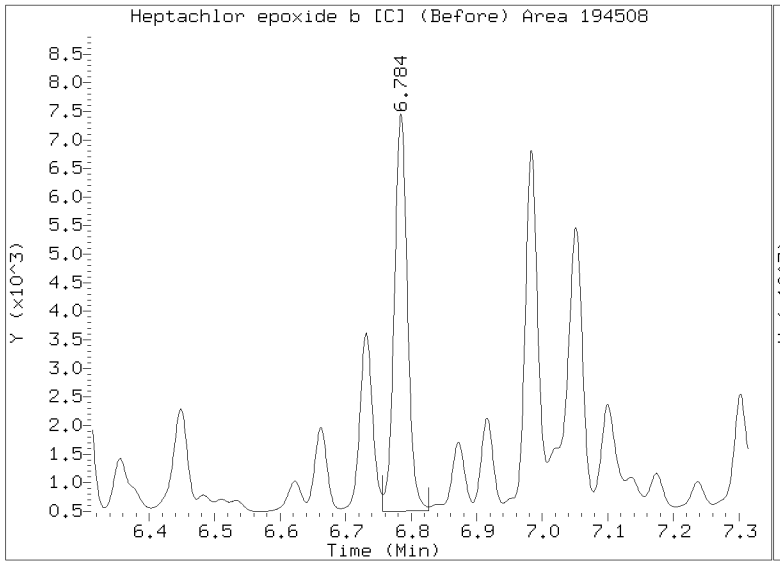


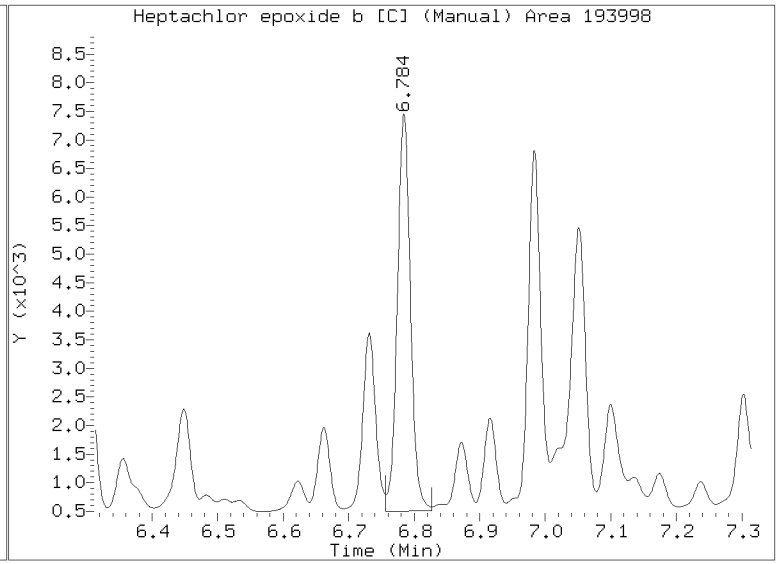
Manual Peak Adjustment Report, CLP-2

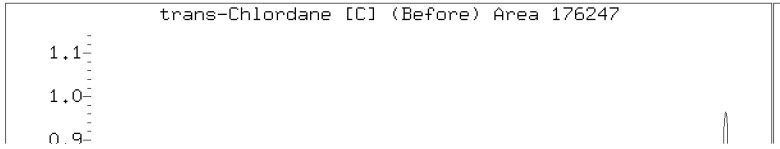
Datafile: /20230131.b/B20230131.b/23013143.D
Injection Date: 01-FEB-2023 03:23
Lab ID:23A0133-09 Client ID:

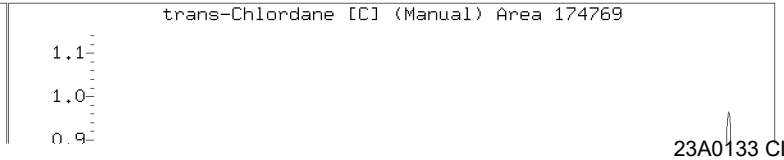












Manual Peak Adjustment Report, CLP-2

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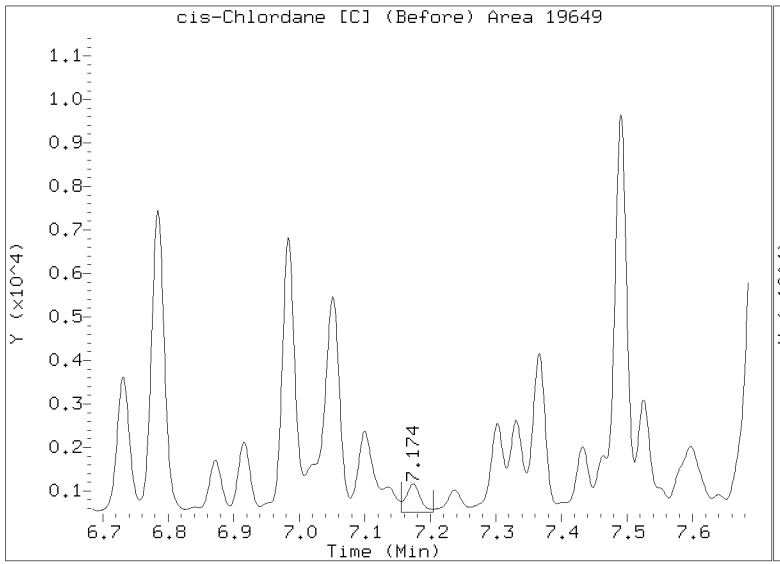
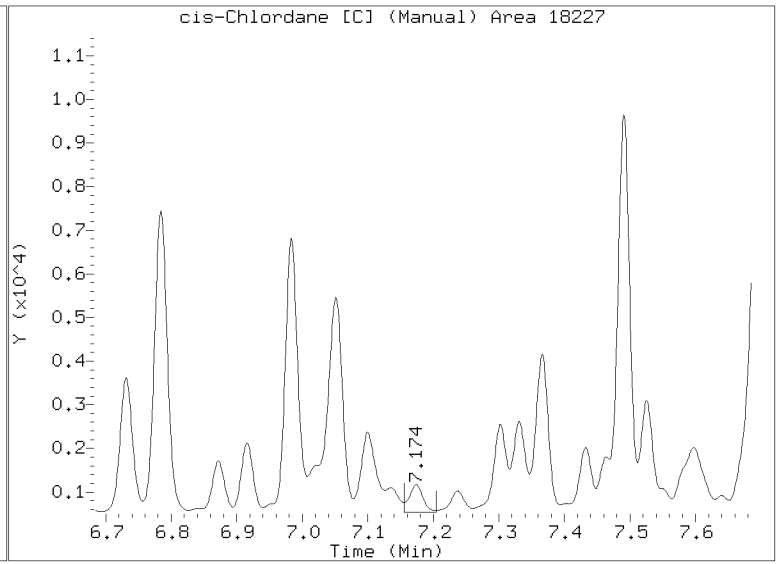
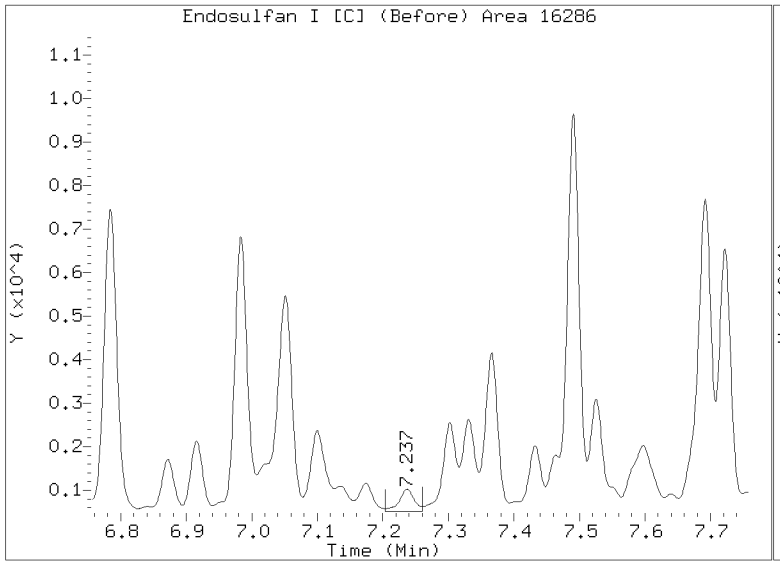
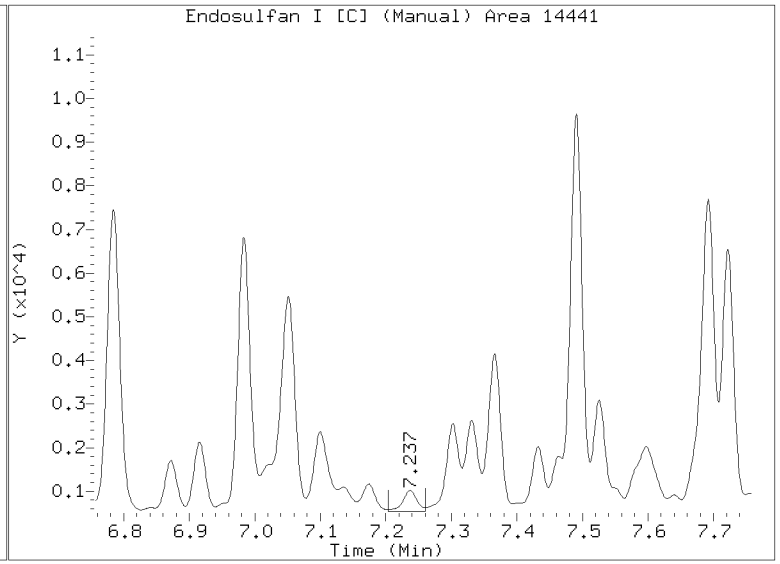
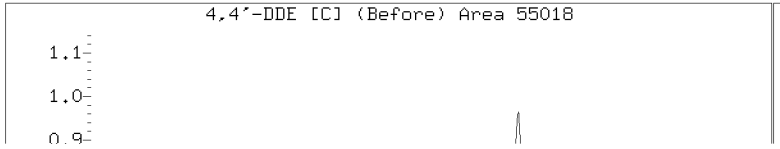
Lab ID:23A0133-09 Client ID:

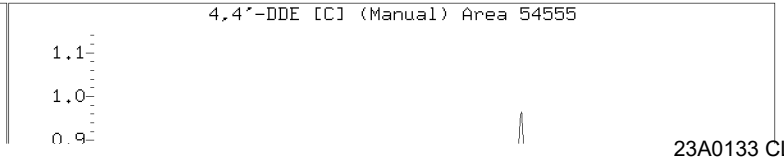












Manual Peak Adjustment Report, CLP-2

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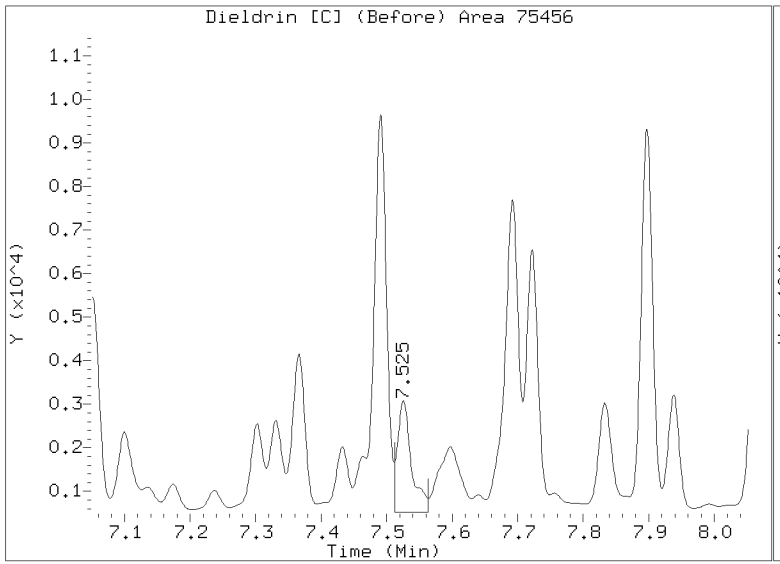
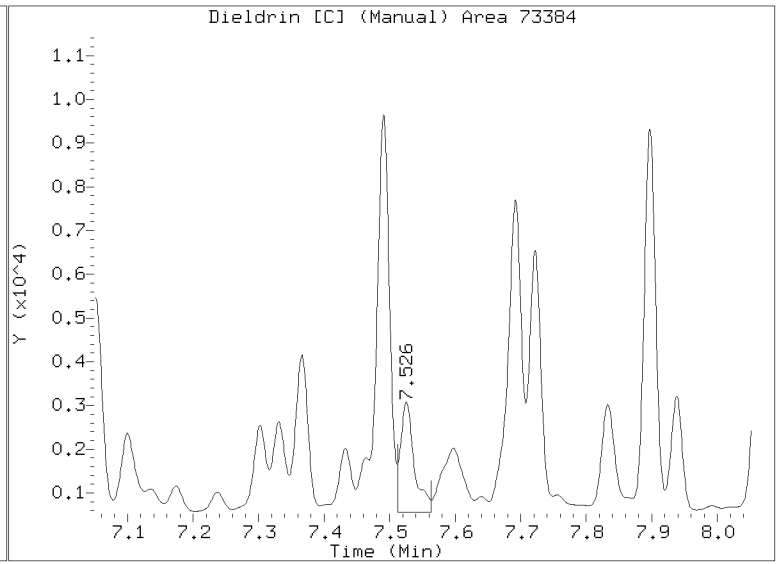
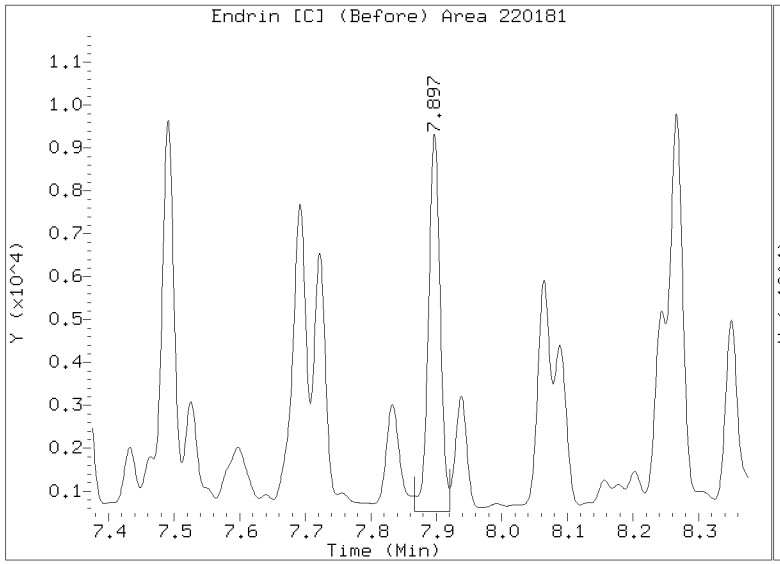
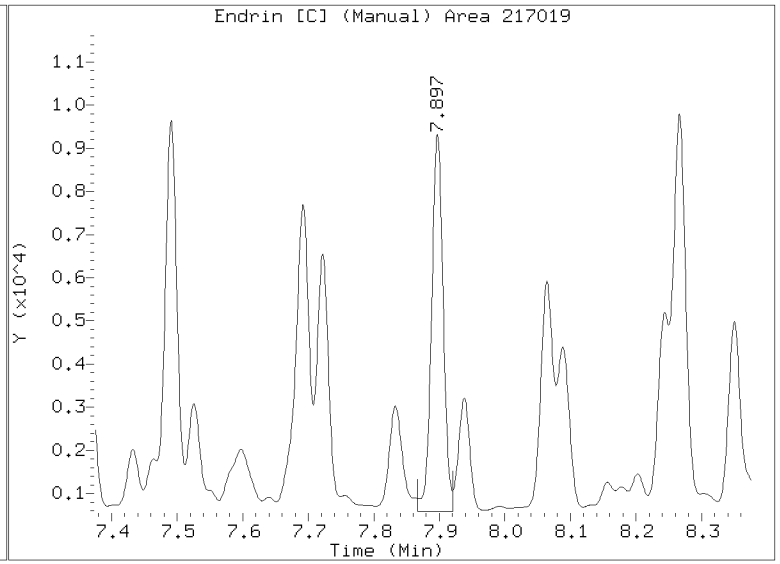
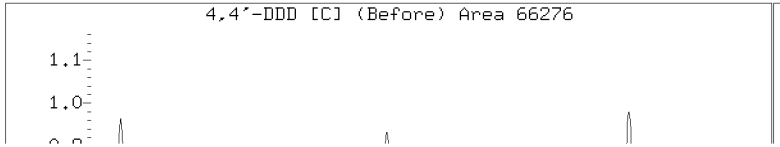
Lab ID:23A0133-09 Client ID:

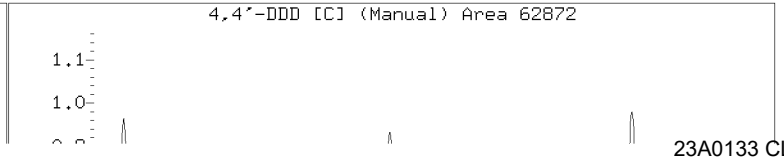












Manual Peak Adjustment Report, CLP-2

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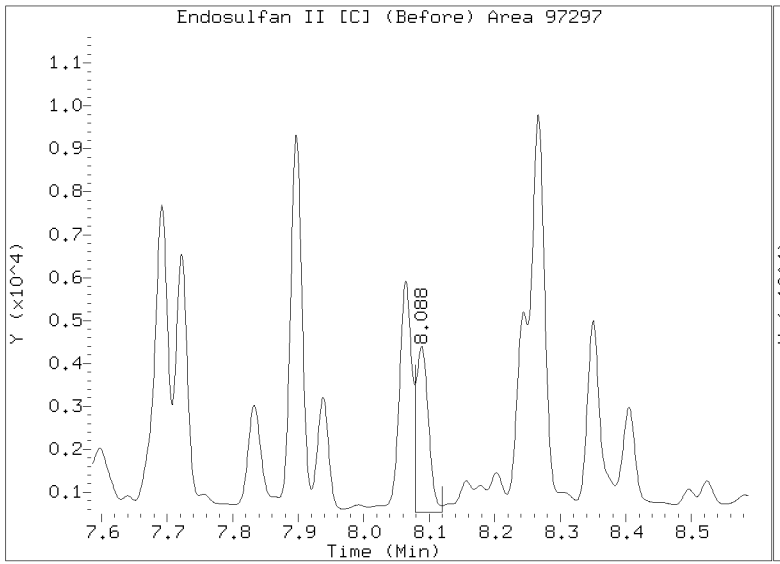
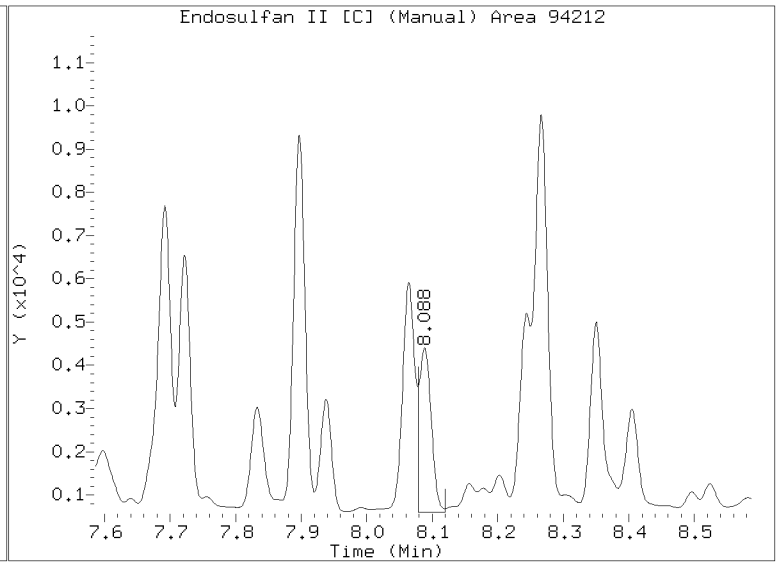
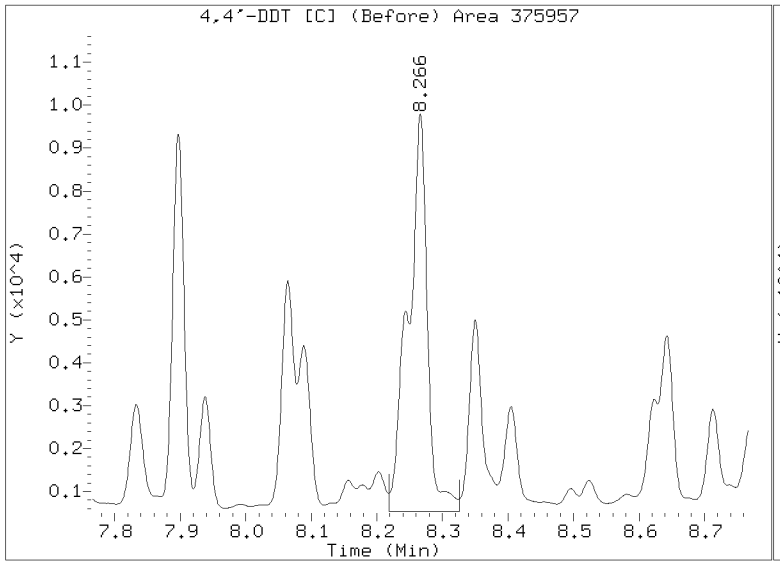
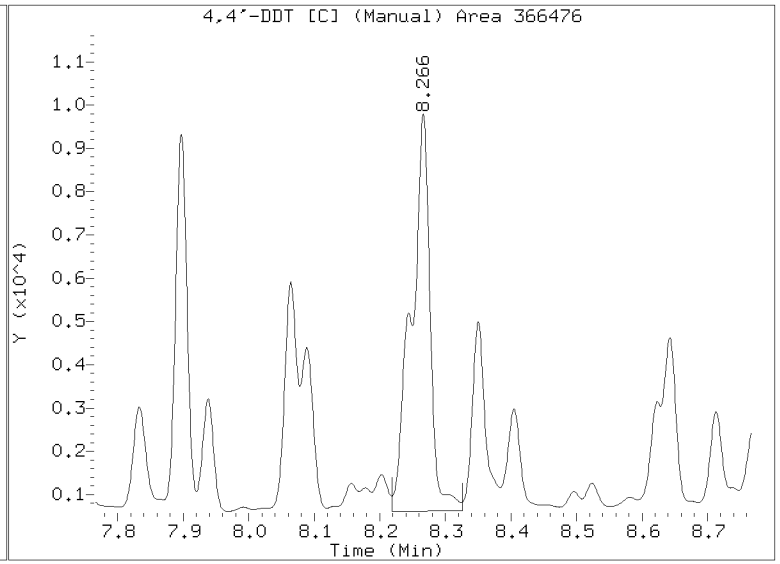
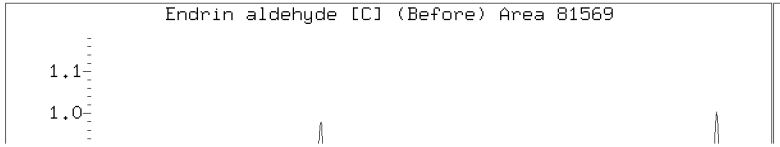
Lab ID:23A0133-09 Client ID:

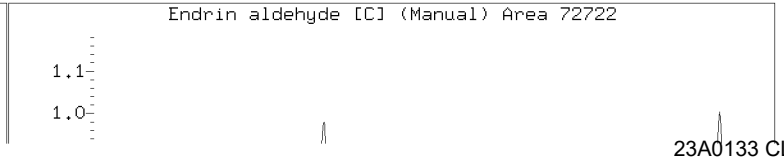












Manual Peak Adjustment Report, CLP-2

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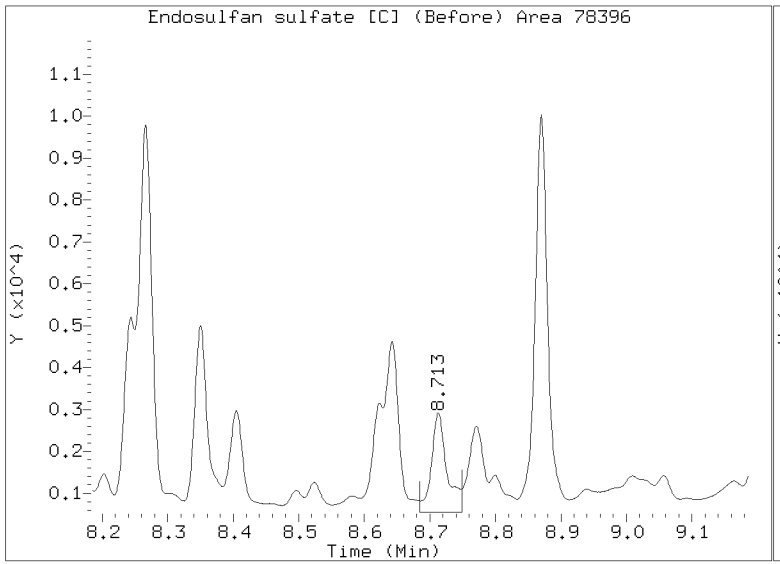
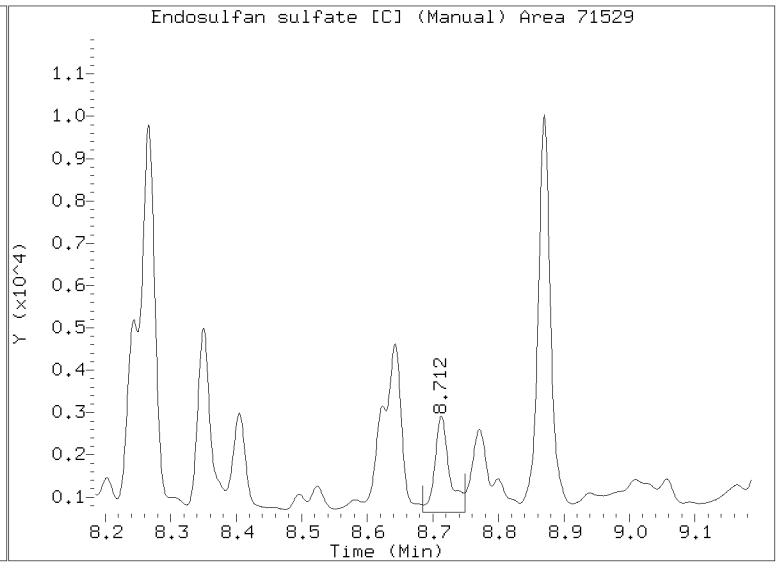
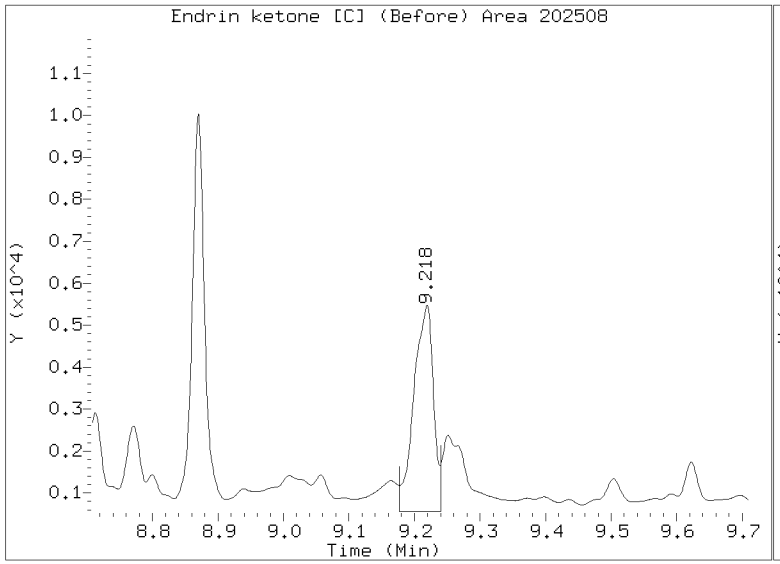
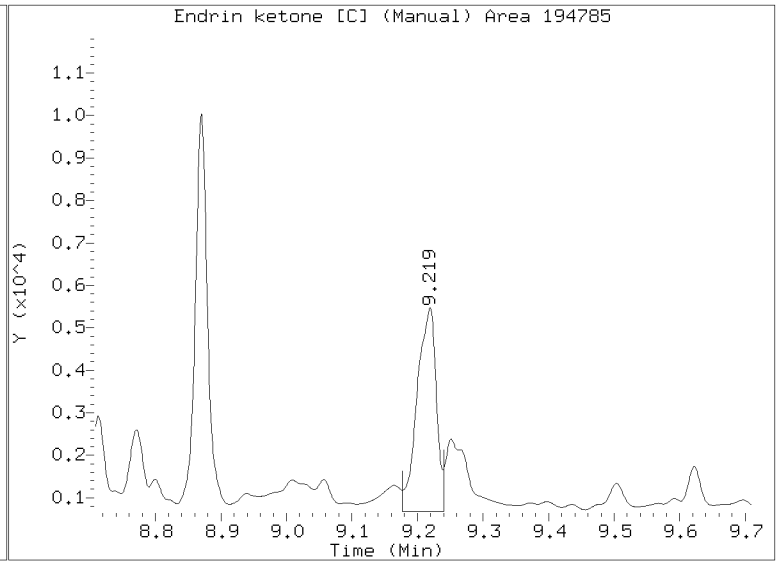
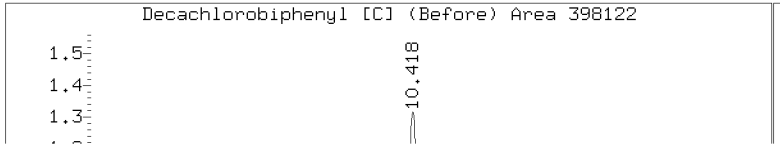
Lab ID:23A0133-09 Client ID:

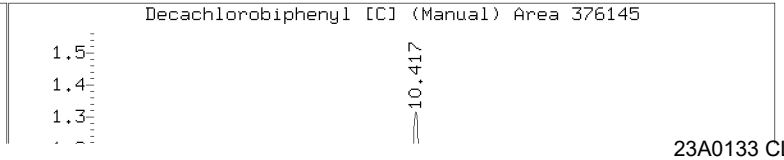












Manual Peak Adjustment Report, CLP-2

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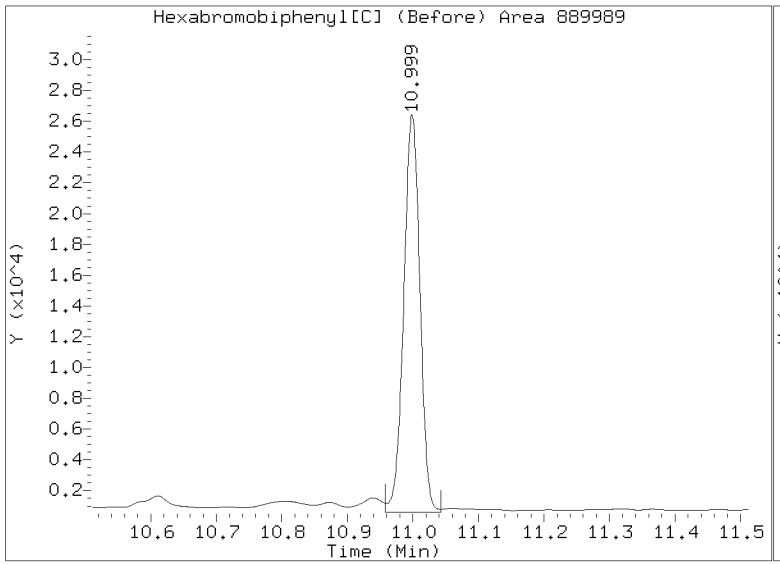
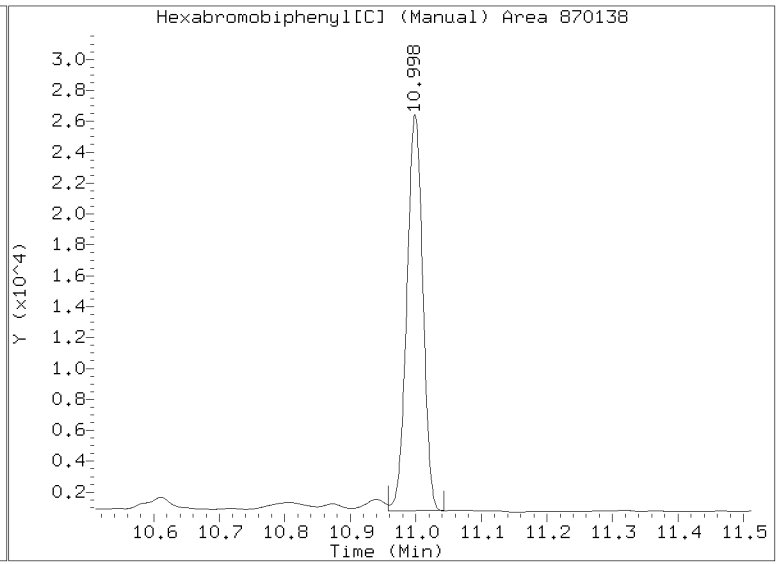
Lab ID:23A0133-09 Client ID:





Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1215

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-10 C	File ID:	23013144.D
Sampled:	01/06/23 11:38	Prepared:	01/19/23 13:44	Analyzed:	02/01/23 03:41
% Solids:	53.49	Preparation:	EPA 3546 (Microwave)	Initial/Final:	23.37 g Wet / 2.5 mL
Batch:	BLA0392	Sequence:	SLB0046	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9996*	*7.92*	*99.0*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9996*	*7.79*	*97.4*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9996*	*4.38*	*54.7*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9996*	*4.35*	*54.4*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013144.D
Data file 2: /20230131.b/B20230131.b/23013144.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: 23A0133-10
Client ID:
Injection Date: 01-FEB-2023 03:41
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.303	-0.007	34041	4.819	-0.014	10496	1.97	0.40	132.7*	alpha-BHC
4.685	-0.008	30538	5.328	0.019	2262	4.60	0.23	181.2*	beta-BHC
4.876	0.001	9616	5.642	-0.019	4322	0.68	0.20	109.4*	delta-BHC
4.614	0.003	22639	----			1.51	0.00	---	gamma-BHC (Lindane)
5.082	-0.010	11438	5.770	0.016	12275	0.86	0.61	34.3	Heptachlor
5.432	0.018	12732	6.149	-0.009	29986	0.85	1.30	41.4*	Aldrin
6.076	-0.012	69144	6.784	-0.030	104957	5.35	5.50	2.9	Heptachlor epoxide b
----			7.238	-0.019	6414	0.00	0.38	---	Endosulfan I
6.773	-0.018	433719	7.528	-0.024	323242	34.01	17.40	64.6*	Dieldrin
6.445	-0.007	137348	7.333	-0.009	94139	11.60	5.53	70.9*	4,4'-DDE
7.066	0.025	919836	7.900	0.025	877949	101.68	70.34	36.4	Endrin
7.306	0.028	37859	8.068	-0.020	409056	4.65	31.97	149.2*	Endosulfan II
----			7.940	-0.008	108872	0.00	8.97	---	4,4'-DDD
----			8.715	0.029	541754	0.00	48.22	---	Endosulfan sulfate
7.363	-0.028	731645	8.268	0.002	627349	88.84	53.53	49.6*	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
8.387	-0.027	580829	9.215	0.006	1677663	65.57	138.25	71.3*	Endrin ketone
7.730	0.024	604856	8.408	-0.010	504227	93.12	55.87	50.0*	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
2.285	-0.019	7467	2.512	0.030	6033	0.41	0.24	52.4*	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.799	-0.002	266631	4.191	-0.006	401908	21.88	21.77	0.5	Tetrachloro-m-xylene
9.323	0.004	276997	10.421	-0.008	377995	39.62	38.96	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

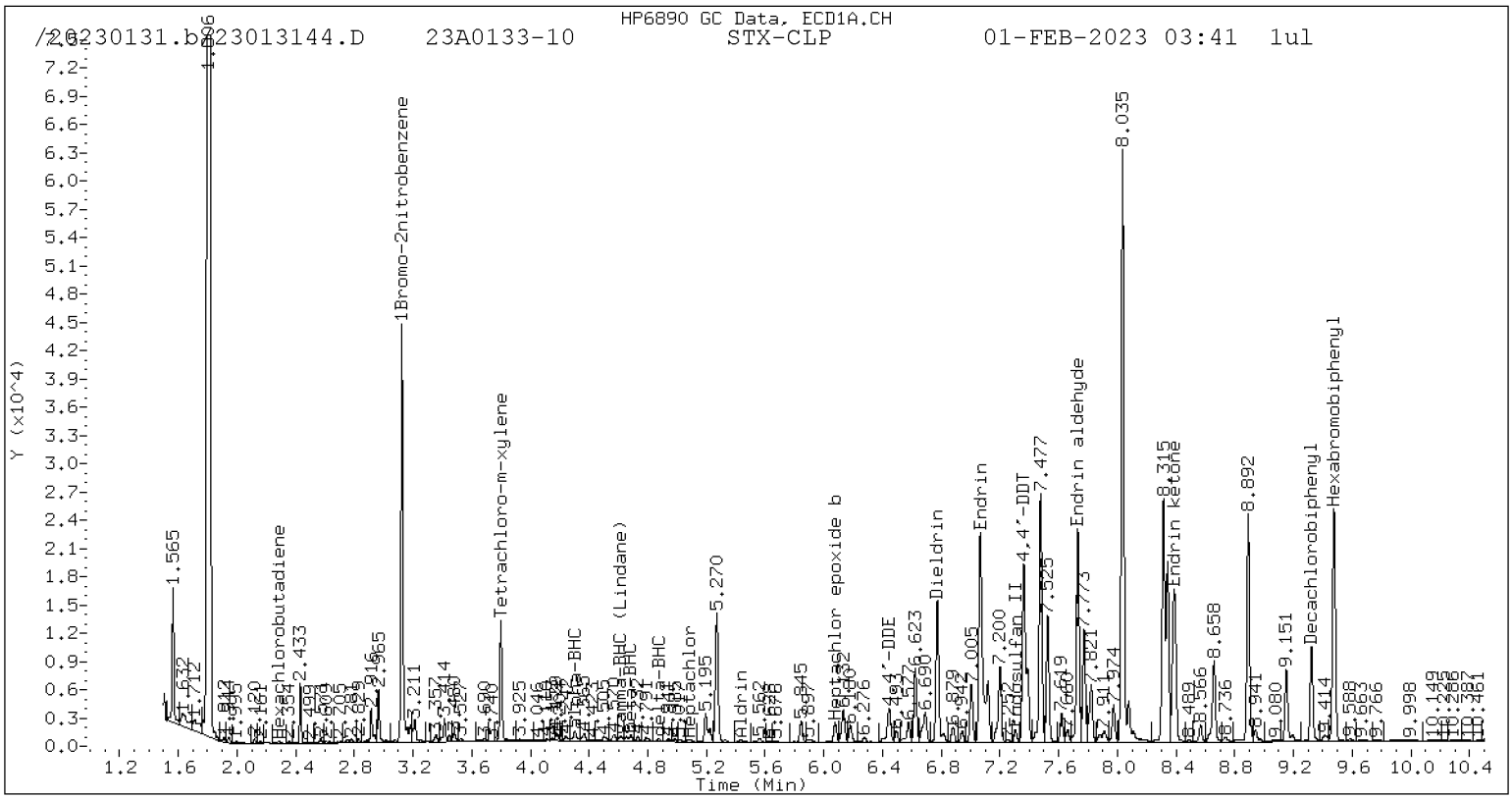
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	896184	33.3
Hexabromobiphenyl	609723	690015	13.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1311546	30.3
Hexabromobiphenyl	769764	877888	14.0

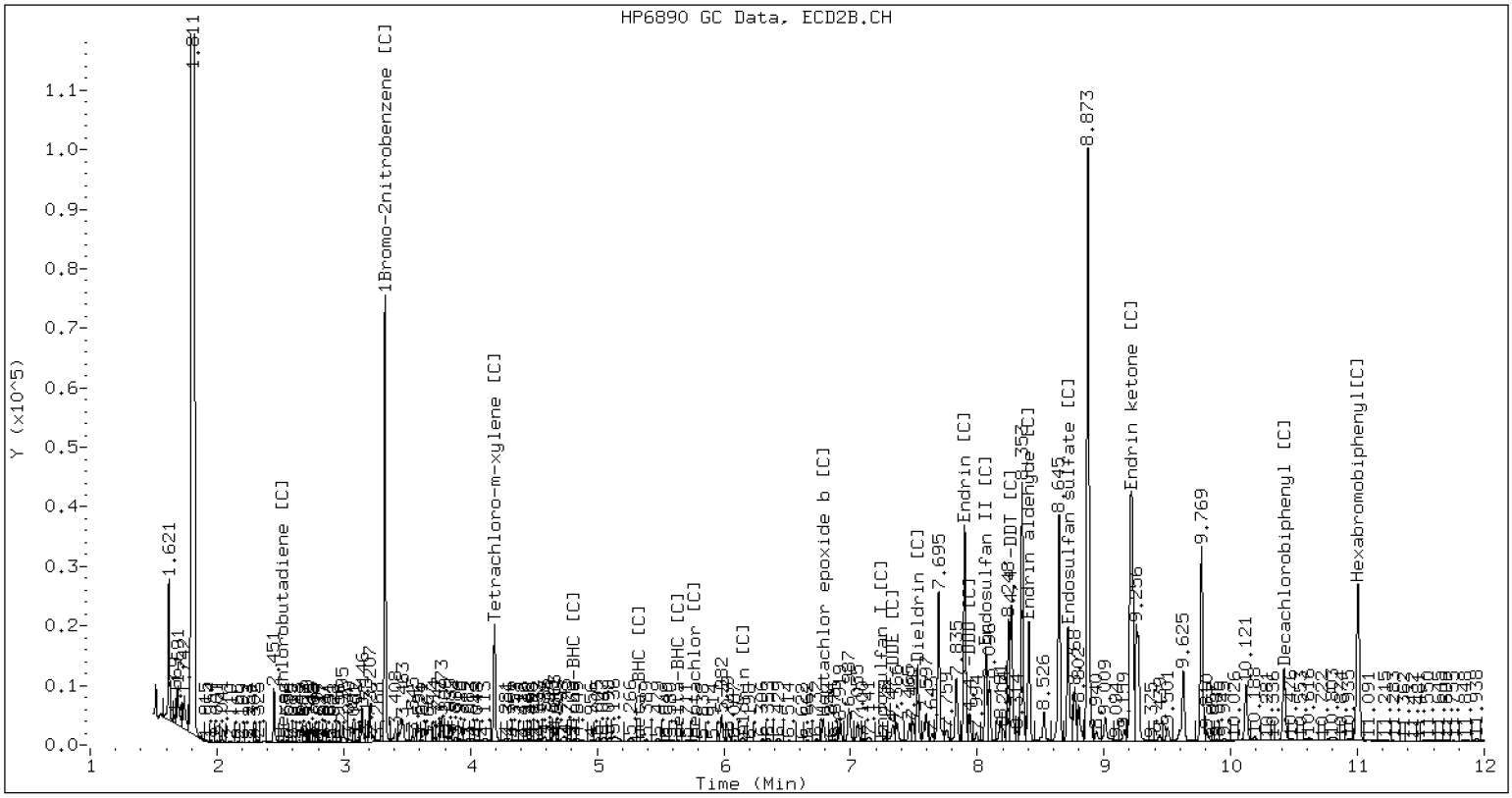
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

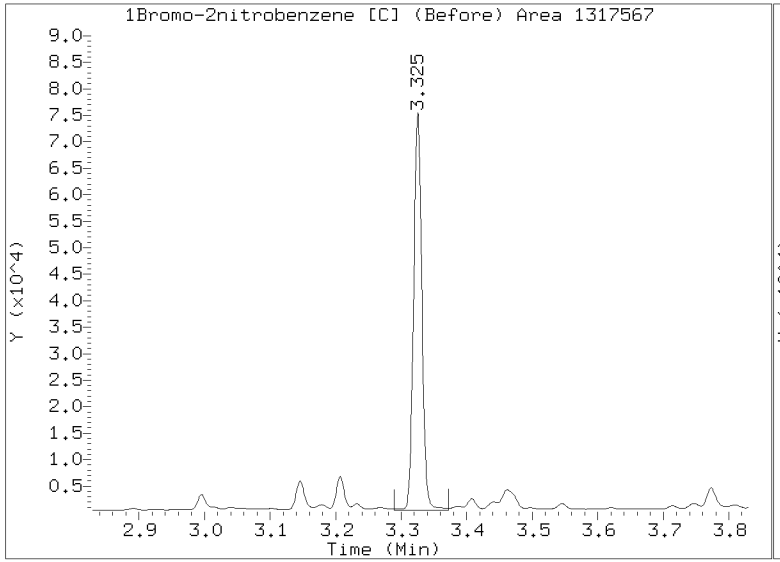
/20230131.b/B20230131.b/23013144.D 23A0133-10 CLP2

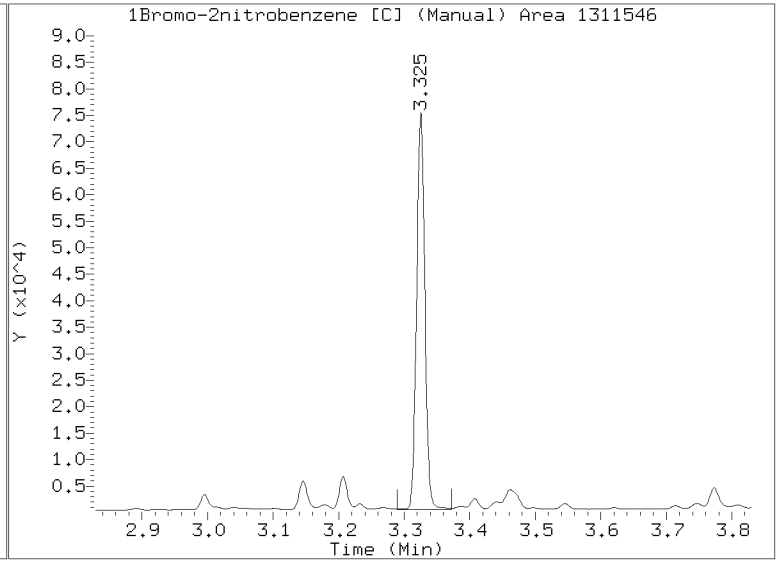


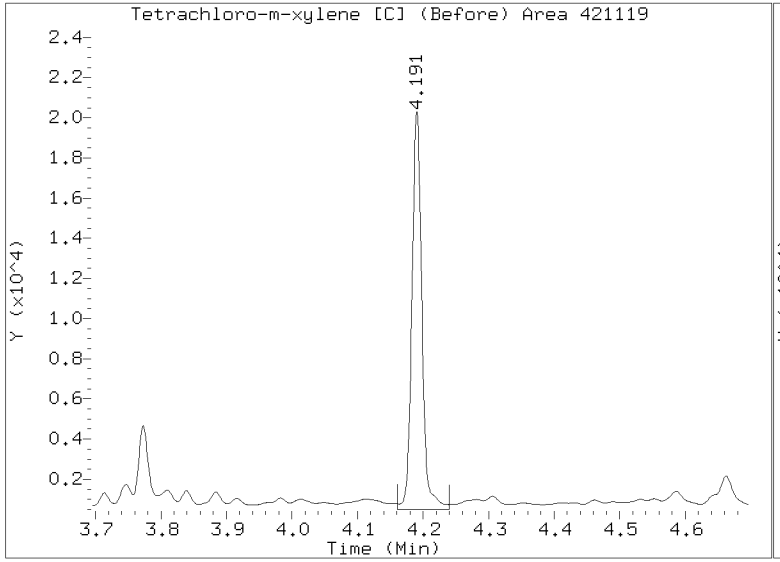
CLP-2 Manual Integration: NO

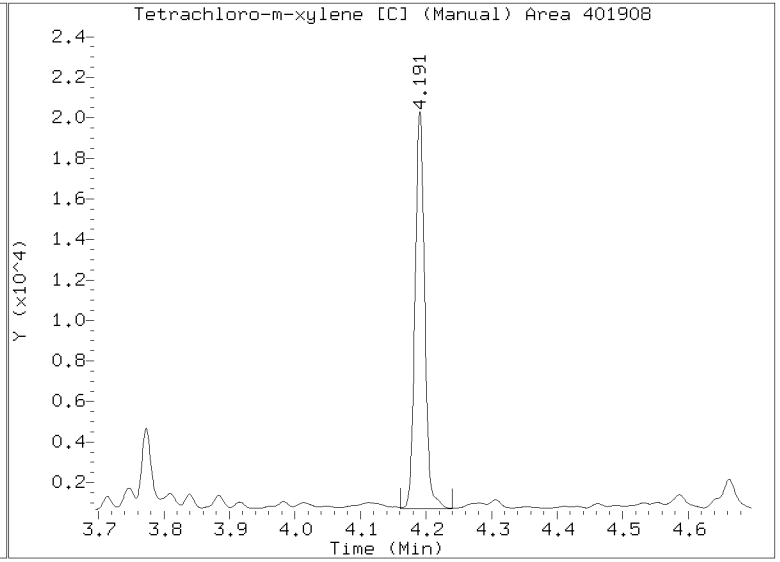
Manual Peak Adjustment Report, CLP-2

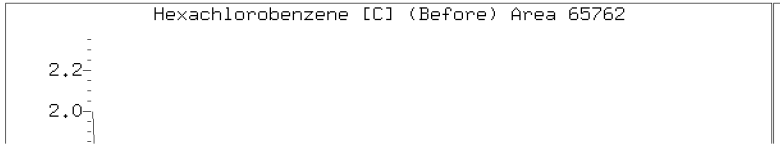
Datafile: /20230131.b/B20230131.b/23013144.D
Injection Date: 01-FEB-2023 03:41
Lab ID:23A0133-10 Client ID:

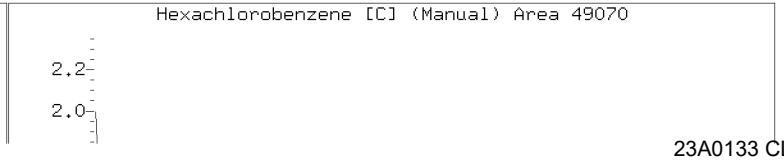






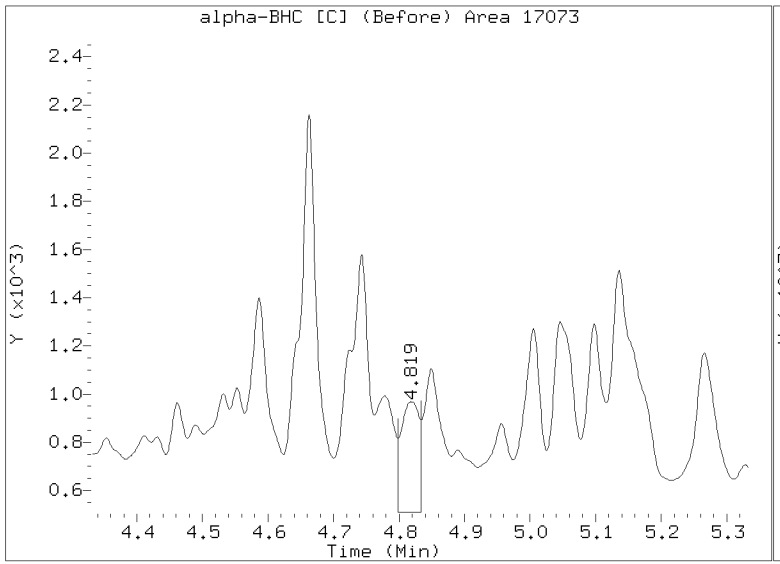


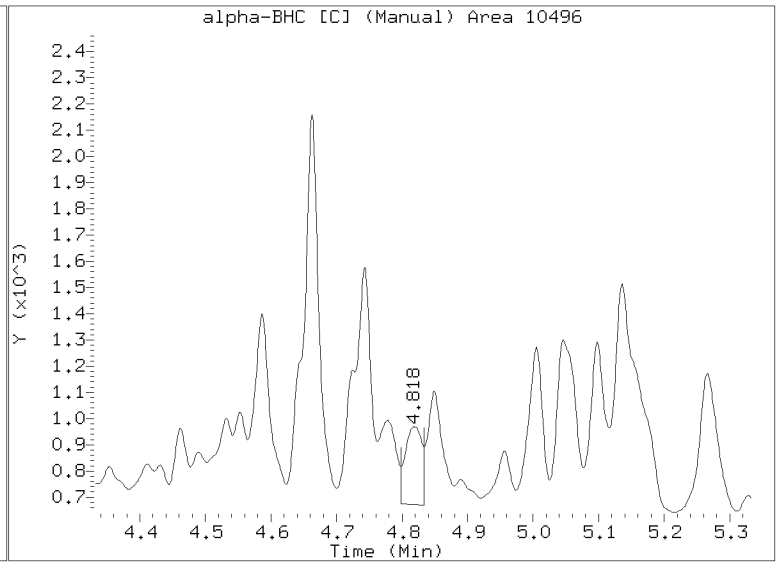


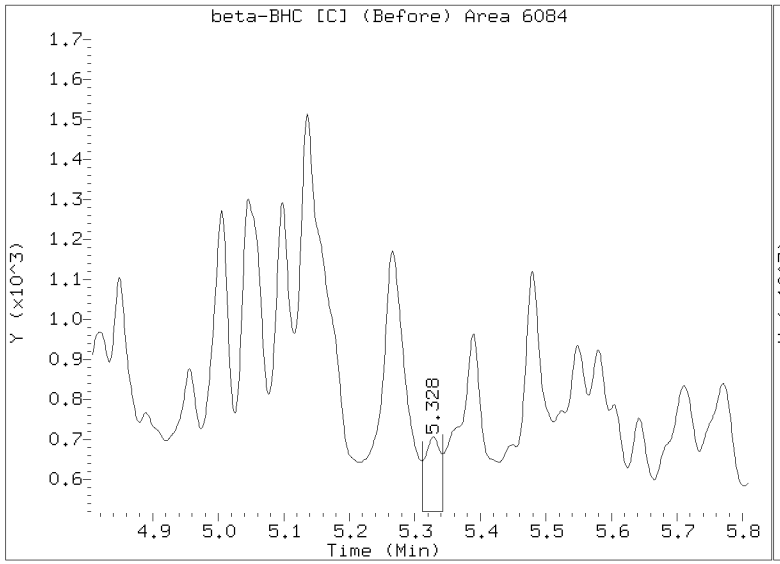


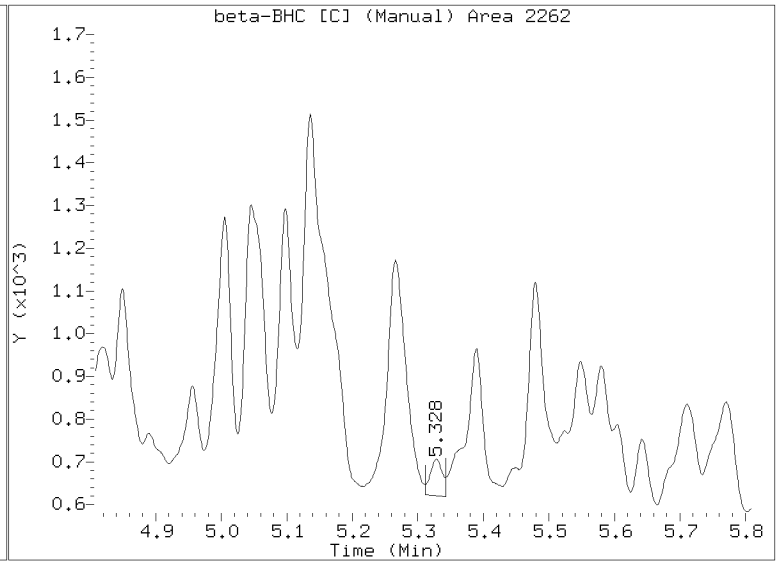
Manual Peak Adjustment Report, CLP-2

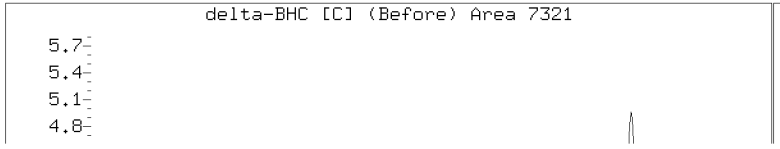
Datafile: /20230131.b/B20230131.b/23013144.D
Injection Date: 01-FEB-2023 03:41
Lab ID:23A0133-10 Client ID:

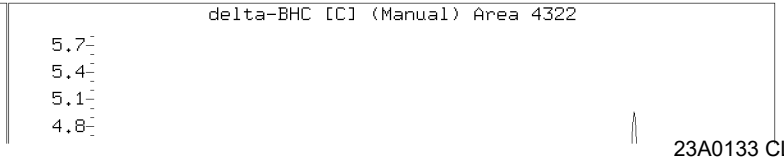












Manual Peak Adjustment Report, CLP-2

Datafile: /20230131.b/B20230131.b/23013144.D
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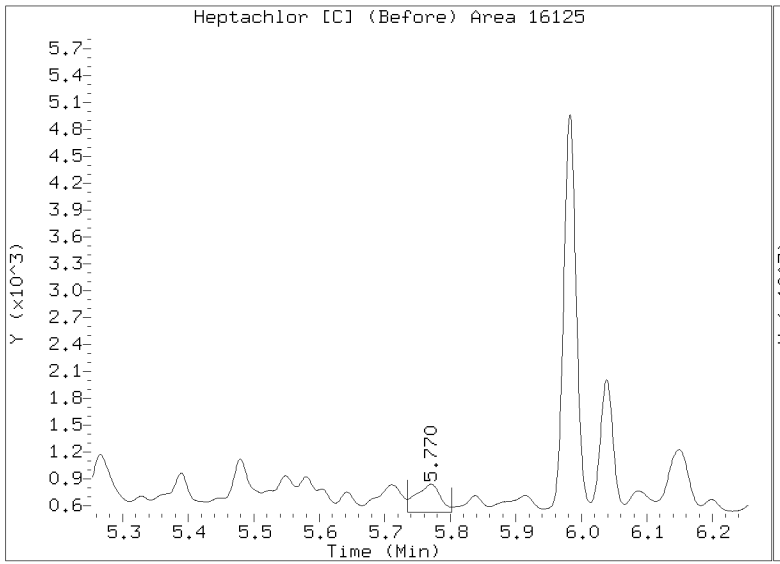
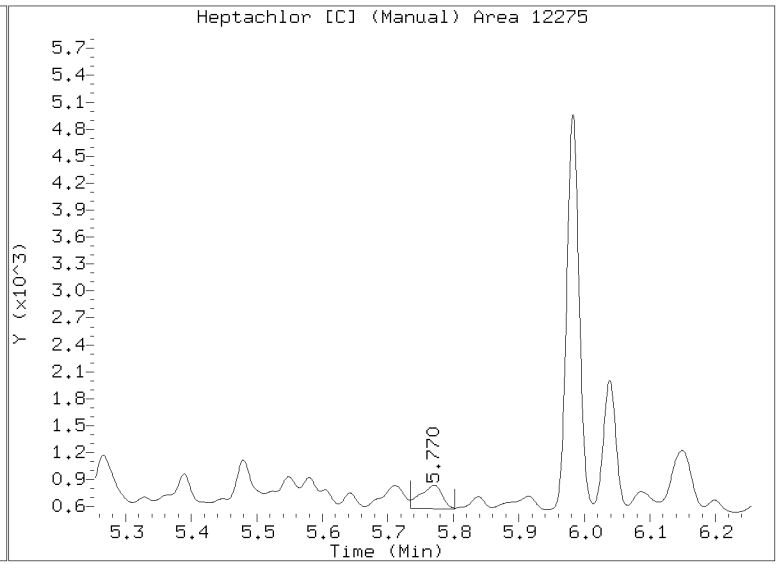
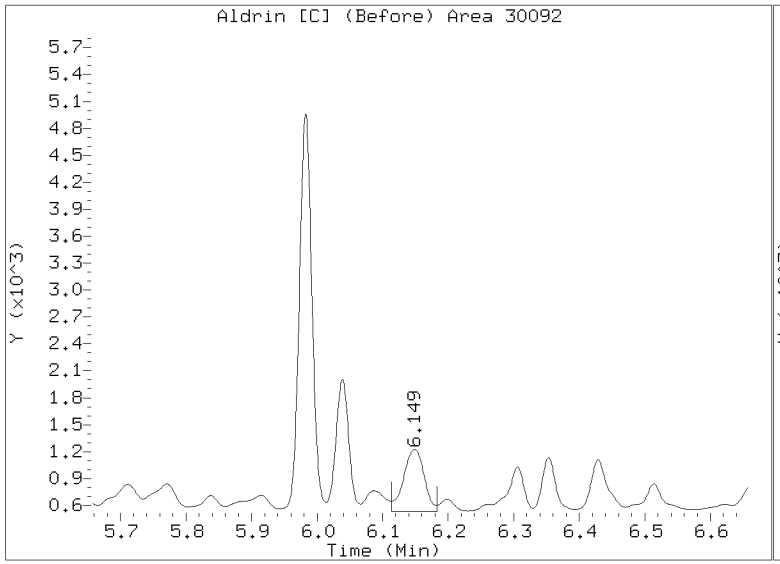
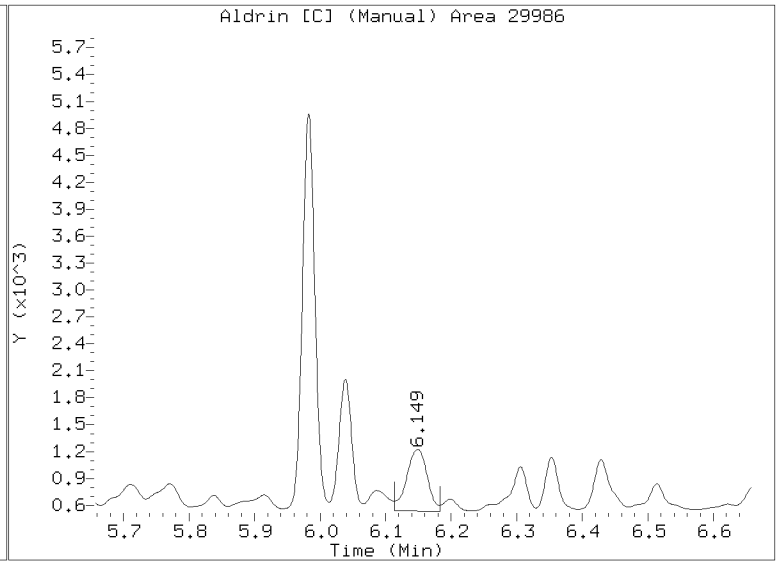
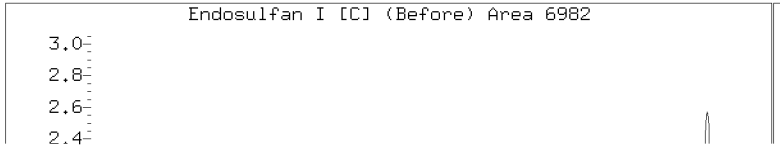
Lab ID:23A0133-10 Client ID:

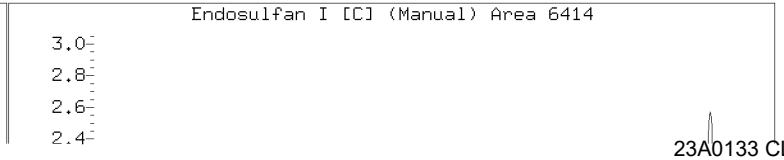












Manual Peak Adjustment Report, CLP-2

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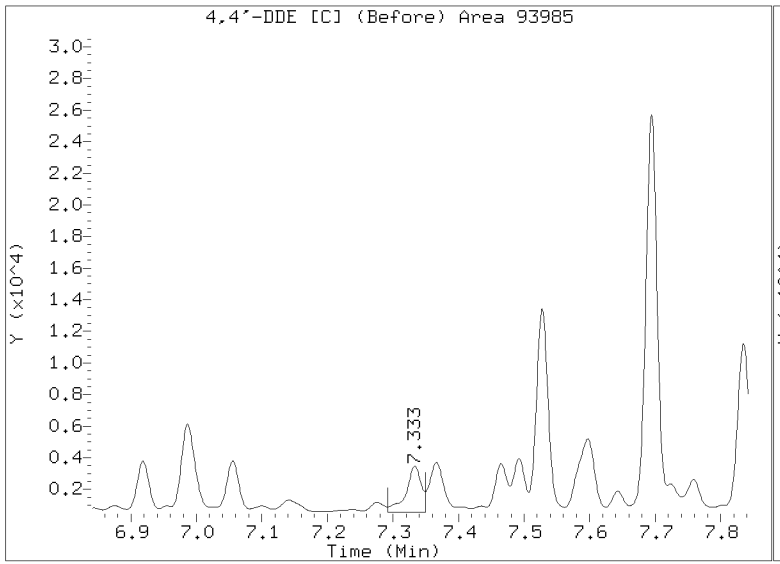
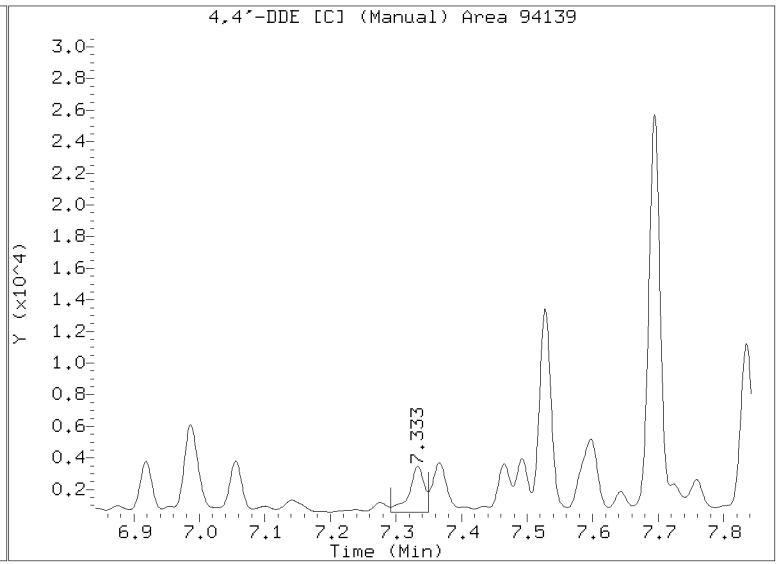
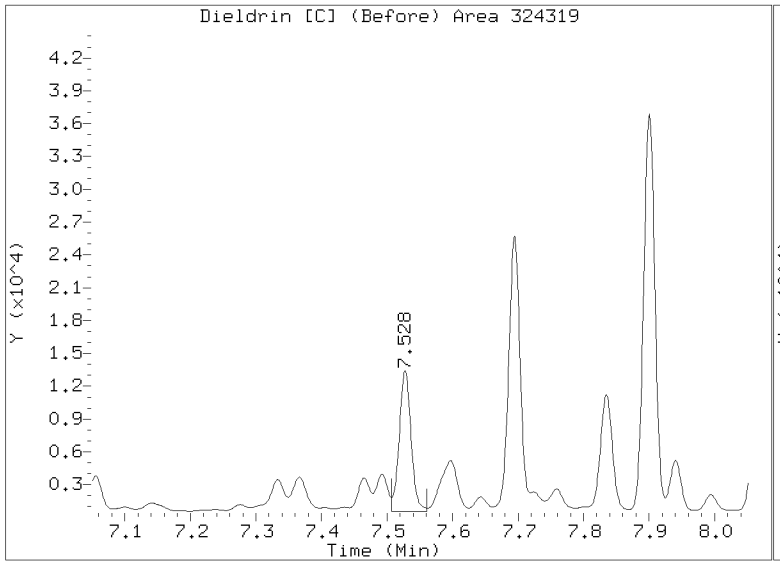
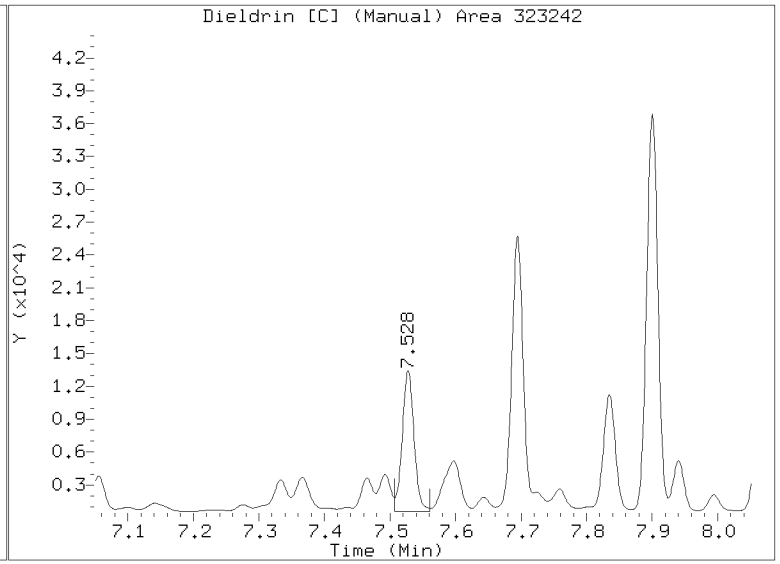
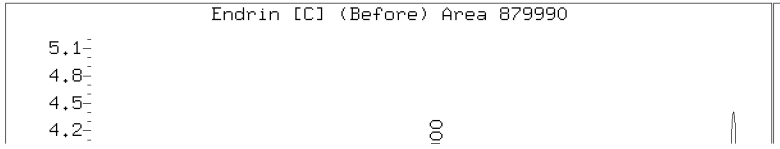
Lab ID:23A0133-10 Client ID:

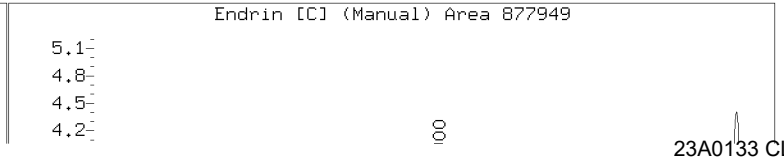












Manual Peak Adjustment Report, CLP-2

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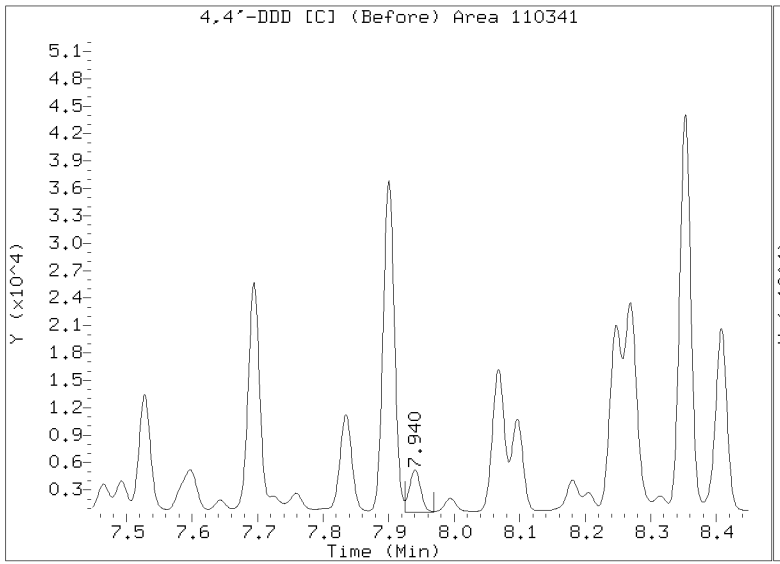
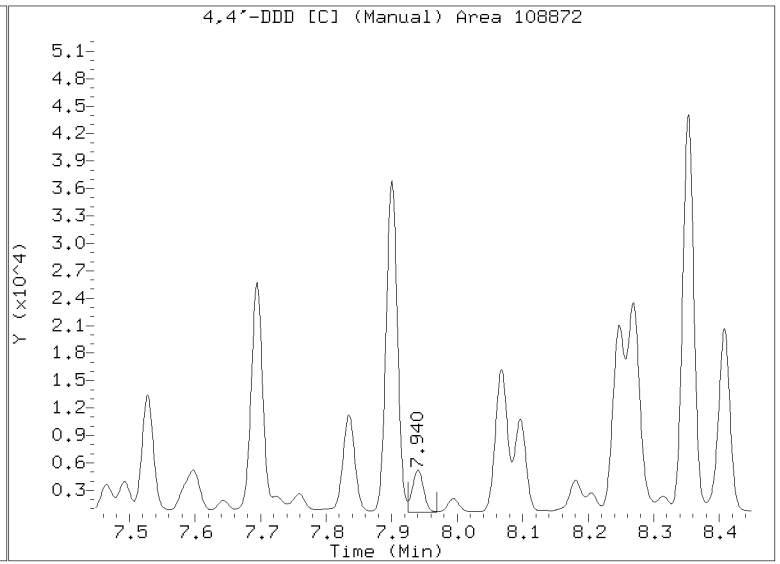
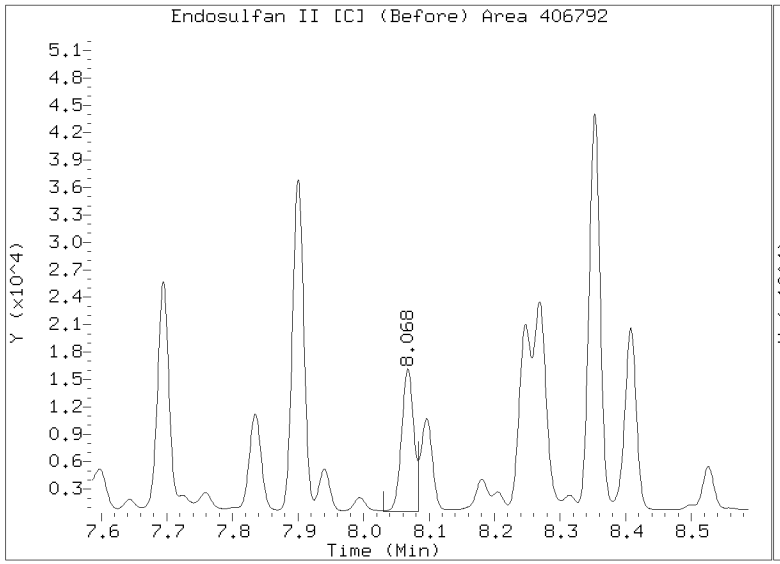
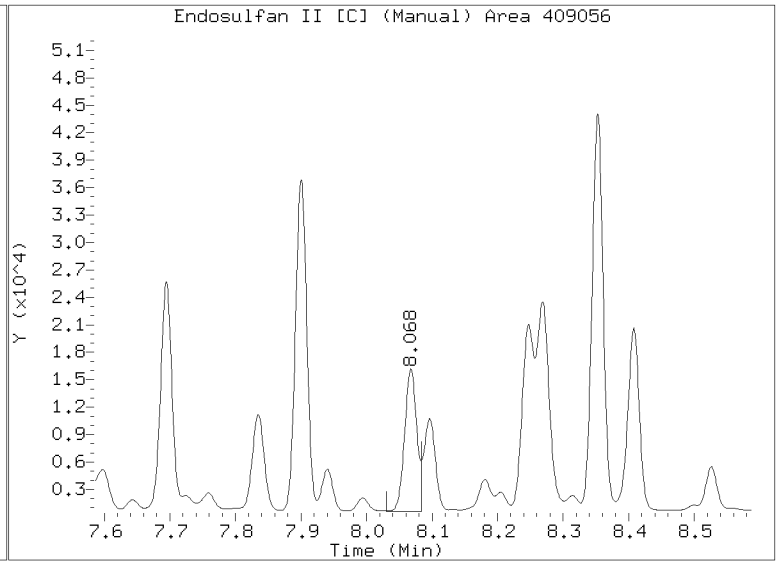
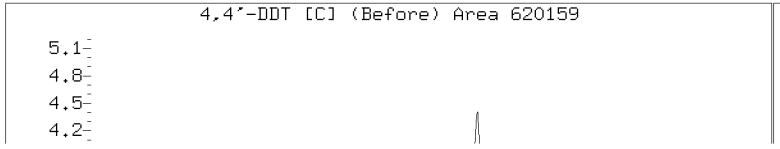
Lab ID:23A0133-10 Client ID:

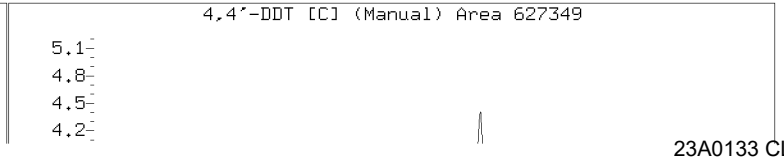






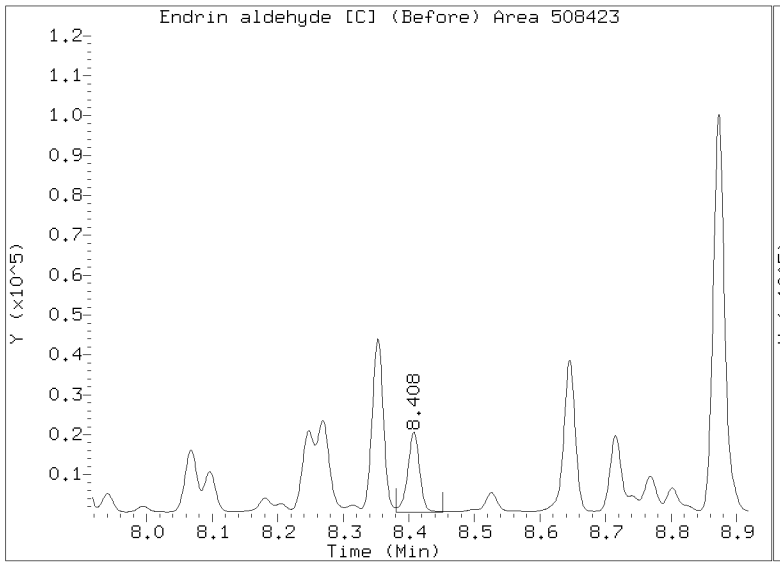


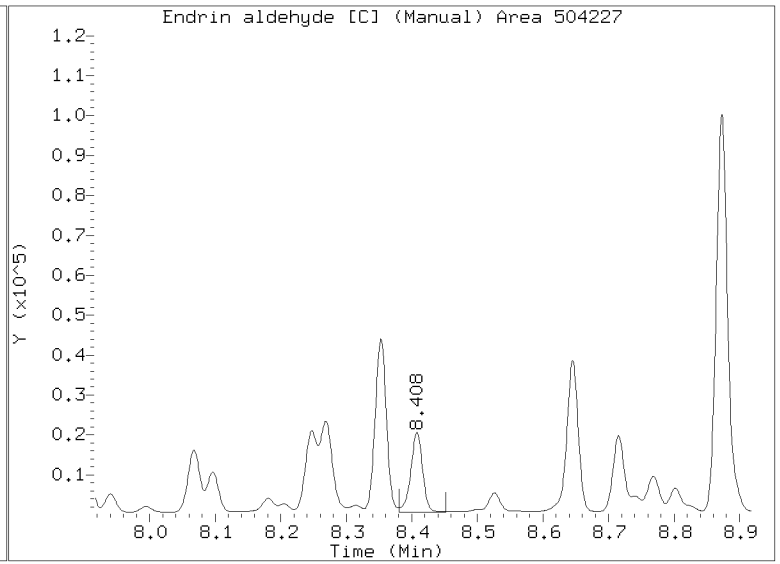


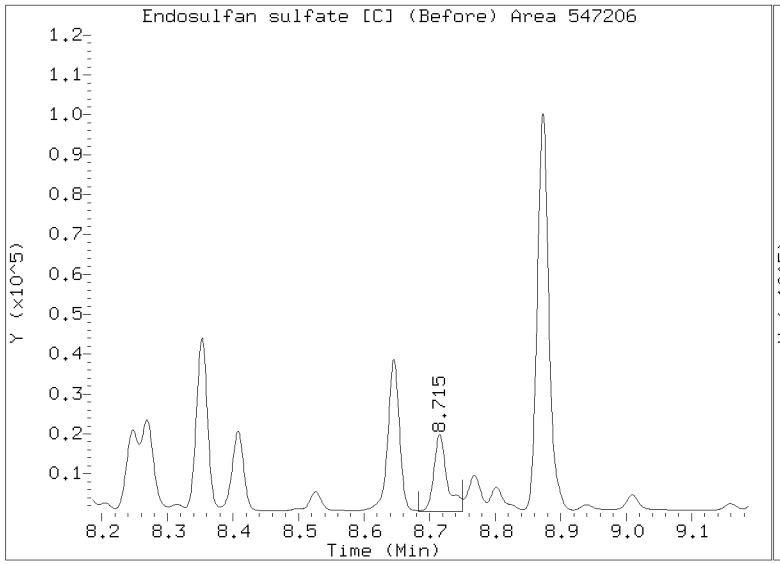


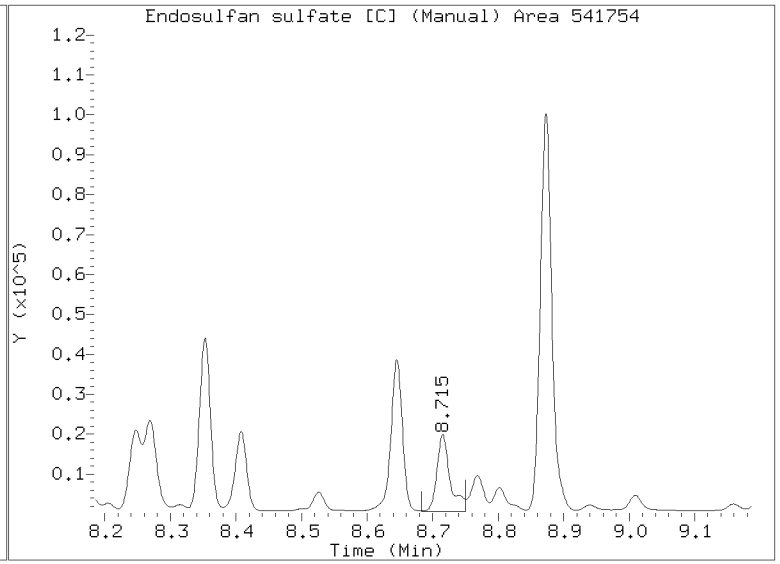
Manual Peak Adjustment Report, CLP-2

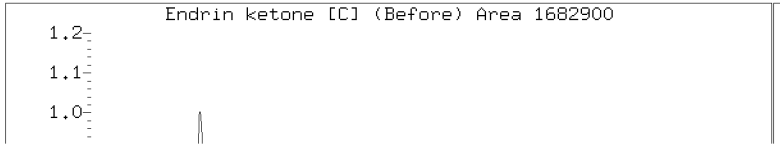
Datafile: /20230131.b/B20230131.b/23013144.D
Injection Date: 01-FEB-2023 03:41
Lab ID:23A0133-10 Client ID:

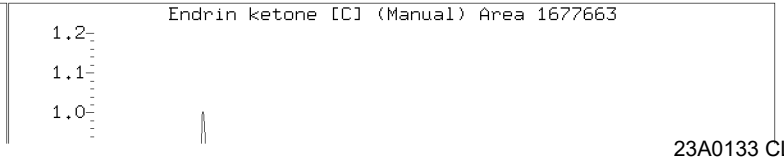












Manual Peak Adjustment Report, CLP-2

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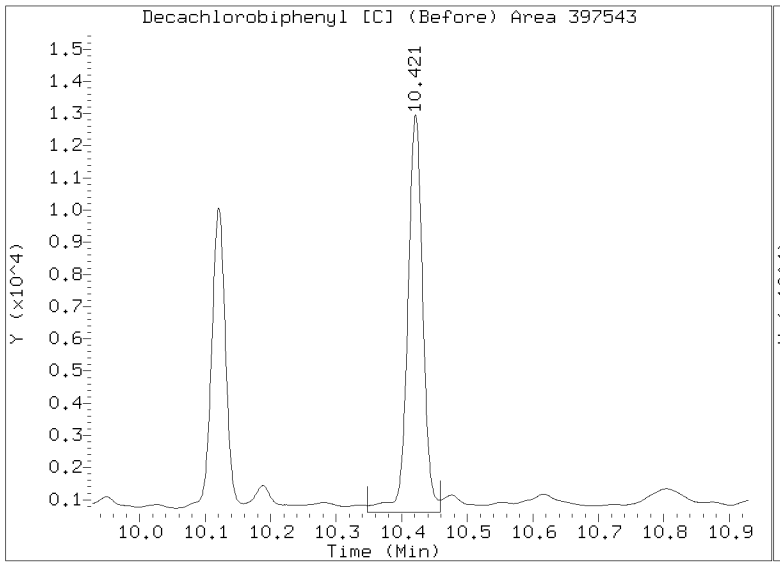
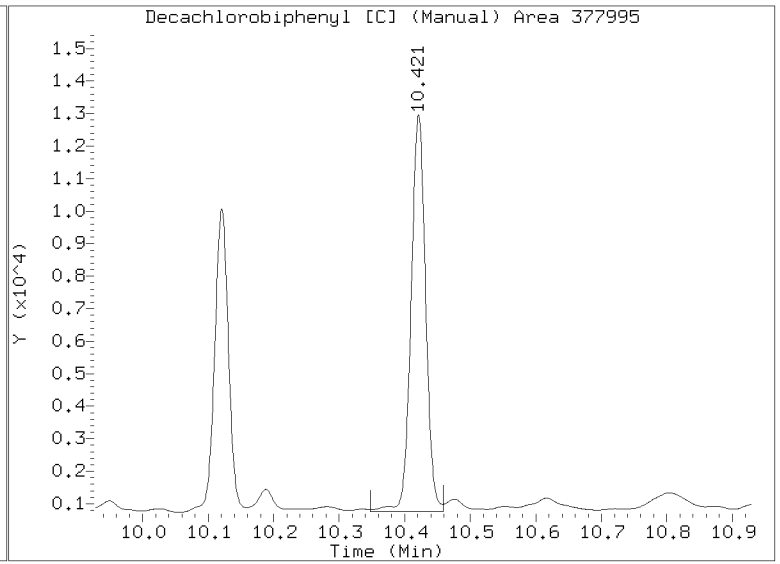
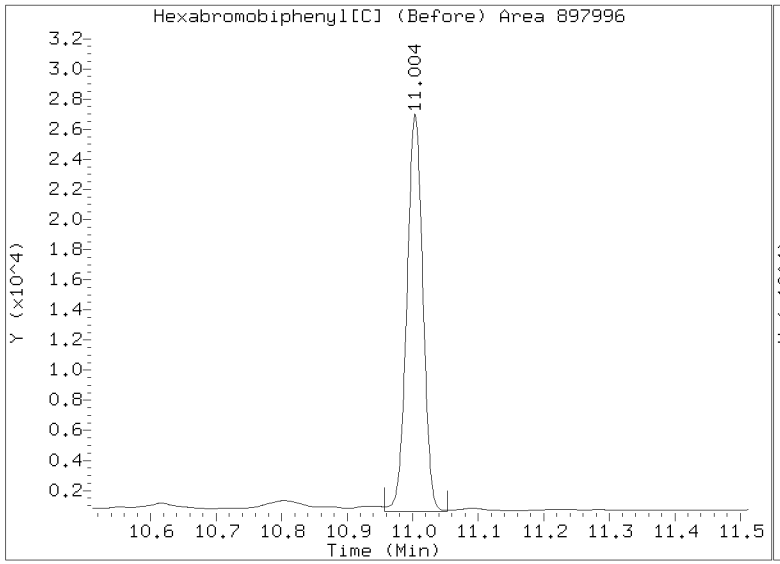
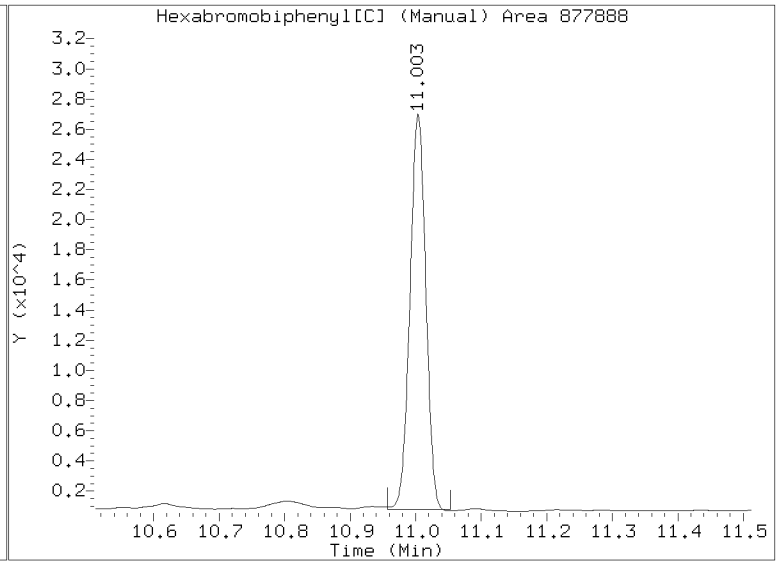
Lab ID:23A0133-10 Client ID:









Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1222

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-11 C	File ID:	23013145.D
Sampled:	01/06/23 13:00	Prepared:	01/19/23 13:44	Analyzed:	02/01/23 03:59
% Solids:	52.13	Preparation:	EPA 3546 (Microwave)	Initial/Final:	23.99 g Wet / 2.5 mL
Batch:	BLA0392	Sequence:	SLB0046	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9962*	*7.77*	*97.2*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9962*	*8.03*	*100*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9962*	*4.95*	*61.9*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9962*	*4.91*	*61.4*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013145.D
Data file 2: /20230131.b/B20230131.b/23013145.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: 23A0133-11
Client ID:
Injection Date: 01-FEB-2023 03:59
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.302	-0.008	28216	4.845	0.013	38975	1.36	1.21	11.8	alpha-BHC M
4.684	-0.009	23842	5.328	0.018	14818	2.99	1.21	84.7*	beta-BHC
4.878	0.003	93811	5.643	-0.018	5302	5.54	0.20	186.1*	delta-BHC
----			5.218	-0.011	4627	0.00	0.17	---	gamma-BHC (Lindane)
5.073	-0.020	42628	5.763	0.008	80698	2.67	3.26	20.0	Heptachlor
5.429	0.015	150912	6.141	-0.017	58286	8.42	2.06	121.4*	Aldrin
6.074	-0.015	174473	6.784	-0.030	780588	11.23	33.37	99.3*	Heptachlor epoxide b
----			7.238	-0.020	59902	0.00	2.91	---	Endosulfan I
6.771	-0.020	563081	7.527	-0.025	365313	36.75	16.04	78.5*	Dieldrin
6.443	-0.009	436506	7.331	-0.011	171489	30.68	8.21	115.6*	4,4'-DDE
7.065	0.024	1469518	7.899	0.023	1062358	128.79	67.99	61.8*	Endrin
7.304	0.026	97494	8.089	0.001	448370	9.49	27.99	98.7*	Endosulfan II
----			7.939	-0.010	583112	0.00	38.36	---	4,4'-DDD
8.126	-0.014	86229	8.713	0.027	253907	8.84	18.05	68.5*	Endosulfan sulfate
7.361	-0.030	1267368	8.268	0.001	1887579	122.01	128.67	5.3	4,4'-DDT
----			8.938	0.029	172215	0.00	26.53	---	Methoxychlor
----			9.221	0.011	904607	0.00	59.55	---	Endrin ketone
7.728	0.021	271073	8.404	-0.014	322035	33.09	28.50	14.9	Endrin aldehyde
6.224	-0.006	48299	7.054	0.028	541742	3.06	23.22	153.4*	trans-Chlordane
6.394	0.018	216316	7.174	-0.011	33247	13.66	1.46	161.5*	cis-Chlordane
2.284	-0.019	45610	2.510	0.028	4996	2.10	0.16	171.2*	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.797	-0.004	362508	4.189	-0.007	556182	24.75	24.57	0.8	Tetrachloro-m-xylene
9.321	0.002	342764	10.420	-0.009	487821	38.87	40.16	3.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

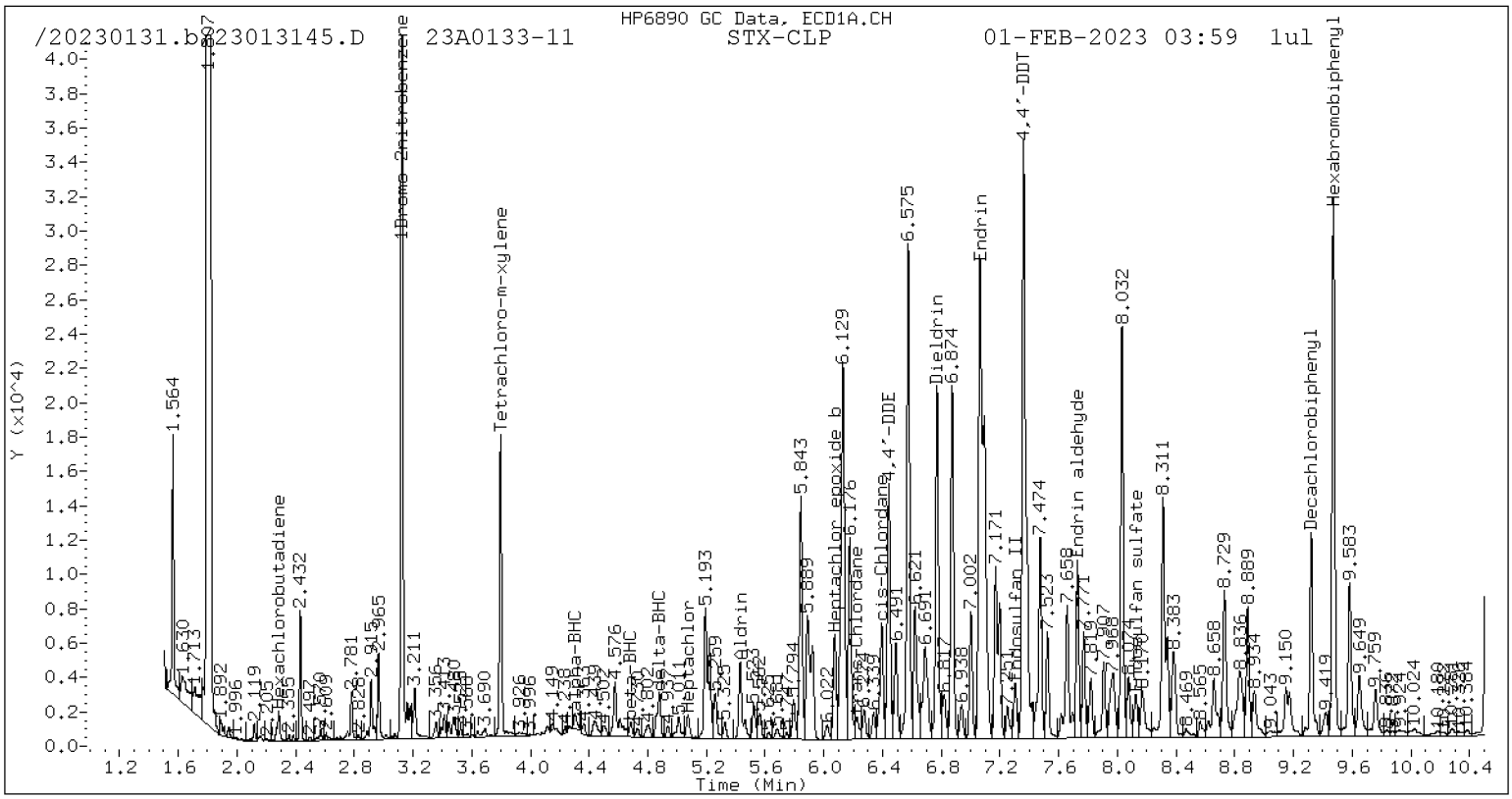
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	1076833	60.1
Hexabromobiphenyl	609723	870339	42.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1608290	59.8
Hexabromobiphenyl	769764	1098992	42.8

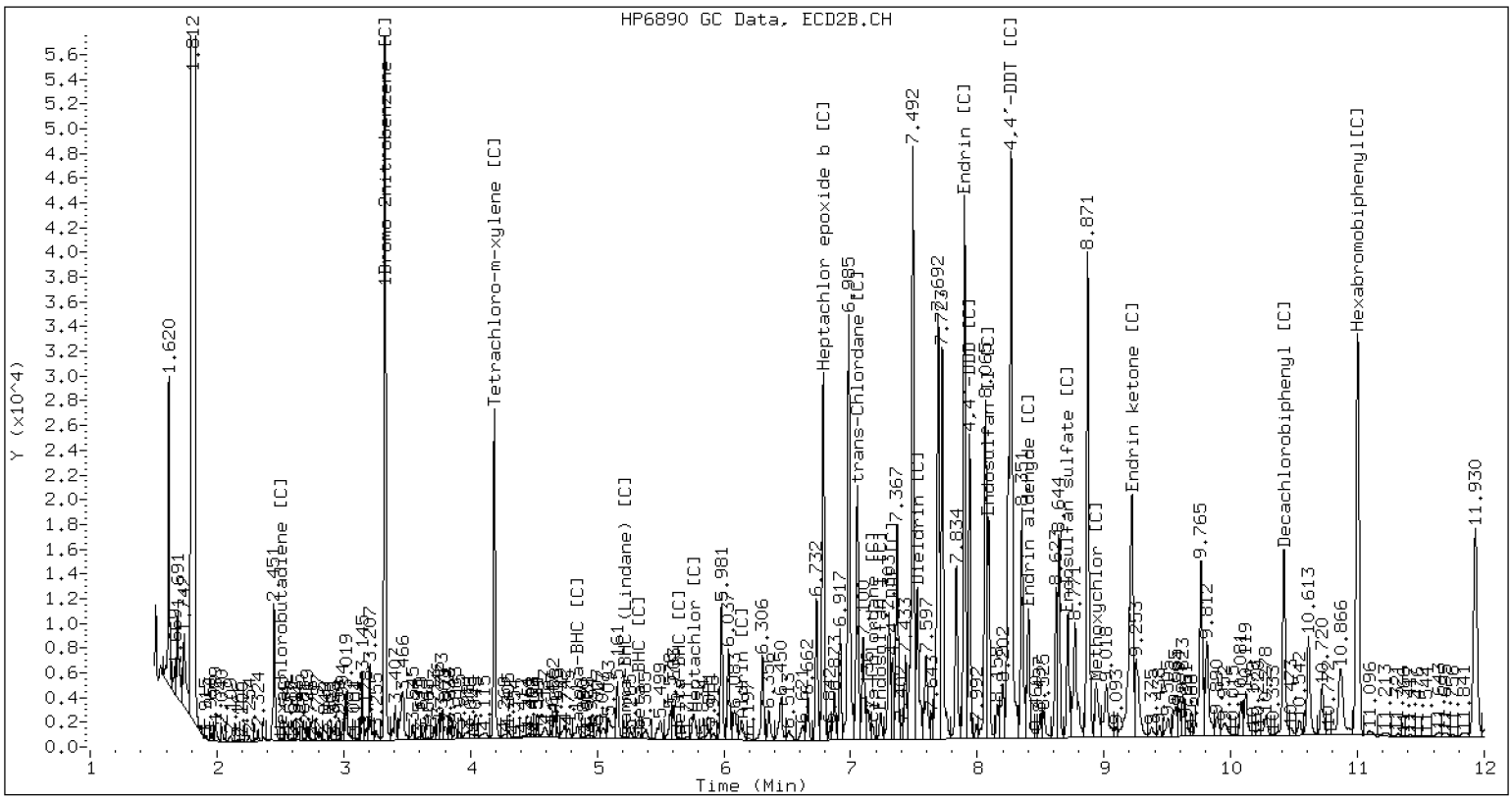
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

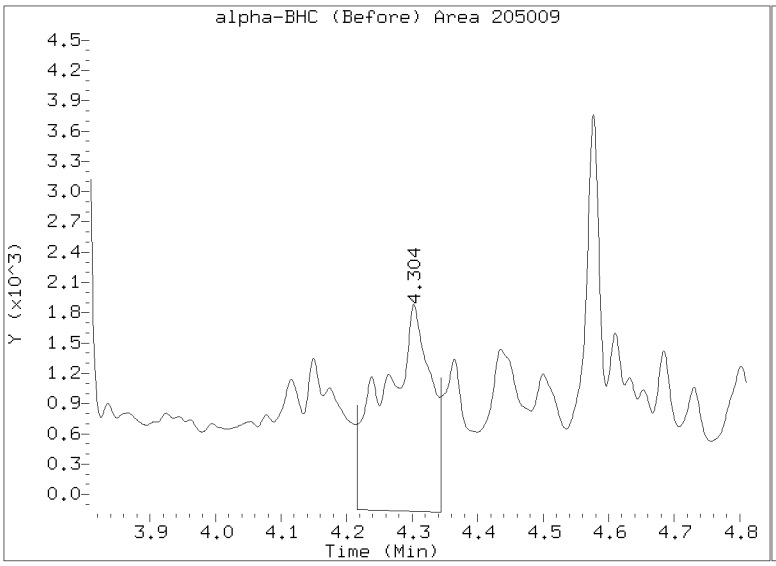
/20230131.b/B20230131.b/23013145.D 23A0133-11 CLP2

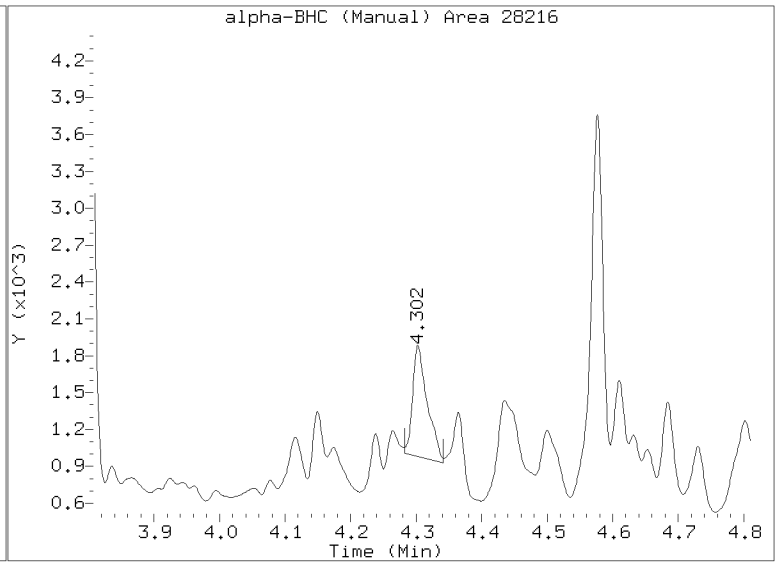


CLP-2 Manual Integration: NO

Manual Peak Adjustment Report, STX-CLP

Datafile: /20230131.b/23013145.D
Injection Date: 01-FEB-2023 03:59
Lab ID:23A0133-11 Client ID:
Report Date: 02/03/2023 20:25





Manual Peak Adjustment Report, CLP-2

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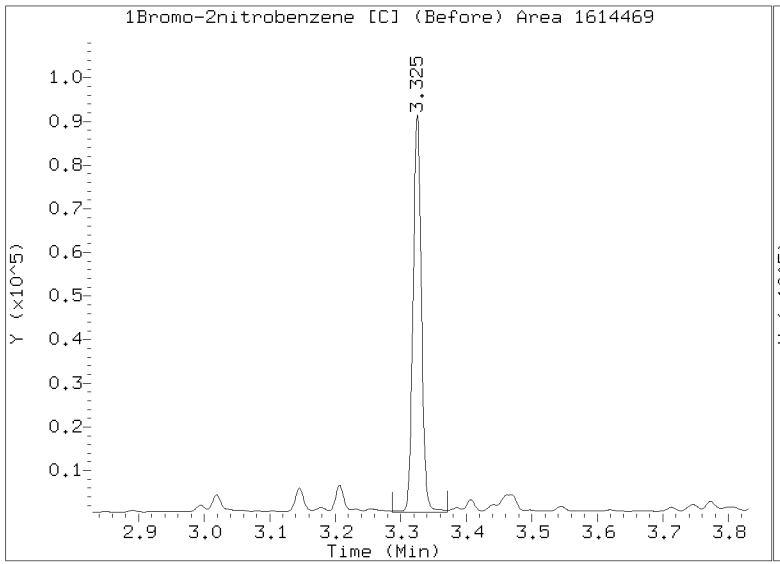
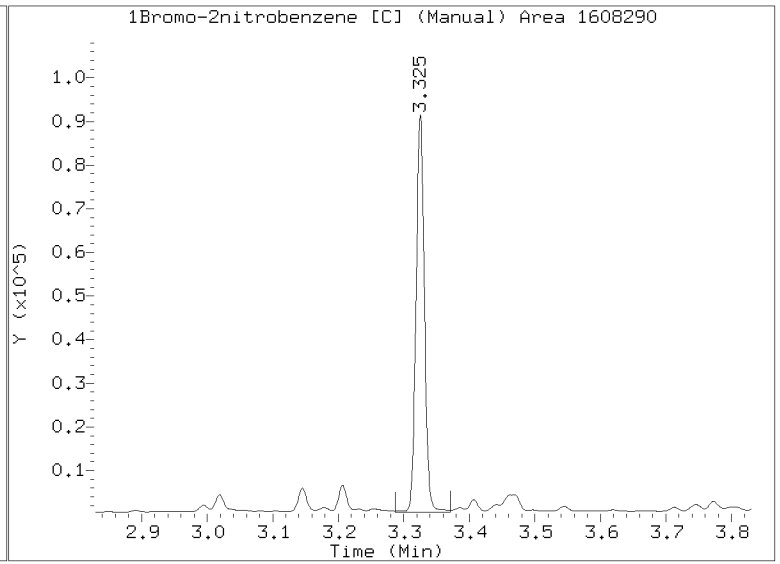
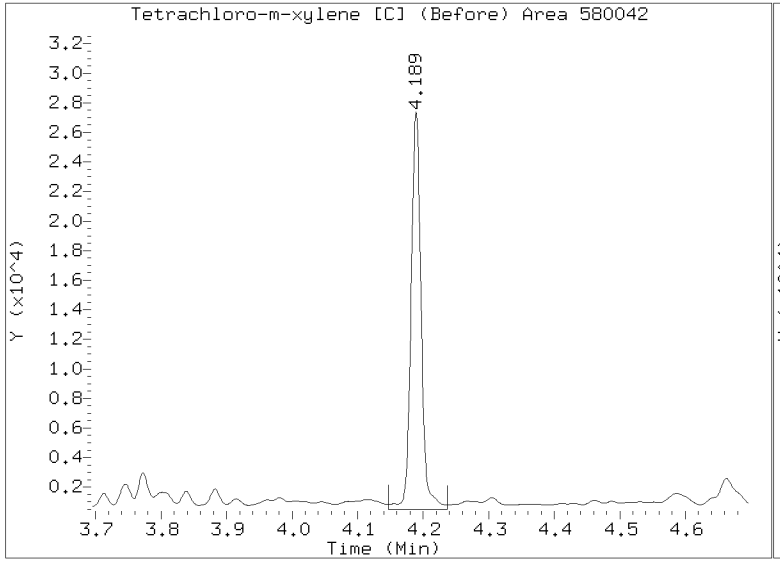
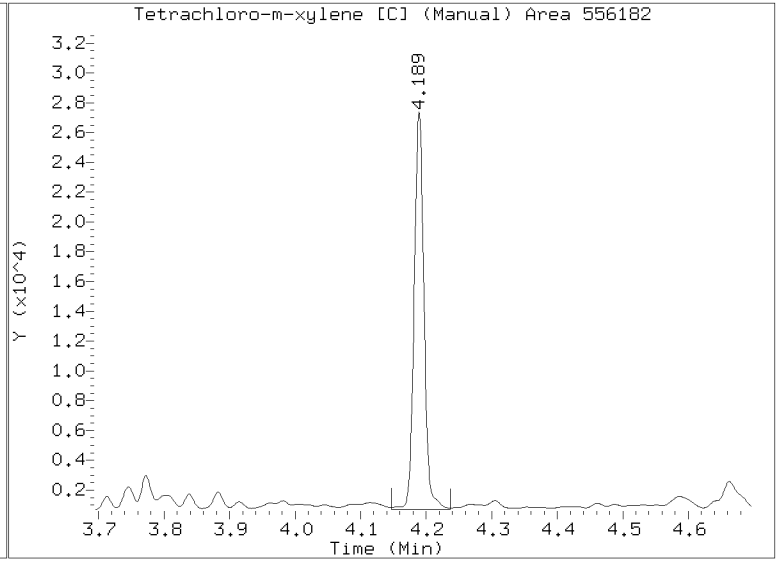
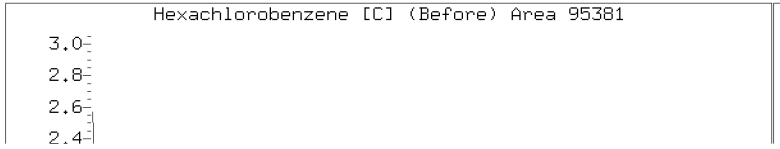
Lab ID:23A0133-11 Client ID:

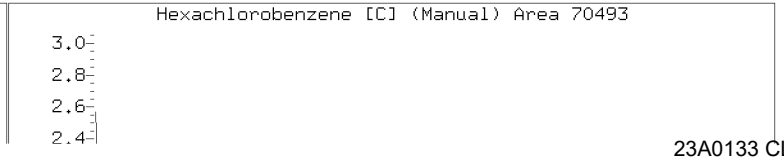












Manual Peak Adjustment Report, CLP-2

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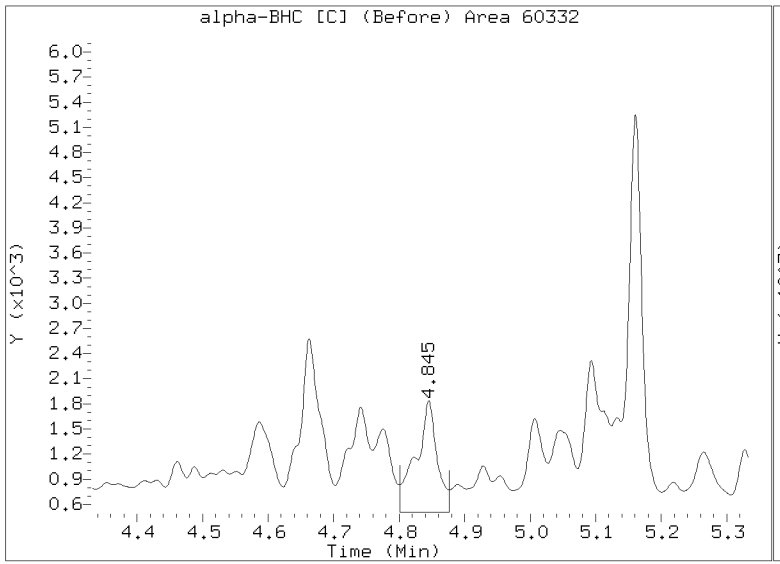
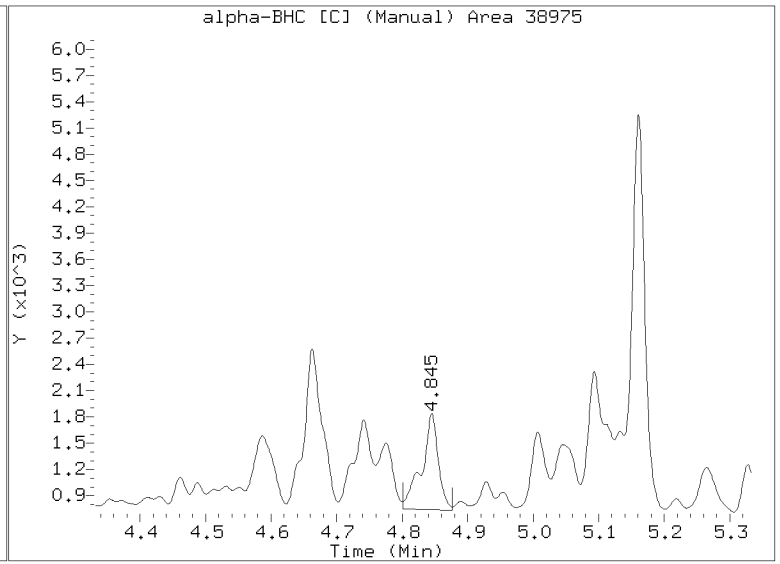
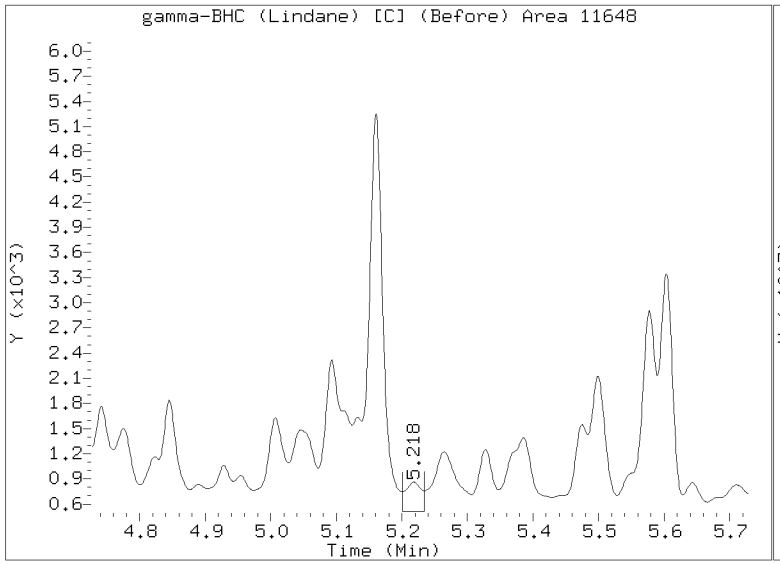
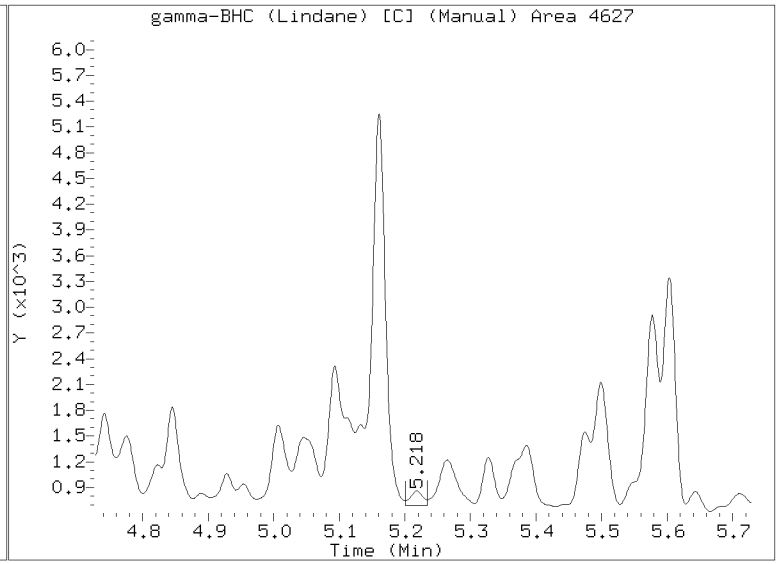
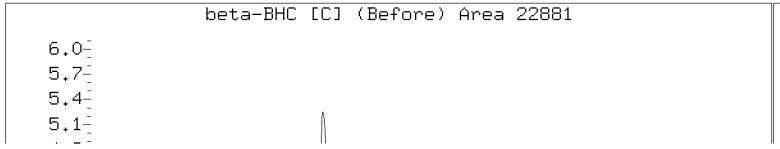
Lab ID:23A0133-11 Client ID:

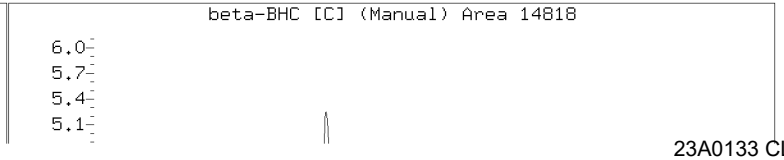












Manual Peak Adjustment Report, CLP-2

Datafile: /20230131.b/B20230131.b/23013145.D
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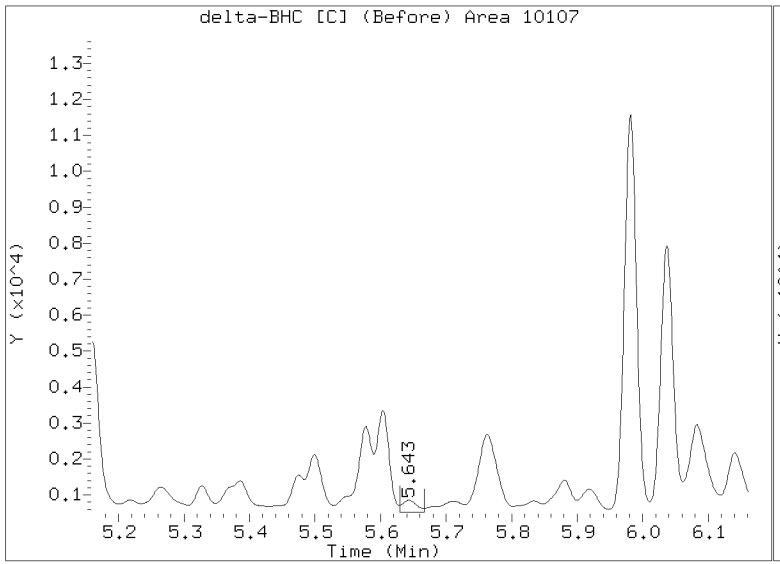
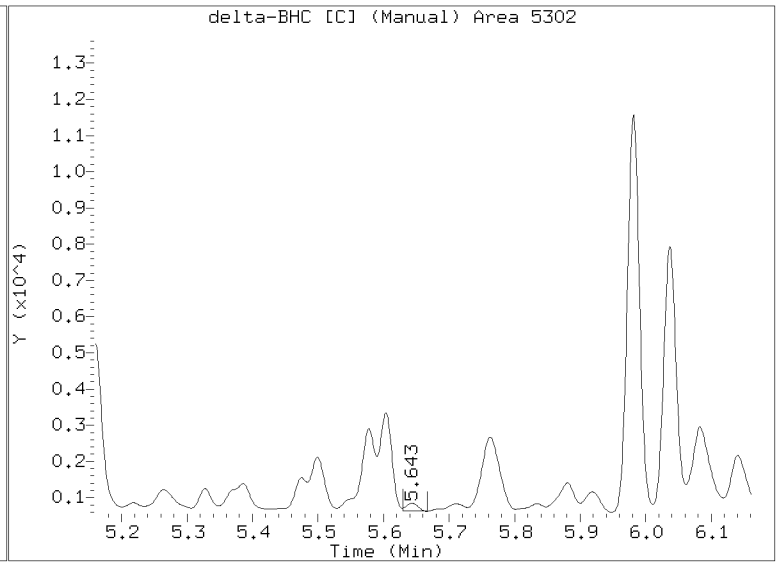
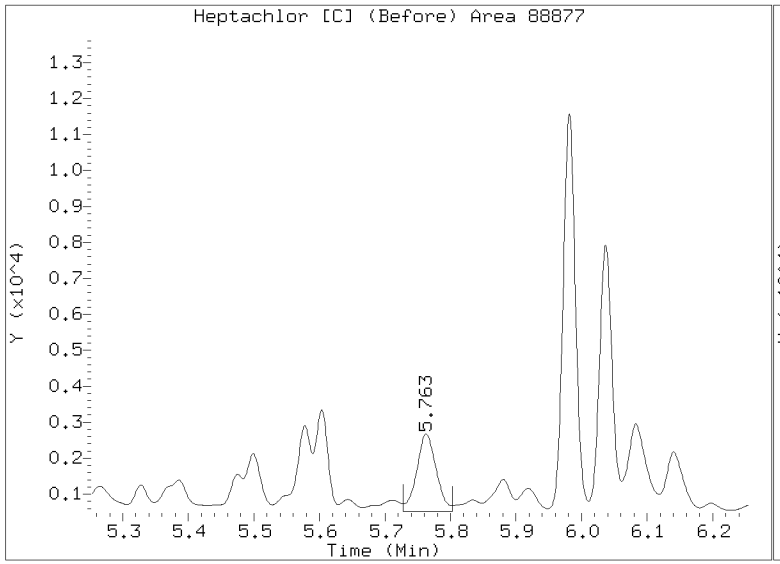
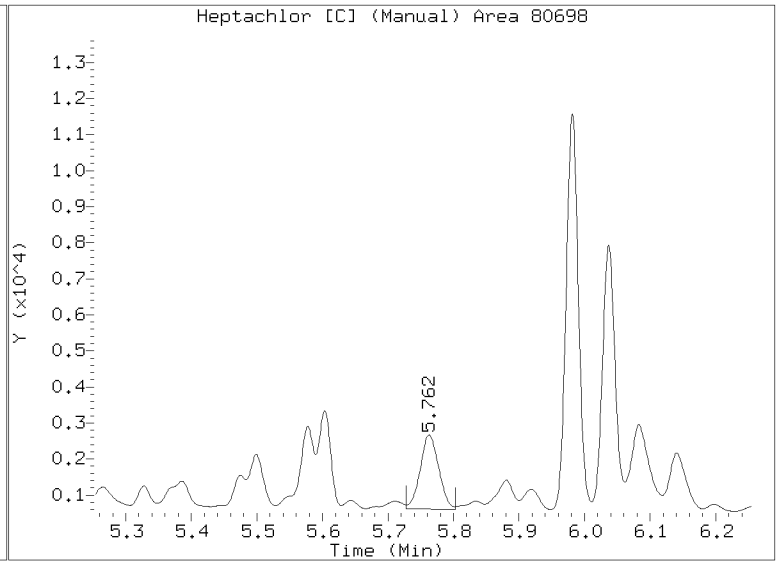
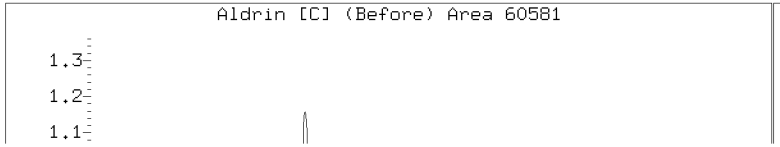
Lab ID:23A0133-11 Client ID:

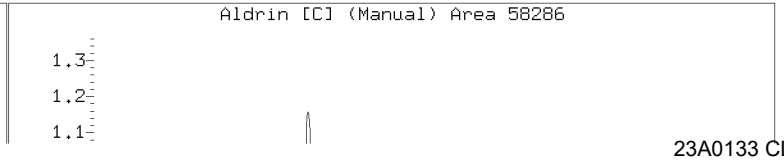












Manual Peak Adjustment Report, CLP-2

Datafile: /20230131.b/B20230131.b/23013145.D
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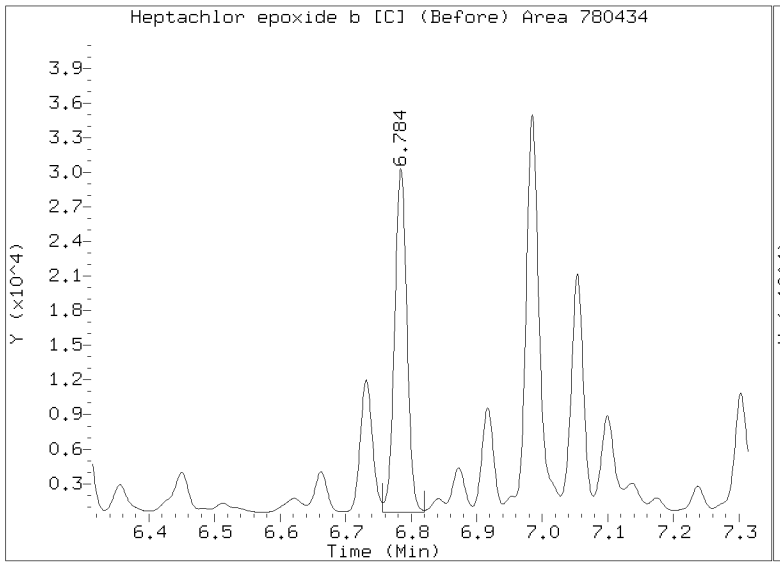

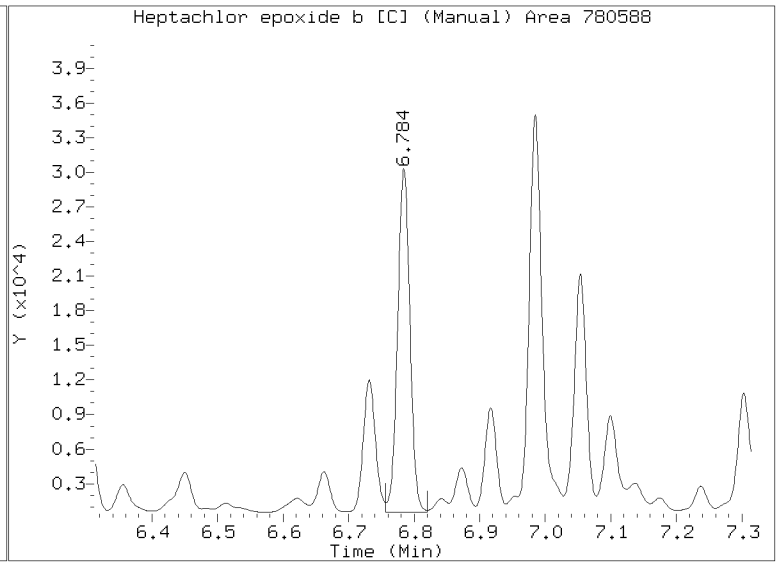

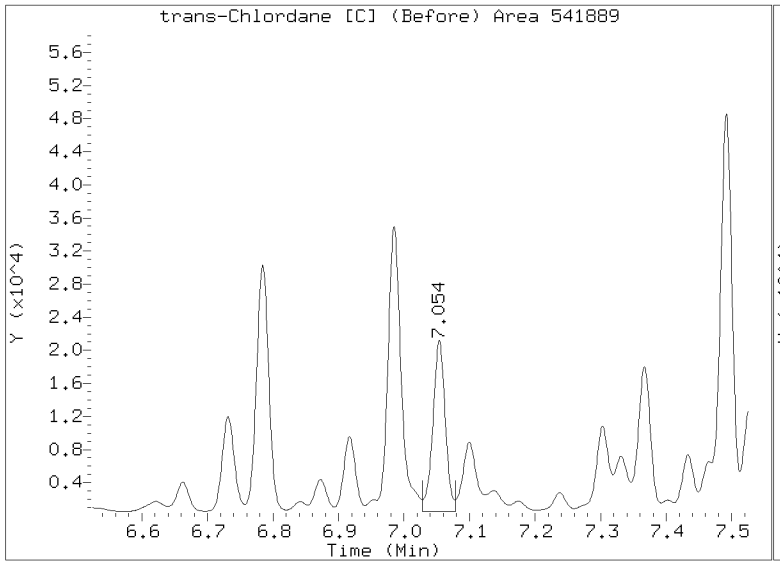

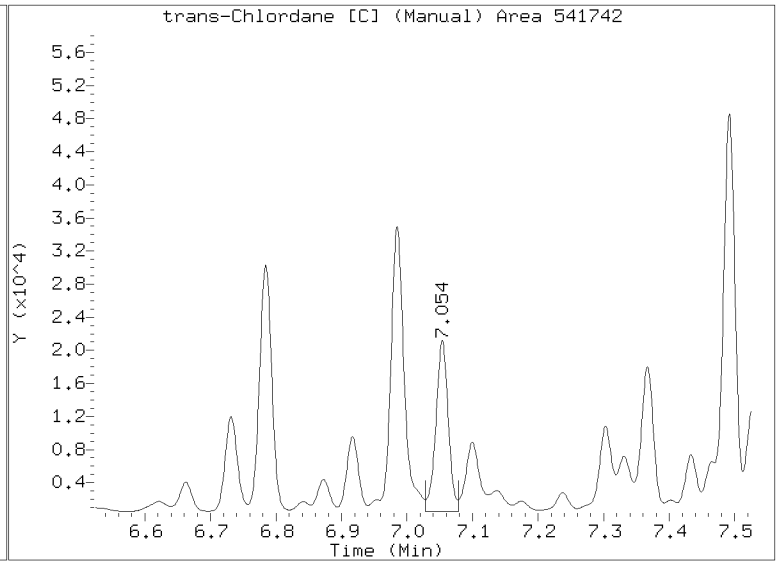

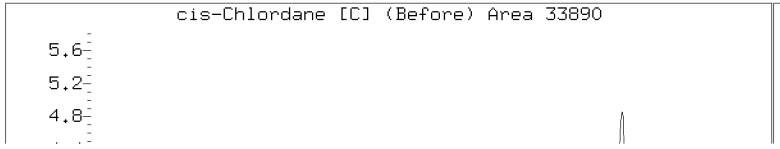

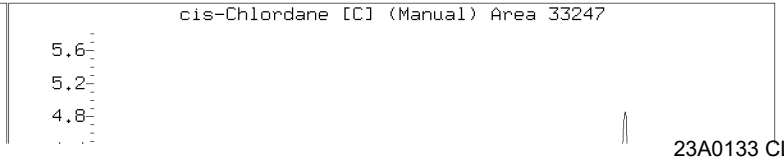

Manual Peak Adjustment Report, CLP-2

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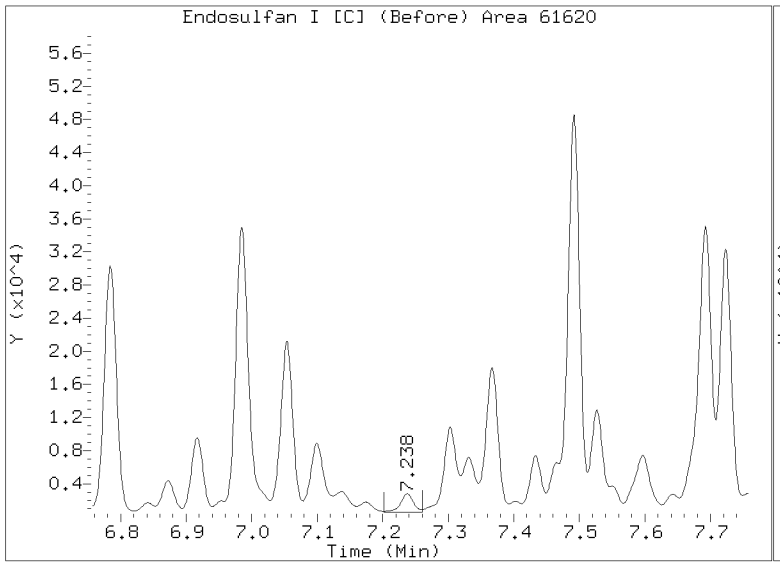

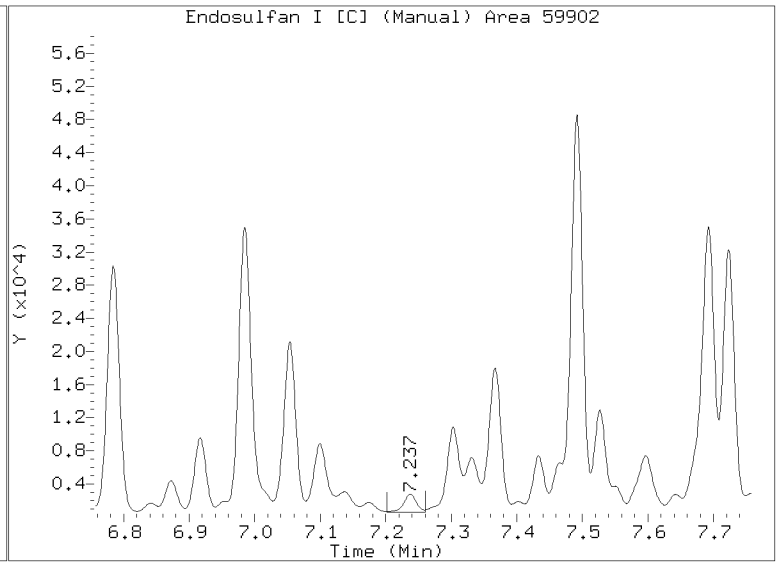

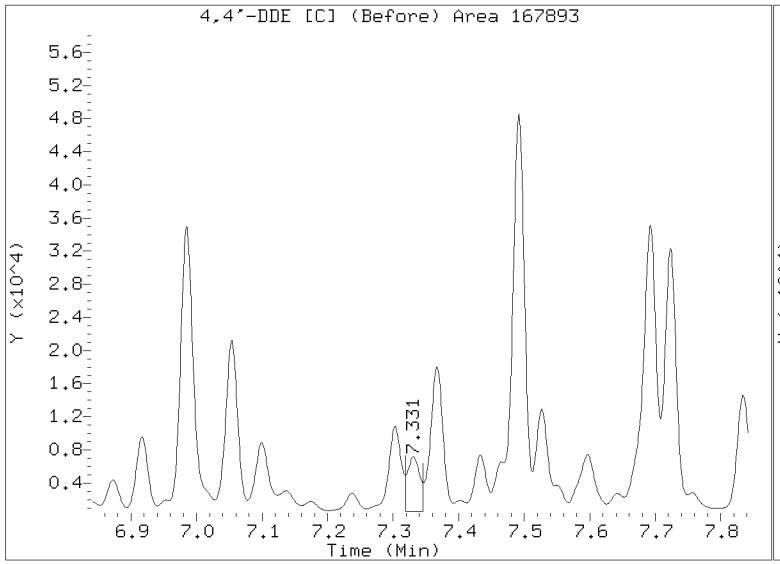

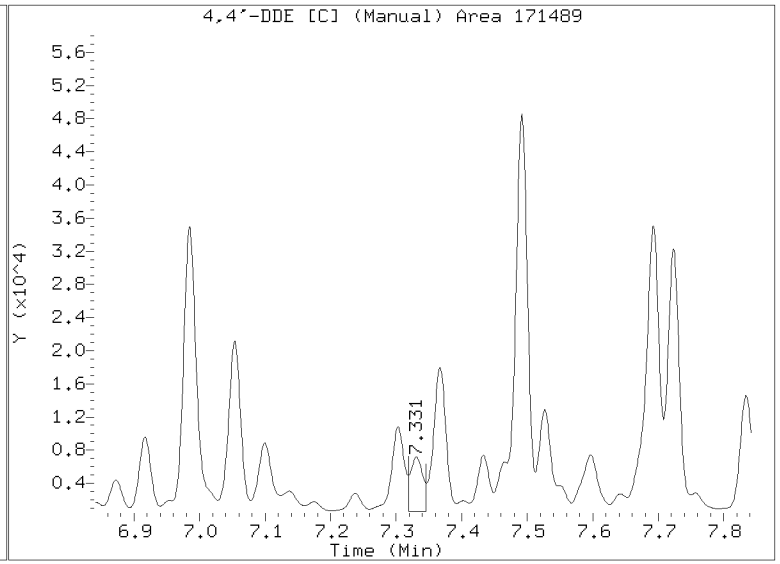

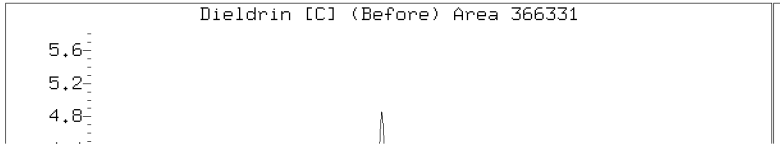

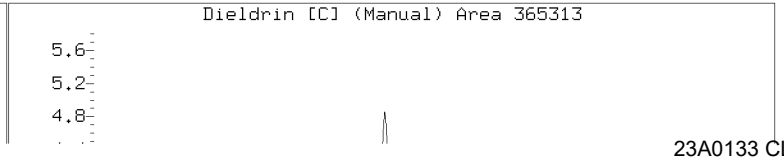

Manual Peak Adjustment Report, CLP-2

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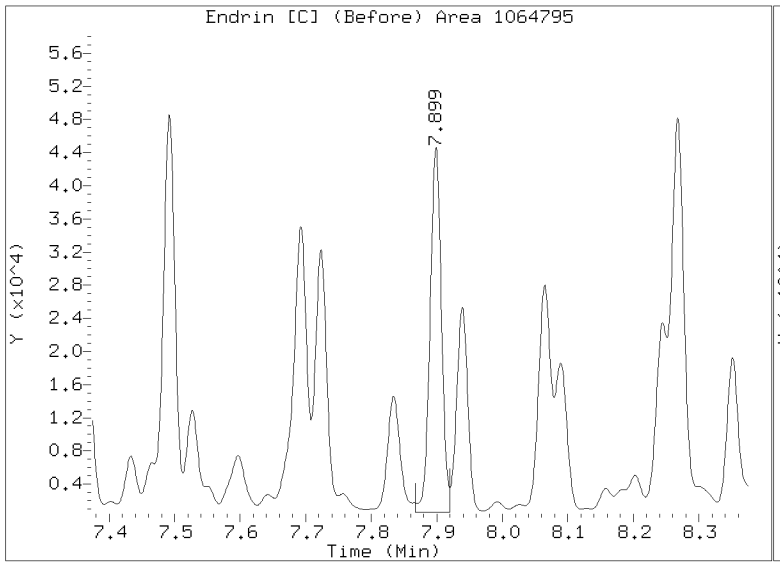

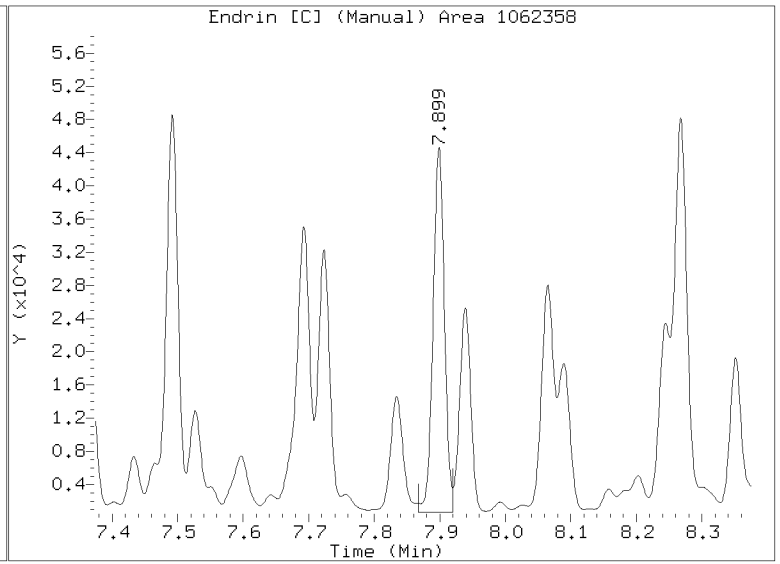

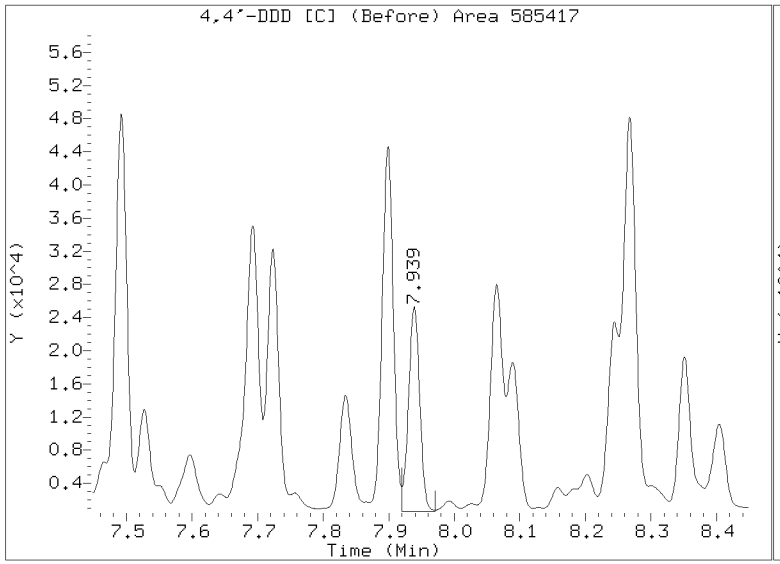

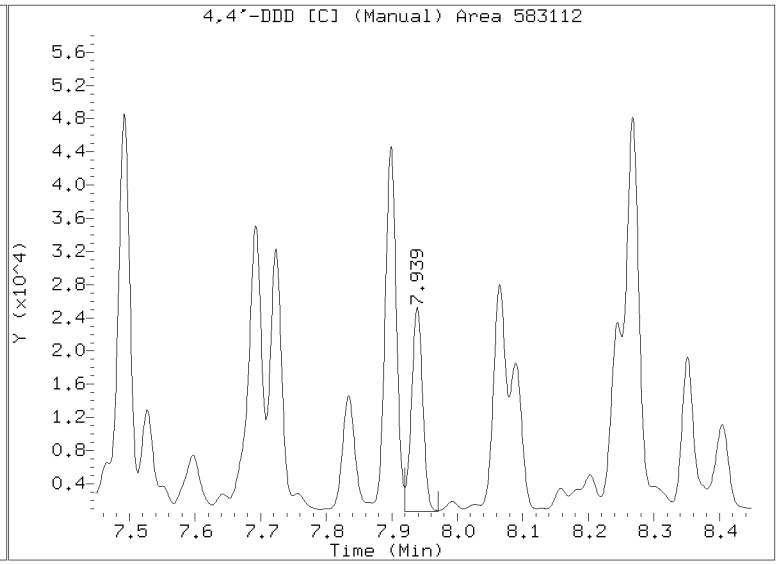

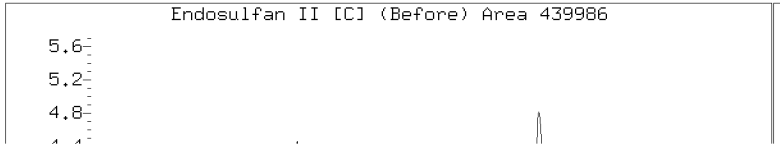

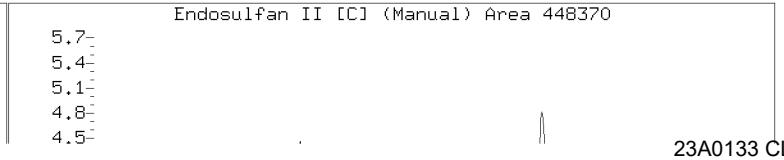

Manual Peak Adjustment Report, CLP-2

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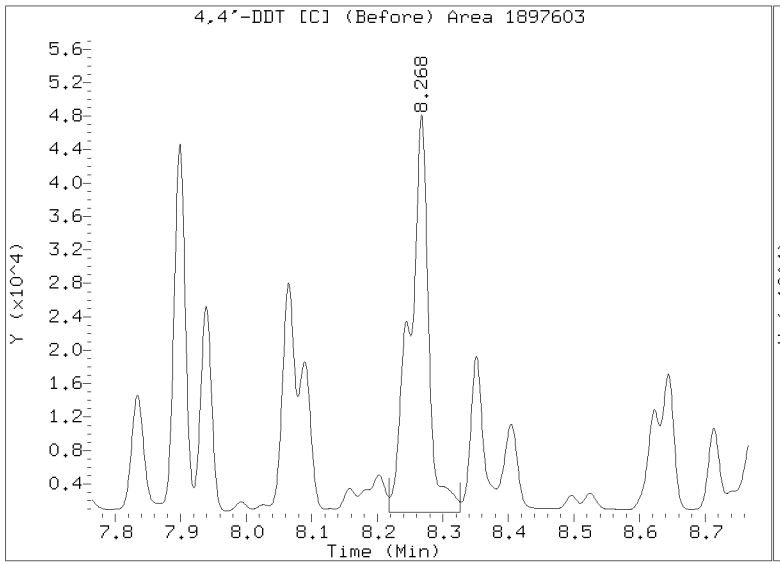

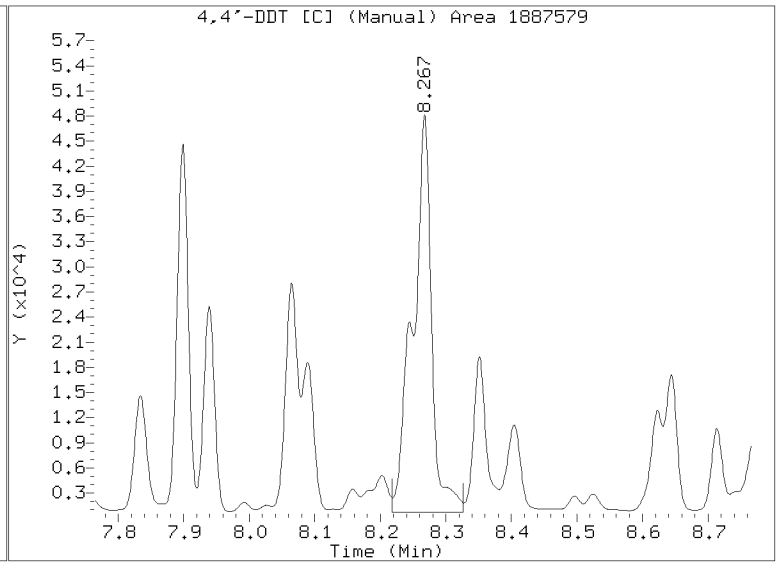

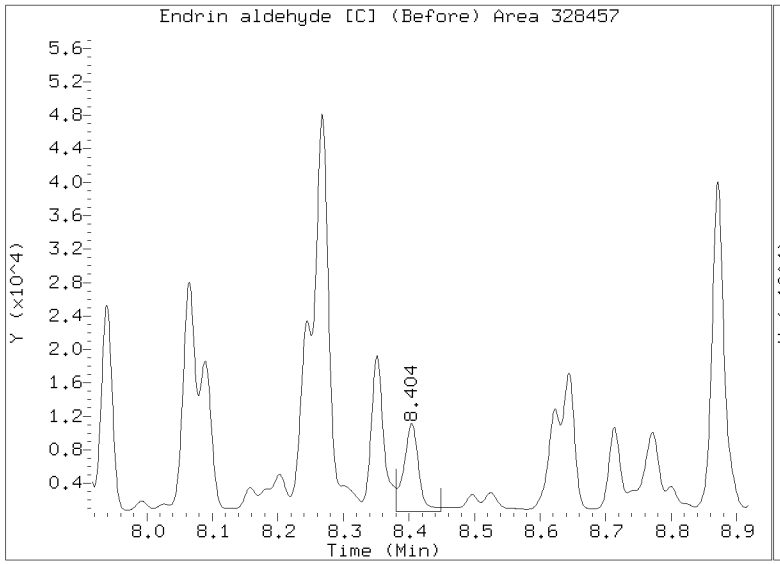

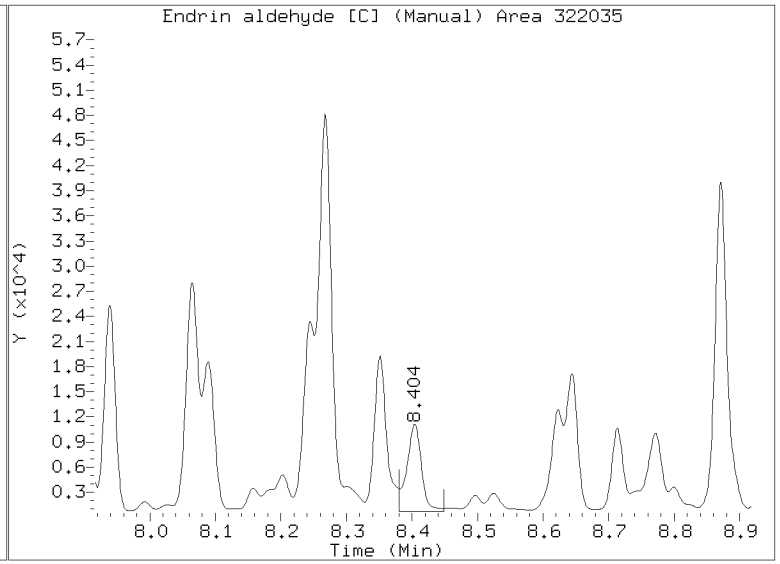

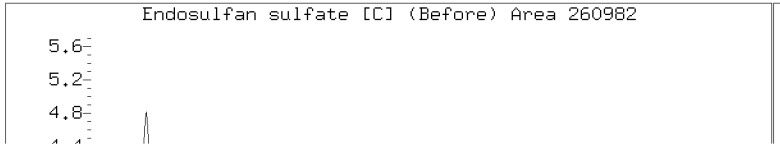

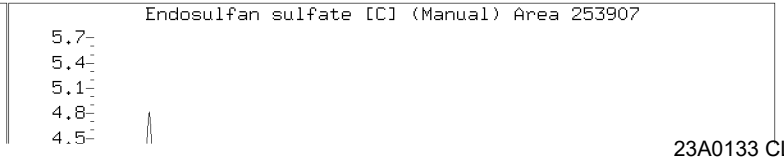

Manual Peak Adjustment Report, CLP-2

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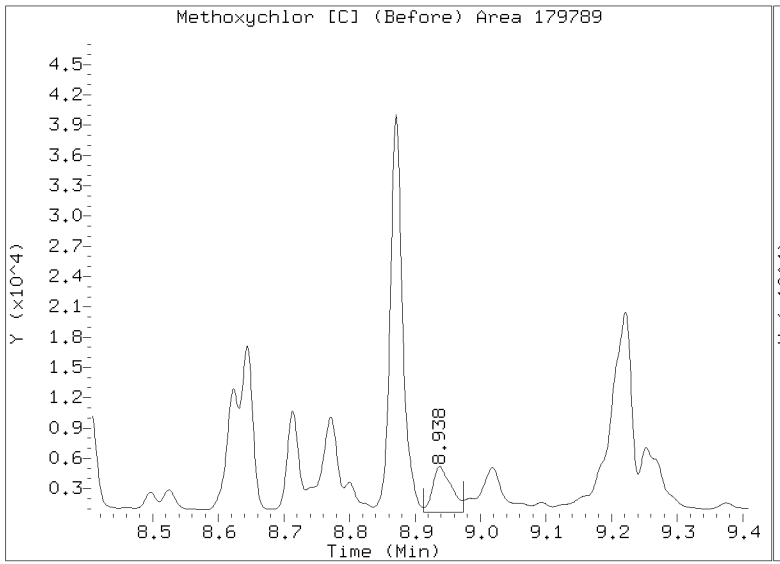
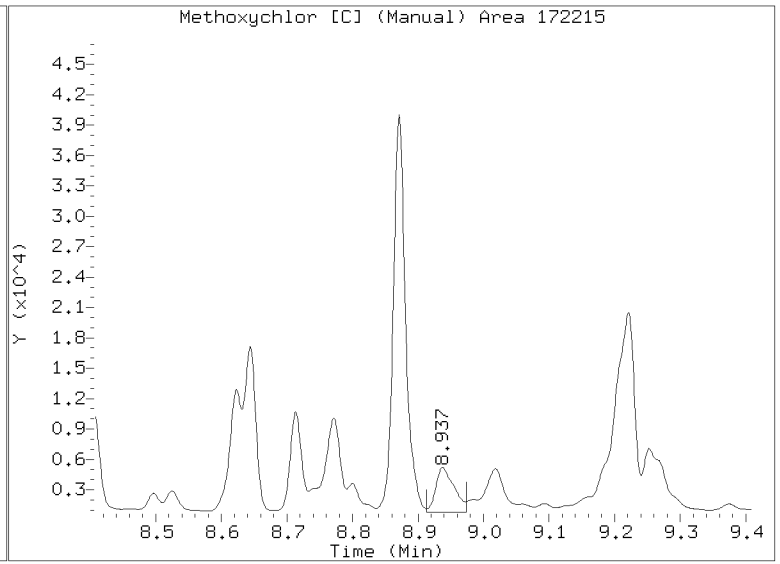
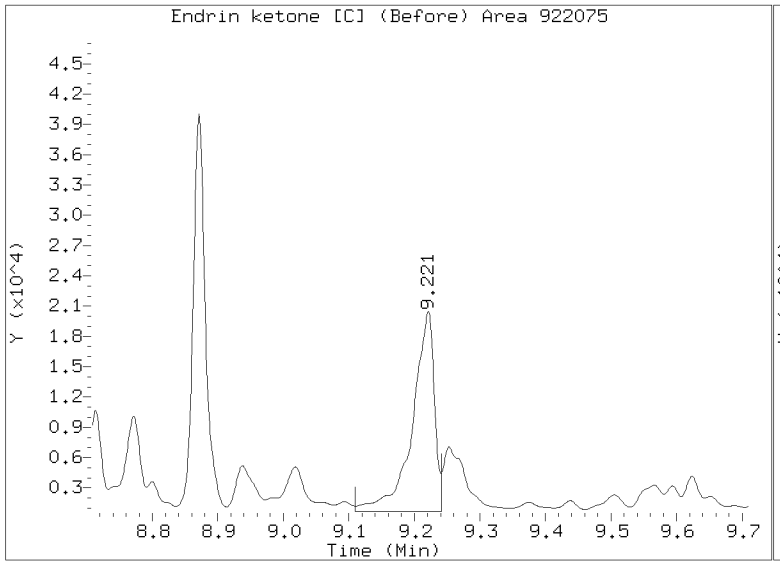
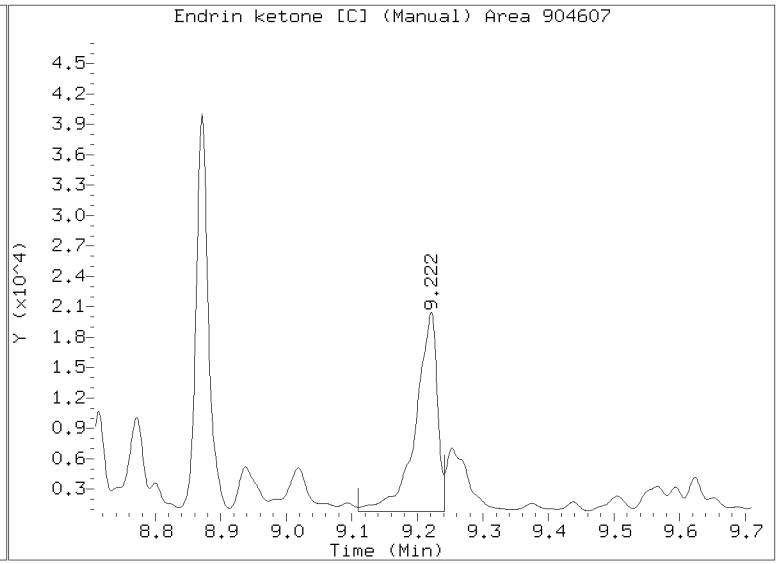
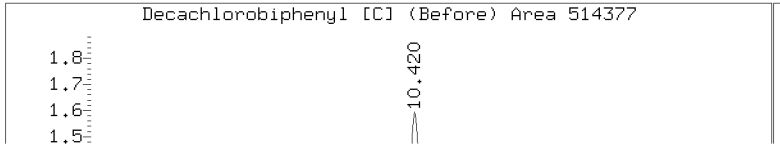
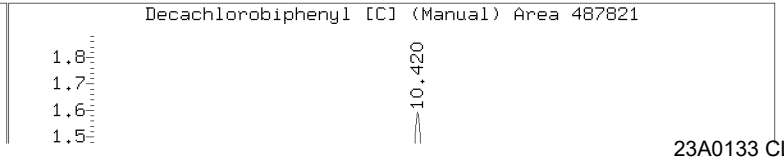












Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1227

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-12 C	File ID:	23013146.D
Sampled:	01/06/23 13:18	Prepared:	01/19/23 13:44	Analyzed:	02/01/23 04:17
% Solids:	55.76	Preparation:	EPA 3546 (Microwave)	Initial/Final:	22.44 g Wet / 2.5 mL
Batch:	BLA0392	Sequence:	SLB0046	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9920*	*8.03*	*101*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9920*	*12.2*	*153*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9920*	*5.67*	*70.9*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9920*	*5.50*	*68.8*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013146.D
Data file 2: /20230131.b/B20230131.b/23013146.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: 23A0133-12
Client ID:
Injection Date: 01-FEB-2023 04:17
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.303	-0.008	22543	4.817	-0.015	5284	2.59	0.38	148.7*	alpha-BHC
4.685	-0.008	6380	5.329	0.020	4867	1.91	0.92	69.3*	beta-BHC
4.877	0.002	17030	5.644	-0.017	2553	2.40	0.22	165.8*	delta-BHC
----			5.219	-0.010	2387	0.00	0.20	---	gamma-BHC (Lindane)
5.073	-0.020	8471	5.762	0.008	16097	1.26	1.51	18.0	Heptachlor
5.429	0.015	29520	6.145	-0.013	16740	3.93	1.38	96.1*	Aldrin
6.070	-0.018	30920	----			4.74	0.00	---	Heptachlor epoxide b
----			7.236	-0.021	13809	0.00	1.56	---	Endosulfan I
6.768	-0.023	74377	7.550	-0.001	31307	11.57	3.20	113.4*	Dieldrin
6.441	-0.010	84420	7.330	-0.012	49530	14.15	5.52	87.8*	4,4'-DDE
----			7.896	0.021	140668	0.00	19.09	---	Endrin
7.300	0.022	11632	8.064	-0.024	91285	2.65	12.08	128.1*	Endosulfan II
7.092	-0.007	304099	7.938	-0.011	222550	69.15	31.05	76.1*	4,4'-DDD
----			8.712	0.026	70418	0.00	10.62	---	Endosulfan sulfate
----			8.265	-0.001	285596	0.00	41.28	---	4,4'-DDT
7.903	0.026	34493	----			17.52	0.00	---	Methoxychlor
----			9.217	0.008	138282	0.00	19.30	---	Endrin ketone
7.724	0.018	51329	8.403	-0.015	75672	14.64	14.20	3.1	Endrin aldehyde
6.225	-0.005	12504	7.052	0.027	110104	1.89	10.99	141.3*	trans-Chlordane
6.392	0.016	57850	7.173	-0.012	19813	8.71	2.02	124.7*	cis-Chlordane
2.276	-0.027	12758	2.453	-0.029	62259	1.40	4.74	108.7*	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.798	-0.002	174173	4.190	-0.006	267802	28.36	27.54	2.9	Tetrachloro-m-xylene
9.316	-0.003	151670	10.416	-0.013	350547	40.20	61.19	41.4*	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

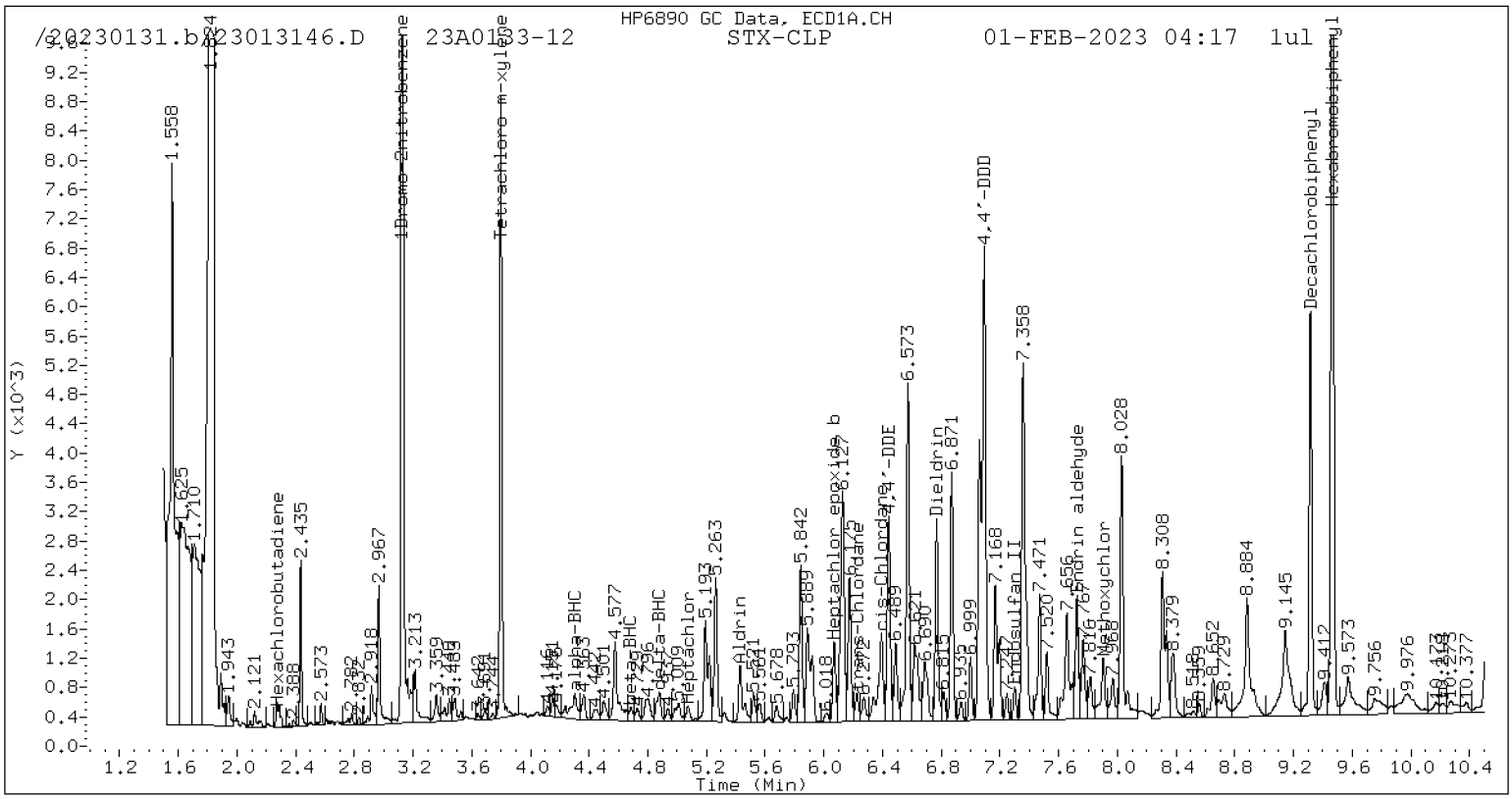
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	451622	-32.8
Hexabromobiphenyl	609723	372348	-38.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	690853	-31.4
Hexabromobiphenyl	769764	518319	-32.7

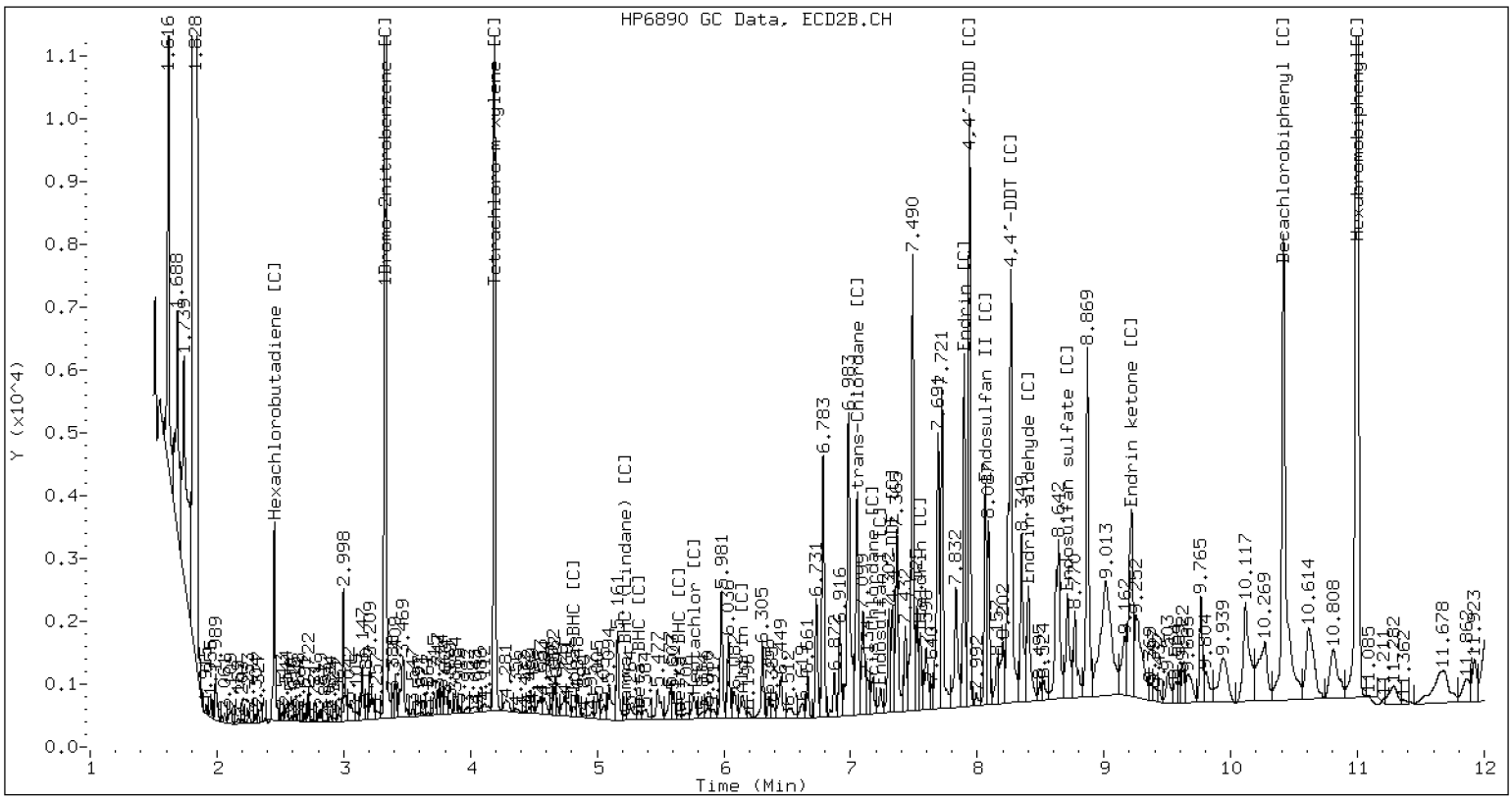
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230131.b/B20230131.b/23013146.D 23A0133-12 CLP2



CLP-2 Manual Integration: NO

Manual Peak Adjustment Report, CLP-2

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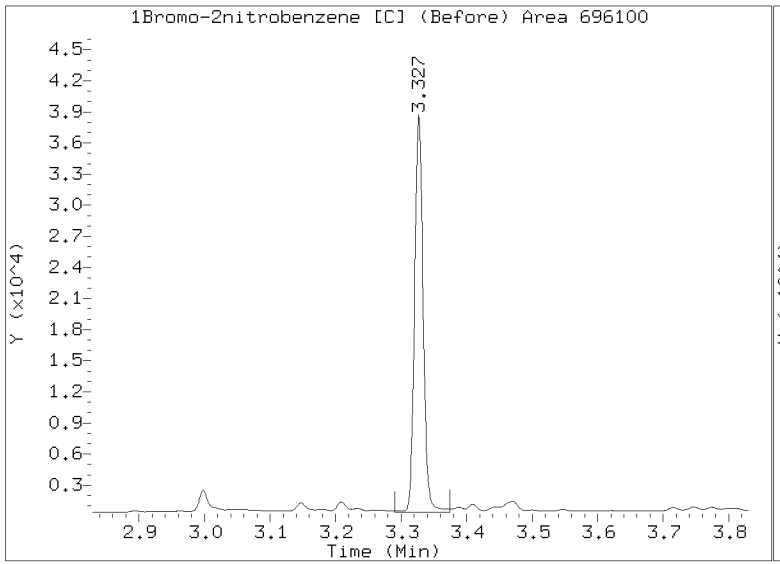
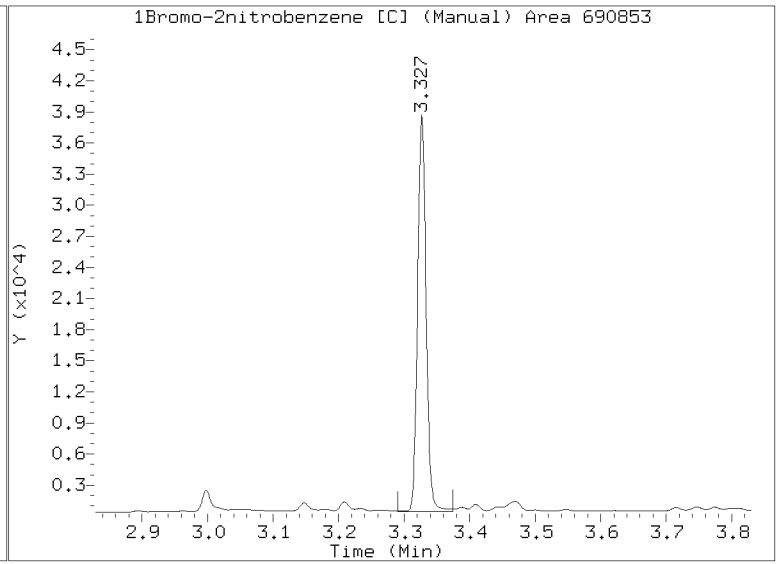
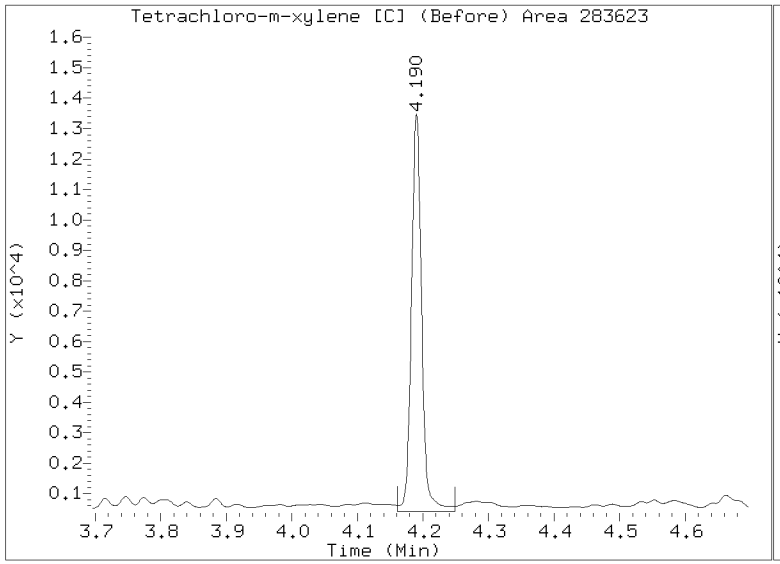
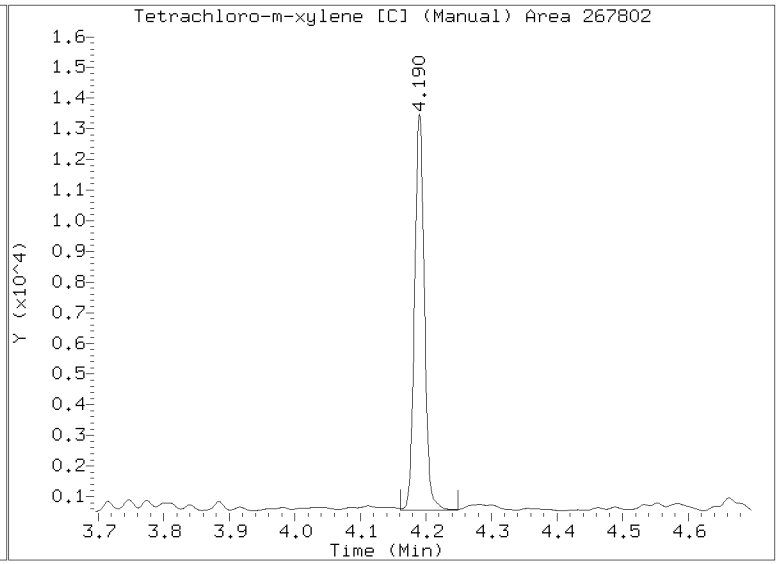
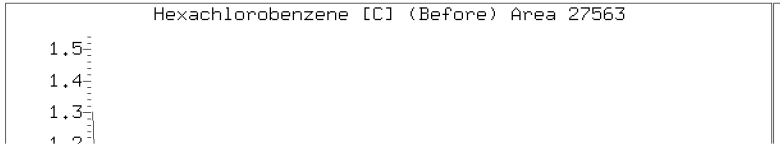
Injection Date: 01-FEB-2023 04:17
Lab ID:23A0133-12 Client ID:

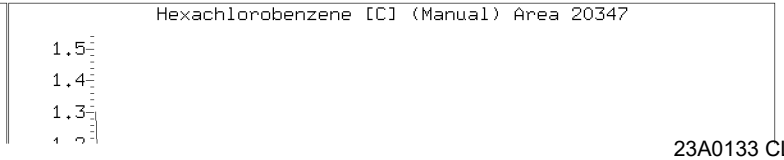












Manual Peak Adjustment Report, CLP-2

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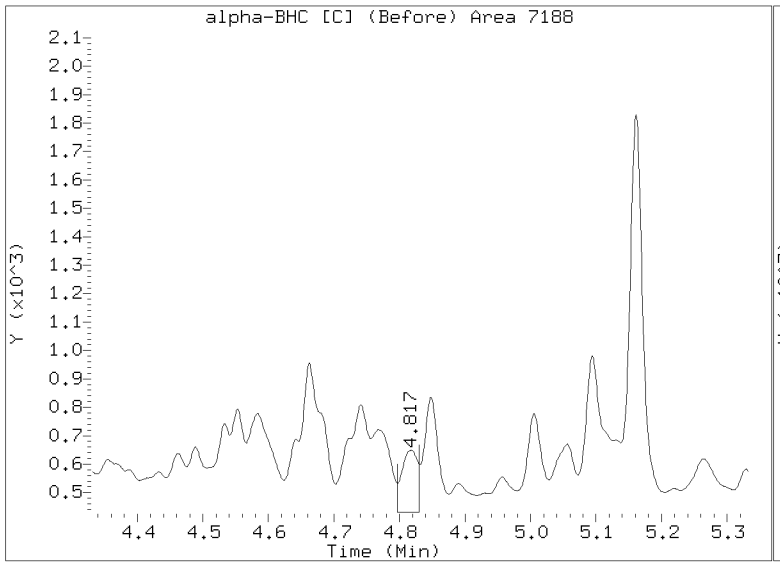
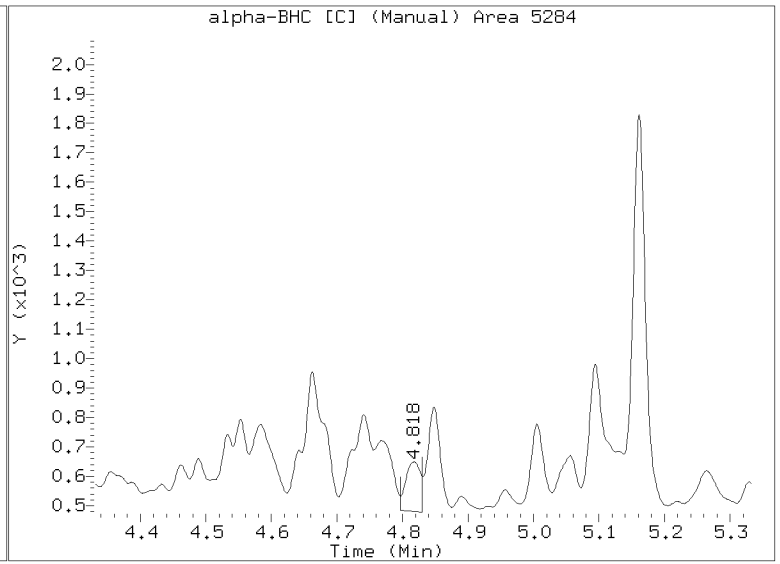
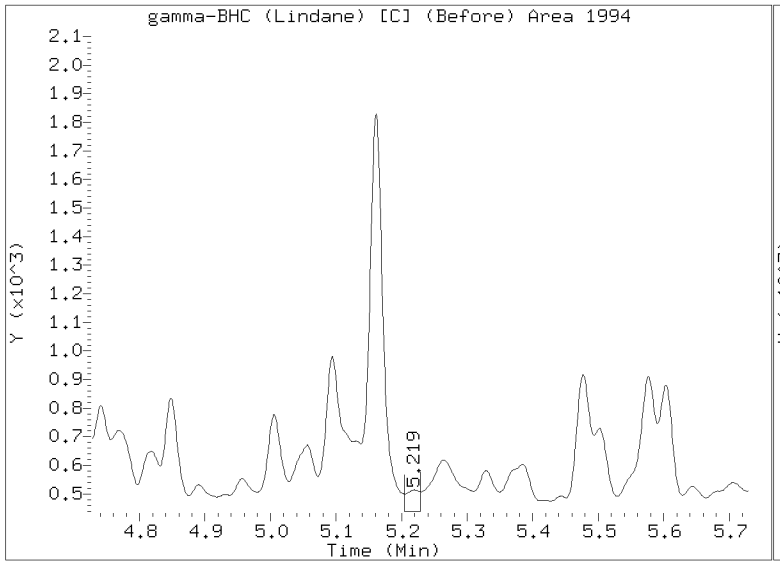
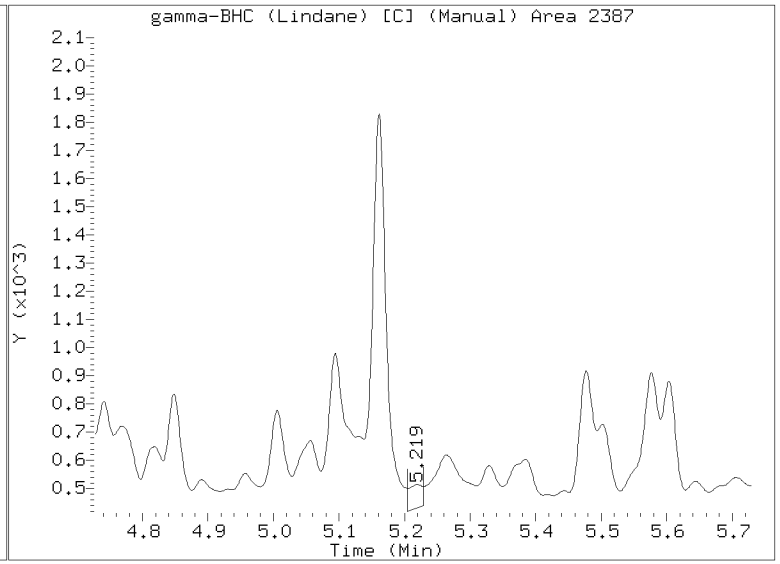
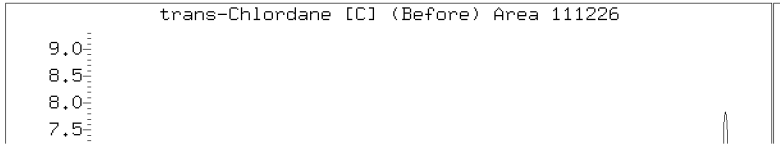
Lab ID:23A0133-12 Client ID:

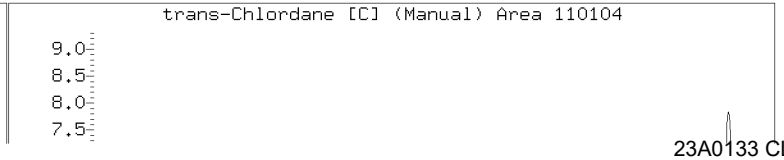












Manual Peak Adjustment Report, CLP-2

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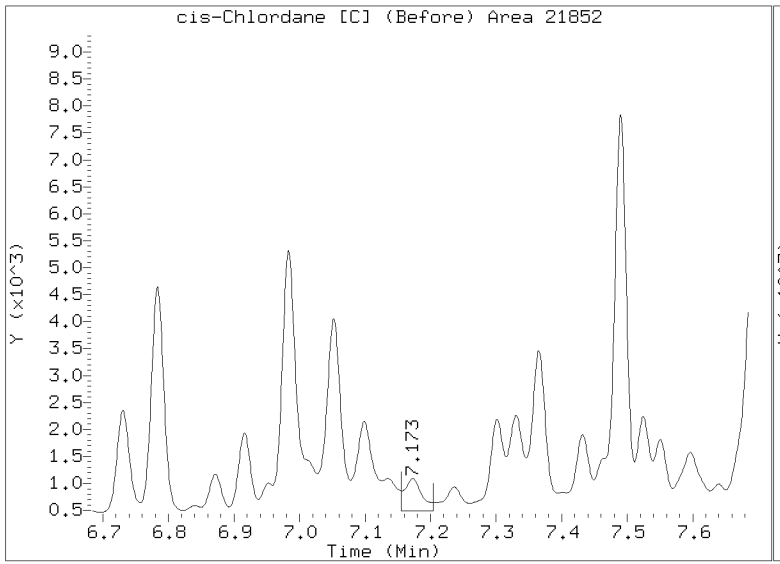

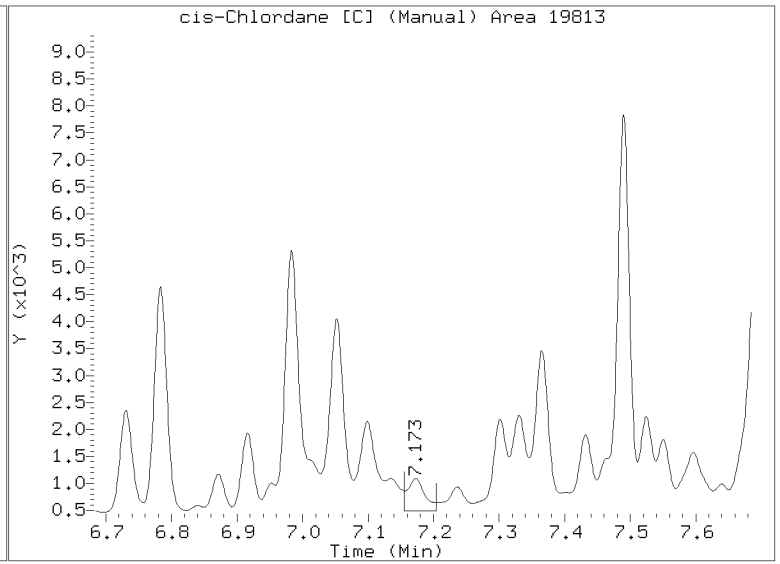

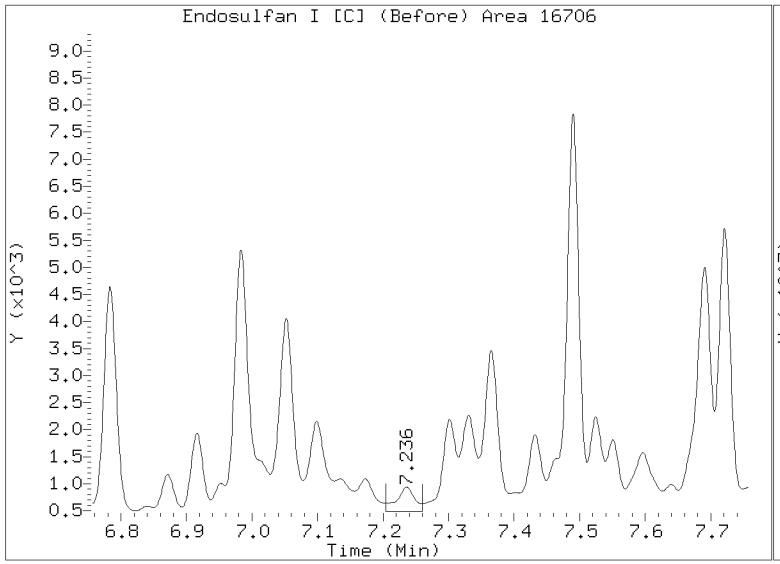

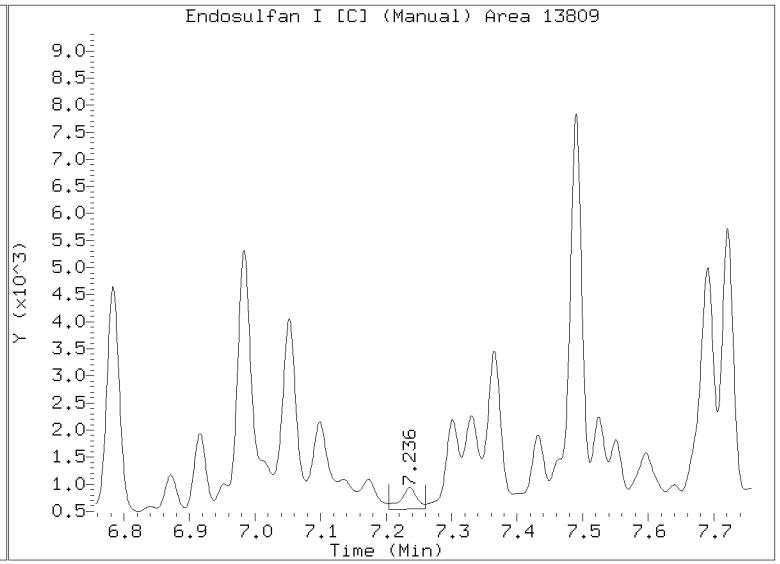

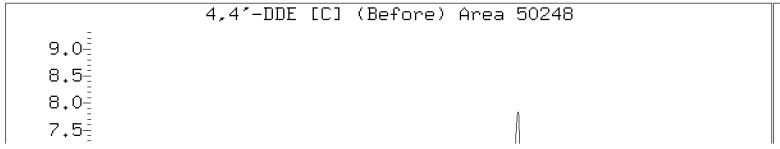

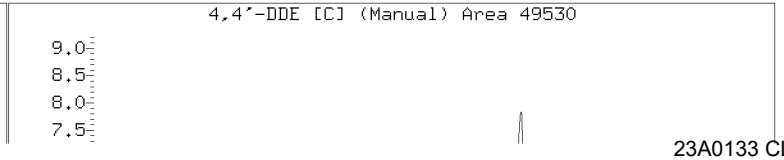

Manual Peak Adjustment Report, CLP-2

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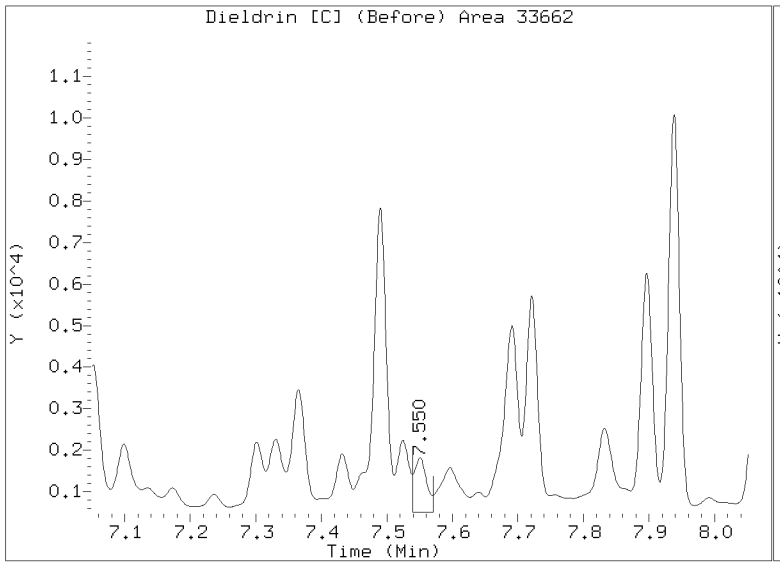

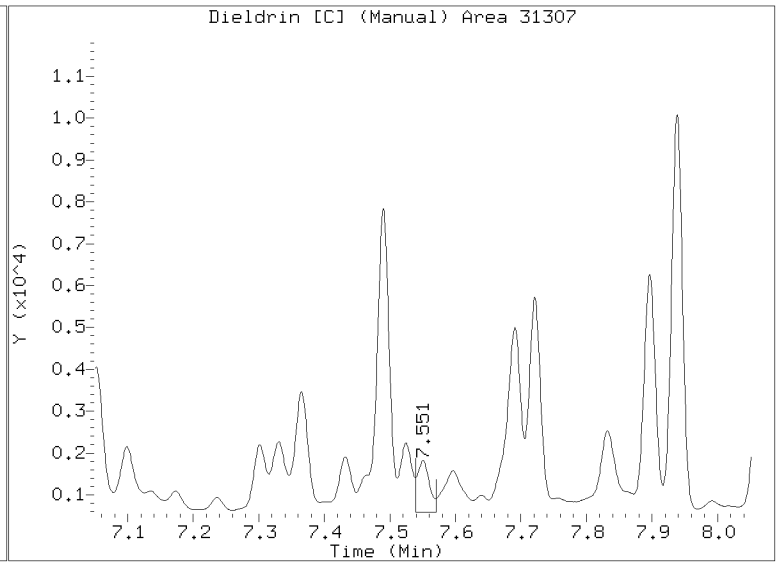

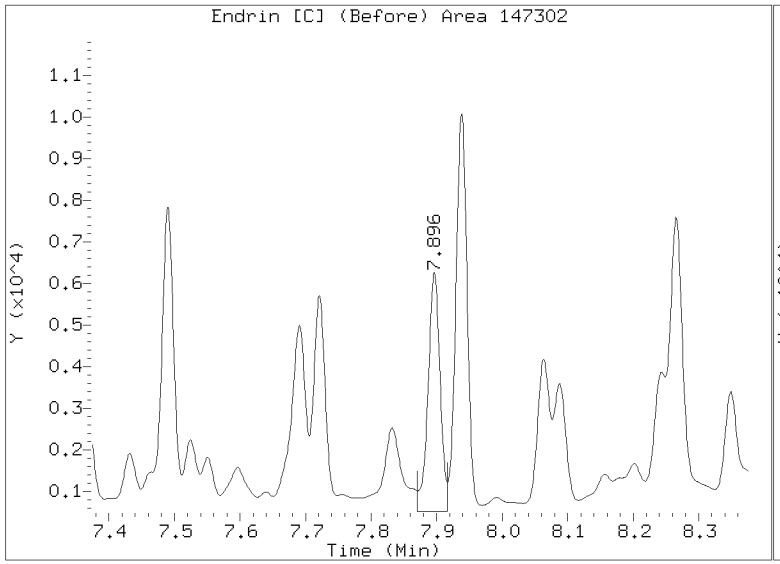

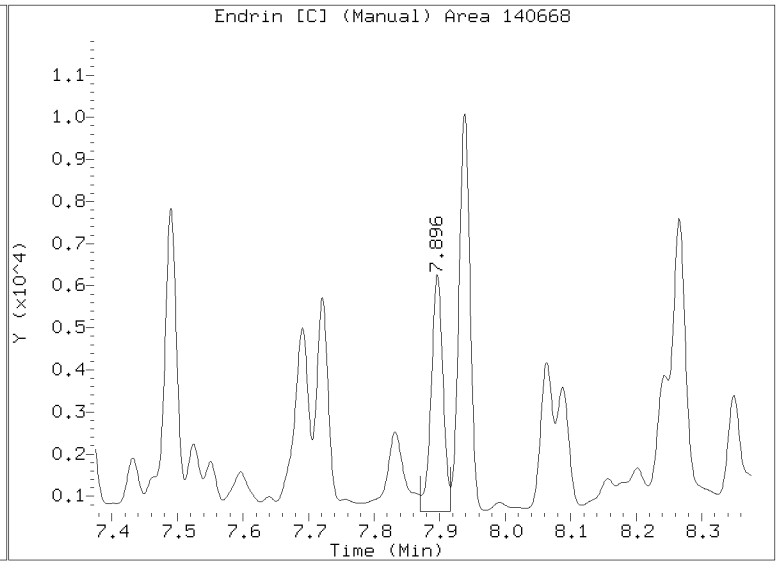

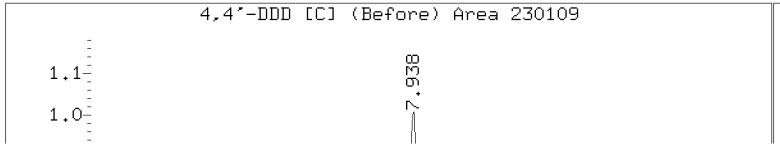

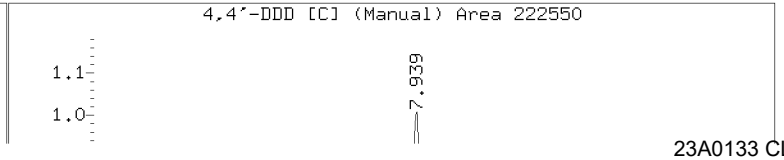

Manual Peak Adjustment Report, CLP-2

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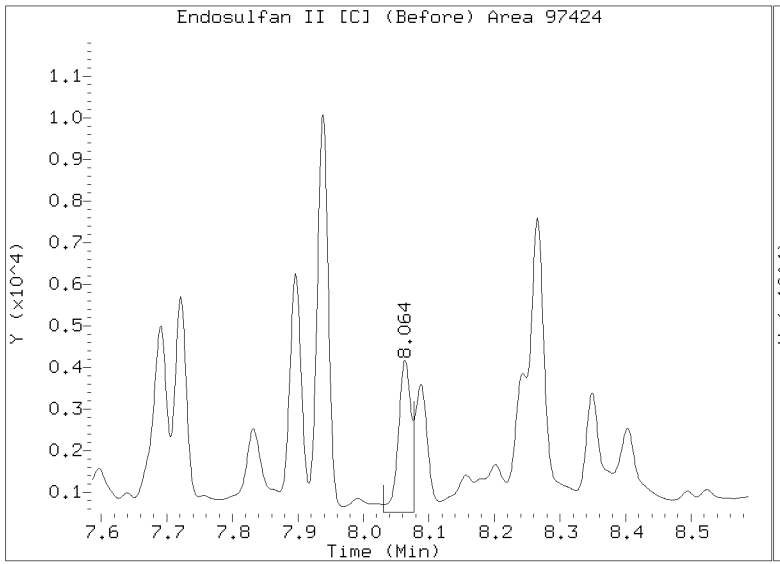

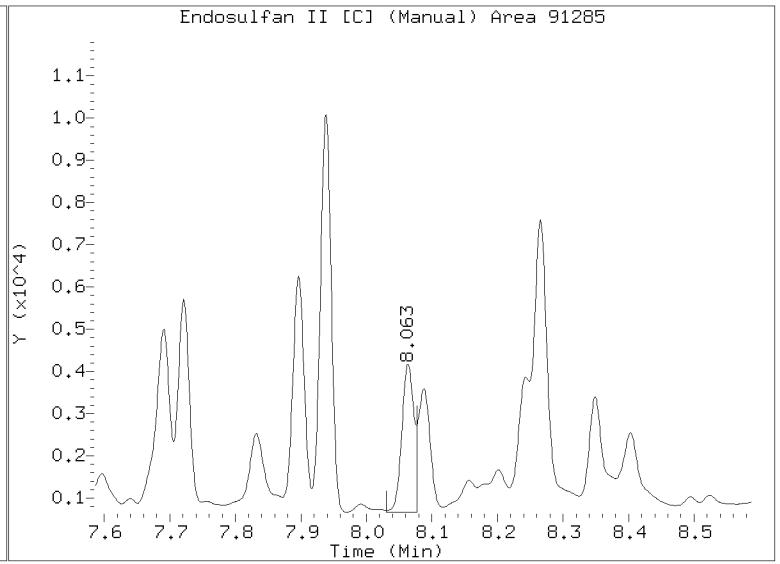

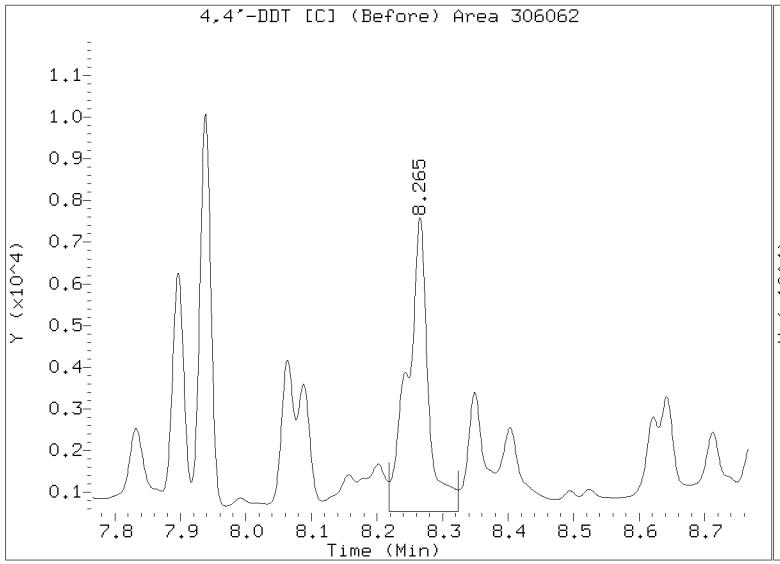

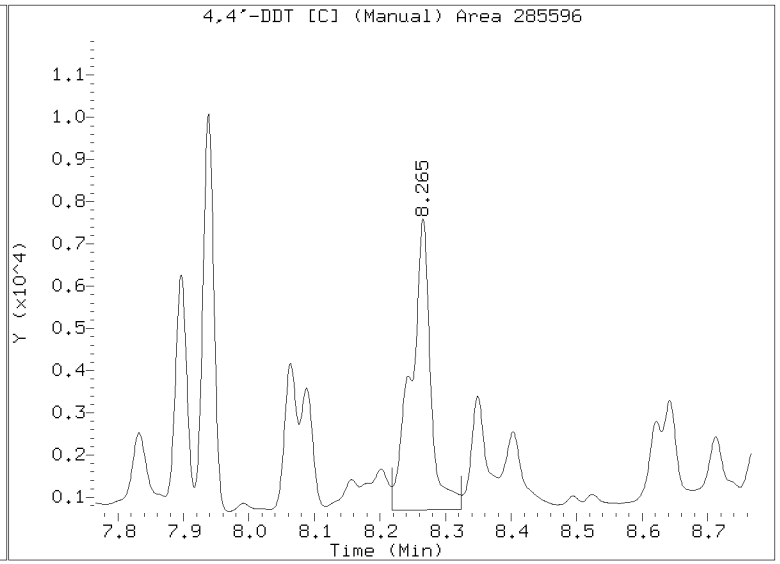

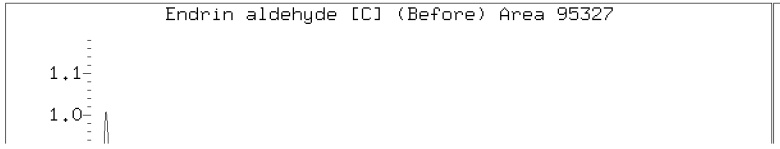

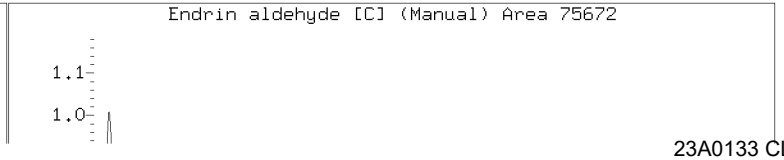

Manual Peak Adjustment Report, CLP-2

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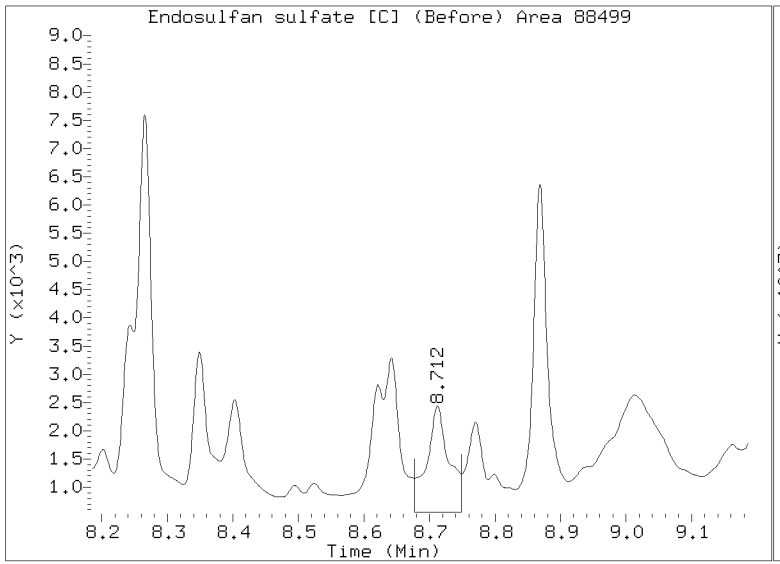
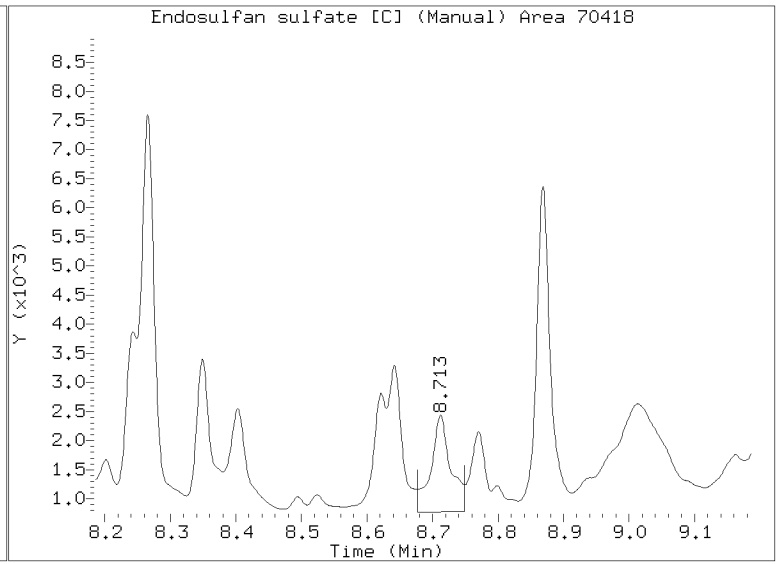
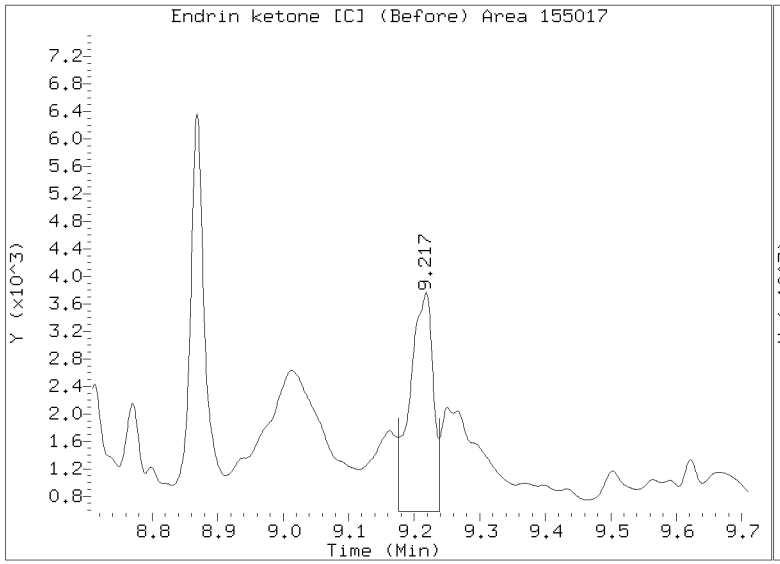
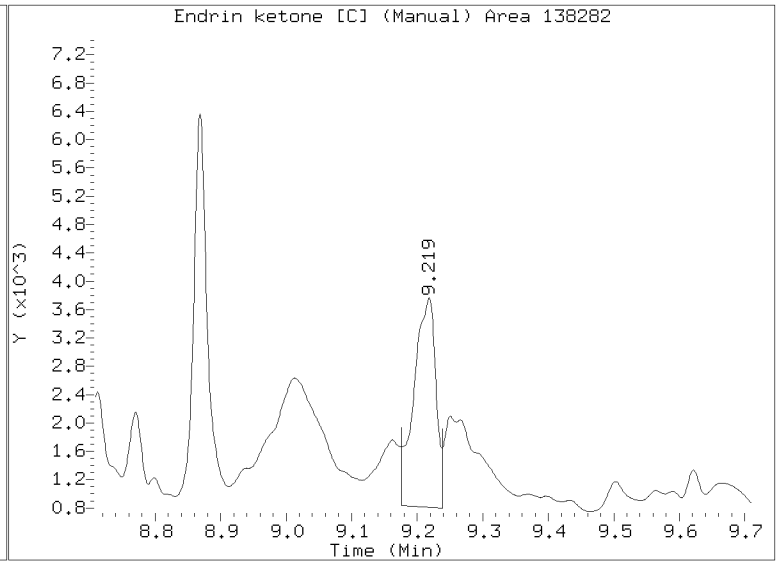
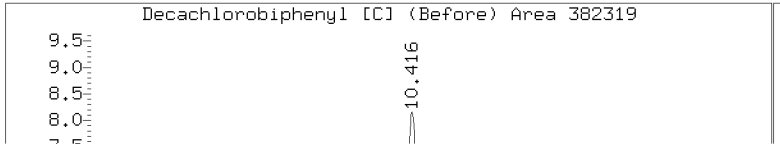
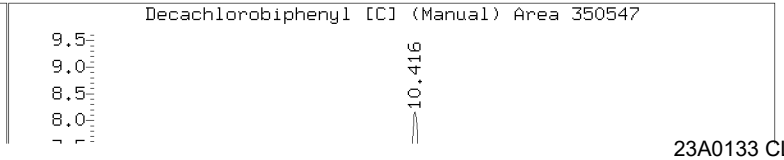






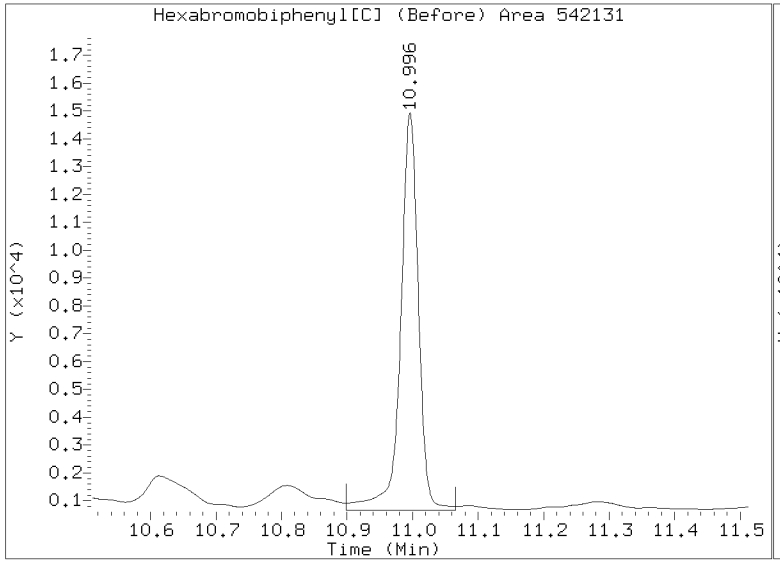


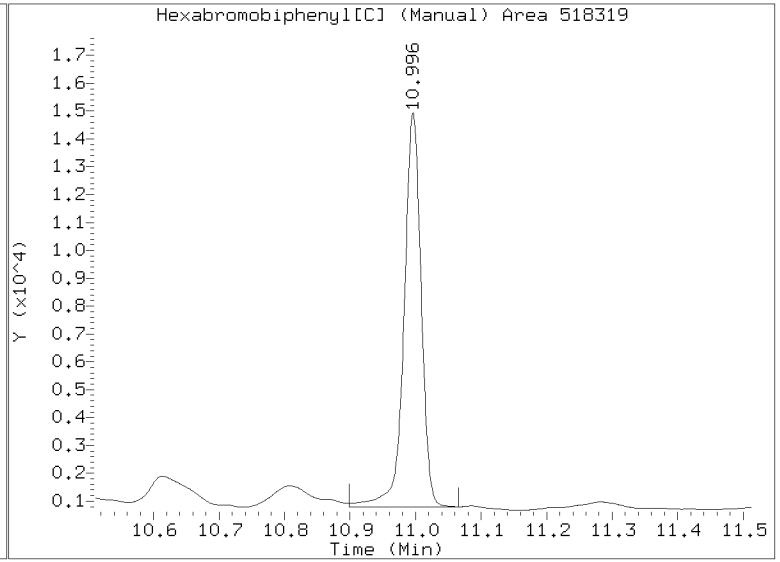




Manual Peak Adjustment Report, CLP-2

Datafile: /20230131.b/B20230131.b/23013146.D
Injection Date: 01-FEB-2023 04:17
Lab ID:23A0133-12 Client ID:





Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1110

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-13 C	File ID:	23013147.D
Sampled:	01/06/23 14:00	Prepared:	01/19/23 13:44	Analyzed:	02/01/23 04:35
% Solids:	59.32	Preparation:	EPA 3546 (Microwave)	Initial/Final:	21.09 g Wet / 2.5 mL
Batch:	BLA0392	Sequence:	SLB0046	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9932*	*6.61*	*82.7*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9932*	*8.21*	*103*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9932*	*5.24*	*65.5*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9932*	*5.28*	*66.0*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013147.D
Data file 2: /20230131.b/B20230131.b/23013147.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: 23A0133-13
Client ID:
Injection Date: 01-FEB-2023 04:35
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.326	0.015	14670	4.822	-0.011	9914	1.19	0.51	79.4*	alpha-BHC
----			5.326	0.017	9117	0.00	1.24	---	beta-BHC
4.880	0.005	39693	----			3.94	0.00	---	delta-BHC
4.611	-0.001	25954	5.220	-0.009	6501	2.43	0.40	143.8*	gamma-BHC (Lindane)
5.076	-0.016	8113	5.757	0.002	23376	0.85	1.58	59.5*	Heptachlor
5.429	0.015	50213	----			4.72	0.00	---	Aldrin
6.072	-0.017	30887	----			3.35	0.00	---	Heptachlor epoxide b
----			7.237	-0.021	15497	0.00	1.26	---	Endosulfan I
6.768	-0.023	119089	----			13.08	0.00	---	Dieldrin
6.440	-0.011	126886	7.366	0.024	142860	15.01	11.43	27.1	4,4'-DDE
7.062	0.020	214485	7.896	0.021	184597	31.46	18.90	49.9*	Endrin
7.300	0.022	15701	8.065	-0.023	282695	2.56	28.24	166.8*	Endosulfan II
----			7.937	-0.012	33290	0.00	3.50	---	4,4'-DDD
----			8.711	0.025	49854	0.00	5.67	---	Endosulfan sulfate
----			8.265	-0.001	378055	0.00	41.24	---	4,4'-DDT
7.903	0.026	38314	----			13.93	0.00	---	Methoxychlor
----			9.217	0.008	225418	0.00	23.74	---	Endrin ketone
7.726	0.020	37853	8.404	-0.014	50170	7.73	7.11	8.5	Endrin aldehyde
----			7.051	0.026	141381	0.00	10.13	---	trans-Chlordane
6.392	0.016	78416	7.173	-0.012	10061	8.34	0.74	167.5*	cis-Chlordane
2.286	-0.018	4019	2.453	-0.029	73322	0.31	4.00	171.1*	Hexachlorobutadiene
----			4.678	-0.015	7171	0.00	0.41	---	Hexachlorobenzene
3.799	-0.001	227962	4.191	-0.006	357698	26.20	26.40	0.7	Tetrachloro-m-xylene
9.316	-0.003	174212	10.416	-0.013	311752	33.06	41.07	21.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

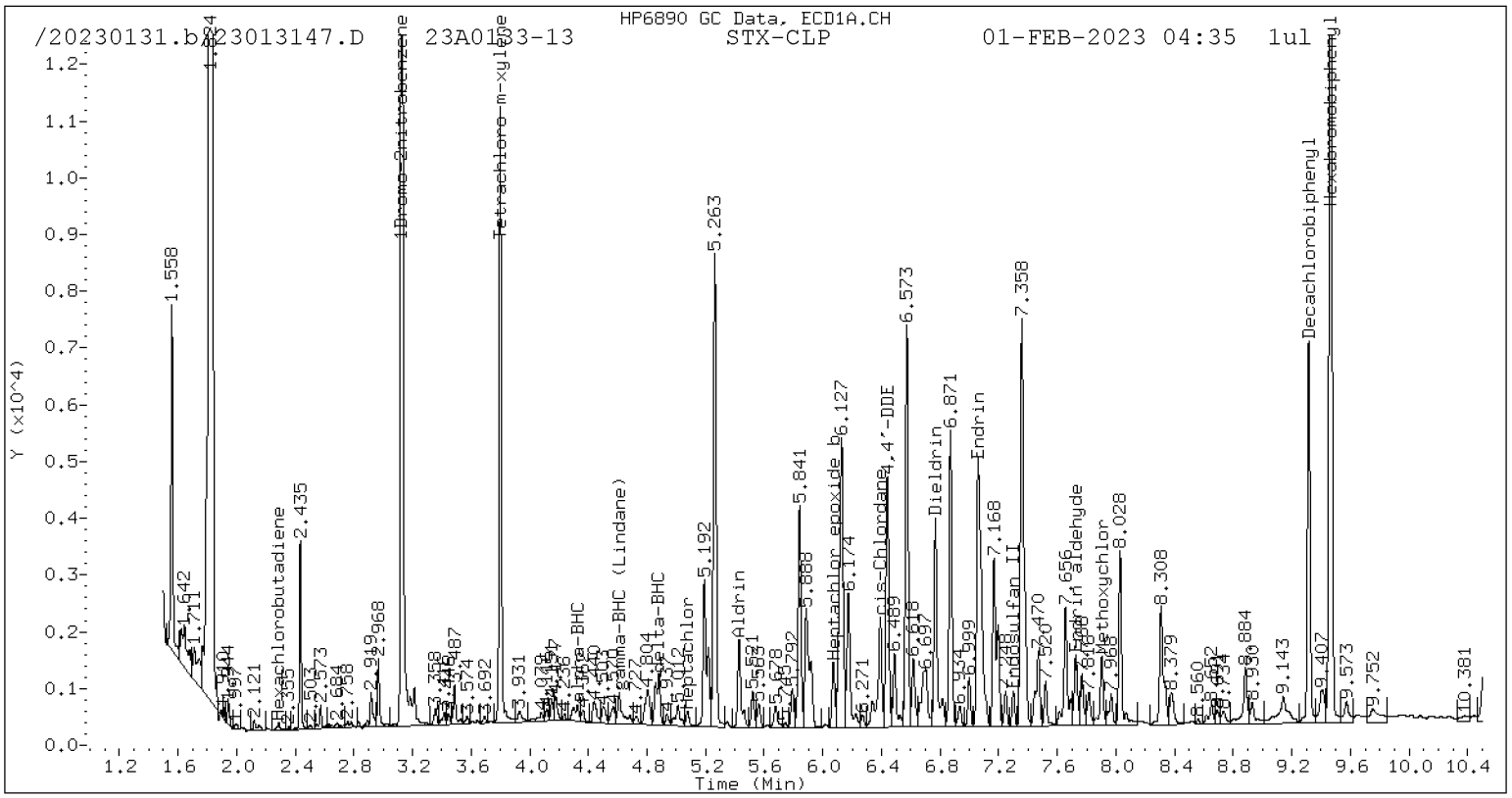
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	639701	-4.9
Hexabromobiphenyl	609723	520053	-14.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	962552	-4.4
Hexabromobiphenyl	769764	686821	-10.8

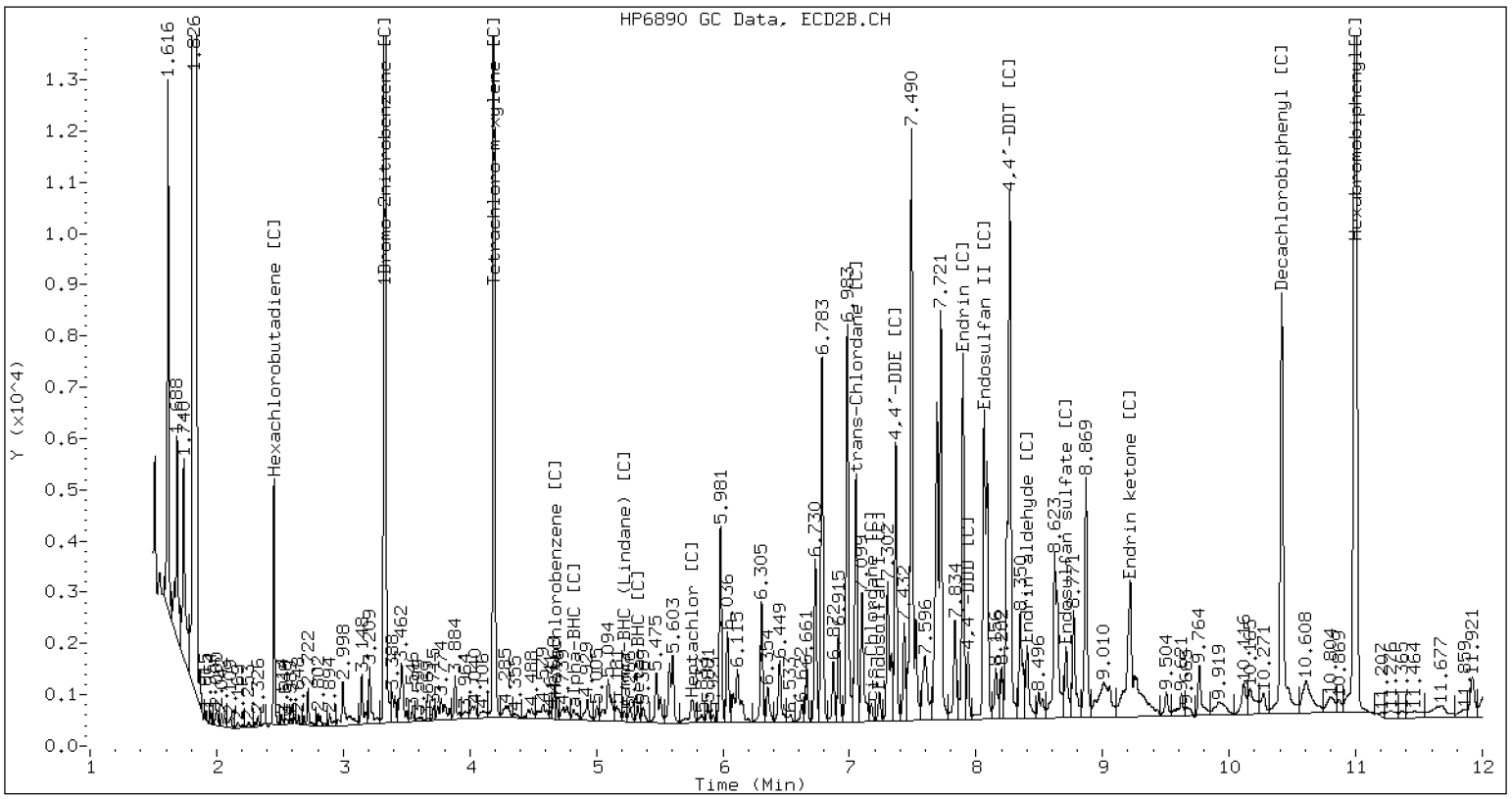
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

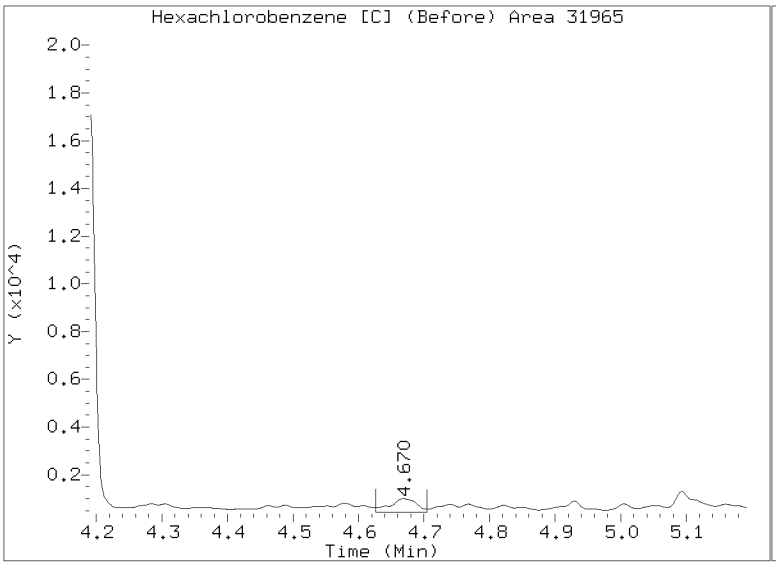
/20230131.b/B20230131.b/23013147.D 23A0133-13 CLP2

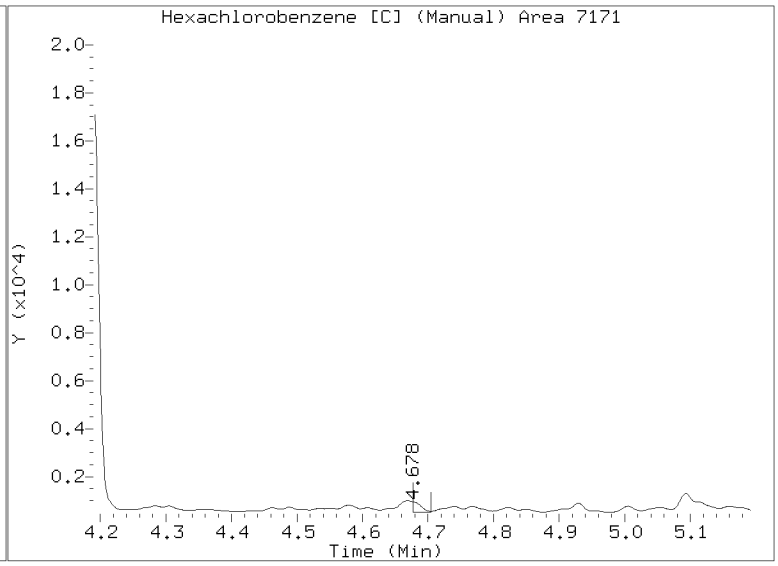


CLP-2 Manual Integration: YES

Manual Peak Adjustment Report, CLP-2

Datafile: /20230131.b/B20230131.b/23013147.D
Injection Date: 01-FEB-2023 04:35
Lab ID:23A0133-13 Client ID:





Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1109

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-14 C	File ID:	23013148.D
Sampled:	01/06/23 14:13	Prepared:	01/19/23 13:44	Analyzed:	02/01/23 04:53
% Solids:	45.19	Preparation:	EPA 3546 (Microwave)	Initial/Final:	27.97 g Wet / 2.5 mL
Batch:	BLA0392	Sequence:	SLB0046	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.49	0.14	0.49	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9116*	*7.75*	*97.9*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9116*	*7.76*	*98.1*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9116*	*5.81*	*73.4*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9116*	*5.67*	*71.7*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013148.D
Data file 2: /20230131.b/B20230131.b/23013148.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: 23A0133-14
Client ID:
Injection Date: 01-FEB-2023 04:53
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.300	-0.011	39892	4.820	-0.013	5690	2.39	0.20	168.4*	alpha-BHC
4.682	-0.011	10539	5.326	0.016	14316	1.64	1.35	19.0	beta-BHC
4.879	0.004	76011	----			5.56	0.00	---	delta-BHC
4.609	-0.002	29199	5.219	-0.010	7074	2.01	0.30	148.2*	gamma-BHC (Lindane)
5.076	-0.017	18359	5.758	0.003	32904	1.42	1.54	7.7	Heptachlor
5.428	0.014	51184	6.149	-0.008	23513	3.54	0.96	114.5*	Aldrin
6.072	-0.017	20467	6.839	0.025	4506	1.63	0.22	151.9*	Heptachlor epoxide b
----			7.236	-0.021	10787	0.00	0.61	---	Endosulfan I
6.768	-0.023	91608	7.525	-0.027	57439	7.41	2.92	87.0*	Dieldrin
6.442	-0.009	104158	7.330	-0.012	74675	9.08	4.14	74.8*	4,4'-DDE
7.062	0.021	212193	7.897	0.021	158679	21.89	11.88	59.2*	Endrin
7.302	0.024	13877	8.087	-0.000	82935	1.59	6.06	116.9*	Endosulfan II
----			7.937	-0.011	82017	0.00	6.31	---	4,4'-DDD
----			8.712	0.026	41894	0.00	3.49	---	Endosulfan sulfate
----			8.263	-0.003	356912	0.00	28.47	---	4,4'-DDT
7.904	0.027	24293	----			6.21	0.00	---	Methoxychlor
----			9.219	0.009	130122	0.00	10.02	---	Endrin ketone
7.727	0.020	42762	8.404	-0.015	52049	6.14	5.39	13.0	Endrin aldehyde
6.224	-0.006	23904	7.049	0.024	121547	1.88	6.03	105.0*	trans-Chlordane
6.391	0.015	68429	7.173	-0.012	22871	5.36	1.16	128.8*	cis-Chlordane
2.298	-0.006	10807	2.509	0.027	4845	0.62	0.18	108.4*	Hexachlorobutadiene
4.149	-0.004	17992	----			1.16	0.00	---	Hexachlorobenzene
3.797	-0.003	346950	4.189	-0.007	560602	29.37	28.66	2.4	Tetrachloro-m-xylene
9.318	-0.001	293514	10.417	-0.012	407125	39.17	39.22	0.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

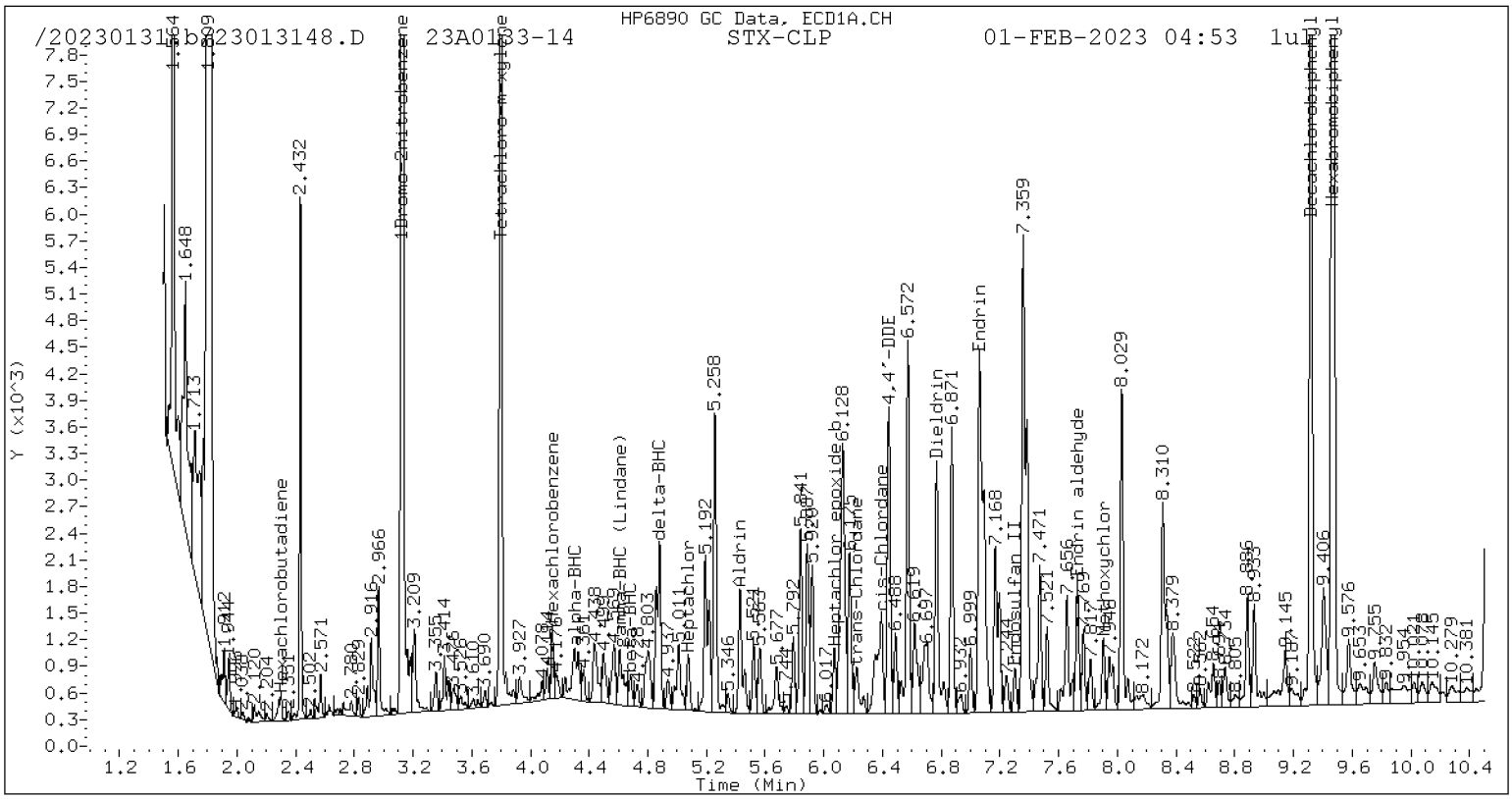
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	868689	29.2
Hexabromobiphenyl	609723	739547	21.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1389480	38.1
Hexabromobiphenyl	769764	939202	22.0

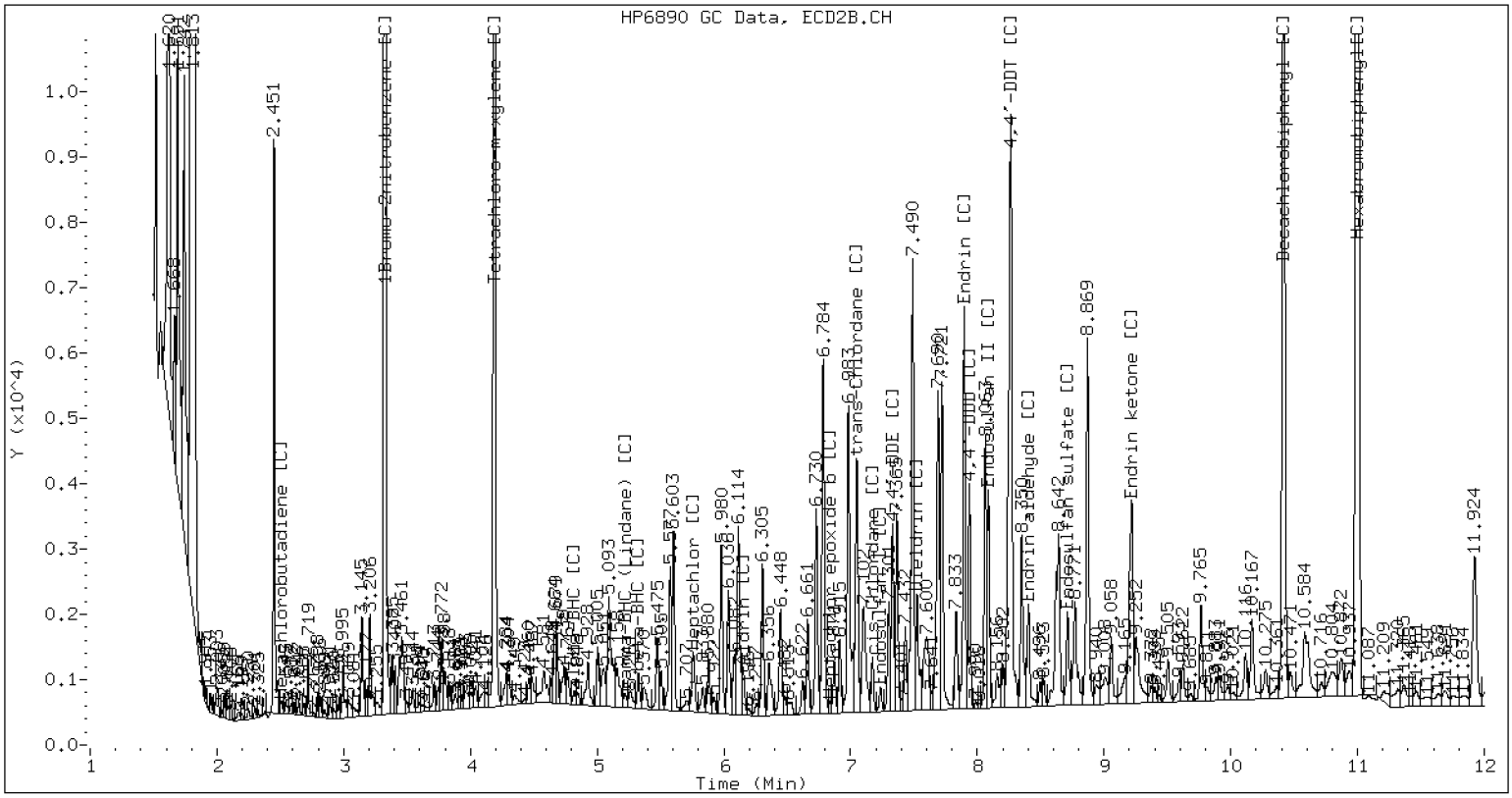
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

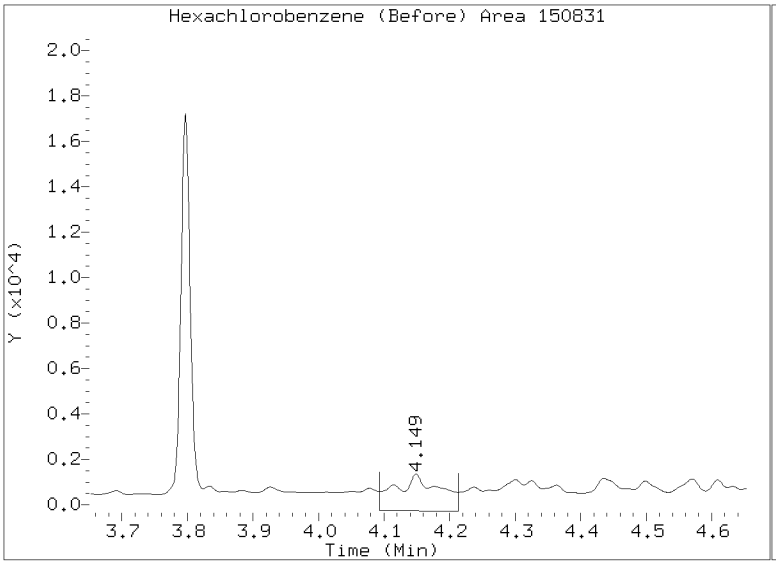
/20230131.b/B20230131.b/23013148.D 23A0133-14 CLP2

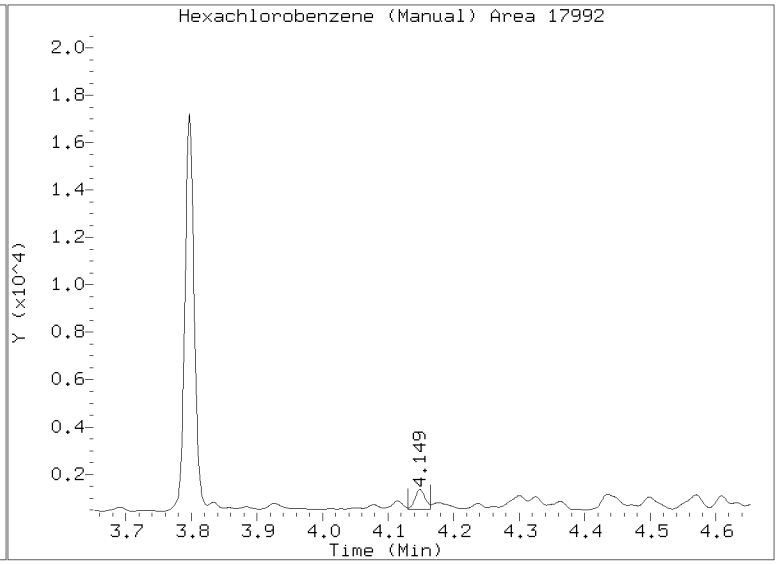


CLP-2 Manual Integration: NO

Manual Peak Adjustment Report, STX-CLP

Datafile: /20230131.b/23013148.D
Injection Date: 01-FEB-2023 04:53
Lab ID:23A0133-14 Client ID:
Report Date: 02/03/2023 20:25





Manual Peak Adjustment Report, CLP-2

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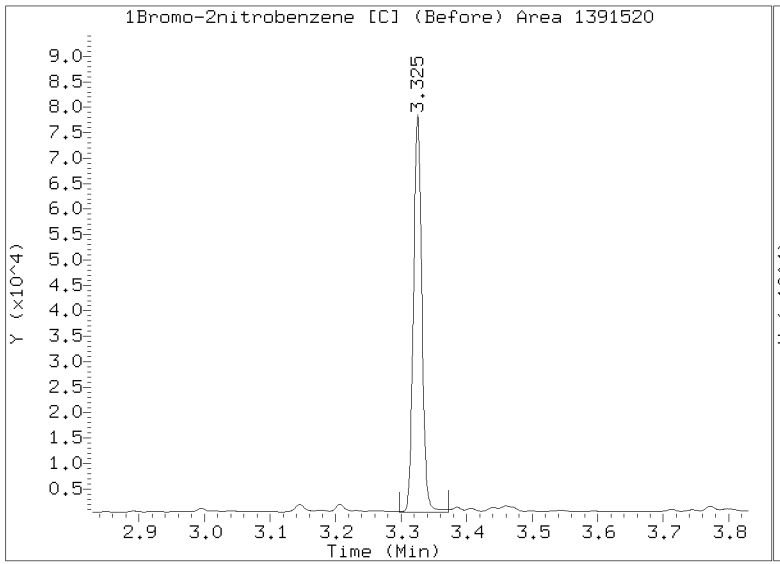
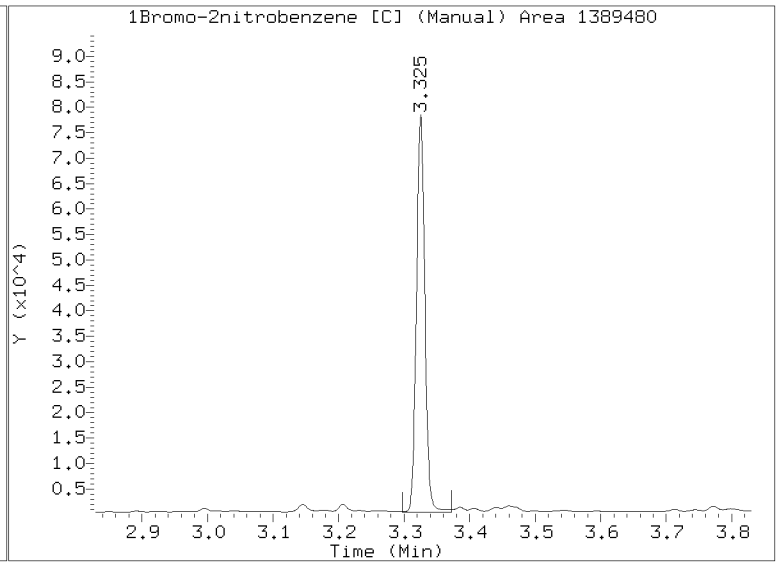
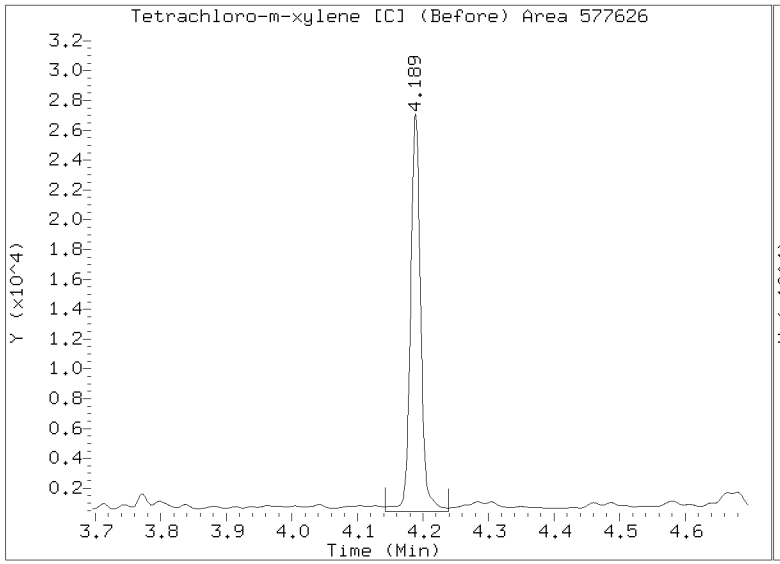
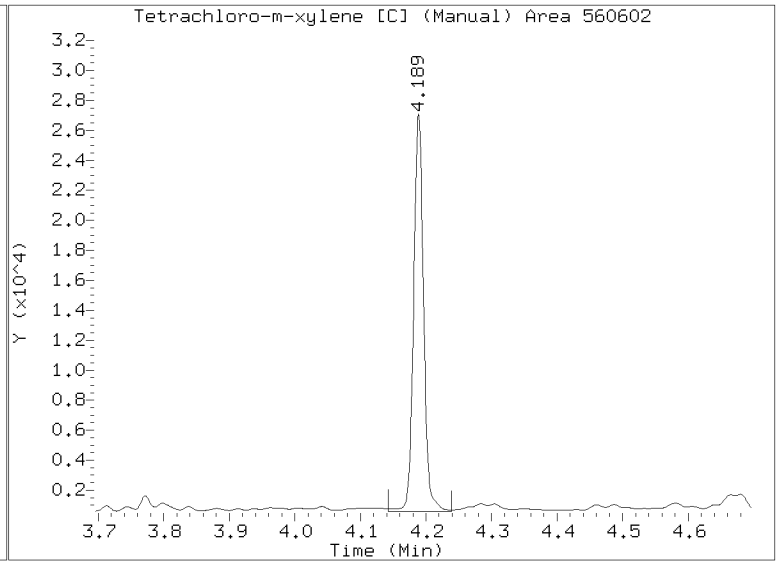
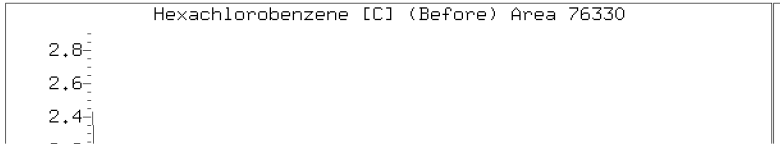
Injection Date: 01-FEB-2023 04:53
Lab ID:23A0133-14 Client ID:

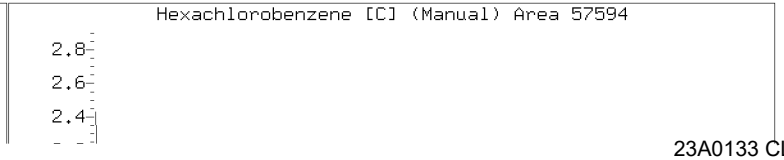












Manual Peak Adjustment Report, CLP-2

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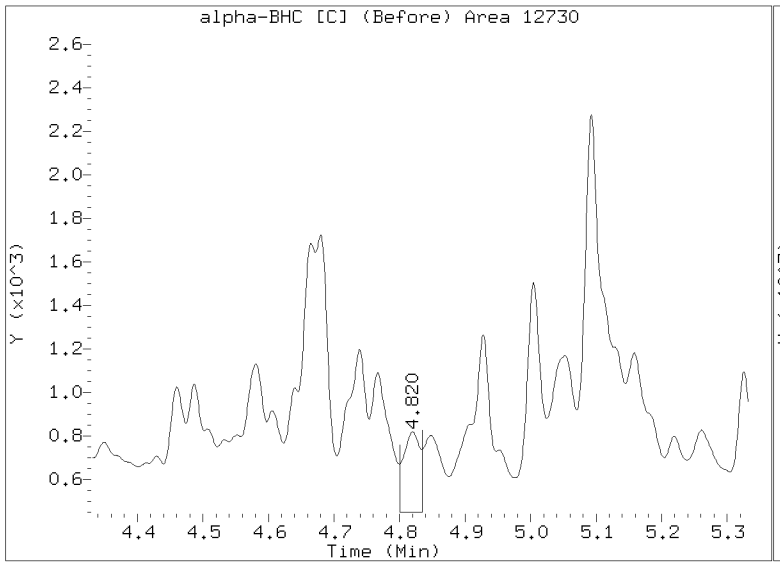
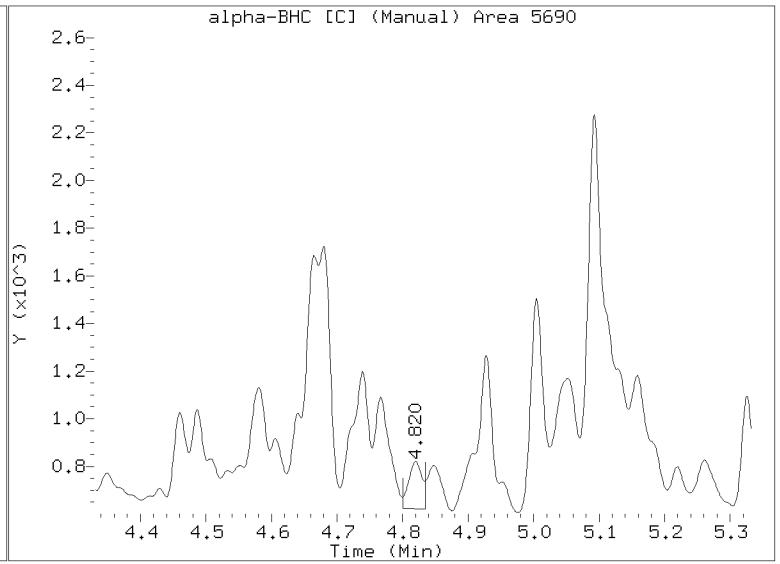
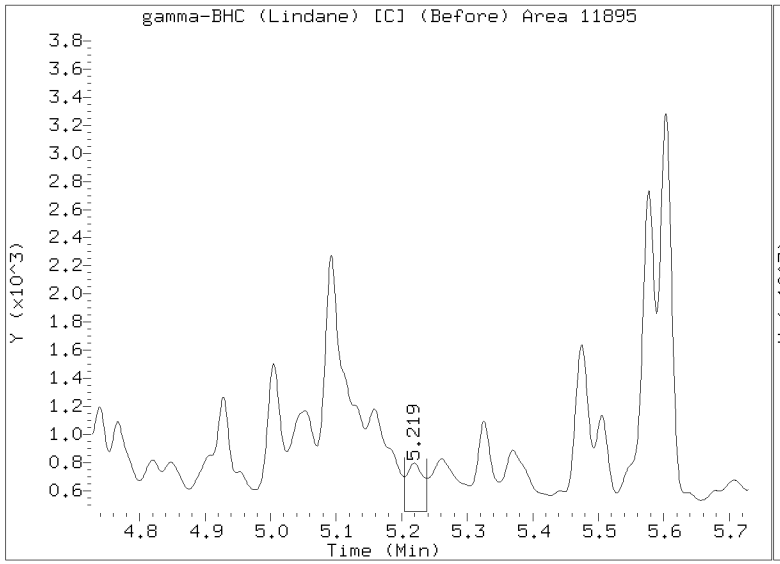
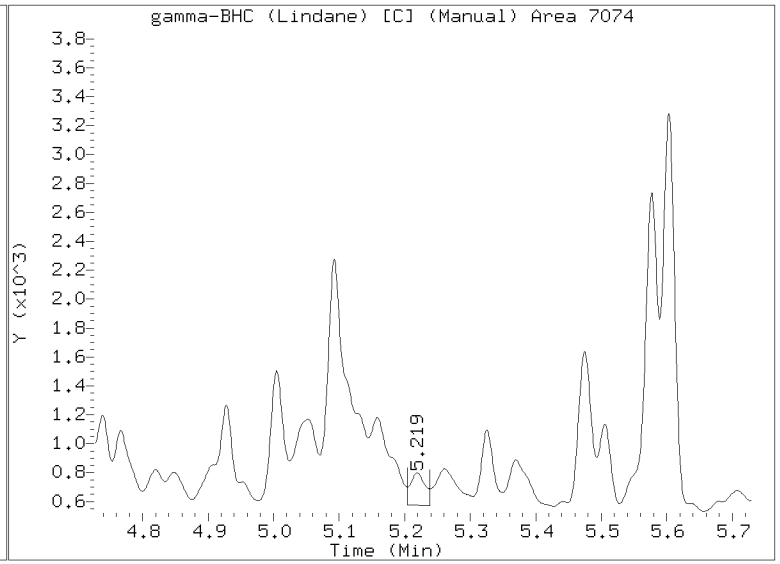
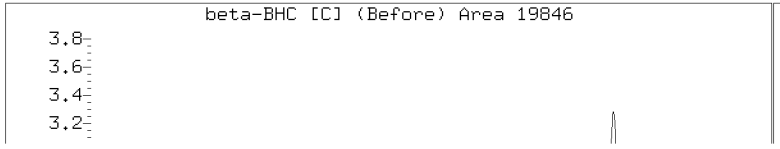
Injection Date: 01-FEB-2023 04:53
Lab ID:23A0133-14 Client ID:

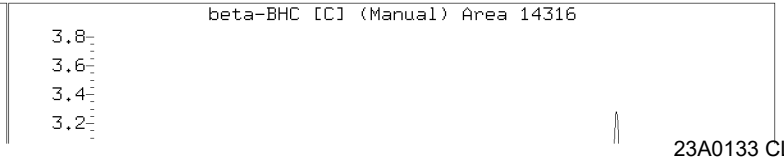






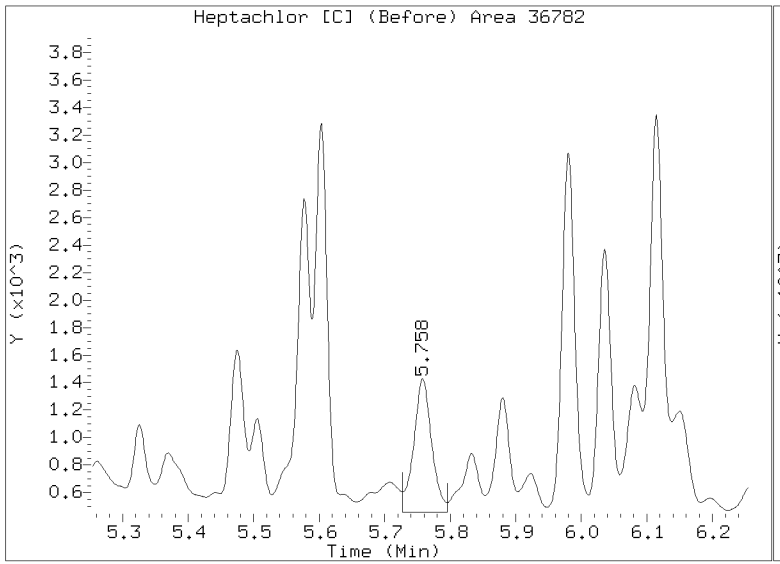


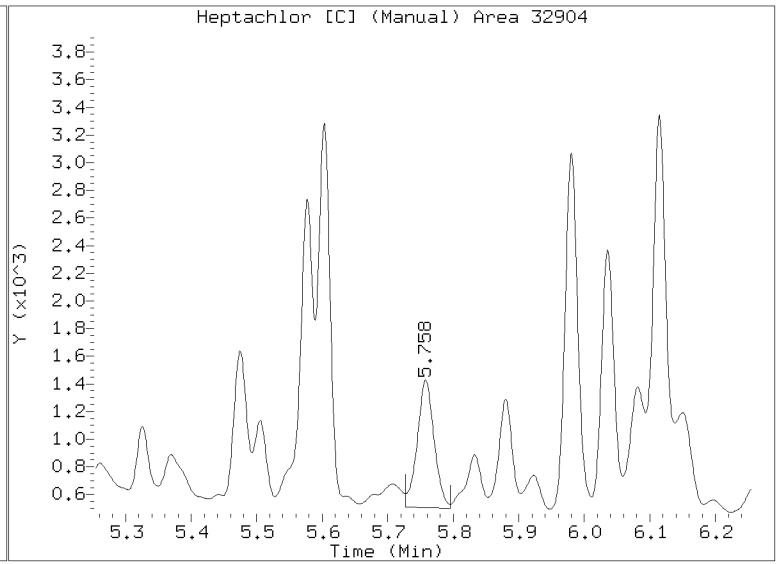


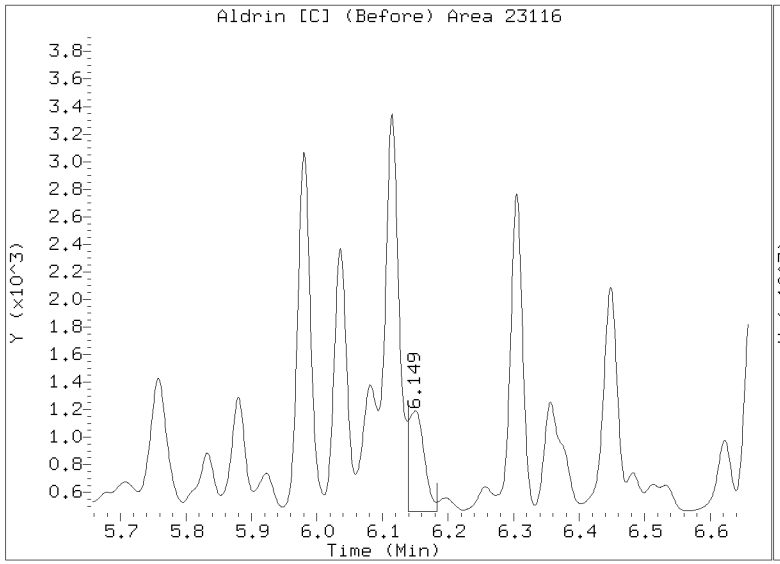


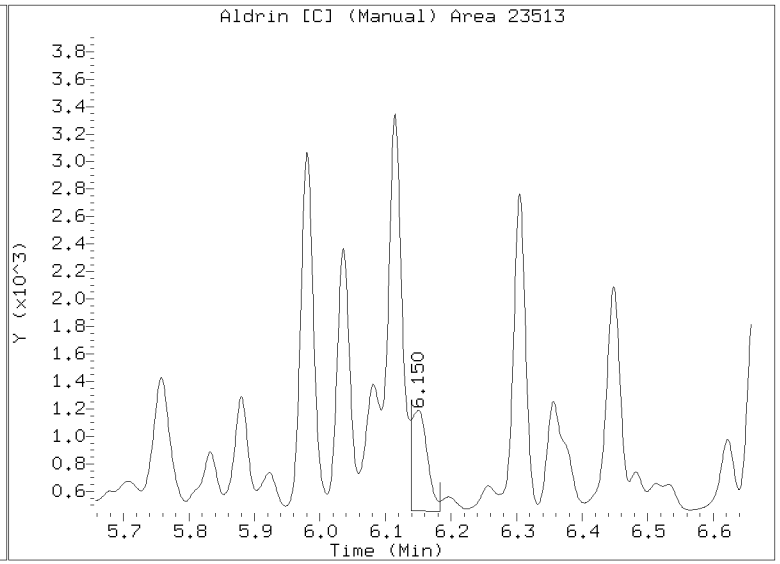
Manual Peak Adjustment Report, CLP-2

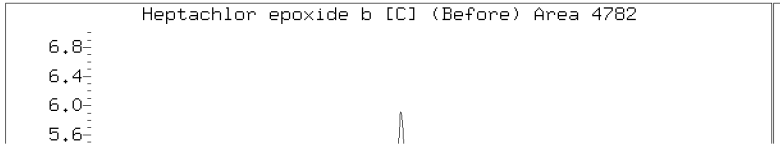
Datafile: /20230131.b/B20230131.b/23013148.D
Injection Date: 01-FEB-2023 04:53
Lab ID:23A0133-14 Client ID:

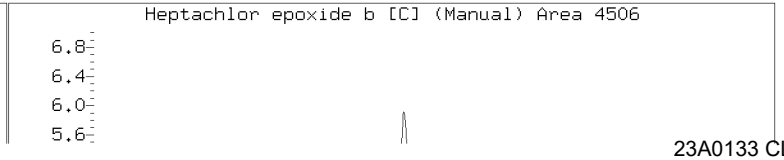












Manual Peak Adjustment Report, CLP-2

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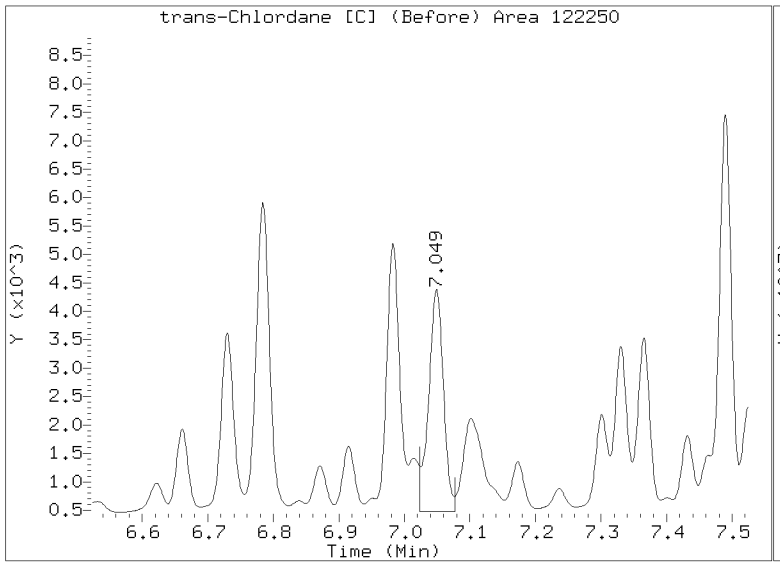

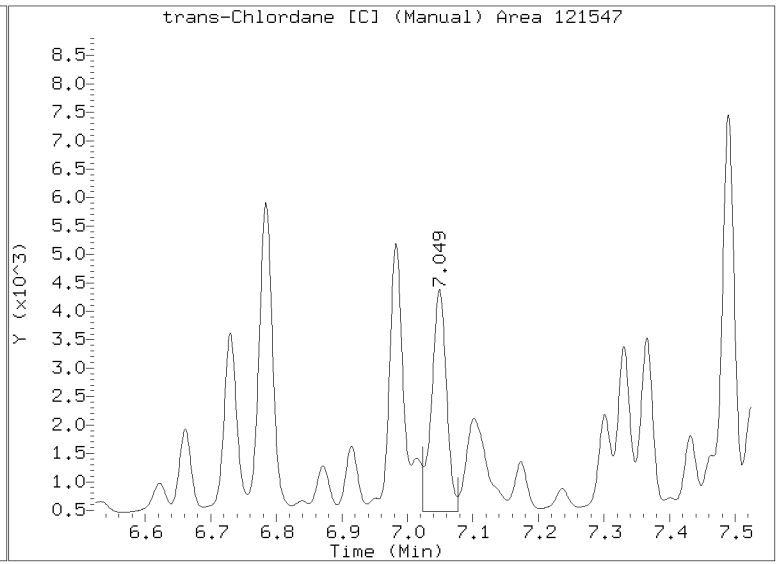

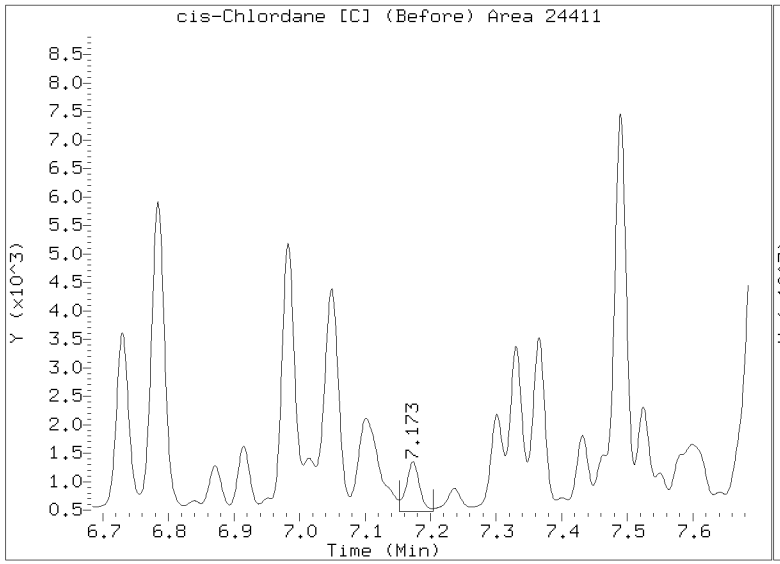

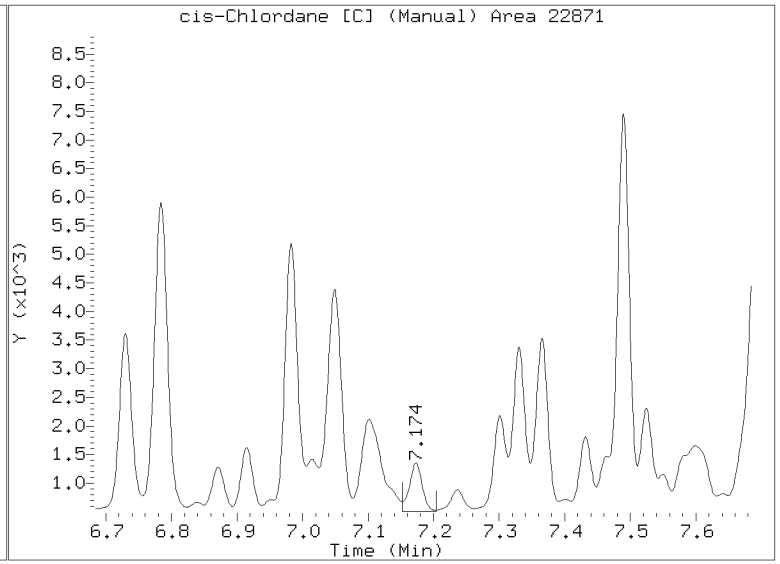

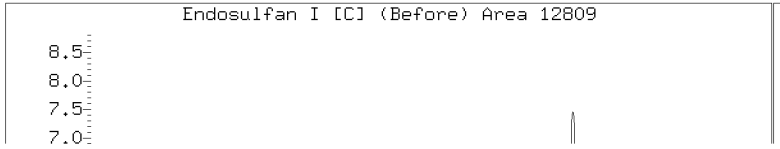

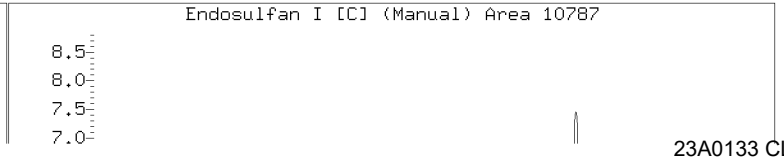

Manual Peak Adjustment Report, CLP-2

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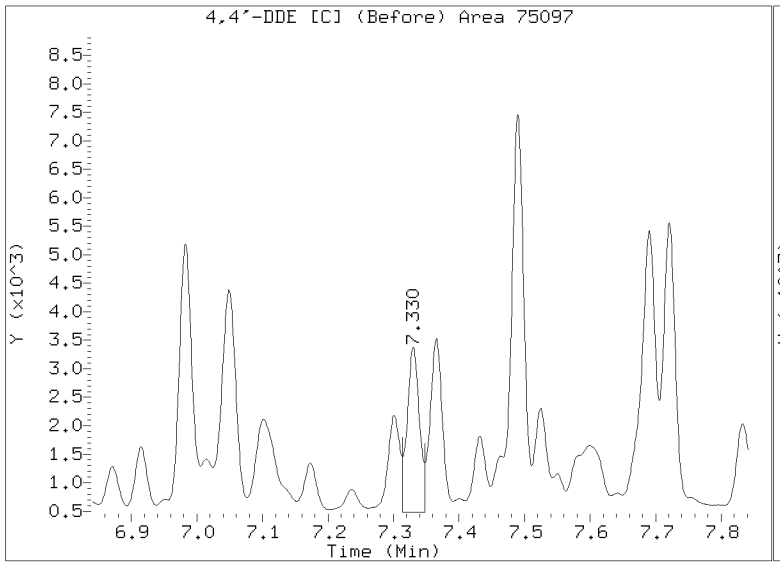
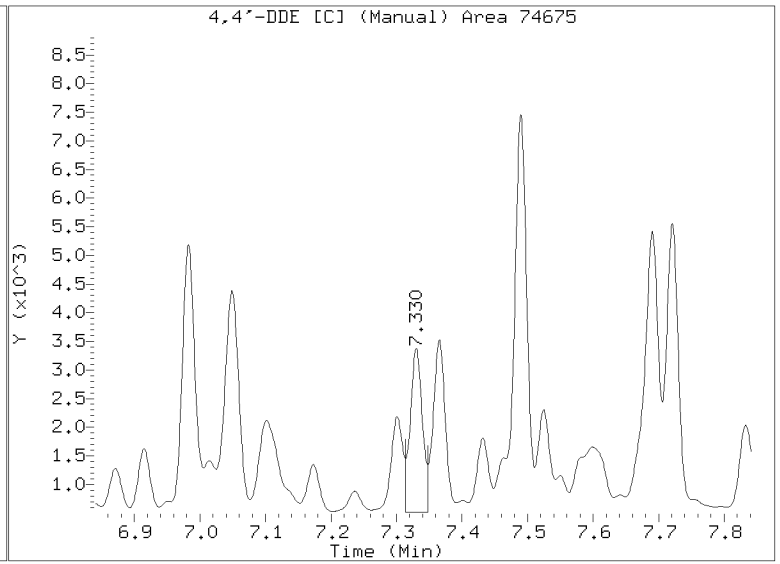
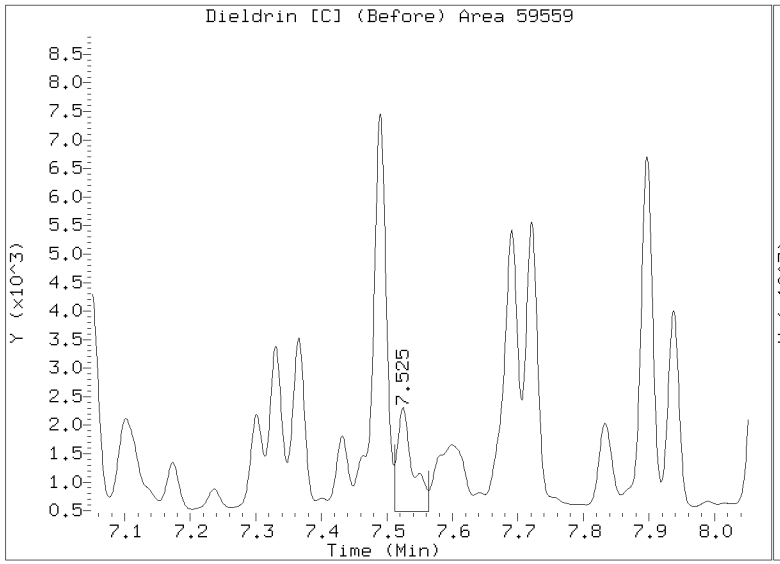
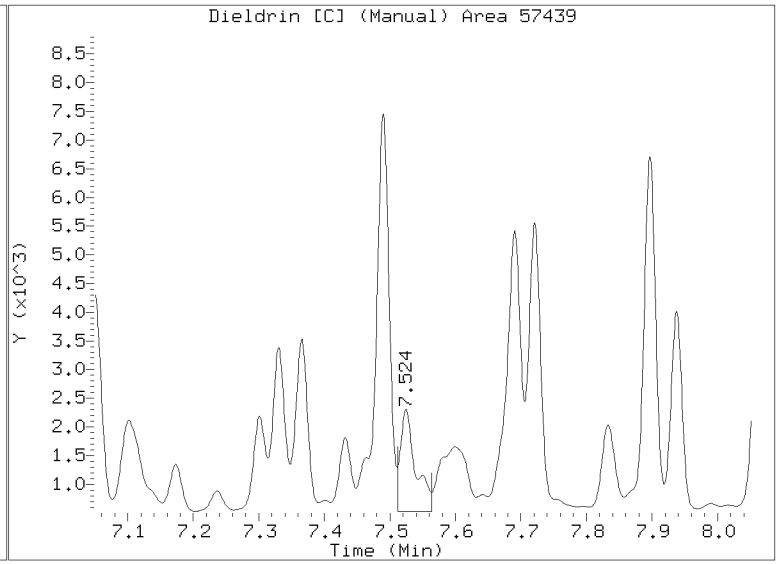
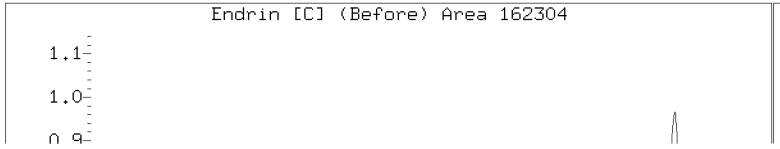
Lab ID:23A0133-14 Client ID:

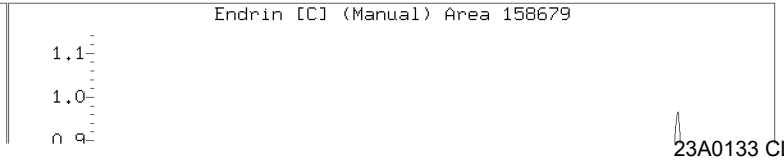












Manual Peak Adjustment Report, CLP-2

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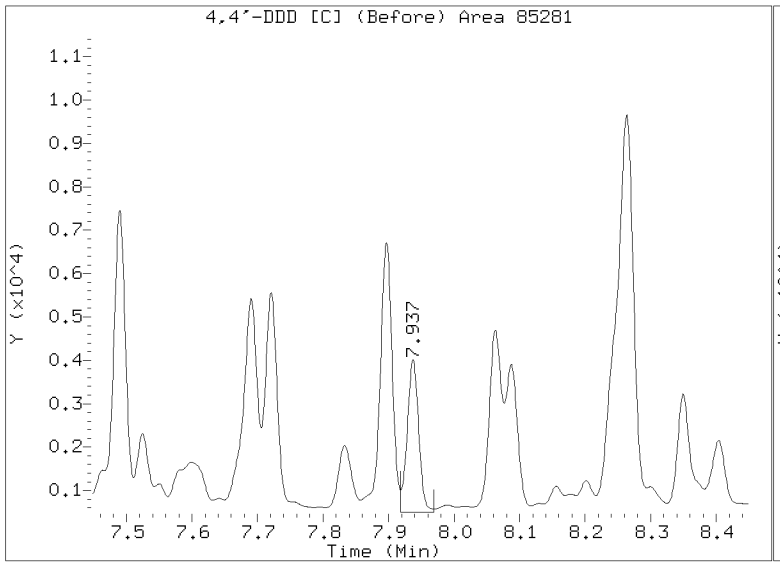

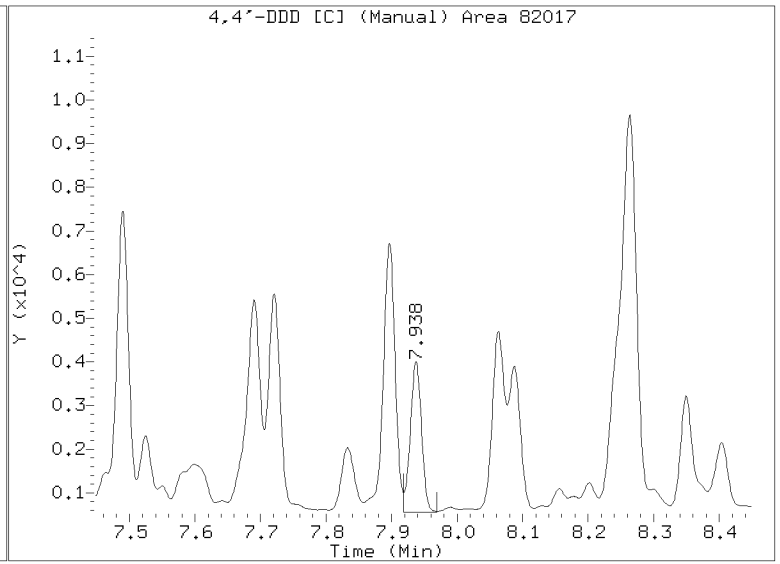

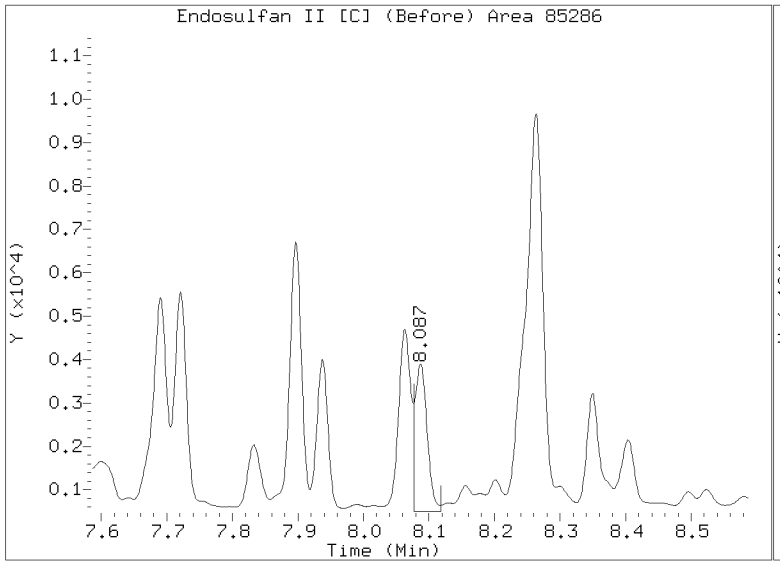

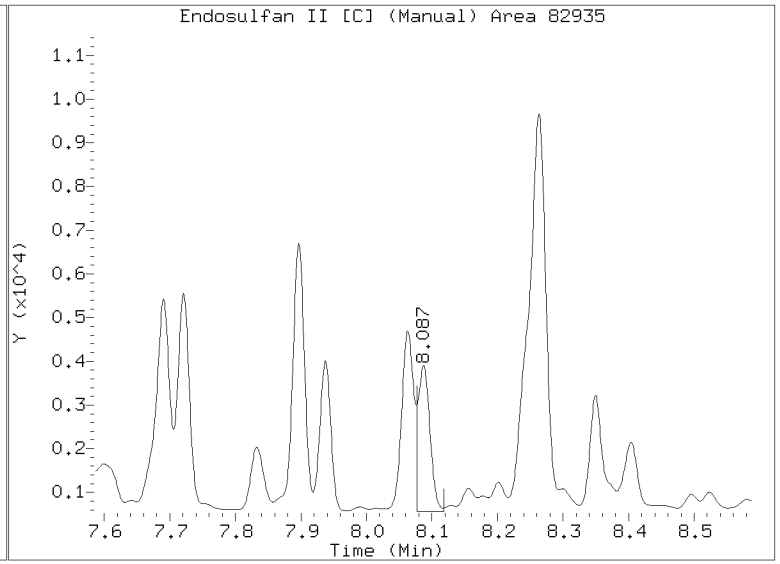

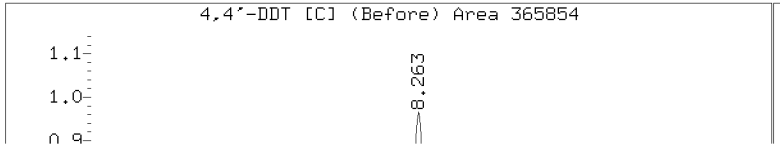

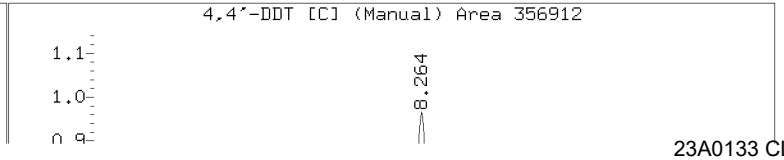

Manual Peak Adjustment Report, CLP-2

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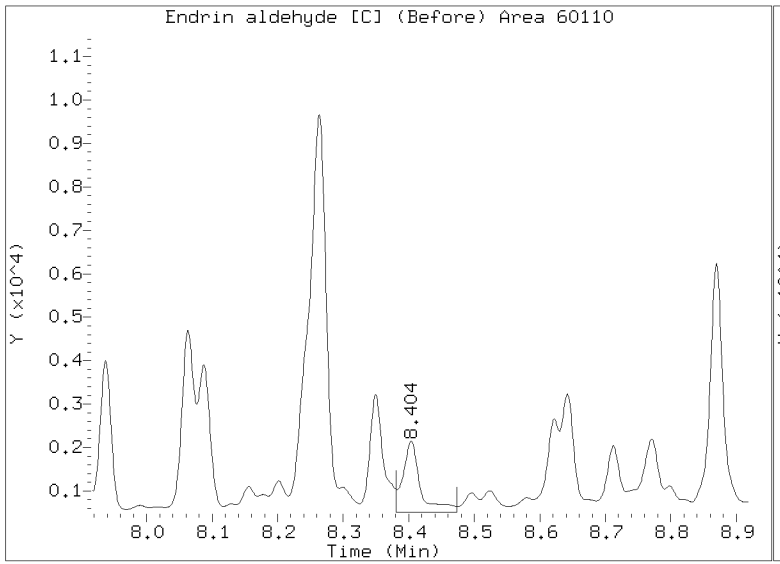
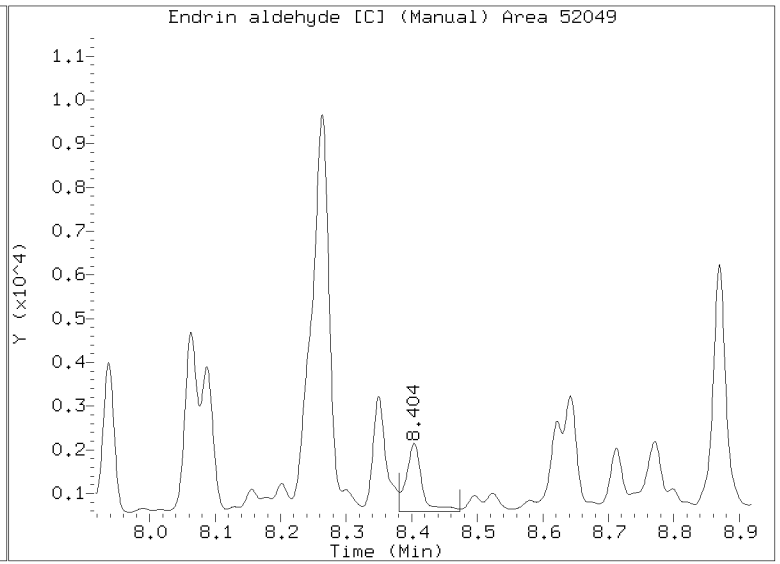
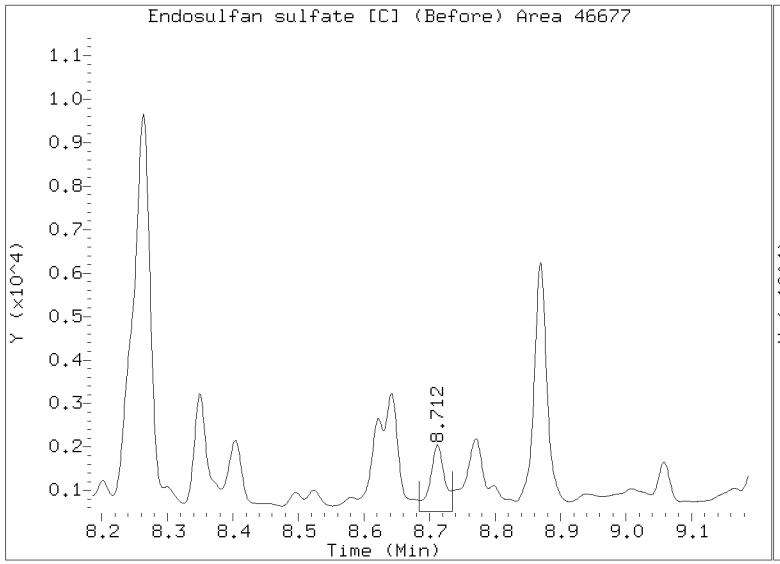
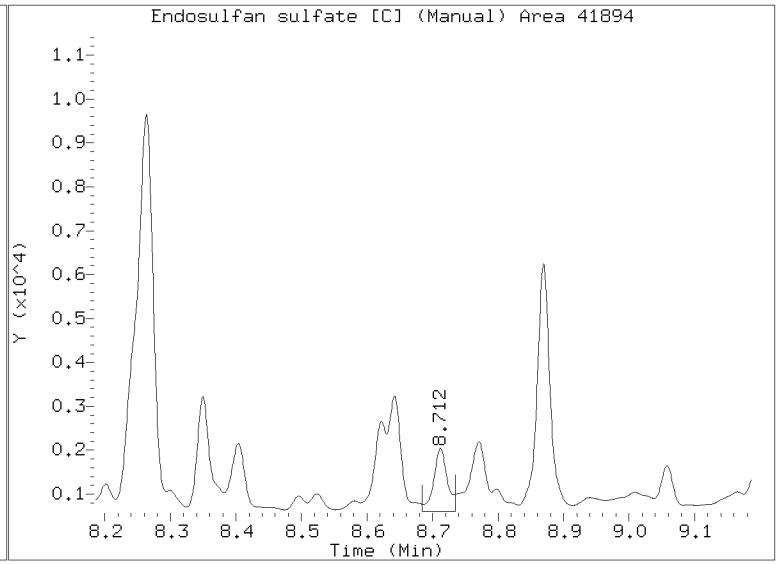
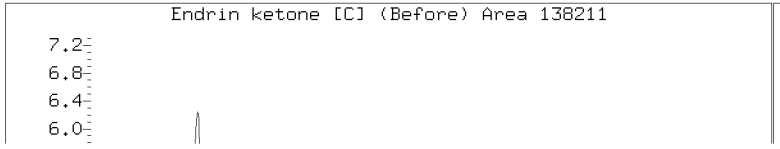
Lab ID:23A0133-14 Client ID:

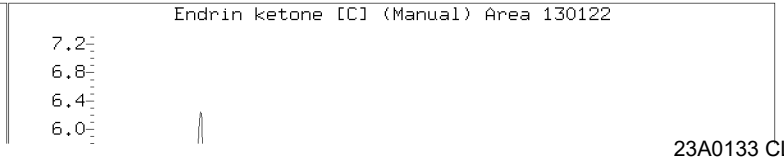












Manual Peak Adjustment Report, CLP-2

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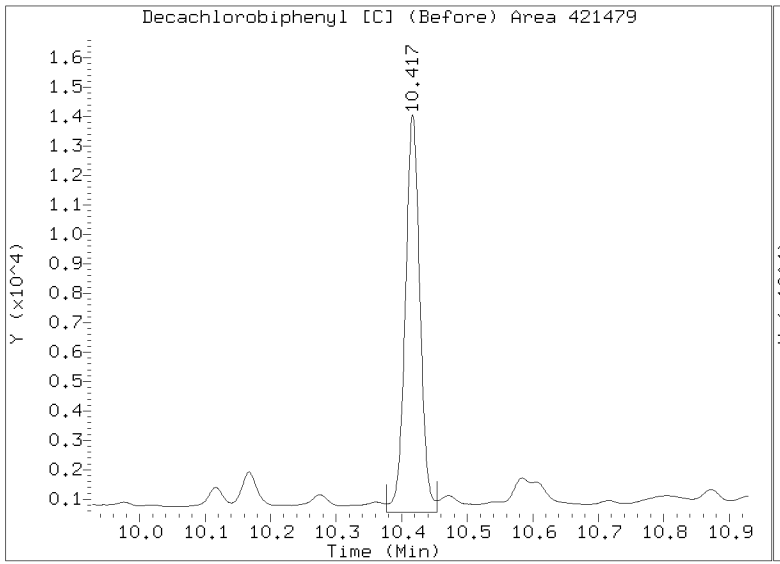
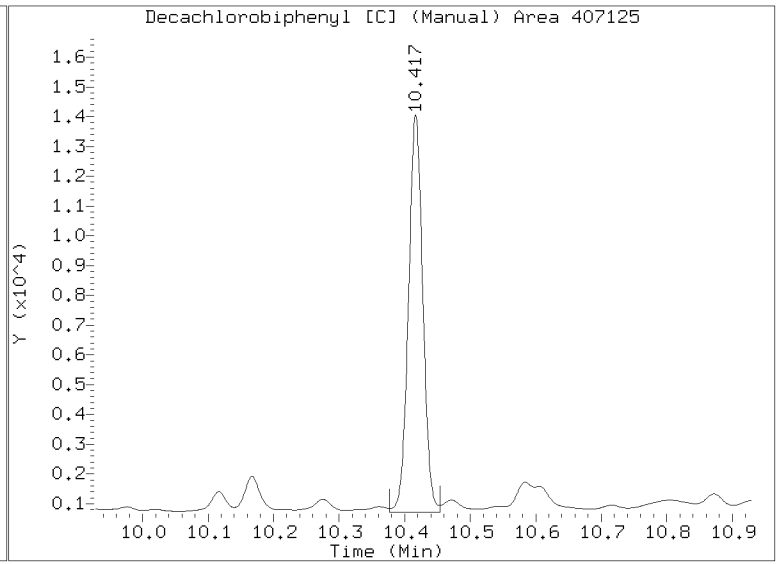
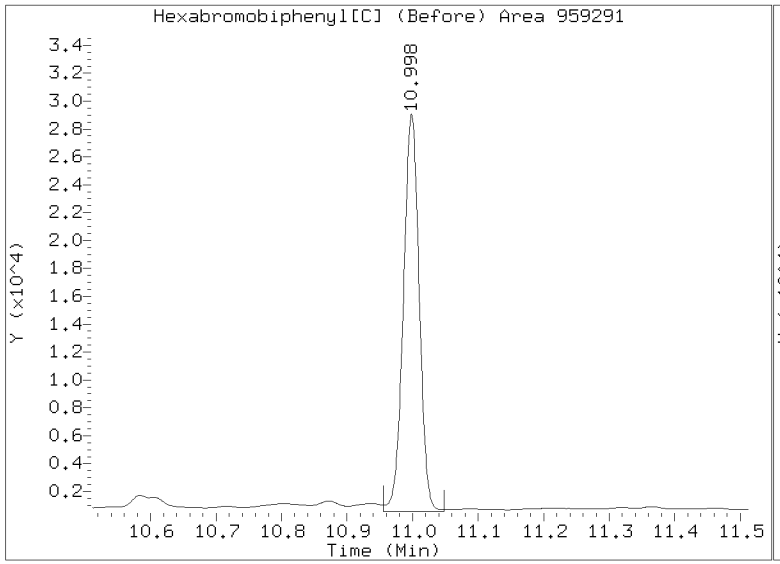
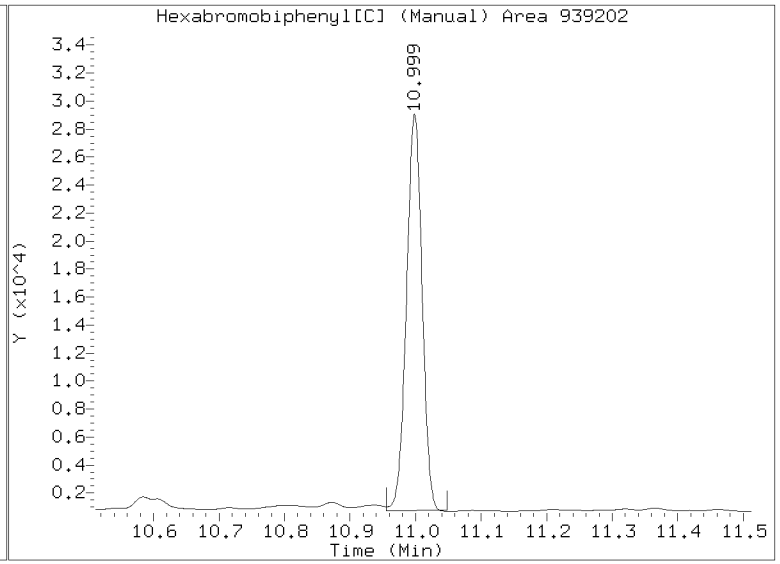








Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1092

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-15 C	File ID:	23013151.D
Sampled:	01/06/23 14:26	Prepared:	01/19/23 13:44	Analyzed:	02/01/23 05:46
% Solids:	52.30	Preparation:	EPA 3546 (Microwave)	Initial/Final:	23.97 g Wet / 2.5 mL
Batch:	BLA0392	Sequence:	SLB0046	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.40	0.14	0.50	J

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9768*	*8.43*	*106*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9768*	*8.51*	*107*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9768*	*6.17*	*77.3*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9768*	*6.30*	*79.0*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013151.D
Data file 2: /20230131.b/B20230131.b/23013151.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: 23A0133-15
Client ID:
Injection Date: 01-FEB-2023 05:46
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.301	-0.009	27103	----			2.93	0.00	---	alpha-BHC
----			5.326	0.017	14149	0.00	2.48	---	beta-BHC
4.880	0.004	61036	5.679	0.018	942	8.09	0.08	196.3*	delta-BHC
4.610	-0.001	29162	5.219	-0.010	4745	3.64	0.37	162.9*	gamma-BHC (Lindane)
5.076	-0.016	13859	5.758	0.004	24340	1.95	2.11	8.0	Heptachlor
5.429	0.015	39433	----			4.94	0.00	---	Aldrin
6.071	-0.017	15780	6.839	0.025	3073	2.28	0.28	156.0*	Heptachlor epoxide b
----			7.236	-0.021	7370	0.00	0.77	---	Endosulfan I
6.767	-0.023	60876	7.524	-0.027	43009	8.92	4.05	75.1*	Dieldrin
6.449	-0.003	154307	7.330	-0.012	43752	24.35	4.49	137.7*	4,4'-DDE
7.061	0.020	152007	7.896	0.020	116793	29.24	16.20	57.4*	Endrin
7.301	0.023	10464	8.087	-0.000	64405	2.24	8.71	118.3*	Endosulfan II
----			7.937	-0.011	54078	0.00	7.71	---	4,4'-DDD
8.129	-0.011	5226	8.711	0.025	25489	1.18	3.93	107.8*	Endosulfan sulfate
----			8.264	-0.003	237536	0.00	35.08	---	4,4'-DDT
7.903	0.026	17102	8.937	0.028	4612	8.15	1.54	136.5*	Methoxychlor
----			9.218	0.008	88504	0.00	12.62	---	Endrin ketone
7.726	0.019	30185	8.403	-0.015	32261	8.09	6.19	26.6	Endrin aldehyde
6.223	-0.007	11082	7.050	0.025	103950	1.58	9.56	143.4*	trans-Chlordane
6.391	0.015	46586	7.173	-0.011	13016	6.61	1.22	137.5*	cis-Chlordane
2.288	-0.015	3902	2.453	-0.029	51515	0.40	3.61	159.8*	Hexachlorobutadiene
4.150	-0.003	17174	4.681	-0.011	23699	2.00	1.73	14.5	Hexachlorobenzene MN
3.799	-0.002	201814	4.190	-0.006	333665	30.94	31.61	2.2	Tetrachloro-m-xylene
9.316	-0.003	169920	10.415	-0.014	239279	42.29	42.69	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

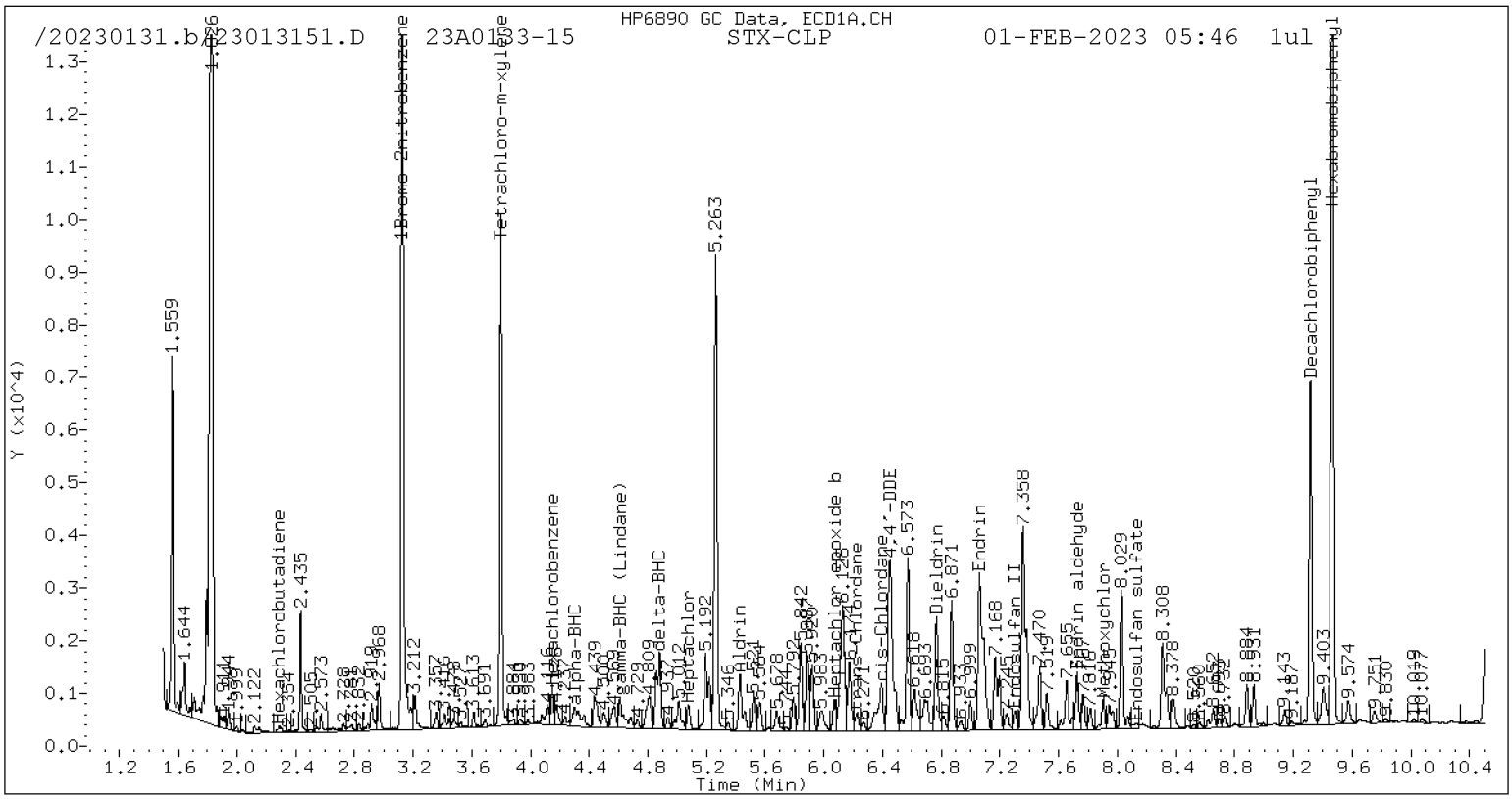
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	479687	-28.7
Hexabromobiphenyl	609723	396530	-35.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	749804	-25.5
Hexabromobiphenyl	769764	507196	-34.1

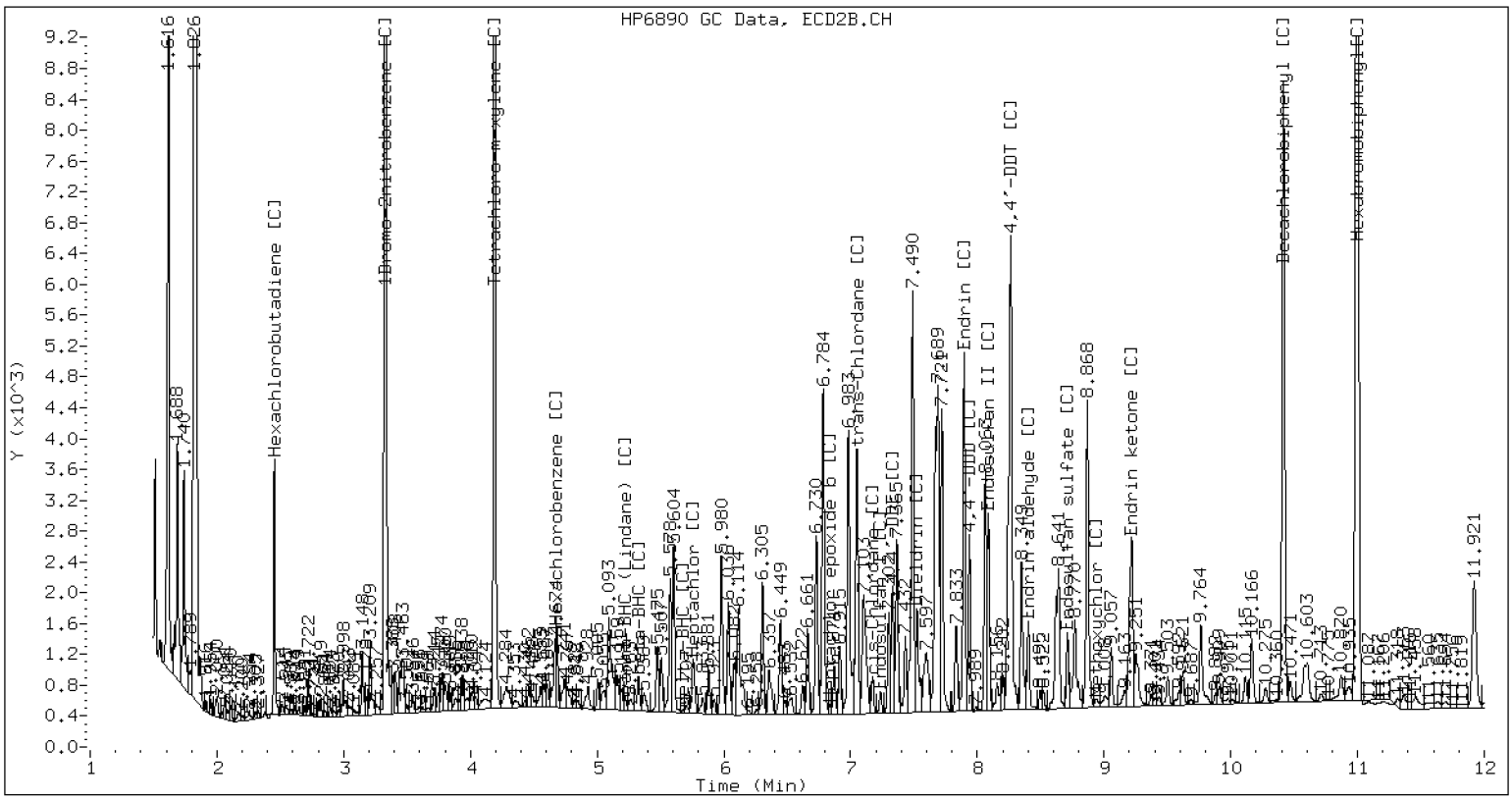
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

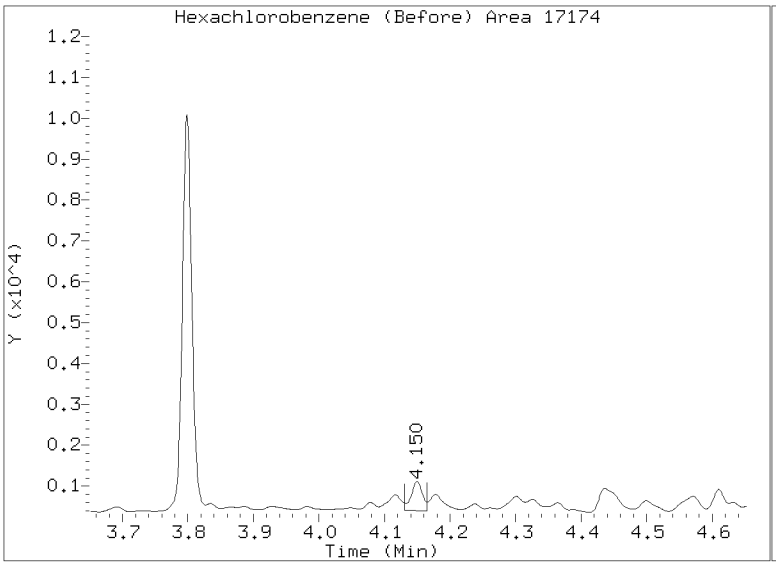
/20230131.b/B20230131.b/23013151.D 23A0133-15 CLP2

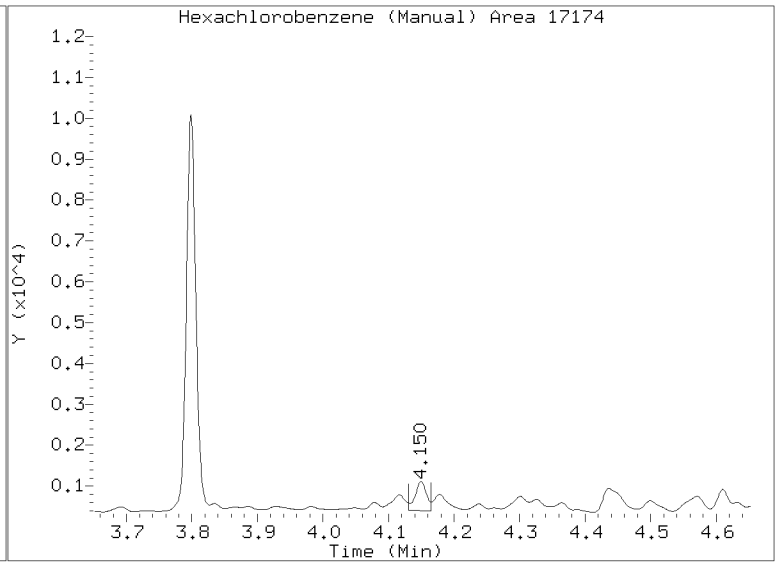


CLP-2 Manual Integration: YES

Manual Peak Adjustment Report, STX-CLP

Datafile: /20230131.b/23013151.D
Injection Date: 01-FEB-2023 05:46
Lab ID:23A0133-15 Client ID:
Report Date: 02/03/2023 20:25





Manual Peak Adjustment Report, CLP-2

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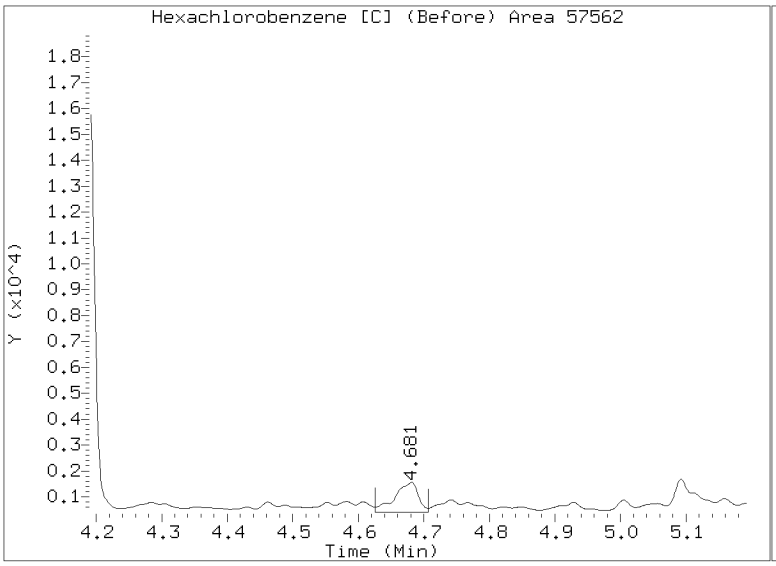
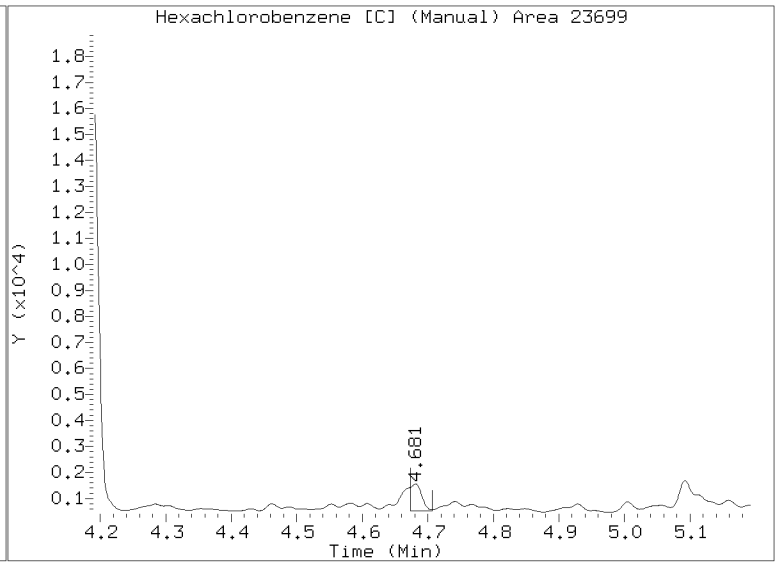
Lab ID:23A0133-15 Client ID:





Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1091

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-16 C	File ID:	23013152.D
Sampled:	01/06/23 14:50	Prepared:	01/19/23 13:44	Analyzed:	02/01/23 06:04
% Solids:	49.38	Preparation:	EPA 3546 (Microwave)	Initial/Final:	25.39 g Wet / 2.5 mL
Batch:	BLA0392	Sequence:	SLB0046	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9760*	*6.93*	*86.9*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9760*	*6.75*	*84.6*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9760*	*5.56*	*69.7*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9760*	*5.01*	*62.8*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013152.D
Data file 2: /20230131.b/B20230131.b/23013152.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: 23A0133-16
Client ID:
Injection Date: 01-FEB-2023 06:04
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.299	-0.012	32128	4.821	-0.011	2282	3.56	0.15	183.3*	alpha-BHC
4.683	-0.010	7013	5.326	0.017	7821	2.02	1.39	36.6	beta-BHC
4.880	0.004	43756	----			5.93	0.00	---	delta-BHC
4.609	-0.003	18384	5.221	-0.008	4148	2.35	0.33	150.6*	gamma-BHC (Lindane)
5.076	-0.017	11560	5.758	0.004	17630	1.66	1.55	6.6	Heptachlor
5.429	0.015	29368	6.149	-0.009	12112	3.76	0.94	120.4*	Aldrin
6.072	-0.017	12546	6.839	0.025	2186	1.85	0.20	160.3*	Heptachlor epoxide b
----			7.236	-0.022	5598	0.00	0.59	---	Endosulfan I
6.768	-0.023	46351	7.524	-0.027	28762	6.95	2.76	86.3*	Dieldrin
6.442	-0.009	52868	7.330	-0.012	36997	8.53	3.87	75.2*	4,4'-DDE
7.061	0.020	102460	7.896	0.021	78825	19.63	10.87	57.5*	Endrin
7.301	0.023	6926	8.087	-0.001	43549	1.47	5.86	119.6*	Endosulfan II
----			7.937	-0.012	35543	0.00	5.04	---	4,4'-DDD
----			8.712	0.026	20862	0.00	3.20	---	Endosulfan sulfate
----			8.264	-0.003	160485	0.00	23.57	---	4,4'-DDT
7.903	0.026	12445	----			5.91	0.00	---	Methoxychlor
----			9.218	0.008	63148	0.00	8.96	---	Endrin ketone
7.726	0.019	21388	8.403	-0.015	27165	5.71	5.18	9.7	Endrin aldehyde
6.223	-0.006	8488	7.049	0.024	64552	1.23	6.04	132.1*	trans-Chlordane
6.391	0.015	34537	7.173	-0.012	11208	5.01	1.07	129.5*	cis-Chlordane
2.285	-0.018	2800	2.452	-0.030	40356	0.30	2.88	162.7*	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.798	-0.002	177695	4.190	-0.006	260214	27.86	25.10	10.4	Tetrachloro-m-xylene
9.316	-0.003	140238	10.415	-0.014	190877	34.77	33.86	2.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

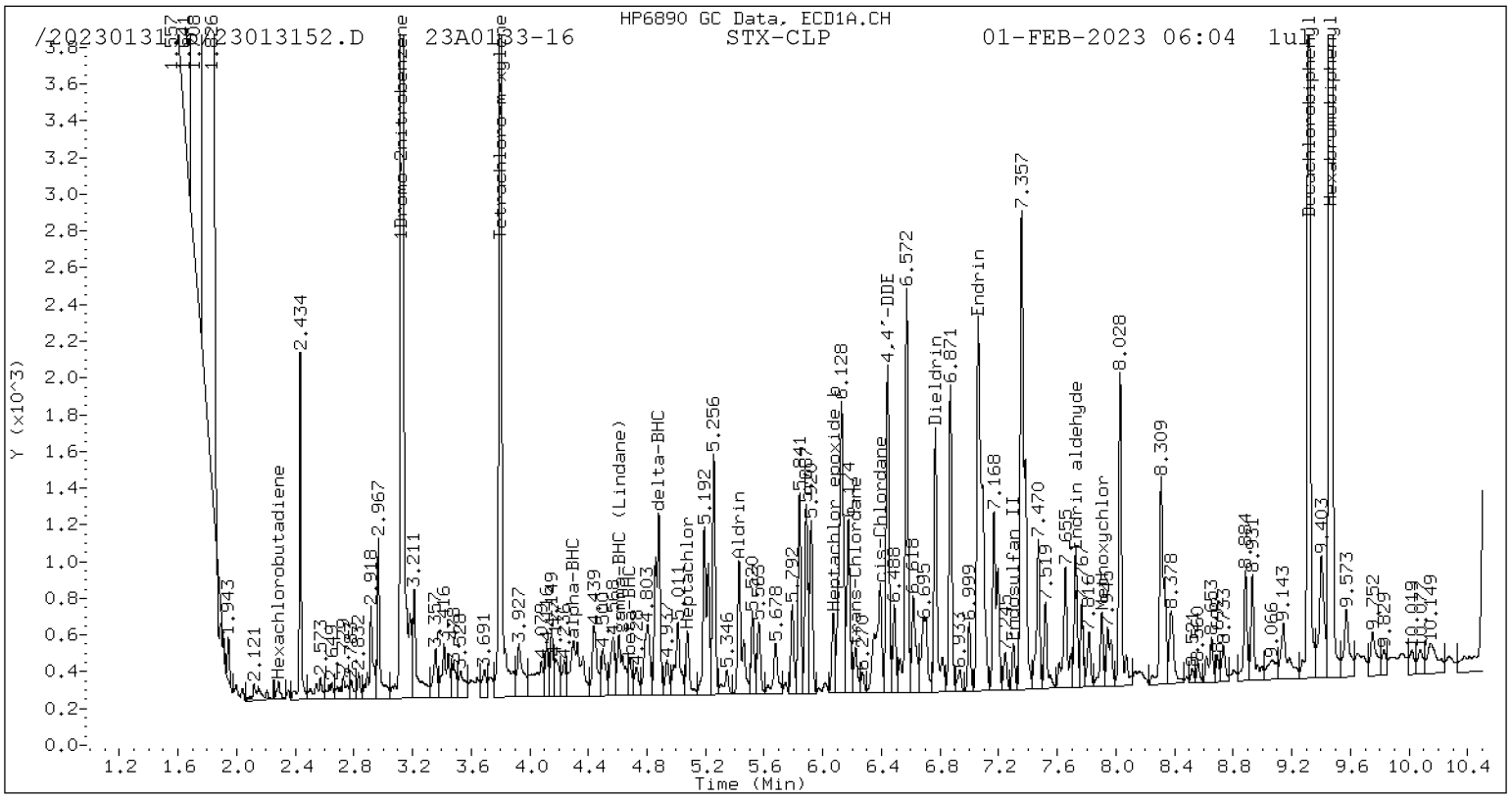
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	468940	-30.3
Hexabromobiphenyl	609723	398052	-34.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	736368	-26.8
Hexabromobiphenyl	769764	510093	-33.7

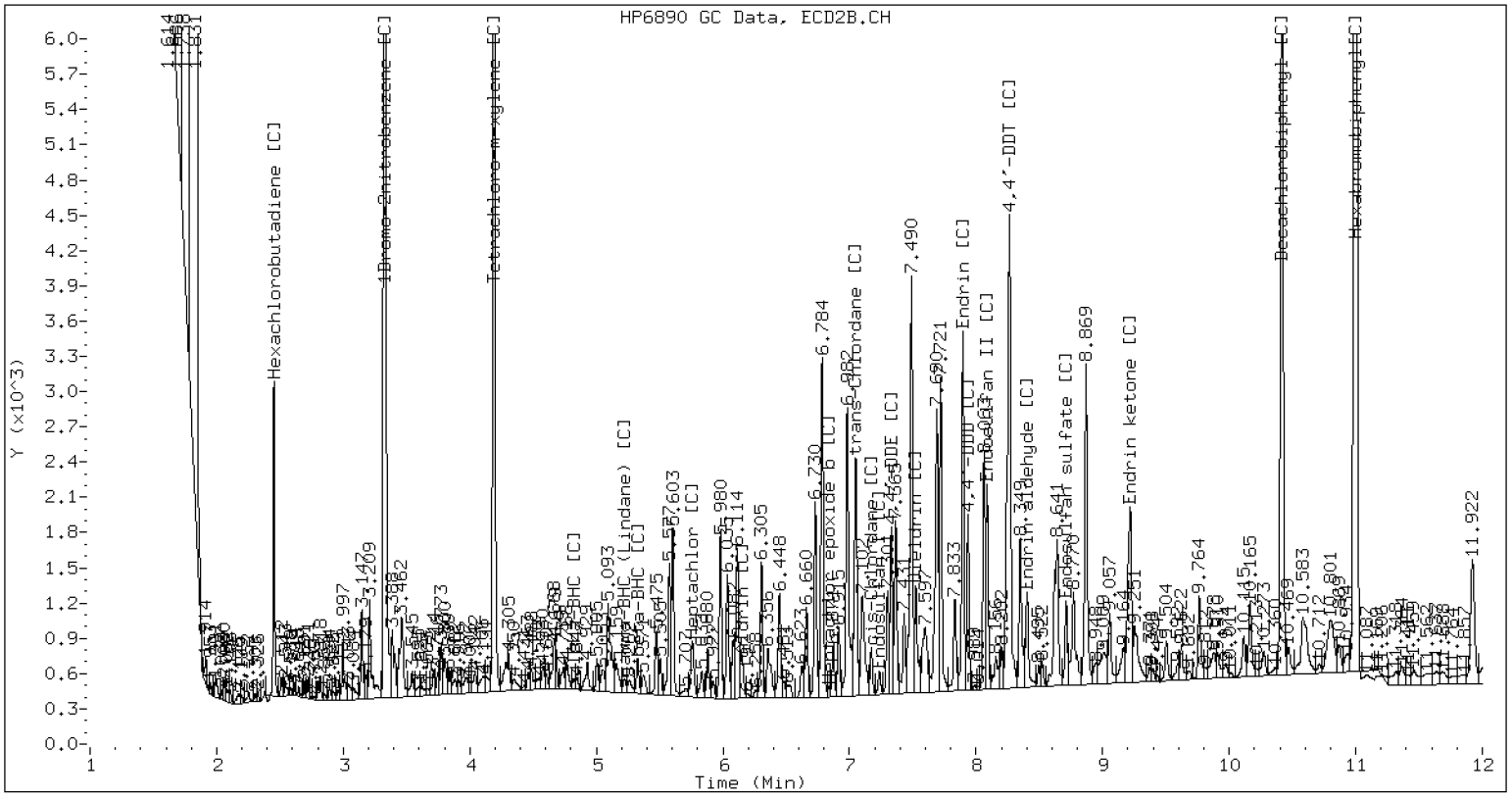
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230131.b/B20230131.b/23013152.D 23A0133-16 CLP2



CLP-2 Manual Integration: NO

Manual Peak Adjustment Report, CLP-2

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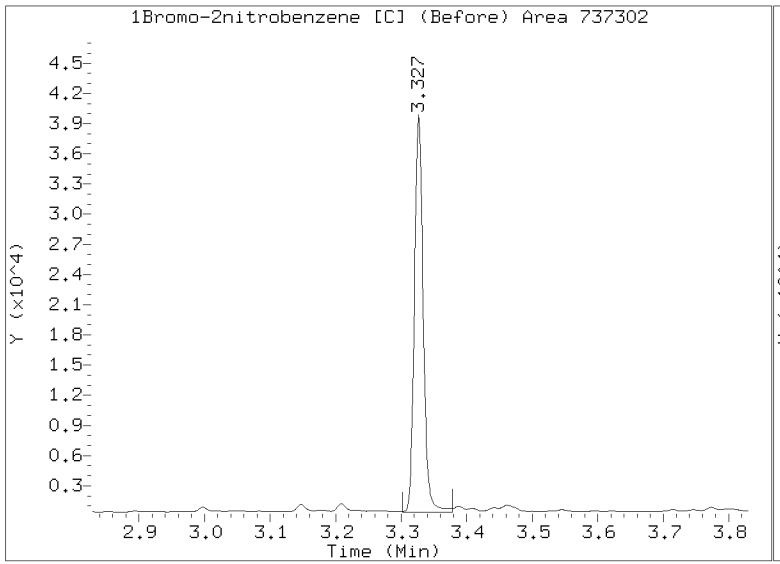
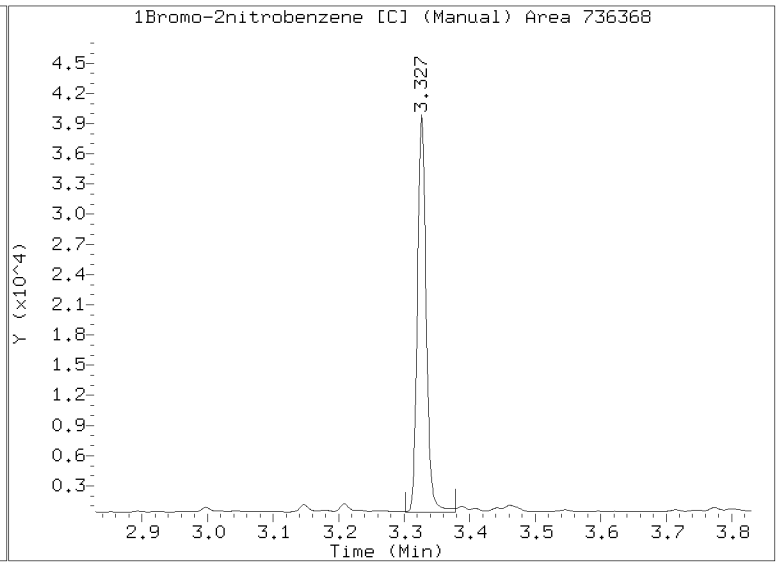
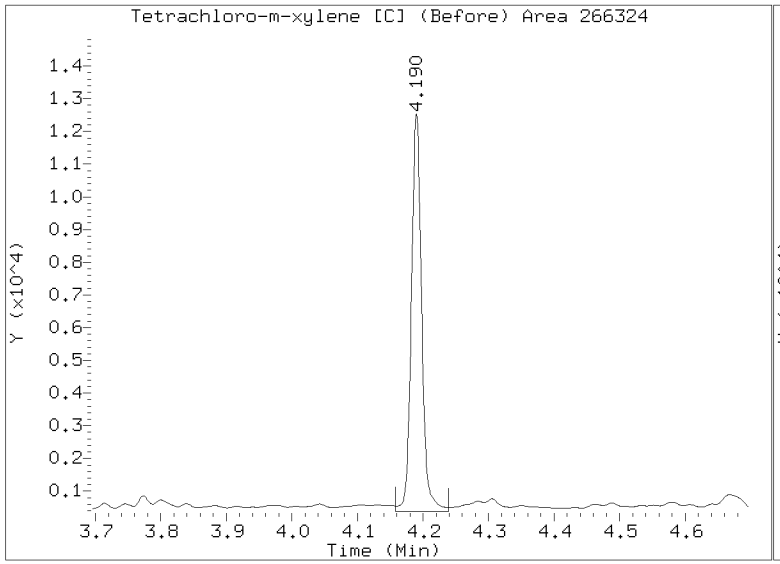
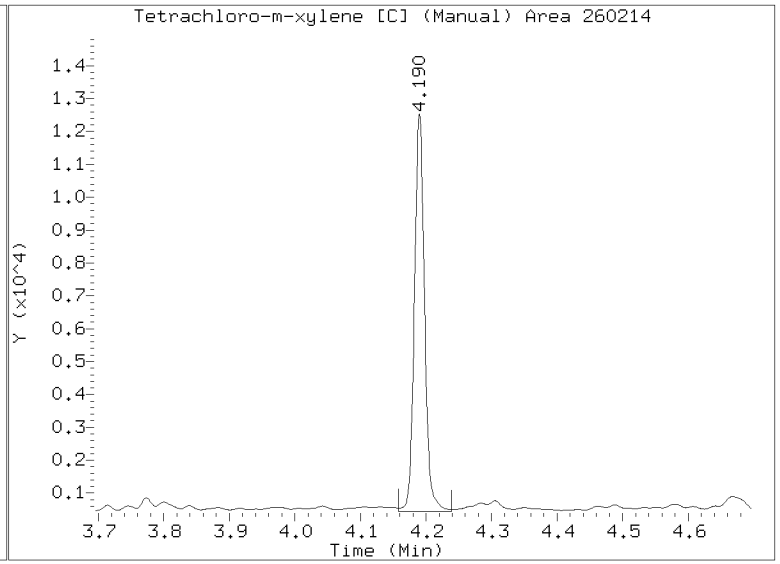
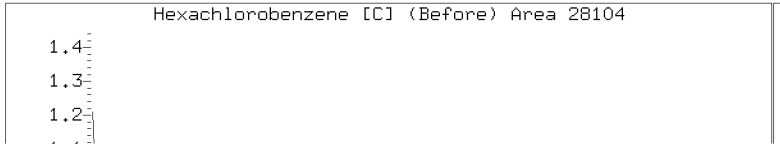
Lab ID:23A0133-16 Client ID:

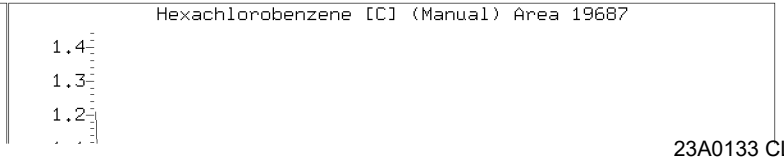












Manual Peak Adjustment Report, CLP-2

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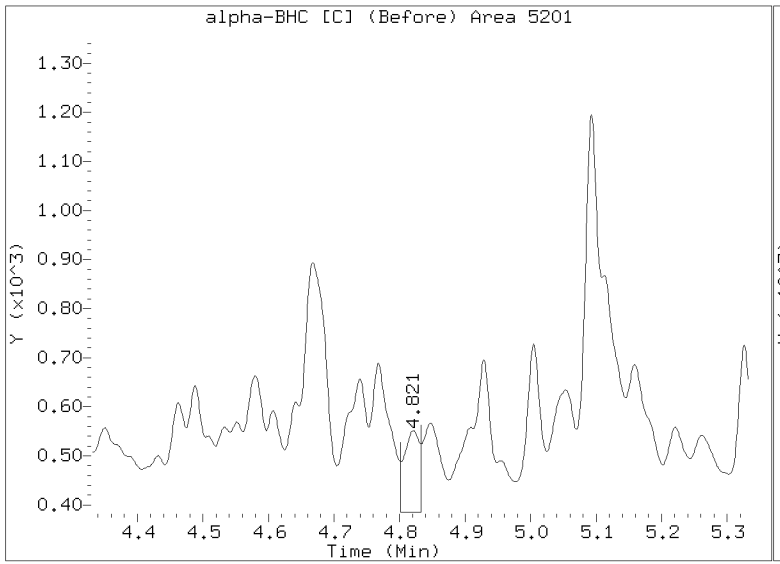

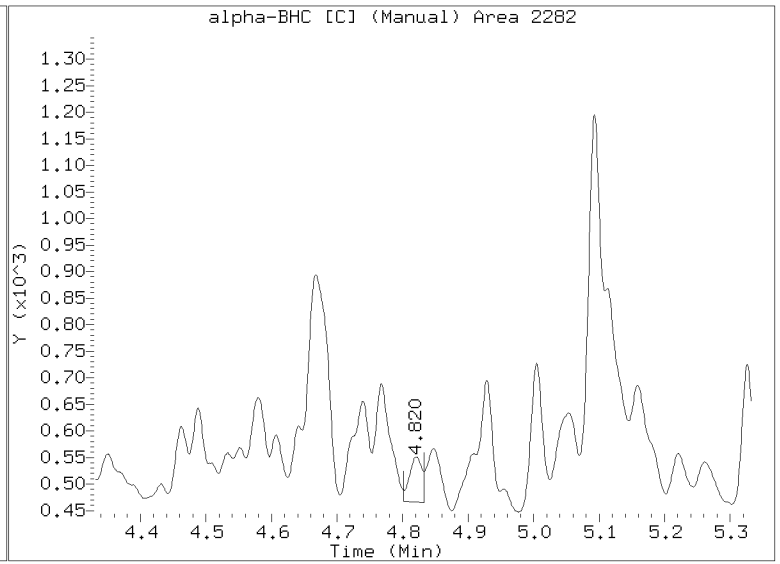

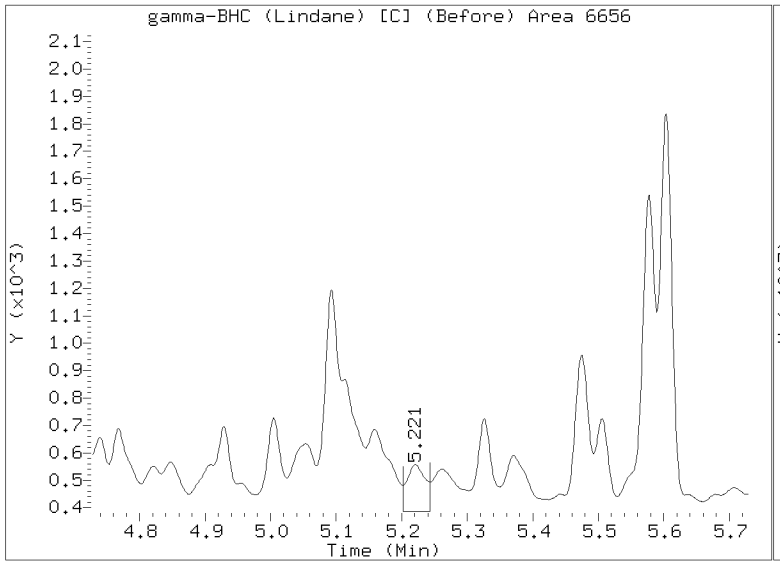

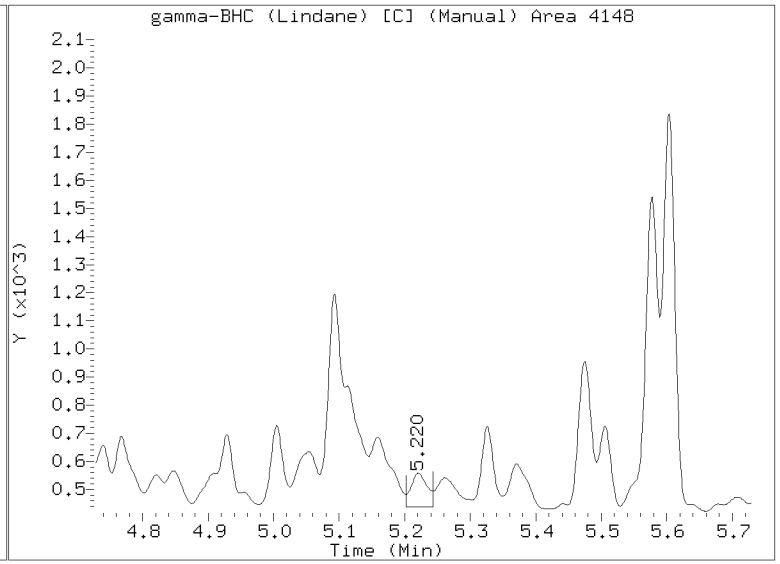

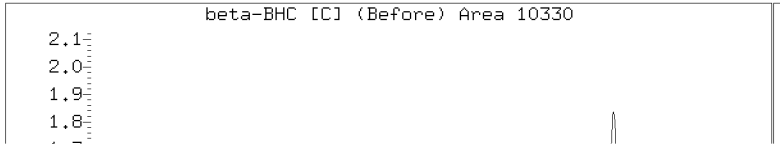

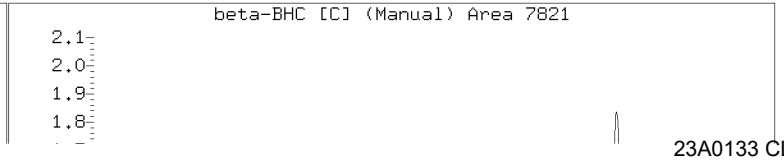

Manual Peak Adjustment Report, CLP-2

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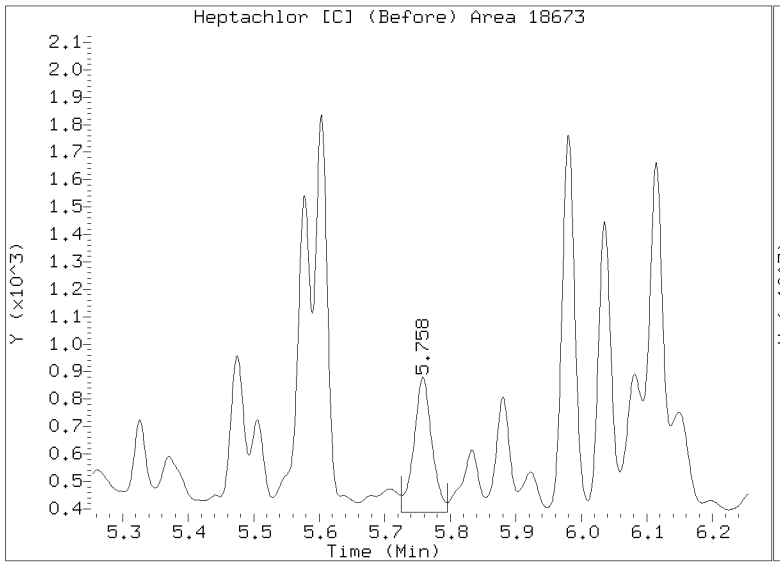

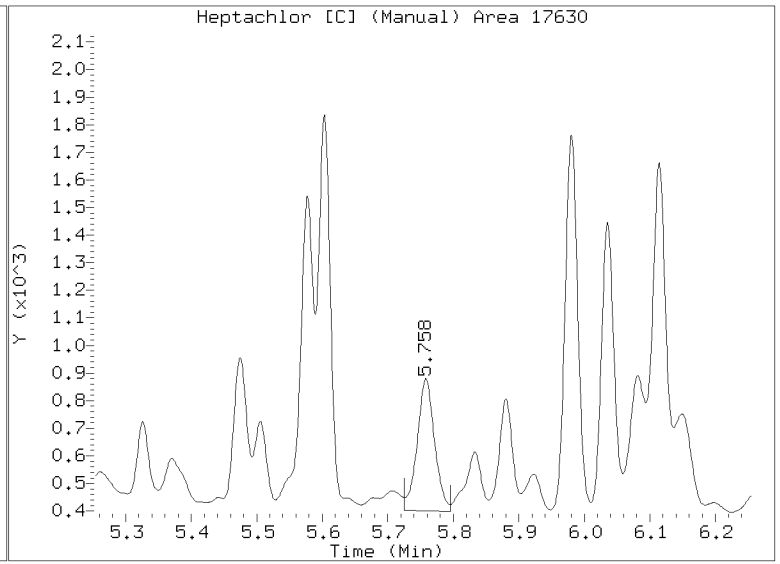

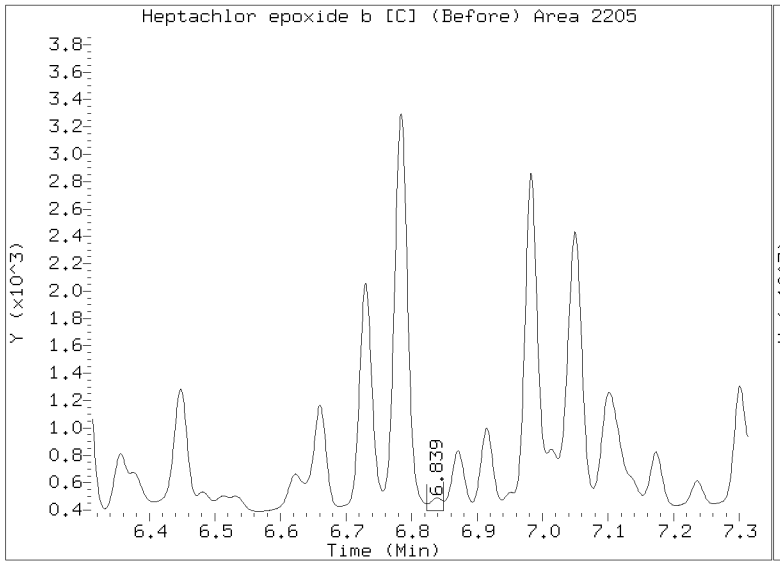

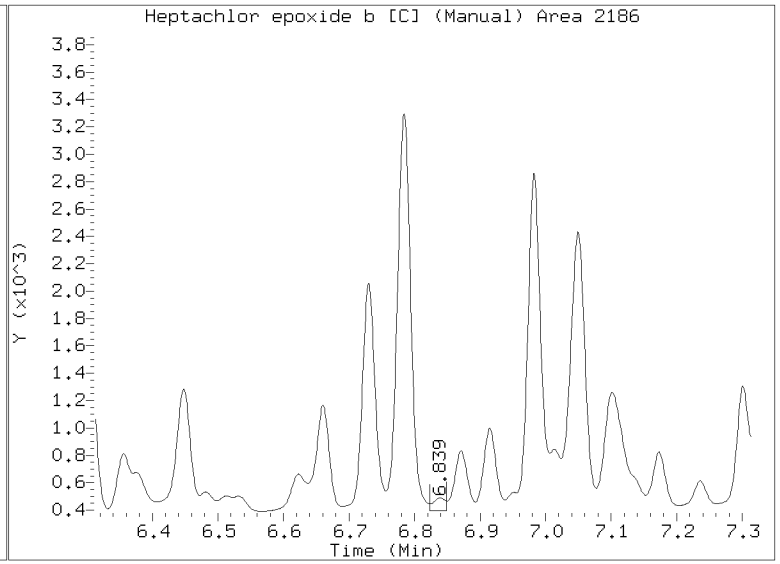

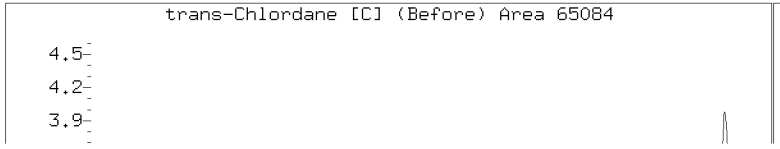

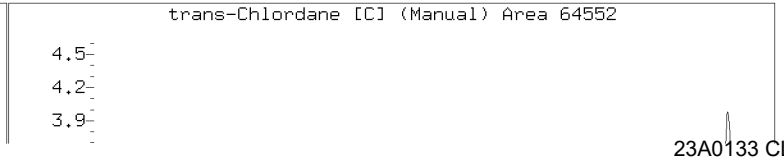

Manual Peak Adjustment Report, CLP-2

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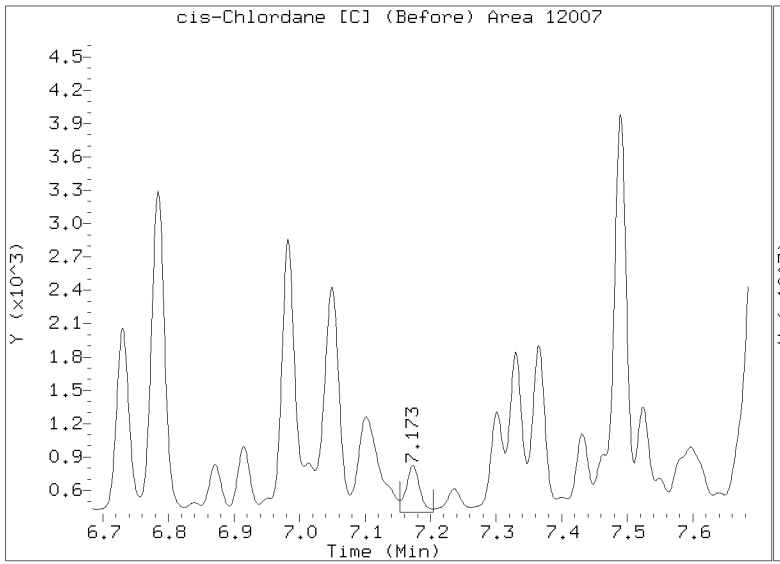

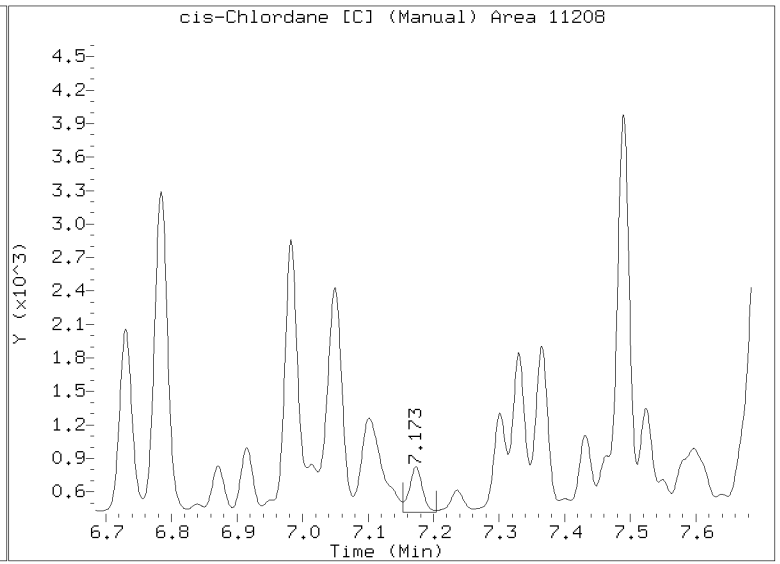

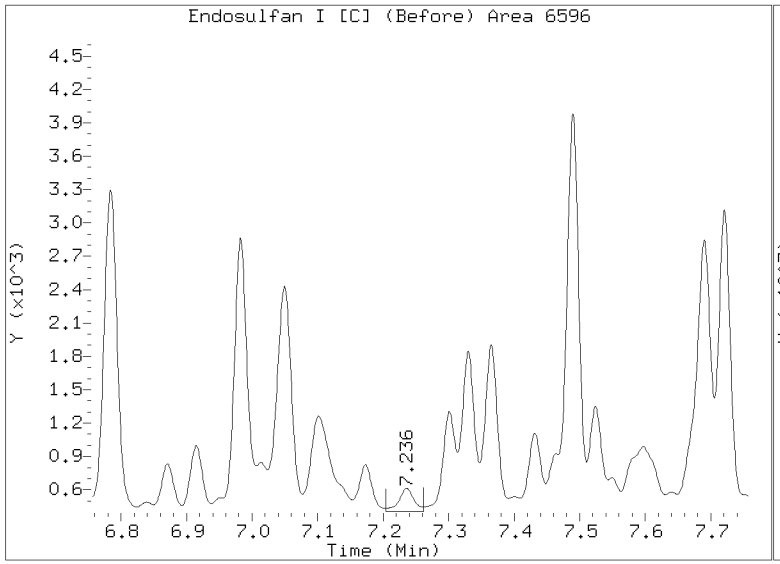

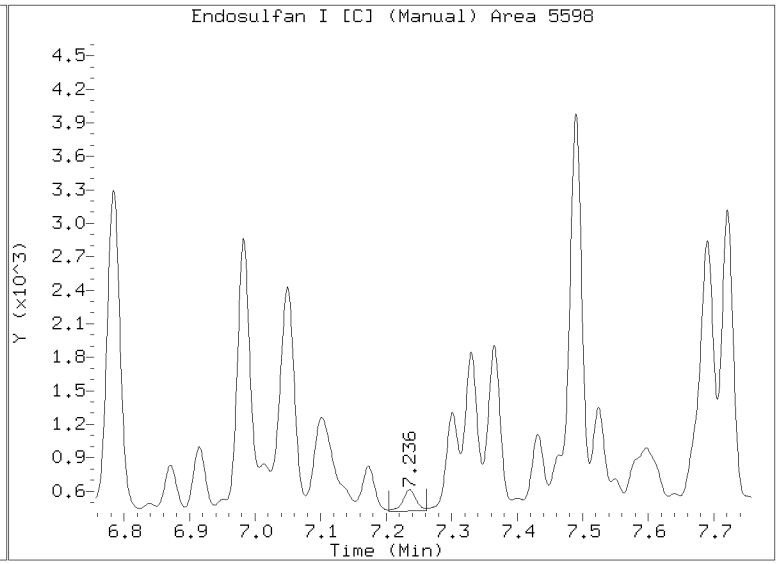

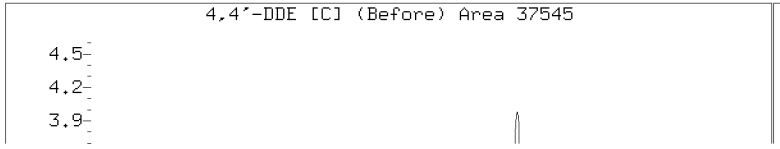

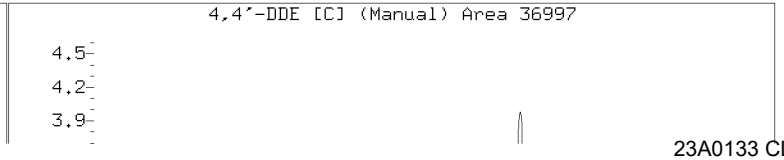

Manual Peak Adjustment Report, CLP-2

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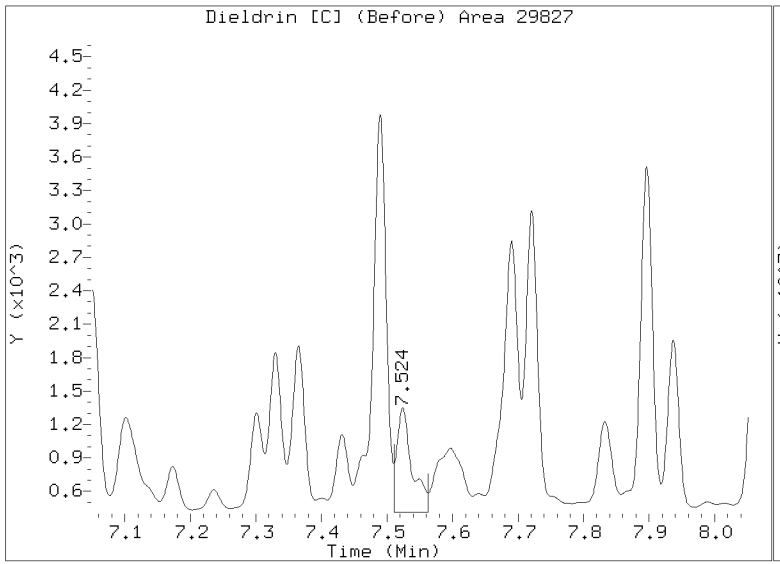

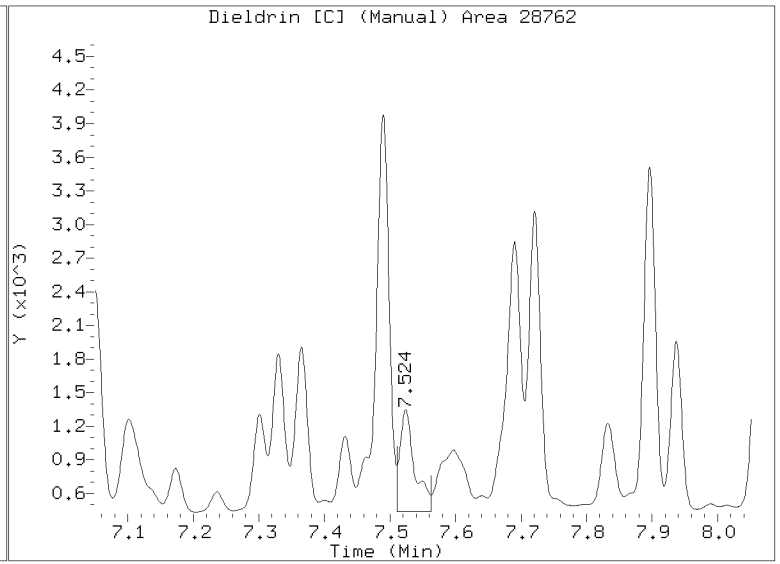

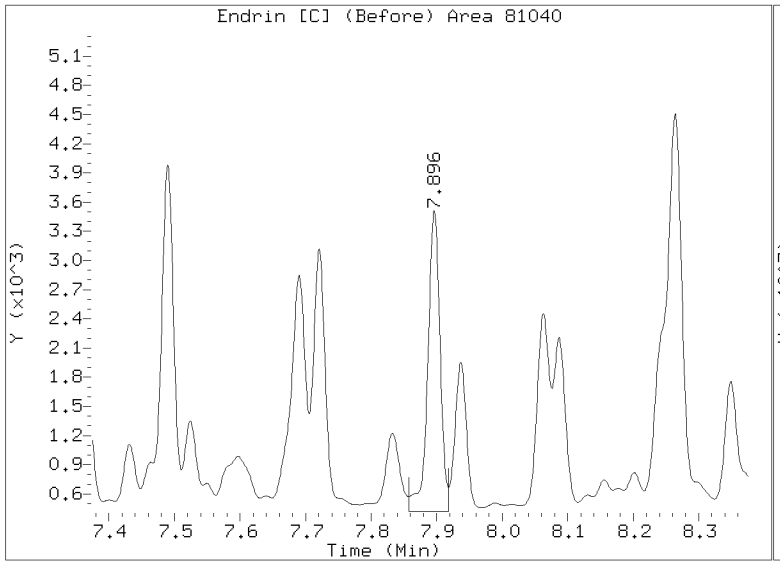

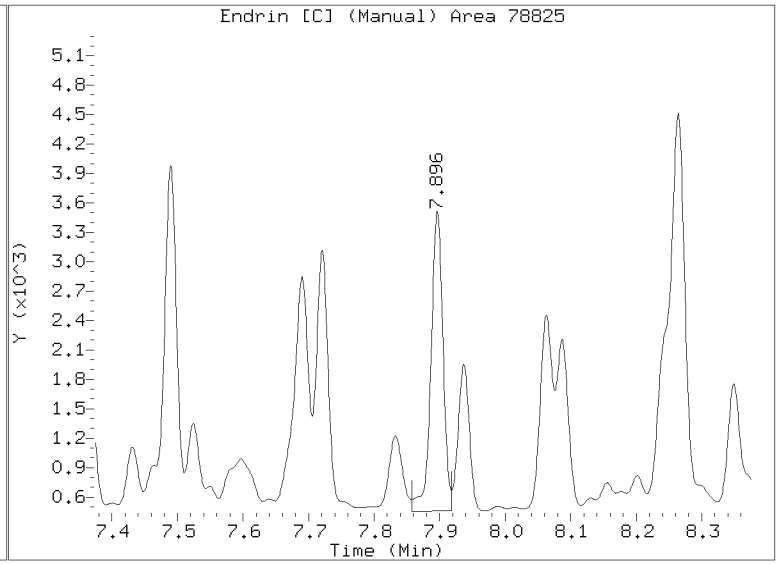

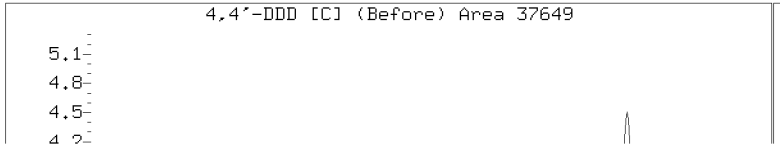

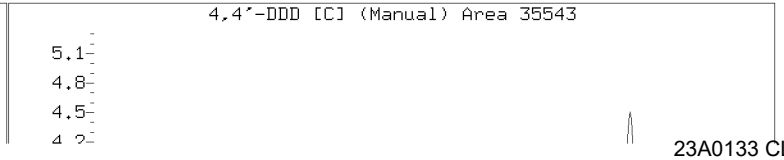

Manual Peak Adjustment Report, CLP-2

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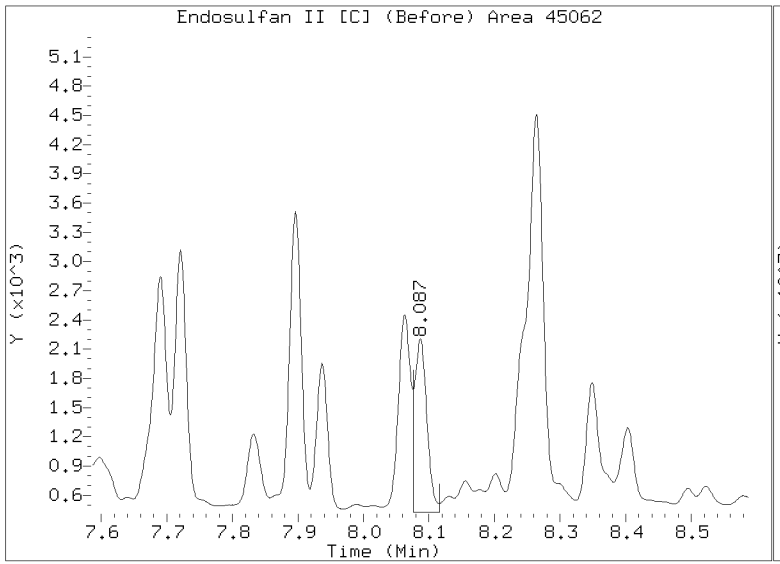
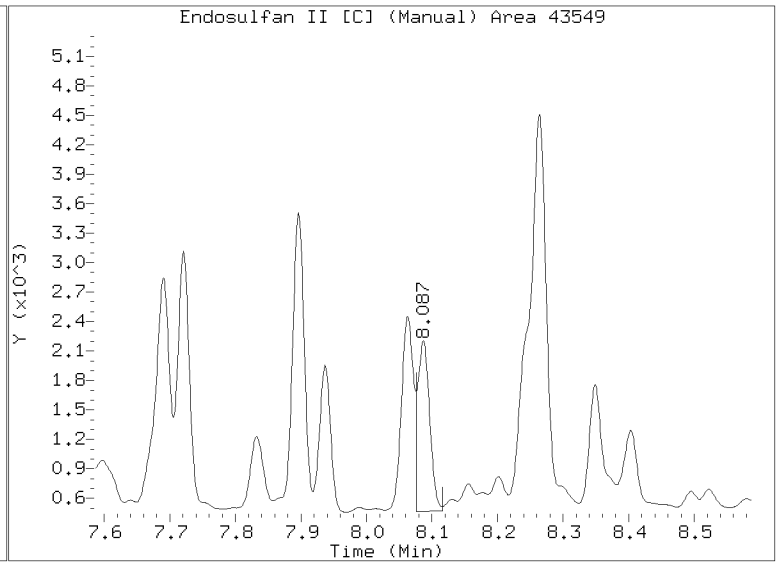
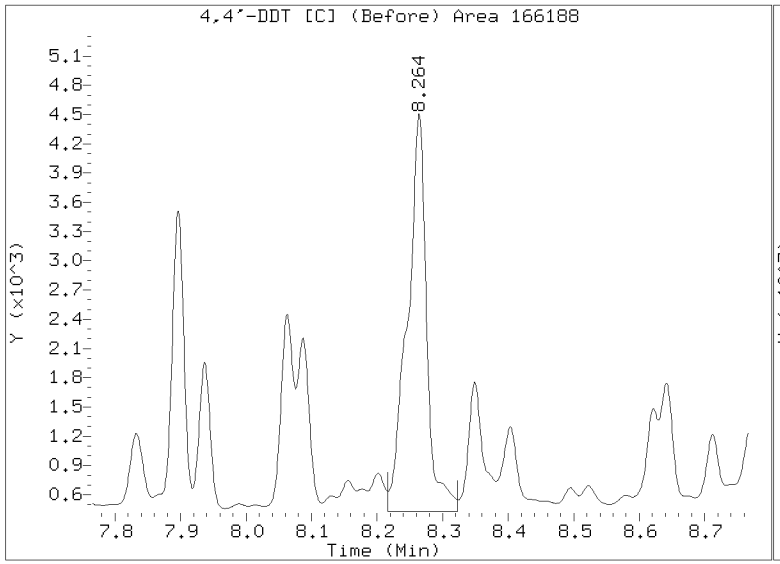
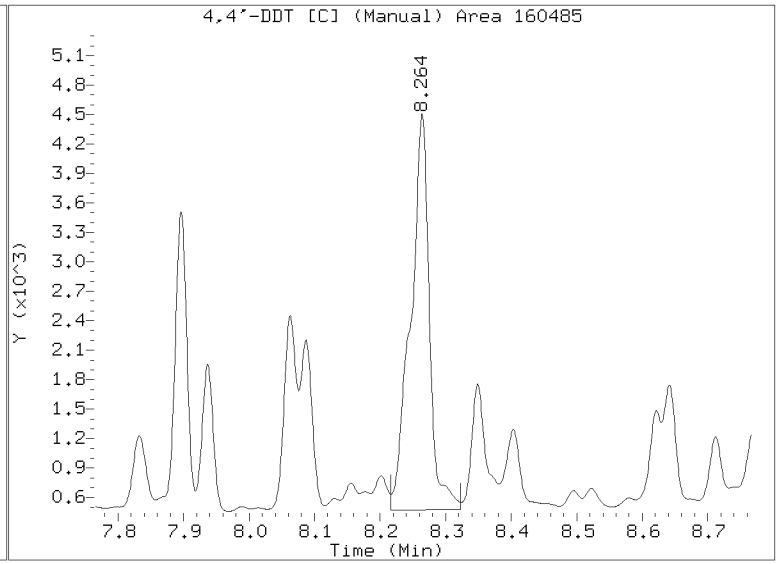
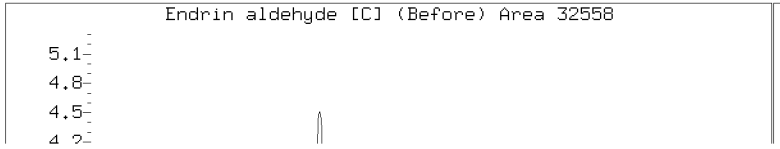
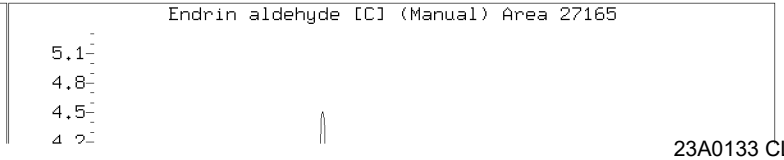






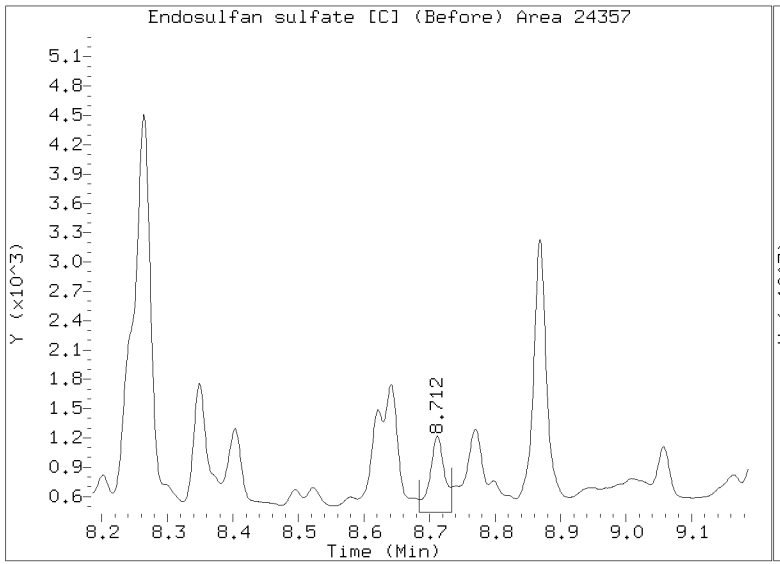


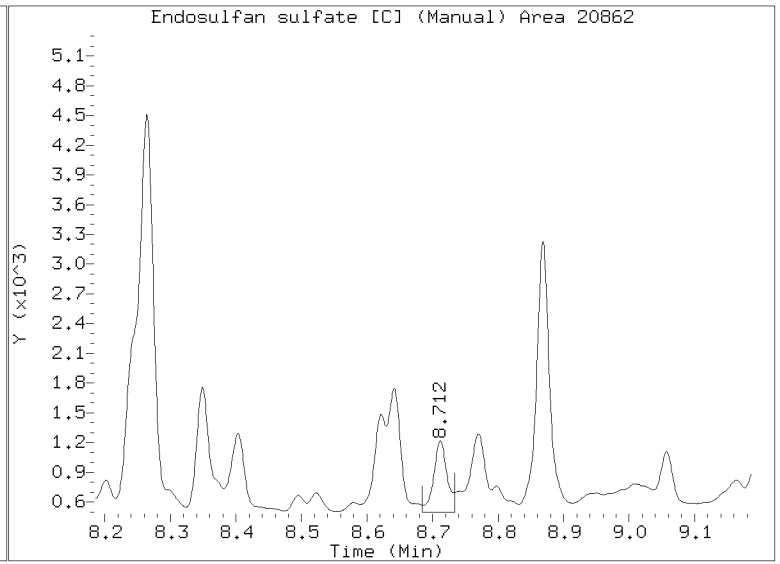


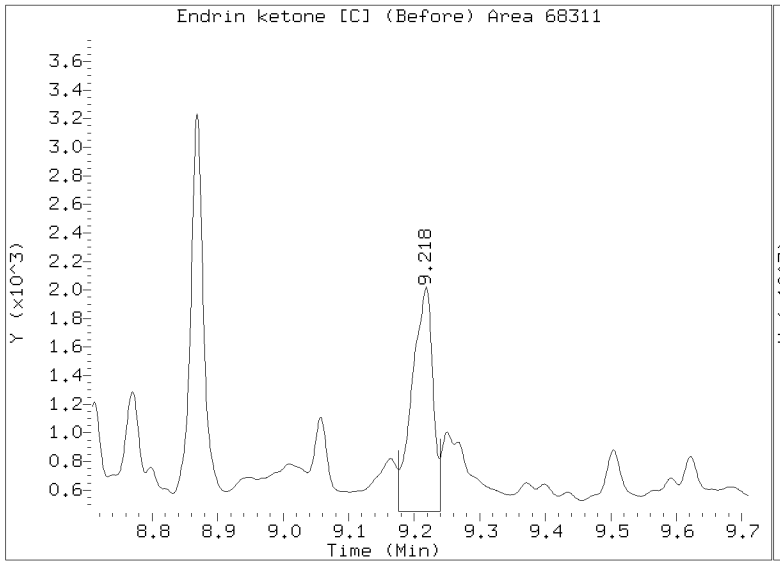


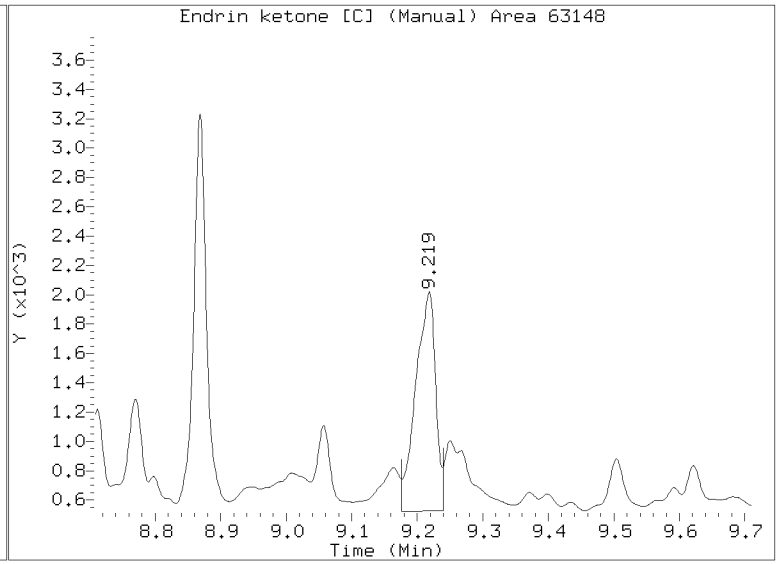
Manual Peak Adjustment Report, CLP-2

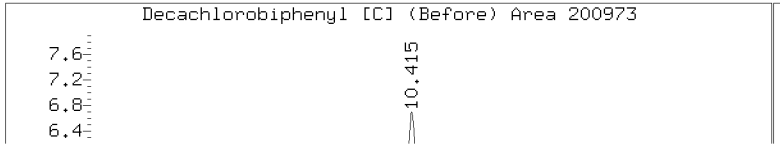
Datafile: /20230131.b/B20230131.b/23013152.D
Injection Date: 01-FEB-2023 06:04
Lab ID:23A0133-16 Client ID:

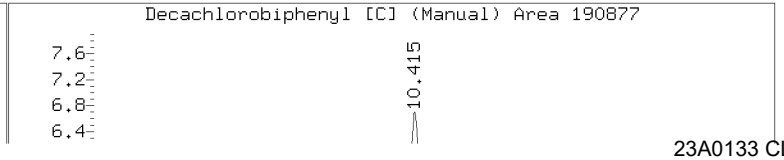






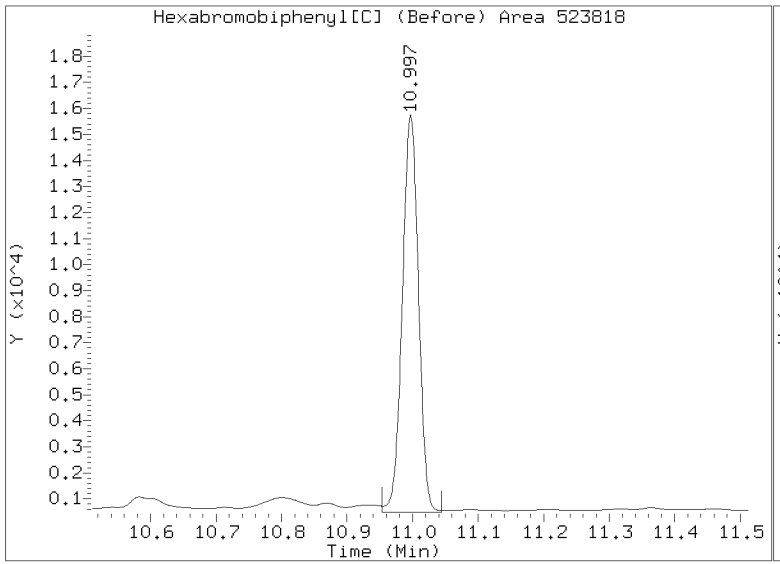


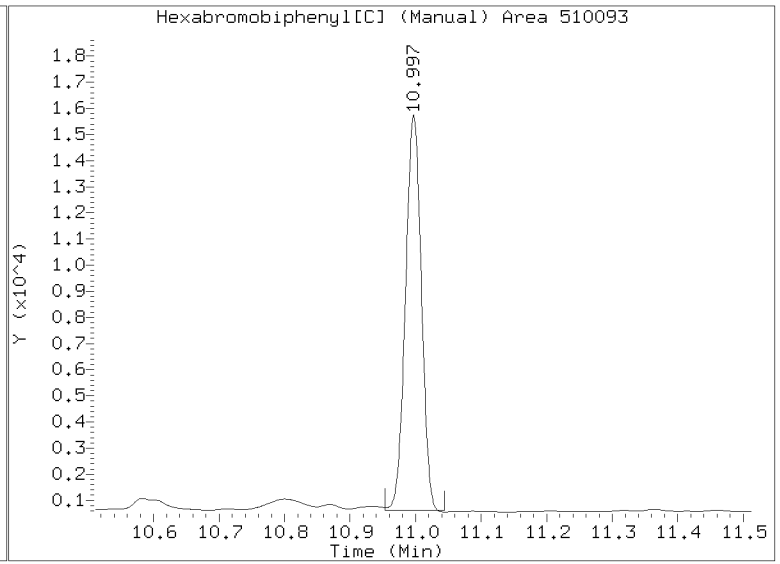




Manual Peak Adjustment Report, CLP-2

Datafile: /20230131.b/B20230131.b/23013152.D
Injection Date: 01-FEB-2023 06:04
Lab ID:23A0133-16 Client ID:





PREPARATION BATCH SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0392 Batch Matrix: Solid
Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1250	23A0133-03	23013137.D	01/19/23 13:44	
LDW23-SC1241	23A0133-06	23013138.D	01/19/23 13:44	
LDW23-IT1217	23A0133-07	23013139.D	01/19/23 13:44	
LDW23-SC1185	23A0133-08	23013140.D	01/19/23 13:44	
LDW23-SC1234	23A0133-09	23013143.D	01/19/23 13:44	
LDW23-SC1215	23A0133-10	23013144.D	01/19/23 13:44	
LDW23-SC1222	23A0133-11	23013145.D	01/19/23 13:44	
LDW23-SC1227	23A0133-12	23013146.D	01/19/23 13:44	
LDW23-SS1110	23A0133-13	23013147.D	01/19/23 13:44	
LDW23-SS1109	23A0133-14	23013148.D	01/19/23 13:44	
LDW23-SS1092	23A0133-15	23013151.D	01/19/23 13:44	
LDW23-SS1091	23A0133-16	23013152.D	01/19/23 13:44	
Blank	BLA0392-BLK1	23013134.D	01/19/23 13:44	
LCS	BLA0392-BS1	23013135.D	01/19/23 13:44	
LCS Dup	BLA0392-BSD1	23013136.D	01/19/23 13:44	
LDW23-SC1185	BLA0392-MS1	23013141.D	01/19/23 13:44	
LDW23-SC1185	BLA0392-MSD1	23013142.D	01/19/23 13:44	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0392

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

Matrix: Solid **Date Prepared:** 01/19/23 **Balance ID:** B146462614 **Set Up By:** CTO 1/16/23

From BLA0062 on 16-Jan-2023 by CTO

WO Comments

22L0417: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E> BATCH with 22L0383
<H>BPR K011477-79, Dup </H> Store in freezer (except GS) SR see Project Memo
23A0133: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

Designator	Description
62	Toxaphene
44	WND
QLS 10	QLS Spike

Analysis: 8081B Pest (PSDDA)

Lab Number & Container	% Solids	Initial (g) Target Dry: 12.5 (Wet)	Initial (g) Target Dry: 12.5 Actual	(REQ) GPC (1:1) 1 2 3	(Yes / No) Acid Clean 5mL	(REQ) Sulfur C/U ~~4.5mL+0.5~~ mL ~~Ethyl Acetate~~	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
22L0417-03 A	55.2	(22.65)	22.67	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
22L0417-04 A	58.2	(21.47)	21.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0133-03 C	51.1	(24.46)	24.51	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0133-06 C	49.0	(25.51)	25.57	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0133-07 C	59.5	(21.01)	21.01	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0133-08 C	58.6	(21.33)	21.35	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0133-09 C	53.7	(23.26)	23.30	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0133-10 C	53.5	(23.37)	23.37	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0133-11 C	52.1	(23.98)	23.99	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0133-12 C	55.8	(22.42)	22.44	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0133-13 C	59.3	(21.07)	21.09	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0133-14 C	45.2	(27.66)	27.69	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0133-15 C	52.3	(23.90)	23.97	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0133-16 C	49.4	(25.31)	25.29	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 12.5 (Wet)	Initial (g) Target Dry: 12.5 Actual	(REQ) GPC (1:1) 1 2 3	(Yes / No) Acid Clean 5mL	(REQ) Sulfur C/U 4.5mL+0.5 mL ~~Ethyl Acetate~~	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLA0392-BLK1	100.0	(12.50)	12.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLA0392-BS1	100.0	(12.50)	12.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLA0392-BSD1	100.0	(12.50)	12.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLA0392-MS1	58.6	(21.33)	21.33	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	Use 23A0133-08
BLA0392-MSD1	58.6	(21.33)	21.33	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	Use 23A0133-08

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0392

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

WO Comments

22L0417: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E> BATCH with 22L0383
<H>BPR K011477-79, Dup </H> Store in freezer (except GS) SR see Project Memo
23A0133: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Steps

Microwave
1 (2) 3
01/19/23
CT
Analyst/Date

Pre GPC KD
100°C
(No Exchange)
3 4 5 6
AA 1-20-23
Analyst/Date

TurboVap
Pre GPC
1 2 3 (4) 5
LJ 1/20/23
Analyst/Date

Post GPC KD
80 - 85°C
Hexane Exchange
(2 X 20 mL)
100°C
(0) (1) (2) 3 (4) (5) 6
TWC 1/24/23
Analyst/Date

TurboVap
Pre-Cleanups
1 2 3 (4) 5
mol/24/23
Analyst/Date

TurboVap
Post-Cleanups
1 2 (3) 4 5
mol/24/23
Analyst/Date

Vialing

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: CT/MS Date: 01/19/23	
Hexane	K0008310
80:20 Hexane/Acetone	L000257
1:1 Hexane/Acetone	L000044
Neutral Glass Wool	K010562
Anhydrous Sodium Sulfate	L000453
Pre GPC KD Analyst: AA Date: 1-20-23	
Hexane	K0008310
Anhydrous Sodium Sulfate	NA
Neutral Glass Wool	NA
GPC Filter Prep Analyst: LJ Date: 1/20/23	
Methylene Chloride	K005442
GPC Analyst: CTU Date: 1/23/23	
Methylene Chloride	K005157
GPC Calibration File	CLA0166
Post GPC KD Analyst: TWC Date: 1/24/23	
Methylene Chloride	K005442
Hexane	K000331
Vialing Analyst: M Date: 01/29/23	
Hexane	K11373
Sulfuric Acid	K10364
~~Ethyl Acetate~~	
Tetrabutylammonium hydrogensulfate (TBAS)	K11885
Sodium Sulfite	K10363
Silica Gel (SPE) Darts	K11573

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 2µg/mL	N ~~K010600~~ K011752 (V) Exp Date: 1/23/2023	50µL	CT	Y
Spike (Freezer) 0.5/1/5µg/mL	3 K011471 (V) Exp Date: 6/10/2023	100µL	CT	Y

MANUALLY ENTER EXPIRATION DATES!

(V) indicates a virtual standard combining two or more physical standards. In these cases the Standard ID refers to the virtual standard, not the parent standards.

If a Standard ID is missing, but should be present, check the standard definition in Element LIMS to be sure Standard Info 6 has the correct letter or number designator matching the vial designator inthe Standard ID column. If it is correct, check the batch and bench sheet in Element LIMS to be sure the correct standards are selected for surrogate(s) and spike(s).

3046F

Printed: 1/16/2023 2:56:23PM

WO Comments

22L0417: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E> BATCH with 22L0383
<H>BPR K011477-79, Dup </H> Store in freezer (except GS) SR see Project Memo
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<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

01/19/23 — Client ID verified By — Date

01/29/23 — Preparation Reviewed By — Date

01/19/23 13:44 — Extraction Date and Time

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0392

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

WO Comments

22L0417: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E> BATCH with 22L0383
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<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Analyst/Date

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0392

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8081B Pest (PSDDA) in Solid (Version:HCB Only)

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<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessels. 3. Add 1:1 Hex/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-re-homogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 Hex/ACE into Erlenmeyer flask using a funnel containing neutral glasswool. 8. Rinse with Hexane. 9. Microwave a 2nd time using 8:2 Hex/Ace (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with Hexane. 11. KD to 5mL at 100°C. (NO HEXANE EXCHANGE). 12. TurboVap 13. GPC 14. After GPC: KD at 80 - 85°C 15. Exchange to Hexane at 100°C 2 x 20 mL). 16. TurboVap. 17. Cleanups, If Acid cleaning do not add Ethyl Acetate for Sulfur Clean. Do Not Acid Clean if Acid liable compounds are requested. 18. Vial in Hexane. A. Need Total Solids Y (N) B. Archive/Freeze (Y) / N	

3046F

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: PEST Extraction Batch: BLA0392

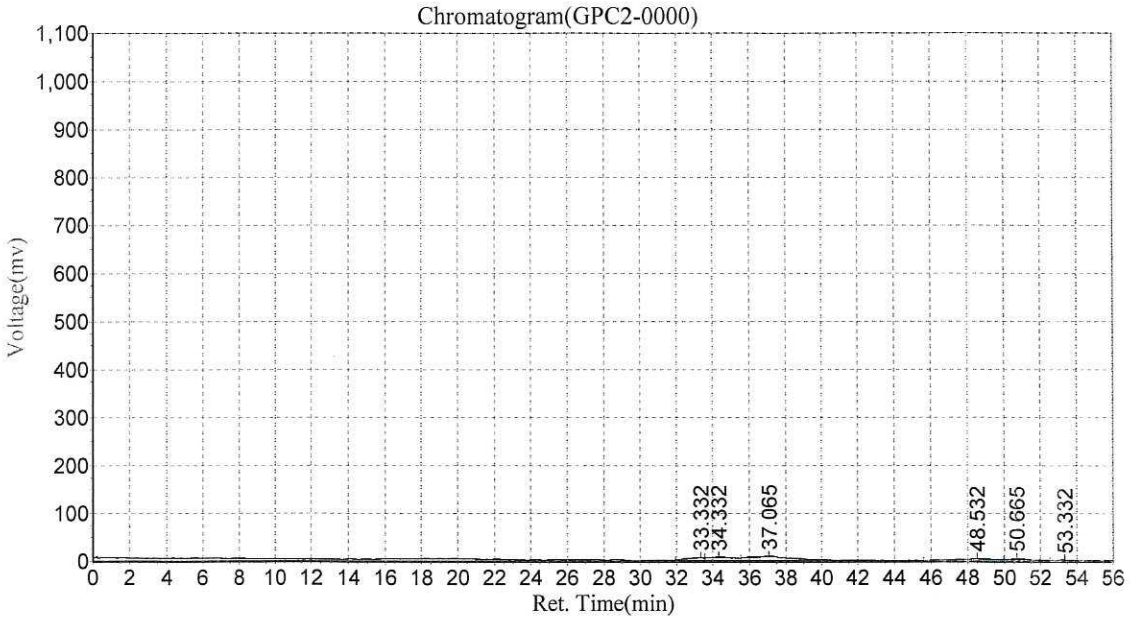
Total Solids Batch: NA Work Order(s): 23A0133 01-16

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
[X] No Anomalies (standard soil/wet sediment/sand/gravel)= 01-16	CR 1/13/23
[X] Standing Water Decanted (Not shared)= 01-16	CR 1/13/23
[ ] Standing Water Homogenized (Shared samples)=	
[ ] Clay/Clumps (Difficult to homogenize)=	
[ ] Rocks (%+size)?	
[ ] Organics (Leaves/sticks/grass)=	
[ ] Oily, obvious fuel/sulfur odors=	
[ ] Received in 32oz jar(s)=Homogenized in Pyrex dish=	
[X] Previously Frozen = 01-16	CR 1/13/23
[ ] Other (Details)=	
Aqueous:	
[ ] No Anomalies	
[ ] Turbid/Color=	
[ ] Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
[ ] Emulsions (%)=	
[ ] Oily, obvious fuel/sulfur odors=	
[ ] Other (Details)=	
[ ] Received in 1.0L Bottle(s)=No Bottle Rinse=	
[X] Other Notes/Comments= (Note problems, concerns, corrective actions). 13?-11 went to dryness in hex	Tue 1/24/23
[X] Share Samples Y / (N)	CR 1/13/23
[X] Multiple Jars Y / (N)	CR 1/13/23
[ ] Sample Pre-Screens indicate analyte activity=	
[ ] Sample weights/volumes reduced based on Pre-Screen=	

BLA0392 22A0417/23A0133 PEST

Date:2023-01-23,5:29:31 PM
Data File:c:\n2000\data\gpc2\012323\GPC2-0000
Method File:E:\GPC2_InHouse.mtd

Analyst£ºCTO
Date/Time2023-01-23,5:29:32 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		33.332	6954.815	506752.469	12.1357
2		34.332	7769.047	829528.000	19.8656
3		37.065	9307.817	1777473.625	42.5670
4		48.532	3879.747	602639.188	14.4320
5		50.665	3533.517	349089.281	8.3600
6		53.332	1719.230	110222.539	2.6396
Total			33164.174	4175705.102	100.000

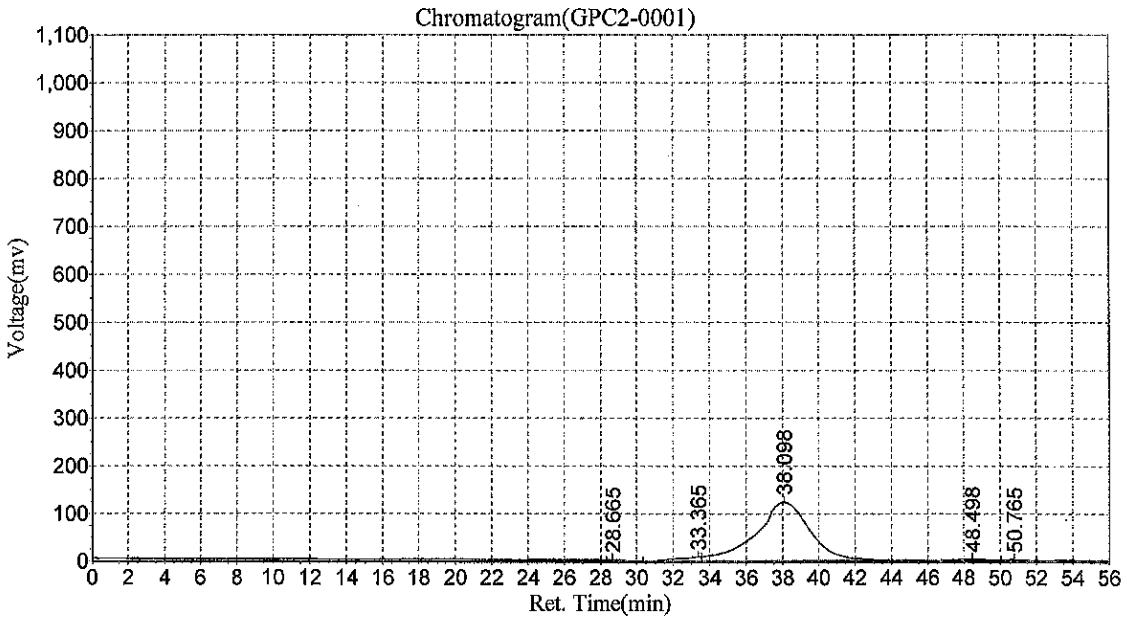
Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-23,6:27:15 PM
Data File:c:\n2000\data\gpc2\012323\GPC2-0001
Method File:E:\GPC2_InHouse.mtd

Analyst£°CTO
Date/Time2023-01-23,6:27:17 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		28.665	1853.817	100377.344	0.3717
2		33.365	8838.412	863736.188	3.1983
3		38.098	123157.188	25341898.000	93.8366
4		48.498	3298.084	487581.750	1.8054
5		50.765	2539.634	212828.578	0.7881
Total			139687.135	27006421.859	100.000

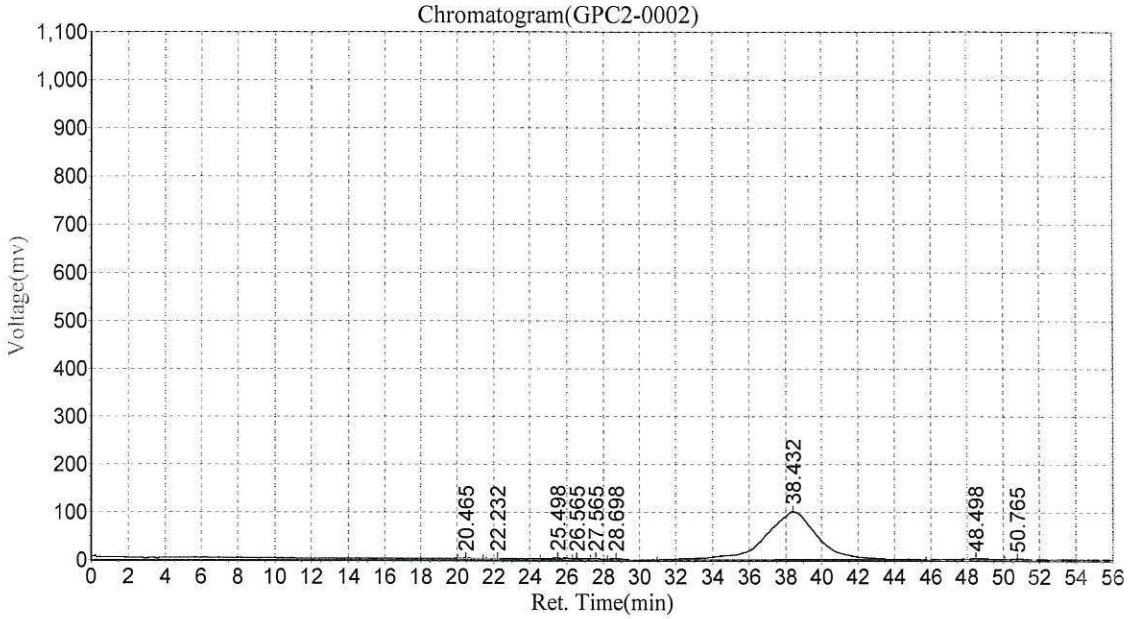
Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-23,7:24:57 PM
Data File:c:\n2000\data\gpc2\012323\GPC2-0002
Method File:E:\GPC2_InHouse.mtd

Analyst£ºCTO
Date/Time2023-01-23,7:24:58 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		20.465	1625.830	111739.461	0.5343
2		22.232	1974.791	175214.125	0.8378
3		25.498	3286.663	185810.250	0.8885
4		26.565	3151.866	167847.500	0.8026
5		27.565	2785.806	124649.461	0.5960
6		28.698	2669.271	159634.234	0.7633
7		38.432	100761.789	19639044.000	93.9064
8		48.498	1989.326	232152.672	1.1101
9		50.765	1798.304	117339.914	0.5611
Total			120043.646	20913431.617	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-23,8:22:40 PM
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Method File:E:\GPC2_InHouse.mtd

Analyst£°CTO
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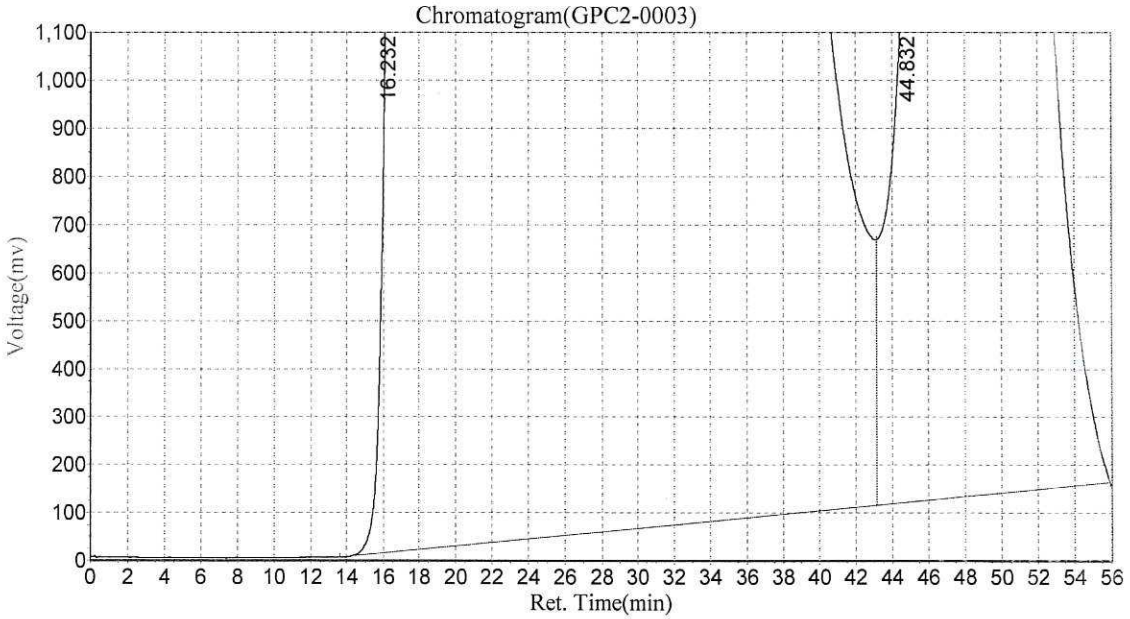

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.232	1362473.000	2043195904.000	73.4033
2		44.832	1253804.375	740324480.000	26.5967
Total			2616277.375	2783520384.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-23,9:20:22 PM
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Method File:E:\GPC2_InHouse.mtd

Analyst£°CTO
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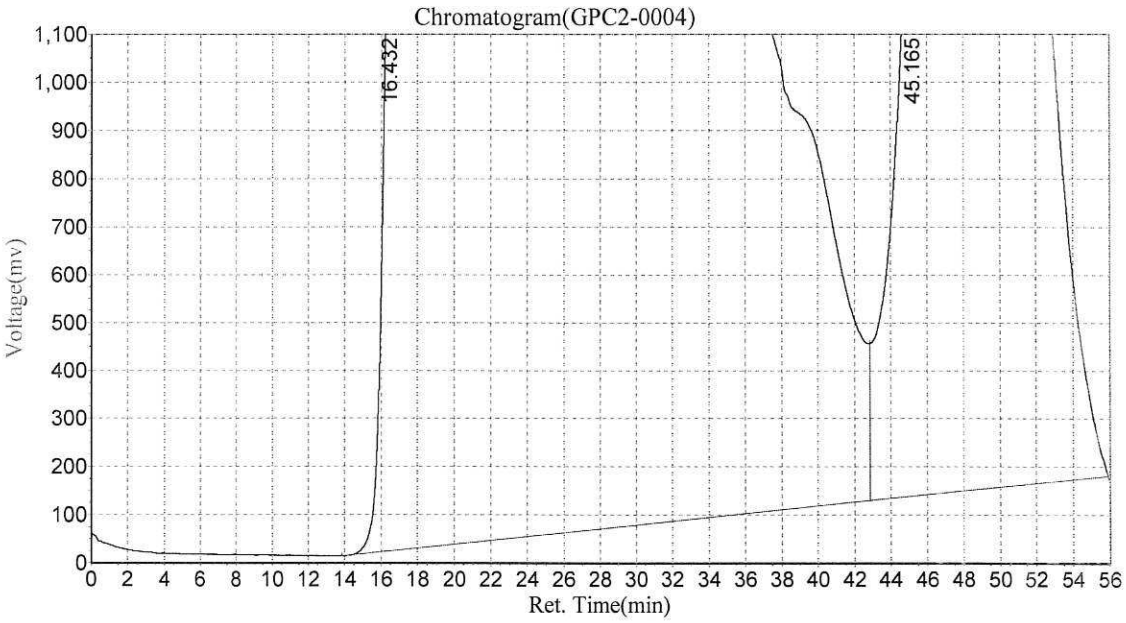

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.432	1354529.625	1872490496.000	72.1657
2		45.165	1237614.250	722220544.000	27.8343
Total			2592143.875	2594711040.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-23,10:18:05 PM
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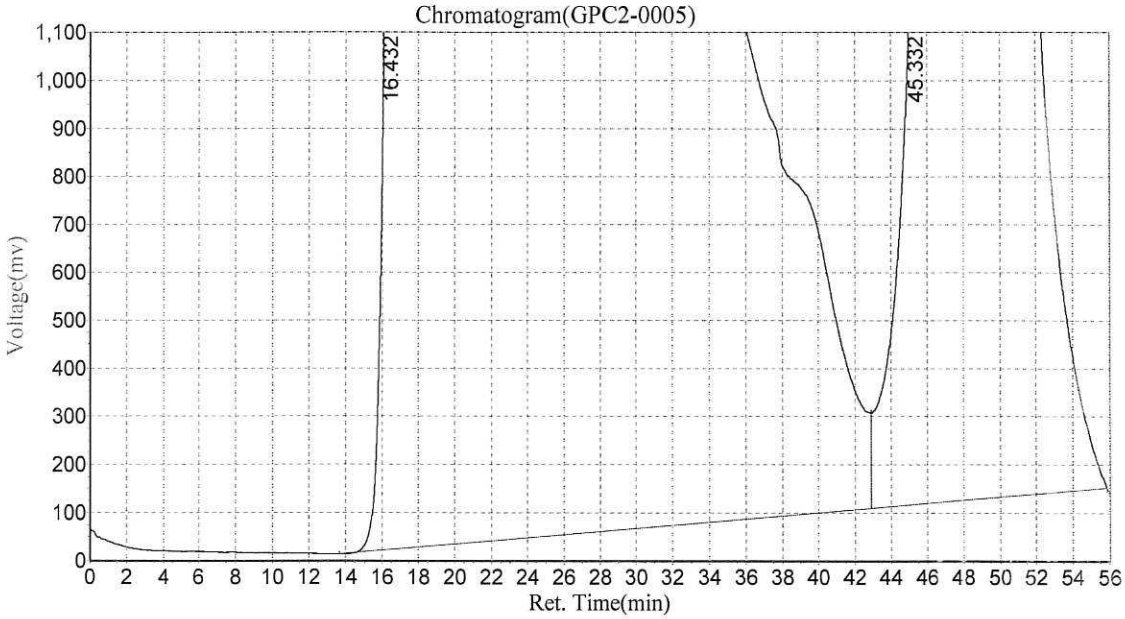
Method File:E:\GPC2_InHouse.mtd

Analyst£°CTO
Date/Time2023-01-23,10:18:06 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.432	1356009.125	1824945664.000	73.3392
2		45.332	1256934.250	663417856.000	26.6608
Total			2612943.375	2488363520.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-23,11:15:47 PM
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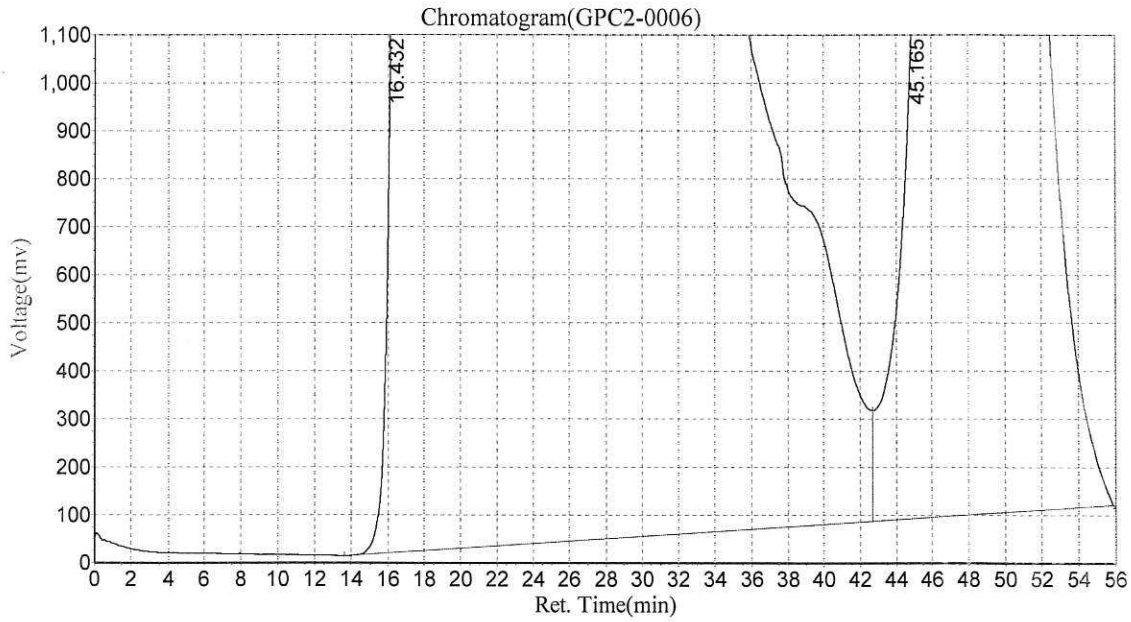
Method File:E:\GPC2_InHouse.mtd

Analyst£ºCTO
Date/Time2023-01-23,11:15:48 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.432	1357622.875	1822111872.000	72.2530
2		45.165	1280969.500	699738688.000	27.7470
Total			2638592.375	2521850560.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-24,12:13:30 AM
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Analyst£°CTO
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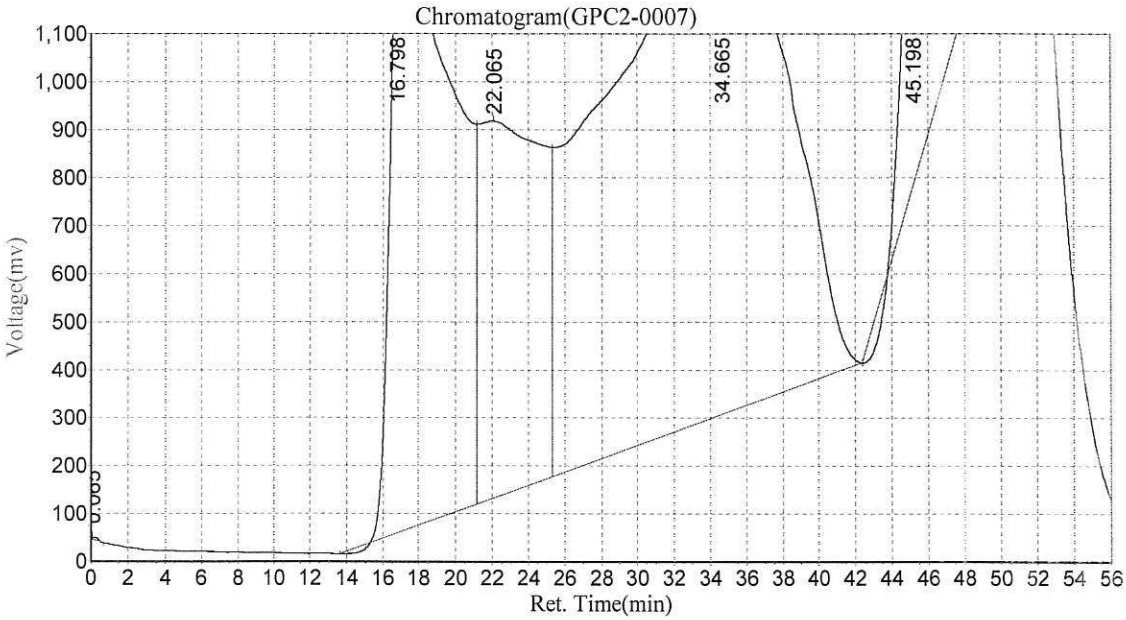


Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.065	5634.600	137259.594	0.0102
2		16.798	1319235.250	312201792.000	23.1895
3		22.065	785420.000	185967456.000	13.8132
4		34.665	1052386.750	740989568.000	55.0387
5		45.198	594631.313	107011072.000	7.9485
Total			3757307.913	1346307147.594	100.000

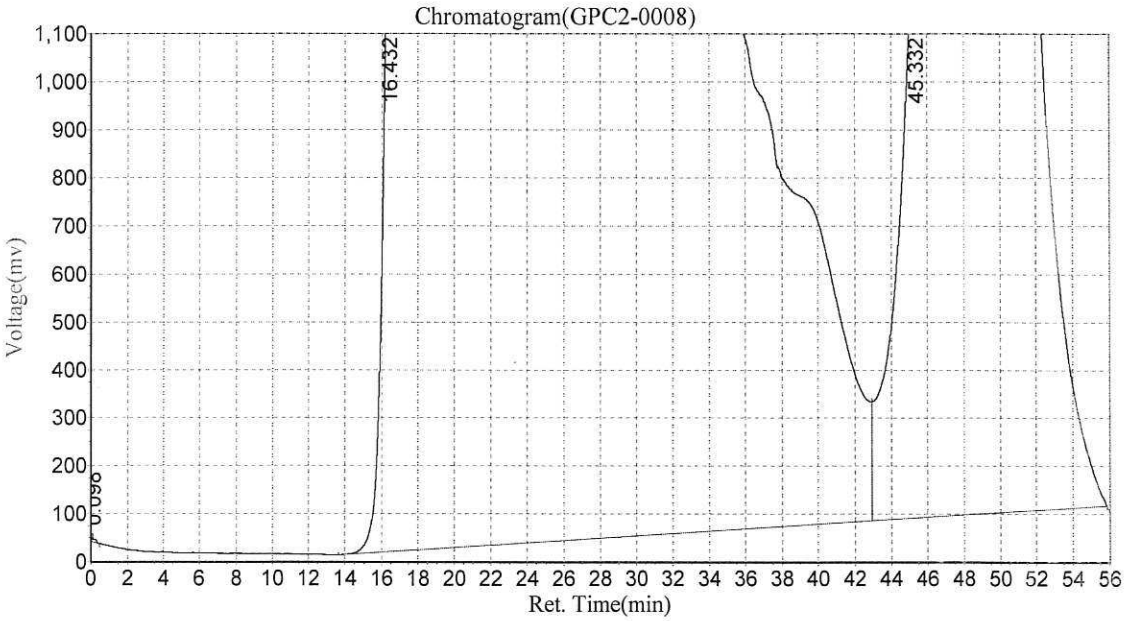
Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-24,1:11:12 AM
Data File:c:\n2000\data\gpc2\012323\GPC2-0008
Method File:E:\GPC2_InHouse.mtd

Analyst£°CTO
Date/Time2023-01-24,1:11:14 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.098	5855.846	102513.203	0.0041
2		16.432	1357946.500	1820731136.000	72.7741
3		45.332	1283527.750	681061568.000	27.2218
Total			2647330.096	2501895217.203	100.000

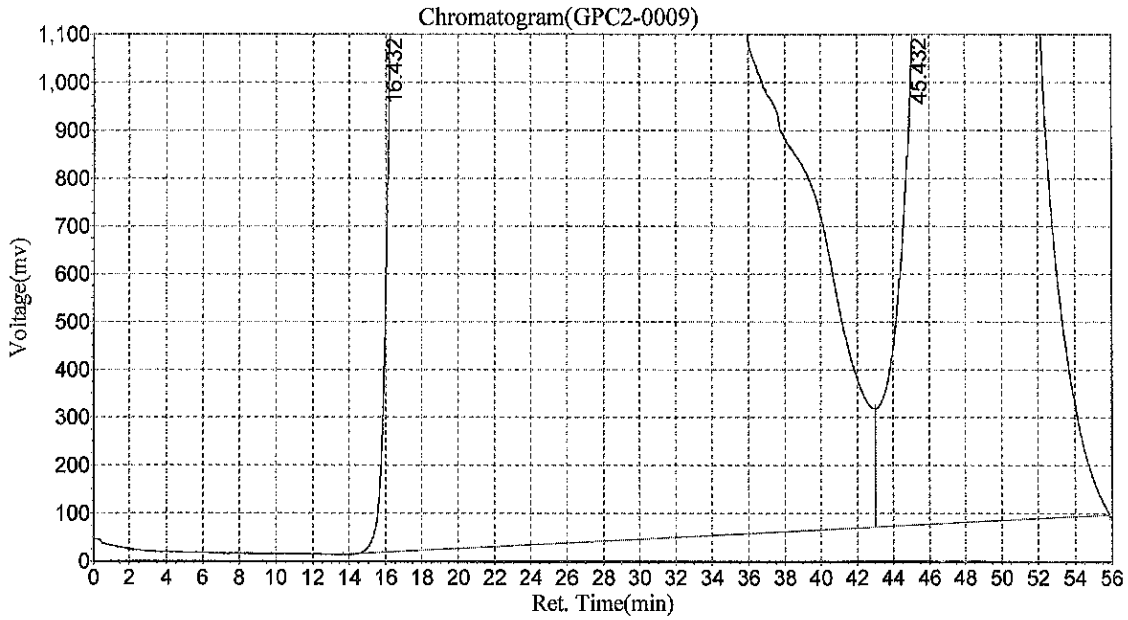
Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-24,2:08:55 AM
Data File:c:\n2000\data\gpc2\012323\GPC2-0009
Method File:E:\GPC2_InHouse.mtd

Analyst£ºCTO
Date/Time2023-01-24,2:08:57 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.432	1360026.375	1817639040.000	72.9967
2		45.432	1298940.750	672389312.000	27.0033
Total			2658967.125	2490028352.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-24,3:06:37 AM
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Method File:E:\GPC2_InHouse.mtd

Analyst£°CTO
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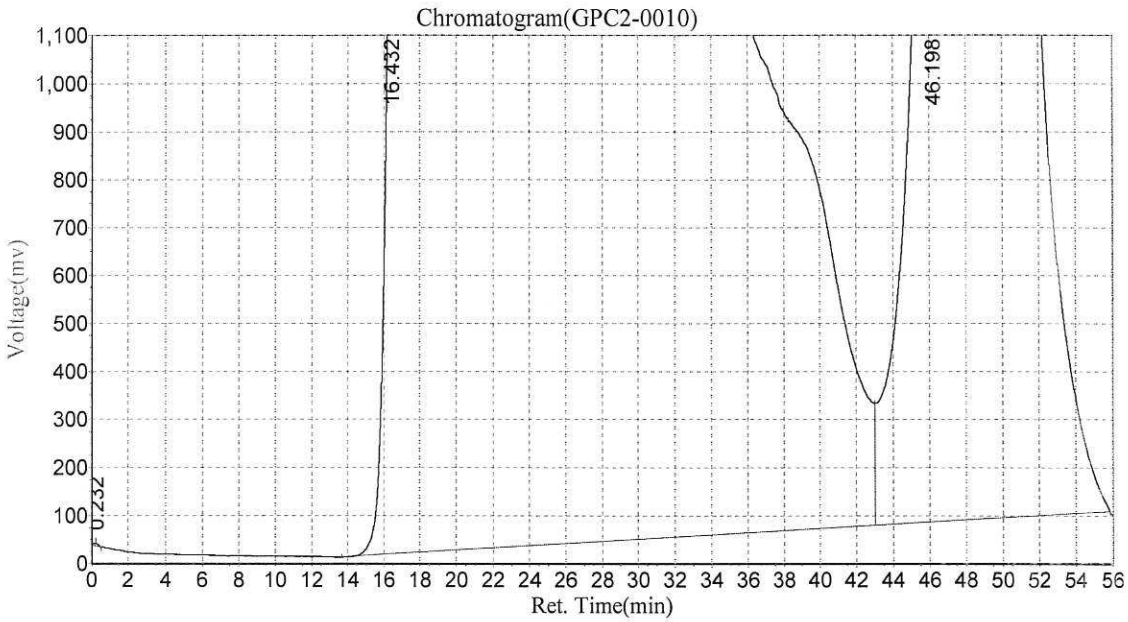


Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.232	6091.286	106959.703	0.0042
2		16.432	1359154.250	1873455232.000	73.6531
3		46.198	1287852.125	670058688.000	26.3427
Total			2653097.661	2543620879.703	100.000

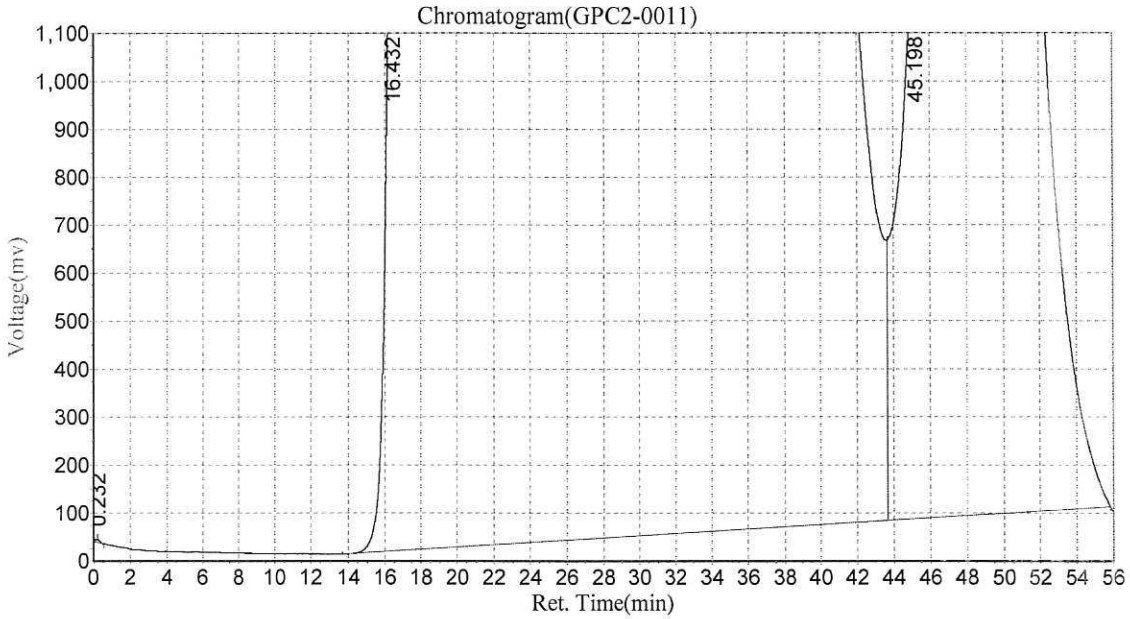
Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-24,4:04:20 AM
Data File:c:\n2000\data\gpc2\012323\GPC2-0011
Method File:E:\GPC2_InHouse.mtd

Analyst£°CTO
Date/Time2023-01-24,4:04:22 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.232	6366.600	113857.500	0.0040
2		16.432	1358271.125	2138918912.000	75.6370
3		45.198	1287491.500	688839232.000	24.3589
Total			2652129.225	2827872001.500	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-24,5:02:02 AM
Data File:c:\n2000\data\gpc2\012323\GPC2-0012
Method File:E:\GPC2_InHouse.mtd

Analyst£ºCTO
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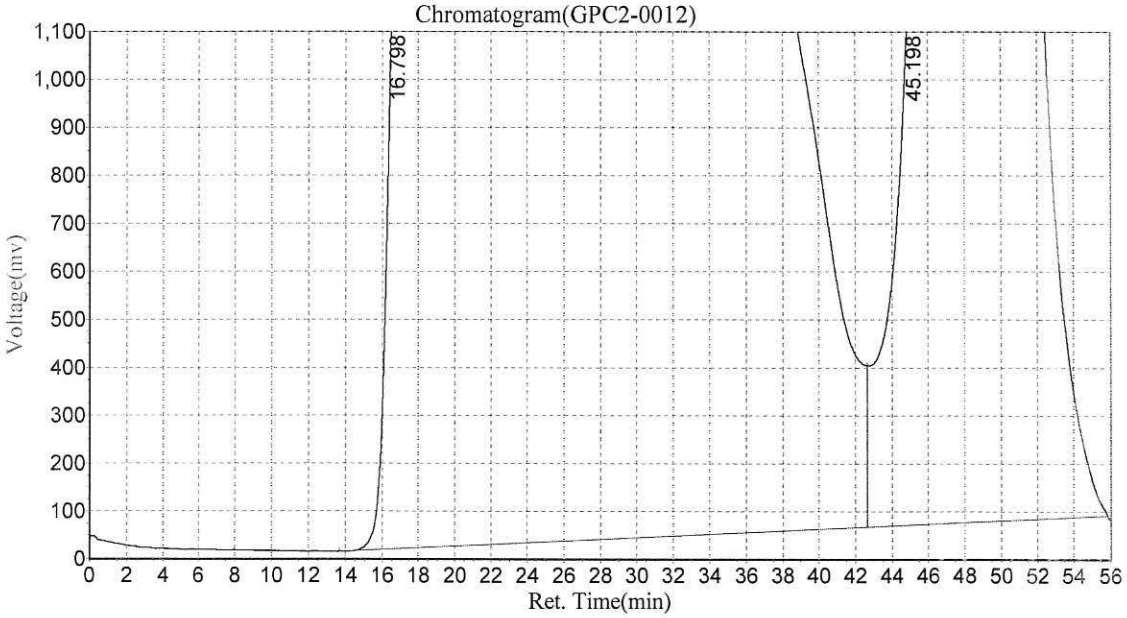

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.798	1357785.750	1878068224.000	72.3339
2		45.198	1303292.875	718320704.000	27.6661
Total			2661078.625	2596388928.000	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-24,5:59:45 AM
Data File:c:\n2000\data\gpc2\012323\GPC2-0013
Method File:E:\GPC2_InHouse.mtd

Analyst£ºCTO
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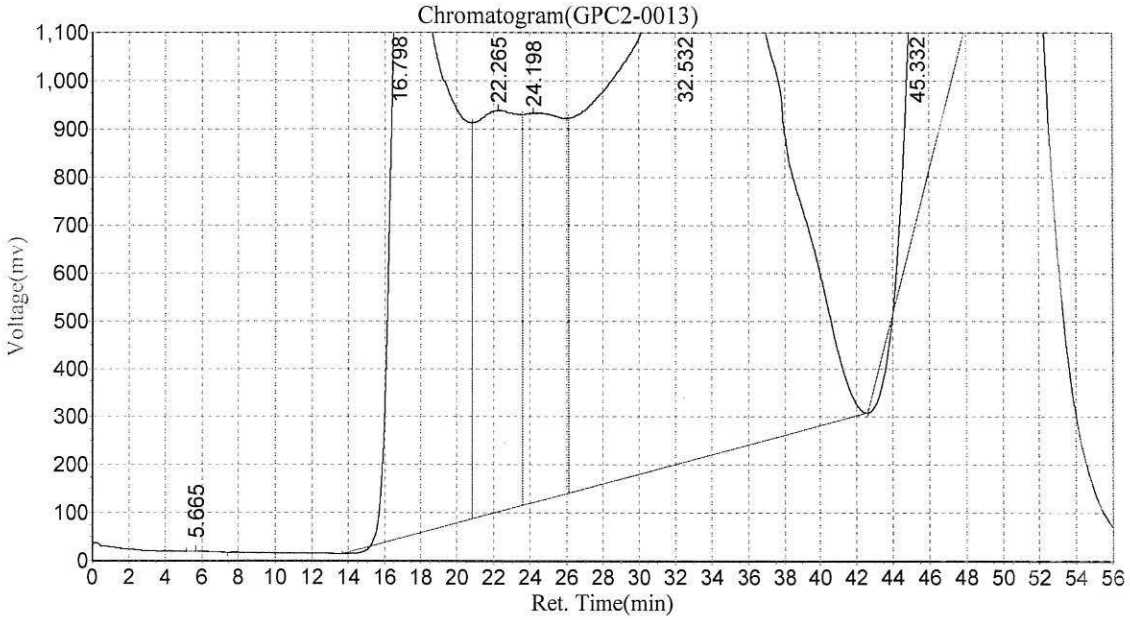


Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		5.665	1385.134	109513.602	0.0076
2		16.798	1332530.000	302342016.000	21.0636
3		22.265	837735.938	137603712.000	9.5866
4		24.198	812253.875	121812528.000	8.4865
5		32.532	1167802.125	762173824.000	53.0993
6		45.332	665064.938	111332096.000	7.7563
Total			4816772.009	1435373689.602	100.000

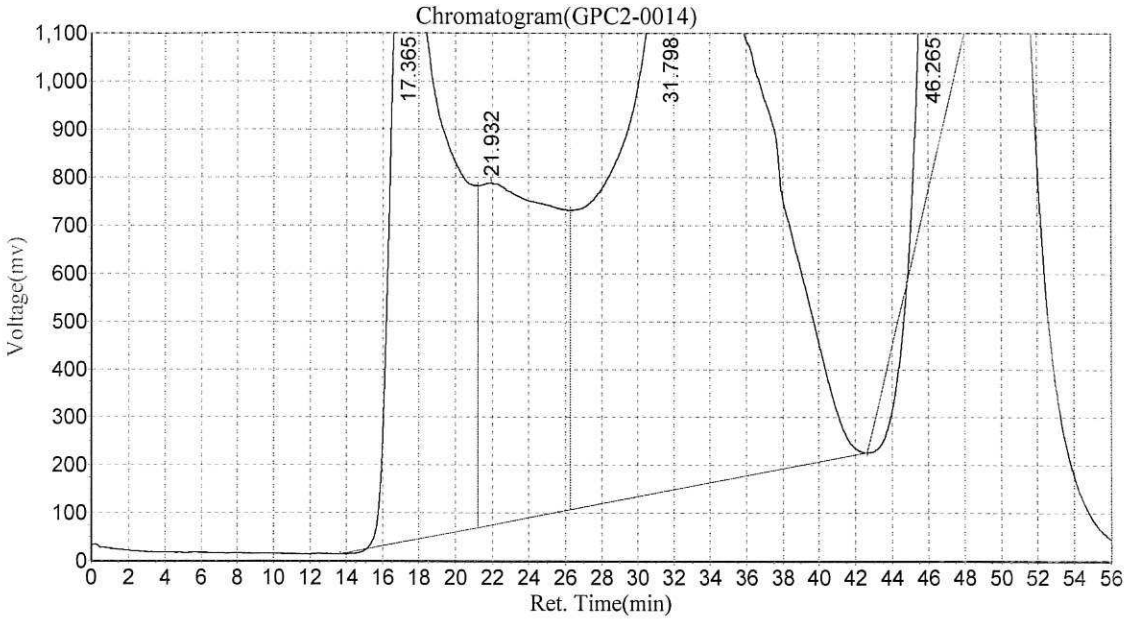
Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-24,6:57:28 AM
Data File:c:\n2000\data\gpc2\012323\GPC2-0014
Method File:E:\GPC2_InHouse.mtd

Analyst£ºCTO
Date/Time2023-01-24,6:57:29 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	1337955.750	299070368.000	23.7652
2		21.932	713223.813	204085760.000	16.2174
3		31.798	1067561.500	672655040.000	53.4516
4		46.265	564118.000	82625776.000	6.5657
Total			3682859.063	1258436944.000	100.000

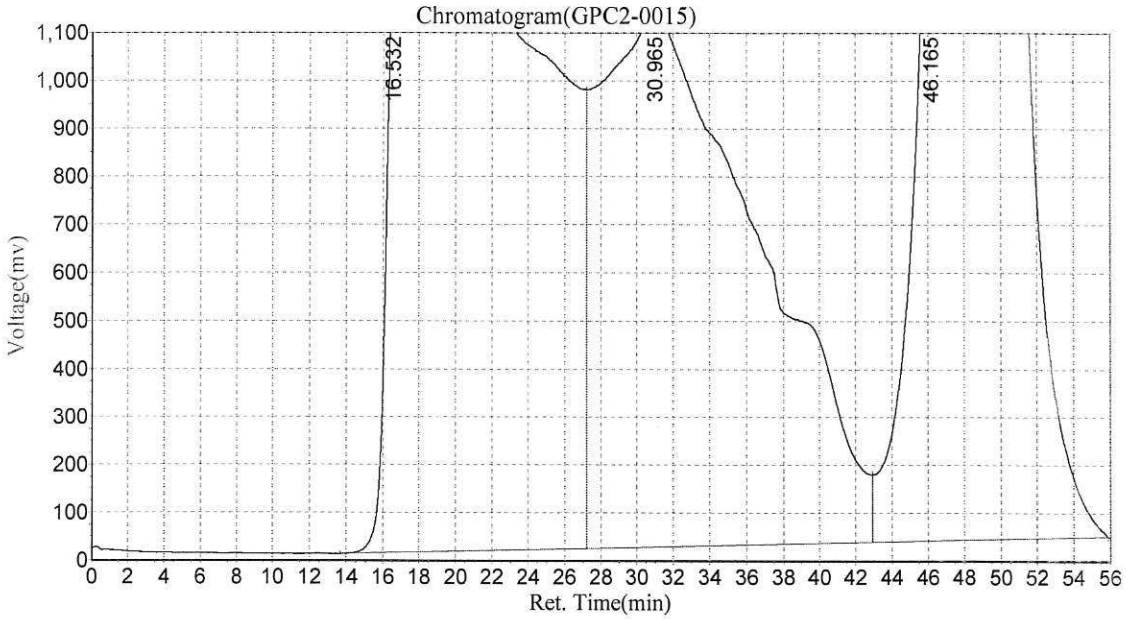
Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-24,7:55:11 AM
Data File:c:\n2000\data\gpc2\012323\GPC2-0015
Method File:E:\GPC2_InHouse.mtd

Analyst£°CTO
Date/Time2023-01-24,7:55:12 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.532	1363022.125	778833856.000	37.8682
2		30.965	1110603.375	674181440.000	32.7799
3		46.165	1333754.625	603678592.000	29.3519
Total			3807380.125	2056693888.000	100.000

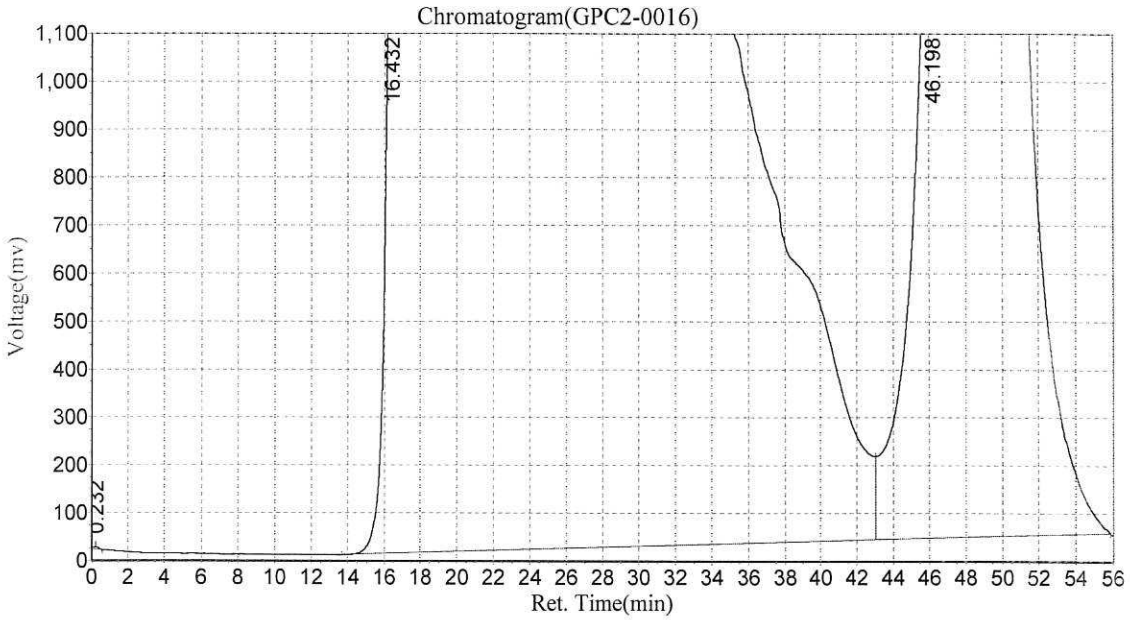
Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-24,8:52:53 AM
Data File:c:\n2000\data\gpc2\012323\GPC2-0016
Method File:E:\GPC2_InHouse.mtd

Analyst£ºCTO
Date/Time2023-01-24,8:52:54 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.232	5154.706	105584.797	0.0044
2		16.432	1363889.750	1802722176.000	75.0488
3		46.198	1327925.375	599239808.000	24.9468
Total			2696969.831	2402067568.797	100.000

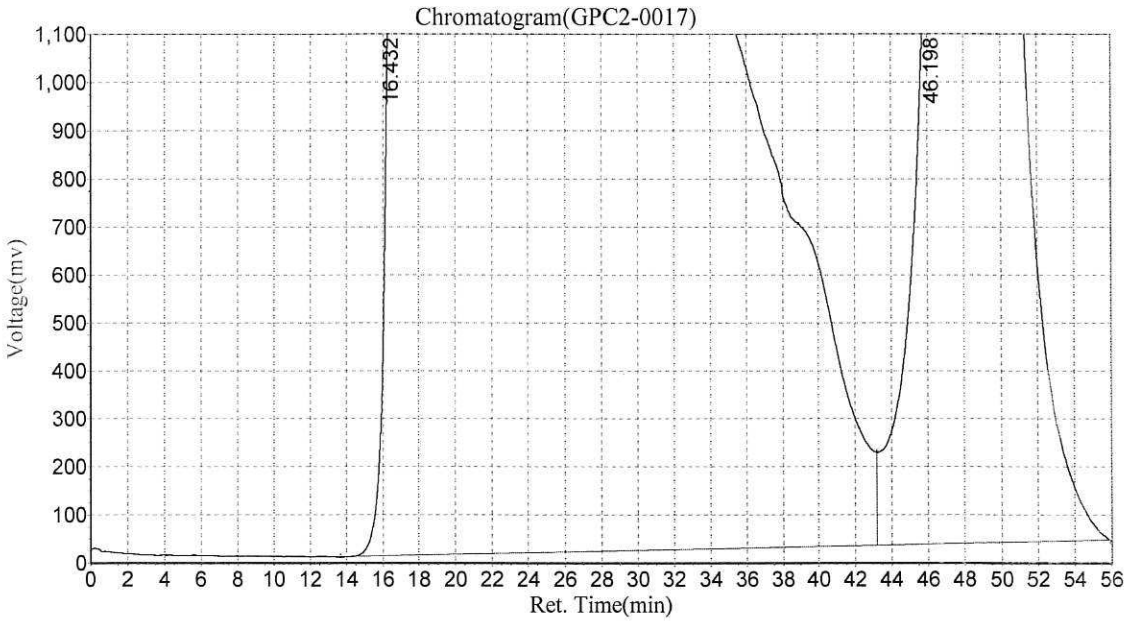
Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0392 22A0417/23A0133 PEST

Date:2023-01-24,9:50:36 AM
Data File:c:\n2000\data\gpc2\012323\GPC2-0017
Method File:E:\GPC2_InHouse.mtd

Analyst£ºCTO
Date/Time2023-01-24,9:50:38 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.432	1364628.625	1829683840.000	75.9836
2		46.198	1337248.500	578315008.000	24.0164
Total			2701877.125	2407998848.000	100.000

Ingredient Table

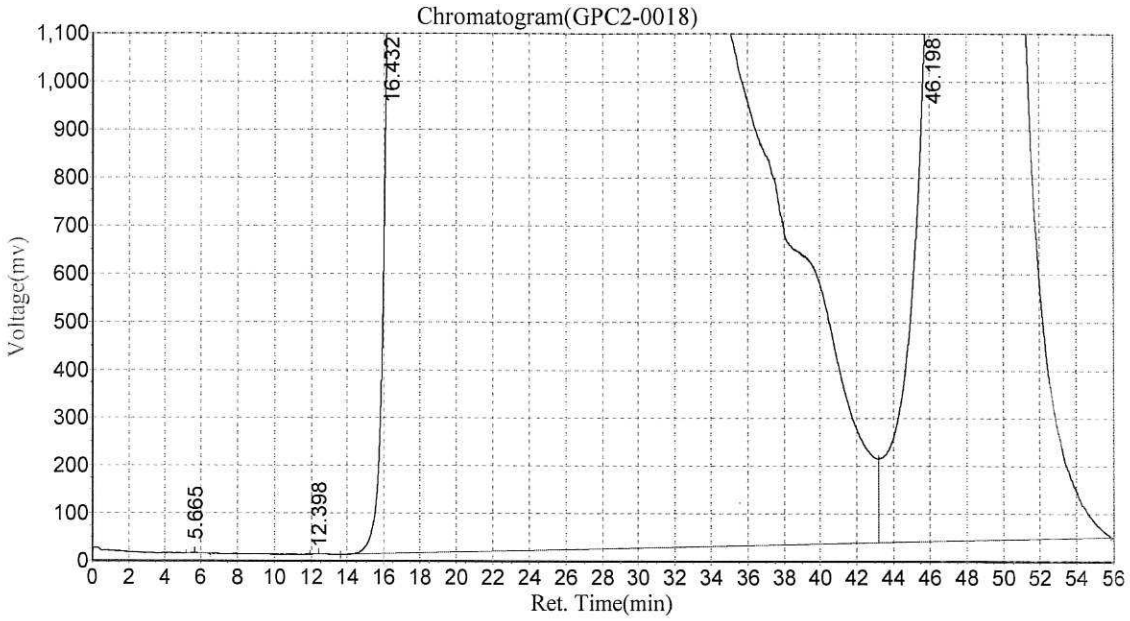
No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

-16

BLA0392 22A0417/23A0133 PEST

Date:2023-01-24,10:48:18 AM
Data File:c:\n2000\data\gpc2\012323\GPC2-0018
Method File:E:\GPC2_InHouse.mtd

Analyst£°CTO
Date/Time2023-01-24,10:48:20 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		5.665	1741.281	102760.445	0.0043
2		12.398	1808.800	101980.719	0.0043
3		16.432	1364012.750	1817232000.000	76.2220
4		46.198	1333884.875	566693760.000	23.7694
Total			2701447.706	2384130501.164	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLA0256	Cleanup Type:	GPC
Cleanup Method:	EPA 3640A GPC Cleanup 1:1	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1241	23A0133-06	23013138.D	01/23/2023	
LDW23-SS1092	23A0133-15	23013151.D	01/23/2023	
LDW23-SS1109	23A0133-14	23013148.D	01/23/2023	
LDW23-SS1110	23A0133-13	23013147.D	01/23/2023	
LDW23-SC1250	23A0133-03	23013137.D	01/23/2023	
LCS Dup	BLA0392-BSD1	23013136.D	01/23/2023	
Blank	BLA0392-BLK1	23013134.D	01/23/2023	
LDW23-SS1091	23A0133-16	23013152.D	01/23/2023	
Matrix Spike Dup	BLA0392-MSD1	23013142.D	01/23/2023	
Matrix Spike	BLA0392-MS1	23013141.D	01/23/2023	
LDW23-SC1234	23A0133-09	23013143.D	01/23/2023	
LDW23-SC1227	23A0133-12	23013146.D	01/23/2023	
LDW23-SC1222	23A0133-11	23013145.D	01/23/2023	
LDW23-SC1215	23A0133-10	23013144.D	01/23/2023	
LDW23-SC1185	23A0133-08	23013140.D	01/23/2023	
LDW23-IT1217	23A0133-07	23013139.D	01/23/2023	
LCS	BLA0392-BS1	23013135.D	01/23/2023	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLA0261	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665 Sulfuric Acid Cleanup - uL	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1110	23A0133-13	23013147.D	01/29/2023	
LDW23-IT1217	23A0133-07	23013139.D	01/29/2023	
LDW23-SC1215	23A0133-10	23013144.D	01/29/2023	
LDW23-SC1227	23A0133-12	23013146.D	01/29/2023	
LDW23-SC1234	23A0133-09	23013143.D	01/29/2023	
LDW23-SC1250	23A0133-03	23013137.D	01/29/2023	
LDW23-SC1185	23A0133-08	23013140.D	01/29/2023	
LDW23-SS1091	23A0133-16	23013152.D	01/29/2023	
LDW23-SS1109	23A0133-14	23013148.D	01/29/2023	
LDW23-SC1222	23A0133-11	23013145.D	01/29/2023	
LDW23-SC1241	23A0133-06	23013138.D	01/29/2023	
LCS	BLA0392-BS1	23013135.D	01/29/2023	
LCS Dup	BLA0392-BSD1	23013136.D	01/29/2023	
Matrix Spike	BLA0392-MS1	23013141.D	01/29/2023	
Matrix Spike Dup	BLA0392-MSD1	23013142.D	01/29/2023	
Blank	BLA0392-BLK1	23013134.D	01/29/2023	
LDW23-SS1092	23A0133-15	23013151.D	01/29/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLA0262	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1109	23A0133-14	23013148.D	01/29/2023	
LDW23-SS1110	23A0133-13	23013147.D	01/29/2023	
LDW23-SS1092	23A0133-15	23013151.D	01/29/2023	
LDW23-SS1091	23A0133-16	23013152.D	01/29/2023	
LDW23-SC1227	23A0133-12	23013146.D	01/29/2023	
LDW23-SC1250	23A0133-03	23013137.D	01/29/2023	
LDW23-SC1241	23A0133-06	23013138.D	01/29/2023	
LDW23-SC1222	23A0133-11	23013145.D	01/29/2023	
LDW23-IT1217	23A0133-07	23013139.D	01/29/2023	
LDW23-SC1185	23A0133-08	23013140.D	01/29/2023	
LDW23-SC1215	23A0133-10	23013144.D	01/29/2023	
Matrix Spike Dup	BLA0392-MSD1	23013142.D	01/29/2023	
Matrix Spike	BLA0392-MS1	23013141.D	01/29/2023	
LCS Dup	BLA0392-BSD1	23013136.D	01/29/2023	
LCS	BLA0392-BS1	23013135.D	01/29/2023	
Blank	BLA0392-BLK1	23013134.D	01/29/2023	
LDW23-SC1234	23A0133-09	23013143.D	01/29/2023	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLA0263	Cleanup Type:	Sulfur
Cleanup Method:	EPA 3660B Sulfur Cleanup - uL	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1227	23A0133-12	23013146.D	01/29/2023	
LDW23-SC1215	23A0133-10	23013144.D	01/29/2023	
LDW23-SC1234	23A0133-09	23013143.D	01/29/2023	
LDW23-SC1185	23A0133-08	23013140.D	01/29/2023	
LDW23-SC1241	23A0133-06	23013138.D	01/29/2023	
LDW23-SC1250	23A0133-03	23013137.D	01/29/2023	
LDW23-SS1091	23A0133-16	23013152.D	01/29/2023	
LDW23-IT1217	23A0133-07	23013139.D	01/29/2023	
LDW23-SS1110	23A0133-13	23013147.D	01/29/2023	
Blank	BLA0392-BLK1	23013134.D	01/29/2023	
LCS Dup	BLA0392-BSD1	23013136.D	01/29/2023	
LDW23-SC1222	23A0133-11	23013145.D	01/29/2023	
LCS	BLA0392-BS1	23013135.D	01/29/2023	
Matrix Spike	BLA0392-MS1	23013141.D	01/29/2023	
Matrix Spike Dup	BLA0392-MSD1	23013142.D	01/29/2023	
LDW23-SS1109	23A0133-14	23013148.D	01/29/2023	
LDW23-SS1092	23A0133-15	23013151.D	01/29/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8081B

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLA0392-BLK1	File ID:	23013134.D
Sampled:	N/A	Prepared:	01/19/23 13:44	Analyzed:	02/01/23 00:42
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	12.5 g / 2.5 mL
Batch:	BLA0392	Sequence:	SLB0046	Calibration:	FL00041
Instrument:	ECD6	Column:	STX-CLP	Cleanups:	GPC, Silica Gel, Sulfur, Sulfuric Acid

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
118-74-1	Hexachlorobenzene	1	0.50	U	0.15	0.50

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl	8.0000	7.65	95.7	30 - 160	
Decachlorobiphenyl [2C]	8.0000	8.15	102	30 - 160	
Tetrachlorometaxylene	8.0000	6.05	75.6	30 - 160	
Tetrachlorometaxylene [2C]	8.0000	5.81	72.6	30 - 160	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013134.D
Data file 2: /20230131.b/B20230131.b/23013134.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: BLA0392-BLK1
Client ID:
Injection Date: 01-FEB-2023 00:42
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP on col	CLP2 on col	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response				
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			6.805	-0.009	1782	0.00	0.09	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.798	-0.002	342115	4.189	-0.007	582830	30.26	29.04	4.1	Tetrachloro-m-xylene
9.315	-0.004	293062	10.415	-0.014	425023	38.27	40.77	6.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

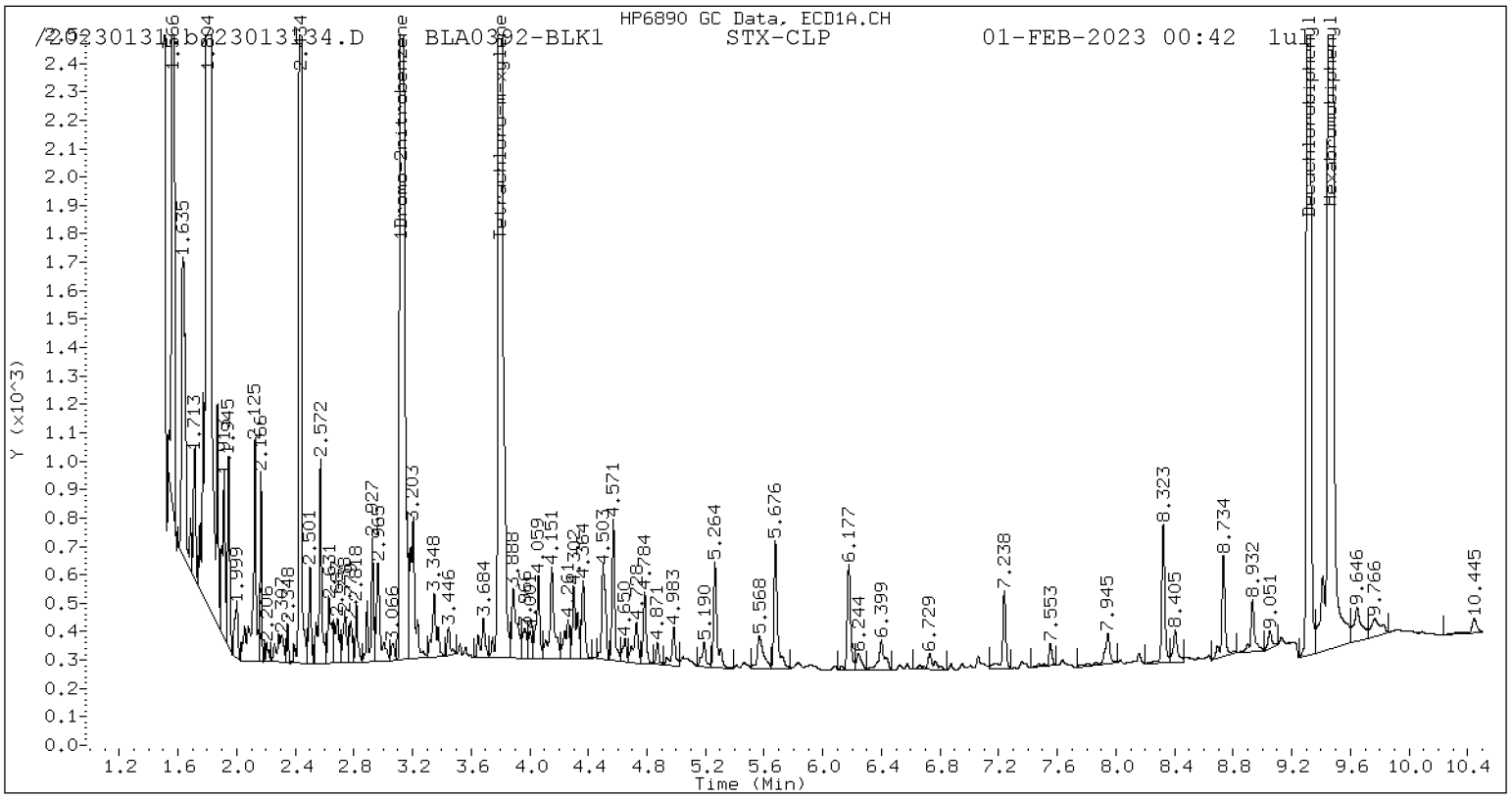
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	831390	23.6
Hexabromobiphenyl	609723	755842	24.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1425928	41.7
Hexabromobiphenyl	769764	943214	22.5

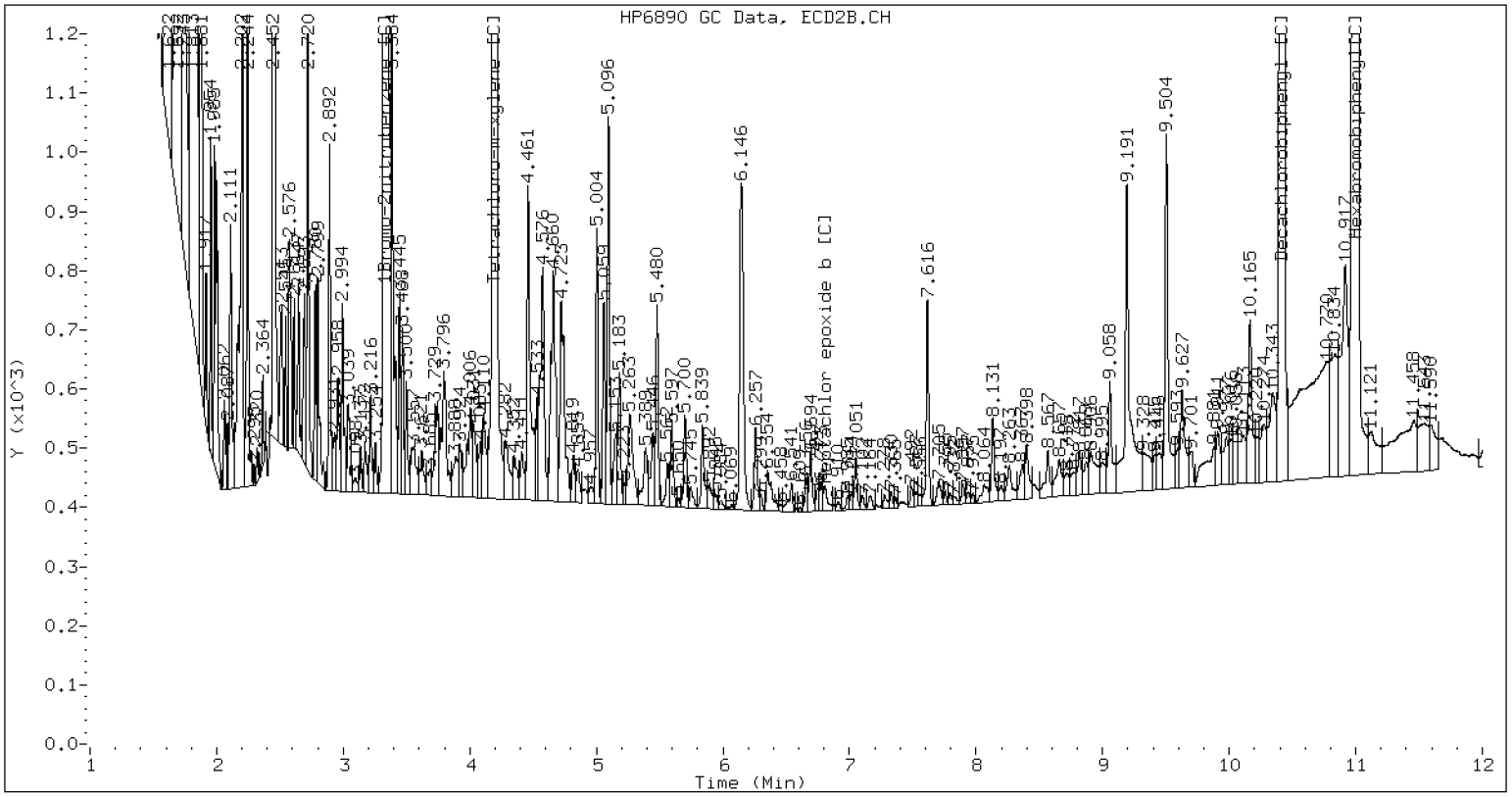
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230131.b/B20230131.b/23013134.D BLA0392-BLK1 CLP2



CLP-2 Manual Integration: NO

LCS / LCS DUPLICATE RECOVERY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/01/23 01:00
Batch:	BLA0392	Laboratory ID:	BLA0392-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	12.5 g / 2.5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Hexachlorobenzene	4.00	2.61		65.3	26 - 128

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	4.00	2.85		71.2	8.63	30	26 - 128

* Indicates values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013135.D
Data file 2: /20230131.b/B20230131.b/23013135.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: BLA0392-BS1
Client ID:
Injection Date: 01-FEB-2023 01:00
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.307	-0.003	233250	4.824	-0.009	391871	14.45	13.73	5.1	alpha-BHC
4.689	-0.003	96360	5.299	-0.010	156456	15.50	14.41	7.3	beta-BHC
4.872	-0.004	223291	5.651	-0.011	368891	16.92	15.69	7.6	delta-BHC
4.608	-0.003	221484	5.219	-0.010	366562	15.82	15.13	4.5	gamma-BHC (Lindane)
5.089	-0.004	199187	5.744	-0.011	325378	15.99	14.83	7.6	Heptachlor
5.410	-0.004	200919	6.147	-0.011	285732	14.39	11.40	23.2	Aldrin
6.083	-0.005	184544	6.803	-0.011	289522	15.25	13.97	8.7	Heptachlor epoxide b
6.526	-0.005	219997	7.246	-0.011	317573	19.81	17.39	13.0	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
6.446	-0.005	364412	7.331	-0.011	537930	32.89	29.07	12.3	4,4'-DDE
----			----			0.00	0.00	---	Endrin
7.274	-0.004	44692	8.077	-0.011	55217	4.79	3.93	19.9	Endosulfan II
7.095	-0.004	321616	7.938	-0.011	455635	34.48	34.13	1.0	4,4'-DDD
8.137	-0.004	239961	8.675	-0.011	317897	27.11	25.73	5.2	Endosulfan sulfate
7.387	-0.004	323677	8.256	-0.011	432495	34.34	33.57	2.3	4,4'-DDT
7.874	-0.003	7637	8.890	-0.018	27423	1.83	4.81	89.8*	Methoxychlor
8.410	-0.004	248894	9.199	-0.011	326463	24.55	24.47	0.3	Endrin ketone
7.702	-0.004	24819	8.407	-0.011	34254	3.34	3.45	3.3	Endrin aldehyde
6.225	-0.005	208353	7.014	-0.012	304728	16.95	14.75	13.9	trans-Chlordane
6.371	-0.005	195802	7.174	-0.011	285391	15.88	14.12	11.8	cis-Chlordane
2.302	-0.002	199178	2.479	-0.003	302173	11.77	11.15	5.5	Hexachlorobutadiene
4.150	-0.003	195783	4.683	-0.009	315472	13.06	12.14	7.3	Hexachlorobenzene
3.798	-0.002	337907	4.189	-0.007	576630	29.62	28.76	3.0	Tetrachloro-m-xylene
9.315	-0.003	306349	10.414	-0.015	430777	38.28	40.38	5.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

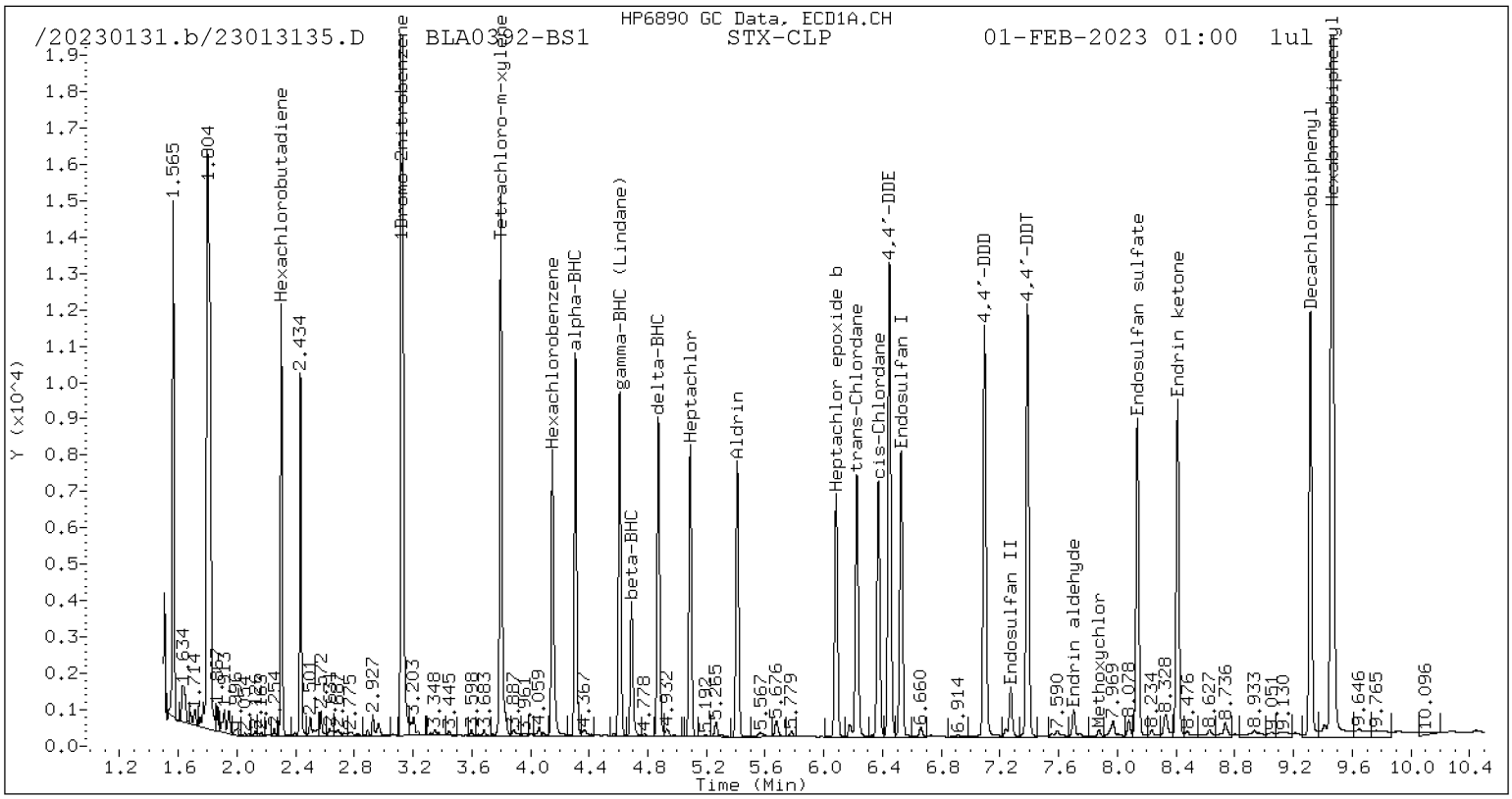
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	838726	24.7
Hexabromobiphenyl	609723	789811	29.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1424555	41.5
Hexabromobiphenyl	769764	965219	25.4

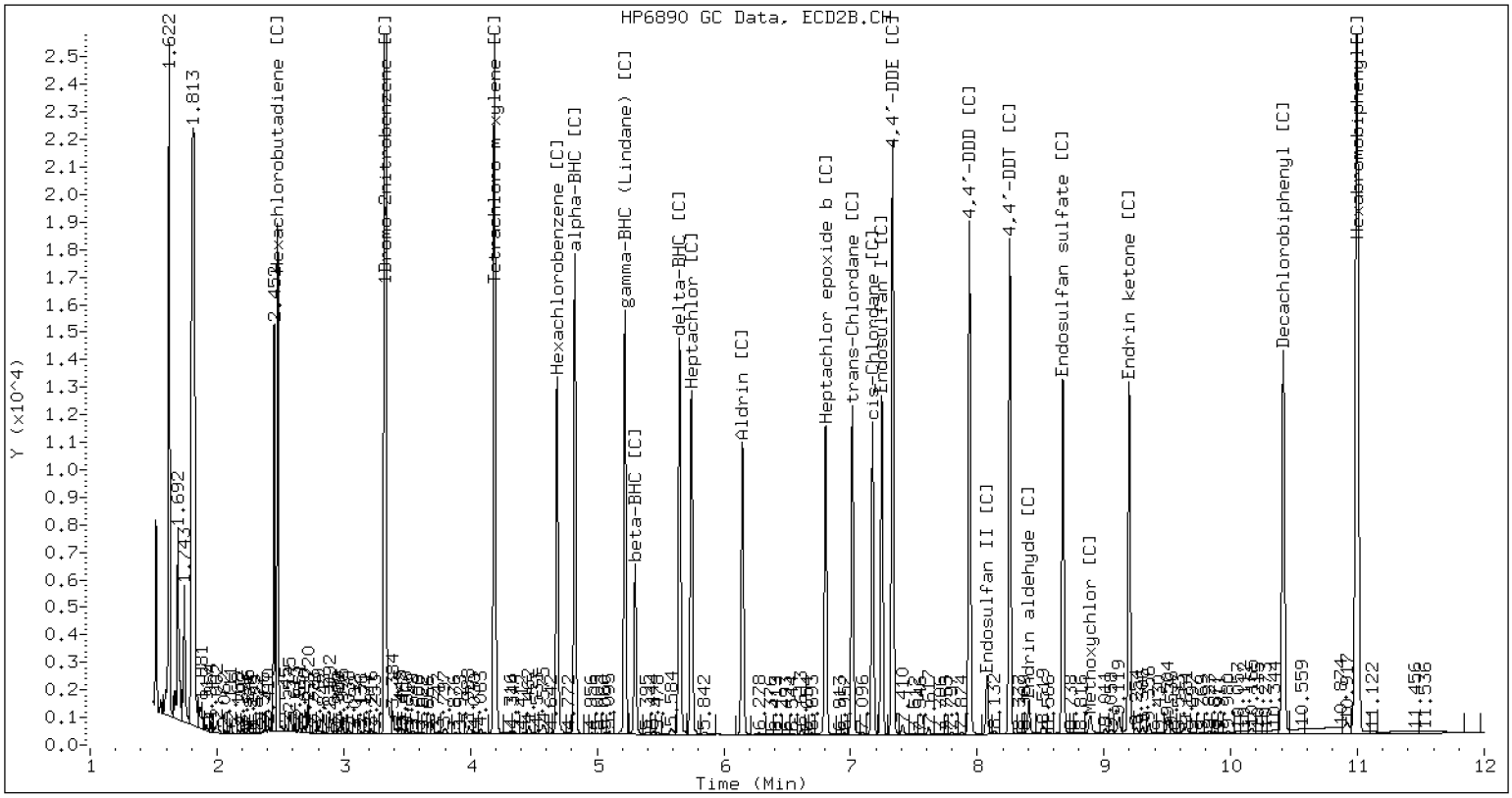
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230131.b/B20230131.b/23013135.D BLA0392-BS1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013136.D
Data file 2: /20230131.b/B20230131.b/23013136.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: BLA0392-BSD1
Client ID:
Injection Date: 01-FEB-2023 01:18
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.307	-0.003	244109	4.824	-0.009	414025	15.26	14.69	3.8	alpha-BHC
4.689	-0.004	101325	5.299	-0.010	166676	16.46	15.56	5.6	beta-BHC
4.871	-0.004	238524	5.651	-0.010	395262	18.25	17.03	6.9	delta-BHC
4.608	-0.004	232297	5.219	-0.010	382856	16.75	16.01	4.5	gamma-BHC (Lindane)
5.088	-0.004	207400	5.744	-0.010	341518	16.81	15.77	6.4	Heptachlor
5.409	-0.005	205982	6.147	-0.011	296748	14.90	12.00	21.5	Aldrin
6.083	-0.006	193675	6.802	-0.012	311552	16.15	15.23	5.9	Heptachlor epoxide b
6.526	-0.005	232224	7.247	-0.011	347975	21.11	19.31	8.9	Endosulfan I
----			7.552	0.000	1926	0.00	0.10	---	Dieldrin
6.446	-0.006	386529	7.331	-0.011	589823	35.22	32.30	8.7	4,4'-DDE
----			7.874	-0.002	4088	0.00	0.31	---	Endrin
7.273	-0.005	45229	8.077	-0.011	59339	5.15	4.32	17.5	Endosulfan II
7.094	-0.005	338856	7.938	-0.011	498660	38.54	38.27	0.7	4,4'-DDD
8.136	-0.005	257126	8.675	-0.011	349754	30.82	29.01	6.1	Endosulfan sulfate
7.386	-0.005	343232	8.256	-0.011	482839	38.63	38.39	0.6	4,4'-DDT
7.873	-0.004	5192	8.890	-0.019	32833	1.32	5.90	126.9*	Methoxychlor
8.410	-0.005	265267	9.199	-0.011	354492	27.76	27.22	2.0	Endrin ketone
7.702	-0.005	23977	8.407	-0.011	37462	3.42	3.87	12.2	Endrin aldehyde
6.224	-0.005	218995	7.014	-0.011	327812	17.98	16.07	11.2	trans-Chlordane
6.371	-0.005	207659	7.174	-0.011	310739	17.00	15.57	8.8	cis-Chlordane
2.301	-0.002	220930	2.479	-0.004	326728	13.19	12.21	7.7	Hexachlorobutadiene
4.150	-0.003	211407	4.684	-0.009	335771	14.24	13.09	8.4	Hexachlorobenzene
3.798	-0.003	351655	4.189	-0.007	590636	31.13	29.84	4.2	Tetrachloro-m-xylene
9.315	-0.004	293151	10.415	-0.014	460085	38.87	44.18	12.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

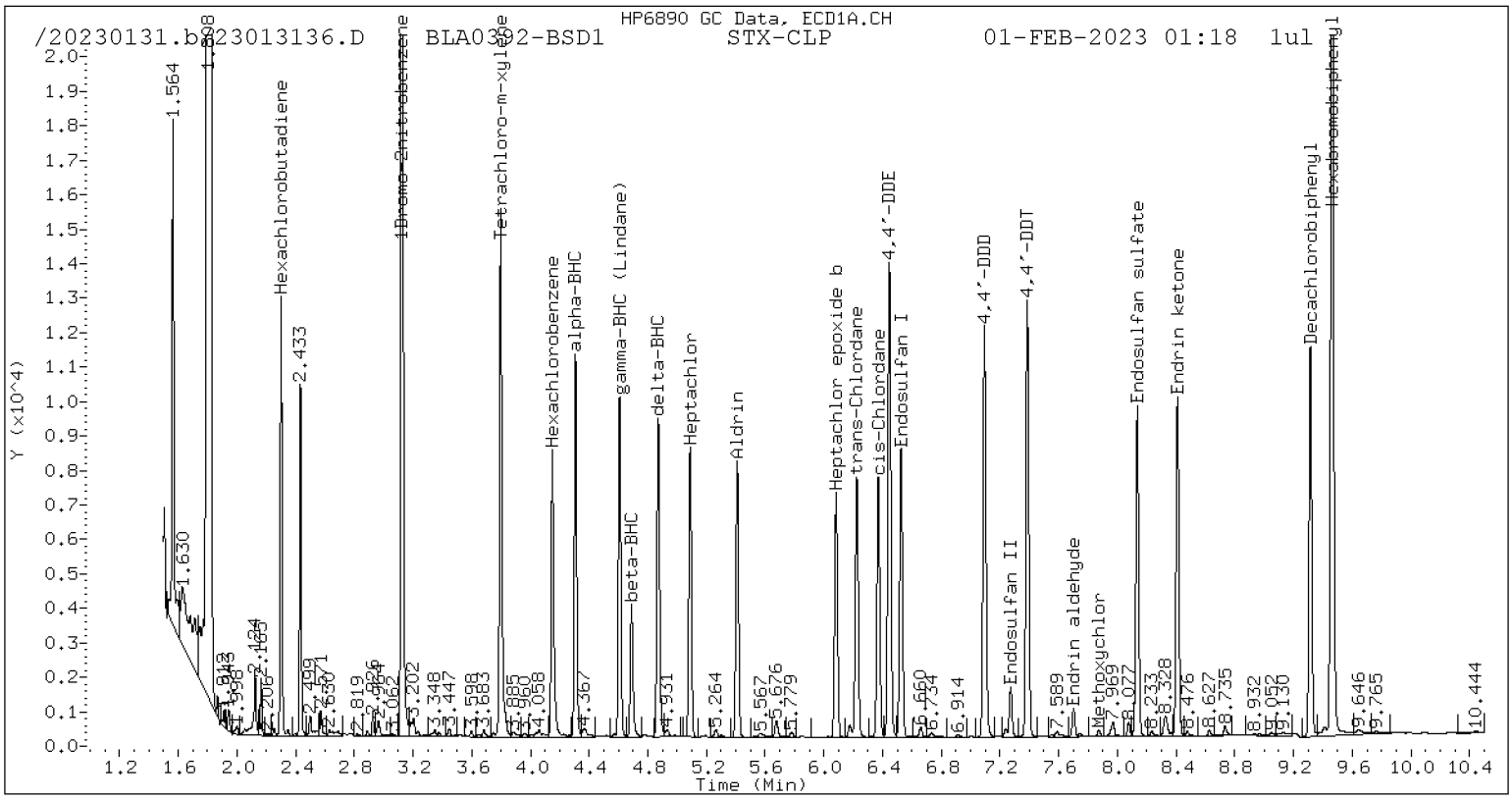
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	830768	23.5
Hexabromobiphenyl	609723	744415	22.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1405970	39.7
Hexabromobiphenyl	769764	942175	22.4

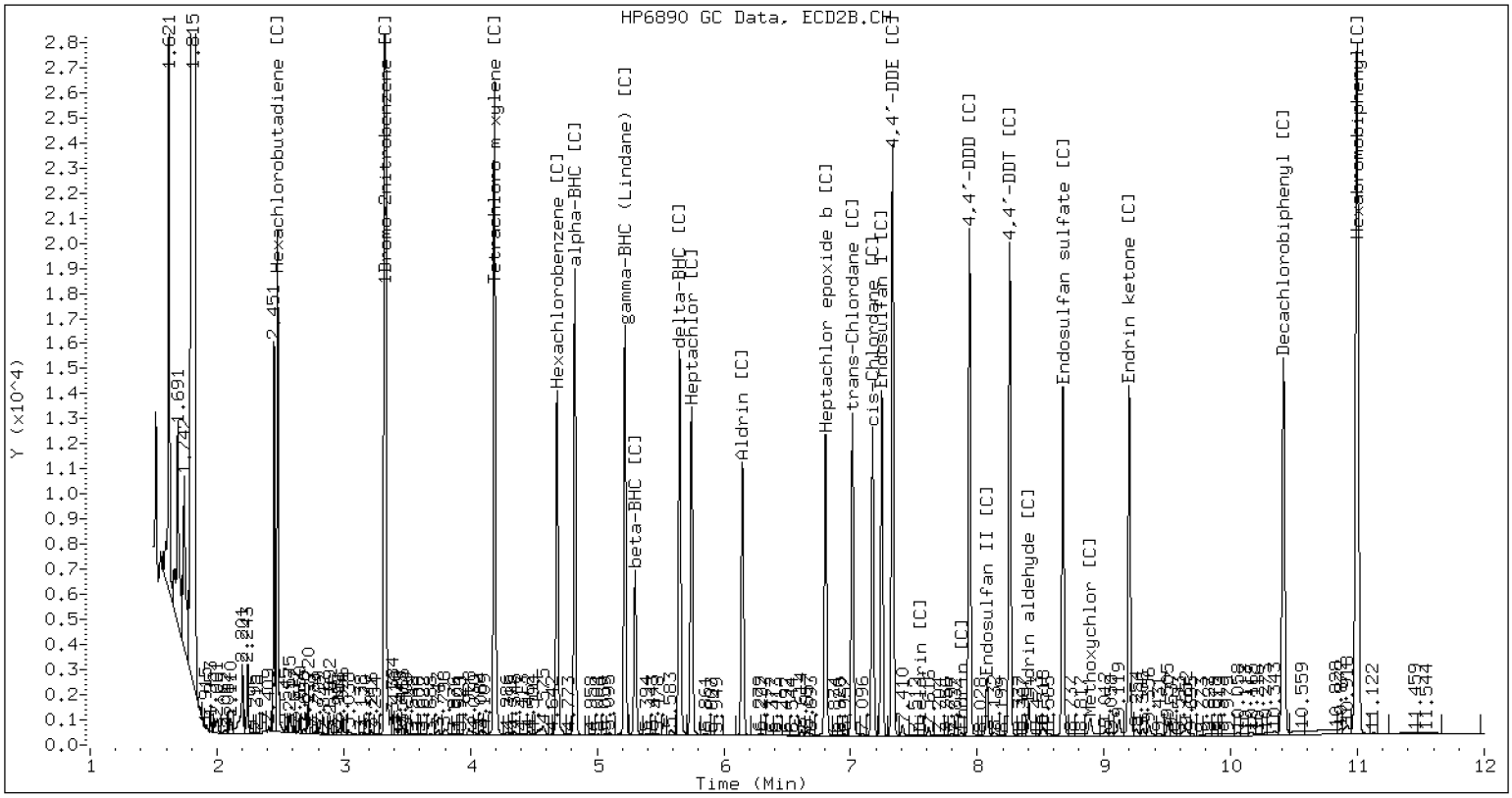
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230131.b/B20230131.b/23013136.D BLA0392-BSD1 CLP2



CLP-2 Manual Integration: NO

MS / MS DUPLICATE RECOVERY
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/01/23 02:48
Batch:	BLA0392	Laboratory ID:	BLA0392-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	21.33 g / 2.5 mL	Source Sample:	LDW23-SC1185

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Hexachlorobenzene	4.00	ND	U	3.04		76.0	26 - 128

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

MS / MS DUPLICATE RECOVERY
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/01/23 03:05
Batch:	BLA0392	Laboratory ID:	BLA0392-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	21.33 g / 2.5 mL	Source Sample:	LDW23-SC1185

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	4.00	3.83		95.8	23.0	30	26 - 128

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

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Data file 2: /20230131.b/B20230131.b/23013141.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: BLA0392-MS1
Client ID:
Injection Date: 01-FEB-2023 02:48
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.306	-0.005	255564	4.823	-0.009	301882	14.69	11.19	27.1	alpha-BHC N
4.688	-0.005	106632	5.298	-0.011	124401	15.92	12.13	27.1	beta-BHC N
4.871	-0.004	258951	5.650	-0.011	258563	18.21	11.63	44.1*	delta-BHC N
4.607	-0.004	262460	5.219	-0.010	264252	17.40	11.54	40.5*	gamma-BHC (Lindane) N
5.087	-0.005	180622	5.744	-0.010	287885	13.46	13.88	3.1	Heptachlor N
5.411	-0.003	227915	6.147	-0.011	271986	15.15	11.48	27.5	Aldrin N
6.081	-0.008	174104	6.785	-0.029	477186	13.35	24.36	58.4*	Heptachlor epoxide b N
6.526	-0.005	134537	7.246	-0.012	205082	11.24	11.88	5.5	Endosulfan I N
6.769	-0.022	190827	7.524	-0.027	103752	14.84	5.44	92.7*	Dieldrin N
6.445	-0.006	464634	7.331	-0.011	568742	38.92	32.52	17.9	4,4'-DDE N
----			7.897	0.021	314869	0.00	25.41	---	Endrin
7.301	0.023	57945	8.064	-0.023	394223	7.06	31.04	125.9*	Endosulfan II N
7.093	-0.006	602603	7.938	-0.010	424885	73.34	35.25	70.2*	4,4'-DDD N
8.136	-0.005	199273	8.675	-0.011	248120	25.56	22.24	13.9	Endosulfan sulfate N
7.385	-0.006	588775	8.261	-0.006	887255	70.91	76.26	7.3	4,4'-DDT N
7.906	0.029	50257	8.937	0.029	22884	13.66	4.44	101.8*	Methoxychlor N
8.410	-0.005	242770	9.201	-0.009	544646	27.18	45.21	49.8*	Endrin ketone N
7.726	0.019	94365	8.404	-0.014	101947	14.41	11.38	23.5	Endrin aldehyde N
6.225	-0.005	166877	7.015	-0.010	258197	12.60	13.22	4.8	trans-Chlordane N
6.372	-0.003	239350	7.174	-0.011	228679	18.02	11.97	40.3*	cis-Chlordane N
2.301	-0.002	183492	2.479	-0.004	291044	10.07	11.36	12.0	Hexachlorobutadiene
4.149	-0.004	245239	4.682	-0.010	314141	15.18	12.79	17.1	Hexachlorobenzene N
3.797	-0.003	369047	4.189	-0.007	507318	30.03	26.77	11.5	Tetrachloro-m-xylene N
9.318	-0.001	273681	10.417	-0.012	374672	38.83	38.90	0.2	Decachlorobiphenyl N

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
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Hexabromobiphenyl	609723	695690	14.1

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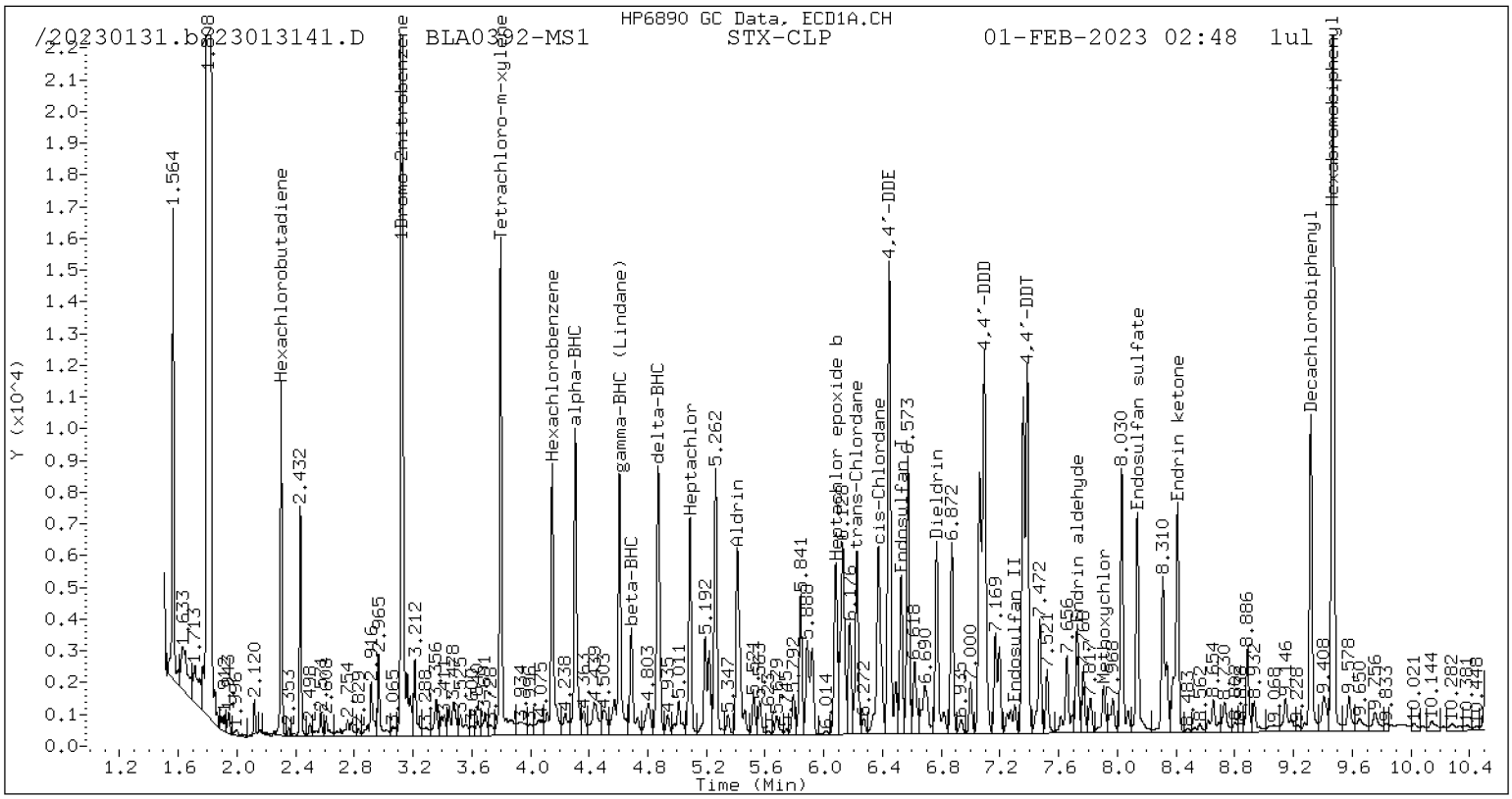
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1346547	33.8
Hexabromobiphenyl	769764	871557	13.2

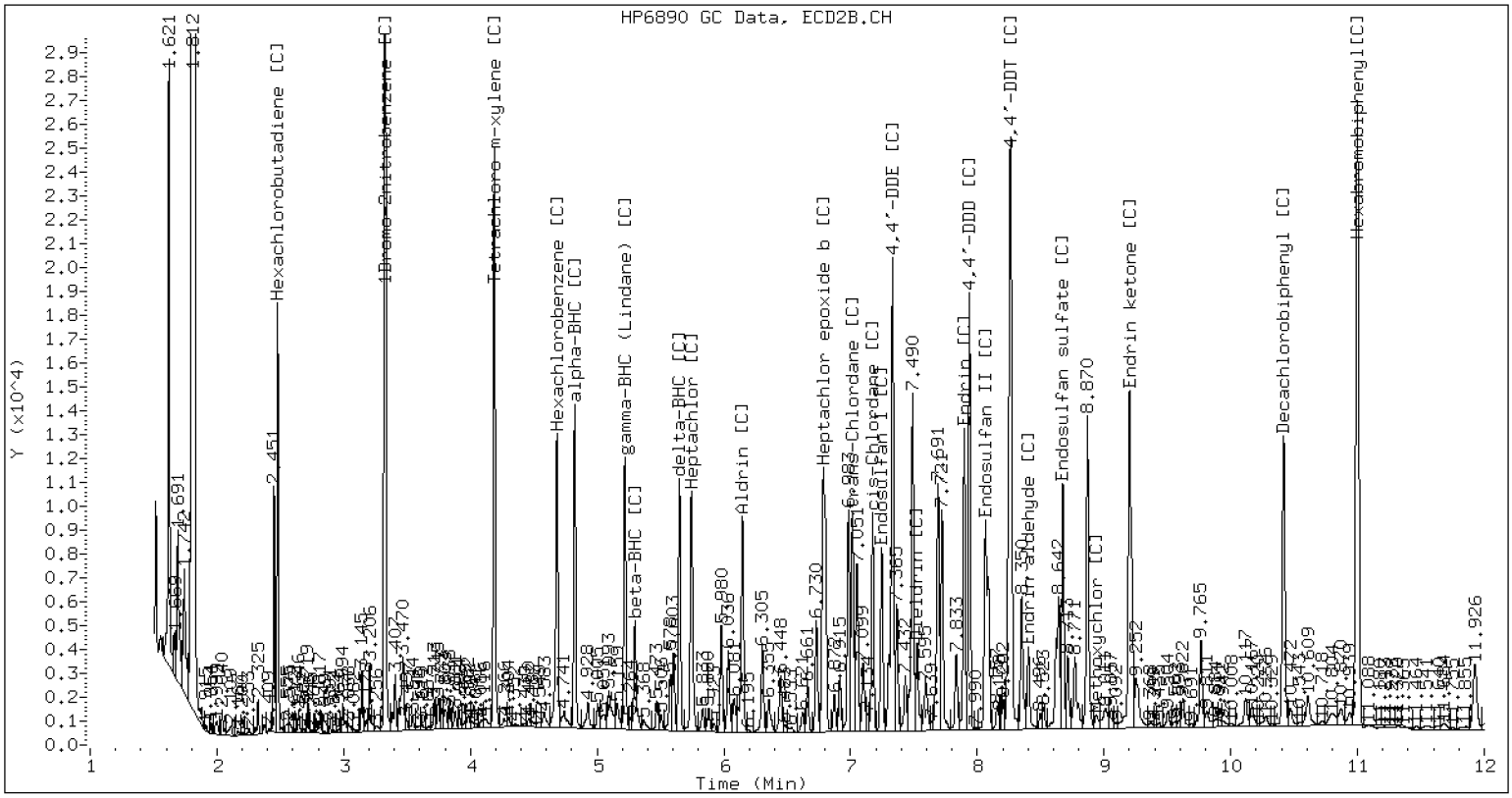
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230131.b/B20230131.b/23013141.D BLA0392-MS1 CLP2



CLP-2 Manual Integration: YES

Manual Peak Adjustment Report, CLP-2

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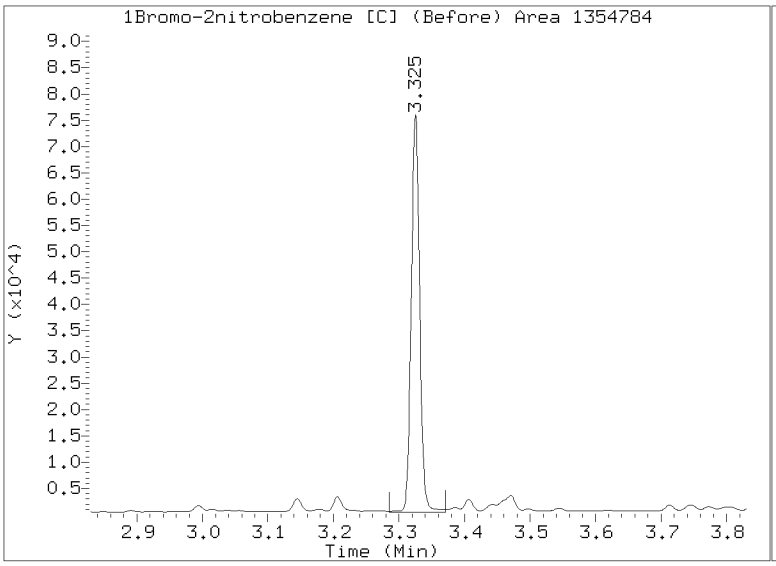
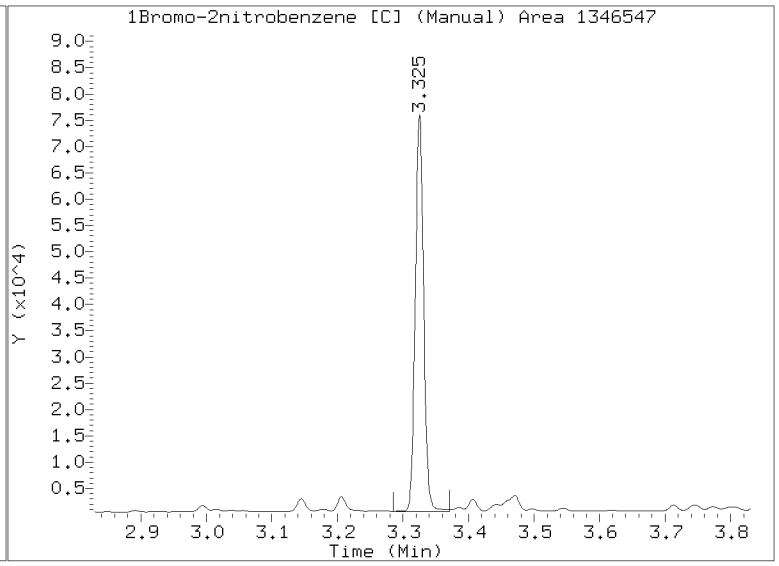
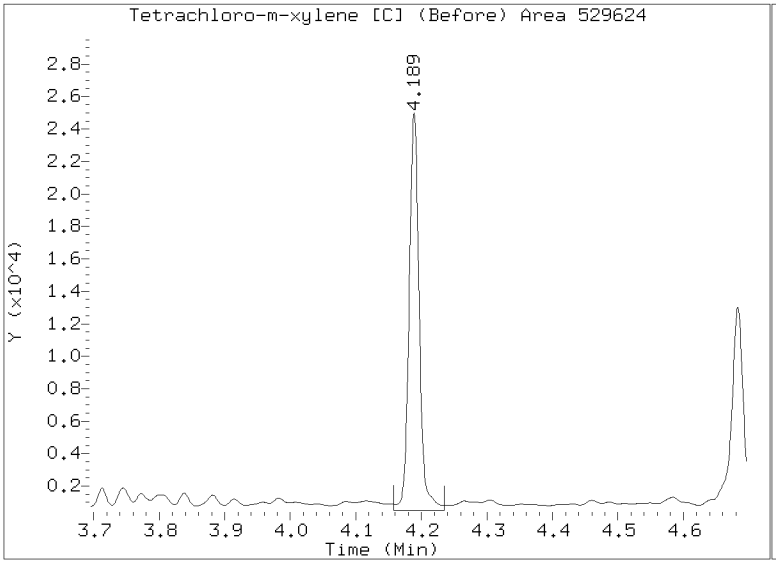
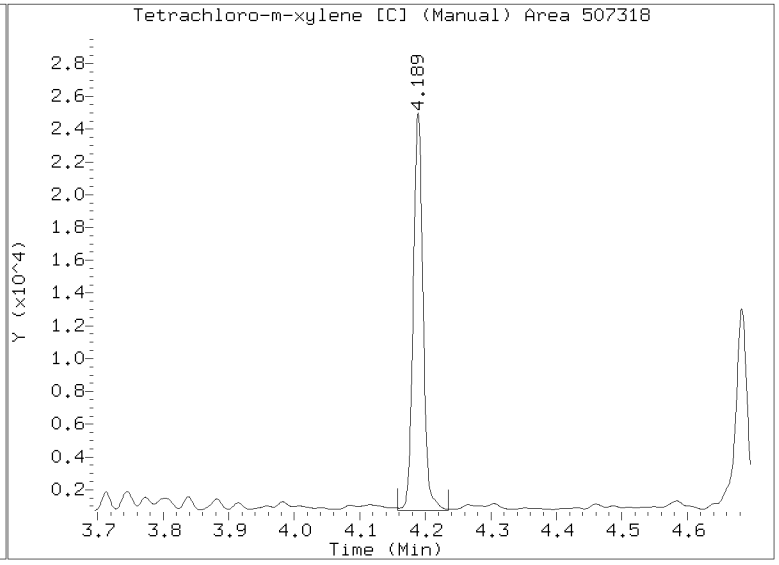
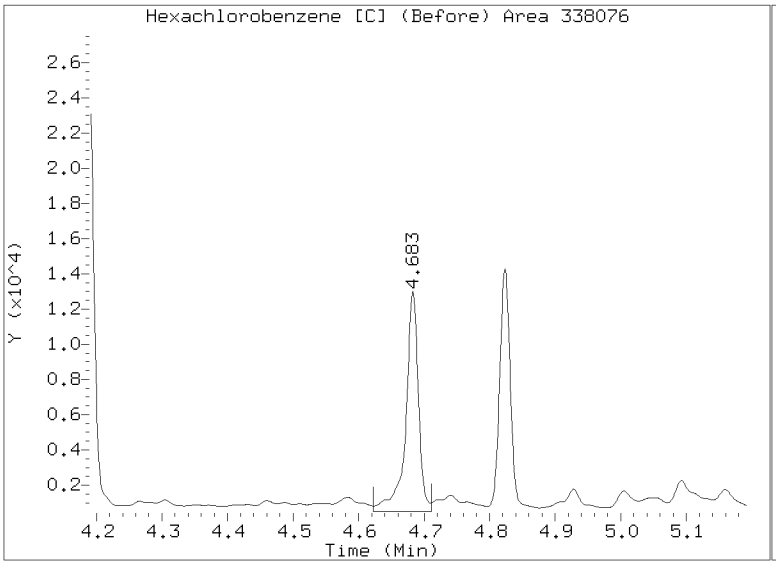
Injection Date: 01-FEB-2023 02:48
Lab ID:BLA0392-MS1 Client ID:

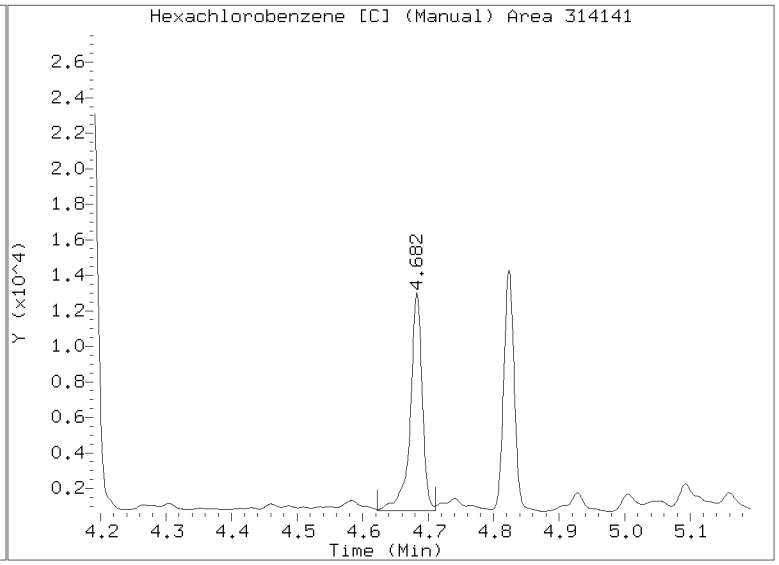












Manual Peak Adjustment Report, CLP-2

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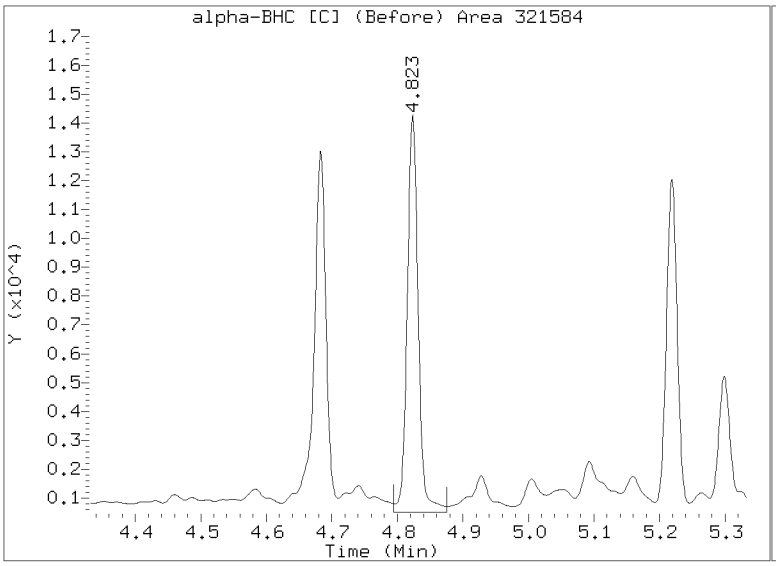
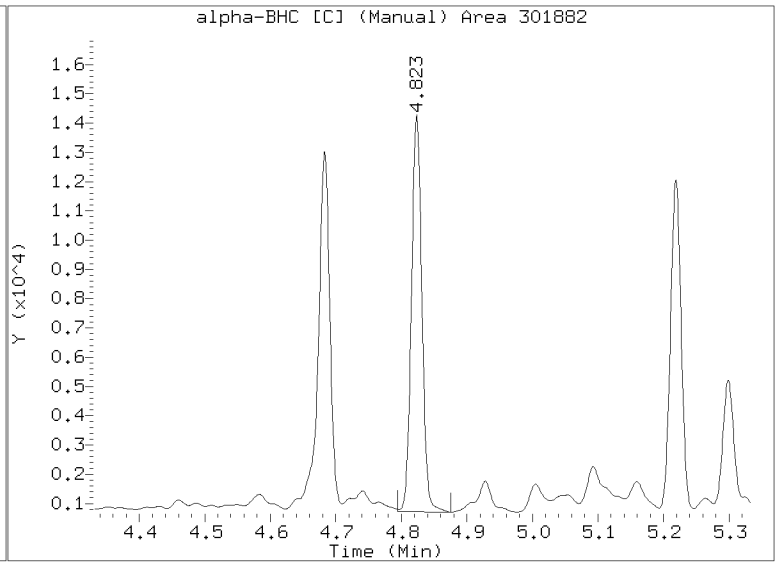
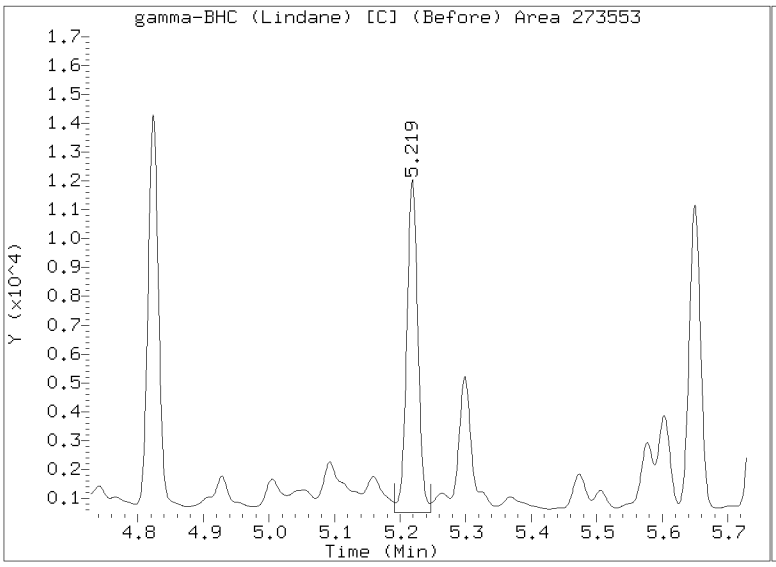
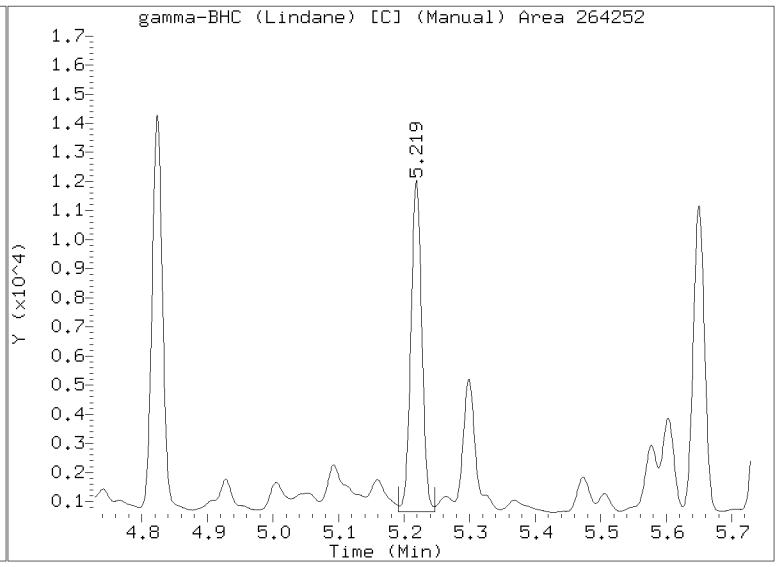
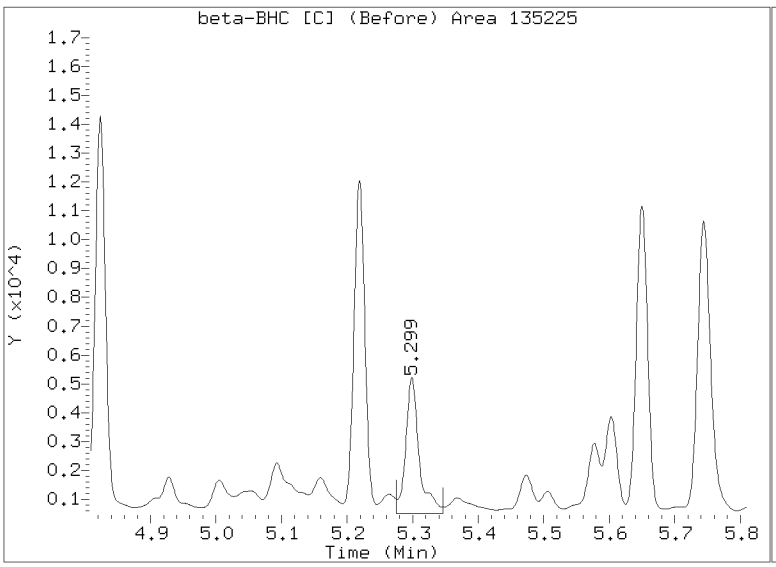
Lab ID:BLA0392-MS1 Client ID:

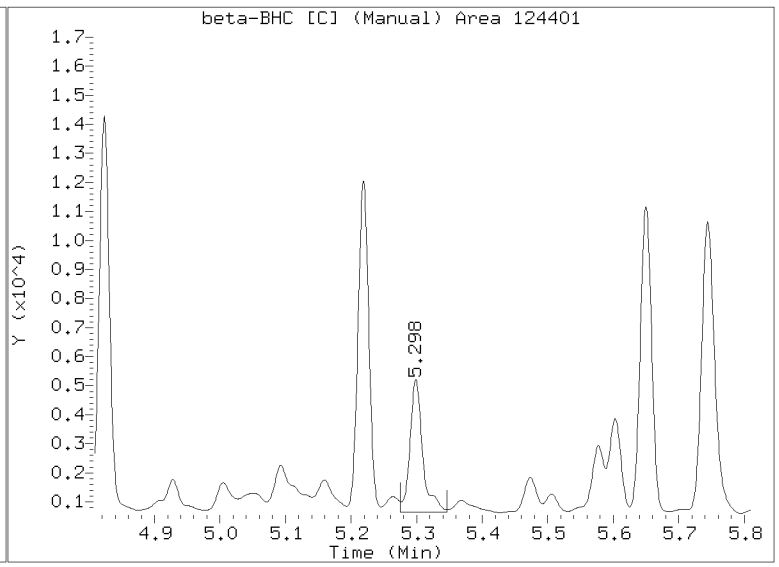






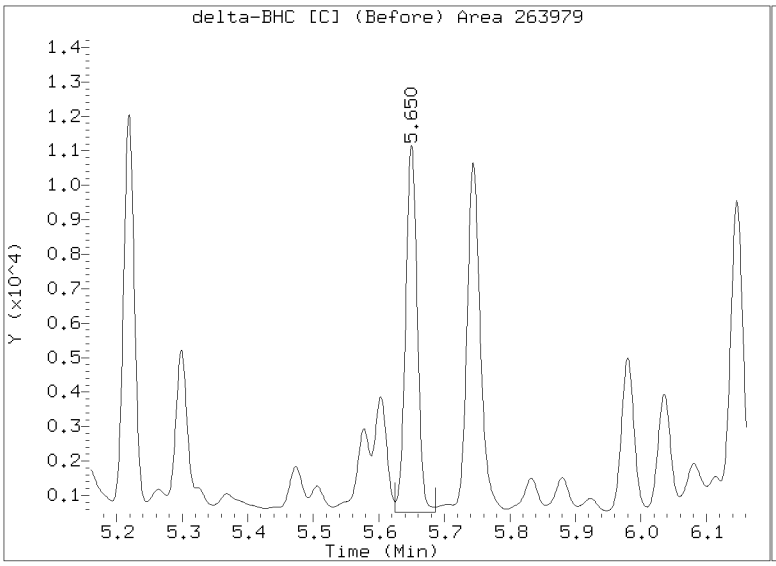


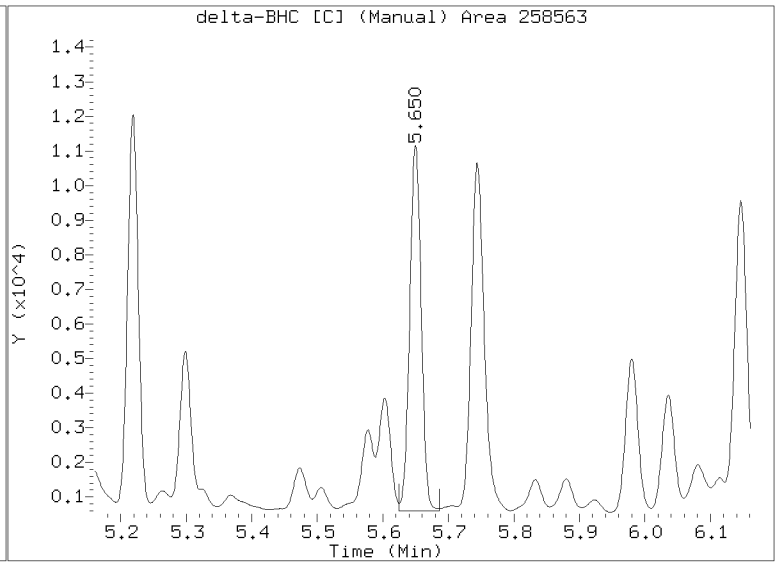


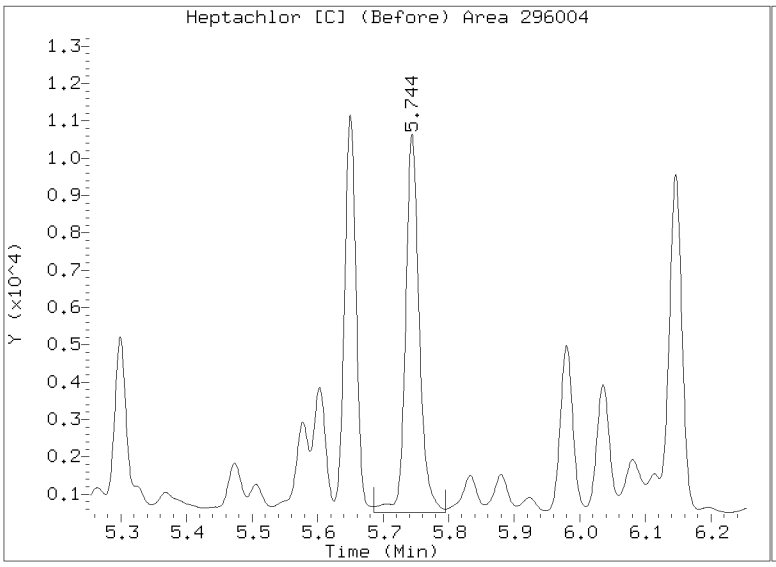


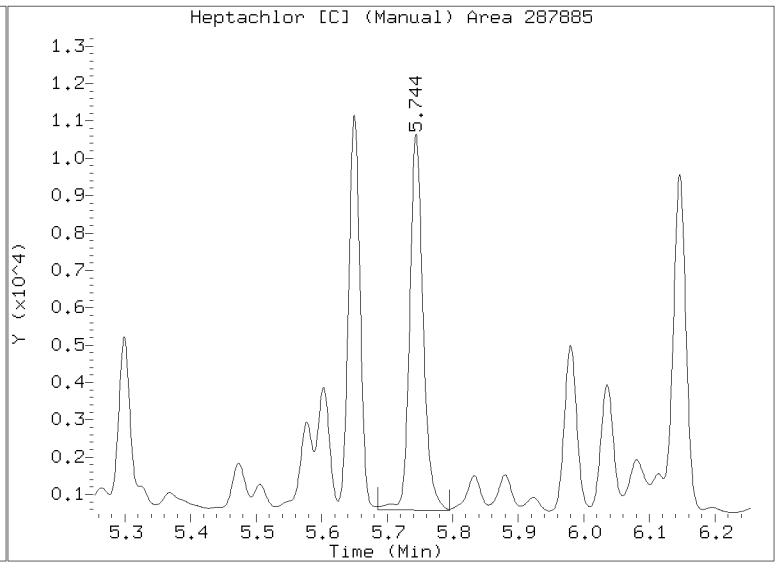
Manual Peak Adjustment Report, CLP-2

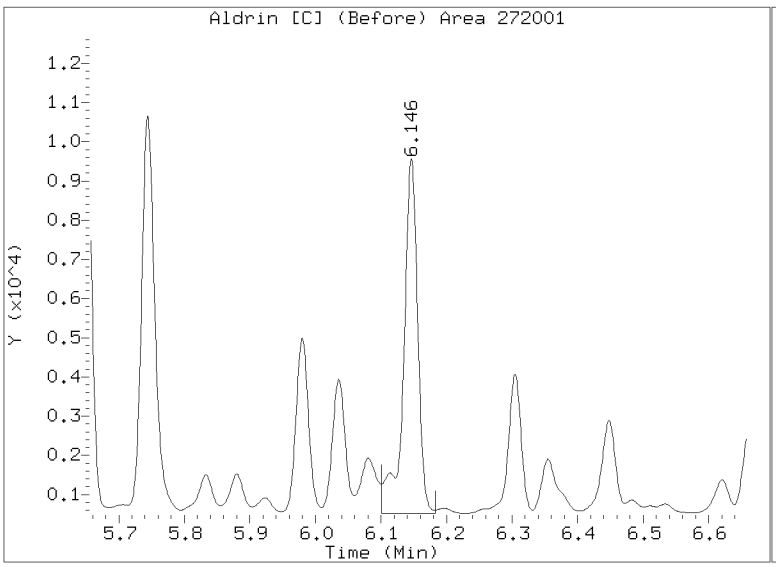
Datafile: /20230131.b/B20230131.b/23013141.D
Injection Date: 01-FEB-2023 02:48
Lab ID:BLA0392-MS1 Client ID:

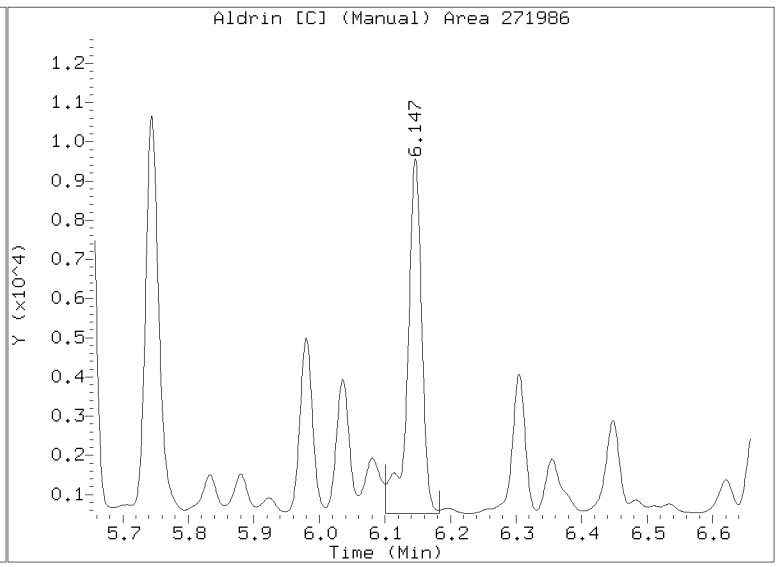












Manual Peak Adjustment Report, CLP-2

Datafile: /20230131.b/B20230131.b/23013141.D
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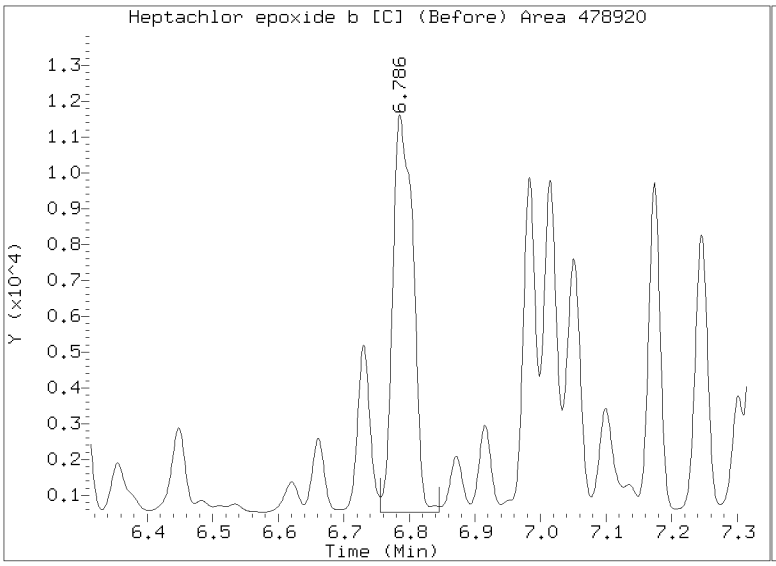
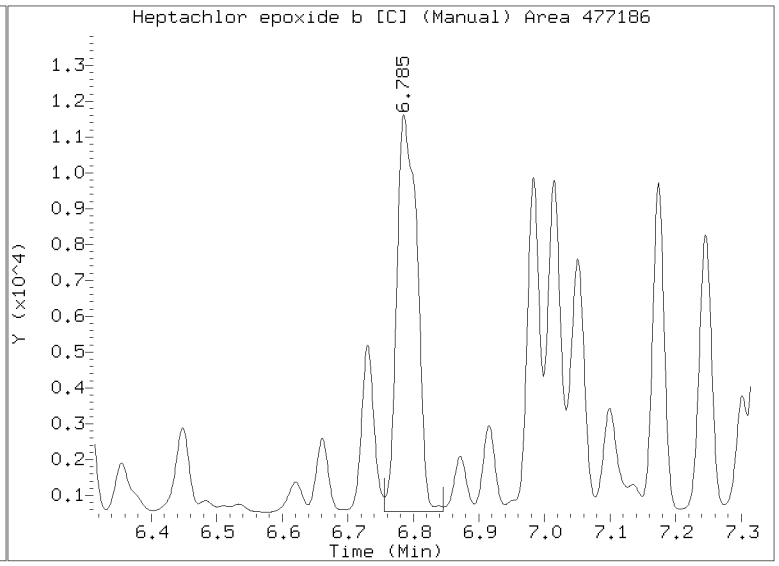
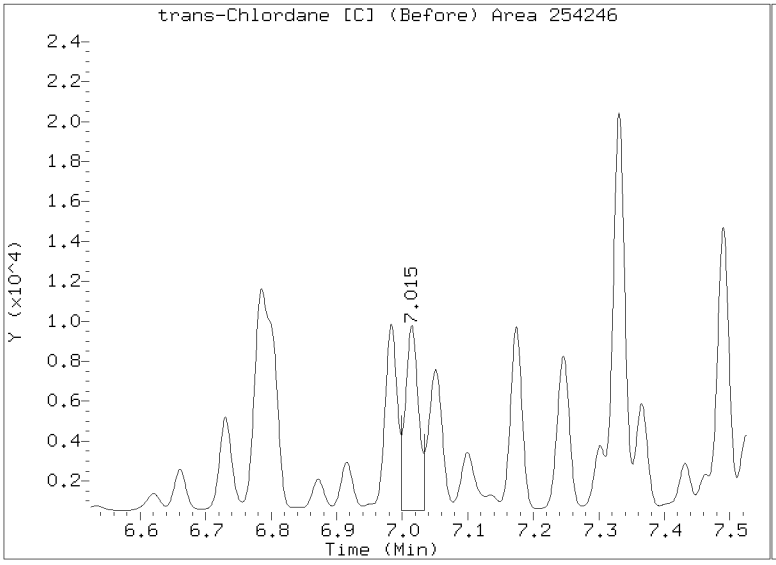
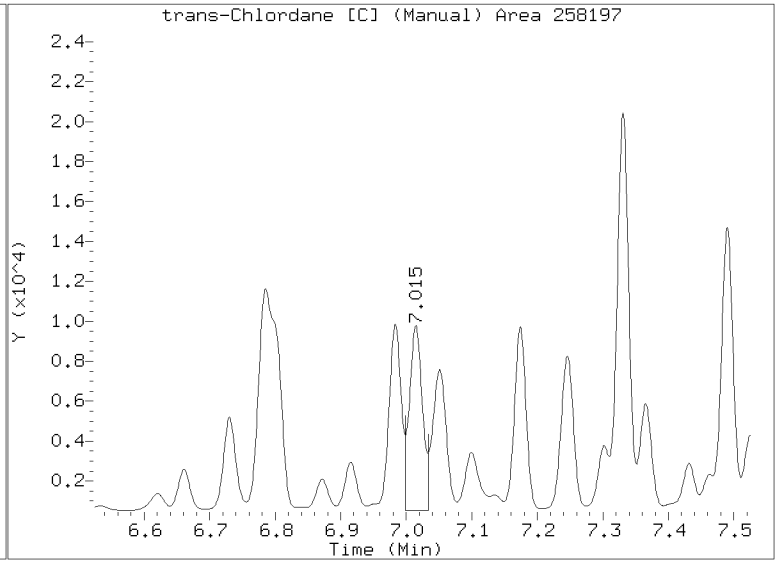
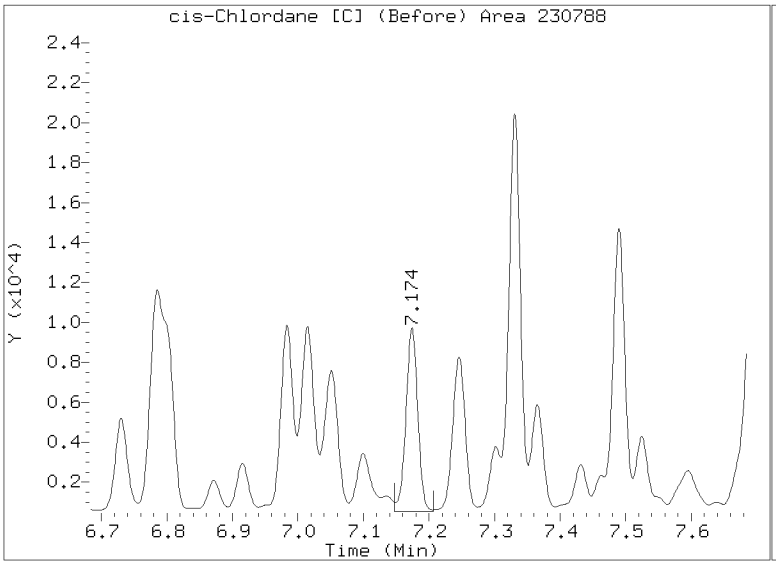
Lab ID:BLA0392-MS1 Client ID:

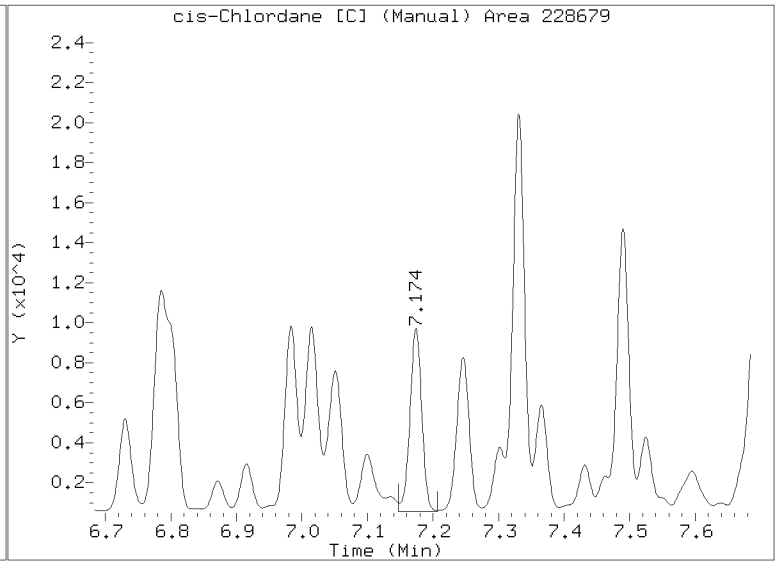












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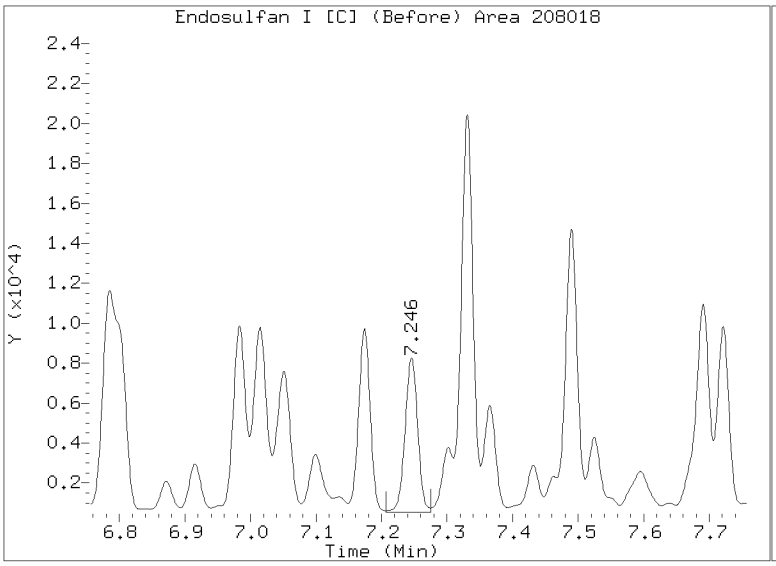
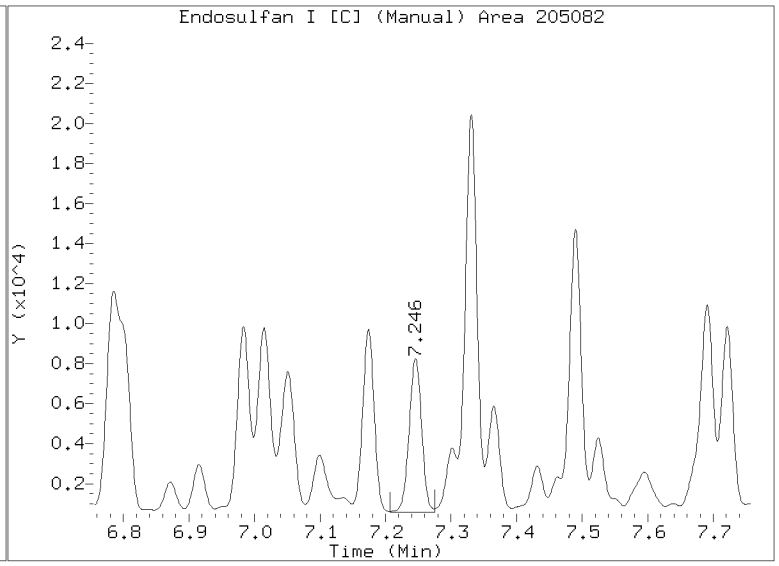
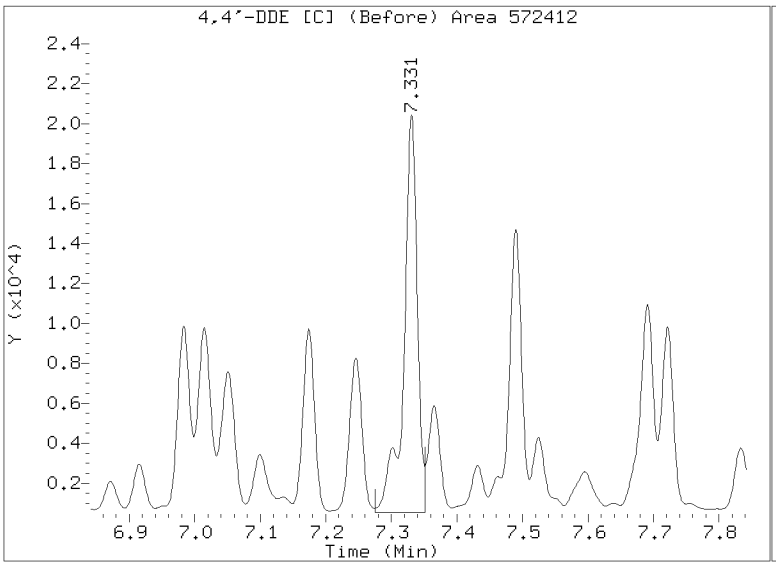
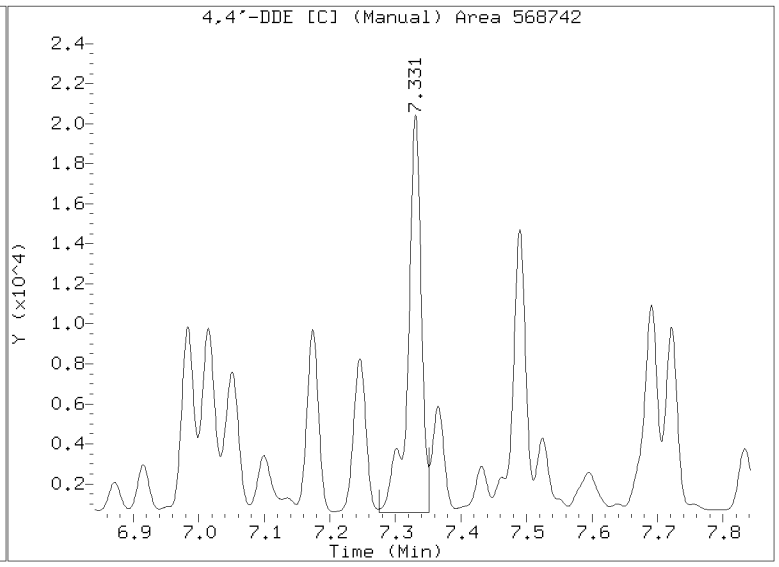
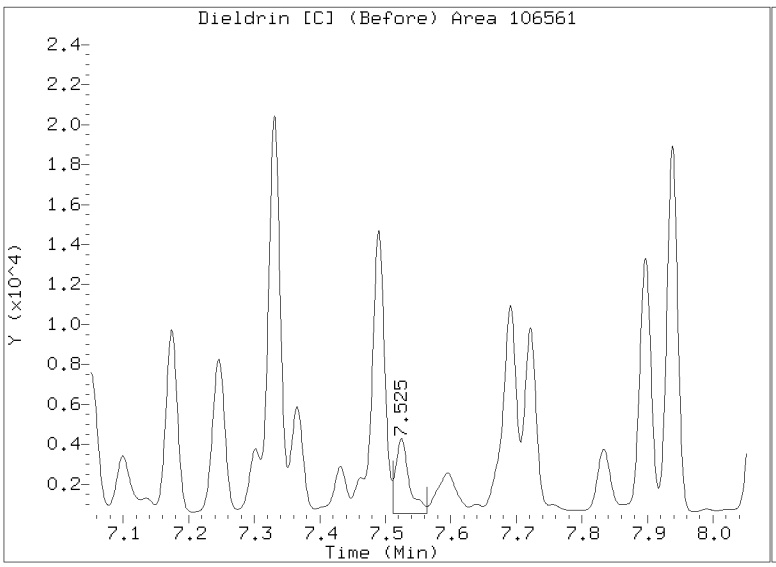
Injection Date: 01-FEB-2023 02:48
Lab ID:BLA0392-MS1 Client ID:

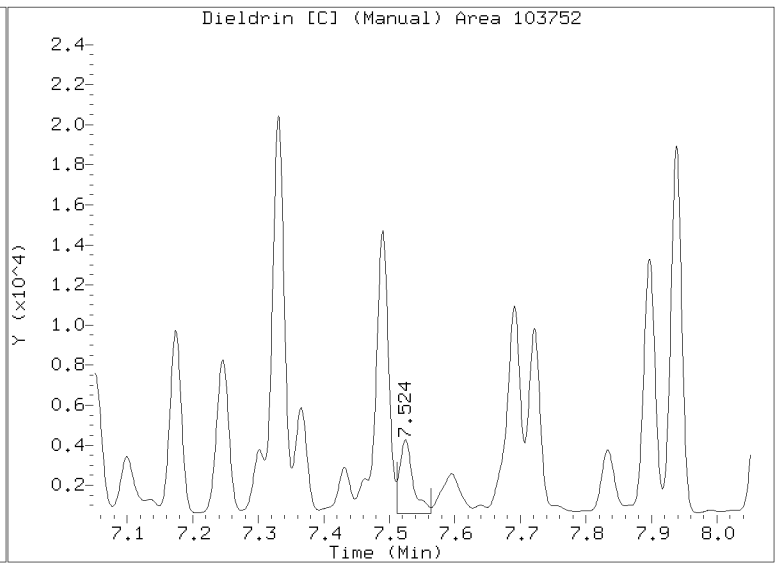












Manual Peak Adjustment Report, CLP-2

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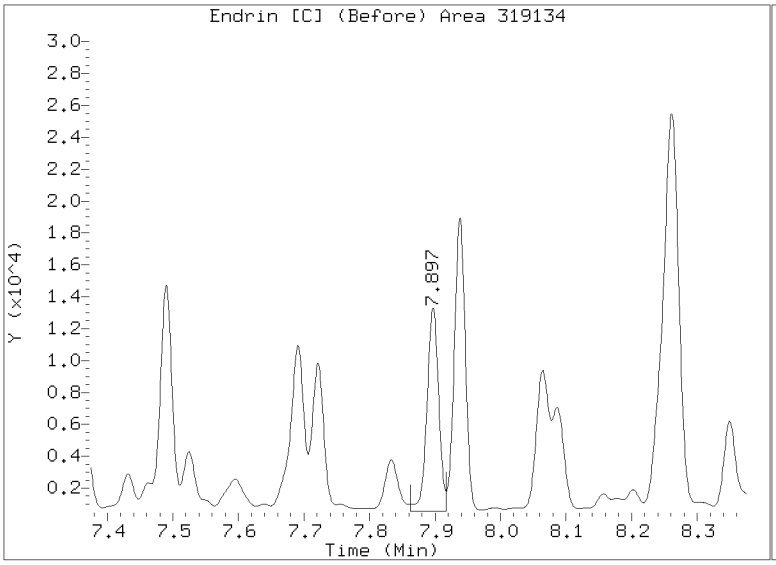
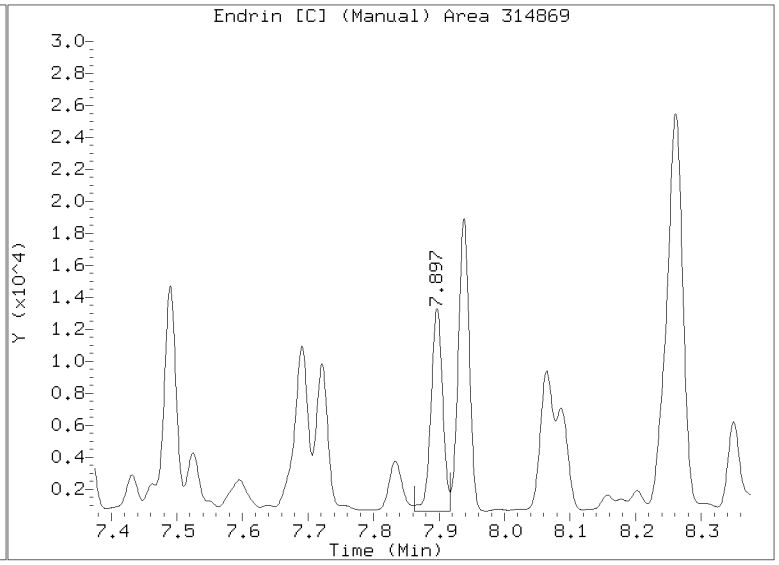
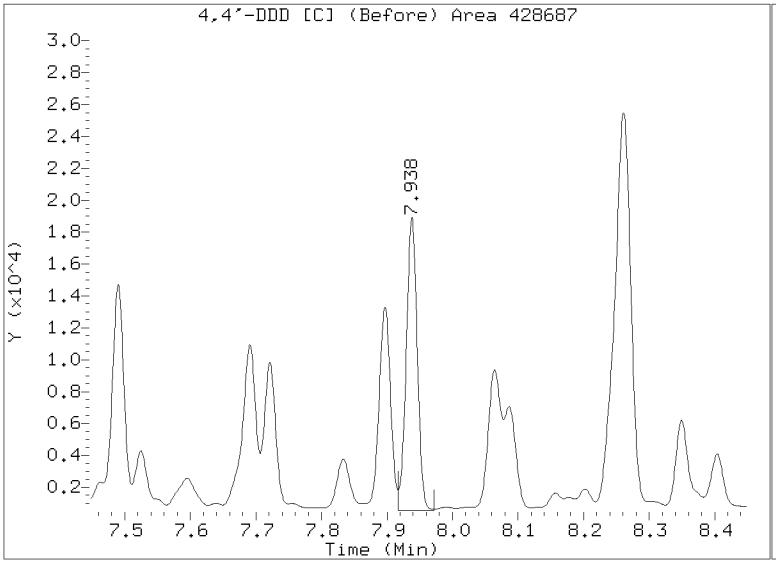
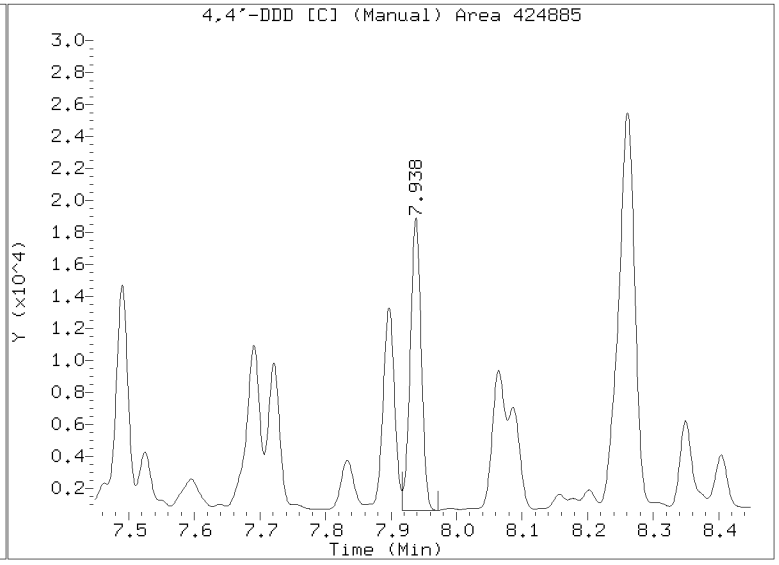
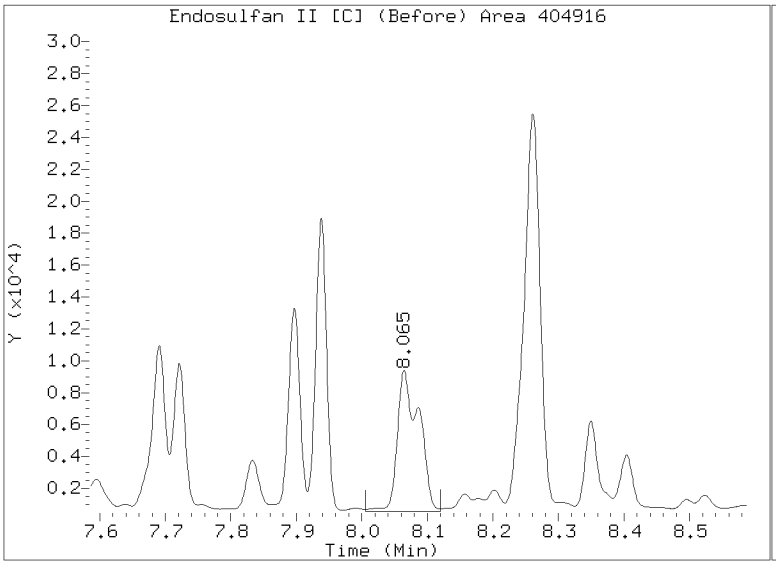
Lab ID:BLA0392-MS1 Client ID:

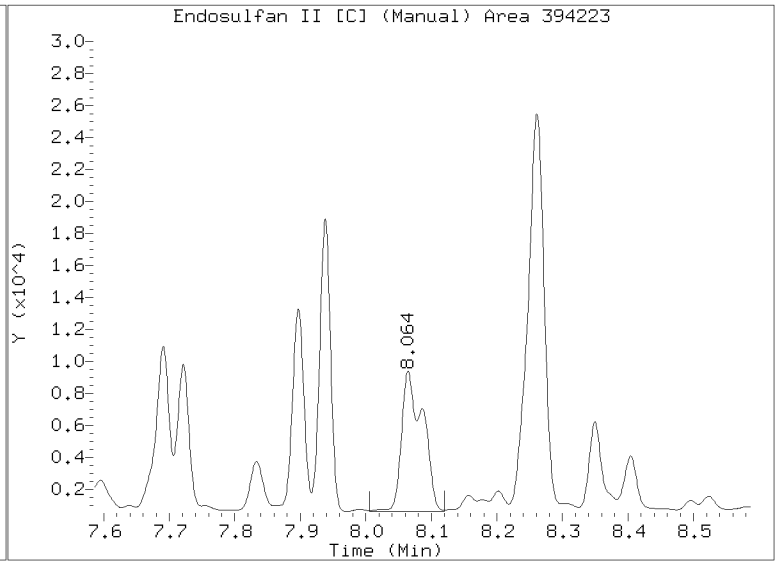












Manual Peak Adjustment Report, CLP-2

Datafile: /20230131.b/B20230131.b/23013141.D
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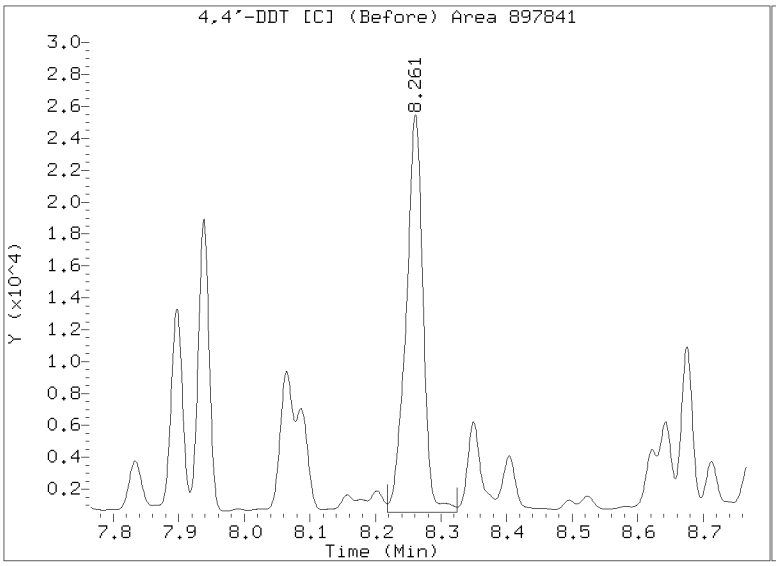
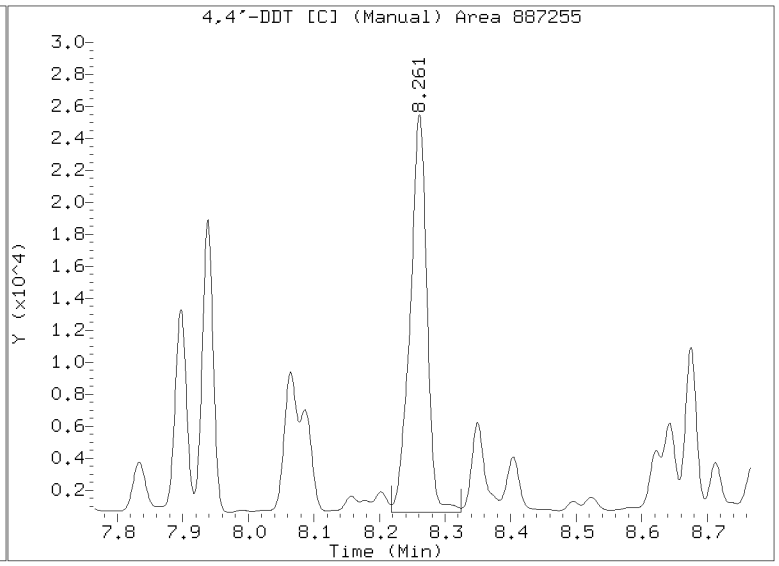
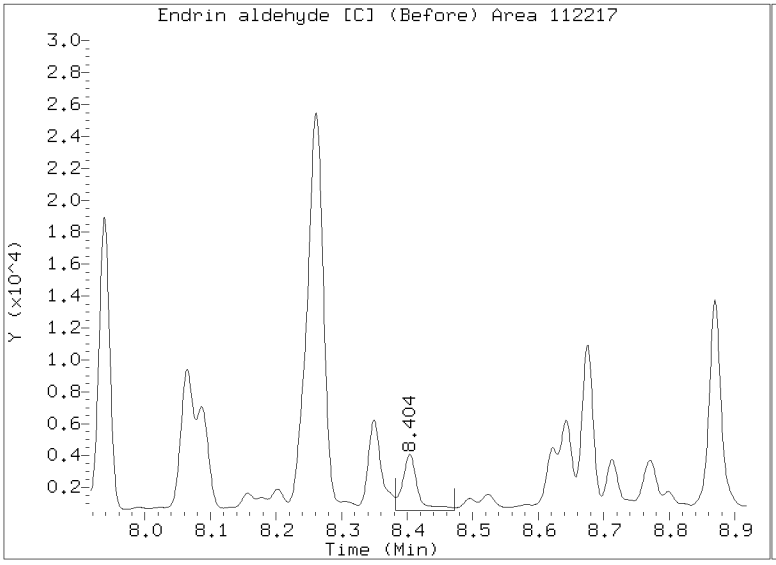
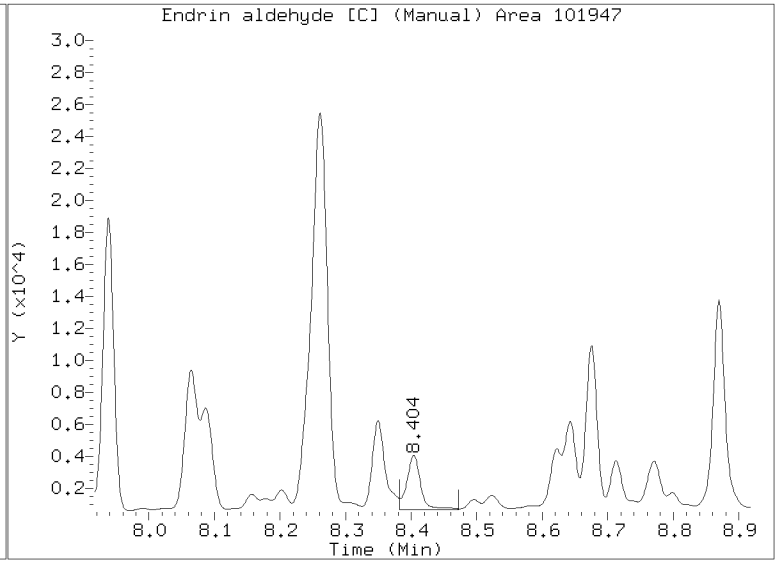
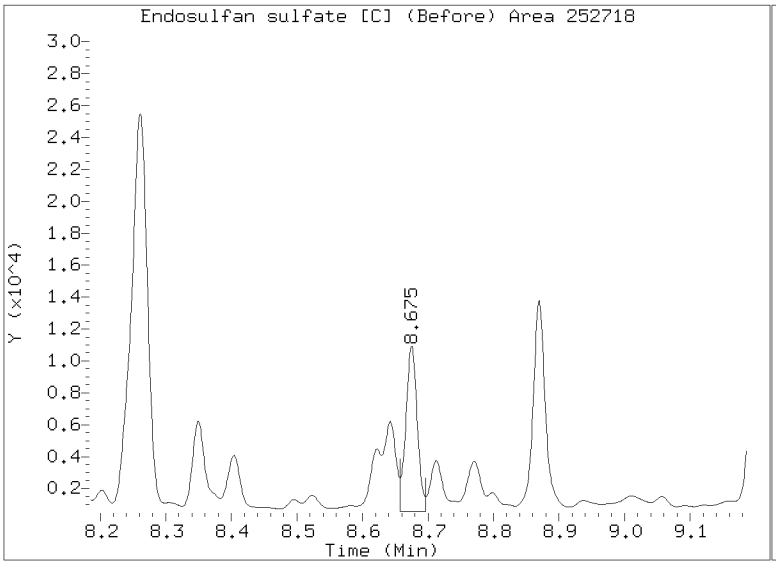
Lab ID:BLA0392-MS1 Client ID:

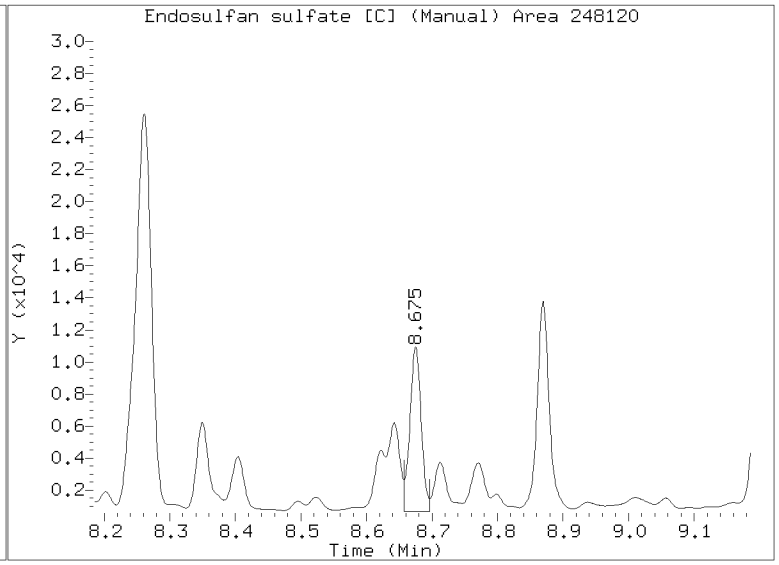






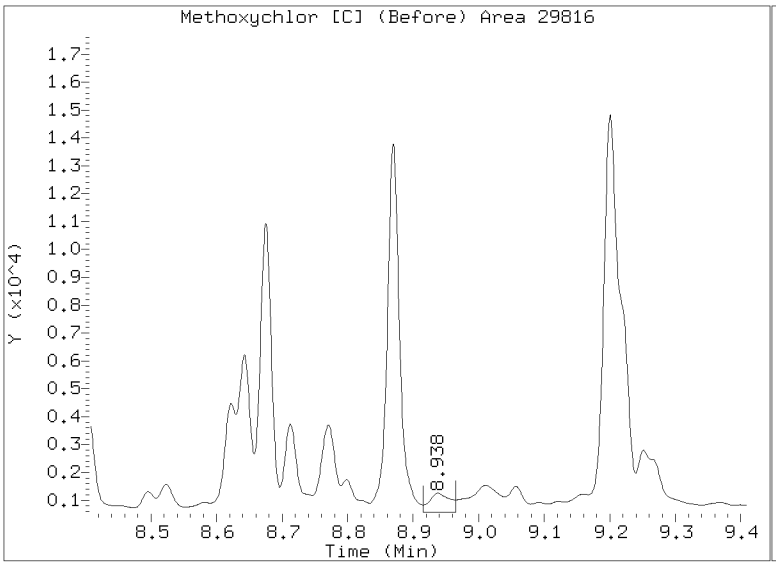


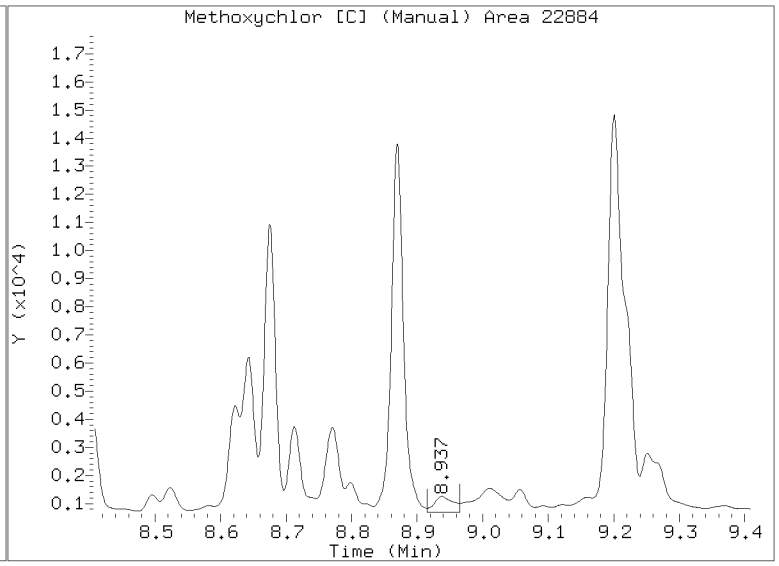


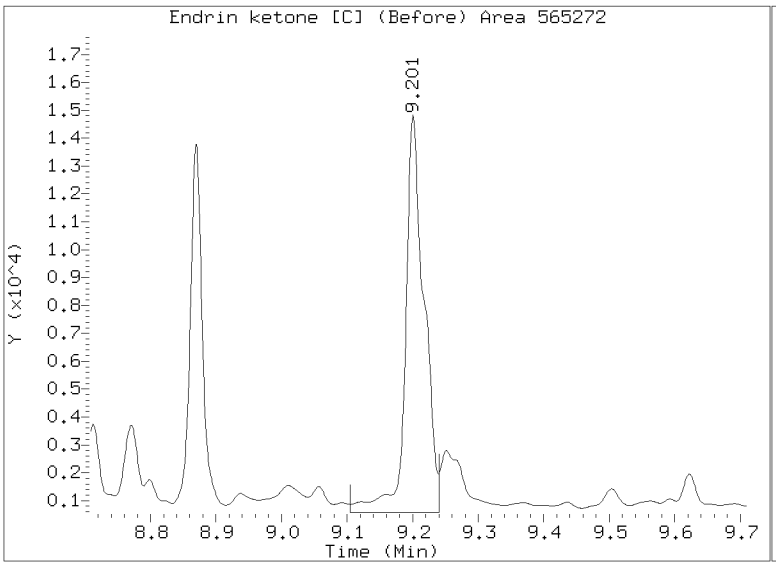


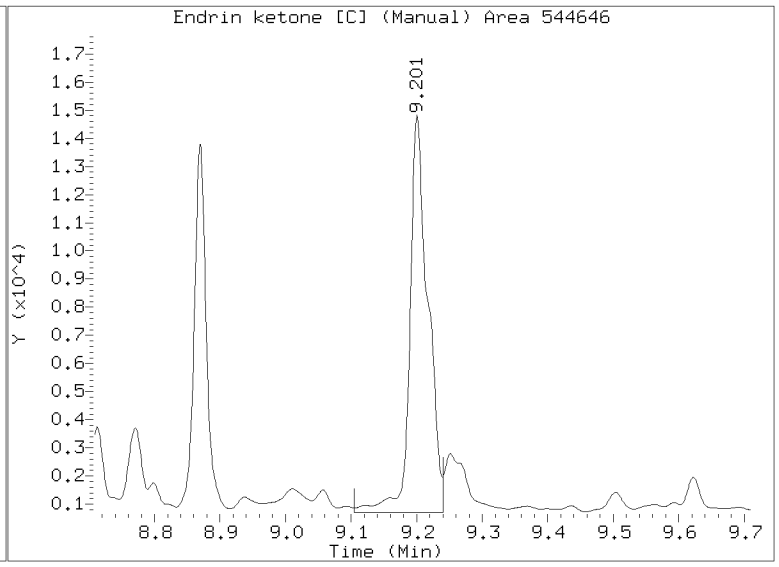
Manual Peak Adjustment Report, CLP-2

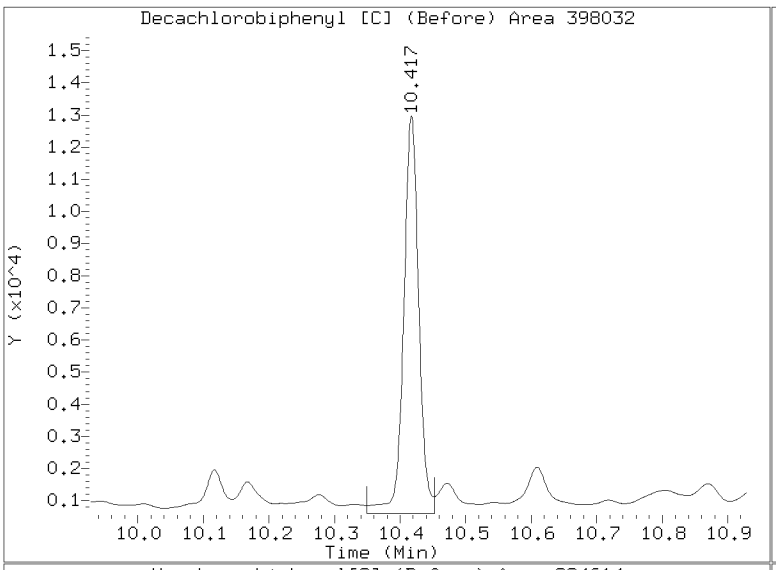
Datafile: /20230131.b/B20230131.b/23013141.D
Injection Date: 01-FEB-2023 02:48
Lab ID:BLA0392-MS1 Client ID:

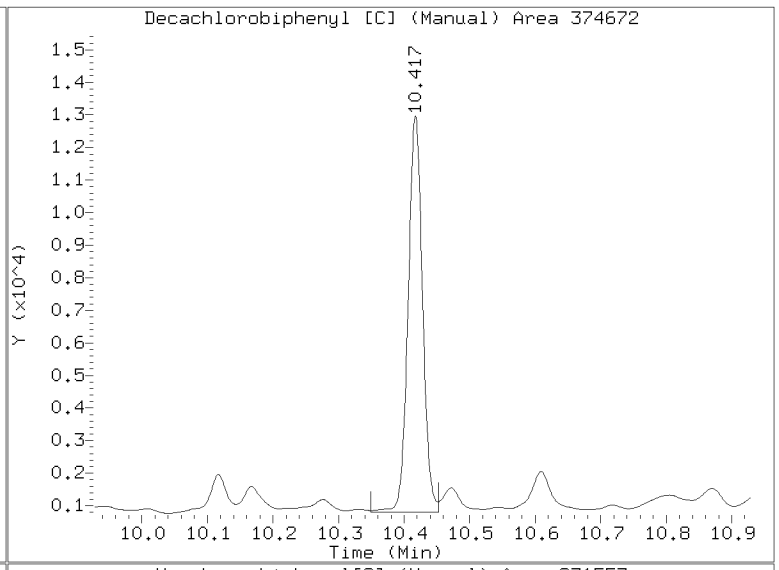


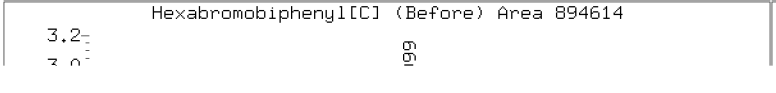


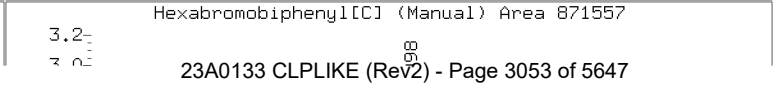












Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013142.D
Data file 2: /20230131.b/B20230131.b/23013142.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: BLA0392-MSD1
Client ID:
Injection Date: 01-FEB-2023 03:05
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.306	-0.004	330791	4.824	-0.009	349528	18.00	12.83	33.5	alpha-BHC N
4.688	-0.005	170687	5.300	-0.010	137044	24.13	13.24	58.3*	beta-BHC N
4.871	-0.004	338282	5.650	-0.011	293003	22.52	13.06	53.2*	delta-BHC N
4.607	-0.004	372659	5.219	-0.010	299607	23.39	12.96	57.4*	gamma-BHC (Lindane) N
5.088	-0.005	259256	5.745	-0.010	325393	18.29	15.54	16.2	Heptachlor N
5.412	-0.002	340785	6.147	-0.011	306892	21.45	12.84	50.2*	Aldrin N
6.081	-0.007	246829	6.785	-0.029	537496	17.92	27.19	41.1*	Heptachlor epoxide b N
6.526	-0.004	199524	7.246	-0.011	241803	15.78	13.88	12.8	Endosulfan I N
6.769	-0.022	256621	7.525	-0.026	115076	18.89	5.98	103.9*	Dieldrin N
6.445	-0.006	606805	7.331	-0.011	644316	48.12	36.50	27.5	4,4'-DDE N
----			7.897	0.022	354265	0.00	28.16	---	Endrin
7.301	0.023	176225	8.065	-0.023	445346	16.83	34.54	68.9*	Endosulfan II N
7.093	-0.006	797887	7.939	-0.010	480431	76.16	39.27	63.9*	4,4'-DDD N
8.137	-0.004	411769	8.675	-0.011	285891	41.42	25.25	48.5*	Endosulfan sulfate N
7.386	-0.005	776207	8.260	-0.006	1003572	73.32	84.98	14.7	4,4'-DDT N
7.905	0.028	151282	8.938	0.029	25781	32.25	4.93	146.9*	Methoxychlor N
8.410	-0.005	401715	9.201	-0.008	605945	35.28	49.55	33.7	Endrin ketone N
7.726	0.020	158604	8.405	-0.014	106354	18.99	11.69	47.6*	Endrin aldehyde N
6.225	-0.004	290425	7.015	-0.011	292018	20.76	14.81	33.4	trans-Chlordane N
6.373	-0.003	370236	7.175	-0.010	258866	26.38	13.42	65.1*	cis-Chlordane N
2.301	-0.002	234902	2.479	-0.003	348555	12.20	13.48	9.9	Hexachlorobutadiene
4.149	-0.004	326458	4.683	-0.009	356039	19.13	14.36	28.5	Hexachlorobenzene N
3.797	-0.003	475775	4.190	-0.007	563605	36.65	29.46	21.7	Tetrachloro-m-xylene N
9.319	0.000	478638	10.418	-0.011	407737	53.25	41.70	24.3	Decachlorobiphenyl N

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

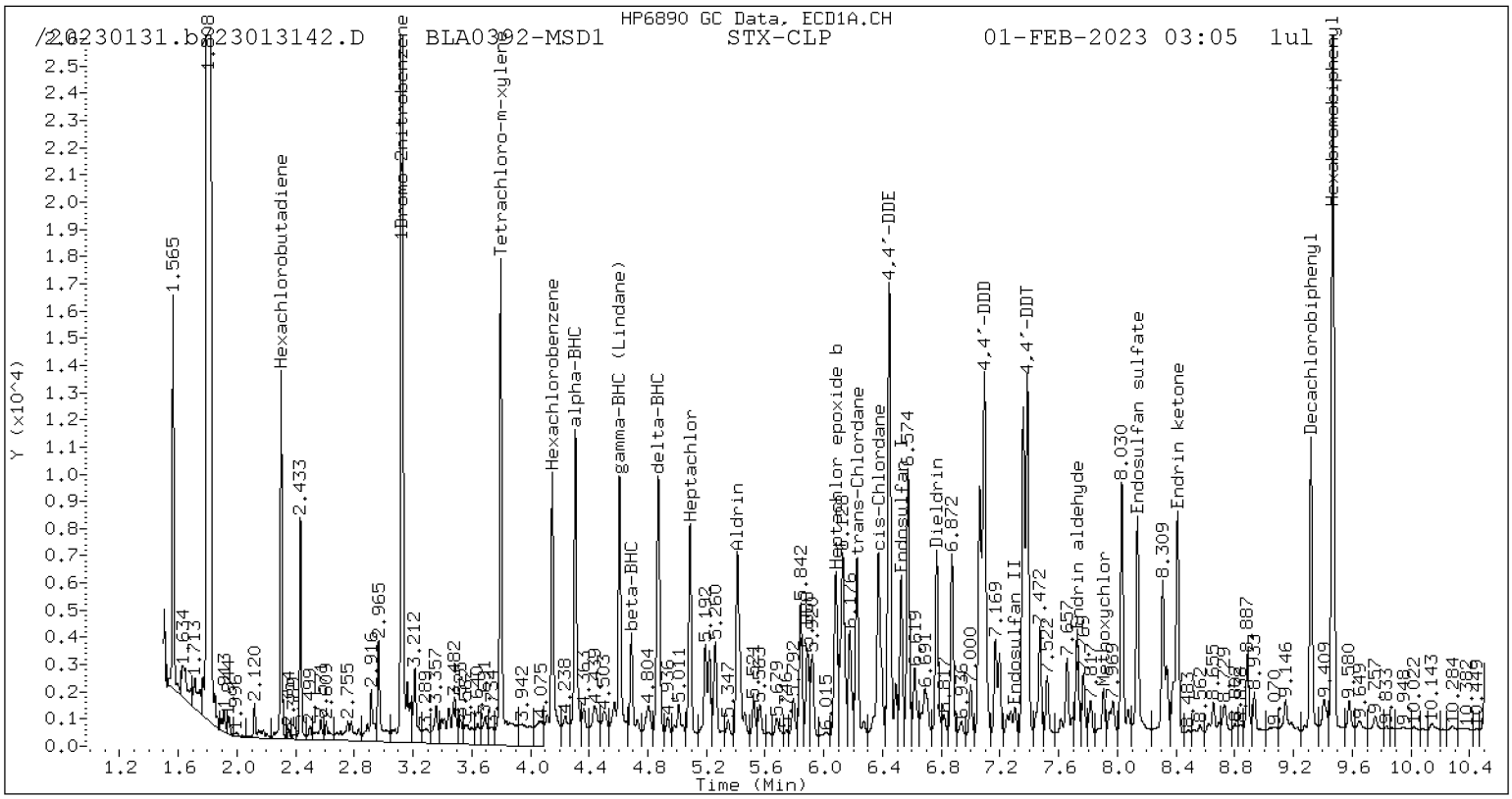
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	954549	42.0
Hexabromobiphenyl	609723	887035	45.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1359002	35.0
Hexabromobiphenyl	769764	884682	14.9

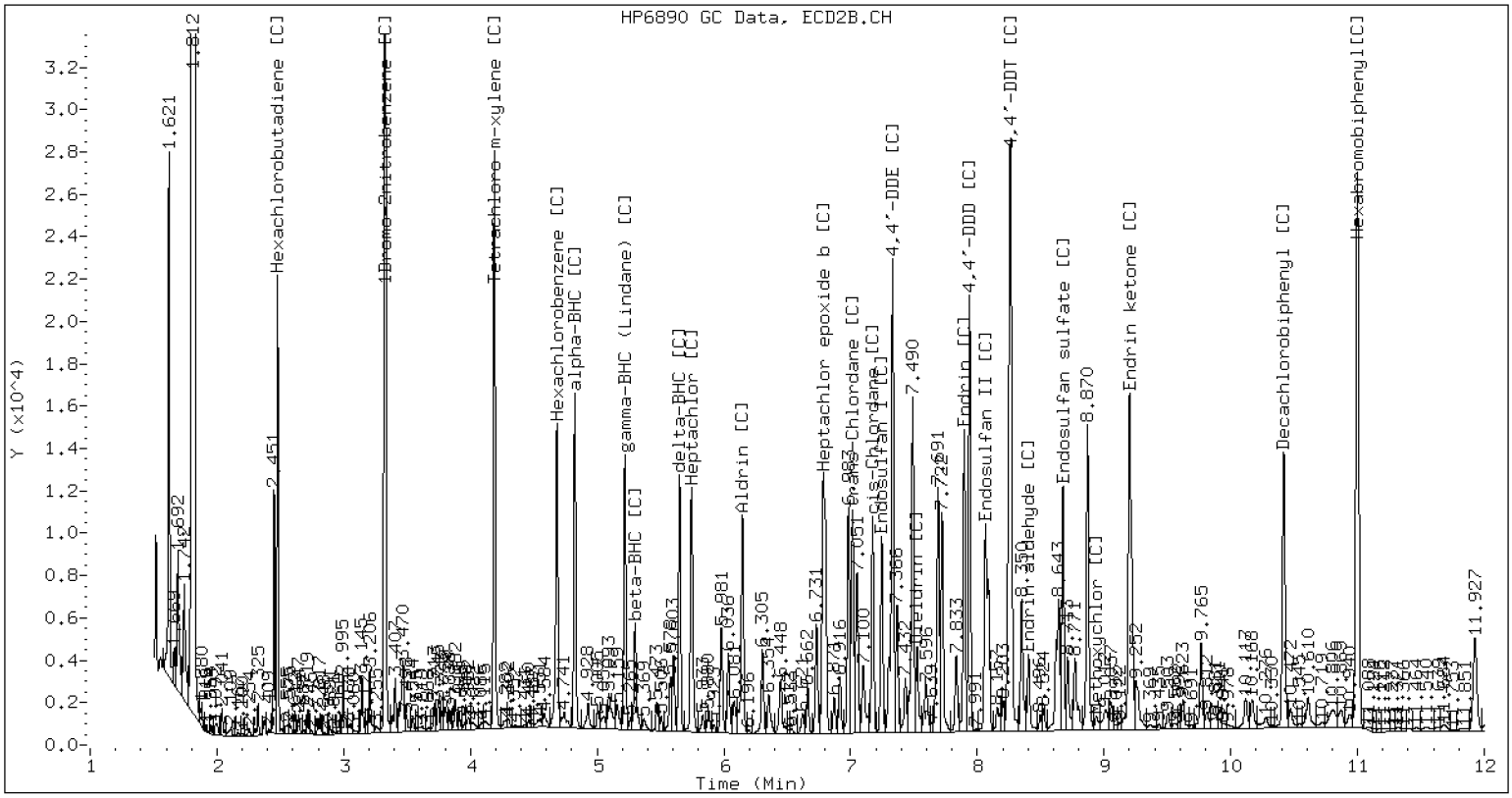
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230131.b/B20230131.b/23013142.D BLA0392-MSD1 CLP2



CLP-2 Manual Integration: YES

Manual Peak Adjustment Report, CLP-2

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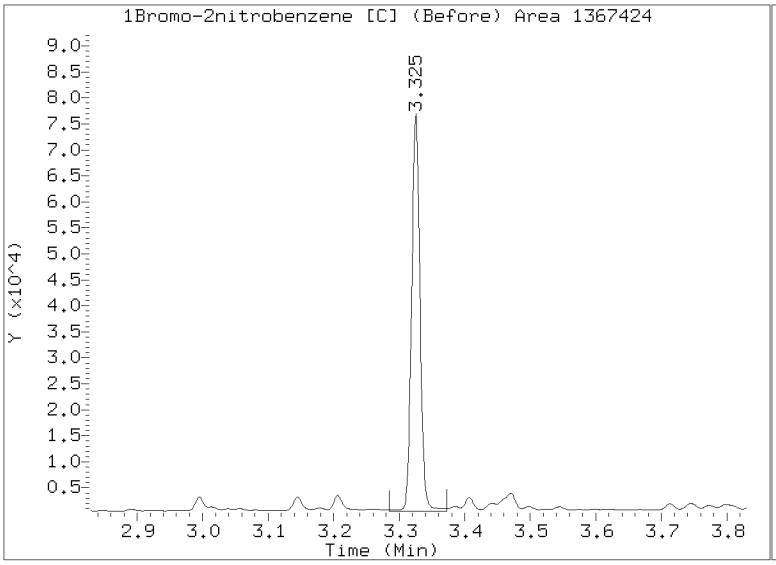
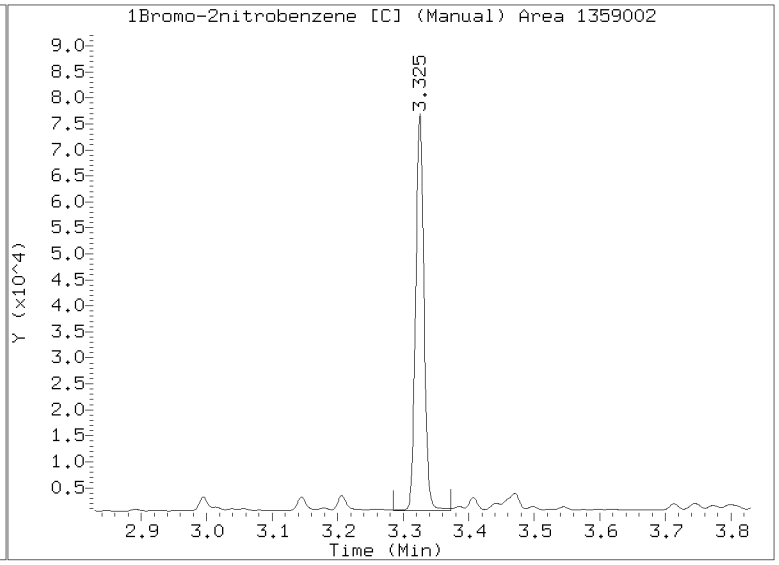
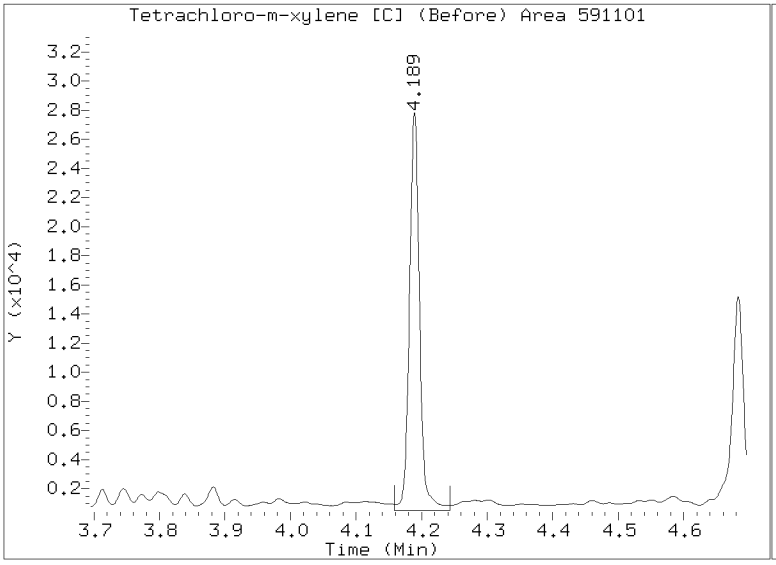
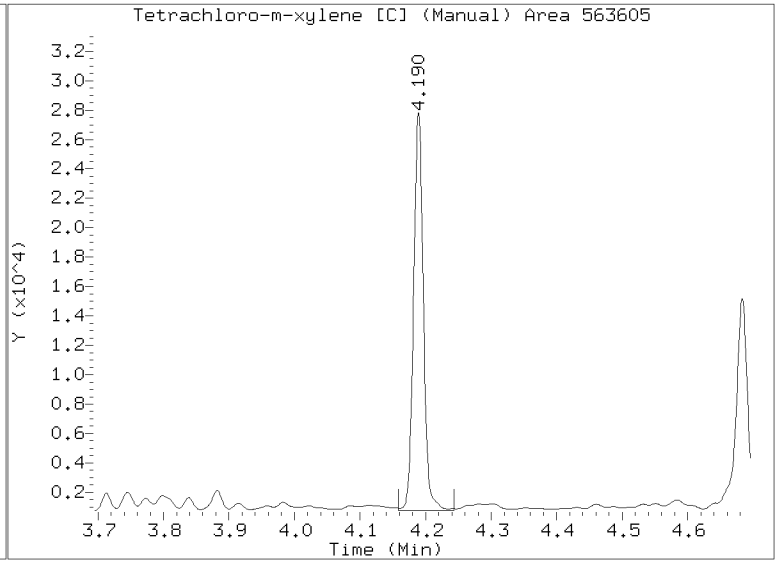
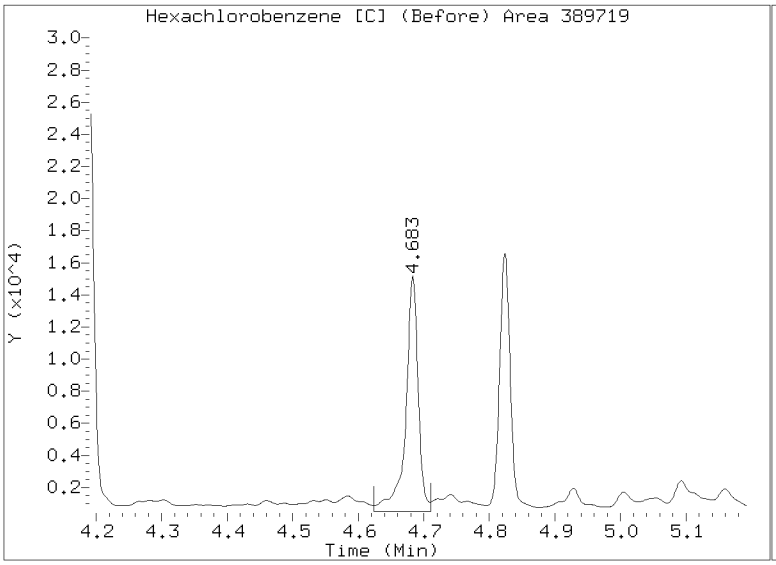
Injection Date: 01-FEB-2023 03:05
Lab ID:BLA0392-MSD1 Client ID:

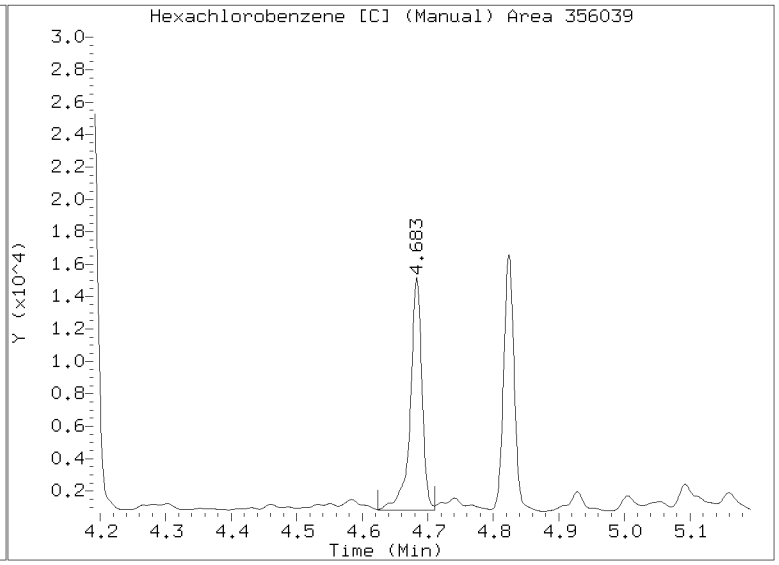












Manual Peak Adjustment Report, CLP-2

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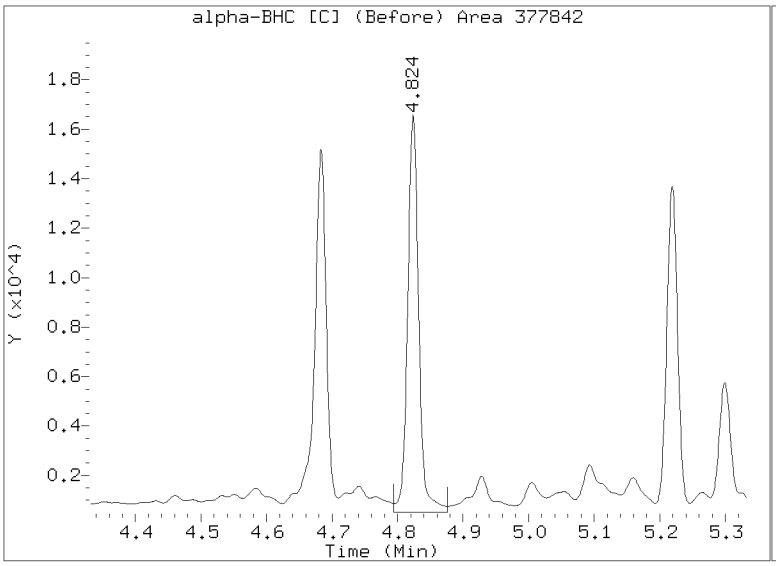
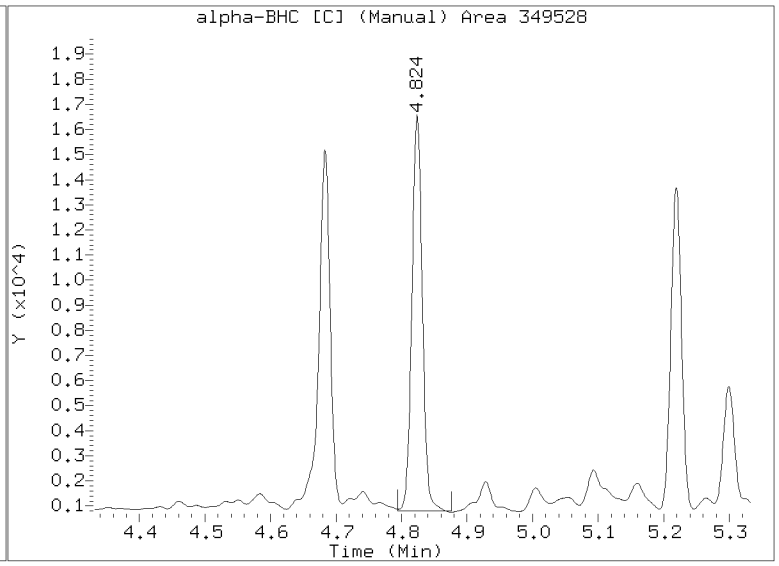
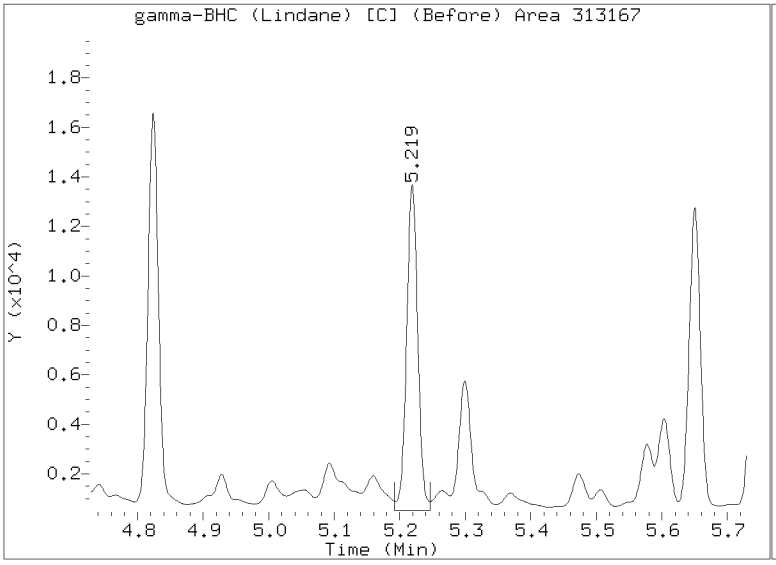
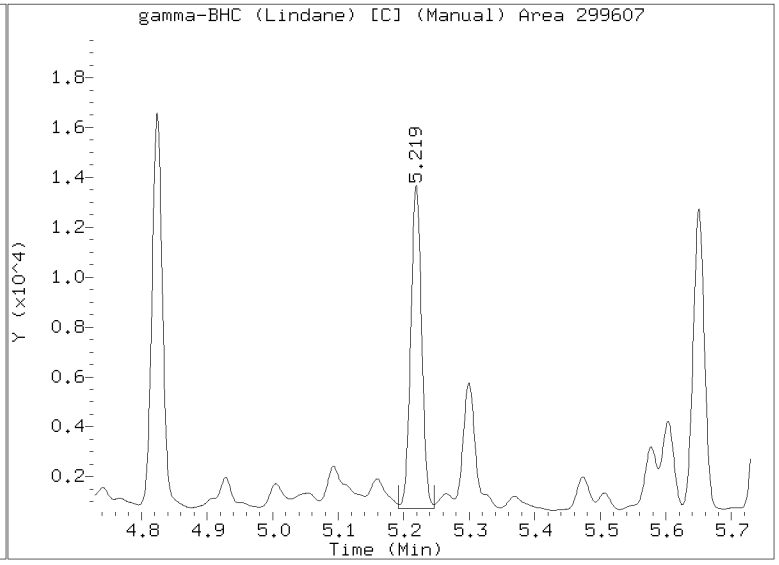
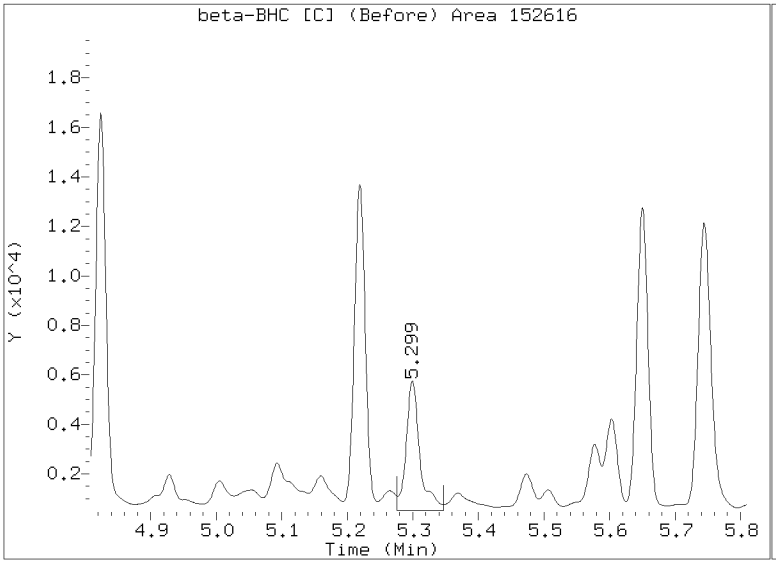
Injection Date: 01-FEB-2023 03:05
Lab ID:BLA0392-MSD1 Client ID:

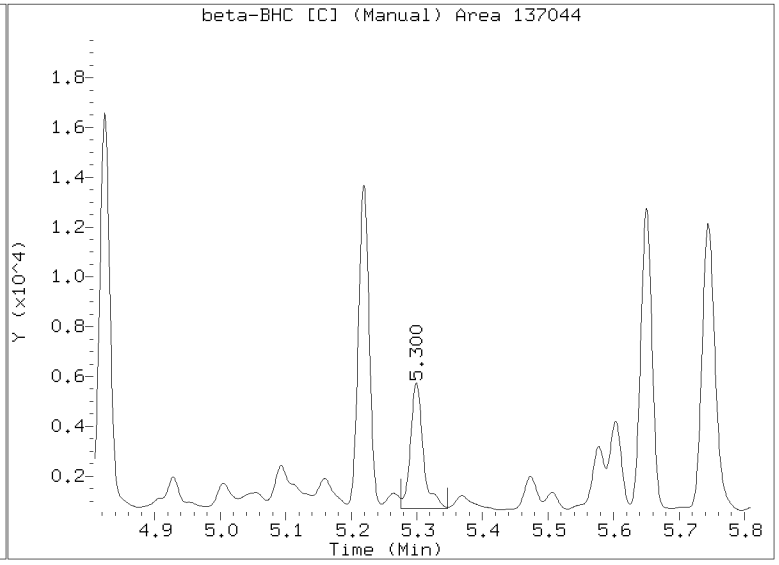












Manual Peak Adjustment Report, CLP-2

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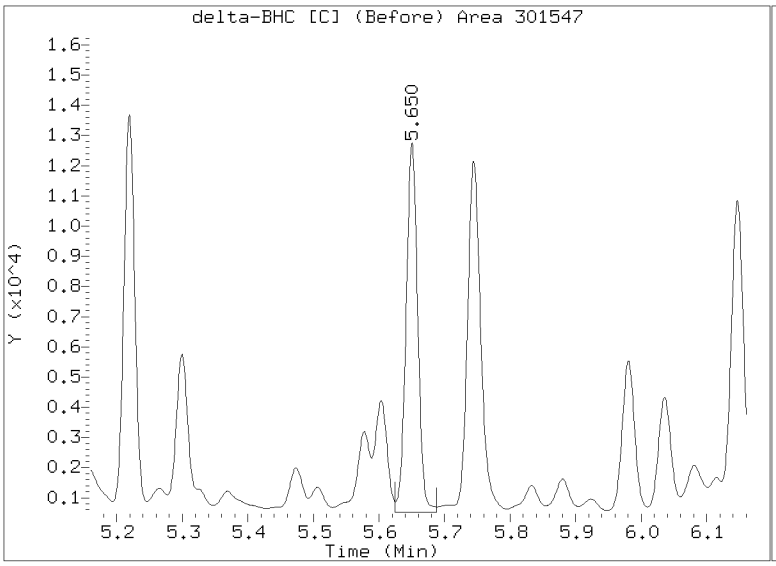
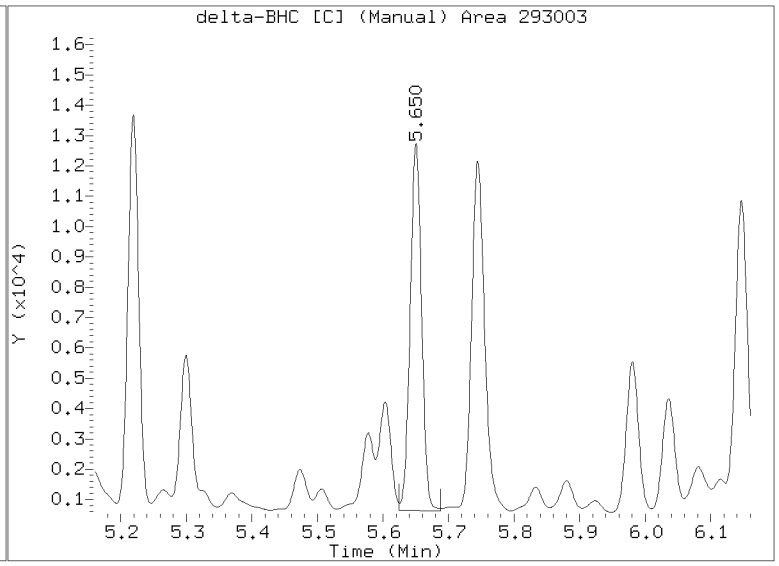
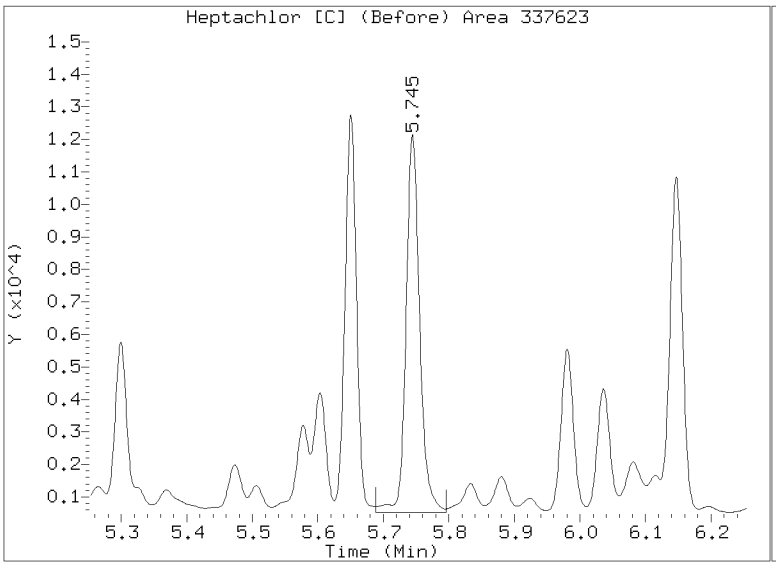
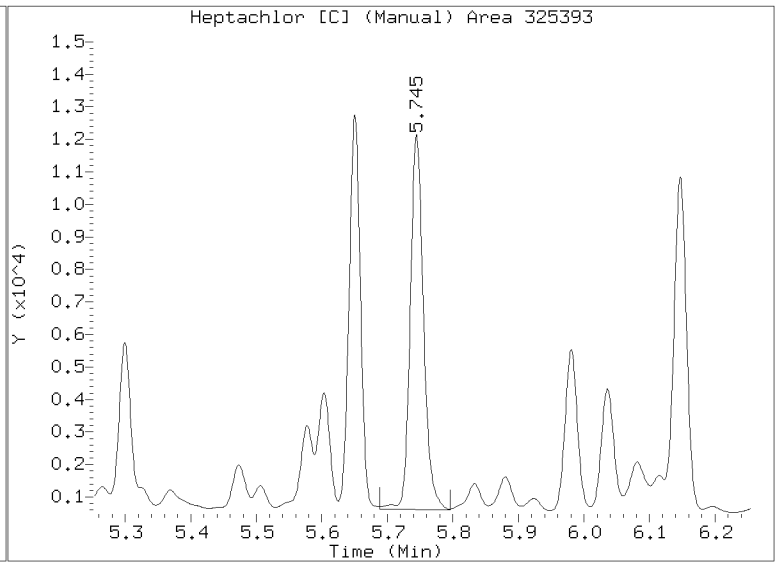
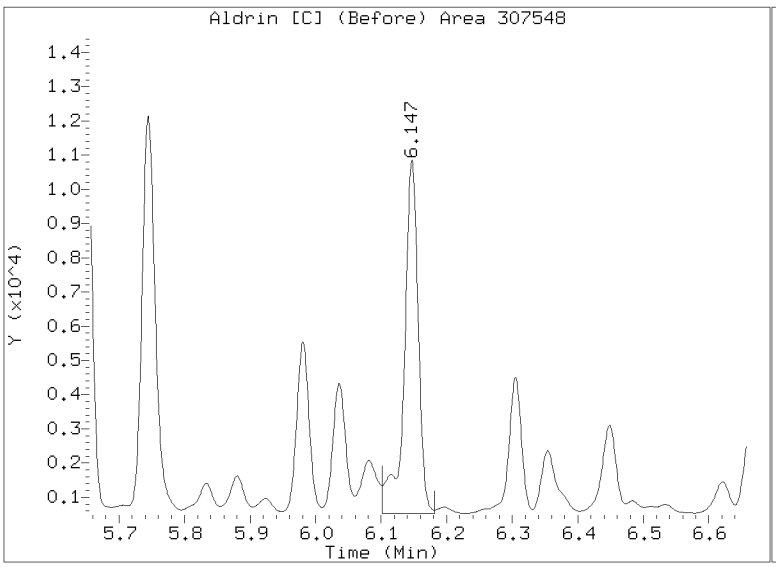
Injection Date: 01-FEB-2023 03:05
Lab ID:BLA0392-MSD1 Client ID:

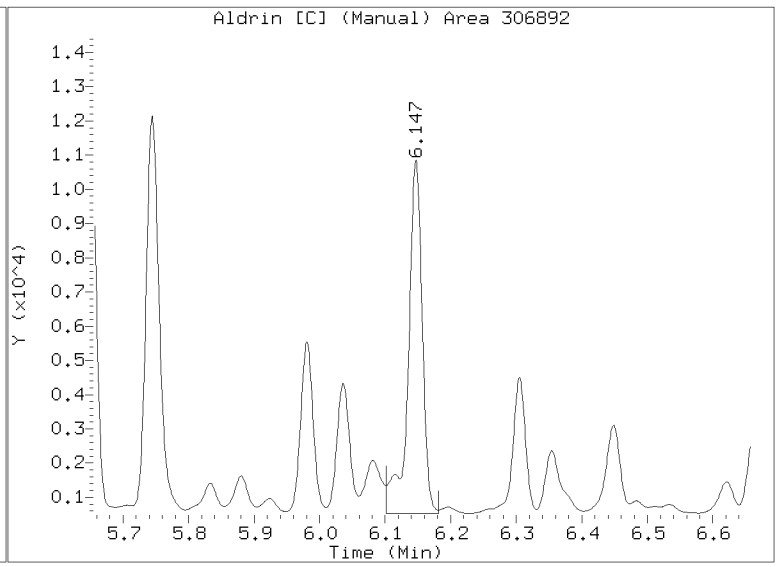












Manual Peak Adjustment Report, CLP-2

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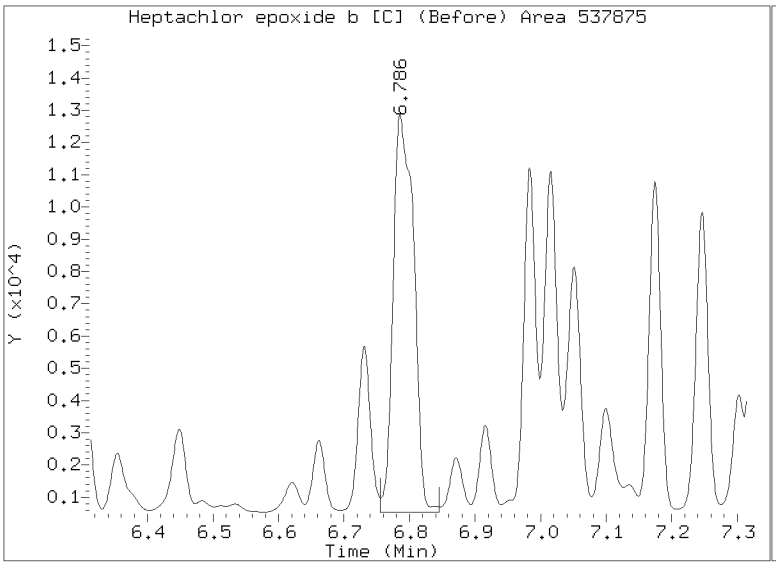
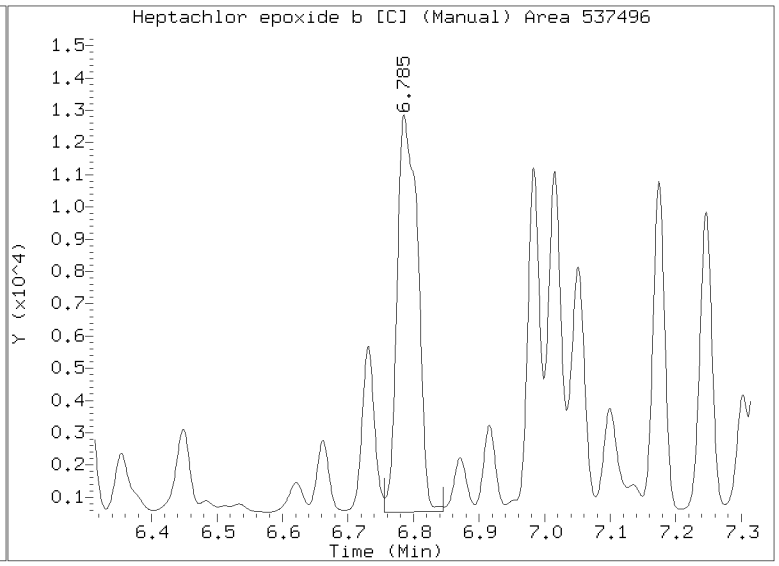
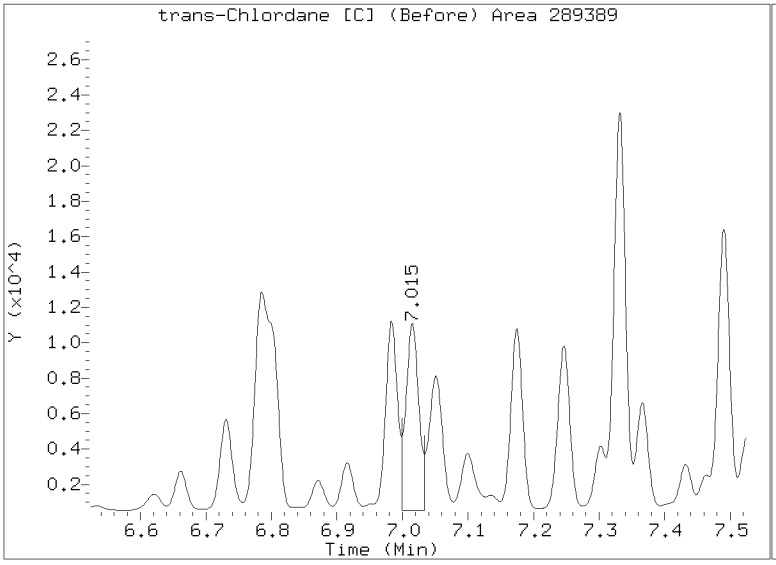
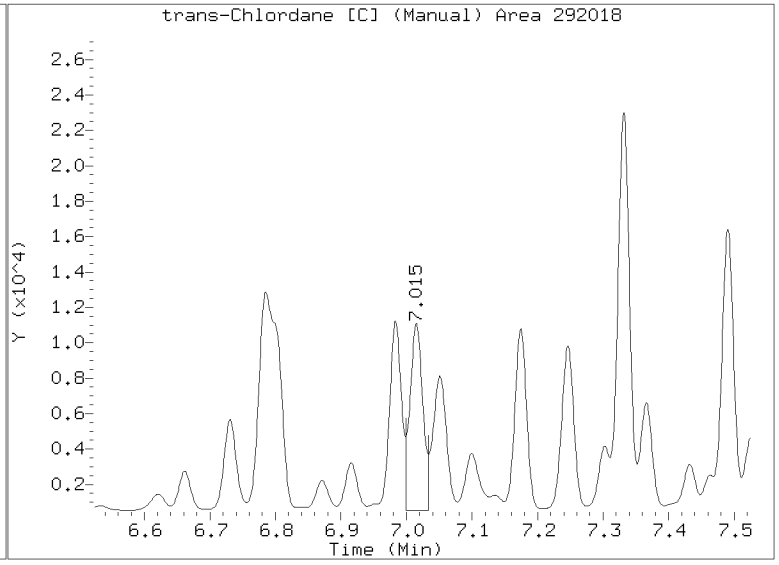
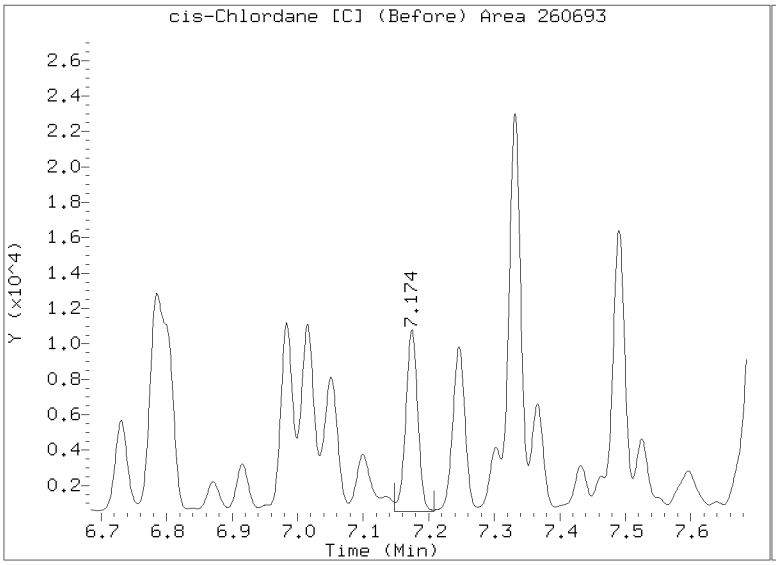
Lab ID:BLA0392-MSD1 Client ID:

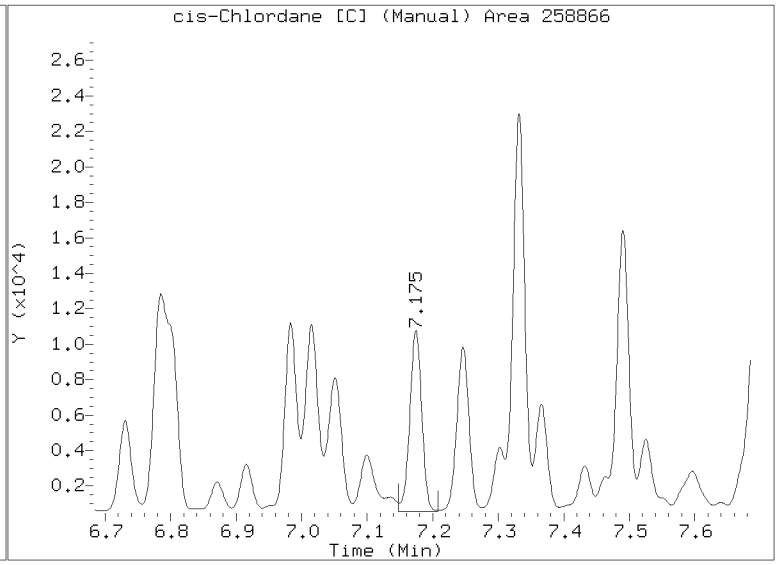












Manual Peak Adjustment Report, CLP-2

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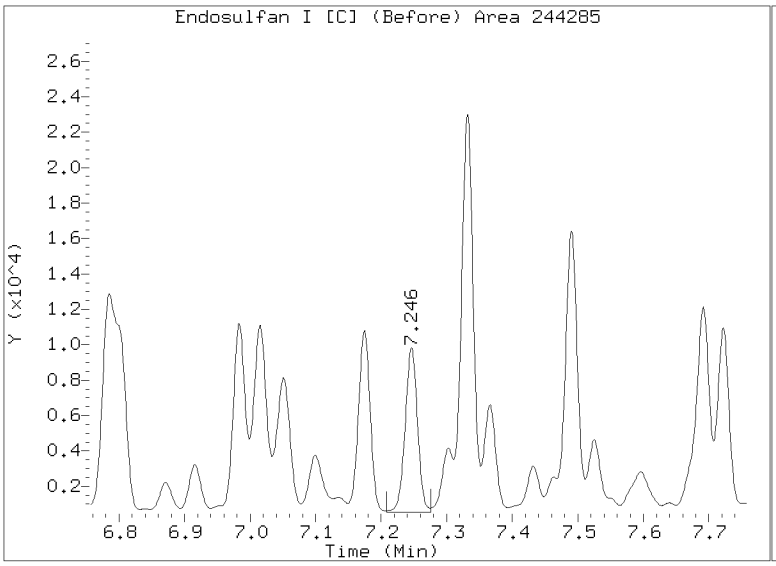
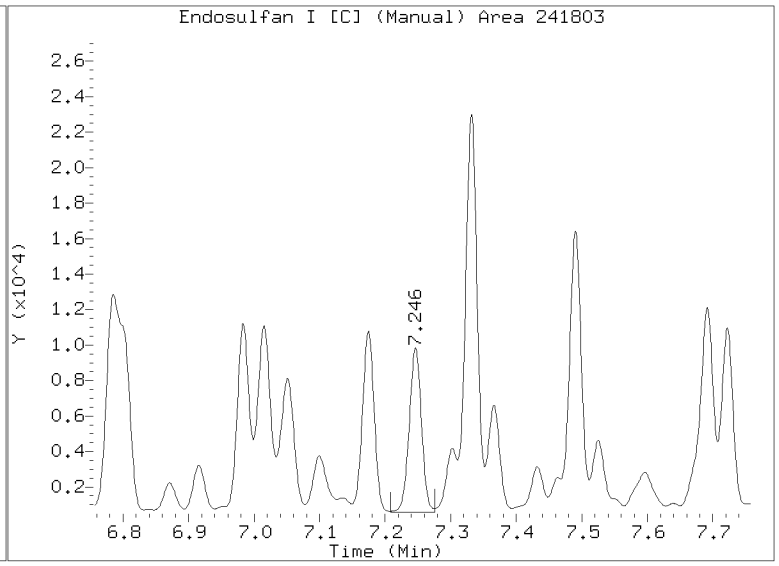
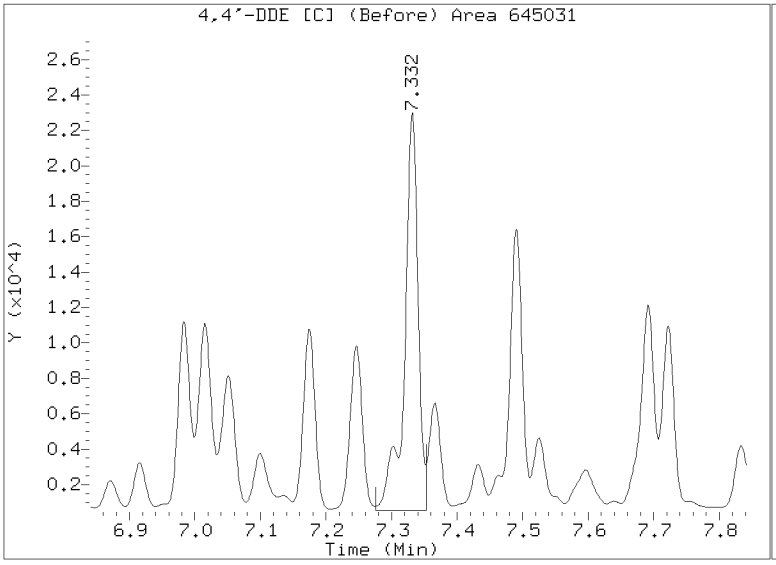
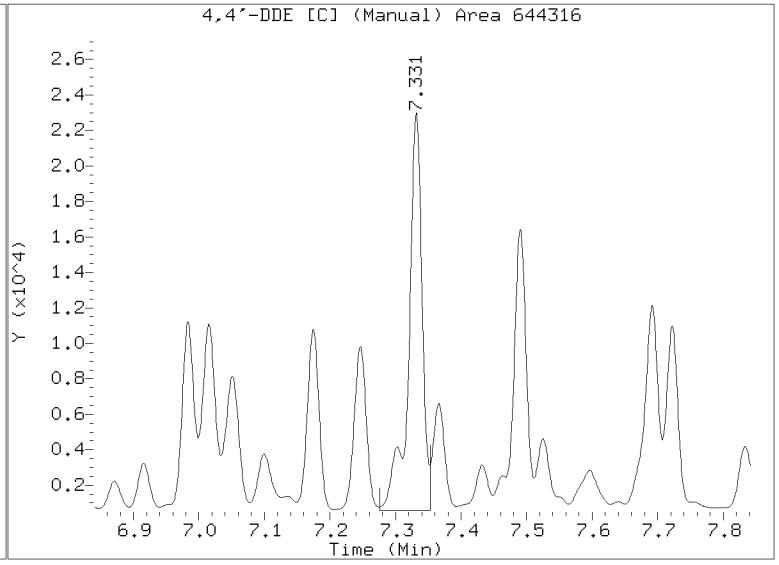
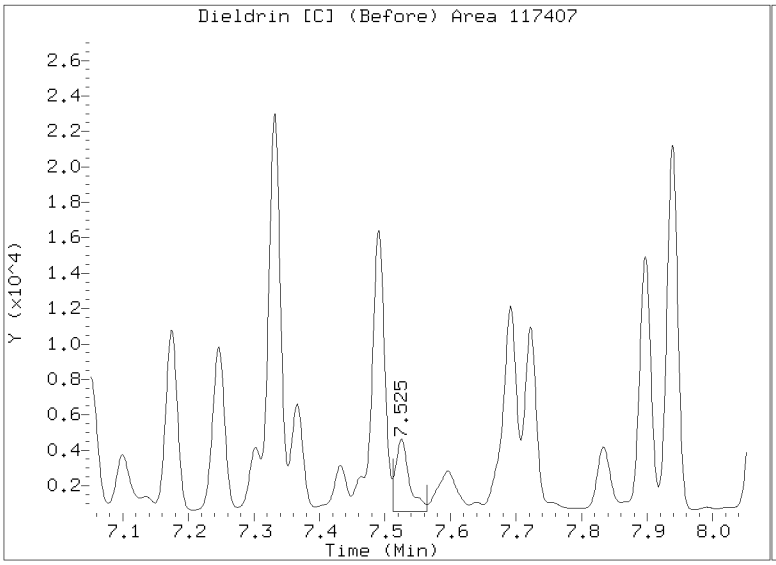
Injection Date: 01-FEB-2023 03:05
Lab ID:BLA0392-MSD1 Client ID:

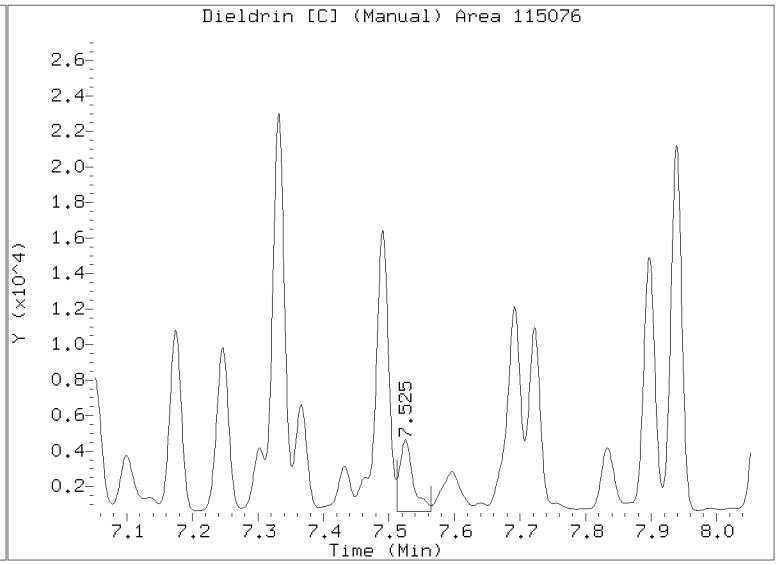






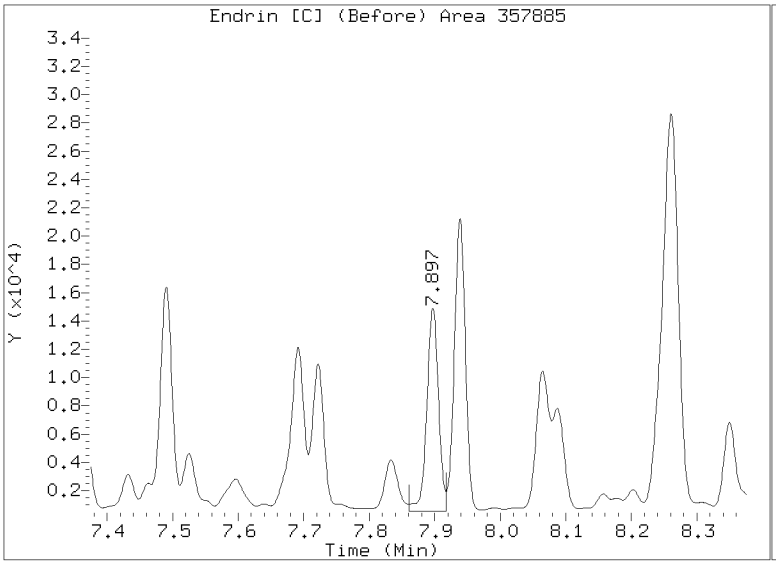


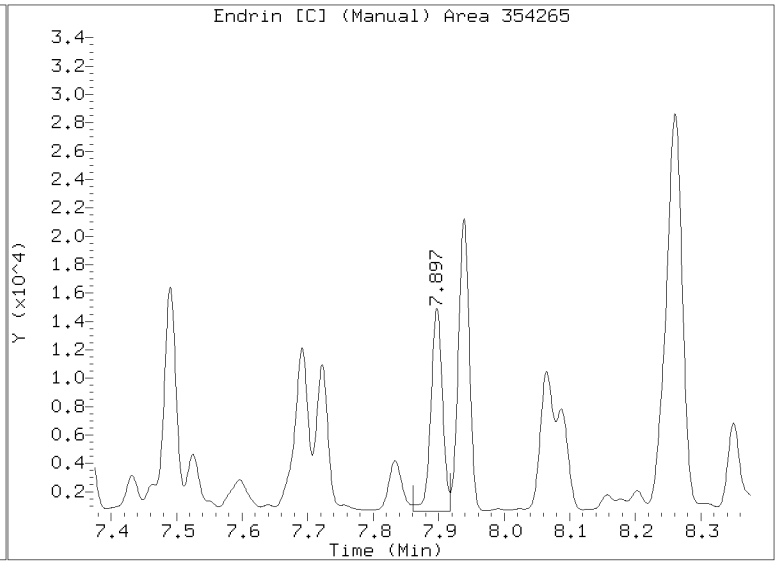


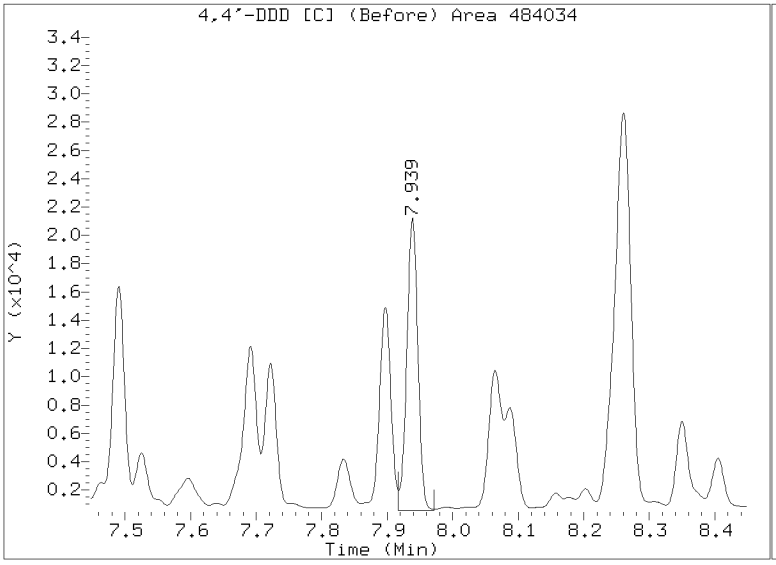


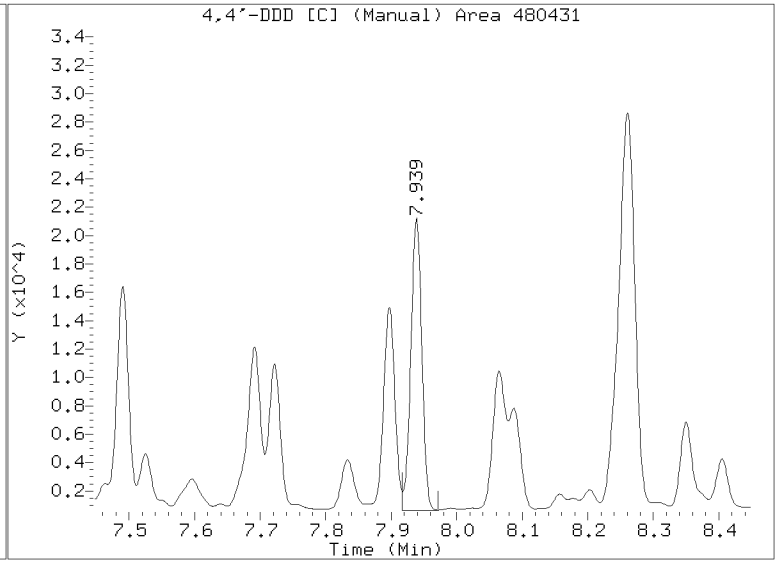
Manual Peak Adjustment Report, CLP-2

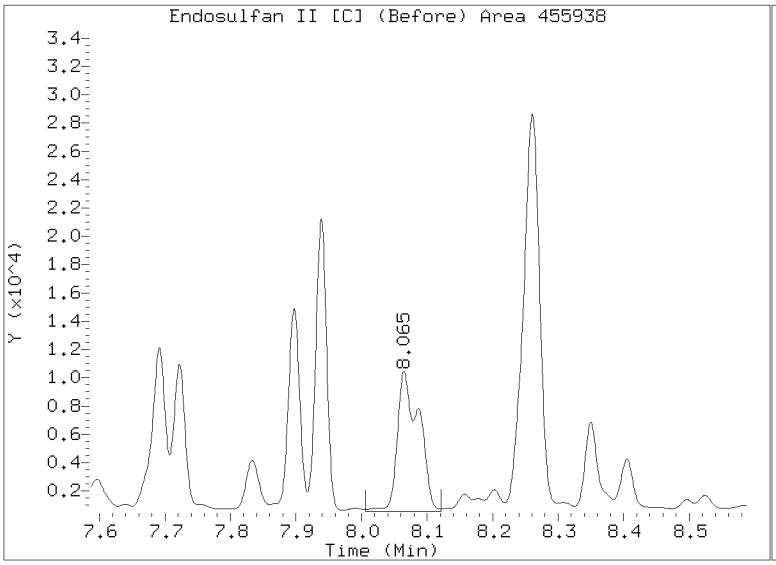
Datafile: /20230131.b/B20230131.b/23013142.D
Injection Date: 01-FEB-2023 03:05
Lab ID:BLA0392-MSD1 Client ID:

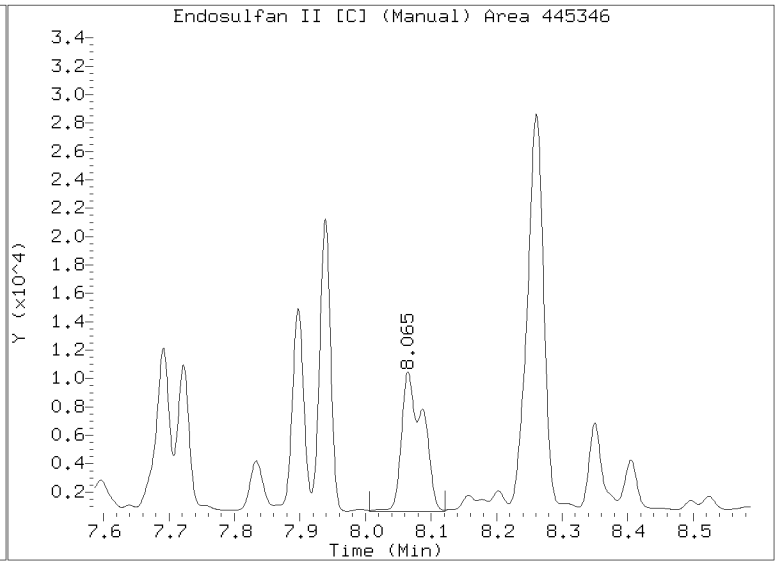






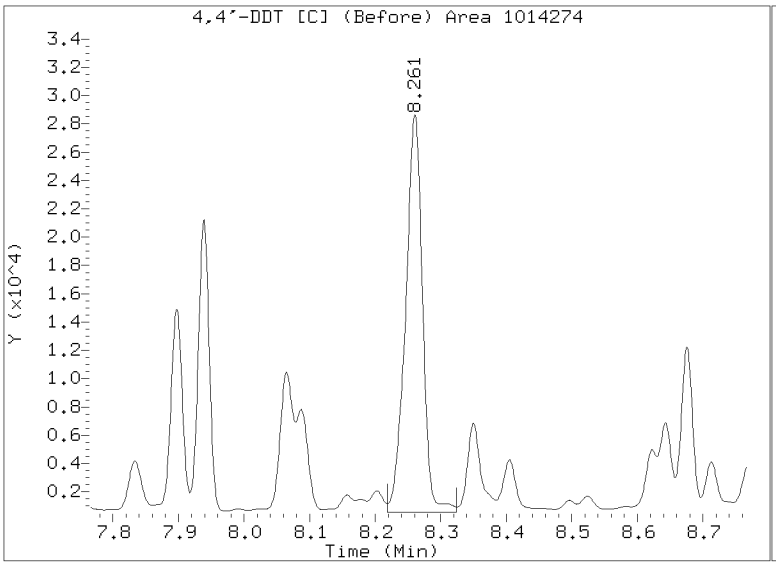


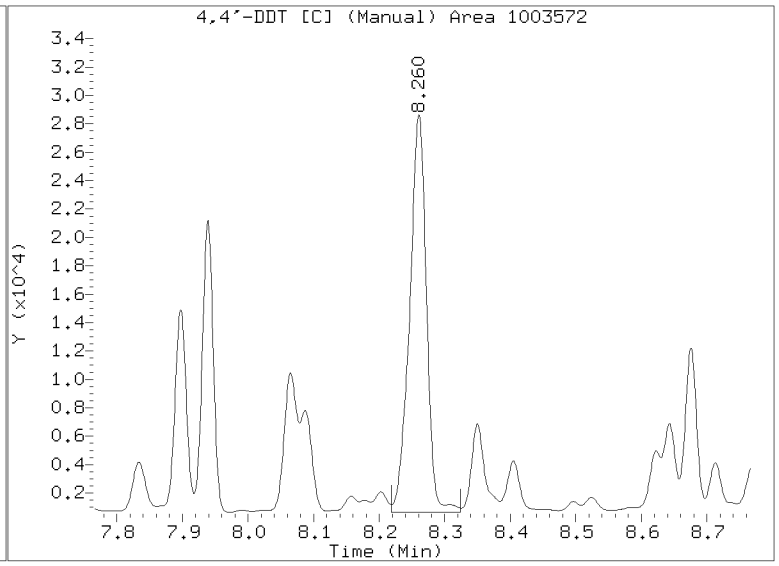


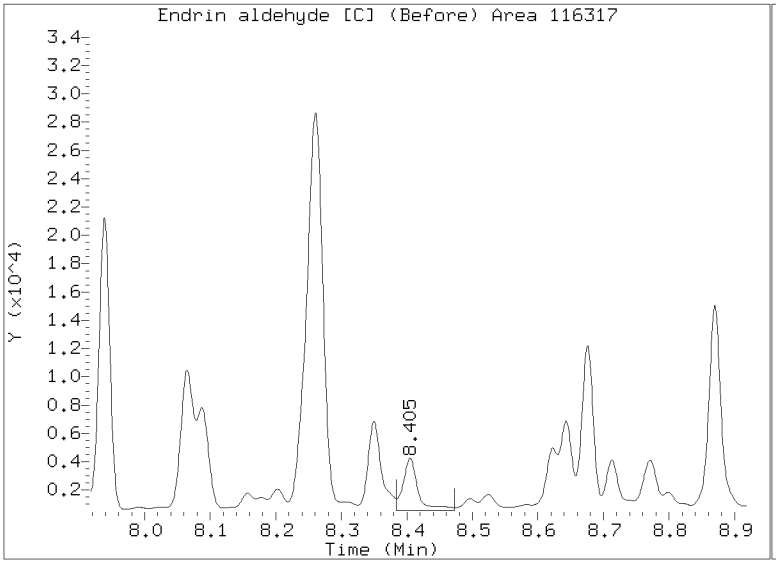


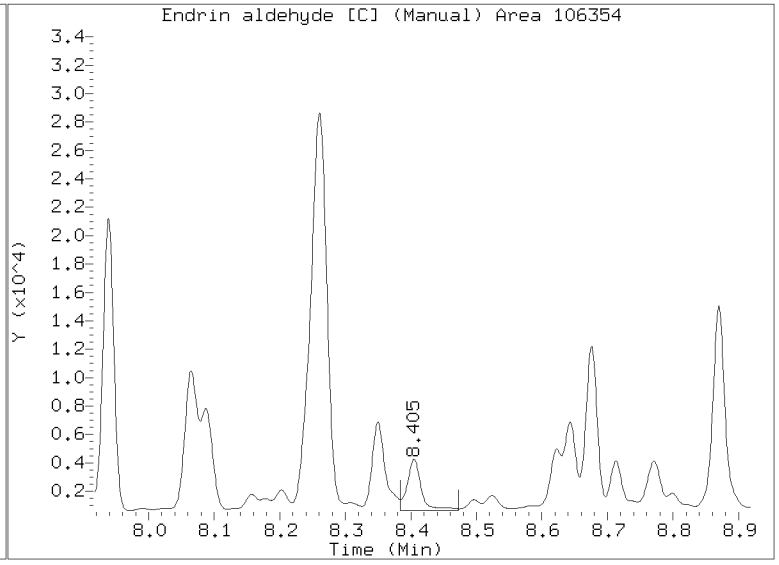
Manual Peak Adjustment Report, CLP-2

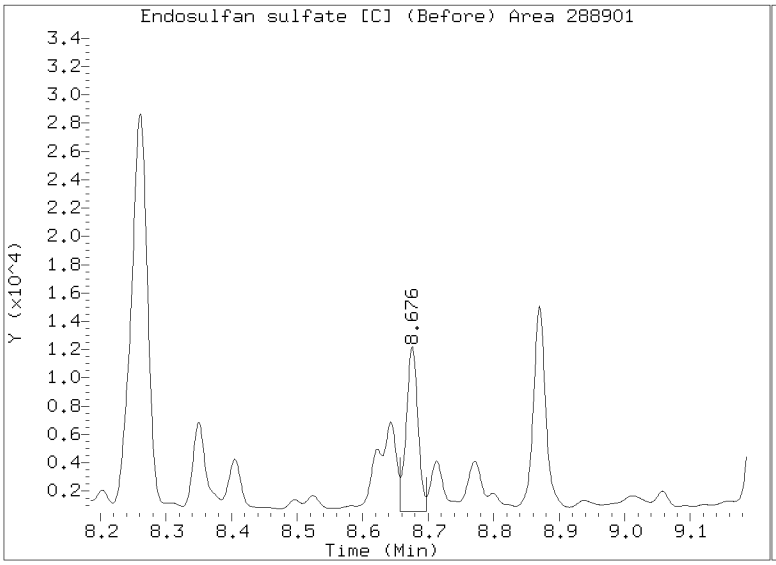
Datafile: /20230131.b/B20230131.b/23013142.D
Injection Date: 01-FEB-2023 03:05
Lab ID:BLA0392-MSD1 Client ID:

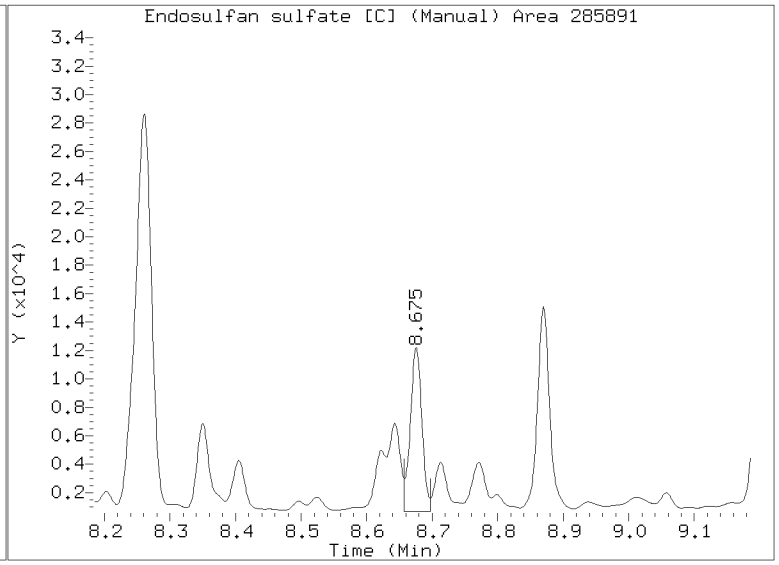












Manual Peak Adjustment Report, CLP-2

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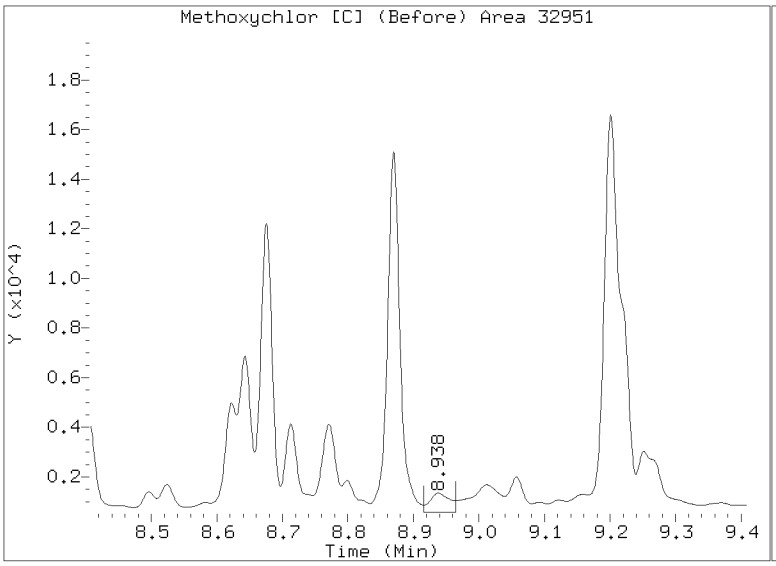
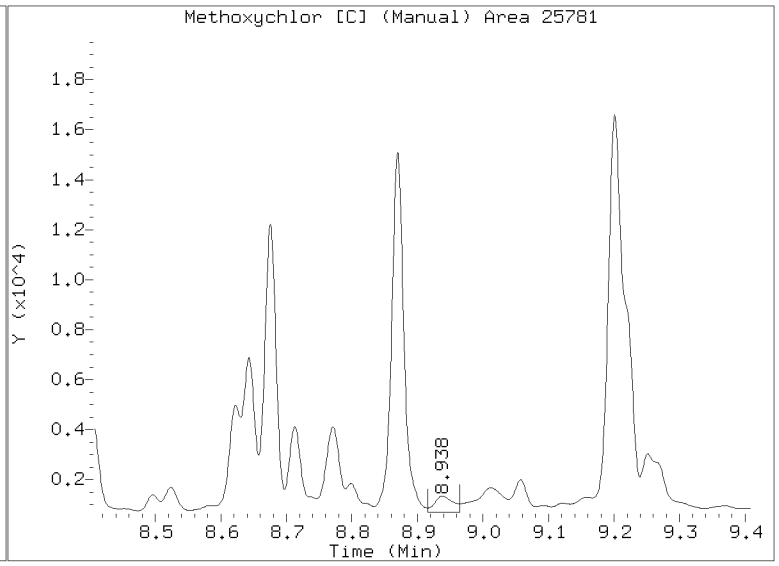
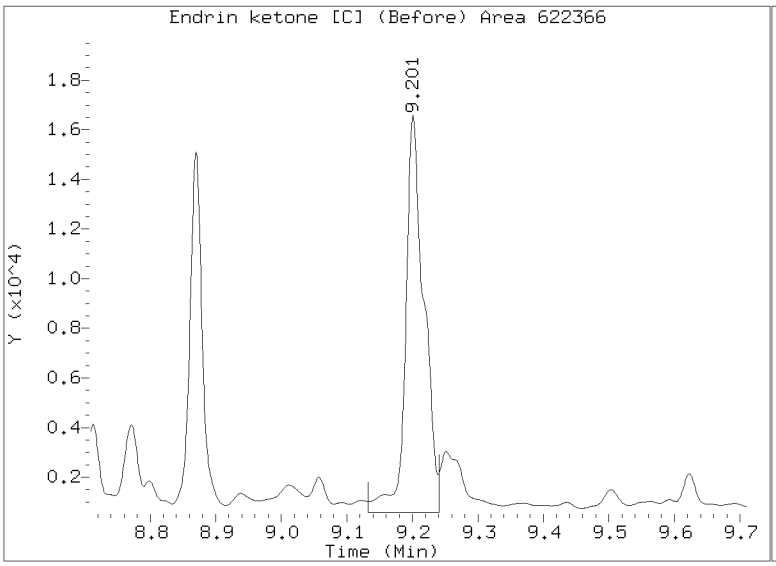
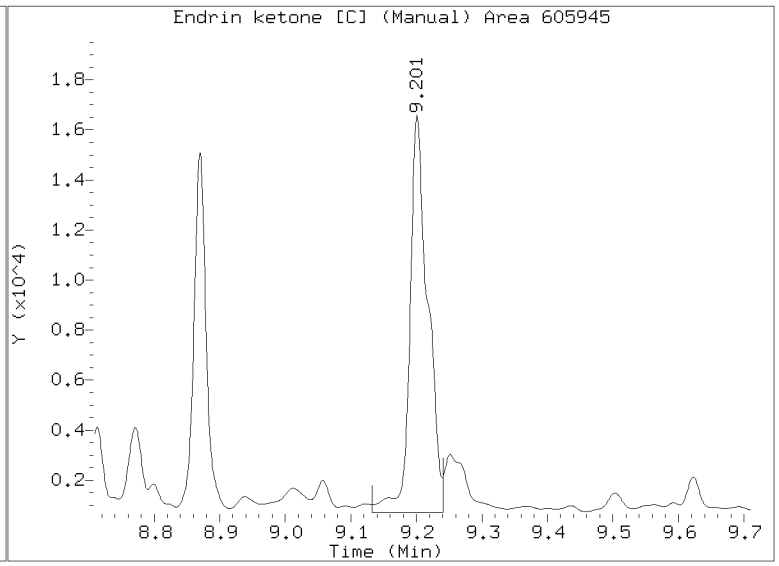
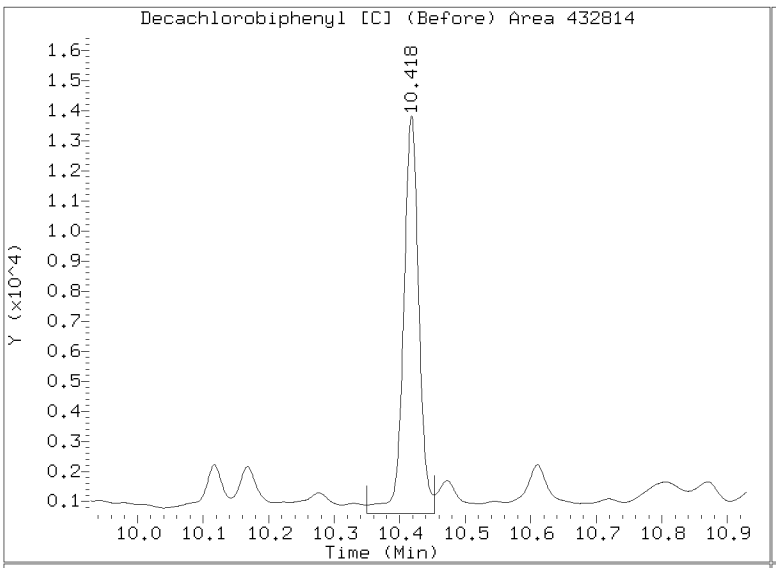
Lab ID:BLA0392-MSD1 Client ID:

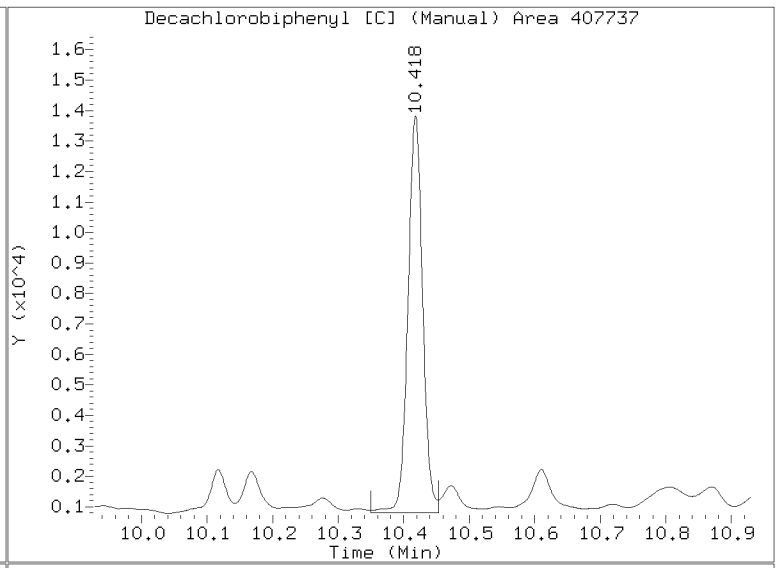


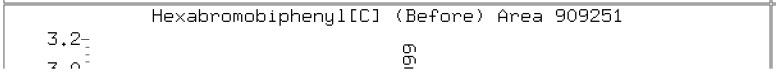


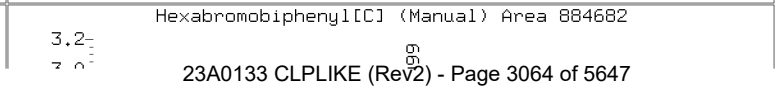












INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
alpha-BHC			2.5	1.564682	5	1.558115	10	1.57359	20	1.566596	40	1.528219
beta-BHC			2.5	0.6501672	5	0.6116678	10	0.6049898	20	0.5910241	40	0.567415
gamma-BHC (Lindane)			2.5	1.364013	5	1.359107	10	1.367627	20	1.357913	40	1.317203
delta-BHC			2.5	1.267737	5	1.264366	10	1.278672	20	1.286232	40	1.255792
Heptachlor			2.5	1.26903	5	1.222902	10	1.218715	20	1.207966	40	1.145438
Aldrin			2.5	1.349967	5	1.349283	10	1.40535	20	1.372547	40	1.307197
Heptachlor Epoxide			2.5	1.231126	5	1.189593	10	1.20792	20	1.178021	40	1.104377
trans-Chlordane (beta-Chlordane)			2.5	1.262297	5	1.202181	10	1.202336	20	1.19062	40	1.128117
cis-Chlordane (alpha-chlordane)			2.5	1.308183	5	1.222582	10	1.200602	20	1.177182	40	1.111332
Endosulfan I			2.5	1.143813	5	1.097776	10	1.093658	20	1.076133	40	1.011287
4,4'-DDE			5	1.141182	10	1.108491	20	1.098369	40	1.077225	80	0.9961189
Dieldrin			5	1.225418	10	1.190449	20	1.185191	40	1.155764	80	1.077517
Endrin			5	1.158191	10	1.117563	20	1.079508	40	1.061387	80	0.9725989
Endosulfan II			5	0.9400399	10	0.9913797	20	1.005265	40	0.925043	80	0.9337917
4,4'-DDD			5	1.004568	10	0.9927897	20	0.9803235	40	0.9586353	80	0.8937077
Endrin Aldehyde			5	0.8167784	10	0.7834798	20	0.7706241	40	0.7573308	80	0.7147756
4,4'-DDT			5	1.007054	10	0.9936998	20	0.9768522	40	0.9722874	80	0.9123228
Endosulfan Sulfate			5	0.9534179	10	0.9413755	20	0.9158457	40	0.9056998	80	0.8542021
Endrin Ketone			5	1.134866	10	1.083274	20	1.043162	40	1.021136	80	0.9645492
Methoxychlor			25	0.4887243	50	0.4567517	100	0.4291758	200	0.4123964	400	0.380531
Hexachlorobutadiene			2.5	1.967135	5	1.727858	10	1.608612	20	1.550898	40	1.457962
Hexachlorobenzene			2.5	1.583946	5	1.509865	10	1.463674	20	1.414258	40	1.348389
Decachlorobiphenyl			5	0.9567749	10	0.8690419	20	0.8114883	40	0.7853665	80	0.7399881
Tetrachlorometaxylene			5	1.223478	10	1.154628	20	1.122612	40	1.064313	80	1.018952

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
alpha-BHC	80	1.449687										
beta-BHC	80	0.5324503										
gamma-BHC (Lindane)	80	1.246178										
delta-BHC	80	1.199667										
Heptachlor	80	1.064858										
Aldrin	80	1.204866										
Heptachlor Epoxide	80	1.016142										
trans-Chlordane (beta-Chlordane)	80	1.050129										
cis-Chlordane (alpha-chlordane)	80	1.036345										
Endosulfan I	80	0.9344351										
4,4'-DDE	160	0.9196699										
Dieldrin	160	0.9953457										
Endrin	160	0.903669										
Endosulfan II	160	0.8694106										
4,4'-DDD	160	0.8394108										
Endrin Aldehyde	160	0.6754471										
4,4'-DDT	160	0.8666848										
Endosulfan Sulfate	160	0.808554										
Endrin Ketone	160	0.9150773										
Methoxychlor	800	0.3710888										
Hexachlorobutadiene	80	1.368623										
Hexachlorobenzene	80	1.259233										
2,4'-DDE					5	0.8703192	10	0.8471901	20	0.8231684	40	0.7887622
2,4'-DDD					5	0.761682	10	0.7418629	20	0.7301989	40	0.7053717
2,4'-DDT					5	0.8194572	10	0.8004965	20	0.7842725	40	0.7616258
Oxychlordane					5	1.016746	10	1.011016	20	0.9890796	40	0.9530961
cis-Nonachlor					5	1.323191	10	1.277938	20	1.243982	40	1.217703

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
trans-Nonachlor					5	1.347777	10	1.328677	20	1.28535	40	1.249062
Mirex					5	0.8317764	10	0.8043457	20	0.7641487	40	0.7481553
Decachlorobiphenyl	160	0.7008722										
Tetrachlorometaxylene	160	0.9437243										

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2,4'-DDE	80	0.7262802	160	0.6559468								
2,4'-DDD	80	0.6522807	160	0.6001736								
2,4'-DDT	80	0.7135595	160	0.6495601								
Oxychlordane	80	0.9018234	160	0.8351028								
cis-Nonachlor	80	1.140435	160	1.065099								
trans-Nonachlor	80	1.167639	160	1.085646								
Mirex	80	0.706171	160	0.6667706								

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc		Conc		Conc		Conc		Conc		Conc	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 25		Level 26		Level 27		Level 28		Level 29		Level 30	
	Conc		Conc		Conc		Conc		Conc		Conc	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
alpha-BHC	1.540148	3.1			RSD (20)	
beta-BHC	0.5929524	6.8			RSD (20)	
gamma-BHC (Lindane)	1.33534	3.5			RSD (20)	
delta-BHC	1.258744	2.5			RSD (20)	
Heptachlor	1.188151	6.1			RSD (20)	
Aldrin	1.331535	5.2			RSD (20)	
Heptachlor Epoxide	1.15453	6.9			RSD (20)	
trans-Chlordane (beta-Chlordane)	1.172613	6.3			RSD (20)	
cis-Chlordane (alpha-chlordane)	1.176038	8.0			RSD (20)	
Endosulfan I	1.059517	7.1			RSD (20)	
4,4'-DDE	1.056843	7.9			RSD (20)	
Dieldrin	1.138281	7.6			RSD (20)	
Endrin	1.048819	9.0			RSD (20)	
Endosulfan II	0.944155	5.2			RSD (20)	
4,4'-DDD	0.9449058	6.9			RSD (20)	
Endrin Aldehyde	0.7530726	6.7			RSD (20)	
4,4'-DDT	0.9548168	5.7			RSD (20)	
Endosulfan Sulfate	0.8965158	6.2			RSD (20)	
Endrin Ketone	1.027011	7.7			RSD (20)	
Methoxychlor	0.4231113	10.6			RSD (20)	
Hexachlorobutadiene	1.613515	13.2			RSD (20)	
Hexachlorobenzene	1.429894	8.1			RSD (20)	
2,4'-DDE	0.7852778	10.3			RSD (20)	
2,4'-DDD	0.698595	8.8			RSD (20)	
2,4'-DDT	0.7548286	8.4			RSD (20)	
Oxychlordane	0.951144	7.5			RSD (20)	
cis-Nonachlor	1.211391	7.8			RSD (20)	
trans-Nonachlor	1.244025	8.1			RSD (20)	
Mirex	0.7535613	8.1			RSD (20)	
Decachlorobiphenyl	0.8105886	11.4			RSD (20)	
Tetrachlorometaxylene	1.087951	9.2			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
alpha-BHC [2C]			2.5	1.582358	5	1.586238	10	1.633164	20	1.640486	40	1.615441
beta-BHC [2C]			2.5	0.652782	5	0.6172948	10	0.6184608	20	0.6125812	40	0.5918008
gamma-BHC (Lindane) [2C]			2.5	1.355071	5	1.348783	10	1.381456	20	1.392772	40	1.366606
delta-BHC [2C]			2.5	1.323764	5	1.307234	10	1.339425	20	1.328433	40	1.331977
Heptachlor [2C]			2.5	1.270249	5	1.234236	10	1.258409	20	1.272245	40	1.215755
Aldrin [2C]			2.5	1.511397	5	1.416724	10	1.432636	20	1.430376	40	1.370917
Heptachlor Epoxide [2C]			2.5	1.2977	5	1.174596	10	1.174288	20	1.174706	40	1.114434
trans-Chlordane (beta-Chlordane) [2C]			2.5	1.25449	5	1.176102	10	1.164843	20	1.168848	40	1.125534
cis-Chlordane (alpha-chlordane) [2C]			2.5	1.258498	5	1.153199	10	1.135052	20	1.136251	40	1.089792
Endosulfan I [2C]			2.5	1.118263	5	1.044155	10	1.035412	20	1.034697	40	0.9885012
4,4'-DDE [2C]			5	1.120237	10	1.069625	20	1.064387	40	1.055415	80	0.9897135
Dieldrin [2C]			5	1.270008	10	1.162844	20	1.139359	40	1.136098	80	1.071389
Endrin [2C]			5	1.256912	10	1.17909	20	1.159477	40	1.149599	80	1.066056
Endosulfan II [2C]			5	1.296819	10	1.202961	20	1.188491	40	1.160501	80	1.099056
4,4'-DDD [2C]			5	1.234482	10	1.121556	20	1.117792	40	1.112003	80	1.04628
Endrin Aldehyde [2C]			5	0.9430111	10	0.8430348	20	0.8249196	40	0.8129946	80	0.7727701
4,4'-DDT [2C]			5	1.175911	10	1.077825	20	1.067612	40	1.073272	80	1.019364
Endosulfan Sulfate [2C]			5	1.137768	10	1.042553	20	1.030373	40	1.023023	80	0.9721732
Endrin Ketone [2C]			5	1.235631	10	1.119988	20	1.114405	40	1.100852	80	1.047659
Methoxychlor [2C]			25	0.5184064	50	0.4866753	100	0.4751666	200	0.4681736	400	0.4433957
Hexachlorobutadiene [2C]			2.5	1.975612	5	1.648845	10	1.492482	20	1.376096	40	1.341211
Hexachlorobenzene [2C]			2.5	1.602215	5	1.520618	10	1.491402	20	1.450251	40	1.385947
Decachlorobiphenyl [2C]			5	1.087142	10	0.9391597	20	0.8562421	40	0.8499592	80	0.8013928
Tetrachlorometaxylene [2C]			5	1.220863	10	1.179368	20	1.164832	40	1.127982	80	1.06878

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
alpha-BHC [2C]	80	1.561903										
beta-BHC [2C]	80	0.5642956										
gamma-BHC (Lindane) [2C]	80	1.31891										
delta-BHC [2C]	80	1.29291										
Heptachlor [2C]	80	1.144118										
Aldrin [2C]	80	1.281263										
Heptachlor Epoxide [2C]	80	1.046144										
trans-Chlordane (beta-Chlordane) [2C]	80	1.072685										
cis-Chlordane (alpha-chlordane) [2C]	80	1.03859										
Endosulfan I [2C]	80	0.9325836										
4,4'-DDE [2C]	160	0.9356313										
Dieldrin [2C]	160	1.019365										
Endrin [2C]	160	1.013782										
Endosulfan II [2C]	160	1.047801										
4,4'-DDD [2C]	160	1.006382										
Endrin Aldehyde [2C]	160	0.7380269										
4,4'-DDT [2C]	160	0.9933936										
Endosulfan Sulfate [2C]	160	0.9372514										
Endrin Ketone [2C]	160	1.016567										
Methoxychlor [2C]	800	0.4436418										
Hexachlorobutadiene [2C]	80	1.300813										
Hexachlorobenzene [2C]	80	1.304223										
2,4'-DDE [2C]					5	0.8343307	10	0.8052418	20	0.7431295	40	0.7258871
2,4'-DDD [2C]					5	0.9097548	10	0.8797099	20	0.8273813	40	0.8164191
2,4'-DDT [2C]					5	0.9400077	10	0.8804604	20	0.8502582	40	0.8485216
Oxychlordane [2C]					5	0.9644685	10	0.9467754	20	0.9033255	40	0.8966281
cis-Nonachlor [2C]					5	1.449238	10	1.407074	20	1.376474	40	1.372123

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
trans-Nonachlor [2C]					5	1.488853	10	1.51762	20	1.451789	40	1.447663
Mirex [2C]					5	0.9331395	10	0.8115521	20	0.7946205	40	0.762682
Decachlorobiphenyl [2C]	160	0.7711875										
Tetrachlorometaxylene [2C]	160	0.9948184										

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2,4'-DDE [2C]	80	0.6667087	160	0.6020159								
2,4'-DDD [2C]	80	0.76623	160	0.7136982								
2,4'-DDT [2C]	80	0.7977257	160	0.7424898								
Oxychlordane [2C]	80	0.8433342	160	0.7909247								
cis-Nonachlor [2C]	80	1.313286	160	1.248174								
trans-Nonachlor [2C]	80	1.376815	160	1.306683								
Mirex [2C]	80	0.7399752	160	0.7075065								

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc		Conc		Conc		Conc		Conc		Conc	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 25		Level 26		Level 27		Level 28		Level 29		Level 30	
	Conc		Conc		Conc		Conc		Conc		Conc	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
alpha-BHC [2C]	1.603265	1.9			RSD (20)	
beta-BHC [2C]	0.6095359	4.9			RSD (20)	
gamma-BHC (Lindane) [2C]	1.3606	1.9			RSD (20)	
delta-BHC [2C]	1.320624	1.3			RSD (20)	
Heptachlor [2C]	1.232502	3.9			RSD (20)	
Aldrin [2C]	1.407219	5.4			RSD (20)	
Heptachlor Epoxide [2C]	1.163645	7.1			RSD (20)	
trans-Chlordane (beta-Chlordane) [2C]	1.160417	5.2			RSD (20)	
cis-Chlordane (alpha-chlordane) [2C]	1.13523	6.5			RSD (20)	
Endosulfan I [2C]	1.025602	6.0			RSD (20)	
4,4'-DDE [2C]	1.039168	6.3			RSD (20)	
Dieldrin [2C]	1.133177	7.5			RSD (20)	
Endrin [2C]	1.137486	7.6			RSD (20)	
Endosulfan II [2C]	1.165938	7.4			RSD (20)	
4,4'-DDD [2C]	1.106416	7.0			RSD (20)	
Endrin Aldehyde [2C]	0.8224595	8.5			RSD (20)	
4,4'-DDT [2C]	1.067896	5.9			RSD (20)	
Endosulfan Sulfate [2C]	1.023857	6.7			RSD (20)	
Endrin Ketone [2C]	1.10585	6.8			RSD (20)	
Methoxychlor [2C]	0.4725766	6.0			RSD (20)	
Hexachlorobutadiene [2C]	1.52251	16.8			RSD (20)	
Hexachlorobenzene [2C]	1.459109	7.2			RSD (20)	
2,4'-DDE [2C]	0.7295523	11.8			RSD (20)	
2,4'-DDD [2C]	0.8188656	8.8			RSD (20)	
2,4'-DDT [2C]	0.8432439	8.1			RSD (20)	
Oxychlordane [2C]	0.8909094	7.3			RSD (20)	
cis-Nonachlor [2C]	1.361061	5.2			RSD (20)	
trans-Nonachlor [2C]	1.43157	5.4			RSD (20)	
Mirex [2C]	0.7915793	9.9			RSD (20)	
Decachlorobiphenyl [2C]	0.8841805	13.0			RSD (20)	
Tetrachlorometaxylene [2C]	1.126107	7.3			RSD (20)	

Printed: 12/17/2022 10:57:45AM

ANALYSIS SEQUENCE

SKL0233

Instrument: ECD6 Element Column ID:
Calibration ID: FL00041

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0233-PEM1	DS1	QC		1	K007286	K006953		
SKL0233-CAL1	INDAA	QC		2	K011594	K006953		
SKL0233-CAL2	INDAB	QC		3	K011593	K006953		
SKL0233-CAL3	INDAC	QC		4	K011592	K006953		
SKL0233-CAL4	INDAD	QC		5	K011591	K006953		
SKL0233-CAL5	INDAE	QC		6	K011590	K006953		
SKL0233-CAL6	INDAF	QC		7	K011589	K006953		
SKL0233-CAL7	INDAG	QC		8	K011463	K006953		
SKL0233-CAL8	WNDA	QC		9	K011595	K006953		
SKL0233-CAL9	WNDB	QC		10	K007148	K006953		
SKL0233-CALA	WNDC	QC		11	K007147	K006953		
SKL0233-CALB	WNDD	QC		12	K007146	K006953		
SKL0233-CALC	WNDE	QC		13	K007145	K006953		
SKL0233-CALD	WNDF	QC		14	K007144	K006953		
SKL0233-CALE	WNDG	QC		15	K007093	K006953		
SKL0233-CALM	NOS1	QC		16	K007375	K006953		
SKL0233-CALN	NOS2	QC		17	K007374	K006953		
SKL0233-CALO	NOS3	QC		18	K007373	K006953		
SKL0233-CALP	NOS4	QC		19	K007372	K006953		
SKL0233-CALQ	NOS5	QC		20	K007371	K006953		
SKL0233-CALR	NOS6	QC		21	K007370	K006953		
SKL0233-CALS	NOS7	QC		22	K007287	K006953		

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ANALYSIS SEQUENCE

SKL0233

Instrument: ECD6 Element Column ID:
Calibration ID: FL00041

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0233-CALF	TOXAPH1	QC		23	K011601	K006953		
SKL0233-CALG	TOXAPH2	QC		24	K011600	K006953		
SKL0233-CALH	TOXAPH3	QC		25	K011599	K006953		
SKL0233-CALI	TOXAPH4	QC		26	K011598	K006953		
SKL0233-CALJ	TOXAPH5	QC		27	K011597	K006953		
SKL0233-CALK	TOXAPH6	QC		28	K011596	K006953		
SKL0233-CALL	TOXAPH7	QC		29	K008546	K006953		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	14-DEC-2022 19:27	22121401.D	1	RINSE	
2	14-DEC-2022 19:44	22121402.D	1	RINSE	
3	14-DEC-2022 20:02	22121403.D	1	SEQ-IBL1	
4	14-DEC-2022 20:20	22121404.D	1	SEQ-PEM1	
5	14-DEC-2022 20:38	22121405.D	1	SEQ-CAL1	
6	14-DEC-2022 20:56	22121406.D	1	SEQ-CAL2	
7	14-DEC-2022 21:14	22121407.D	1	SEQ-CAL3	
8	14-DEC-2022 21:31	22121408.D	1	SEQ-CAL4	
9	14-DEC-2022 21:49	22121409.D	1	SEQ-CAL5	
10	14-DEC-2022 22:07	22121410.D	1	SEQ-CAL6	
11	14-DEC-2022 22:25	22121411.D	1	SEQ-CAL7	
12	14-DEC-2022 22:43	22121412.D	1	SEQ-CAL8	
13	14-DEC-2022 23:01	22121413.D	1	SEQ-CAL9	
14	14-DEC-2022 23:19	22121414.D	1	SEQ-CALA	
15	14-DEC-2022 23:36	22121415.D	1	SEQ-CALB	
16	14-DEC-2022 23:54	22121416.D	1	SEQ-CALC	
17	15-DEC-2022 00:12	22121417.D	1	SEQ-CALD	
18	15-DEC-2022 00:30	22121418.D	1	SEQ-CALE	
19	15-DEC-2022 00:48	22121419.D	1	SEQ-SCV1	
20	15-DEC-2022 01:06	22121420.D	1	SEQ-SCV2	
21	15-DEC-2022 01:24	22121421.D	1	SEQ-CAL1A	
22	15-DEC-2022 01:42	22121422.D	1	SEQ-CAL2A	
23	15-DEC-2022 01:59	22121423.D	1	SEQ-CAL3A	
24	15-DEC-2022 02:17	22121424.D	1	SEQ-CAL4A	
25	15-DEC-2022 02:35	22121425.D	1	SEQ-CAL5A	
26	15-DEC-2022 02:53	22121426.D	1	SEQ-CAL6A	
27	15-DEC-2022 03:11	22121427.D	1	SEQ-CAL7A	
28	15-DEC-2022 03:29	22121428.D	1	SEQ-CAL8A	
29	15-DEC-2022 03:46	22121429.D	1	SEQ-CAL9A	
30	15-DEC-2022 04:04	22121430.D	1	SEQ-CALAA	
31	15-DEC-2022 04:22	22121431.D	1	SEQ-CALAB	
32	15-DEC-2022 04:40	22121432.D	1	SEQ-CALAC	
33	15-DEC-2022 04:58	22121433.D	1	SEQ-CALAD	
34	15-DEC-2022 05:16	22121434.D	1	SEQ-CALAE	
35	15-DEC-2022 05:33	22121435.D	1	SEQ-PEM2	
36	15-DEC-2022 05:51	22121436.D	1	SEQ-ICV1	
37	15-DEC-2022 06:09	22121437.D	1	SEQ-ICV2	
38	15-DEC-2022 06:27	22121438.D	1	SEQ-ICV3	
39	15-DEC-2022 06:45	22121439.D	1	SEQ-ICV4	
40	15-DEC-2022 07:03	22121440.D	1	BKK0688-BLK1	
41	15-DEC-2022 07:21	22121441.D	1	BKK0688-BS1	
42	15-DEC-2022 07:39	22121442.D	1	BKK0688-BS2	
43	15-DEC-2022 07:57	22121443.D	1	BKK0688-BS3	
44	15-DEC-2022 08:15	22121444.D	1	BKK0688-BSD1	
45	15-DEC-2022 08:32	22121445.D	1	BKK0142-BLK1	
46	15-DEC-2022 08:50	22121446.D	1	BKK0142-BS1	
47	15-DEC-2022 09:08	22121447.D	1	BKK0142-BS2	
48	15-DEC-2022 09:26	22121448.D	1	BKK0142-BSD1	
49	15-DEC-2022 09:44	22121449.D	1	BKK0142-MS1	
50	15-DEC-2022 10:02	22121450.D	1	BKK0142-MSD1	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b p

	Inject Date/Time	Filename	DF	LabID	ClientID
51	15-DEC-2022 10:20	22121451.D	1	22J0513-01	
52	15-DEC-2022 10:38	22121452.D	1	22J0513-04	
53	15-DEC-2022 10:55	22121453.D	1	22J0535-01	
54	15-DEC-2022 11:13	22121454.D	1	22K0429-01	
55	15-DEC-2022 11:31	22121455.D	1	22K0429-02	
56	15-DEC-2022 11:49	22121456.D	1	22K0429-03	
57	15-DEC-2022 12:07	22121457.D	1	SEQ-PEM3	
58	15-DEC-2022 12:25	22121458.D	1	SEQ-CCV1	
59	15-DEC-2022 12:43	22121459.D	1	SEQ-CCV2	
60	15-DEC-2022 13:01	22121460.D	1	SEQ-CCV3	
61	15-DEC-2022 13:19	22121461.D	1	SEQ-CCV4	
62	15-DEC-2022 13:36	22121462.D	1	BKK0380-BLK1	
63	15-DEC-2022 13:54	22121463.D	1	BKK0380-BS1	
64	15-DEC-2022 14:12	22121464.D	1	BKK0380-BSD1	
65	15-DEC-2022 14:30	22121465.D	1	22K0157-01	
66	15-DEC-2022 14:48	22121466.D	1	22K0230-01	
67	15-DEC-2022 15:06	22121467.D	1	22K0231-01	
68	15-DEC-2022 15:24	22121468.D	1	BKK0382-BLK1	
69	15-DEC-2022 15:42	22121469.D	1	BKK0382-BS1	
70	15-DEC-2022 16:00	22121470.D	1	BKK0382-BS2	
71	15-DEC-2022 16:18	22121471.D	1	BKK0382-BSD1	
72	15-DEC-2022 16:35	22121472.D	1	22K0075-01	
73	15-DEC-2022 16:53	22121473.D	1	SEQ-PEM4	
74	15-DEC-2022 17:11	22121474.D	1	SEQ-CCV5	
75	15-DEC-2022 17:29	22121475.D	1	SEQ-CCV6	
76	15-DEC-2022 17:47	22121476.D	1	SEQ-CCV7	
77	15-DEC-2022 18:05	22121477.D	1	SEQ-CCV8	
78	15-DEC-2022 18:23	22121478.D	1	BKK0537-BLK1	
79	15-DEC-2022 18:40	22121479.D	1	BKK0537-BS1	
80	15-DEC-2022 18:58	22121480.D	1	BKK0537-BS2	
81	15-DEC-2022 19:16	22121481.D	1	22K0194-01	
82	15-DEC-2022 19:34	22121482.D	1	22K0194-01RE1	10
83	15-DEC-2022 19:52	22121483.D	1	SEQ-PEM5	
84	15-DEC-2022 20:09	22121484.D	1	SEQ-CCV9	
85	15-DEC-2022 20:27	22121485.D	1	SEQ-CCVA	
86	15-DEC-2022 20:45	22121486.D	1	SEQ-CCVB	
87	15-DEC-2022 21:03	22121487.D	1	SEQ-CCVC	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

ARI Job No.: RINS Method: PEST.m Instrument: ecd6.i Date: 14-DEC-2022

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1927	22121401.D	RINSE		1	NO MANUAL INTEGRATION
1944	22121402.D	RINSE		1	NO MANUAL INTEGRATION
2002	22121403.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
2020	22121404.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
2038	22121405.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
2056	22121406.D	SEQ-CAL2		1	NO MANUAL INTEGRATION
2114	22121407.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2131	22121408.D	SEQ-CAL4		1	NO MANUAL INTEGRATION
2149	22121409.D	SEQ-CAL5		1	NO MANUAL INTEGRATION
2207	22121410.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
2225	22121411.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
2243	22121412.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
2301	22121413.D	SEQ-CAL9		1	NO MANUAL INTEGRATION
2319	22121414.D	SEQ-CALA		1	NO MANUAL INTEGRATION
2336	22121415.D	SEQ-CALB		1	NO MANUAL INTEGRATION
2354	22121416.D	SEQ-CALC		1	NO MANUAL INTEGRATION
0012	22121417.D	SEQ-CALD		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0030	22121418.D	SEQ-CALE		1	NO MANUAL INTEGRATION
0048	22121419.D	SEQ-SCV1		1	NO MANUAL INTEGRATION
0106	22121420.D	SEQ-SCV2		1	NO MANUAL INTEGRATION
0124	22121421.D	SEQ-CAL1A		1	NO MANUAL INTEGRATION
0142	22121422.D	SEQ-CAL2A		1	NO MANUAL INTEGRATION
0159	22121423.D	SEQ-CAL3A		1	NO MANUAL INTEGRATION
0217	22121424.D	SEQ-CAL4A		1	NO MANUAL INTEGRATION
0235	22121425.D	SEQ-CAL5A		1	NO MANUAL INTEGRATION
0253	22121426.D	SEQ-CAL6A		1	NO MANUAL INTEGRATION
0311	22121427.D	SEQ-CAL7A		1	NO MANUAL INTEGRATION
0329	22121428.D	SEQ-CAL8A		1	NO MANUAL INTEGRATION
0346	22121429.D	SEQ-CAL9A		1	NO MANUAL INTEGRATION
0404	22121430.D	SEQ-CALAA		1	NO MANUAL INTEGRATION
0422	22121431.D	SEQ-CALAB		1	NO MANUAL INTEGRATION
0440	22121432.D	SEQ-CALAC		1	NO MANUAL INTEGRATION
0458	22121433.D	SEQ-CALAD		1	NO MANUAL INTEGRATION
0516	22121434.D	SEQ-CALAE		1	NO MANUAL INTEGRATION
0533	22121435.D	SEQ-PEM2		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0551	22121436.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
0609	22121437.D	SEQ-ICV2		1	NO MANUAL INTEGRATION
0627	22121438.D	SEQ-ICV3		1	NO MANUAL INTEGRATION
0645	22121439.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
0703	22121440.D	BKK0688-BLK1		1	NO MANUAL INTEGRATION
0721	22121441.D	BKK0688-BS1		1	NO MANUAL INTEGRATION
0739	22121442.D	BKK0688-BS2		1	NO MANUAL INTEGRATION
0757	22121443.D	BKK0688-BS3		1	NO MANUAL INTEGRATION
0815	22121444.D	BKK0688-BSD1		1	NO MANUAL INTEGRATION
0832	22121445.D	BKK0142-BLK1		1	NO MANUAL INTEGRATION
0850	22121446.D	BKK0142-BS1		1	NO MANUAL INTEGRATION
0908	22121447.D	BKK0142-BS2		1	NO MANUAL INTEGRATION
0926	22121448.D	BKK0142-BSD1		1	NO MANUAL INTEGRATION
0944	22121449.D	BKK0142-MS1		1	NO MANUAL INTEGRATION
1002	22121450.D	BKK0142-MSD1		1	NO MANUAL INTEGRATION
1020	22121451.D	22J0513-01		1	NO MANUAL INTEGRATION
1038	22121452.D	22J0513-04		1	NO MANUAL INTEGRATION
1055	22121453.D	22J0535-01		1	trans-Chlordane,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1113	22121454.D	22K0429-01		1	Heptachlor epoxide b,
1131	22121455.D	22K0429-02		1	Heptachlor epoxide b,
1149	22121456.D	22K0429-03		1	Hexachlorobenzene,
1207	22121457.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
1225	22121458.D	SEQ-CCV1		1	NO MANUAL INTEGRATION
1243	22121459.D	SEQ-CCV2		1	NO MANUAL INTEGRATION
1301	22121460.D	SEQ-CCV3		1	NO MANUAL INTEGRATION
1319	22121461.D	SEQ-CCV4		1	NO MANUAL INTEGRATION
1336	22121462.D	BKK0380-BLK1		1	NO MANUAL INTEGRATION
1354	22121463.D	BKK0380-BS1		1	NO MANUAL INTEGRATION
1412	22121464.D	BKK0380-BSD1		1	NO MANUAL INTEGRATION
1430	22121465.D	22K0157-01		1	NO MANUAL INTEGRATION
1448	22121466.D	22K0230-01		1	NO MANUAL INTEGRATION
1506	22121467.D	22K0231-01		1	NO MANUAL INTEGRATION
1524	22121468.D	BKK0382-BLK1		1	NO MANUAL INTEGRATION
1542	22121469.D	BKK0382-BS1		1	NO MANUAL INTEGRATION
1600	22121470.D	BKK0382-BS2		1	NO MANUAL INTEGRATION
1618	22121471.D	BKK0382-BSD1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1635	22121472.D	22K0075-01		1	NO MANUAL INTEGRATION
1653	22121473.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
1711	22121474.D	SEQ-CCV5		1	NO MANUAL INTEGRATION
1729	22121475.D	SEQ-CCV6		1	NO MANUAL INTEGRATION
1747	22121476.D	SEQ-CCV7		1	NO MANUAL INTEGRATION
1805	22121477.D	SEQ-CCV8		1	NO MANUAL INTEGRATION
1823	22121478.D	BKK0537-BLK1		1	NO MANUAL INTEGRATION
1840	22121479.D	BKK0537-BS1		1	NO MANUAL INTEGRATION
1858	22121480.D	BKK0537-BS2		1	NO MANUAL INTEGRATION
1916	22121481.D	22K0194-01		1	NO MANUAL INTEGRATION
1934	22121482.D	22K0194-01RE1	10	1	NO MANUAL INTEGRATION
1952	22121483.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2009	22121484.D	SEQ-CCV9		1	NO MANUAL INTEGRATION
2027	22121485.D	SEQ-CCVA		1	NO MANUAL INTEGRATION
2045	22121486.D	SEQ-CCVB		1	NO MANUAL INTEGRATION
2103	22121487.D	SEQ-CCVC		1	NO MANUAL INTEGRATION
1927	22121401.D	RINSE		1	NO MANUAL INTEGRATION
1944	22121402.D	RINSE		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2002	22121403.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
2020	22121404.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
2038	22121405.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
2056	22121406.D	SEQ-CAL2		1	NO MANUAL INTEGRATION
2114	22121407.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2131	22121408.D	SEQ-CAL4		1	NO MANUAL INTEGRATION
2149	22121409.D	SEQ-CAL5		1	NO MANUAL INTEGRATION
2207	22121410.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
2225	22121411.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
2243	22121412.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
2301	22121413.D	SEQ-CAL9		1	NO MANUAL INTEGRATION
2319	22121414.D	SEQ-CALA		1	NO MANUAL INTEGRATION
2336	22121415.D	SEQ-CALB		1	NO MANUAL INTEGRATION
2354	22121416.D	SEQ-CALC		1	NO MANUAL INTEGRATION
0012	22121417.D	SEQ-CALD		1	NO MANUAL INTEGRATION
0030	22121418.D	SEQ-CALE		1	NO MANUAL INTEGRATION
0048	22121419.D	SEQ-SCV1		1	NO MANUAL INTEGRATION
0106	22121420.D	SEQ-SCV2		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0124	22121421.D	SEQ-CAL1A		1	NO MANUAL INTEGRATION
0142	22121422.D	SEQ-CAL2A		1	NO MANUAL INTEGRATION
0159	22121423.D	SEQ-CAL3A		1	NO MANUAL INTEGRATION
0217	22121424.D	SEQ-CAL4A		1	NO MANUAL INTEGRATION
0235	22121425.D	SEQ-CAL5A		1	NO MANUAL INTEGRATION
0253	22121426.D	SEQ-CAL6A		1	NO MANUAL INTEGRATION
0311	22121427.D	SEQ-CAL7A		1	NO MANUAL INTEGRATION
0329	22121428.D	SEQ-CAL8A		1	NO MANUAL INTEGRATION
0346	22121429.D	SEQ-CAL9A		1	NO MANUAL INTEGRATION
0404	22121430.D	SEQ-CALAA		1	NO MANUAL INTEGRATION
0422	22121431.D	SEQ-CALAB		1	NO MANUAL INTEGRATION
0440	22121432.D	SEQ-CALAC		1	NO MANUAL INTEGRATION
0458	22121433.D	SEQ-CALAD		1	NO MANUAL INTEGRATION
0516	22121434.D	SEQ-CALAE		1	NO MANUAL INTEGRATION
0533	22121435.D	SEQ-PEM2		1	NO MANUAL INTEGRATION
0551	22121436.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
0609	22121437.D	SEQ-ICV2		1	NO MANUAL INTEGRATION
0627	22121438.D	SEQ-ICV3		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0645	22121439.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
0703	22121440.D	BKK0688-BLK1		1	NO MANUAL INTEGRATION
0721	22121441.D	BKK0688-BS1		1	NO MANUAL INTEGRATION
0739	22121442.D	BKK0688-BS2		1	NO MANUAL INTEGRATION
0757	22121443.D	BKK0688-BS3		1	NO MANUAL INTEGRATION
0815	22121444.D	BKK0688-BSD1		1	NO MANUAL INTEGRATION
0832	22121445.D	BKK0142-BLK1		1	NO MANUAL INTEGRATION
0850	22121446.D	BKK0142-BS1		1	NO MANUAL INTEGRATION
0908	22121447.D	BKK0142-BS2		1	NO MANUAL INTEGRATION
0926	22121448.D	BKK0142-BSD1		1	NO MANUAL INTEGRATION
0944	22121449.D	BKK0142-MS1		1	NO MANUAL INTEGRATION
1002	22121450.D	BKK0142-MSD1		1	NO MANUAL INTEGRATION
1020	22121451.D	22J0513-01		1	NO MANUAL INTEGRATION
1038	22121452.D	22J0513-04		1	NO MANUAL INTEGRATION
1055	22121453.D	22J0535-01		1	trans-Chlordane [C],
1113	22121454.D	22K0429-01		1	NO MANUAL INTEGRATION
1131	22121455.D	22K0429-02		1	Aldrin [C], Heptachlor epoxide b [C], trans-Chlordane [C],
1149	22121456.D	22K0429-03		1	Aldrin [C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1207	22121457.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
1225	22121458.D	SEQ-CCV1		1	NO MANUAL INTEGRATION
1243	22121459.D	SEQ-CCV2		1	NO MANUAL INTEGRATION
1301	22121460.D	SEQ-CCV3		1	NO MANUAL INTEGRATION
1319	22121461.D	SEQ-CCV4		1	NO MANUAL INTEGRATION
1336	22121462.D	BKK0380-BLK1		1	NO MANUAL INTEGRATION
1354	22121463.D	BKK0380-BS1		1	NO MANUAL INTEGRATION
1412	22121464.D	BKK0380-BSD1		1	NO MANUAL INTEGRATION
1430	22121465.D	22K0157-01		1	NO MANUAL INTEGRATION
1448	22121466.D	22K0230-01		1	NO MANUAL INTEGRATION
1506	22121467.D	22K0231-01		1	NO MANUAL INTEGRATION
1524	22121468.D	BKK0382-BLK1		1	NO MANUAL INTEGRATION
1542	22121469.D	BKK0382-BS1		1	NO MANUAL INTEGRATION
1600	22121470.D	BKK0382-BS2		1	NO MANUAL INTEGRATION
1618	22121471.D	BKK0382-BSD1		1	NO MANUAL INTEGRATION
1635	22121472.D	22K0075-01		1	NO MANUAL INTEGRATION
1653	22121473.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
1711	22121474.D	SEQ-CCV5		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1729	22121475.D	SEQ-CCV6		1	NO MANUAL INTEGRATION
1747	22121476.D	SEQ-CCV7		1	NO MANUAL INTEGRATION
1805	22121477.D	SEQ-CCV8		1	NO MANUAL INTEGRATION
1823	22121478.D	BKK0537-BLK1		1	NO MANUAL INTEGRATION
1840	22121479.D	BKK0537-BS1		1	NO MANUAL INTEGRATION
1858	22121480.D	BKK0537-BS2		1	NO MANUAL INTEGRATION
1916	22121481.D	22K0194-01		1	NO MANUAL INTEGRATION
1934	22121482.D	22K0194-01RE1	10	1	NO MANUAL INTEGRATION
1952	22121483.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2010	22121484.D	SEQ-CCV9		1	NO MANUAL INTEGRATION
2027	22121485.D	SEQ-CCVA		1	NO MANUAL INTEGRATION
2045	22121486.D	SEQ-CCVB		1	NO MANUAL INTEGRATION
2103	22121487.D	SEQ-CCVC		1	NO MANUAL INTEGRATION

Security Status Report

Date: 17-Dec-2022 10:57

22121401.D	Data Locked	jrains, 17-Dec-2022 10:57
22121402.D	Data Locked	jrains, 17-Dec-2022 10:57
22121403.D	Data Locked	jrains, 17-Dec-2022 10:57
22121404.D	Data Locked	jrains, 17-Dec-2022 10:57
22121405.D	Data Locked	jrains, 17-Dec-2022 10:57
22121406.D	Data Locked	jrains, 17-Dec-2022 10:57
22121407.D	Data Locked	jrains, 17-Dec-2022 10:57
22121408.D	Data Locked	jrains, 17-Dec-2022 10:57
22121409.D	Data Locked	jrains, 17-Dec-2022 10:57
22121410.D	Data Locked	jrains, 17-Dec-2022 10:57
22121411.D	Data Locked	jrains, 17-Dec-2022 10:57
22121412.D	Data Locked	jrains, 17-Dec-2022 10:57
22121413.D	Data Locked	jrains, 17-Dec-2022 10:57
22121414.D	Data Locked	jrains, 17-Dec-2022 10:57
22121415.D	Data Locked	jrains, 17-Dec-2022 10:57
22121416.D	Data Locked	jrains, 17-Dec-2022 10:57
22121417.D	Data Locked	jrains, 17-Dec-2022 10:57
22121418.D	Data Locked	jrains, 17-Dec-2022 10:57
22121419.D	Data Locked	jrains, 17-Dec-2022 10:57
22121420.D	Data Locked	jrains, 17-Dec-2022 10:57
22121421.D	Data Locked	jrains, 17-Dec-2022 10:57
22121422.D	Data Locked	jrains, 17-Dec-2022 10:57
22121423.D	Data Locked	jrains, 17-Dec-2022 10:57
22121424.D	Data Locked	jrains, 17-Dec-2022 10:57
22121425.D	Data Locked	jrains, 17-Dec-2022 10:57
22121426.D	Data Locked	jrains, 17-Dec-2022 10:57
22121427.D	Data Locked	jrains, 17-Dec-2022 10:57
22121428.D	Data Locked	jrains, 17-Dec-2022 10:57
22121429.D	Data Locked	jrains, 17-Dec-2022 10:57
22121430.D	Data Locked	jrains, 17-Dec-2022 10:57
22121431.D	Data Locked	jrains, 17-Dec-2022 10:57
22121432.D	Data Locked	jrains, 17-Dec-2022 10:57
22121433.D	Data Locked	jrains, 17-Dec-2022 10:57
22121434.D	Data Locked	jrains, 17-Dec-2022 10:57

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121428.D
Level 2: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121429.D
Level 3: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121430.D
Level 4: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121431.D
Level 5: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121432.D
Level 6: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121433.D
Level 7: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121434.D

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
1 Hexachlorobutadiene [C]	+++++	1.97561	1.64885	1.49248	1.37610	1.34121	1.30081	1.52251	16.761
5 Hexachlorobenzene [C]	+++++	1.60221	1.52062	1.49140	1.45025	1.38595	1.30422	1.45911	7.170
6 alpha-BHC [C]	+++++	1.58236	1.58624	1.63316	1.64049	1.61544	1.56190	1.60327	1.946
7 gamma-BHC (Lindane) [C]	+++++	1.35507	1.34878	1.38146	1.39277	1.36661	1.31891	1.36060	1.921
8 beta-BHC [C]	+++++	0.65278	0.61729	0.61846	0.61258	0.59180	0.56430	0.60954	4.856
9 delta-BHC [C]	+++++	1.32376	1.30723	1.33943	1.32843	1.33198	1.29291	1.32062	1.312
10 Heptachlor [C]	+++++	1.27025	1.23424	1.25841	1.27225	1.21576	1.14412	1.23250	3.937
11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
12 Aldrin [C]	+++++	1.51140	1.41672	1.43264	1.43038	1.37092	1.28126	1.40722	5.441
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
14 Heptachlor epoxide b [C]	+++++	1.29770	1.17460	1.17429	1.17471	1.11443	1.04614	1.16364	7.144
15 cis-Chlordane [C]	+++++	1.25850	1.15320	1.13505	1.13625	1.08979	1.03859	1.13523	6.464
16 trans-Chlordane [C]	+++++	1.25449	1.17610	1.16484	1.16885	1.12553	1.07269	1.16042	5.185
17 Endosulfan I [C]	+++++	1.11826	1.04415	1.03541	1.03470	0.98850	0.93258	1.02560	6.032
18 4,4'-DDE [C]	+++++	1.12024	1.06963	1.06439	1.05541	0.98971	0.93563	1.03917	6.320
19 Dieldrin [C]	+++++	1.27001	1.16284	1.13936	1.13610	1.07139	1.01937	1.13318	7.532
20 Endrin [C]	+++++	1.25691	1.17909	1.15948	1.14960	1.06606	1.01378	1.13749	7.566
21 4,4'-DDD [C]	+++++	1.23448	1.12156	1.11779	1.11200	1.04628	1.00638	1.10642	7.049
22 Endosulfan II [C]	+++++	1.29682	1.20296	1.18849	1.16050	1.09906	1.04780	1.16594	7.425

ARI Labs, Inc.

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Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
23 4,4'-DDT [C]	+++++	1.17591	1.07782	1.06761	1.07327	1.01936	0.99339	1.06790	5.878
24 Endrin aldehyde [C]	+++++	0.94301	0.84303	0.82492	0.81299	0.77277	0.73803	0.82246	8.537
25 Endosulfan sulfate [C]	+++++	1.13777	1.04255	1.03037	1.02302	0.97217	0.93725	1.02386	6.702
26 Methoxychlor [C]	+++++	0.51841	0.48668	0.47517	0.46817	0.44340	0.44364	0.47258	5.996
27 Endrin ketone [C]	+++++	1.23563	1.11999	1.11440	1.10085	1.04766	1.01657	1.10585	6.827
29 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####
31 Aroclor-1232(1)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####
32 Aroclor-1242(1)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####
33 Aroclor-1248(1)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####
34 Aroclor-1254(1)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####
35 Aroclor-1260(1)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####
36 Aroclor-1262(1)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
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Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
37 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
38 Toxaphene [C](1)	0.01492	0.01529	0.01573	0.01558	0.01527	0.01455	0.01387	0.01503	4.285
(2)	0.03524	0.03538	0.03581	0.03480	0.03351	0.03170	0.03010	0.03379	6.368
(3)	0.02615	0.02659	0.02671	0.02640	0.02571	0.02464	0.02387	0.02572	4.197
(4)	0.08868	0.08690	0.08740	0.08502	0.08225	0.07926	0.07782	0.08390	5.022
(5)	0.04138	0.04124	0.04193	0.04145	0.04102	0.04046	0.04062	0.04116	1.227
39 2,4-DDE [C]	+++++	0.83433	0.80524	0.74313	0.72589	0.66671	0.60202	0.72955	11.810

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
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Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
40 2,4-DDD [C]	+++++	0.90975	0.87971	0.82738	0.81642	0.76623	0.71370	0.81887	8.785
41 2,4-DDT [C]	+++++	0.94001	0.88046	0.85026	0.84852	0.79773	0.74249	0.84324	8.052
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 Oxychlordane [C]	+++++	0.96447	0.94678	0.90333	0.89663	0.84333	0.79092	0.89091	7.271
44 trans-Nonachlor [C]	+++++	1.48885	1.51762	1.45179	1.44766	1.37681	1.30668	1.43157	5.406
45 cis-Nonachlor [C]	+++++	1.44924	1.40707	1.37647	1.37212	1.31329	1.24817	1.36106	5.224
46 Mirex [C]	+++++	0.93314	0.81155	0.79462	0.76268	0.73998	0.70751	0.79158	9.949
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 Chlordane (NOS) [C](1)	0.03877	0.03690	0.03764	0.03840	0.03761	0.03805	0.03764	0.03786	1.615
(2)	0.04647	0.04439	0.04416	0.04357	0.04103	0.03978	0.03825	0.04252	6.844
(3)	0.14135	0.14252	0.14927	0.15059	0.14418	0.14081	0.13812	0.14383	3.173

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
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Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
49 Trifluralin	*****	*****	*****	*****	*****	*****	*****	*****	*****
50 Dacthal	*****	*****	*****	*****	*****	*****	*****	*****	*****
51 Oxadiazon	*****	*****	*****	*****	*****	*****	*****	*****	*****
52 Kelthane	*****	*****	*****	*****	*****	*****	*****	*****	*****
53 Chlorpyrifos	*****	*****	*****	*****	*****	*****	*****	*****	*****
54 Methyl Parathion	*****	*****	*****	*****	*****	*****	*****	*****	*****
55 Ethyl Parathion	*****	*****	*****	*****	*****	*****	*****	*****	*****
56 Kepone [C]	*****	*****	*****	*****	*****	*****	*****	*****	*****
57 1-Chloropyrene	*****	*****	*****	*****	*****	*****	*****	*****	*****
$ 4 Tetrachloro-m-xylene [C]	*****	1.22086	1.17937	1.16483	1.12798	1.06878	0.99482	1.12611	7.306
$ 28 Decachlorobiphenyl [C]	*****	1.08714	0.93916	0.85624	0.84996	0.80139	0.77119	0.88418	12.973

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd6.i\20220809.b\22080909.D
Level 2: \\target\share\chem4\ecd6.i\20220809.b\22080910.D
Level 3: \\target\share\chem4\ecd6.i\20220809.b\22080911.D
Level 4: \\target\share\chem4\ecd6.i\20220809.b\22080912.D
Level 5: \\target\share\chem4\ecd6.i\20220809.b\22080913.D
Level 6: \\target\share\chem4\ecd6.i\20220809.b\22080914.D
Level 7: \\target\share\chem4\ecd6.i\20220809.b\22080915.D

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7							
1 Hexachlorobutadiene	+++++	1.64215	1.55667	1.51049	1.47308	1.40536		
	1.30292						1.48178	7.988
5 Hexachlorobenzene	+++++	1.48647	1.40778	1.36481	1.31957	1.25458		
	1.15582						1.33150	8.750
6 alpha-BHC	+++++	1.41183	1.40802	1.42270	1.42790	1.37811		
	1.29587						1.39074	3.567
7 gamma-BHC (Lindane)	+++++	1.20108	1.18733	1.20704	1.21598	1.18532		
	1.11861						1.18589	2.948
8 beta-BHC	+++++	0.65244	0.60612	0.58927	0.57533	0.54649		
	0.50588						0.57925	8.684
9 delta-BHC	+++++	1.15252	1.13315	1.18185	1.21952	1.21492		
	1.16159						1.17726	2.950
10 Heptachlor	+++++	1.18674	1.12881	1.11527	1.09009	1.03076		
	0.94214						1.08230	7.897
11 Aldrin	+++++	1.14505	1.10493	1.10576	1.09698	1.04621		
	0.96536						1.07738	5.877

ARI Labs, Inc.

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Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
14 Heptachlor epoxide b	+++++	1.05278	0.99602	0.98316	0.95413	0.89408	0.81733	0.94959	8.751
15 cis-Chlordane	+++++	1.00217	0.95563	0.94931	0.93343	0.89233	0.82943	0.92705	6.424
16 trans-Chlordane	+++++	1.02223	0.96054	0.95840	0.94631	0.90606	0.84267	0.93937	6.420
17 Endosulfan I	+++++	1.10444	1.01004	0.97510	0.92642	0.86761	0.77363	0.94287	12.207
18 4,4'-DDE	+++++	0.85783	0.84618	0.86175	0.85068	0.80349	0.73346	0.82557	6.027
19 Dieldrin	+++++	1.02112	0.97469	0.96064	0.93395	0.87876	0.79720	0.92773	8.553
20 Endrin	+++++	1.03359	0.99258	1.01493	1.03951	0.95184	0.92125	0.99228	4.755
21 4,4'-DDD	+++++	1.26749	1.21690	1.21140	1.19455	1.09258	1.02286	1.16763	7.815
22 Endosulfan II	+++++	1.32213	1.30831	1.28817	1.25191	1.14300	1.05695	1.22841	8.614

ARI Labs, Inc.

INITIAL CALIBRATION DATA

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Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
23 4,4'-DDT	+++++	1.20278	1.19912	1.21231	1.21971	1.13284	1.06544	1.17203	5.186
24 Endrin aldehyde	+++++	1.05042	1.01673	1.00197	0.99460	0.91340	0.84575	0.97048	7.836
25 Methoxychlor	+++++	0.56408	0.54010	0.51985	0.50693	0.45626	0.43428	0.50358	9.854
26 Endosulfan sulfate	+++++	1.14290	1.11216	1.09802	1.09968	1.00734	0.94888	1.06816	6.922
27 Endrin ketone	+++++	1.47959	1.40243	1.34455	1.31335	1.19489	1.12695	1.31029	9.966
29 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
31 Aroclor-1232(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
32 Aroclor-1242(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

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Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(6)	*****	*****	*****	*****	*****	*****	*****	*****	*****
33 Aroclor-1248(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
34 Aroclor-1254(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
35 Aroclor-1260(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
36 Aroclor-1262(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
37 Aroclor-1268(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
38 Toxaphene(1)	0.02824	0.03896	0.03693	0.03480	0.03418	0.02891	0.02792	0.03285	13.645
(2)	0.08343	0.10636	0.10204	0.09499	0.09608	0.08394	0.08263	0.09278	10.362
(3)	0.04776	0.06283	0.06069	0.06020	0.06090	0.05141	0.05119	0.05643	10.755
(4)	0.05098	0.07225	0.07089	0.06844	0.06847	0.06296	0.06388	0.06541	11.021
(5)	0.04955	0.06896	0.06748	0.06372	0.06603	0.05846	0.05934	0.06194	10.880

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
39 2,4-DDE	+++++	1.14103	1.08072	1.09005	1.06169	0.88466	0.89319	1.02522	10.614
40 2,4-DDD	+++++	1.08881	1.01841	0.99599	0.98400	0.85150	0.85318	0.96531	9.816
41 2,4-DDT	+++++	0.97799	0.97179	0.97332	0.98841	0.88743	0.88215	0.94685	5.117
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 Oxychlordane	+++++	1.32927	1.24890	1.22496	1.20236	1.04785	1.05015	1.18392	9.540
44 trans-Nonachlor	+++++	1.68629	1.57989	1.58456	1.55669	1.34437	1.36253	1.51906	8.949
45 cis-Nonachlor	+++++	1.62941	1.55213	1.53413	1.52347	1.34758	1.35527	1.49033	7.639
46 Mirex	+++++	1.20478	1.11168	1.05006	1.00932	0.85381	0.85786	1.01459	13.749
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 Chlordane (NOS)(1)	0.06029	0.05735	0.05369	0.05005	0.04581	0.04808	0.04531	0.05151	11.230
(2)	0.15038	0.14213	0.13501	0.13074	0.12020	0.12674	0.12030	0.13221	8.482

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(3)	0.17221	0.15459	0.13623	0.13893	0.12753	0.13518	0.13160	0.14232	11.024
49 Trifluralin	*****	*****	*****	*****	*****	*****	*****	*****	*****
50 Dacthal	*****	*****	*****	*****	*****	*****	*****	*****	*****
51 Oxadiazon	*****	*****	*****	*****	*****	*****	*****	*****	*****
52 Kelthane	*****	*****	*****	*****	*****	*****	*****	*****	*****
53 Chlorpyrifos	*****	*****	*****	*****	*****	*****	*****	*****	*****
54 Methyl Parathion	*****	*****	*****	*****	*****	*****	*****	*****	*****
55 Ethyl Parathion	*****	*****	*****	*****	*****	*****	*****	*****	*****
56 Kepone	*****	*****	*****	*****	*****	*****	*****	*****	*****
57 1-Chloropyrene	*****	*****	*****	*****	*****	*****	*****	*****	*****
$ 4 Tetrachloro-m-xylene	*****	1.10401	1.05839	1.02629	0.99588	0.93352	0.85040	0.99475	9.166

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
$ 28 Decachlorobiphenyl	+++++	0.99444	0.96249	0.90111	0.87014	0.79161	0.75653	0.87939	10.607

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121405	22121406	22121407	22121408	22121409	22121410	22121411
INJ.DATE:	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022
INJ.TIME:	20:38	20:56	21:14	21:31	21:49	22:07	22:25

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.323	2.323	2.324	2.323	2.324	2.324	2.324	2.324	2.294-2.354	2.323	0.000
* 2 1Bromo-2nitrobenzene	3.151	3.151	3.152	3.151	3.151	3.151	3.151	3.151	3.121-3.181	3.151	0.000
* 3 Hexabromobiphenyl	9.504	9.503	9.504	9.505	9.505	9.504	9.504	9.505	9.475-9.535	9.504	0.001
$ 4 Tetrachloro-m-xylene	3.828	3.828	3.828	3.828	3.828	3.828	3.828	3.828	3.798-3.858	3.828	0.000
5 Hexachlorobenzene	4.182	4.182	4.183	4.183	4.182	4.183	4.182	4.182	4.152-4.212	4.183	0.000
6 alpha-BHC	4.342	4.342	4.343	4.343	4.342	4.342	4.342	4.342	4.312-4.372	4.342	0.000
7 gamma-BHC (Lindane)	4.645	4.645	4.646	4.646	4.645	4.646	4.645	4.645	4.615-4.675	4.645	0.000
8 beta-BHC	4.726	4.726	4.727	4.726	4.726	4.726	4.726	4.726	4.696-4.756	4.726	0.000
9 delta-BHC	4.909	4.909	4.910	4.910	4.909	4.910	4.910	4.909	4.879-4.939	4.910	0.000
10 Heptachlor	5.130	5.129	5.130	5.130	5.130	5.130	5.130	5.130	5.100-5.160	5.130	0.000
11 Aldrin	5.453	5.453	5.455	5.454	5.454	5.454	5.454	5.454	5.424-5.484	5.454	0.000
12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.597-13.657	+++++	+++++
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.839-10.899	+++++	+++++
14 Heptachlor epoxide b	6.130	6.130	6.132	6.131	6.130	6.130	6.130	6.130	6.100-6.160	6.131	0.001
15 cis-Chlordane	6.417	6.417	6.417	6.418	6.417	6.417	6.417	6.417	6.387-6.447	6.417	0.000
16 trans-Chlordane	6.270	6.271	6.271	6.271	6.271	6.271	6.271	6.271	6.241-6.301	6.271	0.000
17 Endosulfan I	6.572	6.572	6.573	6.573	6.572	6.572	6.573	6.572	6.542-6.602	6.573	0.000

Reviewer 1 _____ Date:_____
Reviewer 2 _____ Date:_____

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE	6.489	6.489	6.490	6.490	6.489	6.489	6.490	6.489	6.459-6.519	6.489	0.000
	19 Dieldrin	6.831	6.832	6.832	6.832	6.831	6.832	6.832	6.831	6.801-6.861	6.832	0.000
	20 Endrin	7.081	7.081	7.082	7.082	7.081	7.082	7.082	7.081	7.051-7.111	7.082	0.000
	21 4,4'-DDD	7.135	7.136	7.136	7.136	7.135	7.136	7.135	7.135	7.105-7.165	7.136	0.000
	22 Endosulfan II	7.318	7.317	7.318	7.318	7.317	7.317	7.317	7.317	7.287-7.347	7.317	0.000
	23 4,4'-DDT	7.427	7.427	7.428	7.428	7.427	7.427	7.428	7.427	7.397-7.457	7.428	0.000
	24 Endrin aldehyde	7.746	7.746	7.746	7.746	7.746	7.746	7.746	7.746	7.716-7.776	7.746	0.000
	25 Methoxychlor	7.912	7.912	7.913	7.912	7.912	7.912	7.912	7.912	7.882-7.942	7.912	0.000
	26 Endosulfan sulfate	8.180	8.179	8.180	8.180	8.180	8.179	8.180	8.180	8.150-8.210	8.180	0.000
	27 Endrin ketone	8.453	8.452	8.454	8.453	8.453	8.453	8.454	8.453	8.423-8.483	8.453	0.001
$	28 Decachlorobiphenyl	9.355	9.354	9.355	9.355	9.355	9.355	9.356	9.355	9.325-9.385	9.355	0.000
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
	38 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.931	6.901-6.961	+++++	+++++
	39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.106	6.076-6.136	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.681	6.651-6.711	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.957	6.927-6.987	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.014	5.984-6.044	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.397	6.367-6.427	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.112	7.082-7.142	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.082	8.052-8.112	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.593	5.563-5.623	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121405	22121406	22121407	22121408	22121409	22121410	22121411
INJ.DATE:	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022
INJ.TIME:	20:38	20:56	21:14	21:31	21:49	22:07	22:25

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene [C	2.500	2.500	2.500	2.500	2.500	2.500	2.501	2.501	2.471-2.531	2.500	0.000
* 2 1Bromo-2nitrobenzene [	3.350	3.350	3.351	3.351	3.350	3.351	3.351	3.351	3.321-3.381	3.351	0.000
* 3 Hexabromobiphenyl[C]	11.054	11.053	11.054	11.054	11.053	11.053	11.054	11.054	11.024-11.084	11.054	0.000
$ 4 Tetrachloro-m-xylene [	4.220	4.220	4.220	4.220	4.220	4.221	4.220	4.220	4.190-4.250	4.220	0.000
5 Hexachlorobenzene [C]	4.718	4.718	4.718	4.718	4.718	4.718	4.718	4.718	4.688-4.748	4.718	0.000
6 alpha-BHC [C]	4.860	4.859	4.860	4.860	4.860	4.860	4.861	4.861	4.831-4.891	4.860	0.000
7 gamma-BHC (Lindane) [C	5.257	5.257	5.258	5.258	5.258	5.258	5.258	5.258	5.228-5.288	5.258	0.000
8 beta-BHC [C]	5.337	5.337	5.338	5.337	5.337	5.337	5.337	5.337	5.307-5.367	5.337	0.000
9 delta-BHC [C]	5.690	5.691	5.691	5.691	5.690	5.691	5.691	5.691	5.661-5.721	5.691	0.000
10 Heptachlor [C]	5.786	5.787	5.787	5.787	5.787	5.787	5.787	5.787	5.757-5.817	5.787	0.000
11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.558-14.618	+++++	+++++
12 Aldrin [C]	6.190	6.190	6.191	6.191	6.191	6.190	6.191	6.191	6.161-6.221	6.191	0.000
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.650-12.710	+++++	+++++
14 Heptachlor epoxide b [	6.845	6.845	6.845	6.846	6.845	6.846	6.845	6.845	6.815-6.875	6.845	0.000
15 cis-Chlordane [C]	7.215	7.215	7.216	7.216	7.216	7.215	7.216	7.216	7.186-7.246	7.215	0.000
16 trans-Chlordane [C]	7.056	7.055	7.056	7.056	7.056	7.056	7.056	7.056	7.026-7.086	7.056	0.000
17 Endosulfan I [C]	7.288	7.288	7.289	7.289	7.289	7.288	7.289	7.289	7.259-7.319	7.288	0.000

Reviewer 1 _____ Date:_____
Reviewer 2 _____ Date:_____

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE [C]	7.370	7.370	7.371	7.371	7.370	7.371	7.371	7.371	7.341-7.401	7.371	0.000
	19 Dieldrin [C]	7.582	7.582	7.583	7.583	7.582	7.582	7.583	7.583	7.553-7.613	7.582	0.000
	20 Endrin [C]	7.906	7.906	7.906	7.907	7.907	7.907	7.907	7.907	7.877-7.937	7.907	0.000
	21 4,4'-DDD [C]	7.976	7.976	7.976	7.977	7.976	7.976	7.976	7.976	7.946-8.006	7.976	0.000
	22 Endosulfan II [C]	8.117	8.116	8.117	8.117	8.117	8.117	8.117	8.117	8.087-8.147	8.117	0.000
	23 4,4'-DDT [C]	8.294	8.294	8.294	8.295	8.295	8.295	8.295	8.295	8.265-8.325	8.295	0.000
	24 Endrin aldehyde [C]	8.448	8.447	8.448	8.448	8.448	8.448	8.448	8.448	8.418-8.478	8.448	0.000
	25 Endosulfan sulfate [C]	8.715	8.714	8.715	8.715	8.715	8.715	8.715	8.715	8.685-8.745	8.715	0.000
	26 Methoxychlor [C]	8.935	8.934	8.935	8.936	8.935	8.935	8.936	8.936	8.906-8.966	8.935	0.001
	27 Endrin ketone [C]	9.239	9.239	9.239	9.240	9.239	9.239	9.240	9.240	9.210-9.270	9.239	0.000
$	28 Decachlorobiphenyl [C]	10.466	10.465	10.466	10.466	10.466	10.466	10.467	10.467	10.437-10.497	10.466	0.001
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
	38 Toxaphene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.126	7.096-7.156	+++++	+++++
	39 2,4-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.036	7.006-7.066	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.591	7.561-7.621	+++++	+++++
41 2,4-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.883-7.943	+++++	+++++
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.741	6.711-6.771	+++++	+++++
44 trans-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.155	7.125-7.185	+++++	+++++
45 cis-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.975	7.945-8.005	+++++	+++++
46 Mirex [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.223	9.193-9.253	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.612	5.582-5.642	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121412	22121413	22121414	22121415	22121416	22121417	22121418
INJ.DATE:	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	22:43	23:01	23:19	23:36	23:54	00:12	00:30

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.324	2.294-2.354	+++++	+++++
*	2 1Bromo-2nitrobenzene	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.121-3.181	3.151	0.000
*	3 Hexabromobiphenyl	9.504	9.504	9.504	9.504	9.504	9.504	9.504	9.505	9.475-9.535	9.504	0.000
$	4 Tetrachloro-m-xylene	+++++	+++++	+++++	+++++	3.800	3.800	3.800	3.828	3.798-3.858	3.800	0.000
	5 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.182	4.152-4.212	+++++	+++++
	6 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.342	4.312-4.372	+++++	+++++
	7 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.645	4.615-4.675	+++++	+++++
	8 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.726	4.696-4.756	+++++	+++++
	9 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.909	4.879-4.939	+++++	+++++
	10 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.130	5.100-5.160	+++++	+++++
	11 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.454	5.424-5.484	+++++	+++++
	12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.597-13.657	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.839-10.899	+++++	+++++
	14 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.130	6.100-6.160	+++++	+++++
	15 cis-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.417	6.387-6.447	+++++	+++++
	16 trans-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.271	6.241-6.301	+++++	+++++
	17 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.572	6.542-6.602	+++++	+++++

Reviewer 1 _____ Date:_____
Reviewer 2 _____ Date:_____

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.489	6.459-6.519	+++++	+++++
	19 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.831	6.801-6.861	+++++	+++++
	20 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.081	7.051-7.111	+++++	+++++
	21 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.135	7.105-7.165	+++++	+++++
	22 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.317	7.287-7.347	+++++	+++++
	23 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.427	7.397-7.457	+++++	+++++
	24 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.746	7.716-7.776	+++++	+++++
	25 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.912	7.882-7.942	+++++	+++++
	26 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.180	8.150-8.210	+++++	+++++
	27 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.453	8.423-8.483	+++++	+++++
$	28 Decachlorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.355	9.325-9.385	+++++	+++++
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
	38 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.931	6.901-6.961	+++++	+++++
	39 2,4-DDE	6.106	6.106	6.106	6.106	6.106	6.106	6.106	6.106	6.076-6.136	6.106	0.000

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	6.681	6.681	6.681	6.681	6.681	6.681	6.680	6.681	6.651-6.711	6.681	0.000
41 2,4-DDT	6.956	6.957	6.956	6.956	6.957	6.956	6.956	6.957	6.927-6.987	6.956	0.000
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlordane	6.014	6.015	6.014	6.015	6.014	6.014	6.014	6.014	5.984-6.044	6.015	0.000
44 trans-Nonachlor	6.397	6.398	6.398	6.398	6.397	6.397	6.397	6.397	6.367-6.427	6.398	0.000
45 cis-Nonachlor	7.112	7.112	7.111	7.112	7.112	7.112	7.112	7.112	7.082-7.142	7.112	0.000
46 Mirex	8.082	8.082	8.082	8.082	8.082	8.082	8.082	8.082	8.052-8.112	8.082	0.000
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.593	5.563-5.623	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121412	22121413	22121414	22121415	22121416	22121417	22121418
INJ.DATE:	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	22:43	23:01	23:19	23:36	23:54	00:12	00:30

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.501	2.471-2.531	+++++	+++++
*	2 1Bromo-2nitrobenzene [	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.321-3.381	3.351	0.000
*	3 Hexabromobiphenyl[C]	11.054	11.054	11.054	11.054	11.054	11.054	11.054	11.054	11.024-11.084	11.054	0.000
$	4 Tetrachloro-m-xylene [	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.220	4.190-4.250	+++++	+++++
	5 Hexachlorobenzene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.718	4.688-4.748	+++++	+++++
	6 alpha-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.861	4.831-4.891	+++++	+++++
	7 gamma-BHC (Lindane) [C	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.258	5.228-5.288	+++++	+++++
	8 beta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.337	5.307-5.367	+++++	+++++
	9 delta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.691	5.661-5.721	+++++	+++++
	10 Heptachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.787	5.757-5.817	+++++	+++++
	11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.558-14.618	+++++	+++++
	12 Aldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.191	6.161-6.221	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.650-12.710	+++++	+++++
	14 Heptachlor epoxide b [	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.845	6.815-6.875	+++++	+++++
	15 cis-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.216	7.186-7.246	+++++	+++++
	16 trans-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.056	7.026-7.086	+++++	+++++
	17 Endosulfan I [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.289	7.259-7.319	+++++	+++++

Reviewer 1 _____ Date:_____
Reviewer 2 _____ Date:_____

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.371	7.341-7.401	+++++	+++++
	19 Dieldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.583	7.553-7.613	+++++	+++++
	20 Endrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.907	7.877-7.937	+++++	+++++
	21 4,4'-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.976	7.946-8.006	+++++	+++++
	22 Endosulfan II [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.117	8.087-8.147	+++++	+++++
	23 4,4'-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.295	8.265-8.325	+++++	+++++
	24 Endrin aldehyde [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.448	8.418-8.478	+++++	+++++
	25 Endosulfan sulfate [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.715	8.685-8.745	+++++	+++++
	26 Methoxychlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.936	8.906-8.966	+++++	+++++
	27 Endrin ketone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.240	9.210-9.270	+++++	+++++
$	28 Decachlorobiphenyl [C]	+++++	+++++	+++++	+++++	+++++	+++++	10.471	10.467	10.437-10.497	10.471	0.000
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
	38 Toxaphene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.126	7.096-7.156	+++++	+++++
	39 2,4-DDE [C]	7.036	7.036	7.035	7.036	7.036	7.036	7.036	7.036	7.006-7.066	7.036	0.000

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	7.591	7.590	7.590	7.591	7.590	7.591	7.591	7.591	7.561-7.621	7.591	0.000
41 2,4-DDT [C]	7.913	7.914	7.913	7.913	7.913	7.914	7.913	7.913	7.883-7.943	7.913	0.000
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlordane [C]	6.741	6.741	6.741	6.741	6.741	6.741	6.741	6.741	6.711-6.771	6.741	0.000
44 trans-Nonachlor [C]	7.154	7.154	7.154	7.155	7.154	7.155	7.155	7.155	7.125-7.185	7.154	0.000
45 cis-Nonachlor [C]	7.975	7.975	7.975	7.975	7.975	7.975	7.975	7.975	7.945-8.005	7.975	0.000
46 Mirex [C]	9.223	9.223	9.222	9.223	9.222	9.223	9.223	9.223	9.193-9.253	9.223	0.000
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.612	5.582-5.642	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121421	22121422	22121423	22121424	22121425	22121426	22121427
INJ.DATE:	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	01:24	01:42	01:59	02:17	02:35	02:53	03:11

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.324	2.294-2.354	+++++	+++++
*	2 1Bromo-2nitrobenzene	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.121-3.181	3.151	0.000
*	3 Hexabromobiphenyl	9.504	9.504	9.505	9.504	9.504	9.504	9.505	9.505	9.475-9.535	9.504	0.000
$	4 Tetrachloro-m-xylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.828	3.798-3.858	+++++	+++++
	5 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.182	4.152-4.212	+++++	+++++
	6 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.342	4.312-4.372	+++++	+++++
	7 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.645	4.615-4.675	+++++	+++++
	8 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.726	4.696-4.756	+++++	+++++
	9 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.909	4.879-4.939	+++++	+++++
	10 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.130	5.100-5.160	+++++	+++++
	11 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.454	5.424-5.484	+++++	+++++
	12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.597-13.657	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.839-10.899	+++++	+++++
	14 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.130	6.100-6.160	+++++	+++++
	15 cis-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.417	6.387-6.447	+++++	+++++
	16 trans-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.271	6.241-6.301	+++++	+++++
	17 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.572	6.542-6.602	+++++	+++++

Reviewer 1 _____ Date:_____
Reviewer 2 _____ Date:_____

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.489	6.459-6.519	+++++	+++++
	19 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.831	6.801-6.861	+++++	+++++
	20 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.081	7.051-7.111	+++++	+++++
	21 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.135	7.105-7.165	+++++	+++++
	22 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.317	7.287-7.347	+++++	+++++
	23 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.427	7.397-7.457	+++++	+++++
	24 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.746	7.716-7.776	+++++	+++++
	25 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.912	7.882-7.942	+++++	+++++
	26 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.180	8.150-8.210	+++++	+++++
	27 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.453	8.423-8.483	+++++	+++++
$	28 Decachlorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	9.380	9.355	9.325-9.385	9.380	0.000
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
	38 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.931	6.901-6.961	+++++	+++++
	39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.106	6.076-6.136	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.681	6.651-6.711	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.957	6.927-6.987	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.014	5.984-6.044	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.397	6.367-6.427	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.112	7.082-7.142	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.082	8.052-8.112	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	5.593	5.593	5.593	5.593	5.593	5.592	5.593	5.593	5.563-5.623	5.593	0.000
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121421	22121422	22121423	22121424	22121425	22121426	22121427
INJ.DATE:	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	01:24	01:42	01:59	02:17	02:35	02:53	03:11

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.501	2.471-2.531	+++++	+++++
*	2 1Bromo-2nitrobenzene [	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.321-3.381	3.351	0.000
*	3 Hexabromobiphenyl[C]	11.054	11.055	11.054	11.054	11.054	11.054	11.054	11.054	11.024-11.084	11.054	0.000
$	4 Tetrachloro-m-xylene [	4.215	+++++	+++++	+++++	+++++	+++++	+++++	4.220	4.190-4.250	4.215	0.000
	5 Hexachlorobenzene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.718	4.688-4.748	+++++	+++++
	6 alpha-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.861	4.831-4.891	+++++	+++++
	7 gamma-BHC (Lindane) [C	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.258	5.228-5.288	+++++	+++++
	8 beta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.337	5.307-5.367	+++++	+++++
	9 delta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.691	5.661-5.721	+++++	+++++
	10 Heptachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.787	5.757-5.817	+++++	+++++
	11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.558-14.618	+++++	+++++
	12 Aldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.191	6.161-6.221	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.650-12.710	+++++	+++++
	14 Heptachlor epoxide b [	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.845	6.815-6.875	+++++	+++++
	15 cis-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.216	7.186-7.246	+++++	+++++
	16 trans-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.056	7.026-7.086	+++++	+++++
	17 Endosulfan I [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.289	7.259-7.319	+++++	+++++

Reviewer 1 _____ Date:_____
Reviewer 2 _____ Date:_____

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.371	7.341-7.401	+++++	+++++
	19 Dieldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.583	7.553-7.613	+++++	+++++
	20 Endrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.907	7.877-7.937	+++++	+++++
	21 4,4'-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.976	7.946-8.006	+++++	+++++
	22 Endosulfan II [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.117	8.087-8.147	+++++	+++++
	23 4,4'-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.295	8.265-8.325	+++++	+++++
	24 Endrin aldehyde [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.448	8.418-8.478	+++++	+++++
	25 Endosulfan sulfate [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.715	8.685-8.745	+++++	+++++
	26 Methoxychlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.936	8.906-8.966	+++++	+++++
	27 Endrin ketone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.240	9.210-9.270	+++++	+++++
$	28 Decachlorobiphenyl [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.467	10.437-10.497	+++++	+++++
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
	38 Toxaphene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.126	7.096-7.156	+++++	+++++
	39 2,4-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.036	7.006-7.066	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.591	7.561-7.621	+++++	+++++
41 2,4-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.883-7.943	+++++	+++++
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.741	6.711-6.771	+++++	+++++
44 trans-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.155	7.125-7.185	+++++	+++++
45 cis-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.975	7.945-8.005	+++++	+++++
46 Mirex [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.223	9.193-9.253	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	5.612	5.612	5.612	5.611	5.612	5.612	5.612	5.612	5.582-5.642	5.612	0.000
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121428	22121429	22121430	22121431	22121432	22121433	22121434
INJ.DATE:	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	03:29	03:46	04:04	04:22	04:40	04:58	05:16

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.324	2.294-2.354	+++++	+++++
*	2 1Bromo-2nitrobenzene	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.121-3.181	3.151	0.000
*	3 Hexabromobiphenyl	9.505	9.504	9.504	9.504	9.505	9.504	9.504	9.505	9.475-9.535	9.504	0.000
$	4 Tetrachloro-m-xylene	3.828	3.828	3.828	3.828	3.828	3.828	3.828	3.828	3.798-3.858	3.828	0.000
	5 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.182	4.152-4.212	+++++	+++++
	6 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.342	4.312-4.372	+++++	+++++
	7 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.645	4.615-4.675	+++++	+++++
	8 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.726	4.696-4.756	+++++	+++++
	9 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.909	4.879-4.939	+++++	+++++
	10 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.130	5.100-5.160	+++++	+++++
	11 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.454	5.424-5.484	+++++	+++++
	12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.597-13.657	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.839-10.899	+++++	+++++
	14 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.130	6.100-6.160	+++++	+++++
	15 cis-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.417	6.387-6.447	+++++	+++++
	16 trans-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.271	6.241-6.301	+++++	+++++
	17 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.572	6.542-6.602	+++++	+++++

Reviewer 1 _____ Date:_____
Reviewer 2 _____ Date:_____

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.489	6.459-6.519	+++++	+++++
	19 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.831	6.801-6.861	+++++	+++++
	20 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.081	7.051-7.111	+++++	+++++
	21 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.135	7.105-7.165	+++++	+++++
	22 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.317	7.287-7.347	+++++	+++++
	23 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.427	7.397-7.457	+++++	+++++
	24 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.746	7.716-7.776	+++++	+++++
	25 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.912	7.882-7.942	+++++	+++++
	26 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.180	8.150-8.210	+++++	+++++
	27 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.453	8.423-8.483	+++++	+++++
$	28 Decachlorobiphenyl	9.355	9.355	9.355	9.355	9.356	9.356	9.355	9.355	9.325-9.385	9.356	0.000
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
	38 Toxaphene	6.931	6.931	6.931	6.931	6.931	6.931	6.931	6.931	6.901-6.961	6.931	0.000
	39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.106	6.076-6.136	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.681	6.651-6.711	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.957	6.927-6.987	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.014	5.984-6.044	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.397	6.367-6.427	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.112	7.082-7.142	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.082	8.052-8.112	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.593	5.563-5.623	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121428	22121429	22121430	22121431	22121432	22121433	22121434
INJ.DATE:	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	03:29	03:46	04:04	04:22	04:40	04:58	05:16

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.501	2.471-2.531	+++++	+++++
* 2 1Bromo-2nitrobenzene [	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.321-3.381	3.351	0.000
* 3 Hexabromobiphenyl[C]	11.055	11.054	11.054	11.055	11.054	11.054	11.054	11.054	11.024-11.084	11.054	0.000
$ 4 Tetrachloro-m-xylene [	4.221	4.220	4.220	4.221	4.221	4.221	4.221	4.220	4.190-4.250	4.221	0.000
5 Hexachlorobenzene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.718	4.688-4.748	+++++	+++++
6 alpha-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.861	4.831-4.891	+++++	+++++
7 gamma-BHC (Lindane) [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.258	5.228-5.288	+++++	+++++
8 beta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.337	5.307-5.367	+++++	+++++
9 delta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.691	5.661-5.721	+++++	+++++
10 Heptachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.787	5.757-5.817	+++++	+++++
11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.558-14.618	+++++	+++++
12 Aldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.191	6.161-6.221	+++++	+++++
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.650-12.710	+++++	+++++
14 Heptachlor epoxide b [	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.845	6.815-6.875	+++++	+++++
15 cis-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.216	7.186-7.246	+++++	+++++
16 trans-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.056	7.026-7.086	+++++	+++++
17 Endosulfan I [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.289	7.259-7.319	+++++	+++++

Reviewer 1 _____ Date:_____
Reviewer 2 _____ Date:_____

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.371	7.341-7.401	+++++	+++++
	19 Dieldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.583	7.553-7.613	+++++	+++++
	20 Endrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.907	7.877-7.937	+++++	+++++
	21 4,4'-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.976	7.946-8.006	+++++	+++++
	22 Endosulfan II [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.117	8.087-8.147	+++++	+++++
	23 4,4'-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.295	8.265-8.325	+++++	+++++
	24 Endrin aldehyde [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.448	8.418-8.478	+++++	+++++
	25 Endosulfan sulfate [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.715	8.685-8.745	+++++	+++++
	26 Methoxychlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.936	8.906-8.966	+++++	+++++
	27 Endrin ketone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.240	9.210-9.270	+++++	+++++
$	28 Decachlorobiphenyl [C]	10.467	10.467	10.467	10.466	10.466	10.466	10.467	10.467	10.437-10.497	10.466	0.000
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
	38 Toxaphene [C]	7.125	7.125	7.125	7.125	7.126	7.126	7.126	7.126	7.096-7.156	7.125	0.000
	39 2,4-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.036	7.006-7.066	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.591	7.561-7.621	+++++	+++++
41 2,4-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.883-7.943	+++++	+++++
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.741	6.711-6.771	+++++	+++++
44 trans-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.155	7.125-7.185	+++++	+++++
45 cis-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.975	7.945-8.005	+++++	+++++
46 Mirex [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.223	9.193-9.253	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.612	5.582-5.642	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121403.D
Data file 2: /20221214.b/B20221214.b/22121403.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-IBL1
Client ID:
Injection Date: 14-DEC-2022 20:02
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			6.824	-0.021	2291	0.00	0.14	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			7.597	0.015	1696	0.00	0.11	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			8.135	0.018	285	0.00	0.02	---	Endosulfan II
----			7.975	-0.002	1369	0.00	0.12	---	4,4'-DDD
----			8.720	0.005	243	0.00	0.02	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			8.924	-0.013	546	0.00	0.11	---	Methoxychlor
8.444	-0.009	1962	9.226	-0.013	2888	0.23	0.25	10.1	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			7.070	0.014	4708	0.00	0.30	---	trans-Chlordane
----			7.219	0.003	810	0.00	0.05	---	cis-Chlordane
2.351	0.028	6378	2.512	0.012	33421	0.42	1.60	116.6*	Hexachlorobutadiene
4.183	0.001	4869	4.721	0.003	421	0.36	0.02	178.1*	Hexachlorobenzene
3.828	0.000	375293	4.220	-0.000	579767	36.70	37.46	2.1	Tetrachloro-m-xylene
9.356	0.001	243291	10.467	0.000	323668	35.86	35.40	1.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

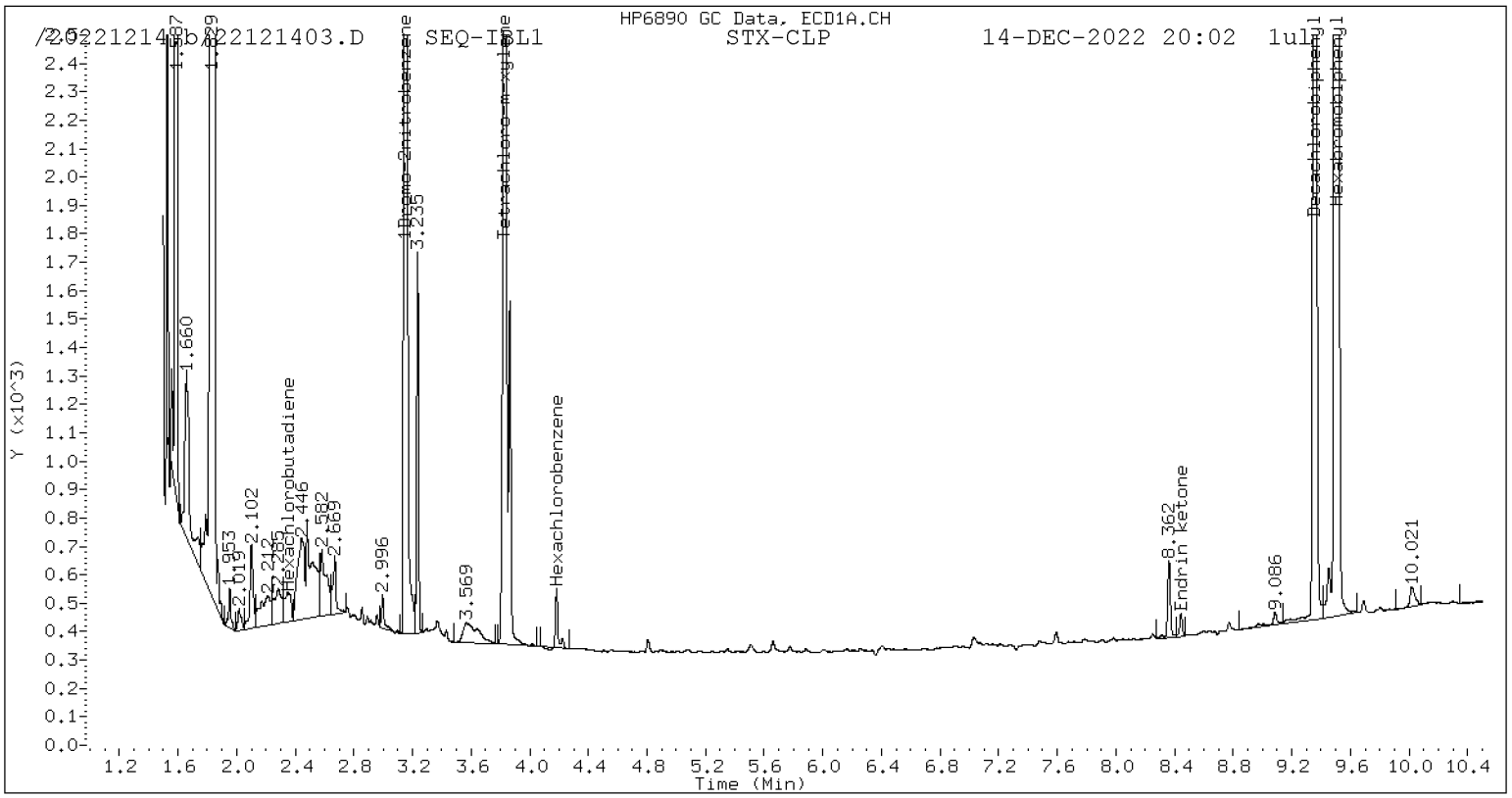
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	751998	5.8
Hexabromobiphenyl	641833	669495	4.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1099555	3.8
Hexabromobiphenyl	797125	827325	3.8

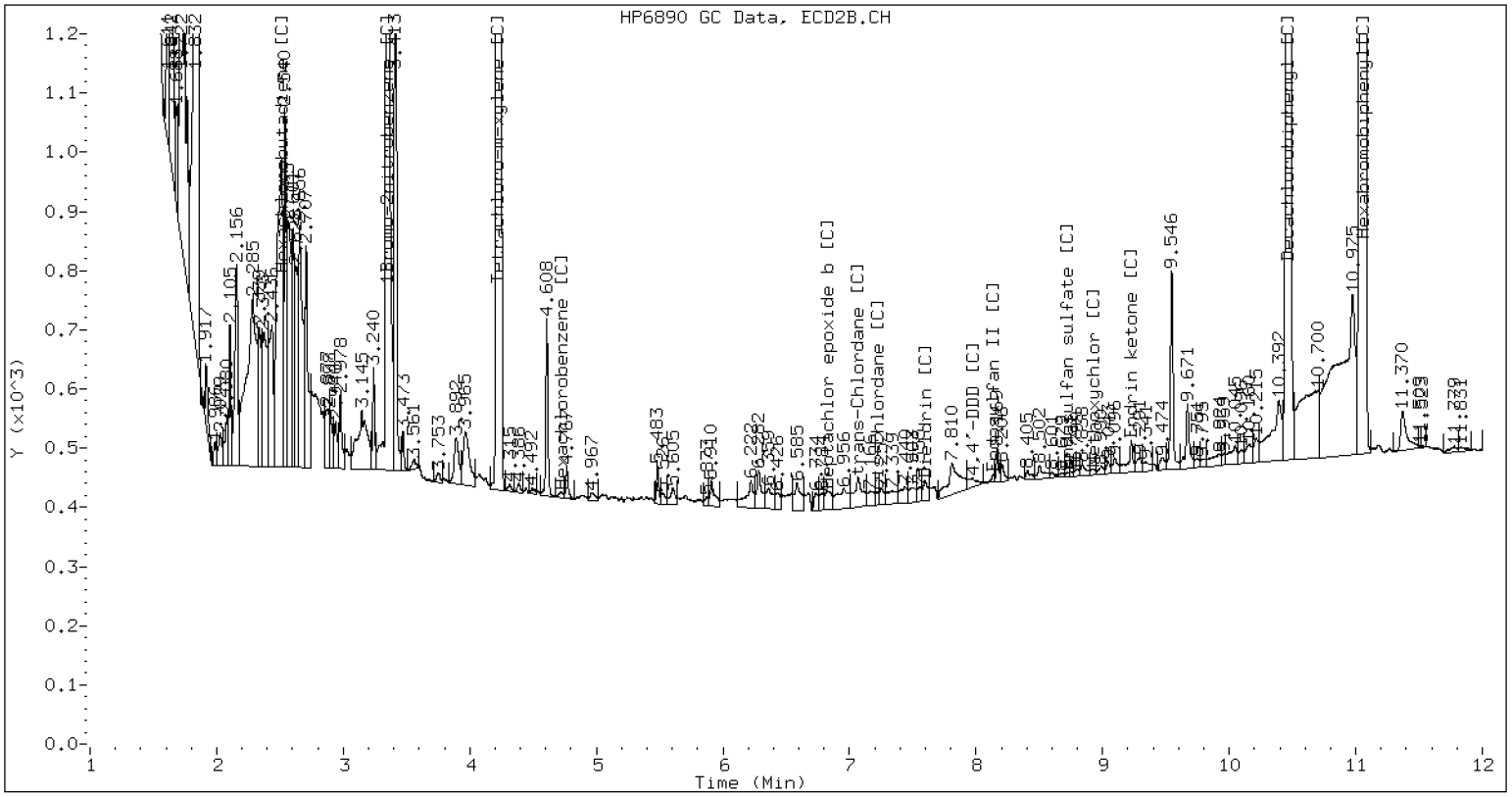
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121403.D SEQ-IBL1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121403.D
Data file 2: /20221214.b/B20221214.b/22121403.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-IBL1
Client ID:
Injection Date: 14-DEC-2022 20:02
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM1 InstID,Data File: ecd6.i, 22121404.D

Analysis Date: 14-DEC-2022 20:20 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.151	683485
4,4'-DDE	6.490	6258
Endrin	7.082	745471
4,4'-DDD	7.136	15566
4,4'-DDT	7.428	629664
Endrin ketone	8.453	19276
Endrin aldehyde	7.747	21328
Hexabromobiphenyl	9.504	619012
Tetrachloro-m-xylene	3.828	1161664
Decachlorobiphenyl	9.355	833312

DDT Percent Breakdown = 3.3 %
((6258+15566) * 100)/(6258+15566+629664)

Endrin Percent Breakdown = 5.2 %
((21328+19276) * 100)/(21328+19276+745471)

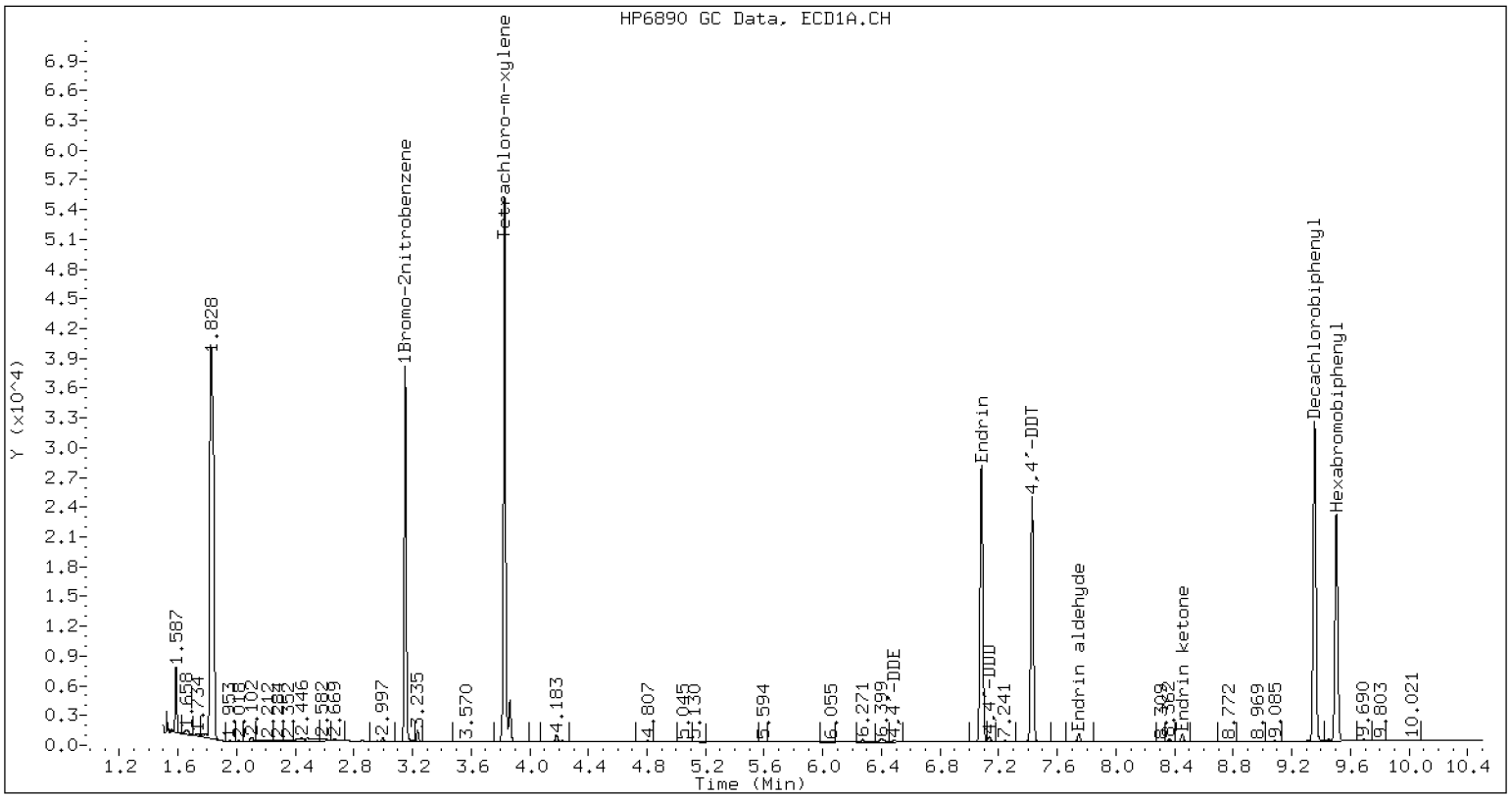
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene [C]	3.350	1005375
4,4'-DDE [C]	7.370	11906
Endrin [C]	7.907	1029194
4,4'-DDD [C]	7.977	32697
4,4'-DDT [C]	8.295	890195
Endrin ketone [C]	9.239	28268
Endrin aldehyde [C]	8.448	31426
Hexabromobiphenyl[C]	11.054	772586
Tetrachloro-m-xylene [C]	4.220	1890294
Decachlorobiphenyl [C]	10.467	1140978

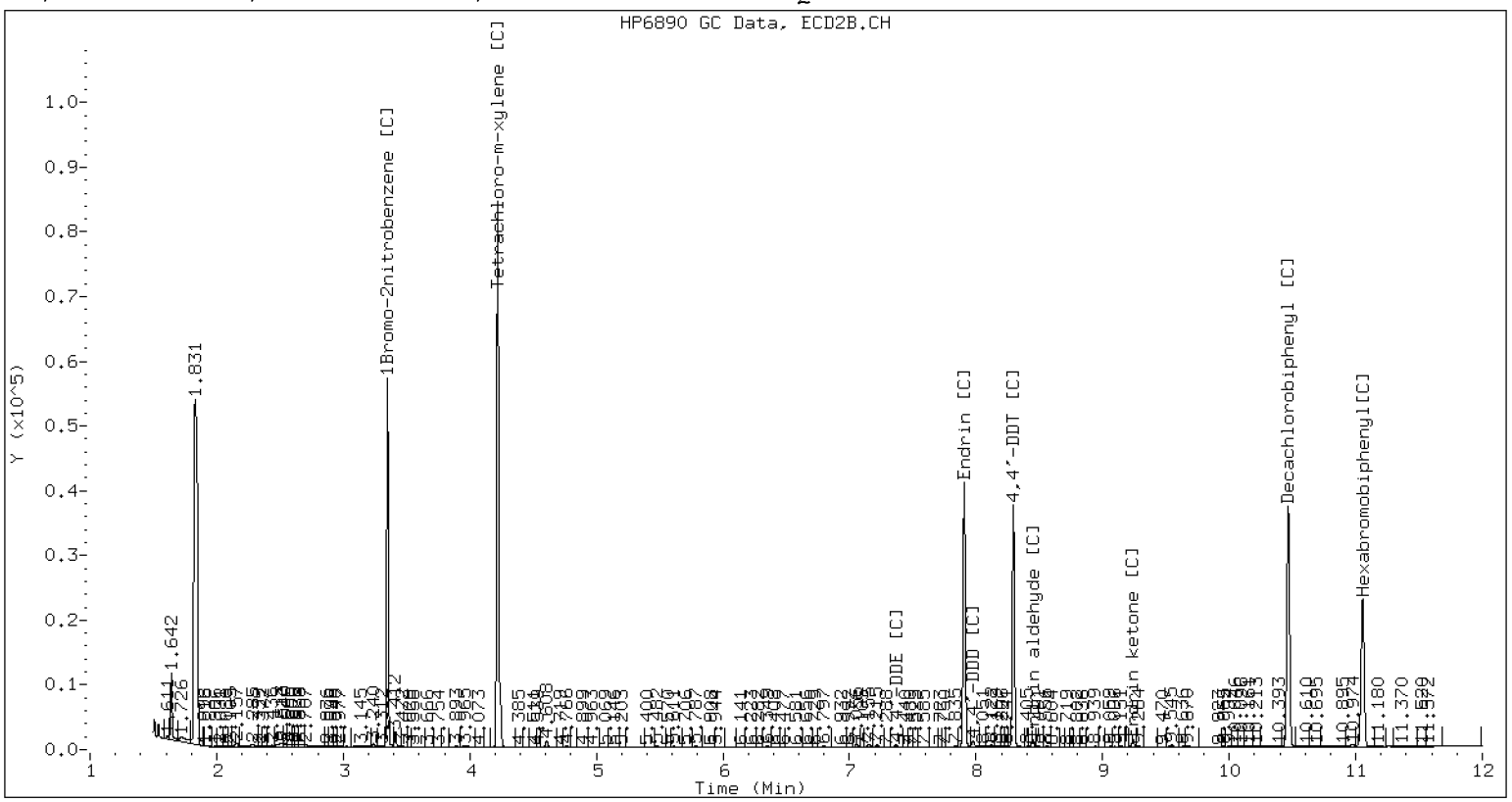
DDT Percent Breakdown = 4.8 %
((11906+32697) * 100)/(11906+32697+890195)

Endrin Percent Breakdown = 5.5 %
((31426+28268) * 100)/(31426+28268+1029194)

/20221214.b/22121404.D SEQ-PEM1 STX-CLP 14-DEC-2022 20:20 1ul



/20221214.b/B20221214.b/22121404.D SEQ-PEM1 CLP2 14-DEC-2022



7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM1 InstID,Data File: ecd6.i, 22121404.D

Analysis Date: 14-DEC-2022 20:20 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.151	683485
4,4'-DDE	6.490	6258
Endrin	7.082	745471
4,4'-DDD	7.136	15566
4,4'-DDT	7.428	629664
Endrin ketone	8.453	19276
Endrin aldehyde	7.747	21328
Hexabromobiphenyl	9.504	619012
Tetrachloro-m-xylene	3.828	1161664
Decachlorobiphenyl	9.355	833312

DDT Percent Breakdown = 3.3 %
((6258+15566) * 100)/(6258+15566+629664)

Endrin Percent Breakdown = 5.2 %
((21328+19276) * 100)/(21328+19276+745471)

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312

Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121405.D
Data file 2: /20221214.b/B20221214.b/22121405.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL1
Client ID:
Injection Date: 14-DEC-2022 20:38
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	-0.000	17720	4.860	-0.001	25579	1.30	1.22	6.4	alpha-BHC
4.726	-0.000	7513	5.337	-0.000	10927	1.43	1.37	4.4	beta-BHC
4.909	-0.000	14050	5.690	-0.000	21188	1.26	1.23	2.8	delta-BHC
4.645	-0.000	15329	5.257	-0.001	21981	1.30	1.24	4.9	gamma-BHC (Lindane)
5.130	-0.000	14540	5.786	-0.000	20395	1.38	1.27	8.9	Heptachlor
5.453	-0.001	15026	6.190	-0.001	24413	1.28	1.33	3.9	Aldrin
6.130	0.000	13937	6.845	-0.000	21959	1.37	1.44	5.6	Heptachlor epoxide b
6.572	-0.000	13220	7.288	-0.000	19257	1.41	1.44	1.8	Endosulfan I
6.831	0.000	27285	7.582	-0.001	43580	2.71	2.94	8.2	Dieldrin
6.489	0.000	25951	7.370	-0.001	37722	2.78	2.78	0.0	4,4'-DDE
7.081	0.000	24429	7.906	-0.001	31381	2.94	2.78	5.3	Endrin
7.318	0.001	19827	8.117	-0.000	30675	2.65	2.66	0.3	Endosulfan II
7.135	0.000	20434	7.976	-0.000	28995	2.73	2.65	3.0	4,4'-DDD
8.180	-0.000	19661	8.715	-0.000	26689	2.76	2.63	4.9	Endosulfan sulfate
7.427	0.000	20071	8.294	-0.001	26950	2.65	2.55	3.9	4,4'-DDT
7.912	-0.000	52385	8.935	-0.001	65896	15.60	14.07	10.3	Methoxychlor
8.453	-0.001	24276	9.239	-0.000	30129	2.98	2.75	8.0	Endrin ketone
7.746	-0.000	17209	8.448	-0.000	21218	2.88	2.60	10.1	Endrin aldehyde
6.270	-0.001	14829	7.056	-0.000	22517	1.43	1.48	3.7	trans-Chlordane
6.417	0.000	15767	7.215	-0.000	22150	1.52	1.49	1.6	cis-Chlordane
2.323	-0.001	27320	2.500	-0.001	42655	1.92	2.14	11.3	Hexachlorobutadiene
4.182	0.000	18555	4.718	-0.000	27377	1.47	1.44	2.2	Hexachlorobenzene
3.828	-0.000	28792	4.220	-0.001	41270	2.99	2.80	6.5	Tetrachloro-m-xylene
9.355	-0.000	21954	10.466	-0.000	30646	3.41	3.50	2.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

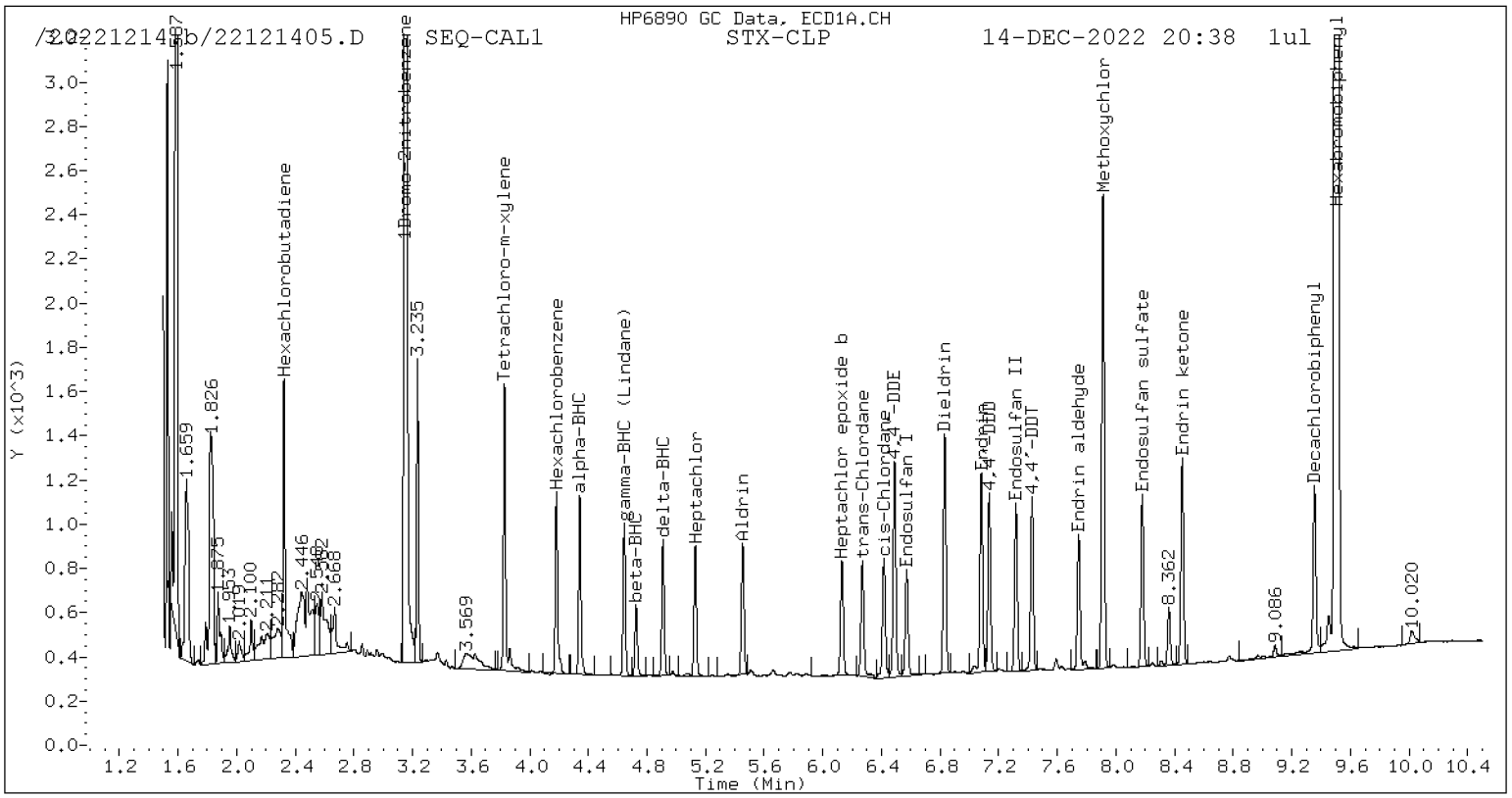
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	707324	-0.5
Hexabromobiphenyl	641833	634819	-1.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1045524	-1.3
Hexabromobiphenyl	797125	792558	-0.6

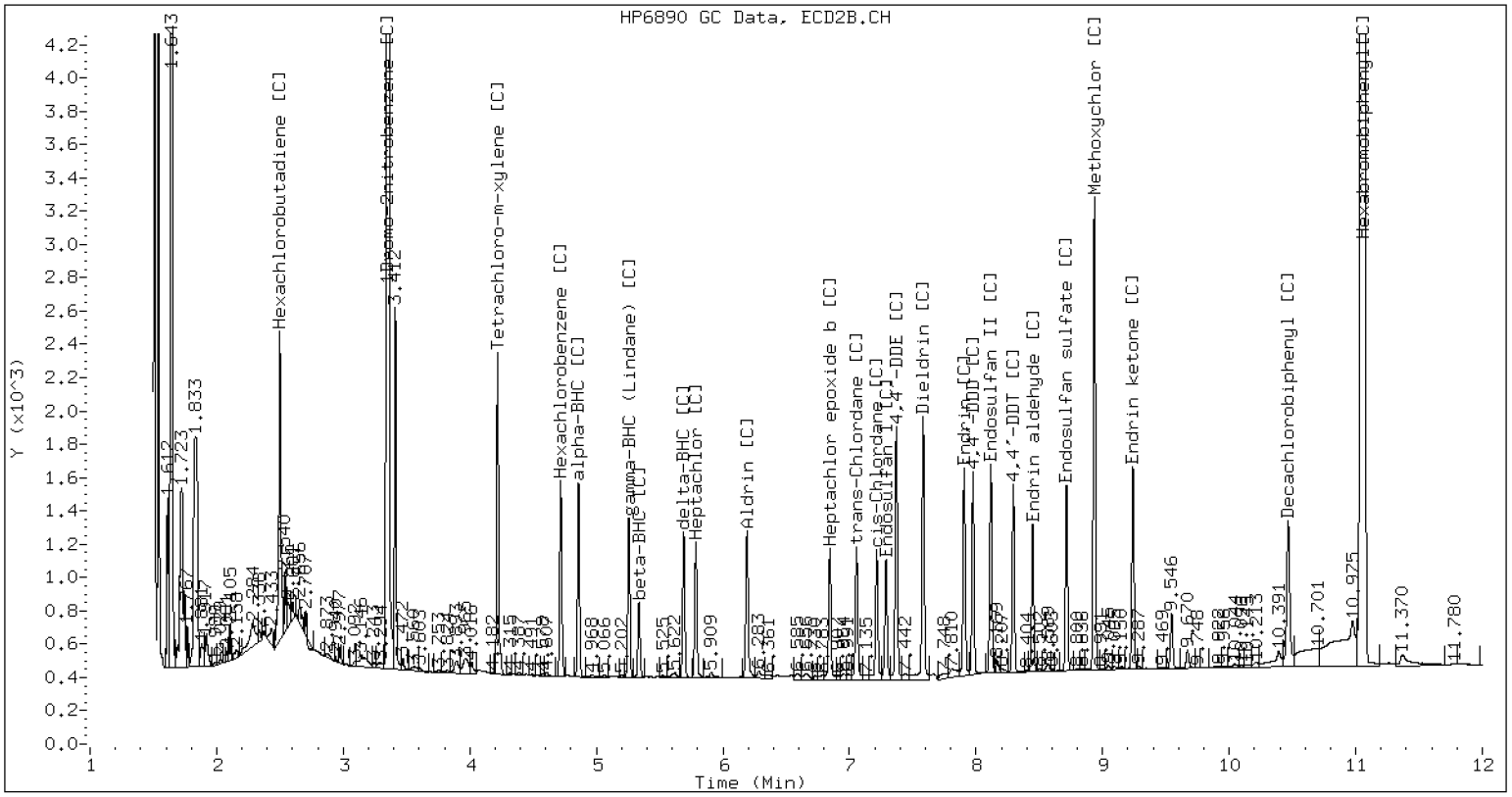
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121405.D SEQ-CAL1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121405.D
Data file 2: /20221214.b/B20221214.b/22121405.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL1
Client ID:
Injection Date: 14-DEC-2022 20:38
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121406.D
Data file 2: /20221214.b/B20221214.b/22121406.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL2
Client ID:
Injection Date: 14-DEC-2022 20:56
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	-0.000	35088	4.859	-0.001	52514	2.54	2.47	2.9	alpha-BHC
4.726	-0.000	14580	5.337	-0.000	21664	2.74	2.68	2.4	beta-BHC
4.909	-0.000	28429	5.691	-0.000	43932	2.52	2.51	0.5	delta-BHC
4.645	0.000	30588	5.257	-0.001	44971	2.55	2.49	2.5	gamma-BHC (Lindane)
5.129	-0.001	28458	5.787	-0.000	42156	2.67	2.58	3.6	Heptachlor
5.453	-0.001	30273	6.190	-0.001	50159	2.53	2.69	5.8	Aldrin
6.130	-0.001	27608	6.845	-0.001	43067	2.67	2.79	4.5	Heptachlor epoxide b
6.572	-0.000	25650	7.288	-0.001	37112	2.70	2.73	1.0	Endosulfan I
6.832	0.000	54960	7.582	-0.001	84296	5.38	5.60	4.0	Dieldrin
6.489	-0.000	51182	7.370	-0.001	74355	5.40	5.39	0.2	4,4'-DDE
7.081	0.000	46577	7.906	-0.001	63434	5.52	5.52	0.1	Endrin
7.317	0.001	37804	8.116	-0.001	65448	4.98	5.56	11.1	Endosulfan II
7.136	0.001	40399	7.976	-0.001	62302	5.32	5.58	4.8	4,4'-DDD
8.179	-0.001	38342	8.714	-0.001	57421	5.32	5.56	4.4	Endosulfan sulfate
7.427	-0.000	40499	8.294	-0.001	59346	5.27	5.51	4.3	4,4'-DDT
7.912	-0.000	98271	8.934	-0.002	130815	28.88	27.42	5.2	Methoxychlor
8.452	-0.001	45639	9.239	-0.001	62360	5.53	5.59	1.1	Endrin ketone
7.746	0.000	32847	8.447	-0.001	47592	5.42	5.73	5.6	Endrin aldehyde
6.271	0.000	28307	7.055	-0.001	41633	2.69	2.70	0.4	trans-Chlordane
6.417	0.000	29336	7.215	-0.000	41766	2.78	2.77	0.3	cis-Chlordane
2.323	-0.001	44113	2.500	-0.001	65565	3.05	3.24	6.2	Hexachlorobutadiene
4.182	-0.000	35520	4.718	-0.000	53173	2.77	2.75	0.9	Hexachlorobenzene
3.828	-0.000	54873	4.220	-0.001	81034	5.62	5.42	3.7	Tetrachloro-m-xylene
9.354	-0.001	38477	10.465	-0.001	54866	5.90	6.15	4.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

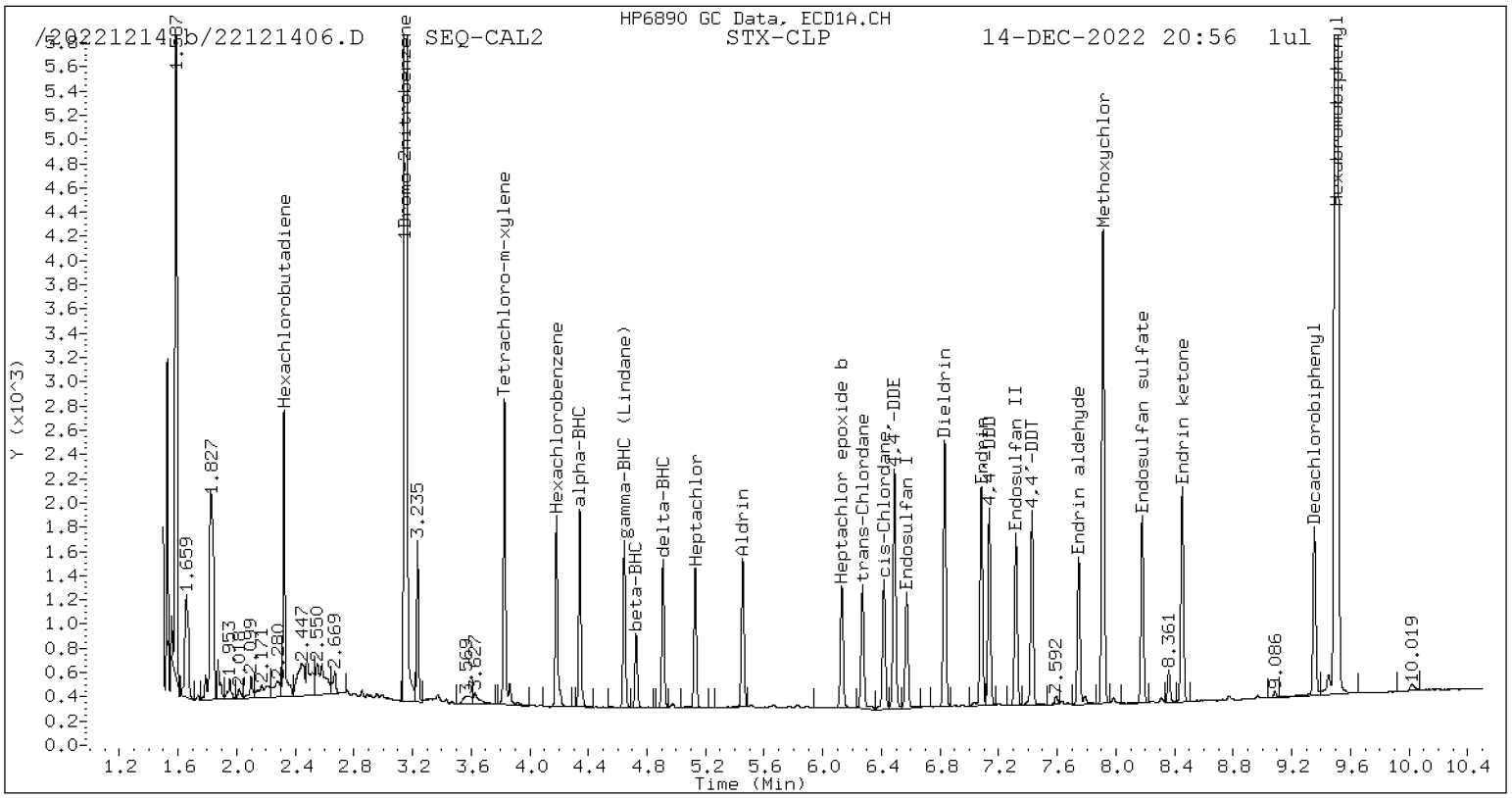
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	717600	1.0
Hexabromobiphenyl	641833	643445	0.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1061990	0.3
Hexabromobiphenyl	797125	807490	1.3

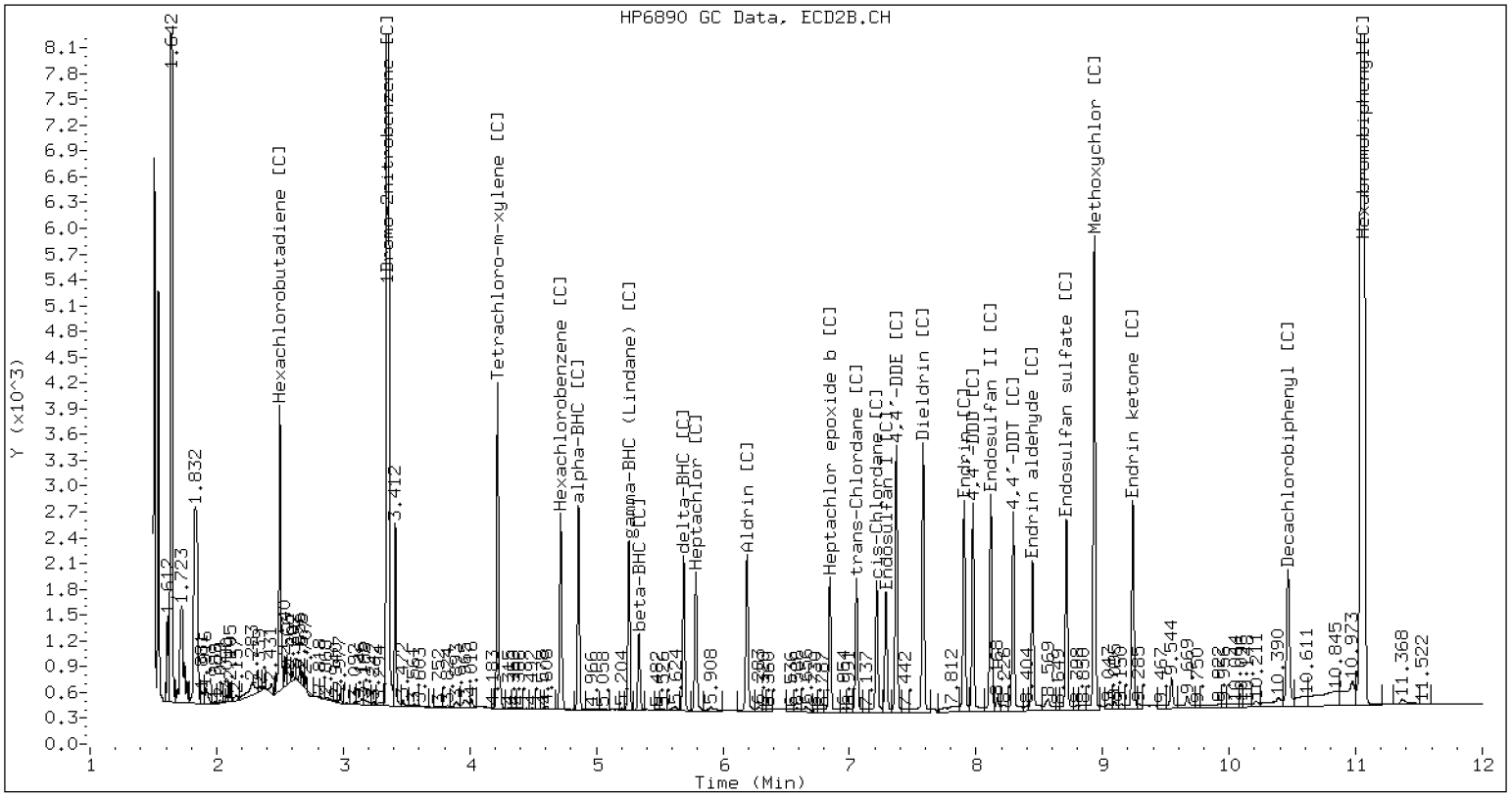
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121406.D SEQ-CAL2 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121406.D
Data file 2: /20221214.b/B20221214.b/22121406.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL2
Client ID:
Injection Date: 14-DEC-2022 20:56
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121407.D
Data file 2: /20221214.b/B20221214.b/22121407.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL3
Client ID:
Injection Date: 14-DEC-2022 21:14
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.343	0.001	68202	4.860	-0.000	103195	5.06	4.95	2.2	alpha-BHC
4.727	0.000	26774	5.338	0.000	40159	5.16	5.06	1.8	beta-BHC
4.910	0.001	55344	5.691	0.000	85044	5.02	4.95	1.5	delta-BHC
4.646	0.001	59491	5.258	0.000	87747	5.09	4.96	2.6	gamma-BHC (Lindane)
5.130	0.000	53529	5.787	0.000	80295	5.15	5.01	2.7	Heptachlor
5.455	0.001	59061	6.191	0.000	92167	5.07	5.03	0.7	Aldrin
6.132	0.001	52071	6.845	-0.000	76415	5.15	5.05	2.1	Heptachlor epoxide b
6.573	0.001	48052	7.289	-0.000	67929	5.18	5.09	1.8	Endosulfan I
6.832	0.001	104217	7.583	-0.000	151301	10.46	10.26	1.9	Dieldrin
6.490	0.001	97042	7.371	0.000	139172	10.49	10.29	1.9	4,4'-DDE
7.082	0.001	87185	7.906	-0.001	115830	10.66	10.37	2.8	Endrin
7.318	0.001	77341	8.117	0.000	118175	10.50	10.32	1.8	Endosulfan II
7.136	0.001	77451	7.976	0.000	110178	10.51	10.14	3.6	4,4'-DDD
8.180	0.001	73440	8.715	0.000	102417	10.50	10.18	3.1	Endosulfan sulfate
7.428	0.001	77522	8.294	-0.001	105882	10.41	10.09	3.1	4,4'-DDT
7.913	0.001	178164	8.935	-0.001	239047	53.98	51.49	4.7	Methoxychlor
8.454	0.000	84510	9.239	-0.000	110024	10.55	10.13	4.1	Endrin ketone
7.746	0.001	61122	8.448	-0.000	82817	10.40	10.25	1.5	Endrin aldehyde
6.271	0.001	52622	7.056	-0.000	76513	5.13	5.07	1.1	trans-Chlordane
6.417	0.001	53515	7.216	0.000	75023	5.20	5.08	2.3	cis-Chlordane
2.324	-0.000	75632	2.500	-0.000	107268	5.35	5.41	1.1	Hexachlorobutadiene
4.183	0.001	66090	4.718	-0.000	98926	5.28	5.21	1.3	Hexachlorobenzene
3.828	0.000	101081	4.220	-0.000	153451	10.61	10.47	1.3	Tetrachloro-m-xylene
9.355	-0.000	67797	10.466	-0.000	92260	10.72	10.62	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

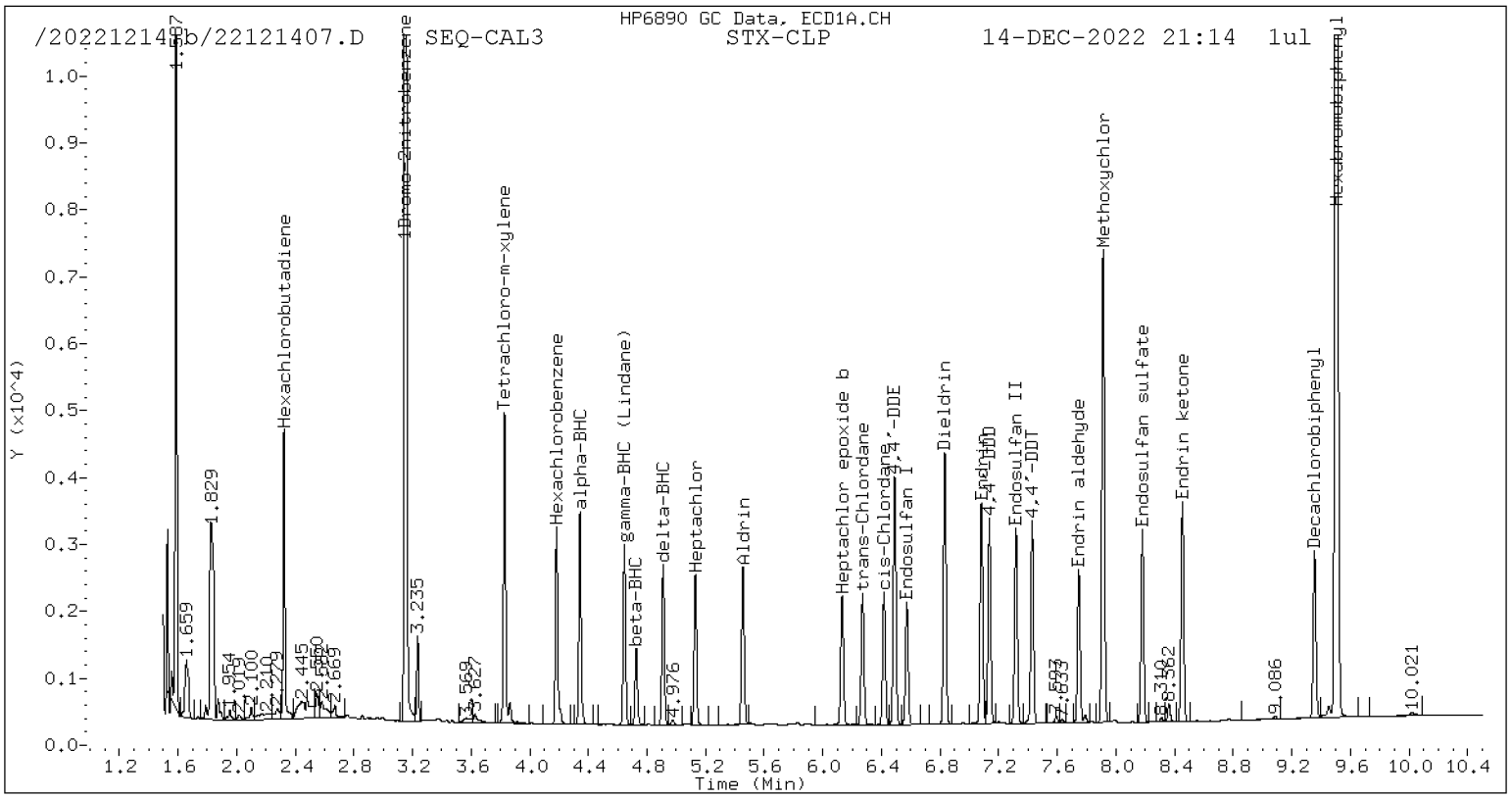
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	700354	-1.4
Hexabromobiphenyl	641833	624108	-2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1040903	-1.7
Hexabromobiphenyl	797125	785894	-1.4

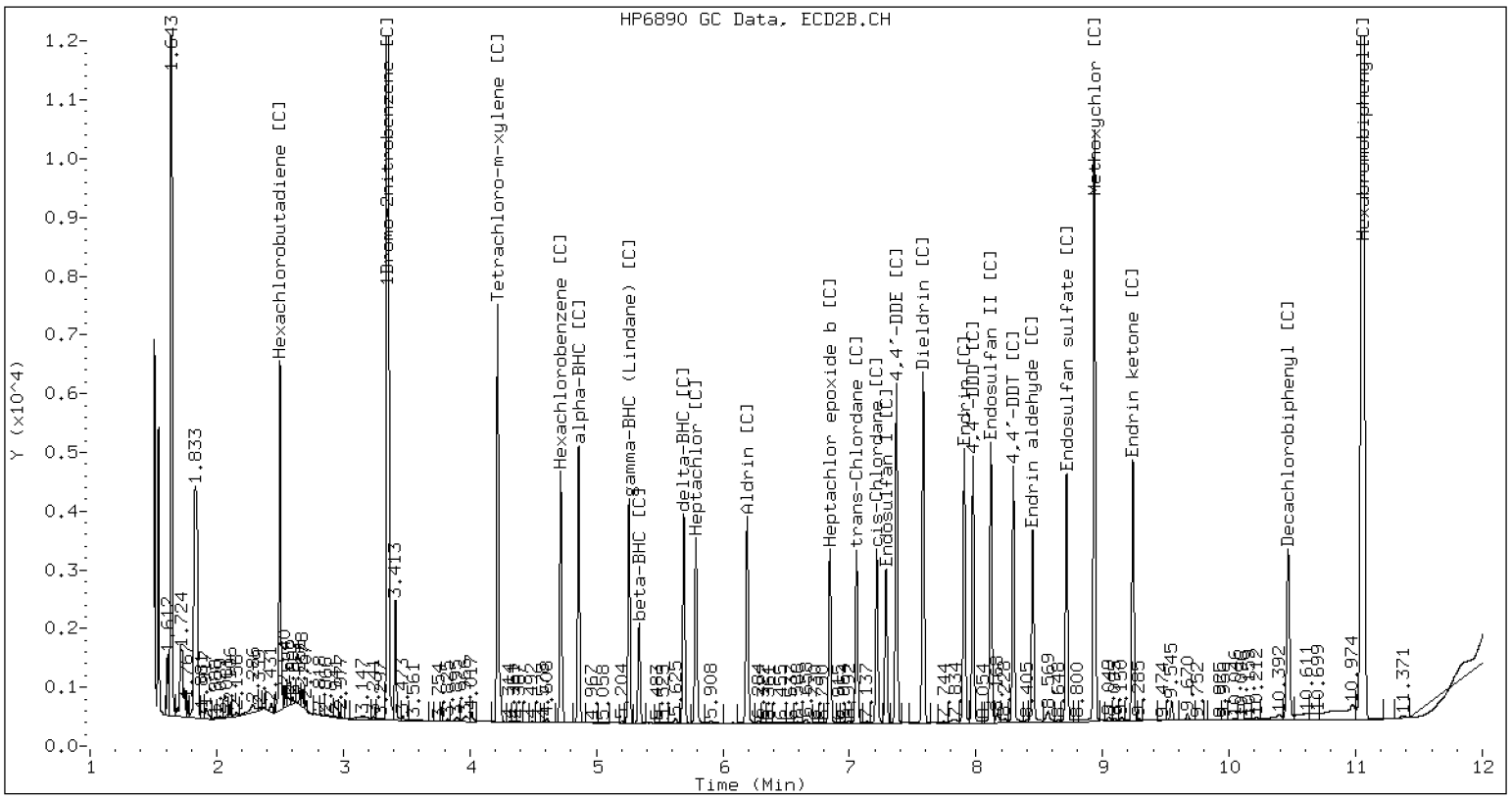
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121407.D SEQ-CAL3 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121407.D
Data file 2: /20221214.b/B20221214.b/22121407.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL3
Client ID:
Injection Date: 14-DEC-2022 21:14
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121408.D
Data file 2: /20221214.b/B20221214.b/22121408.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL4
Client ID:
Injection Date: 14-DEC-2022 21:31
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.343	0.000	139784	4.860	-0.000	216159	10.22	10.19	0.3	alpha-BHC
4.726	0.000	53742	5.337	0.000	81857	10.20	10.15	0.6	beta-BHC
4.910	0.001	113586	5.691	0.000	177281	10.16	10.14	0.2	delta-BHC
4.646	0.000	121488	5.258	0.000	182844	10.24	10.15	0.9	gamma-BHC (Lindane)
5.130	0.000	108260	5.787	-0.000	166558	10.26	10.21	0.5	Heptachlor
5.454	0.000	124839	6.191	0.000	189618	10.55	10.18	3.6	Aldrin
6.131	0.001	107301	6.846	0.001	155424	10.46	10.09	3.6	Heptachlor epoxide b
6.573	0.000	97151	7.289	0.000	137043	10.32	10.10	2.2	Endosulfan I
6.832	0.001	210564	7.583	0.000	301602	20.82	20.11	3.5	Dieldrin
6.490	0.001	195139	7.371	0.000	281756	20.79	20.49	1.5	4,4'-DDE
7.082	0.001	173216	7.907	-0.000	231062	20.59	20.39	1.0	Endrin
7.318	0.001	161303	8.117	0.001	236844	21.29	20.39	4.4	Endosulfan II
7.136	0.001	157301	7.977	0.001	222755	20.75	20.21	2.7	4,4'-DDD
8.180	0.000	146955	8.715	0.000	205334	20.43	20.13	1.5	Endosulfan sulfate
7.428	0.001	156744	8.295	-0.000	212755	20.46	19.99	2.3	4,4'-DDT
7.912	0.001	344324	8.936	-0.001	473459	101.43	100.55	0.9	Methoxychlor
8.453	-0.000	167384	9.240	0.000	222080	20.31	20.15	0.8	Endrin ketone
7.746	0.000	123653	8.448	0.000	164391	20.47	20.06	2.0	Endrin aldehyde
6.271	0.001	106805	7.056	0.000	154174	10.25	10.04	2.1	trans-Chlordane
6.418	0.001	106651	7.216	0.001	150231	10.21	10.00	2.1	cis-Chlordane
2.323	-0.000	142895	2.500	-0.001	197539	9.97	9.80	1.7	Hexachlorobutadiene
4.183	0.000	130020	4.718	0.000	197396	10.24	10.22	0.1	Hexachlorobenzene
3.828	0.000	199446	4.220	-0.000	308345	20.64	20.69	0.2	Tetrachloro-m-xylene
9.355	0.000	130210	10.466	-0.000	170633	20.02	19.37	3.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

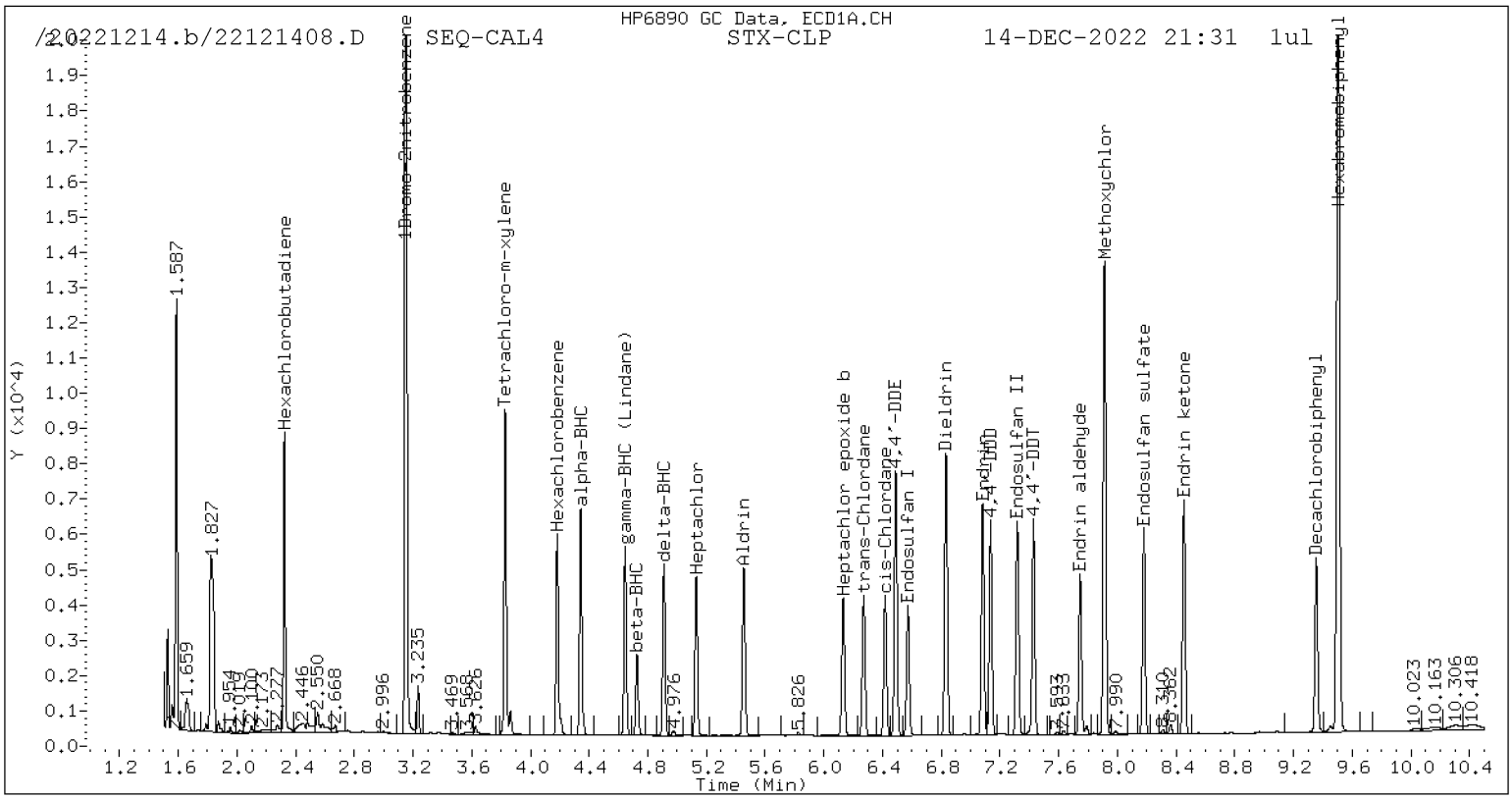
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	710650	0.0
Hexabromobiphenyl	641833	641833	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1058848	0.0
Hexabromobiphenyl	797125	797125	0.0

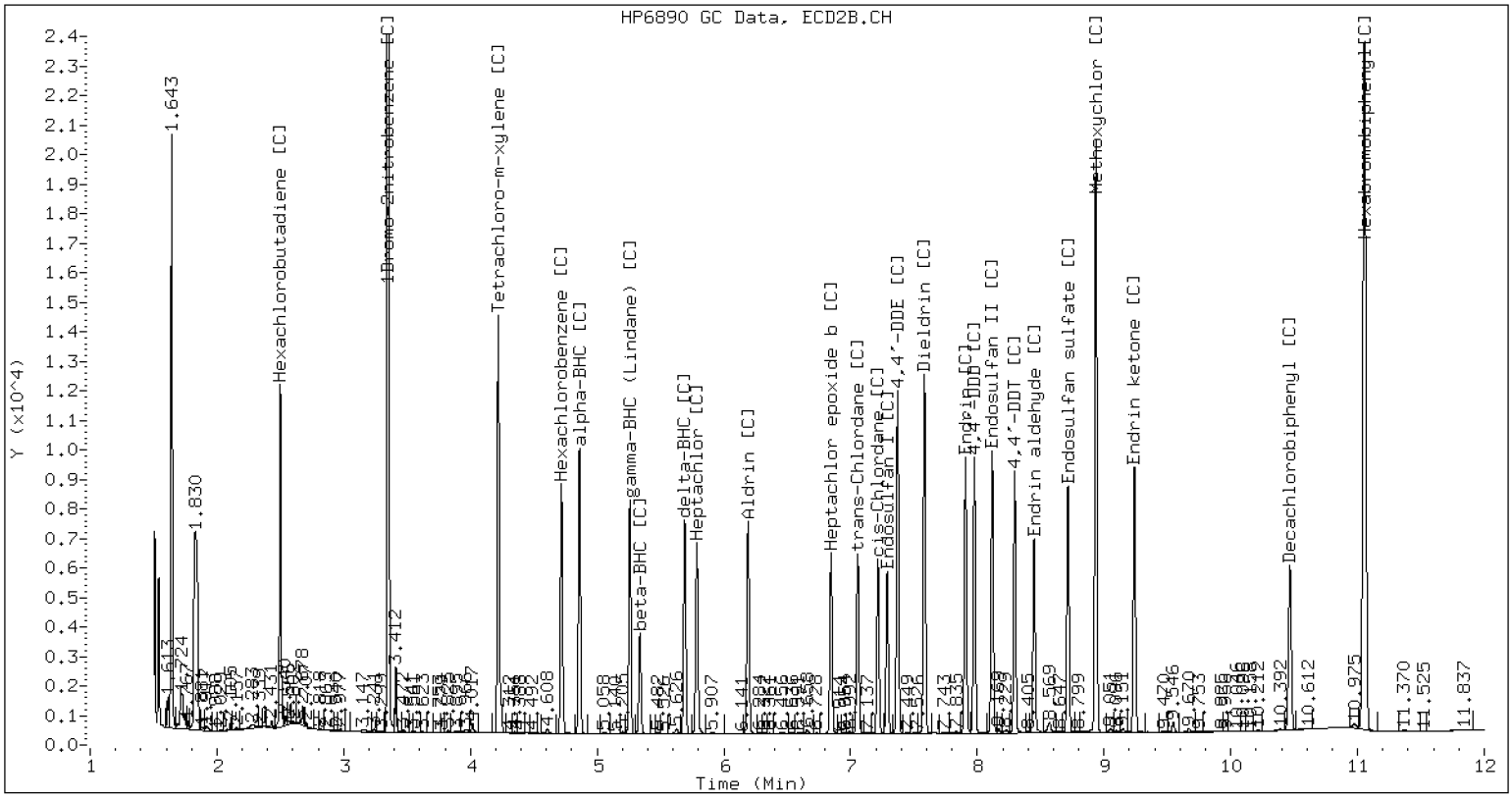
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121408.D SEQ-CAL4 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121408.D
Data file 2: /20221214.b/B20221214.b/22121408.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL4
Client ID:
Injection Date: 14-DEC-2022 21:31
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121409.D
Data file 2: /20221214.b/B20221214.b/22121409.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL5
Client ID:
Injection Date: 14-DEC-2022 21:49
Report Date: 12/16/2022 15:30
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	0.000	263355	4.860	-0.001	412780	20.34	20.46	0.6	alpha-BHC
4.726	0.000	99355	5.337	-0.000	154138	19.93	20.10	0.8	beta-BHC
4.909	0.000	216224	5.690	-0.000	334261	20.44	20.12	1.6	delta-BHC
4.645	0.000	228274	5.258	-0.000	350450	20.34	20.47	0.7	gamma-BHC (Lindane)
5.130	0.000	203067	5.787	-0.000	320123	20.33	20.64	1.5	Heptachlor
5.454	0.000	230734	6.191	-0.000	359912	20.62	20.33	1.4	Aldrin
6.130	0.000	198033	6.845	-0.000	295580	20.41	20.19	1.1	Heptachlor epoxide b
6.572	0.000	180905	7.289	-0.000	260351	20.31	20.18	0.7	Endosulfan I
6.831	0.000	388583	7.582	-0.000	571731	40.61	40.10	1.3	Dieldrin
6.489	0.000	362177	7.370	-0.000	531128	40.77	40.63	0.4	4,4'-DDE
7.081	0.000	323576	7.907	-0.000	442460	40.48	40.43	0.1	Endrin
7.317	0.000	282010	8.117	-0.000	446656	39.19	39.81	1.6	Endosulfan II
7.135	0.000	292251	7.976	-0.000	427990	40.58	40.20	0.9	4,4'-DDD
8.180	0.000	276113	8.715	0.000	393743	40.41	39.97	1.1	Endosulfan sulfate
7.427	0.000	296413	8.295	-0.000	413083	40.73	40.20	1.3	4,4'-DDT
7.912	0.000	628619	8.935	-0.001	900958	194.94	198.14	1.6	Methoxychlor
8.453	0.000	311305	9.239	-0.000	423698	39.77	39.82	0.1	Endrin ketone
7.746	0.000	230881	8.448	0.000	312907	40.23	39.54	1.7	Endrin aldehyde
6.271	0.000	200151	7.056	-0.000	294106	20.31	20.15	0.8	trans-Chlordane
6.417	0.000	197892	7.216	-0.000	285904	20.02	20.02	0.0	cis-Chlordane
2.324	0.000	260716	2.500	-0.000	346254	19.22	18.08	6.2	Hexachlorobutadiene
4.182	0.000	237746	4.718	-0.000	364913	19.78	19.88	0.5	Hexachlorobenzene
3.828	0.000	357836	4.220	-0.000	567647	39.13	40.07	2.4	Tetrachloro-m-xylene
9.355	0.000	239428	10.466	-0.001	327134	38.76	38.45	0.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

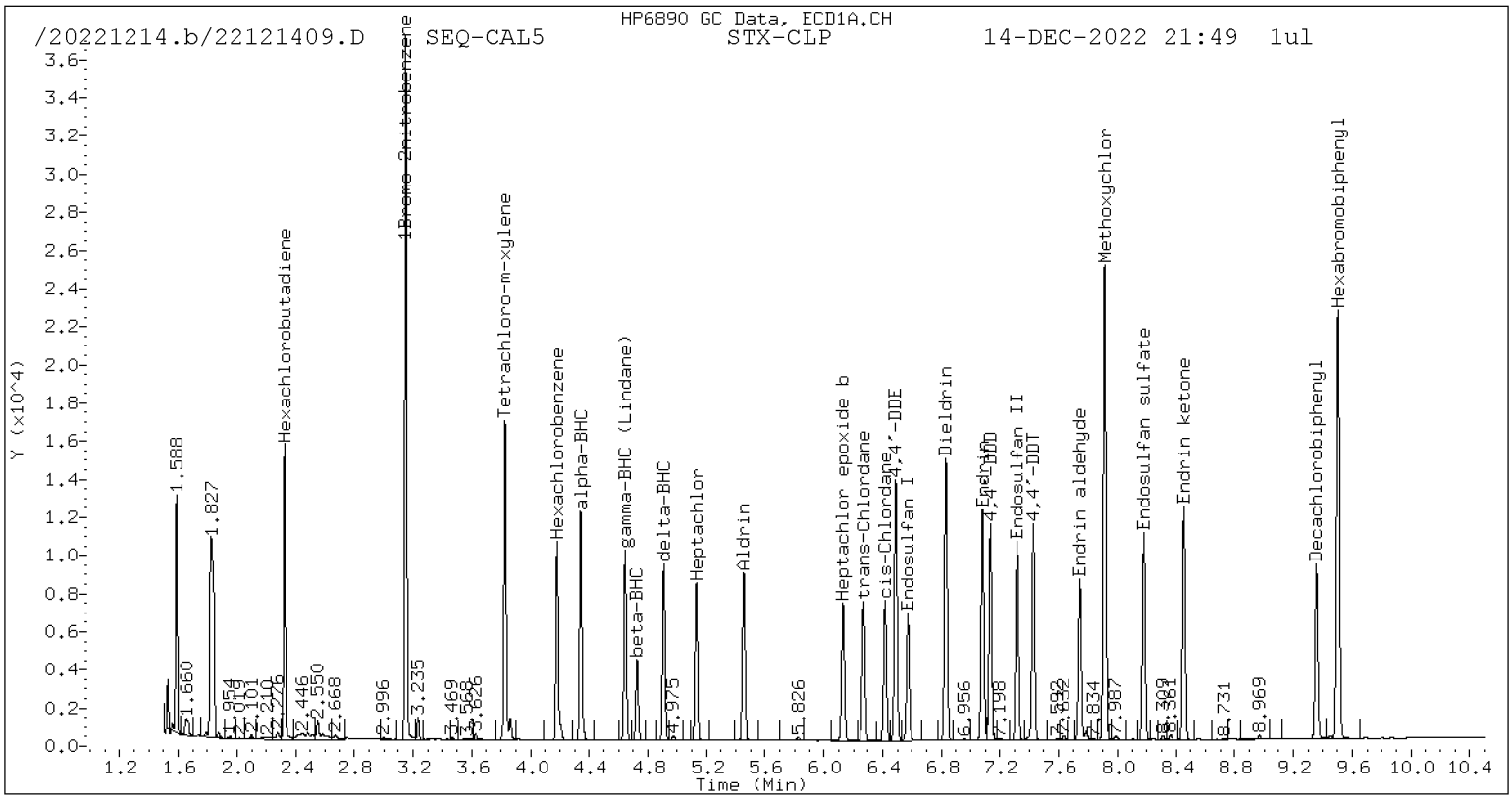
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	672426	0.0
Hexabromobiphenyl	609723	609723	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1006482	0.0
Hexabromobiphenyl	769764	769764	0.0

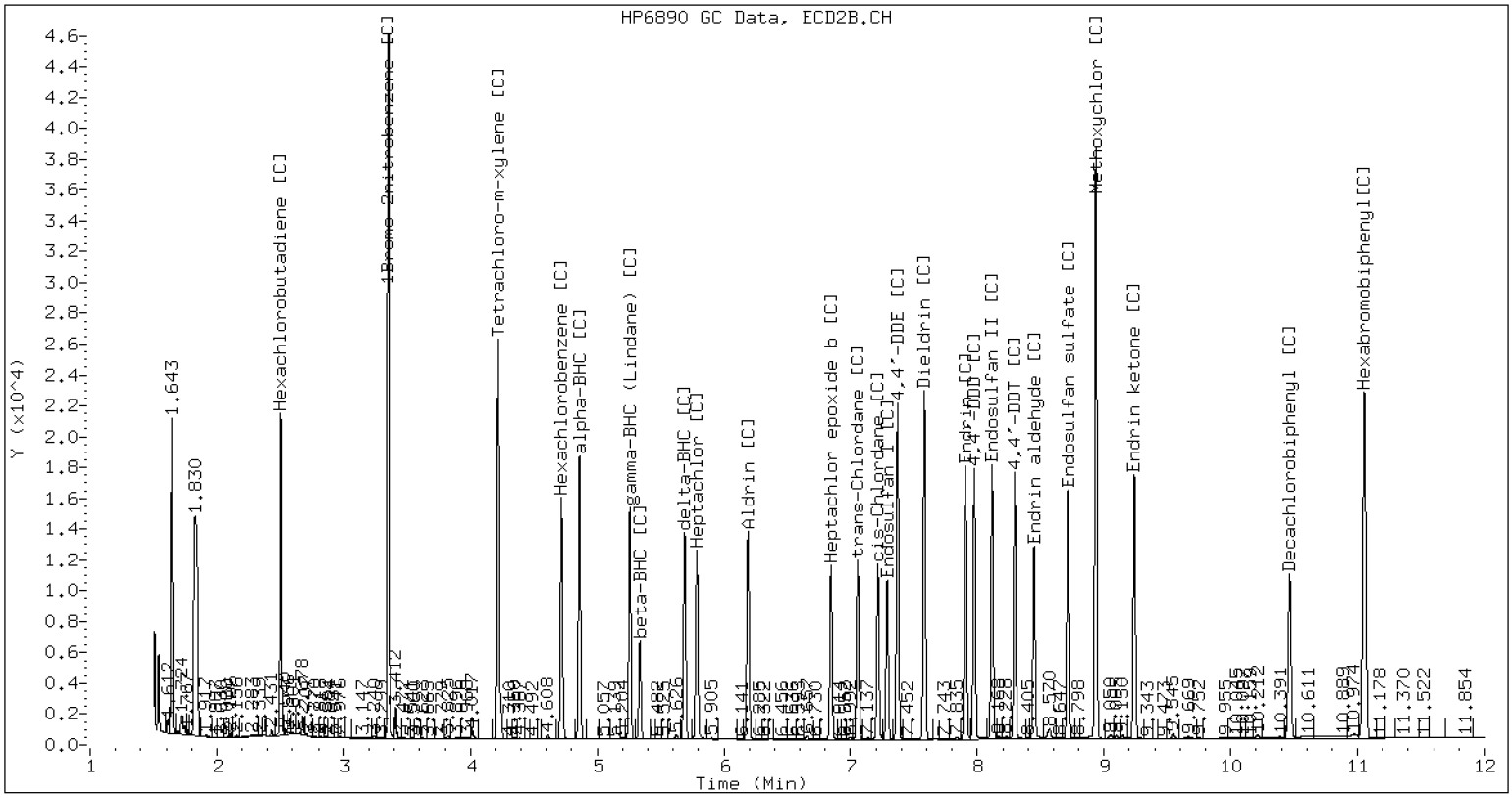
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121409.D SEQ-CAL5 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121409.D
Data file 2: /20221214.b/B20221214.b/22121409.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL5
Client ID:
Injection Date: 14-DEC-2022 21:49
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121410.D
Data file 2: /20221214.b/B20221214.b/22121410.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL6
Client ID:
Injection Date: 14-DEC-2022 22:07
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	0.000	535902	4.860	-0.000	849533	39.69	40.30	1.5	alpha-BHC
4.726	0.000	198976	5.337	-0.000	311218	38.28	38.84	1.4	beta-BHC
4.910	0.000	440370	5.691	0.000	700464	39.91	40.34	1.1	delta-BHC
4.646	0.000	461905	5.258	0.000	718675	39.46	40.18	1.8	gamma-BHC (Lindane)
5.130	0.000	401672	5.787	0.000	639345	38.56	39.46	2.3	Heptachlor
5.454	0.000	458396	6.190	-0.000	720942	39.27	38.97	0.8	Aldrin
6.130	0.000	387273	6.846	0.000	586062	38.26	38.31	0.1	Heptachlor epoxide b
6.572	-0.000	354629	7.288	-0.001	519836	38.18	38.55	1.0	Endosulfan I
6.832	0.000	755708	7.582	-0.000	1126850	75.73	75.64	0.1	Dieldrin
6.489	0.000	698620	7.371	-0.000	1040947	75.40	76.19	1.0	4,4'-DDE
7.082	0.000	615481	7.907	-0.000	858461	74.19	74.98	1.1	Endrin
7.317	0.000	590923	8.117	-0.000	885035	79.12	75.41	4.8	Endosulfan II
7.136	0.000	565557	7.976	-0.000	842536	75.67	75.65	0.0	4,4'-DDD
8.179	-0.001	540557	8.715	0.000	782860	76.22	75.96	0.3	Endosulfan sulfate
7.427	0.000	577337	8.295	-0.000	820861	76.44	76.36	0.1	4,4'-DDT
7.912	-0.000	1204040	8.935	-0.001	1785262	359.75	375.30	4.2	Methoxychlor
8.453	-0.001	610387	9.239	-0.000	843646	75.13	75.79	0.9	Endrin ketone
7.746	-0.000	452325	8.448	0.000	622287	75.93	75.17	1.0	Endrin aldehyde
6.271	0.000	395598	7.056	-0.000	591899	38.48	38.80	0.8	trans-Chlordane
6.417	0.001	389712	7.215	-0.000	573103	37.80	38.40	1.6	cis-Chlordane
2.324	0.000	511265	2.500	-0.000	705320	36.14	35.24	2.5	Hexachlorobutadiene
4.183	0.001	472841	4.718	0.000	728846	37.72	37.99	0.7	Hexachlorobenzene
3.828	-0.000	714634	4.221	0.000	1124106	74.93	75.93	1.3	Tetrachloro-m-xylene
9.355	-0.000	468280	10.466	-0.001	645336	73.03	72.51	0.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

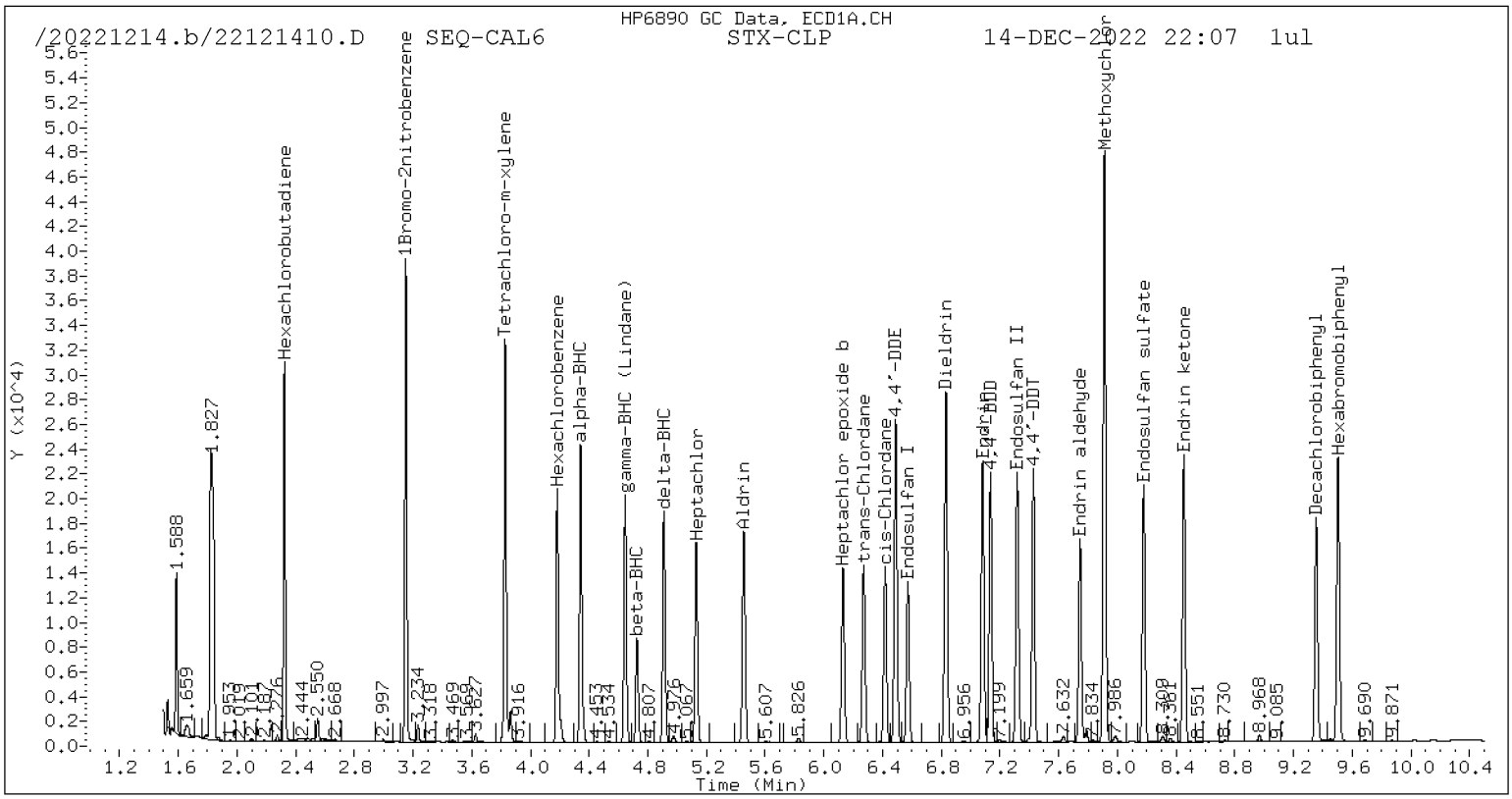
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	701342	-1.3
Hexabromobiphenyl	641833	632821	-1.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1051766	-0.7
Hexabromobiphenyl	797125	805268	1.0

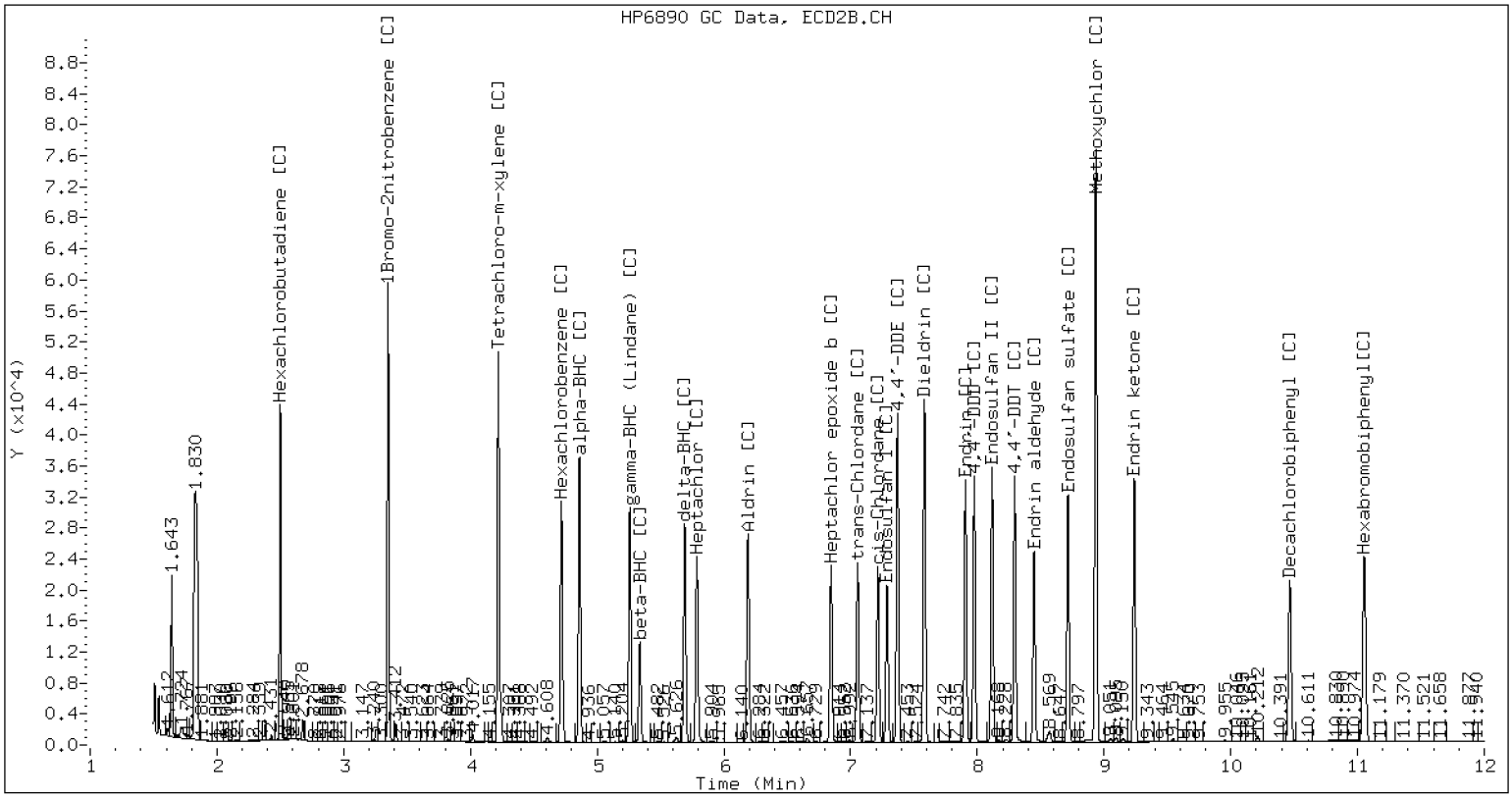
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121410.D SEQ-CAL6 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121410.D
Data file 2: /20221214.b/B20221214.b/22121410.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL6
Client ID:
Injection Date: 14-DEC-2022 22:07
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121411.D
Data file 2: /20221214.b/B20221214.b/22121411.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL7
Client ID:
Injection Date: 14-DEC-2022 22:25
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	0.000	1012605	4.861	0.000	1623058	75.30	77.94	3.4	alpha-BHC
4.726	0.000	371916	5.337	0.000	586390	71.84	74.06	3.1	beta-BHC
4.910	0.000	837966	5.691	0.000	1343533	76.25	78.32	2.7	delta-BHC
4.645	-0.000	870454	5.258	0.000	1370551	74.66	77.55	3.8	gamma-BHC (Lindane)
5.130	0.000	743802	5.787	0.000	1188915	71.70	74.26	3.5	Heptachlor
5.454	0.000	841598	6.191	0.000	1331430	72.39	72.84	0.6	Aldrin
6.130	-0.000	709774	6.845	0.000	1087105	70.41	71.92	2.1	Heptachlor epoxide b
6.573	0.000	652702	7.289	0.000	969098	70.56	72.74	3.1	Endosulfan I
6.832	0.000	1390496	7.583	0.000	2118555	139.91	143.93	2.8	Dieldrin
6.490	0.001	1284777	7.371	0.000	1944530	139.23	144.06	3.4	4,4'-DDE
7.082	0.001	1132487	7.907	0.000	1618631	137.86	142.60	3.4	Endrin
7.317	0.000	1089554	8.117	0.000	1672946	147.33	143.79	2.4	Endosulfan II
7.135	0.000	1051958	7.976	0.000	1606815	142.14	145.53	2.4	4,4'-DDD
8.180	0.000	1013288	8.715	0.000	1496440	144.30	146.47	1.5	Endosulfan sulfate
7.428	0.001	1086138	8.295	0.000	1586078	145.23	148.84	2.5	4,4'-DDT
7.912	0.001	2325261	8.936	0.000	3541650	701.64	751.02	6.8	Methoxychlor
8.454	0.000	1146784	9.240	0.000	1623077	142.56	147.08	3.1	Endrin ketone
7.746	-0.000	846477	8.448	0.000	1178353	143.51	143.57	0.0	Endrin aldehyde
6.271	0.000	733514	7.056	0.000	1114685	71.64	73.95	3.2	trans-Chlordane
6.417	0.001	723886	7.216	0.000	1079255	70.50	73.19	3.7	cis-Chlordane
2.324	0.000	955982	2.501	0.000	1351745	67.86	68.35	0.7	Hexachlorobutadiene
4.182	0.000	879573	4.718	0.000	1355289	70.45	71.51	1.5	Hexachlorobenzene
3.828	0.000	1318381	4.220	0.000	2067539	138.79	141.35	1.8	Tetrachloro-m-xylene
9.356	0.000	878340	10.467	0.000	1231298	138.34	139.55	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

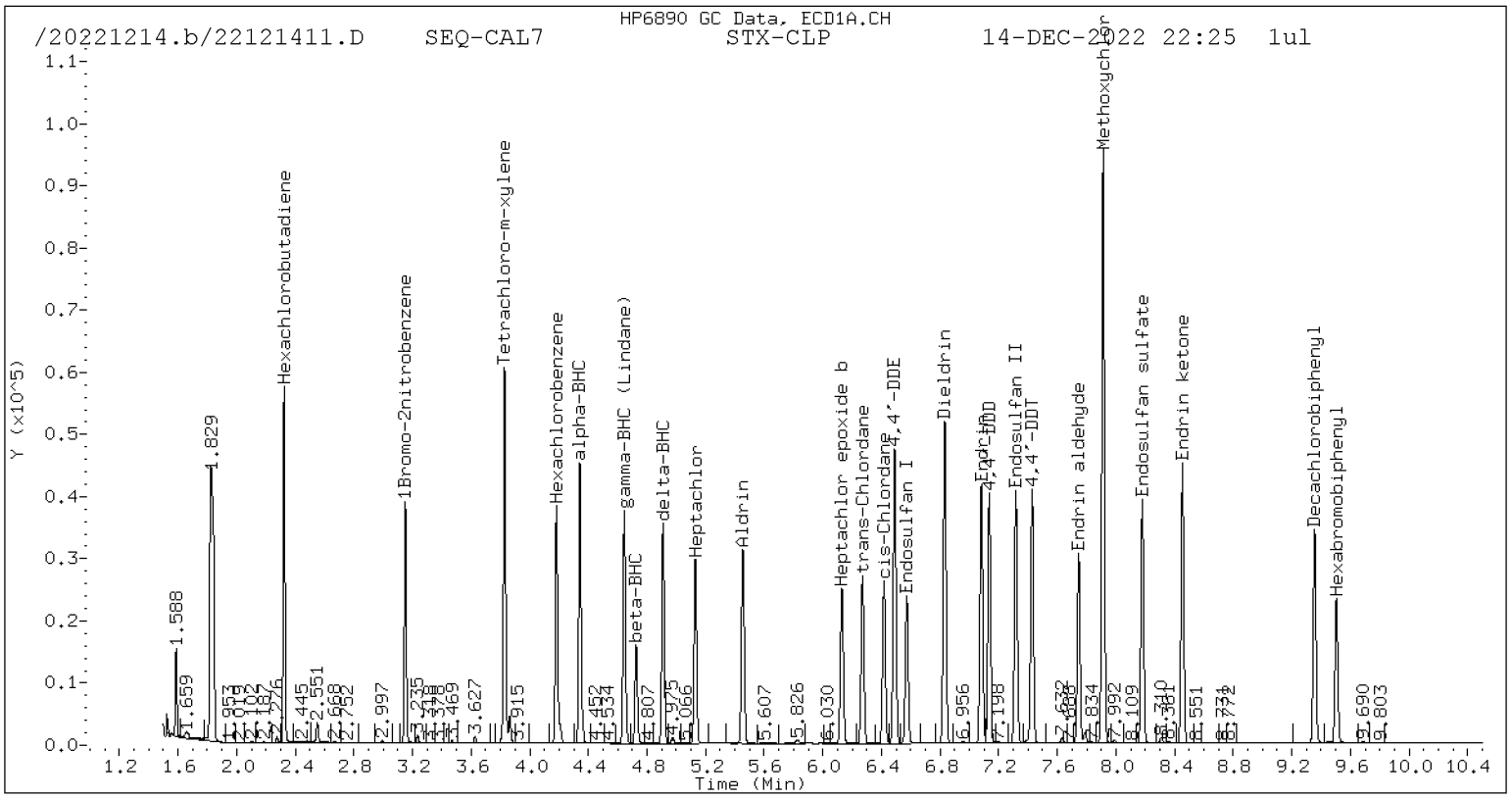
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	698499	-1.7
Hexabromobiphenyl	641833	626605	-2.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1039154	-1.9
Hexabromobiphenyl	797125	798313	0.1

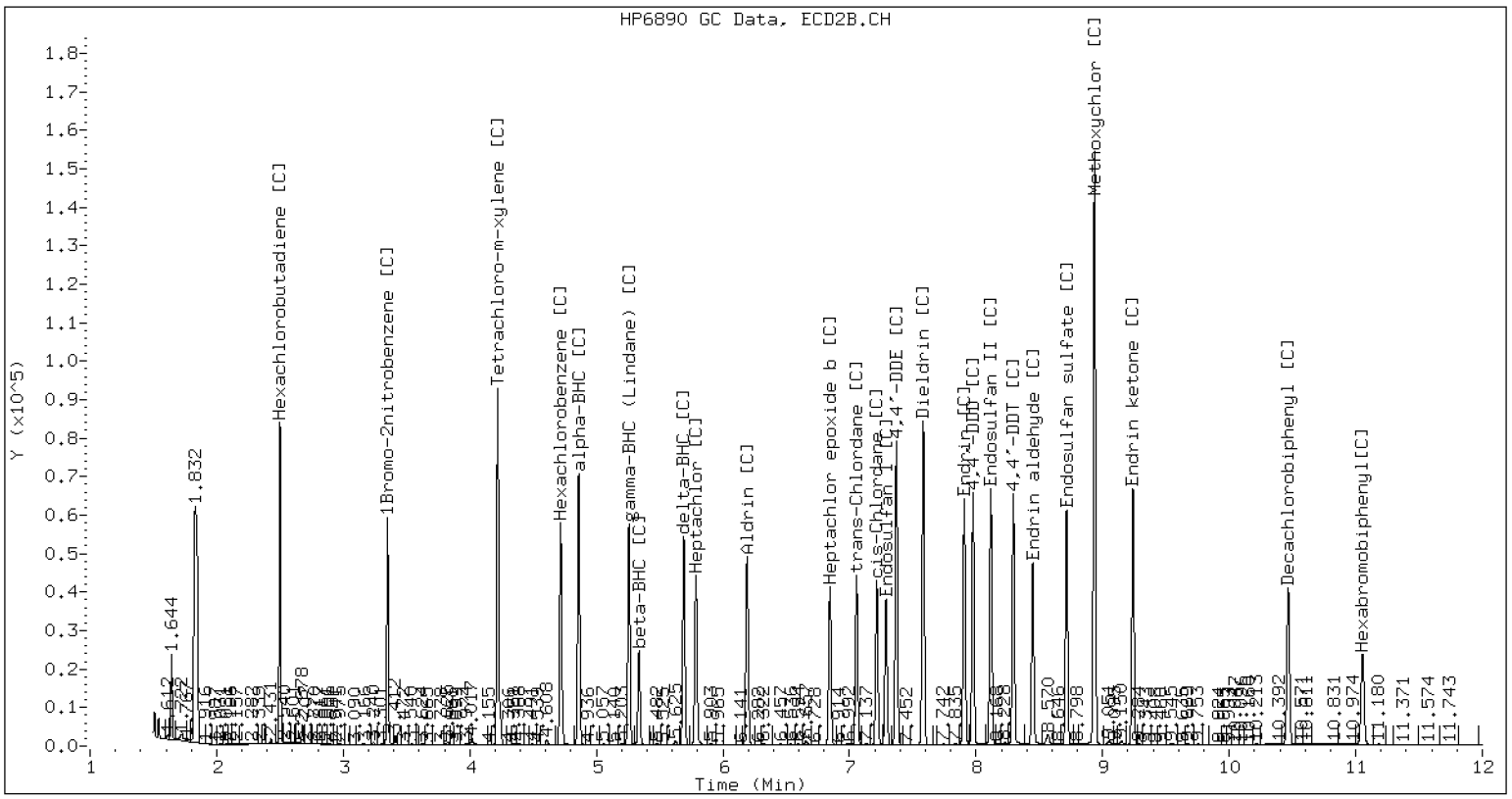
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121411.D SEQ-CAL7 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121411.D
Data file 2: /20221214.b/B20221214.b/22121411.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL7
Client ID:
Injection Date: 14-DEC-2022 22:25
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121412.D
Data file 2: /20221214.b/B20221214.b/22121412.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL8
Client ID:
Injection Date: 14-DEC-2022 22:43
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	-0.000	22184	6.741	-0.000	34211	2.89	2.85	1.2	Oxychlordane
6.106	-0.000	18661	7.036	-0.000	30817	2.94	3.14	6.5	2,4-DDE
6.397	-0.000	30616	7.154	-0.001	41466	3.05	2.82	7.5	trans-Nonachlor
6.681	0.000	16263	7.591	0.000	26177	2.88	3.12	7.9	2,4-DDD
6.956	-0.001	17569	7.913	-0.000	24398	2.88	2.82	2.1	2,4-DDT
7.112	-0.000	29417	7.975	-0.000	37972	3.01	2.72	9.9	cis-Nonachlor
8.082	-0.000	18819	9.223	-0.000	24312	3.09	3.00	3.1	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

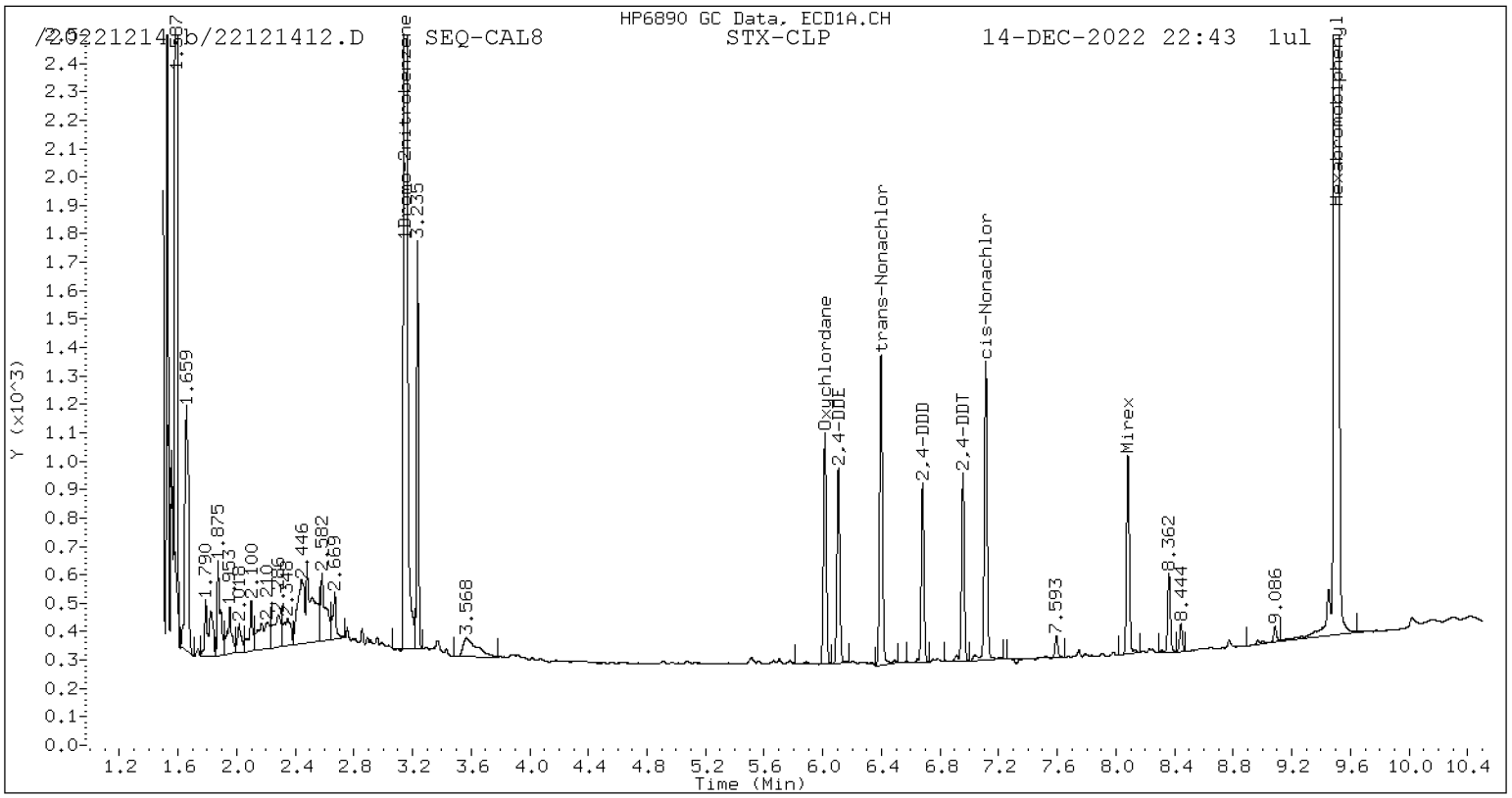
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	713898	0.5
Hexabromobiphenyl	641833	646441	0.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1076864	1.7
Hexabromobiphenyl	797125	820275	2.9

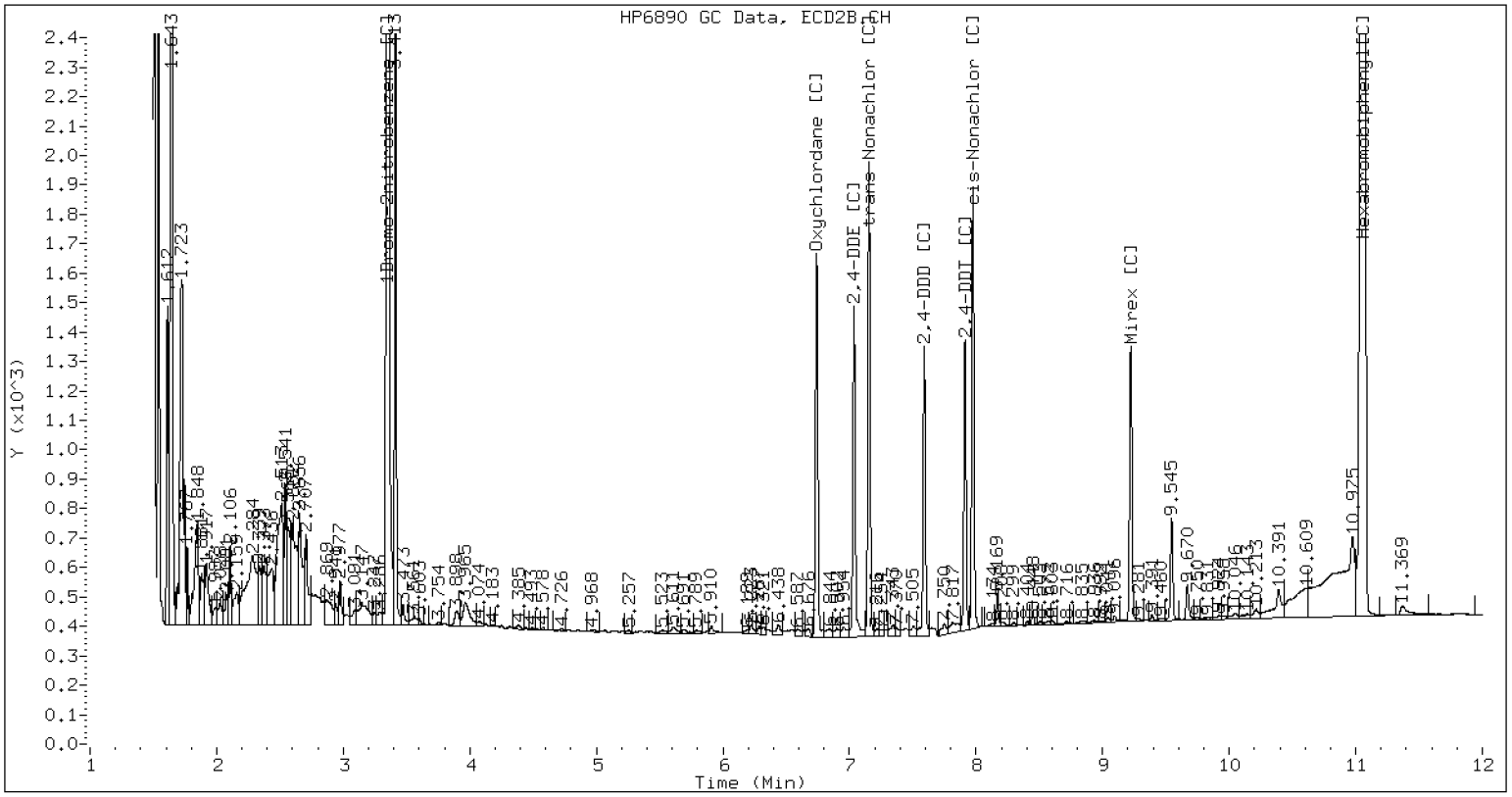
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121412.D SEQ-CAL8 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121412.D
Data file 2: /20221214.b/B20221214.b/22121412.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL8
Client ID:
Injection Date: 14-DEC-2022 22:43
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121413.D
Data file 2: /20221214.b/B20221214.b/22121413.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL9
Client ID:
Injection Date: 14-DEC-2022 23:01
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.015	0.000	39121	6.741	-0.000	61505	5.34	5.41	1.3	Oxychlordane
6.106	0.000	33487	7.036	-0.000	53206	5.54	5.72	3.1	2,4-DDE
6.398	0.000	51858	7.154	-0.001	72836	5.42	5.20	4.1	trans-Nonachlor
6.681	0.000	29307	7.590	-0.000	44506	5.45	5.55	1.9	2,4-DDD
6.957	-0.000	31530	7.914	0.000	45986	5.43	5.57	2.6	2,4-DDT
7.112	-0.000	50912	7.975	0.000	70898	5.46	5.32	2.6	cis-Nonachlor
8.082	-0.000	32004	9.223	-0.000	45650	5.52	5.89	6.6	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

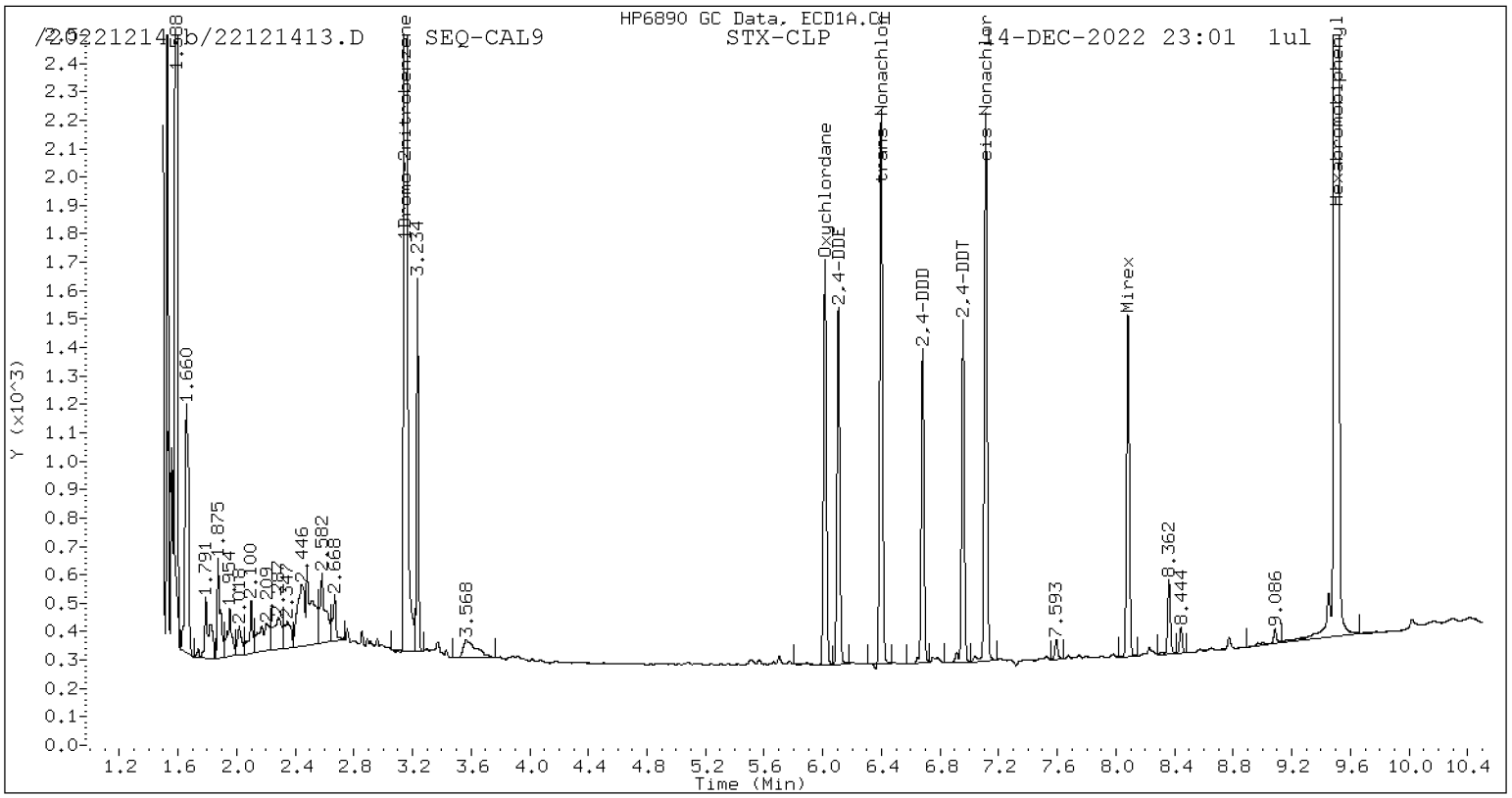
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	672507	-5.4
Hexabromobiphenyl	641833	615627	-4.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1020334	-3.6
Hexabromobiphenyl	797125	782734	-1.8

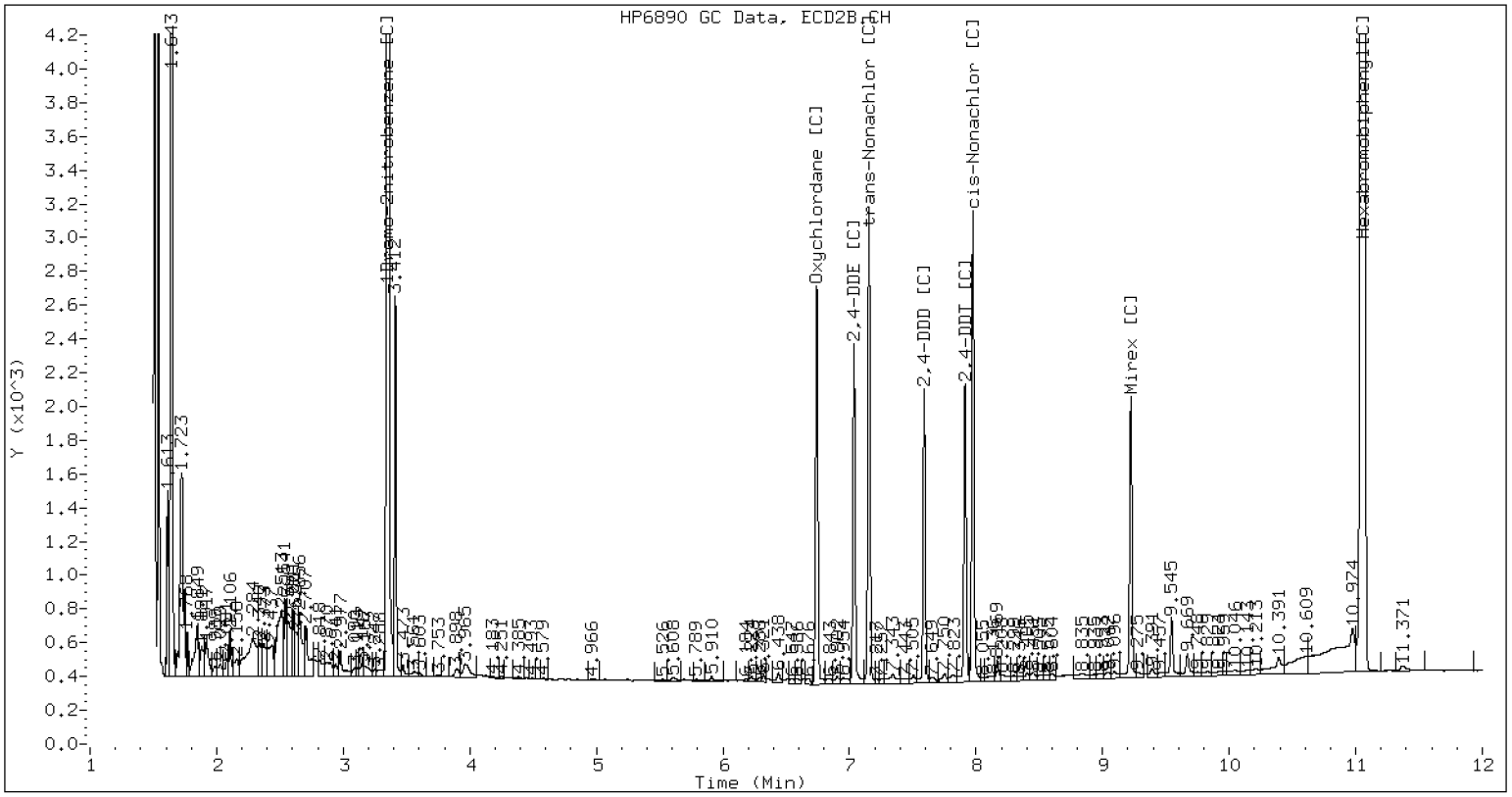
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121413.D SEQ-CAL9 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121413.D
Data file 2: /20221214.b/B20221214.b/22121413.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL9
Client ID:
Injection Date: 14-DEC-2022 23:01
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121414.D
Data file 2: /20221214.b/B20221214.b/22121414.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALA
Client ID:
Injection Date: 14-DEC-2022 23:19
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	-0.000	82473	6.741	-0.001	127500	10.63	10.63	0.0	Oxychlordane
6.106	-0.000	69109	7.035	-0.001	108440	10.79	11.04	2.3	2,4-DDE
6.398	0.000	108386	7.154	-0.001	157712	10.68	10.60	0.7	trans-Nonachlor
6.681	0.000	60517	7.590	-0.000	91420	10.62	10.74	1.2	2,4-DDD
6.956	-0.001	65300	7.913	0.000	91498	10.61	10.44	1.6	2,4-DDT
7.111	-0.001	104247	7.975	-0.000	146224	10.55	10.34	2.0	cis-Nonachlor
8.082	-0.000	65614	9.222	-0.000	84337	10.67	10.25	4.0	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

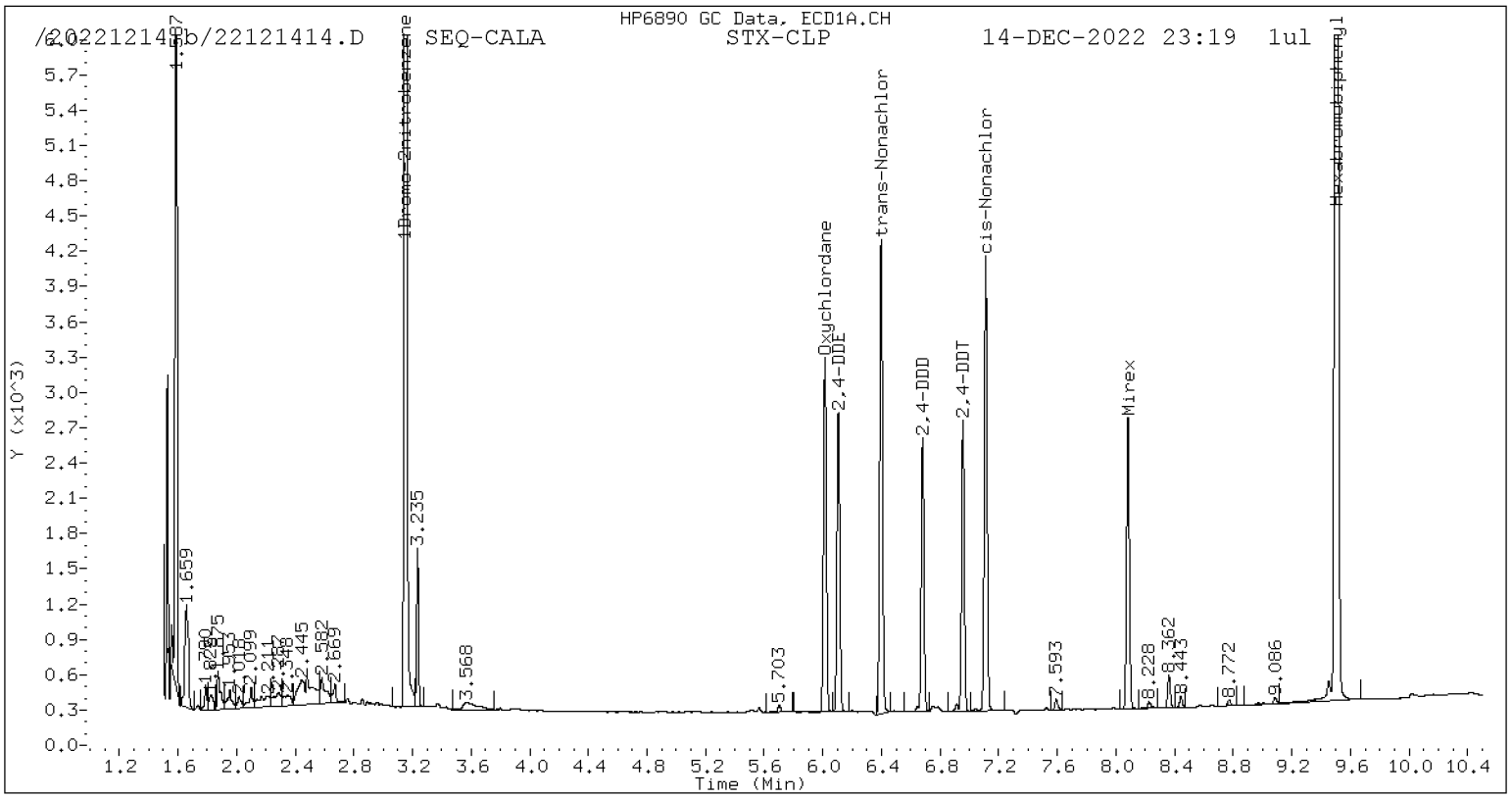
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	712122	0.2
Hexabromobiphenyl	641833	652595	1.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1077341	1.7
Hexabromobiphenyl	797125	831365	4.3

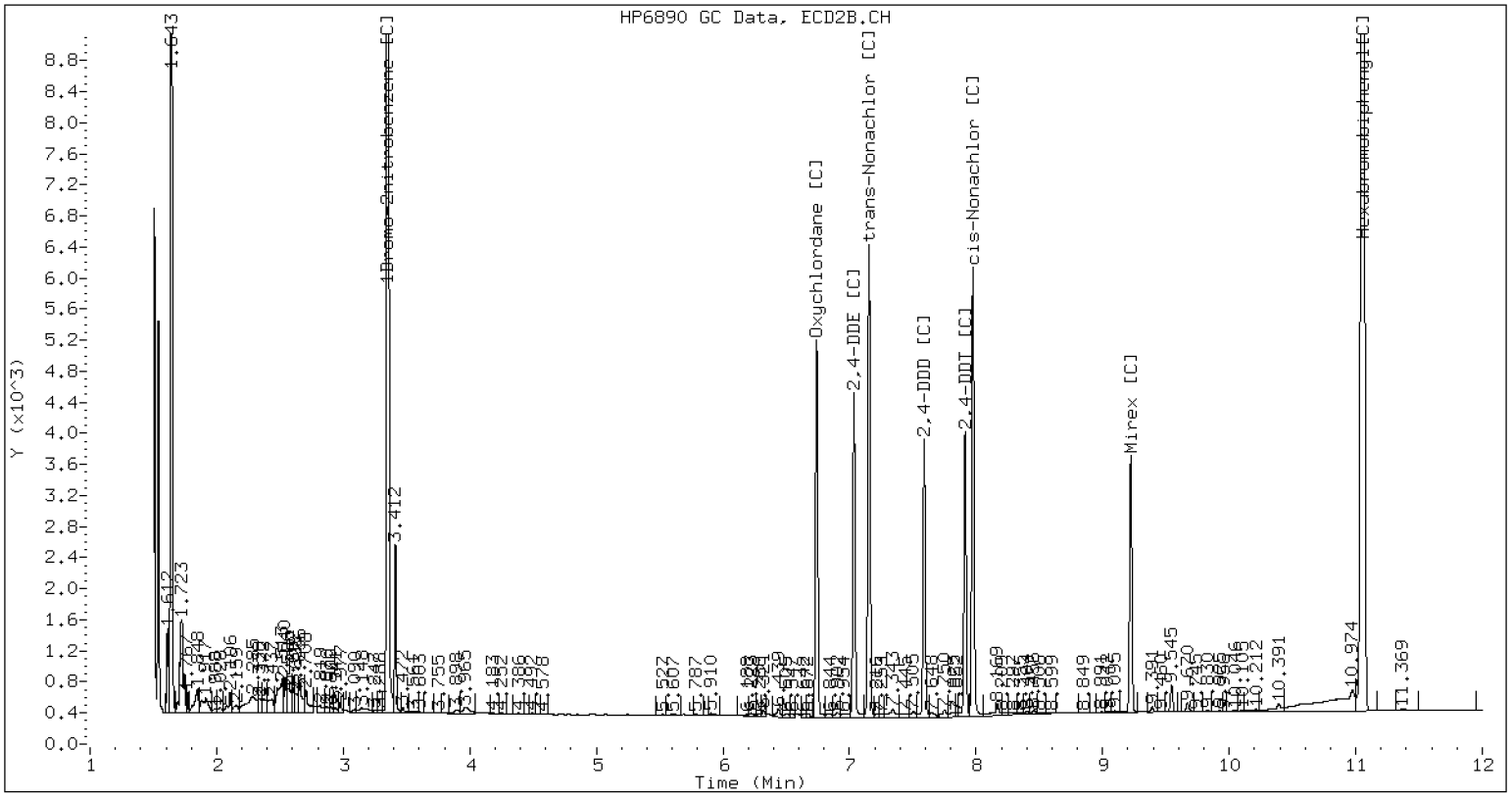
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121414.D SEQ-CALA CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121414.D
Data file 2: /20221214.b/B20221214.b/22121414.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALA
Client ID:
Injection Date: 14-DEC-2022 23:19
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121415.D
Data file 2: /20221214.b/B20221214.b/22121415.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALB
Client ID:
Injection Date: 14-DEC-2022 23:36
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.015	0.001	154379	6.741	-0.000	238017	20.80	20.28	2.5	Oxychlordane
6.106	-0.000	128483	7.036	-0.000	195807	20.97	20.37	2.9	2,4-DDE
6.398	0.000	200622	7.155	-0.000	289952	20.66	20.28	1.9	trans-Nonachlor
6.681	0.000	113972	7.591	0.000	165245	20.90	20.21	3.4	2,4-DDD
6.956	-0.001	122412	7.913	0.000	169814	20.78	20.17	3.0	2,4-DDT
7.112	-0.000	194165	7.975	-0.000	274910	20.54	20.23	1.5	cis-Nonachlor
8.082	-0.000	119271	9.223	0.000	158702	20.28	20.08	1.0	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

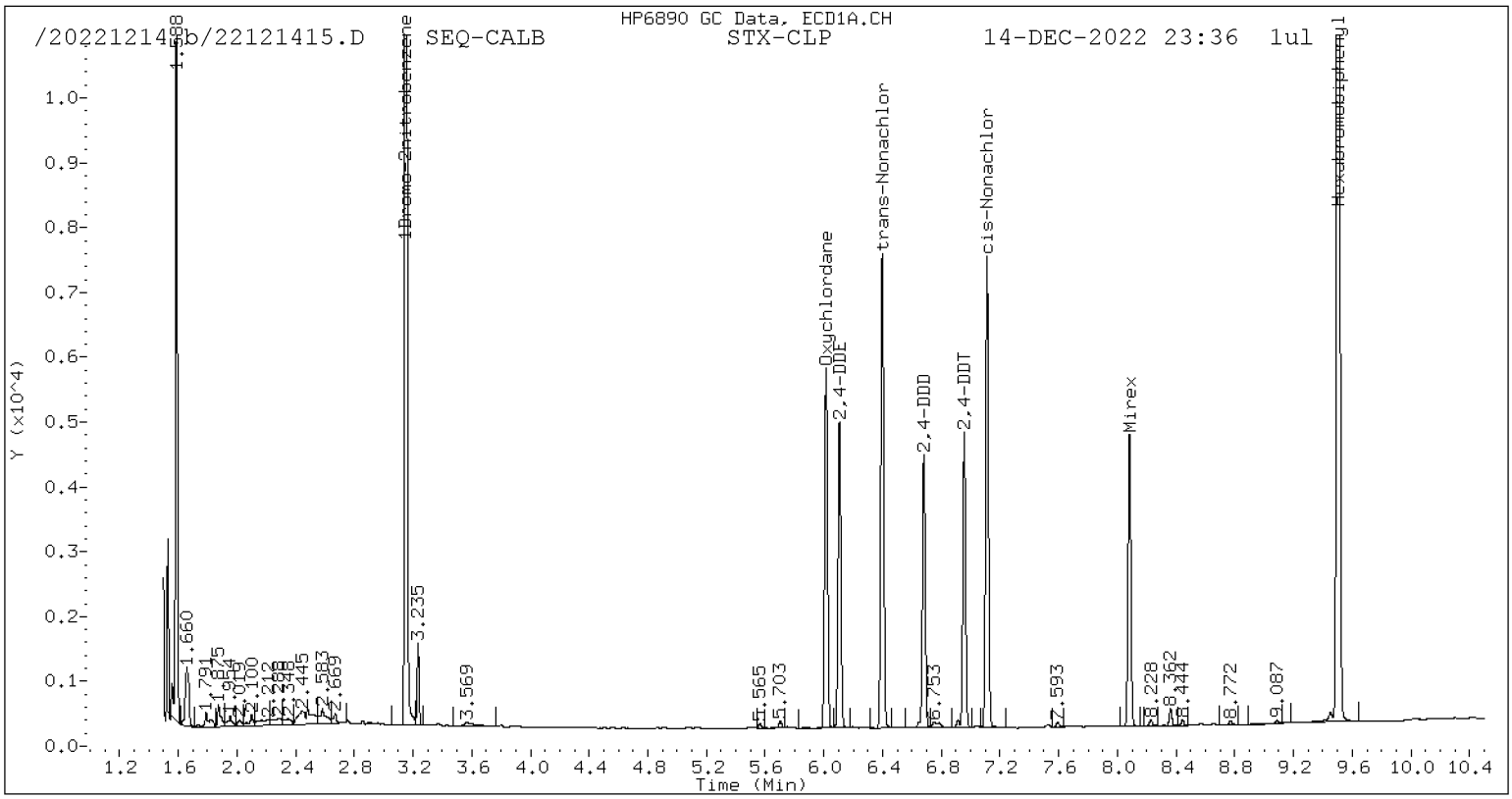
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	693450	-2.4
Hexabromobiphenyl	641833	624334	-2.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1053959	-0.5
Hexabromobiphenyl	797125	798882	0.2

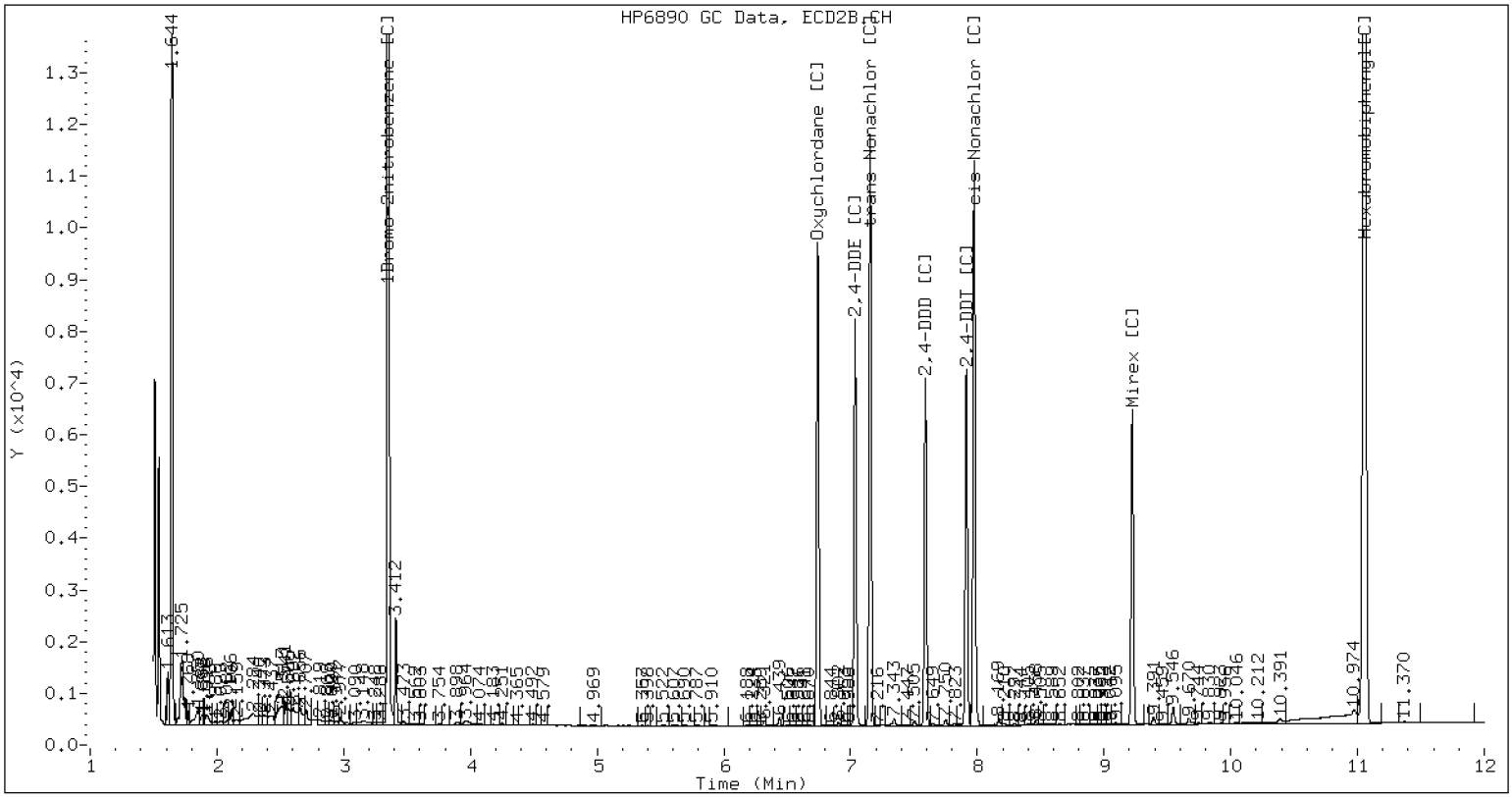
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121415.D SEQ-CALB CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121415.D
Data file 2: /20221214.b/B20221214.b/22121415.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALB
Client ID:
Injection Date: 14-DEC-2022 23:36
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121416.D
Data file 2: /20221214.b/B20221214.b/22121416.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALC
Client ID:
Injection Date: 14-DEC-2022 23:54
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	0.000	292499	6.741	-0.000	460731	40.08	40.26	0.4	Oxychlordane
6.106	0.000	242066	7.036	-0.000	372996	40.18	39.80	0.9	2,4-DDE
6.397	0.000	383329	7.154	-0.001	567971	40.16	40.45	0.7	trans-Nonachlor
6.681	0.000	216474	7.590	-0.000	320311	40.39	39.88	1.3	2,4-DDD
6.957	0.000	233738	7.913	-0.000	332906	40.36	40.25	0.3	2,4-DDT
7.112	0.000	373705	7.975	-0.000	538334	40.21	40.33	0.3	cis-Nonachlor
8.082	0.000	229604	9.222	-0.000	299228	39.71	38.54	3.0	Mirex
3.800	-0.028	1151	----			0.13	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

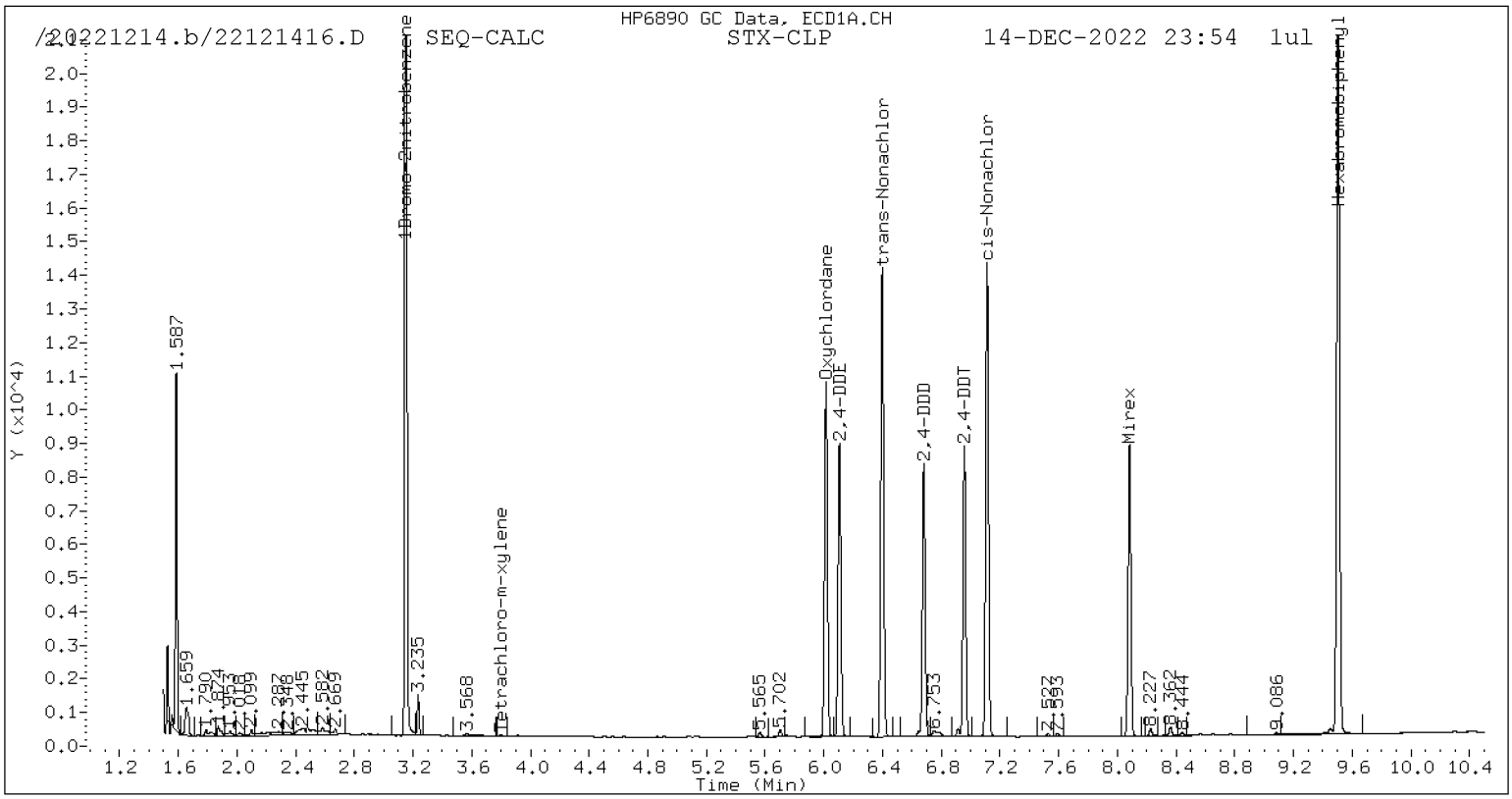
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	674573	-5.1
Hexabromobiphenyl	641833	613787	-4.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1027697	-2.9
Hexabromobiphenyl	797125	784673	-1.6

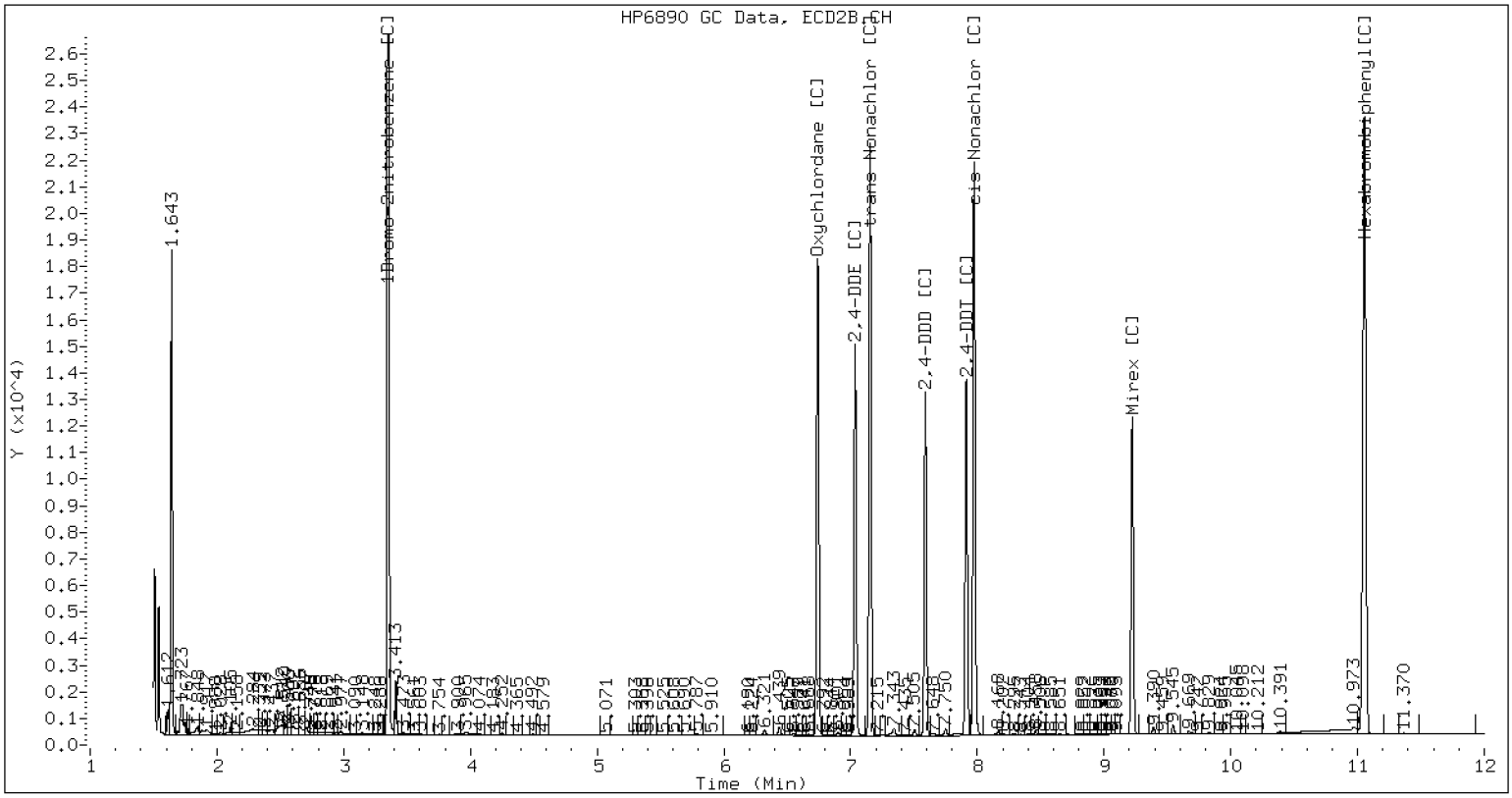
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121416.D SEQ-CALC CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121416.D
Data file 2: /20221214.b/B20221214.b/22121416.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALC
Client ID:
Injection Date: 14-DEC-2022 23:54
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121417.D
Data file 2: /20221214.b/B20221214.b/22121417.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALD
Client ID:
Injection Date: 15-DEC-2022 00:12
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	-0.000	544254	6.741	-0.000	856443	75.85	75.73	0.2	Oxychlordane
6.106	-0.000	438313	7.036	-0.000	677072	73.99	73.11	1.2	2,4-DDE
6.397	-0.000	704675	7.155	0.000	1067899	75.09	76.94	2.4	trans-Nonachlor
6.681	0.000	393654	7.591	0.000	594311	74.70	74.86	0.2	2,4-DDD
6.956	-0.001	430636	7.914	0.000	618740	75.63	75.68	0.1	2,4-DDT
7.112	-0.000	688257	7.975	0.000	1018624	75.31	77.19	2.5	cis-Nonachlor
8.082	-0.001	426177	9.223	0.000	573947	74.97	74.78	0.2	Mirex
3.800	-0.028	2109	----			0.23	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

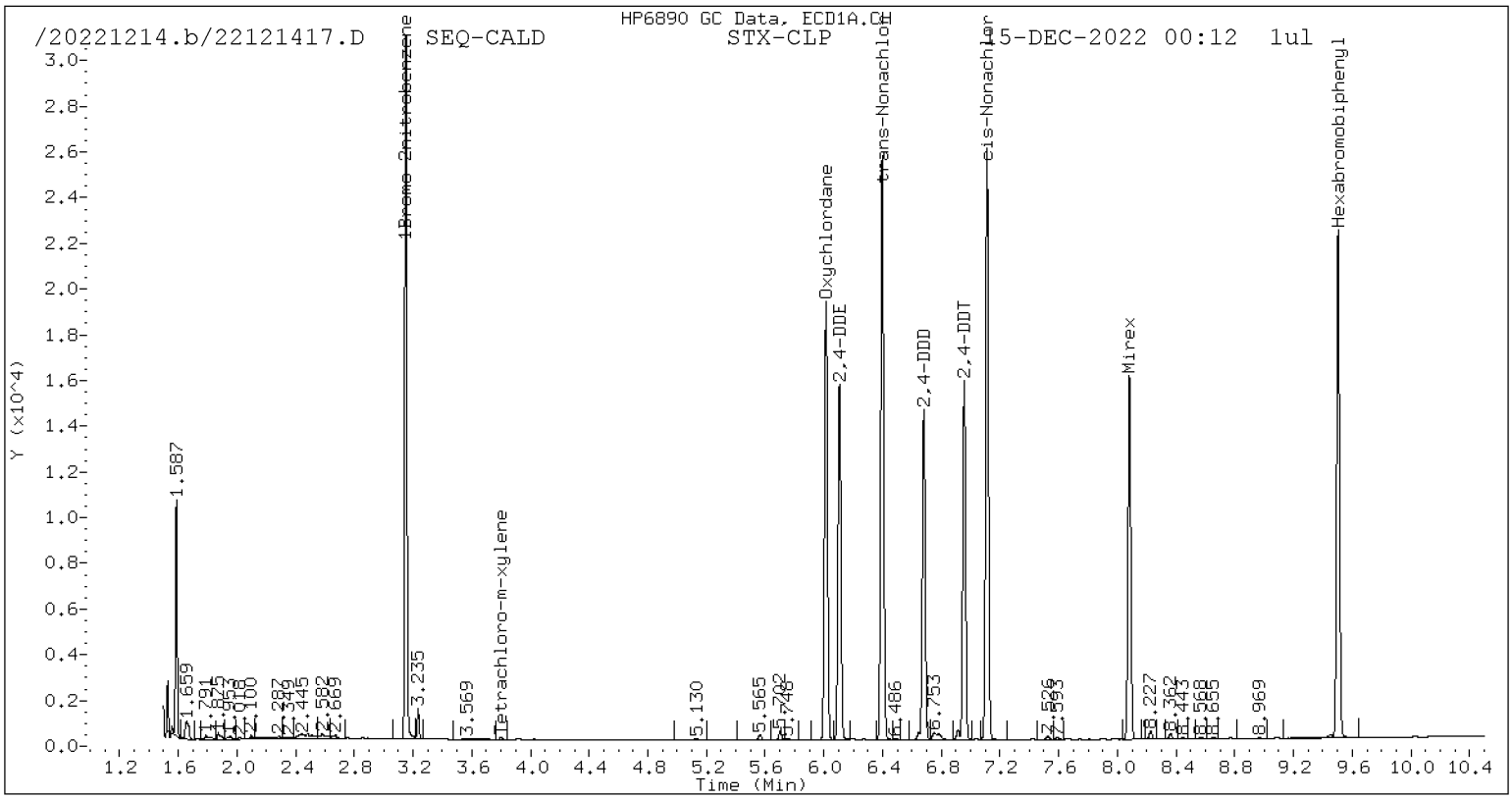
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	664375	-6.5
Hexabromobiphenyl	641833	603504	-6.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1015544	-4.1
Hexabromobiphenyl	797125	775630	-2.7

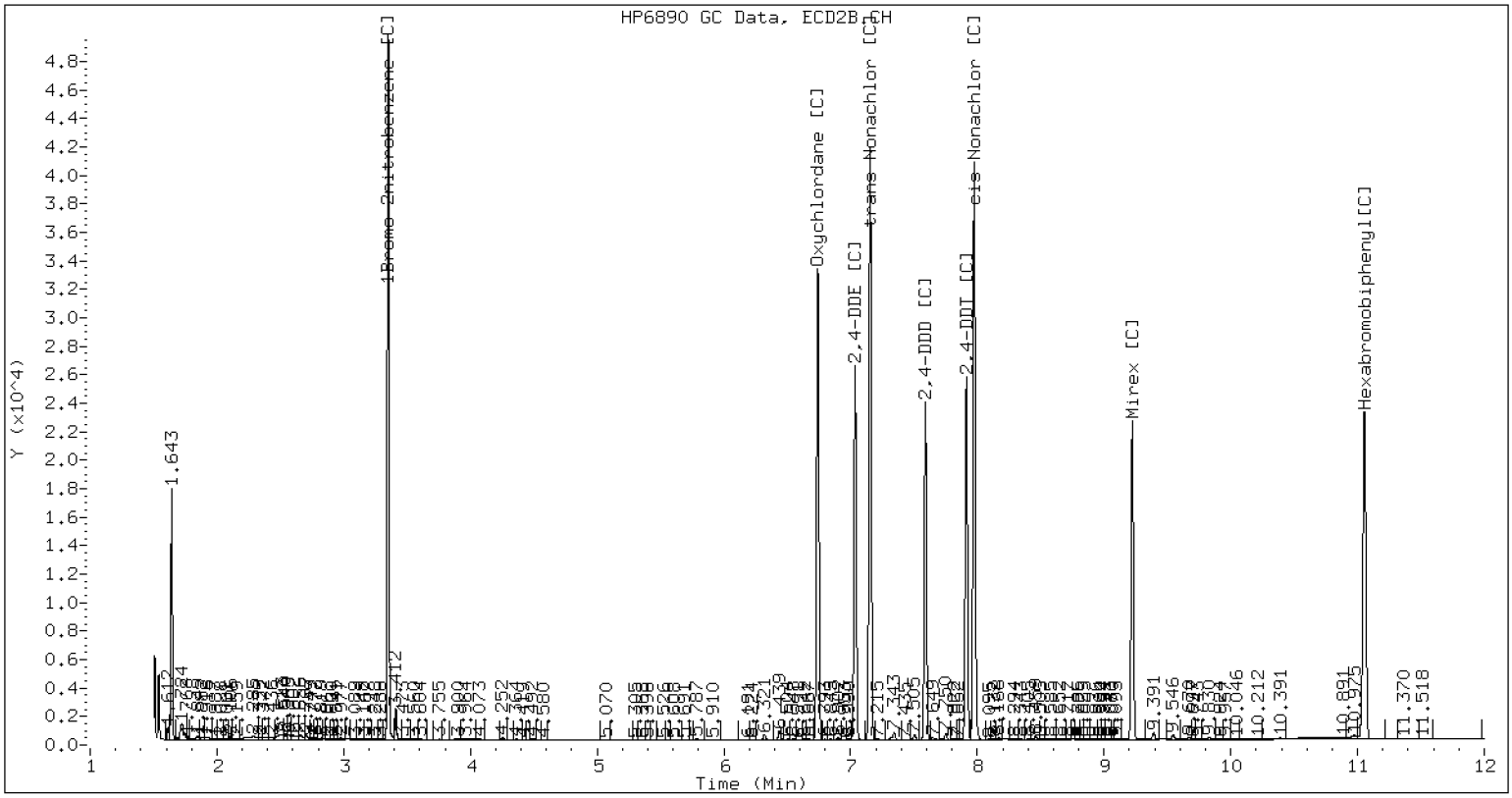
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121417.D SEQ-CALD CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121417.D
Data file 2: /20221214.b/B20221214.b/22121417.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALD
Client ID:
Injection Date: 15-DEC-2022 00:12
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121418.D
Data file 2: /20221214.b/B20221214.b/22121418.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALE
Client ID:
Injection Date: 15-DEC-2022 00:30
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	0.000	1020828	6.741	0.000	1630330	140.48	142.04	1.1	Oxychlordane
6.106	-0.000	801828	7.036	0.000	1240933	133.65	132.03	1.2	2,4-DDE
6.397	0.000	1327091	7.155	0.000	2047915	139.63	146.04	4.5	trans-Nonachlor
6.680	-0.000	733651	7.591	0.000	1118552	137.46	139.45	1.4	2,4-DDD
6.956	-0.001	794021	7.913	0.000	1163676	137.69	140.88	2.3	2,4-DDT
7.112	-0.000	1301975	7.975	0.000	1956215	140.68	146.73	4.2	cis-Nonachlor
8.082	-0.001	815059	9.223	0.000	1108848	141.57	143.01	1.0	Mirex
3.800	-0.028	3997	----			0.43	0.00	---	Tetrachloro-m-xylene
----			10.471	0.004	3393	0.00	0.39	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

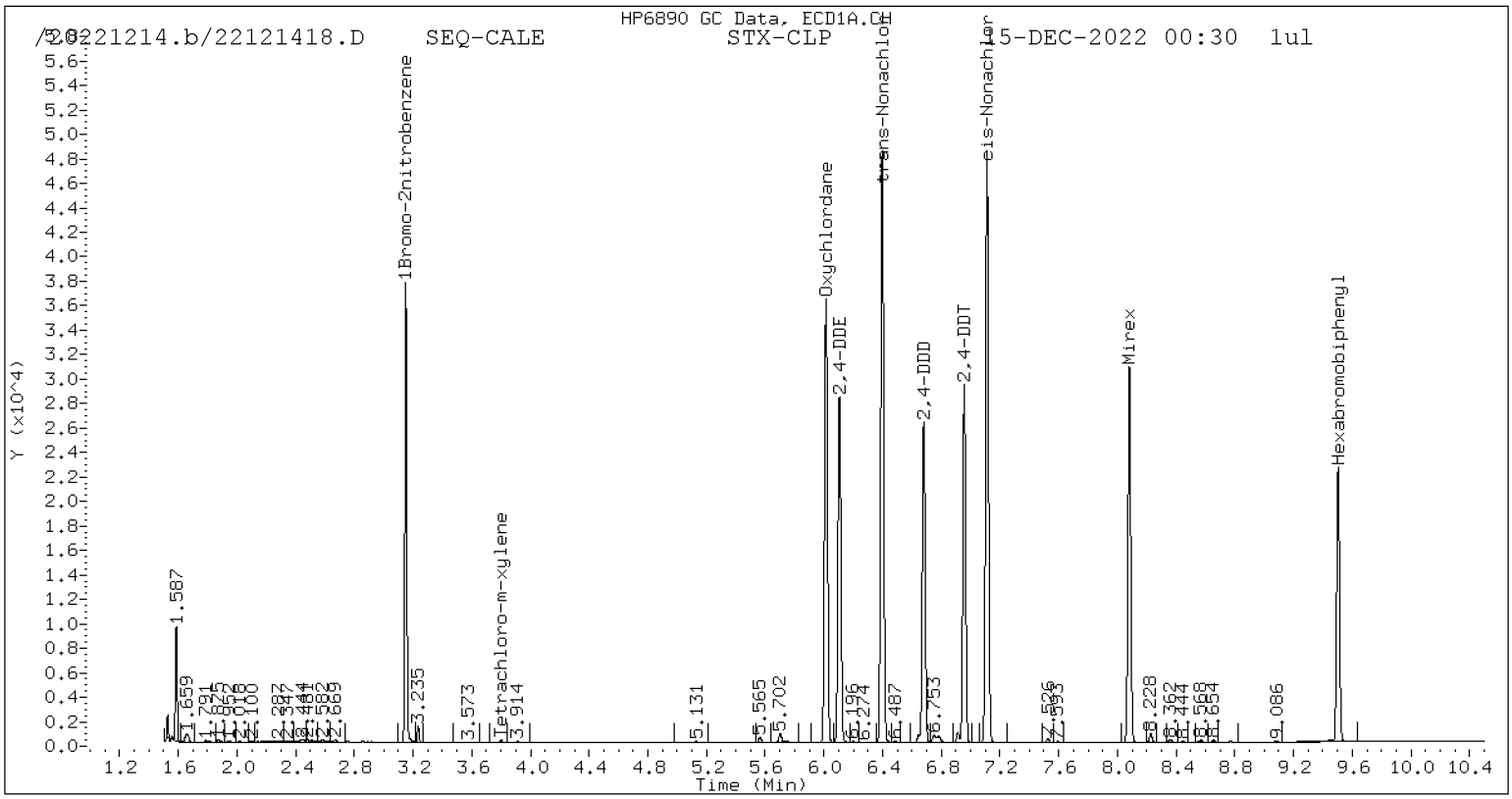
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	675789	-4.9
Hexabromobiphenyl	641833	611199	-4.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1030648	-2.7
Hexabromobiphenyl	797125	783631	-1.7

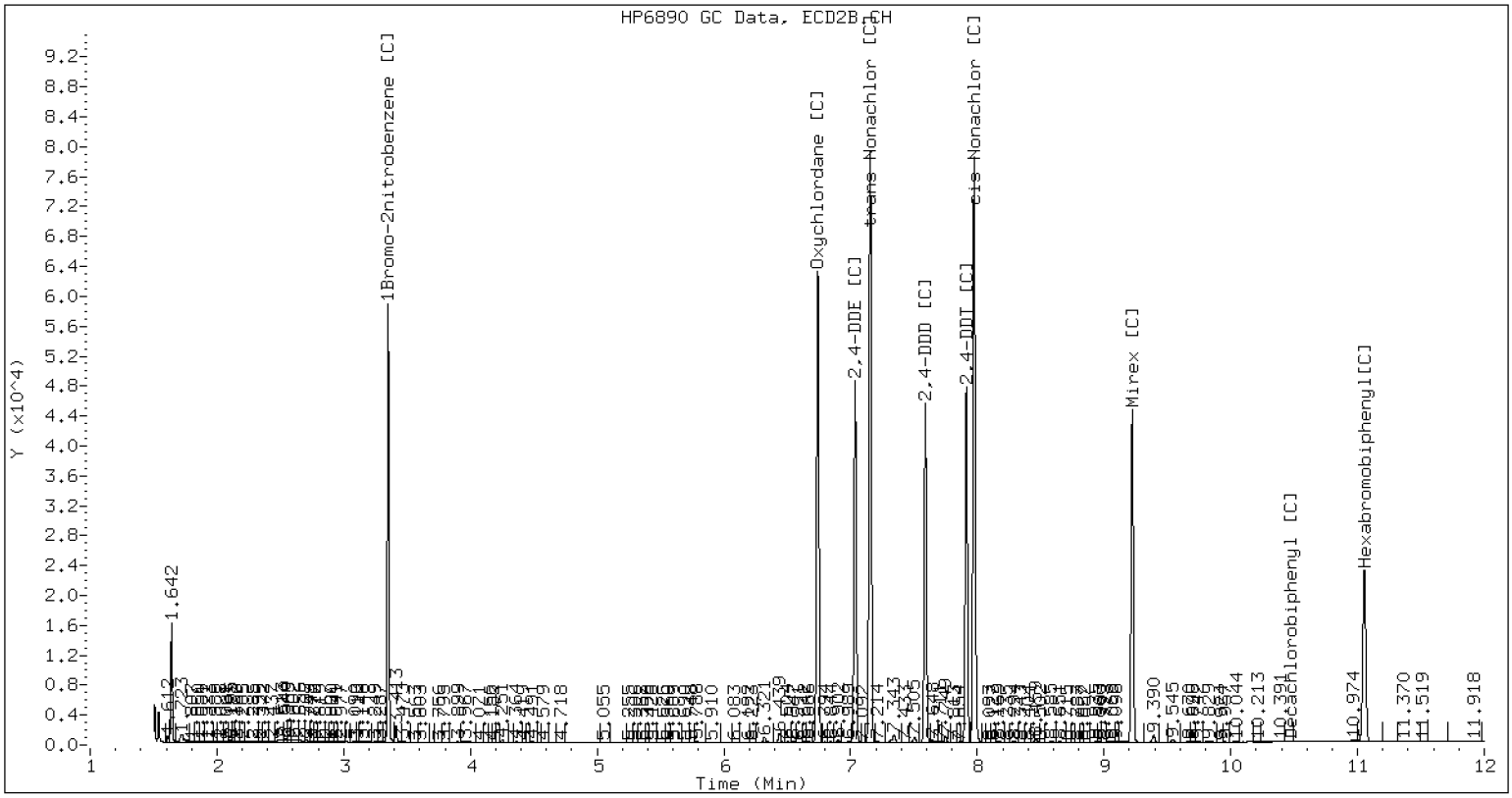
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121418.D SEQ-CALE CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121418.D
Data file 2: /20221214.b/B20221214.b/22121418.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALE
Client ID:
Injection Date: 15-DEC-2022 00:30
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121419.D
Data file 2: /20221214.b/B20221214.b/22121419.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-SCV1
Client ID:
Injection Date: 15-DEC-2022 00:48
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	0.000	643235	4.860	-0.000	1047709	49.66	51.22	3.1	alpha-BHC
4.726	-0.000	242617	5.337	0.000	386388	48.66	49.69	2.1	beta-BHC
4.909	0.000	554797	5.692	0.001	897343	52.41	53.26	1.6	delta-BHC
4.646	0.001	573983	5.258	0.000	915596	51.11	52.75	3.1	gamma-BHC (Lindane)
5.130	0.000	495138	5.788	0.001	804002	49.55	51.13	3.1	Heptachlor
5.454	0.000	526615	6.191	0.000	842909	47.03	46.95	0.2	Aldrin
6.130	0.000	469481	6.846	0.000	724932	48.36	48.83	1.0	Heptachlor epoxide b
6.573	0.000	423102	7.289	-0.000	632890	47.49	48.37	1.8	Endosulfan I
6.832	0.000	478299	7.583	0.000	724854	49.97	50.14	0.3	Dieldrin
6.489	0.000	448741	7.371	0.000	670346	50.49	50.56	0.1	4,4'-DDE
7.082	0.001	396143	7.907	0.000	551004	50.36	50.73	0.7	Endrin
7.318	0.001	350431	8.118	0.001	537104	49.49	48.24	2.6	Endosulfan II
7.136	0.001	355688	7.977	0.001	525927	50.19	49.78	0.8	4,4'-DDD
8.180	0.000	347949	8.716	0.001	502438	51.75	51.39	0.7	Endosulfan sulfate
7.428	0.001	368644	8.295	-0.000	524685	51.48	51.45	0.1	4,4'-DDT
7.913	0.001	174306	8.935	-0.001	238791	54.93	52.91	3.7	Methoxychlor
8.454	0.000	394474	9.240	-0.000	540431	51.21	51.18	0.1	Endrin ketone
7.746	0.001	316262	8.448	0.000	449269	56.00	57.20	2.1	Endrin aldehyde
6.271	0.000	490842	7.056	0.000	748350	49.78	50.55	1.5	trans-Chlordane
6.417	0.001	469513	7.216	0.000	700871	47.47	48.39	1.9	cis-Chlordane
----			2.512	0.011	11364	0.00	0.59	---	Hexachlorobutadiene
----			4.719	0.001	634	0.00	0.03	---	Hexachlorobenzene
----			4.220	-0.000	1724	0.00	0.12	---	Tetrachloro-m-xylene
----			10.468	0.001	643	0.00	0.08	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

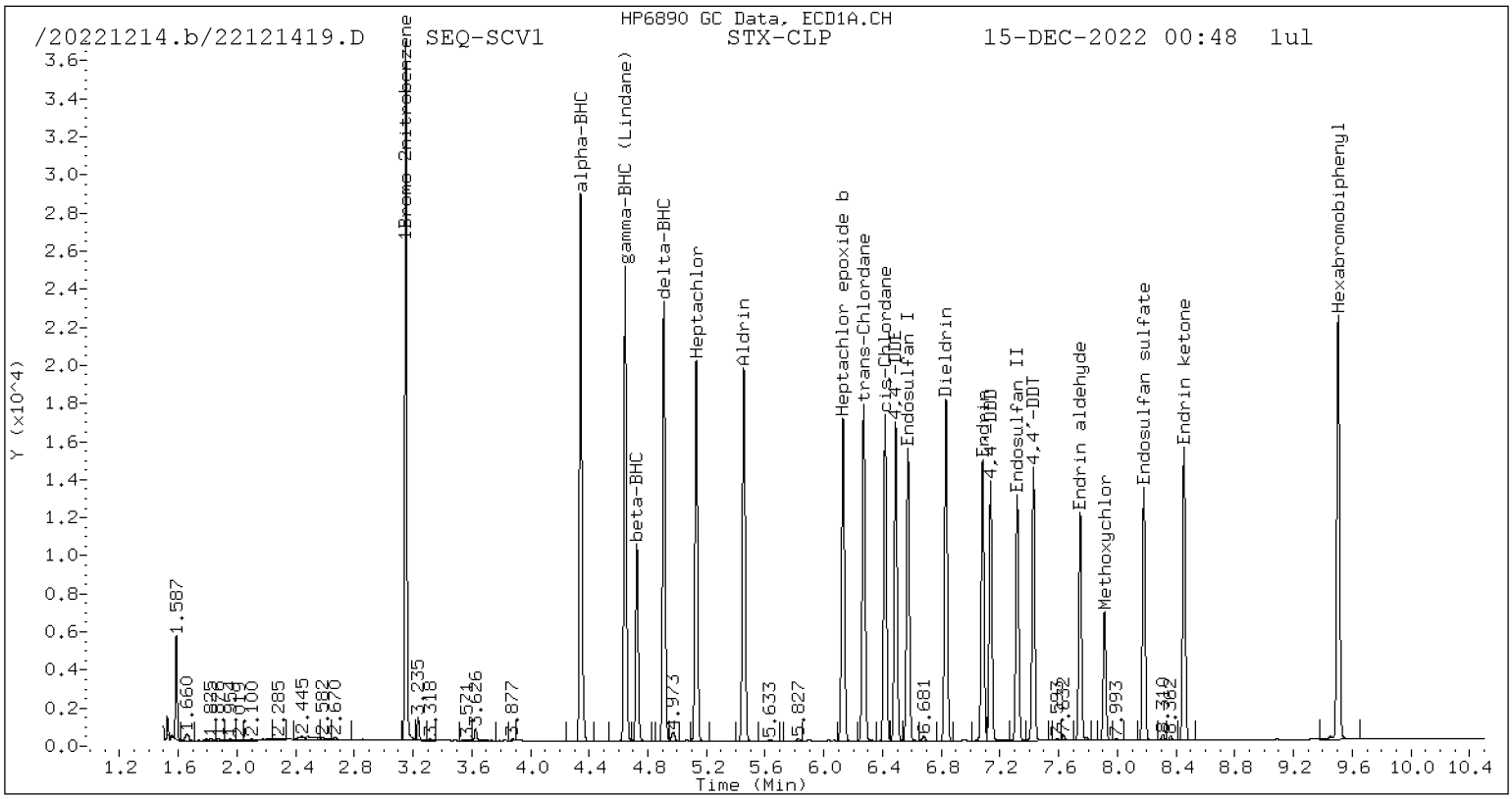
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	672755	-5.3
Hexabromobiphenyl	641833	599983	-6.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1020655	-3.6
Hexabromobiphenyl	797125	763949	-4.2

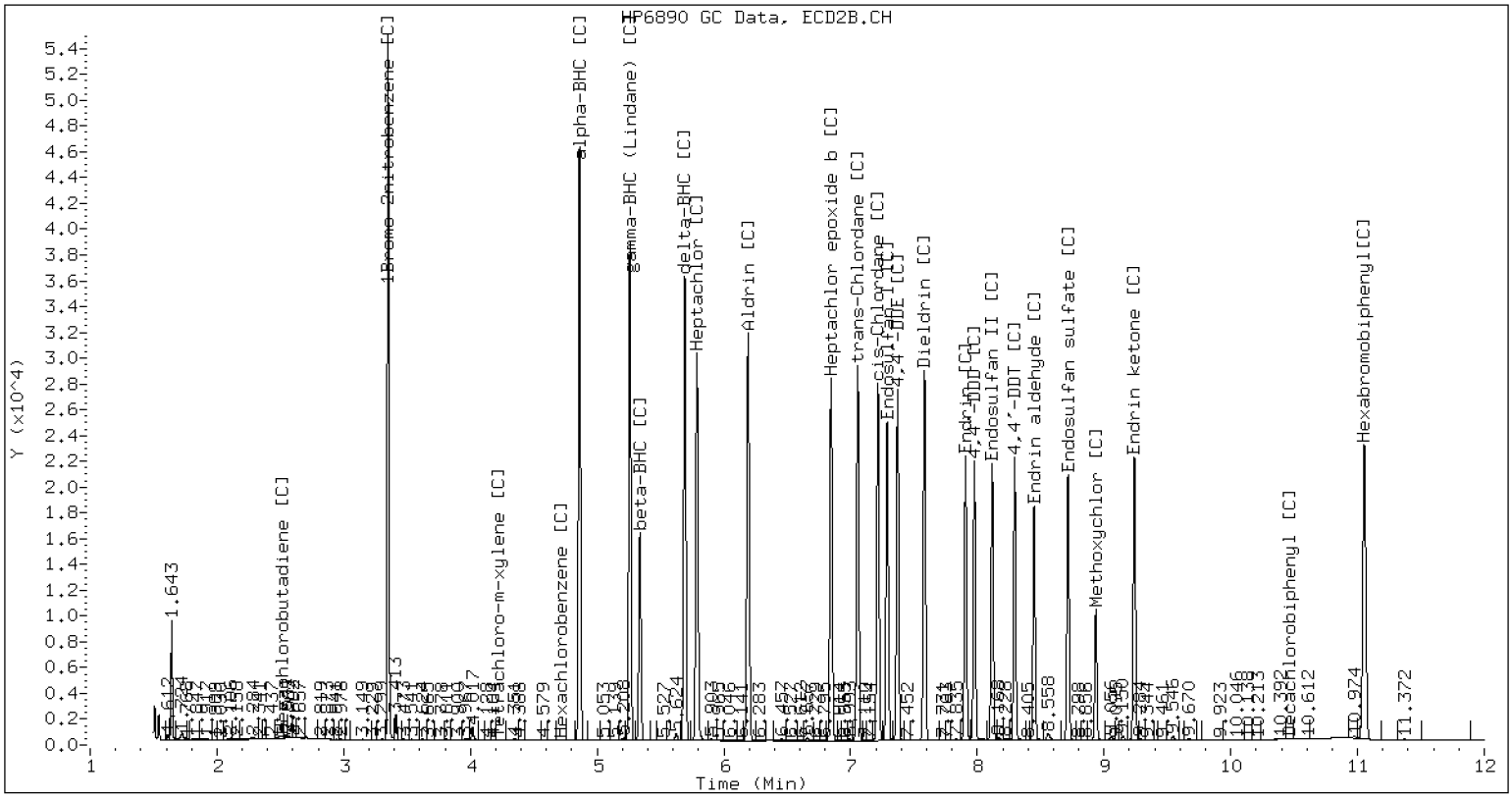
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121419.D SEQ-SCV1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121419.D
Data file 2: /20221214.b/B20221214.b/22121419.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-SCV1
Client ID:
Injection Date: 15-DEC-2022 00:48
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121420.D
Data file 2: /20221214.b/B20221214.b/22121420.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-SCV2
Client ID:
Injection Date: 15-DEC-2022 01:06
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	-0.000	374516	6.741	0.000	591348	51.08	50.07	2.0	Oxychlordane
6.106	-0.000	261097	7.036	-0.000	403824	43.13	41.76	3.2	2,4-DDE
6.397	-0.000	444133	7.155	-0.000	657777	46.31	45.91	0.9	trans-Nonachlor
6.681	0.000	222534	7.591	0.000	334706	41.32	40.84	1.2	2,4-DDD
6.956	-0.001	262722	7.914	0.000	382016	45.15	45.26	0.2	2,4-DDT
7.111	-0.001	455894	7.975	0.000	655718	48.82	48.13	1.4	cis-Nonachlor
8.081	-0.001	256593	9.223	0.000	343173	44.17	43.31	2.0	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

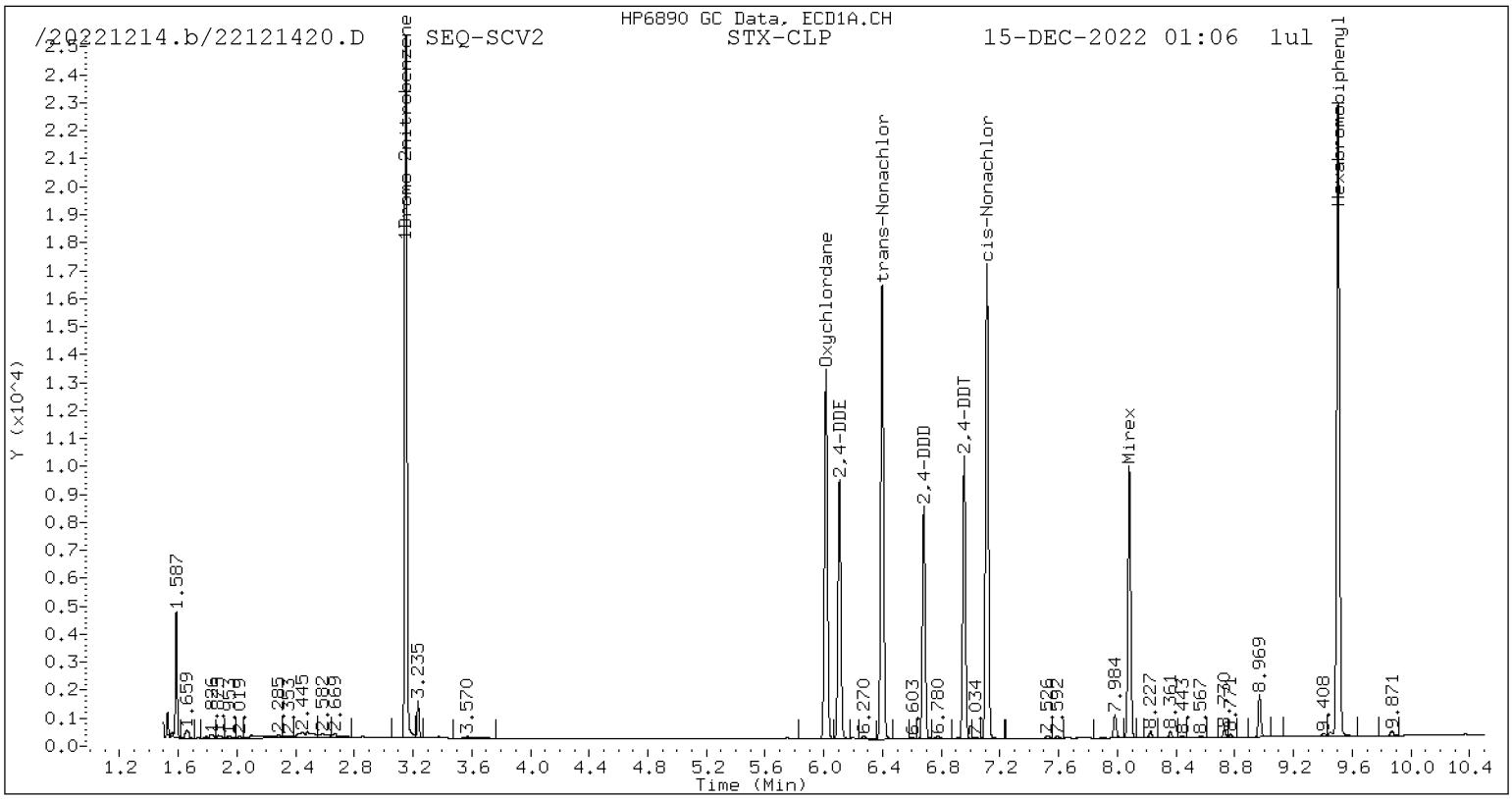
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	687052	-3.3
Hexabromobiphenyl	641833	616730	-3.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1060438	0.2
Hexabromobiphenyl	797125	800740	0.5

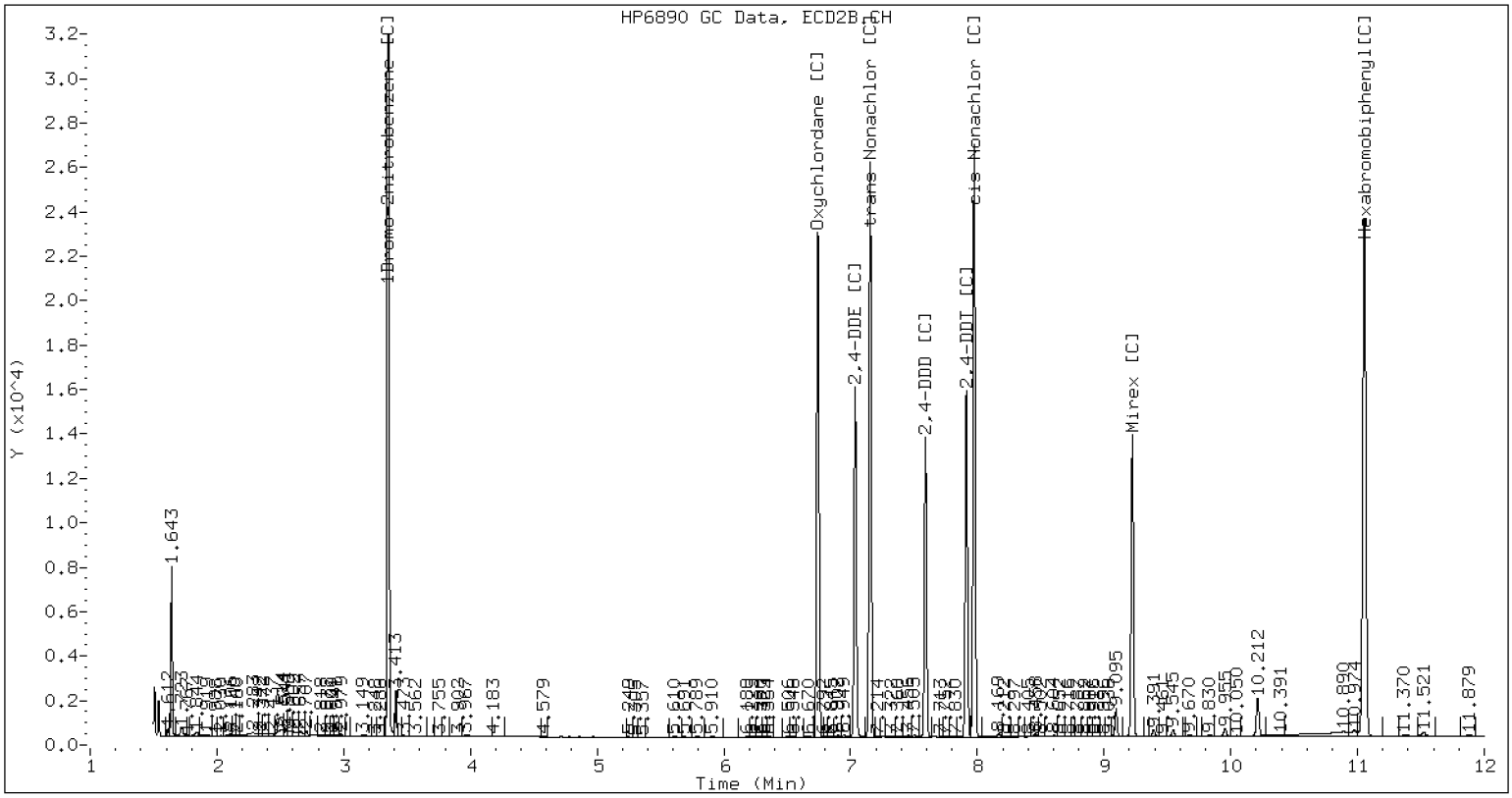
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121420.D SEQ-SCV2 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121420.D
Data file 2: /20221214.b/B20221214.b/22121420.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-SCV2
Client ID:
Injection Date: 15-DEC-2022 01:06
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121421.D
Data file 2: /20221214.b/B20221214.b/22121421.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL1A
Client ID:
Injection Date: 15-DEC-2022 01:24
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			4.215	-0.006	361	0.00	0.02	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	601512	-15.4
Hexabromobiphenyl	641833	690103	7.5

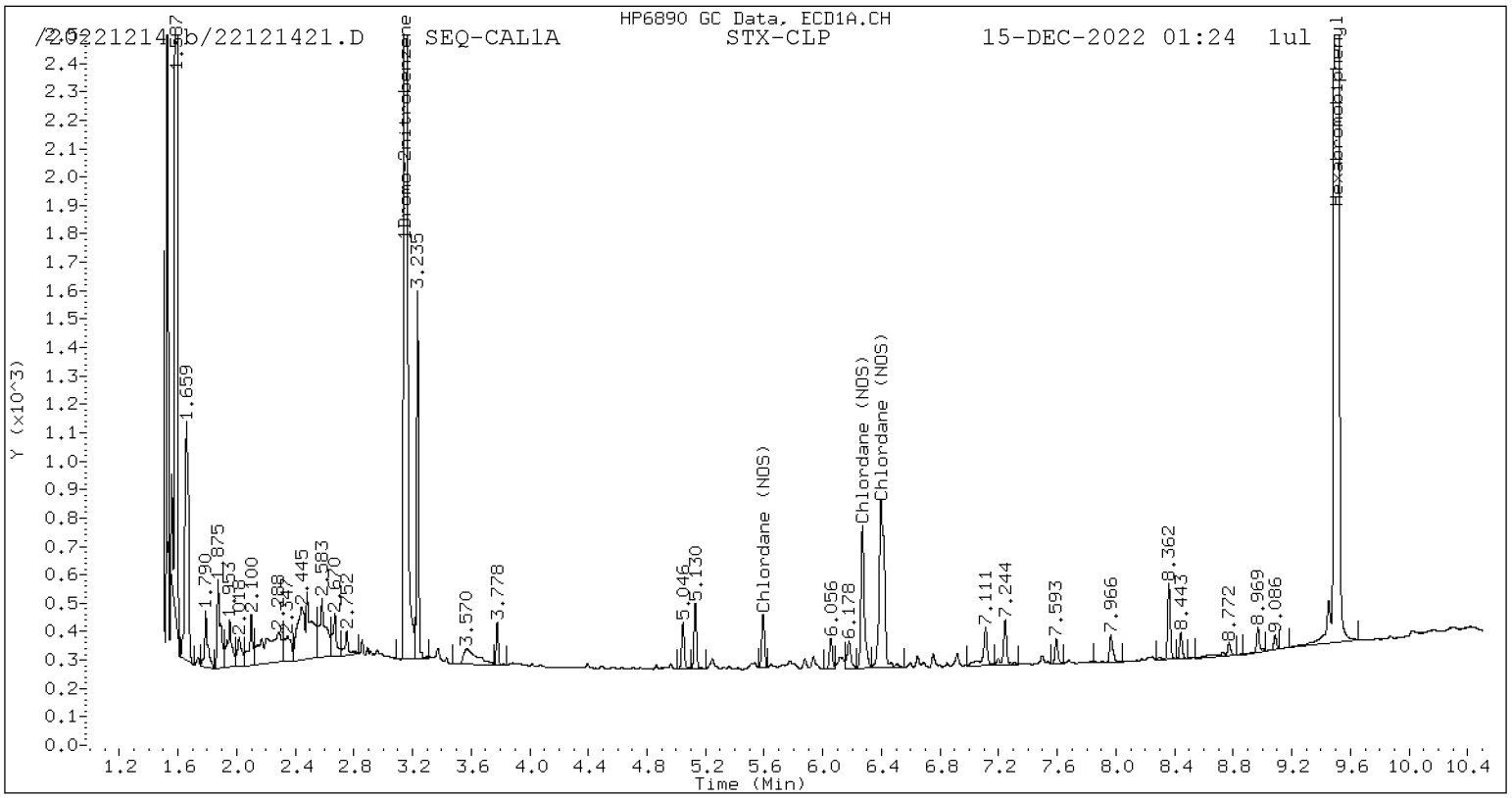
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	776759	-26.6
Hexabromobiphenyl	797125	1058847	32.8

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

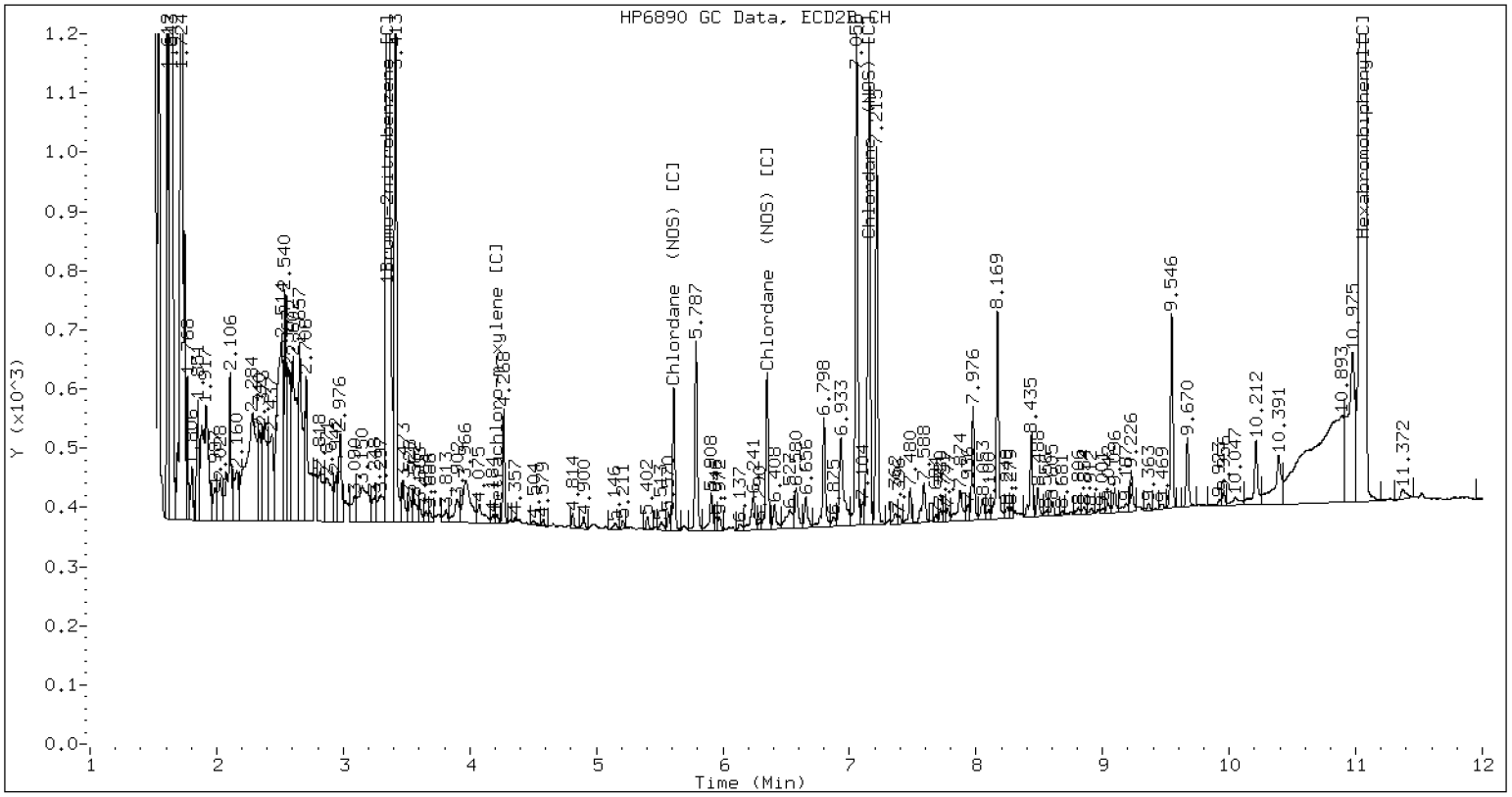
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	5.593	0.000	5054	13.1	1	5.612	-0.000	6415	12.8	
Chlordane (NOS)	2	6.271	-0.000	15913	12.4	2	6.349	-0.000	7689	13.7	
Chlordane (NOS)	3	6.399	0.000	29332	13.1	3	7.155	-0.001	23386	12.3	
Total STX-CLPAve (3 peaks): 12.882						Total CLP2Ave (3 peaks): 12.916				RPD = 0	
Corrected Ave (3 peaks): 12.882						Corrected Ave (3 peaks): 12.916				RPD = 0	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121421.D SEQ-CAL1A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121421.D
Data file 2: /20221214.b/B20221214.b/22121421.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL1A
Client ID:
Injection Date: 15-DEC-2022 01:24
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121422.D
Data file 2: /20221214.b/B20221214.b/22121422.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL2A
Client ID:
Injection Date: 15-DEC-2022 01:42
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	611280	-14.0
Hexabromobiphenyl	641833	704720	9.8

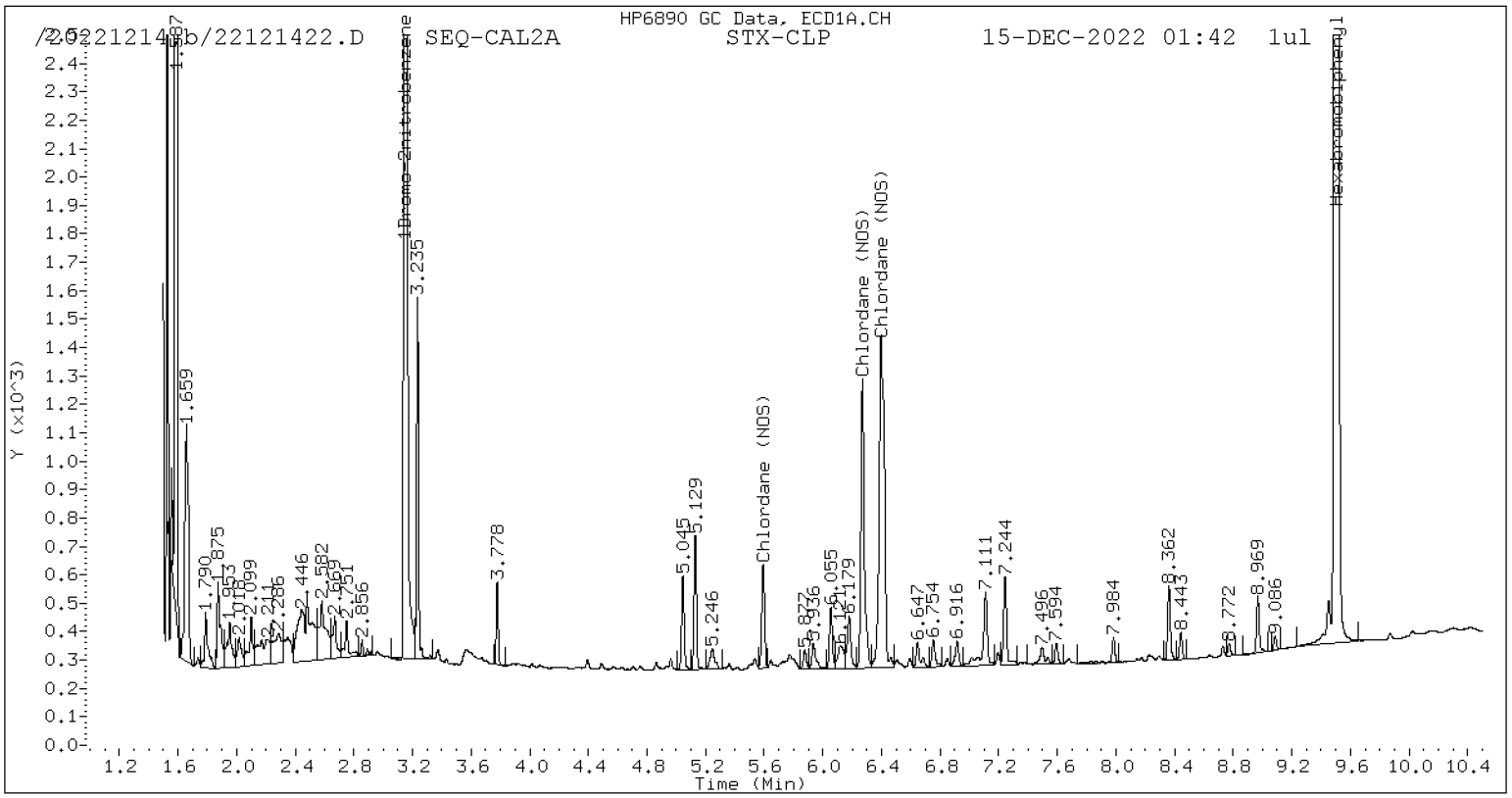
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	793365	-25.1
Hexabromobiphenyl	797125	1083049	35.9

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

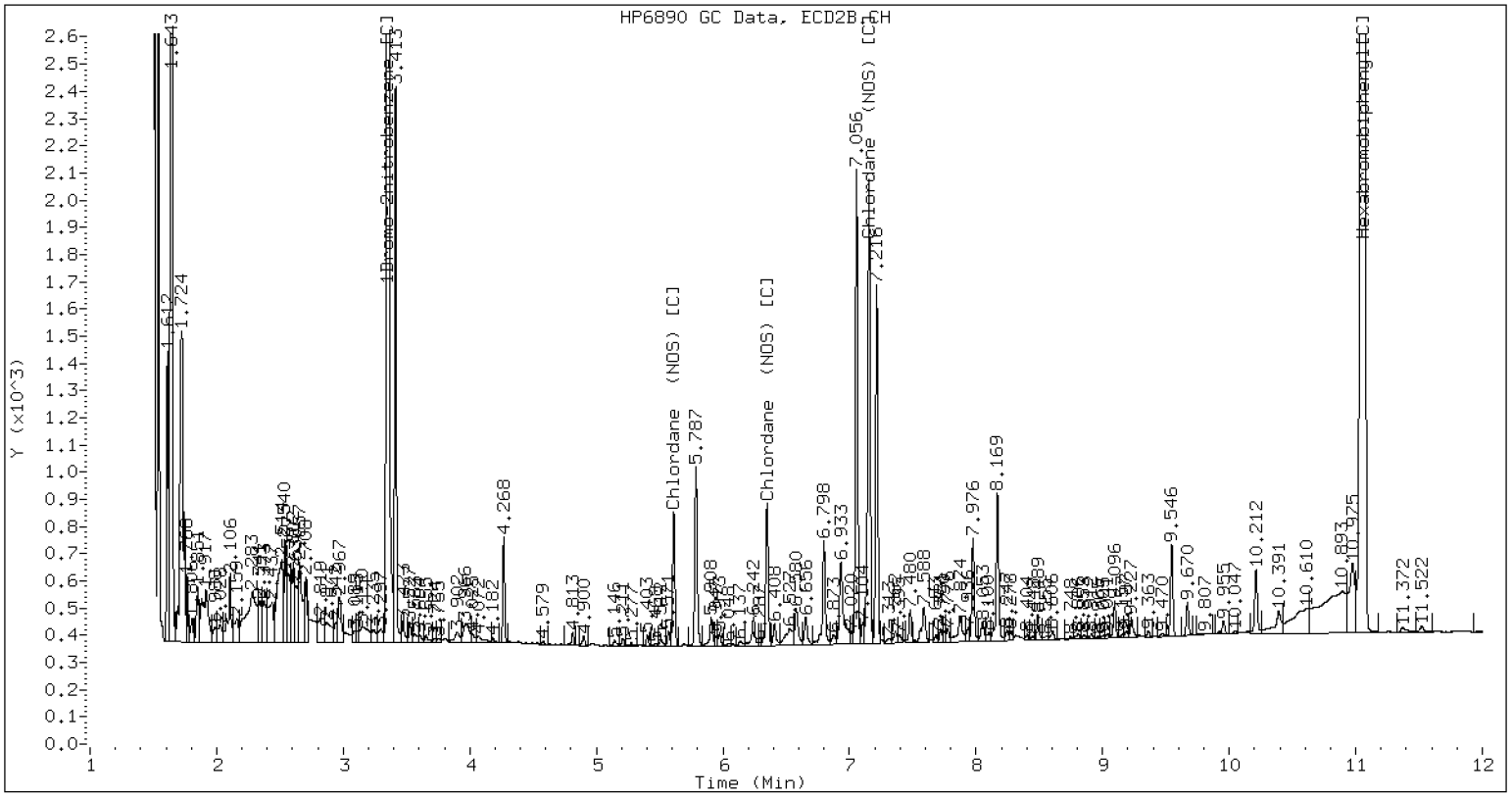
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	5.593	0.000	10046	25.5	1	5.612	-0.000	12488	24.4	
Chlordane (NOS)	2	6.271	-0.000	32715	25.0	2	6.348	-0.001	15023	26.1	
Chlordane (NOS)	3	6.399	0.000	58016	25.4	3	7.155	-0.000	48236	24.8	
Total STX-CLPAve (3 peaks): 25.309						Total CLP2Ave (3 peaks): 25.077				RPD = 1	
Corrected Ave (3 peaks): 25.309						Corrected Ave (3 peaks): 25.077				RPD = 1	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121422.D SEQ-CAL2A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121422.D
Data file 2: /20221214.b/B20221214.b/22121422.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL2A
Client ID:
Injection Date: 15-DEC-2022 01:42
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121423.D
Data file 2: /20221214.b/B20221214.b/22121423.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL3A
Client ID:
Injection Date: 15-DEC-2022 01:59
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	592438	-16.6
Hexabromobiphenyl	641833	685225	6.8

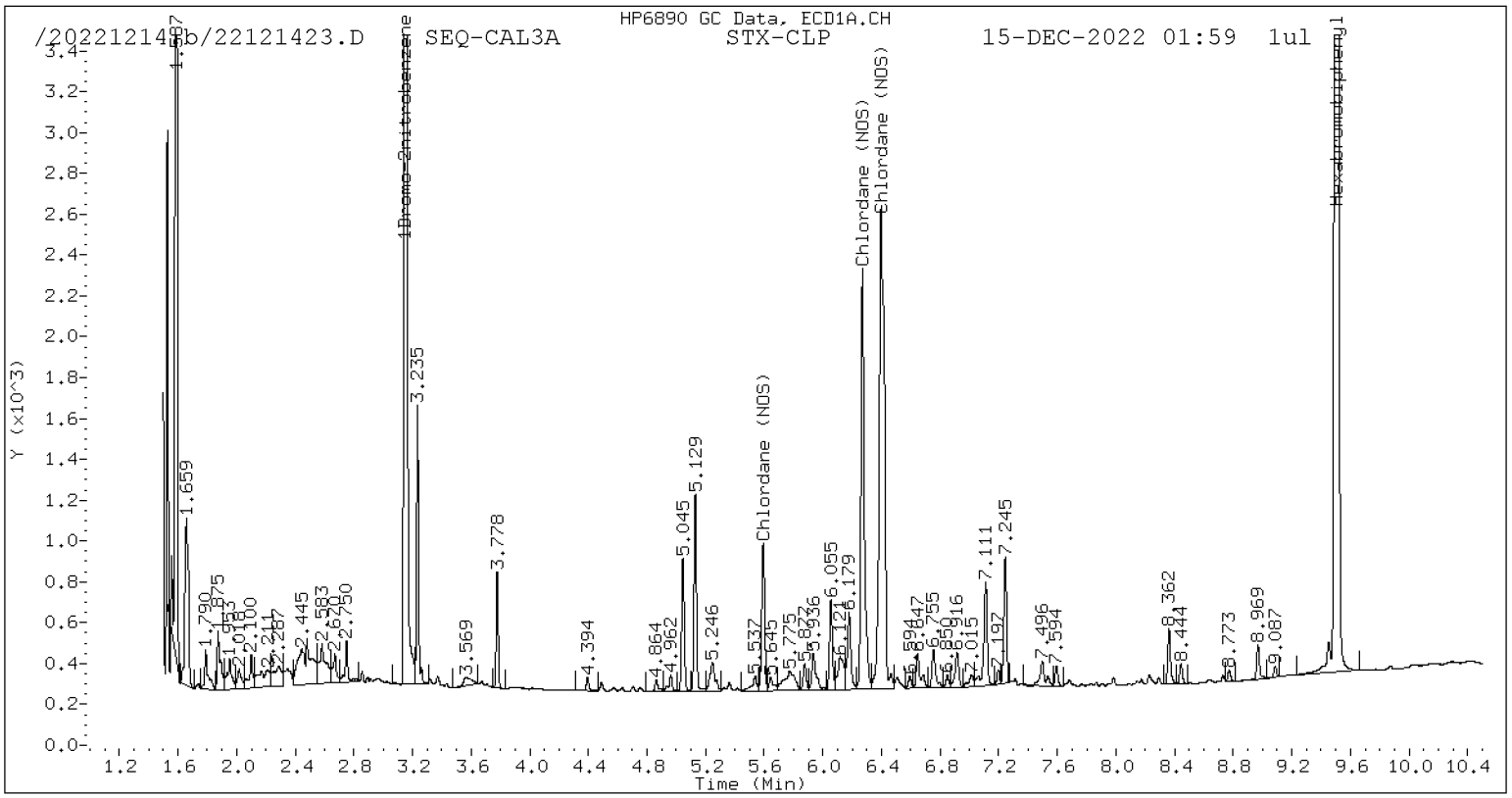
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	769029	-27.4
Hexabromobiphenyl	797125	1054742	32.3

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

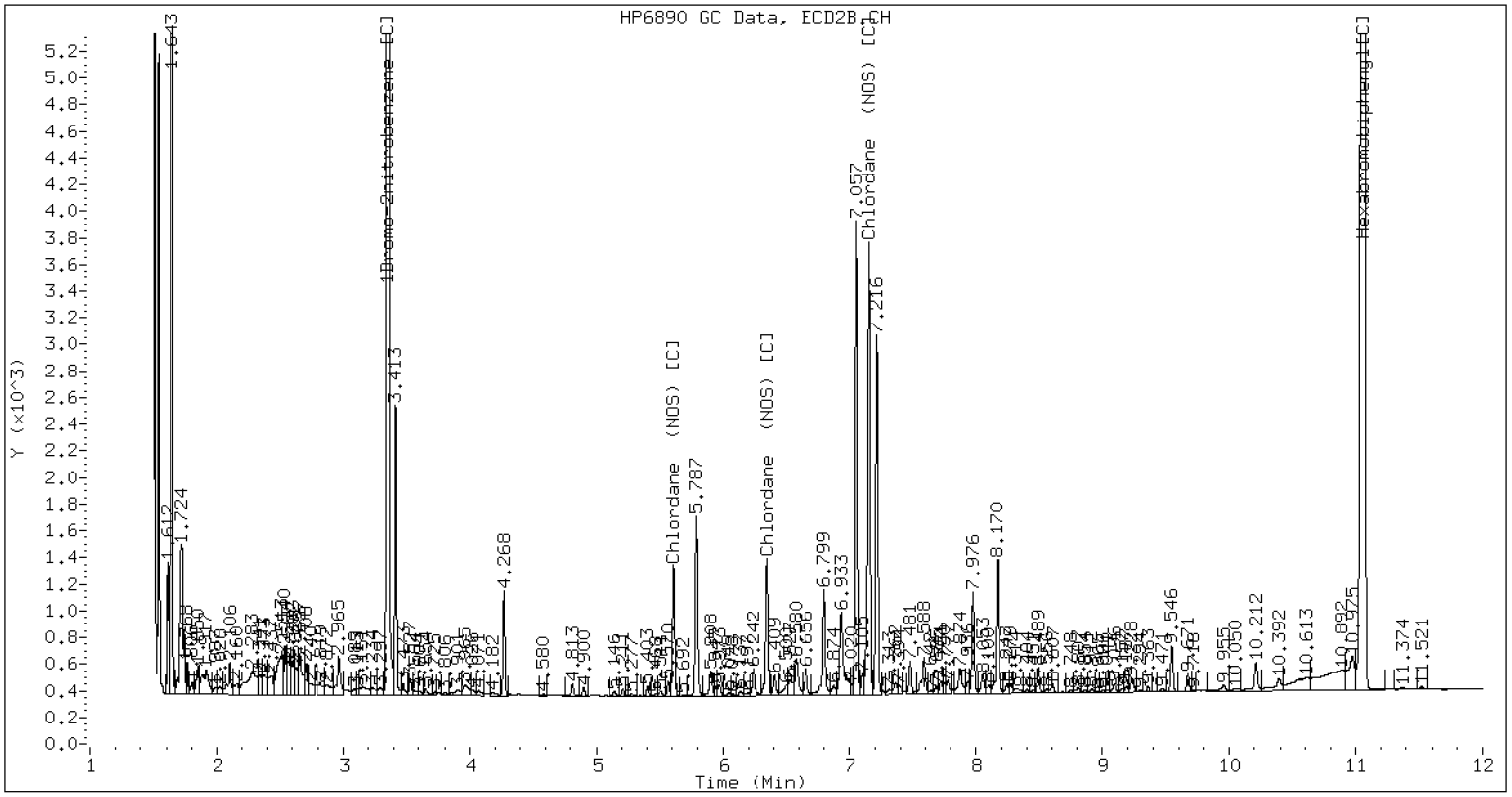
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	5.593	0.001	20502	53.5	1	5.612	-0.000	24816	49.7	
Chlordane (NOS)	2	6.271	-0.000	66320	52.2	2	6.349	0.000	29114	51.9	
Chlordane (NOS)	3	6.399	0.000	116820	52.6	3	7.155	-0.000	98401	51.9	
Total STX-CLPAve (3 peaks): 52.767						Total CLP2Ave (3 peaks): 51.179				RPD = 3	
Corrected Ave (3 peaks): 52.767						Corrected Ave (3 peaks): 51.179				RPD = 3	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121423.D SEQ-CAL3A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121423.D
Data file 2: /20221214.b/B20221214.b/22121423.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL3A
Client ID:
Injection Date: 15-DEC-2022 01:59
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121424.D
Data file 2: /20221214.b/B20221214.b/22121424.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL4A
Client ID:
Injection Date: 15-DEC-2022 02:17
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	584808	-17.7
Hexabromobiphenyl	641833	675665	5.3

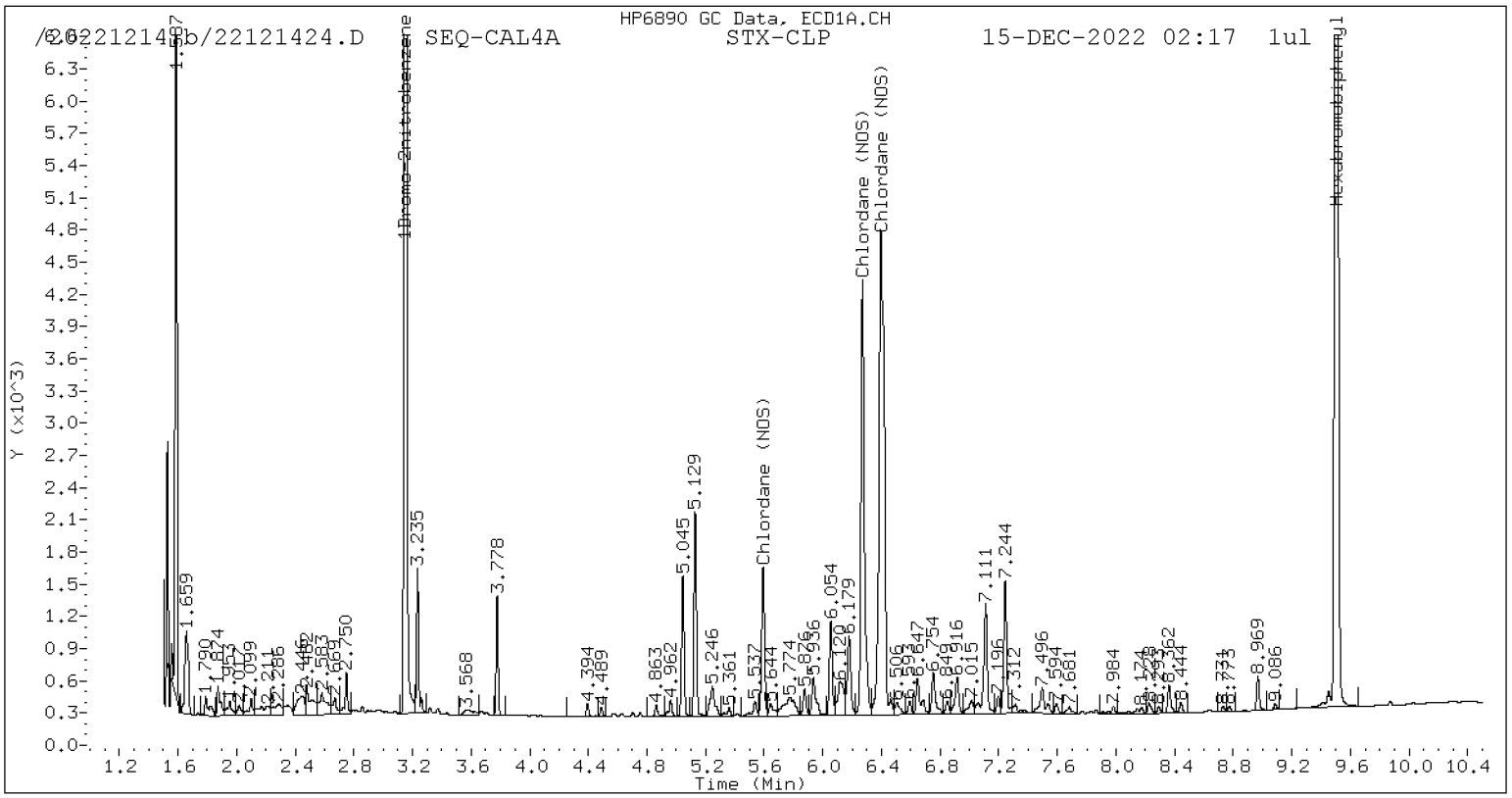
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	758204	-28.4
Hexabromobiphenyl	797125	1039488	30.4

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

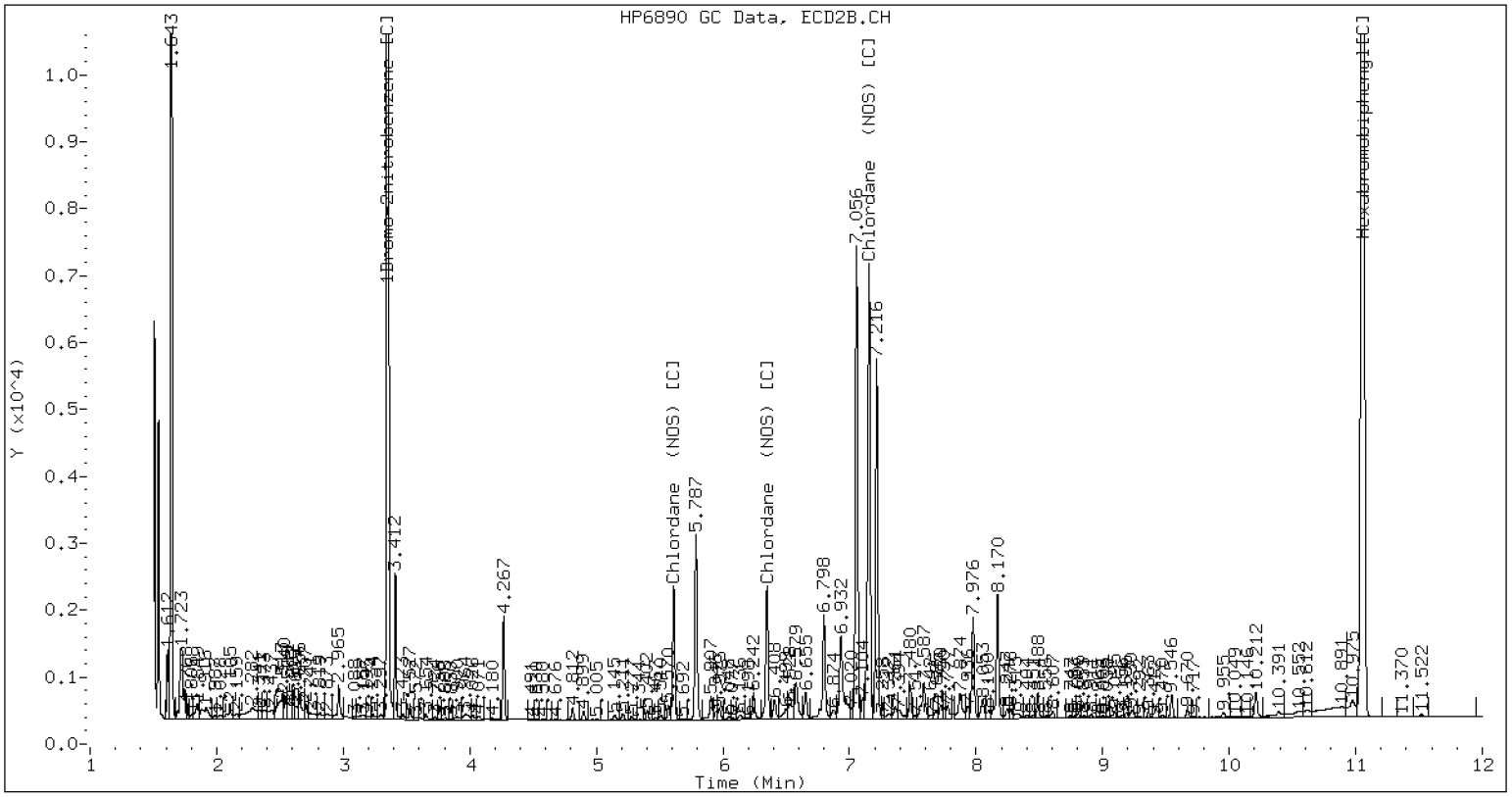
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	5.593	-0.000	39696	105.0	1	5.611	-0.001	49889	101.4	
Chlordane (NOS)	2	6.271	-0.000	131726	105.2	2	6.348	-0.001	56608	102.5	
Chlordane (NOS)	3	6.398	-0.001	229050	104.6	3	7.155	-0.000	195665	104.7	
Total STX-CLPAve (3 peaks): 104.931						Total CLP2Ave (3 peaks): 102.854				RPD = 2	
Corrected Ave (3 peaks): 104.931						Corrected Ave (3 peaks): 102.854				RPD = 2	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121424.D SEQ-CAL4A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121424.D
Data file 2: /20221214.b/B20221214.b/22121424.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL4A
Client ID:
Injection Date: 15-DEC-2022 02:17
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121425.D
Data file 2: /20221214.b/B20221214.b/22121425.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL5A
Client ID:
Injection Date: 15-DEC-2022 02:35
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	612592	-13.8
Hexabromobiphenyl	641833	705251	9.9

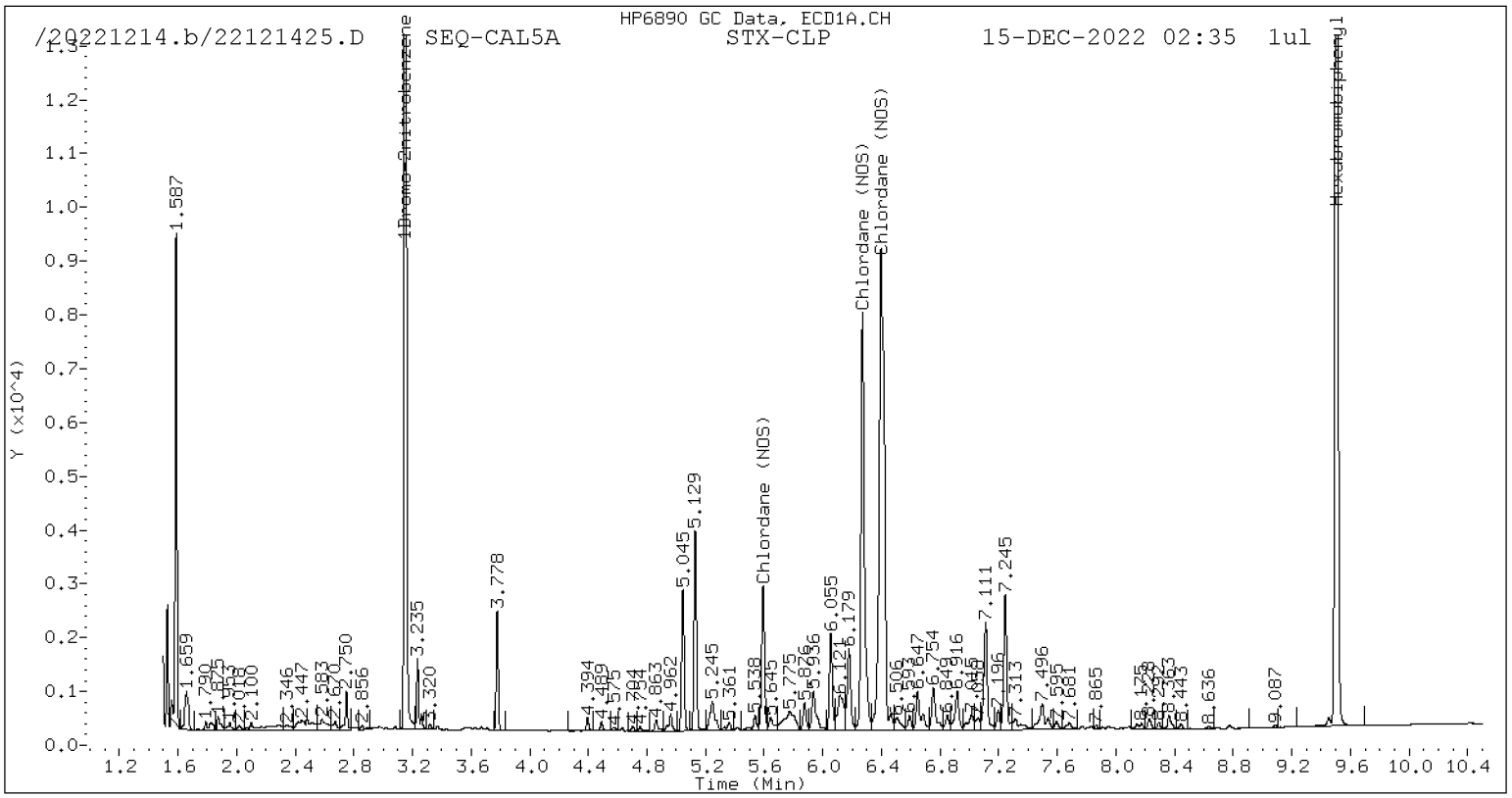
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	792856	-25.1
Hexabromobiphenyl	797125	1079718	35.5

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

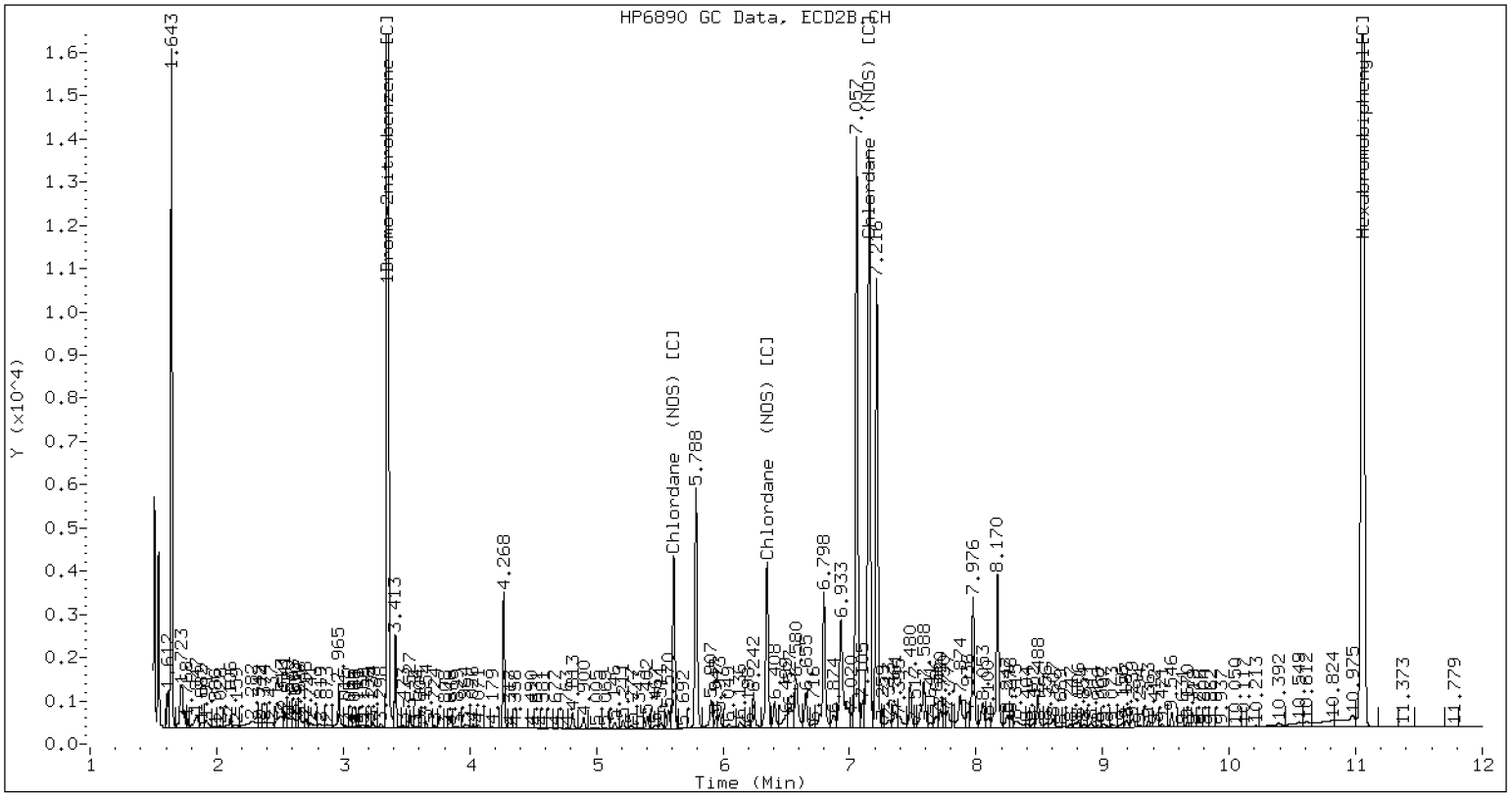
	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Chlordane (NOS)	1	5.593	0.000	77307	196.0	1	5.612	-0.000	101527	198.7
Chlordane (NOS)	2	6.271	0.000	261078	199.7	2	6.349	-0.001	110757	193.0
Chlordane (NOS)	3	6.399	0.000	449301	196.5	3	7.155	-0.000	389197	200.5
Total STX-CLPAve (3 peaks): 197.408						Total CLP2Ave (3 peaks): 197.390				RPD = 0
Corrected Ave (3 peaks): 197.408						Corrected Ave (3 peaks): 197.390				RPD = 0

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121425.D SEQ-CAL5A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121425.D
Data file 2: /20221214.b/B20221214.b/22121425.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL5A
Client ID:
Injection Date: 15-DEC-2022 02:35
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121426.D
Data file 2: /20221214.b/B20221214.b/22121426.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL6A
Client ID:
Injection Date: 15-DEC-2022 02:53
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	603526	-15.1
Hexabromobiphenyl	641833	699031	8.9

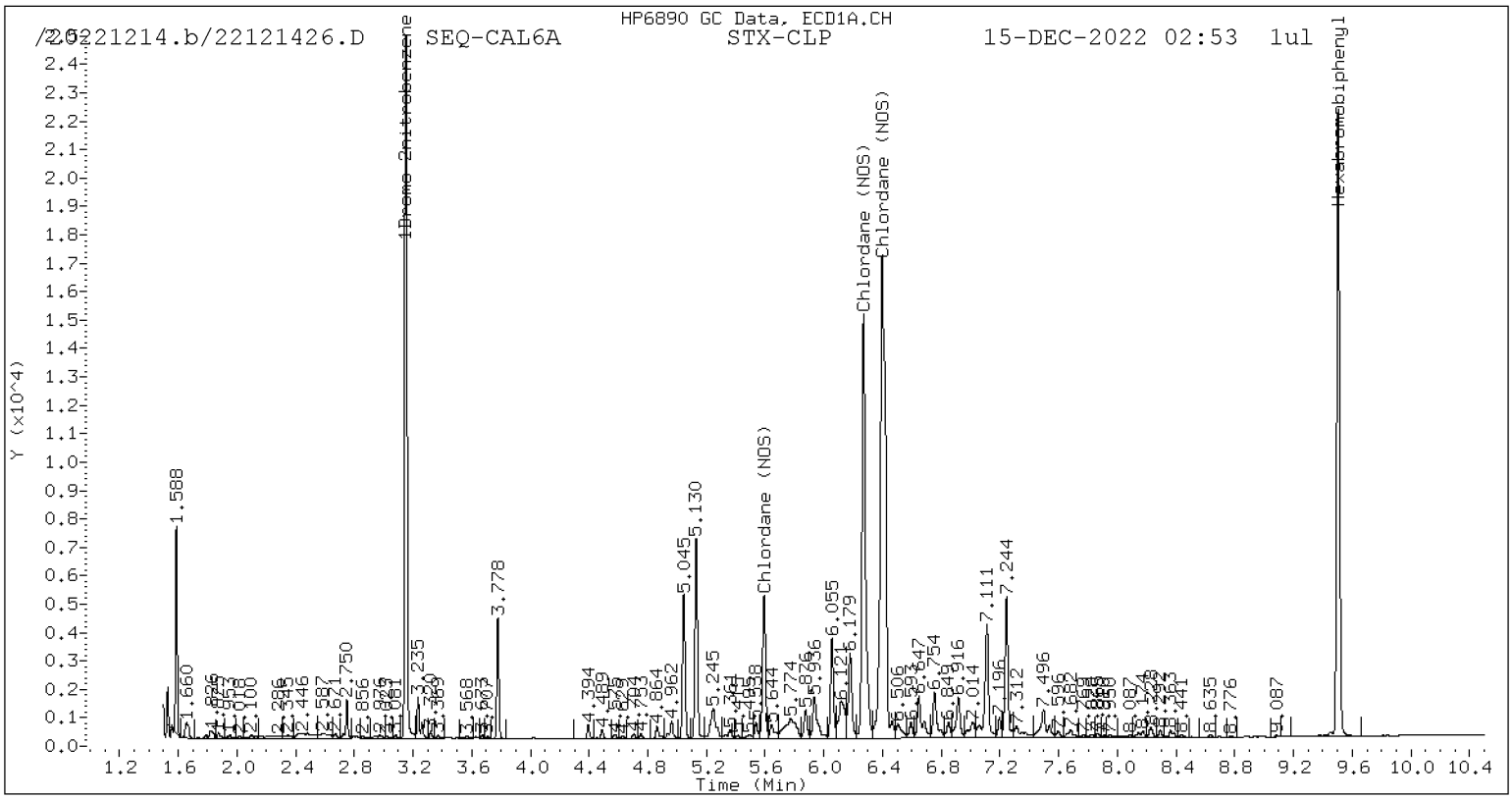
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	779405	-26.4
Hexabromobiphenyl	797125	1068976	34.1

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

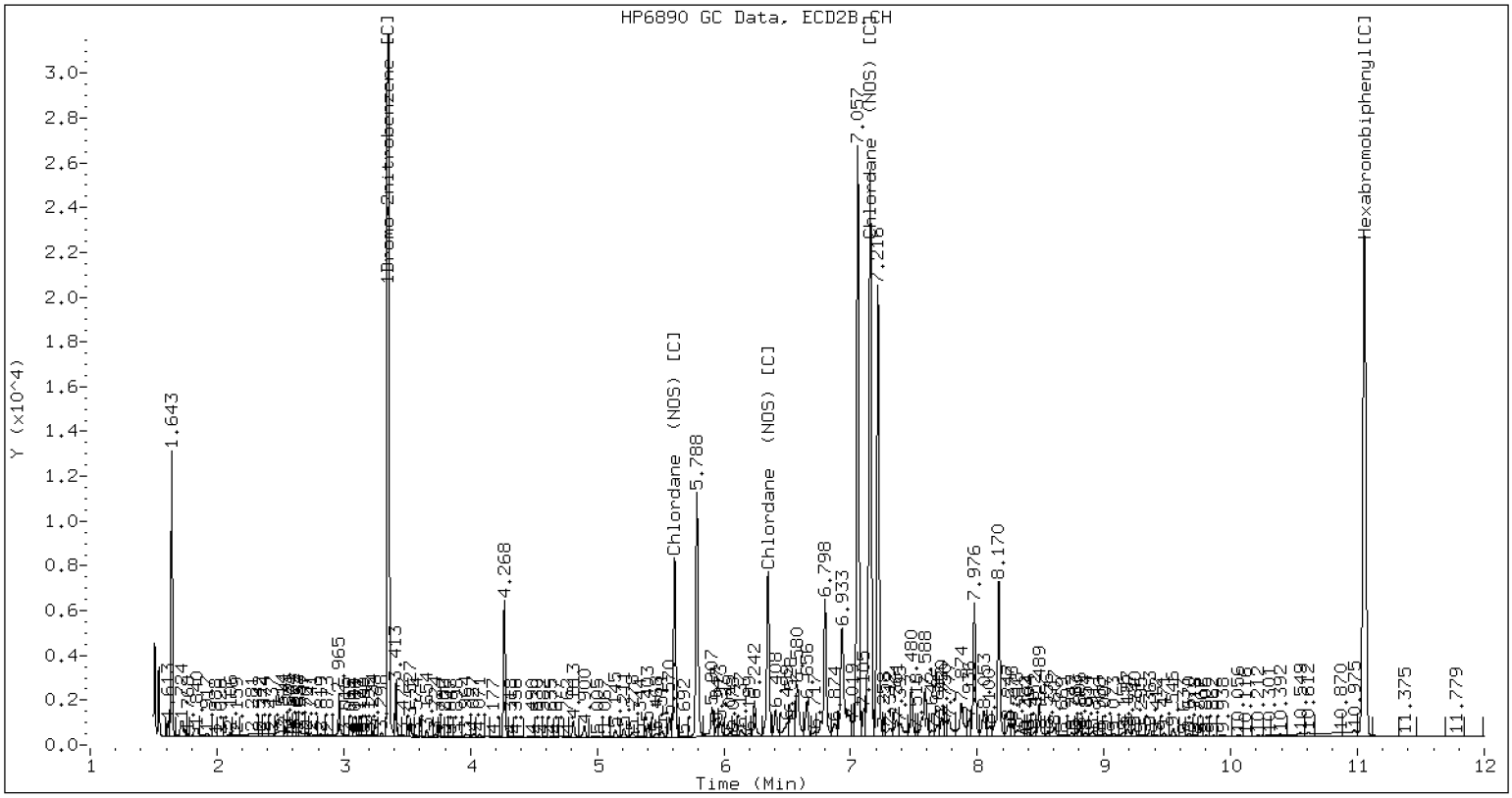
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	5.592	-0.000	146950	375.8	1	5.612	-0.000	203386	402.0	
Chlordane (NOS)	2	6.271	-0.000	503310	388.5	2	6.349	-0.000	212637	374.2	
Chlordane (NOS)	3	6.399	0.000	857451	378.4	3	7.155	-0.000	752631	391.6	
Total STX-CLPAve (3 peaks): 380.894						Total CLP2Ave (3 peaks): 389.290				RPD = 2	
Corrected Ave (3 peaks): 380.894						Corrected Ave (3 peaks): 389.290				RPD = 2	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121426.D SEQ-CAL6A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121426.D
Data file 2: /20221214.b/B20221214.b/22121426.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL6A
Client ID:
Injection Date: 15-DEC-2022 02:53
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121427.D
Data file 2: /20221214.b/B20221214.b/22121427.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL7A
Client ID:
Injection Date: 15-DEC-2022 03:11
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
9.380	0.025	1930	----			0.31	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	610159	-14.1
Hexabromobiphenyl	641833	692215	7.8

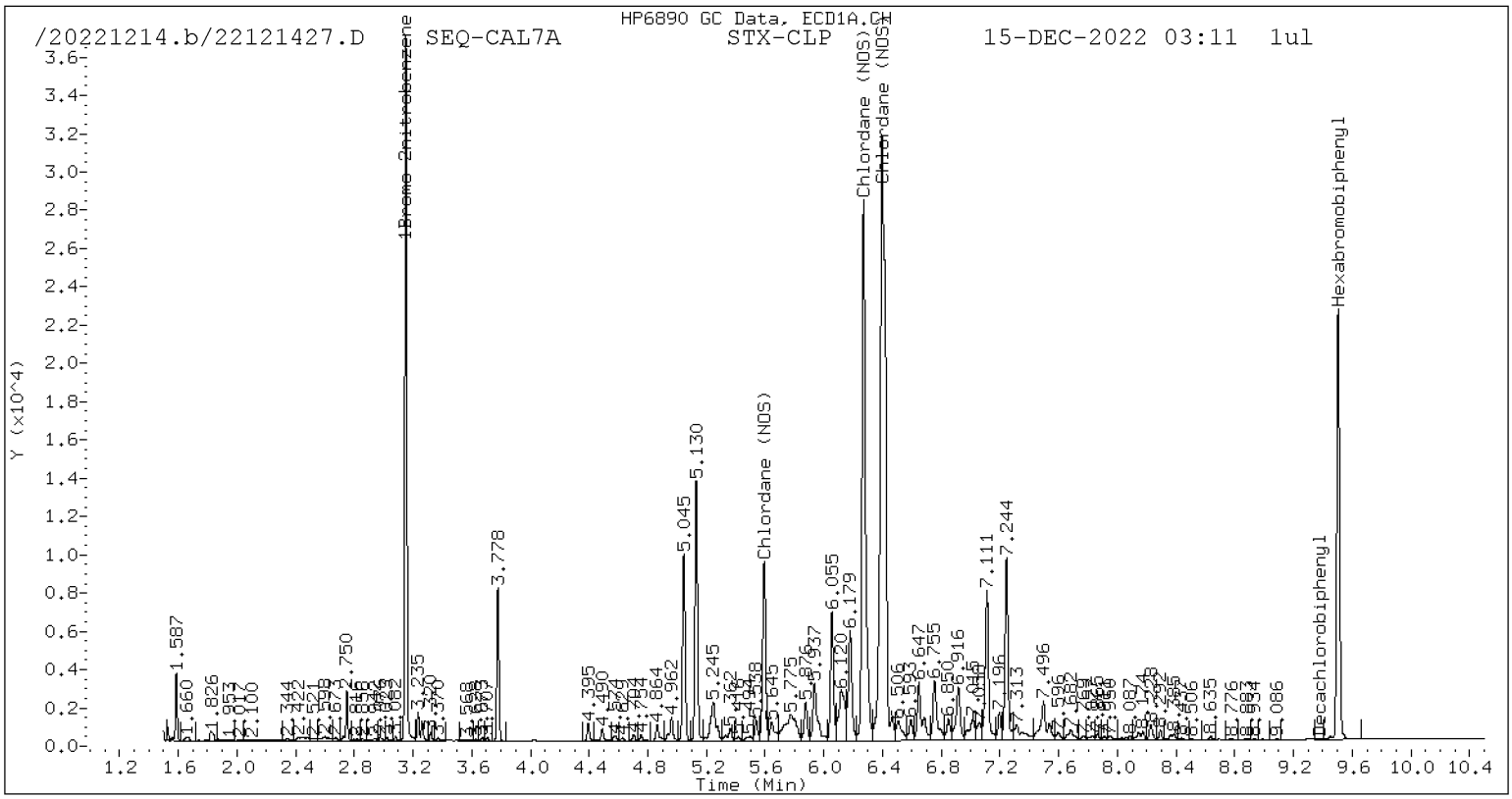
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	790388	-25.4
Hexabromobiphenyl	797125	1059143	32.9

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

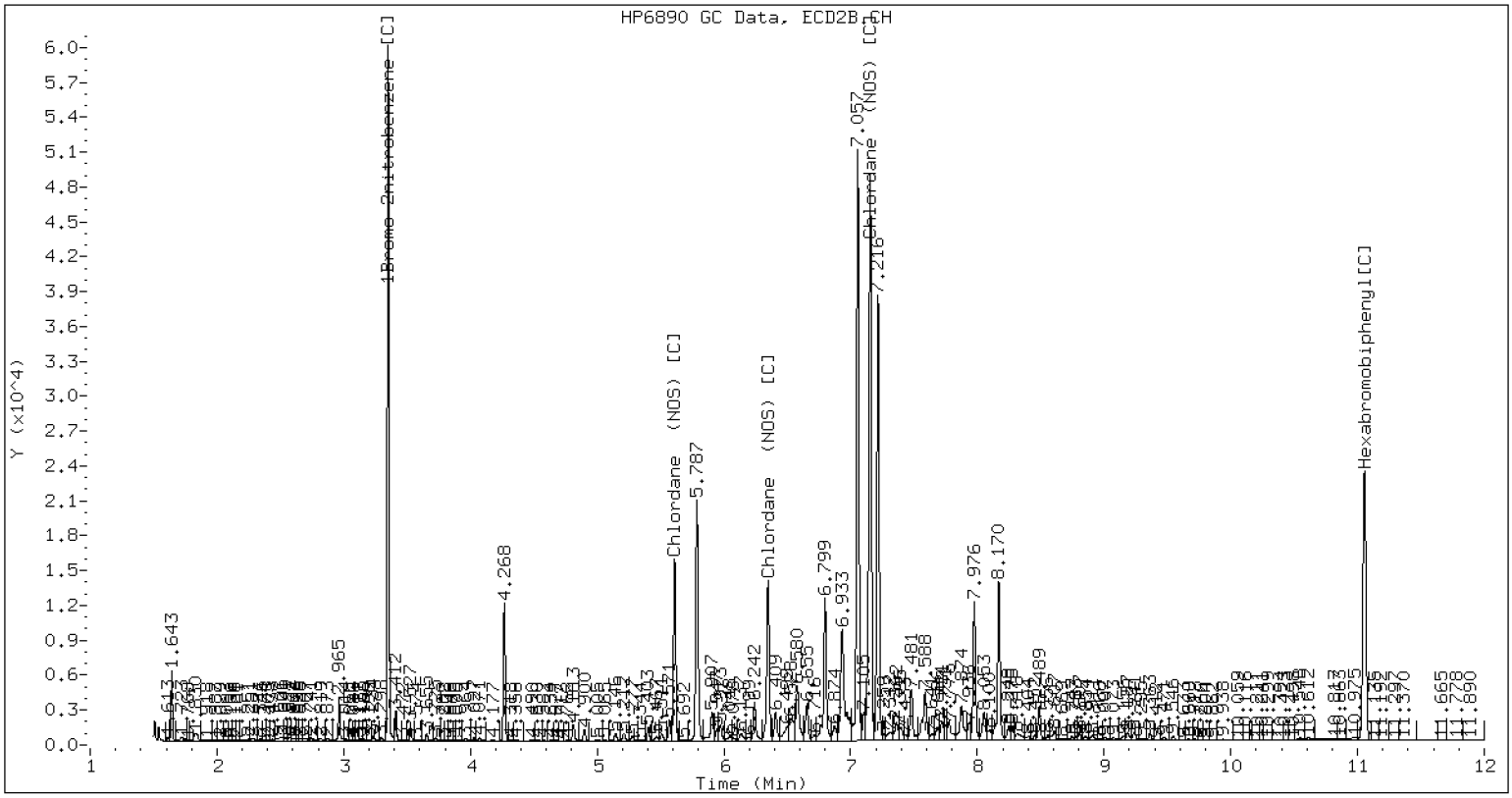
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	5.593	0.001	276980	715.3	1	5.612	0.000	398620	795.3	
Chlordane (NOS)	2	6.271	-0.000	961368	749.3	2	6.349	0.000	405170	719.7	
Chlordane (NOS)	3	6.399	-0.000	1631241	727.0	3	7.155	0.000	1462876	768.2	
Total STX-CLPAve (3 peaks): 730.539						Total CLP2Ave (3 peaks): 761.064				RPD = 4	
Corrected Ave (3 peaks): 730.539						Corrected Ave (3 peaks): 761.064				RPD = 4	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121427.D SEQ-CAL7A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121427.D
Data file 2: /20221214.b/B20221214.b/22121427.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL7A
Client ID:
Injection Date: 15-DEC-2022 03:11
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121428.D
Data file 2: /20221214.b/B20221214.b/22121428.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL8A
Client ID:
Injection Date: 15-DEC-2022 03:29
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	0.000	8893	4.221	0.000	14795	0.95	0.98	4.0	Tetrachloro-m-xylene
9.355	0.000	15511	10.467	0.000	24896	2.54	2.86	11.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	691781	-2.7
Hexabromobiphenyl	641833	602865	-6.1

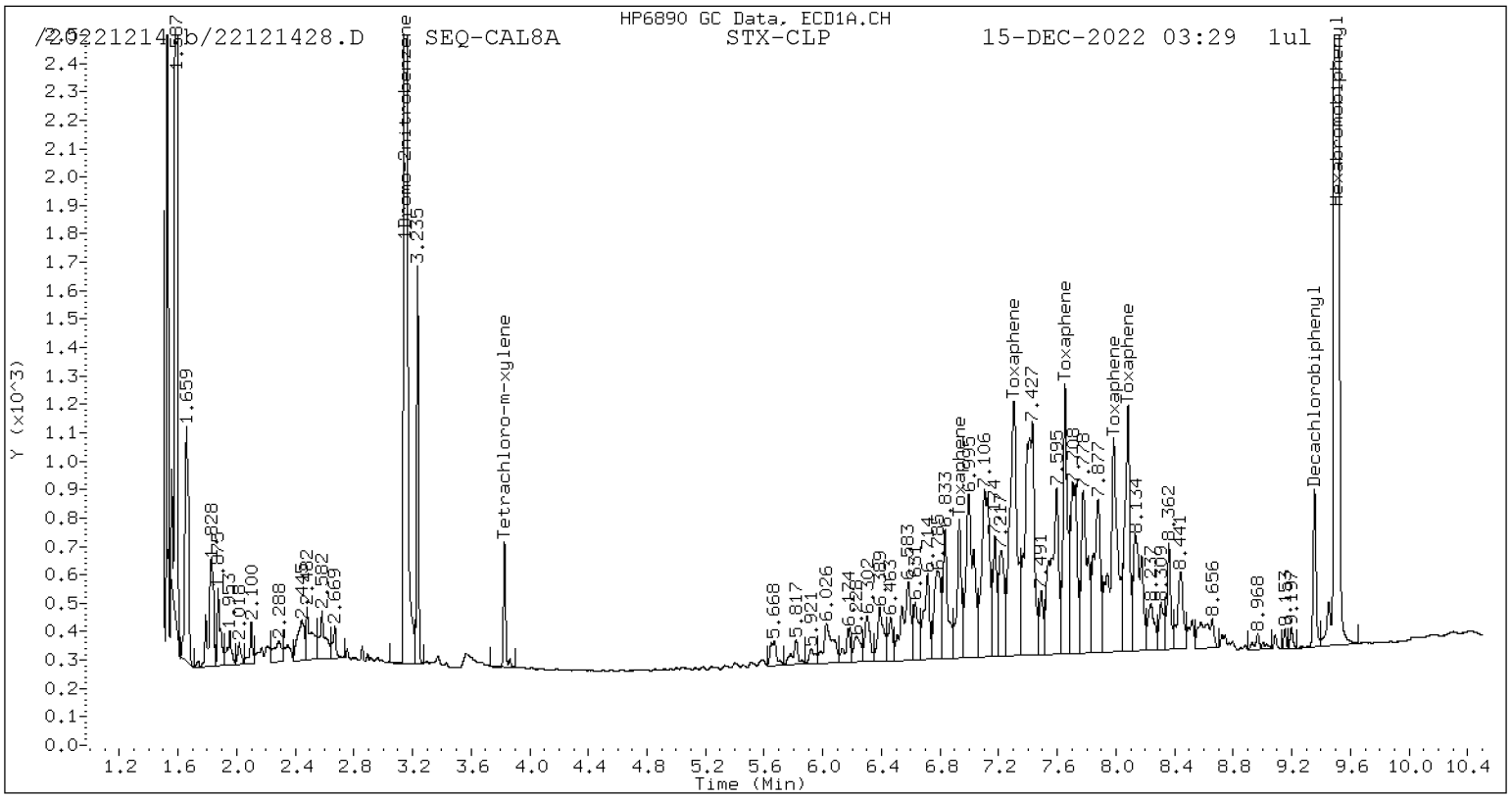
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1068328	0.9
Hexabromobiphenyl	797125	788806	-1.0

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

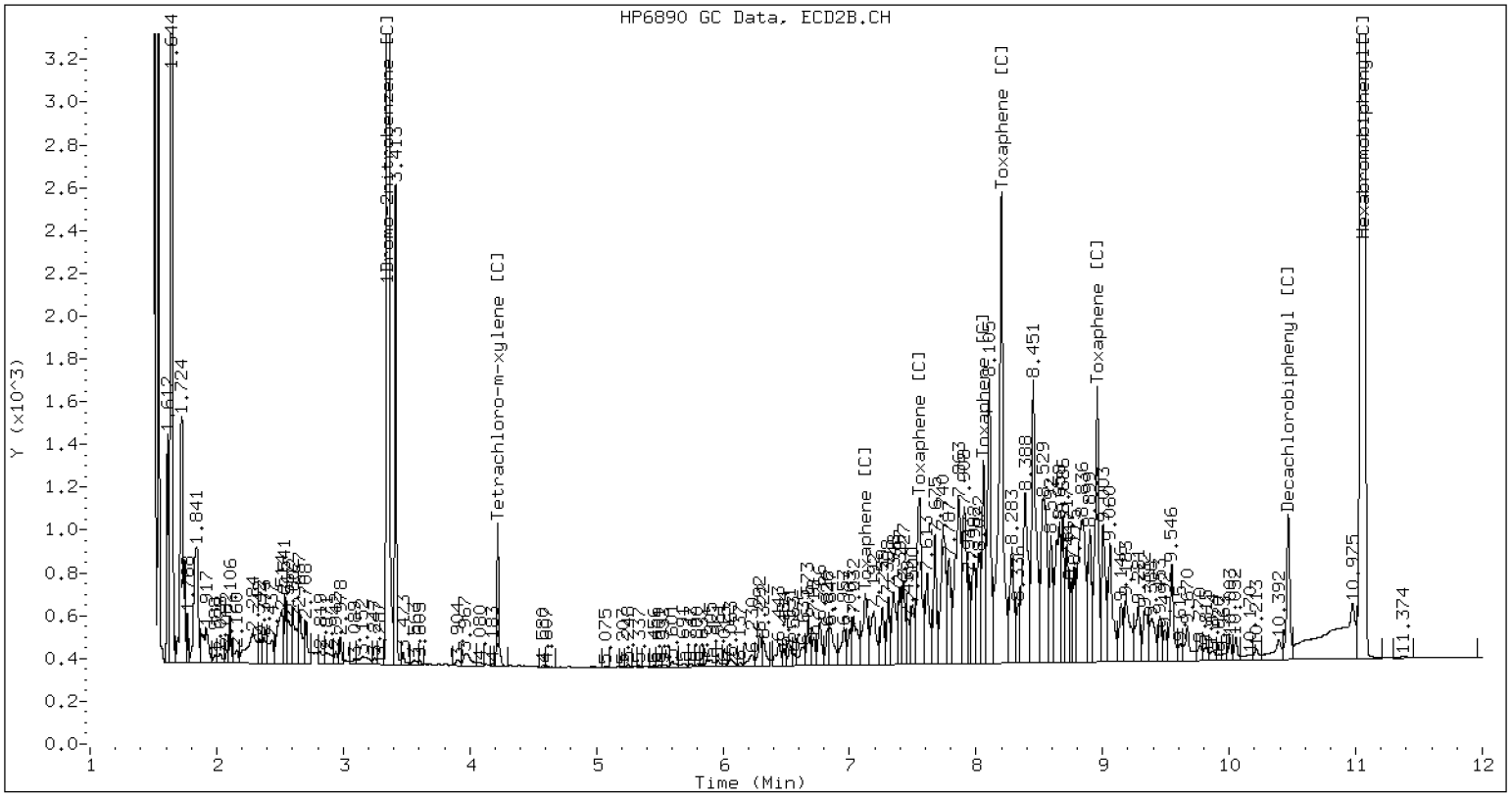
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.931	0.000	20939	118.9	1	7.125	-0.000	18390	124.1	
Toxaphene	2	7.304	0.000	62921	127.5	2	7.553	-0.000	43437	130.4	
Toxaphene	3	7.653	-0.000	40147	126.2	3	8.059	-0.001	32235	127.1	
Toxaphene	4	7.985	-0.001	56816	133.6	4	8.201	-0.001	109296	132.1	
Toxaphene	5	8.082	-0.000	39643	123.4	5	8.958	-0.001	50997	125.7	
Total STX-CLPAve (5 peaks): 125.907						Total CLP2Ave (5 peaks): 127.865					RPD = 2
Corrected Ave (5 peaks): 125.907						Corrected Ave (5 peaks): 127.865					RPD = 2

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121428.D SEQ-CAL8A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121428.D
Data file 2: /20221214.b/B20221214.b/22121428.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL8A
Client ID:
Injection Date: 15-DEC-2022 03:29
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121429.D
Data file 2: /20221214.b/B20221214.b/22121429.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL9A
Client ID:
Injection Date: 15-DEC-2022 03:46
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	-0.000	18632	4.220	-0.000	29829	1.92	1.92	0.1	Tetrachloro-m-xylene
9.355	0.000	29179	10.467	0.000	44716	4.64	4.98	7.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	713620	0.4
Hexabromobiphenyl	641833	620026	-3.4

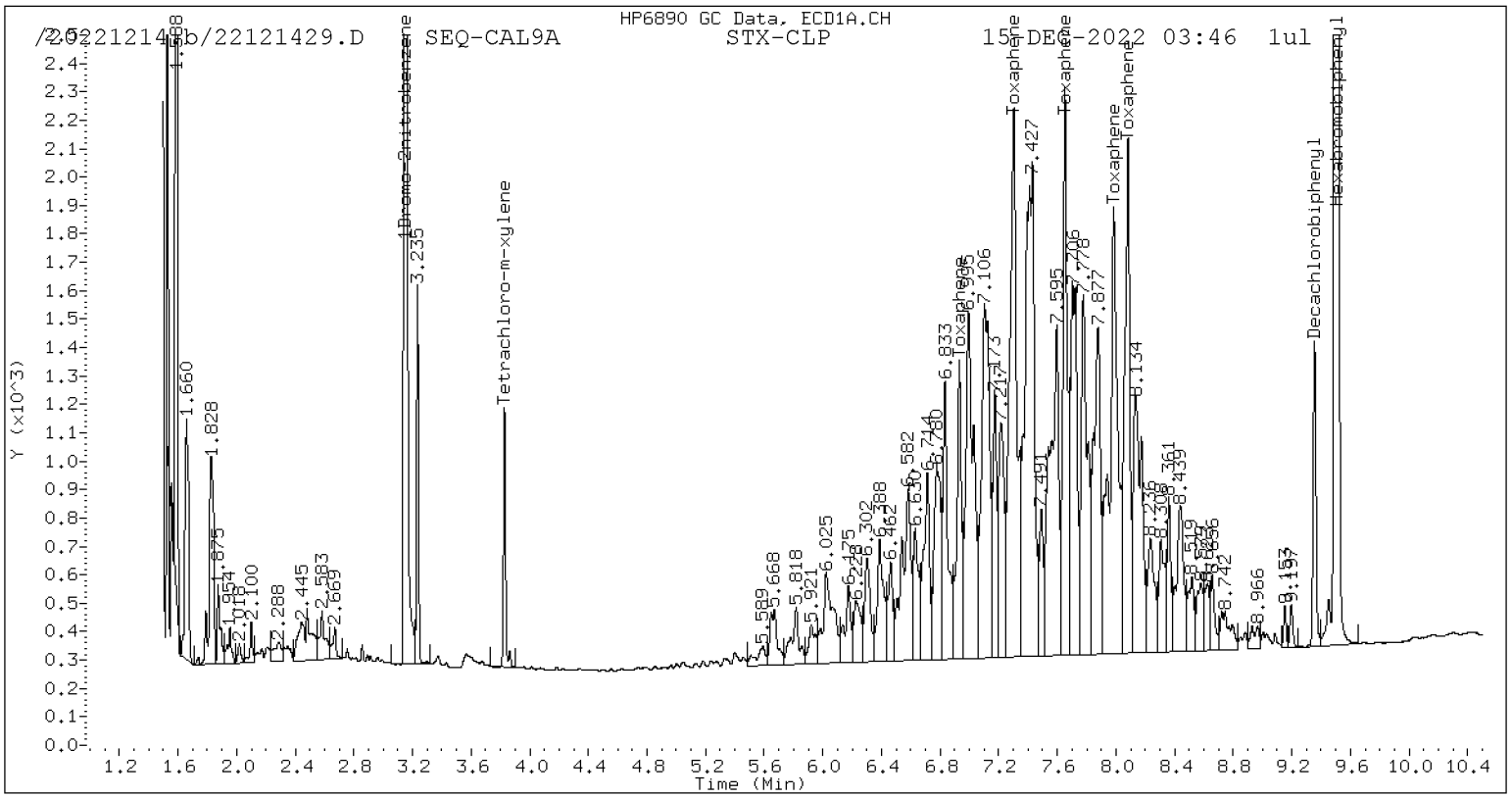
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1104488	4.3
Hexabromobiphenyl	797125	811719	1.8

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

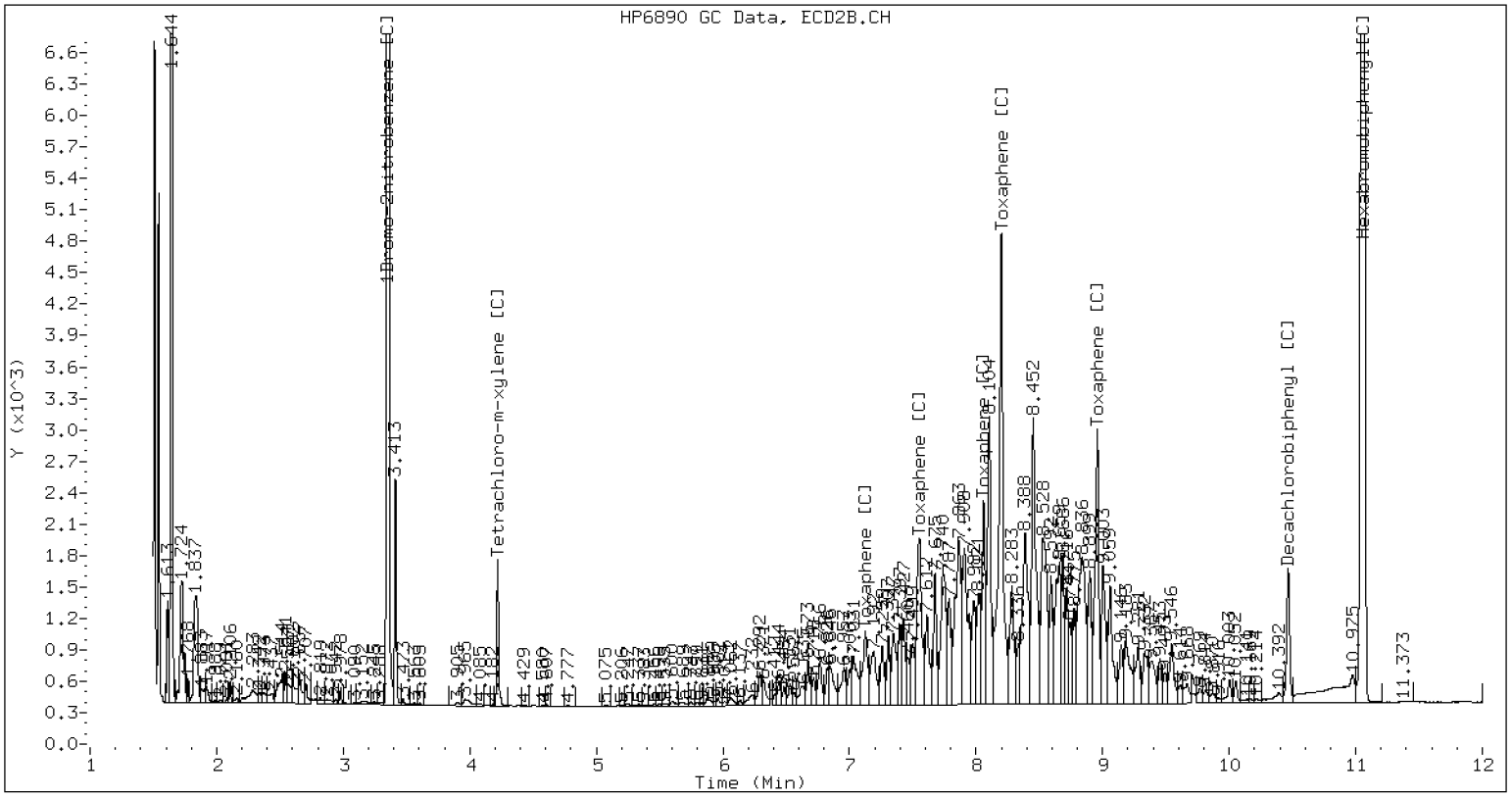
	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.931	0.000	47415	261.8	1	7.125	-0.001	38790	254.4
Toxaphene	2	7.302	-0.001	134642	265.2	2	7.552	-0.001	89754	261.8
Toxaphene	3	7.652	-0.001	86679	264.9	3	8.059	-0.001	67442	258.4
Toxaphene	4	7.985	-0.001	125891	287.7	4	8.200	-0.001	220426	258.9
Toxaphene	5	8.081	-0.000	85903	260.0	5	8.958	-0.001	104601	250.5
Total STX-CLPAve (5 peaks): 267.939						Total CLP2Ave (5 peaks): 256.784				RPD = 4
Corrected Ave (5 peaks): 267.939						Corrected Ave (5 peaks): 256.784				RPD = 4

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121429.D SEQ-CAL9A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121429.D
Data file 2: /20221214.b/B20221214.b/22121429.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL9A
Client ID:
Injection Date: 15-DEC-2022 03:46
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121430.D
Data file 2: /20221214.b/B20221214.b/22121430.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAA
Client ID:
Injection Date: 15-DEC-2022 04:04
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	-0.000	37717	4.220	0.000	60469	3.98	3.98	0.0	Tetrachloro-m-xylene
9.355	0.000	57106	10.467	0.000	82418	9.20	9.32	1.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	696179	-2.0
Hexabromobiphenyl	641833	612804	-4.5

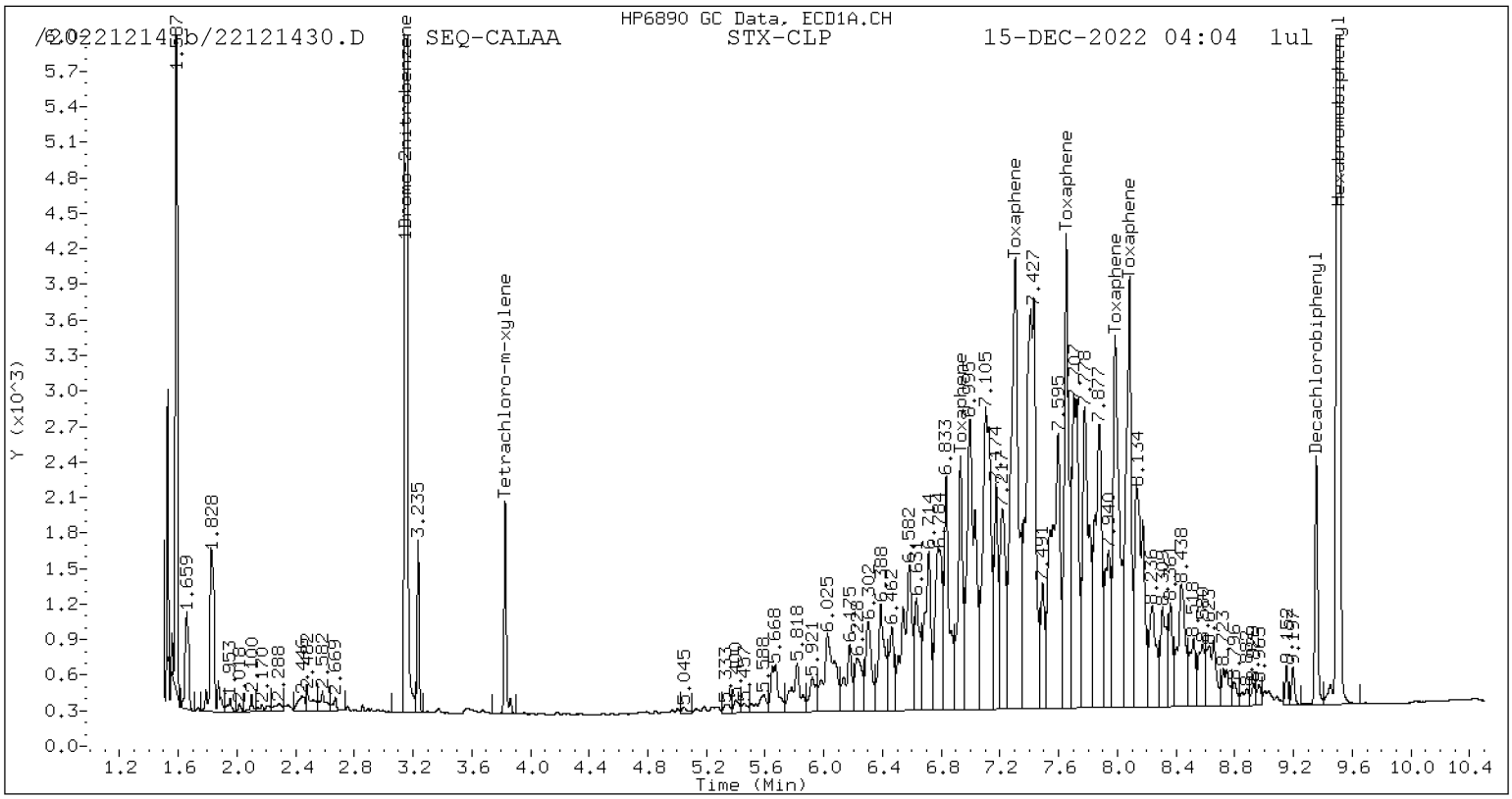
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1078803	1.9
Hexabromobiphenyl	797125	800071	0.4

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

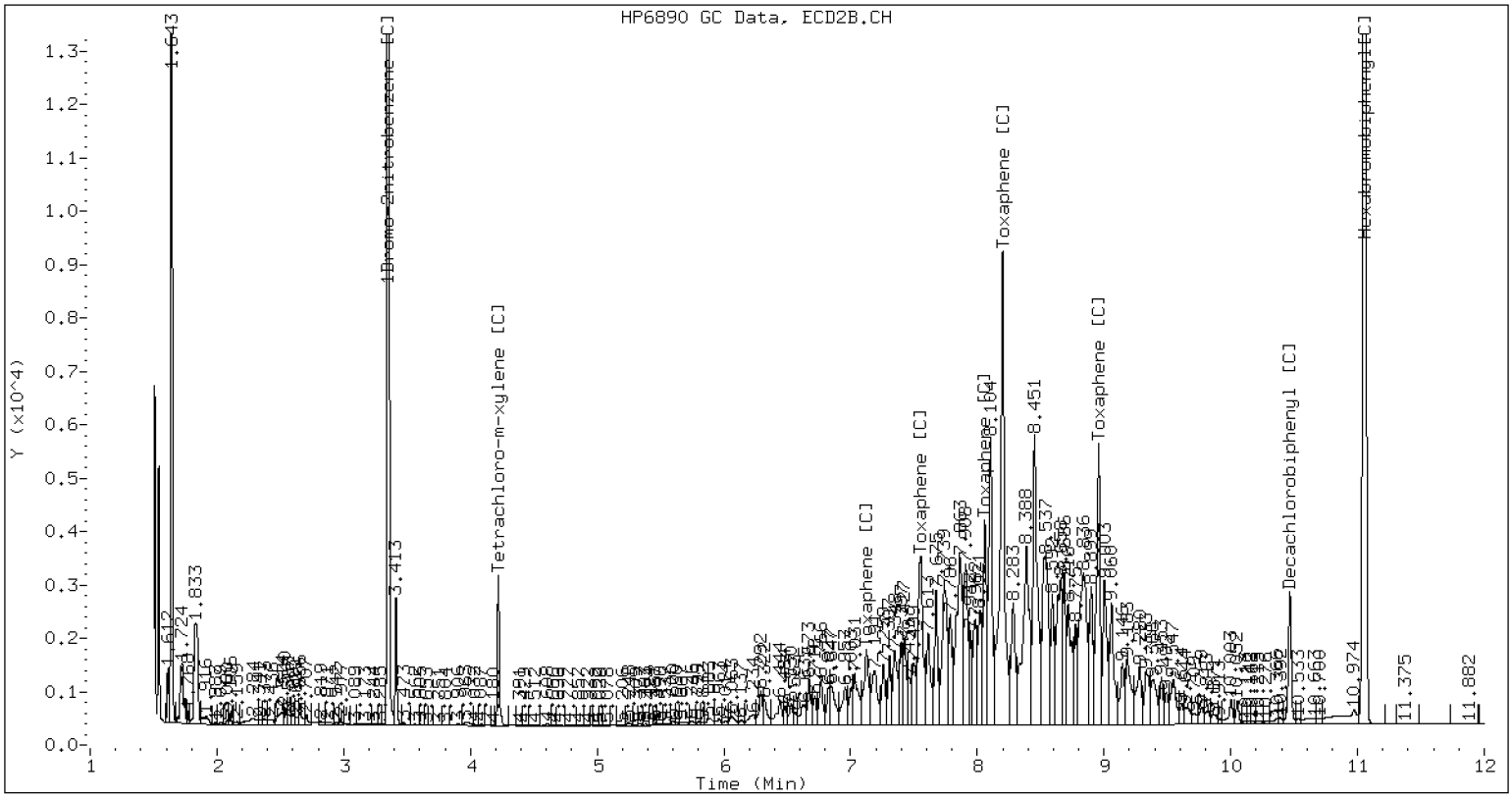
	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.931	-0.000	96535	539.4	1	7.125	-0.001	78635	523.1
Toxaphene	2	7.304	0.000	273576	545.2	2	7.553	-0.001	179081	529.9
Toxaphene	3	7.652	-0.001	177095	547.7	3	8.059	-0.001	133547	519.1
Toxaphene	4	7.985	-0.001	190443	440.4	4	8.200	-0.001	437035	520.8
Toxaphene	5	8.082	-0.000	175009	535.8	5	8.958	-0.001	209659	509.4
Total STX-CLPAve (5 peaks): 521.711						Total CLP2Ave (5 peaks): 520.468				RPD = 0
Corrected Ave (5 peaks): 521.711						Corrected Ave (5 peaks): 520.468				RPD = 0

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121430.D SEQ-CALAA CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121430.D
Data file 2: /20221214.b/B20221214.b/22121430.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAA
Client ID:
Injection Date: 15-DEC-2022 04:04
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121431.D
Data file 2: /20221214.b/B20221214.b/22121431.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAB
Client ID:
Injection Date: 15-DEC-2022 04:22
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	0.000	74347	4.221	0.000	119694	7.73	7.77	0.5	Tetrachloro-m-xylene
9.355	-0.000	107024	10.466	-0.000	151970	17.00	17.11	0.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	706924	-0.5
Hexabromobiphenyl	641833	621486	-3.2

Column 2

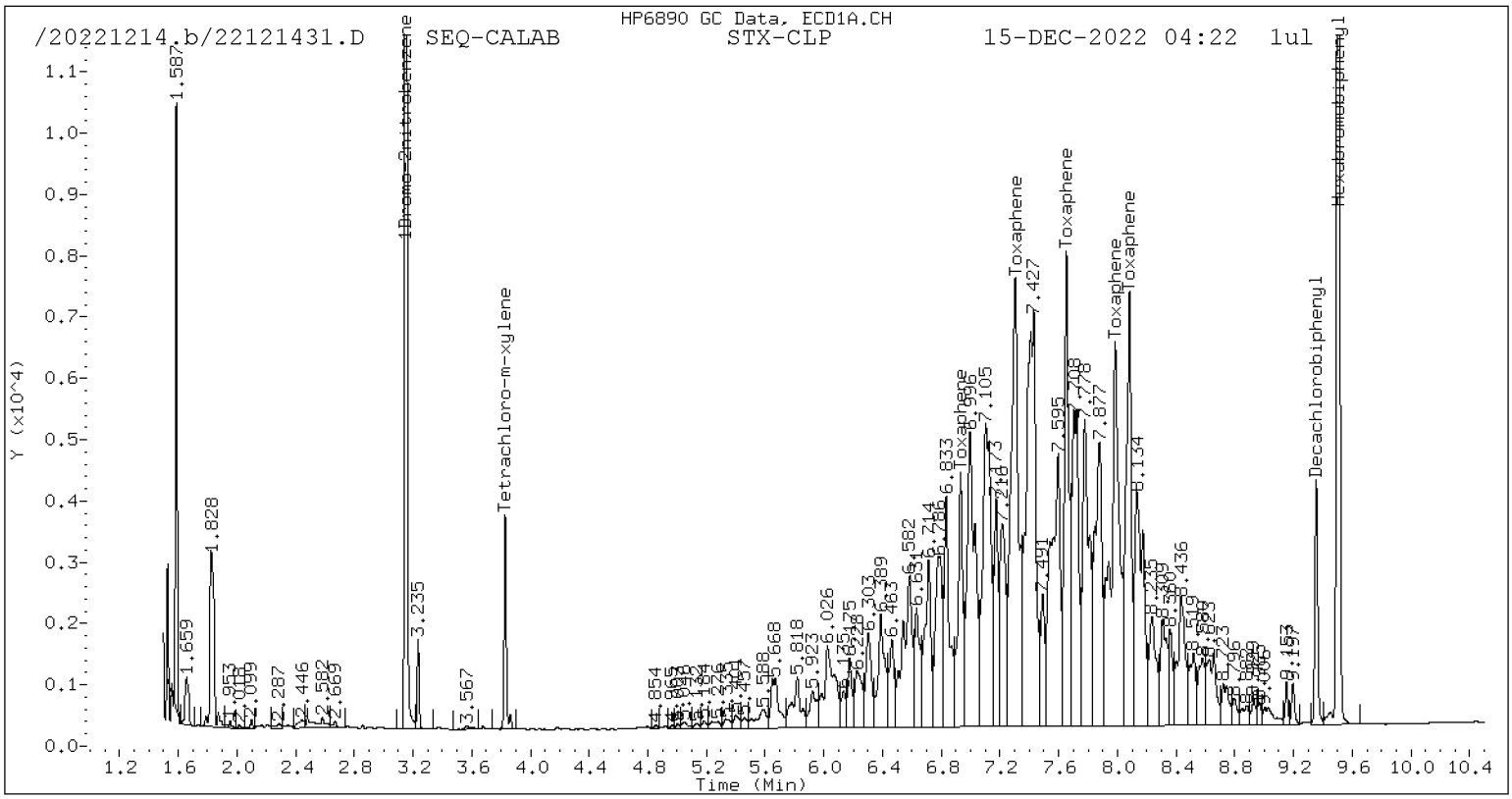
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1093936	3.3
Hexabromobiphenyl	797125	803782	0.8

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.931	0.000	192757	1062.0	1	7.125	-0.000	156515	1036.5
Toxaphene	2	7.303	-0.000	530863	1043.2	2	7.553	-0.001	349637	1029.8
Toxaphene	3	7.653	-0.000	344194	1049.6	3	8.059	-0.000	265296	1026.5
Toxaphene	4	7.986	-0.000	522105	1190.6	4	8.201	-0.001	854255	1013.3
Toxaphene	5	8.082	-0.000	345477	1043.0	5	8.958	-0.001	416452	1007.1

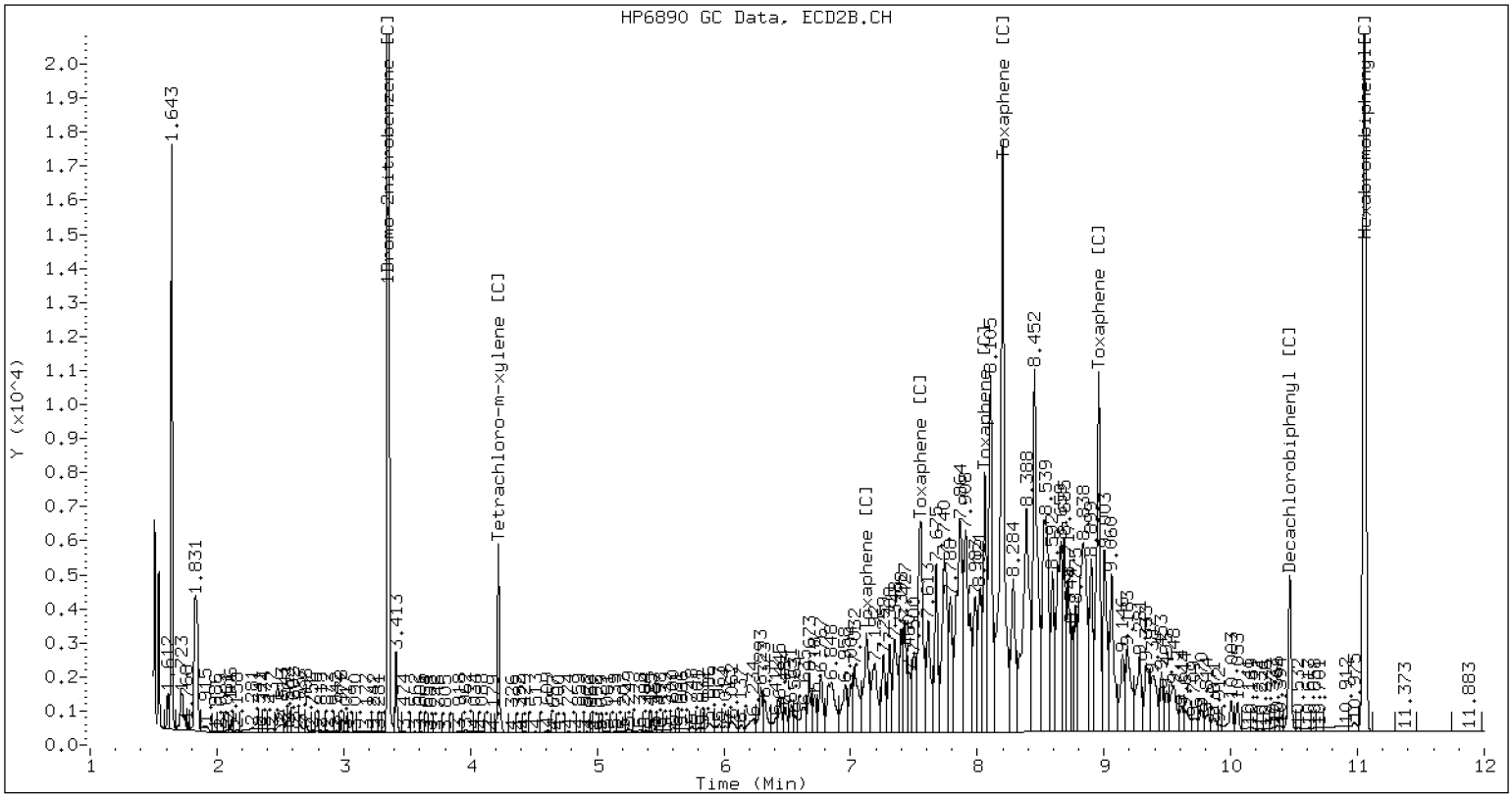
Total STX-CLPAve (5 peaks): 1077.665 Total CLP2Ave (5 peaks): 1022.630 RPD = 5
Corrected Ave (5 peaks): 1077.665 Corrected Ave (5 peaks): 1022.630 RPD = 5

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121431.D SEQ-CALAB CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121431.D
Data file 2: /20221214.b/B20221214.b/22121431.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAB
Client ID:
Injection Date: 15-DEC-2022 04:22
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121432.D
Data file 2: /20221214.b/B20221214.b/22121432.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAC
Client ID:
Injection Date: 15-DEC-2022 04:40
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	0.000	169388	4.221	0.000	273030	18.51	18.69	1.0	Tetrachloro-m-xylene
9.356	0.001	234532	10.466	-0.000	332716	40.53	40.11	1.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	672958	-5.3
Hexabromobiphenyl	641833	571112	-11.0

Column 2

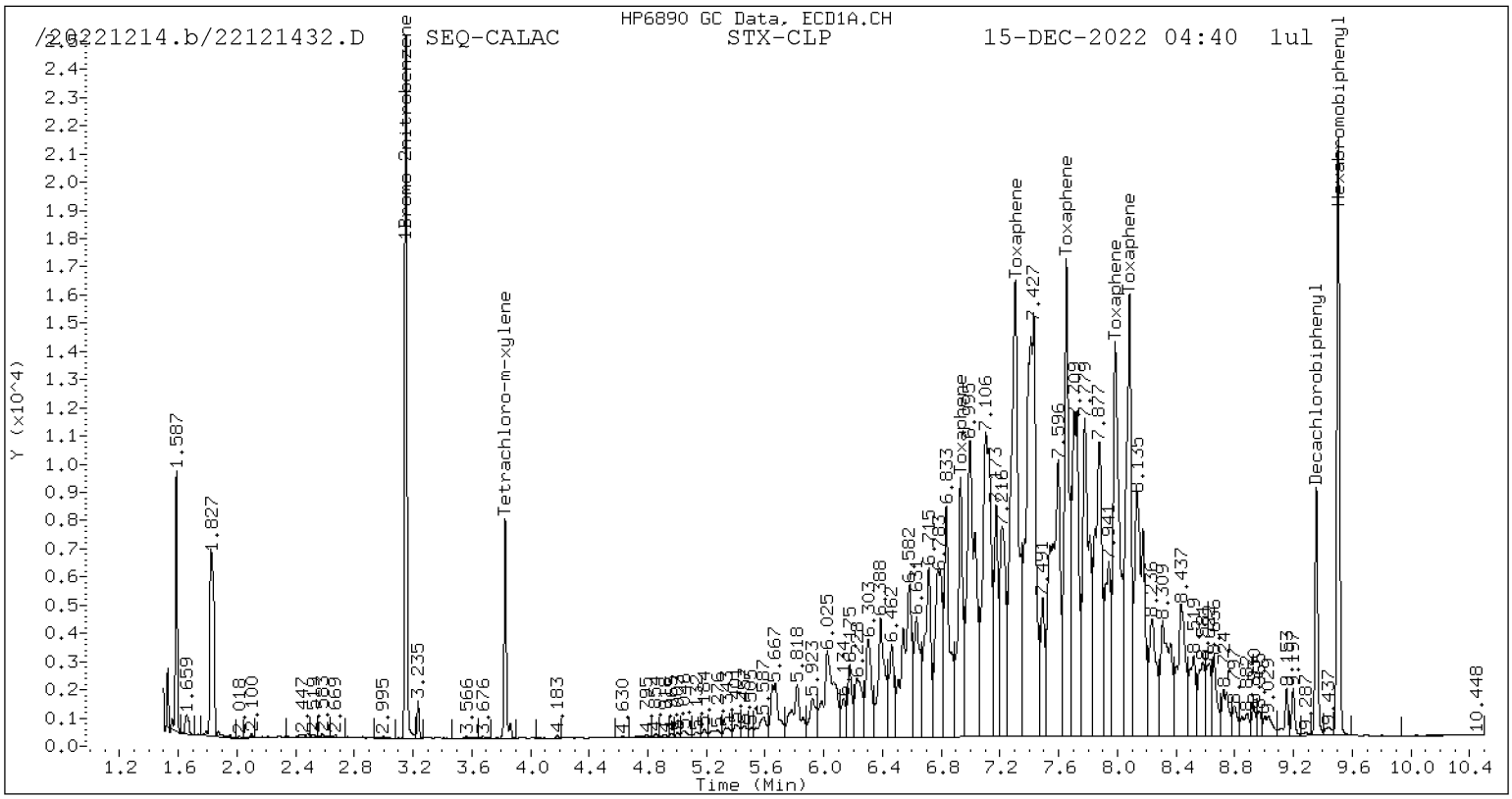
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1037593	-2.0
Hexabromobiphenyl	797125	750492	-5.9

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.931	0.000	432250	2591.5	1	7.126	-0.000	358061	2539.5
Toxaphene	2	7.303	0.000	1180375	2524.1	2	7.553	0.000	785942	2479.1
Toxaphene	3	7.653	0.000	762221	2529.4	3	8.059	-0.000	602985	2498.7
Toxaphene	4	7.986	0.000	863552	2142.9	4	8.201	-0.001	1929083	2450.8
Toxaphene	5	8.082	0.000	777497	2554.3	5	8.958	-0.001	962132	2492.0

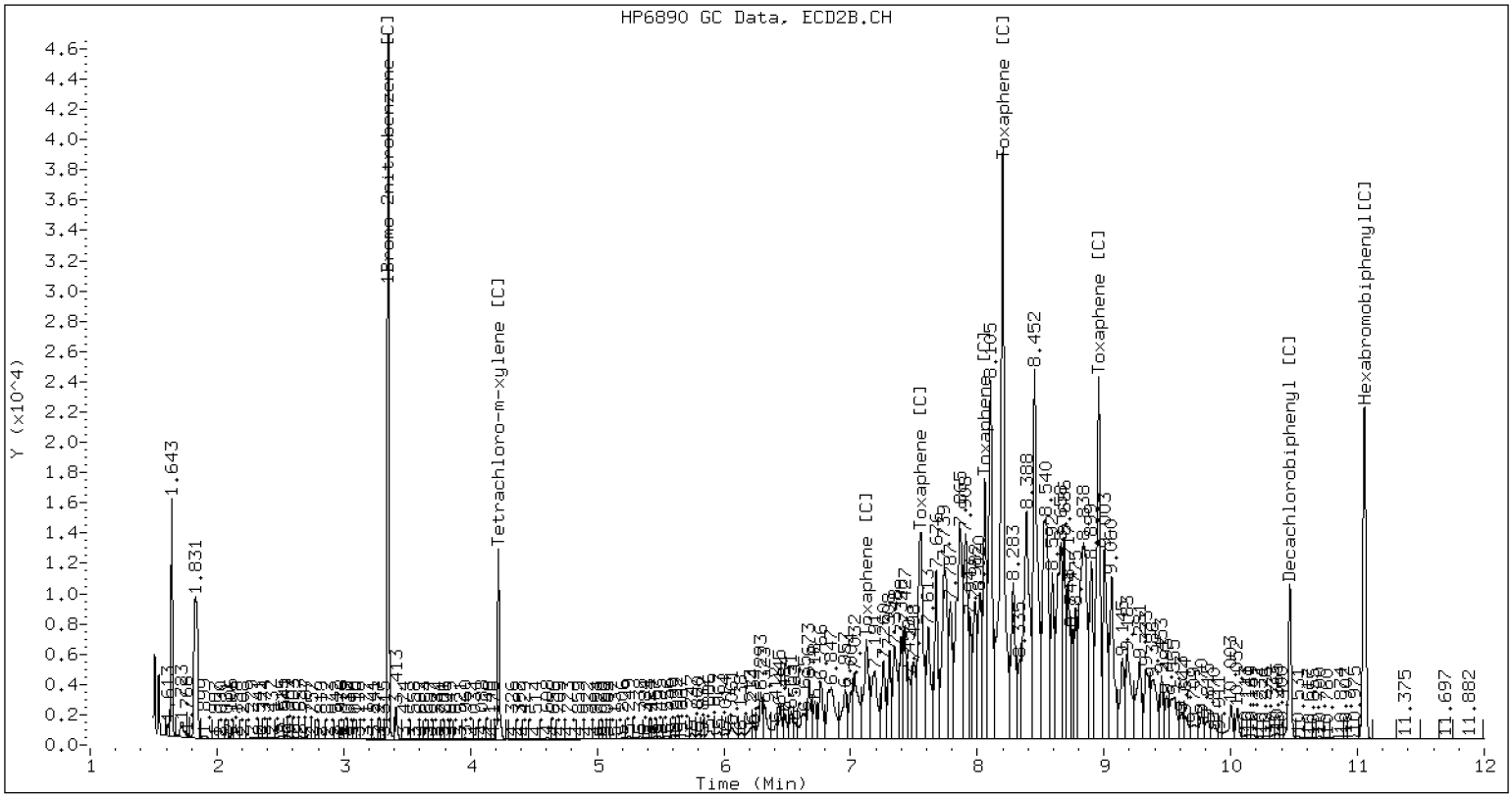
Total STX-CLPAve (5 peaks): 2468.427 Total CLP2Ave (5 peaks): 2492.024 RPD = 1
Corrected Ave (5 peaks): 2468.427 Corrected Ave (5 peaks): 2492.024 RPD = 1

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121432.D SEQ-CALAC CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121432.D
Data file 2: /20221214.b/B20221214.b/22121432.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAC
Client ID:
Injection Date: 15-DEC-2022 04:40
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121433.D
Data file 2: /20221214.b/B20221214.b/22121433.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAD
Client ID:
Injection Date: 15-DEC-2022 04:58
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	-0.000	329284	4.221	0.000	536251	34.78	35.63	2.4	Tetrachloro-m-xylene
9.356	0.000	464116	10.466	-0.000	660536	76.95	77.19	0.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	696178	-2.0
Hexabromobiphenyl	641833	595287	-7.3

Column 2

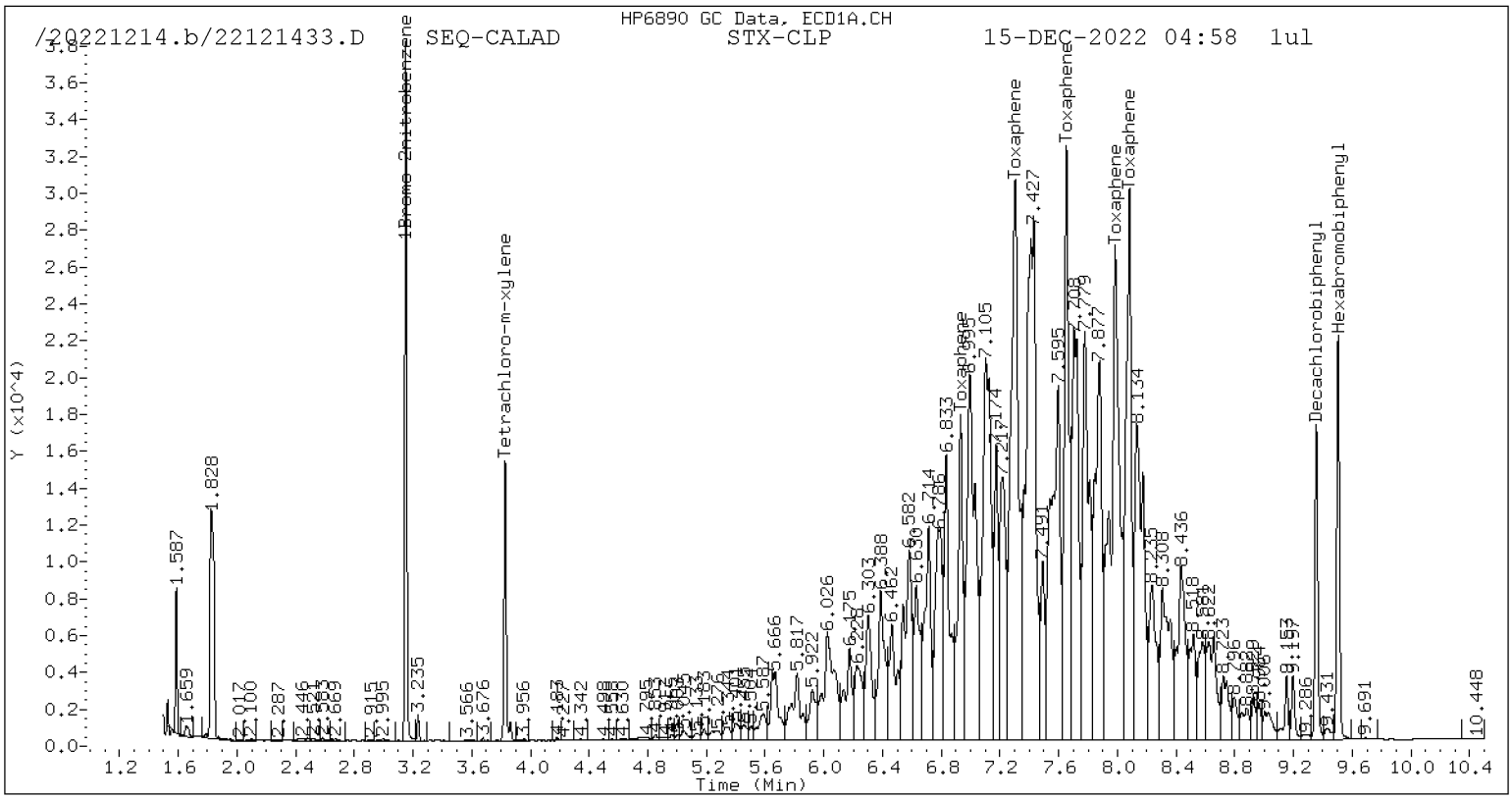
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1069205	1.0
Hexabromobiphenyl	797125	774218	-2.9

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.931	0.000	828531	4765.6	1	7.126	-0.000	704213	4841.5
Toxaphene	2	7.303	-0.000	2275106	4667.4	2	7.554	0.000	1533921	4690.3
Toxaphene	3	7.653	-0.000	1493693	4755.4	3	8.059	-0.001	1192086	4788.5
Toxaphene	4	7.986	0.000	2318449	5519.5	4	8.201	-0.001	3835448	4723.4
Toxaphene	5	8.081	-0.000	1509568	4758.0	5	8.958	-0.000	1957568	4914.8

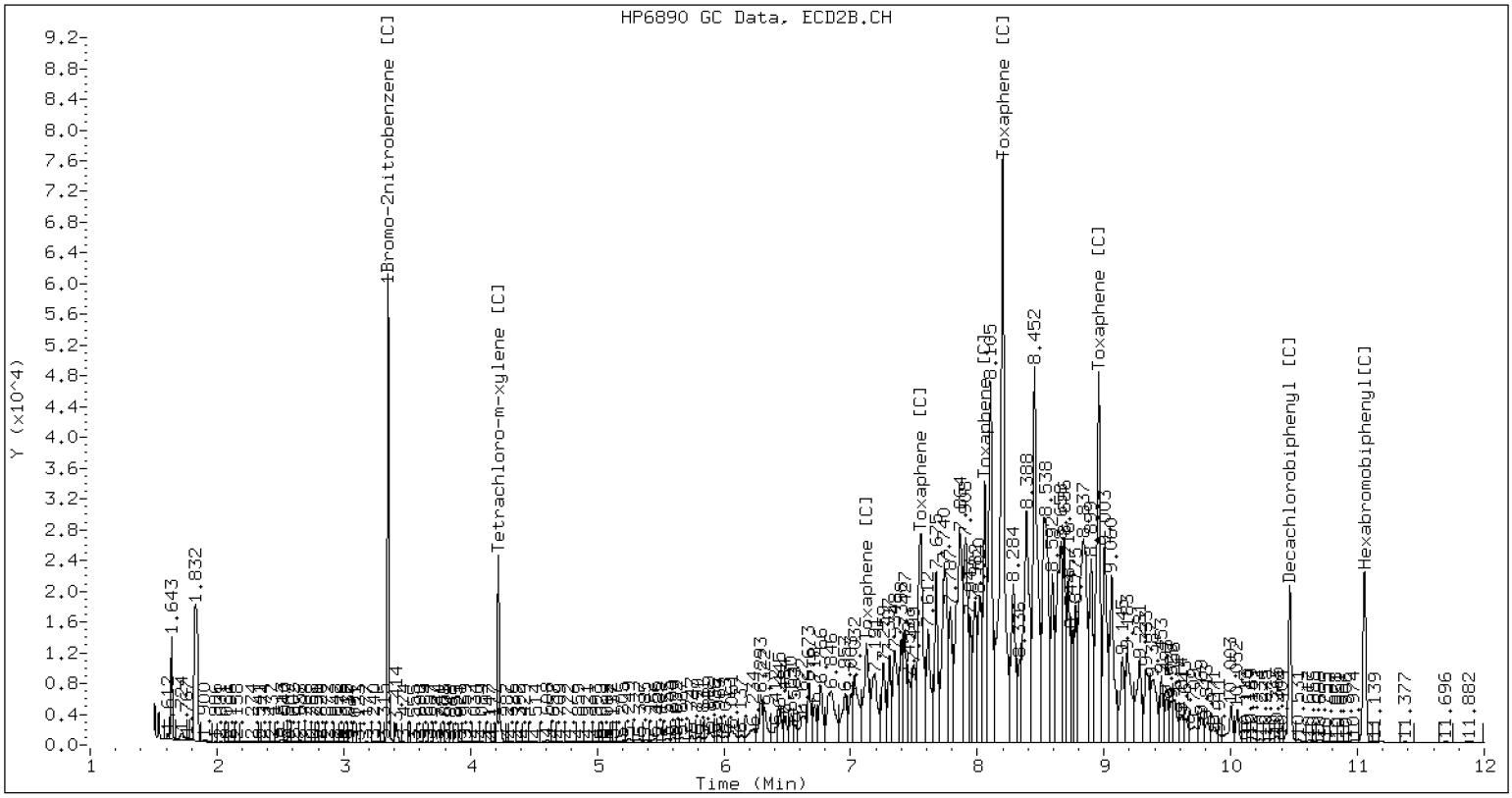
Total STX-CLPAve (5 peaks): 4893.192 Total CLP2Ave (5 peaks): 4791.694 RPD = 2
Corrected Ave (5 peaks): 4893.192 Corrected Ave (5 peaks): 4791.694 RPD = 2

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121433.D SEQ-CALAD CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121433.D
Data file 2: /20221214.b/B20221214.b/22121433.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAD
Client ID:
Injection Date: 15-DEC-2022 04:58
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121434.D
Data file 2: /20221214.b/B20221214.b/22121434.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAE
Client ID:
Injection Date: 15-DEC-2022 05:16
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	-0.000	626937	4.221	0.000	1016753	65.66	67.54	2.8	Tetrachloro-m-xylene
9.355	0.000	899917	10.467	0.000	1293767	145.37	151.89	4.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	702143	-1.2
Hexabromobiphenyl	641833	610983	-4.8

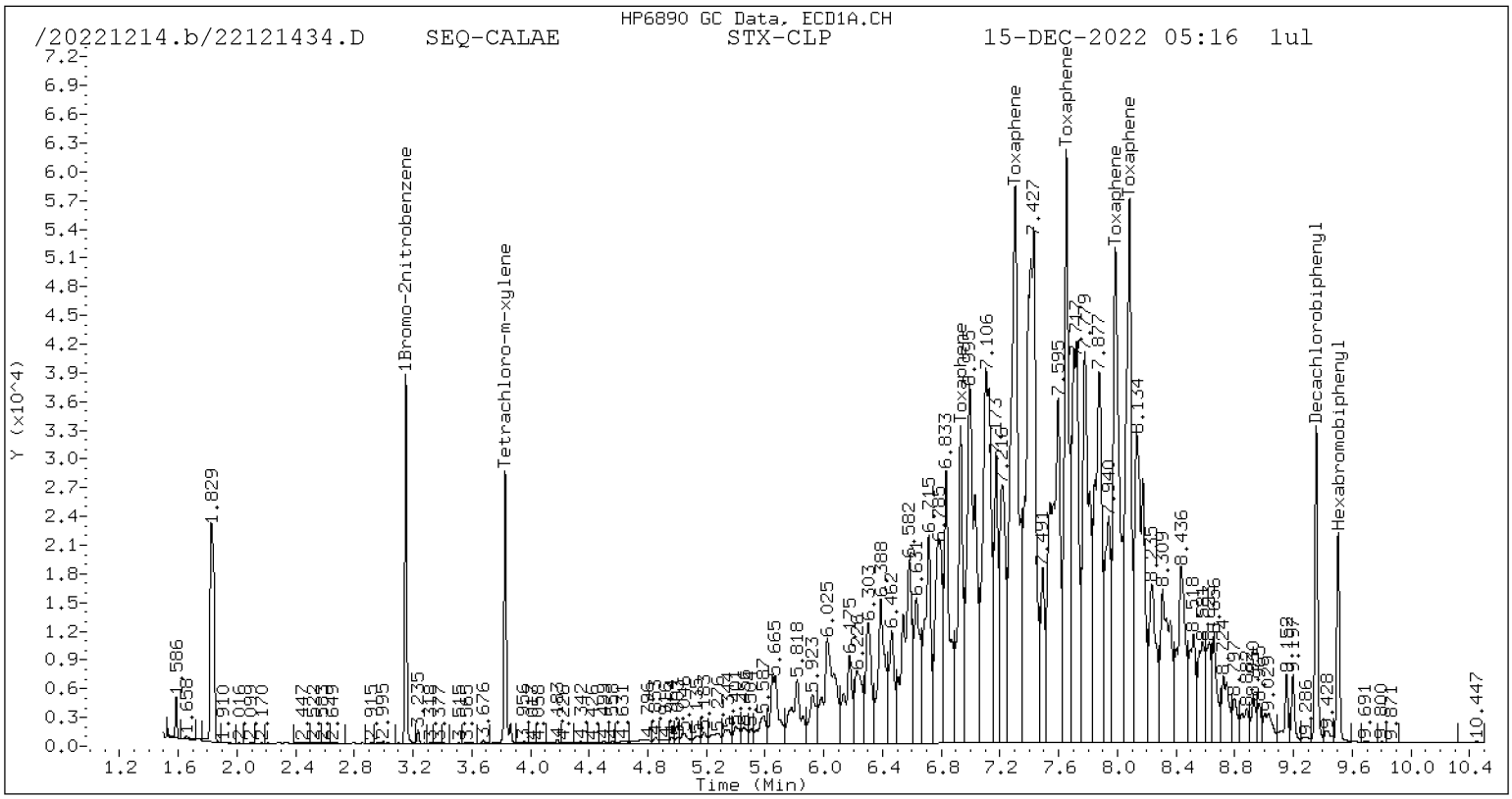
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1069521	1.0
Hexabromobiphenyl	797125	770702	-3.3

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

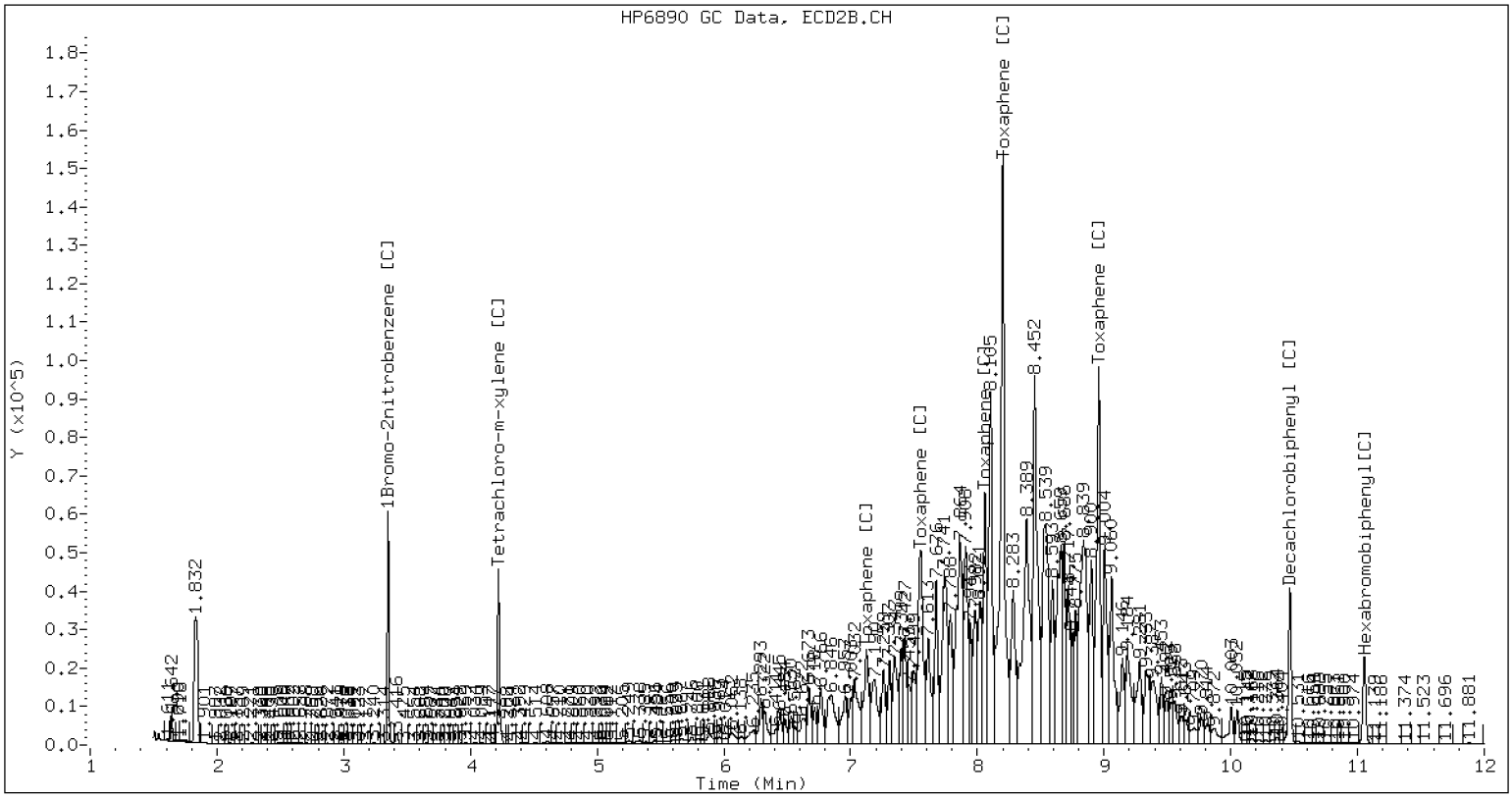
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.931	0.000	1553785	8707.6	1	7.126	0.000	1336419	9229.8	
Toxaphene	2	7.303	-0.000	4216546	8428.1	2	7.553	0.000	2900195	8908.4	
Toxaphene	3	7.653	-0.000	2652265	8227.0	3	8.060	0.000	2299294	9278.2	
Toxaphene	4	7.987	0.001	3225164	7480.8	4	8.201	0.000	7496819	9274.6	
Toxaphene	5	8.082	-0.000	2882252	8851.2	5	8.959	0.000	3913616	9870.7	
Total STX-CLPAve (5 peaks): 8338.950						Total CLP2Ave (5 peaks): 9312.318					RPD = 11
Corrected Ave (5 peaks): 8338.950						Corrected Ave (5 peaks): 9312.318					RPD = 11

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121434.D SEQ-CALAE CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121434.D
Data file 2: /20221214.b/B20221214.b/22121434.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAE
Client ID:
Injection Date: 15-DEC-2022 05:16
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23013104.D	Calibration Date:	12/14/2022
Sequence:	SLB0046	Injection Date:	01/31/23
Lab Sample ID:	SLB0046-ICV1	Injection Time:	15:45
Sequence Name:	INDAE		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Hexachlorobenzene	A	20.000	20.6	1.4298940	1.4742340		3.1	+/-20
Hexachlorobenzene [2C]	A	20.000	20.3	1.4591090	1.4837370		1.7	+/-20
Decachlorobiphenyl	A	40.000	39.6	0.8105886	0.8020704		-1.1	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.6	0.8841805	0.8965048		1.4	+/-20
Tetrachlorometaxylene	A	40.000	39.8	1.0879510	1.0818030		-0.6	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.9	1.1261070	1.1220750		-0.4	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013104.D
Data file 2: /20230131.b/B20230131.b/23013104.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: SLB0046-ICV1
Client ID:
Injection Date: 31-JAN-2023 15:45
Report Date: 02/03/2023 20:24
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.308	-0.003	339941	4.826	-0.006	531982	22.82	22.39	1.9	alpha-BHC
4.691	-0.002	132273	5.302	-0.007	196989	23.06	21.80	5.6	beta-BHC
4.873	-0.003	300541	5.654	-0.008	376575	24.68	19.24	24.8	delta-BHC
4.608	-0.003	292759	5.222	-0.007	456061	22.67	22.61	0.2	gamma-BHC (Lindane)
5.089	-0.003	276088	5.747	-0.008	391781	24.02	21.45	11.3	Heptachlor
5.411	-0.003	289469	6.149	-0.009	438906	22.47	21.04	6.6	Aldrin
6.084	-0.004	246431	6.806	-0.009	357495	22.07	20.73	6.3	Heptachlor epoxide b
6.527	-0.003	232039	7.250	-0.008	311965	22.64	20.52	9.8	Endosulfan I
6.787	-0.004	483792	7.544	-0.008	680334	43.94	40.50	8.1	Dieldrin
6.449	-0.003	453594	7.335	-0.007	643639	44.37	41.79	6.0	4,4'-DDE
7.037	-0.004	409859	7.868	-0.008	532113	45.21	47.62	5.2	Endrin
7.275	-0.003	395569	8.080	-0.008	535026	48.47	46.72	3.7	Endosulfan II
7.097	-0.003	395719	7.942	-0.007	522214	48.45	48.05	0.8	4,4'-DDD
8.137	-0.003	358378	8.678	-0.008	482902	46.25	48.02	3.7	Endosulfan sulfate
7.389	-0.002	393326	8.259	-0.007	477242	47.66	45.50	4.6	4,4'-DDT
7.875	-0.002	836426	8.901	-0.008	1018921	228.71	219.50	4.1	Methoxychlor
8.411	-0.003	407990	9.202	-0.008	505285	45.96	46.52	1.2	Endrin ketone
7.704	-0.003	297678	8.410	-0.008	371232	45.73	45.95	0.5	Endrin aldehyde
6.226	-0.003	251747	7.017	-0.008	353947	22.20	20.58	7.6	trans-Chlordane
6.373	-0.003	246759	7.177	-0.008	341843	21.69	20.31	6.6	cis-Chlordane
2.302	-0.002	324715	2.480	-0.002	367476	20.81	16.28	24.4	Hexachlorobutadiene
4.150	-0.002	285199	4.686	-0.006	439861	20.62	20.34	1.4	Hexachlorobenzene
3.798	-0.002	418562	4.191	-0.005	665289	39.77	39.86	0.2	Tetrachloro-m-xylene
9.316	-0.002	277301	10.418	-0.011	352243	39.58	40.56	2.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

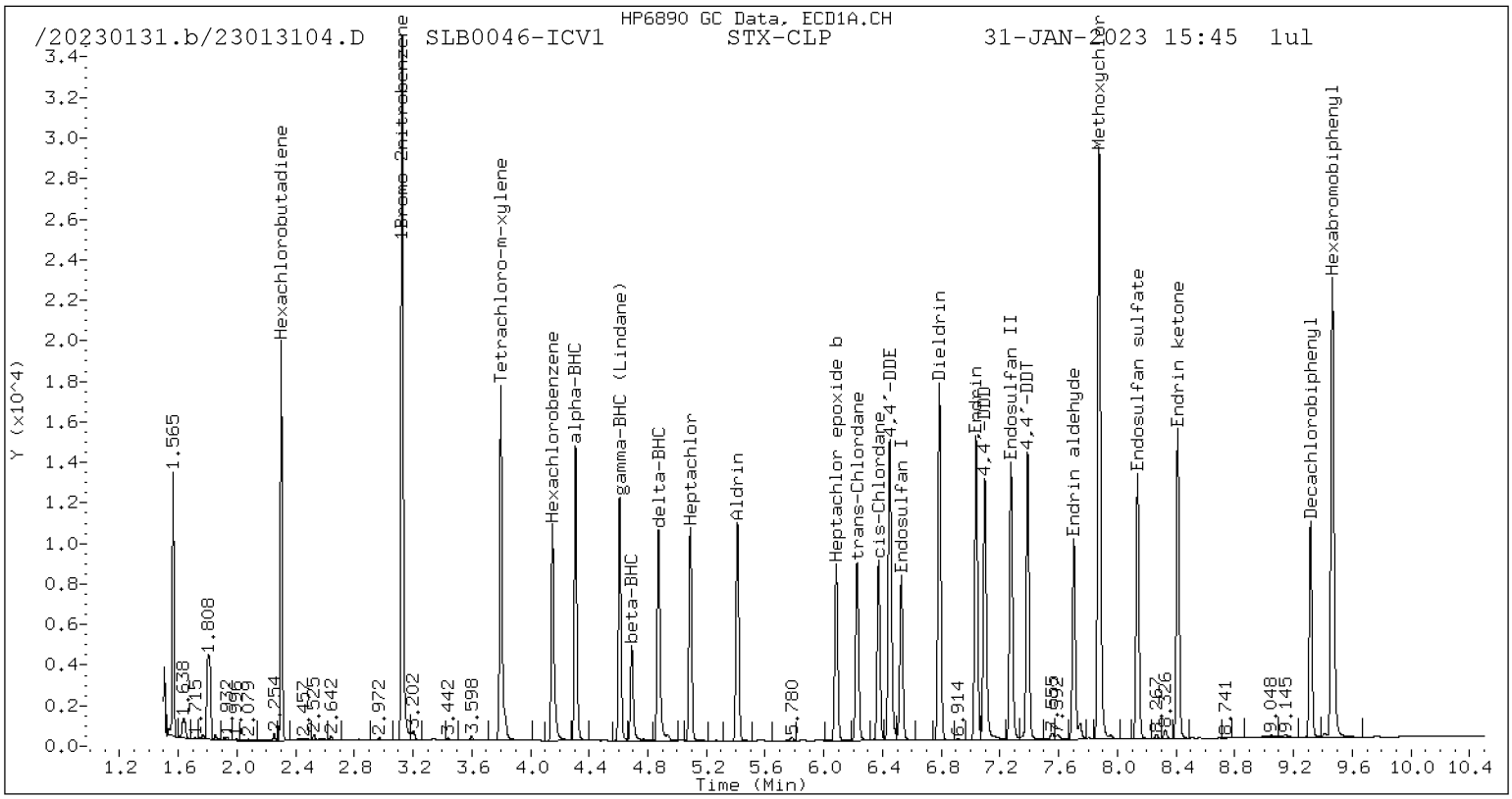
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	773823	15.1
Hexabromobiphenyl	609723	691463	13.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1185819	17.8
Hexabromobiphenyl	769764	785814	2.1

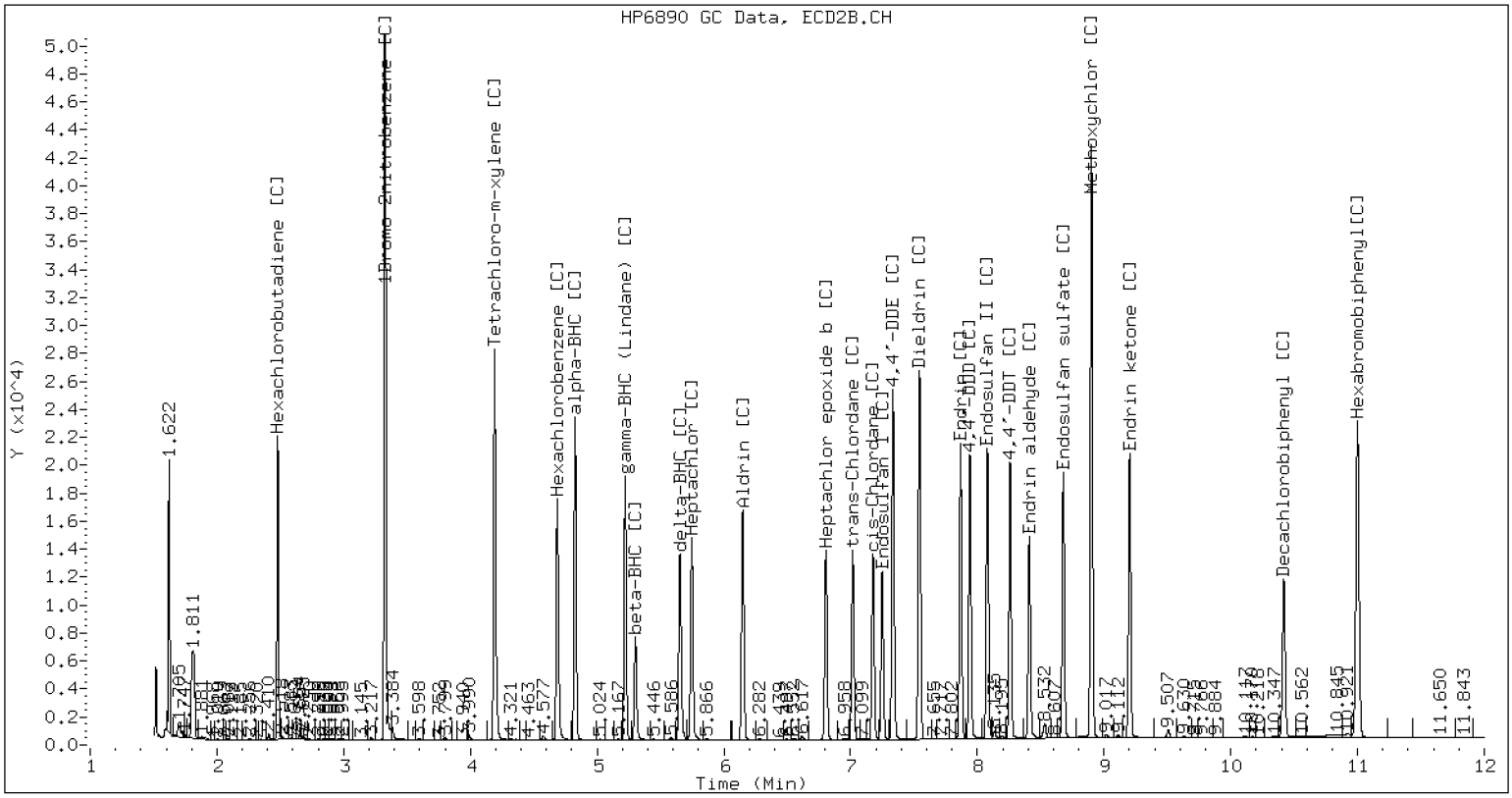
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230131.b/B20230131.b/23013104.D SLB0046-ICV1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23013119.D	Calibration Date:	12/14/2022
Sequence:	SLB0046	Injection Date:	01/31/23
Lab Sample ID:	SLB0046-CCV1	Injection Time:	20:13
Sequence Name:	INDAE		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	20.4	1.4298940	1.4613430		2.2	+/-20
Hexachlorobenzene [2C]	A	20.000	19.4	1.4591090	1.4143100		-3.1	+/-20
Decachlorobiphenyl	A	40.000	38.6	0.8105886	0.7815732		-3.6	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.5	0.8841805	0.8517637		-3.7	+/-20
Tetrachlorometaxylene	A	40.000	39.5	1.0879510	1.0751460		-1.2	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.2	1.1261070	1.0755440		-4.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013119.D
Data file 2: /20230131.b/B20230131.b/23013119.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: SLB0046-CCV1
Client ID:
Injection Date: 31-JAN-2023 20:13
Report Date: 02/03/2023 20:24
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.307	-0.003	326670	4.824	-0.008	529991	22.54	21.22	6.0	alpha-BHC
4.690	-0.003	127237	5.300	-0.009	193333	22.81	20.36	11.3	beta-BHC
4.873	-0.003	287577	5.651	-0.010	376730	24.28	18.31	28.0	delta-BHC
4.608	-0.003	279903	5.220	-0.009	448196	22.28	21.15	5.2	gamma-BHC (Lindane)
5.089	-0.004	266205	5.744	-0.010	405476	23.81	21.12	12.0	Heptachlor
5.410	-0.004	276378	6.147	-0.011	424115	22.06	19.35	13.1	Aldrin
6.084	-0.005	234577	6.803	-0.011	341041	21.59	18.82	13.8	Heptachlor epoxide b N
6.527	-0.004	219796	7.247	-0.010	286826	22.05	17.95	20.5	Endosulfan I N
6.787	-0.004	453215	7.541	-0.010	625108	42.32	35.42	17.8	Dieldrin N
6.448	-0.003	427632	7.332	-0.010	591069	43.01	36.52	16.3	4,4'-DDE N
7.037	-0.004	330347	7.865	-0.010	417157	38.08	38.02	0.2	Endrin N
7.275	-0.003	372557	8.077	-0.010	485613	47.71	43.18	10.0	Endosulfan II N
7.096	-0.003	367515	7.939	-0.010	479923	47.03	44.97	4.5	4,4'-DDD N
8.137	-0.004	390937	8.675	-0.011	434818	52.73	44.03	18.0	Endosulfan sulfate N
7.388	-0.003	361737	8.257	-0.009	449781	45.81	43.66	4.8	4,4'-DDT N
7.875	-0.002	774813	8.899	-0.010	1009533	221.42	221.45	0.0	Methoxychlor N
8.411	-0.004	389694	9.200	-0.010	494597	45.88	46.36	1.0	Endrin ketone N
7.703	-0.004	288376	8.408	-0.010	349031	46.30	43.99	5.1	Endrin aldehyde N
6.226	-0.004	237356	7.015	-0.011	330465	21.51	18.28	16.2	trans-Chlordane N
6.372	-0.004	230997	7.175	-0.010	312410	20.88	17.67	16.6	cis-Chlordane N
2.302	-0.001	312143	2.480	-0.002	380460	20.56	16.04	24.7	Hexachlorobutadiene
4.151	-0.002	274990	4.684	-0.008	440588	20.44	19.39	5.3	Hexachlorobenzene
3.799	-0.002	404634	4.190	-0.007	670110	39.53	38.20	3.4	Tetrachloro-m-xylene
9.315	-0.003	258553	10.415	-0.014	328659	38.57	38.53	0.1	Decachlorobiphenyl N

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

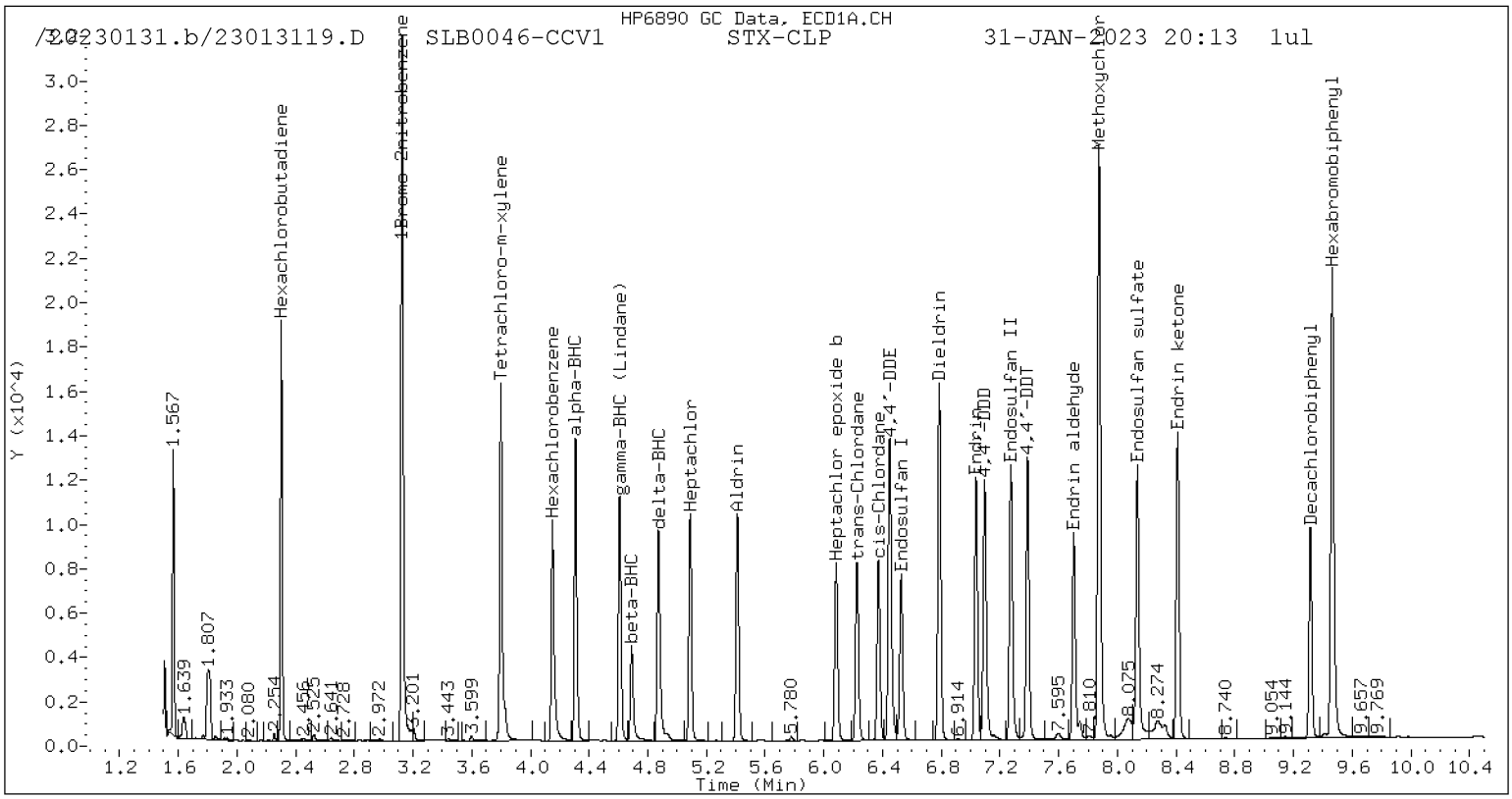
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	752705	11.9
Hexabromobiphenyl	609723	661622	8.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1246086	23.8
Hexabromobiphenyl	769764	771714	0.3

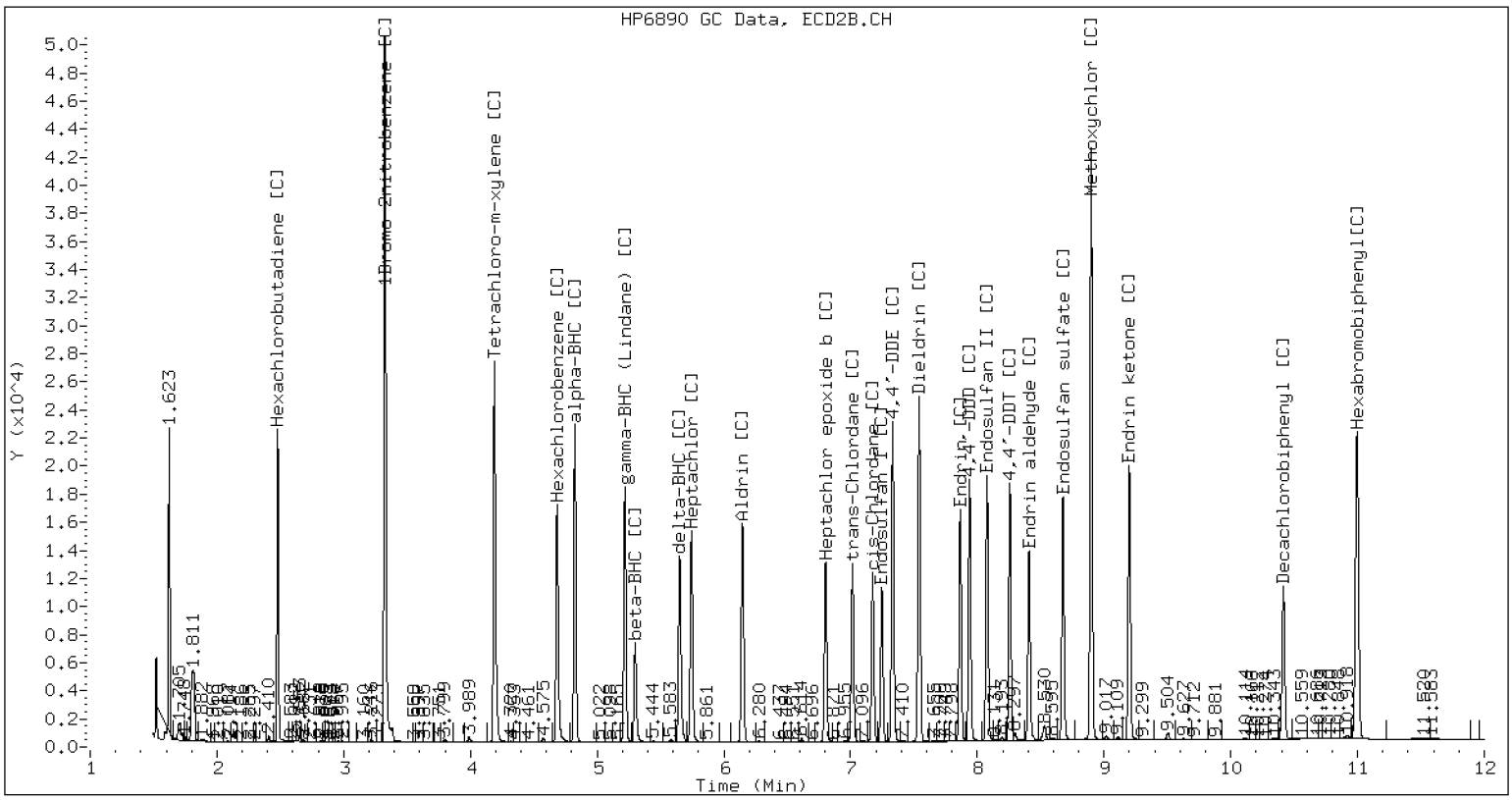
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

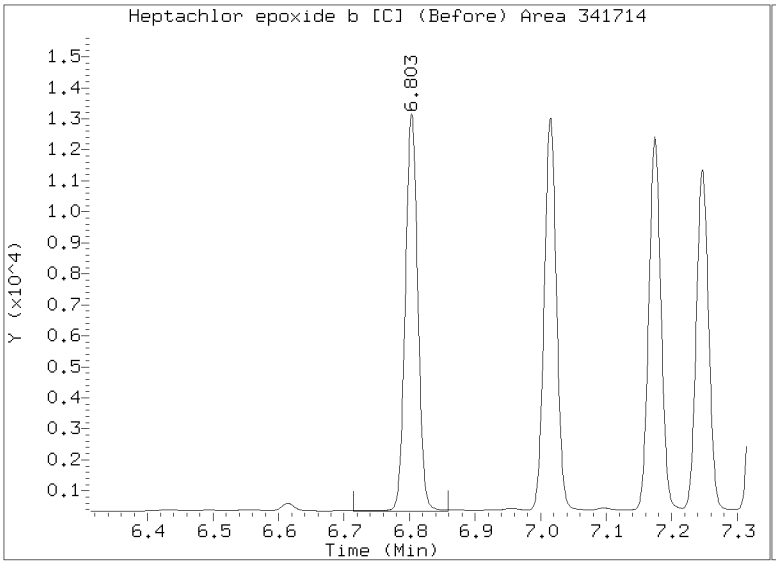
/20230131.b/B20230131.b/23013119.D SLB0046-CCV1 CLP2

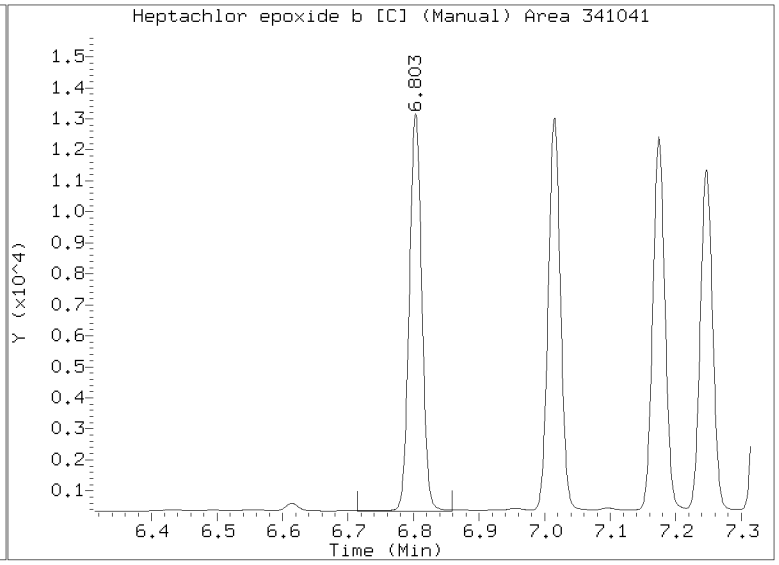


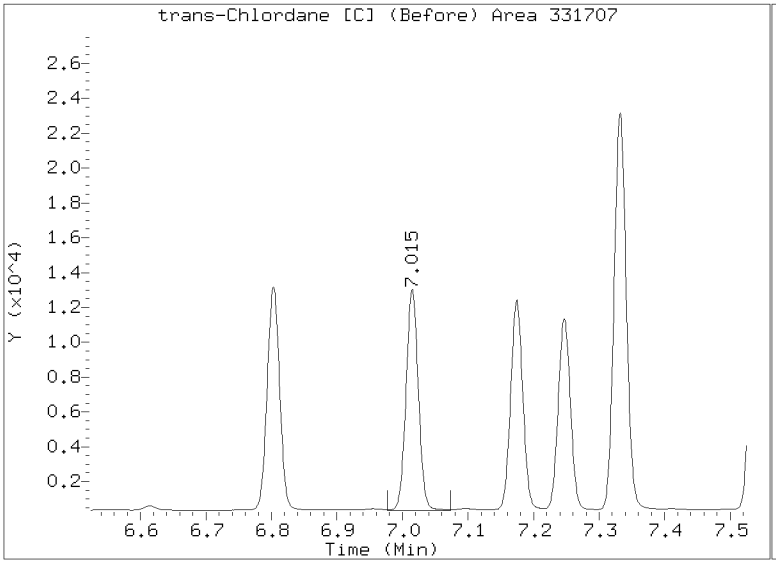
CLP-2 Manual Integration: YES

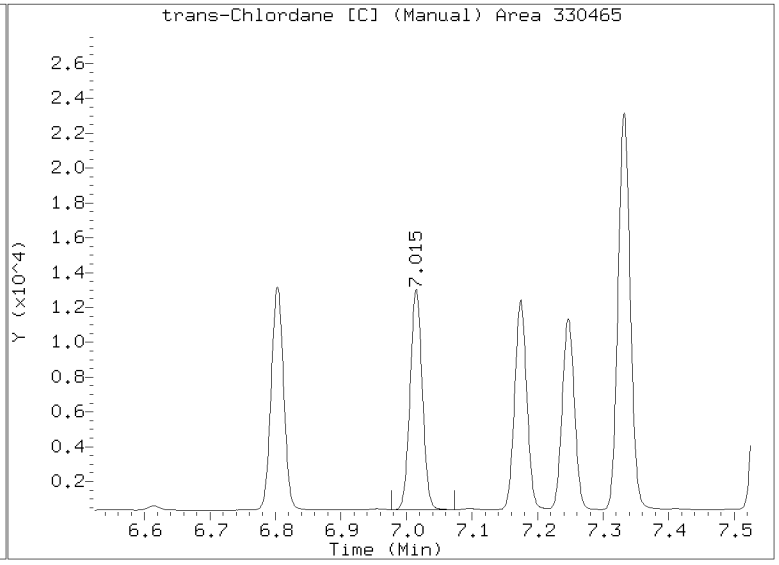
Manual Peak Adjustment Report, CLP-2

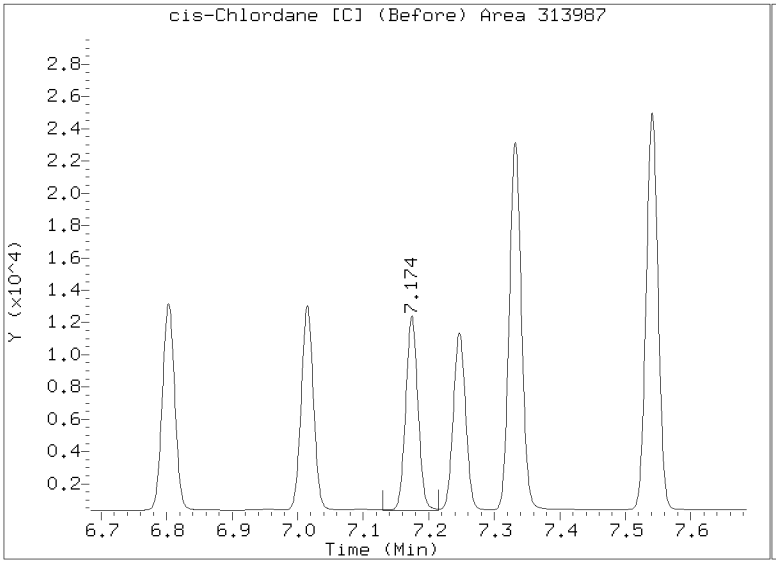
Datafile: /20230131.b/B20230131.b/23013119.D
Injection Date: 31-JAN-2023 20:13
Lab ID:SLB0046-CCV1 Client ID:

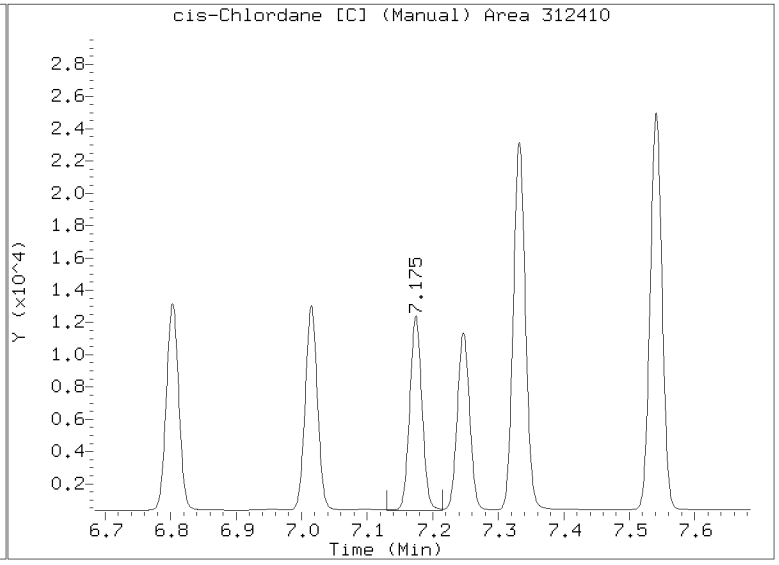






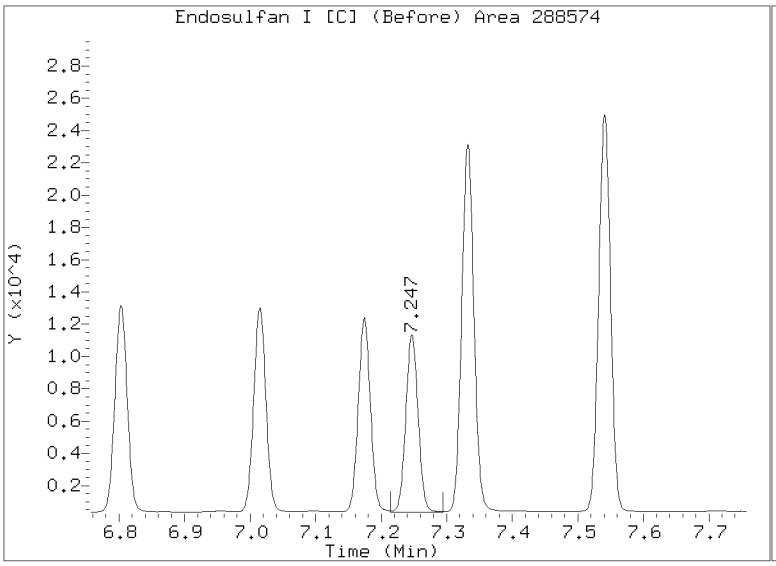


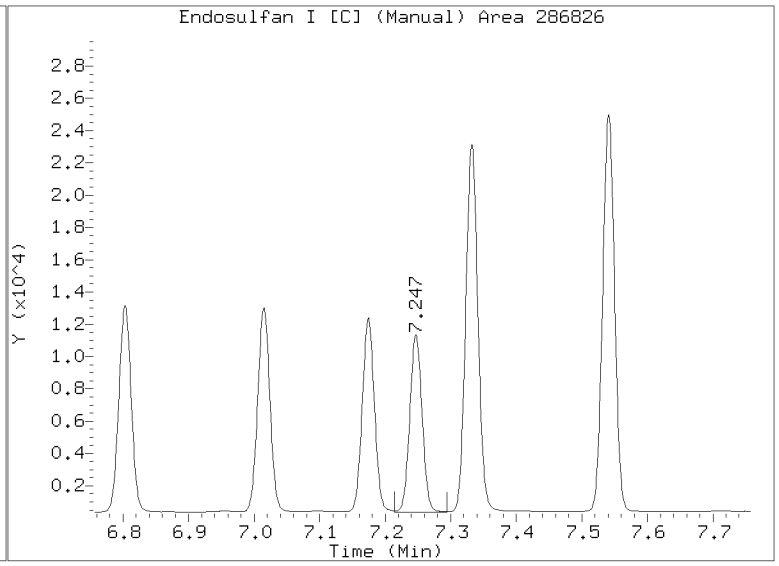


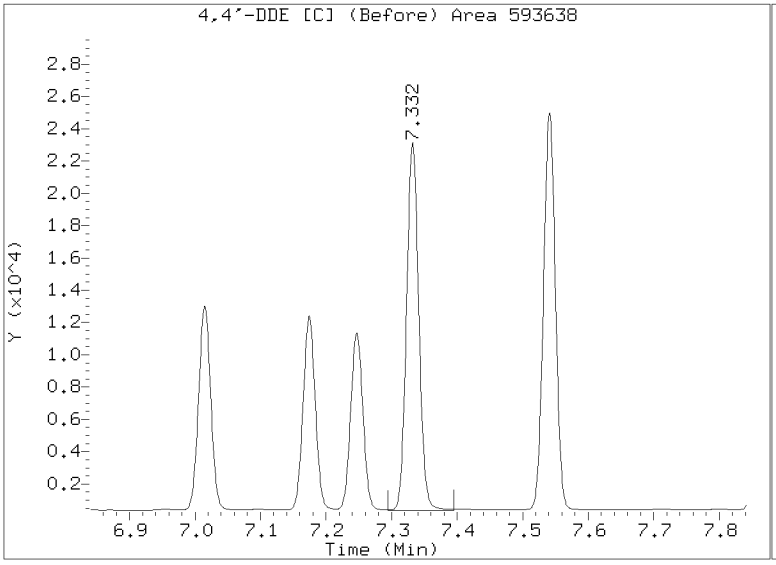


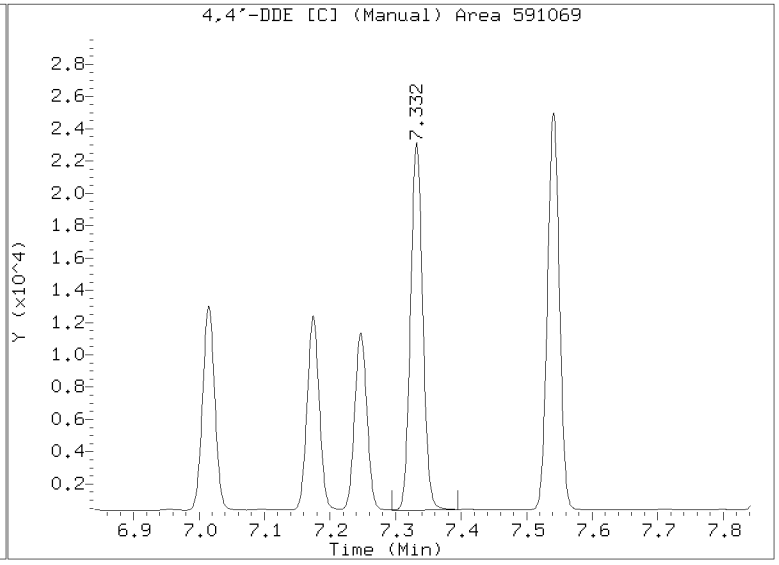
Manual Peak Adjustment Report, CLP-2

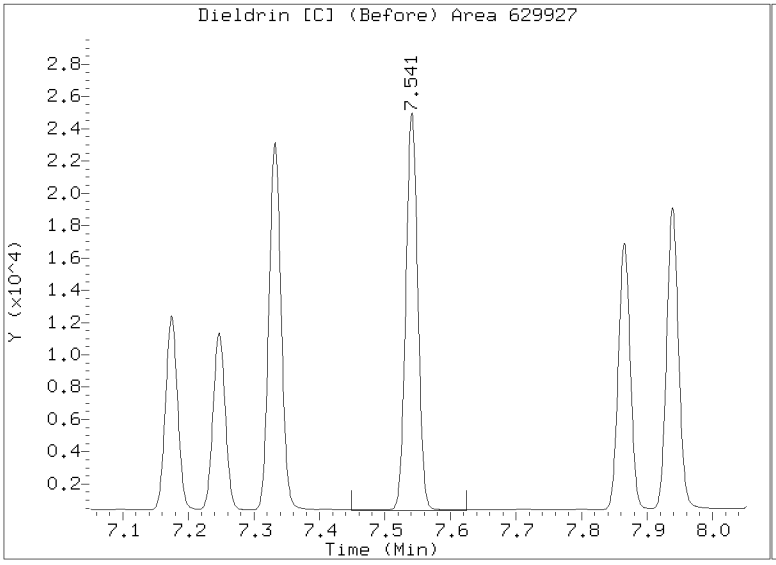
Datafile: /20230131.b/B20230131.b/23013119.D
Injection Date: 31-JAN-2023 20:13
Lab ID:SLB0046-CCV1 Client ID:

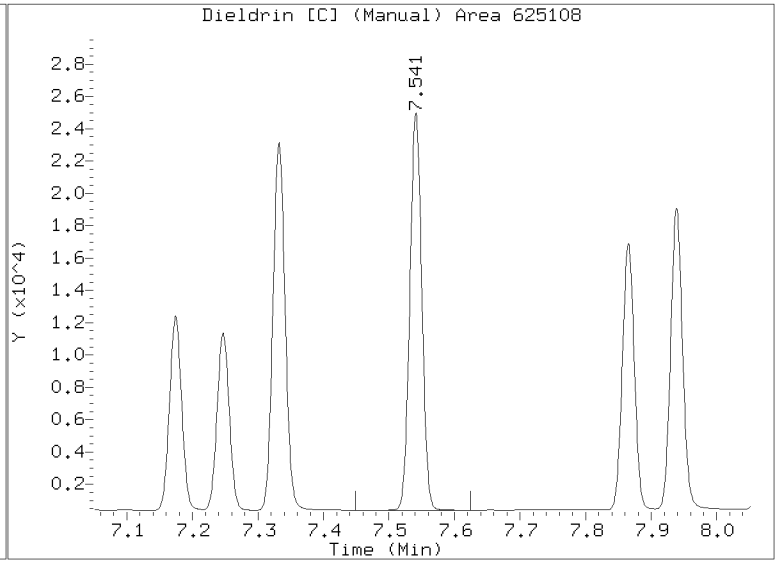






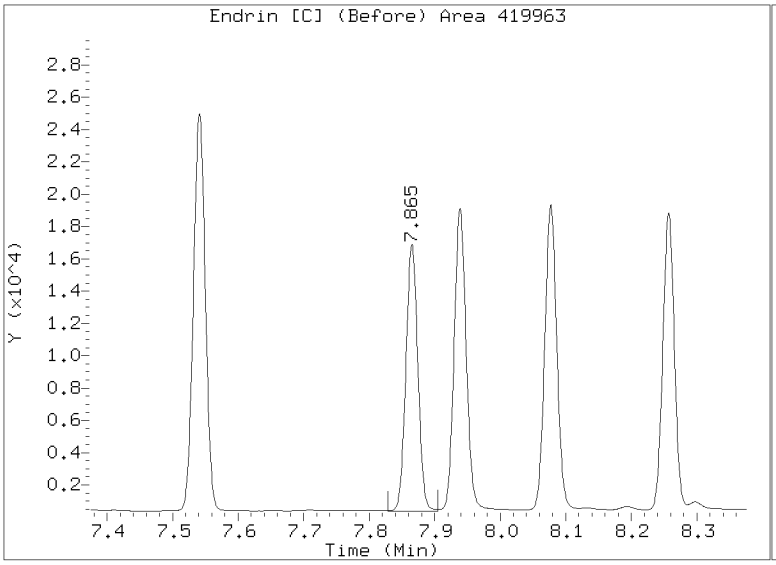


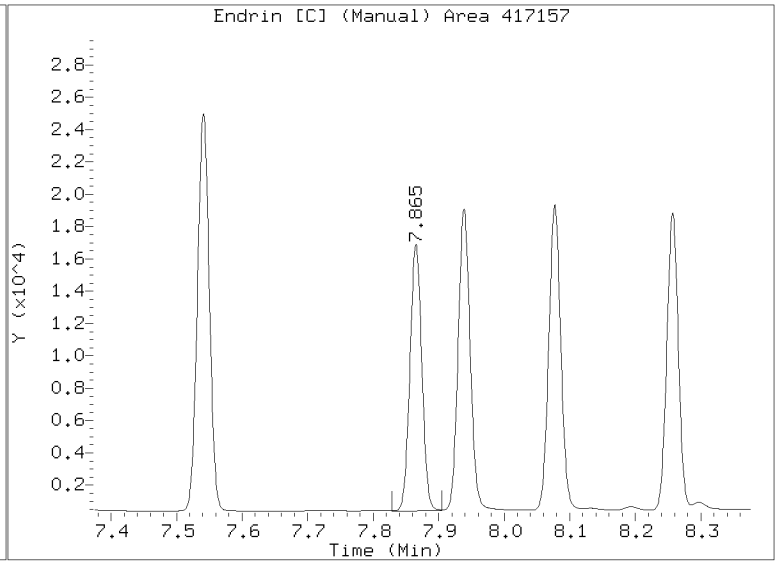


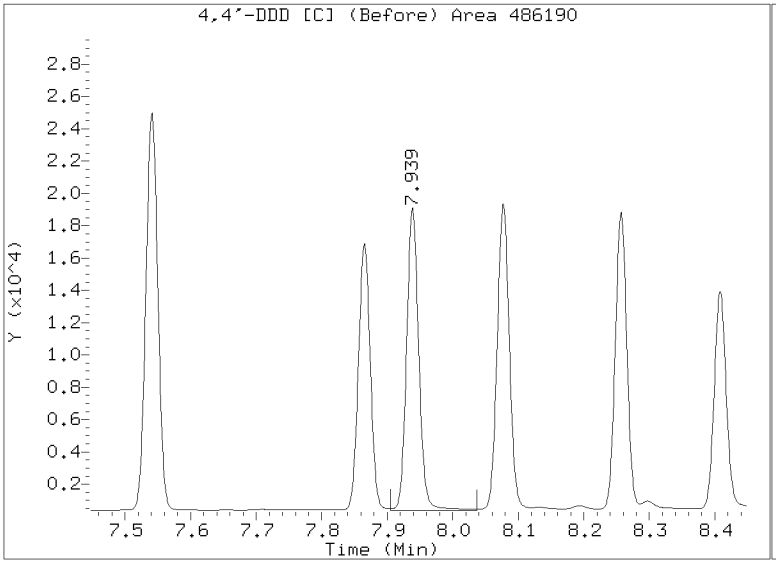


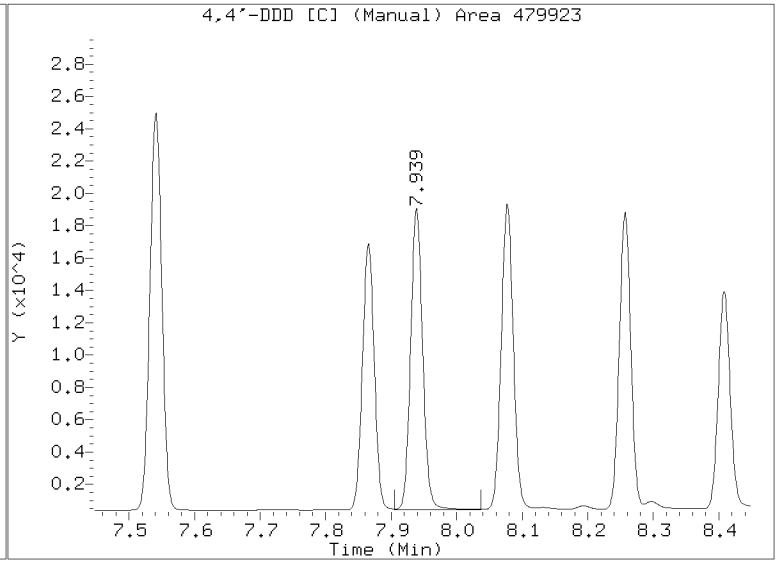
Manual Peak Adjustment Report, CLP-2

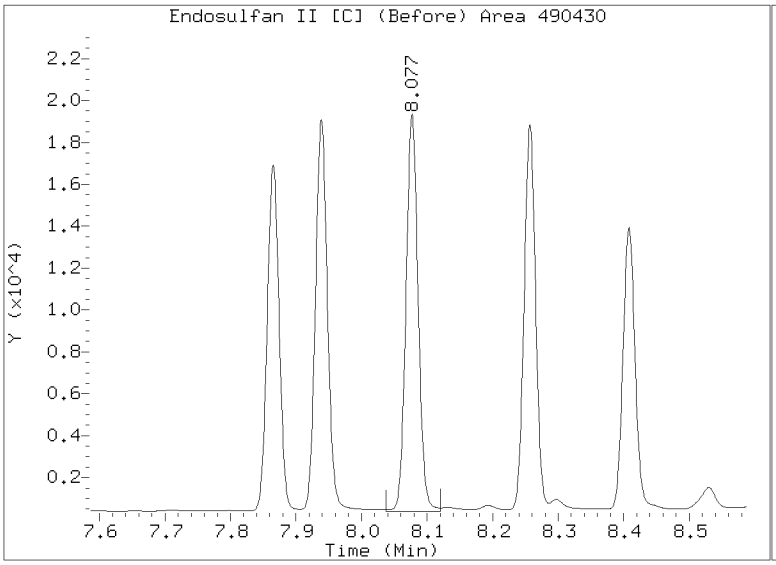
Datafile: /20230131.b/B20230131.b/23013119.D
Injection Date: 31-JAN-2023 20:13
Lab ID:SLB0046-CCV1 Client ID:

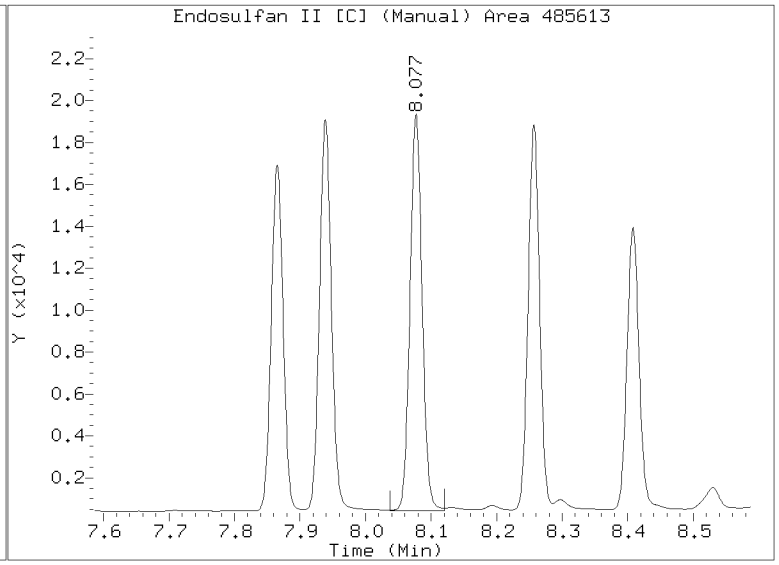






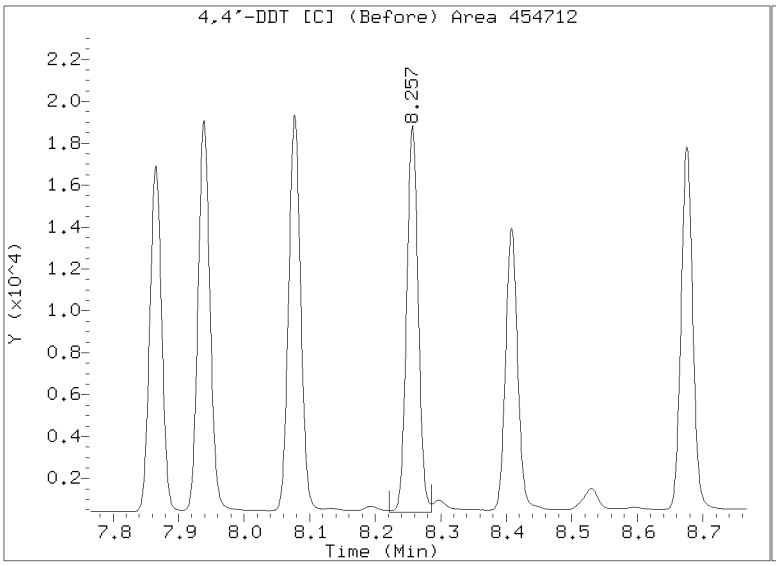


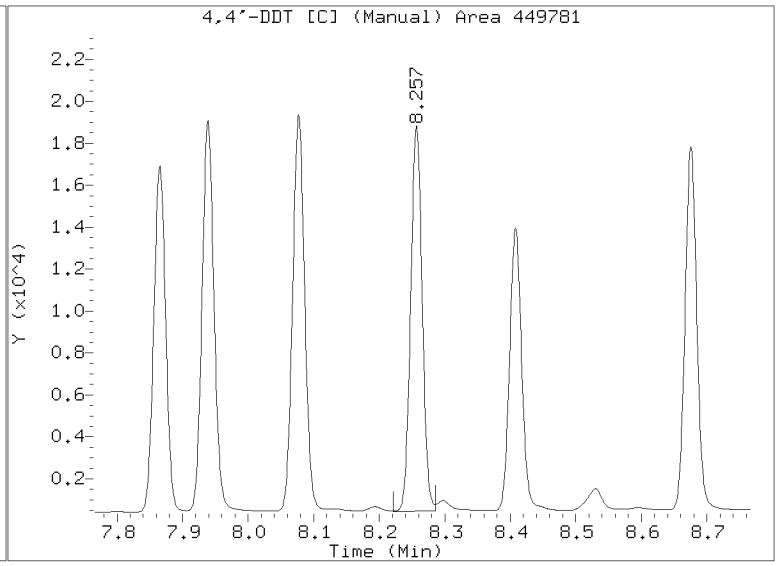


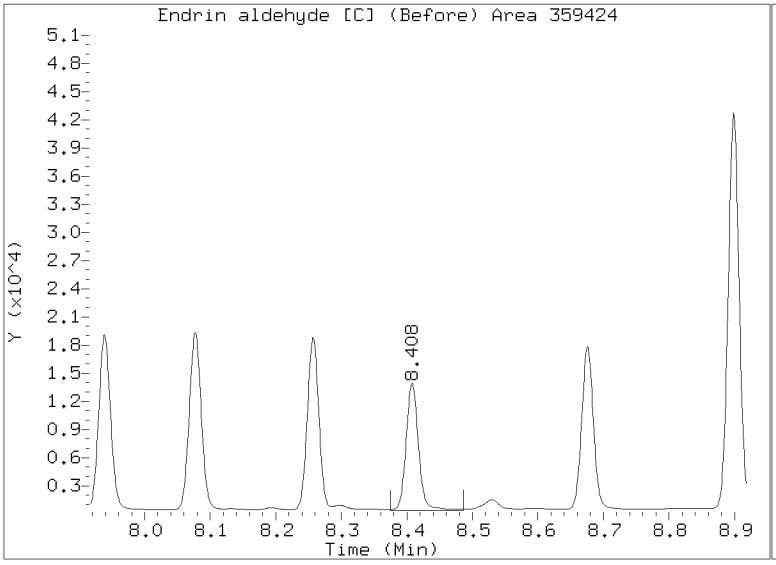


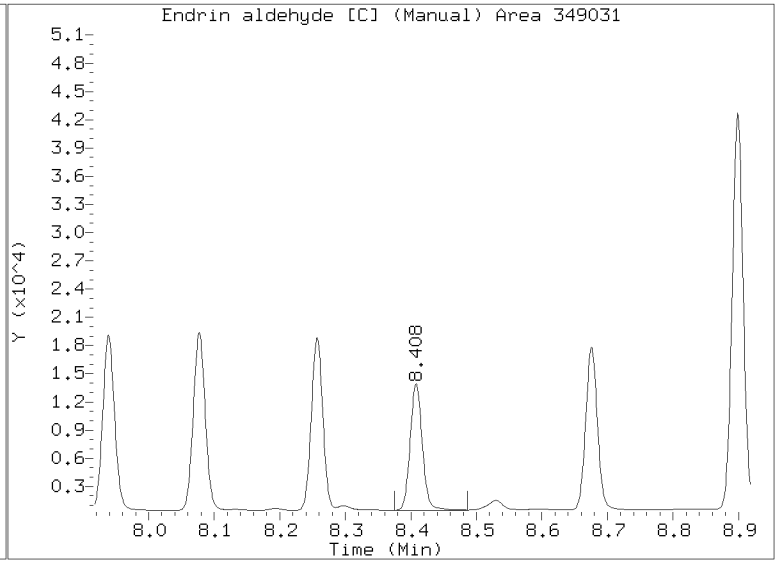
Manual Peak Adjustment Report, CLP-2

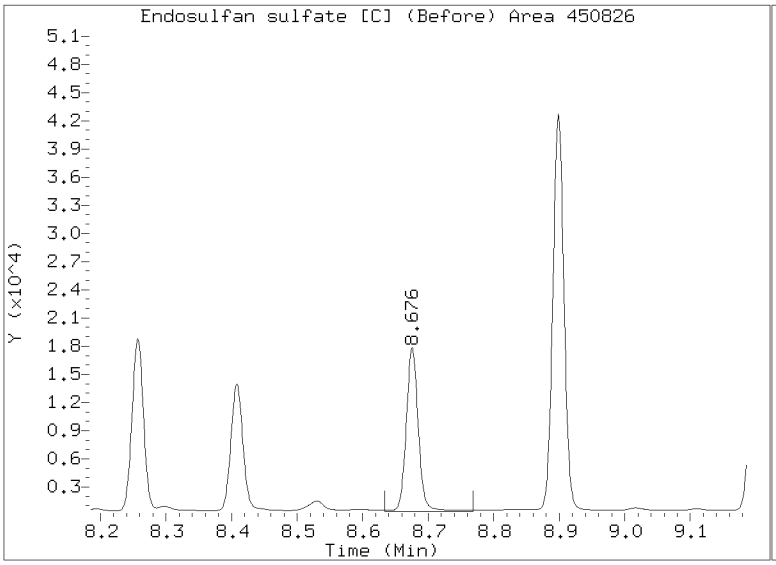
Datafile: /20230131.b/B20230131.b/23013119.D
Injection Date: 31-JAN-2023 20:13
Lab ID:SLB0046-CCV1 Client ID:

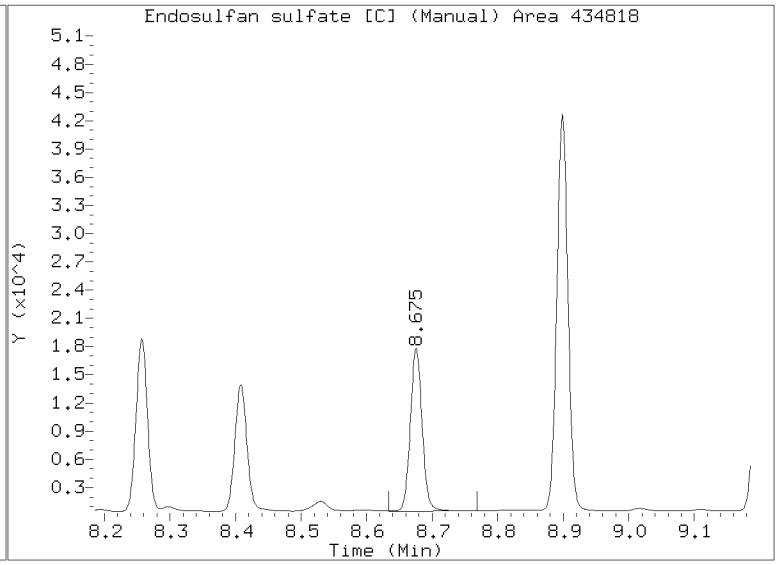






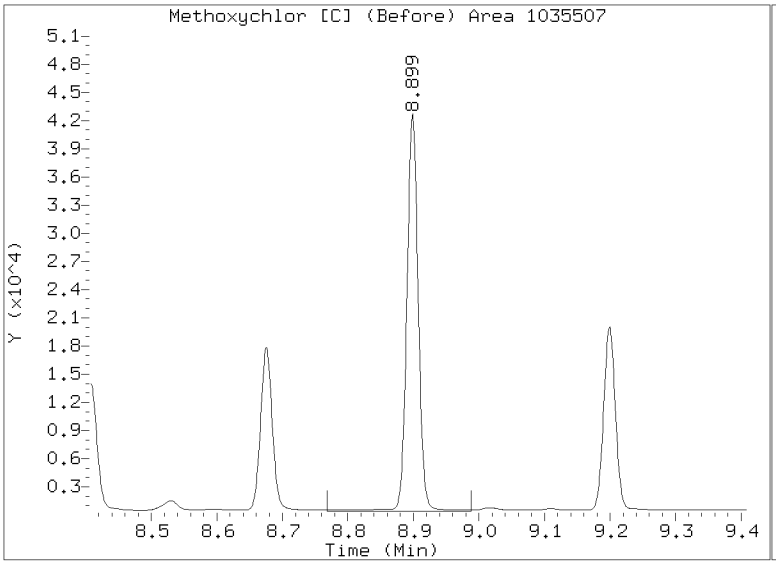


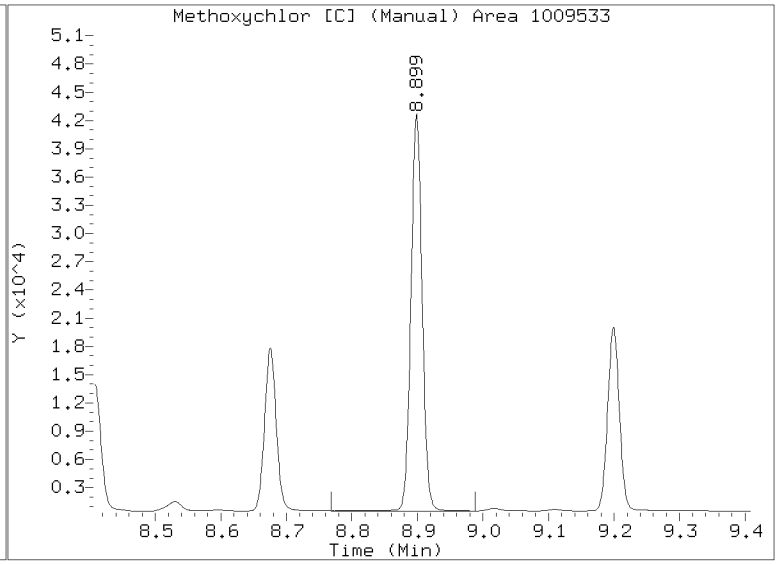


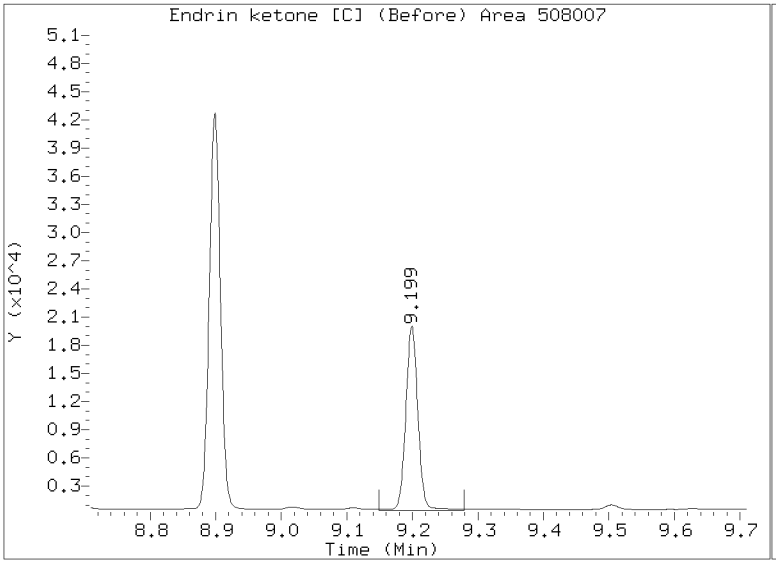


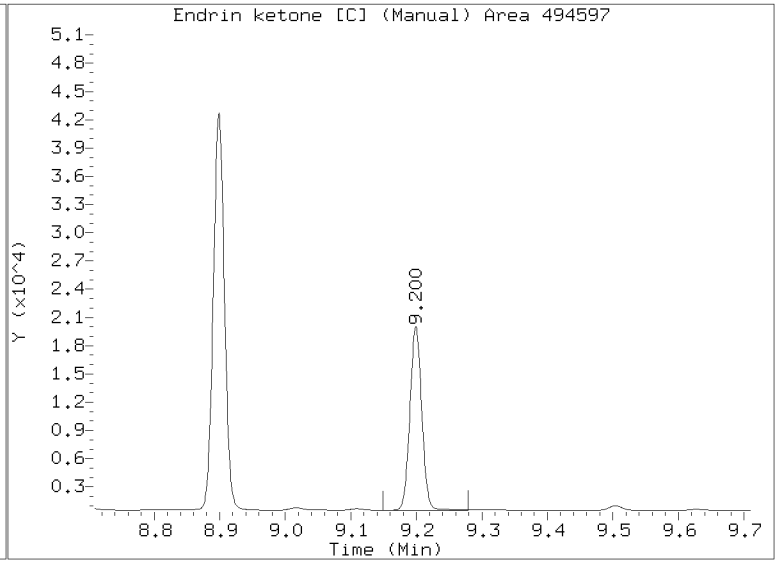
Manual Peak Adjustment Report, CLP-2

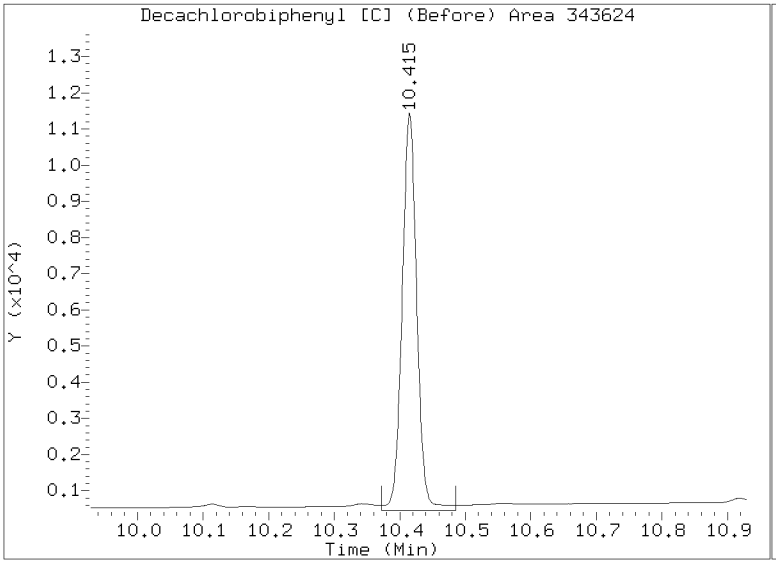
Datafile: /20230131.b/B20230131.b/23013119.D
Injection Date: 31-JAN-2023 20:13
Lab ID:SLB0046-CCV1 Client ID:

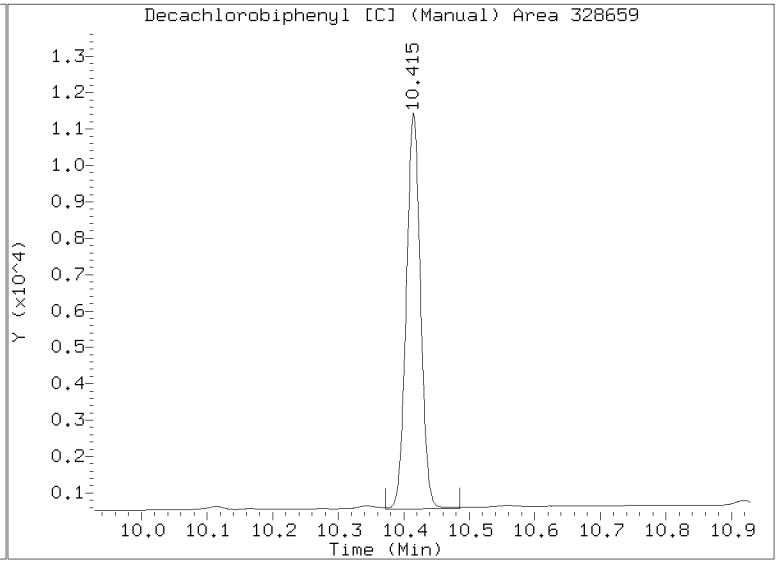






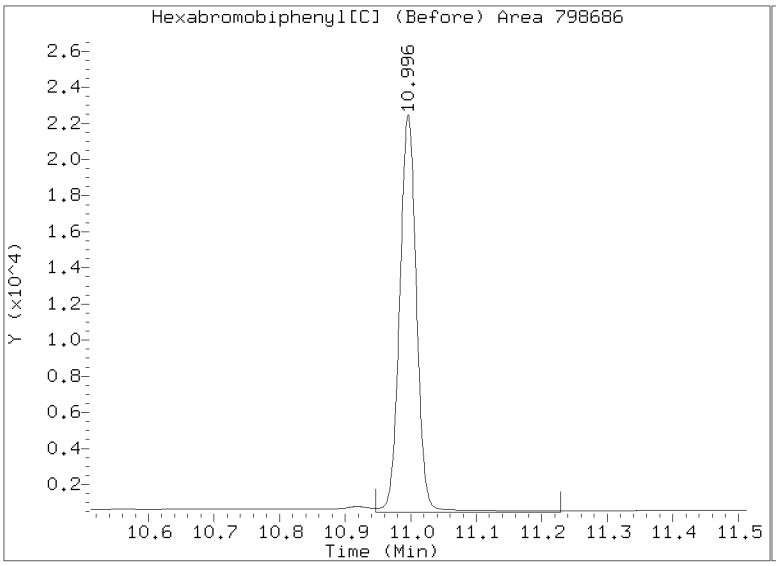


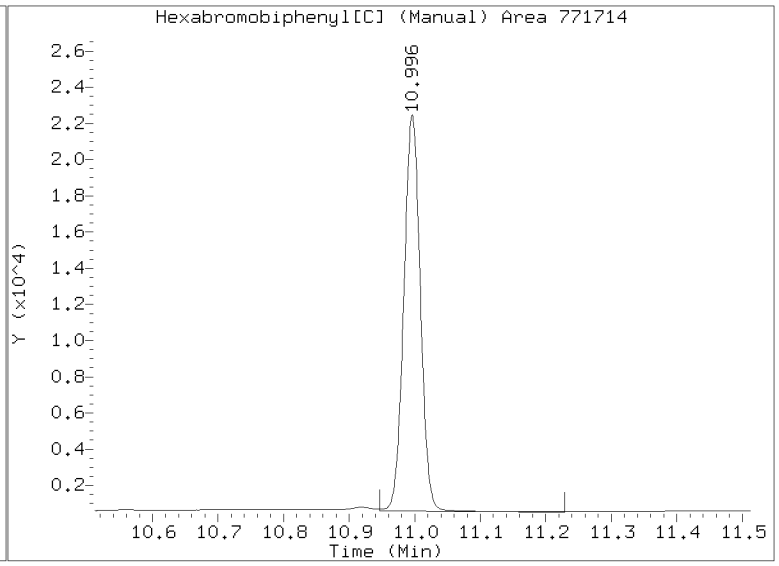




Manual Peak Adjustment Report, CLP-2

Datafile: /20230131.b/B20230131.b/23013119.D
Injection Date: 31-JAN-2023 20:13
Lab ID:SLB0046-CCV1 Client ID:





Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23013133.D	Calibration Date:	12/14/2022
Sequence:	SLB0046	Injection Date:	02/01/23
Lab Sample ID:	SLB0046-CCV2	Injection Time:	00:24
Sequence Name:	INDAE		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	20.8	1.4298940	1.4886980		4.1	+/-20
Hexachlorobenzene [2C]	A	20.000	19.4	1.4591090	1.4151740		-3.0	+/-20
Decachlorobiphenyl	A	40.000	38.1	0.8105886	0.7729838		-4.6	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.6	0.8841805	0.8530642		-3.5	+/-20
Tetrachlorometaxylene	A	40.000	40.3	1.0879510	1.0954370		0.7	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.2	1.1261070	1.0741070		-4.6	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013133.D
Data file 2: /20230131.b/B20230131.b/23013133.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: SLB0046-CCV2
Client ID:
Injection Date: 01-FEB-2023 00:24
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.308	-0.003	319886	4.825	-0.008	531509	22.70	21.24	6.7	alpha-BHC
4.690	-0.002	125023	5.300	-0.009	193546	23.04	20.34	12.5	beta-BHC
4.873	-0.002	281062	5.651	-0.010	375420	24.40	18.21	29.1	delta-BHC
4.608	-0.003	273940	5.220	-0.009	449026	22.42	21.14	5.9	gamma-BHC (Lindane)
5.089	-0.004	260963	5.745	-0.010	403206	24.00	20.96	13.6	Heptachlor
5.410	-0.004	273044	6.147	-0.011	415255	22.41	18.90	17.0	Aldrin
6.084	-0.004	230337	6.803	-0.011	336936	21.80	18.55	16.1	Heptachlor epoxide b N
6.527	-0.003	217688	7.247	-0.010	281722	22.45	17.60	24.3	Endosulfan I N
6.787	-0.004	445637	7.542	-0.010	620856	42.79	35.10	19.7	Dieldrin N
6.450	-0.002	418166	7.332	-0.009	579030	43.24	35.69	19.1	4,4'-DDE N
7.037	-0.004	295054	7.866	-0.010	368723	34.39	32.74	4.9	Endrin N
7.275	-0.003	366639	8.077	-0.010	482566	47.47	41.81	12.7	Endosulfan II N
7.097	-0.003	360518	7.939	-0.010	475770	46.64	43.44	7.1	4,4'-DDD N
8.138	-0.003	373417	8.676	-0.010	444242	50.92	43.83	15.0	Endosulfan sulfate N
7.388	-0.003	348140	8.257	-0.010	448899	44.57	42.46	4.8	4,4'-DDT N
7.875	-0.002	746171	8.899	-0.010	1008824	215.57	215.63	0.0	Methoxychlor N
8.411	-0.003	389397	9.199	-0.011	505444	46.35	46.17	0.4	Endrin ketone N
7.704	-0.003	289752	8.408	-0.010	361641	47.03	44.42	5.7	Endrin aldehyde N
6.226	-0.004	233021	7.015	-0.010	326814	21.72	18.04	18.5	trans-Chlordane N
6.372	-0.003	227065	7.175	-0.010	307544	21.10	17.35	19.5	cis-Chlordane N
2.303	-0.001	309268	2.480	-0.002	383080	20.95	16.12	26.1	Hexachlorobutadiene
4.151	-0.002	272431	4.685	-0.008	441833	20.82	19.40	7.1	Hexachlorobenzene
3.798	-0.002	400929	4.190	-0.006	670696	40.28	38.15	5.4	Tetrachloro-m-xylene
9.316	-0.002	252940	10.415	-0.014	337810	38.14	38.59	1.2	Decachlorobiphenyl N

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

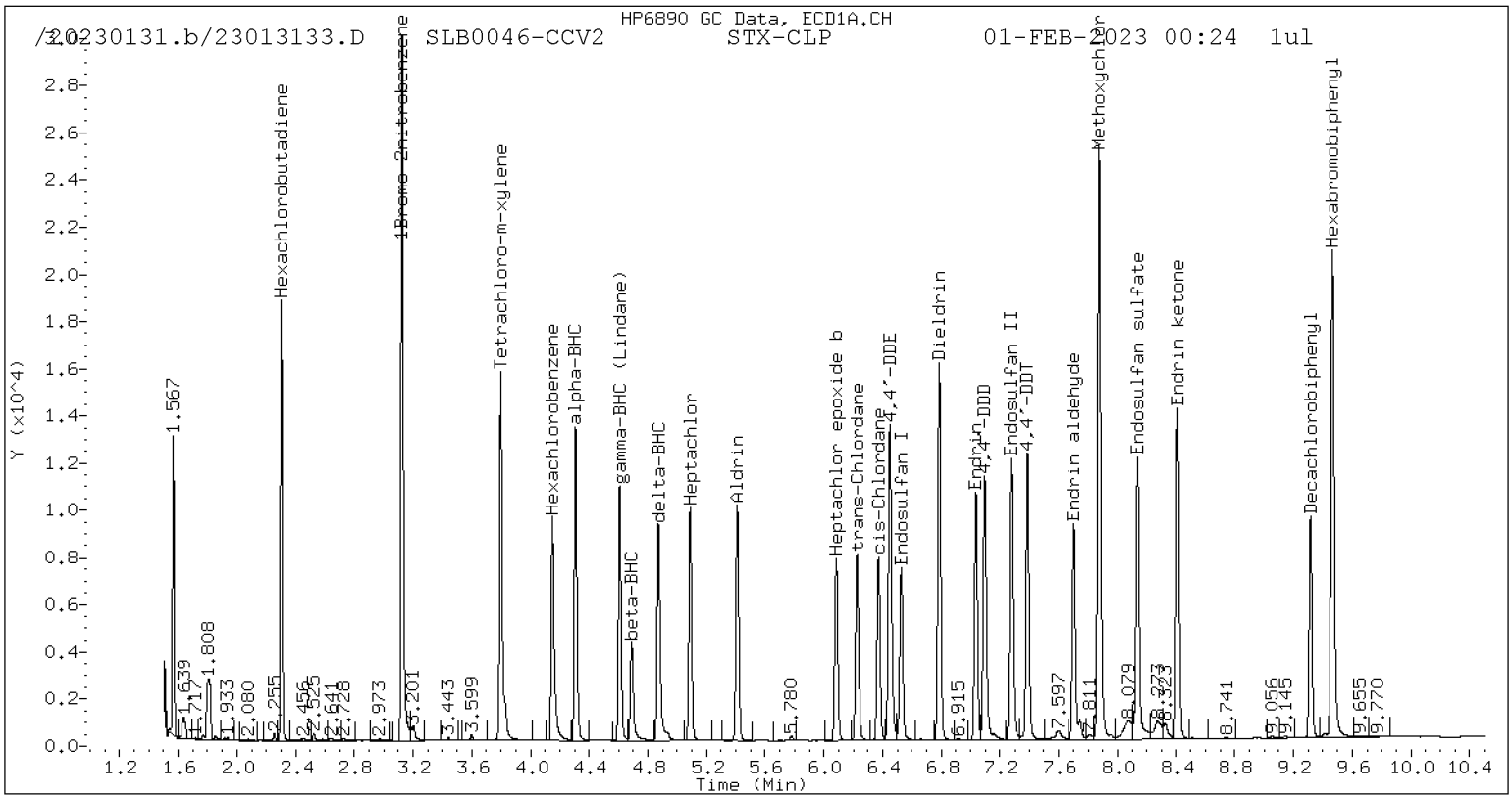
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	731998	8.9
Hexabromobiphenyl	609723	654451	7.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1248844	24.1
Hexabromobiphenyl	769764	791992	2.9

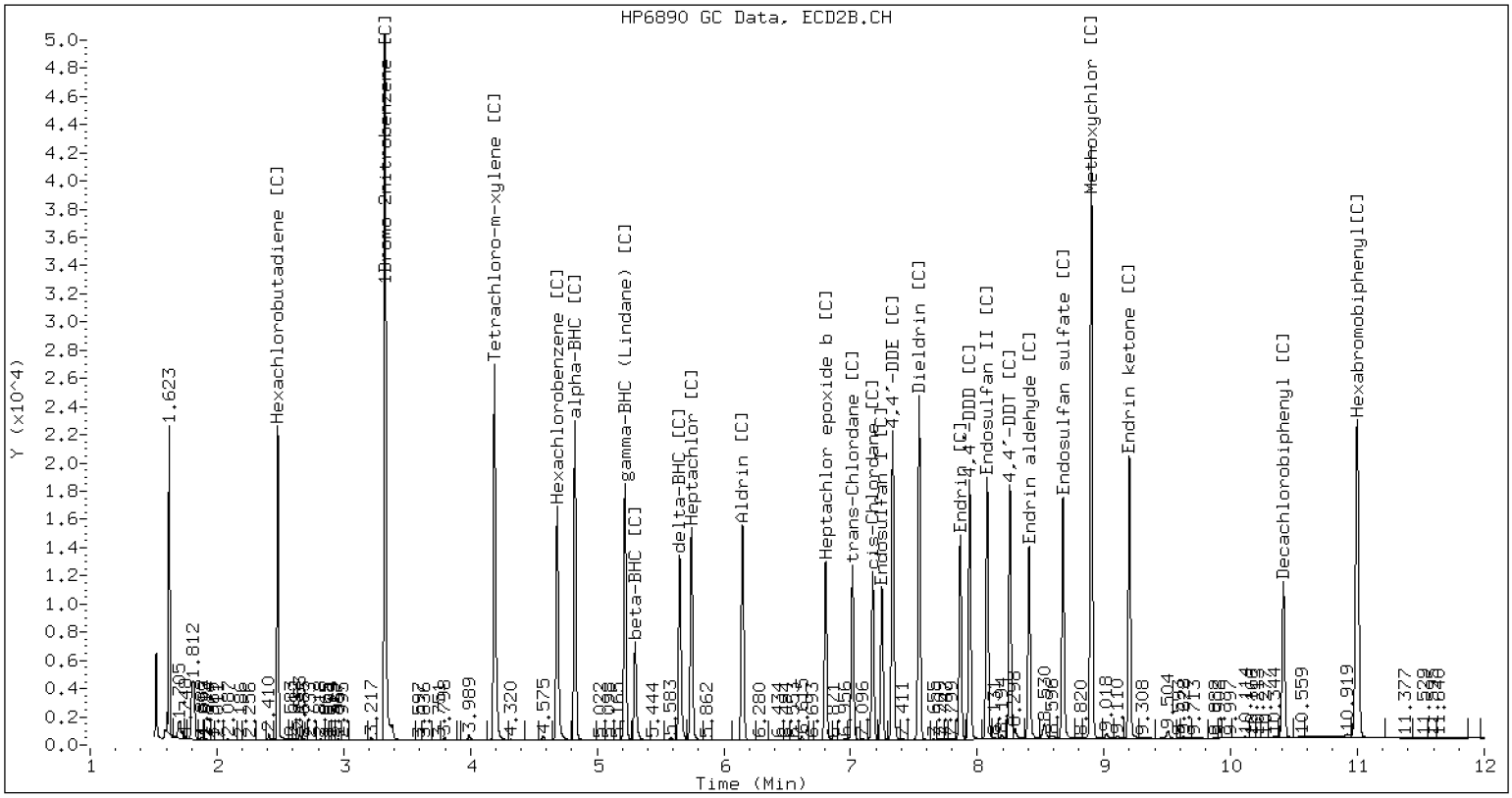
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230131.b/B20230131.b/23013133.D SLB0046-CCV2 CLP2



CLP-2 Manual Integration: YES

Manual Peak Adjustment Report, CLP-2

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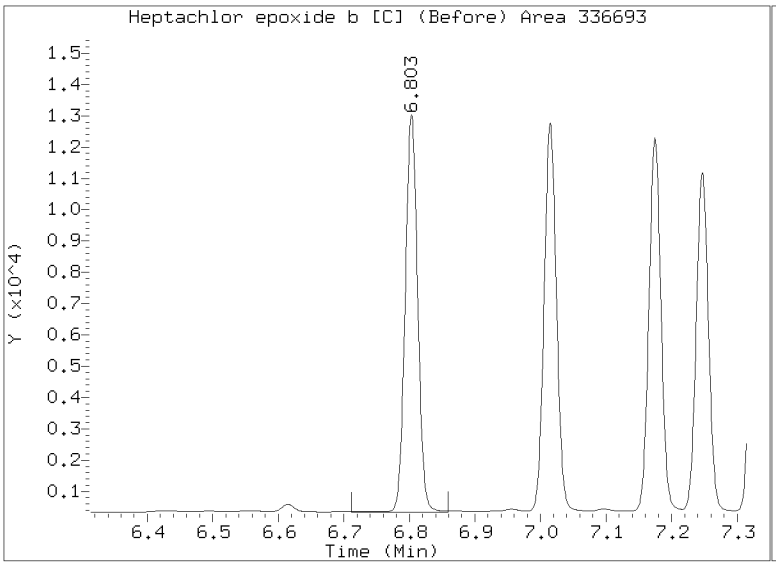
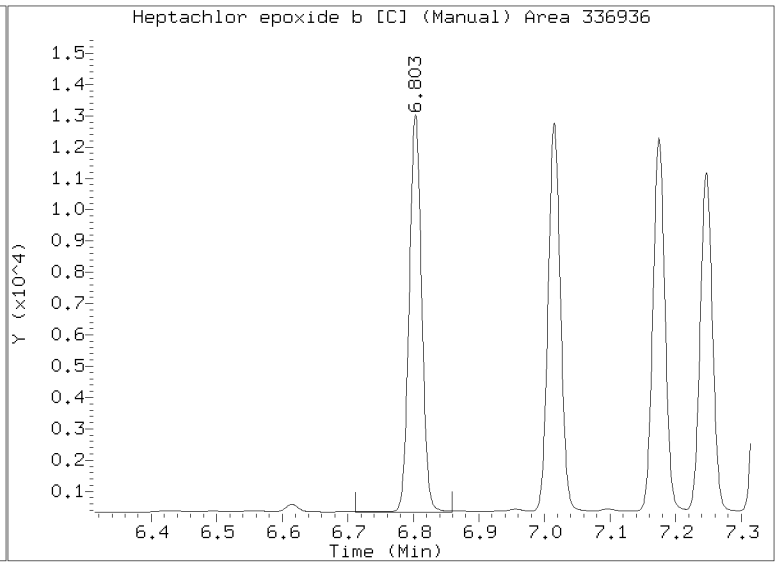
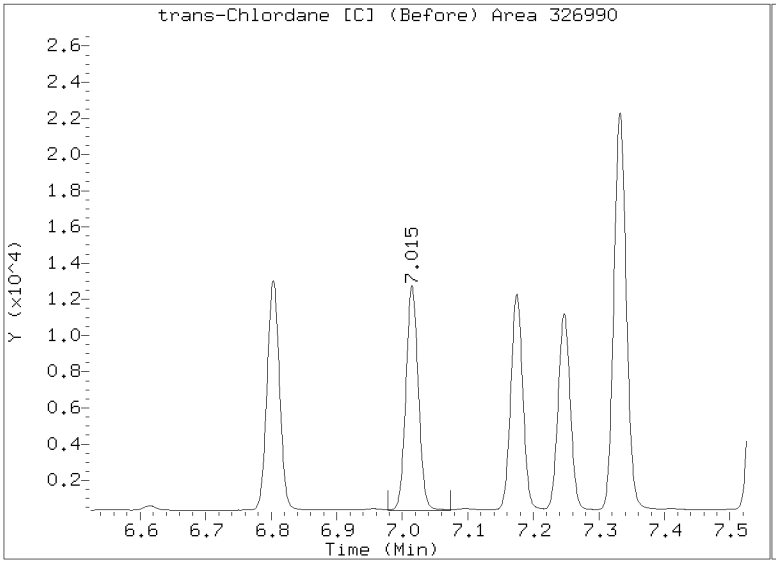
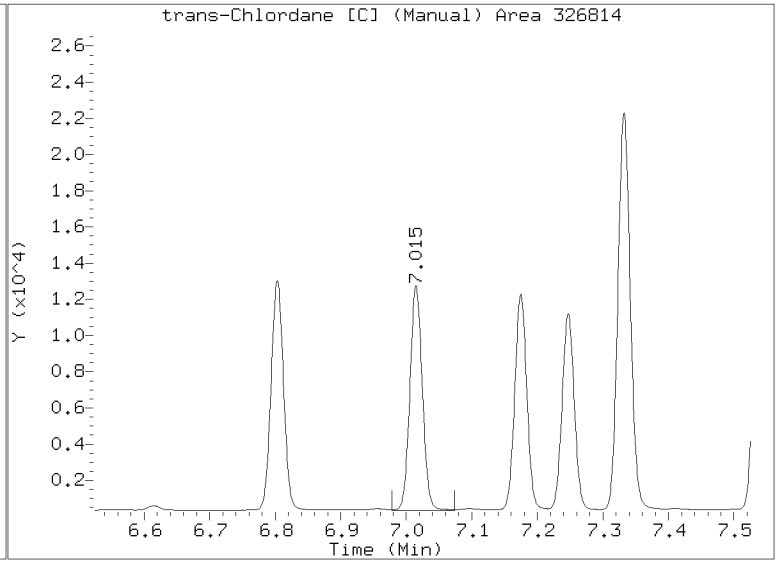
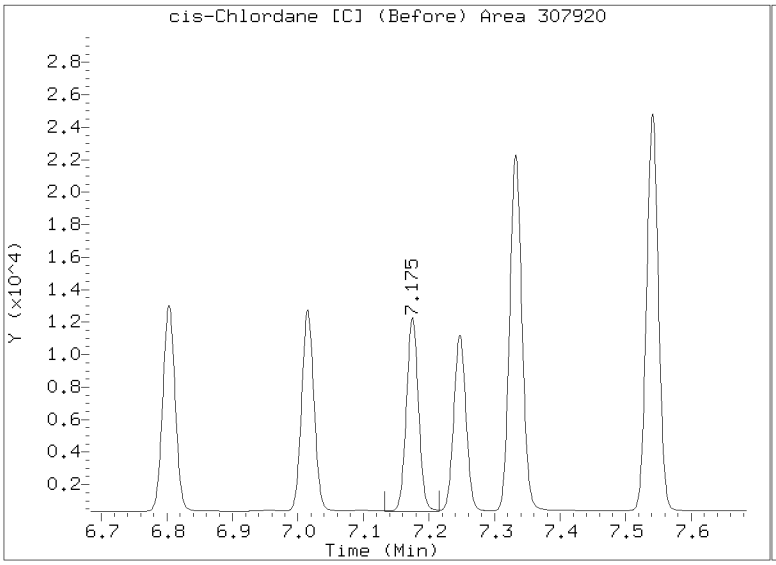
Injection Date: 01-FEB-2023 00:24
Lab ID:SLB0046-CCV2 Client ID:

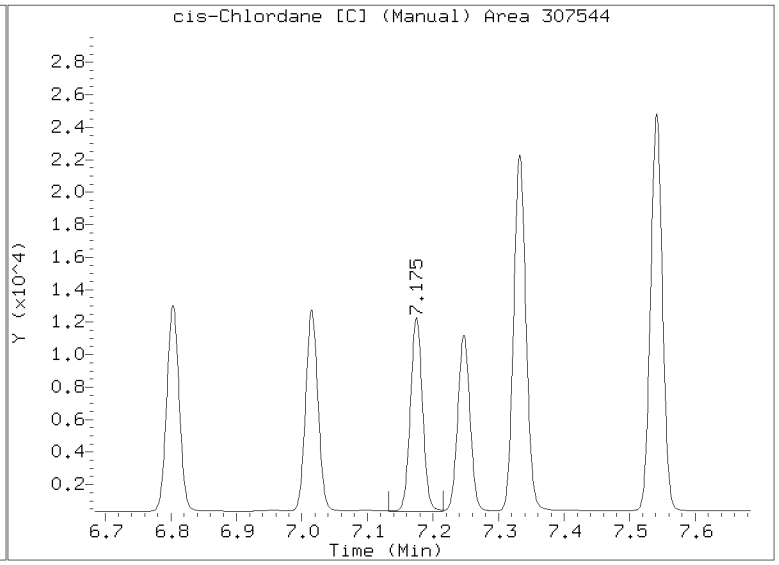












Manual Peak Adjustment Report, CLP-2

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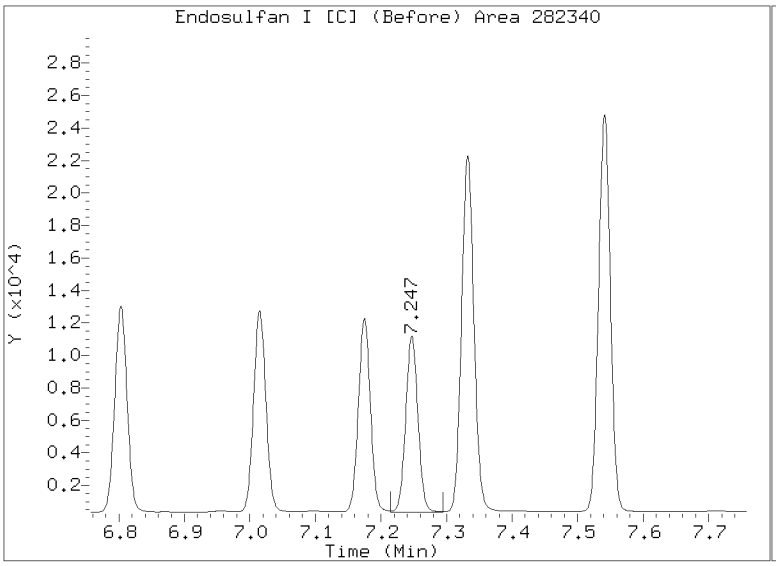
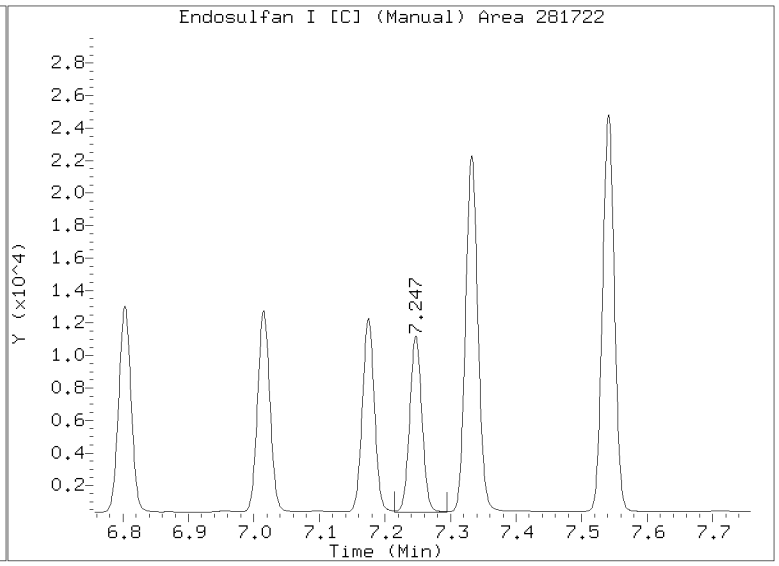
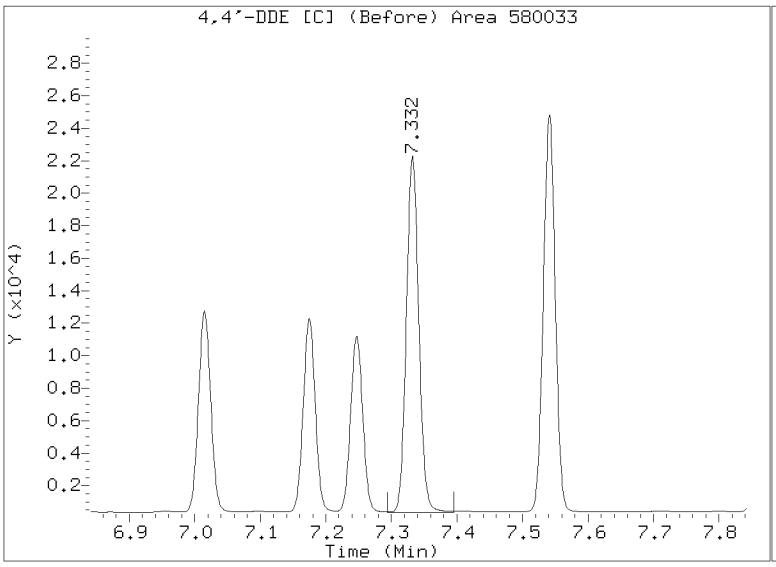
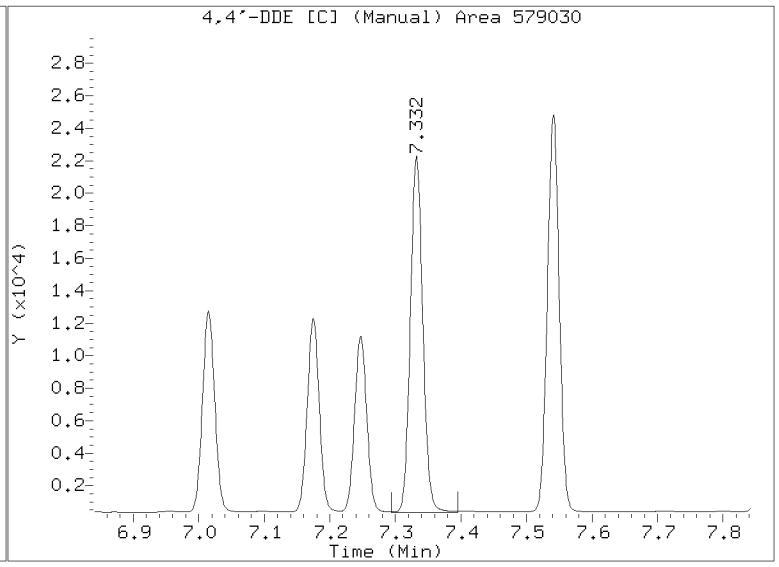
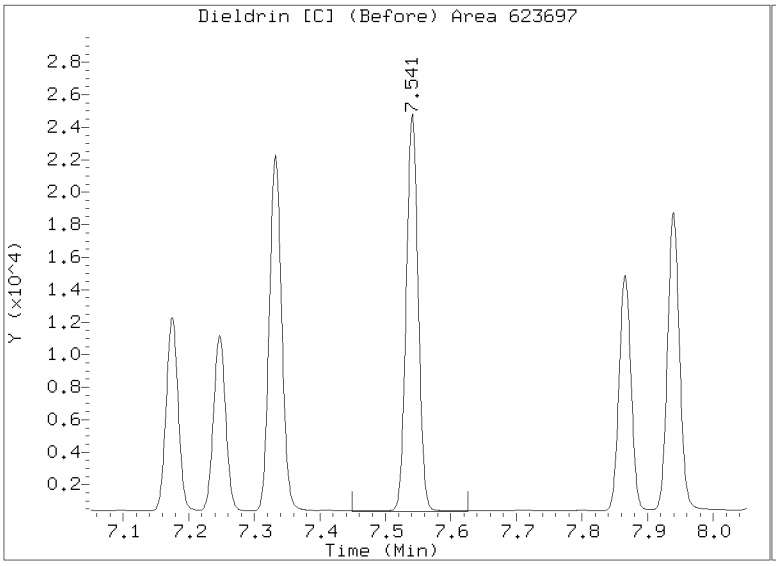
Injection Date: 01-FEB-2023 00:24
Lab ID:SLB0046-CCV2 Client ID:

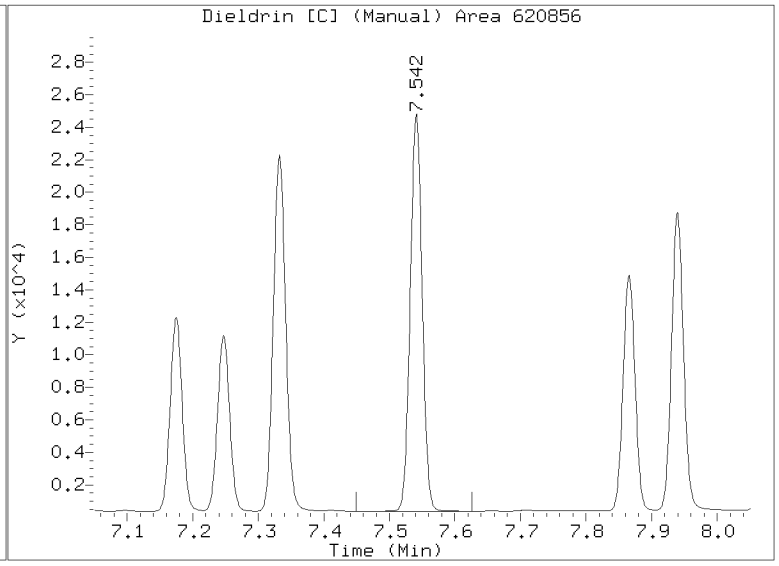












Manual Peak Adjustment Report, CLP-2

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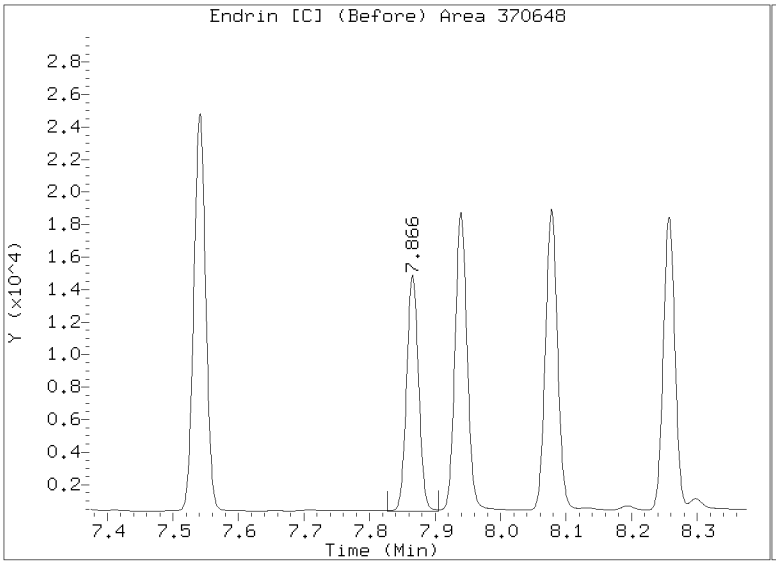
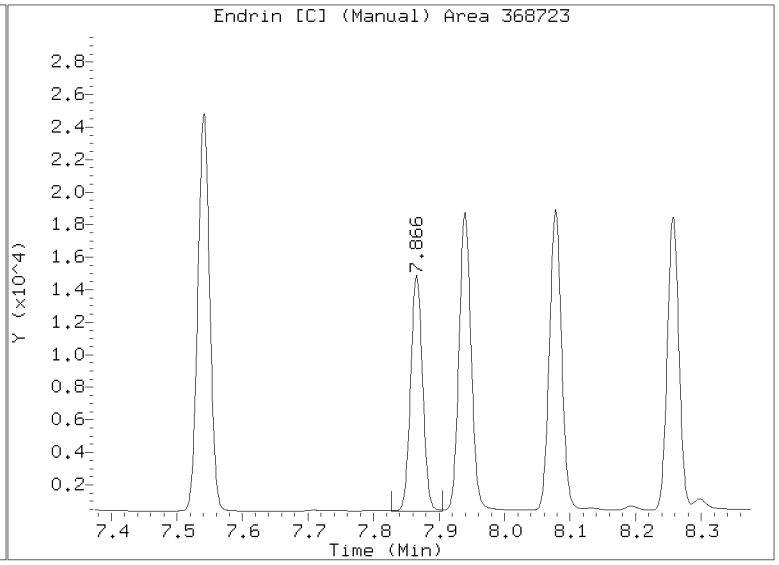
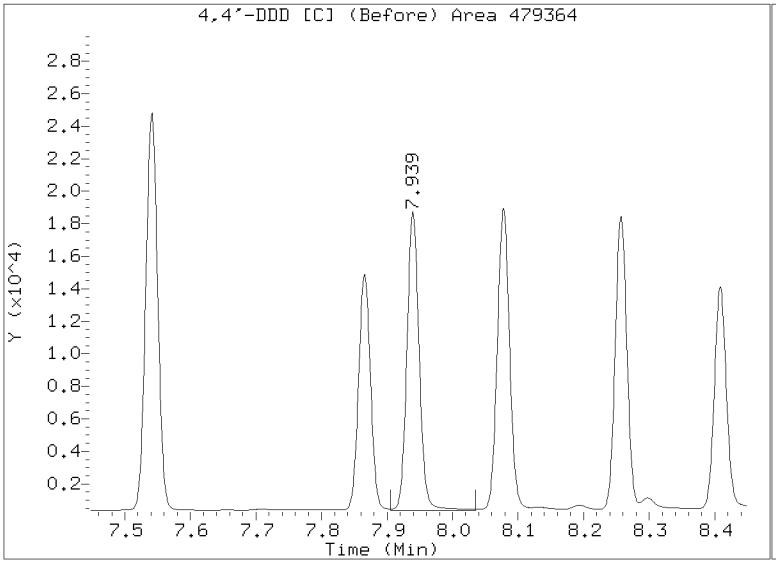
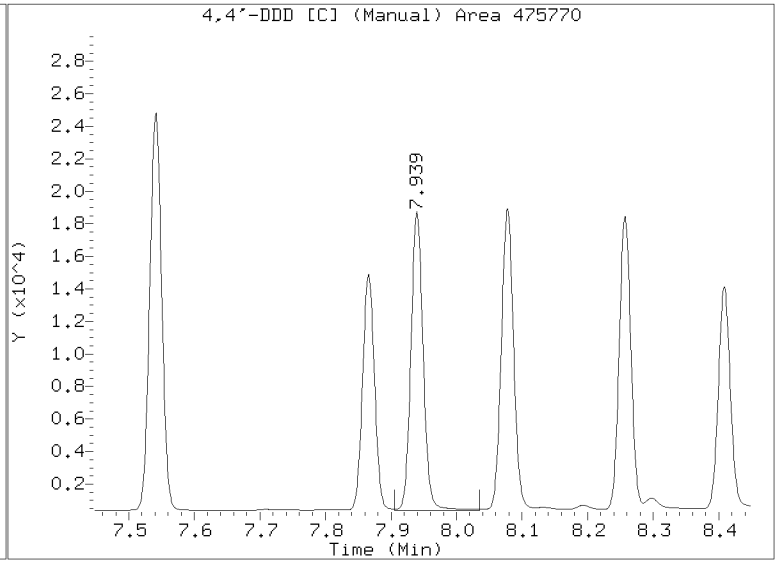
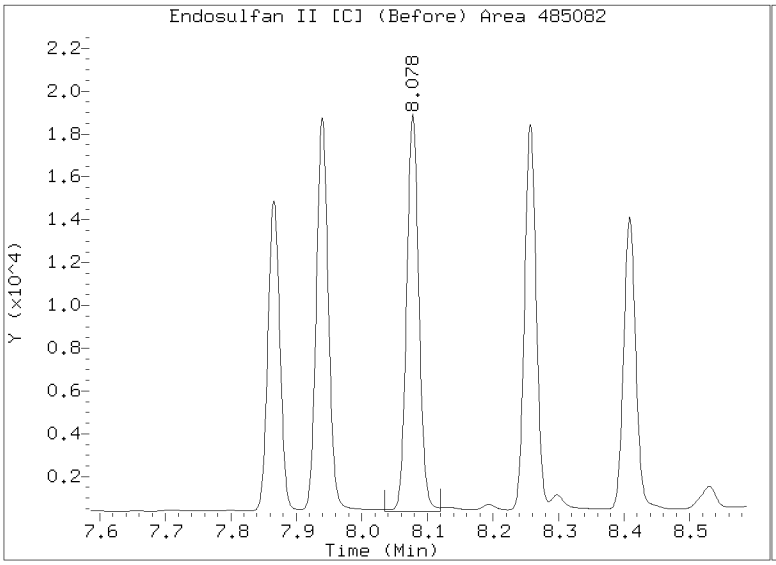
Injection Date: 01-FEB-2023 00:24
Lab ID:SLB0046-CCV2 Client ID:

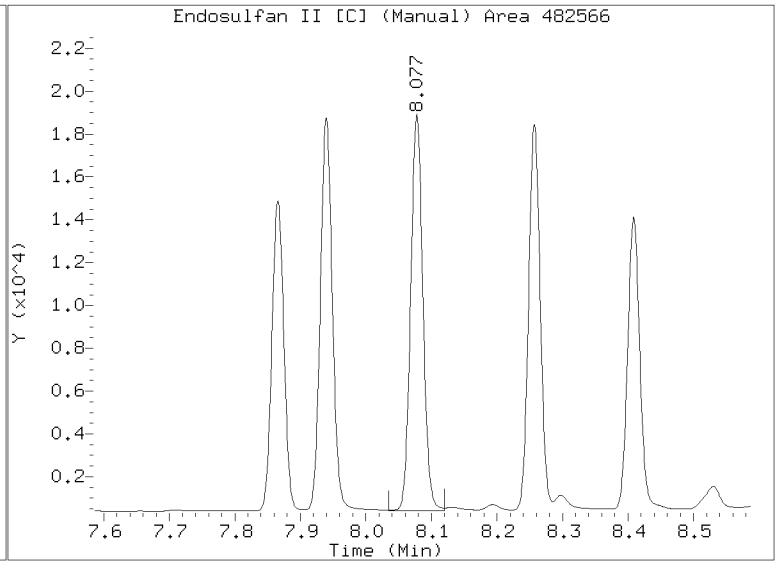












Manual Peak Adjustment Report, CLP-2

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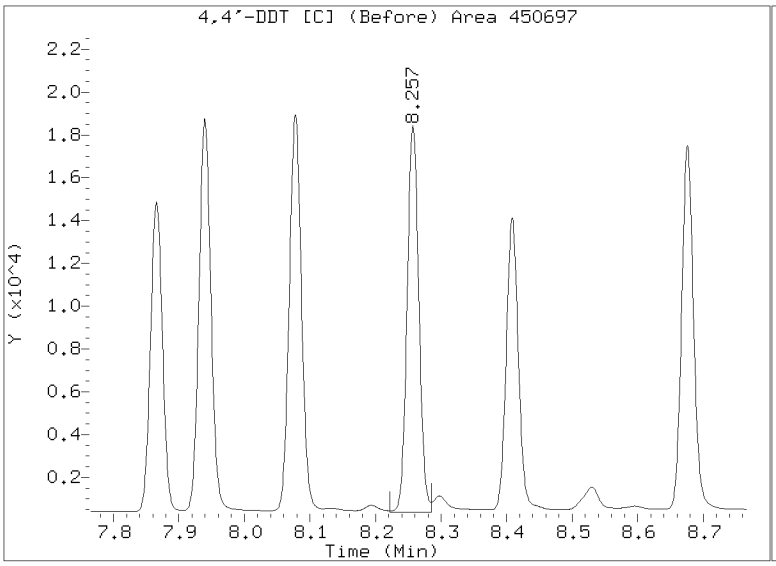
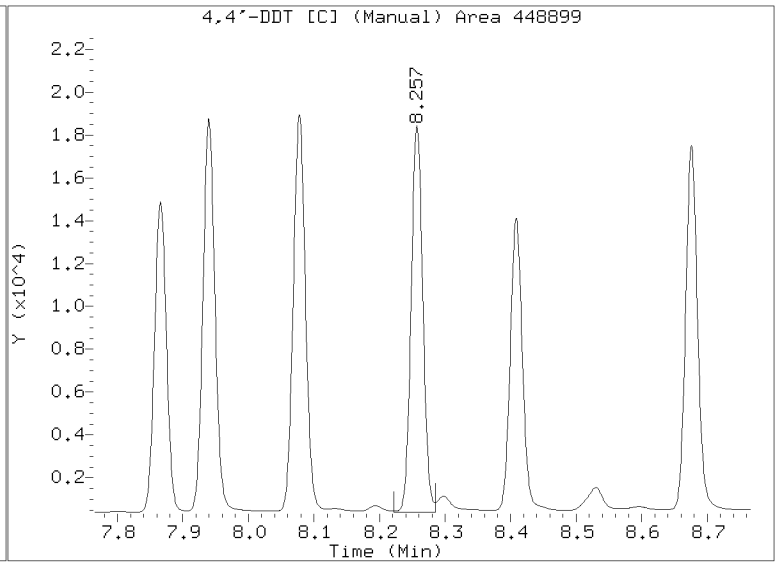
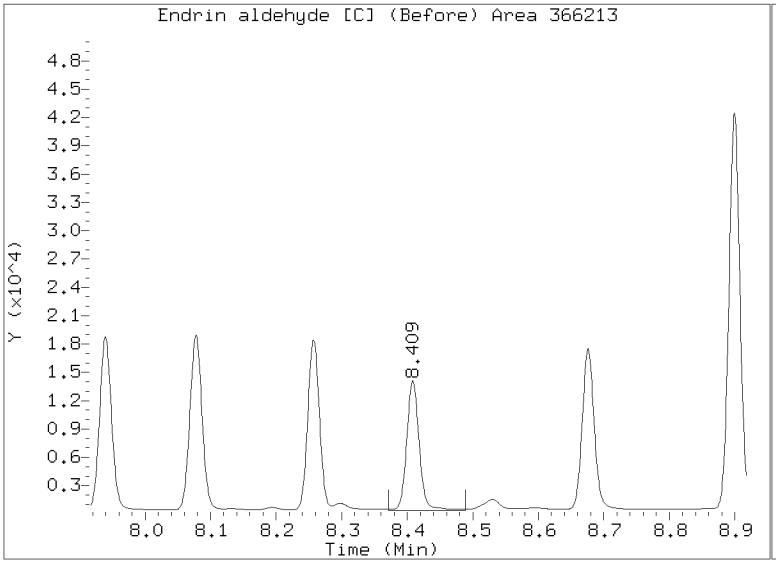
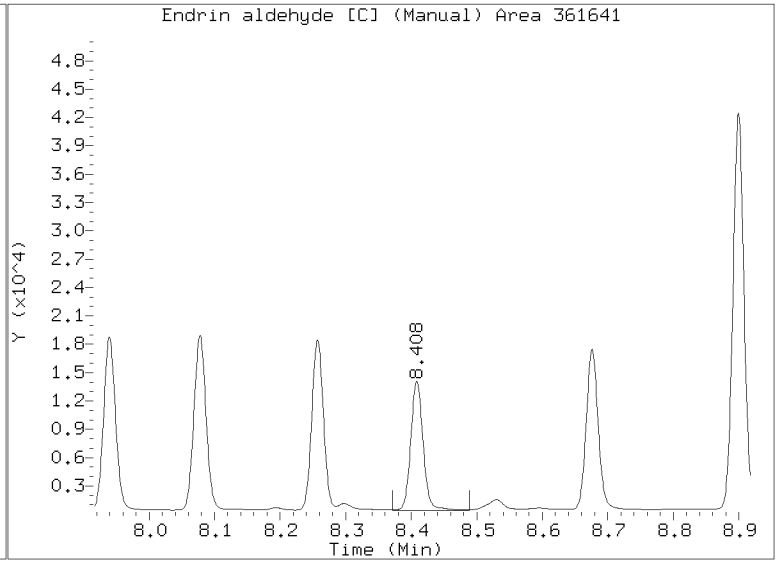
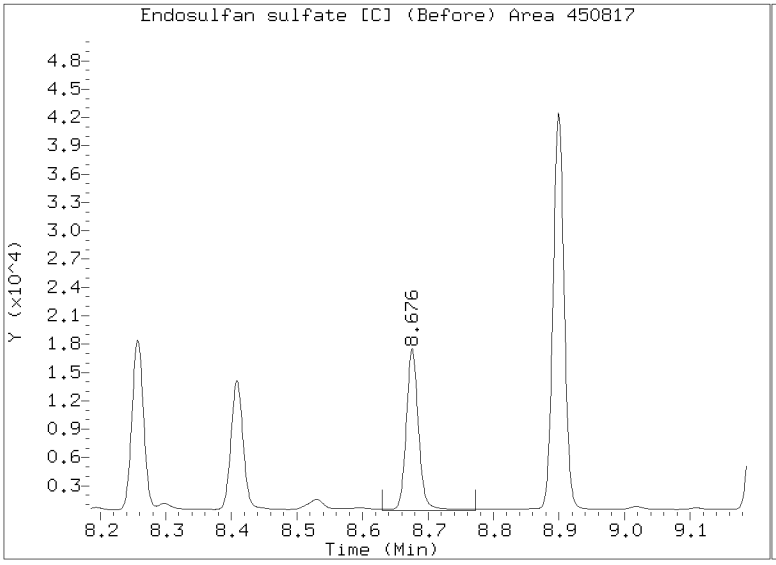
Injection Date: 01-FEB-2023 00:24
Lab ID:SLB0046-CCV2 Client ID:

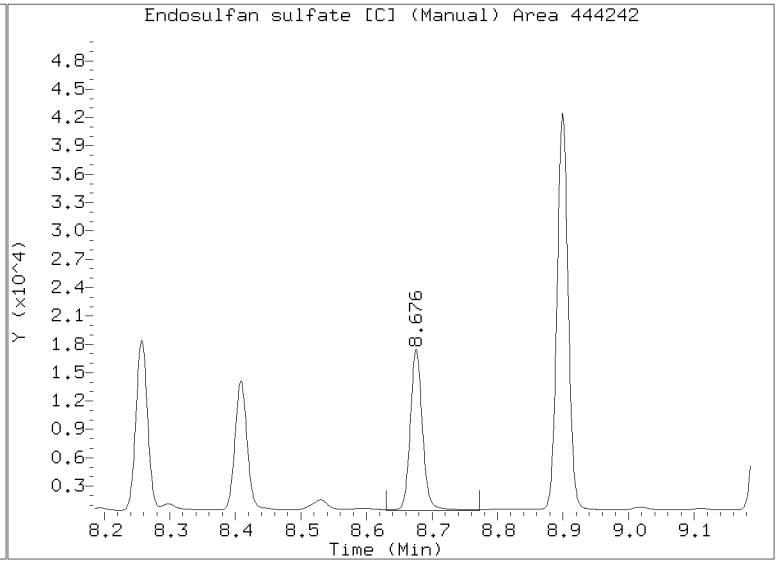






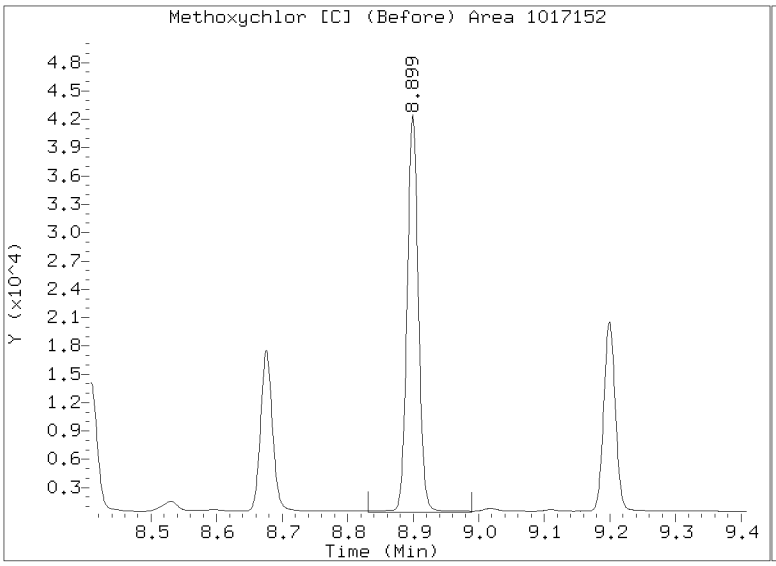


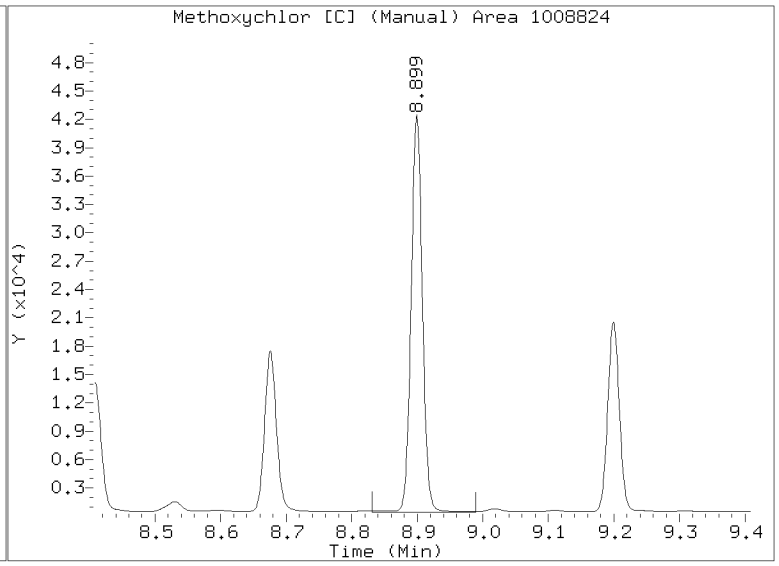


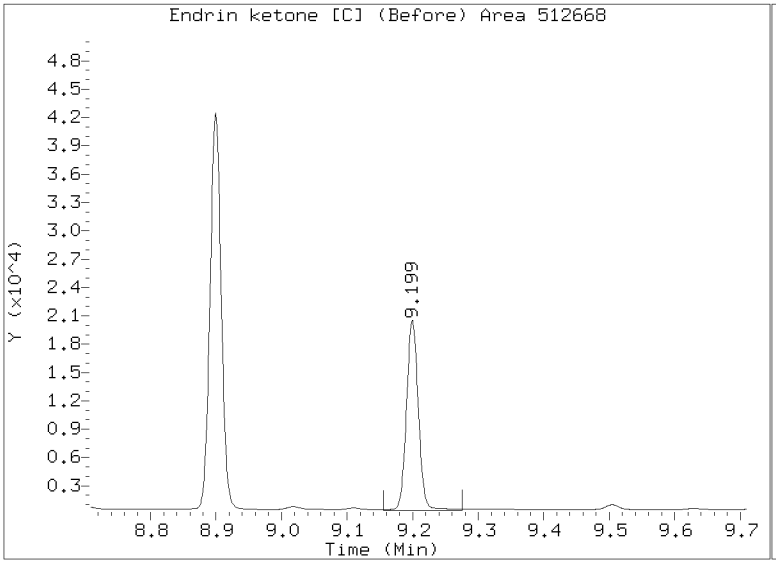


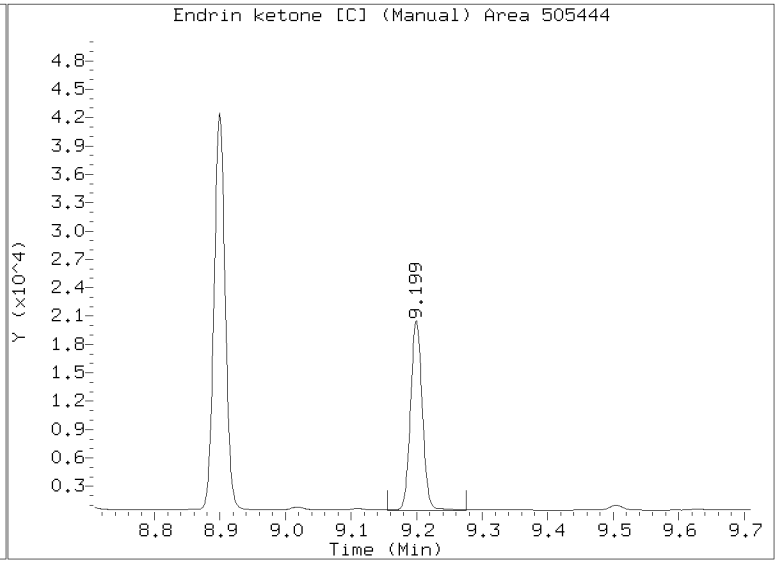
Manual Peak Adjustment Report, CLP-2

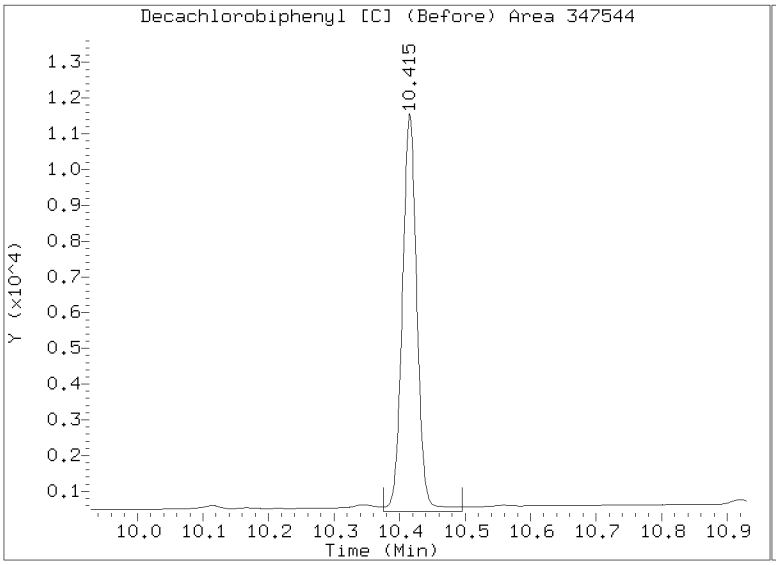
Datafile: /20230131.b/B20230131.b/23013133.D
Injection Date: 01-FEB-2023 00:24
Lab ID:SLB0046-CCV2 Client ID:

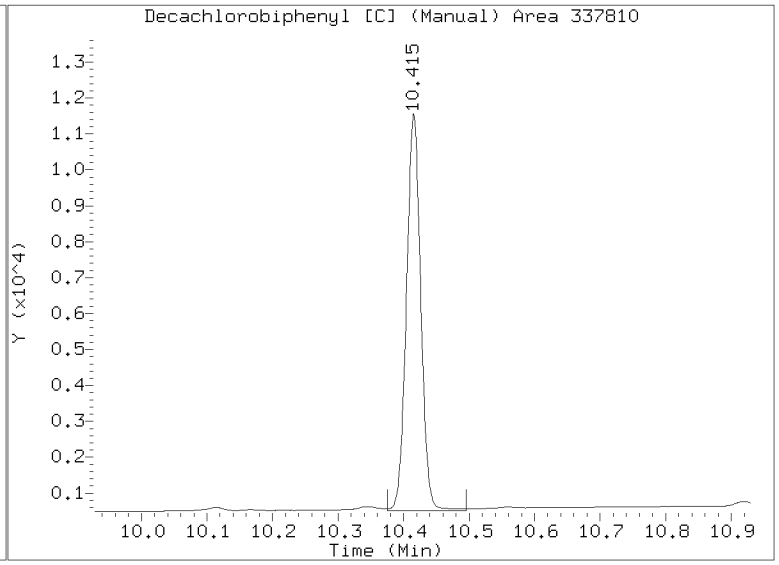






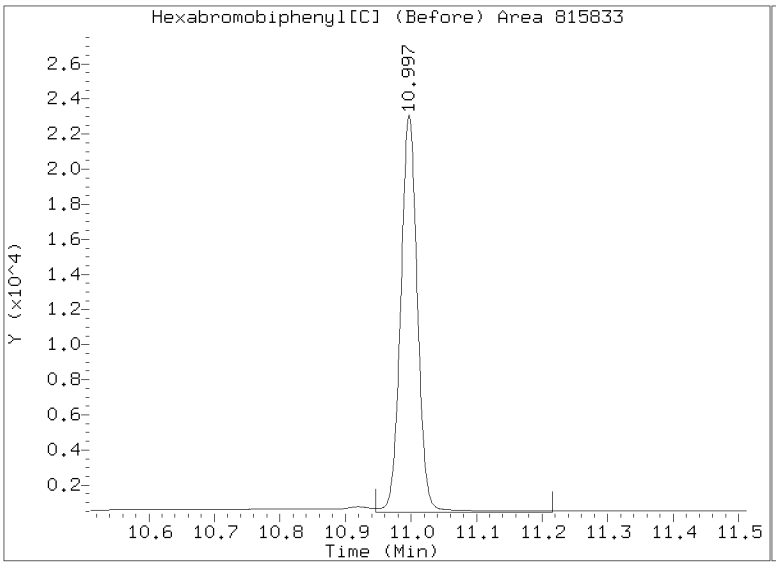


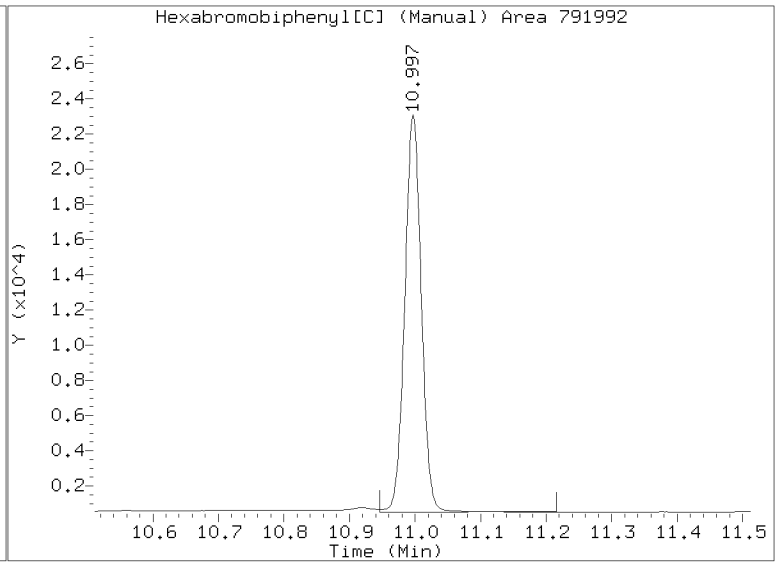




Manual Peak Adjustment Report, CLP-2

Datafile: /20230131.b/B20230131.b/23013133.D
Injection Date: 01-FEB-2023 00:24
Lab ID:SLB0046-CCV2 Client ID:





Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23013150.D	Calibration Date:	12/14/2022
Sequence:	SLB0046	Injection Date:	02/01/23
Lab Sample ID:	SLB0046-CCV3	Injection Time:	05:28
Sequence Name:	INDAE		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	20.4	1.4298940	1.4581270		2.0	+/-20
Hexachlorobenzene [2C]	A	20.000	19.7	1.4591090	1.4401090		-1.3	+/-20
Decachlorobiphenyl	A	40.000	38.9	0.8105886	0.7889394		-2.7	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.1	0.8841805	0.8416085		-4.8	+/-20
Tetrachlorometaxylene	A	40.000	39.7	1.0879510	1.0797150		-0.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.8	1.1261070	1.0935460		-2.9	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013150.D
Data file 2: /20230131.b/B20230131.b/23013150.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: SLB0046-CCV3
Client ID:
Injection Date: 01-FEB-2023 05:28
Report Date: 02/03/2023 20:25
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.309	-0.002	173972	4.825	-0.007	288811	21.48	20.93	2.6	alpha-BHC
4.692	-0.001	70984	5.301	-0.008	108686	22.76	20.72	9.4	beta-BHC
4.875	-0.000	152826	5.653	-0.009	213565	23.09	18.79	20.5	delta-BHC
4.610	-0.002	151179	5.220	-0.008	244937	21.53	20.92	2.9	gamma-BHC (Lindane)
5.090	-0.003	145714	5.745	-0.009	227067	23.32	21.41	8.6	Heptachlor
5.411	-0.003	152623	6.148	-0.010	234713	21.80	19.38	11.7	Aldrin
6.085	-0.004	131269	6.803	-0.011	192891	21.62	19.26	11.5	Heptachlor epoxide b
6.527	-0.004	128066	7.247	-0.010	165292	22.98	18.73	20.4	Endosulfan I
6.787	-0.003	260547	7.541	-0.010	364033	43.52	37.33	15.3	Dieldrin
6.451	-0.001	240152	7.333	-0.009	344807	43.21	38.55	11.4	4,4'-DDE
7.037	-0.004	144516	7.865	-0.011	180024	28.34	26.08	8.3	Endrin
7.276	-0.002	223924	8.077	-0.010	285715	48.79	40.38	18.8	Endosulfan II
7.098	-0.001	214503	7.939	-0.009	284456	46.70	42.37	9.7	4,4'-DDD
8.137	-0.003	245503	8.676	-0.011	278746	56.33	44.87	22.7	Endosulfan sulfate
7.389	-0.002	202811	8.257	-0.010	256555	43.69	39.59	9.8	4,4'-DDT
7.876	-0.001	424945	8.899	-0.010	560009	206.59	195.29	5.6	Methoxychlor
8.411	-0.004	235851	9.199	-0.010	308771	47.24	46.01	2.6	Endrin ketone
7.704	-0.003	179959	8.408	-0.010	229866	49.16	46.06	6.5	Endrin aldehyde
6.226	-0.003	132065	7.015	-0.011	189060	21.42	18.93	12.3	trans-Chlordane
6.373	-0.003	129446	7.175	-0.010	180316	20.93	18.46	12.6	cis-Chlordane
2.304	0.000	171272	2.482	-0.001	228108	20.18	17.41	14.8	Hexachlorobutadiene
4.152	-0.001	153368	4.685	-0.007	247890	20.39	19.74	3.3	Hexachlorobenzene
3.800	0.000	227132	4.191	-0.005	376470	39.70	38.84	2.2	Tetrachloro-m-xylene
9.316	-0.003	153414	10.415	-0.014	204279	38.93	38.07	2.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

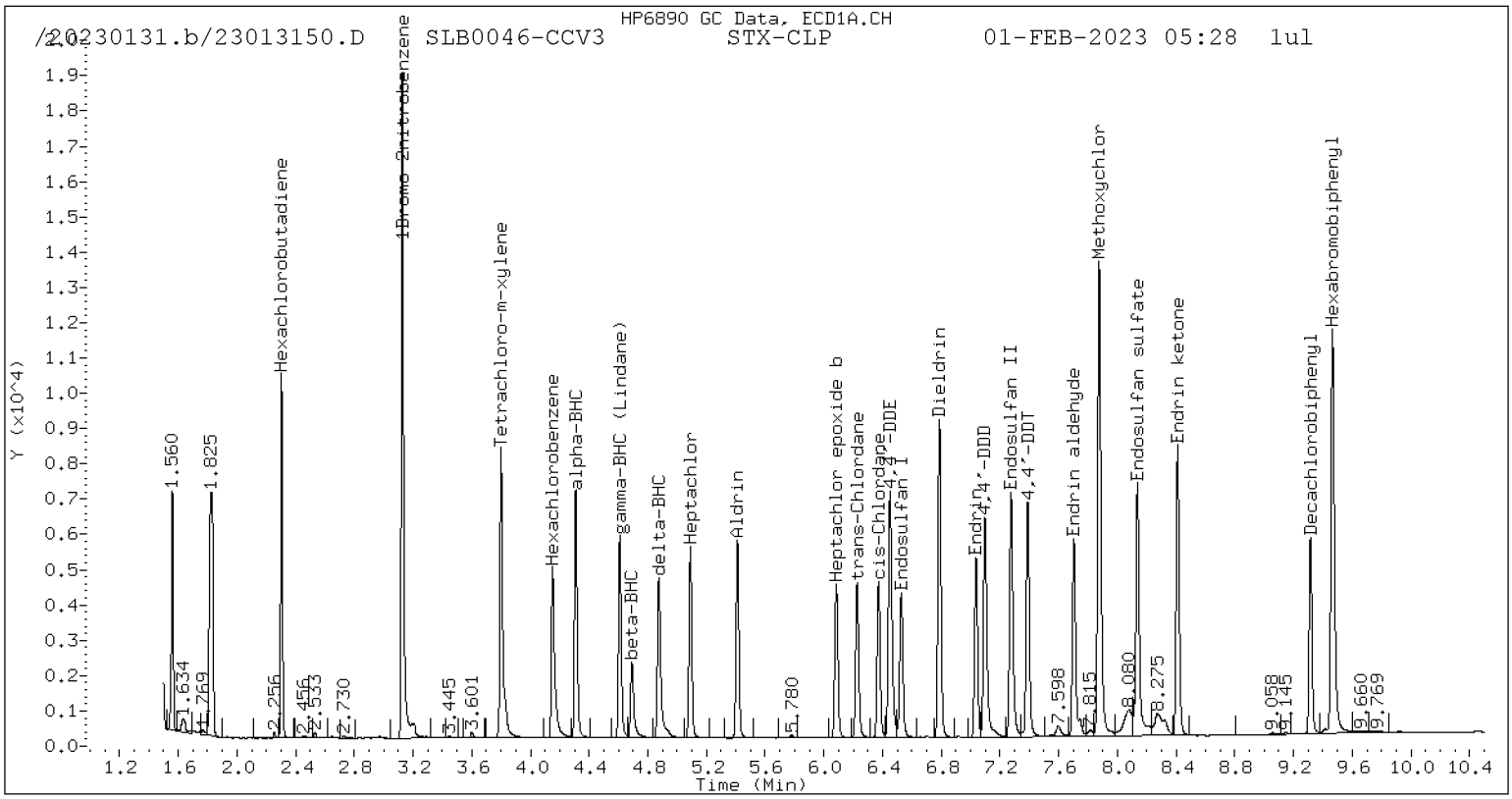
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	420726	-37.4
Hexabromobiphenyl	609723	388912	-36.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	688531	-31.6
Hexabromobiphenyl	769764	485449	-36.9

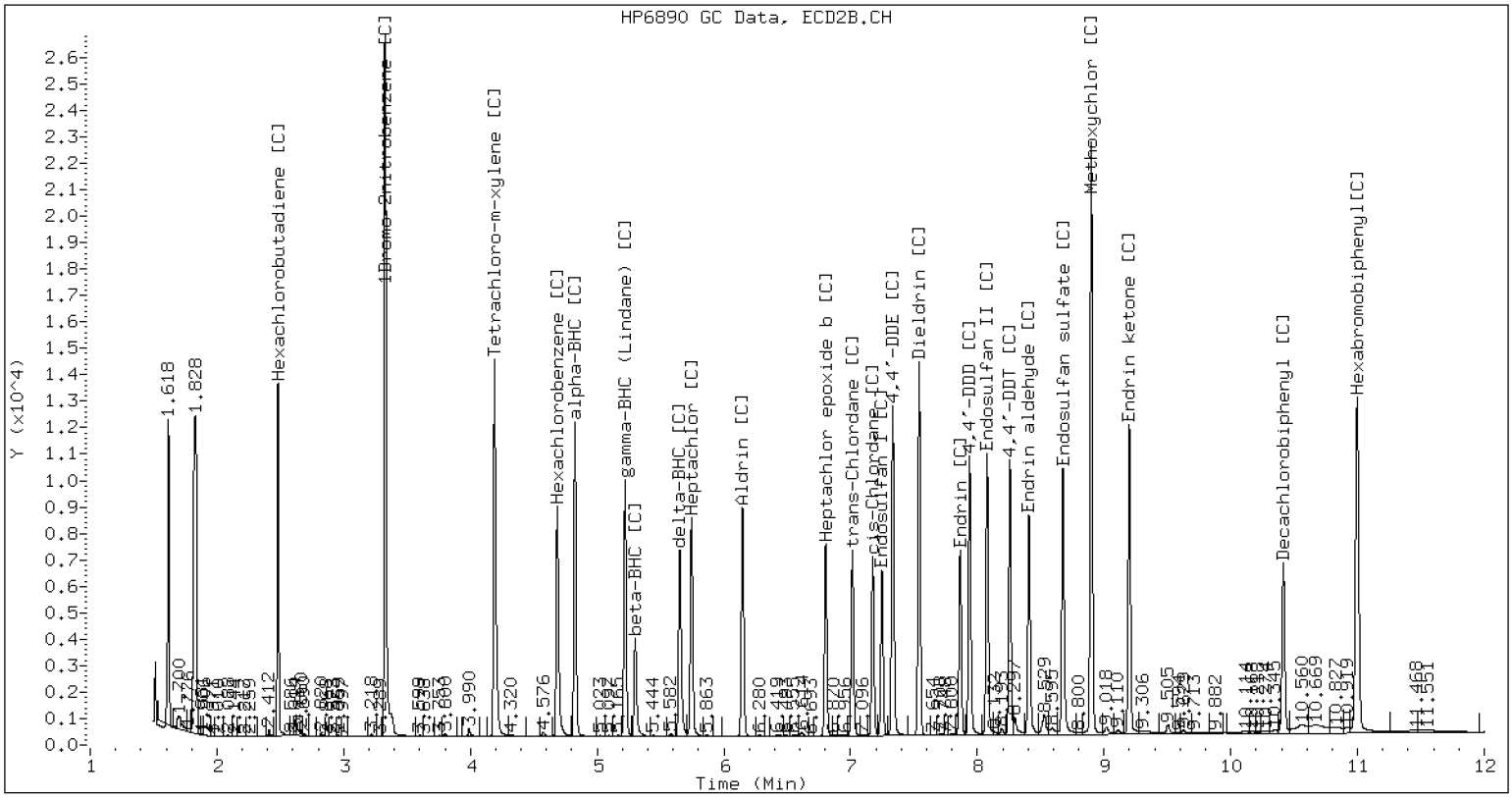
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230131.b/B20230131.b/23013150.D SLB0046-CCV3 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23013168.D	Calibration Date:	12/14/2022
Sequence:	SLB0046	Injection Date:	02/01/23
Lab Sample ID:	SLB0046-CCV4	Injection Time:	10:50
Sequence Name:	INDAE3		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	20.7	1.4298940	1.4765750		3.3	+/-20
Hexachlorobenzene [2C]	A	20.000	20.1	1.4591090	1.4675110		0.6	+/-20
Decachlorobiphenyl	A	40.000	39.8	0.8105886	0.8071043		-0.4	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.6	0.8841805	0.8525866		-3.6	+/-20
Tetrachlorometaxylene	A	40.000	39.8	1.0879510	1.0837750		-0.4	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.6	1.1261070	1.1141620		-1.1	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013168.D
Data file 2: /20230131.b/B20230131.b/23013168.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: SLB0046-CCV4
Client ID:
Injection Date: 01-FEB-2023 10:50
Report Date: 02/03/2023 20:26
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.309	-0.001	177899	4.826	-0.007	302568	21.63	21.37	1.2	alpha-BHC
4.692	-0.001	72505	5.301	-0.008	115014	22.90	21.36	6.9	beta-BHC
4.875	-0.000	152366	5.652	-0.009	218079	22.67	18.70	19.2	delta-BHC
4.610	-0.002	153789	5.220	-0.009	257890	21.57	21.46	0.5	gamma-BHC (Lindane)
5.090	-0.003	147717	5.745	-0.010	241950	23.28	22.23	4.6	Heptachlor
5.410	-0.004	155623	6.147	-0.011	254512	21.89	20.48	6.7	Aldrin
6.085	-0.004	135446	6.803	-0.011	209408	21.97	20.38	7.5	Heptachlor epoxide b
6.528	-0.003	134390	7.247	-0.011	182775	23.75	20.18	16.3	Endosulfan I
6.787	-0.004	270227	7.540	-0.011	407719	44.46	40.74	8.7	Dieldrin
6.451	-0.000	245737	7.332	-0.010	381711	43.54	41.59	4.6	4,4'-DDE
7.037	-0.004	124572	7.865	-0.011	168525	23.73	22.59	4.9	Endrin
7.276	-0.002	249717	8.077	-0.010	323999	52.83	42.37	22.0	Endosulfan II
7.098	-0.001	228895	7.939	-0.010	321630	48.39	44.32	8.8	4,4'-DDD
8.137	-0.004	515846	8.675	-0.011	311017	114.94	46.32	85.1*	Endosulfan sulfate
7.389	-0.002	226226	8.256	-0.010	291199	47.33	41.58	12.9	4,4'-DDT
7.876	-0.001	419480	8.898	-0.010	568380	198.04	183.38	7.7	Methoxychlor
8.411	-0.003	251145	9.199	-0.011	339990	48.85	46.88	4.1	Endrin ketone
7.704	-0.003	200858	8.408	-0.010	266269	53.28	49.36	7.6	Endrin aldehyde
6.227	-0.003	136291	7.015	-0.011	206940	21.77	20.19	7.5	trans-Chlordane
6.373	-0.003	133049	7.174	-0.011	198490	21.19	19.80	6.8	cis-Chlordane
2.304	-0.000	173777	2.482	-0.001	238489	20.17	17.74	12.8	Hexachlorobutadiene
4.153	-0.000	157696	4.686	-0.007	259227	20.65	20.12	2.6	Hexachlorobenzene
3.800	0.000	231491	4.191	-0.005	393620	39.85	39.58	0.7	Tetrachloro-m-xylene
9.315	-0.003	161619	10.414	-0.015	223668	39.83	38.57	3.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

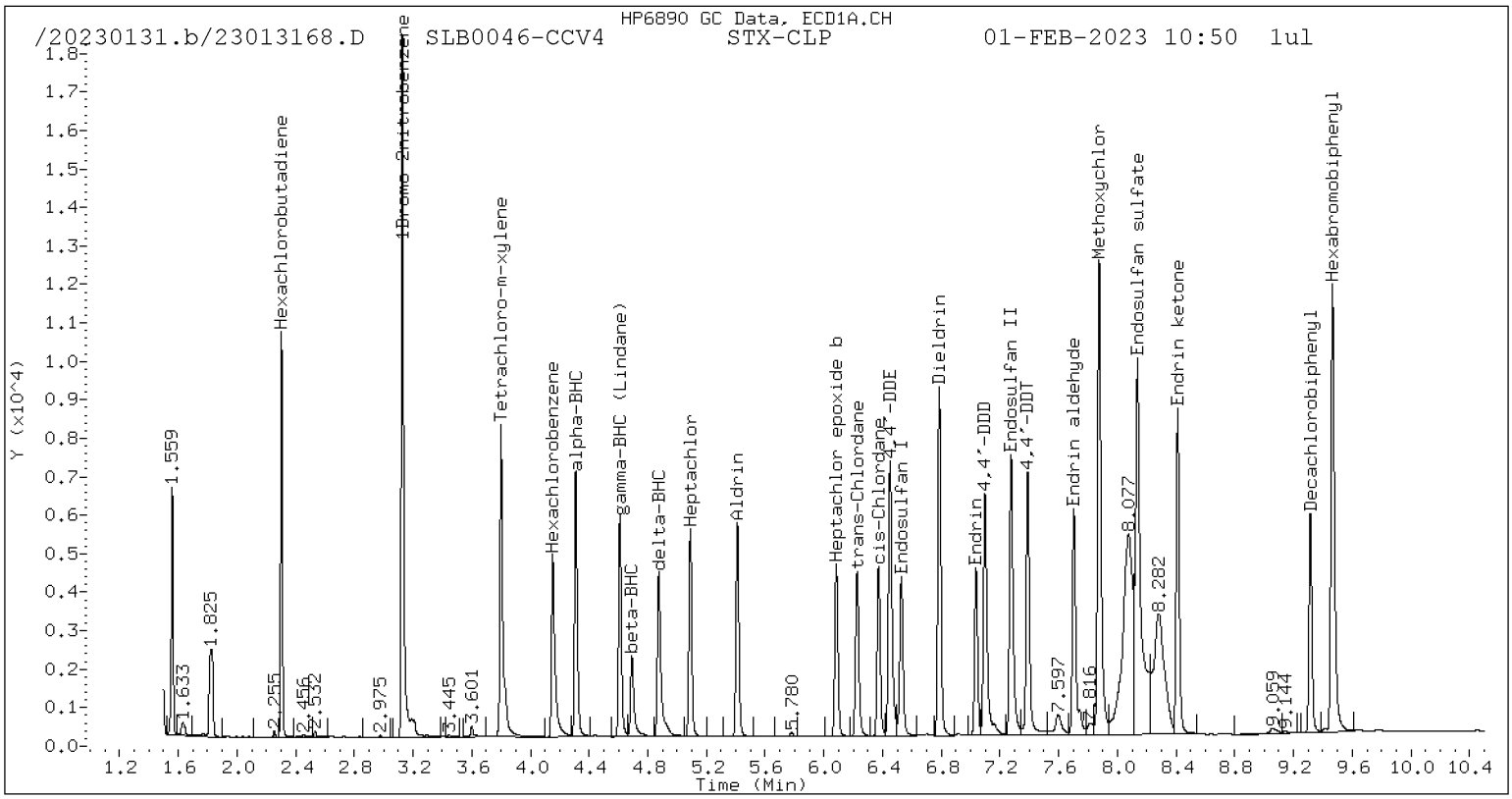
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	427194	-36.5
Hexabromobiphenyl	609723	400491	-34.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	706576	-29.8
Hexabromobiphenyl	769764	524681	-31.8

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

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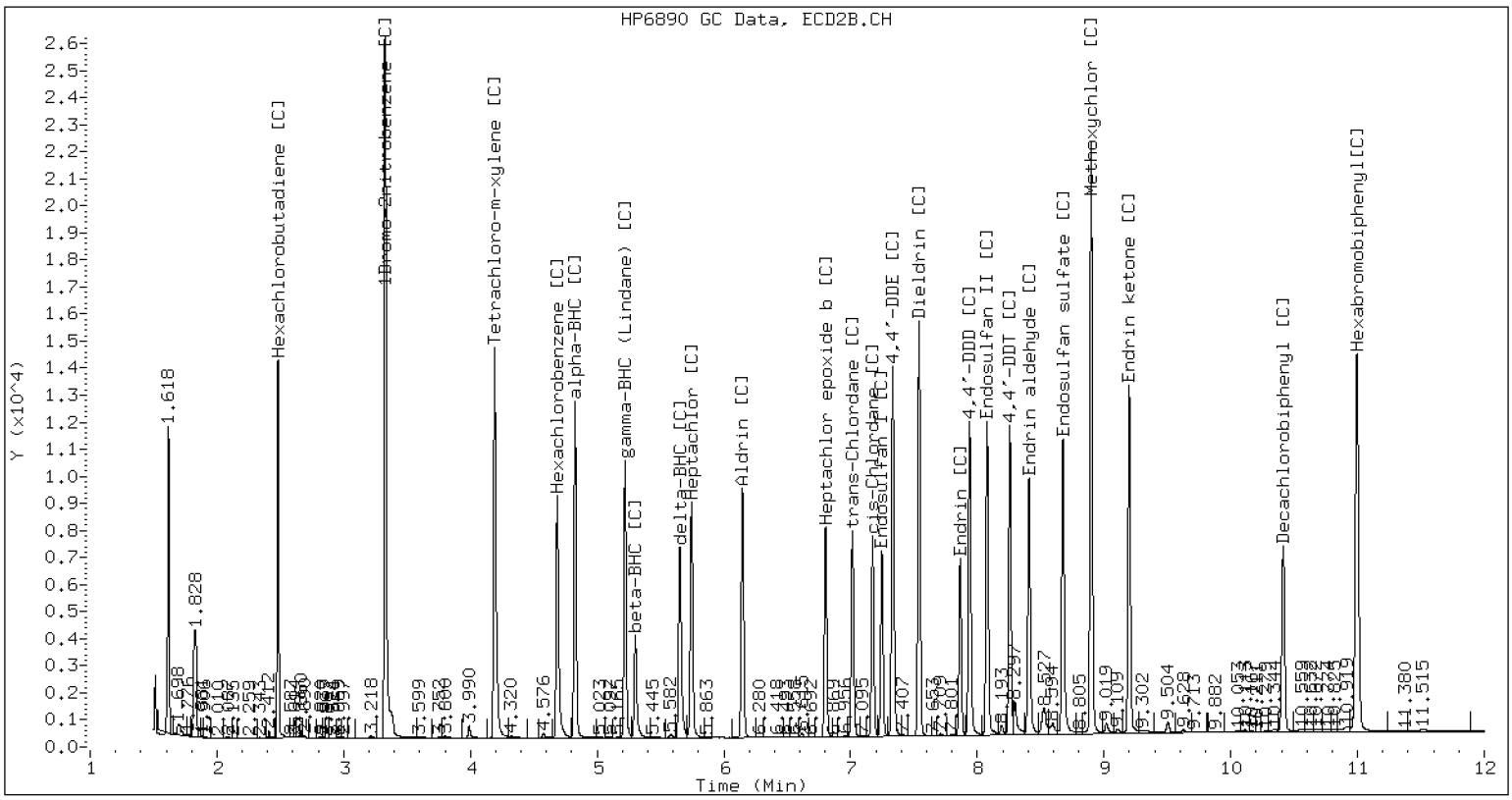


CLP-2 Manual Integration: NO

CONTINUING CALIBRATION CHECK

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23013178.D	Calibration Date:	12/14/2022
Sequence:	SLB0046	Injection Date:	02/01/23
Lab Sample ID:	SLB0046-CCV5	Injection Time:	13:49
Sequence Name:	INDA3		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	20.8	1.4298940	1.4872310		4.0	+/-20
Hexachlorobenzene [2C]	A	20.000	20.3	1.4591090	1.4792510		1.4	+/-20
Decachlorobiphenyl	A	40.000	39.5	0.8105886	0.8006349		-1.2	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.8	0.8841805	0.8584043		-2.9	+/-20
Tetrachlorometaxylene	A	40.000	40.5	1.0879510	1.1018320		1.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.0	1.1261070	1.1268850		0.07	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230131.b/23013178.D
Data file 2: /20230131.b/B20230131.b/23013178.D
Method: \20230131.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR/AA

ARI ID: SLB0046-CCV5
Client ID:
Injection Date: 01-FEB-2023 13:49
Report Date: 02/03/2023 20:26
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.309	-0.001	183954	4.825	-0.008	315633	21.84	21.64	0.9	alpha-BHC
4.692	-0.001	75279	5.301	-0.008	119878	23.21	21.62	7.1	beta-BHC
4.875	-0.001	155556	5.653	-0.008	225873	22.60	18.80	18.3	delta-BHC
4.610	-0.002	158595	5.220	-0.009	269131	21.72	21.74	0.1	gamma-BHC (Lindane)
5.090	-0.003	152399	5.745	-0.010	252215	23.45	22.49	4.2	Heptachlor
5.411	-0.003	160468	6.147	-0.011	266557	22.03	20.82	5.7	Aldrin
6.085	-0.004	139941	6.803	-0.011	219067	22.16	20.69	6.8	Heptachlor epoxide b
6.527	-0.003	140413	7.247	-0.011	192495	24.23	20.63	16.0	Endosulfan I
6.787	-0.003	277736	7.541	-0.010	429556	44.61	41.67	6.8	Dieldrin
6.451	-0.000	254372	7.332	-0.009	405873	44.01	42.93	2.5	4,4'-DDE
7.037	-0.004	120147	7.865	-0.011	167310	21.58	21.20	1.8	Endrin
7.276	-0.002	260107	8.077	-0.010	347911	51.91	43.00	18.8	Endosulfan II
7.098	-0.001	235686	7.939	-0.009	343545	46.99	44.74	4.9	4,4'-DDD
8.137	-0.004	231156	8.676	-0.010	341596	48.58	48.08	1.0	Endosulfan sulfate
7.389	-0.002	220658	8.257	-0.010	305647	43.54	41.24	5.4	4,4'-DDT
7.876	-0.001	422627	8.899	-0.010	583656	188.19	177.97	5.6	Methoxychlor
8.411	-0.003	257688	9.199	-0.010	352356	47.27	45.92	2.9	Endrin ketone
7.704	-0.003	204184	8.408	-0.010	286006	51.08	50.11	1.9	Endrin aldehyde
6.226	-0.003	141315	7.015	-0.011	217232	22.03	20.58	6.8	trans-Chlordane
6.373	-0.003	137868	7.174	-0.011	208094	21.43	20.15	6.2	cis-Chlordane
2.303	-0.000	179520	2.481	-0.001	246917	20.34	17.83	13.2	Hexachlorobutadiene
4.153	-0.000	162683	4.686	-0.007	269139	20.80	20.28	2.6	Hexachlorobenzene
3.801	0.000	241051	4.191	-0.005	410057	40.51	40.03	1.2	Tetrachloro-m-xylene
9.316	-0.003	169978	10.415	-0.014	238275	39.51	38.83	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

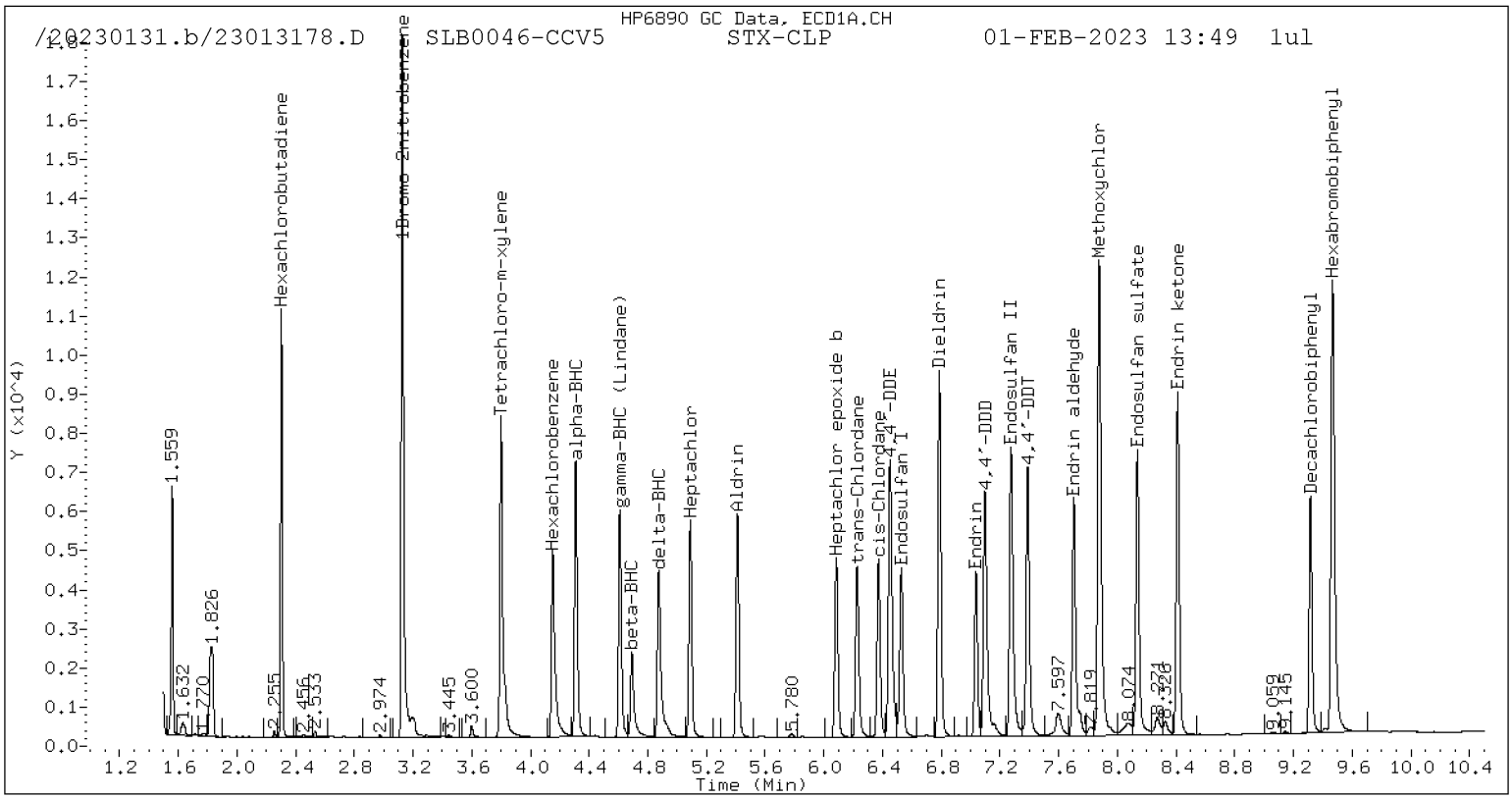
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	437546	-34.9
Hexabromobiphenyl	609723	424608	-30.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	727771	-27.7
Hexabromobiphenyl	769764	555158	-27.9

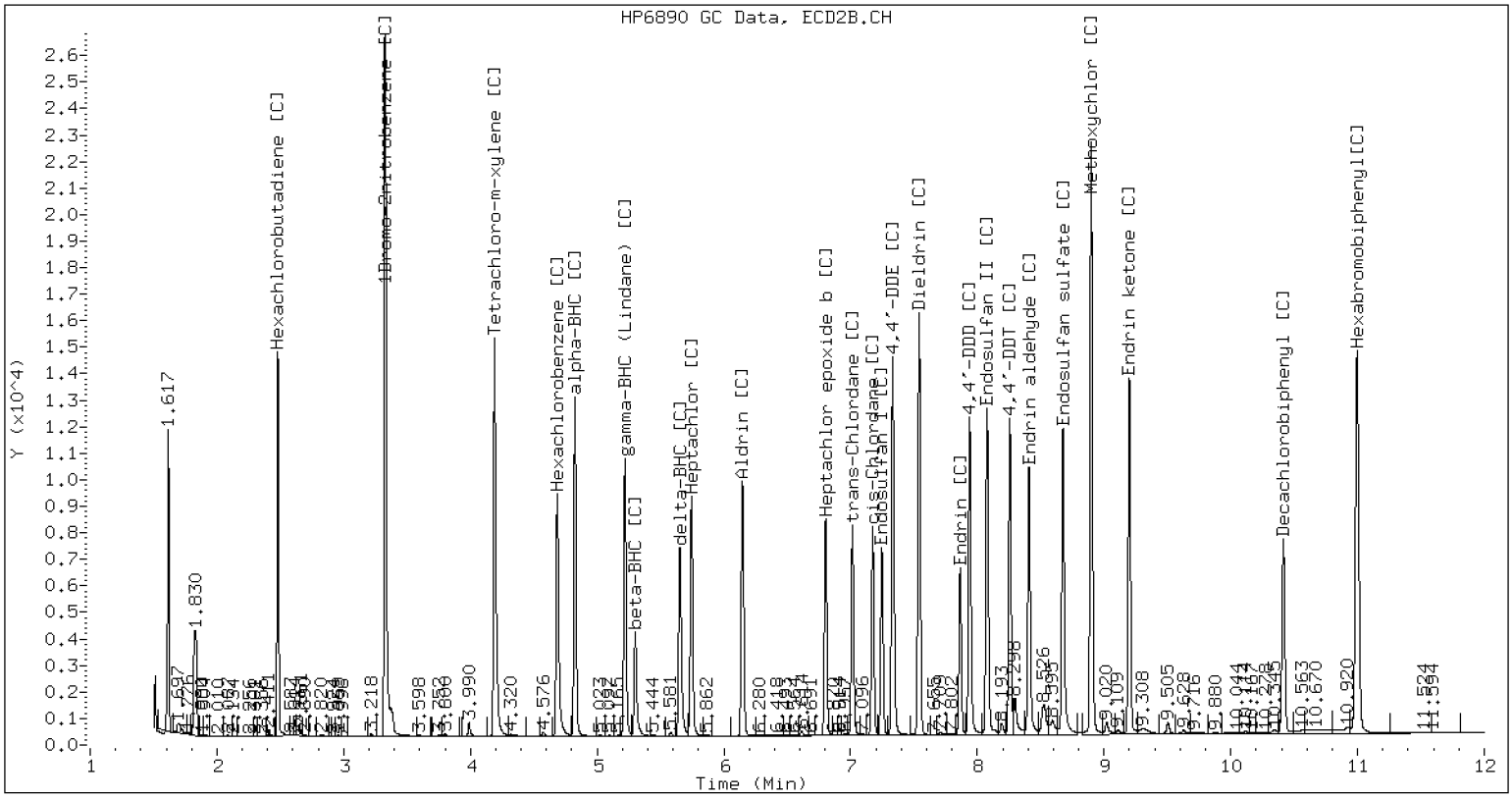
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230131.b/B20230131.b/23013178.D SLB0046-CCV5 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

PERFORMANCE EVAUATION DATA SHEET

DS1

EPA 8081B

Laboratory:	Analytical Resources, LLC	Laboratory ID:	SKL0233-PEM1	File ID:	22121404.D
Client:	Anchor QEA, LLC	Matrix:	Water	Instrument:	ECD6
Project:	AOC5 MR Phase 1	Analyzed:	12/14/2022	Sequence:	SKL0233
SDG:	23A0133	Calibration:	FL00041	Column:	1

PEM COMPOUND	RT	Response
4,4'-DDE	6.49	6258
Endrin	7.08	745471
4,4'-DDD	7.14	15566
Endrin Aldehyde	7.75	21328
4,4'-DDT	7.43	629664
Endrin Ketone	8.45	19276

4,4'-DDT %Breakdown (1): 3.3

Endrin %Breakdown (1): 5.2

Analytical Resources, LLC
Analytical Chemists and Consultants

PERFORMANCE EVAUATION DATA SHEET

DS1

EPA 8081B

Laboratory:	Analytical Resources, LLC	Laboratory ID:	SKL0233-PEM1	File ID:	22121404.D
Client:	Anchor QEA, LLC	Matrix:	Water	Instrument:	ECD6
Project:	AOC5 MR Phase 1	Analyzed:	12/14/2022	Sequence:	SKL0233
SDG:	23A0133	Calibration:	FL00041	Column:	2

PEM COMPOUND	RT	Response
4,4'-DDE	7.37	11906
Endrin	7.91	1029194
4,4'-DDD	7.98	32697
Endrin Aldehyde	8.45	31426
4,4'-DDT	8.30	890195
Endrin Ketone	9.24	28268

4,4'-DDT %Breakdown (1): 4.8

Endrin %Breakdown (1): 5.5

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM1 InstID,Data File: ecd6.i, 22121404.D

Analysis Date: 14-DEC-2022 20:20 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.151	683485
4,4'-DDE	6.490	6258
Endrin	7.082	745471
4,4'-DDD	7.136	15566
4,4'-DDT	7.428	629664
Endrin ketone	8.453	19276
Endrin aldehyde	7.747	21328
Hexabromobiphenyl	9.504	619012
Tetrachloro-m-xylene	3.828	1161664
Decachlorobiphenyl	9.355	833312

DDT Percent Breakdown = 3.3 %
((6258+15566) * 100)/(6258+15566+629664)

Endrin Percent Breakdown = 5.2 %
((21328+19276) * 100)/(21328+19276+745471)

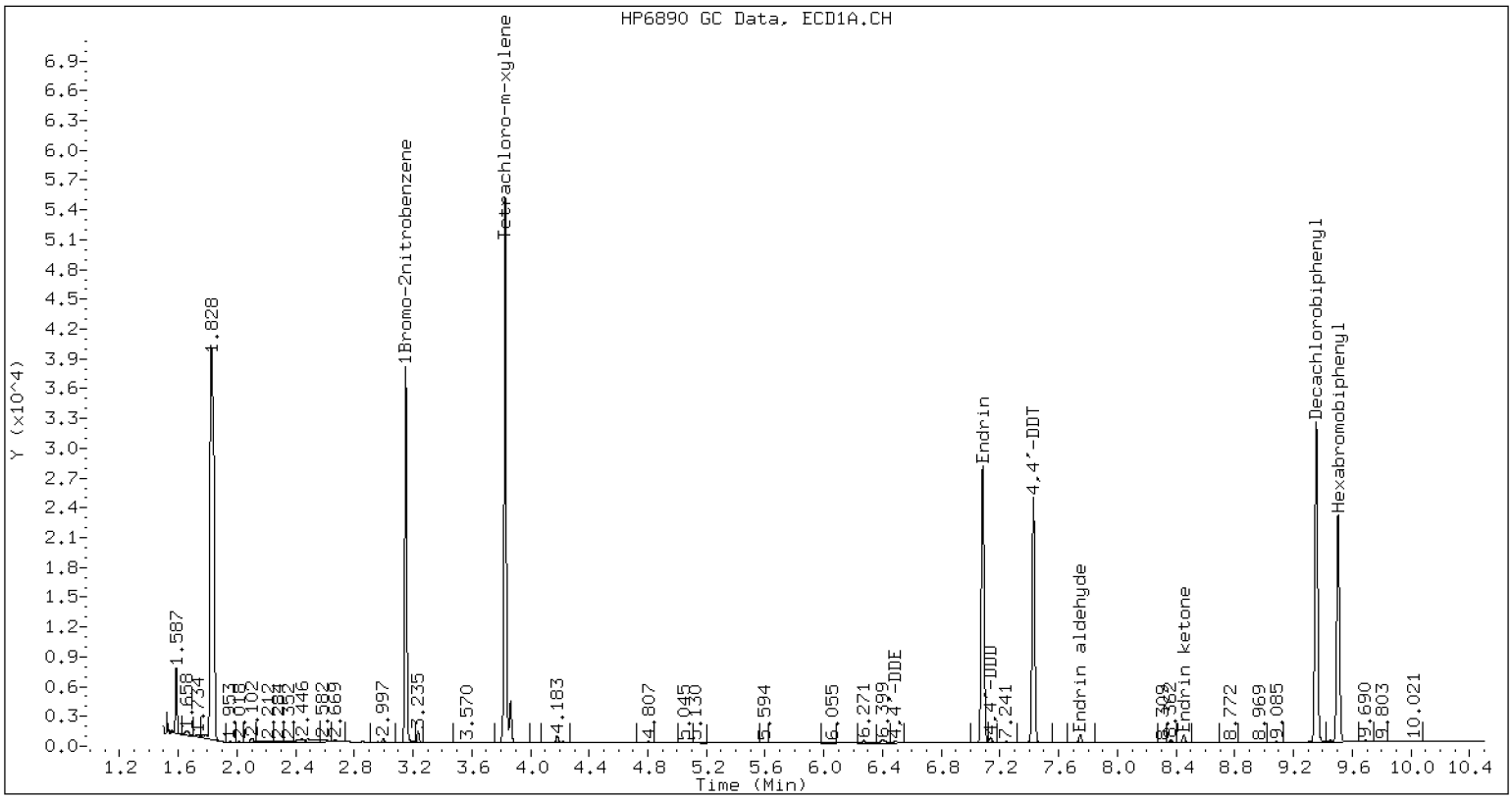
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene [C]	3.350	1005375
4,4'-DDE [C]	7.370	11906
Endrin [C]	7.907	1029194
4,4'-DDD [C]	7.977	32697
4,4'-DDT [C]	8.295	890195
Endrin ketone [C]	9.239	28268
Endrin aldehyde [C]	8.448	31426
Hexabromobiphenyl[C]	11.054	772586
Tetrachloro-m-xylene [C]	4.220	1890294
Decachlorobiphenyl [C]	10.467	1140978

DDT Percent Breakdown = 4.8 %
((11906+32697) * 100)/(11906+32697+890195)

Endrin Percent Breakdown = 5.5 %
((31426+28268) * 100)/(31426+28268+1029194)

/20221214.b/22121404.D SEQ-PEM1 STX-CLP 14-DEC-2022 20:20 1ul



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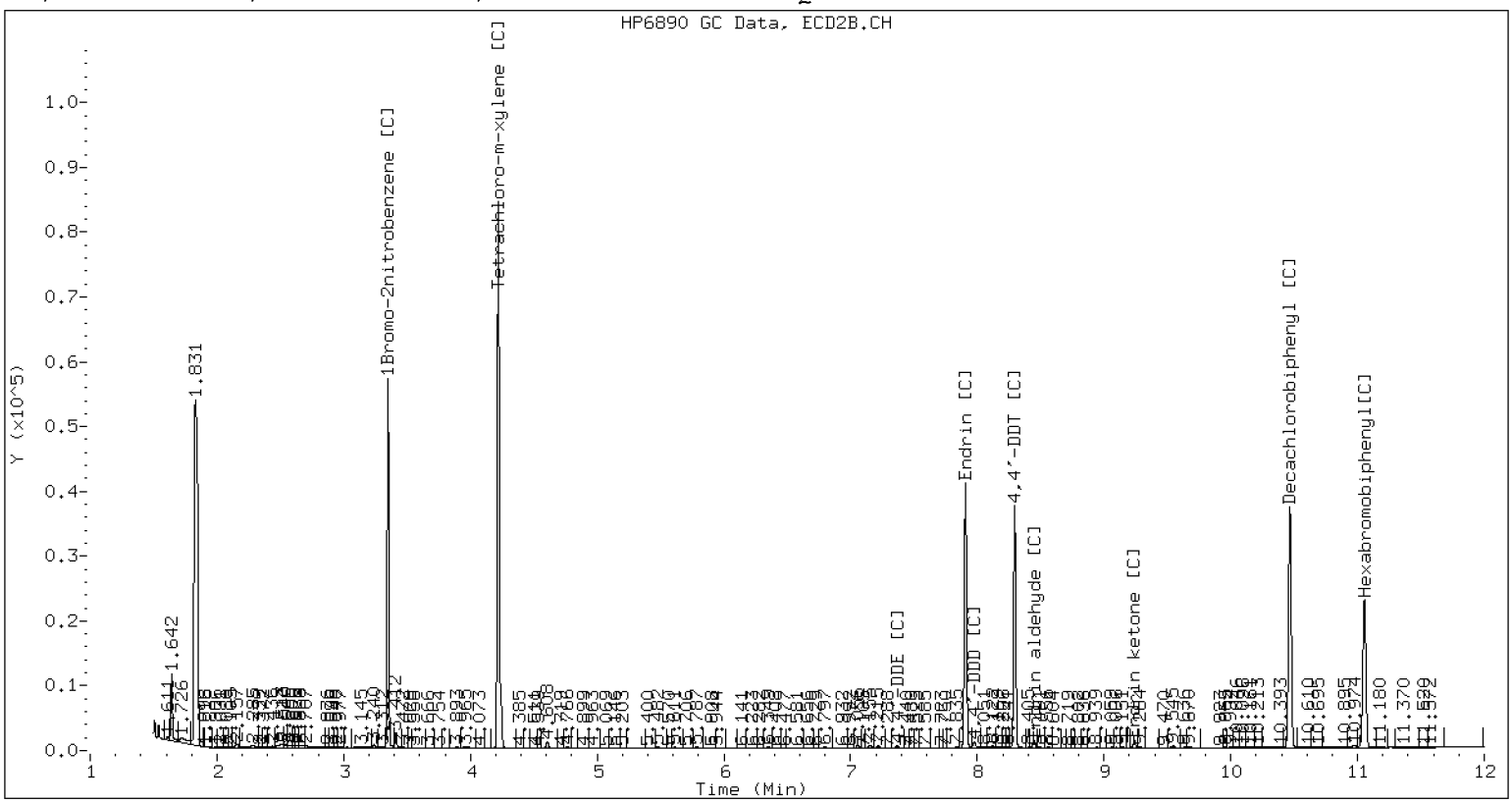

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM1 InstID,Data File: ecd6.i, 22121404.D

Analysis Date: 14-DEC-2022 20:20 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.151	683485
4,4'-DDE	6.490	6258
Endrin	7.082	745471
4,4'-DDD	7.136	15566
4,4'-DDT	7.428	629664
Endrin ketone	8.453	19276
Endrin aldehyde	7.747	21328
Hexabromobiphenyl	9.504	619012
Tetrachloro-m-xylene	3.828	1161664
Decachlorobiphenyl	9.355	833312

DDT Percent Breakdown = 3.3 %
((6258+15566) * 100)/(6258+15566+629664)

Endrin Percent Breakdown = 5.2 %
((21328+19276) * 100)/(21328+19276+745471)

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312

Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SKL0233
Instrument: ECD6
Calibration: FL00041

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Performance Mix	SKL0233-PEM1	22121404.D	22121404.D	NA	12/14/22 20:20
Cal Standard	SKL0233-CAL1	22121405.D	22121405.D	NA	12/14/22 20:38
Cal Standard	SKL0233-CAL2	22121406.D	22121406.D	NA	12/14/22 20:56
Cal Standard	SKL0233-CAL3	22121407.D	22121407.D	NA	12/14/22 21:14
Cal Standard	SKL0233-CAL4	22121408.D	22121408.D	NA	12/14/22 21:31
Cal Standard	SKL0233-CAL5	22121409.D	22121409.D	NA	12/14/22 21:49
Cal Standard	SKL0233-CAL6	22121410.D	22121410.D	NA	12/14/22 22:07
Cal Standard	SKL0233-CAL7	22121411.D	22121411.D	NA	12/14/22 22:25
Cal Standard	SKL0233-CAL8	22121412.D	22121412.D	NA	12/14/22 22:43
Cal Standard	SKL0233-CAL9	22121413.D	22121413.D	NA	12/14/22 23:01
Cal Standard	SKL0233-CALA	22121414.D	22121414.D	NA	12/14/22 23:19
Cal Standard	SKL0233-CALB	22121415.D	22121415.D	NA	12/14/22 23:36
Cal Standard	SKL0233-CALC	22121416.D	22121416.D	NA	12/14/22 23:54
Cal Standard	SKL0233-CALD	22121417.D	22121417.D	NA	12/15/22 00:12
Cal Standard	SKL0233-CALE	22121418.D	22121418.D	NA	12/15/22 00:30

Printed: 12/17/2022 10:57:45AM

ANALYSIS SEQUENCE

SKL0233

Instrument: ECD6 Element Column ID:
Calibration ID: FL00041

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0233-PEM1	DS1	QC		1	K007286	K006953		
SKL0233-CAL1	INDAA	QC		2	K011594	K006953		
SKL0233-CAL2	INDAB	QC		3	K011593	K006953		
SKL0233-CAL3	INDAC	QC		4	K011592	K006953		
SKL0233-CAL4	INDAD	QC		5	K011591	K006953		
SKL0233-CAL5	INDAE	QC		6	K011590	K006953		
SKL0233-CAL6	INDAF	QC		7	K011589	K006953		
SKL0233-CAL7	INDAG	QC		8	K011463	K006953		
SKL0233-CAL8	WNDA	QC		9	K011595	K006953		
SKL0233-CAL9	WNDB	QC		10	K007148	K006953		
SKL0233-CALA	WNDC	QC		11	K007147	K006953		
SKL0233-CALB	WNDD	QC		12	K007146	K006953		
SKL0233-CALC	WNDE	QC		13	K007145	K006953		
SKL0233-CALD	WNDF	QC		14	K007144	K006953		
SKL0233-CALE	WNDG	QC		15	K007093	K006953		
SKL0233-CALM	NOS1	QC		16	K007375	K006953		
SKL0233-CALN	NOS2	QC		17	K007374	K006953		
SKL0233-CALO	NOS3	QC		18	K007373	K006953		
SKL0233-CALP	NOS4	QC		19	K007372	K006953		
SKL0233-CALQ	NOS5	QC		20	K007371	K006953		
SKL0233-CALR	NOS6	QC		21	K007370	K006953		
SKL0233-CALS	NOS7	QC		22	K007287	K006953		

Printed: 12/17/2022 10:57:45AM

ANALYSIS SEQUENCE

SKL0233

Instrument: ECD6 Element Column ID:
Calibration ID: FL00041

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0233-CALF	TOXAPH1	QC		23	K011601	K006953		
SKL0233-CALG	TOXAPH2	QC		24	K011600	K006953		
SKL0233-CALH	TOXAPH3	QC		25	K011599	K006953		
SKL0233-CALI	TOXAPH4	QC		26	K011598	K006953		
SKL0233-CALJ	TOXAPH5	QC		27	K011597	K006953		
SKL0233-CALK	TOXAPH6	QC		28	K011596	K006953		
SKL0233-CALL	TOXAPH7	QC		29	K008546	K006953		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

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1	14-DEC-2022 19:27	22121401.D	1	RINSE	
2	14-DEC-2022 19:44	22121402.D	1	RINSE	
3	14-DEC-2022 20:02	22121403.D	1	SEQ-IBL1	
4	14-DEC-2022 20:20	22121404.D	1	SEQ-PEM1	
5	14-DEC-2022 20:38	22121405.D	1	SEQ-CAL1	
6	14-DEC-2022 20:56	22121406.D	1	SEQ-CAL2	
7	14-DEC-2022 21:14	22121407.D	1	SEQ-CAL3	
8	14-DEC-2022 21:31	22121408.D	1	SEQ-CAL4	
9	14-DEC-2022 21:49	22121409.D	1	SEQ-CAL5	
10	14-DEC-2022 22:07	22121410.D	1	SEQ-CAL6	
11	14-DEC-2022 22:25	22121411.D	1	SEQ-CAL7	
12	14-DEC-2022 22:43	22121412.D	1	SEQ-CAL8	
13	14-DEC-2022 23:01	22121413.D	1	SEQ-CAL9	
14	14-DEC-2022 23:19	22121414.D	1	SEQ-CALA	
15	14-DEC-2022 23:36	22121415.D	1	SEQ-CALB	
16	14-DEC-2022 23:54	22121416.D	1	SEQ-CALC	
17	15-DEC-2022 00:12	22121417.D	1	SEQ-CALD	
18	15-DEC-2022 00:30	22121418.D	1	SEQ-CALE	
19	15-DEC-2022 00:48	22121419.D	1	SEQ-SCV1	
20	15-DEC-2022 01:06	22121420.D	1	SEQ-SCV2	
21	15-DEC-2022 01:24	22121421.D	1	SEQ-CAL1A	
22	15-DEC-2022 01:42	22121422.D	1	SEQ-CAL2A	
23	15-DEC-2022 01:59	22121423.D	1	SEQ-CAL3A	
24	15-DEC-2022 02:17	22121424.D	1	SEQ-CAL4A	
25	15-DEC-2022 02:35	22121425.D	1	SEQ-CAL5A	
26	15-DEC-2022 02:53	22121426.D	1	SEQ-CAL6A	
27	15-DEC-2022 03:11	22121427.D	1	SEQ-CAL7A	
28	15-DEC-2022 03:29	22121428.D	1	SEQ-CAL8A	
29	15-DEC-2022 03:46	22121429.D	1	SEQ-CAL9A	
30	15-DEC-2022 04:04	22121430.D	1	SEQ-CALAA	
31	15-DEC-2022 04:22	22121431.D	1	SEQ-CALAB	
32	15-DEC-2022 04:40	22121432.D	1	SEQ-CALAC	
33	15-DEC-2022 04:58	22121433.D	1	SEQ-CALAD	
34	15-DEC-2022 05:16	22121434.D	1	SEQ-CALAE	
35	15-DEC-2022 05:33	22121435.D	1	SEQ-PEM2	
36	15-DEC-2022 05:51	22121436.D	1	SEQ-ICV1	
37	15-DEC-2022 06:09	22121437.D	1	SEQ-ICV2	
38	15-DEC-2022 06:27	22121438.D	1	SEQ-ICV3	
39	15-DEC-2022 06:45	22121439.D	1	SEQ-ICV4	
40	15-DEC-2022 07:03	22121440.D	1	BKK0688-BLK1	
41	15-DEC-2022 07:21	22121441.D	1	BKK0688-BS1	
42	15-DEC-2022 07:39	22121442.D	1	BKK0688-BS2	
43	15-DEC-2022 07:57	22121443.D	1	BKK0688-BS3	
44	15-DEC-2022 08:15	22121444.D	1	BKK0688-BSD1	
45	15-DEC-2022 08:32	22121445.D	1	BKK0142-BLK1	
46	15-DEC-2022 08:50	22121446.D	1	BKK0142-BS1	
47	15-DEC-2022 09:08	22121447.D	1	BKK0142-BS2	
48	15-DEC-2022 09:26	22121448.D	1	BKK0142-BSD1	
49	15-DEC-2022 09:44	22121449.D	1	BKK0142-MS1	
50	15-DEC-2022 10:02	22121450.D	1	BKK0142-MSD1	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b p

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53	15-DEC-2022 10:55	22121453.D	1	22J0535-01	
54	15-DEC-2022 11:13	22121454.D	1	22K0429-01	
55	15-DEC-2022 11:31	22121455.D	1	22K0429-02	
56	15-DEC-2022 11:49	22121456.D	1	22K0429-03	
57	15-DEC-2022 12:07	22121457.D	1	SEQ-PEM3	
58	15-DEC-2022 12:25	22121458.D	1	SEQ-CCV1	
59	15-DEC-2022 12:43	22121459.D	1	SEQ-CCV2	
60	15-DEC-2022 13:01	22121460.D	1	SEQ-CCV3	
61	15-DEC-2022 13:19	22121461.D	1	SEQ-CCV4	
62	15-DEC-2022 13:36	22121462.D	1	BKK0380-BLK1	
63	15-DEC-2022 13:54	22121463.D	1	BKK0380-BS1	
64	15-DEC-2022 14:12	22121464.D	1	BKK0380-BSD1	
65	15-DEC-2022 14:30	22121465.D	1	22K0157-01	
66	15-DEC-2022 14:48	22121466.D	1	22K0230-01	
67	15-DEC-2022 15:06	22121467.D	1	22K0231-01	
68	15-DEC-2022 15:24	22121468.D	1	BKK0382-BLK1	
69	15-DEC-2022 15:42	22121469.D	1	BKK0382-BS1	
70	15-DEC-2022 16:00	22121470.D	1	BKK0382-BS2	
71	15-DEC-2022 16:18	22121471.D	1	BKK0382-BSD1	
72	15-DEC-2022 16:35	22121472.D	1	22K0075-01	
73	15-DEC-2022 16:53	22121473.D	1	SEQ-PEM4	
74	15-DEC-2022 17:11	22121474.D	1	SEQ-CCV5	
75	15-DEC-2022 17:29	22121475.D	1	SEQ-CCV6	
76	15-DEC-2022 17:47	22121476.D	1	SEQ-CCV7	
77	15-DEC-2022 18:05	22121477.D	1	SEQ-CCV8	
78	15-DEC-2022 18:23	22121478.D	1	BKK0537-BLK1	
79	15-DEC-2022 18:40	22121479.D	1	BKK0537-BS1	
80	15-DEC-2022 18:58	22121480.D	1	BKK0537-BS2	
81	15-DEC-2022 19:16	22121481.D	1	22K0194-01	
82	15-DEC-2022 19:34	22121482.D	1	22K0194-01RE1	10
83	15-DEC-2022 19:52	22121483.D	1	SEQ-PEM5	
84	15-DEC-2022 20:09	22121484.D	1	SEQ-CCV9	
85	15-DEC-2022 20:27	22121485.D	1	SEQ-CCVA	
86	15-DEC-2022 20:45	22121486.D	1	SEQ-CCVB	
87	15-DEC-2022 21:03	22121487.D	1	SEQ-CCVC	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

ARI Job No.: RINS Method: PEST.m Instrument: ecd6.i Date: 14-DEC-2022

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1927	22121401.D	RINSE		1	NO MANUAL INTEGRATION
1944	22121402.D	RINSE		1	NO MANUAL INTEGRATION
2002	22121403.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
2020	22121404.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
2038	22121405.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
2056	22121406.D	SEQ-CAL2		1	NO MANUAL INTEGRATION
2114	22121407.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2131	22121408.D	SEQ-CAL4		1	NO MANUAL INTEGRATION
2149	22121409.D	SEQ-CAL5		1	NO MANUAL INTEGRATION
2207	22121410.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
2225	22121411.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
2243	22121412.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
2301	22121413.D	SEQ-CAL9		1	NO MANUAL INTEGRATION
2319	22121414.D	SEQ-CALA		1	NO MANUAL INTEGRATION
2336	22121415.D	SEQ-CALB		1	NO MANUAL INTEGRATION
2354	22121416.D	SEQ-CALC		1	NO MANUAL INTEGRATION
0012	22121417.D	SEQ-CALD		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0030	22121418.D	SEQ-CALE		1	NO MANUAL INTEGRATION
0048	22121419.D	SEQ-SCV1		1	NO MANUAL INTEGRATION
0106	22121420.D	SEQ-SCV2		1	NO MANUAL INTEGRATION
0124	22121421.D	SEQ-CAL1A		1	NO MANUAL INTEGRATION
0142	22121422.D	SEQ-CAL2A		1	NO MANUAL INTEGRATION
0159	22121423.D	SEQ-CAL3A		1	NO MANUAL INTEGRATION
0217	22121424.D	SEQ-CAL4A		1	NO MANUAL INTEGRATION
0235	22121425.D	SEQ-CAL5A		1	NO MANUAL INTEGRATION
0253	22121426.D	SEQ-CAL6A		1	NO MANUAL INTEGRATION
0311	22121427.D	SEQ-CAL7A		1	NO MANUAL INTEGRATION
0329	22121428.D	SEQ-CAL8A		1	NO MANUAL INTEGRATION
0346	22121429.D	SEQ-CAL9A		1	NO MANUAL INTEGRATION
0404	22121430.D	SEQ-CALAA		1	NO MANUAL INTEGRATION
0422	22121431.D	SEQ-CALAB		1	NO MANUAL INTEGRATION
0440	22121432.D	SEQ-CALAC		1	NO MANUAL INTEGRATION
0458	22121433.D	SEQ-CALAD		1	NO MANUAL INTEGRATION
0516	22121434.D	SEQ-CALAE		1	NO MANUAL INTEGRATION
0533	22121435.D	SEQ-PEM2		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0551	22121436.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
0609	22121437.D	SEQ-ICV2		1	NO MANUAL INTEGRATION
0627	22121438.D	SEQ-ICV3		1	NO MANUAL INTEGRATION
0645	22121439.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
0703	22121440.D	BKK0688-BLK1		1	NO MANUAL INTEGRATION
0721	22121441.D	BKK0688-BS1		1	NO MANUAL INTEGRATION
0739	22121442.D	BKK0688-BS2		1	NO MANUAL INTEGRATION
0757	22121443.D	BKK0688-BS3		1	NO MANUAL INTEGRATION
0815	22121444.D	BKK0688-BSD1		1	NO MANUAL INTEGRATION
0832	22121445.D	BKK0142-BLK1		1	NO MANUAL INTEGRATION
0850	22121446.D	BKK0142-BS1		1	NO MANUAL INTEGRATION
0908	22121447.D	BKK0142-BS2		1	NO MANUAL INTEGRATION
0926	22121448.D	BKK0142-BSD1		1	NO MANUAL INTEGRATION
0944	22121449.D	BKK0142-MS1		1	NO MANUAL INTEGRATION
1002	22121450.D	BKK0142-MSD1		1	NO MANUAL INTEGRATION
1020	22121451.D	22J0513-01		1	NO MANUAL INTEGRATION
1038	22121452.D	22J0513-04		1	NO MANUAL INTEGRATION
1055	22121453.D	22J0535-01		1	trans-Chlordane,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1113	22121454.D	22K0429-01		1	Heptachlor epoxide b,
1131	22121455.D	22K0429-02		1	Heptachlor epoxide b,
1149	22121456.D	22K0429-03		1	Hexachlorobenzene,
1207	22121457.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
1225	22121458.D	SEQ-CCV1		1	NO MANUAL INTEGRATION
1243	22121459.D	SEQ-CCV2		1	NO MANUAL INTEGRATION
1301	22121460.D	SEQ-CCV3		1	NO MANUAL INTEGRATION
1319	22121461.D	SEQ-CCV4		1	NO MANUAL INTEGRATION
1336	22121462.D	BKK0380-BLK1		1	NO MANUAL INTEGRATION
1354	22121463.D	BKK0380-BS1		1	NO MANUAL INTEGRATION
1412	22121464.D	BKK0380-BSD1		1	NO MANUAL INTEGRATION
1430	22121465.D	22K0157-01		1	NO MANUAL INTEGRATION
1448	22121466.D	22K0230-01		1	NO MANUAL INTEGRATION
1506	22121467.D	22K0231-01		1	NO MANUAL INTEGRATION
1524	22121468.D	BKK0382-BLK1		1	NO MANUAL INTEGRATION
1542	22121469.D	BKK0382-BS1		1	NO MANUAL INTEGRATION
1600	22121470.D	BKK0382-BS2		1	NO MANUAL INTEGRATION
1618	22121471.D	BKK0382-BSD1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1635	22121472.D	22K0075-01		1	NO MANUAL INTEGRATION
1653	22121473.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
1711	22121474.D	SEQ-CCV5		1	NO MANUAL INTEGRATION
1729	22121475.D	SEQ-CCV6		1	NO MANUAL INTEGRATION
1747	22121476.D	SEQ-CCV7		1	NO MANUAL INTEGRATION
1805	22121477.D	SEQ-CCV8		1	NO MANUAL INTEGRATION
1823	22121478.D	BKK0537-BLK1		1	NO MANUAL INTEGRATION
1840	22121479.D	BKK0537-BS1		1	NO MANUAL INTEGRATION
1858	22121480.D	BKK0537-BS2		1	NO MANUAL INTEGRATION
1916	22121481.D	22K0194-01		1	NO MANUAL INTEGRATION
1934	22121482.D	22K0194-01RE1	10	1	NO MANUAL INTEGRATION
1952	22121483.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2009	22121484.D	SEQ-CCV9		1	NO MANUAL INTEGRATION
2027	22121485.D	SEQ-CCVA		1	NO MANUAL INTEGRATION
2045	22121486.D	SEQ-CCVB		1	NO MANUAL INTEGRATION
2103	22121487.D	SEQ-CCVC		1	NO MANUAL INTEGRATION
1927	22121401.D	RINSE		1	NO MANUAL INTEGRATION
1944	22121402.D	RINSE		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2002	22121403.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
2020	22121404.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
2038	22121405.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
2056	22121406.D	SEQ-CAL2		1	NO MANUAL INTEGRATION
2114	22121407.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2131	22121408.D	SEQ-CAL4		1	NO MANUAL INTEGRATION
2149	22121409.D	SEQ-CAL5		1	NO MANUAL INTEGRATION
2207	22121410.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
2225	22121411.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
2243	22121412.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
2301	22121413.D	SEQ-CAL9		1	NO MANUAL INTEGRATION
2319	22121414.D	SEQ-CALA		1	NO MANUAL INTEGRATION
2336	22121415.D	SEQ-CALB		1	NO MANUAL INTEGRATION
2354	22121416.D	SEQ-CALC		1	NO MANUAL INTEGRATION
0012	22121417.D	SEQ-CALD		1	NO MANUAL INTEGRATION
0030	22121418.D	SEQ-CALE		1	NO MANUAL INTEGRATION
0048	22121419.D	SEQ-SCV1		1	NO MANUAL INTEGRATION
0106	22121420.D	SEQ-SCV2		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0124	22121421.D	SEQ-CAL1A		1	NO MANUAL INTEGRATION
0142	22121422.D	SEQ-CAL2A		1	NO MANUAL INTEGRATION
0159	22121423.D	SEQ-CAL3A		1	NO MANUAL INTEGRATION
0217	22121424.D	SEQ-CAL4A		1	NO MANUAL INTEGRATION
0235	22121425.D	SEQ-CAL5A		1	NO MANUAL INTEGRATION
0253	22121426.D	SEQ-CAL6A		1	NO MANUAL INTEGRATION
0311	22121427.D	SEQ-CAL7A		1	NO MANUAL INTEGRATION
0329	22121428.D	SEQ-CAL8A		1	NO MANUAL INTEGRATION
0346	22121429.D	SEQ-CAL9A		1	NO MANUAL INTEGRATION
0404	22121430.D	SEQ-CALAA		1	NO MANUAL INTEGRATION
0422	22121431.D	SEQ-CALAB		1	NO MANUAL INTEGRATION
0440	22121432.D	SEQ-CALAC		1	NO MANUAL INTEGRATION
0458	22121433.D	SEQ-CALAD		1	NO MANUAL INTEGRATION
0516	22121434.D	SEQ-CALAE		1	NO MANUAL INTEGRATION
0533	22121435.D	SEQ-PEM2		1	NO MANUAL INTEGRATION
0551	22121436.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
0609	22121437.D	SEQ-ICV2		1	NO MANUAL INTEGRATION
0627	22121438.D	SEQ-ICV3		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0645	22121439.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
0703	22121440.D	BKK0688-BLK1		1	NO MANUAL INTEGRATION
0721	22121441.D	BKK0688-BS1		1	NO MANUAL INTEGRATION
0739	22121442.D	BKK0688-BS2		1	NO MANUAL INTEGRATION
0757	22121443.D	BKK0688-BS3		1	NO MANUAL INTEGRATION
0815	22121444.D	BKK0688-BSD1		1	NO MANUAL INTEGRATION
0832	22121445.D	BKK0142-BLK1		1	NO MANUAL INTEGRATION
0850	22121446.D	BKK0142-BS1		1	NO MANUAL INTEGRATION
0908	22121447.D	BKK0142-BS2		1	NO MANUAL INTEGRATION
0926	22121448.D	BKK0142-BSD1		1	NO MANUAL INTEGRATION
0944	22121449.D	BKK0142-MS1		1	NO MANUAL INTEGRATION
1002	22121450.D	BKK0142-MSD1		1	NO MANUAL INTEGRATION
1020	22121451.D	22J0513-01		1	NO MANUAL INTEGRATION
1038	22121452.D	22J0513-04		1	NO MANUAL INTEGRATION
1055	22121453.D	22J0535-01		1	trans-Chlordane [C],
1113	22121454.D	22K0429-01		1	NO MANUAL INTEGRATION
1131	22121455.D	22K0429-02		1	Aldrin [C], Heptachlor epoxide b [C], trans-Chlordane [C],
1149	22121456.D	22K0429-03		1	Aldrin [C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1207	22121457.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
1225	22121458.D	SEQ-CCV1		1	NO MANUAL INTEGRATION
1243	22121459.D	SEQ-CCV2		1	NO MANUAL INTEGRATION
1301	22121460.D	SEQ-CCV3		1	NO MANUAL INTEGRATION
1319	22121461.D	SEQ-CCV4		1	NO MANUAL INTEGRATION
1336	22121462.D	BKK0380-BLK1		1	NO MANUAL INTEGRATION
1354	22121463.D	BKK0380-BS1		1	NO MANUAL INTEGRATION
1412	22121464.D	BKK0380-BSD1		1	NO MANUAL INTEGRATION
1430	22121465.D	22K0157-01		1	NO MANUAL INTEGRATION
1448	22121466.D	22K0230-01		1	NO MANUAL INTEGRATION
1506	22121467.D	22K0231-01		1	NO MANUAL INTEGRATION
1524	22121468.D	BKK0382-BLK1		1	NO MANUAL INTEGRATION
1542	22121469.D	BKK0382-BS1		1	NO MANUAL INTEGRATION
1600	22121470.D	BKK0382-BS2		1	NO MANUAL INTEGRATION
1618	22121471.D	BKK0382-BSD1		1	NO MANUAL INTEGRATION
1635	22121472.D	22K0075-01		1	NO MANUAL INTEGRATION
1653	22121473.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
1711	22121474.D	SEQ-CCV5		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1729	22121475.D	SEQ-CCV6		1	NO MANUAL INTEGRATION
1747	22121476.D	SEQ-CCV7		1	NO MANUAL INTEGRATION
1805	22121477.D	SEQ-CCV8		1	NO MANUAL INTEGRATION
1823	22121478.D	BKK0537-BLK1		1	NO MANUAL INTEGRATION
1840	22121479.D	BKK0537-BS1		1	NO MANUAL INTEGRATION
1858	22121480.D	BKK0537-BS2		1	NO MANUAL INTEGRATION
1916	22121481.D	22K0194-01		1	NO MANUAL INTEGRATION
1934	22121482.D	22K0194-01RE1	10	1	NO MANUAL INTEGRATION
1952	22121483.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2010	22121484.D	SEQ-CCV9		1	NO MANUAL INTEGRATION
2027	22121485.D	SEQ-CCVA		1	NO MANUAL INTEGRATION
2045	22121486.D	SEQ-CCVB		1	NO MANUAL INTEGRATION
2103	22121487.D	SEQ-CCVC		1	NO MANUAL INTEGRATION

Security Status Report

Date: 17-Dec-2022 10:57

22121401.D	Data Locked	jrains, 17-Dec-2022 10:57
22121402.D	Data Locked	jrains, 17-Dec-2022 10:57
22121403.D	Data Locked	jrains, 17-Dec-2022 10:57
22121404.D	Data Locked	jrains, 17-Dec-2022 10:57
22121405.D	Data Locked	jrains, 17-Dec-2022 10:57
22121406.D	Data Locked	jrains, 17-Dec-2022 10:57
22121407.D	Data Locked	jrains, 17-Dec-2022 10:57
22121408.D	Data Locked	jrains, 17-Dec-2022 10:57
22121409.D	Data Locked	jrains, 17-Dec-2022 10:57
22121410.D	Data Locked	jrains, 17-Dec-2022 10:57
22121411.D	Data Locked	jrains, 17-Dec-2022 10:57
22121412.D	Data Locked	jrains, 17-Dec-2022 10:57
22121413.D	Data Locked	jrains, 17-Dec-2022 10:57
22121414.D	Data Locked	jrains, 17-Dec-2022 10:57
22121415.D	Data Locked	jrains, 17-Dec-2022 10:57
22121416.D	Data Locked	jrains, 17-Dec-2022 10:57
22121417.D	Data Locked	jrains, 17-Dec-2022 10:57
22121418.D	Data Locked	jrains, 17-Dec-2022 10:57
22121419.D	Data Locked	jrains, 17-Dec-2022 10:57
22121420.D	Data Locked	jrains, 17-Dec-2022 10:57
22121421.D	Data Locked	jrains, 17-Dec-2022 10:57
22121422.D	Data Locked	jrains, 17-Dec-2022 10:57
22121423.D	Data Locked	jrains, 17-Dec-2022 10:57
22121424.D	Data Locked	jrains, 17-Dec-2022 10:57
22121425.D	Data Locked	jrains, 17-Dec-2022 10:57
22121426.D	Data Locked	jrains, 17-Dec-2022 10:57
22121427.D	Data Locked	jrains, 17-Dec-2022 10:57
22121428.D	Data Locked	jrains, 17-Dec-2022 10:57
22121429.D	Data Locked	jrains, 17-Dec-2022 10:57
22121430.D	Data Locked	jrains, 17-Dec-2022 10:57
22121431.D	Data Locked	jrains, 17-Dec-2022 10:57
22121432.D	Data Locked	jrains, 17-Dec-2022 10:57
22121433.D	Data Locked	jrains, 17-Dec-2022 10:57
22121434.D	Data Locked	jrains, 17-Dec-2022 10:57

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0046
Instrument: ECD6
Calibration: FL00041

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLB0046-ICV1	23013104.D	23013104.D	NA	01/31/23 15:45
Calibration Check	SLB0046-CCV1	23013119.D	23013119.D	NA	01/31/23 20:13
Calibration Check	SLB0046-CCV2	23013133.D	23013133.D	NA	02/01/23 00:24
Blank	BLA0392-BLK1	23013134.D	23013134.D	Solid	02/01/23 00:42
LCS	BLA0392-BS1	23013135.D	23013135.D	Solid	02/01/23 01:00
LCS Dup	BLA0392-BSD1	23013136.D	23013136.D	Solid	02/01/23 01:18
LDW23-SC1250	23A0133-03	23013137.D	23013137.D	Solid	02/01/23 01:36
LDW23-SC1241	23A0133-06	23013138.D	23013138.D	Solid	02/01/23 01:54
LDW23-IT1217	23A0133-07	23013139.D	23013139.D	Solid	02/01/23 02:12
LDW23-SC1185	23A0133-08	23013140.D	23013140.D	Solid	02/01/23 02:30
LDW23-SC1185	BLA0392-MS1	23013141.D	23013141.D	Solid	02/01/23 02:48
LDW23-SC1185	BLA0392-MSD1	23013142.D	23013142.D	Solid	02/01/23 03:05
LDW23-SC1234	23A0133-09	23013143.D	23013143.D	Solid	02/01/23 03:23
LDW23-SC1215	23A0133-10	23013144.D	23013144.D	Solid	02/01/23 03:41
LDW23-SC1222	23A0133-11	23013145.D	23013145.D	Solid	02/01/23 03:59
LDW23-SC1227	23A0133-12	23013146.D	23013146.D	Solid	02/01/23 04:17
LDW23-SS1110	23A0133-13	23013147.D	23013147.D	Solid	02/01/23 04:35
LDW23-SS1109	23A0133-14	23013148.D	23013148.D	Solid	02/01/23 04:53
Calibration Check	SLB0046-CCV3	23013150.D	23013150.D	NA	02/01/23 05:28
LDW23-SS1092	23A0133-15	23013151.D	23013151.D	Solid	02/01/23 05:46
LDW23-SS1091	23A0133-16	23013152.D	23013152.D	Solid	02/01/23 06:04
Calibration Check	SLB0046-CCV4	23013168.D	23013168.D	NA	02/01/23 10:50
Calibration Check	SLB0046-CCV5	23013178.D	23013178.D	NA	02/01/23 13:49

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLB0046

Instrument: ECD6
Calibration ID: FL00041

Printed: 2/3/2023 3:55:03PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0046-PEM1	QC		1		K007286	L000844		
SLB0046-ICV1	QC		2		L000845	L000844		
BLA0336-BLK1	QC		3			L000844		
BLA0336-BS1	QC		4			L000844		
BLA0336-BSD1	QC		5			L000844		
BLA0336-MS1	QC		6			L000844		
BLA0336-MSD1	QC		7			L000844		
23A0100-01	8081B Pest (PSDDA)	A 02	8			L000844	Anchor QEA, LLC	
23A0100-02	8081B Pest (PSDDA)	A 02	9			L000844	Anchor QEA, LLC	
23A0100-03	8081B Pest (PSDDA)	A 02	10			L000844	Anchor QEA, LLC	
23A0100-04	8081B Pest (PSDDA)	A 02	11			L000844	Anchor QEA, LLC	
23A0100-05	8081B Pest (PSDDA)	A 02	12			L000844	Anchor QEA, LLC	
23A0100-06	8081B Pest (PSDDA)	A 02	13			L000844	Anchor QEA, LLC	
23A0100-07	8081B Pest (PSDDA)	A 02	14			L000844	Anchor QEA, LLC	
23A0100-08	8081B Pest (PSDDA)	A 02	15			L000844	Anchor QEA, LLC	
23A0100-09	8081B Pest (PSDDA)	A 02	16			L000844	Anchor QEA, LLC	
23A0100-10	8081B Pest (PSDDA)	A 02	17			L000844	Anchor QEA, LLC	
SLB0046-PEM2	QC		18		K007286	L000844		
SLB0046-CCV1	QC		19		L000845	L000844		
23A0100-11	8081B Pest (PSDDA)	A 02	20			L000844	Anchor QEA, LLC	
23A0100-12	8081B Pest (PSDDA)	A 02	21			L000844	Anchor QEA, LLC	

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SLB0046

Instrument: ECD6
Calibration ID: FL00041

Printed: 2/3/2023 3:55:03PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
23A0100-13	8081B Pest (PSDDA)	A 02	22			L000844	Anchor QEA, LLC	
23A0100-14	8081B Pest (PSDDA)	A 02	23			L000844	Anchor QEA, LLC	
23A0100-15	8081B Pest (PSDDA)	A 02	24			L000844	Anchor QEA, LLC	
23A0100-16	8081B Pest (PSDDA)	A 02	25			L000844	Anchor QEA, LLC	
23A0100-17	8081B Pest (PSDDA)	A 02	26			L000844	Anchor QEA, LLC	
23A0100-18	8081B Pest (PSDDA)	A 02	27			L000844	Anchor QEA, LLC	
23A0100-19	8081B Pest (PSDDA)	A 02	28			L000844	Anchor QEA, LLC	
23A0100-20	8081B Pest (PSDDA)	A 02	29			L000844	Anchor QEA, LLC	
SLB0046-PEM3	QC		30		K007286	L000844		
SLB0046-CCV2	QC		31		L000845	L000844		
BLA0392-BLK1	QC		32			L000844		
BLA0392-BS1	QC		33			L000844		
BLA0392-BSD1	QC		34			L000844		
BLA0392-MS1	QC		35			L000844		
BLA0392-MSD1	QC		36			L000844		
22L0417-03	8081B Pest (PSDDA)	A 04	37			L000844	Anchor QEA, LLC	
22L0417-04	8081B Pest (PSDDA)	A 04	38			L000844	Anchor QEA, LLC	
23A0133-03	8081B Pest (PSDDA)	C 01	39			L000844	Anchor QEA, LLC	
23A0133-07	8081B Pest (PSDDA)	C 01	40			L000844	Anchor QEA, LLC	
23A0133-09	8081B Pest (PSDDA)	C 01	41			L000844	Anchor QEA, LLC	
23A0133-08	8081B Pest (PSDDA)	C 01	42			L000844	Anchor QEA, LLC	

Samples Loaded By Date

Data Processed By Date

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLB0046

Instrument: ECD6
Calibration ID: FL00041

Printed: 2/3/2023 3:55:03PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
23A0133-11	8081B Pest (PSDDA)	C 01	43			L000844	Anchor QEA, LLC	
23A0133-10	8081B Pest (PSDDA)	C 01	44			L000844	Anchor QEA, LLC	
23A0133-12	8081B Pest (PSDDA)	C 01	45			L000844	Anchor QEA, LLC	
23A0133-06	8081B Pest (PSDDA)	C 01	46			L000844	Anchor QEA, LLC	
23A0133-13	8081B Pest (PSDDA)	C 01	47			L000844	Anchor QEA, LLC	
23A0133-14	8081B Pest (PSDDA)	C 01	48			L000844	Anchor QEA, LLC	
SLB0046-PEM4	QC		49		K007286	L000844		
SLB0046-CCV3	QC		50		L000845	L000844		
23A0133-15	8081B Pest (PSDDA)	C 01	51			L000844	Anchor QEA, LLC	
23A0133-16	8081B Pest (PSDDA)	C 01	52			L000844	Anchor QEA, LLC	
BLA0409-BLK1	QC		53			L000844		
BLA0409-BS1	QC		54			L000844		
BLA0409-BSD1	QC		55			L000844		
BLA0409-MRL1	QC		56			L000844		
BLA0409-MS1	QC		57			L000844		
BLA0409-MSD1	QC		58			L000844		
23A0134-01	8081B Pest (PSDDA)	C 01	59			L000844	Anchor QEA, LLC	
23A0134-02	8081B Pest (PSDDA)	C 01	60			L000844	Anchor QEA, LLC	
23A0134-03	8081B Pest (PSDDA)	C 01	61			L000844	Anchor QEA, LLC	
23A0134-04	8081B Pest (PSDDA)	C 01	62			L000844	Anchor QEA, LLC	
23A0134-05	8081B Pest (PSDDA)	C 01	63			L000844	Anchor QEA, LLC	

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SLB0046

Instrument: ECD6
Calibration ID: FL00041

Printed: 2/3/2023 3:55:03PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
23A0134-06	8081B Pest (PSDDA)	C 01	64			L000844	Anchor QEA, LLC	
23A0134-07	8081B Pest (PSDDA)	C 01	65			L000844	Anchor QEA, LLC	
23A0134-08	8081B Pest (PSDDA)	C 01	66			L000844	Anchor QEA, LLC	
23A0134-09	8081B Pest (PSDDA)	C 01	67			L000844	Anchor QEA, LLC	
23A0134-10	8081B Pest (PSDDA)	C 01	68			L000844	Anchor QEA, LLC	
SLB0046-PEM5	QC		69		K007286	L000844		
SLB0046-CCV4	QC		70		L000845	L000844		
23A0134-11	8081B Pest (PSDDA)	C 01	71			L000844	Anchor QEA, LLC	
23A0134-12	8081B Pest (PSDDA)	C 01	72			L000844	Anchor QEA, LLC	
23A0134-13	8081B Pest (PSDDA)	C 01	73			L000844	Anchor QEA, LLC	
SLB0046-PEM6	QC		74		K007286	L000844		
SLB0046-CCV5	QC		75		L000845	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230131.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	31-JAN-2023 15:28	23013103.D	1	SLB0046-PEM1	
2	31-JAN-2023 15:45	23013104.D	1	SLB0046-ICV1	
3	31-JAN-2023 16:03	23013105.D	1	BLA0336-BLK1	
4	31-JAN-2023 16:21	23013106.D	1	BLA0336-BS1	
5	31-JAN-2023 16:39	23013107.D	1	BLA0336-BSD1	
6	31-JAN-2023 16:57	23013108.D	1	23A0100-01	
7	31-JAN-2023 17:15	23013109.D	1	23A0100-02	
8	31-JAN-2023 17:32	23013110.D	1	23A0100-03	
9	31-JAN-2023 17:50	23013111.D	1	23A0100-04	
10	31-JAN-2023 18:08	23013112.D	1	23A0100-05	
11	31-JAN-2023 18:26	23013113.D	1	23A0100-06	
12	31-JAN-2023 18:44	23013114.D	1	23A0100-07	
13	31-JAN-2023 19:02	23013115.D	1	23A0100-08	
14	31-JAN-2023 19:20	23013116.D	1	23A0100-09	
15	31-JAN-2023 19:38	23013117.D	1	23A0100-10	
16	31-JAN-2023 19:55	23013118.D	1	SLB0046-PEM2	
17	31-JAN-2023 20:13	23013119.D	1	SLB0046-CCV1	
18	31-JAN-2023 20:31	23013120.D	1	23A0100-11	
19	31-JAN-2023 20:49	23013121.D	1	23A0100-12	
20	31-JAN-2023 21:07	23013122.D	1	23A0100-13	
21	31-JAN-2023 21:25	23013123.D	1	23A0100-14	
22	31-JAN-2023 21:43	23013124.D	1	23A0100-15	
23	31-JAN-2023 22:01	23013125.D	1	23A0100-16	
24	31-JAN-2023 22:19	23013126.D	1	23A0100-17	
25	31-JAN-2023 22:37	23013127.D	1	BLA0336-MS1	
26	31-JAN-2023 22:55	23013128.D	1	BLA0336-MSD1	
27	31-JAN-2023 23:13	23013129.D	1	23A0100-18	
28	31-JAN-2023 23:30	23013130.D	1	23A0100-19	
29	31-JAN-2023 23:48	23013131.D	1	23A0100-20	
30	01-FEB-2023 00:06	23013132.D	1	SLB0046-PEM3	
31	01-FEB-2023 00:24	23013133.D	1	SLB0046-CCV2	
32	01-FEB-2023 00:42	23013134.D	1	BLA0392-BLK1	
33	01-FEB-2023 01:00	23013135.D	1	BLA0392-BS1	
34	01-FEB-2023 01:18	23013136.D	1	BLA0392-BSD1	
35	01-FEB-2023 01:36	23013137.D	1	23A0133-03	
36	01-FEB-2023 01:54	23013138.D	1	23A0133-06	
37	01-FEB-2023 02:12	23013139.D	1	23A0133-07	
38	01-FEB-2023 02:30	23013140.D	1	23A0133-08	
39	01-FEB-2023 02:48	23013141.D	1	BLA0392-MS1	
40	01-FEB-2023 03:05	23013142.D	1	BLA0392-MSD1	
41	01-FEB-2023 03:23	23013143.D	1	23A0133-09	
42	01-FEB-2023 03:41	23013144.D	1	23A0133-10	
43	01-FEB-2023 03:59	23013145.D	1	23A0133-11	
44	01-FEB-2023 04:17	23013146.D	1	23A0133-12	
45	01-FEB-2023 04:35	23013147.D	1	23A0133-13	
46	01-FEB-2023 04:53	23013148.D	1	23A0133-14	
47	01-FEB-2023 05:10	23013149.D	1	SLB0046-PEM4	
48	01-FEB-2023 05:28	23013150.D	1	SLB0046-CCV3	
49	01-FEB-2023 05:46	23013151.D	1	23A0133-15	
50	01-FEB-2023 06:04	23013152.D	1	23A0133-16	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230131.b p

	Inject Date/Time	Filename	DF	LabID	ClientID
51	01-FEB-2023 06:22	23013153.D	1	22L0417-03	
52	01-FEB-2023 06:40	23013154.D	1	22L0417-04	
53	01-FEB-2023 06:58	23013155.D	1	BLA0409-BLK1	
54	01-FEB-2023 07:15	23013156.D	1	BLA0409-BS1	
55	01-FEB-2023 07:33	23013157.D	1	BLA0409-BSD1	
56	01-FEB-2023 07:51	23013158.D	1	BLA0409-MRL1	
57	01-FEB-2023 08:09	23013159.D	1	BLA0409-MS1	
58	01-FEB-2023 08:27	23013160.D	1	BLA0409-MSD1	
59	01-FEB-2023 08:45	23013161.D	1	23A0134-01	
60	01-FEB-2023 09:03	23013162.D	1	23A0134-02	
61	01-FEB-2023 09:21	23013163.D	1	23A0134-03	
62	01-FEB-2023 09:38	23013164.D	1	23A0134-04	
63	01-FEB-2023 09:56	23013165.D	1	23A0134-05	
64	01-FEB-2023 10:14	23013166.D	1	23A0134-06	
65	01-FEB-2023 10:32	23013167.D	1	SLB0046-PEM5	
66	01-FEB-2023 10:50	23013168.D	1	SLB0046-CCV4	
67	01-FEB-2023 11:08	23013169.D	1	23A0134-07	
68	01-FEB-2023 11:26	23013170.D	1	23A0134-08	
69	01-FEB-2023 11:44	23013171.D	1	23A0134-09	
70	01-FEB-2023 12:02	23013172.D	1	23A0134-10	
71	01-FEB-2023 12:20	23013173.D	1	23A0134-11	
72	01-FEB-2023 12:38	23013174.D	1	23A0134-12	
73	01-FEB-2023 12:56	23013175.D	1	23A0134-13	
74	01-FEB-2023 13:14	23013176.D	1	23A0134-15	
75	01-FEB-2023 13:31	23013177.D	1	SLB0046-PEM6	
76	01-FEB-2023 13:49	23013178.D	1	SLB0046-CCV5	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230131.b

ARI Job No.: SLB0 Method: PEST.m Instrument: ecd6.i Date: 31-JAN-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1528	23013103.D	SLB0046-PEM1		1	NO MANUAL INTEGRATION
1545	23013104.D	SLB0046-ICV1		1	NO MANUAL INTEGRATION
1603	23013105.D	BLA0336-BLK1		1	NO MANUAL INTEGRATION
1621	23013106.D	BLA0336-BS1		1	NO MANUAL INTEGRATION
1639	23013107.D	BLA0336-BSD1		1	NO MANUAL INTEGRATION
1657	23013108.D	23A0100-01		1	NO MANUAL INTEGRATION
1715	23013109.D	23A0100-02		1	NO MANUAL INTEGRATION
1732	23013110.D	23A0100-03		1	NO MANUAL INTEGRATION
1750	23013111.D	23A0100-04		1	NO MANUAL INTEGRATION
1808	23013112.D	23A0100-05		1	NO MANUAL INTEGRATION
1826	23013113.D	23A0100-06		1	NO MANUAL INTEGRATION
1844	23013114.D	23A0100-07		1	NO MANUAL INTEGRATION
1902	23013115.D	23A0100-08		1	NO MANUAL INTEGRATION
1920	23013116.D	23A0100-09		1	NO MANUAL INTEGRATION
1938	23013117.D	23A0100-10		1	NO MANUAL INTEGRATION
1955	23013118.D	SLB0046-PEM2		1	NO MANUAL INTEGRATION
2013	23013119.D	SLB0046-CCV1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230131.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2031	23013120.D	23A0100-11		1	NO MANUAL INTEGRATION
2049	23013121.D	23A0100-12		1	Hexachlorobenzene,
2107	23013122.D	23A0100-13		1	NO MANUAL INTEGRATION
2125	23013123.D	23A0100-14		1	NO MANUAL INTEGRATION
2143	23013124.D	23A0100-15		1	NO MANUAL INTEGRATION
2201	23013125.D	23A0100-16		1	NO MANUAL INTEGRATION
2219	23013126.D	23A0100-17		1	NO MANUAL INTEGRATION
2237	23013127.D	BLA0336-MS1		1	NO MANUAL INTEGRATION
2255	23013128.D	BLA0336-MSD1		1	NO MANUAL INTEGRATION
2313	23013129.D	23A0100-18		1	Hexachlorobenzene,
2330	23013130.D	23A0100-19		1	Hexachlorobenzene,
2348	23013131.D	23A0100-20		1	NO MANUAL INTEGRATION
0006	23013132.D	SLB0046-PEM3		1	NO MANUAL INTEGRATION
0024	23013133.D	SLB0046-CCV2		1	NO MANUAL INTEGRATION
0042	23013134.D	BLA0392-BLK1		1	NO MANUAL INTEGRATION
0100	23013135.D	BLA0392-BS1		1	NO MANUAL INTEGRATION
0118	23013136.D	BLA0392-BSD1		1	NO MANUAL INTEGRATION
0136	23013137.D	23A0133-03		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230131.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0154	23013138.D	23A0133-06		1	NO MANUAL INTEGRATION
0212	23013139.D	23A0133-07		1	NO MANUAL INTEGRATION
0230	23013140.D	23A0133-08		1	NO MANUAL INTEGRATION
0248	23013141.D	BLA0392-MS1		1	NO MANUAL INTEGRATION
0305	23013142.D	BLA0392-MSD1		1	NO MANUAL INTEGRATION
0323	23013143.D	23A0133-09		1	NO MANUAL INTEGRATION
0341	23013144.D	23A0133-10		1	NO MANUAL INTEGRATION
0359	23013145.D	23A0133-11		1	alpha-BHC,
0417	23013146.D	23A0133-12		1	NO MANUAL INTEGRATION
0435	23013147.D	23A0133-13		1	NO MANUAL INTEGRATION
0453	23013148.D	23A0133-14		1	Hexachlorobenzene,
0510	23013149.D	SLB0046-PEM4		1	NO MANUAL INTEGRATION
0528	23013150.D	SLB0046-CCV3		1	NO MANUAL INTEGRATION
0546	23013151.D	23A0133-15		1	Hexachlorobenzene,
0604	23013152.D	23A0133-16		1	NO MANUAL INTEGRATION
0622	23013153.D	22L0417-03		1	NO MANUAL INTEGRATION
0640	23013154.D	22L0417-04		1	NO MANUAL INTEGRATION
0658	23013155.D	BLA0409-BLK1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230131.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0715	23013156.D	BLA0409-BS1		1	NO MANUAL INTEGRATION
0733	23013157.D	BLA0409-BSD1		1	NO MANUAL INTEGRATION
0751	23013158.D	BLA0409-MRL1		1	NO MANUAL INTEGRATION
0809	23013159.D	BLA0409-MS1		1	NO MANUAL INTEGRATION
0827	23013160.D	BLA0409-MSD1		1	NO MANUAL INTEGRATION
0845	23013161.D	23A0134-01		1	NO MANUAL INTEGRATION
0903	23013162.D	23A0134-02		1	alpha-BHC,
0921	23013163.D	23A0134-03		1	NO MANUAL INTEGRATION
0938	23013164.D	23A0134-04		1	Hexachlorobenzene,
0956	23013165.D	23A0134-05		1	alpha-BHC,
1014	23013166.D	23A0134-06		1	Hexachlorobenzene,
1032	23013167.D	SLB0046-PEM5		1	NO MANUAL INTEGRATION
1050	23013168.D	SLB0046-CCV4		1	NO MANUAL INTEGRATION
1108	23013169.D	23A0134-07		1	NO MANUAL INTEGRATION
1126	23013170.D	23A0134-08		1	NO MANUAL INTEGRATION
1144	23013171.D	23A0134-09		1	alpha-BHC,
1202	23013172.D	23A0134-10		1	NO MANUAL INTEGRATION
1220	23013173.D	23A0134-11		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230131.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1238	23013174.D	23A0134-12		1	NO MANUAL INTEGRATION
1256	23013175.D	23A0134-13		1	NO MANUAL INTEGRATION
1314	23013176.D	23A0134-15		1	NO MANUAL INTEGRATION
1331	23013177.D	SLB0046-PEM6		1	NO MANUAL INTEGRATION
1349	23013178.D	SLB0046-CCV5		1	NO MANUAL INTEGRATION

Security Status Report

Date: 04-Feb-2023 11:13

23013103.D	Data Locked	yev, 04-
23013104.D	Data Locked	yev, 04-
23013105.D	Data Locked	yev, 04-
23013106.D	Data Locked	yev, 04-
23013107.D	Data Locked	yev, 04-
23013108.D	Data Locked	yev, 04-
23013109.D	Data Locked	yev, 04-
23013110.D	Data Locked	yev, 04-
23013111.D	Data Locked	yev, 04-
23013112.D	Data Locked	yev, 04-
23013113.D	Data Locked	yev, 04-
23013114.D	Data Locked	yev, 04-
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23013117.D	Data Locked	yev, 04-
23013118.D	Data Locked	yev, 04-
23013119.D	Data Locked	yev, 04-
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23013152.D	Data Locked	yev, 04-
23013153.D	Data Locked	yev, 04-
23013154.D	Data Locked	yev, 04-
23013155.D	Data Locked	yev, 04-
23013156.D	Data Locked	yev, 04-
23013157.D	Data Locked	yev, 04-
23013158.D	Data Locked	yev, 04-
23013159.D	Data Locked	yev, 04-
23013160.D	Data Locked	yev, 04-
23013161.D	Data Locked	yev, 04-
23013162.D	Data Locked	yev, 04-
23013163.D	Data Locked	yev, 04-

23013164.D	Data Locked	yev, 04-
23013165.D	Data Locked	yev, 04-
23013166.D	Data Locked	yev, 04-
23013167.D	Data Locked	yev, 04-
23013168.D	Data Locked	yev, 04-
23013169.D	Data Locked	yev, 04-
23013170.D	Data Locked	yev, 04-
23013171.D	Data Locked	yev, 04-
23013172.D	Data Locked	yev, 04-
23013173.D	Data Locked	yev, 04-
23013174.D	Data Locked	yev, 04-
23013175.D	Data Locked	yev, 04-
23013176.D	Data Locked	yev, 04-
23013177.D	Data Locked	yev, 04-
23013178.D	Data Locked	yev, 04-

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SKL0233	Instrument:	ECD6
Calibration:	FL00041	Calibration Date:	12/15/2022

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SKL0233-PEM1 (Water)				Lab File ID: 22121404.D			Analyzed: 12/14/22 20:20	
Decachlorobiphenyl	160.00	83.0	0 - 200	9.355	9.354666	0.0003	+/-0.1	
Decachlorobiphenyl [2C]	160.00	83.5	0 - 200	10.466	10.4655	0.0005	+/-0.1	
Tetrachlorometaxylene	160.00	78.1	0 - 200	3.828	3.827833	0.0002	+/-0.1	
Tetrachlorometaxylene [2C]	160.00	83.5	0 - 200	4.22	4.219666	0.0003	+/-0.1	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0046
Instrument: ECD6
Calibration: FL00041
Calibration Date: 12/14/2022

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0046-ICV1 (Solid)				Lab File ID: 23013104.D			Analyzed: 01/31/23 15:45	
Decachlorobiphenyl	40.000	98.9	80 - 120	9.316	9.354666	-0.0387	+/-0.1	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	10.418	10.4655	-0.0475	+/-0.1	
Tetrachlorometaxylene	40.000	99.4	80 - 120	3.798	3.827833	-0.0298	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	99.6	80 - 120	4.191	4.219666	-0.0287	+/-0.1	
SLB0046-CCV1 (Solid)				Lab File ID: 23013119.D			Analyzed: 01/31/23 20:13	
Decachlorobiphenyl	40.000	96.4	80 - 120	9.315	9.354666	-0.0397	+/-0.1	
Decachlorobiphenyl [2C]	40.000	96.3	80 - 120	10.414	10.4655	-0.0515	+/-0.1	
Tetrachlorometaxylene	40.000	98.8	80 - 120	3.798	3.827833	-0.0298	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	95.5	80 - 120	4.189	4.219666	-0.0307	+/-0.1	
SLB0046-CCV2 (Solid)				Lab File ID: 23013133.D			Analyzed: 02/01/23 00:24	
Decachlorobiphenyl	40.000	95.4	80 - 120	9.316	9.354666	-0.0387	+/-0.1	
Decachlorobiphenyl [2C]	40.000	96.5	80 - 120	10.414	10.4655	-0.0515	+/-0.1	
Tetrachlorometaxylene	40.000	101	80 - 120	3.798	3.827833	-0.0298	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	95.4	80 - 120	4.19	4.219666	-0.0297	+/-0.1	
BLA0392-BLK1 (Solid)				Lab File ID: 23013134.D			Analyzed: 02/01/23 00:42	
Decachlorobiphenyl	8.0000	95.7	30 - 160	9.314	9.354666	-0.0407	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	102	30 - 160	10.414	10.4655	-0.0515	+/-0.1	
Tetrachlorometaxylene	8.0000	75.6	30 - 160	3.797	3.827833	-0.0308	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	72.6	30 - 160	4.189	4.219666	-0.0307	+/-0.1	
BLA0392-BS1 (Solid)				Lab File ID: 23013135.D			Analyzed: 02/01/23 01:00	
Decachlorobiphenyl	8.0000	95.7	30 - 160	9.315	9.354666	-0.0397	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	101	30 - 160	10.414	10.4655	-0.0515	+/-0.1	
Tetrachlorometaxylene	8.0000	74.1	30 - 160	3.798	3.827833	-0.0298	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	71.9	30 - 160	4.189	4.219666	-0.0307	+/-0.1	
BLA0392-BSD1 (Solid)				Lab File ID: 23013136.D			Analyzed: 02/01/23 01:18	
Decachlorobiphenyl	8.0000	97.2	30 - 160	9.314	9.354666	-0.0407	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	110	30 - 160	10.415	10.4655	-0.0505	+/-0.1	
Tetrachlorometaxylene	8.0000	77.8	30 - 160	3.797	3.827833	-0.0308	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	74.6	30 - 160	4.189	4.219666	-0.0307	+/-0.1	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0046	Instrument:	ECD6
Calibration:	FL00041	Calibration Date:	12/15/2022

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0133-03 (Solid)				Lab File ID: 23013137.D			Analyzed: 02/01/23 01:36	
Decachlorobiphenyl	7.9827	96.5	30 - 160	9.318	9.354666	-0.0367	+/-0.1	
Decachlorobiphenyl [2C]	7.9827	97.2	30 - 160	10.416	10.4655	-0.0495	+/-0.1	
Tetrachlorometaxylene	7.9827	70.9	30 - 160	3.797	3.827833	-0.0308	+/-0.1	
Tetrachlorometaxylene [2C]	7.9827	71.8	30 - 160	4.188	4.219666	-0.0317	+/-0.1	
23A0133-06 (Solid)				Lab File ID: 23013138.D			Analyzed: 02/01/23 01:54	
Decachlorobiphenyl	7.9797	96.4	30 - 160	9.317	9.354666	-0.0377	+/-0.1	
Decachlorobiphenyl [2C]	7.9797	96.7	30 - 160	10.416	10.4655	-0.0495	+/-0.1	
Tetrachlorometaxylene	7.9797	66.4	30 - 160	3.797	3.827833	-0.0308	+/-0.1	
Tetrachlorometaxylene [2C]	7.9797	69.1	30 - 160	4.189	4.219666	-0.0307	+/-0.1	
23A0133-07 (Solid)				Lab File ID: 23013139.D			Analyzed: 02/01/23 02:12	
Decachlorobiphenyl	7.9994	113	30 - 160	9.319	9.354666	-0.0357	+/-0.1	
Decachlorobiphenyl [2C]	7.9994	112	30 - 160	10.418	10.4655	-0.0475	+/-0.1	
Tetrachlorometaxylene	7.9994	69.1	30 - 160	3.797	3.827833	-0.0308	+/-0.1	
Tetrachlorometaxylene [2C]	7.9994	72.2	30 - 160	4.188	4.219666	-0.0317	+/-0.1	
23A0133-08 (Solid)				Lab File ID: 23013140.D			Analyzed: 02/01/23 02:30	
Decachlorobiphenyl	7.9929	90.8	30 - 160	9.318	9.354666	-0.0367	+/-0.1	
Decachlorobiphenyl [2C]	7.9929	92.1	30 - 160	10.417	10.4655	-0.0485	+/-0.1	
Tetrachlorometaxylene	7.9929	70.1	30 - 160	3.796	3.827833	-0.0318	+/-0.1	
Tetrachlorometaxylene [2C]	7.9929	65.1	30 - 160	4.188	4.219666	-0.0317	+/-0.1	
BLA0392-MS1 (Solid)				Lab File ID: 23013141.D			Analyzed: 02/01/23 02:48	
Decachlorobiphenyl	8.0004	97.1	30 - 160	9.317	9.354666	-0.0377	+/-0.1	
Decachlorobiphenyl [2C]	8.0004	97.2	30 - 160	10.417	10.4655	-0.0485	+/-0.1	
Tetrachlorometaxylene	8.0004	75.1	30 - 160	3.796	3.827833	-0.0318	+/-0.1	
Tetrachlorometaxylene [2C]	8.0004	66.9	30 - 160	4.189	4.219666	-0.0307	+/-0.1	
BLA0392-MSD1 (Solid)				Lab File ID: 23013142.D			Analyzed: 02/01/23 03:05	
Decachlorobiphenyl	8.0004	133	30 - 160	9.318	9.354666	-0.0367	+/-0.1	
Decachlorobiphenyl [2C]	8.0004	104	30 - 160	10.417	10.4655	-0.0485	+/-0.1	
Tetrachlorometaxylene	8.0004	91.6	30 - 160	3.797	3.827833	-0.0308	+/-0.1	
Tetrachlorometaxylene [2C]	8.0004	73.7	30 - 160	4.189	4.219666	-0.0307	+/-0.1	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0046
Instrument: ECD6
Calibration: FL00041
Calibration Date: 12/15/2022

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0133-09 (Solid)				Lab File ID: 23013143.D			Analyzed: 02/01/23 03:23	
Decachlorobiphenyl	7.9863	93.3	30 - 160	9.318	9.354666	-0.0367	+/-0.1	
Decachlorobiphenyl [2C]	7.9863	97.8	30 - 160	10.417	10.4655	-0.0485	+/-0.1	
Tetrachlorometaxylene	7.9863	65.3	30 - 160	3.797	3.827833	-0.0308	+/-0.1	
Tetrachlorometaxylene [2C]	7.9863	67.4	30 - 160	4.189	4.219666	-0.0307	+/-0.1	
23A0133-10 (Solid)				Lab File ID: 23013144.D			Analyzed: 02/01/23 03:41	
Decachlorobiphenyl	7.9996	99.0	30 - 160	9.322	9.354666	-0.0327	+/-0.1	
Decachlorobiphenyl [2C]	7.9996	97.4	30 - 160	10.421	10.4655	-0.0445	+/-0.1	
Tetrachlorometaxylene	7.9996	54.7	30 - 160	3.798	3.827833	-0.0298	+/-0.1	
Tetrachlorometaxylene [2C]	7.9996	54.4	30 - 160	4.19	4.219666	-0.0297	+/-0.1	
23A0133-11 (Solid)				Lab File ID: 23013145.D			Analyzed: 02/01/23 03:59	
Decachlorobiphenyl	7.9962	97.2	30 - 160	9.321	9.354666	-0.0337	+/-0.1	
Decachlorobiphenyl [2C]	7.9962	100	30 - 160	10.419	10.4655	-0.0465	+/-0.1	
Tetrachlorometaxylene	7.9962	61.9	30 - 160	3.796	3.827833	-0.0318	+/-0.1	
Tetrachlorometaxylene [2C]	7.9962	61.4	30 - 160	4.189	4.219666	-0.0307	+/-0.1	
23A0133-12 (Solid)				Lab File ID: 23013146.D			Analyzed: 02/01/23 04:17	
Decachlorobiphenyl	7.9920	101	30 - 160	9.315	9.354666	-0.0397	+/-0.1	
Decachlorobiphenyl [2C]	7.9920	153	30 - 160	10.416	10.4655	-0.0495	+/-0.1	
Tetrachlorometaxylene	7.9920	70.9	30 - 160	3.798	3.827833	-0.0298	+/-0.1	
Tetrachlorometaxylene [2C]	7.9920	68.8	30 - 160	4.19	4.219666	-0.0297	+/-0.1	
23A0133-13 (Solid)				Lab File ID: 23013147.D			Analyzed: 02/01/23 04:35	
Decachlorobiphenyl	7.9932	82.7	30 - 160	9.315	9.354666	-0.0397	+/-0.1	
Decachlorobiphenyl [2C]	7.9932	103	30 - 160	10.415	10.4655	-0.0505	+/-0.1	
Tetrachlorometaxylene	7.9932	65.5	30 - 160	3.798	3.827833	-0.0298	+/-0.1	
Tetrachlorometaxylene [2C]	7.9932	66.0	30 - 160	4.19	4.219666	-0.0297	+/-0.1	
23A0133-14 (Solid)				Lab File ID: 23013148.D			Analyzed: 02/01/23 04:53	
Decachlorobiphenyl	7.9116	97.9	30 - 160	9.317	9.354666	-0.0377	+/-0.1	
Decachlorobiphenyl [2C]	7.9116	98.1	30 - 160	10.416	10.4655	-0.0495	+/-0.1	
Tetrachlorometaxylene	7.9116	73.4	30 - 160	3.797	3.827833	-0.0308	+/-0.1	
Tetrachlorometaxylene [2C]	7.9116	71.7	30 - 160	4.188	4.219666	-0.0317	+/-0.1	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0046
Instrument: ECD6
Calibration: FL00041
Calibration Date: 12/14/2022

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0046-CCV3 (Solid)			Lab File ID: 23013150.D			Analyzed: 02/01/23 05:28		
Decachlorobiphenyl	40.000	97.3	80 - 120	9.316	9.354666	-0.0387	+/-0.1	
Decachlorobiphenyl [2C]	40.000	95.2	80 - 120	10.415	10.4655	-0.0505	+/-0.1	
Tetrachlorometaxylene	40.000	99.2	80 - 120	3.8	3.827833	-0.0278	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	97.1	80 - 120	4.19	4.219666	-0.0297	+/-0.1	
23A0133-15 (Solid)			Lab File ID: 23013151.D			Analyzed: 02/01/23 05:46		
Decachlorobiphenyl	7.9768	106	30 - 160	9.315	9.354666	-0.0397	+/-0.1	
Decachlorobiphenyl [2C]	7.9768	107	30 - 160	10.415	10.4655	-0.0505	+/-0.1	
Tetrachlorometaxylene	7.9768	77.3	30 - 160	3.798	3.827833	-0.0298	+/-0.1	
Tetrachlorometaxylene [2C]	7.9768	79.0	30 - 160	4.19	4.219666	-0.0297	+/-0.1	
23A0133-16 (Solid)			Lab File ID: 23013152.D			Analyzed: 02/01/23 06:04		
Decachlorobiphenyl	7.9760	86.9	30 - 160	9.315	9.354666	-0.0397	+/-0.1	
Decachlorobiphenyl [2C]	7.9760	84.6	30 - 160	10.415	10.4655	-0.0505	+/-0.1	
Tetrachlorometaxylene	7.9760	69.7	30 - 160	3.798	3.827833	-0.0298	+/-0.1	
Tetrachlorometaxylene [2C]	7.9760	62.8	30 - 160	4.19	4.219666	-0.0297	+/-0.1	
SLB0046-CCV4 (Solid)			Lab File ID: 23013168.D			Analyzed: 02/01/23 10:50		
Decachlorobiphenyl	40.000	99.6	80 - 120	9.315	9.354666	-0.0397	+/-0.1	
Decachlorobiphenyl [2C]	40.000	96.4	80 - 120	10.413	10.4655	-0.0525	+/-0.1	
Tetrachlorometaxylene	40.000	99.6	80 - 120	3.8	3.827833	-0.0278	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	98.9	80 - 120	4.191	4.219666	-0.0287	+/-0.1	
SLB0046-CCV5 (Solid)			Lab File ID: 23013178.D			Analyzed: 02/01/23 13:49		
Decachlorobiphenyl	40.000	98.8	80 - 120	9.315	9.354666	-0.0397	+/-0.1	
Decachlorobiphenyl [2C]	40.000	97.1	80 - 120	10.414	10.4655	-0.0515	+/-0.1	
Tetrachlorometaxylene	40.000	101	80 - 120	3.8	3.827833	-0.0278	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	100	80 - 120	4.19	4.219666	-0.0297	+/-0.1	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SKL0233	Instrument:	ECD6
		Calibration:	FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Performance Mix (SKL0233-PEM1)		(Water)		Lab File ID: 22121404.D				Analyzed: 12/14/22 20:20	
1-Bromo-2-Nitrobenzene	683485	3.15	672426	3.15	102	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	619012	9.503	609723	9.504	102	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1005375	3.35	1006482	3.35	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	772586	11.054	769764	11.053	100	50 - 200	0.001	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0046
Instrument: ECD6
Calibration: FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLB0046-ICV1)		(Solid)		Lab File ID: 23013104.D			Analyzed: 01/31/23 15:45		
1-Bromo-2-Nitrobenzene	773823	3.125	773823	3.125	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	691463	9.465	691463	9.465	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1185819	3.326	1185819	3.326	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	785814	10.999	785814	10.999	100	50 - 200	0.000	+/-0.50	
Blank (BLA0392-BLK1)		(Solid)		Lab File ID: 23013134.D			Analyzed: 02/01/23 00:42		
1-Bromo-2-Nitrobenzene	831390	3.124	773823	3.125	107	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	755842	9.462	691463	9.465	109	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1425928	3.325	1185819	3.326	120	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	943214	10.995	785814	10.999	120	50 - 200	-0.004	+/-0.50	
LCS (BLA0392-BS1)		(Solid)		Lab File ID: 23013135.D			Analyzed: 02/01/23 01:00		
1-Bromo-2-Nitrobenzene	838726	3.124	773823	3.125	108	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	789811	9.463	691463	9.465	114	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1424555	3.325	1185819	3.326	120	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	965219	10.995	785814	10.999	123	50 - 200	-0.004	+/-0.50	
LCS Dup (BLA0392-BSD1)		(Solid)		Lab File ID: 23013136.D			Analyzed: 02/01/23 01:18		
1-Bromo-2-Nitrobenzene	830768	3.124	773823	3.125	107	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	744415	9.462	691463	9.465	108	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1405970	3.325	1185819	3.326	119	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	942175	10.995	785814	10.999	120	50 - 200	-0.004	+/-0.50	
LDW23-SC1250 (23A0133-03)		(Solid)		Lab File ID: 23013137.D			Analyzed: 02/01/23 01:36		
1-Bromo-2-Nitrobenzene	872990	3.124	773823	3.125	113	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	707453	9.467	691463	9.465	102	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1374958	3.325	1185819	3.326	116	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	914719	10.998	785814	10.999	116	50 - 200	-0.001	+/-0.50	
LDW23-SC1241 (23A0133-06)		(Solid)		Lab File ID: 23013138.D			Analyzed: 02/01/23 01:54		
1-Bromo-2-Nitrobenzene	1094393	3.124	773823	3.125	141	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	858208	9.467	691463	9.465	124	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1632607	3.325	1185819	3.326	138	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	1088085	10.998	785814	10.999	138	50 - 200	-0.001	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0046	Instrument:	ECD6
		Calibration:	FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-IT1217 (23A0133-07)		(Solid)		Lab File ID: 23013139.D			Analyzed: 02/01/23 02:12		
1-Bromo-2-Nitrobenzene	897706	3.124	773823	3.125	116	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	665986	9.469	691463	9.465	96	50 - 200	0.004	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1313326	3.325	1185819	3.326	111	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	862839	10.999	785814	10.999	110	50 - 200	0.000	+/-0.50	
LDW23-SC1185 (23A0133-08)		(Solid)		Lab File ID: 23013140.D			Analyzed: 02/01/23 02:30		
1-Bromo-2-Nitrobenzene	838064	3.123	773823	3.125	108	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	686455	9.468	691463	9.465	99	50 - 200	0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1327682	3.324	1185819	3.326	112	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	863112	10.999	785814	10.999	110	50 - 200	0.000	+/-0.50	
Matrix Spike (BLA0392-MS1)		(Solid)		Lab File ID: 23013141.D			Analyzed: 02/01/23 02:48		
1-Bromo-2-Nitrobenzene	903748	3.124	773823	3.125	117	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	695690	9.467	691463	9.465	101	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1346547	3.324	1185819	3.326	114	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	871557	10.998	785814	10.999	111	50 - 200	-0.001	+/-0.50	
Matrix Spike Dup (BLA0392-MSD1)		(Solid)		Lab File ID: 23013142.D			Analyzed: 02/01/23 03:05		
1-Bromo-2-Nitrobenzene	954549	3.124	773823	3.125	123	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	887035	9.468	691463	9.465	128	50 - 200	0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1359002	3.325	1185819	3.326	115	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	884682	10.998	785814	10.999	113	50 - 200	-0.001	+/-0.50	
LDW23-SC1234 (23A0133-09)		(Solid)		Lab File ID: 23013143.D			Analyzed: 02/01/23 03:23		
1-Bromo-2-Nitrobenzene	914815	3.124	773823	3.125	118	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	701103	9.467	691463	9.465	101	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1345157	3.325	1185819	3.326	113	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	870138	10.998	785814	10.999	111	50 - 200	-0.001	+/-0.50	
LDW23-SC1215 (23A0133-10)		(Solid)		Lab File ID: 23013144.D			Analyzed: 02/01/23 03:41		
1-Bromo-2-Nitrobenzene	896184	3.124	773823	3.125	116	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	690015	9.475	691463	9.465	100	50 - 200	0.010	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1311546	3.325	1185819	3.326	111	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	877888	11.003	785814	10.999	112	50 - 200	0.004	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLB0046

SDG: 23A0133
Project: AOC5 MR Phase 1
Instrument: ECD6
Calibration: FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SC1222 (23A0133-11)		(Solid)		Lab File ID: 23013145.D			Analyzed: 02/01/23 03:59		
1-Bromo-2-Nitrobenzene	1076833	3.123	773823	3.125	139	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	870339	9.472	691463	9.465	126	50 - 200	0.007	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1608290	3.325	1185819	3.326	136	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	1098992	11.001	785814	10.999	140	50 - 200	0.002	+/-0.50	
LDW23-SC1227 (23A0133-12)		(Solid)		Lab File ID: 23013146.D			Analyzed: 02/01/23 04:17		
1-Bromo-2-Nitrobenzene	451622	3.126	773823	3.125	58	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	372348	9.464	691463	9.465	54	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	690853	3.327	1185819	3.326	58	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	518319	10.996	785814	10.999	66	50 - 200	-0.003	+/-0.50	
LDW23-SS1110 (23A0133-13)		(Solid)		Lab File ID: 23013147.D			Analyzed: 02/01/23 04:35		
1-Bromo-2-Nitrobenzene	639701	3.126	773823	3.125	83	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	520053	9.464	691463	9.465	75	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	962552	3.327	1185819	3.326	81	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	686821	10.996	785814	10.999	87	50 - 200	-0.003	+/-0.50	
LDW23-SS1109 (23A0133-14)		(Solid)		Lab File ID: 23013148.D			Analyzed: 02/01/23 04:53		
1-Bromo-2-Nitrobenzene	868689	3.124	773823	3.125	112	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	739547	9.467	691463	9.465	107	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1389480	3.325	1185819	3.326	117	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	939202	10.998	785814	10.999	120	50 - 200	-0.001	+/-0.50	
LDW23-SS1092 (23A0133-15)		(Solid)		Lab File ID: 23013151.D			Analyzed: 02/01/23 05:46		
1-Bromo-2-Nitrobenzene	479687	3.126	773823	3.125	62	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	396530	9.464	691463	9.465	57	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	749804	3.327	1185819	3.326	63	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	507196	10.996	785814	10.999	65	50 - 200	-0.003	+/-0.50	
LDW23-SS1091 (23A0133-16)		(Solid)		Lab File ID: 23013152.D			Analyzed: 02/01/23 06:04		
1-Bromo-2-Nitrobenzene	468940	3.126	773823	3.125	61	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	398052	9.463	691463	9.465	58	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	736368	3.326	1185819	3.326	62	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	510093	10.996	785814	10.999	65	50 - 200	-0.003	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-07	File ID:	23013139.D
Sampled:	01/06/23 11:14	Prepared:	01/19/23 13:44	Analyzed:	02/01/23 02:12
Solids:	59.50	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD6
Batch:	BLA0392	Sequence:	SLB0046		
GC Column(1):	STX-CLP			GC Column(2):	STX-CLPII

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Hexachlorobenzene	* 1	4.149	4.182	0.033	47310	0.59	26.9
	2	4.683	4.717833	0.0348	54419	0.45	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-15	File ID:	23013151.D
Sampled:	01/06/23 14:26	Prepared:	01/19/23 13:44	Analyzed:	02/01/23 05:46
Solids:	52.30	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD6
Batch:	BLA0392	Sequence:	SLB0046		
GC Column(1):	STX-CLP			GC Column(2):	STX-CLPII

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Hexachlorobenzene	* 1	4.149	4.182	0.033	17174	0.40	13.3
	2	4.681	4.717833	0.0368	23699	0.35	

* Column used for quantitation

HOLDING TIME SUMMARY

Analysis: EPA 8081B

Laboratory: Analytical Resources, LLC SDG: 23A0133

Client: Anchor QEA, LLC Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1250 23A0133-03	01/06/23 10:32	01/06/23 17:26	01/19/23 13:44	13	365	02/01/23 01:36	12	40	
LDW23-SC1241 23A0133-06	01/06/23 10:51	01/06/23 17:26	01/19/23 13:44	13	365	02/01/23 01:54	13	40	
LDW23-IT1217 23A0133-07	01/06/23 11:14	01/06/23 17:26	01/19/23 13:44	13	365	02/01/23 02:12	13	40	
LDW23-SC1185 23A0133-08	01/06/23 12:00	01/06/23 17:26	01/19/23 13:44	13	365	02/01/23 02:30	13	40	
LDW23-SC1234 23A0133-09	01/06/23 13:34	01/06/23 17:26	01/19/23 13:44	13	365	02/01/23 03:23	13	40	
LDW23-SC1215 23A0133-10	01/06/23 11:38	01/06/23 17:26	01/19/23 13:44	13	365	02/01/23 03:41	13	40	
LDW23-SC1222 23A0133-11	01/06/23 13:00	01/06/23 17:26	01/19/23 13:44	13	365	02/01/23 03:59	13	40	
LDW23-SC1227 23A0133-12	01/06/23 13:18	01/06/23 17:26	01/19/23 13:44	13	365	02/01/23 04:17	13	40	
LDW23-SS1110 23A0133-13	01/06/23 14:00	01/06/23 17:26	01/19/23 13:44	12	365	02/01/23 04:35	13	40	
LDW23-SS1109 23A0133-14	01/06/23 14:13	01/06/23 17:26	01/19/23 13:44	12	365	02/01/23 04:53	13	40	
LDW23-SS1092 23A0133-15	01/06/23 14:26	01/06/23 17:26	01/19/23 13:44	12	365	02/01/23 05:46	13	40	
LDW23-SS1091 23A0133-16	01/06/23 14:50	01/06/23 17:26	01/19/23 13:44	12	365	02/01/23 06:04	13	40	
Matrix Spike BLA0392-MS1	01/06/23 12:00	01/06/23 17:26	01/19/23 13:44	13	365	02/01/23 02:48	13	40	
Matrix Spike Dup BLA0392-MSD1	01/06/23 12:00	01/06/23 17:26	01/19/23 13:44	13	365	02/01/23 03:05	13	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ECD6

Analyte	MDL	RL	Units
Hexachlorobenzene	0.15	0.50	ug/kg
Hexachlorobenzene [2C]	0.15	0.50	ug/kg

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CERTIFICATE OF ANALYSIS

Catalog No: S-279N
Description: Tetrachloro-m-xylene
Lot: 0052481B-1
Solvent: N/A
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: Jul 28, 2005
Expiration: Jul 28, 2015
Sample Size: 100 mg
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

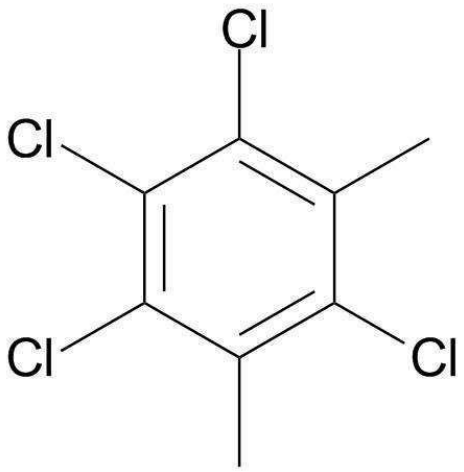
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration	Certified Analyte Concentration[1]
Tetrachloro-meta-xylene	877-09-8	96.0	N/A	N/A

Identification:

Molecular formula: C8H6Cl4
Molecular weight: 243.94



C000147
tetrachlormetaxylene
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] The Uncertainty calculated for this product is ±2.4%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Metrological traceability is established through in-house validated methods.

Purity, if stated, is equal to 100% minus found impurity components. Impurity components have not been identified.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

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CERTIFICATE OF PRODUCT DATA

PRODUCT: C-209N
DESCRIPTION: 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl
LOT #: 990521LB-AC
SOLVENT: N/A

EXPIRATION: Jul 28, 2015

This product is guaranteed accurate to ±0.5% of the Certified Analyte concentration through the Expiration Date on the Label.

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1]	Certified Analyte Concentration[2]
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	100	N/A	N/A

C000148
decachlorbiphenyl
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

* I1768A

Certified by: R. Cooper

1. All weights are traceable through National Institute of Standards & Technology, Test No. 822/254480
2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty calculated for this product is ±4% which is the Combined Uncertainty uc(y). It represents an estimated standard deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is U which is Uc(y) *K where K is the coverage factor at the 95% confidence level (K=2).
3. A product with a suffix (-1A, -2B, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

Please note: AccuStandard follows the U.S. conventions in reporting numerical values, on both certificates and labels.

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

This product was manufactured in accordance to quality system requirements of ISO 9001:2000 and ISO 17025

* Recertified 2 4-6-09 JS

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Standard Record

Standard ID: C000148 **Printed: 4/23/2015 11:54:44AM**

Description:	decachlorbiphenyl	Expires:	15-Jan-2020
Standard Type:	Other	Prepared:	15-Jan-2014
Solvent:	na/a	Prepared By:	Joshua Rains
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	27-Feb-2015 13:03 by JGR
Vendor:	Accustandard	Lot #:	990521lb-ac
Vendor Catalog #:			

Comments

see i1768a
SOM calibrations added 06/12/14 sdrd

Analyte	CAS Number	Concentration	Units
Decachlorobiphenyl [2C]	2051-24-3	1000000	ug/mL
Decachlorobiphenyl	2051-24-3	1000000	ug/mL
DCB 1660 [2C]	2051-24-3	1000000	ug/mL
DCB 1660	2051-24-3	1000000	ug/mL
DCB [2C]	2051-24-3	1000000	ug/mL
DCB (A) [2C]	2051-24-3	1000000	ug/mL
DCB (A)	2051-24-3	1000000	ug/mL
DCB	2051-24-3	1000000	ug/mL

Reviewed By Date

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CERTIFICATE OF ANALYSIS

Catalog No: P-066S
Description: Mirex
Lot: 219051741-01
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jun 5, 2020
Expiration: Jun 5, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY AT-1339

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Mirex	2385-85-5	98.2	100.2	98.4

I007970
Mirex 2d source
Solvent / Lot: MeOH
Prep: 9/7/2020 by JR
Exp: 6/5/2024
Location:

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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CERTIFICATE OF ANALYSIS

Catalog No: P-026S
Description: o,p'-DDE
Lot: 218021093-01
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Feb 10, 2020
Expiration: Feb 10, 2023
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
o,p'-DDE	3424-82-6	99.9	100.4	100.3

I7971

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 822-275872-11

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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CERTIFICATE OF ANALYSIS

Catalog No: P-184S
Description: trans-Nonachlor
Lot: 218011470
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jan 30, 2018
Expiration: Jan 30, 2028
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
trans-Nonachlor	39765-80-5	99.0	100.2	99.2

I 7974

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 822-275872-11

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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CERTIFICATE OF ANALYSIS

Catalog No: P-024S
Description: o,p'-DDD
Lot: 220051307
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: May 27, 2020
Expiration: Jun 27, 2022
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
o,p'-DDD	53-19-0	100.0	100.2	100.2

I010773
o,p-DDD
Solvent / Lot: methanol
Prep: 11/20/2020 by VS
Exp: 6/27/2022
Location:

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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Rev. 5/18

1. **Quality Standards:**

   ISO 17034 – General Requirements for the Competence of ReferenceMaterial Producers ANAB Certificate Number AR-1463

   ISO/IEC 17025 – General Requirements for the Competence of TestingAnd Calibration Laboratories ANAB Certificate Number AT-1339

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

2 **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7

3 **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this .

4 **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5 **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6 **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7 **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

125 Market Street
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CERTIFICATE OF ANALYSIS

Catalog No: P-331S
Description: Oxychlordane Isomer
Lot: 218101131
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Oct 8, 2018
Expiration: Nov 8, 2020
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY AT-1339

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Oxychlordane Isomer	27304-13-8	97.7	102.4*	100.0

I010795
Oxychlordane isomer
Solvent / Lot: methanol
Prep: 11/20/2020 by VS
Exp: 6/20/2022
Location:

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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1. **Quality Standards:**

   ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

2 **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7

3 **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this CRM.

4 **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5 **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6 **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

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CERTIFICATE OF ANALYSIS

Catalog No: P-297S
Description: cis-Nonachlor
Lot: 217121240
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Dec 13, 2017
Expiration: Dec 13, 2020
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY AT-1339

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
cis-Nonachlor	5103-73-1	98.6	100.4	99.0

I010796
cis-Nonochlor-Accustd-100ug/ml
Solvent / Lot: methanol
Prep: 11/20/2020 by VS
Exp: 11/27/2022
Location:

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

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1. **Quality Standards:**

   ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 11.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this CRM.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

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CERTIFICATE OF ANALYSIS

Catalog No: APP-9-112-D-20X
Description: Hexachlorobenzene in Dichloromethane
Lot: 219051389
Solvent: Dichloromethane
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: May 13, 2019
Expiration: May 13, 2029
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Hexachlorobenzene	118-74-1	99.0	2002	1982

J006504
Hexachlorobenzene
Solvent / Lot: Dichloromethane
Prep: 6/21/2021 by YZ
Exp: 5/13/2029
Location:

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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1. **Quality Standards:**

   ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

2 **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7

3 **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this .

4 **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5 **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6 **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

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CERTIFICATE OF ANALYSIS

Catalog No: P-028S
Description: o,p'-DDT
Lot: 221071322
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jul 21, 2021
Expiration: Aug 21, 2023
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
o,p'-DDT	789-02-6	99.9	100.1	100.0

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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Rev. 5/18

1. **Quality Standards:**

   ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

   ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

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CERTIFICATE OF ANALYSIS

Catalog No: P-024S
Description: o,p'-DDD
Lot: 220051307-01
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jul 6, 2021
Expiration: Aug 6, 2023
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
o,p'-DDD	53-19-0	100.0	100.2	100.2

K 0448

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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CERTIFICATE OF ANALYSIS

Catalog No: P-331S
Description: Oxychlordane Isomer
Lot: 221051706
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: May 28, 2021
Expiration: Jun 28, 2023
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Oxychlordane Isomer	27304-13-8	99.2	100.1	99.3

K000449
Oxychlordane isomer
Solvent / Lot: methanol
Prep: 1/13/2022 by YZ
Exp: 6/28/2023
Location:

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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1. **Quality Standards:**

   ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

   ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

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CERTIFICATE OF ANALYSIS

Catalog No: P-297S
Description: cis-Nonachlor
Lot: 221041461
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Apr 22, 2021
Expiration: Apr 22, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
cis-Nonachlor	5103-73-1	98.6	101.1	99.7

K 000450

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By:
Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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CERTIFICATE OF ANALYSIS

Catalog No: P-184S
Description: trans-Nonachlor
Lot: 220091107
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Sep 11, 2020
Expiration: Sep 11, 2030
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB AR-1463 ANAB AT-1339 ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
trans-Nonachlor	39765-80-5	99.0	100.2	99.2

K 0045 I

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-066S
Description: Mirex
Lot: 219051741-01
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jun 5, 2020
Expiration: Jun 5, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Mirex	2385-85-5	98.2	100.2	98.4

K 000452

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

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Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

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K 000 452

CERTIFICATE OF ANALYSIS

Catalog No: P-066S
Description: Mirex
Lot: 221121451
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Dec 27, 2021
Expiration: Dec 27, 2025
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Mirex	2385-85-5	98.2	100.0	98.2

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 7/20

125 Market Street
New Haven, CT 06513
USA

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CERTIFICATE OF ANALYSIS

Catalog No: M-8081-DS
Description: 4,4'-DDT & Endrin
Lot: 221031488-04
Solvent: Hexane
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Apr 8, 2022
Expiration: May 8, 2023
Sample Size: 1 mL
Components: 2
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
4,4'-DDT	50-29-3	100.0	200.9	200.9
Endrin	72-20-8	99.8	200.0	199.6

K7002

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32292 **Lot No.:** A0185477

Description : Organochlorine Pesticide Mix AB # 2

Organochlorine Pesticide Mix AB # 2 8-80 µg/mL, Hexane/Toluene(1:1), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2026 **Storage:** 10°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	alpha-BHC	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 319-84-6 (Lot 12307600)		+/- 0.3703 µg/mL	Unstressed
	Purity 99%		+/- 0.5325 µg/mL	Stressed
2	gamma-BHC (Lindane)	8.0 µg/mL	+/- 0.0654 µg/mL	Gravimetric
	CAS # 58-89-9 (Lot 13087200)		+/- 0.3672 µg/mL	Unstressed
	Purity 99%		+/- 0.5281 µg/mL	Stressed
3	beta-BHC	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 319-85-7 (Lot 0588007-4)		+/- 0.3703 µg/mL	Unstressed
	Purity 99%		+/- 0.5325 µg/mL	Stressed
4	delta-BHC	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 319-86-8 (Lot 13112400)		+/- 0.3703 µg/mL	Unstressed
	Purity 99%		+/- 0.5325 µg/mL	Stressed
5	Heptachlor	8.0 µg/mL	+/- 0.0654 µg/mL	Gravimetric
	CAS # 76-44-8 (Lot 803759)		+/- 0.3672 µg/mL	Unstressed
	Purity 99%		+/- 0.5281 µg/mL	Stressed
6	Aldrin	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 309-00-2 (Lot 12983100)		+/- 0.3702 µg/mL	Unstressed
	Purity 96%		+/- 0.5323 µg/mL	Stressed
7	Heptachlor epoxide (isomer B)	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 1024-57-3 (Lot 13168200)		+/- 0.3703 µg/mL	Unstressed
	Purity 99%		+/- 0.5325 µg/mL	Stressed

8	trans-Chlordane		8.0	µg/mL	+/-	0.0657	µg/mL	Gravimetric
	CAS # 5103-74-2	(Lot 32943)			+/-	0.3689	µg/mL	Unstressed
	Purity 98%				+/-	0.5305	µg/mL	Stressed
9	cis-Chlordane		8.0	µg/mL	+/-	0.0657	µg/mL	Gravimetric
	CAS # 5103-71-9	(Lot 31766)			+/-	0.3689	µg/mL	Unstressed
	Purity 98%				+/-	0.5305	µg/mL	Stressed
10	Endosulfan I		8.0	µg/mL	+/-	0.0654	µg/mL	Gravimetric
	CAS # 959-98-8	(Lot BCCF4060)			+/-	0.3672	µg/mL	Unstressed
	Purity 99%				+/-	0.5281	µg/mL	Stressed
11	4,4'-DDE		16.1	µg/mL	+/-	0.1314	µg/mL	Gravimetric
	CAS # 72-55-9	(Lot GHYQG)			+/-	0.7375	µg/mL	Unstressed
	Purity 99%				+/-	1.0606	µg/mL	Stressed
12	Dieldrin		16.1	µg/mL	+/-	0.1320	µg/mL	Gravimetric
	CAS # 60-57-1	(Lot 11129900)			+/-	0.7408	µg/mL	Unstressed
	Purity 98%				+/-	1.0653	µg/mL	Stressed
13	Endrin		16.1	µg/mL	+/-	0.1320	µg/mL	Gravimetric
	CAS # 72-20-8	(Lot 13157400)			+/-	0.7406	µg/mL	Unstressed
	Purity 99%				+/-	1.0650	µg/mL	Stressed
14	4,4'-DDD		16.1	µg/mL	+/-	0.1320	µg/mL	Gravimetric
	CAS # 72-54-8	(Lot HAN02)			+/-	0.7406	µg/mL	Unstressed
	Purity 99%				+/-	1.0650	µg/mL	Stressed
15	Endosulfan II		16.0	µg/mL	+/-	0.1309	µg/mL	Gravimetric
	CAS # 33213-65-9	(Lot 12448900)			+/-	0.7345	µg/mL	Unstressed
	Purity 99%				+/-	1.0562	µg/mL	Stressed
16	4,4'-DDT		16.1	µg/mL	+/-	0.1315	µg/mL	Gravimetric
	CAS # 50-29-3	(Lot 220428JLM)			+/-	0.7378	µg/mL	Unstressed
	Purity 98%				+/-	1.0610	µg/mL	Stressed
17	Endrin aldehyde		16.1	µg/mL	+/-	0.1314	µg/mL	Gravimetric
	CAS # 7421-93-4	(Lot 30720)			+/-	0.7375	µg/mL	Unstressed
	Purity 99%				+/-	1.0606	µg/mL	Stressed
18	Endosulfan sulfate		16.1	µg/mL	+/-	0.1320	µg/mL	Gravimetric
	CAS # 1031-07-8	(Lot BCCB0424)			+/-	0.7406	µg/mL	Unstressed
	Purity 99%				+/-	1.0650	µg/mL	Stressed
19	Methoxychlor		80.2	µg/mL	+/-	0.5781	µg/mL	Gravimetric
	CAS # 72-43-5	(Lot 13027000)			+/-	3.6697	µg/mL	Unstressed
	Purity 98%				+/-	5.2871	µg/mL	Stressed
20	Endrin ketone		16.1	µg/mL	+/-	0.1314	µg/mL	Gravimetric
	CAS # 53494-70-5	(Lot 13026800)			+/-	0.7375	µg/mL	Unstressed
	Purity 99%				+/-	1.0606	µg/mL	Stressed

Solvent: Hexane/Toluene (50:50)
CAS # 110-54-3/108-88-3
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

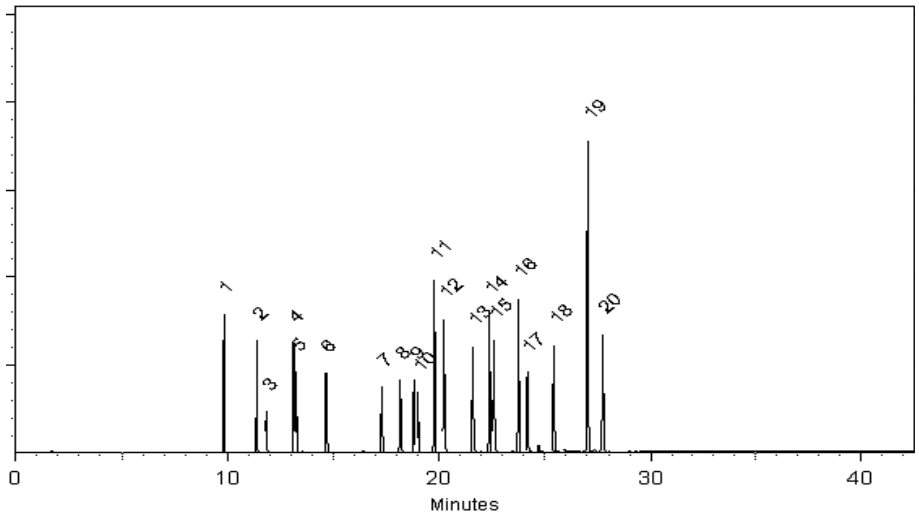
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
150°C to 300°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Morgan Craighead - Mix Technician

Date Mixed: 19-May-2022 **Balance:** B442140311

Fang-Yun Lo - QC Analyst

Date Passed: 26-May-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-502-36-10X
Description: Hexachlorobutadiene
Lot: 222031188
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Mar 11, 2022
Expiration: Apr 11, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Hexachlorobutadiene	87-68-3	98.0	2002	1962

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

1. **Quality Standards:**

   ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

   ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-502-36-10X
Description: Hexachlorobutadiene
Lot: 222031188
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Mar 11, 2022
Expiration: Apr 11, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Hexachlorobutadiene	87-68-3	98.0	2002	1962

K 011468

This Certified Reference Material was verified in accordance with ISO/IEC 17025

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¹ Certified Analyte Concentration = Purity x Prepared Concentration.

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Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1252

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-01 B	File ID:	02012304ECD7.D
Sampled:	01/06/23 09:47	Prepared:	01/18/23 12:25	Analyzed:	02/01/23 10:28
% Solids:	50.24	Preparation:	EPA 3546 (Microwave)	Initial/Final:	24.9 g Wet / 2.5 mL
Batch:	BLA0394	Sequence:	SLB0012	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	39.4	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	62.2	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	43.6	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9938*	*6.78*	*84.8*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9938*	*5.39*	*67.4*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9938*	*6.44*	*80.6*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9938*	*6.04*	*75.6*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230201.b/02012304ECD7.D
Data file 2: /230201.b/230201.b/02012304ECD7.D
Method: \\target\share\chem4\ecd7.i\230201.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0133-01
Client ID:
Injection Date: 01-FEB-2023 10:28
Report Date: 02/01/2023 15:25
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.004	191173	5.681	-0.003	140595	27.0	30.2	11.4	Tetrachloro-m-xylene
13.885	-0.007	156980	14.113	-0.005	173546	33.9	32.2	5.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	501553	-0.4
Hexabromobiphenyl	647433	432753	-33.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	344104	2.1
Hexabromobiphenyl	382032	339227	-11.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.395	-0.010	38098	151.8	1	8.298	-0.006	41790	268.7
Aroclor-1248	2	8.563	-0.018	31725	99.1	2	8.704	-0.007	29483	176.1
Aroclor-1248	3	8.982	-0.017	101495	165.8	3	9.137	-0.016	36695	179.4
Aroclor-1248	4	9.285	-0.009	108861	359.2	4	9.532	-0.045	41704	164.8
		Total Col1Ave (4 peaks):			194.0	Total Col2Ave (4 peaks):				197.2 RPD = 2
		Corrected Ave (3 peaks):			138.9	Corrected Ave (3 peaks):				173.4 RPD = 22
Aroclor-1254	1	9.285	-0.014	108861	213.0	1	9.437	-0.008	72924	292.1
Aroclor-1254	2	9.360	-0.017	51747	237.1	2	9.955	-0.009	34222	169.6
Aroclor-1254	3	9.655	-0.015	72498	221.4	3	10.104	-0.012	132041	300.0
Aroclor-1254	4	9.786	-0.023	153287	238.8	4	10.352	-0.014	162911	370.1
Aroclor-1254	5	10.116	-0.061	184326	441.7	5	10.553	-0.011	104271	425.3
		Total Col1Ave (5 peaks):			270.4	Total Col2Ave (5 peaks):				311.4 RPD = 14
		Corrected Ave (4 peaks):			227.6	Corrected Ave (4 peaks):				283.0 RPD = 22
Aroclor-1260	1	11.031	-0.012	53616	220.8	1	11.643	-0.008	55246	225.7
Aroclor-1260	2	11.346	-0.014	41569	166.5	2	11.904	-0.011	107888	174.3
Aroclor-1260	3	11.717	-0.017	127331	193.8	3	12.422	-0.011	43536	282.1
Aroclor-1260	4	12.117	-0.022	63977	188.4	4	12.487	-0.011	76166	190.1
Aroclor-1260	5	12.233	-0.011	30351	205.1	NS	---			----
		Total Col1Ave (5 peaks):			194.9	Total Col2Ave (4 peaks):				218.0 RPD = 11
		Corrected Ave (4 peaks):			188.5	Corrected Ave (3 peaks):				196.7 RPD = 4
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 2588441 Col1 Total PCB = 0.4 ppm*

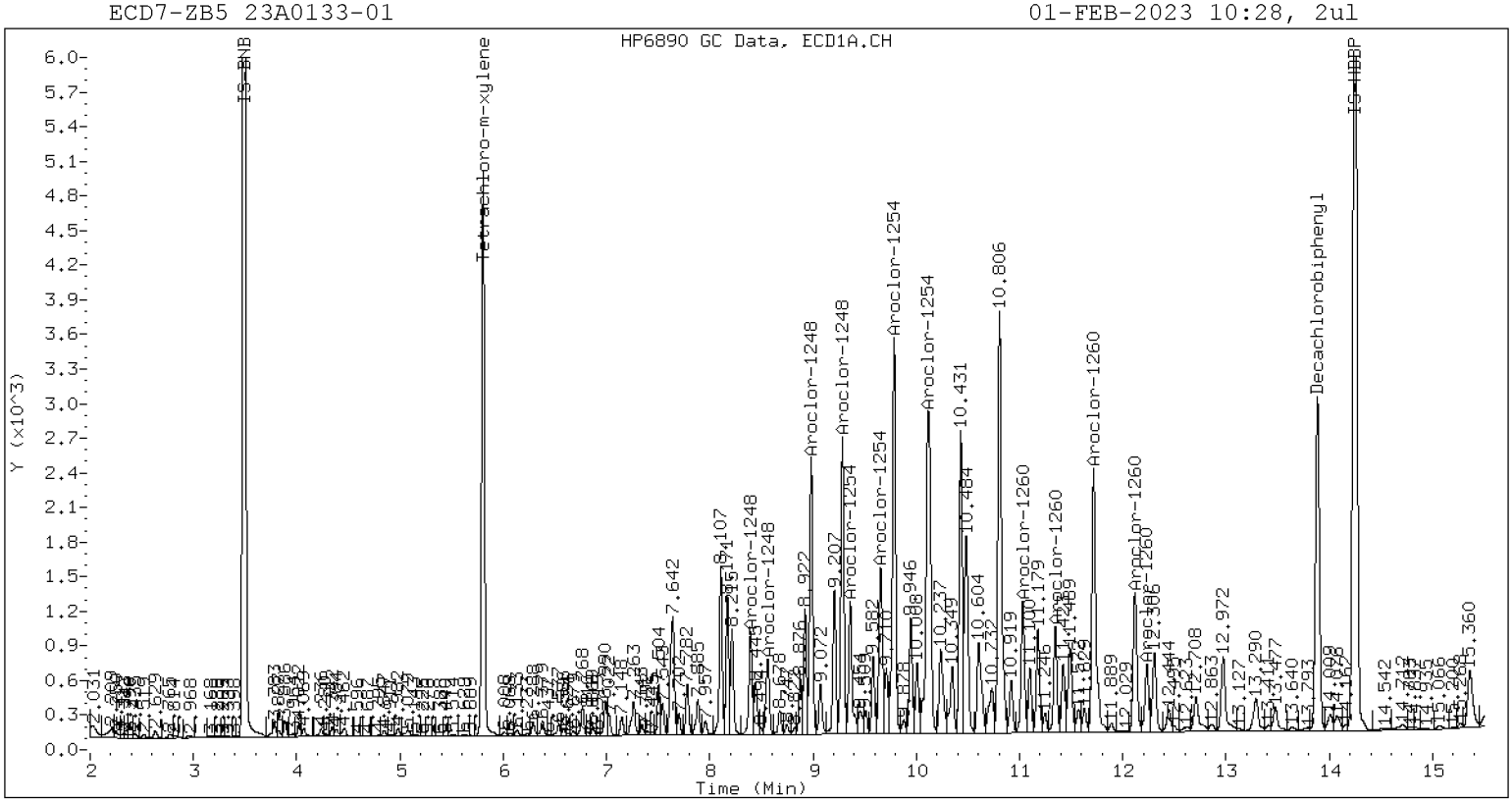
Total PCB Area Col2 (5.784 - 14.018) = 2066949 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

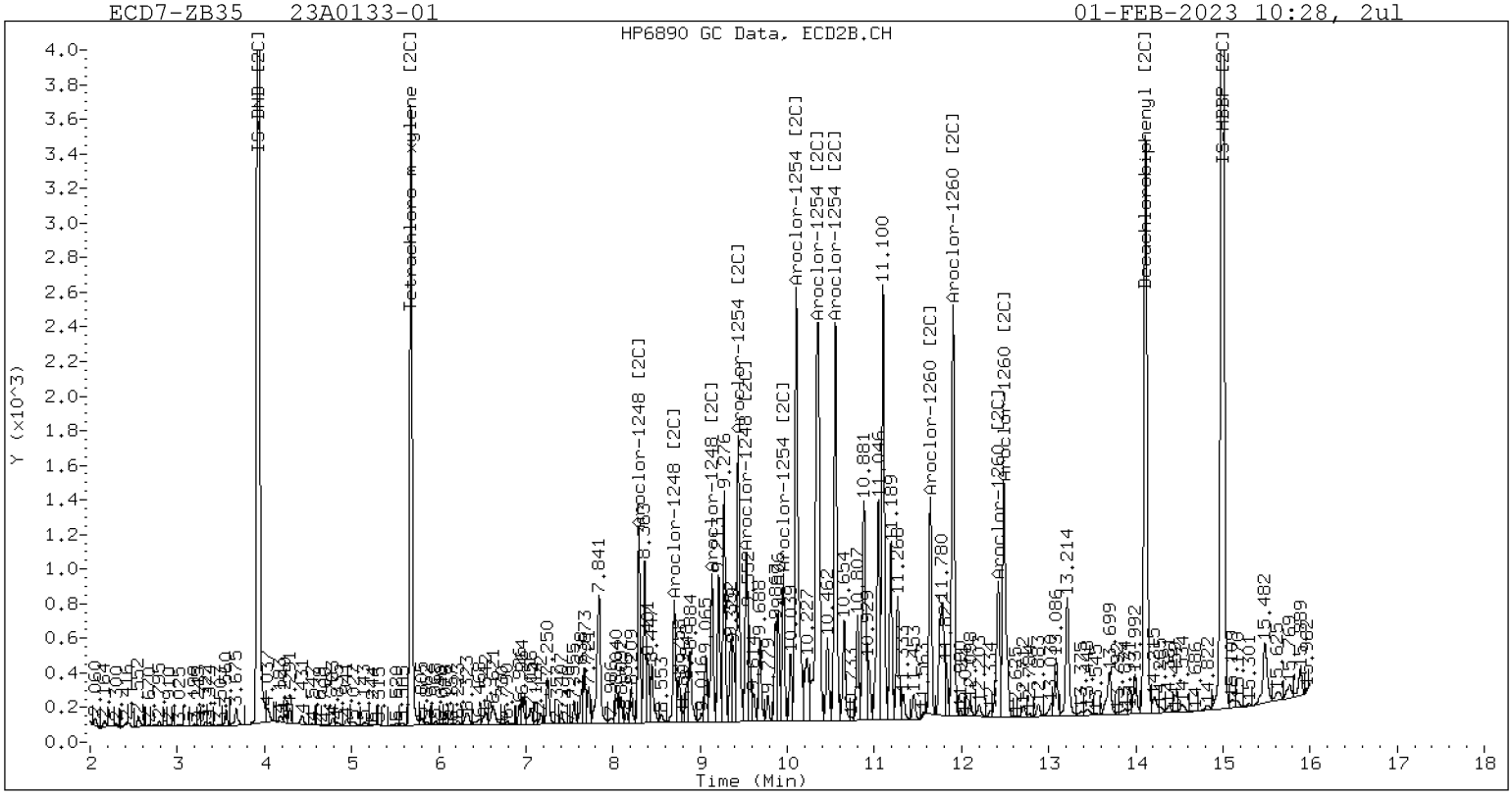
PCB Dual Column Chromatograms

ECD7-ZB5 23A0133-01 01-FEB-2023 10:28, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0133-01 01-FEB-2023 10:28, 2ul

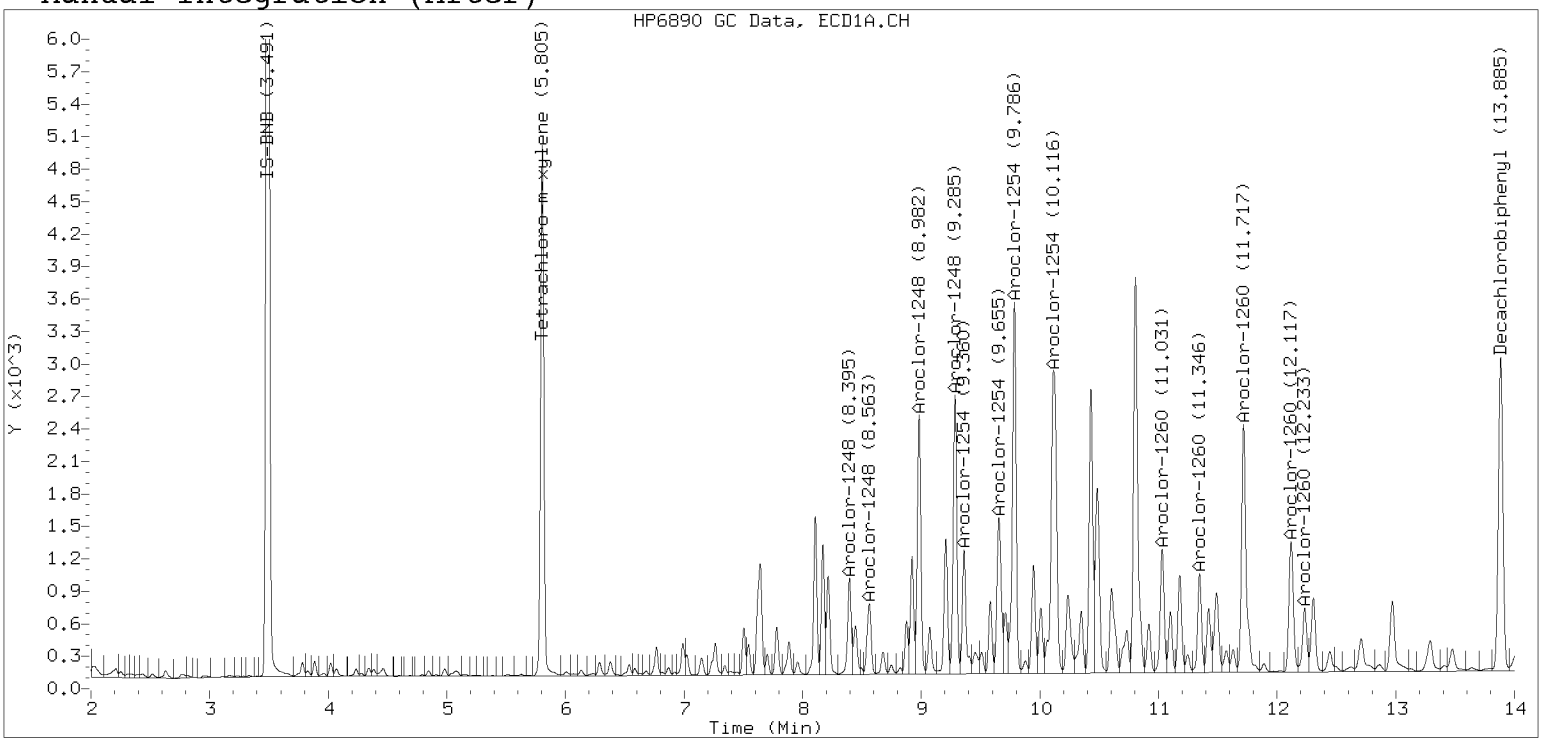


ZB-35 Manual Integration: YES

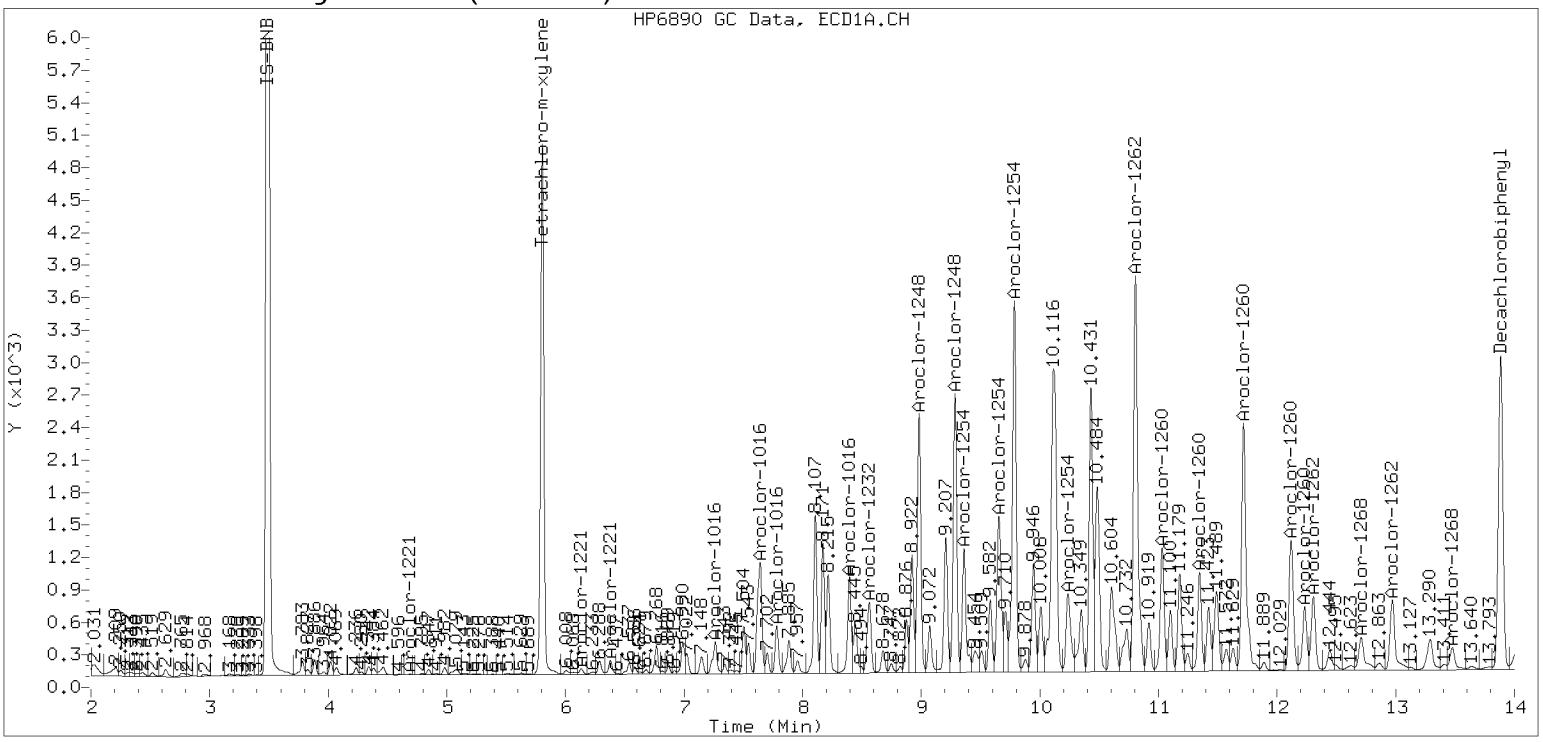
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230201.b/02012304ECD7.D Injection Date: 01-FEB-2023 10:28

Manual Integration (After)



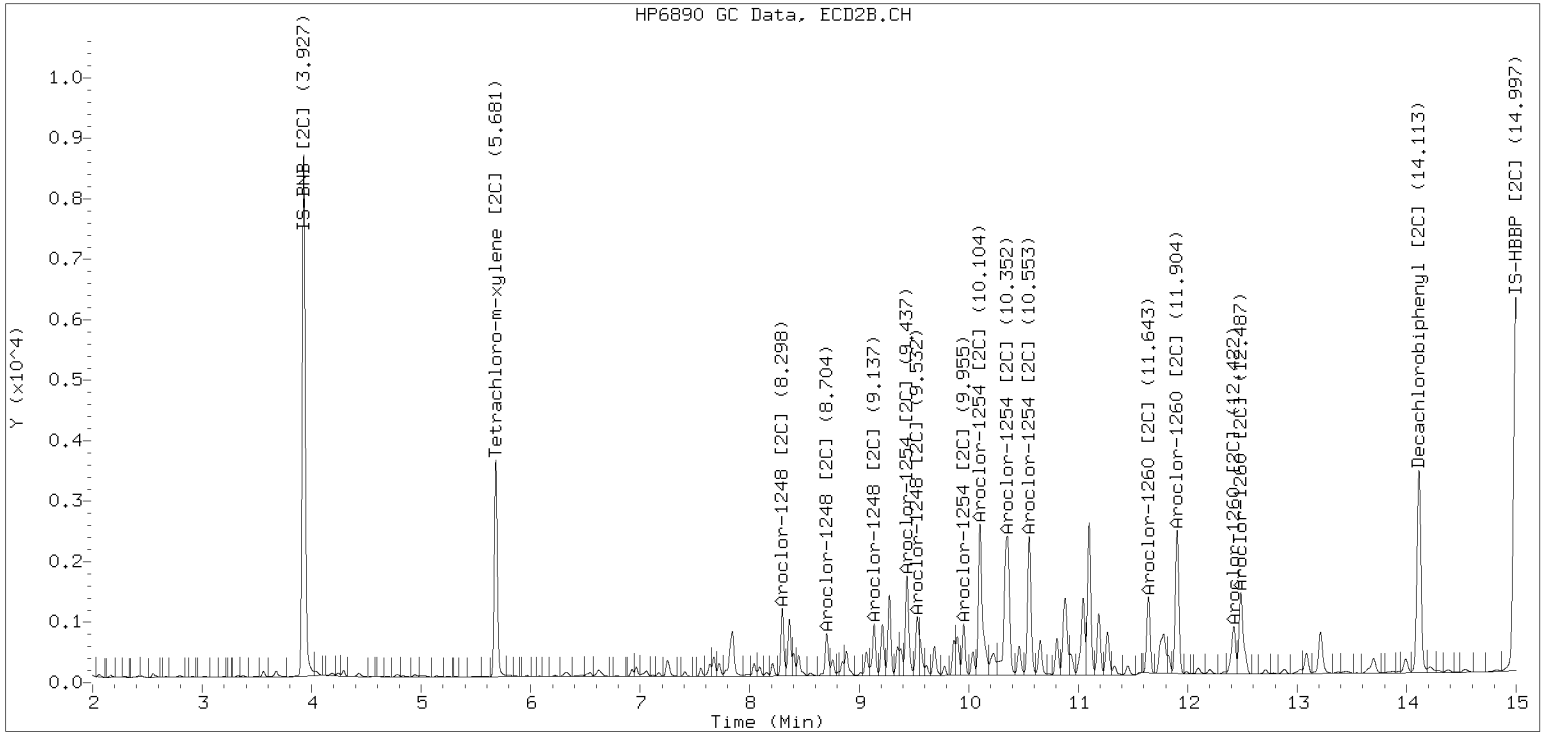
Processed Integration (Before)



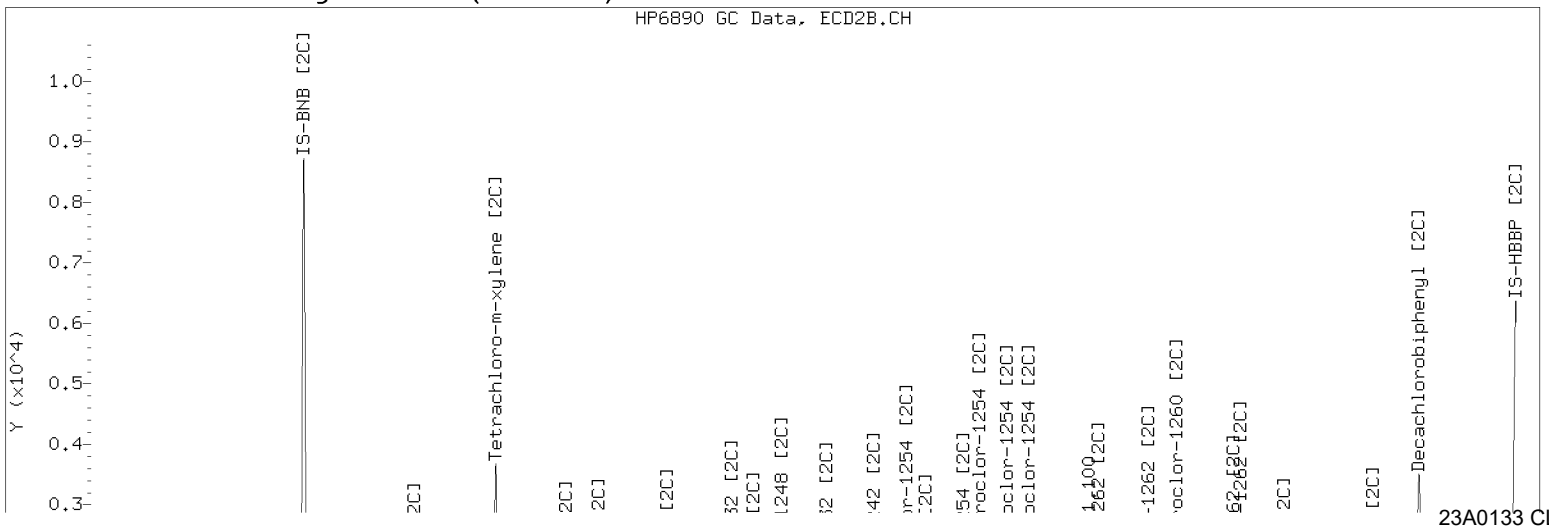
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230201.b/230201.b/02012304ECD7.D Injection Date: 01-FEB-2023 10:28

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1261

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-02 B	File ID:	01312323ECD7.D
Sampled:	01/06/23 09:22	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 17:18
% Solids:	44.82	Preparation:	EPA 3546 (Microwave)	Initial/Final:	27.91 g Wet / 2.5 mL
Batch:	BLA0394	Sequence:	SLA0350	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	32.9	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	55.1	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	39.2	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9941*	*6.96*	*87.1*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9941*	*5.55*	*69.4*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9941*	*6.93*	*86.6*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9941*	*6.71*	*83.9*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312323ECD7.D
Data file 2: /230131.b/230131.b/01312323ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0133-02
Client ID:
Injection Date: 31-JAN-2023 17:18
Report Date: 02/01/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.804	-0.003	183629	5.681	-0.004	144343	27.8	33.6	18.9	Tetrachloro-m-xylene
13.884	-0.006	134718	14.113	-0.005	162123	34.9	34.7	0.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	467939	-7.0
Hexabromobiphenyl	647433	361437	-44.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	318062	-5.6
Hexabromobiphenyl	382032	294787	-22.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.394	-0.009	28794	123.0	1	8.297	-0.007	28639	199.2
Aroclor-1248	2	8.562	-0.014	23974	80.3	2	8.703	-0.007	24210	156.4
Aroclor-1248	3	8.981	-0.014	75164	131.6	3	9.136	-0.018	31890	168.6
Aroclor-1248	4	9.284	-0.007	82545	292.0	4	9.531	-0.047	31542	134.9
	Total Col1Ave (4 peaks):				156.7	Total Col2Ave (4 peaks):				164.8 RPD = 5
	Corrected Ave (3 peaks):				111.6	Corrected Ave (3 peaks):				153.3 RPD = 31
Aroclor-1254	1	9.284	-0.011	82545	173.1	1	9.435	-0.009	59664	258.6
Aroclor-1254	2	9.360	-0.014	32969	161.9	2	9.954	-0.011	31792	170.5
Aroclor-1254	3	9.656	-0.008	68453	224.0	3	10.103	-0.014	102289	251.4
Aroclor-1254	4	9.785	-0.018	122441	204.5	4	10.348	-0.018	132000	324.4
Aroclor-1254	5	10.119	-0.044	140020	359.6	5	10.553	-0.012	84412	372.5
	Total Col1Ave (5 peaks):				224.6	Total Col2Ave (5 peaks):				275.5 RPD = 20
	Corrected Ave (4 peaks):				190.9	Corrected Ave (4 peaks):				251.2 RPD = 27
Aroclor-1260	1	11.032	-0.009	38248	188.6	1	11.642	-0.008	43896	206.4
Aroclor-1260	2	11.346	-0.012	30518	146.4	2	11.903	-0.011	81070	150.7
Aroclor-1260	3	11.716	-0.015	93586	170.5	3	12.422	-0.010	34966	260.7
Aroclor-1260	4	12.118	-0.017	47459	167.4	4	12.486	-0.012	58147	167.0
Aroclor-1260	5	12.233	-0.009	22148	179.2	NS	---			----
	Total Col1Ave (5 peaks):				170.4	Total Col2Ave (4 peaks):				196.2 RPD = 14
	Corrected Ave (4 peaks):				165.9	Corrected Ave (3 peaks):				174.7 RPD = 5
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.908 - 13.790) = 2174969 Col1 Total PCB = 0.4 ppm*

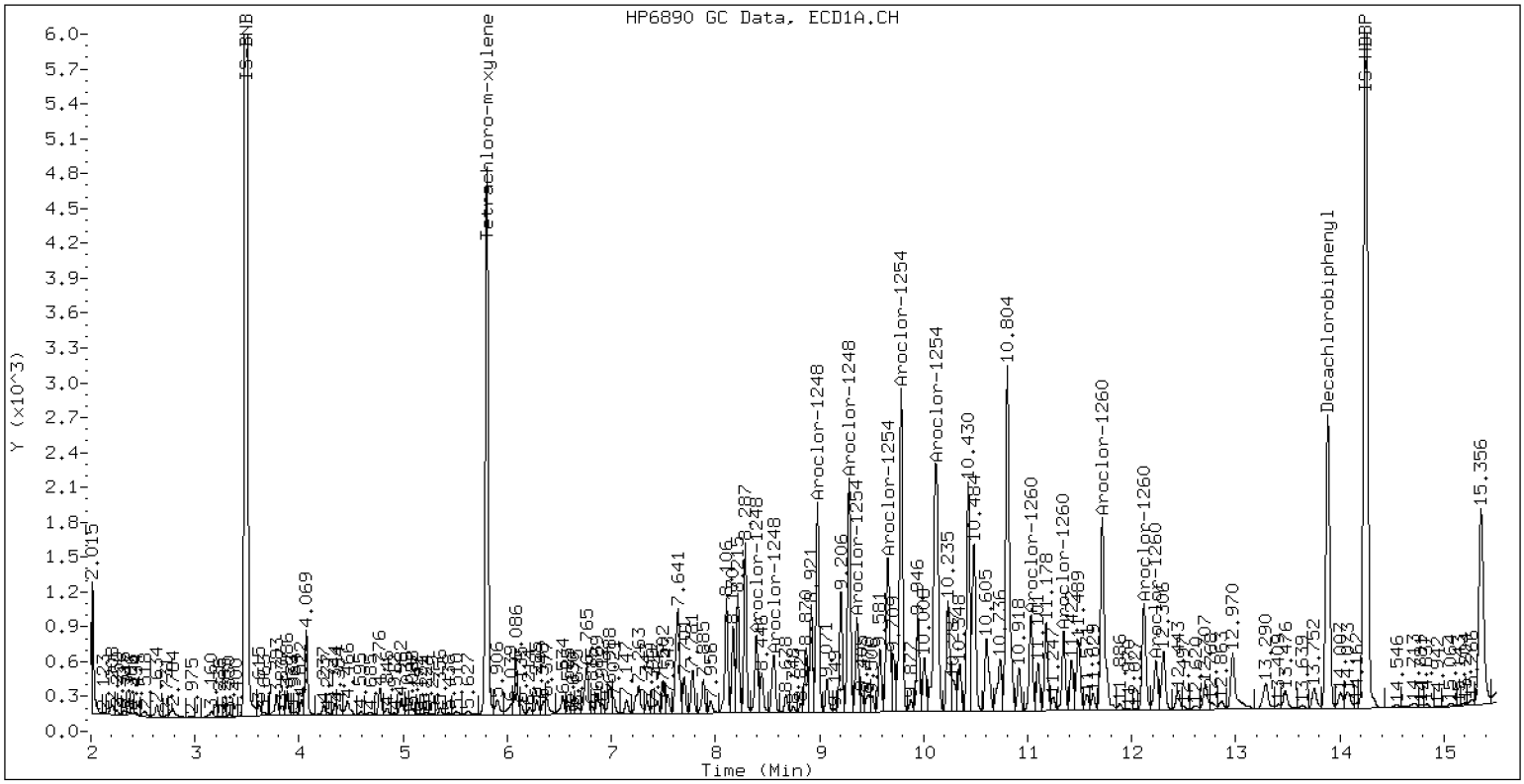
Total PCB Area Col2 (5.784 - 14.018) = 1821601 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

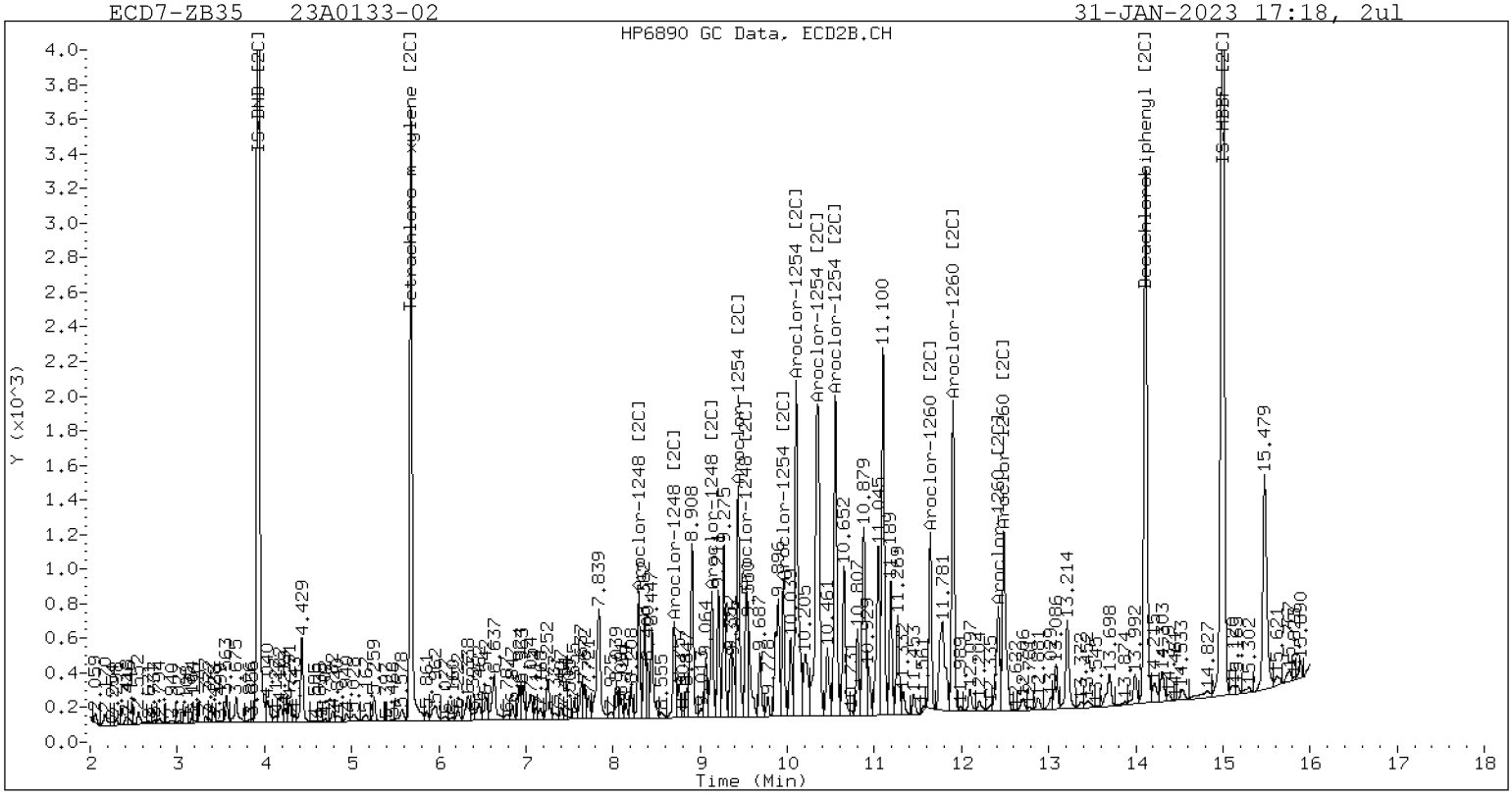
PCB Dual Column Chromatograms

ECD7-ZB5 23A0133-02 31-JAN-2023 17:18, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0133-02 31-JAN-2023 17:18, 2ul

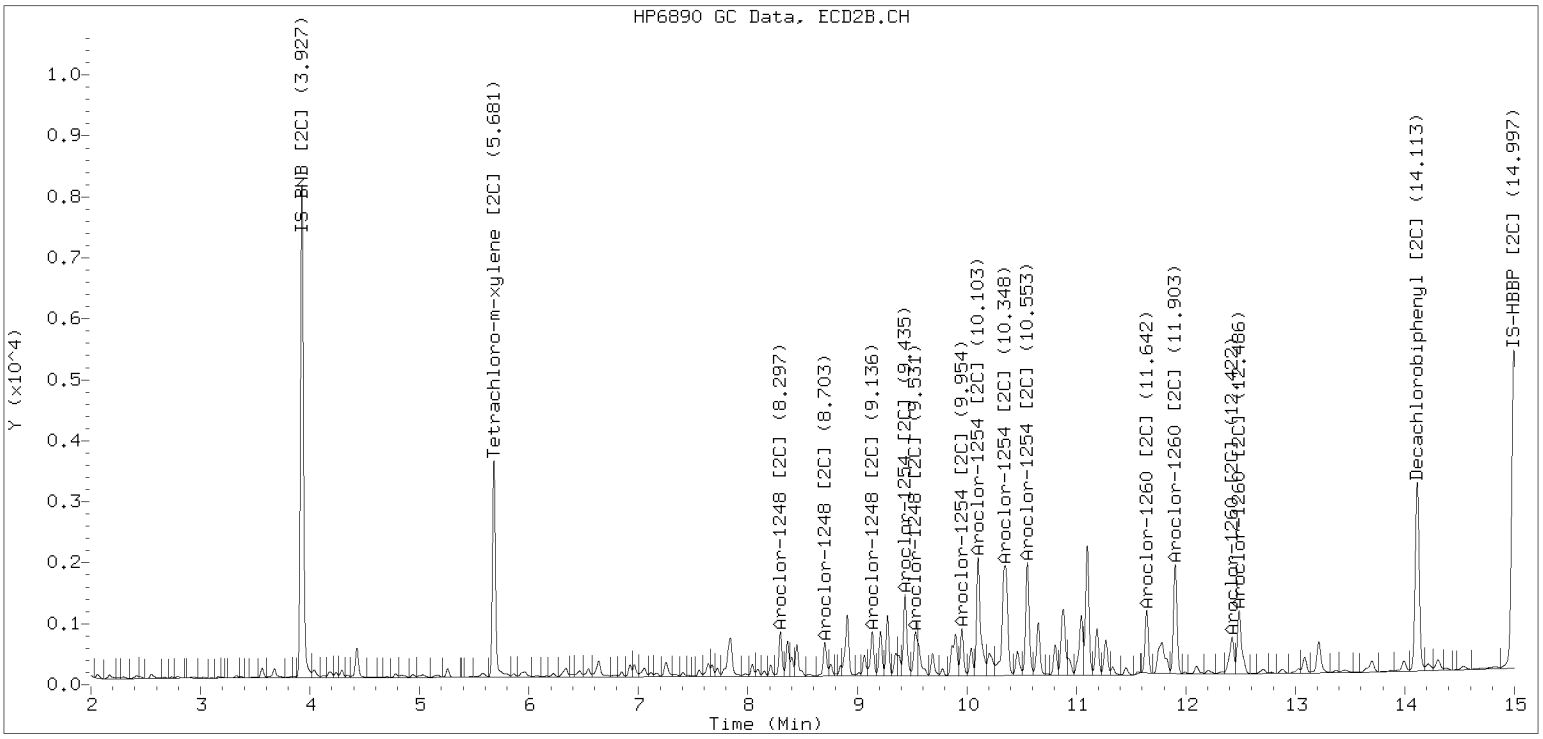


ZB-35 Manual Integration: YES

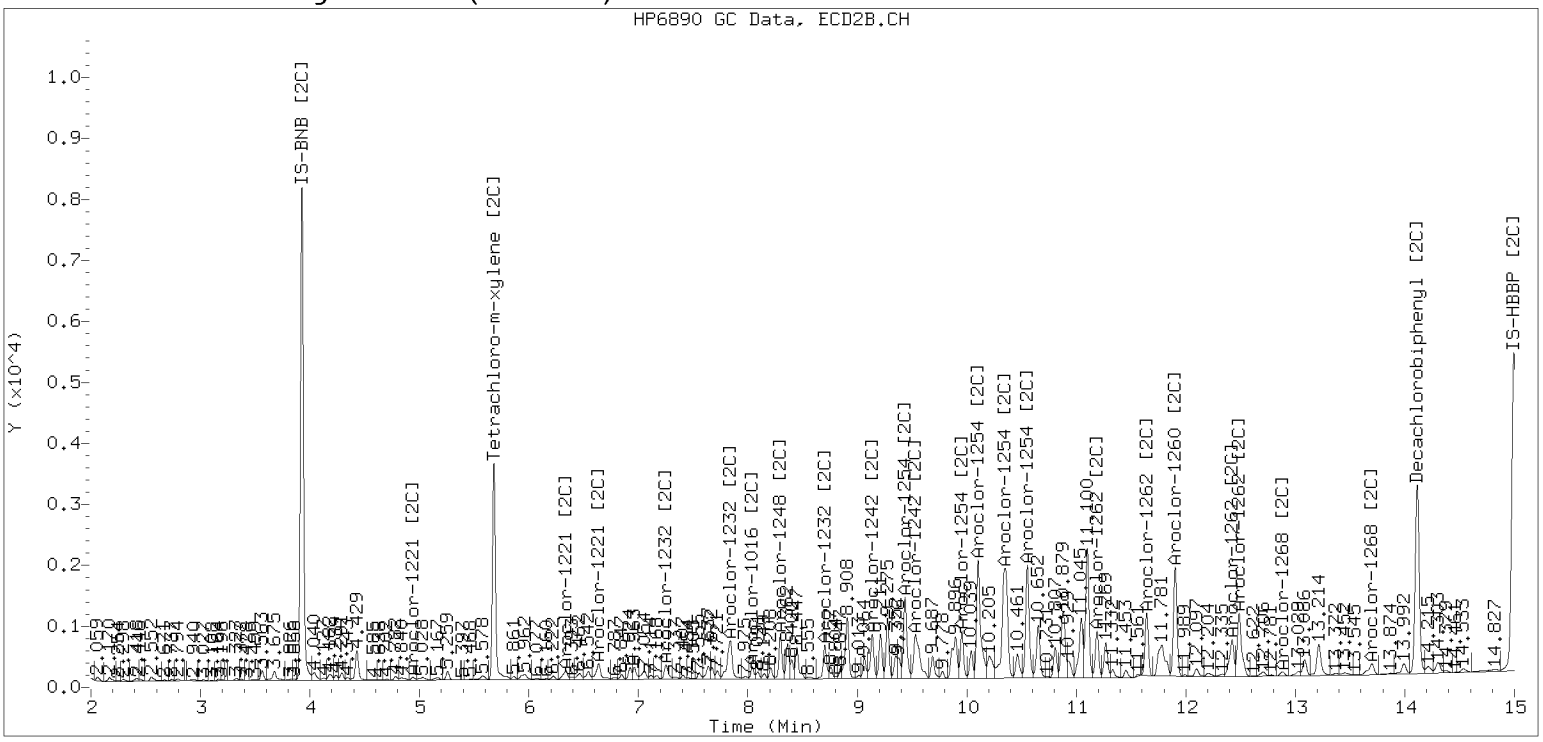
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230131.b/230131.b/01312323ECD7.D Injection Date: 31-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1250

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-03 C	File ID:	01312324ECD7.D
Sampled:	01/06/23 10:32	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 17:39
% Solids:	51.11	Preparation:	EPA 3546 (Microwave)	Initial/Final:	24.51 g Wet / 2.5 mL
Batch:	BLA0394	Sequence:	SLA0350	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	30.0	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	44.8	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	39.9	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9827*	*7.39*	*92.6*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9827*	*5.78*	*72.5*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9827*	*7.04*	*88.2*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9827*	*6.71*	*84.1*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312324ECD7.D
Data file 2: /230131.b/230131.b/01312324ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0133-03
Client ID:
Injection Date: 31-JAN-2023 17:39
Report Date: 02/01/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.804	-0.003	189346	5.681	-0.003	146074	29.0	33.6	14.9	Tetrachloro-m-xylene
13.885	-0.005	142965	14.114	-0.004	164853	37.0	35.3	4.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	462240	-8.2
Hexabromobiphenyl	647433	360951	-44.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	321181	-4.7
Hexabromobiphenyl	382032	294293	-23.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.394	-0.008	28275	122.3	1	8.298	-0.006	25174	173.4
Aroclor-1248	2	8.563	-0.013	23451	79.5	2	8.704	-0.007	24040	153.8
Aroclor-1248	3	8.982	-0.013	69450	123.1	3	9.136	-0.017	30312	158.7
Aroclor-1248	4	9.285	-0.006	74958	268.4	4	9.531	-0.047	27050	114.5
		Total Col1Ave (4 peaks):			148.3	Total Col2Ave (4 peaks):				150.1 RPD = 1
		Corrected Ave (3 peaks):			108.3	Corrected Ave (3 peaks):				142.4 RPD = 27
Aroclor-1254	1	9.285	-0.010	74958	159.1	1	9.436	-0.009	53271	228.6
Aroclor-1254	2	9.360	-0.013	30321	150.7	2	9.955	-0.010	28377	150.7
Aroclor-1254	3	9.657	-0.007	60306	199.8	3	10.103	-0.014	92075	224.1
Aroclor-1254	4	9.785	-0.018	106524	180.1	4	10.350	-0.017	120940	294.4
Aroclor-1254	5	10.123	-0.041	52207	135.7	5	10.552	-0.012	79564	347.7
		Total Col1Ave (5 peaks):			165.1	Total Col2Ave (5 peaks):				249.1 RPD = 41*
		Corrected Ave (4 peaks):			156.4	Corrected Ave (4 peaks):				224.4 RPD = 36
Aroclor-1260	1	11.032	-0.009	39290	194.0	1	11.642	-0.008	41619	196.0
Aroclor-1260	2	11.347	-0.012	30643	147.2	2	11.903	-0.011	83385	155.2
Aroclor-1260	3	11.717	-0.014	95479	174.2	3	12.422	-0.010	36255	270.8
Aroclor-1260	4	12.118	-0.016	48714	172.0	4	12.486	-0.011	61542	177.0
Aroclor-1260	5	12.233	-0.009	24513	198.6	NS	---			----
		Total Col1Ave (5 peaks):			177.2	Total Col2Ave (4 peaks):				199.8 RPD = 12
		Corrected Ave (4 peaks):			171.9	Corrected Ave (3 peaks):				176.1 RPD = 2
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.908 - 13.790) = 2031535 Col1 Total PCB = 0.4 ppm*

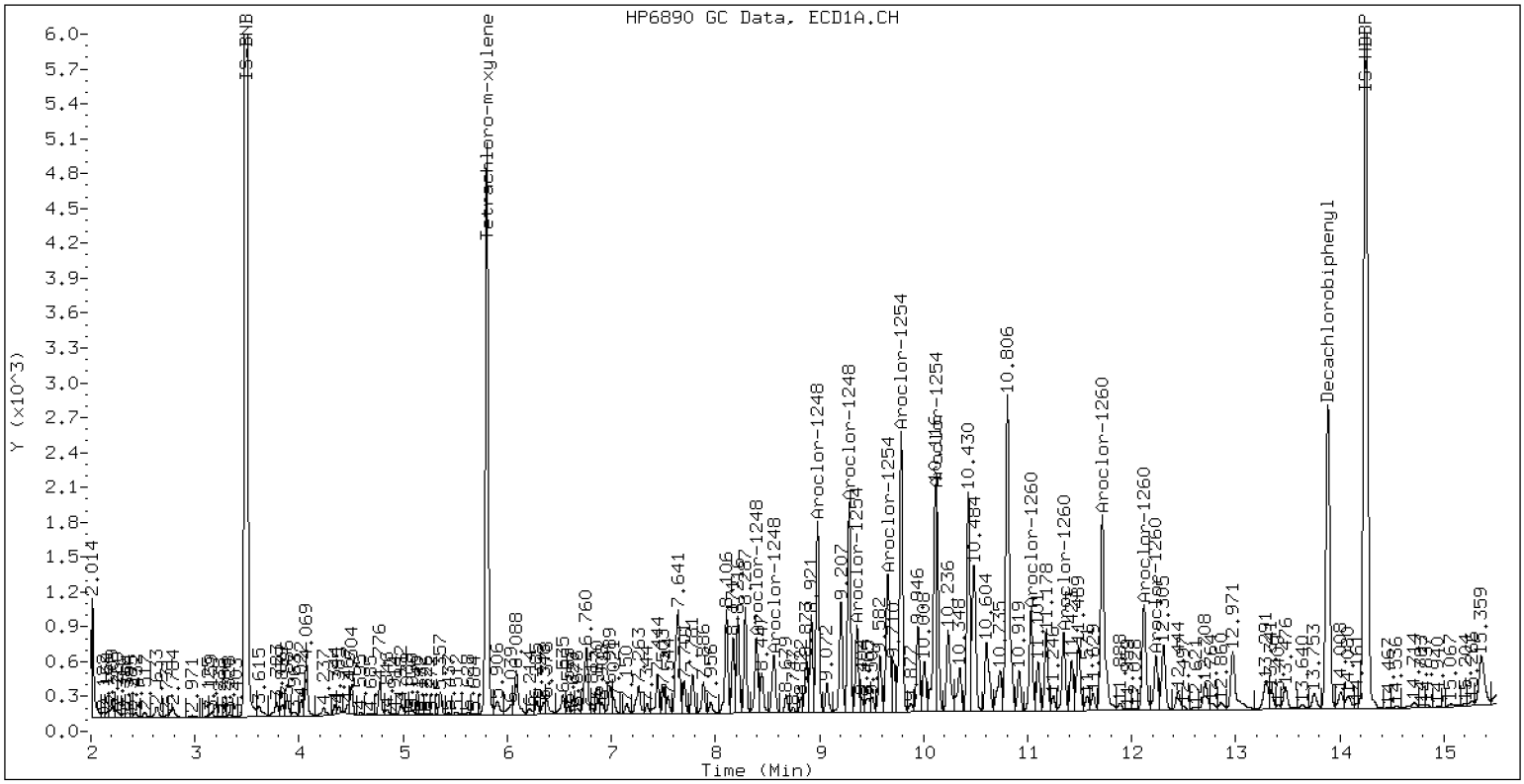
Total PCB Area Col2 (5.784 - 14.018) = 1707041 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

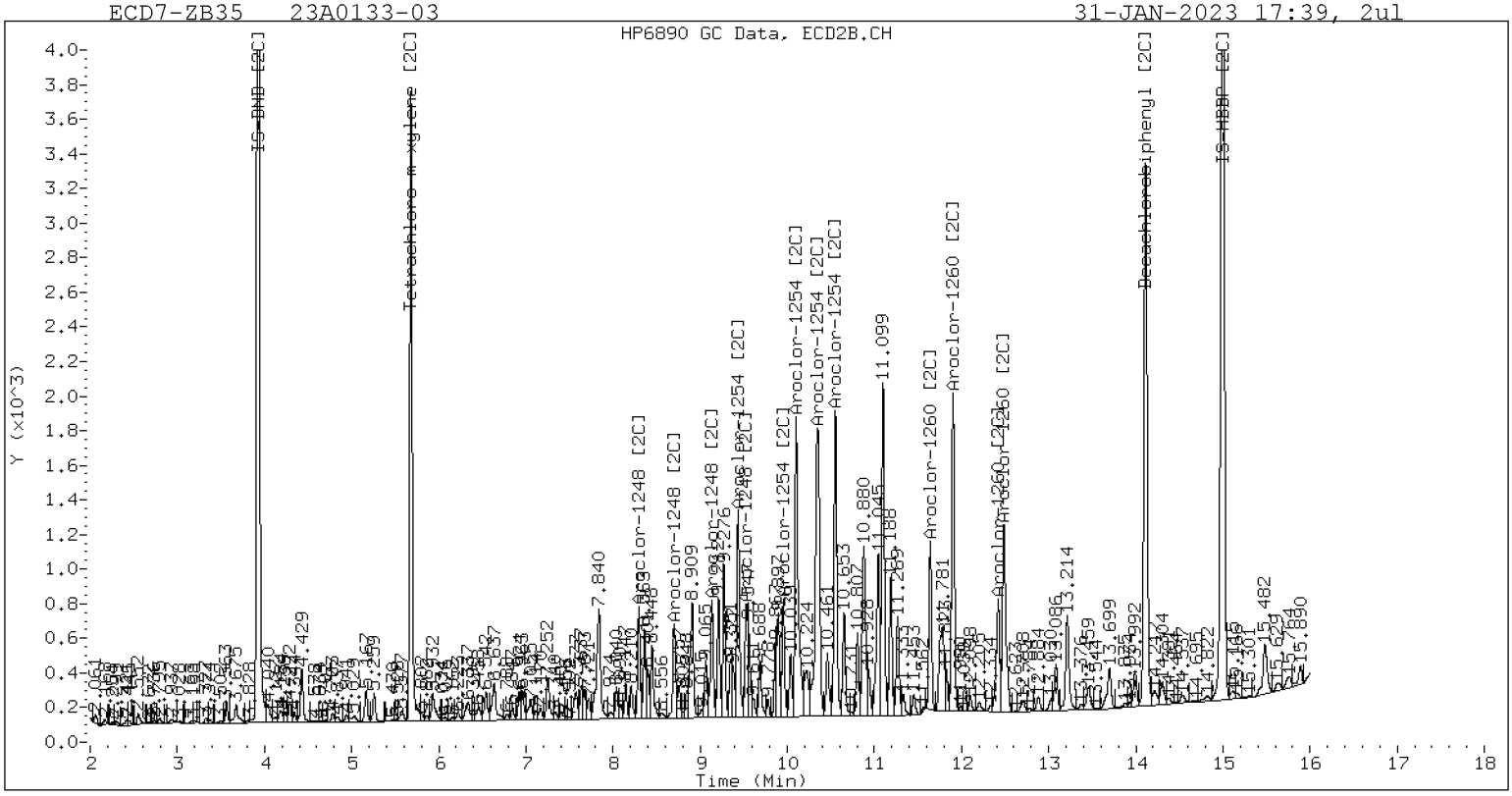
PCB Dual Column Chromatograms

ECD7-ZB5 23A0133-03 31-JAN-2023 17:39, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0133-03 31-JAN-2023 17:39, 2ul

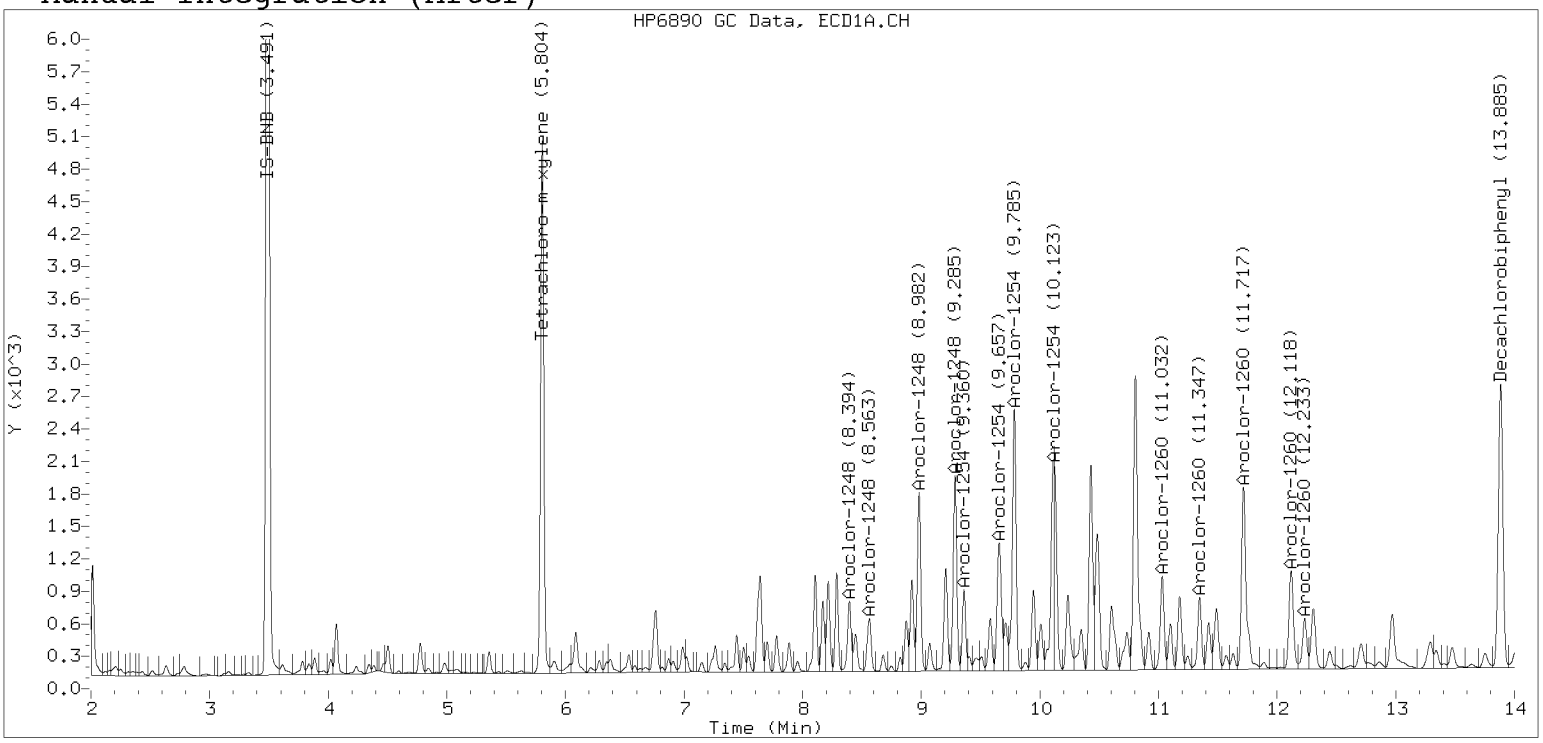


ZB-35 Manual Integration: YES

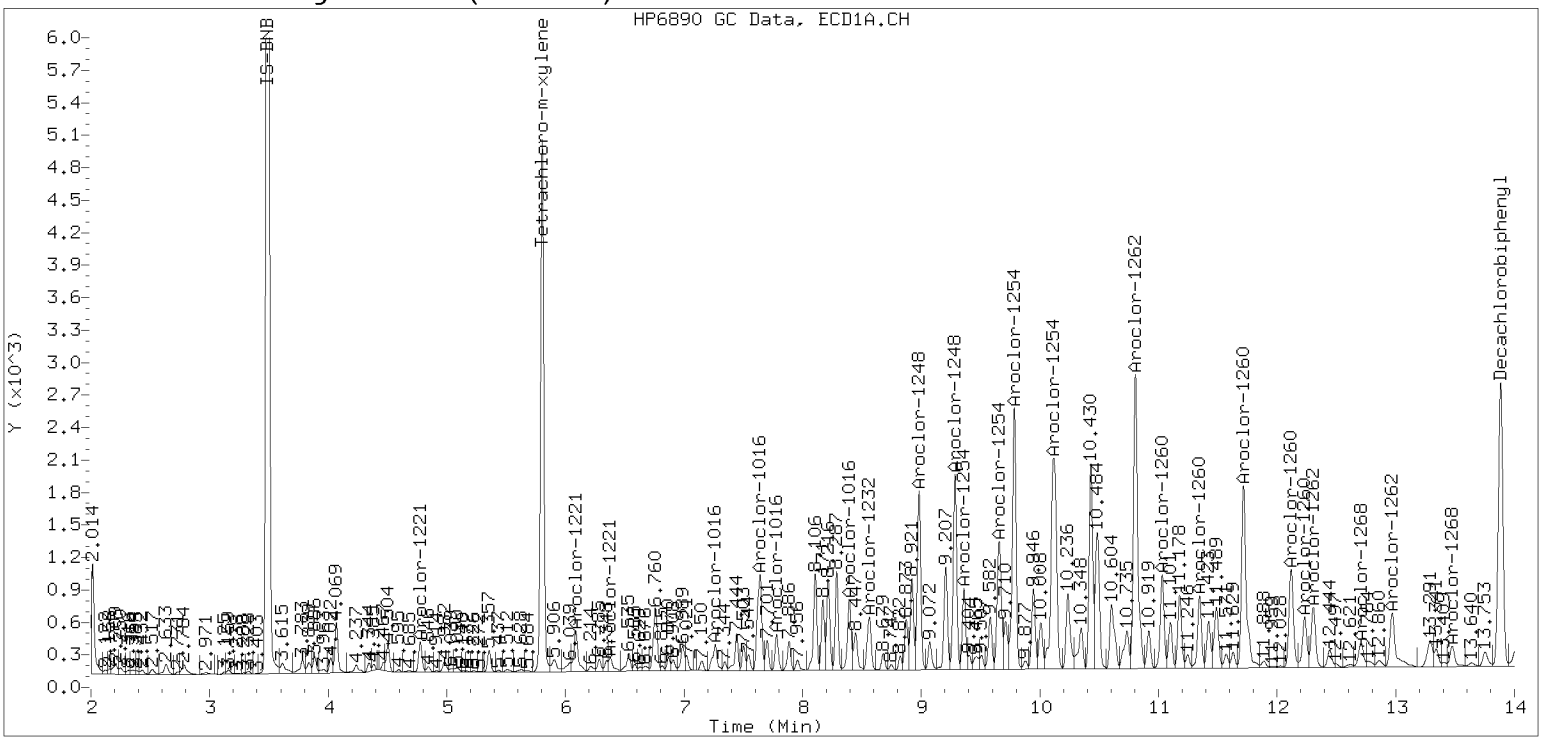
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230131.b/01312324ECD7.D Injection Date: 31-JAN-2023 17:39

Manual Integration (After)



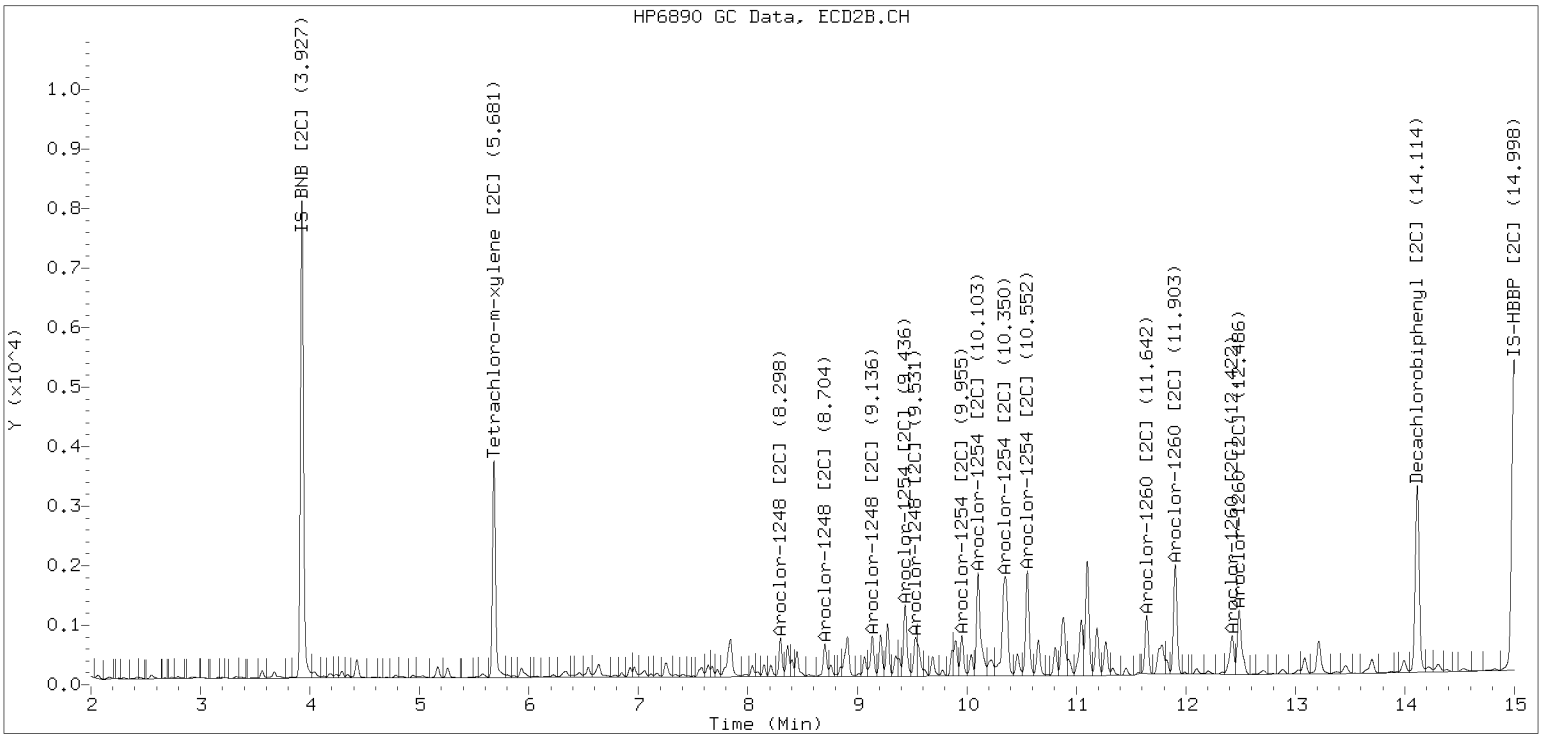
Processed Integration (Before)



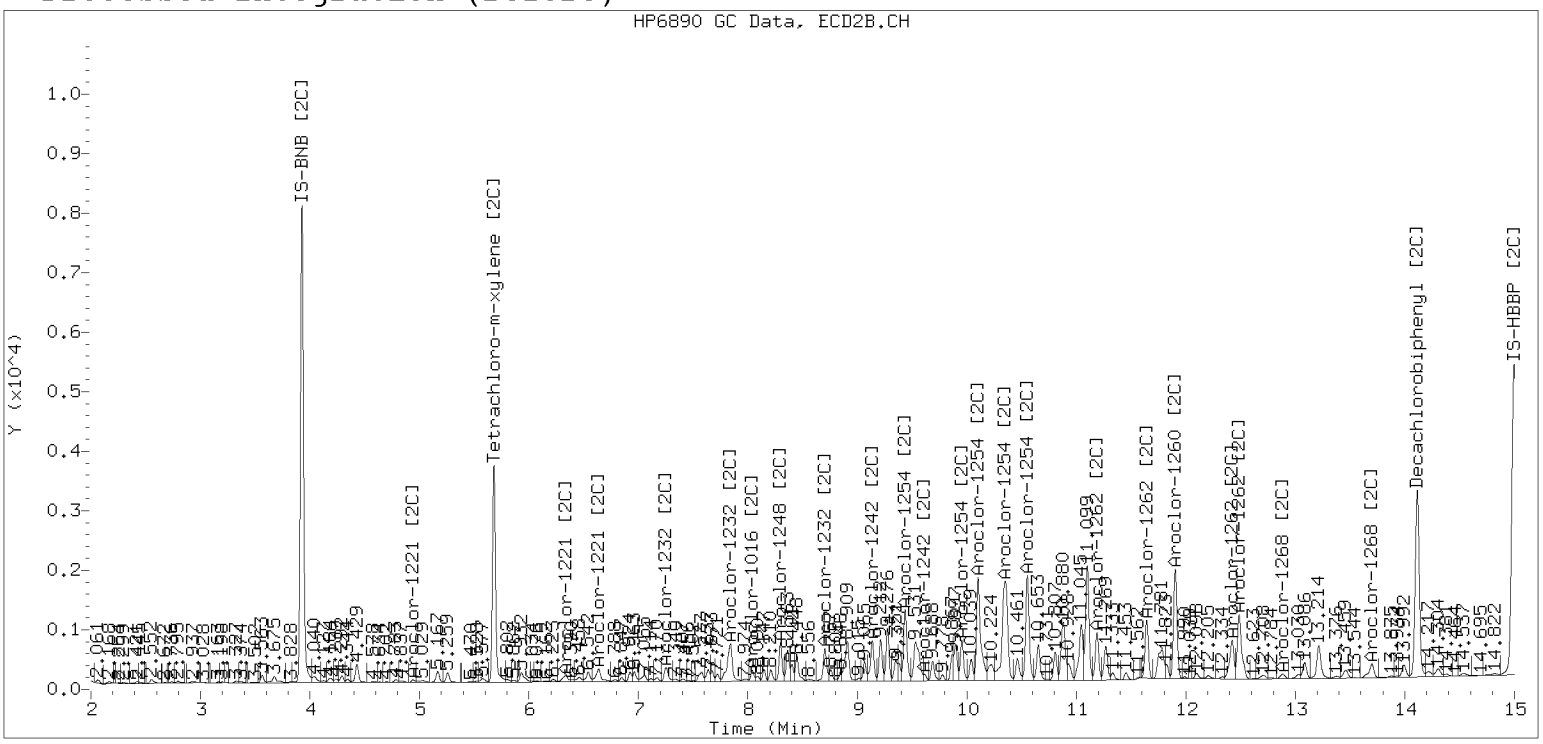
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230131.b/230131.b/01312324ECD7.D Injection Date: 31-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1244

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-04 B	File ID:	01312325ECD7.D
Sampled:	01/06/23 10:14	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 18:00
% Solids:	49.52	Preparation:	EPA 3546 (Microwave)	Initial/Final:	25.24 g Wet / 2.5 mL
Batch:	BLA0394	Sequence:	SLA0350	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	26.6	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	42.9	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	31.0	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*8.0007*	*7.23*	*90.4*	*40 - 126*	
Tetrachlorometaxylene	*1*	*8.0007*	*5.65*	*70.7*	*44 - 120*	
Decachlorobiphenyl	*2*	*8.0007*	*6.90*	*86.3*	*40 - 126*	
Tetrachlorometaxylene	*2*	*8.0007*	*6.77*	*84.6*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312325ECD7.D
Data file 2: /230131.b/230131.b/01312325ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0133-04
Client ID:
Injection Date: 31-JAN-2023 18:00
Report Date: 02/01/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.002	190493	5.682	-0.003	148844	28.3	33.8	17.9	Tetrachloro-m-xylene
13.885	-0.005	143952	14.114	-0.004	169086	36.2	34.5	4.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	476786	-5.3
Hexabromobiphenyl	647433	372170	-42.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	325451	-3.4
Hexabromobiphenyl	382032	308745	-19.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.394	-0.008	24729	103.7	1	8.298	-0.006	22105	150.3
Aroclor-1248	2	8.562	-0.014	20676	68.0	2	8.703	-0.007	22177	140.1
Aroclor-1248	3	8.982	-0.013	57483	98.8	3	9.136	-0.018	25535	132.0
Aroclor-1248	4	9.284	-0.007	63673	221.0	4	9.530	-0.047	26026	108.8
		Total Col1Ave (4 peaks):			122.9		Total Col2Ave (4 peaks):			132.8 RPD = 8
		Corrected Ave (3 peaks):			90.1		Corrected Ave (3 peaks):			126.9 RPD = 34
Aroclor-1254	1	9.284	-0.012	63673	131.0	1	9.436	-0.009	46959	198.9
Aroclor-1254	2	9.361	-0.013	25621	123.5	2	9.955	-0.010	24783	129.9
Aroclor-1254	3	9.658	-0.006	55859	179.4	3	10.103	-0.014	79861	191.8
Aroclor-1254	4	9.785	-0.018	92190	151.1	4	10.351	-0.016	106130	254.9
Aroclor-1254	5	10.118	-0.046	53912	135.9	5	10.553	-0.012	69074	297.9
		Total Col1Ave (5 peaks):			144.2		Total Col2Ave (5 peaks):			214.7 RPD = 39
		Corrected Ave (4 peaks):			135.4		Corrected Ave (4 peaks):			193.9 RPD = 36
Aroclor-1260	1	11.031	-0.010	32167	154.0	1	11.642	-0.008	34582	155.3
Aroclor-1260	2	11.345	-0.013	24149	112.5	2	11.902	-0.012	67560	119.9
Aroclor-1260	3	11.717	-0.014	77335	136.9	3	12.421	-0.011	29617	210.9
Aroclor-1260	4	12.116	-0.019	38934	133.4	4	12.486	-0.012	48718	133.6
Aroclor-1260	5	12.233	-0.009	19111	150.2	NS	---			----
		Total Col1Ave (5 peaks):			137.4		Total Col2Ave (4 peaks):			154.9 RPD = 12
		Corrected Ave (4 peaks):			133.2		Corrected Ave (3 peaks):			136.2 RPD = 2
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.790) = 1932065 Col1 Total PCB = 0.3 ppm*

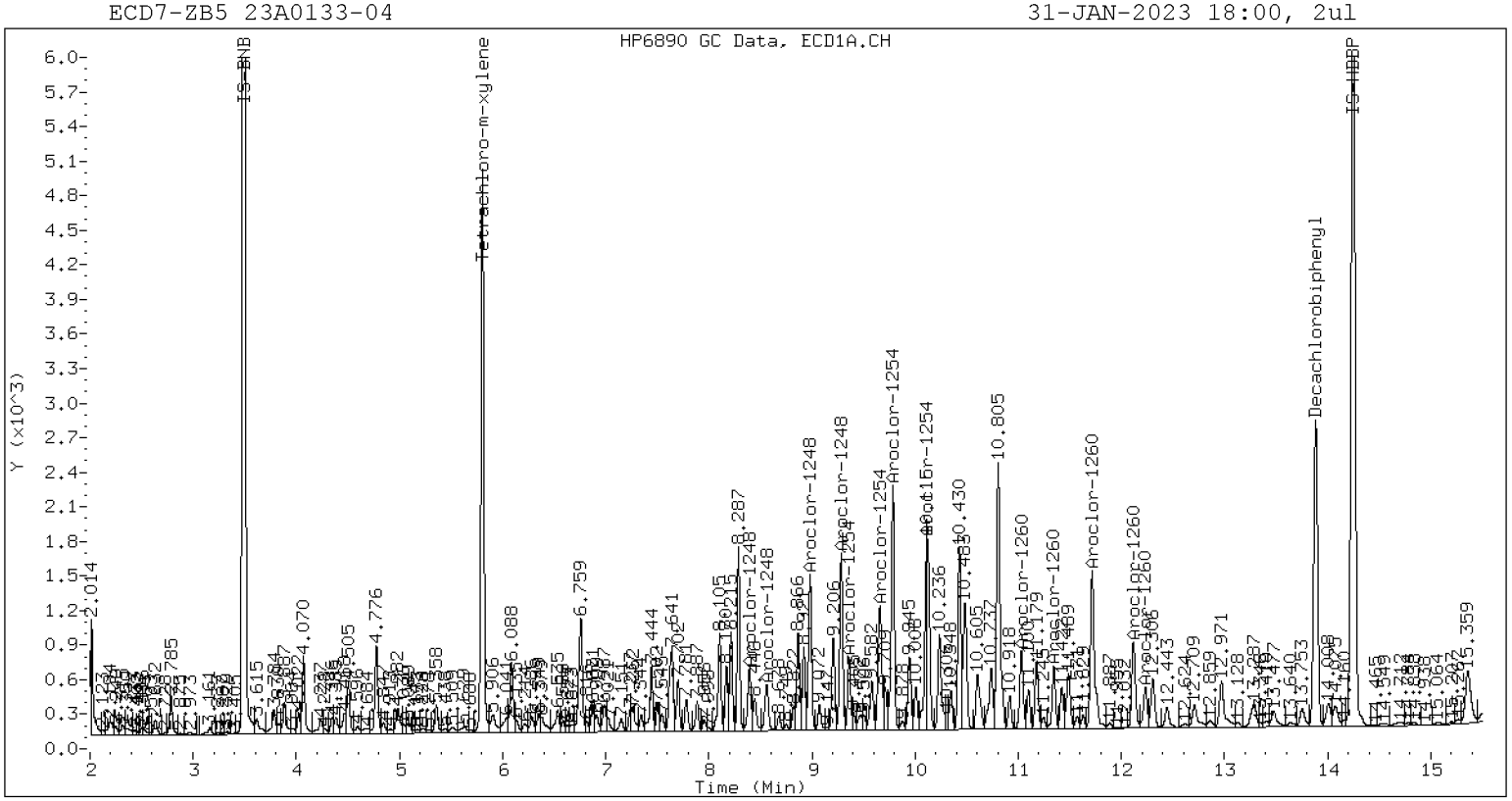
Total PCB Area Col2 (5.784 - 14.018) = 1574951 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

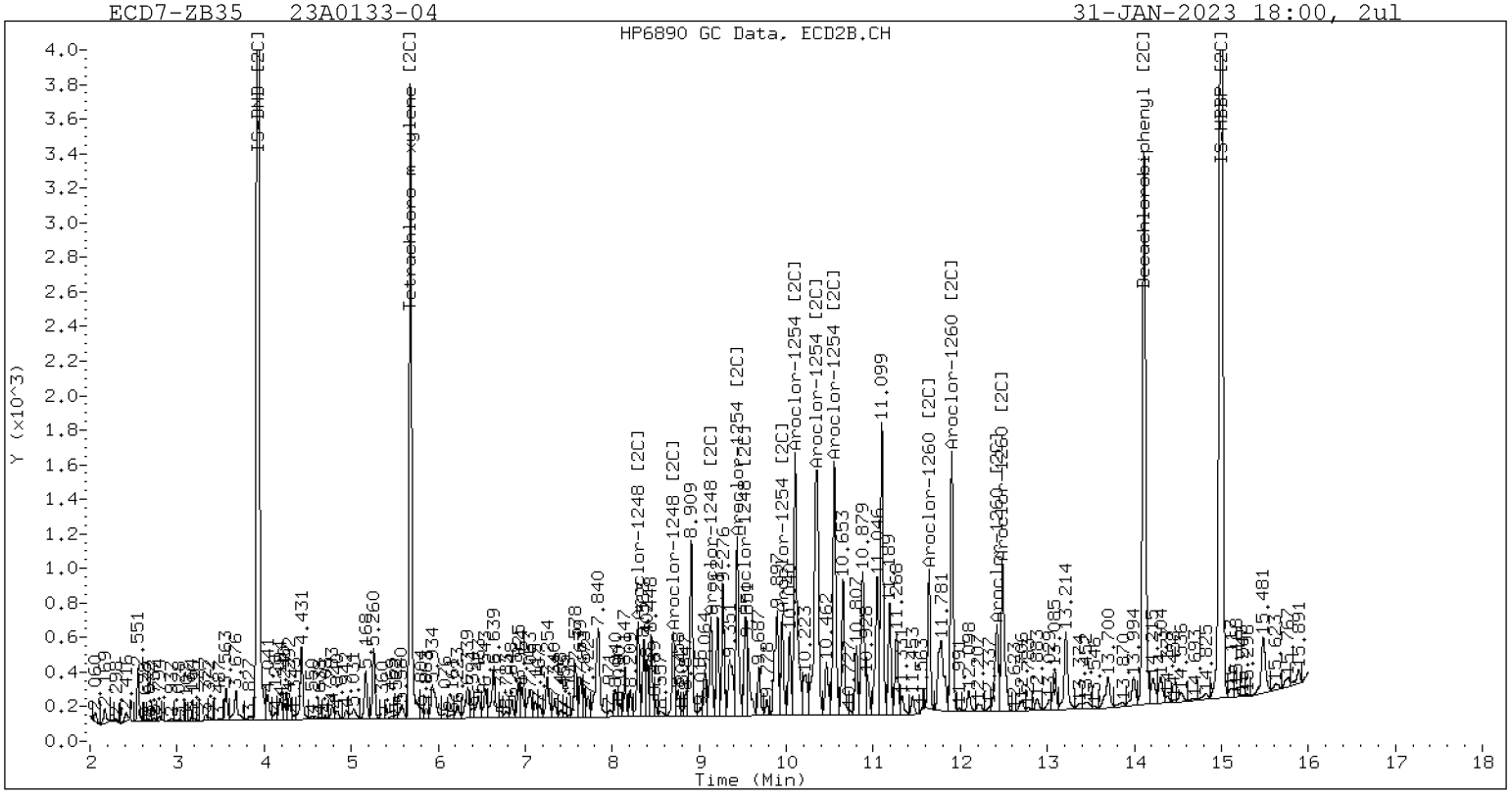
PCB Dual Column Chromatograms

ECD7-ZB5 23A0133-04 31-JAN-2023 18:00, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0133-04 31-JAN-2023 18:00, 2ul

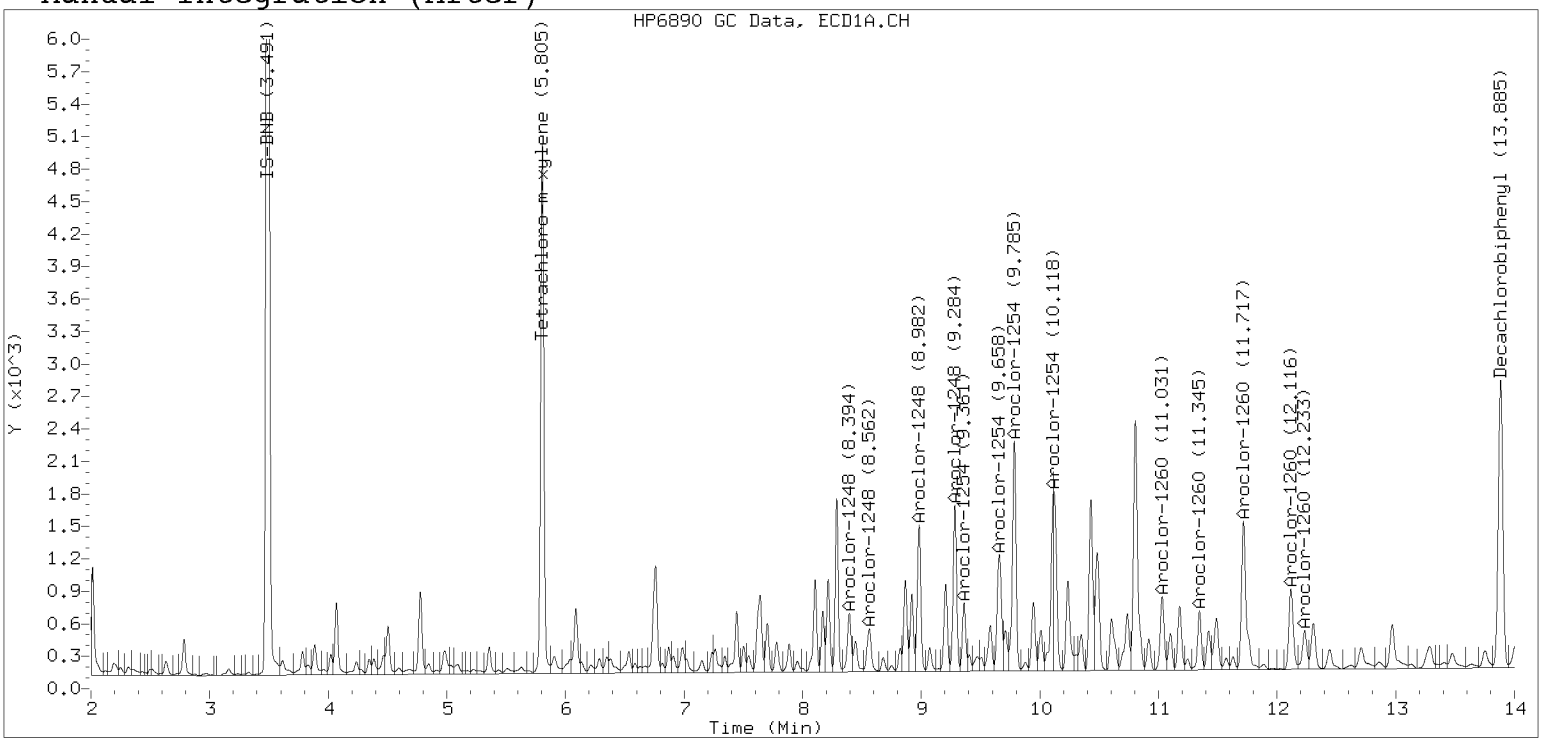


ZB-35 Manual Integration: YES

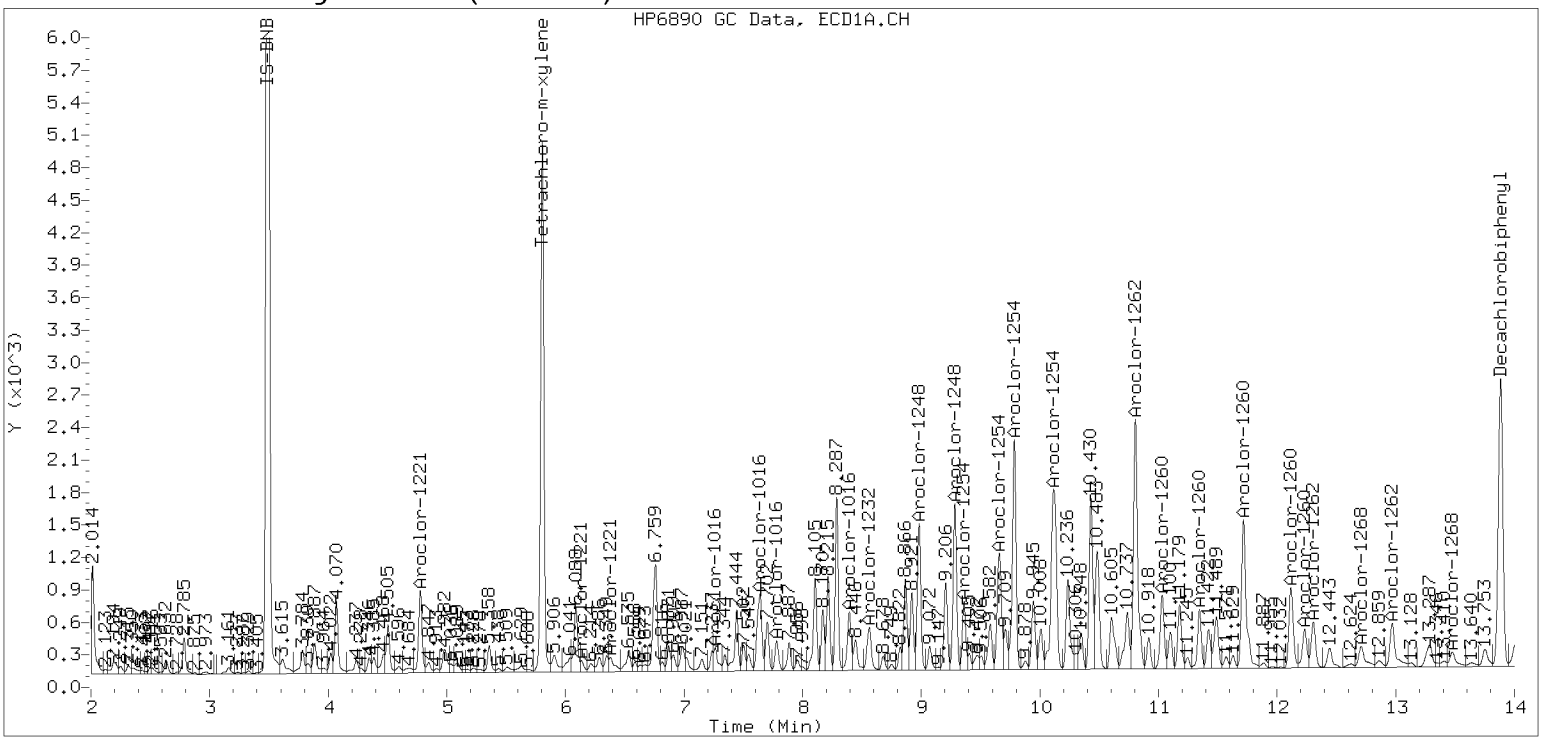
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230131.b/01312325ECD7.D Injection Date: 31-JAN-2023 18:00

Manual Integration (After)



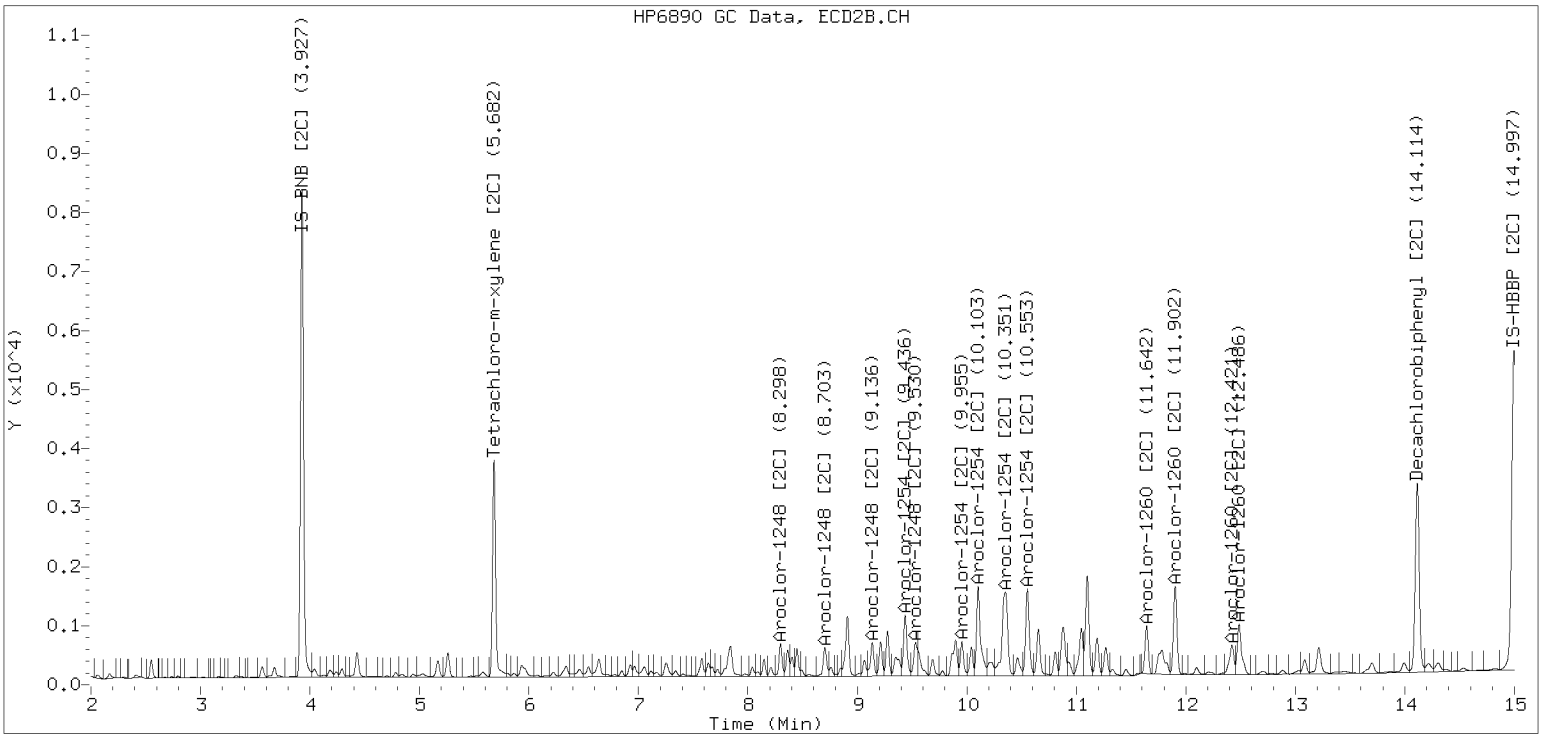
Processed Integration (Before)



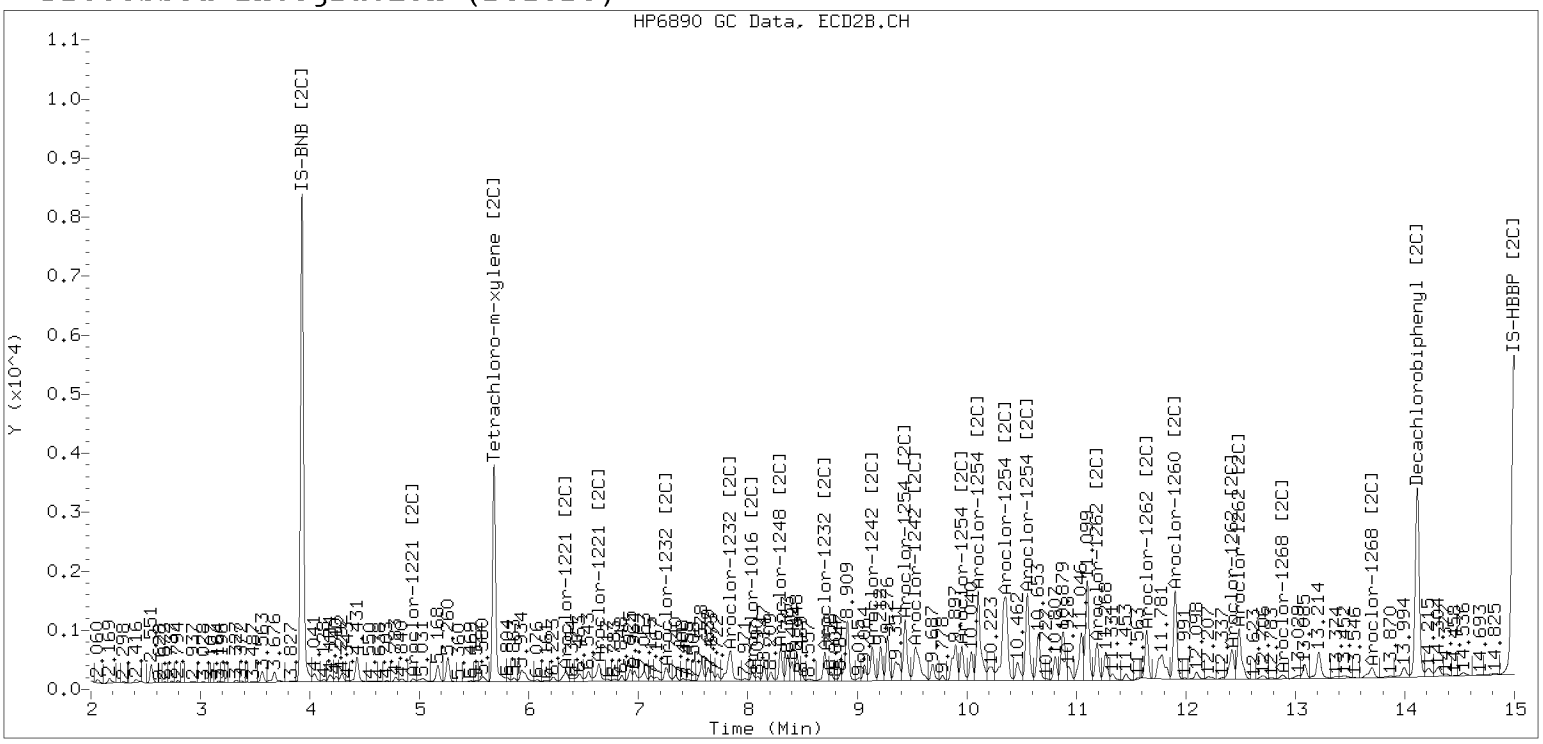
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230131.b/230131.b/01312325ECD7.D Injection Date: 31-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1244-FD

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-05 B	File ID:	01312326ECD7.D
Sampled:	01/06/23 10:14	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 18:21
% Solids:	48.26	Preparation:	EPA 3546 (Microwave)	Initial/Final:	25.92 g Wet / 2.5 mL
Batch:	BLA0394	Sequence:	SLA0350	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	28.8	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	48.6	1.6	4.0	P1
11096-82-5	Aroclor 1260	2	1	37.5	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9943*	*7.00*	*87.5*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9943*	*5.48*	*68.5*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9943*	*6.56*	*82.0*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9943*	*6.68*	*83.6*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312326ECD7.D
Data file 2: /230131.b/230131.b/01312326ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0133-05
Client ID:
Injection Date: 31-JAN-2023 18:21
Report Date: 02/01/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.002	178921	5.681	-0.003	144945	27.4	33.4	19.9	Tetrachloro-m-xylene
13.885	-0.005	138736	14.113	-0.005	162654	35.0	32.8	6.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	461964	-8.2
Hexabromobiphenyl	647433	370454	-42.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	320601	-4.8
Hexabromobiphenyl	382032	312470	-18.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.394	-0.008	24778	107.2	1	8.297	-0.007	26011	179.5
Aroclor-1248	2	8.562	-0.014	19691	66.8	2	8.703	-0.008	23003	147.5
Aroclor-1248	3	8.982	-0.013	61944	109.9	3	9.136	-0.018	27302	143.2
Aroclor-1248	4	9.284	-0.007	71714	256.9	4	9.531	-0.047	25153	106.7
		Total Col1Ave (4 peaks):			135.2		Total Col2Ave (4 peaks):			144.2 RPD = 6
		Corrected Ave (3 peaks):			94.6		Corrected Ave (3 peaks):			132.5 RPD = 33
Aroclor-1254	1	9.284	-0.011	71714	152.3	1	9.436	-0.009	52198	224.4
Aroclor-1254	2	9.361	-0.013	27335	136.0	2	9.954	-0.011	28605	152.2
Aroclor-1254	3	9.657	-0.008	59010	195.6	3	10.103	-0.014	89797	219.0
Aroclor-1254	4	9.785	-0.017	102064	172.7	4	10.349	-0.018	117236	285.9
Aroclor-1254	5	10.120	-0.044	55022	143.1	5	10.553	-0.012	76409	334.5
		Total Col1Ave (5 peaks):			159.9		Total Col2Ave (5 peaks):			243.2 RPD = 41*
		Corrected Ave (4 peaks):			151.0		Corrected Ave (4 peaks):			220.4 RPD = 37
Aroclor-1260	1	11.032	-0.009	36334	174.8	1	11.641	-0.008	40293	178.7
Aroclor-1260	2	11.346	-0.012	27711	129.7	2	11.903	-0.011	86157	151.1
Aroclor-1260	3	11.717	-0.014	91254	162.2	3	12.422	-0.010	35144	247.2
Aroclor-1260	4	12.117	-0.017	48508	166.9	4	12.487	-0.011	63785	172.8
Aroclor-1260	5	12.233	-0.009	23960	189.1	NS	---			----
		Total Col1Ave (5 peaks):			164.6		Total Col2Ave (4 peaks):			187.5 RPD = 13
		Corrected Ave (4 peaks):			158.4		Corrected Ave (3 peaks):			167.5 RPD = 6
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.790) = 1979820 Col1 Total PCB = 0.4 ppm*

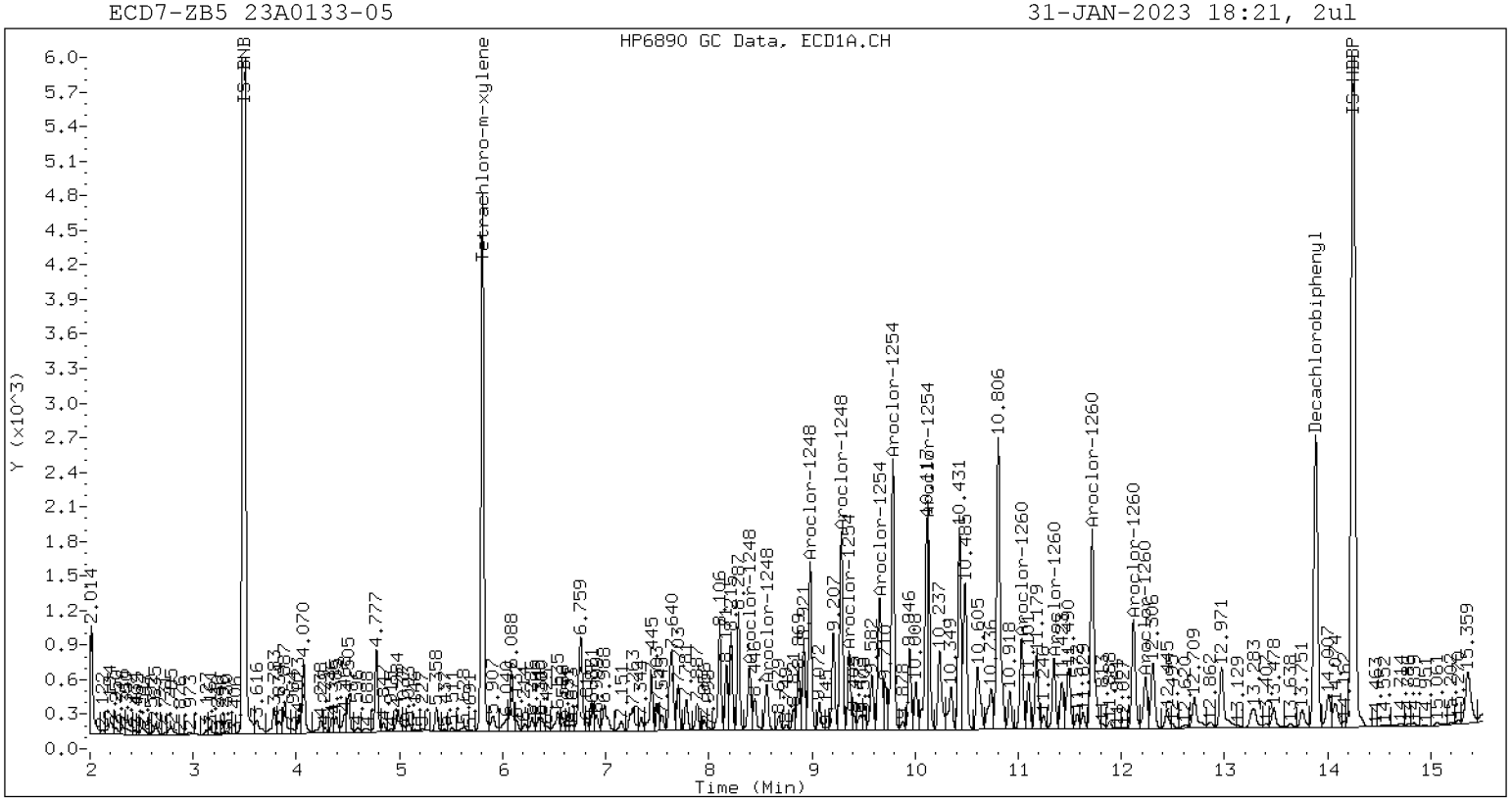
Total PCB Area Col2 (5.784 - 14.018) = 1736380 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

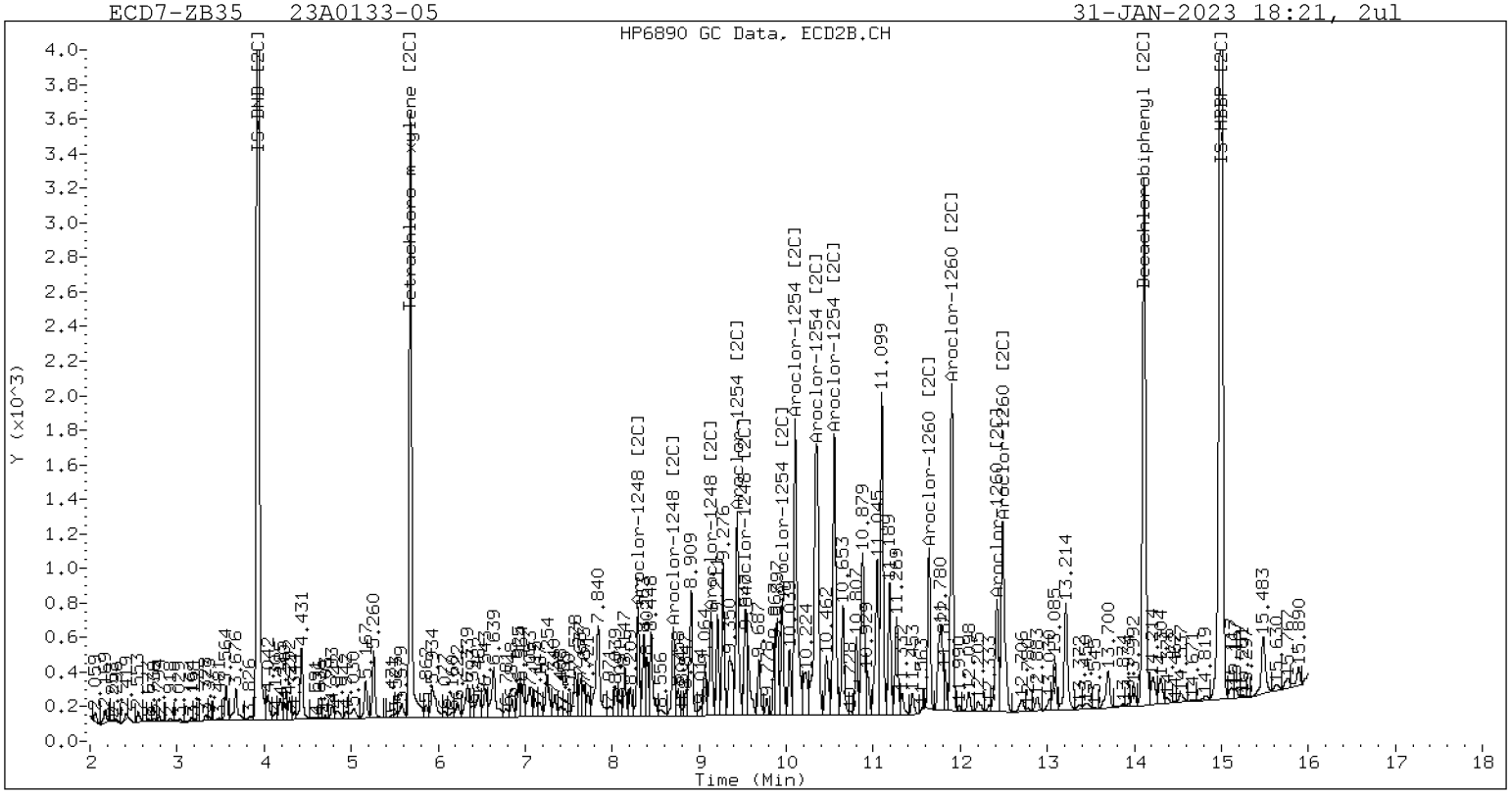
PCB Dual Column Chromatograms

ECD7-ZB5 23A0133-05 31-JAN-2023 18:21, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0133-05 31-JAN-2023 18:21, 2ul

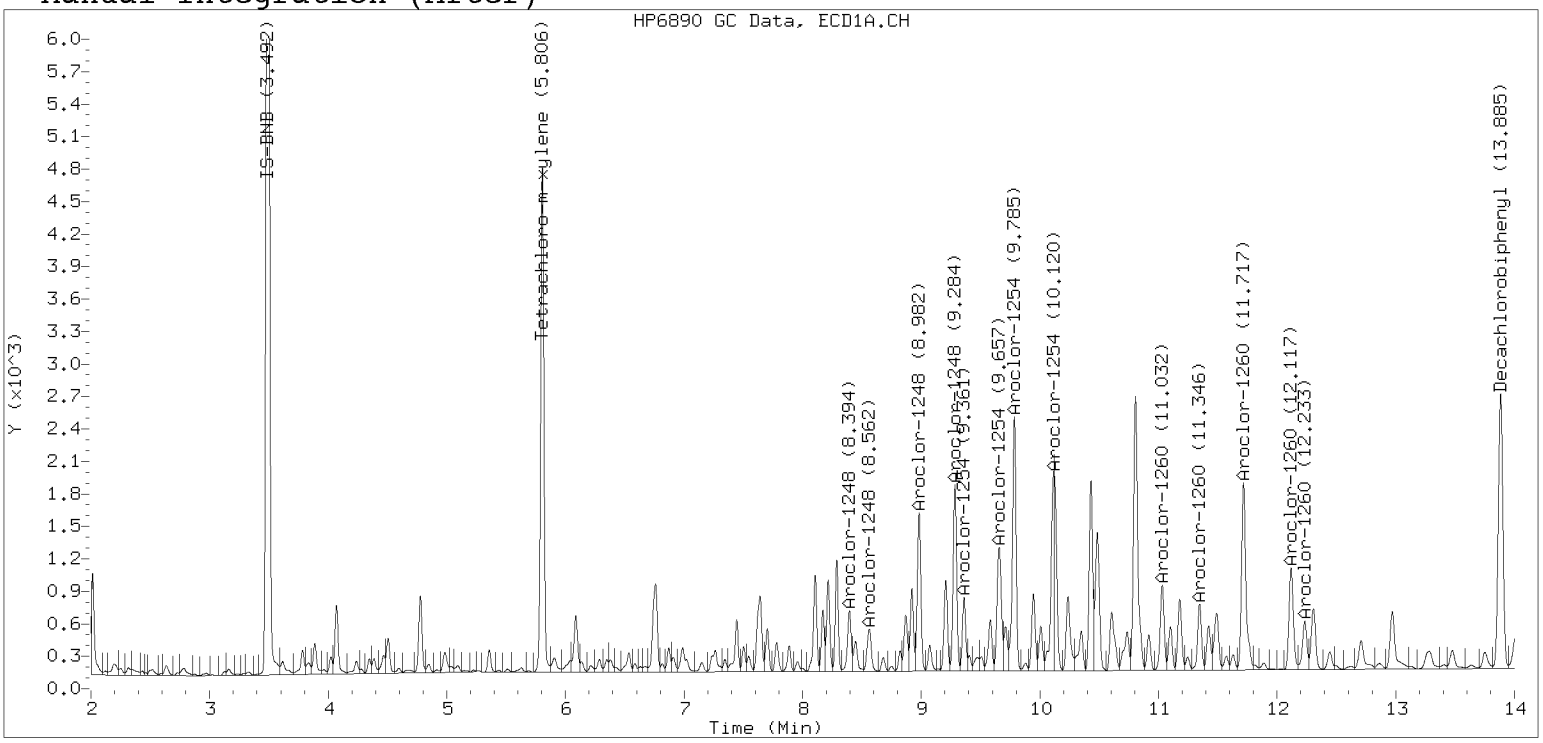


ZB-35 Manual Integration: YES

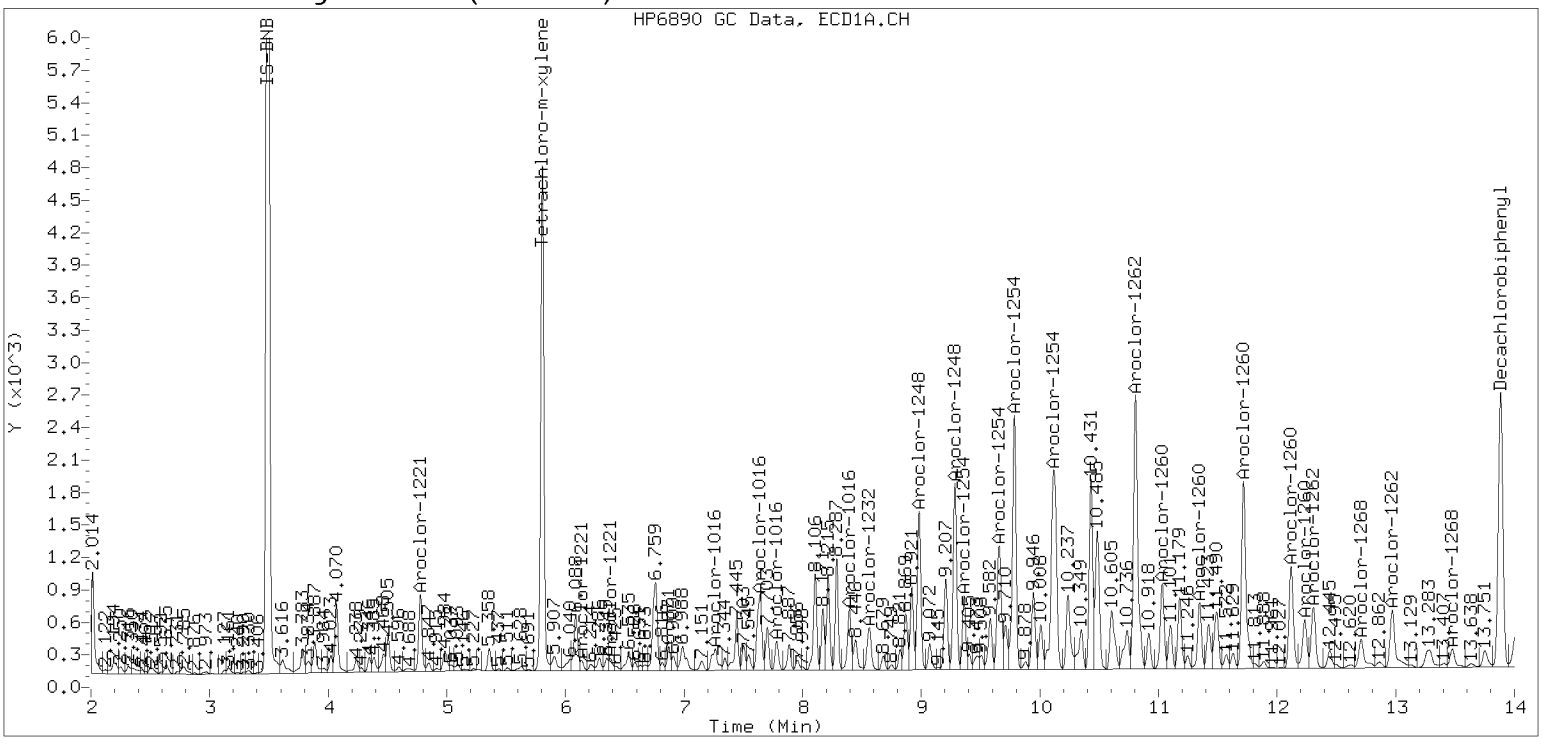
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230131.b/01312326ECD7.D Injection Date: 31-JAN-2023 18:21

Manual Integration (After)



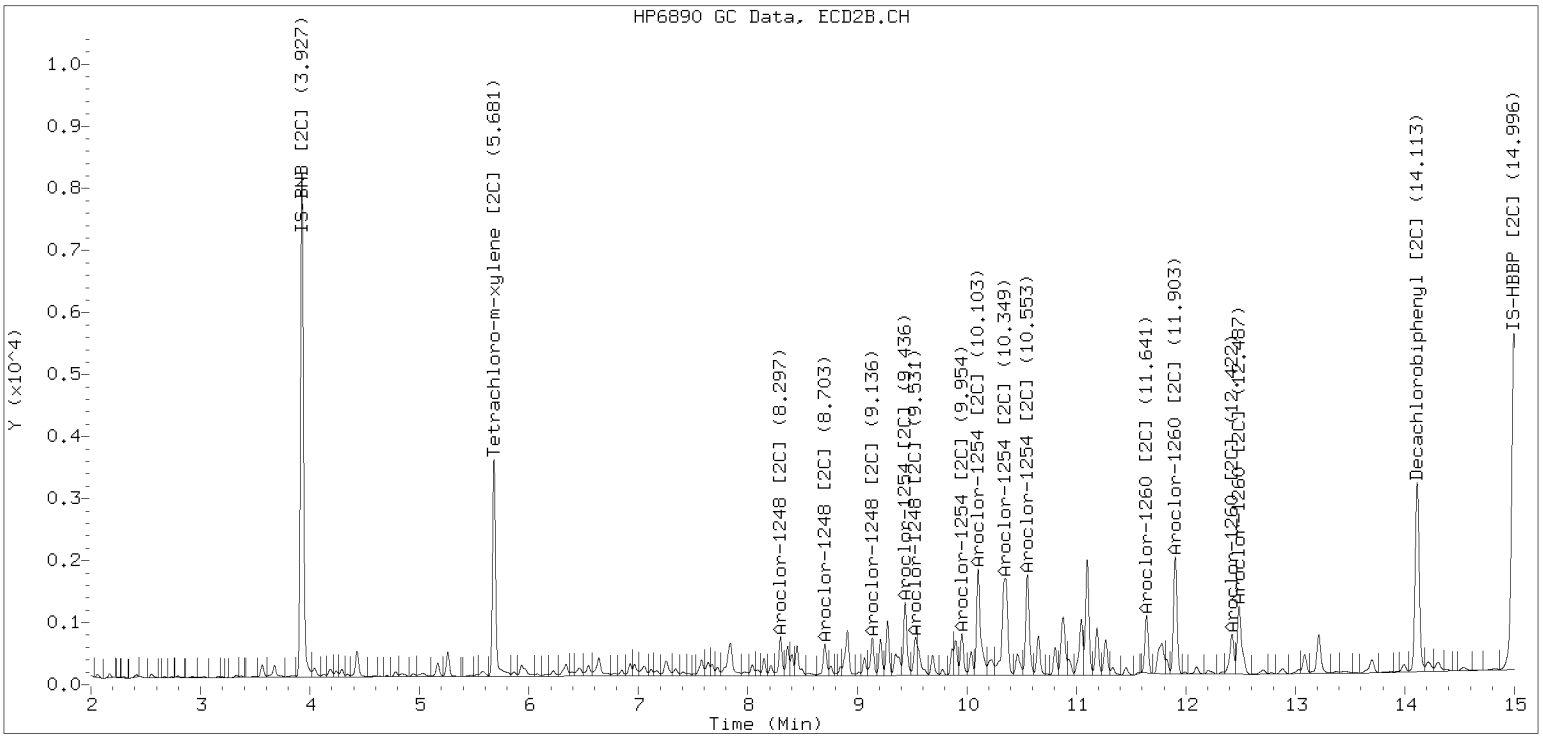
Processed Integration (Before)



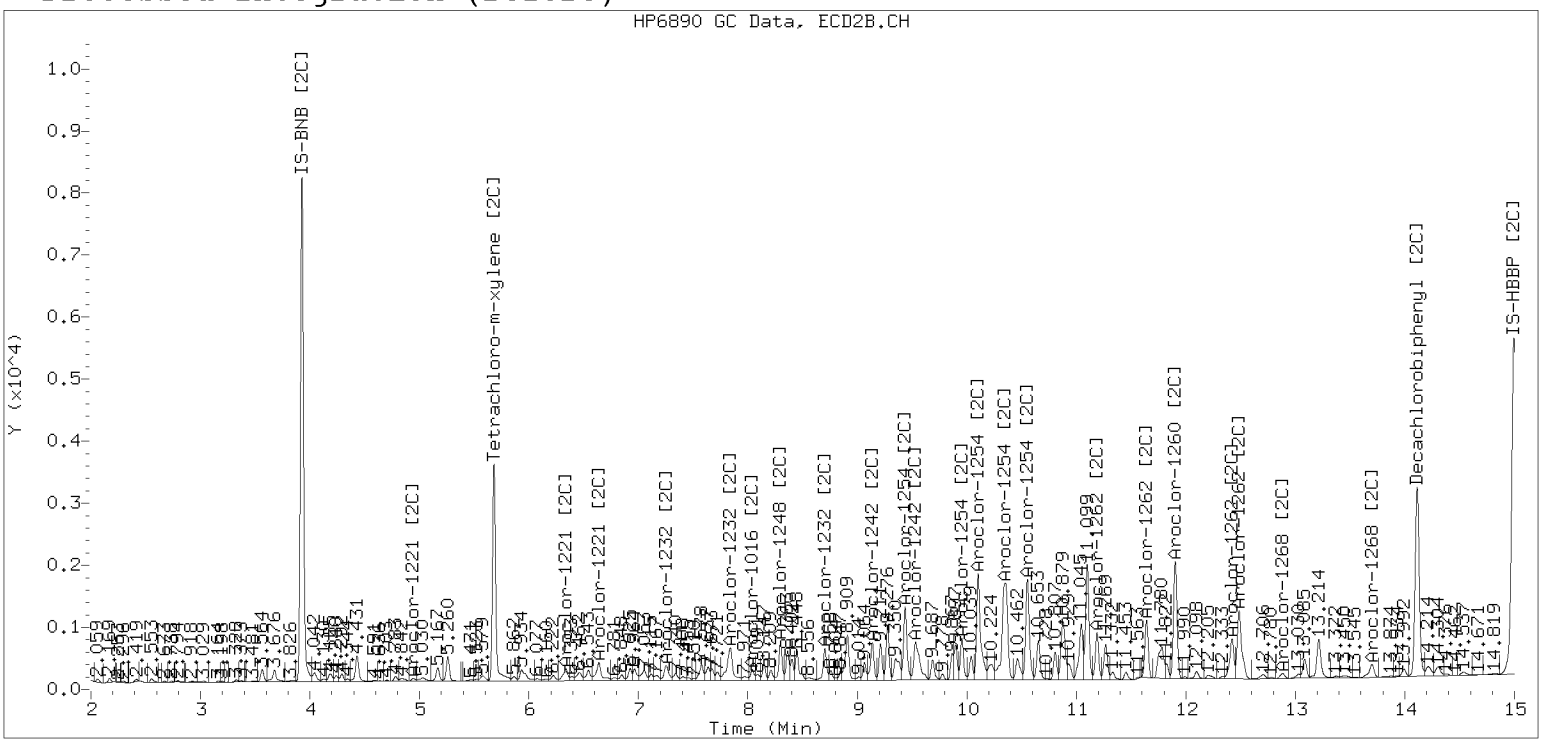
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230131.b/230131.b/01312326ECD7.D Injection Date: 31-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1241

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-06 C	File ID:	01312327ECD7.D
Sampled:	01/06/23 10:51	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 18:42
% Solids:	49.01	Preparation:	EPA 3546 (Microwave)	Initial/Final:	25.51 g Wet / 2.5 mL
Batch:	BLA0394	Sequence:	SLA0350	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	32.5	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	44.0	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	41.8	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9984*	*7.00*	*87.6*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9984*	*5.68*	*71.0*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9984*	*6.72*	*84.1*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9984*	*6.83*	*85.3*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312327ECD7.D
Data file 2: /230131.b/230131.b/01312327ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0133-06
Client ID:
Injection Date: 31-JAN-2023 18:42
Report Date: 02/01/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.002	189183	5.682	-0.002	150150	28.4	34.1	18.3	Tetrachloro-m-xylene
13.885	-0.005	142658	14.113	-0.005	164104	35.0	33.6	4.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	471192	-6.4
Hexabromobiphenyl	647433	380859	-41.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	325403	-3.4
Hexabromobiphenyl	382032	307500	-19.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.395	-0.007	32406	137.5	1	8.298	-0.006	30933	210.3
Aroclor-1248	2	8.563	-0.013	30751	102.3	2	8.704	-0.007	27120	171.3
Aroclor-1248	3	8.982	-0.013	73991	128.6	3	9.137	-0.017	31574	163.2
Aroclor-1248	4	9.285	-0.006	74593	262.0	4	9.532	-0.046	25436	106.3
		Total Col1Ave (4 peaks):			157.6		Total Col2Ave (4 peaks):			162.8 RPD = 3
		Corrected Ave (3 peaks):			122.8		Corrected Ave (3 peaks):			146.9 RPD = 18
Aroclor-1254	1	9.285	-0.010	74593	155.3	1	9.437	-0.008	53310	225.8
Aroclor-1254	2	9.360	-0.013	31355	152.9	2	9.955	-0.010	26059	136.6
Aroclor-1254	3	9.657	-0.007	54820	178.2	3	10.104	-0.013	91885	220.8
Aroclor-1254	4	9.786	-0.017	105518	175.0	4	10.355	-0.011	123830	297.5
Aroclor-1254	5	10.114	-0.050	74884	191.0	5	10.553	-0.011	83735	361.2
		Total Col1Ave (5 peaks):			170.5		Total Col2Ave (5 peaks):			248.4 RPD = 37
		Corrected Ave (4 peaks):			165.4		Corrected Ave (4 peaks):			220.2 RPD = 28
Aroclor-1260	1	11.032	-0.009	48130	225.2	1	11.643	-0.007	44226	199.4
Aroclor-1260	2	11.347	-0.012	35102	159.8	2	11.903	-0.011	96952	172.7
Aroclor-1260	3	11.717	-0.014	108330	187.3	3	12.422	-0.010	38879	277.9
Aroclor-1260	4	12.118	-0.017	53155	177.9	4	12.486	-0.011	67753	186.5
Aroclor-1260	5	12.232	-0.010	27367	210.1	NS	---			----
		Total Col1Ave (5 peaks):			192.1		Total Col2Ave (4 peaks):			209.1 RPD = 9
		Corrected Ave (4 peaks):			183.8		Corrected Ave (3 peaks):			186.2 RPD = 1
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.790) = 2322152 Col1 Total PCB = 0.4 ppm*

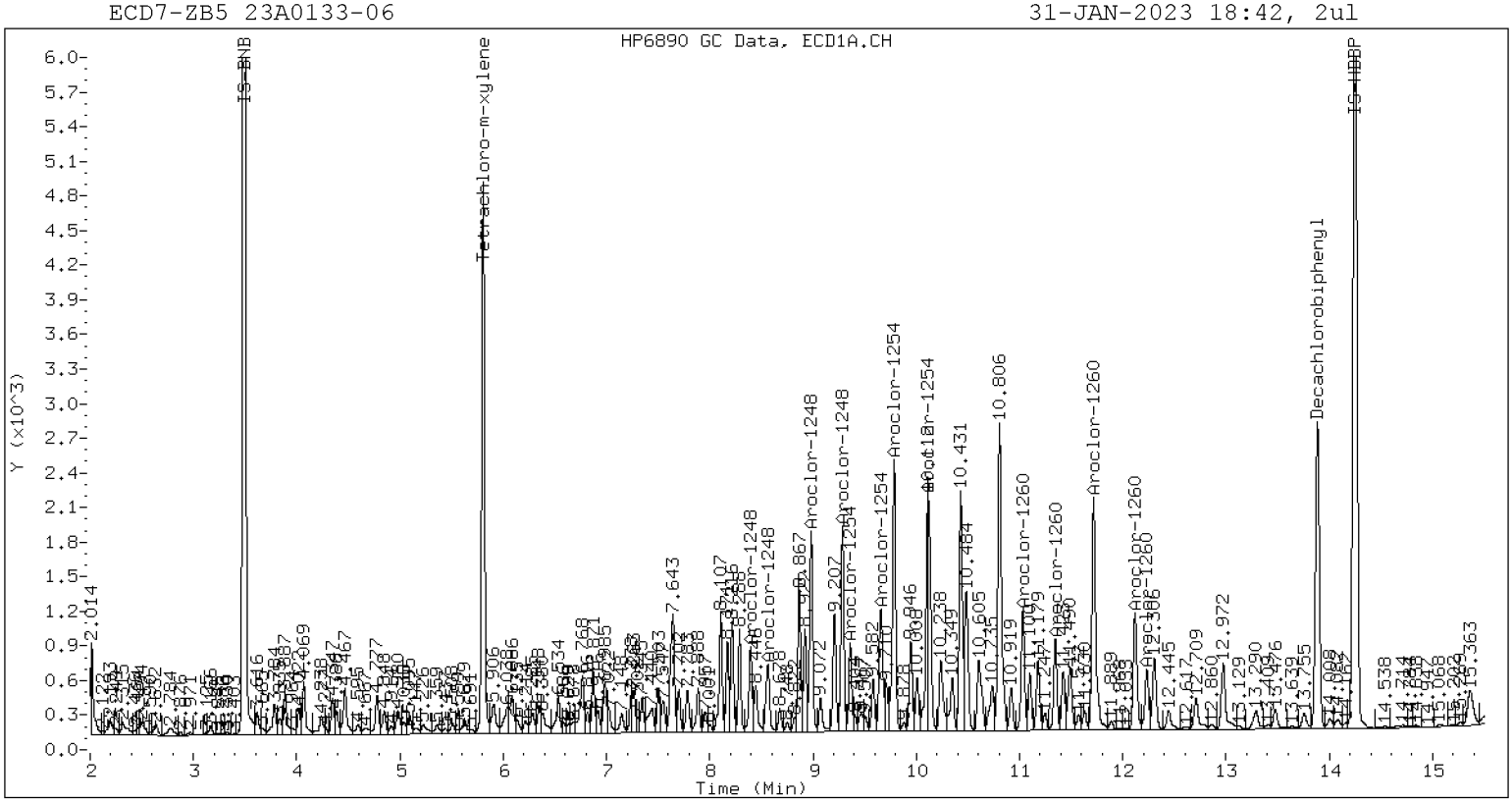
Total PCB Area Col2 (5.784 - 14.018) = 1872428 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

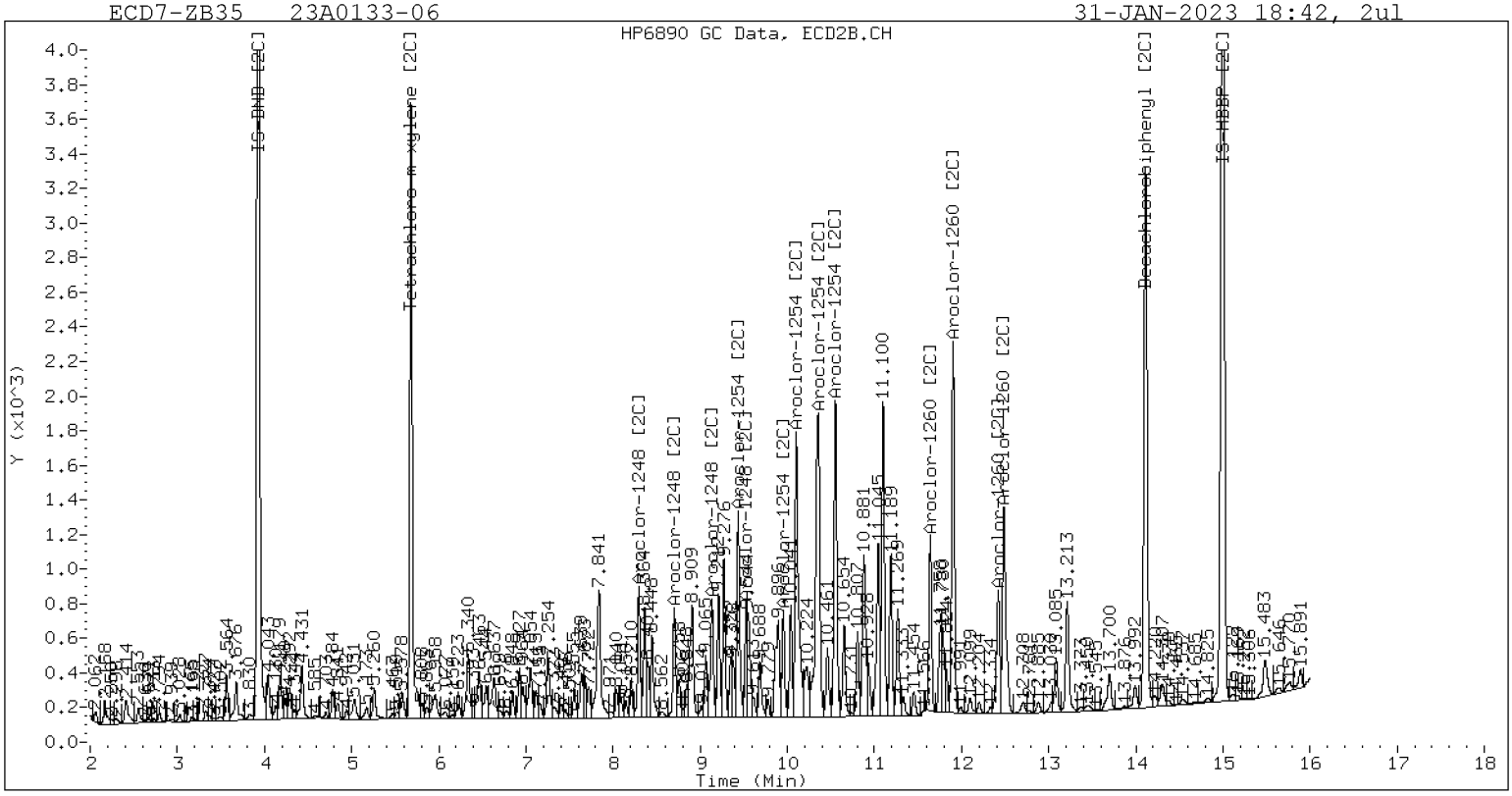
PCB Dual Column Chromatograms

ECD7-ZB5 23A0133-06 31-JAN-2023 18:42, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0133-06 31-JAN-2023 18:42, 2ul

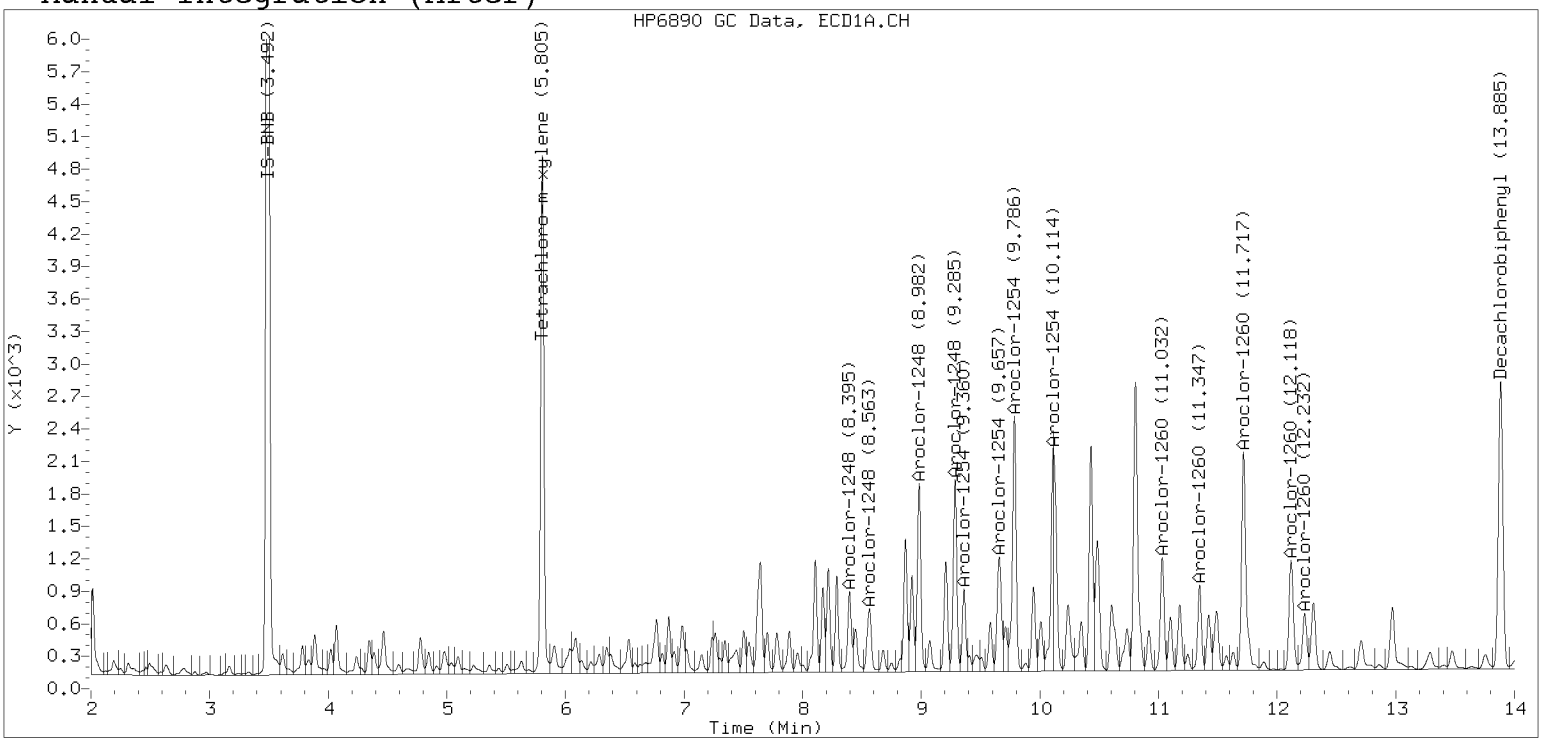


ZB-35 Manual Integration: YES

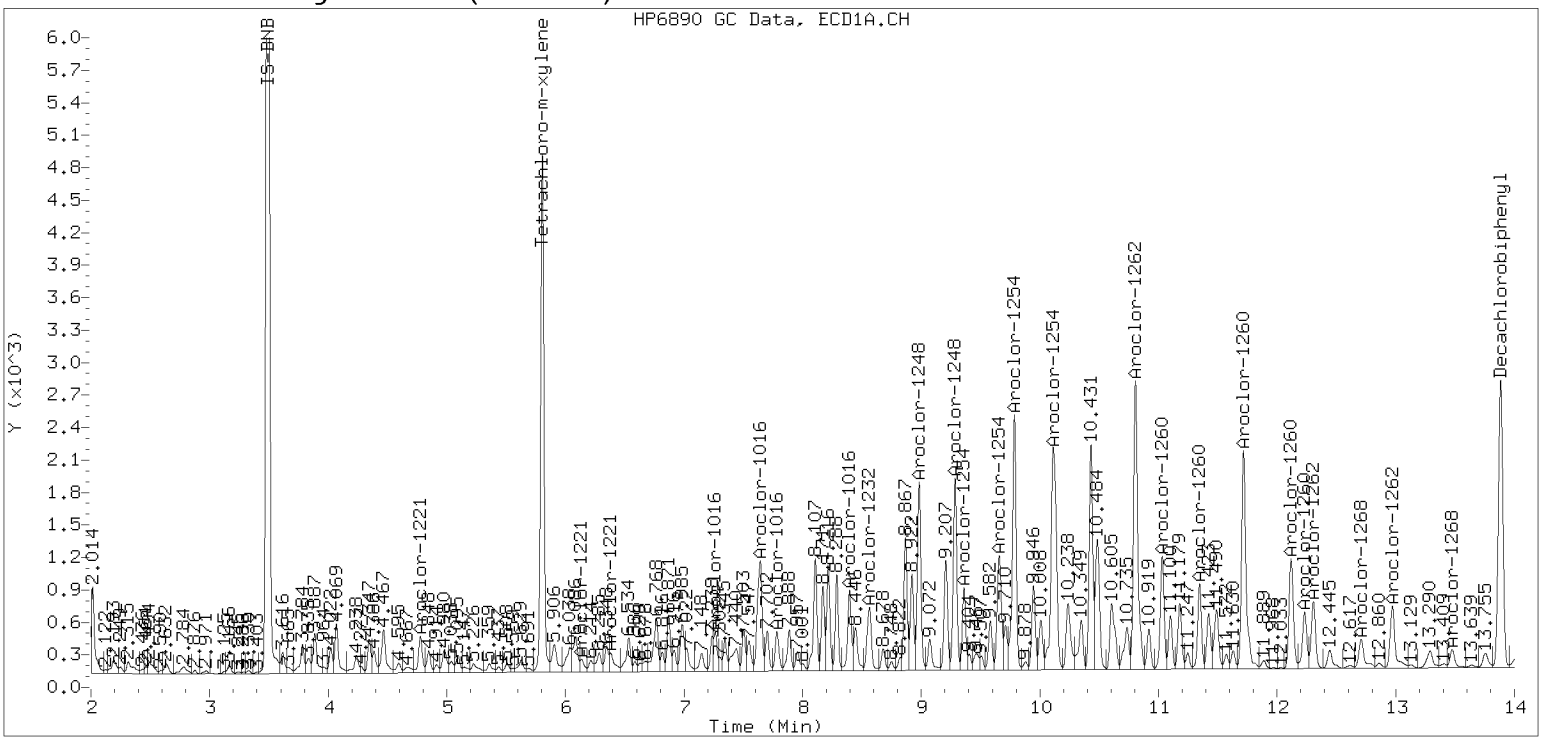
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230131.b/01312327ECD7.D Injection Date: 31-JAN-2023 18:42

Manual Integration (After)



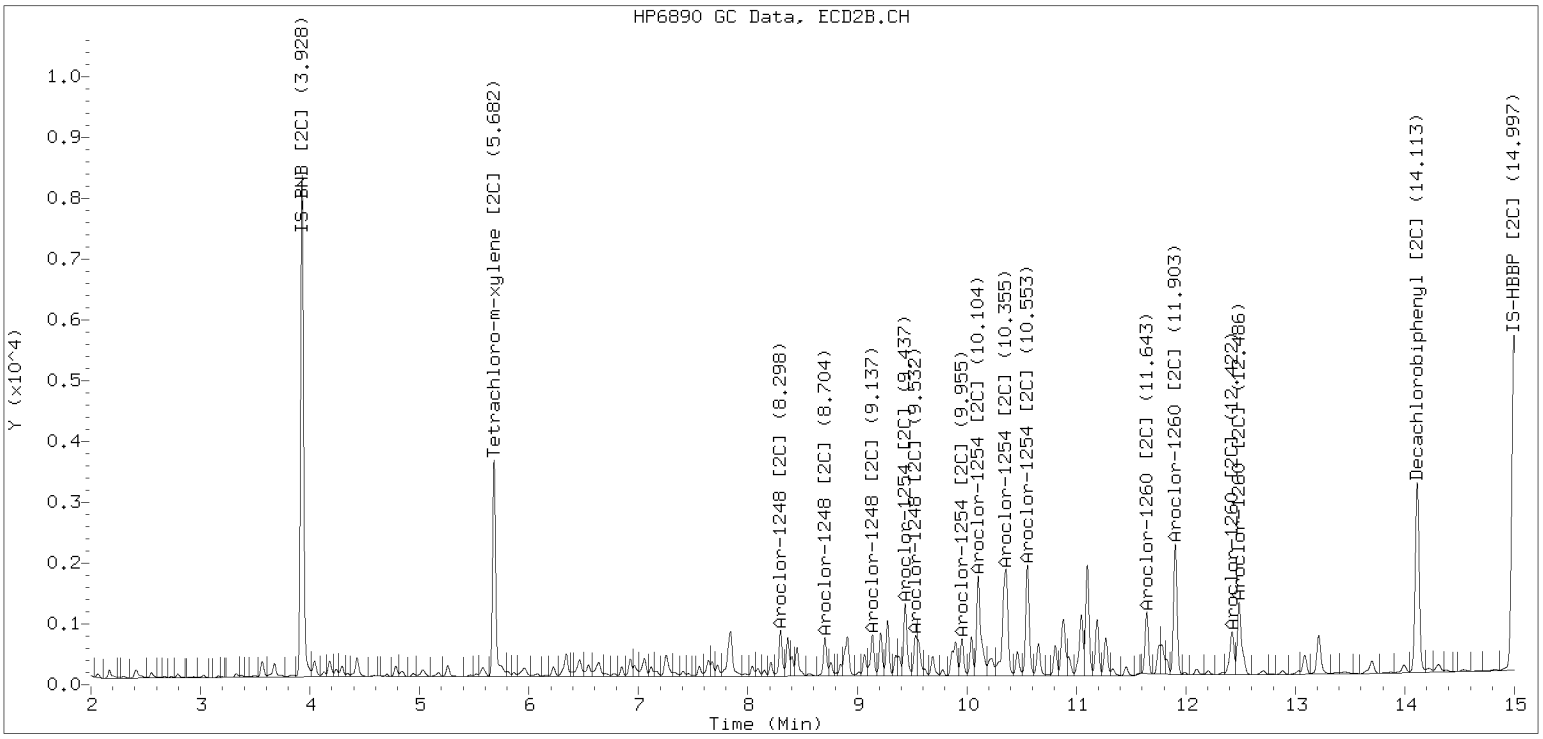
Processed Integration (Before)



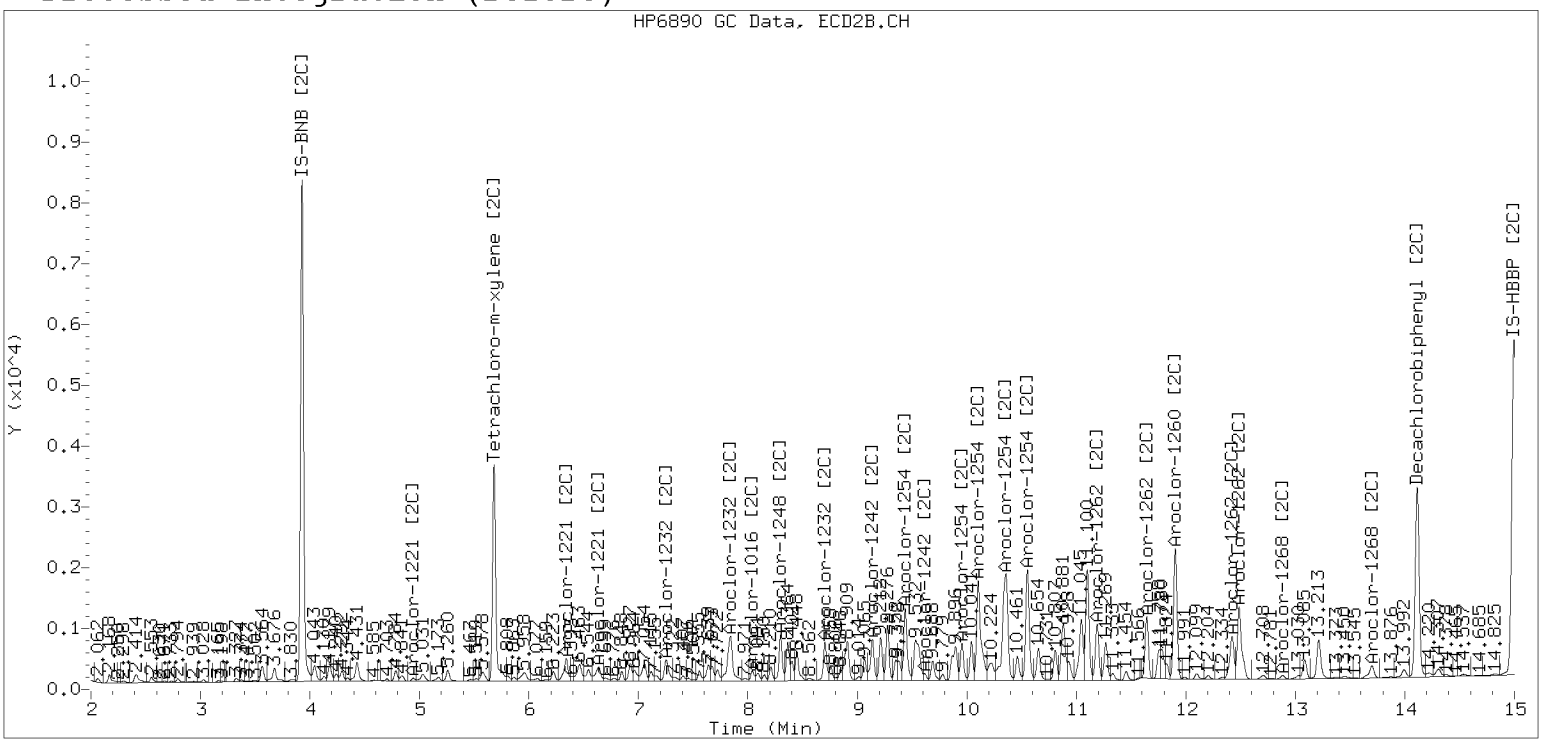
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230131.b/230131.b/01312327ECD7.D Injection Date: 31-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-IT1217

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-07 C	File ID:	01312328ECD7.D
Sampled:	01/06/23 11:14	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 19:03
% Solids:	59.50	Preparation:	EPA 3546 (Microwave)	Initial/Final:	21.06 g Wet / 2.5 mL
Batch:	BLA0394	Sequence:	SLA0350	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	17.3	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	23.1	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	100	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9804*	*7.87*	*98.6*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9804*	*5.45*	*68.3*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9804*	*7.65*	*95.9*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9804*	*6.65*	*83.3*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312328ECD7.D
Data file 2: /230131.b/230131.b/01312328ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0133-07
Client ID:
Injection Date: 31-JAN-2023 19:03
Report Date: 02/01/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.002	178199	5.682	-0.002	141793	27.3	33.3	19.7	Tetrachloro-m-xylene
13.885	-0.005	143829	14.113	-0.005	172754	39.4	38.4	2.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	461397	-8.3
Hexabromobiphenyl	647433	340991	-47.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	314904	-6.5
Hexabromobiphenyl	382032	283826	-25.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.395	-0.008	8160	35.4	1	8.297	-0.007	22818	160.3
Aroclor-1248	2	8.561	-0.015	5674	19.3	2	8.702	-0.008	7786	50.8
Aroclor-1248	3	8.982	-0.013	34835	61.9	3	9.135	-0.018	9221	49.3
Aroclor-1248	4	9.285	-0.006	44774	160.6	4	9.528	-0.050	16153	~~69.~~8
	Total Col1Ave (4 peaks):				69.3	Total Col2Ave (4 peaks):				82.5 RPD = 17
	Corrected Ave (3 peaks):				38.8	Corrected Ave (3 peaks):				56.6 RPD = 37
										86.8
Aroclor-1254	1	9.285	-0.011	44774	95.2	1	9.435	-0.009	32644	142.9
Aroclor-1254	2	9.359	-0.015	14987	74.6	2	9.954	-0.011	22730	123.1
Aroclor-1254	3	9.650	-0.014	29373	97.5	3	10.105	-0.012	32953	81.8
Aroclor-1254	4	9.784	-0.019	57853	98.0	4	10.358	-0.009	101365	2~~51.~~6
Aroclor-1254	5	10.109	-0.054	118370	3~~08.~~3	5	10.552	-0.013	90357	4~~02.~~7
	Total Col1Ave (5 peaks):				1~~34.~~7	Total Col2Ave (5 peaks):				200.4 RPD = 39
	Corrected Ave (4 peaks):				91.3	Corrected Ave (4 peaks):				149.9 RPD = 49*
										115.93
Aroclor-1260	1	11.032	-0.009	112349	587.2	1	11.641	-0.008	84706	413.7
Aroclor-1260	2	11.347	-0.011	79289	403.2	2	11.903	-0.012	221604	427.8
Aroclor-1260	3	11.717	-0.014	217370	419.8	3	12.422	-0.010	89728	694.9
Aroclor-1260	4	12.118	-0.017	92851	347.1	4	12.486	-0.012	158842	473.8
Aroclor-1260	5	12.232	-0.010	69057	592.2	NS	---			----
	Total Col1Ave (5 peaks):				469.9	Total Col2Ave (4 peaks):				502.5 RPD = 7
	Corrected Ave (4 peaks):				439.3	Corrected Ave (3 peaks):				438.4 RPD = 0
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.908 - 13.790) = 2136600 Col1 Total PCB = 0.4 ppm*

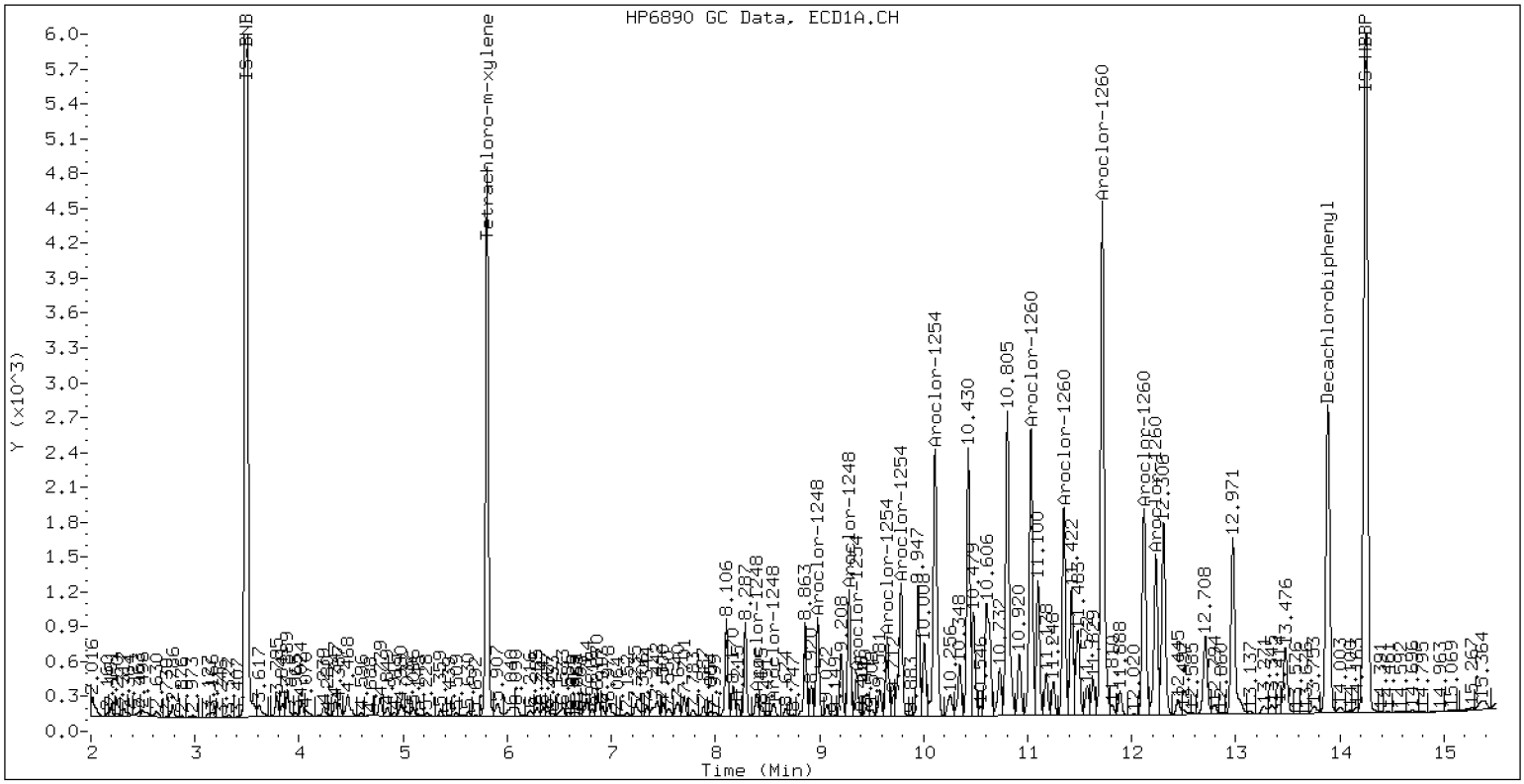
Total PCB Area Col2 (5.784 - 14.018) = 1958272 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

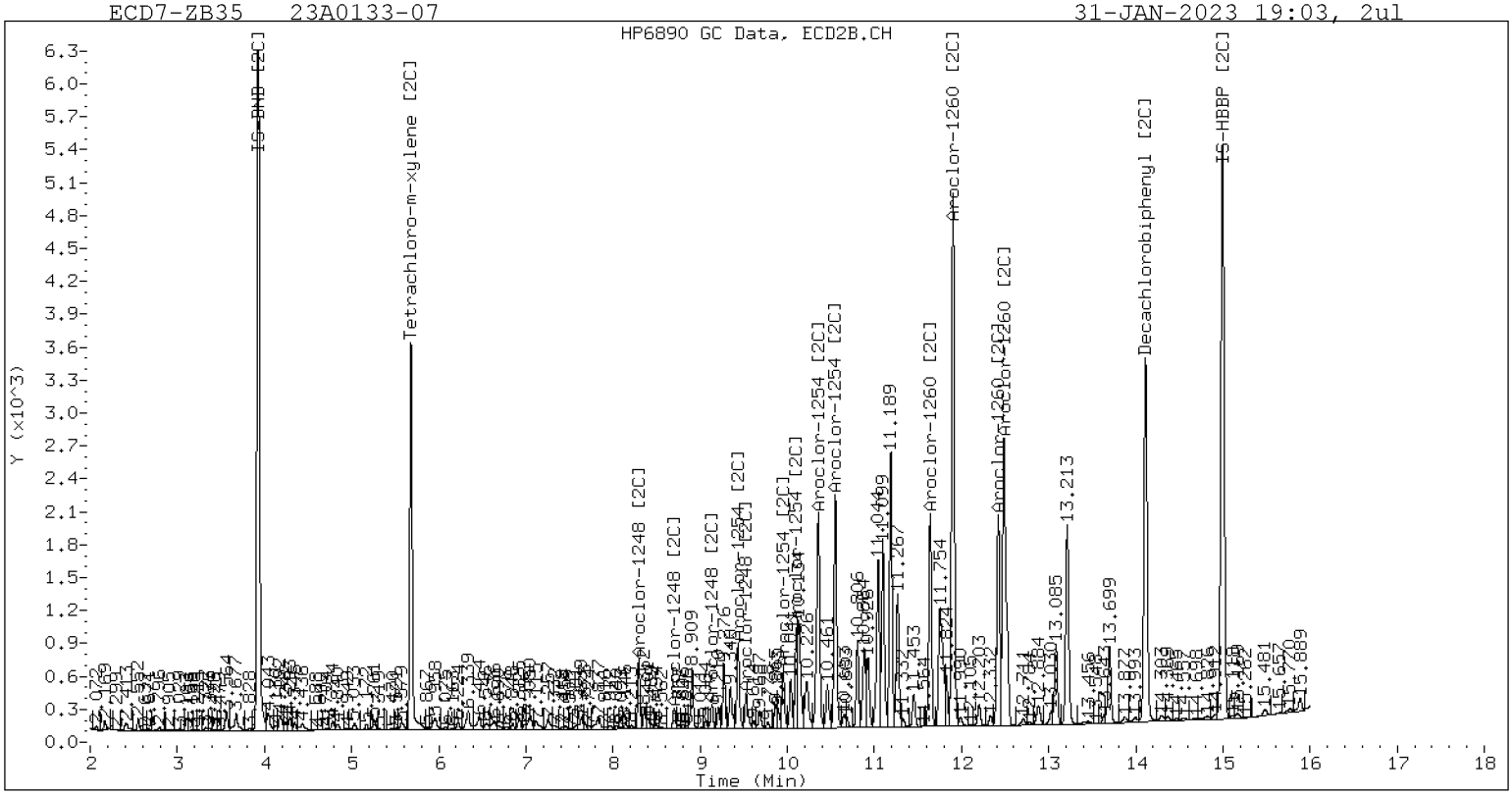
PCB Dual Column Chromatograms

ECD7-ZB5 23A0133-07 31-JAN-2023 19:03, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0133-07 31-JAN-2023 19:03, 2ul

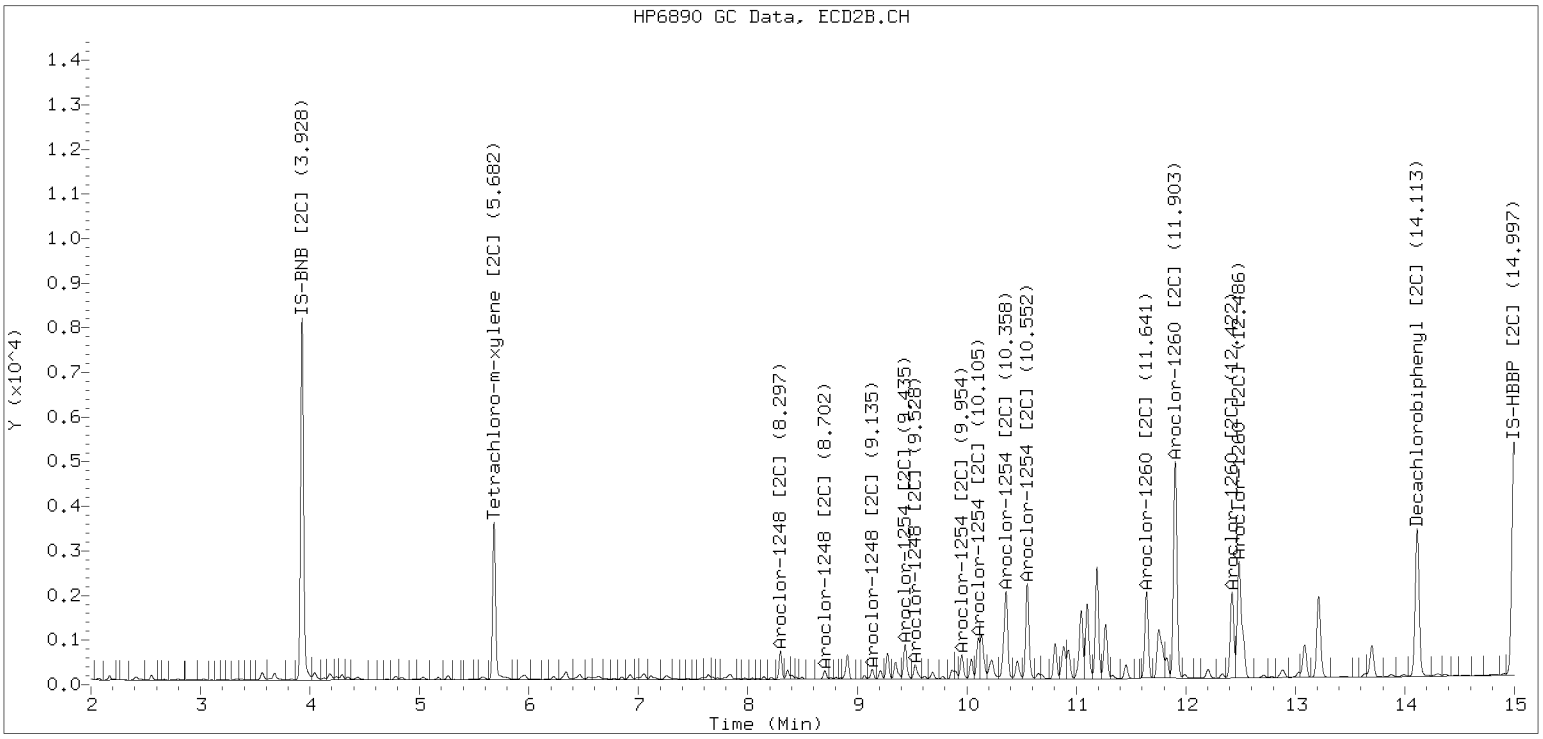


ZB-35 Manual Integration: YES

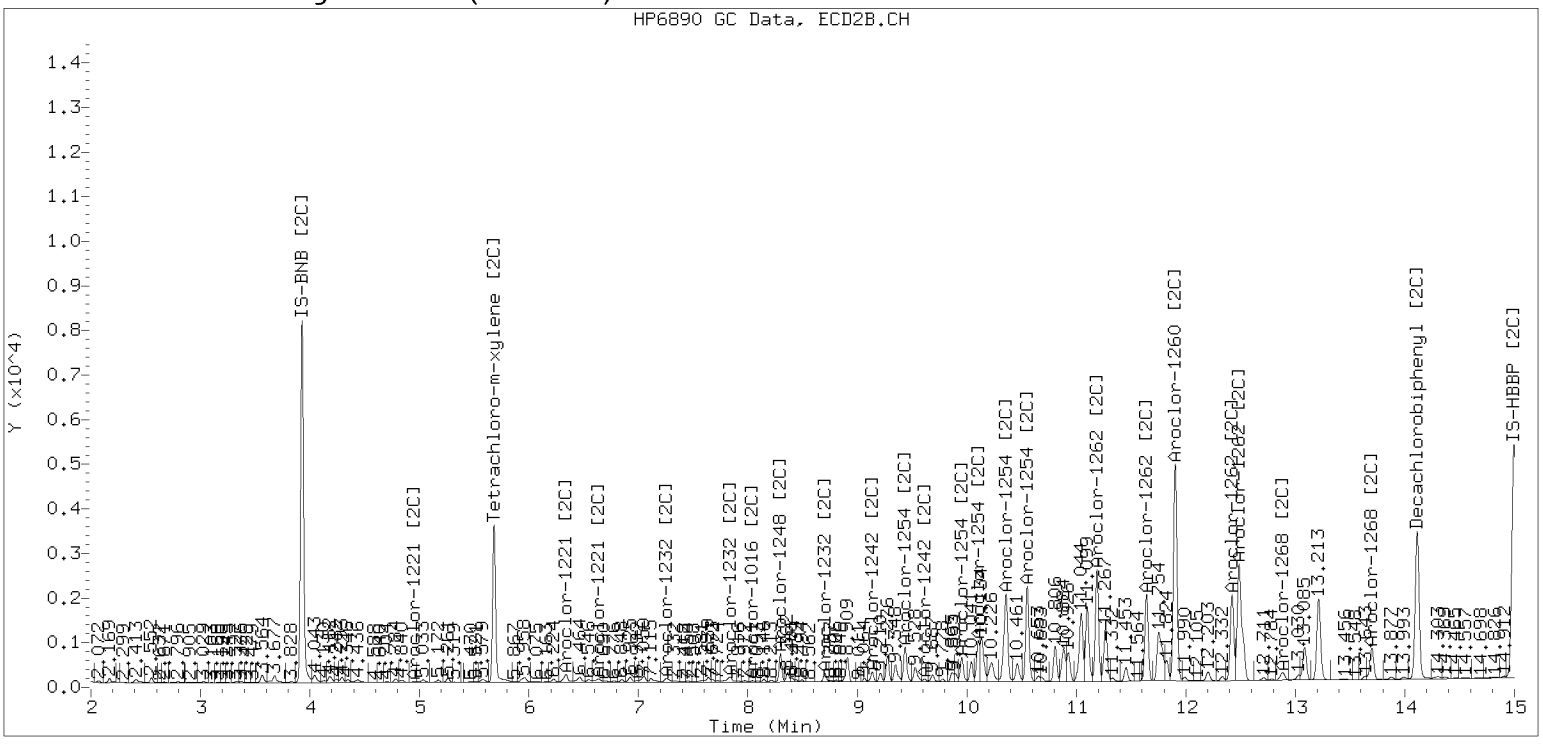
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230131.b/230131.b/01312328ECD7.D Injection Date: 31-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1185

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-08 C	File ID:	01312333ECD7.D
Sampled:	01/06/23 12:00	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 20:48
% Solids:	58.60	Preparation:	EPA 3546 (Microwave)	Initial/Final:	21.36 g Wet / 2.5 mL
Batch:	BLA0394	Sequence:	SLA0350	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	49.0	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	80.8	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	54.9	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9892*	*7.22*	*90.3*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9892*	*5.46*	*68.4*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9892*	*6.88*	*86.1*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9892*	*6.37*	*79.7*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312333ECD7.D
Data file 2: /230131.b/230131.b/01312333ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0133-08
Client ID:
Injection Date: 31-JAN-2023 20:48
Report Date: 02/01/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.003	183136	5.681	-0.003	139744	27.3	31.9	15.4	Tetrachloro-m-xylene
13.885	-0.005	143575	14.113	-0.005	167538	36.1	34.5	4.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	473826	-5.9
Hexabromobiphenyl	647433	371608	-42.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	324066	-3.8
Hexabromobiphenyl	382032	306382	-19.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.394	-0.009	42668	180.0	1	8.297	-0.007	39314	268.4
Aroclor-1248	2	8.562	-0.014	31675	104.8	2	8.703	-0.007	38368	243.3
Aroclor-1248	3	8.982	-0.013	116023	200.6	3	9.136	-0.018	48241	250.4
Aroclor-1248	4	9.284	-0.007	125161	437.2	4	9.529	-0.049	52120	218.7
	Total Col1Ave (4 peaks):				230.6	Total Col2Ave (4 peaks):				245.2 RPD = 6
	Corrected Ave (3 peaks):				161.8	Corrected Ave (3 peaks):				237.5 RPD = 38
Aroclor-1254	1	9.284	-0.011	125161	259.2	1	9.436	-0.009	94333	401.2
Aroclor-1254	2	9.360	-0.014	50201	243.5	2	9.955	-0.010	50597	266.3
Aroclor-1254	3	9.654	-0.010	83736	270.6	3	10.103	-0.014	158502	382.4
Aroclor-1254	4	9.784	-0.018	171451	282.8	4	10.353	-0.014	179660	433.4
Aroclor-1254	5	10.117	-0.047	209491	531.4	5	10.552	-0.012	124537	539.4
	Total Col1Ave (5 peaks):				317.5	Total Col2Ave (5 peaks):				404.5 RPD = 24
	Corrected Ave (4 peaks):				264.0	Corrected Ave (4 peaks):				370.8 RPD = 34
Aroclor-1260	1	11.031	-0.010	58004	278.2	1	11.642	-0.008	67525	305.5
Aroclor-1260	2	11.347	-0.012	49074	229.0	2	11.903	-0.011	129441	231.5
Aroclor-1260	3	11.717	-0.015	135029	239.3	3	12.423	-0.010	44403	318.6
Aroclor-1260	4	12.118	-0.017	73270	251.3	4	12.487	-0.011	88505	244.6
Aroclor-1260	5	12.232	-0.009	30280	238.3	NS	---			----
	Total Col1Ave (5 peaks):				247.2	Total Col2Ave (4 peaks):				275.0 RPD = 11
	Corrected Ave (4 peaks):				239.5	Corrected Ave (3 peaks):				260.5 RPD = 8
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.908 - 13.790) = 6152465 Col1 Total PCB = 1.1 ppm*

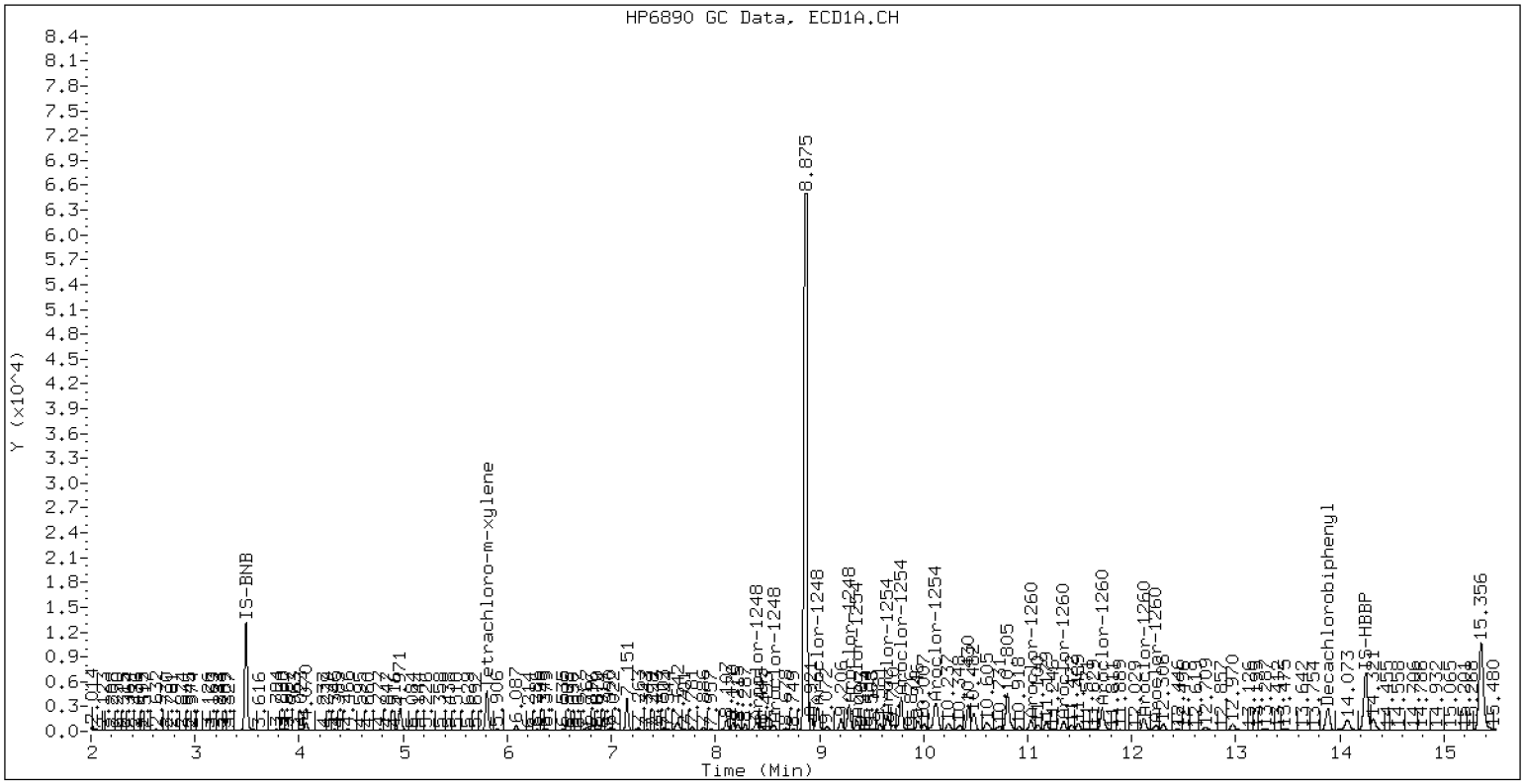
Total PCB Area Col2 (5.784 - 14.018) = 3952043 Col2 Total PCB = 1.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

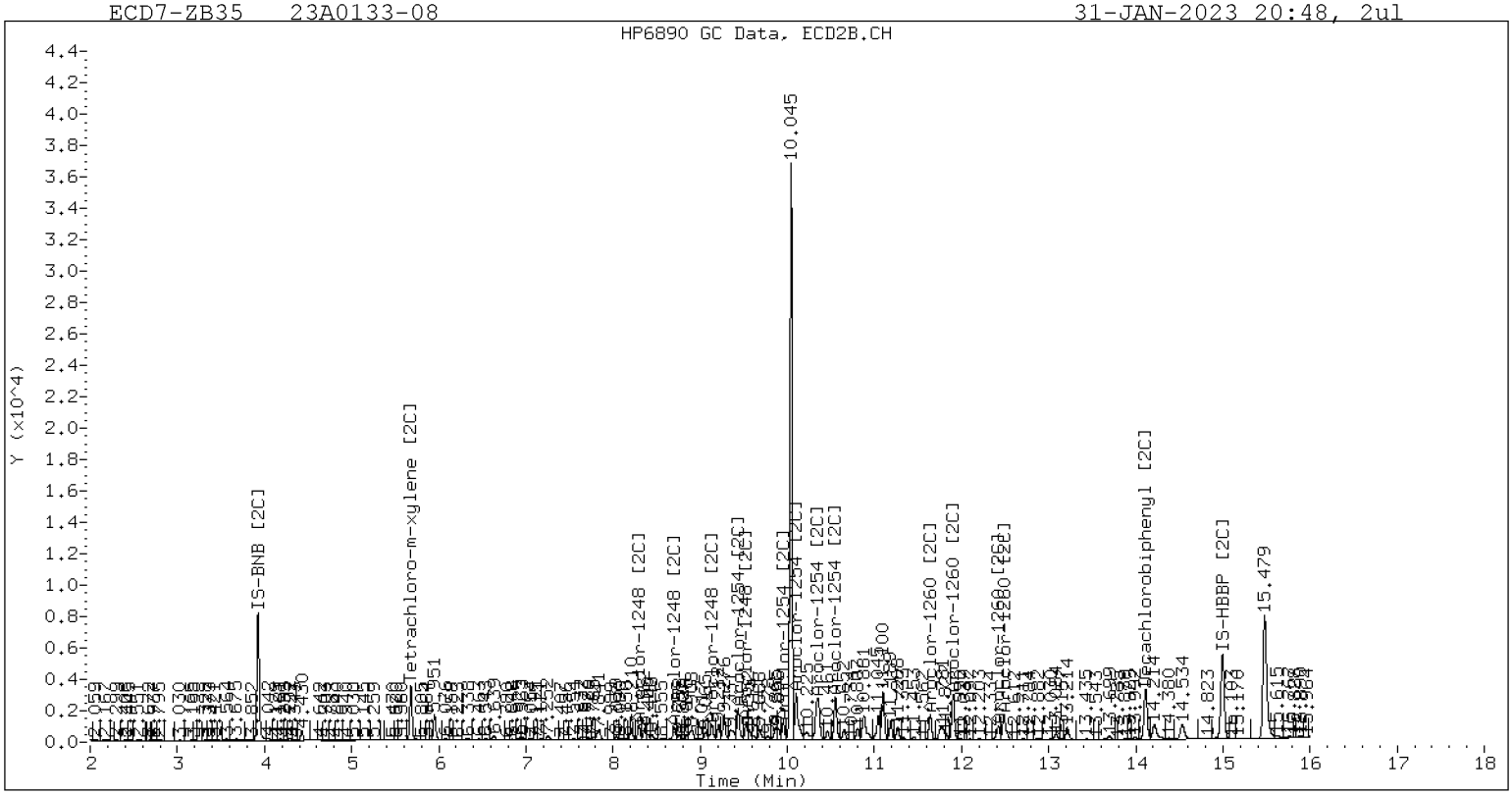
PCB Dual Column Chromatograms

ECD7-ZB5 23A0133-08 31-JAN-2023 20:48, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0133-08 31-JAN-2023 20:48, 2ul

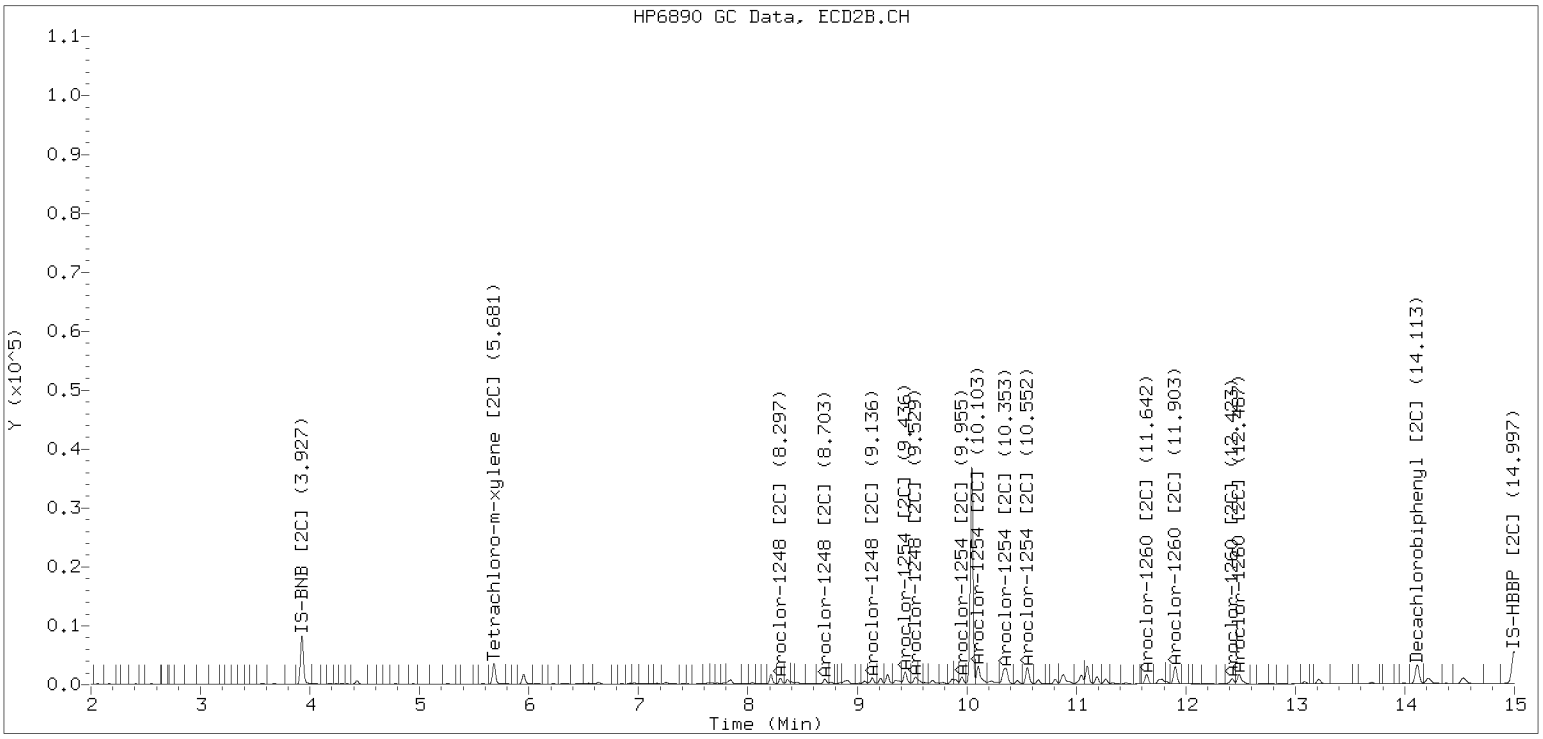


ZB-35 Manual Integration: YES

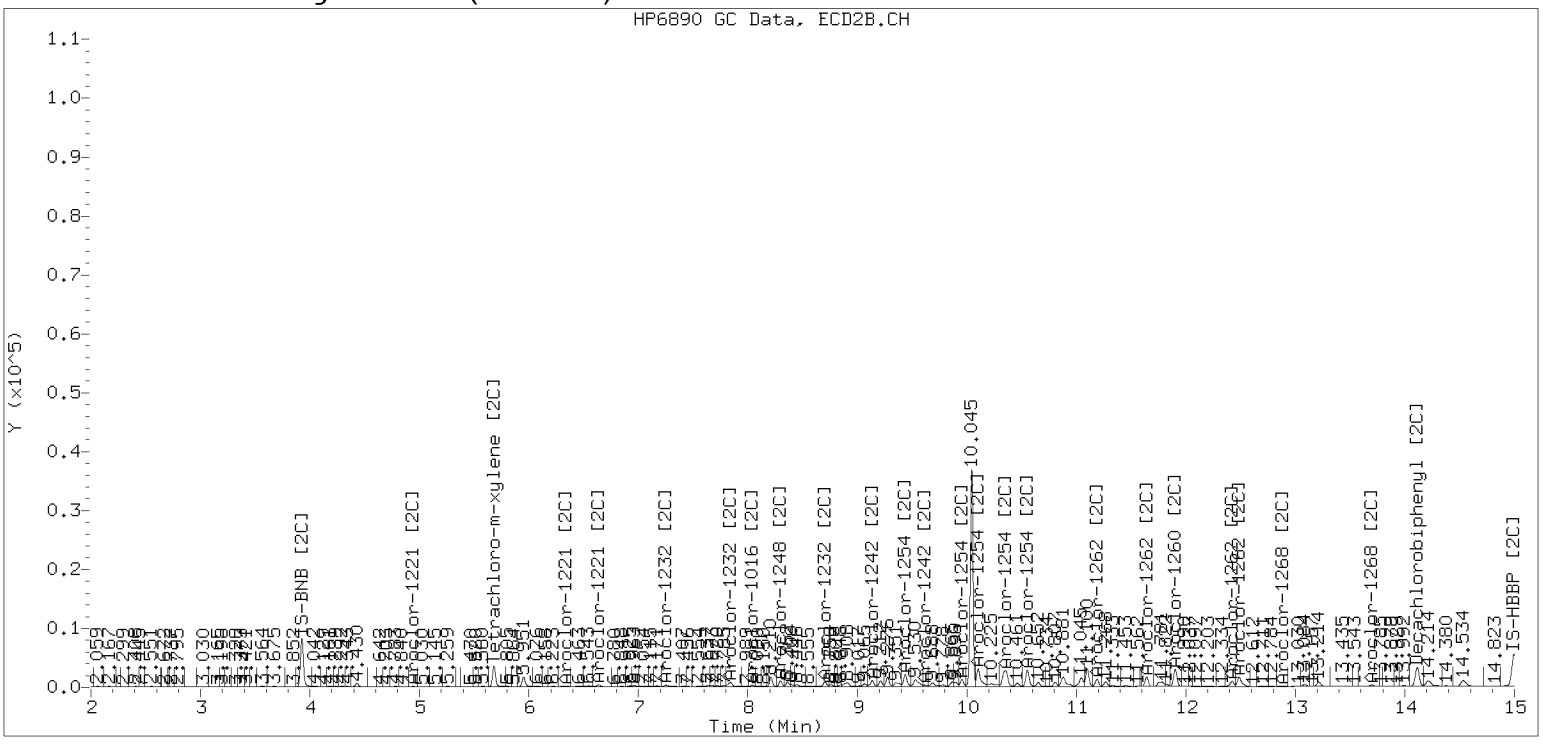
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230131.b/230131.b/01312333ECD7.D Injection Date: 31-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1234

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-09 C	File ID:	01312334ECD7.D
Sampled:	01/06/23 13:34	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 21:09
% Solids:	53.74	Preparation:	EPA 3546 (Microwave)	Initial/Final:	23.27 g Wet / 2.5 mL
Batch:	BLA0394	Sequence:	SLA0350	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	33.3	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	58.9	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	54.9	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9966*	*7.05*	*88.2*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9966*	*5.73*	*71.6*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9966*	*6.74*	*84.3*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9966*	*6.70*	*83.8*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312334ECD7.D
Data file 2: /230131.b/230131.b/01312334ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0133-09
Client ID:
Injection Date: 31-JAN-2023 21:09
Report Date: 02/01/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.003	190193	5.681	-0.003	146520	28.6	33.5	15.7	Tetrachloro-m-xylene
13.884	-0.005	146146	14.113	-0.005	167949	35.3	33.7	4.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	469744	-6.7
Hexabromobiphenyl	647433	387391	-40.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	323293	-4.0
Hexabromobiphenyl	382032	313875	-17.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.395	-0.007	28422	121.0	1	8.298	-0.006	30623	209.6
Aroclor-1248	2	8.562	-0.014	27064	90.3	2	8.704	-0.007	23733	150.9
Aroclor-1248	3	8.983	-0.012	77806	135.7	3	9.137	-0.017	29168	151.8
Aroclor-1248	4	9.285	-0.006	90420	318.6	4	9.530	-0.047	30747	129.3
		Total Col1Ave (4 peaks):			166.4		Total Col2Ave (4 peaks):			160.4 RPD = 4
		Corrected Ave (3 peaks):			115.6		Corrected Ave (3 peaks):			144.0 RPD = 22
Aroclor-1254	1	9.285	-0.010	90420	188.9	1	9.437	-0.007	63200	269.5
Aroclor-1254	2	9.361	-0.013	40249	196.9	2	9.955	-0.010	30968	163.4
Aroclor-1254	3	9.654	-0.010	61040	199.0	3	10.104	-0.013	109098	263.8
Aroclor-1254	4	9.785	-0.017	129745	215.9	4	10.354	-0.013	145138	351.0
Aroclor-1254	5	10.114	-0.050	157335	402.5	5	10.553	-0.012	98239	426.5
		Total Col1Ave (5 peaks):			240.6		Total Col2Ave (5 peaks):			294.8 RPD = 20
		Corrected Ave (4 peaks):			200.2		Corrected Ave (4 peaks):			261.9 RPD = 27
Aroclor-1260	1	11.032	-0.009	63372	291.6	1	11.643	-0.007	56389	249.0
Aroclor-1260	2	11.347	-0.012	45178	202.2	2	11.904	-0.011	133629	233.3
Aroclor-1260	3	11.718	-0.013	143214	243.5	3	12.422	-0.010	51461	360.4
Aroclor-1260	4	12.119	-0.016	71729	236.0	4	12.487	-0.011	94957	256.1
Aroclor-1260	5	12.233	-0.008	39536	298.4	NS	---			----
		Total Col1Ave (5 peaks):			254.3		Total Col2Ave (4 peaks):			274.7 RPD = 8
		Corrected Ave (4 peaks):			243.3		Corrected Ave (3 peaks):			246.1 RPD = 1
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.790) = 2566319 Col1 Total PCB = 0.5 ppm*

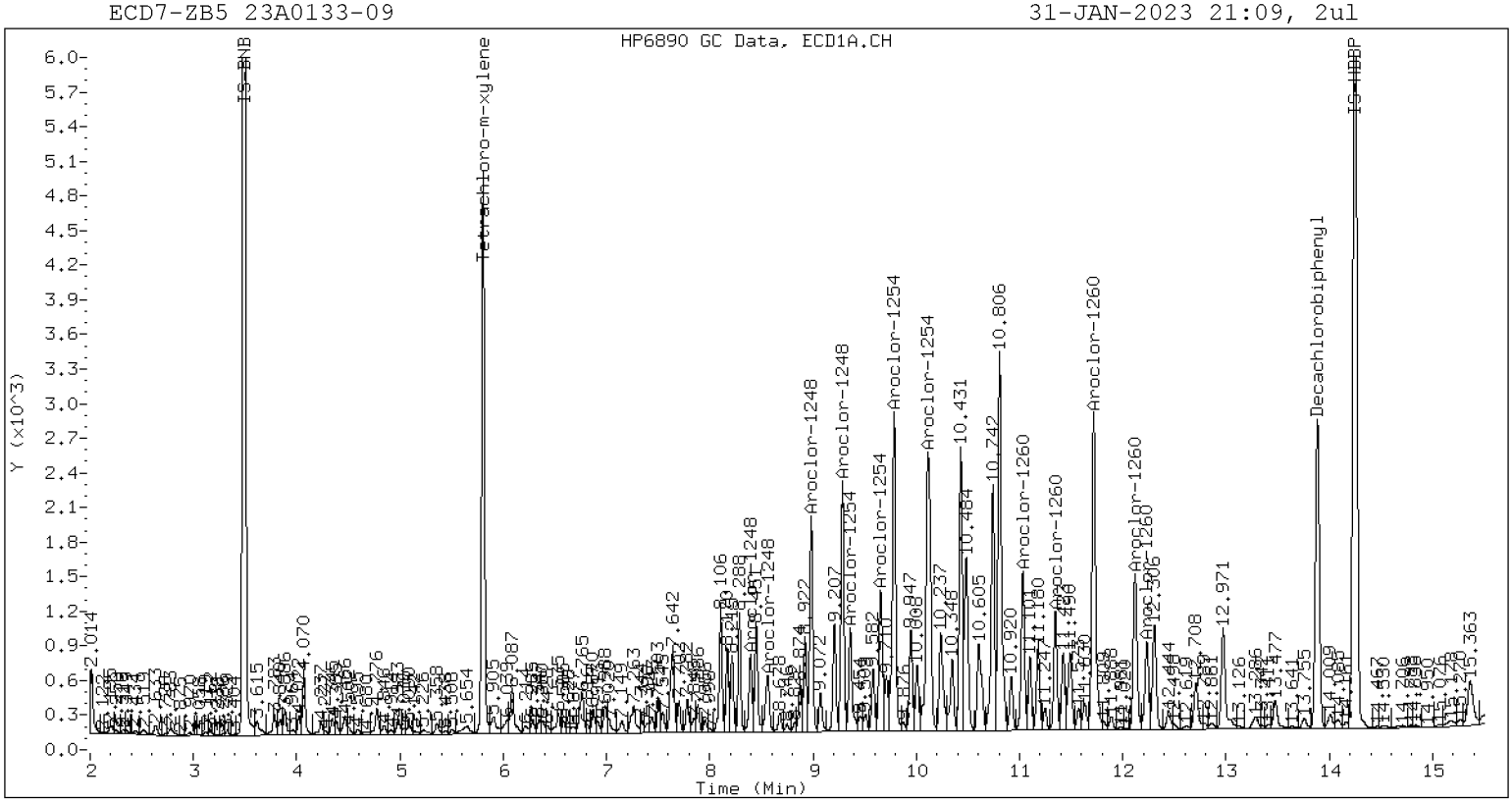
Total PCB Area Col2 (5.784 - 14.018) = 2099718 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

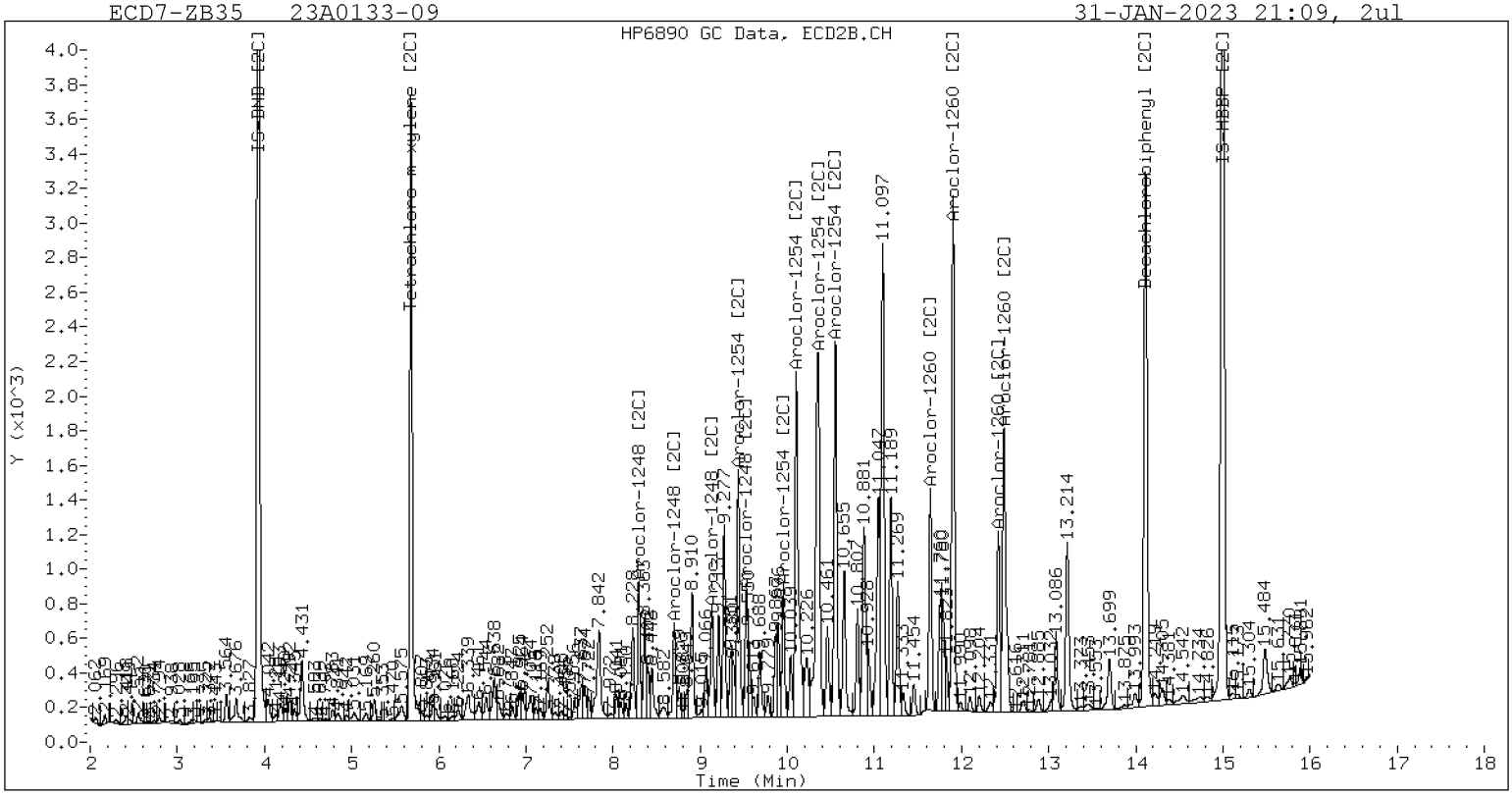
PCB Dual Column Chromatograms

ECD7-ZB5 23A0133-09 31-JAN-2023 21:09, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0133-09 31-JAN-2023 21:09, 2ul

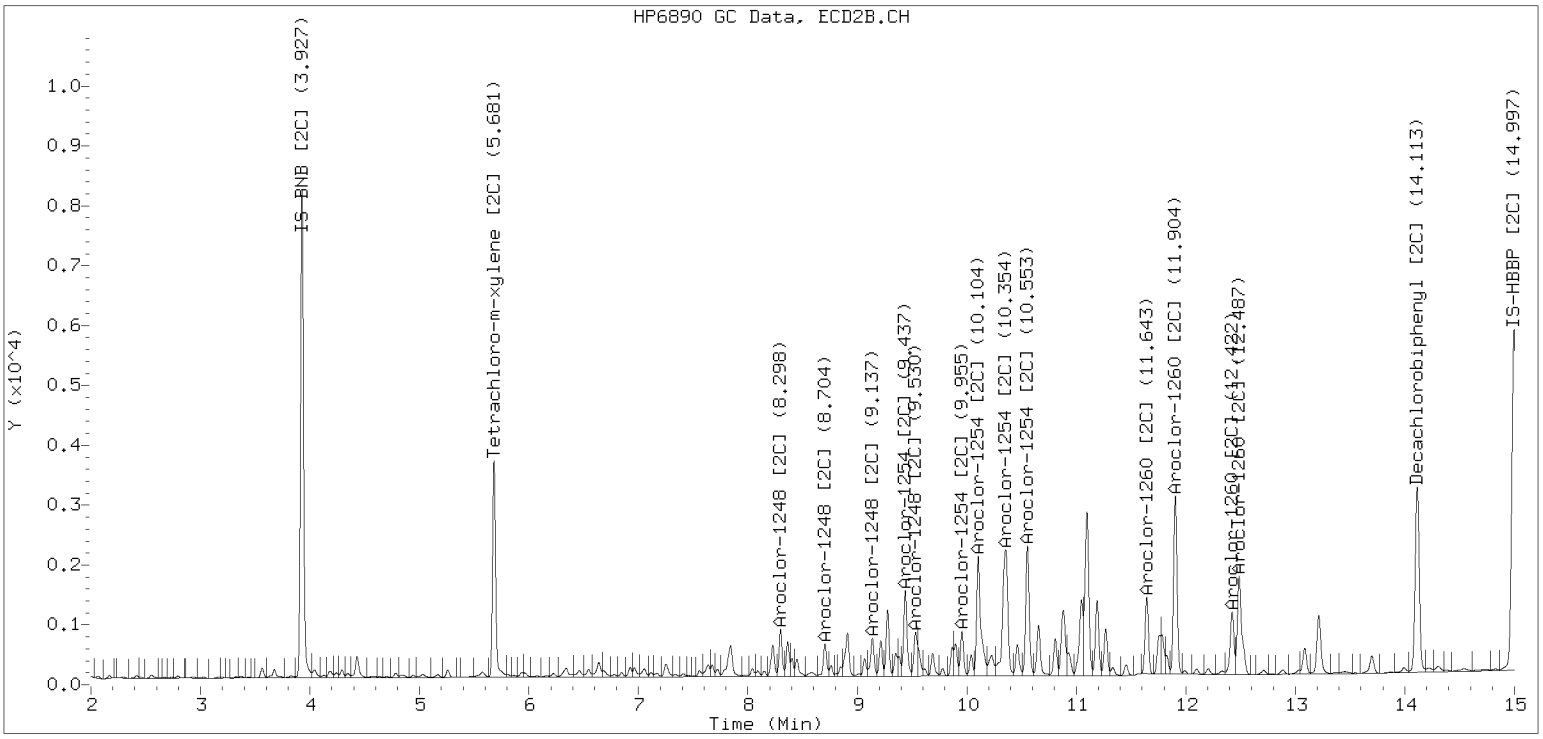


ZB-35 Manual Integration: YES

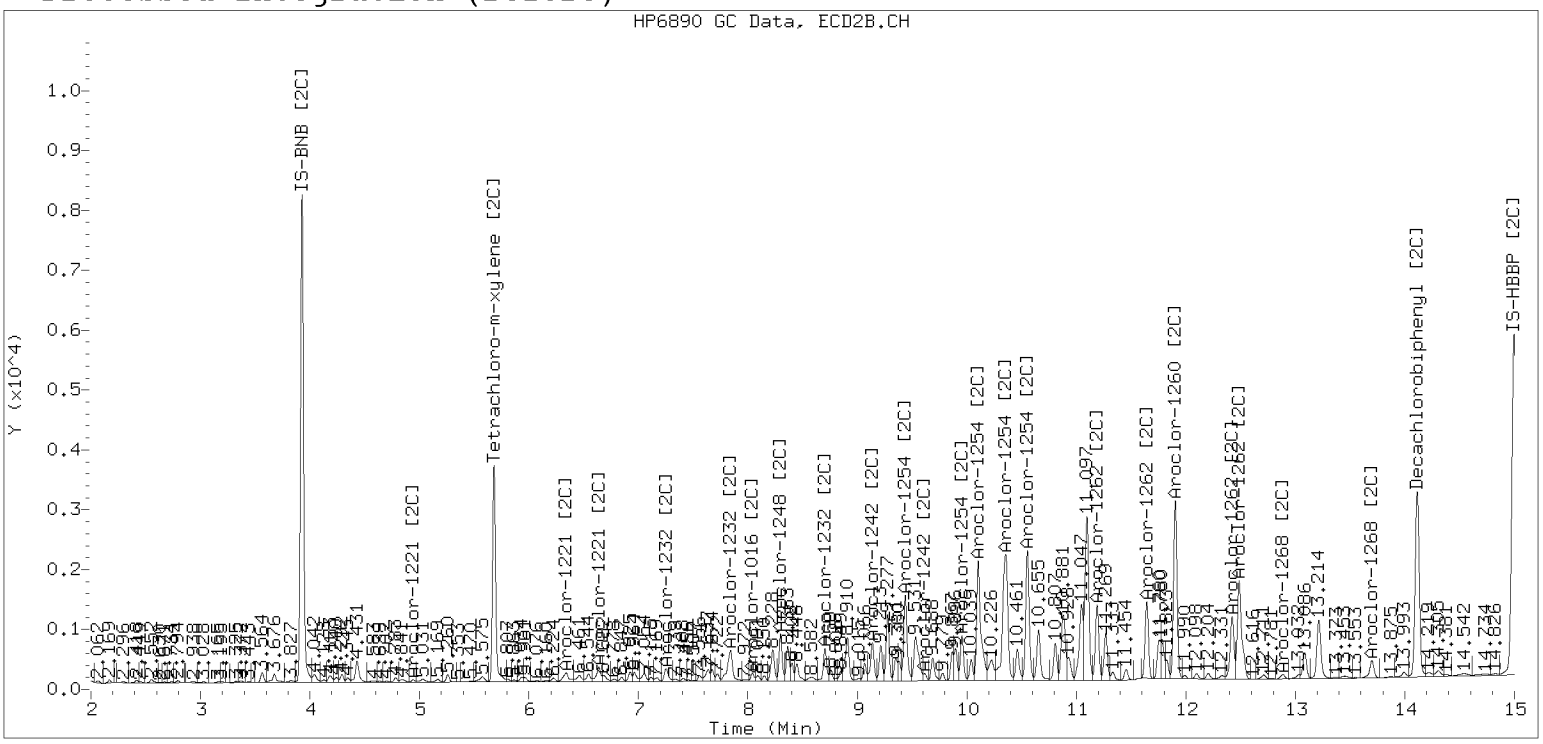
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230131.b/230131.b/01312334ECD7.D Injection Date: 31-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1215

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-10 C	File ID:	02012305ECD7.D
Sampled:	01/06/23 11:38	Prepared:	01/18/23 12:25	Analyzed:	02/01/23 10:49
% Solids:	53.49	Preparation:	EPA 3546 (Microwave)	Initial/Final:	23.41 g Wet / 2.5 mL
Batch:	BLA0394	Sequence:	SLB0012	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	5	20.0	7.8	20.0	U
11104-28-2	Aroclor 1221	1	5	20.0	7.8	20.0	U
11141-16-5	Aroclor 1232	1	5	20.0	7.8	20.0	U
53469-21-9	Aroclor 1242	1	5	20.0	7.8	20.0	U
12672-29-6	Aroclor 1248	1	5	20.0	7.8	20.0	U
11097-69-1	Aroclor 1254	2	5	63.0	7.8	20.0	P1, D
11096-82-5	Aroclor 1260	2	5	361	2.9	20.0	D

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9859*	*7.68*	*96.1*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9859*	*4.27*	*53.4*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9859*	*7.45*	*93.3*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9859*	*5.59*	*69.9*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230201.b/02012305ECD7.D
Data file 2: /230201.b/230201.b/02012305ECD7.D
Method: \\target\share\chem4\ecd7.i\230201.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0133-10RE1
Client ID:
Injection Date: 01-FEB-2023 10:49
Report Date: 02/01/2023 15:25
Matrix: NONE
Dilution Factor: 5.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.804	-0.005	28409	5.681	-0.003	24868	4.3	5.6	26.7	Tetrachloro-m-xylene
13.884	-0.008	34641	14.113	-0.005	38278	7.7	7.5	3.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	470039	-6.6
Hexabromobiphenyl	647433	421264	-34.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	328724	-2.4
Hexabromobiphenyl	382032	323210	-15.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	9.286	-0.012	14279	29.8	1	9.437	-0.008	12042	50.5
Aroclor-1254	2	9.360	-0.018	5374	26.3	2	9.956	-0.009	3431	17.8
Aroclor-1254	3	9.664	-0.005	10276	33.5	3	10.136	0.020	31282	74.4
Aroclor-1254	4	9.784	-0.025	11437	19.0	4	10.360	-0.006	46578	110.8
Aroclor-1254	5	10.108	-0.070	54769	140 0	5	10.553	-0.011	64062	273.5
	Total Col1Ave (5 peaks):				49.7	Total Col2Ave (5 peaks):				105.4 RPD = 72*
	Corrected Ave (4 peaks):				27.1	Corrected Ave (4 peaks):				63.4 RPD = 80*
Aroclor-1260	1	11.032	-0.012	89112	377.0	1	11.642	-0.009	63263	271.3
Aroclor-1260	2	11.349	-0.012	67370	277.3	2	11.904	-0.011	189906	321.9
Aroclor-1260	3	11.718	-0.016	198272	310.0	3	12.424	-0.010	74353	505.7
Aroclor-1260	4	12.119	-0.021	81254	245.9	4	12.488	-0.010	132172	346.2
Aroclor-1260	5	12.233	-0.011	63582	441.4	NS	---			----
	Total Col1Ave (5 peaks):				330.3	Total Col2Ave (4 peaks):				361.3 RPD = 9
	Corrected Ave (4 peaks):				302.5	Corrected Ave (3 peaks):				313.1 RPD = 3
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 1494717 Col1 Total PCB = 0.3 ppm*

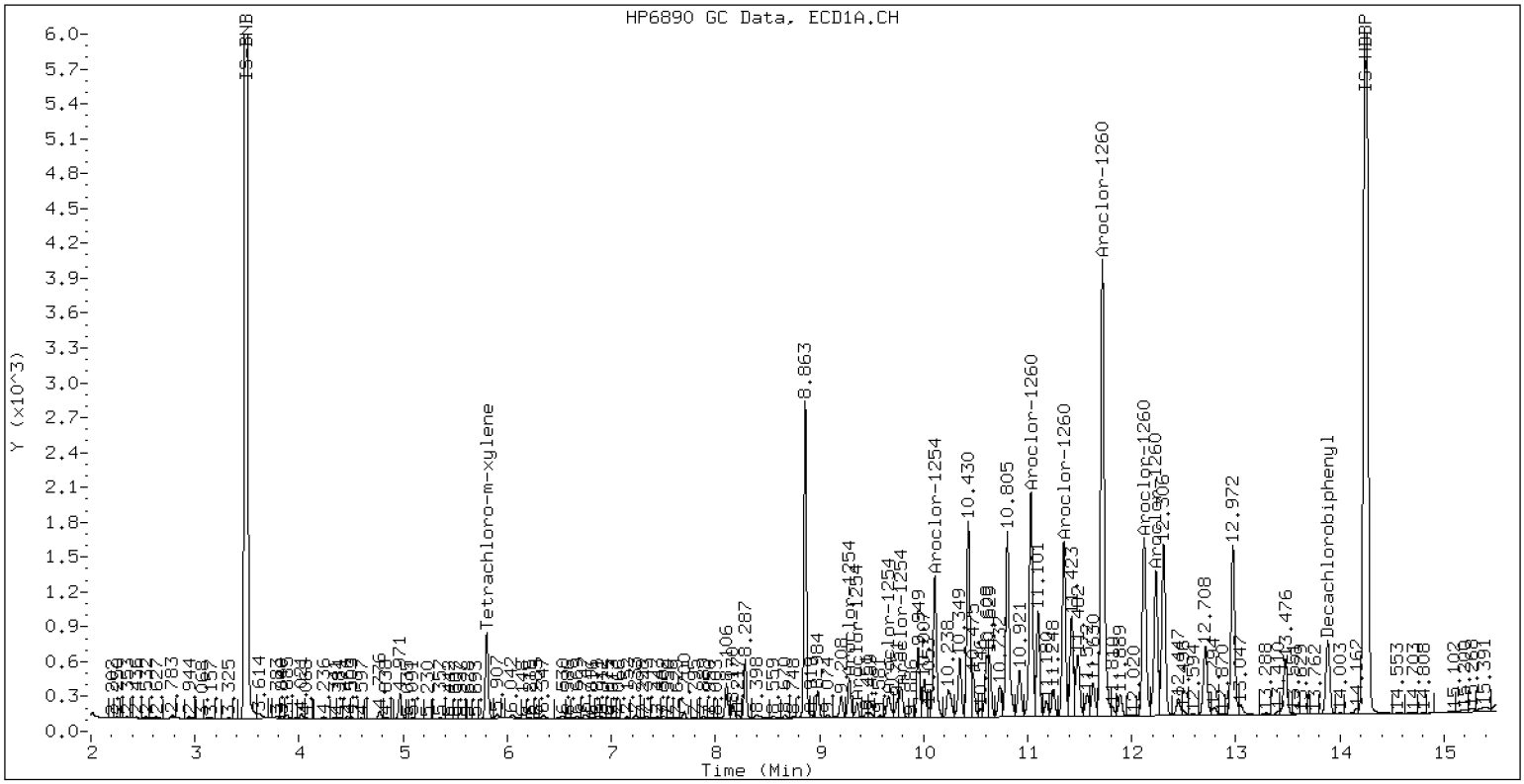
Total PCB Area Col2 (5.784 - 14.018) = 1301895 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

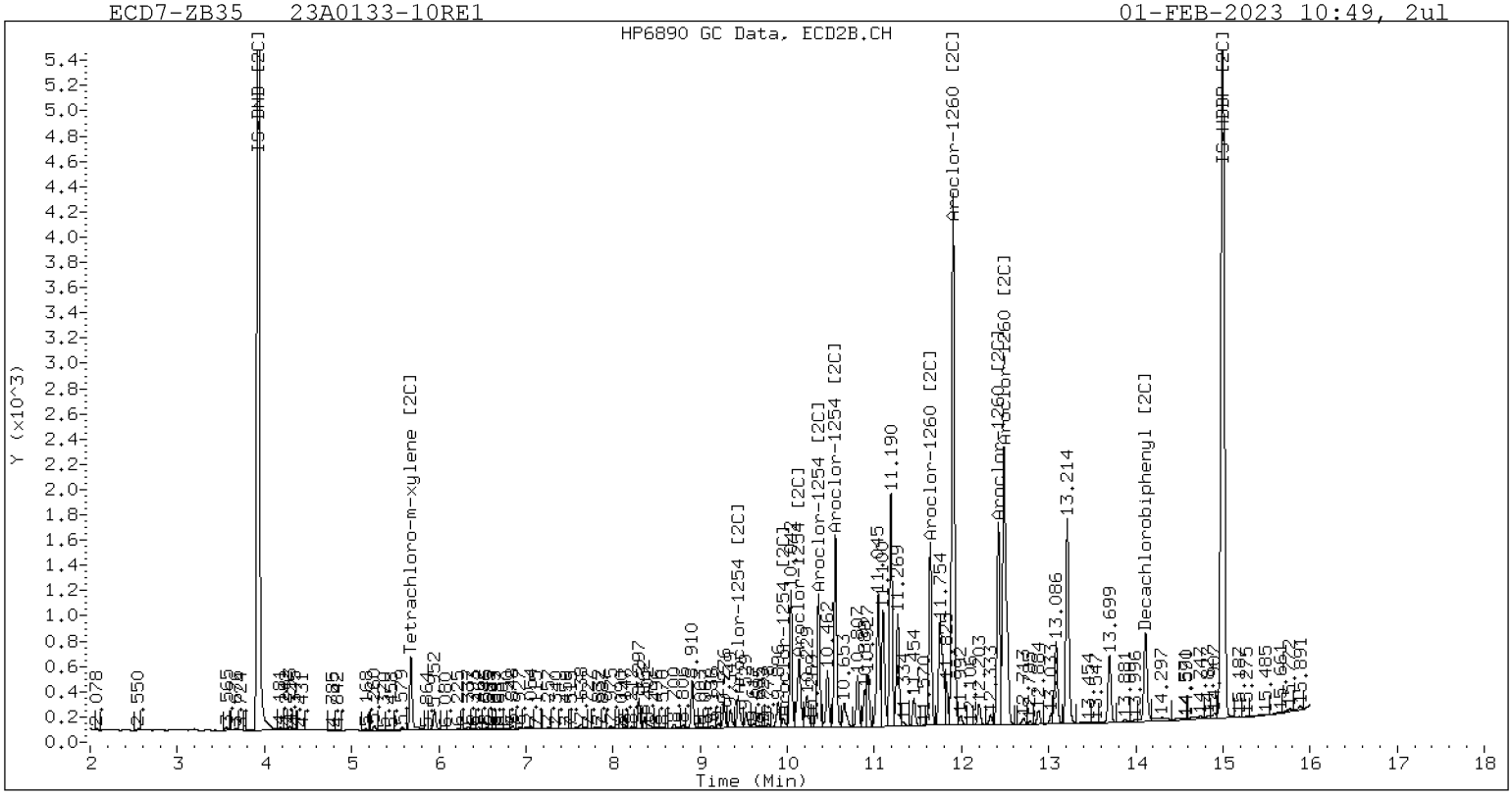
PCB Dual Column Chromatograms

ECD7-ZB5 23A0133-10RE1 01-FEB-2023 10:49, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0133-10RE1 01-FEB-2023 10:49, 2ul

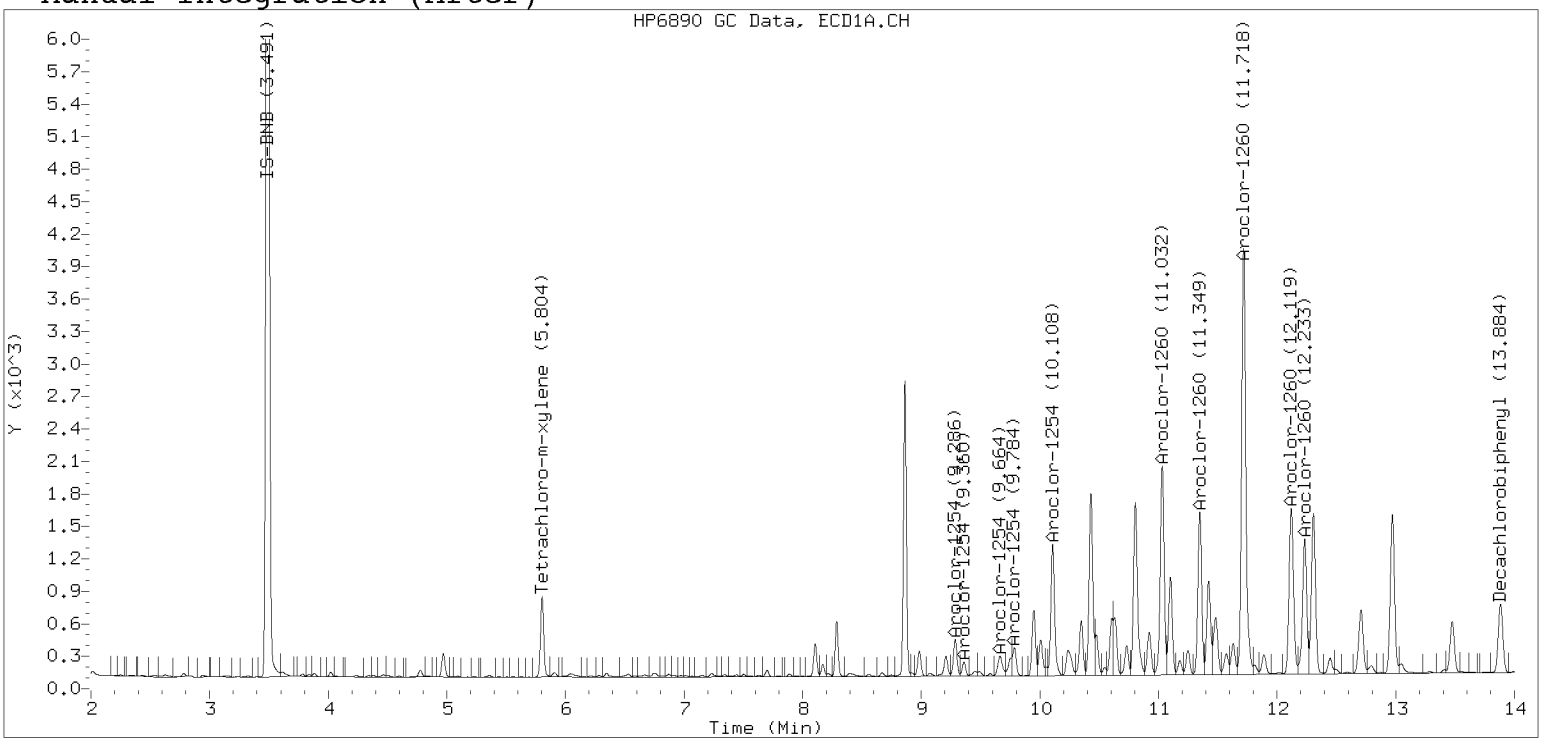


ZB-35 Manual Integration: NO

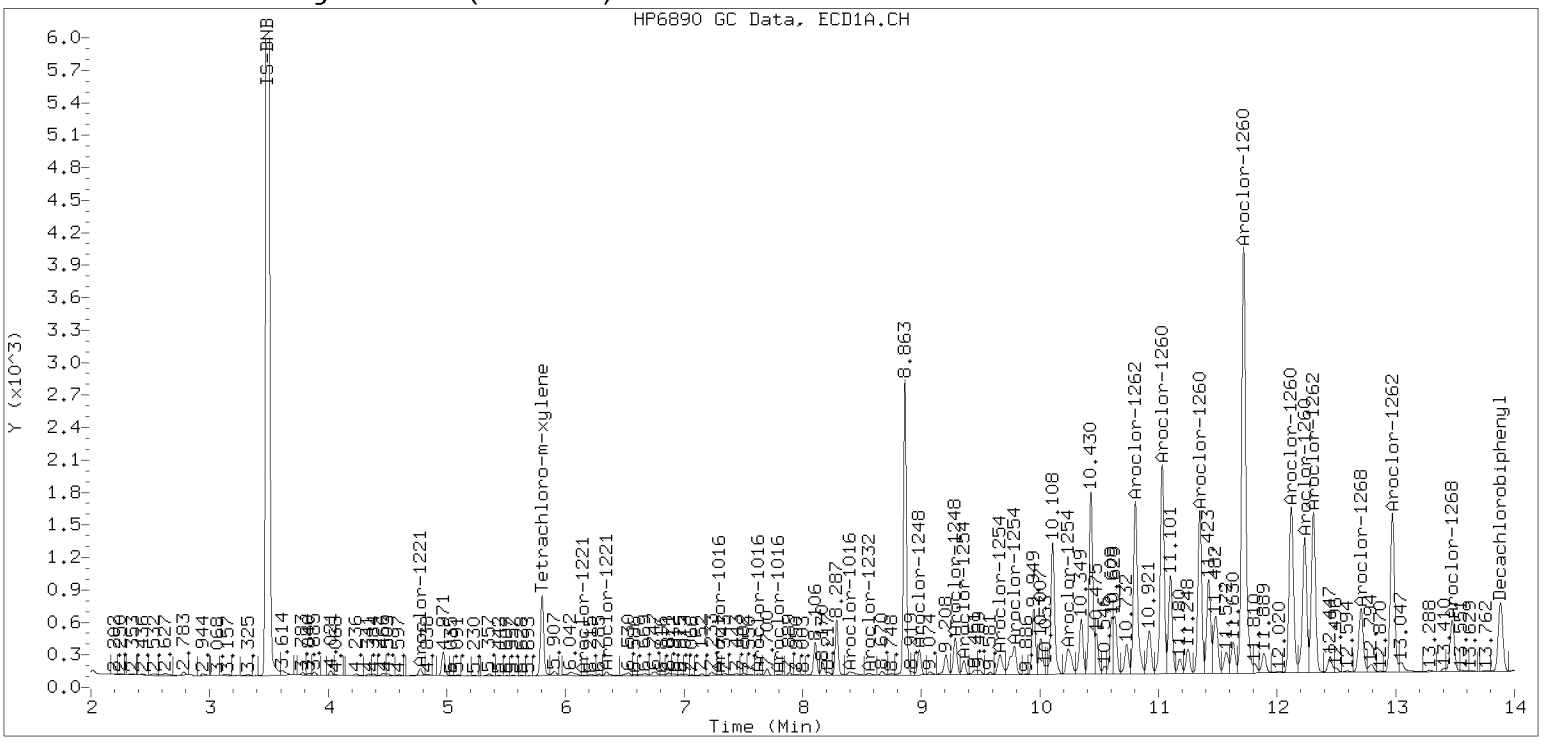
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230201.b/02012305ECD7.D Injection Date: 01-FEB-2023 10:49

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1222

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-11 C	File ID:	01312336ECD7.D
Sampled:	01/06/23 13:00	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 21:51
% Solids:	52.13	Preparation:	EPA 3546 (Microwave)	Initial/Final:	23.98 g Wet / 2.5 mL
Batch:	BLA0394	Sequence:	SLA0350	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	86.3	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	176	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	130	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9995*	*8.08*	*101*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9995*	*4.74*	*59.3*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9995*	*8.22*	*103*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9995*	*6.29*	*78.6*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312336ECD7.D
Data file 2: /230131.b/230131.b/01312336ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0133-11
Client ID:
Injection Date: 31-JAN-2023 21:51
Report Date: 02/01/2023 11:21
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.804	-0.003	163495	5.681	-0.003	130106	23.7	31.5	28.1	Tetrachloro-m-xylene
13.884	-0.007	140134	14.113	-0.005	177702	40.4	41.1	1.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	487779	-3.1
Hexabromobiphenyl	647433	324329	-49.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	305918	-9.2
Hexabromobiphenyl	382032	272378	-28.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.394	-0.008	50447	206.7	1	8.297	-0.007	62012	448.4
Aroclor-1248	2	8.561	-0.015	34282	110.1	2	8.703	-0.007	42261	283.9
Aroclor-1248	3	8.982	-0.013	219972	369.5	3	9.135	-0.018	69357	381.3
Aroclor-1248	4	9.285	-0.006	306326	1039.4	4	9.529	-0.049	137274	610.3
	Total Col1Ave (4 peaks):				431.4	Total Col2Ave (4 peaks):				431.0 RPD = 0
	Corrected Ave (3 peaks):				228.8	Corrected Ave (3 peaks):				371.2 RPD = 47*
Aroclor-1254	1	9.285	-0.009	306326	616.2	1	9.436	-0.009	214223	965.2
Aroclor-1254	2	9.359	-0.013	131169	618.0	2	9.955	-0.010	98301	548.0
Aroclor-1254	3	9.653	-0.011	166648	523.2	3	10.103	-0.013	359002	917.4
Aroclor-1254	4	9.785	-0.017	399886	640.7	4	10.351	-0.016	424597	1085.0
Aroclor-1254	5	10.119	-0.045	237723	585.7	5	10.553	-0.012	284381	1304.8
	Total Col1Ave (5 peaks):				596.8	Total Col2Ave (5 peaks):				964.1 RPD = 47*
	Corrected Ave (4 peaks):				585.8	Corrected Ave (4 peaks):				878.9 RPD = 40*
Aroclor-1260	1	11.032	-0.009	132006	725.4	1	11.642	-0.008	151809	772.6
Aroclor-1260	2	11.347	-0.010	106123	567.3	2	11.904	-0.010	285127	573.5
Aroclor-1260	3	11.717	-0.014	272551	553.5	3	12.423	-0.009	84631	683.0
Aroclor-1260	4	12.117	-0.017	137403	540.0	4	12.487	-0.011	183009	568.8
Aroclor-1260	5	12.233	-0.008	63630	573.7	NS	---			----
	Total Col1Ave (5 peaks):				592.0	Total Col2Ave (4 peaks):				649.5 RPD = 9
	Corrected Ave (4 peaks):				558.6	Corrected Ave (3 peaks):				608.4 RPD = 9
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.907 - 13.791) = 6231752 Col1 Total PCB = 1.1 ppm*

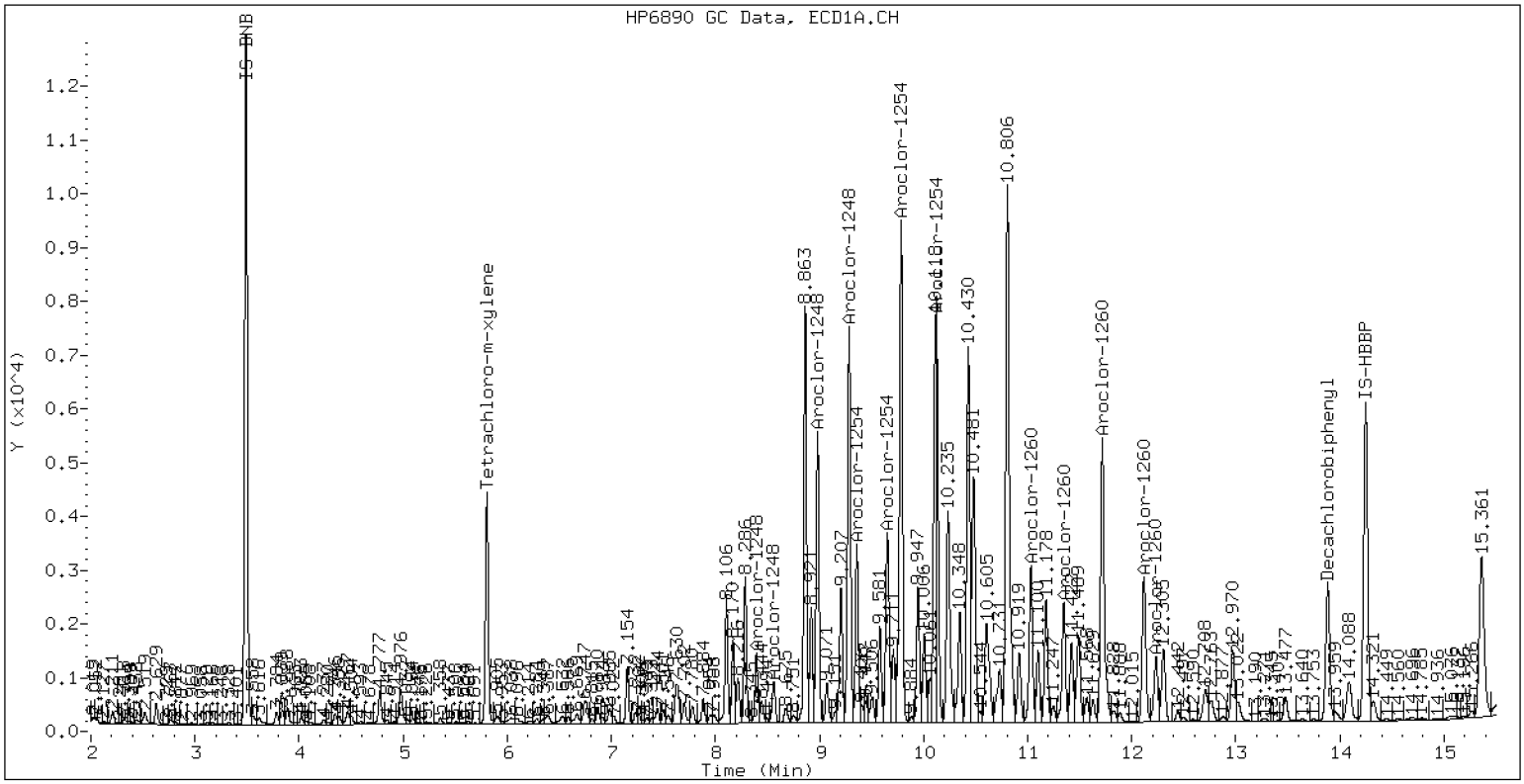
Total PCB Area Col2 (5.784 - 14.018) = 5262440 Col2 Total PCB = 1.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

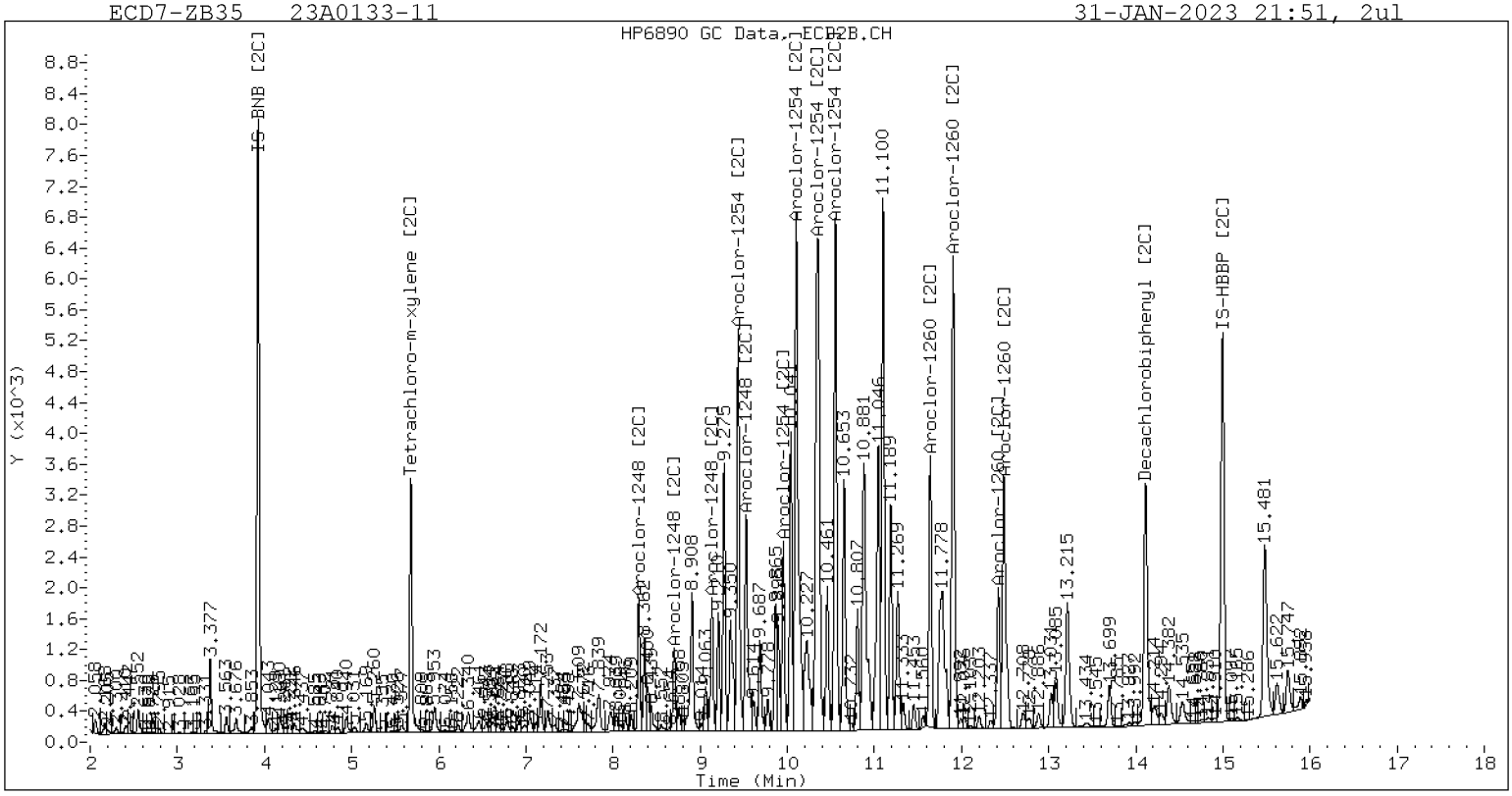
PCB Dual Column Chromatograms

ECD7-ZB5 23A0133-11 31-JAN-2023 21:51, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0133-11 31-JAN-2023 21:51, 2ul

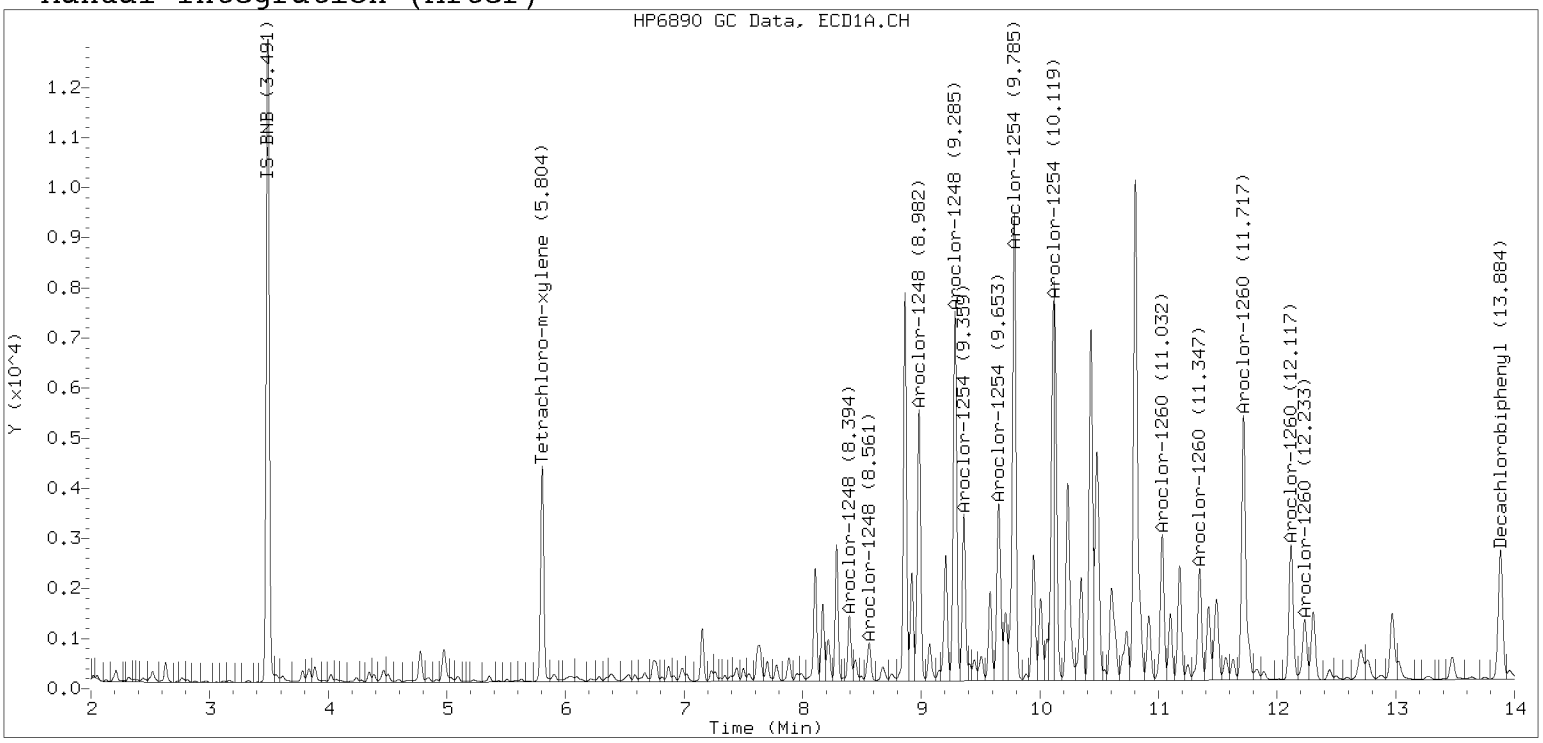


ZB-35 Manual Integration: YES

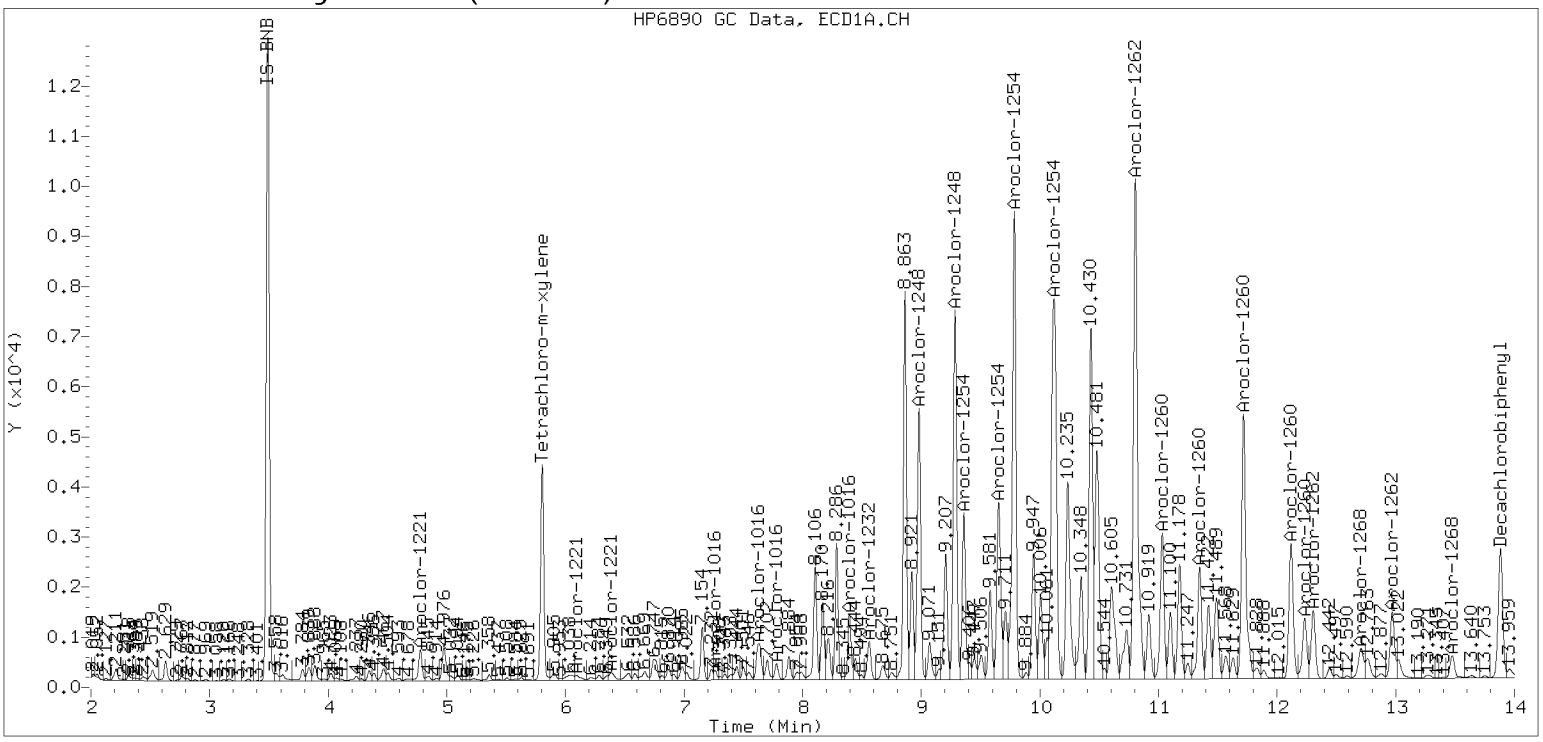
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230131.b/01312336ECD7.D Injection Date: 31-JAN-2023 21:51

Manual Integration (After)



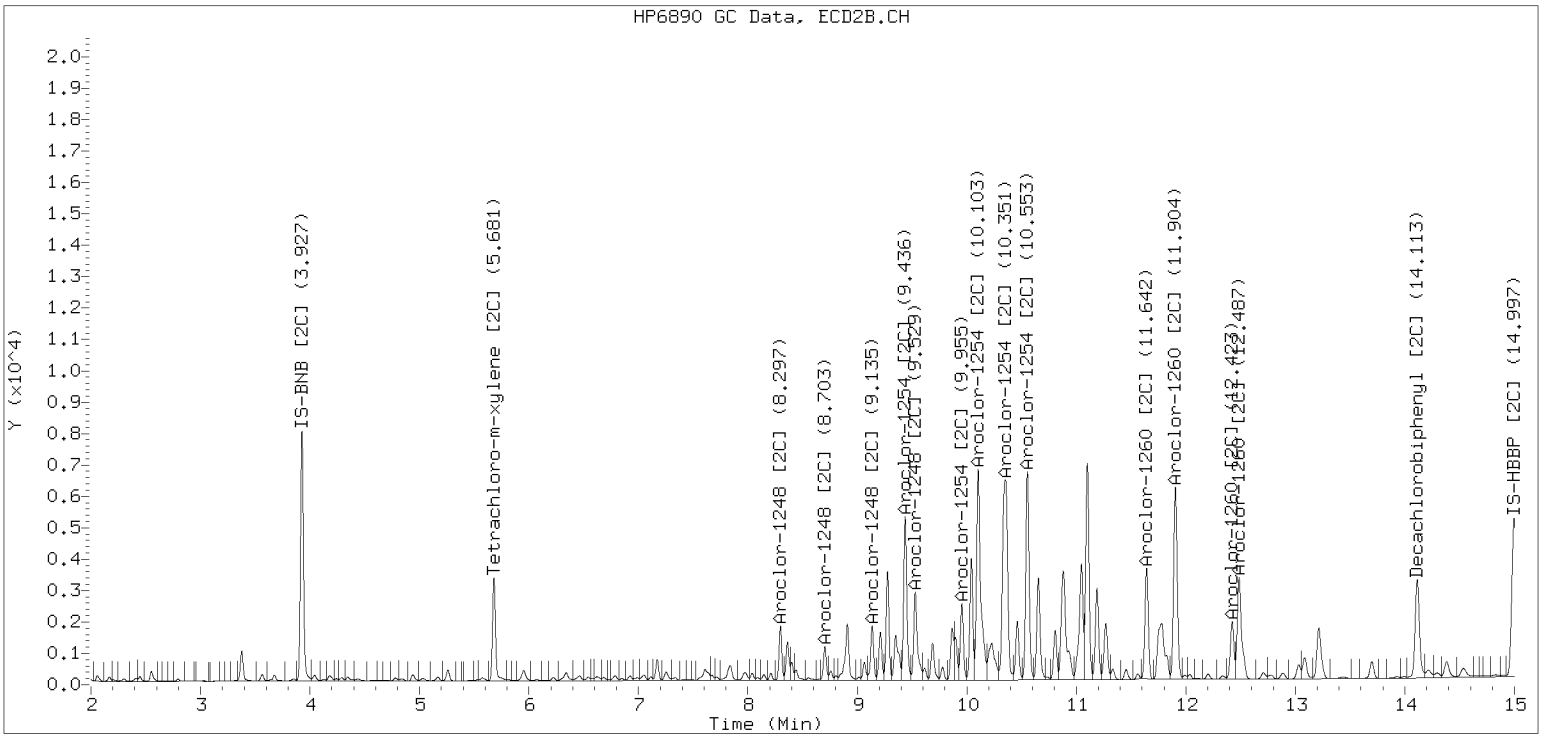
Processed Integration (Before)



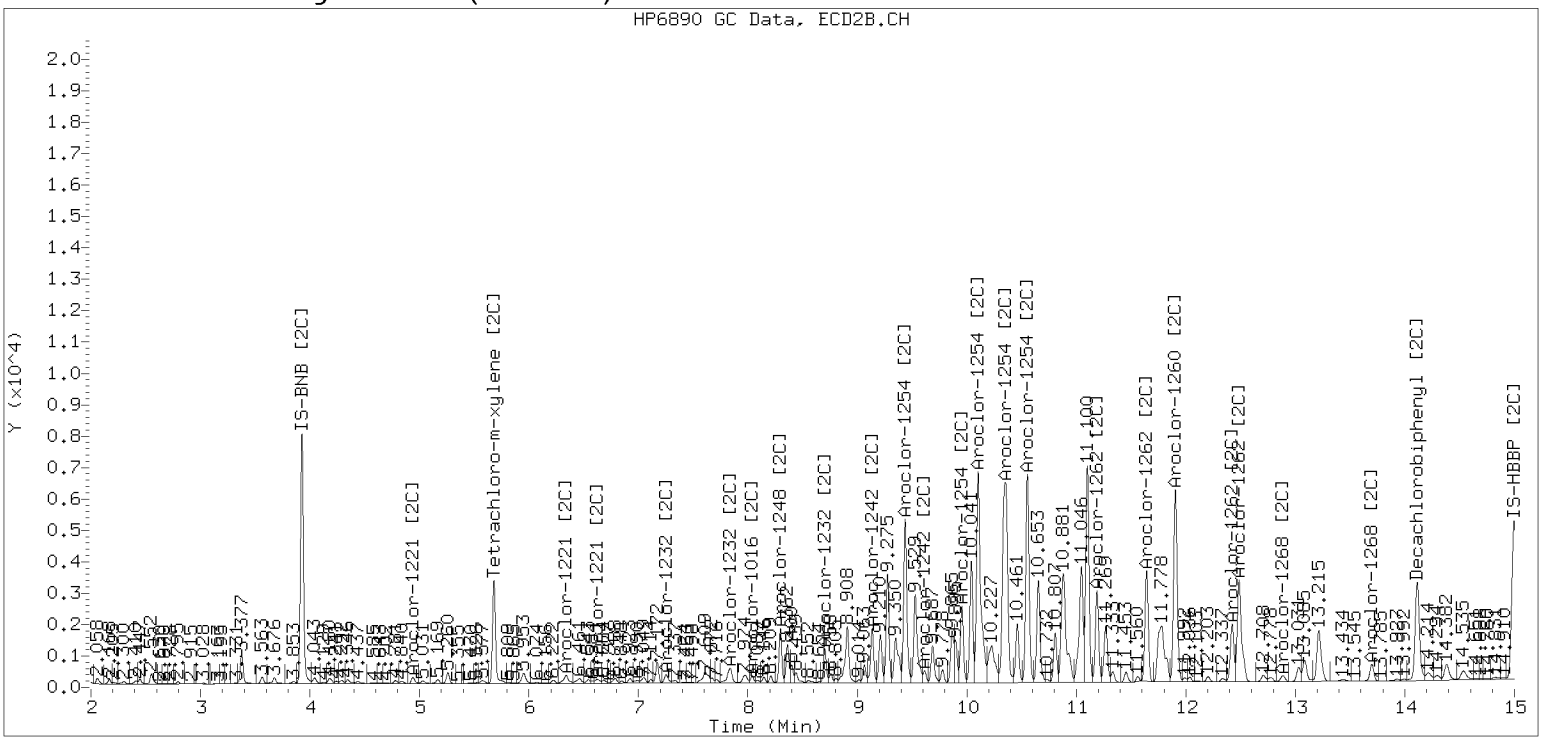
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230131.b/230131.b/01312336ECD7.D Injection Date: 31-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1227

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-12 C	File ID:	02012306ECD7.D
Sampled:	01/06/23 13:18	Prepared:	01/18/23 12:25	Analyzed:	02/01/23 11:10
% Solids:	55.76	Preparation:	EPA 3546 (Microwave)	Initial/Final:	22.44 g Wet / 2.5 mL
Batch:	BLA0394	Sequence:	SLB0012	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	25.2	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	43.4	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	32.9	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9920*	*7.09*	*88.8*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9920*	*5.31*	*66.5*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9920*	*6.66*	*83.3*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9920*	*6.19*	*77.4*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230201.b/02012306ECD7.D
Data file 2: /230201.b/230201.b/02012306ECD7.D
Method: \\target\share\chem4\ecd7.i\230201.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0133-12
Client ID:
Injection Date: 01-FEB-2023 11:10
Report Date: 02/01/2023 15:25
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.804	-0.005	168702	5.681	-0.004	133112	26.6	31.0	15.1	Tetrachloro-m-xylene
13.883	-0.008	150868	14.115	-0.003	167879	35.5	33.3	6.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	448695	-10.9
Hexabromobiphenyl	647433	397335	-38.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	318070	-5.6
Hexabromobiphenyl	382032	317496	-16.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.395	-0.011	15741	70.1	1	8.297	-0.007	20191	140.4
Aroclor-1248	2	8.562	-0.018	10188	35.6	2	8.703	-0.007	12271	79.3
Aroclor-1248	3	8.982	-0.017	60104	109.7	3	9.136	-0.017	22268	117.8
Aroclor-1248	4	9.284	-0.010	78304	288.8	4	9.528	-0.050	34864	149.1
		Total Col1Ave (4 peaks):			126.1		Total Col2Ave (4 peaks):			126 RPD = 4
		Corrected Ave (3 peaks):			71.8		Corrected Ave (3 peaks):			112.5 RPD = 44*
Aroclor-1254	1	9.284	-0.015	78304	171.2	1	9.436	-0.009	57721	250.1
Aroclor-1254	2	9.359	-0.018	35684	182.8	2	9.954	-0.010	26862	144.0
Aroclor-1254	3	9.656	-0.013	58090	198.3	3	10.103	-0.012	92658	227.7
Aroclor-1254	4	9.784	-0.024	120602	210.1	4	10.348	-0.018	62668	154.0
Aroclor-1254	5	10.123	-0.055	56397	151.1	5	10.553	-0.011	70200	309.8
		Total Col1Ave (5 peaks):			182.7		Total Col2Ave (5 peaks):			217.1 RPD = 17
		Corrected Ave (4 peaks):			175.8		Corrected Ave (4 peaks):			194.0 RPD = 10
					190.6					
Aroclor-1260	1	11.031	-0.013	39514	177.2	1	11.643	-0.007	40601	177.3
Aroclor-1260	2	11.347	-0.014	28661	125.1	2	11.904	-0.010	75892	131.0
Aroclor-1260	3	11.718	-0.017	78928	130.8	3	12.423	-0.010	29987	207.6
Aroclor-1260	4	12.117	-0.022	37469	120.2	4	12.488	-0.010	53730	143.3
Aroclor-1260	5	12.232	-0.012	23841	175.5	NS	---			----
		Total Col1Ave (5 peaks):			145.8		Total Col2Ave (4 peaks):			164.8 RPD = 12
		Corrected Ave (4 peaks):			137.9		Corrected Ave (3 peaks):			150.5 RPD = 9
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.909 - 13.792) = 1823125 Col1 Total PCB = 0.3 ppm*

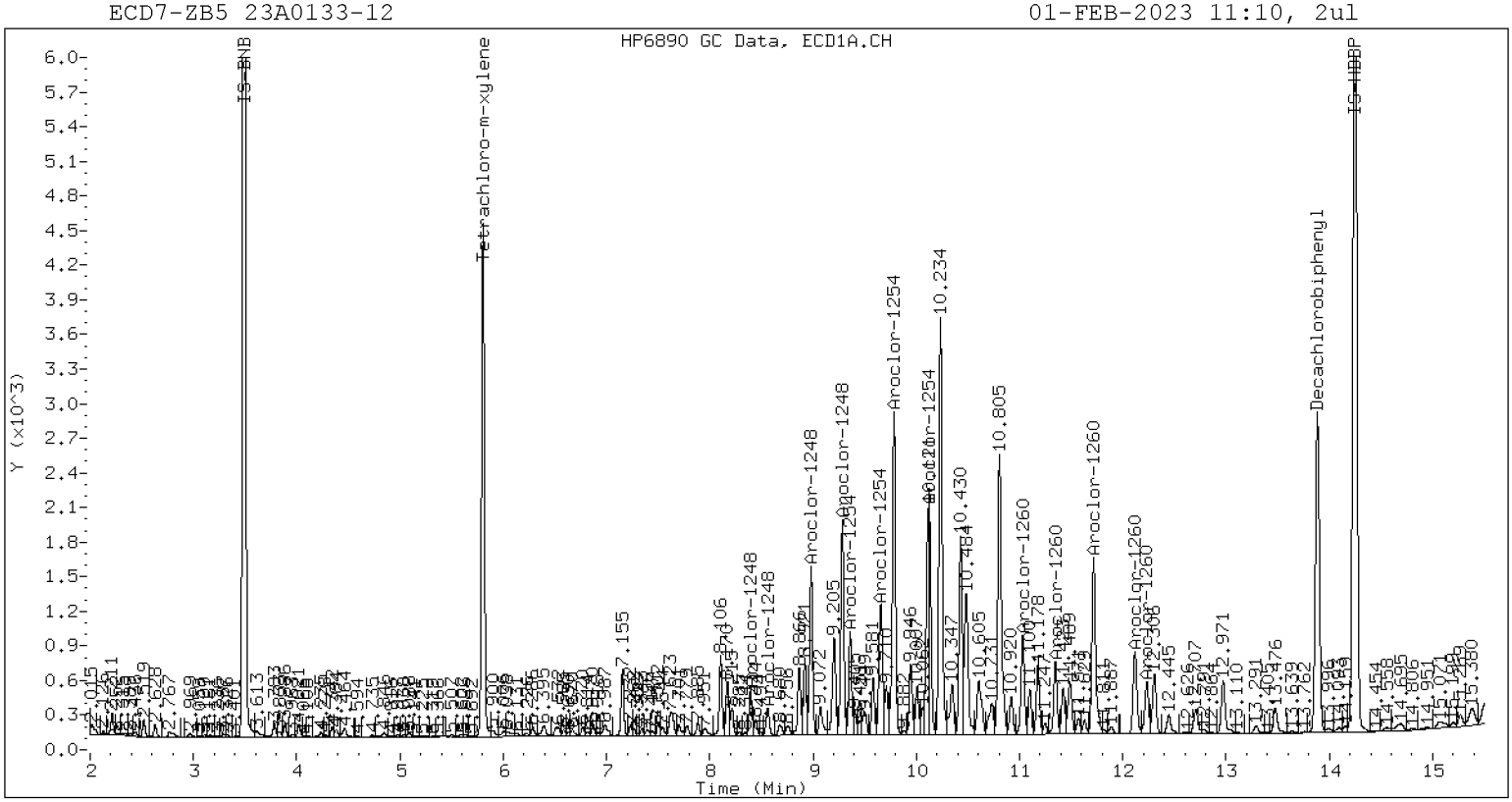
Total PCB Area Col2 (5.784 - 14.018) = 1541786 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

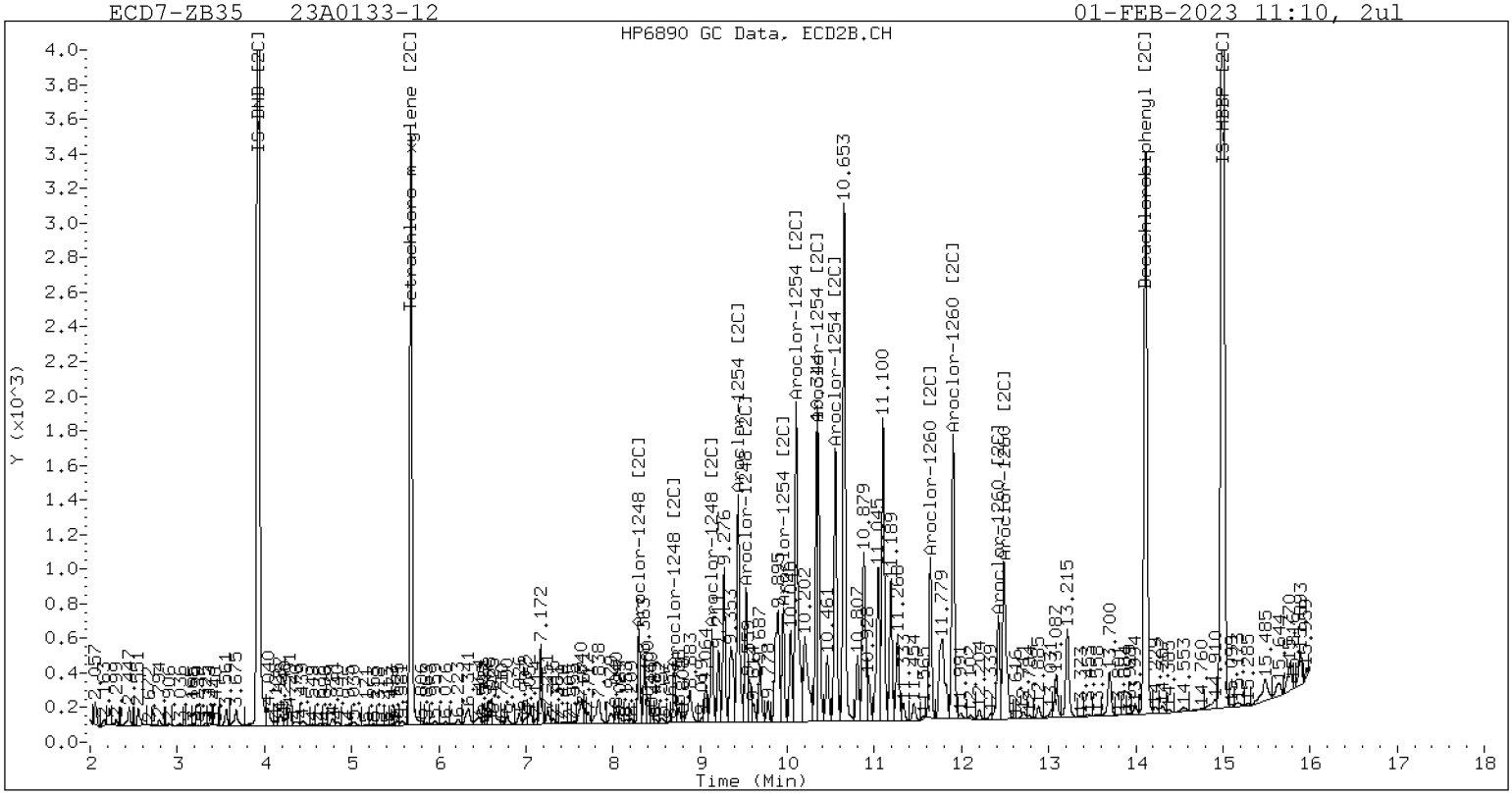
PCB Dual Column Chromatograms

ECD7-ZB5 23A0133-12 01-FEB-2023 11:10, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0133-12 01-FEB-2023 11:10, 2ul

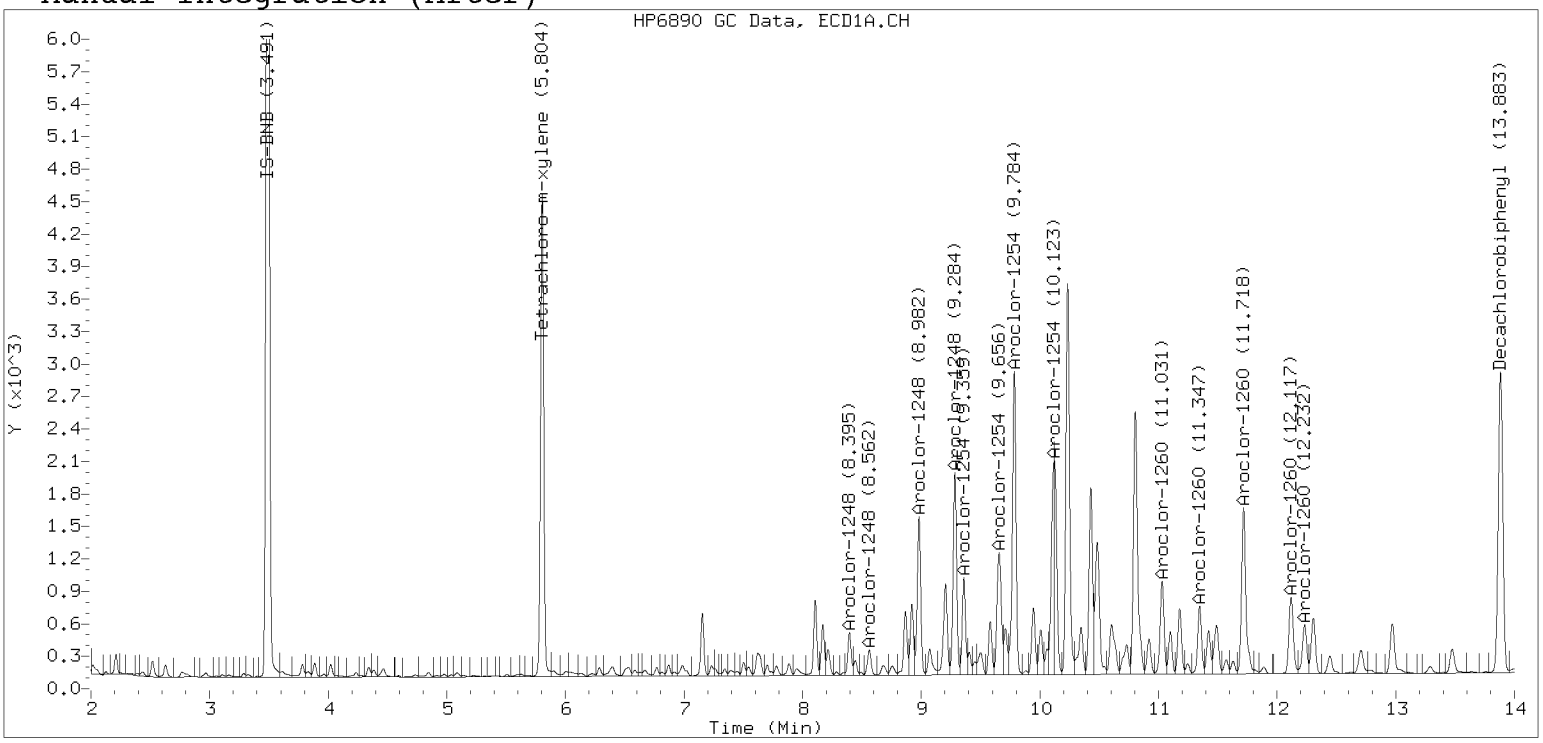


ZB-35 Manual Integration: YES

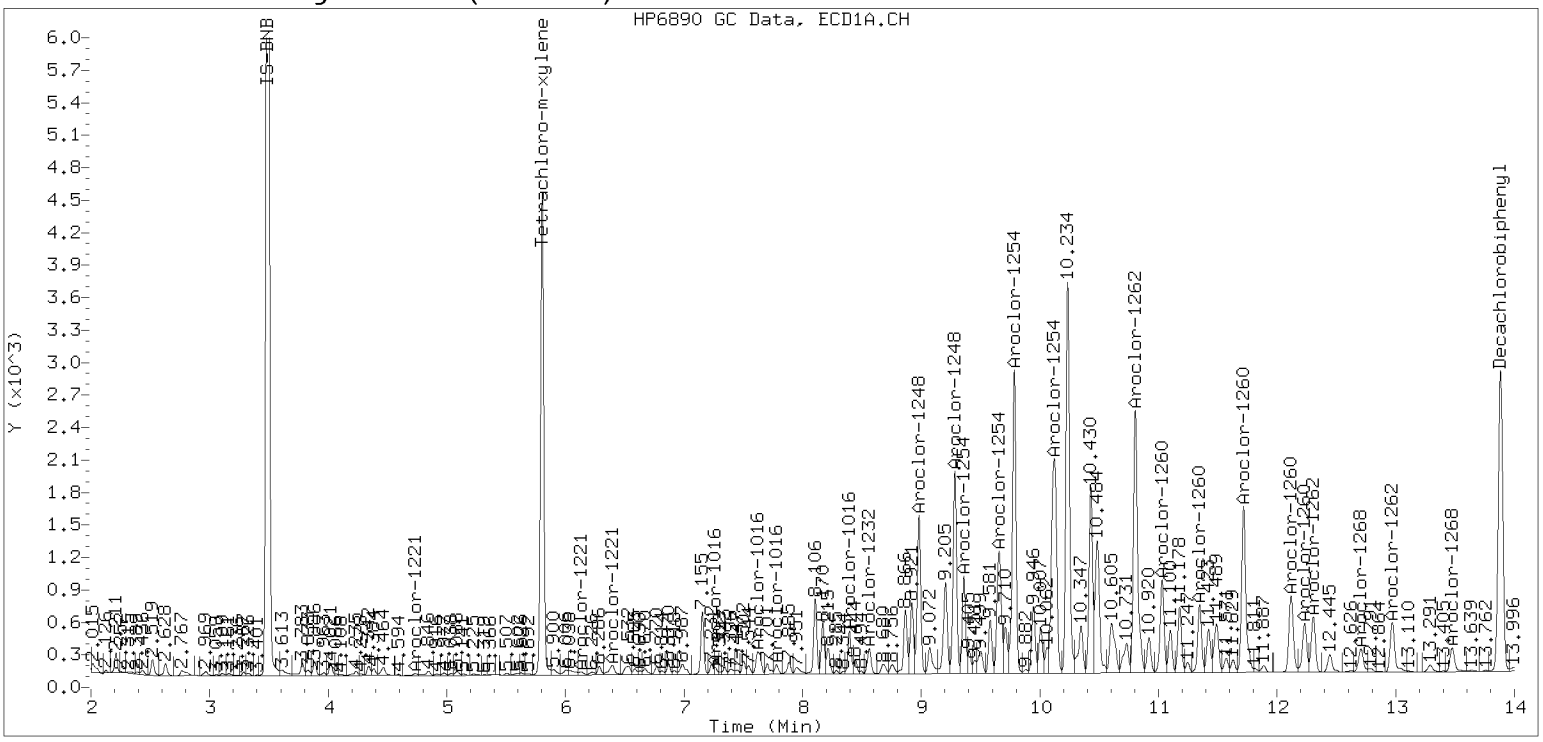
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230201.b/02012306ECD7.D Injection Date: 01-FEB-2023 11:10

Manual Integration (After)



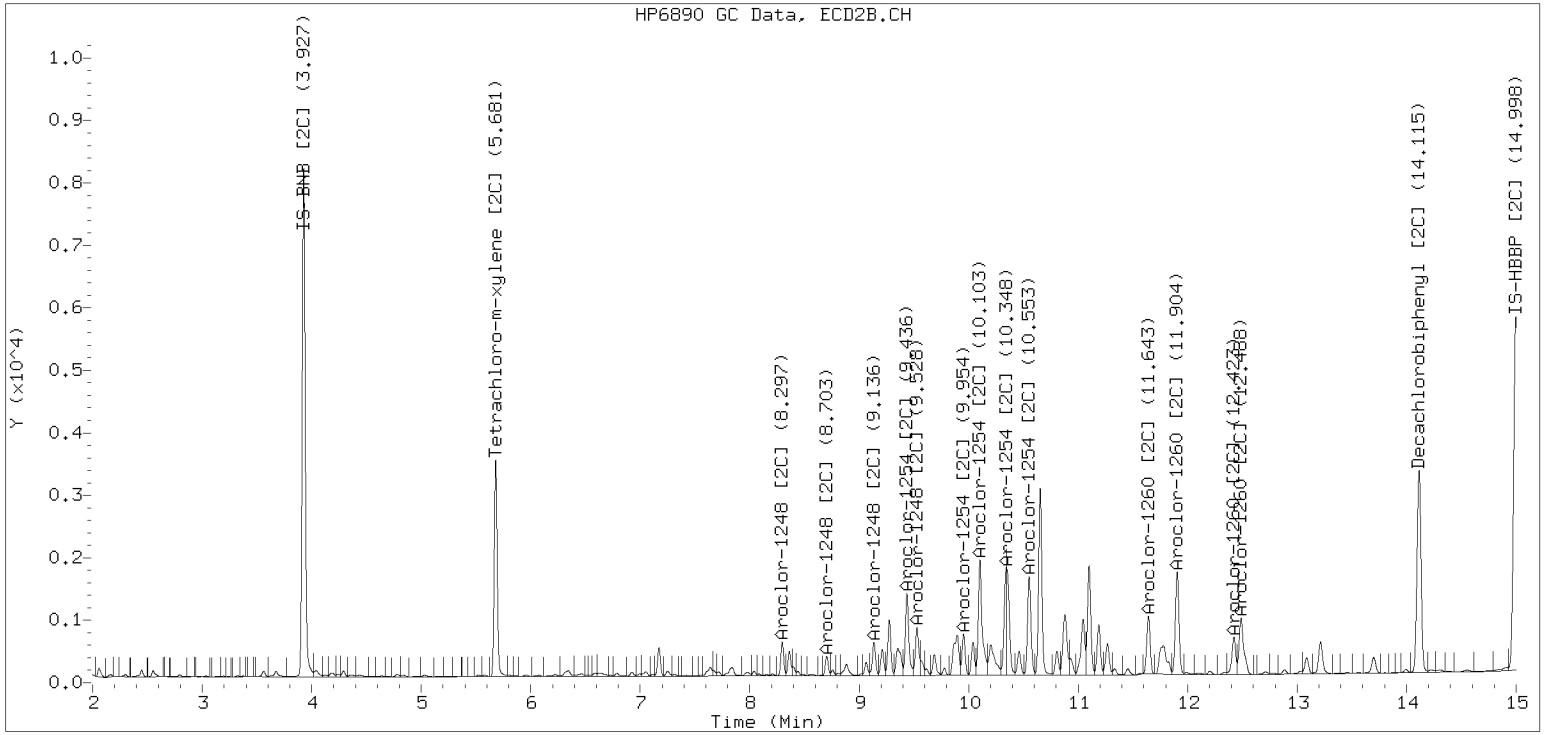
Processed Integration (Before)



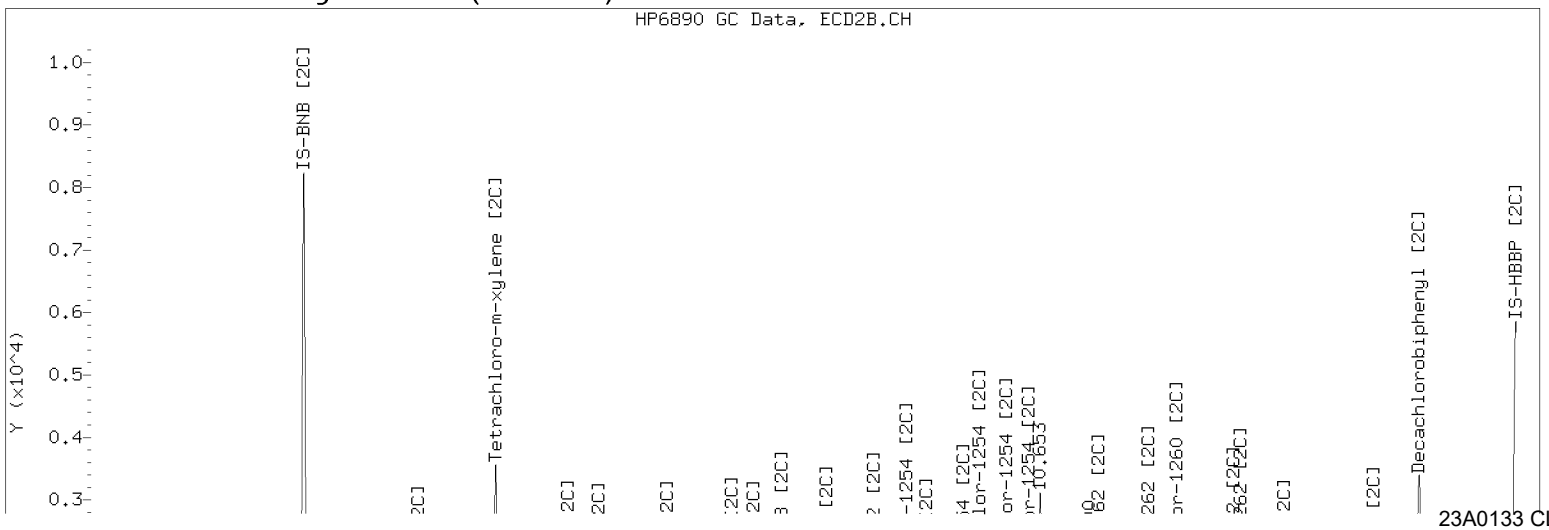
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230201.b/230201.b/02012306ECD7.D Injection Date: 01-FEB-2023 11:10

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1110

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-13 C	File ID:	01312338ECD7.D
Sampled:	01/06/23 14:00	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 22:33
% Solids:	59.32	Preparation:	EPA 3546 (Microwave)	Initial/Final:	21.1 g Wet / 2.5 mL
Batch:	BLA0394	Sequence:	SLA0350	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	18.0	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	26.6	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	20.4	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9894*	*7.19*	*90.0*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9894*	*5.99*	*75.0*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9894*	*7.07*	*88.5*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9894*	*6.80*	*85.1*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312338ECD7.D
Data file 2: /230131.b/230131.b/01312338ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0133-13
Client ID:
Injection Date: 31-JAN-2023 22:33
Report Date: 02/01/2023 11:21
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.001	192120	5.684	-0.001	148599	30.0	34.0	12.6	Tetrachloro-m-xylene
13.885	-0.006	146886	14.113	-0.005	172385	36.0	35.4	1.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	452905	-10.0
Hexabromobiphenyl	647433	381592	-41.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	322943	-4.1
Hexabromobiphenyl	382032	306717	-19.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.395	-0.007	16519	72.9	1	8.299	-0.005	16166	110.7
Aroclor-1248	2	8.563	-0.013	13510	46.7	2	8.703	-0.008	15124	96.3
Aroclor-1248	3	8.983	-0.012	34857	63.1	3	9.137	-0.016	17197	89.6
Aroclor-1248	4	9.285	-0.006	39629	144.8	4	9.533	-0.045	14957	63.0
	Total Col1Ave (4 peaks):				81.9	Total Col2Ave (4 peaks):				89.9 RPD = 9
	Corrected Ave (3 peaks):				60.9	Corrected Ave (3 peaks):				82.9 RPD = 31
Aroclor-1254	1	9.285	-0.009	39629	85.9	1	9.437	-0.008	30227	129.0
Aroclor-1254	2	9.361	-0.011	14972	76.0	2	9.955	-0.010	15652	82.7
Aroclor-1254	3	9.657	-0.006	32776	110.8	3	10.104	-0.013	48621	117.7
Aroclor-1254	4	9.786	-0.016	55798	96.3	4	10.352	-0.015	66151	160.1
Aroclor-1254	5	10.118	-0.046	64435	171.0	5	10.554	-0.011	40522	176.1
	Total Col1Ave (5 peaks):				108.0	Total Col2Ave (5 peaks):				133.1 RPD = 21
	Corrected Ave (4 peaks):				92.2	Corrected Ave (4 peaks):				122.4 RPD = 28
Aroclor-1260	1	11.032	-0.009	22109	103.3	1	11.643	-0.007	21213	95.9
Aroclor-1260	2	11.346	-0.012	14562	66.2	2	11.904	-0.011	41555	74.2
Aroclor-1260	3	11.717	-0.014	49630	85.7	3	12.422	-0.010	21136	151.5
Aroclor-1260	4	12.118	-0.017	25782	86.1	4	12.487	-0.011	31469	86.9
Aroclor-1260	5	12.232	-0.009	13917	106.7	NS	---			----
	Total Col1Ave (5 peaks):				89.6	Total Col2Ave (4 peaks):				102.1 RPD = 13
	Corrected Ave (4 peaks):				85.3	Corrected Ave (3 peaks):				85.7 RPD = 0
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.907 - 13.791) = 1280451 Col1 Total PCB = 0.2 ppm*

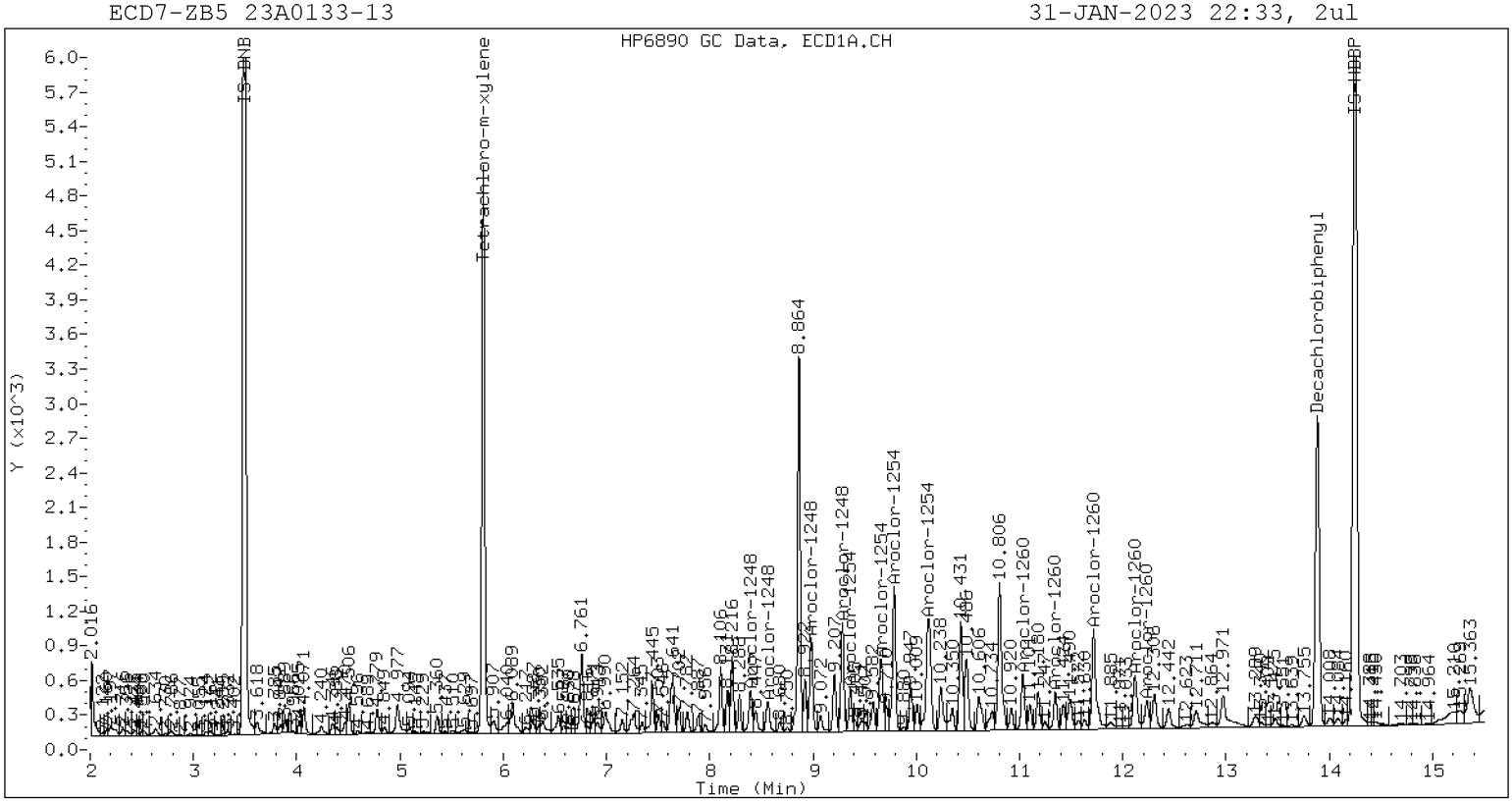
Total PCB Area Col2 (5.784 - 14.018) = 1050286 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

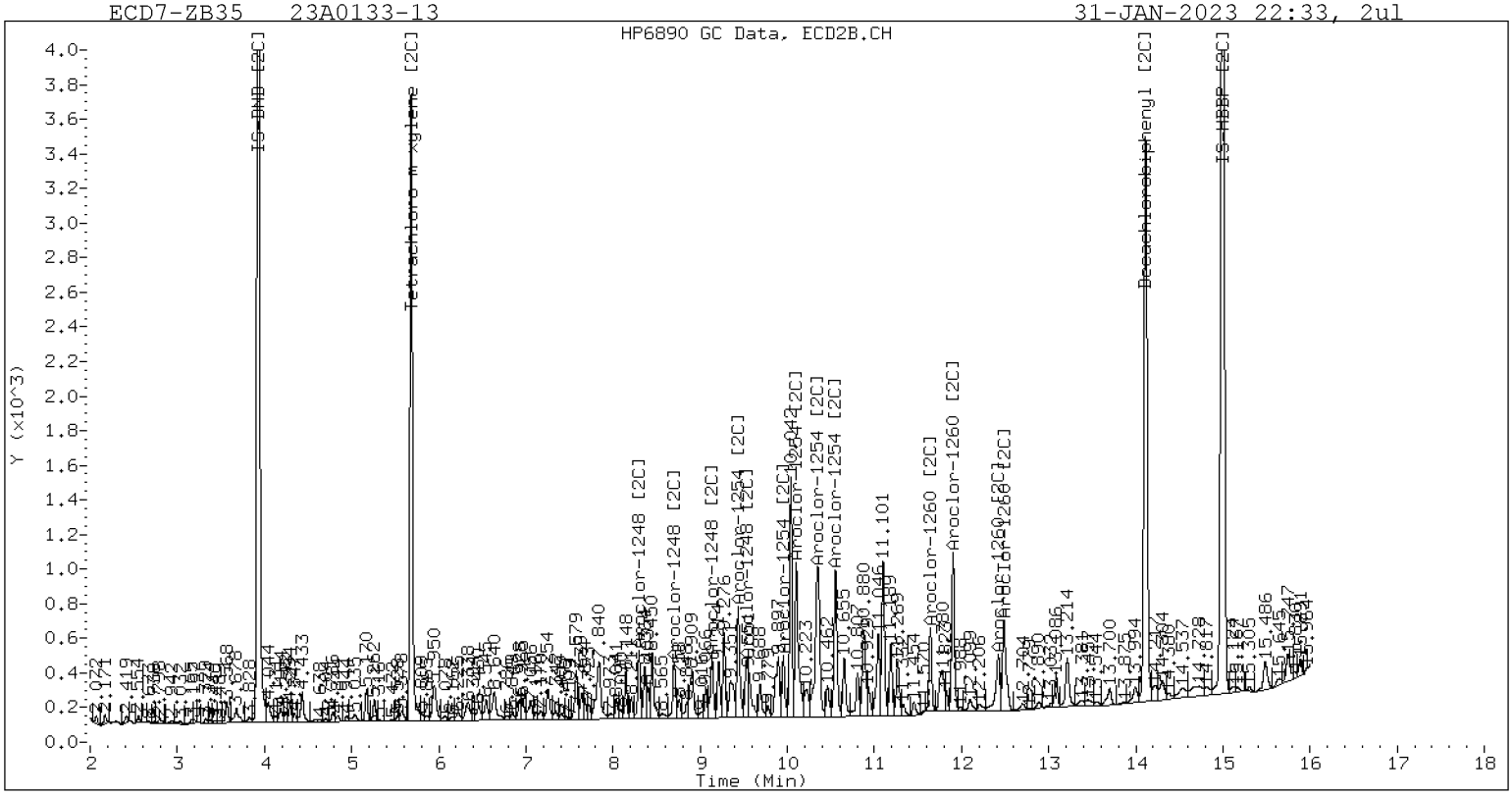
PCB Dual Column Chromatograms

ECD7-ZB5 23A0133-13 31-JAN-2023 22:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0133-13 31-JAN-2023 22:33, 2ul

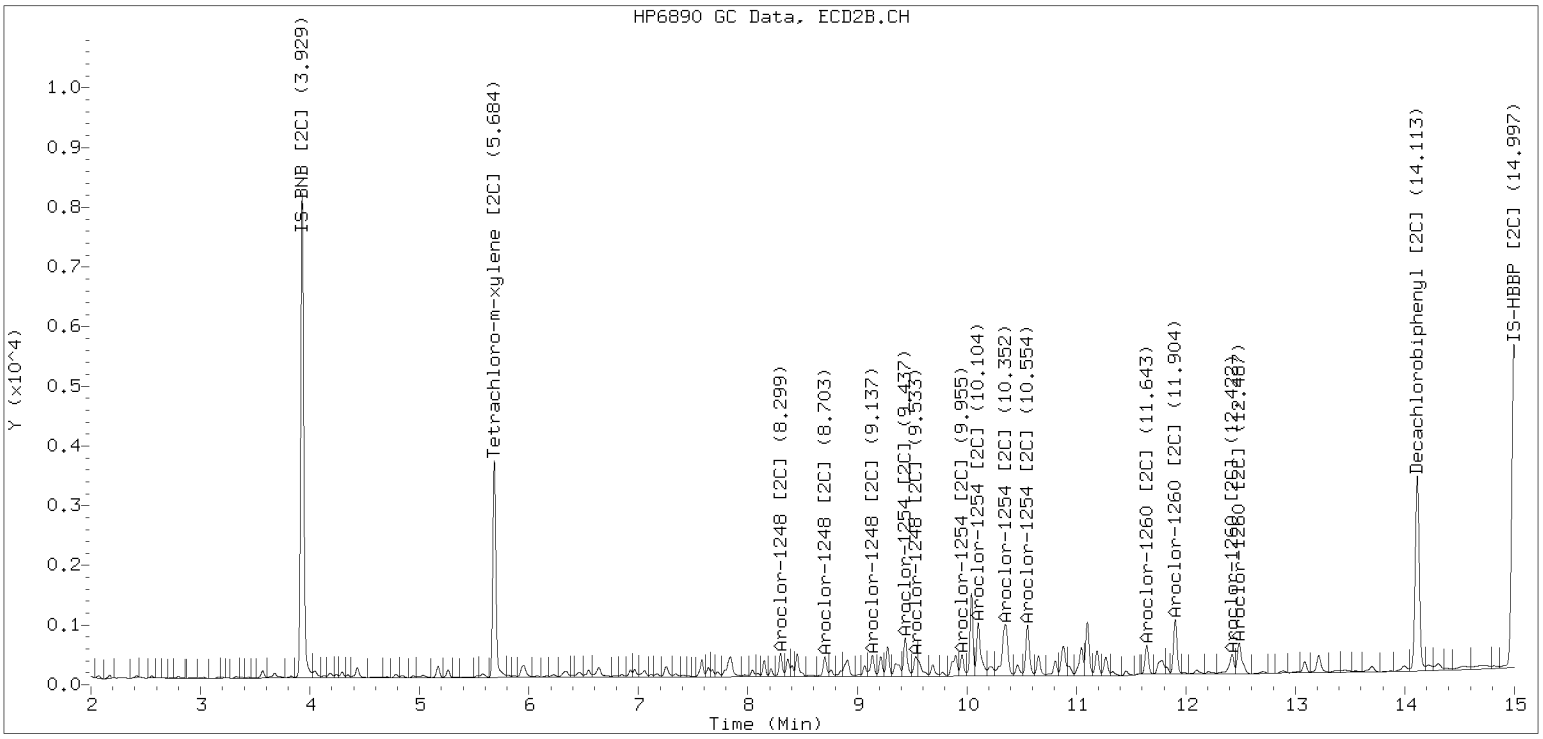


ZB-35 Manual Integration: YES

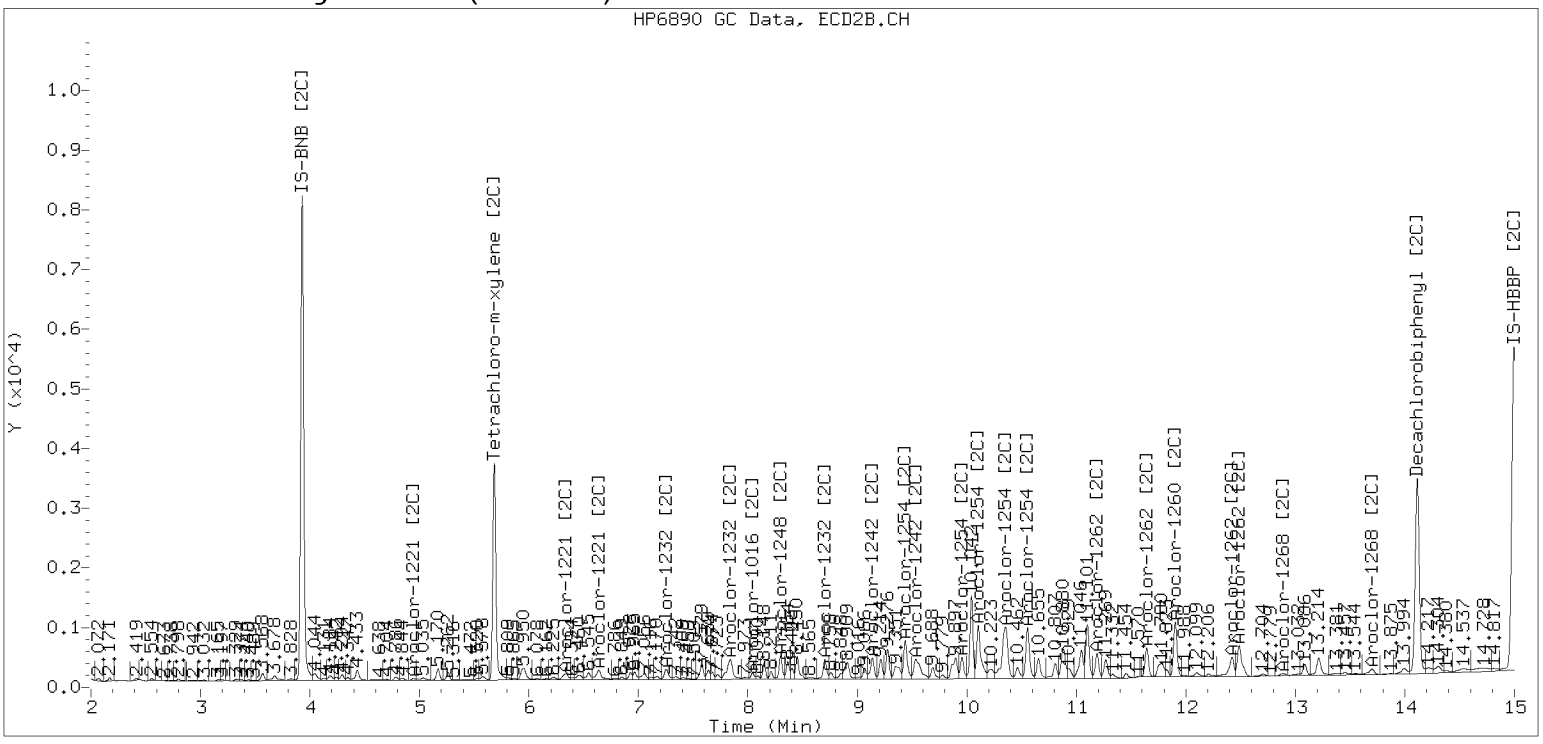
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230131.b/230131.b/01312338ECD7.D Injection Date: 31-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1109

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-14 C	File ID:	02012307ECD7.D
Sampled:	01/06/23 14:13	Prepared:	01/18/23 12:25	Analyzed:	02/01/23 11:31
% Solids:	45.19	Preparation:	EPA 3546 (Microwave)	Initial/Final:	27.7 g Wet / 2.5 mL
Batch:	BLA0394	Sequence:	SLB0012	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	19.9	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	30.9	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	16.4	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9887*	*6.96*	*87.1*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9887*	*5.96*	*74.6*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9887*	*6.83*	*85.5*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9887*	*6.45*	*80.8*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230201.b/02012307ECD7.D
Data file 2: /230201.b/230201.b/02012307ECD7.D
Method: \\target\share\chem4\ecd7.i\230201.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0133-14
Client ID:
Injection Date: 01-FEB-2023 11:31
Report Date: 02/01/2023 15:25
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.004	187990	5.681	-0.003	145118	29.8	32.3	8.0	Tetrachloro-m-xylene
13.884	-0.008	157759	14.113	-0.005	178249	34.8	34.2	1.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	445647	-11.5
Hexabromobiphenyl	647433	423339	-34.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	332147	-1.4
Hexabromobiphenyl	382032	328478	-14.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.395	-0.010	19371	86.9	1	8.298	-0.006	16886	112.5
Aroclor-1248	2	8.563	-0.017	15901	55.9	2	8.704	-0.006	14925	92.4
Aroclor-1248	3	8.982	-0.017	43552	80.1	3	9.137	-0.016	22505	114.0
Aroclor-1248	4	9.285	-0.008	47532	176.5	4	9.533	-0.044	17018	69.7
		Total Col1Ave (4 peaks):			99.9		Total Col2Ave (4 peaks):			97.1 RPD = 3
		Corrected Ave (3 peaks):			74.3		Corrected Ave (3 peaks):			91.5 RPD = 21
Aroclor-1254	1	9.285	-0.014	47532	104.7	1	9.437	-0.007	36943	153.3
Aroclor-1254	2	9.361	-0.017	17870	92.1	2	9.955	-0.009	19319	99.2
Aroclor-1254	3	9.660	-0.010	45422	156.1	3	10.104	-0.011	58452	137.6
Aroclor-1254	4	9.786	-0.023	70211	123.1	4	10.349	-0.016	79514	187.2
Aroclor-1254	5	10.122	-0.055	80019	215.8	5	10.554	-0.010	46648	197.1
		Total Col1Ave (5 peaks):			130.4		Total Col2Ave (5 peaks):			154.9 RPD = 11
		Corrected Ave (4 peaks):			119.0		Corrected Ave (4 peaks):			144.3 RPD = 19
Aroclor-1260	1	11.031	-0.012	21843	92.0	1	11.643	-0.007	23552	99.4
Aroclor-1260	2	11.346	-0.015	16155	66.2	2	11.904	-0.010	40848	68.1
Aroclor-1260	3	11.717	-0.017	56902	88.5	3	12.421	-0.013	24084	161.2
Aroclor-1260	4	12.118	-0.021	36521	110.0	4	12.487	-0.011	30789	79.4
Aroclor-1260	5	12.233	-0.011	16640	114.9	NS	---			----
		Total Col1Ave (5 peaks):			94.3		Total Col2Ave (4 peaks):			102.0 RPD = 8
		Corrected Ave (4 peaks):			89.2		Corrected Ave (3 peaks):			82.3 RPD = 8
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.909 - 13.792) = 1467919 Col1 Total PCB = 0.3 ppm*

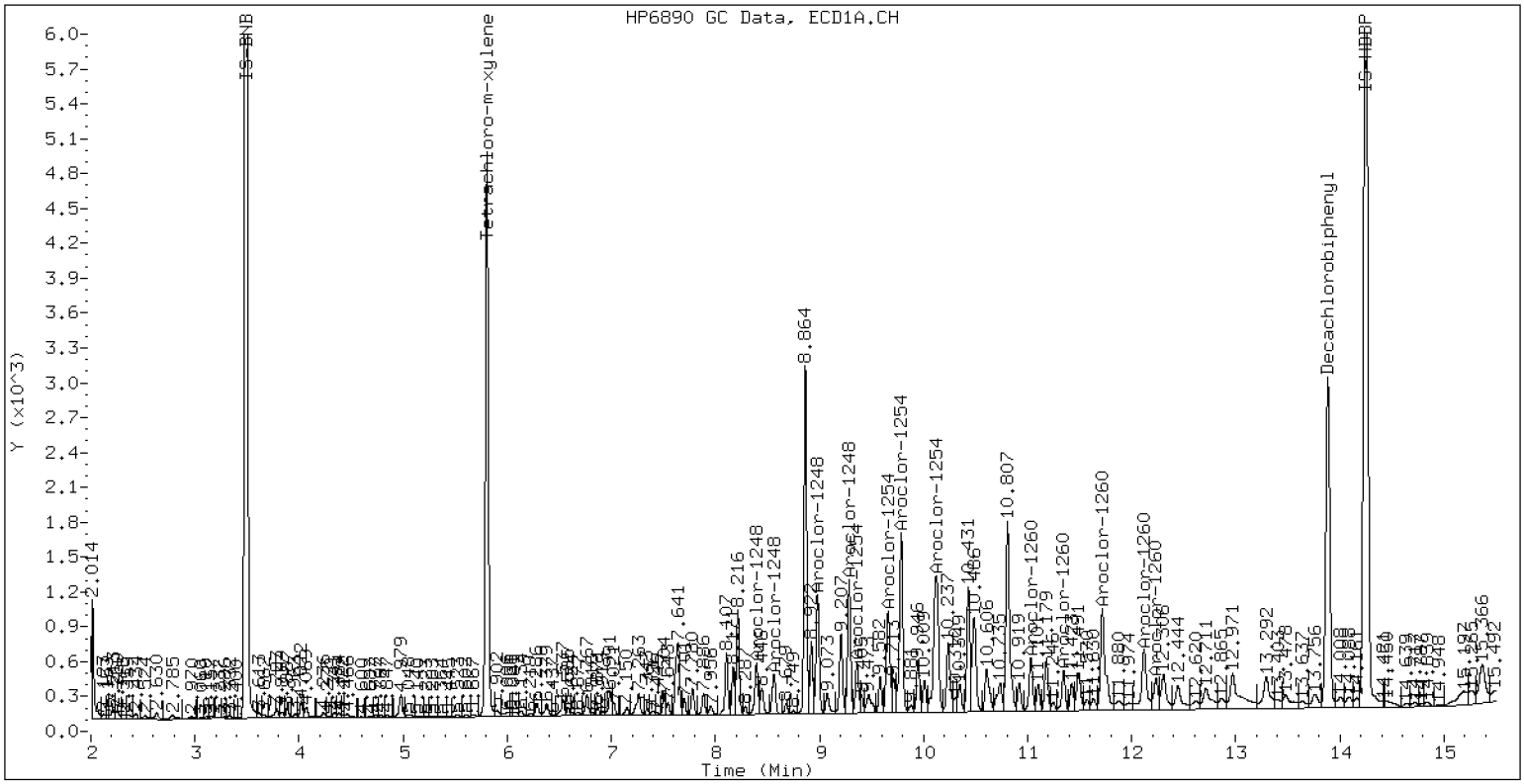
Total PCB Area Col2 (5.784 - 14.018) = 1118072 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

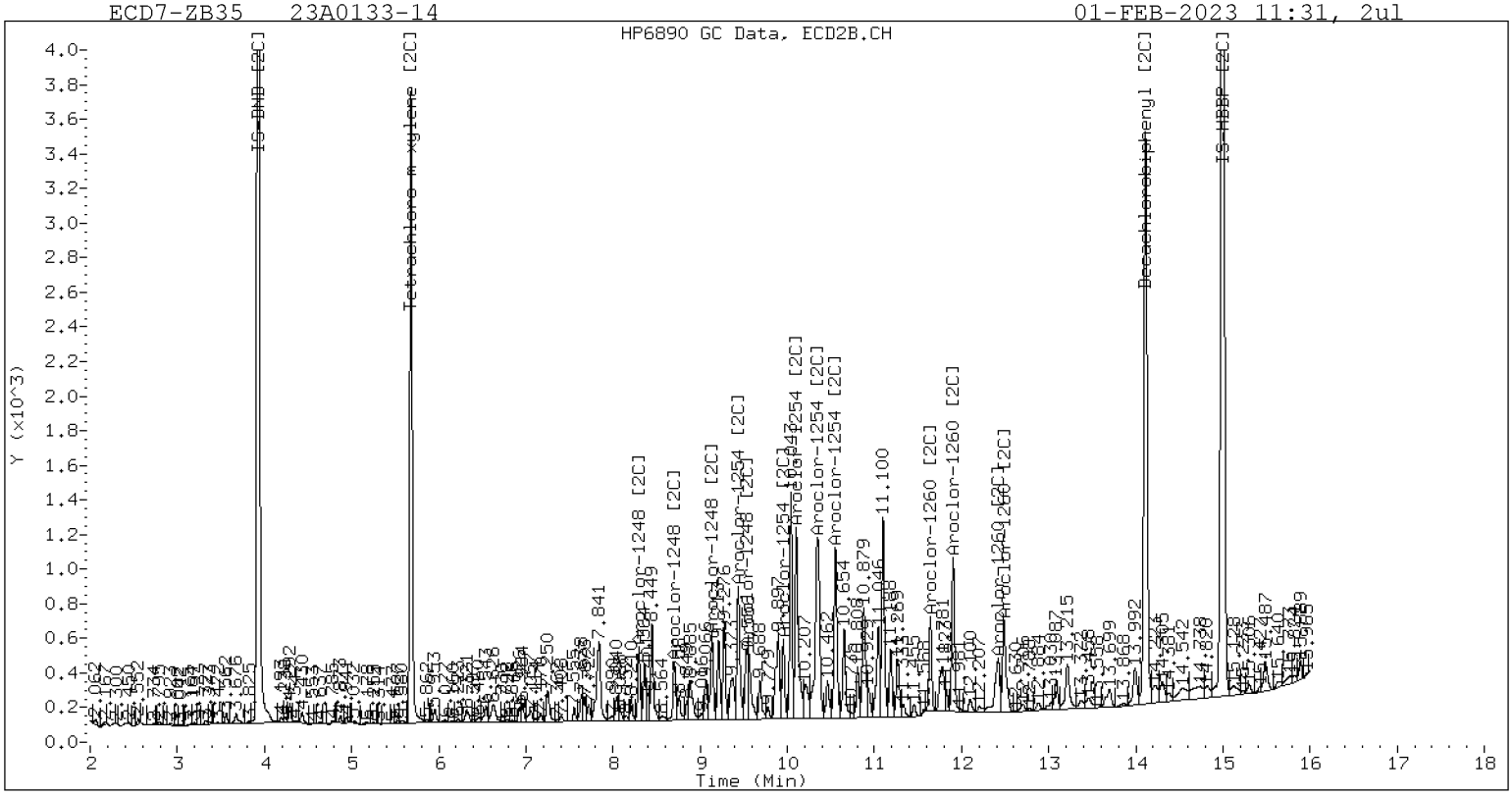
PCB Dual Column Chromatograms

ECD7-ZB5 23A0133-14 01-FEB-2023 11:31, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0133-14 01-FEB-2023 11:31, 2ul

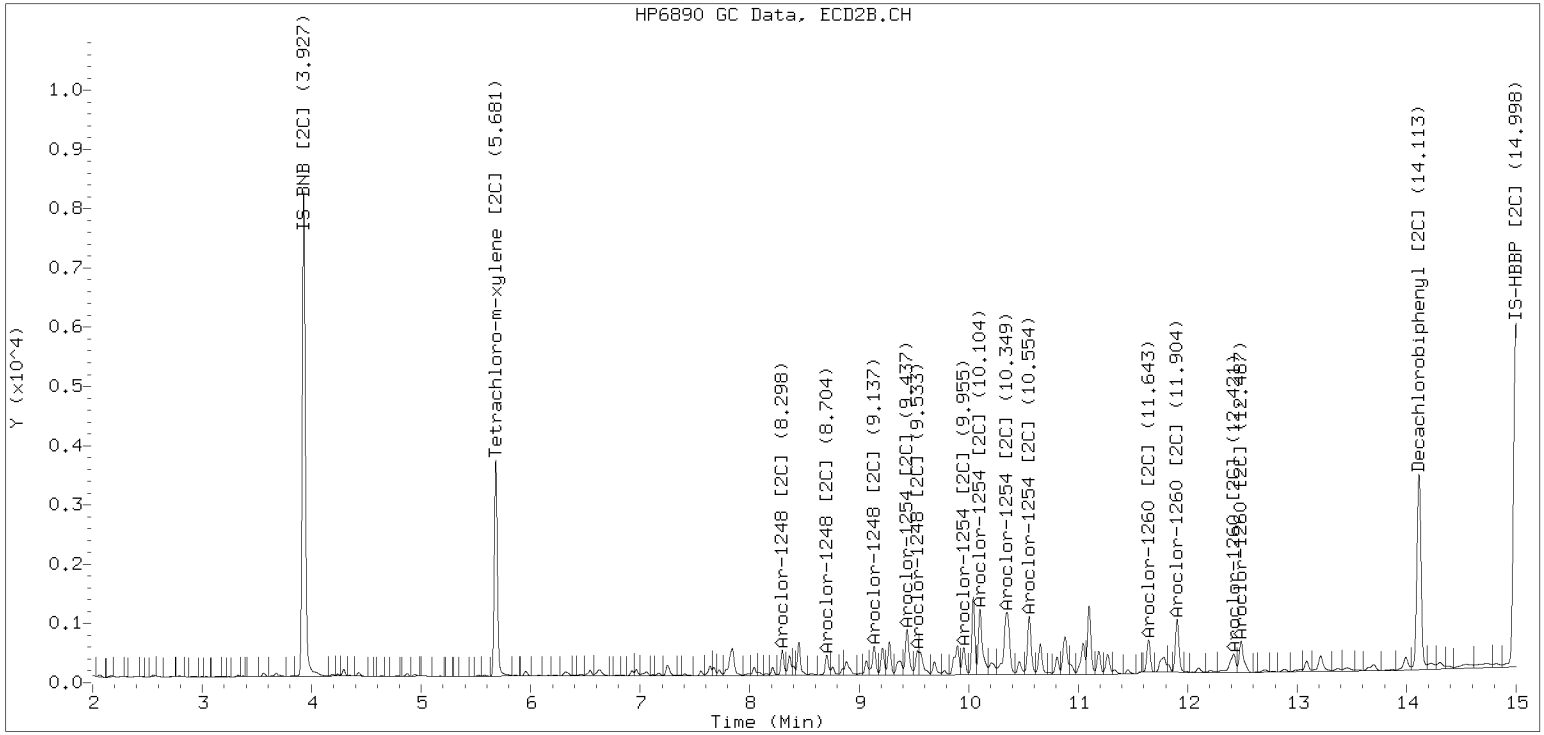


ZB-35 Manual Integration: YES

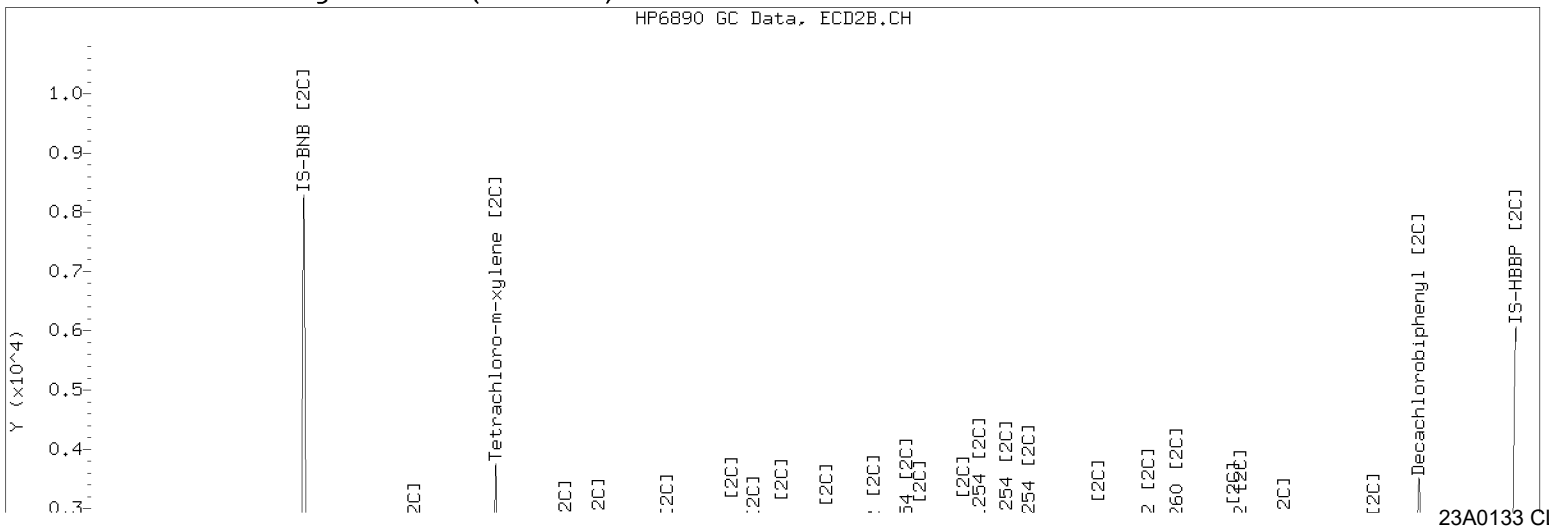
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230201.b/230201.b/02012307ECD7.D Injection Date: 01-FEB-2023 11:31

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1092

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-15 C	File ID:	01312340ECD7.D
Sampled:	01/06/23 14:26	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 23:15
% Solids:	52.30	Preparation:	EPA 3546 (Microwave)	Initial/Final:	23.97 g Wet / 2.5 mL
Batch:	BLA0394	Sequence:	SLA0350	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	28.8	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	43.3	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	32.8	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9768*	*7.21*	*90.3*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9768*	*5.93*	*74.4*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9768*	*6.88*	*86.3*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9768*	*6.88*	*86.3*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312340ECD7.D
Data file 2: /230131.b/230131.b/01312340ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0133-15
Client ID:
Injection Date: 31-JAN-2023 23:15
Report Date: 02/01/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.002	195817	5.682	-0.002	152344	29.7	34.5	14.8	Tetrachloro-m-xylene
13.884	-0.006	154881	14.113	-0.005	176542	36.1	34.5	4.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	465728	-7.5
Hexabromobiphenyl	647433	400745	-38.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	326548	-3.1
Hexabromobiphenyl	382032	322360	-15.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.395	-0.008	27427	117.7	1	8.298	-0.006	23994	162.6
Aroclor-1248	2	8.563	-0.013	25065	84.3	2	8.704	-0.007	24706	155.5
Aroclor-1248	3	8.982	-0.013	61065	107.4	3	9.137	-0.016	30522	157.2
Aroclor-1248	4	9.285	-0.006	66446	236.1	4	9.532	-0.046	24454	101.8
		Total Col1Ave (4 peaks):			136.4		Total Col2Ave (4 peaks):			144.3 RPD = 6
		Corrected Ave (3 peaks):			103.2		Corrected Ave (3 peaks):			138.2 RPD = 29
Aroclor-1254	1	9.285	-0.010	66446	140.0	1	9.436	-0.008	49742	210.0
Aroclor-1254	2	9.360	-0.014	25229	124.5	2	9.955	-0.010	28520	148.9
Aroclor-1254	3	9.656	-0.008	55608	182.8	3	10.104	-0.013	80420	192.5
Aroclor-1254	4	9.785	-0.017	92567	155.3	4	10.349	-0.018	104706	250.7
Aroclor-1254	5	10.122	-0.041	109039	281.4	5	10.553	-0.012	66068	284.0
		Total Col1Ave (5 peaks):			176.8		Total Col2Ave (5 peaks):			217.2 RPD = 21
		Corrected Ave (4 peaks):			150.7		Corrected Ave (4 peaks):			200.5 RPD = 28
Aroclor-1260	1	11.032	-0.010	31984	142.2	1	11.642	-0.007	36681	157.7
Aroclor-1260	2	11.347	-0.012	27111	117.3	2	11.904	-0.010	74180	126.1
Aroclor-1260	3	11.717	-0.014	89543	147.2	3	12.422	-0.010	34485	235.1
Aroclor-1260	4	12.118	-0.017	44131	140.4	4	12.487	-0.011	53157	139.6
Aroclor-1260	5	12.233	-0.008	19017	138.8	NS	---			----
		Total Col1Ave (5 peaks):			137.2		Total Col2Ave (4 peaks):			164.6 RPD = 18
		Corrected Ave (4 peaks):			134.7		Corrected Ave (3 peaks):			141.1 RPD = 5
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.908 - 13.790) = 2366664 Col1 Total PCB = 0.4 ppm*

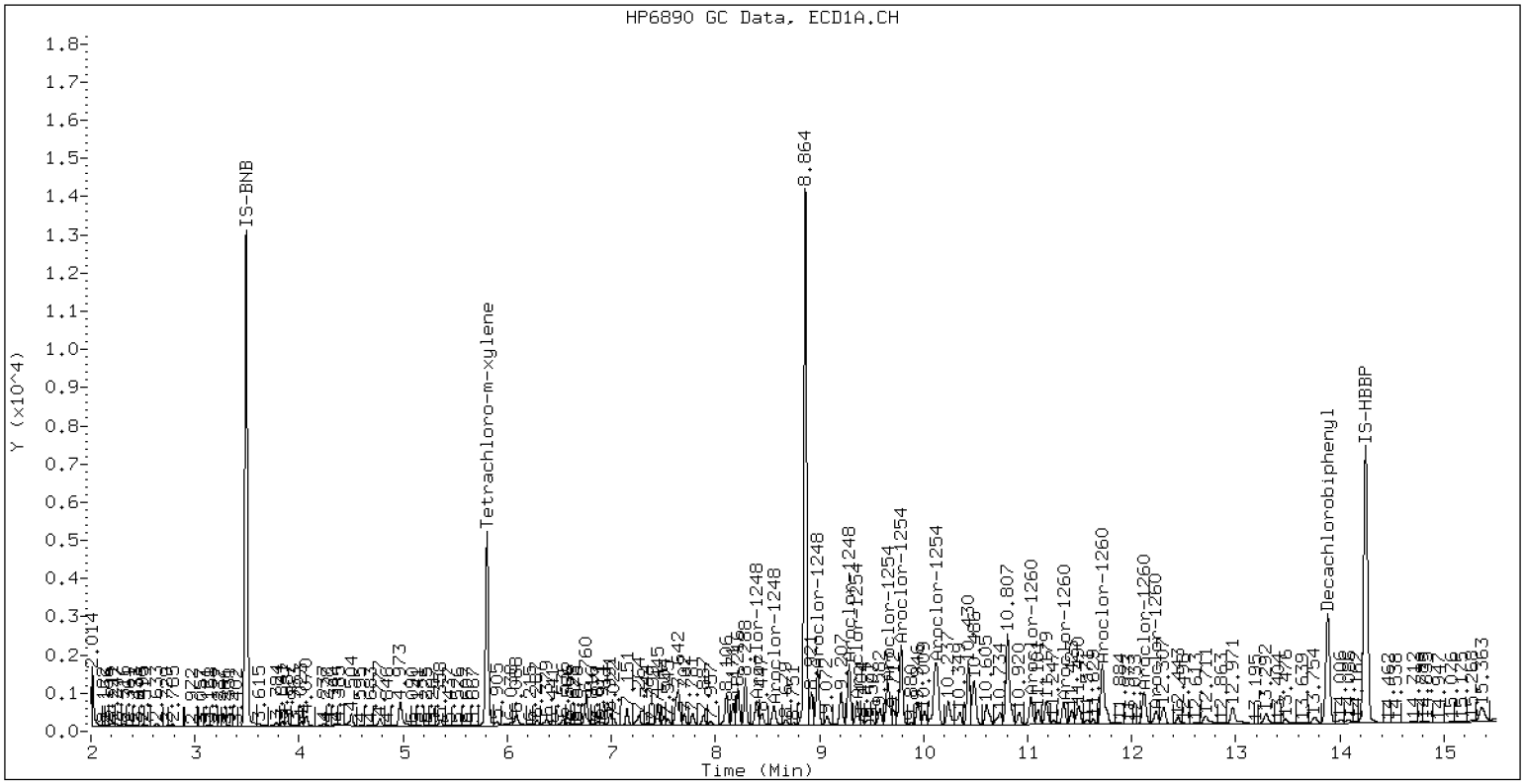
Total PCB Area Col2 (5.784 - 14.018) = 1798778 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

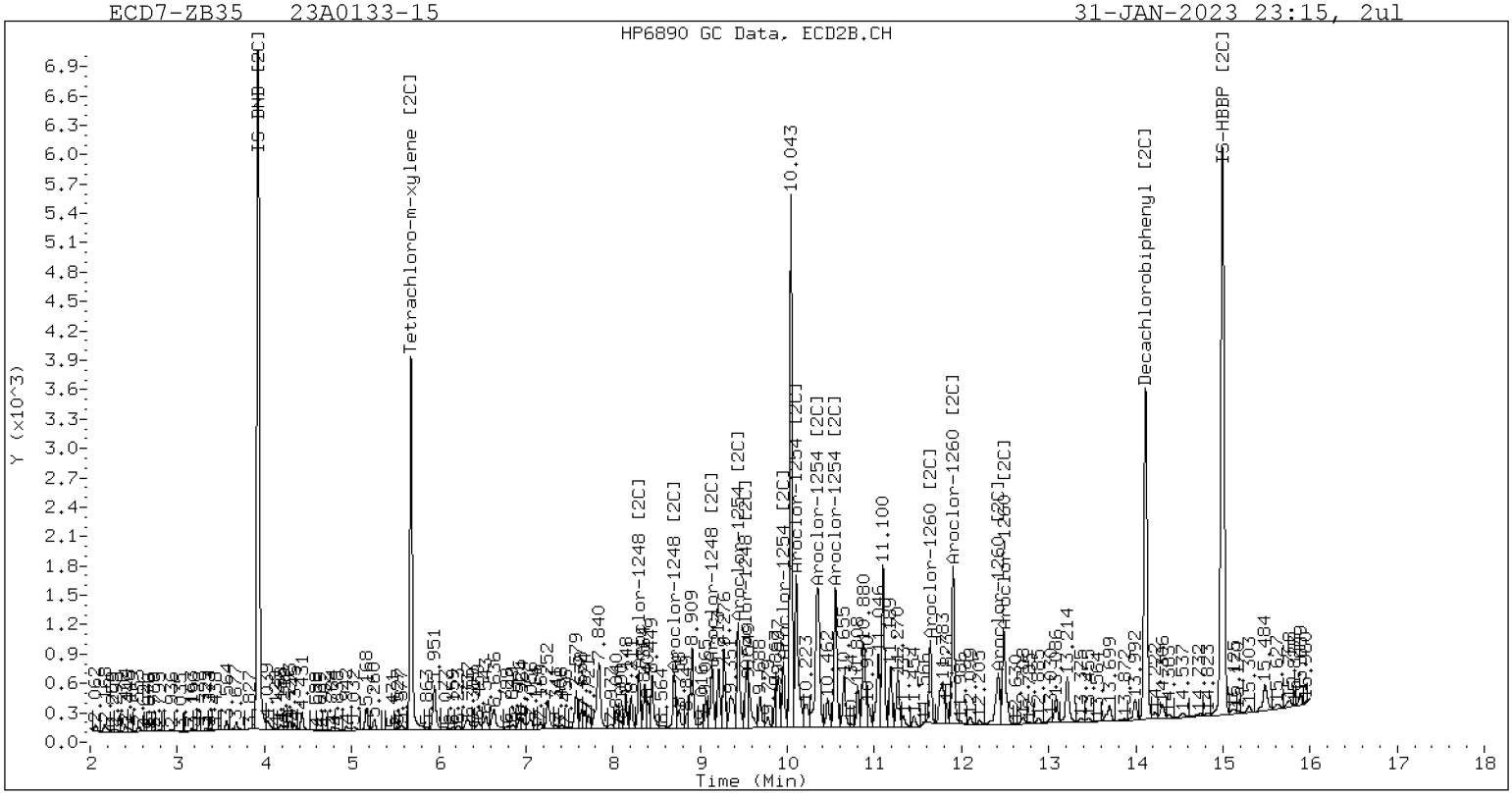
PCB Dual Column Chromatograms

ECD7-ZB5 23A0133-15 31-JAN-2023 23:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0133-15 31-JAN-2023 23:15, 2ul

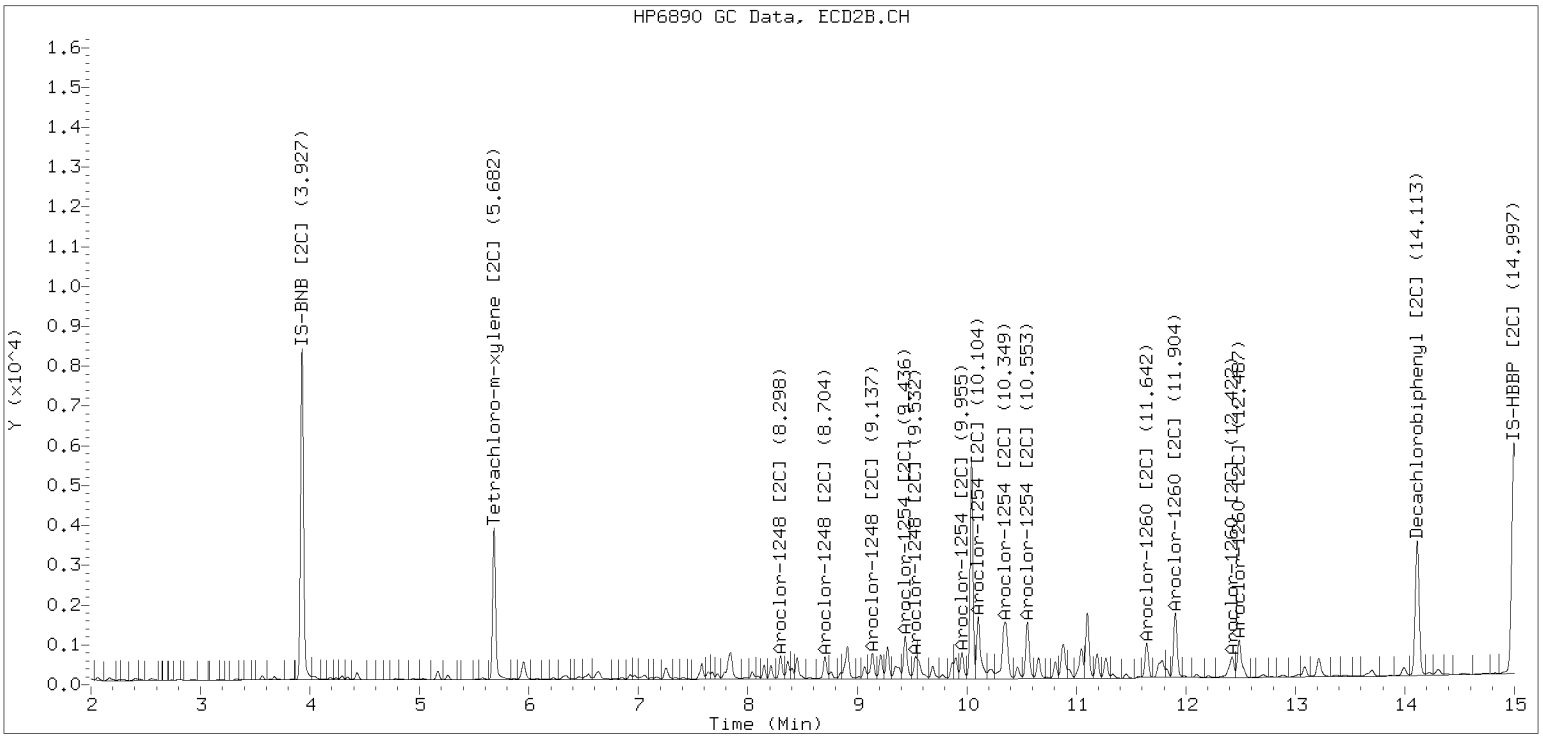


ZB-35 Manual Integration: YES

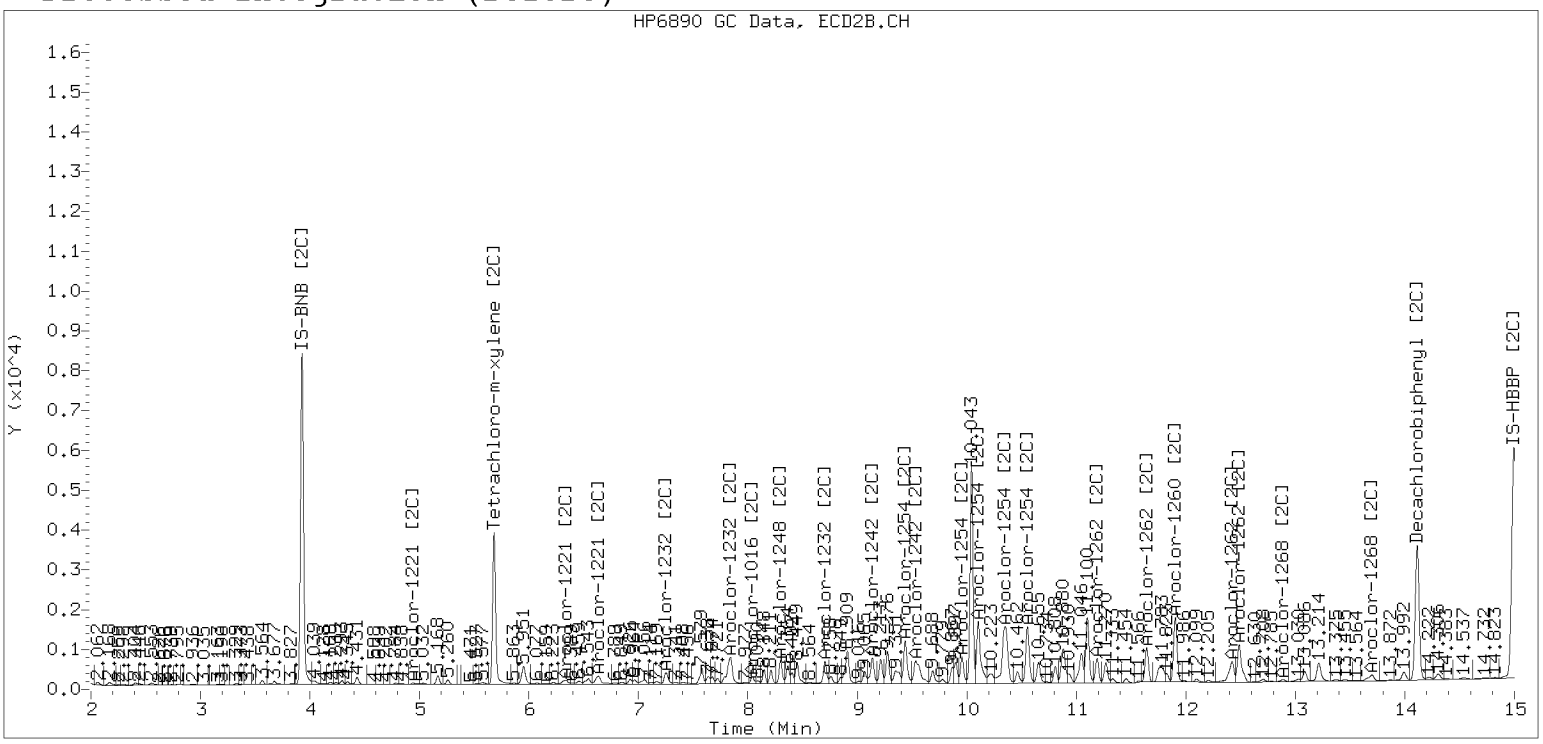
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230131.b/230131.b/01312340ECD7.D Injection Date: 31-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1091

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0133-16 C	File ID:	01312341ECD7.D
Sampled:	01/06/23 14:50	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 23:36
% Solids:	49.38	Preparation:	EPA 3546 (Microwave)	Initial/Final:	25.39 g Wet / 2.5 mL
Batch:	BLA0394	Sequence:	SLA0350	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	20.7	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	32.0	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	21.4	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9760*	*6.66*	*83.5*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9760*	*5.54*	*69.5*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9760*	*6.68*	*83.7*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9760*	*6.37*	*79.9*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312341ECD7.D
Data file 2: /230131.b/230131.b/01312341ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0133-16
Client ID:
Injection Date: 31-JAN-2023 23:36
Report Date: 02/01/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.003	188275	5.681	-0.003	145695	27.8	31.9	13.8	Tetrachloro-m-xylene
13.884	-0.006	146065	14.114	-0.004	174627	33.4	33.5	0.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	479083	-4.8
Hexabromobiphenyl	647433	408797	-36.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	337422	0.2
Hexabromobiphenyl	382032	328456	-14.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.394	-0.009	21589	90.1	1	8.297	-0.007	17829	116.9
Aroclor-1248	2	8.562	-0.014	18538	60.6	2	8.703	-0.007	17789	108.4
Aroclor-1248	3	8.982	-0.013	46513	79.5	3	9.137	-0.017	23295	116.1
Aroclor-1248	4	9.284	-0.007	51308	177.3	4	9.531	-0.047	18405	74.2
		Total Col1Ave (4 peaks):			101.9		Total Col2Ave (4 peaks):			103.9 RPD = 2
		Corrected Ave (3 peaks):			76.8		Corrected Ave (3 peaks):			99.6 RPD = 26
Aroclor-1254	1	9.284	-0.012	51308	105.1	1	9.436	-0.009	38975	159.2
Aroclor-1254	2	9.360	-0.014	19417	93.1	2	9.955	-0.010	21207	107.2
Aroclor-1254	3	9.659	-0.006	47443	151.7	3	10.103	-0.014	61696	142.9
Aroclor-1254	4	9.784	-0.018	72100	117.6	4	10.348	-0.018	81704	189.3
Aroclor-1254	5	10.121	-0.043	83935	210.6	5	10.553	-0.012	48951	203.6
		Total Col1Ave (5 peaks):			135.6		Total Col2Ave (5 peaks):			160.5 RPD = 17
		Corrected Ave (4 peaks):			116.9		Corrected Ave (4 peaks):			149.7 RPD = 25
Aroclor-1260	1	11.031	-0.011	21979	95.8	1	11.642	-0.008	25825	109.0
Aroclor-1260	2	11.346	-0.012	18204	77.2	2	11.903	-0.011	44545	74.3
Aroclor-1260	3	11.716	-0.015	55562	89.5	3	12.420	-0.012	24068	161.1
Aroclor-1260	4	12.117	-0.017	27728	86.5	4	12.487	-0.011	32990	85.0
Aroclor-1260	5	12.232	-0.009	13009	93.1	NS	---			----
		Total Col1Ave (5 peaks):			88.4		Total Col2Ave (4 peaks):			107.3 RPD = 19
		Corrected Ave (4 peaks):			86.6		Corrected Ave (3 peaks):			89.4 RPD = 3
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.790) = 1446740 Col1 Total PCB = 0.3 ppm*

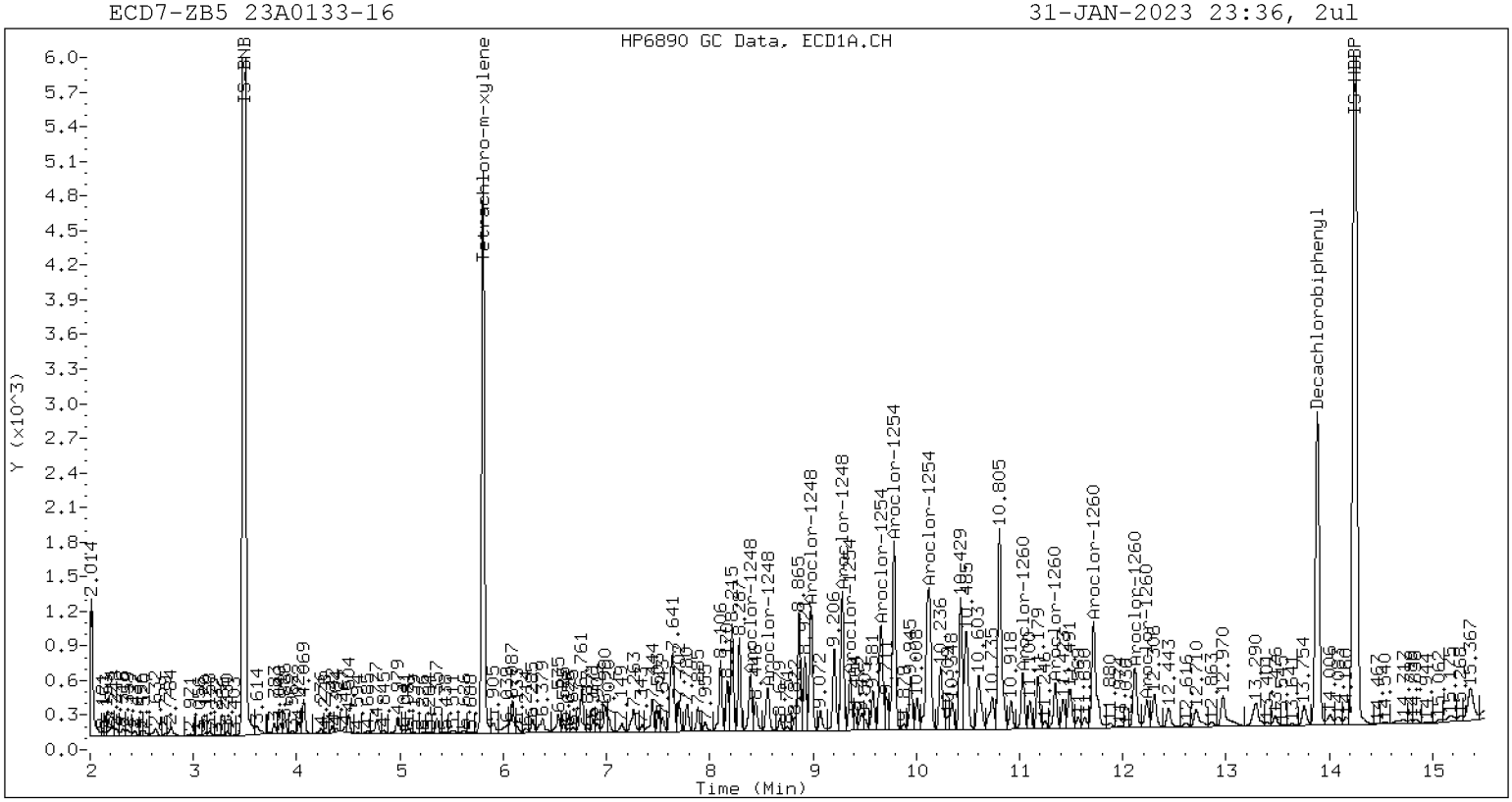
Total PCB Area Col2 (5.784 - 14.018) = 1198642 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

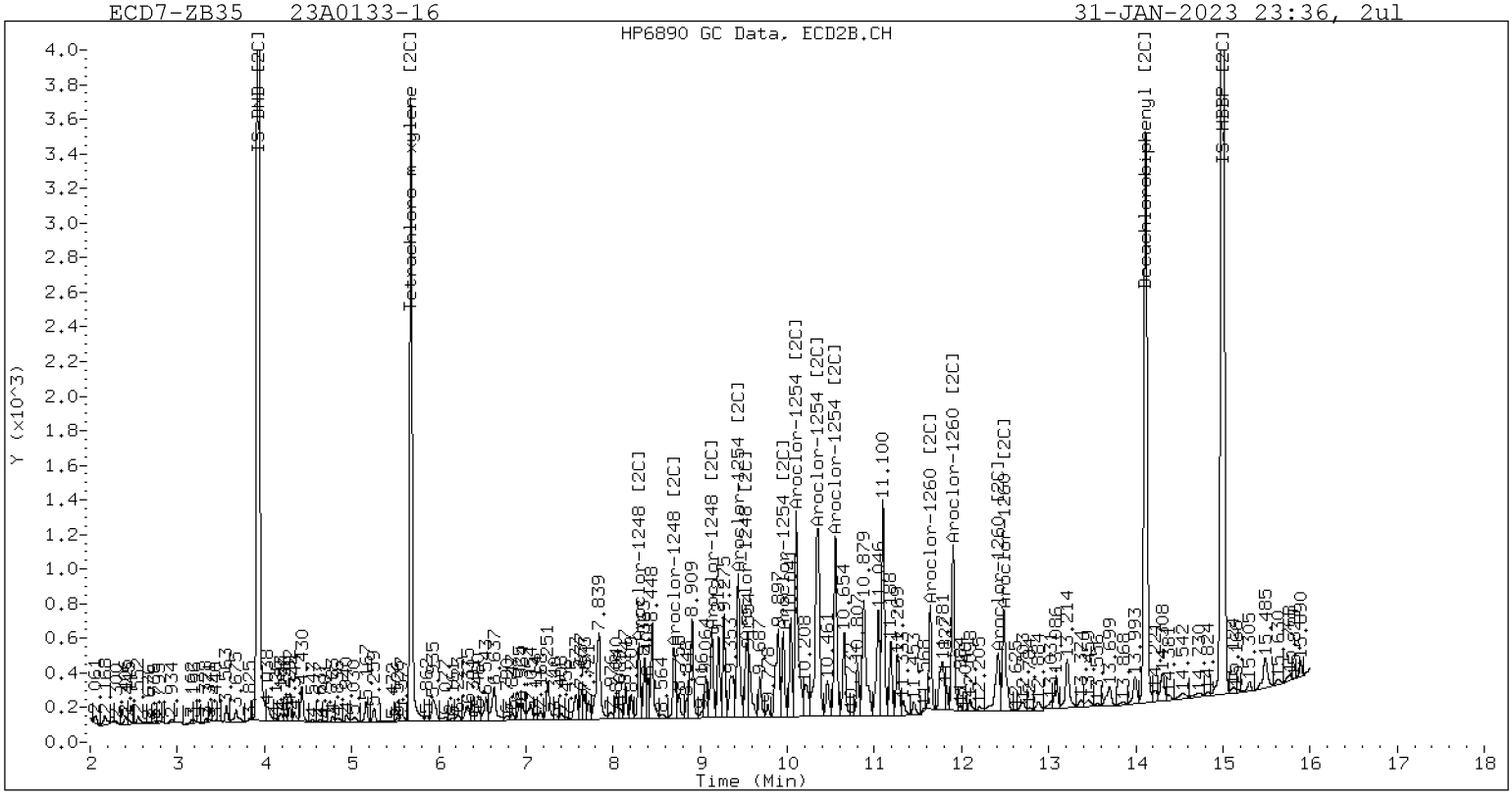
PCB Dual Column Chromatograms

ECD7-ZB5 23A0133-16 31-JAN-2023 23:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0133-16 31-JAN-2023 23:36, 2ul

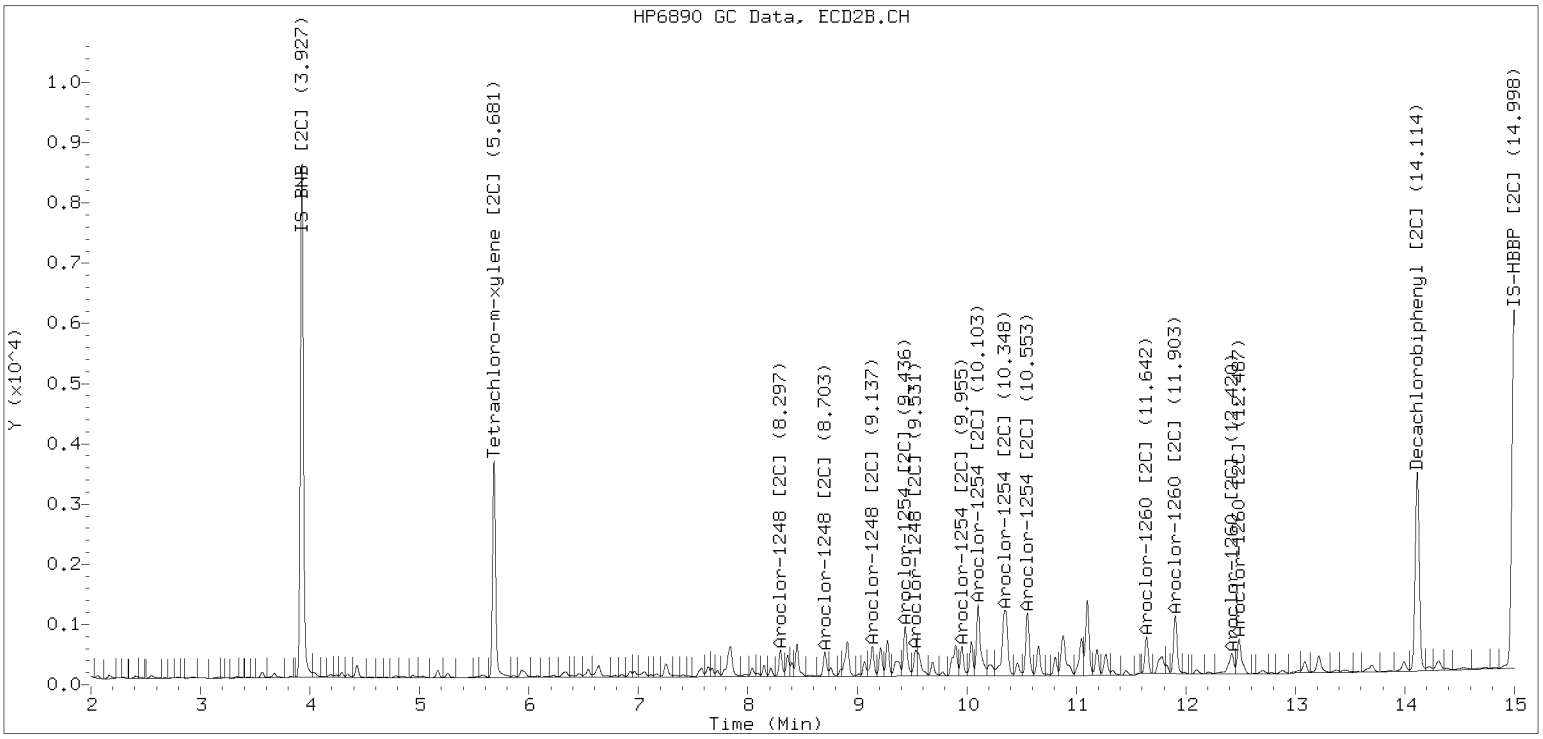


ZB-35 Manual Integration: YES

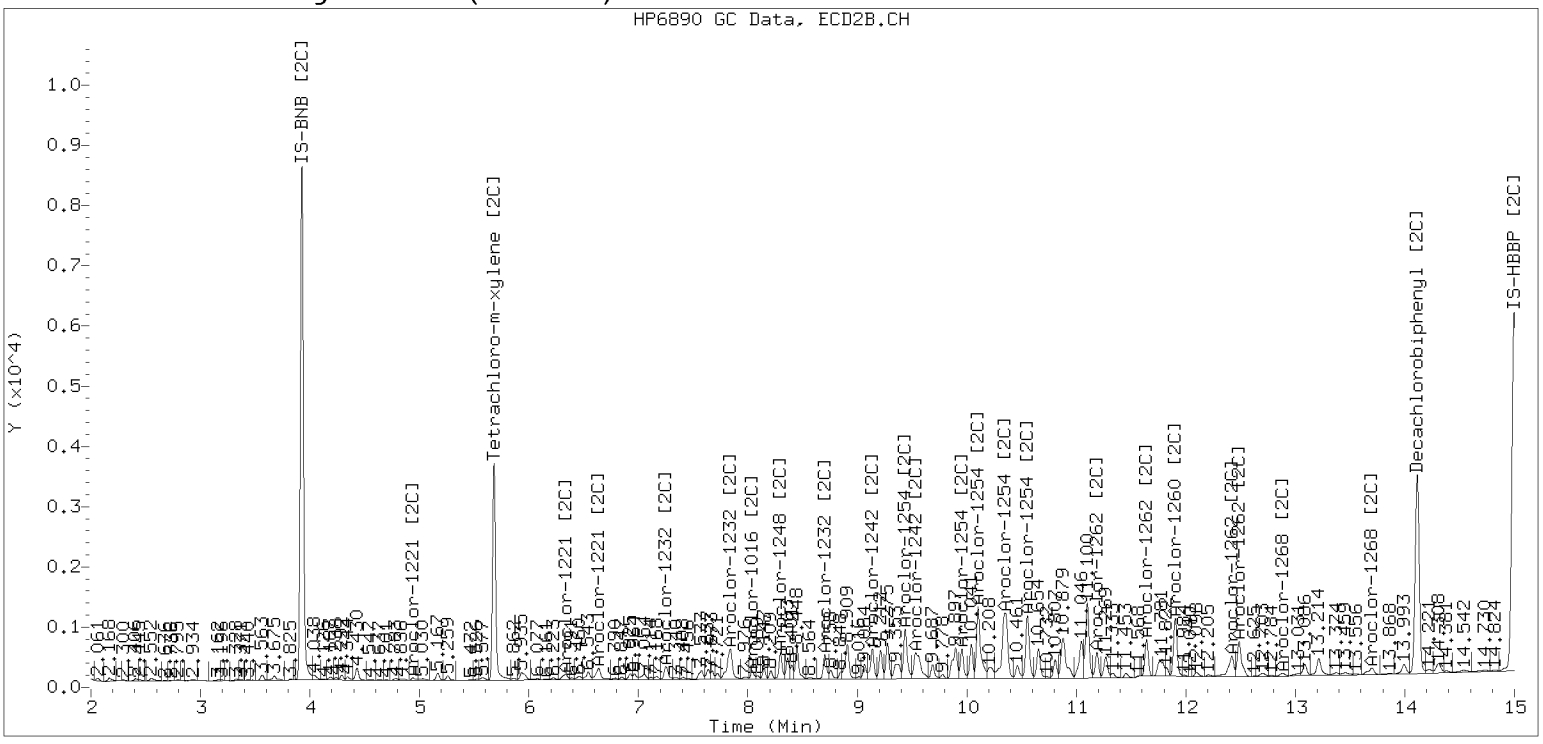
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230131.b/230131.b/01312341ECD7.D Injection Date: 31-JAN-2023

Manual Integration (After)



Processed Integration (Before)



PREPARATION BATCH SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC SDG: 23A0133

Client: Anchor QEA, LLC Project: AOC5 MR Phase 1

Batch: BLA0394 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1252	23A0133-01	02012304ECD7.D	01/18/23 12:25	
LDW23-SC1261	23A0133-02	01312323ECD7.D	01/18/23 12:25	
LDW23-SC1250	23A0133-03	01312324ECD7.D	01/18/23 12:25	
LDW23-SC1244	23A0133-04	01312325ECD7.D	01/18/23 12:25	
LDW23-SC1244-FD	23A0133-05	01312326ECD7.D	01/18/23 12:25	
LDW23-SC1241	23A0133-06	01312327ECD7.D	01/18/23 12:25	
LDW23-IT1217	23A0133-07	01312328ECD7.D	01/18/23 12:25	
LDW23-SC1185	23A0133-08	01312333ECD7.D	01/18/23 12:25	
LDW23-SC1234	23A0133-09	01312334ECD7.D	01/18/23 12:25	
LDW23-SC1215	23A0133-10	02012305ECD7.D	01/18/23 12:25	
LDW23-SC1222	23A0133-11	01312336ECD7.D	01/18/23 12:25	
LDW23-SC1227	23A0133-12	02012306ECD7.D	01/18/23 12:25	
LDW23-SS1110	23A0133-13	01312338ECD7.D	01/18/23 12:25	
LDW23-SS1109	23A0133-14	02012307ECD7.D	01/18/23 12:25	
LDW23-SS1092	23A0133-15	01312340ECD7.D	01/18/23 12:25	
LDW23-SS1091	23A0133-16	01312341ECD7.D	01/18/23 12:25	
Blank	BLA0394-BLK1	01312315ECD7.D	01/18/23 12:25	
LCS	BLA0394-BS1	01312316ECD7.D	01/18/23 12:25	
LCS Dup	BLA0394-BSD1	01312317ECD7.D	01/18/23 12:25	
LDW23-IT1217	BLA0394-MS1	01312331ECD7.D	01/18/23 12:25	
LDW23-IT1217	BLA0394-MSD1	01312332ECD7.D	01/18/23 12:25	
Reference	BLA0394-SRM1	01312318ECD7.D	01/18/23 12:25	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0394

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

Matrix: Solid **Date Prepared:** 01/18/23 **Balance ID:** B1464626014 **Set Up By:** CRD 1/16/23

WO Comments

23A0100: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

23A0133: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

Designator	Description
QLS 5	QLS Spike

Analysis: 8082A PCB Solid 4

Lab Number & Container	% Solids	Initial (g) Target Dry: 12.5 (Wet)	Initial (g) Target Dry: 12.5 Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL) 1 2 3	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23A0100-21 A	51.8	(24.14)	24.18	5mL	5mL	2mL	2.5	1.0	
23A0100-22 A	80.3	(15.56)	15.57	5mL	5mL	2mL	2.5	1.0	
23A0100-23 A	53.4	(23.41)	23.46	5mL	5mL	2mL	2.5	1.0	
23A0133-01 B	50.2	(24.88)	24.90	5mL	5mL	2mL	2.5	1.0	
23A0133-02 B	44.8	(27.89)	27.91	5mL	5mL	2mL	2.5	1.0	
23A0133-03 C	51.1	(24.46)	24.51	5mL	5mL	2mL	2.5	1.0	
23A0133-04 B	49.5	(25.24)	25.24	5mL	5mL	2mL	2.5	1.0	
23A0133-05 B	48.3	(25.90)	25.92	5mL	5mL	2mL	2.5	1.0	
23A0133-06 C	49.0	(25.51)	25.51	5mL	5mL	2mL	2.5	1.0	
23A0133-07 C	59.5	(21.01)	21.06	5mL	5mL	2mL	2.5	1.0	
23A0133-08 C	58.6	(21.33)	21.36	5mL	5mL	2mL	2.5	1.0	
23A0133-09 C	53.7	(23.26)	23.27	5mL	5mL	2mL	2.5	1.0	
23A0133-10 C	53.5	(23.37)	23.41	5mL	5mL	2mL	2.5	1.0	
23A0133-11 C	52.1	(23.98)	23.98	5mL	5mL	2mL	2.5	1.0	
23A0133-12 C	55.8	(22.42)	22.44	5mL	5mL	2mL	2.5	1.0	
23A0133-13 C	59.3	(21.07)	21.10	5mL	5mL	2mL	2.5	1.0	
23A0133-14 C	45.2	(27.66)	27.70	5mL	5mL	2mL	2.5	1.0	
23A0133-15 C	52.3	(23.90)	23.97	5mL	5mL	2mL	2.5	1.0	
23A0133-16 C	49.4	(25.31)	25.39	5mL	5mL	2mL	2.5	1.0	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 12.5 (Wet)	Initial (g) Target Dry: 12.5 Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL) 1 2 3	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLA0394-BLK1	100.0	(12.50)	12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BLA0394-BS1	100.0	(12.50)	12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BLA0394-BSD1	100.0	(12.50)	12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BLA0394-MS1	59.5	(21.01)	21.01	5mL	5mL	2mL	2.5	1.0	Use 23A0133-07
BLA0394-MSD1	59.5	(21.01)	21.01	5mL	5mL	2mL	2.5	1.0	Use 23A0133-07
BLA0394-SRM1	100.0	~~(12.50)~~ (2.50)	2.50	5mL	5mL	2mL	2.5	1.0	Use ~~K010816~~ K011478

+1g DI WATER

CRD 1/18/23

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0394

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

WO Comments

23A0100: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

23A0133: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

	01/18/23		1/30/23	01/18/23 12:25	
Client ID Verified By	Date	Preparation Reviewed By	Date	Extraction Date and Time	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0394

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

WO Comments

23A0100: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
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23A0133: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Steps

Microwave
1 (2) 3
01/18/23
Analyst/Date

KD
100°C
Hexane Exchange
(2 X 20 mL)
(1) 2 3 (4) (5) 6
TWC 1/27/23
Analyst/Date

TurboVap
Pre Cleanups
1 2 3 (4) 5
LJ 1/30/23
Analyst/Date

TurboVap
Post Cleanups
1 (2) 3 4 5
LJ 1/30/23
Analyst/Date

Vialing
LJ 1/30/23
Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: MJCT Date: 01/18/23	
Neutral Glass Wool	K014562
1:1 Hexane/Acetone	L044044
Hexane	K048310
Anhydrous Sodium Sulfate	L000092
KD Analyst: TWC Date: 1/27/23	
Anhydrous Sodium Sulfate	N/A
Hexane	K011373
Vialing Analyst: LJ Date: 1/30/23	
Hexane	K011373
Concentrated Sulfuric Acid	K010364
Silica Gel (SPE) Darts	K011573
Sodium Sulfite	K010363
Tetrabutylammonium hydrogensulfate (TBAS)	L000840

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 2µg/mL	N K011752 (V) Exp Date: 1/23/2023	50µL	CT	✓
Spike 20µg/mL	1 K008150 (V) Exp Date: 3/5/2023	63µL	CT	✓

MANUALLY ENTER EXPIRATION DATES!

(V) indicates a virtual standard combining two or more physical standards. In these cases the Standard ID refers to the virtual standard, not the parent standards.

If a Standard ID is missing, but should be present, check the standard definition in Element LIMS to be sure Standard Info 6 has the correct letter or number designator matching the vial designator inthe Standard ID column. If it is correct, check the batch and bench sheet in Element LIMS to be sure the correct standards are selected for surrogate(s) and spike(s).

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0394

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

WO Comments

23A0100: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0133: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Instructions

SPECIAL INSTRUCTIONS:
1. Weigh soil/sed into beakers-lightly dry with sodium sulfate.
2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels).
3. Add 1:1 Hexane/Acetone until the solvent layer is 3 inches above the soil layer after homogenization.
4. Add surr/spike.
5. Microwave on appropriate power setting determined by # of samples.
6. After microwave-Re-homogenize while hot then cool vessels in R-05 15 minutes. Re-homogenize while cool.
7. Decant 1:1 Hex/Ace into Erlenmeyer flask with sodium sulfate in bottom and funnel with neutral glasswool plug.
8. Re-homogenize and rinse with 1:1 Hexane/Acetone.
9. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane.
10. KD on 100° bath.
11. Exchange (2 X with 20mL) Hexane.
12. TurboVap.
13. Clean-ups.
14. TurboVap.
15. Vial with Hexane.

A. Need Total Solids Y (N)

B. Archive/Freeze (Y) N

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: PAB Extraction Batch: BLA0391

Total Solids Batch: BLA0260 Work Order(s): 23A0100 21-23

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 21-23	CR 1/12/23
☒ Standing Water Decanted (Not shared)= 21-23	CR 1/12/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☒ Previously Frozen = 21-23	CR 1/12/23
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / (N)	
☒ Multiple Jars Y / (N)	CR 1/12/23
☐ Sample Pre-Screens indicate analyte activity=	CR 1/12/23
☐ Sample weights/volumes reduced based on Pre-Screen=	

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Revision 15
07/01/19

Analytical Resources, Incorporated
Analytical Chemists and Consultants

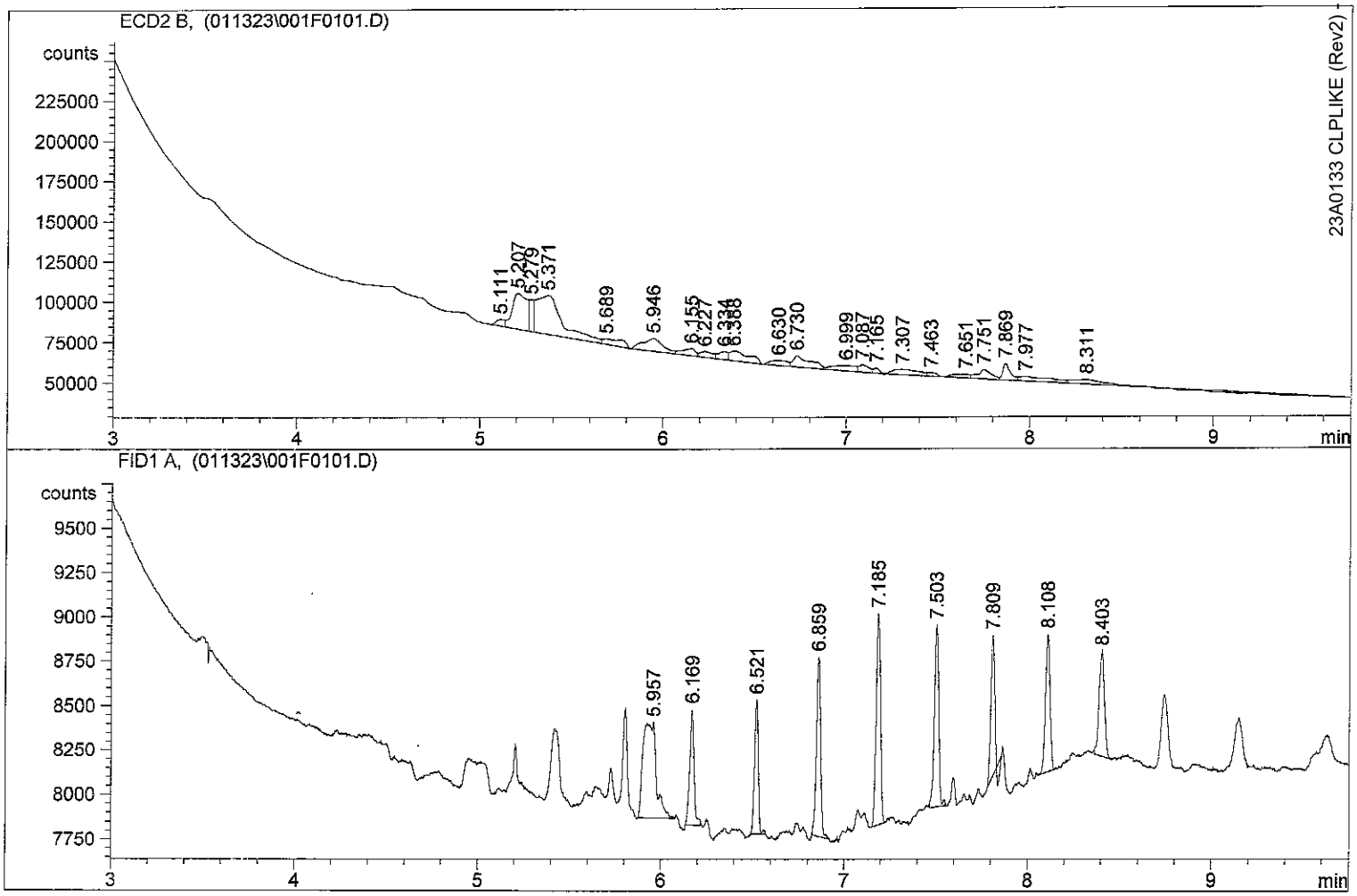
Organic Extractions Laboratory Analyst Notes

Extraction Parameter: PCB Extraction Batch: BLA0394

Total Solids Batch: NIA Work Order(s): 23A0133 01-16

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 01-16	CR 1/13/23
☒ Standing Water Decanted (Not shared)= 01-16	CR 1/13/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☒ Previously Frozen = 01-16	CR 1/13/23
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / (N)	CR 1/13/23
☒ Multiple Jars Y (N)	CR 1/13/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Injection Date	: 1/13/2023 4:40:07 PM	Seq. Line :	1
Sample Name	: DCM RINSE	Location :	Vial 1
Acq. Operator	: CRR	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\011323.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			

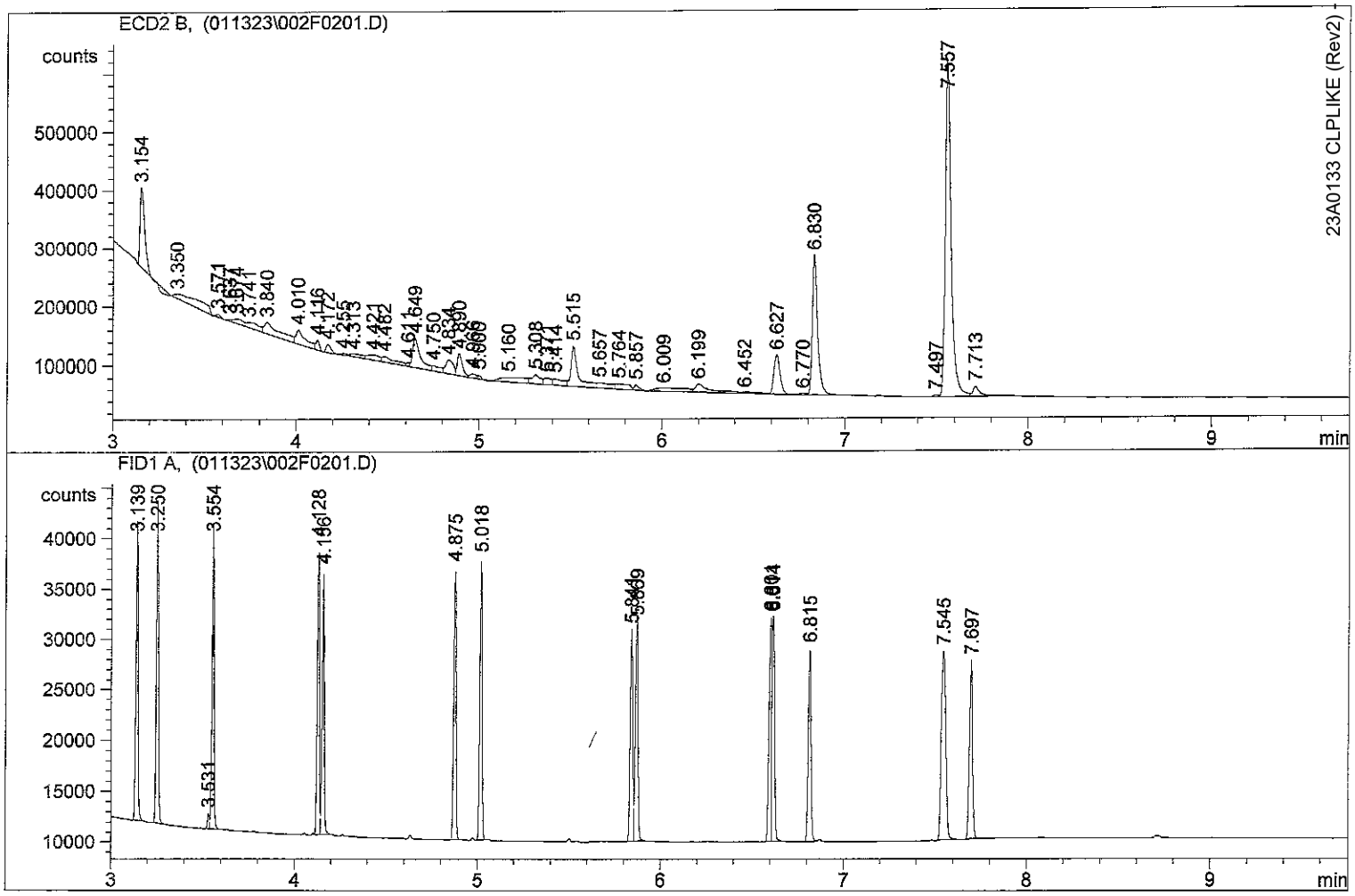


*** End of Report ***

Injection Date : 1/13/2023 4:54:31 PM
Sample Name : PNA STD 10PPM
Acq. Operator : CRR

Seq. Line : 2
Location : Vial 2
Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\011323.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD



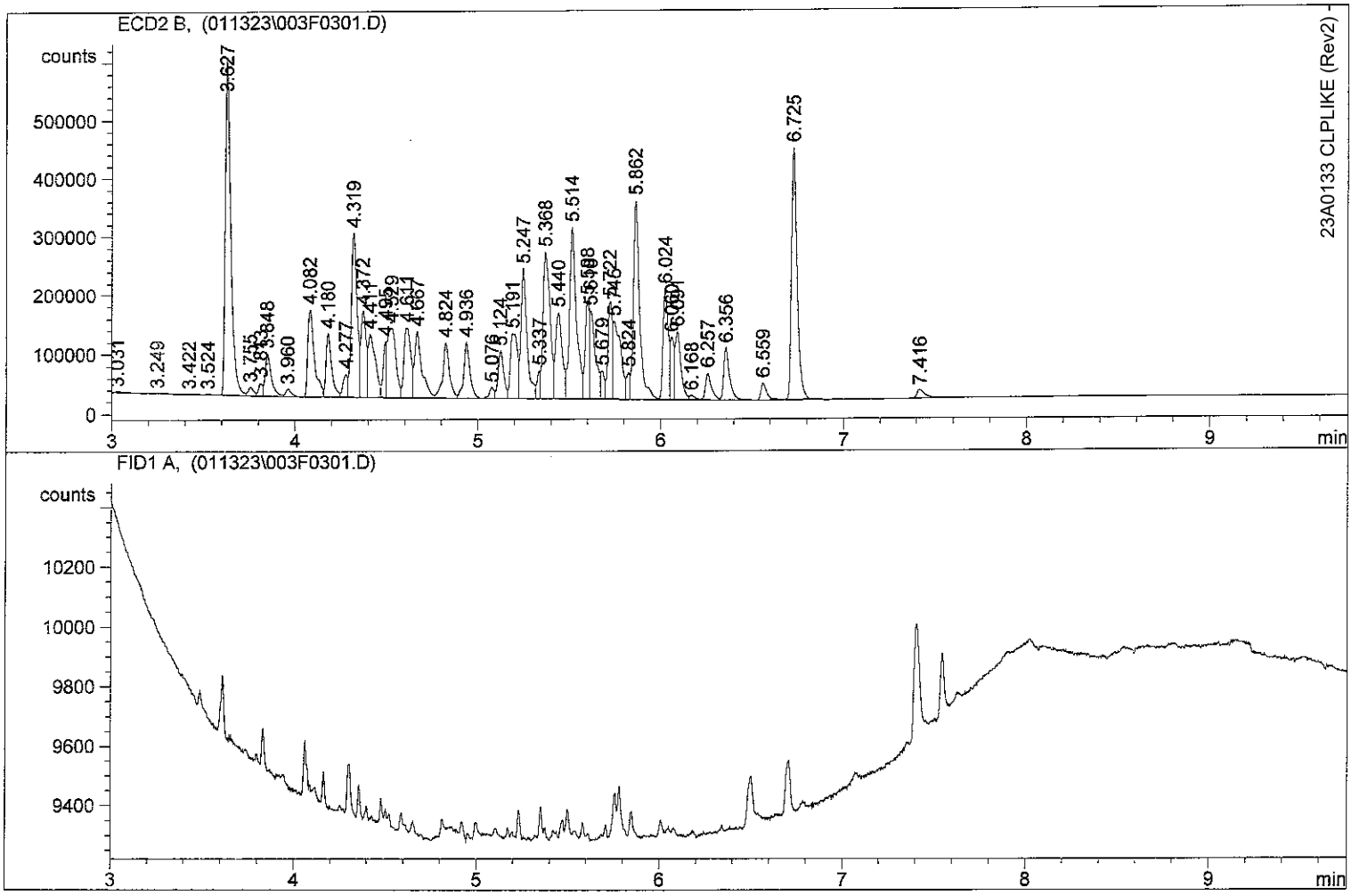
23A0133 CLPLIKE (Rev2) - Page 3494 of 5647

*** End of Report ***

Injection Date : 1/13/2023 5:08:24 PM
Sample Name : AR1660 1PPM
Acq. Operator : CRR

Seq. Line : 3
Location : Vial 3
Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\011323.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD

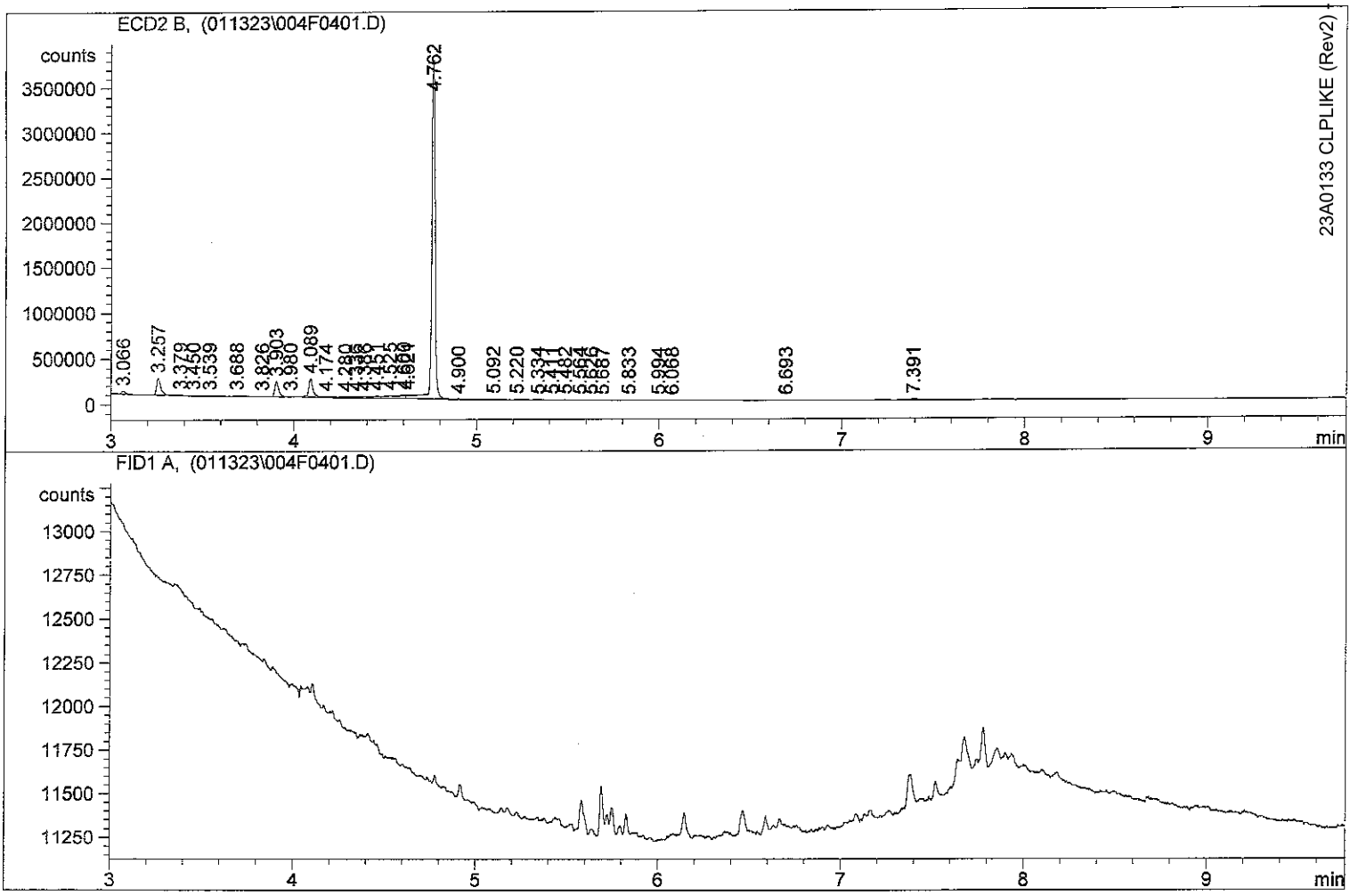


*** End of Report ***

Injection Date : 1/13/2023 5:22:54 PM
Sample Name : 23A0133 01
Acq. Operator : CRR

Seq. Line : 4
Location : Vial 4
Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\011323.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD

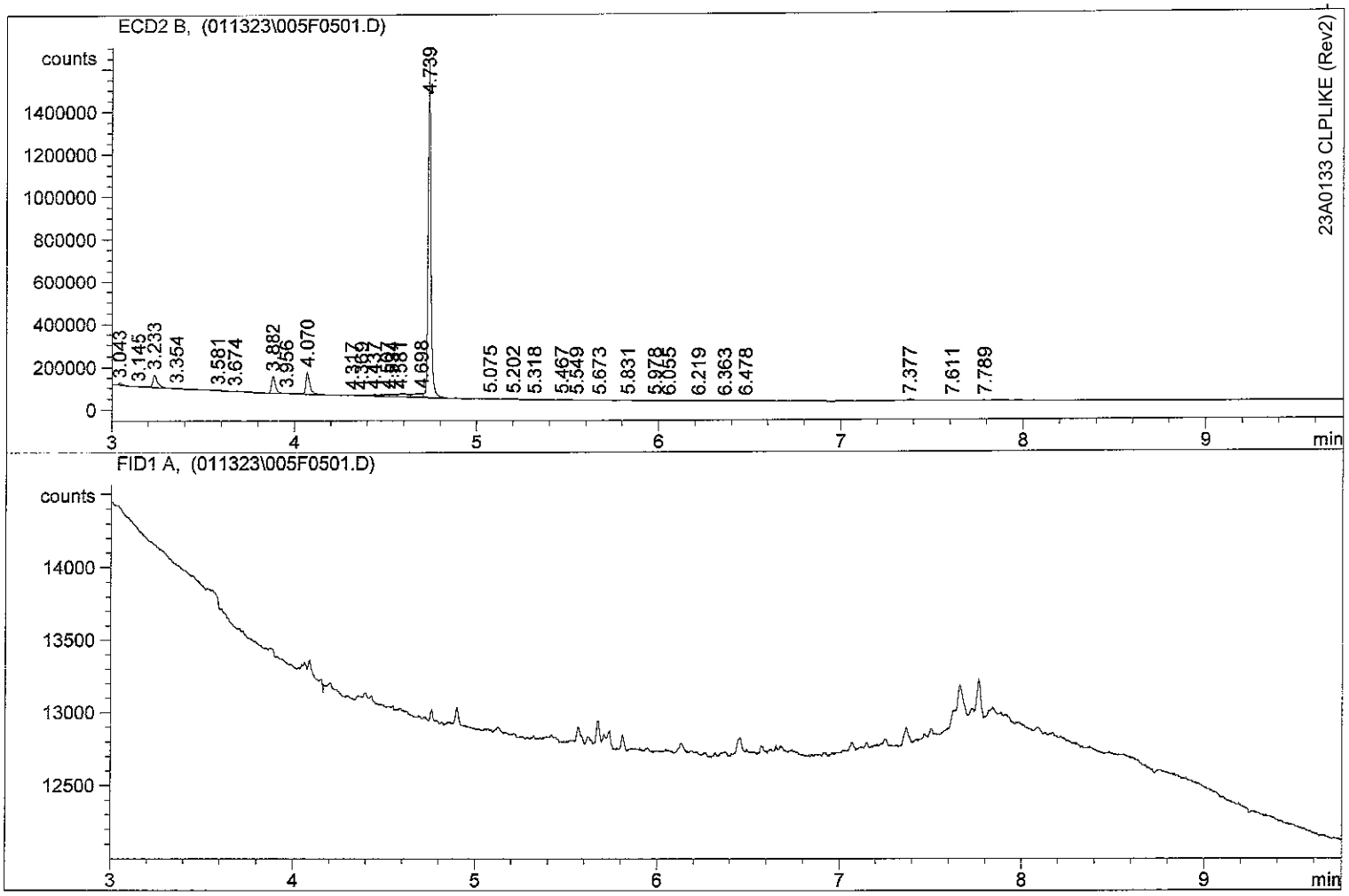


*** End of Report ***

Injection Date : 1/13/2023 5:36:53 PM
Sample Name : 23A0133 02
Acq. Operator : CRR

Seq. Line : 5
Location : Vial 5
Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\011323.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD

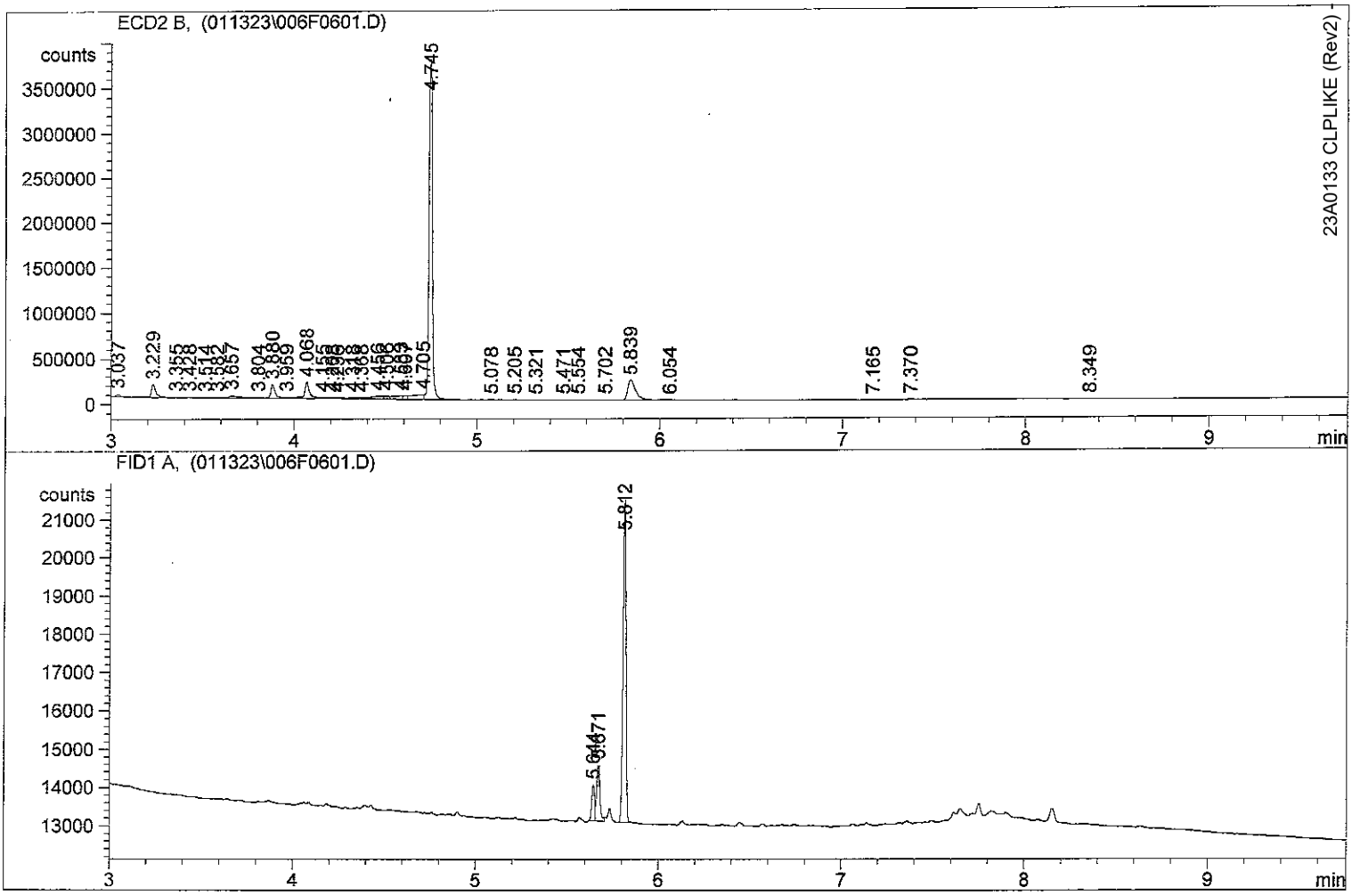


*** End of Report ***

Injection Date : 1/13/2023 5:51:23 PM
Sample Name : 23A0133 03
Acq. Operator : CRR

Seq. Line : 6
Location : Vial 6
Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\011323.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD

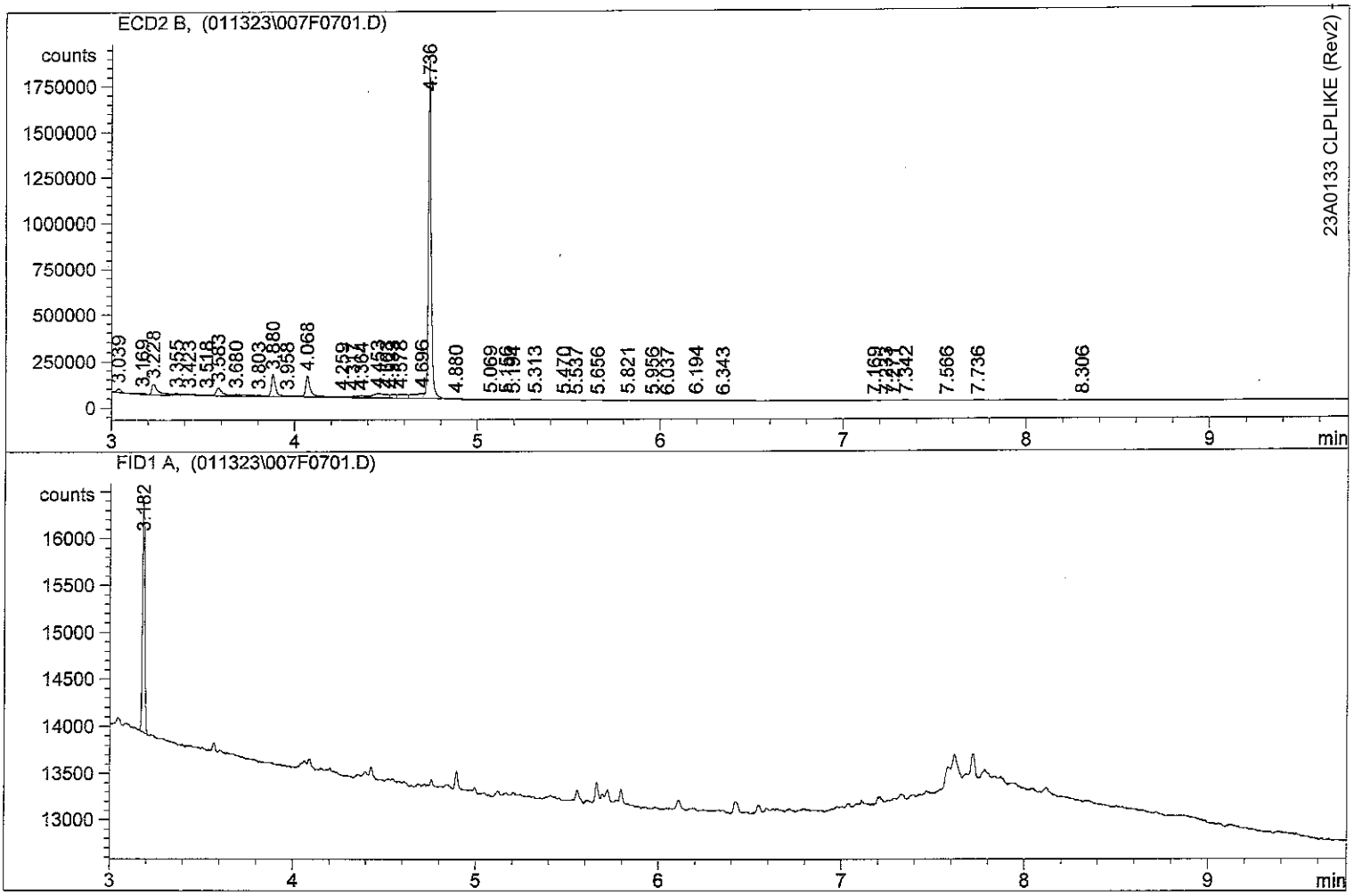


*** End of Report ***

Injection Date : 1/13/2023 6:05:25 PM
Sample Name : 23A0133 04
Acq. Operator : CRR

Seq. Line : 7
Location : Vial 7
Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\011323.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD

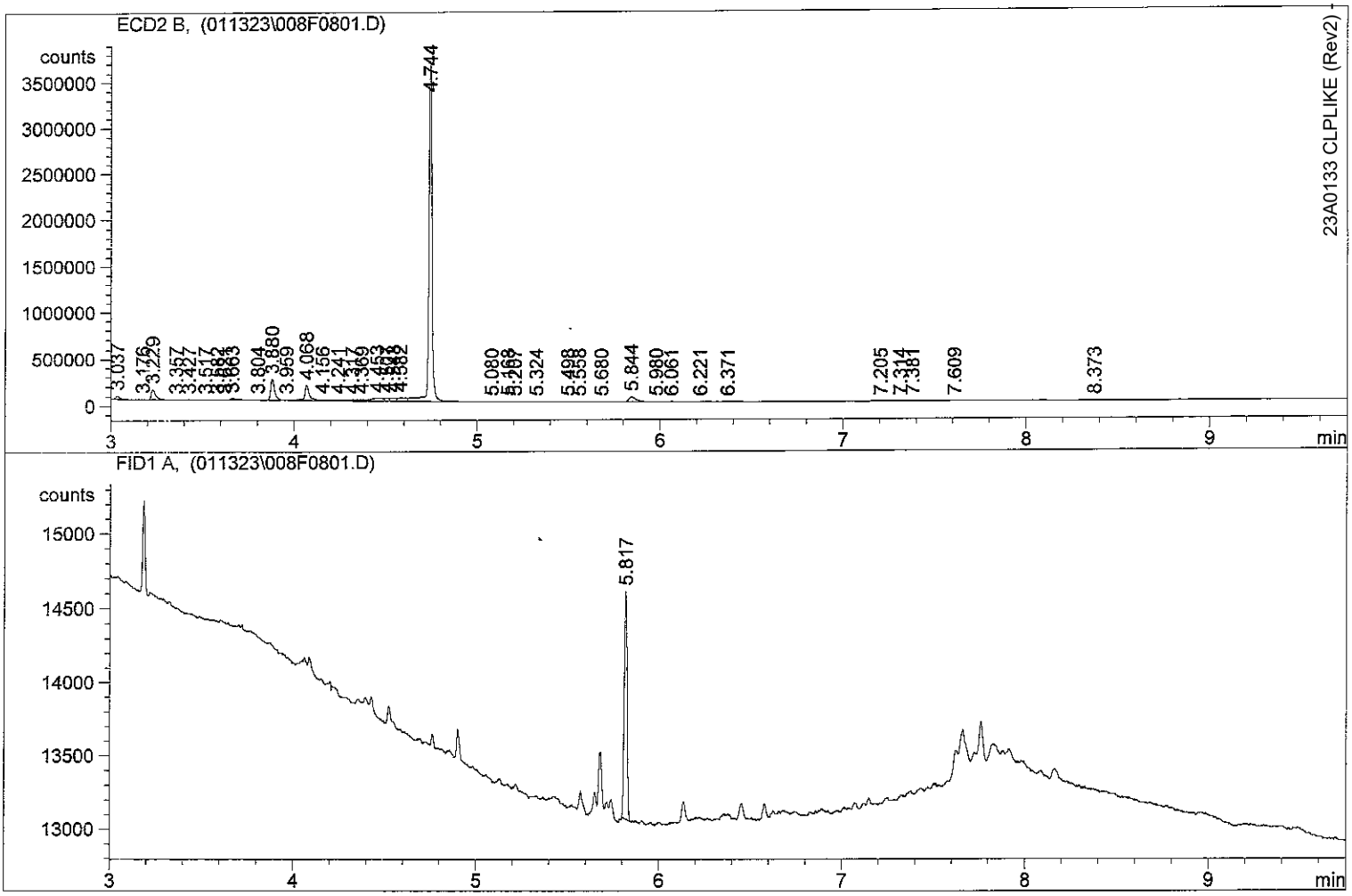


*** End of Report ***

Injection Date : 1/13/2023 6:19:54 PM
Sample Name : 23A0133 05
Acq. Operator : CRR

Seq. Line : 8
Location : Vial 8
Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\011323.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD

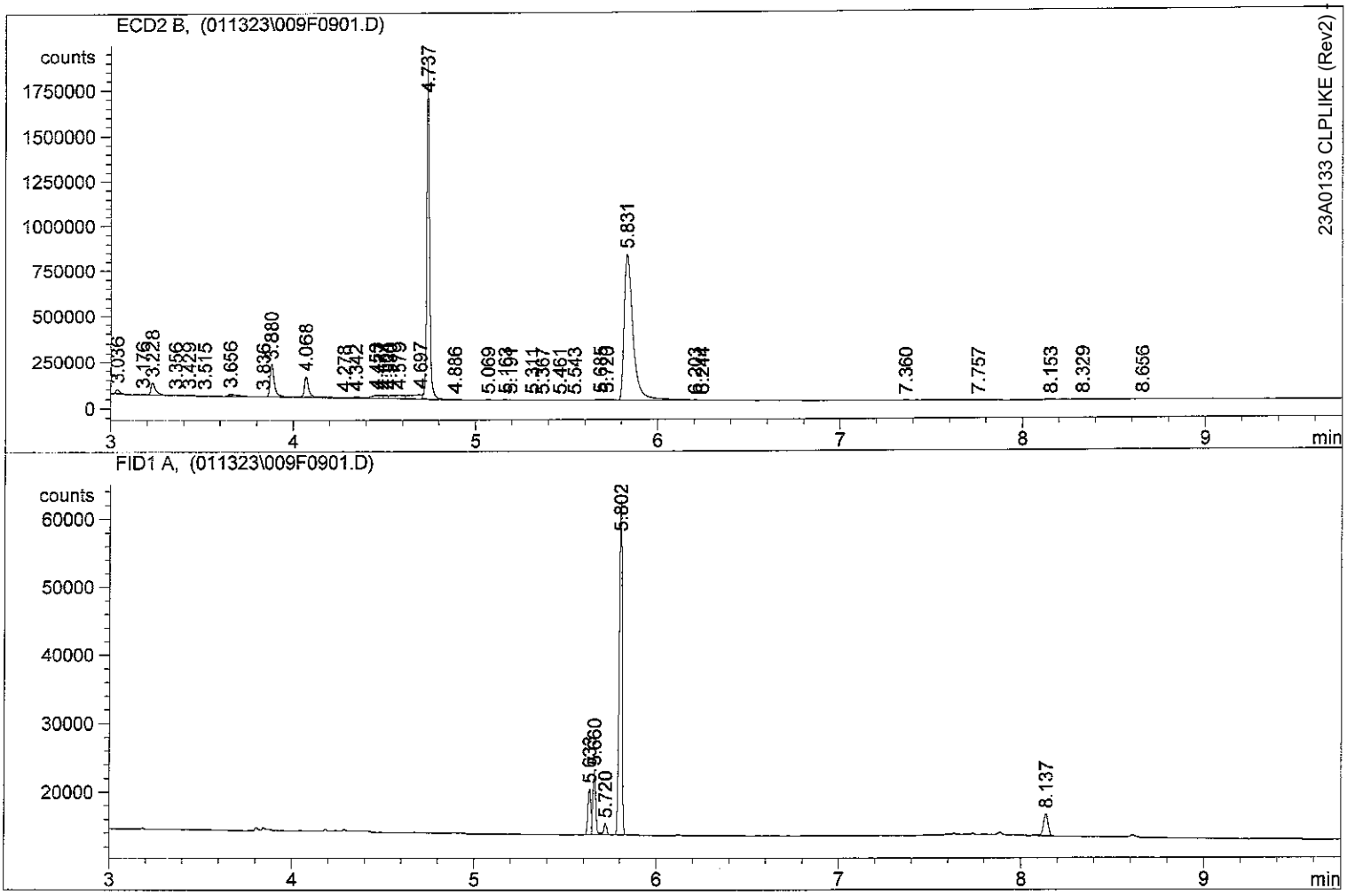


*** End of Report ***

Injection Date : 1/13/2023 6:33:54 PM
Sample Name : 23A0133 06
Acq. Operator : CRR

Seq. Line : 9
Location : Vial 9
Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\011323.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD

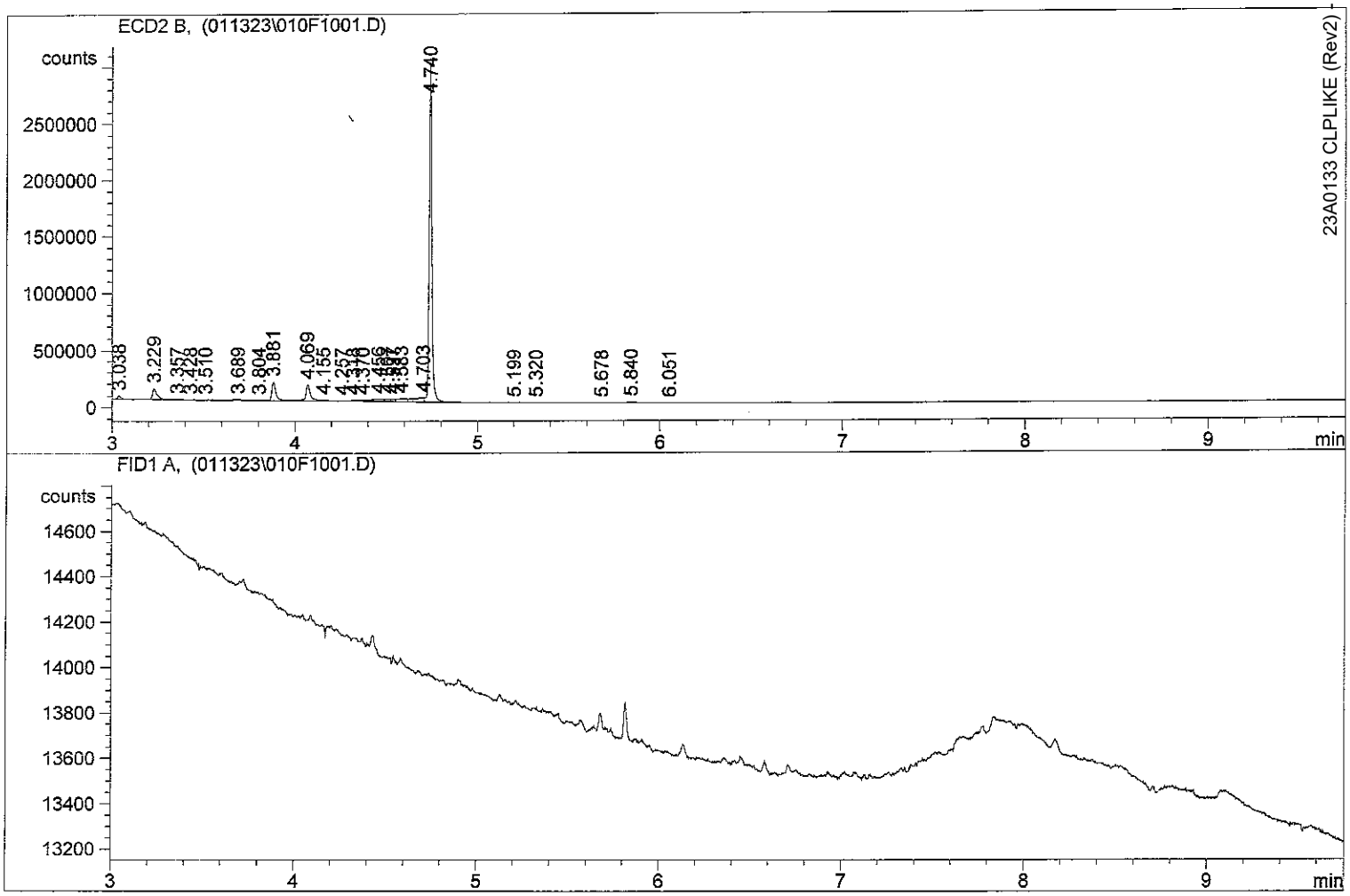


*** End of Report ***

Injection Date : 1/13/2023 6:48:27 PM
Sample Name : 23A0133 07
Acq. Operator : CRR

Seq. Line : 10
Location : Vial 10
Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\011323.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD

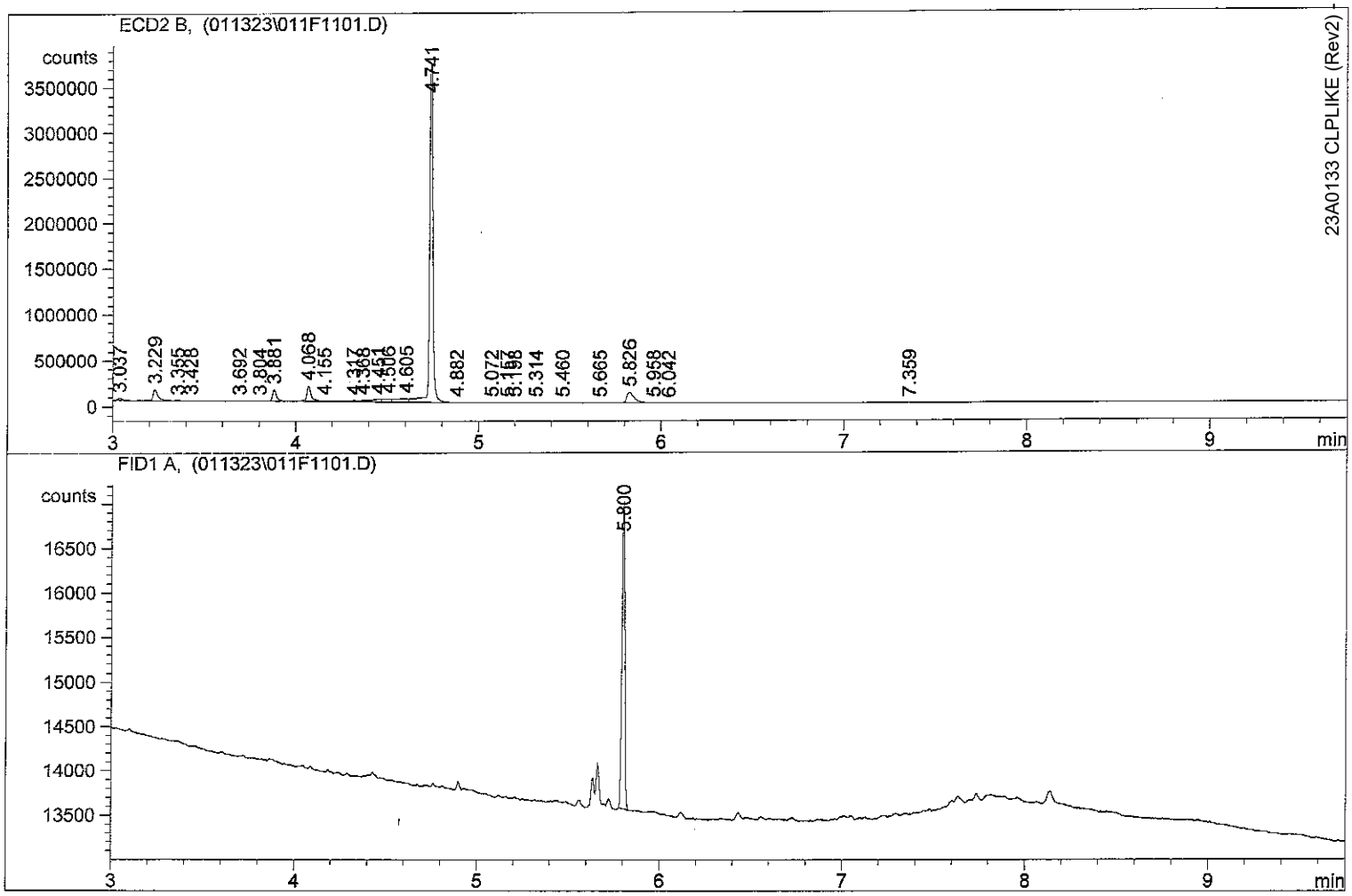


*** End of Report ***

Injection Date : 1/13/2023 7:02:26 PM
Sample Name : 23A0133 08
Acq. Operator : CRR

Seq. Line : 11
Location : Vial 11
Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\011323.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD

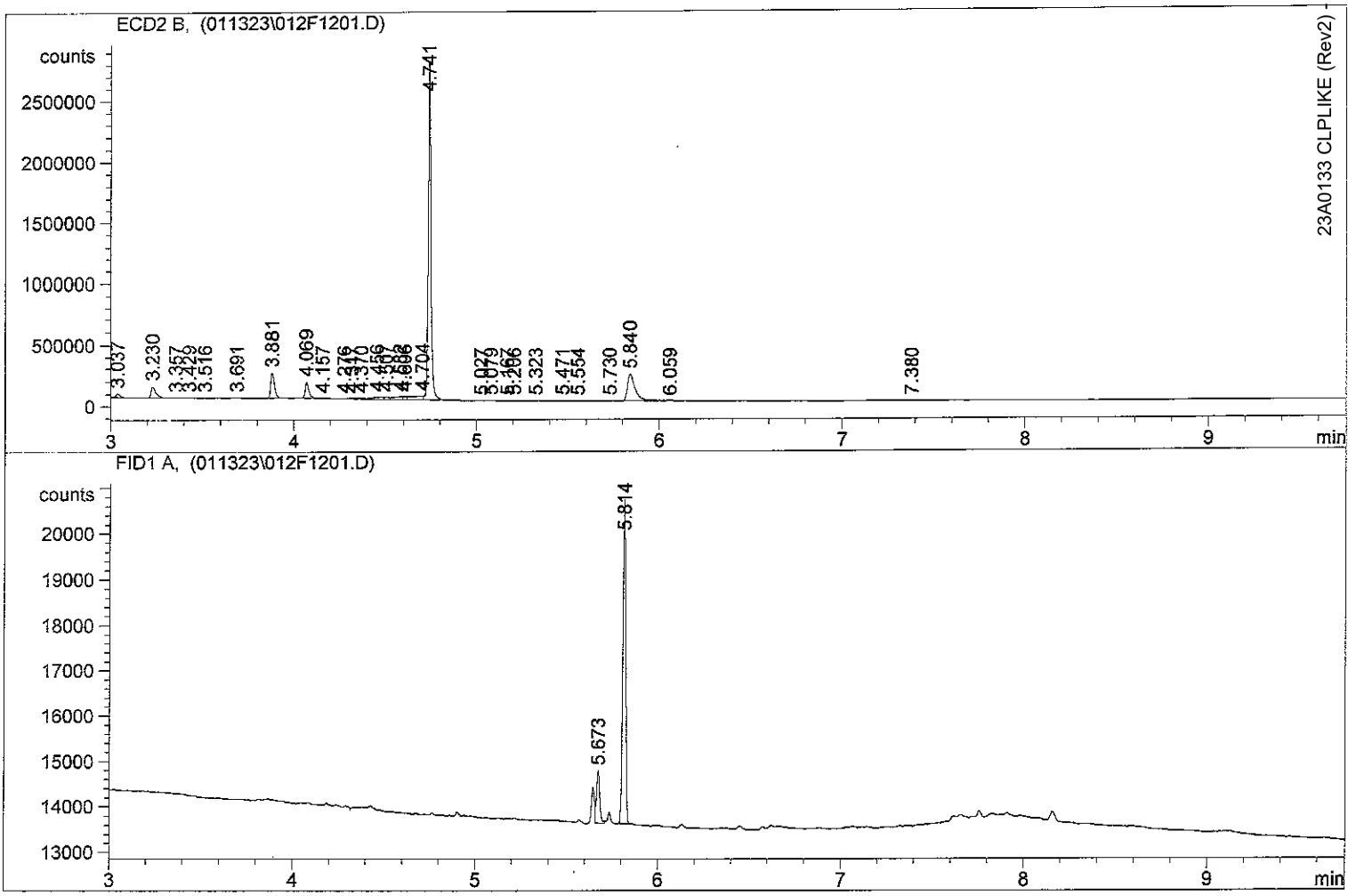


*** End of Report ***

Injection Date : 1/13/2023 7:16:59 PM
Sample Name : 23A0133 09
Acq. Operator : CRR

Seq. Line : 12
Location : Vial 12
Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\011323.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD

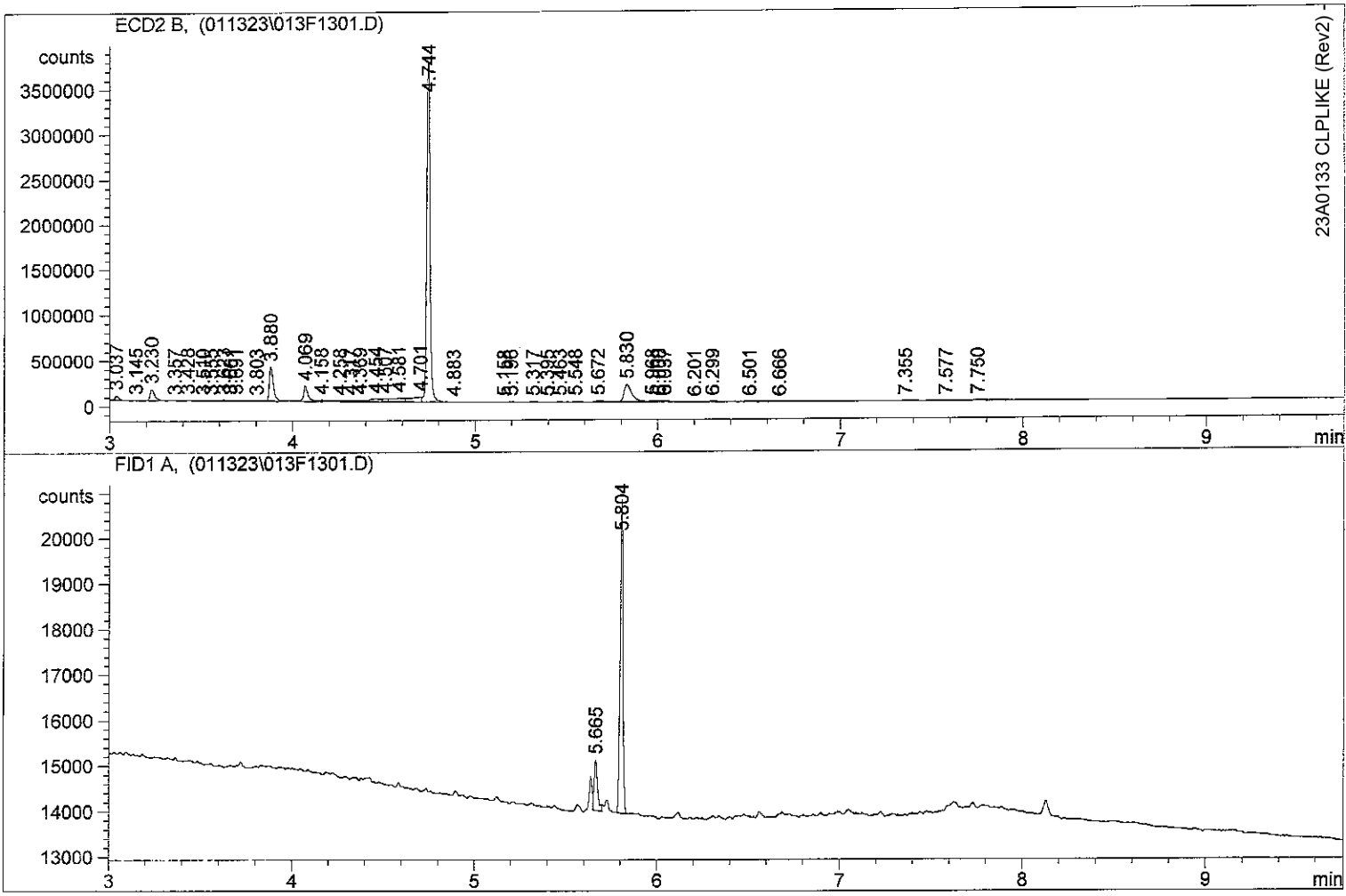


*** End of Report ***

Injection Date : 1/13/2023 7:30:59 PM
Sample Name : 23A0133 10
Acq. Operator : CRR

Seq. Line : 13
Location : Vial 13
Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\011323.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD

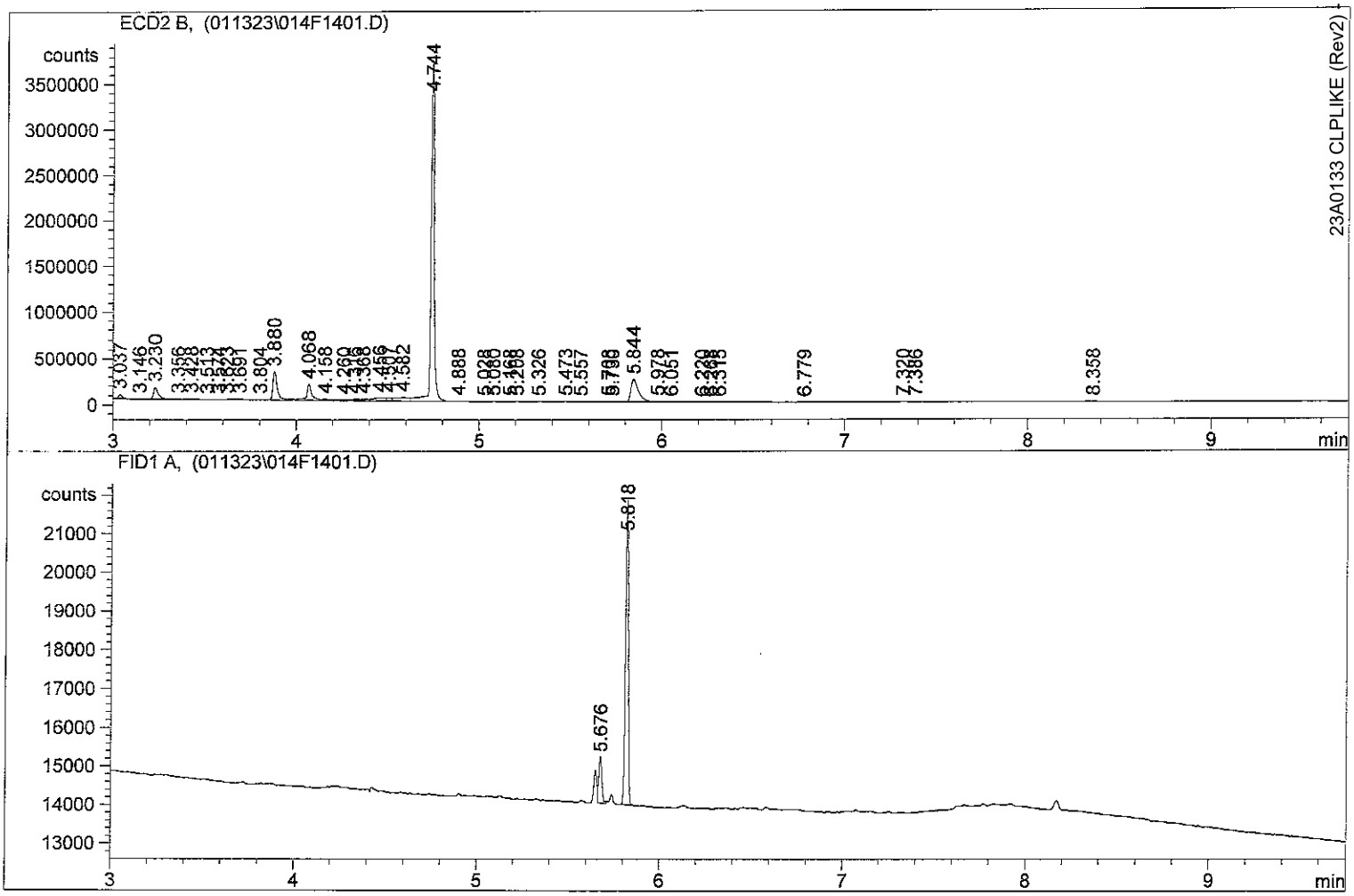


*** End of Report ***

Injection Date : 1/13/2023 7:45:28 PM
Sample Name : 23A0133 11
Acq. Operator : CRR

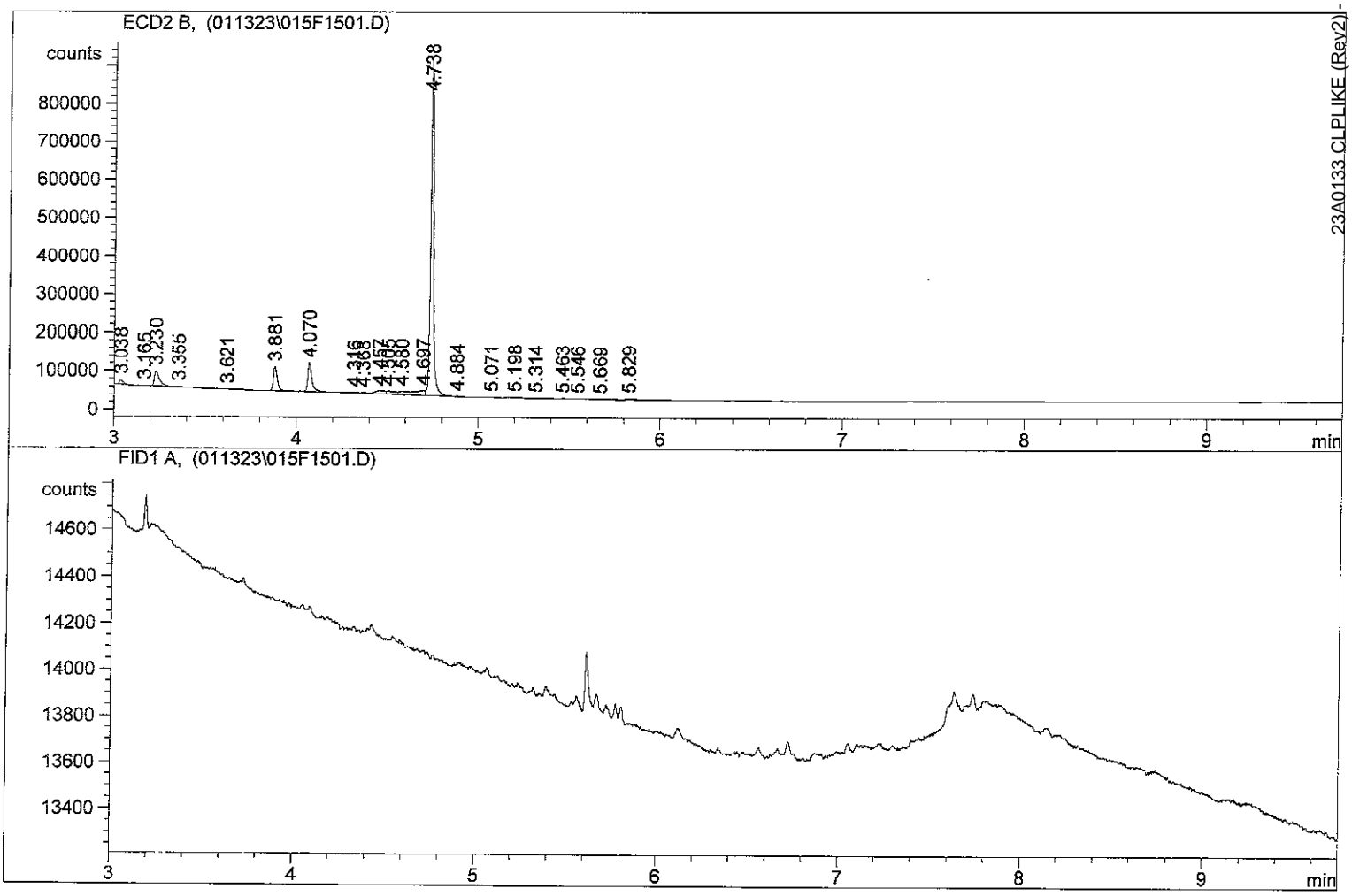
Seq. Line : 14
Location : Vial 14
Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\011323.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD



*** End of Report ***

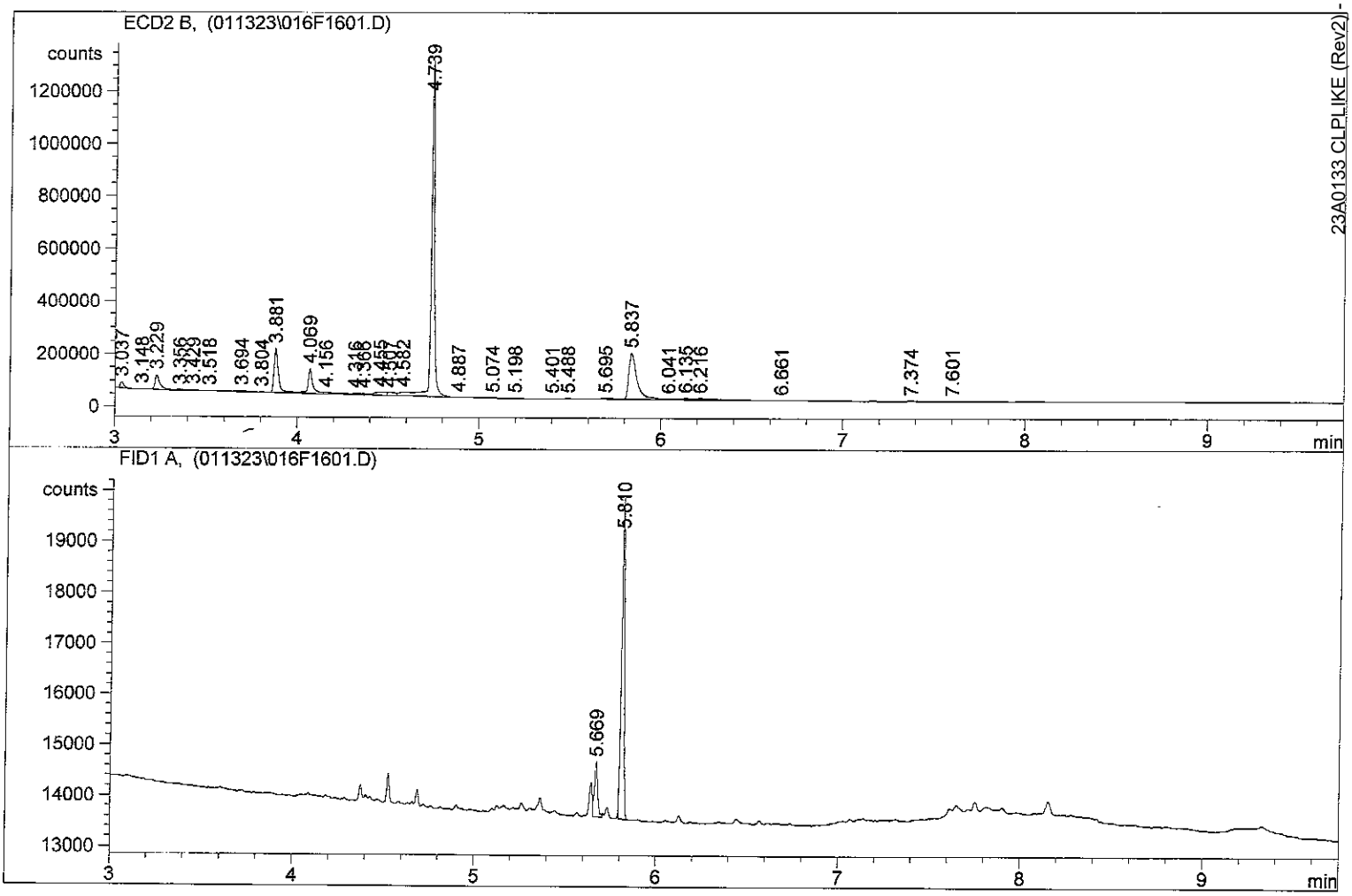
Injection Date	: 1/13/2023 7:59:29 PM	Seq. Line :	15
Sample Name	: 23A0133 12	Location :	Vial 15
Acq. Operator	: CRR	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\011323.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Injection Date : 1/13/2023 8:13:55 PM Seq. Line : 16
Sample Name : 23A0133 13 Location : Vial 16
Acq. Operator : CRR Inj : 1
Inj Volume : 1 µl

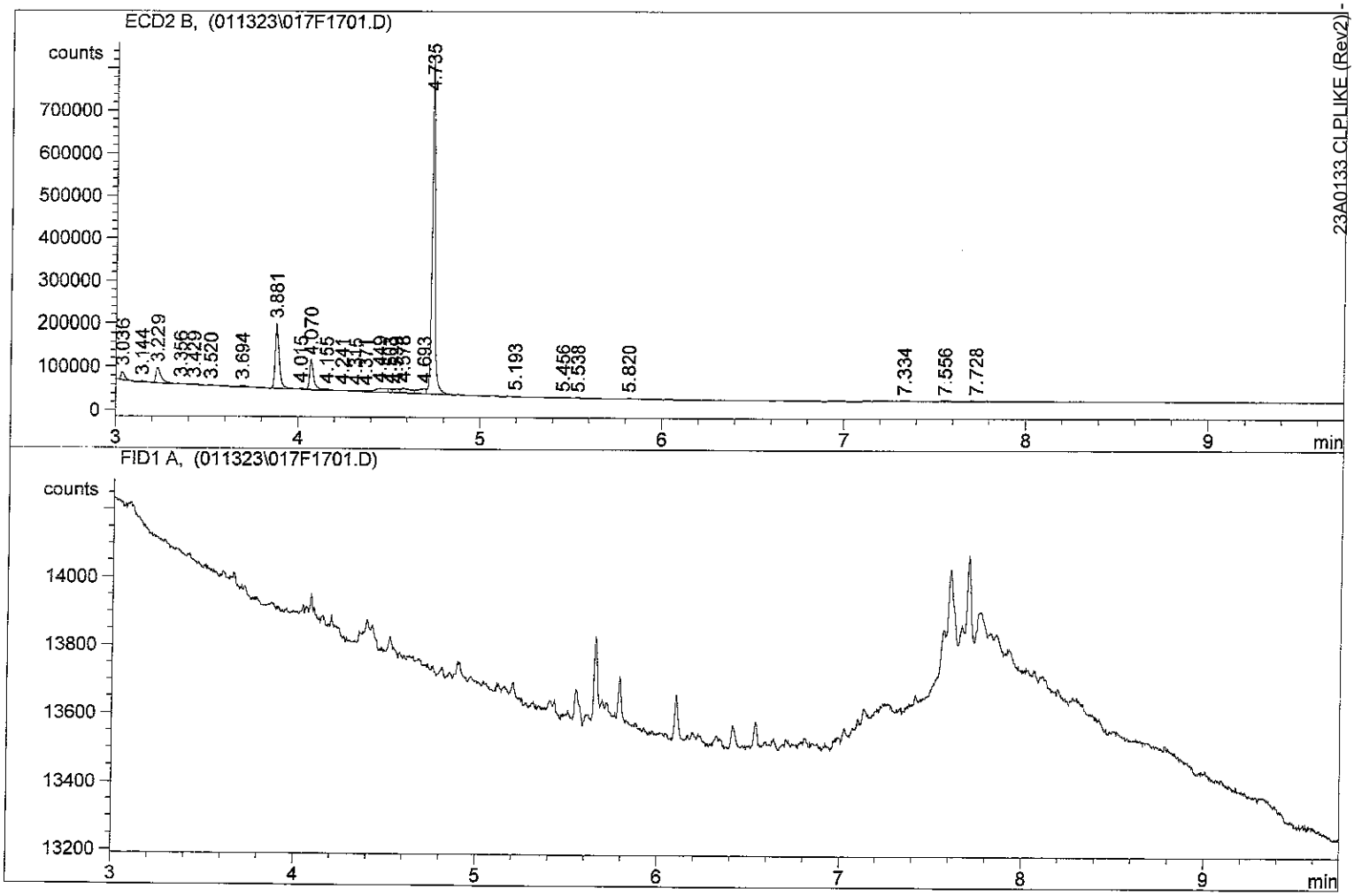
Sequence File : C:\HPCHEM\1\SEQUENCE\011323.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD



*** End of Report ***

Injection Date : 1/13/2023 8:28:00 PM Seq. Line : 17
Sample Name : 23A0133 14 Location : Vial 17
Acq. Operator : CRR Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\011323.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD

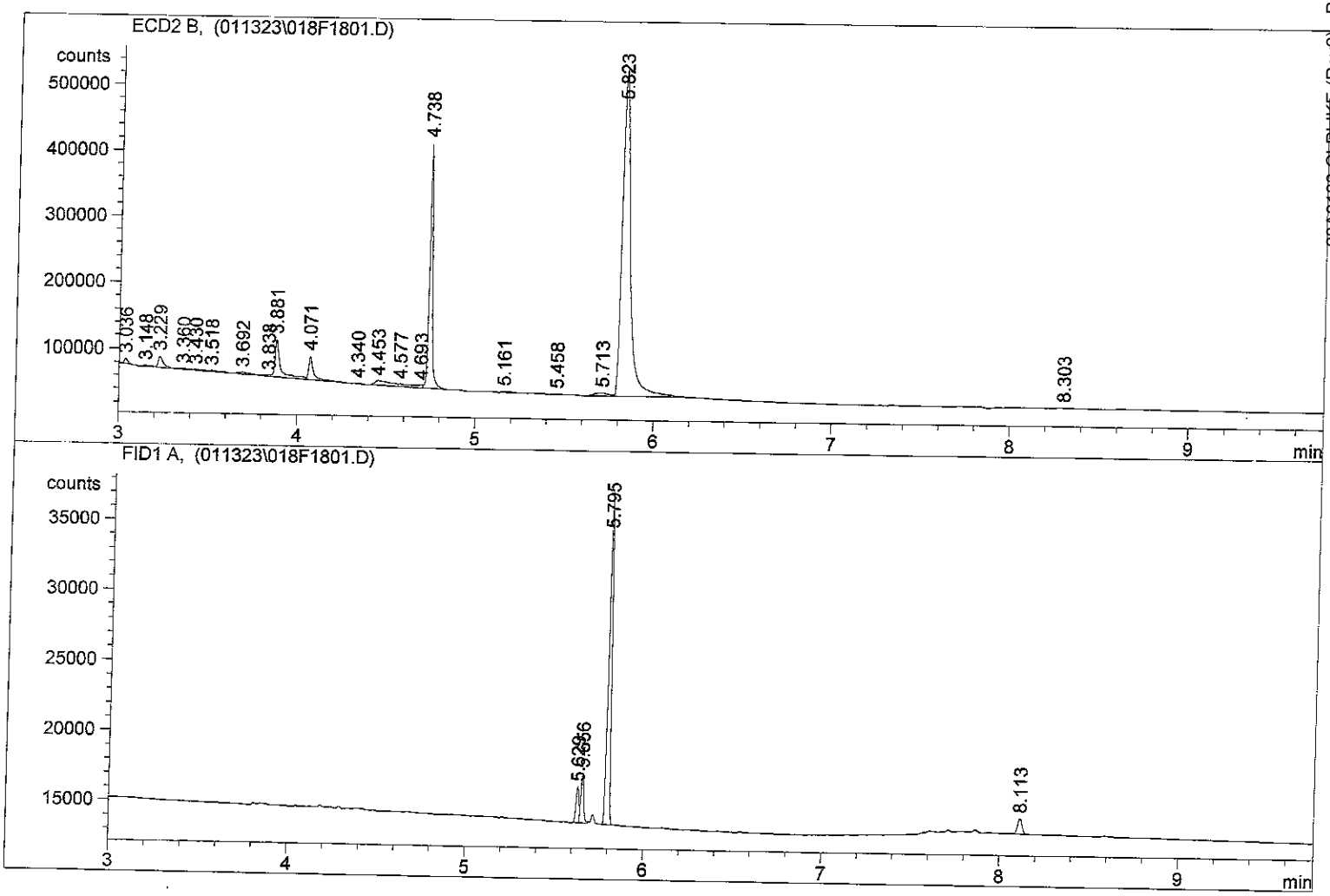


*** End of Report ***

Data File C:\HPCHEM\1\DATA\011323\018F1801.D

Sample Name: 23A0133 15

Injection Date	: 1/13/2023 8:39:54 PM	Seq. Line	: 18
Sample Name	: 23A0133 15	Location	: Vial 18
Acq. Operator	: CRR	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\011323.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			

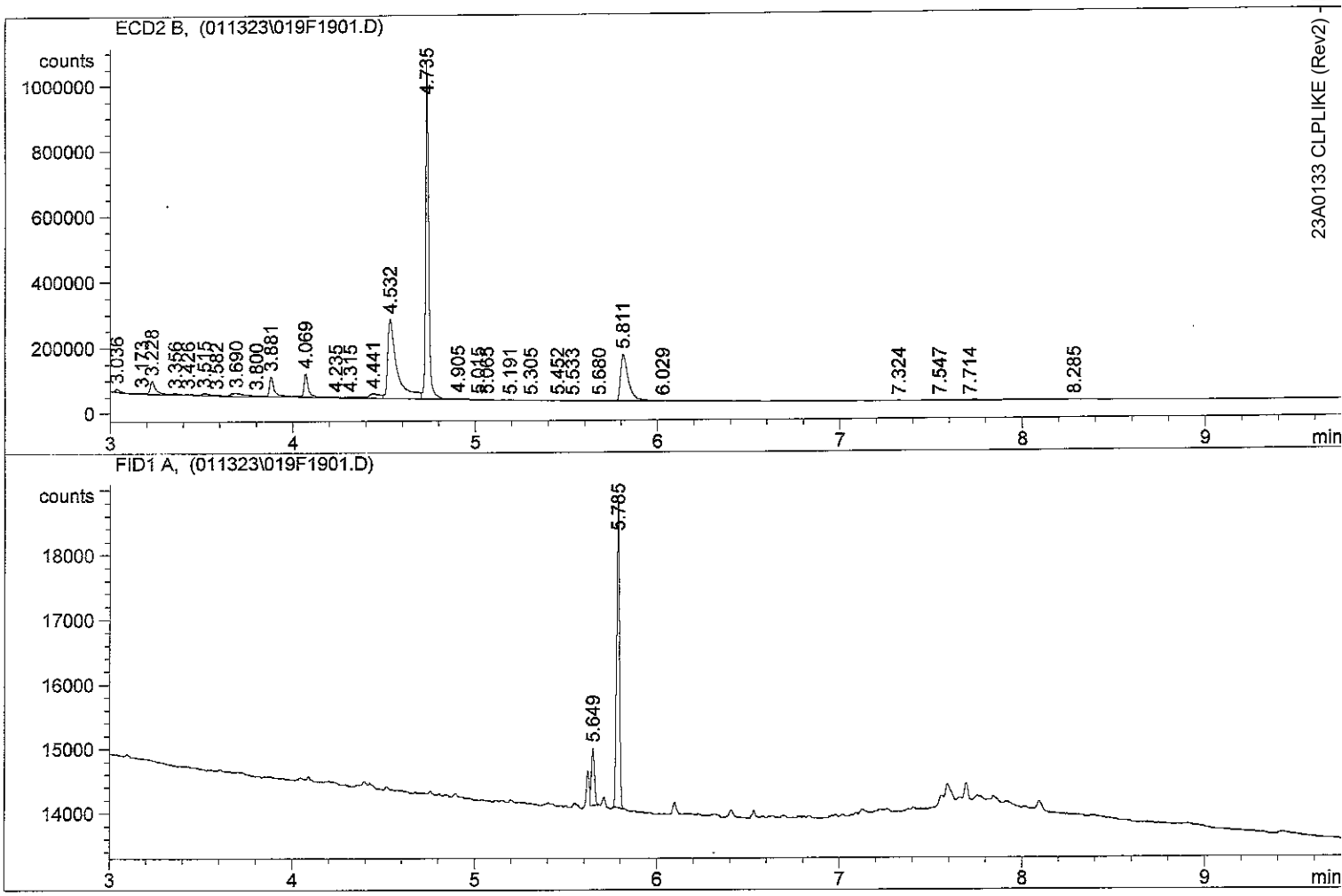


*** End of Report ***

Injection Date : 1/13/2023 8:56:30 PM
Sample Name : 23A0133 16
Acq. Operator : CRR

Seq. Line : 19
Location : Vial 19
Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\011323.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD



*** End of Report ***

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLA0272	Cleanup Type:	Sulfur
Cleanup Method:	EPA 3660B Sulfur Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Matrix Spike Dup	BLA0394-MSD1	01312332ECD7.D	01/30/2023	
LDW23-SS1110	23A0133-13	01312338ECD7.D	01/30/2023	
LDW23-SS1109	23A0133-14	02012307ECD7.D	01/30/2023	
LDW23-SS1092	23A0133-15	01312340ECD7.D	01/30/2023	
LDW23-SS1091	23A0133-16	01312341ECD7.D	01/30/2023	
LDW23-SC1261	23A0133-02	01312323ECD7.D	01/30/2023	
LDW23-SC1252	23A0133-01	02012304ECD7.D	01/30/2023	
LDW23-SC1250	23A0133-03	01312324ECD7.D	01/30/2023	
LDW23-SC1244-FD	23A0133-05	01312326ECD7.D	01/30/2023	
LDW23-SC1234	23A0133-09	01312334ECD7.D	01/30/2023	
LDW23-SC1241	23A0133-06	01312327ECD7.D	01/30/2023	
LDW23-SC1244	23A0133-04	01312325ECD7.D	01/30/2023	
LDW23-IT1217	23A0133-07	01312328ECD7.D	01/30/2023	
LDW23-SC1185	23A0133-08	01312333ECD7.D	01/30/2023	
LDW23-SC1215	23A0133-10	02012305ECD7.D	01/30/2023	
Blank	BLA0394-BLK1	01312315ECD7.D	01/30/2023	
LCS	BLA0394-BS1	01312316ECD7.D	01/30/2023	
LDW23-SC1222	23A0133-11	01312336ECD7.D	01/30/2023	
LCS Dup	BLA0394-BSD1	01312317ECD7.D	01/30/2023	
Reference	BLA0394-SRM1	01312318ECD7.D	01/30/2023	
Matrix Spike	BLA0394-MS1	01312331ECD7.D	01/30/2023	
LDW23-SC1227	23A0133-12	02012306ECD7.D	01/30/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLA0272

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 1/30/2023 4:52:45PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0100-21	A	LDW23-SS1154	A 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0100-22	A	LDW23-SS1149	A 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0100-23	A	LDW23-SS1130	A 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-01	B	LDW23-SC1252	B 01	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-02	B	LDW23-SC1261	B 01	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-03	C	LDW23-SC1250	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-04	B	LDW23-SC1244	B 01	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-05	B	LDW23-SC1244-FD	B 01	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-06	C	LDW23-SC1241	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-07	C	LDW23-IT1217	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-08	C	LDW23-SC1185	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-09	C	LDW23-SC1234	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-10	C	LDW23-SC1215	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-11	C	LDW23-SC1222	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-12	C	LDW23-SC1227	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-13	C	LDW23-SS1110	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-14	C	LDW23-SS1109	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-15	C	LDW23-SS1092	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-16	C	LDW23-SS1091	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
BLA0394-BLK1	-	Blank	-	2.5	2.5	-	1/30/2023	LMJ	
BLA0394-BS1	-	LCS	-	2.5	2.5	-	1/30/2023	LMJ	
BLA0394-BSD1	-	LCS Dup	-	2.5	2.5	-	1/30/2023	LMJ	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLA0272

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 1/30/2023 4:52:45PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
BLA0394-MS1	-	Matrix Spike	-	2.5	2.5	-	1/30/2023	LMJ	
BLA0394-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	1/30/2023	LMJ	
BLA0394-SRM1	-	Reference	-	2.5	2.5	-	1/30/2023	LMJ	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLA0273	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1092	23A0133-15	01312340ECD7.D	01/30/2023	
LDW23-SC1244-FD	23A0133-05	01312326ECD7.D	01/30/2023	
LDW23-IT1217	23A0133-07	01312328ECD7.D	01/30/2023	
LDW23-SS1091	23A0133-16	01312341ECD7.D	01/30/2023	
Matrix Spike	BLA0394-MS1	01312331ECD7.D	01/30/2023	
LCS Dup	BLA0394-BSD1	01312317ECD7.D	01/30/2023	
LCS	BLA0394-BS1	01312316ECD7.D	01/30/2023	
Blank	BLA0394-BLK1	01312315ECD7.D	01/30/2023	
Reference	BLA0394-SRM1	01312318ECD7.D	01/30/2023	
LDW23-SC1185	23A0133-08	01312333ECD7.D	01/30/2023	
LDW23-SC1241	23A0133-06	01312327ECD7.D	01/30/2023	
LDW23-SS1109	23A0133-14	02012307ECD7.D	01/30/2023	
LDW23-SC1215	23A0133-10	02012305ECD7.D	01/30/2023	
LDW23-SC1261	23A0133-02	01312323ECD7.D	01/30/2023	
LDW23-SC1252	23A0133-01	02012304ECD7.D	01/30/2023	
LDW23-SC1250	23A0133-03	01312324ECD7.D	01/30/2023	
Matrix Spike Dup	BLA0394-MSD1	01312332ECD7.D	01/30/2023	
LDW23-SC1244	23A0133-04	01312325ECD7.D	01/30/2023	
LDW23-SC1234	23A0133-09	01312334ECD7.D	01/30/2023	
LDW23-SC1227	23A0133-12	02012306ECD7.D	01/30/2023	
LDW23-SC1222	23A0133-11	01312336ECD7.D	01/30/2023	
LDW23-SS1110	23A0133-13	01312338ECD7.D	01/30/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLA0273

Matrix: Solid **Cleanup using: Organics - EPA 3660C Silica Gel Cleanup - uL** **Printed: 1/30/2023 4:53:52PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0100-21	A	LDW23-SS1154	A 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0100-22	A	LDW23-SS1149	A 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0100-23	A	LDW23-SS1130	A 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-01	B	LDW23-SC1252	B 01	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-02	B	LDW23-SC1261	B 01	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-03	C	LDW23-SC1250	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-04	B	LDW23-SC1244	B 01	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-05	B	LDW23-SC1244-FD	B 01	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-06	C	LDW23-SC1241	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-07	C	LDW23-IT1217	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-08	C	LDW23-SC1185	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-09	C	LDW23-SC1234	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-10	C	LDW23-SC1215	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-11	C	LDW23-SC1222	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-12	C	LDW23-SC1227	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-13	C	LDW23-SS1110	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-14	C	LDW23-SS1109	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-15	C	LDW23-SS1092	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-16	C	LDW23-SS1091	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
BLA0394-BLK1	-	Blank	-	2.5	2.5	-	1/30/2023	LMJ	
BLA0394-BS1	-	LCS	-	2.5	2.5	-	1/30/2023	LMJ	
BLA0394-BSD1	-	LCS Dup	-	2.5	2.5	-	1/30/2023	LMJ	

CLEANUP BENCH SHEET

CLA0273

Matrix: Solid **Cleanup using: Organics - EPA 3660C Silica Gel Cleanup - uL** **Printed: 1/30/2023 4:53:52PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
BLA0394-MS1	-	Matrix Spike	-	2.5	2.5	-	1/30/2023	LMJ	
BLA0394-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	1/30/2023	LMJ	
BLA0394-SRM1	-	Reference	-	2.5	2.5	-	1/30/2023	LMJ	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLA0274	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665 Sulfuric Acid Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Reference	BLA0394-SRM1	01312318ECD7.D	01/30/2023	
LDW23-SS1109	23A0133-14	02012307ECD7.D	01/30/2023	
LDW23-SC1215	23A0133-10	02012305ECD7.D	01/30/2023	
Blank	BLA0394-BLK1	01312315ECD7.D	01/30/2023	
LCS	BLA0394-BS1	01312316ECD7.D	01/30/2023	
LCS Dup	BLA0394-BSD1	01312317ECD7.D	01/30/2023	
Matrix Spike	BLA0394-MS1	01312331ECD7.D	01/30/2023	
LDW23-IT1217	23A0133-07	01312328ECD7.D	01/30/2023	
LDW23-SS1110	23A0133-13	01312338ECD7.D	01/30/2023	
LDW23-SC1227	23A0133-12	02012306ECD7.D	01/30/2023	
LDW23-SS1091	23A0133-16	01312341ECD7.D	01/30/2023	
LDW23-SC1252	23A0133-01	02012304ECD7.D	01/30/2023	
LDW23-SC1185	23A0133-08	01312333ECD7.D	01/30/2023	
Matrix Spike Dup	BLA0394-MSD1	01312332ECD7.D	01/30/2023	
LDW23-SC1222	23A0133-11	01312336ECD7.D	01/30/2023	
LDW23-SC1261	23A0133-02	01312323ECD7.D	01/30/2023	
LDW23-SC1234	23A0133-09	01312334ECD7.D	01/30/2023	
LDW23-SC1241	23A0133-06	01312327ECD7.D	01/30/2023	
LDW23-SC1244	23A0133-04	01312325ECD7.D	01/30/2023	
LDW23-SC1244-FD	23A0133-05	01312326ECD7.D	01/30/2023	
LDW23-SC1250	23A0133-03	01312324ECD7.D	01/30/2023	
LDW23-SS1092	23A0133-15	01312340ECD7.D	01/30/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLA0274

Matrix: Solid **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 1/30/2023 4:54:46PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0100-21	A	LDW23-SS1154	A 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0100-22	A	LDW23-SS1149	A 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0100-23	A	LDW23-SS1130	A 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-01	B	LDW23-SC1252	B 01	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-02	B	LDW23-SC1261	B 01	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-03	C	LDW23-SC1250	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-04	B	LDW23-SC1244	B 01	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-05	B	LDW23-SC1244-FD	B 01	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-06	C	LDW23-SC1241	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-07	C	LDW23-IT1217	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-08	C	LDW23-SC1185	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-09	C	LDW23-SC1234	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-10	C	LDW23-SC1215	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-11	C	LDW23-SC1222	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-12	C	LDW23-SC1227	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-13	C	LDW23-SS1110	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-14	C	LDW23-SS1109	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-15	C	LDW23-SS1092	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
23A0133-16	C	LDW23-SS1091	C 03	2.5	2.5	8082A PCB Solid 4	1/30/2023	LMJ	
BLA0394-BLK1	-	Blank	-	2.5	2.5	-	1/30/2023	LMJ	
BLA0394-BS1	-	LCS	-	2.5	2.5	-	1/30/2023	LMJ	
BLA0394-BSD1	-	LCS Dup	-	2.5	2.5	-	1/30/2023	LMJ	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLA0274

Matrix: Solid **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 1/30/2023 4:54:46PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
BLA0394-MS1	-	Matrix Spike	-	2.5	2.5	-	1/30/2023	LMJ	
BLA0394-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	1/30/2023	LMJ	
BLA0394-SRM1	-	Reference	-	2.5	2.5	-	1/30/2023	LMJ	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8082A

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLA0394-BLK1	File ID:	01312315ECD7.D
Sampled:	N/A	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 14:30
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	12.5 g / 2.5 mL
Batch:	BLA0394	Sequence:	SLA0350	Calibration:	GA00061
Instrument:	ECD7	Column:	ZB5	Cleanups:	Silica Gel, Sulfur, Sulfuric Acid

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
12674-11-2	Aroclor 1016	1	4.0	U	1.6	4.0
11104-28-2	Aroclor 1221	1	4.0	U	1.6	4.0
11141-16-5	Aroclor 1232	1	4.0	U	1.6	4.0
53469-21-9	Aroclor 1242	1	4.0	U	1.6	4.0
12672-29-6	Aroclor 1248	1	4.0	U	1.6	4.0
11097-69-1	Aroclor 1254	1	4.0	U	1.6	4.0
11096-82-5	Aroclor 1260	1	4.0	U	0.6	4.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl	8.0000	7.47	93.4	40 - 126	
Tetrachlorometaxylene	8.0000	6.70	83.7	44 - 120	
Decachlorobiphenyl [2C]	8.0000	8.19	102	40 - 126	
Tetrachlorometaxylene [2C]	8.0000	6.62	82.7	44 - 120	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312315ECD7.D
Data file 2: /230131.b/230131.b/01312315ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLA0394-BLK1
Client ID:
Injection Date: 31-JAN-2023 14:30
Report Date: 01/31/2023 15:07
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.002	240984	5.684	-0.001	162413	33.5	33.1	1.2	Tetrachloro-m-xylene
13.888	-0.003	374723	14.116	-0.002	339451	37.4	41.0	9.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	509018	1.1
Hexabromobiphenyl	647433	937577	44.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	363118	7.8
Hexabromobiphenyl	382032	522176	36.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 116352 Col1 Total PCB = 0.0 ppm*

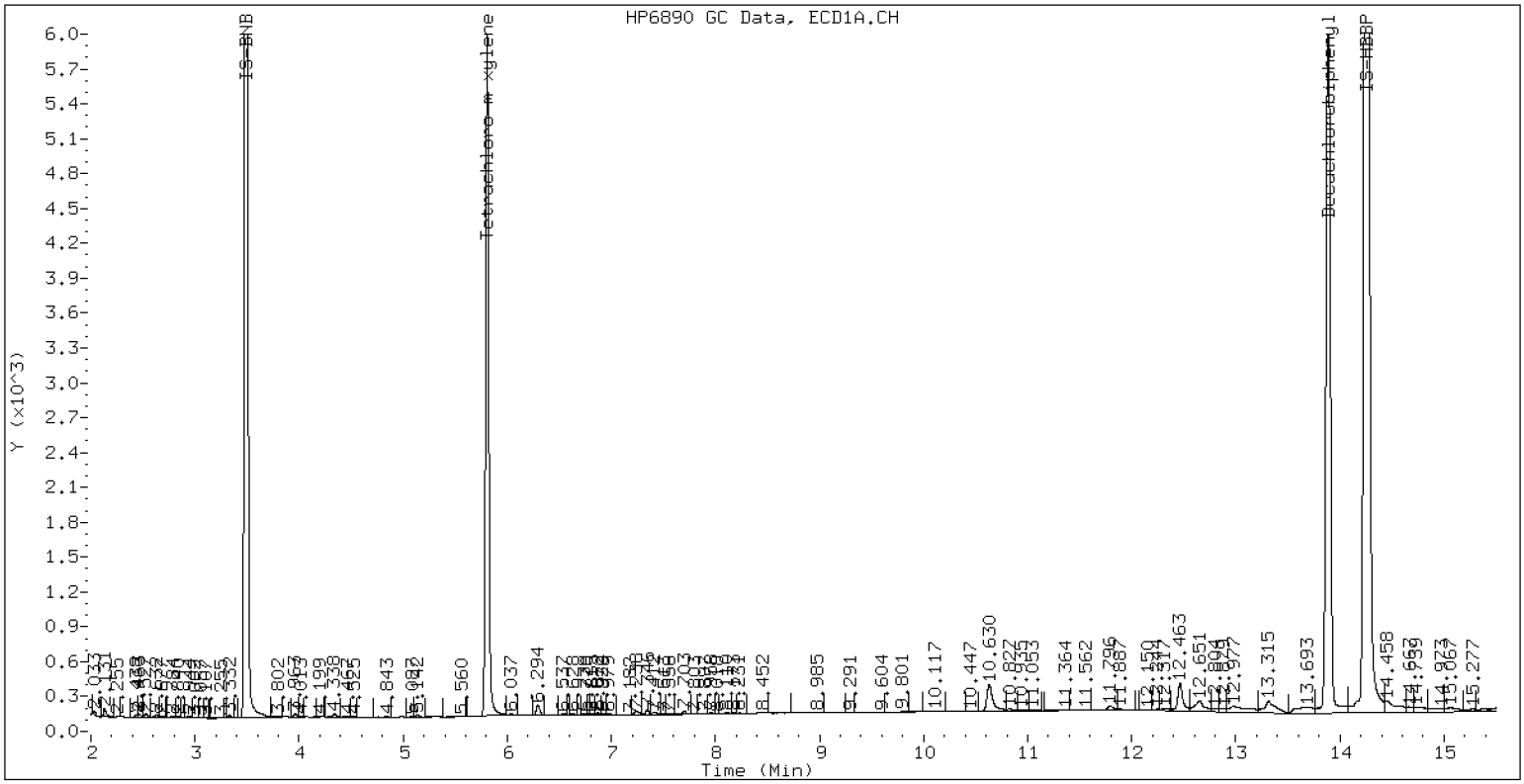
Total PCB Area Col2 (5.785 - 14.018) = 69461 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

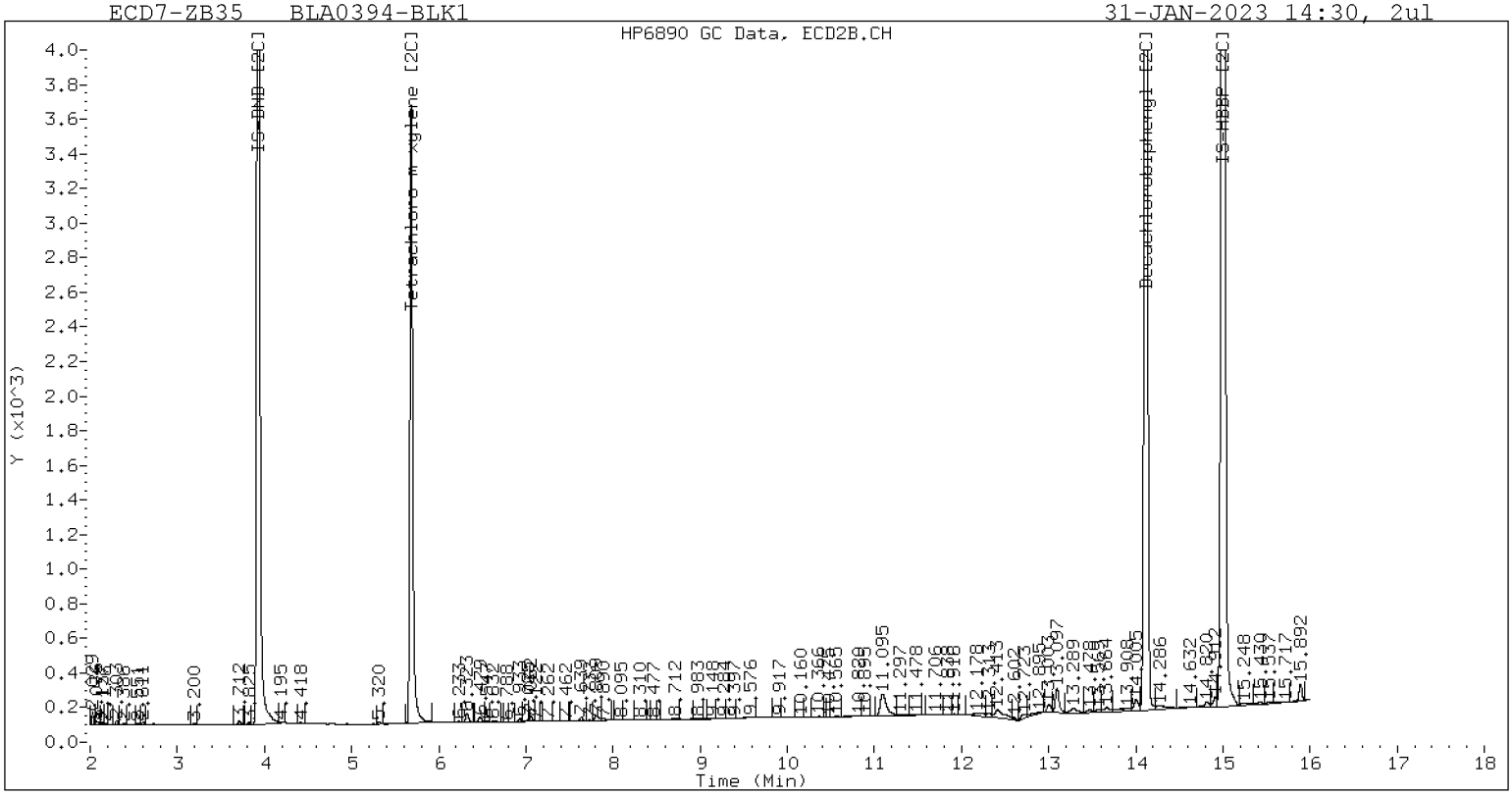
PCB Dual Column Chromatograms

ECD7-ZB5 BLA0394-BLK1 31-JAN-2023 14:30, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLA0394-BLK1 31-JAN-2023 14:30, 2ul



ZB-35 Manual Integration: NO

LCS / LCS DUPLICATE RECOVERY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	01/31/23 14:51
Batch:	BLA0394	Laboratory ID:	BLA0394-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	12.5 g / 2.5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Aroclor 1016 [2C]	101	96.4		95.7	56 - 120
Aroclor 1260 [2C]	101	84.9		84.2	58 - 120

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Aroclor 1016 [2C]	101	90.2		89.5	6.71	30	56 - 120
Aroclor 1260 [2C]	101	77.2		76.6	9.51	30	58 - 120

* Indicates values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312316ECD7.D
Data file 2: /230131.b/230131.b/01312316ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLA0394-BS1
Client ID:
Injection Date: 31-JAN-2023 14:51
Report Date: 01/31/2023 15:54
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.001	272043	5.684	-0.001	176655	38.2	36.7	4.1	Tetrachloro-m-xylene
13.889	-0.001	420967	14.117	-0.002	371745	41.5	44.5	7.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503354	0.0
Hexabromobiphenyl	647433	947870	46.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	356001	5.7
Hexabromobiphenyl	382032	525985	37.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.267	-0.002	86798	464.0	1	7.252	-0.002	88769	459.7
Aroclor-1016	2	7.644	-0.006	300369	484.6	2	7.845	-0.006	210817	498.2
Aroclor-1016	3	7.784	-0.004	121643	426.6	3	8.045	-0.005	86376	500.2
Aroclor-1016	4	8.399	-0.003	92963	506.8	4	8.301	-0.002	63704	470.6
Total Col1Ave (4 peaks):					470.5	Total Col2Ave (4 peaks):				482.2 RPD = 2
Corrected Ave (3 peaks):					458.4	Corrected Ave (3 peaks):				476.2 RPD = 4
Aroclor-1221	1	4.732	-0.000	725	19.5	1	4.956	-0.003	335	12.8
Aroclor-1221	2	6.130	-0.004	10612	139.5	2	6.296	-0.002	9150	160.0
Aroclor-1221	3	6.381	-0.003	54074	306.2	3	6.619	-0.004	39090	405.0
Total Col1Ave (3 peaks):					155.1	Total Col2Ave (3 peaks):				192.6 RPD = 22
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.732	-0.001	725	31.2	1	4.956	-0.004	335	21.2
Aroclor-1232	2	6.130	-0.004	10612	202.7	2	7.252	-0.004	88769	1002.1
Aroclor-1232	3	7.644	-0.014	300369	1147.4	3	7.845	-0.009	210817	1168.5
Aroclor-1232	4	8.571	-0.013	116423	1039.0	4	8.708	-0.006	67271	1342.0
Total Col1Ave (4 peaks):					605.1	Total Col2Ave (4 peaks):				883.4 RPD = 37
Corrected Ave (3 peaks):					424.3	Corrected Ave (3 peaks):				730.6 RPD = 53*
Aroclor-1242	1	7.267	-0.004	86798	563.1	1	7.252	-0.003	88769	570.1
Aroclor-1242	2	7.644	-0.011	300369	595.5	2	7.845	-0.008	210817	609.6
Aroclor-1242	3	8.399	-0.007	92963	620.3	3	9.147	-0.012	11547	106.6
Aroclor-1242	4	8.571	-0.010	116423	514.3	4	9.572	-0.015	7077	49.3
Total Col1Ave (4 peaks):					573.3	Total Col2Ave (4 peaks):				333.9 RPD = 53*
Corrected Ave (3 peaks):					557.6	Corrected Ave (3 peaks):				242.0 RPD = 79*
Aroclor-1248	1	8.399	-0.003	92963	369.2	1	8.301	-0.003	63704	395.9
Aroclor-1248	2	8.571	-0.005	116423	362.5	2	8.708	-0.003	67271	388.4
Aroclor-1248	3	8.989	-0.007	125951	205.0	3	9.147	-0.006	11547	54.6
Aroclor-1248	4	9.293	0.002	97542	320.7	4	9.572	-0.006	7077	27.0
Total Col1Ave (4 peaks):					314.3	Total Col2Ave (4 peaks):				216.5 RPD = 37
Corrected Ave (3 peaks):					296.1	Corrected Ave (3 peaks):				156.7 RPD = 62*
Aroclor-1254	1	9.293	-0.002	97542	190.1	1	9.442	-0.003	56708	219.6
Aroclor-1254	2	---			0.0	2	9.962	-0.002	12450	59.6
Aroclor-1254	3	9.659	-0.005	19280	58.7	3	10.139	0.024	128402	282.0
Aroclor-1254	4	9.796	-0.006	56193	87.2	4	10.364	-0.002	163506	359.1
Aroclor-1254	5	10.114	-0.050	254356	607.3	5	10.560	-0.004	212962	839.6
Total Col1Ave (4 peaks):					235.8	Total Col2Ave (5 peaks):				352.0 RPD = 40
Corrected Ave (3 peaks):					112.0	Corrected Ave (4 peaks):				230.1 RPD = 69*
Aroclor-1260	1	11.038	-0.003	206235	387.8	1	11.648	-0.003	162065	427.1
Aroclor-1260	2	11.355	-0.004	215115	393.5	2	11.912	-0.003	386428	402.5
Aroclor-1260	3	11.728	-0.004	537933	373.8	3	12.431	-0.002	108972	455.4
Aroclor-1260	4	12.130	-0.004	281144	378.1	4	12.495	-0.004	256362	412.6
Aroclor-1260	5	12.239	-0.003	113504	350.2	NS	---			----
Total Col1Ave (5 peaks):					376.7	Total Col2Ave (4 peaks):				424.4 RPD = 12
Corrected Ave (4 peaks):					372.5	Corrected Ave (3 peaks):				414.1 RPD = 11
Aroclor-1262	1	10.817	-0.015	407239	1062.4	1	11.195	-0.006	150071	291.5
Aroclor-1262	2	12.239	-0.007	113504	187.6	2	11.648	-0.005	162065	370.2
Aroclor-1262	3	12.313	-0.008	137160	208.8	3	12.431	-0.003	108972	233.8
Aroclor-1262	4	12.981	-0.009	139491	233.1	4	12.495	-0.009	256362	343.4
Total Col1Ave (4 peaks):					423.0	Total Col2Ave (4 peaks):				309.7 RPD = 31
Corrected Ave (3 peaks):					209.8	Corrected Ave (3 peaks):				289.6 RPD = 32
Aroclor-1268	1	12.239	-0.006	113504	72.5	1	12.431	-0.002	108972	88.7
Aroclor-1268	2	12.313	-0.005	137160	87.8	2	12.495	-0.007	256362	196.1
Aroclor-1268	3	12.716	0.017	63497	49.1	3	12.888	-0.005	6595	6.1
Aroclor-1268	4	13.480	-0.009	26643	6.9	4	13.704	-0.004	30323	9.0
Total Col1Ave (4 peaks):					54.1	Total Col2Ave (4 peaks):				75.0 RPD = 32

Corrected Ave (3 peaks): 42.8 Corrected Ave (3 peaks): 34.6 RPD = 21

Total PCB Area Col1 (5.908 - 13.790) = 5663477 Col1 Total PCB = 1.0 ppm*

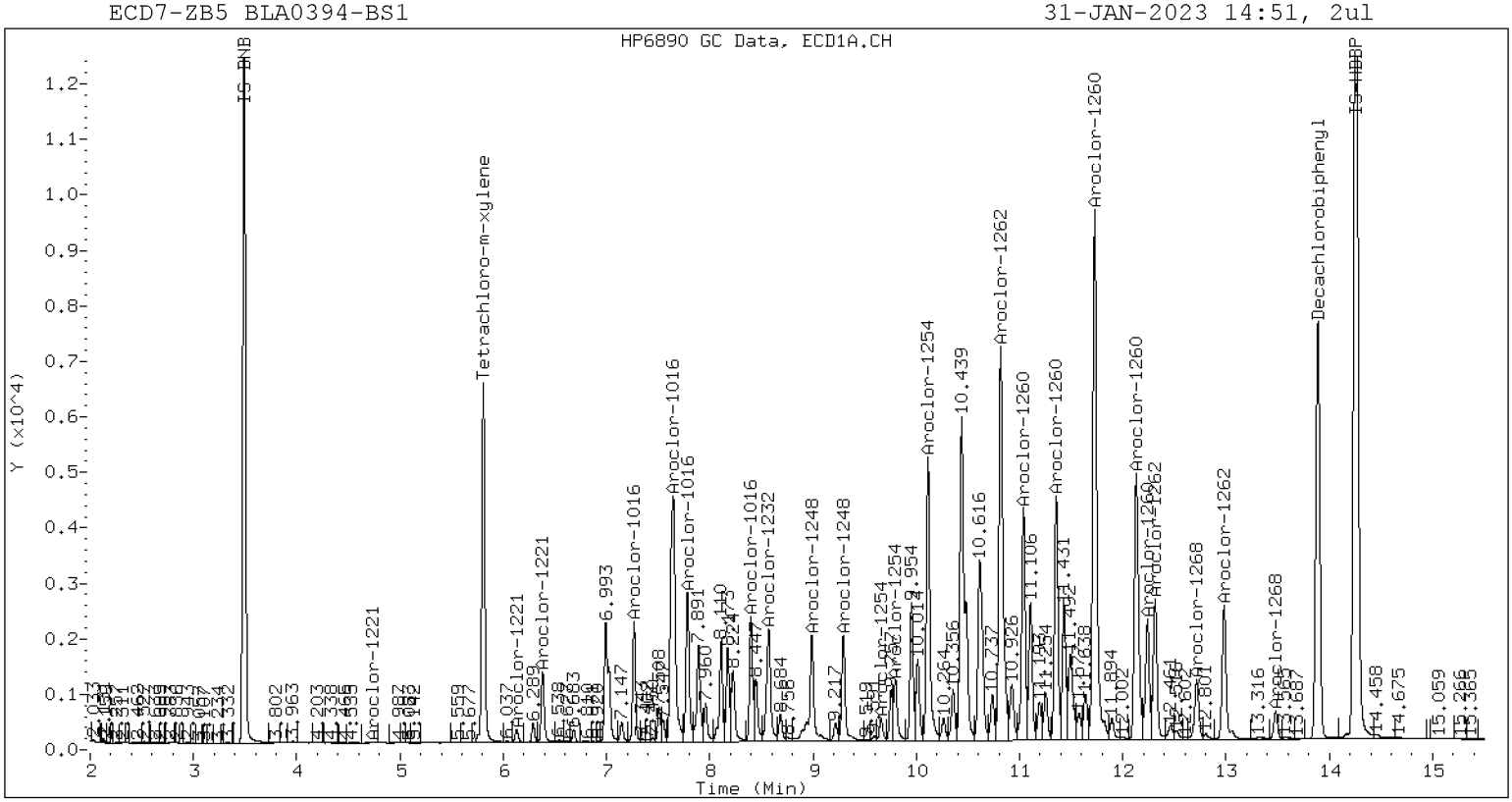
Total PCB Area Col2 (5.785 - 14.018) = 3852684 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

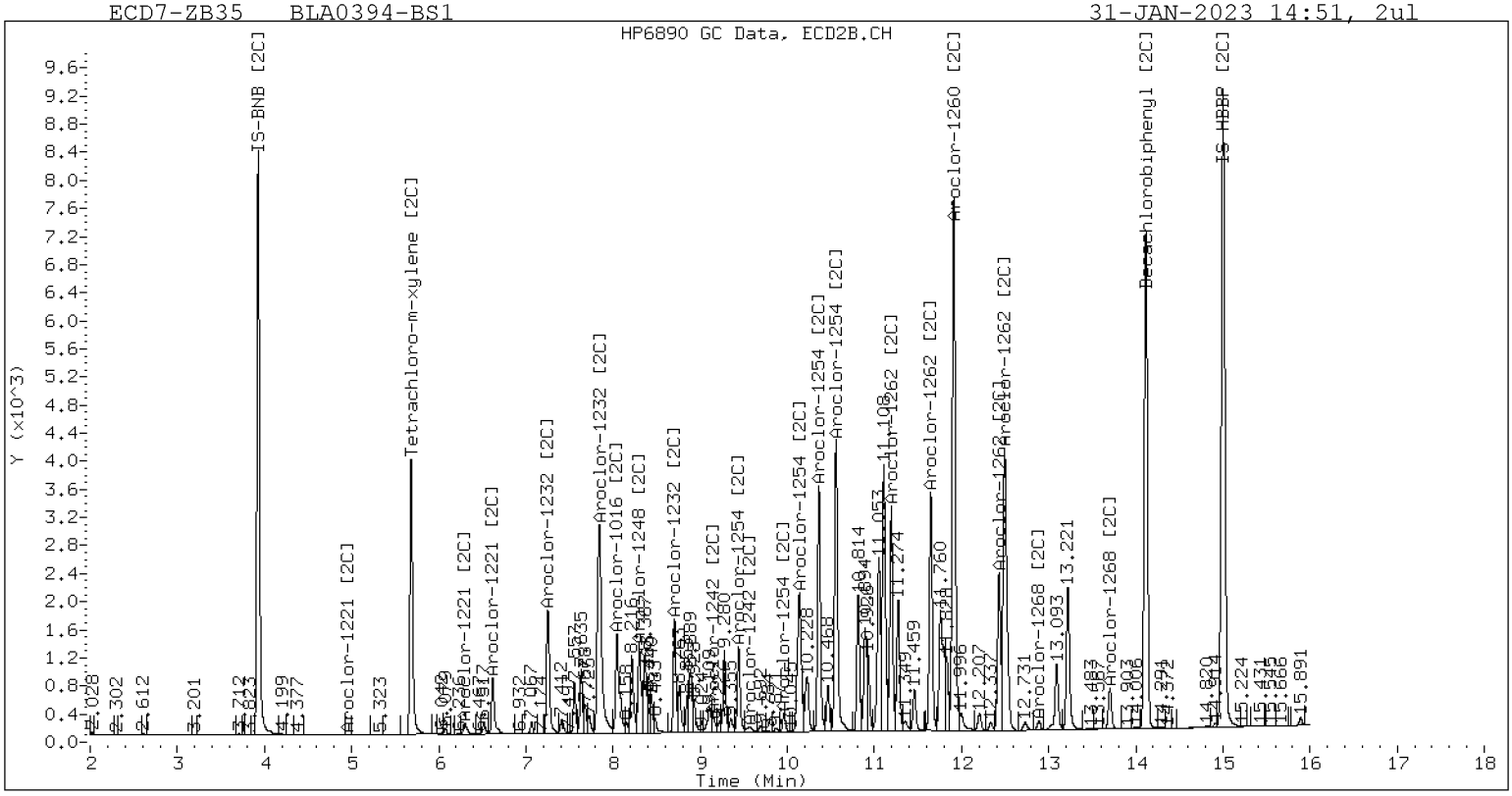
PCB Dual Column Chromatograms

ECD7-ZB5 BLA0394-BS1 31-JAN-2023 14:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLA0394-BS1 31-JAN-2023 14:51, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312317ECD7.D
Data file 2: /230131.b/230131.b/01312317ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLA0394-BSD1
Client ID:
Injection Date: 31-JAN-2023 15:12
Report Date: 01/31/2023 15:54
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.001	274435	5.684	-0.001	178919	37.5	36.1	3.7	Tetrachloro-m-xylene
13.890	0.000	424793	14.117	-0.001	378527	39.8	42.8	7.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	517795	2.9
Hexabromobiphenyl	647433	997108	54.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	366126	8.7
Hexabromobiphenyl	382032	557682	46.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.268	-0.002	89273	464.0	1	7.253	-0.001	85421	430.2
Aroclor-1016	2	7.647	-0.003	294614	462.1	2	7.846	-0.005	203602	467.9
Aroclor-1016	3	7.784	-0.004	117536	400.7	3	8.046	-0.004	82740	465.9
Aroclor-1016	4	8.400	-0.003	89007	471.7	4	8.302	-0.002	61203	439.6
Total Col1Ave (4 peaks):					449.6	Total Col2Ave (4 peaks):				450.9 RPD = 0
Corrected Ave (3 peaks):					442.3	Corrected Ave (3 peaks):				445.2 RPD = 1
Aroclor-1221	1	4.733	0.000	399	10.4	1	4.957	-0.002	386	14.4
Aroclor-1221	2	6.130	-0.004	9063	115.8	2	6.297	-0.002	11390	193.7
Aroclor-1221	3	6.381	-0.003	51279	282.3	3	6.619	-0.004	36843	371.1
Total Col1Ave (3 peaks):					136.2	Total Col2Ave (3 peaks):				193.1 RPD = 35
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.733	-0.000	399	16.7	1	4.957	-0.002	386	23.7
Aroclor-1232	2	6.130	-0.003	9063	168.3	2	7.253	-0.004	85421	937.6
Aroclor-1232	3	7.647	-0.012	294614	1094.1	3	7.846	-0.008	203602	1097.3
Aroclor-1232	4	8.572	-0.012	111506	967.4	4	8.708	-0.005	64621	1253.5
Total Col1Ave (4 peaks):					561.6	Total Col2Ave (4 peaks):				828.0 RPD = 38
Corrected Ave (3 peaks):					384.1	Corrected Ave (3 peaks):				686.2 RPD = 56*
Aroclor-1242	1	7.268	-0.003	89273	563.0	1	7.253	-0.003	85421	533.5
Aroclor-1242	2	7.647	-0.008	294614	567.8	2	7.846	-0.007	203602	572.5
Aroclor-1242	3	8.400	-0.007	89007	577.3	3	9.148	-0.012	11168	100.3
Aroclor-1242	4	8.572	-0.009	111506	478.8	4	9.573	-0.014	6524	44.2
Total Col1Ave (4 peaks):					546.7	Total Col2Ave (4 peaks):				312.6 RPD = 54*
Corrected Ave (3 peaks):					536.5	Corrected Ave (3 peaks):				226.0 RPD = 81*
Aroclor-1248	1	8.400	-0.003	89007	343.6	1	8.302	-0.002	61203	369.8
Aroclor-1248	2	8.572	-0.003	111506	337.5	2	8.708	-0.002	64621	362.8
Aroclor-1248	3	8.990	-0.006	87108	137.8	3	9.148	-0.006	11168	51.3
Aroclor-1248	4	9.293	0.002	91265	291.7	4	9.573	-0.005	6524	24.2
Total Col1Ave (4 peaks):					277.7	Total Col2Ave (4 peaks):				202.0 RPD = 32
Corrected Ave (3 peaks):					255.7	Corrected Ave (3 peaks):				146.1 RPD = 55*
Aroclor-1254	1	9.293	-0.002	91265	172.9	1	9.443	-0.002	54769	206.2
Aroclor-1254	2	---			0.0	2	9.963	-0.002	12050	56.1
Aroclor-1254	3	9.660	-0.005	17349	51.3	3	10.141	0.025	124394	265.6
Aroclor-1254	4	9.796	-0.006	52357	79.0	4	10.365	-0.001	157702	336.7
Aroclor-1254	5	10.114	-0.050	245444	569.7	5	10.560	-0.004	205526	787.9
Total Col1Ave (4 peaks):					218.2	Total Col2Ave (5 peaks):				330.5 RPD = 41*
Corrected Ave (3 peaks):					101.1	Corrected Ave (4 peaks):				216.2 RPD = 73*
Aroclor-1260	1	11.038	-0.004	198719	355.2	1	11.649	-0.002	156629	389.3
Aroclor-1260	2	11.355	-0.004	207715	361.2	2	11.912	-0.002	371144	364.6
Aroclor-1260	3	11.728	-0.003	524139	346.2	3	12.431	-0.002	105167	414.5
Aroclor-1260	4	12.130	-0.004	276947	354.1	4	12.495	-0.003	247055	375.0
Aroclor-1260	5	12.238	-0.003	111274	326.3	NS	---			----
Total Col1Ave (5 peaks):					348.6	Total Col2Ave (4 peaks):				385.9 RPD = 10
Corrected Ave (4 peaks):					345.4	Corrected Ave (3 peaks):				376.3 RPD = 9
Aroclor-1262	1	10.817	-0.015	393786	976.6	1	11.195	-0.005	144595	264.9
Aroclor-1262	2	12.238	-0.007	111274	174.8	2	11.649	-0.004	156629	337.5
Aroclor-1262	3	12.313	-0.008	134207	194.2	3	12.431	-0.003	105167	212.8
Aroclor-1262	4	12.980	-0.009	125240	198.9	4	12.495	-0.008	247055	312.1
Total Col1Ave (4 peaks):					386.1	Total Col2Ave (4 peaks):				281.8 RPD = 31
Corrected Ave (3 peaks):					189.3	Corrected Ave (3 peaks):				263.3 RPD = 33
Aroclor-1268	1	12.238	-0.006	111274	67.6	1	12.431	-0.002	105167	80.8
Aroclor-1268	2	12.313	-0.006	134207	81.7	2	12.495	-0.006	247055	178.3
Aroclor-1268	3	12.717	0.018	60372	44.4	3	12.888	-0.005	6423	5.6
Aroclor-1268	4	13.481	-0.008	24625	6.1	4	13.703	-0.005	29326	8.2
Total Col1Ave (4 peaks):					49.9	Total Col2Ave (4 peaks):				68.2 RPD = 31

Corrected Ave (3 peaks): 39.3 Corrected Ave (3 peaks): 31.5 RPD = 22

Total PCB Area Col1 (5.908 - 13.790) = 5456851 Col1 Total PCB = 0.9 ppm*

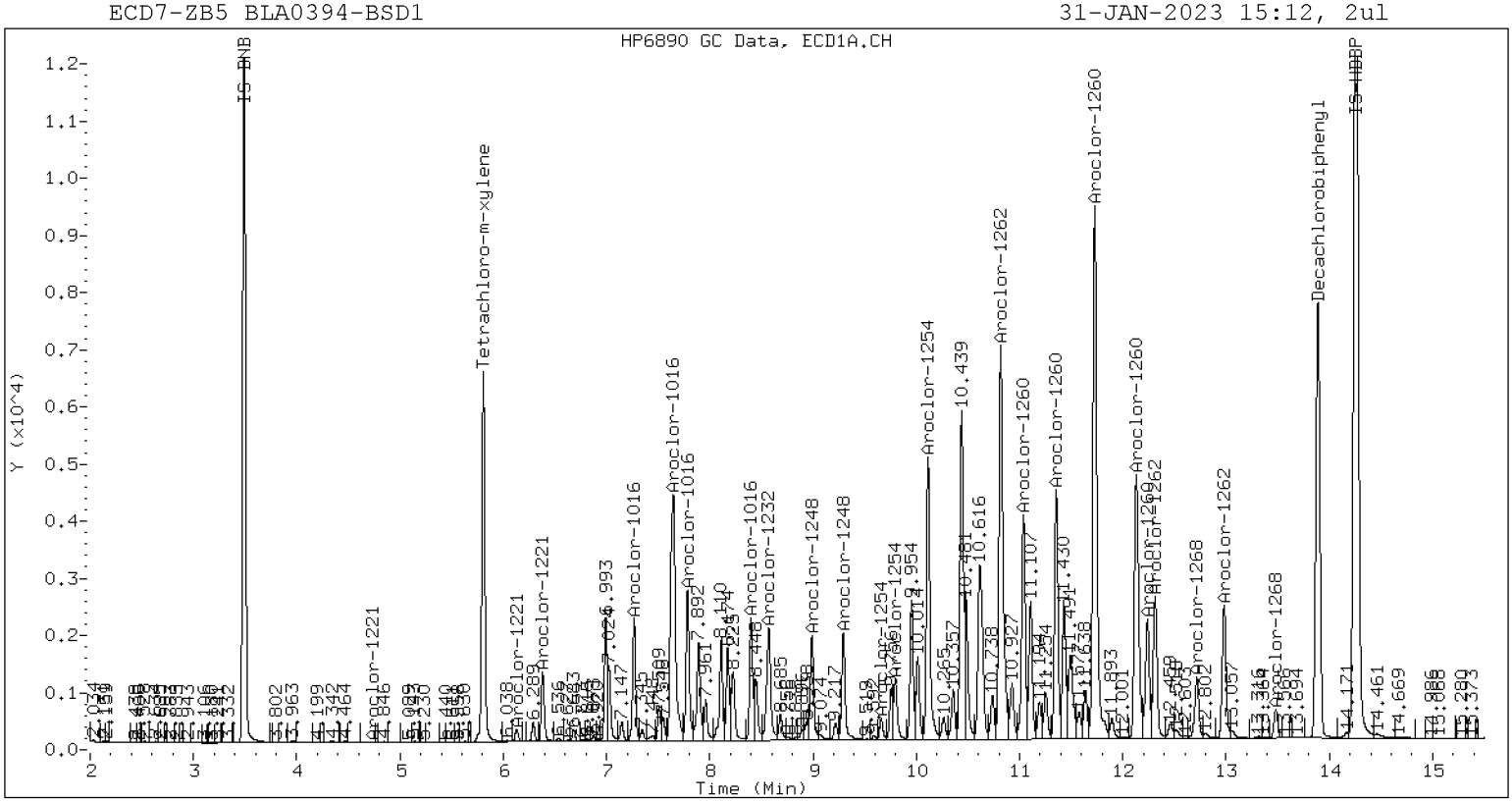
Total PCB Area Col2 (5.785 - 14.018) = 3718673 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

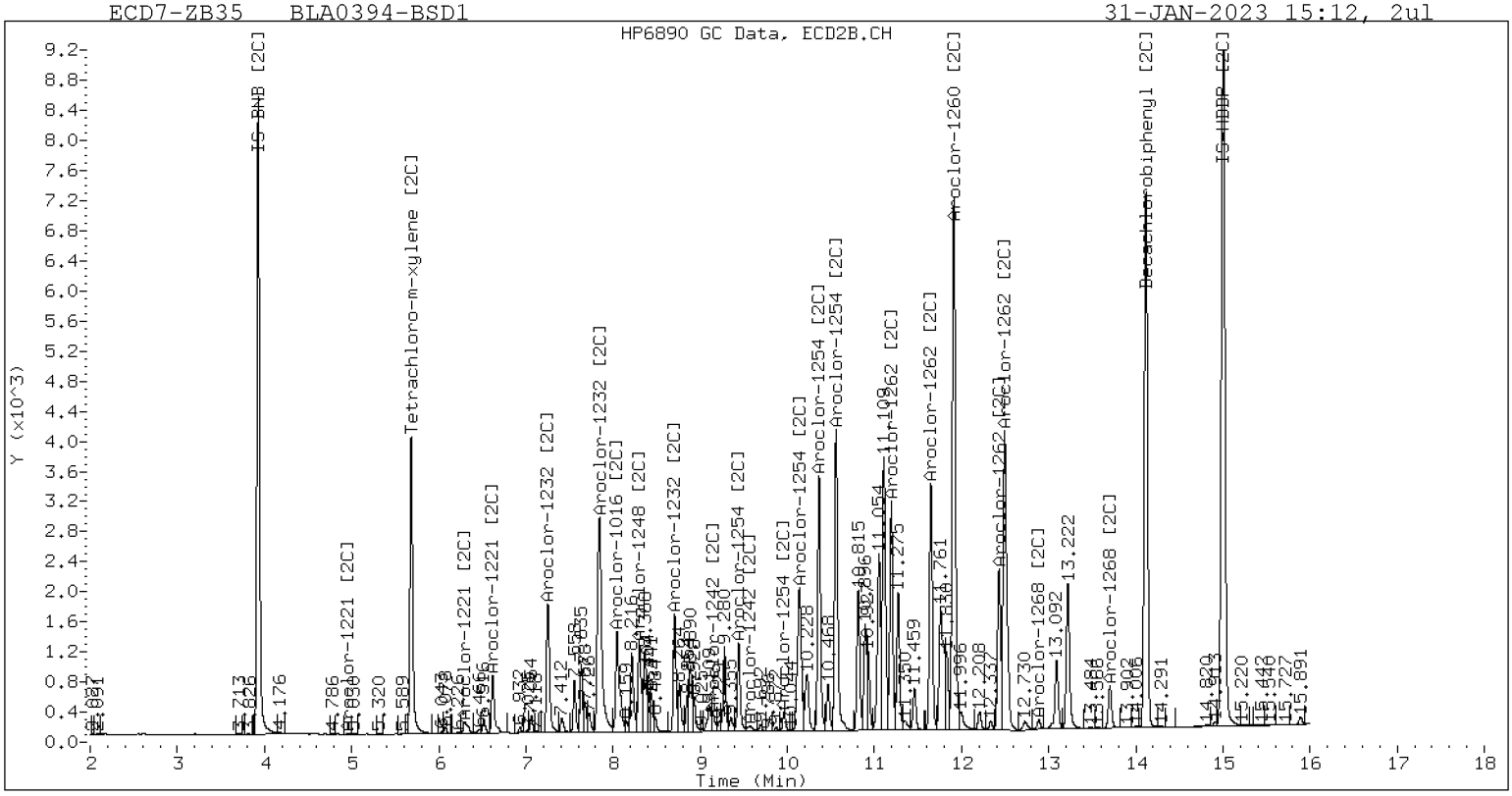
PCB Dual Column Chromatograms

ECD7-ZB5 BLA0394-BSD1 31-JAN-2023 15:12, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLA0394-BSD1 31-JAN-2023 15:12, 2ul



ZB-35 Manual Integration: NO

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	01/31/23 20:06
Batch:	BLA0394	Laboratory ID:	BLA0394-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	21.01 g / 2.5 mL	Source Sample:	LDW23-IT1217

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Aroclor 1016	101	ND	U	57.4		57.0	56 - 120
Aroclor 1260 [2C]	101	100		165		64.4	58 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	01/31/23 20:27
Batch:	BLA0394	Laboratory ID:	BLA0394-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	21.01 g / 2.5 mL	Source Sample:	LDW23-IT1217

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor 1016	101	58.0		57.5	1.02	30	56 - 120
Aroclor 1260 [2C]	101	147	*	46.5 *	11.6	30	58 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312331ECD7.D
Data file 2: /230131.b/230131.b/01312331ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLA0394-MS1
Client ID:
Injection Date: 31-JAN-2023 20:06
Report Date: 02/01/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.804	-0.003	184336	5.681	-0.003	137196	28.3	32.9	15.0	Tetrachloro-m-xylene
13.883	-0.006	152257	14.112	-0.006	176905	40.5	38.3	5.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	460533	-8.5
Hexabromobiphenyl	647433	351936	-45.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	308324	-8.5
Hexabromobiphenyl	382032	291170	-23.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.264	-0.005	54227	316.9	1	7.249	-0.004	61910	370.2
Aroclor-1016	2	7.640	-0.010	168137	296.5	2	7.837	-0.013	130534	356.2
Aroclor-1016	3	7.778	-0.010	62011	237.7	3	8.038	-0.011	48649	325.3
Aroclor-1016	4	8.394	-0.009	49891	297.3	4	8.297	-0.007	51445	438.8
Total Col1Ave (4 peaks):					287.1	Total Col2Ave (4 peaks):				372.6 RPD = 26
Corrected Ave (3 peaks):					277.2	Corrected Ave (3 peaks):				350.6 RPD = 23
Aroclor-1221	1	4.733	0.001	682	20.0	1	4.962	0.003	1178	52.1
Aroclor-1221	2	6.127	-0.007	9316	133.8	2	6.294	-0.004	5857	118.3
Aroclor-1221	3	6.378	-0.007	39644	245.3	3	6.615	-0.007	27741	331.8
Total Col1Ave (3 peaks):					133.1	Total Col2Ave (3 peaks):				167.4 RPD = 23
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.733	0.000	682	32.1	1	4.962	0.002	1178	85.9
Aroclor-1232	2	6.127	-0.007	9316	194.5	2	7.249	-0.007	61910	807.0
Aroclor-1232	3	7.640	-0.018	168137	702.0	3	7.837	-0.017	130534	835.4
Aroclor-1232	4	8.563	-0.021	51236	499.8	4	8.703	-0.011	43964	1012.7
Total Col1Ave (4 peaks):					357.1	Total Col2Ave (4 peaks):				685.2 RPD = 63*
Corrected Ave (3 peaks):					242.1	Corrected Ave (3 peaks):				576.1 RPD = 82*
Aroclor-1242	1	7.264	-0.006	54227	384.5	1	7.249	-0.003	61910	459.1
Aroclor-1242	2	7.640	-0.015	168137	364.3	2	7.837	-0.011	130534	435.8
Aroclor-1242	3	8.394	-0.013	49891	363.9	3	9.135	-0.020	20427	217.8
Aroclor-1242	4	8.563	-0.018	51236	247.4	4	9.614	0.035	2654	21.3
Total Col1Ave (4 peaks):					340.0	Total Col2Ave (4 peaks):				283.5 RPD = 18
Corrected Ave (3 peaks):					325.2	Corrected Ave (3 peaks):				225.0 RPD = 36
Aroclor-1248	1	8.394	-0.009	49891	216.6	1	8.297	-0.007	51445	369.1
Aroclor-1248	2	8.563	-0.013	51236	174.3	2	8.703	-0.008	43964	293.1
Aroclor-1248	3	8.982	-0.013	64287	114.4	3	9.135	-0.019	20427	111.4
Aroclor-1248	4	9.284	-0.007	75274	270.5	4	9.614	0.037	2654	11.7
Total Col1Ave (4 peaks):					193.9	Total Col2Ave (4 peaks):				196.3 RPD = 1
Corrected Ave (3 peaks):					168.4	Corrected Ave (3 peaks):				138.7 RPD = 19
Aroclor-1254	1	9.284	-0.011	75274	160.4	1	9.436	-0.009	55530	248.3
Aroclor-1254	2	9.358	-0.016	14990	74.8	2	9.954	-0.011	27028	149.5
Aroclor-1254	3	9.650	-0.015	35265	117.3	3	10.135	0.018	130511	330.9
Aroclor-1254	4	9.782	-0.020	92753	157.4	4	10.359	-0.008	170508	432.3
Aroclor-1254	5	10.108	-0.056	206707	539.4	5	10.552	-0.013	182643	831.5
Total Col1Ave (5 peaks):					209.9	Total Col2Ave (5 peaks):				398.5 RPD = 62*
Corrected Ave (4 peaks):					127.5	Corrected Ave (4 peaks):				290.2 RPD = 78*
Aroclor-1260	1	11.031	-0.010	183393	928.7	1	11.642	-0.008	150511	716.5
Aroclor-1260	2	11.347	-0.011	149767	737.8	2	11.903	-0.011	397926	748.8
Aroclor-1260	3	11.717	-0.015	396142	741.3	3	12.423	-0.009	139317	1051.8
Aroclor-1260	4	12.118	-0.017	185298	671.1	4	12.487	-0.011	270162	785.5
Aroclor-1260	5	12.233	-0.009	103865	863.0	NS	---			----
Total Col1Ave (5 peaks):					788.4	Total Col2Ave (4 peaks):				825.6 RPD = 5
Corrected Ave (4 peaks):					753.3	Corrected Ave (3 peaks):				750.3 RPD = 0
Aroclor-1262	1	10.804	-0.028	267310	1878.2	1	11.189	-0.011	170238	597.4
Aroclor-1262	2	12.233	-0.013	103865	462.4	2	11.642	-0.011	150511	621.1
Aroclor-1262	3	12.306	-0.015	125628	515.1	3	12.423	-0.011	139317	539.9
Aroclor-1262	4	12.971	-0.018	129925	584.6	4	12.487	-0.017	270162	653.7
Total Col1Ave (4 peaks):					860.1	Total Col2Ave (4 peaks):				603.0 RPD = 35
Corrected Ave (3 peaks):					520.7	Corrected Ave (3 peaks):				586.1 RPD = 12
Aroclor-1268	1	12.233	-0.012	103865	178.7	1	12.423	-0.011	139317	204.9
Aroclor-1268	2	12.306	-0.012	125628	216.7	2	12.487	-0.015	270162	373.4
Aroclor-1268	3	12.707	0.008	57461	119.6	3	12.884	-0.009	12817	21.3
Aroclor-1268	4	13.476	-0.013	44217	31.0	4	13.699	-0.010	52489	28.2
Total Col1Ave (4 peaks):					136.5	Total Col2Ave (4 peaks):				156.9 RPD = 14

Corrected Ave (3 peaks): 109.8 Corrected Ave (3 peaks): 84.8 RPD = 26

Total PCB Area Col1 (5.908 - 13.790) = 4271880 Col1 Total PCB = 0.8 ppm*

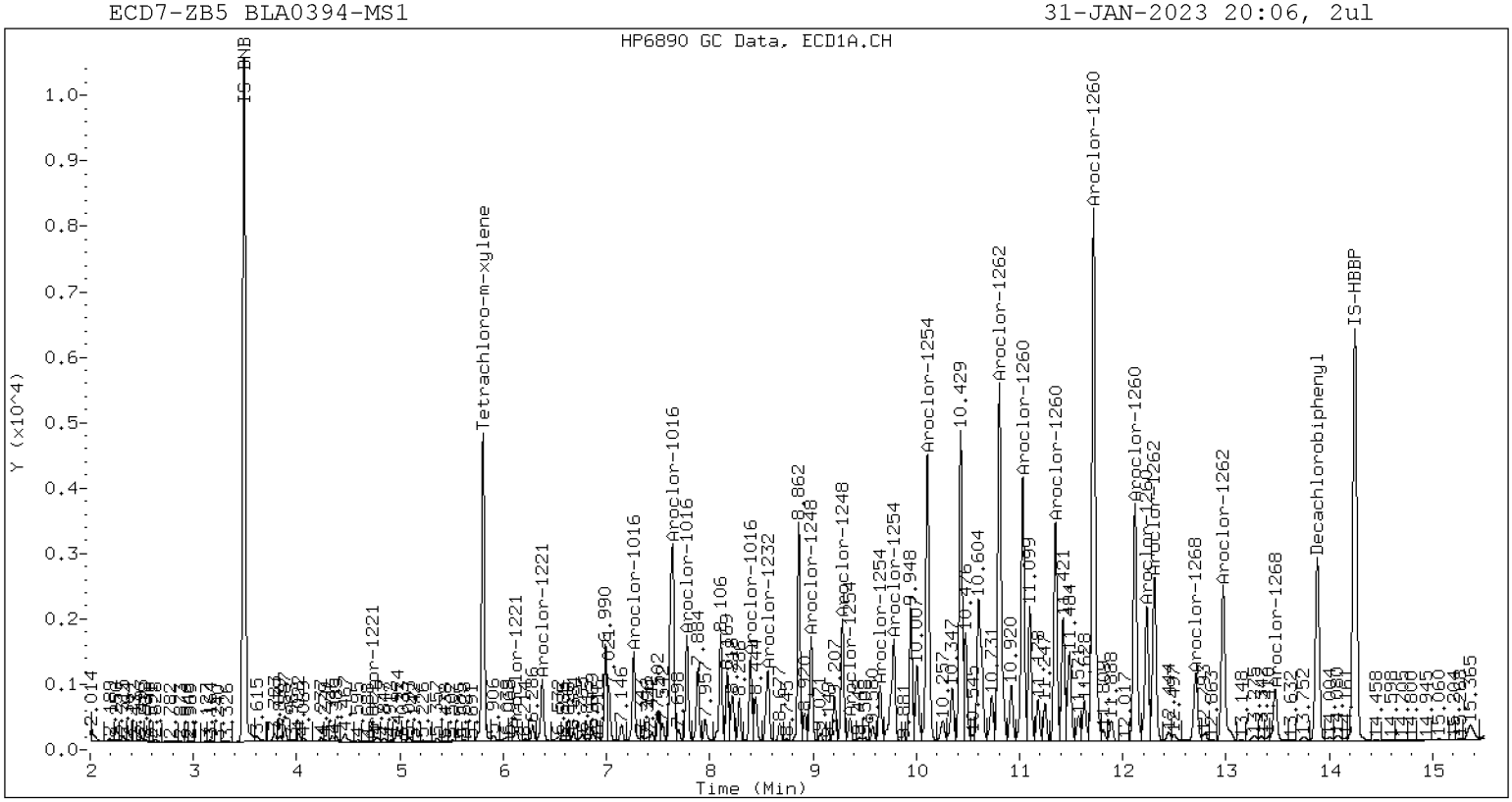
Total PCB Area Col2 (5.784 - 14.018) = 3710657 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

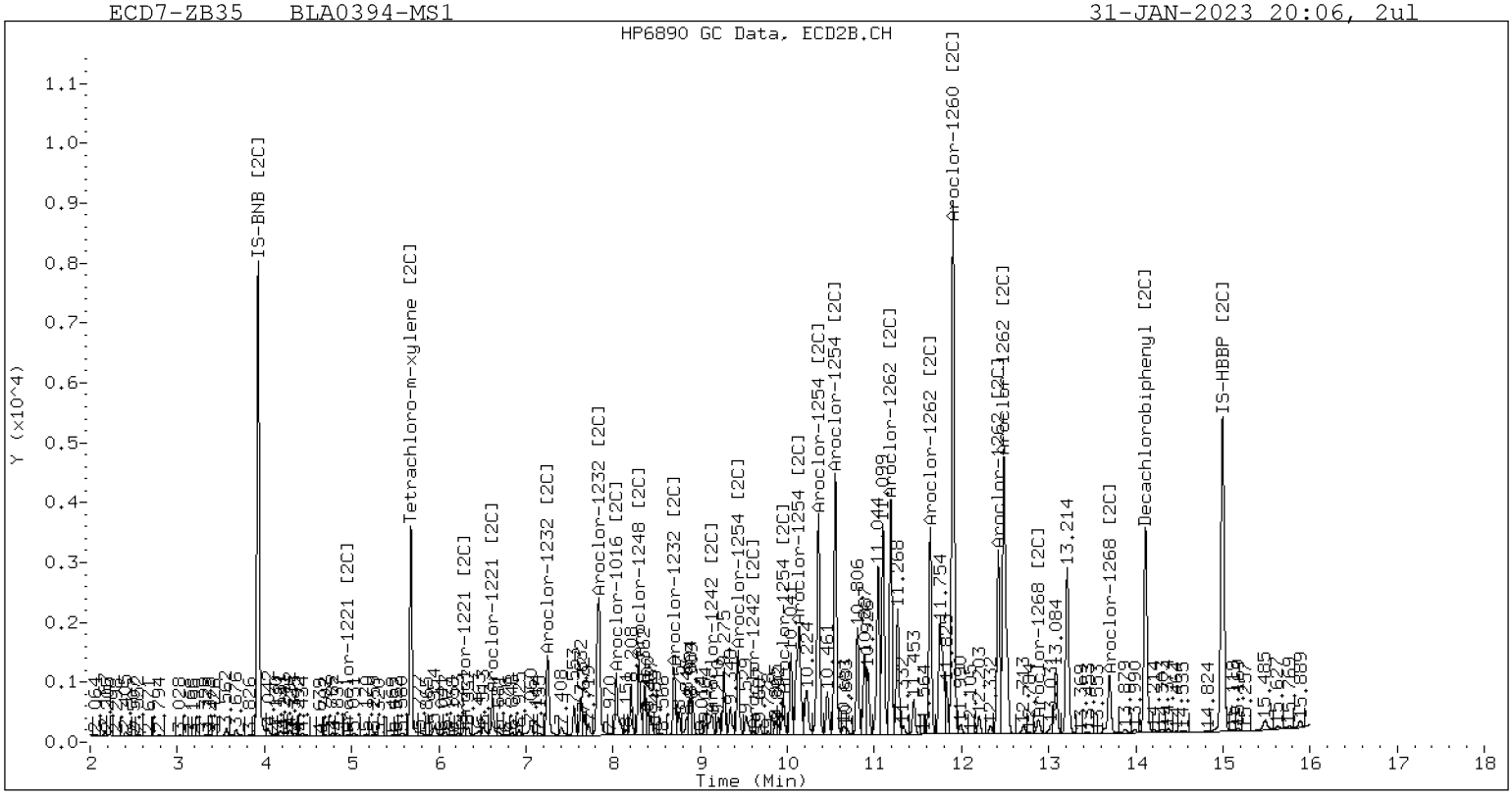
PCB Dual Column Chromatograms

ECD7-ZB5 BLA0394-MS1 31-JAN-2023 20:06, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLA0394-MS1 31-JAN-2023 20:06, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312332ECD7.D
Data file 2: /230131.b/230131.b/01312332ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLA0394-MSD1
Client ID:
Injection Date: 31-JAN-2023 20:27
Report Date: 02/01/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.003	180746	5.681	-0.003	141188	27.1	32.9	19.1	Tetrachloro-m-xylene
13.884	-0.006	147647	14.112	-0.006	174184	38.7	37.4	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	471332	-6.4
Hexabromobiphenyl	647433	356758	-44.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	317805	-5.7
Hexabromobiphenyl	382032	293457	-23.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.265	-0.005	55882	319.1	1	7.250	-0.003	64352	373.3
Aroclor-1016	2	7.640	-0.010	172769	297.7	2	7.839	-0.011	134425	355.9
Aroclor-1016	3	7.778	-0.010	63873	239.2	3	8.039	-0.010	50496	327.6
Aroclor-1016	4	8.394	-0.008	52246	304.2	4	8.297	-0.006	51788	428.6
Total Col1Ave (4 peaks):					290.0	Total Col2Ave (4 peaks):				371.3 RPD = 25
Corrected Ave (3 peaks):					280.4	Corrected Ave (3 peaks):				352.3 RPD = 23
Aroclor-1221	1	4.734	0.001	1831	52.6	1	4.957	-0.002	1119	48.0
Aroclor-1221	2	6.127	-0.006	7836	110.0	2	6.295	-0.004	6006	117.6
Aroclor-1221	3	6.378	-0.006	40306	243.7	3	6.616	-0.007	28568	331.5
Total Col1Ave (3 peaks):					135.4	Total Col2Ave (3 peaks):				165.7 RPD = 20
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.734	0.000	1831	84.2	1	4.957	-0.003	1119	79.2
Aroclor-1232	2	6.127	-0.006	7836	159.9	2	7.250	-0.007	64352	813.8
Aroclor-1232	3	7.640	-0.018	172769	704.8	3	7.839	-0.016	134425	834.6
Aroclor-1232	4	8.564	-0.021	52962	504.8	4	8.703	-0.010	45539	1017.6
Total Col1Ave (4 peaks):					363.4	Total Col2Ave (4 peaks):				686.3 RPD = 62*
Corrected Ave (3 peaks):					249.6	Corrected Ave (3 peaks):				575.9 RPD = 79*
Aroclor-1242	1	7.265	-0.006	55882	387.2	1	7.250	-0.003	64352	463.0
Aroclor-1242	2	7.640	-0.015	172769	365.8	2	7.839	-0.010	134425	435.4
Aroclor-1242	3	8.394	-0.012	52246	372.3	3	9.136	-0.019	22490	232.6
Aroclor-1242	4	8.564	-0.018	52962	249.8	4	9.614	0.035	2357	18.4
Total Col1Ave (4 peaks):					343.8	Total Col2Ave (4 peaks):				287.4 RPD = 18
Corrected Ave (3 peaks):					329.3	Corrected Ave (3 peaks):				228.8 RPD = 36
Aroclor-1248	1	8.394	-0.008	52246	221.6	1	8.297	-0.007	51788	360.5
Aroclor-1248	2	8.564	-0.012	52962	176.1	2	8.703	-0.007	45539	294.5
Aroclor-1248	3	8.983	-0.013	69285	120.4	3	9.136	-0.018	22490	119.0
Aroclor-1248	4	9.284	-0.006	81078	284.7	4	9.614	0.036	2357	10.1
Total Col1Ave (4 peaks):					200.7	Total Col2Ave (4 peaks):				196.0 RPD = 2
Corrected Ave (3 peaks):					172.7	Corrected Ave (3 peaks):				141.2 RPD = 20
Aroclor-1254	1	9.284	-0.011	81078	168.8	1	9.435	-0.009	58750	254.8
Aroclor-1254	2	9.358	-0.015	16848	82.1	2	9.954	-0.011	28650	153.7
Aroclor-1254	3	9.650	-0.014	40536	131.7	3	10.106	-0.011	49395	121.5
Aroclor-1254	4	9.784	-0.019	94639	156.9	4	10.358	-0.008	168004	413.3
Aroclor-1254	5	10.109	-0.055	200332	510.8	5	10.552	-0.013	171764	758.6
Total Col1Ave (5 peaks):					210.1	Total Col2Ave (5 peaks):				340.4 RPD = 47*
Corrected Ave (4 peaks):					134.9	Corrected Ave (4 peaks):				235.8 RPD = 54*
Aroclor-1260	1	11.032	-0.009	160861	803.6	1	11.641	-0.008	137233	648.2
Aroclor-1260	2	11.347	-0.011	133634	649.4	2	11.903	-0.011	356009	664.7
Aroclor-1260	3	11.717	-0.014	352671	651.1	3	12.423	-0.009	124273	930.9
Aroclor-1260	4	12.118	-0.017	167819	599.6	4	12.487	-0.011	241074	695.5
Aroclor-1260	5	12.232	-0.010	91028	746.1	NS	---			----
Total Col1Ave (5 peaks):					690.0	Total Col2Ave (4 peaks):				734.8 RPD = 6
Corrected Ave (4 peaks):					661.6	Corrected Ave (3 peaks):				669.5 RPD = 1
Aroclor-1262	1	10.805	-0.027	257022	1781.5	1	11.189	-0.011	150158	522.8
Aroclor-1262	2	12.232	-0.014	91028	399.7	2	11.641	-0.012	137233	561.9
Aroclor-1262	3	12.306	-0.015	109687	443.7	3	12.423	-0.011	124273	477.8
Aroclor-1262	4	12.970	-0.019	107557	477.4	4	12.487	-0.017	241074	578.8
Total Col1Ave (4 peaks):					775.6	Total Col2Ave (4 peaks):				535.3 RPD = 37
Corrected Ave (3 peaks):					440.3	Corrected Ave (3 peaks):				520.8 RPD = 17
Aroclor-1268	1	12.232	-0.013	91028	154.5	1	12.423	-0.011	124273	181.3
Aroclor-1268	2	12.306	-0.012	109687	186.6	2	12.487	-0.015	241074	330.6
Aroclor-1268	3	12.707	0.008	49211	101.1	3	12.884	-0.009	11561	19.0
Aroclor-1268	4	13.475	-0.014	39667	27.5	4	13.699	-0.010	47392	25.3
Total Col1Ave (4 peaks):					117.4	Total Col2Ave (4 peaks):				139.1 RPD = 17

Corrected Ave (3 peaks): 94.3 Corrected Ave (3 peaks): 75.2 RPD = 23

Total PCB Area Col1 (5.908 - 13.790) = 3960427 Col1 Total PCB = 0.7 ppm*

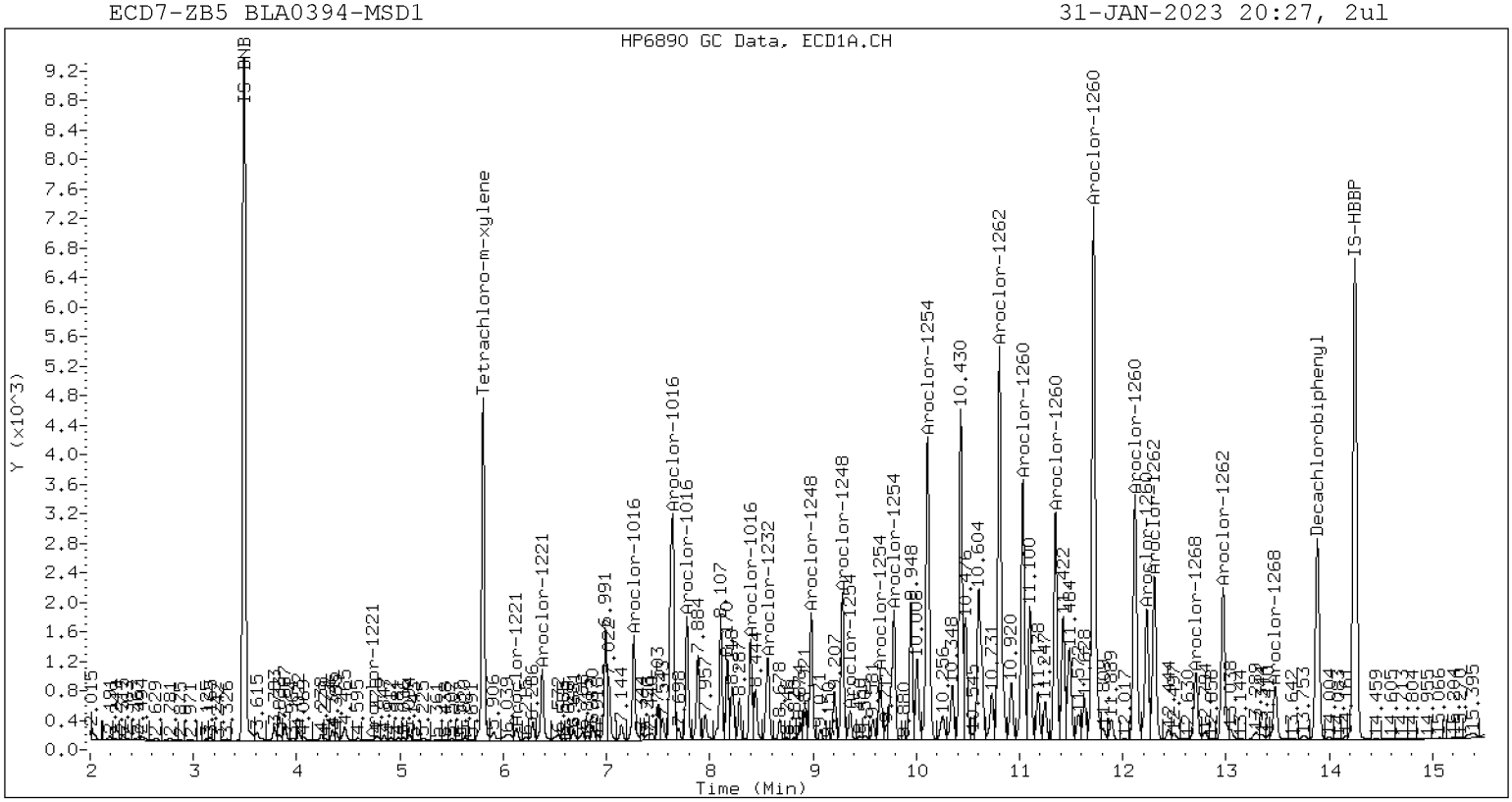
Total PCB Area Col2 (5.784 - 14.018) = 3484691 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

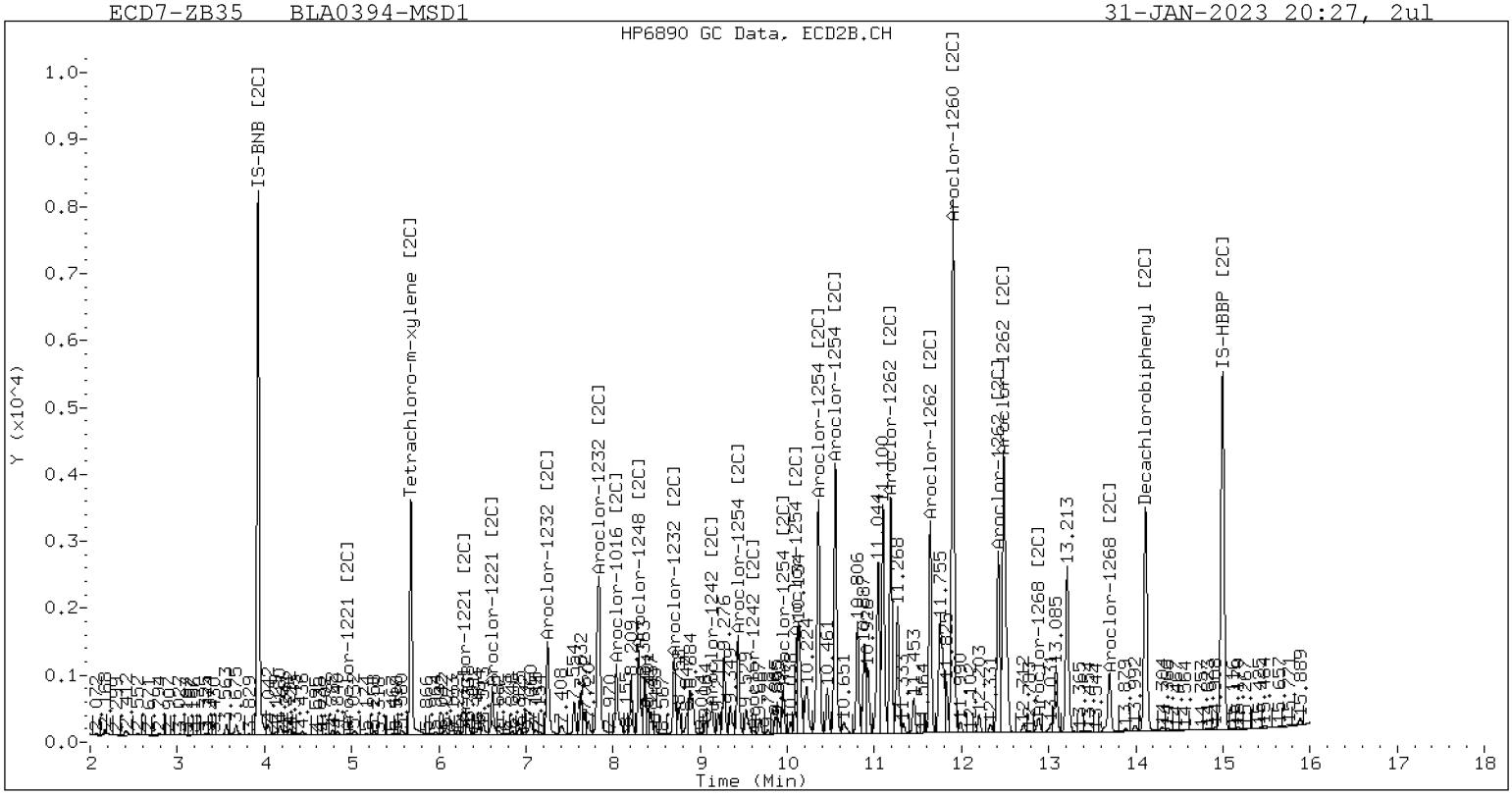
PCB Dual Column Chromatograms

ECD7-ZB5 BLA0394-MSD1 31-JAN-2023 20:27, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLA0394-MSD1 31-JAN-2023 20:27, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0394-SRM1
Batch: BLA0394
Initial/Final: 2.5 g / 2.5 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 01/31/2023 15:33
Standard ID: K010816
Expires: 05/17/2023
Standard Lot#: PSRM0165
Description: Puget Sound reference-SRM

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Aroclor 1260	108.00	89.3	2.9	20.0		82.7	38 - 167
Aroclor 1260 [2C]	108.00	102	2.9	20.0		94.1	38 - 167

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312318ECD7.D
Data file 2: /230131.b/230131.b/01312318ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLA0394-SRM1
Client ID:
Injection Date: 31-JAN-2023 15:33
Report Date: 01/31/2023 15:54
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.001	249144	5.684	-0.001	186618	34.3	39.5	14.1	Tetrachloro-m-xylene
13.886	-0.004	285378	14.115	-0.003	271629	39.1	37.8	3.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	514172	2.2
Hexabromobiphenyl	647433	681622	5.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	349809	3.8
Hexabromobiphenyl	382032	453059	18.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.237	-0.032	15120	79.1	1	7.259	0.005	12113	63.8
Aroclor-1016	2	7.646	-0.004	9225	14.6	2	7.841	-0.010	10858	26.1
Aroclor-1016	3	7.790	0.002	6233	21.4	3	8.044	-0.006	2907	17.1
Aroclor-1016	4	8.400	-0.002	9338	49.8	4	8.300	-0.004	8511	64.0
Total Col1Ave (4 peaks):					41.2	Total Col2Ave (4 peaks):				42.8 RPD = 4
Corrected Ave (3 peaks):					28.6	Corrected Ave (3 peaks):				35.7 RPD = 22
Aroclor-1221	1	4.783	0.050	409	10.8	1	4.941	-0.018	7428	289.7
Aroclor-1221	2	6.116	-0.018	1716	22.1	2	6.341	0.043	15089	268.5
Aroclor-1221	3	6.397	0.013	5177	28.7	3	6.637	0.014	5573	58.8
Total Col1Ave (3 peaks):					20.5	Total Col2Ave (3 peaks):				205.6 RPD = 164*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.783	0.050	409	17.2	1	4.941	-0.018	7428	477.6
Aroclor-1232	2	6.116	-0.017	1716	32.1	2	7.259	0.002	12113	139.2
Aroclor-1232	3	7.646	-0.012	9225	34.5	3	7.841	-0.013	10858	61.2
Aroclor-1232	4	8.568	-0.016	6134	53.6	4	8.706	-0.008	6836	138.8
Total Col1Ave (4 peaks):					34.4	Total Col2Ave (4 peaks):				204.2 RPD = 142*
Corrected Ave (3 peaks):					27.9	Corrected Ave (3 peaks):				113.1 RPD = 121*
Aroclor-1242	1	7.302	0.031	4201	26.7	1	7.259	0.003	12113	79.2
Aroclor-1242	2	7.646	-0.009	9225	17.9	2	7.841	-0.012	10858	32.0
Aroclor-1242	3	8.400	-0.006	9338	61.0	3	9.142	-0.018	8407	79.0
Aroclor-1242	4	8.568	-0.013	6134	26.5	4	9.534	-0.053	13709	97.2
Total Col1Ave (4 peaks):					33.0	Total Col2Ave (4 peaks):				71.8 RPD = 74*
Corrected Ave (3 peaks):					23.7	Corrected Ave (3 peaks):				63.4 RPD = 91*
Aroclor-1248	1	8.400	-0.002	9338	36.3	1	8.300	-0.004	8511	53.8
Aroclor-1248	2	8.568	-0.008	6134	18.7	2	8.706	-0.005	6836	40.2
Aroclor-1248	3	8.987	-0.008	21276	33.9	3	9.142	-0.012	8407	40.4
Aroclor-1248	4	9.288	-0.003	29965	96.5	4	9.534	-0.044	13709	53.3
Total Col1Ave (4 peaks):					46.3	Total Col2Ave (4 peaks):				46.9 RPD = 1
Corrected Ave (3 peaks):					29.6	Corrected Ave (3 peaks):				44.6 RPD = 40*
Aroclor-1254	1	9.288	-0.007	29965	57.2	1	9.439	-0.006	21166	83.4
Aroclor-1254	2	9.364	-0.010	10584	47.3	2	9.958	-0.006	10091	49.2
Aroclor-1254	3	9.658	-0.006	17530	52.2	3	10.109	-0.007	40119	89.7
Aroclor-1254	4	9.790	-0.012	46160	70.2	4	10.360	-0.006	50356	112.5
Aroclor-1254	5	10.111	-0.053	66123	154.6	5	10.555	-0.009	50252	201.6
Total Col1Ave (5 peaks):					76.3	Total Col2Ave (5 peaks):				107.3 RPD = 34
Corrected Ave (4 peaks):					56.7	Corrected Ave (4 peaks):				83.7 RPD = 38
Aroclor-1260	1	11.035	-0.007	37742	98.7	1	11.644	-0.006	32515	99.5
Aroclor-1260	2	11.347	-0.011	30210	76.8	2	11.906	-0.009	75437	91.2
Aroclor-1260	3	11.720	-0.012	94002	90.8	3	12.425	-0.008	25437	123.4
Aroclor-1260	4	12.122	-0.013	50390	94.2	4	12.490	-0.009	49431	92.4
Aroclor-1260	5	12.235	-0.007	20023	85.9	NS	---			----
Total Col1Ave (5 peaks):					89.3	Total Col2Ave (4 peaks):				101.6 RPD = 13
Corrected Ave (4 peaks):					87.0	Corrected Ave (3 peaks):				94.4 RPD = 8
Aroclor-1262	1	10.810	-0.022	86112	312.4	1	11.191	-0.010	31300	70.6
Aroclor-1262	2	12.235	-0.011	20023	46.0	2	11.644	-0.009	32515	86.2
Aroclor-1262	3	12.309	-0.012	23985	50.8	3	12.425	-0.010	25437	63.3
Aroclor-1262	4	12.974	-0.015	23201	53.9	4	12.490	-0.014	49431	76.9
Total Col1Ave (4 peaks):					115.8	Total Col2Ave (4 peaks):				74.3 RPD = 44*
Corrected Ave (3 peaks):					50.2	Corrected Ave (3 peaks):				70.3 RPD = 33
Aroclor-1268	1	12.235	-0.010	20023	17.8	1	12.425	-0.009	25437	24.0
Aroclor-1268	2	12.309	-0.010	23985	21.4	2	12.490	-0.012	49431	43.9
Aroclor-1268	3	12.712	0.013	11690	12.6	3	12.888	-0.005	1138	1.2
Aroclor-1268	4	13.476	-0.013	2926	1.1	4	13.700	-0.008	6725	2.3
Total Col1Ave (4 peaks):					13.2	Total Col2Ave (4 peaks):				17.9 RPD = 30

Corrected Ave (3 peaks): 10.5 Corrected Ave (3 peaks): 9.2 RPD = 13

Total PCB Area Col1 (5.908 - 13.790) = 1217139 Col1 Total PCB = 0.2 ppm*

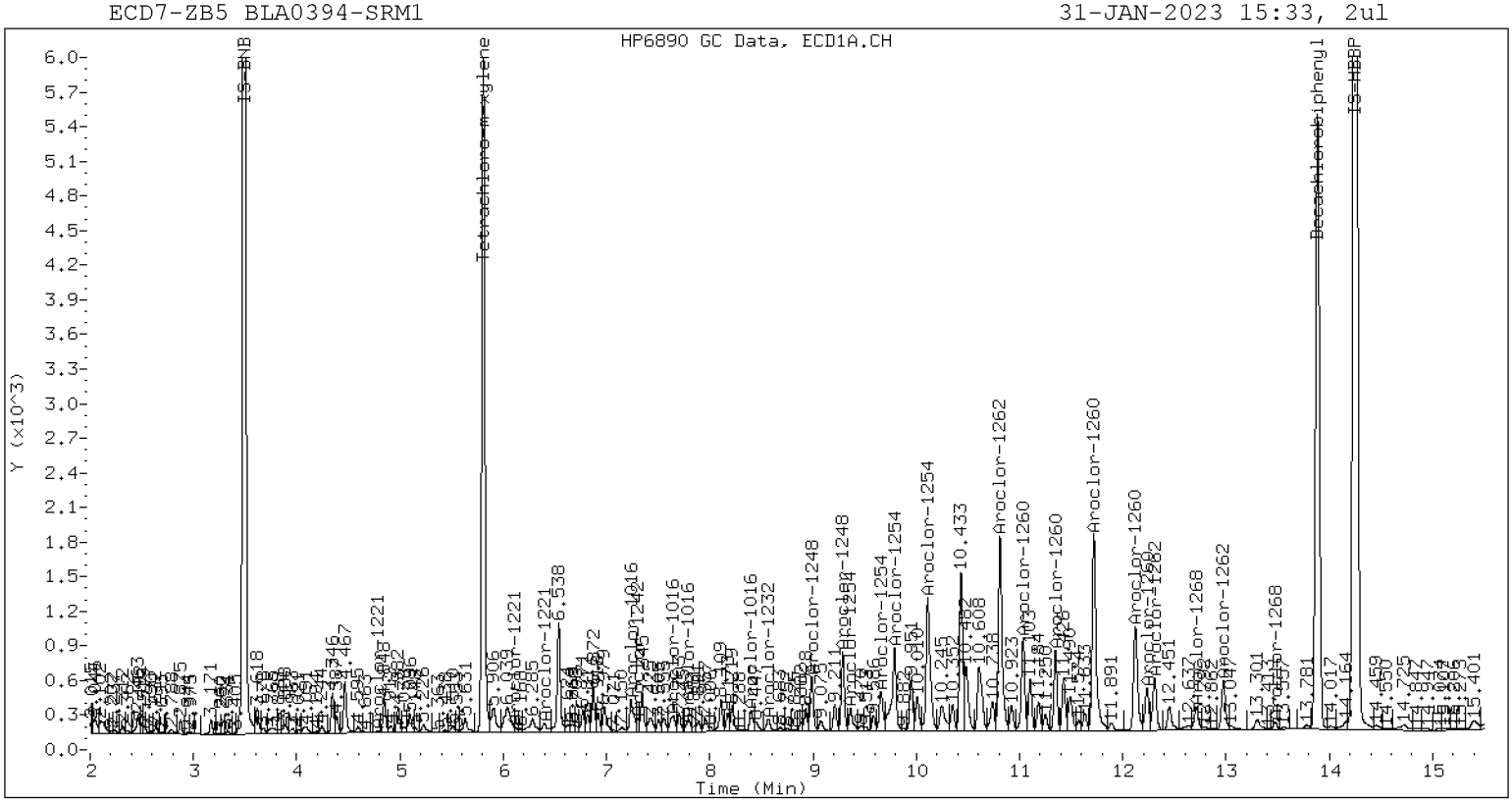
Total PCB Area Col2 (5.785 - 14.018) = 982512 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

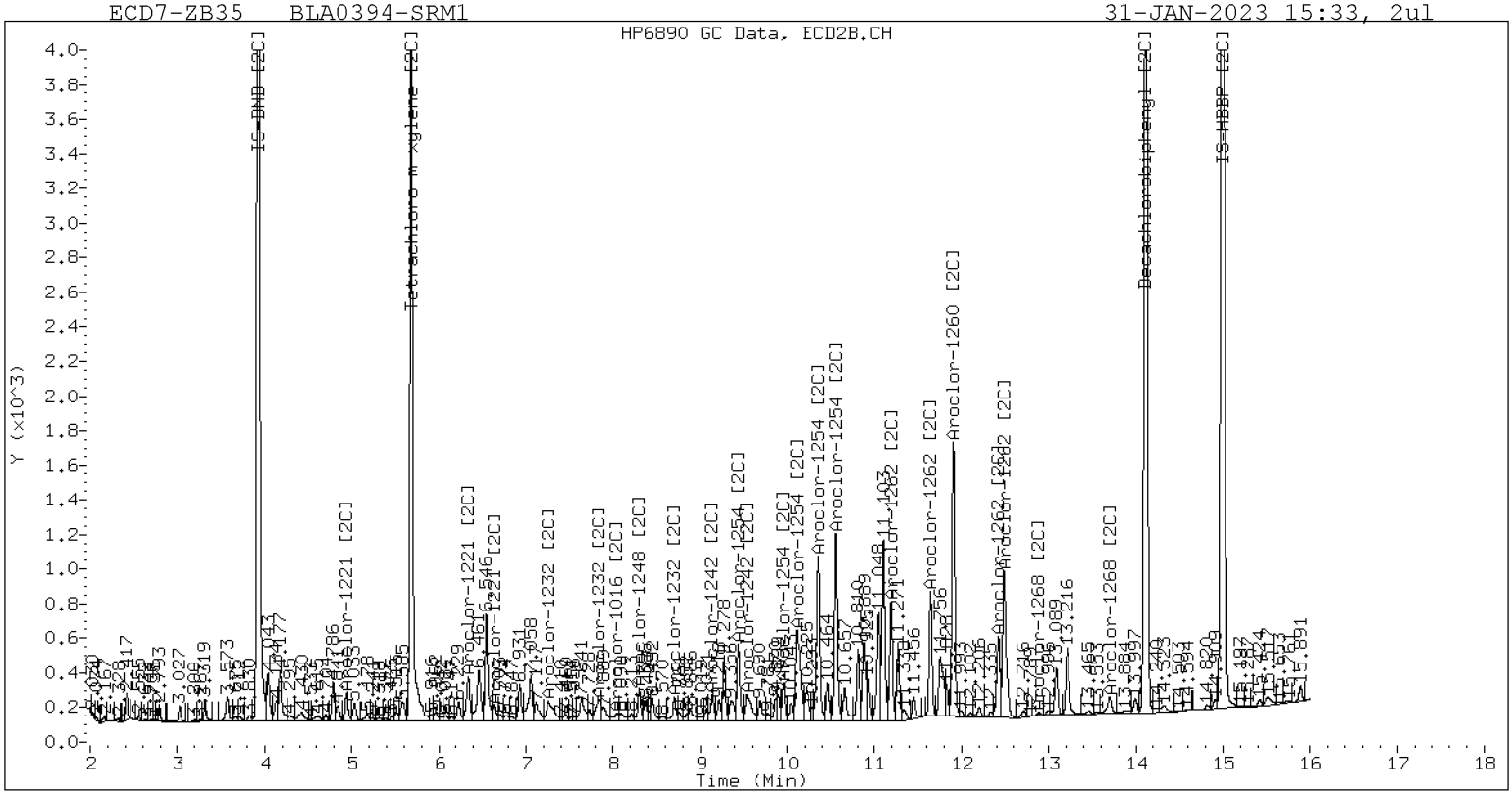
PCB Dual Column Chromatograms

ECD7-ZB5 BLA0394-SRM1 31-JAN-2023 15:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLA0394-SRM1 31-JAN-2023 15:33, 2ul



ZB-35 Manual Integration: NO

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (1):	ZB5

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1016	250	5.167707E-02	20	4.942809E-02	50	5.153925E-02	1000	4.662732E-02	100	5.549196E-02	500	4.928929E-02
Aroclor-1016 (1)	250	3.017861E-02	20	2.947465E-02	50	3.102226E-02	1000	2.635254E-02	100	3.309682E-02	500	2.824148E-02
Aroclor-1016 (2)	250	0.1020346	20	9.270426E-02	50	9.811961E-02	1000	9.356138E-02	100	0.1059789	500	0.0986114
Aroclor-1016 (3)	250	4.399859E-02	20	4.877736E-02	50	4.899883E-02	1000	3.795541E-02	100	0.0512744	500	4.091133E-02
Aroclor-1016 (4)	250	3.049651E-02	20	2.675607E-02	50	2.801628E-02	1000	2.863996E-02	100	3.161774E-02	500	2.939295E-02
Aroclor 1260	250	6.608884E-02	20	6.779653E-02	50	6.325495E-02	1000	5.469674E-02	100	5.850835E-02	500	5.278897E-02
Aroclor-1260 (1)	250	5.181373E-02	20	4.727423E-02	50	4.542797E-02	1000	0.0403981	100	0.0442757	500	0.0401323
Aroclor-1260 (2)	250	5.350015E-02	20	4.939797E-02	50	4.636355E-02	1000	4.208491E-02	100	4.449674E-02	500	4.100371E-02
Aroclor-1260 (3)	250	0.1331674	20	0.1373712	50	0.1282887	1000	0.1078965	100	0.1173998	500	0.1046798
Aroclor-1260 (4)	250	6.473121E-02	20	7.197922E-02	50	0.0663805	1000	5.863707E-02	100	5.997377E-02	500	5.485394E-02
Aroclor-1260 (5)	250	2.723173E-02	20	3.295998E-02	50	2.981405E-02	1000	2.446709E-02	100	2.639578E-02	500	2.327509E-02
Decachlorobiphenyl	40	0.8481341	3.2	0.8644195	8	0.9030151	160	0.7914512	16	0.9308139	80	0.7957625
Tetrachlorometaxylene	40	1.149655	3.2	1.100393	8	1.102173	160	1.094607	16	1.219974	80	1.117921

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1221							250	0.0153579				
Aroclor-1221 (1)							250	5.913051E-03				
Aroclor-1221 (2)							250	1.209121E-02				
Aroclor-1221 (3)							250	2.806945E-02				
Aroclor 1232									250	1.785602E-02		
Aroclor-1232 (1)									250	3.691407E-03		
Aroclor-1232 (2)									250	8.319285E-03		
Aroclor-1232 (3)									250	4.160486E-02		
Aroclor-1232 (4)									250	1.780851E-02		
Aroclor 1242	250	0.0411165										
Aroclor-1242 (1)	250	2.449677E-02										
Aroclor-1242 (2)	250	8.016926E-02										
Aroclor-1242 (3)	250	2.381903E-02										
Aroclor-1242 (4)	250	3.598092E-02										
Aroclor 1248			250	0.0592639								
Aroclor-1248 (1)			250	4.001993E-02								
Aroclor-1248 (2)			250	5.105008E-02								
Aroclor-1248 (3)			250	9.765126E-02								
Aroclor-1248 (4)			250	4.833435E-02								
Aroclor 1254					250	6.750332E-02						
Aroclor-1254 (1)					250	8.153293E-02						
Aroclor-1254 (2)					250	0.0348121						
Aroclor-1254 (3)					250	5.224052E-02						
Aroclor-1254 (4)					250	0.1023658						
Aroclor-1254 (5)					250	6.656523E-02						
Aroclor-1262 (1)							250	3.235265E-02				
Aroclor-1262 (2)							250	5.106336E-02				
Aroclor-1262 (3)							250	5.543866E-02				

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor-1262 (4)							250	5.051654E-02				
Aroclor-1268 (1)									250	0.132157		
Aroclor-1268 (2)									250	0.1317955		
Aroclor-1268 (3)									250	0.1091938		
Aroclor-1268 (4)									250	0.3237404		

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016	0.0506755	5.9			RSD (20)	
Aroclor-1016 (1)	2.972773E-02	7.8			RSD (20)	
Aroclor-1016 (2)	9.850169E-02	5.1			RSD (20)	
Aroclor-1016 (3)	4.531932E-02	11.5			RSD (20)	
Aroclor-1016 (4)	2.915325E-02	6.0			RSD (20)	
Aroclor 1221		0.0			RSD (20)	
Aroclor-1221 (1)		0.0			RSD (20)	
Aroclor-1221 (2)		0.0			RSD (20)	
Aroclor-1221 (3)		0.0			RSD (20)	
Aroclor 1232		0.0			RSD (20)	
Aroclor-1232 (1)		0.0			RSD (20)	
Aroclor-1232 (2)		0.0			RSD (20)	
Aroclor-1232 (3)		0.0			RSD (20)	
Aroclor-1232 (4)		0.0			RSD (20)	
Aroclor 1242		0.0			RSD (20)	
Aroclor-1242 (1)		0.0			RSD (20)	
Aroclor-1242 (2)		0.0			RSD (20)	
Aroclor-1242 (3)		0.0			RSD (20)	
Aroclor-1242 (4)		0.0			RSD (20)	
Aroclor 1248		0.0			RSD (20)	
Aroclor-1248 (1)		0.0			RSD (20)	
Aroclor-1248 (2)		0.0			RSD (20)	
Aroclor-1248 (3)		0.0			RSD (20)	
Aroclor-1248 (4)		0.0			RSD (20)	
Aroclor 1254		0.0			RSD (20)	
Aroclor-1254 (1)		0.0			RSD (20)	
Aroclor-1254 (2)		0.0			RSD (20)	
Aroclor-1254 (3)		0.0			RSD (20)	
Aroclor-1254 (4)		0.0			RSD (20)	
Aroclor-1254 (5)		0.0			RSD (20)	
Aroclor 1260	0.0605224	10.2			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1)	0.044887	9.8			RSD (20)	
Aroclor-1260 (2)	4.614117E-02	10.2			RSD (20)	
Aroclor-1260 (3)	0.1214672	11.2			RSD (20)	
Aroclor-1260 (4)	6.275928E-02	9.8			RSD (20)	
Aroclor-1260 (5)	2.735729E-02	13.0			RSD (20)	
Aroclor-1262 (1)		0.0			RSD (20)	
Aroclor-1262 (2)		0.0			RSD (20)	
Aroclor-1262 (3)		0.0			RSD (20)	
Aroclor-1262 (4)		0.0			RSD (20)	
Aroclor-1268 (1)		0.0			RSD (20)	
Aroclor-1268 (2)		0.0			RSD (20)	
Aroclor-1268 (3)		0.0			RSD (20)	
Aroclor-1268 (4)		0.0			RSD (20)	
Decachlorobiphenyl	0.8555994	6.6			RSD (20)	
Tetrachlorometaxylene	1.130787	4.2			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (2):	ZB35

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
Aroclor 1016 [2C]	250	5.292579E-02	20	4.676037E-02	50	5.470557E-02	1000	4.853417E-02	100	5.747899E-02	500	5.114174E-02
Aroclor-1016 (1) [2C]	250	4.314113E-02	20	4.423802E-02	50	4.724251E-02	1000	3.795138E-02	100	4.677646E-02	500	4.099489E-02
Aroclor-1016 (2) [2C]	250	9.823746E-02	20	8.511696E-02	50	9.615173E-02	1000	9.129912E-02	100	0.1041709	500	9.554107E-02
Aroclor-1016 (3) [2C]	250	4.028886E-02	20	2.918885E-02	50	0.0416533	1000	3.764267E-02	100	4.478001E-02	500	3.925449E-02
Aroclor-1016 (4) [2C]	250	3.003571E-02	20	2.849763E-02	50	3.377476E-02	1000	2.724351E-02	100	3.418865E-02	500	0.0287764
Aroclor 1260 [2C]	250	0.0868269	20	8.456297E-02	50	8.682148E-02	1000	7.954321E-02	100	8.639013E-02	500	7.778218E-02
Aroclor-1260 (1) [2C]	250	6.129497E-02	20	6.075052E-02	50	5.973709E-02	1000	5.307059E-02	100	5.911734E-02	500	5.231082E-02
Aroclor-1260 (2) [2C]	250	0.1536701	20	0.147481	50	0.1510614	1000	0.1380864	100	0.1518107	500	0.1339581
Aroclor-1260 (3) [2C]	250	3.647192E-02	20	3.683006E-02	50	3.729426E-02	1000	3.693906E-02	100	3.582131E-02	500	3.500995E-02
Aroclor-1260 (4) [2C]	250	0.0958705	20	9.319031E-02	50	9.919317E-02	1000	9.007677E-02	100	9.881117E-02	500	8.984983E-02
Decachlorobiphenyl [2C]	40	1.292085	3.2	1.209146	8	1.271224	160	1.30389	16	1.311901	80	1.229614
Tetrachlorometaxylene [2C]	40	1.096753	3.2	1.043423	8	1.105211	160	1.038509	16	1.153217	80	1.051873

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1221 [2C]							250	1.346872E-02				
Aroclor-1221 (1) [2C]							250	5.864614E-03				
Aroclor-1221 (2) [2C]							250	1.285084E-02				
Aroclor-1221 (3) [2C]							250	2.169068E-02				
Aroclor 1232 [2C]									250	0.0188178		
Aroclor-1232 (1) [2C]									250	3.556924E-03		
Aroclor-1232 (2) [2C]									250	1.990636E-02		
Aroclor-1232 (3) [2C]									250	4.054321E-02		
Aroclor-1232 (4) [2C]									250	1.126471E-02		
Aroclor 1242 [2C]	250	4.232355E-02										
Aroclor-1242 (1) [2C]	250	3.498756E-02										
Aroclor-1242 (2) [2C]	250	7.771274E-02										
Aroclor-1242 (3) [2C]	250	2.433789E-02										
Aroclor-1242 (4) [2C]	250	3.225599E-02										
Aroclor 1248 [2C]			250	4.536727E-02								
Aroclor-1248 (1) [2C]			250	0.036162								
Aroclor-1248 (2) [2C]			250	3.892353E-02								
Aroclor-1248 (3) [2C]			250	4.756205E-02								
Aroclor-1248 (4) [2C]			250	5.882148E-02								
Aroclor 1254 [2C]					250	7.332193E-02						
Aroclor-1254 (1) [2C]					250	5.803883E-02						
Aroclor-1254 (2) [2C]					250	4.691175E-02						
Aroclor-1254 (3) [2C]					250	0.1023304						
Aroclor-1254 (4) [2C]					250	0.1023323						
Aroclor-1254 (5) [2C]					250	5.699633E-02						
Aroclor-1262 (1) [2C]							250	7.829705E-02				
Aroclor-1262 (2) [2C]							250	6.658267E-02				
Aroclor-1262 (3) [2C]							250	7.090313E-02				

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor-1262 (4) [2C]							250	0.1135497				
Aroclor-1268 (1) [2C]									250	0.1868176		
Aroclor-1268 (2) [2C]									250	0.1988025		
Aroclor-1268 (3) [2C]									250	0.1654822		
Aroclor-1268 (4) [2C]									250	0.5111759		

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016 [2C]	5.192444E-02	7.6			RSD (20)	
Aroclor-1016 (1) [2C]	4.339073E-02	8.1			RSD (20)	
Aroclor-1016 (2) [2C]	9.508621E-02	6.8			RSD (20)	
Aroclor-1016 (3) [2C]	3.880136E-02	13.6			RSD (20)	
Aroclor-1016 (4) [2C]	3.041944E-02	9.5			RSD (20)	
Aroclor 1221 [2C]		0.0			RSD (20)	
Aroclor-1221 (1) [2C]		0.0			RSD (20)	
Aroclor-1221 (2) [2C]		0.0			RSD (20)	
Aroclor-1221 (3) [2C]		0.0			RSD (20)	
Aroclor 1232 [2C]		0.0			RSD (20)	
Aroclor-1232 (1) [2C]		0.0			RSD (20)	
Aroclor-1232 (2) [2C]		0.0			RSD (20)	
Aroclor-1232 (3) [2C]		0.0			RSD (20)	
Aroclor-1232 (4) [2C]		0.0			RSD (20)	
Aroclor 1242 [2C]		0.0			RSD (20)	
Aroclor-1242 (1) [2C]		0.0			RSD (20)	
Aroclor-1242 (2) [2C]		0.0			RSD (20)	
Aroclor-1242 (3) [2C]		0.0			RSD (20)	
Aroclor-1242 (4) [2C]		0.0			RSD (20)	
Aroclor 1248 [2C]		0.0			RSD (20)	
Aroclor-1248 (1) [2C]		0.0			RSD (20)	
Aroclor-1248 (2) [2C]		0.0			RSD (20)	
Aroclor-1248 (3) [2C]		0.0			RSD (20)	
Aroclor-1248 (4) [2C]		0.0			RSD (20)	
Aroclor 1254 [2C]		0.0			RSD (20)	
Aroclor-1254 (1) [2C]		0.0			RSD (20)	
Aroclor-1254 (2) [2C]		0.0			RSD (20)	
Aroclor-1254 (3) [2C]		0.0			RSD (20)	
Aroclor-1254 (4) [2C]		0.0			RSD (20)	
Aroclor-1254 (5) [2C]		0.0			RSD (20)	
Aroclor 1260 [2C]	8.365448E-02	4.8			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1) [2C]	5.771356E-02	6.9			RSD (20)	
Aroclor-1260 (2) [2C]	0.1460113	5.5			RSD (20)	
Aroclor-1260 (3) [2C]	3.639443E-02	2.3			RSD (20)	
Aroclor-1260 (4) [2C]	9.449863E-02	4.4			RSD (20)	
Aroclor-1262 (1) [2C]		0.0			RSD (20)	
Aroclor-1262 (2) [2C]		0.0			RSD (20)	
Aroclor-1262 (3) [2C]		0.0			RSD (20)	
Aroclor-1262 (4) [2C]		0.0			RSD (20)	
Aroclor-1268 (1) [2C]		0.0			RSD (20)	
Aroclor-1268 (2) [2C]		0.0			RSD (20)	
Aroclor-1268 (3) [2C]		0.0			RSD (20)	
Aroclor-1268 (4) [2C]		0.0			RSD (20)	
Decachlorobiphenyl [2C]	1.269643	3.3			RSD (20)	
Tetrachlorometaxylene [2C]	1.081498	4.2			RSD (20)	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLA0281

Instrument: ECD7
Calibration ID: GA00061

Printed: 1/26/2023 11:51:52AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLA0281-CAL1	QC		1		L000856	K006953		
SLA0281-CAL2	QC		2		L000859	K006953		
SLA0281-CAL3	QC		3		L000858	K006953		
SLA0281-CAL4	QC		4		L000731	K006953		
SLA0281-CAL5	QC		5		L000857	K006953		
SLA0281-CAL6	QC		6		L000855	K006953		
SLA0281-CAL7	QC		7		L000860	K006953		
SLA0281-CAL8	QC		8		L000861	K006953		
SLA0281-CAL9	QC		9		L000862	K006953		
SLA0281-CALA	QC		10		L000863	K006953		
SLA0281-CALB	QC		11		L000864	K006953		
SLA0281-SCV1	QC		12		K007655	K006953		
SLA0281-SCV2	QC		13		K007656	K006953		
SLA0281-SCV3	QC		14		K007657	K006953		
SLA0281-SCV4	QC		15		K007658	K006953		
SLA0281-SCV5	QC		16		K007659	K006953		
SLA0281-SCV6	QC		17		K007660	K006953		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230124.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	24-JAN-2023 15:39	01242312ECD7.D	1	IB	
2	24-JAN-2023 16:00	01242313ECD7.D	1	0.25PPM AR1660	
3	24-JAN-2023 16:21	01242314ECD7.D	1	0.02PPM AR1660	
4	24-JAN-2023 16:42	01242315ECD7.D	1	0.05PPM AR1660	
5	24-JAN-2023 17:03	01242316ECD7.D	1	1.0PPM AR1660	
6	24-JAN-2023 17:24	01242317ECD7.D	1	0.1PPM AR1660	
7	24-JAN-2023 17:45	01242318ECD7.D	1	0.5PPM AR1660	
8	24-JAN-2023 18:06	01242319ECD7.D	1	0.25PPM 1242	
9	24-JAN-2023 18:27	01242320ECD7.D	1	0.25PPM 1248	
10	24-JAN-2023 18:48	01242321ECD7.D	1	0.25PPM 1254	
11	24-JAN-2023 19:09	01242322ECD7.D	1	0.25PPM 2162	
12	24-JAN-2023 19:30	01242323ECD7.D	1	0.25PPM 3268	
13	24-JAN-2023 19:51	01242324ECD7.D	1	AR1660 SCV	
14	24-JAN-2023 20:12	01242325ECD7.D	1	AR1242 SCV	
15	24-JAN-2023 20:33	01242326ECD7.D	1	AR1248 SCV	
16	24-JAN-2023 20:54	01242327ECD7.D	1	AR1254 SCV	
17	24-JAN-2023 21:15	01242328ECD7.D	1	AR2162 SCV	
18	24-JAN-2023 21:36	01242329ECD7.D	1	AR3268 SCV	
19	24-JAN-2023 21:57	01242330ECD7.D	1	DDTS	
20	24-JAN-2023 22:18	01242331ECD7.D	1	DDT BD	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230124.b

ARI Job No.: IB Method: PCB.m Instrument: ecd7.i Date: 24-JAN-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1539	01242312ECD7.D	IB		1	NO MANUAL INTEGRATION
1600	01242313ECD7.D	0.25PPM	AR1660	1	NO MANUAL INTEGRATION
1621	01242314ECD7.D	0.02PPM	AR1660	1	NO MANUAL INTEGRATION
1642	01242315ECD7.D	0.05PPM	AR1660	1	NO MANUAL INTEGRATION
1703	01242316ECD7.D	1.0PPM	AR1660	1	NO MANUAL INTEGRATION
1724	01242317ECD7.D	0.1PPM	AR1660	1	NO MANUAL INTEGRATION
1745	01242318ECD7.D	0.5PPM	AR1660	1	NO MANUAL INTEGRATION
1806	01242319ECD7.D	0.25PPM	1242	1	NO MANUAL INTEGRATION
1827	01242320ECD7.D	0.25PPM	1248	1	NO MANUAL INTEGRATION
1848	01242321ECD7.D	0.25PPM	1254	1	NO MANUAL INTEGRATION
1909	01242322ECD7.D	0.25PPM	2162	1	NO MANUAL INTEGRATION
1930	01242323ECD7.D	0.25PPM	3268	1	NO MANUAL INTEGRATION
1951	01242324ECD7.D	AR1660	SCV	1	NO MANUAL INTEGRATION
2012	01242325ECD7.D	AR1242	SCV	1	NO MANUAL INTEGRATION
2033	01242326ECD7.D	AR1248	SCV	1	NO MANUAL INTEGRATION
2054	01242327ECD7.D	AR1254	SCV	1	NO MANUAL INTEGRATION
2115	01242328ECD7.D	AR2162	SCV	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230124.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2136	01242329ECD7.D	AR3268 SCV		1	NO MANUAL INTEGRATION
2157	01242330ECD7.D	DDTS		1	NO MANUAL INTEGRATION
2218	01242331ECD7.D	DDT BD		1	NO MANUAL INTEGRATION

Security Status Report

Date: 26-Jan-2023 11:55

01242301ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242302ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242303ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242304ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242305ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242306ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242307ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242308ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242309ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242310ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242311ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242312ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242313ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242314ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242315ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242316ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242317ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242318ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242319ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242320ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242321ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242322ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242323ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242324ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242325ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242326ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242327ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242328ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242329ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242330ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242331ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00
End Cal Date : 24-JAN-2023 21:57
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m
Last Edit : 25-Jan-2023 10:02 JoshuaR
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\230124.b\01242314ECD7.D
Level 2: \\target\share\chem4\ecd7.i\230124.b\01242315ECD7.D
Level 3: \\target\share\chem4\ecd7.i\230124.b\01242317ECD7.D
Level 4: \\target\share\chem4\ecd7.i\230124.b\01242313ECD7.D
Level 5: \\target\share\chem4\ecd7.i\230124.b\01242318ECD7.D
Level 6: \\target\share\chem4\ecd7.i\230124.b\01242316ECD7.D
Level 7: \\target\share\chem4\ecd7.i\230124.b\01242323ECD7.D
Level 8: \\target\share\chem4\ecd7.i\230124.b\01242330ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00591	+++++	0.00591	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01209	+++++	0.01209	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02807	+++++	0.02807	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02450	+++++	0.02450	0.000

(2)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.08017	+++++					0.08017	0.000	
(3)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.02382	+++++					0.02382	0.000	
(4)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.03598	+++++					0.03598	0.000	
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.00369	+++++					0.00369	0.000	

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00
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Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m
Last Edit : 25-Jan-2023 10:02 JoshuaR
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00832	+++++	0.00832	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.04160	+++++	0.04160	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.01781	+++++	0.01781	0.000
7 Aroclor-1016(1)	0.02947	0.03102	0.03310	0.03018	0.02824	0.02635	+++++	+++++	0.02973	7.802
(2)	0.09270	0.09812	0.10598	0.10203	0.09861	0.09356	+++++	+++++	0.09850	5.108
(3)	0.04878	0.04900	0.05127	0.04400	0.04091	0.03796	+++++	+++++	0.04532	11.523
(4)	0.02676	0.02802	0.03162	0.03050	0.02939	0.02864	+++++	+++++	0.02915	5.988
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++				

	0.04002	+++++				0.04002	0.000	
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05105	+++++				0.05105	0.000	
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.09765	+++++				0.09765	0.000	
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04833	+++++				0.04833	0.000	

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00
End Cal Date : 24-JAN-2023 21:57
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m
Last Edit : 25-Jan-2023 10:02 JoshuaR
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08153	+++++					0.08153	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03481	+++++					0.03481	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05224	+++++					0.05224	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10237	+++++					0.10237	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06657	+++++					0.06657	0.000
9 Aroclor-1260(1)	0.04727	0.04543	0.04428	0.05181	0.04013	0.04040		
	+++++	+++++					0.04489	9.818
(2)	0.04940	0.04636	0.04450	0.05350	0.04100	0.04208		
	+++++	+++++					0.04614	10.182
(3)	0.13737	0.12829	0.11740	0.13317	0.10468	0.10790		

	+++++	+++++					0.12147	11.161
(4)	0.07198	0.06638	0.05997	0.06473	0.05485	0.05864		
	+++++	+++++					0.06276	9.803
(5)	0.03296	0.02981	0.02640	0.02723	0.02328	0.02447		
	+++++	+++++					0.02736	13.015
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03235	+++++					0.03235	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

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End Cal Date : 24-JAN-2023 21:57
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m
Last Edit : 25-Jan-2023 10:02 JoshuaR
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
(2)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.05106	+++++							0.05106	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.05544	+++++							0.05544	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.05052	+++++							0.05052	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.13216	+++++							0.13216	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.13180	+++++							0.13180	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.10919	+++++							0.10919	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.32374	+++++							0.32374	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++				

	+++++	904					904	0.000	
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	1034					1034	0.000	
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	2557					2557	0.000	
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	1539					1539	0.000	

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00
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Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m
Last Edit : 25-Jan-2023 10:02 JoshuaR
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1484	1484	0.000
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	1.10039	1.10217	1.21997	1.14965	1.11792	1.09461	+++++	+++++	1.13079	4.246
$ 13 Decachlorobiphenyl	0.86442	0.90302	0.93081	0.84813	0.79576	0.79145	+++++	+++++	0.85560	6.556

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00
End Cal Date : 24-JAN-2023 21:57
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m
Last Edit : 25-Jan-2023 09:58 JoshuaR
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242314ECD7.D
Level 2: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242315ECD7.D
Level 3: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242317ECD7.D
Level 4: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242313ECD7.D
Level 5: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242318ECD7.D
Level 6: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242316ECD7.D
Level 7: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242323ECD7.D
Level 8: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242330ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
1 Aroclor-1221 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00586	+++++	0.00586	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01285	+++++	0.01285	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02169	+++++	0.02169	0.000
4 Aroclor-1232 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00356	+++++	0.00356	0.000

	(2)	+++++	+++++	+++++	+++++	+++++	+++++		
		0.01991	+++++					0.01991	0.000
	(3)	+++++	+++++	+++++	+++++	+++++	+++++		
		0.04054	+++++					0.04054	0.000
	(4)	+++++	+++++	+++++	+++++	+++++	+++++		
		0.01126	+++++					0.01126	0.000
3	Aroclor-1242 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
		0.03499	+++++					0.03499	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00
End Cal Date : 24-JAN-2023 21:57
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m
Last Edit : 25-Jan-2023 09:58 JoshuaR
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07771	+++++					0.07771	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02434	+++++					0.02434	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03226	+++++					0.03226	0.000
6 Aroclor-1248 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03616	+++++					0.03616	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03892	+++++					0.03892	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04756	+++++					0.04756	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05882	+++++					0.05882	0.000
7 Aroclor-1016 [2C](1)	0.04424	0.04724	0.04678	0.04314	0.04099	0.03795		

	+++++	+++++				0.04339		8.142
(2)	0.08512	0.09615	0.10417	0.09824	0.09554	0.09130		
	+++++	+++++				0.09509		6.775
(3)	0.02919	0.04165	0.04478	0.04029	0.03925	0.03764		
	+++++	+++++				0.03880		13.639
(4)	0.02850	0.03377	0.03419	0.03004	0.02878	0.02724		
	+++++	+++++				0.03042		9.538

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00
End Cal Date : 24-JAN-2023 21:57
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m
Last Edit : 25-Jan-2023 09:58 JoshuaR
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
8 Aroclor-1254 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05804	+++++					0.05804	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04691	+++++					0.04691	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10233	+++++					0.10233	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10233	+++++					0.10233	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05700	+++++					0.05700	0.000
10 Aroclor-1262 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07830	+++++					0.07830	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06658	+++++					0.06658	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		

	0.07090	+++++					0.07090	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.11355	+++++					0.11355	0.000
9 Aroclor-1260 [2C] (1)	0.06075	0.05974	0.05912	0.06129	0.05231	0.05307		
	+++++	+++++					0.05771	6.881
(2)	0.14748	0.15106	0.15181	0.15367	0.13396	0.13809		
	+++++	+++++					0.14601	5.547

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00
End Cal Date : 24-JAN-2023 21:57
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m
Last Edit : 25-Jan-2023 09:58 JoshuaR
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(3)	0.03683	0.03729	0.03582	0.03647	0.03501	0.03694		
	*****	*****					0.03639	2.314
(4)	0.09319	0.09919	0.09881	0.09587	0.08985	0.09008		
	*****	*****					0.09450	4.373
11 Aroclor-1268 [2C] (1)	*****	*****	*****	*****	*****	*****		
	0.18682	*****					0.18682	0.000
(2)	*****	*****	*****	*****	*****	*****		
	0.19880	*****					0.19880	0.000
(3)	*****	*****	*****	*****	*****	*****		
	0.16548	*****					0.16548	0.000
(4)	*****	*****	*****	*****	*****	*****		
	0.51118	*****					0.51118	0.000
41 2,4-DDE [2C]	*****	*****	*****	*****	*****	*****		
	*****	1528					1528	0.000
42 2,4-DDD [2C]	*****	*****	*****	*****	*****	*****		

	+++++	866					866	0.000
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	863					863	0.000
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1162					1162	0.000
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1277					1277	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00
End Cal Date : 24-JAN-2023 21:57
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m
Last Edit : 25-Jan-2023 09:58 JoshuaR
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 2 Tetrachloro-m-xylene [2C]	1.04342	1.10521	1.15322	1.09675	1.05187	1.03851	+++++	+++++	1.08150	4.159
$ 13 Decachlorobiphenyl [2C]	1.20915	1.27122	1.31190	1.29209	1.22961	1.30389	+++++	+++++	1.26964	3.291

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230124.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	01242313ECD7	01242314ECD7	01242315ECD7	01242316ECD7	01242317ECD7	01242318ECD7
INJ.DATE:	24-JAN-2023	24-JAN-2023	24-JAN-2023	24-JAN-2023	24-JAN-2023	24-JAN-2023
INJ.TIME:	16:00	16:21	16:42	17:03	17:24	17:45

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	3.493	3.492	3.492	3.492	3.492	3.493	3.492	3.392-3.592	3.492	0.000
$ 1 Tetrachloro-m-xylene	5.810	5.809	5.809	5.809	5.808	5.809	5.809	5.709-5.909	5.809	0.001
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	4.733	4.633-4.833	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	7.271	7.171-7.371	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	4.733	4.633-4.833	+++++	+++++
7 Aroclor-1016	7.272	7.272	7.271	7.270	7.271	7.270	7.270	7.170-7.370	7.271	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	8.406	8.306-8.505	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	9.299	9.199-9.399	+++++	+++++
9 Aroclor-1260	11.047	11.049	11.048	11.043	11.046	11.044	11.044	10.944-11.144	11.046	0.002
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.832	10.732-10.932	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	12.245	12.145-12.345	+++++	+++++
$ 13 Decachlorobiphenyl	13.894	13.892	13.893	13.892	13.892	13.891	13.892	13.792-13.992	13.892	0.001
* 12 IS-HBBP	14.267	14.265	14.265	14.264	14.264	14.264	14.266	14.166-14.366	14.265	0.001
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.263	9.213-9.313	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.805	9.755-9.855	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.296	10.246-10.346	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.687	9.587-9.787	+++++	+++++

Reviewer 1 _____ Date:_____
Reviewer 2 _____ Date:_____

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230124.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	10.281	10.181-10.381	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.758	10.658-10.858	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.842	1.742-1.942	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	6.708	6.608-6.808	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230124.b\230124.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	01242313ECD7	01242314ECD7	01242315ECD7	01242316ECD7	01242317ECD7	01242318ECD7
INJ.DATE:	24-JAN-2023	24-JAN-2023	24-JAN-2023	24-JAN-2023	24-JAN-2023	24-JAN-2023
INJ.TIME:	16:00	16:21	16:42	17:03	17:24	17:45

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB [2C]	3.928	3.929	3.929	3.929	3.928	3.929	3.929	3.829-4.029	3.929	0.001
$ 2 Tetrachloro-m-xylene [	5.685	5.686	5.687	5.685	5.686	5.686	5.687	5.587-5.787	5.686	0.001
1 Aroclor-1221 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.959	4.859-5.059	+++++	+++++
4 Aroclor-1232 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.960	4.860-5.060	+++++	+++++
3 Aroclor-1242 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	7.256	7.156-7.356	+++++	+++++
6 Aroclor-1248 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	8.305	8.205-8.405	+++++	+++++
7 Aroclor-1016 [2C]	7.255	7.257	7.256	7.254	7.255	7.254	7.255	7.155-7.355	7.255	0.001
8 Aroclor-1254 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.448	9.348-9.548	+++++	+++++
10 Aroclor-1262 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	11.200	11.100-11.300	+++++	+++++
9 Aroclor-1260 [2C]	11.653	11.655	11.655	11.653	11.655	11.653	11.653	11.553-11.753	11.654	0.001
11 Aroclor-1268 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	12.434	12.334-12.534	+++++	+++++
$ 13 Decachlorobiphenyl [2C	14.120	14.121	14.120	14.122	14.119	14.120	14.120	14.020-14.220	14.120	0.001
* 12 IS-HBBP [2C]	15.008	15.008	15.009	15.007	15.008	15.009	15.009	14.909-15.109	15.008	0.000
41 2,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.912	9.862-9.962	+++++	+++++
42 2,4-DDD [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.538	9.488-9.588	+++++	+++++
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.211	10.111-10.311	+++++	+++++
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.666	10.566-10.766	+++++	+++++

Reviewer 1 _____ Date:_____
Reviewer 2 _____ Date:_____

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230124.b\230124.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	11.095	10.995-11.195	+++++	+++++
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.703	1.603-1.803	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	7.178	7.078-7.278	+++++	+++++

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242312ECD7.D
Data file 2: /230124.b/230124.b/01242312ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 24-JAN-2023 15:39
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.822	0.013	272340	5.680	-0.007	171573	36.5	36.4	0.1	Tetrachloro-m-xylene
13.900	0.008	252989	14.120	-0.000	223176	37.3	38.6	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	528068	4.9
Hexabromobiphenyl	647433	634177	-2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	348301	3.4
Hexabromobiphenyl	382032	364259	-4.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	7.852	0.064	162	0.5	3	---			0.0
Aroclor-1016	4	8.431	0.027	495	2.6	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.317	0.019	1908	34.1
Aroclor-1221	3	---			0.0	3	6.630	0.007	299	3.2
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	7.208	-0.049	26	0.3
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	8.730	0.017	33	0.7
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	7.208	-0.048	26	0.2
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	8.431	0.024	495	3.1	3	9.151	-0.008	93	0.9
Aroclor-1242	4	8.630	0.049	1101	4.6	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.431	0.025	495	1.9	1	---			0.0
Aroclor-1248	2	8.630	0.050	1101	3.3	2	8.730	0.018	33	0.2
Aroclor-1248	3	---			0.0	3	9.151	-0.005	93	0.4
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	9.474	0.026	9010	35.7
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	9.571	-0.099	114	0.3	3	---			0.0
Aroclor-1254	4	9.770	-0.038	104	0.2	4	---			0.0
Aroclor-1254	5	---			0.0	5	10.525	-0.044	482	1.9
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	11.066	0.023	262	0.7	1	11.703	0.050	189	0.7
Aroclor-1260	2	---			0.0	2	11.832	-0.086	97	0.1
Aroclor-1260	3	11.803	0.069	4470	4.6	3	12.414	-0.022	2209	13.3
Aroclor-1260	4	12.089	-0.051	661	1.3	4	---			0.0
Aroclor-1260	5	12.282	0.038	5183	23.9	NS	---			----
	Total Col1Ave (4 peaks):				7.7	Total Col2Ave (3 peaks):				4.7 RPD = 47*
	Corrected Ave (3 peaks):				2.2	Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.789	-0.043	941	3.7	1	---			0.0
Aroclor-1262	2	12.282	0.036	5183	12.8	2	11.703	0.051	189	0.6
Aroclor-1262	3	---			0.0	3	12.414	-0.020	2209	6.8
Aroclor-1262	4	12.982	-0.007	2811	7.0	4	---			0.0
	Total Col1Ave (3 peaks):				7.8	Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	12.282	0.037	5183	4.9	1	12.414	-0.020	2209	2.6
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.705	0.006	3092	3.6	3	12.894	0.001	724	1.0
Aroclor-1268	4	13.500	0.011	13310	5.2	4	13.708	-0.000	2974	1.3
	Total Col1Ave (3 peaks):				4.6	Total Col2Ave (3 peaks):				1.6 RPD = 96*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 89790 Col1 Total PCB = 0.0 ppm*

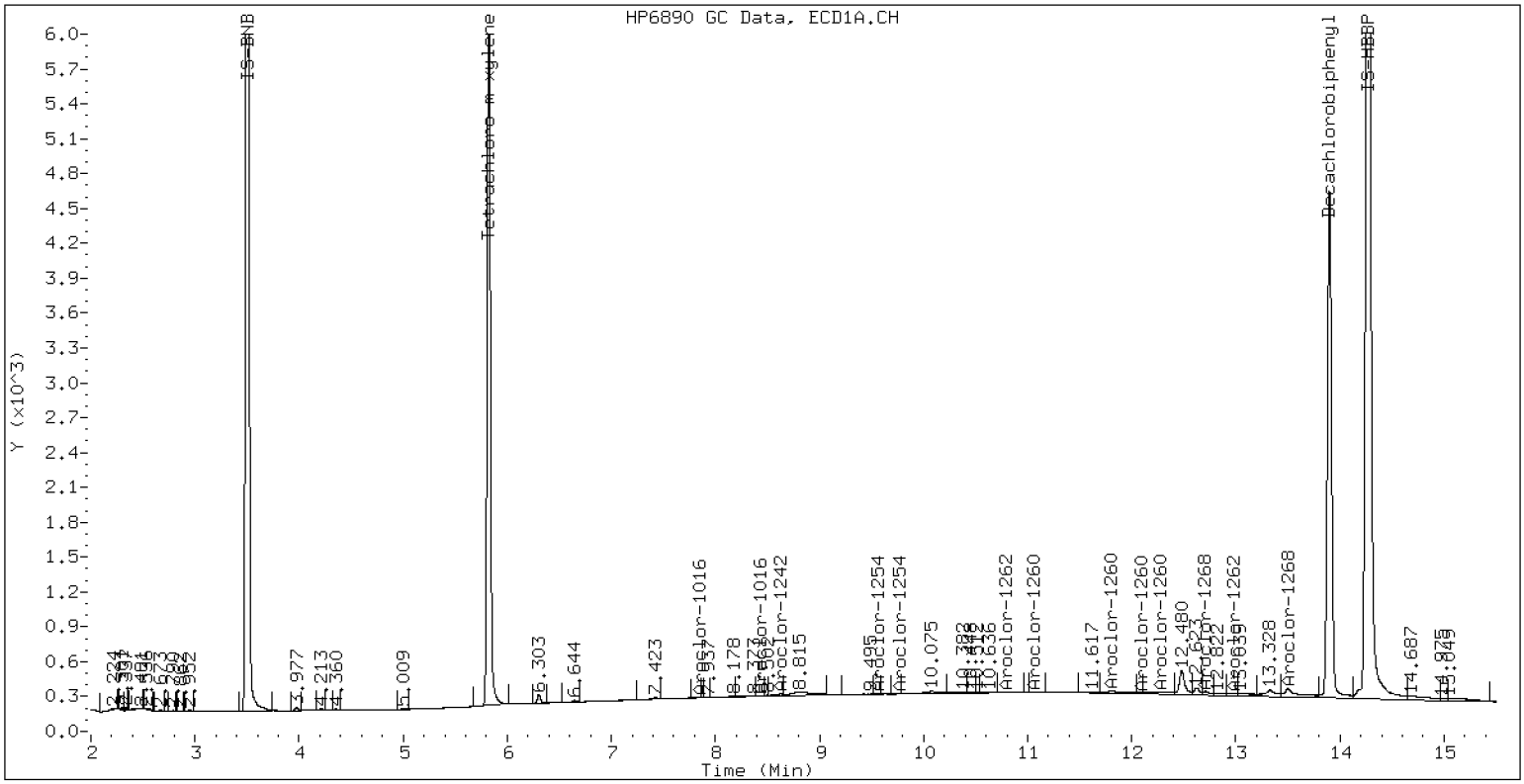
Total PCB Area Col2 (5.787 - 14.020) = 40020 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

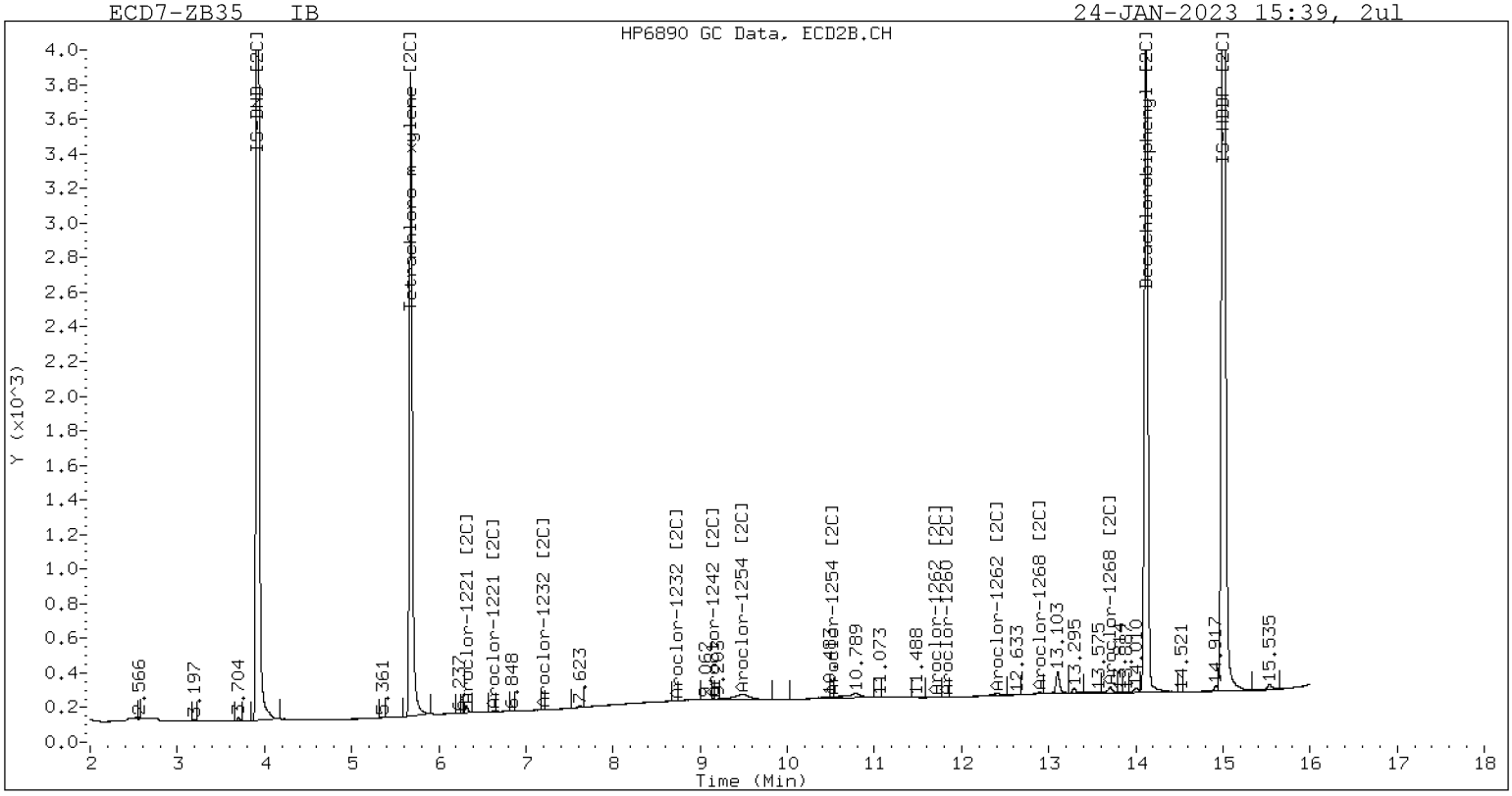
PCB Dual Column Chromatograms

ECD7-ZB5 IB 24-JAN-2023 15:39, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 IB 24-JAN-2023 15:39, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242313ECD7.D
Data file 2: /230124.b/230124.b/01242313ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPM AR1660
Client ID:
Injection Date: 24-JAN-2023 16:00
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.810	0.001	289321	5.685	-0.002	184754	40.7	40.6	0.3	Tetrachloro-m-xylene
13.894	0.002	274555	14.120	0.000	246809	39.7	40.7	2.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503318	0.0
Hexabromobiphenyl	647433	647433	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	336911	0.0
Hexabromobiphenyl	382032	382032	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	47467	253.8	1	7.255	0.000	45421	248.6
Aroclor-1016	2	7.654	0.004	160487	259.0	2	7.851	0.000	103429	258.3
Aroclor-1016	3	7.791	0.003	69204	242.7	3	8.050	0.000	42418	259.6
Aroclor-1016	4	8.406	0.003	47967	261.5	4	8.305	0.000	31623	246.8
Total Col1Ave (4 peaks):					254.2	Total Col2Ave (4 peaks):				253.3 RPD = 0
Corrected Ave (3 peaks):					251.8	Corrected Ave (3 peaks):				251.2 RPD = 0
CalAmt %D:					1.7	CalAmt %D:				1.3
Aroclor-1260	1	11.047	0.003	104831	288.6	1	11.653	0.000	73177	265.5
Aroclor-1260	2	11.362	0.002	108243	289.9	2	11.918	0.000	183459	263.1
Aroclor-1260	3	11.738	0.004	269428	274.1	3	12.436	0.000	43542	250.5
Aroclor-1260	4	12.142	0.002	130966	257.9	4	12.502	0.000	114455	253.6
Aroclor-1260	5	12.246	0.002	55096	248.9	NS	---			----
Total Col1Ave (5 peaks):					271.8	Total Col2Ave (4 peaks):				258.2 RPD = 5
Corrected Ave (4 peaks):					267.3	Corrected Ave (3 peaks):				255.8 RPD = 4
CalAmt %D:					8.7	CalAmt %D:				3.3

Total PCB Area Col1 (5.909 - 13.792) = 2930230 Col1 Total PCB = 0.5 ppm*

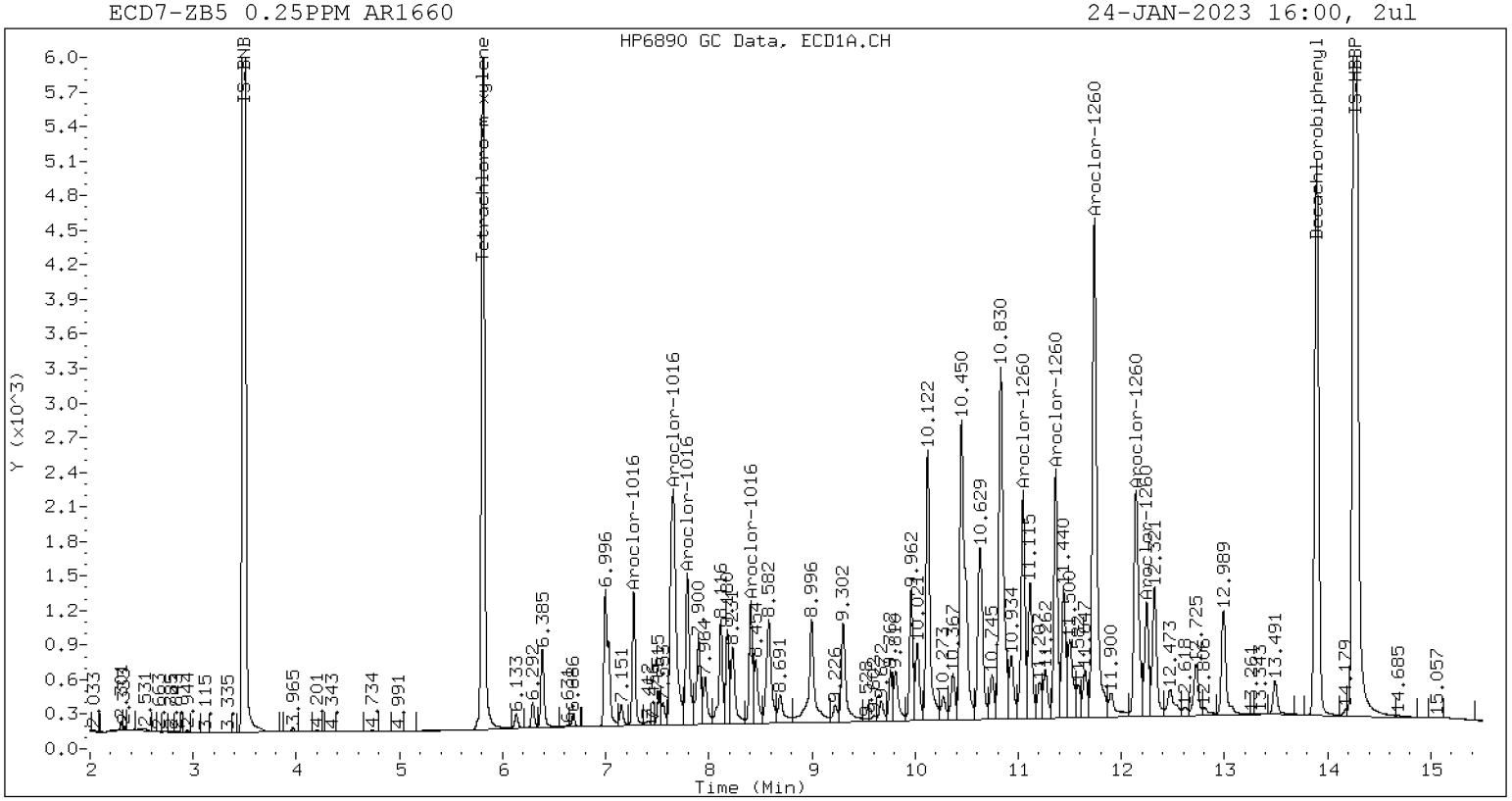
Total PCB Area Col2 (5.787 - 14.020) = 1777050 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

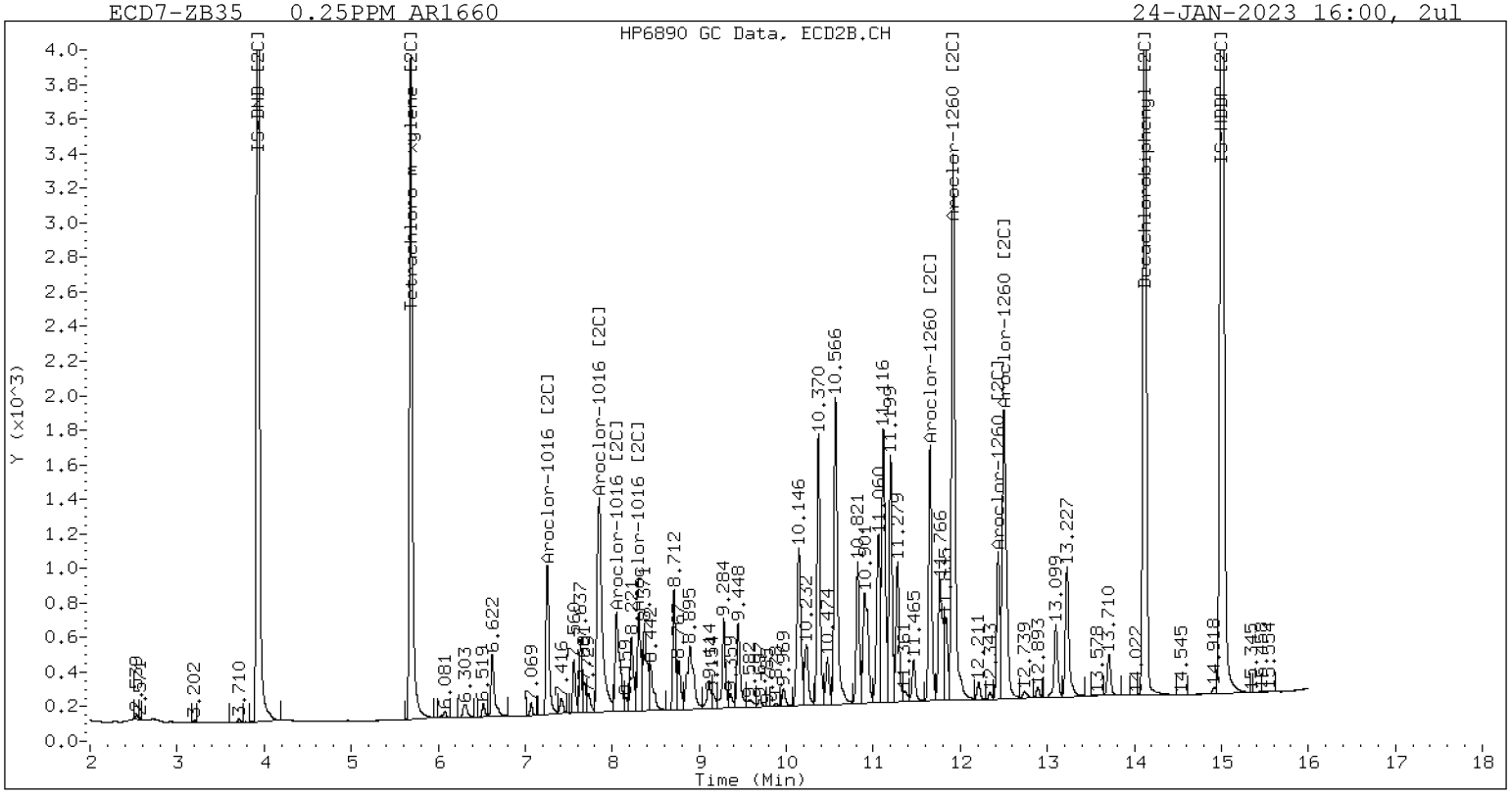
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM AR1660 24-JAN-2023 16:00, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM AR1660 24-JAN-2023 16:00, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242314ECD7.D
Data file 2: /230124.b/230124.b/01242314ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPM AR1660
Client ID:
Injection Date: 24-JAN-2023 16:21
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.000	21307	5.686	-0.000	13767	3.1	3.1	0.9	Tetrachloro-m-xylene
13.892	0.000	23054	14.121	0.001	19257	3.2	3.0	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	484077	-3.8
Hexabromobiphenyl	647433	666748	3.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	329852	-2.1
Hexabromobiphenyl	382032	398153	4.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	3567	19.8	1	7.257	0.002	3648	20.4
Aroclor-1016	2	7.663	0.012	11219	18.8	2	7.858	0.007	7019	17.9
Aroclor-1016	3	7.796	0.008	5903	21.5	3	8.058	0.007	2407	15.0
Aroclor-1016	4	8.410	0.006	3238	18.4	4	8.308	0.003	2350	18.7
Total Col1Ave (4 peaks):					19.6	Total Col2Ave (4 peaks):				18.0 RPD = 9
Corrected Ave (3 peaks):					19.0	Corrected Ave (3 peaks):				17.2 RPD = 10
CalAmt %D:					-1.8	CalAmt %D:				-9.9
Aroclor-1260	1	11.049	0.005	7880	21.1	1	11.655	0.002	6047	21.1
Aroclor-1260	2	11.365	0.005	8234	21.4	2	11.923	0.005	14680	20.2
Aroclor-1260	3	11.742	0.008	22898	22.6	3	12.438	0.002	3666	20.2
Aroclor-1260	4	12.149	0.009	11998	22.9	4	12.506	0.004	9276	19.7
Aroclor-1260	5	12.247	0.003	5494	24.1	NS	---			----
Total Col1Ave (5 peaks):					22.4	Total Col2Ave (4 peaks):				20.3 RPD = 10
Corrected Ave (4 peaks):					22.0	Corrected Ave (3 peaks):				20.1 RPD = 9
CalAmt %D:					12.1	CalAmt %D:				1.5

Total PCB Area Col1 (5.909 - 13.792) = 256211 Col1 Total PCB = 0.0 ppm*

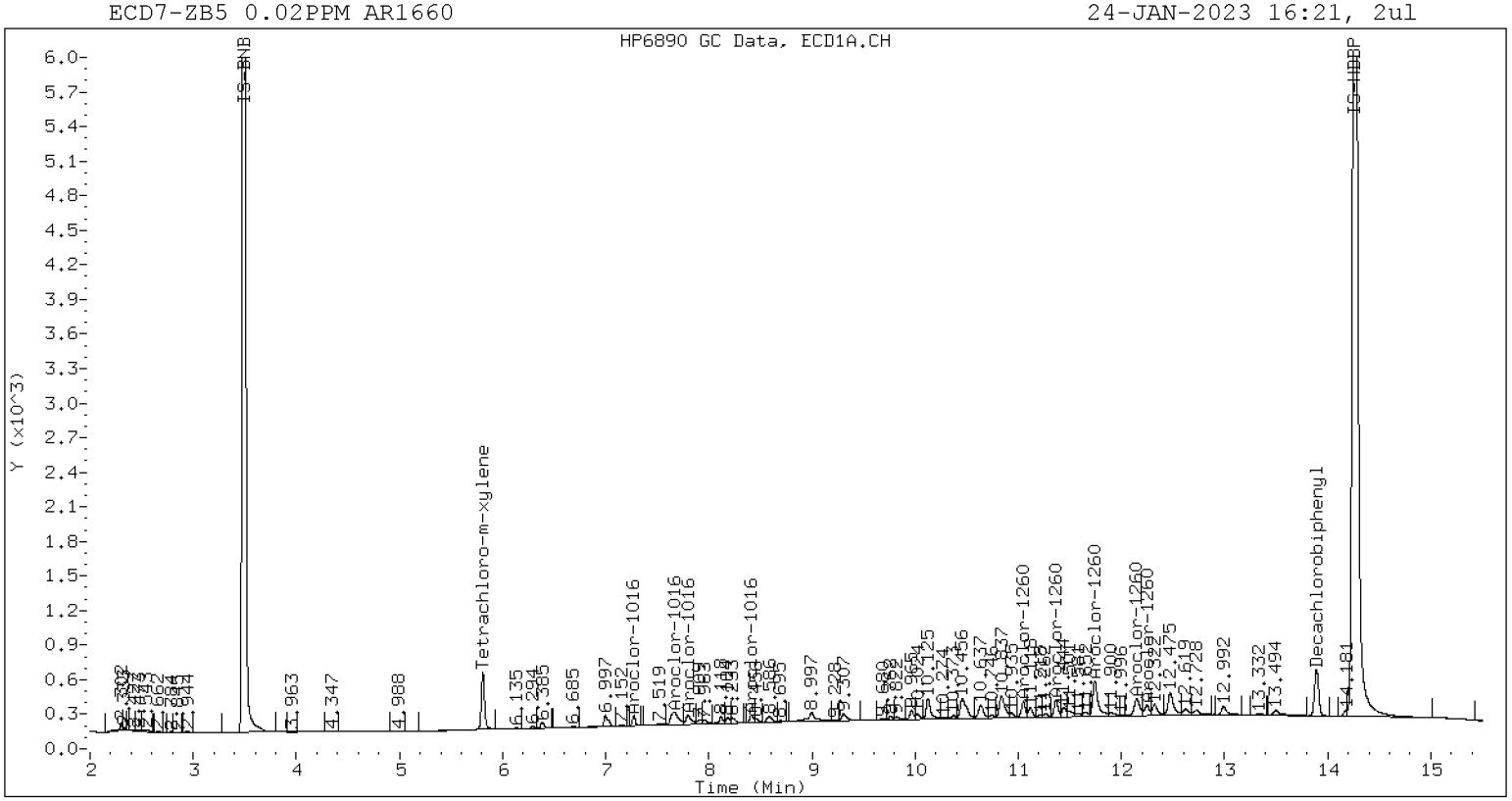
Total PCB Area Col2 (5.787 - 14.020) = 146434 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

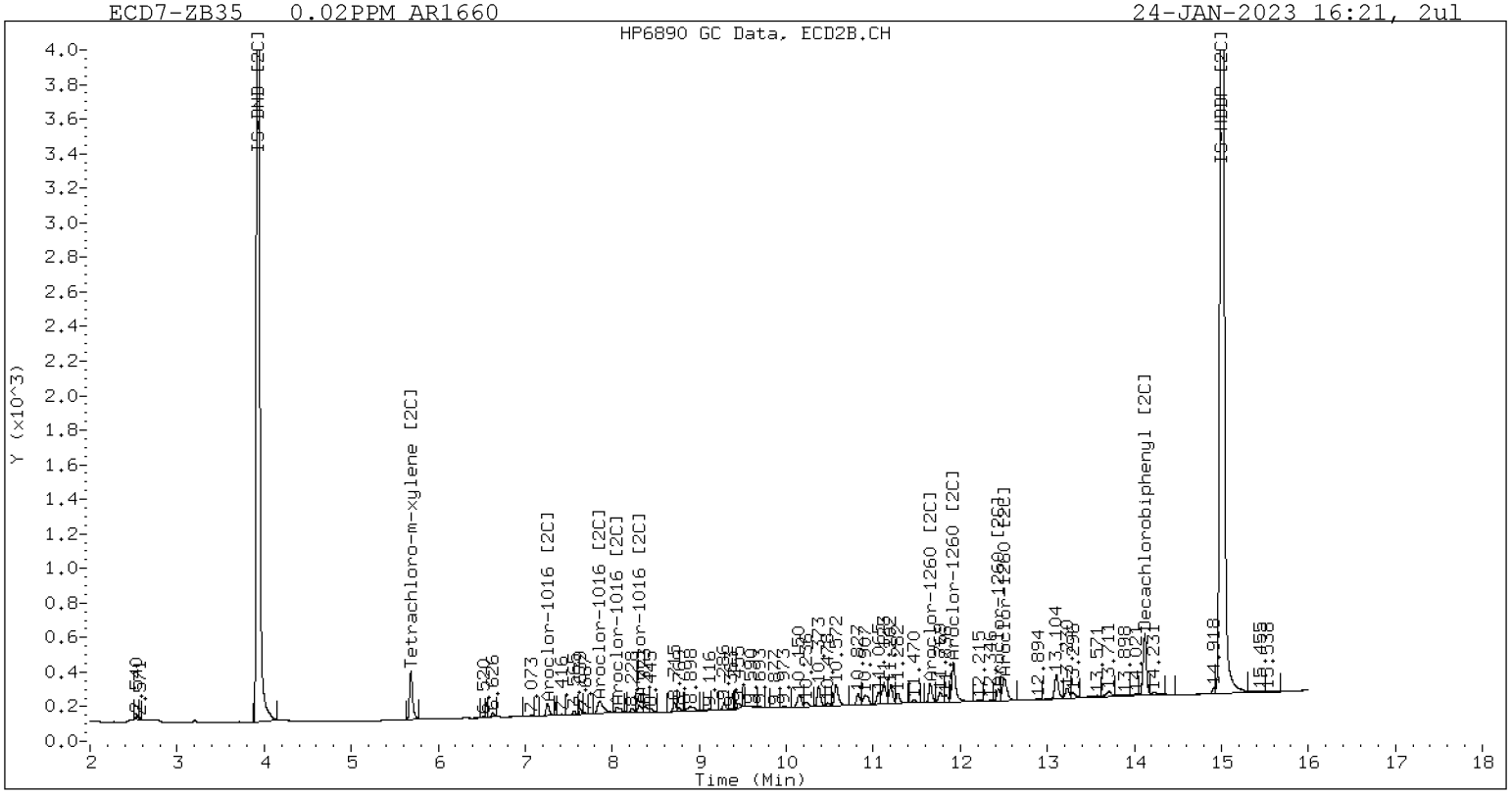
PCB Dual Column Chromatograms

ECD7-ZB5 0.02PPM AR1660 24-JAN-2023 16:21, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.02PPM AR1660 24-JAN-2023 16:21, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242315ECD7.D
Data file 2: /230124.b/230124.b/01242315ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPM AR1660
Client ID:
Injection Date: 24-JAN-2023 16:42
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	53503	5.687	-0.000	36922	7.8	8.2	4.7	Tetrachloro-m-xylene
13.893	0.001	62544	14.120	-0.000	52782	8.4	8.0	5.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	485432	-3.6
Hexabromobiphenyl	647433	692613	7.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	334072	-0.8
Hexabromobiphenyl	382032	415206	8.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.002	9412	52.2	1	7.256	0.001	9864	54.4
Aroclor-1016	2	7.657	0.007	29769	49.8	2	7.855	0.004	20076	50.6
Aroclor-1016	3	7.795	0.006	14866	54.1	3	8.055	0.004	8697	53.7
Aroclor-1016	4	8.409	0.005	8500	48.1	4	8.308	0.003	7052	55.5
Total Col1Ave (4 peaks):					51.0	Total Col2Ave (4 peaks):				53.5 RPD = 5
Corrected Ave (3 peaks):					50.0	Corrected Ave (3 peaks):				52.9 RPD = 6
CalAmt %D:					2.0	CalAmt %D:				7.1
Aroclor-1260	1	11.048	0.005	19665	50.6	1	11.655	0.002	15502	51.8
Aroclor-1260	2	11.364	0.003	20070	50.2	2	11.921	0.003	39201	51.7
Aroclor-1260	3	11.740	0.006	55534	52.8	3	12.439	0.003	9678	51.2
Aroclor-1260	4	12.145	0.006	28735	52.9	4	12.506	0.004	25741	52.5
Aroclor-1260	5	12.246	0.002	12906	54.5	NS	---			----
Total Col1Ave (5 peaks):					52.2	Total Col2Ave (4 peaks):				51.8 RPD = 1
Corrected Ave (4 peaks):					51.6	Corrected Ave (3 peaks):				51.6 RPD = 0
CalAmt %D:					4.4	CalAmt %D:				3.6

Total PCB Area Col1 (5.909 - 13.792) = 600311 Col1 Total PCB = 0.1 ppm*

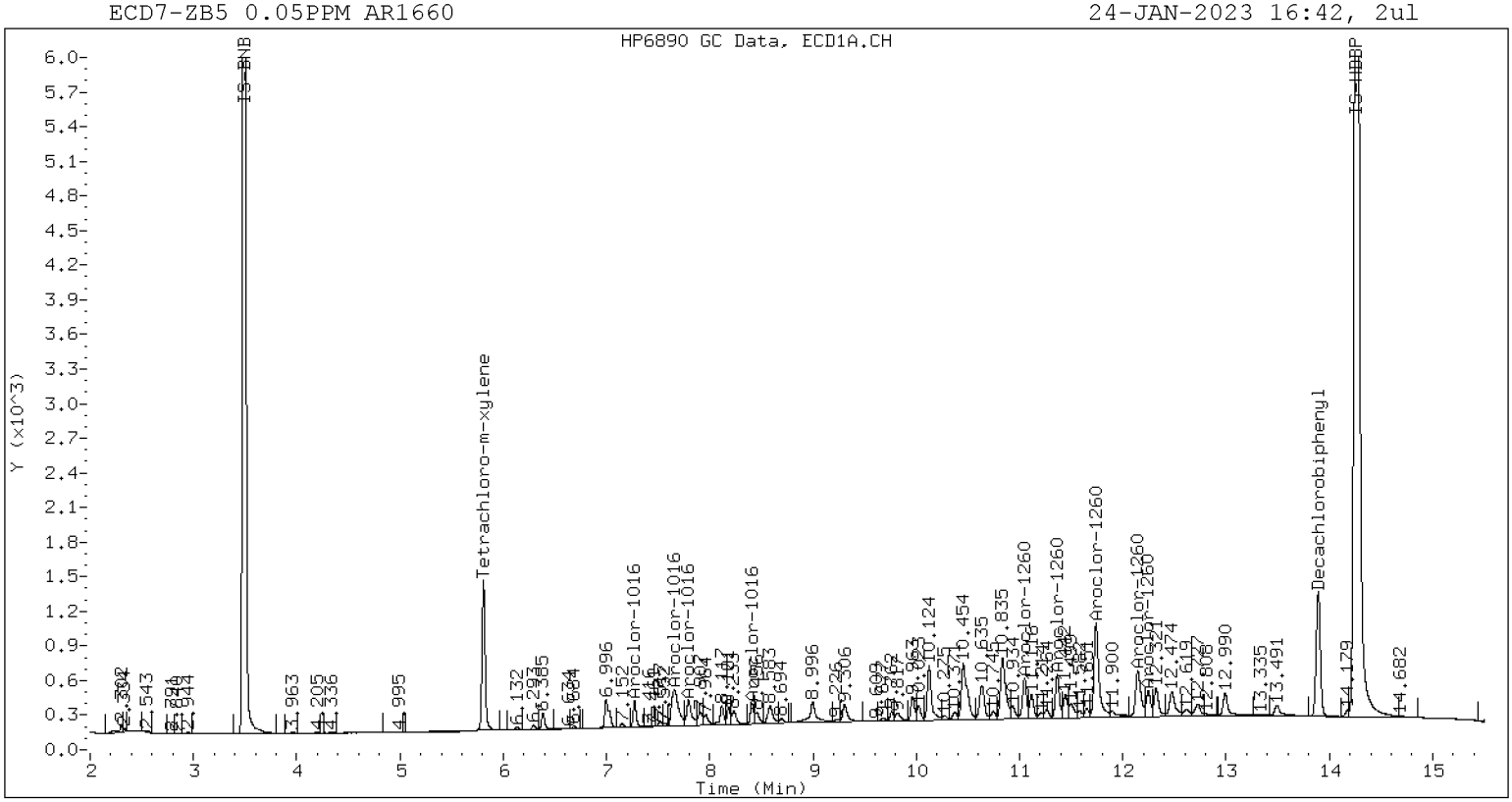
Total PCB Area Col2 (5.787 - 14.020) = 383666 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

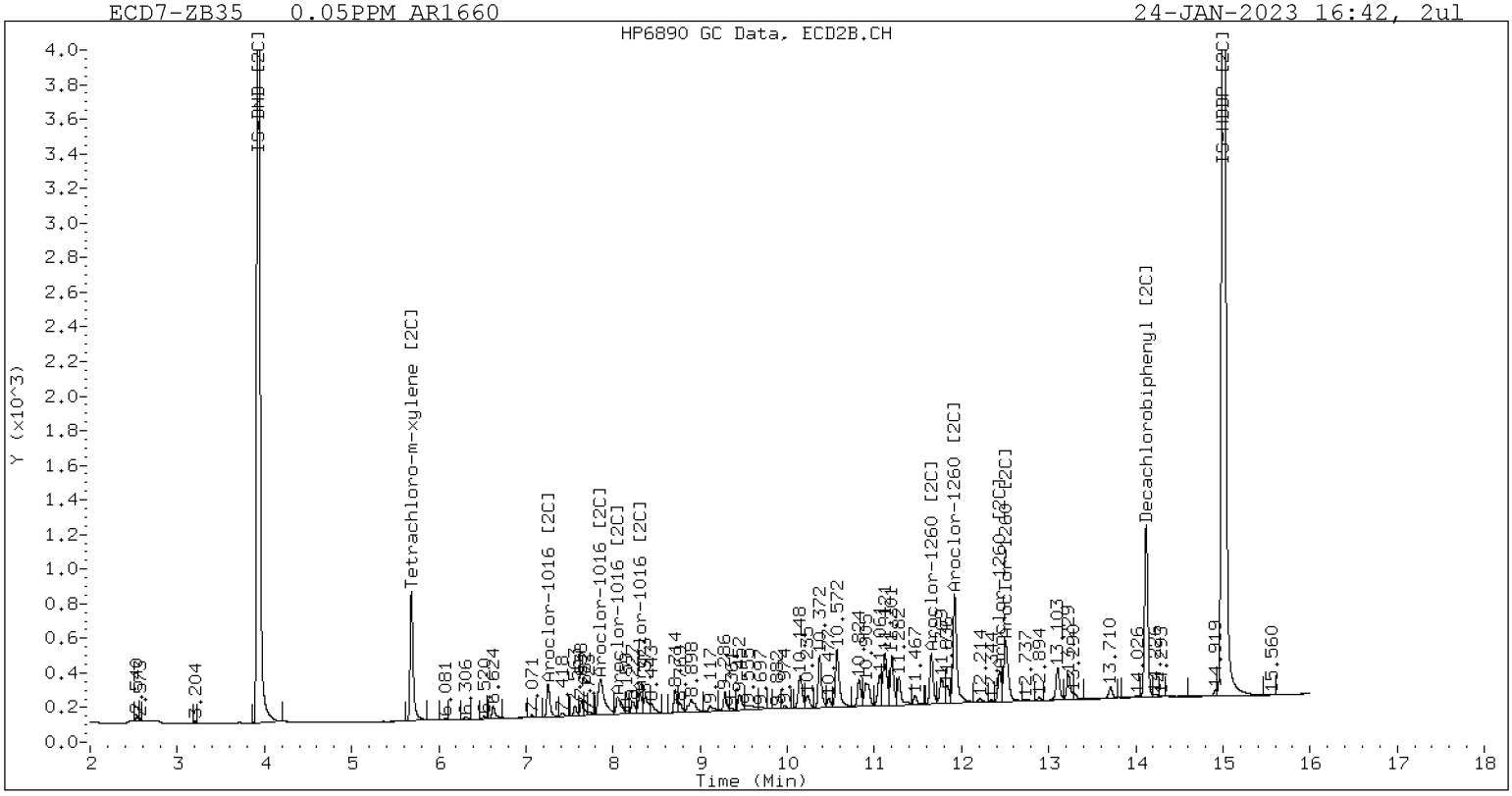
PCB Dual Column Chromatograms

ECD7-ZB5 0.05PPM AR1660 24-JAN-2023 16:42, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.05PPM AR1660 24-JAN-2023 16:42, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242316ECD7.D
Data file 2: /230124.b/230124.b/01242316ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1.0PPM AR1660
Client ID:
Injection Date: 24-JAN-2023 17:03
Report Date: 01/25/2023 11:34
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.000	1033475	5.685	-0.002	672800	154.9	153.6	0.8	Tetrachloro-m-xylene
13.892	0.000	1125556	14.122	0.002	1078539	148.0	164.3	10.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	472076	-6.2
Hexabromobiphenyl	647433	711071	9.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	323926	-3.9
Hexabromobiphenyl	382032	413585	8.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.270	-0.000	155505	886.5	1	7.254	-0.001	153668	874.6
Aroclor-1016	2	7.649	-0.001	552101	949.8	2	7.849	-0.002	369677	960.2
Aroclor-1016	3	7.786	-0.002	223973	837.5	3	8.048	-0.003	152418	970.1
Aroclor-1016	4	8.402	-0.001	169003	982.4	4	8.304	-0.001	110311	895.6
Total Col1Ave (4 peaks):					914.1	Total Col2Ave (4 peaks):				925.1 RPD = 1
Corrected Ave (3 peaks):					891.3	Corrected Ave (3 peaks):				910.1 RPD = 2
CalAmt %D:					-8.6	CalAmt %D:				-7.5
Aroclor-1260	1	11.043	-0.001	359074	900.0	1	11.653	-0.001	274365	919.6
Aroclor-1260	2	11.360	-0.000	374067	912.1	2	11.917	-0.000	713881	945.7
Aroclor-1260	3	11.733	-0.001	959026	888.3	3	12.436	-0.000	190968	1015.0
Aroclor-1260	4	12.137	-0.002	521189	934.3	4	12.502	-0.000	465680	953.2
Aroclor-1260	5	12.242	-0.002	217473	894.4	NS	---			----
Total Col1Ave (5 peaks):					905.8	Total Col2Ave (4 peaks):				958.4 RPD = 6
Corrected Ave (4 peaks):					898.7	Corrected Ave (3 peaks):				939.5 RPD = 4
CalAmt %D:					-9.4	CalAmt %D:				-4.2

Total PCB Area Col1 (5.909 - 13.792) = 10234908 Col1 Total PCB = 1.9 ppm*

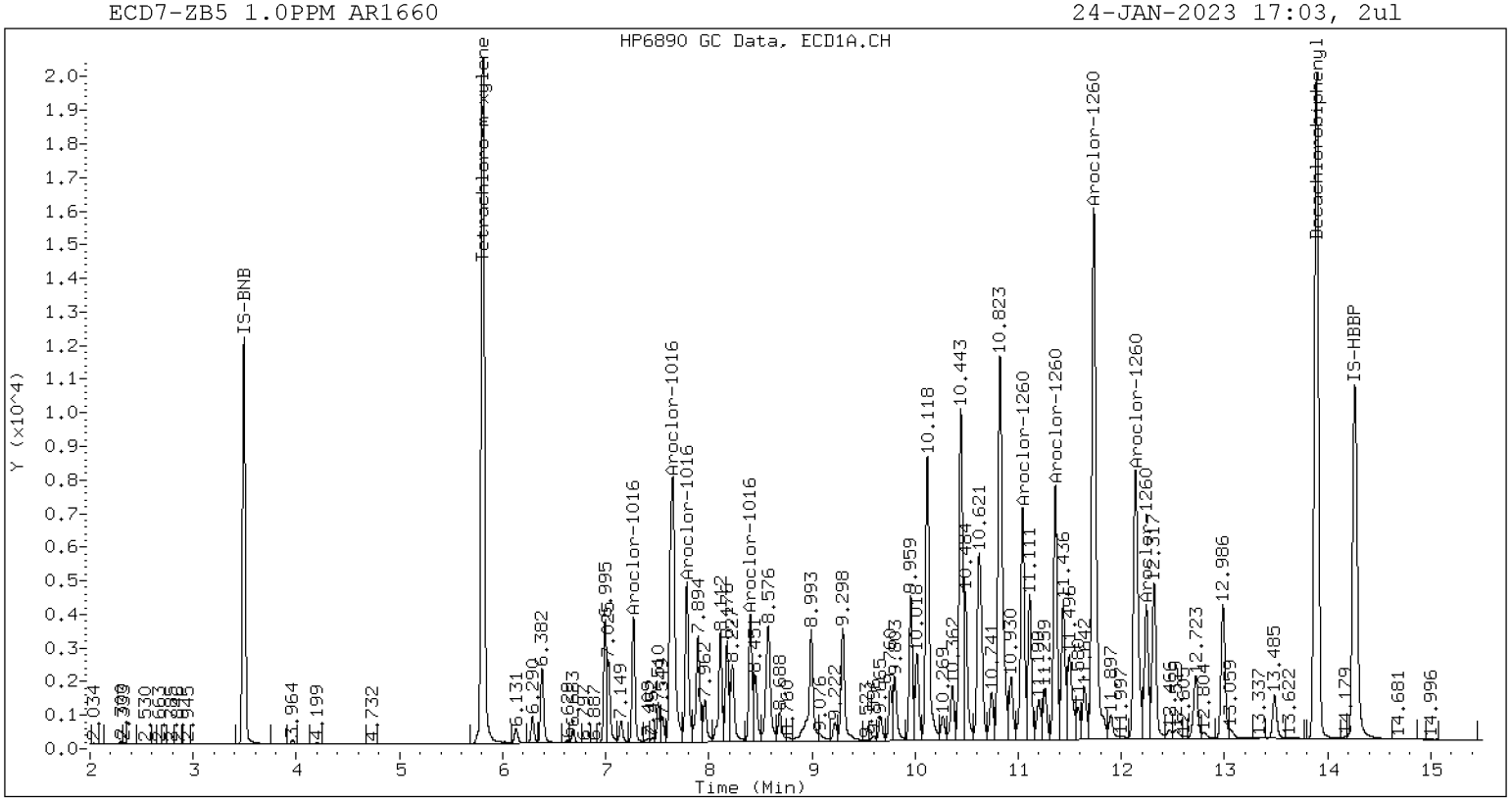
Total PCB Area Col2 (5.787 - 14.020) = 6685547 Col2 Total PCB = 2.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

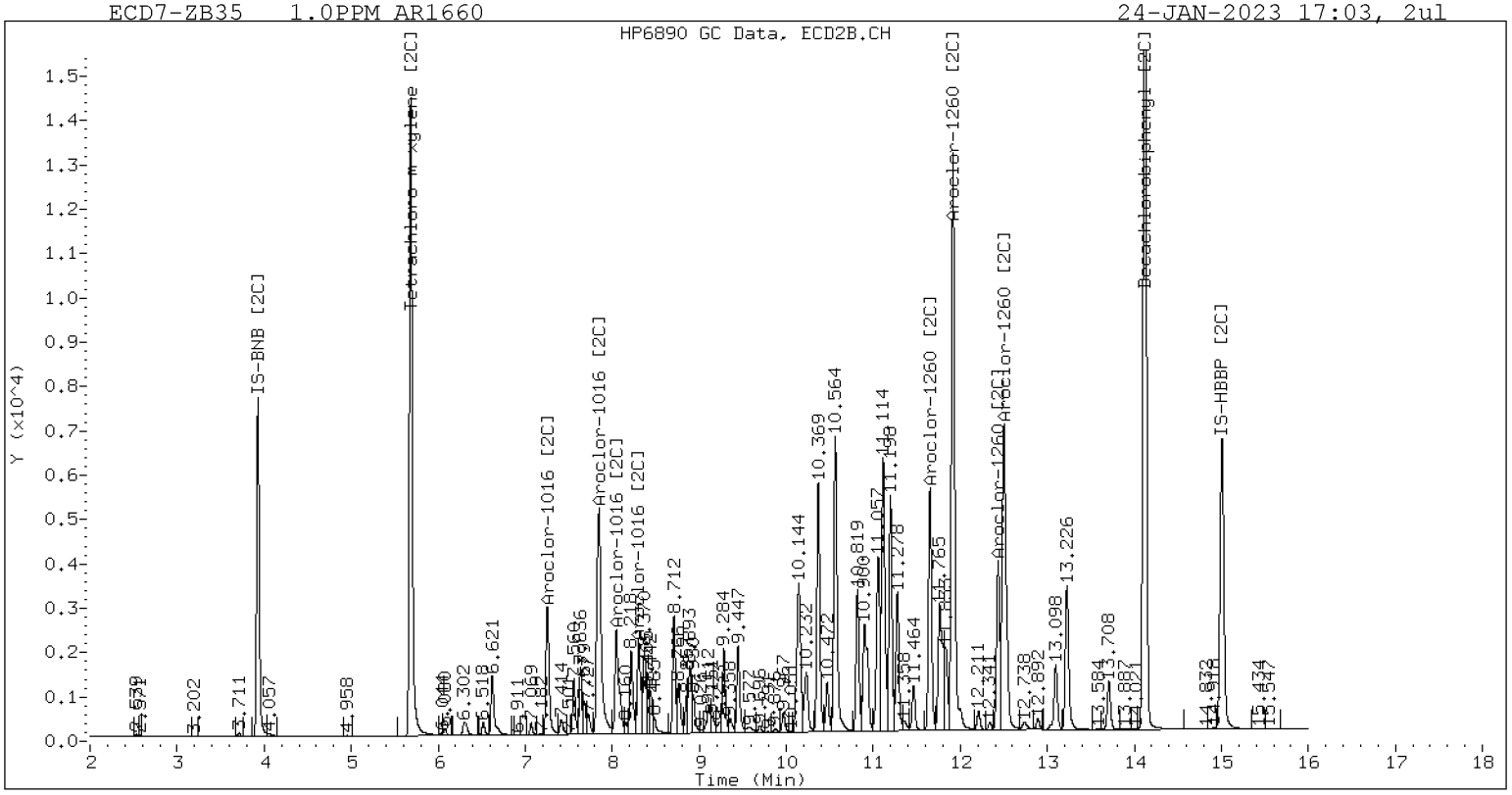
PCB Dual Column Chromatograms

ECD7-ZB5 1.0PPM AR1660 24-JAN-2023 17:03, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 1.0PPM AR1660 24-JAN-2023 17:03, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242317ECD7.D
Data file 2: /230124.b/230124.b/01242317ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPM AR1660
Client ID:
Injection Date: 24-JAN-2023 17:24
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.001	117058	5.686	-0.001	76340	17.3	17.1	1.2	Tetrachloro-m-xylene
13.892	0.000	140818	14.119	-0.001	113773	17.4	16.5	5.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	479756	-4.7
Hexabromobiphenyl	647433	756424	16.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	330987	-1.8
Hexabromobiphenyl	382032	433619	13.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	19848	111.3	1	7.255	0.000	19353	107.8
Aroclor-1016	2	7.656	0.005	63555	107.6	2	7.853	0.002	43099	109.6
Aroclor-1016	3	7.793	0.004	30749	113.1	3	8.053	0.003	18527	115.4
Aroclor-1016	4	8.406	0.003	18961	108.5	4	8.307	0.002	14145	112.4
Total Col1Ave (4 peaks):					110.1	Total Col2Ave (4 peaks):				111.3 RPD = 1
Corrected Ave (3 peaks):					109.1	Corrected Ave (3 peaks):				109.9 RPD = 1
CalAmt %D:					10.1	CalAmt %D:				11.3
Aroclor-1260	1	11.046	0.002	41864	98.6	1	11.655	0.001	32043	102.4
Aroclor-1260	2	11.362	0.001	42073	96.4	2	11.920	0.002	82285	104.0
Aroclor-1260	3	11.739	0.004	111005	96.7	3	12.437	0.001	19416	98.4
Aroclor-1260	4	12.144	0.004	56707	95.6	4	12.504	0.002	53558	104.6
Aroclor-1260	5	12.245	0.001	24958	96.5	NS	---			----
Total Col1Ave (5 peaks):					96.8	Total Col2Ave (4 peaks):				102.3 RPD = 6
Corrected Ave (4 peaks):					96.3	Corrected Ave (3 peaks):				101.6 RPD = 5
CalAmt %D:					-3.2	CalAmt %D:				2.3

Total PCB Area Col1 (5.909 - 13.792) = 1238855 Col1 Total PCB = 0.2 ppm*

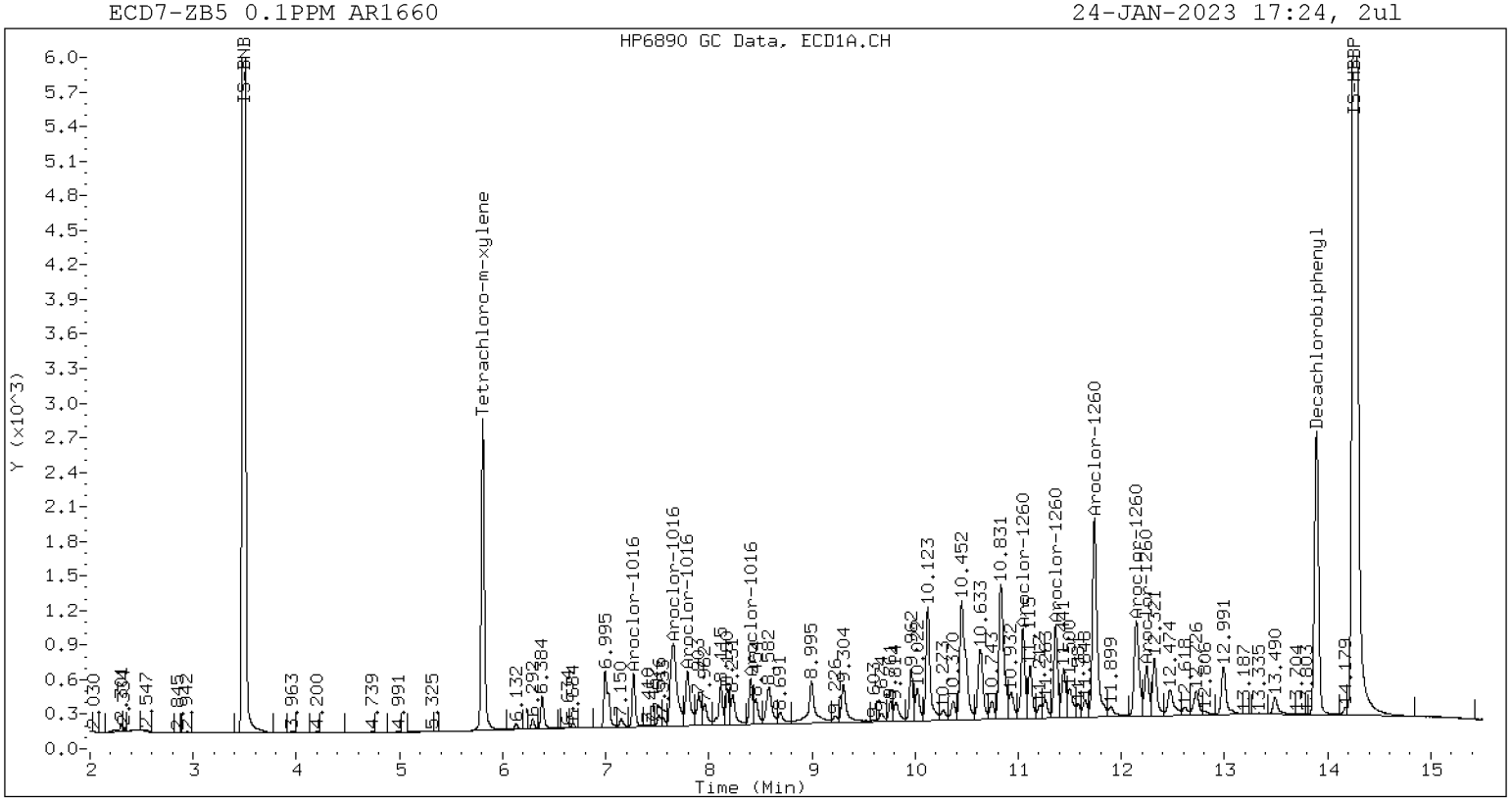
Total PCB Area Col2 (5.787 - 14.020) = 777713 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

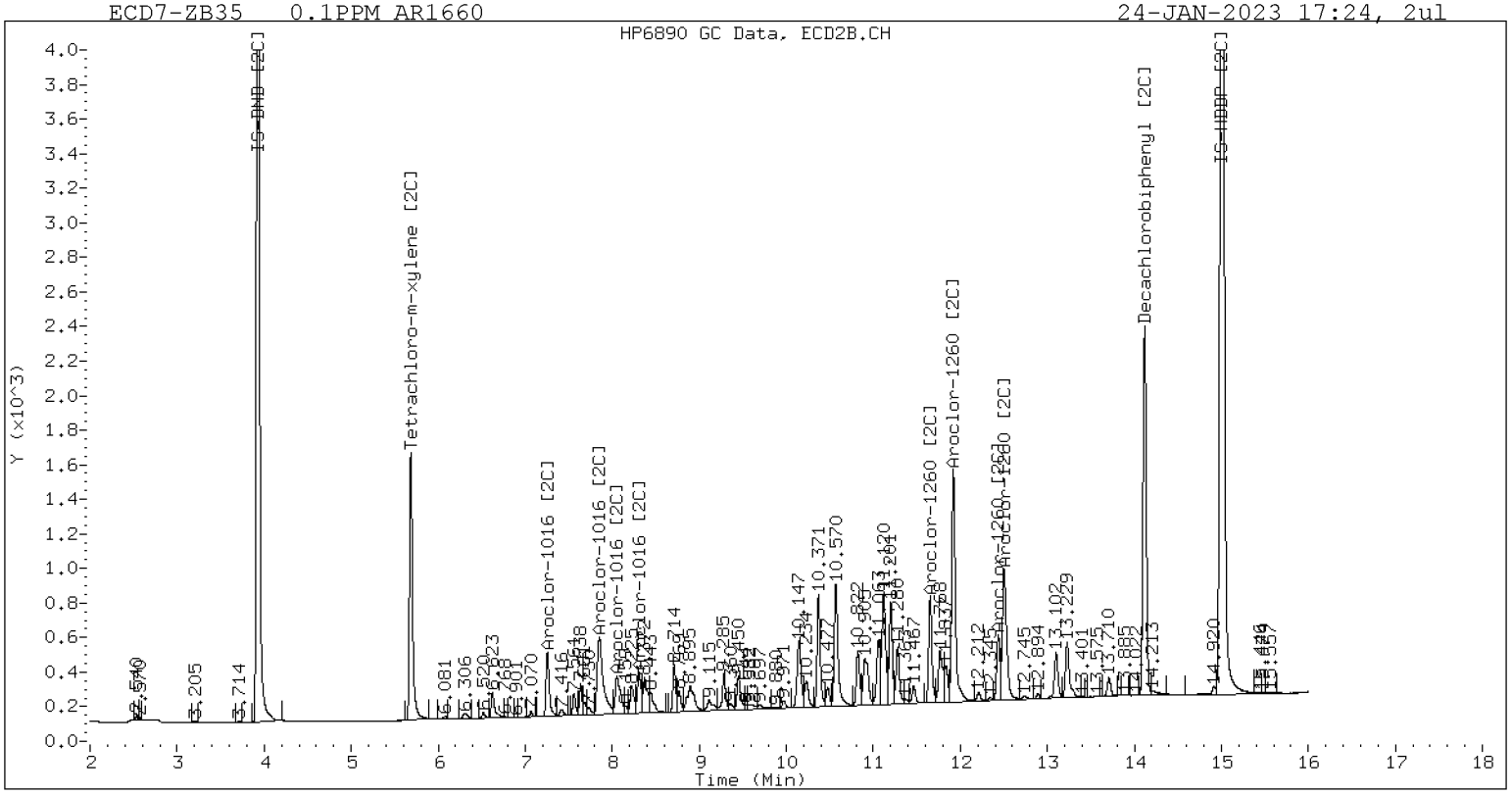
PCB Dual Column Chromatograms

ECD7-ZB5 0.1PPM AR1660 24-JAN-2023 17:24, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.1PPM AR1660 24-JAN-2023 17:24, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242318ECD7.D
Data file 2: /230124.b/230124.b/01242318ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPM AR1660
Client ID:
Injection Date: 24-JAN-2023 17:45
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.000	534053	5.686	-0.000	348900	79.1	77.8	1.6	Tetrachloro-m-xylene
13.891	-0.001	614978	14.120	0.000	552784	74.4	77.5	4.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	477720	-5.1
Hexabromobiphenyl	647433	772816	19.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331694	-1.5
Hexabromobiphenyl	382032	449559	17.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	0.000	84322	475.0	1	7.254	-0.000	84986	472.4
Aroclor-1016	2	7.650	0.000	294429	500.6	2	7.850	-0.001	198065	502.4
Aroclor-1016	3	7.789	0.000	122151	451.4	3	8.050	-0.000	81378	505.8
Aroclor-1016	4	8.404	0.000	87760	504.1	4	8.305	-0.000	59656	473.0
Total Col1Ave (4 peaks):				482.8		Total Col2Ave (4 peaks):			488.4	RPD = 1
Corrected Ave (3 peaks):				475.6		Corrected Ave (3 peaks):			482.6	RPD = 1
CalAmt %D:				-3.4		CalAmt %D:			-2.3	
Aroclor-1260	1	11.044	0.000	193843	447.0	1	11.653	-0.000	146980	453.2
Aroclor-1260	2	11.361	0.000	198052	444.3	2	11.917	-0.001	376388	458.7
Aroclor-1260	3	11.734	0.000	505614	430.9	3	12.436	-0.000	98369	481.0
Aroclor-1260	4	12.139	0.000	264950	437.0	4	12.501	-0.001	252455	475.4
Aroclor-1260	5	12.244	0.000	112421	425.4	NS	---			----
Total Col1Ave (5 peaks):				436.9		Total Col2Ave (4 peaks):			467.1	RPD = 7
Corrected Ave (4 peaks):				434.4		Corrected Ave (3 peaks):			462.4	RPD = 6
CalAmt %D:				-12.6		CalAmt %D:			-6.6	

Total PCB Area Col1 (5.909 - 13.792) = 5412241 Col1 Total PCB = 1.0 ppm*

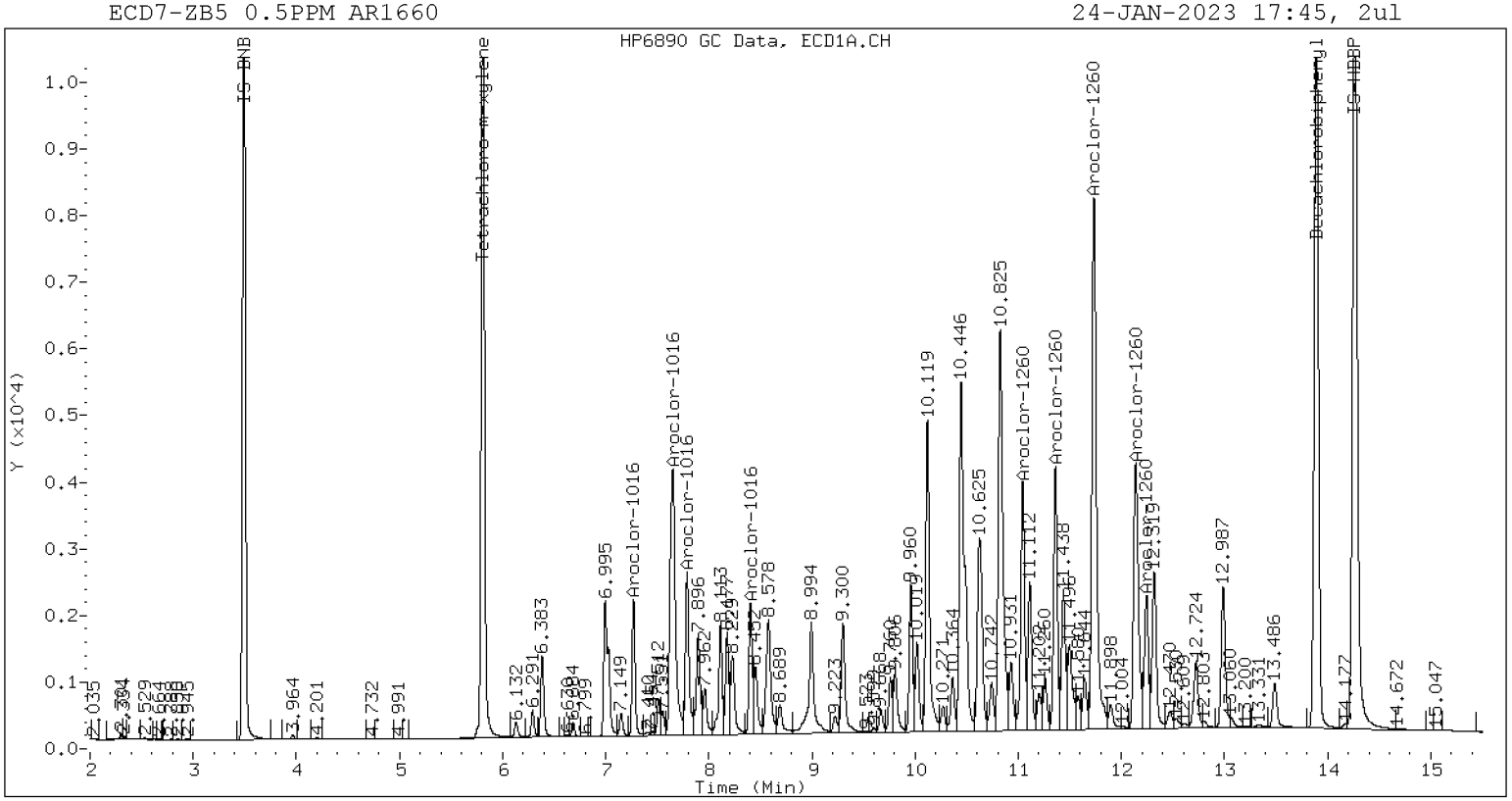
Total PCB Area Col2 (5.787 - 14.020) = 3551064 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

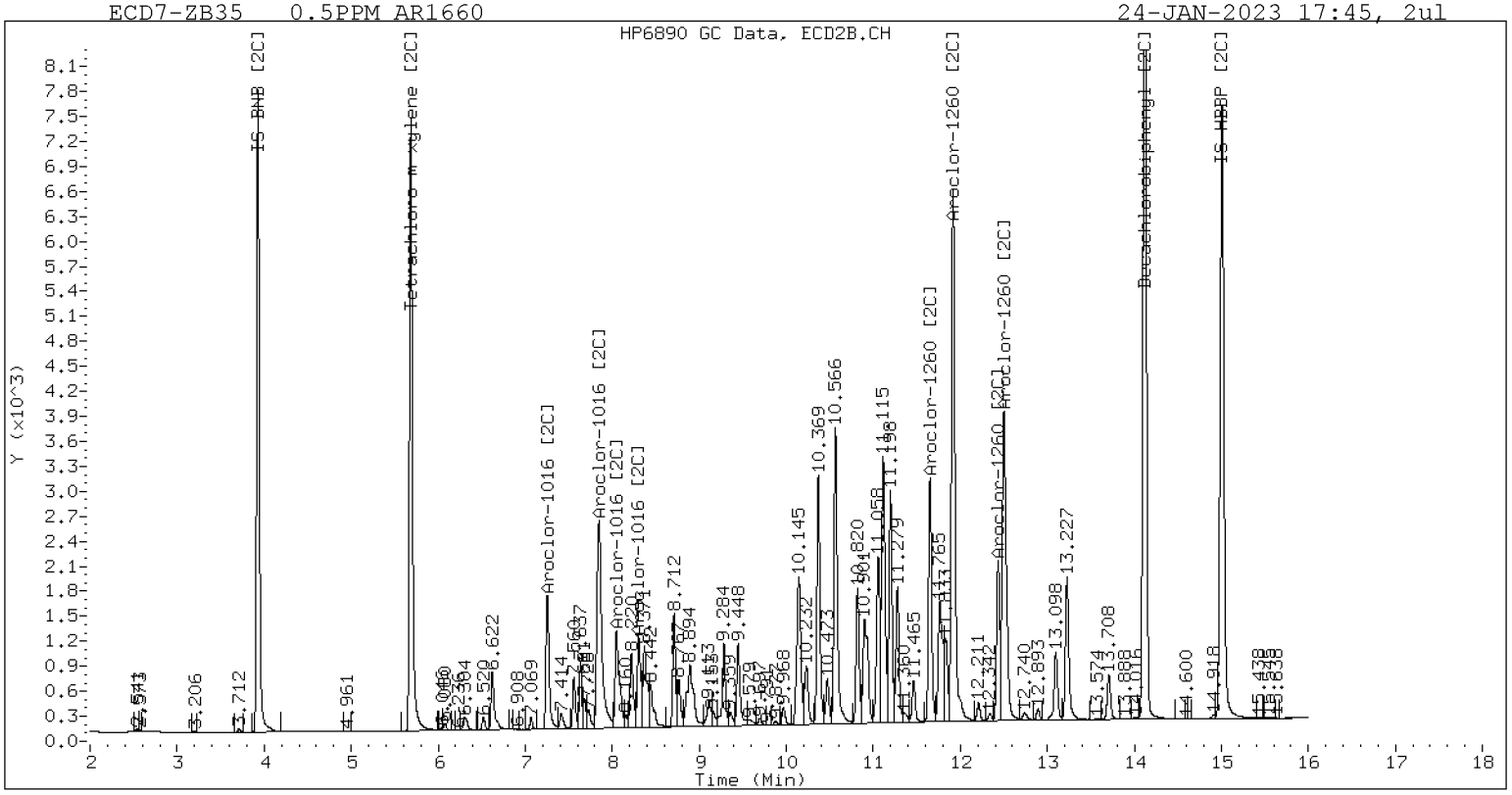
PCB Dual Column Chromatograms

ECD7-ZB5 0.5PPM AR1660 24-JAN-2023 17:45, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.5PPM AR1660 24-JAN-2023 17:45, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242319ECD7.D
Data file 2: /230124.b/230124.b/01242319ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPM 1242
Client ID:
Injection Date: 24-JAN-2023 18:06
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	317773	5.686	-0.000	205627	47.7	46.6	2.2	Tetrachloro-m-xylene
13.892	-0.000	322814	14.121	0.001	269935	36.0	36.5	1.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	471690	-6.3
Hexabromobiphenyl	647433	839322	29.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	326260	-3.2
Hexabromobiphenyl	382032	466396	22.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.271	0.000	36109	250.0	1	7.256	0.000	35672	250.0
Aroclor-1242	2	7.655	0.000	118172	250.0	2	7.853	0.000	79233	250.0
Aroclor-1242	3	8.407	0.000	35110	250.0	3	9.160	0.000	24814	250.0
Aroclor-1242	4	8.581	0.000	53037	250.0	4	9.587	0.000	32887	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.909 - 13.792) = 930958 Col1 Total PCB = 0.2 ppm*

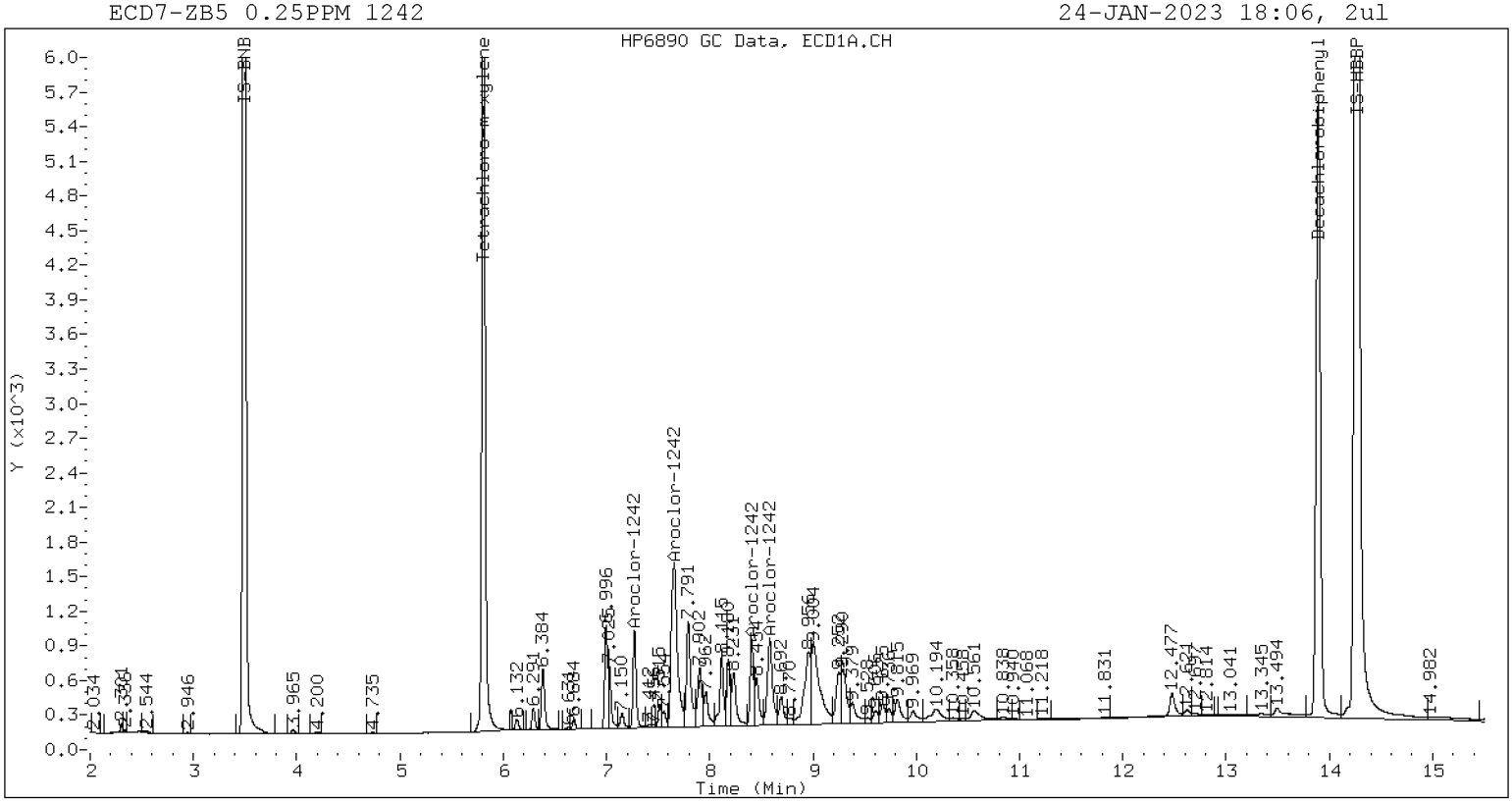
Total PCB Area Col2 (5.787 - 14.020) = 567613 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

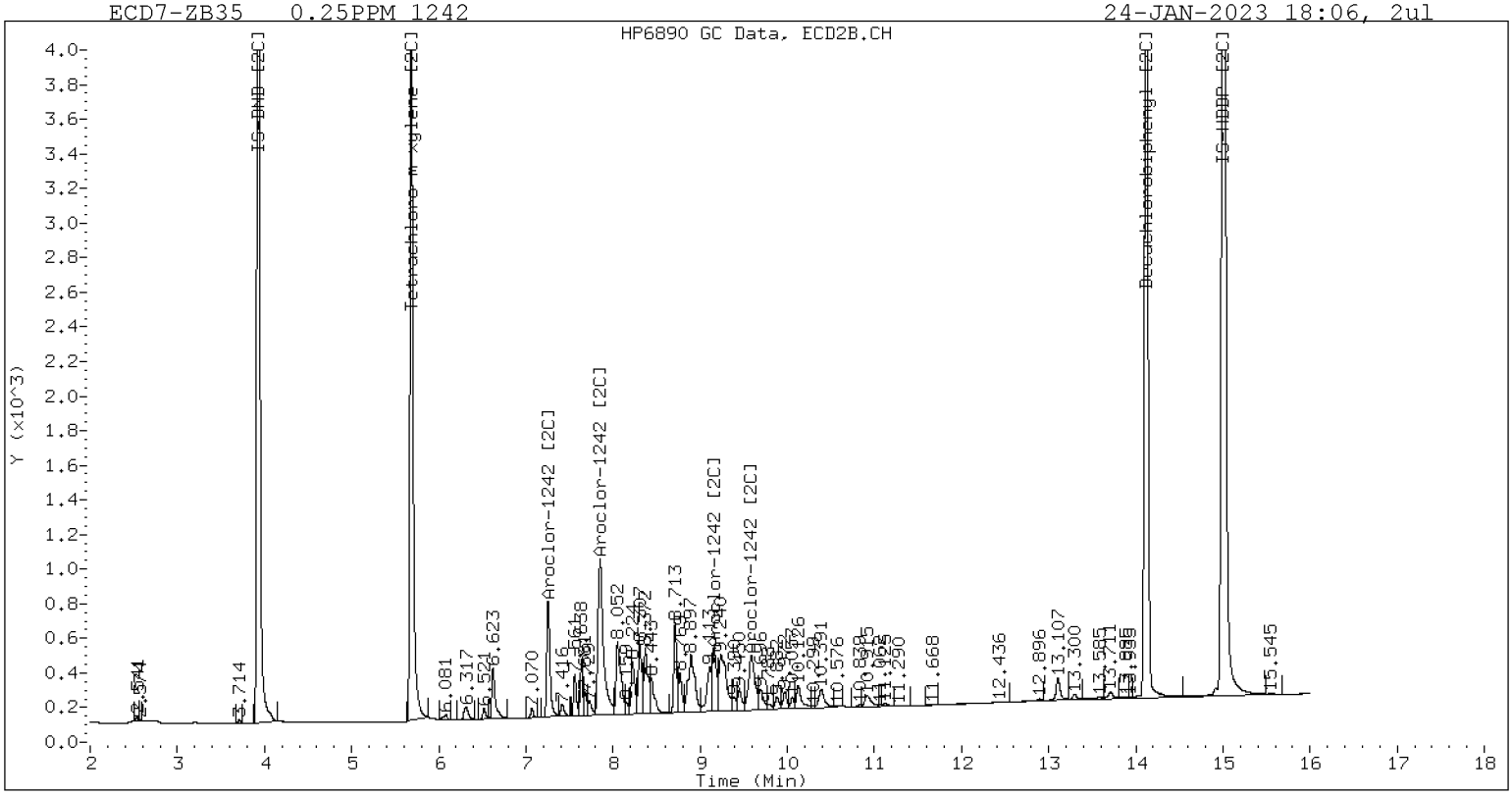
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM 1242 24-JAN-2023 18:06, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM 1242 24-JAN-2023 18:06, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242320ECD7.D
Data file 2: /230124.b/230124.b/01242320ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPM 1248
Client ID:
Injection Date: 24-JAN-2023 18:27
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	266561	5.686	-0.001	171841	38.5	38.0	1.3	Tetrachloro-m-xylene
13.892	0.001	334524	14.120	0.000	281569	36.6	37.7	3.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	489828	-2.7
Hexabromobiphenyl	647433	855612	32.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	334539	-0.7
Hexabromobiphenyl	382032	470415	23.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.406	0.000	61259	250.0	1	8.305	0.000	37805	250.0
Aroclor-1248	2	8.580	0.000	78143	250.0	2	8.712	0.000	40692	250.0
Aroclor-1248	3	8.999	0.000	149476	250.0	3	9.156	0.000	49723	250.0
Aroclor-1248	4	9.294	0.000	73986	250.0	4	9.582	0.000	61494	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.909 - 13.792) = 1237662 Col1 Total PCB = 0.2 ppm*

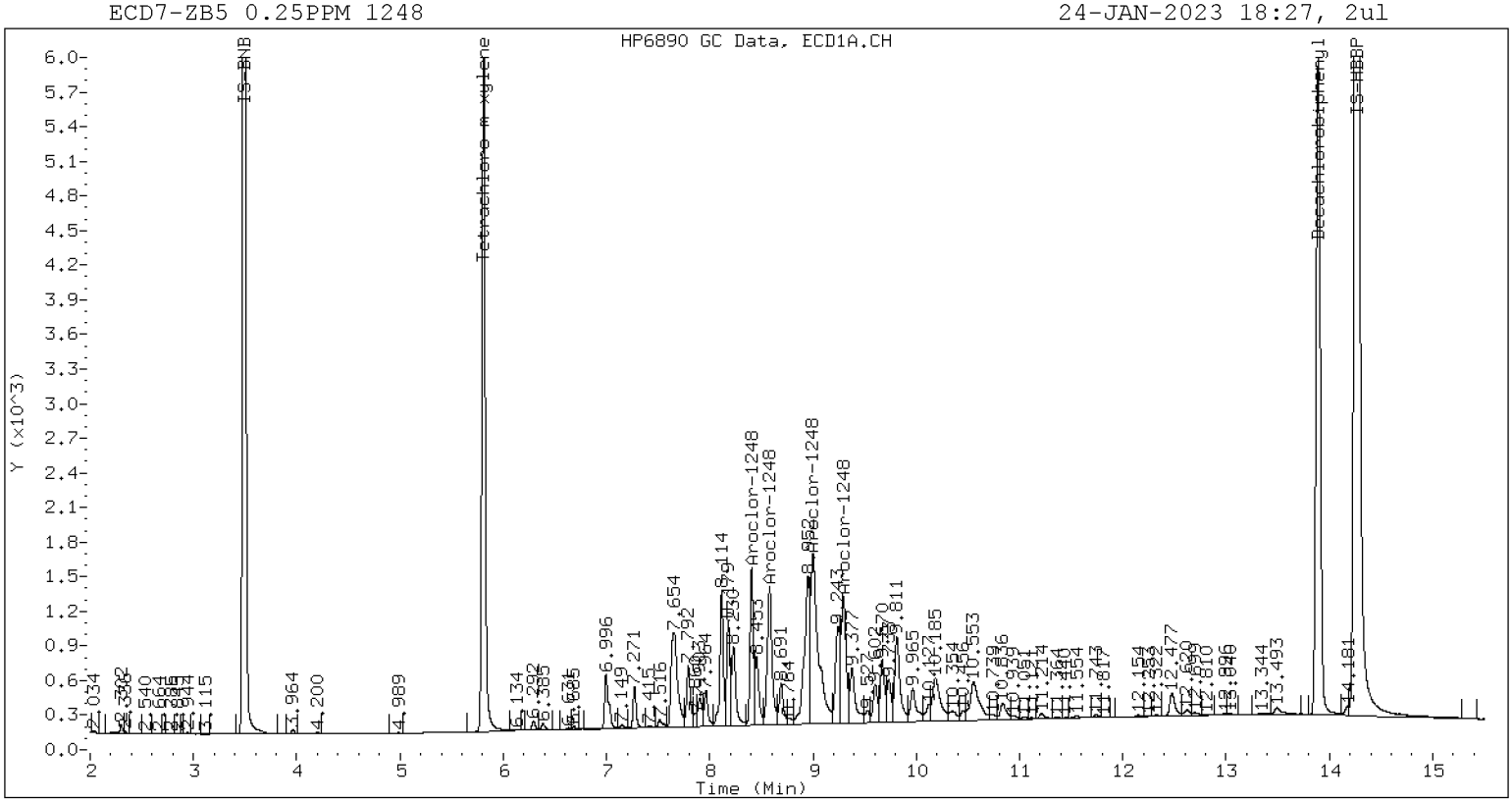
Total PCB Area Col2 (5.787 - 14.020) = 773955 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

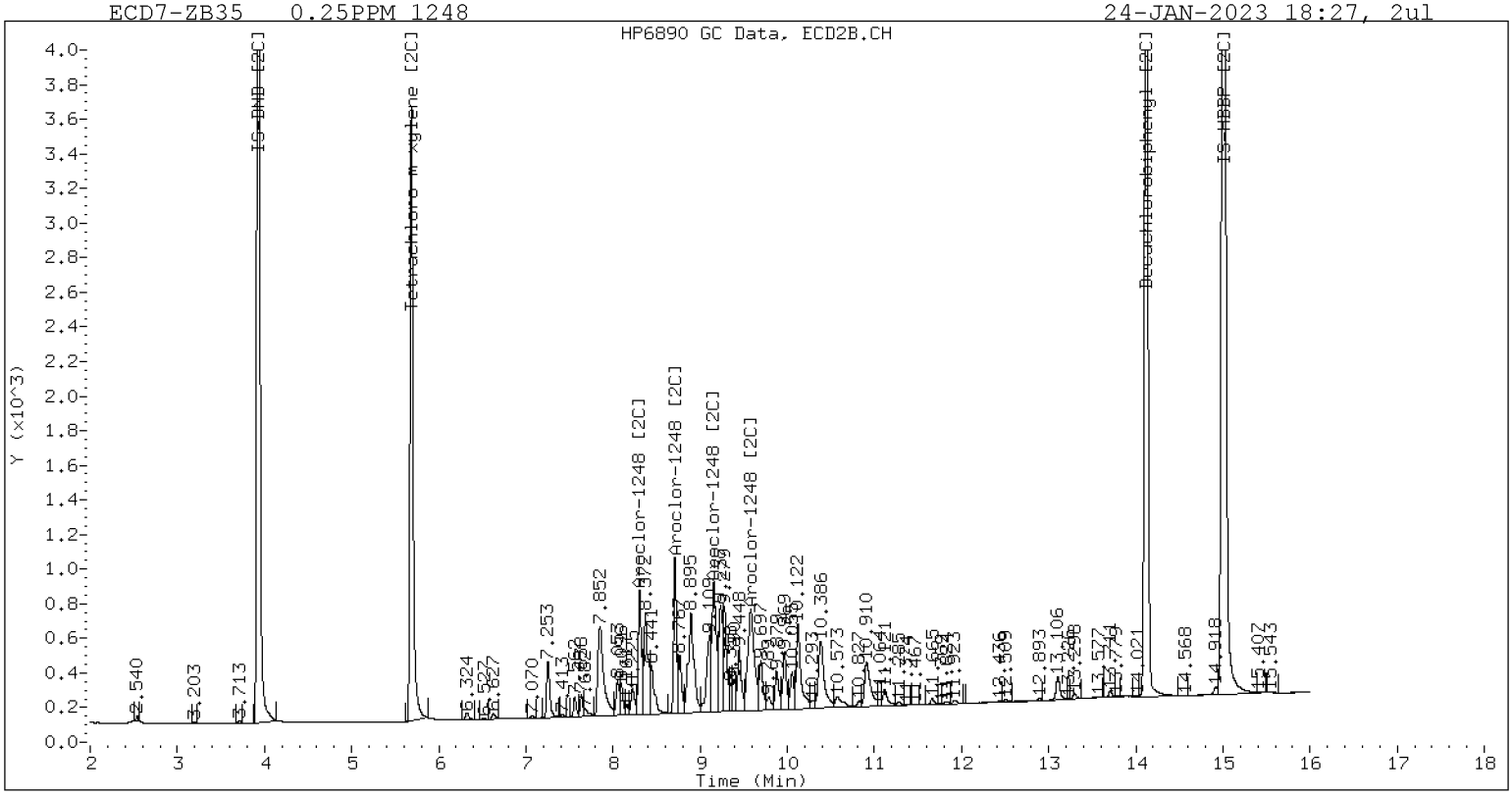
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM 1248 24-JAN-2023 18:27, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM 1248 24-JAN-2023 18:27, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242321ECD7.D
Data file 2: /230124.b/230124.b/01242321ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPM 1254
Client ID:
Injection Date: 24-JAN-2023 18:48
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.001	258819	5.684	-0.002	171764	37.7	38.1	1.1	Tetrachloro-m-xylene
13.893	0.001	343162	14.119	-0.001	283996	36.8	37.9	2.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	486231	-3.4
Hexabromobiphenyl	647433	871523	34.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	333658	-1.0
Hexabromobiphenyl	382032	471925	23.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.299	0.000	123887	250.0	1	9.448	0.000	60516	250.0
Aroclor-1254	2	9.378	0.000	52896	250.0	2	9.969	0.000	48914	250.0
Aroclor-1254	3	9.669	0.000	79378	250.0	3	10.121	0.000	106698	250.0
Aroclor-1254	4	9.808	0.000	155542	250.0	4	10.372	0.000	106700	250.0
Aroclor-1254	5	10.177	0.000	101144	250.0	5	10.569	0.000	59429	250.0

Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.909 - 13.792) = 1659821 Col1 Total PCB = 0.3 ppm*

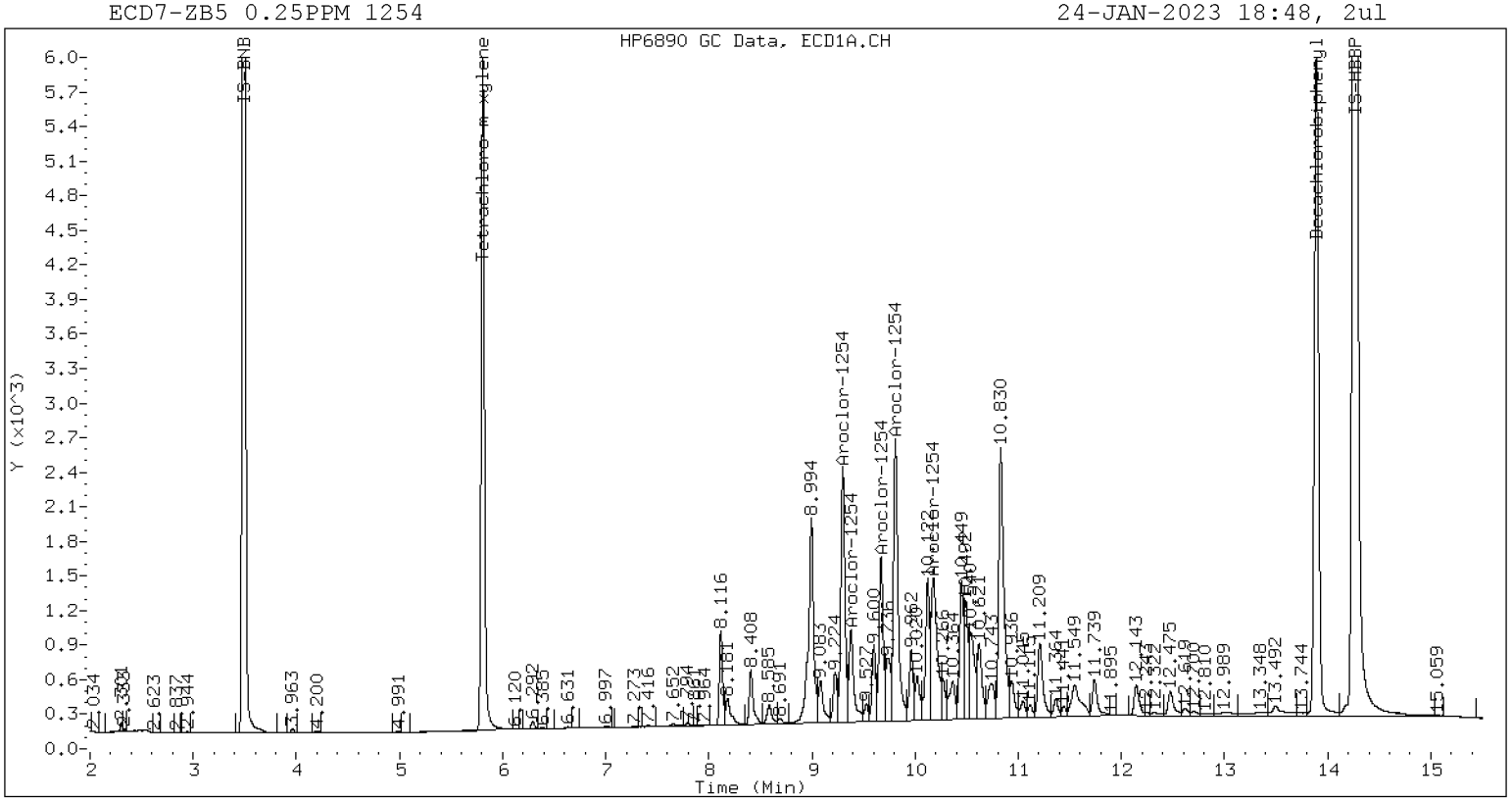
Total PCB Area Col2 (5.787 - 14.020) = 1016659 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

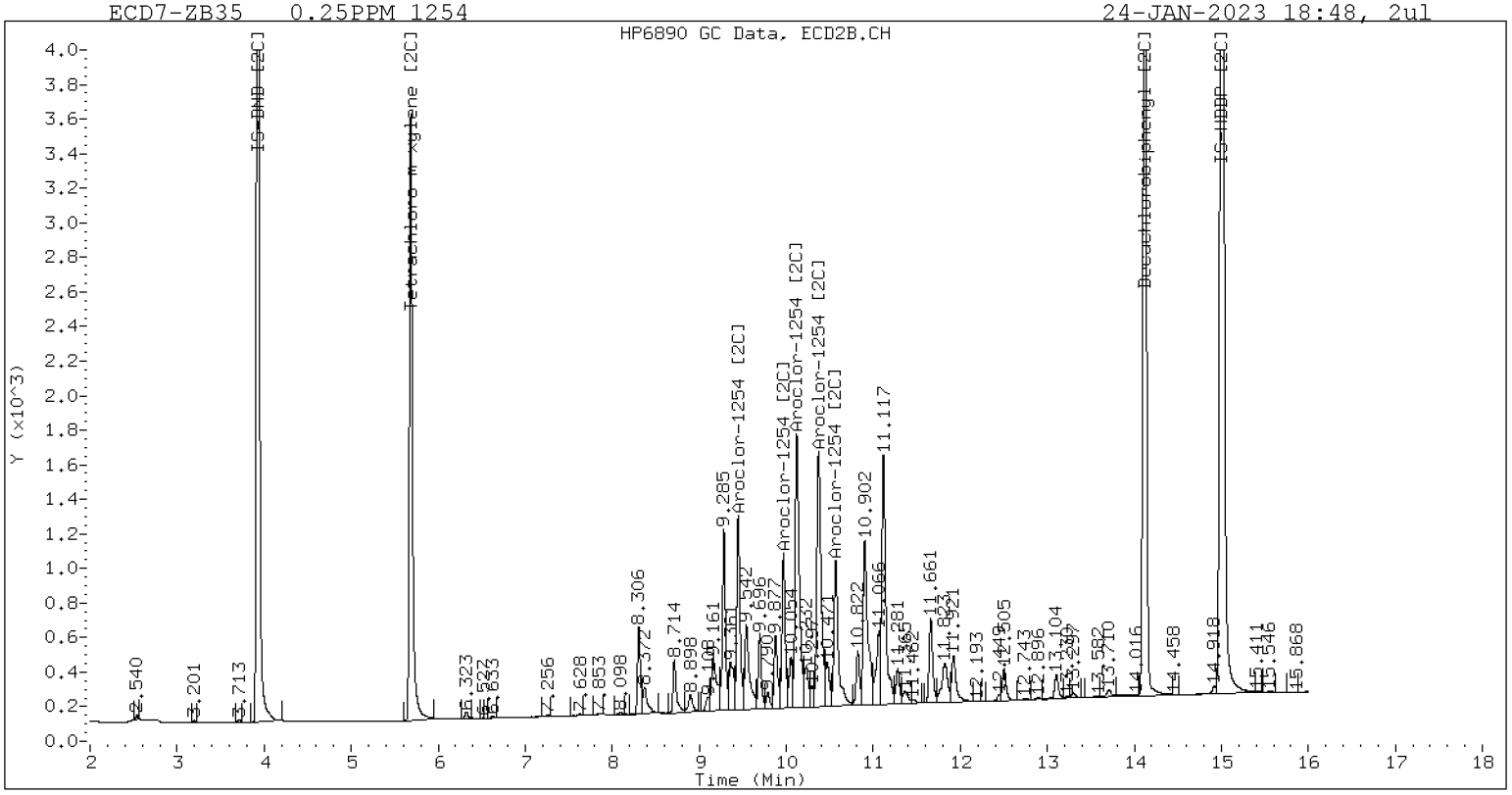
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM 1254 24-JAN-2023 18:48, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM 1254 24-JAN-2023 18:48, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242322ECD7.D
Data file 2: /230124.b/230124.b/01242322ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPM 2162
Client ID:
Injection Date: 24-JAN-2023 19:09
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	272296	5.686	-0.001	173237	39.1	38.6	1.3	Tetrachloro-m-xylene
13.893	0.001	347331	14.120	-0.000	282892	36.8	37.2	1.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	492470	-2.2
Hexabromobiphenyl	647433	883652	36.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331807	-1.5
Hexabromobiphenyl	382032	479356	25.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	4.733	0.000	9100	250.0	1	4.959	0.000	6081	250.0
Aroclor-1221	2	6.134	0.000	18608	250.0	2	6.298	0.000	13325	250.0
Aroclor-1221	3	6.384	0.000	43198	250.0	3	6.623	0.000	22491	250.0
Total Col1Ave (3 peaks):					250.0	Total Col2Ave (3 peaks):				250.0 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.832	0.000	89339	250.0	1	11.200	0.000	117288	250.0
Aroclor-1262	2	12.246	0.000	141007	250.0	2	11.653	0.000	99740	250.0
Aroclor-1262	3	12.321	0.000	153089	250.0	3	12.434	0.000	106212	250.0
Aroclor-1262	4	12.989	0.000	139497	250.0	4	12.504	0.000	170096	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.909 - 13.792) = 2446612 Col1 Total PCB = 0.4 ppm*

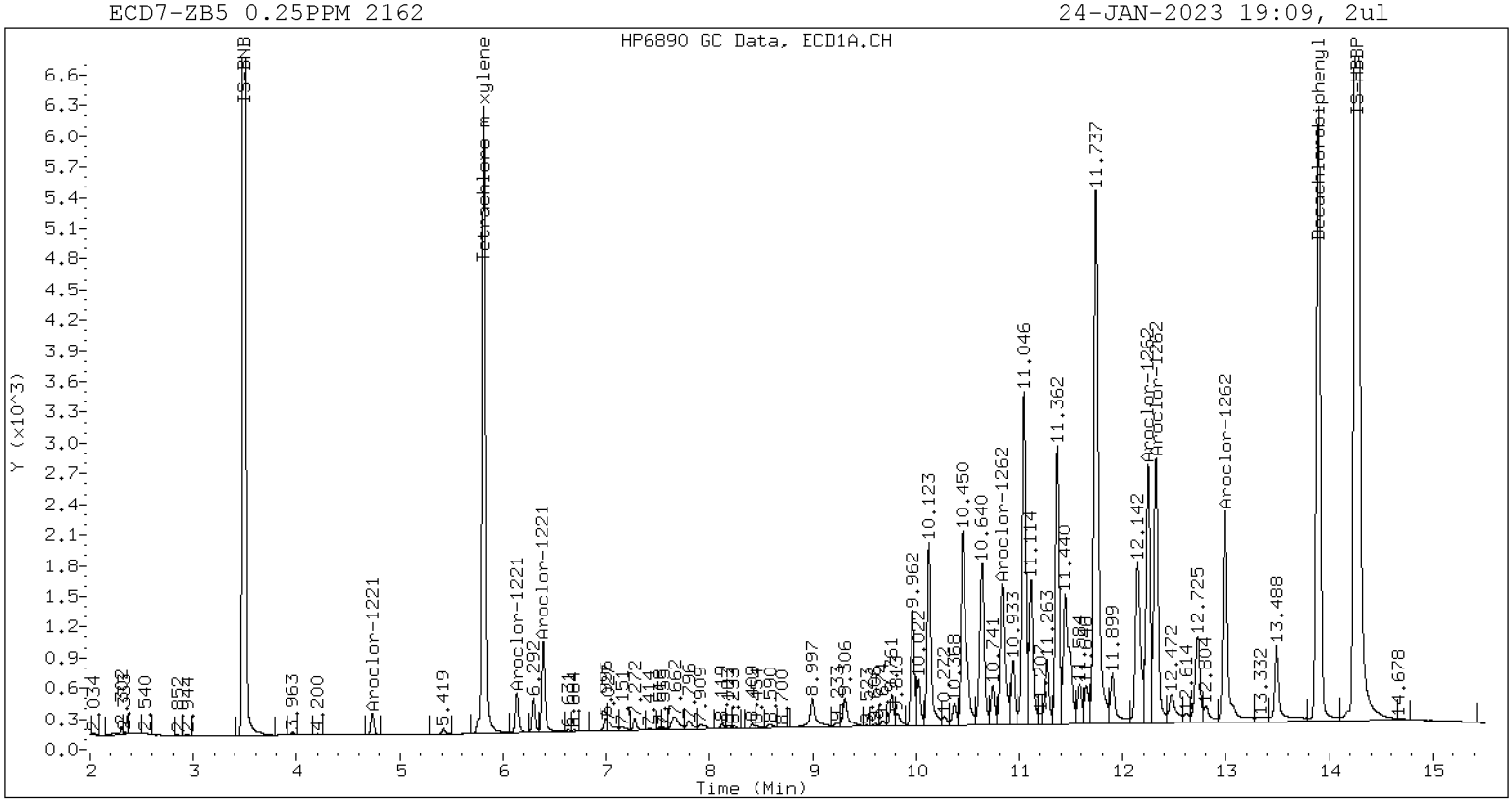
Total PCB Area Col2 (5.787 - 14.020) = 1558387 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

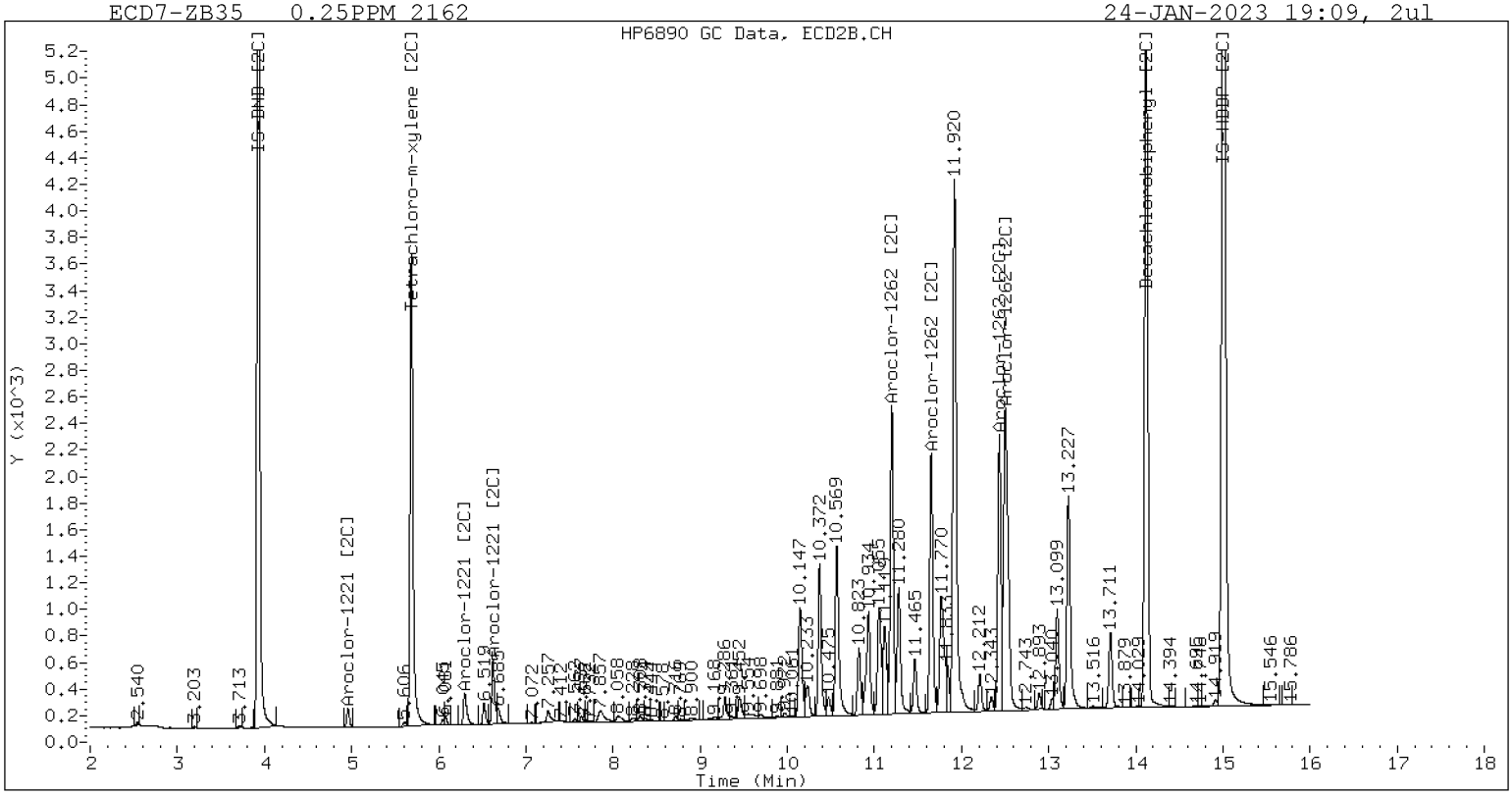
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM 2162 24-JAN-2023 19:09, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM 2162 24-JAN-2023 19:09, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242323ECD7.D
Data file 2: /230124.b/230124.b/01242323ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPM 3268
Client ID:
Injection Date: 24-JAN-2023 19:30
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.000	277108	5.687	0.000	177359	39.7	39.1	1.5	Tetrachloro-m-xylene
13.892	0.000	525503	14.120	0.000	438987	53.8	57.7	7.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	493427	-2.0
Hexabromobiphenyl	647433	913614	41.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	335121	-0.5
Hexabromobiphenyl	382032	479458	25.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	4.733	0.000	5692	250.0	1	4.960	0.000	3725	250.0
Aroclor-1232	2	6.133	0.000	12828	250.0	2	7.257	0.000	20847	250.0
Aroclor-1232	3	7.658	0.000	64153	250.0	3	7.854	0.000	42459	250.0
Aroclor-1232	4	8.584	0.000	27460	250.0	4	8.714	0.000	11797	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	12.245	0.000	377314	250.0	1	12.434	0.000	279910	250.0
Aroclor-1268	2	12.318	0.000	376282	250.0	2	12.501	0.000	297867	250.0
Aroclor-1268	3	12.699	0.000	311753	250.0	3	12.893	0.000	247943	250.0
Aroclor-1268	4	13.489	0.000	924293	250.0	4	13.709	0.000	765898	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.909 - 13.792) = 3136879 Col1 Total PCB = 0.5 ppm*

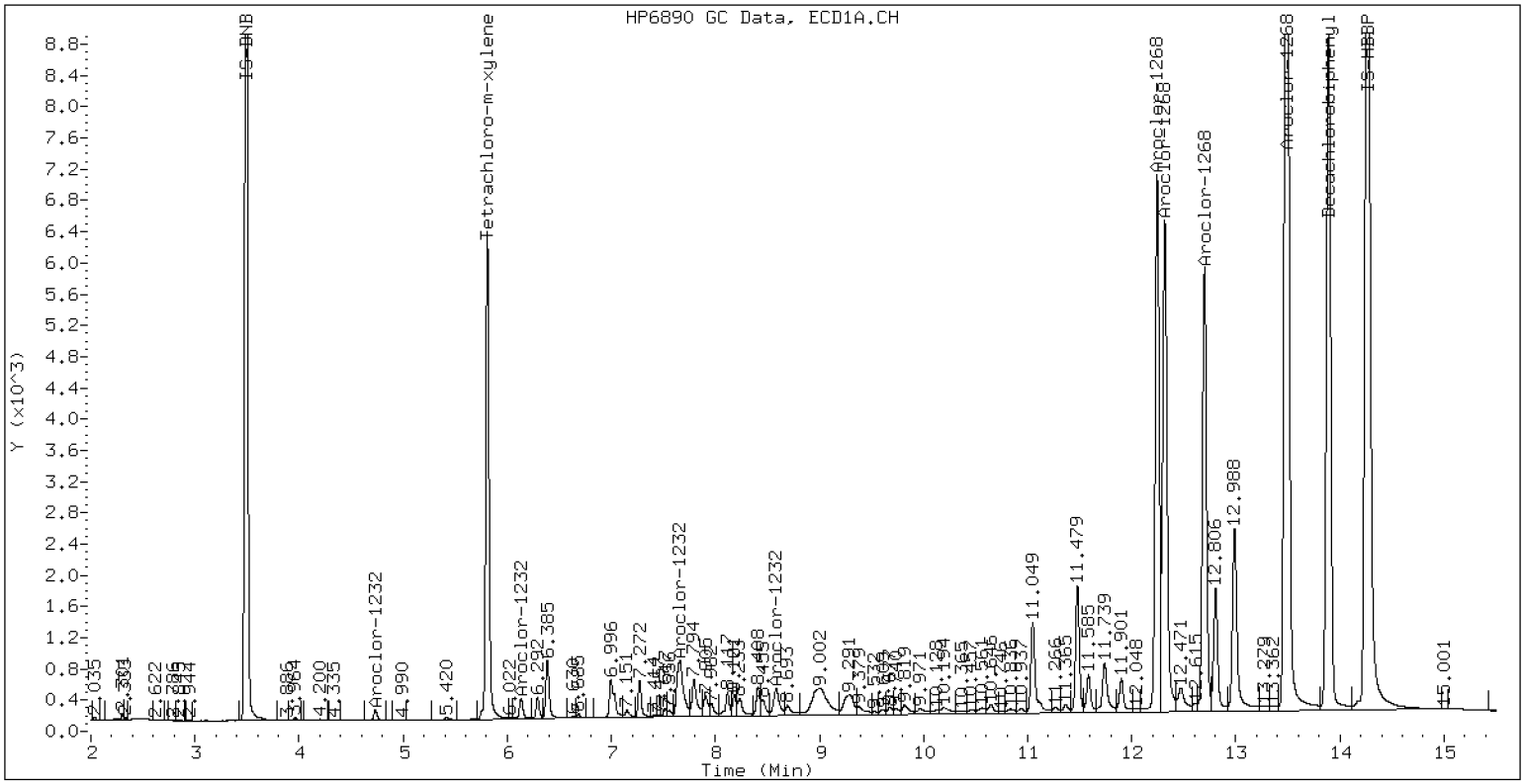
Total PCB Area Col2 (5.787 - 14.020) = 2269104 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

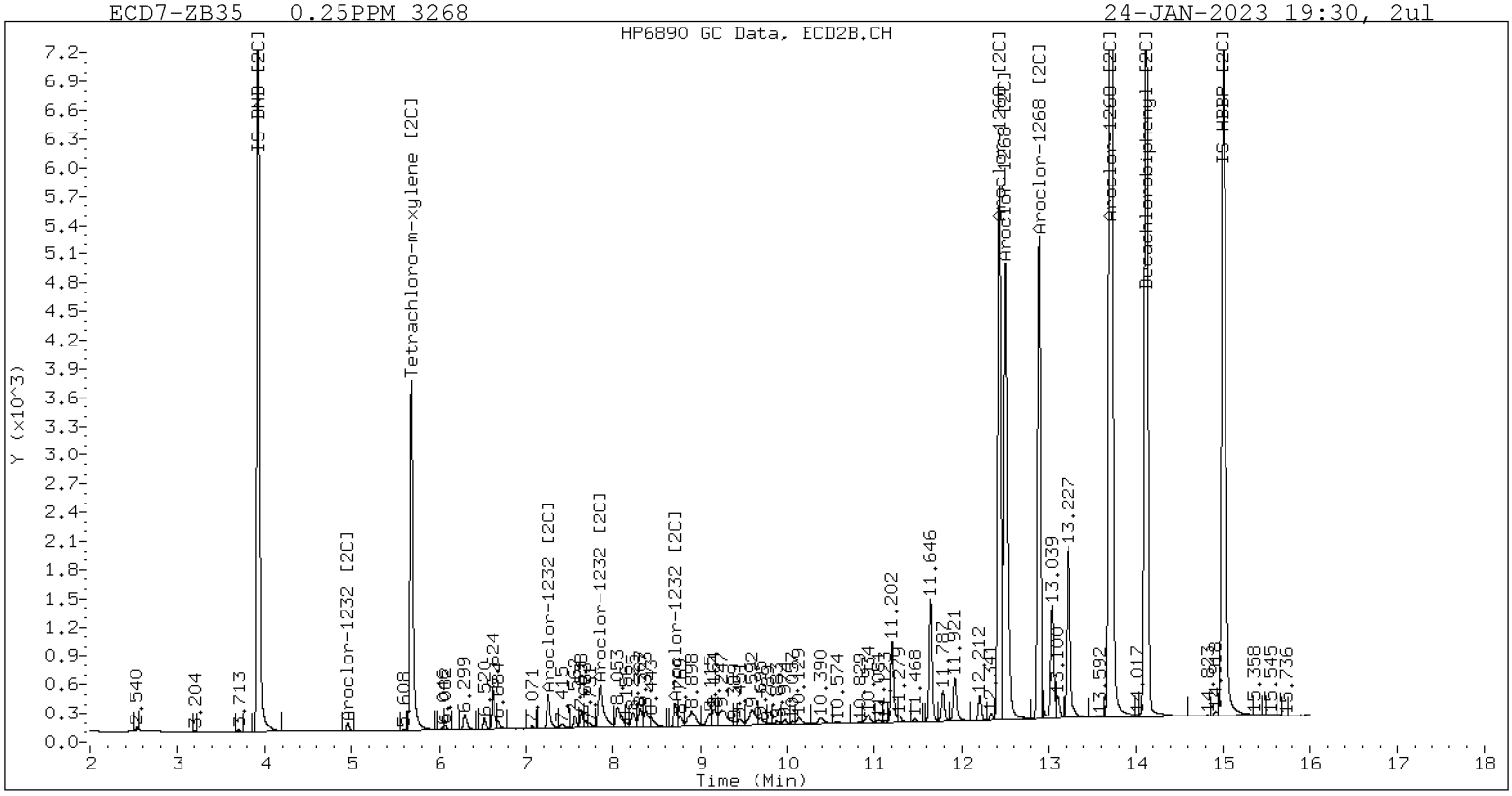
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM 3268 24-JAN-2023 19:30, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM 3268 24-JAN-2023 19:30, 2ul

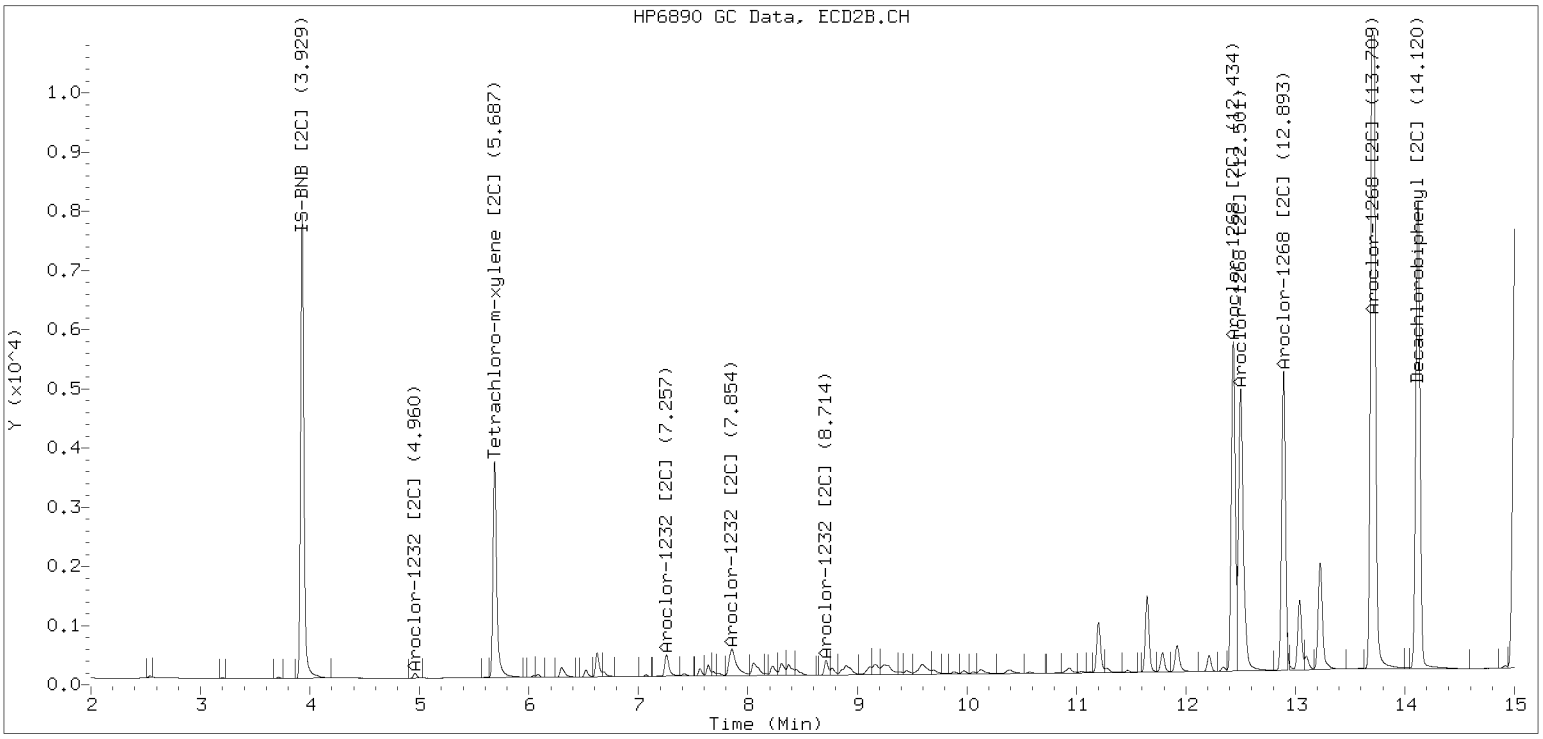


ZB-35 Manual Integration: YES

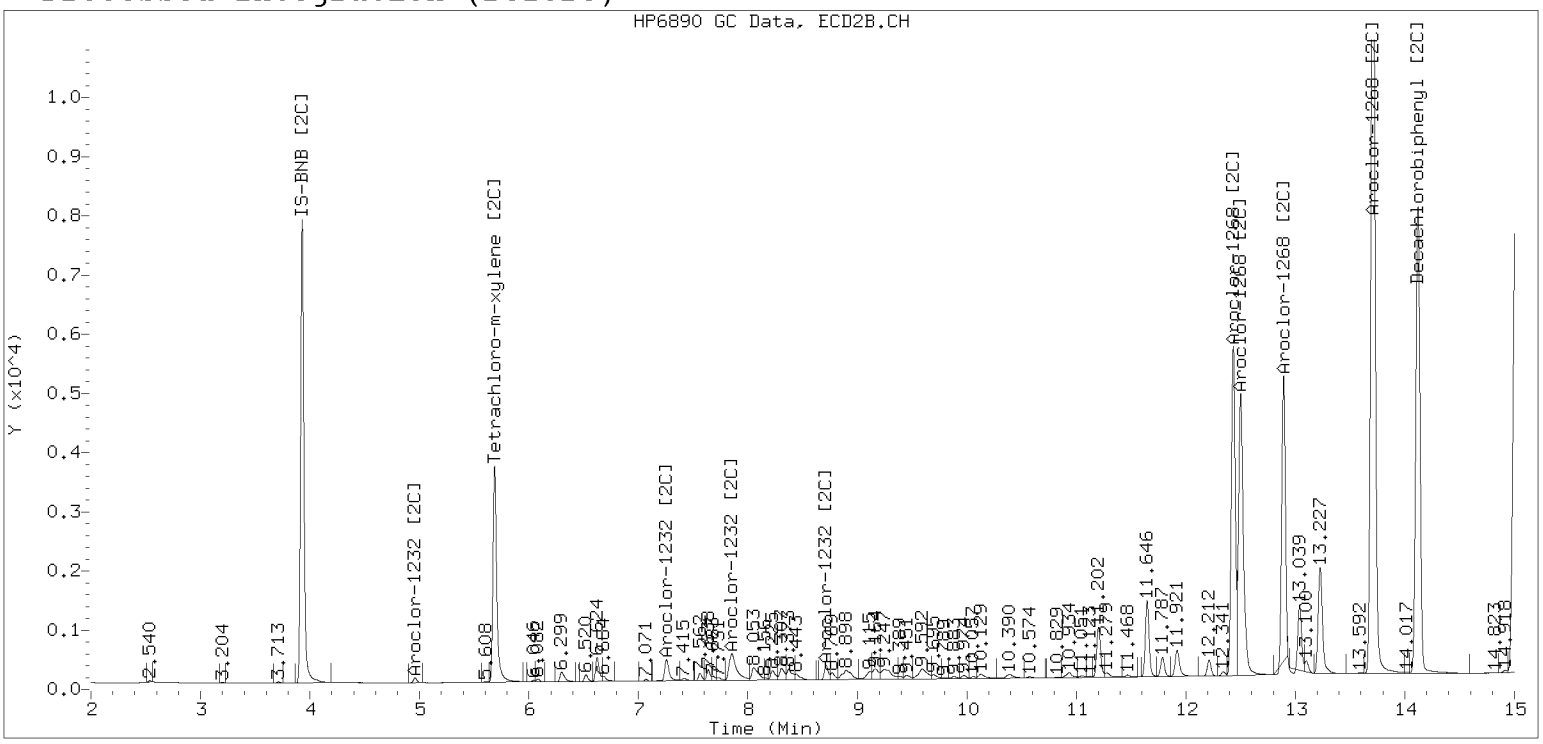
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230124.b/230124.b/01242323ECD7.D Injection Date: 24-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242324ECD7.D
Data file 2: /230124.b/230124.b/01242324ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 SCV
Client ID:
Injection Date: 24-JAN-2023 19:51
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	268739	5.686	-0.001	172961	37.5	37.3	0.6	Tetrachloro-m-xylene
13.891	-0.000	381489	14.121	0.001	320416	37.9	40.2	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	506576	0.6
Hexabromobiphenyl	647433	940129	45.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	343102	1.8
Hexabromobiphenyl	382032	501702	31.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	40958	217.6	1	7.255	0.001	40190	216.0
Aroclor-1016	2	7.655	0.004	135282	216.9	2	7.852	0.001	90338	221.5
Aroclor-1016	3	7.791	0.003	61557	214.5	3	8.052	0.002	37810	227.2
Aroclor-1016	4	8.406	0.002	40372	218.7	4	8.306	0.000	28171	215.9
Total Col1Ave (4 peaks):					216.9	Total Col2Ave (4 peaks):				220.2 RPD = 1
Corrected Ave (3 peaks):					216.3	Corrected Ave (3 peaks):				217.8 RPD = 1
Aroclor-1221	1	4.732	-0.001	256	6.8	1	---			0.0
Aroclor-1221	2	6.131	-0.002	4742	61.9	2	6.302	0.004	5037	91.4
Aroclor-1221	3	6.384	-0.000	27448	154.4	3	6.623	-0.000	18931	203.5
Total Col1Ave (3 peaks):					74.4	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.732	-0.001	256	11.0	1	---			0.0
Aroclor-1232	2	6.131	-0.002	4742	90.0	2	7.255	-0.001	40190	470.8
Aroclor-1232	3	7.655	-0.004	135282	513.5	3	7.852	-0.002	90338	519.5
Aroclor-1232	4	8.581	-0.003	56938	504.9	4	8.713	-0.001	27776	574.9
Total Col1Ave (4 peaks):					279.8	Total Col2Ave (3 peaks):				521.7 RPD = 60*
Corrected Ave (3 peaks):					202.0	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	-0.000	40958	264.0	1	7.255	-0.000	40190	267.8
Aroclor-1242	2	7.655	-0.001	135282	266.5	2	7.852	-0.001	90338	271.0
Aroclor-1242	3	8.406	-0.001	40372	267.7	3	9.115	-0.045	15827	151.6
Aroclor-1242	4	8.581	-0.000	56938	249.9	4	9.587	0.001	3186	23.0
Total Col1Ave (4 peaks):					262.0	Total Col2Ave (4 peaks):				178.4 RPD = 38
Corrected Ave (3 peaks):					260.1	Corrected Ave (3 peaks):				147.5 RPD = 55*
Aroclor-1248	1	8.406	0.000	40372	159.3	1	8.306	0.000	28171	181.6
Aroclor-1248	2	8.581	0.001	56938	176.1	2	8.713	0.000	27776	166.4
Aroclor-1248	3	8.995	-0.004	58213	94.1	3	9.115	-0.042	15827	77.6
Aroclor-1248	4	9.304	0.010	36620	119.6	4	9.587	0.006	3186	12.6
Total Col1Ave (4 peaks):					137.3	Total Col2Ave (4 peaks):				109.6 RPD = 22
Corrected Ave (3 peaks):					124.4	Corrected Ave (3 peaks):				85.5 RPD = 37
Aroclor-1254	1	9.304	0.005	36620	70.9	1	9.450	0.002	20792	83.5
Aroclor-1254	2	---			0.0	2	9.972	0.003	2640	13.1
Aroclor-1254	3	9.673	0.003	4075	12.3	3	10.148	0.027	52902	120.5
Aroclor-1254	4	9.813	0.004	14733	22.7	4	10.372	0.000	71680	163.3
Aroclor-1254	5	10.122	-0.055	119528	283.6	5	10.569	-0.000	98559	403.2
Total Col1Ave (4 peaks):					97.4	Total Col2Ave (5 peaks):				156.7 RPD = 47*
Corrected Ave (3 peaks):					35.3	Corrected Ave (4 peaks):				95.1 RPD = 92*
Aroclor-1260	1	11.045	0.002	116435	220.7	1	11.654	0.000	81795	226.0
Aroclor-1260	2	11.362	0.001	116918	215.6	2	11.920	0.002	217887	238.0
Aroclor-1260	3	11.738	0.003	303264	212.5	3	12.437	0.001	56212	246.3
Aroclor-1260	4	12.143	0.004	141534	191.9	4	12.502	0.000	142689	240.8
Aroclor-1260	5	12.246	0.002	68446	212.9	NS	---			----
Total Col1Ave (5 peaks):					210.7	Total Col2Ave (4 peaks):				237.8 RPD = 12
Corrected Ave (4 peaks):					208.2	Corrected Ave (3 peaks):				234.9 RPD = 12
Aroclor-1262	1	10.830	-0.002	169725	446.4	1	11.200	0.000	83995	171.1
Aroclor-1262	2	12.246	0.000	68446	114.1	2	11.654	0.001	81795	195.9
Aroclor-1262	3	12.320	-0.000	84201	129.2	3	12.437	0.003	56212	126.4
Aroclor-1262	4	12.989	-0.000	78065	131.5	4	12.502	-0.001	142689	200.4
Total Col1Ave (4 peaks):					205.3	Total Col2Ave (4 peaks):				173.4 RPD = 17
Corrected Ave (3 peaks):					124.9	Corrected Ave (3 peaks):				164.5 RPD = 27
Aroclor-1268	1	12.246	0.001	68446	44.1	1	12.437	0.003	56212	48.0
Aroclor-1268	2	12.320	0.002	84201	54.4	2	12.502	0.001	142689	114.4
Aroclor-1268	3	12.726	0.027	33020	25.7	3	12.894	0.001	1495	1.4
Aroclor-1268	4	13.490	0.001	16019	4.2	4	13.709	0.001	10120	3.2
Total Col1Ave (4 peaks):					32.1	Total Col2Ave (4 peaks):				41.8 RPD = 26
Corrected Ave (3 peaks):					24.7	Corrected Ave (3 peaks):				17.5 RPD = 34

Total PCB Area Col1 (5.909 - 13.792) = 2789370 Col1 Total PCB = 0.5 ppm*

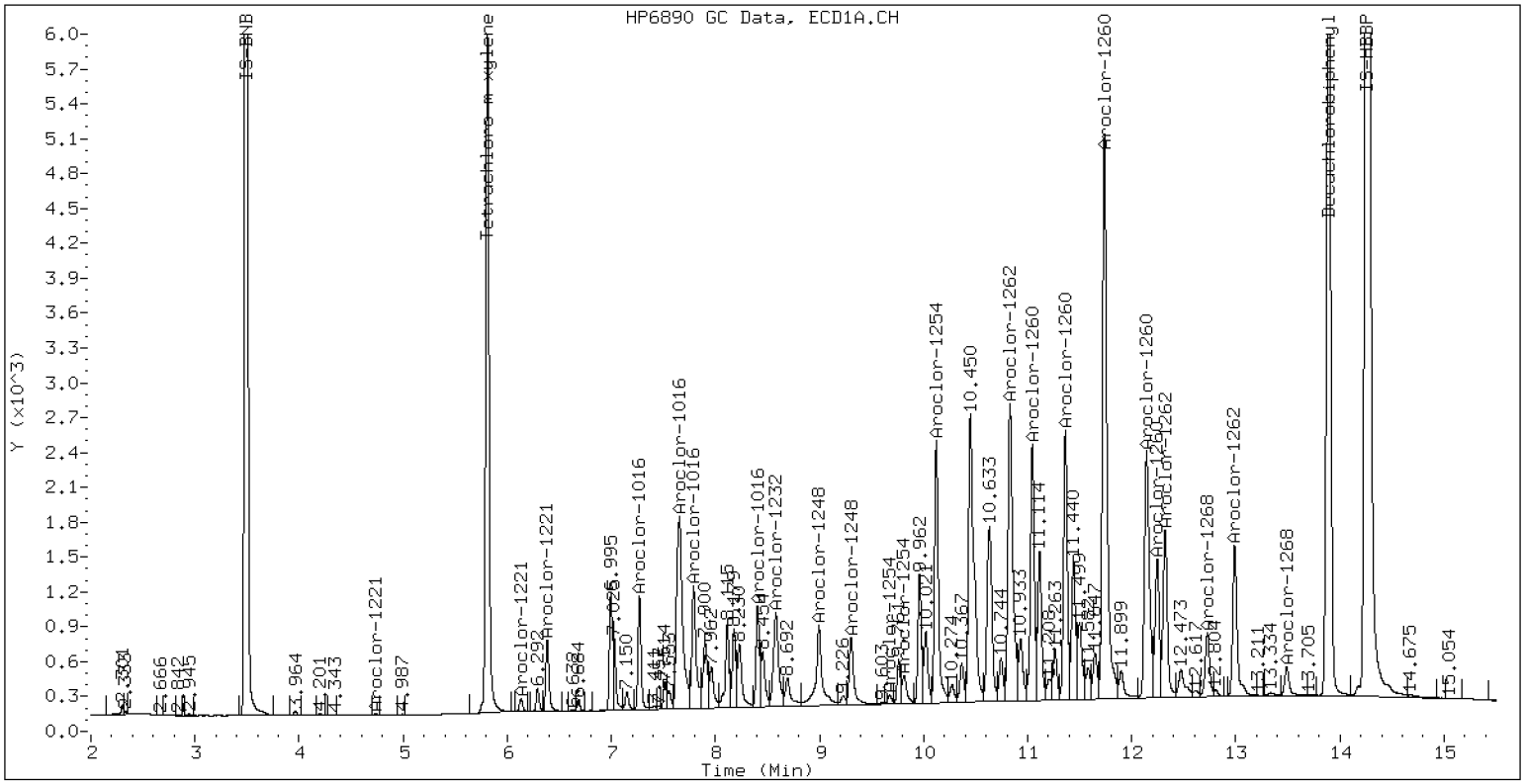
Total PCB Area Col2 (5.787 - 14.020) = 1810543 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

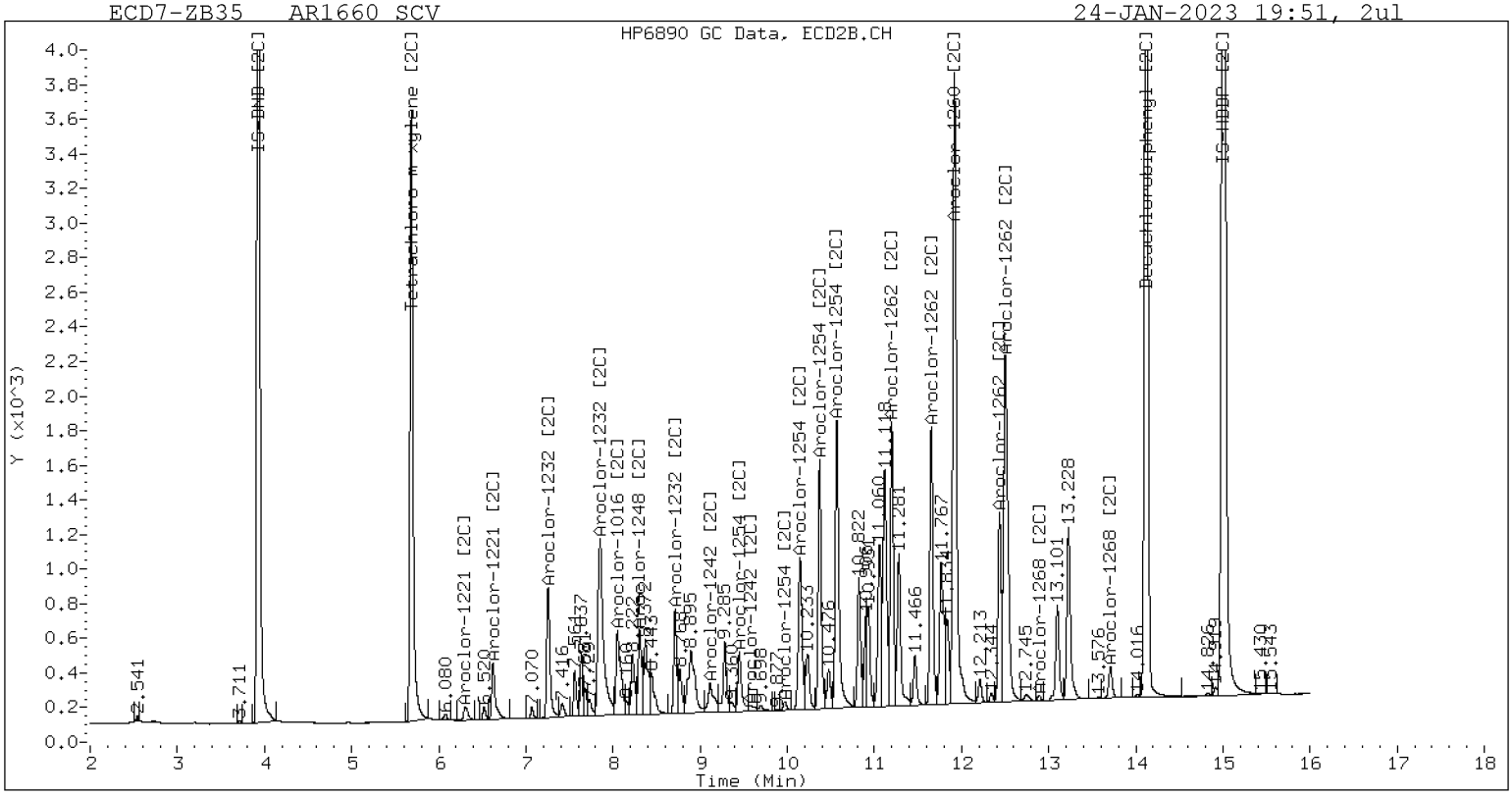
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660 SCV 24-JAN-2023 19:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660 SCV 24-JAN-2023 19:51, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242325ECD7.D
Data file 2: /230124.b/230124.b/01242325ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 SCV
Client ID:
Injection Date: 24-JAN-2023 20:12
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	268580	5.686	-0.001	172592	37.8	37.4	1.1	Tetrachloro-m-xylene
13.892	0.001	392918	14.121	0.001	323869	38.5	40.3	4.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503089	-0.0
Hexabromobiphenyl	647433	953137	47.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	341704	1.4
Hexabromobiphenyl	382032	505860	32.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	29901	159.9	1	7.255	0.000	32077	173.1
Aroclor-1016	2	7.653	0.003	107333	173.3	2	7.851	-0.000	71438	175.9
Aroclor-1016	3	7.790	0.002	45013	157.9	3	8.051	0.001	29072	175.4
Aroclor-1016	4	8.406	0.002	32958	179.8	4	8.306	0.001	21761	167.5
Total Col1Ave (4 peaks):		167.7				Total Col2Ave (4 peaks):		173.0	RPD = 3	
Corrected Ave (3 peaks):		163.7				Corrected Ave (3 peaks):		172.0	RPD = 5	
Aroclor-1221	1	4.737	0.004	141	3.8	1	---			0.0
Aroclor-1221	2	6.133	-0.001	3649	48.0	2	6.317	0.018	4290	78.2
Aroclor-1221	3	6.384	-0.000	21189	120.0	3	6.624	0.001	14613	157.7
Total Col1Ave (3 peaks):		57.3				Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.737	0.003	141	6.1	1	---			0.0
Aroclor-1232	2	6.133	-0.001	3649	69.7	2	7.255	-0.002	32077	377.3
Aroclor-1232	3	7.653	-0.005	107333	410.2	3	7.851	-0.004	71438	412.5
Aroclor-1232	4	8.581	-0.003	59617	532.3	4	8.713	-0.000	22563	468.9
Total Col1Ave (4 peaks):		254.6				Total Col2Ave (3 peaks):		419.6	RPD = 49*	
Corrected Ave (3 peaks):		162.0				Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	29901	194.1	1	7.255	-0.001	32077	214.6
Aroclor-1242	2	7.653	-0.002	107333	212.9	2	7.851	-0.002	71438	215.2
Aroclor-1242	3	8.406	-0.000	32958	220.0	3	9.156	-0.004	27374	263.3
Aroclor-1242	4	8.581	-0.000	59617	263.5	4	9.581	-0.006	34156	247.9
Total Col1Ave (4 peaks):		222.6				Total Col2Ave (4 peaks):		235.3	RPD = 6	
Corrected Ave (3 peaks):		209.0				Corrected Ave (3 peaks):		225.9	RPD = 8	
Aroclor-1248	1	8.406	0.001	32958	131.0	1	8.306	0.001	21761	140.9
Aroclor-1248	2	8.581	0.001	59617	185.7	2	8.713	0.001	22563	135.7
Aroclor-1248	3	9.003	0.004	72557	118.2	3	9.156	-0.000	27374	134.7
Aroclor-1248	4	9.296	0.003	28122	92.5	4	9.581	-0.001	34156	135.9
Total Col1Ave (4 peaks):		131.8				Total Col2Ave (4 peaks):		136.8	RPD = 4	
Corrected Ave (3 peaks):		113.9				Corrected Ave (3 peaks):		135.5	RPD = 17	
Aroclor-1254	1	9.296	-0.002	28122	54.8	1	9.448	0.000	11650	47.0
Aroclor-1254	2	9.380	0.002	9292	42.4	2	9.968	-0.001	7642	38.1
Aroclor-1254	3	9.671	0.001	12871	39.2	3	10.120	-0.001	16012	36.6
Aroclor-1254	4	9.808	-0.000	22113	34.4	4	10.378	0.007	16300	37.3
Aroclor-1254	5	10.176	-0.001	17771	42.5	5	10.572	0.004	4439	18.2
Total Col1Ave (5 peaks):		42.7				Total Col2Ave (5 peaks):		35.5	RPD = 18	
Corrected Ave (4 peaks):		39.6				Corrected Ave (4 peaks):		32.6	RPD = 19	
Aroclor-1260	1	11.047	0.003	741	1.4	1	11.663	0.010	1794	4.9
Aroclor-1260	2	11.366	0.006	379	0.7	2	11.923	0.005	1208	1.3
Aroclor-1260	3	11.745	0.011	860	0.6	3	12.507	0.071	977	4.2
Aroclor-1260	4	12.154	0.014	1536	2.1	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
Total Col1Ave (4 peaks):		1.2				Total Col2Ave (3 peaks):		3.5	RPD = 99*	
Corrected Ave (3 peaks):		0.9				Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.836	0.004	10654	27.6	1	11.120	-0.080	8071	16.3
Aroclor-1262	2	12.154	-0.092	1536	2.5	2	11.663	0.010	1794	4.3
Aroclor-1262	3	---			0.0	3	12.507	0.073	977	2.2
Aroclor-1262	4	13.040	0.051	1739	2.9	4	---			0.0
Total Col1Ave (3 peaks):		11.0				Total Col2Ave (3 peaks):		7.6	RPD = 37	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.154	-0.091	1536	1.0	1	12.507	0.073	977	0.8
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.623	-0.076	5080	3.9	3	12.894	0.001	98	0.1
Aroclor-1268	4	13.501	0.012	2725	0.7	4	13.707	-0.001	1566	0.5
Total Col1Ave (3 peaks):		1.9				Total Col2Ave (3 peaks):		0.5	RPD = 120*	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 915887 Col1 Total PCB = 0.2 ppm*

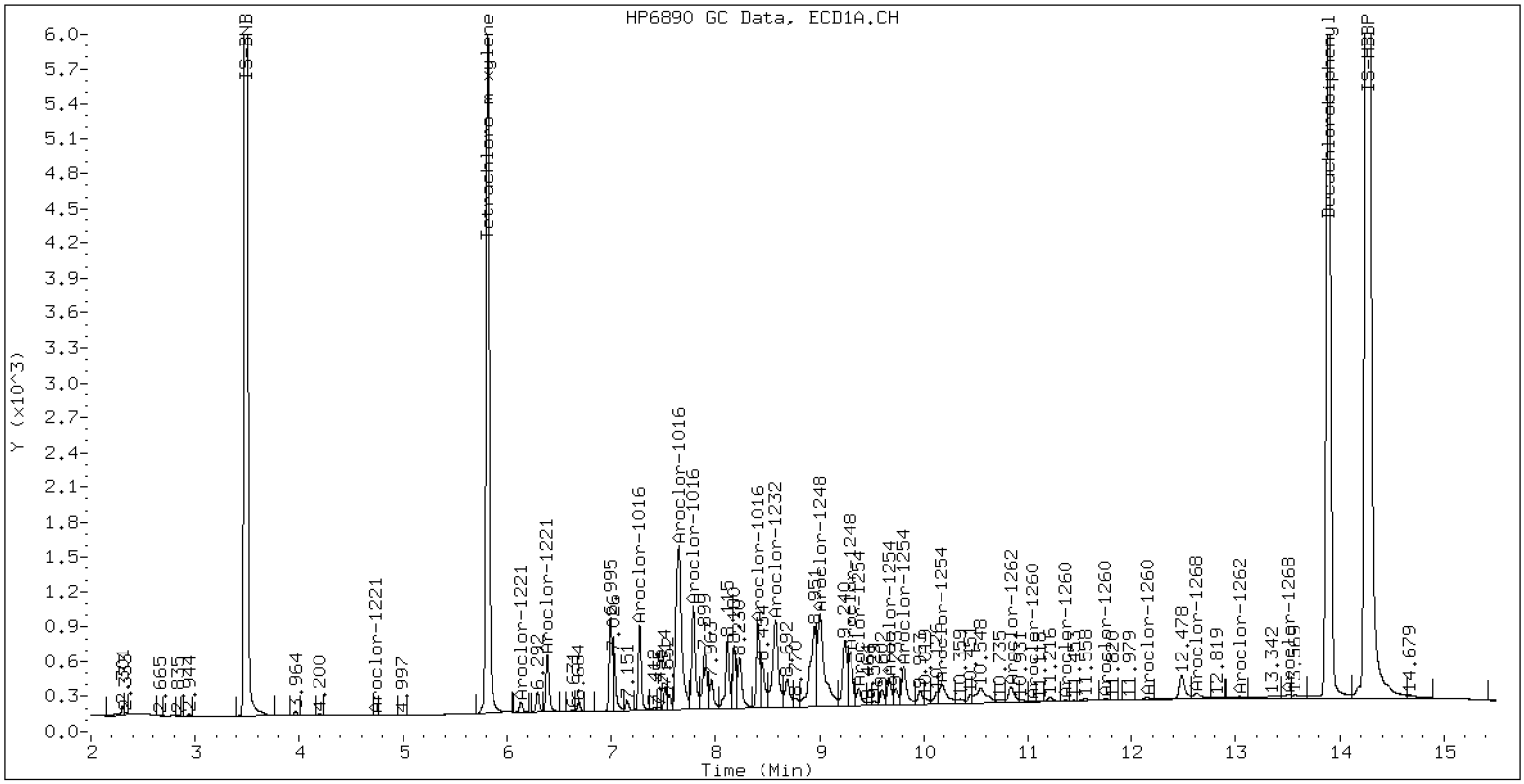
Total PCB Area Col2 (5.787 - 14.020) = 575897 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

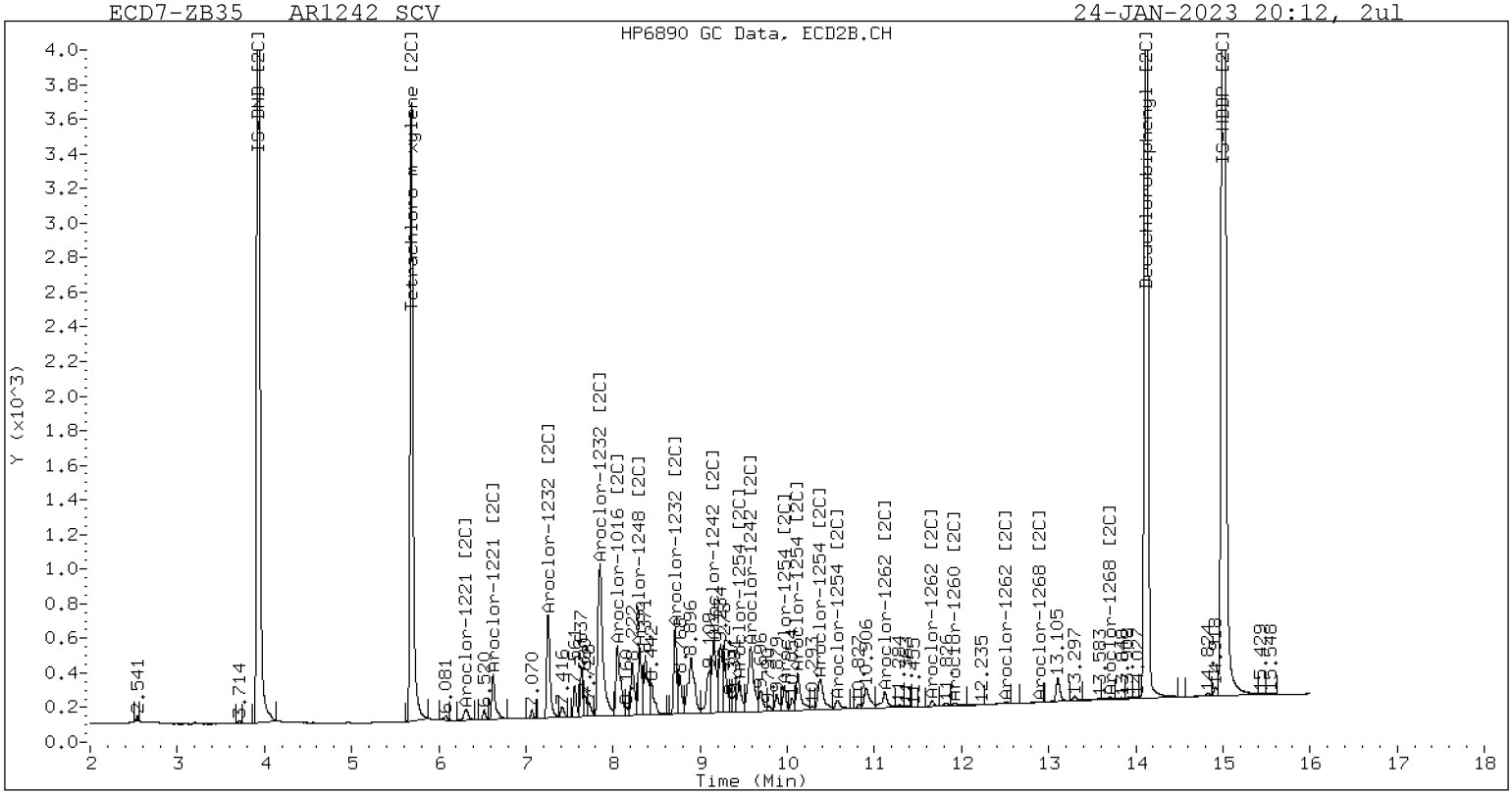
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242 SCV 24-JAN-2023 20:12, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242 SCV 24-JAN-2023 20:12, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242326ECD7.D
Data file 2: /230124.b/230124.b/01242326ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 SCV
Client ID:
Injection Date: 24-JAN-2023 20:33
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.000	263982	5.686	-0.001	169991	36.8	36.5	0.6	Tetrachloro-m-xylene
13.892	0.001	400655	14.121	0.001	316171	38.3	39.6	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	508189	1.0
Hexabromobiphenyl	647433	979067	51.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	344105	2.1
Hexabromobiphenyl	382032	503378	31.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.271	0.001	14777	78.3	1	7.254	-0.001	16100	86.3
Aroclor-1016	2	7.655	0.004	70114	112.1	2	7.853	0.002	47184	115.4
Aroclor-1016	3	7.794	0.006	27212	94.5	3	8.053	0.003	9427	56.5
Aroclor-1016	4	8.406	0.003	59884	323.4	4	8.306	0.001	36680	280.3
	Total Col1Ave (4 peaks):				152.0	Total Col2Ave (4 peaks):				134.6 RPD = 12
	Corrected Ave (3 peaks):				94.9	Corrected Ave (3 peaks):				86.0 RPD = 10
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.133	-0.000	591	7.7	2	6.323	0.025	1820	32.9
Aroclor-1221	3	6.386	0.001	2453	13.8	3	6.627	0.004	1477	15.8
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.133	-0.000	591	11.2	2	7.254	-0.002	16100	188.0
Aroclor-1232	3	7.655	-0.004	70114	265.3	3	7.853	-0.001	47184	270.6
Aroclor-1232	4	8.581	-0.003	76286	674.3	4	8.714	0.000	39330	811.7
	Total Col1Ave (3 peaks):				316.9	Total Col2Ave (3 peaks):				423.4 RPD = 29
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	14777	95.0	1	7.254	-0.002	16100	107.0
Aroclor-1242	2	7.655	-0.001	70114	137.7	2	7.853	0.000	47184	141.2
Aroclor-1242	3	8.406	-0.000	59884	395.8	3	9.159	-0.001	46988	448.9
Aroclor-1242	4	8.581	-0.000	76286	333.8	4	9.584	-0.003	56615	408.1
	Total Col1Ave (4 peaks):				240.5	Total Col2Ave (4 peaks):				276.3 RPD = 14
	Corrected Ave (3 peaks):				188.8	Corrected Ave (3 peaks):				218.7 RPD = 15
Aroclor-1248	1	8.406	0.001	59884	235.6	1	8.306	0.001	36680	235.8
Aroclor-1248	2	8.581	0.001	76286	235.2	2	8.714	0.002	39330	234.9
Aroclor-1248	3	9.000	0.001	148805	239.9	3	9.159	0.003	46988	229.7
Aroclor-1248	4	9.295	0.001	73114	238.1	4	9.584	0.002	56615	223.8
	Total Col1Ave (4 peaks):				237.2	Total Col2Ave (4 peaks):				231.0 RPD = 3
	Corrected Ave (3 peaks):				236.3	Corrected Ave (3 peaks):				229.5 RPD = 3
Aroclor-1254	1	9.295	-0.004	73114	141.2	1	9.449	0.001	20314	81.4
Aroclor-1254	2	9.378	0.000	36561	165.3	2	9.970	0.000	18678	92.6
Aroclor-1254	3	9.672	0.003	30736	92.6	3	10.124	0.003	35321	80.2
Aroclor-1254	4	9.813	0.004	53537	82.3	4	10.387	0.015	35188	79.9
Aroclor-1254	5	10.192	0.015	40119	94.9	5	10.575	0.006	7386	30.1
	Total Col1Ave (5 peaks):				115.3	Total Col2Ave (5 peaks):				72.9 RPD = 45*
	Corrected Ave (4 peaks):				102.7	Corrected Ave (4 peaks):				67.9 RPD = 41*
Aroclor-1260	1	11.054	0.010	1868	3.4	1	11.664	0.011	2055	5.7
Aroclor-1260	2	11.366	0.005	1375	2.4	2	11.926	0.009	1303	1.4
Aroclor-1260	3	11.745	0.010	2137	1.4	3	12.439	0.003	395	1.7
Aroclor-1260	4	12.147	0.008	1650	2.1	4	12.507	0.005	890	1.5
Aroclor-1260	5	12.255	0.011	558	1.7	NS	---			----
	Total Col1Ave (5 peaks):				2.2	Total Col2Ave (4 peaks):				2.6 RPD = 15
	Corrected Ave (4 peaks):				1.9	Corrected Ave (3 peaks):				1.5 RPD = 22
Aroclor-1262	1	10.837	0.005	12736	32.2	1	11.122	-0.078	7136	14.5
Aroclor-1262	2	12.255	0.010	558	0.9	2	11.664	0.011	2055	4.9
Aroclor-1262	3	12.327	0.006	596	0.9	3	12.439	0.004	395	0.9
Aroclor-1262	4	12.996	0.007	1113	1.8	4	12.507	0.003	890	1.2
	Total Col1Ave (4 peaks):				8.9	Total Col2Ave (4 peaks):				5.4 RPD = 50*
	Corrected Ave (3 peaks):				1.2	Corrected Ave (3 peaks):				2.3 RPD = 65*
Aroclor-1268	1	12.255	0.010	558	0.3	1	12.439	0.005	395	0.3
Aroclor-1268	2	12.327	0.009	596	0.4	2	12.507	0.005	890	0.7
Aroclor-1268	3	12.706	0.007	1161	0.9	3	12.896	0.003	166	0.2
Aroclor-1268	4	13.504	0.016	3330	0.8	4	13.717	0.009	469	0.1
	Total Col1Ave (4 peaks):				0.6	Total Col2Ave (4 peaks):				0.3 RPD = 57*
	Corrected Ave (3 peaks):				0.5	Corrected Ave (3 peaks):				0.2 RPD = 83*

Total PCB Area Col1 (5.909 - 13.792) = 1230760 Col1 Total PCB = 0.2 ppm*

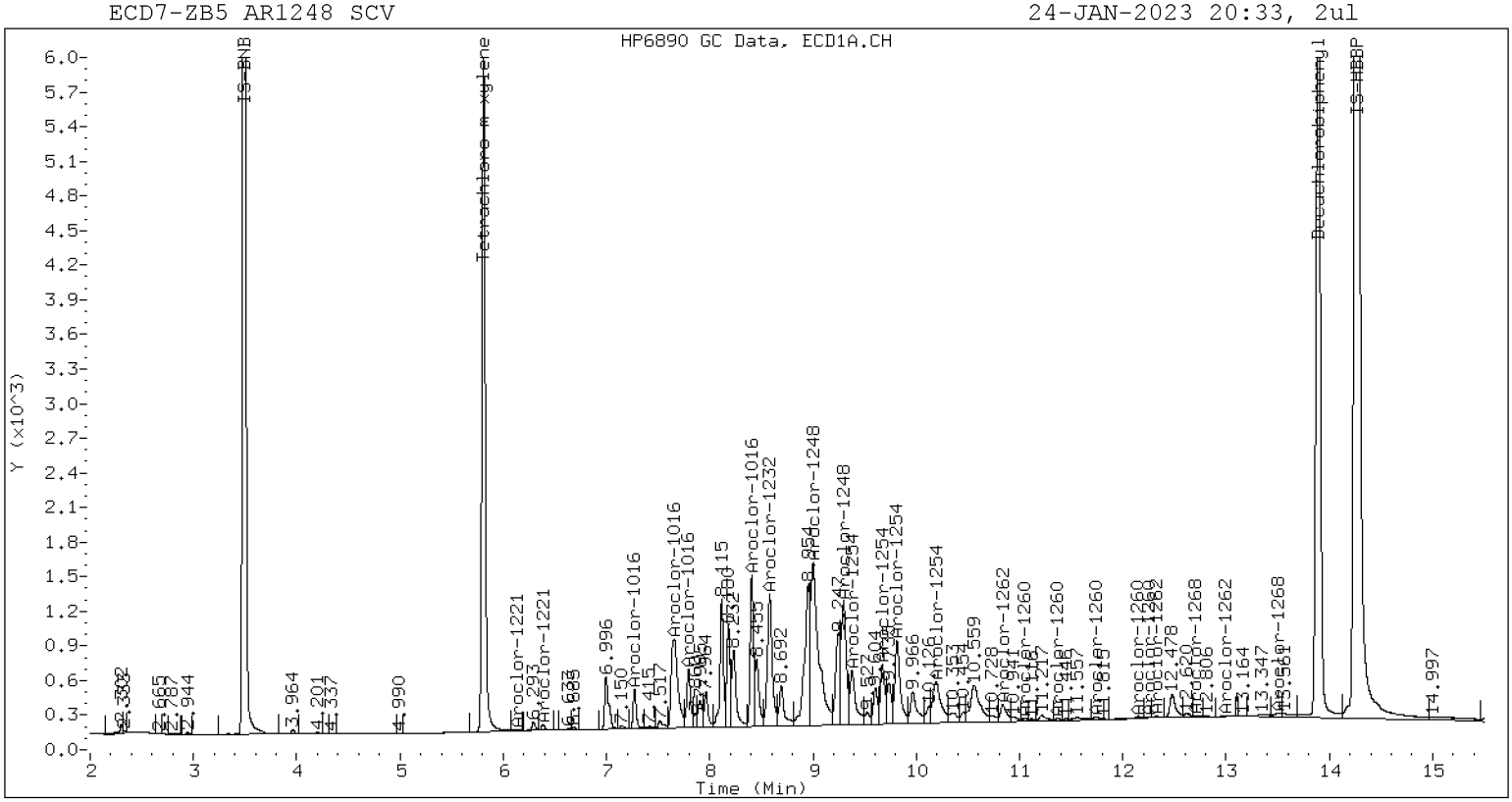
Total PCB Area Col2 (5.787 - 14.020) = 742749 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

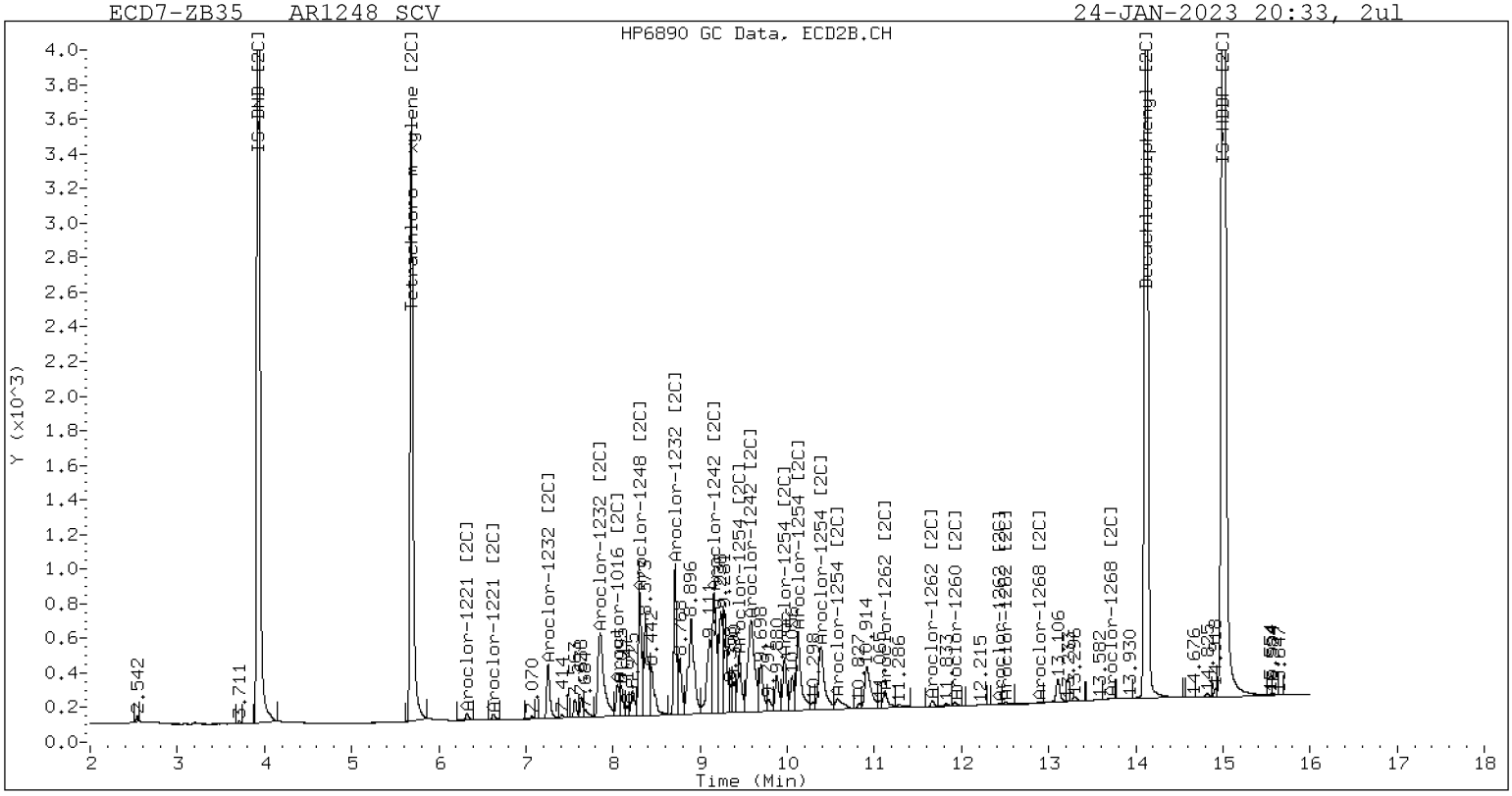
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248 SCV 24-JAN-2023 20:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248 SCV 24-JAN-2023 20:33, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242327ECD7.D
Data file 2: /230124.b/230124.b/01242327ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 SCV
Client ID:
Injection Date: 24-JAN-2023 20:54
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	261398	5.686	-0.001	169839	36.7	36.6	0.1	Tetrachloro-m-xylene
13.892	0.001	383983	14.121	0.001	323233	37.1	39.5	6.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	504424	0.2
Hexabromobiphenyl	647433	968338	49.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	342969	1.8
Hexabromobiphenyl	382032	515045	34.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.273	0.003	320	1.7	1	7.258	0.003	332	1.8
Aroclor-1016	2	7.658	0.008	991	1.6	2	---			0.0
Aroclor-1016	3	7.795	0.007	662	2.3	3	8.097	0.047	515	3.1
Aroclor-1016	4	8.408	0.005	21378	116.3	4	8.307	0.002	20446	156.8
	Total Col1Ave (4 peaks):				30.5	Total Col2Ave (3 peaks):				53.9 RPD = 55*
	Corrected Ave (3 peaks):				1.9	Corrected Ave: < 3 Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.325	0.026	1749	31.7
Aroclor-1221	3	---			0.0	3	6.633	0.011	321	3.5
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	7.258	0.001	332	3.9
Aroclor-1232	3	7.658	-0.000	991	3.8	3	---			0.0
Aroclor-1232	4	8.587	0.003	8887	79.1	4	8.715	0.001	14030	290.5
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	7.273	0.002	320	2.1	1	7.258	0.002	332	2.2
Aroclor-1242	2	7.658	0.003	991	2.0	2	---			0.0
Aroclor-1242	3	8.408	0.002	21378	142.3	3	9.164	0.004	26593	254.9
Aroclor-1242	4	8.587	0.006	8887	39.2	4	9.543	-0.043	34385	248.7
	Total Col1Ave (4 peaks):				46.4	Total Col2Ave (3 peaks):				168.6 RPD = 114*
	Corrected Ave (3 peaks):				14.4	Corrected Ave: < 3 Peaks				
Aroclor-1248	1	8.408	0.003	21378	84.7	1	8.307	0.001	20446	131.9
Aroclor-1248	2	8.587	0.007	8887	27.6	2	8.715	0.003	14030	84.1
Aroclor-1248	3	8.995	-0.004	110289	179.1	3	9.164	0.007	26593	130.4
Aroclor-1248	4	9.300	0.007	113143	371.2	4	9.543	-0.038	34385	136.4
	Total Col1Ave (4 peaks):				165.7	Total Col2Ave (4 peaks):				120.7 RPD = 31
	Corrected Ave (3 peaks):				97.2	Corrected Ave (3 peaks):				115.5 RPD = 17
Aroclor-1254	1	9.300	0.002	113143	220.1	1	9.449	0.001	56453	226.9
Aroclor-1254	2	9.379	0.001	49468	225.4	2	9.970	0.001	45325	225.4
Aroclor-1254	3	9.671	0.002	72811	221.0	3	10.122	0.002	97044	221.2
Aroclor-1254	4	9.811	0.002	140530	217.7	4	10.374	0.002	98778	225.2
Aroclor-1254	5	10.182	0.005	92254	219.8	5	10.570	0.001	57171	234.0
	Total Col1Ave (5 peaks):				220.8	Total Col2Ave (5 peaks):				226.5 RPD = 3
	Corrected Ave (4 peaks):				219.7	Corrected Ave (4 peaks):				224.7 RPD = 2
Aroclor-1260	1	11.045	0.002	8960	16.5	1	11.661	0.008	26985	72.6
Aroclor-1260	2	11.364	0.004	9237	16.5	2	11.923	0.006	19882	21.2
Aroclor-1260	3	11.741	0.007	21268	14.5	3	12.505	0.069	13190	56.3
Aroclor-1260	4	12.146	0.007	19041	25.1	4	---			0.0
Aroclor-1260	5	12.321	0.077	1835	5.5	NS	---			----
	Total Col1Ave (5 peaks):				15.6	Total Col2Ave (3 peaks):				50.0 RPD = 105*
	Corrected Ave (4 peaks):				13.3	Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.832	0.000	157590	402.4	1	11.119	-0.081	92414	183.3
Aroclor-1262	2	12.321	0.075	1835	3.0	2	11.661	0.008	26985	63.0
Aroclor-1262	3	---			0.0	3	12.505	0.071	13190	28.9
Aroclor-1262	4	12.995	0.006	843	1.4	4	---			0.0
	Total Col1Ave (3 peaks):				135.6	Total Col2Ave (3 peaks):				91.7 RPD = 39
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.321	0.076	1835	1.1	1	12.505	0.072	13190	11.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.720	0.021	1314	1.0	3	12.891	-0.002	169	0.2
Aroclor-1268	4	13.504	0.016	1169	0.3	4	13.706	-0.002	1132	0.3
	Total Col1Ave (3 peaks):				0.8	Total Col2Ave (3 peaks):				3.8 RPD = 130*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 1507519 Col1 Total PCB = 0.3 ppm*

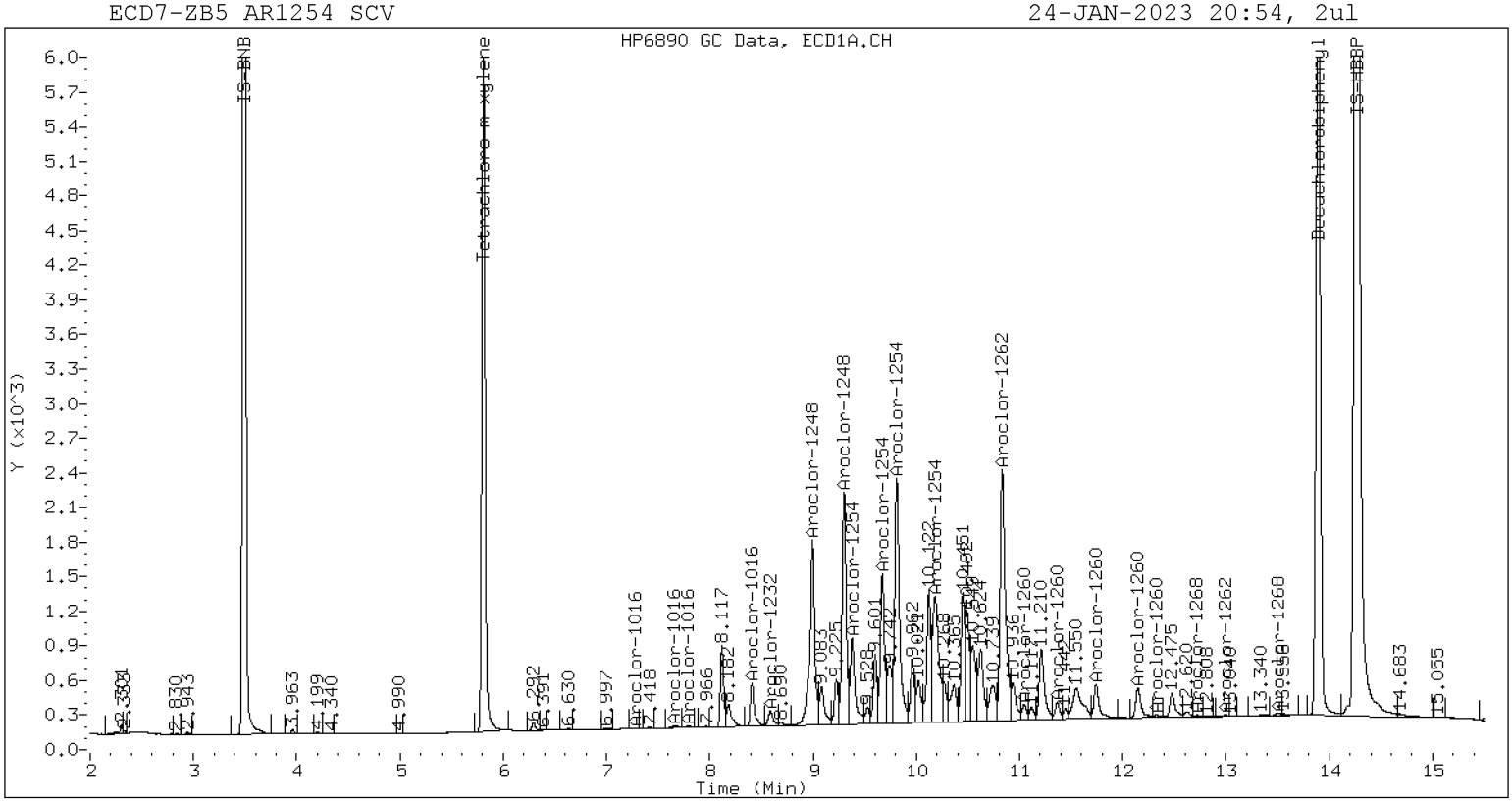
Total PCB Area Col2 (5.787 - 14.020) = 951047 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

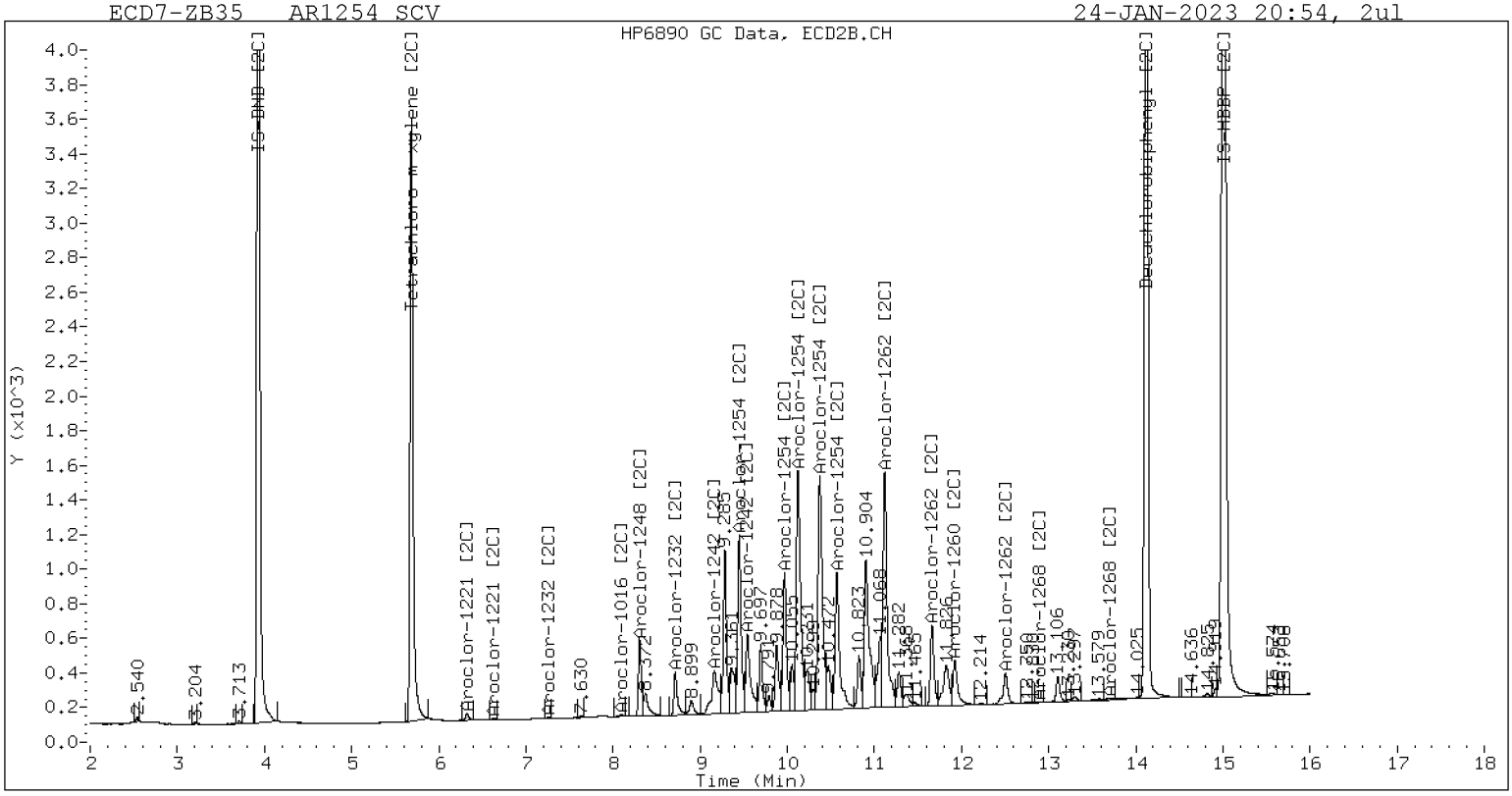
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254 SCV 24-JAN-2023 20:54, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254 SCV 24-JAN-2023 20:54, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242328ECD7.D
Data file 2: /230124.b/230124.b/01242328ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 SCV
Client ID:
Injection Date: 24-JAN-2023 21:15
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	265357	5.685	-0.001	170984	37.3	37.2	0.3	Tetrachloro-m-xylene
13.891	-0.001	397332	14.119	-0.001	326981	37.5	39.5	5.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503473	0.0
Hexabromobiphenyl	647433	991997	53.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	340361	1.0
Hexabromobiphenyl	382032	521975	36.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	5326	28.5	1	7.257	0.002	6708	36.3
Aroclor-1016	2	7.664	0.013	11965	19.3	2	7.856	0.005	7233	17.9
Aroclor-1016	3	7.797	0.009	6015	21.1	3	8.058	0.008	2997	18.2
Aroclor-1016	4	8.410	0.006	3771	20.6	4	8.308	0.002	2065	16.0
Total Col1Ave (4 peaks):					22.4	Total Col2Ave (4 peaks):				22.1 RPD = 1
Corrected Ave (3 peaks):					20.3	Corrected Ave (3 peaks):				17.3 RPD = 16
Aroclor-1221	1	4.732	-0.000	9097	244.5	1	4.959	-0.000	6157	246.8
Aroclor-1221	2	6.133	-0.000	16114	211.8	2	6.297	-0.001	12807	234.2
Aroclor-1221	3	6.384	0.000	40299	228.1	3	6.622	-0.000	21707	235.2
Total Col1Ave (3 peaks):					228.1	Total Col2Ave (3 peaks):				238.7 RPD = 5
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.732	-0.001	9097	391.6	1	4.959	-0.001	6157	406.9
Aroclor-1232	2	6.133	0.000	16114	307.8	2	7.257	0.000	6708	79.2
Aroclor-1232	3	7.664	0.005	11965	45.7	3	7.856	0.001	7233	41.9
Aroclor-1232	4	8.589	0.004	2837	25.3	4	8.716	0.002	1869	39.0
Total Col1Ave (4 peaks):					192.6	Total Col2Ave (4 peaks):				141.7 RPD = 30
Corrected Ave (3 peaks):					126.3	Corrected Ave (3 peaks):				53.4 RPD = 81*
Aroclor-1242	1	7.272	0.001	5326	34.5	1	7.257	0.001	6708	45.1
Aroclor-1242	2	7.664	0.008	11965	23.7	2	7.856	0.003	7233	21.9
Aroclor-1242	3	8.410	0.004	3771	25.2	3	9.169	0.009	1956	18.9
Aroclor-1242	4	8.589	0.007	2837	12.5	4	9.544	-0.043	5978	43.6
Total Col1Ave (4 peaks):					24.0	Total Col2Ave (4 peaks):				32.3 RPD = 30
Corrected Ave (3 peaks):					20.5	Corrected Ave (3 peaks):				28.1 RPD = 31
Aroclor-1248	1	8.410	0.005	3771	15.0	1	8.308	0.002	2065	13.4
Aroclor-1248	2	8.589	0.008	2837	8.8	2	8.716	0.004	1869	11.3
Aroclor-1248	3	8.997	-0.002	36022	58.6	3	9.169	0.012	1956	9.7
Aroclor-1248	4	9.305	0.011	30853	101.4	4	9.544	-0.038	5978	23.9
Total Col1Ave (4 peaks):					46.0	Total Col2Ave (4 peaks):				14.6 RPD = 104*
Corrected Ave (3 peaks):					27.5	Corrected Ave (3 peaks):				11.5 RPD = 82*
Aroclor-1254	1	9.305	0.006	30853	60.1	1	9.451	0.003	17617	71.3
Aroclor-1254	2	9.376	-0.002	5370	24.5	2	9.970	0.001	2849	14.3
Aroclor-1254	3	9.673	0.003	5543	16.9	3	10.146	0.026	88151	202.5
Aroclor-1254	4	9.810	0.002	14544	22.6	4	10.370	-0.002	107074	245.9
Aroclor-1254	5	10.121	-0.056	180016	429.7	5	10.567	-0.002	141725	584.5
Total Col1Ave (5 peaks):					110.8	Total Col2Ave (5 peaks):				223.7 RPD = 68*
Corrected Ave (4 peaks):					31.0	Corrected Ave (4 peaks):				133.5 RPD = 125*
Aroclor-1260	1	11.044	0.001	310806	558.4	1	11.652	-0.001	187682	498.4
Aroclor-1260	2	11.361	0.000	263161	460.0	2	11.917	-0.000	450612	473.0
Aroclor-1260	3	11.735	0.000	629605	418.0	3	12.433	-0.003	206042	867.7
Aroclor-1260	4	12.141	0.001	210012	269.9	4	12.502	-0.000	326457	529.5
Aroclor-1260	5	12.244	-0.000	268425	791.3	NS	---			----
Total Col1Ave (5 peaks):					499.5	Total Col2Ave (4 peaks):				592.1 RPD = 17
Corrected Ave (4 peaks):					426.6	Corrected Ave (3 peaks):				500.3 RPD = 16
Aroclor-1262	1	10.828	-0.005	171094	426.5	1	11.200	0.000	219731	430.1
Aroclor-1262	2	12.244	-0.002	268425	423.9	2	11.652	-0.001	187682	432.0
Aroclor-1262	3	12.319	-0.002	291581	424.2	3	12.433	-0.001	206042	445.4
Aroclor-1262	4	12.988	-0.001	257735	411.5	4	12.502	-0.002	326457	440.6
Total Col1Ave (4 peaks):					421.5	Total Col2Ave (4 peaks):				437.0 RPD = 4
Corrected Ave (3 peaks):					419.8	Corrected Ave (3 peaks):				434.3 RPD = 3
Aroclor-1268	1	12.244	-0.001	268425	163.8	1	12.433	-0.000	206042	169.0
Aroclor-1268	2	12.319	0.001	291581	178.4	2	12.502	0.000	326457	251.7
Aroclor-1268	3	12.725	0.026	108693	80.3	3	12.892	-0.001	10062	9.3
Aroclor-1268	4	13.486	-0.003	95646	23.8	4	13.710	0.001	59437	17.8
Total Col1Ave (4 peaks):					111.6	Total Col2Ave (4 peaks):				112.0 RPD = 0

Corrected Ave (3 peaks): 89.3 Corrected Ave (3 peaks): 65.4 RPD = 31

Total PCB Area Col1 (5.909 - 13.792) = 4409992 Col1 Total PCB = 0.8 ppm*

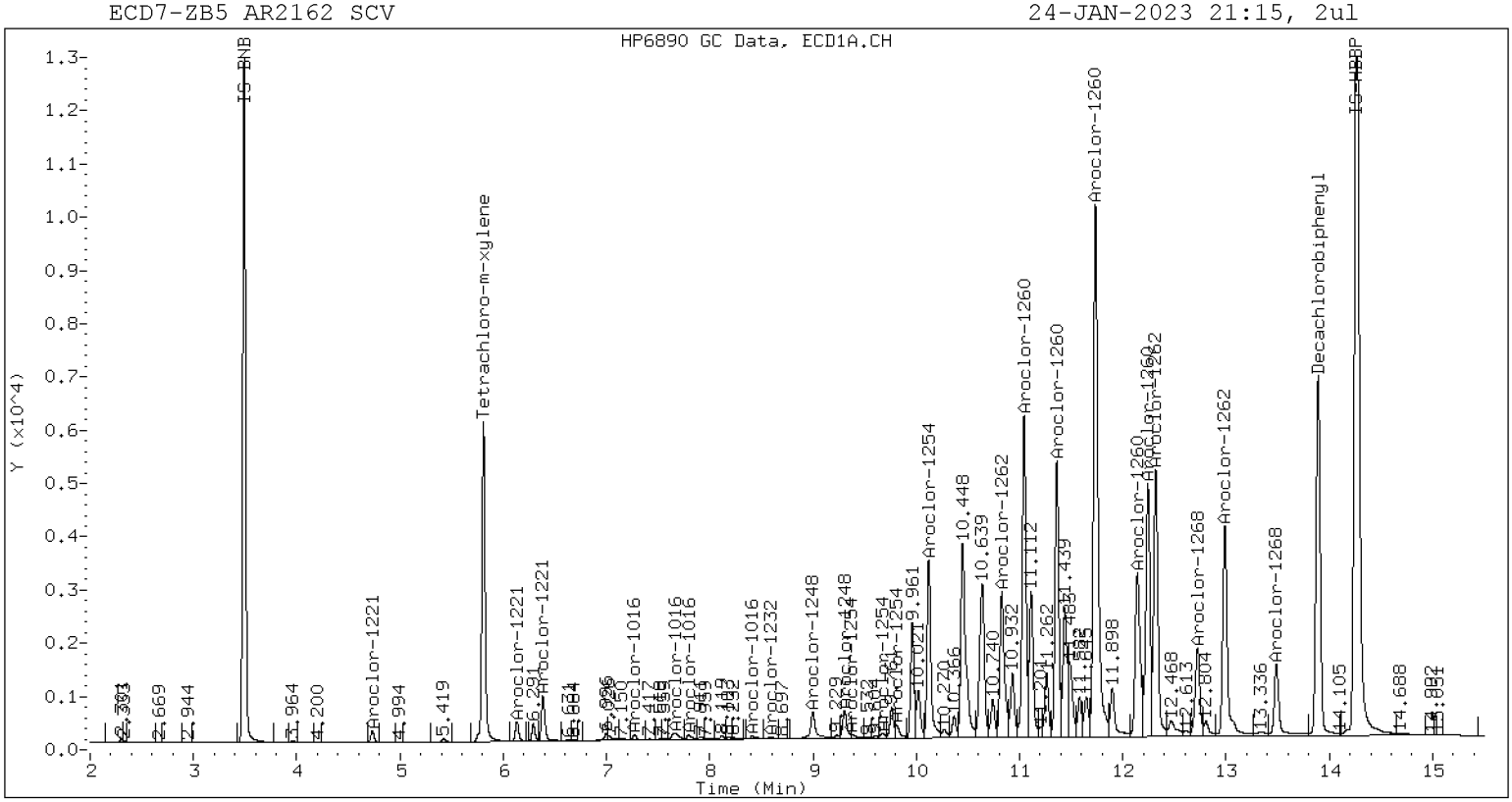
Total PCB Area Col2 (5.787 - 14.020) = 2874073 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

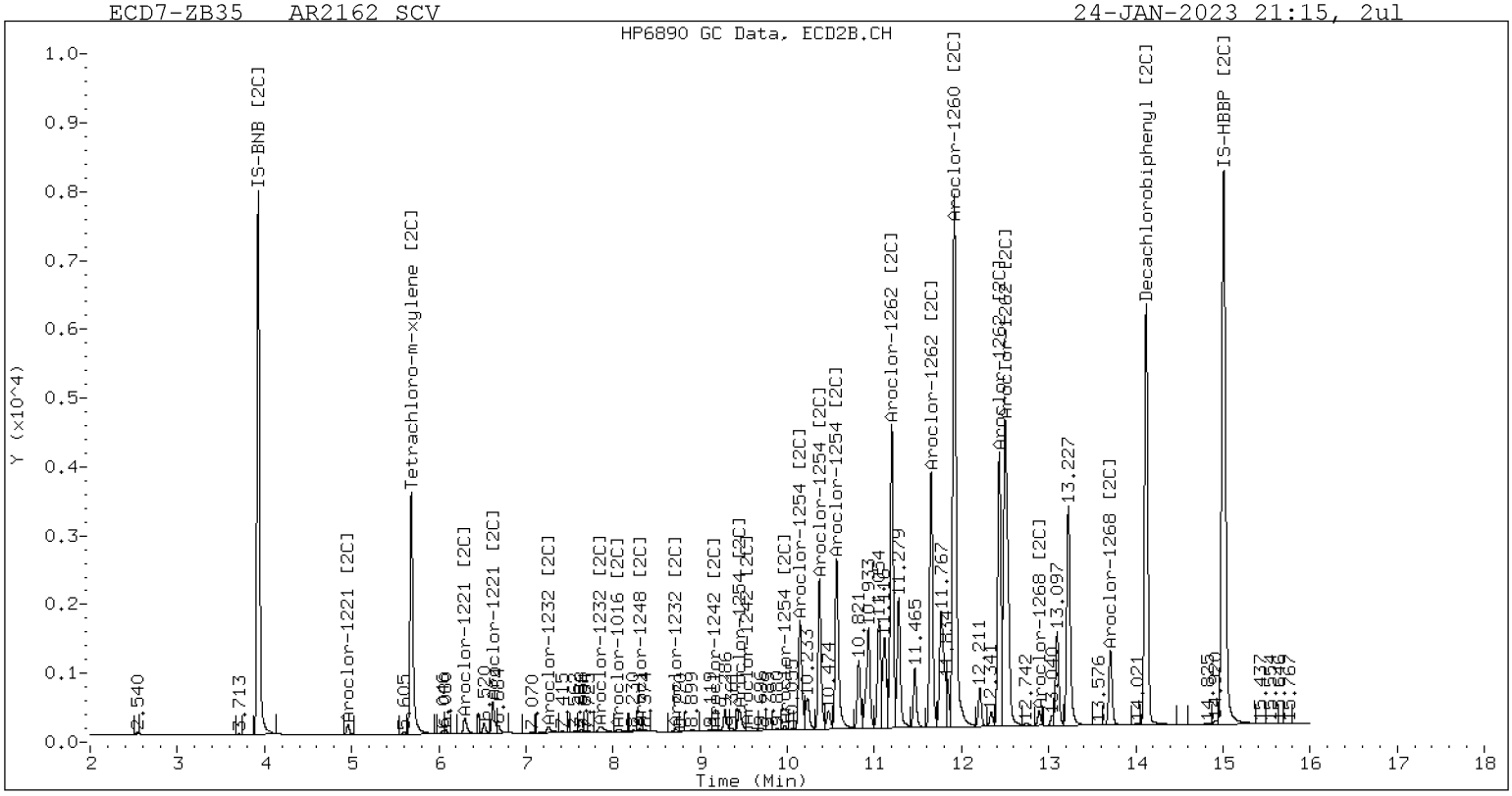
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162 SCV 24-JAN-2023 21:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162 SCV 24-JAN-2023 21:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242329ECD7.D
Data file 2: /230124.b/230124.b/01242329ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 SCV
Client ID:
Injection Date: 24-JAN-2023 21:36
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.810	0.001	250455	5.687	0.000	162795	36.4	36.3	0.2	Tetrachloro-m-xylene
13.892	0.000	551946	14.120	0.000	461901	54.6	57.9	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	487061	-3.2
Hexabromobiphenyl	647433	944934	46.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331721	-1.5
Hexabromobiphenyl	382032	502401	31.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	19363	107.0	1	7.256	0.001	19791	110.0
Aroclor-1016	2	7.659	0.009	58630	97.8	2	7.856	0.005	40139	101.8
Aroclor-1016	3	7.794	0.006	28286	102.5	3	8.055	0.005	17412	108.2
Aroclor-1016	4	8.408	0.004	17373	97.9	4	8.308	0.003	11962	94.8
Total Col1Ave (4 peaks):		101.3				Total Col2Ave (4 peaks):		103.7	RPD = 2	
Corrected Ave (3 peaks):		99.4				Corrected Ave (3 peaks):		101.6	RPD = 2	
Aroclor-1221	1	4.735	0.002	5022	139.5	1	4.961	0.002	3409	140.2
Aroclor-1221	2	6.134	0.001	8987	122.1	2	6.299	0.001	7677	144.1
Aroclor-1221	3	6.385	0.001	29368	171.8	3	6.624	0.001	16198	180.1
Total Col1Ave (3 peaks):		144.5				Total Col2Ave (3 peaks):		154.8	RPD = 7	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.735	0.002	5022	223.5	1	4.961	0.002	3409	231.1
Aroclor-1232	2	6.134	0.001	8987	177.4	2	7.256	-0.001	19791	239.8
Aroclor-1232	3	7.659	0.001	58630	231.5	3	7.856	0.001	40139	238.8
Aroclor-1232	4	8.585	0.000	24991	230.5	4	8.715	0.001	11476	245.7
Total Col1Ave (4 peaks):		215.7				Total Col2Ave (4 peaks):		238.8	RPD = 10	
Corrected Ave (3 peaks):		210.5				Corrected Ave (3 peaks):		236.6	RPD = 12	
Aroclor-1242	1	7.272	0.001	19363	129.8	1	7.256	0.000	19791	136.4
Aroclor-1242	2	7.659	0.004	58630	120.1	2	7.856	0.002	40139	124.6
Aroclor-1242	3	8.408	0.001	17373	119.8	3	9.166	0.006	11813	117.1
Aroclor-1242	4	8.585	0.003	24991	114.1	4	9.595	0.009	16549	123.7
Total Col1Ave (4 peaks):		121.0				Total Col2Ave (4 peaks):		125.4	RPD = 4	
Corrected Ave (3 peaks):		118.0				Corrected Ave (3 peaks):		121.8	RPD = 3	
Aroclor-1248	1	8.408	0.002	17373	71.3	1	8.308	0.003	11962	79.8
Aroclor-1248	2	8.585	0.005	24991	80.4	2	8.715	0.003	11476	71.1
Aroclor-1248	3	9.001	0.002	67631	113.8	3	9.166	0.009	11813	59.9
Aroclor-1248	4	9.293	-0.001	30983	105.3	4	9.595	0.014	16549	67.9
Total Col1Ave (4 peaks):		92.7				Total Col2Ave (4 peaks):		69.7	RPD = 28	
Corrected Ave (3 peaks):		85.7				Corrected Ave (3 peaks):		66.3	RPD = 26	
Aroclor-1254	1	9.293	-0.006	30983	62.4	1	9.451	0.003	3749	15.6
Aroclor-1254	2	9.381	0.003	9071	42.8	2	9.974	0.005	2452	12.6
Aroclor-1254	3	9.678	0.009	5199	16.3	3	10.131	0.010	4718	11.1
Aroclor-1254	4	9.820	0.012	8864	14.2	4	10.389	0.018	4224	10.0
Aroclor-1254	5	10.195	0.018	8085	19.9	5	10.573	0.004	1573	6.7
Total Col1Ave (5 peaks):		31.1				Total Col2Ave (5 peaks):		11.2	RPD = 94*	
Corrected Ave (4 peaks):		23.3				Corrected Ave (4 peaks):		10.1	RPD = 79*	
Aroclor-1260	1	11.050	0.006	66852	126.1	1	11.647	-0.006	57235	157.9
Aroclor-1260	2	11.366	0.006	6269	11.5	2	11.919	0.002	25368	27.7
Aroclor-1260	3	11.741	0.007	41446	28.9	3	12.434	-0.002	262014	1146.4
Aroclor-1260	4	12.052	-0.088	2691	3.6	4	12.502	-0.000	277060	466.9
Aroclor-1260	5	12.245	0.002	349286	1080.9	NS	---			----
Total Col1Ave (5 peaks):		250.2				Total Col2Ave (4 peaks):		449.7	RPD = 57*	
Corrected Ave (4 peaks):		42.5				Corrected Ave (3 peaks):		217.5	RPD = 135*	
Aroclor-1262	1	10.838	0.006	4520	11.8	1	11.203	0.003	40576	82.5
Aroclor-1262	2	12.245	-0.000	349286	579.1	2	11.647	-0.006	57235	136.9
Aroclor-1262	3	12.318	-0.002	349715	534.1	3	12.434	-0.001	262014	588.4
Aroclor-1262	4	12.988	-0.001	141905	237.8	4	12.502	-0.002	277060	388.5
Total Col1Ave (4 peaks):		340.7				Total Col2Ave (4 peaks):		299.1	RPD = 13	
Corrected Ave (3 peaks):		261.2				Corrected Ave (3 peaks):		202.6	RPD = 25	
Aroclor-1268	1	12.245	0.001	349286	223.8	1	12.434	0.000	262014	223.3
Aroclor-1268	2	12.318	0.000	349715	224.6	2	12.502	0.000	277060	221.9
Aroclor-1268	3	12.699	0.000	289328	224.3	3	12.893	-0.000	208928	201.0
Aroclor-1268	4	13.490	0.001	849299	222.1	4	13.710	0.002	725831	226.1
Total Col1Ave (4 peaks):		223.7				Total Col2Ave (4 peaks):		218.1	RPD = 3	

Corrected Ave (3 peaks): 223.4 Corrected Ave (3 peaks): 215.4 RPD = 4

Total PCB Area Col1 (5.909 - 13.792) = 2866092 Col1 Total PCB = 0.5 ppm*

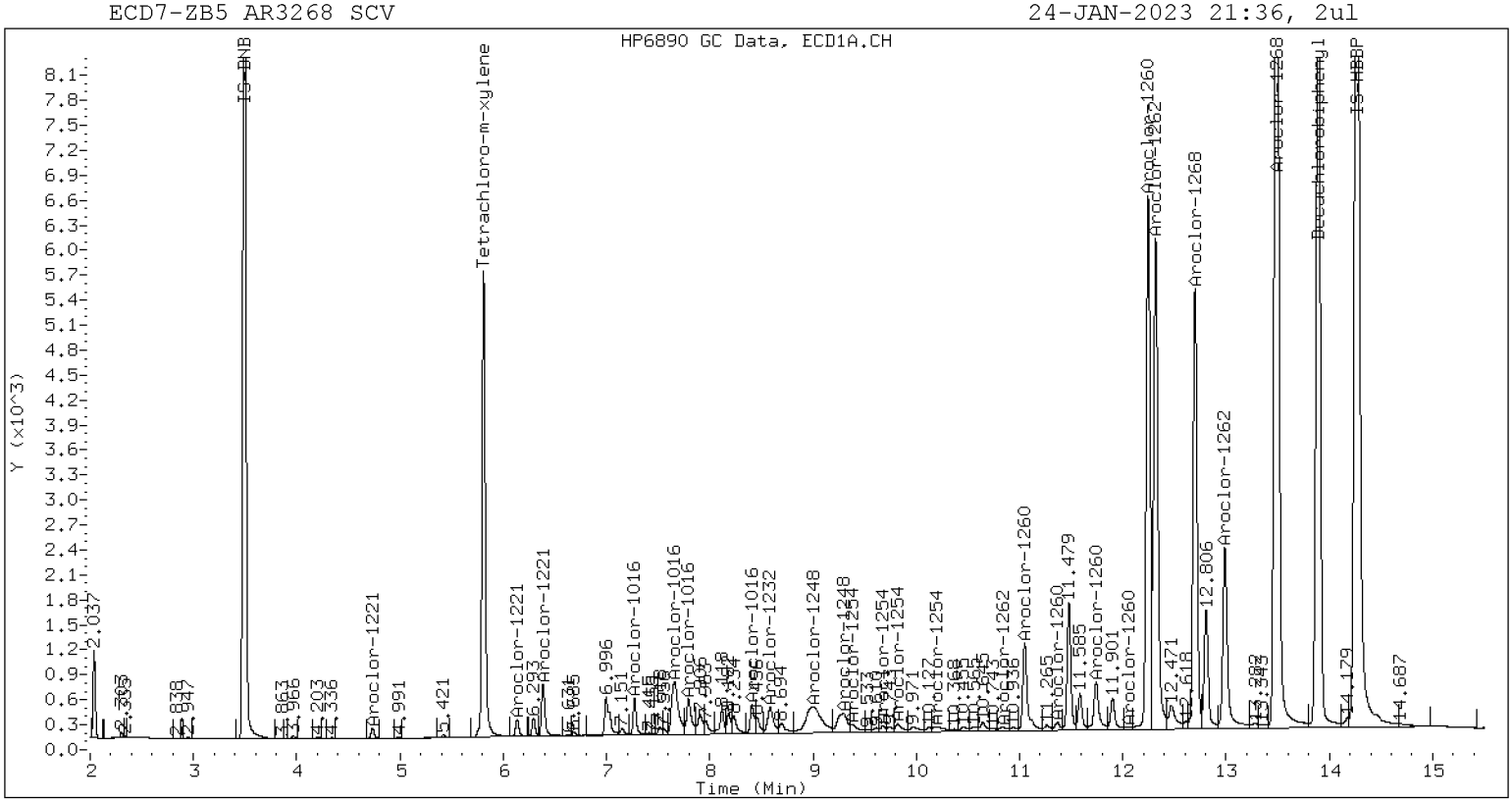
Total PCB Area Col2 (5.787 - 14.020) = 2084481 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

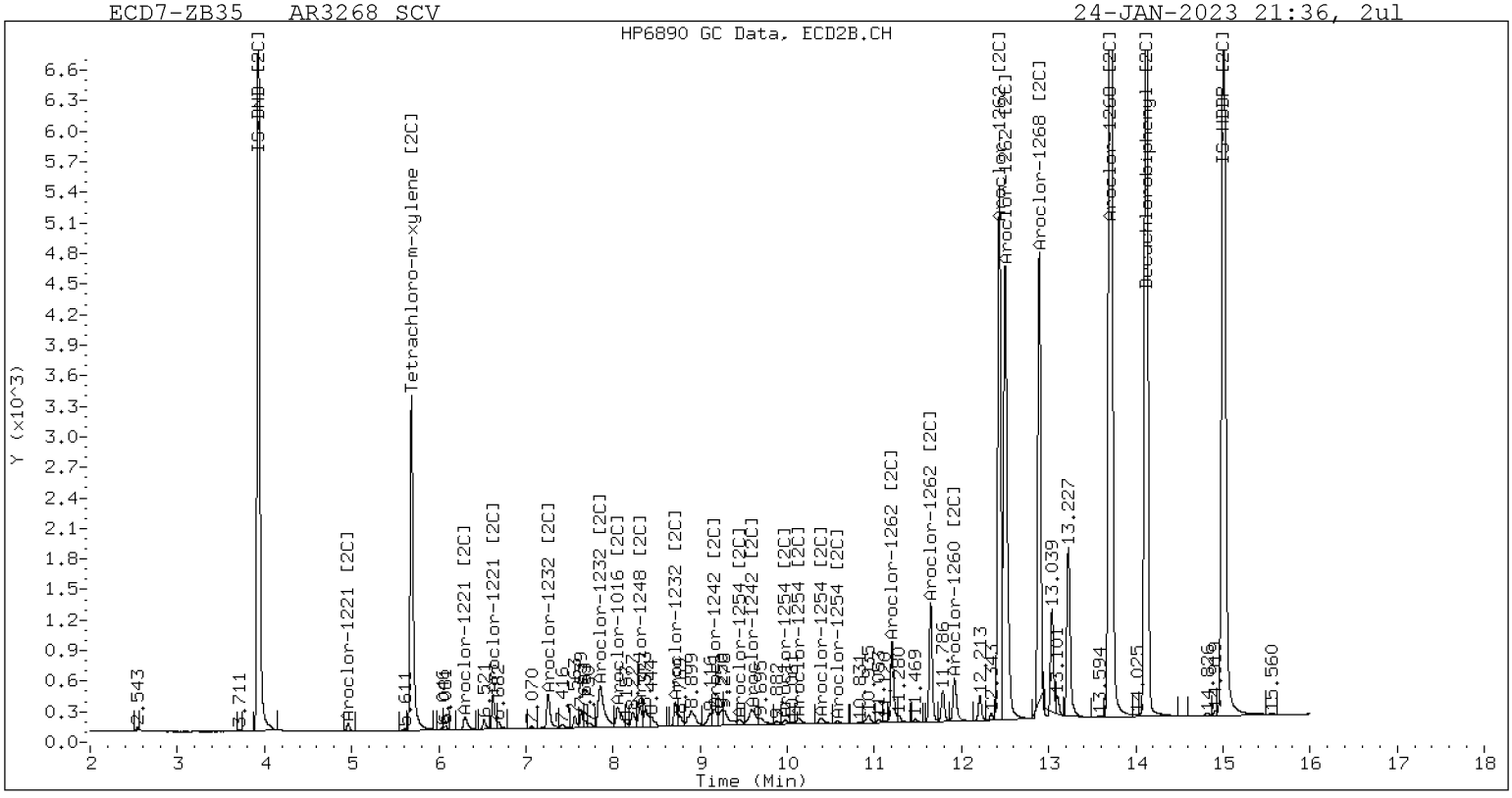
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268 SCV 24-JAN-2023 21:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268 SCV 24-JAN-2023 21:36, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /230124.b/01242330ECD7.D ARI ID: DDTS

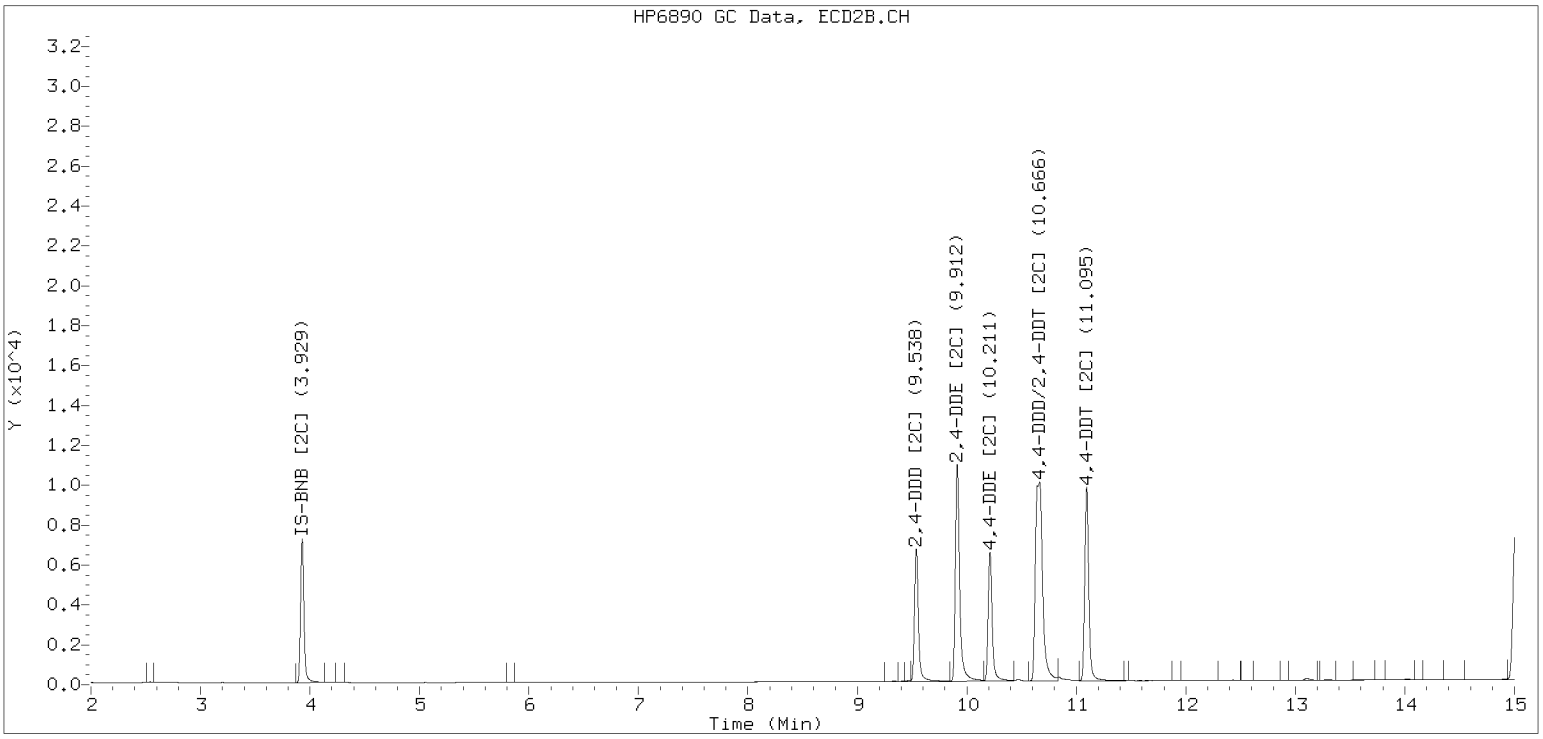
ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
9.263	0.000	519078	9.912	0.000	601473	0.100	0.100	0.0	2,4-DDE
10.296	0.000	1468204	10.666	0.000	915087	0.100	0.200#	66.7*	2,4-DDT
9.687	0.000	883988	10.211	0.000	339715	0.100	0.100	0.0	4,4-DDE
0.000	-10.281	0	10.666	0.000	915087	0.000	0.200#	----	4,4-DDD

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

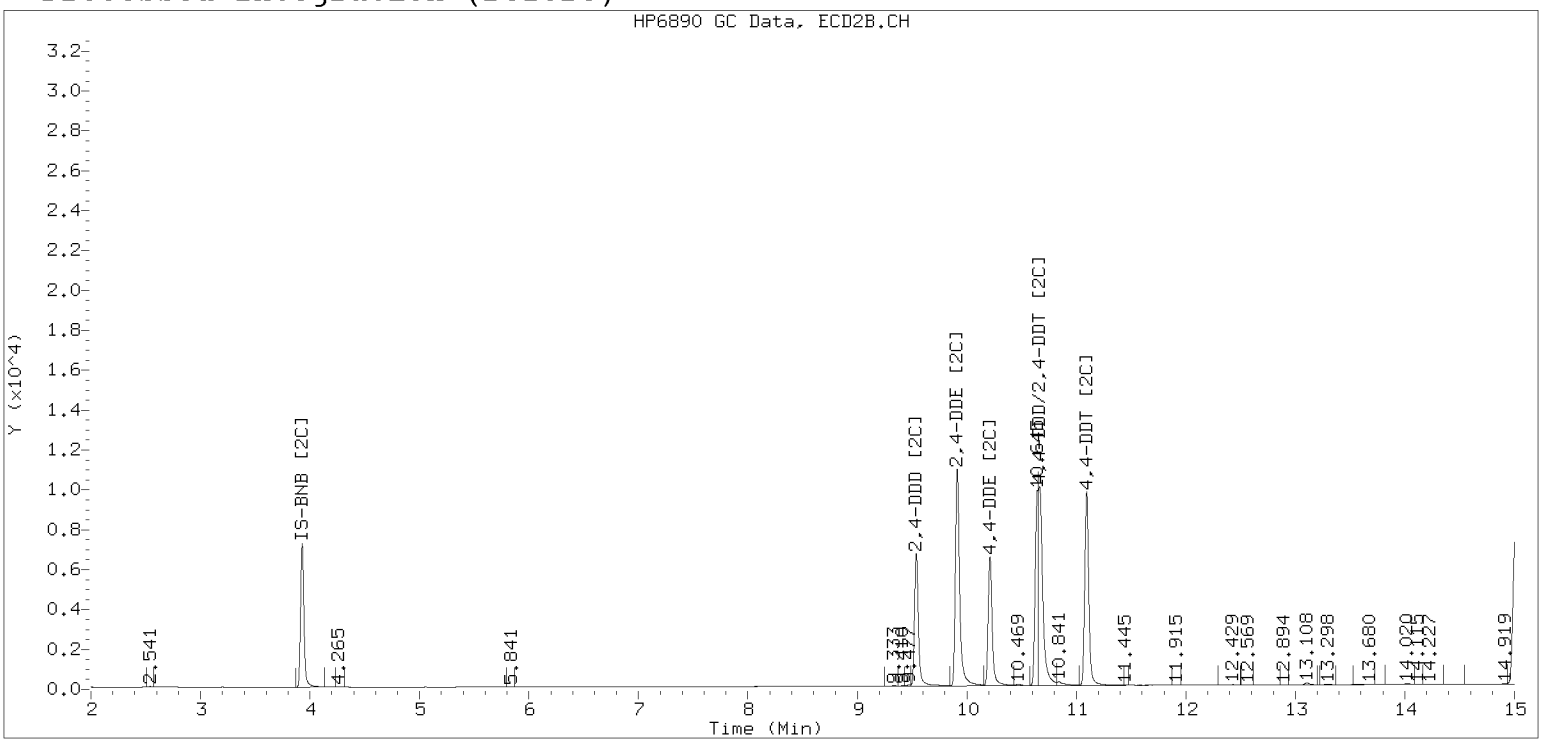
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230124.b/230124.b/01242330ECD7.D Injection Date: 24-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242331ECD7.D
Data file 2: /230124.b/230124.b/01242331ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: DDT BD
Client ID:
Injection Date: 24-JAN-2023 22:18
Report Date: 01/25/2023 10:54
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	249607	0.000	0.000	0	36.2	0.1	198.6*	Tetrachloro-m-xylene
13.893	0.001	342925	0.000	0.000	0	33.3	0.1	198.4*	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	488086	-3.0
Hexabromobiphenyl	647433	963404	48.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	334787	-0.6
Hexabromobiphenyl	382032	334787	-12.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	3.929	-0.000	334787	80.0
Aroclor-1016	2	---			0.0	NS	---			----
Aroclor-1016	3	---			0.0	NS	---			----
Aroclor-1016	4	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	9.924	0.012	8335	0.0
Aroclor-1221	2	---			0.0	NS	---			----
Aroclor-1221	3	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	NS	---			----
Aroclor-1232	3	---			0.0	NS	---			----
Aroclor-1232	4	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	NS	---			----
Aroclor-1242	3	---			0.0	NS	---			----
Aroclor-1242	4	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	10.681	0.016	29738	0.0
Aroclor-1248	2	---			0.0	NS	---			----
Aroclor-1248	3	8.973	-0.026	2304	3.9	NS	---			----
Aroclor-1248	4	9.235	-0.059	1484	5.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	9.235	-0.064	1484	3.0	1	11.098	0.003	696435	0.1
Aroclor-1254	2	9.378	-0.000	295	1.4	NS	---			----
Aroclor-1254	3	9.703	0.034	11396	35.8	NS	---			----
Aroclor-1254	4	---			0.0	NS	---			----
Aroclor-1254	5	10.272	0.095	32481	80.0	NS	---			----
	Total Col1Ave (4 peaks):				30.0	Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	11.115	0.071	9308	17.2	1	---			0.0
Aroclor-1260	2	11.344	-0.016	232461	418.4	NS	---			----
Aroclor-1260	3	11.698	-0.036	294	0.2	NS	---			----
Aroclor-1260	4	---			0.0	NS	---			----
Aroclor-1260	5	---			0.0	NS	---			----
	Total Col1Ave (3 peaks):				145.3	Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.763	-0.070	892438	2290.6	1	---			0.0
Aroclor-1262	2	---			0.0	NS	---			----
Aroclor-1262	3	---			0.0	NS	---			----
Aroclor-1262	4	12.990	0.001	748	1.2	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	NS	---			----
Aroclor-1268	3	12.620	-0.079	4678	3.6	NS	---			----
Aroclor-1268	4	13.510	0.021	3115	0.8	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 1961348 Col1 Total PCB = 0.3 ppm*

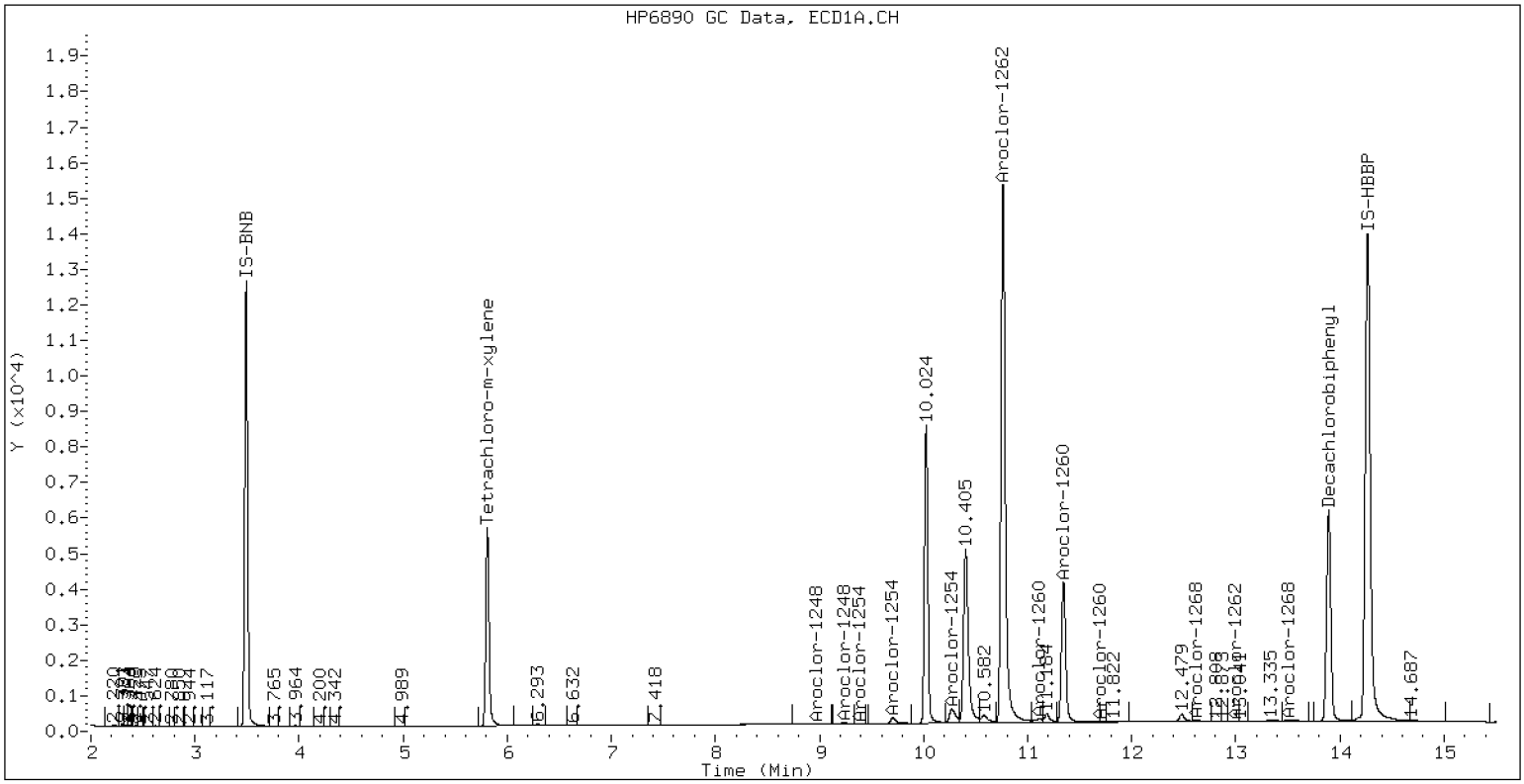
Total PCB Area Col2 (5.909 - 13.792) = 1177441 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

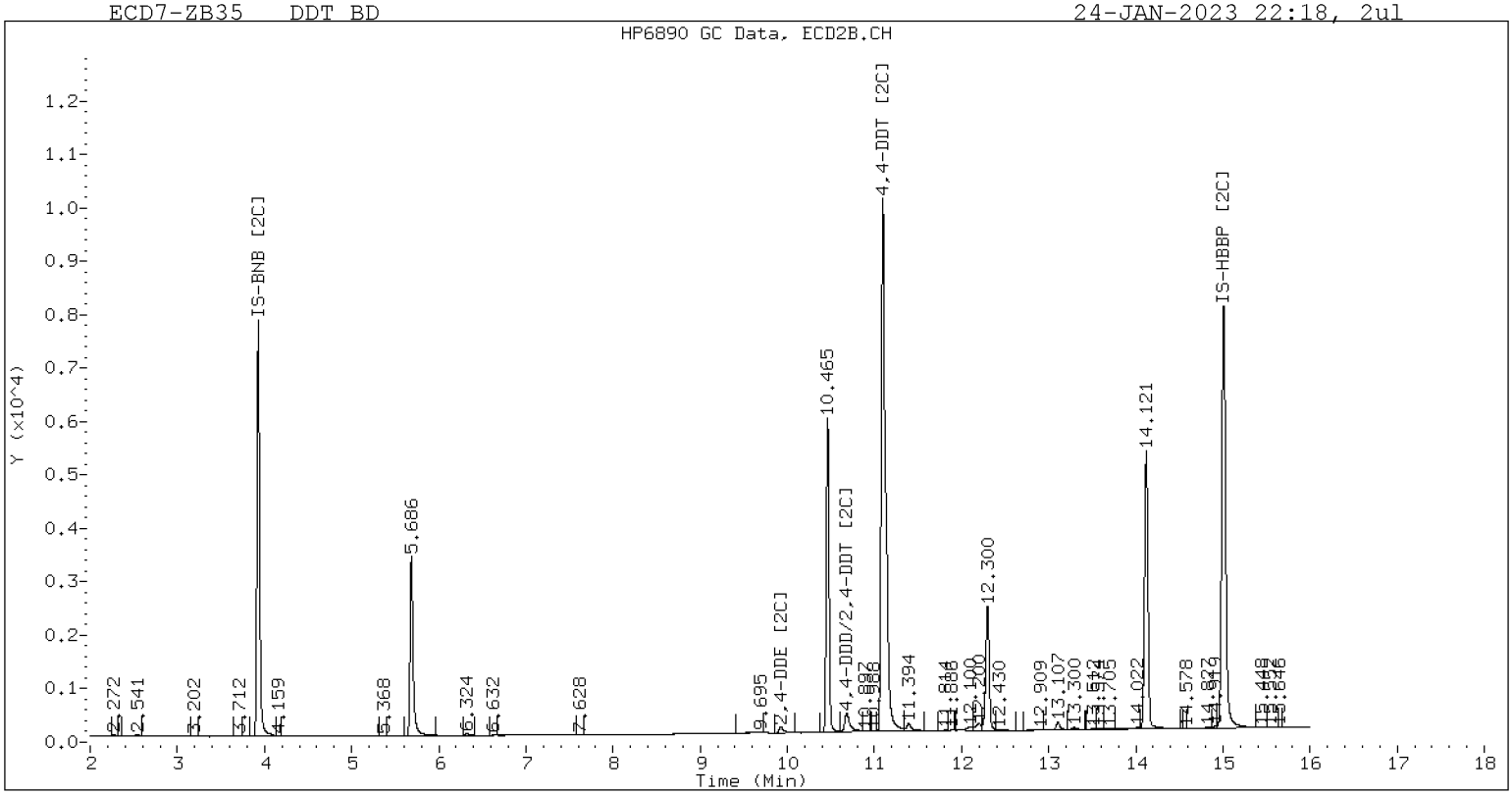
PCB Dual Column Chromatograms

ECD7-ZB5 DDT BD 24-JAN-2023 22:18, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 DDT BD 24-JAN-2023 22:18, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GA00061
Laboratory ID: SLA0281-SCV1
Sequence: SLA0281
Sequence Name: AR1660SCV1
Standard ID: K007655

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1016	250.00	217	-13.2	20.00
Aroclor 1016 [2C]	250.00	220	-11.9	20.00
Aroclor 1260	250.00	211	-15.7	20.00
Aroclor 1260 [2C]	250.00	238	-4.9	20.00
Decachlorobiphenyl	40.000	37.9	-5.1	20.00
Tetrachlorometaxylene	40.000	37.5	-6.2	20.00
Decachlorobiphenyl [2C]	40.000	40.2	0.6	20.00
Tetrachlorometaxylene [2C]	40.000	37.3	-6.8	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242324ECD7.D
Data file 2: /230124.b/230124.b/01242324ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 SCV
Client ID:
Injection Date: 24-JAN-2023 19:51
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	268739	5.686	-0.001	172961	37.5	37.3	0.6	Tetrachloro-m-xylene
13.891	-0.000	381489	14.121	0.001	320416	37.9	40.2	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	506576	0.6
Hexabromobiphenyl	647433	940129	45.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	343102	1.8
Hexabromobiphenyl	382032	501702	31.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	40958	217.6	1	7.255	0.001	40190	216.0
Aroclor-1016	2	7.655	0.004	135282	216.9	2	7.852	0.001	90338	221.5
Aroclor-1016	3	7.791	0.003	61557	214.5	3	8.052	0.002	37810	227.2
Aroclor-1016	4	8.406	0.002	40372	218.7	4	8.306	0.000	28171	215.9
Total Col1Ave (4 peaks):					216.9	Total Col2Ave (4 peaks):				220.2 RPD = 1
Corrected Ave (3 peaks):					216.3	Corrected Ave (3 peaks):				217.8 RPD = 1
Aroclor-1221	1	4.732	-0.001	256	6.8	1	---			0.0
Aroclor-1221	2	6.131	-0.002	4742	61.9	2	6.302	0.004	5037	91.4
Aroclor-1221	3	6.384	-0.000	27448	154.4	3	6.623	-0.000	18931	203.5
Total Col1Ave (3 peaks):					74.4	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.732	-0.001	256	11.0	1	---			0.0
Aroclor-1232	2	6.131	-0.002	4742	90.0	2	7.255	-0.001	40190	470.8
Aroclor-1232	3	7.655	-0.004	135282	513.5	3	7.852	-0.002	90338	519.5
Aroclor-1232	4	8.581	-0.003	56938	504.9	4	8.713	-0.001	27776	574.9
Total Col1Ave (4 peaks):					279.8	Total Col2Ave (3 peaks):				521.7 RPD = 60*
Corrected Ave (3 peaks):					202.0	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	-0.000	40958	264.0	1	7.255	-0.000	40190	267.8
Aroclor-1242	2	7.655	-0.001	135282	266.5	2	7.852	-0.001	90338	271.0
Aroclor-1242	3	8.406	-0.001	40372	267.7	3	9.115	-0.045	15827	151.6
Aroclor-1242	4	8.581	-0.000	56938	249.9	4	9.587	0.001	3186	23.0
Total Col1Ave (4 peaks):					262.0	Total Col2Ave (4 peaks):				178.4 RPD = 38
Corrected Ave (3 peaks):					260.1	Corrected Ave (3 peaks):				147.5 RPD = 55*
Aroclor-1248	1	8.406	0.000	40372	159.3	1	8.306	0.000	28171	181.6
Aroclor-1248	2	8.581	0.001	56938	176.1	2	8.713	0.000	27776	166.4
Aroclor-1248	3	8.995	-0.004	58213	94.1	3	9.115	-0.042	15827	77.6
Aroclor-1248	4	9.304	0.010	36620	119.6	4	9.587	0.006	3186	12.6
Total Col1Ave (4 peaks):					137.3	Total Col2Ave (4 peaks):				109.6 RPD = 22
Corrected Ave (3 peaks):					124.4	Corrected Ave (3 peaks):				85.5 RPD = 37
Aroclor-1254	1	9.304	0.005	36620	70.9	1	9.450	0.002	20792	83.5
Aroclor-1254	2	---			0.0	2	9.972	0.003	2640	13.1
Aroclor-1254	3	9.673	0.003	4075	12.3	3	10.148	0.027	52902	120.5
Aroclor-1254	4	9.813	0.004	14733	22.7	4	10.372	0.000	71680	163.3
Aroclor-1254	5	10.122	-0.055	119528	283.6	5	10.569	-0.000	98559	403.2
Total Col1Ave (4 peaks):					97.4	Total Col2Ave (5 peaks):				156.7 RPD = 47*
Corrected Ave (3 peaks):					35.3	Corrected Ave (4 peaks):				95.1 RPD = 92*
Aroclor-1260	1	11.045	0.002	116435	220.7	1	11.654	0.000	81795	226.0
Aroclor-1260	2	11.362	0.001	116918	215.6	2	11.920	0.002	217887	238.0
Aroclor-1260	3	11.738	0.003	303264	212.5	3	12.437	0.001	56212	246.3
Aroclor-1260	4	12.143	0.004	141534	191.9	4	12.502	0.000	142689	240.8
Aroclor-1260	5	12.246	0.002	68446	212.9	NS	---			----
Total Col1Ave (5 peaks):					210.7	Total Col2Ave (4 peaks):				237.8 RPD = 12
Corrected Ave (4 peaks):					208.2	Corrected Ave (3 peaks):				234.9 RPD = 12
Aroclor-1262	1	10.830	-0.002	169725	446.4	1	11.200	0.000	83995	171.1
Aroclor-1262	2	12.246	0.000	68446	114.1	2	11.654	0.001	81795	195.9
Aroclor-1262	3	12.320	-0.000	84201	129.2	3	12.437	0.003	56212	126.4
Aroclor-1262	4	12.989	-0.000	78065	131.5	4	12.502	-0.001	142689	200.4
Total Col1Ave (4 peaks):					205.3	Total Col2Ave (4 peaks):				173.4 RPD = 17
Corrected Ave (3 peaks):					124.9	Corrected Ave (3 peaks):				164.5 RPD = 27
Aroclor-1268	1	12.246	0.001	68446	44.1	1	12.437	0.003	56212	48.0
Aroclor-1268	2	12.320	0.002	84201	54.4	2	12.502	0.001	142689	114.4
Aroclor-1268	3	12.726	0.027	33020	25.7	3	12.894	0.001	1495	1.4
Aroclor-1268	4	13.490	0.001	16019	4.2	4	13.709	0.001	10120	3.2
Total Col1Ave (4 peaks):					32.1	Total Col2Ave (4 peaks):				41.8 RPD = 26
Corrected Ave (3 peaks):					24.7	Corrected Ave (3 peaks):				17.5 RPD = 34

Total PCB Area Col1 (5.909 - 13.792) = 2789370 Col1 Total PCB = 0.5 ppm*

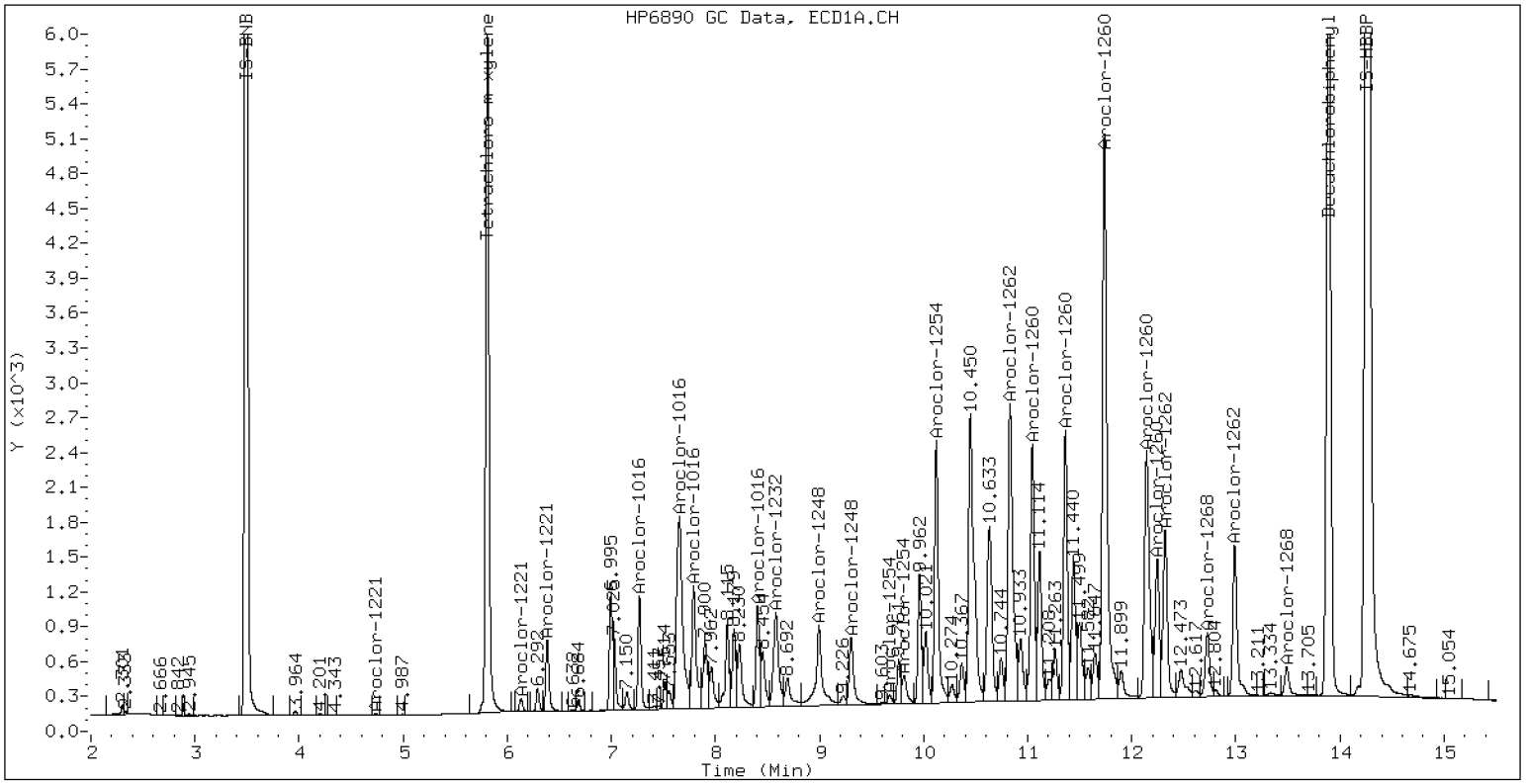
Total PCB Area Col2 (5.787 - 14.020) = 1810543 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

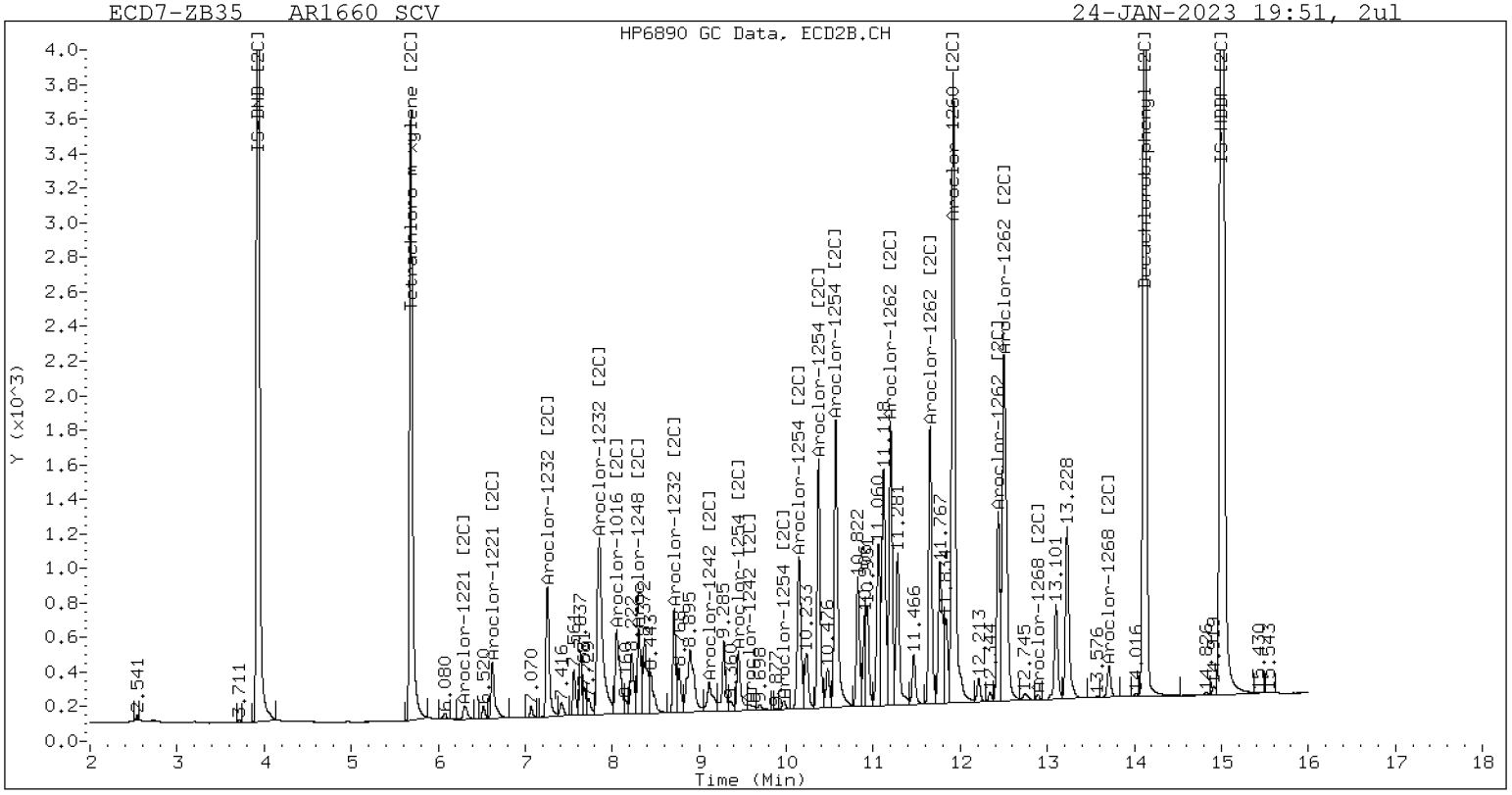
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660 SCV 24-JAN-2023 19:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660 SCV 24-JAN-2023 19:51, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GA00061
Laboratory ID: SLA0281-SCV2
Sequence: SLA0281
Sequence Name: AR1242SCV2
Standard ID: K007656

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1242	250.00	223	-10.9	20.00
Aroclor 1242 [2C]	250.00	235	-5.9	20.00
Decachlorobiphenyl	40.000	38.5	-3.6	20.00
Tetrachlorometaxylene	40.000	37.8	-5.6	20.00
Decachlorobiphenyl [2C]	40.000	40.3	0.9	20.00
Tetrachlorometaxylene [2C]	40.000	37.4	-6.6	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242325ECD7.D
Data file 2: /230124.b/230124.b/01242325ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 SCV
Client ID:
Injection Date: 24-JAN-2023 20:12
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	268580	5.686	-0.001	172592	37.8	37.4	1.1	Tetrachloro-m-xylene
13.892	0.001	392918	14.121	0.001	323869	38.5	40.3	4.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503089	-0.0
Hexabromobiphenyl	647433	953137	47.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	341704	1.4
Hexabromobiphenyl	382032	505860	32.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	29901	159.9	1	7.255	0.000	32077	173.1
Aroclor-1016	2	7.653	0.003	107333	173.3	2	7.851	-0.000	71438	175.9
Aroclor-1016	3	7.790	0.002	45013	157.9	3	8.051	0.001	29072	175.4
Aroclor-1016	4	8.406	0.002	32958	179.8	4	8.306	0.001	21761	167.5
Total Col1Ave (4 peaks):		167.7				Total Col2Ave (4 peaks):		173.0	RPD = 3	
Corrected Ave (3 peaks):		163.7				Corrected Ave (3 peaks):		172.0	RPD = 5	
Aroclor-1221	1	4.737	0.004	141	3.8	1	---			0.0
Aroclor-1221	2	6.133	-0.001	3649	48.0	2	6.317	0.018	4290	78.2
Aroclor-1221	3	6.384	-0.000	21189	120.0	3	6.624	0.001	14613	157.7
Total Col1Ave (3 peaks):		57.3				Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.737	0.003	141	6.1	1	---			0.0
Aroclor-1232	2	6.133	-0.001	3649	69.7	2	7.255	-0.002	32077	377.3
Aroclor-1232	3	7.653	-0.005	107333	410.2	3	7.851	-0.004	71438	412.5
Aroclor-1232	4	8.581	-0.003	59617	532.3	4	8.713	-0.000	22563	468.9
Total Col1Ave (4 peaks):		254.6				Total Col2Ave (3 peaks):		419.6	RPD = 49*	
Corrected Ave (3 peaks):		162.0				Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	29901	194.1	1	7.255	-0.001	32077	214.6
Aroclor-1242	2	7.653	-0.002	107333	212.9	2	7.851	-0.002	71438	215.2
Aroclor-1242	3	8.406	-0.000	32958	220.0	3	9.156	-0.004	27374	263.3
Aroclor-1242	4	8.581	-0.000	59617	263.5	4	9.581	-0.006	34156	247.9
Total Col1Ave (4 peaks):		222.6				Total Col2Ave (4 peaks):		235.3	RPD = 6	
Corrected Ave (3 peaks):		209.0				Corrected Ave (3 peaks):		225.9	RPD = 8	
Aroclor-1248	1	8.406	0.001	32958	131.0	1	8.306	0.001	21761	140.9
Aroclor-1248	2	8.581	0.001	59617	185.7	2	8.713	0.001	22563	135.7
Aroclor-1248	3	9.003	0.004	72557	118.2	3	9.156	-0.000	27374	134.7
Aroclor-1248	4	9.296	0.003	28122	92.5	4	9.581	-0.001	34156	135.9
Total Col1Ave (4 peaks):		131.8				Total Col2Ave (4 peaks):		136.8	RPD = 4	
Corrected Ave (3 peaks):		113.9				Corrected Ave (3 peaks):		135.5	RPD = 17	
Aroclor-1254	1	9.296	-0.002	28122	54.8	1	9.448	0.000	11650	47.0
Aroclor-1254	2	9.380	0.002	9292	42.4	2	9.968	-0.001	7642	38.1
Aroclor-1254	3	9.671	0.001	12871	39.2	3	10.120	-0.001	16012	36.6
Aroclor-1254	4	9.808	-0.000	22113	34.4	4	10.378	0.007	16300	37.3
Aroclor-1254	5	10.176	-0.001	17771	42.5	5	10.572	0.004	4439	18.2
Total Col1Ave (5 peaks):		42.7				Total Col2Ave (5 peaks):		35.5	RPD = 18	
Corrected Ave (4 peaks):		39.6				Corrected Ave (4 peaks):		32.6	RPD = 19	
Aroclor-1260	1	11.047	0.003	741	1.4	1	11.663	0.010	1794	4.9
Aroclor-1260	2	11.366	0.006	379	0.7	2	11.923	0.005	1208	1.3
Aroclor-1260	3	11.745	0.011	860	0.6	3	12.507	0.071	977	4.2
Aroclor-1260	4	12.154	0.014	1536	2.1	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
Total Col1Ave (4 peaks):		1.2				Total Col2Ave (3 peaks):		3.5	RPD = 99*	
Corrected Ave (3 peaks):		0.9				Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.836	0.004	10654	27.6	1	11.120	-0.080	8071	16.3
Aroclor-1262	2	12.154	-0.092	1536	2.5	2	11.663	0.010	1794	4.3
Aroclor-1262	3	---			0.0	3	12.507	0.073	977	2.2
Aroclor-1262	4	13.040	0.051	1739	2.9	4	---			0.0
Total Col1Ave (3 peaks):		11.0				Total Col2Ave (3 peaks):		7.6	RPD = 37	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.154	-0.091	1536	1.0	1	12.507	0.073	977	0.8
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.623	-0.076	5080	3.9	3	12.894	0.001	98	0.1
Aroclor-1268	4	13.501	0.012	2725	0.7	4	13.707	-0.001	1566	0.5
Total Col1Ave (3 peaks):		1.9				Total Col2Ave (3 peaks):		0.5	RPD = 120*	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 915887 Col1 Total PCB = 0.2 ppm*

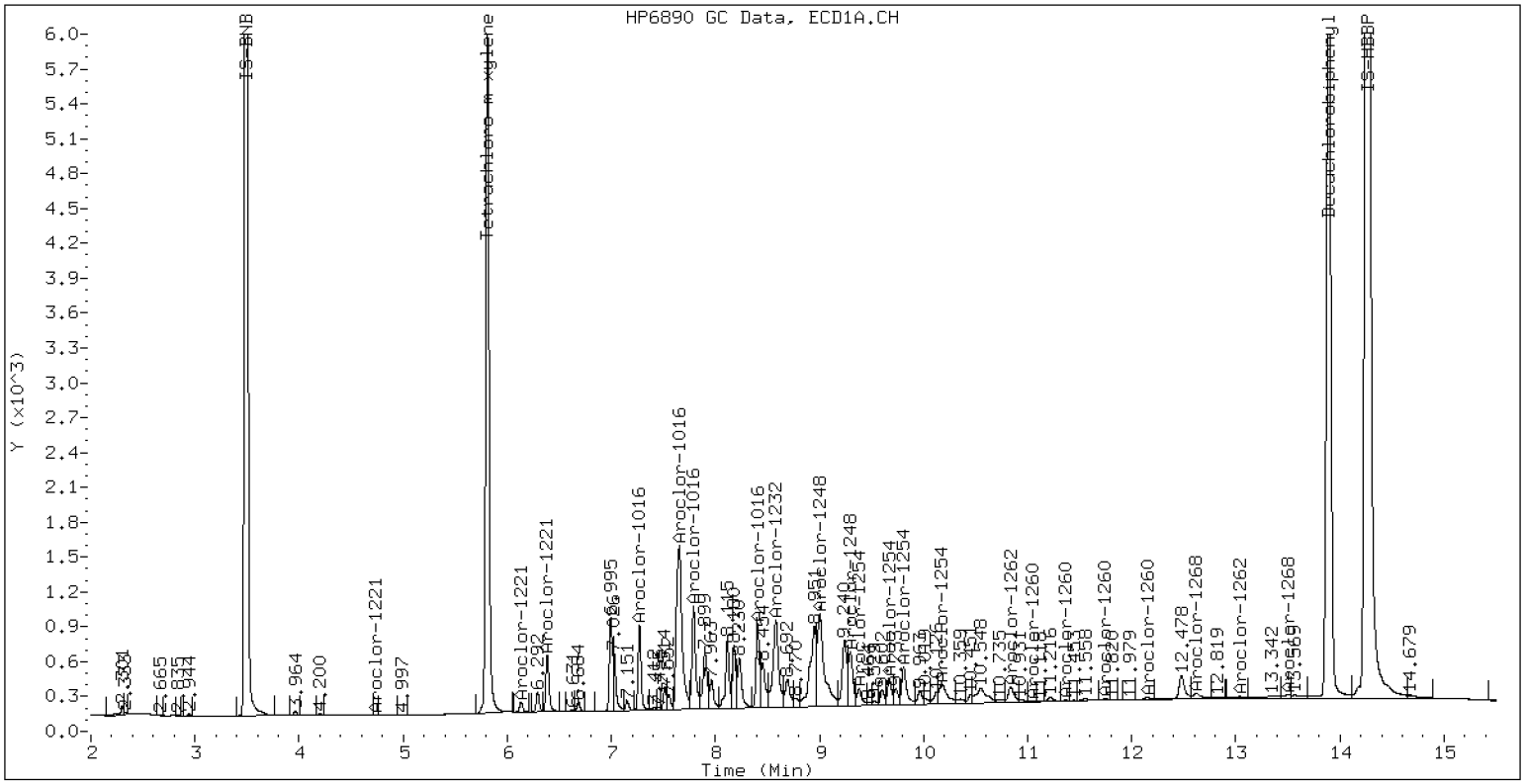
Total PCB Area Col2 (5.787 - 14.020) = 575897 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

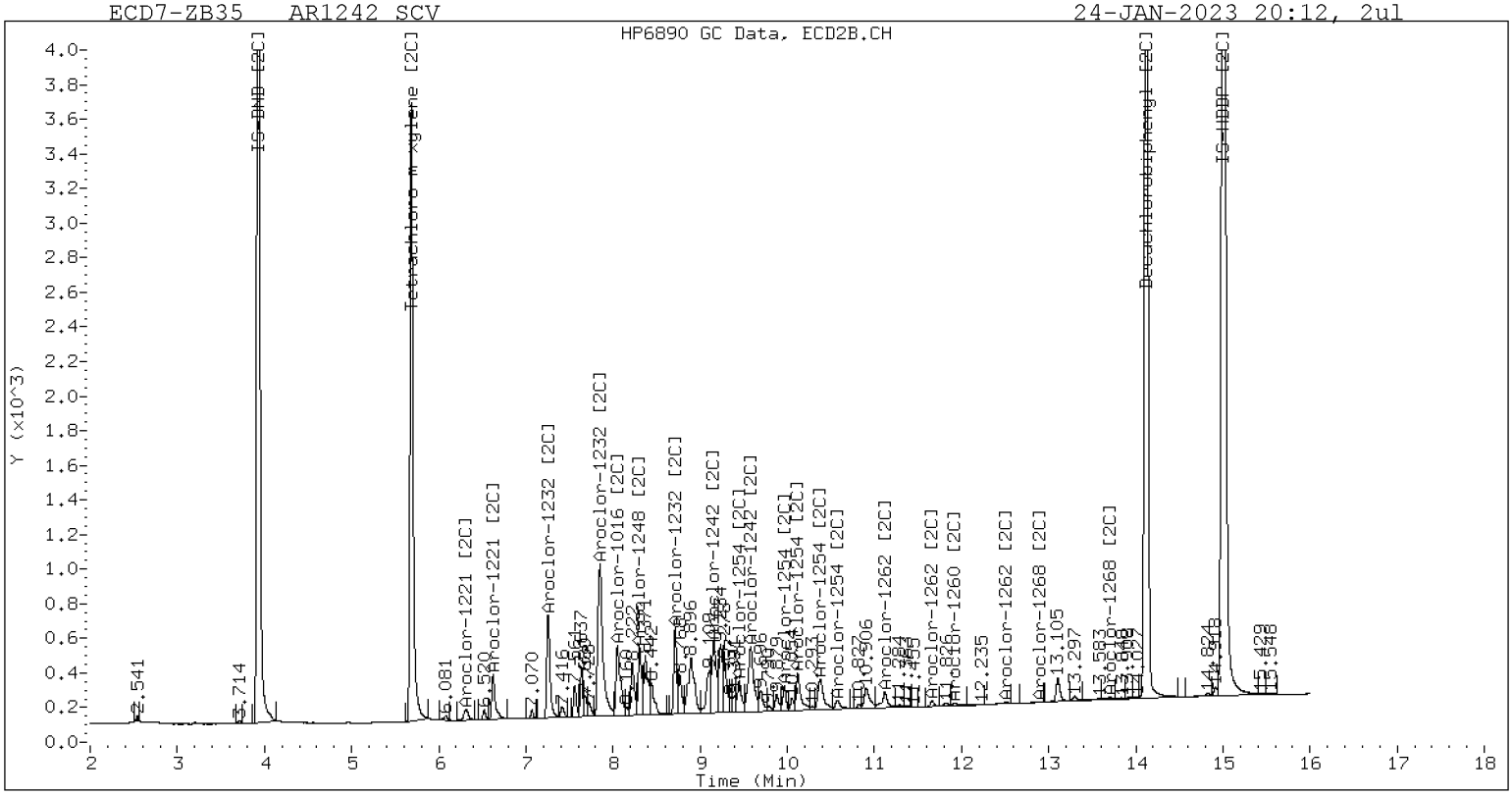
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242 SCV 24-JAN-2023 20:12, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242 SCV 24-JAN-2023 20:12, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GA00061
Laboratory ID: SLA0281-SCV3
Sequence: SLA0281
Sequence Name: AR1248SCV3
Standard ID: K007657

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1248	250.00	237	-5.1	20.00
Aroclor 1248 [2C]	250.00	231	-7.6	20.00
Decachlorobiphenyl	40.000	38.3	-4.3	20.00
Tetrachlorometaxylene	40.000	36.8	-8.1	20.00
Decachlorobiphenyl [2C]	40.000	39.6	-1.1	20.00
Tetrachlorometaxylene [2C]	40.000	36.5	-8.6	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242326ECD7.D
Data file 2: /230124.b/230124.b/01242326ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 SCV
Client ID:
Injection Date: 24-JAN-2023 20:33
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.000	263982	5.686	-0.001	169991	36.8	36.5	0.6	Tetrachloro-m-xylene
13.892	0.001	400655	14.121	0.001	316171	38.3	39.6	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	508189	1.0
Hexabromobiphenyl	647433	979067	51.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	344105	2.1
Hexabromobiphenyl	382032	503378	31.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.271	0.001	14777	78.3	1	7.254	-0.001	16100	86.3
Aroclor-1016	2	7.655	0.004	70114	112.1	2	7.853	0.002	47184	115.4
Aroclor-1016	3	7.794	0.006	27212	94.5	3	8.053	0.003	9427	56.5
Aroclor-1016	4	8.406	0.003	59884	323.4	4	8.306	0.001	36680	280.3
	Total Col1Ave (4 peaks):				152.0	Total Col2Ave (4 peaks):				134.6 RPD = 12
	Corrected Ave (3 peaks):				94.9	Corrected Ave (3 peaks):				86.0 RPD = 10
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.133	-0.000	591	7.7	2	6.323	0.025	1820	32.9
Aroclor-1221	3	6.386	0.001	2453	13.8	3	6.627	0.004	1477	15.8
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.133	-0.000	591	11.2	2	7.254	-0.002	16100	188.0
Aroclor-1232	3	7.655	-0.004	70114	265.3	3	7.853	-0.001	47184	270.6
Aroclor-1232	4	8.581	-0.003	76286	674.3	4	8.714	0.000	39330	811.7
	Total Col1Ave (3 peaks):				316.9	Total Col2Ave (3 peaks):				423.4 RPD = 29
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	14777	95.0	1	7.254	-0.002	16100	107.0
Aroclor-1242	2	7.655	-0.001	70114	137.7	2	7.853	0.000	47184	141.2
Aroclor-1242	3	8.406	-0.000	59884	395.8	3	9.159	-0.001	46988	448.9
Aroclor-1242	4	8.581	-0.000	76286	333.8	4	9.584	-0.003	56615	408.1
	Total Col1Ave (4 peaks):				240.5	Total Col2Ave (4 peaks):				276.3 RPD = 14
	Corrected Ave (3 peaks):				188.8	Corrected Ave (3 peaks):				218.7 RPD = 15
Aroclor-1248	1	8.406	0.001	59884	235.6	1	8.306	0.001	36680	235.8
Aroclor-1248	2	8.581	0.001	76286	235.2	2	8.714	0.002	39330	234.9
Aroclor-1248	3	9.000	0.001	148805	239.9	3	9.159	0.003	46988	229.7
Aroclor-1248	4	9.295	0.001	73114	238.1	4	9.584	0.002	56615	223.8
	Total Col1Ave (4 peaks):				237.2	Total Col2Ave (4 peaks):				231.0 RPD = 3
	Corrected Ave (3 peaks):				236.3	Corrected Ave (3 peaks):				229.5 RPD = 3
Aroclor-1254	1	9.295	-0.004	73114	141.2	1	9.449	0.001	20314	81.4
Aroclor-1254	2	9.378	0.000	36561	165.3	2	9.970	0.000	18678	92.6
Aroclor-1254	3	9.672	0.003	30736	92.6	3	10.124	0.003	35321	80.2
Aroclor-1254	4	9.813	0.004	53537	82.3	4	10.387	0.015	35188	79.9
Aroclor-1254	5	10.192	0.015	40119	94.9	5	10.575	0.006	7386	30.1
	Total Col1Ave (5 peaks):				115.3	Total Col2Ave (5 peaks):				72.9 RPD = 45*
	Corrected Ave (4 peaks):				102.7	Corrected Ave (4 peaks):				67.9 RPD = 41*
Aroclor-1260	1	11.054	0.010	1868	3.4	1	11.664	0.011	2055	5.7
Aroclor-1260	2	11.366	0.005	1375	2.4	2	11.926	0.009	1303	1.4
Aroclor-1260	3	11.745	0.010	2137	1.4	3	12.439	0.003	395	1.7
Aroclor-1260	4	12.147	0.008	1650	2.1	4	12.507	0.005	890	1.5
Aroclor-1260	5	12.255	0.011	558	1.7	NS	---			----
	Total Col1Ave (5 peaks):				2.2	Total Col2Ave (4 peaks):				2.6 RPD = 15
	Corrected Ave (4 peaks):				1.9	Corrected Ave (3 peaks):				1.5 RPD = 22
Aroclor-1262	1	10.837	0.005	12736	32.2	1	11.122	-0.078	7136	14.5
Aroclor-1262	2	12.255	0.010	558	0.9	2	11.664	0.011	2055	4.9
Aroclor-1262	3	12.327	0.006	596	0.9	3	12.439	0.004	395	0.9
Aroclor-1262	4	12.996	0.007	1113	1.8	4	12.507	0.003	890	1.2
	Total Col1Ave (4 peaks):				8.9	Total Col2Ave (4 peaks):				5.4 RPD = 50*
	Corrected Ave (3 peaks):				1.2	Corrected Ave (3 peaks):				2.3 RPD = 65*
Aroclor-1268	1	12.255	0.010	558	0.3	1	12.439	0.005	395	0.3
Aroclor-1268	2	12.327	0.009	596	0.4	2	12.507	0.005	890	0.7
Aroclor-1268	3	12.706	0.007	1161	0.9	3	12.896	0.003	166	0.2
Aroclor-1268	4	13.504	0.016	3330	0.8	4	13.717	0.009	469	0.1
	Total Col1Ave (4 peaks):				0.6	Total Col2Ave (4 peaks):				0.3 RPD = 57*
	Corrected Ave (3 peaks):				0.5	Corrected Ave (3 peaks):				0.2 RPD = 83*

Total PCB Area Col1 (5.909 - 13.792) = 1230760 Col1 Total PCB = 0.2 ppm*

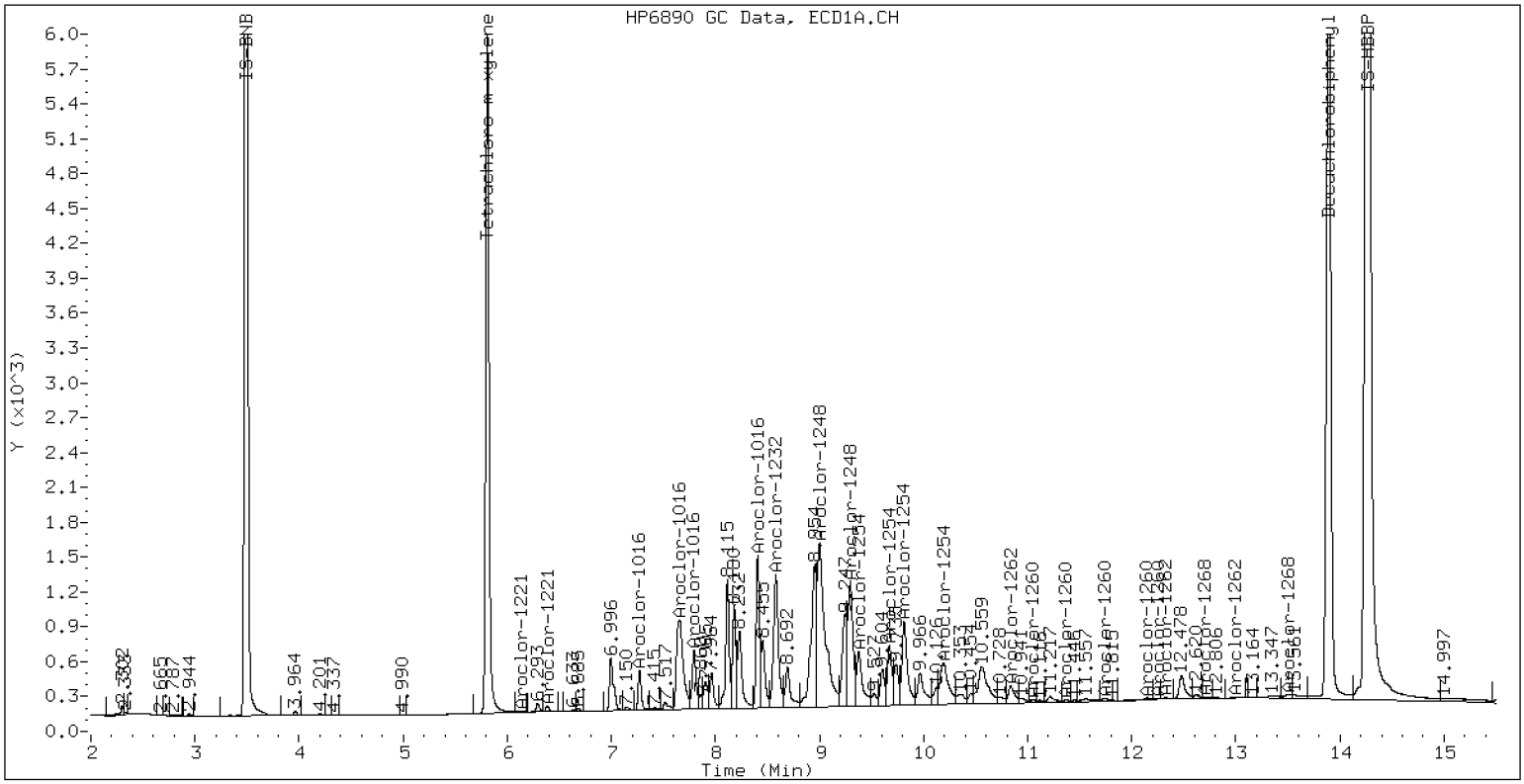
Total PCB Area Col2 (5.787 - 14.020) = 742749 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

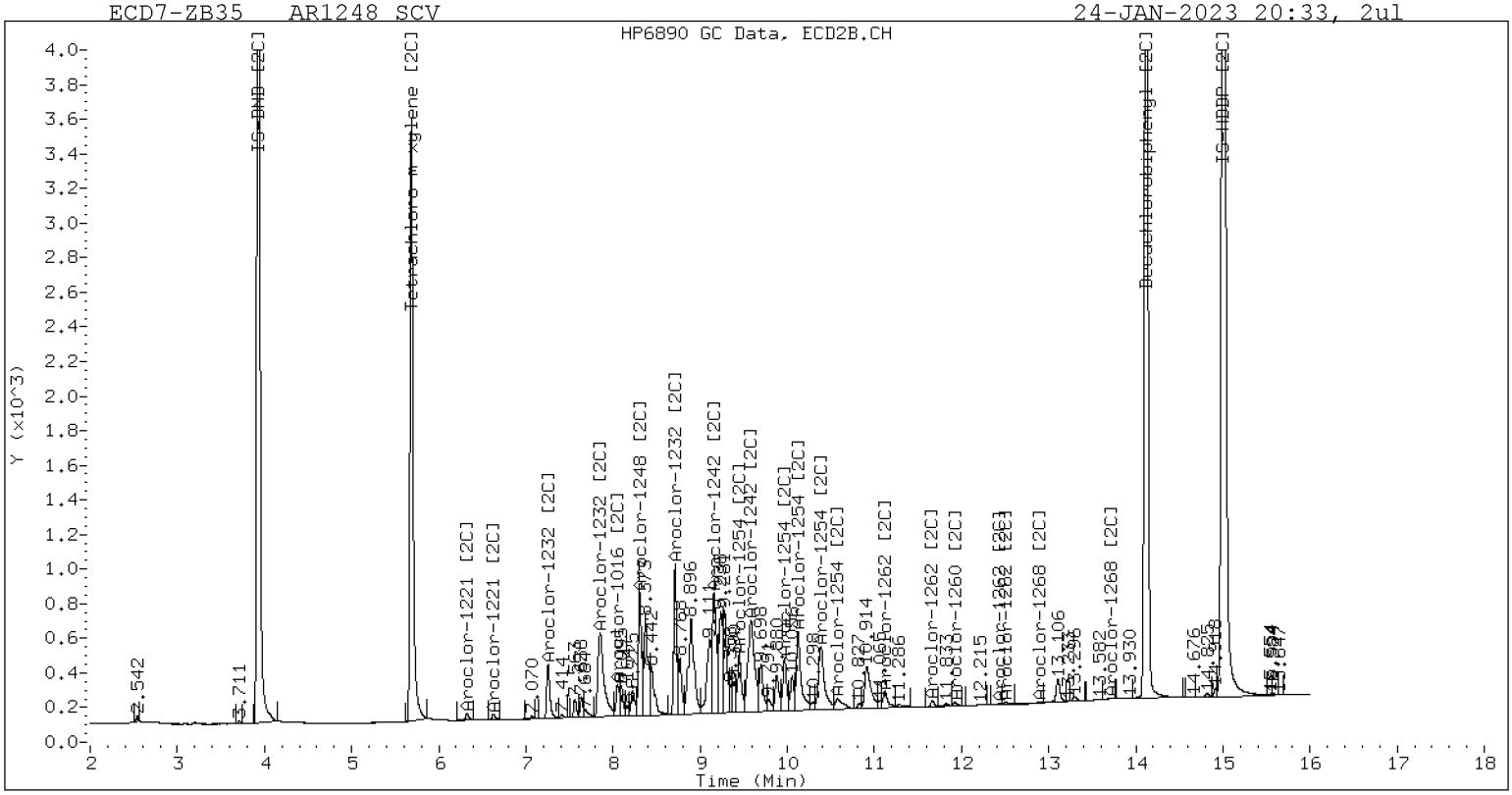
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248 SCV 24-JAN-2023 20:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248 SCV 24-JAN-2023 20:33, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GA00061
Laboratory ID: SLA0281-SCV4
Sequence: SLA0281
Sequence Name: AR1254SCV4
Standard ID: K007658

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1254	250.00	221	-11.7	20.00
Aroclor 1254 [2C]	250.00	227	-9.4	20.00
Decachlorobiphenyl	40.000	37.1	-7.3	20.00
Tetrachlorometaxylene	40.000	36.7	-8.3	20.00
Decachlorobiphenyl [2C]	40.000	39.5	-1.1	20.00
Tetrachlorometaxylene [2C]	40.000	36.6	-8.4	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242327ECD7.D
Data file 2: /230124.b/230124.b/01242327ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 SCV
Client ID:
Injection Date: 24-JAN-2023 20:54
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	261398	5.686	-0.001	169839	36.7	36.6	0.1	Tetrachloro-m-xylene
13.892	0.001	383983	14.121	0.001	323233	37.1	39.5	6.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	504424	0.2
Hexabromobiphenyl	647433	968338	49.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	342969	1.8
Hexabromobiphenyl	382032	515045	34.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.273	0.003	320	1.7	1	7.258	0.003	332	1.8
Aroclor-1016	2	7.658	0.008	991	1.6	2	---			0.0
Aroclor-1016	3	7.795	0.007	662	2.3	3	8.097	0.047	515	3.1
Aroclor-1016	4	8.408	0.005	21378	116.3	4	8.307	0.002	20446	156.8
	Total Col1Ave (4 peaks):				30.5	Total Col2Ave (3 peaks):			53.9	RPD = 55*
	Corrected Ave (3 peaks):				1.9	Corrected Ave: < 3 Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.325	0.026	1749	31.7
Aroclor-1221	3	---			0.0	3	6.633	0.011	321	3.5
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	7.258	0.001	332	3.9
Aroclor-1232	3	7.658	-0.000	991	3.8	3	---			0.0
Aroclor-1232	4	8.587	0.003	8887	79.1	4	8.715	0.001	14030	290.5
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	7.273	0.002	320	2.1	1	7.258	0.002	332	2.2
Aroclor-1242	2	7.658	0.003	991	2.0	2	---			0.0
Aroclor-1242	3	8.408	0.002	21378	142.3	3	9.164	0.004	26593	254.9
Aroclor-1242	4	8.587	0.006	8887	39.2	4	9.543	-0.043	34385	248.7
	Total Col1Ave (4 peaks):				46.4	Total Col2Ave (3 peaks):			168.6	RPD = 114*
	Corrected Ave (3 peaks):				14.4	Corrected Ave: < 3 Peaks				
Aroclor-1248	1	8.408	0.003	21378	84.7	1	8.307	0.001	20446	131.9
Aroclor-1248	2	8.587	0.007	8887	27.6	2	8.715	0.003	14030	84.1
Aroclor-1248	3	8.995	-0.004	110289	179.1	3	9.164	0.007	26593	130.4
Aroclor-1248	4	9.300	0.007	113143	371.2	4	9.543	-0.038	34385	136.4
	Total Col1Ave (4 peaks):				165.7	Total Col2Ave (4 peaks):			120.7	RPD = 31
	Corrected Ave (3 peaks):				97.2	Corrected Ave (3 peaks):			115.5	RPD = 17
Aroclor-1254	1	9.300	0.002	113143	220.1	1	9.449	0.001	56453	226.9
Aroclor-1254	2	9.379	0.001	49468	225.4	2	9.970	0.001	45325	225.4
Aroclor-1254	3	9.671	0.002	72811	221.0	3	10.122	0.002	97044	221.2
Aroclor-1254	4	9.811	0.002	140530	217.7	4	10.374	0.002	98778	225.2
Aroclor-1254	5	10.182	0.005	92254	219.8	5	10.570	0.001	57171	234.0
	Total Col1Ave (5 peaks):				220.8	Total Col2Ave (5 peaks):			226.5	RPD = 3
	Corrected Ave (4 peaks):				219.7	Corrected Ave (4 peaks):			224.7	RPD = 2
Aroclor-1260	1	11.045	0.002	8960	16.5	1	11.661	0.008	26985	72.6
Aroclor-1260	2	11.364	0.004	9237	16.5	2	11.923	0.006	19882	21.2
Aroclor-1260	3	11.741	0.007	21268	14.5	3	12.505	0.069	13190	56.3
Aroclor-1260	4	12.146	0.007	19041	25.1	4	---			0.0
Aroclor-1260	5	12.321	0.077	1835	5.5	NS	---			----
	Total Col1Ave (5 peaks):				15.6	Total Col2Ave (3 peaks):			50.0	RPD = 105*
	Corrected Ave (4 peaks):				13.3	Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.832	0.000	157590	402.4	1	11.119	-0.081	92414	183.3
Aroclor-1262	2	12.321	0.075	1835	3.0	2	11.661	0.008	26985	63.0
Aroclor-1262	3	---			0.0	3	12.505	0.071	13190	28.9
Aroclor-1262	4	12.995	0.006	843	1.4	4	---			0.0
	Total Col1Ave (3 peaks):				135.6	Total Col2Ave (3 peaks):			91.7	RPD = 39
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.321	0.076	1835	1.1	1	12.505	0.072	13190	11.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.720	0.021	1314	1.0	3	12.891	-0.002	169	0.2
Aroclor-1268	4	13.504	0.016	1169	0.3	4	13.706	-0.002	1132	0.3
	Total Col1Ave (3 peaks):				0.8	Total Col2Ave (3 peaks):			3.8	RPD = 130*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 1507519 Col1 Total PCB = 0.3 ppm*

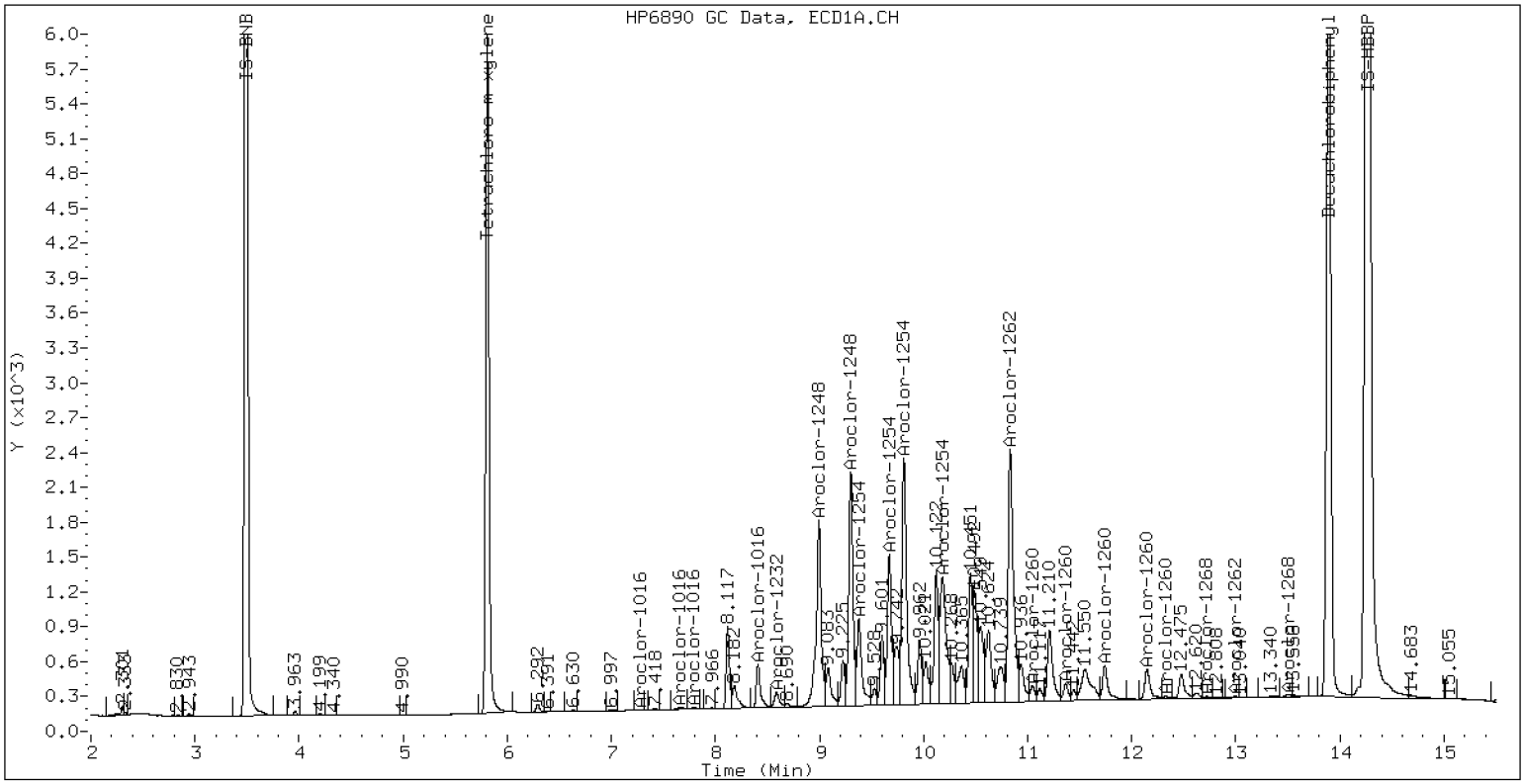
Total PCB Area Col2 (5.787 - 14.020) = 951047 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

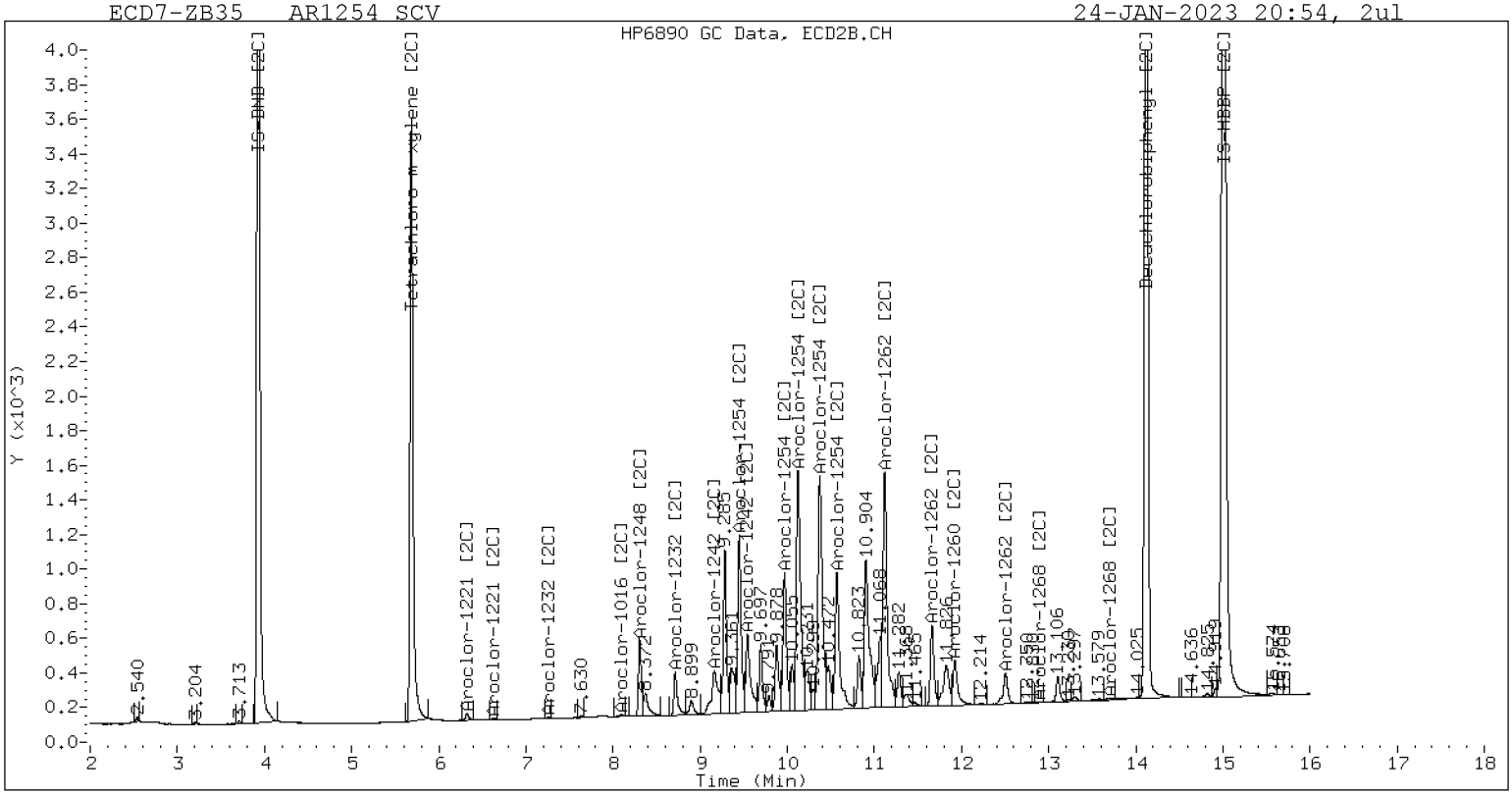
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254 SCV 24-JAN-2023 20:54, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254 SCV 24-JAN-2023 20:54, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GA00061
Laboratory ID: SLA0281-SCV5
Sequence: SLA0281
Sequence Name: AR2162SCV5
Standard ID: K007659

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1221	250.00	228	-8.8	20.00
Aroclor 1221 [2C]	250.00	239	-4.5	20.00
Decachlorobiphenyl	40.000	37.5	-6.4	20.00
Tetrachlorometaxylene	40.000	37.3	-6.8	20.00
Decachlorobiphenyl [2C]	40.000	39.5	-1.3	20.00
Tetrachlorometaxylene [2C]	40.000	37.2	-7.1	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242328ECD7.D
Data file 2: /230124.b/230124.b/01242328ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 SCV
Client ID:
Injection Date: 24-JAN-2023 21:15
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	265357	5.685	-0.001	170984	37.3	37.2	0.3	Tetrachloro-m-xylene
13.891	-0.001	397332	14.119	-0.001	326981	37.5	39.5	5.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503473	0.0
Hexabromobiphenyl	647433	991997	53.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	340361	1.0
Hexabromobiphenyl	382032	521975	36.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	5326	28.5	1	7.257	0.002	6708	36.3
Aroclor-1016	2	7.664	0.013	11965	19.3	2	7.856	0.005	7233	17.9
Aroclor-1016	3	7.797	0.009	6015	21.1	3	8.058	0.008	2997	18.2
Aroclor-1016	4	8.410	0.006	3771	20.6	4	8.308	0.002	2065	16.0
Total Col1Ave (4 peaks):					22.4	Total Col2Ave (4 peaks):				22.1 RPD = 1
Corrected Ave (3 peaks):					20.3	Corrected Ave (3 peaks):				17.3 RPD = 16
Aroclor-1221	1	4.732	-0.000	9097	244.5	1	4.959	-0.000	6157	246.8
Aroclor-1221	2	6.133	-0.000	16114	211.8	2	6.297	-0.001	12807	234.2
Aroclor-1221	3	6.384	0.000	40299	228.1	3	6.622	-0.000	21707	235.2
Total Col1Ave (3 peaks):					228.1	Total Col2Ave (3 peaks):				238.7 RPD = 5
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.732	-0.001	9097	391.6	1	4.959	-0.001	6157	406.9
Aroclor-1232	2	6.133	0.000	16114	307.8	2	7.257	0.000	6708	79.2
Aroclor-1232	3	7.664	0.005	11965	45.7	3	7.856	0.001	7233	41.9
Aroclor-1232	4	8.589	0.004	2837	25.3	4	8.716	0.002	1869	39.0
Total Col1Ave (4 peaks):					192.6	Total Col2Ave (4 peaks):				141.7 RPD = 30
Corrected Ave (3 peaks):					126.3	Corrected Ave (3 peaks):				53.4 RPD = 81*
Aroclor-1242	1	7.272	0.001	5326	34.5	1	7.257	0.001	6708	45.1
Aroclor-1242	2	7.664	0.008	11965	23.7	2	7.856	0.003	7233	21.9
Aroclor-1242	3	8.410	0.004	3771	25.2	3	9.169	0.009	1956	18.9
Aroclor-1242	4	8.589	0.007	2837	12.5	4	9.544	-0.043	5978	43.6
Total Col1Ave (4 peaks):					24.0	Total Col2Ave (4 peaks):				32.3 RPD = 30
Corrected Ave (3 peaks):					20.5	Corrected Ave (3 peaks):				28.1 RPD = 31
Aroclor-1248	1	8.410	0.005	3771	15.0	1	8.308	0.002	2065	13.4
Aroclor-1248	2	8.589	0.008	2837	8.8	2	8.716	0.004	1869	11.3
Aroclor-1248	3	8.997	-0.002	36022	58.6	3	9.169	0.012	1956	9.7
Aroclor-1248	4	9.305	0.011	30853	101.4	4	9.544	-0.038	5978	23.9
Total Col1Ave (4 peaks):					46.0	Total Col2Ave (4 peaks):				14.6 RPD = 104*
Corrected Ave (3 peaks):					27.5	Corrected Ave (3 peaks):				11.5 RPD = 82*
Aroclor-1254	1	9.305	0.006	30853	60.1	1	9.451	0.003	17617	71.3
Aroclor-1254	2	9.376	-0.002	5370	24.5	2	9.970	0.001	2849	14.3
Aroclor-1254	3	9.673	0.003	5543	16.9	3	10.146	0.026	88151	202.5
Aroclor-1254	4	9.810	0.002	14544	22.6	4	10.370	-0.002	107074	245.9
Aroclor-1254	5	10.121	-0.056	180016	429.7	5	10.567	-0.002	141725	584.5
Total Col1Ave (5 peaks):					110.8	Total Col2Ave (5 peaks):				223.7 RPD = 68*
Corrected Ave (4 peaks):					31.0	Corrected Ave (4 peaks):				133.5 RPD = 125*
Aroclor-1260	1	11.044	0.001	310806	558.4	1	11.652	-0.001	187682	498.4
Aroclor-1260	2	11.361	0.000	263161	460.0	2	11.917	-0.000	450612	473.0
Aroclor-1260	3	11.735	0.000	629605	418.0	3	12.433	-0.003	206042	867.7
Aroclor-1260	4	12.141	0.001	210012	269.9	4	12.502	-0.000	326457	529.5
Aroclor-1260	5	12.244	-0.000	268425	791.3	NS	---			----
Total Col1Ave (5 peaks):					499.5	Total Col2Ave (4 peaks):				592.1 RPD = 17
Corrected Ave (4 peaks):					426.6	Corrected Ave (3 peaks):				500.3 RPD = 16
Aroclor-1262	1	10.828	-0.005	171094	426.5	1	11.200	0.000	219731	430.1
Aroclor-1262	2	12.244	-0.002	268425	423.9	2	11.652	-0.001	187682	432.0
Aroclor-1262	3	12.319	-0.002	291581	424.2	3	12.433	-0.001	206042	445.4
Aroclor-1262	4	12.988	-0.001	257735	411.5	4	12.502	-0.002	326457	440.6
Total Col1Ave (4 peaks):					421.5	Total Col2Ave (4 peaks):				437.0 RPD = 4
Corrected Ave (3 peaks):					419.8	Corrected Ave (3 peaks):				434.3 RPD = 3
Aroclor-1268	1	12.244	-0.001	268425	163.8	1	12.433	-0.000	206042	169.0
Aroclor-1268	2	12.319	0.001	291581	178.4	2	12.502	0.000	326457	251.7
Aroclor-1268	3	12.725	0.026	108693	80.3	3	12.892	-0.001	10062	9.3
Aroclor-1268	4	13.486	-0.003	95646	23.8	4	13.710	0.001	59437	17.8
Total Col1Ave (4 peaks):					111.6	Total Col2Ave (4 peaks):				112.0 RPD = 0

Corrected Ave (3 peaks): 89.3 Corrected Ave (3 peaks): 65.4 RPD = 31

Total PCB Area Col1 (5.909 - 13.792) = 4409992 Col1 Total PCB = 0.8 ppm*

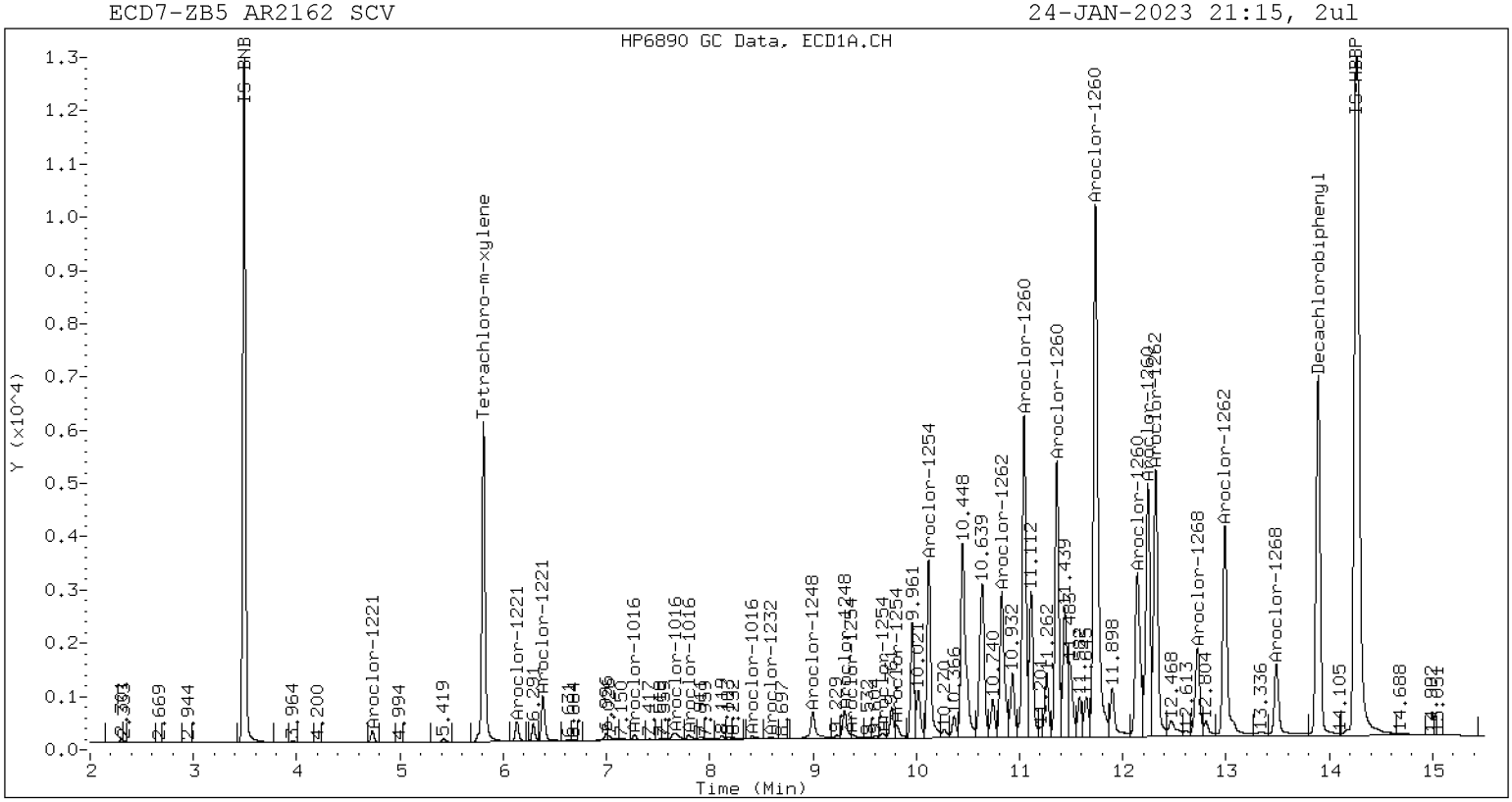
Total PCB Area Col2 (5.787 - 14.020) = 2874073 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

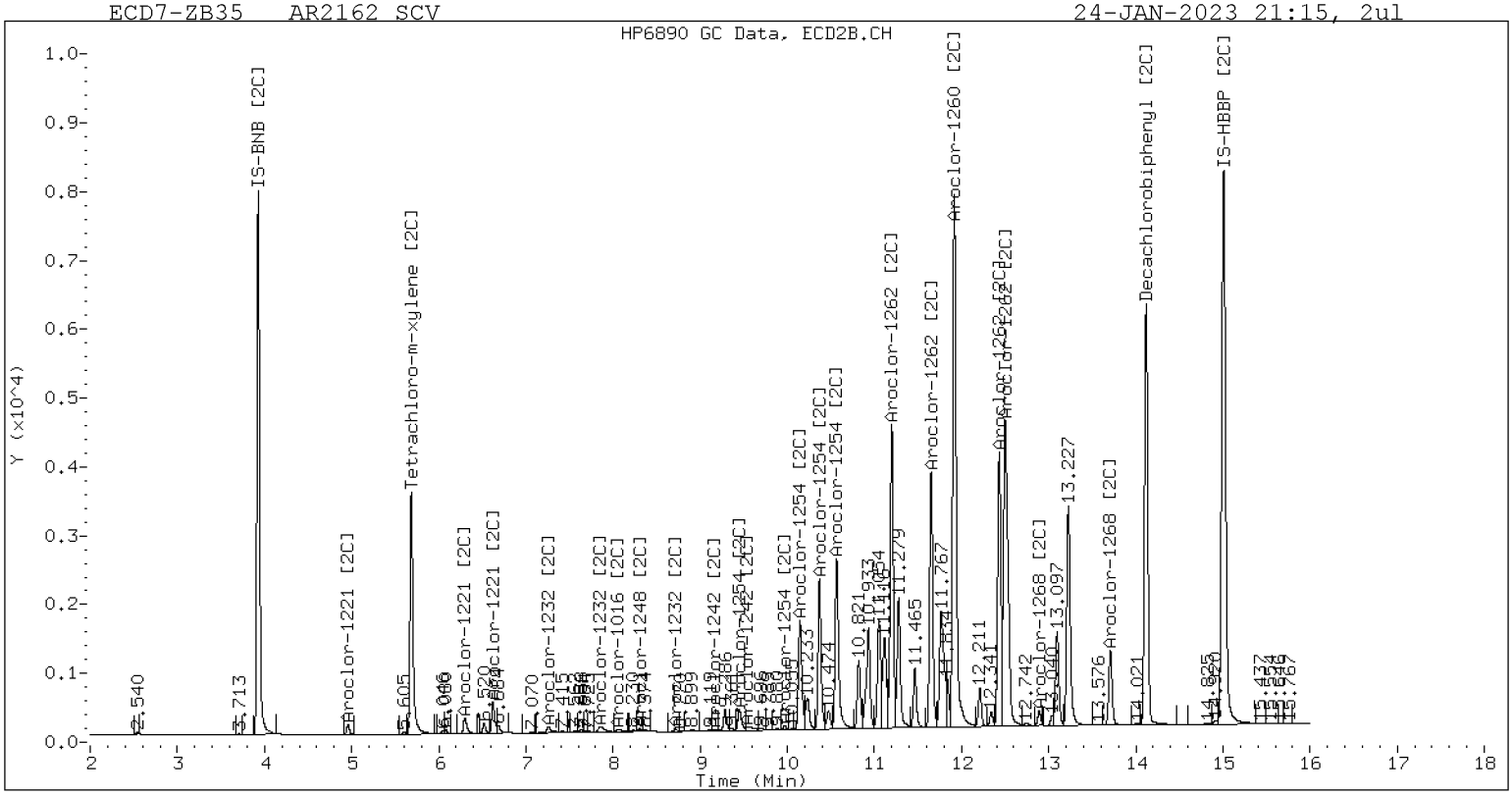
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162 SCV 24-JAN-2023 21:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162 SCV 24-JAN-2023 21:15, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GA00061
Laboratory ID: SLA0281-SCV6
Sequence: SLA0281
Sequence Name: AR3268SCV6
Standard ID: K007660

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1232	250.00	216	-13.7	20.00
Aroclor 1232 [2C]	250.00	239	-4.5	20.00
Decachlorobiphenyl	40.000	54.6	36.5	20.00
Tetrachlorometaxylene	40.000	36.4	-9.1	20.00
Decachlorobiphenyl [2C]	40.000	57.9	44.8	20.00
Tetrachlorometaxylene [2C]	40.000	36.3	-9.2	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242329ECD7.D
Data file 2: /230124.b/230124.b/01242329ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 SCV
Client ID:
Injection Date: 24-JAN-2023 21:36
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.810	0.001	250455	5.687	0.000	162795	36.4	36.3	0.2	Tetrachloro-m-xylene
13.892	0.000	551946	14.120	0.000	461901	54.6	57.9	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	487061	-3.2
Hexabromobiphenyl	647433	944934	46.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331721	-1.5
Hexabromobiphenyl	382032	502401	31.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016 1	7.272	0.002	19363	107.0	1	7.256	0.001	19791	110.0
Aroclor-1016 2	7.659	0.009	58630	97.8	2	7.856	0.005	40139	101.8
Aroclor-1016 3	7.794	0.006	28286	102.5	3	8.055	0.005	17412	108.2
Aroclor-1016 4	8.408	0.004	17373	97.9	4	8.308	0.003	11962	94.8
Total Col1Ave (4 peaks):				101.3	Total Col2Ave (4 peaks):				103.7 RPD = 2
Corrected Ave (3 peaks):				99.4	Corrected Ave (3 peaks):				101.6 RPD = 2
Aroclor-1221 1	4.735	0.002	5022	139.5	1	4.961	0.002	3409	140.2
Aroclor-1221 2	6.134	0.001	8987	122.1	2	6.299	0.001	7677	144.1
Aroclor-1221 3	6.385	0.001	29368	171.8	3	6.624	0.001	16198	180.1
Total Col1Ave (3 peaks):				144.5	Total Col2Ave (3 peaks):				154.8 RPD = 7
Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1232 1	4.735	0.002	5022	223.5	1	4.961	0.002	3409	231.1
Aroclor-1232 2	6.134	0.001	8987	177.4	2	7.256	-0.001	19791	239.8
Aroclor-1232 3	7.659	0.001	58630	231.5	3	7.856	0.001	40139	238.8
Aroclor-1232 4	8.585	0.000	24991	230.5	4	8.715	0.001	11476	245.7
Total Col1Ave (4 peaks):				215.7	Total Col2Ave (4 peaks):				238.8 RPD = 10
Corrected Ave (3 peaks):				210.5	Corrected Ave (3 peaks):				236.6 RPD = 12
Aroclor-1242 1	7.272	0.001	19363	129.8	1	7.256	0.000	19791	136.4
Aroclor-1242 2	7.659	0.004	58630	120.1	2	7.856	0.002	40139	124.6
Aroclor-1242 3	8.408	0.001	17373	119.8	3	9.166	0.006	11813	117.1
Aroclor-1242 4	8.585	0.003	24991	114.1	4	9.595	0.009	16549	123.7
Total Col1Ave (4 peaks):				121.0	Total Col2Ave (4 peaks):				125.4 RPD = 4
Corrected Ave (3 peaks):				118.0	Corrected Ave (3 peaks):				121.8 RPD = 3
Aroclor-1248 1	8.408	0.002	17373	71.3	1	8.308	0.003	11962	79.8
Aroclor-1248 2	8.585	0.005	24991	80.4	2	8.715	0.003	11476	71.1
Aroclor-1248 3	9.001	0.002	67631	113.8	3	9.166	0.009	11813	59.9
Aroclor-1248 4	9.293	-0.001	30983	105.3	4	9.595	0.014	16549	67.9
Total Col1Ave (4 peaks):				92.7	Total Col2Ave (4 peaks):				69.7 RPD = 28
Corrected Ave (3 peaks):				85.7	Corrected Ave (3 peaks):				66.3 RPD = 26
Aroclor-1254 1	9.293	-0.006	30983	62.4	1	9.451	0.003	3749	15.6
Aroclor-1254 2	9.381	0.003	9071	42.8	2	9.974	0.005	2452	12.6
Aroclor-1254 3	9.678	0.009	5199	16.3	3	10.131	0.010	4718	11.1
Aroclor-1254 4	9.820	0.012	8864	14.2	4	10.389	0.018	4224	10.0
Aroclor-1254 5	10.195	0.018	8085	19.9	5	10.573	0.004	1573	6.7
Total Col1Ave (5 peaks):				31.1	Total Col2Ave (5 peaks):				11.2 RPD = 94*
Corrected Ave (4 peaks):				23.3	Corrected Ave (4 peaks):				10.1 RPD = 79*
Aroclor-1260 1	11.050	0.006	66852	126.1	1	11.647	-0.006	57235	157.9
Aroclor-1260 2	11.366	0.006	6269	11.5	2	11.919	0.002	25368	27.7
Aroclor-1260 3	11.741	0.007	41446	28.9	3	12.434	-0.002	262014	1146.4
Aroclor-1260 4	12.052	-0.088	2691	3.6	4	12.502	-0.000	277060	466.9
Aroclor-1260 5	12.245	0.002	349286	1080.9	NS	---			----
Total Col1Ave (5 peaks):				250.2	Total Col2Ave (4 peaks):				449.7 RPD = 57*
Corrected Ave (4 peaks):				42.5	Corrected Ave (3 peaks):				217.5 RPD = 135*
Aroclor-1262 1	10.838	0.006	4520	11.8	1	11.203	0.003	40576	82.5
Aroclor-1262 2	12.245	-0.000	349286	579.1	2	11.647	-0.006	57235	136.9
Aroclor-1262 3	12.318	-0.002	349715	534.1	3	12.434	-0.001	262014	588.4
Aroclor-1262 4	12.988	-0.001	141905	237.8	4	12.502	-0.002	277060	388.5
Total Col1Ave (4 peaks):				340.7	Total Col2Ave (4 peaks):				299.1 RPD = 13
Corrected Ave (3 peaks):				261.2	Corrected Ave (3 peaks):				202.6 RPD = 25
Aroclor-1268 1	12.245	0.001	349286	223.8	1	12.434	0.000	262014	223.3
Aroclor-1268 2	12.318	0.000	349715	224.6	2	12.502	0.000	277060	221.9
Aroclor-1268 3	12.699	0.000	289328	224.3	3	12.893	-0.000	208928	201.0
Aroclor-1268 4	13.490	0.001	849299	222.1	4	13.710	0.002	725831	226.1
Total Col1Ave (4 peaks):				223.7	Total Col2Ave (4 peaks):				218.1 RPD = 3

Corrected Ave (3 peaks): 223.4 Corrected Ave (3 peaks): 215.4 RPD = 4

Total PCB Area Col1 (5.909 - 13.792) = 2866092 Col1 Total PCB = 0.5 ppm*

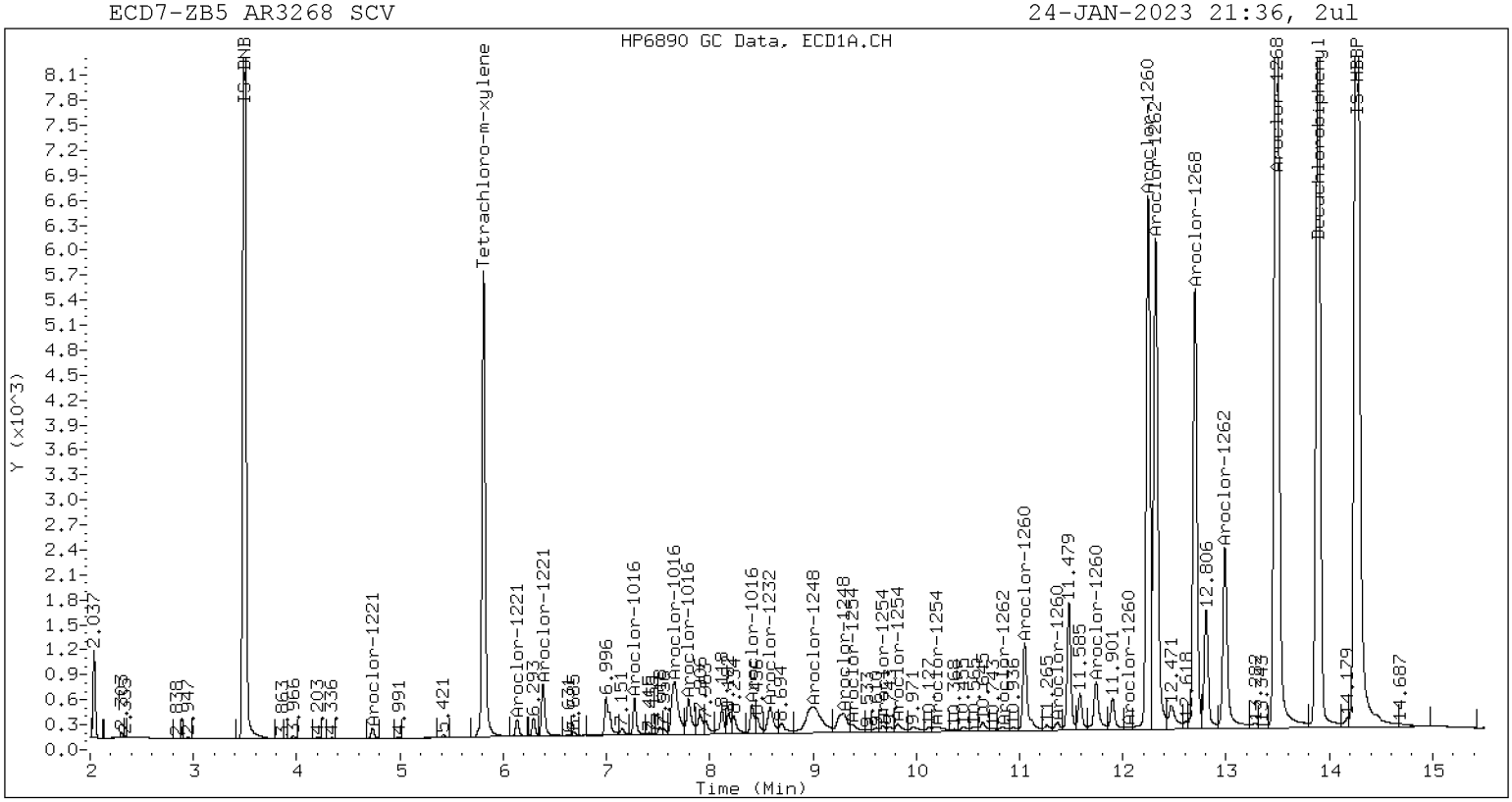
Total PCB Area Col2 (5.787 - 14.020) = 2084481 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

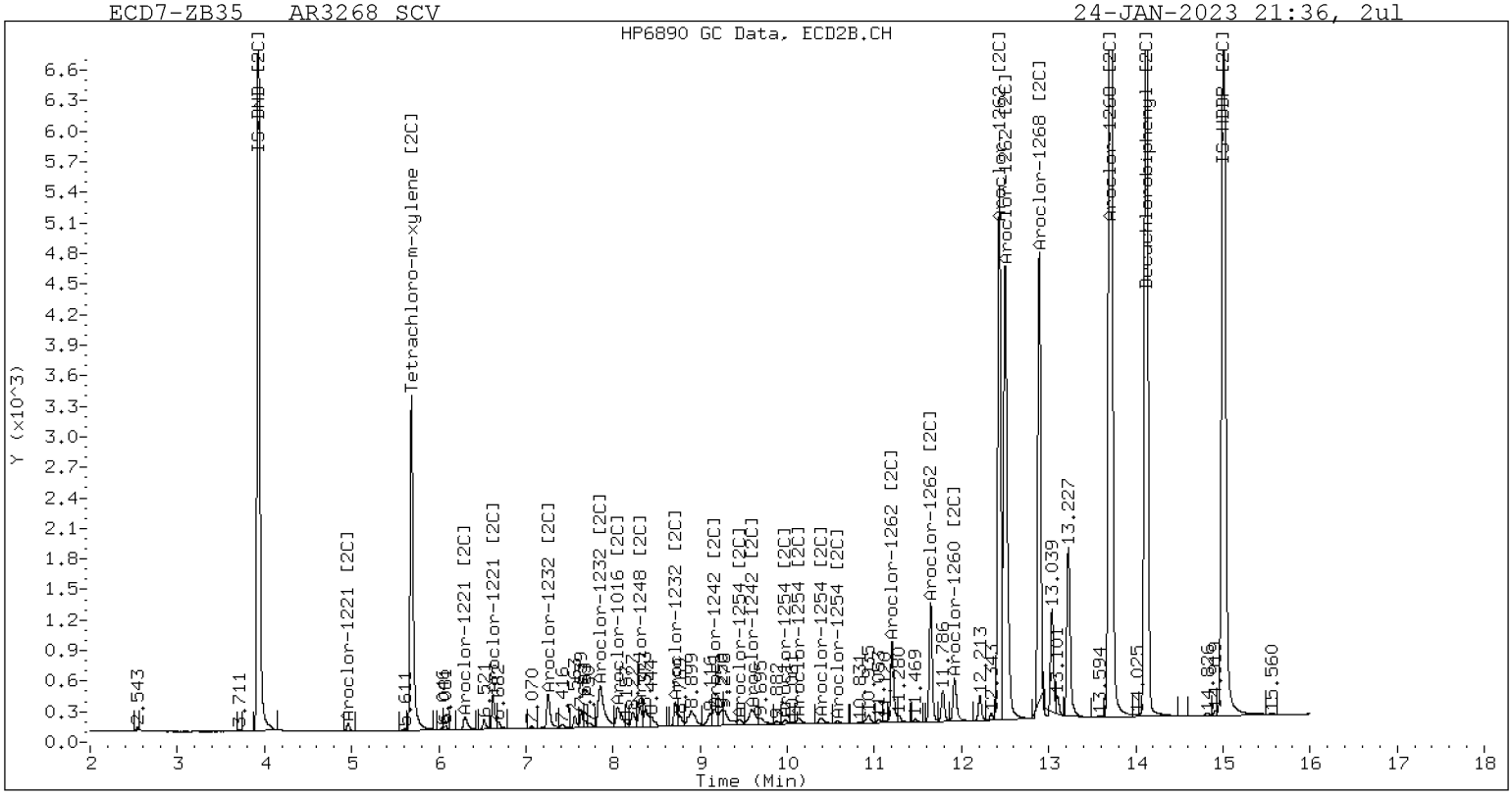
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268 SCV 24-JAN-2023 21:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268 SCV 24-JAN-2023 21:36, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01312302ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0350	Injection Date:	01/31/23
Lab Sample ID:	SLA0350-ICV1	Injection Time:	09:56
Sequence Name:	AR1254ICV1		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	255	0.0675033	0.0696270		2.0	+/-20
Aroclor-1254 (1)	A	250.00	260	0.0815329	0.0848990			
Aroclor-1254 (2)	A	250.00	233	0.0348121	0.0325115			
Aroclor-1254 (3)	A	250.00	261	0.0522405	0.0544774			
Aroclor-1254 (4)	A	250.00	262	0.1023658	0.1073742			
Aroclor-1254 (5)	A	250.00	259	0.0665652	0.0688731			
Aroclor 1254 [2C]	A	250.00	257	0.0733219	0.0758912		2.9	+/-20
Aroclor-1254 (1) [2C]	A	250.00	267	0.0580388	0.0620175			
Aroclor-1254 (2) [2C]	A	250.00	265	0.0469118	0.0497326			
Aroclor-1254 (3) [2C]	A	250.00	264	0.1023304	0.1080054			
Aroclor-1254 (4) [2C]	A	250.00	264	0.1023323	0.1080554			
Aroclor-1254 (5) [2C]	A	250.00	226	0.0569963	0.0516450			
Decachlorobiphenyl	A	40.000	37.7	0.8555994	0.8072111		-5.8	+/-20
Tetrachlorometaxylene	A	40.000	40.7	1.1307870	1.1509510		1.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.4	1.2696430	1.1546480		-9.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.2	1.0814980	1.0867240		0.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312302ECD7.D
Data file 2: /230131.b/230131.b/01312302ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 31-JAN-2023 09:56
Report Date: 01/31/2023 15:07
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.001	270863	5.684	-0.001	190932	40.7	40.2	1.3	Tetrachloro-m-xylene
13.892	-0.000	358836	14.118	0.000	320005	37.7	36.4	3.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	470677	-6.5
Hexabromobiphenyl	647433	889076	37.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	351390	4.3
Hexabromobiphenyl	382032	554290	45.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1254	1	9.295	-0.004	124875	260.3	1	9.445	0.000	68101	267.1
Aroclor-1254	2	9.374	-0.004	47820	233.5	2	9.965	0.000	54611	265.0
Aroclor-1254	3	9.664	-0.005	80129	260.7	3	10.116	0.000	118600	263.9
Aroclor-1254	4	9.802	-0.006	157933	262.2	4	10.367	0.000	118655	264.0
Aroclor-1254	5	10.164	-0.013	101303	258.7	5	10.564	0.000	56711	226.5
		Total Col1Ave (5 peaks):		255.1			Total Col2Ave (5 peaks):		257.3	RPD = 1
		Corrected Ave (4 peaks):		253.3			Corrected Ave (4 peaks):		254.9	RPD = 1
			CalAmt %D:	2.0				CalAmt %D:	2.9	

Total PCB Area Col1 (5.909 - 13.792) = 1608198 Col1 Total PCB = 0.3 ppm*

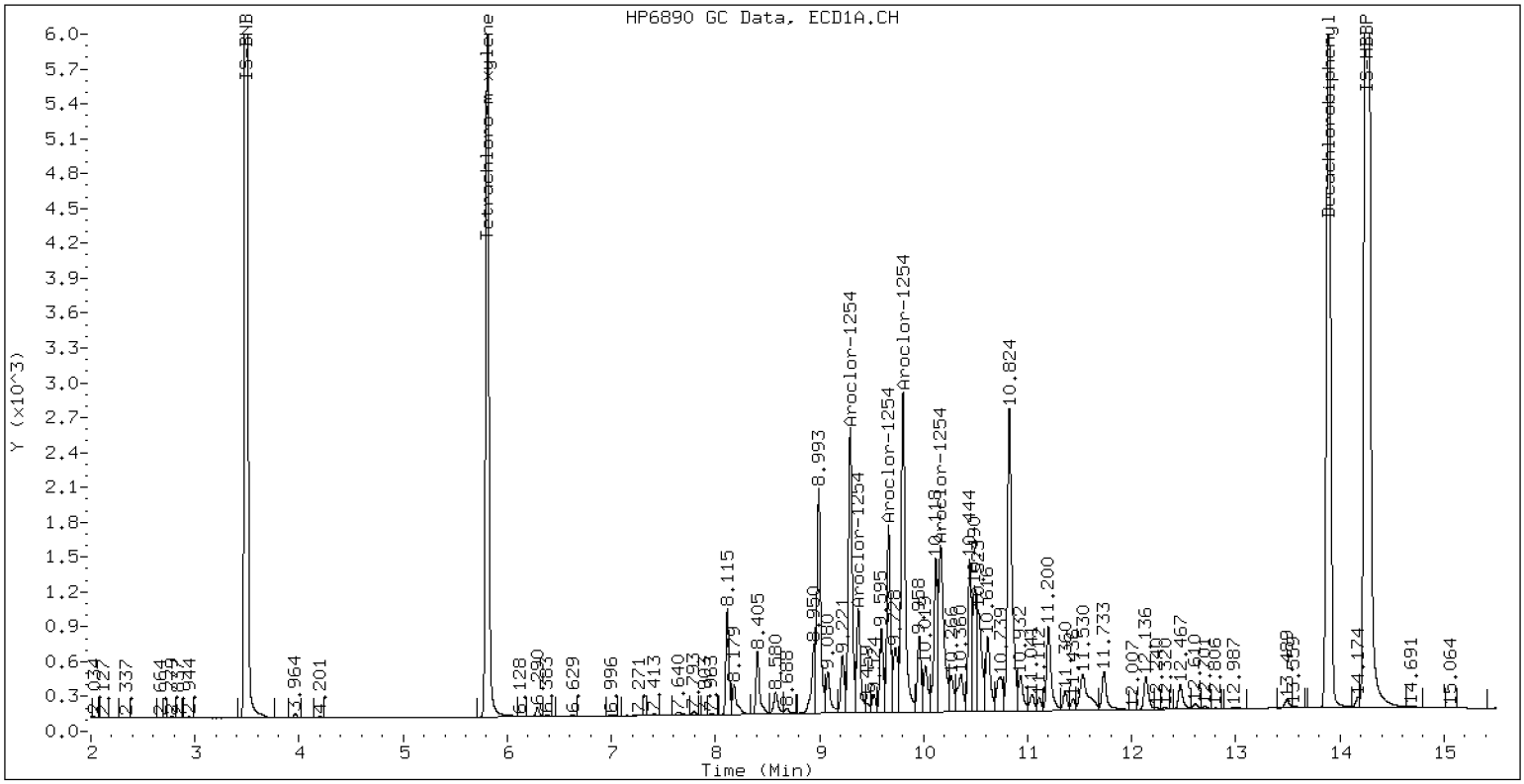
Total PCB Area Col2 (5.785 - 14.018) = 1122714 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

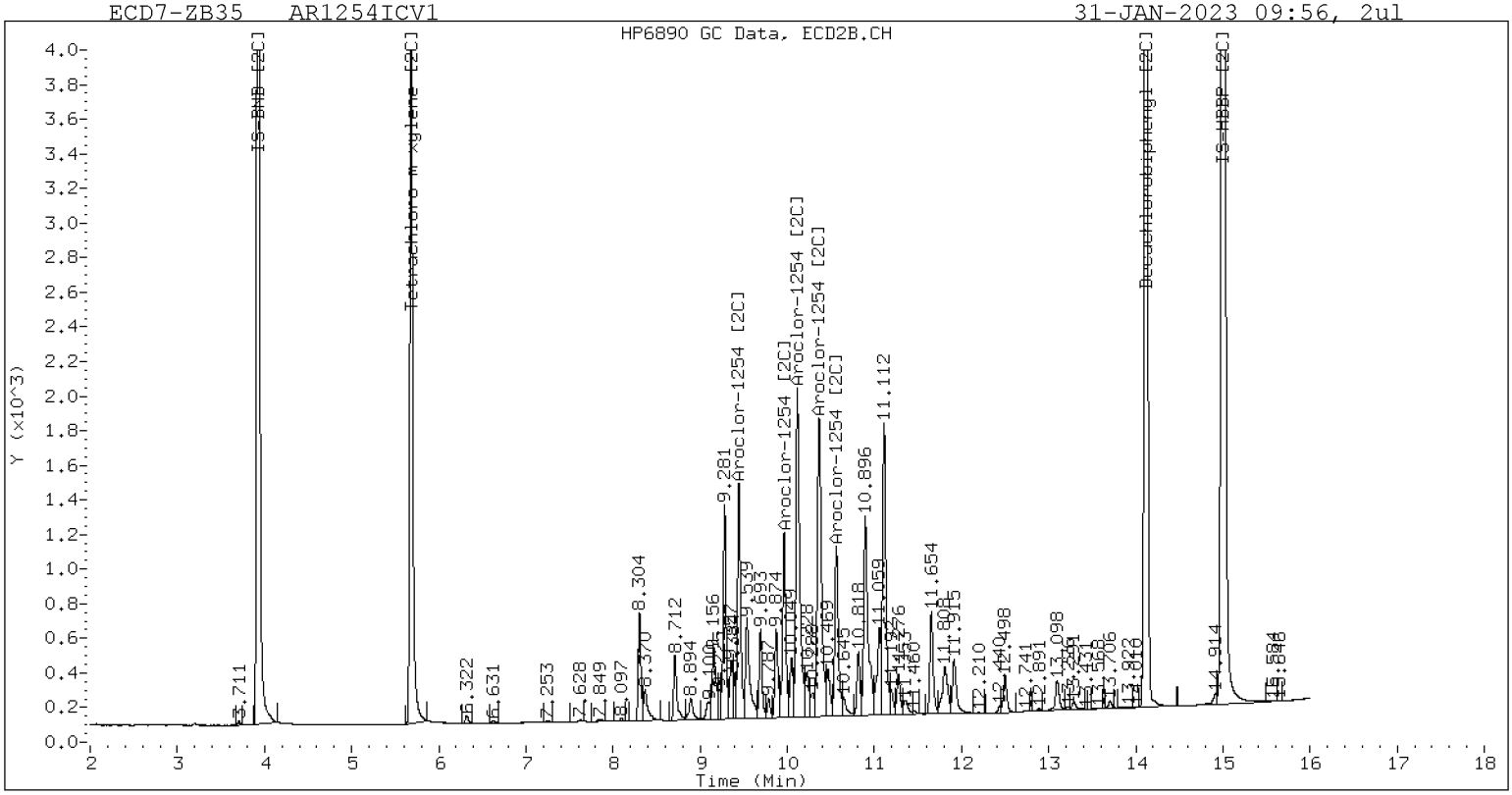
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 31-JAN-2023 09:56, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 31-JAN-2023 09:56, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01312303ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0350	Injection Date:	01/31/23
Lab Sample ID:	SLA0350-ICV2	Injection Time:	10:17
Sequence Name:	AR1660ICV2		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Aroclor 1016	A	250.00	262	0.0506755	0.0532587		4.6	+/-20	
Aroclor-1016 (1)	A	250.00	261	0.0297277	0.0310584		4.4		
Aroclor-1016 (2)	A	250.00	269	0.0985017	0.1059668		7.6		
Aroclor-1016 (3)	A	250.00	246	0.0453193	0.0445279		-1.6		
Aroclor-1016 (4)	A	250.00	270	0.0291533	0.0314818		8.0		
Aroclor 1016 [2C]	A	250.00	271	0.0519244	0.0564618		8.3	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	264	0.0433907	0.0457397		5.6		
Aroclor-1016 (2) [2C]	A	250.00	274	0.0950862	0.1044367		9.6		
Aroclor-1016 (3) [2C]	A	250.00	278	0.0388014	0.0431343		11.2		
Aroclor-1016 (4) [2C]	A	250.00	267	0.0304194	0.0325367		6.8		
Aroclor 1260	A	250.00	177	0.0605224	0.0430870		-29.2	+/-20	*
Aroclor-1260 (1)	A	250.00	183	0.0448870	0.0328762		-26.8		
Aroclor-1260 (2)	A	250.00	182	0.0461412	0.0336915		-27.2		
Aroclor-1260 (3)	A	250.00	178	0.1214672	0.0866109		-28.8		
Aroclor-1260 (4)	A	250.00	176	0.0627593	0.0440887		-29.6		
Aroclor-1260 (5)	A	250.00	166	0.0273573	0.0181677		-33.6		
Aroclor 1260 [2C]	A	250.00	204	0.0836545	0.0681100		-18.4	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	205	0.0577136	0.0473695		-18.0		
Aroclor-1260 (2) [2C]	A	250.00	201	0.1460113	0.1176754		-19.6		
Aroclor-1260 (3) [2C]	A	250.00	206	0.0363944	0.0300708		-17.6		
Aroclor-1260 (4) [2C]	A	250.00	204	0.0944986	0.0773241		-18.4		
Decachlorobiphenyl	A	40.000	36.2	0.8555994	0.7750116		-9.5	+/-20	
Tetrachlorometaxylene	A	40.000	43.0	1.1307870	1.2145250		7.5	+/-20	
Decachlorobiphenyl [2C]	A	40.000	38.4	1.2696430	1.2190150		-4.0	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	42.1	1.0814980	1.1381960		5.3	+/-20	

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312303ECD7.D
Data file 2: /230131.b/230131.b/01312303ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 31-JAN-2023 10:17
Report Date: 01/31/2023 15:07
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.001	283217	5.685	-0.000	198580	43.0	42.1	2.0	Tetrachloro-m-xylene
13.890	-0.001	375206	14.118	-0.000	340663	36.2	38.4	5.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	466383	-7.3
Hexabromobiphenyl	647433	968259	49.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	348938	3.6
Hexabromobiphenyl	382032	558915	46.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	45266	261.2	1	7.253	-0.001	49876	263.5
Aroclor-1016	2	7.651	0.001	154441	268.9	2	7.851	0.000	113881	274.6
Aroclor-1016	3	7.788	-0.000	64897	245.6	3	8.050	-0.001	47035	277.9
Aroclor-1016	4	8.403	-0.001	45883	270.0	4	8.304	0.000	35479	267.4
Total Col1Ave (4 peaks):					261.4	Total Col2Ave (4 peaks):				270.9 RPD = 4
Corrected Ave (3 peaks):					258.6	Corrected Ave (3 peaks):				268.5 RPD = 4
CalAmt %D:					4.6	CalAmt %D:				8.3
Aroclor-1260	1	11.042	-0.002	99477	183.1	1	11.651	0.001	82736	205.2
Aroclor-1260	2	11.358	-0.002	101944	182.5	2	11.914	-0.000	205533	201.5
Aroclor-1260	3	11.731	-0.003	262068	178.3	3	12.433	0.001	52522	206.6
Aroclor-1260	4	12.134	-0.005	133404	175.6	4	12.498	-0.001	135055	204.6
Aroclor-1260	5	12.241	-0.002	54972	166.0	NS	---			----
Total Col1Ave (5 peaks):					177.1	Total Col2Ave (4 peaks):				204.5 RPD = 14
Corrected Ave (4 peaks):					175.6	Corrected Ave (3 peaks):				203.7 RPD = 15
CalAmt %D:					-29.2	CalAmt %D:				-18.2

Total PCB Area Col1 (5.909 - 13.792) = 2776538 Col1 Total PCB = 0.5 ppm*

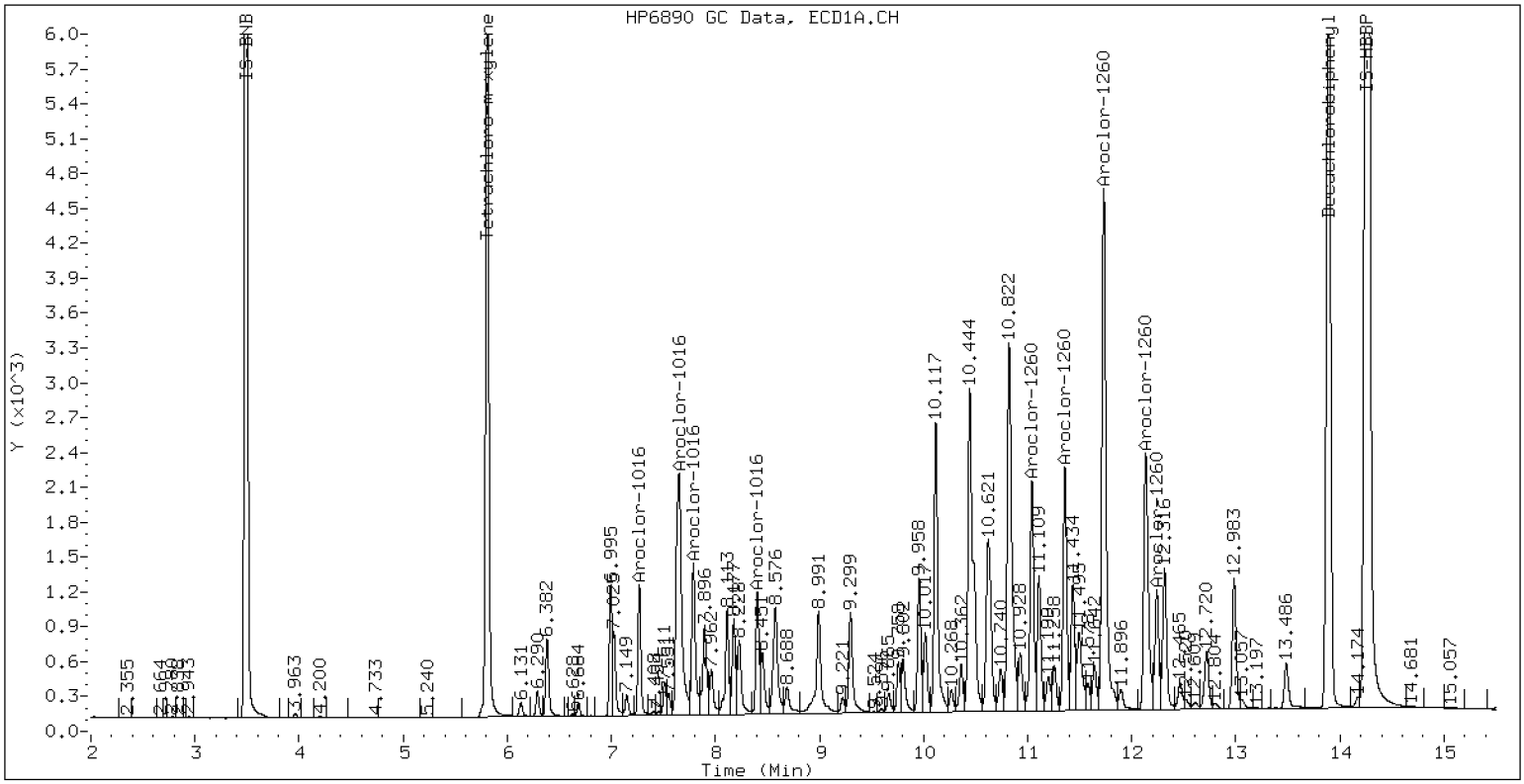
Total PCB Area Col2 (5.785 - 14.018) = 1993916 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

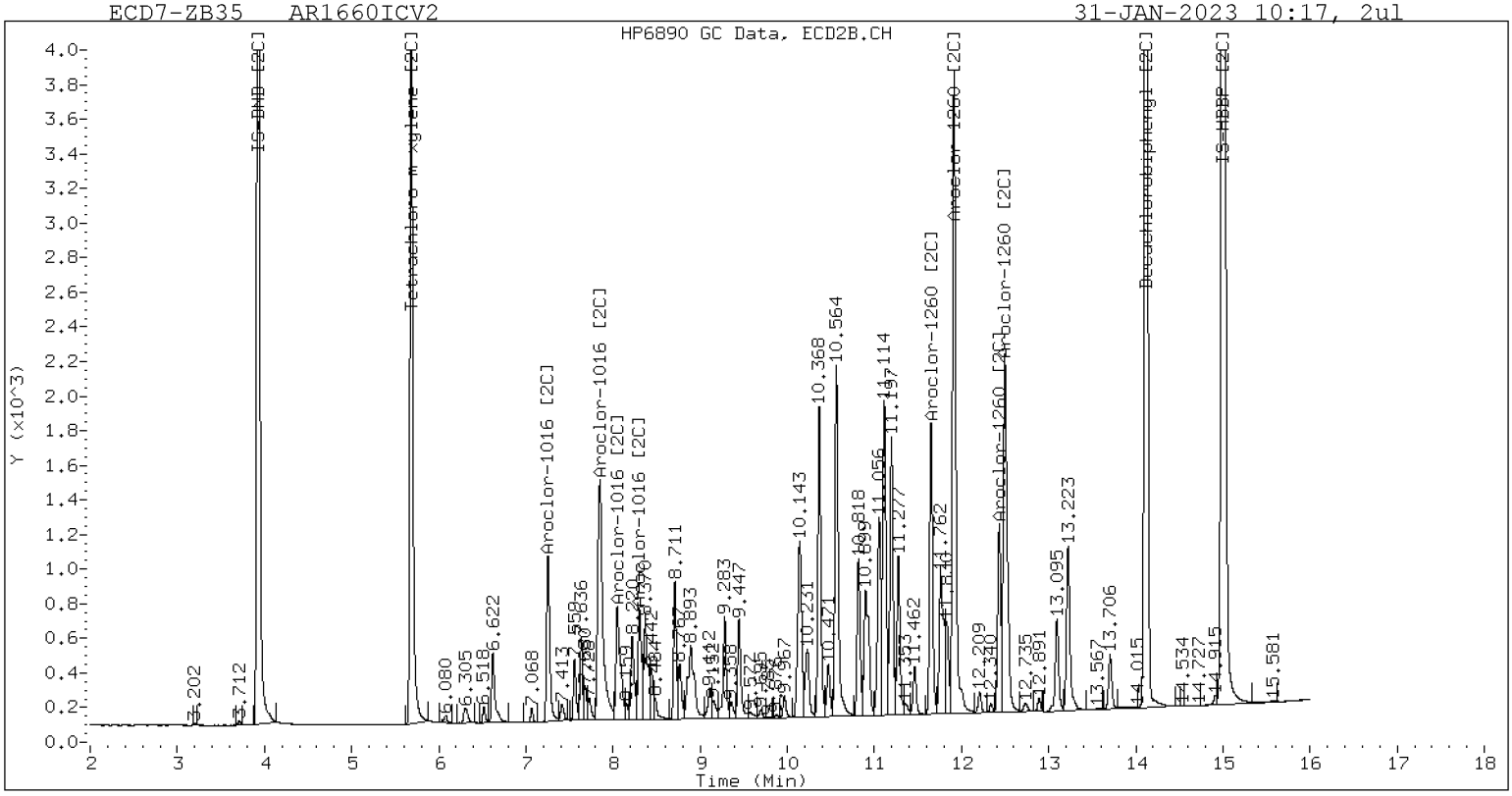
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 31-JAN-2023 10:17, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 31-JAN-2023 10:17, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02012302ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0012	Injection Date:	02/01/23
Lab Sample ID:	SLB0012-ICV1	Injection Time:	09:46
Sequence Name:	AR1254ICV1		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	244	0.0675033	0.0663845		-2.6	+/-20
Aroclor-1254 (1)	A	250.00	240	0.0815329	0.0781562			
Aroclor-1254 (2)	A	250.00	227	0.0348121	0.0315954			
Aroclor-1254 (3)	A	250.00	248	0.0522405	0.0519194			
Aroclor-1254 (4)	A	250.00	254	0.1023658	0.1039686			
Aroclor-1254 (5)	A	250.00	249	0.0665652	0.0662828			
Aroclor 1254 [2C]	A	250.00	247	0.0733219	0.0728153		-1.1	+/-20
Aroclor-1254 (1) [2C]	A	250.00	255	0.0580388	0.0591513			
Aroclor-1254 (2) [2C]	A	250.00	257	0.0469118	0.0482192			
Aroclor-1254 (3) [2C]	A	250.00	247	0.1023304	0.1011999			
Aroclor-1254 (4) [2C]	A	250.00	257	0.1023323	0.1052443			
Aroclor-1254 (5) [2C]	A	250.00	220	0.0569963	0.0502621			
Decachlorobiphenyl	A	40.000	37.8	0.8555994	0.8086669		-5.5	+/-20
Tetrachlorometaxylene	A	40.000	39.7	1.1307870	1.1234200		-0.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.0	1.2696430	1.1415930		-10.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.9	1.0814980	1.0788300		-0.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230201.b/02012302ECD7.D
Data file 2: /230201.b/230201.b/02012302ECD7.D
Method: \\target\share\chem4\ecd7.i\230201.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 01-FEB-2023 09:46
Report Date: 02/01/2023 15:25
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.001	278279	5.683	-0.001	188259	39.7	39.9	0.4	Tetrachloro-m-xylene
13.893	0.002	306023	14.118	0.000	265207	37.8	36.0	5.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	495414	-1.6
Hexabromobiphenyl	647433	756858	16.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	349006	3.6
Hexabromobiphenyl	382032	464626	21.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.296	-0.003	120999	239.6	1	9.445	0.000	64513	254.8
Aroclor-1254	2	9.372	-0.005	48915	226.9	2	9.965	0.000	52590	257.0
Aroclor-1254	3	9.663	-0.006	80380	248.5	3	10.116	0.000	110373	247.2
Aroclor-1254	4	9.801	-0.007	160961	253.9	4	10.366	0.000	114784	257.1
Aroclor-1254	5	10.163	-0.014	102617	248.9	5	10.564	0.000	54818	220.5

Total Col1Ave (5 peaks): 243.6 Total Col2Ave (5 peaks): 247.3 RPD = 2

Corrected Ave (4 peaks): 241.0 Corrected Ave (4 peaks): 244.9 RPD = 2

CalAmt %D: -2.6 CalAmt %D: -1.1

Total PCB Area Col1 (5.909 - 13.792) = 1630995 Col1 Total PCB = 0.3 ppm*

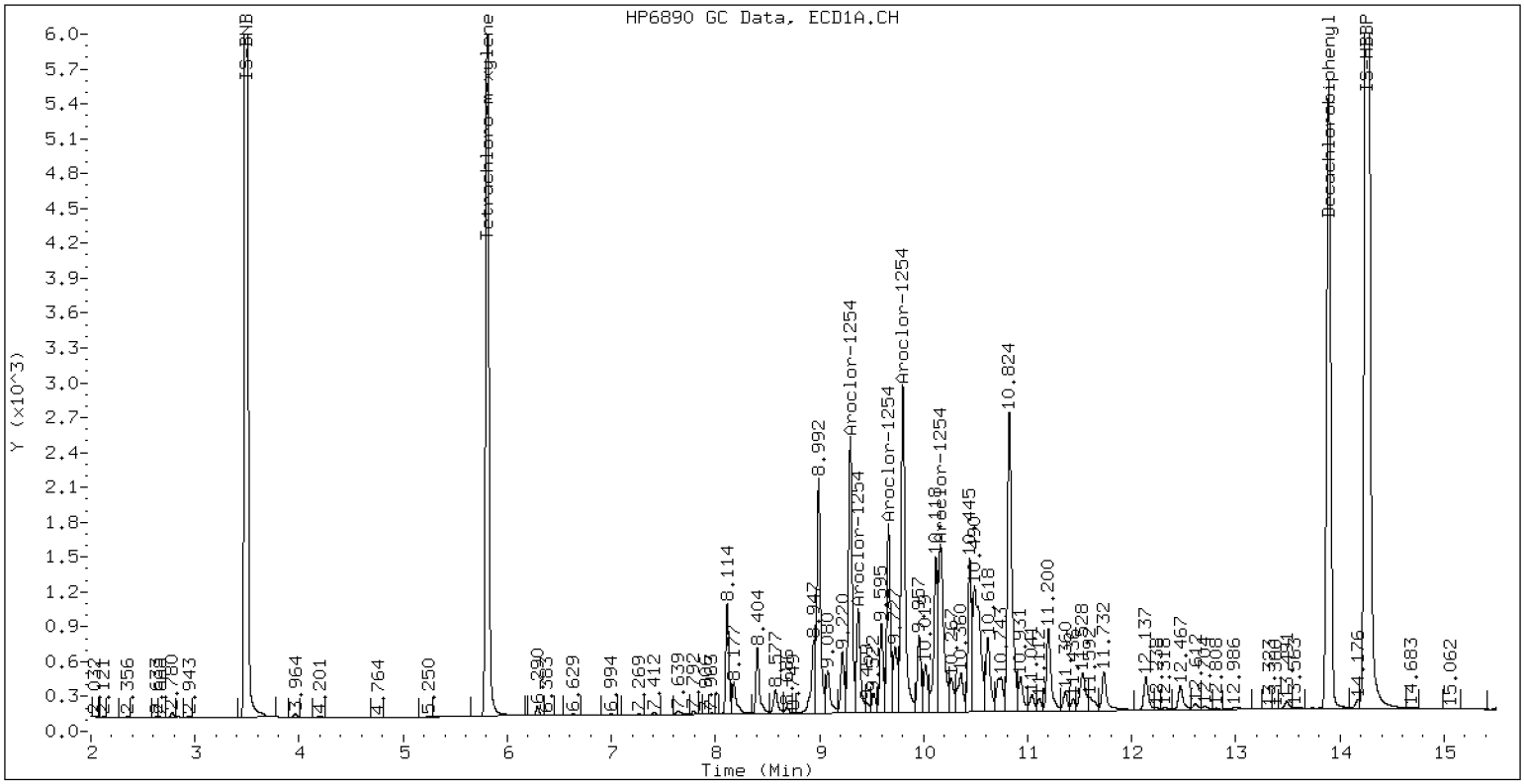
Total PCB Area Col2 (5.784 - 14.018) = 1073599 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

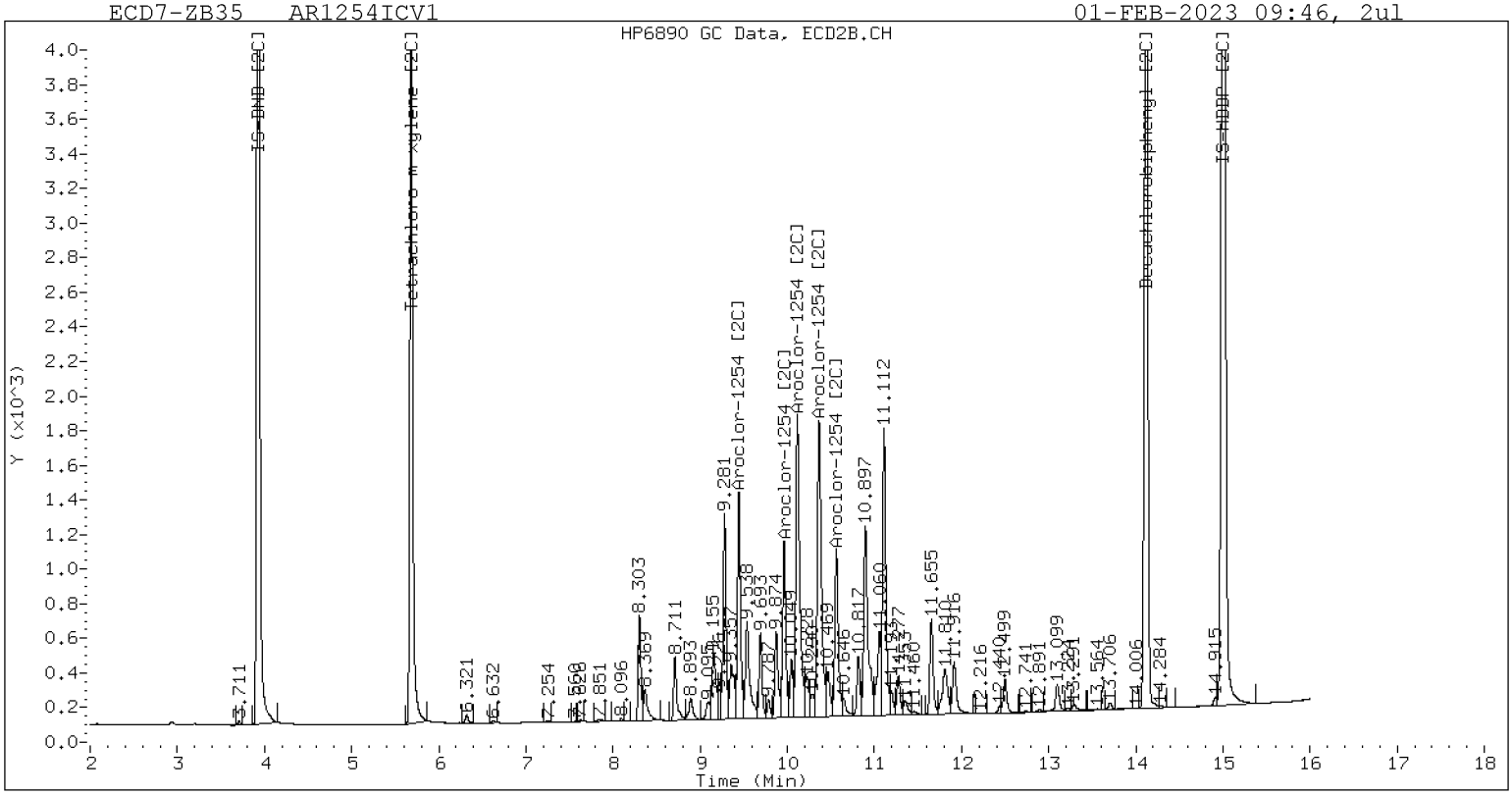
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 01-FEB-2023 09:46, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 01-FEB-2023 09:46, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02012303ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0012	Injection Date:	02/01/23
Lab Sample ID:	SLB0012-ICV2	Injection Time:	10:07
Sequence Name:	AR1660ICV2		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Aroclor 1016	A	250.00	259	0.0506755	0.0526280		3.4	+/-20	
Aroclor-1016 (1)	A	250.00	259	0.0297277	0.0308283		3.6		
Aroclor-1016 (2)	A	250.00	265	0.0985017	0.1044877		6.0		
Aroclor-1016 (3)	A	250.00	242	0.0453193	0.0438859		-3.2		
Aroclor-1016 (4)	A	250.00	268	0.0291533	0.0313103		7.2		
Aroclor 1016 [2C]	A	250.00	266	0.0519244	0.0554291		6.5	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	262	0.0433907	0.0454883		4.8		
Aroclor-1016 (2) [2C]	A	250.00	268	0.0950862	0.1020070		7.2		
Aroclor-1016 (3) [2C]	A	250.00	272	0.0388014	0.0422560		8.8		
Aroclor-1016 (4) [2C]	A	250.00	263	0.0304194	0.0319651		5.2		
Aroclor 1260	A	250.00	199	0.0605224	0.0485047		-20.2	+/-20	*
Aroclor-1260 (1)	A	250.00	208	0.0448870	0.0372847		-16.8		
Aroclor-1260 (2)	A	250.00	207	0.0461412	0.0381757		-17.2		
Aroclor-1260 (3)	A	250.00	201	0.1214672	0.0975020		-19.6		
Aroclor-1260 (4)	A	250.00	197	0.0627593	0.0493877		-21.2		
Aroclor-1260 (5)	A	250.00	184	0.0273573	0.0201735		-26.4		
Aroclor 1260 [2C]	A	250.00	224	0.0836545	0.0746569		-10.4	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	226	0.0577136	0.0523033		-9.6		
Aroclor-1260 (2) [2C]	A	250.00	222	0.1460113	0.1297957		-11.2		
Aroclor-1260 (3) [2C]	A	250.00	227	0.0363944	0.0330970		-9.2		
Aroclor-1260 (4) [2C]	A	250.00	221	0.0944986	0.0834316		-11.6		
Decachlorobiphenyl	A	40.000	36.1	0.8555994	0.7717455		-9.8	+/-20	
Tetrachlorometaxylene	A	40.000	42.2	1.1307870	1.1934520		5.5	+/-20	
Decachlorobiphenyl [2C]	A	40.000	38.4	1.2696430	1.2182300		-4.0	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	41.7	1.0814980	1.1280120		4.3	+/-20	

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230201.b/02012303ECD7.D
Data file 2: /230201.b/230201.b/02012303ECD7.D
Method: \\target\share\chem4\ecd7.i\230201.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 01-FEB-2023 10:07
Report Date: 02/01/2023 15:25
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.002	279315	5.684	0.000	188166	42.2	41.7	1.2	Tetrachloro-m-xylene
13.890	-0.001	308070	14.118	0.000	276336	36.1	38.4	6.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	468079	-7.0
Hexabromobiphenyl	647433	798372	23.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	333624	-1.0
Hexabromobiphenyl	382032	453668	18.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.000	45094	259.3	1	7.253	0.000	47425	262.1
Aroclor-1016	2	7.649	-0.001	152839	265.2	2	7.850	0.000	106350	268.2
Aroclor-1016	3	7.787	-0.001	64194	242.1	3	8.049	-0.000	44055	272.3
Aroclor-1016	4	8.402	-0.002	45799	268.5	4	8.304	0.000	33326	262.7
Total Col1Ave (4 peaks):					258.8	Total Col2Ave (4 peaks):				266.3 RPD = 3
Corrected Ave (3 peaks):					255.5	Corrected Ave (3 peaks):				264.3 RPD = 3
CalAmt %D:					3.5	CalAmt %D:				6.5
Aroclor-1260	1	11.041	-0.003	93022	207.7	1	11.650	0.000	74151	226.6
Aroclor-1260	2	11.359	-0.002	95245	206.8	2	11.914	-0.001	184013	222.2
Aroclor-1260	3	11.731	-0.004	243259	200.7	3	12.432	-0.002	46922	227.3
Aroclor-1260	4	12.135	-0.004	123218	196.7	4	12.497	-0.001	118282	220.7
Aroclor-1260	5	12.240	-0.003	50331	184.4	NS	---			----
Total Col1Ave (5 peaks):					199.3	Total Col2Ave (4 peaks):				224.2 RPD = 12
Corrected Ave (4 peaks):					197.2	Corrected Ave (3 peaks):				223.2 RPD = 12
CalAmt %D:					-20.3	CalAmt %D:				-10.3

Total PCB Area Col1 (5.909 - 13.792) = 2663537 Col1 Total PCB = 0.5 ppm*

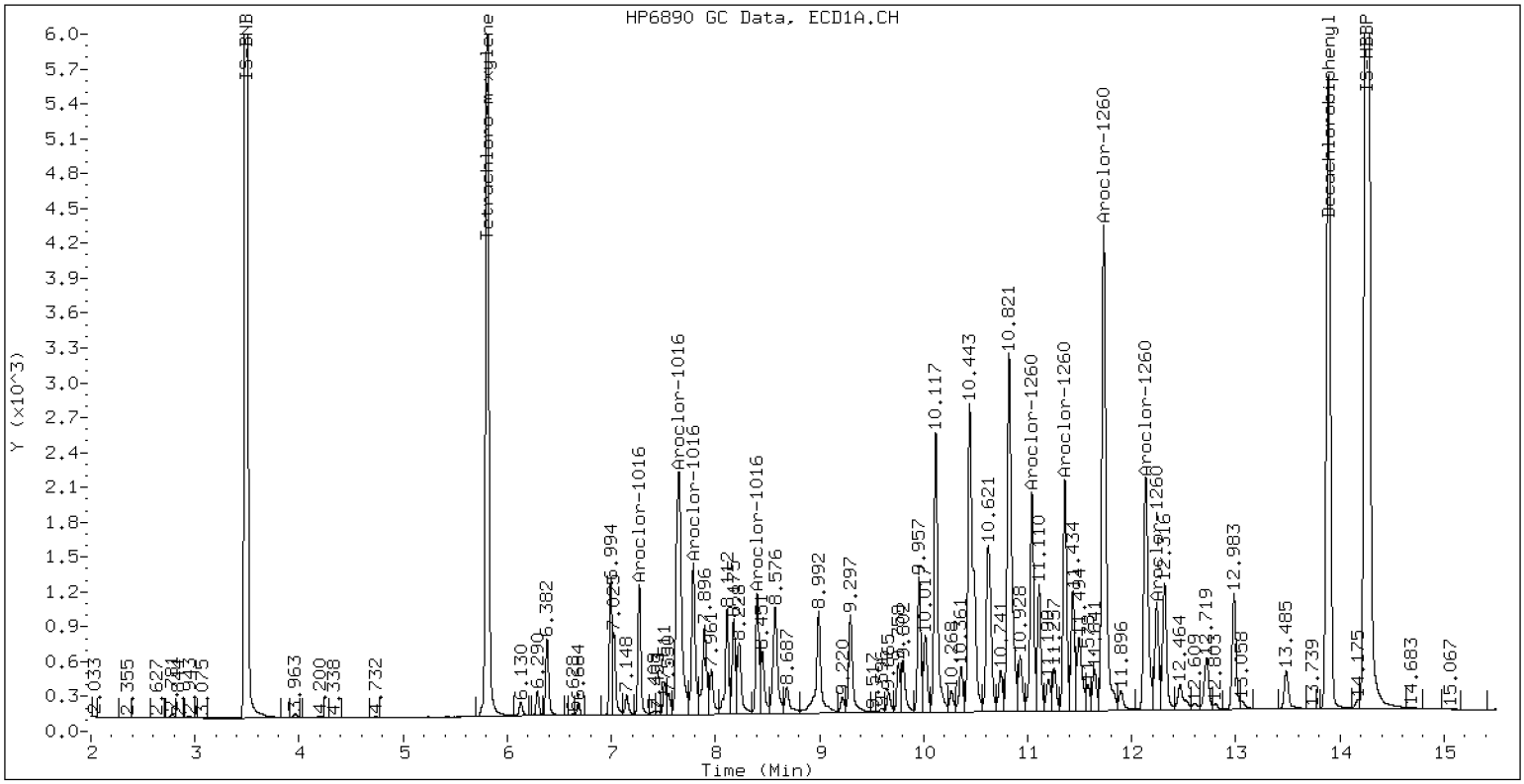
Total PCB Area Col2 (5.784 - 14.018) = 1812633 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

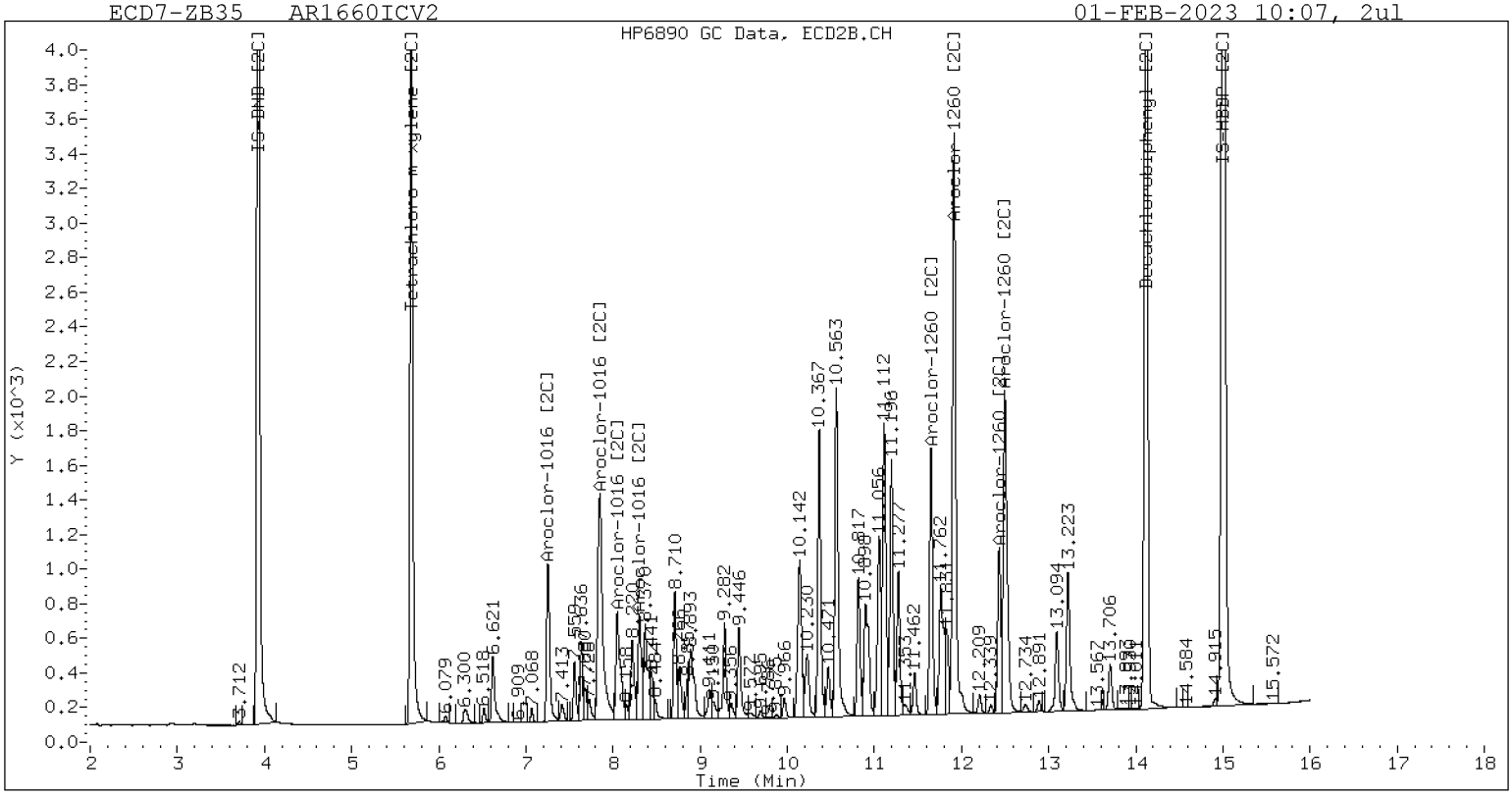
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 01-FEB-2023 10:07, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 01-FEB-2023 10:07, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01242324ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0281	Injection Date:	01/24/23
Lab Sample ID:	SLA0281-SCV1	Injection Time:	19:51
Sequence Name:	AR1660SCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	217	0.0506755	0.0439293		-13.2	+/-20
Aroclor 1016 [2C]	A	250.00	220	0.0519244	0.0458194		-11.9	+/-20
Aroclor 1260	A	250.00	211	0.0605224	0.0508252		-15.7	+/-20
Aroclor 1260 [2C]	A	250.00	238	0.0836545	0.0795027		-4.9	+/-20
Decachlorobiphenyl	A	40.000	37.9	0.8555994	0.8115673		-5.1	+/-20
Tetrachlorometaxylene	A	40.000	37.5	1.1307870	1.0610020		-6.2	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.2	1.2696430	1.2773160		0.6	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.3	1.0814980	1.0082190		-6.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242324ECD7.D
Data file 2: /230124.b/230124.b/01242324ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 SCV
Client ID:
Injection Date: 24-JAN-2023 19:51
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	268739	5.686	-0.001	172961	37.5	37.3	0.6	Tetrachloro-m-xylene
13.891	-0.000	381489	14.121	0.001	320416	37.9	40.2	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	506576	0.6
Hexabromobiphenyl	647433	940129	45.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	343102	1.8
Hexabromobiphenyl	382032	501702	31.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	40958	217.6	1	7.255	0.001	40190	216.0
Aroclor-1016	2	7.655	0.004	135282	216.9	2	7.852	0.001	90338	221.5
Aroclor-1016	3	7.791	0.003	61557	214.5	3	8.052	0.002	37810	227.2
Aroclor-1016	4	8.406	0.002	40372	218.7	4	8.306	0.000	28171	215.9
Total Col1Ave (4 peaks):					216.9	Total Col2Ave (4 peaks):				220.2 RPD = 1
Corrected Ave (3 peaks):					216.3	Corrected Ave (3 peaks):				217.8 RPD = 1
Aroclor-1221	1	4.732	-0.001	256	6.8	1	---			0.0
Aroclor-1221	2	6.131	-0.002	4742	61.9	2	6.302	0.004	5037	91.4
Aroclor-1221	3	6.384	-0.000	27448	154.4	3	6.623	-0.000	18931	203.5
Total Col1Ave (3 peaks):					74.4	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.732	-0.001	256	11.0	1	---			0.0
Aroclor-1232	2	6.131	-0.002	4742	90.0	2	7.255	-0.001	40190	470.8
Aroclor-1232	3	7.655	-0.004	135282	513.5	3	7.852	-0.002	90338	519.5
Aroclor-1232	4	8.581	-0.003	56938	504.9	4	8.713	-0.001	27776	574.9
Total Col1Ave (4 peaks):					279.8	Total Col2Ave (3 peaks):				521.7 RPD = 60*
Corrected Ave (3 peaks):					202.0	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	-0.000	40958	264.0	1	7.255	-0.000	40190	267.8
Aroclor-1242	2	7.655	-0.001	135282	266.5	2	7.852	-0.001	90338	271.0
Aroclor-1242	3	8.406	-0.001	40372	267.7	3	9.115	-0.045	15827	151.6
Aroclor-1242	4	8.581	-0.000	56938	249.9	4	9.587	0.001	3186	23.0
Total Col1Ave (4 peaks):					262.0	Total Col2Ave (4 peaks):				178.4 RPD = 38
Corrected Ave (3 peaks):					260.1	Corrected Ave (3 peaks):				147.5 RPD = 55*
Aroclor-1248	1	8.406	0.000	40372	159.3	1	8.306	0.000	28171	181.6
Aroclor-1248	2	8.581	0.001	56938	176.1	2	8.713	0.000	27776	166.4
Aroclor-1248	3	8.995	-0.004	58213	94.1	3	9.115	-0.042	15827	77.6
Aroclor-1248	4	9.304	0.010	36620	119.6	4	9.587	0.006	3186	12.6
Total Col1Ave (4 peaks):					137.3	Total Col2Ave (4 peaks):				109.6 RPD = 22
Corrected Ave (3 peaks):					124.4	Corrected Ave (3 peaks):				85.5 RPD = 37
Aroclor-1254	1	9.304	0.005	36620	70.9	1	9.450	0.002	20792	83.5
Aroclor-1254	2	---			0.0	2	9.972	0.003	2640	13.1
Aroclor-1254	3	9.673	0.003	4075	12.3	3	10.148	0.027	52902	120.5
Aroclor-1254	4	9.813	0.004	14733	22.7	4	10.372	0.000	71680	163.3
Aroclor-1254	5	10.122	-0.055	119528	283.6	5	10.569	-0.000	98559	403.2
Total Col1Ave (4 peaks):					97.4	Total Col2Ave (5 peaks):				156.7 RPD = 47*
Corrected Ave (3 peaks):					35.3	Corrected Ave (4 peaks):				95.1 RPD = 92*
Aroclor-1260	1	11.045	0.002	116435	220.7	1	11.654	0.000	81795	226.0
Aroclor-1260	2	11.362	0.001	116918	215.6	2	11.920	0.002	217887	238.0
Aroclor-1260	3	11.738	0.003	303264	212.5	3	12.437	0.001	56212	246.3
Aroclor-1260	4	12.143	0.004	141534	191.9	4	12.502	0.000	142689	240.8
Aroclor-1260	5	12.246	0.002	68446	212.9	NS	---			----
Total Col1Ave (5 peaks):					210.7	Total Col2Ave (4 peaks):				237.8 RPD = 12
Corrected Ave (4 peaks):					208.2	Corrected Ave (3 peaks):				234.9 RPD = 12
Aroclor-1262	1	10.830	-0.002	169725	446.4	1	11.200	0.000	83995	171.1
Aroclor-1262	2	12.246	0.000	68446	114.1	2	11.654	0.001	81795	195.9
Aroclor-1262	3	12.320	-0.000	84201	129.2	3	12.437	0.003	56212	126.4
Aroclor-1262	4	12.989	-0.000	78065	131.5	4	12.502	-0.001	142689	200.4
Total Col1Ave (4 peaks):					205.3	Total Col2Ave (4 peaks):				173.4 RPD = 17
Corrected Ave (3 peaks):					124.9	Corrected Ave (3 peaks):				164.5 RPD = 27
Aroclor-1268	1	12.246	0.001	68446	44.1	1	12.437	0.003	56212	48.0
Aroclor-1268	2	12.320	0.002	84201	54.4	2	12.502	0.001	142689	114.4
Aroclor-1268	3	12.726	0.027	33020	25.7	3	12.894	0.001	1495	1.4
Aroclor-1268	4	13.490	0.001	16019	4.2	4	13.709	0.001	10120	3.2
Total Col1Ave (4 peaks):					32.1	Total Col2Ave (4 peaks):				41.8 RPD = 26
Corrected Ave (3 peaks):					24.7	Corrected Ave (3 peaks):				17.5 RPD = 34

Total PCB Area Col1 (5.909 - 13.792) = 2789370 Col1 Total PCB = 0.5 ppm*

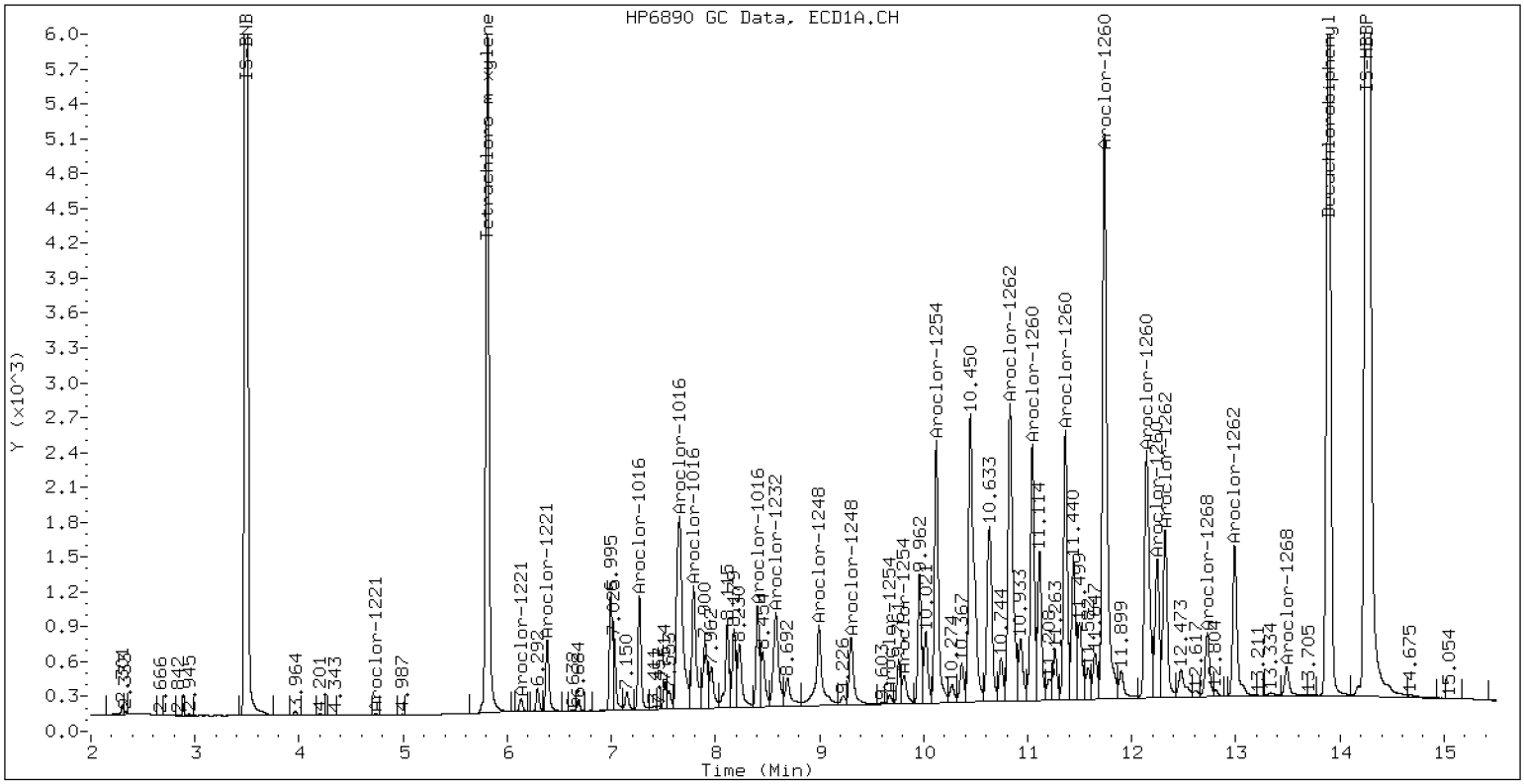
Total PCB Area Col2 (5.787 - 14.020) = 1810543 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

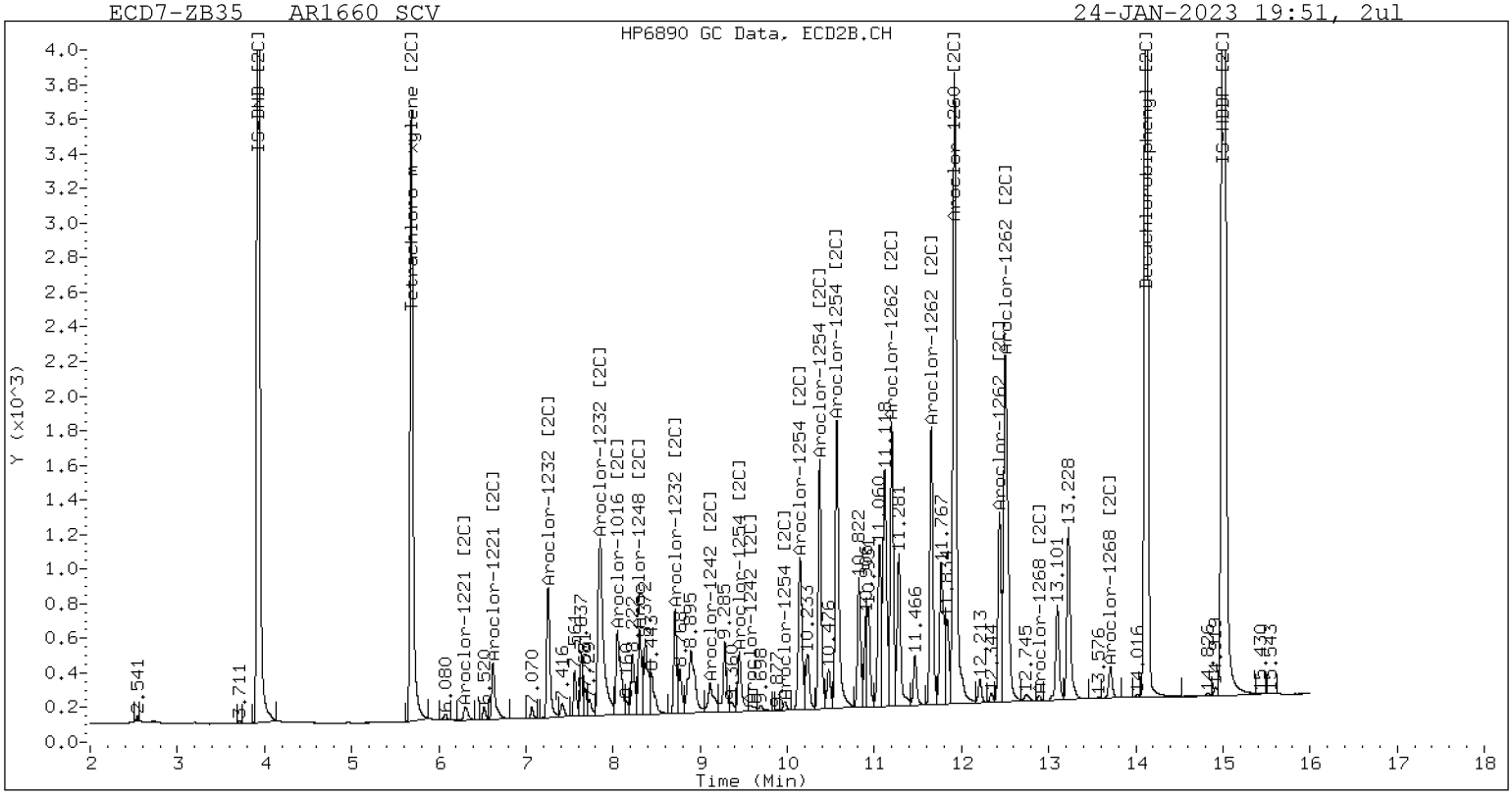
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660 SCV 24-JAN-2023 19:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660 SCV 24-JAN-2023 19:51, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01242325ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0281	Injection Date:	01/24/23
Lab Sample ID:	SLA0281-SCV2	Injection Time:	20:12
Sequence Name:	AR1242SCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	223	0.0411165	0.0365437		-10.9	+/-20
Aroclor 1242 [2C]	A	250.00	235	0.0423236	0.0386405		-5.9	+/-20
Decachlorobiphenyl	A	40.000	38.5	0.8555994	0.8244733		-3.6	+/-20
Tetrachlorometaxylene	A	40.000	37.8	1.1307870	1.0677240		-5.6	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.3	1.2696430	1.2804690		0.9	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.4	1.0814980	1.0101840		-6.6	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242325ECD7.D
Data file 2: /230124.b/230124.b/01242325ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 SCV
Client ID:
Injection Date: 24-JAN-2023 20:12
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	268580	5.686	-0.001	172592	37.8	37.4	1.1	Tetrachloro-m-xylene
13.892	0.001	392918	14.121	0.001	323869	38.5	40.3	4.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503089	-0.0
Hexabromobiphenyl	647433	953137	47.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	341704	1.4
Hexabromobiphenyl	382032	505860	32.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	29901	159.9	1	7.255	0.000	32077	173.1
Aroclor-1016	2	7.653	0.003	107333	173.3	2	7.851	-0.000	71438	175.9
Aroclor-1016	3	7.790	0.002	45013	157.9	3	8.051	0.001	29072	175.4
Aroclor-1016	4	8.406	0.002	32958	179.8	4	8.306	0.001	21761	167.5
Total Col1Ave (4 peaks):					167.7	Total Col2Ave (4 peaks):				173.0 RPD = 3
Corrected Ave (3 peaks):					163.7	Corrected Ave (3 peaks):				172.0 RPD = 5
Aroclor-1221	1	4.737	0.004	141	3.8	1	---			0.0
Aroclor-1221	2	6.133	-0.001	3649	48.0	2	6.317	0.018	4290	78.2
Aroclor-1221	3	6.384	-0.000	21189	120.0	3	6.624	0.001	14613	157.7
Total Col1Ave (3 peaks):					57.3	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.737	0.003	141	6.1	1	---			0.0
Aroclor-1232	2	6.133	-0.001	3649	69.7	2	7.255	-0.002	32077	377.3
Aroclor-1232	3	7.653	-0.005	107333	410.2	3	7.851	-0.004	71438	412.5
Aroclor-1232	4	8.581	-0.003	59617	532.3	4	8.713	-0.000	22563	468.9
Total Col1Ave (4 peaks):					254.6	Total Col2Ave (3 peaks):				419.6 RPD = 49*
Corrected Ave (3 peaks):					162.0	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	29901	194.1	1	7.255	-0.001	32077	214.6
Aroclor-1242	2	7.653	-0.002	107333	212.9	2	7.851	-0.002	71438	215.2
Aroclor-1242	3	8.406	-0.000	32958	220.0	3	9.156	-0.004	27374	263.3
Aroclor-1242	4	8.581	-0.000	59617	263.5	4	9.581	-0.006	34156	247.9
Total Col1Ave (4 peaks):					222.6	Total Col2Ave (4 peaks):				235.3 RPD = 6
Corrected Ave (3 peaks):					209.0	Corrected Ave (3 peaks):				225.9 RPD = 8
Aroclor-1248	1	8.406	0.001	32958	131.0	1	8.306	0.001	21761	140.9
Aroclor-1248	2	8.581	0.001	59617	185.7	2	8.713	0.001	22563	135.7
Aroclor-1248	3	9.003	0.004	72557	118.2	3	9.156	-0.000	27374	134.7
Aroclor-1248	4	9.296	0.003	28122	92.5	4	9.581	-0.001	34156	135.9
Total Col1Ave (4 peaks):					131.8	Total Col2Ave (4 peaks):				136.8 RPD = 4
Corrected Ave (3 peaks):					113.9	Corrected Ave (3 peaks):				135.5 RPD = 17
Aroclor-1254	1	9.296	-0.002	28122	54.8	1	9.448	0.000	11650	47.0
Aroclor-1254	2	9.380	0.002	9292	42.4	2	9.968	-0.001	7642	38.1
Aroclor-1254	3	9.671	0.001	12871	39.2	3	10.120	-0.001	16012	36.6
Aroclor-1254	4	9.808	-0.000	22113	34.4	4	10.378	0.007	16300	37.3
Aroclor-1254	5	10.176	-0.001	17771	42.5	5	10.572	0.004	4439	18.2
Total Col1Ave (5 peaks):					42.7	Total Col2Ave (5 peaks):				35.5 RPD = 18
Corrected Ave (4 peaks):					39.6	Corrected Ave (4 peaks):				32.6 RPD = 19
Aroclor-1260	1	11.047	0.003	741	1.4	1	11.663	0.010	1794	4.9
Aroclor-1260	2	11.366	0.006	379	0.7	2	11.923	0.005	1208	1.3
Aroclor-1260	3	11.745	0.011	860	0.6	3	12.507	0.071	977	4.2
Aroclor-1260	4	12.154	0.014	1536	2.1	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
Total Col1Ave (4 peaks):					1.2	Total Col2Ave (3 peaks):				3.5 RPD = 99*
Corrected Ave (3 peaks):					0.9	Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.836	0.004	10654	27.6	1	11.120	-0.080	8071	16.3
Aroclor-1262	2	12.154	-0.092	1536	2.5	2	11.663	0.010	1794	4.3
Aroclor-1262	3	---			0.0	3	12.507	0.073	977	2.2
Aroclor-1262	4	13.040	0.051	1739	2.9	4	---			0.0
Total Col1Ave (3 peaks):					11.0	Total Col2Ave (3 peaks):				7.6 RPD = 37
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.154	-0.091	1536	1.0	1	12.507	0.073	977	0.8
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.623	-0.076	5080	3.9	3	12.894	0.001	98	0.1
Aroclor-1268	4	13.501	0.012	2725	0.7	4	13.707	-0.001	1566	0.5
Total Col1Ave (3 peaks):					1.9	Total Col2Ave (3 peaks):				0.5 RPD = 120*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 915887 Col1 Total PCB = 0.2 ppm*

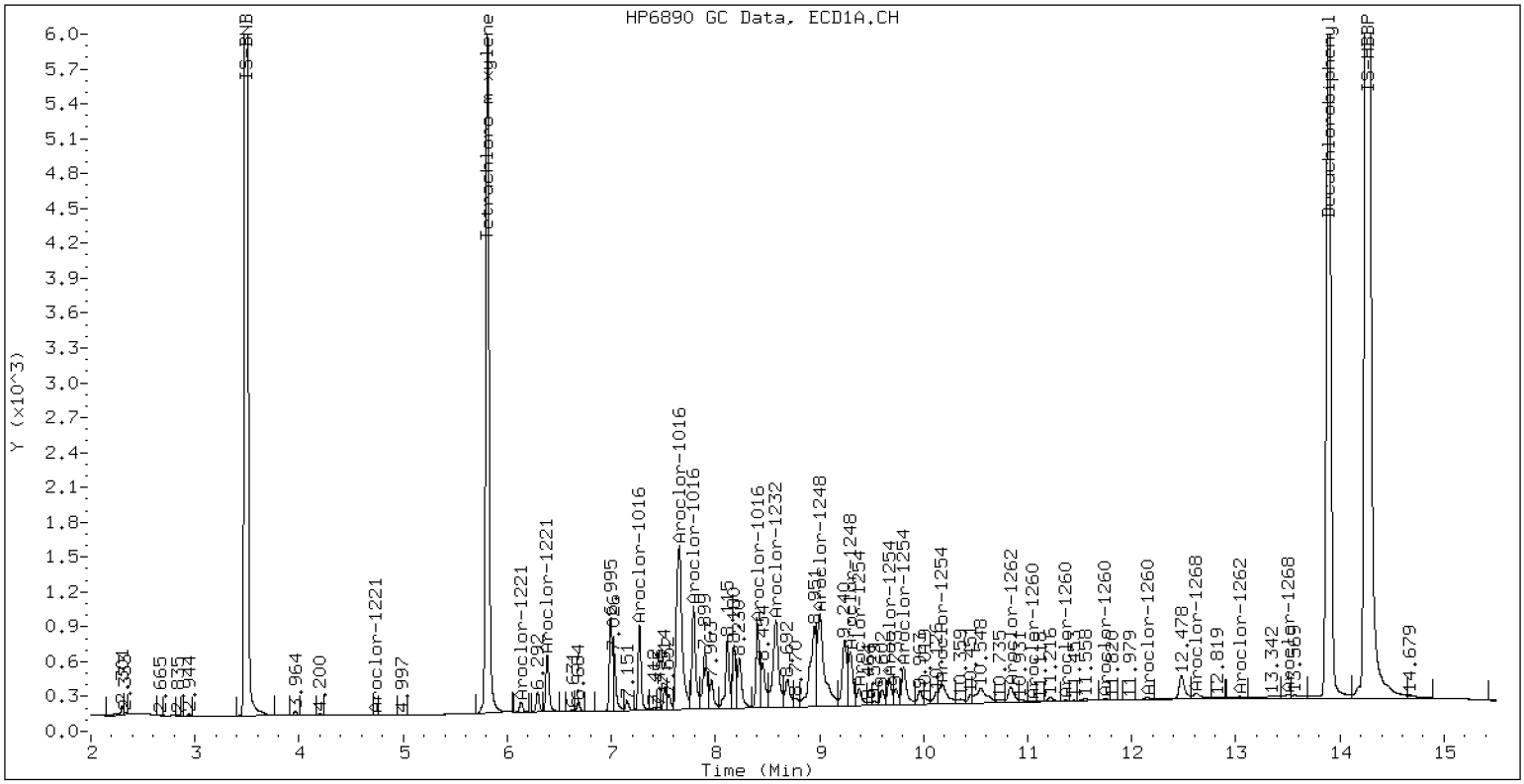
Total PCB Area Col2 (5.787 - 14.020) = 575897 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

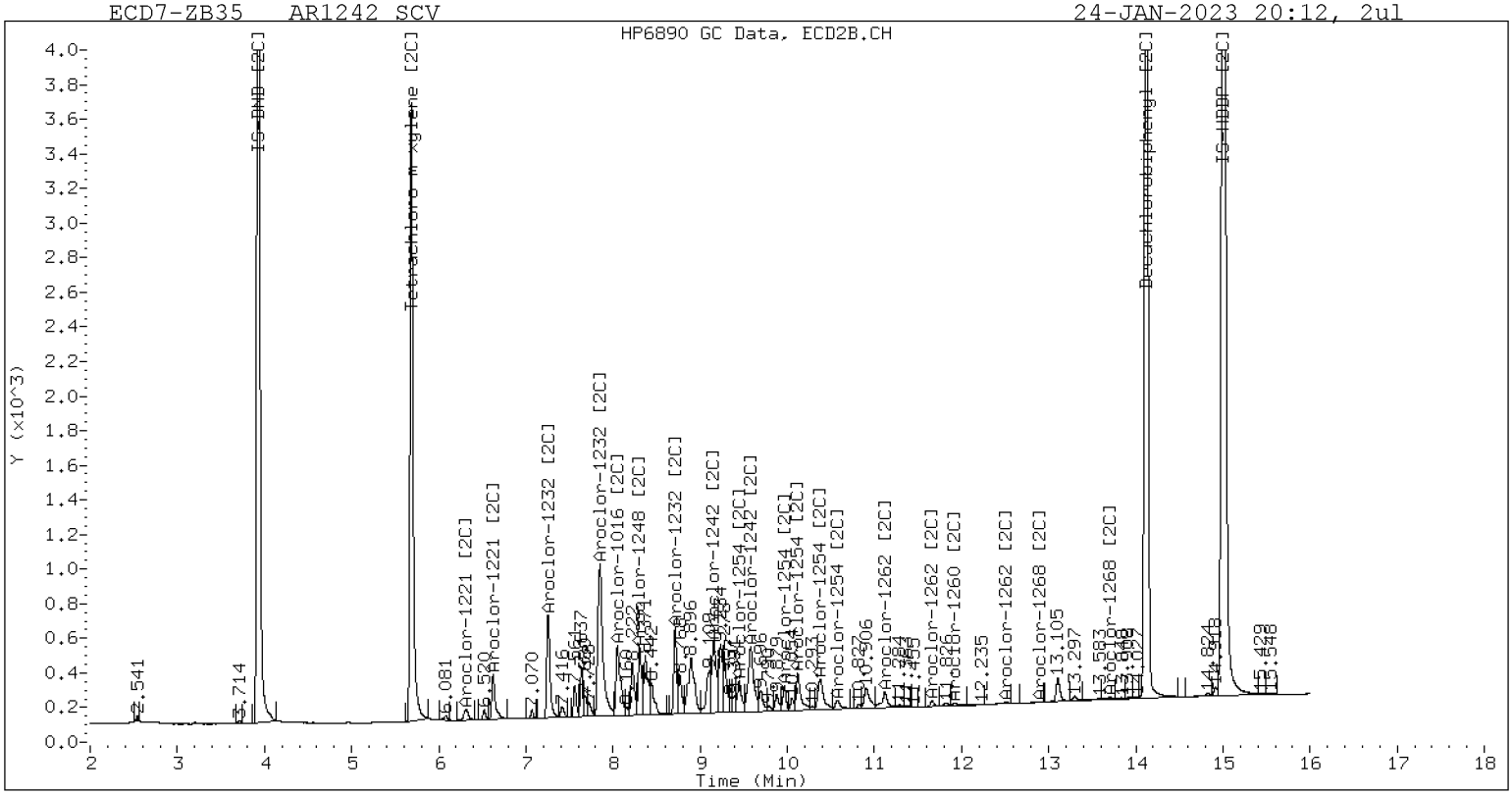
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242 SCV 24-JAN-2023 20:12, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242 SCV 24-JAN-2023 20:12, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01242326ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0281	Injection Date:	01/24/23
Lab Sample ID:	SLA0281-SCV3	Injection Time:	20:33
Sequence Name:	AR1248SCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	237	0.0592639	0.0563710		-5.1	+/-20
Aroclor 1248 [2C]	A	250.00	231	0.0453673	0.0417577		-7.6	+/-20
Decachlorobiphenyl	A	40.000	38.3	0.8555994	0.8184425		-4.3	+/-20
Tetrachlorometaxylene	A	40.000	36.8	1.1307870	1.0389130		-8.1	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.6	1.2696430	1.2561970		-1.1	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.5	1.0814980	0.9880182		-8.6	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242326ECD7.D
Data file 2: /230124.b/230124.b/01242326ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 SCV
Client ID:
Injection Date: 24-JAN-2023 20:33
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.000	263982	5.686	-0.001	169991	36.8	36.5	0.6	Tetrachloro-m-xylene
13.892	0.001	400655	14.121	0.001	316171	38.3	39.6	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	508189	1.0
Hexabromobiphenyl	647433	979067	51.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	344105	2.1
Hexabromobiphenyl	382032	503378	31.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	14777	78.3	1	7.254	-0.001	16100	86.3
Aroclor-1016	2	7.655	0.004	70114	112.1	2	7.853	0.002	47184	115.4
Aroclor-1016	3	7.794	0.006	27212	94.5	3	8.053	0.003	9427	56.5
Aroclor-1016	4	8.406	0.003	59884	323.4	4	8.306	0.001	36680	280.3
Total Col1Ave (4 peaks):					152.0	Total Col2Ave (4 peaks):				134.6 RPD = 12
Corrected Ave (3 peaks):					94.9	Corrected Ave (3 peaks):				86.0 RPD = 10
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.133	-0.000	591	7.7	2	6.323	0.025	1820	32.9
Aroclor-1221	3	6.386	0.001	2453	13.8	3	6.627	0.004	1477	15.8
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.133	-0.000	591	11.2	2	7.254	-0.002	16100	188.0
Aroclor-1232	3	7.655	-0.004	70114	265.3	3	7.853	-0.001	47184	270.6
Aroclor-1232	4	8.581	-0.003	76286	674.3	4	8.714	0.000	39330	811.7
Total Col1Ave (3 peaks):					316.9	Total Col2Ave (3 peaks):				423.4 RPD = 29
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	14777	95.0	1	7.254	-0.002	16100	107.0
Aroclor-1242	2	7.655	-0.001	70114	137.7	2	7.853	0.000	47184	141.2
Aroclor-1242	3	8.406	-0.000	59884	395.8	3	9.159	-0.001	46988	448.9
Aroclor-1242	4	8.581	-0.000	76286	333.8	4	9.584	-0.003	56615	408.1
Total Col1Ave (4 peaks):					240.5	Total Col2Ave (4 peaks):				276.3 RPD = 14
Corrected Ave (3 peaks):					188.8	Corrected Ave (3 peaks):				218.7 RPD = 15
Aroclor-1248	1	8.406	0.001	59884	235.6	1	8.306	0.001	36680	235.8
Aroclor-1248	2	8.581	0.001	76286	235.2	2	8.714	0.002	39330	234.9
Aroclor-1248	3	9.000	0.001	148805	239.9	3	9.159	0.003	46988	229.7
Aroclor-1248	4	9.295	0.001	73114	238.1	4	9.584	0.002	56615	223.8
Total Col1Ave (4 peaks):					237.2	Total Col2Ave (4 peaks):				231.0 RPD = 3
Corrected Ave (3 peaks):					236.3	Corrected Ave (3 peaks):				229.5 RPD = 3
Aroclor-1254	1	9.295	-0.004	73114	141.2	1	9.449	0.001	20314	81.4
Aroclor-1254	2	9.378	0.000	36561	165.3	2	9.970	0.000	18678	92.6
Aroclor-1254	3	9.672	0.003	30736	92.6	3	10.124	0.003	35321	80.2
Aroclor-1254	4	9.813	0.004	53537	82.3	4	10.387	0.015	35188	79.9
Aroclor-1254	5	10.192	0.015	40119	94.9	5	10.575	0.006	7386	30.1
Total Col1Ave (5 peaks):					115.3	Total Col2Ave (5 peaks):				72.9 RPD = 45*
Corrected Ave (4 peaks):					102.7	Corrected Ave (4 peaks):				67.9 RPD = 41*
Aroclor-1260	1	11.054	0.010	1868	3.4	1	11.664	0.011	2055	5.7
Aroclor-1260	2	11.366	0.005	1375	2.4	2	11.926	0.009	1303	1.4
Aroclor-1260	3	11.745	0.010	2137	1.4	3	12.439	0.003	395	1.7
Aroclor-1260	4	12.147	0.008	1650	2.1	4	12.507	0.005	890	1.5
Aroclor-1260	5	12.255	0.011	558	1.7	NS	---			----
Total Col1Ave (5 peaks):					2.2	Total Col2Ave (4 peaks):				2.6 RPD = 15
Corrected Ave (4 peaks):					1.9	Corrected Ave (3 peaks):				1.5 RPD = 22
Aroclor-1262	1	10.837	0.005	12736	32.2	1	11.122	-0.078	7136	14.5
Aroclor-1262	2	12.255	0.010	558	0.9	2	11.664	0.011	2055	4.9
Aroclor-1262	3	12.327	0.006	596	0.9	3	12.439	0.004	395	0.9
Aroclor-1262	4	12.996	0.007	1113	1.8	4	12.507	0.003	890	1.2
Total Col1Ave (4 peaks):					8.9	Total Col2Ave (4 peaks):				5.4 RPD = 50*
Corrected Ave (3 peaks):					1.2	Corrected Ave (3 peaks):				2.3 RPD = 65*
Aroclor-1268	1	12.255	0.010	558	0.3	1	12.439	0.005	395	0.3
Aroclor-1268	2	12.327	0.009	596	0.4	2	12.507	0.005	890	0.7
Aroclor-1268	3	12.706	0.007	1161	0.9	3	12.896	0.003	166	0.2
Aroclor-1268	4	13.504	0.016	3330	0.8	4	13.717	0.009	469	0.1
Total Col1Ave (4 peaks):					0.6	Total Col2Ave (4 peaks):				0.3 RPD = 57*
Corrected Ave (3 peaks):					0.5	Corrected Ave (3 peaks):				0.2 RPD = 83*

Total PCB Area Col1 (5.909 - 13.792) = 1230760 Col1 Total PCB = 0.2 ppm*

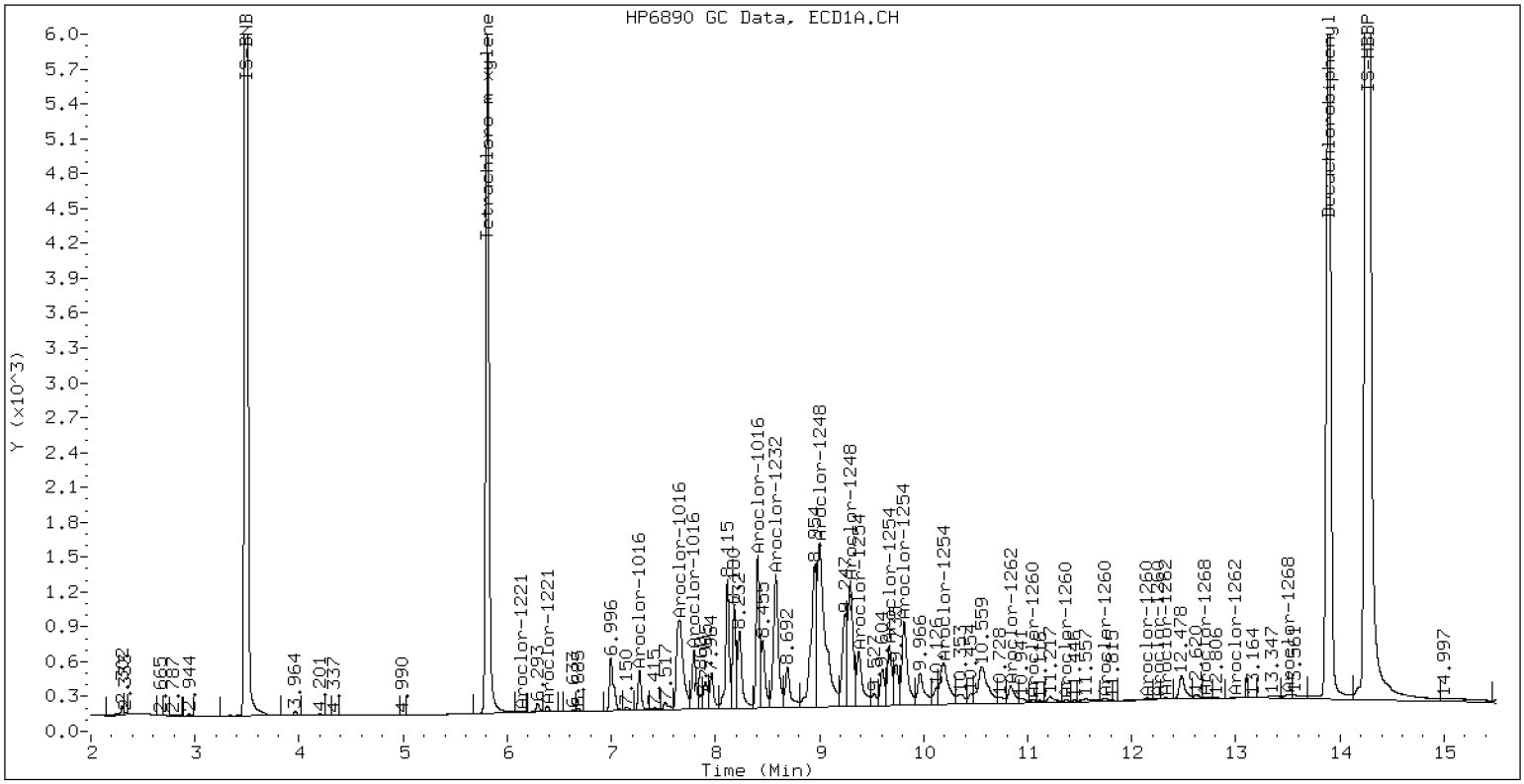
Total PCB Area Col2 (5.787 - 14.020) = 742749 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

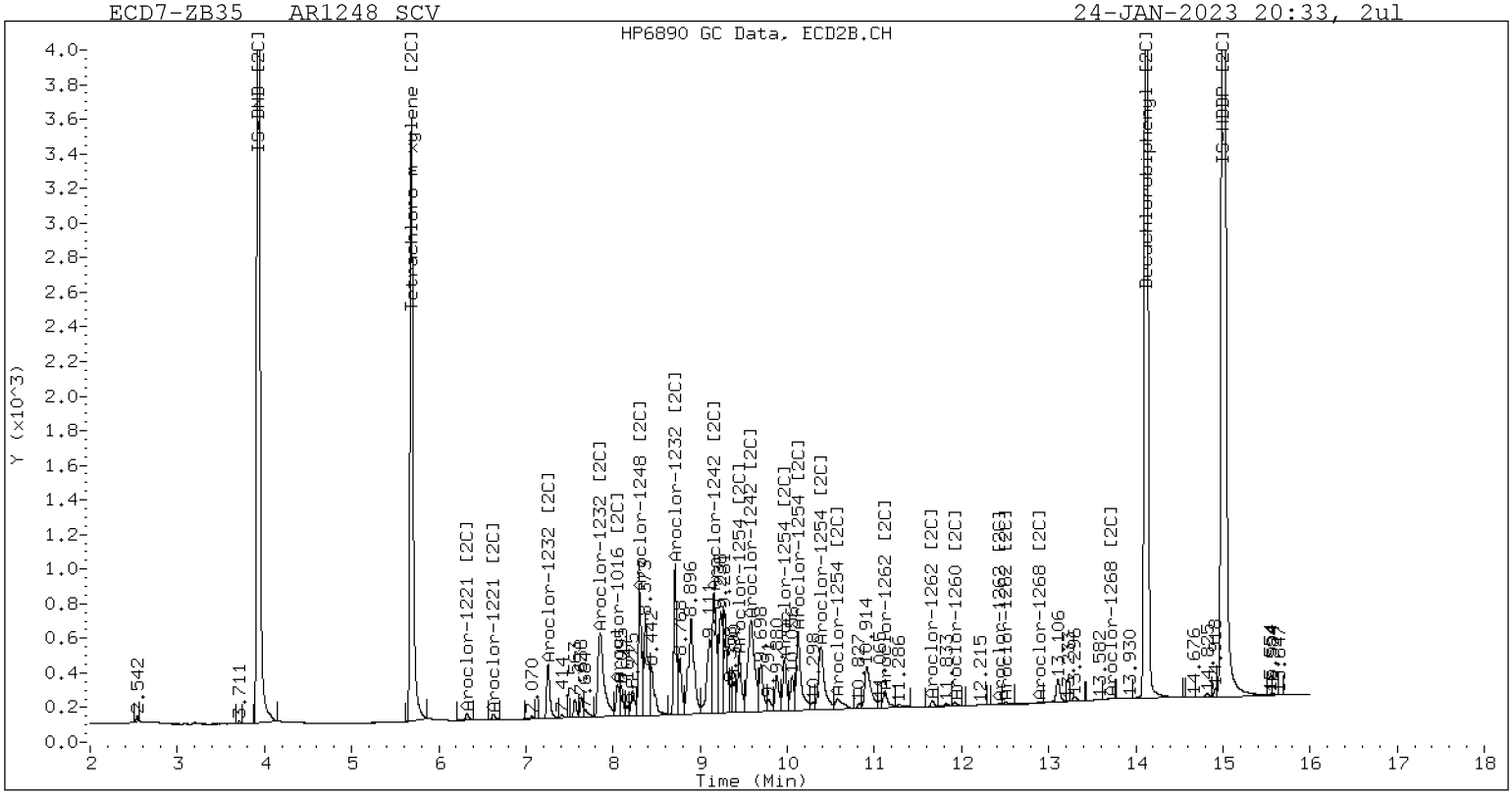
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248 SCV 24-JAN-2023 20:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248 SCV 24-JAN-2023 20:33, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01242327ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0281	Injection Date:	01/24/23
Lab Sample ID:	SLA0281-SCV4	Injection Time:	20:54
Sequence Name:	AR1254SCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	221	0.0675033	0.0594048		-11.7	+/-20
Aroclor 1254 [2C]	A	250.00	227	0.0733219	0.0662023		-9.4	+/-20
Decachlorobiphenyl	A	40.000	37.1	0.8555994	0.7930764		-7.3	+/-20
Tetrachlorometaxylene	A	40.000	36.7	1.1307870	1.0364220		-8.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.5	1.2696430	1.2551640		-1.1	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.6	1.0814980	0.9904044		-8.4	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242327ECD7.D
Data file 2: /230124.b/230124.b/01242327ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 SCV
Client ID:
Injection Date: 24-JAN-2023 20:54
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	261398	5.686	-0.001	169839	36.7	36.6	0.1	Tetrachloro-m-xylene
13.892	0.001	383983	14.121	0.001	323233	37.1	39.5	6.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	504424	0.2
Hexabromobiphenyl	647433	968338	49.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	342969	1.8
Hexabromobiphenyl	382032	515045	34.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.273	0.003	320	1.7	1	7.258	0.003	332	1.8
Aroclor-1016	2	7.658	0.008	991	1.6	2	---			0.0
Aroclor-1016	3	7.795	0.007	662	2.3	3	8.097	0.047	515	3.1
Aroclor-1016	4	8.408	0.005	21378	116.3	4	8.307	0.002	20446	156.8
	Total Col1Ave (4 peaks):				30.5	Total Col2Ave (3 peaks):				53.9 RPD = 55*
	Corrected Ave (3 peaks):				1.9	Corrected Ave: < 3 Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.325	0.026	1749	31.7
Aroclor-1221	3	---			0.0	3	6.633	0.011	321	3.5
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	7.258	0.001	332	3.9
Aroclor-1232	3	7.658	-0.000	991	3.8	3	---			0.0
Aroclor-1232	4	8.587	0.003	8887	79.1	4	8.715	0.001	14030	290.5
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	7.273	0.002	320	2.1	1	7.258	0.002	332	2.2
Aroclor-1242	2	7.658	0.003	991	2.0	2	---			0.0
Aroclor-1242	3	8.408	0.002	21378	142.3	3	9.164	0.004	26593	254.9
Aroclor-1242	4	8.587	0.006	8887	39.2	4	9.543	-0.043	34385	248.7
	Total Col1Ave (4 peaks):				46.4	Total Col2Ave (3 peaks):				168.6 RPD = 114*
	Corrected Ave (3 peaks):				14.4	Corrected Ave: < 3 Peaks				
Aroclor-1248	1	8.408	0.003	21378	84.7	1	8.307	0.001	20446	131.9
Aroclor-1248	2	8.587	0.007	8887	27.6	2	8.715	0.003	14030	84.1
Aroclor-1248	3	8.995	-0.004	110289	179.1	3	9.164	0.007	26593	130.4
Aroclor-1248	4	9.300	0.007	113143	371.2	4	9.543	-0.038	34385	136.4
	Total Col1Ave (4 peaks):				165.7	Total Col2Ave (4 peaks):				120.7 RPD = 31
	Corrected Ave (3 peaks):				97.2	Corrected Ave (3 peaks):				115.5 RPD = 17
Aroclor-1254	1	9.300	0.002	113143	220.1	1	9.449	0.001	56453	226.9
Aroclor-1254	2	9.379	0.001	49468	225.4	2	9.970	0.001	45325	225.4
Aroclor-1254	3	9.671	0.002	72811	221.0	3	10.122	0.002	97044	221.2
Aroclor-1254	4	9.811	0.002	140530	217.7	4	10.374	0.002	98778	225.2
Aroclor-1254	5	10.182	0.005	92254	219.8	5	10.570	0.001	57171	234.0
	Total Col1Ave (5 peaks):				220.8	Total Col2Ave (5 peaks):				226.5 RPD = 3
	Corrected Ave (4 peaks):				219.7	Corrected Ave (4 peaks):				224.7 RPD = 2
Aroclor-1260	1	11.045	0.002	8960	16.5	1	11.661	0.008	26985	72.6
Aroclor-1260	2	11.364	0.004	9237	16.5	2	11.923	0.006	19882	21.2
Aroclor-1260	3	11.741	0.007	21268	14.5	3	12.505	0.069	13190	56.3
Aroclor-1260	4	12.146	0.007	19041	25.1	4	---			0.0
Aroclor-1260	5	12.321	0.077	1835	5.5	NS	---			----
	Total Col1Ave (5 peaks):				15.6	Total Col2Ave (3 peaks):				50.0 RPD = 105*
	Corrected Ave (4 peaks):				13.3	Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.832	0.000	157590	402.4	1	11.119	-0.081	92414	183.3
Aroclor-1262	2	12.321	0.075	1835	3.0	2	11.661	0.008	26985	63.0
Aroclor-1262	3	---			0.0	3	12.505	0.071	13190	28.9
Aroclor-1262	4	12.995	0.006	843	1.4	4	---			0.0
	Total Col1Ave (3 peaks):				135.6	Total Col2Ave (3 peaks):				91.7 RPD = 39
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.321	0.076	1835	1.1	1	12.505	0.072	13190	11.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.720	0.021	1314	1.0	3	12.891	-0.002	169	0.2
Aroclor-1268	4	13.504	0.016	1169	0.3	4	13.706	-0.002	1132	0.3
	Total Col1Ave (3 peaks):				0.8	Total Col2Ave (3 peaks):				3.8 RPD = 130*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 1507519 Col1 Total PCB = 0.3 ppm*

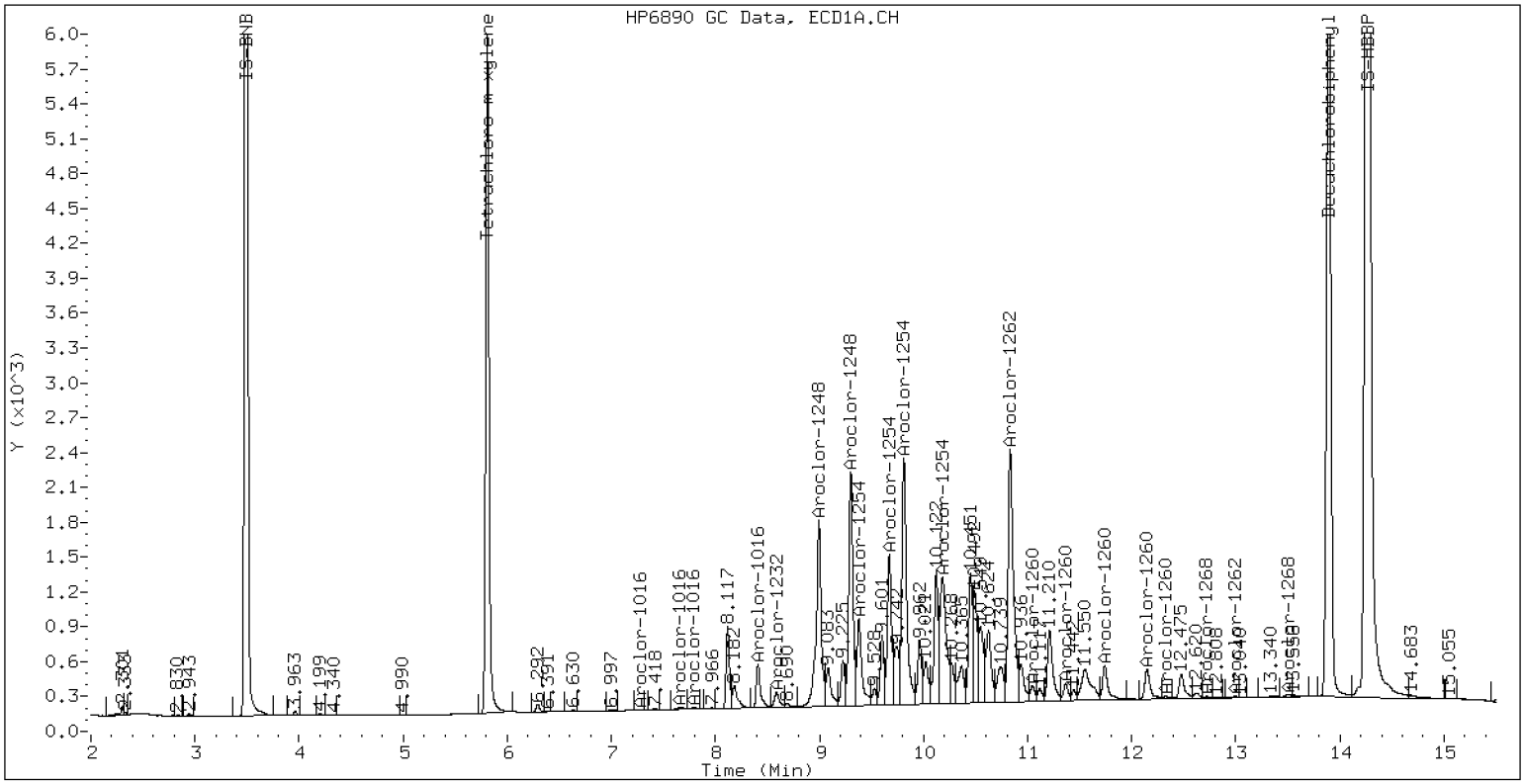
Total PCB Area Col2 (5.787 - 14.020) = 951047 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

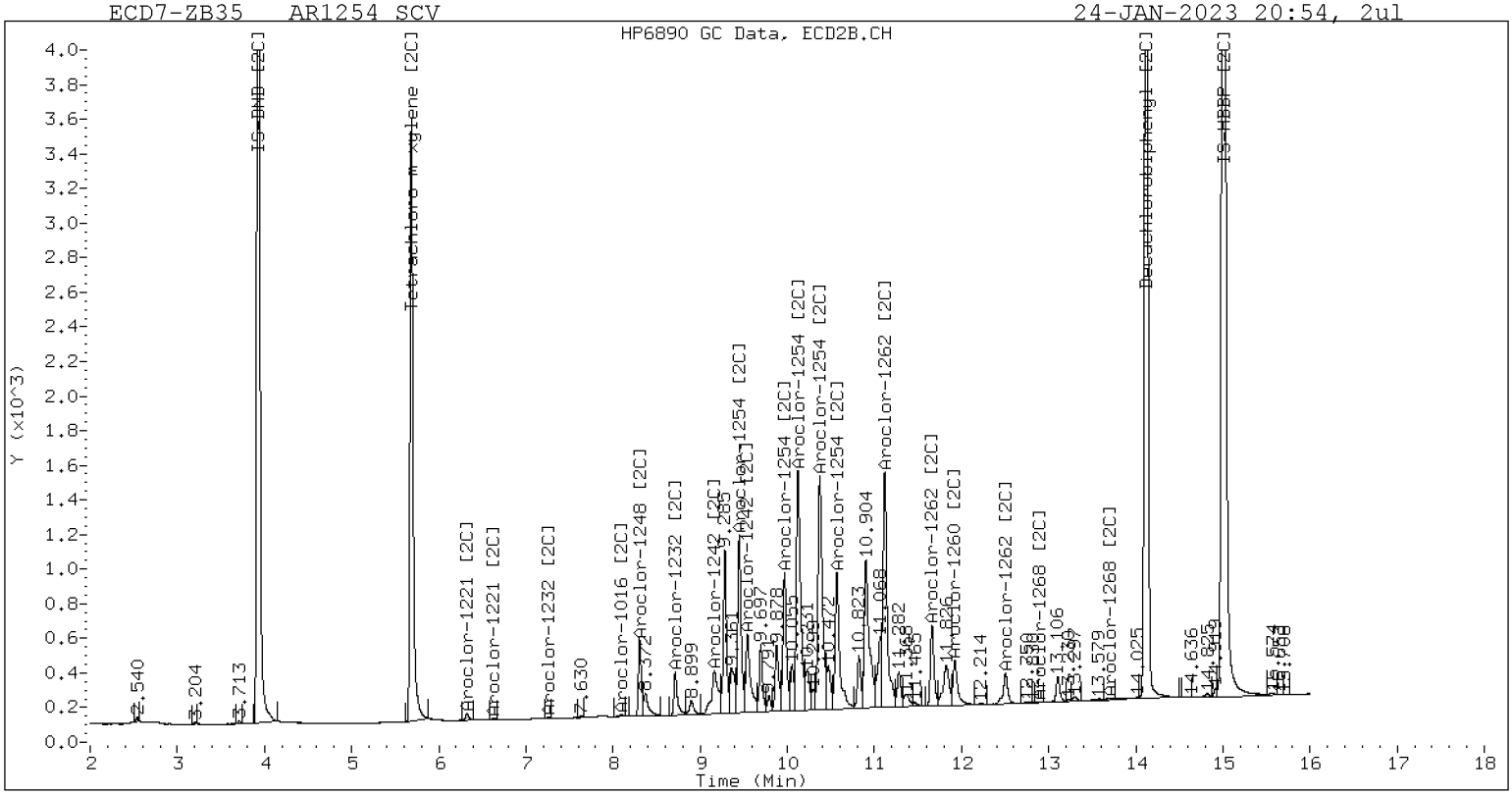
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254 SCV 24-JAN-2023 20:54, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254 SCV 24-JAN-2023 20:54, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01242328ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0281	Injection Date:	01/24/23
Lab Sample ID:	SLA0281-SCV5	Injection Time:	21:15
Sequence Name:	AR2162SCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1221	A	250.00	228	0.0153579	0.0138791		-8.8	+/-20
Aroclor 1221 [2C]	A	250.00	239	0.0134687	0.0127460		-4.5	+/-20
Decachlorobiphenyl	A	40.000	37.5	0.8555994	0.8010750		-6.4	+/-20
Tetrachlorometaxylene	A	40.000	37.3	1.1307870	1.0541060		-6.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.5	1.2696430	1.2528610		-1.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.2	1.0814980	1.0047210		-7.1	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242328ECD7.D
Data file 2: /230124.b/230124.b/01242328ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 SCV
Client ID:
Injection Date: 24-JAN-2023 21:15
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	265357	5.685	-0.001	170984	37.3	37.2	0.3	Tetrachloro-m-xylene
13.891	-0.001	397332	14.119	-0.001	326981	37.5	39.5	5.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503473	0.0
Hexabromobiphenyl	647433	991997	53.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	340361	1.0
Hexabromobiphenyl	382032	521975	36.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	5326	28.5	1	7.257	0.002	6708	36.3
Aroclor-1016	2	7.664	0.013	11965	19.3	2	7.856	0.005	7233	17.9
Aroclor-1016	3	7.797	0.009	6015	21.1	3	8.058	0.008	2997	18.2
Aroclor-1016	4	8.410	0.006	3771	20.6	4	8.308	0.002	2065	16.0
Total Col1Ave (4 peaks):					22.4	Total Col2Ave (4 peaks):				22.1 RPD = 1
Corrected Ave (3 peaks):					20.3	Corrected Ave (3 peaks):				17.3 RPD = 16
Aroclor-1221	1	4.732	-0.000	9097	244.5	1	4.959	-0.000	6157	246.8
Aroclor-1221	2	6.133	-0.000	16114	211.8	2	6.297	-0.001	12807	234.2
Aroclor-1221	3	6.384	0.000	40299	228.1	3	6.622	-0.000	21707	235.2
Total Col1Ave (3 peaks):					228.1	Total Col2Ave (3 peaks):				238.7 RPD = 5
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.732	-0.001	9097	391.6	1	4.959	-0.001	6157	406.9
Aroclor-1232	2	6.133	0.000	16114	307.8	2	7.257	0.000	6708	79.2
Aroclor-1232	3	7.664	0.005	11965	45.7	3	7.856	0.001	7233	41.9
Aroclor-1232	4	8.589	0.004	2837	25.3	4	8.716	0.002	1869	39.0
Total Col1Ave (4 peaks):					192.6	Total Col2Ave (4 peaks):				141.7 RPD = 30
Corrected Ave (3 peaks):					126.3	Corrected Ave (3 peaks):				53.4 RPD = 81*
Aroclor-1242	1	7.272	0.001	5326	34.5	1	7.257	0.001	6708	45.1
Aroclor-1242	2	7.664	0.008	11965	23.7	2	7.856	0.003	7233	21.9
Aroclor-1242	3	8.410	0.004	3771	25.2	3	9.169	0.009	1956	18.9
Aroclor-1242	4	8.589	0.007	2837	12.5	4	9.544	-0.043	5978	43.6
Total Col1Ave (4 peaks):					24.0	Total Col2Ave (4 peaks):				32.3 RPD = 30
Corrected Ave (3 peaks):					20.5	Corrected Ave (3 peaks):				28.1 RPD = 31
Aroclor-1248	1	8.410	0.005	3771	15.0	1	8.308	0.002	2065	13.4
Aroclor-1248	2	8.589	0.008	2837	8.8	2	8.716	0.004	1869	11.3
Aroclor-1248	3	8.997	-0.002	36022	58.6	3	9.169	0.012	1956	9.7
Aroclor-1248	4	9.305	0.011	30853	101.4	4	9.544	-0.038	5978	23.9
Total Col1Ave (4 peaks):					46.0	Total Col2Ave (4 peaks):				14.6 RPD = 104*
Corrected Ave (3 peaks):					27.5	Corrected Ave (3 peaks):				11.5 RPD = 82*
Aroclor-1254	1	9.305	0.006	30853	60.1	1	9.451	0.003	17617	71.3
Aroclor-1254	2	9.376	-0.002	5370	24.5	2	9.970	0.001	2849	14.3
Aroclor-1254	3	9.673	0.003	5543	16.9	3	10.146	0.026	88151	202.5
Aroclor-1254	4	9.810	0.002	14544	22.6	4	10.370	-0.002	107074	245.9
Aroclor-1254	5	10.121	-0.056	180016	429.7	5	10.567	-0.002	141725	584.5
Total Col1Ave (5 peaks):					110.8	Total Col2Ave (5 peaks):				223.7 RPD = 68*
Corrected Ave (4 peaks):					31.0	Corrected Ave (4 peaks):				133.5 RPD = 125*
Aroclor-1260	1	11.044	0.001	310806	558.4	1	11.652	-0.001	187682	498.4
Aroclor-1260	2	11.361	0.000	263161	460.0	2	11.917	-0.000	450612	473.0
Aroclor-1260	3	11.735	0.000	629605	418.0	3	12.433	-0.003	206042	867.7
Aroclor-1260	4	12.141	0.001	210012	269.9	4	12.502	-0.000	326457	529.5
Aroclor-1260	5	12.244	-0.000	268425	791.3	NS	---			----
Total Col1Ave (5 peaks):					499.5	Total Col2Ave (4 peaks):				592.1 RPD = 17
Corrected Ave (4 peaks):					426.6	Corrected Ave (3 peaks):				500.3 RPD = 16
Aroclor-1262	1	10.828	-0.005	171094	426.5	1	11.200	0.000	219731	430.1
Aroclor-1262	2	12.244	-0.002	268425	423.9	2	11.652	-0.001	187682	432.0
Aroclor-1262	3	12.319	-0.002	291581	424.2	3	12.433	-0.001	206042	445.4
Aroclor-1262	4	12.988	-0.001	257735	411.5	4	12.502	-0.002	326457	440.6
Total Col1Ave (4 peaks):					421.5	Total Col2Ave (4 peaks):				437.0 RPD = 4
Corrected Ave (3 peaks):					419.8	Corrected Ave (3 peaks):				434.3 RPD = 3
Aroclor-1268	1	12.244	-0.001	268425	163.8	1	12.433	-0.000	206042	169.0
Aroclor-1268	2	12.319	0.001	291581	178.4	2	12.502	0.000	326457	251.7
Aroclor-1268	3	12.725	0.026	108693	80.3	3	12.892	-0.001	10062	9.3
Aroclor-1268	4	13.486	-0.003	95646	23.8	4	13.710	0.001	59437	17.8
Total Col1Ave (4 peaks):					111.6	Total Col2Ave (4 peaks):				112.0 RPD = 0

Corrected Ave (3 peaks): 89.3 Corrected Ave (3 peaks): 65.4 RPD = 31

Total PCB Area Col1 (5.909 - 13.792) = 4409992 Col1 Total PCB = 0.8 ppm*

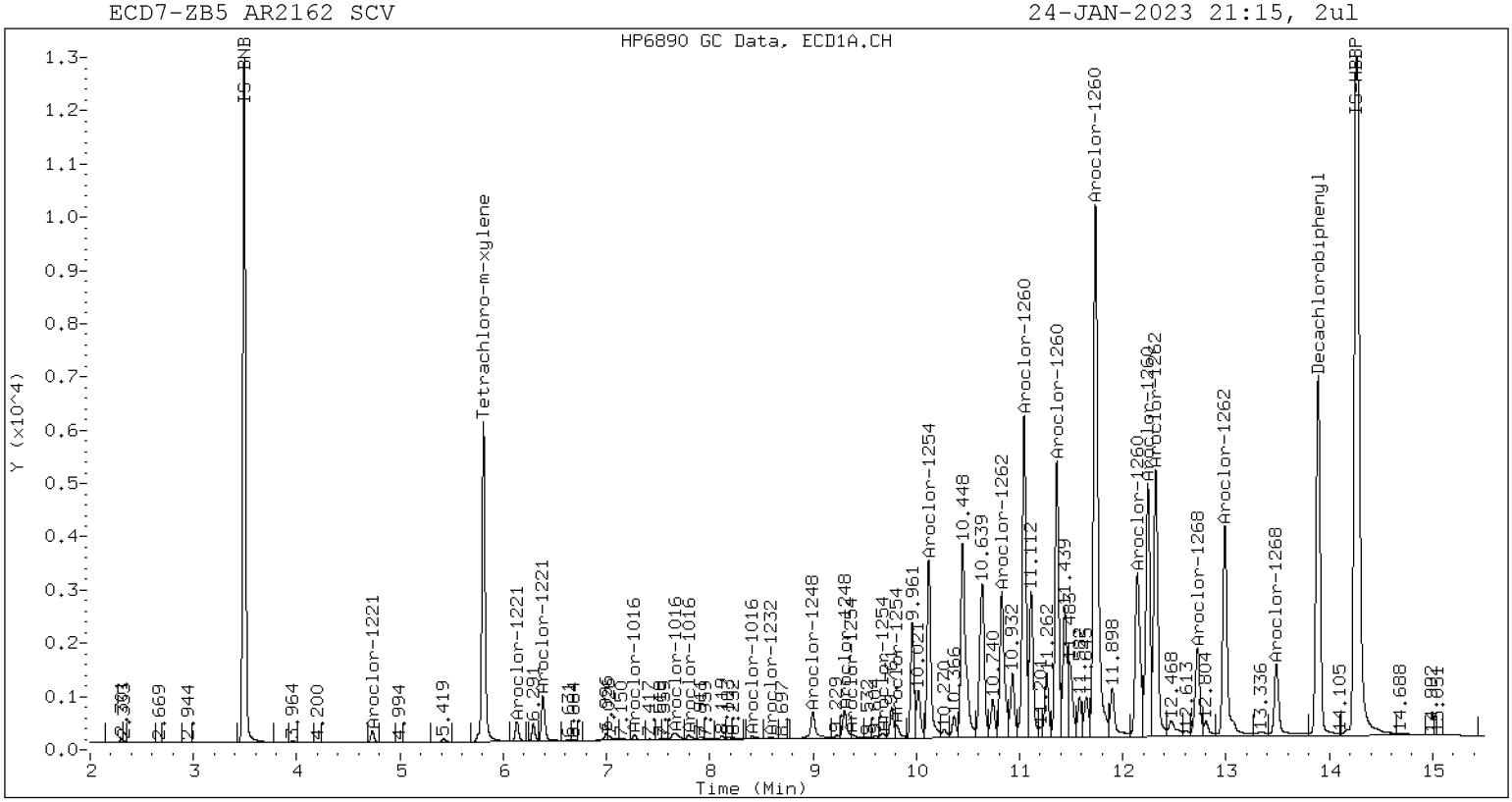
Total PCB Area Col2 (5.787 - 14.020) = 2874073 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

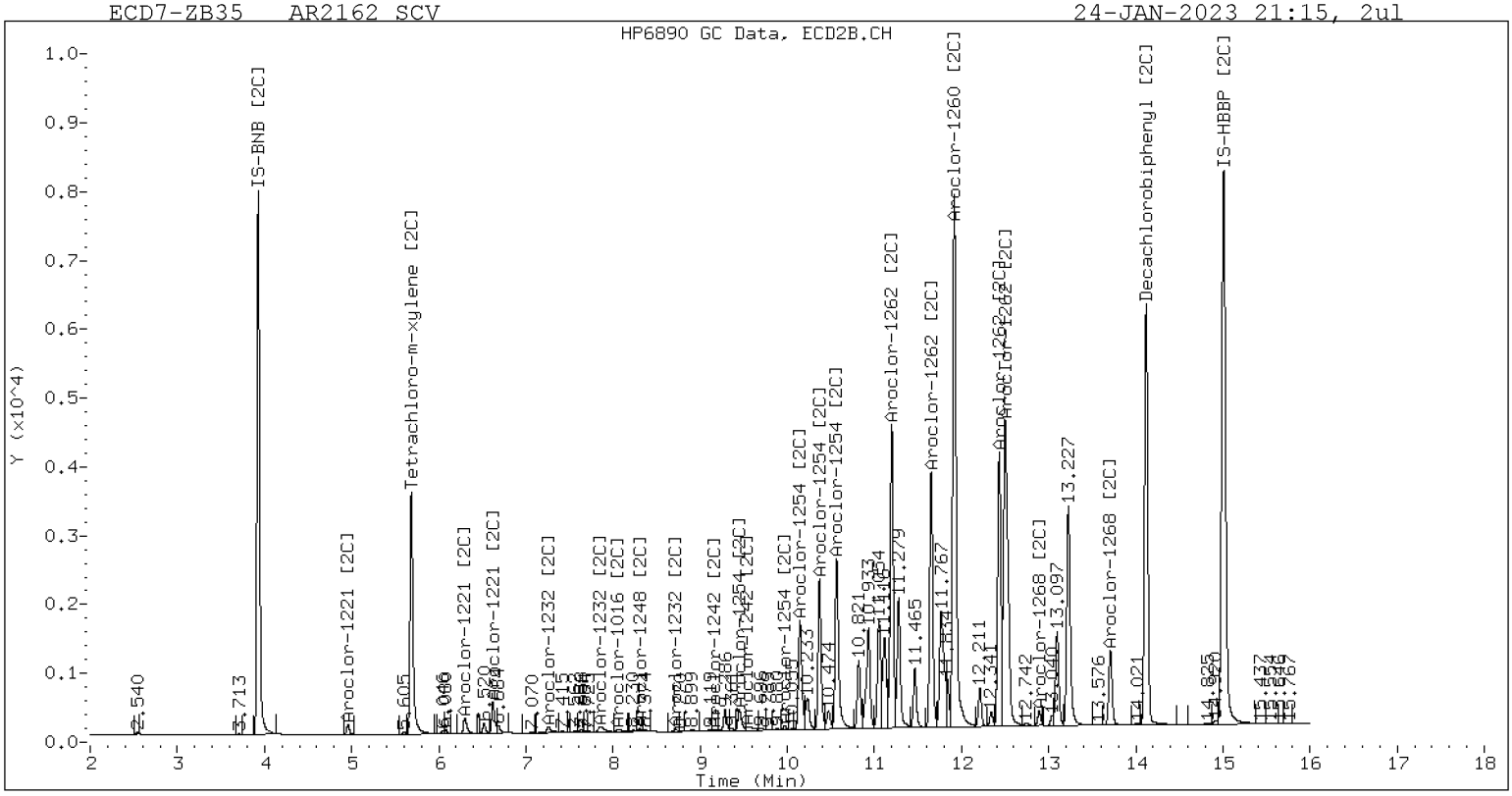
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162 SCV 24-JAN-2023 21:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162 SCV 24-JAN-2023 21:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01242329ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0281	Injection Date:	01/24/23
Lab Sample ID:	SLA0281-SCV6	Injection Time:	21:36
Sequence Name:	AR3268SCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1232	A	250.00	216	0.0178560	0.0160358		-13.7	+/-20
Aroclor 1232 [2C]	A	250.00	239	0.0188178	0.0180429		-4.5	+/-20
Decachlorobiphenyl	A	40.000	54.6	0.8555994	1.1682210		36.5	+/-20
Tetrachlorometaxylene	A	40.000	36.4	1.1307870	1.0284340		-9.1	+/-20
Decachlorobiphenyl [2C]	A	40.000	57.9	1.2696430	1.8387740		44.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.3	1.0814980	0.9815176		-9.2	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242329ECD7.D
Data file 2: /230124.b/230124.b/01242329ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 SCV
Client ID:
Injection Date: 24-JAN-2023 21:36
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.810	0.001	250455	5.687	0.000	162795	36.4	36.3	0.2	Tetrachloro-m-xylene
13.892	0.000	551946	14.120	0.000	461901	54.6	57.9	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	487061	-3.2
Hexabromobiphenyl	647433	944934	46.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331721	-1.5
Hexabromobiphenyl	382032	502401	31.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	19363	107.0	1	7.256	0.001	19791	110.0
Aroclor-1016	2	7.659	0.009	58630	97.8	2	7.856	0.005	40139	101.8
Aroclor-1016	3	7.794	0.006	28286	102.5	3	8.055	0.005	17412	108.2
Aroclor-1016	4	8.408	0.004	17373	97.9	4	8.308	0.003	11962	94.8
Total Col1Ave (4 peaks):					101.3	Total Col2Ave (4 peaks):				103.7 RPD = 2
Corrected Ave (3 peaks):					99.4	Corrected Ave (3 peaks):				101.6 RPD = 2
Aroclor-1221	1	4.735	0.002	5022	139.5	1	4.961	0.002	3409	140.2
Aroclor-1221	2	6.134	0.001	8987	122.1	2	6.299	0.001	7677	144.1
Aroclor-1221	3	6.385	0.001	29368	171.8	3	6.624	0.001	16198	180.1
Total Col1Ave (3 peaks):					144.5	Total Col2Ave (3 peaks):				154.8 RPD = 7
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.735	0.002	5022	223.5	1	4.961	0.002	3409	231.1
Aroclor-1232	2	6.134	0.001	8987	177.4	2	7.256	-0.001	19791	239.8
Aroclor-1232	3	7.659	0.001	58630	231.5	3	7.856	0.001	40139	238.8
Aroclor-1232	4	8.585	0.000	24991	230.5	4	8.715	0.001	11476	245.7
Total Col1Ave (4 peaks):					215.7	Total Col2Ave (4 peaks):				238.8 RPD = 10
Corrected Ave (3 peaks):					210.5	Corrected Ave (3 peaks):				236.6 RPD = 12
Aroclor-1242	1	7.272	0.001	19363	129.8	1	7.256	0.000	19791	136.4
Aroclor-1242	2	7.659	0.004	58630	120.1	2	7.856	0.002	40139	124.6
Aroclor-1242	3	8.408	0.001	17373	119.8	3	9.166	0.006	11813	117.1
Aroclor-1242	4	8.585	0.003	24991	114.1	4	9.595	0.009	16549	123.7
Total Col1Ave (4 peaks):					121.0	Total Col2Ave (4 peaks):				125.4 RPD = 4
Corrected Ave (3 peaks):					118.0	Corrected Ave (3 peaks):				121.8 RPD = 3
Aroclor-1248	1	8.408	0.002	17373	71.3	1	8.308	0.003	11962	79.8
Aroclor-1248	2	8.585	0.005	24991	80.4	2	8.715	0.003	11476	71.1
Aroclor-1248	3	9.001	0.002	67631	113.8	3	9.166	0.009	11813	59.9
Aroclor-1248	4	9.293	-0.001	30983	105.3	4	9.595	0.014	16549	67.9
Total Col1Ave (4 peaks):					92.7	Total Col2Ave (4 peaks):				69.7 RPD = 28
Corrected Ave (3 peaks):					85.7	Corrected Ave (3 peaks):				66.3 RPD = 26
Aroclor-1254	1	9.293	-0.006	30983	62.4	1	9.451	0.003	3749	15.6
Aroclor-1254	2	9.381	0.003	9071	42.8	2	9.974	0.005	2452	12.6
Aroclor-1254	3	9.678	0.009	5199	16.3	3	10.131	0.010	4718	11.1
Aroclor-1254	4	9.820	0.012	8864	14.2	4	10.389	0.018	4224	10.0
Aroclor-1254	5	10.195	0.018	8085	19.9	5	10.573	0.004	1573	6.7
Total Col1Ave (5 peaks):					31.1	Total Col2Ave (5 peaks):				11.2 RPD = 94*
Corrected Ave (4 peaks):					23.3	Corrected Ave (4 peaks):				10.1 RPD = 79*
Aroclor-1260	1	11.050	0.006	66852	126.1	1	11.647	-0.006	57235	157.9
Aroclor-1260	2	11.366	0.006	6269	11.5	2	11.919	0.002	25368	27.7
Aroclor-1260	3	11.741	0.007	41446	28.9	3	12.434	-0.002	262014	1146.4
Aroclor-1260	4	12.052	-0.088	2691	3.6	4	12.502	-0.000	277060	466.9
Aroclor-1260	5	12.245	0.002	349286	1080.9	NS	---			----
Total Col1Ave (5 peaks):					250.2	Total Col2Ave (4 peaks):				449.7 RPD = 57*
Corrected Ave (4 peaks):					42.5	Corrected Ave (3 peaks):				217.5 RPD = 135*
Aroclor-1262	1	10.838	0.006	4520	11.8	1	11.203	0.003	40576	82.5
Aroclor-1262	2	12.245	-0.000	349286	579.1	2	11.647	-0.006	57235	136.9
Aroclor-1262	3	12.318	-0.002	349715	534.1	3	12.434	-0.001	262014	588.4
Aroclor-1262	4	12.988	-0.001	141905	237.8	4	12.502	-0.002	277060	388.5
Total Col1Ave (4 peaks):					340.7	Total Col2Ave (4 peaks):				299.1 RPD = 13
Corrected Ave (3 peaks):					261.2	Corrected Ave (3 peaks):				202.6 RPD = 25
Aroclor-1268	1	12.245	0.001	349286	223.8	1	12.434	0.000	262014	223.3
Aroclor-1268	2	12.318	0.000	349715	224.6	2	12.502	0.000	277060	221.9
Aroclor-1268	3	12.699	0.000	289328	224.3	3	12.893	-0.000	208928	201.0
Aroclor-1268	4	13.490	0.001	849299	222.1	4	13.710	0.002	725831	226.1
Total Col1Ave (4 peaks):					223.7	Total Col2Ave (4 peaks):				218.1 RPD = 3

Corrected Ave (3 peaks): 223.4 Corrected Ave (3 peaks): 215.4 RPD = 4

Total PCB Area Col1 (5.909 - 13.792) = 2866092 Col1 Total PCB = 0.5 ppm*

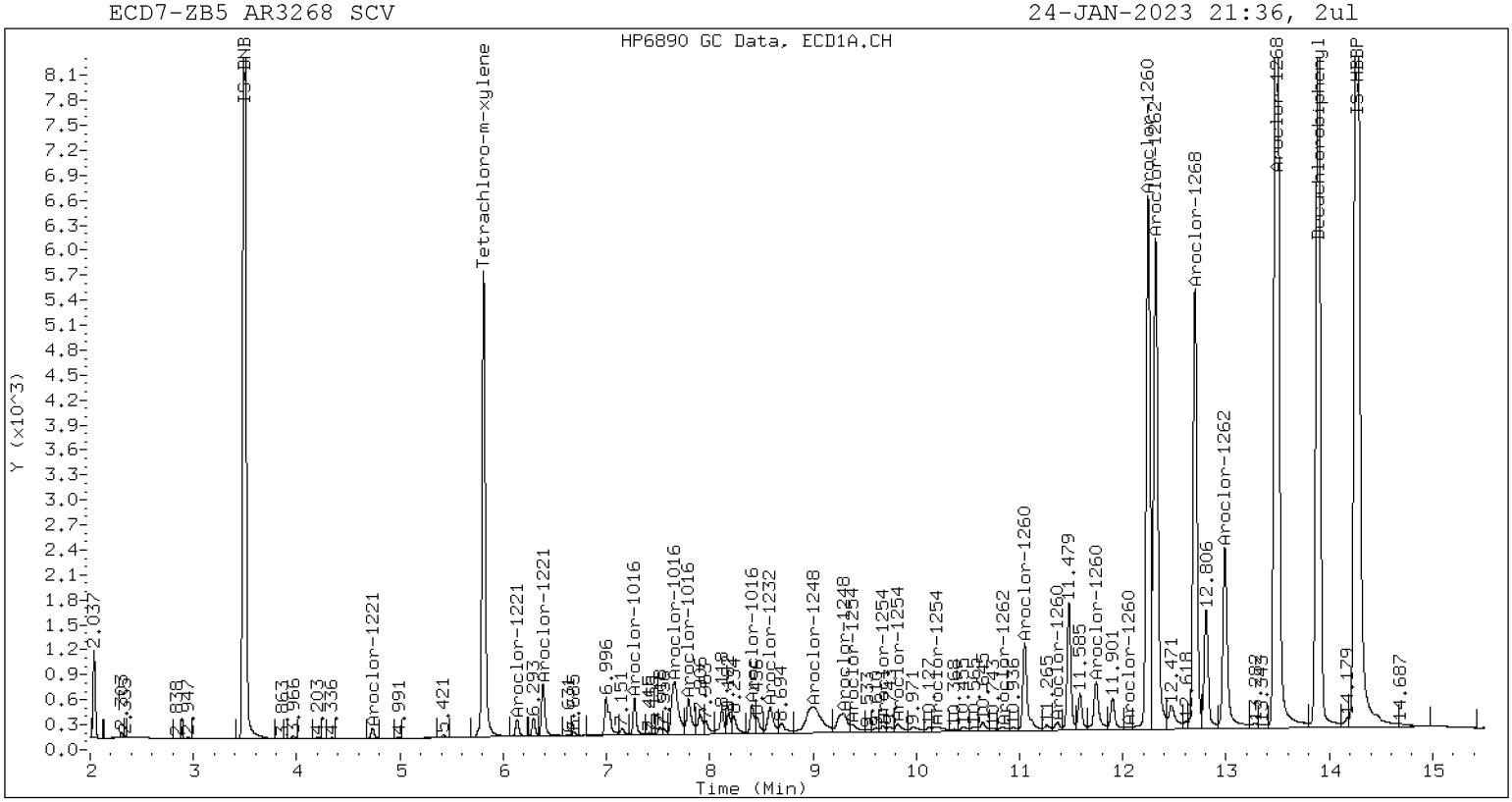
Total PCB Area Col2 (5.787 - 14.020) = 2084481 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

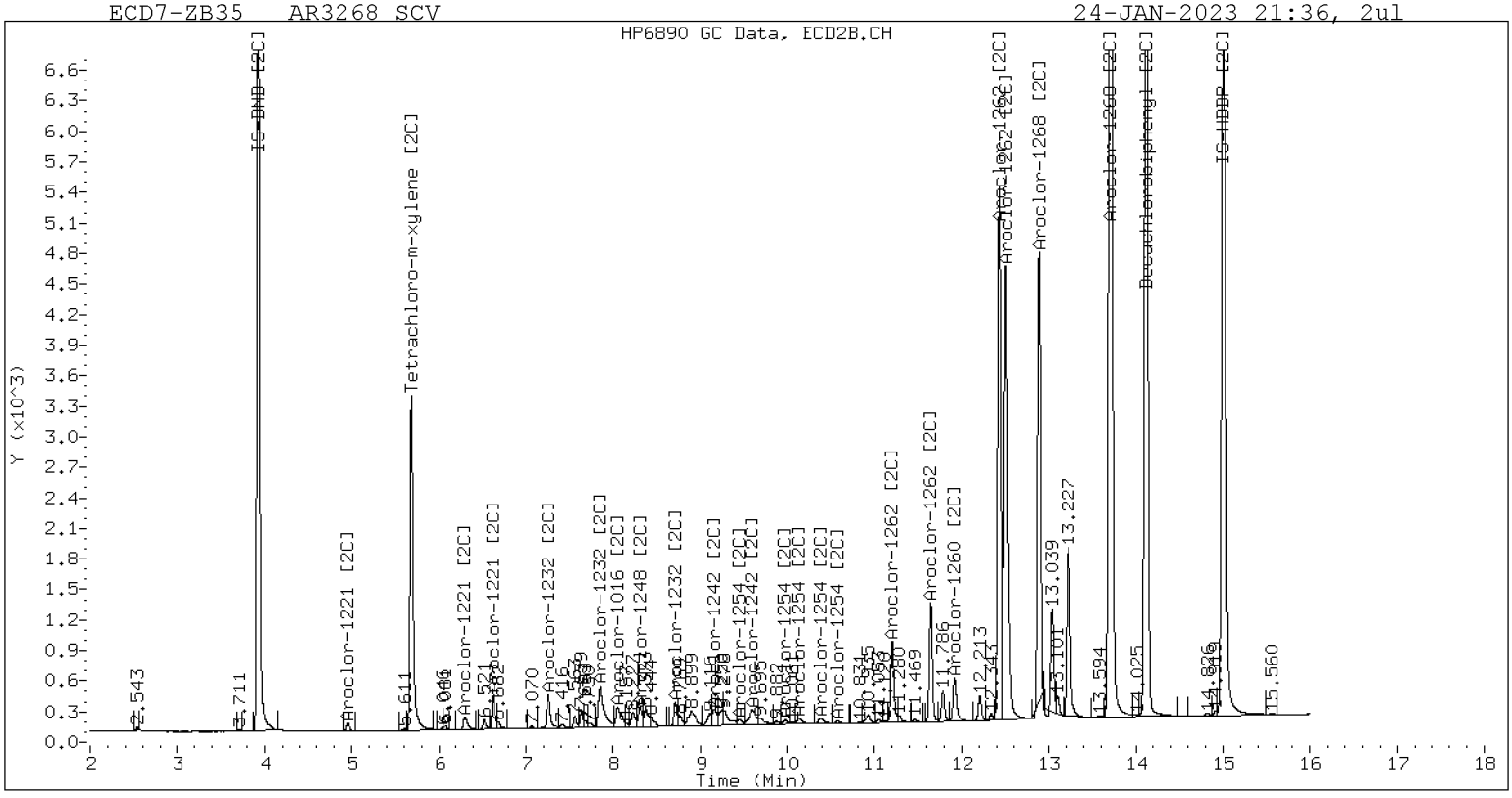
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268 SCV 24-JAN-2023 21:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268 SCV 24-JAN-2023 21:36, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01312313ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0350	Injection Date:	01/31/23
Lab Sample ID:	SLA0350-CCV1	Injection Time:	13:48
Sequence Name:	AR1248CCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	227	0.0592639	0.0514786		-9.3	+/-20
Aroclor-1248 (1)	A	250.00	252		0.0404181			
Aroclor-1248 (2)	A	250.00	249		0.0508455			
Aroclor-1248 (3)	A	250.00	184		0.0717941			
Aroclor-1248 (4)	A	250.00	222		0.0428568			
Aroclor 1248 [2C]	A	250.00	252	0.0453673	0.0454022		0.6	+/-20
Aroclor-1248 (1) [2C]	A	250.00	259		0.0374752			
Aroclor-1248 (2) [2C]	A	250.00	256		0.0398245			
Aroclor-1248 (3) [2C]	A	250.00	248		0.0471179			
Aroclor-1248 (4) [2C]	A	250.00	243		0.0571914			
Decachlorobiphenyl	A	40.000	35.4	0.8555994	0.7572121		-11.5	+/-20
Tetrachlorometaxylene	A	40.000	39.8	1.1307870	1.1250740		-0.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.2	1.2696430	1.2458790		-2.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.5	1.0814980	1.0669290		-1.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312313ECD7.D
Data file 2: /230131.b/230131.b/01312313ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 31-JAN-2023 13:48
Report Date: 01/31/2023 15:07
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.001	258865	5.685	0.000	180647	39.8	39.5	0.8	Tetrachloro-m-xylene
13.889	-0.002	268674	14.118	-0.000	261966	35.4	39.3	10.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	460174	-8.6
Hexabromobiphenyl	647433	709640	9.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	338630	0.5
Hexabromobiphenyl	382032	420532	10.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.403	-0.003	58123	252.5	1	8.304	0.000	39657	259.1
Aroclor-1248	2	8.576	-0.004	73118	249.0	2	8.711	0.000	42143	255.8
Aroclor-1248	3	8.995	-0.004	103243	183.8	3	9.154	0.000	49861	247.7
Aroclor-1248	4	9.291	-0.003	61630	221.7	4	9.578	0.000	60521	243.1
Total Col1Ave (4 peaks):					226.7	Total Col2Ave (4 peaks):				251.4 RPD = 10
Corrected Ave (3 peaks):					218.2	Corrected Ave (3 peaks):				248.8 RPD = 13
CalAmt %D:					-9.3	CalAmt %D:				0.6

Total PCB Area Col1 (5.909 - 13.792) = 1124775 Col1 Total PCB = 0.2 ppm*

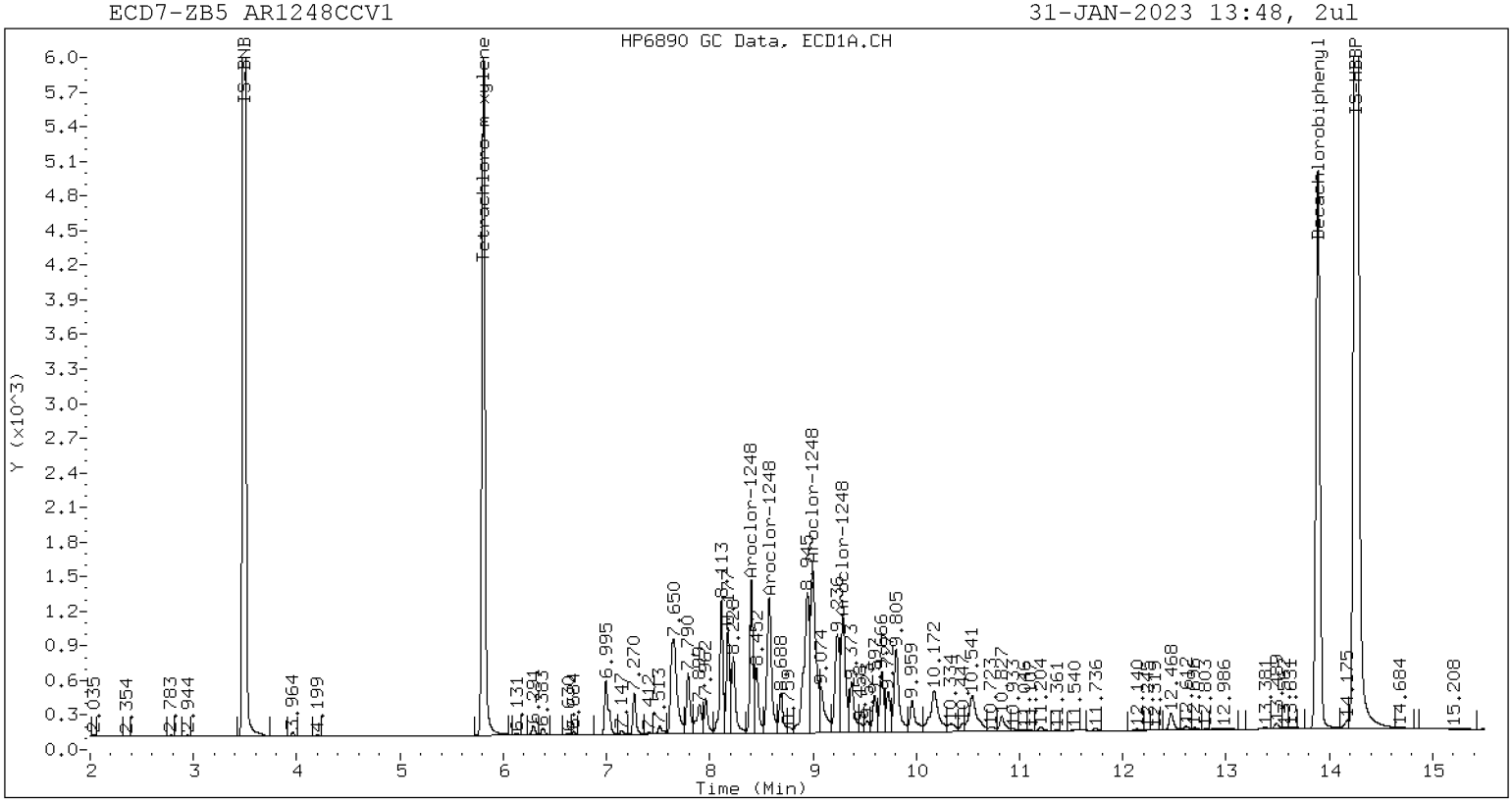
Total PCB Area Col2 (5.785 - 14.018) = 784604 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

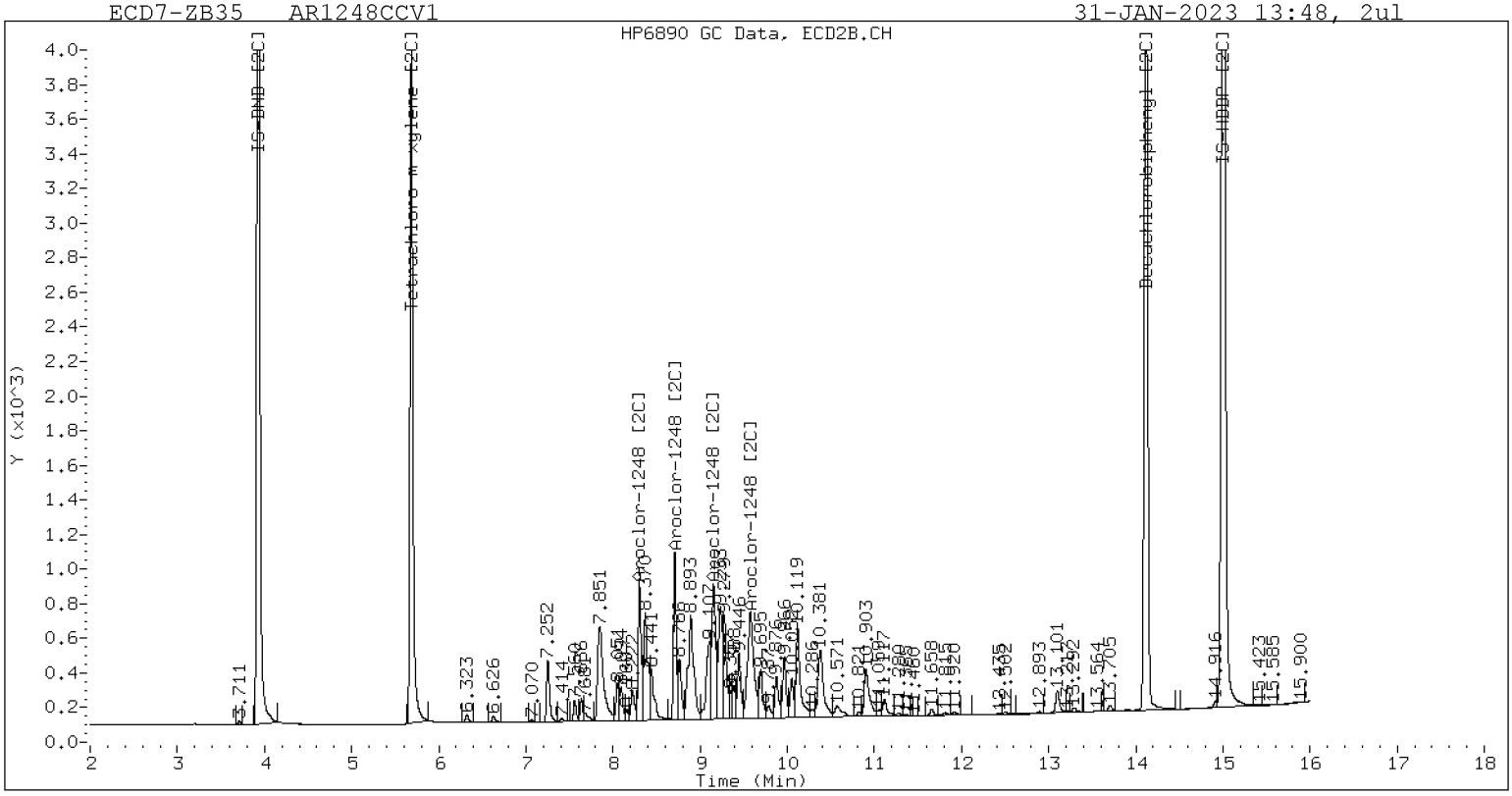
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 31-JAN-2023 13:48, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 31-JAN-2023 13:48, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01312314ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0350	Injection Date:	01/31/23
Lab Sample ID:	SLA0350-CCV2	Injection Time:	14:09
Sequence Name:	AR1660CCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	258	0.0506755	0.0524147		3.0	+/-20	
Aroclor-1016 (1)	A	250.00	259	0.0297277	0.0308535		3.6		
Aroclor-1016 (2)	A	250.00	264	0.0985017	0.1038716		5.6		
Aroclor-1016 (3)	A	250.00	244	0.0453193	0.0442801		-2.4		
Aroclor-1016 (4)	A	250.00	263	0.0291533	0.0306536		5.2		
Aroclor 1016 [2C]	A	250.00	267	0.0519244	0.0555773		6.7	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	260	0.0433907	0.0452043		4.0		
Aroclor-1016 (2) [2C]	A	250.00	270	0.0950862	0.1025361		8.0		
Aroclor-1016 (3) [2C]	A	250.00	274	0.0388014	0.0425605		9.6		
Aroclor-1016 (4) [2C]	A	250.00	263	0.0304194	0.0320081		5.2		
Aroclor 1260	A	250.00	186	0.0605224	0.0454056		-25.4	+/-20	*
Aroclor-1260 (1)	A	250.00	197	0.0448870	0.0353494		-21.2		
Aroclor-1260 (2)	A	250.00	194	0.0461412	0.0358479		-22.4		
Aroclor-1260 (3)	A	250.00	188	0.1214672	0.0914887		-24.8		
Aroclor-1260 (4)	A	250.00	182	0.0627593	0.0456720		-27.2		
Aroclor-1260 (5)	A	250.00	171	0.0273573	0.0186701		-31.6		
Aroclor 1260 [2C]	A	250.00	221	0.0836545	0.0737018		-11.7	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	219	0.0577136	0.0506685		-12.4		
Aroclor-1260 (2) [2C]	A	250.00	218	0.1460113	0.1275748		-12.8		
Aroclor-1260 (3) [2C]	A	250.00	224	0.0363944	0.0326818		-10.4		
Aroclor-1260 (4) [2C]	A	250.00	222	0.0944986	0.0838818		-11.2		
Decachlorobiphenyl	A	40.000	36.9	0.8555994	0.7898651		-7.8	+/-20	
Tetrachlorometaxylene	A	40.000	42.4	1.1307870	1.1993700		6.0	+/-20	
Decachlorobiphenyl [2C]	A	40.000	40.1	1.2696430	1.2730180		0.3	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	41.5	1.0814980	1.1229600		3.8	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312314ECD7.D
Data file 2: /230131.b/230131.b/01312314ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 31-JAN-2023 14:09
Report Date: 01/31/2023 15:07
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.001	280303	5.685	0.000	189609	42.4	41.5	2.1	Tetrachloro-m-xylene
13.890	-0.002	332908	14.118	0.000	301606	36.9	40.1	8.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	467417	-7.1
Hexabromobiphenyl	647433	842949	30.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	337695	0.2
Hexabromobiphenyl	382032	473844	24.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.000	45067	259.5	1	7.254	0.000	47704	260.4
Aroclor-1016	2	7.650	-0.000	151723	263.6	2	7.851	0.000	108206	269.6
Aroclor-1016	3	7.788	-0.000	64679	244.3	3	8.050	0.000	44914	274.2
Aroclor-1016	4	8.403	-0.001	44775	262.9	4	8.304	0.000	33778	263.1
Total Col1Ave (4 peaks):					257.6	Total Col2Ave (4 peaks):				266.8 RPD = 4
Corrected Ave (3 peaks):					255.5	Corrected Ave (3 peaks):				264.4 RPD = 3
CalAmt %D:					3.0	CalAmt %D:				6.7
Aroclor-1260	1	11.041	-0.002	93118	196.9	1	11.651	0.000	75028	219.5
Aroclor-1260	2	11.359	-0.002	94431	194.2	2	11.915	0.000	188908	218.4
Aroclor-1260	3	11.731	-0.003	241001	188.3	3	12.433	0.000	48394	224.5
Aroclor-1260	4	12.135	-0.005	120310	181.9	4	12.499	0.000	124209	221.9
Aroclor-1260	5	12.242	-0.002	49181	170.6	NS	---			----
Total Col1Ave (5 peaks):					186.4	Total Col2Ave (4 peaks):				221.1 RPD = 17
Corrected Ave (4 peaks):					183.8	Corrected Ave (3 peaks):				219.9 RPD = 18
CalAmt %D:					-25.4	CalAmt %D:				-11.6

Total PCB Area Col1 (5.909 - 13.792) = 2635635 Col1 Total PCB = 0.5 ppm*

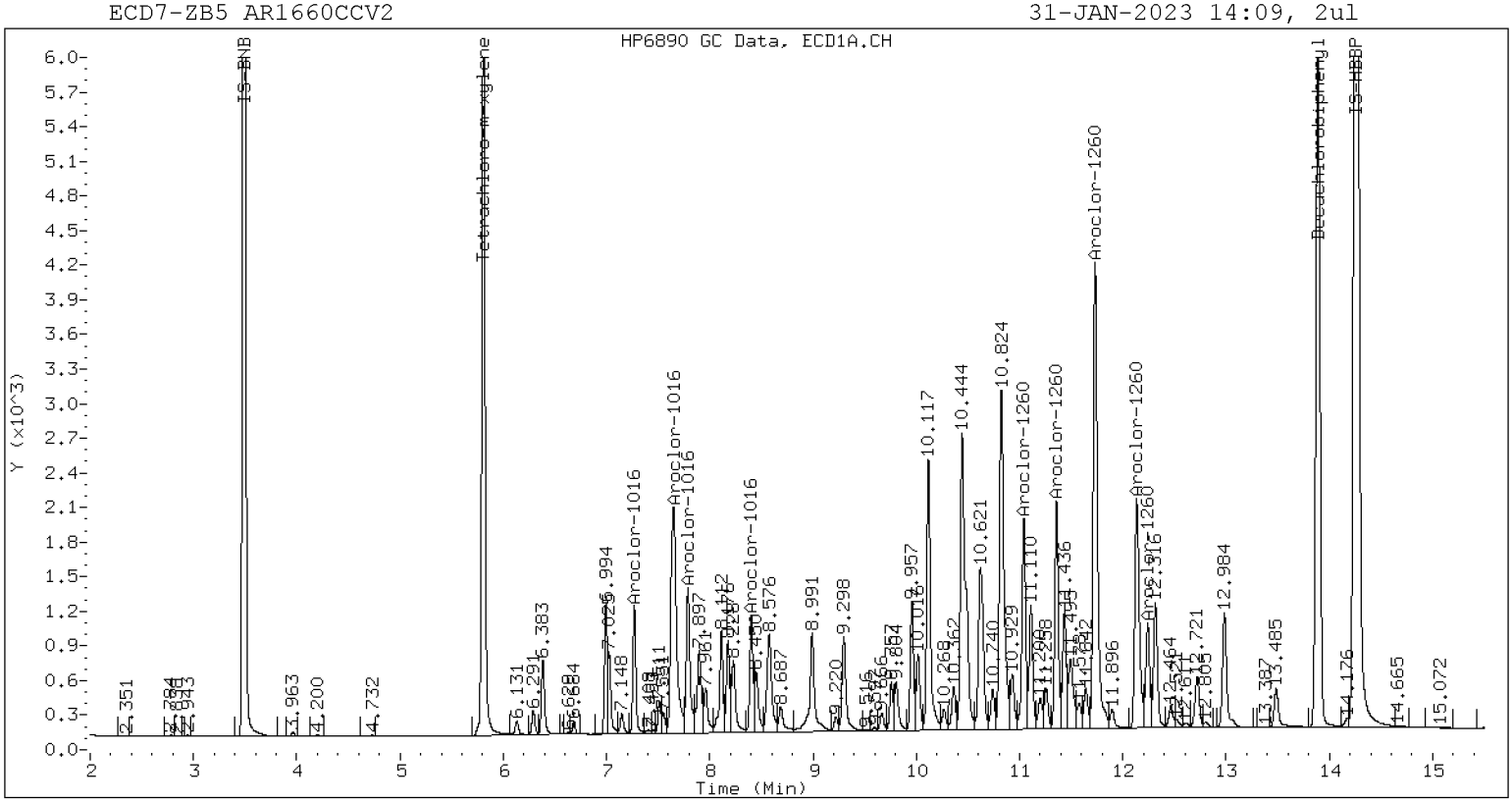
Total PCB Area Col2 (5.785 - 14.018) = 1852188 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

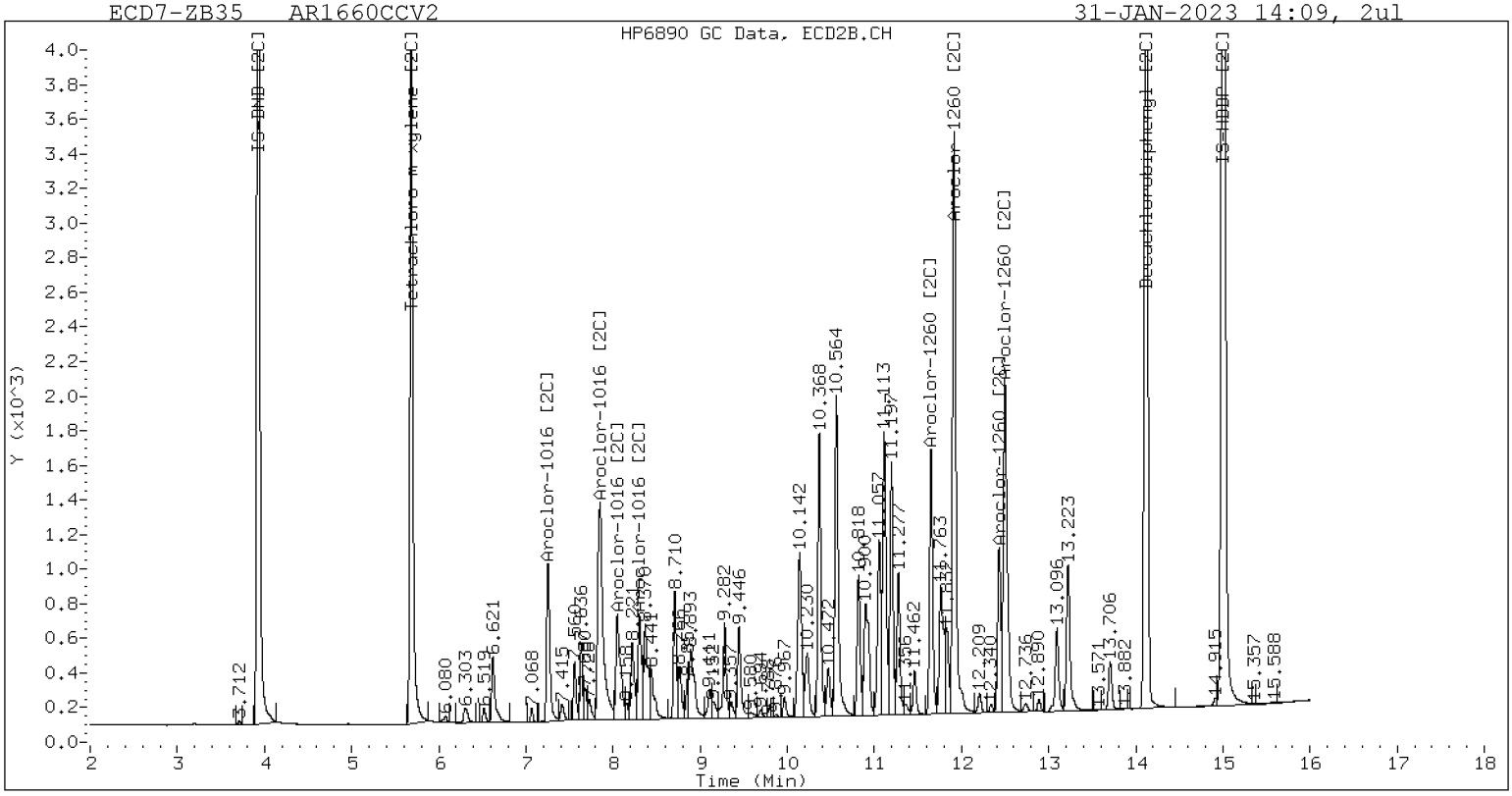
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 31-JAN-2023 14:09, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 31-JAN-2023 14:09, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01312329ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0350	Injection Date:	01/31/23
Lab Sample ID:	SLA0350-CCV3	Injection Time:	19:24
Sequence Name:	AR1242CCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	239	0.0411165	0.0396136		-4.5	+/-20
Aroclor-1242 (1)	A	250.00	247		0.0241730			
Aroclor-1242 (2)	A	250.00	248		0.0794396			
Aroclor-1242 (3)	A	250.00	232		0.0220776			
Aroclor-1242 (4)	A	250.00	228		0.0327643			
Aroclor 1242 [2C]	A	250.00	247	0.0423236	0.0421602		-1.3	+/-20
Aroclor-1242 (1) [2C]	A	250.00	261		0.0365710			
Aroclor-1242 (2) [2C]	A	250.00	254		0.0788784			
Aroclor-1242 (3) [2C]	A	250.00	245		0.0238747			
Aroclor-1242 (4) [2C]	A	250.00	227		0.0293167			
Decachlorobiphenyl	A	40.000	35.0	0.8555994	0.7487691		-12.5	+/-20
Tetrachlorometaxylene	A	40.000	48.1	1.1307870	1.3607930		20.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	35.7	1.2696430	1.1346450		-10.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	48.1	1.0814980	1.3010170		20.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312329ECD7.D
Data file 2: /230131.b/230131.b/01312329ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV3
Client ID:
Injection Date: 31-JAN-2023 19:24
Report Date: 02/01/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.001	315363	5.683	-0.001	215010	48.1	48.1	0.0	Tetrachloro-m-xylene
13.890	0.000	157930	14.117	-0.000	174476	35.0	35.7	2.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	463499	-7.9
Hexabromobiphenyl	647433	421839	-34.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	330526	-1.9
Hexabromobiphenyl	382032	307543	-19.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.269	-0.002	35013	246.7	1	7.253	0.000	37774	261.3
Aroclor-1242	2	7.651	-0.004	115063	247.7	2	7.848	0.000	81473	253.7
Aroclor-1242	3	8.403	-0.004	31978	231.7	3	9.155	0.000	24660	245.2
Aroclor-1242	4	8.576	-0.005	47457	227.7	4	9.579	0.000	30281	227.2
Total Col1Ave (4 peaks):					238.4	Total Col2Ave (4 peaks):				246.9 RPD = 3
Corrected Ave (3 peaks):					235.4	Corrected Ave (3 peaks):				242.1 RPD = 3
CalAmt %D:					-4.6	CalAmt %D:				-1.2

Total PCB Area Col1 (5.908 - 13.790) = 802962 Col1 Total PCB = 0.1 ppm*

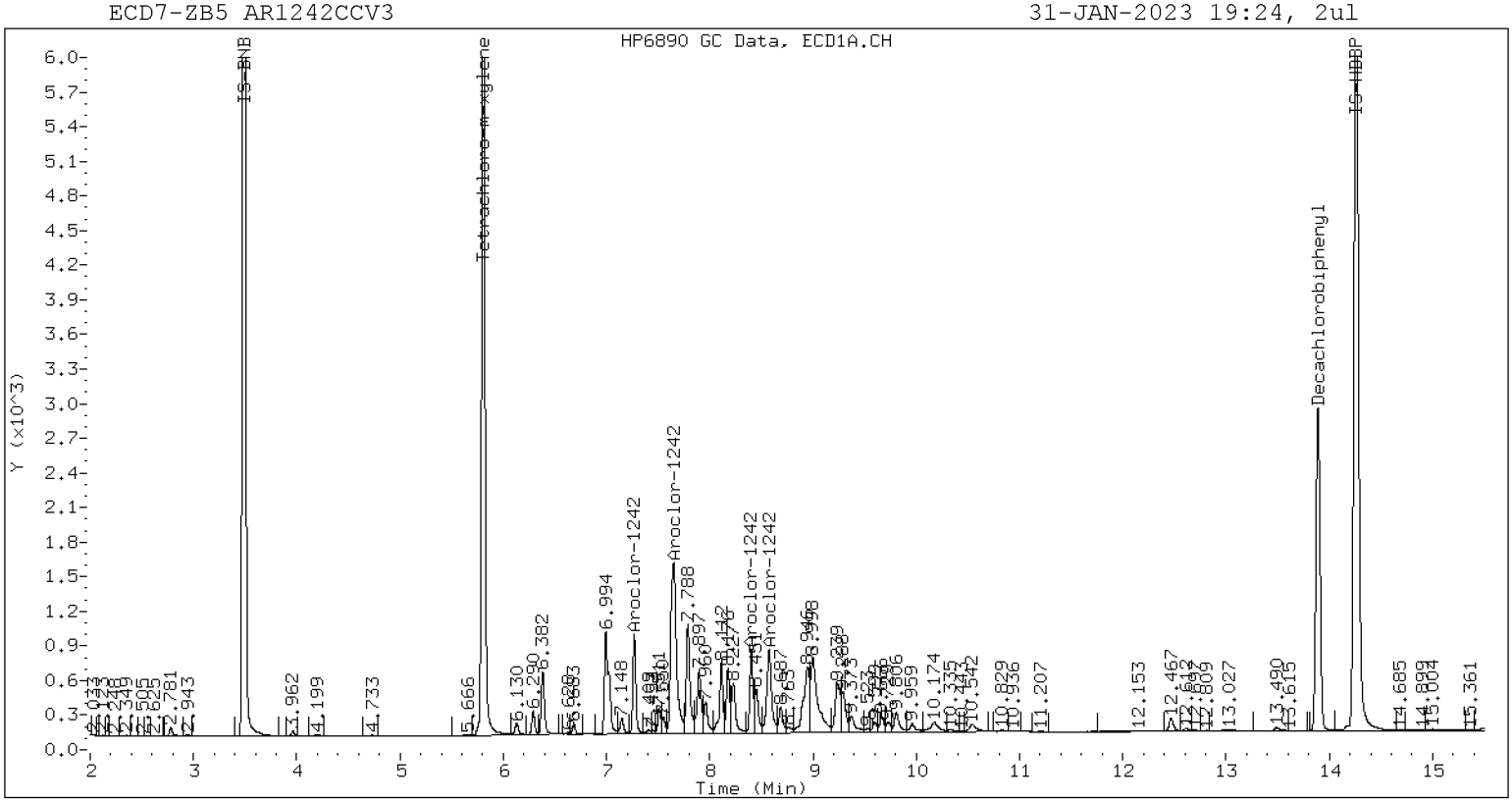
Total PCB Area Col2 (5.784 - 14.018) = 555214 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

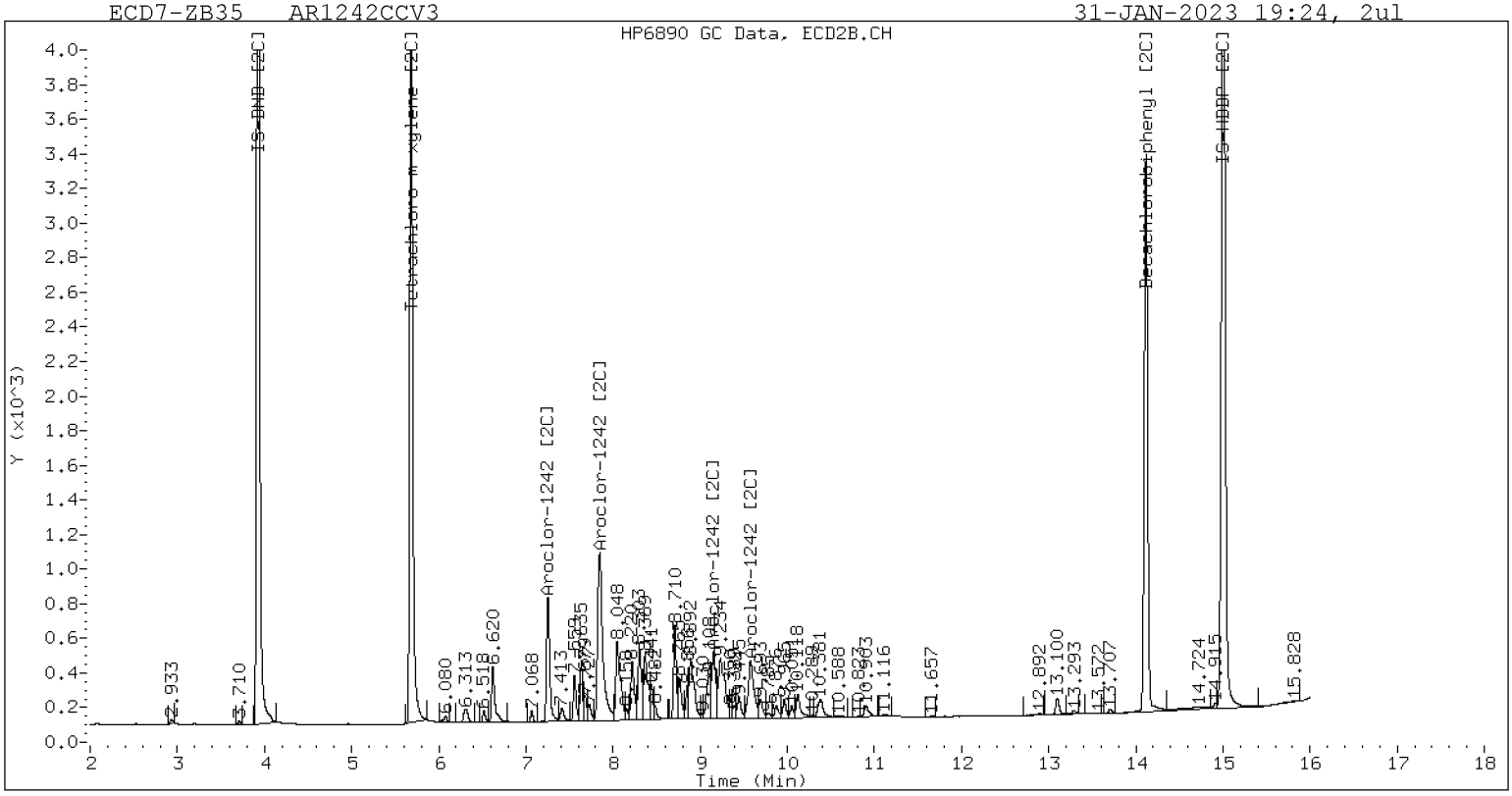
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3 31-JAN-2023 19:24, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3 31-JAN-2023 19:24, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01312330ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0350	Injection Date:	01/31/23
Lab Sample ID:	SLA0350-CCV4	Injection Time:	19:45
Sequence Name:	AR1660CCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	251	0.0506755	0.0510922		0.3	+/-20
Aroclor-1016 (1)	A	250.00	254	0.0297277	0.0302620		1.6	
Aroclor-1016 (2)	A	250.00	258	0.0985017	0.1016847		3.2	
Aroclor-1016 (3)	A	250.00	235	0.0453193	0.0425554		-6.0	
Aroclor-1016 (4)	A	250.00	256	0.0291533	0.0298667		2.4	
Aroclor 1016 [2C]	A	250.00	266	0.0519244	0.0553569		6.2	+/-20
Aroclor-1016 (1) [2C]	A	250.00	261	0.0433907	0.0453549		4.4	
Aroclor-1016 (2) [2C]	A	250.00	269	0.0950862	0.1022190		7.6	
Aroclor-1016 (3) [2C]	A	250.00	272	0.0388014	0.0422251		8.8	
Aroclor-1016 (4) [2C]	A	250.00	260	0.0304194	0.0316285		4.0	
Aroclor 1260	A	250.00	240	0.0605224	0.0582193		-4.1	+/-20
Aroclor-1260 (1)	A	250.00	261	0.0448870	0.0468590		4.4	
Aroclor-1260 (2)	A	250.00	253	0.0461412	0.0467041		1.2	
Aroclor-1260 (3)	A	250.00	239	0.1214672	0.1161576		-4.4	
Aroclor-1260 (4)	A	250.00	230	0.0627593	0.0577461		-8.0	
Aroclor-1260 (5)	A	250.00	216	0.0273573	0.0236295		-13.6	
Aroclor 1260 [2C]	A	250.00	242	0.0836545	0.0806471		-3.1	+/-20
Aroclor-1260 (1) [2C]	A	250.00	247	0.0577136	0.0569374		-1.2	
Aroclor-1260 (2) [2C]	A	250.00	240	0.1460113	0.1405112		-4.0	
Aroclor-1260 (3) [2C]	A	250.00	245	0.0363944	0.0356757		-2.0	
Aroclor-1260 (4) [2C]	A	250.00	237	0.0944986	0.0894643		-5.2	
Decachlorobiphenyl	A	40.000	38.3	0.8555994	0.8187071		-4.3	+/-20
Tetrachlorometaxylene	A	40.000	41.4	1.1307870	1.1717600		3.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.6	1.2696430	1.2258730		-3.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	41.3	1.0814980	1.1179010		3.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312330ECD7.D
Data file 2: /230131.b/230131.b/01312330ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV4
Client ID:
Injection Date: 31-JAN-2023 19:45
Report Date: 02/01/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.000	281724	5.684	-0.000	189335	41.4	41.3	0.2	Tetrachloro-m-xylene
13.890	-0.000	232494	14.118	0.000	234214	38.3	38.6	0.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	480856	-4.5
Hexabromobiphenyl	647433	567954	-12.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	338733	0.5
Hexabromobiphenyl	382032	382118	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	45474	254.5	1	7.253	-0.000	48010	261.3
Aroclor-1016	2	7.651	0.001	152799	258.1	2	7.849	-0.001	108203	268.8
Aroclor-1016	3	7.788	-0.001	63947	234.8	3	8.049	0.000	44697	272.1
Aroclor-1016	4	8.402	-0.001	44880	256.1	4	8.303	-0.001	33480	259.9
Total Col1Ave (4 peaks):					250.9	Total Col2Ave (4 peaks):				265.5 RPD = 6
Corrected Ave (3 peaks):					248.5	Corrected Ave (3 peaks):				263.3 RPD = 6
CalAmt %D:					0.3	CalAmt %D:				6.2
Aroclor-1260	1	11.041	0.000	83168	261.0	1	11.650	0.000	67990	246.6
Aroclor-1260	2	11.358	-0.001	82893	253.0	2	11.914	-0.001	167787	240.6
Aroclor-1260	3	11.731	0.000	206163	239.1	3	12.433	0.000	42601	245.1
Aroclor-1260	4	12.135	0.000	102491	230.0	4	12.498	-0.000	106831	236.7
Aroclor-1260	5	12.241	-0.001	41939	215.9	NS	---			----
Total Col1Ave (5 peaks):					239.8	Total Col2Ave (4 peaks):				242.2 RPD = 1
Corrected Ave (4 peaks):					234.5	Corrected Ave (3 peaks):				240.8 RPD = 3
CalAmt %D:					-4.1	CalAmt %D:				-3.1

Total PCB Area Col1 (5.908 - 13.790) = 2462340 Col1 Total PCB = 0.4 ppm*

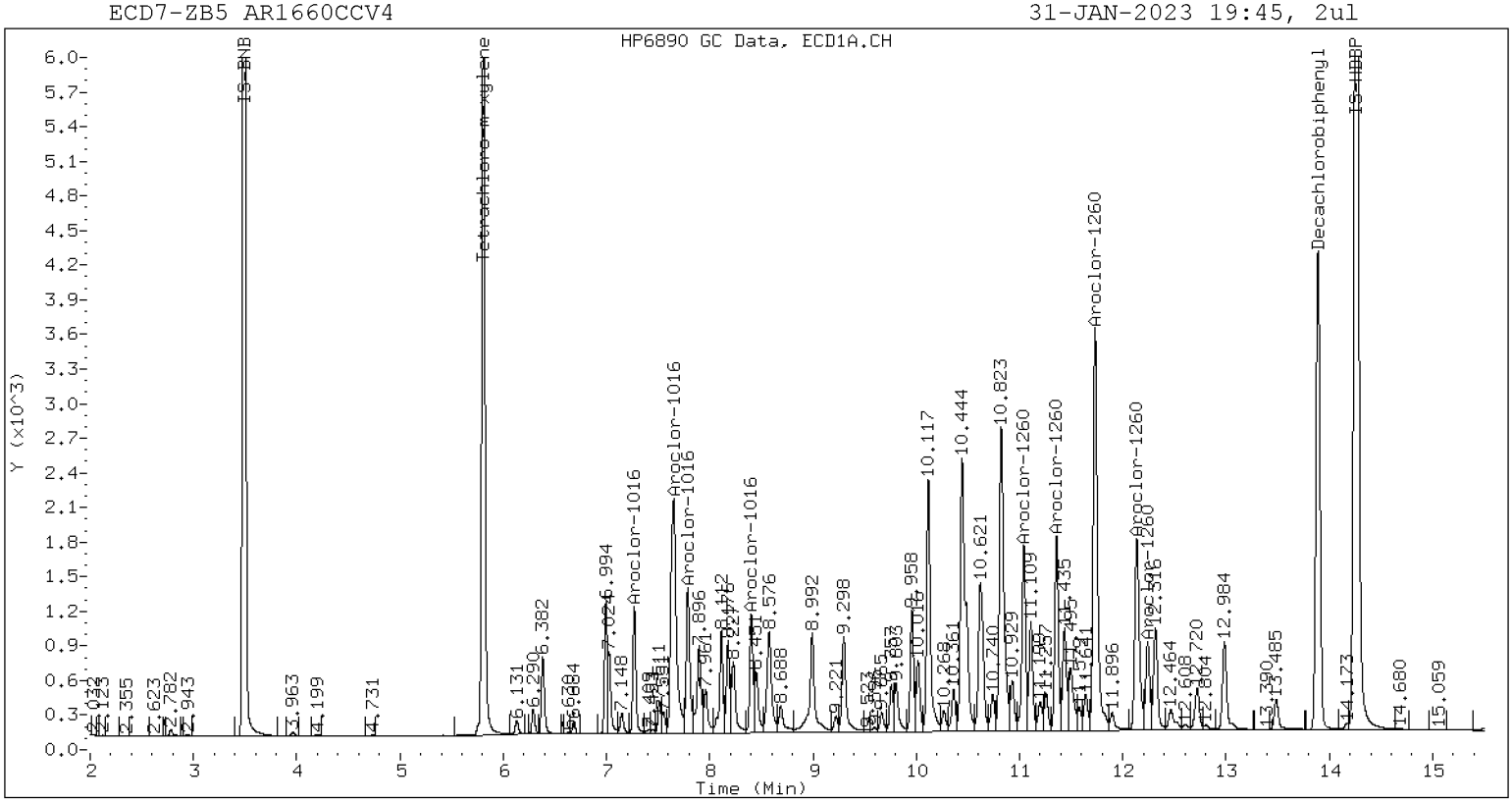
Total PCB Area Col2 (5.784 - 14.018) = 1731882 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

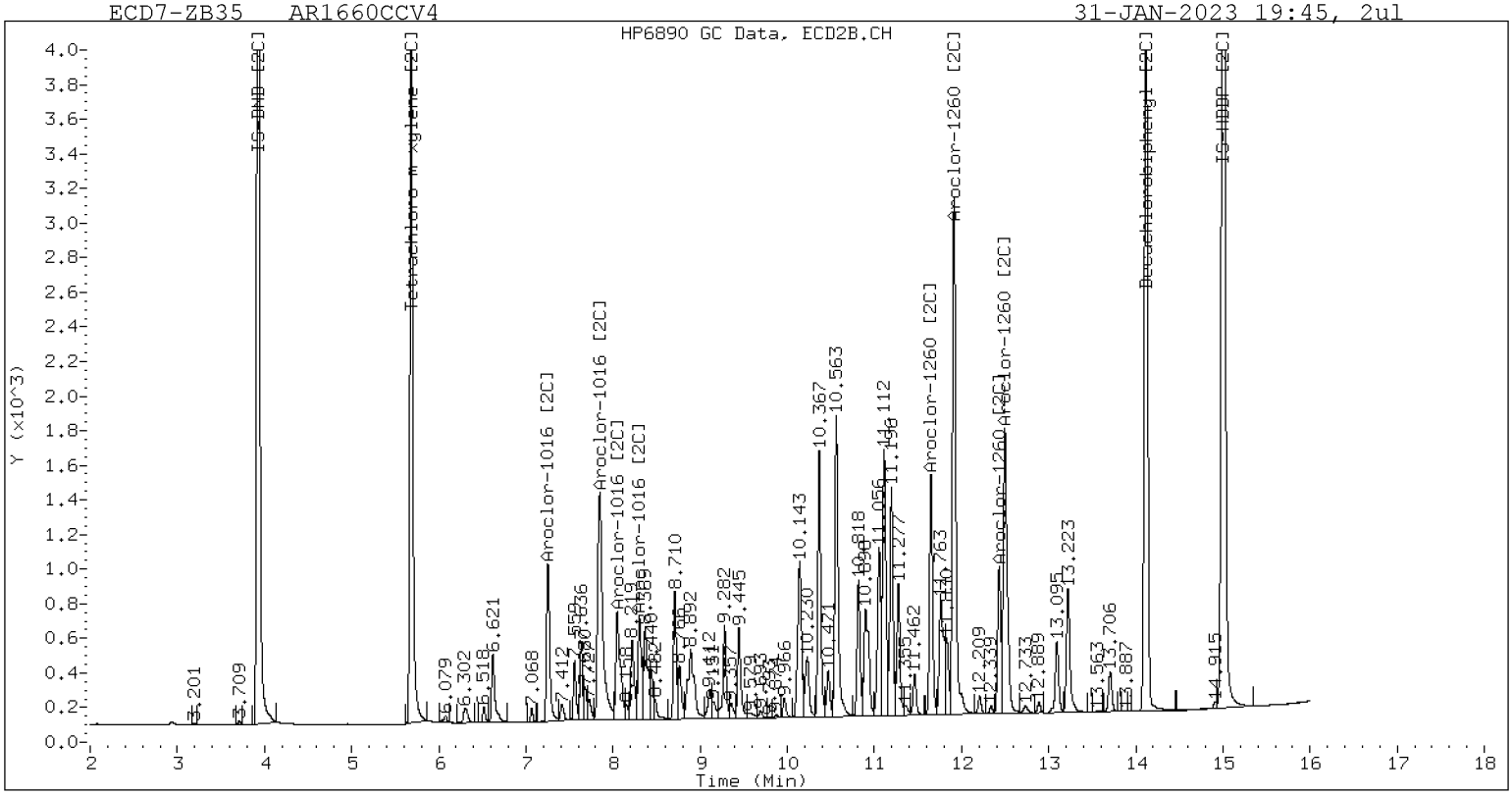
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4 31-JAN-2023 19:45, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV4 31-JAN-2023 19:45, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01312343ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0350	Injection Date:	02/01/23
Lab Sample ID:	SLA0350-CCV5	Injection Time:	00:19
Sequence Name:	AR1254CCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	235	0.0675033	0.0638982		-6.2	+/-20
Aroclor-1254 (1)	A	250.00	242		0.0789565			
Aroclor-1254 (2)	A	250.00	219		0.0305298			
Aroclor-1254 (3)	A	250.00	240		0.0500851			
Aroclor-1254 (4)	A	250.00	239		0.0978368			
Aroclor-1254 (5)	A	250.00	233		0.0620829			
Aroclor 1254 [2C]	A	250.00	237	0.0733219	0.0698160		-5.1	+/-20
Aroclor-1254 (1) [2C]	A	250.00	251		0.0582383			
Aroclor-1254 (2) [2C]	A	250.00	246		0.0462322			
Aroclor-1254 (3) [2C]	A	250.00	242		0.0988796			
Aroclor-1254 (4) [2C]	A	250.00	241		0.0987505			
Aroclor-1254 (5) [2C]	A	250.00	206		0.0469794			
Decachlorobiphenyl	A	40.000	36.0	0.8555994	0.7689993		-10.0	+/-20
Tetrachlorometaxylene	A	40.000	39.0	1.1307870	1.1040510		-2.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.2	1.2696430	1.1815770		-7.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.7	1.0814980	1.0731620		-0.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312343ECD7.D
Data file 2: /230131.b/230131.b/01312343ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCV5
Client ID:
Injection Date: 01-FEB-2023 00:19
Report Date: 02/01/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.000	262769	5.684	0.000	182216	39.1	39.7	1.6	Tetrachloro-m-xylene
13.891	0.001	231781	14.117	-0.001	229884	36.0	37.2	3.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	476009	-5.4
Hexabromobiphenyl	647433	602812	-6.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	339587	0.8
Hexabromobiphenyl	382032	389114	1.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.294	-0.001	117450	242.1	1	9.445	0.000	61803	250.9
Aroclor-1254	2	9.372	-0.002	45414	219.2	2	9.965	0.000	49062	246.4
Aroclor-1254	3	9.664	-0.001	74503	239.7	3	10.117	0.000	104932	241.6
Aroclor-1254	4	9.802	-0.001	145535	238.9	4	10.367	0.000	104795	241.2
Aroclor-1254	5	10.164	0.000	92350	233.2	5	10.565	0.000	49855	206.1

Total Col1Ave (5 peaks): 234.6 Total Col2Ave (5 peaks): 237.2 RPD = 1

Corrected Ave (4 peaks): 232.8 Corrected Ave (4 peaks): 233.8 RPD = 0

CalAmt %D: -6.1 CalAmt %D: -5.1

Total PCB Area Col1 (5.908 - 13.790) = 1459488 Col1 Total PCB = 0.3 ppm*

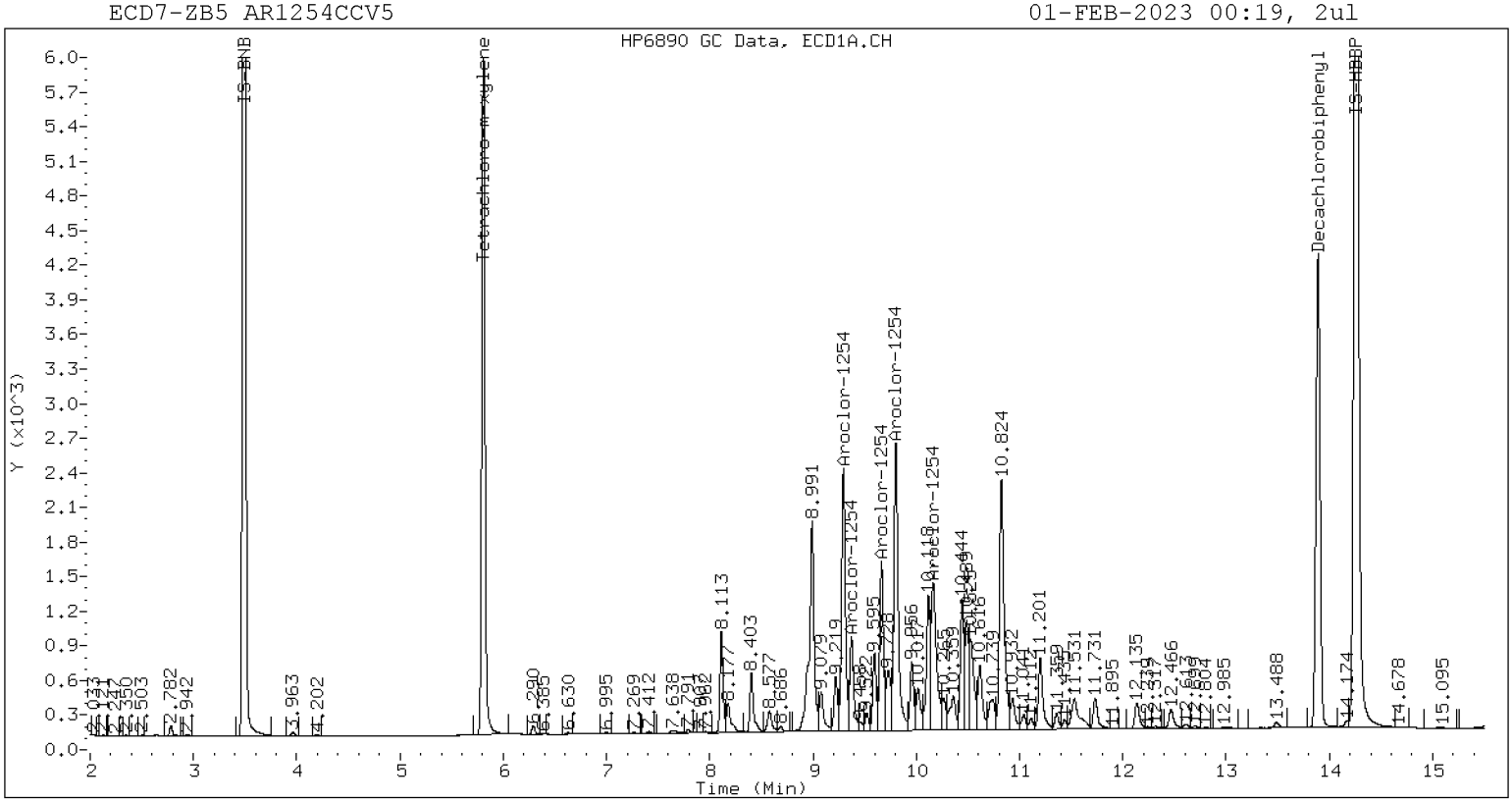
Total PCB Area Col2 (5.784 - 14.018) = 998754 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

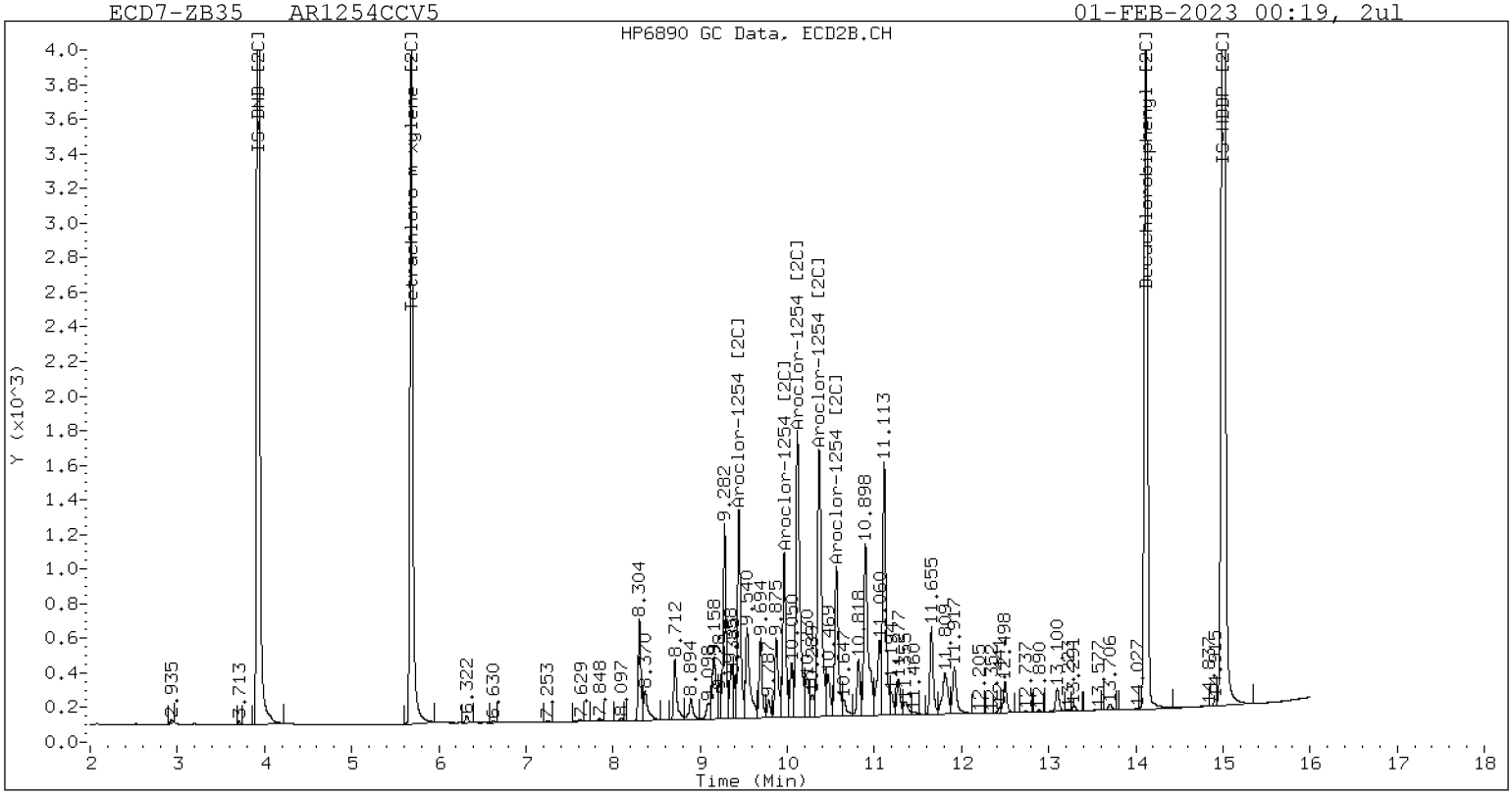
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5 01-FEB-2023 00:19, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCV5 01-FEB-2023 00:19, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01312344ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0350	Injection Date:	02/01/23
Lab Sample ID:	SLA0350-CCV6	Injection Time:	00:40
Sequence Name:	AR1660CCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	255	0.0506755	0.0519672		2.0	+/-20
Aroclor-1016 (1)	A	250.00	256	0.0297277	0.0304925		2.4	
Aroclor-1016 (2)	A	250.00	262	0.0985017	0.1032228		4.8	
Aroclor-1016 (3)	A	250.00	240	0.0453193	0.0435571		-4.0	
Aroclor-1016 (4)	A	250.00	262	0.0291533	0.0305966		4.8	
Aroclor 1016 [2C]	A	250.00	265	0.0519244	0.0552668		6.0	+/-20
Aroclor-1016 (1) [2C]	A	250.00	259	0.0433907	0.0449219		3.6	
Aroclor-1016 (2) [2C]	A	250.00	269	0.0950862	0.1022280		7.6	
Aroclor-1016 (3) [2C]	A	250.00	272	0.0388014	0.0422428		8.8	
Aroclor-1016 (4) [2C]	A	250.00	260	0.0304194	0.0316744		4.0	
Aroclor 1260	A	250.00	221	0.0605224	0.0535963		-11.8	+/-20
Aroclor-1260 (1)	A	250.00	238	0.0448870	0.0428300		-4.8	
Aroclor-1260 (2)	A	250.00	231	0.0461412	0.0427244		-7.6	
Aroclor-1260 (3)	A	250.00	220	0.1214672	0.1067867		-12.0	
Aroclor-1260 (4)	A	250.00	213	0.0627593	0.0535942		-14.8	
Aroclor-1260 (5)	A	250.00	201	0.0273573	0.0220460		-19.6	
Aroclor 1260 [2C]	A	250.00	237	0.0836545	0.0789151		-5.2	+/-20
Aroclor-1260 (1) [2C]	A	250.00	239	0.0577136	0.0551185		-4.4	
Aroclor-1260 (2) [2C]	A	250.00	235	0.1460113	0.1372246		-6.0	
Aroclor-1260 (3) [2C]	A	250.00	240	0.0363944	0.0349456		-4.0	
Aroclor-1260 (4) [2C]	A	250.00	234	0.0944986	0.0883716		-6.4	
Decachlorobiphenyl	A	40.000	37.6	0.8555994	0.8052520		-6.0	+/-20
Tetrachlorometaxylene	A	40.000	41.6	1.1307870	1.1774570		4.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.0	1.2696430	1.2378660		-2.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	41.6	1.0814980	1.1238270		4.0	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230131.b/01312344ECD7.D
Data file 2: /230131.b/230131.b/01312344ECD7.D
Method: \\target\share\chem4\ecd7.i\230131.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV6
Client ID:
Injection Date: 01-FEB-2023 00:40
Report Date: 02/01/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.000	284062	5.684	0.000	192021	41.7	41.6	0.2	Tetrachloro-m-xylene
13.891	0.001	273284	14.118	0.000	260728	37.6	39.0	3.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	482501	-4.1
Hexabromobiphenyl	647433	678754	4.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	341727	1.4
Hexabromobiphenyl	382032	421254	10.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.268	-0.001	45977	256.4	1	7.253	0.000	47972	258.8
Aroclor-1016	2	7.650	-0.000	155641	262.0	2	7.850	0.000	109169	268.8
Aroclor-1016	3	7.787	-0.001	65676	240.3	3	8.049	0.000	45111	272.2
Aroclor-1016	4	8.402	-0.001	46134	262.4	4	8.304	0.000	33825	260.3
Total Col1Ave (4 peaks):					255.3	Total Col2Ave (4 peaks):				265.0 RPD = 4
Corrected Ave (3 peaks):					252.9	Corrected Ave (3 peaks):				262.6 RPD = 4
CalAmt %D:					2.1	CalAmt %D:				6.0
Aroclor-1260	1	11.041	-0.000	90847	238.5	1	11.650	0.000	72559	238.8
Aroclor-1260	2	11.357	-0.001	90623	231.5	2	11.914	0.000	180645	235.0
Aroclor-1260	3	11.731	-0.000	226506	219.8	3	12.432	0.000	46003	240.0
Aroclor-1260	4	12.135	-0.000	113679	213.5	4	12.498	0.000	116334	233.8
Aroclor-1260	5	12.241	-0.000	46762	201.5	NS	---			----
Total Col1Ave (5 peaks):					221.0	Total Col2Ave (4 peaks):				236.9 RPD = 7
Corrected Ave (4 peaks):					216.6	Corrected Ave (3 peaks):				235.8 RPD = 9
CalAmt %D:					-11.6	CalAmt %D:				-5.2

Total PCB Area Col1 (5.908 - 13.790) = 2602910 Col1 Total PCB = 0.5 ppm*

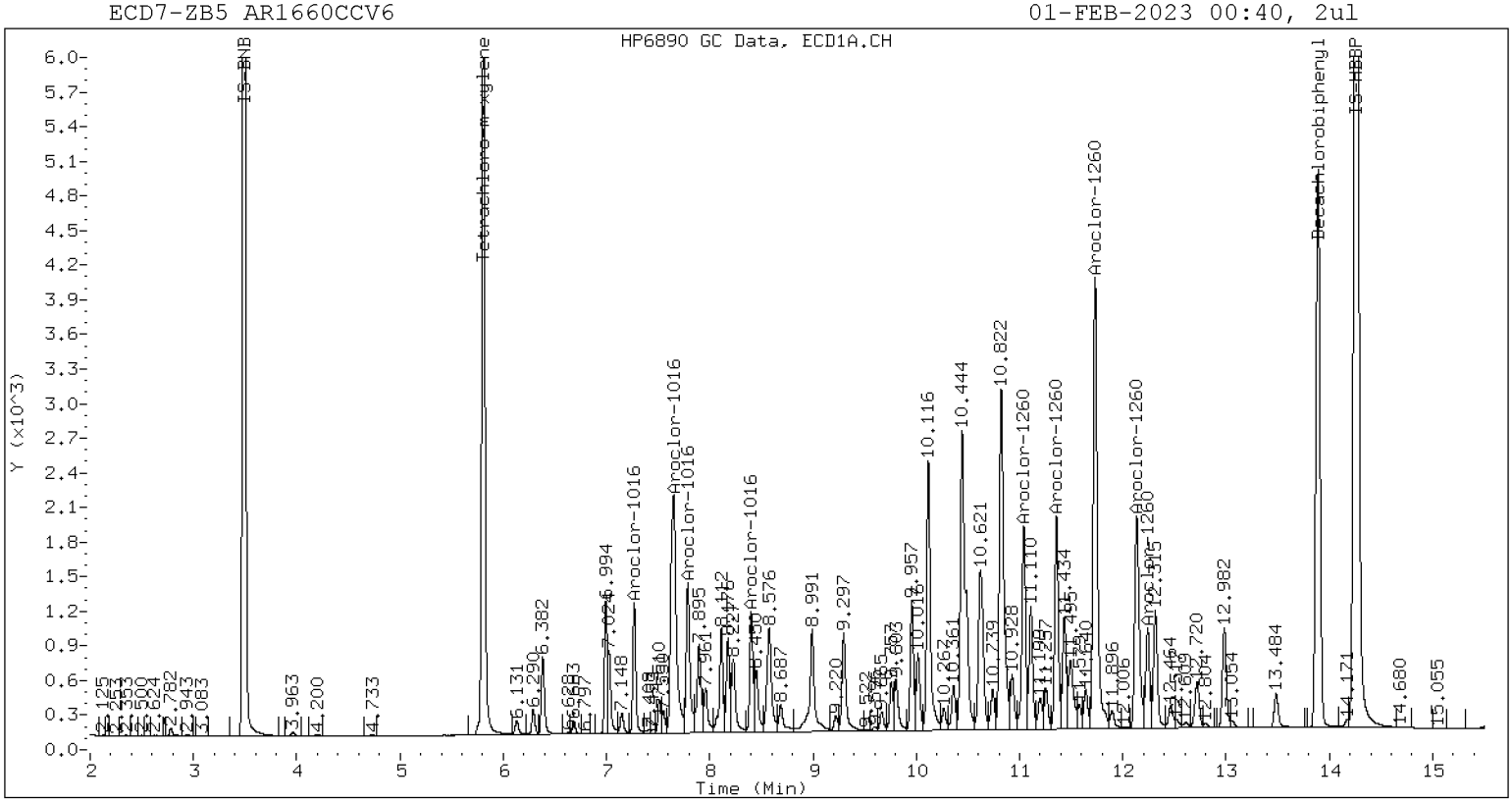
Total PCB Area Col2 (5.784 - 14.018) = 1815184 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

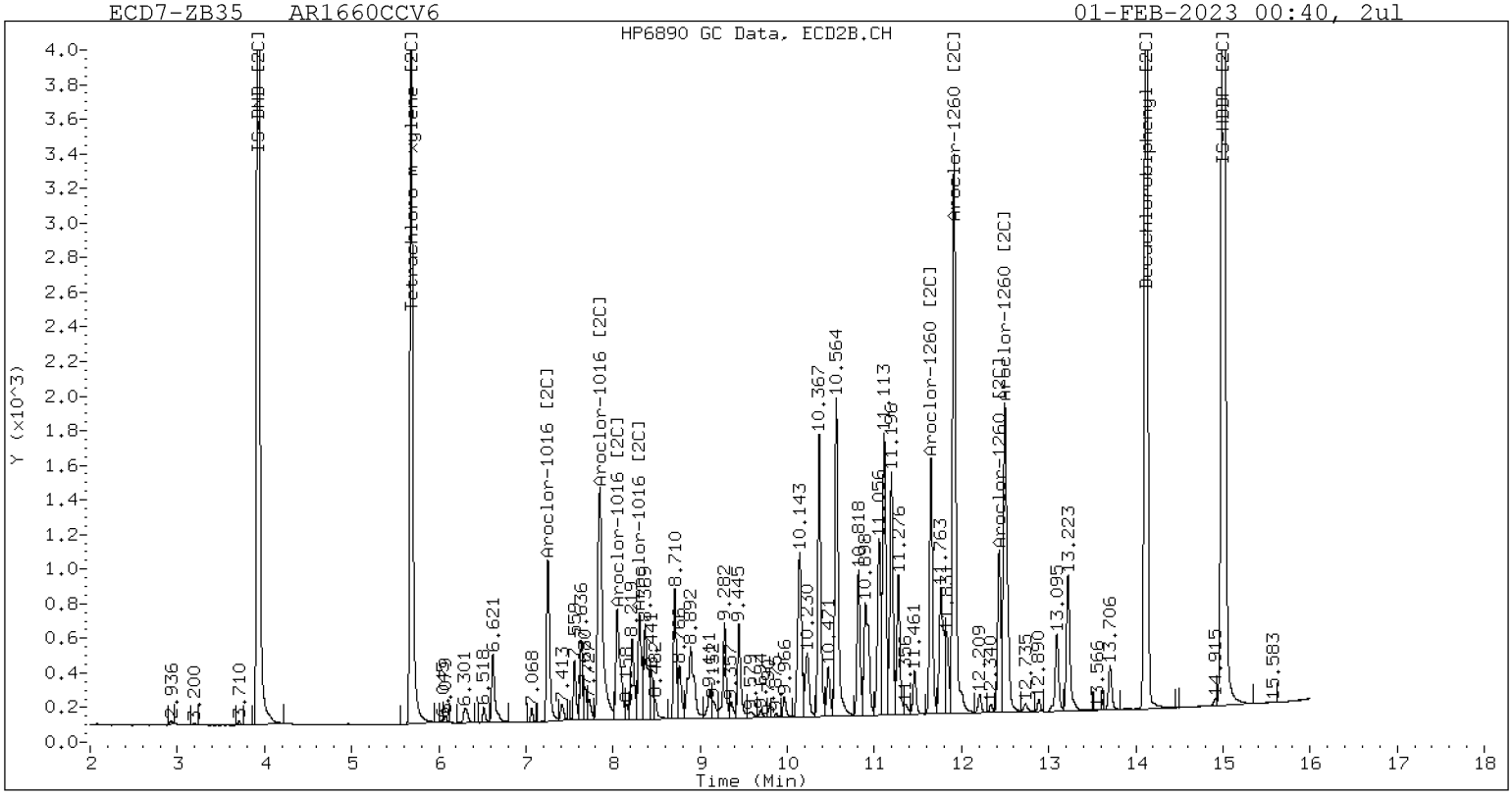
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6 01-FEB-2023 00:40, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6 01-FEB-2023 00:40, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02012308ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0012	Injection Date:	02/01/23
Lab Sample ID:	SLB0012-CCV1	Injection Time:	11:52
Sequence Name:	AR1248CCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	213	0.0592639	0.0484642		-14.7	+/-20
Aroclor-1248 (1)	A	250.00	244		0.0390338			
Aroclor-1248 (2)	A	250.00	240		0.0489723			
Aroclor-1248 (3)	A	250.00	175		0.0682782			
Aroclor-1248 (4)	A	250.00	194		0.0375723			
Aroclor 1248 [2C]	A	250.00	241	0.0453673	0.0436092		-3.5	+/-20
Aroclor-1248 (1) [2C]	A	250.00	251		0.0363088			
Aroclor-1248 (2) [2C]	A	250.00	242		0.0377289			
Aroclor-1248 (3) [2C]	A	250.00	240		0.0457537			
Aroclor-1248 (4) [2C]	A	250.00	232		0.0546454			
Decachlorobiphenyl	A	40.000	34.1	0.8555994	0.7290369		-14.8	+/-20
Tetrachlorometaxylene	A	40.000	39.6	1.1307870	1.1181120		-1.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.0	1.2696430	1.1424470		-10.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.4	1.0814980	1.0654260		-1.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230201.b/02012308ECD7.D
Data file 2: /230201.b/230201.b/02012308ECD7.D
Method: \\target\share\chem4\ecd7.i\230201.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 01-FEB-2023 11:52
Report Date: 02/01/2023 15:25
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.001	255227	5.685	0.001	178737	39.6	39.4	0.4	Tetrachloro-m-xylene
13.890	-0.002	187805	14.117	-0.001	198154	34.1	36.0	5.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	456532	-9.3
Hexabromobiphenyl	647433	515214	-20.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	335522	-0.4
Hexabromobiphenyl	382032	346894	-9.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.402	-0.003	55688	243.8	1	8.304	0.000	38070	251.0
Aroclor-1248	2	8.576	-0.004	69867	239.8	2	8.711	0.000	39559	242.3
Aroclor-1248	3	8.995	-0.004	97410	174.8	3	9.153	0.000	47973	240.5
Aroclor-1248	4	9.291	-0.003	53603	194.3	4	9.577	0.000	57296	232.3
Total Col1Ave (4 peaks):					213.2	Total Col2Ave (4 peaks):				241.5 RPD = 12
Corrected Ave (3 peaks):					203.0	Corrected Ave (3 peaks):				238.4 RPD = 16
CalAmt %D:					-14.7	CalAmt %D:				-3.4

Total PCB Area Col1 (5.909 - 13.792) = 1043662 Col1 Total PCB = 0.2 ppm*

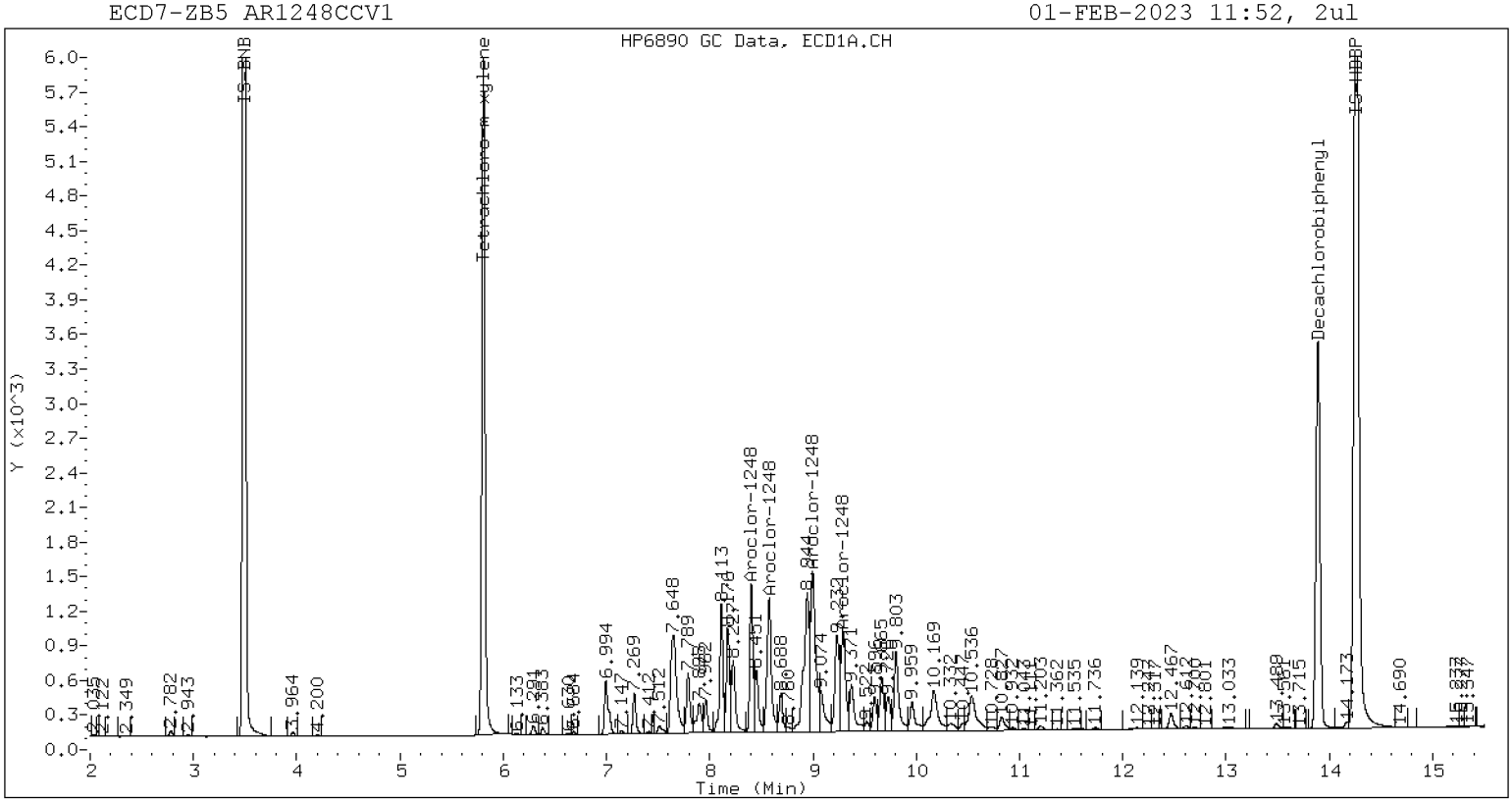
Total PCB Area Col2 (5.784 - 14.018) = 731663 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

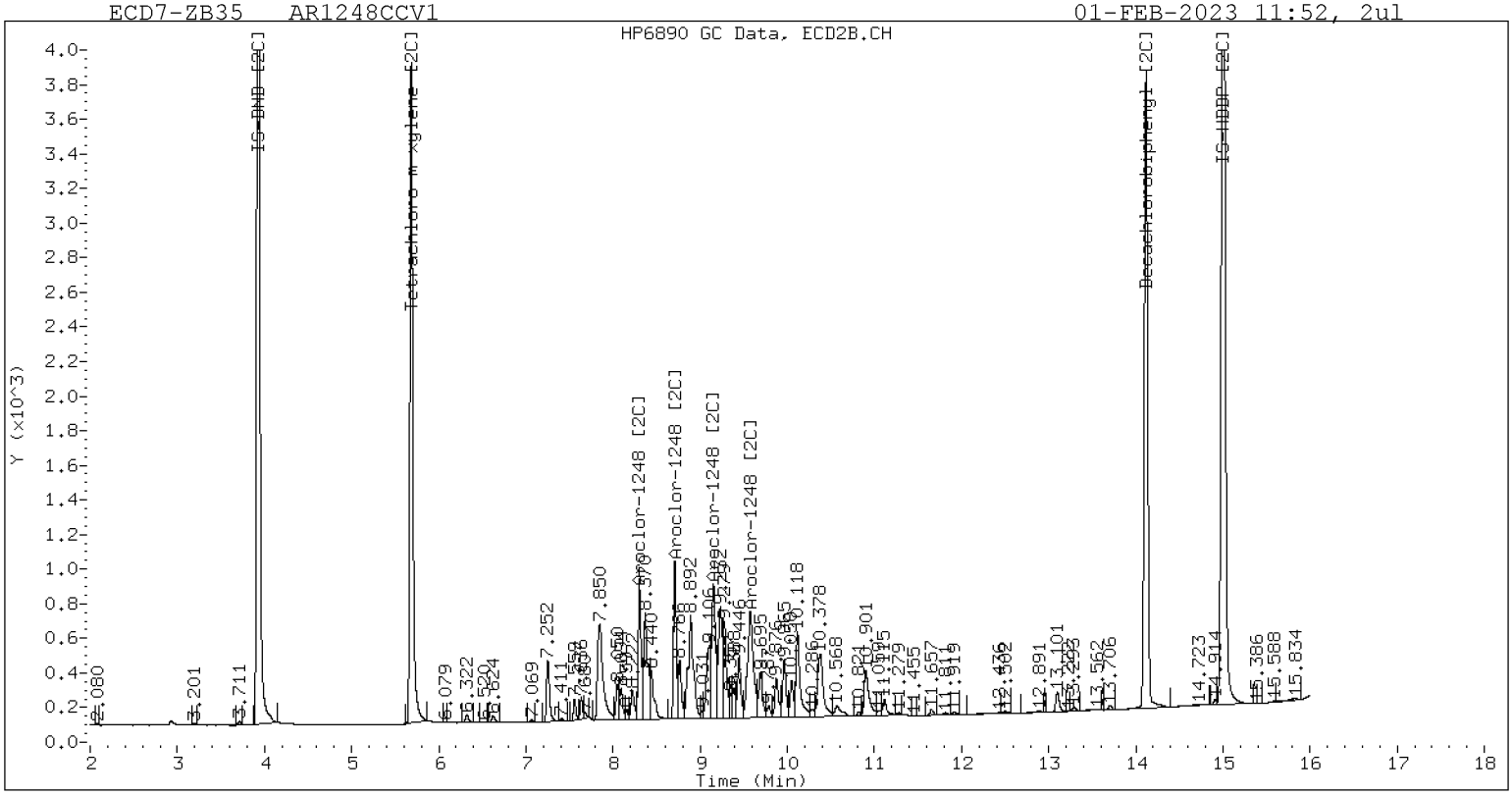
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 01-FEB-2023 11:52, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 01-FEB-2023 11:52, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02012309ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0012	Injection Date:	02/01/23
Lab Sample ID:	SLB0012-CCV2	Injection Time:	12:13
Sequence Name:	AR1660CCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	258	0.0506755	0.0525358		3.2	+/-20
Aroclor-1016 (1)	A	250.00	261	0.0297277	0.0310260		4.4	
Aroclor-1016 (2)	A	250.00	265	0.0985017	0.1044194		6.0	
Aroclor-1016 (3)	A	250.00	242	0.0453193	0.0439465		-3.2	
Aroclor-1016 (4)	A	250.00	264	0.0291533	0.0307511		5.6	
Aroclor 1016 [2C]	A	250.00	268	0.0519244	0.0557854		7.2	+/-20
Aroclor-1016 (1) [2C]	A	250.00	264	0.0433907	0.0458436		5.6	
Aroclor-1016 (2) [2C]	A	250.00	269	0.0950862	0.1024551		7.6	
Aroclor-1016 (3) [2C]	A	250.00	276	0.0388014	0.0427967		10.4	
Aroclor-1016 (4) [2C]	A	250.00	263	0.0304194	0.0320463		5.2	
Aroclor 1260	A	250.00	222	0.0605224	0.0539596		-11.2	+/-20
Aroclor-1260 (1)	A	250.00	242	0.0448870	0.0434041		-3.2	
Aroclor-1260 (2)	A	250.00	237	0.0461412	0.0436919		-5.2	
Aroclor-1260 (3)	A	250.00	223	0.1214672	0.1082057		-10.8	
Aroclor-1260 (4)	A	250.00	211	0.0627593	0.0528957		-15.6	
Aroclor-1260 (5)	A	250.00	197	0.0273573	0.0216007		-21.2	
Aroclor 1260 [2C]	A	250.00	238	0.0836545	0.0792101		-4.8	+/-20
Aroclor-1260 (1) [2C]	A	250.00	240	0.0577136	0.0554287		-4.0	
Aroclor-1260 (2) [2C]	A	250.00	236	0.1460113	0.1375803		-5.6	
Aroclor-1260 (3) [2C]	A	250.00	241	0.0363944	0.0351462		-3.6	
Aroclor-1260 (4) [2C]	A	250.00	235	0.0944986	0.0886852		-6.0	
Decachlorobiphenyl	A	40.000	37.5	0.8555994	0.8026723		-6.3	+/-20
Tetrachlorometaxylene	A	40.000	42.4	1.1307870	1.1991480		6.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.2	1.2696430	1.2127670		-4.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	41.7	1.0814980	1.1267660		4.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230201.b/02012309ECD7.D
Data file 2: /230201.b/230201.b/02012309ECD7.D
Method: \\target\share\chem4\ecd7.i\230201.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 01-FEB-2023 12:13
Report Date: 02/01/2023 15:25
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.002	272892	5.684	0.000	184669	42.4	41.7	1.8	Tetrachloro-m-xylene
13.890	-0.002	259695	14.118	0.000	241605	37.5	38.2	1.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	455143	-9.6
Hexabromobiphenyl	647433	647076	-0.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	327786	-2.7
Hexabromobiphenyl	382032	398436	4.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	44129	260.9	1	7.253	0.000	46959	264.1
Aroclor-1016	2	7.650	-0.001	148518	265.0	2	7.850	0.000	104948	269.4
Aroclor-1016	3	7.787	-0.001	62506	242.4	3	8.049	0.000	43838	275.7
Aroclor-1016	4	8.402	-0.002	43738	263.7	4	8.304	0.000	32826	263.4
Total Col1Ave (4 peaks):					258.0	Total Col2Ave (4 peaks):				268.2 RPD = 4
Corrected Ave (3 peaks):					255.7	Corrected Ave (3 peaks):				265.6 RPD = 4
CalAmt %D:					3.2	CalAmt %D:				7.3
Aroclor-1260	1	11.041	-0.003	87768	241.7	1	11.650	0.000	69015	240.1
Aroclor-1260	2	11.358	-0.003	88350	236.7	2	11.915	0.000	171303	235.6
Aroclor-1260	3	11.732	-0.003	218804	222.7	3	12.433	0.000	43761	241.4
Aroclor-1260	4	12.135	-0.005	106961	210.7	4	12.498	0.000	110423	234.6
Aroclor-1260	5	12.241	-0.003	43679	197.4	NS	---			----
Total Col1Ave (5 peaks):					221.9	Total Col2Ave (4 peaks):				237.9 RPD = 7
Corrected Ave (4 peaks):					216.9	Corrected Ave (3 peaks):				236.8 RPD = 9
CalAmt %D:					-11.3	CalAmt %D:				-4.8

Total PCB Area Col1 (5.909 - 13.792) = 2501590 Col1 Total PCB = 0.5 ppm*

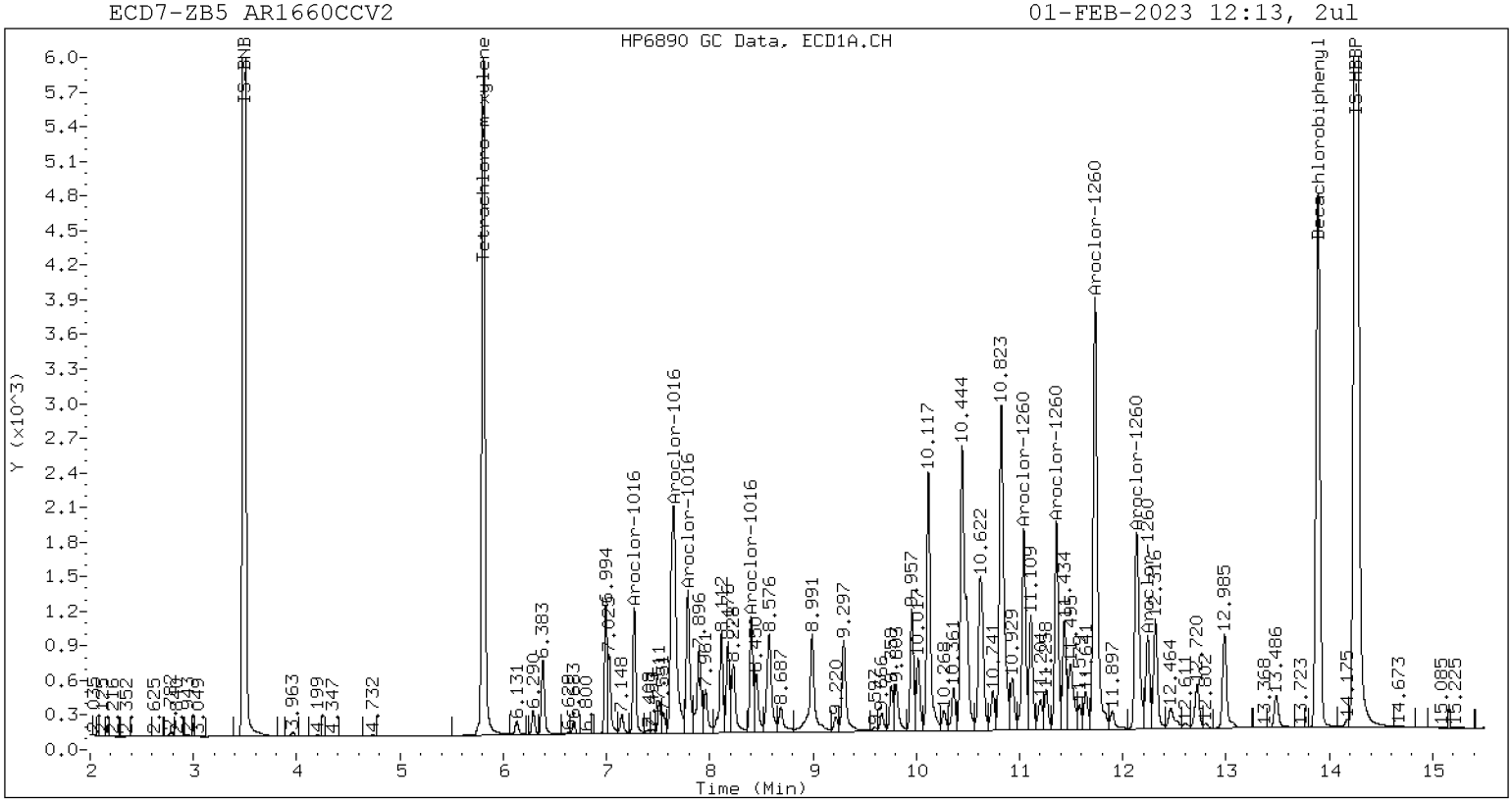
Total PCB Area Col2 (5.784 - 14.018) = 1726440 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

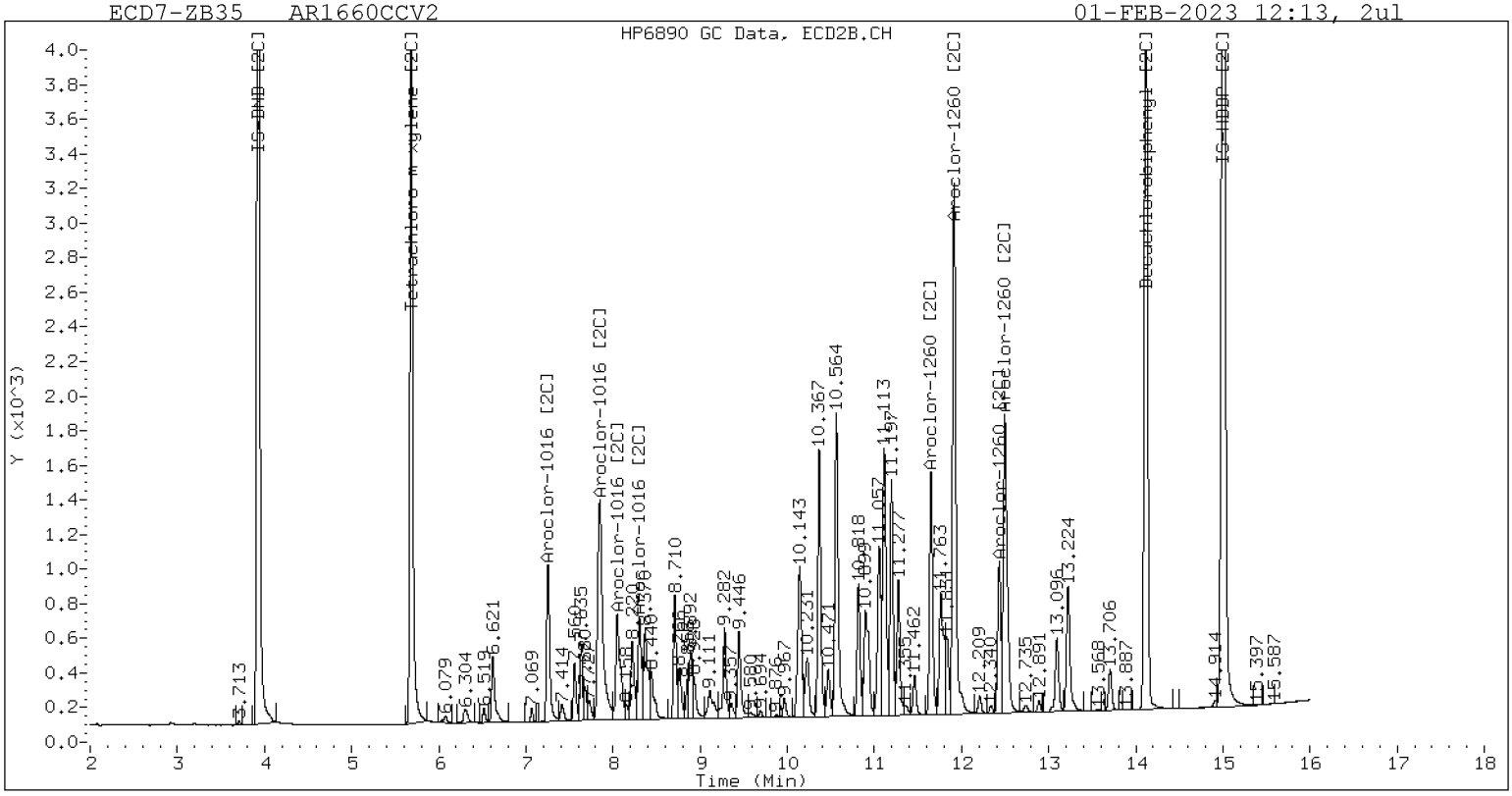
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 01-FEB-2023 12:13, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 01-FEB-2023 12:13, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02012314ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0012	Injection Date:	02/01/23
Lab Sample ID:	SLB0012-CCV3	Injection Time:	16:14
Sequence Name:	AR1242CCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	253	0.0411165	0.0416730		1.2	+/-20
Aroclor-1242 (1)	A	250.00	251		0.0245760			
Aroclor-1242 (2)	A	250.00	254		0.0814729			
Aroclor-1242 (3)	A	250.00	254		0.0242567			
Aroclor-1242 (4)	A	250.00	253		0.0363864			
Aroclor 1242 [2C]	A	250.00	259	0.0423236	0.0438853		3.6	+/-20
Aroclor-1242 (1) [2C]	A	250.00	262		0.0366541			
Aroclor-1242 (2) [2C]	A	250.00	261		0.0811628			
Aroclor-1242 (3) [2C]	A	250.00	265		0.0257839			
Aroclor-1242 (4) [2C]	A	250.00	248		0.0319406			
Decachlorobiphenyl	A	40.000	33.9	0.8555994	0.7253589		-15.3	+/-20
Tetrachlorometaxylene	A	40.000	48.5	1.1307870	1.3699850		21.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	35.6	1.2696430	1.1298110		-11.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	48.4	1.0814980	1.3077520		21.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230201.b/02012314ECD7.D
Data file 2: /230201.b/230201.b/02012314ECD7.D
Method: \\target\share\chem4\ecd7.i\230201.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV3
Client ID:
Injection Date: 01-FEB-2023 16:14
Report Date: 02/01/2023 16:40
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.002	334986	5.686	0.002	224887	48.5	48.4	0.2	Tetrachloro-m-xylene
13.890	0.000	285428	14.118	0.000	268434	33.9	35.6	4.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	489036	-2.8
Hexabromobiphenyl	647433	786998	21.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	343929	2.1
Hexabromobiphenyl	382032	475184	24.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.270	-0.001	37558	250.8	1	7.254	-0.002	39395	261.9
Aroclor-1242	2	7.652	-0.004	124510	254.1	2	7.851	-0.002	87232	261.1
Aroclor-1242	3	8.404	-0.003	37070	254.6	3	9.155	-0.004	27712	264.9
Aroclor-1242	4	8.577	-0.004	55607	252.8	4	9.582	-0.005	34329	247.6
Total Col1Ave (4 peaks):					253.1	Total Col2Ave (4 peaks):				258.9 RPD = 2
Corrected Ave (3 peaks):					252.6	Corrected Ave (3 peaks):				256.9 RPD = 2
CalAmt %D:					1.2	CalAmt %D:				3.5

Total PCB Area Col1 (5.907 - 13.790) = 928881 Col1 Total PCB = 0.2 ppm*

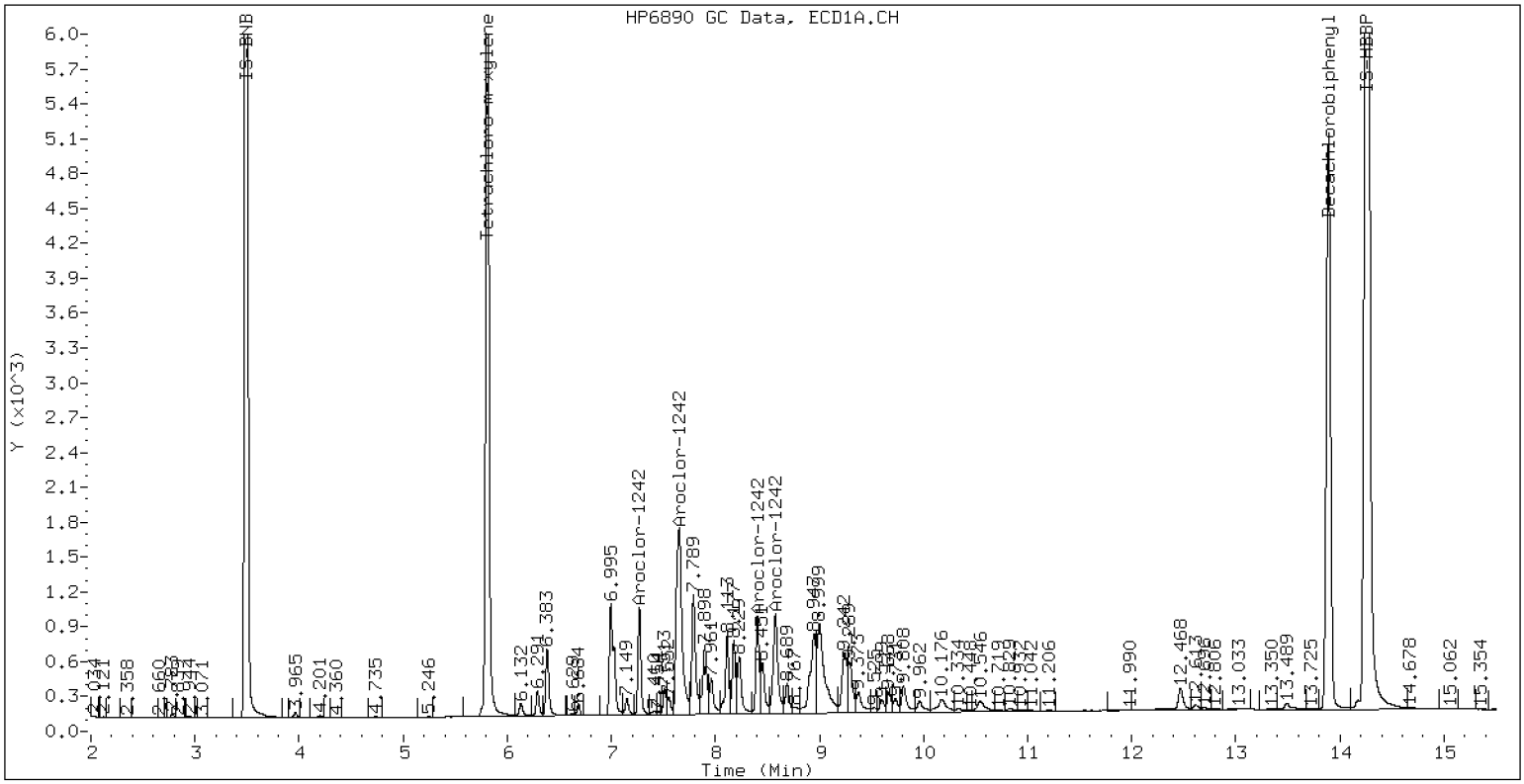
Total PCB Area Col2 (5.784 - 14.018) = 617099 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

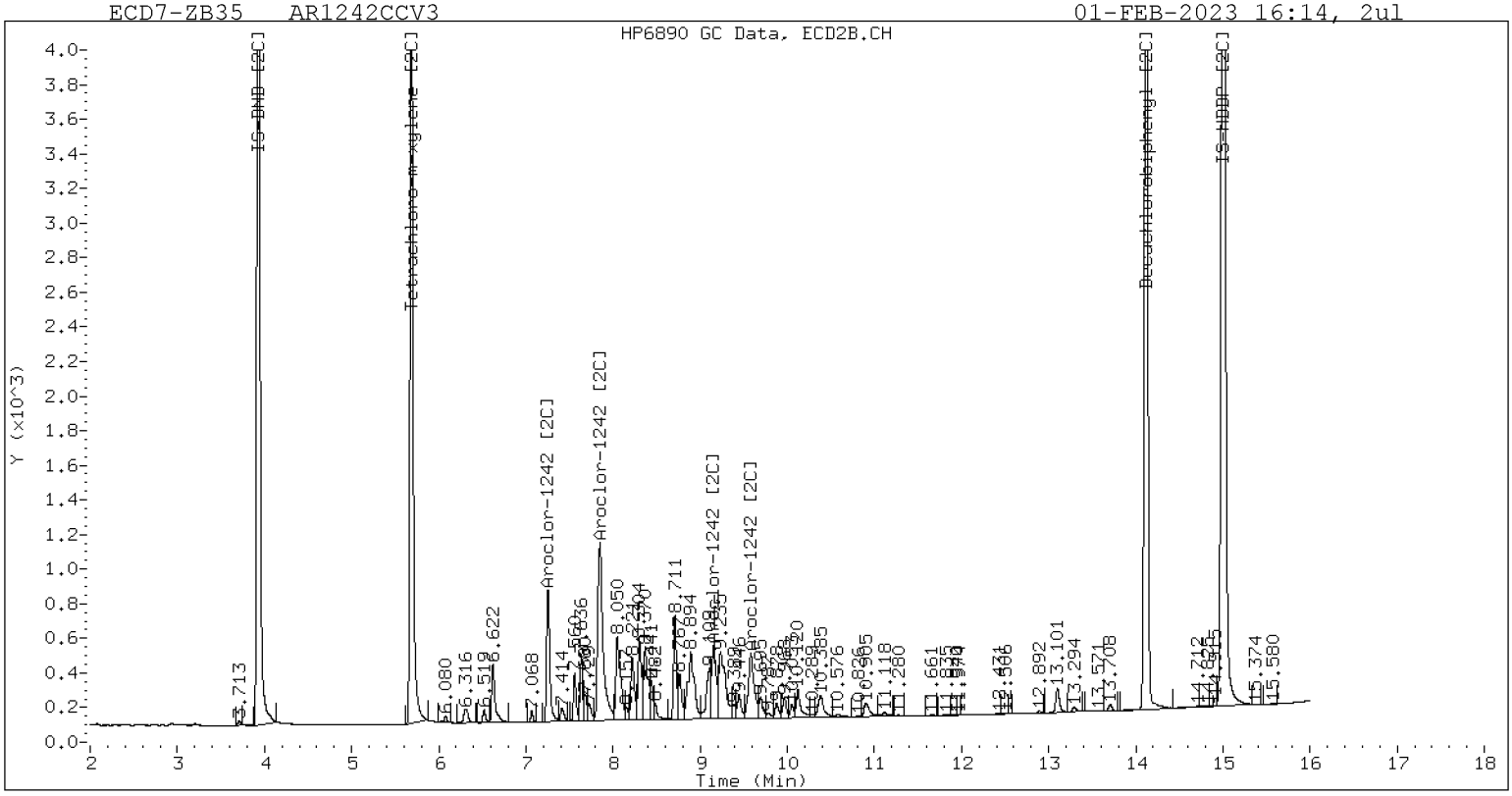
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3 01-FEB-2023 16:14, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3 01-FEB-2023 16:14, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02012315ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0012	Injection Date:	02/01/23
Lab Sample ID:	SLB0012-CCV4	Injection Time:	16:35
Sequence Name:	AR1660CCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	255	0.0506755	0.0519258		2.0	+/-20	
Aroclor-1016 (1)	A	250.00	256	0.0297277	0.0304934		2.4		
Aroclor-1016 (2)	A	250.00	261	0.0985017	0.1029785		4.4		
Aroclor-1016 (3)	A	250.00	240	0.0453193	0.0435343		-4.0		
Aroclor-1016 (4)	A	250.00	263	0.0291533	0.0306970		5.2		
Aroclor 1016 [2C]	A	250.00	268	0.0519244	0.0556422		7.0	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	262	0.0433907	0.0454292		4.8		
Aroclor-1016 (2) [2C]	A	250.00	269	0.0950862	0.1023416		7.6		
Aroclor-1016 (3) [2C]	A	250.00	274	0.0388014	0.0425671		9.6		
Aroclor-1016 (4) [2C]	A	250.00	265	0.0304194	0.0322309		6.0		
Aroclor 1260	A	250.00	193	0.0605224	0.0470129		-22.7	+/-20	*
Aroclor-1260 (1)	A	250.00	200	0.0448870	0.0358673		-20.0		
Aroclor-1260 (2)	A	250.00	200	0.0461412	0.0368356		-20.0		
Aroclor-1260 (3)	A	250.00	194	0.1214672	0.0944764		-22.4		
Aroclor-1260 (4)	A	250.00	191	0.0627593	0.0480351		-23.6		
Aroclor-1260 (5)	A	250.00	181	0.0273573	0.0198500		-27.6		
Aroclor 1260 [2C]	A	250.00	220	0.0836545	0.0732287		-12.2	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	218	0.0577136	0.0502160		-12.8		
Aroclor-1260 (2) [2C]	A	250.00	217	0.1460113	0.1269313		-13.2		
Aroclor-1260 (3) [2C]	A	250.00	222	0.0363944	0.0323127		-11.2		
Aroclor-1260 (4) [2C]	A	250.00	221	0.0944986	0.0834549		-11.6		
Decachlorobiphenyl	A	40.000	36.2	0.8555994	0.7737796		-9.5	+/-20	
Tetrachlorometaxylene	A	40.000	41.7	1.1307870	1.1790690		4.3	+/-20	
Decachlorobiphenyl [2C]	A	40.000	38.0	1.2696430	1.2055190		-5.0	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	41.5	1.0814980	1.1222090		3.8	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230201.b/02012315ECD7.D
Data file 2: /230201.b/230201.b/02012315ECD7.D
Method: \\target\share\chem4\ecd7.i\230201.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV4
Client ID:
Injection Date: 01-FEB-2023 16:35
Report Date: 02/01/2023 16:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.001	284461	5.685	0.001	190651	41.7	41.5	0.5	Tetrachloro-m-xylene
13.891	0.001	337660	14.117	-0.001	294034	36.2	38.0	4.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	482518	-4.1
Hexabromobiphenyl	647433	872755	34.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	339778	0.9
Hexabromobiphenyl	382032	487813	27.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	0.001	45980	256.4	1	7.254	0.001	48237	261.7
Aroclor-1016	2	7.652	0.002	155278	261.4	2	7.850	0.000	108667	269.1
Aroclor-1016	3	7.788	0.001	65644	240.2	3	8.049	0.000	45198	274.3
Aroclor-1016	4	8.403	0.001	46287	263.2	4	8.304	0.000	34223	264.9
Total Col1Ave (4 peaks):					255.3	Total Col2Ave (4 peaks):				267.5 RPD = 5
Corrected Ave (3 peaks):					252.7	Corrected Ave (3 peaks):				265.2 RPD = 5
CalAmt %D:					2.1	CalAmt %D:				7.0
Aroclor-1260	1	11.042	0.001	97823	199.8	1	11.651	0.000	76550	217.5
Aroclor-1260	2	11.358	0.001	100464	199.6	2	11.915	0.000	193496	217.3
Aroclor-1260	3	11.731	-0.000	257671	194.4	3	12.432	-0.001	49258	222.0
Aroclor-1260	4	12.136	0.002	131009	191.3	4	12.498	0.000	127220	220.8
Aroclor-1260	5	12.242	0.001	54138	181.4	NS	---			----
Total Col1Ave (5 peaks):					193.3	Total Col2Ave (4 peaks):				219.4 RPD = 13
Corrected Ave (4 peaks):					191.7	Corrected Ave (3 peaks):				218.5 RPD = 13
CalAmt %D:					-22.7	CalAmt %D:				-12.2

Total PCB Area Col1 (5.907 - 13.790) = 2775692 Col1 Total PCB = 0.5 ppm*

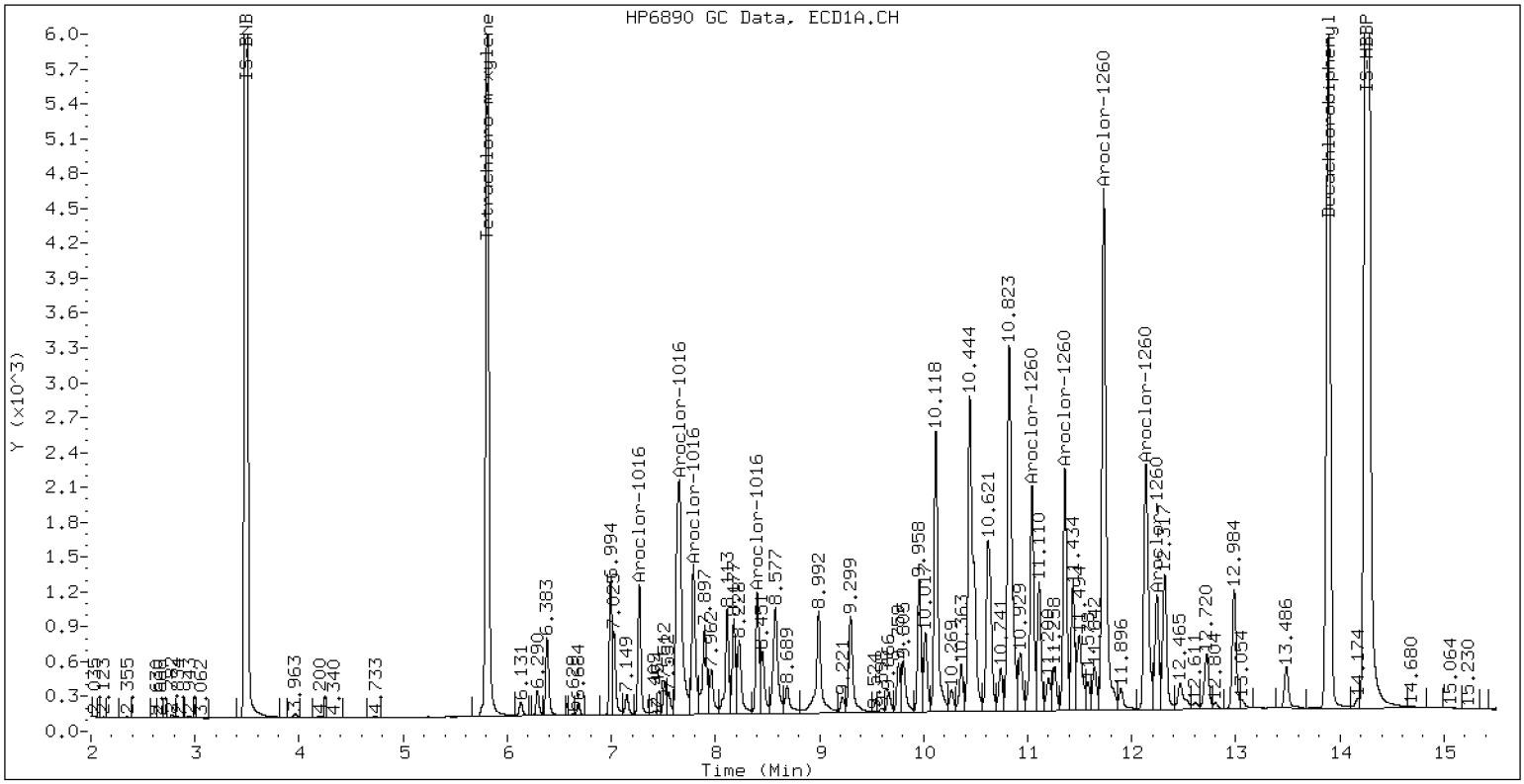
Total PCB Area Col2 (5.784 - 14.018) = 1880561 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

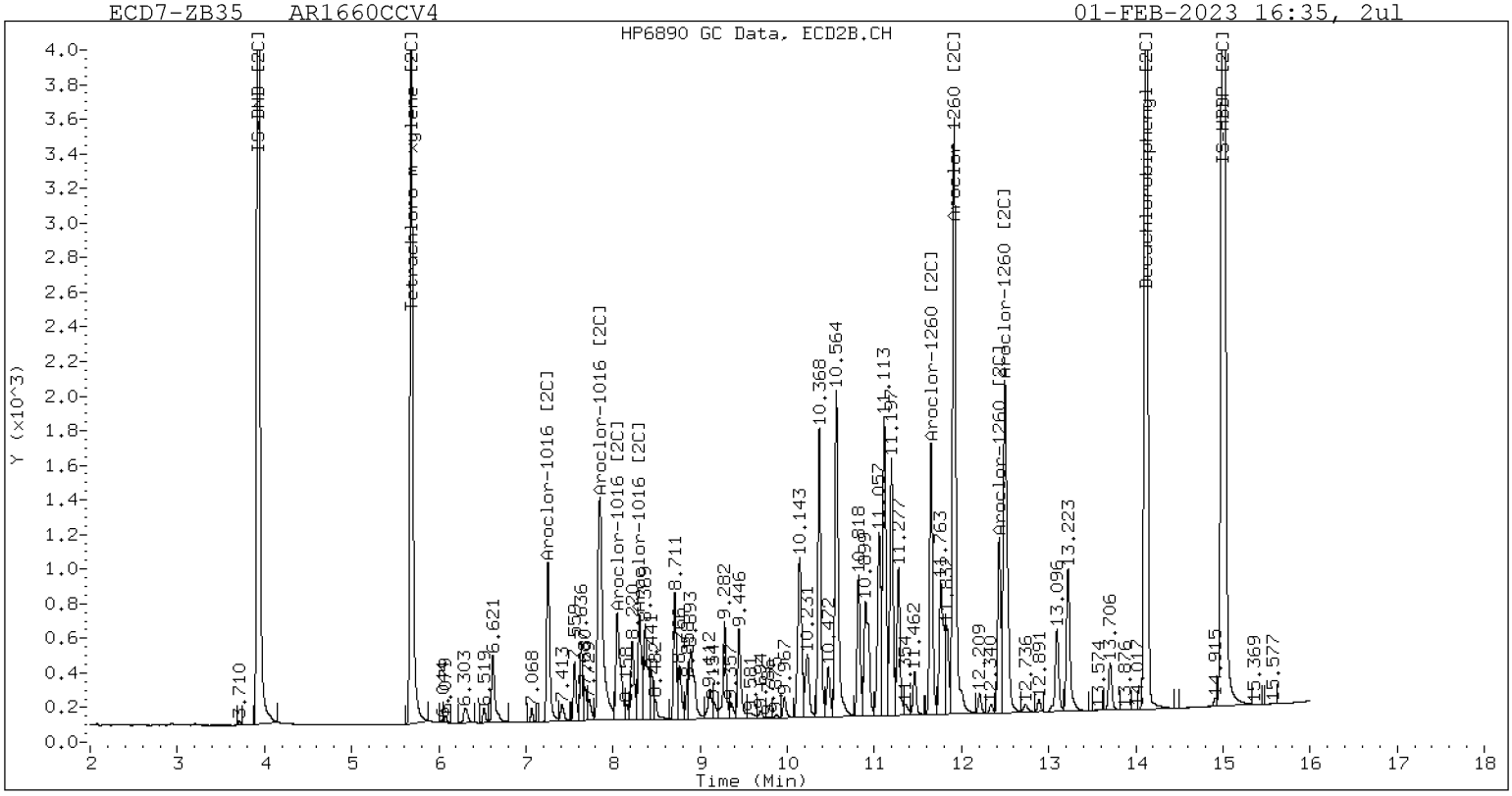
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4 01-FEB-2023 16:35, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV4 01-FEB-2023 16:35, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02012326ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0012	Injection Date:	02/01/23
Lab Sample ID:	SLB0012-CCV5	Injection Time:	20:26
Sequence Name:	AR1254CCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	195	0.0675033	0.0530650		-21.8	+/-20 *
Aroclor-1254 (1)	A	250.00	203		0.0661095			
Aroclor-1254 (2)	A	250.00	188		0.0262285			
Aroclor-1254 (3)	A	250.00	198		0.0414359			
Aroclor-1254 (4)	A	250.00	198		0.0810067			
Aroclor-1254 (5)	A	250.00	190		0.0505443			
Aroclor 1254 [2C]	A	250.00	212	0.0733219	0.0620571		-15.4	+/-20
Aroclor-1254 (1) [2C]	A	250.00	229		0.0531171			
Aroclor-1254 (2) [2C]	A	250.00	224		0.0419794			
Aroclor-1254 (3) [2C]	A	250.00	211		0.0865402			
Aroclor-1254 (4) [2C]	A	250.00	214		0.0875952			
Aroclor-1254 (5) [2C]	A	250.00	180		0.0410535			
Decachlorobiphenyl	A	40.000	35.3	0.8555994	0.7549823		-11.8	+/-20
Tetrachlorometaxylene	A	40.000	38.8	1.1307870	1.0980720		-3.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.6	1.2696430	1.1631720		-8.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.8	1.0814980	1.0759940		-0.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230201.b/02012326ECD7.D
Data file 2: /230201.b/230201.b/02012326ECD7.D
Method: \\target\share\chem4\ecd7.i\230201.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCV5
Client ID:
Injection Date: 01-FEB-2023 20:26
Report Date: 02/02/2023 09:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.000	262253	5.684	0.000	186679	38.8	39.8	2.4	Tetrachloro-m-xylene
13.889	-0.001	159507	14.116	-0.000	180572	35.3	36.6	3.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	477661	-5.1
Hexabromobiphenyl	647433	422545	-34.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	346989	3.0
Hexabromobiphenyl	382032	310482	-18.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.294	-0.002	98681	202.7	1	9.444	0.000	57597	228.8
Aroclor-1254	2	9.371	-0.001	39151	188.4	2	9.964	0.000	45520	223.7
Aroclor-1254	3	9.663	-0.000	61851	198.3	3	10.115	0.000	93839	211.4
Aroclor-1254	4	9.800	-0.002	120918	197.8	4	10.365	0.000	94983	214.0
Aroclor-1254	5	10.162	-0.001	75447	189.8	5	10.563	0.000	44516	180.1

Total Col1Ave (5 peaks): 195.4 Total Col2Ave (5 peaks): 211.6 RPD = 8

Corrected Ave (4 peaks): 193.6 Corrected Ave (4 peaks): 207.3 RPD = 7

CalAmt %D: -21.8 CalAmt %D: -15.4

Total PCB Area Col1 (5.907 - 13.790) = 1195900 Col1 Total PCB = 0.2 ppm*

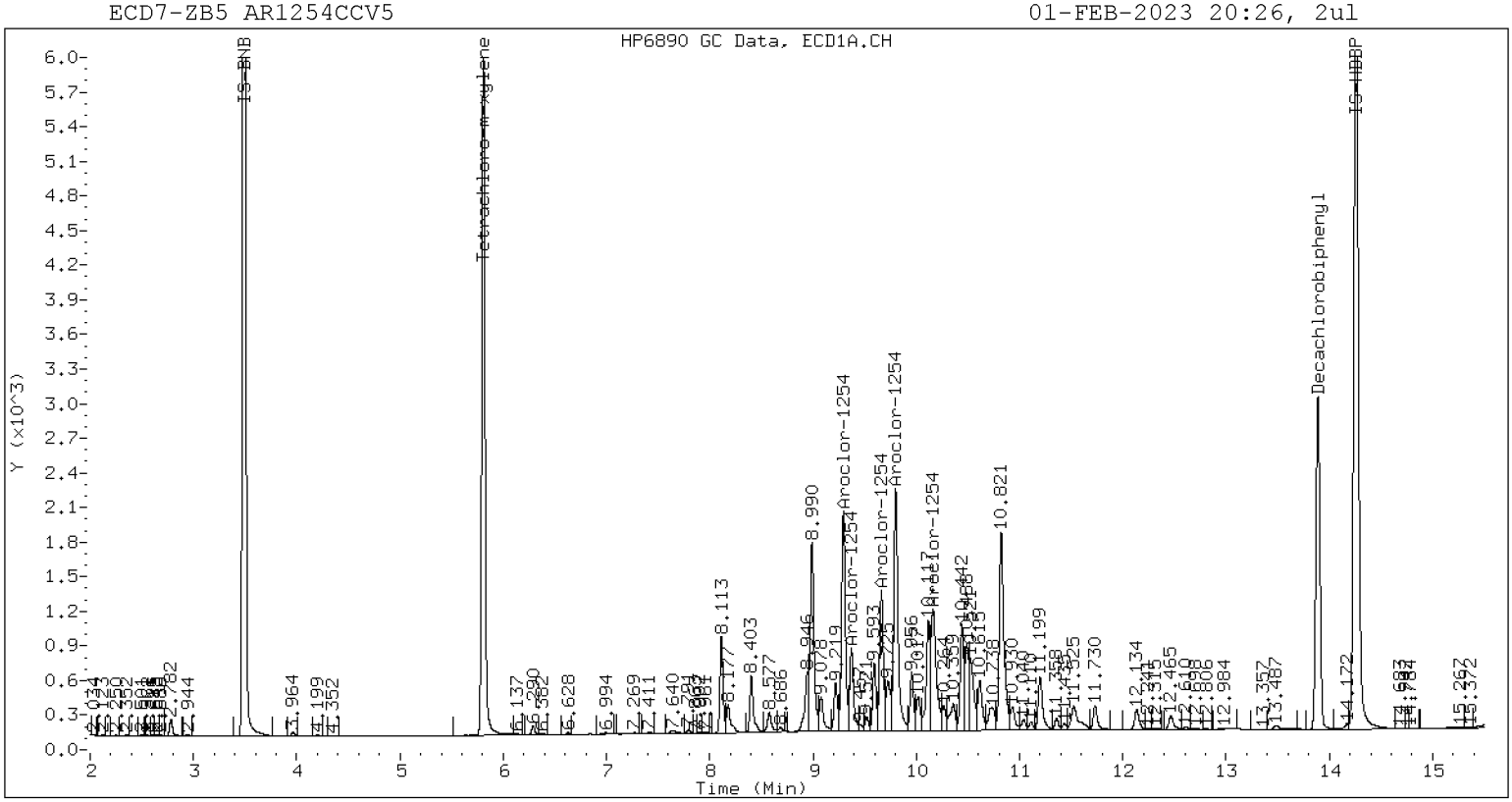
Total PCB Area Col2 (5.784 - 14.016) = 903510 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

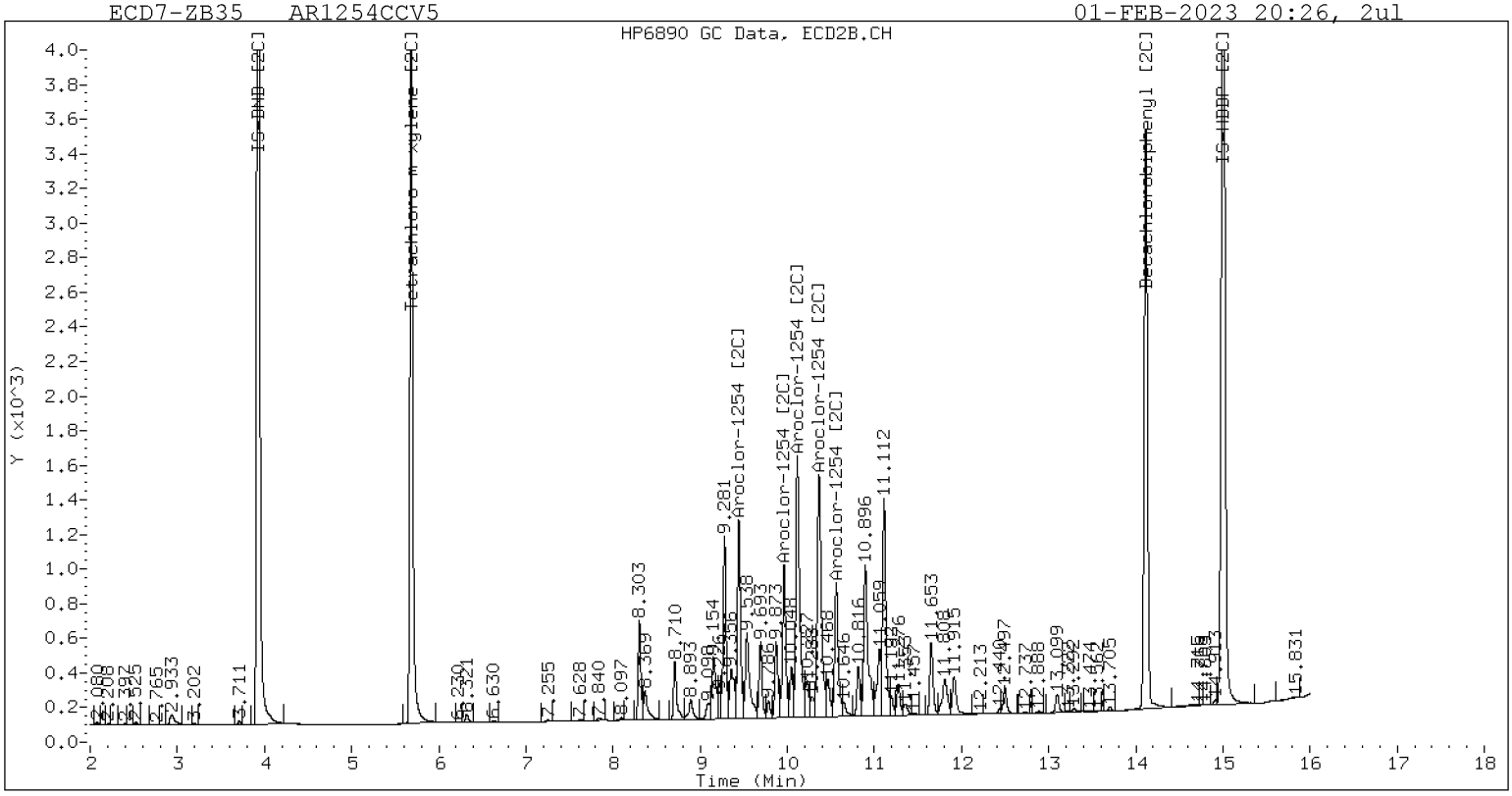
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5 01-FEB-2023 20:26, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCV5 01-FEB-2023 20:26, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02012327ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0012	Injection Date:	02/01/23
Lab Sample ID:	SLB0012-CCV6	Injection Time:	20:47
Sequence Name:	AR1660CCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	253	0.0506755	0.0515784		1.2	+/-20
Aroclor-1016 (1)	A	250.00	257	0.0297277	0.0305865		2.8	
Aroclor-1016 (2)	A	250.00	260	0.0985017	0.1026277		4.0	
Aroclor-1016 (3)	A	250.00	237	0.0453193	0.0429767		-5.2	
Aroclor-1016 (4)	A	250.00	258	0.0291533	0.0301226		3.2	
Aroclor 1016 [2C]	A	250.00	267	0.0519244	0.0557193		6.9	+/-20
Aroclor-1016 (1) [2C]	A	250.00	264	0.0433907	0.0458718		5.6	
Aroclor-1016 (2) [2C]	A	250.00	269	0.0950862	0.1024844		7.6	
Aroclor-1016 (3) [2C]	A	250.00	275	0.0388014	0.0427490		10.0	
Aroclor-1016 (4) [2C]	A	250.00	261	0.0304194	0.0317720		4.4	
Aroclor 1260	A	250.00	254	0.0605224	0.0617266		1.8	+/-20
Aroclor-1260 (1)	A	250.00	276	0.0448870	0.0494995		10.4	
Aroclor-1260 (2)	A	250.00	268	0.0461412	0.0494231		7.2	
Aroclor-1260 (3)	A	250.00	254	0.1214672	0.1231755		1.6	
Aroclor-1260 (4)	A	250.00	244	0.0627593	0.0613724		-2.4	
Aroclor-1260 (5)	A	250.00	230	0.0273573	0.0251627		-8.0	
Aroclor 1260 [2C]	A	250.00	252	0.0836545	0.0837736		0.7	+/-20
Aroclor-1260 (1) [2C]	A	250.00	256	0.0577136	0.0590023		2.4	
Aroclor-1260 (2) [2C]	A	250.00	251	0.1460113	0.1465426		0.4	
Aroclor-1260 (3) [2C]	A	250.00	256	0.0363944	0.0372023		2.4	
Aroclor-1260 (4) [2C]	A	250.00	244	0.0944986	0.0923473		-2.4	
Decachlorobiphenyl	A	40.000	38.7	0.8555994	0.8282077		-3.3	+/-20
Tetrachlorometaxylene	A	40.000	41.9	1.1307870	1.1835120		4.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.4	1.2696430	1.2184740		-4.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	41.7	1.0814980	1.1280500		4.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230201.b/02012327ECD7.D
Data file 2: /230201.b/230201.b/02012327ECD7.D
Method: \\target\share\chem4\ecd7.i\230201.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV6
Client ID:
Injection Date: 01-FEB-2023 20:47
Report Date: 02/02/2023 09:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.001	275940	5.685	0.000	191077	41.9	41.7	0.3	Tetrachloro-m-xylene
13.890	-0.000	211646	14.117	0.001	215963	38.7	38.4	0.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	466307	-7.4
Hexabromobiphenyl	647433	511094	-21.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	338774	0.6
Hexabromobiphenyl	382032	354481	-7.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	44571	257.2	1	7.253	-0.000	48563	264.3
Aroclor-1016	2	7.650	0.000	149550	260.5	2	7.849	-0.000	108497	269.5
Aroclor-1016	3	7.787	-0.000	62626	237.1	3	8.049	0.000	45257	275.4
Aroclor-1016	4	8.402	0.000	43895	258.3	4	8.303	-0.000	33636	261.1
Total Col1Ave (4 peaks):					253.3	Total Col2Ave (4 peaks):				267.6 RPD = 5
Corrected Ave (3 peaks):					250.9	Corrected Ave (3 peaks):				265.0 RPD = 5
CalAmt %D:					1.3	CalAmt %D:				7.0
Aroclor-1260	1	11.041	0.000	79059	275.7	1	11.650	0.001	65360	255.6
Aroclor-1260	2	11.357	-0.000	78937	267.8	2	11.914	0.001	162333	250.9
Aroclor-1260	3	11.730	-0.001	196732	253.5	3	12.433	0.001	41211	255.5
Aroclor-1260	4	12.135	-0.000	98022	244.5	4	12.497	-0.001	102298	244.3
Aroclor-1260	5	12.240	-0.001	40189	229.9	NS	---			----
Total Col1Ave (5 peaks):					254.3	Total Col2Ave (4 peaks):				251.6 RPD = 1
Corrected Ave (4 peaks):					248.9	Corrected Ave (3 peaks):				250.3 RPD = 1
CalAmt %D:					1.7	CalAmt %D:				0.6

Total PCB Area Col1 (5.907 - 13.790) = 2367582 Col1 Total PCB = 0.4 ppm*

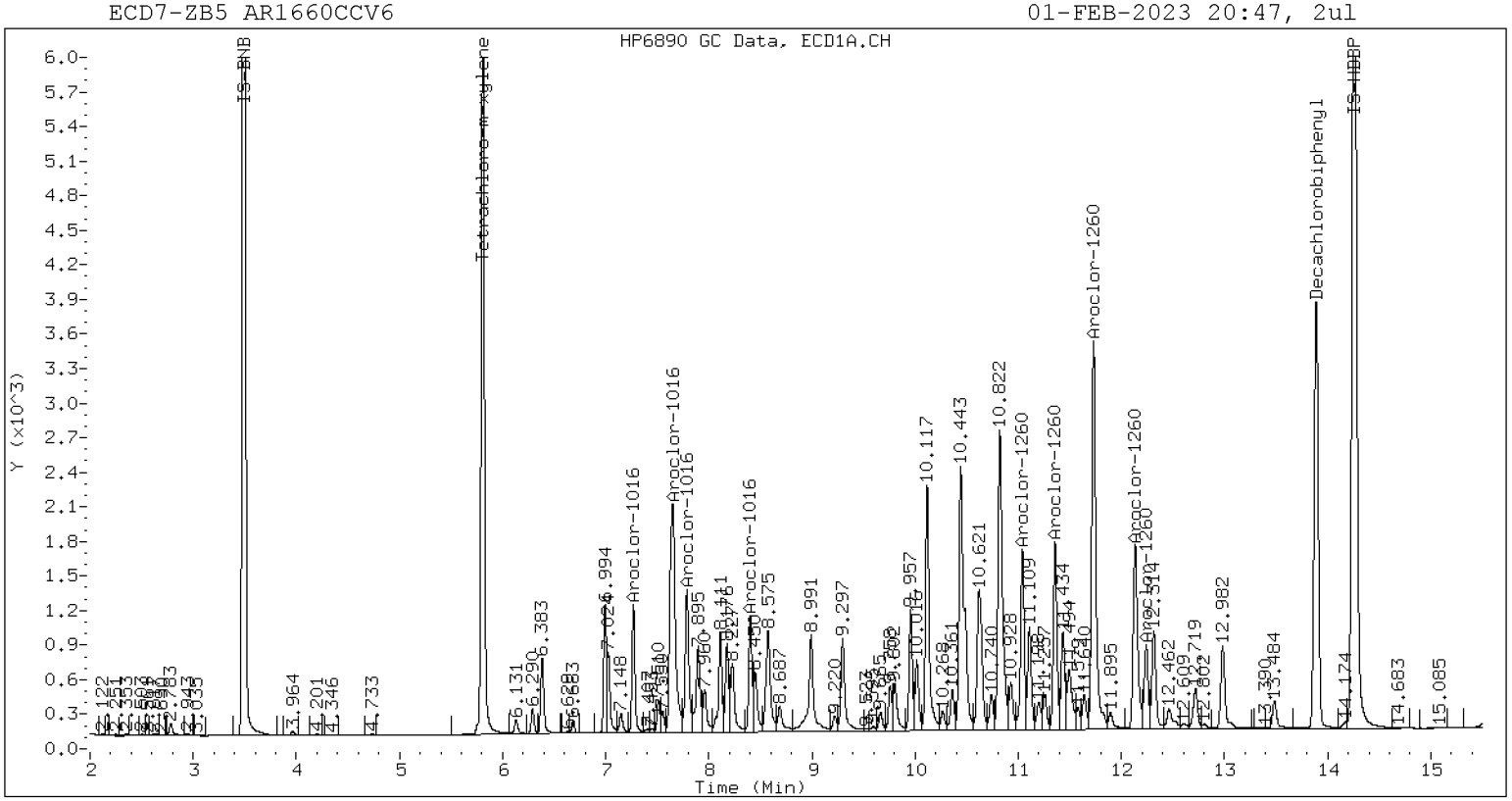
Total PCB Area Col2 (5.784 - 14.016) = 1691120 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

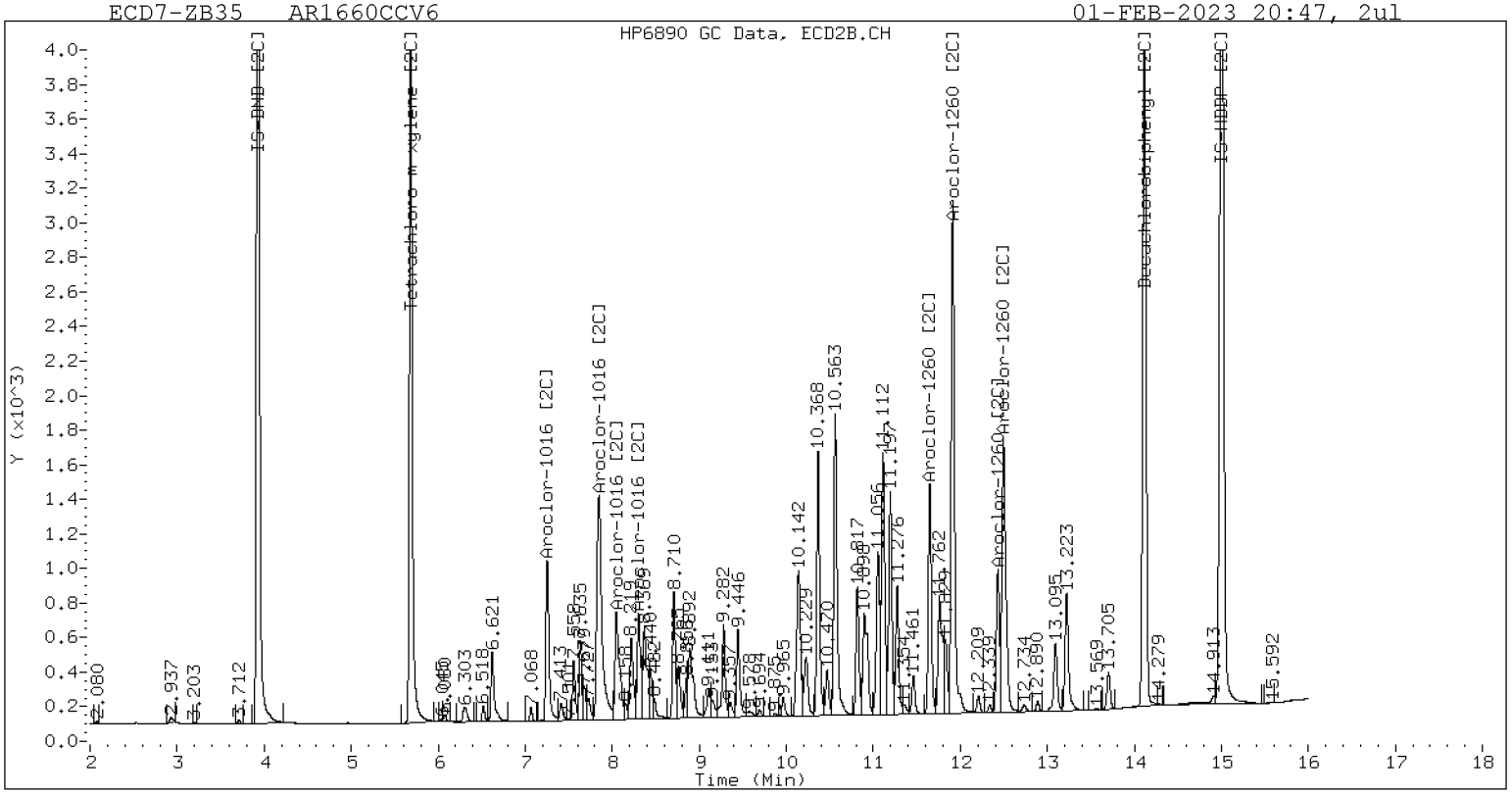
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6 01-FEB-2023 20:47, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6 01-FEB-2023 20:47, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02012336ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0012	Injection Date:	02/01/23
Lab Sample ID:	SLB0012-CCV7	Injection Time:	23:56
Sequence Name:	AR1248CCV7		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	180	0.0592639	0.0407470		-27.9	+/-20 *
Aroclor-1248 (1)	A	250.00	213		0.0341619			
Aroclor-1248 (2)	A	250.00	208		0.0424708			
Aroclor-1248 (3)	A	250.00	144		0.0560997			
Aroclor-1248 (4)	A	250.00	156		0.0302555			
Aroclor 1248 [2C]	A	250.00	221	0.0453673	0.0399145		-11.5	+/-20
Aroclor-1248 (1) [2C]	A	250.00	231		0.0334518			
Aroclor-1248 (2) [2C]	A	250.00	222		0.0345363			
Aroclor-1248 (3) [2C]	A	250.00	221		0.0420586			
Aroclor-1248 (4) [2C]	A	250.00	211		0.0496114			
Decachlorobiphenyl	A	40.000	34.8	0.8555994	0.7446385		-13.0	+/-20
Tetrachlorometaxylene	A	40.000	37.7	1.1307870	1.0656700		-5.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.8	1.2696430	1.1682520		-8.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.2	1.0814980	1.0609670		-2.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230201.b/02012336ECD7.D
Data file 2: /230201.b/230201.b/02012336ECD7.D
Method: \\target\share\chem4\ecd7.i\230201.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV7
Client ID:
Injection Date: 01-FEB-2023 23:56
Report Date: 02/02/2023 09:54
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.000	252203	5.684	-0.001	183447	37.7	39.2	4.0	Tetrachloro-m-xylene
13.890	-0.000	130276	14.117	0.001	158700	34.8	36.8	5.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	473323	-6.0
Hexabromobiphenyl	647433	349904	-46.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	345811	2.6
Hexabromobiphenyl	382032	271688	-28.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.401	-0.001	50530	213.4	1	8.303	0.000	36150	231.3
Aroclor-1248	2	8.574	-0.002	62820	208.0	2	8.710	0.000	37322	221.8
Aroclor-1248	3	8.994	-0.001	82979	143.6	3	9.153	0.000	45451	221.1
Aroclor-1248	4	9.290	-0.001	44752	156.5	4	9.576	0.000	53613	210.9
Total Col1Ave (4 peaks):					180.4	Total Col2Ave (4 peaks):				221.3 RPD = 20
Corrected Ave (3 peaks):					169.4	Corrected Ave (3 peaks):				217.9 RPD = 25
CalAmt %D:					-27.8	CalAmt %D:				-11.5

Total PCB Area Col1 (5.907 - 13.790) = 932013 Col1 Total PCB = 0.2 ppm*

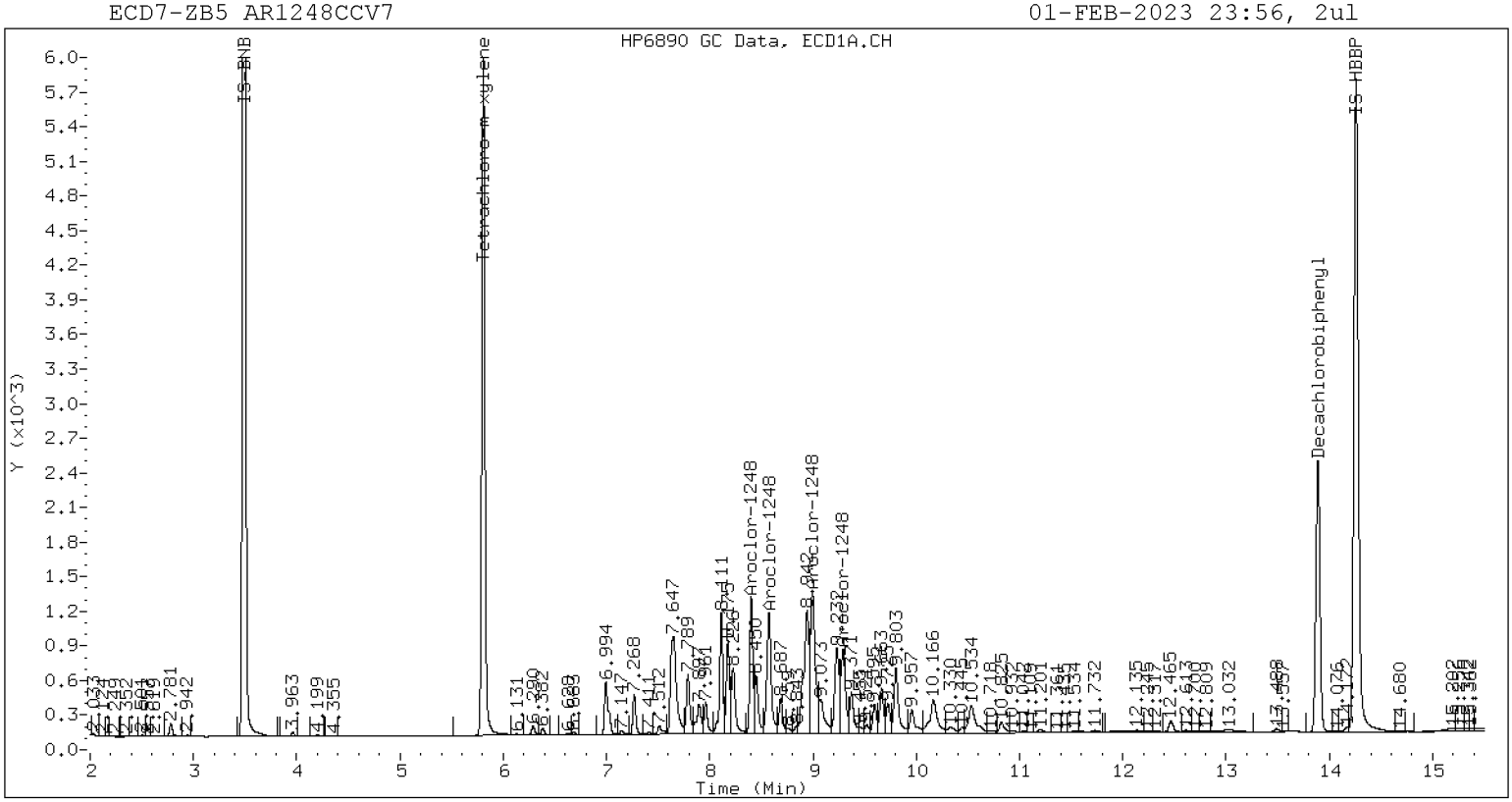
Total PCB Area Col2 (5.784 - 14.016) = 698365 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

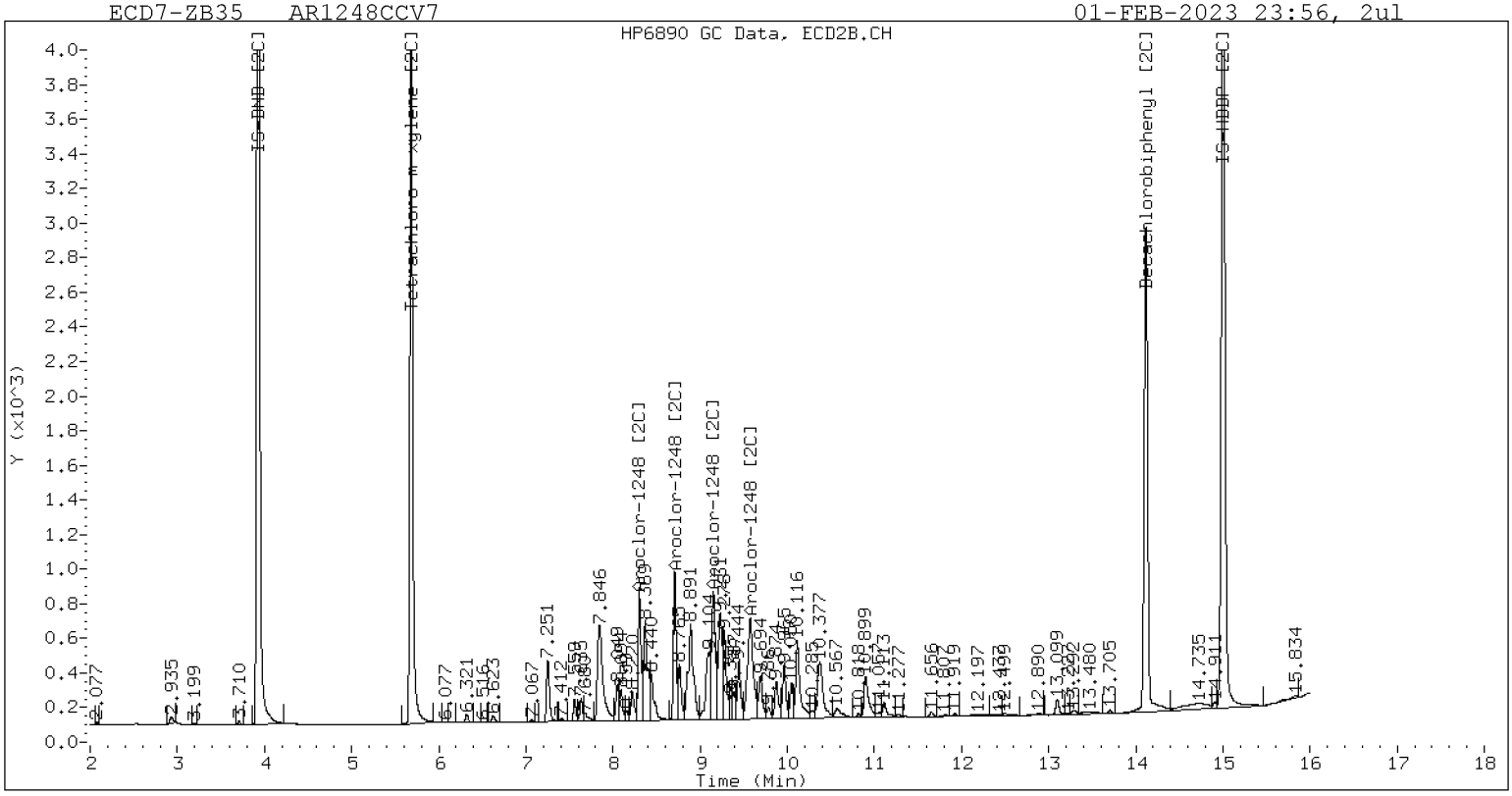
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV7 01-FEB-2023 23:56, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV7 01-FEB-2023 23:56, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02012337ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0012	Injection Date:	02/02/23
Lab Sample ID:	SLB0012-CCV8	Injection Time:	00:17
Sequence Name:	AR1660CCV8		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	249	0.0506755	0.0506814		-0.4	+/-20
Aroclor-1016 (1)	A	250.00	254	0.0297277	0.0302097		1.6	
Aroclor-1016 (2)	A	250.00	256	0.0985017	0.1008198		2.4	
Aroclor-1016 (3)	A	250.00	232	0.0453193	0.0420331		-7.2	
Aroclor-1016 (4)	A	250.00	254	0.0291533	0.0296629		1.6	
Aroclor 1016 [2C]	A	250.00	262	0.0519244	0.0546185		4.9	+/-20
Aroclor-1016 (1) [2C]	A	250.00	261	0.0433907	0.0452941		4.4	
Aroclor-1016 (2) [2C]	A	250.00	264	0.0950862	0.1004994		5.6	
Aroclor-1016 (3) [2C]	A	250.00	268	0.0388014	0.0415848		7.2	
Aroclor-1016 (4) [2C]	A	250.00	256	0.0304194	0.0310956		2.4	
Aroclor 1260	A	250.00	261	0.0605224	0.0632861		4.4	+/-20
Aroclor-1260 (1)	A	250.00	293	0.0448870	0.0525837		17.2	
Aroclor-1260 (2)	A	250.00	281	0.0461412	0.0518073		12.4	
Aroclor-1260 (3)	A	250.00	259	0.1214672	0.1257458		3.6	
Aroclor-1260 (4)	A	250.00	244	0.0627593	0.0613174		-2.4	
Aroclor-1260 (5)	A	250.00	228	0.0273573	0.0249763		-8.8	
Aroclor 1260 [2C]	A	250.00	264	0.0836545	0.0878943		5.6	+/-20
Aroclor-1260 (1) [2C]	A	250.00	270	0.0577136	0.0624670		8.0	
Aroclor-1260 (2) [2C]	A	250.00	262	0.1460113	0.1532333		4.8	
Aroclor-1260 (3) [2C]	A	250.00	268	0.0363944	0.0390727		7.2	
Aroclor-1260 (4) [2C]	A	250.00	256	0.0944986	0.0968042		2.4	
Decachlorobiphenyl	A	40.000	38.6	0.8555994	0.8263913		-3.5	+/-20
Tetrachlorometaxylene	A	40.000	42.0	1.1307870	1.1860400		5.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.8	1.2696430	1.2313120		-3.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.0	1.0814980	1.1344420		5.0	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230201.b/02012337ECD7.D
Data file 2: /230201.b/230201.b/02012337ECD7.D
Method: \\target\share\chem4\ecd7.i\230201.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV8
Client ID:
Injection Date: 02-FEB-2023 00:17
Report Date: 02/02/2023 09:54
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.000	274168	5.684	0.000	192166	42.0	42.0	0.0	Tetrachloro-m-xylene
13.890	-0.000	180507	14.116	0.000	194077	38.6	38.8	0.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	462325	-8.1
Hexabromobiphenyl	647433	436856	-32.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	338785	0.6
Hexabromobiphenyl	382032	315236	-17.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	43646	254.1	1	7.253	0.000	47953	261.0
Aroclor-1016	2	7.650	-0.000	145661	255.9	2	7.849	0.000	106399	264.2
Aroclor-1016	3	7.787	-0.001	60728	231.9	3	8.049	0.000	44026	267.9
Aroclor-1016	4	8.402	-0.000	42856	254.4	4	8.303	0.000	32921	255.6
Total Col1Ave (4 peaks):					249.0	Total Col2Ave (4 peaks):				262.2 RPD = 5
Corrected Ave (3 peaks):					246.8	Corrected Ave (3 peaks):				260.3 RPD = 5
CalAmt %D:					-0.4	CalAmt %D:				4.9
Aroclor-1260	1	11.040	-0.000	71786	292.9	1	11.649	0.000	61537	270.6
Aroclor-1260	2	11.357	-0.000	70726	280.7	2	11.913	0.000	150952	262.4
Aroclor-1260	3	11.731	-0.001	171665	258.8	3	12.432	0.000	38491	268.4
Aroclor-1260	4	12.134	-0.001	83709	244.3	4	12.497	0.000	95363	256.1
Aroclor-1260	5	12.241	-0.001	34097	228.2	NS	---			----
Total Col1Ave (5 peaks):					261.0	Total Col2Ave (4 peaks):				264.4 RPD = 1
Corrected Ave (4 peaks):					253.0	Corrected Ave (3 peaks):				262.3 RPD = 4
CalAmt %D:					4.4	CalAmt %D:				5.7

Total PCB Area Col1 (5.907 - 13.790) = 2196626 Col1 Total PCB = 0.4 ppm*

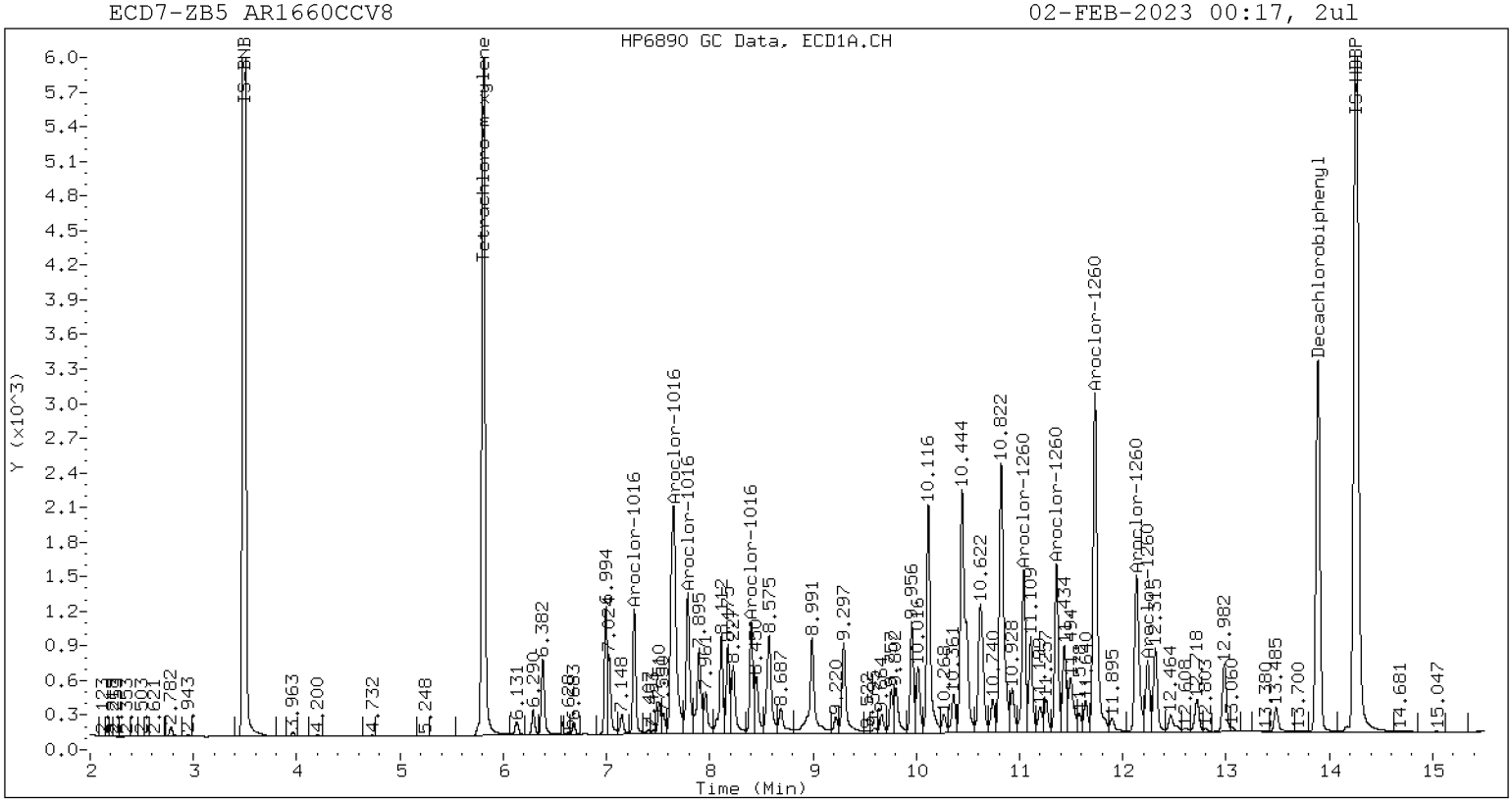
Total PCB Area Col2 (5.784 - 14.016) = 1616114 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

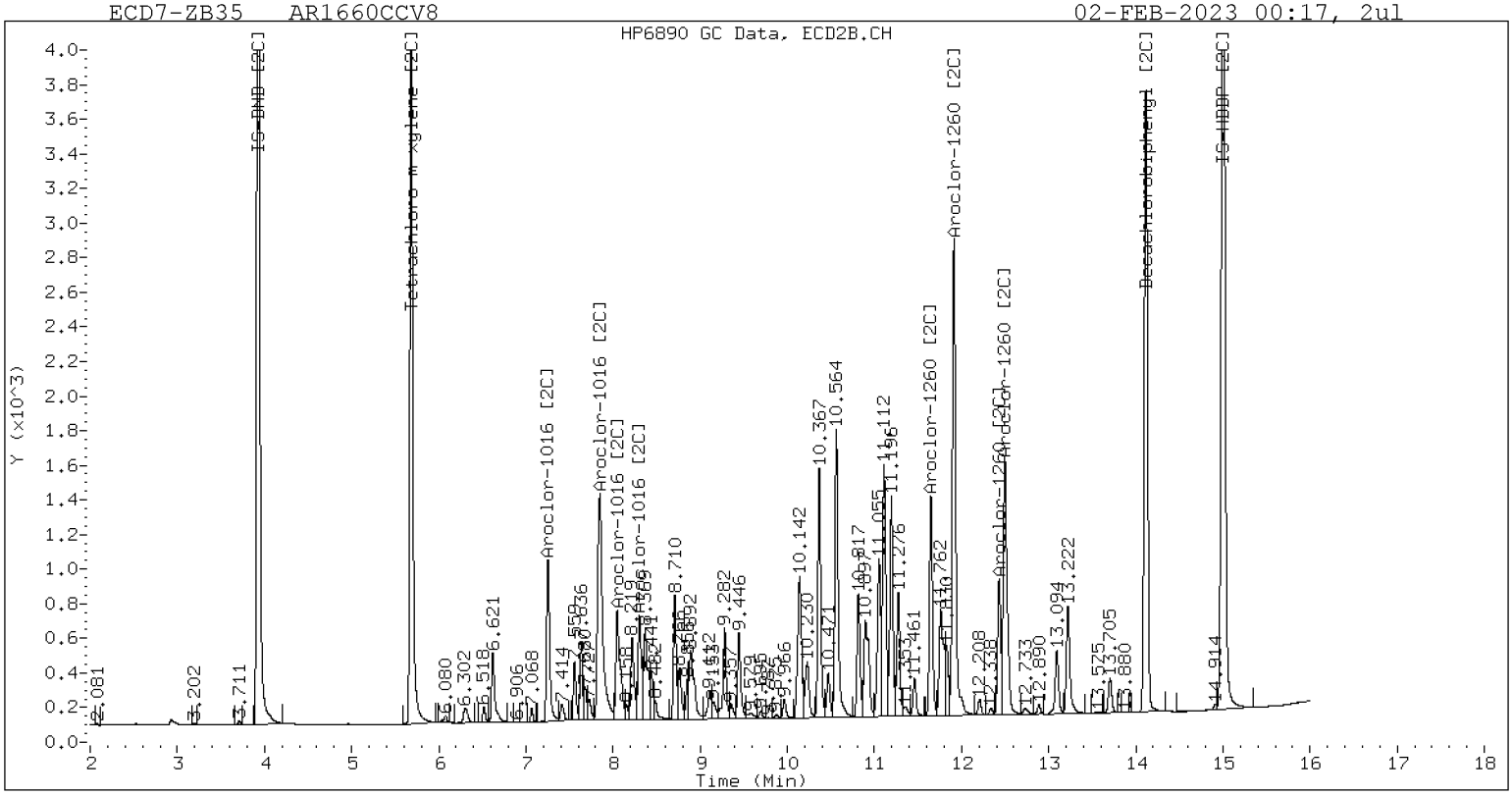
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV8 02-FEB-2023 00:17, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV8 02-FEB-2023 00:17, 2ul



ZB-35 Manual Integration: NO

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLA0281	Instrument:	ECD7
		Calibration:	GA00061

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Cal Standard	SLA0281-CAL1	01242313ECD7.D	01242313ECD7.D	NA	01/24/23 16:00
Cal Standard	SLA0281-CAL2	01242314ECD7.D	01242314ECD7.D	NA	01/24/23 16:21
Cal Standard	SLA0281-CAL3	01242315ECD7.D	01242315ECD7.D	NA	01/24/23 16:42
Cal Standard	SLA0281-CAL4	01242316ECD7.D	01242316ECD7.D	NA	01/24/23 17:03
Cal Standard	SLA0281-CAL5	01242317ECD7.D	01242317ECD7.D	NA	01/24/23 17:24
Cal Standard	SLA0281-CAL6	01242318ECD7.D	01242318ECD7.D	NA	01/24/23 17:45
Cal Standard	SLA0281-CAL7	01242319ECD7.D	01242319ECD7.D	NA	01/24/23 18:06
Cal Standard	SLA0281-CAL8	01242320ECD7.D	01242320ECD7.D	NA	01/24/23 18:27
Cal Standard	SLA0281-CAL9	01242321ECD7.D	01242321ECD7.D	NA	01/24/23 18:48
Cal Standard	SLA0281-CALA	01242322ECD7.D	01242322ECD7.D	NA	01/24/23 19:09
Cal Standard	SLA0281-CALB	01242323ECD7.D	01242323ECD7.D	NA	01/24/23 19:30
Secondary Cal Check	SLA0281-SCV1	01242324ECD7.D	01242324ECD7.D	NA	01/24/23 19:51
Secondary Cal Check	SLA0281-SCV2	01242325ECD7.D	01242325ECD7.D	NA	01/24/23 20:12
Secondary Cal Check	SLA0281-SCV3	01242326ECD7.D	01242326ECD7.D	NA	01/24/23 20:33
Secondary Cal Check	SLA0281-SCV4	01242327ECD7.D	01242327ECD7.D	NA	01/24/23 20:54
Secondary Cal Check	SLA0281-SCV5	01242328ECD7.D	01242328ECD7.D	NA	01/24/23 21:15
Secondary Cal Check	SLA0281-SCV6	01242329ECD7.D	01242329ECD7.D	NA	01/24/23 21:36

Security Status Report

Date: 26-Jan-2023 15:41

01242330ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242331ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242332ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242333ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242334ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242335ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242336ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242337ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242338ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242339ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242340ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242341ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242342ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
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01242344ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
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01242391ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLA0350	Instrument:	ECD7
		Calibration:	GA00061

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLA0350-ICV1	01312302ECD7.D	01312302ECD7.D	NA	01/31/23 09:56
Initial Cal Check	SLA0350-ICV2	01312303ECD7.D	01312303ECD7.D	NA	01/31/23 10:17
Calibration Check	SLA0350-CCV1	01312313ECD7.D	01312313ECD7.D	NA	01/31/23 13:48
Calibration Check	SLA0350-CCV2	01312314ECD7.D	01312314ECD7.D	NA	01/31/23 14:09
Blank	BLA0394-BLK1	01312315ECD7.D	01312315ECD7.D	Solid	01/31/23 14:30
LCS	BLA0394-BS1	01312316ECD7.D	01312316ECD7.D	Solid	01/31/23 14:51
LCS Dup	BLA0394-BSD1	01312317ECD7.D	01312317ECD7.D	Solid	01/31/23 15:12
Reference	BLA0394-SRM1	01312318ECD7.D	01312318ECD7.D	Solid	01/31/23 15:33
LDW23-SC1261	23A0133-02	01312323ECD7.D	01312323ECD7.D	Solid	01/31/23 17:18
LDW23-SC1250	23A0133-03	01312324ECD7.D	01312324ECD7.D	Solid	01/31/23 17:39
LDW23-SC1244	23A0133-04	01312325ECD7.D	01312325ECD7.D	Solid	01/31/23 18:00
LDW23-SC1244-FD	23A0133-05	01312326ECD7.D	01312326ECD7.D	Solid	01/31/23 18:21
LDW23-SC1241	23A0133-06	01312327ECD7.D	01312327ECD7.D	Solid	01/31/23 18:42
LDW23-IT1217	23A0133-07	01312328ECD7.D	01312328ECD7.D	Solid	01/31/23 19:03
Calibration Check	SLA0350-CCV3	01312329ECD7.D	01312329ECD7.D	NA	01/31/23 19:24
Calibration Check	SLA0350-CCV4	01312330ECD7.D	01312330ECD7.D	NA	01/31/23 19:45
LDW23-IT1217	BLA0394-MS1	01312331ECD7.D	01312331ECD7.D	Solid	01/31/23 20:06
LDW23-IT1217	BLA0394-MSD1	01312332ECD7.D	01312332ECD7.D	Solid	01/31/23 20:27
LDW23-SC1185	23A0133-08	01312333ECD7.D	01312333ECD7.D	Solid	01/31/23 20:48
LDW23-SC1234	23A0133-09	01312334ECD7.D	01312334ECD7.D	Solid	01/31/23 21:09
LDW23-SC1222	23A0133-11	01312336ECD7.D	01312336ECD7.D	Solid	01/31/23 21:51
LDW23-SS1110	23A0133-13	01312338ECD7.D	01312338ECD7.D	Solid	01/31/23 22:33
LDW23-SS1092	23A0133-15	01312340ECD7.D	01312340ECD7.D	Solid	01/31/23 23:15
LDW23-SS1091	23A0133-16	01312341ECD7.D	01312341ECD7.D	Solid	01/31/23 23:36
Calibration Check	SLA0350-CCV5	01312343ECD7.D	01312343ECD7.D	NA	02/01/23 00:19
Calibration Check	SLA0350-CCV6	01312344ECD7.D	01312344ECD7.D	NA	02/01/23 00:40

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLA0350

Instrument: ECD7
Calibration ID: GA00061

Printed: 2/1/2023 1:42:01PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLA0350-ICV1	QC		1		L000862	L000844		
SLA0350-ICV2	QC		2		L000856	L000844		
BLA0660-BLK1	QC		3			L000844		
BLA0660-BS1	QC		4			L000844		
BLA0660-BSD1	QC		5			L000844		
23A0562-01	082A PCB Medium Level Oil	A 01	6			L000844	Clean Earth	
23A0562-02	082A PCB Medium Level Oil	A 01	7			L000844	Clean Earth	
23A0567-01	082A PCB Medium Level Oil	A 01	8			L000844	Seattle Public Utilities [Solid Waste Field Op]	See Version Comment
SLA0350-CCV1	QC		9		L000861	L000844		
SLA0350-CCV2	QC		10		L000856	L000844		
BLA0394-BLK1	QC		11			L000844		
BLA0394-BS1	QC		12			L000844		
BLA0394-BSD1	QC		13			L000844		
BLA0394-SRM1	QC		14			L000844		
23A0100-21	8082A PCB Solid 4	A 03	15			L000844	Anchor QEA, LLC	
23A0100-23	8082A PCB Solid 4	A 03	16			L000844	Anchor QEA, LLC	
23A0133-02	8082A PCB Solid 4	B 01	17			L000844	Anchor QEA, LLC	
23A0133-03	8082A PCB Solid 4	C 03	18			L000844	Anchor QEA, LLC	
23A0133-04	8082A PCB Solid 4	B 01	19			L000844	Anchor QEA, LLC	
23A0133-05	8082A PCB Solid 4	B 01	20			L000844	Anchor QEA, LLC	
23A0133-06	8082A PCB Solid 4	C 03	21			L000844	Anchor QEA, LLC	

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SLA0350

Instrument: ECD7
Calibration ID: GA00061

Printed: 2/1/2023 1:42:01PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
23A0133-07	8082A PCB Solid 4	C 03	22			L000844	Anchor QEA, LLC	
SLA0350-CCV3	QC		23		L000860	L000844		
SLA0350-CCV4	QC		24		L000856	L000844		
BLA0394-MS1	QC		25			L000844		
BLA0394-MSD1	QC		26			L000844		
23A0133-08	8082A PCB Solid 4	C 03	27			L000844	Anchor QEA, LLC	
23A0133-09	8082A PCB Solid 4	C 03	28			L000844	Anchor QEA, LLC	
23A0133-11	8082A PCB Solid 4	C 03	29			L000844	Anchor QEA, LLC	
23A0133-13	8082A PCB Solid 4	C 03	30			L000844	Anchor QEA, LLC	
23A0133-15	8082A PCB Solid 4	C 03	31			L000844	Anchor QEA, LLC	
23A0133-16	8082A PCB Solid 4	C 03	32			L000844	Anchor QEA, LLC	
23A0100-22	8082A PCB Solid 4	A 03	33			L000844	Anchor QEA, LLC	
SLA0350-CCV5	QC		34		L000862	L000844		
SLA0350-CCV6	QC		35		L000856	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230131.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	31-JAN-2023 09:36	01312301ECD7.D	1	DDTS	
2	31-JAN-2023 09:56	01312302ECD7.D	1	AR1254ICV1	
3	31-JAN-2023 10:17	01312303ECD7.D	1	AR1660ICV2	
4	31-JAN-2023 10:39	01312304ECD7.D	1	BLA0660-BLK1	
5	31-JAN-2023 11:00	01312305ECD7.D	1	BLA0660-BS1	
6	31-JAN-2023 11:21	01312306ECD7.D	1	BLA0660-BSD1	
7	31-JAN-2023 11:42	01312307ECD7.D	1	23A0562-01	
8	31-JAN-2023 12:03	01312308ECD7.D	5	23A0562-01RE1	
9	31-JAN-2023 12:24	01312309ECD7.D	1	23A0562-02	
10	31-JAN-2023 12:45	01312310ECD7.D	5	23A0562-02RE1	
11	31-JAN-2023 13:06	01312311ECD7.D	1	23A0567-01	
12	31-JAN-2023 13:27	01312312ECD7.D	5	23A0567-01RE1	
13	31-JAN-2023 13:48	01312313ECD7.D	1	AR1248CCV1	
14	31-JAN-2023 14:09	01312314ECD7.D	1	AR1660CCV2	
15	31-JAN-2023 14:30	01312315ECD7.D	1	BLA0394-BLK1	
16	31-JAN-2023 14:51	01312316ECD7.D	1	BLA0394-BS1	
17	31-JAN-2023 15:12	01312317ECD7.D	1	BLA0394-BSD1	
18	31-JAN-2023 15:33	01312318ECD7.D	1	BLA0394-SRM1	
19	31-JAN-2023 15:54	01312319ECD7.D	1	23A0100-21	
20	31-JAN-2023 16:15	01312320ECD7.D	1	23A0100-22	
21	31-JAN-2023 16:36	01312321ECD7.D	1	23A0100-23	
22	31-JAN-2023 16:57	01312322ECD7.D	1	23A0133-01	
23	31-JAN-2023 17:18	01312323ECD7.D	1	23A0133-02	
24	31-JAN-2023 17:39	01312324ECD7.D	1	23A0133-03	
25	31-JAN-2023 18:00	01312325ECD7.D	1	23A0133-04	
26	31-JAN-2023 18:21	01312326ECD7.D	1	23A0133-05	
27	31-JAN-2023 18:42	01312327ECD7.D	1	23A0133-06	
28	31-JAN-2023 19:03	01312328ECD7.D	1	23A0133-07	
29	31-JAN-2023 19:24	01312329ECD7.D	1	AR1242CCV3	
30	31-JAN-2023 19:45	01312330ECD7.D	1	AR1660CCV4	
31	31-JAN-2023 20:06	01312331ECD7.D	1	BLA0394-MS1	
32	31-JAN-2023 20:27	01312332ECD7.D	1	BLA0394-MSD1	
33	31-JAN-2023 20:48	01312333ECD7.D	1	23A0133-08	
34	31-JAN-2023 21:09	01312334ECD7.D	1	23A0133-09	
35	31-JAN-2023 21:30	01312335ECD7.D	1	23A0133-10	
36	31-JAN-2023 21:51	01312336ECD7.D	1	23A0133-11	
37	31-JAN-2023 22:12	01312337ECD7.D	1	23A0133-12	
38	31-JAN-2023 22:33	01312338ECD7.D	1	23A0133-13	
39	31-JAN-2023 22:54	01312339ECD7.D	1	23A0133-14	
40	31-JAN-2023 23:15	01312340ECD7.D	1	23A0133-15	
41	31-JAN-2023 23:36	01312341ECD7.D	1	23A0133-16	
42	31-JAN-2023 23:58	01312342ECD7.D	5	23A0100-22RE1	
43	01-FEB-2023 00:19	01312343ECD7.D	1	AR1254CCV5	
44	01-FEB-2023 00:40	01312344ECD7.D	1	AR1660CCV6	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230131.b

ARI Job No.: DDTS Method: PCB.m Instrument: ecd7.i Date: 31-JAN-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0936	01312301ECD7.D	DDTS		1	NO MANUAL INTEGRATION
0956	01312302ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1017	01312303ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1039	01312304ECD7.D	BLA0660-BLK1		1	NO MANUAL INTEGRATION
1100	01312305ECD7.D	BLA0660-BS1		1	NO MANUAL INTEGRATION
1121	01312306ECD7.D	BLA0660-BSD1		1	NO MANUAL INTEGRATION
1142	01312307ECD7.D	23A0562-01		1	IS-BNB, IS-HBBP, Tetrachloro-m-xylene, Decachlorobiphenyl,
1203	01312308ECD7.D	23A0562-01RE1		5	NO MANUAL INTEGRATION
1224	01312309ECD7.D	23A0562-02		1	IS-HBBP, Decachlorobiphenyl,
1245	01312310ECD7.D	23A0562-02RE1		5	NO MANUAL INTEGRATION
1306	01312311ECD7.D	23A0567-01		1	NO MANUAL INTEGRATION
1327	01312312ECD7.D	23A0567-01RE1		5	NO MANUAL INTEGRATION
1348	01312313ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
1409	01312314ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1430	01312315ECD7.D	BLA0394-BLK1		1	NO MANUAL INTEGRATION
1451	01312316ECD7.D	BLA0394-BS1		1	NO MANUAL INTEGRATION
1512	01312317ECD7.D	BLA0394-BSD1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230131.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1533	01312318ECD7.D	BLA0394-SRM1		1	NO MANUAL INTEGRATION
1554	01312319ECD7.D	23A0100-21		1	NO MANUAL INTEGRATION
1615	01312320ECD7.D	23A0100-22		1	NO MANUAL INTEGRATION
1636	01312321ECD7.D	23A0100-23		1	NO MANUAL INTEGRATION
1657	01312322ECD7.D	23A0133-01		1	NO MANUAL INTEGRATION
1718	01312323ECD7.D	23A0133-02		1	NO MANUAL INTEGRATION
1739	01312324ECD7.D	23A0133-03		1	Aroclor-1254,
1800	01312325ECD7.D	23A0133-04		1	Aroclor-1254,
1821	01312326ECD7.D	23A0133-05		1	Aroclor-1254,
1842	01312327ECD7.D	23A0133-06		1	Aroclor-1254,
1903	01312328ECD7.D	23A0133-07		1	NO MANUAL INTEGRATION
1924	01312329ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
1945	01312330ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
2006	01312331ECD7.D	BLA0394-MS1		1	NO MANUAL INTEGRATION
2027	01312332ECD7.D	BLA0394-MSD1		1	NO MANUAL INTEGRATION
2048	01312333ECD7.D	23A0133-08		1	NO MANUAL INTEGRATION
2109	01312334ECD7.D	23A0133-09		1	NO MANUAL INTEGRATION
2130	01312335ECD7.D	23A0133-10		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230131.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2151	01312336ECD7.D	23A0133-11		1	Aroclor-1254,
2212	01312337ECD7.D	23A0133-12		1	NO MANUAL INTEGRATION
2233	01312338ECD7.D	23A0133-13		1	NO MANUAL INTEGRATION
2254	01312339ECD7.D	23A0133-14		1	NO MANUAL INTEGRATION
2315	01312340ECD7.D	23A0133-15		1	NO MANUAL INTEGRATION
2336	01312341ECD7.D	23A0133-16		1	NO MANUAL INTEGRATION
2358	01312342ECD7.D	23A0100-22RE1		5	Aroclor-1254,
0019	01312343ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
0040	01312344ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
0936	01312301ECD7.D	DDTS		1	NO MANUAL INTEGRATION
0956	01312302ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1017	01312303ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1039	01312304ECD7.D	BLA0660-BLK1		1	NO MANUAL INTEGRATION
1100	01312305ECD7.D	BLA0660-BS1		1	NO MANUAL INTEGRATION
1121	01312306ECD7.D	BLA0660-BSD1		1	NO MANUAL INTEGRATION
1142	01312307ECD7.D	23A0562-01		1	NO MANUAL INTEGRATION
1203	01312308ECD7.D	23A0562-01RE1		5	NO MANUAL INTEGRATION
1224	01312309ECD7.D	23A0562-02		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230131.b\230131.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1245	01312310ECD7.D	23A0562-02RE1		5	NO MANUAL INTEGRATION
1306	01312311ECD7.D	23A0567-01		1	NO MANUAL INTEGRATION
1327	01312312ECD7.D	23A0567-01RE1		5	NO MANUAL INTEGRATION
1348	01312313ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
1409	01312314ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1430	01312315ECD7.D	BLA0394-BLK1		1	NO MANUAL INTEGRATION
1451	01312316ECD7.D	BLA0394-BS1		1	NO MANUAL INTEGRATION
1512	01312317ECD7.D	BLA0394-BSD1		1	NO MANUAL INTEGRATION
1533	01312318ECD7.D	BLA0394-SRM1		1	NO MANUAL INTEGRATION
1554	01312319ECD7.D	23A0100-21		1	NO MANUAL INTEGRATION
1615	01312320ECD7.D	23A0100-22		1	NO MANUAL INTEGRATION
1636	01312321ECD7.D	23A0100-23		1	Aroclor-1248 [2C],
1657	01312322ECD7.D	23A0133-01		1	NO MANUAL INTEGRATION
1718	01312323ECD7.D	23A0133-02		1	Aroclor-1248 [2C],
1739	01312324ECD7.D	23A0133-03		1	Aroclor-1248 [2C],
1800	01312325ECD7.D	23A0133-04		1	Aroclor-1248 [2C],
1821	01312326ECD7.D	23A0133-05		1	Aroclor-1248 [2C],
1842	01312327ECD7.D	23A0133-06		1	Aroclor-1248 [2C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230131.b\230131.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1903	01312328ECD7.D	23A0133-07		1	Aroclor-1248 [2C],
1924	01312329ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
1945	01312330ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
2006	01312331ECD7.D	BLA0394-MS1		1	NO MANUAL INTEGRATION
2027	01312332ECD7.D	BLA0394-MSD1		1	NO MANUAL INTEGRATION
2048	01312333ECD7.D	23A0133-08		1	Aroclor-1248 [2C],
2109	01312334ECD7.D	23A0133-09		1	Aroclor-1248 [2C],
2130	01312335ECD7.D	23A0133-10		1	NO MANUAL INTEGRATION
2151	01312336ECD7.D	23A0133-11		1	Aroclor-1248 [2C],
2212	01312337ECD7.D	23A0133-12		1	NO MANUAL INTEGRATION
2233	01312338ECD7.D	23A0133-13		1	Aroclor-1248 [2C],
2254	01312339ECD7.D	23A0133-14		1	NO MANUAL INTEGRATION
2315	01312340ECD7.D	23A0133-15		1	Aroclor-1248 [2C],
2336	01312341ECD7.D	23A0133-16		1	Aroclor-1248 [2C],
2358	01312342ECD7.D	23A0100-22RE1		5	NO MANUAL INTEGRATION
0019	01312343ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
0040	01312344ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION

Security Status Report

Date: 01-Feb-2023 13:44

01312301ECD7.D	Data Locked	richardl, 01-Feb-2023 13:44
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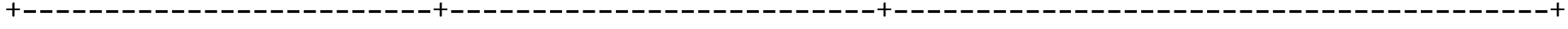

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0012
Instrument: ECD7
Calibration: GA00061

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLB0012-ICV1	02012302ECD7.D	02012302ECD7.D	NA	02/01/23 09:46
Initial Cal Check	SLB0012-ICV2	02012303ECD7.D	02012303ECD7.D	NA	02/01/23 10:07
LDW23-SC1252	23A0133-01	02012304ECD7.D	02012304ECD7.D	Solid	02/01/23 10:28
LDW23-SC1215	23A0133-10	02012305ECD7.D	02012305ECD7.D	Solid	02/01/23 10:49
LDW23-SC1227	23A0133-12	02012306ECD7.D	02012306ECD7.D	Solid	02/01/23 11:10
LDW23-SS1109	23A0133-14	02012307ECD7.D	02012307ECD7.D	Solid	02/01/23 11:31
Calibration Check	SLB0012-CCV1	02012308ECD7.D	02012308ECD7.D	NA	02/01/23 11:52
Calibration Check	SLB0012-CCV2	02012309ECD7.D	02012309ECD7.D	NA	02/01/23 12:13
Calibration Check	SLB0012-CCV3	02012314ECD7.D	02012314ECD7.D	NA	02/01/23 16:14
Calibration Check	SLB0012-CCV4	02012315ECD7.D	02012315ECD7.D	NA	02/01/23 16:35
Calibration Check	SLB0012-CCV5	02012326ECD7.D	02012326ECD7.D	NA	02/01/23 20:26
Calibration Check	SLB0012-CCV6	02012327ECD7.D	02012327ECD7.D	NA	02/01/23 20:47
Calibration Check	SLB0012-CCV7	02012336ECD7.D	02012336ECD7.D	NA	02/01/23 23:56
Calibration Check	SLB0012-CCV8	02012337ECD7.D	02012337ECD7.D	NA	02/02/23 00:17

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLB0012

Instrument: ECD7
Calibration ID: GA00061

Printed: 2/2/2023 10:46:23AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0012-ICV1	QC		1		L000862	L000844		
SLB0012-ICV2	QC		2		L000856	L000844		
23A0133-01	8082A PCB Solid 4	B 01	3			L000844	Anchor QEA, LLC	
23A0133-10	8082A PCB Solid 4	C 03	4			L000844	Anchor QEA, LLC	
23A0133-12	8082A PCB Solid 4	C 03	5			L000844	Anchor QEA, LLC	
23A0133-14	8082A PCB Solid 4	C 03	6			L000844	Anchor QEA, LLC	
SLB0012-CCV1	QC		7		L000861	L000844		
SLB0012-CCV2	QC		8		L000856	L000844		
BLA0412-BLK1	QC		9			L000844		
BLA0412-BS1	QC		10			L000844		
BLA0412-BSD1	QC		11			L000844		
BLA0412-SRM1	QC		12			L000844		
23A0134-01	8082A PCB Solid 4	C 03	13			L000844	Anchor QEA, LLC	
23A0134-02	8082A PCB Solid 4	C 03	14			L000844	Anchor QEA, LLC	
23A0134-04	8082A PCB Solid 4	C 03	15			L000844	Anchor QEA, LLC	
23A0134-05	8082A PCB Solid 4	C 03	16			L000844	Anchor QEA, LLC	
23A0134-06	8082A PCB Solid 4	C 03	17			L000844	Anchor QEA, LLC	
23A0134-07	8082A PCB Solid 4	C 03	18			L000844	Anchor QEA, LLC	
23A0134-08	8082A PCB Solid 4	C 03	19			L000844	Anchor QEA, LLC	
23A0134-09	8082A PCB Solid 4	C 03	20			L000844	Anchor QEA, LLC	
23A0134-10	8082A PCB Solid 4	C 03	21			L000844	Anchor QEA, LLC	

Samples Loaded By _____ Date _____

Data Processed By _____ Date _____

ANALYSIS SEQUENCE

SLB0012

Instrument: ECD7
Calibration ID: GA00061

Printed: 2/2/2023 10:46:23AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0012-CCV3	QC		22		L000860	L000844		
SLB0012-CCV4	QC		23		L000856	L000844		
23A0134-11	8082A PCB Solid 4	C 03	24			L000844	Anchor QEA, LLC	
23A0134-12	8082A PCB Solid 4	C 03	25			L000844	Anchor QEA, LLC	
23A0134-14	8082A PCB Solid 4	C 03	26			L000844	Anchor QEA, LLC	
23A0134-15	8082A PCB Solid 4	C 03	27			L000844	Anchor QEA, LLC	
23A0134-16	8082A PCB Solid 4	B 01	28			L000844	Anchor QEA, LLC	
BLA0412-MS1	QC		29			L000844		
BLA0412-MSD1	QC		30			L000844		
SLB0012-CCV5	QC		31		L000862	L000844		
SLB0012-CCV6	QC		32		L000856	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230201.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	01-FEB-2023 09:25	02012301ECD7.D	1	DDTS	
2	01-FEB-2023 09:46	02012302ECD7.D	1	AR1254ICV1	
3	01-FEB-2023 10:07	02012303ECD7.D	1	AR1660ICV2	
4	01-FEB-2023 10:28	02012304ECD7.D	1	23A0133-01	
5	01-FEB-2023 10:49	02012305ECD7.D	5	23A0133-10RE1	
6	01-FEB-2023 11:10	02012306ECD7.D	1	23A0133-12	
7	01-FEB-2023 11:31	02012307ECD7.D	1	23A0133-14	
8	01-FEB-2023 11:52	02012308ECD7.D	1	AR1248CCV1	
9	01-FEB-2023 12:13	02012309ECD7.D	1	AR1660CCV2	
10	01-FEB-2023 14:50	02012310ECD7.D	1	BLA0412-BLK1	
11	01-FEB-2023 15:11	02012311ECD7.D	1	BLA0412-BS1	
12	01-FEB-2023 15:32	02012312ECD7.D	1	BLA0412-BSD1	
13	01-FEB-2023 15:53	02012313ECD7.D	1	BLA0412-SRM1	
14	01-FEB-2023 16:14	02012314ECD7.D	1	AR1242CCV3	
15	01-FEB-2023 16:35	02012315ECD7.D	1	AR1660CCV4	
16	01-FEB-2023 16:56	02012316ECD7.D	1	23A0134-01	
17	01-FEB-2023 17:17	02012317ECD7.D	1	23A0134-02	
18	01-FEB-2023 17:38	02012318ECD7.D	1	23A0134-03	
19	01-FEB-2023 17:59	02012319ECD7.D	1	23A0134-04	
20	01-FEB-2023 18:20	02012320ECD7.D	1	23A0134-05	
21	01-FEB-2023 18:41	02012321ECD7.D	1	23A0134-06	
22	01-FEB-2023 19:02	02012322ECD7.D	1	23A0134-07	
23	01-FEB-2023 19:23	02012323ECD7.D	1	23A0134-08	
24	01-FEB-2023 19:44	02012324ECD7.D	1	23A0134-09	
25	01-FEB-2023 20:05	02012325ECD7.D	1	23A0134-10	
26	01-FEB-2023 20:26	02012326ECD7.D	1	AR1254CCV5	
27	01-FEB-2023 20:47	02012327ECD7.D	1	AR1660CCV6	
28	01-FEB-2023 21:08	02012328ECD7.D	1	23A0134-11	
29	01-FEB-2023 21:29	02012329ECD7.D	1	23A0134-12	
30	01-FEB-2023 21:50	02012330ECD7.D	1	23A0134-13	
31	01-FEB-2023 22:11	02012331ECD7.D	1	23A0134-14	
32	01-FEB-2023 22:32	02012332ECD7.D	1	23A0134-15	
33	01-FEB-2023 22:53	02012333ECD7.D	1	23A0134-16	
34	01-FEB-2023 23:14	02012334ECD7.D	1	BLA0412-MS1	
35	01-FEB-2023 23:35	02012335ECD7.D	1	BLA0412-MSD1	
36	01-FEB-2023 23:56	02012336ECD7.D	1	AR1248CCV7	
37	02-FEB-2023 00:17	02012337ECD7.D	1	AR1660CCV8	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230201.b

ARI Job No.: DDTS Method: PCB.m Instrument: ecd7.i Date: 01-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0925	02012301ECD7.D	DDTS		1	NO MANUAL INTEGRATION
0946	02012302ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1007	02012303ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1028	02012304ECD7.D	23A0133-01		1	Aroclor-1254,
1049	02012305ECD7.D	23A0133-10RE1		5	Aroclor-1254,
1110	02012306ECD7.D	23A0133-12		1	Aroclor-1254,
1131	02012307ECD7.D	23A0133-14		1	NO MANUAL INTEGRATION
1152	02012308ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
1213	02012309ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1450	02012310ECD7.D	BLA0412-BLK1		1	NO MANUAL INTEGRATION
1511	02012311ECD7.D	BLA0412-BS1		1	NO MANUAL INTEGRATION
1532	02012312ECD7.D	BLA0412-BSD1		1	NO MANUAL INTEGRATION
1553	02012313ECD7.D	BLA0412-SRM1		1	NO MANUAL INTEGRATION
1614	02012314ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
1635	02012315ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
1656	02012316ECD7.D	23A0134-01		1	NO MANUAL INTEGRATION
1717	02012317ECD7.D	23A0134-02		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230201.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1738	02012318ECD7.D	23A0134-03		1	NO MANUAL INTEGRATION
1759	02012319ECD7.D	23A0134-04		1	NO MANUAL INTEGRATION
1820	02012320ECD7.D	23A0134-05		1	NO MANUAL INTEGRATION
1841	02012321ECD7.D	23A0134-06		1	NO MANUAL INTEGRATION
1902	02012322ECD7.D	23A0134-07		1	Aroclor-1260,
1923	02012323ECD7.D	23A0134-08		1	Aroclor-1260,
1944	02012324ECD7.D	23A0134-09		1	Aroclor-1254, Aroclor-1260,
2005	02012325ECD7.D	23A0134-10		1	NO MANUAL INTEGRATION
2026	02012326ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
2047	02012327ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
2108	02012328ECD7.D	23A0134-11		1	NO MANUAL INTEGRATION
2129	02012329ECD7.D	23A0134-12		1	Aroclor-1248, Aroclor-1254, Aroclor-1260, IS-HBBP, Decachlorobiphenyl,
2150	02012330ECD7.D	23A0134-13		1	NO MANUAL INTEGRATION
2211	02012331ECD7.D	23A0134-14		1	Aroclor-1260,
2232	02012332ECD7.D	23A0134-15		1	Aroclor-1248,
2253	02012333ECD7.D	23A0134-16		1	NO MANUAL INTEGRATION
2314	02012334ECD7.D	BLA0412-MS1		1	NO MANUAL INTEGRATION
2335	02012335ECD7.D	BLA0412-MSD1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230201.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2356	02012336ECD7.D	AR1248CCV7		1	NO MANUAL INTEGRATION
0017	02012337ECD7.D	AR1660CCV8		1	NO MANUAL INTEGRATION
0925	02012301ECD7.D	DDTS		1	NO MANUAL INTEGRATION
0946	02012302ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1007	02012303ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1028	02012304ECD7.D	23A0133-01		1	Aroclor-1248 [2C],
1049	02012305ECD7.D	23A0133-10RE1		5	NO MANUAL INTEGRATION
1110	02012306ECD7.D	23A0133-12		1	Aroclor-1248 [2C], Aroclor-1254 [2C],
1131	02012307ECD7.D	23A0133-14		1	Aroclor-1248 [2C],
1152	02012308ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
1213	02012309ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1450	02012310ECD7.D	BLA0412-BLK1		1	NO MANUAL INTEGRATION
1511	02012311ECD7.D	BLA0412-BS1		1	NO MANUAL INTEGRATION
1532	02012312ECD7.D	BLA0412-BSD1		1	NO MANUAL INTEGRATION
1553	02012313ECD7.D	BLA0412-SRM1		1	NO MANUAL INTEGRATION
1614	02012314ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
1635	02012315ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
1656	02012316ECD7.D	23A0134-01		1	Aroclor-1248 [2C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230201.b\230201.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1717	02012317ECD7.D	23A0134-02		1	Aroclor-1248 [2C],
1738	02012318ECD7.D	23A0134-03		1	NO MANUAL INTEGRATION
1759	02012319ECD7.D	23A0134-04		1	Aroclor-1248 [2C],
1820	02012320ECD7.D	23A0134-05		1	Aroclor-1248 [2C],
1841	02012321ECD7.D	23A0134-06		1	NO MANUAL INTEGRATION
1902	02012322ECD7.D	23A0134-07		1	Aroclor-1248 [2C],
1923	02012323ECD7.D	23A0134-08		1	Aroclor-1260 [2C],
1944	02012324ECD7.D	23A0134-09		1	NO MANUAL INTEGRATION
2005	02012325ECD7.D	23A0134-10		1	NO MANUAL INTEGRATION
2026	02012326ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
2047	02012327ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
2108	02012328ECD7.D	23A0134-11		1	Aroclor-1248 [2C],
2129	02012329ECD7.D	23A0134-12		1	Aroclor-1248 [2C], Aroclor-1260 [2C],
2150	02012330ECD7.D	23A0134-13		1	NO MANUAL INTEGRATION
2211	02012331ECD7.D	23A0134-14		1	Aroclor-1248 [2C],
2232	02012332ECD7.D	23A0134-15		1	Aroclor-1248 [2C],
2253	02012333ECD7.D	23A0134-16		1	Aroclor-1248 [2C],
2314	02012334ECD7.D	BLA0412-MS1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230201.b\230201.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2335	02012335ECD7.D	BLA0412-MSD1		1	NO MANUAL INTEGRATION
2356	02012336ECD7.D	AR1248CCV7		1	NO MANUAL INTEGRATION
0017	02012337ECD7.D	AR1660CCV8		1	NO MANUAL INTEGRATION

Security Status Report

Date: 02-Feb-2023 10:45

02012301ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012302ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012303ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012304ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012305ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012306ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012307ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012308ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012309ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012310ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012311ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012312ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012313ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012314ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012315ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012316ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
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02012319ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012320ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012321ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012322ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012323ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012324ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012325ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012326ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012327ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012328ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012329ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012330ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012331ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012332ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012333ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012334ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012335ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012336ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45
02012337ECD7.D	Data Locked	richardl, 02-Feb-2023 10:45

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLA0281
Instrument: ECD7
Calibration: GA00061
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLA0281-SCV1 (Solid)			Lab File ID: 01242324ECD7.D			Analyzed: 01/24/23 19:51		
Decachlorobiphenyl	40.000	94.9	80 - 120	13.891	13.892	-0.0010	N/A	
Tetrachlorometaxylene	40.000	93.8	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	14.12	14.12017	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	93.2	80 - 120	5.685	5.685333	-0.0003	N/A	
SLA0281-SCV2 (Solid)			Lab File ID: 01242325ECD7.D			Analyzed: 01/24/23 20:12		
Decachlorobiphenyl	40.000	96.4	80 - 120	13.892	13.892	0.0000	N/A	
Tetrachlorometaxylene	40.000	94.4	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	14.121	14.12017	0.0008	N/A	
Tetrachlorometaxylene [2C]	40.000	93.4	80 - 120	5.685	5.685333	-0.0003	N/A	
SLA0281-SCV3 (Solid)			Lab File ID: 01242326ECD7.D			Analyzed: 01/24/23 20:33		
Decachlorobiphenyl	40.000	95.7	80 - 120	13.892	13.892	0.0000	N/A	
Tetrachlorometaxylene	40.000	91.9	80 - 120	5.809	5.808667	0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	98.9	80 - 120	14.12	14.12017	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	91.4	80 - 120	5.685	5.685333	-0.0003	N/A	
SLA0281-SCV4 (Solid)			Lab File ID: 01242327ECD7.D			Analyzed: 01/24/23 20:54		
Decachlorobiphenyl	40.000	92.7	80 - 120	13.892	13.892	0.0000	N/A	
Tetrachlorometaxylene	40.000	91.7	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	98.9	80 - 120	14.121	14.12017	0.0008	N/A	
Tetrachlorometaxylene [2C]	40.000	91.6	80 - 120	5.685	5.685333	-0.0003	N/A	
SLA0281-SCV5 (Solid)			Lab File ID: 01242328ECD7.D			Analyzed: 01/24/23 21:15		
Decachlorobiphenyl	40.000	93.6	80 - 120	13.89	13.892	-0.0020	N/A	
Tetrachlorometaxylene	40.000	93.2	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	98.7	80 - 120	14.119	14.12017	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	92.9	80 - 120	5.685	5.685333	-0.0003	N/A	
SLA0281-SCV6 (Solid)			Lab File ID: 01242329ECD7.D			Analyzed: 01/24/23 21:36		
Decachlorobiphenyl	40.000	137	80 - 120	13.892	13.892	0.0000	N/A	
Tetrachlorometaxylene	40.000	90.9	80 - 120	5.809	5.808667	0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	145	80 - 120	14.12	14.12017	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	90.8	80 - 120	5.686	5.685333	0.0007	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLA0350
Instrument: ECD7
Calibration: GA00061
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLA0350-ICV1 (Oil)			Lab File ID: 01312302ECD7.D			Analyzed: 01/31/23 09:56		
Decachlorobiphenyl	40.000	94.3	80 - 120	13.891	13.892	-0.0010	N/A	
Tetrachlorometaxylene	40.000	102	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	91.0	80 - 120	14.118	14.12017	-0.0022	N/A	
Tetrachlorometaxylene [2C]	40.000	101	80 - 120	5.683	5.685333	-0.0023	N/A	
SLA0350-ICV2 (Oil)			Lab File ID: 01312303ECD7.D			Analyzed: 01/31/23 10:17		
Decachlorobiphenyl	40.000	90.5	80 - 120	13.89	13.892	-0.0020	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	96.0	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	105	80 - 120	5.684	5.685333	-0.0013	N/A	
SLA0350-CCV1 (Oil)			Lab File ID: 01312313ECD7.D			Analyzed: 01/31/23 13:48		
Decachlorobiphenyl	40.000	88.5	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	99.5	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	98.0	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	98.8	80 - 120	5.685	5.685333	-0.0003	N/A	
SLA0350-CCV2 (Oil)			Lab File ID: 01312314ECD7.D			Analyzed: 01/31/23 14:09		
Decachlorobiphenyl	40.000	92.3	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	106	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	100	80 - 120	14.118	14.12017	-0.0022	N/A	
Tetrachlorometaxylene [2C]	40.000	104	80 - 120	5.685	5.685333	-0.0003	N/A	
BLA0394-BLK1 (Solid)			Lab File ID: 01312315ECD7.D			Analyzed: 01/31/23 14:30		
Decachlorobiphenyl	8.0000	93.4	40 - 126	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	8.0000	83.7	44 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	8.0000	102	40 - 126	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	8.0000	82.7	44 - 120	5.684	5.685333	-0.0013	N/A	
BLA0394-BS1 (Solid)			Lab File ID: 01312316ECD7.D			Analyzed: 01/31/23 14:51		
Decachlorobiphenyl	8.0000	104	40 - 126	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	8.0000	95.6	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	8.0000	111	40 - 126	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	8.0000	91.8	44 - 120	5.683	5.685333	-0.0023	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLA0350
Instrument: ECD7
Calibration: GA00061
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLA0394-BSD1 (Solid)			Lab File ID: 01312317ECD7.D			Analyzed: 01/31/23 15:12		
Decachlorobiphenyl	8.0000	99.6	40 - 126	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	8.0000	93.7	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	8.0000	107	40 - 126	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	8.0000	90.4	44 - 120	5.683	5.685333	-0.0023	N/A	
BLA0394-SRM1 (Solid)			Lab File ID: 01312318ECD7.D			Analyzed: 01/31/23 15:33		
Decachlorobiphenyl	40.000	97.9	40 - 126	13.885	13.892	-0.0070	N/A	
Tetrachlorometaxylene	40.000	85.7	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	94.4	40 - 126	14.114	14.12017	-0.0062	N/A	
Tetrachlorometaxylene [2C]	40.000	98.7	44 - 120	5.683	5.685333	-0.0023	N/A	
23A0133-02 (Solid)			Lab File ID: 01312323ECD7.D			Analyzed: 01/31/23 17:18		
Decachlorobiphenyl	7.9941	87.1	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	7.9941	69.4	44 - 120	5.804	5.808667	-0.0047	N/A	
Decachlorobiphenyl [2C]	7.9941	86.6	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9941	83.9	44 - 120	5.68	5.685333	-0.0053	N/A	
23A0133-03 (Solid)			Lab File ID: 01312324ECD7.D			Analyzed: 01/31/23 17:39		
Decachlorobiphenyl	7.9827	92.6	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9827	72.5	44 - 120	5.804	5.808667	-0.0047	N/A	
Decachlorobiphenyl [2C]	7.9827	88.2	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9827	84.1	44 - 120	5.68	5.685333	-0.0053	N/A	
23A0133-04 (Solid)			Lab File ID: 01312325ECD7.D			Analyzed: 01/31/23 18:00		
Decachlorobiphenyl	8.0007	90.4	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	8.0007	70.7	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	8.0007	86.3	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	8.0007	84.6	44 - 120	5.681	5.685333	-0.0043	N/A	
23A0133-05 (Solid)			Lab File ID: 01312326ECD7.D			Analyzed: 01/31/23 18:21		
Decachlorobiphenyl	7.9943	87.5	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9943	68.5	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	7.9943	82.0	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9943	83.6	44 - 120	5.681	5.685333	-0.0043	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLA0350
Instrument: ECD7
Calibration: GA00061
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0133-06 (Solid)			Lab File ID: 01312327ECD7.D			Analyzed: 01/31/23 18:42		
Decachlorobiphenyl	7.9984	87.6	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9984	71.0	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	7.9984	84.1	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9984	85.3	44 - 120	5.681	5.685333	-0.0043	N/A	
23A0133-07 (Solid)			Lab File ID: 01312328ECD7.D			Analyzed: 01/31/23 19:03		
Decachlorobiphenyl	7.9804	98.6	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9804	68.3	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	7.9804	95.9	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9804	83.3	44 - 120	5.681	5.685333	-0.0043	N/A	
SLA0350-CCV3 (Oil)			Lab File ID: 01312329ECD7.D			Analyzed: 01/31/23 19:24		
Decachlorobiphenyl	40.000	87.5	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	120	80 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	89.3	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	120	80 - 120	5.683	5.685333	-0.0023	N/A	
SLA0350-CCV4 (Oil)			Lab File ID: 01312330ECD7.D			Analyzed: 01/31/23 19:45		
Decachlorobiphenyl	40.000	95.8	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	104	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	96.5	80 - 120	14.118	14.12017	-0.0022	N/A	
Tetrachlorometaxylene [2C]	40.000	103	80 - 120	5.684	5.685333	-0.0013	N/A	
BLA0394-MS1 (Solid)			Lab File ID: 01312331ECD7.D			Analyzed: 01/31/23 20:06		
Decachlorobiphenyl	7.9994	101	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	7.9994	70.8	44 - 120	5.804	5.808667	-0.0047	N/A	
Decachlorobiphenyl [2C]	7.9994	95.7	40 - 126	14.111	14.12017	-0.0092	N/A	
Tetrachlorometaxylene [2C]	7.9994	82.3	44 - 120	5.68	5.685333	-0.0053	N/A	
BLA0394-MSD1 (Solid)			Lab File ID: 01312332ECD7.D			Analyzed: 01/31/23 20:27		
Decachlorobiphenyl	7.9994	96.7	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	7.9994	67.8	44 - 120	5.804	5.808667	-0.0047	N/A	
Decachlorobiphenyl [2C]	7.9994	93.5	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9994	82.2	44 - 120	5.68	5.685333	-0.0053	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLA0350
Instrument: ECD7
Calibration: GA00061
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0133-08 (Solid)			Lab File ID: 01312333ECD7.D			Analyzed: 01/31/23 20:48		
Decachlorobiphenyl	7.9892	90.3	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9892	68.4	44 - 120	5.804	5.808667	-0.0047	N/A	
Decachlorobiphenyl [2C]	7.9892	86.1	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9892	79.7	44 - 120	5.68	5.685333	-0.0053	N/A	
23A0133-09 (Solid)			Lab File ID: 01312334ECD7.D			Analyzed: 01/31/23 21:09		
Decachlorobiphenyl	7.9966	88.2	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9966	71.6	44 - 120	5.804	5.808667	-0.0047	N/A	
Decachlorobiphenyl [2C]	7.9966	84.3	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9966	83.8	44 - 120	5.681	5.685333	-0.0043	N/A	
23A0133-11 (Solid)			Lab File ID: 01312336ECD7.D			Analyzed: 01/31/23 21:51		
Decachlorobiphenyl	7.9995	101	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	7.9995	59.3	44 - 120	5.804	5.808667	-0.0047	N/A	
Decachlorobiphenyl [2C]	7.9995	103	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9995	78.6	44 - 120	5.68	5.685333	-0.0053	N/A	
23A0133-13 (Solid)			Lab File ID: 01312338ECD7.D			Analyzed: 01/31/23 22:33		
Decachlorobiphenyl	7.9894	90.0	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9894	75.0	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	7.9894	88.5	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9894	85.1	44 - 120	5.683	5.685333	-0.0023	N/A	
23A0133-15 (Solid)			Lab File ID: 01312340ECD7.D			Analyzed: 01/31/23 23:15		
Decachlorobiphenyl	7.9768	90.3	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	7.9768	74.4	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	7.9768	86.3	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9768	86.3	44 - 120	5.682	5.685333	-0.0033	N/A	
23A0133-16 (Solid)			Lab File ID: 01312341ECD7.D			Analyzed: 01/31/23 23:36		
Decachlorobiphenyl	7.9760	83.5	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	7.9760	69.5	44 - 120	5.804	5.808667	-0.0047	N/A	
Decachlorobiphenyl [2C]	7.9760	83.7	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9760	79.9	44 - 120	5.681	5.685333	-0.0043	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLA0350	Instrument:	ECD7
Calibration:	GA00061	Calibration Date:	01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLA0350-CCV5 (Oil)			Lab File ID: 01312343ECD7.D				Analyzed: 02/01/23 00:19	
Decachlorobiphenyl	40.000	90.0	80 - 120	13.89	13.892	-0.0020	N/A	
Tetrachlorometaxylene	40.000	97.5	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	93.0	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	99.3	80 - 120	5.684	5.685333	-0.0013	N/A	
SLA0350-CCV6 (Oil)			Lab File ID: 01312344ECD7.D				Analyzed: 02/01/23 00:40	
Decachlorobiphenyl	40.000	94.0	80 - 120	13.89	13.892	-0.0020	N/A	
Tetrachlorometaxylene	40.000	104	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	97.5	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	104	80 - 120	5.684	5.685333	-0.0013	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0012	Instrument:	ECD7
Calibration:	GA00061	Calibration Date:	01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0012-ICV1 (Solid)			Lab File ID: 02012302ECD7.D			Analyzed: 02/01/23 09:46		
Decachlorobiphenyl	40.000	94.5	80 - 120	13.893	13.892	0.0010	N/A	
Tetrachlorometaxylene	40.000	99.3	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	90.0	80 - 120	14.118	14.12017	-0.0022	N/A	
Tetrachlorometaxylene [2C]	40.000	99.8	80 - 120	5.683	5.685333	-0.0023	N/A	
SLB0012-ICV2 (Solid)			Lab File ID: 02012303ECD7.D			Analyzed: 02/01/23 10:07		
Decachlorobiphenyl	40.000	90.3	80 - 120	13.89	13.892	-0.0020	N/A	
Tetrachlorometaxylene	40.000	106	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	96.0	80 - 120	14.118	14.12017	-0.0022	N/A	
Tetrachlorometaxylene [2C]	40.000	104	80 - 120	5.684	5.685333	-0.0013	N/A	
23A0133-01 (Solid)			Lab File ID: 02012304ECD7.D			Analyzed: 02/01/23 10:28		
Decachlorobiphenyl	7.9938	84.8	40 - 126	13.885	13.892	-0.0070	N/A	
Tetrachlorometaxylene	7.9938	67.4	44 - 120	5.804	5.808667	-0.0047	N/A	
Decachlorobiphenyl [2C]	7.9938	80.6	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9938	75.6	44 - 120	5.681	5.685333	-0.0043	N/A	
23A0133-10 (Solid)			Lab File ID: 02012305ECD7.D			Analyzed: 02/01/23 10:49		
Decachlorobiphenyl	7.9859	96.1	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	7.9859	53.4	44 - 120	5.803	5.808667	-0.0057	N/A	
Decachlorobiphenyl [2C]	7.9859	93.3	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9859	69.9	44 - 120	5.68	5.685333	-0.0053	N/A	
23A0133-12 (Solid)			Lab File ID: 02012306ECD7.D			Analyzed: 02/01/23 11:10		
Decachlorobiphenyl	7.9920	88.8	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	7.9920	66.5	44 - 120	5.804	5.808667	-0.0047	N/A	
Decachlorobiphenyl [2C]	7.9920	83.3	40 - 126	14.114	14.12017	-0.0062	N/A	
Tetrachlorometaxylene [2C]	7.9920	77.4	44 - 120	5.68	5.685333	-0.0053	N/A	
23A0133-14 (Solid)			Lab File ID: 02012307ECD7.D			Analyzed: 02/01/23 11:31		
Decachlorobiphenyl	7.9887	87.1	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9887	74.6	44 - 120	5.804	5.808667	-0.0047	N/A	
Decachlorobiphenyl [2C]	7.9887	85.5	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9887	80.8	44 - 120	5.681	5.685333	-0.0043	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0012
Instrument: ECD7
Calibration: GA00061
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0012-CCV1 (Solid)			Lab File ID: 02012308ECD7.D				Analyzed: 02/01/23 11:52	
Decachlorobiphenyl	40.000	85.3	80 - 120	13.89	13.892	-0.0020	N/A	
Tetrachlorometaxylene	40.000	99.0	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	90.0	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	98.5	80 - 120	5.684	5.685333	-0.0013	N/A	
SLB0012-CCV2 (Solid)			Lab File ID: 02012309ECD7.D				Analyzed: 02/01/23 12:13	
Decachlorobiphenyl	40.000	93.8	80 - 120	13.89	13.892	-0.0020	N/A	
Tetrachlorometaxylene	40.000	106	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	95.5	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	104	80 - 120	5.684	5.685333	-0.0013	N/A	
SLB0012-CCV3 (Solid)			Lab File ID: 02012314ECD7.D				Analyzed: 02/01/23 16:14	
Decachlorobiphenyl	40.000	84.8	80 - 120	13.89	13.892	-0.0020	N/A	
Tetrachlorometaxylene	40.000	121	80 - 120	5.809	5.808667	0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	89.0	80 - 120	14.118	14.12017	-0.0022	N/A	
Tetrachlorometaxylene [2C]	40.000	121	80 - 120	5.686	5.685333	0.0007	N/A	
SLB0012-CCV4 (Solid)			Lab File ID: 02012315ECD7.D				Analyzed: 02/01/23 16:35	
Decachlorobiphenyl	40.000	90.5	80 - 120	13.891	13.892	-0.0010	N/A	
Tetrachlorometaxylene	40.000	104	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	95.0	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	104	80 - 120	5.685	5.685333	-0.0003	N/A	
SLB0012-CCV5 (Solid)			Lab File ID: 02012326ECD7.D				Analyzed: 02/01/23 20:26	
Decachlorobiphenyl	40.000	88.3	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	97.0	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	91.5	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	99.5	80 - 120	5.684	5.685333	-0.0013	N/A	
SLB0012-CCV6 (Solid)			Lab File ID: 02012327ECD7.D				Analyzed: 02/01/23 20:47	
Decachlorobiphenyl	40.000	96.8	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	105	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	96.0	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	104	80 - 120	5.684	5.685333	-0.0013	N/A	

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0012	Instrument:	ECD7
Calibration:	GA00061	Calibration Date:	01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0012-CCV7 (Solid)			Lab File ID: 02012336ECD7.D			Analyzed: 02/01/23 23:56		
Decachlorobiphenyl	40.000	87.0	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	94.3	80 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	92.0	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	98.0	80 - 120	5.683	5.685333	-0.0023	N/A	
SLB0012-CCV8 (Solid)			Lab File ID: 02012337ECD7.D			Analyzed: 02/02/23 00:17		
Decachlorobiphenyl	40.000	96.5	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	105	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	97.0	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	105	80 - 120	5.684	5.685333	-0.0013	N/A	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLA0281	Instrument:	ECD7
		Calibration:	GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SLA0281-SCV1)		(Solid)	Lab File ID: 01242324ECD7.D				Analyzed: 01/24/23 19:51		
1-Bromo-2-Nitrobenzene	506576	3.491	503318	3.492	101	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	940129	14.264	647433	14.266	145	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	343102	3.928	336911	3.928	102	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	501702	15.008	382032	15.008	131	50 - 200	0.000	+/-0.50	
Secondary Cal Check (SLA0281-SCV2)		(Solid)	Lab File ID: 01242325ECD7.D				Analyzed: 01/24/23 20:12		
1-Bromo-2-Nitrobenzene	503089	3.492	503318	3.492	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	953137	14.265	647433	14.266	147	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	341704	3.929	336911	3.928	101	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	505860	15.007	382032	15.008	132	50 - 200	-0.001	+/-0.50	
Secondary Cal Check (SLA0281-SCV3)		(Solid)	Lab File ID: 01242326ECD7.D				Analyzed: 01/24/23 20:33		
1-Bromo-2-Nitrobenzene	508189	3.491	503318	3.492	101	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	979067	14.265	647433	14.266	151	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	344105	3.928	336911	3.928	102	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	503378	15.007	382032	15.008	132	50 - 200	-0.001	+/-0.50	
Secondary Cal Check (SLA0281-SCV4)		(Solid)	Lab File ID: 01242327ECD7.D				Analyzed: 01/24/23 20:54		
1-Bromo-2-Nitrobenzene	504424	3.491	503318	3.492	100	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	968338	14.265	647433	14.266	150	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	342969	3.928	336911	3.928	102	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	515045	15.01	382032	15.008	135	50 - 200	0.002	+/-0.50	
Secondary Cal Check (SLA0281-SCV5)		(Solid)	Lab File ID: 01242328ECD7.D				Analyzed: 01/24/23 21:15		
1-Bromo-2-Nitrobenzene	503473	3.491	503318	3.492	100	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	991997	14.264	647433	14.266	153	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	340361	3.928	336911	3.928	101	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	521975	15.008	382032	15.008	137	50 - 200	0.000	+/-0.50	
Secondary Cal Check (SLA0281-SCV6)		(Solid)	Lab File ID: 01242329ECD7.D				Analyzed: 01/24/23 21:36		
1-Bromo-2-Nitrobenzene	487061	3.494	503318	3.492	97	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	944934	14.266	647433	14.266	146	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	331721	3.93	336911	3.928	98	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl [2C]	502401	15.007	382032	15.008	132	50 - 200	-0.001	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLA0350
Instrument: ECD7
Calibration: GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLA0350-ICV1)		(Oil)	Lab File ID: 01312302ECD7.D				Analyzed: 01/31/23 09:56		
1-Bromo-2-Nitrobenzene	470677	3.491	470677	3.491	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	889076	14.262	889076	14.262	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	351390	3.926	351390	3.926	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	554290	15.005	554290	15.005	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SLA0350-ICV2)		(Oil)	Lab File ID: 01312303ECD7.D				Analyzed: 01/31/23 10:17		
1-Bromo-2-Nitrobenzene	466383	3.491	466383	3.491	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	968259	14.26	968259	14.26	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	348938	3.927	348938	3.927	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	558915	15.006	558915	15.006	100	50 - 200	0.000	+/-0.50	
Blank (BLA0394-BLK1)		(Solid)	Lab File ID: 01312315ECD7.D				Analyzed: 01/31/23 14:30		
1-Bromo-2-Nitrobenzene	509018	3.491	466383	3.491	109	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	937577	14.256	889076	14.262	105	50 - 200	-0.006	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	363118	3.928	348938	3.927	104	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	522176	15.003	558915	15.006	93	50 - 200	-0.003	+/-0.50	
LCS (BLA0394-BS1)		(Solid)	Lab File ID: 01312316ECD7.D				Analyzed: 01/31/23 14:51		
1-Bromo-2-Nitrobenzene	503354	3.491	466383	3.491	108	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	947870	14.256	889076	14.262	107	50 - 200	-0.006	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	356001	3.928	348938	3.927	102	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	525985	15.002	558915	15.006	94	50 - 200	-0.004	+/-0.50	
LCS Dup (BLA0394-BSD1)		(Solid)	Lab File ID: 01312317ECD7.D				Analyzed: 01/31/23 15:12		
1-Bromo-2-Nitrobenzene	517795	3.491	466383	3.491	111	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	997108	14.259	889076	14.262	112	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	366126	3.927	348938	3.927	105	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	557682	15.003	558915	15.006	100	50 - 200	-0.003	+/-0.50	
Reference (BLA0394-SRM1)		(Solid)	Lab File ID: 01312318ECD7.D				Analyzed: 01/31/23 15:33		
1-Bromo-2-Nitrobenzene	514172	3.491	466383	3.491	110	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	681622	14.253	889076	14.262	77	50 - 200	-0.009	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	349809	3.928	348938	3.927	100	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	453059	14.998	558915	15.006	81	50 - 200	-0.008	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLA0350	Instrument:	ECD7
		Calibration:	GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SC1261 (23A0133-02)		(Solid)	Lab File ID: 01312323ECD7.D				Analyzed: 01/31/23 17:18		
1-Bromo-2-Nitrobenzene	467939	3.49	466383	3.491	100	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	361437	14.247	889076	14.262	41	50 - 200	-0.015	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	318062	3.926	348938	3.927	91	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	294787	14.996	558915	15.006	53	50 - 200	-0.010	+/-0.50	
LDW23-SC1250 (23A0133-03)		(Solid)	Lab File ID: 01312324ECD7.D				Analyzed: 01/31/23 17:39		
1-Bromo-2-Nitrobenzene	462240	3.49	466383	3.491	99	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	360951	14.247	889076	14.262	41	50 - 200	-0.015	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	321181	3.926	348938	3.927	92	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	294293	14.997	558915	15.006	53	50 - 200	-0.009	+/-0.50	
LDW23-SC1244 (23A0133-04)		(Solid)	Lab File ID: 01312325ECD7.D				Analyzed: 01/31/23 18:00		
1-Bromo-2-Nitrobenzene	476786	3.491	466383	3.491	102	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	372170	14.247	889076	14.262	42	50 - 200	-0.015	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	325451	3.927	348938	3.927	93	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	308745	14.996	558915	15.006	55	50 - 200	-0.010	+/-0.50	
LDW23-SC1244-FD (23A0133-05)		(Solid)	Lab File ID: 01312326ECD7.D				Analyzed: 01/31/23 18:21		
1-Bromo-2-Nitrobenzene	461964	3.491	466383	3.491	99	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	370454	14.248	889076	14.262	42	50 - 200	-0.014	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	320601	3.927	348938	3.927	92	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	312470	14.996	558915	15.006	56	50 - 200	-0.010	+/-0.50	
LDW23-SC1241 (23A0133-06)		(Solid)	Lab File ID: 01312327ECD7.D				Analyzed: 01/31/23 18:42		
1-Bromo-2-Nitrobenzene	471192	3.491	466383	3.491	101	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	380859	14.248	889076	14.262	43	50 - 200	-0.014	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	325403	3.927	348938	3.927	93	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	307500	14.996	558915	15.006	55	50 - 200	-0.010	+/-0.50	
LDW23-IT1217 (23A0133-07)		(Solid)	Lab File ID: 01312328ECD7.D				Analyzed: 01/31/23 19:03		
1-Bromo-2-Nitrobenzene	461397	3.492	466383	3.491	99	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	340991	14.247	889076	14.262	38	50 - 200	-0.015	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	314904	3.928	348938	3.927	90	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	283826	14.996	558915	15.006	51	50 - 200	-0.010	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLA0350
SDG: 23A0133
Project: AOC5 MR Phase 1
Instrument: ECD7
Calibration: GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (BLA0394-MS1)		(Solid)	Lab File ID: 01312331ECD7.D				Analyzed: 01/31/23 20:06		
1-Bromo-2-Nitrobenzene	460533	3.49	466383	3.491	99	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	351936	14.247	889076	14.262	40	50 - 200	-0.015	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	308324	3.927	348938	3.927	88	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	291170	14.997	558915	15.006	52	50 - 200	-0.009	+/-0.50	
Matrix Spike Dup (BLA0394-MSD1)		(Solid)	Lab File ID: 01312332ECD7.D				Analyzed: 01/31/23 20:27		
1-Bromo-2-Nitrobenzene	471332	3.49	466383	3.491	101	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	356758	14.247	889076	14.262	40	50 - 200	-0.015	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	317805	3.927	348938	3.927	91	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	293457	14.997	558915	15.006	53	50 - 200	-0.009	+/-0.50	
LDW23-SC1185 (23A0133-08)		(Solid)	Lab File ID: 01312333ECD7.D				Analyzed: 01/31/23 20:48		
1-Bromo-2-Nitrobenzene	473826	3.49	466383	3.491	102	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	371608	14.247	889076	14.262	42	50 - 200	-0.015	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	324066	3.926	348938	3.927	93	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	306382	14.996	558915	15.006	55	50 - 200	-0.010	+/-0.50	
LDW23-SC1234 (23A0133-09)		(Solid)	Lab File ID: 01312334ECD7.D				Analyzed: 01/31/23 21:09		
1-Bromo-2-Nitrobenzene	469744	3.491	466383	3.491	101	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	387391	14.247	889076	14.262	44	50 - 200	-0.015	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	323293	3.927	348938	3.927	93	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	313875	14.997	558915	15.006	56	50 - 200	-0.009	+/-0.50	
LDW23-SC1222 (23A0133-11)		(Solid)	Lab File ID: 01312336ECD7.D				Analyzed: 01/31/23 21:51		
1-Bromo-2-Nitrobenzene	487779	3.49	466383	3.491	105	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	324329	14.248	889076	14.262	36	50 - 200	-0.014	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	305918	3.927	348938	3.927	88	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	272378	14.997	558915	15.006	49	50 - 200	-0.009	+/-0.50	*
LDW23-SS1110 (23A0133-13)		(Solid)	Lab File ID: 01312338ECD7.D				Analyzed: 01/31/23 22:33		
1-Bromo-2-Nitrobenzene	452905	3.493	466383	3.491	97	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	381592	14.248	889076	14.262	43	50 - 200	-0.014	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	322943	3.929	348938	3.927	93	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl [2C]	306717	14.996	558915	15.006	55	50 - 200	-0.010	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLA0350	Instrument:	ECD7
		Calibration:	GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SS1092 (23A0133-15)		(Solid)		Lab File ID: 01312340ECD7.D				Analyzed: 01/31/23 23:15	
1-Bromo-2-Nitrobenzene	465728	3.491	466383	3.491	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	400745	14.247	889076	14.262	45	50 - 200	-0.015	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	326548	3.927	348938	3.927	94	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	322360	14.996	558915	15.006	58	50 - 200	-0.010	+/-0.50	
LDW23-SS1091 (23A0133-16)		(Solid)		Lab File ID: 01312341ECD7.D				Analyzed: 01/31/23 23:36	
1-Bromo-2-Nitrobenzene	479083	3.49	466383	3.491	103	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	408797	14.248	889076	14.262	46	50 - 200	-0.014	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	337422	3.926	348938	3.927	97	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	328456	14.997	558915	15.006	59	50 - 200	-0.009	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0012
Instrument: ECD7
Calibration: GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLB0012-ICV1)		(Solid)	Lab File ID: 02012302ECD7.D				Analyzed: 02/01/23 09:46		
1-Bromo-2-Nitrobenzene	495414	3.492	495414	3.492	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	756858	14.263	756858	14.263	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	349006	3.927	349006	3.927	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	464626	15.005	464626	15.005	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SLB0012-ICV2)		(Solid)	Lab File ID: 02012303ECD7.D				Analyzed: 02/01/23 10:07		
1-Bromo-2-Nitrobenzene	468079	3.491	468079	3.491	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	798372	14.26	798372	14.26	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	333624	3.927	333624	3.927	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	453668	15.003	453668	15.003	100	50 - 200	0.000	+/-0.50	
LDW23-SC1252 (23A0133-01)		(Solid)	Lab File ID: 02012304ECD7.D				Analyzed: 02/01/23 10:28		
1-Bromo-2-Nitrobenzene	501553	3.49	468079	3.491	107	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	432753	14.248	798372	14.26	54	50 - 200	-0.012	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	344104	3.927	333624	3.927	103	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	339227	14.997	453668	15.003	75	50 - 200	-0.006	+/-0.50	
LDW23-SC1215 (23A0133-10)		(Solid)	Lab File ID: 02012305ECD7.D				Analyzed: 02/01/23 10:49		
1-Bromo-2-Nitrobenzene	470039	3.49	468079	3.491	100	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	421264	14.249	798372	14.26	53	50 - 200	-0.011	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	328724	3.927	333624	3.927	99	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	323210	14.998	453668	15.003	71	50 - 200	-0.005	+/-0.50	
LDW23-SC1227 (23A0133-12)		(Solid)	Lab File ID: 02012306ECD7.D				Analyzed: 02/01/23 11:10		
1-Bromo-2-Nitrobenzene	448695	3.49	468079	3.491	96	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	397335	14.248	798372	14.26	50	50 - 200	-0.012	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	318070	3.927	333624	3.927	95	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	317496	14.997	453668	15.003	70	50 - 200	-0.006	+/-0.50	
LDW23-SS1109 (23A0133-14)		(Solid)	Lab File ID: 02012307ECD7.D				Analyzed: 02/01/23 11:31		
1-Bromo-2-Nitrobenzene	445647	3.491	468079	3.491	95	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	423339	14.247	798372	14.26	53	50 - 200	-0.013	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	332147	3.927	333624	3.927	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	328478	14.998	453668	15.003	72	50 - 200	-0.005	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-02	File ID:	01312323ECD7.D
Sampled:	01/06/23 09:22	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 17:18
Solids:	44.82	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0394	Sequence:	SLA0350		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.393	8.405	0.012	52619.25	31.3	5.
	* 2	8.296	8.305	0.009	29070.25	32.9	
Aroclor 1254	1	9.283	9.298	0.015	89285.6	44.9	20.4
	* 2	9.435	9.447	0.012	82031.4	55.1	
Aroclor 1260	1	11.031	11.04533	0.0143	46391.8	34.1	13.9
	* 2	11.642	11.65333	0.0113	54519.75	39.2	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-03	File ID:	01312324ECD7.D
Sampled:	01/06/23 10:32	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 17:39
Solids:	51.11	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0394	Sequence:	SLA0350		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.394	8.405	0.011	49033.5	29.6	1.3
	* 2	8.297	8.305	0.008	26644	30.0	
Aroclor 1254	1	9.284	9.298	0.014	64863.2	32.9	30.6
	* 2	9.435	9.447	0.012	74845.4	44.8	
Aroclor 1260	1	11.031	11.04533	0.0143	47727.8	35.4	12.
	* 2	11.642	11.65333	0.0113	55700.25	39.9	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-04	File ID:	01312325ECD7.D
Sampled:	01/06/23 10:14	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 18:00
Solids:	49.52	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0394	Sequence:	SLA0350		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.394	8.405	0.011	41640.25	24.6	7.8
	* 2	8.297	8.305	0.008	23960.75	26.6	
Aroclor 1254	1	9.283	9.298	0.015	58251	28.8	39.3
	* 2	9.435	9.447	0.012	65361.4	42.9	
Aroclor 1260	1	11.031	11.04533	0.0143	38339.2	27.5	12.
	* 2	11.641	11.65333	0.0123	45119.25	31.0	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-05	File ID:	01312326ECD7.D
Sampled:	01/06/23 10:14	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 18:21
Solids:	48.26	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0394	Sequence:	SLA0350		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.394	8.405	0.011	44531.75	27.0	6.5
	* 2	8.297	8.305	0.008	25367.25	28.8	
Aroclor 1254	1	9.284	9.298	0.014	63029	32.0	41.2
	* 2	9.435	9.447	0.012	72849	48.6	
Aroclor 1260	1	11.031	11.04533	0.0143	45553.4	32.9	13.1
	* 2	11.641	11.65333	0.0123	56344.75	37.5	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-06	File ID:	01312327ECD7.D
Sampled:	01/06/23 10:51	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 18:42
Solids:	49.01	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0394	Sequence:	SLA0350		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.395	8.405	0.01	52935.25	31.5	3.1
	* 2	8.297	8.305	0.008	28765.75	32.5	
Aroclor 1254	1	9.284	9.298	0.014	68234	33.1	28.3
	* 2	9.436	9.447	0.011	75763.8	44.0	
Aroclor 1260	1	11.031	11.04533	0.0143	54416.8	38.4	8.5
	* 2	11.642	11.65333	0.0113	61952.5	41.8	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-07	File ID:	01312328ECD7.D
Sampled:	01/06/23 11:14	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 19:03
Solids:	59.50	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0394	Sequence:	SLA0350		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.394	8.405	0.011	23360.75	13.8	22.5
	* 2	8.297	8.305	0.008	13994.5	17.3	
Aroclor 1254	1	9.284	9.298	0.014	53071.4	18.2	23.7
	* 2	9.435	9.447	0.012	56009.8	23.1	
Aroclor 1260	1	11.031	11.04533	0.0143	114183.2	93.8	6.4
	* 2	11.641	11.65333	0.0123	138720	100	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-08	File ID:	01312333ECD7.D
Sampled:	01/06/23 12:00	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 20:48
Solids:	58.60	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0394	Sequence:	SLA0350		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.393	8.405	0.012	78881.75	46.1	6.1
	* 2	8.296	8.305	0.009	44510.75	49.0	
Aroclor 1254	1	9.284	9.298	0.014	128008	63.4	24.1
	* 2	9.436	9.447	0.011	121525.8	80.8	
Aroclor 1260	1	11.03	11.04533	0.0153	69131.4	49.4	10.5
	* 2	11.642	11.65333	0.0113	82468.5	54.9	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-09	File ID:	01312334ECD7.D
Sampled:	01/06/23 13:34	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 21:09
Solids:	53.74	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0394	Sequence:	SLA0350		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.395	8.405	0.01	55928	33.3	3.7
	2	8.298	8.305	0.007	28567.75	32.1	
Aroclor 1254	1	9.285	9.298	0.013	95757.8	48.1	20.2
	* 2	9.437	9.447	0.01	89328.6	58.9	
Aroclor 1260	1	11.032	11.04533	0.0133	72605.8	50.8	7.8
	* 2	11.642	11.65333	0.0113	84109	54.9	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-11	File ID:	01312336ECD7.D
Sampled:	01/06/23 13:00	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 21:51
Solids:	52.13	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0394	Sequence:	SLA0350		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.394	8.405	0.011	152756.8	86.3	.1
	2	8.296	8.305	0.009	77726	86.2	
Aroclor 1254	1	9.284	9.298	0.014	248350.4	119	38.6
	* 2	9.435	9.447	0.012	276100.8	176	
Aroclor 1260	1	11.032	11.04533	0.0133	142342.6	118	9.7
	* 2	11.642	11.65333	0.0113	176144	130	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-13	File ID:	01312338ECD7.D
Sampled:	01/06/23 14:00	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 22:33
Solids:	59.32	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0394	Sequence:	SLA0350		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.395	8.405	0.01	26128.75	16.4	9.3
	* 2	8.298	8.305	0.007	15861	18.0	
Aroclor 1254	1	9.284	9.298	0.014	41522	21.6	20.7
	* 2	9.437	9.447	0.01	40234.6	26.6	
Aroclor 1260	1	11.031	11.04533	0.0143	25200	17.9	13.1
	* 2	11.643	11.65333	0.0103	28843.25	20.4	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-15	File ID:	01312340ECD7.D
Sampled:	01/06/23 14:26	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 23:15
Solids:	52.30	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0394	Sequence:	SLA0350		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.395	8.405	0.01	45000.75	27.2	5.7
	* 2	8.297	8.305	0.008	25919	28.8	
Aroclor 1254	1	9.285	9.298	0.013	69777.8	35.3	20.4
	* 2	9.436	9.447	0.011	65891.2	43.3	
Aroclor 1260	1	11.031	11.04533	0.0143	42357.2	27.4	17.9
	* 2	11.642	11.65333	0.0113	49625.75	32.8	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-16	File ID:	01312341ECD7.D
Sampled:	01/06/23 14:50	Prepared:	01/18/23 12:25	Analyzed:	01/31/23 23:36
Solids:	49.38	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0394	Sequence:	SLA0350		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.393	8.405	0.012	34487	20.3	2.
	* 2	8.297	8.305	0.008	19329.5	20.7	
Aroclor 1254	1	9.283	9.298	0.015	54840.6	27.0	16.9
	* 2	9.436	9.447	0.011	50506.6	32.0	
Aroclor 1260	1	11.03	11.04533	0.0153	27296.4	17.6	19.5
	* 2	11.642	11.65333	0.0113	31857	21.4	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-01	File ID:	02012304ECD7.D
Sampled:	01/06/23 09:47	Prepared:	01/18/23 12:25	Analyzed:	02/01/23 10:28
Solids:	50.24	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0394	Sequence:	SLB0012		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.395	8.405	0.01	70044.75	38.8	1.5
	* 2	8.297	8.305	0.008	37418	39.4	
Aroclor 1254	1	9.284	9.298	0.014	114143.8	45.5	31.
	* 2	9.436	9.447	0.011	101273.8	62.2	
Aroclor 1260	1	11.031	11.04533	0.0143	63368.8	39.0	11.1
	* 2	11.642	11.65333	0.0113	70709	43.6	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-10	File ID:	02012305ECD7.D
Sampled:	01/06/23 11:38	Prepared:	01/18/23 12:25	Analyzed:	02/01/23 10:49
Solids:	53.49	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0394	Sequence:	SLB0012		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1254	1	9.286	9.298	0.012	19227	27.1	79.7
	* 2	9.436	9.447	0.011	31479	63.0	
Aroclor 1260	1	11.031	11.04533	0.0143	99918	330	9.
	* 2	11.641	11.65333	0.0123	114923.5	361	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-12	File ID:	02012306ECD7.D
Sampled:	01/06/23 13:18	Prepared:	01/18/23 12:25	Analyzed:	02/01/23 11:10
Solids:	55.76	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0394	Sequence:	SLB0012		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.394	8.405	0.011	41084.25	25.2	11.3
	2	8.297	8.305	0.008	22398.5	22.5	
Aroclor 1254	1	9.283	9.298	0.015	69815.4	38.1	13.
	* 2	9.435	9.447	0.012	62021.8	43.4	
Aroclor 1260	1	11.03	11.04533	0.0153	41682.6	29.1	12.3
	* 2	11.642	11.65333	0.0113	50052.5	32.9	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-14	File ID:	02012307ECD7.D
Sampled:	01/06/23 14:13	Prepared:	01/18/23 12:25	Analyzed:	02/01/23 11:31
Solids:	45.19	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0394	Sequence:	SLB0012		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.395	8.405	0.01	31589	19.9	2.5
	2	8.297	8.305	0.008	17833.5	19.4	
Aroclor 1254	1	9.285	9.298	0.013	52210.8	23.8	26.
	* 2	9.437	9.447	0.01	48175.2	30.9	
Aroclor 1260	1	11.031	11.04533	0.0143	29612.2	18.8	13.6
	* 2	11.643	11.65333	0.0103	29818.25	16.4	

* Column used for quantitation

HOLDING TIME SUMMARY

Analysis: EPA 8082A

Laboratory: Analytical Resources, LLC SDG: 23A0133

Client: Anchor QEA, LLC Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1252 23A0133-01	01/06/23 09:47	01/06/23 17:26	01/18/23 12:25	12	365	02/01/23 10:28	14	40	
LDW23-SC1261 23A0133-02	01/06/23 09:22	01/06/23 17:26	01/18/23 12:25	12	365	01/31/23 17:18	13	40	
LDW23-SC1250 23A0133-03	01/06/23 10:32	01/06/23 17:26	01/18/23 12:25	12	365	01/31/23 17:39	13	40	
LDW23-SC1244 23A0133-04	01/06/23 10:14	01/06/23 17:26	01/18/23 12:25	12	365	01/31/23 18:00	13	40	
LDW23-SC1244-FD 23A0133-05	01/06/23 10:14	01/06/23 17:26	01/18/23 12:25	12	365	01/31/23 18:21	13	40	
LDW23-SC1241 23A0133-06	01/06/23 10:51	01/06/23 17:26	01/18/23 12:25	12	365	01/31/23 18:42	13	40	
LDW23-IT1217 23A0133-07	01/06/23 11:14	01/06/23 17:26	01/18/23 12:25	12	365	01/31/23 19:03	13	40	
LDW23-SC1185 23A0133-08	01/06/23 12:00	01/06/23 17:26	01/18/23 12:25	12	365	01/31/23 20:48	13	40	
LDW23-SC1234 23A0133-09	01/06/23 13:34	01/06/23 17:26	01/18/23 12:25	11	365	01/31/23 21:09	13	40	
LDW23-SC1215 23A0133-10	01/06/23 11:38	01/06/23 17:26	01/18/23 12:25	12	365	02/01/23 10:49	14	40	
LDW23-SC1222 23A0133-11	01/06/23 13:00	01/06/23 17:26	01/18/23 12:25	11	365	01/31/23 21:51	13	40	
LDW23-SC1227 23A0133-12	01/06/23 13:18	01/06/23 17:26	01/18/23 12:25	11	365	02/01/23 11:10	14	40	
LDW23-SS1110 23A0133-13	01/06/23 14:00	01/06/23 17:26	01/18/23 12:25	11	365	01/31/23 22:33	13	40	
LDW23-SS1109 23A0133-14	01/06/23 14:13	01/06/23 17:26	01/18/23 12:25	11	365	02/01/23 11:31	14	40	
LDW23-SS1092 23A0133-15	01/06/23 14:26	01/06/23 17:26	01/18/23 12:25	11	365	01/31/23 23:15	13	40	
LDW23-SS1091 23A0133-16	01/06/23 14:50	01/06/23 17:26	01/18/23 12:25	11	365	01/31/23 23:36	13	40	
Matrix Spike BLA0394-MS1	01/06/23 11:14	01/06/23 17:26	01/18/23 12:25	12	365	01/31/23 20:06	13	40	
Matrix Spike Dup BLA0394-MSD1	01/06/23 11:14	01/06/23 17:26	01/18/23 12:25	12	365	01/31/23 20:27	13	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ECD7

Analyte	MDL	RL	Units
Aroclor 1016	1.6	4.0	ug/kg
Aroclor 1016 [2C]	1.6	4.0	ug/kg
Aroclor 1221	1.6	4.0	ug/kg
Aroclor 1221 [2C]	1.6	4.0	ug/kg
Aroclor 1232	1.6	4.0	ug/kg
Aroclor 1232 [2C]	1.6	4.0	ug/kg
Aroclor 1242	1.6	4.0	ug/kg
Aroclor 1242 [2C]	1.6	4.0	ug/kg
Aroclor 1248	1.6	4.0	ug/kg
Aroclor 1248 [2C]	1.6	4.0	ug/kg
Aroclor 1254	1.6	4.0	ug/kg
Aroclor 1254 [2C]	1.6	4.0	ug/kg
Aroclor 1260	0.6	4.0	ug/kg
Aroclor 1260 [2C]	0.6	4.0	ug/kg

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: S-279N
Description: Tetrachloro-m-xylene
Lot: 0052481B-1
Solvent: N/A
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: Jul 28, 2005
Expiration: Jul 28, 2015
Sample Size: 100 mg
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

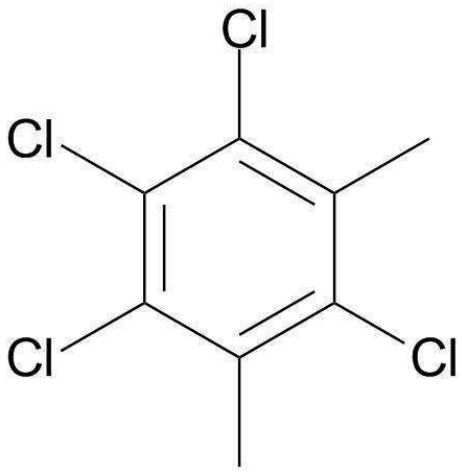
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration	Certified Analyte Concentration[1]
Tetrachloro-meta-xylene	877-09-8	96.0	N/A	N/A

Identification:

Molecular formula: C8H6Cl4
Molecular weight: 243.94



C000147
tetrachlormetaxylene
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] The Uncertainty calculated for this product is ±2.4%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Metrological traceability is established through in-house validated methods.

Purity, if stated, is equal to 100% minus found impurity components. Impurity components have not been identified.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

AccuStandard
125 Market Street
New Haven, CT 06513
(203) 786-5290

CERTIFICATE OF PRODUCT DATA

PRODUCT: C-209N
DESCRIPTION: 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl
LOT #: 990521LB-AC
SOLVENT: N/A

EXPIRATION: Jul 28, 2015

This product is guaranteed accurate to ±0.5% of the Certified Analyte concentration through the Expiration Date on the Label.

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1]	Certified Analyte Concentration[2]
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	100	N/A	N/A

C000148
decachlorbiphenyl
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

* I1768A

Certified by: R. Cooper

1. All weights are traceable through National Institute of Standards & Technology, Test No. 822/254480
2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty calculated for this product is ±4% which is the Combined Uncertainty uc(y). It represents an estimated standard deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is U which is Uc(y) *K where K is the coverage factor at the 95% confidence level (K=2).
3. A product with a suffix (-1A, -2B, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

Please note: AccuStandard follows the U.S. conventions in reporting numerical values, on both certificates and labels.

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

This product was manufactured in accordance to quality system requirements of ISO 9001:2000 and ISO 17025

* Recertified 2 4-6-09 JS

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Standard Record

Standard ID: C000148 **Printed: 4/23/2015 11:54:44AM**

Description:	decachlorbiphenyl	Expires:	15-Jan-2020
Standard Type:	Other	Prepared:	15-Jan-2014
Solvent:	na/a	Prepared By:	Joshua Rains
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	27-Feb-2015 13:03 by JGR
Vendor:	Accustandard	Lot #:	990521lb-ac
Vendor Catalog #:			

Comments

see i1768a
SOM calibrations added 06/12/14 sdrd

Analyte	CAS Number	Concentration	Units
Decachlorobiphenyl [2C]	2051-24-3	1000000	ug/mL
Decachlorobiphenyl	2051-24-3	1000000	ug/mL
DCB 1660 [2C]	2051-24-3	1000000	ug/mL
DCB 1660	2051-24-3	1000000	ug/mL
DCB [2C]	2051-24-3	1000000	ug/mL
DCB (A) [2C]	2051-24-3	1000000	ug/mL
DCB (A)	2051-24-3	1000000	ug/mL
DCB	2051-24-3	1000000	ug/mL

Reviewed By Date

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Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101461
Description: Aroclor 1254
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL13053
Certification Date: November 29, 2018
Expiration Date: November 30, 2026

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1254	11097-69-1	1000	± 0.246%

I09808
Recd. JP
02/24/20

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Certificate No. 2427.02

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Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL11110613_us

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101462
Description: Aroclor 1260
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL16516
Certification Date: March 4, 2021
Expiration Date: February 28, 2029

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1260	11096-82-5	1000	± 0.553%

J 006465

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101468
Description: Aroclor 1221
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14017
Certification Date: August 20, 2019
Expiration Date: August 31, 2027

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1221	11104-28-2	1000	± 0.553%

J004466
Rec'd
06/18/21

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Certicate No. 2427.02

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101469
Description: Aroclor 1232
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14914
Certification Date: January 31, 2020
Expiration Date: January 31, 2028

Andrea L Gill
Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1232	11141-16-5	1000	± 0.738%

J006467 JR
read
06/18/21

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2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.:	AL0-101470	**Lot Number:**	CL14018
Description:	Aroclor 1242	**Certification Date:**	August 20, 2019
Storage:	4 °C	**Expiration Date:**	August 31, 2027
Provided As:	1 mL in 2 mL Ampoule in Isooctane		

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1242	53469-21-9	1000	± 0.553%

J006468
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06/18/21

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2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

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[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.:	AL0-101471	**Lot Number:**	CL15384
Description:	Aroclor 1248	**Certification Date:**	June 19, 2020
Storage:	4 °C	**Expiration Date:**	June 30, 2028
Provided As:	1 mL in 2 mL Ampoule in Isooctane		

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1248	12672-29-6	1000	± 0.520%

JJ06469
Reed, JR
06/18/21

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

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Chemical Testing Laboratory
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3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

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[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
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Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101474
Description: Aroclor 1262
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL11330
Certification Date: May 15, 2015
Expiration Date: April 30, 2023
Revision Date: April 2, 2018

Andrea L Gill
Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1262	37324-23-5	1000	± 0.516%

J 00647
Rec'd JK
06/18/21

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials
Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL111110613_us

Certificate of Analysis

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Access your MSDS and digital C of A at www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

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Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101475	**Lot Number:**	CL11331
Description:	Aroclor 1268	**Certification Date:**	May 15, 2015
Storage:	4 °C	**Expiration Date:**	April 30, 2023
Provided As:	1 mL in 2 mL Ampoule in Isooctane	**Revision Date:**	April 2, 2018

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1268	11100-14-4	1000	± 0.516%

J006472
Rec'd
06/18/21

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

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ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL11110613_us

Certificate of Analysis

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

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Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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Chemical Testing Laboratory
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Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101467
Description: Aroclor 1016
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL16555
Certification Date: June 22, 2021
Expiration Date: February 28, 2029

Andrea Gill, Certified Reference Materials Manager

J012591
AROCLOR 1016
Expires 2/28/2029
Prepared By Joshua Rains 11/26/2021

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1016	12674-11-2	1000	± 0.310%

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

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Aroclor 1016 Solution

Product Number: PP-282 **Page:** 1 of 1

Lot Number: CR-0761 **Lot Issue Date:** 28-Feb-2017 **Expiration Date:** 31-Mar-2025

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1016	012674-11-2	NT01016	100.2 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1254 JR
Reed
02/05/22

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

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Certificate of Analysis

Product Name: Aroclor 1260 Standard

Product Number: PP-362-1 **Lot Issue Date:** 20-Jan-2021

Lot Number: 0006582048 **Expiration Date:** 28-Feb-2025

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1260	011096-82-5	NT01023	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K 1255

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

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ISO 17025 Cert
No. AT-1937

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Certificate of Analysis
ISO Guide 34

Aroclor 1242 Solution

Product Number: PP-312 **Page:** 1 of 1

Lot Number: CS-6293 **Lot Issue Date:** 04-Jan-2019 **Expiration Date:** 31-Jan-2023

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1242	053469-21-9	NT01020	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1256

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ISO Guide 34 Cert No.
AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026
registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO17025 Cert No.
AT-1937

ISO 17034

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Trusted Answers

Reference Material Certificate

Product Name:	Aroclor 1248 Standard	**Lot Number:**	0006626997
Product Number:	PP-342-1	**Lot Issue Date:**	17-Aug-2021
Storage Conditions:	Store at Room Temperature (15° to 30°C).	**Expiration Date:**	30-Sep-2025

	CERTIFIED VALUES				
Component Name	Concentration		Expanded Uncertainty	CAS#	Analyte Lot
Aroclor 1248	100.3	±	0.5 µg/mL	012672-29-6	NT01582

Matrix: isooctane (2,2,4-trimethylpentane)

K1257

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:
The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Certificate of Analysis

Agilent

Aroclor 1254 Solution

Product Number: PP-352 **Page:** 1 of 1

Lot Number: CS-2321 **Lot Issue Date:** 04-May-2018 **Expiration Date:** 31-May-2026

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1254	011097-69-1	RM00922	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1258

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

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Certificate of Analysis

Product Name: Aroclor 1221 Standard

Product Number: PP-292-1 **Lot Issue Date:** 28-Apr-2020

Lot Number: 0006535333 **Expiration Date:** 31-May-2024

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1221	011104-28-2	RM04278	100.2 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K1259

Traceability:

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:

This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:

Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:

The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert No. AT-1937

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Certificate of Analysis
ISO 17034

Aroclor 1262 Standard

Product Number: PP-372-1 **Page:** 1 of 1

Lot Number: 0006499800 **Lot Issue Date:** 04-Nov-2019 **Expiration Date:** 30-Nov-2023

This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent Technologies ISO 9001 registered quality system. A review of the gravimetric preparation data by our ISO 17025 accredited laboratory serves to verify the concentration of each analyte. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1262	037324-23-5	RM14263	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1260

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026 registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

Agilent

Certificate of Analysis
ISO 17034

Aroclor 1232 Standard

Product Number: PP-302-1 **Page:** 1 of 1

Lot Number: CF-2197A **Lot Issue Date:** 05-Jul-2016 **Expiration Date:** 31-Aug-2023

This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1232	011141-16-5	NT01717	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1261

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026 registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO17025 Cert No. AT-1937

Agilent

Certificate of Analysis

Product Name: Aroclor 1268 Standard

Product Number: PP-382-1 **Lot Issue Date:** 09-Feb-2021

Lot Number: 0006587800 **Expiration Date:** 31-Mar-2029

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1268	011100-14-4	RM00937	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K1262

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert
No. AT-1937

250 Smith Street North Kingstown, Rhode Island 02852 www.agilent.com/quality

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101467
Description: Aroclor 1016
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL12975
Certification Date: November 19, 2018
Expiration Date: October 31, 2026

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1016	12674-11-2	1000	± 0.553%

K 5829

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL11110613_us

Certificate of Analysis

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

   $$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

ILT1116613_US

Certificate of Analysis

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6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101462
Description: Aroclor 1260
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL18021
Certification Date: February 14, 2022
Expiration Date: February 28, 2030

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1260	11096-82-5	1000	± 0.553%

K005830

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Recipient Copy

CHAIN-OF-CUSTODY RECORD

COC No. 15546

Order Number: CB014961

Date Shipped: 11/17/2022

AirBill No(s): 519204142414

From: QATS LABORATORY
2700 CHANDLER AVENUE, BLDG. B
LAS VEGAS, NV 89120
PHONE: 1-702-895-8712

To: Kelly Bottem
Analytical Resources, Inc.
4611 S. 134th Place SUITE 100
Tukwila WA 98168
206-695-6211

Sample ID	Sigma ID	Qty	Description/Remarks	→ Catalogue Number
PSRM0164	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0165	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0166	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM

Ka1085 – KO 10816 KO1081 7

11/17/2022

PUGET SOUND SRM FOR THE LOCKHEED WEST SEATTLE SF SITE 5-YEAR REVIEW MONITORING.

Please use the enclosed Sample Preparation Instructions. If catalogue number(s) are listed at the top of the Sample Preparation Instructions use the Sample Preparation Instructions with catalogue number(s) matching the catalogue number(s) of each of the samples listed above.

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	11/17/2022 (1400)	Phillip	10:22 11/18/22
Custody Seal(s): Present/Absent	Remarks:		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

Report No. 00, 9/11/2014

SMP Version 3.3

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1241

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-06 B	File ID:	23022310
Sampled:	01/06/23 10:51	Prepared:	01/24/23 13:10	Analyzed:	02/23/23 17:32
% Solids:	48.97	Preparation:	EPA 1613	Initial/Final:	20.44 g Wet / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.713	0.655-0.886	0.070	0.999	0.681	ng/kg	J, B
1746-01-6	2,3,7,8-TCDD	1	0.491	0.655-0.886	0.044	0.999	0.326	ng/kg	EMPC, J
57117-41-6	1,2,3,7,8-PeCDF	1	1.587	1.318-1.783	0.115	0.999	0.544	ng/kg	J
57117-31-4	2,3,4,7,8-PeCDF	1	1.307	1.318-1.783	0.112	0.999	0.962	ng/kg	EMPC, J
40321-76-4	1,2,3,7,8-PeCDD	1	1.018	1.318-1.783	0.157	0.999	1.13	ng/kg	EMPC
70648-26-9	1,2,3,4,7,8-HxCDF	1	1.199	1.054-1.426	0.059	0.999	2.83	ng/kg	B
57117-44-9	1,2,3,6,7,8-HxCDF	1	1.250	1.054-1.426	0.057	0.999	0.983	ng/kg	J
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.736	1.054-1.426	0.061	0.999	1.08	ng/kg	EMPC
72918-21-9	1,2,3,7,8,9-HxCDF	1	1.608	1.054-1.426	0.070	0.999	0.586	ng/kg	EMPC, J, B
39227-28-6	1,2,3,4,7,8-HxCDD	1	1.425	1.054-1.426	0.136	0.999	0.954	ng/kg	J
57653-85-7	1,2,3,6,7,8-HxCDD	1	1.184	1.054-1.426	0.129	0.999	3.86	ng/kg	
19408-74-3	1,2,3,7,8,9-HxCDD	1	1.276	1.054-1.426	0.135	0.999	2.63	ng/kg	B
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.056	0.893-1.208	0.098	0.999	24.1	ng/kg	
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	1.078	0.893-1.208	0.128	0.999	2.01	ng/kg	
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.057	0.893-1.208	0.260	2.50	108	ng/kg	B
39001-02-0	OCDF	1	0.892	0.757-1.024	0.113	2.50	64.2	ng/kg	
3268-87-9	OCDD	1	0.916	0.757-1.024	0.215	9.99	906	ng/kg	B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			0.999	9.78	ng/kg	
41903-57-5	Total TCDD	1	0.000			0.999	2.29	ng/kg	
30402-15-4	Total PeCDF	1	0.000			0.999	9.32	ng/kg	
36088-22-9	Total PeCDD	1	0.000			0.999	1.68	ng/kg	
55684-94-1	Total HxCDF	1	0.000			0.999	29.9	ng/kg	
34465-46-8	Total HxCDD	1	0.000			0.999	33.3	ng/kg	
38998-75-3	Total HpCDF	1	0.000			0.999	79.0	ng/kg	
37871-00-4	Total HpCDD	1	0.000			0.999	267	ng/kg	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 4.75
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 4.75

LDW23-SC1241

Form 2
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-06	File ID:	23022310
Sampled:	01/06/23 10:51	Prepared:	01/24/23 13:10	Analyzed:	02/23/23 17:32
Solids Wt%:	48.97	Preparation:	EPA 1613	Initial/Final:	20.44 g / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.775	0.655-0.886	0.069	87.8	24 - 169 %	
13C12-2,3,7,8-TCDD		0.769	0.655-0.886	0.101	114	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.543	1.318-1.783	0.101	105	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.559	1.318-1.783	0.105	105	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.602	1.318-1.783	0.084	84.8	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.452	0.434-0.587	0.135	93.3	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.511	0.434-0.587	0.132	96.2	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.507	0.434-0.587	0.140	96.3	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.506	0.434-0.587	0.153	91.1	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.259	1.054-1.426	0.158	106	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.213	1.054-1.426	0.153	110	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.448	0.374-0.506	0.117	90.4	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.459	0.374-0.506	0.134	97.3	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.078	0.893-1.208	0.179	95.8	23 - 140 %	
13C12-OCDD		0.920	0.757-1.024	0.140	97.2	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.032	92.0	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:11:36 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: 23A0133-06, Name: 23022310, Date: 23-Feb-2023, Time: 17:32:23, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	26.000	1.000	2.044e3	2.867e3	0.876	0.713	0.770	1112	1496	2.69e4	4.44e4	24.2	29.7	NO	bd	dd	0.341
12378-PeCDF	30.176	1.001	2.403e3	1.515e3	0.845	1.587	1.550	2256	1937	3.59e4	2.36e4	15.9	12.2	NO	bb	bb	0.272
23478-PeCDF	31.513	1.001	4.063e3	3.108e3	0.911	1.307	1.550	2256	1937	7.22e4	4.75e4	32.0	24.5	YES	bb	dd	0.482
123478-HxCDF	35.122	1.000	9.654e3	8.049e3	1.182	1.199	1.240	1011	1102	1.59e5	1.29e5	157.3	116.7	NO	bd	dd	1.416
234678-HxCDF	36.103	1.000	2.956e3	4.019e3	1.229	0.736	1.240	1011	1102	5.04e4	4.24e4	49.8	38.4	YES	MM	MM	0.540
123678-HxCDF	35.256	1.000	3.818e3	3.054e3	1.248	1.250	1.240	1011	1102	6.46e4	4.71e4	63.9	42.7	NO	db	db	0.492
123789-HxCDF	37.128	1.000	1.952e3	1.214e3	1.187	1.608	1.240	1011	1102	2.72e4	1.89e4	26.9	17.1	YES	bb	bb	0.293
1234678-HpCDF	38.988	1.001	7.520e4	7.119e4	1.204	1.056	1.050	1750	1523	1.18e6	1.10e6	673.8	723.2	NO	bb	bb	12.063
1234789-HpCDF	41.261	1.000	5.750e3	5.334e3	1.165	1.078	1.050	1750	1523	7.86e4	7.72e4	44.9	50.6	NO	bb	bb	1.004
OCDF	45.564	1.006	1.483e5	1.661e5	1.186	0.892	0.890	1219	993	1.68e6	1.85e6	1375.9	1866.9	NO	bd	bd	32.151
2378-TCDD	26.650	1.001	8.834e2	1.799e3	1.236	0.491	0.770	999	882	1.28e4	2.82e4	12.9	32.0	YES	bd	bd	0.163
12378-PeCDD	31.758	1.000	2.550e3	2.505e3	1.087	1.018	1.550	1918	1479	3.65e4	3.32e4	19.0	22.4	YES	bb	bb	0.566
123478-HxCDD	36.248	1.000	2.941e3	2.064e3	0.987	1.425	1.240	1595	2327	5.08e4	3.48e4	31.8	14.9	NO	bd	bd	0.477
123678-HxCDD	36.370	1.000	1.224e4	1.034e4	1.021	1.184	1.240	1595	2327	2.01e5	1.65e5	126.0	71.0	NO	dd	db	1.929
123789-HxCDD	36.749	1.011	8.028e3	6.290e3	0.985	1.276	1.240	1595	2327	1.25e5	1.01e5	78.3	43.6	NO	bb	bb	1.315
1234678-HpCDD	40.504	1.001	2.807e5	2.654e5	1.253	1.057	1.050	2673	4033	4.29e6	4.01e6	1603.1	994.2	NO	bb	bb	54.056
OCDD	45.317	1.000	1.971e6	2.150e6	1.103	0.916	0.890	2177	1750	2.34e7	2.59e7	10749.7	14805.0	NO	bd	bb	453.373
13C-2378-TCDF	25.986	1.007	7.184e5	9.274e5	1.768	0.775	0.770	1903	1509	1.12e7	1.45e7	5882.6	9580.6	NO	bb	bb	87.814
13C-12378-PeCDF	30.153	1.169	1.034e6	6.702e5	1.527	1.543	1.550	2201	2102	1.56e7	1.00e7	7103.2	4770.3	NO	bd	bd	105.271
13C-23478-PeCDF	31.490	1.220	9.955e5	6.385e5	1.466	1.559	1.550	2201	2102	1.50e7	9.66e6	6808.1	4593.9	NO	bb	bb	105.121
13C-123478-HxCDF	35.111	0.956	3.294e5	7.284e5	1.054	0.452	0.510	1766	2524	5.63e6	1.15e7	3188.3	4568.9	NO	bb	bd	93.283
13C-123678-HxCDF	35.245	0.959	3.783e5	7.404e5	1.080	0.511	0.510	1766	2524	6.01e6	1.17e7	3402.2	4626.3	NO	db	db	96.248
13C-234678-HxCDF	36.114	0.983	3.540e5	6.976e5	1.014	0.507	0.510	1766	2524	5.65e6	1.12e7	3201.2	4453.1	NO	bb	bb	96.325
13C-123789-HxCDF	37.128	1.011	3.059e5	6.040e5	0.928	0.506	0.510	1766	2524	5.15e6	1.02e7	2913.8	4021.4	NO	bb	bb	91.111
13C-1234678-HpCDF	38.966	1.061	3.119e5	6.960e5	1.036	0.448	0.440	1673	1979	5.15e6	1.16e7	3081.2	5842.5	NO	bb	bb	90.384
13C-1234789-HpCDF	41.239	1.122	2.981e5	6.495e5	0.905	0.459	0.440	1673	1979	4.14e6	9.13e6	2474.3	4614.4	NO	bd	bd	97.288
13C-1234-TCDD	25.802	0.000	4.740e5	5.860e5	1.000	0.809	0.770	2005	1106	7.49e6	9.55e6	3736.3	8628.7	NO	bb	bb	100.000
13C-2378-TCDD	26.622	1.032	5.783e5	7.520e5	1.103	0.769	0.770	2005	1106	9.09e6	1.17e7	4531.1	10602.5	NO	bb	bb	113.774
13C-12378-PeCDD	31.747	1.230	5.059e5	3.158e5	0.914	1.602	1.550	1070	1076	7.34e6	4.63e6	6855.6	4300.4	NO	bb	bd	84.788
13C-123478-HxCDD	36.236	0.986	5.920e5	4.703e5	0.933	1.259	1.240	2146	2308	9.74e6	7.57e6	4537.5	3281.6	NO	bd	bd	105.792
13C-123678-HxCDD	36.359	0.990	6.284e5	5.182e5	0.965	1.213	1.240	2146	2308	9.81e6	8.08e6	4572.5	3498.8	NO	db	db	110.444
13C-1234678-HpCDD	40.481	1.102	4.184e5	3.881e5	0.782	1.078	1.050	2168	2053	6.40e6	5.92e6	2950.5	2881.9	NO	bb	bb	95.834
13C-OCDD	45.298	1.233	7.899e5	8.588e5	0.788	0.920	0.890	1858	1461	9.52e6	1.04e7	5120.5	7150.2	NO	bb	bb	194.347
13C-123789-HxCDD	36.738	0.000	5.881e5	4.881e5	1.000	1.205	1.240	2146	2308	9.88e6	8.33e6	4602.0	3609.7	NO	bb	bb	100.000
37CL-2378-TCDD	26.650	1.033	4.812e5		1.233			1118		7.41e6		6628.6			bb		36.800

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:11:36 Pacific Standard Time

ID: 23A0133-06, Name: 23022310, Date: 23-Feb-2023, Time: 17:32:23, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.483	0.865	6.699e2	1.272e3	1.064	0.527	0.770	1112	1496	1.22e4	2.07e4	11.0	13.8	YES	bb	bd	0.111
1289-TCDF	27.625	1.063	9.160e2	1.435e3	0.858	0.638	0.770	1112	1496	1.47e4	2.44e4	13.2	16.3	YES	bb	db	0.167
13468-PECDF					1.013		1.550	827	1049								
12389-PECDF					0.844		1.550	2256	1937								
123468-HXCDF	33.463	0.953	9.474e3	7.745e3	1.197	1.223	1.240	1011	1102	1.46e5	1.23e5	144.6	111.4	NO	bd	bb	1.359
1368-TCDD	23.754	0.892	2.425e3	2.607e3	1.084	0.930	0.770	999	882	3.76e4	4.15e4	37.6	47.0	YES	bb	bb	0.349
1289-TCDD	27.243	1.023	3.176e2	1.545e2	0.975	2.056	0.770	999	882	4.88e3	3.69e3	4.9	4.2	YES	bb	bb	0.036
12479-PECDD	29.073	0.916	6.869e3	1.965e3	1.837	3.495	1.550	1918	1479	7.04e4	4.16e4	36.7	28.1	YES	bb	db	0.585
12389-PECDD	32.159	1.013	8.299e2	6.596e2	1.252	1.258	1.550	1918	1479	1.54e4	9.29e3	8.0	6.3	YES	bb	bb	0.145
124679-HXCDD	34.242	0.945	3.228e4	2.675e4	1.033	1.207	1.240	1595	2327	4.94e5	4.02e5	309.5	172.9	NO	bb	bb	5.379
1234679-HPCDD	39.434	0.974	4.250e5	3.986e5	1.286	1.066	1.050	2673	4033	6.88e6	6.50e6	2575.0	1612.3	NO	bb	bb	79.407
Total-tetrafurans			3.212e4		0.933			1112		4.72e5							4.895
Total-penta1			2.892e4					827		4.27e5							3.071
Total-pentafurans			1.418e4		0.866			2256		2.00e5							1.595
Total-hexafurans			1.048e5		1.208			1011		1.64e6							14.955
Total-heptafurans			2.353e5		1.185			1750		3.62e6							39.516
Total-Furans			5.636e5		1.067			1112		8.03e6							96.182
Total-tetradioxins			7.435e3		1.099			999		1.16e5							1.147
Total-pentadioxins			6.005e3		1.392			1918		8.30e4							0.843
Total-hexadioxins			1.023e5		1.007			1595		1.44e6							16.675
Total-heptadioxins			7.057e5		1.269			2673		1.12e7							133.462
Total-Dioxins			2.792e6		1.165			999		3.62e7							605.501
Total-TEQ			3.356e6					999		4.42e7							701.683
FUNCTION1 PFK			2.799e7					383952		5.51e7							
FUNCTION2 PFK			2.340e7					389496		2.40e7							0.000
FUNCTION3 PFK			1.000e7					330517		3.87e7							0.000
FUNCTION4 PFK			3.213e5					352694		2.50e6							
FUNCTION5 PFK			9.590e3					190806		5.30e5							
FUNCTION1 HXCD...			5.050e3					865		8.62e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			3.011e2					1058		8.12e3							0.000
FUNCTION3 OCDPE			5.847e2					709		8.98e3							0.000
FUNCTION4 NCDPE			2.261e4					731		3.80e5							0.000
FUNCTION5 DCDPE			0.000e0					620		0.00e0							

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Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.76	1.384e3	1.801e3	0.933	0.77	0.77	19.8	YES	NO	dd	dd	0.207
2	Total-tetrafurans	24.66	2.685e3	3.340e3	0.933	0.80	0.77	28.7	YES	NO	bd	bd	0.393
3	Total-tetrafurans	24.25	2.240e3	2.993e3	0.933	0.75	0.77	26.8	YES	NO	db	dd	0.341
4	Total-tetrafurans	24.11	1.384e3	1.600e3	0.933	0.86	0.77	20.7	YES	NO	dd	dd	0.194
5	Total-tetrafurans	23.98	2.324e3	3.442e3	0.933	0.68	0.77	32.1	YES	NO	bd	bd	0.376
6	Total-tetrafurans	23.84	7.842e2	1.057e3	0.933	0.74	0.77	11.2	YES	NO	db	db	0.120
7	Total-tetrafurans	23.74	2.557e3	3.285e3	0.933	0.78	0.77	39.4	YES	NO	dd	dd	0.381
8	Total-tetrafurans	23.64	4.344e3	5.539e3	0.933	0.78	0.77	53.7	YES	NO	dd	dd	0.644
9	Total-tetrafurans	23.33	3.974e3	5.035e3	0.933	0.79	0.77	55.4	YES	NO	bd	bd	0.587
10	Total-tetrafurans	26.24	2.081e3	3.007e3	0.933	0.69	0.77	24.0	YES	NO	dd	dd	0.331
11	Total-tetrafurans	26.13	1.580e3	2.272e3	0.933	0.70	0.77	21.9	YES	NO	dd	dd	0.251
12	2378-TCDF	26.00	2.044e3	2.867e3	0.876	0.71	0.77	24.2	YES	NO	bd	dd	0.341
13	Total-tetrafurans	25.08	1.718e3	2.474e3	0.933	0.69	0.77	22.9	YES	NO	db	bb	0.273
14	Total-tetrafurans	24.90	3.021e3	3.986e3	0.933	0.76	0.77	43.5	YES	NO	dd	db	0.457

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-penta1	27.43	2.892e4	1.906e4		1.52	1.55	516.3	YES	NO	bb	bb	3.071

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	30.38	3.773e3	2.238e3	0.866	1.69	1.55	24.2	YES	NO	bd	bd	0.416
2	12378-PeCDF	30.18	2.403e3	1.515e3	0.845	1.59	1.55	15.9	YES	NO	bb	bb	0.272
3	Total-pentafurans	28.91	5.007e3	3.062e3	0.866	1.64	1.55	26.4	YES	NO	dd	dd	0.558
4	Total-pentafurans	31.37	3.001e3	2.056e3	0.866	1.46	1.55	21.9	YES	NO	db	dd	0.350

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HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123468-HXCDF	33.46	9.474e3	7.745e3	1.197	1.22	1.24	144.6	YES	NO	bd	bb	1.359
2	123678-HxCDF	35.26	3.818e3	3.054e3	1.248	1.25	1.24	63.9	YES	NO	db	db	0.492
3	123478-HxCDF	35.12	9.654e3	8.049e3	1.182	1.20	1.24	157.3	YES	NO	bd	dd	1.416
4	Total-hexafurans	34.97	1.803e3	1.304e3	1.208	1.38	1.24	31.4	YES	NO	bb	bd	0.248
5	Total-hexafurans	34.51	4.685e4	3.731e4	1.208	1.26	1.24	725.4	YES	NO	bb	bb	6.732
6	Total-hexafurans	34.21	1.120e3	8.621e2	1.208	1.30	1.24	16.3	YES	NO	bb	bb	0.159
7	Total-hexafurans	33.67	3.206e4	2.480e4	1.208	1.29	1.24	485.6	YES	NO	db	bb	4.548

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-heptafurans	39.66	1.543e5	1.520e5	1.185	1.02	1.05	1347.7	YES	NO	bd	bb	26.449
2	1234678-HpCDF	38.99	7.520e4	7.119e4	1.204	1.06	1.05	673.8	YES	NO	bb	bb	12.063
3	1234789-HpCDF	41.26	5.750e3	5.334e3	1.165	1.08	1.05	44.9	YES	NO	bb	bb	1.004

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.76	1.384e3	1.801e3	0.933	0.77	0.77	19.8	YES	NO	dd	dd	0.207
2	Total-tetrafurans	24.66	2.685e3	3.340e3	0.933	0.80	0.77	28.7	YES	NO	bd	bd	0.393
3	Total-tetrafurans	24.25	2.240e3	2.993e3	0.933	0.75	0.77	26.8	YES	NO	db	dd	0.341
4	Total-tetrafurans	24.11	1.384e3	1.600e3	0.933	0.86	0.77	20.7	YES	NO	dd	dd	0.194
5	Total-tetrafurans	23.98	2.324e3	3.442e3	0.933	0.68	0.77	32.1	YES	NO	bd	bd	0.376
6	Total-tetrafurans	23.84	7.842e2	1.057e3	0.933	0.74	0.77	11.2	YES	NO	db	db	0.120
7	Total-tetrafurans	23.74	2.557e3	3.285e3	0.933	0.78	0.77	39.4	YES	NO	dd	dd	0.381
8	Total-tetrafurans	23.64	4.344e3	5.539e3	0.933	0.78	0.77	53.7	YES	NO	dd	dd	0.644
9	Total-tetrafurans	23.33	3.974e3	5.035e3	0.933	0.79	0.77	55.4	YES	NO	bd	bd	0.587
10	Total-tetrafurans	26.24	2.081e3	3.007e3	0.933	0.69	0.77	24.0	YES	NO	dd	dd	0.331
11	Total-tetrafurans	26.13	1.580e3	2.272e3	0.933	0.70	0.77	21.9	YES	NO	dd	dd	0.251
12	2378-TCDF	26.00	2.044e3	2.867e3	0.876	0.71	0.77	24.2	YES	NO	bd	dd	0.341
13	Total-tetrafurans	25.08	1.718e3	2.474e3	0.933	0.69	0.77	22.9	YES	NO	db	bb	0.273
14	Total-tetrafurans	24.90	3.021e3	3.986e3	0.933	0.76	0.77	43.5	YES	NO	dd	db	0.457
15	Total-pentafurans	30.38	3.773e3	2.238e3	0.866	1.69	1.55	24.2	YES	NO	bd	bd	0.416
16	12378-PeCDF	30.18	2.403e3	1.515e3	0.845	1.59	1.55	15.9	YES	NO	bb	bb	0.272
17	Total-pentafurans	28.91	5.007e3	3.062e3	0.866	1.64	1.55	26.4	YES	NO	dd	dd	0.558
18	Total-pentafurans	31.37	3.001e3	2.056e3	0.866	1.46	1.55	21.9	YES	NO	db	dd	0.350
19	123468-HXCDF	33.46	9.474e3	7.745e3	1.197	1.22	1.24	144.6	YES	NO	bd	bb	1.359
20	123678-HxCDF	35.26	3.818e3	3.054e3	1.248	1.25	1.24	63.9	YES	NO	db	db	0.492
21	123478-HxCDF	35.12	9.654e3	8.049e3	1.182	1.20	1.24	157.3	YES	NO	bd	dd	1.416
22	Total-hexafurans	34.97	1.803e3	1.304e3	1.208	1.38	1.24	31.4	YES	NO	bb	bd	0.248
23	Total-hexafurans	34.51	4.685e4	3.731e4	1.208	1.26	1.24	725.4	YES	NO	bb	bb	6.732
24	Total-hexafurans	34.21	1.120e3	8.621e2	1.208	1.30	1.24	16.3	YES	NO	bb	bb	0.159
25	Total-hexafurans	33.67	3.206e4	2.480e4	1.208	1.29	1.24	485.6	YES	NO	db	bb	4.548
26	Total-heptafurans	39.66	1.543e5	1.520e5	1.185	1.02	1.05	1347.7	YES	NO	bd	bb	26.449
27	1234678-HpCDF	38.99	7.520e4	7.119e4	1.204	1.06	1.05	673.8	YES	NO	bb	bb	12.063
28	1234789-HpCDF	41.26	5.750e3	5.334e3	1.165	1.08	1.05	44.9	YES	NO	bb	bb	1.004
29	OCDF	45.56	1.483e5	1.661e5	1.186	0.89	0.89	1375.9	YES	NO	bd	bd	32.151
30	Total-penta1	27.43	2.892e4	1.906e4		1.52	1.55	516.3	YES	NO	bb	bb	3.071

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TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.83	6.944e2	9.569e2	1.099	0.73	0.77	8.8	YES	NO	bd	dd	0.113
2	Total-tetradioxins	25.25	1.259e3	1.610e3	1.099	0.78	0.77	19.4	YES	NO	bb	bd	0.196
3	Total-tetradioxins	24.97	8.367e2	1.141e3	1.099	0.73	0.77	12.5	YES	NO	bb	bb	0.135
4	Total-tetradioxins	24.77	2.023e3	2.324e3	1.099	0.87	0.77	32.6	YES	NO	bb	db	0.297
5	Total-tetradioxins	24.04	1.705e3	2.016e3	1.099	0.85	0.77	31.4	YES	NO	bb	bb	0.255
6	Total-tetradioxins	26.27	9.165e2	1.283e3	1.099	0.71	0.77	11.1	YES	NO	bb	bb	0.151

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentadioxins	30.69	2.738e3	1.626e3	1.392	1.68	1.55	15.0	YES	NO	db	db	0.381
2	Total-pentadioxins	30.16	3.267e3	2.014e3	1.392	1.62	1.55	28.3	YES	NO	bb	bb	0.462

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.75	8.028e3	6.290e3	0.985	1.28	1.24	78.3	YES	NO	bb	bb	1.315
2	123678-HxCDD	36.37	1.224e4	1.034e4	1.021	1.18	1.24	126.0	YES	NO	dd	db	1.929
3	123478-HxCDD	36.25	2.941e3	2.064e3	0.987	1.42	1.24	31.8	YES	NO	bd	bd	0.477
4	Total-hexadioxins	35.47	3.531e3	2.651e3	1.007	1.33	1.24	40.0	YES	NO	db	db	0.556
5	Total-hexadioxins	35.37	3.631e4	2.913e4	1.007	1.25	1.24	241.3	YES	NO	bd	bd	5.887
6	Total-hexadioxins	35.01	6.963e3	5.604e3	1.007	1.24	1.24	75.6	YES	NO	bb	bb	1.131
7	124679-HXCDD	34.24	3.228e4	2.675e4	1.033	1.21	1.24	309.5	YES	NO	bb	bb	5.379

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.50	2.807e5	2.654e5	1.253	1.06	1.05	1603.1	YES	NO	bb	bb	54.056
2	1234679-HPCDD	39.43	4.250e5	3.986e5	1.286	1.07	1.05	2575.0	YES	NO	bb	bb	79.407

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.83	6.944e2	9.569e2	1.099	0.73	0.77	8.8	YES	NO	bd	dd	0.113
2	Total-tetradioxins	25.25	1.259e3	1.610e3	1.099	0.78	0.77	19.4	YES	NO	bb	bd	0.196
3	Total-tetradioxins	24.97	8.367e2	1.141e3	1.099	0.73	0.77	12.5	YES	NO	bb	bb	0.135
4	Total-tetradioxins	24.77	2.023e3	2.324e3	1.099	0.87	0.77	32.6	YES	NO	bb	db	0.297
5	Total-tetradioxins	24.04	1.705e3	2.016e3	1.099	0.85	0.77	31.4	YES	NO	bb	bb	0.255
6	Total-tetradioxins	26.27	9.165e2	1.283e3	1.099	0.71	0.77	11.1	YES	NO	bb	bb	0.151
7	Total-pentadioxins	30.69	2.738e3	1.626e3	1.392	1.68	1.55	15.0	YES	NO	db	db	0.381
8	Total-pentadioxins	30.16	3.267e3	2.014e3	1.392	1.62	1.55	28.3	YES	NO	bb	bb	0.462
9	123789-HxCDD	36.75	8.028e3	6.290e3	0.985	1.28	1.24	78.3	YES	NO	bb	bb	1.315
10	123678-HxCDD	36.37	1.224e4	1.034e4	1.021	1.18	1.24	126.0	YES	NO	dd	db	1.929
11	123478-HxCDD	36.25	2.941e3	2.064e3	0.987	1.42	1.24	31.8	YES	NO	bd	bd	0.477
12	Total-hexadioxins	35.47	3.531e3	2.651e3	1.007	1.33	1.24	40.0	YES	NO	db	db	0.556
13	Total-hexadioxins	35.37	3.631e4	2.913e4	1.007	1.25	1.24	241.3	YES	NO	bd	bd	5.887
14	Total-hexadioxins	35.01	6.963e3	5.604e3	1.007	1.24	1.24	75.6	YES	NO	bb	bb	1.131
15	124679-HXCDD	34.24	3.228e4	2.675e4	1.033	1.21	1.24	309.5	YES	NO	bb	bb	5.379
16	1234678-HpCDD	40.50	2.807e5	2.654e5	1.253	1.06	1.05	1603.1	YES	NO	bb	bb	54.056
17	1234679-HPCDD	39.43	4.250e5	3.986e5	1.286	1.07	1.05	2575.0	YES	NO	bb	bb	79.407
18	OCDD	45.32	1.971e6	2.150e6	1.103	0.92	0.89	10749.7	YES	NO	bd	bb	453.373

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.76	1.384e3	1.801e3	0.933	0.77	0.77	19.8	YES	NO	dd	dd	0.207
2	Total-tetrafurans	24.66	2.685e3	3.340e3	0.933	0.80	0.77	28.7	YES	NO	bd	bd	0.393
3	Total-tetrafurans	24.25	2.240e3	2.993e3	0.933	0.75	0.77	26.8	YES	NO	db	dd	0.341
4	Total-tetrafurans	24.11	1.384e3	1.600e3	0.933	0.86	0.77	20.7	YES	NO	dd	dd	0.194
5	Total-tetrafurans	23.98	2.324e3	3.442e3	0.933	0.68	0.77	32.1	YES	NO	bd	bd	0.376
6	Total-tetrafurans	23.84	7.842e2	1.057e3	0.933	0.74	0.77	11.2	YES	NO	db	db	0.120
7	Total-tetrafurans	23.74	2.557e3	3.285e3	0.933	0.78	0.77	39.4	YES	NO	dd	dd	0.381
8	Total-tetrafurans	23.64	4.344e3	5.539e3	0.933	0.78	0.77	53.7	YES	NO	dd	dd	0.644
9	Total-tetrafurans	23.33	3.974e3	5.035e3	0.933	0.79	0.77	55.4	YES	NO	bd	bd	0.587
10	Total-tetrafurans	26.24	2.081e3	3.007e3	0.933	0.69	0.77	24.0	YES	NO	dd	dd	0.331
11	Total-tetrafurans	26.13	1.580e3	2.272e3	0.933	0.70	0.77	21.9	YES	NO	dd	dd	0.251
12	2378-TCDF	26.00	2.044e3	2.867e3	0.876	0.71	0.77	24.2	YES	NO	bd	dd	0.341
13	Total-tetrafurans	25.08	1.718e3	2.474e3	0.933	0.69	0.77	22.9	YES	NO	db	bb	0.273
14	Total-tetrafurans	24.90	3.021e3	3.986e3	0.933	0.76	0.77	43.5	YES	NO	dd	db	0.457
15	Total-pentafurans	30.38	3.773e3	2.238e3	0.866	1.69	1.55	24.2	YES	NO	bd	bd	0.416
16	12378-PeCDF	30.18	2.403e3	1.515e3	0.845	1.59	1.55	15.9	YES	NO	bb	bb	0.272
17	Total-pentafurans	28.91	5.007e3	3.062e3	0.866	1.64	1.55	26.4	YES	NO	dd	dd	0.558
18	Total-pentafurans	31.37	3.001e3	2.056e3	0.866	1.46	1.55	21.9	YES	NO	db	dd	0.350
19	123468-HXCDF	33.46	9.474e3	7.745e3	1.197	1.22	1.24	144.6	YES	NO	bd	bb	1.359
20	123678-HxCDF	35.26	3.818e3	3.054e3	1.248	1.25	1.24	63.9	YES	NO	db	db	0.492
21	123478-HxCDF	35.12	9.654e3	8.049e3	1.182	1.20	1.24	157.3	YES	NO	bd	dd	1.416
22	Total-hexafurans	34.97	1.803e3	1.304e3	1.208	1.38	1.24	31.4	YES	NO	bb	bd	0.248
23	Total-hexafurans	34.51	4.685e4	3.731e4	1.208	1.26	1.24	725.4	YES	NO	bb	bb	6.732
24	Total-hexafurans	34.21	1.120e3	8.621e2	1.208	1.30	1.24	16.3	YES	NO	bb	bb	0.159
25	Total-hexafurans	33.67	3.206e4	2.480e4	1.208	1.29	1.24	485.6	YES	NO	db	bb	4.548
26	Total-heptafurans	39.66	1.543e5	1.520e5	1.185	1.02	1.05	1347.7	YES	NO	bd	bb	26.449
27	1234678-HpCDF	38.99	7.520e4	7.119e4	1.204	1.06	1.05	673.8	YES	NO	bb	bb	12.063
28	1234789-HpCDF	41.26	5.750e3	5.334e3	1.165	1.08	1.05	44.9	YES	NO	bb	bb	1.004
29	OCDF	45.56	1.483e5	1.661e5	1.186	0.89	0.89	1375.9	YES	NO	bd	bd	32.151
30	Total-penta1	27.43	2.892e4	1.906e4		1.52	1.55	516.3	YES	NO	bb	bb	3.071
31	Total-tetradioxins	25.83	6.944e2	9.569e2	1.099	0.73	0.77	8.8	YES	NO	bd	dd	0.113
32	Total-tetradioxins	25.25	1.259e3	1.610e3	1.099	0.78	0.77	19.4	YES	NO	bb	bd	0.196
33	Total-tetradioxins	24.97	8.367e2	1.141e3	1.099	0.73	0.77	12.5	YES	NO	bb	bb	0.135
34	Total-tetradioxins	24.77	2.023e3	2.324e3	1.099	0.87	0.77	32.6	YES	NO	bb	db	0.297
35	Total-tetradioxins	24.04	1.705e3	2.016e3	1.099	0.85	0.77	31.4	YES	NO	bb	bb	0.255
36	Total-tetradioxins	26.27	9.165e2	1.283e3	1.099	0.71	0.77	11.1	YES	NO	bb	bb	0.151
37	Total-pentadioxins	30.69	2.738e3	1.626e3	1.392	1.68	1.55	15.0	YES	NO	db	db	0.381

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	Total-pentadioxins	30.16	3.267e3	2.014e3	1.392	1.62	1.55	28.3	YES	NO	bb	bb	0.462
39	123789-HxCDD	36.75	8.028e3	6.290e3	0.985	1.28	1.24	78.3	YES	NO	bb	bb	1.315
40	123678-HxCDD	36.37	1.224e4	1.034e4	1.021	1.18	1.24	126.0	YES	NO	dd	db	1.929
41	123478-HxCDD	36.25	2.941e3	2.064e3	0.987	1.42	1.24	31.8	YES	NO	bd	bd	0.477
42	Total-hexadioxins	35.47	3.531e3	2.651e3	1.007	1.33	1.24	40.0	YES	NO	db	db	0.556
43	Total-hexadioxins	35.37	3.631e4	2.913e4	1.007	1.25	1.24	241.3	YES	NO	bd	bd	5.887
44	Total-hexadioxins	35.01	6.963e3	5.604e3	1.007	1.24	1.24	75.6	YES	NO	bb	bb	1.131
45	124679-HXCDD	34.24	3.228e4	2.675e4	1.033	1.21	1.24	309.5	YES	NO	bb	bb	5.379
46	1234678-HpCDD	40.50	2.807e5	2.654e5	1.253	1.06	1.05	1603.1	YES	NO	bb	bb	54.056
47	1234679-HPCDD	39.43	4.250e5	3.986e5	1.286	1.07	1.05	2575.0	YES	NO	bb	bb	79.407
48	OCDD	45.32	1.971e6	2.150e6	1.103	0.92	0.89	10749.7	YES	NO	bd	bb	453.373

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	28.02	7.487e4					1.4	NO		bb		
2	FUNCTION1 PFK	27.86	1.153e5					3.7	YES		bb		
3	FUNCTION1 PFK	24.26	5.013e6					15.3	YES		bb		
4	FUNCTION1 PFK	23.57	2.010e6					14.9	YES		bb		
5	FUNCTION1 PFK	22.57	3.214e6					18.2	YES		db		
6	FUNCTION1 PFK	22.03	1.280e7					46.5	YES		bd		
7	FUNCTION1 PFK	21.40	4.763e6					43.4	YES		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	30.65	8.846e6					12.6	YES		db		0.000
2	FUNCTION2 PFK	29.50	1.501e6					23.4	YES		dd		0.000
3	FUNCTION2 PFK	29.21	1.306e7					25.8	YES		bd		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	36.80	6.212e6					28.1	YES		db		0.000
2	FUNCTION3 PFK	36.23	2.852e5					13.3	YES		bd		0.000
3	FUNCTION3 PFK	36.08	2.826e5					8.6	YES		bb		0.000
4	FUNCTION3 PFK	37.81	2.586e5					3.1	YES		bb		0.000
5	FUNCTION3 PFK	37.57	9.687e5					14.0	YES		db		0.000
6	FUNCTION3 PFK	37.33	7.129e5					24.0	YES		dd		0.000
7	FUNCTION3 PFK	37.25	1.282e6					26.1	YES		bd		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.04	3.213e5					7.1	YES		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.12	9.590e3					2.8	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	24.02	1.610e2					2.2	NO		bb		0.000
2	FUNCTION1 HXCD...	22.88	7.855e1					1.6	NO		bb		0.000
3	FUNCTION1 HXCD...	22.55	1.527e2					2.9	NO		bb		0.000
4	FUNCTION1 HXCD...	22.38	7.355e1					1.6	NO		bb		0.000
5	FUNCTION1 HXCD...	21.49	1.519e2					3.0	YES		db		0.000
6	FUNCTION1 HXCD...	21.40	4.120e2					3.9	YES		dd		0.000
7	FUNCTION1 HXCD...	21.28	1.287e2					2.3	NO		bd		0.000
8	FUNCTION1 HXCD...	28.10	7.347e1					1.7	NO		bb		0.000
9	FUNCTION1 HXCD...	27.99	7.223e1					1.7	NO		db		0.000
10	FUNCTION1 HXCD...	27.92	9.455e1					1.8	NO		bd		0.000
11	FUNCTION1 HXCD...	27.03	1.546e2					2.1	NO		bb		0.000
12	FUNCTION1 HXCD...	26.38	2.404e2					5.0	YES		bb		0.000
13	FUNCTION1 HXCD...	26.16	3.092e3					65.3	YES		bb		0.000
14	FUNCTION1 HXCD...	25.35	7.698e1					2.1	NO		bb		0.000
15	FUNCTION1 HXCD...	24.47	8.778e1					2.3	NO		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.87	7.097e1					1.8	NO		bb		0.000
2	FUNCTION2 HPCD...	30.72	8.300e1					2.0	NO		bb		0.000
3	FUNCTION2 HPCD...	30.33	7.372e1					2.1	NO		bb		0.000
4	FUNCTION2 HPCD...	29.06	7.345e1					1.8	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	34.38	9.292e1					2.6	NO		bd		0.000
2	FUNCTION3 OCDPE	33.38	1.689e2					2.9	NO		bb		0.000
3	FUNCTION3 OCDPE	36.77	9.523e1					2.6	NO		bb		0.000
4	FUNCTION3 OCDPE	36.13	1.397e2					2.8	NO		bb		0.000
5	FUNCTION3 OCDPE	34.49	8.804e1					1.7	NO		db		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	39.46	7.011e1					2.8	NO		bb		0.000
2	FUNCTION4 NCDPE	38.64	2.254e4					517.7	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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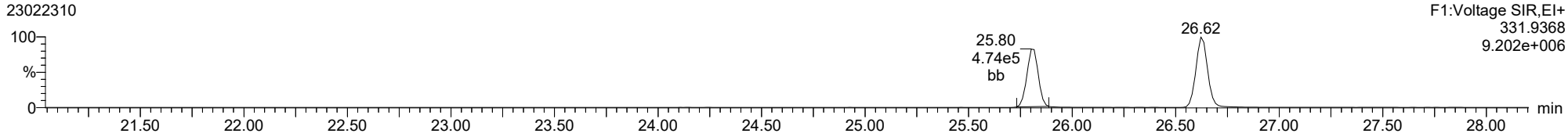
Printed: Friday, February 24, 2023 15:11:36 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: 23A0133-06, Name: 23022310, Date: 23-Feb-2023, Time: 17:32:23, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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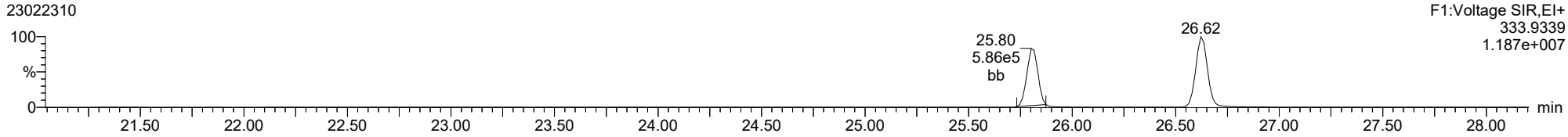

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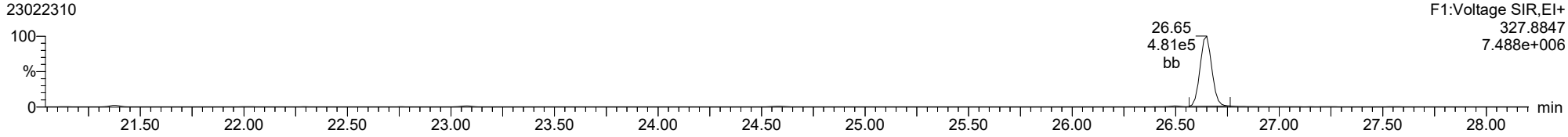

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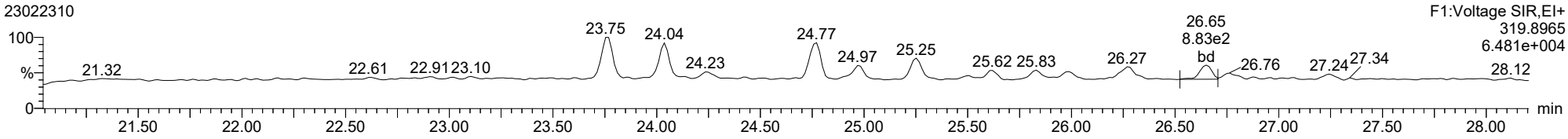

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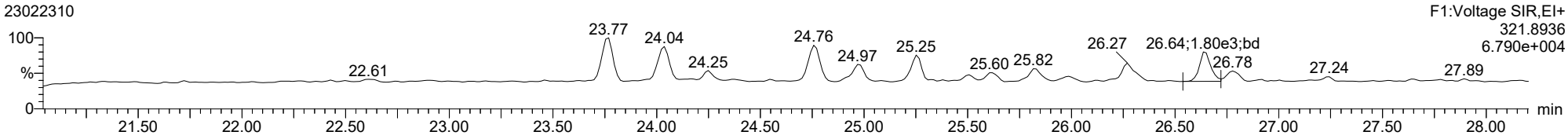

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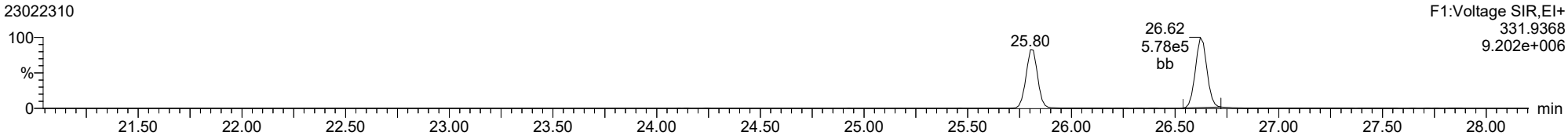

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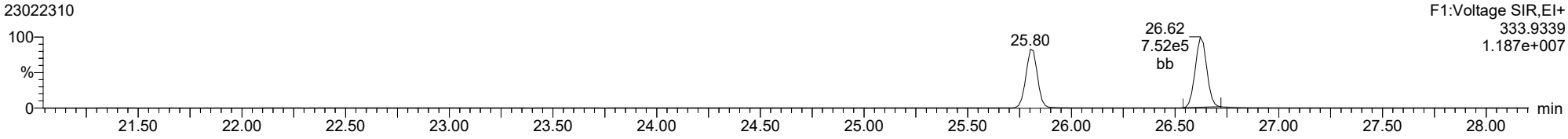
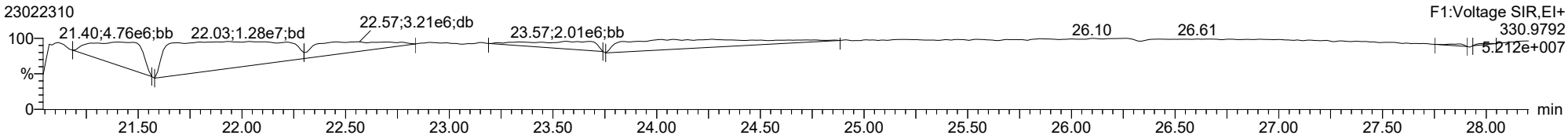
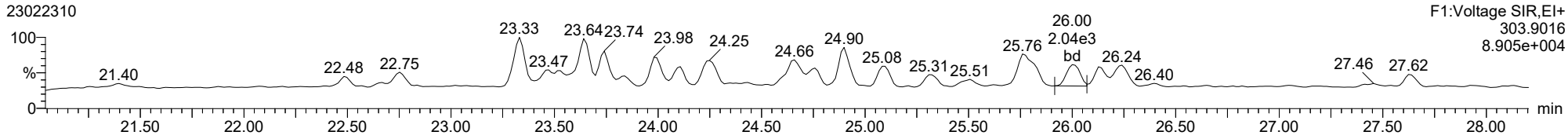


FUNCTION1 PFK



ID: 23A0133-06, Name: 23022310, Date: 23-Feb-2023, Time: 17:32:23, Conditions: AUTOSPEC01, User: pk

2378-TCDF



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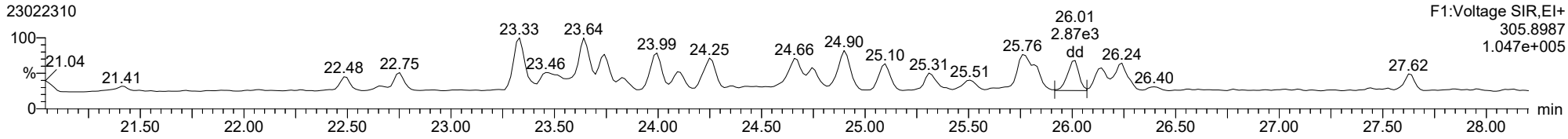

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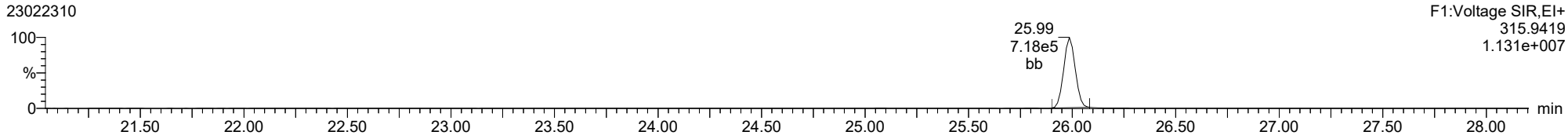

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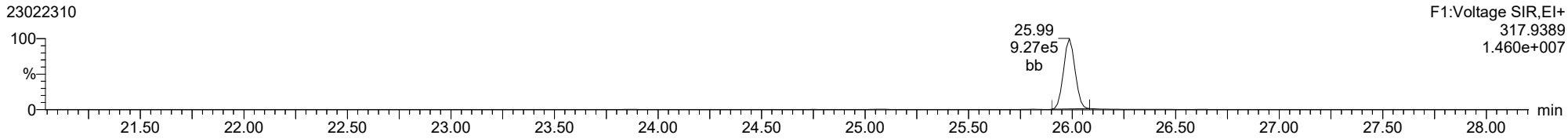
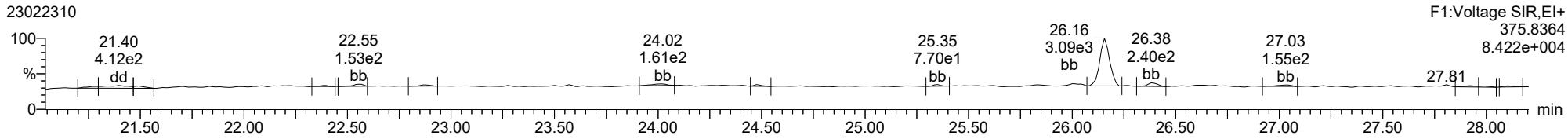


FUNCTION1 HXCDPE



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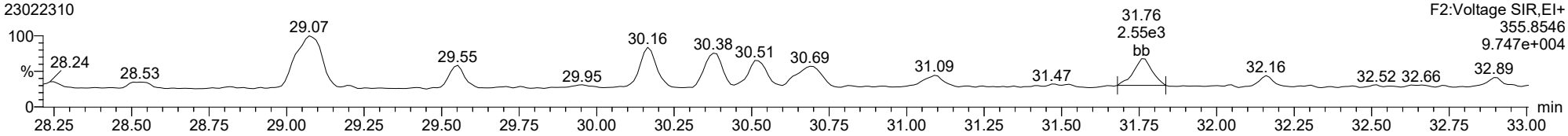
12378-PeCDD



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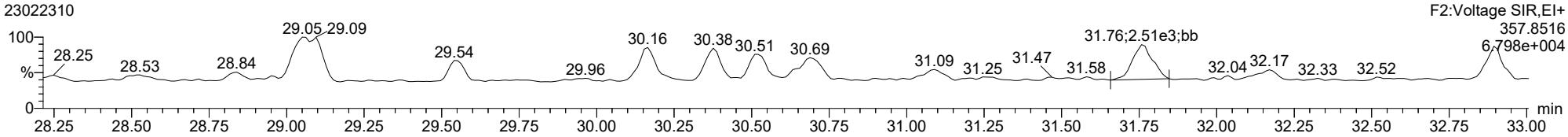

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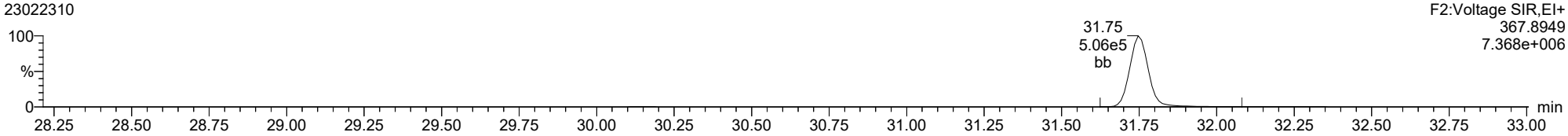

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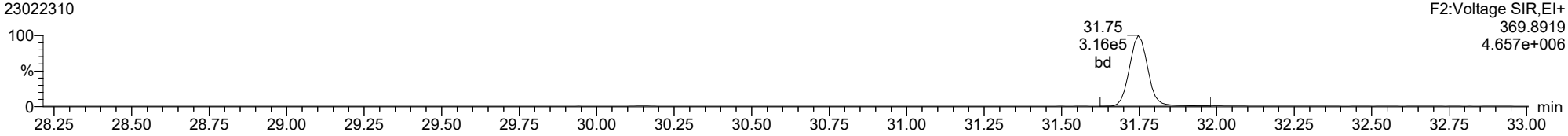

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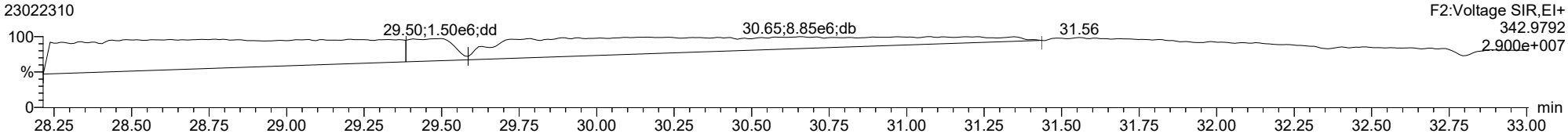

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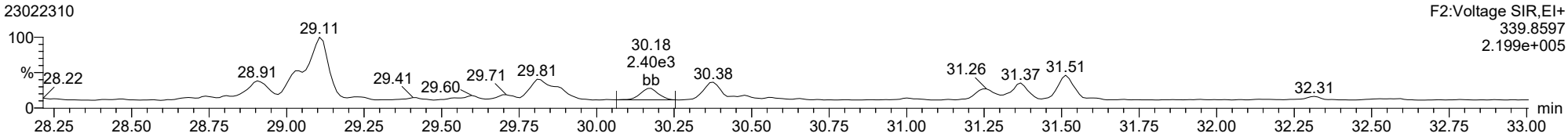

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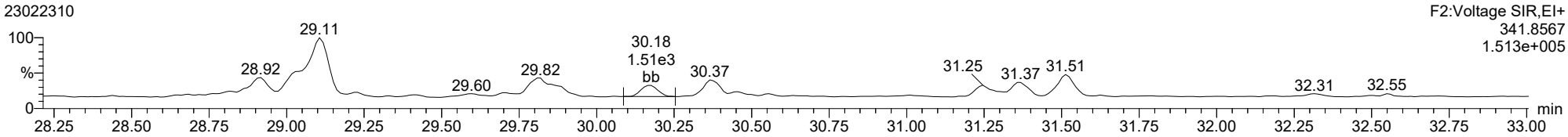

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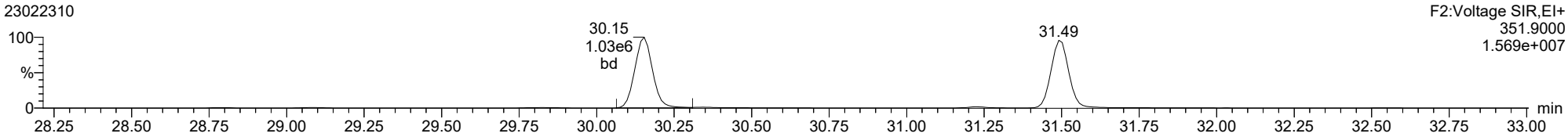

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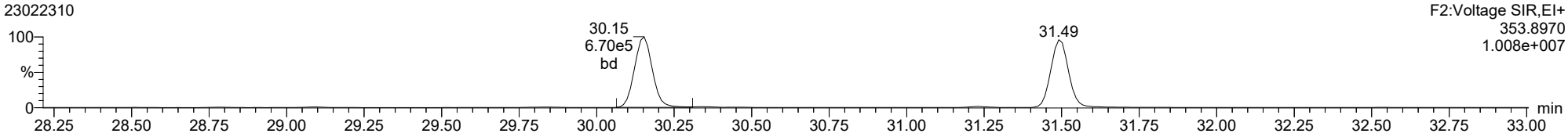

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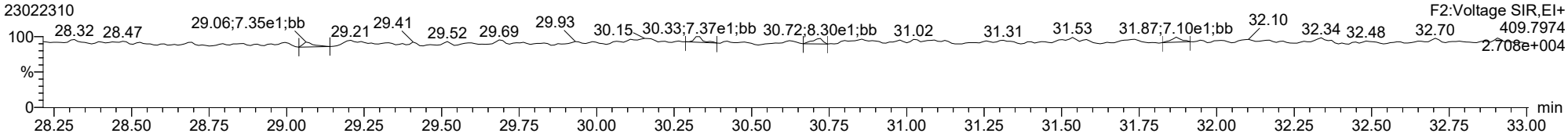

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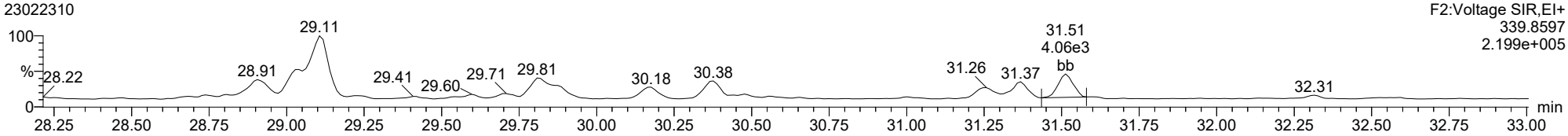

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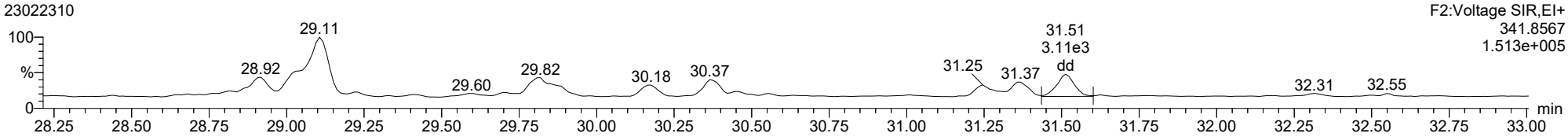

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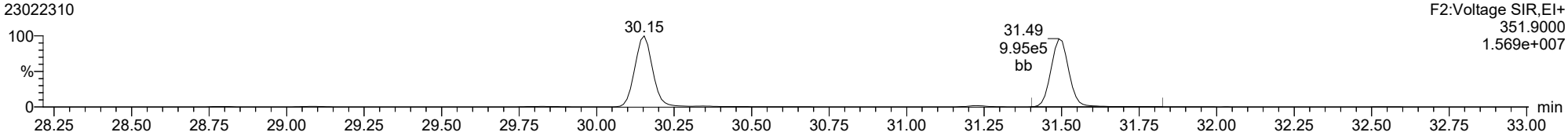

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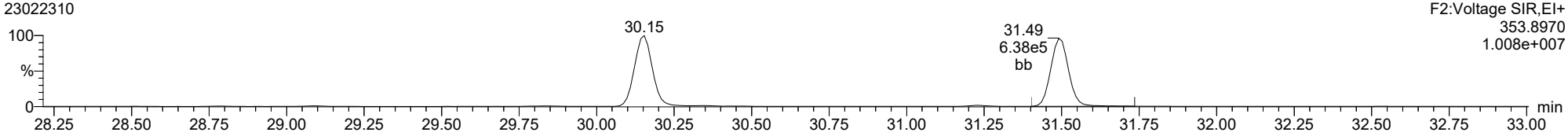

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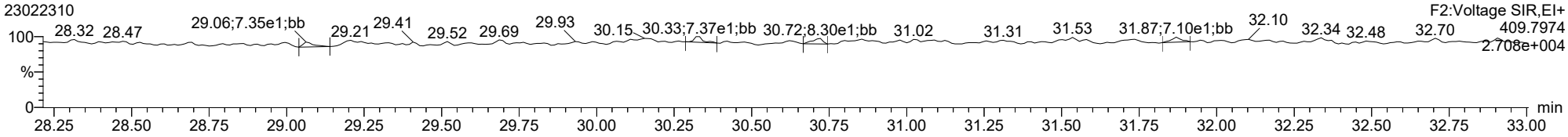

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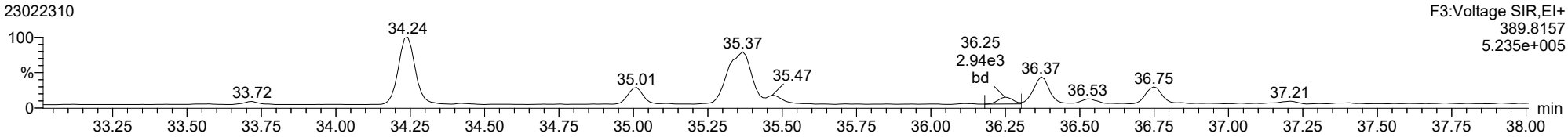

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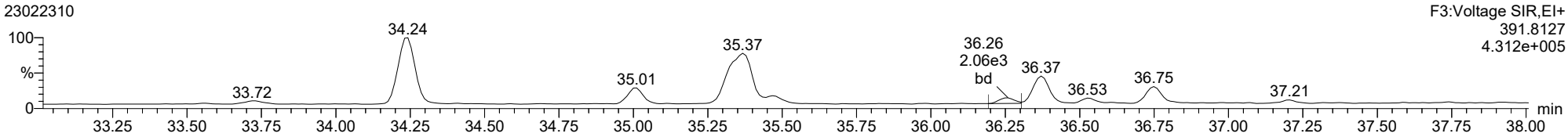

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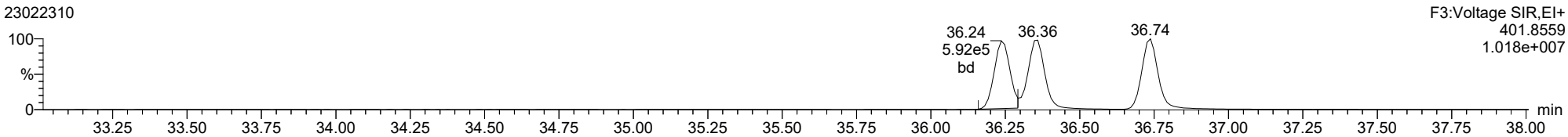

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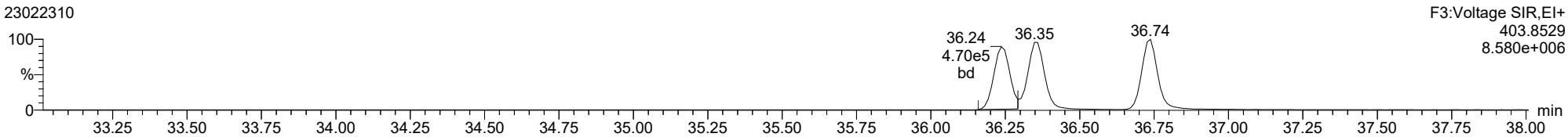
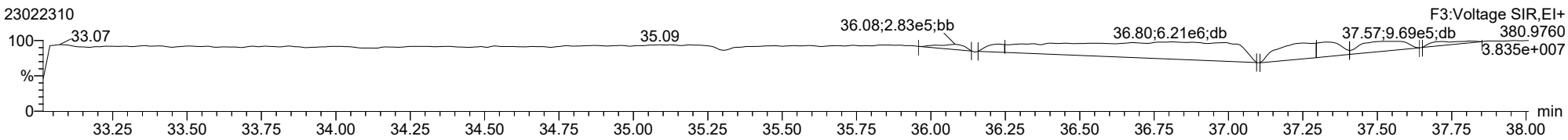


FUNCTION3 PFK



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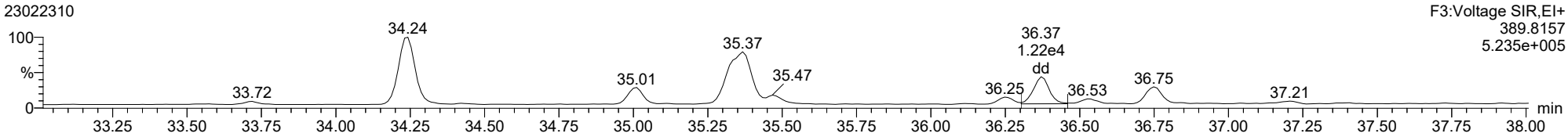

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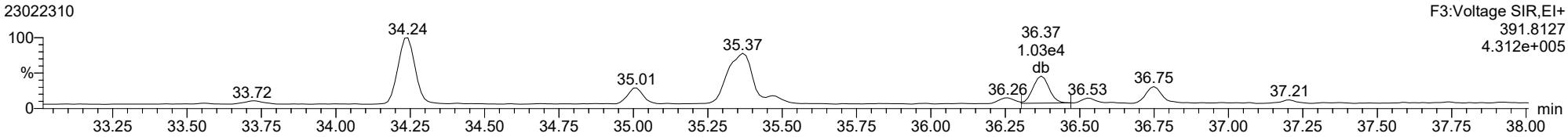

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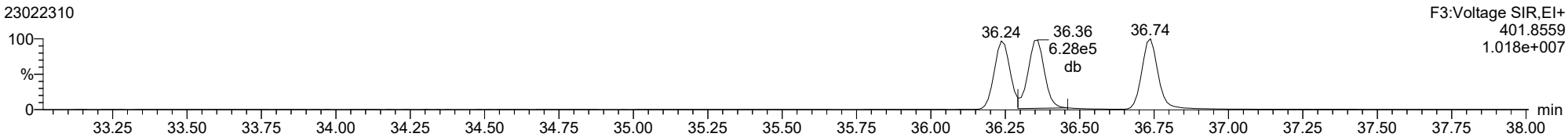

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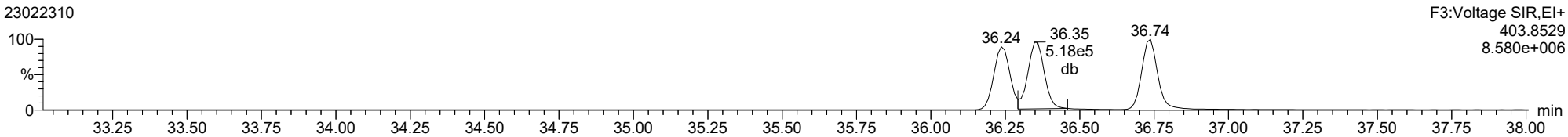

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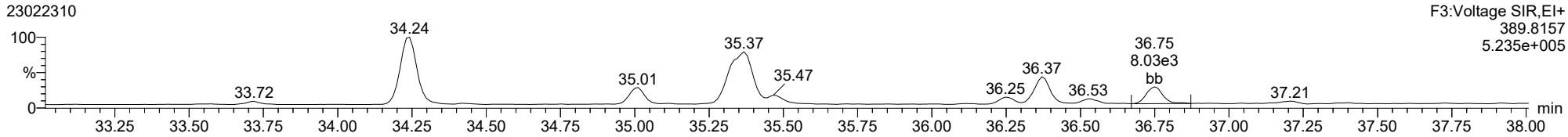

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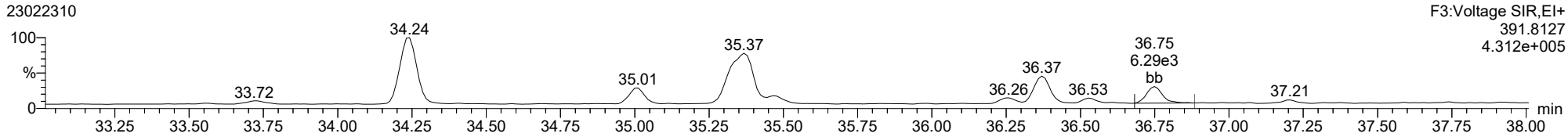

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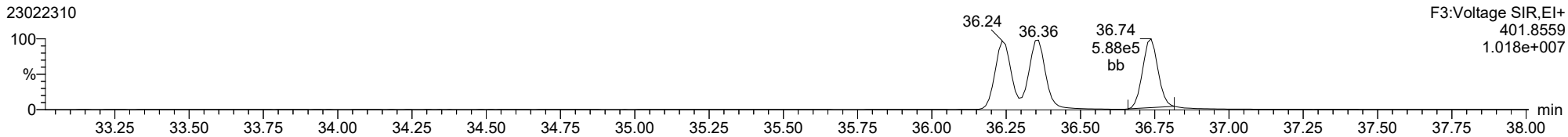

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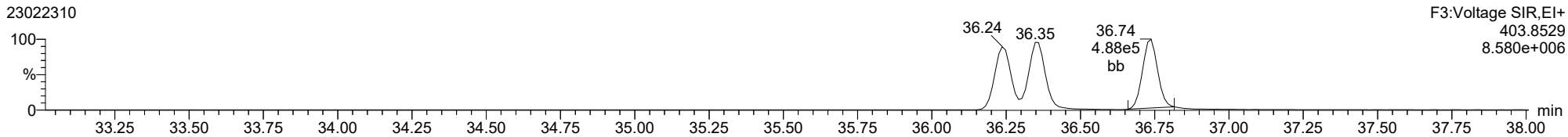

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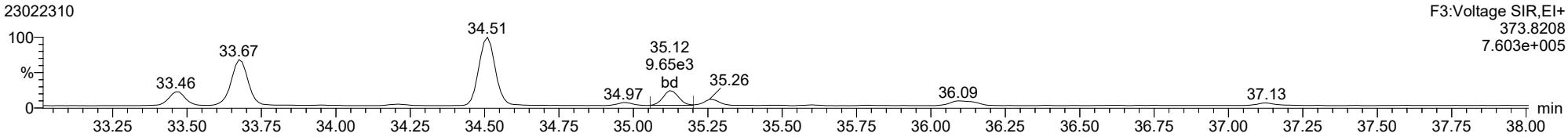

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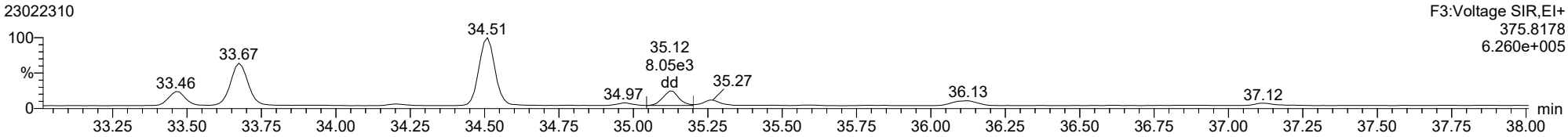

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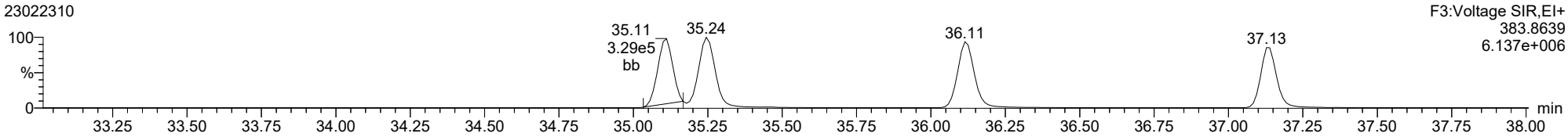

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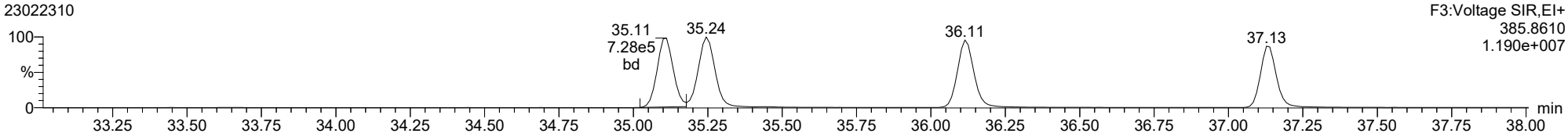

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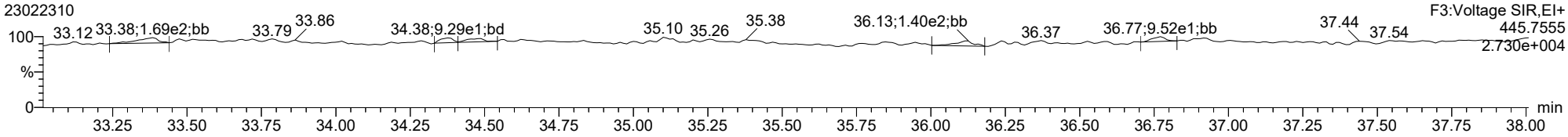

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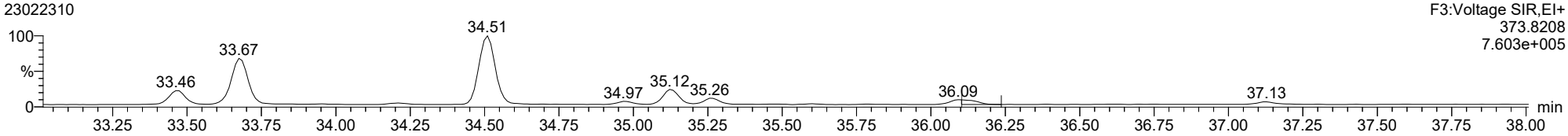

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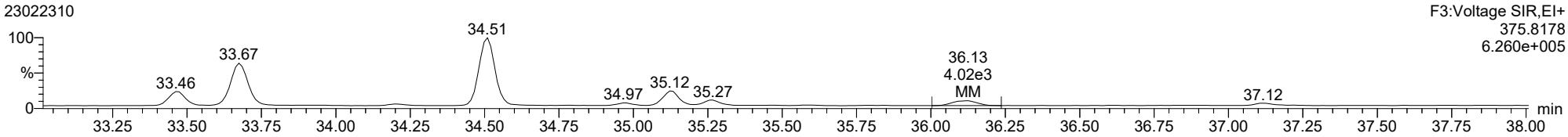

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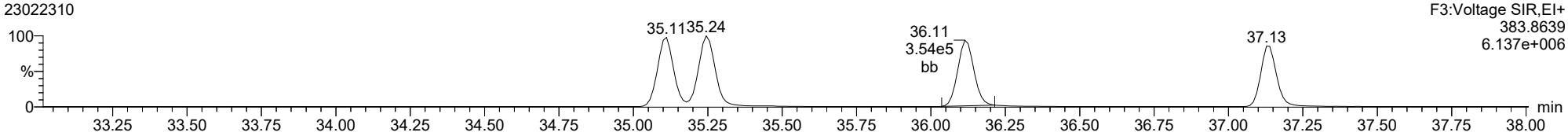

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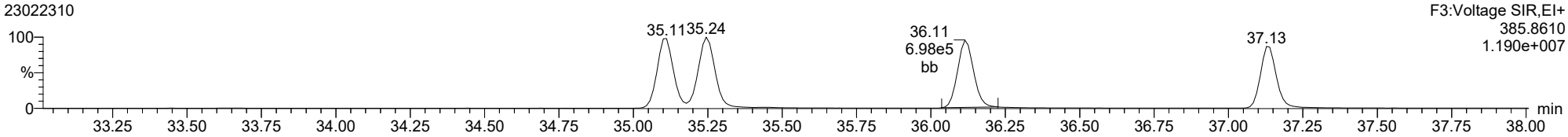
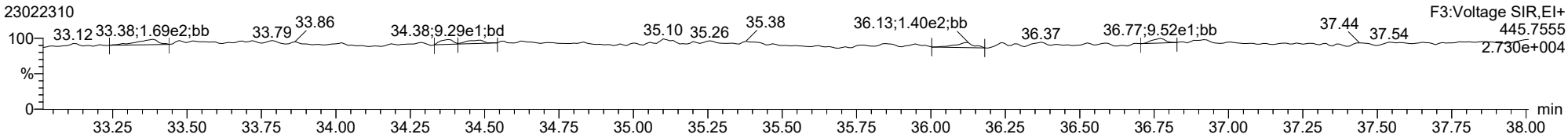


FUNCTION3 OCDPE



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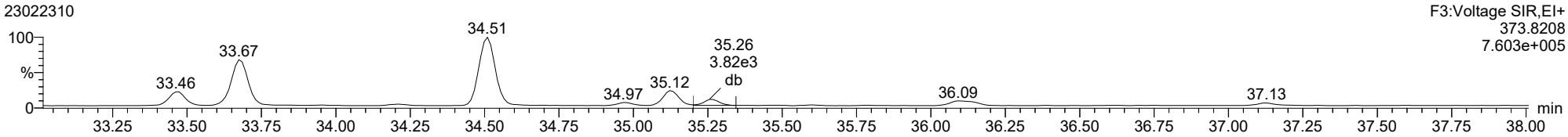

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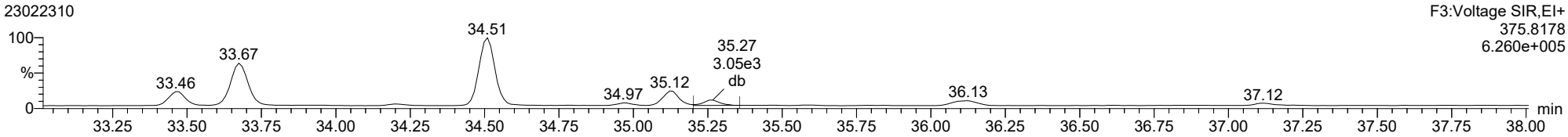

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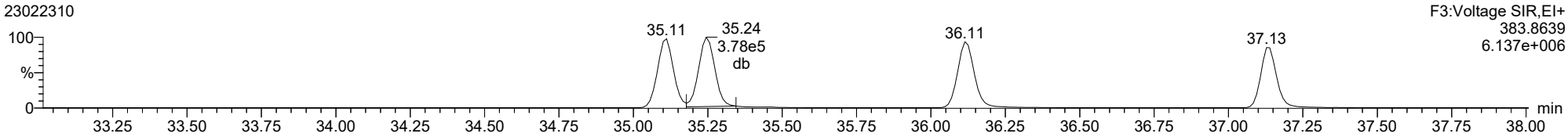

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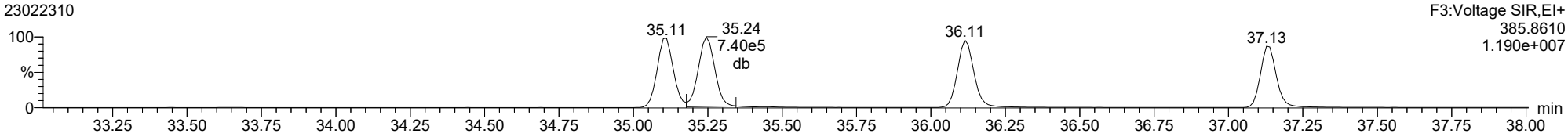
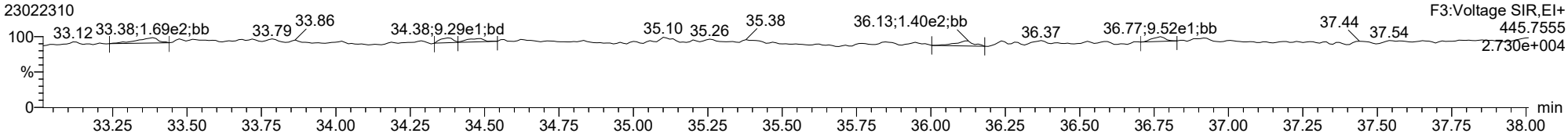


FUNCTION3 OCDPE



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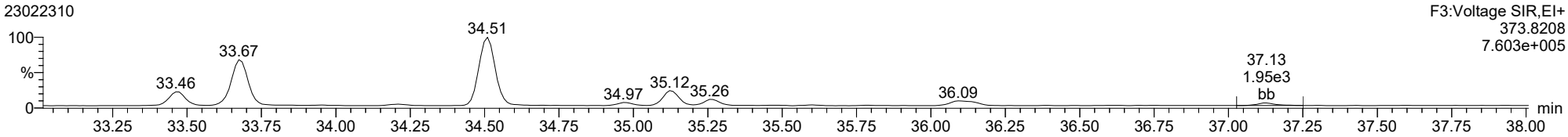

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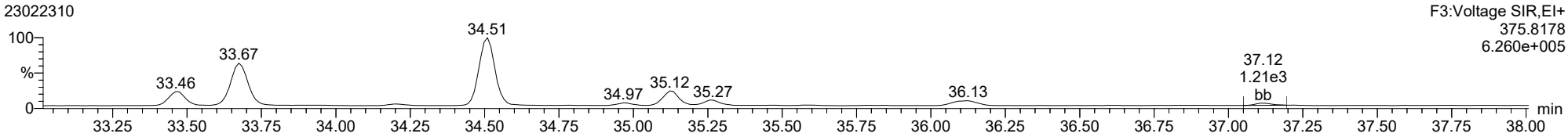

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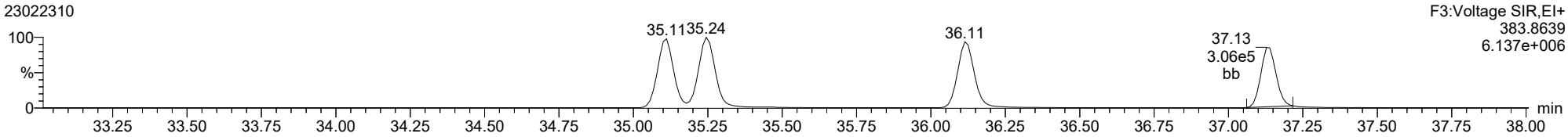

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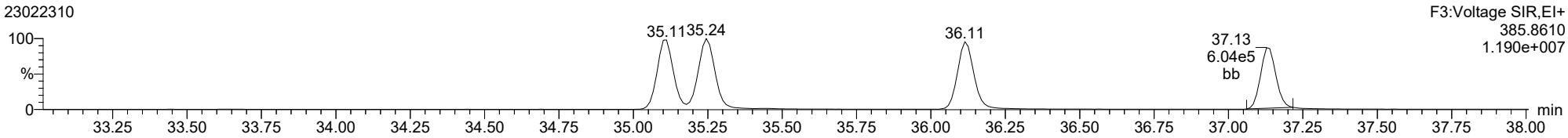
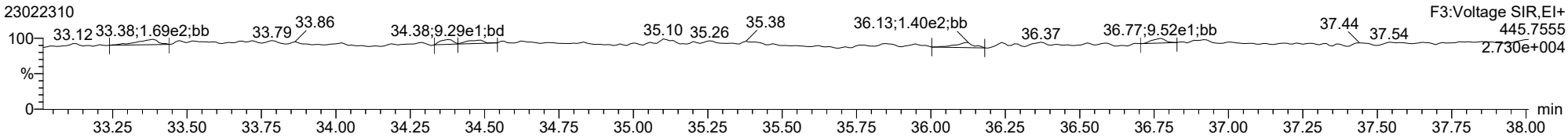
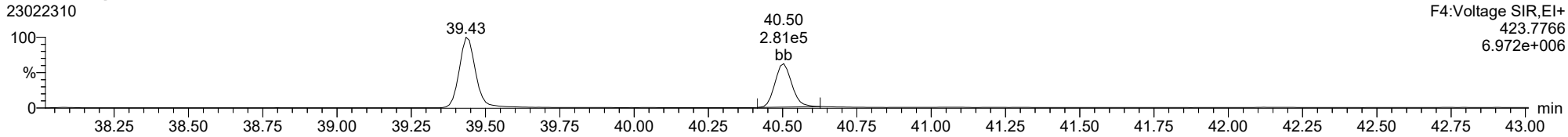


FUNCTION3 OCDPE

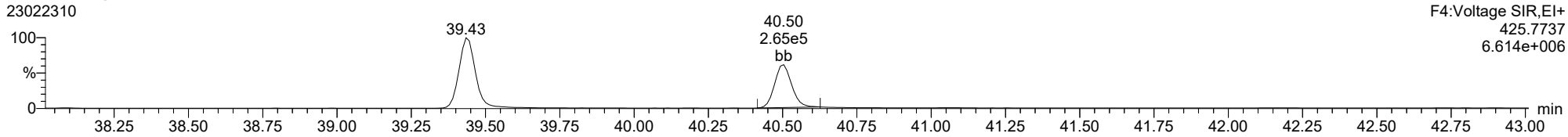


ID: 23A0133-06, Name: 23022310, Date: 23-Feb-2023, Time: 17:32:23, Conditions: AUTOSPEC01, User: pk

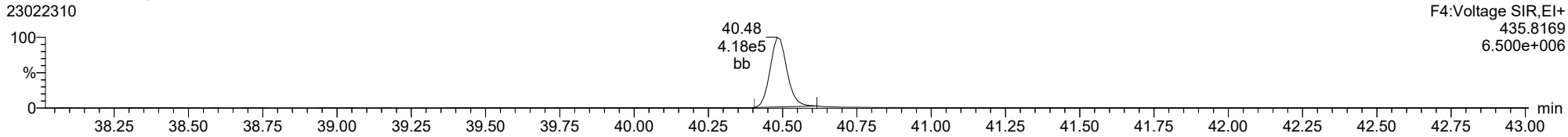
1234678-HpCDD



1234678-HpCDD



13C-1234678-HpCDD



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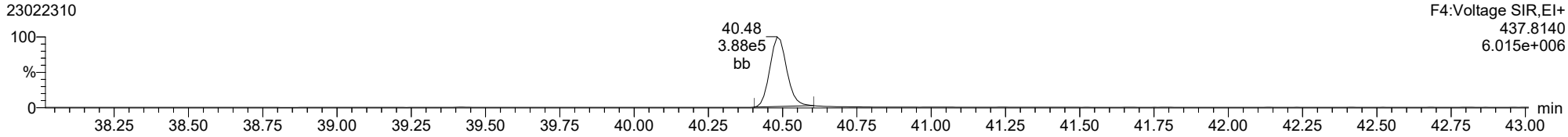

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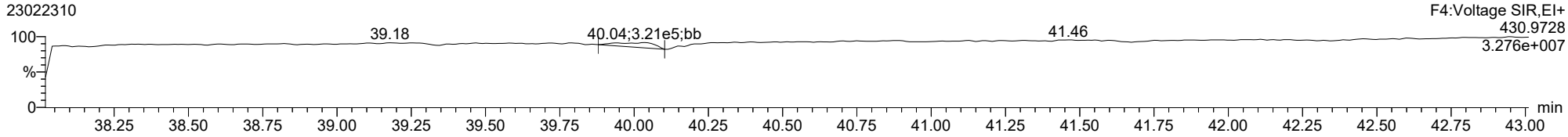

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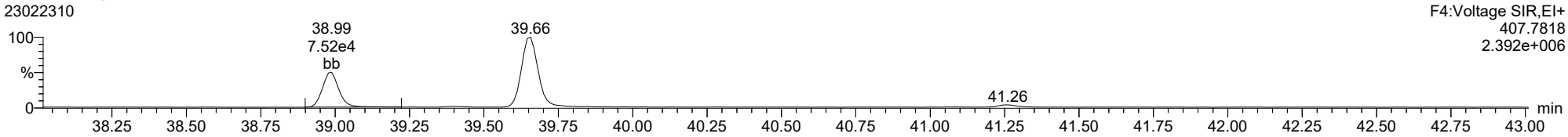

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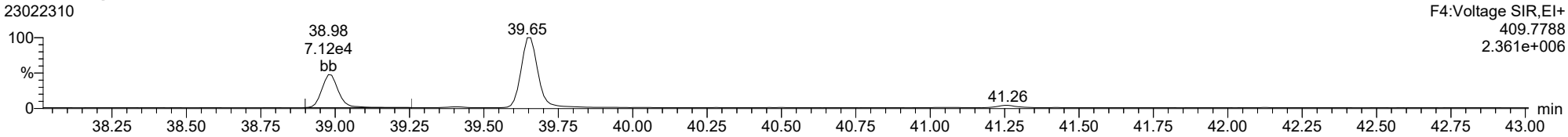

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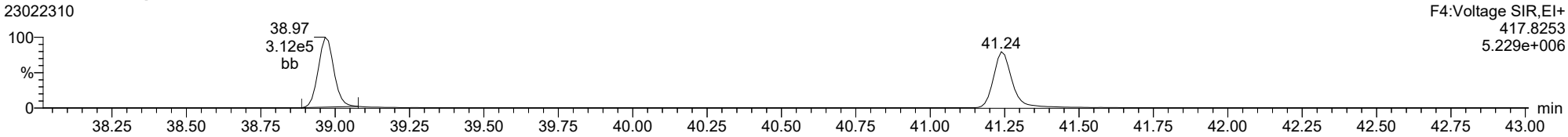

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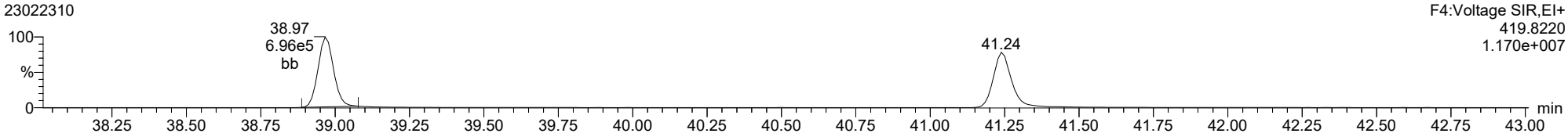
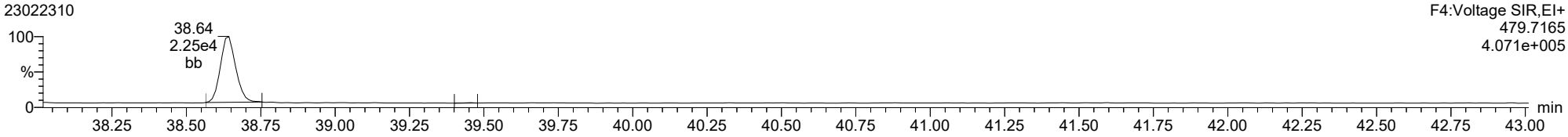
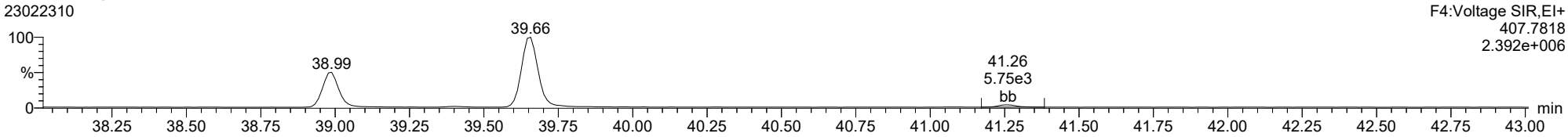


FUNCTION4 NCDPE

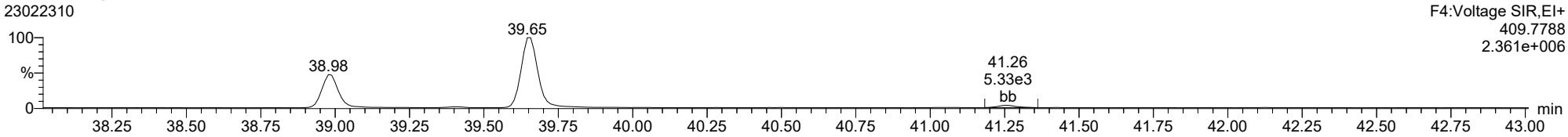


ID: 23A0133-06, Name: 23022310, Date: 23-Feb-2023, Time: 17:32:23, Conditions: AUTOSPEC01, User: pk

1234789-HpCDF



1234789-HpCDF



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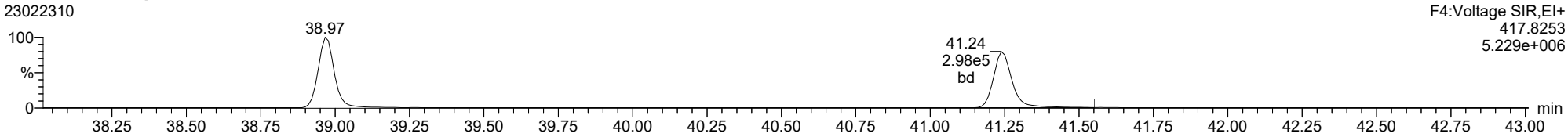

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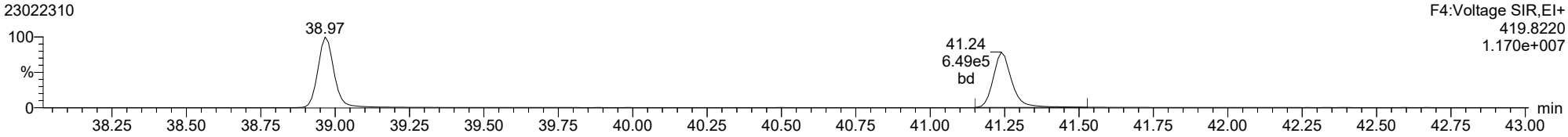
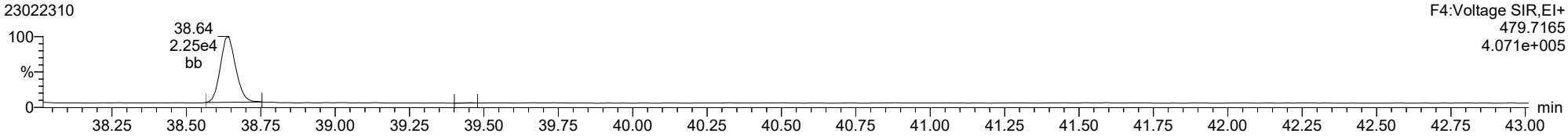
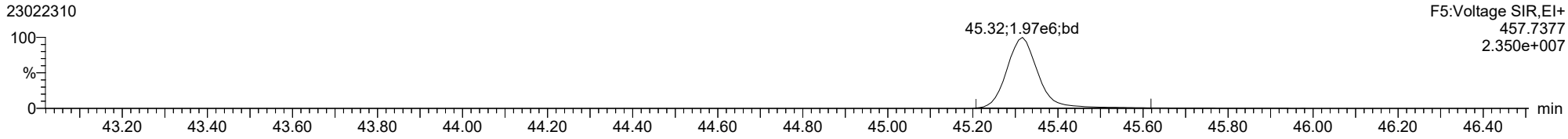


FUNCTION4 NCDPE

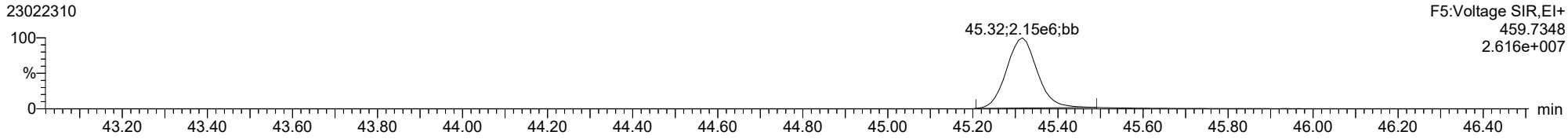


ID: 23A0133-06, Name: 23022310, Date: 23-Feb-2023, Time: 17:32:23, Conditions: AUTOSPEC01, User: pk

OCDD



OCDD



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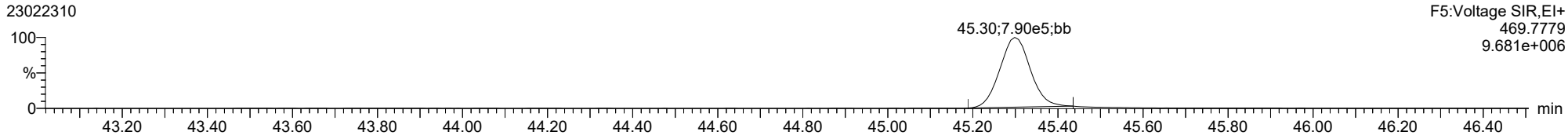
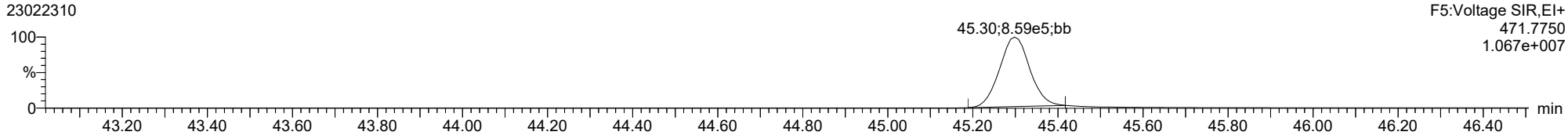
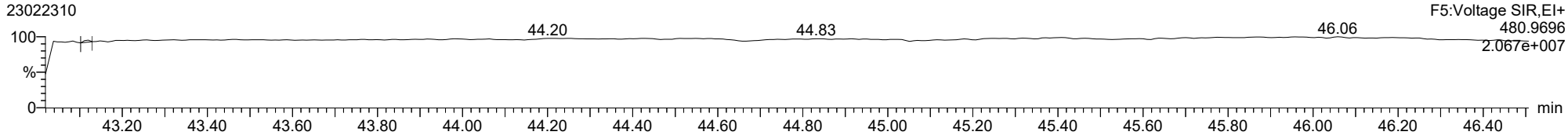


13C-OCDD



FUNCTION5 PFK



ID: 23A0133-06, Name: 23022310, Date: 23-Feb-2023, Time: 17:32:23, Conditions: AUTOSPEC01, User: pk

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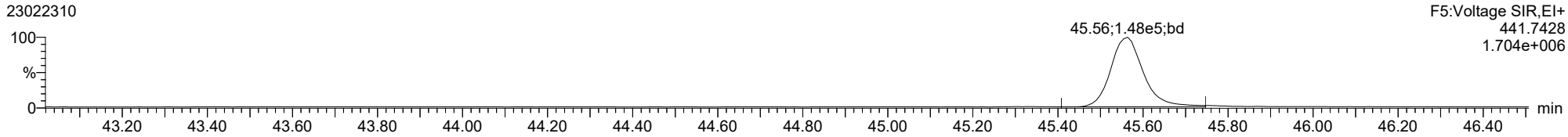

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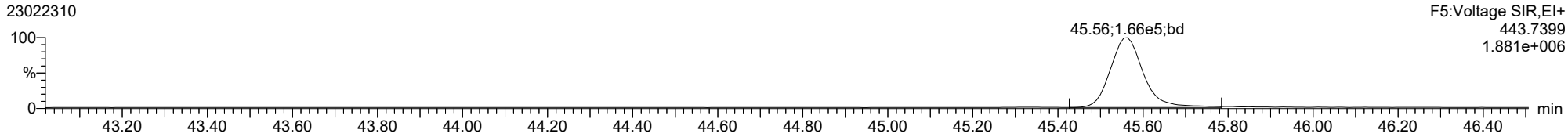

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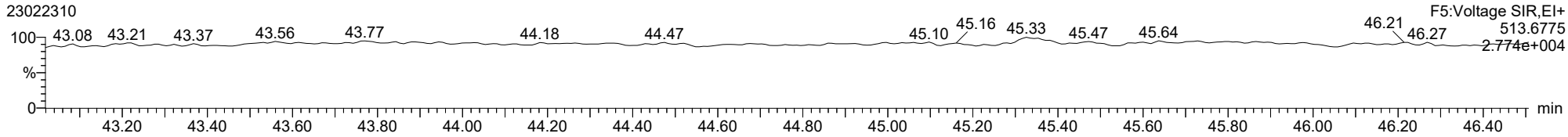
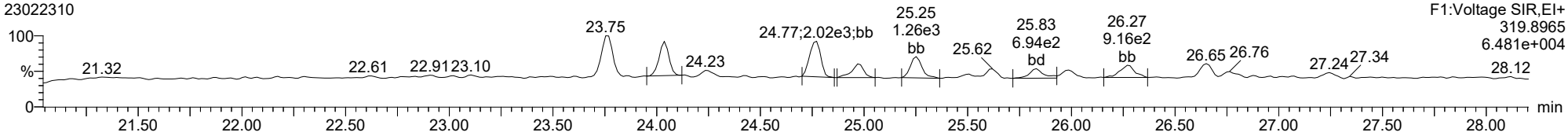
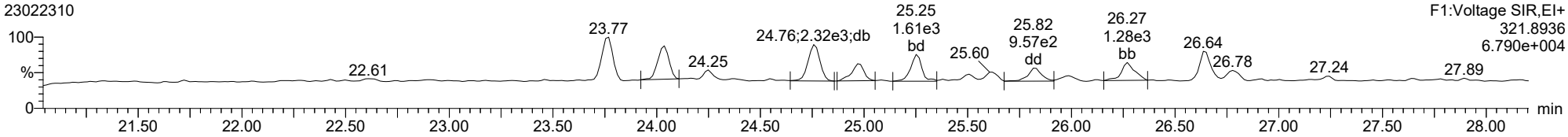


ID: 23A0133-06, Name: 23022310, Date: 23-Feb-2023, Time: 17:32:23, Conditions: AUTOSPEC01, User: pk

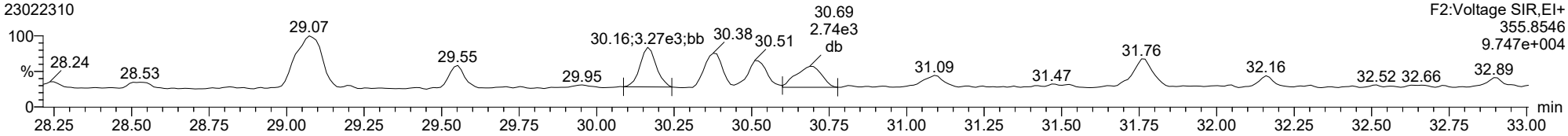
Total-tetradioxins



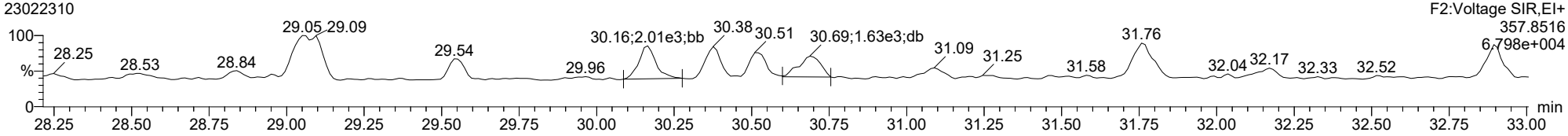
Total-tetradioxins



Total-pentadioxins

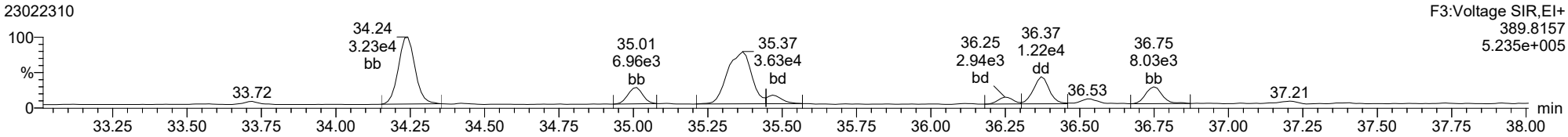


Total-pentadioxins

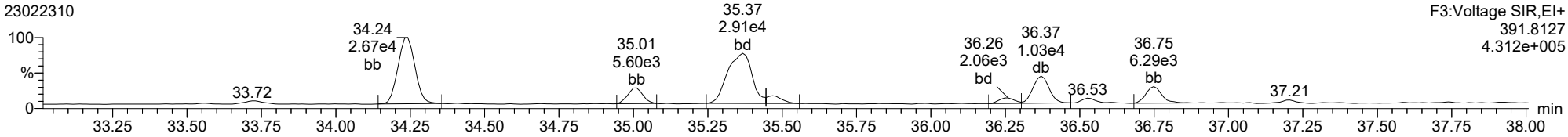


ID: 23A0133-06, Name: 23022310, Date: 23-Feb-2023, Time: 17:32:23, Conditions: AUTOSPEC01, User: pk

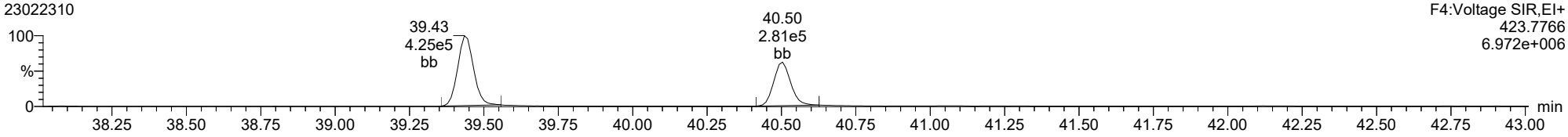
Total-hexadioxins



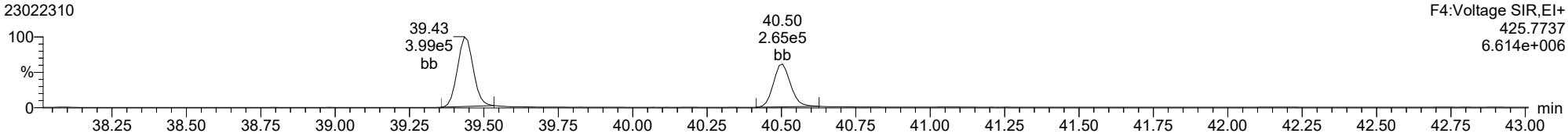
Total-hexadioxins



Total-heptadioxins

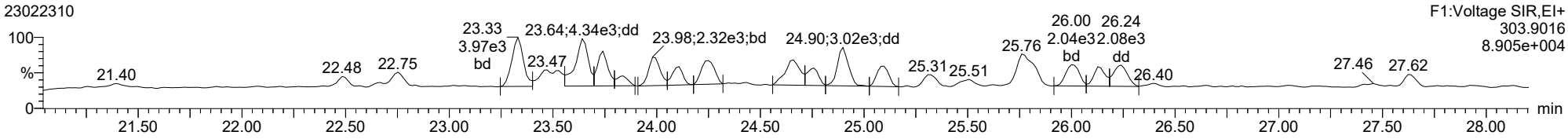


Total-heptadioxins



ID: 23A0133-06, Name: 23022310, Date: 23-Feb-2023, Time: 17:32:23, Conditions: AUTOSPEC01, User: pk

Total-tetrafurans



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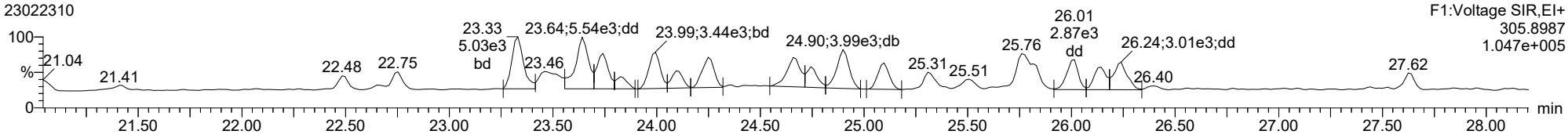

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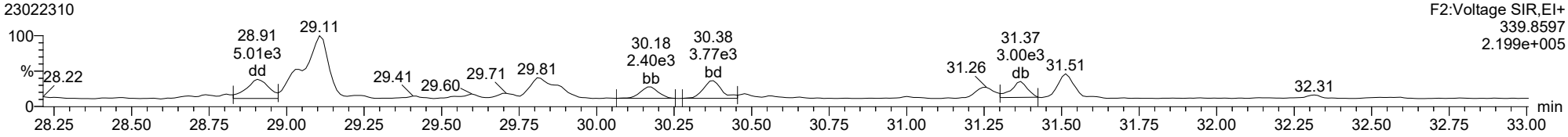

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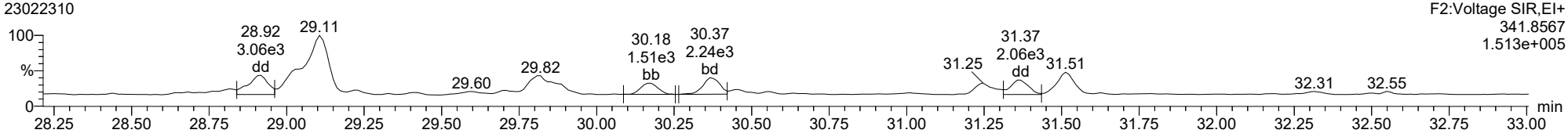
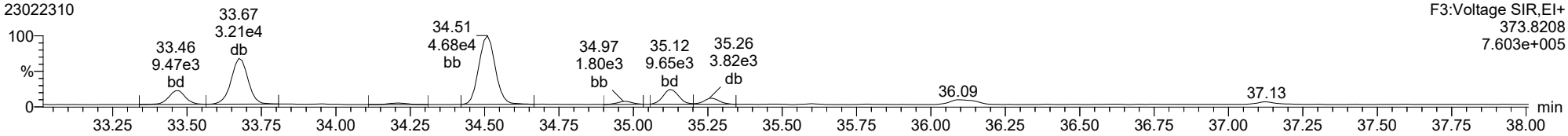


ID: 23A0133-06, Name: 23022310, Date: 23-Feb-2023, Time: 17:32:23, Conditions: AUTOSPEC01, User: pk

Total-hexafurans



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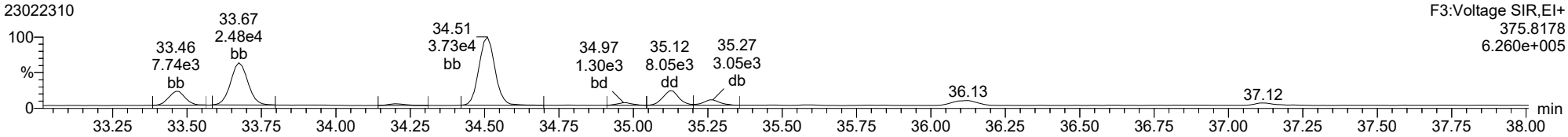
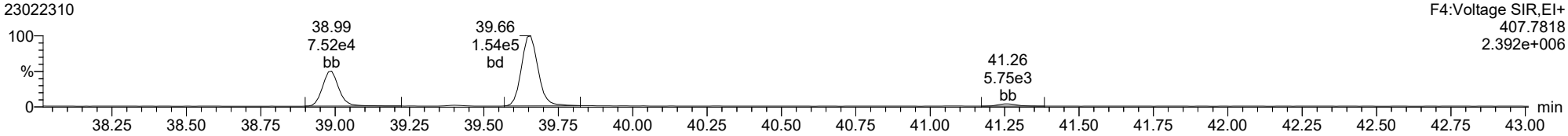
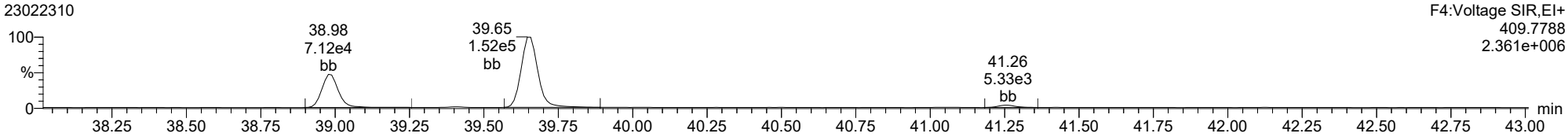


Total-heptafurans



Total-heptafurans



Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1217

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-07 B	File ID:	23022311
Sampled:	01/06/23 11:14	Prepared:	01/24/23 13:10	Analyzed:	02/23/23 18:21
% Solids:	63.85	Preparation:	EPA 1613	Initial/Final:	15.68 g Wet / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.816	0.655-0.886	0.069	0.999	0.820	ng/kg	X, J, B
1746-01-6	2,3,7,8-TCDD	1	0.630	0.655-0.886	0.047	0.999	0.233	ng/kg	EMPC, J
57117-41-6	1,2,3,7,8-PeCDF	1	1.662	1.318-1.783	0.158	0.999	0.492	ng/kg	J
57117-31-4	2,3,4,7,8-PeCDF	1	1.839	1.318-1.783	0.158	0.999	0.716	ng/kg	EMPC, J
40321-76-4	1,2,3,7,8-PeCDD	1	1.586	1.318-1.783	0.175	0.999	0.674	ng/kg	J
70648-26-9	1,2,3,4,7,8-HxCDF	1	1.343	1.054-1.426	0.046	0.999	0.952	ng/kg	J, B
57117-44-9	1,2,3,6,7,8-HxCDF	1	1.155	1.054-1.426	0.042	0.999	0.616	ng/kg	J
60851-34-5	2,3,4,6,7,8-HxCDF	1	1.148	1.054-1.426	0.045	0.999	0.969	ng/kg	J
72918-21-9	1,2,3,7,8,9-HxCDF	1	1.274	1.054-1.426	0.053	0.999	0.268	ng/kg	J, B
39227-28-6	1,2,3,4,7,8-HxCDD	1	1.027	1.054-1.426	0.139	0.999	0.407	ng/kg	EMPC, J
57653-85-7	1,2,3,6,7,8-HxCDD	1	1.022	1.054-1.426	0.137	0.999	1.10	ng/kg	EMPC
19408-74-3	1,2,3,7,8,9-HxCDD	1	1.190	1.054-1.426	0.141	0.999	0.755	ng/kg	J, B
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.010	0.893-1.208	0.074	0.999	8.72	ng/kg	
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.951	0.893-1.208	0.106	0.999	0.723	ng/kg	J
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.063	0.893-1.208	0.192	2.50	31.3	ng/kg	B
39001-02-0	OCDF	1	0.872	0.757-1.024	0.118	2.50	23.7	ng/kg	
3268-87-9	OCDD	1	0.902	0.757-1.024	0.188	9.99	293	ng/kg	B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			0.999	14.8	ng/kg	
41903-57-5	Total TCDD	1	0.000			0.999	3.29	ng/kg	
30402-15-4	Total PeCDF	1	0.000			0.999	20.1	ng/kg	
36088-22-9	Total PeCDD	1	0.000			0.999	4.41	ng/kg	
55684-94-1	Total HxCDF	1	0.000			0.999	13.6	ng/kg	
34465-46-8	Total HxCDD	1	0.000			0.999	6.10	ng/kg	
38998-75-3	Total HpCDF	1	0.000			0.999	28.1	ng/kg	
37871-00-4	Total HpCDD	1	0.000			0.999	64.9	ng/kg	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 2.23

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 2.23

LDW23-IT1217

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-07	File ID:	23022311
Sampled:	01/06/23 11:14	Prepared:	01/24/23 13:10	Analyzed:	02/23/23 18:21
Solids Wt%:	63.85	Preparation:	EPA 1613	Initial/Final:	15.68 g / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.772	0.655-0.886	0.057	83.8	24 - 169 %	
13C12-2,3,7,8-TCDD		0.777	0.655-0.886	0.110	114	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.551	1.318-1.783	0.102	78.4	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.556	1.318-1.783	0.106	77.4	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.630	1.318-1.783	0.085	62.4	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.501	0.434-0.587	0.138	101	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.502	0.434-0.587	0.134	101	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.509	0.434-0.587	0.143	100	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.503	0.434-0.587	0.156	93.3	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.243	1.054-1.426	0.228	110	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.202	1.054-1.426	0.221	113	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.442	0.374-0.506	0.145	87.6	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.444	0.374-0.506	0.166	91.1	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.013	0.893-1.208	0.217	93.3	23 - 140 %	
13C12-OCDD		0.905	0.757-1.024	0.135	81.6	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.034	89.3	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:11:50 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: 23A0133-07, Name: 23022311, Date: 23-Feb-2023, Time: 18:21:49, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	26.000	1.000	2.196e3	2.690e3	0.876	0.816	0.770	824	1336	3.13e4	4.04e4	37.9	30.2	NO	bd	bd	0.410
12378-PeCDF	30.164	1.000	1.427e3	8.583e2	0.845	1.662	1.550	2204	1521	1.97e4	1.21e4	9.0	8.0	NO	bb	bb	0.246
23478-PeCDF	31.513	1.001	2.202e3	1.197e3	0.911	1.839	1.550	2204	1521	3.12e4	1.76e4	14.2	11.6	YES	MM	db	0.358
123478-HxCDF	35.134	1.001	3.123e3	2.326e3	1.182	1.343	1.240	725	637	4.81e4	3.61e4	66.4	56.7	NO	dd	dd	0.476
234678-HxCDF	36.114	1.000	2.943e3	2.564e3	1.229	1.148	1.240	725	637	3.08e4	2.88e4	42.5	45.2	NO	bb	bb	0.485
123678-HxCDF	35.267	1.001	2.038e3	1.765e3	1.248	1.155	1.240	725	637	3.32e4	2.79e4	45.8	43.8	NO	db	db	0.308
123789-HxCDF	37.105	0.999	7.016e2	5.509e2	1.187	1.274	1.240	725	637	8.40e3	8.68e3	11.6	13.6	NO	bb	bb	0.134
1234678-HpCDF	38.988	1.001	2.180e4	2.159e4	1.204	1.010	1.050	1170	881	3.41e5	3.56e5	291.6	403.7	NO	bb	bd	4.367
1234789-HpCDF	41.261	1.000	1.541e3	1.620e3	1.165	0.951	1.050	1170	881	2.27e4	2.41e4	19.4	27.4	NO	bb	bb	0.362
OCDF	45.563	1.006	3.827e4	4.388e4	1.186	0.872	0.890	821	818	4.46e5	4.86e5	543.7	594.5	NO	bd	bd	11.844
2378-TCDD	26.650	1.001	6.416e2	1.019e3	1.236	0.630	0.770	868	884	7.64e3	1.54e4	8.8	17.5	YES	dd	bd	0.117
12378-PeCDD	31.747	1.000	1.176e3	7.417e2	1.087	1.586	1.550	1255	1192	1.36e4	9.71e3	10.9	8.1	NO	bb	bb	0.338
123478-HxCDD	36.248	1.001	9.528e2	9.280e2	0.987	1.027	1.240	1474	2129	1.71e4	1.54e4	11.6	7.2	YES	bd	bd	0.203
123678-HxCDD	36.359	1.001	2.812e3	2.751e3	1.021	1.022	1.240	1474	2129	4.66e4	4.46e4	31.6	21.0	YES	db	dd	0.551
123789-HxCDD	36.738	1.011	1.949e3	1.638e3	0.985	1.190	1.240	1474	2129	2.87e4	2.54e4	19.4	11.9	NO	bb	bb	0.378
1234678-HpCDD	40.504	1.000	6.697e4	6.303e4	1.253	1.063	1.050	1820	2209	1.06e6	9.77e5	584.1	442.3	NO	bb	bb	15.651
OCDD	45.316	1.000	4.487e5	4.974e5	1.103	0.902	0.890	1378	1054	5.25e6	5.83e6	3810.0	5538.1	NO	bd	bb	146.741
13C-2378-TCDF	25.986	1.007	5.921e5	7.673e5	1.768	0.772	0.770	1356	1194	9.35e6	1.21e7	6898.5	10115.2	NO	bb	bb	83.818
13C-12378-PeCDF	30.153	1.169	6.675e5	4.305e5	1.527	1.551	1.550	2247	1699	1.01e7	6.49e6	4513.5	3817.2	NO	bd	bd	78.386
13C-23478-PeCDF	31.490	1.220	6.336e5	4.072e5	1.466	1.556	1.550	2247	1699	9.46e6	6.11e6	4208.8	3595.8	NO	bb	bb	77.382
13C-123478-HxCDF	35.111	0.956	3.229e5	6.449e5	1.054	0.501	0.510	1417	2268	5.05e6	1.00e7	3562.6	4421.8	NO	bd	bd	100.998
13C-123678-HxCDF	35.245	0.960	3.307e5	6.580e5	1.080	0.502	0.510	1417	2268	5.20e6	1.03e7	3669.9	4538.8	NO	db	db	100.672
13C-234678-HxCDF	36.114	0.983	3.117e5	6.124e5	1.014	0.509	0.510	1417	2268	4.98e6	9.73e6	3511.3	4289.7	NO	bb	bb	100.178
13C-123789-HxCDF	37.128	1.011	2.636e5	5.236e5	0.928	0.503	0.510	1417	2268	4.32e6	8.51e6	3048.1	3752.8	NO	bb	bb	93.280
13C-1234678-HpCDF	38.966	1.061	2.527e5	5.724e5	1.036	0.442	0.440	1652	2166	4.21e6	9.51e6	2549.1	4391.9	NO	bb	bb	87.570
13C-1234789-HpCDF	41.250	1.123	2.304e5	5.191e5	0.905	0.444	0.440	1652	2166	3.07e6	6.92e6	1860.3	3193.0	NO	bb	bb	91.071
13C-1234-TCDD	25.802	0.000	3.931e5	5.242e5	1.000	0.750	0.770	1938	1151	6.53e6	8.47e6	3372.0	7357.6	NO	bb	bb	100.000
13C-2378-TCDD	26.622	1.032	5.034e5	6.479e5	1.103	0.777	0.770	1938	1151	7.91e6	1.02e7	4082.2	8905.5	NO	bb	bb	113.797
13C-12378-PeCDD	31.747	1.230	3.240e5	1.988e5	0.914	1.630	1.550	1207	779	4.78e6	2.95e6	3963.5	3792.3	NO	bb	bb	62.354
13C-123478-HxCDD	36.225	0.986	5.189e5	4.175e5	0.933	1.243	1.240	3429	1980	8.72e6	6.89e6	2541.8	3480.2	NO	bd	bd	110.374
13C-123678-HxCDD	36.337	0.989	5.395e5	4.490e5	0.965	1.202	1.240	3429	1980	8.40e6	7.00e6	2450.2	3535.8	NO	db	db	112.691
13C-1234678-HpCDD	40.492	1.102	3.337e5	3.295e5	0.782	1.013	1.050	2273	2029	5.05e6	4.72e6	2221.4	2325.6	NO	bb	bd	93.252
13C-OCDD	45.298	1.233	5.555e5	6.140e5	0.788	0.905	0.890	1368	1339	6.66e6	7.35e6	4870.1	5487.7	NO	bb	bb	163.144
13C-123789-HxCDD	36.727	0.000	4.990e5	4.104e5	1.000	1.216	1.240	3429	1980	8.34e6	6.79e6	2433.3	3430.1	NO	bb	bb	100.000
37CL-2378-TCDD	26.650	1.033	4.039e5		1.233			1072		6.13e6		5720.6			bb		35.703

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:11:50 Pacific Standard Time

ID: 23A0133-07, Name: 23022311, Date: 23-Feb-2023, Time: 18:21:49, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.483	0.865	1.467e3	1.931e3	1.064	0.760	0.770	824	1336	2.14e4	3.44e4	26.0	25.7	NO	bb	bb	0.235
1289-TCDF					0.858		0.770	824	1336								
13468-PECDF					1.013		1.550	746	1012								
12389-PECDF					0.844		1.550	2204	1521								
123468-HXCDF	33.473	0.953	3.092e3	2.901e3	1.197	1.066	1.240	725	637	4.76e4	4.31e4	65.7	67.6	NO	bb	bb	0.517
1368-TCDD	23.754	0.892	3.473e3	4.149e3	1.084	0.837	0.770	868	884	5.76e4	6.86e4	66.4	77.6	NO	bb	bb	0.611
1289-TCDD					0.975		0.770	868	884								
12479-PECDD	29.073	0.916	4.520e3	2.770e3	1.837	1.632	1.550	1255	1192	5.20e4	2.76e4	41.4	23.1	NO	bb	bb	0.759
12389-PECDD					1.252		1.550	1255	1192								
124679-HXCDD	34.242	0.945	8.420e3	6.738e3	1.033	1.250	1.240	1474	2129	1.27e5	1.07e5	86.2	50.3	NO	bb	bb	1.567
1234679-HPCDD	39.445	0.974	7.343e4	7.001e4	1.286	1.049	1.050	1820	2209	1.19e6	1.13e6	651.3	510.4	NO	bb	bb	16.819
Total-tetrafurans			4.100e4		0.933			824		6.06e5							7.402
Total-penta1			3.433e4					746		5.31e5							5.668
Total-pentafurans			2.363e4		0.866			2204		2.76e5							4.398
Total-hexafurans			4.169e4		1.208			725		6.40e5							6.817
Total-heptafurans			6.732e4		1.185			1170		1.04e6							14.084
Total-Furans			2.462e5		1.067			824		3.54e6							50.212
Total-tetradioxins			9.411e3		1.099			868		1.47e5							1.649
Total-pentadioxins			1.062e4		1.392			1255		1.39e5							2.206
Total-hexadioxins			1.641e4		1.007			1474		2.48e5							3.052
Total-heptadioxins			1.404e5		1.269			1820		2.25e6							32.470
Total-Dioxins			6.256e5		1.165			868		8.03e6							186.118
Total-TEQ			8.718e5					868		1.16e7							236.331
FUNCTION1 PFK			1.173e7					553580		2.86e7							
FUNCTION2 PFK			1.262e7					244978		2.91e7							0.000
FUNCTION3 PFK			2.818e6					374163		1.31e7							0.000
FUNCTION4 PFK			0.000e0					297066		0.00e0							
FUNCTION5 PFK			1.478e7					188846		6.56e6							
FUNCTION1 HXCD...			3.744e3					790		5.30e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			4.609e2					750		8.89e3							0.000
FUNCTION3 OCDPE			1.773e2					640		3.06e3							0.000
FUNCTION4 NCDPE			5.825e3					831		1.01e5							0.000
FUNCTION5 DCDPE			0.000e0					774		0.00e0							

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: 23A0133-07, Name: 23022311, Date: 23-Feb-2023, Time: 18:21:49, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.90	4.994e3	6.445e3	0.933	0.77	0.77	99.2	YES	NO	dd	dd	0.902
2	Total-tetrafurans	24.76	1.438e3	1.984e3	0.933	0.72	0.77	27.5	YES	NO	dd	dd	0.270
3	Total-tetrafurans	24.66	3.147e3	4.239e3	0.933	0.74	0.77	46.2	YES	NO	dd	dd	0.582
4	Total-tetrafurans	24.23	1.873e3	2.128e3	0.933	0.88	0.77	32.9	YES	NO	db	db	0.316
5	Total-tetrafurans	24.09	1.129e3	1.358e3	0.933	0.83	0.77	20.5	YES	NO	dd	dd	0.196
6	Total-tetrafurans	23.99	4.661e3	5.829e3	0.933	0.80	0.77	81.1	YES	NO	dd	dd	0.827
7	Total-tetrafurans	23.83	1.173e3	1.354e3	0.933	0.87	0.77	26.6	YES	NO	dd	dd	0.199
8	Total-tetrafurans	23.73	2.804e3	3.869e3	0.933	0.72	0.77	50.1	YES	NO	dd	dd	0.526
9	Total-tetrafurans	23.63	2.404e3	3.536e3	0.933	0.68	0.77	45.2	YES	NO	dd	dd	0.468
10	Total-tetrafurans	23.32	6.935e3	8.565e3	0.933	0.81	0.77	120.9	YES	NO	bd	bd	1.223
11	1368-TCDF	22.48	1.467e3	1.931e3	1.064	0.76	0.77	26.0	YES	NO	bb	bb	0.235
12	Total-tetrafurans	27.62	1.773e2	2.415e2	0.933	0.73	0.77	3.2	YES	NO	db	bb	0.033
13	Total-tetrafurans	26.40	6.595e2	8.953e2	0.933	0.74	0.77	12.8	YES	NO	db	db	0.123
14	Total-tetrafurans	26.24	2.153e3	3.106e3	0.933	0.69	0.77	38.6	YES	NO	dd	dd	0.415
15	Total-tetrafurans	26.14	1.192e3	1.677e3	0.933	0.71	0.77	21.1	YES	NO	dd	dd	0.226
16	2378-TCDF	26.00	2.196e3	2.690e3	0.876	0.82	0.77	37.9	YES	NO	bd	bd	0.410
17	Total-tetrafurans	25.65	2.111e2	2.411e2	0.933	0.88	0.77	4.9	YES	NO	bd	dd	0.036
18	Total-tetrafurans	25.10	2.386e3	2.868e3	0.933	0.83	0.77	40.4	YES	NO	dd	db	0.414

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-penta1	27.43	3.433e4	2.274e4		1.51	1.55	712.1	YES	NO	bb	bb	5.668

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	31.25	1.437e3	8.999e2	0.866	1.60	1.55	10.1	YES	NO	bd	bd	0.252
2	Total-pentafurans	30.37	1.687e3	1.139e3	0.866	1.48	1.55	10.5	YES	NO	bd	bd	0.305
3	12378-PeCDF	30.16	1.427e3	8.583e2	0.845	1.66	1.55	9.0	YES	NO	bb	bb	0.246
4	Total-pentafurans	29.22	9.175e2	6.830e2	0.866	1.34	1.55	7.0	YES	NO	db	db	0.173
5	Total-pentafurans	29.10	1.506e4	1.123e4	0.866	1.34	1.55	70.8	YES	NO	MM	MM	2.838
6	Total-pentafurans	28.89	3.100e3	2.312e3	0.866	1.34	1.55	17.9	YES	NO	dd	bd	0.584

ID: 23A0133-07, Name: 23022311, Date: 23-Feb-2023, Time: 18:21:49, Conditions: AUTOSPEC01, User: pk

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.11	7.016e2	5.509e2	1.187	1.27	1.24	11.6	YES	NO	bb	bb	0.134
2	234678-HxCDF	36.11	2.943e3	2.564e3	1.229	1.15	1.24	42.5	YES	NO	bb	bb	0.485
3	123678-HxCDF	35.27	2.038e3	1.765e3	1.248	1.15	1.24	45.8	YES	NO	db	db	0.308
4	123478-HxCDF	35.13	3.123e3	2.326e3	1.182	1.34	1.24	66.4	YES	NO	dd	dd	0.476
5	Total-hexafurans	34.51	1.602e4	1.299e4	1.208	1.23	1.24	361.4	YES	NO	bb	bb	2.618
6	Total-hexafurans	33.67	1.377e4	1.146e4	1.208	1.20	1.24	288.9	YES	NO	bb	bb	2.277
7	123468-HXCDF	33.47	3.092e3	2.901e3	1.197	1.07	1.24	65.7	YES	NO	bb	bb	0.517

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.99	2.180e4	2.159e4	1.204	1.01	1.05	291.6	YES	NO	bb	bd	4.367
2	1234789-HpCDF	41.26	1.541e3	1.620e3	1.165	0.95	1.05	19.4	YES	NO	bb	bb	0.362
3	Total-heptafurans	39.66	4.331e4	4.257e4	1.185	1.02	1.05	569.0	YES	NO	bd	bd	9.207
4	Total-heptafurans	39.41	6.676e2	7.049e2	1.185	0.95	1.05	8.1	YES	NO	bb	bb	0.147

ID: 23A0133-07, Name: 23022311, Date: 23-Feb-2023, Time: 18:21:49, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.90	4.994e3	6.445e3	0.933	0.77	0.77	99.2	YES	NO	dd	dd	0.902
2	Total-tetrafurans	24.76	1.438e3	1.984e3	0.933	0.72	0.77	27.5	YES	NO	dd	dd	0.270
3	Total-tetrafurans	24.66	3.147e3	4.239e3	0.933	0.74	0.77	46.2	YES	NO	dd	dd	0.582
4	Total-tetrafurans	24.23	1.873e3	2.128e3	0.933	0.88	0.77	32.9	YES	NO	db	db	0.316
5	Total-tetrafurans	24.09	1.129e3	1.358e3	0.933	0.83	0.77	20.5	YES	NO	dd	dd	0.196
6	Total-tetrafurans	23.99	4.661e3	5.829e3	0.933	0.80	0.77	81.1	YES	NO	dd	dd	0.827
7	Total-tetrafurans	23.83	1.173e3	1.354e3	0.933	0.87	0.77	26.6	YES	NO	dd	dd	0.199
8	Total-tetrafurans	23.73	2.804e3	3.869e3	0.933	0.72	0.77	50.1	YES	NO	dd	dd	0.526
9	Total-tetrafurans	23.63	2.404e3	3.536e3	0.933	0.68	0.77	45.2	YES	NO	dd	dd	0.468
10	Total-tetrafurans	23.32	6.935e3	8.565e3	0.933	0.81	0.77	120.9	YES	NO	bd	bd	1.223
11	1368-TCDF	22.48	1.467e3	1.931e3	1.064	0.76	0.77	26.0	YES	NO	bb	bb	0.235
12	Total-tetrafurans	27.62	1.773e2	2.415e2	0.933	0.73	0.77	3.2	YES	NO	db	bb	0.033
13	Total-tetrafurans	26.40	6.595e2	8.953e2	0.933	0.74	0.77	12.8	YES	NO	db	db	0.123
14	Total-tetrafurans	26.24	2.153e3	3.106e3	0.933	0.69	0.77	38.6	YES	NO	dd	dd	0.415
15	Total-tetrafurans	26.14	1.192e3	1.677e3	0.933	0.71	0.77	21.1	YES	NO	dd	dd	0.226
16	2378-TCDF	26.00	2.196e3	2.690e3	0.876	0.82	0.77	37.9	YES	NO	bd	bd	0.410
17	Total-tetrafurans	25.65	2.111e2	2.411e2	0.933	0.88	0.77	4.9	YES	NO	bd	dd	0.036
18	Total-tetrafurans	25.10	2.386e3	2.868e3	0.933	0.83	0.77	40.4	YES	NO	dd	db	0.414
19	Total-pentafurans	31.25	1.437e3	8.999e2	0.866	1.60	1.55	10.1	YES	NO	bd	bd	0.252
20	Total-pentafurans	30.37	1.687e3	1.139e3	0.866	1.48	1.55	10.5	YES	NO	bd	bd	0.305
21	12378-PeCDF	30.16	1.427e3	8.583e2	0.845	1.66	1.55	9.0	YES	NO	bb	bb	0.246
22	Total-pentafurans	29.22	9.175e2	6.830e2	0.866	1.34	1.55	7.0	YES	NO	db	db	0.173
23	Total-pentafurans	29.10	1.506e4	1.123e4	0.866	1.34	1.55	70.8	YES	NO	MM	MM	2.838
24	Total-pentafurans	28.89	3.100e3	2.312e3	0.866	1.34	1.55	17.9	YES	NO	dd	bd	0.584
25	123789-HxCDF	37.11	7.016e2	5.509e2	1.187	1.27	1.24	11.6	YES	NO	bb	bb	0.134
26	234678-HxCDF	36.11	2.943e3	2.564e3	1.229	1.15	1.24	42.5	YES	NO	bb	bb	0.485
27	123678-HxCDF	35.27	2.038e3	1.765e3	1.248	1.15	1.24	45.8	YES	NO	db	db	0.308
28	123478-HxCDF	35.13	3.123e3	2.326e3	1.182	1.34	1.24	66.4	YES	NO	dd	dd	0.476
29	Total-hexafurans	34.51	1.602e4	1.299e4	1.208	1.23	1.24	361.4	YES	NO	bb	bb	2.618
30	Total-hexafurans	33.67	1.377e4	1.146e4	1.208	1.20	1.24	288.9	YES	NO	bb	bb	2.277
31	123468-HXCDF	33.47	3.092e3	2.901e3	1.197	1.07	1.24	65.7	YES	NO	bb	bb	0.517
32	1234678-HpCDF	38.99	2.180e4	2.159e4	1.204	1.01	1.05	291.6	YES	NO	bb	bd	4.367
33	1234789-HpCDF	41.26	1.541e3	1.620e3	1.165	0.95	1.05	19.4	YES	NO	bb	bb	0.362
34	Total-heptafurans	39.66	4.331e4	4.257e4	1.185	1.02	1.05	569.0	YES	NO	bd	bd	9.207
35	Total-heptafurans	39.41	6.676e2	7.049e2	1.185	0.95	1.05	8.1	YES	NO	bb	bb	0.147
36	OCDF	45.56	3.827e4	4.388e4	1.186	0.87	0.89	543.7	YES	NO	bd	bd	11.844
37	Total-penta1	27.43	3.433e4	2.274e4		1.51	1.55	712.1	YES	NO	bb	bb	5.668

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TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	24.04	2.274e3	2.795e3	1.099	0.81	0.77	38.4	YES	NO	bb	bb	0.401
2	1368-TCDD	23.75	3.473e3	4.149e3	1.084	0.84	0.77	66.4	YES	NO	bb	bb	0.611
3	Total-tetradioxins	25.82	6.058e2	7.402e2	1.099	0.82	0.77	10.3	YES	NO	bb	bb	0.106
4	Total-tetradioxins	25.62	4.926e2	5.736e2	1.099	0.86	0.77	9.5	YES	NO	bb	db	0.084
5	Total-tetradioxins	25.25	1.383e3	1.655e3	1.099	0.84	0.77	23.8	YES	NO	bb	bb	0.240
6	Total-tetradioxins	24.76	1.183e3	1.434e3	1.099	0.82	0.77	21.1	YES	NO	bd	bd	0.207

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.75	1.176e3	7.417e2	1.087	1.59	1.55	10.9	YES	NO	bb	bb	0.338
2	Total-pentadioxins	30.52	1.601e3	9.392e2	1.392	1.70	1.55	19.2	YES	NO	bb	bb	0.349
3	Total-pentadioxins	30.37	8.636e2	5.372e2	1.392	1.61	1.55	9.8	YES	NO	bb	bb	0.192
4	Total-pentadioxins	30.15	2.459e3	1.677e3	1.392	1.47	1.55	29.2	YES	NO	bb	bb	0.568
5	12479-PECDD	29.07	4.520e3	2.770e3	1.837	1.63	1.55	41.4	YES	NO	bb	bb	0.759

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexadioxins	35.01	6.044e3	4.679e3	1.007	1.29	1.24	62.8	YES	NO	bb	bb	1.107
2	124679-HXCDD	34.24	8.420e3	6.738e3	1.033	1.25	1.24	86.2	YES	NO	bb	bb	1.567
3	123789-HxCDD	36.74	1.949e3	1.638e3	0.985	1.19	1.24	19.4	YES	NO	bb	bb	0.378

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.50	6.697e4	6.303e4	1.253	1.06	1.05	584.1	YES	NO	bb	bb	15.651
2	1234679-HPCDD	39.45	7.343e4	7.001e4	1.286	1.05	1.05	651.3	YES	NO	bb	bb	16.819

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	24.04	2.274e3	2.795e3	1.099	0.81	0.77	38.4	YES	NO	bb	bb	0.401
2	1368-TCDD	23.75	3.473e3	4.149e3	1.084	0.84	0.77	66.4	YES	NO	bb	bb	0.611
3	Total-tetradioxins	25.82	6.058e2	7.402e2	1.099	0.82	0.77	10.3	YES	NO	bb	bb	0.106
4	Total-tetradioxins	25.62	4.926e2	5.736e2	1.099	0.86	0.77	9.5	YES	NO	bb	db	0.084
5	Total-tetradioxins	25.25	1.383e3	1.655e3	1.099	0.84	0.77	23.8	YES	NO	bb	bb	0.240
6	Total-tetradioxins	24.76	1.183e3	1.434e3	1.099	0.82	0.77	21.1	YES	NO	bd	bd	0.207
7	12378-PeCDD	31.75	1.176e3	7.417e2	1.087	1.59	1.55	10.9	YES	NO	bb	bb	0.338
8	Total-pentadioxins	30.52	1.601e3	9.392e2	1.392	1.70	1.55	19.2	YES	NO	bb	bb	0.349
9	Total-pentadioxins	30.37	8.636e2	5.372e2	1.392	1.61	1.55	9.8	YES	NO	bb	bb	0.192
10	Total-pentadioxins	30.15	2.459e3	1.677e3	1.392	1.47	1.55	29.2	YES	NO	bb	bb	0.568
11	12479-PECDD	29.07	4.520e3	2.770e3	1.837	1.63	1.55	41.4	YES	NO	bb	bb	0.759
12	Total-hexadioxins	35.01	6.044e3	4.679e3	1.007	1.29	1.24	62.8	YES	NO	bb	bb	1.107
13	124679-HXCDD	34.24	8.420e3	6.738e3	1.033	1.25	1.24	86.2	YES	NO	bb	bb	1.567
14	123789-HxCDD	36.74	1.949e3	1.638e3	0.985	1.19	1.24	19.4	YES	NO	bb	bb	0.378
15	1234678-HpCDD	40.50	6.697e4	6.303e4	1.253	1.06	1.05	584.1	YES	NO	bb	bb	15.651
16	1234679-HPCDD	39.45	7.343e4	7.001e4	1.286	1.05	1.05	651.3	YES	NO	bb	bb	16.819
17	OCDD	45.32	4.487e5	4.974e5	1.103	0.90	0.89	3810.0	YES	NO	bd	bb	146.741

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.90	4.994e3	6.445e3	0.933	0.77	0.77	99.2	YES	NO	dd	dd	0.902
2	Total-tetrafurans	24.76	1.438e3	1.984e3	0.933	0.72	0.77	27.5	YES	NO	dd	dd	0.270
3	Total-tetrafurans	24.66	3.147e3	4.239e3	0.933	0.74	0.77	46.2	YES	NO	dd	dd	0.582
4	Total-tetrafurans	24.23	1.873e3	2.128e3	0.933	0.88	0.77	32.9	YES	NO	db	db	0.316
5	Total-tetrafurans	24.09	1.129e3	1.358e3	0.933	0.83	0.77	20.5	YES	NO	dd	dd	0.196
6	Total-tetrafurans	23.99	4.661e3	5.829e3	0.933	0.80	0.77	81.1	YES	NO	dd	dd	0.827
7	Total-tetrafurans	23.83	1.173e3	1.354e3	0.933	0.87	0.77	26.6	YES	NO	dd	dd	0.199
8	Total-tetrafurans	23.73	2.804e3	3.869e3	0.933	0.72	0.77	50.1	YES	NO	dd	dd	0.526
9	Total-tetrafurans	23.63	2.404e3	3.536e3	0.933	0.68	0.77	45.2	YES	NO	dd	dd	0.468
10	Total-tetrafurans	23.32	6.935e3	8.565e3	0.933	0.81	0.77	120.9	YES	NO	bd	bd	1.223
11	1368-TCDF	22.48	1.467e3	1.931e3	1.064	0.76	0.77	26.0	YES	NO	bb	bb	0.235
12	Total-tetrafurans	27.62	1.773e2	2.415e2	0.933	0.73	0.77	3.2	YES	NO	db	bb	0.033
13	Total-tetrafurans	26.40	6.595e2	8.953e2	0.933	0.74	0.77	12.8	YES	NO	db	db	0.123
14	Total-tetrafurans	26.24	2.153e3	3.106e3	0.933	0.69	0.77	38.6	YES	NO	dd	dd	0.415
15	Total-tetrafurans	26.14	1.192e3	1.677e3	0.933	0.71	0.77	21.1	YES	NO	dd	dd	0.226
16	2378-TCDF	26.00	2.196e3	2.690e3	0.876	0.82	0.77	37.9	YES	NO	bd	bd	0.410
17	Total-tetrafurans	25.65	2.111e2	2.411e2	0.933	0.88	0.77	4.9	YES	NO	bd	dd	0.036
18	Total-tetrafurans	25.10	2.386e3	2.868e3	0.933	0.83	0.77	40.4	YES	NO	dd	db	0.414
19	Total-pentafurans	31.25	1.437e3	8.999e2	0.866	1.60	1.55	10.1	YES	NO	bd	bd	0.252
20	Total-pentafurans	30.37	1.687e3	1.139e3	0.866	1.48	1.55	10.5	YES	NO	bd	bd	0.305
21	12378-PeCDF	30.16	1.427e3	8.583e2	0.845	1.66	1.55	9.0	YES	NO	bb	bb	0.246
22	Total-pentafurans	29.22	9.175e2	6.830e2	0.866	1.34	1.55	7.0	YES	NO	db	db	0.173
23	Total-pentafurans	29.10	1.506e4	1.123e4	0.866	1.34	1.55	70.8	YES	NO	MM	MM	2.838
24	Total-pentafurans	28.89	3.100e3	2.312e3	0.866	1.34	1.55	17.9	YES	NO	dd	bd	0.584
25	123789-HxCDF	37.11	7.016e2	5.509e2	1.187	1.27	1.24	11.6	YES	NO	bb	bb	0.134
26	234678-HxCDF	36.11	2.943e3	2.564e3	1.229	1.15	1.24	42.5	YES	NO	bb	bb	0.485
27	123678-HxCDF	35.27	2.038e3	1.765e3	1.248	1.15	1.24	45.8	YES	NO	db	db	0.308
28	123478-HxCDF	35.13	3.123e3	2.326e3	1.182	1.34	1.24	66.4	YES	NO	dd	dd	0.476
29	Total-hexafurans	34.51	1.602e4	1.299e4	1.208	1.23	1.24	361.4	YES	NO	bb	bb	2.618
30	Total-hexafurans	33.67	1.377e4	1.146e4	1.208	1.20	1.24	288.9	YES	NO	bb	bb	2.277
31	123468-HXCDF	33.47	3.092e3	2.901e3	1.197	1.07	1.24	65.7	YES	NO	bb	bb	0.517
32	1234678-HpCDF	38.99	2.180e4	2.159e4	1.204	1.01	1.05	291.6	YES	NO	bb	bd	4.367
33	1234789-HpCDF	41.26	1.541e3	1.620e3	1.165	0.95	1.05	19.4	YES	NO	bb	bb	0.362
34	Total-heptafurans	39.66	4.331e4	4.257e4	1.185	1.02	1.05	569.0	YES	NO	bd	bd	9.207
35	Total-heptafurans	39.41	6.676e2	7.049e2	1.185	0.95	1.05	8.1	YES	NO	bb	bb	0.147
36	OCDF	45.56	3.827e4	4.388e4	1.186	0.87	0.89	543.7	YES	NO	bd	bd	11.844
37	Total-penta1	27.43	3.433e4	2.274e4		1.51	1.55	712.1	YES	NO	bb	bb	5.668

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	Total-tetradioxins	24.04	2.274e3	2.795e3	1.099	0.81	0.77	38.4	YES	NO	bb	bb	0.401
39	1368-TCDD	23.75	3.473e3	4.149e3	1.084	0.84	0.77	66.4	YES	NO	bb	bb	0.611
40	Total-tetradioxins	25.82	6.058e2	7.402e2	1.099	0.82	0.77	10.3	YES	NO	bb	bb	0.106
41	Total-tetradioxins	25.62	4.926e2	5.736e2	1.099	0.86	0.77	9.5	YES	NO	bb	db	0.084
42	Total-tetradioxins	25.25	1.383e3	1.655e3	1.099	0.84	0.77	23.8	YES	NO	bb	bb	0.240
43	Total-tetradioxins	24.76	1.183e3	1.434e3	1.099	0.82	0.77	21.1	YES	NO	bd	bd	0.207
44	12378-PeCDD	31.75	1.176e3	7.417e2	1.087	1.59	1.55	10.9	YES	NO	bb	bb	0.338
45	Total-pentadioxins	30.52	1.601e3	9.392e2	1.392	1.70	1.55	19.2	YES	NO	bb	bb	0.349
46	Total-pentadioxins	30.37	8.636e2	5.372e2	1.392	1.61	1.55	9.8	YES	NO	bb	bb	0.192
47	Total-pentadioxins	30.15	2.459e3	1.677e3	1.392	1.47	1.55	29.2	YES	NO	bb	bb	0.568
48	12479-PECDD	29.07	4.520e3	2.770e3	1.837	1.63	1.55	41.4	YES	NO	bb	bb	0.759
49	Total-hexadioxins	35.01	6.044e3	4.679e3	1.007	1.29	1.24	62.8	YES	NO	bb	bb	1.107
50	124679-HXCDD	34.24	8.420e3	6.738e3	1.033	1.25	1.24	86.2	YES	NO	bb	bb	1.567
51	123789-HxCDD	36.74	1.949e3	1.638e3	0.985	1.19	1.24	19.4	YES	NO	bb	bb	0.378
52	1234678-HpCDD	40.50	6.697e4	6.303e4	1.253	1.06	1.05	584.1	YES	NO	bb	bb	15.651
53	1234679-HPCDD	39.45	7.343e4	7.001e4	1.286	1.05	1.05	651.3	YES	NO	bb	bb	16.819
54	OCDD	45.32	4.487e5	4.974e5	1.103	0.90	0.89	3810.0	YES	NO	bd	bb	146.741

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	28.08	1.188e5					2.2	NO		bb		
2	FUNCTION1 PFK	27.79	5.054e3					0.6	NO		bb		
3	FUNCTION1 PFK	27.38	5.115e3					0.7	NO		bb		
4	FUNCTION1 PFK	27.14	1.984e4					1.2	NO		bb		
5	FUNCTION1 PFK	25.94	3.446e4					0.7	NO		bb		
6	FUNCTION1 PFK	22.86	5.514e5					6.1	YES		db		
7	FUNCTION1 PFK	22.58	2.553e6					10.3	YES		bd		
8	FUNCTION1 PFK	22.00	1.280e6					4.1	YES		bb		
9	FUNCTION1 PFK	21.35	7.165e6					25.8	YES		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.46	4.082e5					19.6	YES		db		0.000
2	FUNCTION2 PFK	29.04	2.909e6					31.5	YES		dd		0.000
3	FUNCTION2 PFK	28.64	7.584e6					42.4	YES		bd		0.000
4	FUNCTION2 PFK	32.99	2.875e5					1.1	NO		bb		0.000
5	FUNCTION2 PFK	32.72	1.147e6					18.5	YES		bb		0.000
6	FUNCTION2 PFK	29.74	2.877e5					5.8	YES		bb		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	37.58	2.000e5					6.0	YES		db		0.000
2	FUNCTION3 PFK	37.50	3.024e5					7.8	YES		dd		0.000
3	FUNCTION3 PFK	37.31	9.731e5					10.7	YES		bd		0.000
4	FUNCTION3 PFK	36.79	1.312e6					8.5	YES		bb		0.000
5	FUNCTION3 PFK	36.19	2.969e4					1.9	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.22	1.478e7					34.7	YES		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	22.98	1.430e2					2.8	NO		bb		0.000
2	FUNCTION1 HXCD...	21.69	7.761e1					1.1	NO		bb		0.000
3	FUNCTION1 HXCD...	21.11	7.249e1					1.7	NO		bb		0.000
4	FUNCTION1 HXCD...	27.13	1.305e2					2.9	NO		db		0.000
5	FUNCTION1 HXCD...	27.06	2.703e2					5.3	YES		bd		0.000
6	FUNCTION1 HXCD...	26.64	1.116e2					2.5	NO		bb		0.000
7	FUNCTION1 HXCD...	26.38	5.470e2					9.0	YES		bb		0.000
8	FUNCTION1 HXCD...	26.16	8.841e2					17.3	YES		db		0.000
9	FUNCTION1 HXCD...	26.01	3.653e2					6.3	YES		bd		0.000
10	FUNCTION1 HXCD...	25.36	1.723e2					3.7	YES		bb		0.000
11	FUNCTION1 HXCD...	24.98	1.241e2					2.1	NO		bb		0.000
12	FUNCTION1 HXCD...	24.01	8.453e2					12.4	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.66	1.641e2					3.2	YES		bb		0.000
2	FUNCTION2 HPCD...	32.47	1.074e2					3.7	YES		bb		0.000
3	FUNCTION2 HPCD...	29.21	1.894e2					5.0	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	37.19	1.008e2					2.0	NO		bb		0.000
2	FUNCTION3 OCDPE	33.38	7.648e1					2.7	NO		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.64	5.825e3					121.5	YES		bb		0.000

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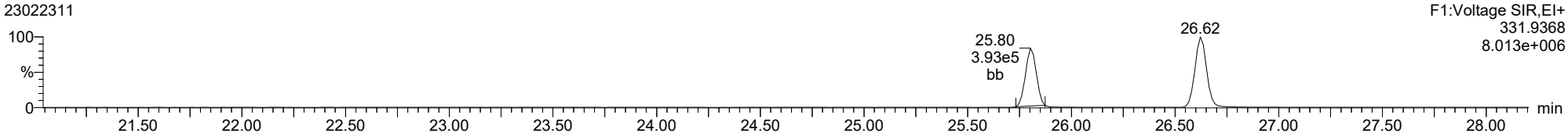
ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: 23A0133-07, Name: 23022311, Date: 23-Feb-2023, Time: 18:21:49, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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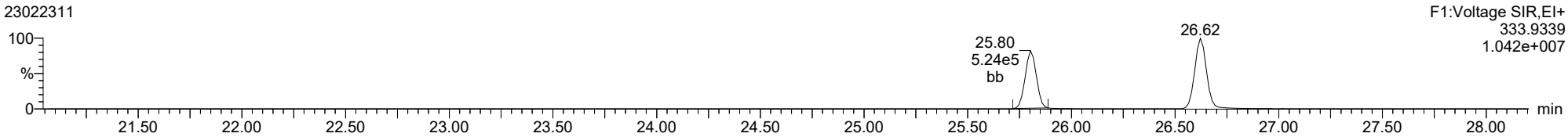
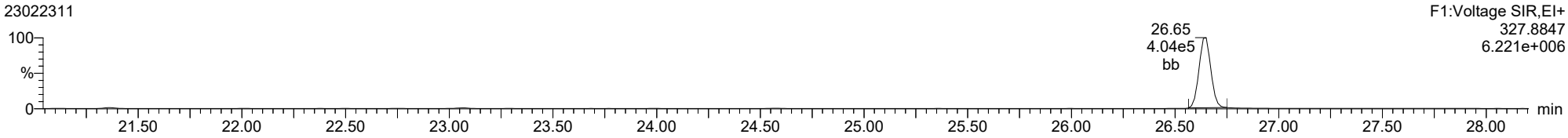
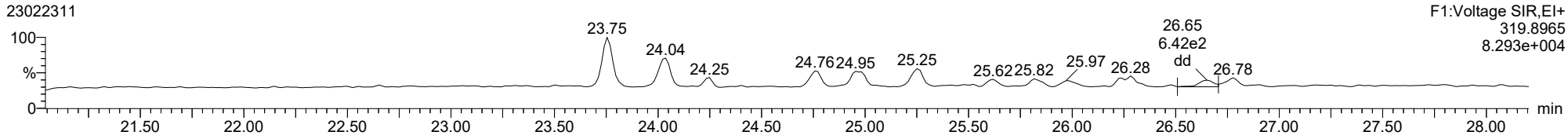


37CL-2378-TCDD



ID: 23A0133-07, Name: 23022311, Date: 23-Feb-2023, Time: 18:21:49, Conditions: AUTOSPEC01, User: pk

2378-TCDD



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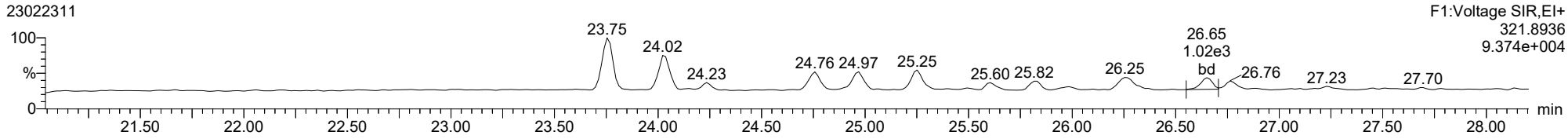

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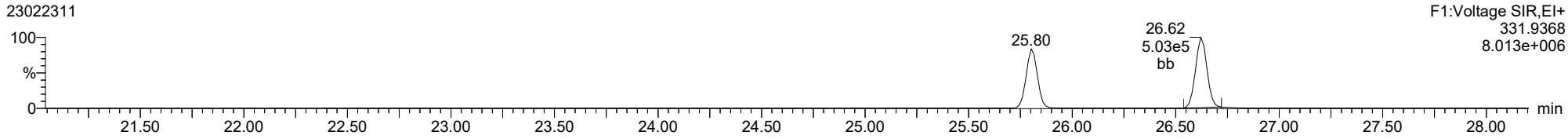

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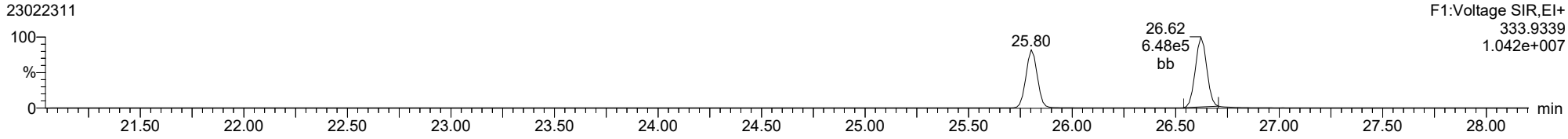

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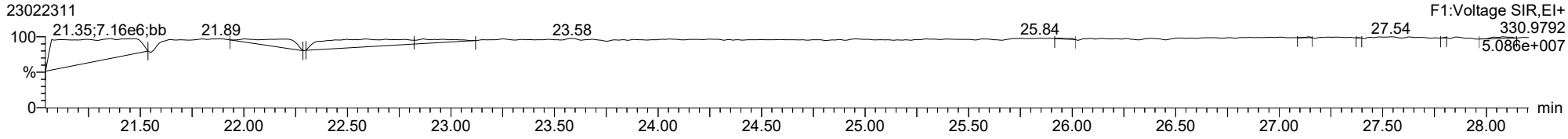
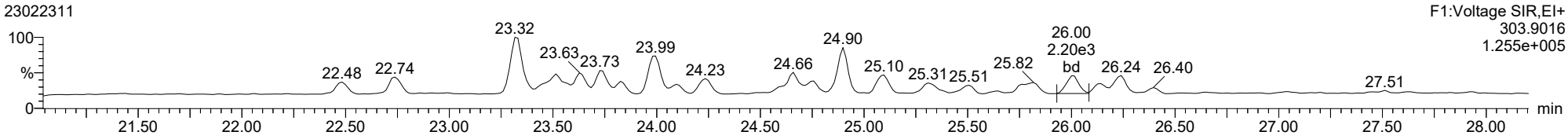


ID: 23A0133-07, Name: 23022311, Date: 23-Feb-2023, Time: 18:21:49, Conditions: AUTOSPEC01, User: pk

2378-TCDF



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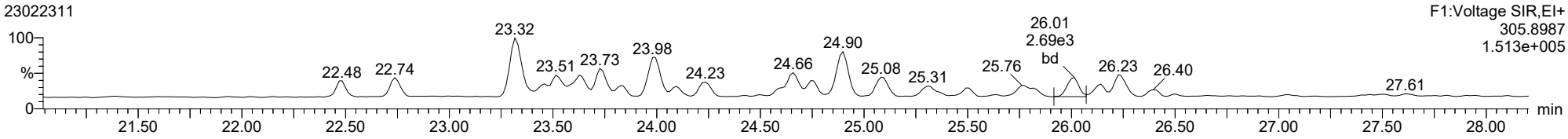

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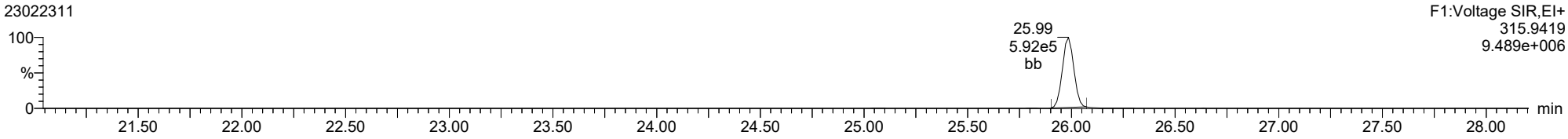
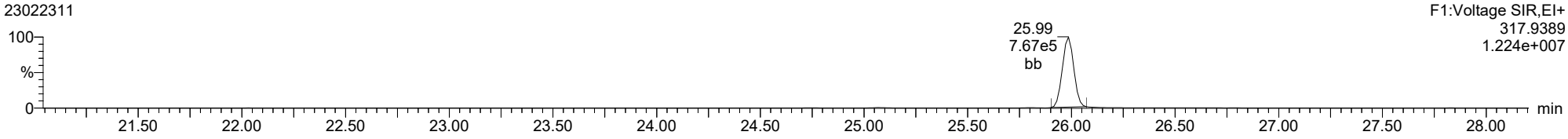
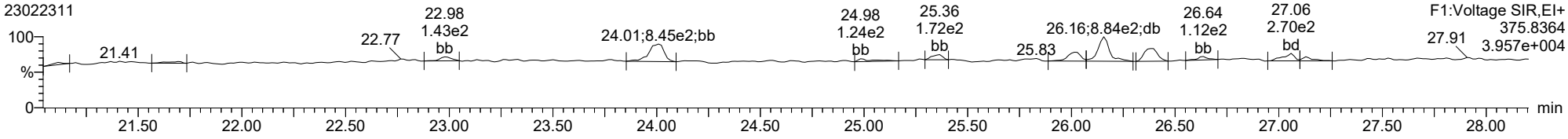


13C-2378-TCDF

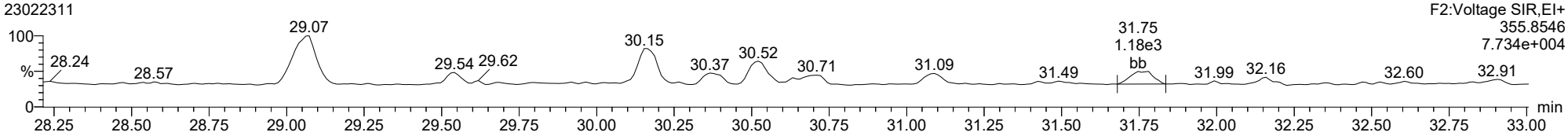


FUNCTION1 HXCDPE



ID: 23A0133-07, Name: 23022311, Date: 23-Feb-2023, Time: 18:21:49, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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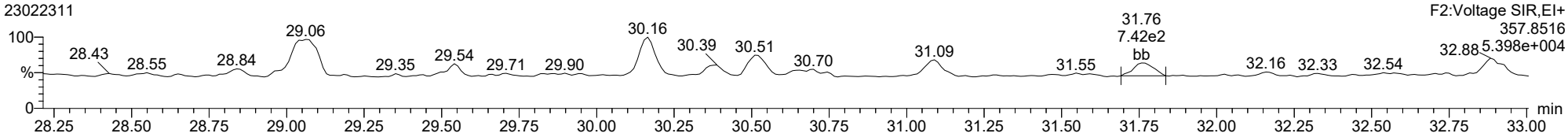

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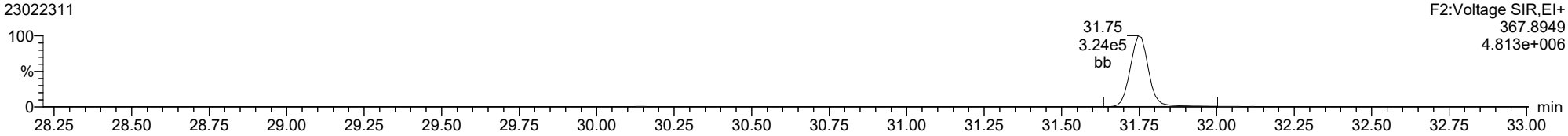

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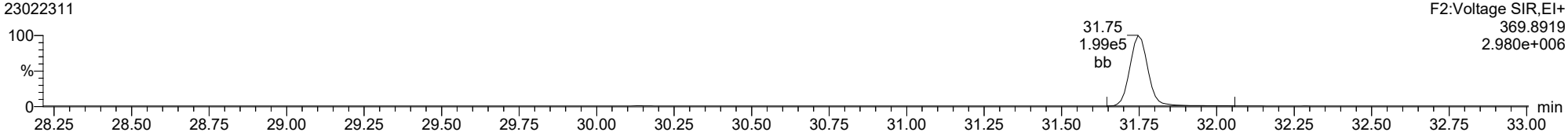
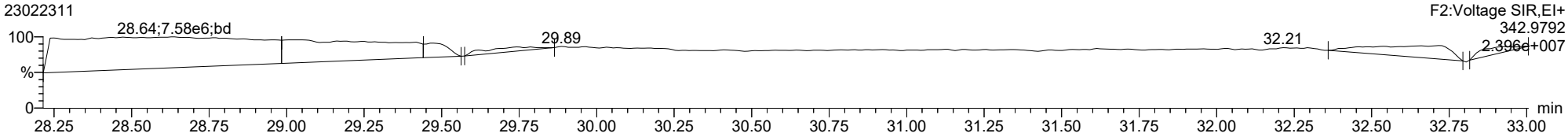
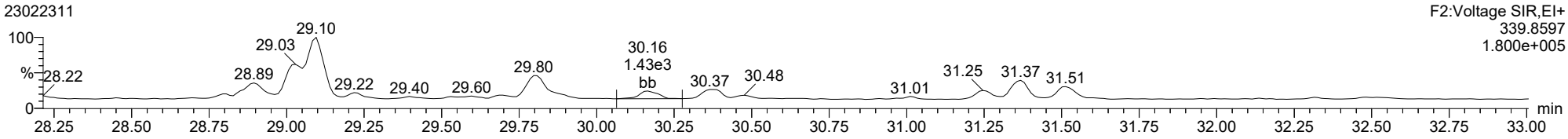


FUNCTION2 PFK

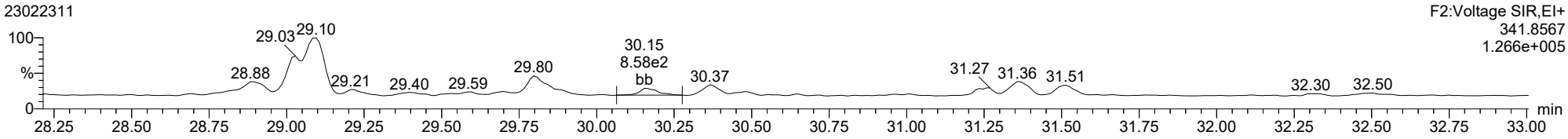


ID: 23A0133-07, Name: 23022311, Date: 23-Feb-2023, Time: 18:21:49, Conditions: AUTOSPEC01, User: pk

12378-PeCDF



12378-PeCDF



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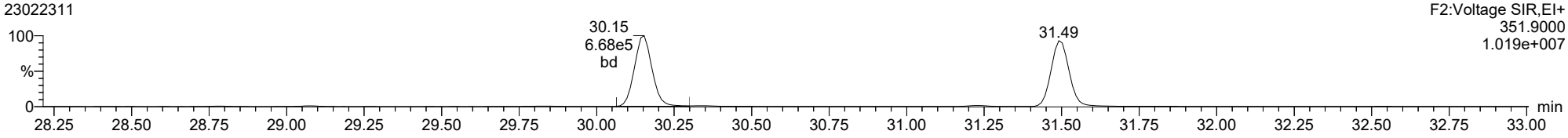

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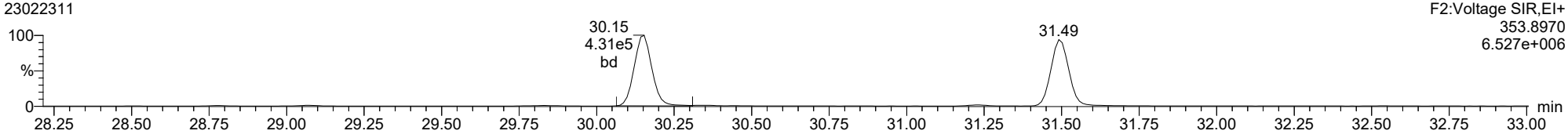
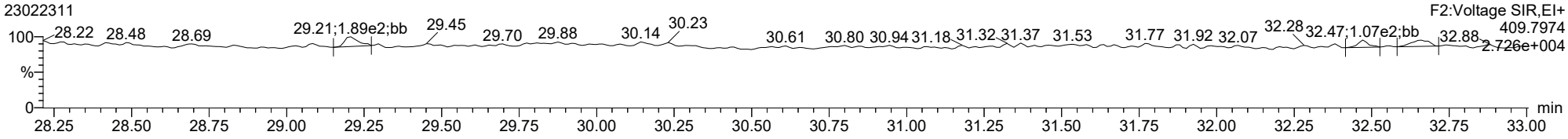


FUNCTION2 HPCDPE



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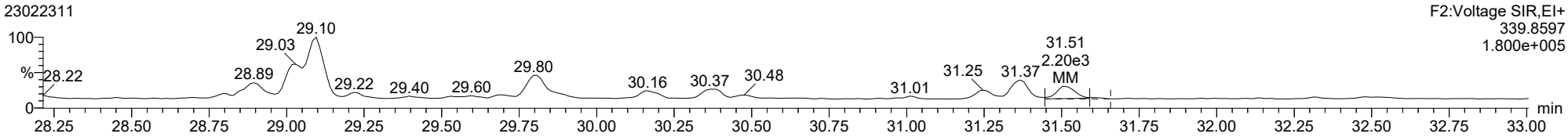
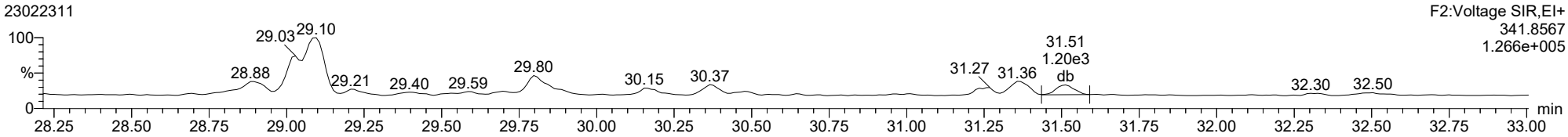
23478-PeCDF



23478-PeCDF



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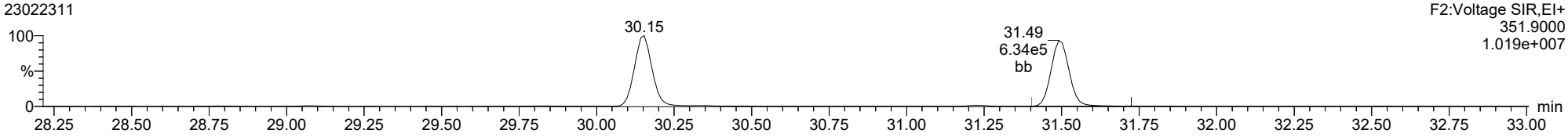

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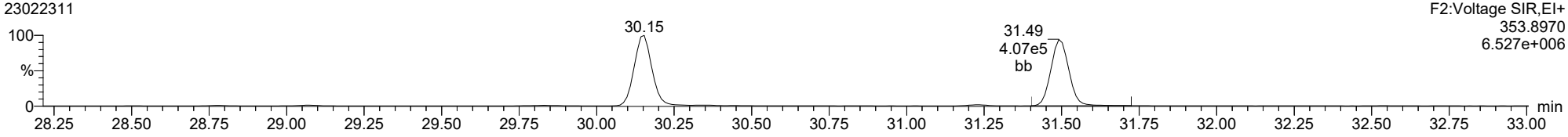
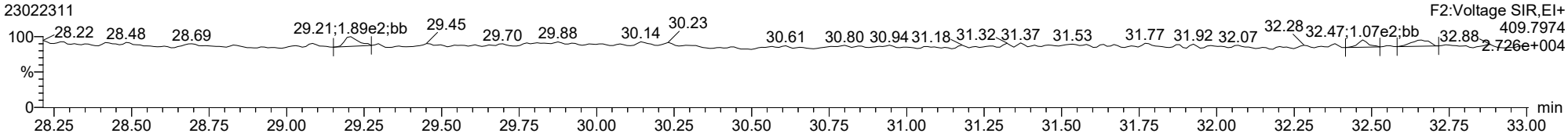


FUNCTION2 HPCDPE



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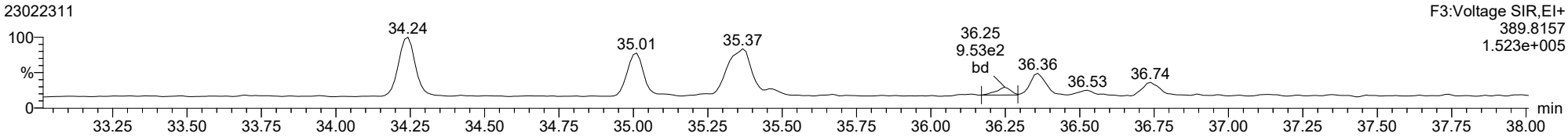
123478-HxCDD



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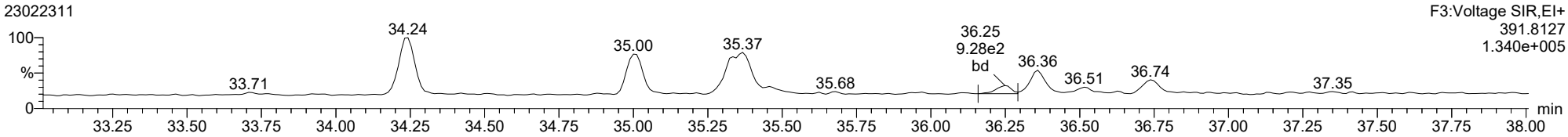

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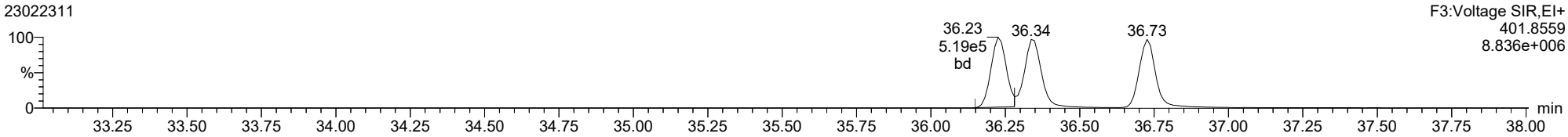

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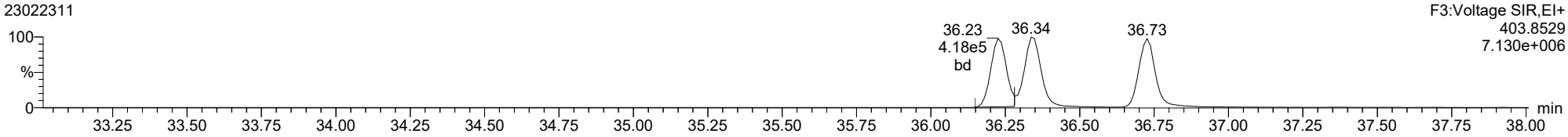

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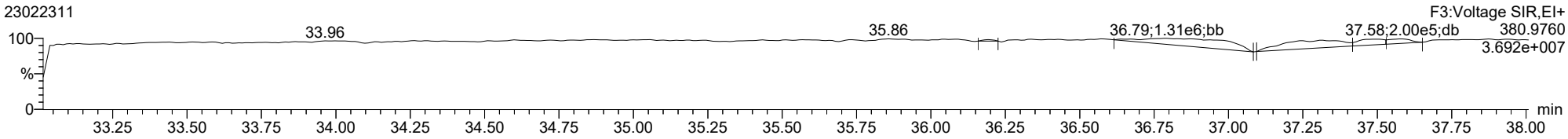

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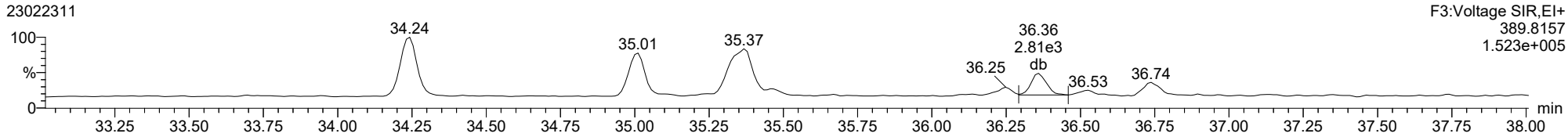
123678-HxCDD



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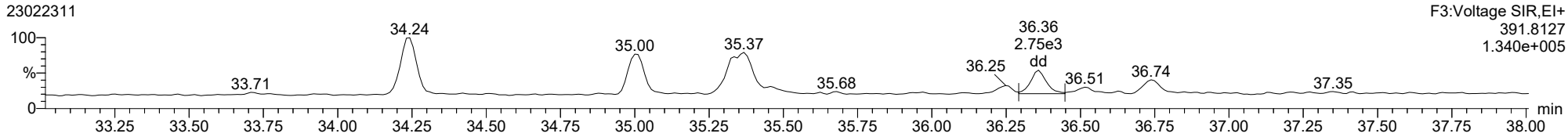

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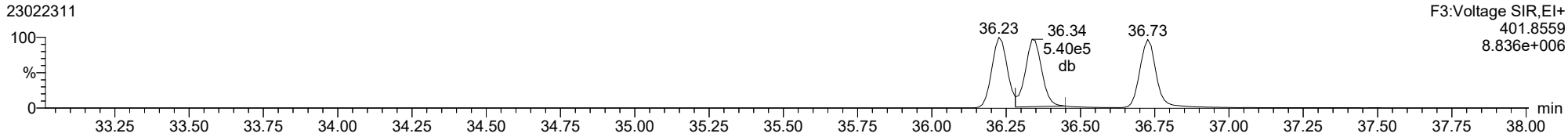

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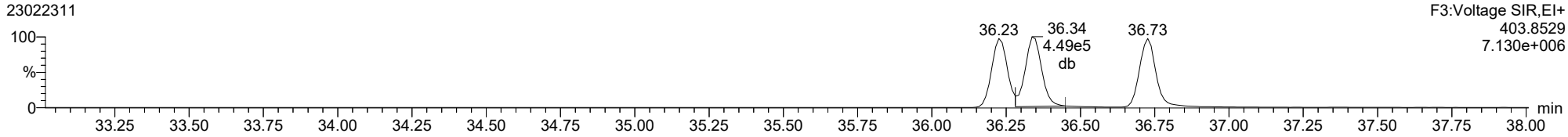

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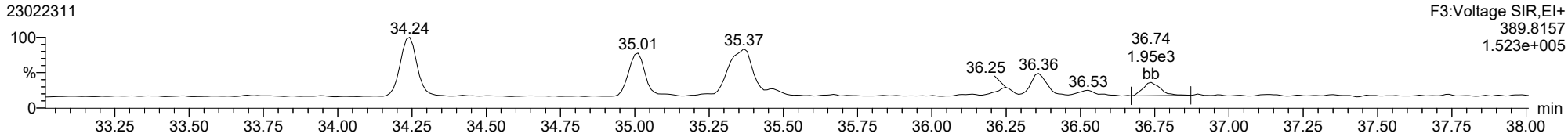

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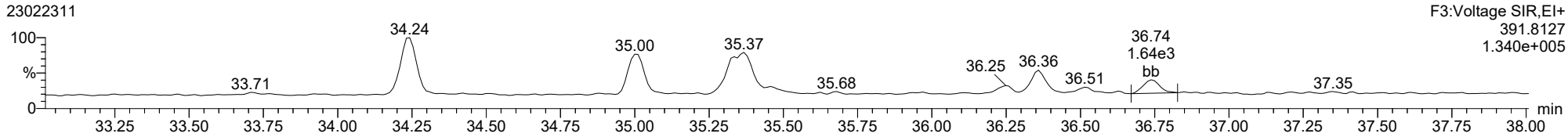

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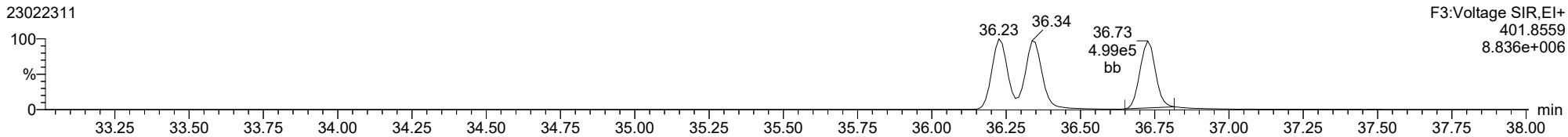

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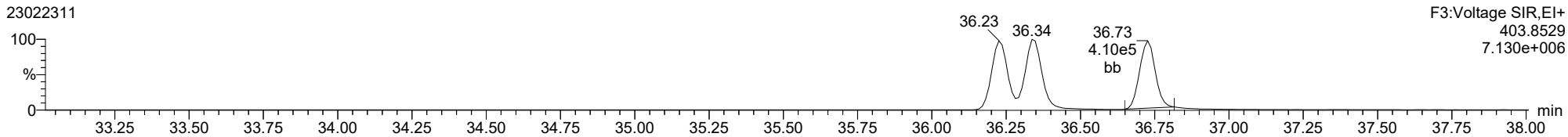

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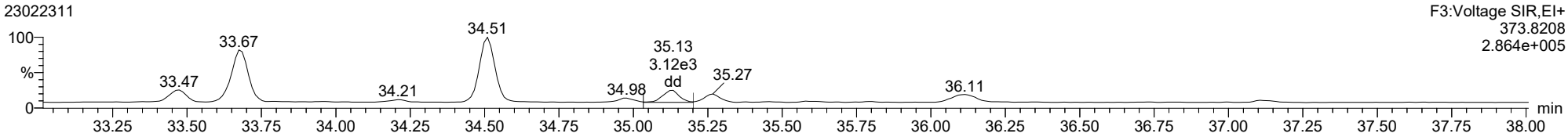

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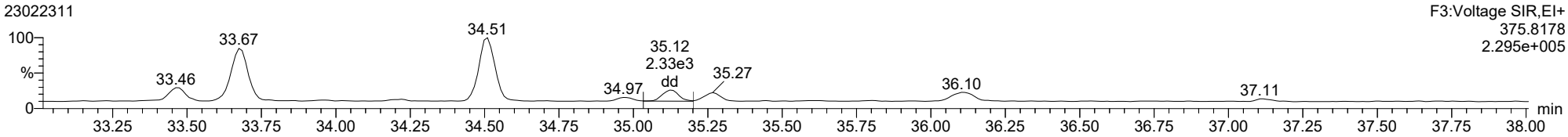

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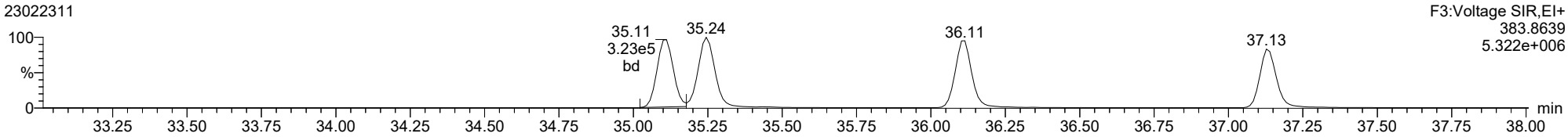

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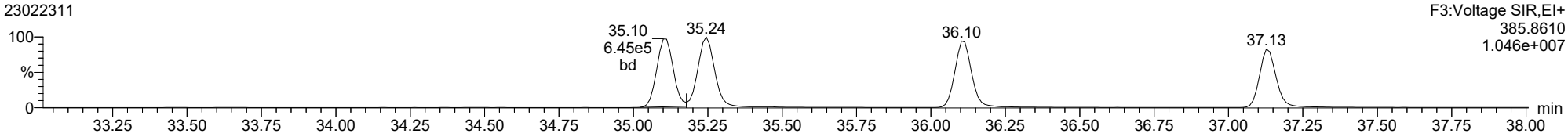

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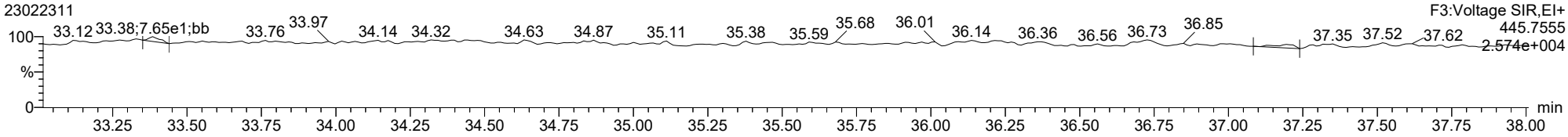

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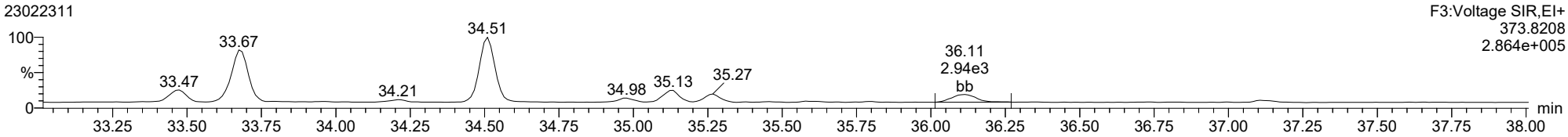

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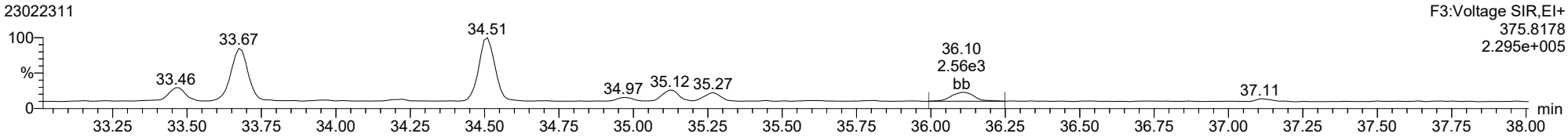

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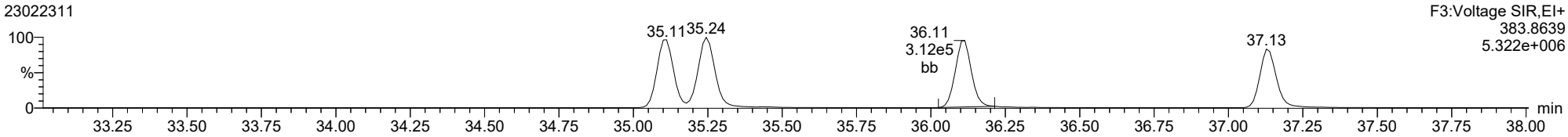

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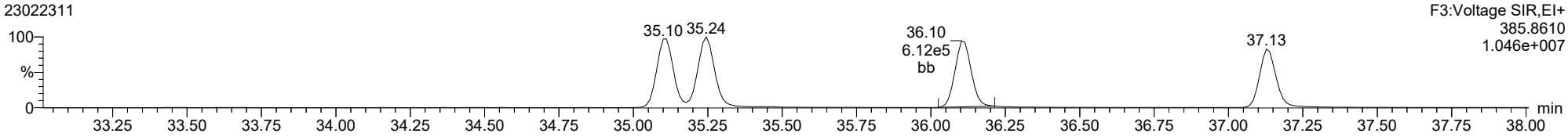

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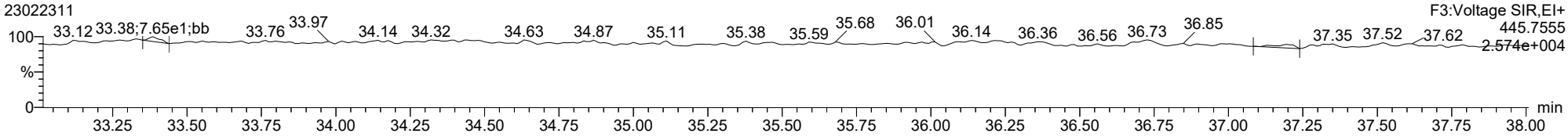

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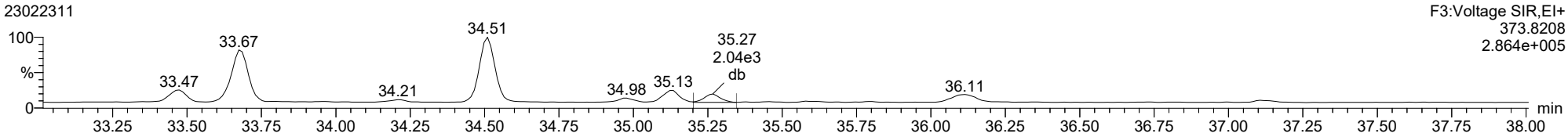

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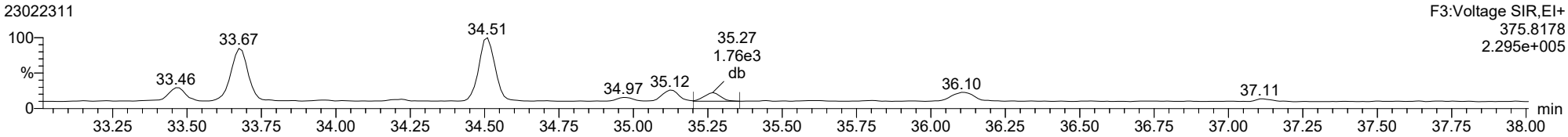

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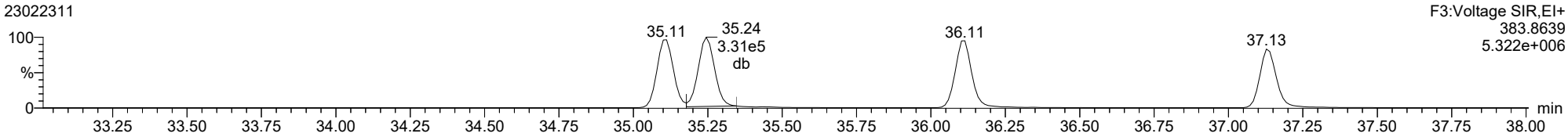

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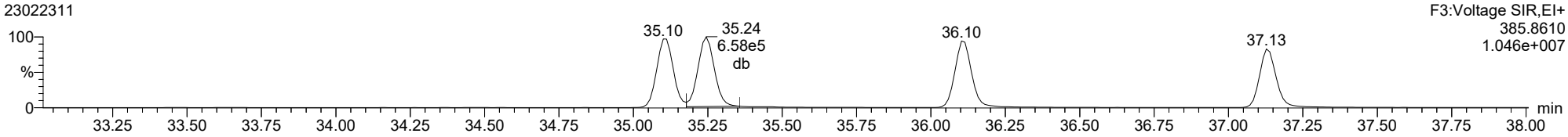

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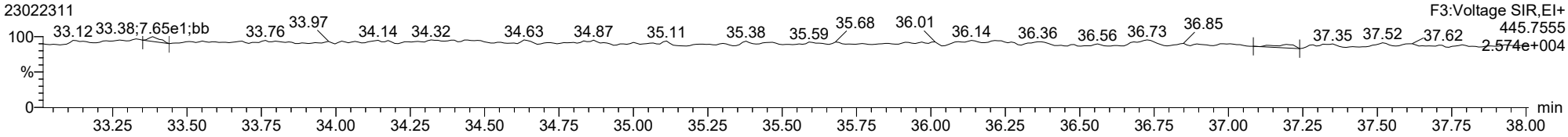

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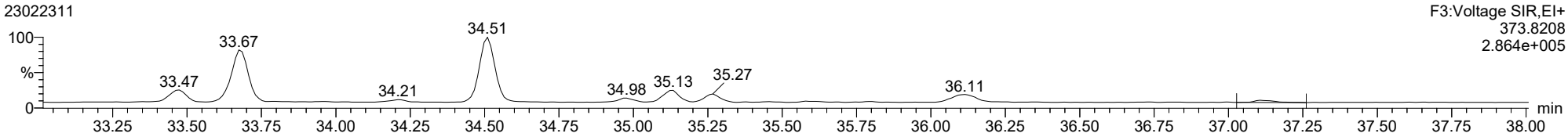

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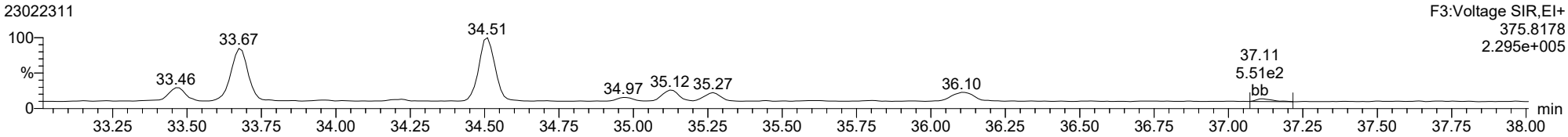

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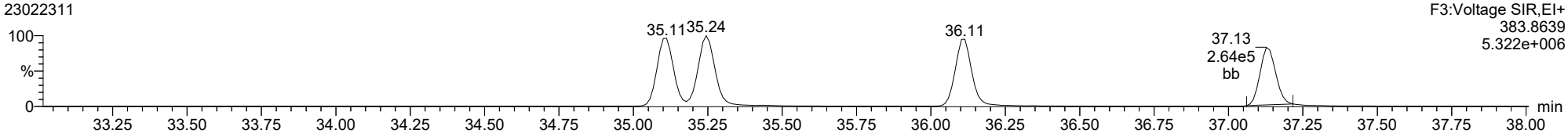

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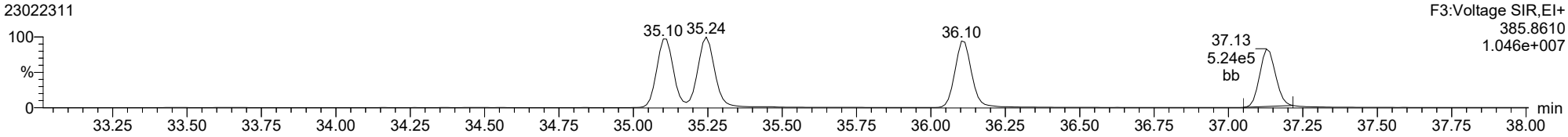

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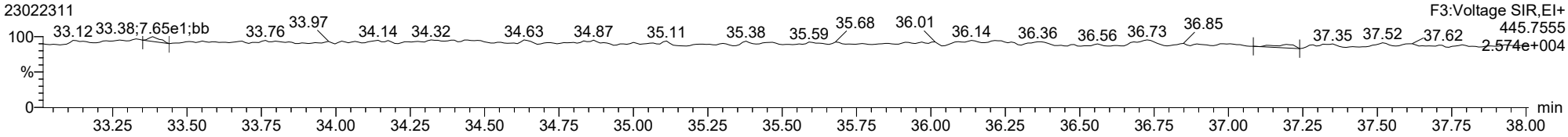

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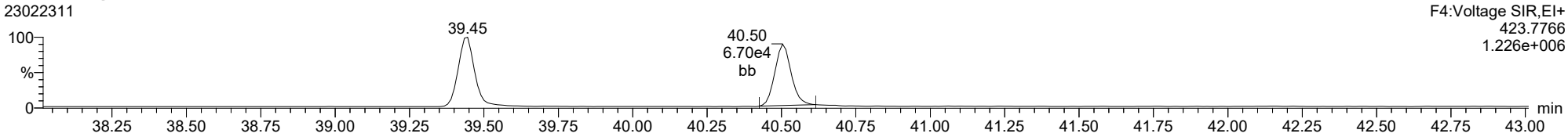

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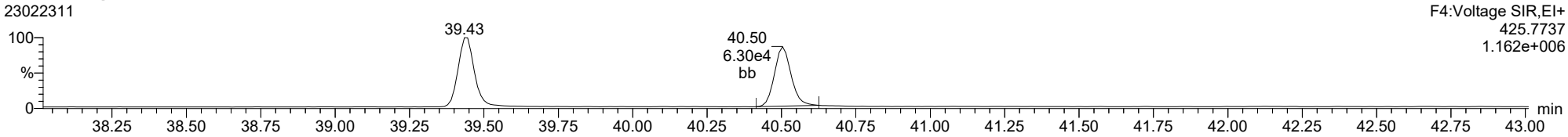

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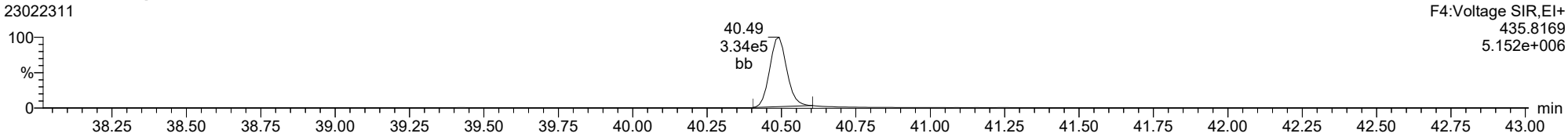

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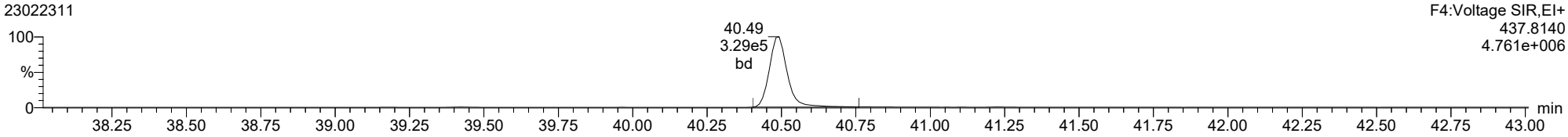

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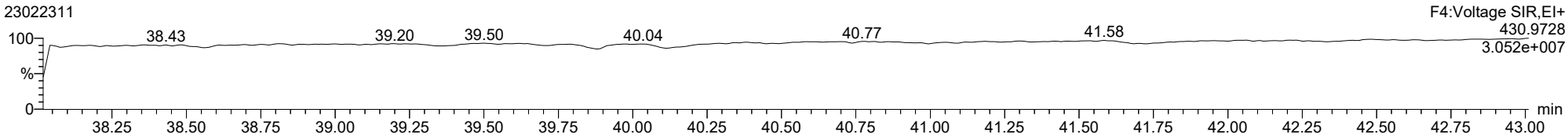

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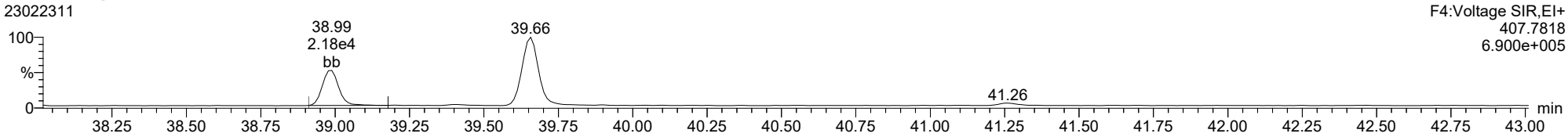

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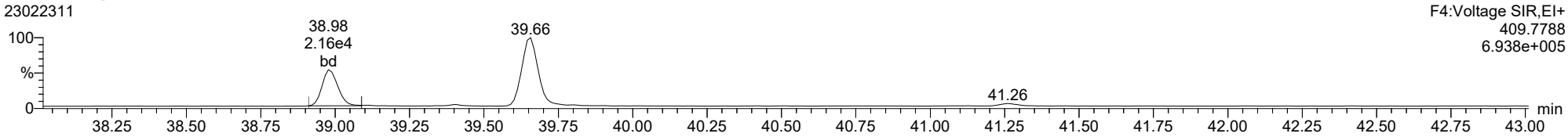

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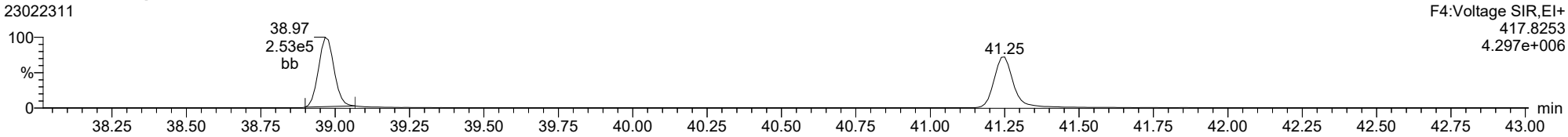

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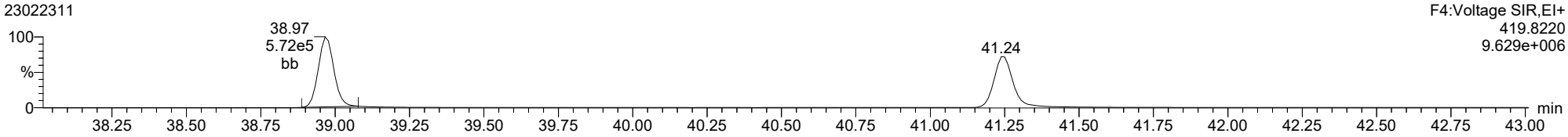

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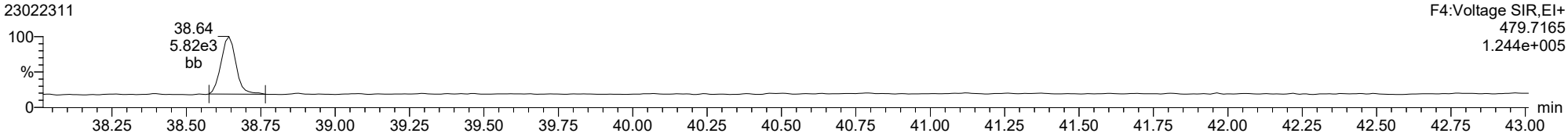

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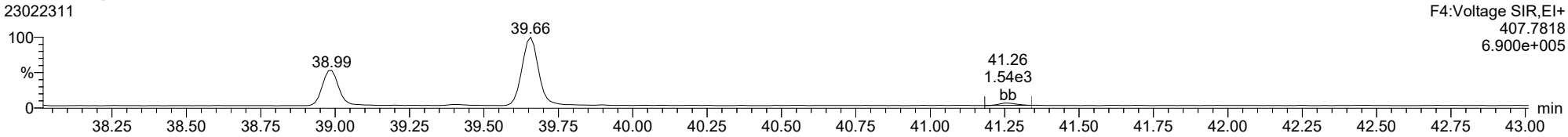

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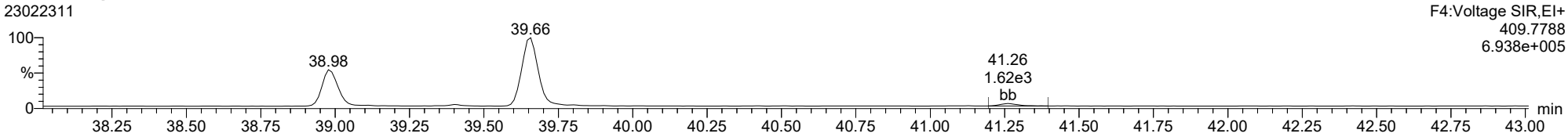

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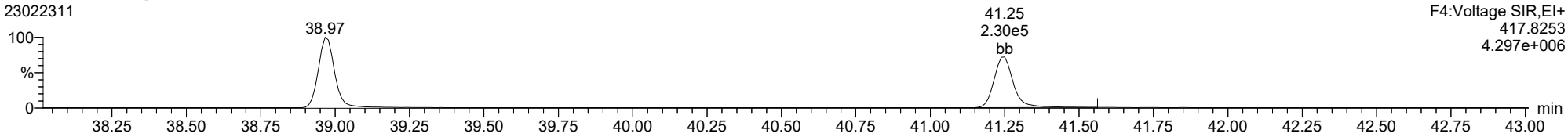

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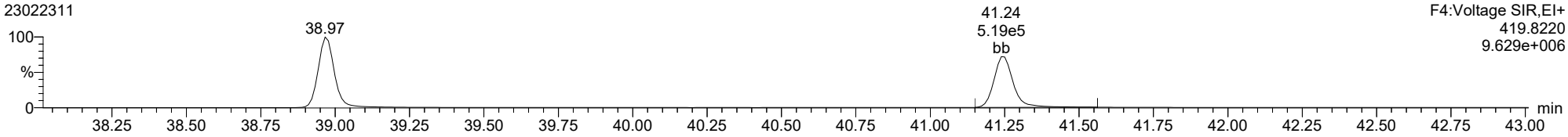

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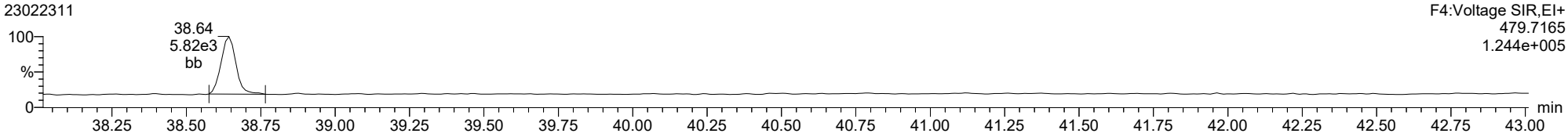

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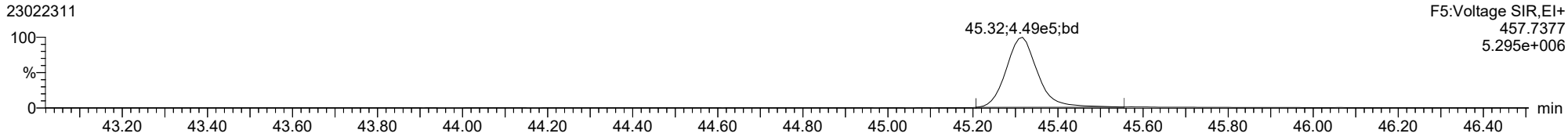

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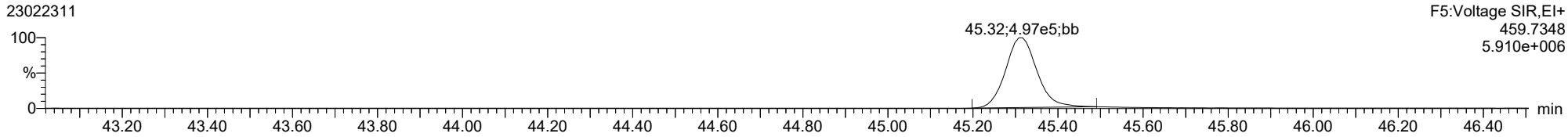

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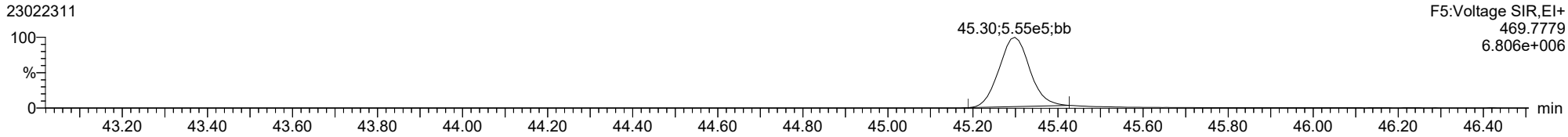

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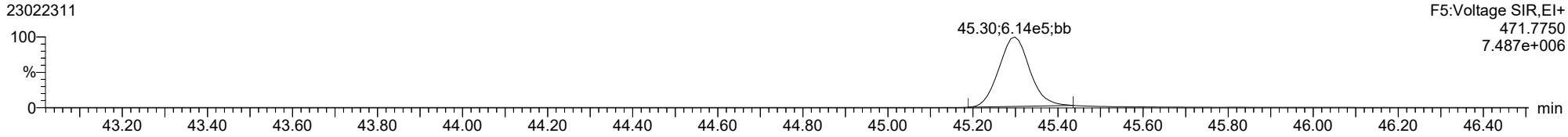

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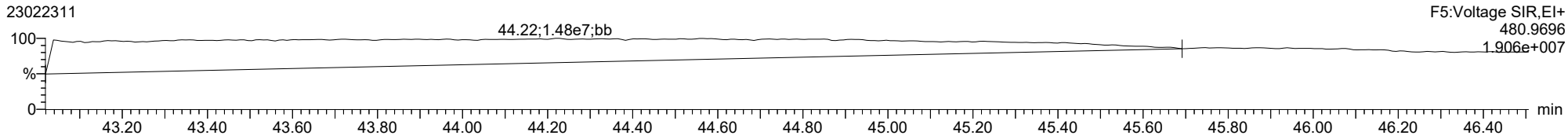

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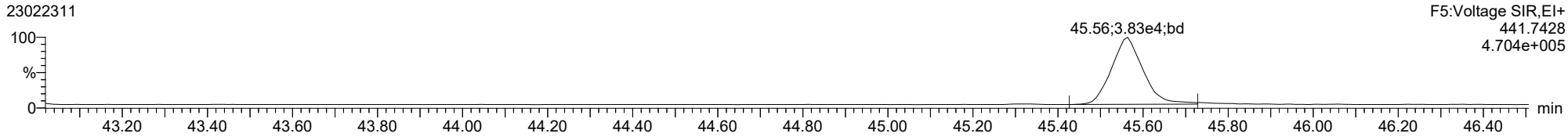

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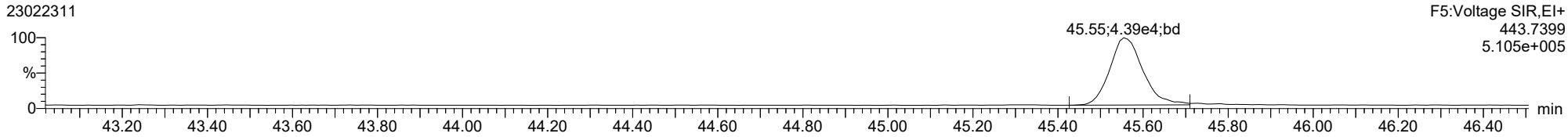

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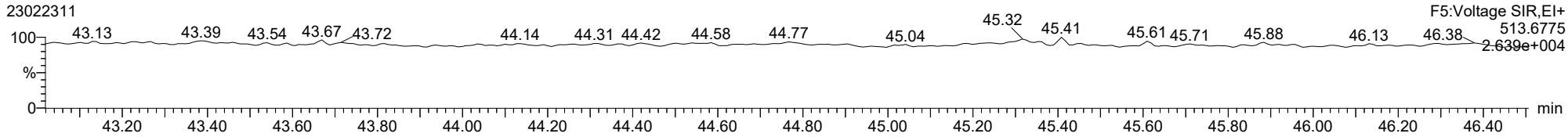

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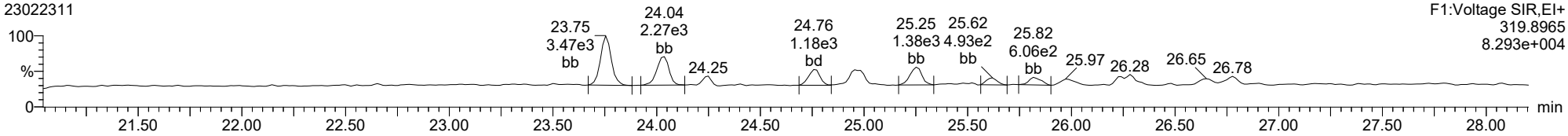
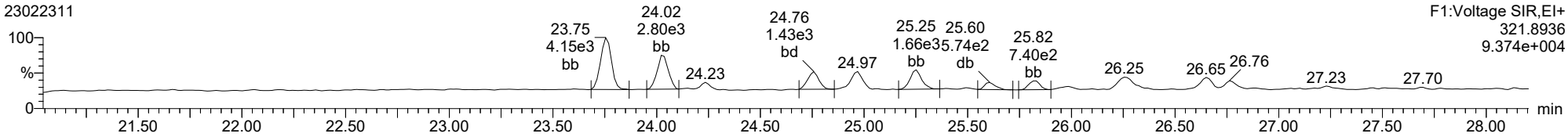
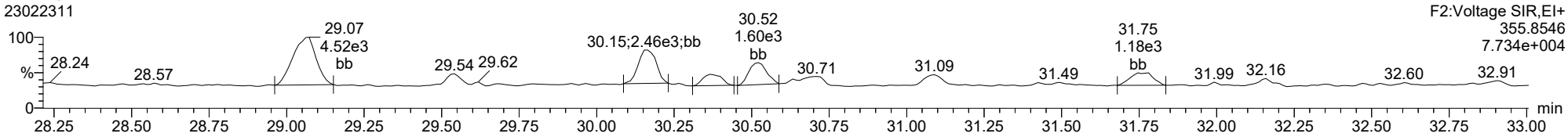
Total-tetradioxins



Total-tetradioxins



Total-pentadioxins



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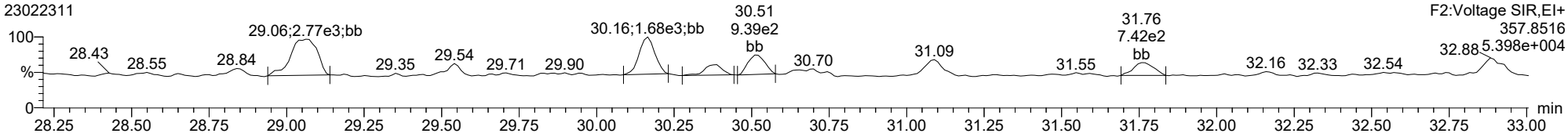

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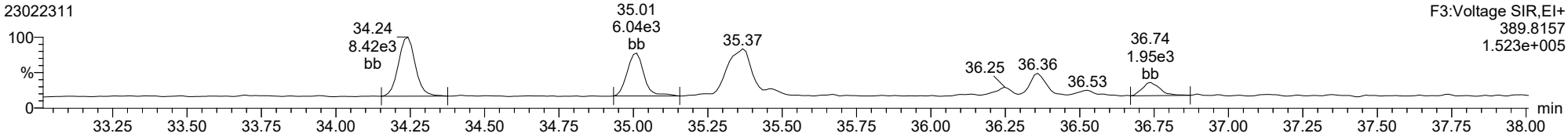
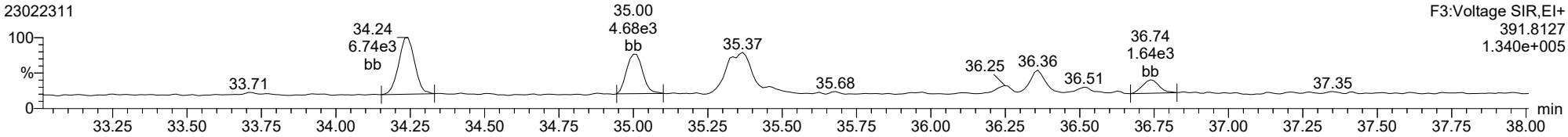
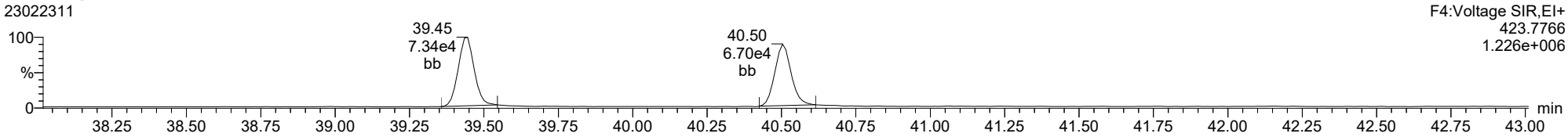
Total-hexadioxins



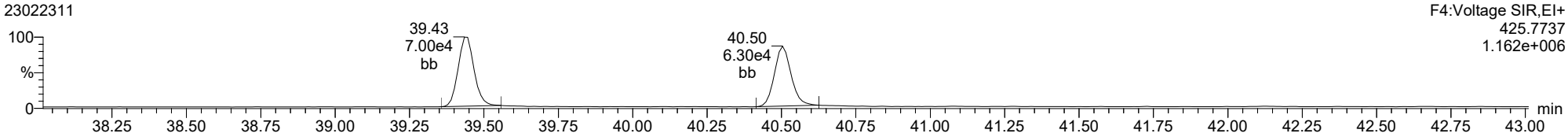
Total-hexadioxins



Total-heptadioxins

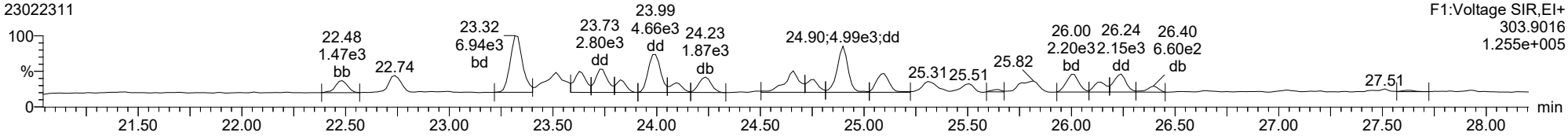


Total-heptadioxins

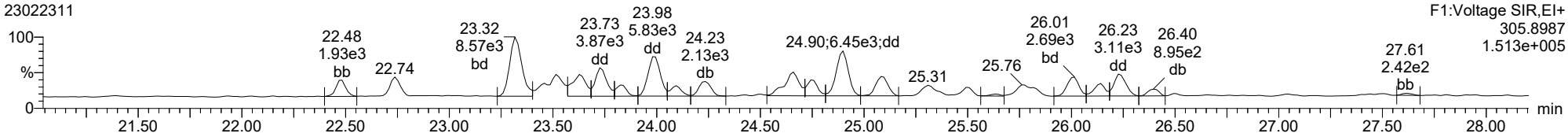


ID: 23A0133-07, Name: 23022311, Date: 23-Feb-2023, Time: 18:21:49, Conditions: AUTOSPEC01, User: pk

Total-tetrafurans



Total-tetrafurans



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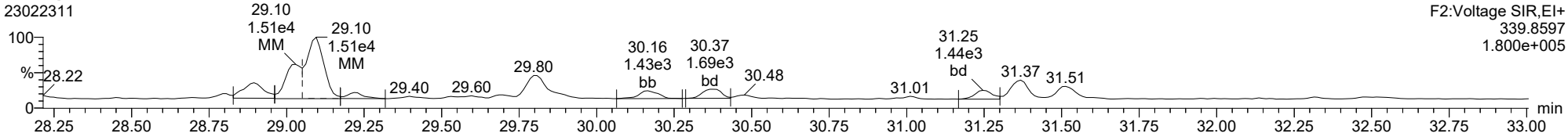
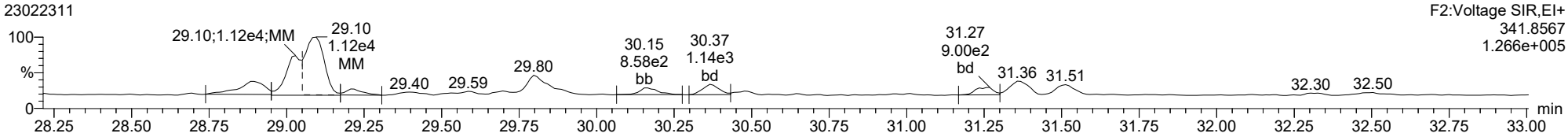
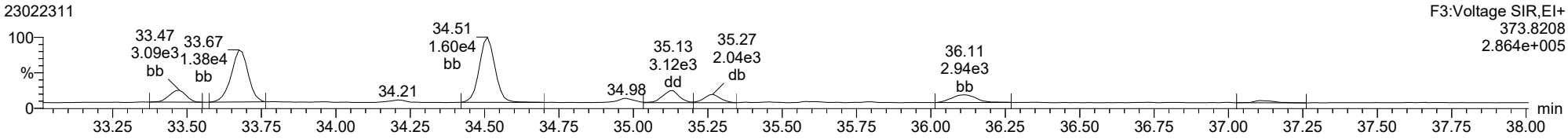


Total-pentafurans

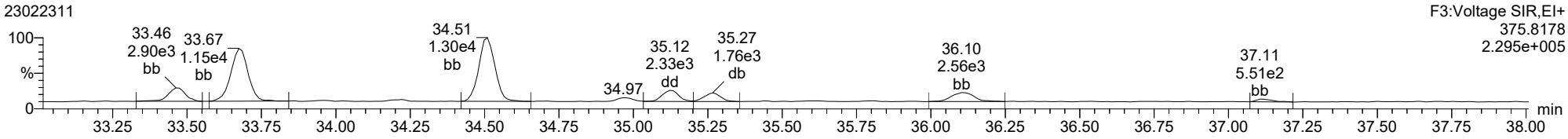


ID: 23A0133-07, Name: 23022311, Date: 23-Feb-2023, Time: 18:21:49, Conditions: AUTOSPEC01, User: pk

Total-hexafurans



Total-hexafurans



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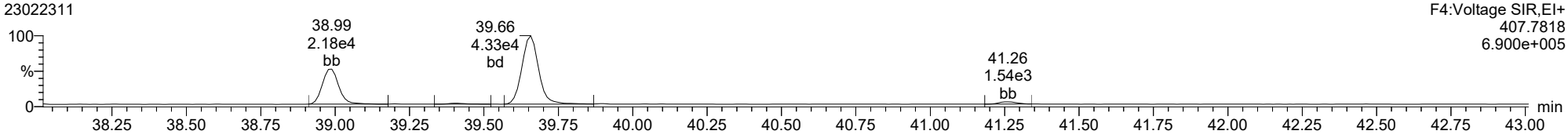
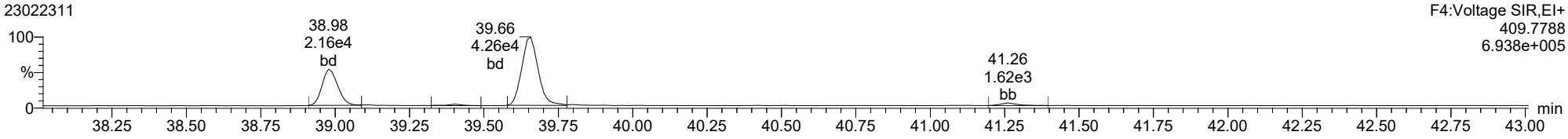


Total-heptafurans



Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1215

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-10 B	File ID:	23022314
Sampled:	01/06/23 11:38	Prepared:	01/24/23 13:10	Analyzed:	02/23/23 20:56
% Solids:	54.04	Preparation:	EPA 1613	Initial/Final:	18.53 g Wet / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.819	0.655-0.886	0.089	0.999	2.80	ng/kg	X, B
1746-01-6	2,3,7,8-TCDD	1	0.474	0.655-0.886	0.058	0.999	0.303	ng/kg	EMPC, J
57117-41-6	1,2,3,7,8-PeCDF	1	1.555	1.318-1.783	0.110	0.999	1.24	ng/kg	
57117-31-4	2,3,4,7,8-PeCDF	1	1.624	1.318-1.783	0.112	0.999	2.93	ng/kg	
40321-76-4	1,2,3,7,8-PeCDD	1	1.431	1.318-1.783	0.206	0.999	1.39	ng/kg	
70648-26-9	1,2,3,4,7,8-HxCDF	1	1.190	1.054-1.426	0.103	0.999	2.39	ng/kg	B
57117-44-9	1,2,3,6,7,8-HxCDF	1	1.089	1.054-1.426	0.091	0.999	2.07	ng/kg	
60851-34-5	2,3,4,6,7,8-HxCDF	1	1.203	1.054-1.426	0.099	0.999	4.11	ng/kg	
72918-21-9	1,2,3,7,8,9-HxCDF	1	1.139	1.054-1.426	0.112	0.999	0.729	ng/kg	J, B
39227-28-6	1,2,3,4,7,8-HxCDD	1	1.221	1.054-1.426	0.219	0.999	0.753	ng/kg	J
57653-85-7	1,2,3,6,7,8-HxCDD	1	1.210	1.054-1.426	0.225	0.999	2.21	ng/kg	
19408-74-3	1,2,3,7,8,9-HxCDD	1	1.088	1.054-1.426	0.226	0.999	1.26	ng/kg	B
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.013	0.893-1.208	0.117	0.999	29.0	ng/kg	
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.805	0.893-1.208	0.163	0.999	1.22	ng/kg	EMPC
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.026	0.893-1.208	0.224	2.50	29.0	ng/kg	B
39001-02-0	OCDF	1	0.842	0.757-1.024	0.210	2.50	40.0	ng/kg	
3268-87-9	OCDD	1	0.836	0.757-1.024	0.296	9.99	171	ng/kg	B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			0.999	59.4	ng/kg
41903-57-5	Total TCDD	1	0.000			0.999	8.83	ng/kg
30402-15-4	Total PeCDF	1	0.000			0.999	111	ng/kg
36088-22-9	Total PeCDD	1	0.000			0.999	10.7	ng/kg
55684-94-1	Total HxCDF	1	0.000			0.999	56.0	ng/kg
34465-46-8	Total HxCDD	1	0.000			0.999	23.3	ng/kg
38998-75-3	Total HpCDF	1	0.000			0.999	64.4	ng/kg
37871-00-4	Total HpCDD	1	0.000			0.999	61.7	ng/kg

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 4.90

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 4.90

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LDW23-SC1215

Form 2
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-10	File ID:	23022314
Sampled:	01/06/23 11:38	Prepared:	01/24/23 13:10	Analyzed:	02/23/23 20:56
Solids Wt%:	54.04	Preparation:	EPA 1613	Initial/Final:	18.53 g / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.775	0.655-0.886	0.086	82.3	24 - 169 %	
13C12-2,3,7,8-TCDD		0.768	0.655-0.886	0.123	105	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.563	1.318-1.783	0.188	90.6	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.555	1.318-1.783	0.195	85.0	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.603	1.318-1.783	0.135	65.9	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.504	0.434-0.587	0.255	102	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.504	0.434-0.587	0.249	106	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.496	0.434-0.587	0.265	103	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.511	0.434-0.587	0.290	99.8	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.246	1.054-1.426	0.186	107	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.225	1.054-1.426	0.180	112	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.451	0.374-0.506	0.198	89.5	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.444	0.374-0.506	0.227	87.6	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.097	0.893-1.208	0.225	87.3	23 - 140 %	
13C12-OCDD		0.901	0.757-1.024	0.390	76.0	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.033	82.8	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:13:34 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: 23A0133-10, Name: 23022314, Date: 23-Feb-2023, Time: 20:56:42, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	26.028	1.001	6.146e3	7.502e3	0.876	0.819	0.770	1139	1056	9.43e4	1.14e5	82.8	108.0	NO	dd	bd	1.400
12378-PeCDF	30.187	1.000	3.376e3	2.171e3	0.845	1.555	1.550	1395	1000	5.38e4	3.75e4	38.5	37.5	NO	bb	bd	0.621
23478-PeCDF	31.524	1.000	7.881e3	4.853e3	0.911	1.624	1.550	1395	1000	1.11e5	7.00e4	79.5	70.0	NO	dd	db	1.465
123478-HxCDF	35.145	1.001	4.787e3	4.021e3	1.182	1.190	1.240	1007	938	7.68e4	6.61e4	76.2	70.5	NO	dd	dd	1.195
234678-HxCDF	36.125	1.000	8.312e3	6.908e3	1.229	1.203	1.240	1007	938	8.72e4	7.12e4	86.6	75.9	NO	bb	bb	2.059
123678-HxCDF	35.290	1.001	4.440e3	4.079e3	1.248	1.089	1.240	1007	938	7.04e4	6.20e4	69.9	66.1	NO	db	db	1.035
123789-HxCDF	37.139	1.000	1.235e3	1.084e3	1.187	1.139	1.240	1007	938	2.00e4	1.45e4	19.8	15.5	NO	bb	bb	0.365
1234678-HpCDF	39.011	1.001	4.729e4	4.666e4	1.204	1.013	1.050	1046	956	7.28e5	7.17e5	696.4	749.9	NO	bb	bd	14.545
1234789-HpCDF	41.284	1.000	1.458e3	1.810e3	1.165	0.805	1.050	1046	956	2.15e4	2.34e4	20.6	24.5	YES	bb	bb	0.612
OCDF	45.573	1.006	3.764e4	4.471e4	1.186	0.842	0.890	816	891	4.26e5	5.02e5	521.8	563.3	NO	bd	bd	20.036
2378-TCDD	26.678	1.002	5.358e2	1.131e3	1.236	0.474	0.770	995	616	6.74e3	1.69e4	6.8	27.5	YES	bd	bd	0.152
12378-PeCDD	31.780	1.000	2.045e3	1.429e3	1.087	1.431	1.550	1171	1285	3.39e4	1.76e4	28.9	13.7	NO	bb	bb	0.694
123478-HxCDD	36.270	1.001	1.178e3	9.653e2	0.987	1.221	1.240	1393	2137	1.98e4	1.55e4	14.2	7.3	NO	bd	bd	0.377
123678-HxCDD	36.382	1.000	3.873e3	3.202e3	1.021	1.210	1.240	1393	2137	6.15e4	4.58e4	44.2	21.4	NO	dd	dd	1.109
123789-HxCDD	36.760	1.011	1.953e3	1.795e3	0.985	1.088	1.240	1393	2137	3.07e4	2.41e4	22.1	11.3	NO	bb	bb	0.633
1234678-HpCDD	40.526	1.000	3.634e4	3.543e4	1.253	1.026	1.050	1164	1648	5.35e5	5.14e5	459.1	311.8	NO	bb	bd	14.519
OCDD	45.335	1.000	1.485e5	1.776e5	1.103	0.836	0.890	1234	1000	1.75e6	2.02e6	1415.1	2021.0	NO	bb	bd	85.379
13C-2378-TCDF	26.000	1.007	4.857e5	6.270e5	1.768	0.775	0.770	1337	1687	7.33e6	9.51e6	5479.5	5636.6	NO	bb	bb	82.269
13C-12378-PeCDF	30.176	1.168	6.454e5	4.130e5	1.527	1.563	1.550	3028	2640	9.41e6	5.96e6	3107.7	2259.5	NO	bd	bd	90.604
13C-23478-PeCDF	31.513	1.220	5.805e5	3.733e5	1.466	1.555	1.550	3028	2640	8.57e6	5.48e6	2829.2	2077.4	NO	bd	bd	85.039
13C-123478-HxCDF	35.122	0.956	2.091e5	4.147e5	1.054	0.504	0.510	1868	2515	3.22e6	6.41e6	1722.1	2547.5	NO	bd	bd	102.384
13C-123678-HxCDF	35.267	0.960	2.212e5	4.386e5	1.080	0.504	0.510	1868	2515	3.43e6	6.80e6	1833.2	2705.9	NO	db	db	105.653
13C-234678-HxCDF	36.136	0.983	1.994e5	4.022e5	1.014	0.496	0.510	1868	2515	3.18e6	6.29e6	1699.9	2500.5	NO	bb	bb	102.577
13C-123789-HxCDF	37.150	1.011	1.810e5	3.545e5	0.928	0.511	0.510	1868	2515	2.97e6	5.82e6	1590.5	2315.6	NO	bb	bb	99.809
13C-1234678-HpCDF	38.988	1.061	1.668e5	3.696e5	1.036	0.451	0.440	1614	1730	2.66e6	5.95e6	1644.8	3437.7	NO	bb	bb	89.542
13C-1234789-HpCDF	41.261	1.123	1.411e5	3.174e5	0.905	0.444	0.440	1614	1730	1.95e6	4.33e6	1205.6	2502.3	NO	bb	bb	87.628
13C-1234-TCDD	25.831	0.000	3.328e5	4.322e5	1.000	0.770	0.770	1644	1032	5.16e6	6.69e6	3135.7	6482.1	NO	bb	bb	100.000
13C-2378-TCDD	26.636	1.031	3.853e5	5.018e5	1.103	0.768	0.770	1644	1032	5.88e6	7.69e6	3574.0	7447.9	NO	bb	bb	105.144
13C-12378-PeCDD	31.769	1.230	2.837e5	1.770e5	0.914	1.603	1.550	1514	932	4.04e6	2.55e6	2670.3	2739.8	NO	bb	bb	65.891
13C-123478-HxCDD	36.248	0.986	3.196e5	2.566e5	0.933	1.246	1.240	1608	1229	5.43e6	4.35e6	3377.8	3543.3	NO	bd	bd	106.810
13C-123678-HxCDD	36.370	0.990	3.441e5	2.809e5	0.965	1.225	1.240	1608	1229	5.07e6	4.24e6	3152.1	3450.2	NO	db	db	112.060
13C-1234678-HpCDD	40.504	1.102	2.065e5	1.882e5	0.782	1.097	1.050	1430	1443	3.15e6	2.89e6	2200.7	2002.0	NO	bb	bb	87.279
13C-OCDD	45.317	1.233	3.283e5	3.645e5	0.788	0.901	0.890	2394	2622	3.89e6	4.26e6	1625.5	1626.4	NO	bb	bb	152.022
13C-123789-HxCDD	36.749	0.000	3.207e5	2.576e5	1.000	1.245	1.240	1608	1229	5.42e6	4.20e6	3370.8	3421.9	NO	bb	bb	100.000
37CL-2378-TCDD	26.664	1.032	3.126e5		1.233			810		4.78e6		5901.5			bb		33.126

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:13:34 Pacific Standard Time

ID: 23A0133-10, Name: 23022314, Date: 23-Feb-2023, Time: 20:56:42, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.497	0.865	3.370e3	3.828e3	1.064	0.880	0.770	1139	1056	4.97e4	5.94e4	43.6	56.3	NO	bb	bb	0.608
1289-TCDF	27.469	1.056	1.804e3	1.666e3	0.858	1.083	0.770	1139	1056	1.49e4	1.99e4	13.1	18.8	YES	bb	bb	0.364
13468-PECDF					1.013		1.550	594	929								
12389-PECDF	32.504	1.077	8.208e2	6.607e2	0.844	1.242	1.550	1395	1000	1.37e4	1.12e4	9.8	11.2	YES	bb	bd	0.166
123468-HXCDF	33.485	0.953	8.796e3	7.495e3	1.197	1.174	1.240	1007	938	1.40e5	1.20e5	139.4	127.8	NO	bb	bb	2.181
1368-TCDD	23.768	0.892	6.071e3	7.585e3	1.084	0.800	0.770	995	616	9.57e4	1.18e5	96.3	191.4	NO	bd	bb	1.420
1289-TCDD	27.257	1.023	3.766e2	3.275e2	0.975	1.150	0.770	995	616	4.60e3	5.73e3	4.6	9.3	YES	bd	bb	0.081
12479-PECDD	29.095	0.916	9.659e3	5.572e3	1.837	1.733	1.550	1171	1285	1.11e5	6.92e4	95.0	53.8	NO	bb	bb	1.799
12389-PECDD	32.192	1.013	4.149e2	3.590e2	1.252	1.156	1.550	1171	1285	8.77e3	6.46e3	7.5	5.0	YES	bb	bb	0.134
124679-HXCDD	34.265	0.945	1.177e4	9.168e3	1.033	1.283	1.240	1393	2137	1.84e5	1.41e5	132.1	66.2	NO	bb	bb	3.518
1234679-HPCDD	39.457	0.974	4.142e4	4.175e4	1.286	0.992	1.050	1164	1648	6.52e5	6.59e5	559.7	400.0	NO	bb	bd	16.386
Total-tetrafurans			1.354e5		0.933			1139		2.04e6							29.764
Total-penta1			1.653e5					594		2.44e6							28.433
Total-pentafurans			1.460e5		0.866			1395		2.17e6							27.327
Total-hexafurans			1.138e5		1.208			1007		1.69e6							28.056
Total-heptafurans			1.006e5		1.185			1046		1.53e6							32.228
Total-Furans			6.987e5		1.067			1139		1.03e7							165.845
Total-tetradioxins			1.893e4		1.099			995		2.90e5							4.421
Total-pentadioxins			2.283e4		1.392			1171		3.25e5							5.345
Total-hexadioxins			3.827e4		1.007			1393		5.69e5							11.658
Total-heptadioxins			7.776e4		1.269			1164		1.19e6							30.905
Total-Dioxins			3.063e5		1.165			995		4.12e6							137.709
Total-TEQ			1.005e6					995		1.44e7							303.554
FUNCTION1 PFK			6.750e6					481585		2.55e7							
FUNCTION2 PFK			1.205e7					293017		1.64e7							0.000
FUNCTION3 PFK			2.383e6					271496		6.35e6							0.000
FUNCTION4 PFK			1.239e6					283513		7.74e6							
FUNCTION5 PFK			1.987e5					149802		6.29e6							
FUNCTION1 HXCD...			1.035e4					468		1.75e5							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			1.293e3					863		2.10e4							0.000
FUNCTION3 OCDPE			2.170e2					566		4.07e3							0.000
FUNCTION4 NCDPE			3.191e3					606		5.55e4							0.000
FUNCTION5 DCDPE			0.000e0					565		0.00e0							

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.77	3.257e3	4.157e3	0.933	0.78	0.77	42.4	YES	NO	dd	dd	0.714
2	Total-tetrafurans	24.69	6.235e3	8.550e3	0.933	0.73	0.77	64.2	YES	NO	dd	dd	1.424
3	Total-tetrafurans	24.52	1.977e2	2.738e2	0.933	0.72	0.77	3.1	YES	NO	bd	bd	0.045
4	Total-tetrafurans	24.25	2.997e3	4.073e3	0.933	0.74	0.77	44.3	YES	NO	db	bb	0.681
5	Total-tetrafurans	24.12	1.691e3	1.980e3	0.933	0.85	0.77	23.7	YES	NO	dd	db	0.354
6	Total-tetrafurans	24.01	1.906e4	2.522e4	0.933	0.76	0.77	256.1	YES	NO	dd	dd	4.266
7	Total-tetrafurans	23.84	2.138e3	2.582e3	0.933	0.83	0.77	27.6	YES	NO	dd	dd	0.455
8	Total-tetrafurans	23.75	1.070e4	1.357e4	0.933	0.79	0.77	154.1	YES	NO	dd	dd	2.338
9	Total-tetrafurans	23.66	3.988e3	5.407e3	0.933	0.74	0.77	47.1	YES	NO	dd	dd	0.905
10	Total-tetrafurans	23.34	2.963e4	3.890e4	0.933	0.76	0.77	405.6	YES	NO	bd	bd	6.603
11	Total-tetrafurans	22.77	6.212e3	7.847e3	0.933	0.79	0.77	88.4	YES	NO	bb	bb	1.355
12	1368-TCDF	22.50	3.370e3	3.828e3	1.064	0.88	0.77	43.6	YES	NO	bb	bb	0.608
13	Total-tetrafurans	27.06	7.162e2	9.611e2	0.933	0.75	0.77	10.1	YES	NO	bb	bb	0.162
14	Total-tetrafurans	26.40	2.765e3	3.293e3	0.933	0.84	0.77	37.7	YES	NO	dd	db	0.584
15	Total-tetrafurans	26.25	4.440e3	5.551e3	0.933	0.80	0.77	51.3	YES	NO	dd	dd	0.963
16	2378-TCDF	26.03	6.146e3	7.502e3	0.876	0.82	0.77	82.8	YES	NO	dd	bd	1.400
17	Total-tetrafurans	25.83	2.640e3	3.029e3	0.933	0.87	0.77	36.6	YES	NO	dd	db	0.546
18	Total-tetrafurans	25.79	1.472e3	1.817e3	0.933	0.81	0.77	27.3	YES	NO	dd	bd	0.317
19	Total-tetrafurans	25.52	2.190e3	2.664e3	0.933	0.82	0.77	27.5	YES	NO	dd	db	0.468
20	Total-tetrafurans	25.34	3.120e3	4.090e3	0.933	0.76	0.77	32.4	YES	NO	bd	bd	0.695
21	Total-tetrafurans	25.11	5.430e3	6.796e3	0.933	0.80	0.77	67.7	YES	NO	db	db	1.178
22	Total-tetrafurans	24.91	1.703e4	2.141e4	0.933	0.80	0.77	216.9	YES	NO	dd	dd	3.703

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-penta1	27.46	1.653e5	1.107e5		1.49	1.55	4104.1	YES	NO	bb	bb	28.433

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PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	31.27	4.305e3	2.426e3	0.866	1.77	1.55	44.9	YES	NO	bd	bd	0.772
2	Total-pentafurans	31.01	8.112e2	4.941e2	0.866	1.64	1.55	8.6	YES	NO	bb	bb	0.150
3	Total-pentafurans	30.39	8.963e3	5.510e3	0.866	1.63	1.55	90.5	YES	NO	bd	dd	1.660
4	12378-PeCDF	30.19	3.376e3	2.171e3	0.845	1.55	1.55	38.5	YES	NO	bb	bd	0.621
5	Total-pentafurans	29.82	2.075e4	1.312e4	0.866	1.58	1.55	203.2	YES	NO	db	db	3.885
6	Total-pentafurans	29.12	5.160e4	3.286e4	0.866	1.57	1.55	547.0	YES	NO	dd	dd	9.687
7	Total-pentafurans	29.05	2.042e4	1.236e4	0.866	1.65	1.55	261.7	YES	NO	dd	dd	3.760
8	Total-pentafurans	28.93	1.008e4	7.401e3	0.866	1.36	1.55	91.8	YES	NO	dd	dd	2.005
9	Total-pentafurans	28.69	3.414e2	2.304e2	0.866	1.48	1.55	5.1	YES	NO	bd	bd	0.066
10	23478-PeCDF	31.52	7.881e3	4.853e3	0.911	1.62	1.55	79.5	YES	NO	dd	db	1.465
11	Total-pentafurans	31.38	1.745e4	1.094e4	0.866	1.60	1.55	186.1	YES	NO	dd	dd	3.256

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexafurans	33.70	4.363e4	3.457e4	1.208	1.26	1.24	622.4	YES	NO	bd	bb	10.693
2	123468-HXCDF	33.48	8.796e3	7.495e3	1.197	1.17	1.24	139.4	YES	NO	bb	bb	2.181
3	123789-HxCDF	37.14	1.235e3	1.084e3	1.187	1.14	1.24	19.8	YES	NO	bb	bb	0.365
4	234678-HxCDF	36.13	8.312e3	6.908e3	1.229	1.20	1.24	86.6	YES	NO	bb	bb	2.059
5	Total-hexafurans	35.61	6.515e2	5.996e2	1.208	1.09	1.24	11.9	YES	NO	bb	bb	0.171
6	123678-HxCDF	35.29	4.440e3	4.079e3	1.248	1.09	1.24	69.9	YES	NO	db	db	1.035
7	123478-HxCDF	35.14	4.787e3	4.021e3	1.182	1.19	1.24	76.2	YES	NO	dd	dd	1.195
8	Total-hexafurans	34.99	2.026e3	1.675e3	1.208	1.21	1.24	32.2	YES	NO	bd	bd	0.506
9	Total-hexafurans	34.53	3.843e4	3.088e4	1.208	1.24	1.24	594.7	YES	NO	bb	bb	9.478
10	Total-hexafurans	34.22	1.537e3	1.202e3	1.208	1.28	1.24	23.4	YES	NO	bb	bb	0.375

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-heptafurans	39.67	5.331e4	5.091e4	1.185	1.05	1.05	766.3	YES	NO	bb	bb	17.684
2	1234678-HpCDF	39.01	4.729e4	4.666e4	1.204	1.01	1.05	696.4	YES	NO	bb	bd	14.545

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.77	3.257e3	4.157e3	0.933	0.78	0.77	42.4	YES	NO	dd	dd	0.714
2	Total-tetrafurans	24.69	6.235e3	8.550e3	0.933	0.73	0.77	64.2	YES	NO	dd	dd	1.424
3	Total-tetrafurans	24.52	1.977e2	2.738e2	0.933	0.72	0.77	3.1	YES	NO	bd	bd	0.045
4	Total-tetrafurans	24.25	2.997e3	4.073e3	0.933	0.74	0.77	44.3	YES	NO	db	bb	0.681
5	Total-tetrafurans	24.12	1.691e3	1.980e3	0.933	0.85	0.77	23.7	YES	NO	dd	db	0.354
6	Total-tetrafurans	24.01	1.906e4	2.522e4	0.933	0.76	0.77	256.1	YES	NO	dd	dd	4.266
7	Total-tetrafurans	23.84	2.138e3	2.582e3	0.933	0.83	0.77	27.6	YES	NO	dd	dd	0.455
8	Total-tetrafurans	23.75	1.070e4	1.357e4	0.933	0.79	0.77	154.1	YES	NO	dd	dd	2.338
9	Total-tetrafurans	23.66	3.988e3	5.407e3	0.933	0.74	0.77	47.1	YES	NO	dd	dd	0.905
10	Total-tetrafurans	23.34	2.963e4	3.890e4	0.933	0.76	0.77	405.6	YES	NO	bd	bd	6.603
11	Total-tetrafurans	22.77	6.212e3	7.847e3	0.933	0.79	0.77	88.4	YES	NO	bb	bb	1.355
12	1368-TCDF	22.50	3.370e3	3.828e3	1.064	0.88	0.77	43.6	YES	NO	bb	bb	0.608
13	Total-tetrafurans	27.06	7.162e2	9.611e2	0.933	0.75	0.77	10.1	YES	NO	bb	bb	0.162
14	Total-tetrafurans	26.40	2.765e3	3.293e3	0.933	0.84	0.77	37.7	YES	NO	dd	db	0.584
15	Total-tetrafurans	26.25	4.440e3	5.551e3	0.933	0.80	0.77	51.3	YES	NO	dd	dd	0.963
16	2378-TCDF	26.03	6.146e3	7.502e3	0.876	0.82	0.77	82.8	YES	NO	dd	bd	1.400
17	Total-tetrafurans	25.83	2.640e3	3.029e3	0.933	0.87	0.77	36.6	YES	NO	dd	db	0.546
18	Total-tetrafurans	25.79	1.472e3	1.817e3	0.933	0.81	0.77	27.3	YES	NO	dd	bd	0.317
19	Total-tetrafurans	25.52	2.190e3	2.664e3	0.933	0.82	0.77	27.5	YES	NO	dd	db	0.468
20	Total-tetrafurans	25.34	3.120e3	4.090e3	0.933	0.76	0.77	32.4	YES	NO	bd	bd	0.695
21	Total-tetrafurans	25.11	5.430e3	6.796e3	0.933	0.80	0.77	67.7	YES	NO	db	db	1.178
22	Total-tetrafurans	24.91	1.703e4	2.141e4	0.933	0.80	0.77	216.9	YES	NO	dd	dd	3.703
23	Total-pentafurans	31.27	4.305e3	2.426e3	0.866	1.77	1.55	44.9	YES	NO	bd	bd	0.772
24	Total-pentafurans	31.01	8.112e2	4.941e2	0.866	1.64	1.55	8.6	YES	NO	bb	bb	0.150
25	Total-pentafurans	30.39	8.963e3	5.510e3	0.866	1.63	1.55	90.5	YES	NO	bd	dd	1.660
26	12378-PeCDF	30.19	3.376e3	2.171e3	0.845	1.55	1.55	38.5	YES	NO	bb	bd	0.621
27	Total-pentafurans	29.82	2.075e4	1.312e4	0.866	1.58	1.55	203.2	YES	NO	db	db	3.885
28	Total-pentafurans	29.12	5.160e4	3.286e4	0.866	1.57	1.55	547.0	YES	NO	dd	dd	9.687
29	Total-pentafurans	29.05	2.042e4	1.236e4	0.866	1.65	1.55	261.7	YES	NO	dd	dd	3.760
30	Total-pentafurans	28.93	1.008e4	7.401e3	0.866	1.36	1.55	91.8	YES	NO	dd	dd	2.005
31	Total-pentafurans	28.69	3.414e2	2.304e2	0.866	1.48	1.55	5.1	YES	NO	bd	bd	0.066
32	23478-PeCDF	31.52	7.881e3	4.853e3	0.911	1.62	1.55	79.5	YES	NO	dd	db	1.465
33	Total-pentafurans	31.38	1.745e4	1.094e4	0.866	1.60	1.55	186.1	YES	NO	dd	dd	3.256
34	Total-hexafurans	33.70	4.363e4	3.457e4	1.208	1.26	1.24	622.4	YES	NO	bd	bb	10.693
35	123468-HXCDF	33.48	8.796e3	7.495e3	1.197	1.17	1.24	139.4	YES	NO	bb	bb	2.181
36	123789-HxCDF	37.14	1.235e3	1.084e3	1.187	1.14	1.24	19.8	YES	NO	bb	bb	0.365
37	234678-HxCDF	36.13	8.312e3	6.908e3	1.229	1.20	1.24	86.6	YES	NO	bb	bb	2.059

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	Total-hexafurans	35.61	6.515e2	5.996e2	1.208	1.09	1.24	11.9	YES	NO	bb	bb	0.171
39	123678-HxCDF	35.29	4.440e3	4.079e3	1.248	1.09	1.24	69.9	YES	NO	db	db	1.035
40	123478-HxCDF	35.14	4.787e3	4.021e3	1.182	1.19	1.24	76.2	YES	NO	dd	dd	1.195
41	Total-hexafurans	34.99	2.026e3	1.675e3	1.208	1.21	1.24	32.2	YES	NO	bd	bd	0.506
42	Total-hexafurans	34.53	3.843e4	3.088e4	1.208	1.24	1.24	594.7	YES	NO	bb	bb	9.478
43	Total-hexafurans	34.22	1.537e3	1.202e3	1.208	1.28	1.24	23.4	YES	NO	bb	bb	0.375
44	Total-heptafurans	39.67	5.331e4	5.091e4	1.185	1.05	1.05	766.3	YES	NO	bb	bb	17.684
45	1234678-HpCDF	39.01	4.729e4	4.666e4	1.204	1.01	1.05	696.4	YES	NO	bb	bd	14.545
46	OCDF	45.57	3.764e4	4.471e4	1.186	0.84	0.89	521.8	YES	NO	bd	bd	20.036
47	Total-penta1	27.46	1.653e5	1.107e5		1.49	1.55	4104.1	YES	NO	bb	bb	28.433

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	26.79	9.693e2	1.120e3	1.099	0.87	0.77	15.5	YES	NO	db	db	0.214
2	Total-tetradioxins	26.27	1.957e3	2.232e3	1.099	0.88	0.77	21.8	YES	NO	bb	db	0.430
3	Total-tetradioxins	25.84	1.032e3	1.421e3	1.099	0.73	0.77	17.2	YES	NO	bd	bd	0.252
4	Total-tetradioxins	25.63	8.344e2	1.088e3	1.099	0.77	0.77	11.1	YES	NO	db	db	0.197
5	Total-tetradioxins	25.27	2.518e3	3.109e3	1.099	0.81	0.77	40.1	YES	NO	bb	bb	0.577
6	Total-tetradioxins	24.77	9.509e2	1.368e3	1.099	0.69	0.77	16.2	YES	NO	bd	bb	0.238
7	Total-tetradioxins	24.25	7.097e2	8.325e2	1.099	0.85	0.77	10.9	YES	NO	db	bb	0.158
8	Total-tetradioxins	24.05	3.885e3	5.229e3	1.099	0.74	0.77	62.1	YES	NO	dd	bd	0.935
9	1368-TCDD	23.77	6.071e3	7.585e3	1.084	0.80	0.77	96.3	YES	NO	bd	bb	1.420

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.78	2.045e3	1.429e3	1.087	1.43	1.55	28.9	YES	NO	bb	bb	0.694
2	Total-pentadioxins	30.54	3.497e3	2.032e3	1.392	1.72	1.55	40.9	YES	NO	bd	bd	0.862
3	Total-pentadioxins	30.40	2.028e3	1.241e3	1.392	1.63	1.55	27.9	YES	NO	bb	bb	0.510
4	Total-pentadioxins	30.18	5.602e3	3.897e3	1.392	1.44	1.55	85.3	YES	NO	bb	bb	1.481
5	12479-PECDD	29.09	9.659e3	5.572e3	1.837	1.73	1.55	95.0	YES	NO	bb	bb	1.799

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.76	1.953e3	1.795e3	0.985	1.09	1.24	22.1	YES	NO	bb	bb	0.633
2	Total-hexadioxins	36.54	6.630e2	5.193e2	1.007	1.28	1.24	8.1	YES	NO	db	db	0.196
3	123678-HxCDD	36.38	3.873e3	3.202e3	1.021	1.21	1.24	44.2	YES	NO	dd	dd	1.109
4	123478-HxCDD	36.27	1.178e3	9.653e2	0.987	1.22	1.24	14.2	YES	NO	bd	bd	0.377
5	Total-hexadioxins	35.39	1.188e4	1.094e4	1.007	1.09	1.24	109.6	YES	NO	bb	bb	3.775
6	Total-hexadioxins	35.02	6.959e3	5.435e3	1.007	1.28	1.24	78.4	YES	NO	bb	bb	2.050
7	124679-HXCDD	34.26	1.177e4	9.168e3	1.033	1.28	1.24	132.1	YES	NO	bb	bb	3.518

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.53	3.634e4	3.543e4	1.253	1.03	1.05	459.1	YES	NO	bb	bd	14.519
2	1234679-HPCDD	39.46	4.142e4	4.175e4	1.286	0.99	1.05	559.7	YES	NO	bb	bd	16.386

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	26.79	9.693e2	1.120e3	1.099	0.87	0.77	15.5	YES	NO	db	db	0.214
2	Total-tetradioxins	26.27	1.957e3	2.232e3	1.099	0.88	0.77	21.8	YES	NO	bb	db	0.430
3	Total-tetradioxins	25.84	1.032e3	1.421e3	1.099	0.73	0.77	17.2	YES	NO	bd	bd	0.252
4	Total-tetradioxins	25.63	8.344e2	1.088e3	1.099	0.77	0.77	11.1	YES	NO	db	db	0.197
5	Total-tetradioxins	25.27	2.518e3	3.109e3	1.099	0.81	0.77	40.1	YES	NO	bb	bb	0.577
6	Total-tetradioxins	24.77	9.509e2	1.368e3	1.099	0.69	0.77	16.2	YES	NO	bd	bb	0.238
7	Total-tetradioxins	24.25	7.097e2	8.325e2	1.099	0.85	0.77	10.9	YES	NO	db	bb	0.158
8	Total-tetradioxins	24.05	3.885e3	5.229e3	1.099	0.74	0.77	62.1	YES	NO	dd	bd	0.935
9	1368-TCDD	23.77	6.071e3	7.585e3	1.084	0.80	0.77	96.3	YES	NO	bd	bb	1.420
10	12378-PeCDD	31.78	2.045e3	1.429e3	1.087	1.43	1.55	28.9	YES	NO	bb	bb	0.694
11	Total-pentadioxins	30.54	3.497e3	2.032e3	1.392	1.72	1.55	40.9	YES	NO	bd	bd	0.862
12	Total-pentadioxins	30.40	2.028e3	1.241e3	1.392	1.63	1.55	27.9	YES	NO	bb	bb	0.510
13	Total-pentadioxins	30.18	5.602e3	3.897e3	1.392	1.44	1.55	85.3	YES	NO	bb	bb	1.481
14	12479-PECDD	29.09	9.659e3	5.572e3	1.837	1.73	1.55	95.0	YES	NO	bb	bb	1.799
15	123789-HxCDD	36.76	1.953e3	1.795e3	0.985	1.09	1.24	22.1	YES	NO	bb	bb	0.633
16	Total-hexadioxins	36.54	6.630e2	5.193e2	1.007	1.28	1.24	8.1	YES	NO	db	db	0.196
17	123678-HxCDD	36.38	3.873e3	3.202e3	1.021	1.21	1.24	44.2	YES	NO	dd	dd	1.109
18	123478-HxCDD	36.27	1.178e3	9.653e2	0.987	1.22	1.24	14.2	YES	NO	bd	bd	0.377
19	Total-hexadioxins	35.39	1.188e4	1.094e4	1.007	1.09	1.24	109.6	YES	NO	bb	bb	3.775
20	Total-hexadioxins	35.02	6.959e3	5.435e3	1.007	1.28	1.24	78.4	YES	NO	bb	bb	2.050
21	124679-HXCDD	34.26	1.177e4	9.168e3	1.033	1.28	1.24	132.1	YES	NO	bb	bb	3.518
22	1234678-HpCDD	40.53	3.634e4	3.543e4	1.253	1.03	1.05	459.1	YES	NO	bb	bd	14.519
23	1234679-HPCDD	39.46	4.142e4	4.175e4	1.286	0.99	1.05	559.7	YES	NO	bb	bd	16.386
24	OCDD	45.33	1.485e5	1.776e5	1.103	0.84	0.89	1415.1	YES	NO	bb	bd	85.379

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.77	3.257e3	4.157e3	0.933	0.78	0.77	42.4	YES	NO	dd	dd	0.714
2	Total-tetrafurans	24.69	6.235e3	8.550e3	0.933	0.73	0.77	64.2	YES	NO	dd	dd	1.424
3	Total-tetrafurans	24.52	1.977e2	2.738e2	0.933	0.72	0.77	3.1	YES	NO	bd	bd	0.045
4	Total-tetrafurans	24.25	2.997e3	4.073e3	0.933	0.74	0.77	44.3	YES	NO	db	bb	0.681
5	Total-tetrafurans	24.12	1.691e3	1.980e3	0.933	0.85	0.77	23.7	YES	NO	dd	db	0.354
6	Total-tetrafurans	24.01	1.906e4	2.522e4	0.933	0.76	0.77	256.1	YES	NO	dd	dd	4.266
7	Total-tetrafurans	23.84	2.138e3	2.582e3	0.933	0.83	0.77	27.6	YES	NO	dd	dd	0.455
8	Total-tetrafurans	23.75	1.070e4	1.357e4	0.933	0.79	0.77	154.1	YES	NO	dd	dd	2.338
9	Total-tetrafurans	23.66	3.988e3	5.407e3	0.933	0.74	0.77	47.1	YES	NO	dd	dd	0.905
10	Total-tetrafurans	23.34	2.963e4	3.890e4	0.933	0.76	0.77	405.6	YES	NO	bd	bd	6.603
11	Total-tetrafurans	22.77	6.212e3	7.847e3	0.933	0.79	0.77	88.4	YES	NO	bb	bb	1.355
12	1368-TCDF	22.50	3.370e3	3.828e3	1.064	0.88	0.77	43.6	YES	NO	bb	bb	0.608
13	Total-tetrafurans	27.06	7.162e2	9.611e2	0.933	0.75	0.77	10.1	YES	NO	bb	bb	0.162
14	Total-tetrafurans	26.40	2.765e3	3.293e3	0.933	0.84	0.77	37.7	YES	NO	dd	db	0.584
15	Total-tetrafurans	26.25	4.440e3	5.551e3	0.933	0.80	0.77	51.3	YES	NO	dd	dd	0.963
16	2378-TCDF	26.03	6.146e3	7.502e3	0.876	0.82	0.77	82.8	YES	NO	dd	bd	1.400
17	Total-tetrafurans	25.83	2.640e3	3.029e3	0.933	0.87	0.77	36.6	YES	NO	dd	db	0.546
18	Total-tetrafurans	25.79	1.472e3	1.817e3	0.933	0.81	0.77	27.3	YES	NO	dd	bd	0.317
19	Total-tetrafurans	25.52	2.190e3	2.664e3	0.933	0.82	0.77	27.5	YES	NO	dd	db	0.468
20	Total-tetrafurans	25.34	3.120e3	4.090e3	0.933	0.76	0.77	32.4	YES	NO	bd	bd	0.695
21	Total-tetrafurans	25.11	5.430e3	6.796e3	0.933	0.80	0.77	67.7	YES	NO	db	db	1.178
22	Total-tetrafurans	24.91	1.703e4	2.141e4	0.933	0.80	0.77	216.9	YES	NO	dd	dd	3.703
23	Total-pentafurans	31.27	4.305e3	2.426e3	0.866	1.77	1.55	44.9	YES	NO	bd	bd	0.772
24	Total-pentafurans	31.01	8.112e2	4.941e2	0.866	1.64	1.55	8.6	YES	NO	bb	bb	0.150
25	Total-pentafurans	30.39	8.963e3	5.510e3	0.866	1.63	1.55	90.5	YES	NO	bd	dd	1.660
26	12378-PeCDF	30.19	3.376e3	2.171e3	0.845	1.55	1.55	38.5	YES	NO	bb	bd	0.621
27	Total-pentafurans	29.82	2.075e4	1.312e4	0.866	1.58	1.55	203.2	YES	NO	db	db	3.885
28	Total-pentafurans	29.12	5.160e4	3.286e4	0.866	1.57	1.55	547.0	YES	NO	dd	dd	9.687
29	Total-pentafurans	29.05	2.042e4	1.236e4	0.866	1.65	1.55	261.7	YES	NO	dd	dd	3.760
30	Total-pentafurans	28.93	1.008e4	7.401e3	0.866	1.36	1.55	91.8	YES	NO	dd	dd	2.005
31	Total-pentafurans	28.69	3.414e2	2.304e2	0.866	1.48	1.55	5.1	YES	NO	bd	bd	0.066
32	23478-PeCDF	31.52	7.881e3	4.853e3	0.911	1.62	1.55	79.5	YES	NO	dd	db	1.465
33	Total-pentafurans	31.38	1.745e4	1.094e4	0.866	1.60	1.55	186.1	YES	NO	dd	dd	3.256
34	Total-hexafurans	33.70	4.363e4	3.457e4	1.208	1.26	1.24	622.4	YES	NO	bd	bb	10.693
35	123468-HXCDF	33.48	8.796e3	7.495e3	1.197	1.17	1.24	139.4	YES	NO	bb	bb	2.181
36	123789-HxCDF	37.14	1.235e3	1.084e3	1.187	1.14	1.24	19.8	YES	NO	bb	bb	0.365
37	234678-HxCDF	36.13	8.312e3	6.908e3	1.229	1.20	1.24	86.6	YES	NO	bb	bb	2.059

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	Total-hexafurans	35.61	6.515e2	5.996e2	1.208	1.09	1.24	11.9	YES	NO	bb	bb	0.171
39	123678-HxCDF	35.29	4.440e3	4.079e3	1.248	1.09	1.24	69.9	YES	NO	db	db	1.035
40	123478-HxCDF	35.14	4.787e3	4.021e3	1.182	1.19	1.24	76.2	YES	NO	dd	dd	1.195
41	Total-hexafurans	34.99	2.026e3	1.675e3	1.208	1.21	1.24	32.2	YES	NO	bd	bd	0.506
42	Total-hexafurans	34.53	3.843e4	3.088e4	1.208	1.24	1.24	594.7	YES	NO	bb	bb	9.478
43	Total-hexafurans	34.22	1.537e3	1.202e3	1.208	1.28	1.24	23.4	YES	NO	bb	bb	0.375
44	Total-heptafurans	39.67	5.331e4	5.091e4	1.185	1.05	1.05	766.3	YES	NO	bb	bb	17.684
45	1234678-HpCDF	39.01	4.729e4	4.666e4	1.204	1.01	1.05	696.4	YES	NO	bb	bd	14.545
46	OCDF	45.57	3.764e4	4.471e4	1.186	0.84	0.89	521.8	YES	NO	bd	bd	20.036
47	Total-penta1	27.46	1.653e5	1.107e5		1.49	1.55	4104.1	YES	NO	bb	bb	28.433
48	Total-tetradioxins	26.79	9.693e2	1.120e3	1.099	0.87	0.77	15.5	YES	NO	db	db	0.214
49	Total-tetradioxins	26.27	1.957e3	2.232e3	1.099	0.88	0.77	21.8	YES	NO	bb	db	0.430
50	Total-tetradioxins	25.84	1.032e3	1.421e3	1.099	0.73	0.77	17.2	YES	NO	bd	bd	0.252
51	Total-tetradioxins	25.63	8.344e2	1.088e3	1.099	0.77	0.77	11.1	YES	NO	db	db	0.197
52	Total-tetradioxins	25.27	2.518e3	3.109e3	1.099	0.81	0.77	40.1	YES	NO	bb	bb	0.577
53	Total-tetradioxins	24.77	9.509e2	1.368e3	1.099	0.69	0.77	16.2	YES	NO	bd	bb	0.238
54	Total-tetradioxins	24.25	7.097e2	8.325e2	1.099	0.85	0.77	10.9	YES	NO	db	bb	0.158
55	Total-tetradioxins	24.05	3.885e3	5.229e3	1.099	0.74	0.77	62.1	YES	NO	dd	bd	0.935
56	1368-TCDD	23.77	6.071e3	7.585e3	1.084	0.80	0.77	96.3	YES	NO	bd	bb	1.420
57	12378-PeCDD	31.78	2.045e3	1.429e3	1.087	1.43	1.55	28.9	YES	NO	bb	bb	0.694
58	Total-pentadioxins	30.54	3.497e3	2.032e3	1.392	1.72	1.55	40.9	YES	NO	bd	bd	0.862
59	Total-pentadioxins	30.40	2.028e3	1.241e3	1.392	1.63	1.55	27.9	YES	NO	bb	bb	0.510
60	Total-pentadioxins	30.18	5.602e3	3.897e3	1.392	1.44	1.55	85.3	YES	NO	bb	bb	1.481
61	12479-PECDD	29.09	9.659e3	5.572e3	1.837	1.73	1.55	95.0	YES	NO	bb	bb	1.799
62	123789-HxCDD	36.76	1.953e3	1.795e3	0.985	1.09	1.24	22.1	YES	NO	bb	bb	0.633
63	Total-hexadioxins	36.54	6.630e2	5.193e2	1.007	1.28	1.24	8.1	YES	NO	db	db	0.196
64	123678-HxCDD	36.38	3.873e3	3.202e3	1.021	1.21	1.24	44.2	YES	NO	dd	dd	1.109
65	123478-HxCDD	36.27	1.178e3	9.653e2	0.987	1.22	1.24	14.2	YES	NO	bd	bd	0.377
66	Total-hexadioxins	35.39	1.188e4	1.094e4	1.007	1.09	1.24	109.6	YES	NO	bb	bb	3.775
67	Total-hexadioxins	35.02	6.959e3	5.435e3	1.007	1.28	1.24	78.4	YES	NO	bb	bb	2.050
68	124679-HXCDD	34.26	1.177e4	9.168e3	1.033	1.28	1.24	132.1	YES	NO	bb	bb	3.518
69	1234678-HpCDD	40.53	3.634e4	3.543e4	1.253	1.03	1.05	459.1	YES	NO	bb	bd	14.519
70	1234679-HPCDD	39.46	4.142e4	4.175e4	1.286	0.99	1.05	559.7	YES	NO	bb	bd	16.386
71	OCDD	45.33	1.485e5	1.776e5	1.103	0.84	0.89	1415.1	YES	NO	bb	bd	85.379

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.68	4.124e5					6.3	YES		bb		
2	FUNCTION1 PFK	21.44	1.310e6					10.9	YES		bb		
3	FUNCTION1 PFK	21.14	6.096e4					3.1	YES		bb		
4	FUNCTION1 PFK	22.92	4.839e4					3.4	YES		db		
5	FUNCTION1 PFK	22.72	3.141e6					10.1	YES		bd		
6	FUNCTION1 PFK	22.21	1.778e6					19.0	YES		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	32.43	6.385e5					4.8	YES		bb		0.000
2	FUNCTION2 PFK	29.94	1.699e6					10.5	YES		bb		0.000
3	FUNCTION2 PFK	29.44	7.662e5					19.5	YES		db		0.000
4	FUNCTION2 PFK	29.30	8.951e6					21.0	YES		bd		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	37.33	6.269e5					6.2	YES		bb		0.000
2	FUNCTION3 PFK	36.99	1.756e6					17.2	YES		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.04	3.546e5					6.3	YES		bb		
2	FUNCTION4 PFK	39.80	3.392e5					10.1	YES		db		
3	FUNCTION4 PFK	39.66	5.252e5					9.0	YES		bd		
4	FUNCTION4 PFK	38.22	1.967e4					1.9	NO		bb		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	45.28	5.694e3					1.4	NO		bb		
2	FUNCTION5 PFK	44.69	2.195e3					0.8	NO		db		
3	FUNCTION5 PFK	44.61	1.403e4					2.0	NO		bd		
4	FUNCTION5 PFK	44.55	9.474e3					1.3	NO		db		
5	FUNCTION5 PFK	44.49	1.216e3					0.7	NO		bd		
6	FUNCTION5 PFK	44.37	8.270e3					1.6	NO		db		
7	FUNCTION5 PFK	44.34	8.551e3					1.6	NO		bd		
8	FUNCTION5 PFK	43.88	1.865e3					0.8	NO		bb		
9	FUNCTION5 PFK	43.69	9.274e3					1.8	NO		bb		
10	FUNCTION5 PFK	43.34	7.159e3					2.0	NO		db		
11	FUNCTION5 PFK	43.32	3.885e3					1.4	NO		bd		
12	FUNCTION5 PFK	43.20	2.269e4					3.3	YES		db		
13	FUNCTION5 PFK	43.18	7.117e3					2.4	NO		dd		
14	FUNCTION5 PFK	43.14	8.295e3					2.7	NO		bd		
15	FUNCTION5 PFK	43.08	8.564e3					2.0	NO		bb		
16	FUNCTION5 PFK	46.44	1.847e4					2.3	NO		bb		
17	FUNCTION5 PFK	46.37	6.749e3					1.6	NO		bb		
18	FUNCTION5 PFK	46.31	1.225e4					2.3	NO		bb		
19	FUNCTION5 PFK	46.21	4.250e3					1.0	NO		bb		
20	FUNCTION5 PFK	46.12	4.420e3					1.1	NO		bb		
21	FUNCTION5 PFK	45.95	7.887e2					0.6	NO		bb		
22	FUNCTION5 PFK	45.91	2.730e3					1.0	NO		bb		
23	FUNCTION5 PFK	45.75	6.835e3					1.8	NO		bb		
24	FUNCTION5 PFK	45.65	5.210e3					1.5	NO		bb		
25	FUNCTION5 PFK	45.46	6.908e3					1.3	NO		db		
26	FUNCTION5 PFK	45.41	1.180e4					1.7	NO		bd		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	24.01	2.402e3					84.9	YES		bb		0.000
2	FUNCTION1 HXCD...	22.99	6.599e2					25.9	YES		bb		0.000
3	FUNCTION1 HXCD...	21.85	9.093e1					5.0	YES		bb		0.000
4	FUNCTION1 HXCD...	21.45	8.911e1					2.5	NO		bb		0.000
5	FUNCTION1 HXCD...	27.92	2.684e2					9.1	YES		bb		0.000
6	FUNCTION1 HXCD...	27.05	6.408e2					25.4	YES		bb		0.000
7	FUNCTION1 HXCD...	26.40	3.006e3					106.2	YES		bb		0.000
8	FUNCTION1 HXCD...	26.17	4.443e2					18.4	YES		db		0.000
9	FUNCTION1 HXCD...	26.03	1.505e3					58.4	YES		dd		0.000
10	FUNCTION1 HXCD...	25.84	2.123e2					3.7	YES		bd		0.000
11	FUNCTION1 HXCD...	25.38	7.070e2					22.8	YES		bb		0.000
12	FUNCTION1 HXCD...	25.07	1.438e2					3.7	YES		bb		0.000
13	FUNCTION1 HXCD...	24.93	8.780e1					4.3	YES		db		0.000
14	FUNCTION1 HXCD...	24.83	8.752e1					3.1	YES		bd		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.49	2.974e2					4.2	YES		bb		0.000
2	FUNCTION2 HPCD...	29.23	9.952e2					20.1	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	33.40	2.170e2					7.2	YES		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.65	3.191e3					91.6	YES		bb		0.000

ID: 23A0133-10, Name: 23022314, Date: 23-Feb-2023, Time: 20:56:42, Conditions: AUTOSPEC01, User: pk

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:13:34 Pacific Standard Time

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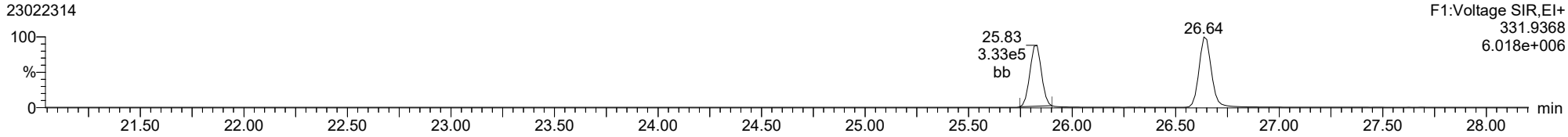
ID: 23A0133-10, Name: 23022314, Date: 23-Feb-2023, Time: 20:56:42, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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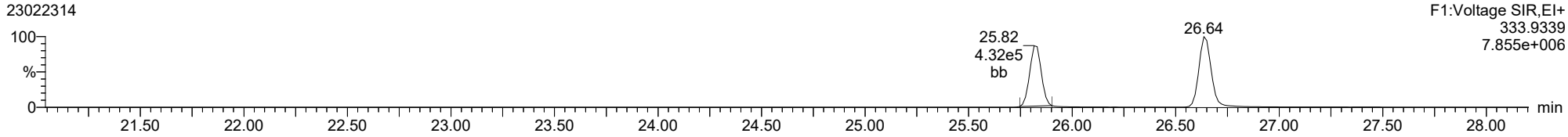
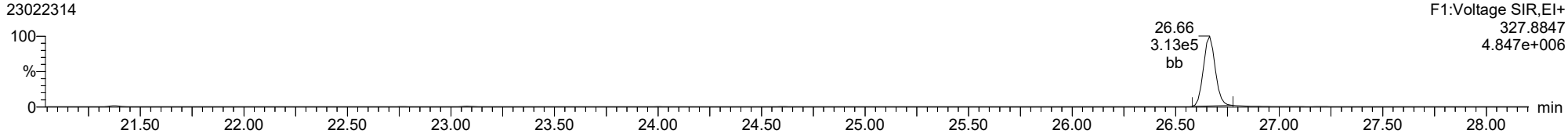


37CL-2378-TCDD



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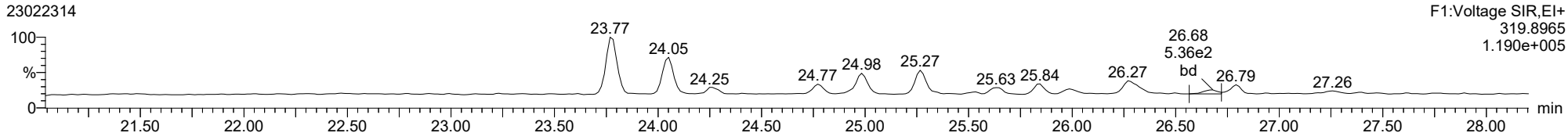
2378-TCDD



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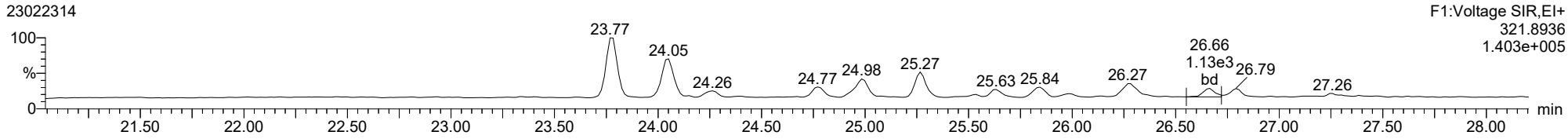

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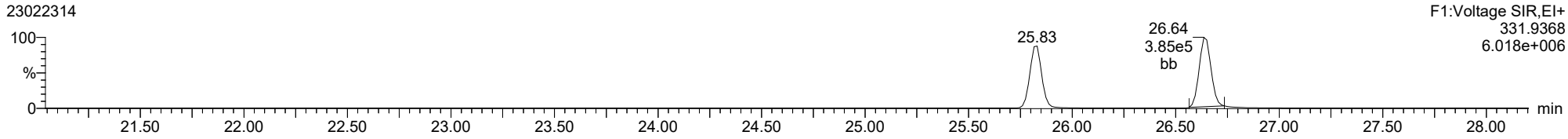

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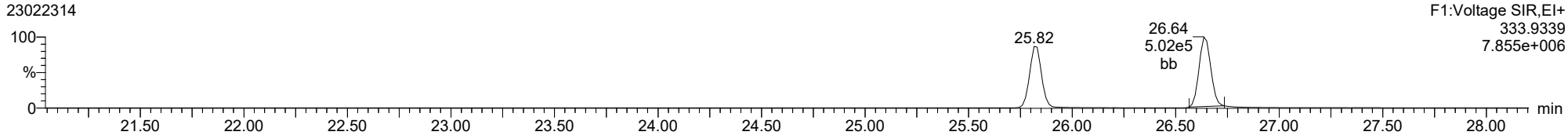

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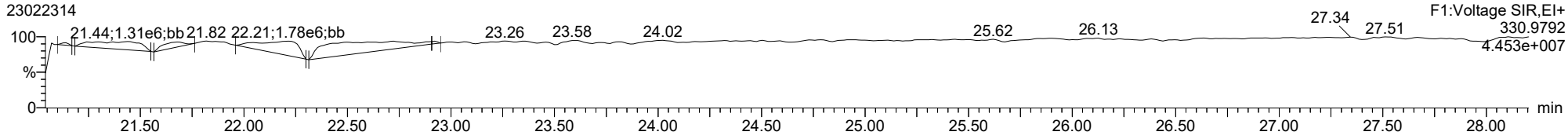
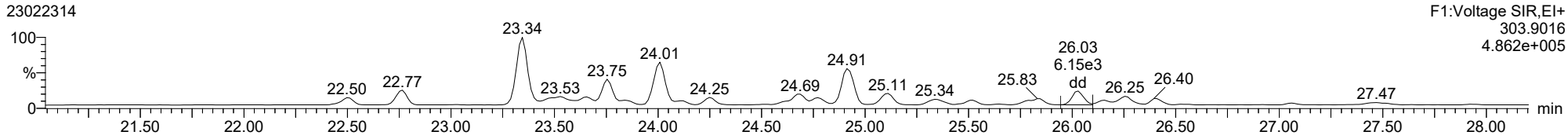


ID: 23A0133-10, Name: 23022314, Date: 23-Feb-2023, Time: 20:56:42, Conditions: AUTOSPEC01, User: pk

2378-TCDF



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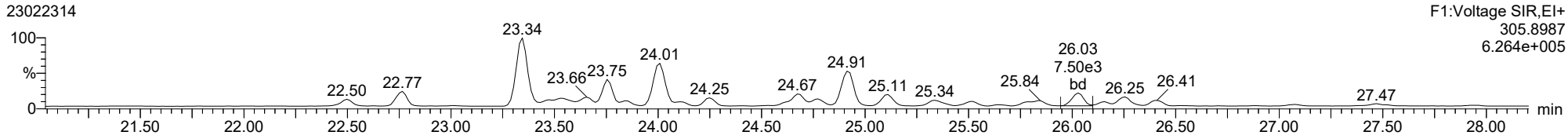

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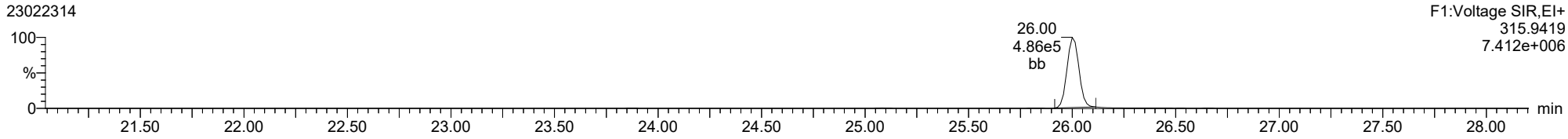

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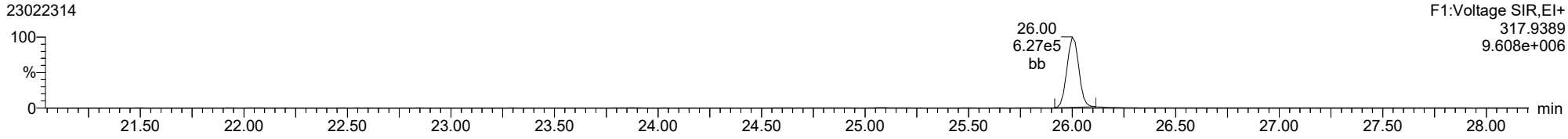
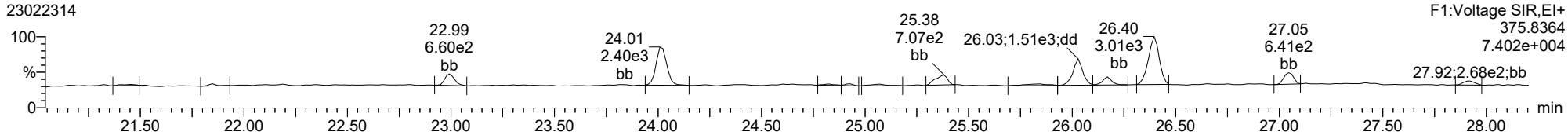
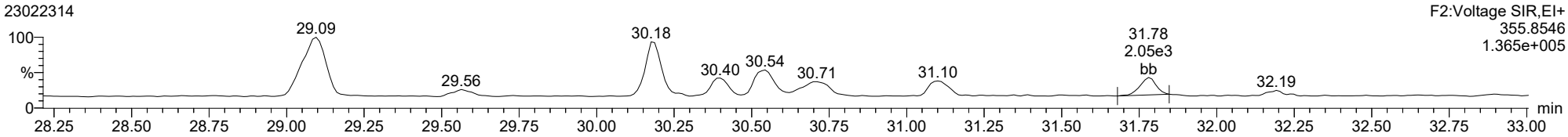


FUNCTION1 HXCDPE



ID: 23A0133-10, Name: 23022314, Date: 23-Feb-2023, Time: 20:56:42, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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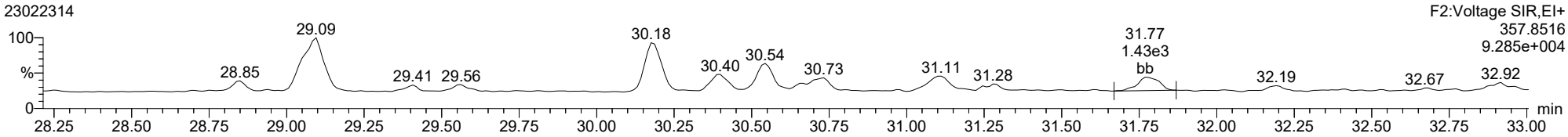

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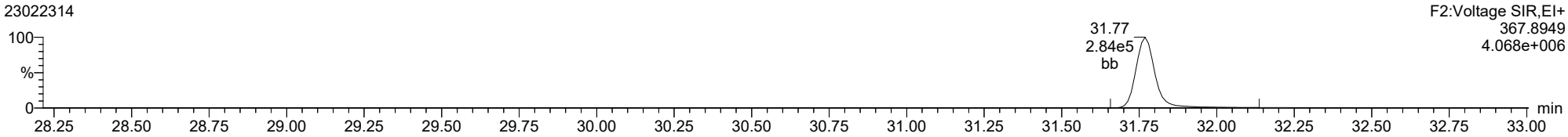

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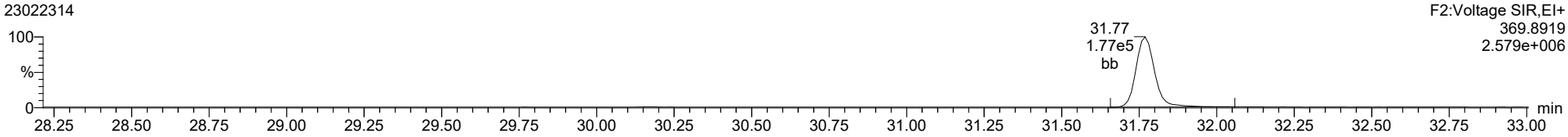
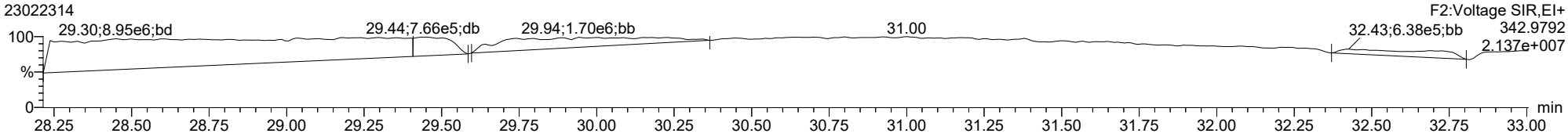


FUNCTION2 PFK



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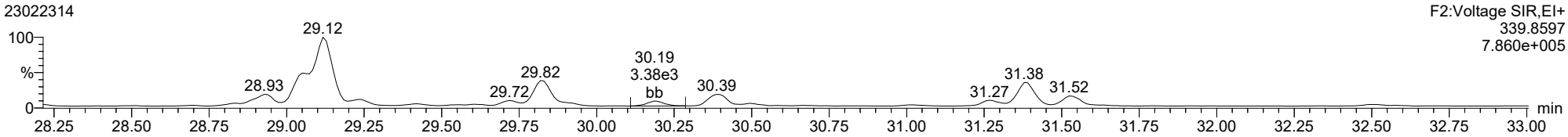

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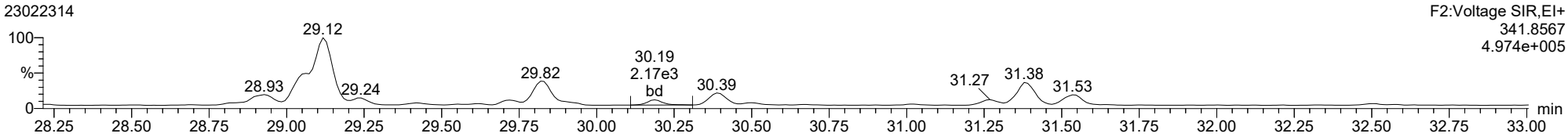

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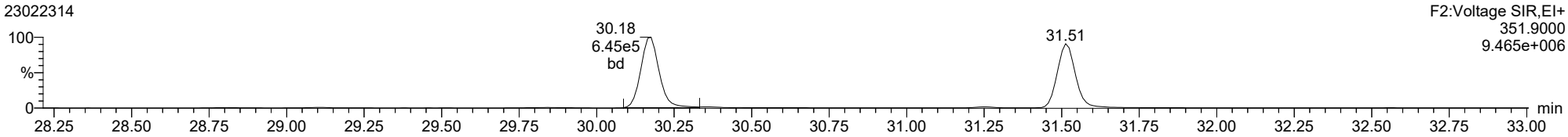

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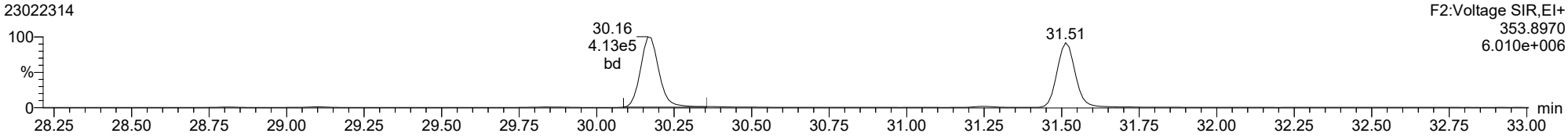
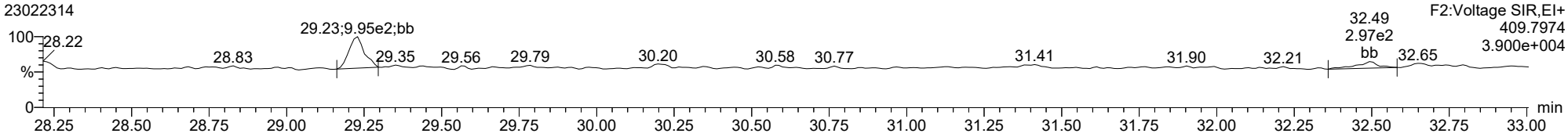


FUNCTION2 HPCDPE



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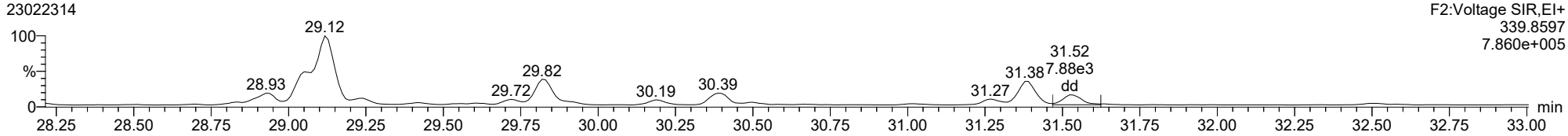
23478-PeCDF



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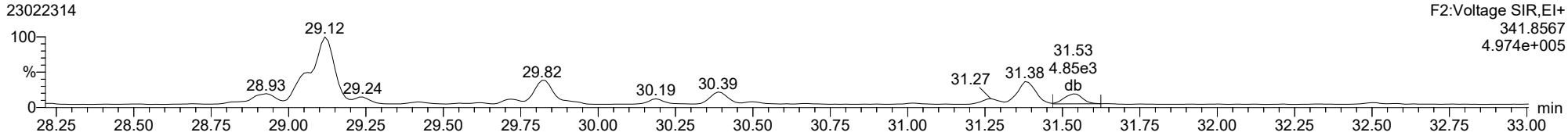

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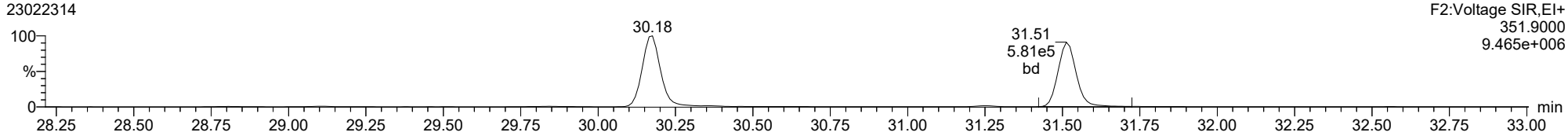

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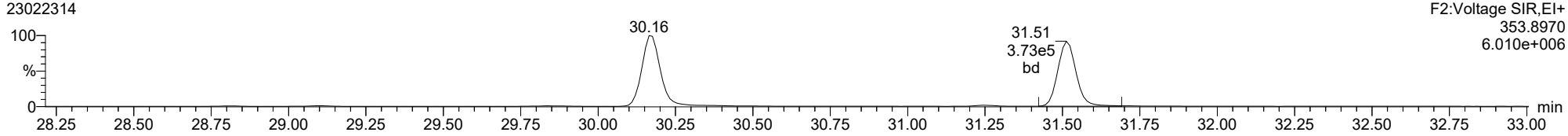

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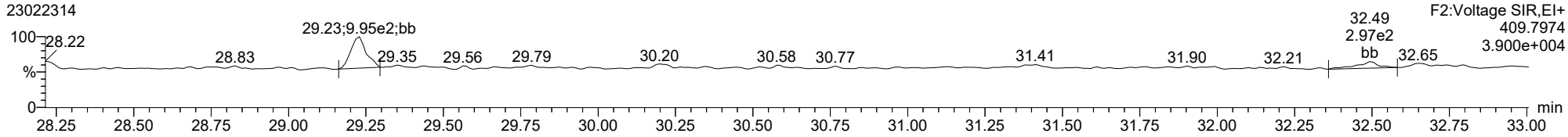

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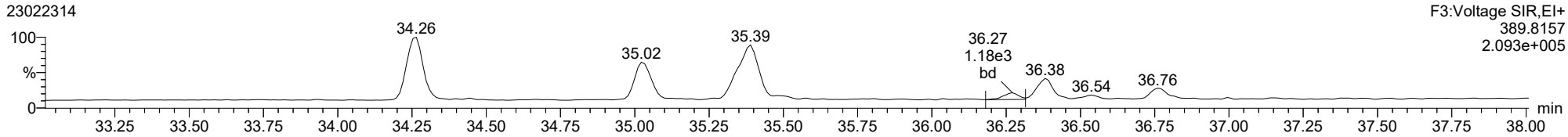
123478-HxCDD



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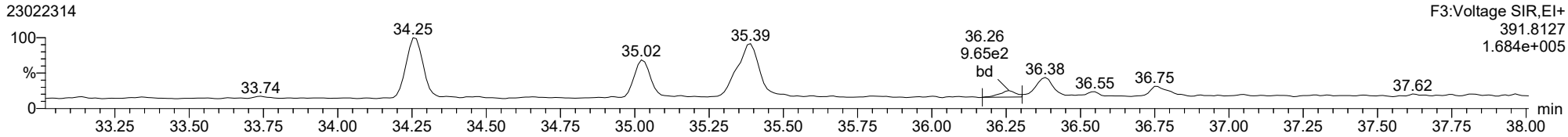

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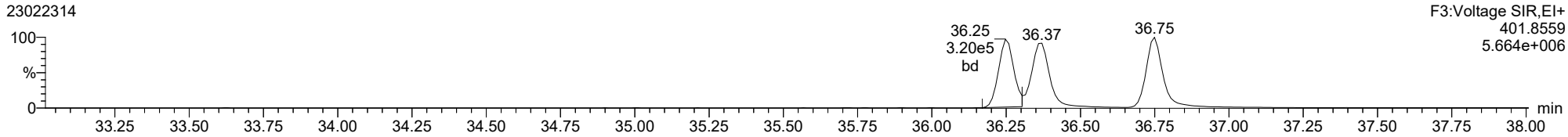

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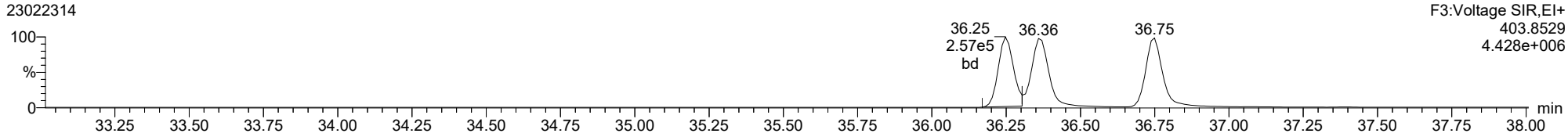

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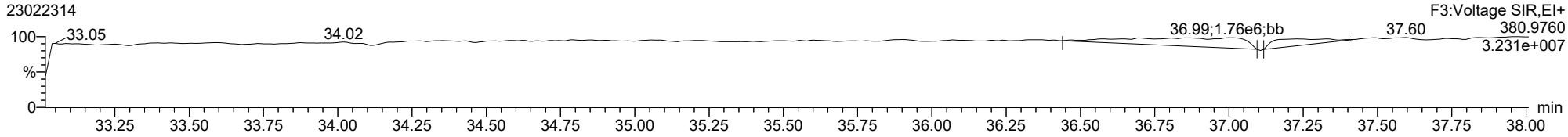

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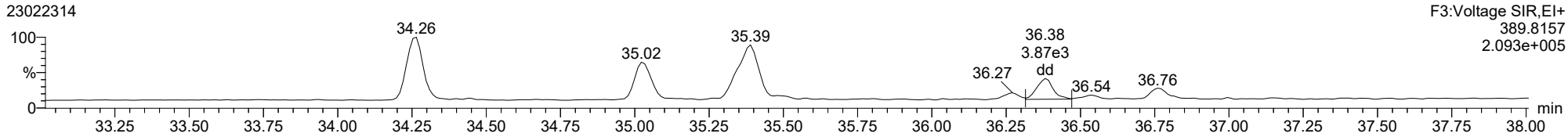

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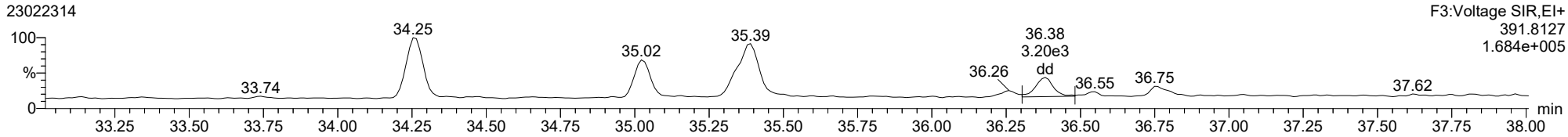

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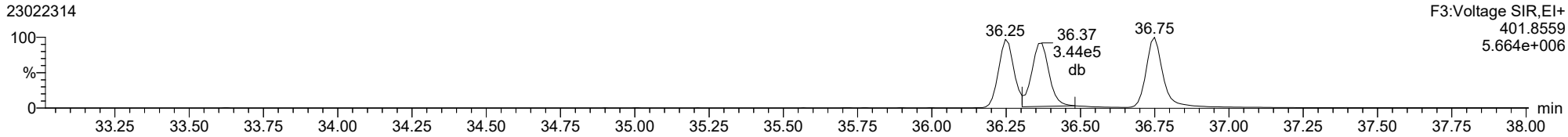

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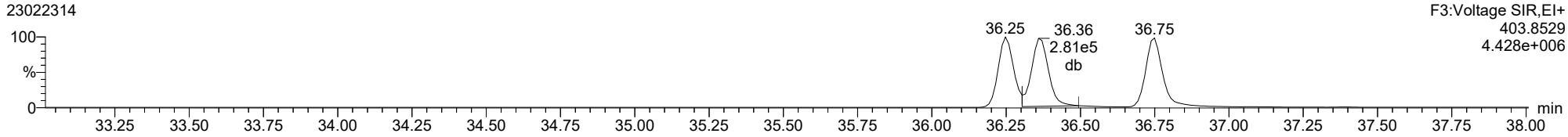

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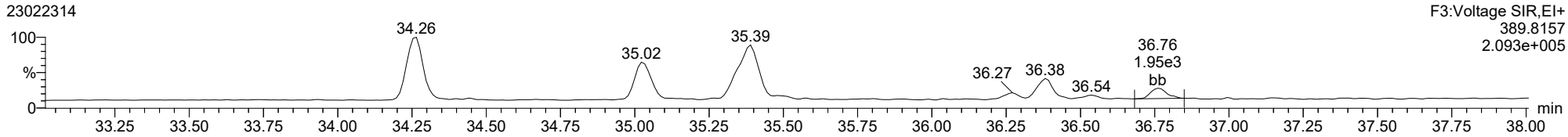

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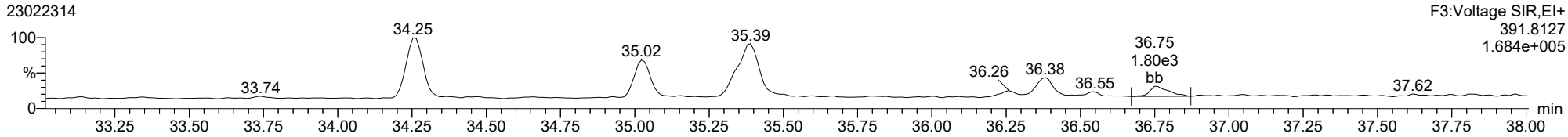

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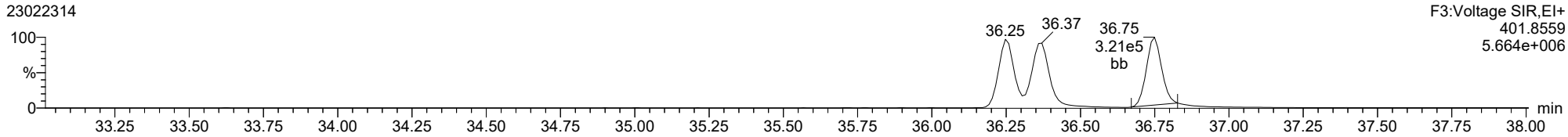

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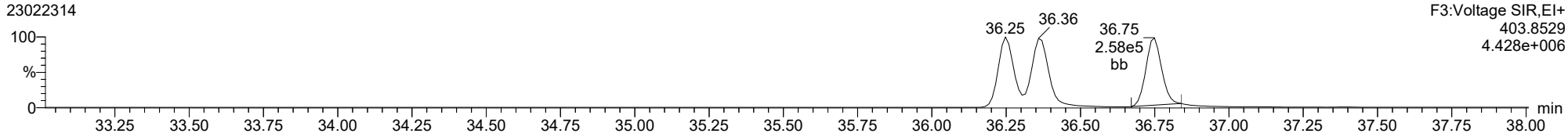

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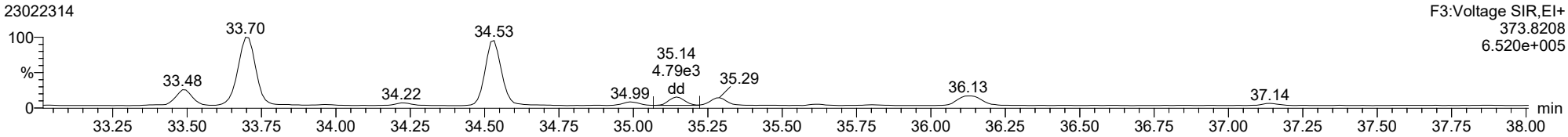

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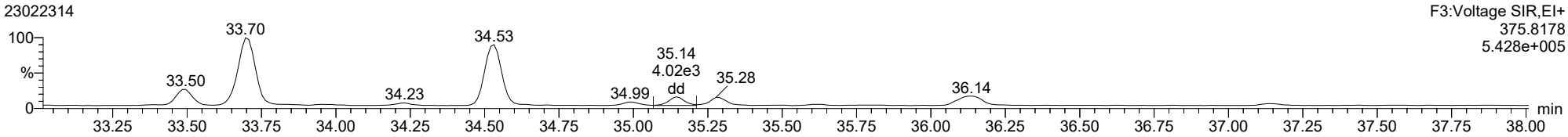

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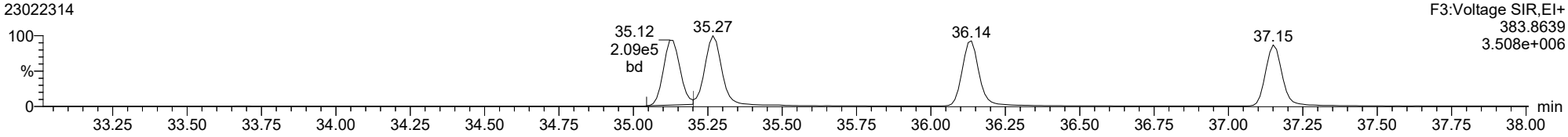

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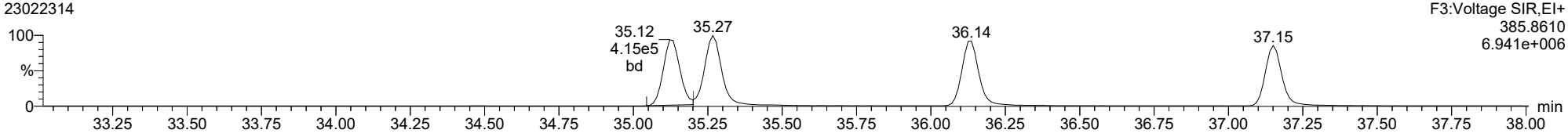
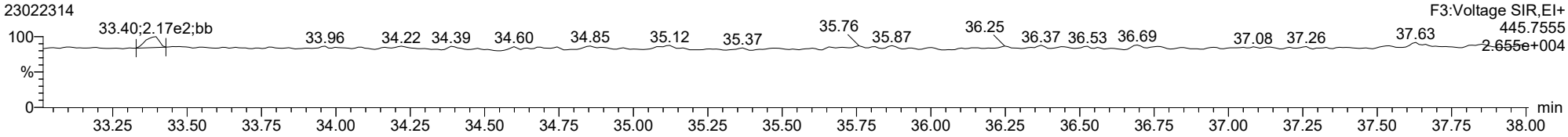


FUNCTION3 OCDPE



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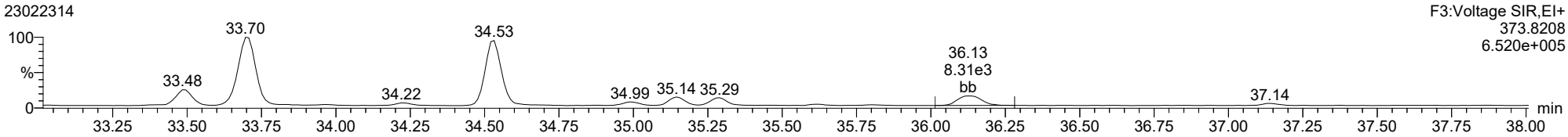
234678-HxCDF



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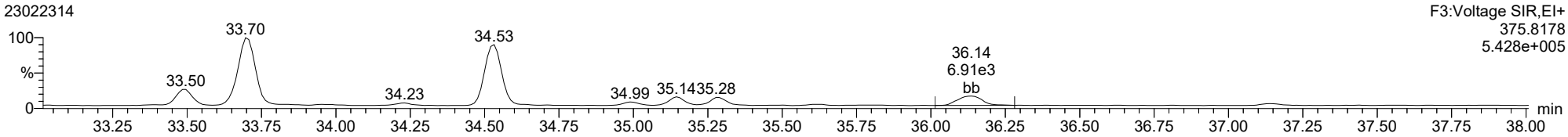

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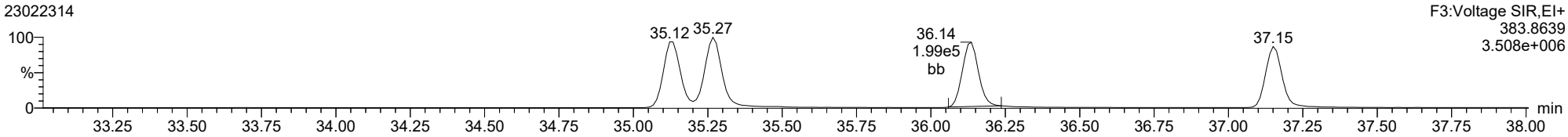

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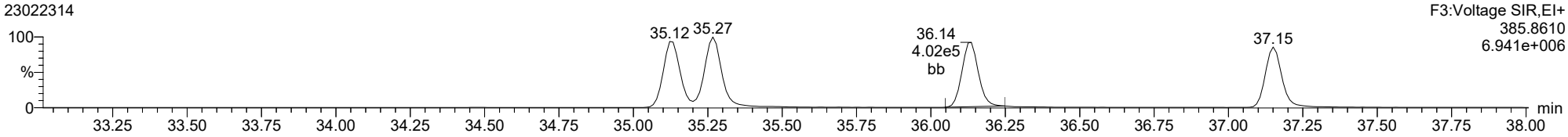

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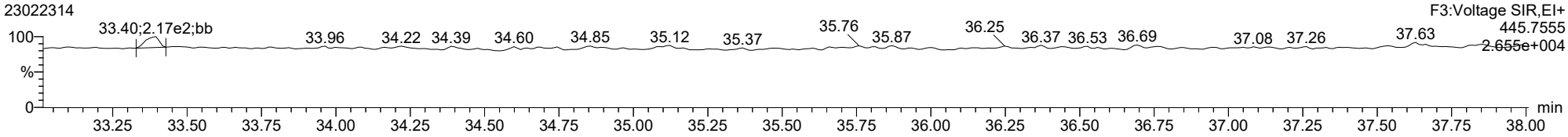

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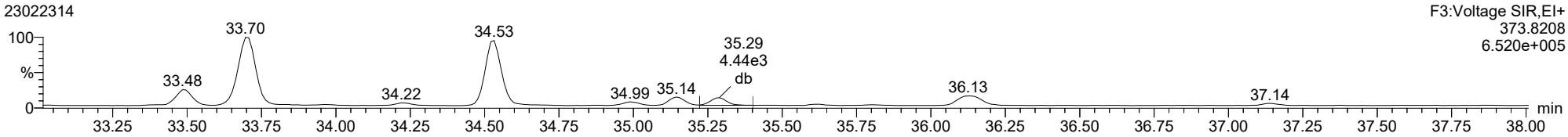

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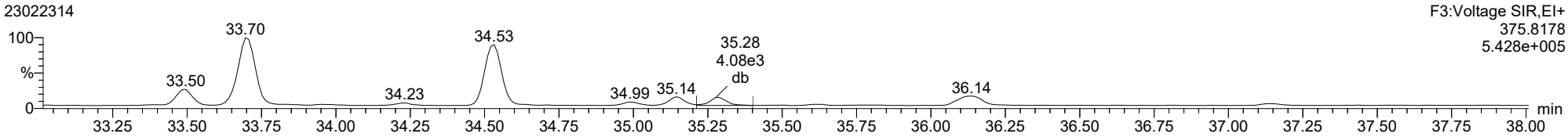

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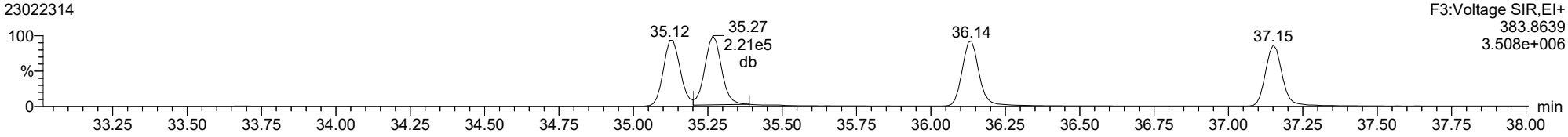

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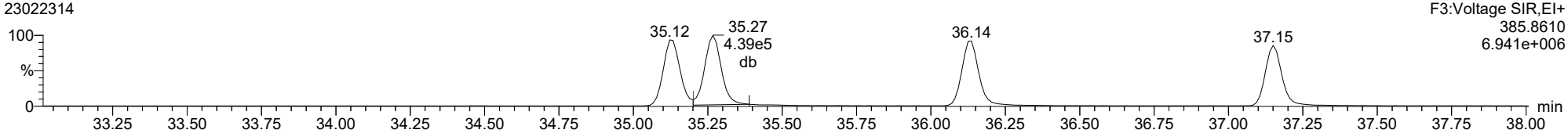

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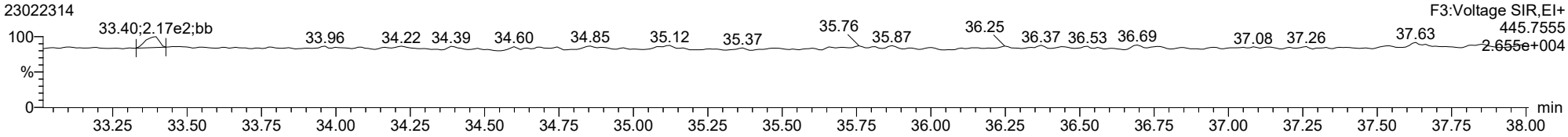

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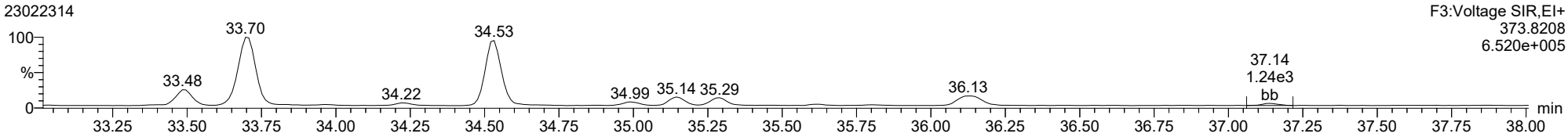

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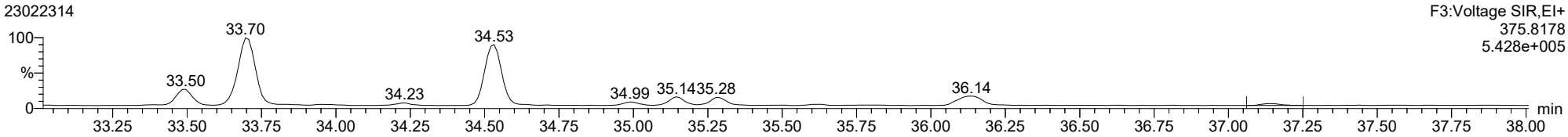

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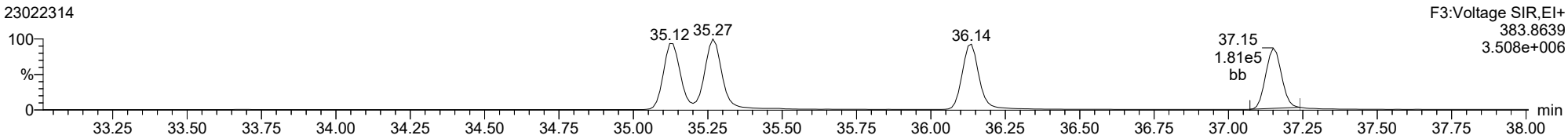

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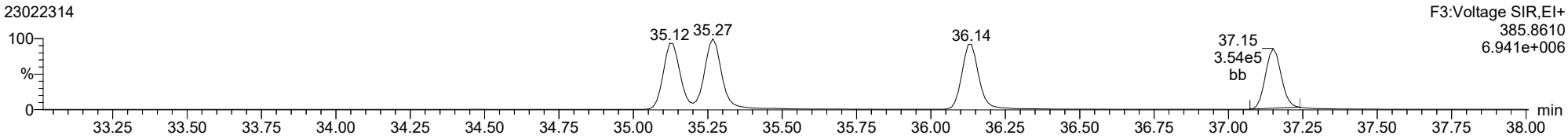

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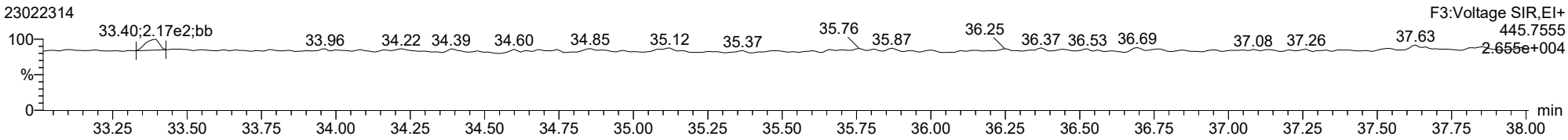

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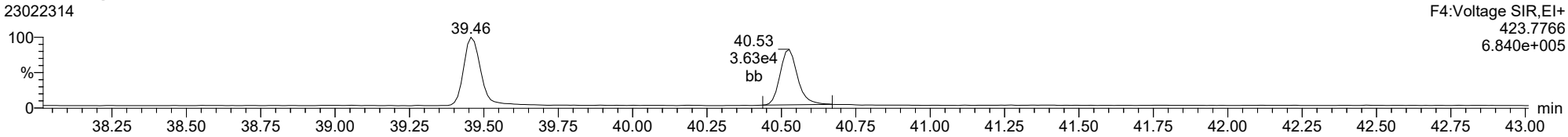

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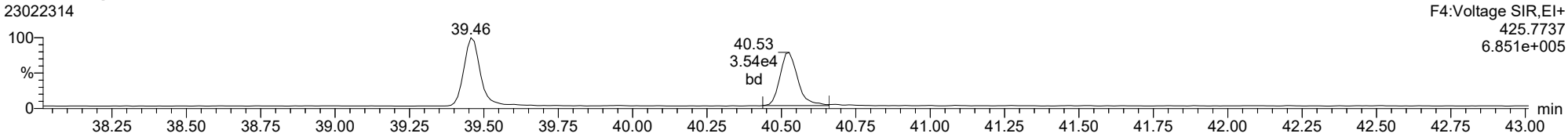

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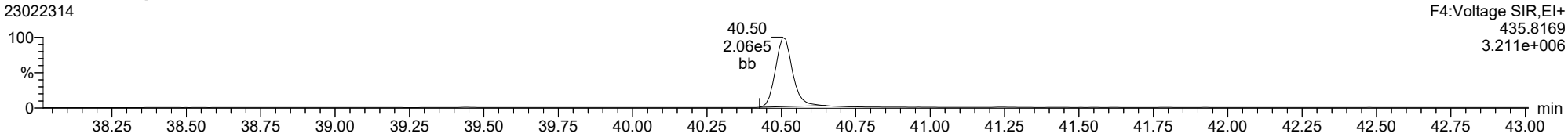

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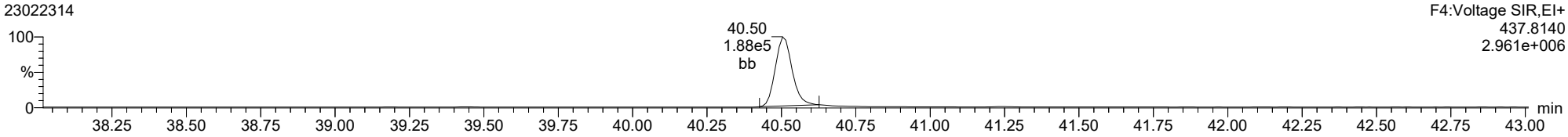

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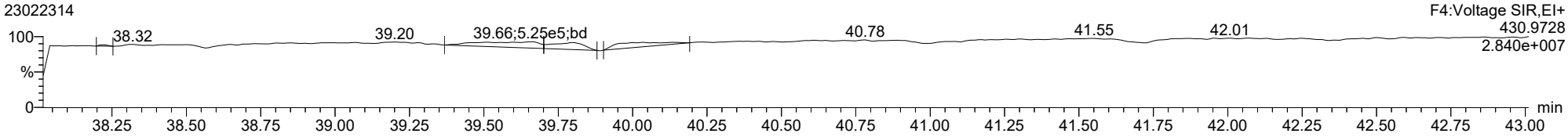

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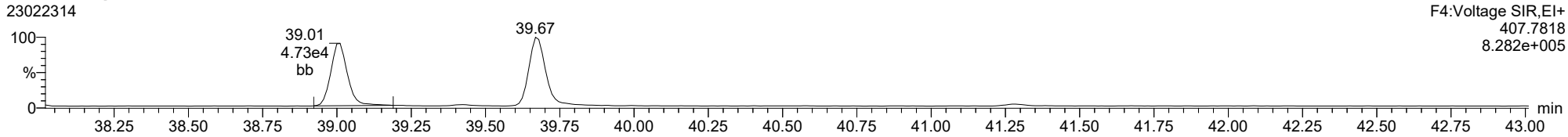

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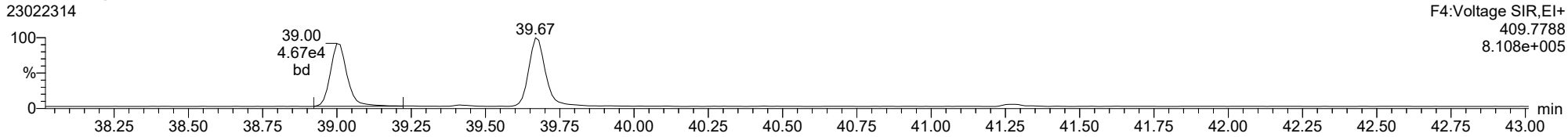

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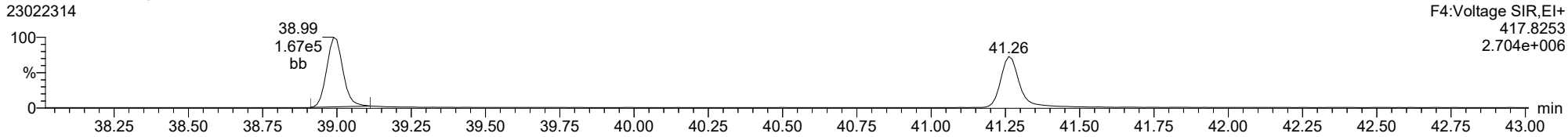

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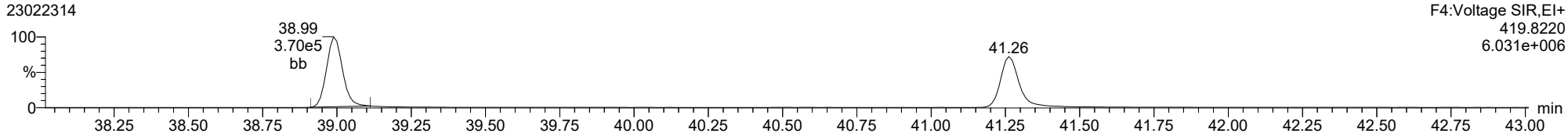
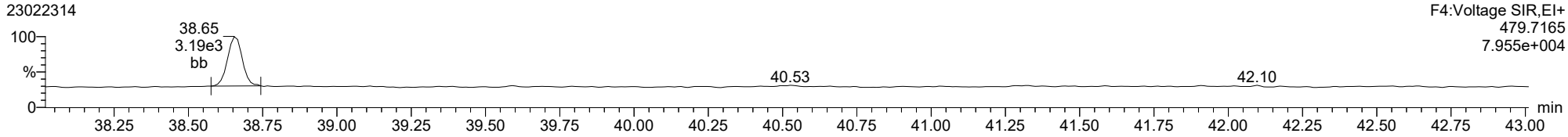


FUNCTION4 NCDPE



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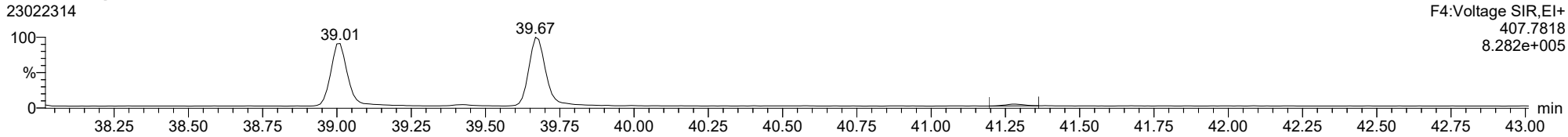

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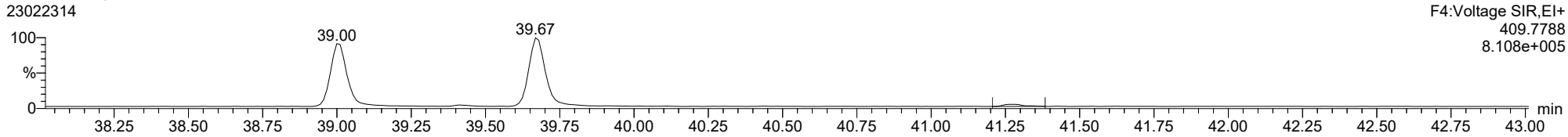

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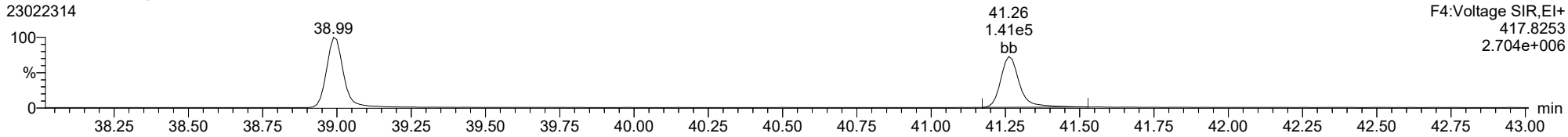

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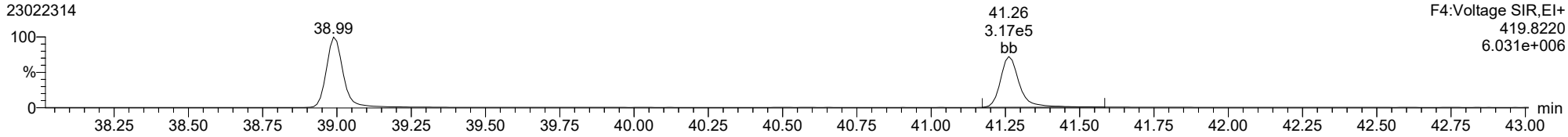

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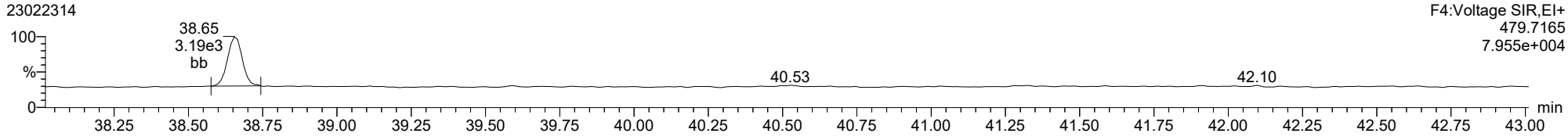

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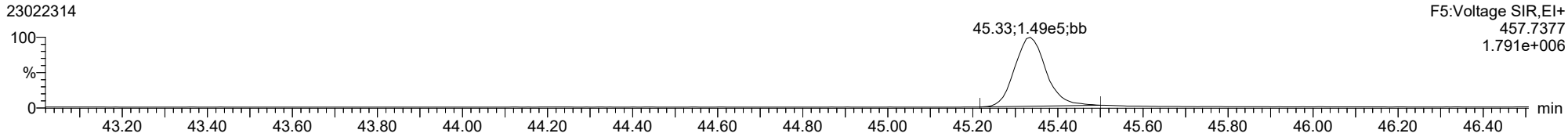

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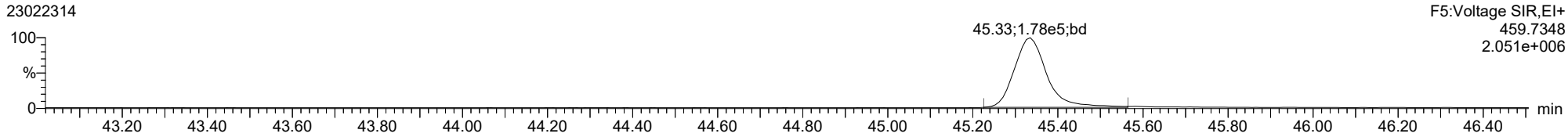

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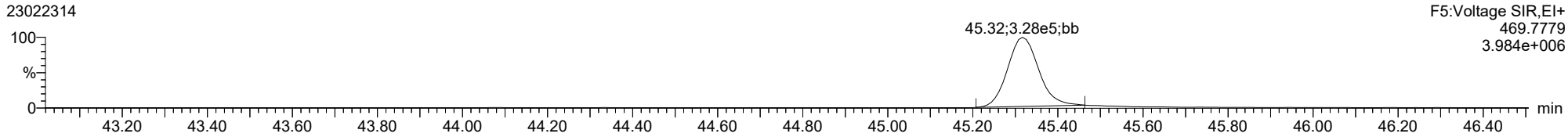

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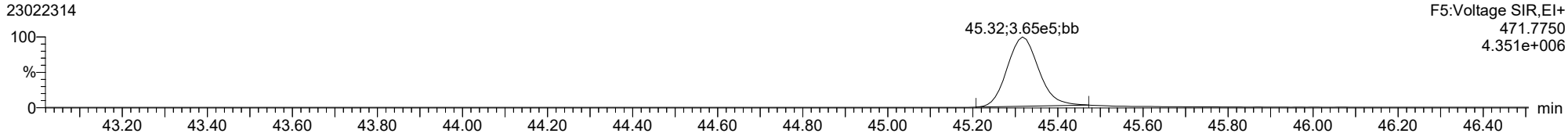
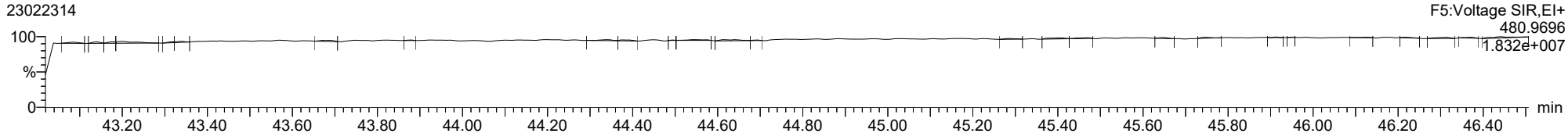


FUNCTION5 PFK



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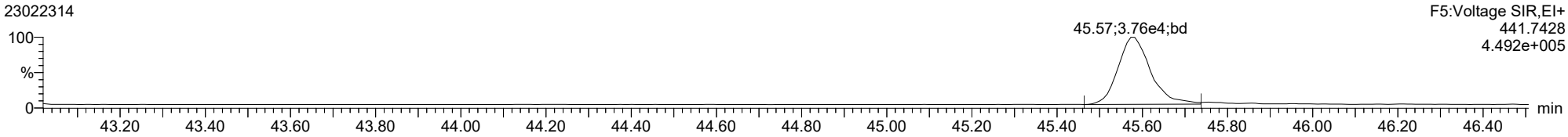
OCDF



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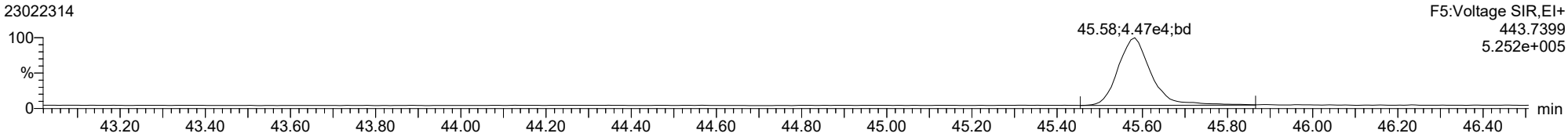

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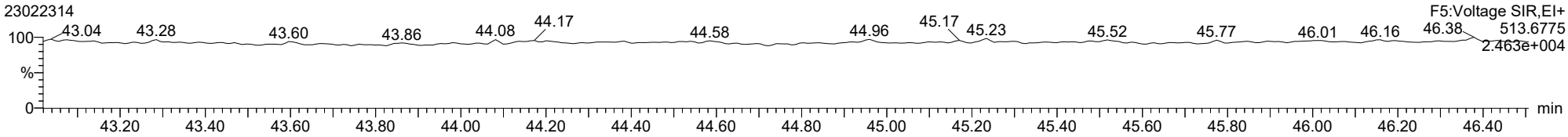

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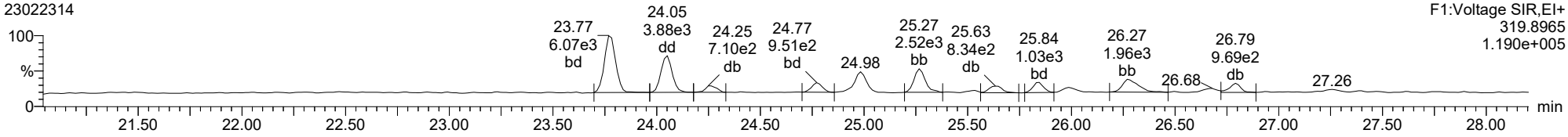
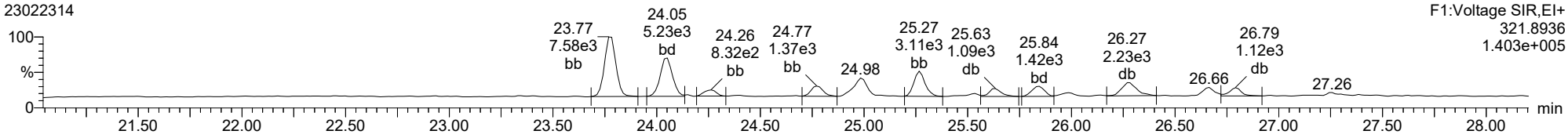
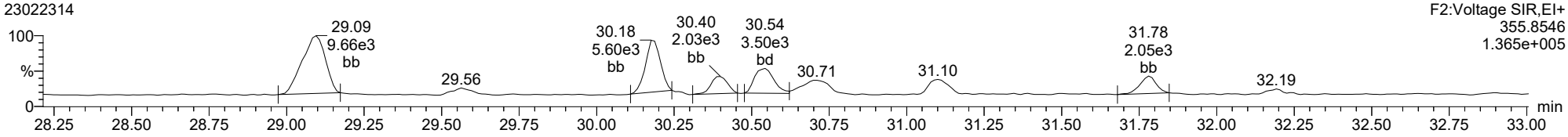
Total-tetradioxins



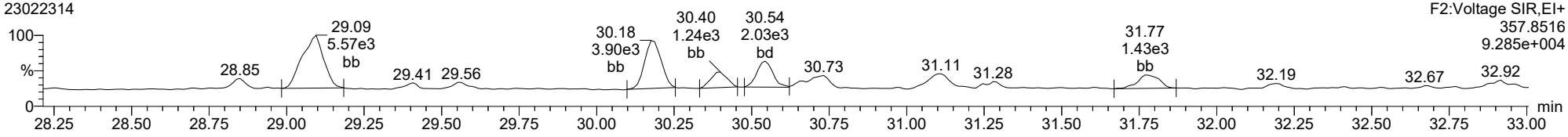
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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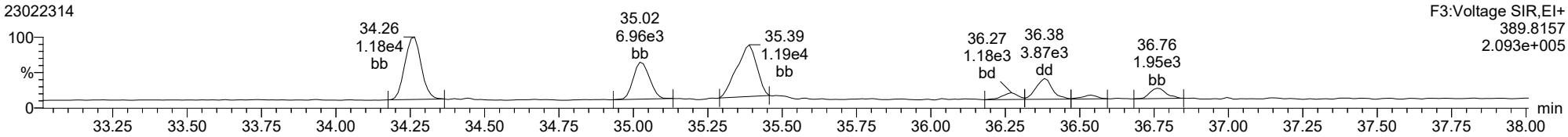
Total-hexadioxins



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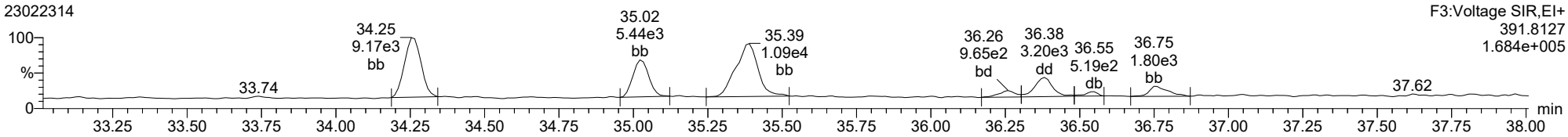
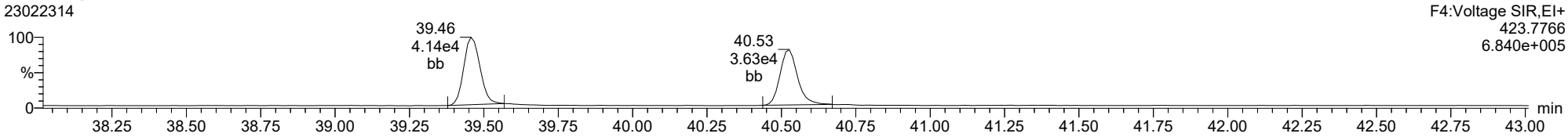


Total-heptadioxins



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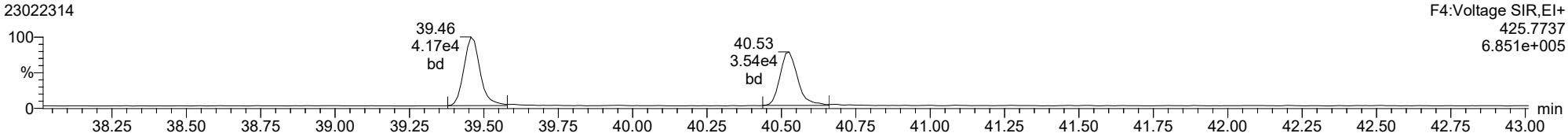

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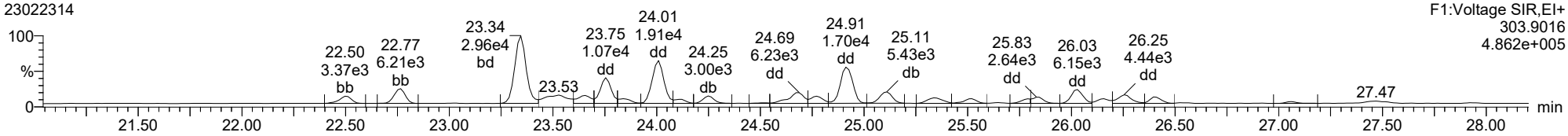
Total-tetrafurans



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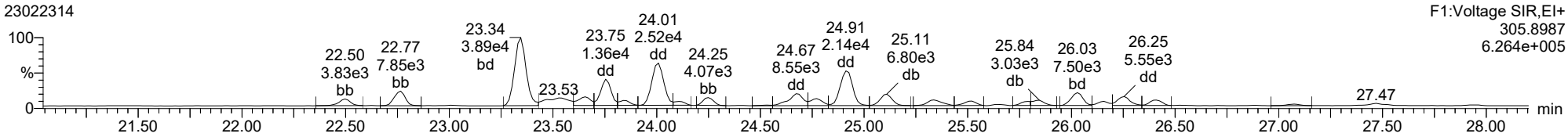

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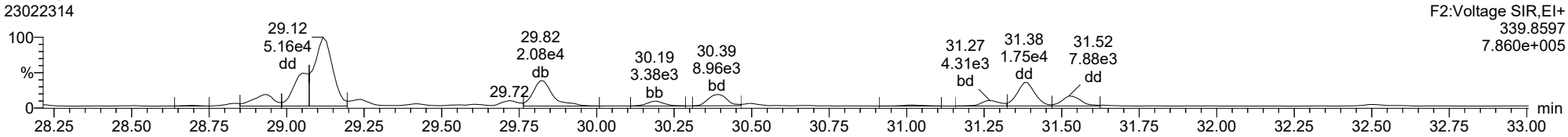
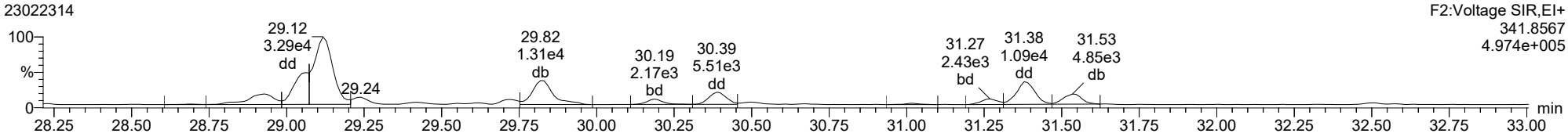
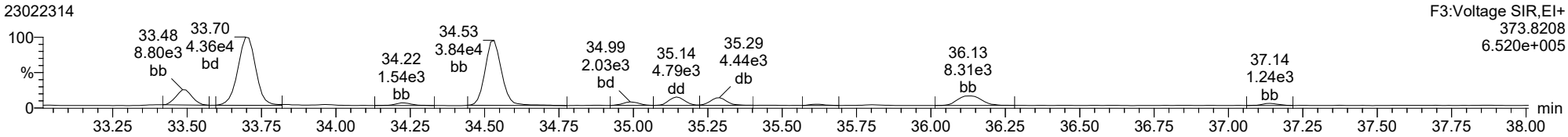


Total-pentafurans

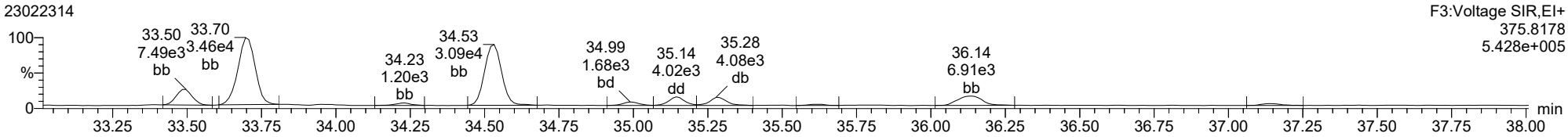


ID: 23A0133-10, Name: 23022314, Date: 23-Feb-2023, Time: 20:56:42, Conditions: AUTOSPEC01, User: pk

Total-hexafurans



Total-hexafurans



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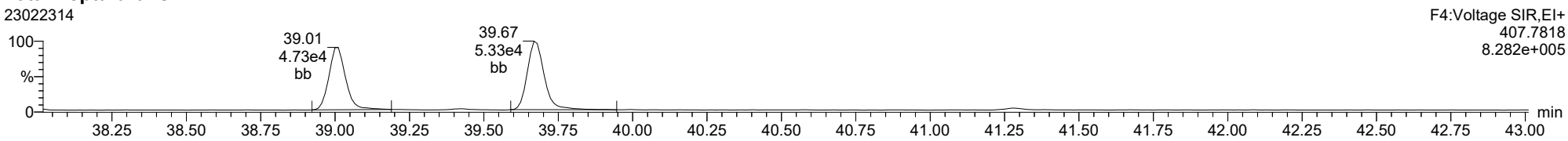
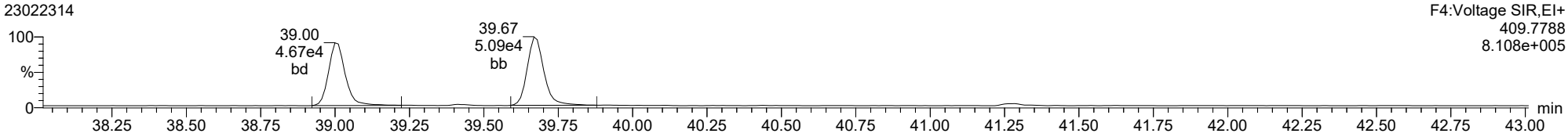


Total-heptafurans



Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1222

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-11 B	File ID:	23022315
Sampled:	01/06/23 13:00	Prepared:	01/24/23 13:10	Analyzed:	02/23/23 21:46
% Solids:	56.13	Preparation:	EPA 1613	Initial/Final:	17.83 g Wet / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.798	0.655-0.886	0.123	0.999	3.04	ng/kg	X, B
1746-01-6	2,3,7,8-TCDD	1	0.508	0.655-0.886	0.063	0.999	0.368	ng/kg	EMPC, J
57117-41-6	1,2,3,7,8-PeCDF	1	1.497	1.318-1.783	0.170	0.999	5.85	ng/kg	
57117-31-4	2,3,4,7,8-PeCDF	1	1.424	1.318-1.783	0.190	0.999	14.7	ng/kg	
40321-76-4	1,2,3,7,8-PeCDD	1	1.351	1.318-1.783	0.190	0.999	2.75	ng/kg	
70648-26-9	1,2,3,4,7,8-HxCDF	1	1.229	1.054-1.426	0.209	0.999	134	ng/kg	B
57117-44-9	1,2,3,6,7,8-HxCDF	1	1.261	1.054-1.426	0.194	0.999	21.9	ng/kg	
60851-34-5	2,3,4,6,7,8-HxCDF	1	1.224	1.054-1.426	0.201	0.999	30.8	ng/kg	
72918-21-9	1,2,3,7,8,9-HxCDF	1	1.284	1.054-1.426	0.223	0.999	21.3	ng/kg	B
39227-28-6	1,2,3,4,7,8-HxCDD	1	1.298	1.054-1.426	0.236	0.999	2.71	ng/kg	
57653-85-7	1,2,3,6,7,8-HxCDD	1	1.250	1.054-1.426	0.220	0.999	32.0	ng/kg	
19408-74-3	1,2,3,7,8,9-HxCDD	1	1.237	1.054-1.426	0.232	0.999	6.41	ng/kg	B
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.036	0.893-1.208	0.323	0.999	471	ng/kg	
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	1.058	0.893-1.208	0.469	0.999	73.7	ng/kg	
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.031	0.893-1.208	0.683	2.50	881	ng/kg	B
39001-02-0	OCDF	1	0.893	0.757-1.024	0.387	2.50	1020	ng/kg	
3268-87-9	OCDD	1	0.881	0.757-1.024	0.545	9.99	7990	ng/kg	E, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			0.999	29.3	ng/kg
41903-57-5	Total TCDD	1	0.000			0.999	8.29	ng/kg
30402-15-4	Total PeCDF	1	0.000			0.999	206	ng/kg
36088-22-9	Total PeCDD	1	0.000			0.999	18.9	ng/kg
55684-94-1	Total HxCDF	1	0.000			0.999	852	ng/kg
34465-46-8	Total HxCDD	1	0.000			0.999	142	ng/kg
38998-75-3	Total HpCDF	1	0.000			0.999	1970	ng/kg
37871-00-4	Total HpCDD	1	0.000			0.999	1580	ng/kg

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 49.88
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 49.88

LDW23-SC1222

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0133-11	File ID:	23022315
Sampled:	01/06/23 13:00	Prepared:	01/24/23 13:10	Analyzed:	02/23/23 21:46
Solids Wt%:	56.13	Preparation:	EPA 1613	Initial/Final:	17.83 g / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.778	0.655-0.886	0.077	84.9	24 - 169 %	
13C12-2,3,7,8-TCDD		0.761	0.655-0.886	0.090	106	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.569	1.318-1.783	0.117	83.0	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.567	1.318-1.783	0.122	70.7	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.765	1.318-1.783	0.083	57.0	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.508	0.434-0.587	0.138	99.1	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.506	0.434-0.587	0.134	99.6	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.513	0.434-0.587	0.143	100	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.508	0.434-0.587	0.156	99.1	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.243	1.054-1.426	0.183	107	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.281	1.054-1.426	0.177	107	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.451	0.374-0.506	0.205	90.7	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.443	0.374-0.506	0.234	88.9	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.072	0.893-1.208	0.199	92.5	23 - 140 %	
13C12-OCDD		0.916	0.757-1.024	0.165	88.4	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.037	87.1	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:13:49 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: 23A0133-11, Name: 23022315, Date: 23-Feb-2023, Time: 21:46:06, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	26.014	1.001	8.848e3	1.108e4	0.876	0.798	0.770	3291	931	1.28e5	1.65e5	38.9	176.9	NO	bd	bd	1.523
12378-PeCDF	30.176	1.001	1.871e4	1.250e4	0.845	1.497	1.550	1729	2754	2.92e5	1.88e5	168.7	68.3	NO	bb	bb	2.927
23478-PeCDF	31.512	1.000	4.062e4	2.854e4	0.911	1.424	1.550	1729	2754	6.35e5	4.25e5	367.2	154.3	NO	db	dd	7.352
123478-HxCDF	35.133	1.001	3.688e5	3.001e5	1.182	1.229	1.240	2863	2601	5.94e6	4.81e6	2073.4	1849.5	NO	bd	bd	66.862
234678-HxCDF	36.091	0.999	8.584e4	7.016e4	1.229	1.224	1.240	2863	2601	1.06e6	8.81e5	371.0	338.9	NO	bb	bb	15.429
123678-HxCDF	35.267	1.000	6.669e4	5.289e4	1.248	1.261	1.240	2863	2601	9.89e5	7.62e5	345.3	293.2	NO	db	dd	10.983
123789-HxCDF	37.127	1.000	5.312e4	4.136e4	1.187	1.284	1.240	2863	2601	8.06e5	6.31e5	281.6	242.5	NO	bb	bb	10.679
1234678-HpCDF	38.988	1.000	1.100e6	1.061e6	1.204	1.036	1.050	3875	4234	1.76e7	1.70e7	4552.0	4024.8	NO	bd	bd	235.585
1234789-HpCDF	41.261	1.000	1.441e5	1.362e5	1.165	1.058	1.050	3875	4234	1.93e6	1.86e6	497.2	439.0	NO	bb	bb	36.857
OCDF	45.572	1.006	1.607e6	1.798e6	1.186	0.893	0.890	1590	3689	1.82e7	2.04e7	11446.1	5529.8	NO	dd	dd	508.104
2378-TCDD	26.650	1.001	8.916e2	1.756e3	1.236	0.508	0.770	940	1353	1.38e4	2.57e4	14.7	19.0	YES	bd	bd	0.184
12378-PeCDD	31.768	1.000	4.454e3	3.296e3	1.087	1.351	1.550	1282	1376	6.59e4	3.95e4	51.4	28.7	NO	bb	bb	1.374
123478-HxCDD	36.247	1.000	6.145e3	4.733e3	0.987	1.298	1.240	2717	2358	1.02e5	8.33e4	37.5	35.3	NO	bd	bd	1.357
123678-HxCDD	36.359	1.000	7.600e4	6.082e4	1.021	1.250	1.240	2717	2358	1.26e6	1.01e6	464.6	426.8	NO	dd	dd	16.013
123789-HxCDD	36.749	1.011	1.442e4	1.166e4	0.985	1.237	1.240	2717	2358	2.51e5	1.85e5	92.4	78.4	NO	bb	bb	3.210
1234678-HpCDD	40.514	1.001	1.644e6	1.595e6	1.253	1.031	1.050	6707	6095	2.54e7	2.44e7	3786.9	3998.8	NO	bb	bb	441.011
OCDD	45.325	1.000	1.166e7	1.324e7	1.103	0.881	0.890	4668	2237	1.43e8	1.63e8	30736.0	72834.4	NO	bb	bb	3998.277
13C-2378-TCDF	25.986	1.007	6.534e5	8.404e5	1.768	0.778	0.770	1808	1718	1.03e7	1.34e7	5698.6	7788.9	NO	bb	bb	84.858
13C-12378-PeCDF	30.153	1.169	7.711e5	4.915e5	1.527	1.569	1.550	2879	1740	1.14e7	7.28e6	3963.7	4184.8	NO	bd	bd	83.039
13C-23478-PeCDF	31.501	1.221	6.301e5	4.022e5	1.466	1.567	1.550	2879	1740	9.45e6	6.07e6	3283.3	3488.7	NO	bb	bb	70.712
13C-123478-HxCDF	35.111	0.956	2.853e5	5.613e5	1.054	0.508	0.510	1349	1792	4.47e6	8.89e6	3315.2	4961.4	NO	bd	bd	99.097
13C-123678-HxCDF	35.256	0.960	2.931e5	5.793e5	1.080	0.506	0.510	1349	1792	4.53e6	9.00e6	3361.2	5021.4	NO	db	db	99.625
13C-234678-HxCDF	36.113	0.983	2.789e5	5.439e5	1.014	0.513	0.510	1349	1792	4.49e6	8.70e6	3326.0	4855.8	NO	bb	bb	100.039
13C-123789-HxCDF	37.138	1.011	2.513e5	4.943e5	0.928	0.508	0.510	1349	1792	4.17e6	8.19e6	3093.7	4572.8	NO	bb	bb	99.106
13C-1234678-HpCDF	38.977	1.061	2.369e5	5.251e5	1.036	0.451	0.440	1626	2964	3.88e6	8.67e6	2386.7	2924.1	NO	bb	bb	90.704
13C-1234789-HpCDF	41.249	1.123	2.003e5	4.523e5	0.905	0.443	0.440	1626	2964	2.73e6	6.05e6	1678.7	2041.9	NO	bb	bd	88.942
13C-1234-TCDD	25.802	0.000	4.362e5	5.595e5	1.000	0.780	0.770	1633	952	6.80e6	8.83e6	4167.6	9275.7	NO	bb	bb	100.000
13C-2378-TCDD	26.622	1.032	5.029e5	6.612e5	1.103	0.761	0.770	1633	952	7.62e6	1.01e7	4667.0	10555.9	NO	bb	bb	106.001
13C-12378-PeCDD	31.757	1.231	3.314e5	1.877e5	0.914	1.765	1.550	914	1056	4.93e6	2.84e6	5389.9	2689.8	NO	bb	bd	57.034
13C-123478-HxCDD	36.236	0.986	4.499e5	3.621e5	0.933	1.243	1.240	2132	1556	7.24e6	5.78e6	3396.0	3717.3	NO	bd	bd	107.350
13C-123678-HxCDD	36.347	0.989	4.702e5	3.669e5	0.965	1.281	1.240	2132	1556	7.63e6	5.99e6	3577.1	3846.8	NO	db	db	107.030
13C-1234678-HpCDD	40.492	1.102	3.034e5	2.831e5	0.782	1.072	1.050	1730	1645	4.64e6	4.34e6	2683.9	2639.7	NO	bb	bb	92.499
13C-OCDD	45.307	1.233	5.402e5	5.895e5	0.788	0.916	0.890	1413	1397	6.59e6	7.16e6	4663.5	5122.9	NO	bb	bb	176.769
13C-123789-HxCDD	36.737	0.000	4.495e5	3.613e5	1.000	1.244	1.240	2132	1556	7.19e6	5.82e6	3372.9	3742.1	NO	bb	bb	100.000
37CL-2378-TCDD	26.650	1.033	4.277e5		1.233			1179		6.56e6		5563.1			bb		34.827

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:13:49 Pacific Standard Time

ID: 23A0133-11, Name: 23022315, Date: 23-Feb-2023, Time: 21:46:06, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.455	0.864	2.662e3	3.807e3	1.064	0.699	0.770	3291	931	2.88e4	4.63e4	8.7	49.7	NO	bb	bb	0.407
1289-TCDF	27.441	1.056	1.361e3	2.486e3	0.858	0.548	0.770	3291	931	1.68e4	2.38e4	5.1	25.6	YES	bd	bd	0.300
13468-PECDF					1.013		1.550	847	922								
12389-PECDF	32.493	1.078	2.362e3	1.087e3	0.844	2.173	1.550	1729	2754	3.52e4	2.41e4	20.4	8.7	YES	dd	bd	0.324
123468-HXCDF	33.473	0.953	1.332e5	1.076e5	1.197	1.238	1.240	2863	2601	2.09e6	1.70e6	729.0	654.0	NO	bb	bb	23.754
1368-TCDD	23.754	0.892	7.529e3	9.421e3	1.084	0.799	0.770	940	1353	1.20e5	1.50e5	127.5	111.2	NO	bd	bb	1.343
1289-TCDD	27.243	1.023	3.195e2	4.356e2	0.975	0.734	0.770	940	1353	4.41e3	6.25e3	4.7	4.6	NO	bb	bb	0.067
12479-PECDD	29.073	0.915	2.049e4	1.332e4	1.837	1.537	1.550	1282	1376	1.98e5	1.39e5	154.3	101.1	NO	MM	MM	3.545
12389-PECDD	32.170	1.013	1.222e3	6.753e2	1.252	1.810	1.550	1282	1376	1.63e4	1.28e4	12.7	9.3	YES	bb	bb	0.292
124679-HXCDD	34.242	0.945	9.114e4	7.487e4	1.033	1.217	1.240	2717	2358	1.48e6	1.21e6	546.3	514.1	NO	bb	bb	19.792
1234679-HPCDD	39.445	0.974	1.344e6	1.279e6	1.286	1.051	1.050	6707	6095	2.20e7	2.10e7	3277.8	3443.6	NO	bb	bb	347.772
Total-tetrafurans			8.831e4		0.933			3291		1.31e6							14.637
Total-penta1			2.173e5					847		3.41e6							31.243
Total-pentafurans			4.317e5		0.866			1729		6.30e6							71.934
Total-hexafurans			2.342e6		1.208			2863		3.64e7							426.250
Total-heptafurans			4.277e6		1.185			3875		6.74e7							984.104
Total-Furans			8.963e6		1.067			3291		1.33e8							2036.271
Total-tetradioxins			2.315e4		1.099			940		3.57e5							4.148
Total-pentadioxins			4.424e4		1.392			1282		5.78e5							9.457
Total-hexadioxins			3.278e5		1.007			2717		4.90e6							70.992
Total-heptadioxins			2.988e6		1.269			6707		4.74e7							788.783
Total-Dioxins			1.505e7		1.165			940		1.97e8							4871.658
Total-TEQ			2.401e7					940		3.30e8							6907.929
FUNCTION1 PFK			6.655e7					432946		3.54e7							
FUNCTION2 PFK			7.450e6					253120		5.03e6							0.000
FUNCTION3 PFK			0.000e0					254269		0.00e0							
FUNCTION4 PFK			8.530e5					312095		1.86e7							
FUNCTION5 PFK			2.255e5					186450		7.63e6							
FUNCTION1 HXCD...			1.690e4					805		2.80e5							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			3.337e3					702		5.64e4							0.000
FUNCTION3 OCDPE			1.419e3					609		2.55e4							0.000
FUNCTION4 NCDPE			4.168e3					784		7.16e4							0.000
FUNCTION5 DCDPE			1.671e3					597		1.42e4							0.000

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.66	4.904e3	5.750e3	0.933	0.85	0.77	17.3	YES	NO	dd	dd	0.765
2	Total-tetrafurans	24.23	3.199e3	4.156e3	0.933	0.77	0.77	14.8	YES	NO	db	db	0.528
3	Total-tetrafurans	24.09	2.130e3	2.770e3	0.933	0.77	0.77	10.0	YES	NO	dd	dd	0.352
4	Total-tetrafurans	23.99	1.088e4	1.387e4	0.933	0.78	0.77	45.1	YES	NO	dd	dd	1.776
5	Total-tetrafurans	23.84	2.260e3	2.896e3	0.933	0.78	0.77	10.7	YES	NO	dd	dd	0.370
6	Total-tetrafurans	23.74	1.063e4	1.273e4	0.933	0.83	0.77	51.8	YES	NO	dd	dd	1.676
7	Total-tetrafurans	23.33	8.799e3	1.249e4	0.933	0.70	0.77	41.7	YES	NO	bd	bd	1.528
8	Total-tetrafurans	22.75	3.185e3	4.507e3	0.933	0.71	0.77	16.0	YES	NO	bb	bb	0.552
9	1368-TCDF	22.45	2.662e3	3.807e3	1.064	0.70	0.77	8.7	YES	NO	bb	bb	0.407
10	Total-tetrafurans	26.40	4.433e3	5.745e3	0.933	0.77	0.77	21.4	YES	NO	dd	dd	0.730
11	Total-tetrafurans	26.24	3.875e3	4.967e3	0.933	0.78	0.77	15.9	YES	NO	dd	dd	0.635
12	2378-TCDF	26.01	8.848e3	1.108e4	0.876	0.80	0.77	38.9	YES	NO	bd	bd	1.523
13	Total-tetrafurans	25.82	1.783e3	2.418e3	0.933	0.74	0.77	8.5	YES	NO	db	db	0.302
14	Total-tetrafurans	25.77	1.064e3	1.548e3	0.933	0.69	0.77	7.2	YES	NO	bd	bd	0.187
15	Total-tetrafurans	25.10	5.982e3	7.807e3	0.933	0.77	0.77	27.2	YES	NO	bb	db	0.990
16	Total-tetrafurans	24.90	9.662e3	1.271e4	0.933	0.76	0.77	43.6	YES	NO	db	dd	1.605
17	Total-tetrafurans	24.76	4.010e3	5.891e3	0.933	0.68	0.77	18.9	YES	NO	dd	dd	0.711

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-penta1	27.43	2.173e5	1.444e5		1.50	1.55	4031.5	YES	NO	bb	bb	31.243

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PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	29.71	8.480e3	5.634e3	0.866	1.51	1.55	77.7	YES	NO	dd	dd	1.420
2	Total-pentafurans	29.53	2.249e3	1.420e3	0.866	1.58	1.55	22.8	YES	NO	bd	dd	0.369
3	Total-pentafurans	29.38	2.733e3	1.925e3	0.866	1.42	1.55	19.0	YES	NO	db	dd	0.469
4	Total-pentafurans	29.22	1.135e4	6.920e3	0.866	1.64	1.55	101.5	YES	NO	dd	dd	1.837
5	Total-pentafurans	29.09	2.589e5	1.670e5	0.866	1.55	1.55	2121.8	YES	NO	dd	dd	42.839
6	Total-pentafurans	28.91	1.871e4	1.248e4	0.866	1.50	1.55	159.2	YES	NO	dd	dd	3.137
7	Total-pentafurans	28.81	2.190e3	1.510e3	0.866	1.45	1.55	23.6	YES	NO	bd	bd	0.372
8	Total-pentafurans	32.55	2.319e3	1.510e3	0.866	1.54	1.55	18.8	YES	NO	db	db	0.385
9	23478-PeCDF	31.51	4.062e4	2.854e4	0.911	1.42	1.55	367.2	YES	NO	db	dd	7.352
10	Total-pentafurans	31.37	3.701e4	2.498e4	0.866	1.48	1.55	320.5	YES	NO	dd	dd	6.235
11	Total-pentafurans	30.38	2.846e4	1.720e4	0.866	1.66	1.55	243.4	YES	NO	bd	bb	4.592
12	12378-PeCDF	30.18	1.871e4	1.250e4	0.845	1.50	1.55	168.7	YES	NO	bb	bb	2.927

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.13	5.312e4	4.136e4	1.187	1.28	1.24	281.6	YES	NO	bb	bb	10.679
2	234678-HxCDF	36.09	8.584e4	7.016e4	1.229	1.22	1.24	371.0	YES	NO	bb	bb	15.429
3	Total-hexafurans	35.60	5.575e3	4.474e3	1.208	1.25	1.24	31.6	YES	NO	bb	bb	1.012
4	123678-HxCDF	35.27	6.669e4	5.289e4	1.248	1.26	1.24	345.3	YES	NO	db	dd	10.983
5	123478-HxCDF	35.13	3.688e5	3.001e5	1.182	1.23	1.24	2073.4	YES	NO	bd	bd	66.862
6	Total-hexafurans	34.98	2.026e4	1.704e4	1.208	1.19	1.24	121.8	YES	NO	bb	bb	3.756
7	Total-hexafurans	34.51	1.140e6	9.270e5	1.208	1.23	1.24	6244.6	YES	NO	bb	bb	208.139
8	Total-hexafurans	34.21	1.272e4	1.020e4	1.208	1.25	1.24	69.3	YES	NO	bb	bb	2.308
9	Total-hexafurans	33.68	4.558e5	3.718e5	1.208	1.23	1.24	2456.0	YES	NO	bb	bd	83.328
10	123468-HXCDF	33.47	1.332e5	1.076e5	1.197	1.24	1.24	729.0	YES	NO	bb	bb	23.754

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.26	1.441e5	1.362e5	1.165	1.06	1.05	497.2	YES	NO	bb	bb	36.857
2	Total-heptafurans	39.67	3.015e6	2.913e6	1.185	1.03	1.05	12276.7	YES	NO	bd	bd	707.453
3	Total-heptafurans	39.41	1.830e4	1.696e4	1.185	1.08	1.05	68.8	YES	NO	db	db	4.208
4	1234678-HpCDF	38.99	1.100e6	1.061e6	1.204	1.04	1.05	4552.0	YES	NO	bd	bd	235.585

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.66	4.904e3	5.750e3	0.933	0.85	0.77	17.3	YES	NO	dd	dd	0.765
2	Total-tetrafurans	24.23	3.199e3	4.156e3	0.933	0.77	0.77	14.8	YES	NO	db	db	0.528
3	Total-tetrafurans	24.09	2.130e3	2.770e3	0.933	0.77	0.77	10.0	YES	NO	dd	dd	0.352
4	Total-tetrafurans	23.99	1.088e4	1.387e4	0.933	0.78	0.77	45.1	YES	NO	dd	dd	1.776
5	Total-tetrafurans	23.84	2.260e3	2.896e3	0.933	0.78	0.77	10.7	YES	NO	dd	dd	0.370
6	Total-tetrafurans	23.74	1.063e4	1.273e4	0.933	0.83	0.77	51.8	YES	NO	dd	dd	1.676
7	Total-tetrafurans	23.33	8.799e3	1.249e4	0.933	0.70	0.77	41.7	YES	NO	bd	bd	1.528
8	Total-tetrafurans	22.75	3.185e3	4.507e3	0.933	0.71	0.77	16.0	YES	NO	bb	bb	0.552
9	1368-TCDF	22.45	2.662e3	3.807e3	1.064	0.70	0.77	8.7	YES	NO	bb	bb	0.407
10	Total-tetrafurans	26.40	4.433e3	5.745e3	0.933	0.77	0.77	21.4	YES	NO	dd	dd	0.730
11	Total-tetrafurans	26.24	3.875e3	4.967e3	0.933	0.78	0.77	15.9	YES	NO	dd	dd	0.635
12	2378-TCDF	26.01	8.848e3	1.108e4	0.876	0.80	0.77	38.9	YES	NO	bd	bd	1.523
13	Total-tetrafurans	25.82	1.783e3	2.418e3	0.933	0.74	0.77	8.5	YES	NO	db	db	0.302
14	Total-tetrafurans	25.77	1.064e3	1.548e3	0.933	0.69	0.77	7.2	YES	NO	bd	bd	0.187
15	Total-tetrafurans	25.10	5.982e3	7.807e3	0.933	0.77	0.77	27.2	YES	NO	bb	db	0.990
16	Total-tetrafurans	24.90	9.662e3	1.271e4	0.933	0.76	0.77	43.6	YES	NO	db	dd	1.605
17	Total-tetrafurans	24.76	4.010e3	5.891e3	0.933	0.68	0.77	18.9	YES	NO	dd	dd	0.711
18	Total-pentafurans	29.71	8.480e3	5.634e3	0.866	1.51	1.55	77.7	YES	NO	dd	dd	1.420
19	Total-pentafurans	29.53	2.249e3	1.420e3	0.866	1.58	1.55	22.8	YES	NO	bd	dd	0.369
20	Total-pentafurans	29.38	2.733e3	1.925e3	0.866	1.42	1.55	19.0	YES	NO	db	dd	0.469
21	Total-pentafurans	29.22	1.135e4	6.920e3	0.866	1.64	1.55	101.5	YES	NO	dd	dd	1.837
22	Total-pentafurans	29.09	2.589e5	1.670e5	0.866	1.55	1.55	2121.8	YES	NO	dd	dd	42.839
23	Total-pentafurans	28.91	1.871e4	1.248e4	0.866	1.50	1.55	159.2	YES	NO	dd	dd	3.137
24	Total-pentafurans	28.81	2.190e3	1.510e3	0.866	1.45	1.55	23.6	YES	NO	bd	bd	0.372
25	Total-pentafurans	32.55	2.319e3	1.510e3	0.866	1.54	1.55	18.8	YES	NO	db	db	0.385
26	23478-PeCDF	31.51	4.062e4	2.854e4	0.911	1.42	1.55	367.2	YES	NO	db	dd	7.352
27	Total-pentafurans	31.37	3.701e4	2.498e4	0.866	1.48	1.55	320.5	YES	NO	dd	dd	6.235
28	Total-pentafurans	30.38	2.846e4	1.720e4	0.866	1.66	1.55	243.4	YES	NO	bd	bb	4.592
29	12378-PeCDF	30.18	1.871e4	1.250e4	0.845	1.50	1.55	168.7	YES	NO	bb	bb	2.927
30	123789-HxCDF	37.13	5.312e4	4.136e4	1.187	1.28	1.24	281.6	YES	NO	bb	bb	10.679
31	234678-HxCDF	36.09	8.584e4	7.016e4	1.229	1.22	1.24	371.0	YES	NO	bb	bb	15.429
32	Total-hexafurans	35.60	5.575e3	4.474e3	1.208	1.25	1.24	31.6	YES	NO	bb	bb	1.012
33	123678-HxCDF	35.27	6.669e4	5.289e4	1.248	1.26	1.24	345.3	YES	NO	db	dd	10.983
34	123478-HxCDF	35.13	3.688e5	3.001e5	1.182	1.23	1.24	2073.4	YES	NO	bd	bd	66.862
35	Total-hexafurans	34.98	2.026e4	1.704e4	1.208	1.19	1.24	121.8	YES	NO	bb	bb	3.756
36	Total-hexafurans	34.51	1.140e6	9.270e5	1.208	1.23	1.24	6244.6	YES	NO	bb	bb	208.139
37	Total-hexafurans	34.21	1.272e4	1.020e4	1.208	1.25	1.24	69.3	YES	NO	bb	bb	2.308

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	Total-hexafurans	33.68	4.558e5	3.718e5	1.208	1.23	1.24	2456.0	YES	NO	bb	bd	83.328
39	123468-HXCDF	33.47	1.332e5	1.076e5	1.197	1.24	1.24	729.0	YES	NO	bb	bb	23.754
40	1234789-HpCDF	41.26	1.441e5	1.362e5	1.165	1.06	1.05	497.2	YES	NO	bb	bb	36.857
41	Total-heptafurans	39.67	3.015e6	2.913e6	1.185	1.03	1.05	12276.7	YES	NO	bd	bd	707.453
42	Total-heptafurans	39.41	1.830e4	1.696e4	1.185	1.08	1.05	68.8	YES	NO	db	db	4.208
43	1234678-HpCDF	38.99	1.100e6	1.061e6	1.204	1.04	1.05	4552.0	YES	NO	bd	bd	235.585
44	OCDF	45.57	1.607e6	1.798e6	1.186	0.89	0.89	11446.1	YES	NO	dd	dd	508.104
45	Total-penta1	27.43	2.173e5	1.444e5		1.50	1.55	4031.5	YES	NO	bb	bb	31.243

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.25	3.527e3	4.660e3	1.099	0.76	0.77	61.3	YES	NO	bb	bb	0.640
2	Total-tetradioxins	24.97	2.553e3	3.323e3	1.099	0.77	0.77	35.7	YES	NO	bb	bb	0.459
3	Total-tetradioxins	24.04	5.304e3	6.337e3	1.099	0.84	0.77	94.0	YES	NO	db	bd	0.910
4	1368-TCDD	23.75	7.529e3	9.421e3	1.084	0.80	0.77	127.5	YES	NO	bd	bb	1.343
5	1289-TCDD	27.24	3.195e2	4.356e2	0.975	0.73	0.77	4.7	YES	NO	bb	bb	0.067
6	Total-tetradioxins	26.27	1.624e3	2.359e3	1.099	0.69	0.77	19.1	YES	NO	bb	bb	0.311
7	Total-tetradioxins	25.82	1.024e3	1.375e3	1.099	0.74	0.77	17.1	YES	NO	bd	bd	0.188
8	Total-tetradioxins	25.62	1.272e3	1.670e3	1.099	0.76	0.77	20.6	YES	NO	db	db	0.230

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentadioxins	31.09	2.086e3	1.404e3	1.392	1.49	1.55	23.4	YES	NO	bb	bb	0.483
2	Total-pentadioxins	30.53	5.059e3	3.575e3	1.392	1.41	1.55	66.5	YES	NO	bd	dd	1.195
3	Total-pentadioxins	30.39	4.082e3	2.926e3	1.392	1.40	1.55	49.4	YES	NO	bb	bd	0.970
4	Total-pentadioxins	30.16	8.076e3	5.589e3	1.392	1.45	1.55	106.0	YES	NO	bb	bb	1.891
5	12378-PeCDD	31.77	4.454e3	3.296e3	1.087	1.35	1.55	51.4	YES	NO	bb	bb	1.374
6	12479-PECDD	29.07	2.049e4	1.332e4	1.837	1.54	1.55	154.3	YES	NO	MM	MM	3.545

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.75	1.442e4	1.166e4	0.985	1.24	1.24	92.4	YES	NO	bb	bb	3.210
2	123678-HxCDD	36.36	7.600e4	6.082e4	1.021	1.25	1.24	464.6	YES	NO	dd	dd	16.013
3	123478-HxCDD	36.25	6.145e3	4.733e3	0.987	1.30	1.24	37.5	YES	NO	bd	bd	1.357
4	Total-hexadioxins	35.38	1.149e5	9.336e4	1.007	1.23	1.24	511.1	YES	NO	bb	bb	25.096
5	Total-hexadioxins	35.01	2.514e4	2.071e4	1.007	1.21	1.24	150.2	YES	NO	bb	bb	5.524
6	124679-HXCDD	34.24	9.114e4	7.487e4	1.033	1.22	1.24	546.3	YES	NO	bb	bb	19.792

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.51	1.644e6	1.595e6	1.253	1.03	1.05	3786.9	YES	NO	bb	bb	441.011
2	1234679-HPCDD	39.44	1.344e6	1.279e6	1.286	1.05	1.05	3277.8	YES	NO	bb	bb	347.772

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:13:49 Pacific Standard Time

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.25	3.527e3	4.660e3	1.099	0.76	0.77	61.3	YES	NO	bb	bb	0.640
2	Total-tetradioxins	24.97	2.553e3	3.323e3	1.099	0.77	0.77	35.7	YES	NO	bb	bb	0.459
3	Total-tetradioxins	24.04	5.304e3	6.337e3	1.099	0.84	0.77	94.0	YES	NO	db	bd	0.910
4	1368-TCDD	23.75	7.529e3	9.421e3	1.084	0.80	0.77	127.5	YES	NO	bd	bb	1.343
5	1289-TCDD	27.24	3.195e2	4.356e2	0.975	0.73	0.77	4.7	YES	NO	bb	bb	0.067
6	Total-tetradioxins	26.27	1.624e3	2.359e3	1.099	0.69	0.77	19.1	YES	NO	bb	bb	0.311
7	Total-tetradioxins	25.82	1.024e3	1.375e3	1.099	0.74	0.77	17.1	YES	NO	bd	bd	0.188
8	Total-tetradioxins	25.62	1.272e3	1.670e3	1.099	0.76	0.77	20.6	YES	NO	db	db	0.230
9	Total-pentadioxins	31.09	2.086e3	1.404e3	1.392	1.49	1.55	23.4	YES	NO	bb	bb	0.483
10	Total-pentadioxins	30.53	5.059e3	3.575e3	1.392	1.41	1.55	66.5	YES	NO	bd	dd	1.195
11	Total-pentadioxins	30.39	4.082e3	2.926e3	1.392	1.40	1.55	49.4	YES	NO	bb	bd	0.970
12	Total-pentadioxins	30.16	8.076e3	5.589e3	1.392	1.45	1.55	106.0	YES	NO	bb	bb	1.891
13	12378-PeCDD	31.77	4.454e3	3.296e3	1.087	1.35	1.55	51.4	YES	NO	bb	bb	1.374
14	123789-HxCDD	36.75	1.442e4	1.166e4	0.985	1.24	1.24	92.4	YES	NO	bb	bb	3.210
15	123678-HxCDD	36.36	7.600e4	6.082e4	1.021	1.25	1.24	464.6	YES	NO	dd	dd	16.013
16	123478-HxCDD	36.25	6.145e3	4.733e3	0.987	1.30	1.24	37.5	YES	NO	bd	bd	1.357
17	Total-hexadioxins	35.38	1.149e5	9.336e4	1.007	1.23	1.24	511.1	YES	NO	bb	bb	25.096
18	Total-hexadioxins	35.01	2.514e4	2.071e4	1.007	1.21	1.24	150.2	YES	NO	bb	bb	5.524
19	124679-HXCDD	34.24	9.114e4	7.487e4	1.033	1.22	1.24	546.3	YES	NO	bb	bb	19.792
20	1234678-HpCDD	40.51	1.644e6	1.595e6	1.253	1.03	1.05	3786.9	YES	NO	bb	bb	441.011
21	1234679-HPCDD	39.44	1.344e6	1.279e6	1.286	1.05	1.05	3277.8	YES	NO	bb	bb	347.772
22	OCDD	45.33	1.166e7	1.324e7	1.103	0.88	0.89	30736.0	YES	NO	bb	bb	3998.2...
23	12479-PECDD	29.07	2.049e4	1.332e4	1.837	1.54	1.55	154.3	YES	NO	MM	MM	3.545

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.66	4.904e3	5.750e3	0.933	0.85	0.77	17.3	YES	NO	dd	dd	0.765
2	Total-tetrafurans	24.23	3.199e3	4.156e3	0.933	0.77	0.77	14.8	YES	NO	db	db	0.528
3	Total-tetrafurans	24.09	2.130e3	2.770e3	0.933	0.77	0.77	10.0	YES	NO	dd	dd	0.352
4	Total-tetrafurans	23.99	1.088e4	1.387e4	0.933	0.78	0.77	45.1	YES	NO	dd	dd	1.776
5	Total-tetrafurans	23.84	2.260e3	2.896e3	0.933	0.78	0.77	10.7	YES	NO	dd	dd	0.370
6	Total-tetrafurans	23.74	1.063e4	1.273e4	0.933	0.83	0.77	51.8	YES	NO	dd	dd	1.676
7	Total-tetrafurans	23.33	8.799e3	1.249e4	0.933	0.70	0.77	41.7	YES	NO	bd	bd	1.528
8	Total-tetrafurans	22.75	3.185e3	4.507e3	0.933	0.71	0.77	16.0	YES	NO	bb	bb	0.552
9	1368-TCDF	22.45	2.662e3	3.807e3	1.064	0.70	0.77	8.7	YES	NO	bb	bb	0.407
10	Total-tetrafurans	26.40	4.433e3	5.745e3	0.933	0.77	0.77	21.4	YES	NO	dd	dd	0.730
11	Total-tetrafurans	26.24	3.875e3	4.967e3	0.933	0.78	0.77	15.9	YES	NO	dd	dd	0.635
12	2378-TCDF	26.01	8.848e3	1.108e4	0.876	0.80	0.77	38.9	YES	NO	bd	bd	1.523
13	Total-tetrafurans	25.82	1.783e3	2.418e3	0.933	0.74	0.77	8.5	YES	NO	db	db	0.302
14	Total-tetrafurans	25.77	1.064e3	1.548e3	0.933	0.69	0.77	7.2	YES	NO	bd	bd	0.187
15	Total-tetrafurans	25.10	5.982e3	7.807e3	0.933	0.77	0.77	27.2	YES	NO	bb	db	0.990
16	Total-tetrafurans	24.90	9.662e3	1.271e4	0.933	0.76	0.77	43.6	YES	NO	db	dd	1.605
17	Total-tetrafurans	24.76	4.010e3	5.891e3	0.933	0.68	0.77	18.9	YES	NO	dd	dd	0.711
18	Total-pentafurans	29.71	8.480e3	5.634e3	0.866	1.51	1.55	77.7	YES	NO	dd	dd	1.420
19	Total-pentafurans	29.53	2.249e3	1.420e3	0.866	1.58	1.55	22.8	YES	NO	bd	dd	0.369
20	Total-pentafurans	29.38	2.733e3	1.925e3	0.866	1.42	1.55	19.0	YES	NO	db	dd	0.469
21	Total-pentafurans	29.22	1.135e4	6.920e3	0.866	1.64	1.55	101.5	YES	NO	dd	dd	1.837
22	Total-pentafurans	29.09	2.589e5	1.670e5	0.866	1.55	1.55	2121.8	YES	NO	dd	dd	42.839
23	Total-pentafurans	28.91	1.871e4	1.248e4	0.866	1.50	1.55	159.2	YES	NO	dd	dd	3.137
24	Total-pentafurans	28.81	2.190e3	1.510e3	0.866	1.45	1.55	23.6	YES	NO	bd	bd	0.372
25	Total-pentafurans	32.55	2.319e3	1.510e3	0.866	1.54	1.55	18.8	YES	NO	db	db	0.385
26	23478-PeCDF	31.51	4.062e4	2.854e4	0.911	1.42	1.55	367.2	YES	NO	db	dd	7.352
27	Total-pentafurans	31.37	3.701e4	2.498e4	0.866	1.48	1.55	320.5	YES	NO	dd	dd	6.235
28	Total-pentafurans	30.38	2.846e4	1.720e4	0.866	1.66	1.55	243.4	YES	NO	bd	bb	4.592
29	12378-PeCDF	30.18	1.871e4	1.250e4	0.845	1.50	1.55	168.7	YES	NO	bb	bb	2.927
30	123789-HxCDF	37.13	5.312e4	4.136e4	1.187	1.28	1.24	281.6	YES	NO	bb	bb	10.679
31	234678-HxCDF	36.09	8.584e4	7.016e4	1.229	1.22	1.24	371.0	YES	NO	bb	bb	15.429
32	Total-hexafurans	35.60	5.575e3	4.474e3	1.208	1.25	1.24	31.6	YES	NO	bb	bb	1.012
33	123678-HxCDF	35.27	6.669e4	5.289e4	1.248	1.26	1.24	345.3	YES	NO	db	dd	10.983
34	123478-HxCDF	35.13	3.688e5	3.001e5	1.182	1.23	1.24	2073.4	YES	NO	bd	bd	66.862
35	Total-hexafurans	34.98	2.026e4	1.704e4	1.208	1.19	1.24	121.8	YES	NO	bb	bb	3.756
36	Total-hexafurans	34.51	1.140e6	9.270e5	1.208	1.23	1.24	6244.6	YES	NO	bb	bb	208.139
37	Total-hexafurans	34.21	1.272e4	1.020e4	1.208	1.25	1.24	69.3	YES	NO	bb	bb	2.308

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	Total-hexafurans	33.68	4.558e5	3.718e5	1.208	1.23	1.24	2456.0	YES	NO	bb	bd	83.328
39	123468-HXCDF	33.47	1.332e5	1.076e5	1.197	1.24	1.24	729.0	YES	NO	bb	bb	23.754
40	1234789-HpCDF	41.26	1.441e5	1.362e5	1.165	1.06	1.05	497.2	YES	NO	bb	bb	36.857
41	Total-heptafurans	39.67	3.015e6	2.913e6	1.185	1.03	1.05	12276.7	YES	NO	bd	bd	707.453
42	Total-heptafurans	39.41	1.830e4	1.696e4	1.185	1.08	1.05	68.8	YES	NO	db	db	4.208
43	1234678-HpCDF	38.99	1.100e6	1.061e6	1.204	1.04	1.05	4552.0	YES	NO	bd	bd	235.585
44	OCDF	45.57	1.607e6	1.798e6	1.186	0.89	0.89	11446.1	YES	NO	dd	dd	508.104
45	Total-penta1	27.43	2.173e5	1.444e5		1.50	1.55	4031.5	YES	NO	bb	bb	31.243
46	Total-tetradioxins	25.25	3.527e3	4.660e3	1.099	0.76	0.77	61.3	YES	NO	bb	bb	0.640
47	Total-tetradioxins	24.97	2.553e3	3.323e3	1.099	0.77	0.77	35.7	YES	NO	bb	bb	0.459
48	Total-tetradioxins	24.04	5.304e3	6.337e3	1.099	0.84	0.77	94.0	YES	NO	db	bd	0.910
49	1368-TCDD	23.75	7.529e3	9.421e3	1.084	0.80	0.77	127.5	YES	NO	bd	bb	1.343
50	1289-TCDD	27.24	3.195e2	4.356e2	0.975	0.73	0.77	4.7	YES	NO	bb	bb	0.067
51	Total-tetradioxins	26.27	1.624e3	2.359e3	1.099	0.69	0.77	19.1	YES	NO	bb	bb	0.311
52	Total-tetradioxins	25.82	1.024e3	1.375e3	1.099	0.74	0.77	17.1	YES	NO	bd	bd	0.188
53	Total-tetradioxins	25.62	1.272e3	1.670e3	1.099	0.76	0.77	20.6	YES	NO	db	db	0.230
54	Total-pentadioxins	31.09	2.086e3	1.404e3	1.392	1.49	1.55	23.4	YES	NO	bb	bb	0.483
55	Total-pentadioxins	30.53	5.059e3	3.575e3	1.392	1.41	1.55	66.5	YES	NO	bd	dd	1.195
56	Total-pentadioxins	30.39	4.082e3	2.926e3	1.392	1.40	1.55	49.4	YES	NO	bb	bd	0.970
57	Total-pentadioxins	30.16	8.076e3	5.589e3	1.392	1.45	1.55	106.0	YES	NO	bb	bb	1.891
58	12378-PeCDD	31.77	4.454e3	3.296e3	1.087	1.35	1.55	51.4	YES	NO	bb	bb	1.374
59	123789-HxCDD	36.75	1.442e4	1.166e4	0.985	1.24	1.24	92.4	YES	NO	bb	bb	3.210
60	123678-HxCDD	36.36	7.600e4	6.082e4	1.021	1.25	1.24	464.6	YES	NO	dd	dd	16.013
61	123478-HxCDD	36.25	6.145e3	4.733e3	0.987	1.30	1.24	37.5	YES	NO	bd	bd	1.357
62	Total-hexadioxins	35.38	1.149e5	9.336e4	1.007	1.23	1.24	511.1	YES	NO	bb	bb	25.096
63	Total-hexadioxins	35.01	2.514e4	2.071e4	1.007	1.21	1.24	150.2	YES	NO	bb	bb	5.524
64	124679-HXCDD	34.24	9.114e4	7.487e4	1.033	1.22	1.24	546.3	YES	NO	bb	bb	19.792
65	1234678-HpCDD	40.51	1.644e6	1.595e6	1.253	1.03	1.05	3786.9	YES	NO	bb	bb	441.011
66	1234679-HPCDD	39.44	1.344e6	1.279e6	1.286	1.05	1.05	3277.8	YES	NO	bb	bb	347.772
67	OCDD	45.33	1.166e7	1.324e7	1.103	0.88	0.89	30736.0	YES	NO	bb	bb	3998.2...
68	12479-PECDD	29.07	2.049e4	1.332e4	1.837	1.54	1.55	154.3	YES	NO	MM	MM	3.545

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.44	9.914e6					32.3	YES		dd		
2	FUNCTION1 PFK	21.32	2.181e7					45.5	YES		bd		
3	FUNCTION1 PFK	27.78	3.482e7					4.0	YES		db		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.46	1.602e5					7.7	YES		db		0.000
2	FUNCTION2 PFK	29.31	7.290e6					12.2	YES		bd		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	39.01	1.476e3					0.3	NO		bd		
2	FUNCTION4 PFK	38.73	3.327e4					1.6	NO		db		
3	FUNCTION4 PFK	38.65	7.312e4					2.4	NO		bd		
4	FUNCTION4 PFK	38.50	8.302e3					0.8	NO		bb		
5	FUNCTION4 PFK	38.38	9.393e2					0.3	NO		bb		
6	FUNCTION4 PFK	38.32	2.055e4					1.9	NO		db		
7	FUNCTION4 PFK	38.27	1.017e4					0.9	NO		dd		
8	FUNCTION4 PFK	38.22	2.098e4					1.6	NO		bd		
9	FUNCTION4 PFK	38.12	1.757e4					1.6	NO		db		
10	FUNCTION4 PFK	38.07	4.166e3					0.7	NO		bd		
11	FUNCTION4 PFK	40.65	5.850e3					0.8	NO		dd		
12	FUNCTION4 PFK	40.59	1.185e4					0.8	NO		bd		
13	FUNCTION4 PFK	40.54	5.724e3					0.7	NO		bb		
14	FUNCTION4 PFK	40.01	3.495e3					0.7	NO		bb		
15	FUNCTION4 PFK	39.97	5.101e3					0.5	NO		db		
16	FUNCTION4 PFK	39.95	8.870e3					0.6	NO		bd		
17	FUNCTION4 PFK	39.85	1.134e4					1.5	NO		db		
18	FUNCTION4 PFK	39.81	2.786e4					2.0	NO		dd		
19	FUNCTION4 PFK	39.73	3.296e4					1.7	NO		dd		
20	FUNCTION4 PFK	39.68	1.699e4					1.3	NO		dd		
21	FUNCTION4 PFK	39.62	3.554e3					0.5	NO		bd		
22	FUNCTION4 PFK	39.58	2.585e3					0.4	NO		bb		
23	FUNCTION4 PFK	39.40	8.987e3					0.9	NO		bb		
24	FUNCTION4 PFK	39.26	3.632e4					1.9	NO		bb		
25	FUNCTION4 PFK	39.18	6.694e3					1.1	NO		bb		
26	FUNCTION4 PFK	39.08	3.632e4					1.3	NO		db		
27	FUNCTION4 PFK	41.81	1.601e4					0.9	NO		bd		
28	FUNCTION4 PFK	41.66	1.132e4					1.0	NO		bb		
29	FUNCTION4 PFK	41.57	1.523e4					1.3	NO		db		
30	FUNCTION4 PFK	41.53	2.365e4					1.8	NO		dd		
31	FUNCTION4 PFK	41.47	1.266e4					1.1	NO		dd		
32	FUNCTION4 PFK	41.44	8.817e3					1.1	NO		bd		
33	FUNCTION4 PFK	41.36	3.453e3					0.5	NO		bb		
34	FUNCTION4 PFK	41.19	1.434e4					1.1	NO		db		
35	FUNCTION4 PFK	41.15	8.259e3					0.8	NO		bd		
36	FUNCTION4 PFK	41.05	6.732e3					0.9	NO		bb		
37	FUNCTION4 PFK	40.95	7.234e3					0.9	NO		db		

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	40.90	6.982e3					0.9	NO		dd		
39	FUNCTION4 PFK	40.87	1.005e4					1.0	NO		dd		
40	FUNCTION4 PFK	40.83	5.128e3					0.7	NO		bd		
41	FUNCTION4 PFK	40.76	1.754e4					1.1	NO		db		
42	FUNCTION4 PFK	40.69	6.827e3					0.7	NO		dd		
43	FUNCTION4 PFK	42.89	1.328e4					1.3	NO		bb		
44	FUNCTION4 PFK	42.81	2.311e3					0.3	NO		db		
45	FUNCTION4 PFK	42.75	9.005e3					0.9	NO		dd		
46	FUNCTION4 PFK	42.68	3.298e4					2.1	NO		bd		
47	FUNCTION4 PFK	42.50	9.872e3					1.1	NO		db		
48	FUNCTION4 PFK	42.45	1.846e4					0.8	NO		bd		
49	FUNCTION4 PFK	42.31	2.856e4					1.4	NO		db		
50	FUNCTION4 PFK	42.24	2.660e4					1.2	NO		dd		
51	FUNCTION4 PFK	42.16	5.060e4					1.6	NO		dd		
52	FUNCTION4 PFK	42.02	4.697e4					1.9	NO		dd		
53	FUNCTION4 PFK	41.95	1.620e4					1.6	NO		bd		
54	FUNCTION4 PFK	41.84	8.926e3					1.0	NO		db		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.42	2.042e3					0.6	NO		bb		
2	FUNCTION5 PFK	43.30	6.442e2					0.4	NO		bb		
3	FUNCTION5 PFK	43.09	8.717e3					1.7	NO		bb		
4	FUNCTION5 PFK	45.53	4.230e3					1.0	NO		bd		
5	FUNCTION5 PFK	45.43	2.198e3					0.7	NO		bb		
6	FUNCTION5 PFK	45.37	4.828e3					0.6	NO		bb		
7	FUNCTION5 PFK	45.30	1.986e3					0.6	NO		bb		
8	FUNCTION5 PFK	45.18	8.123e2					0.5	NO		bb		
9	FUNCTION5 PFK	44.85	5.983e3					1.1	NO		bb		
10	FUNCTION5 PFK	44.75	6.543e3					1.2	NO		bb		
11	FUNCTION5 PFK	44.44	1.337e4					1.9	NO		bb		
12	FUNCTION5 PFK	44.32	4.829e3					1.1	NO		bb		
13	FUNCTION5 PFK	44.25	9.040e3					1.3	NO		db		
14	FUNCTION5 PFK	44.20	1.353e4					1.9	NO		bd		
15	FUNCTION5 PFK	44.09	1.257e4					2.1	NO		bb		
16	FUNCTION5 PFK	44.03	5.150e3					1.5	NO		db		
17	FUNCTION5 PFK	44.00	9.750e3					1.7	NO		bd		
18	FUNCTION5 PFK	43.52	6.763e3					0.8	NO		bb		
19	FUNCTION5 PFK	43.46	1.946e3					0.7	NO		bb		
20	FUNCTION5 PFK	46.29	9.077e3					1.9	NO		db		
21	FUNCTION5 PFK	46.24	1.822e4					2.3	NO		dd		
22	FUNCTION5 PFK	46.20	9.579e3					1.9	NO		dd		
23	FUNCTION5 PFK	46.17	1.153e4					2.2	NO		dd		
24	FUNCTION5 PFK	46.14	7.027e3					1.8	NO		dd		
25	FUNCTION5 PFK	46.10	8.483e3					1.7	NO		dd		
26	FUNCTION5 PFK	46.06	1.110e4					1.9	NO		dd		
27	FUNCTION5 PFK	46.02	1.131e4					1.5	NO		bd		
28	FUNCTION5 PFK	45.89	7.309e2					0.4	NO		bb		
29	FUNCTION5 PFK	45.69	4.559e3					1.2	NO		db		
30	FUNCTION5 PFK	45.65	4.895e3					1.1	NO		bd		
31	FUNCTION5 PFK	45.58	1.404e4					1.7	NO		db		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	22.54	4.630e2					7.8	YES		db		0.000
2	FUNCTION1 HXCD...	22.38	8.581e1					2.1	NO		bd		0.000
3	FUNCTION1 HXCD...	22.06	8.056e1					2.2	NO		bb		0.000
4	FUNCTION1 HXCD...	27.91	6.509e2					13.1	YES		bb		0.000
5	FUNCTION1 HXCD...	27.03	1.160e3					26.4	YES		bb		0.000
6	FUNCTION1 HXCD...	26.38	3.704e3					70.9	YES		bb		0.000
7	FUNCTION1 HXCD...	26.16	2.770e3					56.9	YES		db		0.000
8	FUNCTION1 HXCD...	26.01	2.838e3					60.0	YES		bd		0.000
9	FUNCTION1 HXCD...	25.80	1.521e2					3.1	YES		bb		0.000
10	FUNCTION1 HXCD...	25.36	1.404e3					26.5	YES		bb		0.000
11	FUNCTION1 HXCD...	24.01	3.475e3					74.5	YES		bb		0.000
12	FUNCTION1 HXCD...	22.98	1.204e2					3.9	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.64	3.450e2					6.4	YES		bb		0.000
2	FUNCTION2 HPCD...	32.49	5.014e2					10.7	YES		bb		0.000
3	FUNCTION2 HPCD...	30.13	8.779e1					3.0	YES		bb		0.000
4	FUNCTION2 HPCD...	29.36	3.646e2					10.9	YES		db		0.000
5	FUNCTION2 HPCD...	29.22	1.699e3					41.2	YES		bd		0.000
6	FUNCTION2 HPCD...	28.76	9.830e1					2.9	NO		bb		0.000
7	FUNCTION2 HPCD...	32.94	2.410e2					5.2	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	35.91	7.219e1					4.5	YES		bb		0.000
2	FUNCTION3 OCDPE	34.48	7.067e2					17.3	YES		bb		0.000
3	FUNCTION3 OCDPE	33.96	1.858e2					5.2	YES		bb		0.000
4	FUNCTION3 OCDPE	33.63	8.048e1					5.3	YES		bb		0.000
5	FUNCTION3 OCDPE	33.37	3.741e2					9.5	YES		bb		0.000

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ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.64	4.168e3					91.3	YES		bb		0.000

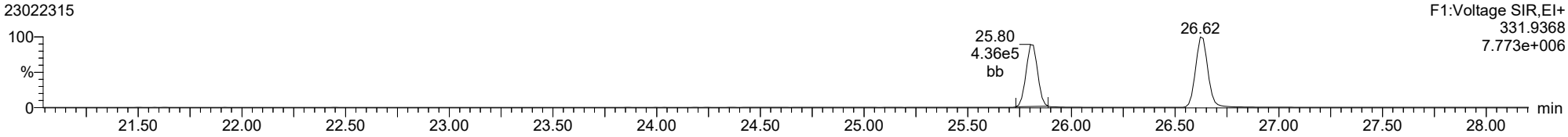
ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	45.33	1.671e3					23.8	YES		bb		0.000

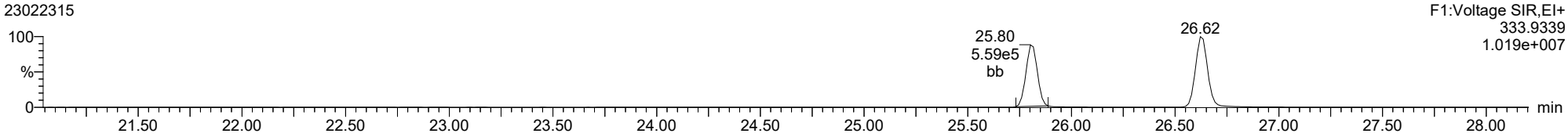
Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: 23A0133-11, Name: 23022315, Date: 23-Feb-2023, Time: 21:46:06, Conditions: AUTOSPEC01, User: pk

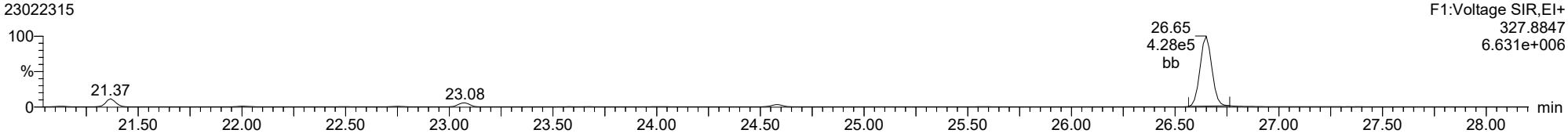
13C-1234-TCDD



13C-1234-TCDD



37CL-2378-TCDD



ID: 23A0133-11, Name: 23022315, Date: 23-Feb-2023, Time: 21:46:06, Conditions: AUTOSPEC01, User: pk

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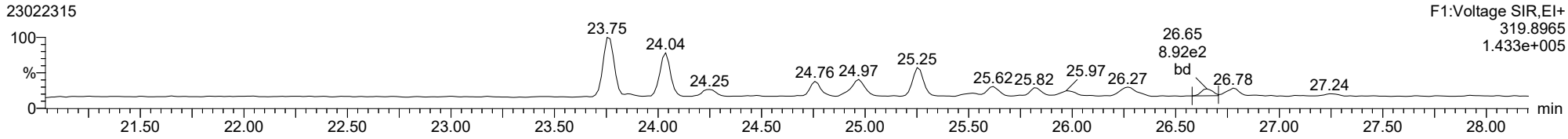

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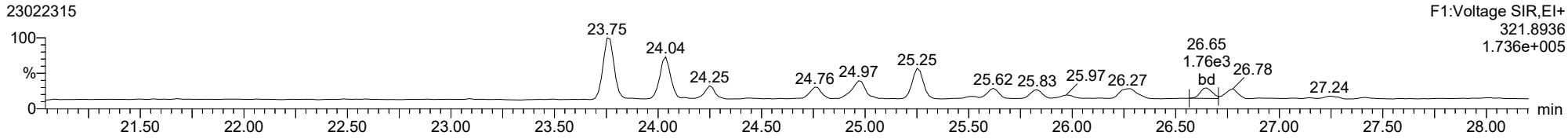

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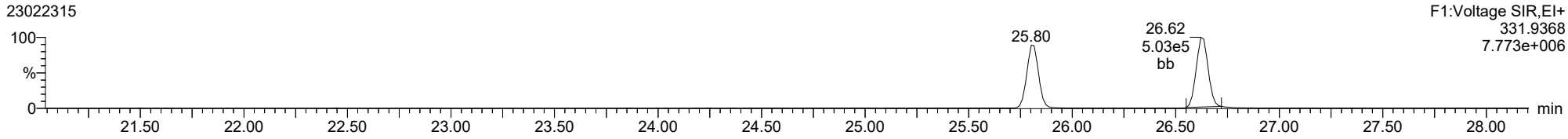

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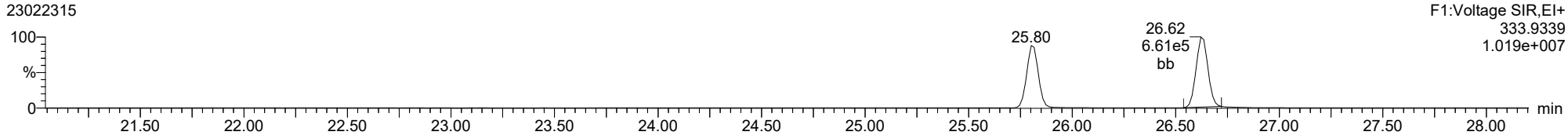

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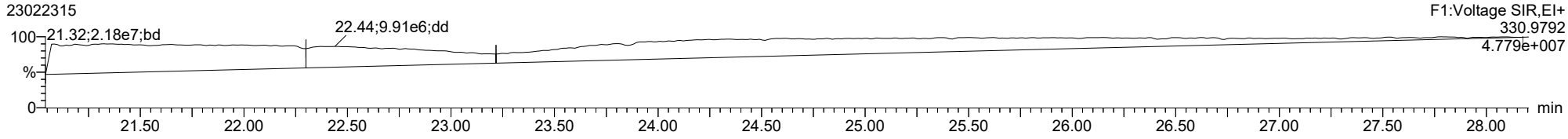
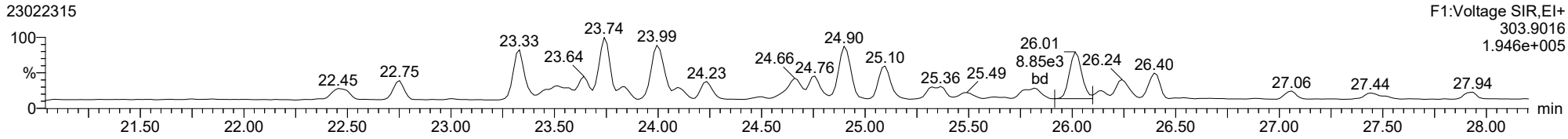


ID: 23A0133-11, Name: 23022315, Date: 23-Feb-2023, Time: 21:46:06, Conditions: AUTOSPEC01, User: pk

2378-TCDF



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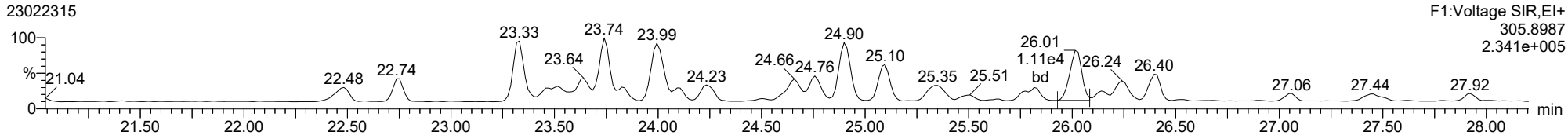

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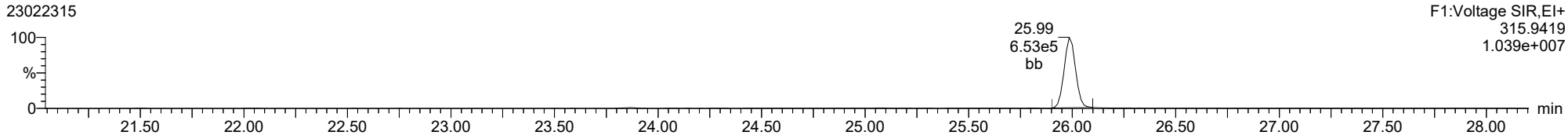

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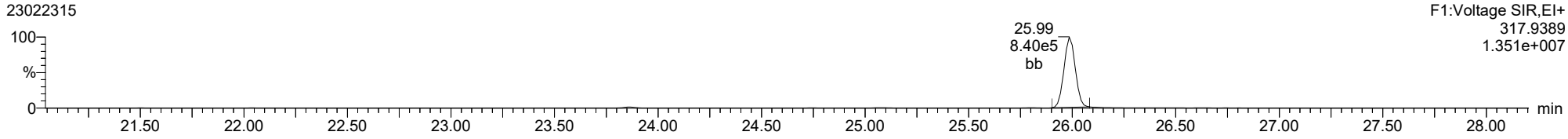
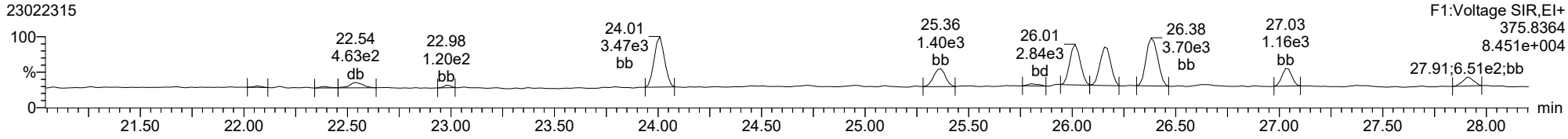


FUNCTION1 HXCDPE



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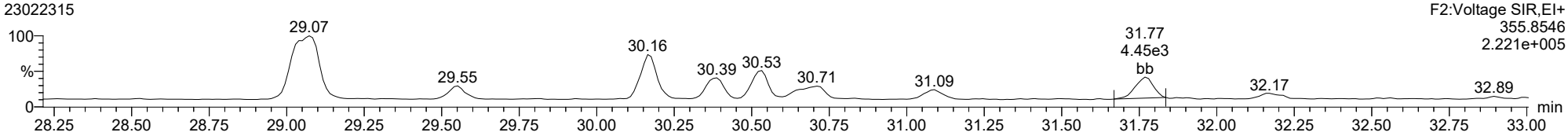
12378-PeCDD



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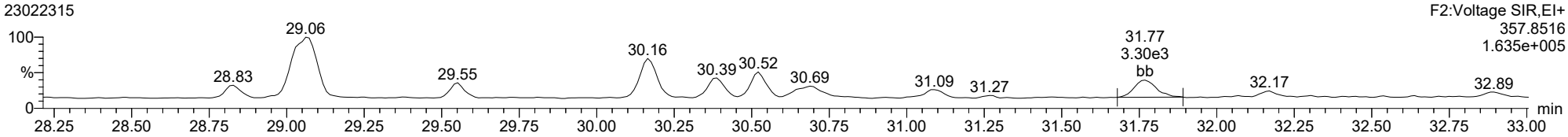

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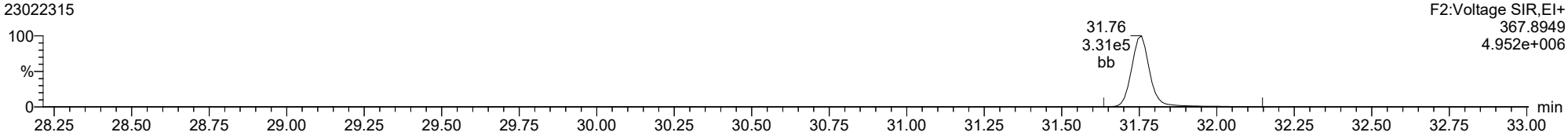

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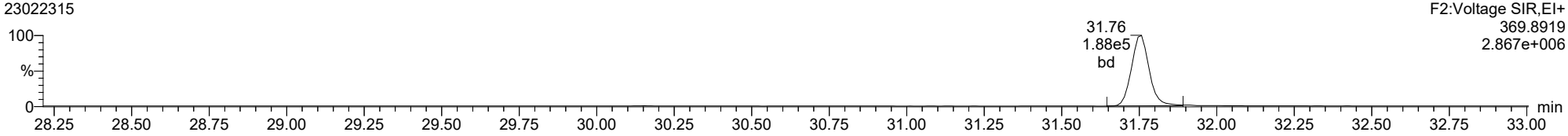
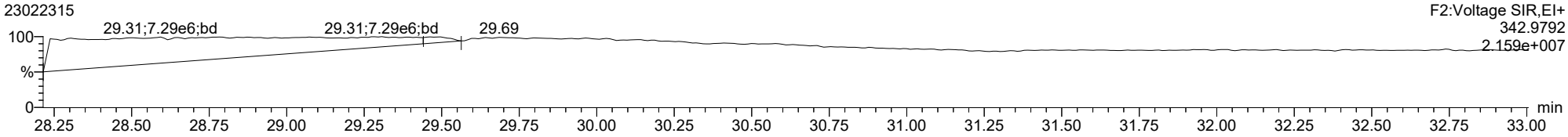


FUNCTION2 PFK



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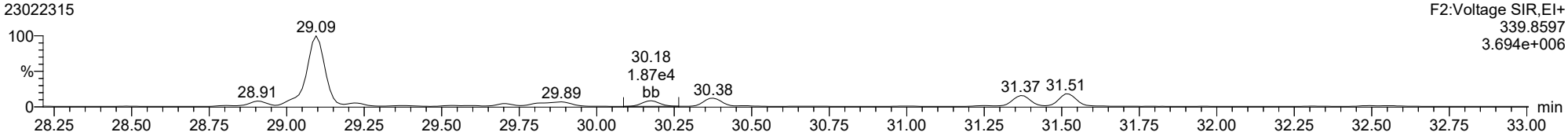

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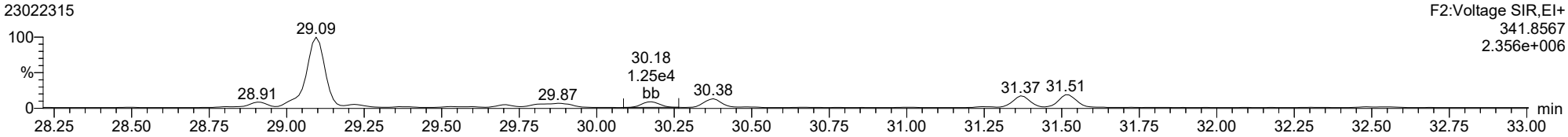

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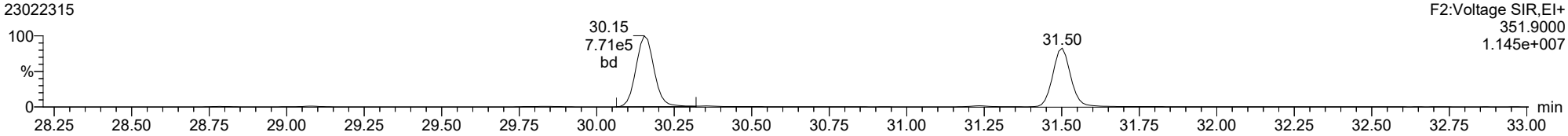

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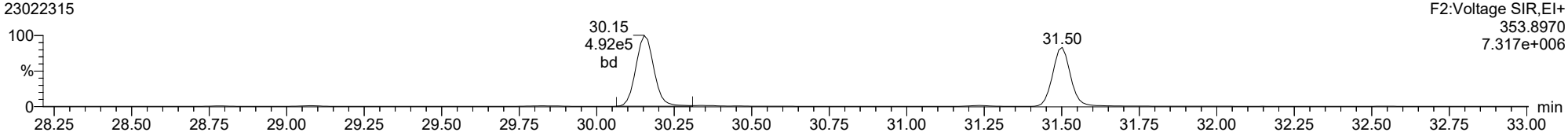
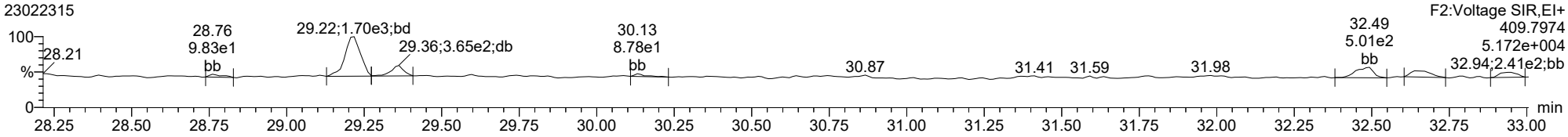


FUNCTION2 HPCDPE



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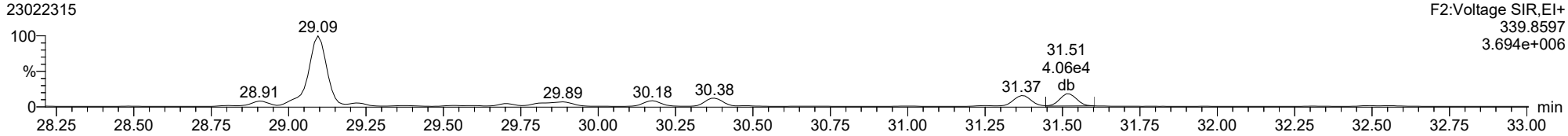
23478-PeCDF



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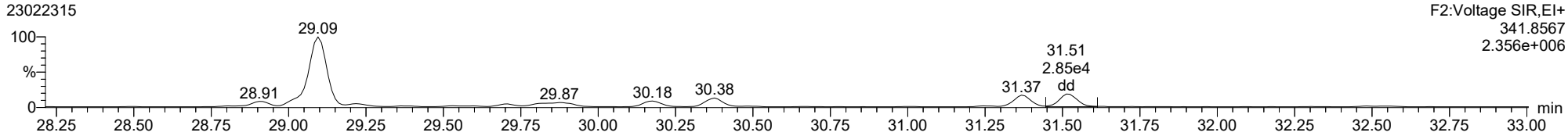

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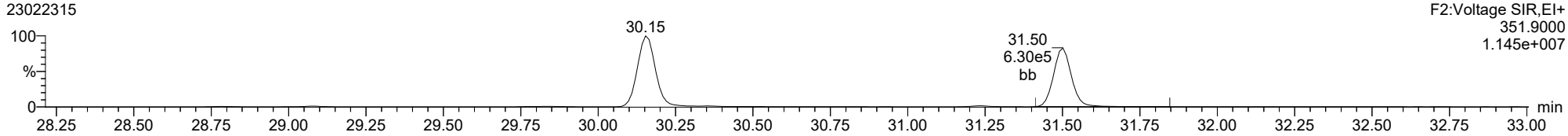

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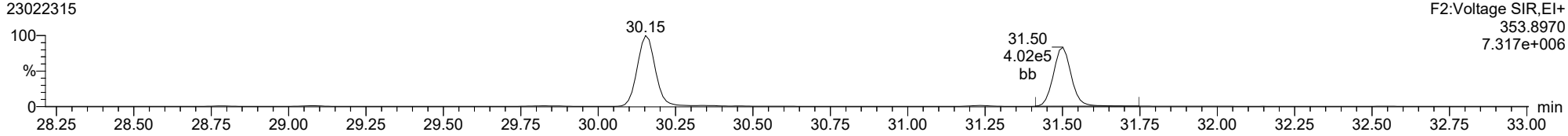
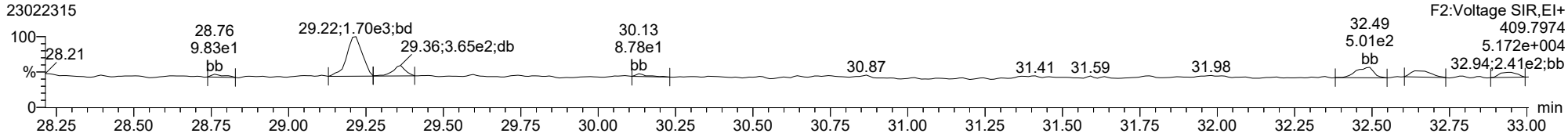


FUNCTION2 HPCDPE



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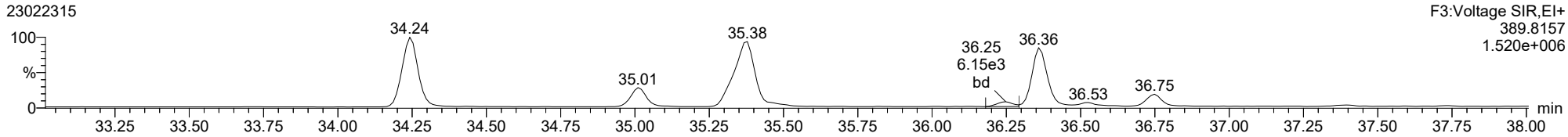

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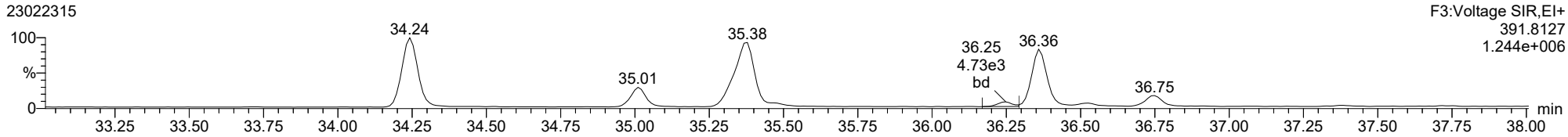

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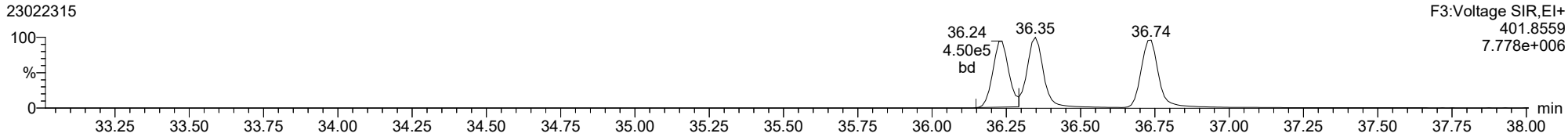

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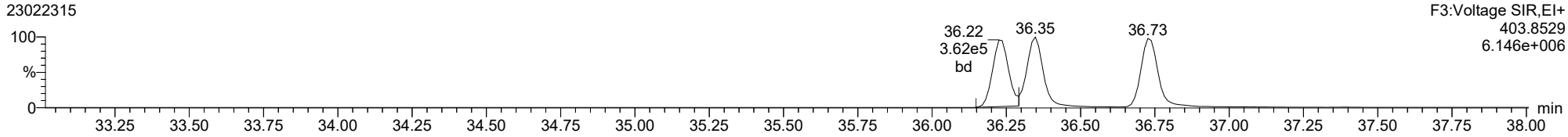
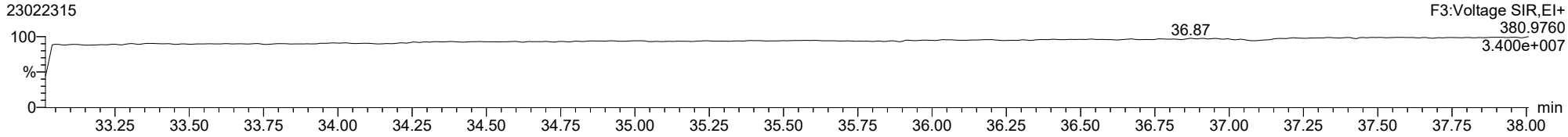


FUNCTION3 PFK



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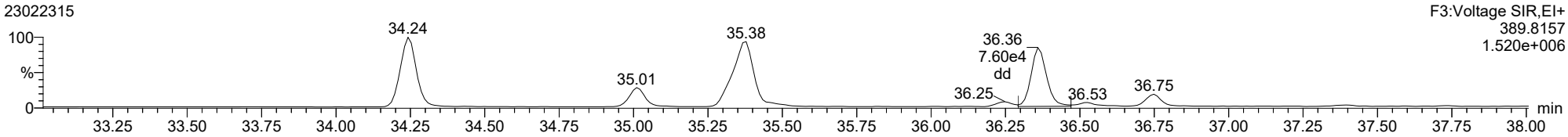
123678-HxCDD



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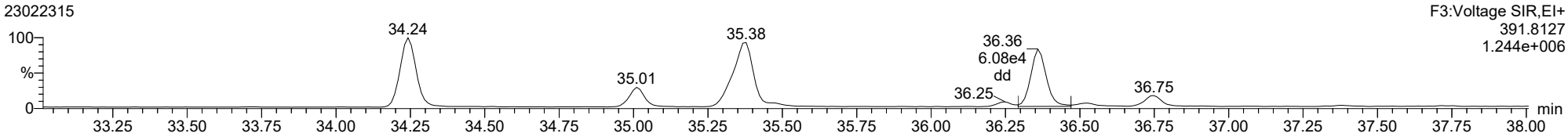

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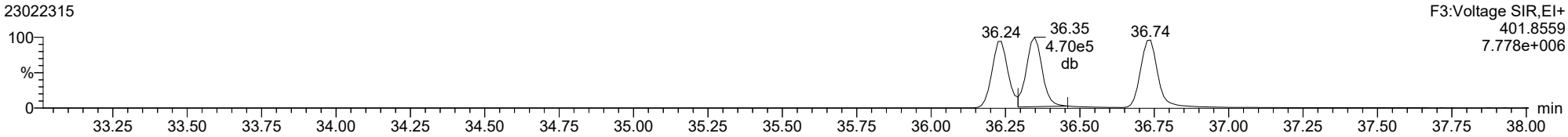

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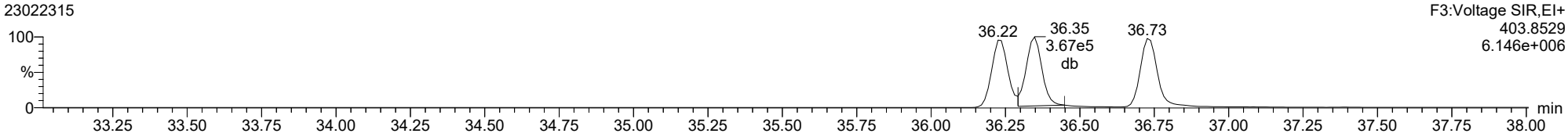

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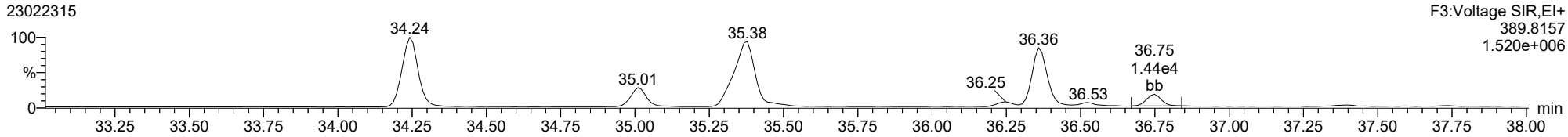

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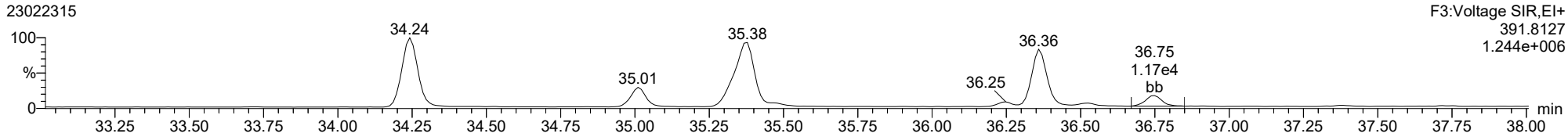

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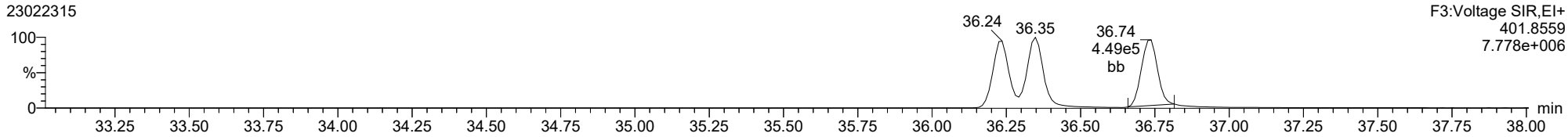

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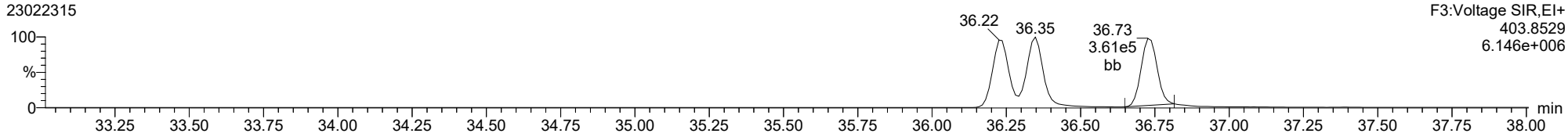

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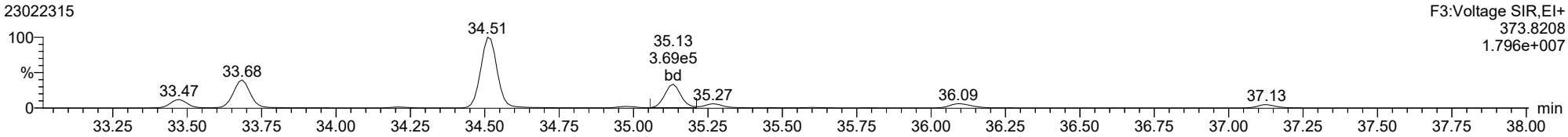
123478-HxCDF



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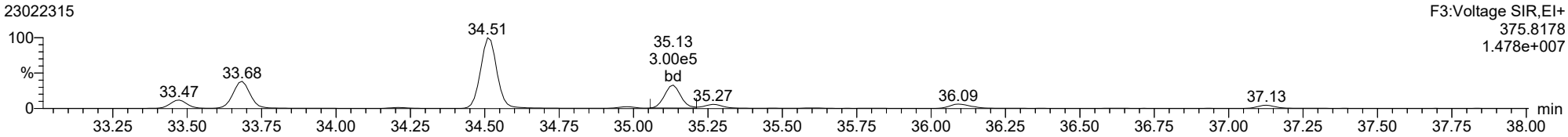

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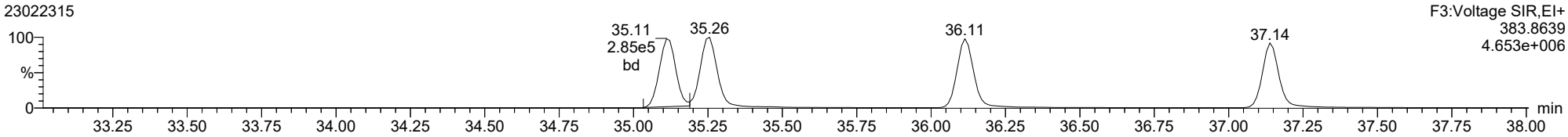

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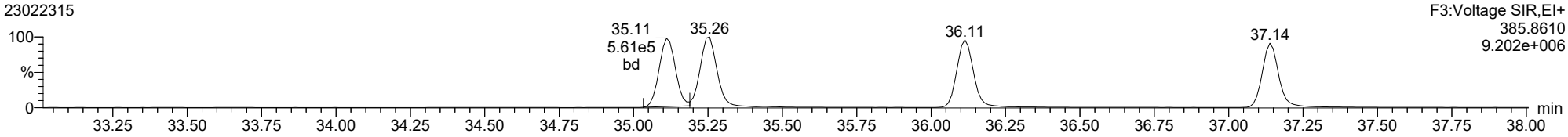
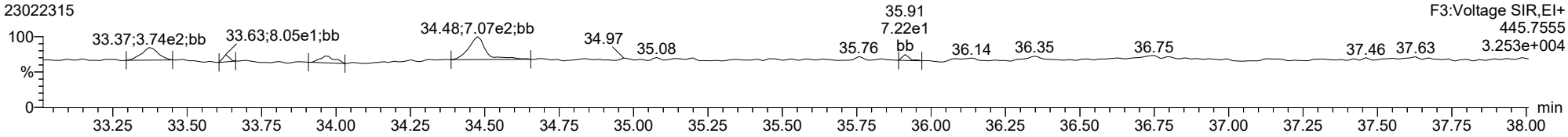


FUNCTION3 OCDPE



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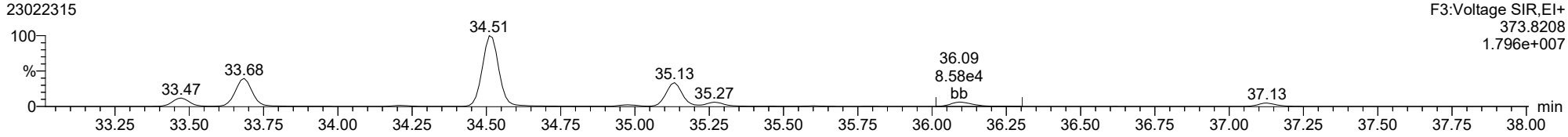

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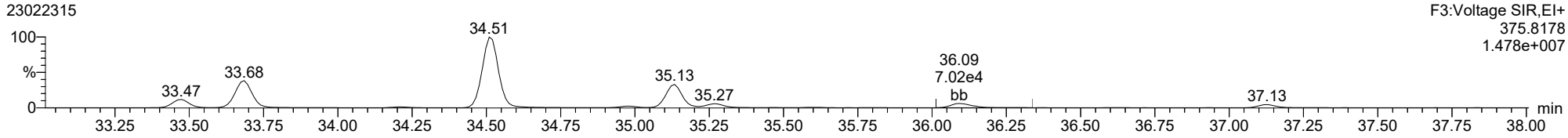

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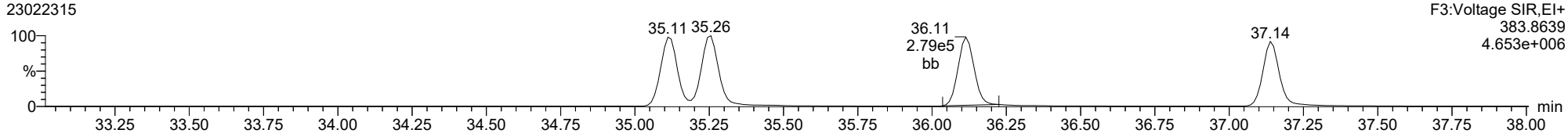

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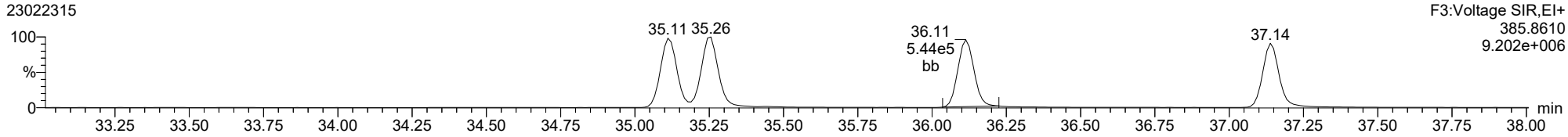

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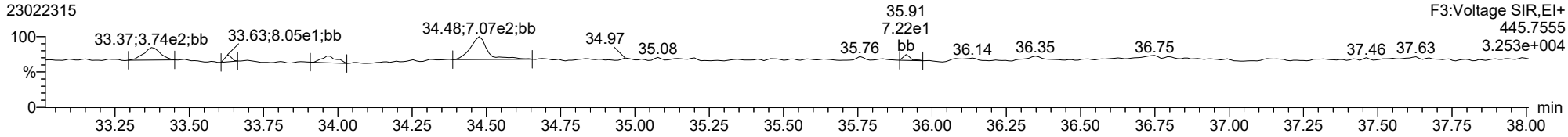

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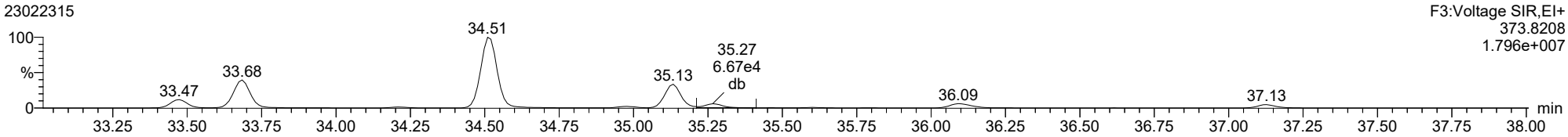

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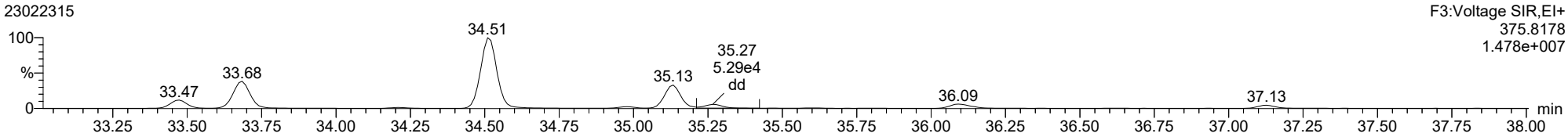

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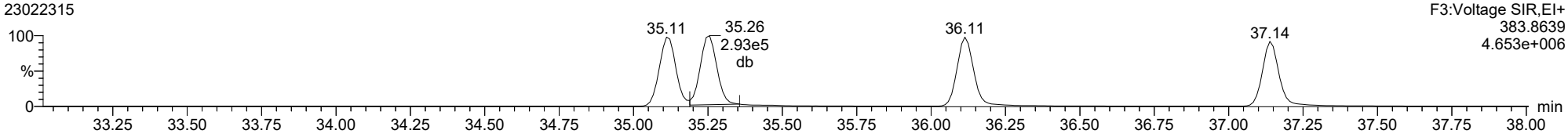

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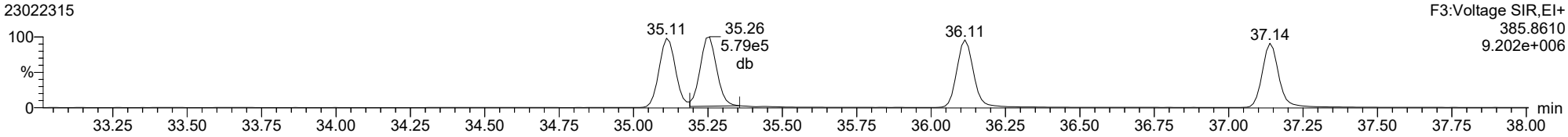

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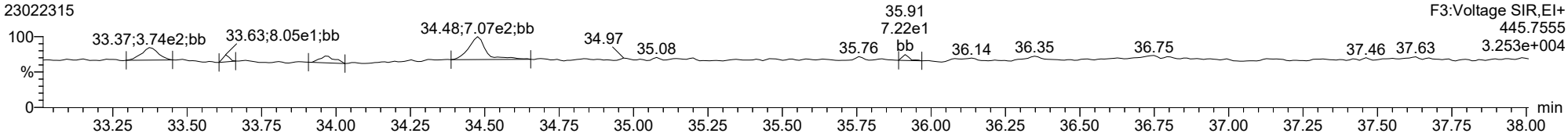

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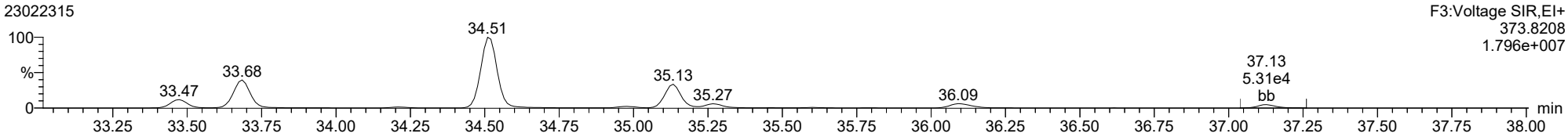

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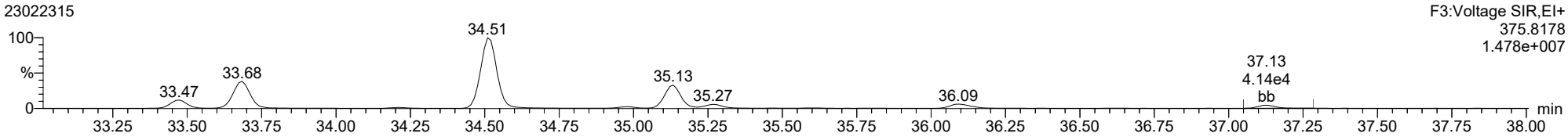

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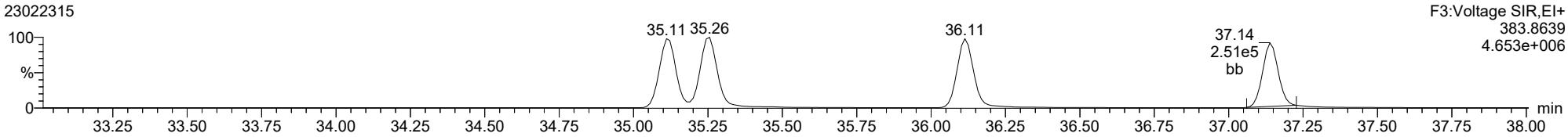

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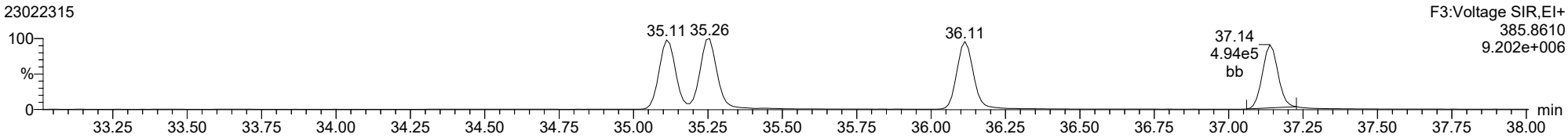

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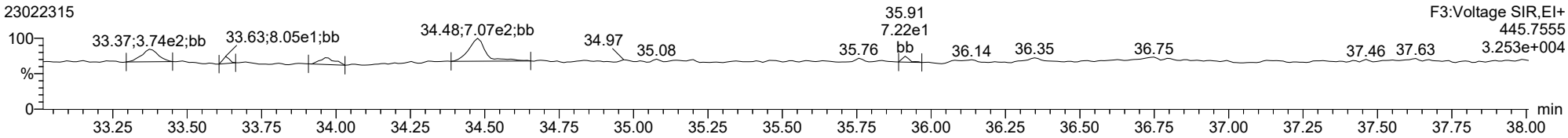

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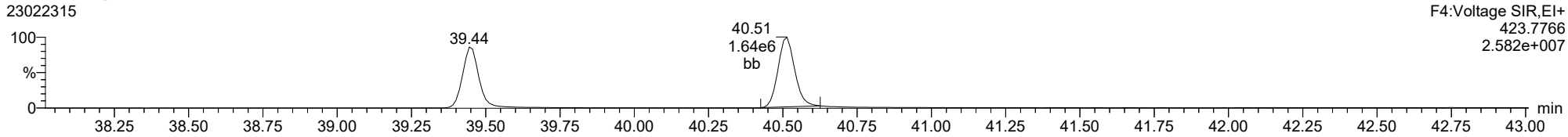

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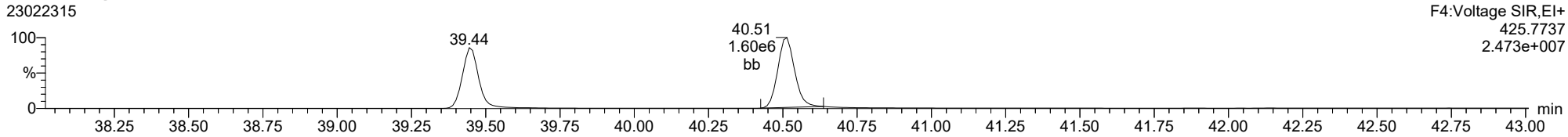

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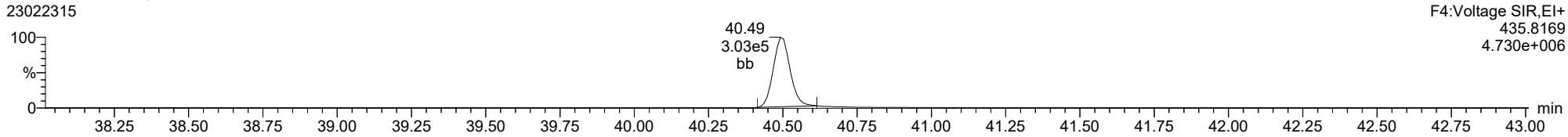

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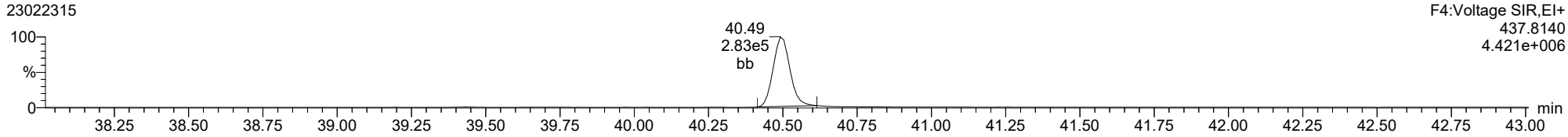
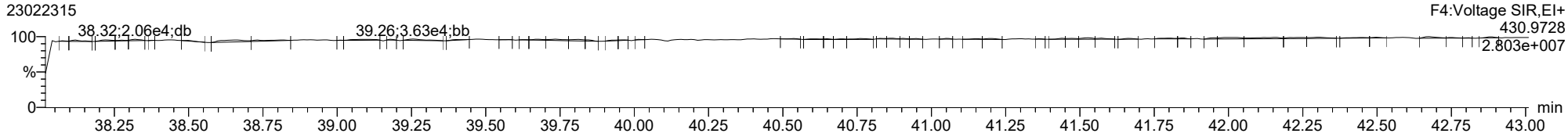


FUNCTION4 PFK



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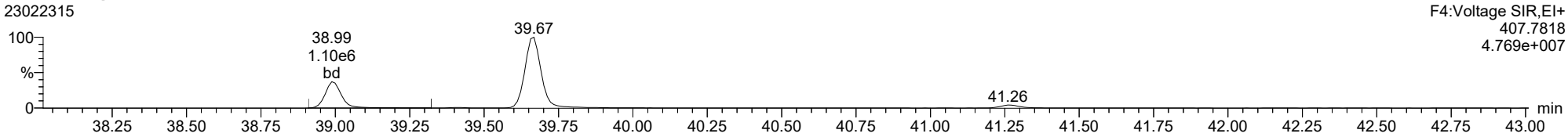

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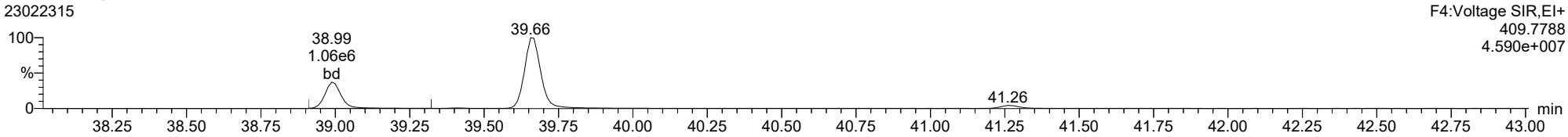

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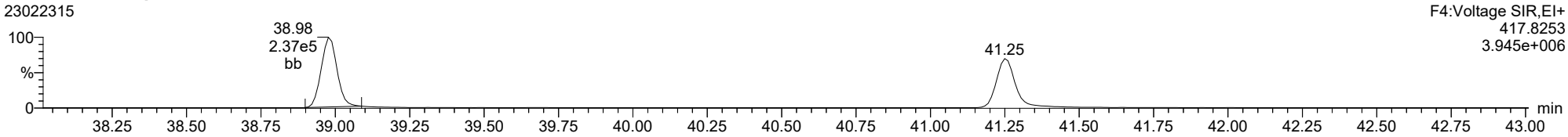

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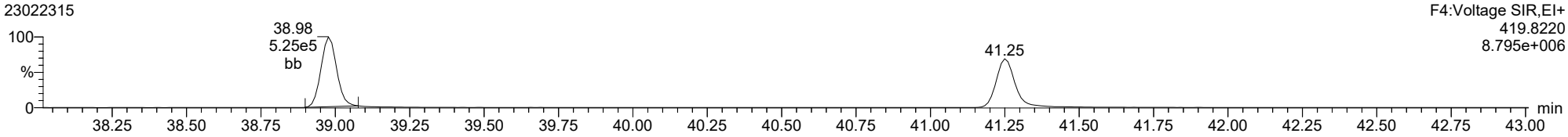

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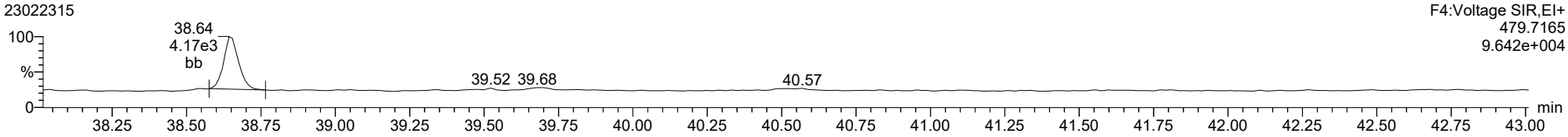

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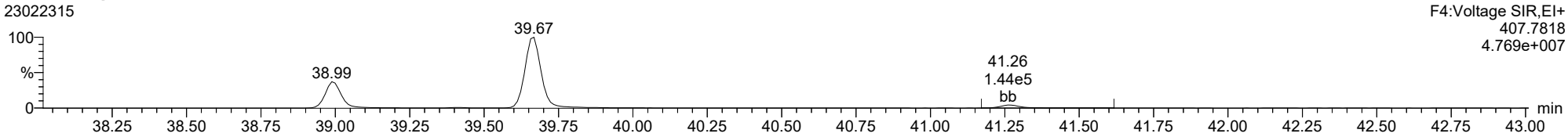

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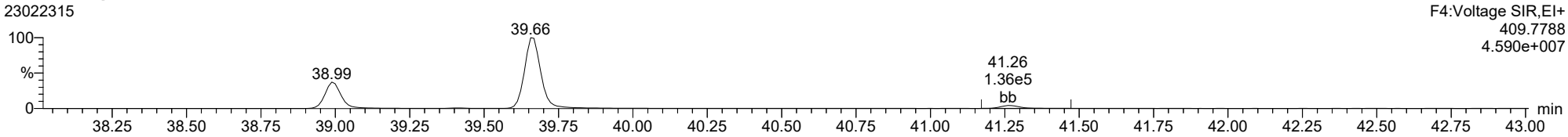

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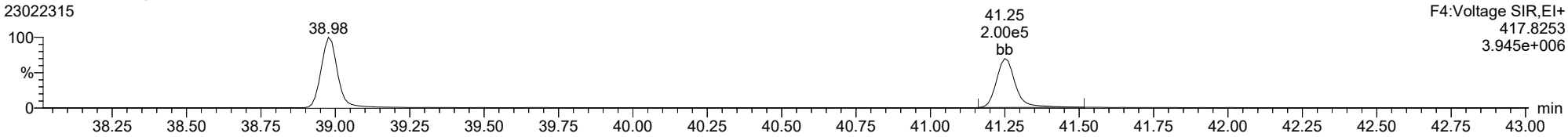

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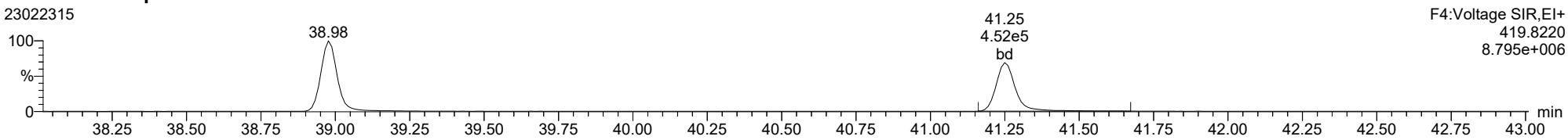

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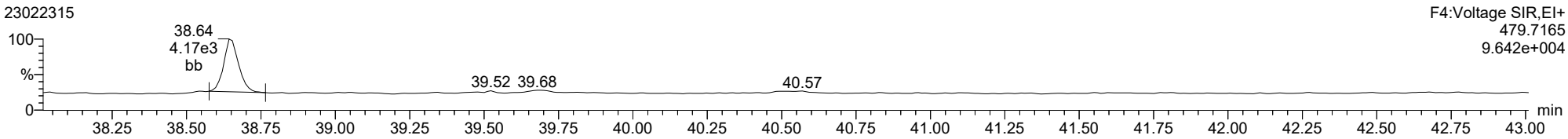

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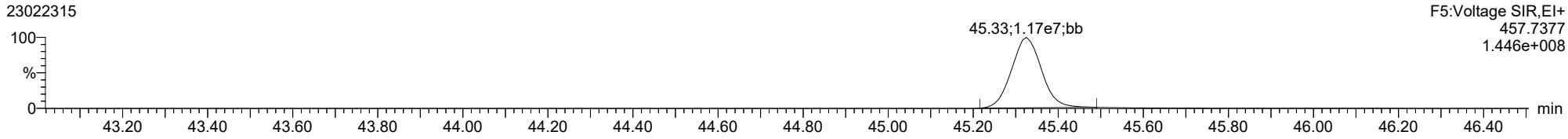

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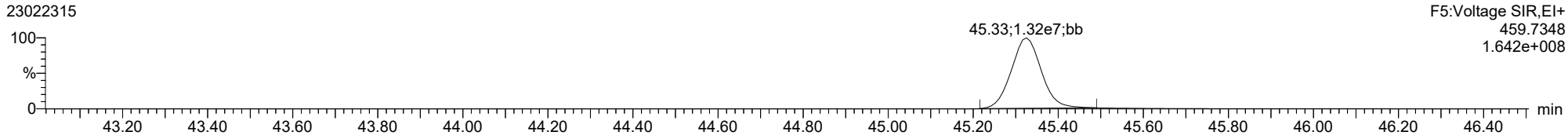

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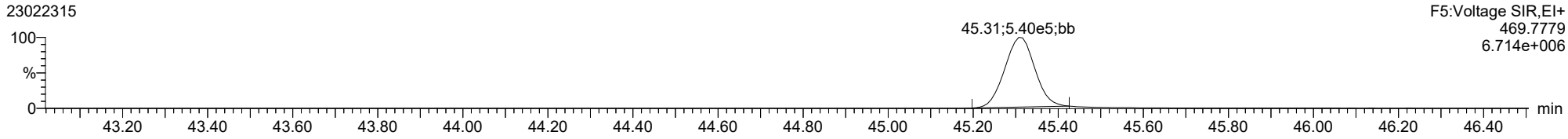

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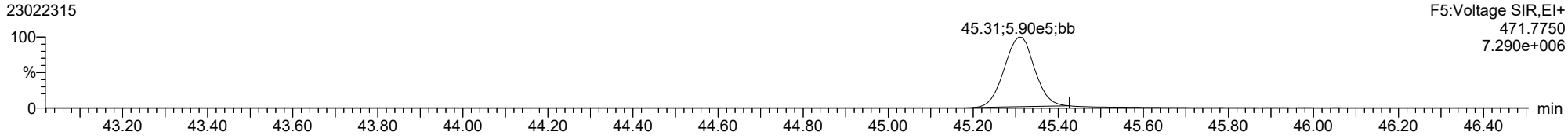
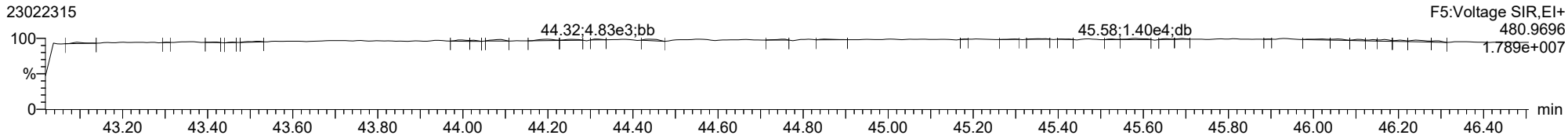


FUNCTION5 PFK



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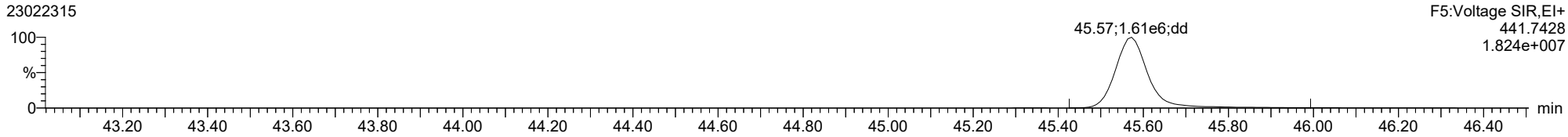

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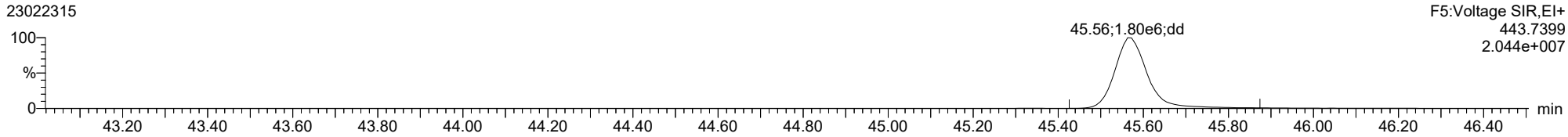

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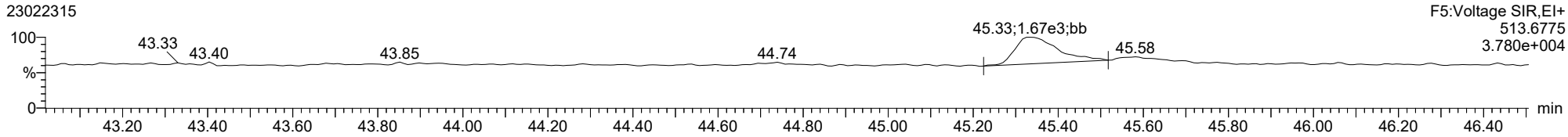

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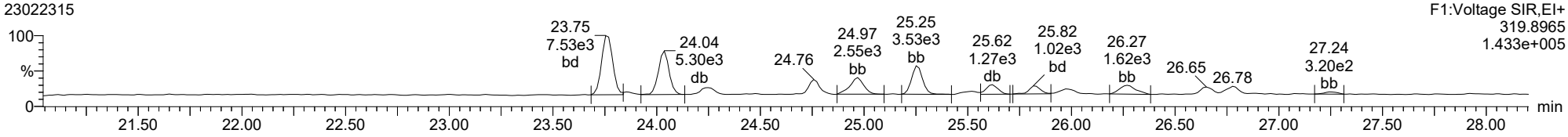
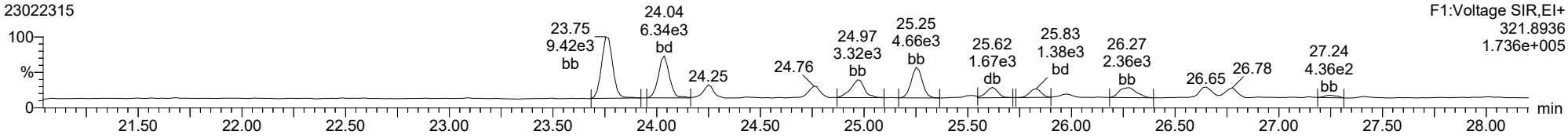
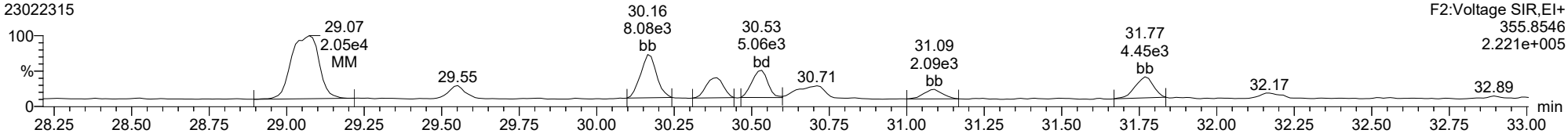
Total-tetradioxins



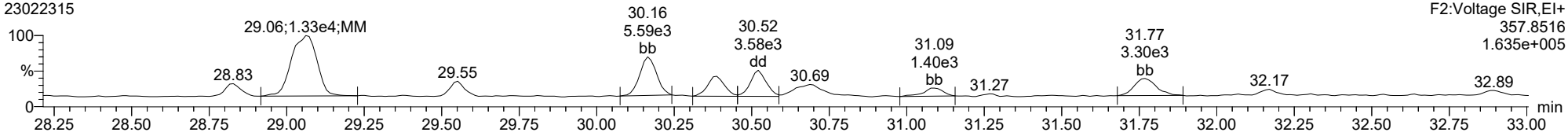
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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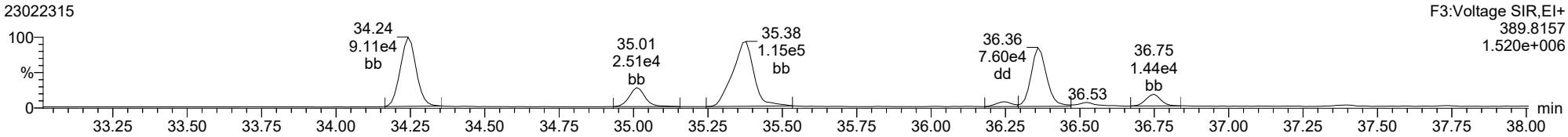
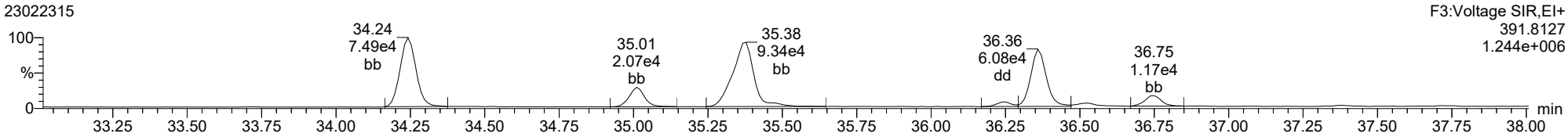
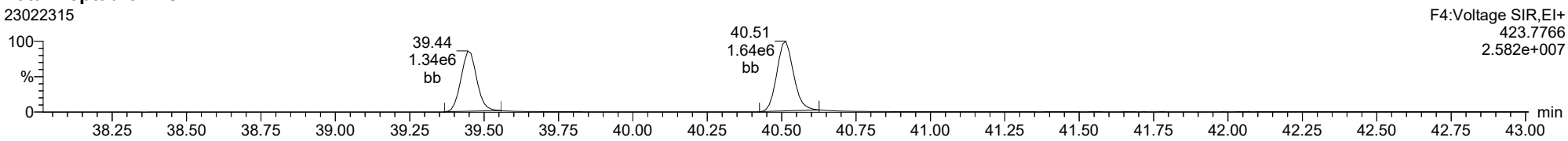
Total-hexadioxins



Total-hexadioxins



Total-heptadioxins



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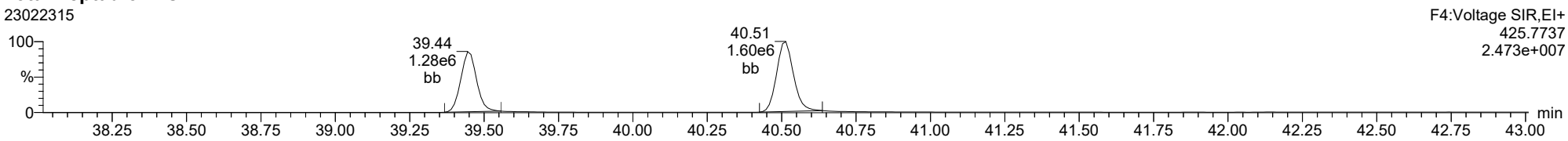

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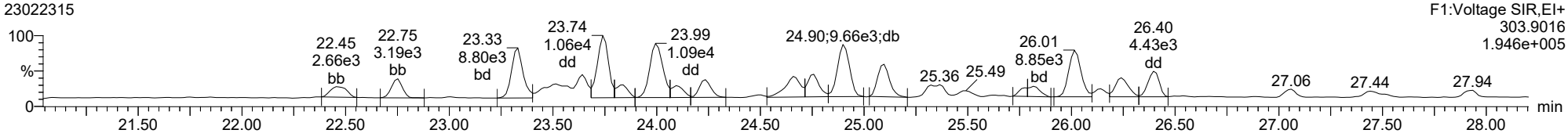
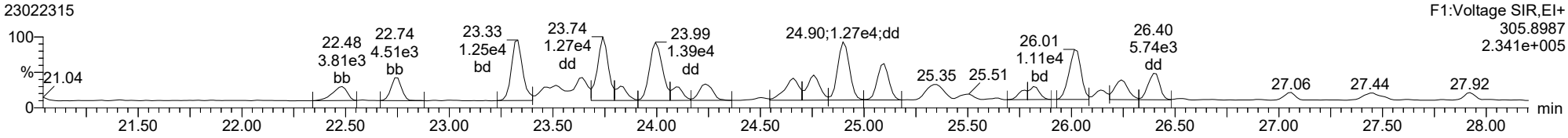
Total-tetrafurans



Total-tetrafurans



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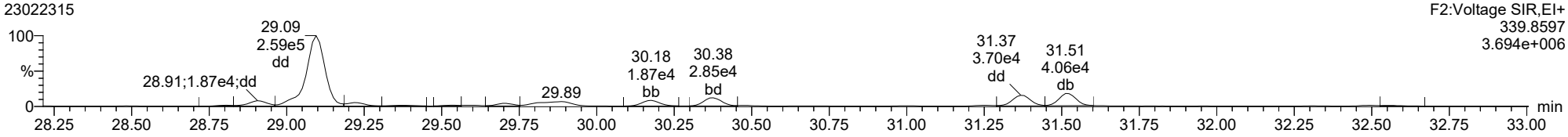
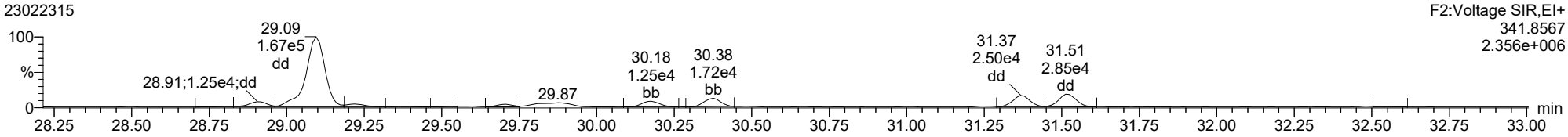


Total-pentafurans



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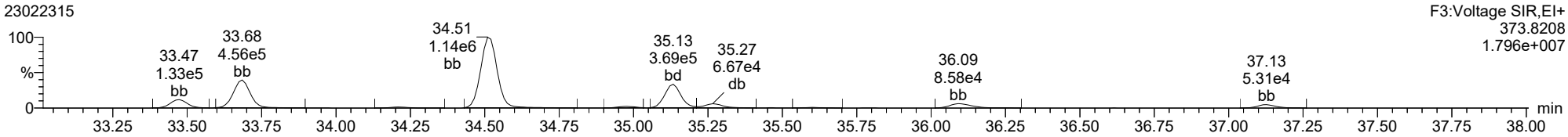
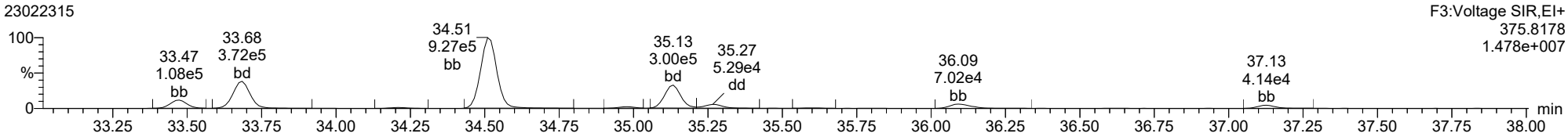
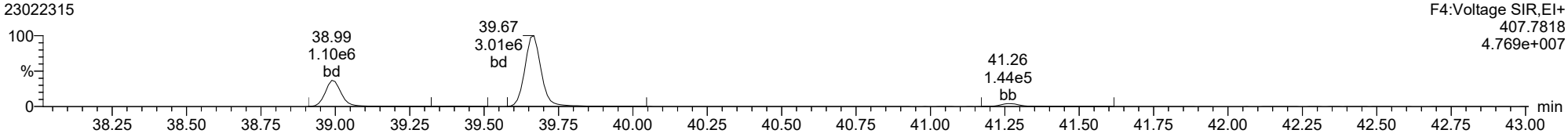
Total-hexafurans



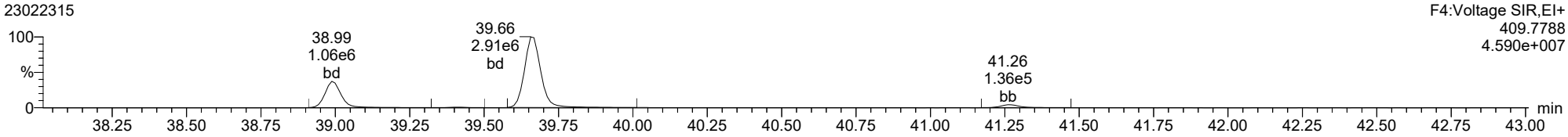
Total-hexafurans



Total-heptafurans



Total-heptafurans



PREPARATION BATCH SUMMARY

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0261 Batch Matrix: Solid
Preparation: EPA 1613

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1241	23A0133-06	23022310	01/24/23 13:10	
LDW23-IT1217	23A0133-07	23022311	01/24/23 13:10	
LDW23-SC1215	23A0133-10	23022314	01/24/23 13:10	
LDW23-SC1222	23A0133-11	23022315	01/24/23 13:10	
Blank	BLA0261-BLK1	23022304	01/24/23 13:10	
LCS	BLA0261-BS1	23022401	01/24/23 13:10	
Reference	BLA0261-SRM1	23022306	01/24/23 13:10	

Analytical Resources, LLC
Analytical Chemists and Consultants

HRGCMS Dioxin/Furan Preparation Bench Sheet EPA Methods 8290A or 1613B

Batch: BLA0261

Solid Samples

ARI Work Orders: 23A0100,23A0133,23A0134,23A0207

Matrix (circle one)	(Soil)	Sediment	Oil Tissue
Extraction Method	Start Date/Time:	End Date/Time:	
(Soxhlet) SepF Shake out	1/24/23 13:10	1/25/23 0512	

Reagents/Equipment Used	NA	ID / Lot Number	Initials	Date
Glasswool		JQ12850	TW	1/26/23
Basic Silica		KQ02255	TW	1/26/23
Acid Silica		KQ11012	TW	1/26/23
Activated Florisil		KQ05756	TW	1/26/23
Balance		24650344	TW	1/24/23
Toluene		KQ11233	TW	1/24/23
Hexane		KQ08316	TW	1/25/23
CH2Cl2		KQ10561	TW	1/26/23
H2SO4		KQ09796	TW	1/25/23
Na2SO4		LQ00453	TW	1/24/23
Other (RM)		KQ11479	TW	1/24/23
0% Silica		KQ11054	TW	1/26/23
Nonane		HQ06038	TW	1/27/23

Lab Number & Container	Sample Name	% Solids	Sample Weight Equal to dry (g) (Target Dry)	Actual	RotoVap 45 °C	Water Trap Vol (mL)	Final Vol. (uL)
23A0100-09 C	LDW23-SS1226	55.33	(18.07)	18.08	(1)/2	6.5	20
23A0100-21 C	LDW23-SS1154	52.92	(18.90)	18.91	1/(2)	6.5	20
23A0133-06 B	LDW23-SC1241	48.97	(20.42)	20.44	(1)/2	7.0	20
23A0133-07 B	LDW23-IT1217	63.85	(15.66)	15.68	1/(2)	6.0	20
23A0133-10 B	LDW23-SC1215	54.04	(18.51)	18.53	(1)/2	7.0	20
23A0133-11 B	LDW23-SC1222	56.13	(17.82)	17.83	1/(2)	7.5	20
23A0134-06 B	LDW23-SS1160	46.51	(21.50)	21.52	(1)/2	10.0	20
23A0134-14 B	LDW23-IT1194	75.11	(13.31)	13.34	1/(2)	3.0	20
23A0207-02 B	LDW23-IT1089	80.6	(12.41)	12.41	(1)/2	2.0	20
23A0207-10 B	LDW23-IT1097	74.39	(13.44)	13.44	1/(2)	2.5	20
23A0207-17 B	LDW23-IT1209	64.48	(15.51)	15.52	(1)/2	5.5	20
BLA0261-BLK1	Blank	100	()	10.00	(1)/2	0.0	20
BLA0261-BS1	LCS	100	()	10.00	1/(2)	0.0	20
BLA0261-DUP1	Duplicate 23A0100-09C	55.33	(18.07)	18.08	(1)/2	6.5	20
BLA0261-SRM1	Reference	100	()	10.04	1/(2)	0.0	20
Prep Analyst / Date:				1/24/23 TW	1/24/23 TW	1/25/23 TW	

Standards Used	Vol	ID / Lot Number	Concentration	Expiration Date	Analyst	Witness	Date
Recovery Standard	1.0 mL	KQ11158	2/4 ng/mL	12/2/23	TW	M	1/24/23
OPR	1.0 mL	KQ06403	0.2/1.0/2.0 ng/mL	6/3/23	TW	M	1/24/23
~~QLS Standard~~	~~1.0 mL~~		0.1/0.5/0.1ng/mL ng/n				
Cleanu-up Standard	1.0 mL	KQ11157	0.8 ng/mL	12/2/23	TW	M	1/26/23

Verify Client ID

Analyst / Date: TW 1/24/23

Acid Clean (Y) N

Analyst / Date: TW 1/25/23

Silica-Florisil Clean (Y) N

Analyst / Date: TW 1/26/23

Supervisor Review By 2/3/23 Date

Printed: 1/18/2023 5:28:59AM

TOTAL SOLIDS BENCHSHEET

Method HRSM01.2

(dry at 110 C)

Batch:	BLA0191
Date:	1/11/2023 5:17
Analyst:	TW
Drying Oven:	18
Analytical Balance:	24650344

Instrumentation

Batch drying time					
Record times as mm/dd/yy hh:mm		Oven Temp, C	TS (%) calculated as:	Oven Temps, °C	
Date/time in oven:	1/10/2023 12:03	111	Final dry wt (g) = (Dry Wt - Tare Wt)	Start Temp:	111
Date/time out:	1/11/2023 5:17	111	TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)	End Temp:	111
Elapsed hrs:	17.2				

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0100-09	0.7800	11.1900	6.5400	5.76	**55.33%**	Yes
23A0100-21	0.8100	11.2600	6.3400	5.53	**52.92%**	Yes
23A0133-06	0.8200	11.4800	6.0400	5.22	**48.97%**	Yes
23A0133-07	0.8100	11.3500	7.5400	6.73	**63.85%**	No
23A0133-10	0.8100	11.7100	6.7000	5.89	**54.04%**	Yes
23A0133-11	0.8000	11.3300	6.7100	5.91	**56.13%**	Yes
23A0134-06	0.8100	11.5400	5.8000	4.99	**46.51%**	Yes
23A0134-14	0.7900	11.7600	9.0300	8.24	**75.11%**	Yes

TOTAL SOLIDS BENCHSHEET

Method HRSM01.2

(dry at 110 C)

Batch:	BLA0191
Date:	1/11/23 0517
Analyst:	TW
Drying Oven:	018
Analytical Balance:	24650344

Instrumentation

Batch drying time

Record times as mm/dd/yy hh:mm

			Oven Temp, C
Date/time in oven:	01/10/23	12:03	111
Date/time out:	1/11/23	~~0517~~ 1/11/23	111
Elapsed hrs:	0.0		

TS (%) calculated as:

Final dry wt (g) = (Dry Wt - Tare Wt)

TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)

Oven Temps, °C	
Start Temp:	111
End Temp:	111

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0100-09 C	0.78	11.19	6.54			~~No~~ Yes
23A0100-21 C	0.81	11.26	6.34			~~No~~ Yes
23A0133-06 B	0.82	11.48	6.64			~~No~~ Yes
23A0133-07	0.81	11.35	7.54			No
23A0133-10	0.81	11.71	6.76			~~No~~ Yes
23A0133-11	0.80	11.33	6.71			~~No~~ Yes
23A0134-06	0.81	11.54	8.86			~~No~~ Yes
23A0134-14	0.79	11.76	9.63			~~No~~ Yes

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: DIOXIN Extraction Batch ~~BLA0191~~ M1/7123

Total Solids Batch: BLA0191 Work Order(s): 23A0100, 133, 134

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☑ Standing Water Decanted (Not shared)= 100-9, 21, 133-06, 10, 11, 134-06, 14	TW 1/10/23
☐ Standing Water Homogenized (Shared samples)=	
☑ Clay/Clumps (Difficult to homogenize)= 100-9, 21, 133-06, 07, 10, 11, 134-06, 14	TW 1/10/23
☐ Rocks (%+size)?	
☑ Organics (Leaves/sticks/grass)= 100-9, 21, 134-06, 14 = roots, fine organics	TW 1/10/23
☑ Oily, obvious fuel/sulfur odors= 100-9, 21, 133-06, 10, 11, 134-06	TW 1/10/23
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

```
Injection Date  : 1/10/2023 4:40:07 PM          Seq. Line :  24
Sample Name     : CS4 STD                      Location : Vial 3
Acq. Operator   : TW                              Inj :  1
                                              Inj Volume : 1 µl

Sequence File   : C:\HPCHEM\2\SEQUENCE\011023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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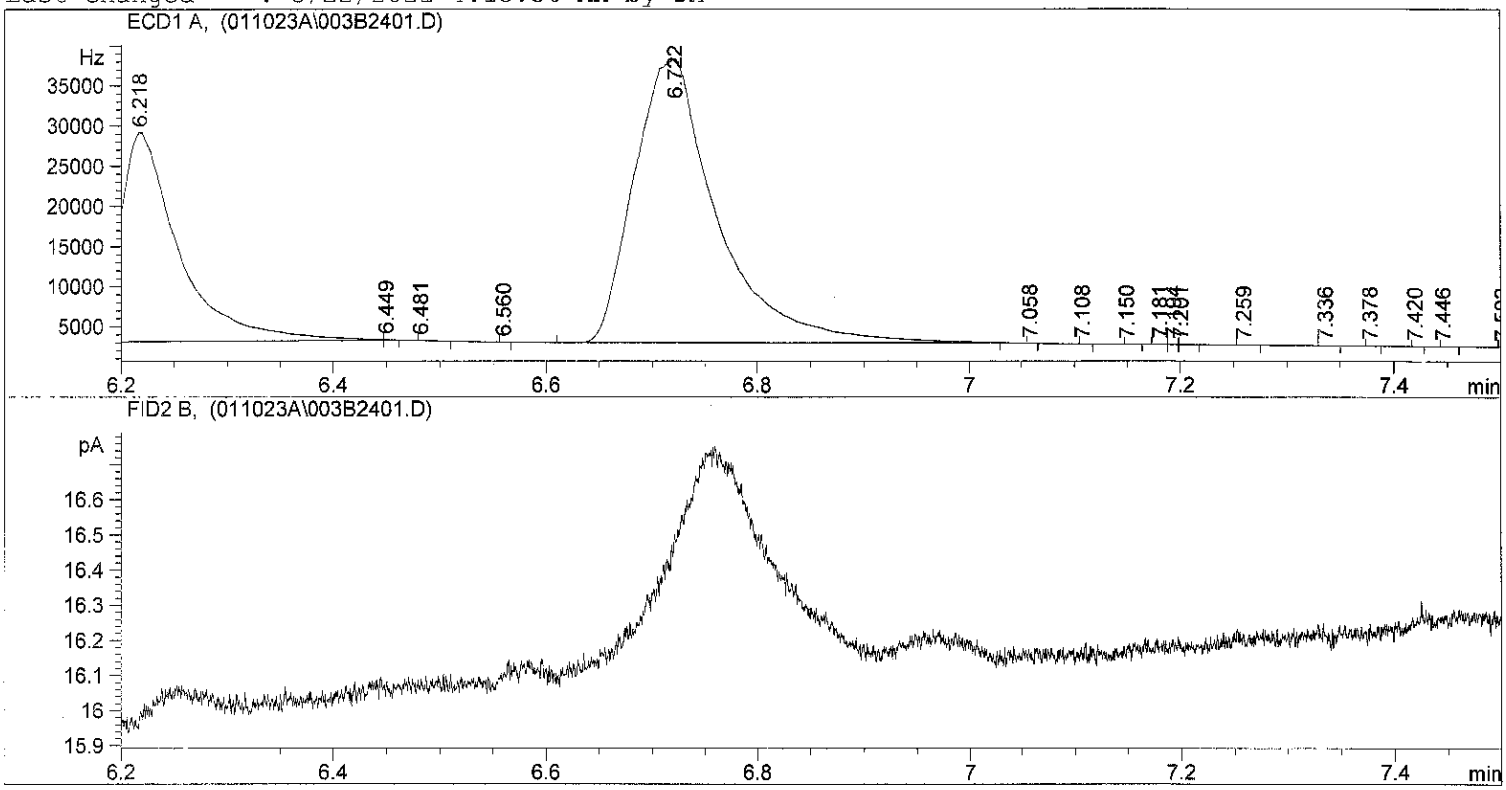

Area Percent Report

```
Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
```

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.421	BP	0.0214	60.18620	33.77775	0.00409
2	5.532	VV S	0.0361	2.70709e5	1.02255e5	18.37671
3	5.628	VV S	0.0496	3.98342e5	1.33767e5	27.04087
4	5.690	VV S	0.0426	1.33533e5	5.22753e4	9.06473
5	5.745	VV S	0.0690	1.57568e5	3.80741e4	10.69628
6	5.985	VV S	0.0500	1.32034e5	4.40027e4	8.96293
7	6.140	VV S	0.0497	8.33965e4	2.79654e4	5.66125
8	6.218	VV S	0.0661	1.03474e5	2.60769e4	7.02420
9	6.449	VB S	6.46e-3	31.36730	80.95958	0.00213
10	6.481	BP	0.0132	20.37583	19.20737	0.00138
11	6.560	PB	3.76e-3	4.52826	16.71346	0.00031
12	6.722	PB S	0.0645	1.93644e5	3.53576e4	13.14523
13	7.058	PP	2.73e-3	2.51149	13.74796	0.00017
14	7.108	BP	4.18e-3	6.59377	21.50872	0.00045
15	7.150	PP	3.03e-3	3.70290	16.39653	0.00025
16	7.181	BP	5.11e-3	6.43688	19.23071	0.00044
17	7.194	VV	5.57e-3	7.11942	18.17810	0.00048

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	7.201	VP	6.94e-3	11.85726	22.51980	0.00080
19	7.259	PB	7.01e-3	3.54180	6.65123	0.00024
20	7.336	PB	0.0000	3.21669	1.35458e-1	0.00022
21	7.378	PB	2.66e-3	1.77213	10.04074	0.00012
22	7.420	BP	4.71e-3	3.31404	10.65795	0.00022
23	7.446	BP	3.87e-3	3.18037	11.34503	0.00022
24	7.502	BP	0.0000	6.46398e-1	3.55019	4.388e-5
25	7.539	BP	6.52e-3	3.48247	7.10520	0.00024
26	7.600	PP	1.88e-3	1.64885	14.97418	0.00011
27	7.612	VV	6.47e-3	6.67334	16.66188	0.00045
28	7.664	VP	0.0287	227.25983	94.45261	0.01543
Totals :				1.47311e6	4.60212e5	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

```
Injection Date  : 1/10/2023 5:13:27 PM          Seq. Line :  27
Sample Name     : 23A0100 09                    Location : Vial 20
Acq. Operator   : TW                               Inj :   1
                                                Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\011023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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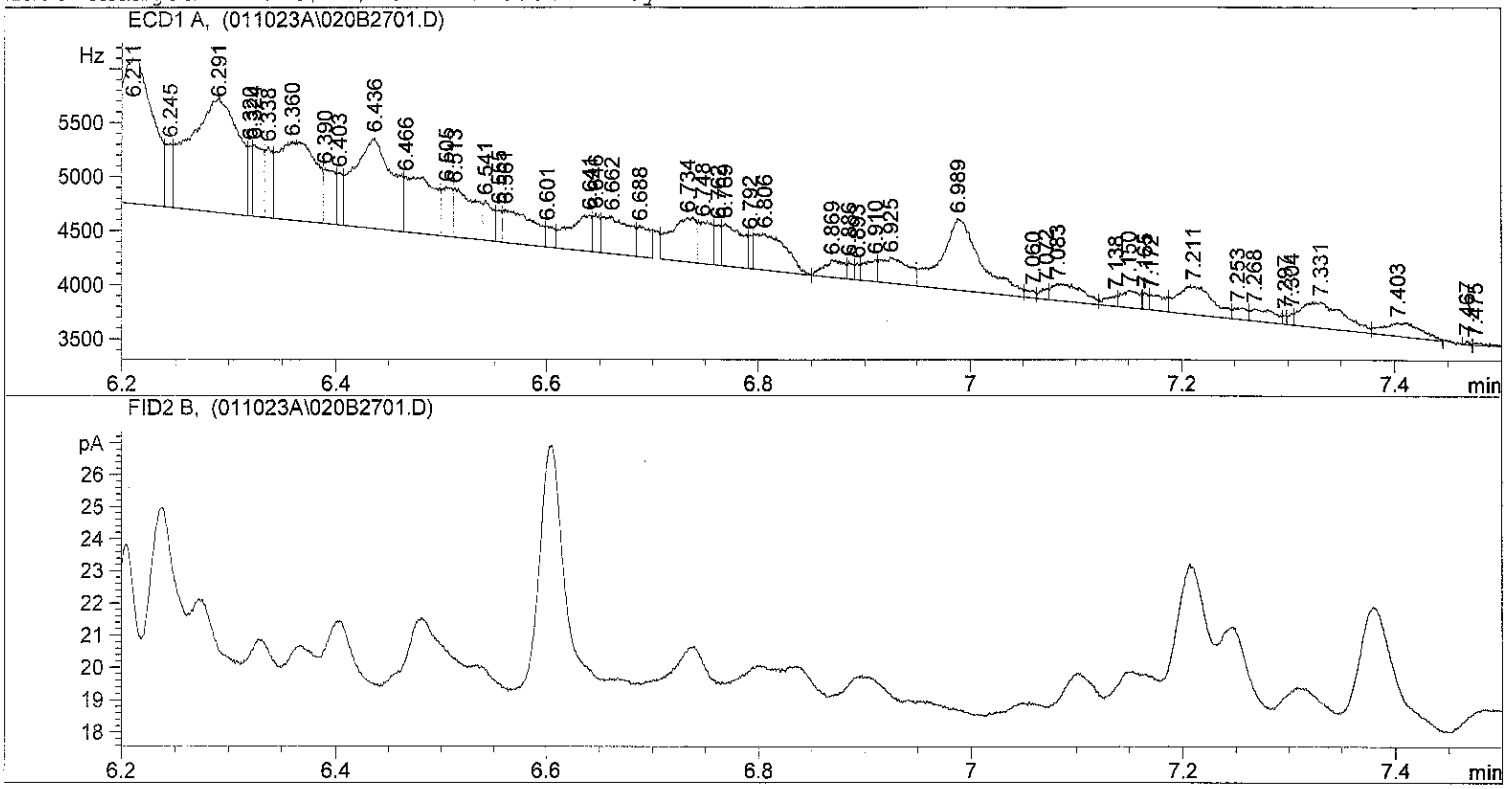

Area Percent Report

```
Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
```

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.252	BV	0.0167	681.04175	487.32443	0.88730
2	5.261	VV	2.56e-3	88.70521	478.44360	0.11557
3	5.267	VV	0.0146	521.08209	461.81567	0.67890
4	5.298	VV	2.53e-3	13.47287	81.40771	0.01755
5	5.308	VV	0.0158	196.70804	150.98076	0.25628
6	5.340	VP	0.0108	94.06686	107.72036	0.12256
7	5.384	VV	0.0135	598.53204	541.84515	0.77980
8	5.410	VV	0.0241	1571.28320	801.19409	2.04716
9	5.449	VV	0.0200	2329.92676	1530.59985	3.03557
10	5.478	VV	0.0200	1847.49304	1172.36353	2.40703
11	5.514	VV	0.0273	2312.78223	1034.80603	3.01323
12	5.563	VV	3.08e-3	67.54485	317.52121	0.08800
13	5.587	VV	0.0130	822.40424	809.80719	1.07148
14	5.592	VV	6.25e-3	307.23917	818.93884	0.40029
15	5.600	VV	0.0124	801.43048	793.49200	1.04415
16	5.632	VV	0.0165	1255.04175	967.85748	1.63514
17	5.647	VV	0.0214	1717.62439	970.91089	2.23783

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.696	VV	0.0320	4848.03955	1836.49878	6.31632
19	5.759	VV	0.0245	4297.96045	2133.15820	5.59964
20	5.797	VV	0.0161	1344.94214	1055.25891	1.75227
21	5.817	VV	0.0234	3069.57666	1596.43762	3.99923
22	5.873	VV	0.0295	4865.64355	1961.88428	6.33926
23	5.911	VV	5.25e-3	395.38229	992.95477	0.51513
24	5.940	VV	0.0322	4005.26855	1480.89417	5.21831
25	5.972	VV	4.45e-3	391.97562	1130.10999	0.51069
26	5.983	VV	0.0102	944.49078	1199.73108	1.23054
27	6.010	VV	0.0239	2866.95020	1459.42529	3.73524
28	6.047	VV	0.0319	4593.51611	1702.87634	5.98471
29	6.088	VV	0.0126	903.66907	895.89905	1.17736
30	6.113	VV	8.59e-3	556.07532	812.20221	0.72449
31	6.118	VV	3.87e-3	228.79079	816.56281	0.29808
32	6.131	VV	0.0214	1488.48242	875.47430	1.93929
33	6.168	VV	0.0118	760.10773	803.76306	0.99031
34	6.174	VV	5.42e-3	319.94012	808.19312	0.41684
35	6.211	VV	0.0329	3767.90894	1352.02966	4.90906
36	6.245	VV	6.10e-3	280.49030	595.37469	0.36544
37	6.291	VV	0.0380	3384.92773	1060.92749	4.41009
38	6.320	VV	3.61e-3	155.73657	649.38007	0.20290
39	6.324	VV	8.65e-3	444.36484	660.38025	0.57895
40	6.338	VV	6.18e-3	312.99323	654.38605	0.40779
41	6.360	VV	0.0292	1770.55566	728.37500	2.30679
42	6.390	VV	9.32e-3	374.02289	500.61328	0.48730
43	6.403	VV	5.44e-3	192.59837	483.85846	0.25093
44	6.436	VV	0.0298	2101.85596	839.43127	2.73843
45	6.466	VV	0.0232	994.48676	513.22430	1.29568
46	6.505	VV	8.52e-3	316.14075	454.26230	0.41189
47	6.513	VB	0.0170	635.41992	450.68619	0.82786
48	6.541	BV	8.13e-3	244.37936	368.99796	0.31839
49	6.555	VV	4.65e-3	97.87543	296.58463	0.12752
50	6.561	VV	0.0341	625.73700	305.55957	0.81525
51	6.601	VV	6.96e-3	109.39624	194.67686	0.14253
52	6.641	VV	0.0179	488.19360	333.76514	0.63605
53	6.646	VV	7.54e-3	159.21011	351.75204	0.20743
54	6.662	VV	0.0225	613.07050	348.54056	0.79875
55	6.688	VB	0.0144	243.13919	282.13303	0.31678
56	6.734	BV	0.0205	693.62860	405.77200	0.90370
57	6.748	VV	0.0116	355.22034	384.80527	0.46280
58	6.762	VV	6.47e-3	146.10582	376.22815	0.19036
59	6.769	VV	0.0159	510.58475	389.53198	0.66522
60	6.792	VV	3.92e-3	82.98141	310.75638	0.10811
61	6.806	VP	0.0247	698.00122	337.89227	0.90940
62	6.869	VV	0.0160	205.54623	155.98642	0.26780
63	6.886	VV	4.93e-3	62.72736	161.46371	0.08173
64	6.893	VV	3.95e-3	43.46125	151.39304	0.05662
65	6.910	VV	0.0105	173.21948	205.16260	0.22568
66	6.925	VV	0.0221	436.24203	235.02486	0.56836
67	6.989	VV	0.0307	1711.47437	658.81812	2.22981
68	7.060	VV	8.61e-3	43.16754	66.21706	0.05624
69	7.072	VV	7.23e-3	52.80255	99.04352	0.06879
70	7.083	VV	0.0248	318.34476	152.32964	0.41476
71	7.138	VV	8.96e-3	73.50501	102.59936	0.09577
72	7.150	VV	0.0148	183.70160	155.28217	0.23934
73	7.165	VV	4.71e-3	52.88215	150.18152	0.06890
74	7.172	VB	0.0122	139.58995	140.10622	0.18187
75	7.211	BV	0.0300	617.22235	260.95901	0.80415
76	7.253	VV	0.0112	97.13154	107.07098	0.12655
77	7.268	VV	0.0199	181.16748	109.40671	0.23604
78	7.297	VV	3.38e-3	18.65541	84.32295	0.02431
79	7.304	VV	4.28e-3	35.15025	111.36844	0.04580
80	7.331	VV	0.0328	665.65851	239.92424	0.86726
81	7.403	VP	0.0307	312.34064	122.83429	0.40694
82	7.467	PP	3.43e-3	8.96816	36.91663	0.01168

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.475	VB	0.0109	21.34477	24.20552	0.02781
84	7.520	PV	3.27e-3	5.67376	26.81939	0.00739
85	7.526	VP	4.01e-3	7.14111	24.45399	0.00930
86	7.611	PV	9.78e-3	82.02930	106.59660	0.10687
87	7.626	VV	0.0213	247.40669	138.30247	0.32234
88	7.657	VB	5.14e-3	17.45796	44.82317	0.02275
89	7.699	BB	8.16e-3	15.09860	23.94218	0.01967
90	7.720	BP	4.94e-3	9.17297	23.59593	0.01195
91	7.726	VB	7.23e-3	9.66963	16.51853	0.01260
Totals :				7.67542e4	5.06539e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

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*** End of Report ***

```
Injection Date  : 1/10/2023 5:24:27 PM          Seq. Line :  28
Sample Name     : 23A0100 21                    Location : Vial 21
Acq. Operator   : TW                               Inj :   1
                                                Inj Volume : 1 µl

Sequence File   : C:\HPCHEM\2\SEQUENCE\011023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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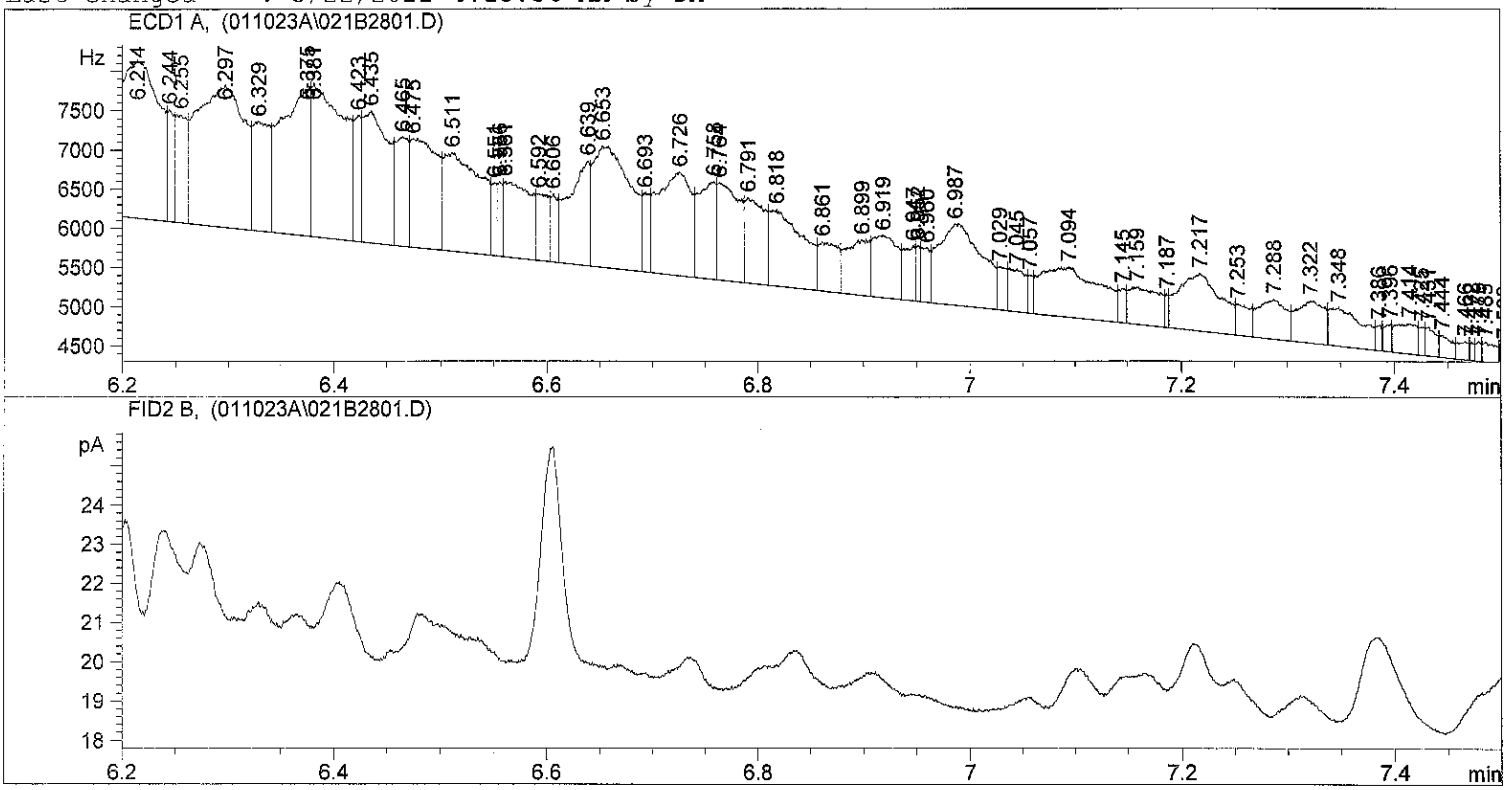

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.238	BP	0.0222	1873.94849	1023.81146	1.16809
2	5.288	VV	3.95e-3	19.19676	63.13660	0.01197
3	5.296	VV	7.91e-3	86.04298	141.14536	0.05363
4	5.317	VP	9.59e-3	112.03368	152.12117	0.06983
5	5.345	VV	9.78e-3	114.70499	152.39954	0.07150
6	5.381	VV	0.0151	1232.81934	995.21521	0.76846
7	5.390	VV	4.82e-3	349.34677	964.95587	0.21776
8	5.400	VV	8.09e-3	693.33710	1079.49719	0.43218
9	5.408	VV	0.0131	1115.01050	1053.63757	0.69502
10	5.449	VV	0.0189	2422.72852	1525.24463	1.51017
11	5.481	VV	0.0189	2913.97070	1918.37378	1.81637
12	5.502	VV	3.13e-3	251.95189	1161.62146	0.15705
13	5.516	VV	0.0179	1959.67212	1352.76660	1.22153
14	5.539	VV	6.69e-3	329.30508	725.71710	0.20527
15	5.582	VV	0.0365	4752.43066	1545.66772	2.96235
16	5.629	VV	0.0314	5961.51416	2244.47461	3.71601
17	5.697	VV	0.0326	8780.02832	3201.89062	5.47288

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.758	VV	0.0281	5619.84277	2421.97974	3.50303
19	5.784	VV	6.49e-3	688.45410	1519.42773	0.42914
20	5.790	VV	8.60e-3	1000.09570	1495.74207	0.62339
21	5.821	VV	0.0274	5109.61768	2276.81567	3.18499
22	5.873	VV	0.0311	8019.85742	3044.55811	4.99904
23	5.905	VV	0.0130	1632.95251	2089.53662	1.01787
24	5.939	VV	0.0301	6268.51465	2477.22729	3.90737
25	5.988	VV	0.0216	4133.97754	2314.30933	2.57684
26	6.008	VV	0.0214	4316.89795	2421.58569	2.69086
27	6.039	VV	0.0300	5967.78271	2356.10742	3.71991
28	6.083	VV	9.44e-3	1305.86133	1722.46863	0.81399
29	6.087	VV	8.89e-3	922.69775	1729.13098	0.57515
30	6.100	VV	6.64e-3	876.61664	1813.30554	0.54642
31	6.113	VV	0.0316	5219.25293	1977.14124	3.25333
32	6.173	VV	0.0235	3096.48853	1636.68433	1.93014
33	6.187	VV	5.42e-3	637.15515	1607.51184	0.39716
34	6.214	VV	0.0313	5319.37500	2011.35535	3.31574
35	6.244	VV	6.06e-3	618.41577	1426.08020	0.38548
36	6.255	VV	9.48e-3	1048.75403	1377.87781	0.65372
37	6.297	VV	0.0366	5527.58789	1811.88660	3.44553
38	6.329	VV	0.0138	1552.09827	1392.34180	0.96747
39	6.375	VV	0.0222	3594.82666	1938.20715	2.24077
40	6.381	VV	0.0343	4014.51733	1951.26282	2.50238
41	6.423	VV	6.50e-3	756.05347	1604.36694	0.47127
42	6.435	VV	0.0203	2784.45972	1680.17590	1.73564
43	6.465	VV	0.0113	1198.83667	1387.90466	0.74727
44	6.475	VV	0.0207	2342.39624	1383.81445	1.46009
45	6.511	VV	0.0287	3026.01025	1257.35400	1.88621
46	6.551	VV	4.38e-3	300.25977	927.21338	0.18716
47	6.556	VV	4.91e-3	318.37289	949.10645	0.19845
48	6.561	VV	0.0205	1634.97510	960.47595	1.01913
49	6.592	VV	0.0104	688.93097	853.01038	0.42943
50	6.606	VV	6.00e-3	413.37646	861.76306	0.25767
51	6.639	VV	0.0169	1821.64490	1336.12585	1.13549
52	6.653	VV	0.0293	3805.98804	1545.25146	2.37240
53	6.693	VV	6.59e-3	496.98312	1001.11224	0.30979
54	6.726	VV	0.0260	2869.26880	1317.38000	1.78851
55	6.758	VV	0.0147	1448.13623	1251.60693	0.90267
56	6.764	VV	0.0169	1745.99573	1236.88794	1.08834
57	6.791	VV	0.0156	1396.86914	1088.06238	0.87071
58	6.818	VV	0.0272	2173.83618	975.48615	1.35502
59	6.861	VV	0.0157	775.09570	624.93512	0.48314
60	6.899	VV	0.0187	1077.43750	705.58179	0.67160
61	6.919	VV	0.0208	1282.38708	789.22302	0.79935
62	6.947	VV	9.19e-3	513.14740	696.68005	0.31986
63	6.952	VV	4.60e-3	232.76831	713.87085	0.14509
64	6.960	VV	7.16e-3	389.49902	692.25873	0.24279
65	6.987	VV	0.0343	2956.24951	1028.31250	1.84273
66	7.029	VB	7.33e-3	308.51691	551.51343	0.19231
67	7.045	BV	0.0136	600.00842	536.74084	0.37400
68	7.057	VV	4.63e-3	167.20189	483.55469	0.10422
69	7.094	VV	0.0455	2454.65234	634.93262	1.53006
70	7.145	VV	6.94e-3	222.59998	436.89816	0.13875
71	7.159	VV	0.0236	942.92187	473.32614	0.58775
72	7.187	VV	3.17e-3	100.52439	423.55707	0.06266
73	7.217	VV	0.0325	2001.69775	732.50909	1.24772
74	7.253	VV	0.0117	379.52219	397.50311	0.23657
75	7.288	VV	0.0213	906.55280	511.14642	0.56508
76	7.322	VV	0.0225	978.78406	541.30365	0.61011
77	7.348	VV	0.0260	1052.55322	494.45645	0.65609
78	7.386	VV	5.55e-3	118.98990	319.45078	0.07417
79	7.396	VV	6.77e-3	161.55260	350.98413	0.10070
80	7.414	VV	0.0171	532.12708	385.80386	0.33169
81	7.425	VV	4.51e-3	127.93536	363.13388	0.07975
82	7.431	VV	8.33e-3	244.62889	369.17621	0.15249

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.444	VV	0.0104	227.45105	276.14926	0.14178
84	7.466	VV	9.18e-3	170.74687	232.17390	0.10643
85	7.472	VV	3.89e-3	65.98145	234.24075	0.04113
86	7.479	VV	4.74e-3	89.73297	253.14749	0.05593
87	7.485	VB	0.0113	223.39510	248.71796	0.13925
88	7.503	BV	6.10e-3	105.84186	245.93547	0.06597
89	7.508	VV	0.0139	305.76898	267.43109	0.19060
90	7.530	VV	3.36e-3	52.63671	207.12512	0.03281
91	7.536	VP	0.0259	347.87799	223.62790	0.21684
92	7.627	VV	0.0431	1181.19812	324.59351	0.73628
93	7.696	VV	7.03e-3	47.87330	99.14868	0.02984
94	7.706	VV	7.64e-3	45.67104	99.63440	0.02847
95	7.722	VV	0.0212	216.90851	125.02407	0.13521
96	7.752	VV	3.60e-3	10.80337	45.02313	0.00673
97	7.759	VV	6.72e-3	35.78472	66.04220	0.02231
98	7.775	VV	7.83e-3	42.62664	91.62818	0.02657
99	7.779	VB	6.68e-3	48.25491	92.52290	0.03008

Totals : 1.60428e5 1.02120e5

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

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Injection Date  : 1/10/2023 5:35:42 PM          Seq. Line :  29
Sample Name     : 23A0133 06                    Location : Vial 22
Acq. Operator   : TW                               Inj :   1
                                                Inj Volume : 1 µl

Sequence File   : C:\HPCHEM\2\SEQUENCE\011023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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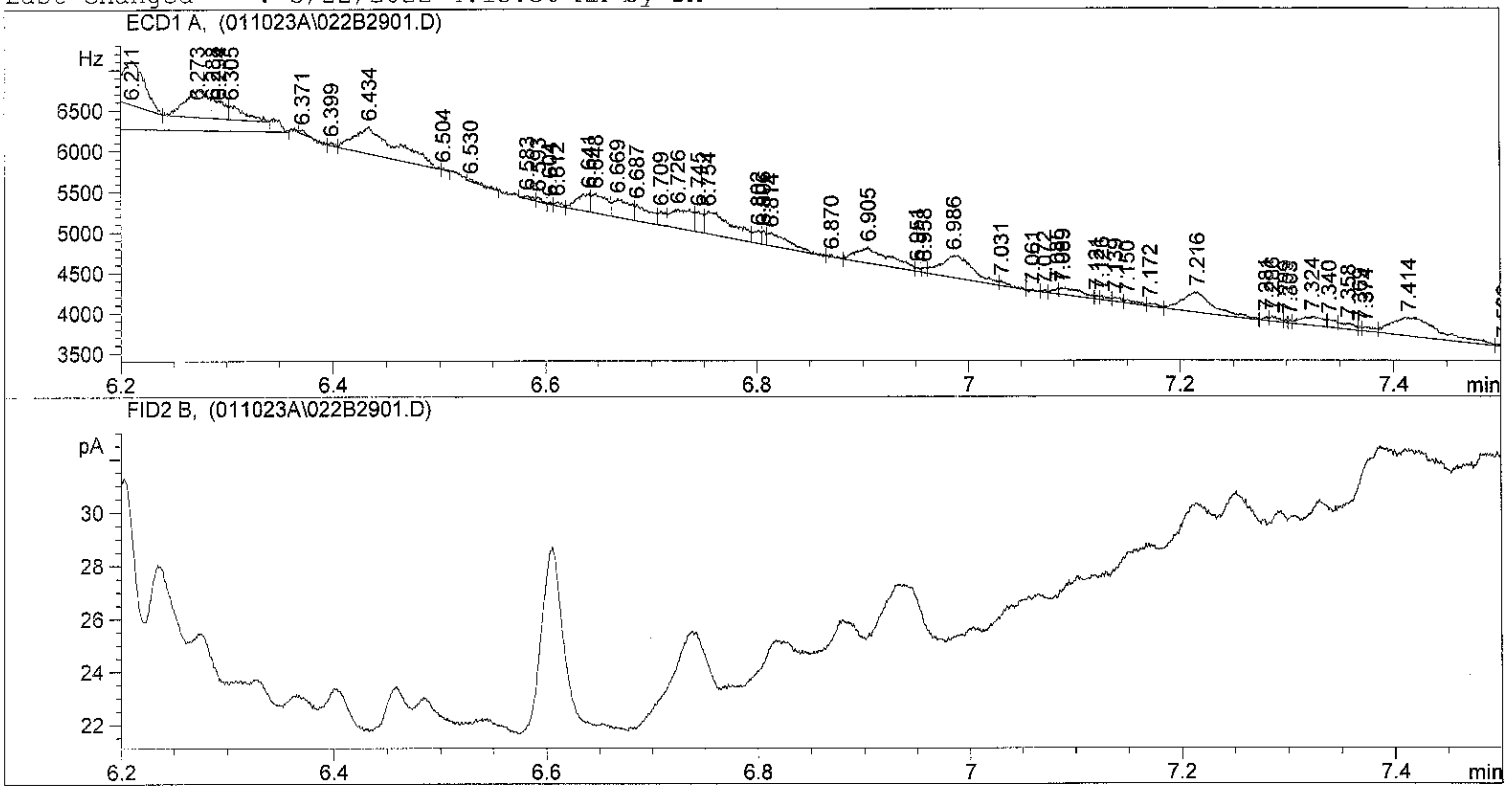

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.244	BV	0.0146	612.29938	568.81592	1.06309
2	5.255	VV	0.0150	635.57019	515.52716	1.10349
3	5.293	VV	0.0154	303.46655	238.82466	0.52688
4	5.326	VP	0.0165	1139.85547	895.18976	1.97904
5	5.383	VV	9.69e-3	591.63867	759.19122	1.02721
6	5.393	VV	0.0245	1551.59619	778.48651	2.69391
7	5.448	VV	0.0178	1338.01697	907.07227	2.32309
8	5.485	VV	0.0164	2023.24573	1496.30945	3.51280
9	5.516	VV	0.0188	1241.53259	803.53174	2.15557
10	5.594	VV	0.0257	1521.03027	724.02692	2.64084
11	5.634	VV	0.0170	919.46991	669.88330	1.59640
12	5.647	VV	5.86e-3	311.40720	665.01447	0.54067
13	5.652	VB	6.48e-3	335.54205	665.63159	0.58257
14	5.700	BV	0.0322	4075.17456	1555.57507	7.07540
15	5.729	VV	7.70e-3	507.87119	859.23499	0.88178
16	5.738	VV	4.77e-3	303.92957	850.64941	0.52769
17	5.761	VV	0.0238	2762.03174	1427.35840	4.79549

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.792	VV	9.72e-3	657.98810	823.71356	1.14241
19	5.819	VV	0.0231	2286.98438	1219.79089	3.97071
20	5.844	VV	5.17e-3	222.61830	717.10535	0.38651
21	5.849	VV	3.75e-3	198.91112	737.36340	0.34535
22	5.873	VV	0.0261	3366.83813	1562.38989	5.84557
23	5.905	VV	4.19e-3	242.08788	833.79419	0.42032
24	5.917	VV	9.35e-3	537.80713	853.31152	0.93375
25	5.955	VV S	0.0234	7517.47510	4524.56641	13.05198
26	6.062	VV S	0.0828	7769.44824	1564.17969	13.48946
27	6.112	VB S	0.0708	5877.33203	1384.21411	10.20434
28	6.149	BV T	5.48e-3	26.10163	62.44853	0.04532
29	6.162	VV T	0.0122	130.27094	132.97401	0.22618
30	6.178	VV T	0.0117	154.71031	160.03830	0.26861
31	6.211	VV T	0.0196	853.76392	548.02124	1.48232
32	6.273	PV T	0.0185	507.58777	342.93500	0.88128
33	6.288	PV T	4.82e-3	76.12974	263.38724	0.13218
34	6.294	PV T	9.59e-3	125.61470	218.28059	0.21809
35	6.305	PB T	0.0174	178.44576	170.44955	0.30982
36	6.371	BP	5.84e-3	15.04439	41.41626	0.02612
37	6.399	VV	4.43e-3	13.26947	38.40532	0.02304
38	6.434	VV	0.0324	921.47748	337.70844	1.59989
39	6.504	VP	3.18e-3	5.42450	24.55944	0.00942
40	6.530	PB	8.77e-3	15.77707	23.70165	0.02739
41	6.583	PV	7.14e-3	18.00468	35.36163	0.03126
42	6.593	VP	4.48e-3	17.41158	55.15138	0.03023
43	6.604	VV	2.74e-3	4.86604	29.20659	0.00845
44	6.612	VV	5.15e-3	20.06841	51.43213	0.03484
45	6.641	VV	0.0109	187.68631	221.22353	0.32586
46	6.648	VV	0.0131	235.79785	234.36105	0.40940
47	6.669	VV	0.0139	257.99216	225.67096	0.44793
48	6.687	VV	0.0115	191.66493	204.44031	0.33277
49	6.709	VV	6.32e-3	84.08810	171.37331	0.14600
50	6.726	VV	0.0170	330.53522	232.82910	0.57388
51	6.745	VV	6.22e-3	126.90698	254.32698	0.22034
52	6.754	VV	0.0228	522.90613	274.72330	0.90788
53	6.802	VV	6.22e-3	75.32269	156.40343	0.13078
54	6.806	VV	4.05e-3	46.71222	167.85699	0.08110
55	6.814	VB	0.0232	223.89308	160.99278	0.38873
56	6.870	BP	5.47e-3	8.77137	26.73923	0.01523
57	6.905	VV	0.0266	444.48401	199.53027	0.77172
58	6.951	VV	3.77e-3	14.21693	52.34454	0.02468
59	6.958	VV	4.55e-3	20.19215	62.75348	0.03506
60	6.986	VV	0.0251	576.63031	272.33908	1.00116
61	7.031	VP	7.07e-3	30.96366	59.52934	0.05376
62	7.061	BV	0.0000	5.67603e-1	14.11697	0.00099
63	7.072	VV	3.82e-3	6.64697	25.68062	0.01154
64	7.085	VV	6.08e-3	25.21995	72.10282	0.04379
65	7.089	VV	0.0174	121.47299	83.45010	0.21090
66	7.121	VV	4.37e-3	11.29449	39.09271	0.01961
67	7.126	VV	5.59e-3	23.50047	52.77926	0.04080
68	7.139	VV	6.61e-3	26.87504	52.14564	0.04666
69	7.150	VV	9.34e-3	34.80832	46.45424	0.06043
70	7.172	VP	0.0116	25.28228	36.28760	0.04390
71	7.216	VP	0.0237	497.23746	250.87393	0.86331
72	7.281	VV	3.99e-3	15.31032	49.71627	0.02658
73	7.286	VV	6.55e-3	32.71588	62.10408	0.05680
74	7.299	VV	2.32e-3	5.99487	40.72983	0.01041
75	7.303	VV	2.67e-3	6.30741	35.59186	0.01095
76	7.324	VV	0.0166	155.58310	111.90555	0.27013
77	7.340	VB	6.95e-3	54.51270	100.14571	0.09465
78	7.358	BV	0.0112	67.41943	74.20908	0.11705
79	7.369	VV	2.79e-3	8.43929	45.01439	0.01465
80	7.374	VV	9.22e-3	38.85703	53.81880	0.06746
81	7.414	VP	0.0371	723.65784	230.21101	1.25643
82	7.503	VV	8.39e-3	20.12090	31.76292	0.03493

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.518	VP	6.14e-3	12.07282	24.52885	0.02096
84	7.544	BV	1.58e-3	1.94280	23.06863	0.00337
85	7.580	VV	0.0234	239.70518	122.88408	0.41618
86	7.611	VV	2.86e-3	7.71628	36.61987	0.01340
87	7.625	VB	0.0172	101.58657	71.46624	0.17638
88	7.703	BP	6.73e-3	10.37789	25.71481	0.01802
89	7.733	PP	7.16e-3	7.29397	13.37346	0.01266
Totals :				5.75964e4	3.59395e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Height [pA]	Area %
1	5.318	BV	0.0345	56.86142	21.19361	55.58530
2	5.376	VP	0.0198	45.43437	31.91228	44.41470
Totals :				102.29579	53.10589	

Results obtained with enhanced integrator!

*** End of Report ***

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Injection Date  : 1/10/2023 5:46:42 PM          Seq. Line :  30
Sample Name     : 23A0133 07                    Location : Vial 23
Acq. Operator   : TW                               Inj :   1
                                                Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\011023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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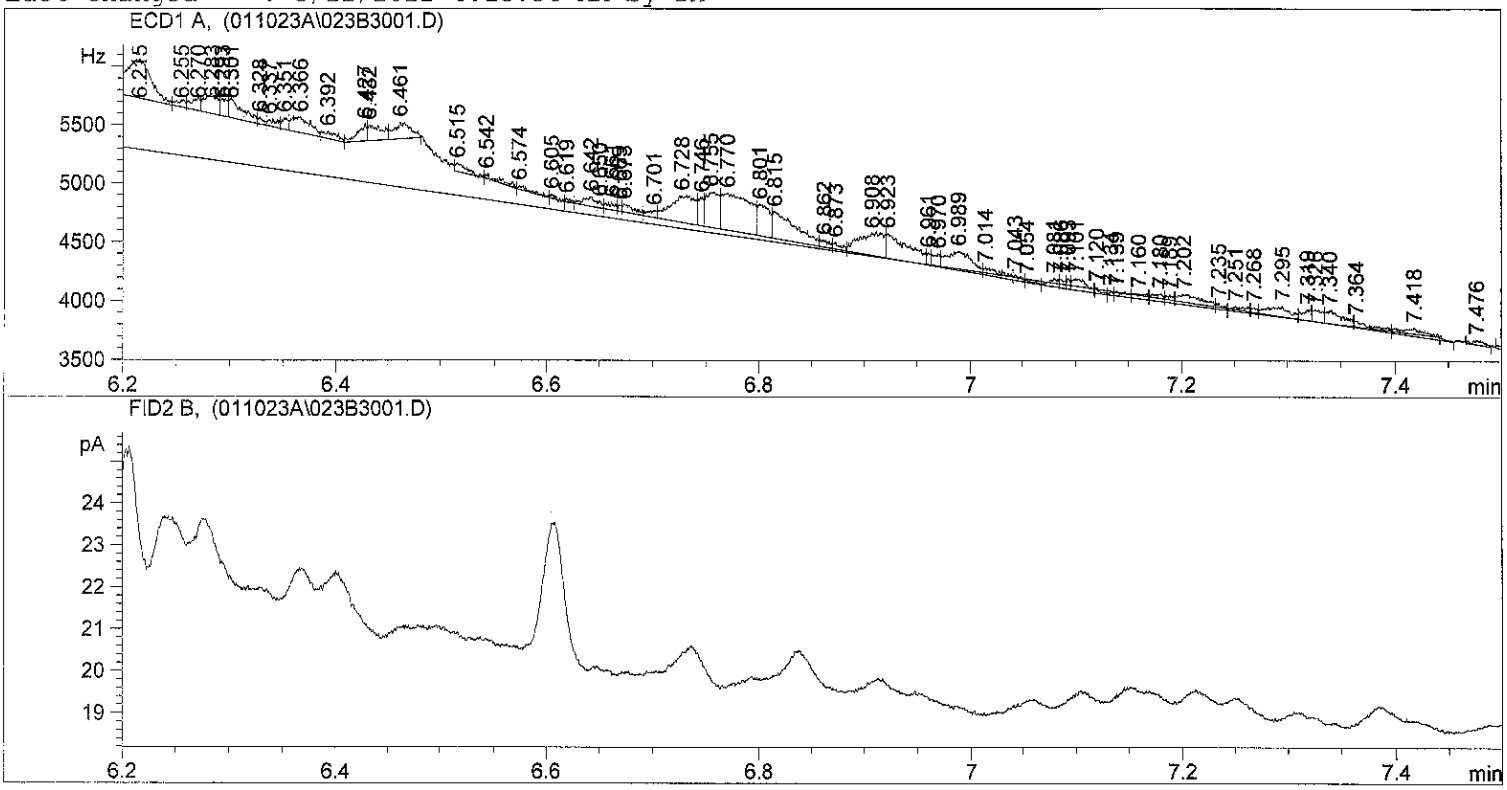

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.237	BV	7.62e-3	60.52505	100.65115	0.09271
2	5.251	VP	0.0126	168.16995	169.49529	0.25760
3	5.281	VV	3.33e-3	22.43650	89.39955	0.03437
4	5.301	VP	0.0184	451.20325	295.46307	0.69115
5	5.342	VV	5.95e-3	61.26715	133.53162	0.09385
6	5.380	VV	0.0195	3175.86084	2052.61377	4.86477
7	5.413	VV	0.0166	893.29773	696.15533	1.36835
8	5.447	VV	0.0177	1303.15930	887.27344	1.99617
9	5.480	VV S	0.0284	9908.49805	4621.61572	15.17778
10	5.518	BB T	9.47e-3	324.17050	436.07257	0.49656
11	5.571	BV T	0.0120	187.46783	213.96573	0.28716
12	5.582	PV T	7.53e-3	122.56742	206.25702	0.18775
13	5.598	PV T	0.0145	256.46640	214.50966	0.39285
14	5.631	PV T	0.0123	260.73203	259.42282	0.39939
15	5.637	VV T	7.54e-3	145.62337	244.92928	0.22307
16	5.649	PV T	6.57e-3	76.42119	193.98842	0.11706
17	5.654	VV T	5.77e-3	67.02200	193.65630	0.10266

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.698	VB S	0.1300	3.12397e4	2843.70435	47.85280
19	5.729	BV T	2.76e-3	9.50861	51.32150	0.01457
20	5.738	PV T	7.30e-3	93.11758	167.19565	0.14264
21	5.756	VV T	0.0170	599.83875	426.23233	0.91883
22	5.789	PV T	3.77e-3	20.17670	89.15858	0.03091
23	5.793	PV T	5.58e-3	29.98103	89.47176	0.04592
24	5.816	PV T	0.0129	277.61765	264.06155	0.42525
25	5.833	PV T	7.73e-3	98.06387	211.37704	0.15021
26	5.845	PV T	5.03e-3	62.68344	190.79144	0.09602
27	5.876	PV T	0.0190	1738.89990	1124.37976	2.66364
28	5.908	PV T	0.0135	423.88358	394.32553	0.64930
29	5.956	PV T	0.0290	2308.87866	963.15247	3.53673
30	5.974	VV T	0.0217	811.88043	623.32831	1.24363
31	6.009	PV T	0.0222	1161.98499	622.56720	1.77992
32	6.039	PV T	5.08e-3	150.81564	392.76163	0.23102
33	6.048	PV T	0.0245	867.81512	442.17014	1.32931
34	6.090	PV T	0.0153	208.23770	226.44887	0.31898
35	6.109	PV T	0.0197	400.25873	244.37082	0.61311
36	6.137	PV T	8.71e-3	99.51347	190.38301	0.15243
37	6.149	PV T	7.71e-3	71.25487	153.98352	0.10915
38	6.156	PV T	3.53e-3	40.51991	161.58812	0.06207
39	6.162	PV T	0.0118	209.47050	218.34335	0.32087
40	6.179	PV T	5.58e-3	62.61734	187.14285	0.09592
41	6.184	PV T	8.58e-3	100.68195	195.48441	0.15422
42	6.215	PV T	0.0209	589.59149	338.22562	0.90313
43	6.255	PV T	7.00e-3	33.37911	60.87574	0.05113
44	6.270	PV T	7.66e-3	60.08153	112.00895	0.09203
45	6.283	PV T	0.0104	144.34174	172.48317	0.22110
46	6.293	PV T	7.07e-3	62.01329	146.15459	0.09499
47	6.301	PV T	0.0152	148.50743	162.37361	0.22748
48	6.328	PV T	5.76e-3	19.24261	55.66401	0.02948
49	6.337	PV T	0.0112	36.39331	53.97169	0.05575
50	6.351	PV T	4.99e-3	38.21723	97.05670	0.05854
51	6.366	PV T	0.0154	162.06024	130.91086	0.24824
52	6.392	PV T	0.0144	55.04098	63.83871	0.08431
53	6.427	PV T	7.44e-3	83.82493	142.89787	0.12840
54	6.432	PV T	0.0152	120.89467	132.72334	0.18519
55	6.461	PB T	0.0138	155.59860	141.32208	0.23835
56	6.515	BV T	0.0125	51.53232	68.97178	0.07894
57	6.542	PV T	0.0161	35.74825	37.05116	0.05476
58	6.574	PV T	0.0124	22.02710	29.53053	0.03374
59	6.605	PV T	5.05e-3	9.83228	32.45513	0.01506
60	6.619	PV T	5.09e-3	9.38065	30.73148	0.01437
61	6.642	PV T	9.42e-3	58.10738	80.54819	0.08901
62	6.650	PV T	4.12e-3	13.08819	52.93780	0.02005
63	6.661	PV T	6.66e-3	33.64548	62.70876	0.05154
64	6.669	PV T	3.33e-3	10.97520	54.94667	0.01681
65	6.673	PV T	0.0132	52.05566	65.73598	0.07974
66	6.701	PV T	7.50e-3	34.45409	58.29053	0.05278
67	6.728	PV T	0.0200	361.93759	226.83083	0.55441
68	6.746	PV T	5.02e-3	86.92395	240.51088	0.13315
69	6.755	PV T	0.0106	257.38458	299.85144	0.39426
70	6.770	PV T	0.0231	595.54828	316.91217	0.91226
71	6.801	PV T	0.0133	212.44676	265.92966	0.32542
72	6.815	PV T	0.0262	353.26987	225.07777	0.54114
73	6.862	PV T	9.73e-3	34.09356	58.40981	0.05222
74	6.873	PV T	6.38e-3	26.78282	54.07108	0.04103
75	6.908	PV T	0.0214	319.68945	183.28177	0.48970
76	6.923	PV T	0.0250	310.82541	207.08769	0.47612
77	6.961	PV T	3.71e-3	25.68607	102.86993	0.03935
78	6.970	PV T	7.50e-3	49.31721	109.60079	0.07554
79	6.989	PV T	0.0196	261.14056	159.92982	0.40001
80	7.014	PV T	0.0218	76.46458	58.53350	0.11713
81	7.043	PV T	6.73e-3	19.36163	47.98312	0.02966
82	7.054	PV T	7.46e-3	11.65792	26.03885	0.01786

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.081	PV T	7.66e-3	40.32930	68.60429	0.06178
84	7.086	PV T	5.43e-3	24.26955	74.50557	0.03718
85	7.093	PV T	3.53e-3	18.04250	85.26215	0.02764
86	7.101	PV T	0.0159	90.30009	94.92358	0.13832
87	7.120	PV T	5.65e-3	15.30370	45.14074	0.02344
88	7.134	PV T	3.10e-3	7.36799	34.37783	0.01129
89	7.139	PV T	8.98e-3	28.55143	39.76492	0.04373
90	7.160	PV T	0.0103	35.70971	43.84323	0.05470
91	7.180	PV T	9.16e-3	42.36913	62.11914	0.06490
92	7.189	PV T	5.70e-3	27.71349	60.98224	0.04245
93	7.202	PV T	0.0210	144.16217	83.11406	0.22083
94	7.235	PV T	6.63e-3	20.44642	51.40030	0.03132
95	7.251	PV T	0.0157	38.25452	40.73576	0.05860
96	7.268	PV T	6.17e-3	18.59734	50.26978	0.02849
97	7.295	PV T	0.0162	128.37013	94.88189	0.19664
98	7.319	PV T	7.36e-3	52.75975	91.01861	0.08082
99	7.326	PV T	8.89e-3	66.54156	95.98929	0.10193
100	7.340	PV T	0.0183	116.31078	105.76897	0.17816
101	7.364	PV T	0.0155	46.49176	49.95780	0.07122
102	7.418	PB T	0.0165	62.17491	46.07780	0.09524
103	7.476	PB	0.0107	29.33693	37.50960	0.04494
104	7.506	BV	7.80e-3	28.09713	44.29510	0.04304
105	7.515	VV	5.34e-3	20.27016	49.91647	0.03105
106	7.526	VV	0.0171	85.57520	59.66505	0.13108
107	7.552	VB	7.00e-3	31.00447	56.51242	0.04749
108	7.639	PV	0.0290	251.91705	103.53011	0.38589
109	7.661	VV	0.0129	60.00706	77.65726	0.09192
110	7.677	VB	0.0115	68.36611	73.16644	0.10472
111	7.700	BP	7.29e-3	28.60193	51.38385	0.04381
112	7.712	VP	5.41e-3	11.32471	27.49092	0.01735
113	7.753	PB	4.18e-3	4.40393	17.57430	0.00675
114	7.782	BV	6.39e-3	13.62052	27.46167	0.02086
115	7.790	VBA	5.90e-3	11.46302	32.40670	0.01756
Totals :				6.52829e4	2.84274e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

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Injection Date  : 1/10/2023 5:57:59 PM          Seq. Line :  31
Sample Name     : 23A0133 10                    Location : Vial 24
Acq. Operator   : TW                               Inj :  1
                                               Inj Volume : 1 µl

Sequence File   : C:\HPCHEM\2\SEQUENCE\011023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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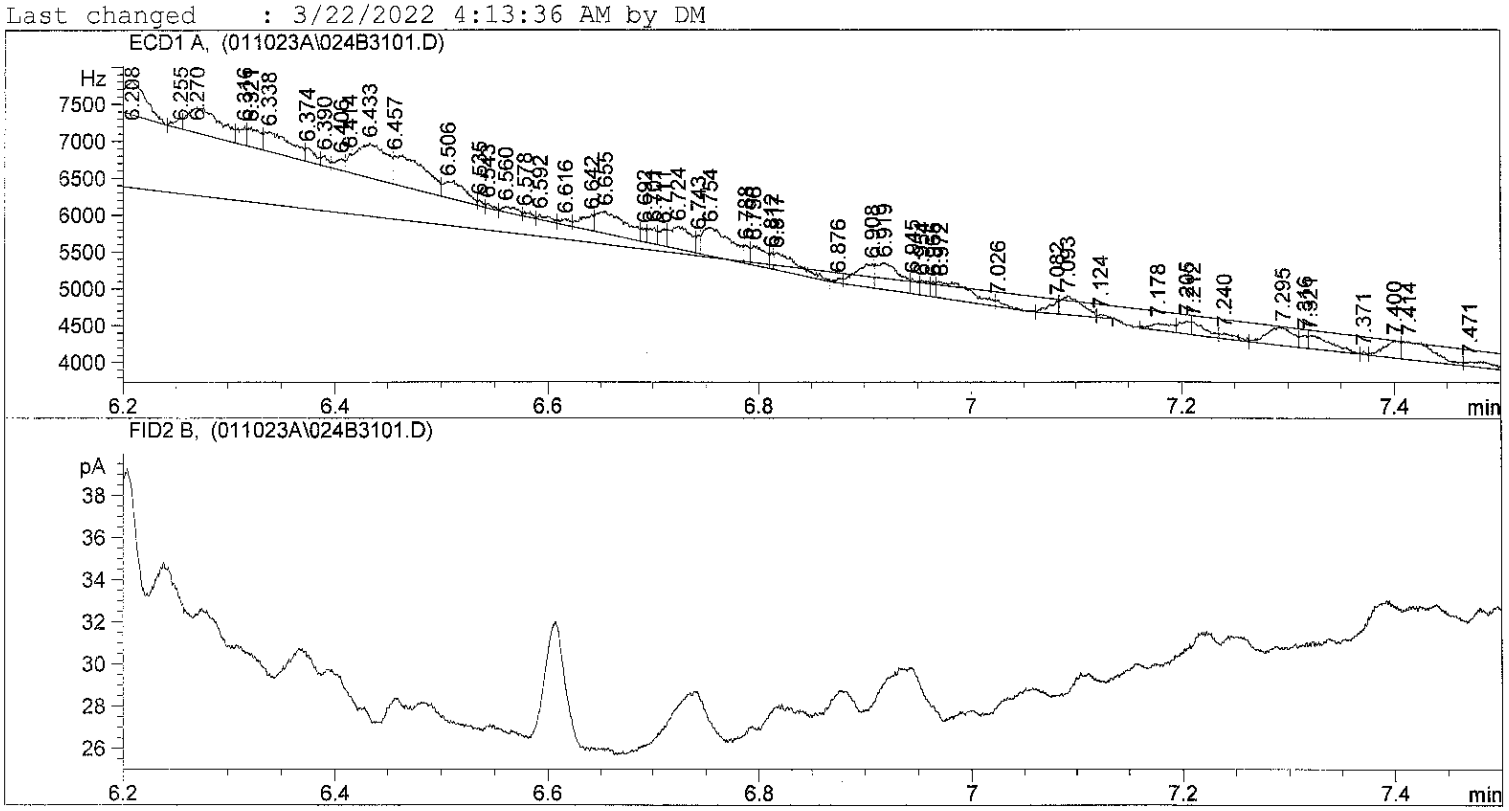

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.202	BV S	0.0000	8521.00391	658.11603	6.32272
2	5.260	PV T	0.0131	553.09137	563.10364	0.41040
3	5.287	PV T	0.0161	938.62018	698.34790	0.69647
4	5.326	PV T	0.0154	738.75049	606.99664	0.54816
5	5.344	PV T	4.64e-3	20.32547	65.06798	0.01508
6	5.384	PV S	0.0229	1.35290e4	8342.24121	10.03877
7	5.415	BV T	9.44e-3	286.98816	396.90286	0.21295
8	5.449	PV T	0.0102	299.39288	372.83328	0.22215
9	5.485	PV S	0.0198	3.08669e4	2.27877e4	22.90375
10	5.519	BV T	0.0121	779.57916	1004.12549	0.57846
11	5.575	PV T	0.0141	213.60008	183.93614	0.15849
12	5.598	PV T	0.0181	552.46857	381.41422	0.40994
13	5.632	PV T	6.28e-3	81.35230	167.11098	0.06036
14	5.656	PV T	0.0115	294.54755	315.21719	0.21856
15	5.702	PV S	0.0313	1.94262e4	8433.10742	14.41453
16	5.731	BV T	3.02e-3	8.12703	44.84336	0.00603
17	5.749	PV T	9.11e-3	124.90369	184.20203	0.09268

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.771	PV T	0.0147	320.09189	294.85684	0.23751
19	5.791	PV T	5.71e-3	44.59769	98.02155	0.03309
20	5.801	PV T	6.64e-3	22.95658	57.65438	0.01703
21	5.819	PV T	0.0148	344.64243	290.64978	0.25573
22	5.851	PV T	4.53e-3	28.91170	81.77005	0.02145
23	5.878	PV S	0.0304	7378.87451	3257.67676	5.47525
24	5.910	BV T	7.40e-3	47.08858	80.82181	0.03494
25	5.957	PBAS	0.0694	3.19162e4	5620.94189	23.68236
26	5.991	BV T	5.20e-3	14.86493	41.29556	0.01103
27	6.000	PV T	2.76e-3	8.81095	53.26691	0.00654
28	6.004	PB T	5.20e-3	35.60543	98.95611	0.02642
29	6.042	BV T	7.27e-3	176.70619	318.58081	0.13112
30	6.062	PV T	0.0179	1193.07214	806.79163	0.88528
31	6.110	PV T	0.0149	1000.64124	807.61993	0.74249
32	6.140	PV T	7.05e-3	73.81334	174.46703	0.05477
33	6.151	PV T	5.02e-3	71.84731	198.82561	0.05331
34	6.155	PV T	5.75e-3	78.99754	229.16792	0.05862
35	6.164	PV T	0.0134	300.61337	270.42603	0.22306
36	6.185	PV T	3.32e-3	46.10256	197.71739	0.03421
37	6.189	PV T	6.30e-3	73.10487	193.48703	0.05425
38	6.208	PV T	0.0191	706.23425	454.67929	0.52404
39	6.255	PV T	6.68e-3	70.53098	139.95470	0.05234
40	6.270	PV T	0.0272	768.65472	344.78879	0.57035
41	6.316	PV T	7.87e-3	135.74365	252.66788	0.10072
42	6.321	PV T	0.0104	212.29465	264.17834	0.15753
43	6.338	PV T	0.0305	494.61008	270.54477	0.36701
44	6.374	PV T	0.0106	122.26417	192.50021	0.09072
45	6.390	PV T	6.63e-3	56.55354	142.14203	0.04196
46	6.406	PV T	7.94e-3	94.97431	159.61732	0.07047
47	6.414	PV T	4.28e-3	76.95046	257.90262	0.05710
48	6.433	PV T	0.0231	916.80261	472.00058	0.68028
49	6.457	PV T	0.0373	878.75891	392.58896	0.65205
50	6.506	PV T	0.0189	340.29462	219.67250	0.25250
51	6.535	PV T	5.69e-3	25.74959	75.41034	0.01911
52	6.543	PV T	6.94e-3	27.53024	66.14136	0.02043
53	6.560	PV T	0.0121	81.83069	83.37642	0.06072
54	6.578	PV T	6.56e-3	33.93367	64.25134	0.02518
55	6.592	PV T	0.0120	50.09398	69.71783	0.03717
56	6.616	PV T	7.93e-3	49.63623	78.98442	0.03683
57	6.642	PV T	0.0101	171.32834	214.69916	0.12713
58	6.655	PV T	0.0245	612.23663	304.36151	0.45429
59	6.692	PV T	5.62e-3	62.12588	184.10376	0.04610
60	6.701	PV T	6.99e-3	121.38299	221.72023	0.09007
61	6.711	PV T	6.27e-3	110.12238	235.04979	0.08171
62	6.724	PV T	0.0164	421.14044	311.10791	0.31249
63	6.743	PV T	3.66e-3	55.28650	251.61234	0.04102
64	6.754	PV T	0.0239	733.81848	384.32339	0.54451
65	6.788	PV T	6.26e-3	93.66893	249.35707	0.06950
66	6.796	PV T	0.0113	244.50093	265.83487	0.18142
67	6.812	PV T	3.86e-3	50.57629	218.47319	0.03753
68	6.817	PV T	0.0287	387.95523	225.53362	0.28787
69	6.876	PV T	6.62e-3	26.37236	63.78611	0.01957
70	6.908	PV T	0.0154	354.46805	322.81238	0.26302
71	6.919	PV T	0.0196	577.97333	362.39014	0.42887
72	6.945	PV T	7.92e-3	95.66992	201.35149	0.07099
73	6.954	PV T	9.77e-3	111.85142	190.83725	0.08300
74	6.965	PV T	4.35e-3	53.61713	205.35318	0.03978
75	6.972	PV T	0.0288	530.50073	219.65729	0.39364
76	7.026	PV T	9.07e-3	48.94696	89.92014	0.03632
77	7.082	PV T	8.62e-3	120.38598	175.07814	0.08933
78	7.093	PV T	0.0171	360.18167	263.92862	0.26726
79	7.124	PB T	9.77e-3	25.27410	43.09675	0.01875
80	7.178	BV T	0.0173	141.60271	97.88611	0.10507
81	7.205	PV T	8.90e-3	124.43013	174.81778	0.09233
82	7.212	PV T	0.0148	155.00696	174.22107	0.11502

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.240	PV T	0.0180	80.12846	74.24090	0.05946
84	7.295	PV T	0.0199	413.85318	247.71562	0.30709
85	7.316	PV T	6.20e-3	81.54340	169.86420	0.06051
86	7.321	PV T	0.0254	275.33096	180.57054	0.20430
87	7.371	PV T	2.89e-3	9.50028	44.53003	0.00705
88	7.400	PV T	0.0127	249.61143	236.65576	0.18522
89	7.414	PV T	0.0243	501.25180	247.24228	0.37194
90	7.471	PV T	0.0235	133.30510	67.78533	0.09891
91	7.513	PV T	0.0150	106.10216	87.20834	0.07873
92	7.553	PV T	7.70e-3	19.76770	42.79890	0.01467
93	7.581	PV T	0.0177	233.20416	161.31445	0.17304
94	7.595	PV T	9.76e-3	81.17523	138.55910	0.06023
95	7.634	PV T	0.0282	636.59747	267.36435	0.47237
96	7.659	PV T	8.73e-3	78.74953	150.30055	0.05843
97	7.670	PV T	8.14e-3	74.15862	111.77367	0.05503
98	7.694	PV T	0.0140	128.56975	115.08860	0.09540
99	7.707	PV T	0.0244	183.13712	124.87239	0.13589
100	7.732	PV T	0.0179	125.06499	116.31034	0.09280
101	7.785	PV T	2.70e-3	3.98525	22.11845	0.00296
102	7.794	PBAT	4.68e-3	6.58284	22.05867	0.00488
Totals :				1.34768e5	7.06591e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Height [pA]	Area %
1	5.378	PB	0.0158	29.82101	27.54385	1.000e2
Totals :				29.82101	27.54385	

Results obtained with enhanced integrator!

*** End of Report ***

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Injection Date  : 1/10/2023 6:08:59 PM          Seq. Line :  32
Sample Name     : 23A0133 11                    Location : Vial 25
Acq. Operator   : TW                               Inj :   1
                                              Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\011023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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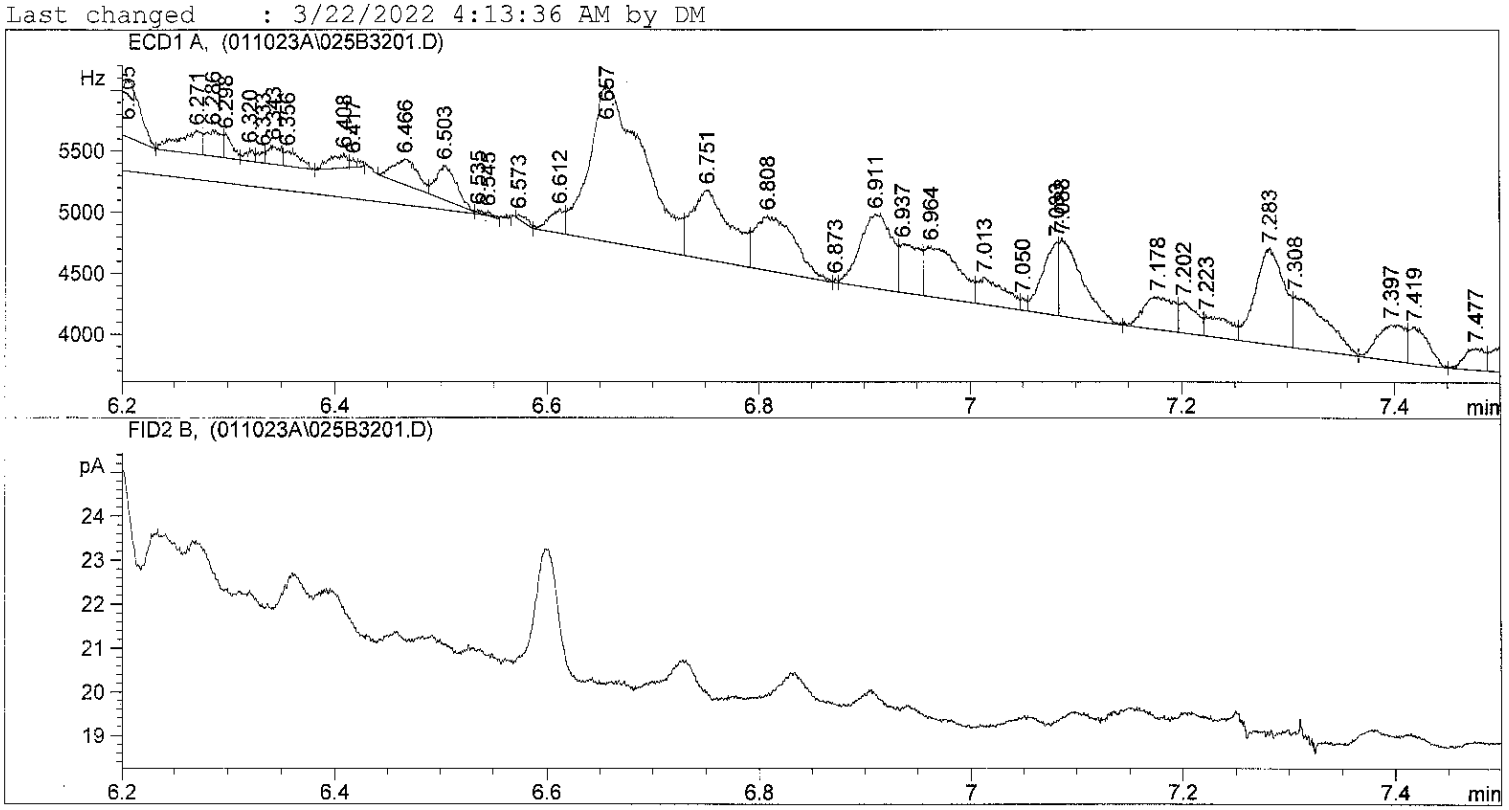

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.261	BV	0.0216	1336.92151	735.07190	1.47042
2	5.292	VV	3.09e-3	81.60104	382.37515	0.08975
3	5.307	VV	0.0213	900.52502	516.74805	0.99045
4	5.341	VV	0.0100	284.38058	367.71228	0.31278
5	5.379	VV	0.0198	2406.01392	1490.26331	2.64627
6	5.396	VV	7.68e-3	549.22144	904.82159	0.60406
7	5.437	VV	0.0248	6529.94238	3369.10937	7.18199
8	5.477	VV S	0.0218	9339.82715	5748.34619	10.27246
9	5.512	VV S	0.0711	7986.19434	1870.87317	8.78366
10	5.556	BV T	4.77e-3	20.73194	60.85885	0.02280
11	5.566	VV T	2.16e-3	4.77751	35.76314	0.00525
12	5.601	VV T	0.0244	1589.92358	785.61725	1.74869
13	5.695	VV T	0.0171	2124.98584	1617.96790	2.33718
14	5.727	VV T	3.29e-3	4.80031	24.32063	0.00528
15	5.756	VB S	0.0608	2.65285e4	5485.05322	29.17755
16	5.790	BV X	3.58e-3	13.39368	62.35421	0.01473
17	5.802	VV T	4.34e-3	18.45156	64.52848	0.02029

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.812	VV T	0.0136	229.03903	211.91388	0.25191
19	5.871	PV T	0.0188	1899.67676	1335.82825	2.08937
20	5.951	PV T	0.0242	1348.99597	673.56030	1.48370
21	6.004	VB T	0.0324	4154.62207	1522.84106	4.56949
22	6.087	BV T	4.60e-3	34.95192	101.95492	0.03844
23	6.105	PV T	0.0165	342.54099	248.18336	0.37675
24	6.122	PV T	0.0213	229.60019	179.93987	0.25253
25	6.157	PV T	0.0205	287.04810	167.94449	0.31571
26	6.205	PV T	0.0228	871.45923	454.69321	0.95848
27	6.271	PV T	0.0187	296.68707	191.67935	0.32631
28	6.286	PV T	0.0165	210.76595	213.16266	0.23181
29	6.298	PV T	9.50e-3	110.76598	194.30421	0.12183
30	6.320	PV T	6.20e-3	50.46003	101.45130	0.05550
31	6.333	PV T	6.28e-3	42.48829	93.80320	0.04673
32	6.343	PV T	0.0116	123.88230	151.04961	0.13625
33	6.356	PV T	0.0178	128.00243	119.69357	0.14078
34	6.408	PV T	0.0132	126.09591	114.88260	0.13869
35	6.417	PB T	9.75e-3	39.58123	67.64394	0.04353
36	6.466	BV T	0.0197	342.27368	211.51645	0.37645
37	6.503	PV T	0.0160	378.34201	282.96701	0.41612
38	6.535	PV T	6.07e-3	9.39928	21.02854	0.01034
39	6.545	PB T	7.38e-3	14.65515	33.09489	0.01612
40	6.573	BP	0.0105	32.39604	38.03336	0.03563
41	6.612	VV	0.0128	199.46332	193.60698	0.21938
42	6.657	VV	0.0418	4559.59326	1285.45935	5.01490
43	6.751	VV	0.0298	1437.36987	570.29089	1.58090
44	6.808	VP	0.0312	1181.11035	447.80786	1.29905
45	6.873	VV	2.70e-3	5.48909	30.43679	0.00604
46	6.911	VV	0.0251	1284.82935	607.31116	1.41313
47	6.937	VV	0.0160	538.36426	402.51291	0.59212
48	6.964	VV	0.0267	924.86255	413.64063	1.01722
49	7.013	VV	0.0229	404.32382	217.63084	0.44470
50	7.050	VV	5.41e-3	37.68169	96.83687	0.04144
51	7.083	VV	0.0132	615.35217	596.18799	0.67680
52	7.088	VP	0.0178	929.89337	637.48468	1.02275
53	7.178	VV	0.0239	540.55927	270.48981	0.59454
54	7.202	VV	0.0188	291.16306	258.79114	0.32024
55	7.223	VB	0.0284	281.53745	164.98097	0.30965
56	7.283	BV	0.0233	1503.37036	779.12512	1.65349
57	7.308	VV	0.0252	899.02551	425.84662	0.98880
58	7.397	VV	0.0217	531.66119	294.06073	0.58475
59	7.419	VP	0.0156	382.65991	300.93408	0.42087
60	7.477	VV	0.0181	238.64912	182.32680	0.26248
61	7.507	VV	0.0227	480.60263	251.89511	0.52859
62	7.545	VV	7.09e-3	24.74870	43.16238	0.02722
63	7.556	VV	3.79e-3	11.60878	46.28155	0.01277
64	7.563	VP	7.95e-3	28.58931	46.64909	0.03144
65	7.623	VV	0.0381	1874.20630	593.34808	2.06136
66	7.718	VV	0.0287	606.19086	250.29985	0.66672
67	7.754	VP	3.82e-3	5.89040	21.33632	0.00648
68	7.773	VV	5.79e-3	23.90085	51.73820	0.02629
69	7.779	VV	6.35e-3	25.17148	56.99943	0.02768
70	7.786	VB	6.70e-3	29.20069	55.82658	0.03212
Totals :				9.09210e4	3.98463e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

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Injection Date  : 1/10/2023 6:19:42 PM          Seq. Line :  33
Sample Name     : 23A0134 06                    Location : Vial 26
Acq. Operator   : TW                               Inj :   1
                                                Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\011023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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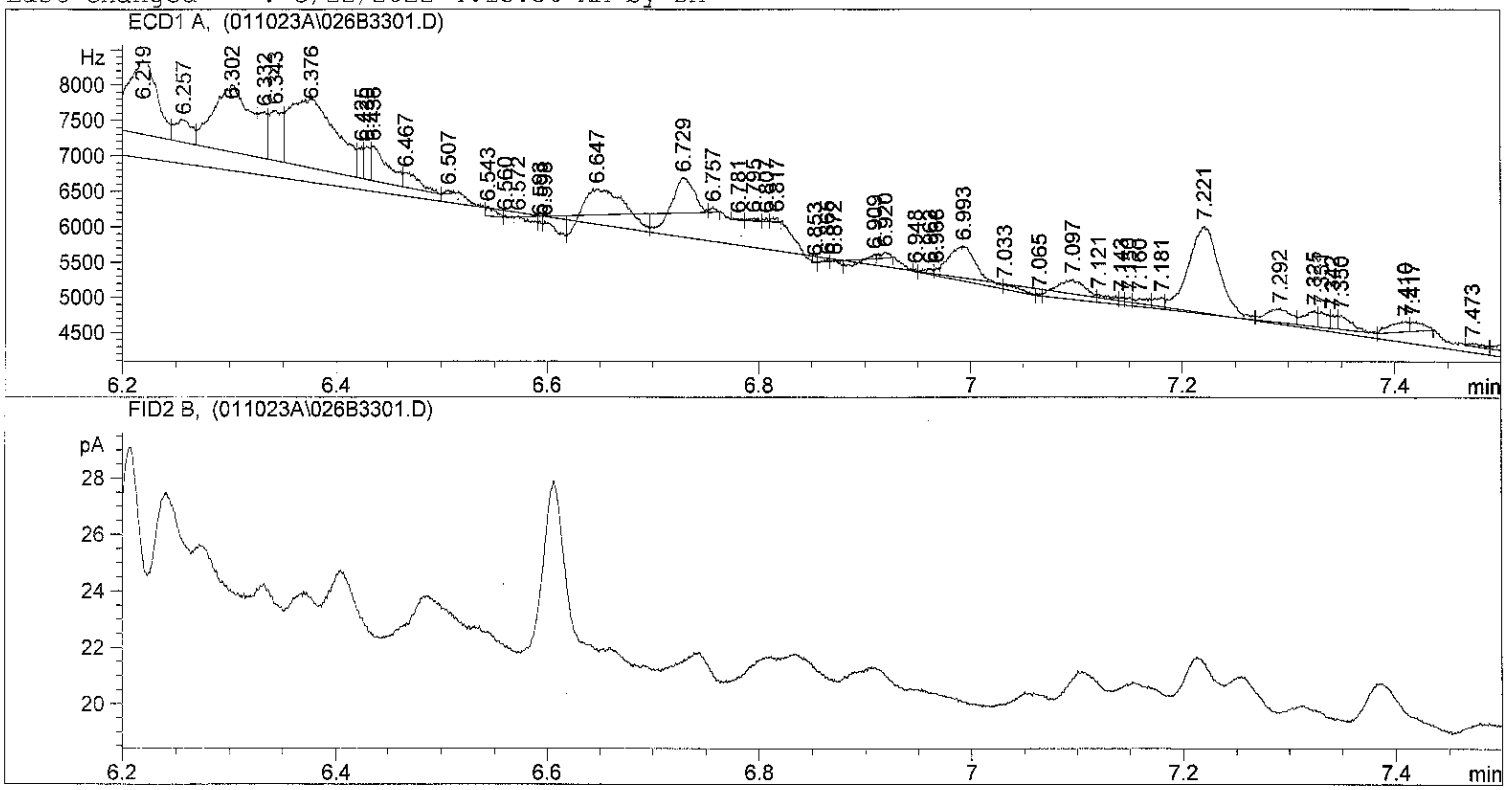

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.228	BV S	0.0491	2.11592e4	5221.05371	20.25181
2	5.299	PV T	5.61e-3	22.68953	55.08806	0.02172
3	5.311	PV T	3.54e-3	34.17997	145.42409	0.03271
4	5.315	PP T	0.0000	107.57045	158.54823	0.10296
5	5.347	PV T	0.6227	195.08470	3.66114	0.18672
6	5.389	PV T	0.0150	1562.15076	1364.87842	1.49516
7	5.405	PV T	0.0148	1511.73706	1277.21448	1.44691
8	5.448	PV T	9.96e-3	388.31091	517.39789	0.37166
9	5.493	PV T	0.0170	1560.74744	1108.03320	1.49382
10	5.515	PV T	0.0000	197.78839	499.50079	0.18931
11	5.584	PV T	0.0000	515.08350	244.15511	0.49300
12	5.591	PV T	0.0118	195.71399	277.02902	0.18732
13	5.630	PB S	0.0965	3.60504e4	4478.57275	34.50445
14	5.693	BV T	0.0238	3960.67187	2026.60986	3.79083
15	5.730	PV T	0.0106	177.12770	279.52185	0.16953
16	5.762	PV T	0.0184	1733.78137	1175.85120	1.65943
17	5.827	PV T	0.0184	1162.02942	763.39630	1.11220

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.874	PV T	0.0210	3243.50952	1854.75403	3.10442
19	5.910	PV T	0.0106	452.20389	540.82452	0.43281
20	5.922	PV T	5.68e-3	170.77803	501.42413	0.16345
21	5.940	PV T	0.0185	1210.33154	778.27240	1.15843
22	5.959	PV T	0.0163	744.23950	760.66553	0.71232
23	5.983	PV T	9.49e-3	555.09937	781.64478	0.53130
24	5.989	PV T	9.50e-3	470.13446	825.02313	0.44997
25	6.009	PV T	9.59e-3	729.74518	946.68372	0.69845
26	6.015	PV T	4.95e-3	397.34436	1019.05621	0.38031
27	6.040	PV T	0.0285	4425.88916	1863.32056	4.23610
28	6.091	PV T	6.73e-3	88.30241	218.80661	0.08452
29	6.116	PV T	0.0191	1251.51318	804.72388	1.19784
30	6.147	PV T	0.0198	765.16028	470.96353	0.73235
31	6.219	PV T	0.0250	2216.65088	1061.67334	2.12159
32	6.257	PV T	0.0148	365.12134	317.99316	0.34946
33	6.302	PV T	0.0278	2122.85791	937.25909	2.03182
34	6.332	PV T	7.80e-3	374.77606	662.16516	0.35870
35	6.343	PV T	0.0112	651.03040	713.20227	0.62311
36	6.376	PV T	0.0367	2987.66748	977.15826	2.85955
37	6.425	PV T	6.37e-3	170.57213	446.47556	0.16326
38	6.430	PV T	5.99e-3	196.35744	459.37012	0.18794
39	6.436	PV T	0.0184	536.35419	485.96899	0.51335
40	6.467	PV T	0.0183	224.87691	204.49385	0.21523
41	6.507	PB T	5.89e-3	20.75228	49.53226	0.01986
42	6.543	BV T	9.90e-3	74.82203	125.90578	0.07161
43	6.560	PV T	2.30e-3	2.13750	15.49012	0.00205
44	6.572	PV T	0.0000	59.22992	13.22085	0.05669
45	6.593	PV T	5.80e-3	24.49053	70.32876	0.02344
46	6.598	PV T	0.0523	238.45232	76.02994	0.22823
47	6.647	PV T	0.0162	489.26041	365.06934	0.46828
48	6.729	PV T	0.0116	445.74557	499.40939	0.42663
49	6.757	PB T	5.04e-3	24.40188	67.06898	0.02336
50	6.781	BV T	5.56e-3	7.60649	22.78533	0.00728
51	6.795	PV T	8.29e-3	19.60178	39.42309	0.01876
52	6.807	PV T	3.63e-3	10.73905	41.30555	0.01028
53	6.817	PB T	5.14e-3	24.22234	62.21202	0.02318
54	6.853	BV T	1.48e-3	1.33630	15.06412	0.00128
55	6.865	PV T	3.53e-3	4.76449	23.86197	0.00456
56	6.872	PV T	0.0000	9.01915	15.21343	0.00863
57	6.909	PV T	0.0000	47.47112	60.68282	0.04544
58	6.920	PB T	8.00e-3	46.96777	76.10533	0.04495
59	6.948	BV T	2.54e-3	5.65908	37.06041	0.00542
60	6.962	PV T	7.40e-3	45.75134	80.84416	0.04379
61	6.968	PV T	3.81e-3	29.49934	107.19189	0.02823
62	6.993	PV T	0.0229	903.56525	493.79843	0.86482
63	7.033	PV T	0.0180	75.04240	69.29934	0.07182
64	7.065	PV T	3.41e-3	7.04340	34.39769	0.00674
65	7.097	PV T	0.0237	541.60626	281.24701	0.51838
66	7.121	PV T	0.0181	122.04520	112.63263	0.11681
67	7.143	PV T	4.69e-3	29.75797	105.68455	0.02848
68	7.150	PV T	4.91e-3	43.11105	116.78288	0.04126
69	7.160	PV T	0.0117	114.44446	124.50150	0.10954
70	7.181	PV T	9.16e-3	111.47330	163.32953	0.10669
71	7.221	PV T	0.0242	2520.43530	1246.53809	2.41235
72	7.292	PV T	0.0191	308.87128	197.15616	0.29563
73	7.325	PV T	0.0107	192.33154	222.70224	0.18408
74	7.331	PV T	9.82e-3	132.42430	224.69366	0.12675
75	7.342	PV T	6.91e-3	81.04735	195.45763	0.07757
76	7.350	PV T	0.0143	170.73369	199.48566	0.16341
77	7.410	PV T	0.0163	185.96838	140.20345	0.17799
78	7.417	PB T	0.0135	115.72649	142.99974	0.11076
79	7.473	BV T	0.0115	44.09354	46.23389	0.04220
80	7.519	PB T	0.0277	300.91327	134.44070	0.28801
81	7.629	BV	0.0161	440.41904	343.95349	0.42153
82	7.635	VV	9.06e-3	226.50308	336.14392	0.21679

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.647	VV	0.0124	287.66403	284.29523	0.27533
84	7.669	VB	0.0166	229.63559	171.25723	0.21979
85	7.707	BV	6.20e-3	18.31117	49.20847	0.01753
86	7.725	VP	0.0133	41.12469	39.64447	0.03936
87	7.778	VBA	0.0231	719.43970	386.94943	0.68859
Totals :				1.04480e5	4.49547e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

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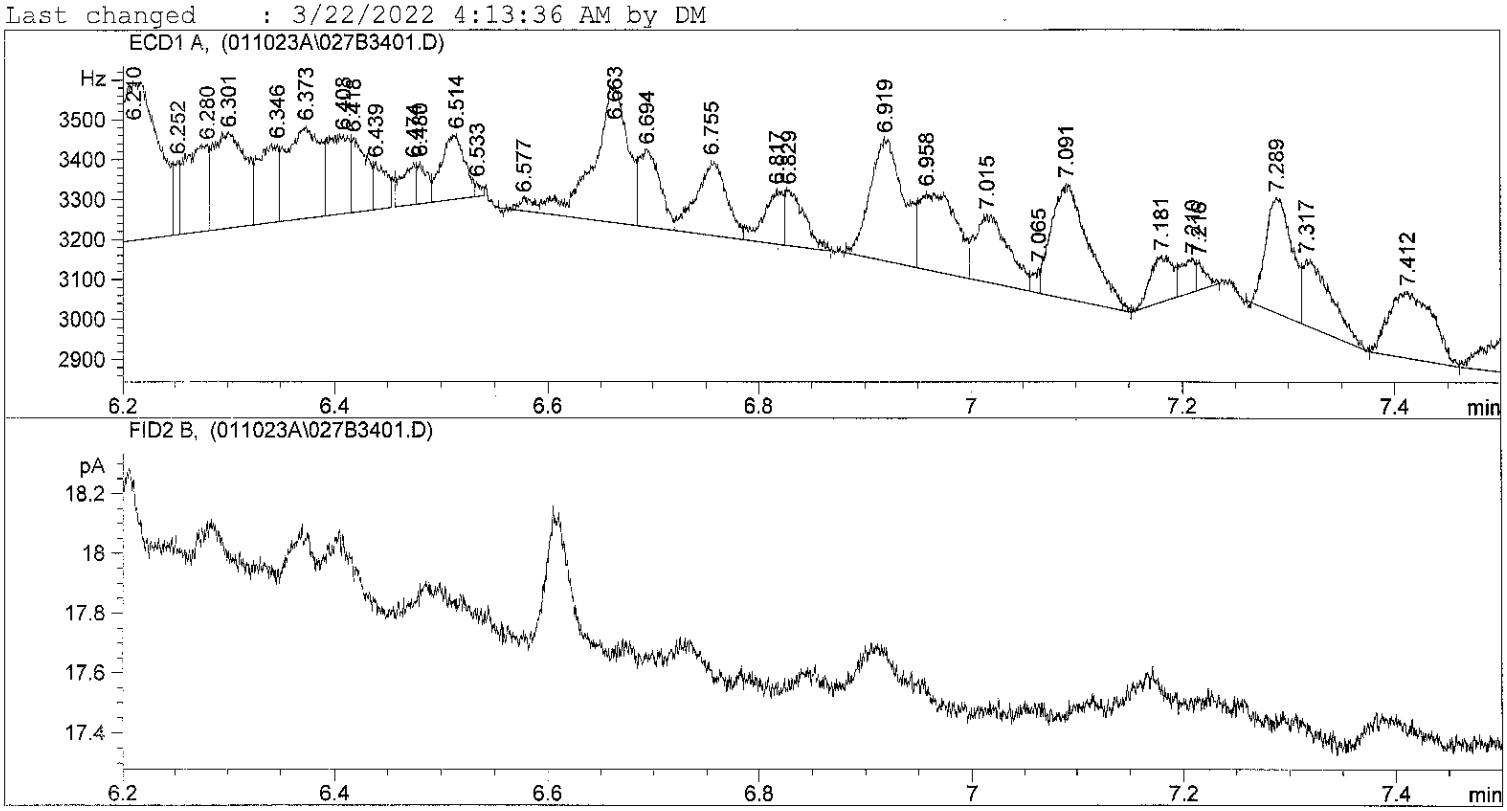
*** End of Report ***

Injection Date : 1/10/2023 6:31:52 PM Seq. Line : 34
Sample Name : 23A0134 14 Location : Vial 27
Acq. Operator : TW Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\2\SEQUENCE\011023A.S
Method : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed : 3/22/2022 4:13:36 AM by DM



Area Percent Report

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.229	BB	3.47e-3	3.07419	14.51647	0.00991
2	5.278	PV	0.0150	161.77228	131.00050	0.52125
3	5.282	VB	8.92e-3	68.90590	128.79027	0.22202
4	5.295	BV	8.00e-3	75.07994	121.72447	0.24192
5	5.333	VV	0.0288	294.23926	123.69019	0.94807
6	5.346	VV	4.44e-3	34.52481	110.52535	0.11124
7	5.383	VV	0.0265	627.03131	291.72308	2.02036
8	5.419	VV	0.0243	393.22125	198.95546	1.26700
9	5.485	VV	0.0293	1390.13293	576.35162	4.47915
10	5.517	VV	0.0235	605.03247	308.12732	1.94948
11	5.552	VV	0.0137	247.43813	223.28055	0.79727
12	5.602	VV	0.0301	648.08313	259.41418	2.08819
13	5.657	VV	0.0331	1407.92615	505.63867	4.53648
14	5.702	VV	0.0324	1514.04175	559.58801	4.87840
15	5.762	VV	0.0251	1811.06604	890.66693	5.83544
16	5.799	VV	8.89e-3	279.79590	393.74881	0.90153
17	5.808	VV	5.79e-3	188.32840	423.17780	0.60681

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.822	VV	0.0118	432.68564	452.29379	1.39416
19	5.828	VV	4.07e-3	121.77089	433.85043	0.39236
20	5.837	VV	6.96e-3	220.50105	431.31256	0.71048
21	5.852	VV	9.94e-3	382.41901	477.90097	1.23219
22	5.875	VV	0.0238	1078.23999	551.66187	3.47420
23	5.902	VV	9.97e-3	391.01505	497.51471	1.25989
24	5.906	VV	0.0123	491.44180	496.59726	1.58348
25	5.924	VV	5.23e-3	145.28998	420.38562	0.46814
26	5.957	VV	0.0221	889.88544	495.60803	2.86730
27	5.967	VV	0.0102	413.78207	504.46637	1.33325
28	5.977	VV	5.02e-3	149.91061	498.20679	0.48303
29	5.988	VV	9.17e-3	358.22107	524.53625	1.15422
30	5.994	VV	4.39e-3	169.35416	521.38983	0.54568
31	6.002	VV	6.50e-3	242.88931	515.15900	0.78261
32	6.012	VV	0.0147	653.23767	532.12512	2.10480
33	6.028	VB	8.29e-3	307.30798	491.72269	0.99018
34	6.041	BV	5.58e-3	214.91748	503.30139	0.69249
35	6.052	VV	0.0287	1184.98254	513.80450	3.81813
36	6.088	VV	3.65e-3	116.19648	417.04987	0.37440
37	6.093	VV	0.0126	433.06265	421.62866	1.39537
38	6.116	VV	7.12e-3	216.54976	387.46390	0.69775
39	6.137	VV	0.0275	946.08606	440.03351	3.04839
40	6.164	VV	0.0151	445.11194	391.56046	1.43420
41	6.180	VV	5.82e-3	150.10031	348.79605	0.48364
42	6.187	VV	3.46e-3	84.28869	343.45963	0.27159
43	6.210	VV	0.0328	1088.64807	399.84866	3.50774
44	6.252	VV	4.95e-3	69.81255	187.12798	0.22494
45	6.280	VV	0.0190	336.14246	215.18098	1.08309
46	6.301	VV	0.0259	511.20987	238.05656	1.64717
47	6.346	VV	0.0161	260.36612	195.39104	0.83893
48	6.373	VV	0.0258	499.14862	231.46349	1.60831
49	6.408	VV	0.0168	271.57849	195.60472	0.87505
50	6.428	VV	0.0124	188.57491	187.08542	0.60761
51	6.439	VB	0.0104	95.90443	116.92256	0.30901
52	6.474	BV	0.0116	98.68539	104.28423	0.31797
53	6.480	VB	7.91e-3	65.41029	104.39767	0.21076
54	6.514	BV	0.0191	247.67200	163.00961	0.79802
55	6.533	VB	4.81e-3	12.96668	35.89327	0.04178
56	6.577	PV	0.0108	28.45155	32.44989	0.09167
57	6.663	VV	0.0290	780.63763	339.54977	2.51529
58	6.694	VV	0.0171	270.02670	193.05754	0.87005
59	6.755	VV	0.0249	373.95773	186.97466	1.20493
60	6.817	VV	0.0159	173.95636	136.01123	0.56051
61	6.829	VP	0.0153	175.47621	139.41750	0.56540
62	6.919	BV	0.0256	663.36298	306.93195	2.13742
63	6.958	VV	0.0293	482.42606	194.65158	1.55443
64	7.015	VV	0.0262	372.59705	168.17921	1.20055
65	7.065	VV	5.69e-3	27.56389	63.22916	0.08881
66	7.091	VP	0.0304	710.91248	287.65945	2.29063
67	7.181	VV	0.0176	169.15604	114.97651	0.54504
68	7.210	VV	0.0124	82.82612	81.98586	0.26687
69	7.216	VB	7.20e-3	40.69283	71.95134	0.13112
70	7.289	PV	0.0210	503.09280	287.82770	1.62102
71	7.317	VP	0.0226	315.77863	165.74341	1.01747
72	7.412	VP	0.0341	476.03589	165.88821	1.53384
73	7.512	VV	0.0303	315.01624	123.86129	1.01501
74	7.548	VV	5.89e-3	13.14349	31.34298	0.04235
75	7.569	VV	8.82e-3	30.88825	43.84755	0.09953
76	7.574	VV	4.08e-3	12.31449	47.29460	0.03968
77	7.634	VV	0.0420	1020.03571	286.06885	3.28666
78	7.721	VP	0.0263	231.50536	106.62041	0.74593
79	7.786	VV	0.0116	25.56510	27.10668	0.08237
80	7.793	VP	3.55e-3	5.15719	20.37687	0.01662
Totals :				3.10356e4	2.28700e4	

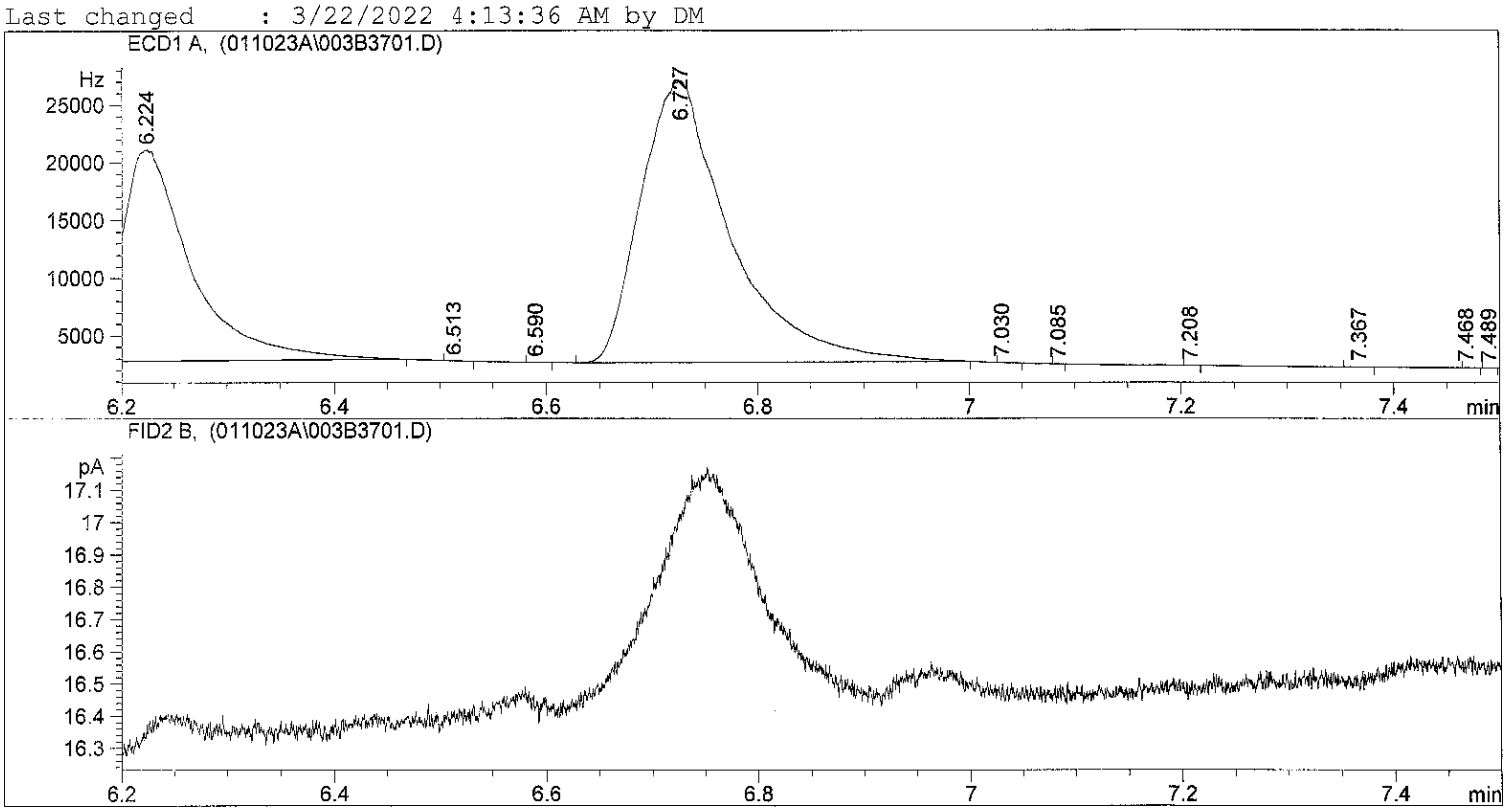
Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

Injection Date : 1/10/2023 7:05:35 PM Seq. Line : 37
Sample Name : CS4 STD Location : Vial 3
Acq. Operator : TW Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\2\SEQUENCE\011023A.S
Method : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed : 3/22/2022 4:13:36 AM by DM



Area Percent Report

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.467	PP	0.0000	7.01997e-1	7.63667	5.633e-5
2	5.535	VV S	0.0377	2.37360e5	8.74061e4	19.04476
3	5.631	VV S	0.0521	3.46041e5	1.10596e5	27.76491
4	5.691	VV S	0.0455	1.20826e5	4.42671e4	9.69457
5	5.750	VV S	0.0724	1.37677e5	3.16967e4	11.04664
6	5.986	VV S	0.0542	1.10833e5	3.40515e4	8.89277
7	6.142	VV S	0.0528	6.68054e4	2.10905e4	5.36019
8	6.224	VB S	0.0762	8.37530e4	1.83260e4	6.71999
9	6.513	PP	0.0000	2.13323e-1	3.15643	1.712e-5
10	6.590	PP	9.04e-3	16.86399	24.46356	0.00135
11	6.727	PB S	0.0701	1.42830e5	2.44125e4	11.46009
12	7.030	PP	0.0108	13.49655	15.38340	0.00108
13	7.085	PB	4.16e-3	3.05957	12.26168	0.00025
14	7.208	PB	6.98e-3	5.75799	11.61666	0.00046
15	7.367	BP	8.46e-3	13.77203	19.92431	0.00111
16	7.468	PB	3.15e-3	2.79147	12.77946	0.00022
17	7.489	BP	3.95e-3	2.26348	9.60899	0.00018

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	7.538	PP	0.0000	8.74833e-1	4.55805	7.019e-5
19	7.619	PP	3.79e-3	2.38221	8.20597	0.00019
20	7.660	BB	0.0229	94.50393	48.89766	0.00758
21	7.694	BB	7.43e-3	12.95466	22.13354	0.00104
22	7.720	BB	0.0101	10.53837	12.97600	0.00085
23	7.755	BP	5.29e-3	5.50425	14.96309	0.00044
24	7.762	VV	2.10e-3	2.21606	15.19379	0.00018
25	7.769	VBA	0.0118	12.31639	12.87944	0.00099

Totals : 1.24633e6 3.72103e5

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

```
Injection Date  : 1/16/2023 2:54:15 PM          Seq. Line :   3
Sample Name     : CS4 STANDARD                   Location : Vial 11
Acq. Operator   : DXP                               Inj :   1
                                                Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\011623A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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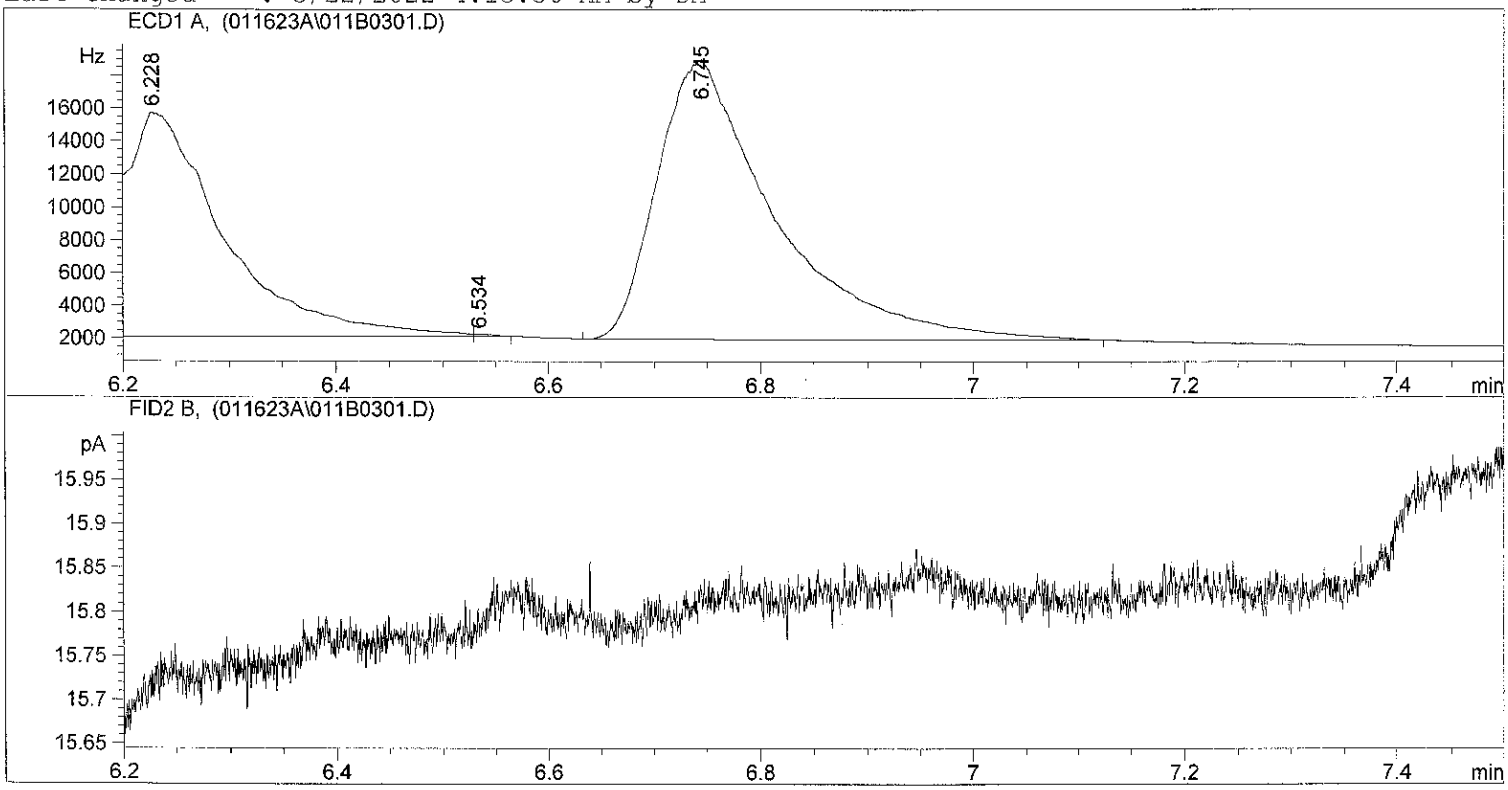

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
```

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.540	BV S	0.0377	2.19817e5	7.47713e4	18.51561
2	5.635	VV S	0.0598	3.38457e5	9.44083e4	28.50886
3	5.695	VV S	0.0428	1.03991e5	4.04864e4	8.75936
4	5.746	VV S	0.0858	1.42898e5	2.77472e4	12.03659
5	5.994	VV S	0.0691	1.07870e5	2.60086e4	9.08605
6	6.150	VV S	0.0645	5.76439e4	1.48884e4	4.85545
7	6.228	VV S	0.1060	8.67672e4	1.36447e4	7.30855
8	6.534	VB S	0.0201	167.18159	138.40277	0.01408
9	6.745	PB S	0.0896	1.29574e5	1.70237e4	10.91424
10	7.533	BP	9.94e-3	7.73250	9.65665	0.00065
11	7.594	PP	1.80e-3	1.05785	10.28531	8.910e-5
12	7.613	PP	7.59e-3	5.46853	9.12779	0.00046
Totals :				1.18720e6	3.09146e5	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

==========

*** End of Report ***

```
Injection Date  : 1/16/2023 5:40:57 PM          Seq. Line :  18
Sample Name     : 23A0207 02                    Location : Vial 24
Acq. Operator   : DXP                               Inj :  1
                                              Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\011623A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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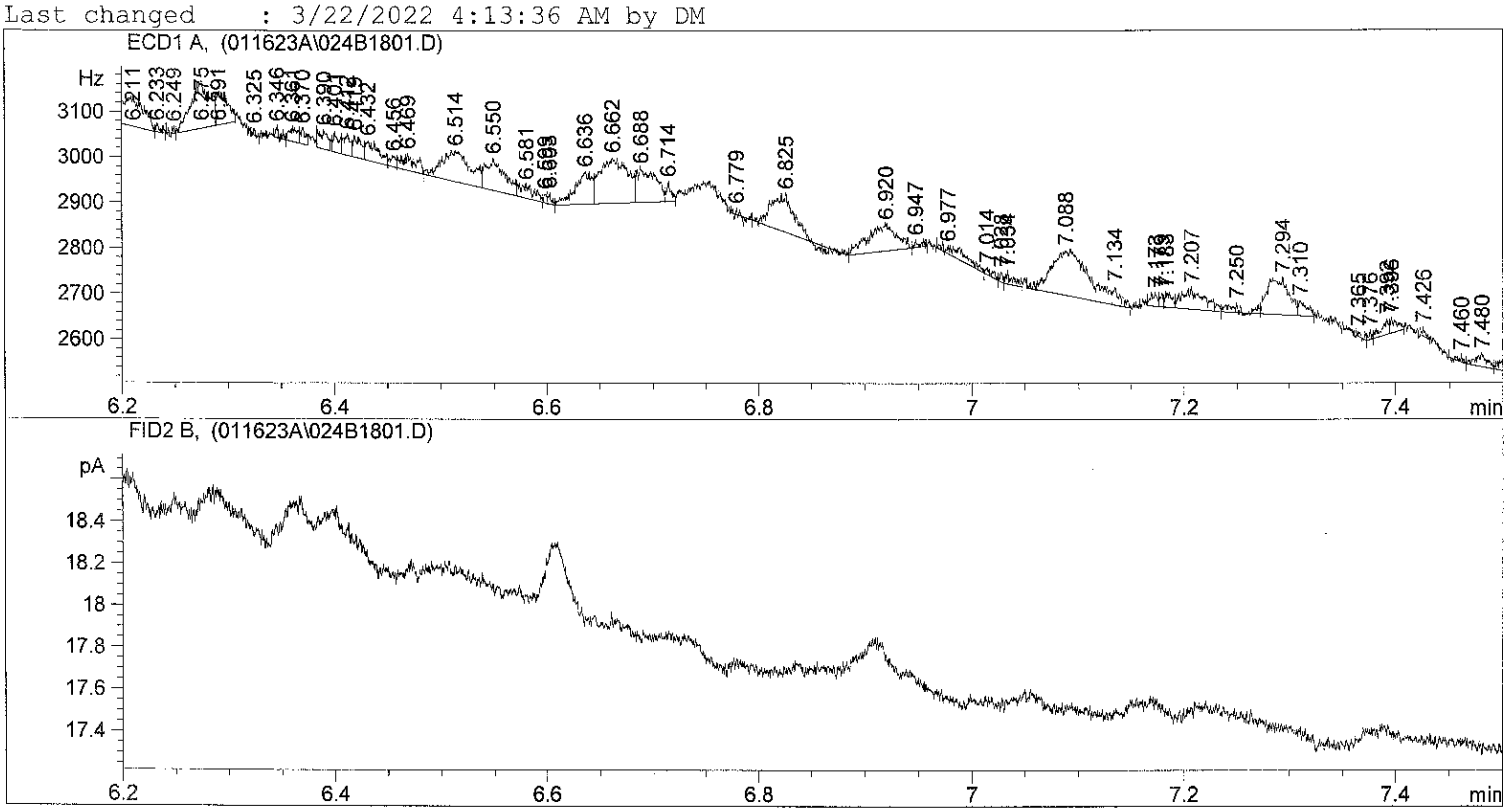

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.287	BV	0.0169	148.57916	108.97947	1.75113
2	5.297	VV	6.61e-3	35.16692	70.62211	0.41447
3	5.307	VB	5.98e-3	23.67327	53.32178	0.27901
4	5.380	BV	0.0251	667.89038	336.68658	7.87164
5	5.412	VB	0.0187	147.67381	95.27809	1.74046
6	5.480	BV	0.0186	1219.24622	858.36792	14.36982
7	5.515	VV	0.0201	246.75024	163.07648	2.90815
8	5.549	VV	8.14e-3	37.15849	60.73095	0.43794
9	5.610	VV	0.0269	191.18887	85.43890	2.25332
10	5.652	VV	0.0184	201.91083	132.08418	2.37968
11	5.656	VV	8.09e-3	91.08881	141.82895	1.07356
12	5.697	VV	0.0245	644.87006	315.28787	7.60032
13	5.732	VV	7.49e-3	75.60886	124.38763	0.89111
14	5.760	VV	0.0222	553.86725	307.24954	6.52778
15	5.828	VV	0.0282	350.88519	148.59013	4.13547
16	5.876	VV	0.0281	426.90771	180.89912	5.03146
17	5.897	VV	6.05e-3	66.23891	136.70319	0.78068

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.903	VV	3.13e-3	27.68118	127.67915	0.32625
19	5.907	VV	6.79e-3	61.95396	113.05527	0.73018
20	5.960	VV	0.0274	284.43573	124.01330	3.35231
21	5.971	VV	7.32e-3	60.96825	102.75842	0.71856
22	6.012	VV	0.0304	419.56992	167.40480	4.94498
23	6.039	VB	0.0111	63.60933	71.80996	0.74969
24	6.087	BP	3.19e-3	3.76095	20.07493	0.04433
25	6.112	BV	6.52e-3	16.91619	34.51904	0.19937
26	6.130	VV	0.0198	94.18166	56.53273	1.11001
27	6.175	VV	0.0182	69.22485	45.85841	0.81587
28	6.211	VP	0.0169	94.94120	67.02078	1.11896
29	6.233	VP	3.72e-3	4.51154	16.89083	0.05317
30	6.249	BP	2.35e-3	1.53439	13.25322	0.01808
31	6.275	VV	0.0156	128.51006	102.63912	1.51460
32	6.291	VB	9.36e-3	52.01651	69.29709	0.61306
33	6.325	PP	1.83e-3	1.40142	13.30448	0.01652
34	6.346	BV	3.12e-3	5.96623	27.63069	0.07032
35	6.361	VV	6.78e-3	16.75246	30.64992	0.19744
36	6.370	VB	4.32e-3	10.53328	33.04438	0.12414
37	6.390	BB	6.77e-3	22.27529	40.80514	0.26253
38	6.401	BB	5.08e-3	16.88225	43.99216	0.19897
39	6.412	BV	6.16e-3	20.80172	45.25386	0.24517
40	6.419	VV	6.36e-3	22.85696	46.28327	0.26939
41	6.432	VB	0.0111	36.39904	42.17062	0.42899
42	6.456	BV	5.81e-3	8.66752	21.91477	0.10215
43	6.469	VP	0.0108	30.86499	34.63340	0.36377
44	6.514	VV	0.0224	126.56197	67.24179	1.49164
45	6.550	VB	0.0153	86.43136	68.81509	1.01866
46	6.581	BV	0.0116	27.37184	28.58545	0.32260
47	6.599	VV	3.19e-3	3.67118	17.92261	0.04327
48	6.603	VP	3.14e-3	4.66193	21.42123	0.05494
49	6.636	VV	0.0136	77.61913	69.76479	0.91481
50	6.662	VV	0.0211	175.35164	99.00315	2.06666
51	6.688	VV	0.0157	92.35135	73.10036	1.08844
52	6.714	VV	4.32e-3	13.30046	41.66791	0.15676
53	6.779	PB	1.06e-3	4.73667e-1	11.95798	0.00558
54	6.825	BP	0.0194	113.41196	82.93789	1.33665
55	6.920	VP	0.0233	108.79445	55.95485	1.28223
56	6.947	VB	4.81e-3	5.25792	14.56025	0.06197
57	6.977	BV	0.0355	30.51836	14.31016	0.35968
58	7.014	VP	6.65e-3	6.47282	12.49198	0.07629
59	7.028	VP	2.90e-3	3.56943	19.87731	0.04207
60	7.034	VB	8.38e-3	12.68304	25.21926	0.14948
61	7.088	BV	0.0296	239.00577	96.86974	2.81688
62	7.134	VP	6.80e-3	19.88435	38.65346	0.23435
63	7.173	BV	5.79e-3	11.45944	26.78061	0.13506
64	7.179	VV	2.93e-3	5.70107	28.52108	0.06719
65	7.183	VB	5.64e-3	13.84358	30.80024	0.16316
66	7.207	BP	0.0170	64.47075	45.91431	0.75984
67	7.250	VB	0.0113	15.67978	18.03928	0.18480
68	7.294	BV	0.0165	109.54167	80.34286	1.29104
69	7.310	VB	7.35e-3	18.53575	32.03506	0.21846
70	7.365	PP	3.88e-3	2.21097	8.96678	0.02606
71	7.376	VV	3.23e-3	3.13274	16.35970	0.03692
72	7.392	VV	6.66e-3	14.51976	31.04320	0.17113
73	7.396	VB	5.66e-3	13.73673	31.67677	0.16190
74	7.426	BB	3.04e-3	3.74720	16.57687	0.04416
75	7.460	PP	4.48e-3	2.52333	12.91850	0.02974
76	7.480	VV	9.43e-3	20.90482	28.26265	0.24638
77	7.506	VV	8.26e-3	21.84679	33.28683	0.25748
78	7.517	VP	0.0123	35.27191	37.86517	0.41571
79	7.566	BP	3.53e-3	4.25648	15.85394	0.05017
80	7.588	BP	4.07e-3	2.96290	11.26443	0.03492
81	7.627	VB	0.0289	175.83839	76.81888	2.07240
82	7.683	BP	2.79e-3	2.06158	12.05888	0.02430

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.719	VB	0.0196	71.83527	46.99170	0.84664
84	7.784	PPA	0.0117	17.37662	18.18227	0.20480

Totals : 8484.77204 6352.93790

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

```
Injection Date  : 1/16/2023 5:52:11 PM          Seq. Line :  19
Sample Name     : 23A0207 10                    Location : Vial 25
Acq. Operator   : DXP                               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\011623A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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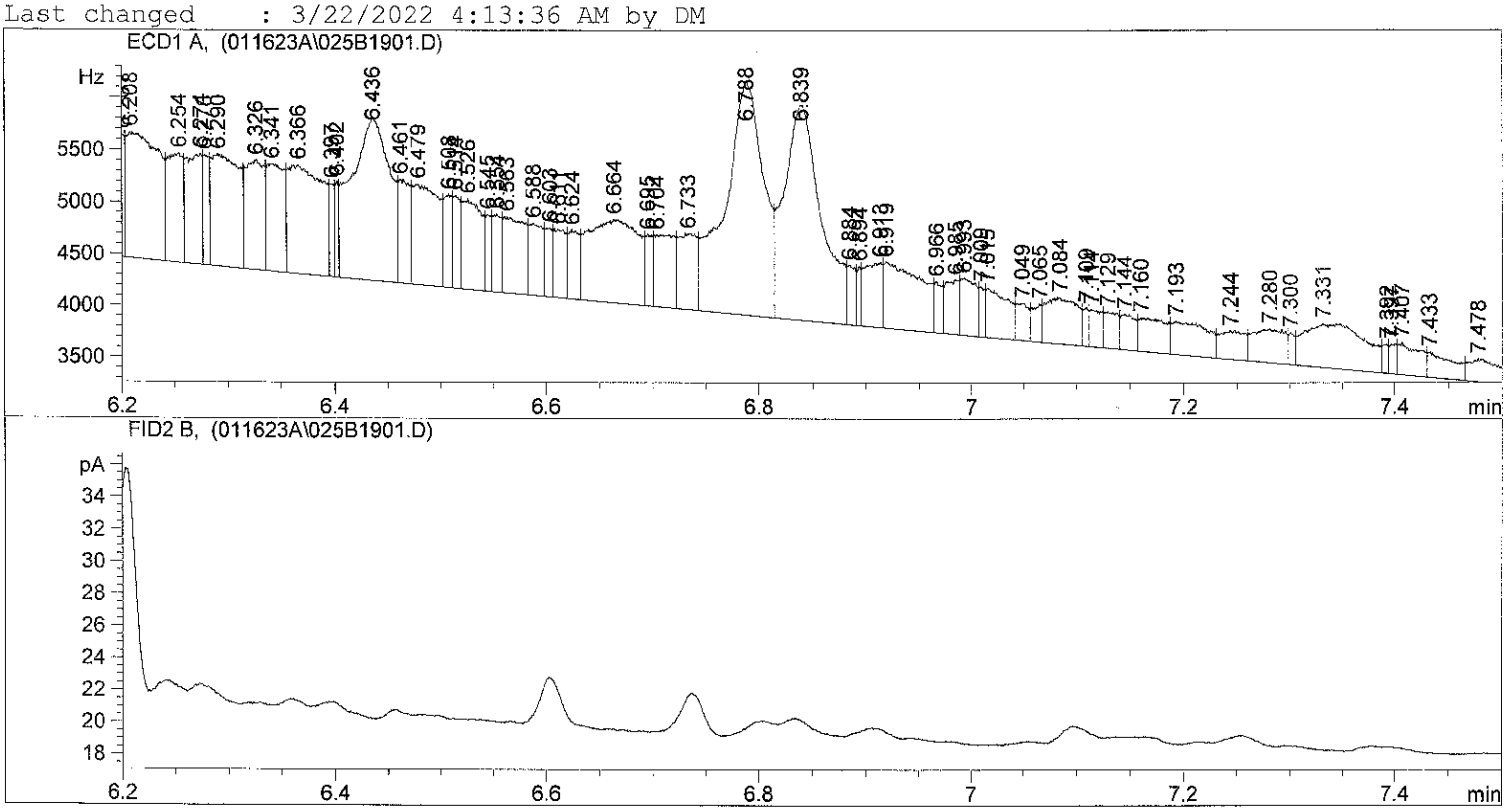

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.240	BV	0.0298	3124.94556	1276.02820	2.62268
2	5.299	VV	0.0107	433.90390	501.49243	0.36416
3	5.309	VV	0.0187	800.24469	532.43854	0.67162
4	5.345	VV	6.02e-3	116.31822	241.60114	0.09762
5	5.366	VV	0.0235	953.97540	485.78229	0.80065
6	5.411	VV	0.0167	811.08502	578.78162	0.68072
7	5.422	VV	8.65e-3	350.72742	521.11151	0.29436
8	5.434	VV	6.03e-3	232.59988	519.01862	0.19521
9	5.454	VV	0.0136	652.37775	603.25977	0.54752
10	5.480	VV	0.0210	2082.37231	1189.61145	1.74768
11	5.515	VV	0.0199	1472.43066	939.24121	1.23577
12	5.538	VV	3.89e-3	150.48964	534.26953	0.12630
13	5.542	VV	5.59e-3	174.36371	519.44659	0.14634
14	5.592	VV	0.0407	3780.44824	1095.53796	3.17283
15	5.637	VV	0.0300	3518.09229	1387.91272	2.95264
16	5.697	VV	0.0345	6225.64404	2209.57056	5.22502
17	5.743	VV	0.0107	1135.47034	1337.79761	0.95297

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.757	VV	0.0191	2158.31201	1364.52161	1.81141
19	5.780	VV	3.41e-3	265.15881	1102.60181	0.22254
20	5.786	VV	0.0105	884.53137	1139.41956	0.74236
21	5.797	VV	7.85e-3	700.25757	1096.89026	0.58771
22	5.827	VV	0.0267	2790.95337	1248.33032	2.34237
23	5.875	VV	0.0289	4895.79248	2090.26050	4.10891
24	5.939	VV	0.0472	8734.71289	2213.82080	7.33081
25	5.979	VV	7.93e-3	1080.57336	1767.94458	0.90690
26	5.989	VV	6.17e-3	849.98517	1780.59656	0.71337
27	6.004	VV	0.0235	3384.92603	1753.66211	2.84088
28	6.036	VV	0.0339	4415.26465	1595.73999	3.70562
29	6.081	VV	0.0127	1365.74414	1315.49304	1.14623
30	6.098	VV	8.31e-3	780.16467	1244.37183	0.65477
31	6.110	VV	6.63e-3	674.93512	1264.59839	0.56646
32	6.116	VV	3.13e-3	274.17633	1263.56982	0.23011
33	6.122	VV	0.0219	2318.41016	1271.72266	1.94578
34	6.153	VV	5.76e-3	484.59482	1139.08899	0.40671
35	6.167	VV	0.0106	1039.77075	1234.13220	0.87265
36	6.175	VV	7.18e-3	710.28510	1221.86597	0.59612
37	6.186	VV	0.0102	970.53094	1185.36670	0.81454
38	6.201	VV	5.28e-3	452.37845	1177.78003	0.37967
39	6.208	VV	0.0249	2536.26270	1206.83557	2.12862
40	6.254	VV	0.0135	1081.68469	1047.17017	0.90783
41	6.274	VV	0.0123	1073.14185	1067.70850	0.90066
42	6.278	VV	5.11e-3	427.00909	1056.67383	0.35838
43	6.290	VV	0.0222	1927.73474	1072.50549	1.61790
44	6.326	VV	0.0147	1268.17627	1051.13525	1.06435
45	6.341	VV	0.0142	1170.41089	1030.68542	0.98230
46	6.366	VV	0.0264	2317.35303	1046.08313	1.94489
47	6.397	VV	4.48e-3	267.03391	895.69092	0.22411
48	6.402	VV	3.36e-3	218.60709	922.50159	0.18347
49	6.436	VV	0.0299	3894.18262	1562.24341	3.26829
50	6.461	VV	9.56e-3	765.90961	997.48090	0.64281
51	6.479	VV	0.0213	1657.71851	972.36102	1.39128
52	6.508	VV	6.56e-3	473.56247	896.26038	0.39745
53	6.514	VV	6.17e-3	412.12473	895.68353	0.34589
54	6.526	VV	0.0156	1119.83777	871.48724	0.93985
55	6.545	VV	4.91e-3	260.04114	738.68872	0.21825
56	6.554	VV	0.0101	456.08865	752.74780	0.38278
57	6.563	VV	0.0169	1040.68005	737.84644	0.87342
58	6.588	VV	0.0107	613.94293	696.13257	0.51527
59	6.603	VV	6.21e-3	321.84119	669.81787	0.27011
60	6.611	VV	9.31e-3	490.97125	657.79291	0.41206
61	6.624	VV	9.06e-3	492.20026	663.37537	0.41309
62	6.664	VV	0.0387	2610.68799	804.50610	2.19108
63	6.695	VV	6.34e-3	327.35782	688.79724	0.27474
64	6.704	VV	0.0216	900.99927	695.61096	0.75618
65	6.733	VV	0.0149	909.89758	733.31262	0.76365
66	6.788	VV	0.0305	5684.32275	2247.14722	4.77070
67	6.839	VV	0.0297	4969.95215	2064.70947	4.17115
68	6.884	VV	9.15e-3	314.95895	573.48706	0.26434
69	6.894	VV	3.41e-3	137.75288	572.47601	0.11561
70	6.913	VV	0.0137	715.90375	629.55798	0.60084
71	6.919	VV	0.0300	1584.62634	638.12494	1.32994
72	6.966	VV	6.98e-3	260.76315	492.47516	0.21885
73	6.985	VV	0.0109	461.71375	524.70380	0.38750
74	6.993	VV	0.0135	579.95026	551.71039	0.48674
75	7.009	VV	5.25e-3	185.27823	485.48682	0.15550
76	7.015	VV	0.0183	707.21613	477.72296	0.59355
77	7.049	VV	0.0106	278.80869	359.95441	0.23400
78	7.065	VV	8.01e-3	224.63374	365.35010	0.18853
79	7.084	VV	0.0250	940.54132	450.22772	0.78937
80	7.109	VV	4.68e-3	131.48769	376.36807	0.11035
81	7.114	VV	9.54e-3	275.61652	359.68445	0.23132
82	7.129	VV	0.0109	299.71158	353.99985	0.25154

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.144	VV	0.0122	333.45117	339.99341	0.27986
84	7.160	VV	0.0295	570.58777	322.18216	0.47888
85	7.193	VV	0.0283	750.50092	321.31470	0.62988
86	7.244	VV	0.0194	437.54465	271.47699	0.36722
87	7.280	VV	0.0253	691.02081	326.23993	0.57996
88	7.300	VV	5.22e-3	121.40380	306.25595	0.10189
89	7.331	VV	0.0483	1739.46375	423.96033	1.45989
90	7.392	VV	6.13e-3	114.27633	281.92908	0.09591
91	7.397	VV	5.90e-3	129.67094	285.43649	0.10883
92	7.407	VV	0.0181	442.90817	309.00952	0.37172
93	7.433	VV	0.0196	395.26379	242.66505	0.33173
94	7.478	VV	0.0237	421.06589	218.76604	0.35339
95	7.512	VV	0.0177	279.23132	190.58142	0.23435
96	7.534	VV	9.01e-3	86.12434	159.39920	0.07228
97	7.544	VV	0.0143	182.44044	155.83250	0.15312
98	7.579	VP	4.15e-3	9.95726	32.76343	0.00836
99	7.626	VV	0.0277	304.98819	131.28871	0.25597
100	7.654	VB	0.0102	45.48045	64.86250	0.03817
101	7.680	BV	4.38e-3	5.79532	18.88080	0.00486
102	7.689	VB	4.06e-3	5.82994	22.20481	0.00489
103	7.730	BB	0.0131	19.73060	25.18986	0.01656
104	7.761	BP	2.49e-3	1.52296	16.27187	0.00128
105	7.770	VV	5.69e-3	11.81573	30.70541	0.00992
106	7.784	VPA	9.95e-3	14.92385	20.85231	0.01253

Totals : 1.19151e5 8.44171e4

Results obtained with enhanced integrator!

Signal 2: FID2 B,

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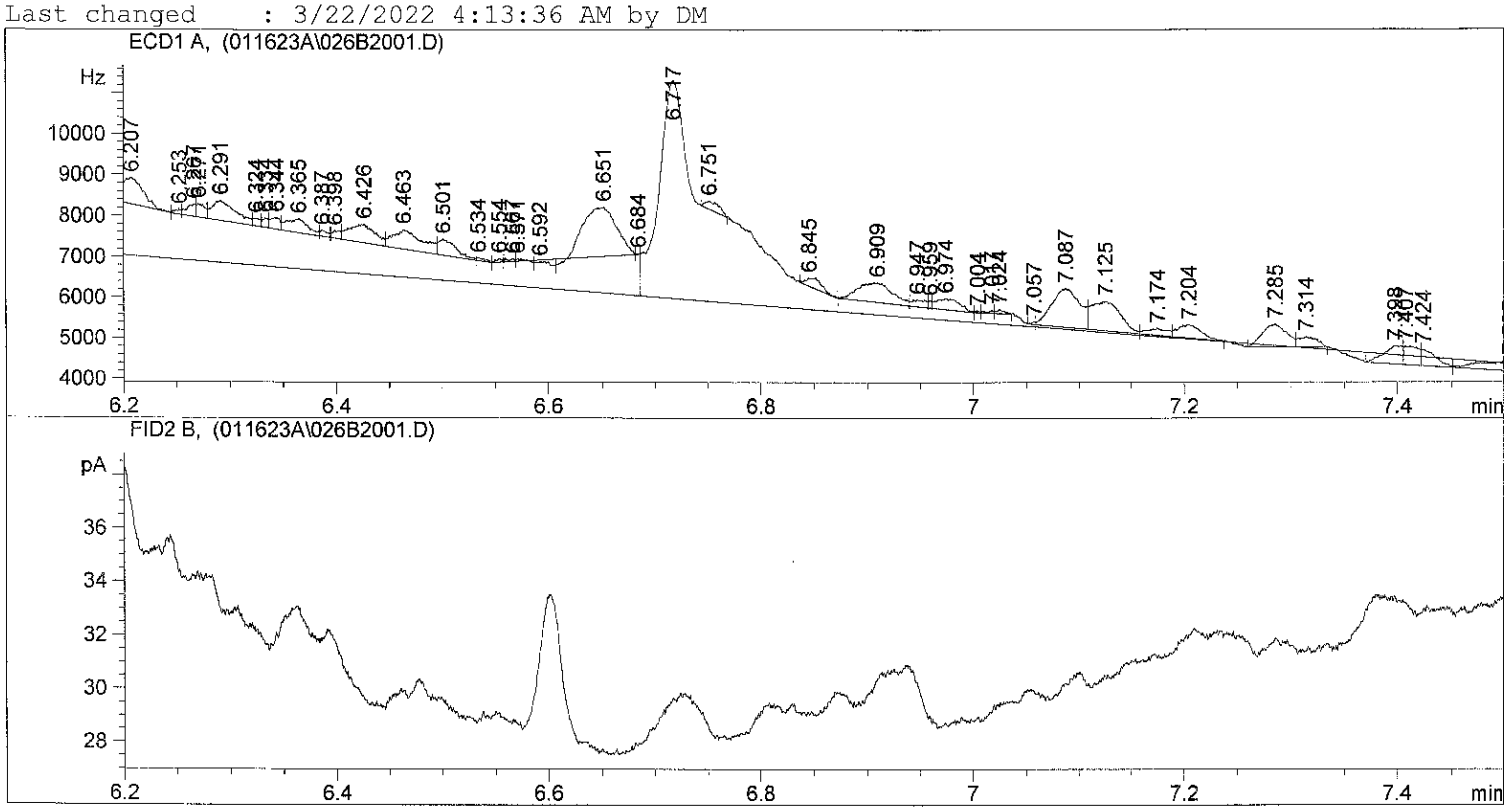
*** End of Report ***

Injection Date : 1/16/2023 6:03:10 PM Seq. Line : 20
Sample Name : 23A0207 17 Location : Vial 26
Acq. Operator : DXP Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\2\SEQUENCE\011623A.S
Method : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed : 3/22/2022 4:13:36 AM by DM



Area Percent Report

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.283	BV S	0.0201	4791.64648	2863.42261	2.41147
2	5.323	VP S	0.0208	1093.65186	875.62787	0.55040
3	5.381	VV S	0.0265	6050.03613	2882.46167	3.04477
4	5.433	VV S	0.0317	5949.65430	3123.98535	2.99425
5	5.480	VV S	0.0460	2.27913e4	8265.79395	11.47009
6	5.563	BV T	0.0185	2658.97900	1756.61731	1.33817
7	5.590	VV T	0.0142	1110.63672	995.06311	0.55894
8	5.631	VV T	0.0109	621.02600	750.64685	0.31254
9	5.676	VV S	0.0331	2.04576e4	7782.18262	10.29560
10	5.757	VV S	0.0768	2.37658e4	5157.59424	11.96049
11	5.808	BV T	9.95e-3	547.39758	697.98163	0.27549
12	5.814	VV T	9.93e-3	374.74750	628.90198	0.18860
13	5.831	VV T	9.66e-3	323.79907	407.76776	0.16296
14	5.865	PV T	0.0142	725.62561	620.63318	0.36518
15	5.900	VV T	0.0153	991.88464	809.48987	0.49918
16	5.926	VV T	4.91e-3	28.13276	72.84813	0.01416
17	5.953	VV S	0.0202	1.17034e4	7854.75928	5.88992

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.977	VV S	0.0270	6024.15674	3712.59717	3.03175
19	6.005	VV S	0.2781	4.47492e4	2682.21021	22.52070
20	6.058	BV T	0.0172	1538.68372	1120.37439	0.77437
21	6.091	PV T	7.50e-3	309.68011	523.95251	0.15585
22	6.110	VV T	0.0168	1435.17529	1090.10193	0.72227
23	6.139	PV T	7.04e-3	158.99734	297.36417	0.08002
24	6.143	PV T	6.84e-3	101.73583	247.74300	0.05120
25	6.158	PV T	0.0183	232.48434	211.46112	0.11700
26	6.179	PV T	7.71e-3	49.90465	107.85330	0.02512
27	6.207	PV T	0.0189	981.26727	631.25079	0.49384
28	6.253	PV T	4.89e-3	42.53971	110.50652	0.02141
29	6.267	PV T	7.46e-3	173.22839	294.56366	0.08718
30	6.271	PV T	8.69e-3	169.85101	325.75488	0.08548
31	6.291	PV T	0.0190	745.33704	482.97571	0.37510
32	6.324	PV T	6.81e-3	91.56882	183.93329	0.04608
33	6.334	PV T	4.92e-3	81.49857	230.98293	0.04102
34	6.344	PV T	7.38e-3	169.45378	283.03998	0.08528
35	6.365	PV T	0.0164	464.29309	339.02612	0.23366
36	6.387	PV T	6.97e-3	76.18125	144.12776	0.03834
37	6.398	PV T	6.71e-3	97.66360	186.54813	0.04915
38	6.426	PV T	0.0208	764.53577	454.87976	0.38476
39	6.463	PV T	0.0232	920.99579	475.55286	0.46350
40	6.501	PV T	0.0143	463.50595	393.47641	0.23327
41	6.534	PV T	0.0101	40.38167	66.60812	0.02032
42	6.554	PV T	4.80e-3	33.14666	92.16893	0.01668
43	6.567	PV T	6.64e-3	32.00493	63.91315	0.01611
44	6.571	PV T	2.66e-3	9.49507	59.41621	0.00478
45	6.592	PV T	0.0320	103.47183	38.17243	0.05207
46	6.651	PV T	0.0258	2591.29736	1200.96155	1.30411
47	6.684	PV T	2.95e-3	4.42754	24.99069	0.00223
48	6.717	PBAS	0.0463	1.98507e4	5342.46338	9.99018
49	6.751	BB T	0.0129	199.72641	195.83043	0.10052
50	6.845	BV T	0.0147	240.70921	199.16229	0.12114
51	6.909	PV T	0.0283	1080.40515	480.12299	0.54373
52	6.947	PV T	0.0109	148.90408	168.88684	0.07494
53	6.959	PV T	3.74e-3	38.67131	172.23109	0.01946
54	6.974	PV T	0.0190	415.06137	268.28058	0.20889
55	7.004	PV T	4.51e-3	8.97585	28.23443	0.00452
56	7.017	PV T	5.41e-3	29.10902	70.54433	0.01465
57	7.024	PB T	6.44e-3	48.33448	96.60530	0.02433
58	7.057	BV T	3.20e-3	16.25640	73.07719	0.00818
59	7.087	PV T	0.0233	1775.49597	944.28571	0.89355
60	7.125	PV T	0.0234	1388.32556	724.22382	0.69870
61	7.174	PV T	0.0163	222.65869	167.68399	0.11206
62	7.204	PB T	0.0186	489.97067	324.66000	0.24659
63	7.285	BV T	0.0188	874.44409	560.65668	0.44008
64	7.314	PB T	0.0152	315.59641	256.18430	0.15883
65	7.398	BV T	0.0147	549.10461	446.63135	0.27635
66	7.407	PV T	0.0153	420.74533	459.76639	0.21175
67	7.424	PV T	0.0149	362.63794	405.31479	0.18250
68	7.505	PV T	0.0348	770.04779	266.02899	0.38754
69	7.553	PV T	0.0120	83.15952	90.49993	0.04185
70	7.569	PV T	7.79e-3	87.37181	138.00558	0.04397
71	7.575	PV T	8.58e-3	80.62099	156.58119	0.04057
72	7.627	PV T	0.0362	1836.33154	609.05054	0.92416
73	7.702	PV T	0.0136	231.73167	207.85164	0.11662
74	7.713	PV T	0.0230	448.45239	233.79054	0.22569
75	7.779	PBAT	0.0113	47.34584	52.41156	0.02383
Totals :				1.98702e5	7.47614e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

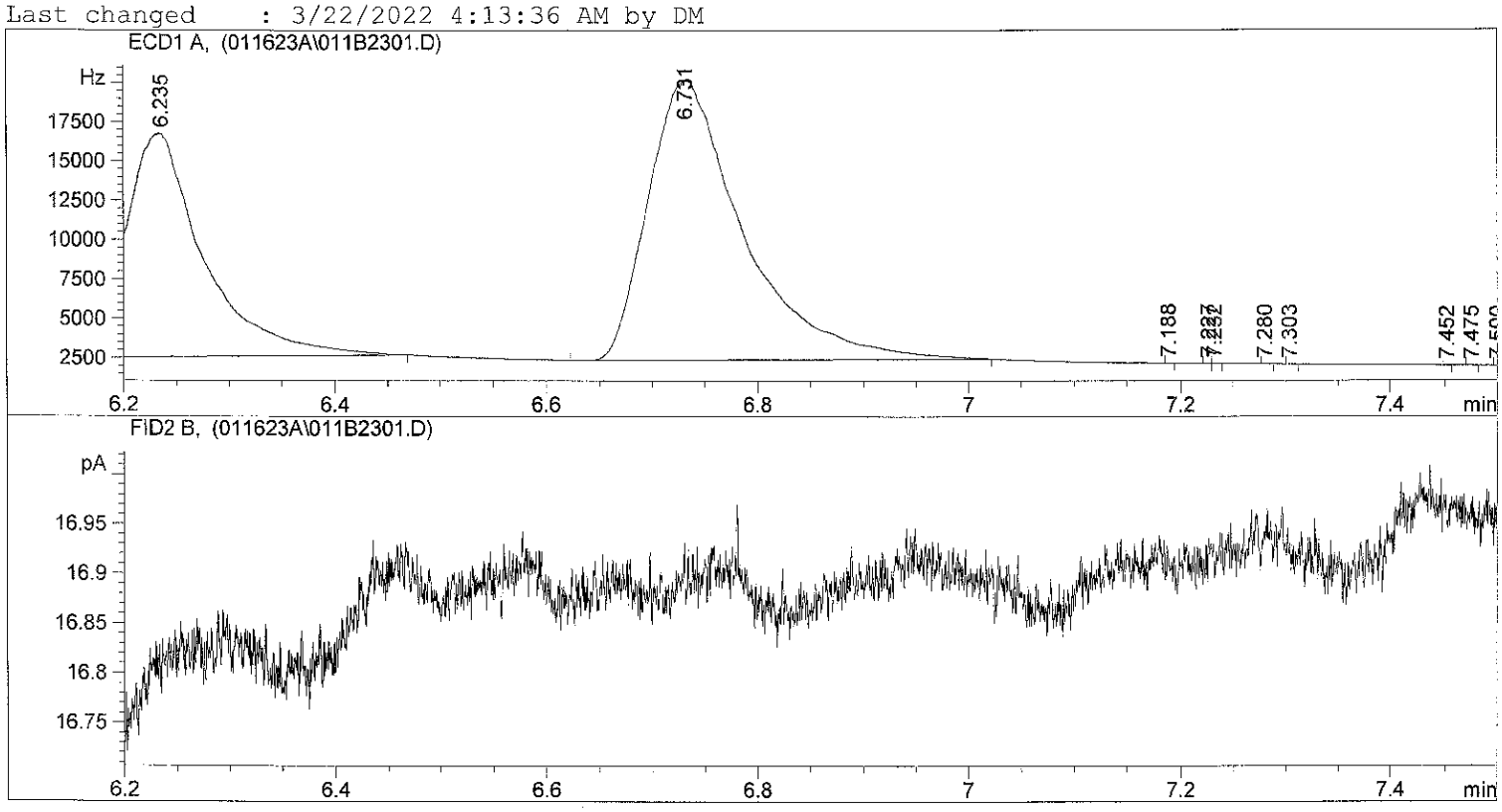
Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Height [pA]	Area %
1	5.373	PB	0.0168	26.49011	24.22663	1.000e2
Totals :				26.49011	24.22663	

Results obtained with enhanced integrator!

*** End of Report ***

Injection Date : 1/16/2023 6:35:45 PM Seq. Line : 23
Sample Name : CS4 STANDARD Location : Vial 11
Acq. Operator : DXP Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\2\SEQUENCE\011623A.S
Method : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed : 3/22/2022 4:13:36 AM by DM



Area Percent Report

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.387	BP	3.76e-3	6.73550	23.38311	0.00061
2	5.426	PP	1.91e-3	5.61193	50.03798	0.00051
3	5.540	VV S	0.0375	2.19397e5	7.92904e4	19.96961
4	5.633	VV S	0.0515	3.17148e5	1.02691e5	28.86701
5	5.696	VV S	0.0467	1.10937e5	3.95519e4	10.09752
6	5.750	VV S	0.0708	1.20410e5	2.83515e4	10.95979
7	5.989	VV S	0.0591	9.51110e4	2.68172e4	8.65706
8	6.146	VV S	0.0571	5.54376e4	1.61712e4	5.04597
9	6.235	VB S	0.0811	6.91785e4	1.42134e4	6.29667
10	6.731	PB S	0.0740	1.10879e5	1.78229e4	10.09229
11	7.188	BP	2.09e-3	1.64488	12.89897	0.00015
12	7.227	BP	4.34e-3	4.60406	17.08595	0.00042
13	7.232	VP	4.83e-3	4.55880	13.19342	0.00041
14	7.280	PP	1.77e-3	8.96034e-1	8.90398	8.156e-5
15	7.303	BP	2.12e-3	1.75317	13.42507	0.00016
16	7.452	PP	2.95e-3	1.95807	8.95854	0.00018
17	7.475	PP	3.77e-3	2.89440	10.64370	0.00026

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	7.500	PP	3.29e-3	1.66892	7.22919	0.00015
19	7.543	PB	1.92e-3	9.27373e-1	8.21267	8.441e-5
20	7.572	BP	7.59e-3	5.66413	9.45509	0.00052
21	7.661	BP	0.0253	113.56325	53.72012	0.01034
22	7.727	PP	3.29e-3	2.20621	8.89274	0.00020
Totals :				1.09865e6	3.25155e5	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin Extraction Laboratory – Glassware

Batch ID: BLA0261 Work Order: 23A0100, 23A0133, 23A0134, 23A0207 Extraction Parameter: Dioxin ARI Analyst: TW

ARI Sample ID	300 mL Flat Bottom	Small Soxhlet	Large Soxhlet	250 mL Beaker	Funnel	Column	Florisil Column	Turbo Tube	Sep Funnel	Erlenmeyer Flask	Centrifuge Bottle	Turbo-Vap	Vortex Mixer	Heating Mantle
BLA0261 - BLK1	6	5		19	46	9	12	37				4	4	A1
- BS1	40	15		17	38	15	67	20				4	4	A2
- DUP1	32		71	239	60	198	139	3				4	4	A3
- SRM1	70	64		23	16	41	7	17				4	4	A5
23A0100 - 09	18		23	39	61	185	150	32				4	4	A6
- 21	49		25	31	5	43	166	25				4	4	B1
23A0133 - 06	4		67	138	59	2	136	82				4	4	B2
- 07	38	11		49	11	36	16	31				4	4	B3
- 10	79		28	50	25	31	29	35				4	4	B4
- 11	67		35	43	24	45	49	57				4	4	B5
23A0134 - 06	60		3	33	28	35	2	85				4	4	B6
- 14	39	70		41	37	38	61	42				4	4	C1
23A0207 - 02	17	25		3	27	11	70	10				4	4	C2
- 10	53	26		13	65	16	71	24				4	4	C3
- 17	43	23		25	3	14	60	23				4	4	C4
												4	4	
												4	4	
												4	4	
												4	4	
												4	4	
												4	4	
												4	4	
												4	4	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLA0236	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665 Sulfuric Acid Cleanup - uL	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	BLA0261-BLK1	23022304	01/25/2023	
LDW23-SC1241	23A0133-06	23022310	01/25/2023	
LDW23-SC1222	23A0133-11	23022315	01/25/2023	
LDW23-SC1215	23A0133-10	23022314	01/25/2023	
LDW23-IT1217	23A0133-07	23022311	01/25/2023	
LCS	BLA0261-BS1	23022401	01/25/2023	
Reference	BLA0261-SRM1	23022306	01/25/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLA0236

Matrix: Solid **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 1/27/2023 10:22:01AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0100-09	C	LDW23-SS1226	C 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0100-21	C	LDW23-SS1154	C 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0133-06	B	LDW23-SC1241	B 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0133-07	B	LDW23-IT1217	B 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0133-10	B	LDW23-SC1215	B 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0133-11	B	LDW23-SC1222	B 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0134-06	B	LDW23-SS1160	B 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0134-14	B	LDW23-IT1194	B 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0207-02	B	LDW23-IT1089	B 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0207-10	B	LDW23-IT1097	B 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0207-17	B	LDW23-IT1209	B 01	20	20	1613B Dioxin	1/25/2023	TW	
BLA0261-BLK1	-	Blank	-	20	20	-	1/25/2023	TW	
BLA0261-BS1	-	LCS	-	20	20	-	1/25/2023	TW	
BLA0261-DUP1	-	Duplicate	-	20	20	-	1/25/2023	TW	
BLA0261-SRM1	-	Reference	-	20	20	-	1/25/2023	TW	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLA0237	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	BLA0261-BLK1	23022304	01/26/2023	
LCS	BLA0261-BS1	23022401	01/26/2023	
Reference	BLA0261-SRM1	23022306	01/26/2023	
LDW23-SC1241	23A0133-06	23022310	01/26/2023	
LDW23-SC1222	23A0133-11	23022315	01/26/2023	
LDW23-SC1215	23A0133-10	23022314	01/26/2023	
LDW23-IT1217	23A0133-07	23022311	01/26/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLA0237

Matrix: Solid **Cleanup using: Organics - EPA 3660C Silica Gel Cleanup - uL** **Printed: 1/27/2023 10:23:03AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0100-09	C	LDW23-SS1226	C 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0100-21	C	LDW23-SS1154	C 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0133-06	B	LDW23-SC1241	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0133-07	B	LDW23-IT1217	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0133-10	B	LDW23-SC1215	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0133-11	B	LDW23-SC1222	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0134-06	B	LDW23-SS1160	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0134-14	B	LDW23-IT1194	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0207-02	B	LDW23-IT1089	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0207-10	B	LDW23-IT1097	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0207-17	B	LDW23-IT1209	B 01	20	20	1613B Dioxin	1/26/2023	TW	
BLA0261-BLK1	-	Blank	-	20	20	-	1/26/2023	TW	
BLA0261-BS1	-	LCS	-	20	20	-	1/26/2023	TW	
BLA0261-DUP1	-	Duplicate	-	20	20	-	1/26/2023	TW	
BLA0261-SRM1	-	Reference	-	20	20	-	1/26/2023	TW	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLA0238	Cleanup Type:	Florisil
Cleanup Method:	EPA 3620B Florisil Cleanup (uL)	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1217	23A0133-07	23022311	01/26/2023	
LDW23-SC1215	23A0133-10	23022314	01/26/2023	
LDW23-SC1222	23A0133-11	23022315	01/26/2023	
LDW23-SC1241	23A0133-06	23022310	01/26/2023	
LCS	BLA0261-BS1	23022401	01/26/2023	
Blank	BLA0261-BLK1	23022304	01/26/2023	
Reference	BLA0261-SRM1	23022306	01/26/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLA0238

Matrix: Solid **Cleanup using: Organics - EPA 3620B Florisil Cleanup (uL)** **Check Standard: CKK0015-FLO1** **Printed: 1/27/2023 10:23:47AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0100-09	C	LDW23-SS1226	C 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0100-21	C	LDW23-SS1154	C 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0133-06	B	LDW23-SC1241	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0133-07	B	LDW23-IT1217	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0133-10	B	LDW23-SC1215	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0133-11	B	LDW23-SC1222	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0134-06	B	LDW23-SS1160	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0134-14	B	LDW23-IT1194	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0207-02	B	LDW23-IT1089	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0207-10	B	LDW23-IT1097	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0207-17	B	LDW23-IT1209	B 01	20	20	1613B Dioxin	1/26/2023	TW	
BLA0261-BLK1	-	Blank	-	20	20	-	1/26/2023	TW	
BLA0261-BS1	-	LCS	-	20	20	-	1/26/2023	TW	
BLA0261-DUP1	-	Duplicate	-	20	20	-	1/26/2023	TW	
BLA0261-SRM1	-	Reference	-	20	20	-	1/26/2023	TW	

Analytical Resources, LLC
Analytical Chemists and Consultants

Blank

Form 1
METHOD BLANK DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLA0261-BLK1	File ID:	23022304
Sampled:	N/A	Prepared:	01/24/23 13:10	Analyzed:	02/23/23 12:35
Solids Wt%:		Preparation:	EPA 1613	Initial/Final:	10 g / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	2.534	0.655-0.886	0.056	1.00	0.0551	ng/kg	EMPC, J
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.048	1.00	ND	ng/kg	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.000	1.318-1.783	0.067	1.00	ND	ng/kg	U
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.064	1.00	ND	ng/kg	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	0.090	1.00	ND	ng/kg	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	1.151	1.054-1.426	0.037	1.00	0.0596	ng/kg	J
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.000	1.054-1.426	0.033	1.00	ND	ng/kg	U
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.037	1.00	ND	ng/kg	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	1.077	1.054-1.426	0.047	1.00	0.0913	ng/kg	J
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.047	1.00	ND	ng/kg	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.047	1.00	ND	ng/kg	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	1.301	1.054-1.426	0.048	1.00	0.0582	ng/kg	J
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	0.000	0.893-1.208	0.044	1.00	ND	ng/kg	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.000	0.893-1.208	0.066	1.00	ND	ng/kg	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.610	0.893-1.208	0.061	2.50	0.221	ng/kg	EMPC, J
39001-02-0	OCDF	1	0.000	0.757-1.024	0.132	2.50	ND	ng/kg	U
3268-87-9	OCDD	1	0.816	0.757-1.024	0.132	10.0	0.979	ng/kg	J

Homologue Groups

55722-27-5	Total TCDF	1	0.000			1.00	ND	ng/kg
41903-57-5	Total TCDD	1	0.000			1.00	ND	ng/kg
30402-15-4	Total PeCDF	1	0.000			1.00	ND	ng/kg
36088-22-9	Total PeCDD	1	0.000			1.00	ND	ng/kg
55684-94-1	Total HxCDF	1	0.000			1.00	0.151	ng/kg
34465-46-8	Total HxCDD	1	0.000			1.00	0.0582	ng/kg
38998-75-3	Total HpCDF	1	0.000			1.00	ND	ng/kg
37871-00-4	Total HpCDD	1	0.000			1.00	ND	ng/kg

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.029
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.118

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Blank

Form 2
METHOD BLANK DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLA0261-BLK1	File ID:	23022304
Sampled:	N/A	Prepared:	01/24/23 13:10	Analyzed:	02/23/23 12:35
Solids Wt%:	0.00	Preparation:	EPA 1613	Initial/Final:	10 g / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF	1	0.769	0.655-0.886	0.09	101	24 - 169 %	
13C12-2,3,7,8-TCDD	1	0.759	0.655-0.886	0.12	135	25 - 164 %	
13C12-1,2,3,7,8-PeCDF	1	1.574	1.318-1.783	0.16	83.3	24 - 185 %	
13C12-2,3,4,7,8-PeCDF	1	1.554	1.318-1.783	0.17	85.6	21 - 178 %	
13C12-1,2,3,7,8-PeCDD	1	1.648	1.318-1.783	0.10	73.0	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF	1	0.506	0.434-0.587	0.24	121	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF	1	0.507	0.434-0.587	0.24	130	26 - 123 %	*
13C12-2,3,4,6,7,8-HxCDF	1	0.503	0.434-0.587	0.25	120	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF	1	0.503	0.434-0.587	0.28	107	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD	1	1.213	1.054-1.426	0.25	142	32 - 141 %	*
13C12-1,2,3,6,7,8-HxCDD	1	1.224	1.054-1.426	0.24	147	28 - 130 %	*
13C12-1,2,3,4,6,7,8-HpCDF	1	0.440	0.374-0.506	0.24	95.9	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF	1	0.449	0.374-0.506	0.27	96.7	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD	1	1.063	0.893-1.208	0.25	98.0	23 - 140 %	
13C12-OCDD	1	0.933	0.757-1.024	0.27	69.1	17 - 157 %	
37Cl4-2,3,7,8-TCDD	1	328.000		0.06	107	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:10:10 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	26.028	1.002	2.527e2	9.974e1	0.876	2.534	0.770	779	1106	3.24e3	1.78e3	4.2	1.6	YES	dd	db	0.028
12378-PeCDF					0.845		1.550	624	788								
23478-PeCDF					0.911		1.550	624	788								
123478-HxCDF	35.111	1.000	1.813e2	1.575e2	1.182	1.151	1.240	591	509	2.80e3	2.45e3	4.7	4.8	NO	bd	bb	0.030
234678-HxCDF					1.229		1.240	591	509								
123678-HxCDF					1.248		1.240	591	509								
123789-HxCDF	37.172	1.001	2.109e2	1.958e2	1.187	1.077	1.240	591	509	3.28e3	2.49e3	5.5	4.9	NO	bb	bb	0.046
1234678-HpCDF					1.204		1.050	508	576								
1234789-HpCDF					1.165		1.050	508	576								
OCDF					1.186		0.890	446	850								
2378-TCDD					1.236		0.770	1139	753								
12378-PeCDD					1.087		1.550	719	570								
123478-HxCDD					0.987		1.240	569	719								
123678-HxCDD					1.021		1.240	569	719								
123789-HxCDD	36.738	1.011	1.674e2	1.286e2	0.985	1.301	1.240	569	719	2.35e3	2.73e3	4.1	3.8	NO	bb	db	0.029
1234678-HpCDD	40.493	1.000	4.924e2	3.058e2	1.253	1.610	1.050	576	509	4.98e3	4.07e3	8.7	8.0	YES	bb	bd	0.110
OCDD	45.317	1.001	9.963e2	1.221e3	1.103	0.816	0.890	625	579	1.22e4	1.35e4	19.5	23.4	NO	bb	MM	0.490
13C-2378-TCDF	25.986	1.007	6.345e5	8.255e5	1.768	0.769	0.770	1891	1391	9.93e6	1.30e7	5251.4	9328.9	NO	bb	bb	100.508
13C-12378-PeCDF	30.153	1.169	6.390e5	4.060e5	1.527	1.574	1.550	3111	2266	9.20e6	5.82e6	2956.8	2569.0	NO	bd	bd	83.282
13C-23478-PeCDF	31.490	1.220	6.273e5	4.036e5	1.466	1.554	1.550	3111	2266	8.79e6	5.63e6	2825.4	2486.4	NO	bd	bb	85.576
13C-123478-HxCDF	35.111	0.956	3.235e5	6.388e5	1.054	0.506	0.510	2306	2921	5.01e6	9.80e6	2172.9	3356.9	NO	bd	bd	121.121
13C-123678-HxCDF	35.245	0.960	3.566e5	7.032e5	1.080	0.507	0.510	2306	2921	5.45e6	1.09e7	2364.5	3728.2	NO	db	db	130.152
13C-234678-HxCDF	36.103	0.983	3.067e5	6.098e5	1.014	0.503	0.510	2306	2921	4.86e6	9.67e6	2105.2	3309.4	NO	bb	bb	119.835
13C-123789-HxCDF	37.139	1.011	2.511e5	4.996e5	0.928	0.503	0.510	2306	2921	3.99e6	7.95e6	1729.8	2722.5	NO	bb	bb	107.285
13C-1234678-HpCDF	38.966	1.061	2.290e5	5.202e5	1.036	0.440	0.440	2462	2574	3.73e6	8.30e6	1513.4	3223.9	NO	bb	bb	95.898
13C-1234789-HpCDF	41.239	1.123	2.046e5	4.554e5	0.905	0.449	0.440	2462	2574	2.62e6	5.87e6	1062.8	2280.1	NO	bd	bd	96.716
13C-1234-TCDD	25.802	0.000	3.591e5	4.625e5	1.000	0.776	0.770	1830	1062	5.72e6	7.35e6	3124.7	6925.5	NO	bb	bb	100.000
13C-2378-TCDD	26.622	1.032	5.295e5	6.977e5	1.103	0.759	0.770	1830	1062	8.17e6	1.09e7	4464.1	10228.8	NO	bb	bb	135.430
13C-12378-PeCDD	31.747	1.230	3.413e5	2.071e5	0.914	1.648	1.550	894	1059	4.92e6	2.91e6	5507.8	2744.0	NO	bb	bb	73.020
13C-123478-HxCDD	36.225	0.986	5.457e5	4.498e5	0.933	1.213	1.240	2192	2580	9.04e6	7.42e6	4125.6	2876.1	NO	bd	bd	141.521
13C-123678-HxCDD	36.337	0.989	5.889e5	4.810e5	0.965	1.224	1.240	2192	2580	8.84e6	7.35e6	4035.6	2846.5	NO	db	db	147.089
13C-1234678-HpCDD	40.481	1.102	2.977e5	2.802e5	0.782	1.063	1.050	1895	2007	4.37e6	4.12e6	2307.2	2054.1	NO	bb	bb	98.020
13C-OCDD	45.289	1.233	3.965e5	4.249e5	0.788	0.933	0.890	1644	2744	4.79e6	5.18e6	2910.8	1886.5	NO	bb	bb	138.210
13C-123789-HxCDD	36.727	0.000	4.195e5	3.345e5	1.000	1.254	1.240	2192	2580	6.80e6	5.36e6	3101.6	2078.0	NO	bb	bb	100.000
37CL-2378-TCDD	26.650	1.033	4.340e5		1.233			1497		6.50e6		4344.7			bb		42.821

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:10:10 Pacific Standard Time

ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					1.064		0.770	779	1106								
1289-TCDF					0.858		0.770	779	1106								
13468-PECDF					1.013		1.550	627	904								
12389-PECDF					0.844		1.550	624	788								
123468-HXCDF					1.197		1.240	591	509								
1368-TCDD					1.084		0.770	1139	753								
1289-TCDD					0.975		0.770	1139	753								
12479-PECDD					1.837		1.550	719	570								
12389-PECDD					1.252		1.550	719	570								
124679-HXCDD					1.033		1.240	569	719								
1234679-HPCDD	39.445	0.974	2.223e2	1.065e2	1.286	2.089	1.050	576	509	4.28e3	1.75e3	7.4	3.4	YES	db	bb	0.044
Total-tetrafurans			0.000e0		0.933			779		0.00e0							
Total-penta1			0.000e0					627		0.00e0							
Total-pentafurans			0.000e0		0.866			624		0.00e0							
Total-hexafurans			3.923e2		1.208			591		6.08e3							0.075
Total-heptafurans			0.000e0		1.185			508		0.00e0							
Total-Furans			3.923e2		1.067			779		6.08e3							0.075
Total-tetradioxins			0.000e0		1.099			1139		0.00e0							
Total-pentadioxins			0.000e0		1.392			719		0.00e0							
Total-hexadioxins			1.674e2		1.007			569		2.35e3							0.029
Total-heptadioxins			0.000e0		1.269			576		0.00e0							
Total-Dioxins			1.164e3		1.165			1139		1.46e4							0.519
Total-TEQ			1.556e3					1139		2.06e4							0.594
FUNCTION1 PFK			8.985e7					473182		1.85e7							
FUNCTION2 PFK			2.188e7					303374		2.10e7							0.000
FUNCTION3 PFK			6.972e4					326888		2.73e6							0.000
FUNCTION4 PFK			3.101e5					246927		8.42e6							
FUNCTION5 PFK			8.823e6					168164		1.08e7							
FUNCTION1 HXCD...			1.135e3					640		1.11e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			3.361e2					1099		6.75e3							0.000
FUNCTION3 OCDPE			5.134e2					657		9.86e3							0.000
FUNCTION4 NCDPE			7.772e1					613		1.23e3							0.000
FUNCTION5 DCDPE			8.698e1					464		2.12e3							0.000

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.17	2.109e2	1.958e2	1.187	1.08	1.24	5.5	YES	NO	bb	bb	0.046
2	123478-HxCDF	35.11	1.813e2	1.575e2	1.182	1.15	1.24	4.7	YES	NO	bd	bb	0.030

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.17	2.109e2	1.958e2	1.187	1.08	1.24	5.5	YES	NO	bb	bb	0.046
2	123478-HxCDF	35.11	1.813e2	1.575e2	1.182	1.15	1.24	4.7	YES	NO	bd	bb	0.030

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.74	1.674e2	1.286e2	0.985	1.30	1.24	4.1	YES	NO	bb	db	0.029

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.74	1.674e2	1.286e2	0.985	1.30	1.24	4.1	YES	NO	bb	db	0.029
2	OCDD	45.32	9.963e2	1.221e3	1.103	0.82	0.89	19.5	YES	NO	bb	MM	0.490

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.17	2.109e2	1.958e2	1.187	1.08	1.24	5.5	YES	NO	bb	bb	0.046
2	123478-HxCDF	35.11	1.813e2	1.575e2	1.182	1.15	1.24	4.7	YES	NO	bd	bb	0.030
3	123789-HxCDD	36.74	1.674e2	1.286e2	0.985	1.30	1.24	4.1	YES	NO	bb	db	0.029
4	OCDD	45.32	9.963e2	1.221e3	1.103	0.82	0.89	19.5	YES	NO	bb	MM	0.490

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	28.13	2.702e5					3.2	YES		db		
2	FUNCTION1 PFK	26.88	1.305e7					15.6	YES		dd		
3	FUNCTION1 PFK	25.68	7.653e7					20.1	YES		bd		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	31.92	4.077e5					4.8	YES		bb		0.000
2	FUNCTION2 PFK	28.37	2.147e7					64.3	YES		bb		0.000

ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	37.15	7.233e3					1.2	NO		bb		0.000
2	FUNCTION3 PFK	35.90	1.054e4					1.3	NO		bb		0.000
3	FUNCTION3 PFK	35.72	2.581e3					0.7	NO		bb		0.000
4	FUNCTION3 PFK	35.09	3.036e4					1.7	NO		bb		0.000
5	FUNCTION3 PFK	34.35	2.022e3					0.6	NO		bb		0.000
6	FUNCTION3 PFK	34.29	6.449e3					1.0	NO		bb		0.000
7	FUNCTION3 PFK	33.19	2.387e3					0.7	NO		bb		0.000
8	FUNCTION3 PFK	33.15	8.147e3					1.3	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	39.14	1.304e3					0.5	NO		bb		
2	FUNCTION4 PFK	39.09	1.592e4					1.9	NO		bb		
3	FUNCTION4 PFK	38.87	1.272e3					0.5	NO		bb		
4	FUNCTION4 PFK	38.38	1.836e4					1.7	NO		bb		
5	FUNCTION4 PFK	38.15	8.765e3					1.4	NO		db		
6	FUNCTION4 PFK	38.12	2.112e4					3.3	YES		bd		
7	FUNCTION4 PFK	42.38	9.910e3					1.6	NO		bb		
8	FUNCTION4 PFK	42.29	1.735e3					0.6	NO		bb		
9	FUNCTION4 PFK	42.24	3.487e4					1.8	NO		bb		
10	FUNCTION4 PFK	42.01	4.943e3					0.9	NO		bb		
11	FUNCTION4 PFK	41.93	1.785e3					0.6	NO		bb		
12	FUNCTION4 PFK	41.89	4.935e3					0.9	NO		bb		
13	FUNCTION4 PFK	41.81	6.348e3					0.9	NO		bb		
14	FUNCTION4 PFK	41.61	1.278e4					1.6	NO		bb		
15	FUNCTION4 PFK	41.37	9.718e3					1.6	NO		db		
16	FUNCTION4 PFK	41.33	1.369e4					1.5	NO		bd		
17	FUNCTION4 PFK	40.90	5.227e4					2.3	NO		bb		
18	FUNCTION4 PFK	40.67	1.576e4					1.7	NO		bb		
19	FUNCTION4 PFK	40.58	4.789e3					0.8	NO		bb		
20	FUNCTION4 PFK	40.40	2.503e3					0.9	NO		bb		
21	FUNCTION4 PFK	40.12	6.875e3					0.9	NO		bb		
22	FUNCTION4 PFK	39.28	3.051e3					0.4	NO		bb		
23	FUNCTION4 PFK	42.94	2.824e4					2.8	NO		bb		
24	FUNCTION4 PFK	42.52	1.732e4					1.3	NO		db		
25	FUNCTION4 PFK	42.48	1.187e4					1.8	NO		bd		

ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.75	1.100e5					4.0	YES		db		
2	FUNCTION5 PFK	43.20	8.713e6					59.9	YES		bd		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.64	7.297e1					2.9	NO		bb		0.000
2	FUNCTION1 HXCD...	25.84	8.690e2					10.1	YES		db		0.000
3	FUNCTION1 HXCD...	25.63	1.935e2					4.2	YES		bd		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.75	1.376e2					1.8	NO		db		0.000
2	FUNCTION2 HPCD...	30.63	9.702e1					2.3	NO		bd		0.000
3	FUNCTION2 HPCD...	28.86	1.015e2					2.0	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.23	1.179e2					3.9	YES		bd		0.000
2	FUNCTION3 OCDPE	37.70	1.179e2					4.6	YES		bb		0.000
3	FUNCTION3 OCDPE	36.73	1.515e2					3.4	YES		bb		0.000
4	FUNCTION3 OCDPE	36.35	1.261e2					3.0	YES		db		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.51	7.772e1					2.0	NO		bb		0.000

ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	43.25	8.698e1					4.6	YES		bb		0.000

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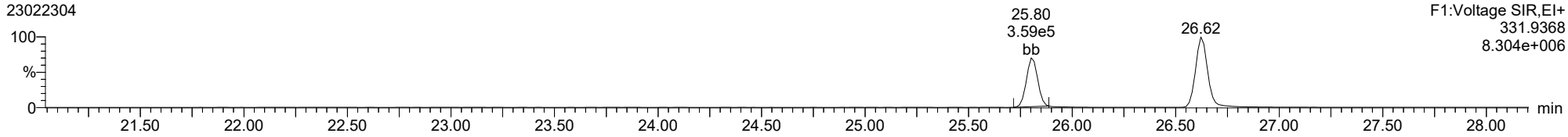
ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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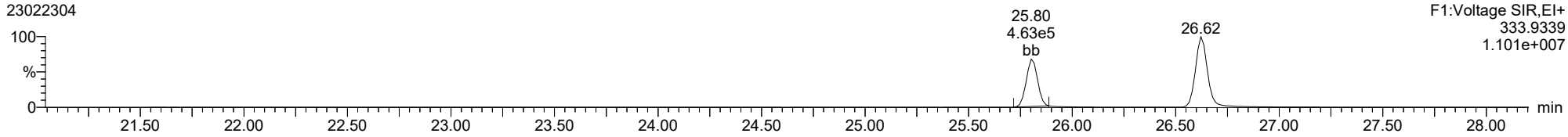

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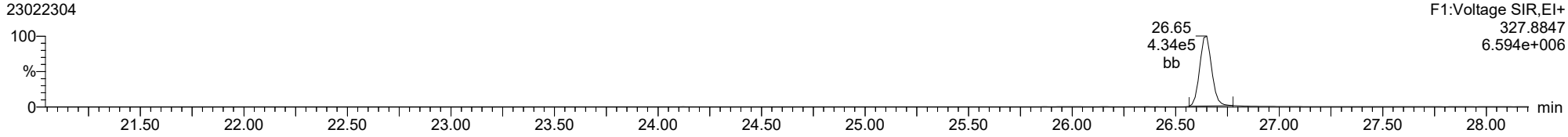

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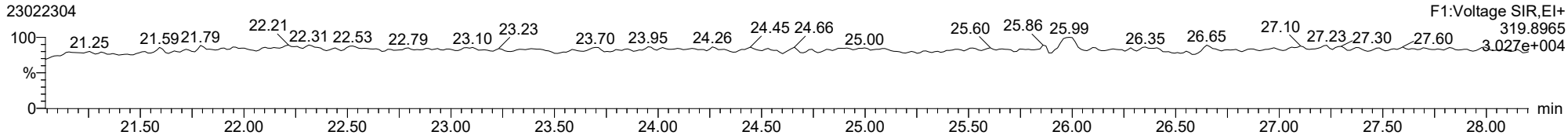

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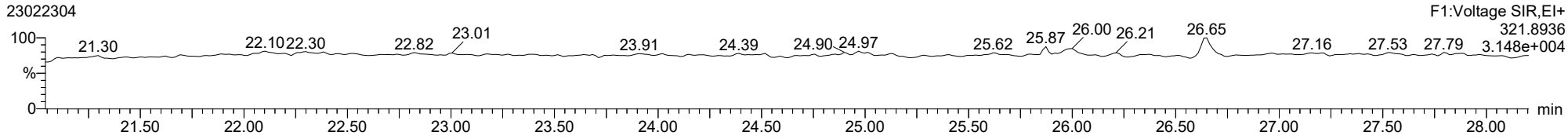

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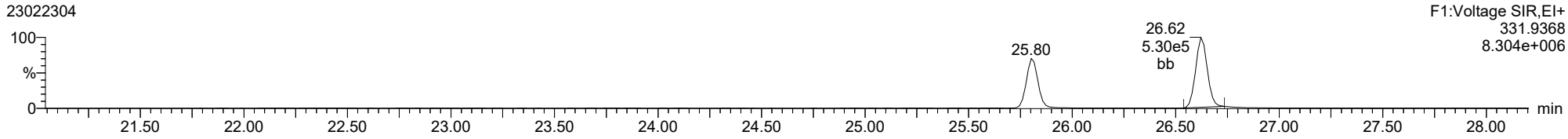

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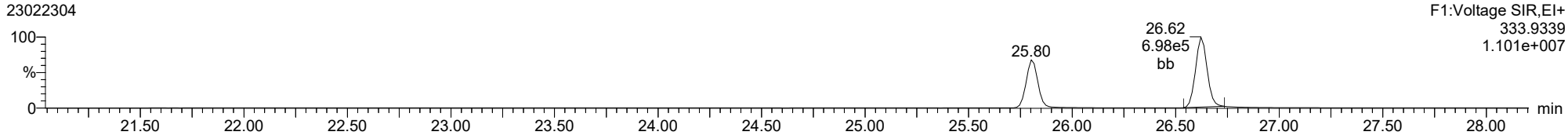

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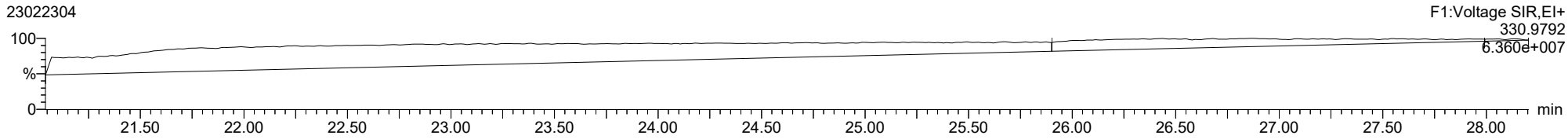

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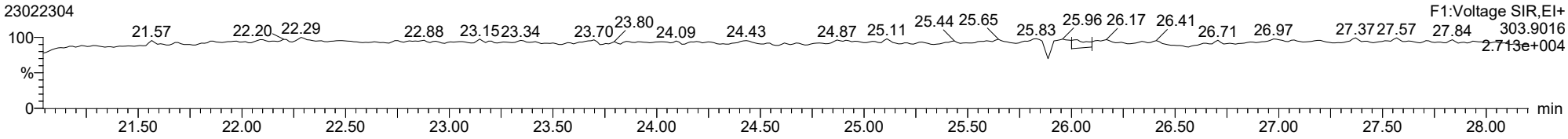

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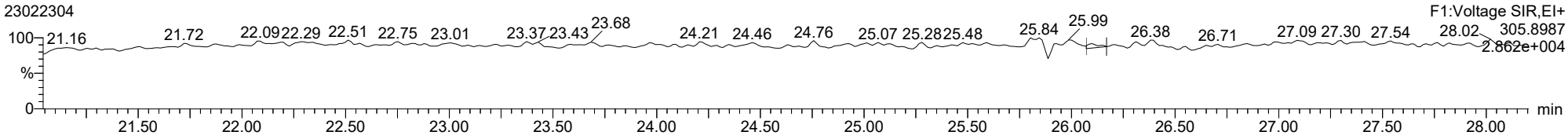

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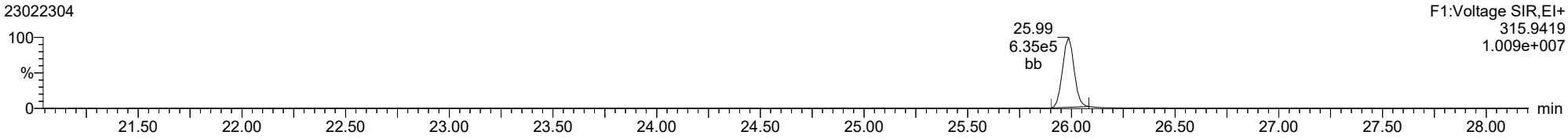

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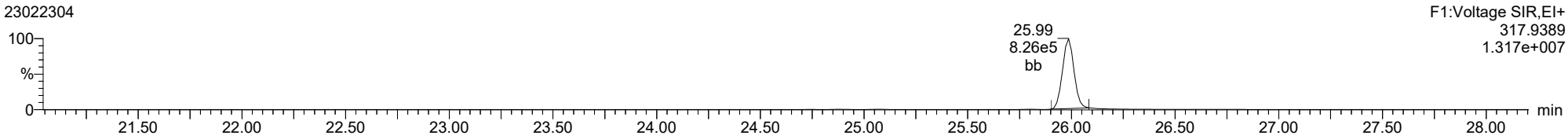
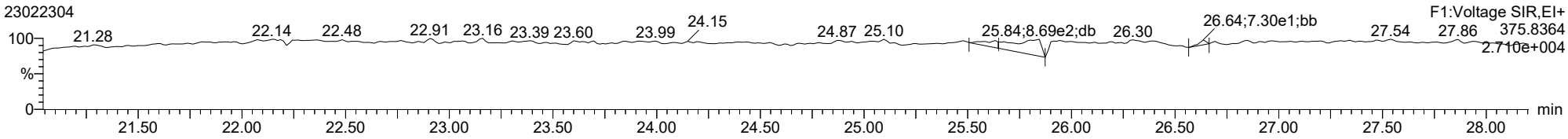


FUNCTION1 HXCDPE



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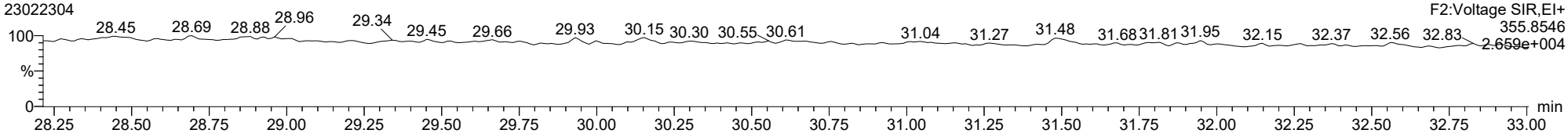
12378-PeCDD



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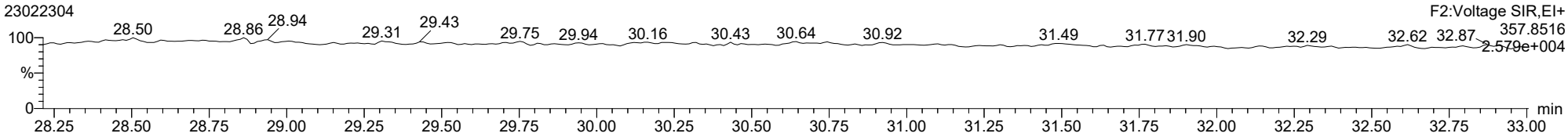

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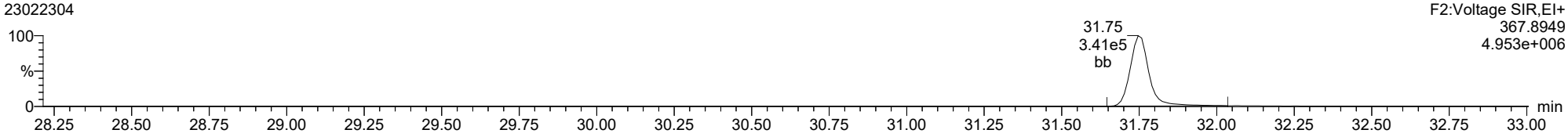

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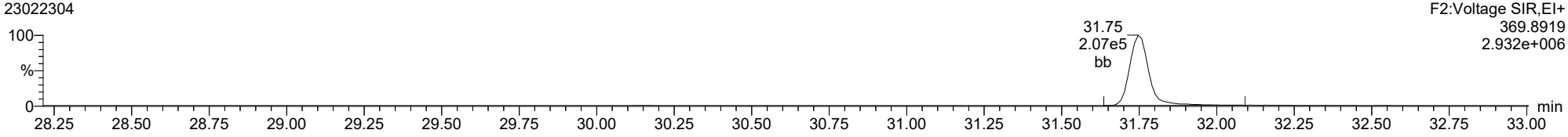
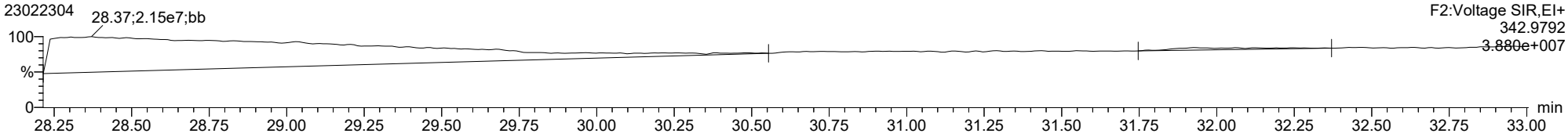


FUNCTION2 PFK



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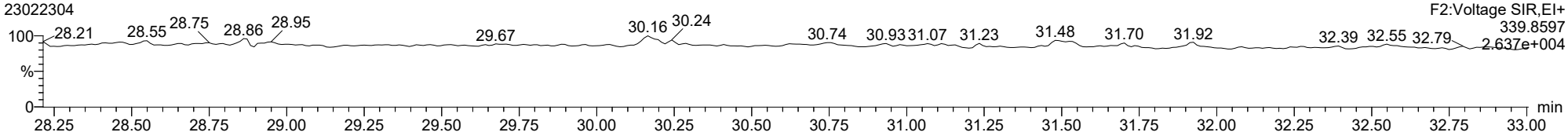

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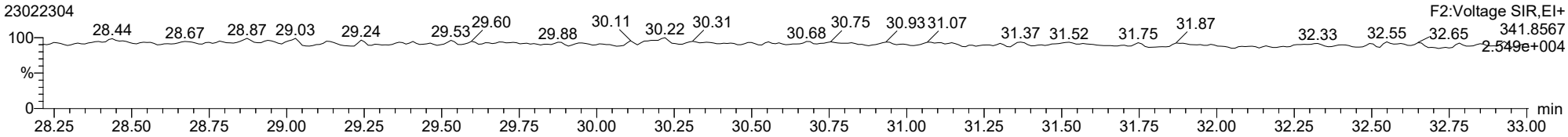

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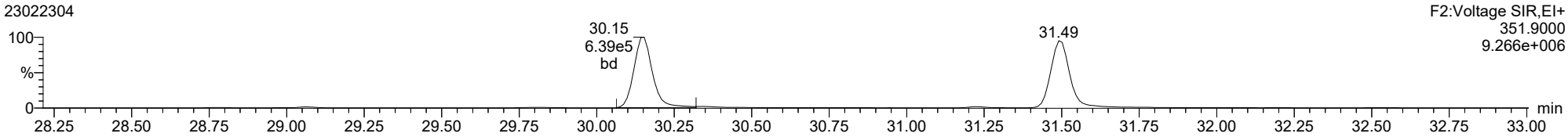

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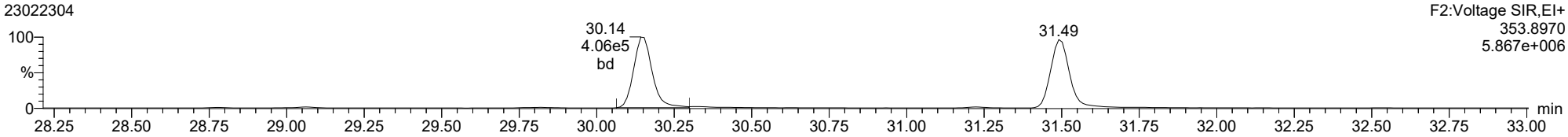
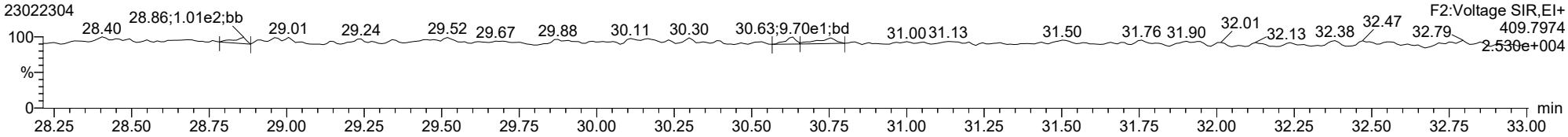


FUNCTION2 HPCDPE



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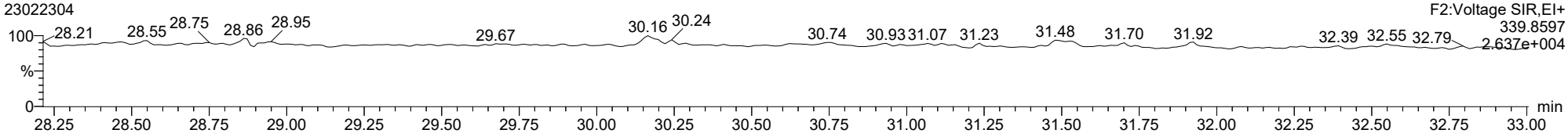
23478-PeCDF



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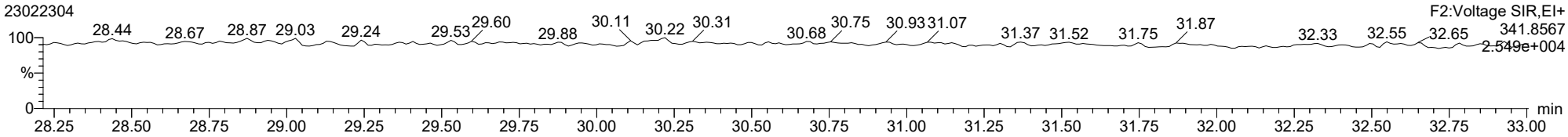

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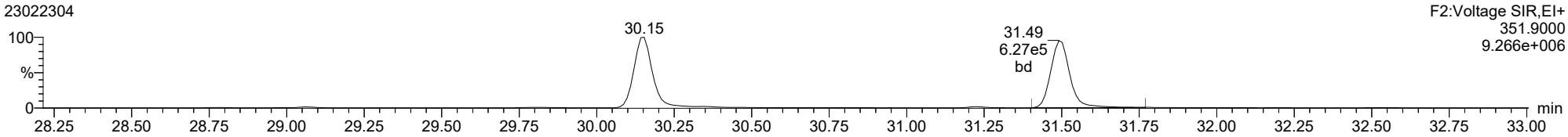

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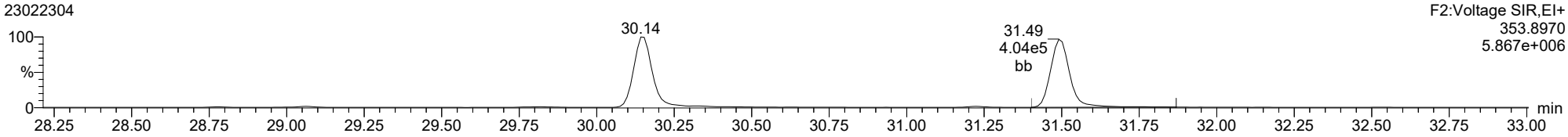

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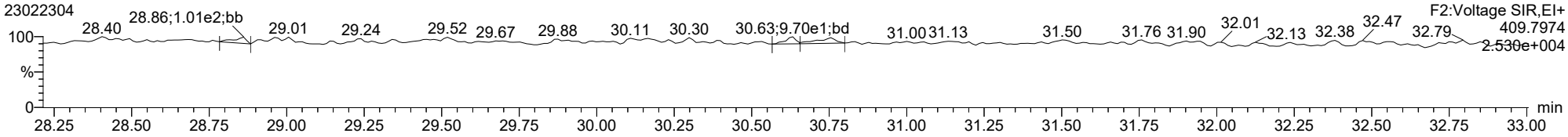

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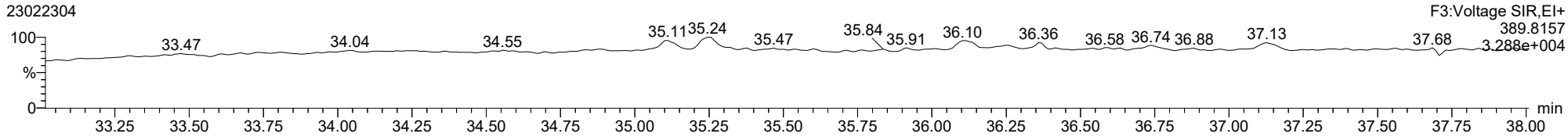
123478-HxCDD



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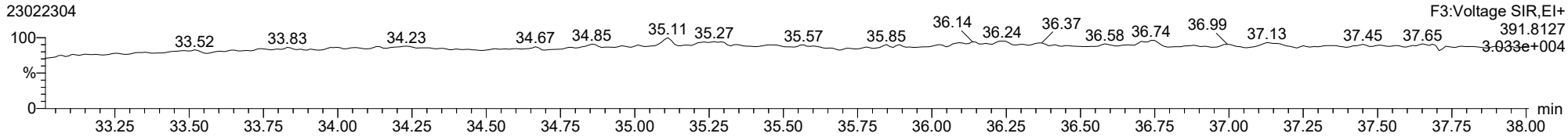

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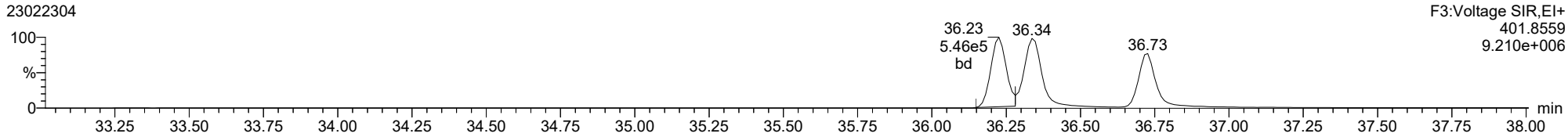

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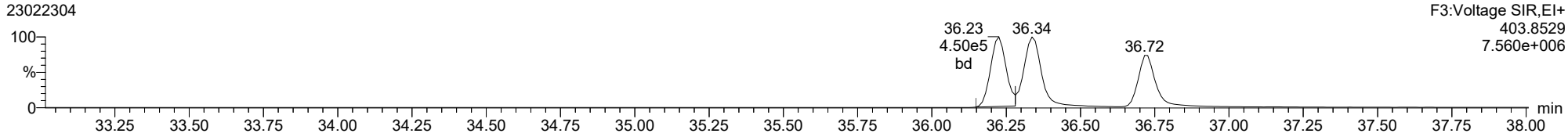

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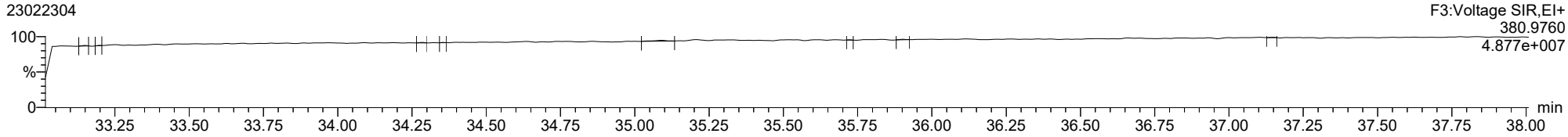

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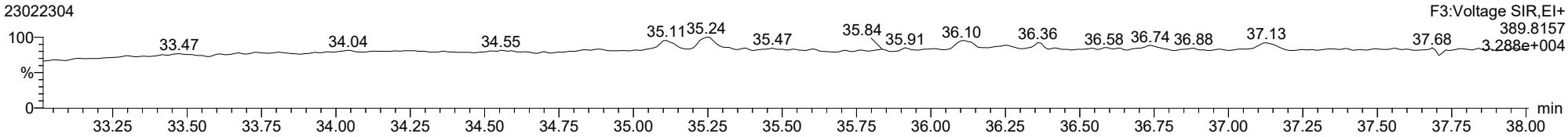

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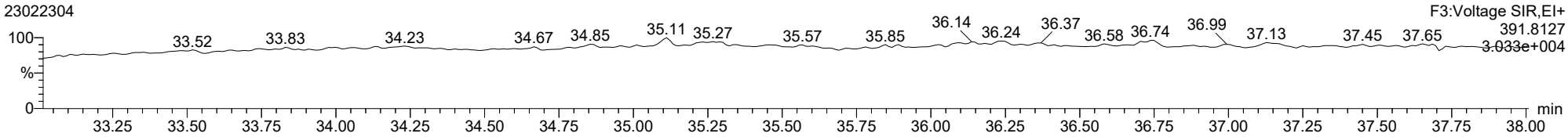

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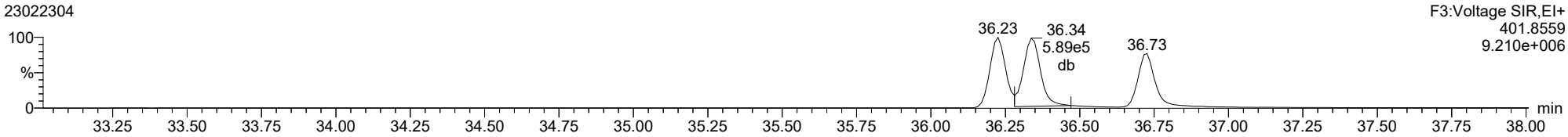

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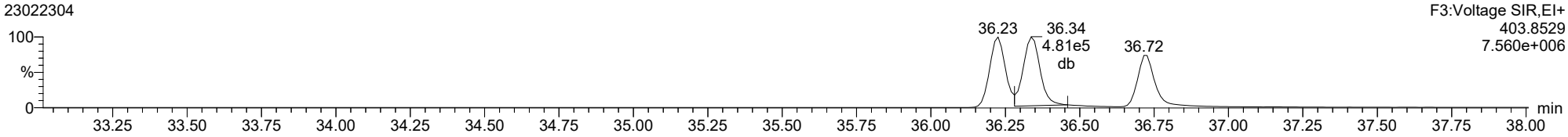

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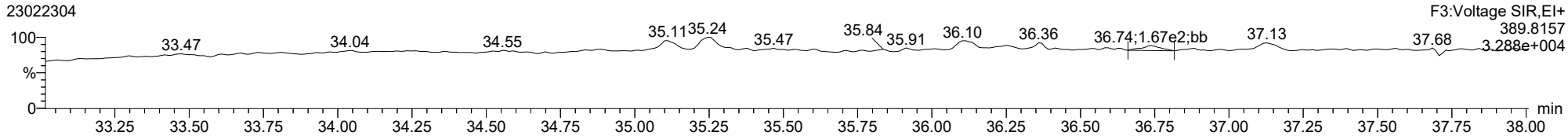

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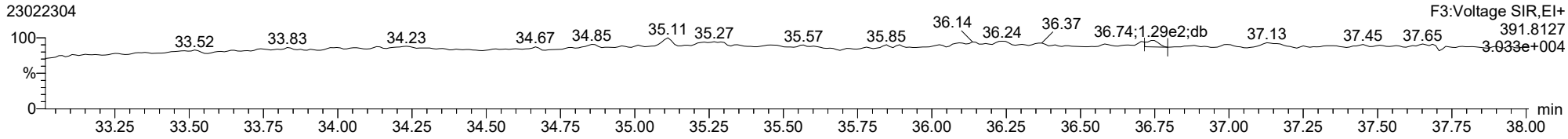

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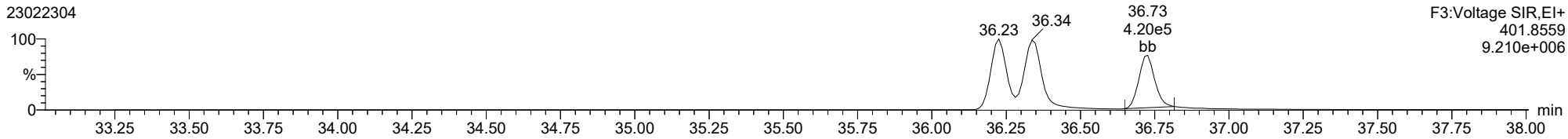

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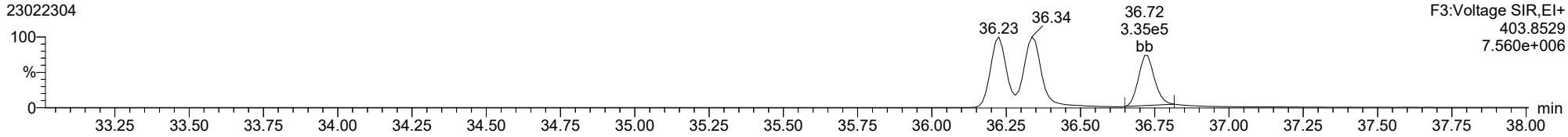

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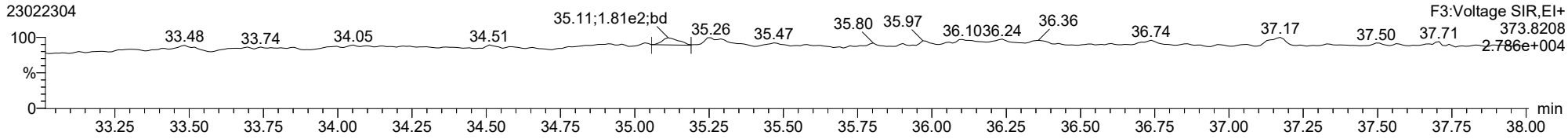

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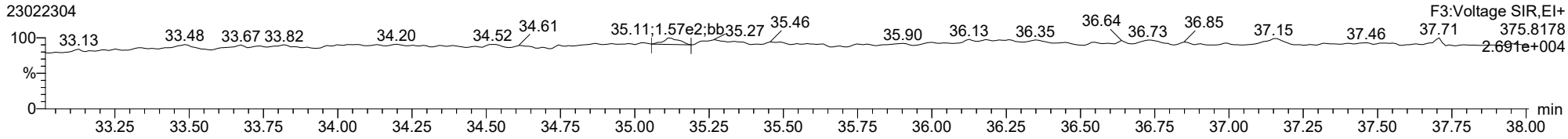

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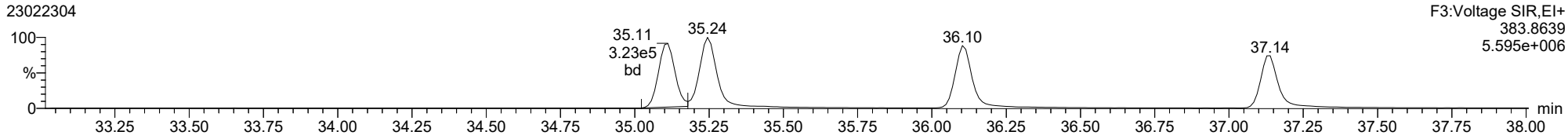

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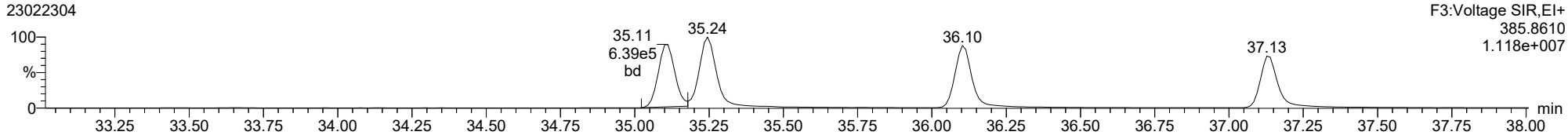

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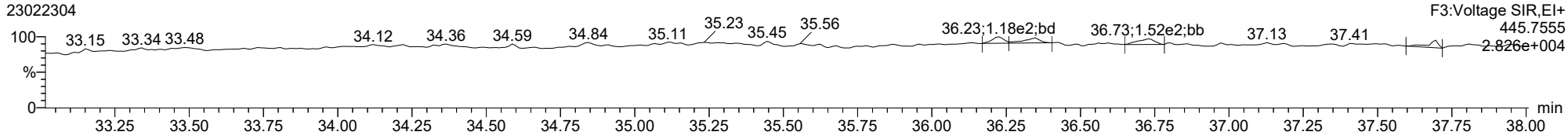

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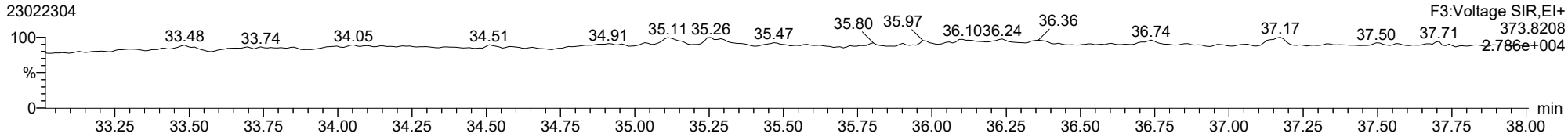

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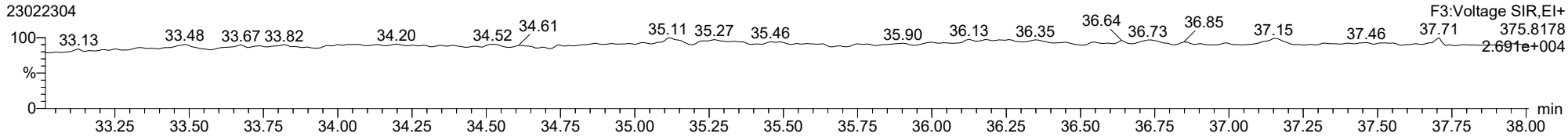

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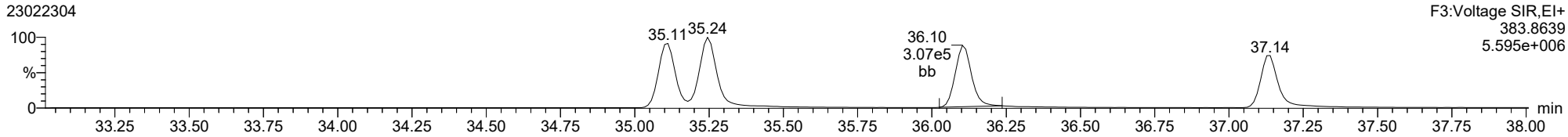

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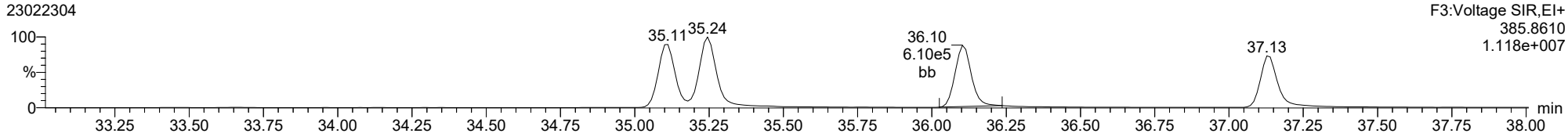

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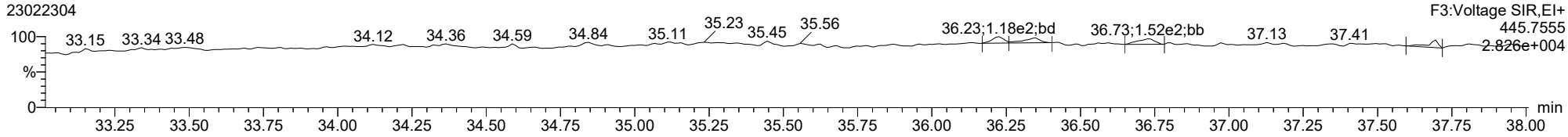

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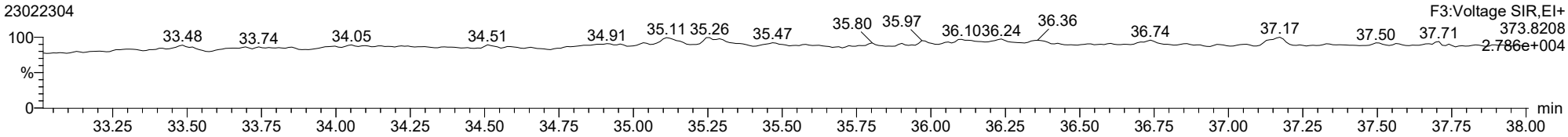

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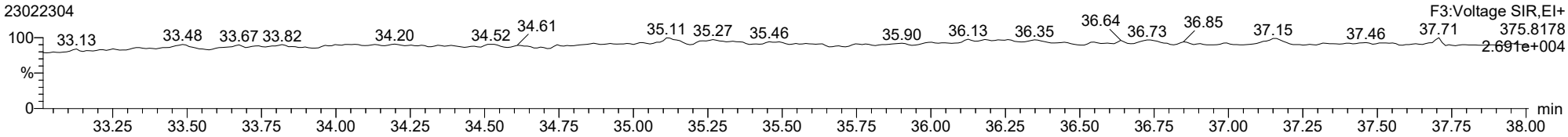

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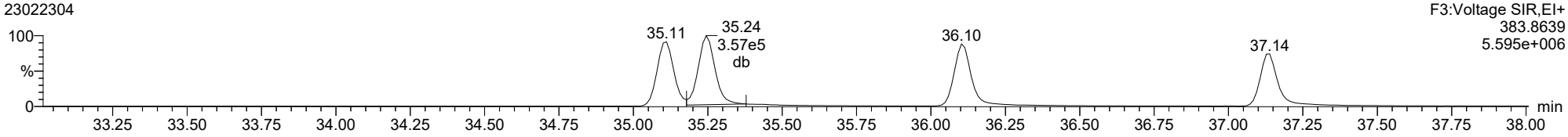

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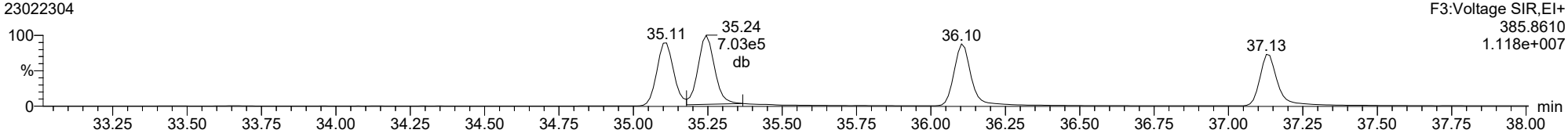

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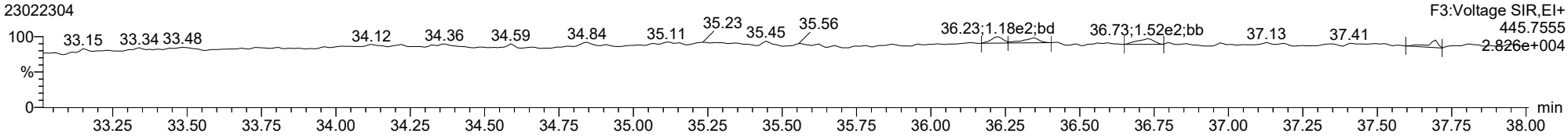

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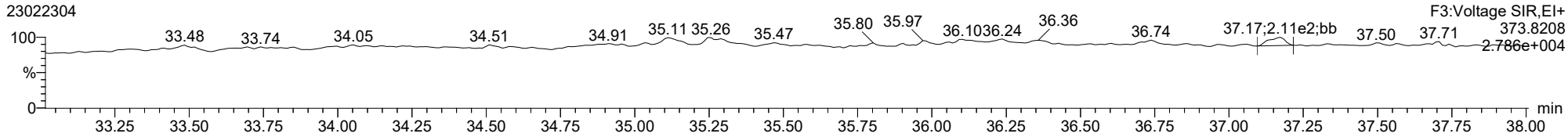

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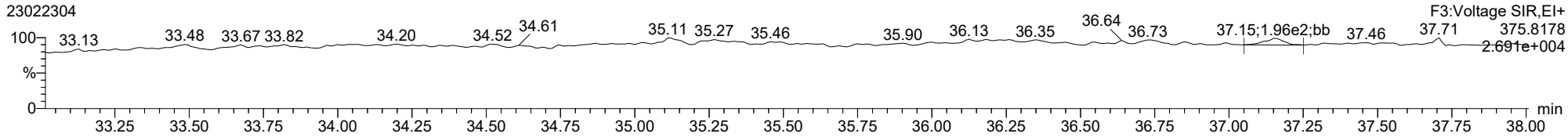

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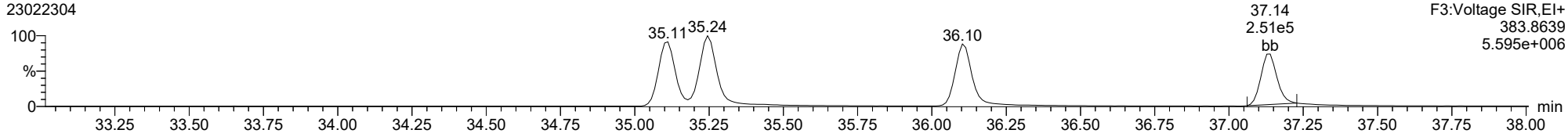

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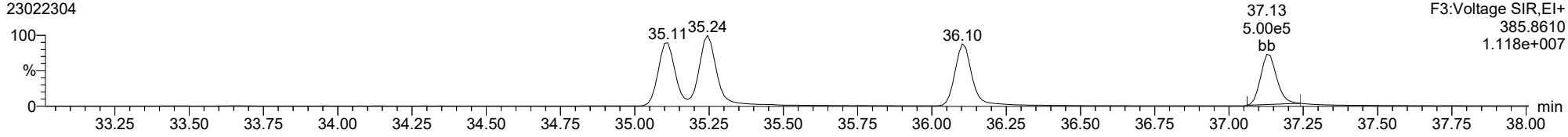
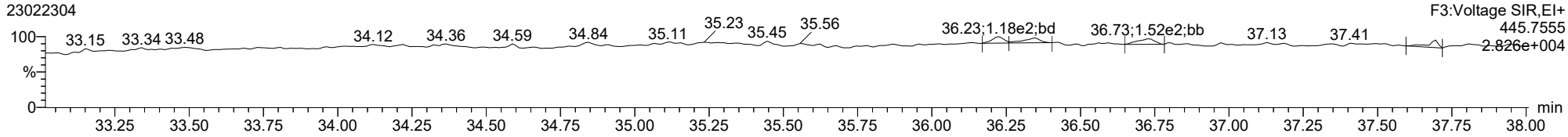


FUNCTION3 OCDPE



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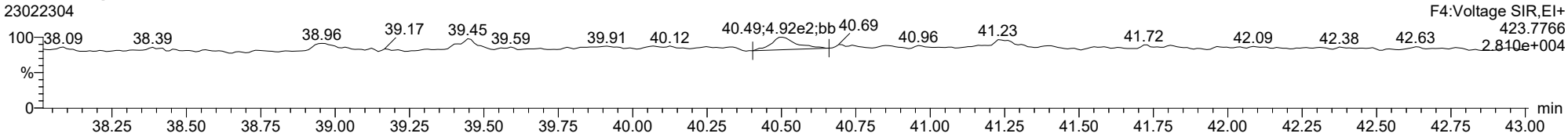

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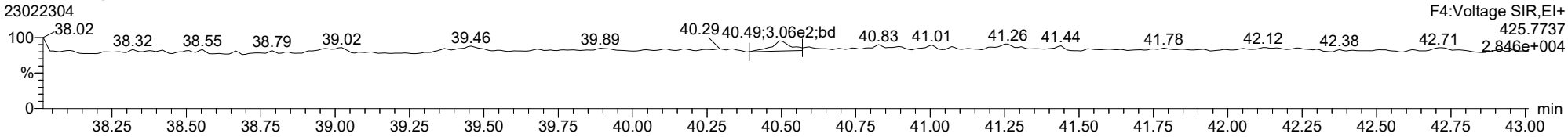

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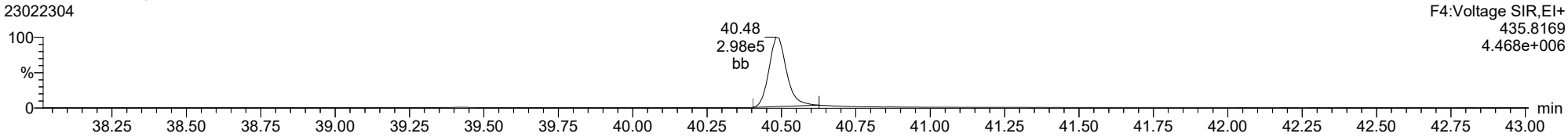

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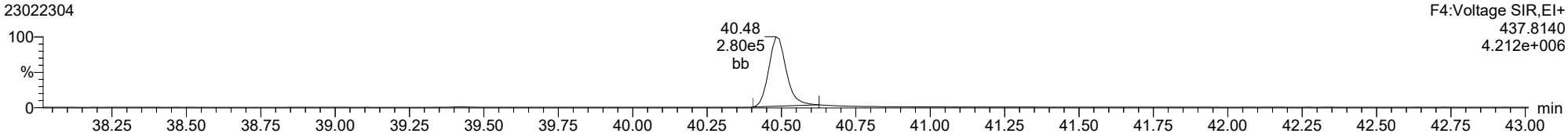
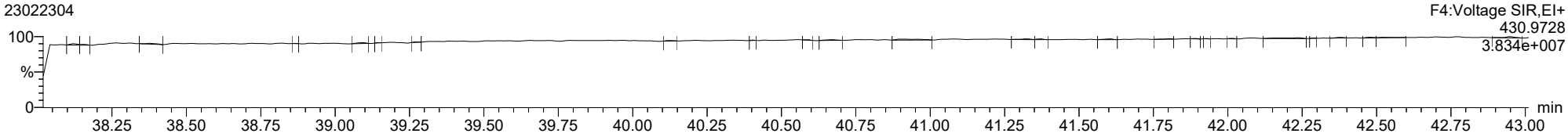


FUNCTION4 PFK



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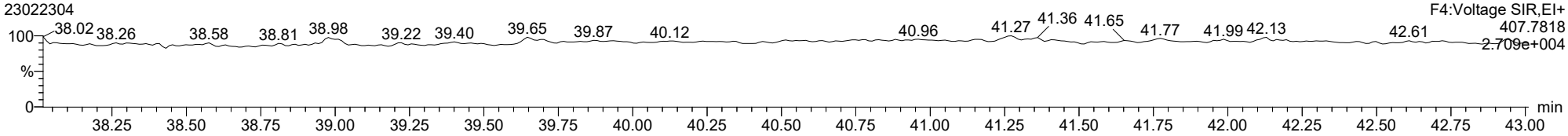

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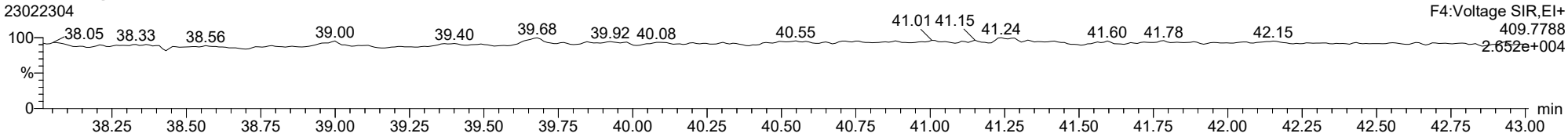

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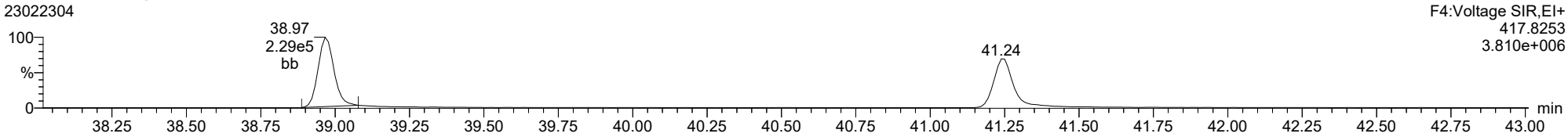

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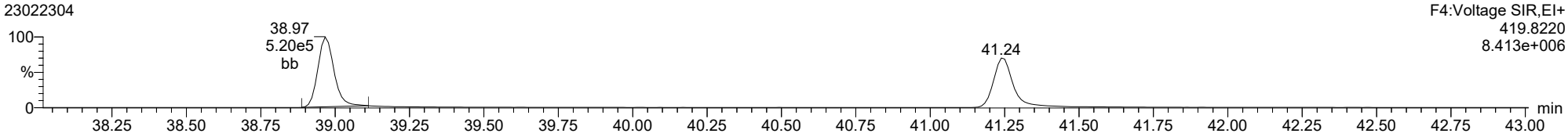
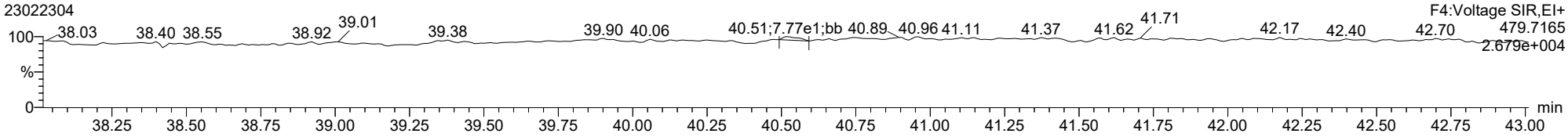


FUNCTION4 NCDPE



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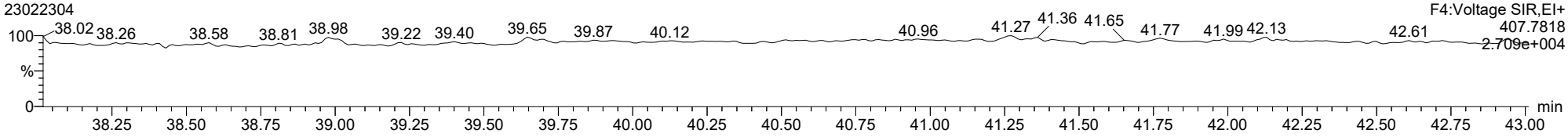
1234789-HpCDF



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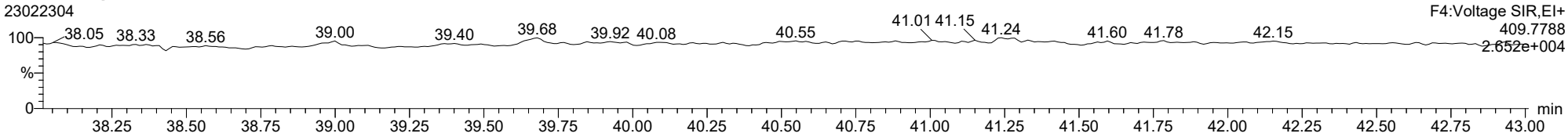

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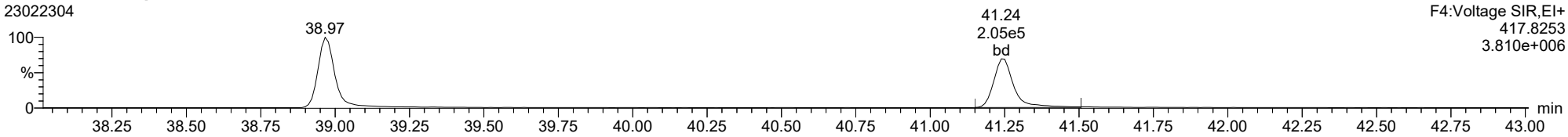

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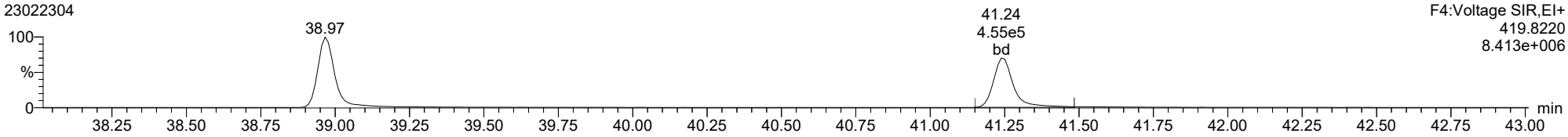
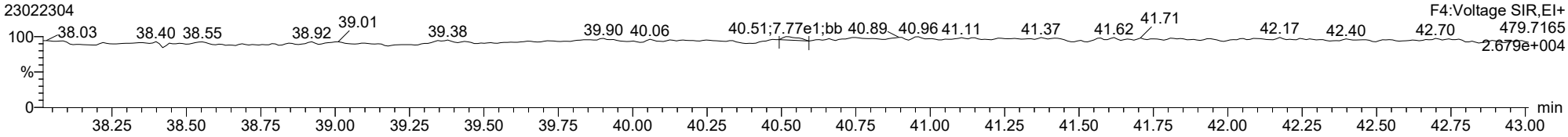


FUNCTION4 NCDPE



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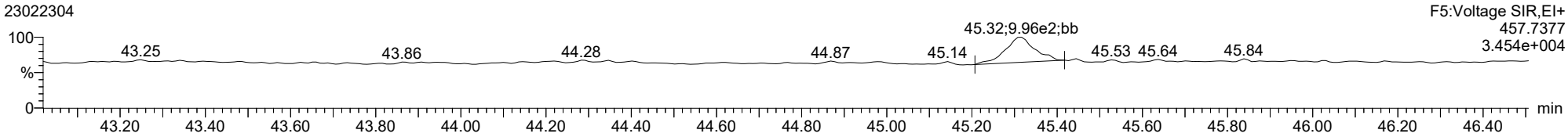
OCDD



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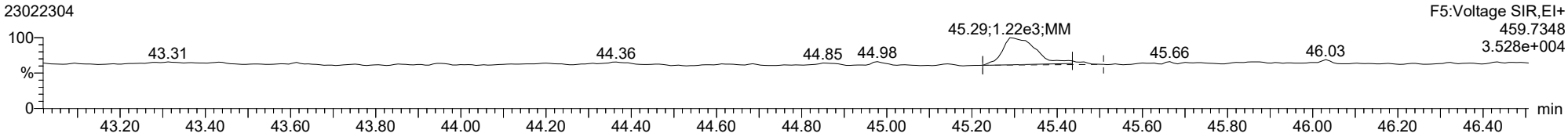

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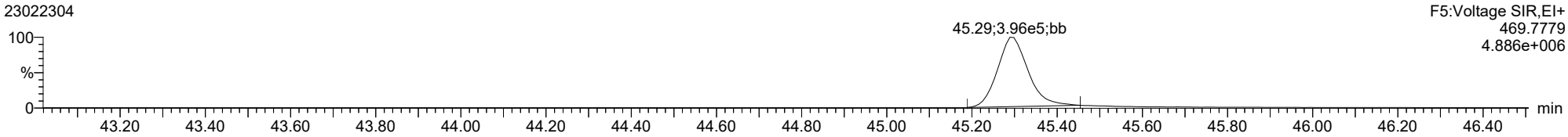

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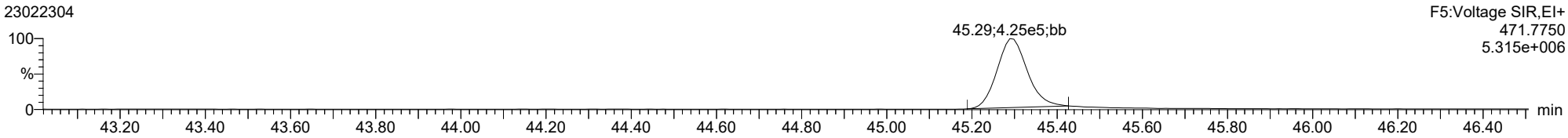
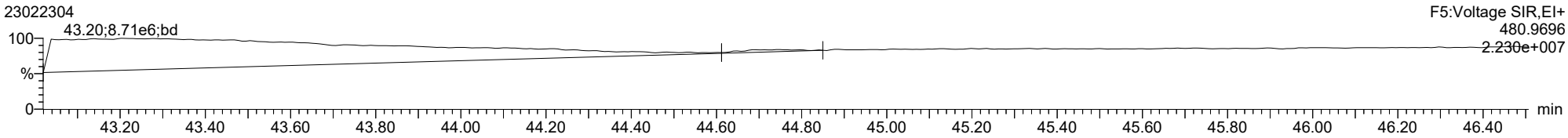


FUNCTION5 PFK



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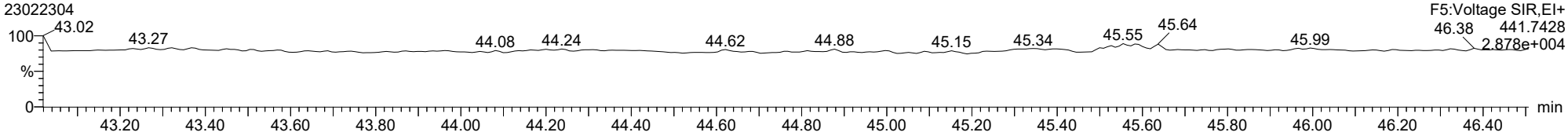
OCDF



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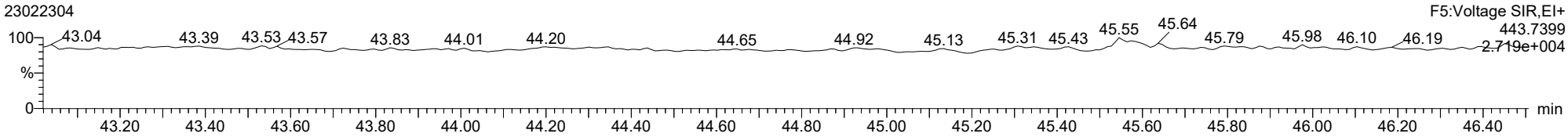
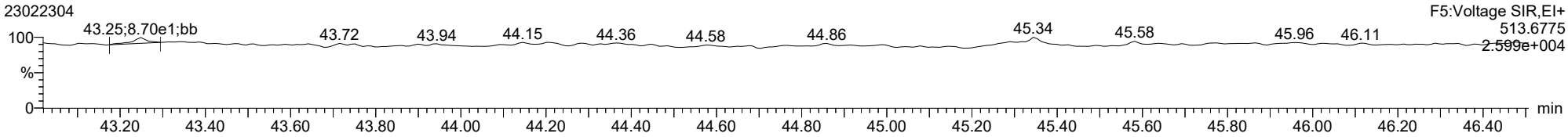
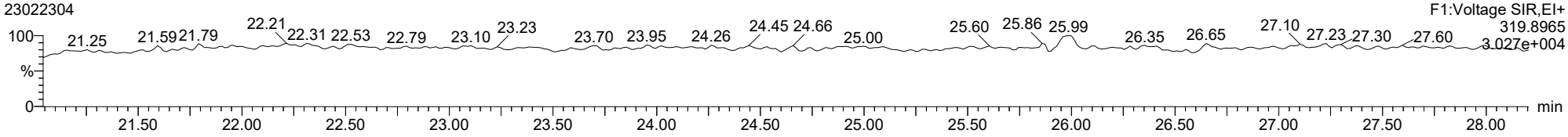


FUNCTION5 DCDPE

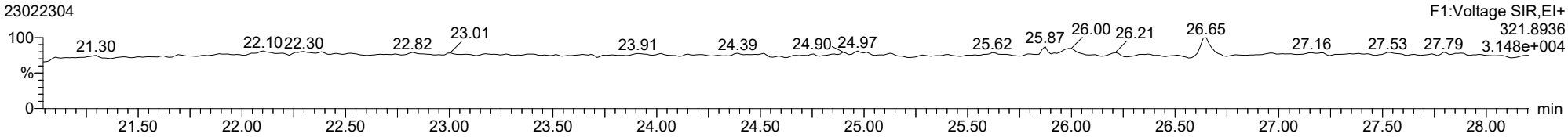


ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

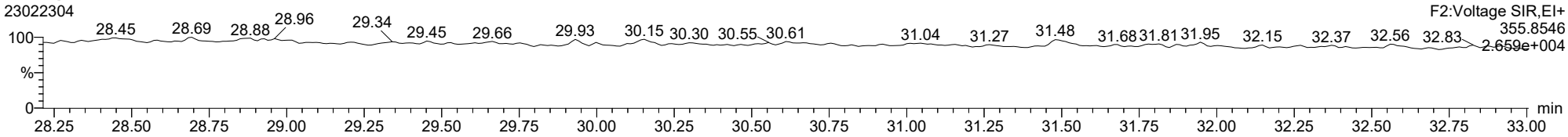
Total-tetradioxins



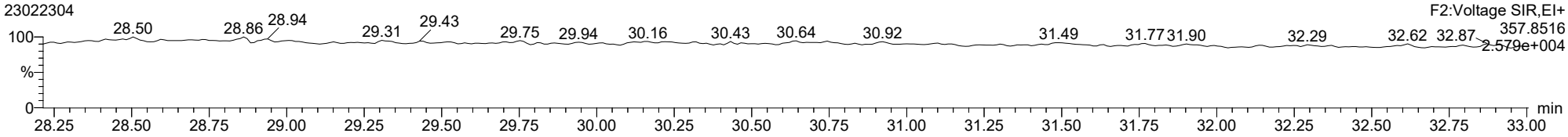
Total-tetradioxins



Total-pentadioxins

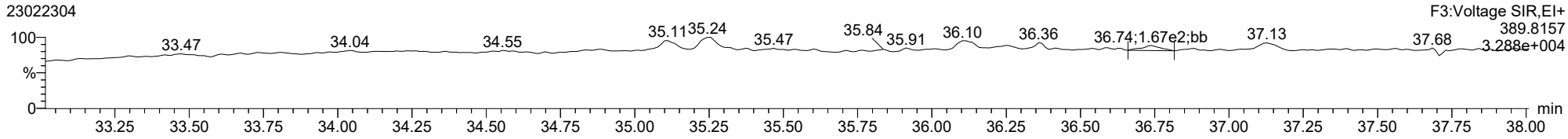


Total-pentadioxins

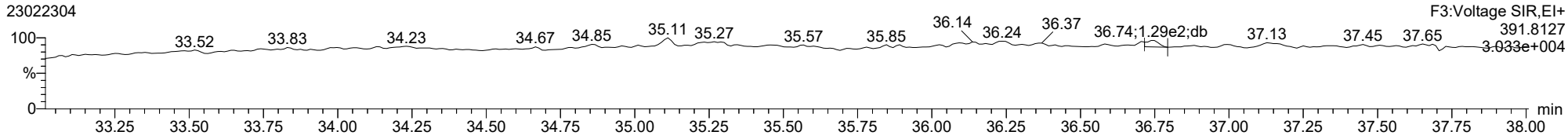


ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

Total-hexadioxins



Total-hexadioxins



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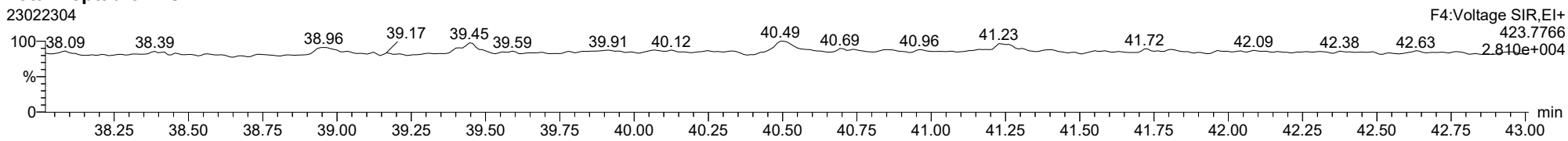
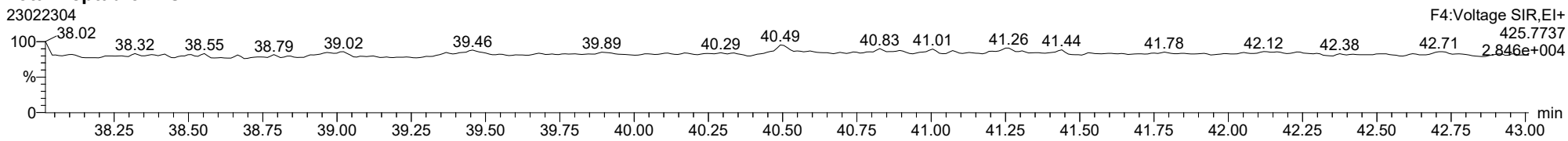
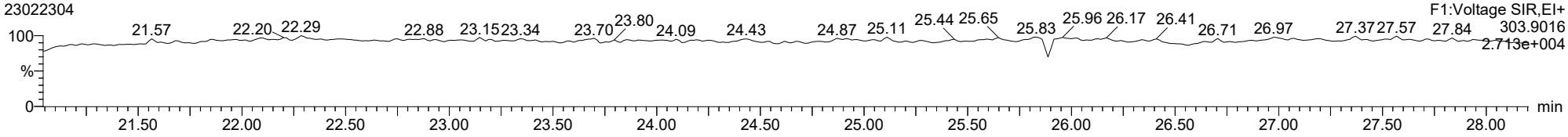


Total-heptadioxins

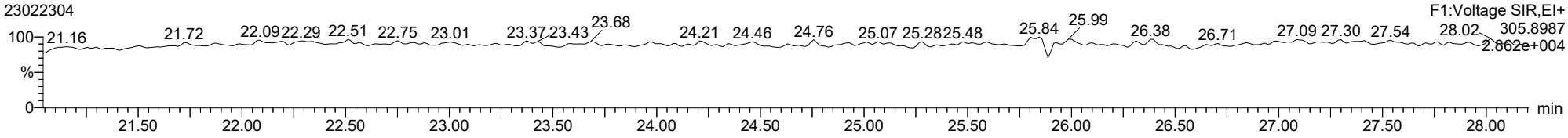


ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

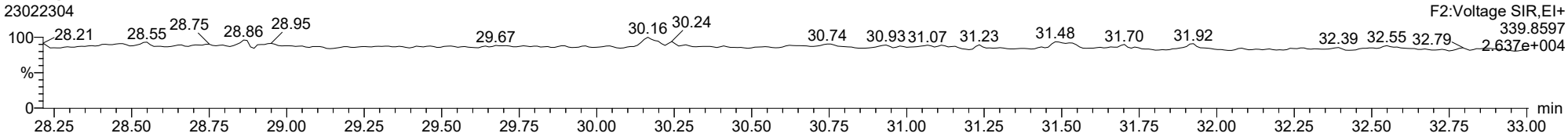
Total-tetrafurans



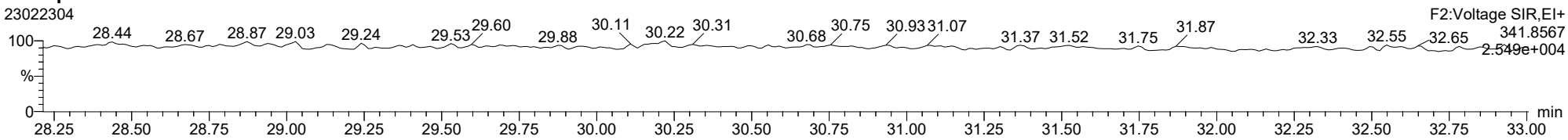
Total-tetrafurans



Total-pentafurans



Total-pentafurans



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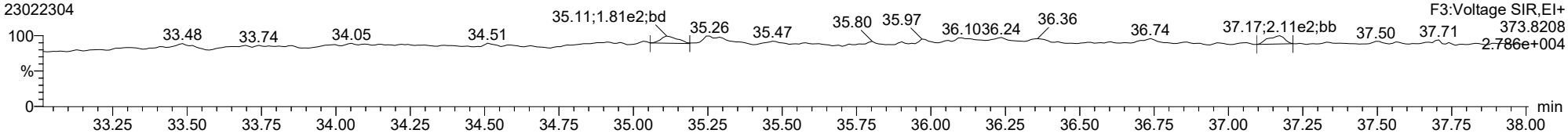
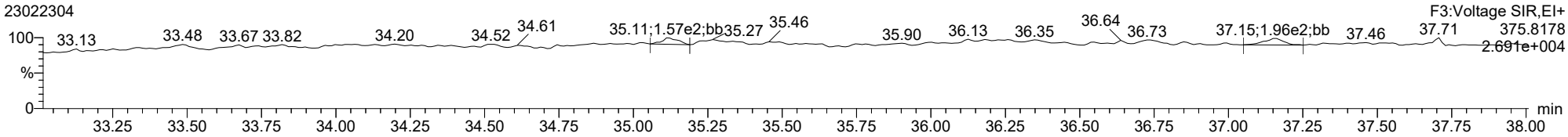
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:10:10 Pacific Standard Time

ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

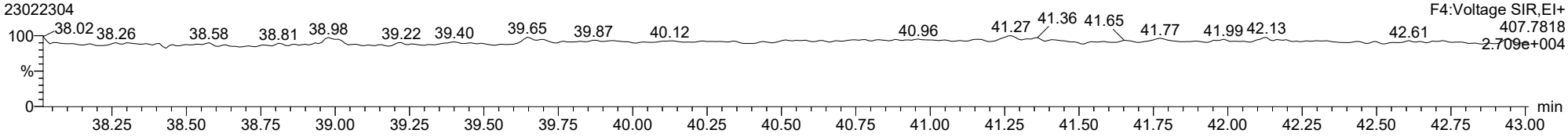
Total-hexafurans



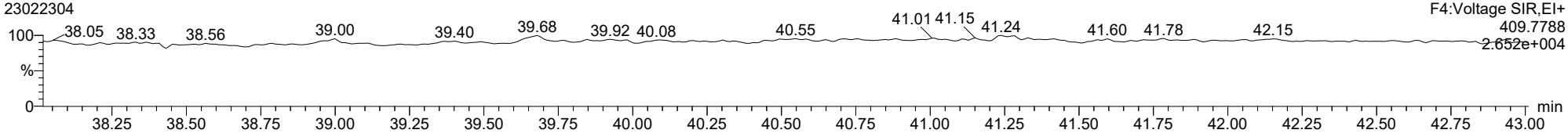
Total-hexafurans



Total-heptafurans



Total-heptafurans



LCS RECOVERY
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/24/23 10:33
Batch:	BLA0261	Laboratory ID:	BLA0261-BS1
Preparation:	EPA 1613	Sequence Name:	LCS
Initial/Final:	18.08 g / 20 uL		

COMPOUND	SPIKE ADDED (ng/kg wet)	LCS CONCENTRATION (ng/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
2,3,7,8-TCDF	11.1	10.4	B	93.8	75 - 158
2,3,7,8-TCDD	11.1	9.36		84.6	67 - 158
1,2,3,7,8-PeCDF	55.3	53.0		95.8	80 - 134
2,3,4,7,8-PeCDF	55.3	53.1		96.0	68 - 160
1,2,3,7,8-PeCDD	55.3	57.2		103	70 - 142
1,2,3,4,7,8-HxCDF	55.3	47.6	B	86.0	72 - 134
1,2,3,6,7,8-HxCDF	55.3	46.4	*	83.9 *	84 - 130
2,3,4,6,7,8-HxCDF	55.3	47.8		86.4	70 - 156
1,2,3,7,8,9-HxCDF	55.3	47.3	B	85.5	78 - 130
1,2,3,4,7,8-HxCDD	55.3	49.2		89.0	70 - 164
1,2,3,6,7,8-HxCDD	55.3	46.5		84.1	76 - 134
1,2,3,7,8,9-HxCDD	55.3	44.6	B	80.7	64 - 162
1,2,3,4,6,7,8-HpCDF	55.3	53.6		96.9	82 - 122
1,2,3,4,7,8,9-HpCDF	55.3	47.7		86.3	78 - 138
1,2,3,4,6,7,8-HpCDD	55.3	51.1	B	92.4	70 - 140
OCDF	111	86.9		78.6	63 - 170
OCDD	111	113	B	102	78 - 144

* Indicates values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IHBS.qld
Last Altered: Friday, February 24, 2023 15:04:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:05:19 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.986	1.001	3.400e4	4.355e4	0.876	0.781	0.770	973	992	4.96e5	6.52e5	510.1	657.1	NO	bd	dd	9.375
12378-PeCDF	30.153	1.001	2.181e5	1.465e5	0.845	1.489	1.550	1763	1819	3.26e6	2.11e6	1851.2	1158.0	NO	bb	bd	47.922
23478-PeCDF	31.490	1.000	2.276e5	1.506e5	0.911	1.512	1.550	1763	1819	3.44e6	2.24e6	1949.2	1234.0	NO	bb	bb	47.988
123478-HxCDF	35.100	1.000	2.029e5	1.668e5	1.182	1.217	1.240	1576	1373	3.12e6	2.59e6	1978.6	1884.8	NO	bd	bd	42.987
234678-HxCDF	36.103	1.000	2.120e5	1.722e5	1.229	1.231	1.240	1576	1373	3.10e6	2.51e6	1968.2	1831.6	NO	bd	bd	43.203
123678-HxCDF	35.245	1.001	2.399e5	1.944e5	1.248	1.234	1.240	1576	1373	3.32e6	2.66e6	2107.6	1935.9	NO	dd	dd	41.949
123789-HxCDF	37.128	1.000	1.781e5	1.494e5	1.187	1.192	1.240	1576	1373	2.62e6	2.13e6	1661.1	1551.9	NO	bd	bd	42.753
1234678-HpCDF	38.966	1.000	1.790e5	1.793e5	1.204	0.998	1.050	1648	1731	2.77e6	2.67e6	1679.4	1543.3	NO	bd	bd	48.435
1234789-HpCDF	41.239	1.000	1.403e5	1.344e5	1.165	1.044	1.050	1648	1731	1.84e6	1.79e6	1115.7	1032.3	NO	bd	bb	43.131
OCDF	45.528	1.006	1.863e5	2.046e5	1.186	0.911	0.890	868	1912	2.08e6	2.29e6	2402.1	1195.8	NO	bd	bd	78.556
2378-TCDD	26.622	1.001	3.176e4	4.061e4	1.236	0.782	0.770	804	823	4.78e5	6.11e5	594.6	742.8	NO	bd	bd	8.459
12378-PeCDD	31.747	1.001	1.603e5	9.965e4	1.087	1.609	1.550	707	1191	2.44e6	1.54e6	3449.9	1294.6	NO	bb	bb	51.675
123478-HxCDD	36.214	1.000	1.799e5	1.487e5	0.987	1.209	1.240	1973	1435	2.78e6	2.34e6	1410.4	1630.5	NO	bd	bd	44.513
123678-HxCDD	36.337	1.001	2.052e5	1.707e5	1.021	1.203	1.240	1973	1435	3.03e6	2.46e6	1536.8	1717.1	NO	dd	db	42.068
123789-HxCDD	36.716	1.011	1.788e5	1.437e5	0.985	1.244	1.240	1973	1435	2.72e6	2.15e6	1381.0	1499.4	NO	bb	bb	40.325
1234678-HpCDD	40.481	1.000	1.402e5	1.411e5	1.253	0.994	1.050	1458	1730	2.05e6	1.95e6	1405.6	1127.6	NO	bb	bd	46.180
OCDD	45.290	1.000	2.185e5	2.531e5	1.103	0.863	0.890	2342	1624	2.42e6	2.81e6	1035.1	1728.9	NO	bd	bd	101.935
13C-2378-TCDF	25.972	1.007	4.079e5	5.364e5	1.768	0.760	0.770	1086	1029	6.10e6	7.93e6	5617.0	7704.5	NO	bb	bb	84.444
13C-12378-PeCDF	30.131	1.168	5.502e5	3.505e5	1.527	1.570	1.550	2130	5526	8.07e6	5.16e6	3789.0	933.0	NO	bd	bd	93.254
13C-23478-PeCDF	31.479	1.221	5.309e5	3.340e5	1.466	1.589	1.550	2130	5526	7.44e6	4.77e6	3493.0	862.5	NO	bb	bb	93.264
13C-123478-HxCDF	35.089	0.956	2.403e5	4.875e5	1.054	0.493	0.510	2965	2559	3.84e6	7.79e6	1293.8	3045.7	NO	bd	bd	108.338
13C-123678-HxCDF	35.223	0.960	2.757e5	5.539e5	1.080	0.498	0.510	2965	2559	3.99e6	8.17e6	1346.6	3192.1	NO	db	db	120.486
13C-234678-HxCDF	36.092	0.983	2.450e5	4.788e5	1.014	0.512	0.510	2965	2559	3.75e6	7.40e6	1264.3	2893.1	NO	bb	bb	111.921
13C-123789-HxCDF	37.117	1.011	2.163e5	4.293e5	0.928	0.504	0.510	2965	2559	3.39e6	6.73e6	1141.6	2631.2	NO	bb	bb	109.123
13C-1234678-HpCDF	38.955	1.061	1.903e5	4.241e5	1.036	0.449	0.440	2164	2327	3.04e6	6.71e6	1403.5	2884.1	NO	bb	bb	92.999
13C-1234789-HpCDF	41.228	1.123	1.679e5	3.788e5	0.905	0.443	0.440	2164	2327	2.10e6	4.74e6	971.8	2038.0	NO	bb	bd	94.758
13C-1234-TCDD	25.788	0.000	2.747e5	3.578e5	1.000	0.768	0.770	1268	851	4.42e6	5.69e6	3485.6	6688.0	NO	bb	bb	100.000
13C-2378-TCDD	26.608	1.032	3.012e5	3.908e5	1.103	0.771	0.770	1268	851	4.73e6	6.10e6	3727.4	7174.9	NO	bb	bb	99.193
13C-12378-PeCDD	31.725	1.230	2.937e5	1.693e5	0.914	1.735	1.550	1164	1230	4.05e6	2.37e6	3475.0	1923.7	NO	bb	bb	80.071
13C-123478-HxCDD	36.203	0.986	4.046e5	3.432e5	0.933	1.179	1.240	2164	1936	6.56e6	5.43e6	3033.1	2806.2	NO	bd	bd	125.729
13C-123678-HxCDD	36.314	0.989	4.668e5	4.085e5	0.965	1.143	1.240	2164	1936	6.98e6	5.70e6	3225.4	2943.1	NO	db	db	142.329
13C-1234678-HpCDD	40.470	1.103	2.530e5	2.334e5	0.782	1.084	1.050	1685	1365	3.54e6	3.33e6	2101.6	2435.8	NO	bb	bb	97.559
13C-OCDD	45.271	1.233	3.987e5	4.403e5	0.788	0.906	0.890	2071	2053	4.69e6	5.13e6	2265.1	2497.7	NO	bb	bb	166.955
13C-123789-HxCDD	36.704	0.000	3.470e5	2.905e5	1.000	1.194	1.240	2164	1936	5.51e6	4.59e6	2547.9	2372.1	NO	bb	bb	100.000
37CL-2378-TCDD	26.622	1.032	2.495e5		1.233			1118		3.75e6		3349.2			bb		31.985

Dataset: T:\Autospec\Processed Data Batch\230223IHBS.qld
Last Altered: Friday, February 24, 2023 15:04:25 Pacific Standard Time
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ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.469	0.865	3.150e2	3.857e2	1.064	0.817	0.770	973	992	4.67e3	5.93e3	4.8	6.0	NO	bb	bb	0.070
1289-TCDF	27.483	1.058	1.673e2	1.312e2	0.858	1.275	0.770	973	992	2.65e3	3.62e3	2.7	3.7	YES	bb	bb	0.037
13468-PECDF	27.342	0.907	2.284e3	1.590e3	1.013	1.437	1.550	551	718	2.59e4	1.96e4	47.1	27.3	NO	bb	bb	0.425
12389-PECDF	32.527	1.079	3.080e3	2.164e3	0.844	1.423	1.550	1763	1819	4.48e4	2.85e4	25.4	15.7	NO	bb	bd	0.690
123468-HXCDF	33.451	0.953	2.077e3	1.661e3	1.197	1.251	1.240	1576	1373	3.00e4	2.58e4	19.0	18.8	NO	bd	bb	0.429
1368-TCDD	23.740	0.892	2.649e2	2.386e2	1.084	1.110	0.770	804	823	3.62e3	3.69e3	4.5	4.5	YES	bb	bb	0.067
1289-TCDD					0.975		0.770	804	823								
12479-PECDD	29.006	0.914	1.806e3	8.510e2	1.837	2.123	1.550	707	1191	2.00e4	9.14e3	28.3	7.7	YES	bb	bb	0.312
12389-PECDD	32.137	1.013	1.418e3	8.009e2	1.252	1.771	1.550	707	1191	2.03e4	1.37e4	28.7	11.5	NO	bb	bb	0.383
124679-HXCDD	34.209	0.945	1.691e3	1.275e3	1.033	1.326	1.240	1973	1435	2.48e4	1.79e4	12.6	12.5	NO	bb	bb	0.384
1234679-HPCDD	39.423	0.974	7.538e3	7.019e3	1.286	1.074	1.050	1458	1730	1.10e5	1.01e5	75.2	58.5	NO	bb	bb	2.327
Total-tetrafurans			3.604e4		0.933			973		5.28e5							9.915
Total-penta1			2.284e3					551		2.59e4							0.425
Total-pentafurans			4.494e5		0.866			1763		6.76e6							96.723
Total-hexafurans			8.351e5		1.208			1576		1.22e7							171.320
Total-heptafurans			3.193e5		1.185			1648		4.61e6							91.565
Total-Furans			1.828e6		1.067			973		2.62e7							448.504
Total-tetradioxins			3.440e4		1.099			804		5.12e5							9.239
Total-pentadioxins			1.617e5		1.392			707		2.46e6							52.058
Total-hexadioxins			5.656e5		1.007			1973		8.56e6							127.290
Total-heptadioxins			1.478e5		1.269			1458		2.16e6							48.507
Total-Dioxins			1.128e6		1.165			804		1.61e7							339.028
Total-TEQ			2.956e6					804		4.23e7							787.532
FUNCTION1 PFK			5.290e7					267379		2.31e7							
FUNCTION2 PFK			1.054e5					121995		3.57e6							0.000
FUNCTION3 PFK			2.584e5					298195		8.18e6							0.000
FUNCTION4 PFK			7.994e6					199842		1.31e7							
FUNCTION5 PFK			3.348e4					130260		1.36e6							
FUNCTION1 HXCD...			1.639e2					417		2.72e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			3.008e2					786		4.68e3							0.000
FUNCTION3 OCDPE			5.773e2					700		1.60e4							0.000
FUNCTION4 NCDPE			2.107e3					783		2.66e4							0.000
FUNCTION5 DCDPE			0.000e0					528		0.00e0							

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.99	3.400e4	4.355e4	0.876	0.78	0.77	510.1	YES	NO	bd	dd	9.375
2	Total-tetrafurans	25.80	9.248e2	1.294e3	0.933	0.71	0.77	15.3	YES	NO	bb	bd	0.252
3	Total-tetrafurans	25.07	4.227e2	6.355e2	0.933	0.67	0.77	6.5	YES	NO	db	db	0.120
4	Total-tetrafurans	24.74	3.752e2	4.914e2	0.933	0.76	0.77	6.2	YES	NO	bd	bd	0.098
5	1368-TCDF	22.47	3.150e2	3.857e2	1.064	0.82	0.77	4.8	YES	NO	bb	bb	0.070

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.34	2.284e3	1.590e3	1.013	1.44	1.55	47.1	YES	NO	bb	bb	0.425

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.53	3.080e3	2.164e3	0.844	1.42	1.55	25.4	YES	NO	bb	bd	0.690
2	23478-PeCDF	31.49	2.276e5	1.506e5	0.911	1.51	1.55	1949.2	YES	NO	bb	bb	47.988
3	12378-PeCDF	30.15	2.181e5	1.465e5	0.845	1.49	1.55	1851.2	YES	NO	bb	bd	47.922
4	Total-pentafurans	29.77	5.740e2	3.641e2	0.866	1.58	1.55	5.7	YES	NO	bb	bb	0.123

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123468-HXCDF	33.45	2.077e3	1.661e3	1.197	1.25	1.24	19.0	YES	NO	bd	bb	0.429
2	123789-HxCDF	37.13	1.781e5	1.494e5	1.187	1.19	1.24	1661.1	YES	NO	bd	bd	42.753
3	234678-HxCDF	36.10	2.120e5	1.722e5	1.229	1.23	1.24	1968.2	YES	NO	bd	bd	43.203
4	123678-HxCDF	35.25	2.399e5	1.944e5	1.248	1.23	1.24	2107.6	YES	NO	dd	dd	41.949
5	123478-HxCDF	35.10	2.029e5	1.668e5	1.182	1.22	1.24	1978.6	YES	NO	bd	bd	42.987

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.97	1.790e5	1.793e5	1.204	1.00	1.05	1679.4	YES	NO	bd	bd	48.435
2	1234789-HpCDF	41.24	1.403e5	1.344e5	1.165	1.04	1.05	1115.7	YES	NO	bd	bb	43.131

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.99	3.400e4	4.355e4	0.876	0.78	0.77	510.1	YES	NO	bd	dd	9.375
2	Total-tetrafurans	25.80	9.248e2	1.294e3	0.933	0.71	0.77	15.3	YES	NO	bb	bd	0.252
3	Total-tetrafurans	25.07	4.227e2	6.355e2	0.933	0.67	0.77	6.5	YES	NO	db	db	0.120
4	Total-tetrafurans	24.74	3.752e2	4.914e2	0.933	0.76	0.77	6.2	YES	NO	bd	bd	0.098
5	1368-TCDF	22.47	3.150e2	3.857e2	1.064	0.82	0.77	4.8	YES	NO	bb	bb	0.070
6	12389-PECDF	32.53	3.080e3	2.164e3	0.844	1.42	1.55	25.4	YES	NO	bb	bd	0.690
7	23478-PeCDF	31.49	2.276e5	1.506e5	0.911	1.51	1.55	1949.2	YES	NO	bb	bb	47.988
8	12378-PeCDF	30.15	2.181e5	1.465e5	0.845	1.49	1.55	1851.2	YES	NO	bb	bd	47.922
9	Total-pentafurans	29.77	5.740e2	3.641e2	0.866	1.58	1.55	5.7	YES	NO	bb	bb	0.123
10	123468-HXCDF	33.45	2.077e3	1.661e3	1.197	1.25	1.24	19.0	YES	NO	bd	bb	0.429
11	123789-HxCDF	37.13	1.781e5	1.494e5	1.187	1.19	1.24	1661.1	YES	NO	bd	bd	42.753
12	234678-HxCDF	36.10	2.120e5	1.722e5	1.229	1.23	1.24	1968.2	YES	NO	bd	bd	43.203
13	123678-HxCDF	35.25	2.399e5	1.944e5	1.248	1.23	1.24	2107.6	YES	NO	dd	dd	41.949
14	123478-HxCDF	35.10	2.029e5	1.668e5	1.182	1.22	1.24	1978.6	YES	NO	bd	bd	42.987
15	1234678-HpCDF	38.97	1.790e5	1.793e5	1.204	1.00	1.05	1679.4	YES	NO	bd	bd	48.435
16	OCDF	45.53	1.863e5	2.046e5	1.186	0.91	0.89	2402.1	YES	NO	bd	bd	78.556
17	1234789-HpCDF	41.24	1.403e5	1.344e5	1.165	1.04	1.05	1115.7	YES	NO	bd	bb	43.131
18	13468-PECDF	27.34	2.284e3	1.590e3	1.013	1.44	1.55	47.1	YES	NO	bb	bb	0.425

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	26.75	1.550e3	1.976e3	1.099	0.78	0.77	26.5	YES	NO	db	db	0.464
2	2378-TCDD	26.62	3.176e4	4.061e4	1.236	0.78	0.77	594.6	YES	NO	bd	bd	8.459
3	Total-tetradioxins	26.24	1.095e3	1.308e3	1.099	0.84	0.77	15.2	YES	NO	bb	bb	0.316

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.14	1.418e3	8.009e2	1.252	1.77	1.55	28.7	YES	NO	bb	bb	0.383
2	12378-PeCDD	31.75	1.603e5	9.965e4	1.087	1.61	1.55	3449.9	YES	NO	bb	bb	51.675

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HXCDD	34.21	1.691e3	1.275e3	1.033	1.33	1.24	12.6	YES	NO	bb	bb	0.384
2	123789-HxCDD	36.72	1.788e5	1.437e5	0.985	1.24	1.24	1381.0	YES	NO	bb	bb	40.325
3	123678-HxCDD	36.34	2.052e5	1.707e5	1.021	1.20	1.24	1536.8	YES	NO	dd	db	42.068
4	123478-HxCDD	36.21	1.799e5	1.487e5	0.987	1.21	1.24	1410.4	YES	NO	bd	bd	44.513

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.48	1.402e5	1.411e5	1.253	0.99	1.05	1405.6	YES	NO	bb	bd	46.180
2	1234679-HPCDD	39.42	7.538e3	7.019e3	1.286	1.07	1.05	75.2	YES	NO	bb	bb	2.327

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	26.75	1.550e3	1.976e3	1.099	0.78	0.77	26.5	YES	NO	db	db	0.464
2	2378-TCDD	26.62	3.176e4	4.061e4	1.236	0.78	0.77	594.6	YES	NO	bd	bd	8.459
3	Total-tetradioxins	26.24	1.095e3	1.308e3	1.099	0.84	0.77	15.2	YES	NO	bb	bb	0.316
4	124679-HXCDD	34.21	1.691e3	1.275e3	1.033	1.33	1.24	12.6	YES	NO	bb	bb	0.384
5	12389-PECDD	32.14	1.418e3	8.009e2	1.252	1.77	1.55	28.7	YES	NO	bb	bb	0.383
6	12378-PeCDD	31.75	1.603e5	9.965e4	1.087	1.61	1.55	3449.9	YES	NO	bb	bb	51.675
7	123789-HxCDD	36.72	1.788e5	1.437e5	0.985	1.24	1.24	1381.0	YES	NO	bb	bb	40.325
8	123678-HxCDD	36.34	2.052e5	1.707e5	1.021	1.20	1.24	1536.8	YES	NO	dd	db	42.068
9	123478-HxCDD	36.21	1.799e5	1.487e5	0.987	1.21	1.24	1410.4	YES	NO	bd	bd	44.513
10	1234678-HpCDD	40.48	1.402e5	1.411e5	1.253	0.99	1.05	1405.6	YES	NO	bb	bd	46.180
11	1234679-HPCDD	39.42	7.538e3	7.019e3	1.286	1.07	1.05	75.2	YES	NO	bb	bb	2.327
12	OCDD	45.29	2.185e5	2.531e5	1.103	0.86	0.89	1035.1	YES	NO	bd	bd	101.935

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.99	3.400e4	4.355e4	0.876	0.78	0.77	510.1	YES	NO	bd	dd	9.375
2	Total-tetrafurans	25.80	9.248e2	1.294e3	0.933	0.71	0.77	15.3	YES	NO	bb	bd	0.252
3	Total-tetrafurans	25.07	4.227e2	6.355e2	0.933	0.67	0.77	6.5	YES	NO	db	db	0.120
4	Total-tetrafurans	24.74	3.752e2	4.914e2	0.933	0.76	0.77	6.2	YES	NO	bd	bd	0.098
5	1368-TCDF	22.47	3.150e2	3.857e2	1.064	0.82	0.77	4.8	YES	NO	bb	bb	0.070
6	12389-PECDF	32.53	3.080e3	2.164e3	0.844	1.42	1.55	25.4	YES	NO	bb	bd	0.690
7	23478-PeCDF	31.49	2.276e5	1.506e5	0.911	1.51	1.55	1949.2	YES	NO	bb	bb	47.988
8	12378-PeCDF	30.15	2.181e5	1.465e5	0.845	1.49	1.55	1851.2	YES	NO	bb	bd	47.922
9	Total-pentafurans	29.77	5.740e2	3.641e2	0.866	1.58	1.55	5.7	YES	NO	bb	bb	0.123
10	123468-HXCDF	33.45	2.077e3	1.661e3	1.197	1.25	1.24	19.0	YES	NO	bd	bb	0.429
11	123789-HxCDF	37.13	1.781e5	1.494e5	1.187	1.19	1.24	1661.1	YES	NO	bd	bd	42.753
12	234678-HxCDF	36.10	2.120e5	1.722e5	1.229	1.23	1.24	1968.2	YES	NO	bd	bd	43.203
13	123678-HxCDF	35.25	2.399e5	1.944e5	1.248	1.23	1.24	2107.6	YES	NO	dd	dd	41.949
14	123478-HxCDF	35.10	2.029e5	1.668e5	1.182	1.22	1.24	1978.6	YES	NO	bd	bd	42.987
15	1234678-HpCDF	38.97	1.790e5	1.793e5	1.204	1.00	1.05	1679.4	YES	NO	bd	bd	48.435
16	OCDF	45.53	1.863e5	2.046e5	1.186	0.91	0.89	2402.1	YES	NO	bd	bd	78.556
17	1234789-HpCDF	41.24	1.403e5	1.344e5	1.165	1.04	1.05	1115.7	YES	NO	bd	bb	43.131
18	13468-PECDF	27.34	2.284e3	1.590e3	1.013	1.44	1.55	47.1	YES	NO	bb	bb	0.425
19	Total-tetradioxins	26.75	1.550e3	1.976e3	1.099	0.78	0.77	26.5	YES	NO	db	db	0.464
20	2378-TCDD	26.62	3.176e4	4.061e4	1.236	0.78	0.77	594.6	YES	NO	bd	bd	8.459
21	Total-tetradioxins	26.24	1.095e3	1.308e3	1.099	0.84	0.77	15.2	YES	NO	bb	bb	0.316
22	124679-HXCDD	34.21	1.691e3	1.275e3	1.033	1.33	1.24	12.6	YES	NO	bb	bb	0.384
23	12389-PECDD	32.14	1.418e3	8.009e2	1.252	1.77	1.55	28.7	YES	NO	bb	bb	0.383
24	12378-PeCDD	31.75	1.603e5	9.965e4	1.087	1.61	1.55	3449.9	YES	NO	bb	bb	51.675
25	123789-HxCDD	36.72	1.788e5	1.437e5	0.985	1.24	1.24	1381.0	YES	NO	bb	bb	40.325
26	123678-HxCDD	36.34	2.052e5	1.707e5	1.021	1.20	1.24	1536.8	YES	NO	dd	db	42.068
27	123478-HxCDD	36.21	1.799e5	1.487e5	0.987	1.21	1.24	1410.4	YES	NO	bd	bd	44.513
28	1234678-HpCDD	40.48	1.402e5	1.411e5	1.253	0.99	1.05	1405.6	YES	NO	bb	bd	46.180
29	1234679-HPCDD	39.42	7.538e3	7.019e3	1.286	1.07	1.05	75.2	YES	NO	bb	bb	2.327
30	OCDD	45.29	2.185e5	2.531e5	1.103	0.86	0.89	1035.1	YES	NO	bd	bd	101.935

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	25.52	2.089e7					31.8	YES		db		
2	FUNCTION1 PFK	21.32	3.201e7					54.5	YES		bd		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.88	3.453e3					1.2	NO		bb		0.000
2	FUNCTION2 PFK	28.84	2.664e3					0.9	NO		bb		0.000
3	FUNCTION2 PFK	28.40	2.132e3					0.8	NO		bb		0.000
4	FUNCTION2 PFK	28.27	2.537e3					1.1	NO		bb		0.000
5	FUNCTION2 PFK	31.80	1.156e3					0.6	NO		bd		0.000
6	FUNCTION2 PFK	31.76	2.457e3					0.8	NO		bb		0.000
7	FUNCTION2 PFK	31.27	5.747e3					1.4	NO		bb		0.000
8	FUNCTION2 PFK	30.89	6.468e3					1.6	NO		bb		0.000
9	FUNCTION2 PFK	30.81	2.168e3					0.8	NO		bb		0.000
10	FUNCTION2 PFK	30.43	7.800e3					1.4	NO		db		0.000
11	FUNCTION2 PFK	30.35	7.234e3					1.6	NO		bd		0.000
12	FUNCTION2 PFK	29.84	4.582e3					1.2	NO		db		0.000
13	FUNCTION2 PFK	29.81	1.093e3					0.6	NO		bd		0.000
14	FUNCTION2 PFK	29.71	4.583e3					1.3	NO		db		0.000
15	FUNCTION2 PFK	29.67	3.394e3					1.2	NO		bd		0.000
16	FUNCTION2 PFK	29.63	6.024e2					0.4	NO		bb		0.000
17	FUNCTION2 PFK	29.56	3.126e3					0.8	NO		bb		0.000
18	FUNCTION2 PFK	29.27	2.192e3					0.8	NO		bb		0.000
19	FUNCTION2 PFK	29.18	7.018e3					1.4	NO		bb		0.000
20	FUNCTION2 PFK	28.96	4.651e3					1.2	NO		bb		0.000
21	FUNCTION2 PFK	32.94	6.480e2					0.5	NO		bb		0.000
22	FUNCTION2 PFK	32.72	7.948e2					0.5	NO		bb		0.000
23	FUNCTION2 PFK	32.59	2.063e3					0.8	NO		db		0.000
24	FUNCTION2 PFK	32.54	6.761e3					1.3	NO		bd		0.000
25	FUNCTION2 PFK	32.34	5.413e3					1.4	NO		db		0.000
26	FUNCTION2 PFK	32.27	7.088e3					1.4	NO		bd		0.000
27	FUNCTION2 PFK	31.91	2.787e3					1.0	NO		bb		0.000
28	FUNCTION2 PFK	31.84	4.770e3					1.1	NO		db		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.74	5.173e3					0.7	NO		db		0.000
2	FUNCTION3 PFK	33.70	1.599e4					1.3	NO		bd		0.000
3	FUNCTION3 PFK	33.28	1.160e4					1.3	NO		bb		0.000
4	FUNCTION3 PFK	33.22	6.639e3					1.1	NO		bb		0.000
5	FUNCTION3 PFK	33.18	1.832e3					0.5	NO		db		0.000
6	FUNCTION3 PFK	33.12	1.060e4					1.2	NO		dd		0.000
7	FUNCTION3 PFK	33.08	1.046e4					1.2	NO		bd		0.000
8	FUNCTION3 PFK	37.38	5.375e3					0.8	NO		bb		0.000
9	FUNCTION3 PFK	37.12	8.851e3					1.4	NO		bb		0.000
10	FUNCTION3 PFK	36.85	5.951e3					0.8	NO		bb		0.000
11	FUNCTION3 PFK	36.54	2.451e3					0.5	NO		bb		0.000
12	FUNCTION3 PFK	36.26	1.660e4					1.7	NO		bb		0.000
13	FUNCTION3 PFK	35.42	6.974e3					0.9	NO		bb		0.000
14	FUNCTION3 PFK	35.27	5.983e3					0.8	NO		bb		0.000
15	FUNCTION3 PFK	35.22	5.450e3					0.7	NO		db		0.000
16	FUNCTION3 PFK	35.18	9.041e3					1.1	NO		bd		0.000
17	FUNCTION3 PFK	35.12	7.176e3					1.0	NO		bb		0.000
18	FUNCTION3 PFK	34.98	1.696e3					0.5	NO		bb		0.000
19	FUNCTION3 PFK	34.93	3.042e3					0.5	NO		bb		0.000
20	FUNCTION3 PFK	34.52	1.528e4					1.5	NO		db		0.000
21	FUNCTION3 PFK	34.47	4.164e4					1.7	NO		bd		0.000
22	FUNCTION3 PFK	34.38	6.283e3					0.7	NO		bb		0.000
23	FUNCTION3 PFK	34.30	1.861e4					1.7	NO		bb		0.000
24	FUNCTION3 PFK	37.87	1.327e4					1.8	NO		db		0.000
25	FUNCTION3 PFK	37.84	6.074e3					1.0	NO		bd		0.000
26	FUNCTION3 PFK	37.64	1.632e4					1.4	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	39.02	6.487e6					22.0	YES		db		
2	FUNCTION4 PFK	38.11	1.507e6					43.4	YES		bd		

ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	46.35	8.388e3					1.8	NO		bb		
2	FUNCTION5 PFK	44.80	3.819e3					1.4	NO		bb		
3	FUNCTION5 PFK	44.62	5.855e2					0.5	NO		bb		
4	FUNCTION5 PFK	44.49	6.111e2					0.5	NO		bb		
5	FUNCTION5 PFK	44.06	9.205e3					2.1	NO		bb		
6	FUNCTION5 PFK	43.84	4.303e3					1.3	NO		bb		
7	FUNCTION5 PFK	43.63	1.813e3					0.8	NO		bb		
8	FUNCTION5 PFK	43.47	4.159e3					1.5	NO		bb		
9	FUNCTION5 PFK	43.15	5.974e2					0.5	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.72	7.222e1					2.8	NO		bb		0.000
2	FUNCTION1 HXCD...	21.08	9.166e1					3.7	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.67	9.233e1					1.9	NO		bb		0.000
2	FUNCTION2 HPCD...	31.81	9.840e1					2.0	NO		bb		0.000
3	FUNCTION2 HPCD...	28.50	1.101e2					2.1	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	37.90	1.596e2					9.3	YES		bb		0.000
2	FUNCTION3 OCDPE	37.54	1.167e2					2.0	NO		bb		0.000
3	FUNCTION3 OCDPE	37.14	1.111e2					5.3	YES		bb		0.000
4	FUNCTION3 OCDPE	33.59	1.088e2					1.6	NO		bb		0.000
5	FUNCTION3 OCDPE	33.13	8.116e1					4.6	YES		bb		0.000

ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.41	2.150e2					5.7	YES		db		0.000
2	FUNCTION4 NCDPE	38.18	3.742e2					1.2	NO		bd		0.000
3	FUNCTION4 NCDPE	41.75	8.586e1					1.6	NO		bb		0.000
4	FUNCTION4 NCDPE	41.44	8.211e1					4.2	YES		db		0.000
5	FUNCTION4 NCDPE	41.43	2.356e2					4.5	YES		dd		0.000
6	FUNCTION4 NCDPE	41.31	1.836e2					2.6	NO		bd		0.000
7	FUNCTION4 NCDPE	38.79	9.675e1					2.5	NO		db		0.000
8	FUNCTION4 NCDPE	38.75	8.022e1					2.5	NO		dd		0.000
9	FUNCTION4 NCDPE	38.59	5.490e2					5.0	YES		dd		0.000
10	FUNCTION4 NCDPE	38.49	2.044e2					4.2	YES		bd		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

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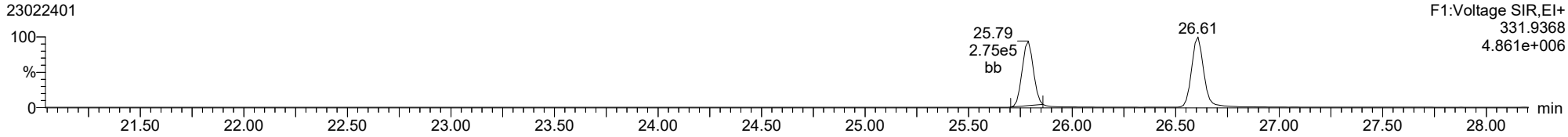

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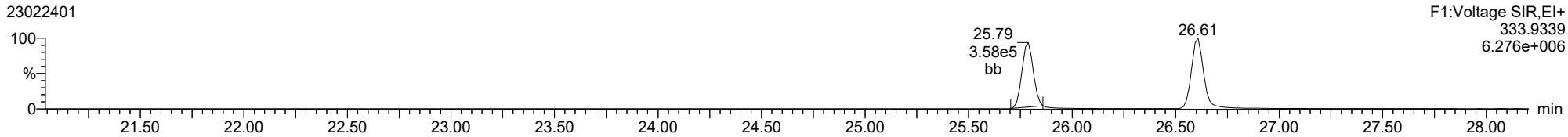

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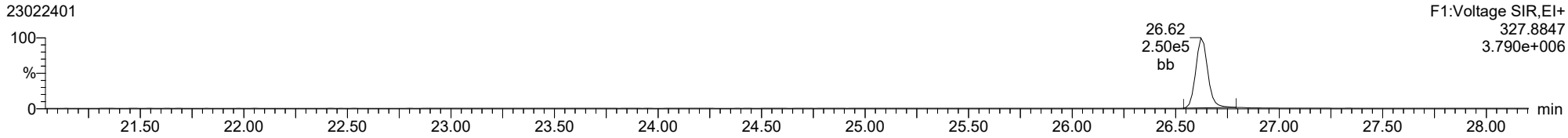

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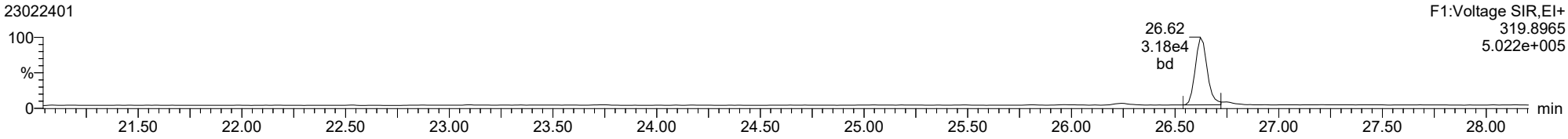

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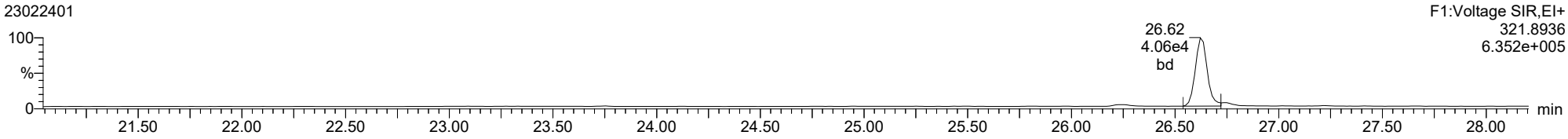

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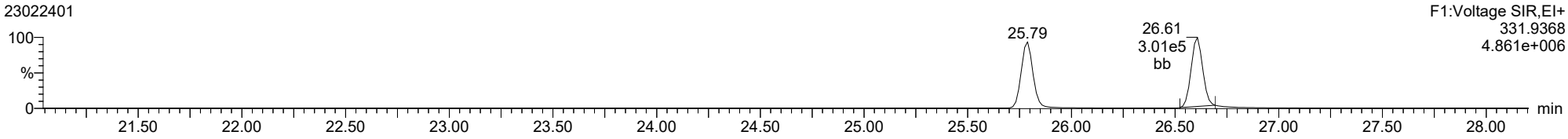

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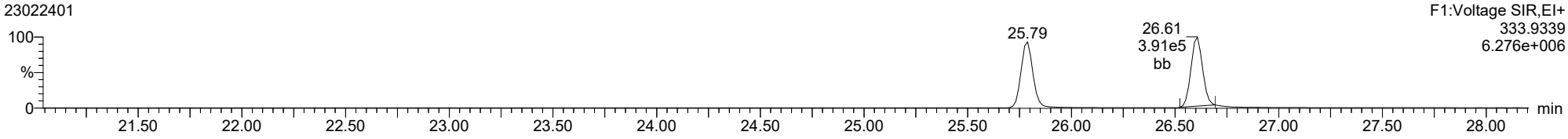

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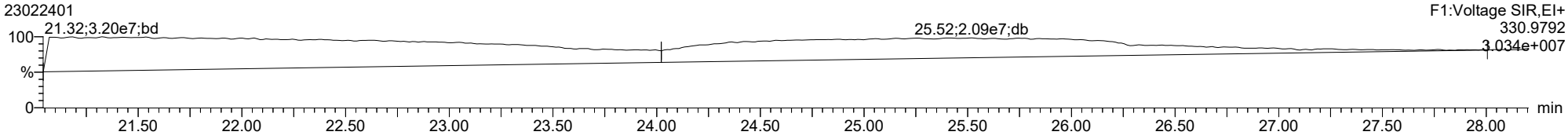

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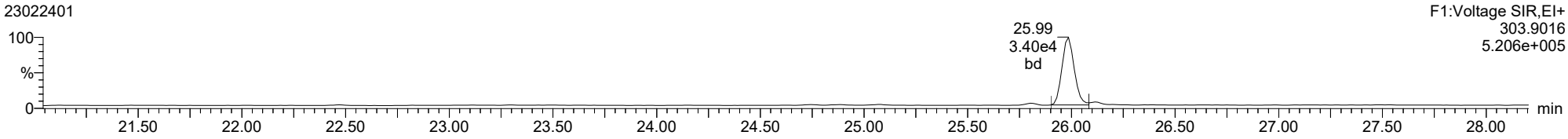

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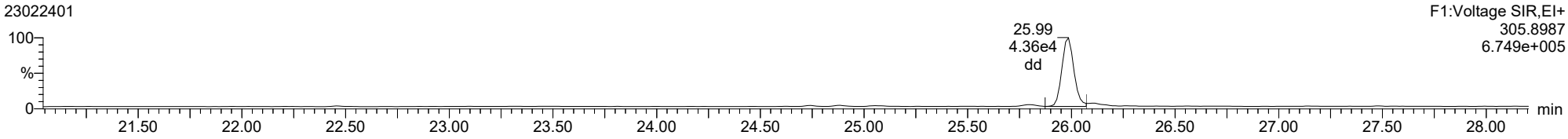

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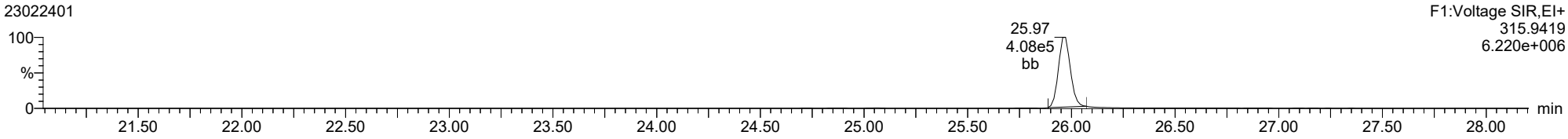

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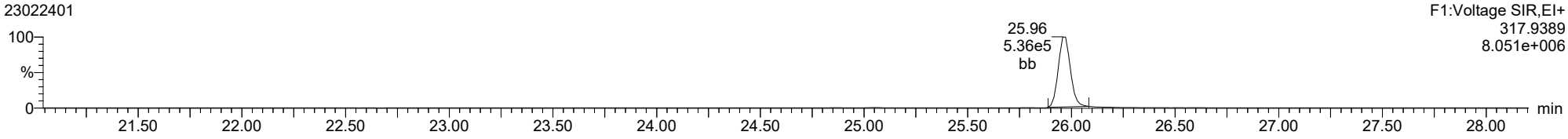

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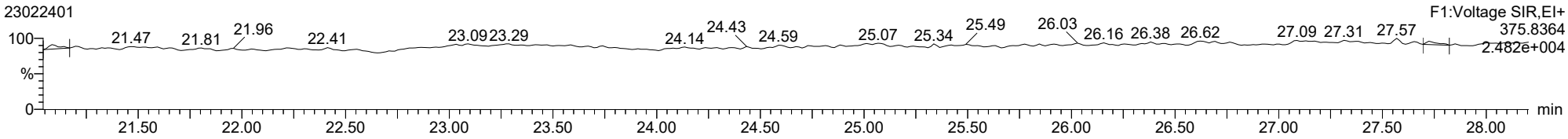

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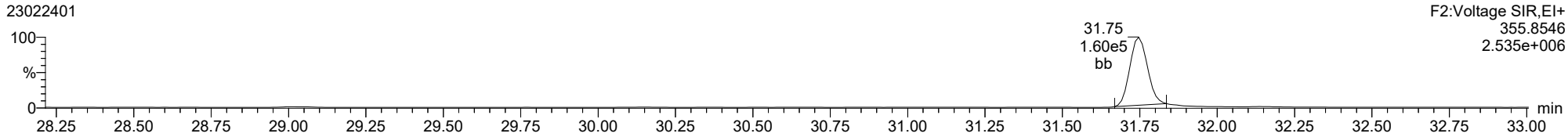

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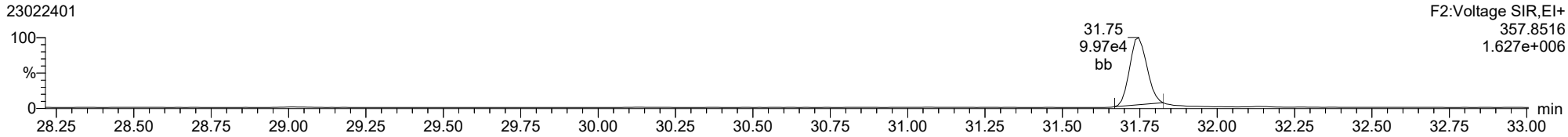

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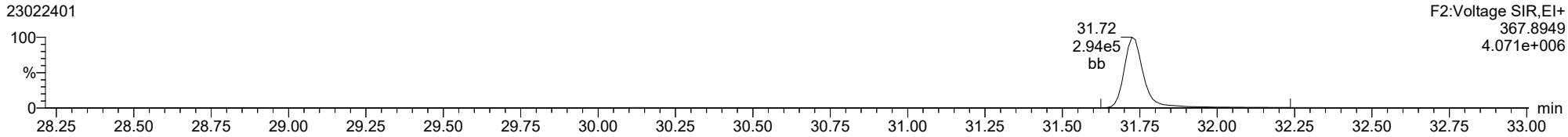

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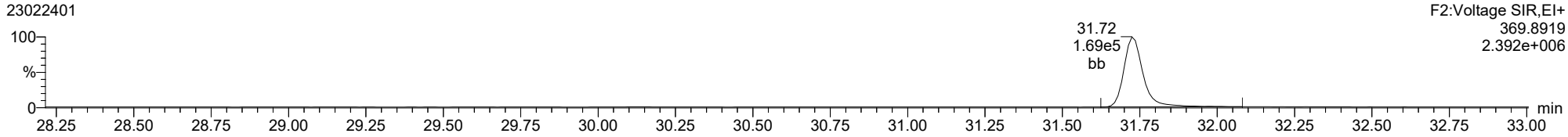

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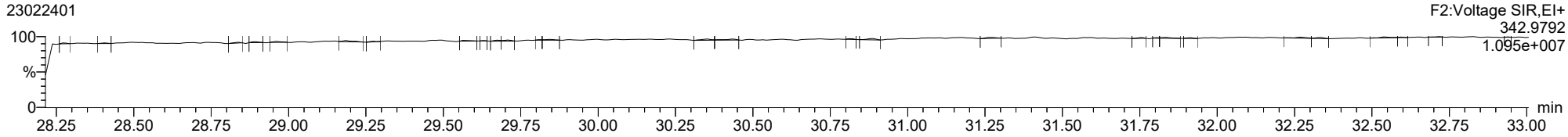

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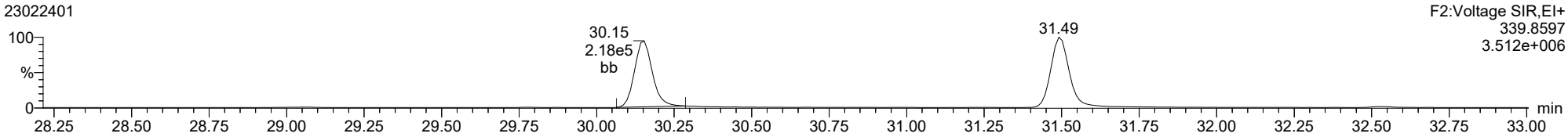

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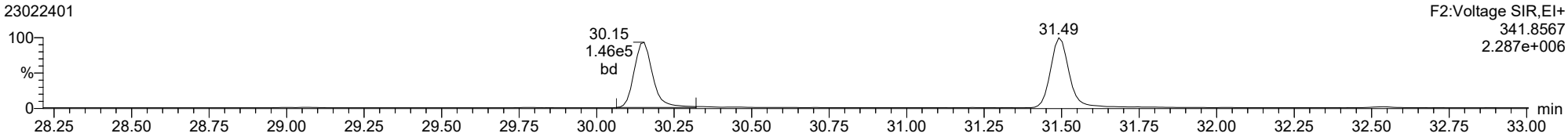

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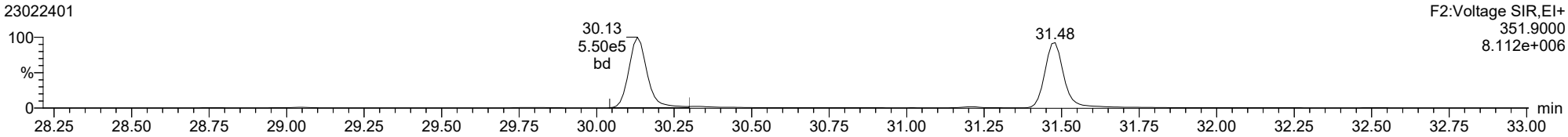

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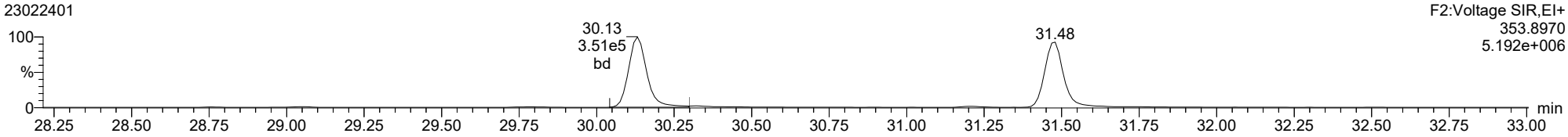

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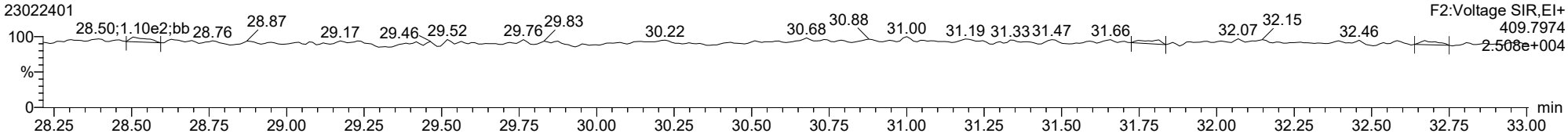

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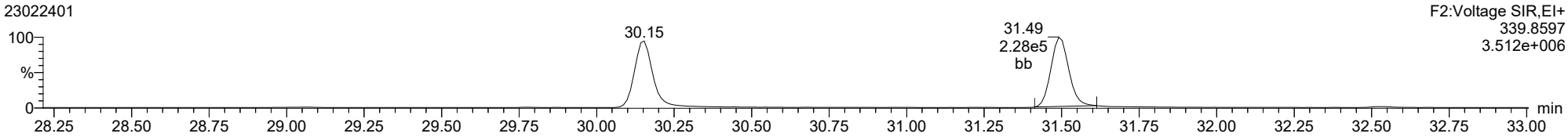

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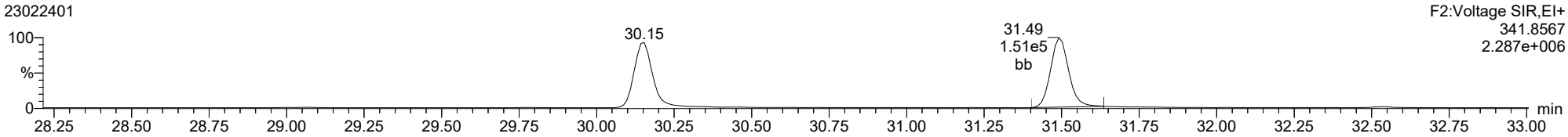

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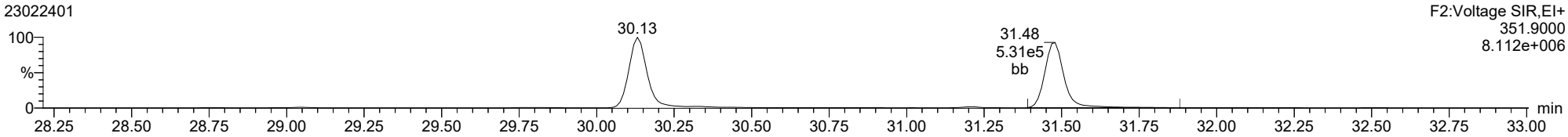

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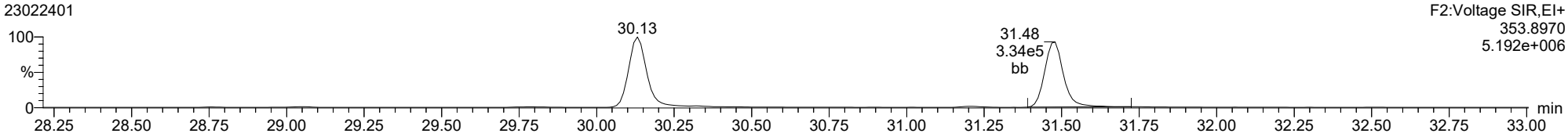

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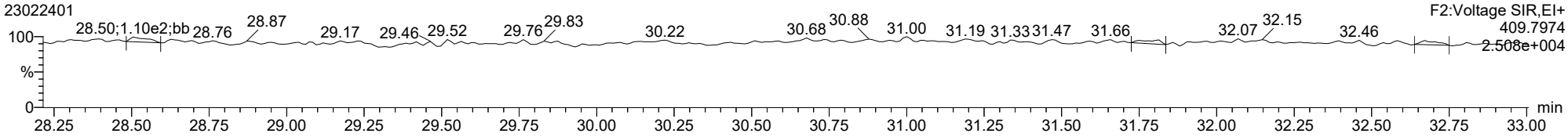

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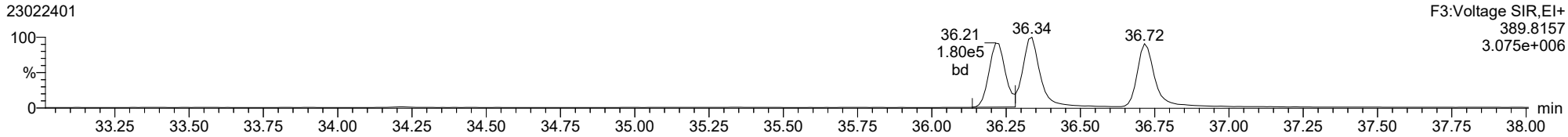

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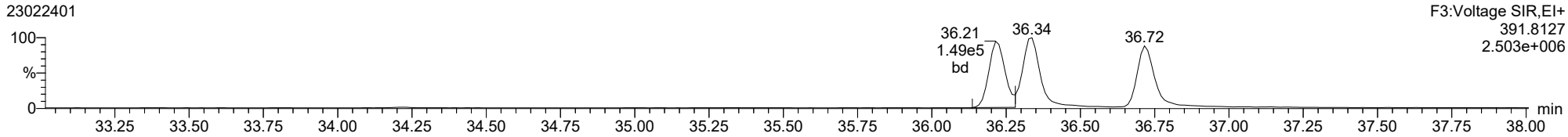

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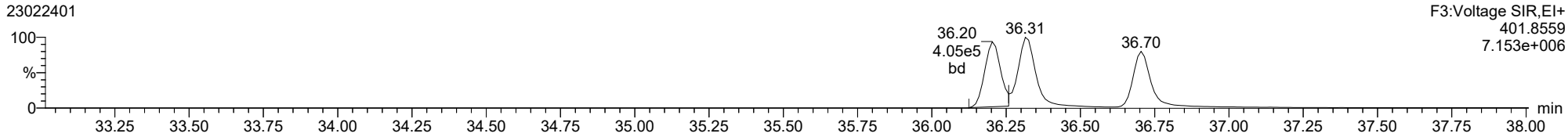

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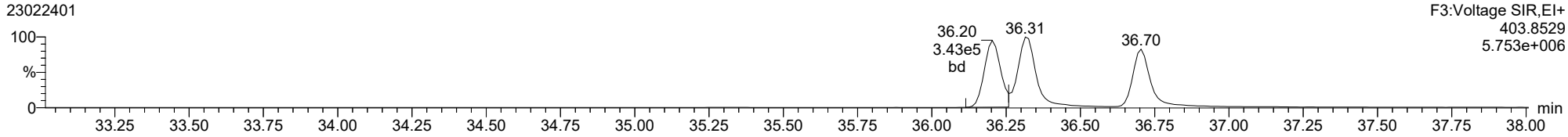

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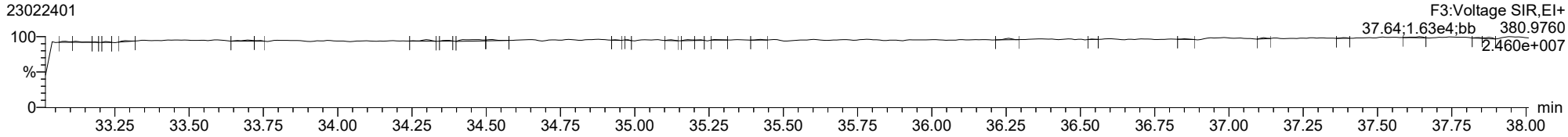

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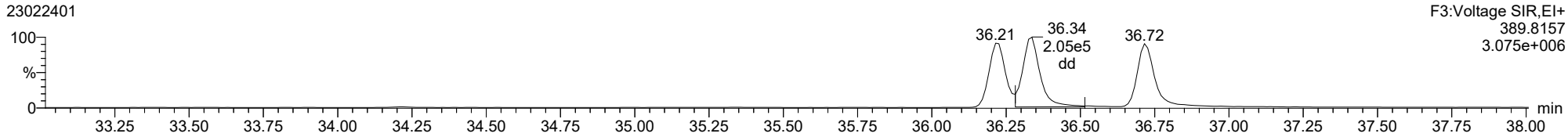

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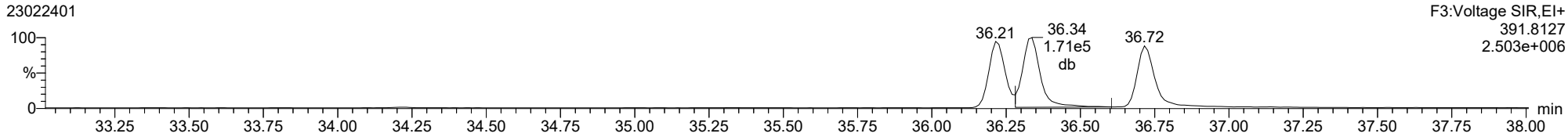

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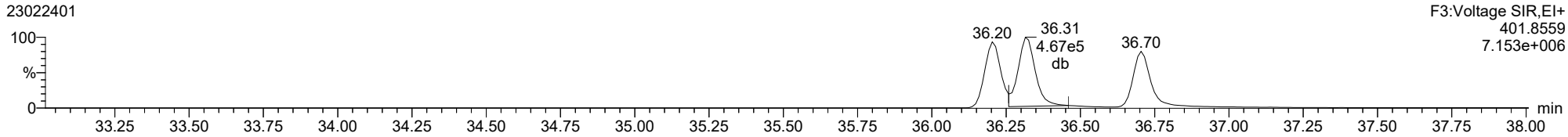

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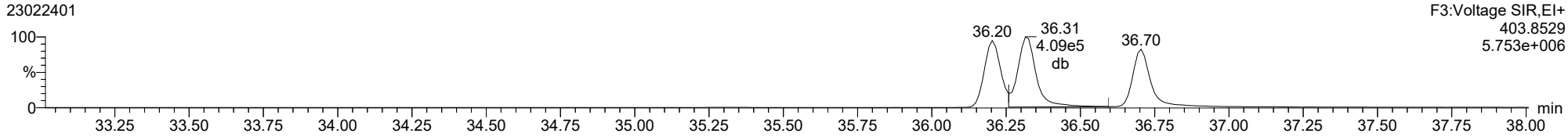

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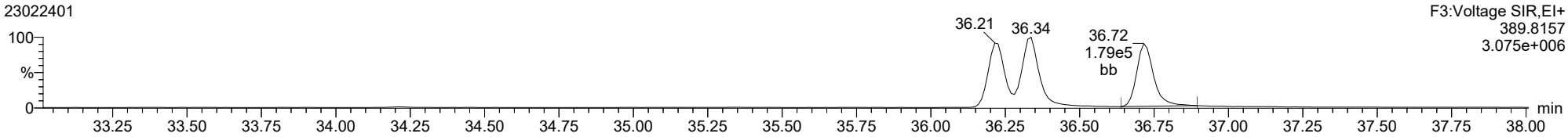

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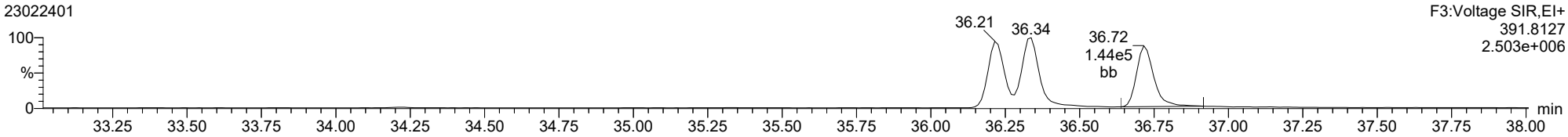

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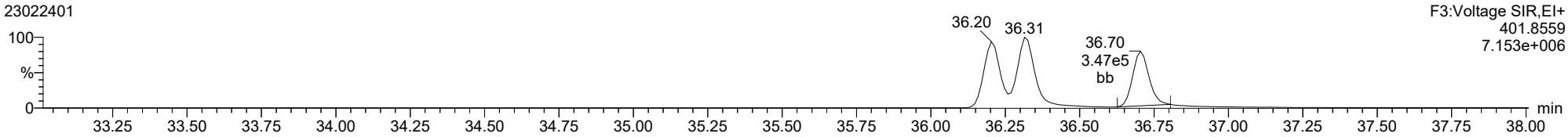

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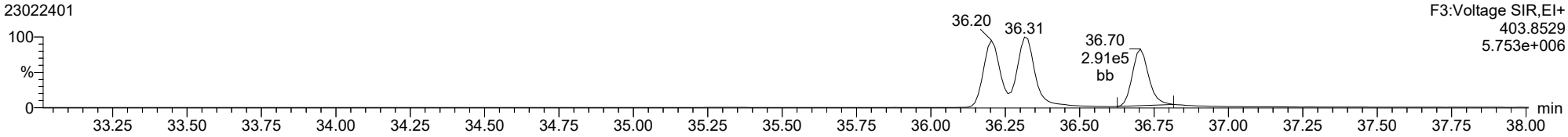

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ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

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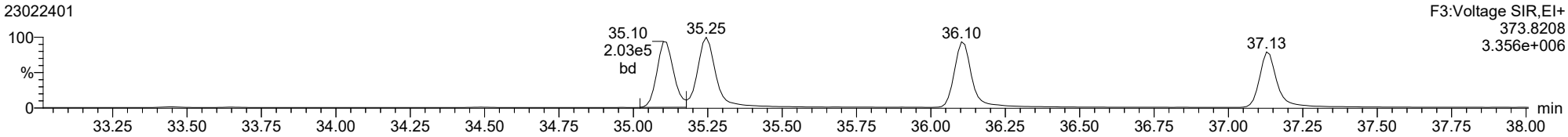

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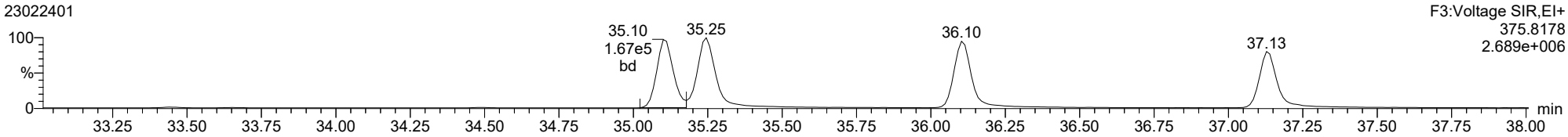

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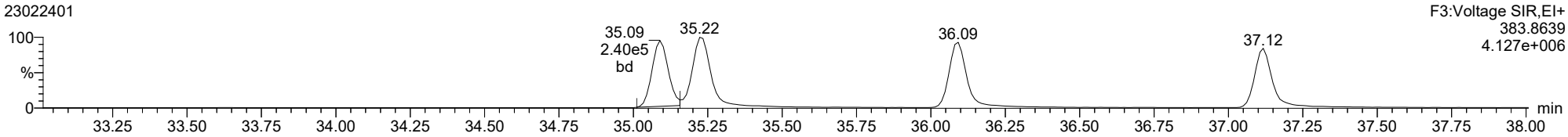

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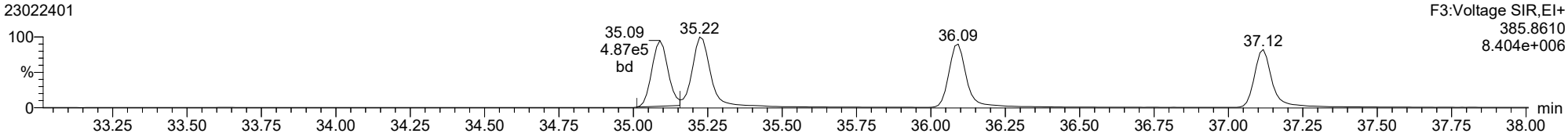

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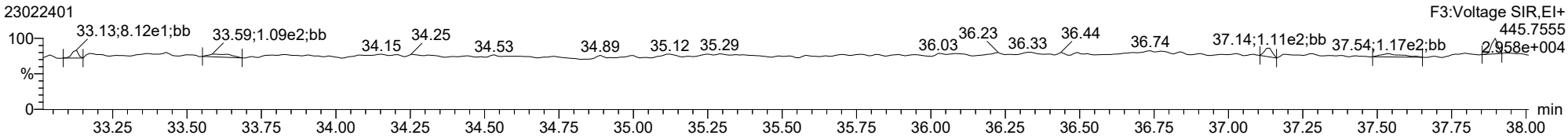

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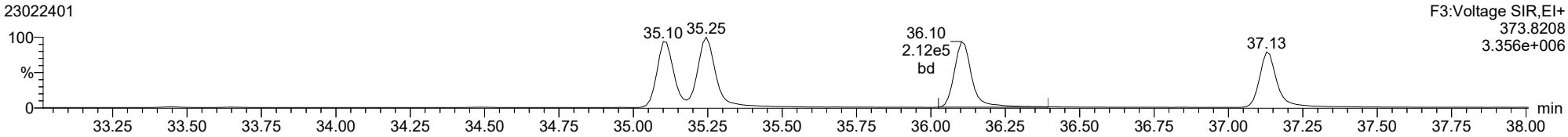

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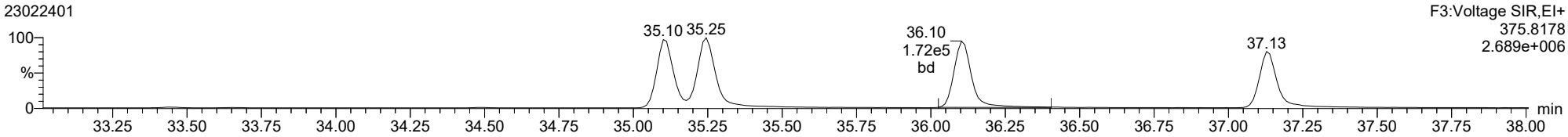

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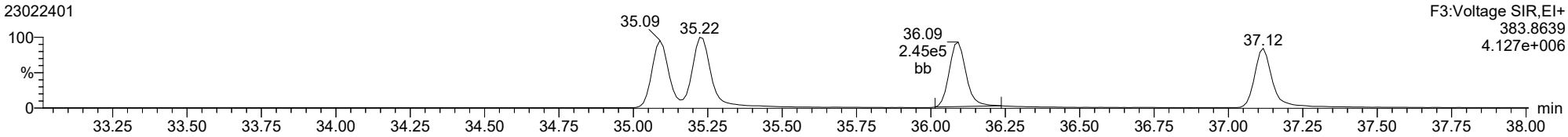

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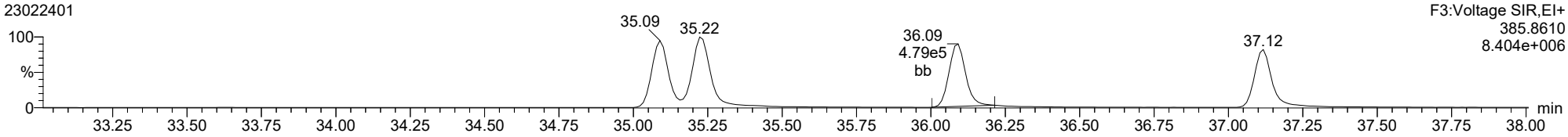

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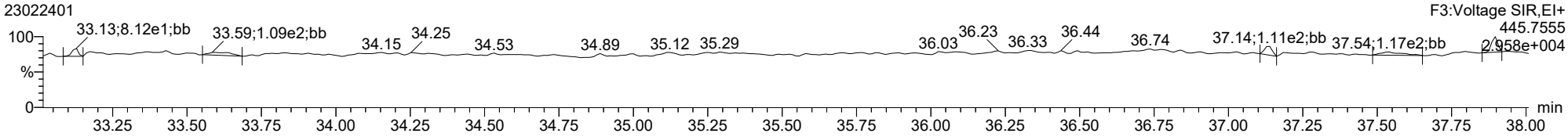

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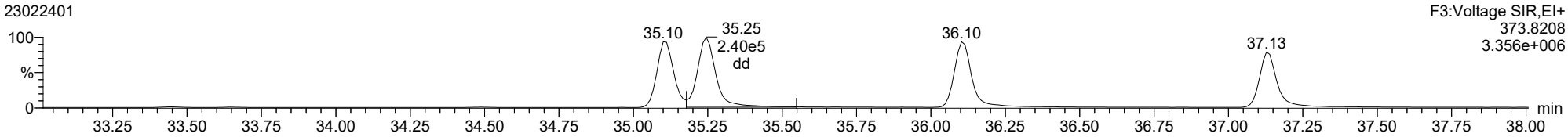

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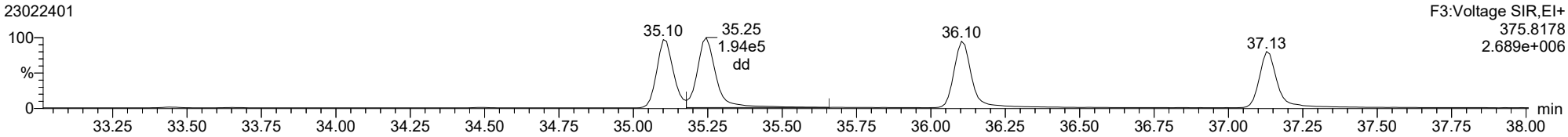

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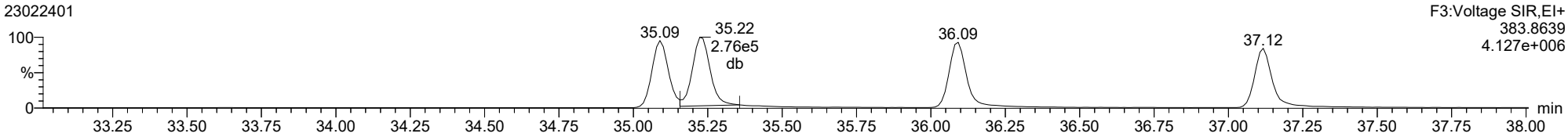

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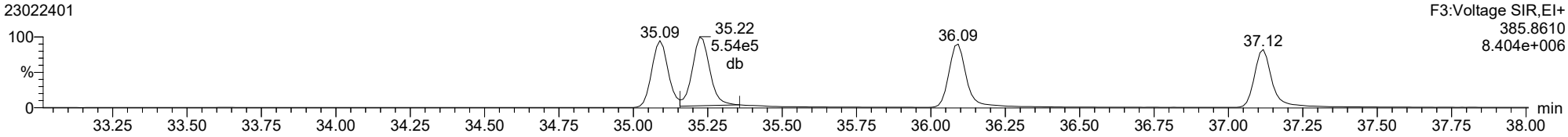

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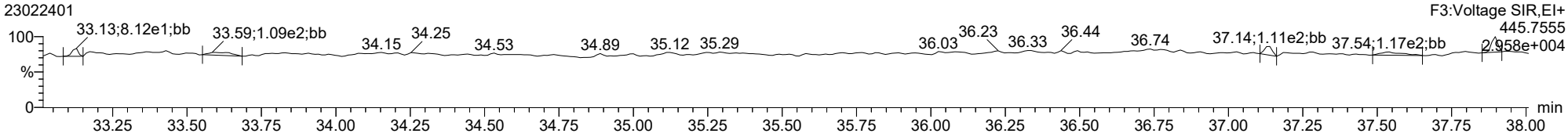

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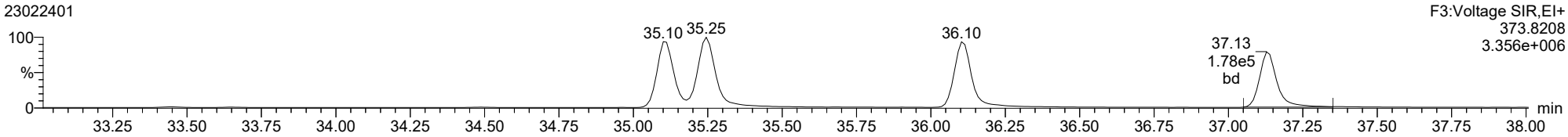

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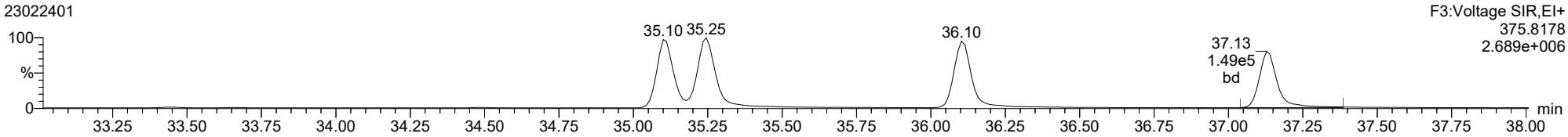

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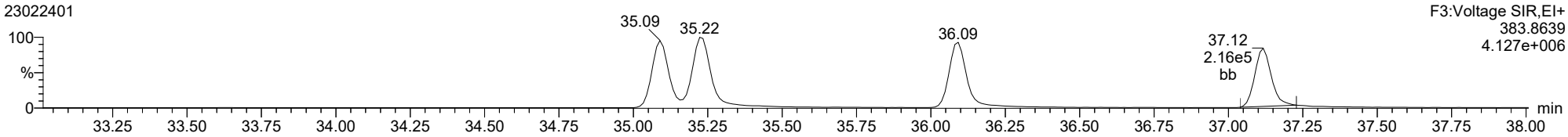

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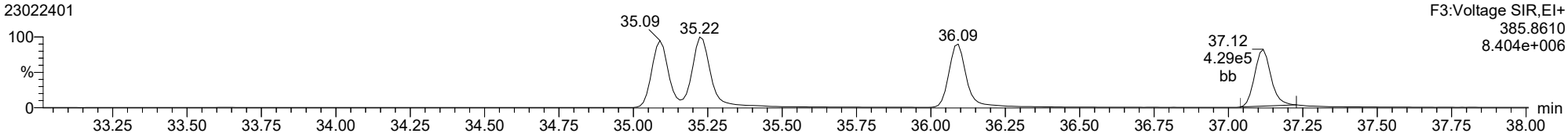

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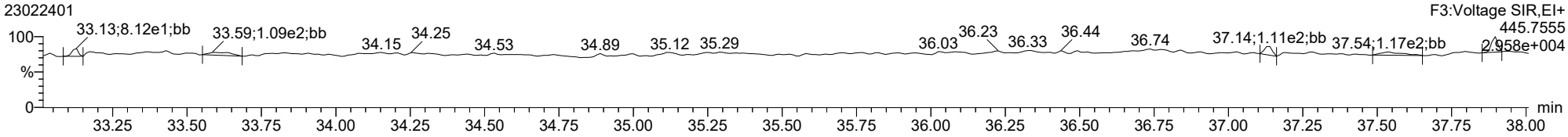

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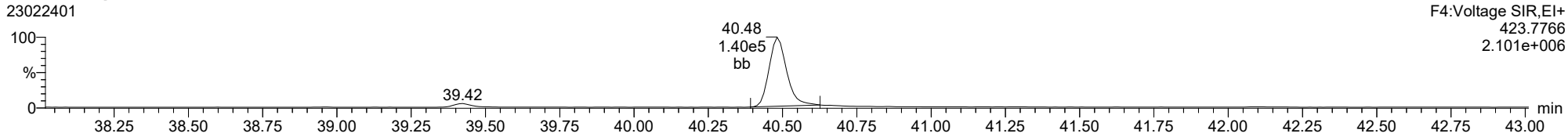

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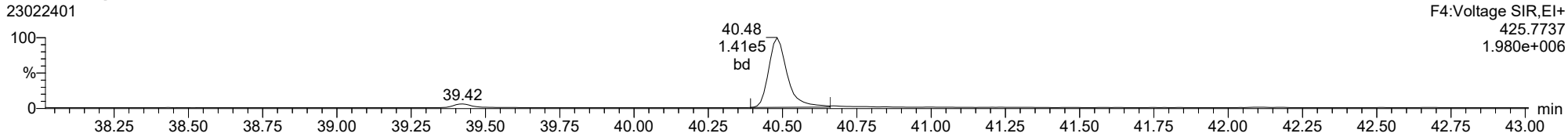

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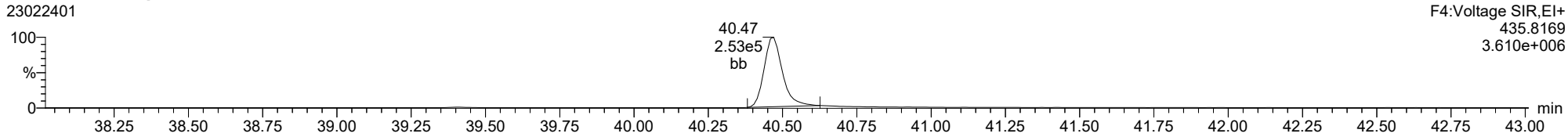

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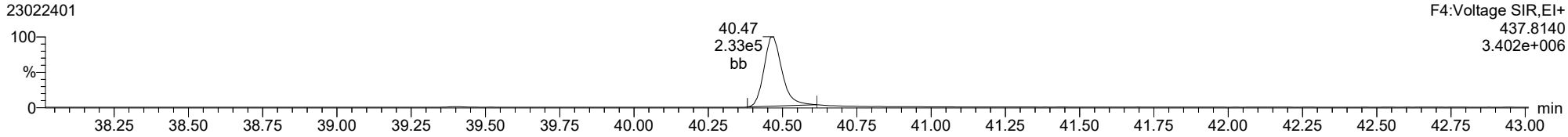

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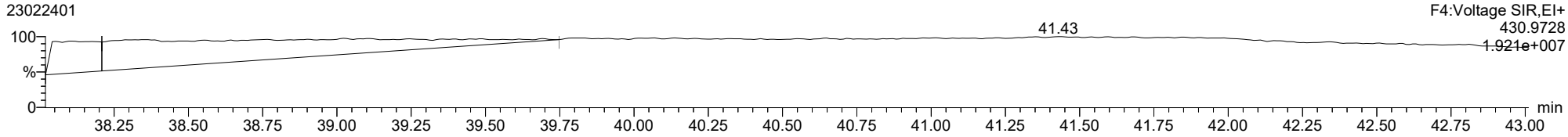

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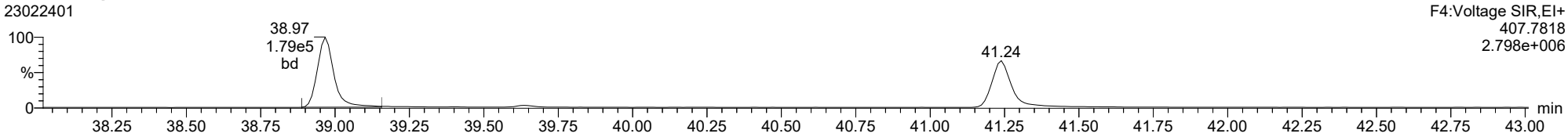

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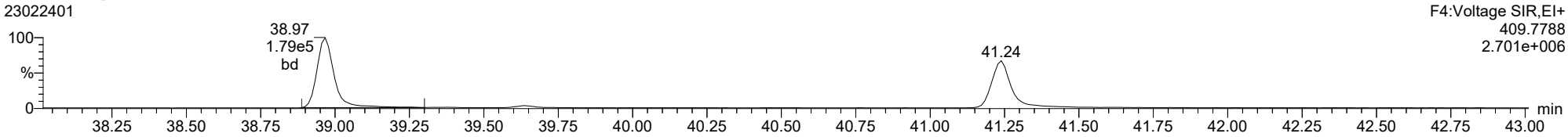

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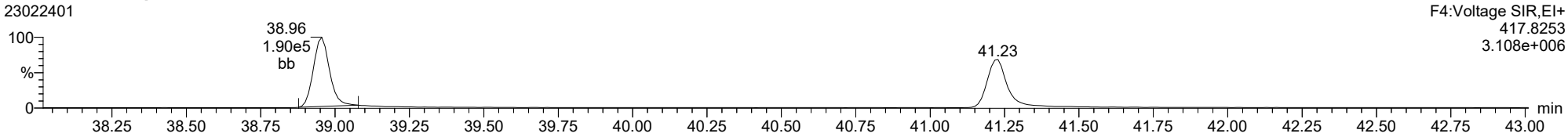

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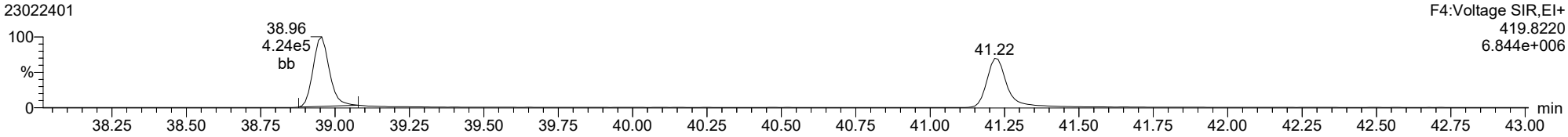

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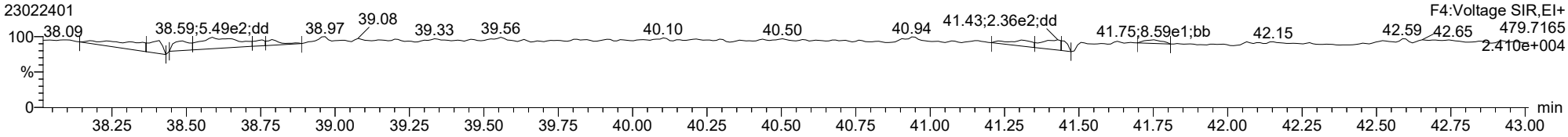

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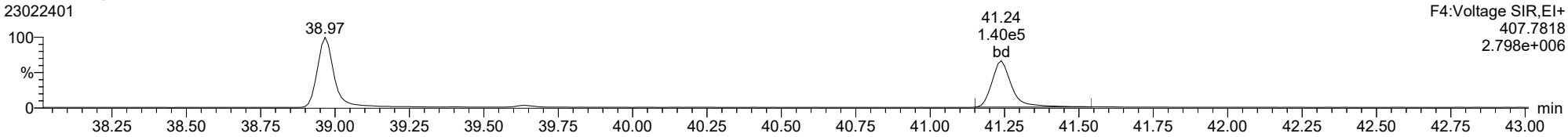

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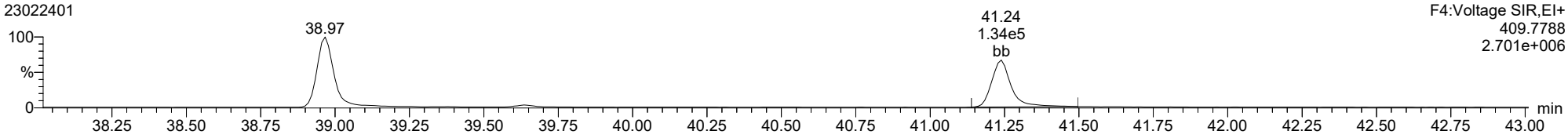

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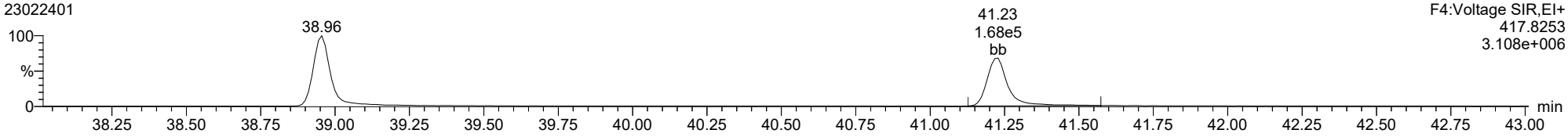

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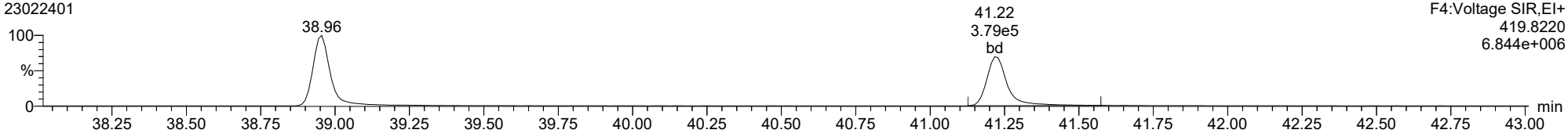

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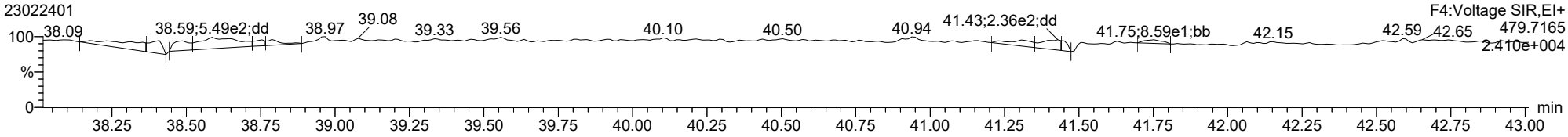

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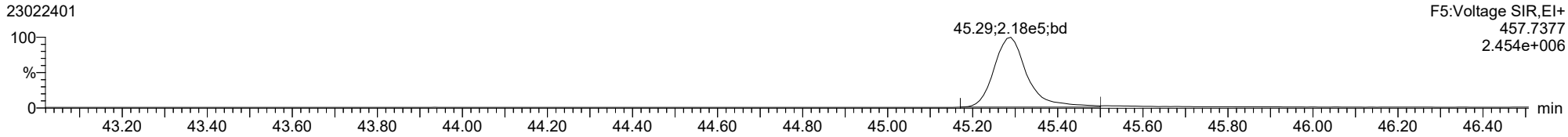

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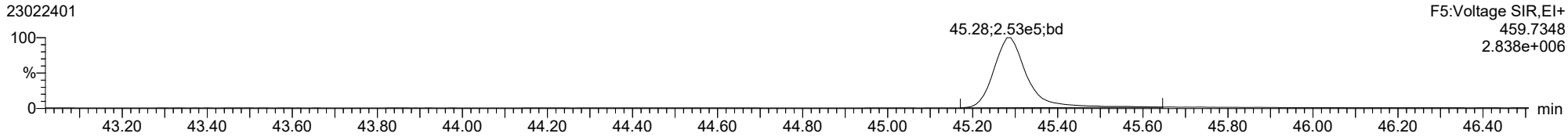

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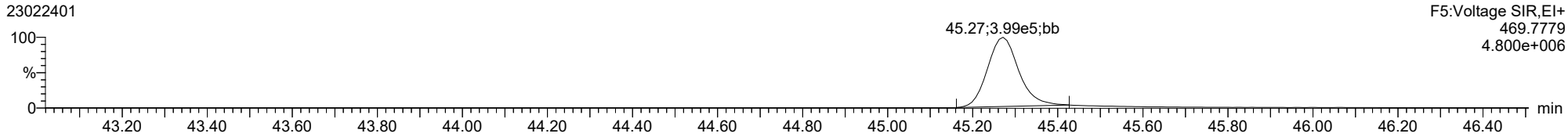

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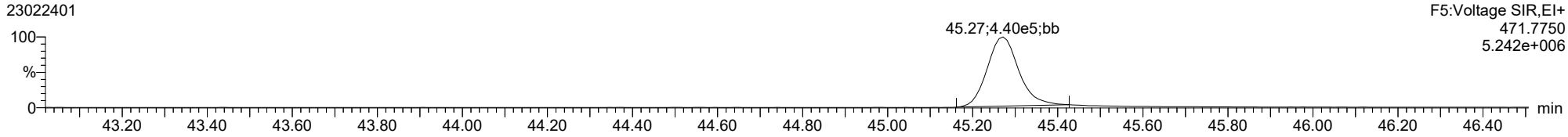

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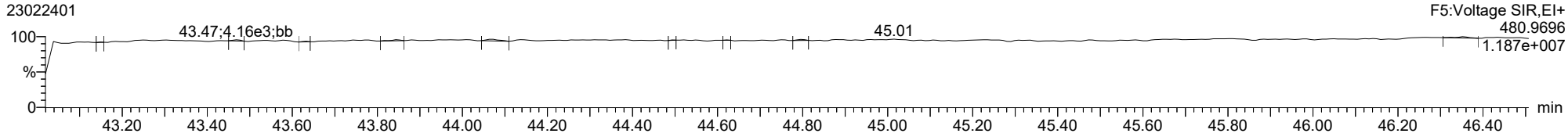

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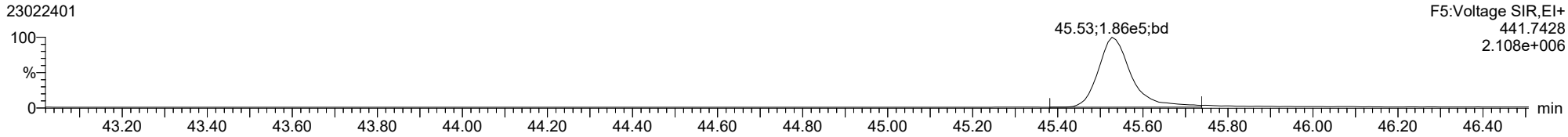

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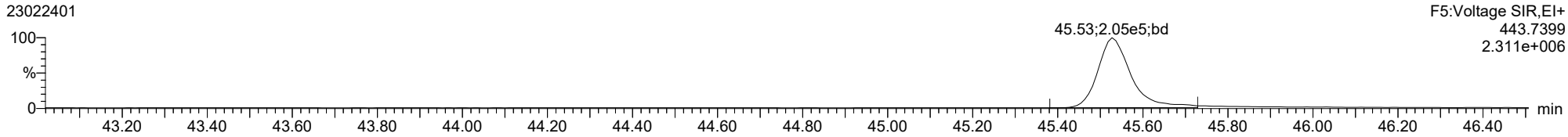

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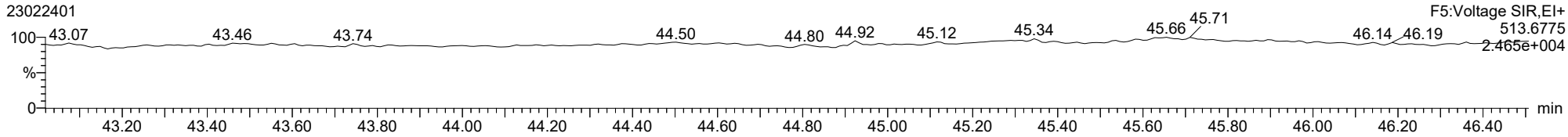

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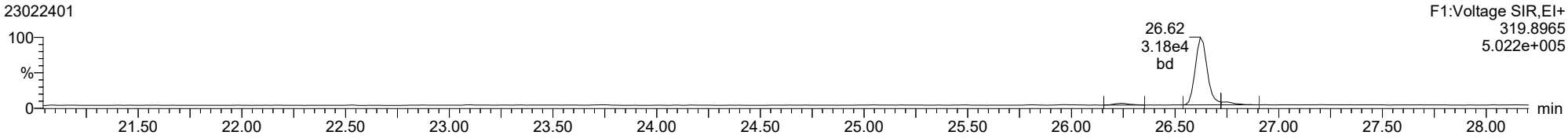
Total-tetradioxins



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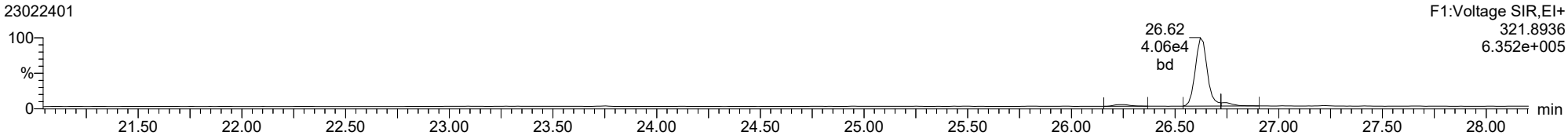

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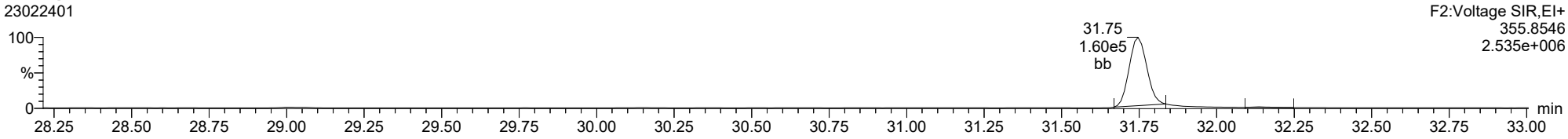
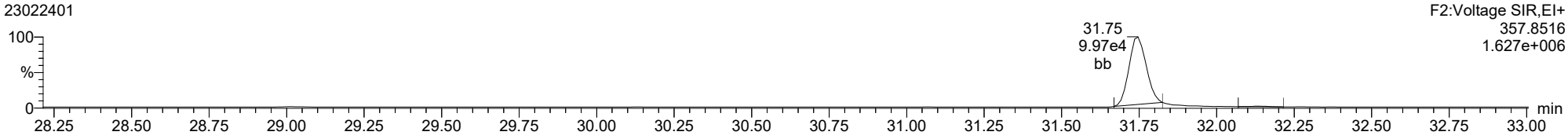
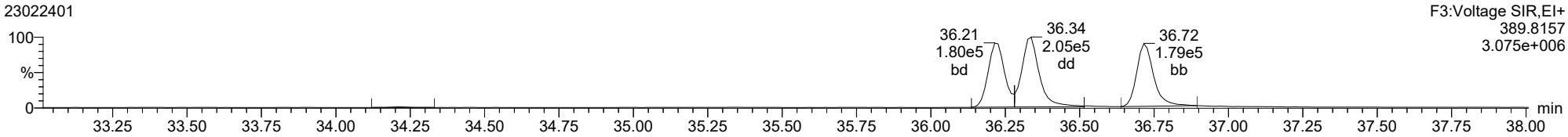


Total-pentadioxins

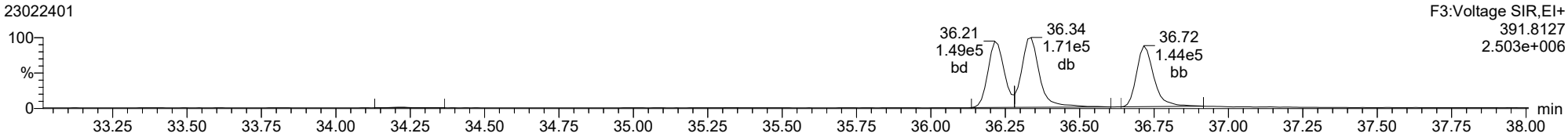


ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

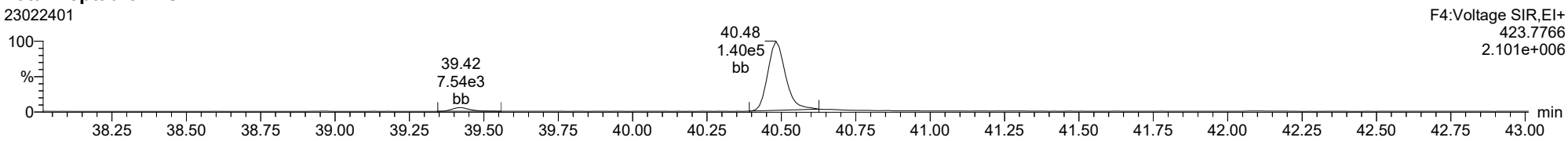
Total-hexadioxins



Total-hexadioxins



Total-heptadioxins



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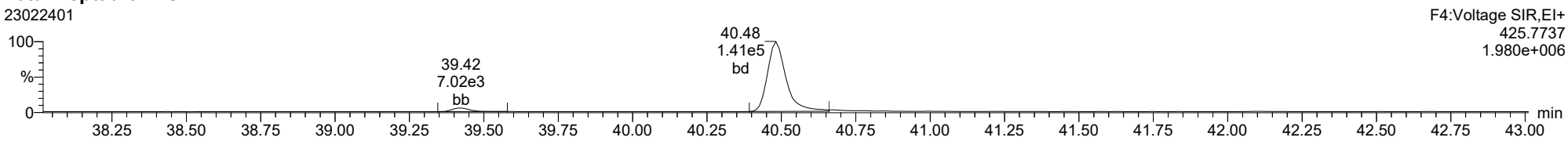
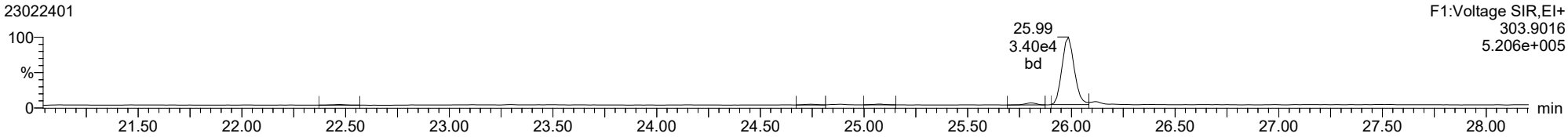
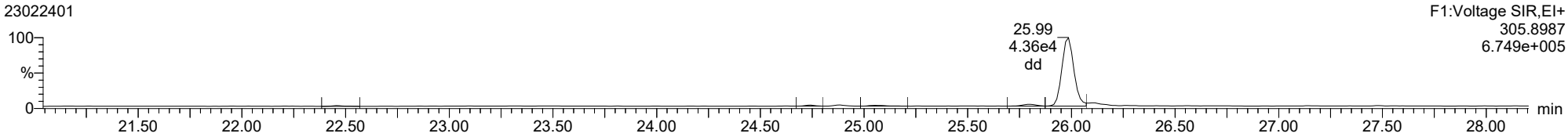


ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

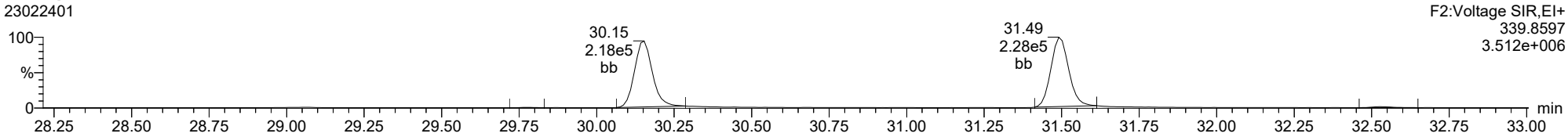
Total-tetrafurans



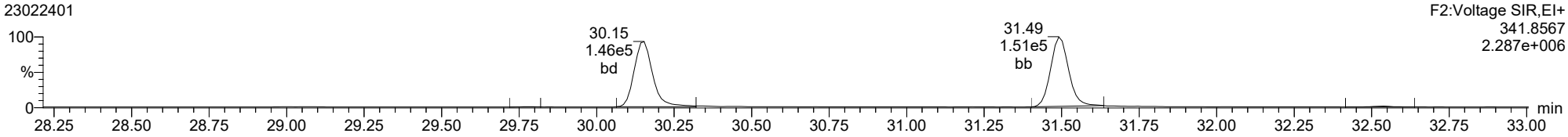
Total-tetrafurans



Total-pentafurans

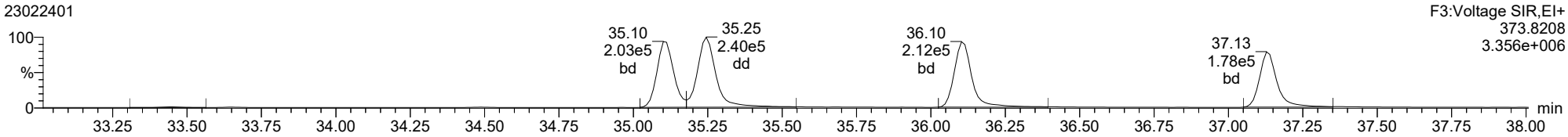


Total-pentafurans

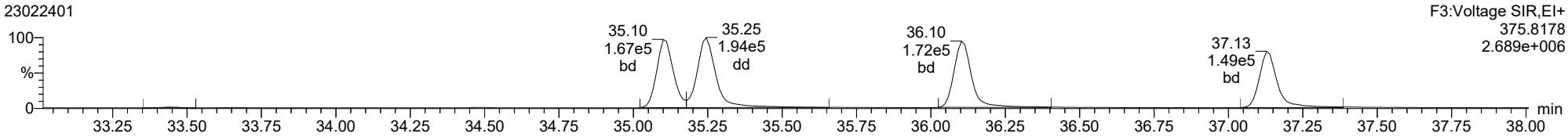


ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

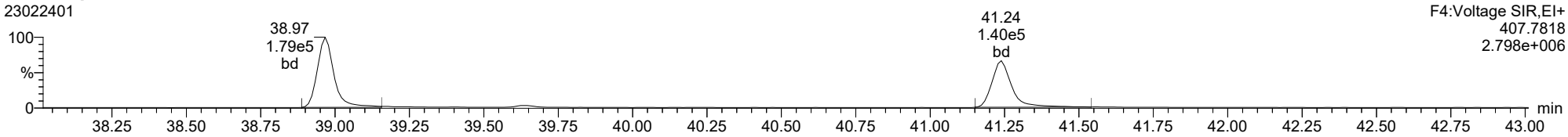
Total-hexafurans



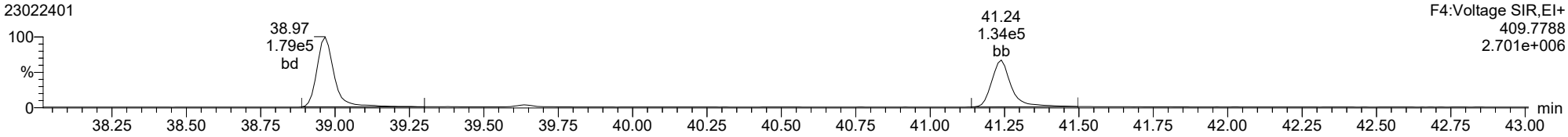
Total-hexafurans



Total-heptafurans



Total-heptafurans



Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0261-SRM1
Batch: BLA0261
Initial/Final: 10.04 g / 20 uL
Preparation: EPA 1613
Analyzed: 02/23/2023 14:14
Standard ID: K011479
Expires: 06/11/2023
Standard Lot#: PSRM0171
Description: Puget Sound reference-SRM

ANALYTE	TRUE (ng/kg wet)	FOUND (ng/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
2,3,7,8-TCDF	1.1100	0.771	0.148	0.996	J, B	69.5	50 - 150
2,3,7,8-TCDD	1.0500	0.707	0.149	0.996	J	67.3	50 - 150
1,2,3,7,8-PeCDF	1.2300	0.911	0.239	0.996	J	74.1	50 - 150
2,3,4,7,8-PeCDF	1.0700	0.732	0.219	0.996	EMPC, J	68.4	50 - 150
1,2,3,7,8-PeCDD	1.0800	1.06	0.169	0.996		98.5	50 - 150
1,2,3,4,7,8-HxCDF	3.0200	2.21	0.279	0.996	B	73.2	50 - 150
1,2,3,6,7,8-HxCDF	1.0900	0.783	0.199	0.996	J	71.8	50 - 150
2,3,4,6,7,8-HxCDF	1.8300	1.47	0.169	0.996		80.1	50 - 150
1,2,3,7,8,9-HxCDF	0.51100	0.543	0.189	0.996	J, B	106	50 - 150
1,2,3,4,7,8-HxCDD	1.5900	1.11	0.169	0.996		69.8	50 - 150
1,2,3,6,7,8-HxCDD	3.8800	2.73	0.179	0.996		70.3	50 - 150
1,2,3,7,8,9-HxCDD	3.0400	2.08	0.219	0.996	B	68.4	50 - 150
1,2,3,4,6,7,8-HpCDF	18.700	17.3	0.209	0.996		92.5	50 - 150
1,2,3,4,7,8,9-HpCDF	1.6300	1.16	0.239	0.996		71.3	50 - 150
1,2,3,4,6,7,8-HpCDD	90.600	79.5	0.558	2.49	B	87.8	50 - 150
OCDF	58.400	46.9	1.10	2.49		80.4	50 - 150
OCDD	811.00	746	4.58	9.96	B	92.0	50 - 150

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:10:37 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.986	1.000	1.490e3	2.065e3	0.876	0.721	0.770	2093	1354	2.18e4	3.10e4	10.4	22.9	NO	bd	dd	0.387
12378-PeCDF	30.165	1.001	2.707e3	1.831e3	0.845	1.478	1.550	2123	1895	3.98e4	2.71e4	18.7	14.3	NO	bb	bb	0.457
23478-PeCDF	31.513	1.001	2.644e3	1.319e3	0.911	2.004	1.550	2123	1895	3.70e4	2.39e4	17.4	12.6	YES	db	db	0.367
123478-HxCDF	35.123	1.001	7.421e3	5.888e3	1.182	1.260	1.240	1627	1194	1.13e5	9.40e4	69.5	78.8	NO	bd	dd	1.109
234678-HxCDF	36.114	1.000	4.864e3	3.968e3	1.229	1.226	1.240	1627	1194	5.85e4	4.65e4	35.9	39.0	NO	bb	bb	0.736
123678-HxCDF	35.256	1.001	2.952e3	2.478e3	1.248	1.191	1.240	1627	1194	4.11e4	3.23e4	25.2	27.0	NO	db	db	0.393
123789-HxCDF	37.117	1.000	1.769e3	1.416e3	1.187	1.249	1.240	1627	1194	2.56e4	1.72e4	15.7	14.4	NO	bb	bb	0.273
1234678-HpCDF	38.977	1.000	4.071e4	3.883e4	1.204	1.048	1.050	1731	1088	6.34e5	6.32e5	366.3	580.7	NO	bd	bd	8.680
1234789-HpCDF	41.261	1.000	2.355e3	2.143e3	1.165	1.099	1.050	1731	1088	3.69e4	3.34e4	21.3	30.7	NO	bb	bb	0.584
OCDF	45.555	1.006	7.644e4	8.880e4	1.186	0.861	0.890	1036	1654	8.76e5	9.84e5	846.1	595.0	NO	bd	bd	23.559
2378-TCDD	26.636	1.000	1.501e3	2.257e3	1.236	0.665	0.770	1306	909	2.16e4	3.72e4	16.5	40.9	NO	bd	bd	0.355
12378-PeCDD	31.747	1.000	2.205e3	1.575e3	1.087	1.400	1.550	1312	1071	2.70e4	1.95e4	20.6	18.2	NO	bb	bb	0.534
123478-HxCDD	36.237	1.000	3.070e3	2.414e3	0.987	1.272	1.240	1401	1631	5.59e4	4.15e4	39.9	25.5	NO	bd	bd	0.557
123678-HxCDD	36.359	1.001	8.648e3	7.042e3	1.021	1.228	1.240	1401	1631	1.37e5	1.12e5	97.7	68.7	NO	dd	dd	1.369
123789-HxCDD	36.738	1.011	6.151e3	4.756e3	0.985	1.293	1.240	1401	1631	1.01e5	8.07e4	72.0	49.5	NO	bd	bb	1.044
1234678-HpCDD	40.504	1.001	1.413e5	1.338e5	1.253	1.056	1.050	2820	2410	2.05e6	1.94e6	726.7	803.8	NO	bb	bb	39.934
OCDD	45.307	1.000	1.173e6	1.268e6	1.103	0.926	0.890	2573	3359	1.35e7	1.50e7	5232.3	4461.0	NO	bd	bb	374.389
13C-2378-TCDF	25.972	1.007	4.580e5	5.900e5	1.768	0.776	0.770	1680	1435	6.93e6	9.05e6	4123.1	6307.9	NO	bb	bb	85.579
13C-12378-PeCDF	30.142	1.168	7.145e5	4.607e5	1.527	1.551	1.550	2070	2113	1.03e7	6.70e6	4961.1	3171.3	NO	bd	bd	111.105
13C-23478-PeCDF	31.490	1.220	7.208e5	4.631e5	1.466	1.556	1.550	2070	2113	1.04e7	6.66e6	5029.2	3150.5	NO	bd	bd	116.572
13C-123478-HxCDF	35.100	0.956	3.404e5	6.750e5	1.054	0.504	0.510	2458	1812	5.27e6	1.05e7	2144.5	5804.1	NO	bd	bd	95.925
13C-123678-HxCDF	35.234	0.959	3.655e5	7.419e5	1.080	0.493	0.510	2458	1812	5.49e6	1.09e7	2231.6	6041.5	NO	db	db	102.070
13C-234678-HxCDF	36.103	0.983	3.336e5	6.435e5	1.014	0.518	0.510	2458	1812	5.22e6	1.01e7	2123.7	5546.8	NO	bb	bb	95.889
13C-123789-HxCDF	37.128	1.011	3.333e5	6.507e5	0.928	0.512	0.510	2458	1812	5.56e6	1.09e7	2263.9	6023.3	NO	bb	bb	105.563
13C-1234678-HpCDF	38.966	1.061	2.334e5	5.276e5	1.036	0.442	0.440	1680	2928	3.92e6	8.72e6	2335.0	2976.9	NO	bb	bb	73.118
13C-1234789-HpCDF	41.239	1.123	2.067e5	4.544e5	0.905	0.455	0.440	1680	2928	2.75e6	6.14e6	1639.3	2098.0	NO	bb	bb	72.721
13C-1234-TCDD	25.802	0.000	2.999e5	3.927e5	1.000	0.764	0.770	1699	3120	4.89e6	6.37e6	2878.0	2042.9	NO	bb	bb	100.000
13C-2378-TCDD	26.622	1.032	3.745e5	4.819e5	1.103	0.777	0.770	1699	3120	5.68e6	7.34e6	3341.1	2353.6	NO	bb	bb	112.107
13C-12378-PeCDD	31.747	1.230	4.031e5	2.484e5	0.914	1.623	1.550	878	851	5.52e6	3.39e6	6283.8	3983.9	NO	bb	bb	102.902
13C-123478-HxCDD	36.225	0.986	5.505e5	4.471e5	0.933	1.231	1.240	1963	1478	9.19e6	7.44e6	4680.6	5035.2	NO	bd	bd	106.441
13C-123678-HxCDD	36.337	0.989	6.187e5	5.038e5	0.965	1.228	1.240	1963	1478	9.17e6	7.60e6	4672.0	5141.8	NO	db	db	115.829
13C-1234678-HpCDD	40.481	1.102	2.864e5	2.635e5	0.782	1.087	1.050	1317	1343	4.22e6	3.94e6	3204.1	2935.1	NO	bb	bb	70.002
13C-OCDD	45.289	1.233	5.699e5	6.126e5	0.788	0.930	0.890	1142	2138	6.80e6	7.48e6	5957.0	3496.9	NO	bb	bb	149.333
13C-123789-HxCDD	36.727	0.000	5.514e5	4.532e5	1.000	1.217	1.240	1963	1478	9.26e6	7.44e6	4714.5	5036.2	NO	bb	bb	100.000
37CL-2378-TCDD	26.636	1.032	3.205e5		1.233			1103		4.82e6		4367.4			bb		37.513

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:10:37 Pacific Standard Time

ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.483	0.866	1.259e3	8.238e2	1.064	1.528	0.770	2093	1354	1.23e4	9.94e3	5.9	7.3	YES	bd	bd	0.187
1289-TCDF					0.858		0.770	2093	1354								
13468-PECDF					1.013		1.550	2347	750								
12389-PECDF					0.844		1.550	2123	1895								
123468-HXCDF	33.463	0.953	6.750e3	5.122e3	1.197	1.318	1.240	1627	1194	1.01e5	7.95e4	62.3	66.6	NO	bd	bb	0.977
1368-TCDD	23.754	0.892	1.536e3	2.057e3	1.084	0.747	0.770	1306	909	2.38e4	3.14e4	18.3	34.5	NO	bb	bb	0.387
1289-TCDD					0.975		0.770	1306	909								
12479-PECDD	29.062	0.915	3.327e3	2.164e3	1.837	1.538	1.550	1312	1071	3.36e4	2.36e4	25.6	22.0	NO	bb	bb	0.459
12389-PECDD					1.252		1.550	1312	1071								
124679-HXCDD	34.231	0.945	2.247e4	1.756e4	1.033	1.280	1.240	1401	1631	3.51e5	2.73e5	250.4	167.4	NO	bb	bb	3.885
1234679-HPCDD	39.434	0.974	2.236e5	2.006e5	1.286	1.115	1.050	2820	2410	3.37e6	3.15e6	1193.9	1305.9	NO	bd	bb	59.987
Total-tetrafurans			1.280e4		0.933			2093		1.92e5							3.128
Total-penta1			1.558e4					2347		2.21e5							2.460
Total-pentafurans			1.679e4		0.866			2123		2.47e5							2.704
Total-hexafurans			7.747e4		1.208			1627		1.14e6							11.365
Total-heptafurans			1.151e5		1.185			1731		1.76e6							26.272
Total-Furans			3.143e5		1.067			2093		4.44e6							69.531
Total-tetradioxins			4.588e3		1.099			1306		6.85e4							1.130
Total-pentadioxins			1.093e4		1.392			1312		1.37e5							2.000
Total-hexadioxins			7.391e4		1.007			1401		1.05e6							12.562
Total-heptadioxins			3.649e5		1.269			2820		5.42e6							99.921
Total-Dioxins			1.628e6		1.165			1306		2.01e7							490.003
Total-TEQ			1.942e6					1306		2.46e7							559.534
FUNCTION1 PFK			6.838e7					464327		6.47e7							
FUNCTION2 PFK			1.538e6					357943		5.72e6							0.000
FUNCTION3 PFK			3.739e6					407640		1.55e7							0.000
FUNCTION4 PFK			1.797e7					268547		1.59e7							
FUNCTION5 PFK			0.000e0					158110		0.00e0							
FUNCTION1 HXCD...			8.340e3					1780		9.06e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			3.830e2					799		9.72e3							0.000
FUNCTION3 OCDPE			0.000e0					622		0.00e0							
FUNCTION4 NCDPE			1.835e4					811		2.96e5							0.000
FUNCTION5 DCDPE			0.000e0					621		0.00e0							

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	27.61	6.306e2	7.524e2	0.933	0.84	0.77	4.9	YES	NO	bb	bb	0.141
2	Total-tetrafurans	26.21	1.302e3	1.823e3	0.933	0.71	0.77	7.7	YES	NO	db	db	0.320
3	Total-tetrafurans	26.13	1.116e3	1.581e3	0.933	0.71	0.77	8.2	YES	NO	dd	dd	0.276
4	2378-TCDF	25.99	1.490e3	2.065e3	0.876	0.72	0.77	10.4	YES	NO	bd	dd	0.387
5	Total-tetrafurans	25.80	6.956e2	9.698e2	0.933	0.72	0.77	5.6	YES	NO	db	dd	0.170
6	Total-tetrafurans	25.31	5.781e2	7.095e2	0.933	0.81	0.77	3.5	YES	NO	bb	db	0.132
7	Total-tetrafurans	25.08	2.256e3	3.073e3	0.933	0.73	0.77	17.2	YES	NO	bb	dd	0.545
8	Total-tetrafurans	24.88	1.248e3	1.883e3	0.933	0.66	0.77	9.2	YES	NO	db	dd	0.320
9	Total-tetrafurans	24.74	3.481e3	4.694e3	0.933	0.74	0.77	25.0	YES	NO	dd	dd	0.836

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-penta1	27.41	1.558e4	1.093e4		1.42	1.55	94.3	YES	NO	bd	bd	2.460

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	28.73	2.124e3	1.248e3	0.866	1.70	1.55	13.0	YES	NO	dd	dd	0.330
2	Total-pentafurans	28.44	1.100e3	7.083e2	0.866	1.55	1.55	8.4	YES	NO	bb	bb	0.177
3	Total-pentafurans	31.36	1.602e3	1.199e3	0.866	1.34	1.55	12.5	YES	NO	dd	dd	0.274
4	12378-PeCDF	30.16	2.707e3	1.831e3	0.845	1.48	1.55	18.7	YES	NO	bb	bb	0.457
5	Total-pentafurans	29.10	6.068e3	3.824e3	0.866	1.59	1.55	40.6	YES	NO	db	db	0.968
6	Total-pentafurans	29.02	3.187e3	1.903e3	0.866	1.68	1.55	23.1	YES	NO	dd	dd	0.498

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HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.12	1.769e3	1.416e3	1.187	1.25	1.24	15.7	YES	NO	bb	bb	0.273
2	234678-HxCDF	36.11	4.864e3	3.968e3	1.229	1.23	1.24	35.9	YES	NO	bb	bb	0.736
3	123678-HxCDF	35.26	2.952e3	2.478e3	1.248	1.19	1.24	25.2	YES	NO	db	db	0.393
4	123478-HxCDF	35.12	7.421e3	5.888e3	1.182	1.26	1.24	69.5	YES	NO	bd	dd	1.109
5	Total-hexafurans	34.97	1.026e3	8.770e2	1.208	1.17	1.24	10.0	YES	NO	bb	bd	0.154
6	Total-hexafurans	34.50	3.000e4	2.423e4	1.208	1.24	1.24	282.4	YES	NO	bb	bb	4.395
7	Total-hexafurans	33.67	2.268e4	1.839e4	1.208	1.23	1.24	199.1	YES	NO	db	bb	3.329
8	123468-HXCDF	33.46	6.750e3	5.122e3	1.197	1.32	1.24	62.3	YES	NO	bd	bb	0.977

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.98	4.071e4	3.883e4	1.204	1.05	1.05	366.3	YES	NO	bd	bd	8.680
2	1234789-HpCDF	41.26	2.355e3	2.143e3	1.165	1.10	1.05	21.3	YES	NO	bb	bb	0.584
3	Total-heptafurans	39.96	2.381e2	2.392e2	1.185	1.00	1.05	3.1	YES	NO	db	db	0.057
4	Total-heptafurans	39.65	7.177e4	7.103e4	1.185	1.01	1.05	628.7	YES	NO	bd	bd	16.952

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-Furans	21.59	1.946e2	2.729e2	1.067	0.71	0.77	1.5	NO	NO	db	bb	0.042
2	Total-tetrafurans	27.61	6.306e2	7.524e2	0.933	0.84	0.77	4.9	YES	NO	bb	bb	0.141
3	Total-tetrafurans	26.21	1.302e3	1.823e3	0.933	0.71	0.77	7.7	YES	NO	db	db	0.320
4	Total-tetrafurans	26.13	1.116e3	1.581e3	0.933	0.71	0.77	8.2	YES	NO	dd	dd	0.276
5	2378-TCDF	25.99	1.490e3	2.065e3	0.876	0.72	0.77	10.4	YES	NO	bd	dd	0.387
6	Total-tetrafurans	25.80	6.956e2	9.698e2	0.933	0.72	0.77	5.6	YES	NO	db	dd	0.170
7	Total-tetrafurans	25.31	5.781e2	7.095e2	0.933	0.81	0.77	3.5	YES	NO	bb	db	0.132
8	Total-tetrafurans	25.08	2.256e3	3.073e3	0.933	0.73	0.77	17.2	YES	NO	bb	dd	0.545
9	Total-tetrafurans	24.88	1.248e3	1.883e3	0.933	0.66	0.77	9.2	YES	NO	db	dd	0.320
10	Total-tetrafurans	24.74	3.481e3	4.694e3	0.933	0.74	0.77	25.0	YES	NO	dd	dd	0.836
11	Total-pentafurans	28.73	2.124e3	1.248e3	0.866	1.70	1.55	13.0	YES	NO	dd	dd	0.330
12	Total-pentafurans	28.44	1.100e3	7.083e2	0.866	1.55	1.55	8.4	YES	NO	bb	bb	0.177
13	Total-pentafurans	31.36	1.602e3	1.199e3	0.866	1.34	1.55	12.5	YES	NO	dd	dd	0.274
14	12378-PeCDF	30.16	2.707e3	1.831e3	0.845	1.48	1.55	18.7	YES	NO	bb	bb	0.457
15	Total-pentafurans	29.10	6.068e3	3.824e3	0.866	1.59	1.55	40.6	YES	NO	db	db	0.968
16	Total-pentafurans	29.02	3.187e3	1.903e3	0.866	1.68	1.55	23.1	YES	NO	dd	dd	0.498
17	123789-HxCDF	37.12	1.769e3	1.416e3	1.187	1.25	1.24	15.7	YES	NO	bb	bb	0.273
18	234678-HxCDF	36.11	4.864e3	3.968e3	1.229	1.23	1.24	35.9	YES	NO	bb	bb	0.736
19	123678-HxCDF	35.26	2.952e3	2.478e3	1.248	1.19	1.24	25.2	YES	NO	db	db	0.393
20	123478-HxCDF	35.12	7.421e3	5.888e3	1.182	1.26	1.24	69.5	YES	NO	bd	dd	1.109
21	Total-hexafurans	34.97	1.026e3	8.770e2	1.208	1.17	1.24	10.0	YES	NO	bb	bd	0.154
22	Total-hexafurans	34.50	3.000e4	2.423e4	1.208	1.24	1.24	282.4	YES	NO	bb	bb	4.395
23	Total-hexafurans	33.67	2.268e4	1.839e4	1.208	1.23	1.24	199.1	YES	NO	db	bb	3.329
24	123468-HXCDF	33.46	6.750e3	5.122e3	1.197	1.32	1.24	62.3	YES	NO	bd	bb	0.977
25	1234678-HpCDF	38.98	4.071e4	3.883e4	1.204	1.05	1.05	366.3	YES	NO	bd	bd	8.680
26	1234789-HpCDF	41.26	2.355e3	2.143e3	1.165	1.10	1.05	21.3	YES	NO	bb	bb	0.584
27	Total-heptafurans	39.96	2.381e2	2.392e2	1.185	1.00	1.05	3.1	YES	NO	db	db	0.057
28	Total-heptafurans	39.65	7.177e4	7.103e4	1.185	1.01	1.05	628.7	YES	NO	bd	bd	16.952
29	OCDF	45.55	7.644e4	8.880e4	1.186	0.86	0.89	846.1	YES	NO	bd	bd	23.559
30	Total-penta1	27.41	1.558e4	1.093e4		1.42	1.55	94.3	YES	NO	bd	bd	2.460

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TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.64	1.501e3	2.257e3	1.236	0.67	0.77	16.5	YES	NO	bd	bd	0.355
2	Total-tetradioxins	26.25	5.008e2	5.759e2	1.099	0.87	0.77	4.7	YES	NO	db	bd	0.114
3	Total-tetradioxins	24.97	2.859e2	4.170e2	1.099	0.69	0.77	3.5	YES	NO	bb	bb	0.075
4	Total-tetradioxins	24.02	7.640e2	1.108e3	1.099	0.69	0.77	9.5	YES	NO	bb	bd	0.199
5	1368-TCDD	23.75	1.536e3	2.057e3	1.084	0.75	0.77	18.3	YES	NO	bb	bb	0.387

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12479-PECDD	29.06	3.327e3	2.164e3	1.837	1.54	1.55	25.6	YES	NO	bb	bb	0.459
2	12378-PeCDD	31.75	2.205e3	1.575e3	1.087	1.40	1.55	20.6	YES	NO	bb	bb	0.534
3	Total-pentadioxins	30.68	1.313e3	9.597e2	1.392	1.37	1.55	12.5	YES	NO	db	db	0.251
4	Total-pentadioxins	30.50	1.134e3	8.247e2	1.392	1.37	1.55	13.0	YES	NO	dd	dd	0.216
5	Total-pentadioxins	30.38	1.960e3	1.274e3	1.392	1.54	1.55	21.2	YES	NO	bd	bd	0.357
6	Total-pentadioxins	29.54	9.906e2	6.870e2	1.392	1.44	1.55	11.5	YES	NO	bb	bb	0.185

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123478-HxCDD	36.24	3.070e3	2.414e3	0.987	1.27	1.24	39.9	YES	NO	bd	bd	0.557
2	Total-hexadioxins	35.46	3.052e3	2.219e3	1.007	1.38	1.24	34.2	YES	NO	dd	db	0.494
3	Total-hexadioxins	35.36	2.525e4	2.051e4	1.007	1.23	1.24	191.1	YES	NO	bd	bd	4.289
4	Total-hexadioxins	35.00	3.989e3	3.436e3	1.007	1.16	1.24	46.6	YES	NO	bb	bb	0.696
5	124679-HXCDD	34.23	2.247e4	1.756e4	1.033	1.28	1.24	250.4	YES	NO	bb	bb	3.885
6	123789-HxCDD	36.74	6.151e3	4.756e3	0.985	1.29	1.24	72.0	YES	NO	bd	bb	1.044
7	Total-hexadioxins	36.52	1.278e3	1.160e3	1.007	1.10	1.24	16.9	YES	NO	db	db	0.228
8	123678-HxCDD	36.36	8.648e3	7.042e3	1.021	1.23	1.24	97.7	YES	NO	dd	dd	1.369

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.50	1.413e5	1.338e5	1.253	1.06	1.05	726.7	YES	NO	bb	bb	39.934
2	1234679-HPCDD	39.43	2.236e5	2.006e5	1.286	1.11	1.05	1193.9	YES	NO	bd	bb	59.987

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.64	1.501e3	2.257e3	1.236	0.67	0.77	16.5	YES	NO	bd	bd	0.355
2	Total-tetradioxins	26.25	5.008e2	5.759e2	1.099	0.87	0.77	4.7	YES	NO	db	bd	0.114
3	Total-tetradioxins	24.97	2.859e2	4.170e2	1.099	0.69	0.77	3.5	YES	NO	bb	bb	0.075
4	Total-tetradioxins	24.02	7.640e2	1.108e3	1.099	0.69	0.77	9.5	YES	NO	bb	bd	0.199
5	1368-TCDD	23.75	1.536e3	2.057e3	1.084	0.75	0.77	18.3	YES	NO	bb	bb	0.387
6	12479-PECDD	29.06	3.327e3	2.164e3	1.837	1.54	1.55	25.6	YES	NO	bb	bb	0.459
7	12378-PeCDD	31.75	2.205e3	1.575e3	1.087	1.40	1.55	20.6	YES	NO	bb	bb	0.534
8	Total-pentadioxins	30.68	1.313e3	9.597e2	1.392	1.37	1.55	12.5	YES	NO	db	db	0.251
9	Total-pentadioxins	30.50	1.134e3	8.247e2	1.392	1.37	1.55	13.0	YES	NO	dd	dd	0.216
10	Total-pentadioxins	30.38	1.960e3	1.274e3	1.392	1.54	1.55	21.2	YES	NO	bd	bd	0.357
11	Total-pentadioxins	29.54	9.906e2	6.870e2	1.392	1.44	1.55	11.5	YES	NO	bb	bb	0.185
12	123478-HxCDD	36.24	3.070e3	2.414e3	0.987	1.27	1.24	39.9	YES	NO	bd	bd	0.557
13	Total-hexadioxins	35.46	3.052e3	2.219e3	1.007	1.38	1.24	34.2	YES	NO	dd	db	0.494
14	Total-hexadioxins	35.36	2.525e4	2.051e4	1.007	1.23	1.24	191.1	YES	NO	bd	bd	4.289
15	Total-hexadioxins	35.00	3.989e3	3.436e3	1.007	1.16	1.24	46.6	YES	NO	bb	bb	0.696
16	124679-HXCDD	34.23	2.247e4	1.756e4	1.033	1.28	1.24	250.4	YES	NO	bb	bb	3.885
17	123789-HxCDD	36.74	6.151e3	4.756e3	0.985	1.29	1.24	72.0	YES	NO	bd	bb	1.044
18	Total-hexadioxins	36.52	1.278e3	1.160e3	1.007	1.10	1.24	16.9	YES	NO	db	db	0.228
19	123678-HxCDD	36.36	8.648e3	7.042e3	1.021	1.23	1.24	97.7	YES	NO	dd	dd	1.369
20	1234678-HpCDD	40.50	1.413e5	1.338e5	1.253	1.06	1.05	726.7	YES	NO	bb	bb	39.934
21	1234679-HPCDD	39.43	2.236e5	2.006e5	1.286	1.11	1.05	1193.9	YES	NO	bd	bb	59.987
22	OCDD	45.31	1.173e6	1.268e6	1.103	0.93	0.89	5232.3	YES	NO	bd	bb	374.389

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-Furans	21.59	1.946e2	2.729e2	1.067	0.71	0.77	1.5	NO	NO	db	bb	0.042
2	Total-tetrafurans	27.61	6.306e2	7.524e2	0.933	0.84	0.77	4.9	YES	NO	bb	bb	0.141
3	Total-tetrafurans	26.21	1.302e3	1.823e3	0.933	0.71	0.77	7.7	YES	NO	db	db	0.320
4	Total-tetrafurans	26.13	1.116e3	1.581e3	0.933	0.71	0.77	8.2	YES	NO	dd	dd	0.276
5	2378-TCDF	25.99	1.490e3	2.065e3	0.876	0.72	0.77	10.4	YES	NO	bd	dd	0.387
6	Total-tetrafurans	25.80	6.956e2	9.698e2	0.933	0.72	0.77	5.6	YES	NO	db	dd	0.170
7	Total-tetrafurans	25.31	5.781e2	7.095e2	0.933	0.81	0.77	3.5	YES	NO	bb	db	0.132
8	Total-tetrafurans	25.08	2.256e3	3.073e3	0.933	0.73	0.77	17.2	YES	NO	bb	dd	0.545
9	Total-tetrafurans	24.88	1.248e3	1.883e3	0.933	0.66	0.77	9.2	YES	NO	db	dd	0.320
10	Total-tetrafurans	24.74	3.481e3	4.694e3	0.933	0.74	0.77	25.0	YES	NO	dd	dd	0.836
11	Total-pentafurans	28.73	2.124e3	1.248e3	0.866	1.70	1.55	13.0	YES	NO	dd	dd	0.330
12	Total-pentafurans	28.44	1.100e3	7.083e2	0.866	1.55	1.55	8.4	YES	NO	bb	bb	0.177
13	Total-pentafurans	31.36	1.602e3	1.199e3	0.866	1.34	1.55	12.5	YES	NO	dd	dd	0.274
14	12378-PeCDF	30.16	2.707e3	1.831e3	0.845	1.48	1.55	18.7	YES	NO	bb	bb	0.457
15	Total-pentafurans	29.10	6.068e3	3.824e3	0.866	1.59	1.55	40.6	YES	NO	db	db	0.968
16	Total-pentafurans	29.02	3.187e3	1.903e3	0.866	1.68	1.55	23.1	YES	NO	dd	dd	0.498
17	123789-HxCDF	37.12	1.769e3	1.416e3	1.187	1.25	1.24	15.7	YES	NO	bb	bb	0.273
18	234678-HxCDF	36.11	4.864e3	3.968e3	1.229	1.23	1.24	35.9	YES	NO	bb	bb	0.736
19	123678-HxCDF	35.26	2.952e3	2.478e3	1.248	1.19	1.24	25.2	YES	NO	db	db	0.393
20	123478-HxCDF	35.12	7.421e3	5.888e3	1.182	1.26	1.24	69.5	YES	NO	bd	dd	1.109
21	Total-hexafurans	34.97	1.026e3	8.770e2	1.208	1.17	1.24	10.0	YES	NO	bb	bd	0.154
22	Total-hexafurans	34.50	3.000e4	2.423e4	1.208	1.24	1.24	282.4	YES	NO	bb	bb	4.395
23	Total-hexafurans	33.67	2.268e4	1.839e4	1.208	1.23	1.24	199.1	YES	NO	db	bb	3.329
24	123468-HXCDF	33.46	6.750e3	5.122e3	1.197	1.32	1.24	62.3	YES	NO	bd	bb	0.977
25	1234678-HpCDF	38.98	4.071e4	3.883e4	1.204	1.05	1.05	366.3	YES	NO	bd	bd	8.680
26	1234789-HpCDF	41.26	2.355e3	2.143e3	1.165	1.10	1.05	21.3	YES	NO	bb	bb	0.584
27	Total-heptafurans	39.96	2.381e2	2.392e2	1.185	1.00	1.05	3.1	YES	NO	db	db	0.057
28	Total-heptafurans	39.65	7.177e4	7.103e4	1.185	1.01	1.05	628.7	YES	NO	bd	bd	16.952
29	OCDF	45.55	7.644e4	8.880e4	1.186	0.86	0.89	846.1	YES	NO	bd	bd	23.559
30	Total-penta1	27.41	1.558e4	1.093e4		1.42	1.55	94.3	YES	NO	bd	bd	2.460
31	2378-TCDD	26.64	1.501e3	2.257e3	1.236	0.67	0.77	16.5	YES	NO	bd	bd	0.355
32	Total-tetradioxins	26.25	5.008e2	5.759e2	1.099	0.87	0.77	4.7	YES	NO	db	bd	0.114
33	Total-tetradioxins	24.97	2.859e2	4.170e2	1.099	0.69	0.77	3.5	YES	NO	bb	bb	0.075
34	Total-tetradioxins	24.02	7.640e2	1.108e3	1.099	0.69	0.77	9.5	YES	NO	bb	bd	0.199
35	1368-TCDD	23.75	1.536e3	2.057e3	1.084	0.75	0.77	18.3	YES	NO	bb	bb	0.387
36	12479-PECDD	29.06	3.327e3	2.164e3	1.837	1.54	1.55	25.6	YES	NO	bb	bb	0.459
37	12378-PeCDD	31.75	2.205e3	1.575e3	1.087	1.40	1.55	20.6	YES	NO	bb	bb	0.534

ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	Total-pentadioxins	30.68	1.313e3	9.597e2	1.392	1.37	1.55	12.5	YES	NO	db	db	0.251
39	Total-pentadioxins	30.50	1.134e3	8.247e2	1.392	1.37	1.55	13.0	YES	NO	dd	dd	0.216
40	Total-pentadioxins	30.38	1.960e3	1.274e3	1.392	1.54	1.55	21.2	YES	NO	bd	bd	0.357
41	Total-pentadioxins	29.54	9.906e2	6.870e2	1.392	1.44	1.55	11.5	YES	NO	bb	bb	0.185
42	123478-HxCDD	36.24	3.070e3	2.414e3	0.987	1.27	1.24	39.9	YES	NO	bd	bd	0.557
43	Total-hexadioxins	35.46	3.052e3	2.219e3	1.007	1.38	1.24	34.2	YES	NO	dd	db	0.494
44	Total-hexadioxins	35.36	2.525e4	2.051e4	1.007	1.23	1.24	191.1	YES	NO	bd	bd	4.289
45	Total-hexadioxins	35.00	3.989e3	3.436e3	1.007	1.16	1.24	46.6	YES	NO	bb	bb	0.696
46	124679-HXCDD	34.23	2.247e4	1.756e4	1.033	1.28	1.24	250.4	YES	NO	bb	bb	3.885
47	123789-HxCDD	36.74	6.151e3	4.756e3	0.985	1.29	1.24	72.0	YES	NO	bd	bb	1.044
48	Total-hexadioxins	36.52	1.278e3	1.160e3	1.007	1.10	1.24	16.9	YES	NO	db	db	0.228
49	123678-HxCDD	36.36	8.648e3	7.042e3	1.021	1.23	1.24	97.7	YES	NO	dd	dd	1.369
50	1234678-HpCDD	40.50	1.413e5	1.338e5	1.253	1.06	1.05	726.7	YES	NO	bb	bb	39.934
51	1234679-HPCDD	39.43	2.236e5	2.006e5	1.286	1.11	1.05	1193.9	YES	NO	bd	bb	59.987
52	OCDD	45.31	1.173e6	1.268e6	1.103	0.93	0.89	5232.3	YES	NO	bd	bb	374.389

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	28.13	3.105e5					2.6	NO		bb		
2	FUNCTION1 PFK	27.48	3.340e6					8.4	YES		bb		
3	FUNCTION1 PFK	23.92	1.084e7					30.4	YES		db		
4	FUNCTION1 PFK	23.39	1.424e7					41.0	YES		dd		
5	FUNCTION1 PFK	21.31	3.965e7					57.1	YES		bd		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.77	3.768e5					3.7	YES		bb		0.000
2	FUNCTION2 PFK	29.43	1.161e6					12.2	YES		bb		0.000

ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	37.70	3.007e4					2.6	NO		bb		0.000
2	FUNCTION3 PFK	37.56	3.366e5					7.4	YES		db		0.000
3	FUNCTION3 PFK	37.46	1.225e5					7.2	YES		bd		0.000
4	FUNCTION3 PFK	37.31	5.733e5					2.9	NO		bb		0.000
5	FUNCTION3 PFK	36.77	2.343e6					11.6	YES		bb		0.000
6	FUNCTION3 PFK	36.04	3.296e5					5.2	YES		bb		0.000
7	FUNCTION3 PFK	33.15	4.206e3					0.9	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.44	1.797e7					59.1	YES		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	23.02	5.172e2					6.9	YES		db		0.000
2	FUNCTION1 HXCD...	22.96	2.351e3					6.6	YES		dd		0.000
3	FUNCTION1 HXCD...	22.61	8.690e1					1.3	NO		bd		0.000
4	FUNCTION1 HXCD...	22.40	7.817e1					1.1	NO		bb		0.000
5	FUNCTION1 HXCD...	22.13	1.367e2					1.5	NO		bb		0.000
6	FUNCTION1 HXCD...	27.75	1.083e2					1.0	NO		bb		0.000
7	FUNCTION1 HXCD...	26.37	1.187e2					1.2	NO		bb		0.000
8	FUNCTION1 HXCD...	26.16	2.548e3					22.5	YES		bb		0.000
9	FUNCTION1 HXCD...	25.08	7.774e1					1.0	NO		bb		0.000
10	FUNCTION1 HXCD...	23.99	2.007e2					1.9	NO		bb		0.000
11	FUNCTION1 HXCD...	23.51	1.225e2					1.6	NO		db		0.000
12	FUNCTION1 HXCD...	23.46	2.764e2					1.7	NO		dd		0.000
13	FUNCTION1 HXCD...	23.33	1.718e3					2.6	NO		bd		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.67	1.012e2					1.8	NO		bb		0.000
2	FUNCTION2 HPCD...	32.43	1.279e2					5.2	YES		bb		0.000
3	FUNCTION2 HPCD...	29.77	7.146e1					2.7	NO		bb		0.000
4	FUNCTION2 HPCD...	29.37	8.240e1					2.4	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.63	1.792e4					354.2	YES		bd		0.000
2	FUNCTION4 NCDPE	38.73	4.339e2					11.3	YES		db		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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Printed: Friday, February 24, 2023 15:10:37 Pacific Standard Time

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ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

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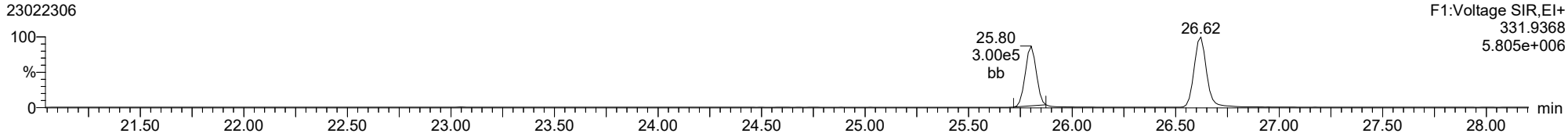

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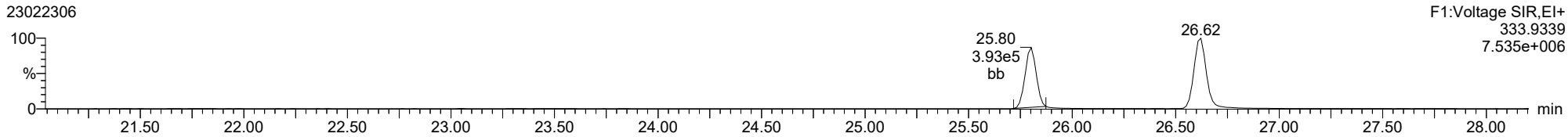

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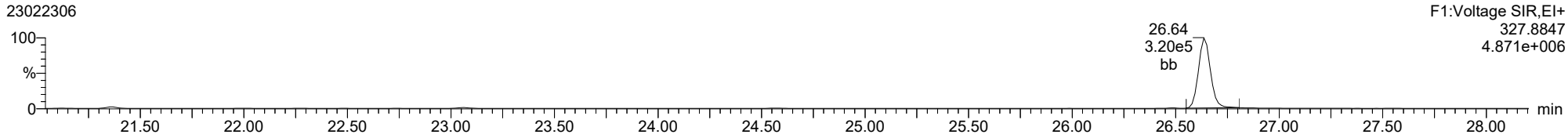

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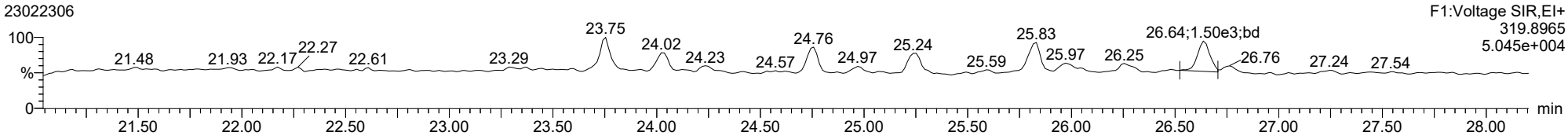

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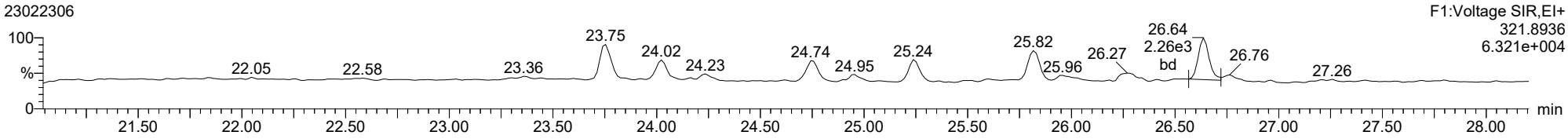

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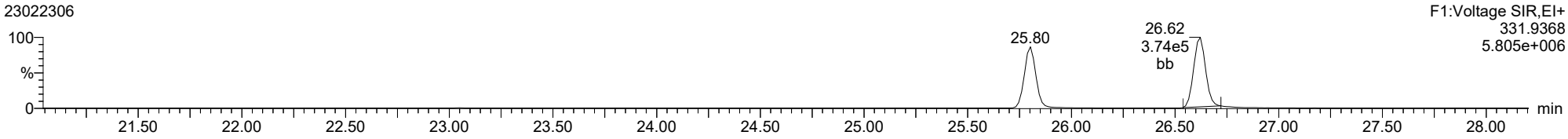

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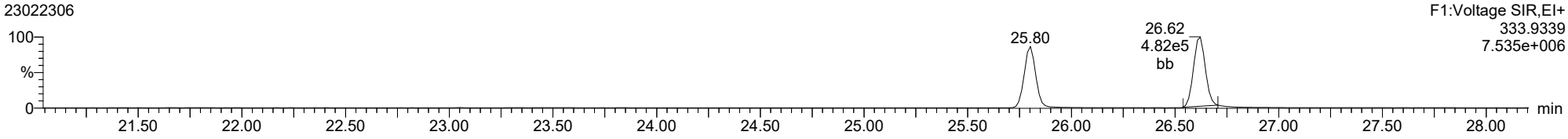

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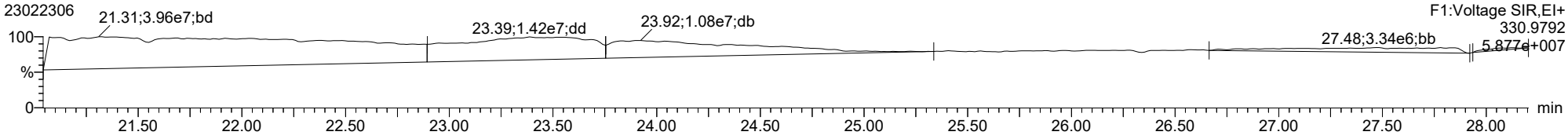

ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

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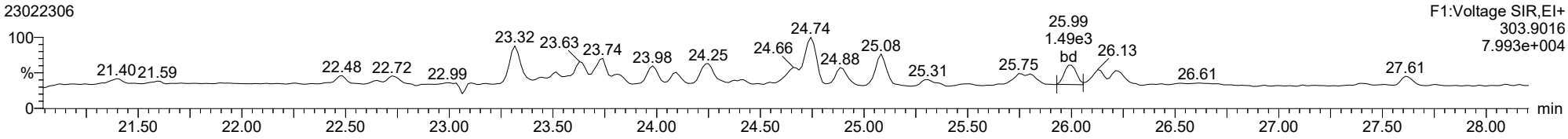

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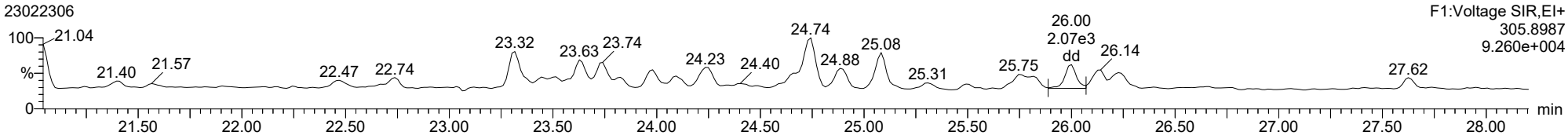

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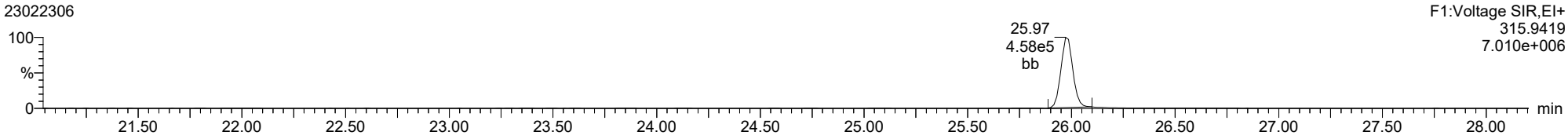

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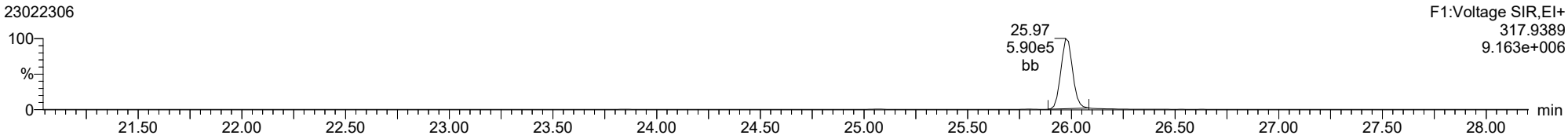
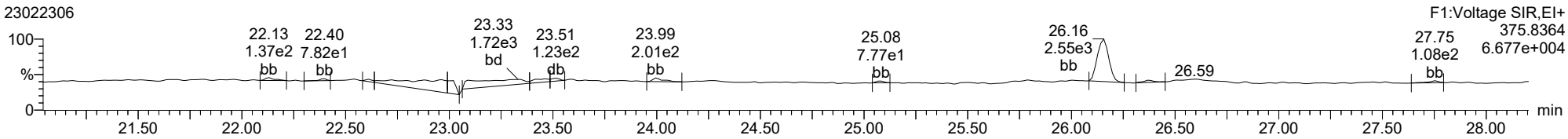


FUNCTION1 HXCDPE



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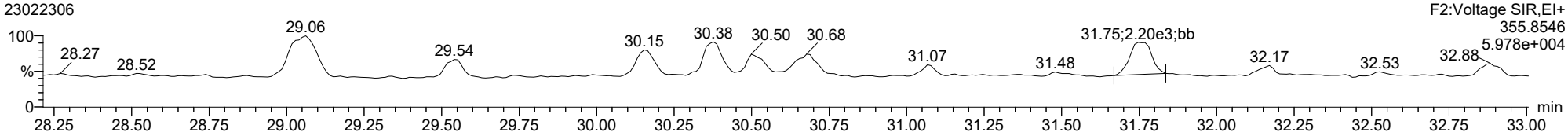
12378-PeCDD



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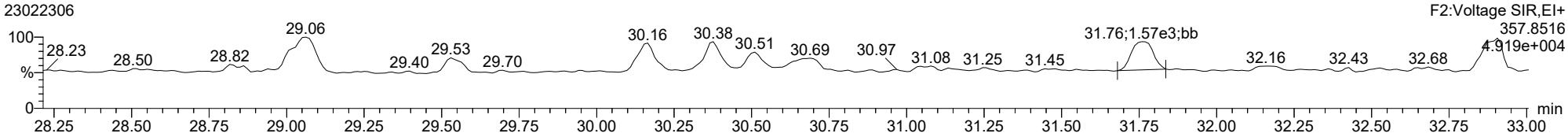

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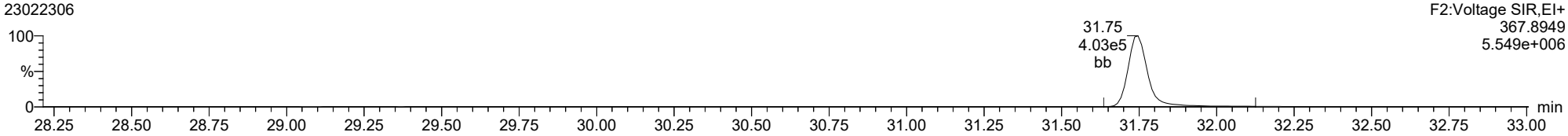

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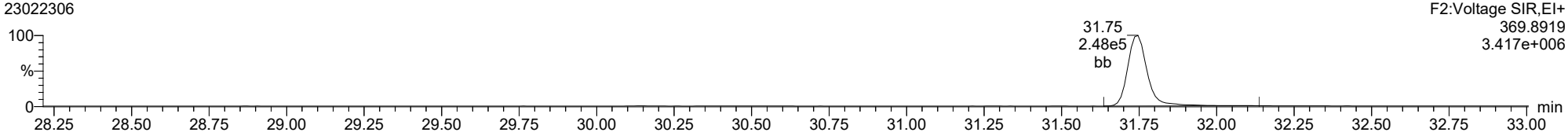
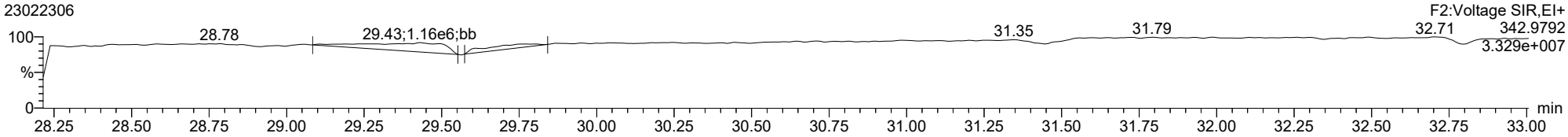


FUNCTION2 PFK



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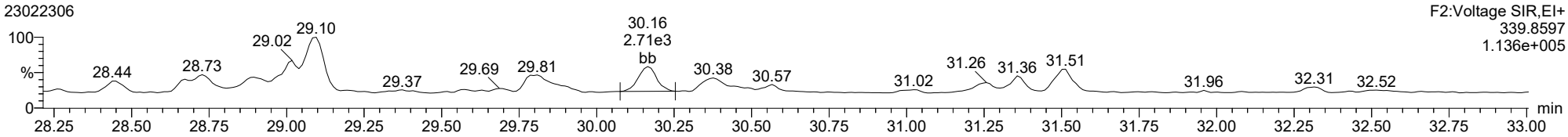
12378-PeCDF



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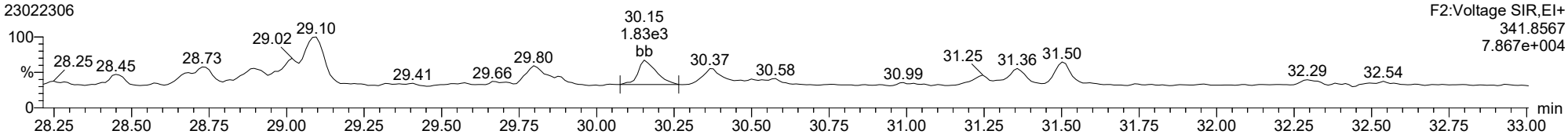

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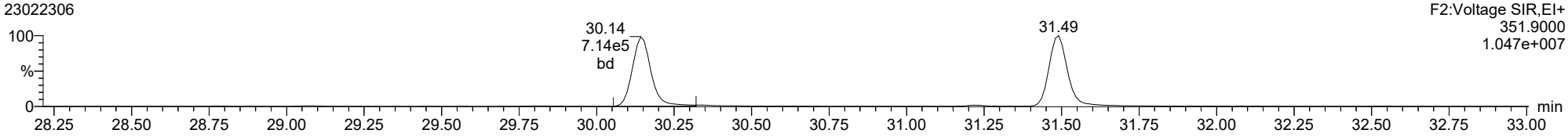

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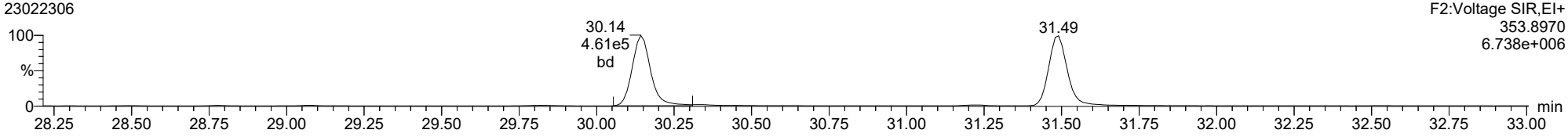

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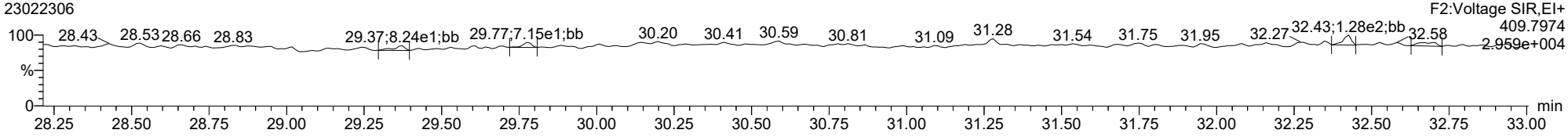

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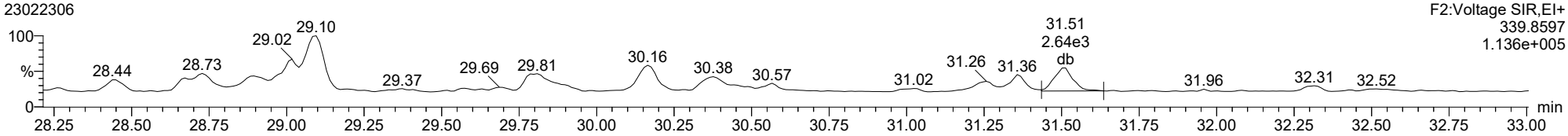
23478-PeCDF



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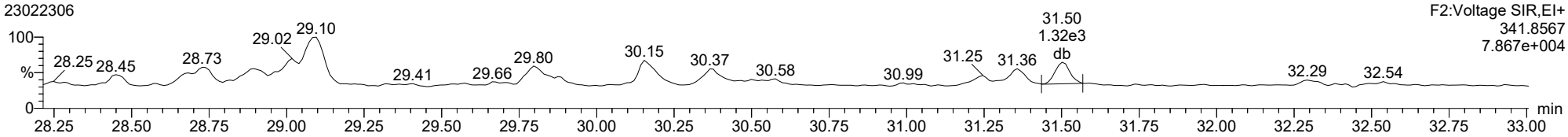

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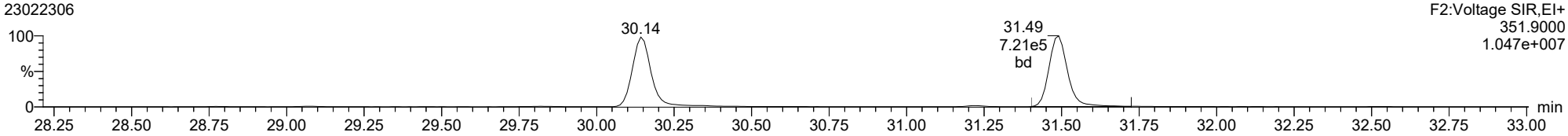

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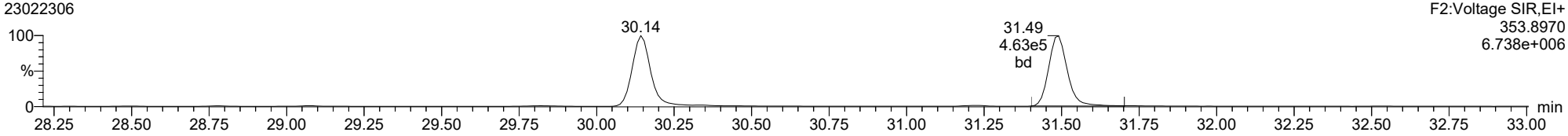

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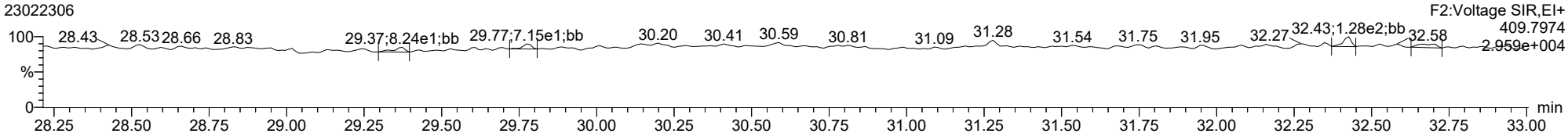
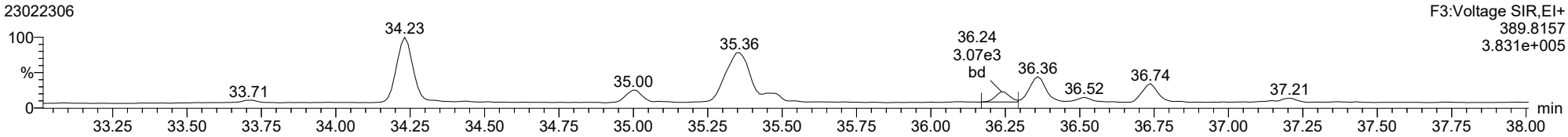
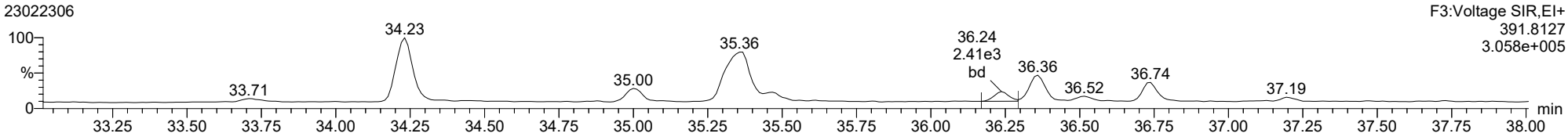


ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

123478-HxCDD



123478-HxCDD



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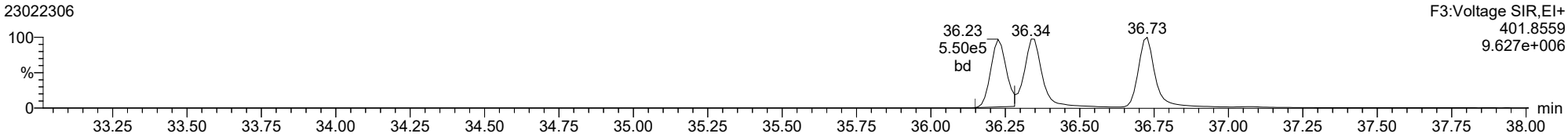

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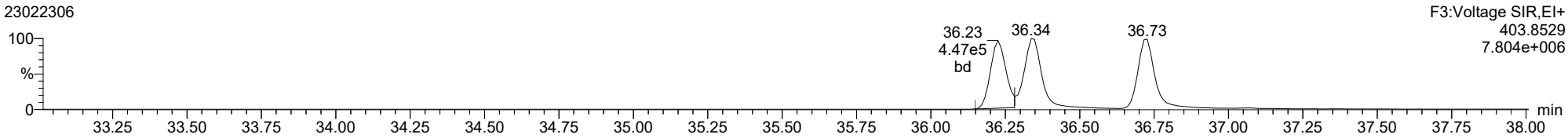

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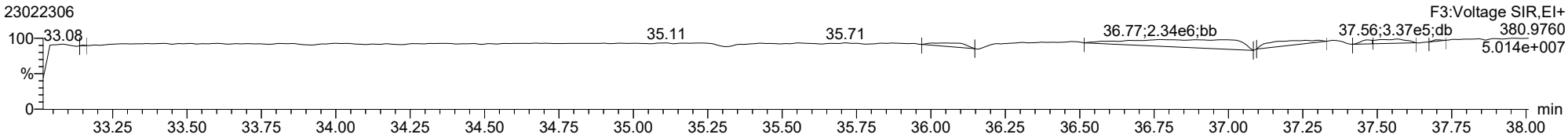

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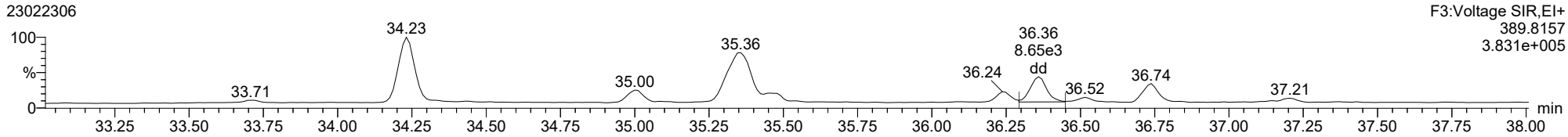

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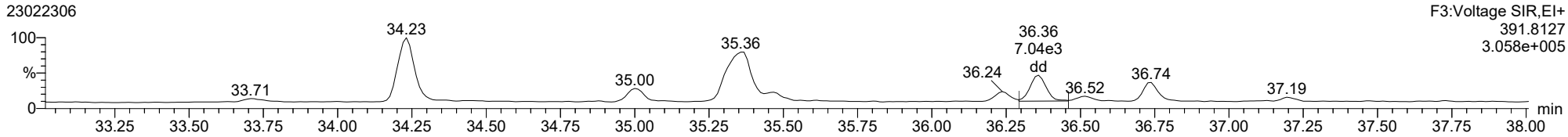

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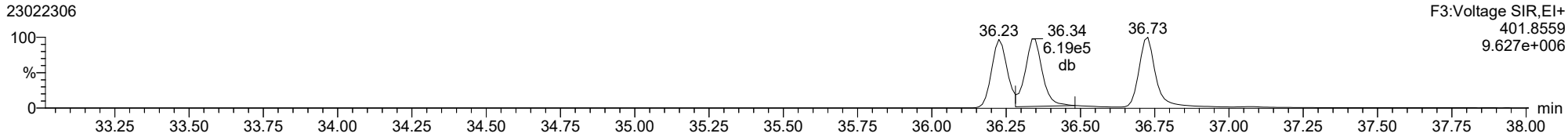

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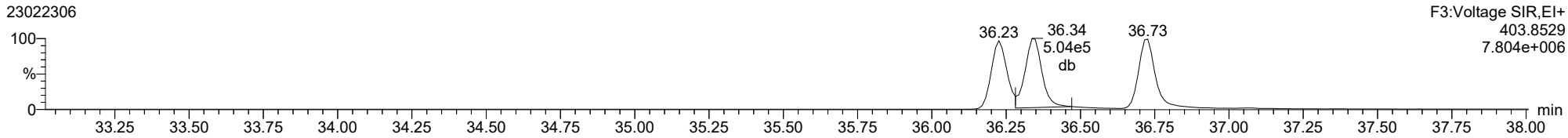

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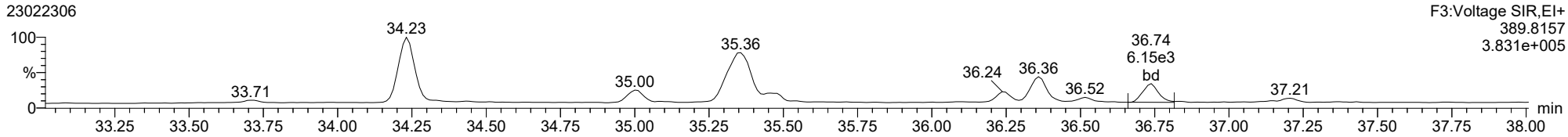

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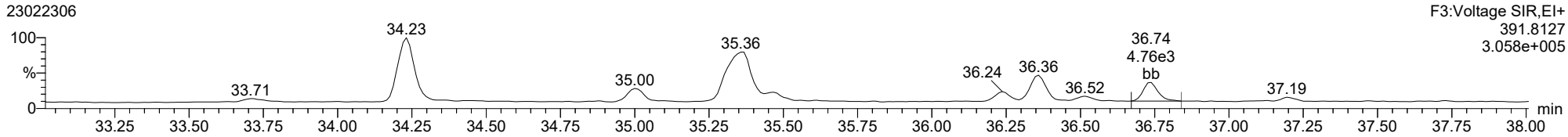

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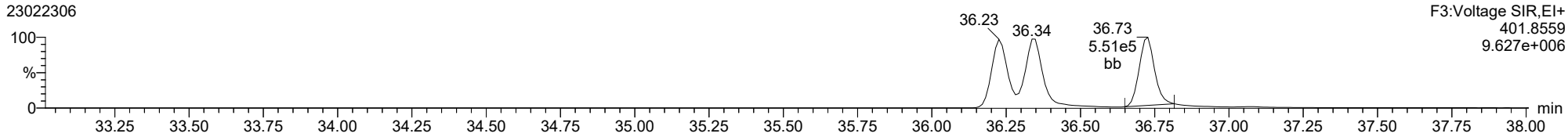

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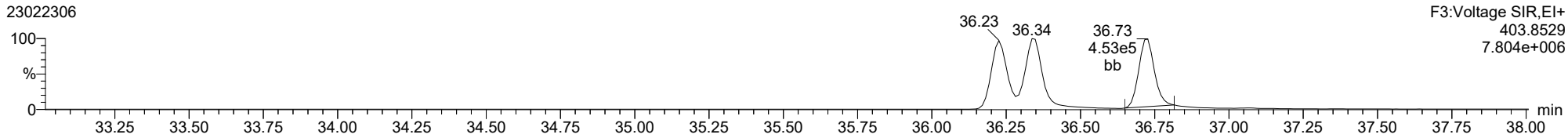

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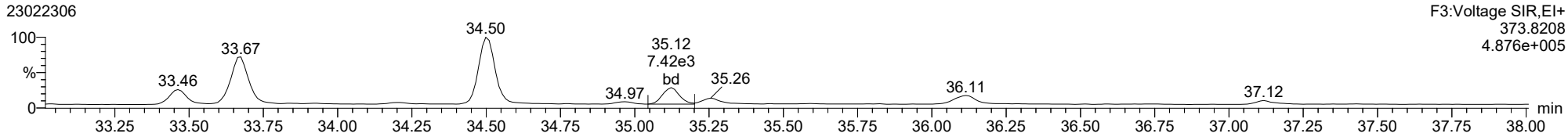

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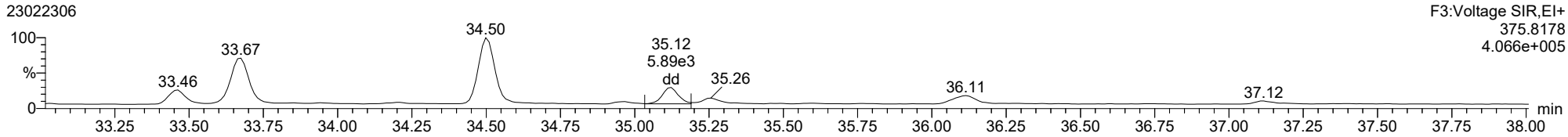

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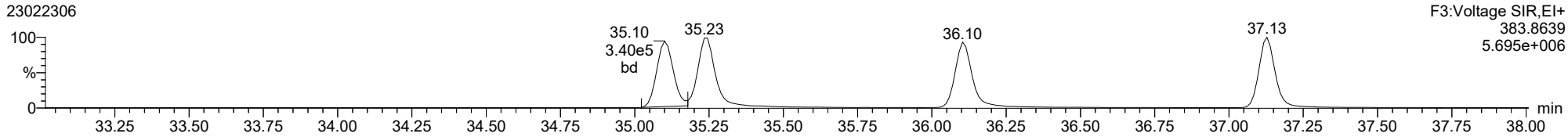

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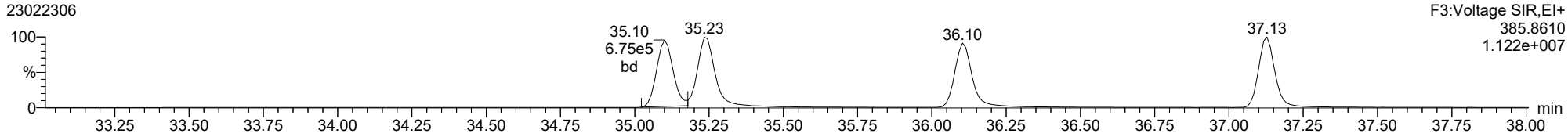

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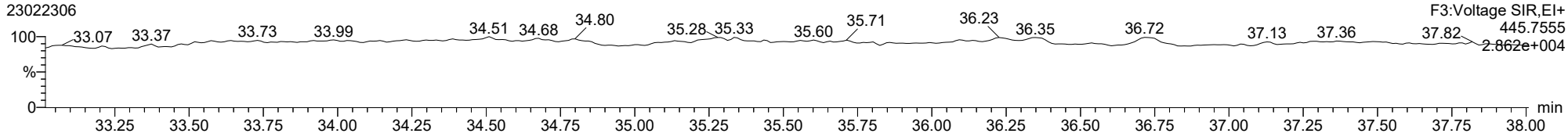

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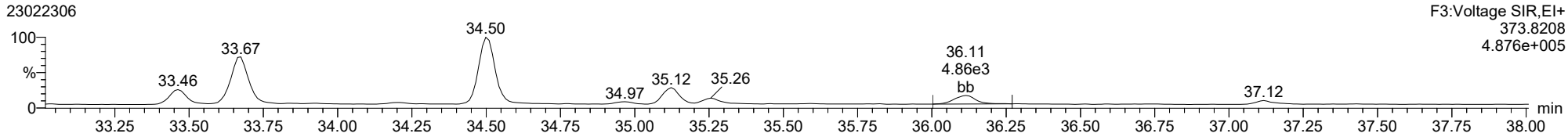

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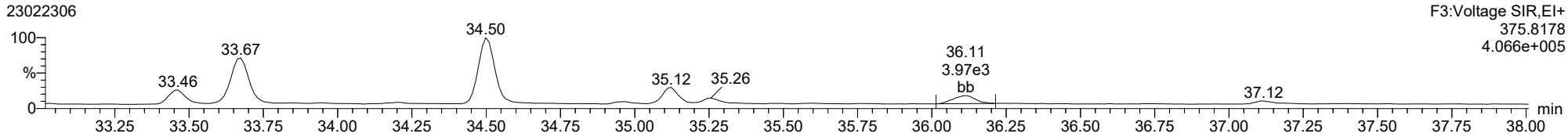

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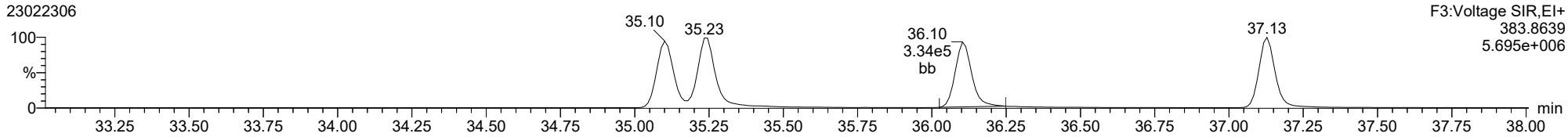

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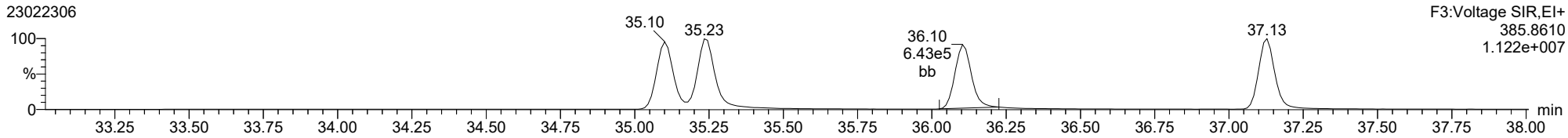
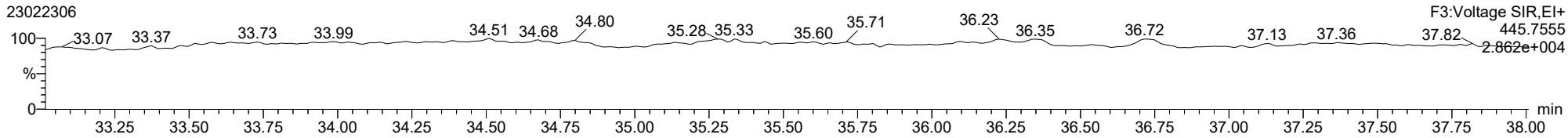


FUNCTION3 OCDPE



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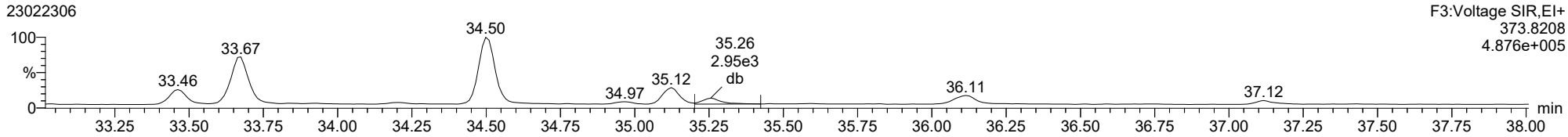

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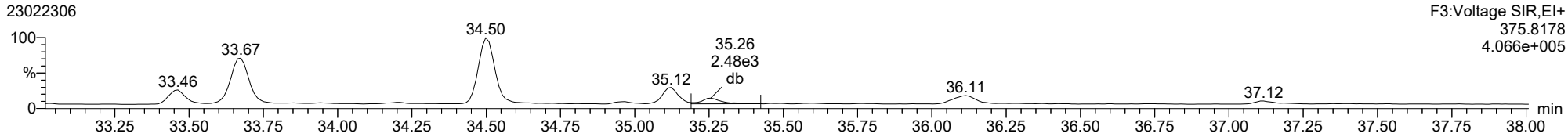

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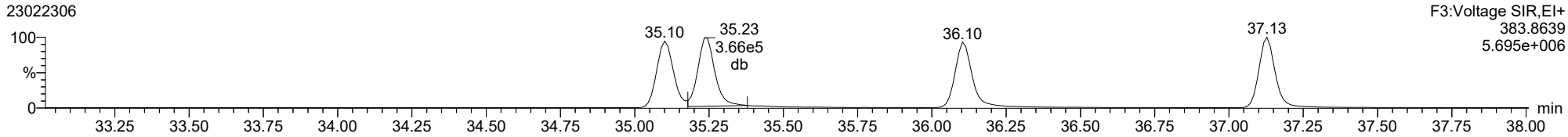

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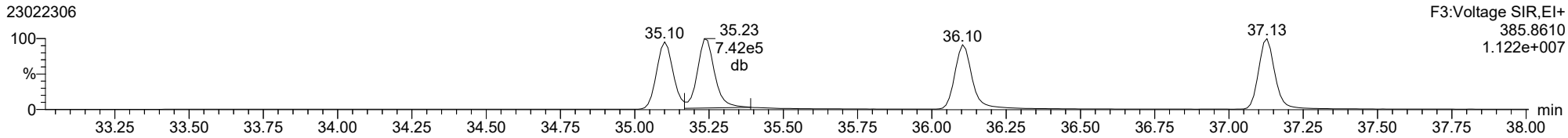
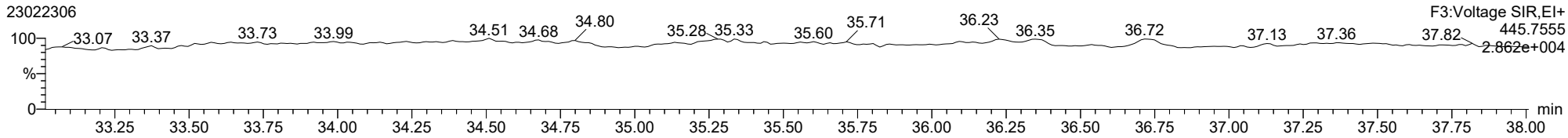


FUNCTION3 OCDPE



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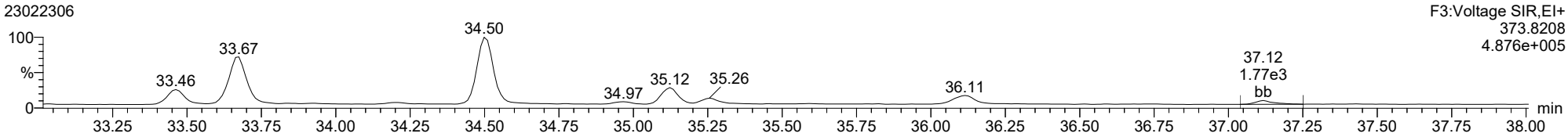

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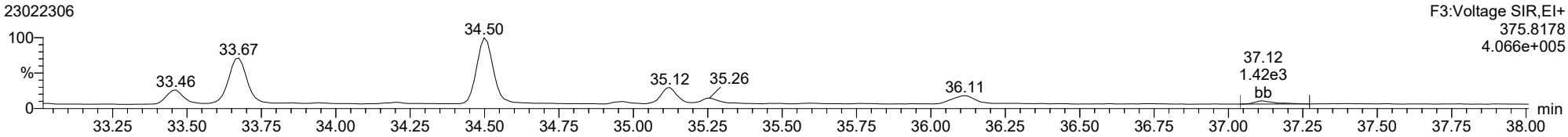

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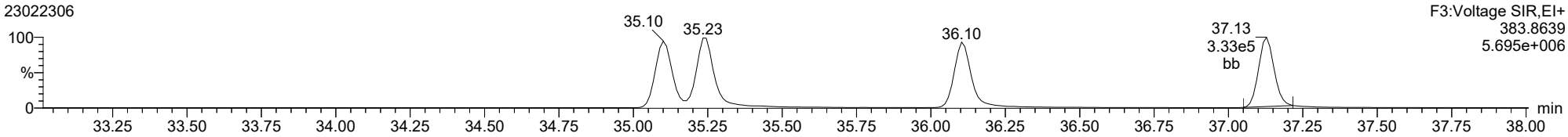

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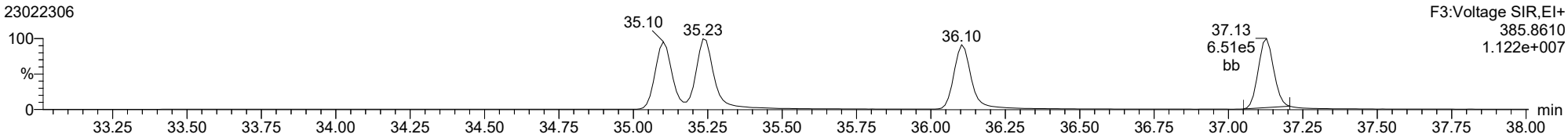
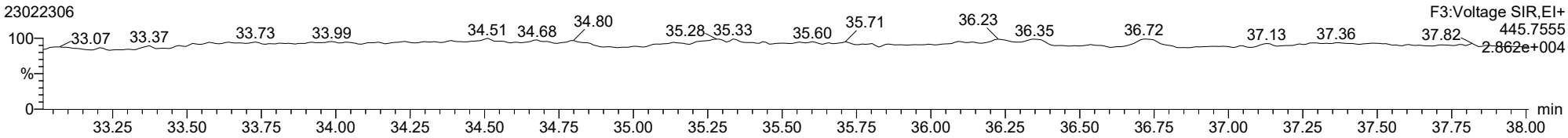


FUNCTION3 OCDPE



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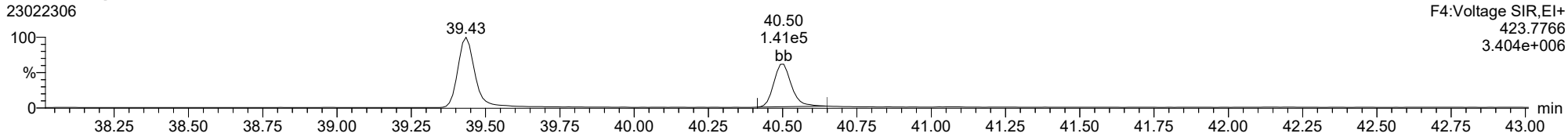

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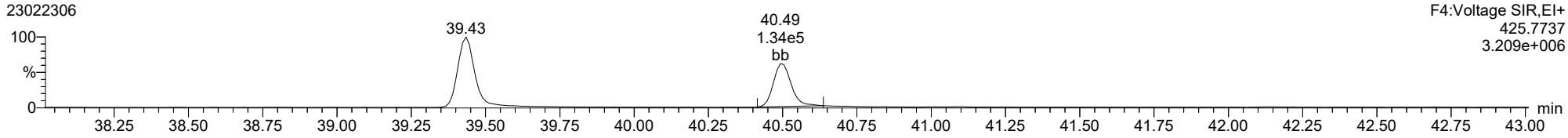

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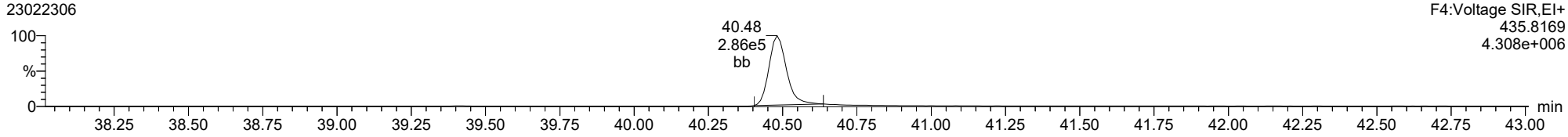

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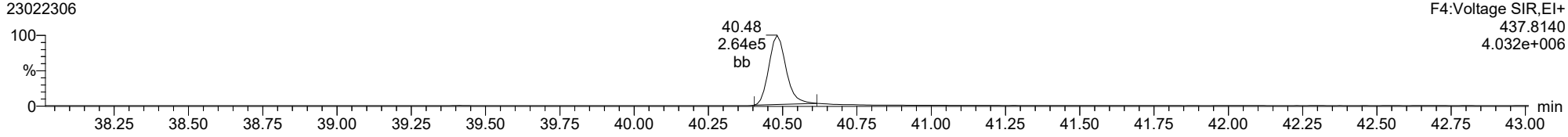
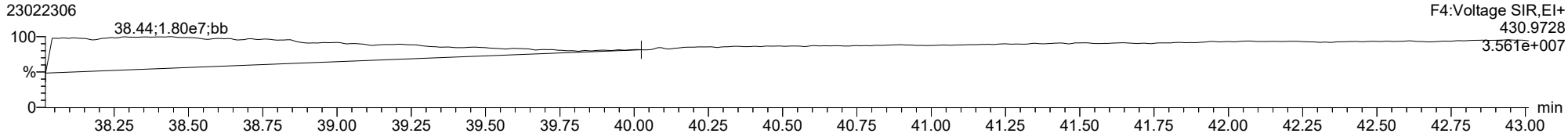


FUNCTION4 PFK



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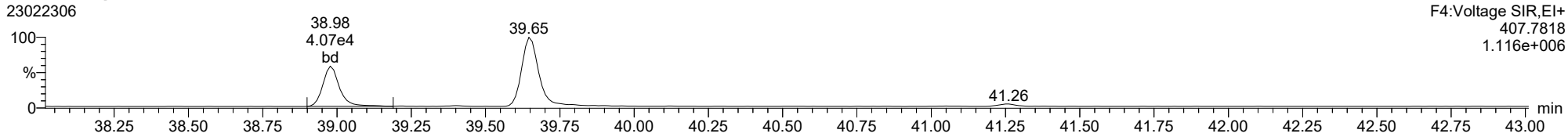

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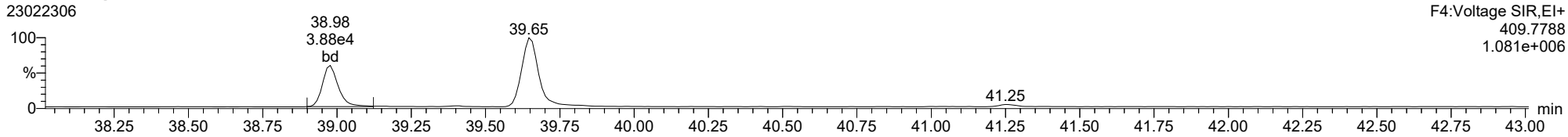

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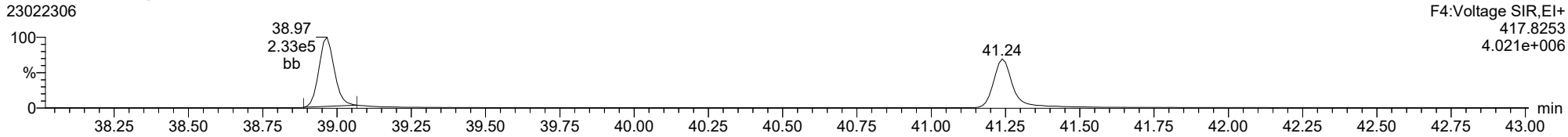

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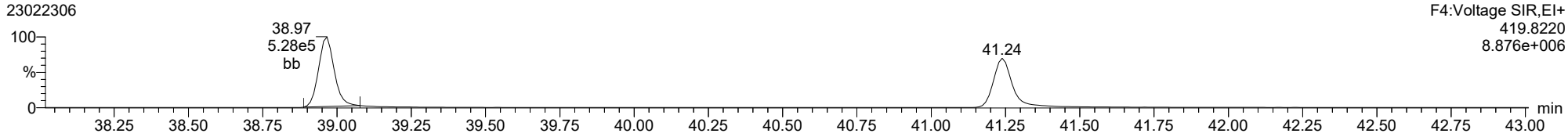

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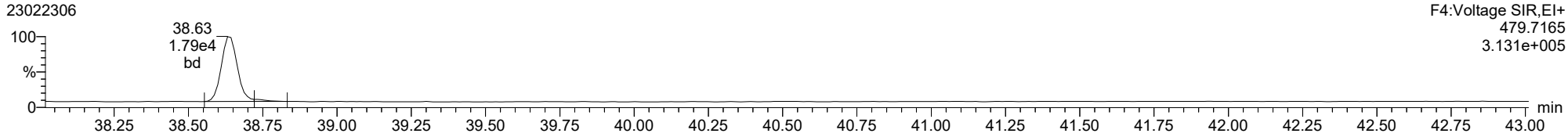

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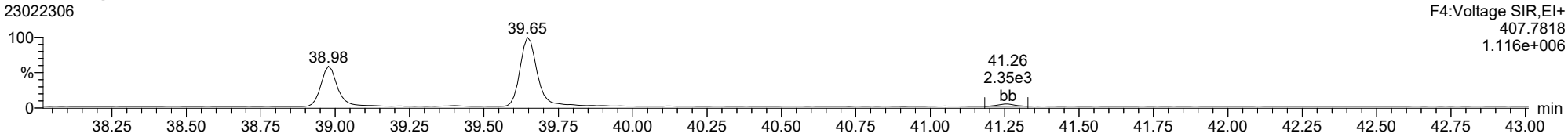

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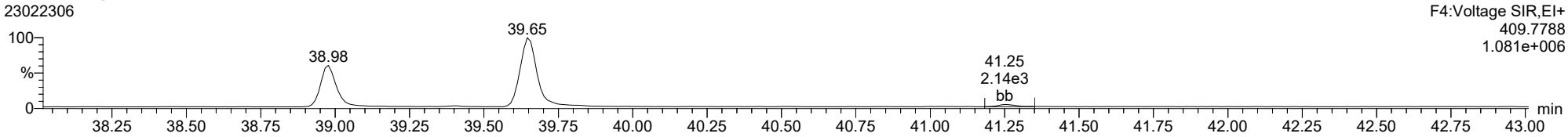

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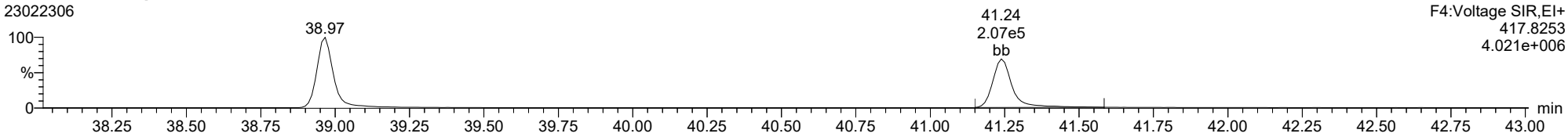

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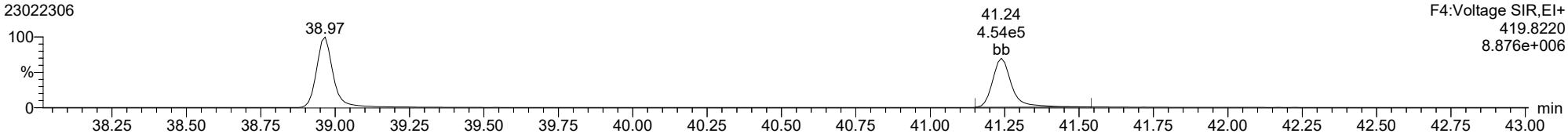

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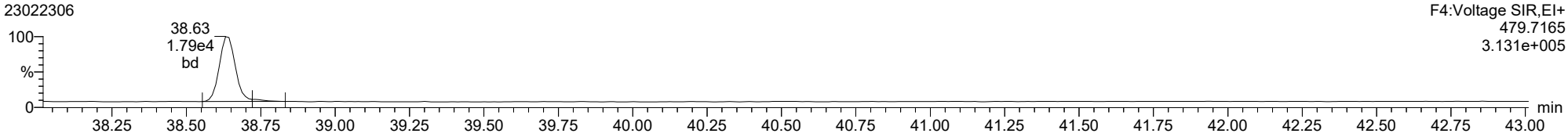

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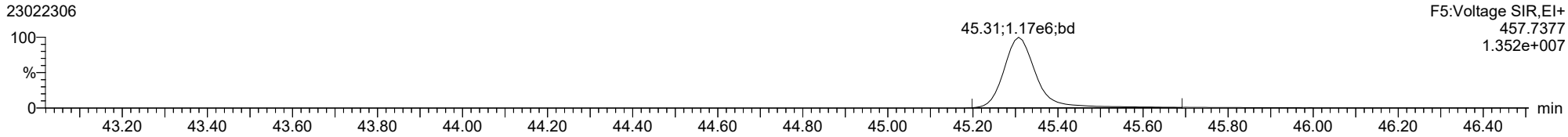
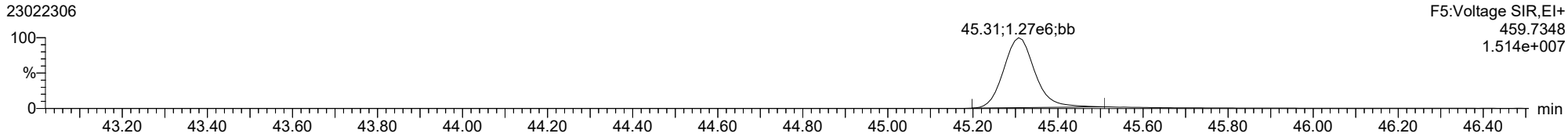
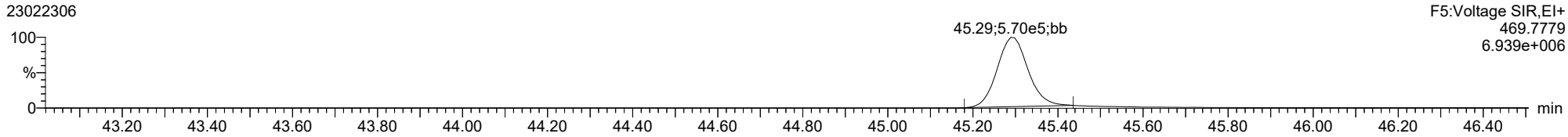
OCDD



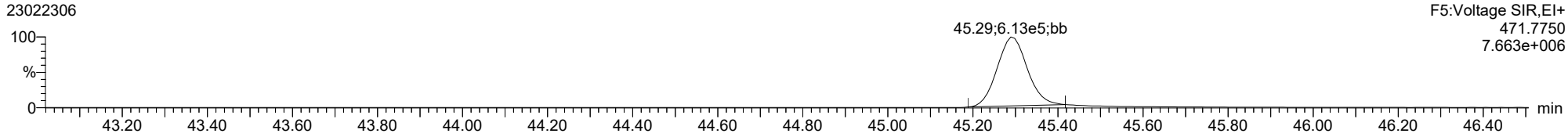
OCDD



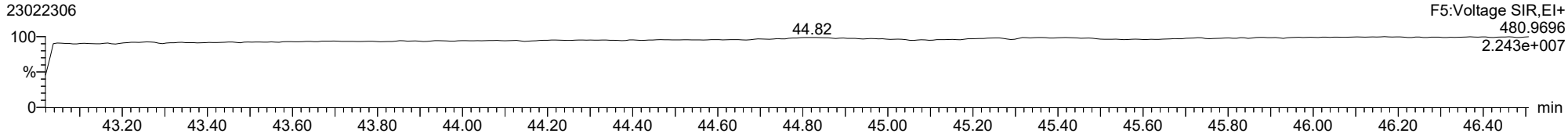
13C-OCDD



13C-OCDD

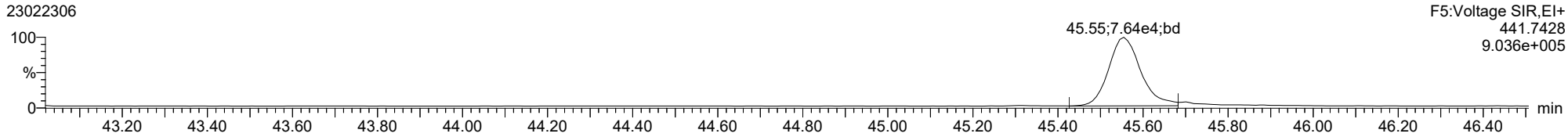


FUNCTION5 PFK

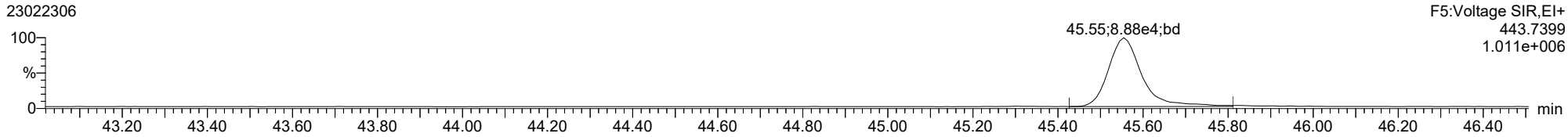


ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

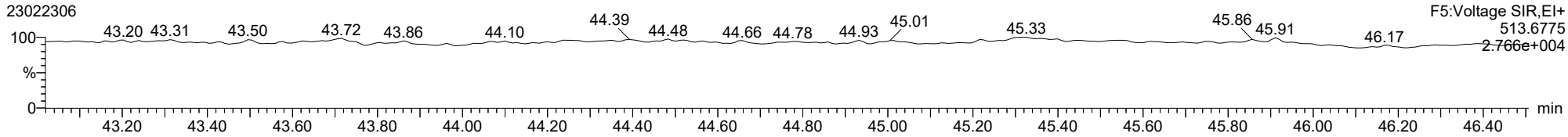
OCDF



OCDF

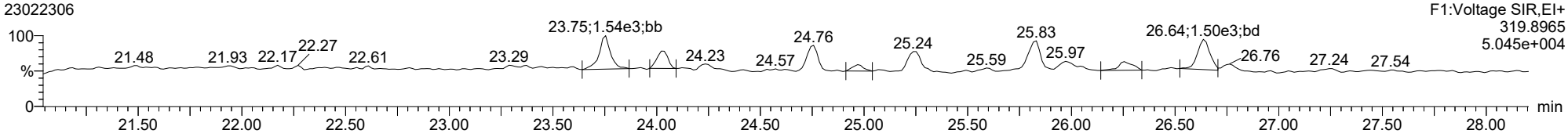


FUNCTION5 DCDPE

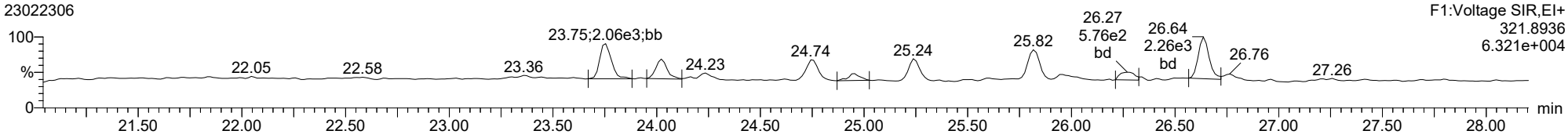


ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

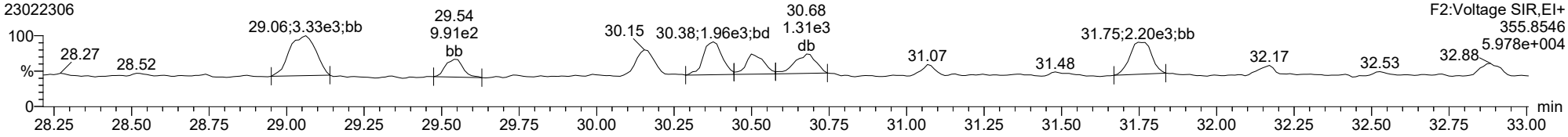
Total-tetradioxins



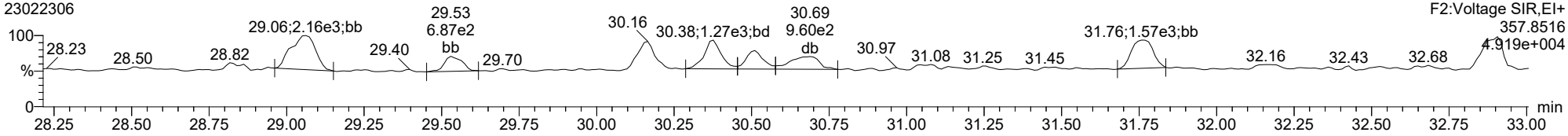
Total-tetradioxins



Total-pentadioxins

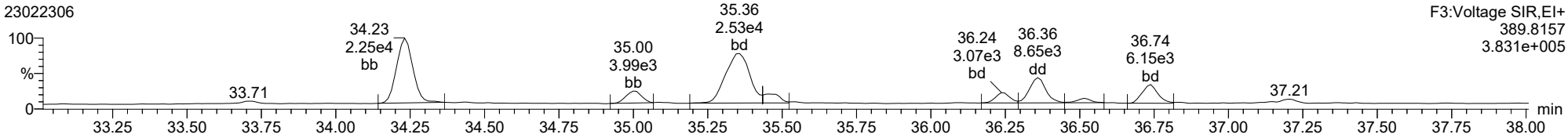


Total-pentadioxins

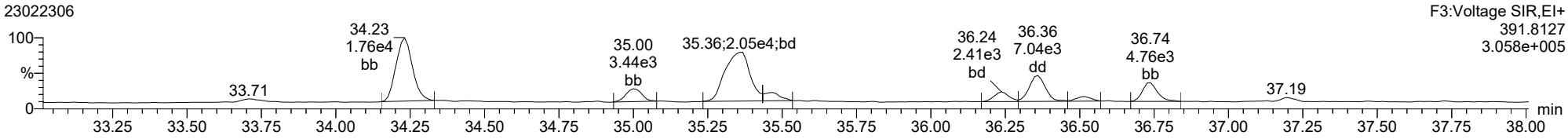


ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

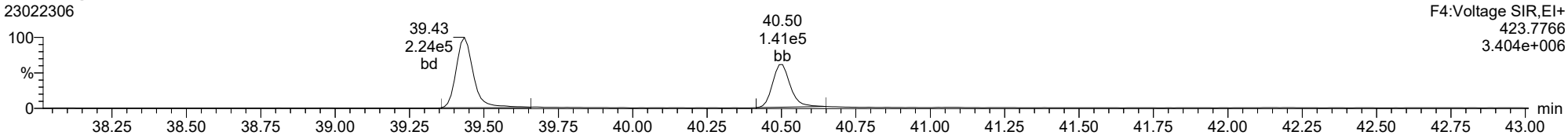
Total-hexadioxins



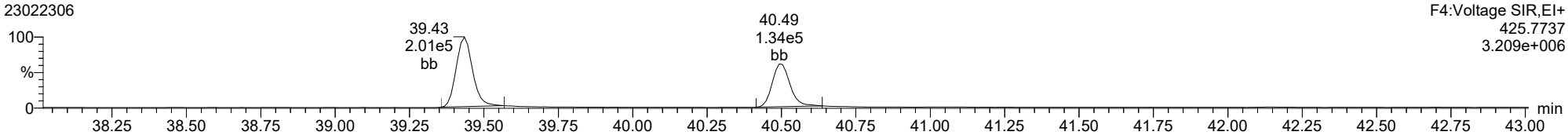
Total-hexadioxins



Total-heptadioxins

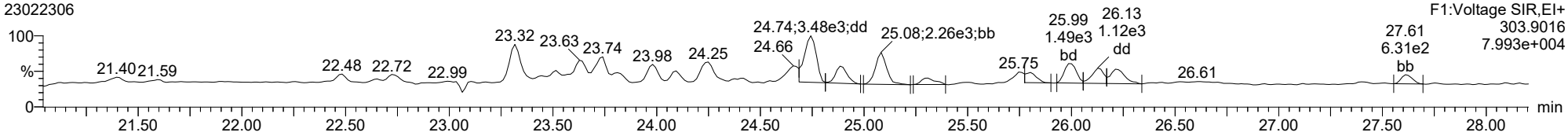


Total-heptadioxins

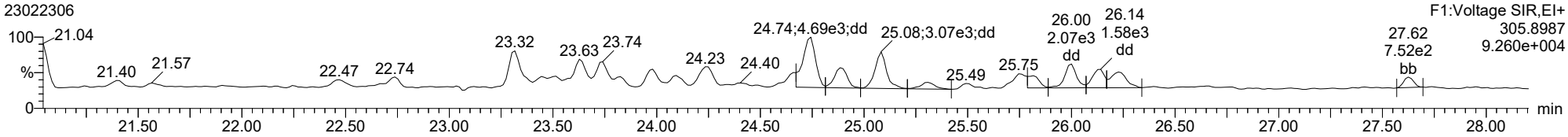


ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

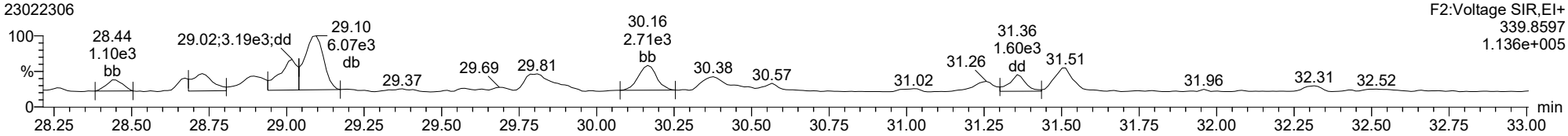
Total-tetrafurans



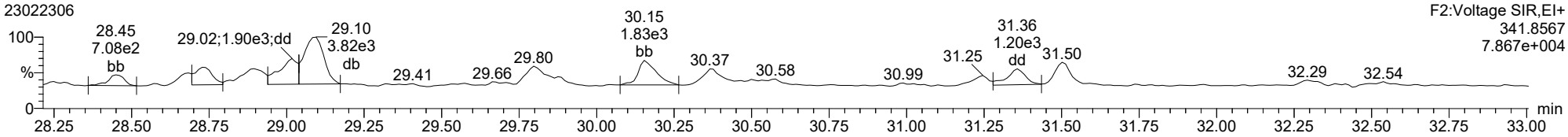
Total-tetrafurans



Total-pentafurans



Total-pentafurans



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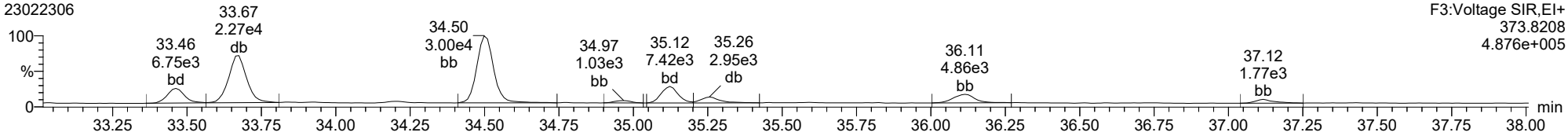
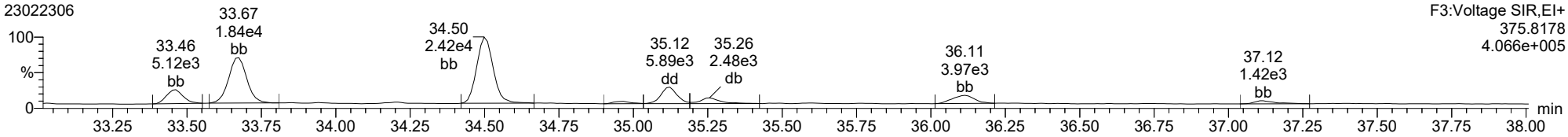
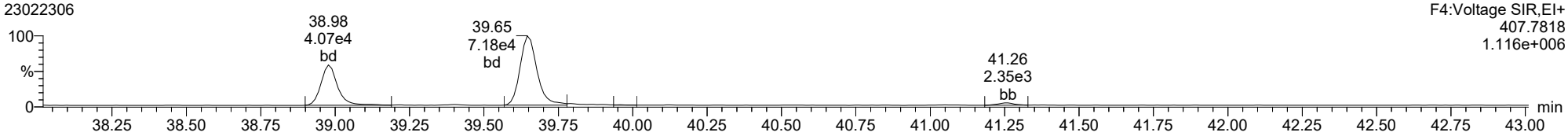
Total-hexafurans



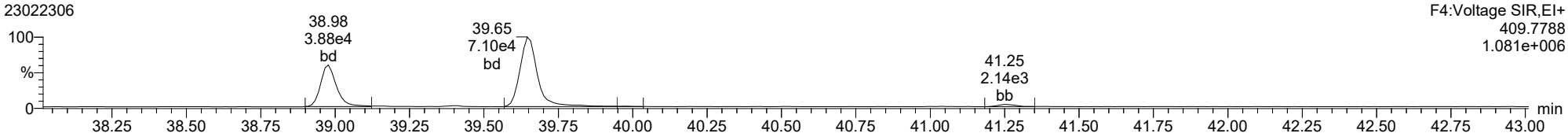
Total-hexafurans



Total-heptafurans



Total-heptafurans



Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00010	Instrument:	AUTOSPEC01
Calibration Date:	02/01/2023	Column (1):	RTX-Dioxin2

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2,3,7,8-TCDF			0.5	0.877532	2	0.8642547	10	0.9061172	40	0.8618622	200	0.870536
2,3,7,8-TCDD			0.5	1.33035	2	1.248621	10	1.137397	40	1.237049	200	1.228383
1,2,3,7,8-PeCDF	0.5	0.8845981	2.5	0.8294231	10	0.8519399	50	0.8286668	200	0.8328816	1000	0.8404146
2,3,4,7,8-PeCDF	0.5	0.9010853	2.5	0.8749834	10	0.9503804	50	0.9063511	200	0.9081631	1000	0.9261047
1,2,3,7,8-PeCDD	0.5	1.076975	2.5	1.101718	10	1.081557	50	1.083093	200	1.079692	1000	1.097073
1,2,3,4,7,8-HxCDF	0.5	1.197722	2.5	1.179021	10	1.141778	50	1.167137	200	1.188102	1000	1.216357
1,2,3,6,7,8-HxCDF	0.5	1.253033	2.5	1.219645	10	1.232591	50	1.230384	200	1.272527	1000	1.280106
2,3,4,6,7,8-HxCDF	0.5	1.220454	2.5	1.190231	10	1.230824	50	1.241416	200	1.24972	1000	1.240458
1,2,3,7,8,9-HxCDF	0.5	1.289076	2.5	1.125812	10	1.1524	50	1.182788	200	1.184457	1000	1.18469
1,2,3,4,7,8-HxCDD	0.5	0.980203	2.5	0.9572147	10	0.9836815	50	0.9739271	200	1.007401	1000	1.019376
1,2,3,6,7,8-HxCDD	0.5	1.134416	2.5	1.030295	10	0.9857061	50	1.001378	200	0.9828882	1000	0.9896475
1,2,3,7,8,9-HxCDD	0.5	1.002595	2.5	0.9852727	10	0.9574018	50	0.9845218	200	0.9780696	1000	1.005007
1,2,3,4,6,7,8-HpCDF	0.5	1.324418	2.5	1.241402	10	1.191769	50	1.137863	200	1.167606	1000	1.161655
1,2,3,4,7,8,9-HpCDF	0.5	1.241104	2.5	1.123881	10	1.176079	50	1.125517	200	1.167259	1000	1.157988
1,2,3,4,6,7,8-HpCDD	0.5	1.539399	2.5	1.221931	10	1.205401	50	1.160679	200	1.191041	1000	1.196962
OCDF	1	1.504532	5	1.206799	20	1.118843	100	1.047747	400	1.115678	2000	1.123986
OCDD			5	1.311834	20	1.098771	100	1.020503	400	1.035617	2000	1.04661
13C12-2,3,7,8-TCDF	100	1.794277	100	1.759625	100	1.739873	100	1.673566	100	1.790703	100	1.850313
13C12-2,3,7,8-TCDD	100	1.096674	100	1.073836	100	1.076512	100	1.133427	100	1.068055	100	1.169179
13C12-1,2,3,7,8-PeCDF	100	1.498324	100	1.483018	100	1.508724	100	1.460163	100	1.478051	100	1.734472
13C12-2,3,4,7,8-PeCDF	100	1.43808	100	1.438214	100	1.422382	100	1.41533	100	1.419969	100	1.663731
13C12-1,2,3,7,8-PeCDD	100	0.8950759	100	0.9011154	100	0.8899914	100	0.8624621	100	0.887379	100	1.048887
13C12-1,2,3,4,7,8-HxCDF	100	1.054544	100	1.077759	100	1.075116	100	1.061315	100	1.049772	100	1.003461
13C12-1,2,3,6,7,8-HxCDF	100	1.068197	100	1.101907	100	1.090557	100	1.088609	100	1.088766	100	1.041682
13C12-2,3,4,6,7,8-HxCDF	100	0.9969267	100	1.031453	100	1.020521	100	1.007653	100	1.020588	100	1.008816
13C12-1,2,3,7,8,9-HxCDF	100	0.9015813	100	0.9303539	100	0.9398705	100	0.9240461	100	0.9405347	100	0.9312132
13C12-1,2,3,4,7,8-HxCDD	100	0.9319648	100	0.9598064	100	0.9330427	100	0.9375516	100	0.9212584	100	0.9139779
13C12-1,2,3,6,7,8-HxCDD	100	0.9536719	100	0.9762285	100	0.9776812	100	0.9576787	100	0.9642386	100	0.9582641

INITIAL CALIBRATION DATA

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00010	Instrument:	AUTOSPEC01
Calibration Date:	02/01/2023	Column (1):	RTX-Dioxin2

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
13C12-1,2,3,4,6,7,8-HpCDF	100	1.009495	100	1.017629	100	1.046802	100	1.034238	100	1.053933	100	1.054435
13C12-1,2,3,4,7,8,9-HpCDF	100	0.8702856	100	0.8813287	100	0.9193412	100	0.9336903	100	0.9100344	100	0.9149429
13C12-1,2,3,4,6,7,8-HpCDD	100	0.7540434	100	0.7706109	100	0.7896711	100	0.7862201	100	0.7996856	100	0.7916329
13C12-OCDD	200	0.7447514	200	0.7401513	200	0.7909367	200	0.7980945	200	0.8130205	200	0.8424516
37Cl4-2,3,7,8-TCDD	0.1	1.457715	0.5	1.244154	2	1.209026	10	1.112721	40	1.137195	200	1.239891
13C12-1,2,3,4-TCDD	100	1	100	1	100	1	100	1	100	1	100	1
13C12-1,2,3,7,8,9-HxCDD	100	1	100	1	100	1	100	1	100	1	100	1

INITIAL CALIBRATION DATA

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00010	Instrument:	AUTOSPEC01
Calibration Date:	02/01/2023	Column (1):	RTX-Dioxin2

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
2,3,7,8-TCDF	0.8760604	2.0			RSD ()	
2,3,7,8-TCDD	1.23636	5.6			RSD ()	
1,2,3,7,8-PeCDF	0.844654	2.5			RSD ()	
2,3,4,7,8-PeCDF	0.911178	2.8			RSD ()	
1,2,3,7,8-PeCDD	1.086685	0.9			RSD ()	
1,2,3,4,7,8-HxCDF	1.181686	2.2			RSD ()	
1,2,3,6,7,8-HxCDF	1.248048	2.0			RSD ()	
2,3,4,6,7,8-HxCDF	1.22885	1.7			RSD ()	
1,2,3,7,8,9-HxCDF	1.186537	4.7			RSD ()	
1,2,3,4,7,8-HxCDD	0.9869672	2.3			RSD ()	
1,2,3,6,7,8-HxCDD	1.020722	5.7			RSD ()	
1,2,3,7,8,9-HxCDD	0.985478	1.8			RSD ()	
1,2,3,4,6,7,8-HpCDF	1.204119	5.7			RSD ()	
1,2,3,4,7,8,9-HpCDF	1.165305	3.7			RSD ()	
1,2,3,4,6,7,8-HpCDD	1.252569	11.3			RSD ()	
OCDF	1.186264	13.8			RSD ()	
OCDD	1.102667	10.9			RSD ()	
13C12-2,3,7,8-TCDF	1.768059	3.4			RSD ()	
13C12-2,3,7,8-TCDD	1.102947	3.7			RSD ()	
13C12-1,2,3,7,8-PeCDF	1.527125	6.7			RSD ()	
13C12-2,3,4,7,8-PeCDF	1.466284	6.6			RSD ()	
13C12-1,2,3,7,8-PeCDD	0.9141518	7.4			RSD ()	
13C12-1,2,3,4,7,8-HxCDF	1.053661	2.6			RSD ()	
13C12-1,2,3,6,7,8-HxCDF	1.079953	2.0			RSD ()	
13C12-2,3,4,6,7,8-HxCDF	1.014326	1.2			RSD ()	
13C12-1,2,3,7,8,9-HxCDF	0.9279333	1.5			RSD ()	
13C12-1,2,3,4,7,8-HxCDD	0.9329336	1.7			RSD ()	
13C12-1,2,3,6,7,8-HxCDD	0.9646272	1.1			RSD ()	
13C12-1,2,3,4,6,7,8-HpCDF	1.036089	1.8			RSD ()	
13C12-1,2,3,4,7,8,9-HpCDF	0.9049372	2.7			RSD ()	
13C12-1,2,3,4,6,7,8-HpCDD	0.7819773	2.1			RSD ()	

INITIAL CALIBRATION DATA

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00010	Instrument:	AUTOSPEC01
Calibration Date:	02/01/2023	Column (1):	RTX-Dioxin2

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
13C12-OCDD	0.7882343	5.0			RSD ()	
37Cl4-2,3,7,8-TCDD	1.23345	9.9			RSD ()	
13C12-1,2,3,4-TCDD	1	0.0			RSD ()	
13C12-1,2,3,7,8,9-HxCDD	1	0.0			RSD ()	

ANALYSIS SEQUENCE

SLB0026

Instrument: AUTOSPEC01 HRGCMS Column ID: K11292
Calibration ID: GB00010 Tune File: JAN3023
EM Voltage: 350 Resolution check times : 11:48, 22:06

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLB0026-ICV1	CS3R1	QC		1	K009821		02/01/2023 10:37	23020102	PK	
SLB0026-RES1	ISCR1	QC		2	K003933		02/01/2023 13:02	23020103	PK	
SLB0026-CAL1	CSLCR	QC		3	I005460		02/01/2023 14:39	23020104	PK	
SLB0026-CAL2	CS1CR	QC		4	I005456		02/01/2023 15:28	23020105	PK	
SLB0026-CAL3	CS2CR	QC		5	I005457		02/01/2023 17:07	23020106	PK	
SLB0026-CAL4	CS3CR	QC		6	K009821		02/01/2023 17:56	23020107	PK	
SLB0026-CAL5	CS4CR	QC		7	I005458		02/01/2023 18:45	23020108	PK	
SLB0026-CAL6	CS5CR	QC		8	I005459		02/01/2023 19:34	23020109	PK	
SLB0026-SCV1	ICVCR	QC		9	H008219		02/01/2023 20:23	23020110	PK	
SLB0026-CCV1	CS3R2	QC		10	K009821		02/01/2023 21:12	23020111	PK	
SLB0026-RES2	ISCR2	QC		11	K003933		02/01/2023 22:06	23020112	PK	

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:36:13 Pacific Standard Time 2/3/23 pk

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Calibrate		
Process Quantify		
Dataset Created		
Peak deleted	Sample:23020104, Compound:TF, RT:25.882	1
Peak deleted	Sample:23020104, Compound:TD, RT:26.532	1
Peak deleted	Sample:23020104, Compound:OD, RT:45.120	1
Peak deleted	Sample:23020109, Compound:TF, RT:27.273	6
Peak deleted	Sample:23020109, Compound:TF, RT:27.379	6
Peak deleted	Sample:23020108, Compound:PP, RT:27.107	5
Peak deleted	Sample:23020106, Compound:PF, RT:32.432	3
Peak deleted	Sample:23020108, Compound:HF, RT:33.335	5
Peak deleted	Sample:23020109, Compound:HF, RT:33.335	6
Peak deleted	Sample:23020108, Compound:TD, RT:27.122	5
Peak deleted	Sample:23020108, Compound:TD, RT:27.061	5
Peak deleted	Sample:23020109, Compound:TD, RT:27.107	6
Peak deleted	Sample:23020109, Compound:TD, RT:27.167	6
Peak deleted	Sample:23020104, Compound:HPD, RT:39.318	1
Peak deleted	Sample:23020105, Compound:HPD, RT:39.318	2
Peak deleted	Sample:23020106, Compound:HPD, RT:39.329	3
Peak deleted	Sample:23020108, Compound:HPD, RT:39.296	5
Peak deleted	Sample:23020109, Compound:HPD, RT:39.307	6
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230201ICIH.qld'	

Dataset: T:\Autospec\Processed Data Batch\230201IHOP.qld
Last Altered: Friday, February 03, 2023 11:20:37 Pacific Standard Time
Printed: Friday, February 03, 2023 11:21:40 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3R1, Name: 23020102, Date: 01-Feb-2023, Time: 10:37:16, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.897	1.001	1.633e4	2.121e4	0.876	0.770	0.770	844	1016	2.38e5	3.19e5	282.5	314.0	NO	bb	bb	8.996
12378-PeCDF	30.050	1.001	1.109e5	7.631e4	0.845	1.453	1.550	1249	1693	1.63e6	1.11e6	1307.7	657.1	NO	bb	bd	45.474
23478-PeCDF	31.387	1.001	1.159e5	7.903e4	0.911	1.467	1.550	1249	1693	1.77e6	1.19e6	1420.2	702.0	NO	bd	bd	46.006
123478-HxCDF	34.997	1.000	1.295e5	1.045e5	1.182	1.240	1.240	1714	1368	2.02e6	1.66e6	1181.4	1216.7	NO	bd	bd	43.803
234678-HxCDF	35.988	1.000	1.343e5	1.093e5	1.229	1.229	1.240	1714	1368	2.03e6	1.64e6	1185.6	1198.5	NO	bd	bb	45.575
123678-HxCDF	35.131	1.000	1.458e5	1.151e5	1.248	1.266	1.240	1714	1368	2.05e6	1.65e6	1195.7	1205.2	NO	db	dd	44.655
123789-HxCDF	37.025	1.001	1.158e5	9.218e4	1.187	1.257	1.240	1714	1368	1.74e6	1.39e6	1013.6	1013.7	NO	bb	bb	44.499
1234678-HpCDF	38.852	1.000	1.090e5	1.104e5	1.204	0.988	1.050	1381	2036	1.81e6	1.80e6	1312.8	883.5	NO	bb	bd	45.091
1234789-HpCDF	41.113	1.001	9.861e4	9.166e4	1.165	1.076	1.050	1381	2036	1.37e6	1.36e6	990.9	669.9	NO	bd	bb	47.733
OCDF	45.368	1.006	1.600e5	1.827e5	1.186	0.875	0.890	1512	1583	1.89e6	2.17e6	1249.6	1369.4	NO	bd	bd	86.348
2378-TCDD	26.532	1.001	1.602e4	2.106e4	1.236	0.761	0.770	1110	975	2.31e5	3.09e5	207.8	317.0	NO	bb	bd	7.999
12378-PeCDD	31.643	1.001	9.866e4	5.958e4	1.087	1.656	1.550	1646	1001	1.48e6	9.13e5	896.9	912.1	NO	bd	bb	49.739
123478-HxCDD	36.111	1.000	1.092e5	8.877e4	0.987	1.230	1.240	1547	1532	1.85e6	1.48e6	1198.0	965.8	NO	bd	bd	44.758
123678-HxCDD	36.234	1.001	1.208e5	9.232e4	1.021	1.308	1.240	1547	1532	1.90e6	1.47e6	1225.9	960.4	NO	db	db	43.840
123789-HxCDD	36.612	1.011	1.096e5	9.138e4	0.985	1.199	1.240	1547	1532	1.82e6	1.52e6	1178.1	989.3	NO	bb	bb	44.134
1234678-HpCDD	40.367	1.001	9.142e4	8.634e4	1.253	1.059	1.050	1287	1635	1.36e6	1.30e6	1055.7	793.5	NO	bd	bb	44.175
OCDD	45.130	1.000	1.558e5	1.797e5	1.103	0.867	0.890	1087	1881	1.97e6	2.25e6	1808.2	1195.6	NO	bb	bb	90.946
13C-2378-TCDF	25.867	1.006	2.092e5	2.671e5	1.768	0.783	0.770	1473	1226	3.13e6	4.02e6	2126.4	3281.6	NO	bb	bb	81.841
13C-12378-PeCDF	30.028	1.168	2.959e5	1.916e5	1.527	1.544	1.550	2999	2197	4.50e6	2.95e6	1498.8	1341.1	NO	bb	bb	96.965
13C-23478-PeCDF	31.365	1.220	2.816e5	1.834e5	1.466	1.535	1.550	2999	2197	4.34e6	2.84e6	1446.0	1290.5	NO	bb	bb	96.345
13C-123478-HxCDF	34.986	0.956	1.509e5	3.011e5	1.054	0.501	0.510	1539	2587	2.37e6	4.78e6	1539.0	1847.3	NO	bd	bd	88.697
13C-123678-HxCDF	35.119	0.960	1.595e5	3.087e5	1.080	0.517	0.510	1539	2587	2.51e6	4.86e6	1632.0	1878.9	NO	db	db	89.641
13C-234678-HxCDF	35.977	0.983	1.463e5	2.887e5	1.014	0.507	0.510	1539	2587	2.39e6	4.73e6	1553.6	1829.5	NO	bb	bb	88.660
13C-123789-HxCDF	37.002	1.011	1.315e5	2.625e5	0.928	0.501	0.510	1539	2587	2.16e6	4.40e6	1402.9	1699.3	NO	bb	bb	87.781
13C-1234678-HpCDF	38.841	1.062	1.240e5	2.800e5	1.036	0.443	0.440	1596	2193	2.11e6	4.68e6	1322.3	2133.9	NO	bb	bb	80.624
13C-1234789-HpCDF	41.091	1.123	1.084e5	2.336e5	0.905	0.464	0.440	1596	2193	1.58e6	3.44e6	991.3	1568.5	NO	bb	bb	78.158
13C-1234-TCDD	25.700	0.000	1.445e5	1.847e5	1.000	0.782	0.770	1667	873	2.18e6	2.81e6	1307.2	3212.9	NO	bb	bb	100.000
13C-2378-TCDD	26.517	1.032	1.635e5	2.114e5	1.103	0.774	0.770	1667	873	2.52e6	3.27e6	1513.3	3746.2	NO	bb	bb	103.258
13C-12378-PeCDD	31.621	1.230	1.783e5	1.145e5	0.914	1.557	1.550	940	1014	2.71e6	1.73e6	2879.6	1709.2	NO	bb	bb	97.286
13C-123478-HxCDD	36.100	0.987	2.492e5	1.989e5	0.933	1.253	1.240	1846	1567	4.13e6	3.30e6	2236.6	2103.6	NO	bd	bd	99.308
13C-123678-HxCDD	36.211	0.990	2.631e5	2.131e5	0.965	1.234	1.240	1846	1567	4.22e6	3.43e6	2285.9	2187.7	NO	db	db	102.074
13C-1234678-HpCDD	40.345	1.103	1.659e5	1.554e5	0.782	1.067	1.050	1641	1171	2.51e6	2.40e6	1529.6	2051.4	NO	bb	bb	84.947
13C-OCDD	45.111	1.233	3.174e5	3.517e5	0.788	0.903	0.890	3114	1814	4.07e6	4.46e6	1307.4	2459.0	NO	bb	bb	175.516
13C-123789-HxCDD	36.590	0.000	2.678e5	2.158e5	1.000	1.241	1.240	1846	1567	4.30e6	3.43e6	2331.6	2186.8	NO	bb	bb	100.000
37CL-2378-TCDD	26.532	1.032	3.482e4		1.233			850		5.25e5		617.9			bb		8.577

Dataset: T:\Autospec\Processed Data Batch\230201IHOP.qld
Last Altered: Friday, February 03, 2023 11:20:37 Pacific Standard Time
Printed: Friday, February 03, 2023 11:21:40 Pacific Standard Time

ID: CS3R1, Name: 23020102, Date: 01-Feb-2023, Time: 10:37:16, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.389	0.866	1.928e4	2.641e4	1.064	0.730	0.770	844	1016	3.12e5	4.35e5	369.4	427.9	NO	bb	bb	9.011
1289-TCDF	27.394	1.059	1.506e4	2.111e4	0.858	0.713	0.770	844	1016	2.15e5	3.01e5	254.4	296.4	NO	db	dd	8.854
13468-PECDF	27.243	0.907	1.732e5	1.184e5	1.013	1.464	1.550	906	933	2.67e6	1.81e6	2951.1	1944.9	NO	bb	bb	59.051
12389-PECDF	32.423	1.080	1.096e5	7.394e4	0.844	1.482	1.550	1249	1693	1.63e6	1.06e6	1301.6	627.3	NO	bb	bd	44.621
123468-HXCDF	33.337	0.953	1.333e5	1.071e5	1.197	1.245	1.240	1714	1368	1.94e6	1.63e6	1132.0	1192.1	NO	bb	bd	44.431
1368-TCDD	23.674	0.893	1.559e4	1.973e4	1.084	0.790	0.770	1110	975	2.48e5	3.06e5	223.8	314.1	NO	bb	bb	8.690
1289-TCDD	27.137	1.023	1.343e4	1.711e4	0.975	0.785	0.770	1110	975	2.02e5	2.57e5	181.6	263.1	NO	bb	bd	8.354
12479-PECDD	28.925	0.915	1.617e5	1.030e5	1.837	1.569	1.550	1646	1001	1.58e6	1.01e6	962.4	1010.4	NO	bb	bb	49.217
12389-PECDD	32.033	1.013	1.065e5	6.755e4	1.252	1.576	1.550	1646	1001	1.60e6	1.04e6	973.2	1039.9	NO	bb	bb	47.467
124679-HXCDD	34.117	0.945	1.151e5	9.437e4	1.033	1.219	1.240	1547	1532	1.82e6	1.49e6	1174.2	973.0	NO	bb	bb	45.255
1234679-HPCDD	39.309	0.974	9.857e4	9.267e4	1.286	1.064	1.050	1287	1635	1.62e6	1.55e6	1257.2	945.5	NO	bb	bb	46.288
Total-tetrafurans			5.067e4		0.933			844		7.65e5							26.861
Total-penta1			1.732e5					906		2.67e6							59.051
Total-pentafurans			3.556e5		0.866			1249		5.33e6							143.542
Total-hexafurans			6.587e5		1.208			1714		9.78e6							222.964
Total-heptafurans			2.076e5		1.185			1381		3.18e6							92.824
Total-Furans			1.606e6		1.067			844		2.36e7							631.589
Total-tetradioxins			7.564e4		1.099			1110		1.04e6							41.916
Total-pentadioxins			3.670e5		1.392			1646		4.67e6							146.491
Total-hexadioxins			4.546e5		1.007			1547		7.39e6							177.988
Total-heptadioxins			1.900e5		1.269			1287		2.98e6							90.463
Total-Dioxins			1.243e6		1.165			1110		1.80e7							547.804
Total-TEQ			2.849e6					1110		4.17e7							1179.393
FUNCTION1 PFK			6.977e5					215892		1.30e7							
FUNCTION2 PFK			7.329e6					149595		7.20e7							0.000
FUNCTION3 PFK			1.409e7					224809		7.00e7							0.000
FUNCTION4 PFK			7.505e3					156562		3.03e5							
FUNCTION5 PFK			1.269e4					142532		5.28e5							
FUNCTION1 HXCD...			3.884e2					838		8.06e3							0.000
FUNCTION1 HPCD...			3.094e2					854		6.24e3							0.000
FUNCTION2 HPCD...			4.137e2					755		7.38e3							0.000
FUNCTION3 OCDPE			2.422e2					659		4.44e3							0.000
FUNCTION4 NCDPE			2.399e2					738		4.58e3							0.000
FUNCTION5 DCDPE			0.000e0					686		0.00e0							

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3R1, Name: 23020102, Date: 01-Feb-2023, Time: 10:37:16, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.39	1.506e4	2.111e4	0.858	0.71	0.77	254.4	YES	NO	db	dd	8.854
2	2378-TCDF	25.90	1.633e4	2.121e4	0.876	0.77	0.77	282.5	YES	NO	bb	bb	8.996
3	1368-TCDF	22.39	1.928e4	2.641e4	1.064	0.73	0.77	369.4	YES	NO	bb	bb	9.011

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.24	1.732e5	1.184e5	1.013	1.46	1.55	2951.1	YES	NO	bb	bb	59.051

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.42	1.096e5	7.394e4	0.844	1.48	1.55	1301.6	YES	NO	bb	bd	44.621
2	23478-PeCDF	31.39	1.159e5	7.903e4	0.911	1.47	1.55	1420.2	YES	NO	bd	bd	46.006
3	12378-PeCDF	30.05	1.109e5	7.631e4	0.845	1.45	1.55	1307.7	YES	NO	bb	bd	45.474
4	Total-pentafurans	28.90	1.918e4	1.152e4	0.866	1.67	1.55	232.8	YES	NO	bb	bb	7.440

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	234678-HxCDF	35.99	1.343e5	1.093e5	1.229	1.23	1.24	1185.6	YES	NO	bd	bb	45.575
2	123678-HxCDF	35.13	1.458e5	1.151e5	1.248	1.27	1.24	1195.7	YES	NO	db	dd	44.655
3	123478-HxCDF	35.00	1.295e5	1.045e5	1.182	1.24	1.24	1181.4	YES	NO	bd	bd	43.803
4	123468-HXCDF	33.34	1.333e5	1.071e5	1.197	1.24	1.24	1132.0	YES	NO	bb	bd	44.431
5	123789-HxCDF	37.02	1.158e5	9.218e4	1.187	1.26	1.24	1013.6	YES	NO	bb	bb	44.499

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.11	9.861e4	9.166e4	1.165	1.08	1.05	990.9	YES	NO	bd	bb	47.733
2	1234678-HpCDF	38.85	1.090e5	1.104e5	1.204	0.99	1.05	1312.8	YES	NO	bb	bd	45.091

ID: CS3R1, Name: 23020102, Date: 01-Feb-2023, Time: 10:37:16, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.39	1.506e4	2.111e4	0.858	0.71	0.77	254.4	YES	NO	db	dd	8.854
2	2378-TCDF	25.90	1.633e4	2.121e4	0.876	0.77	0.77	282.5	YES	NO	bb	bb	8.996
3	1368-TCDF	22.39	1.928e4	2.641e4	1.064	0.73	0.77	369.4	YES	NO	bb	bb	9.011
4	12389-PECDF	32.42	1.096e5	7.394e4	0.844	1.48	1.55	1301.6	YES	NO	bb	bd	44.621
5	23478-PeCDF	31.39	1.159e5	7.903e4	0.911	1.47	1.55	1420.2	YES	NO	bd	bd	46.006
6	12378-PeCDF	30.05	1.109e5	7.631e4	0.845	1.45	1.55	1307.7	YES	NO	bb	bd	45.474
7	Total-pentafurans	28.90	1.918e4	1.152e4	0.866	1.67	1.55	232.8	YES	NO	bb	bb	7.440
8	234678-HxCDF	35.99	1.343e5	1.093e5	1.229	1.23	1.24	1185.6	YES	NO	bd	bb	45.575
9	123678-HxCDF	35.13	1.458e5	1.151e5	1.248	1.27	1.24	1195.7	YES	NO	db	dd	44.655
10	123478-HxCDF	35.00	1.295e5	1.045e5	1.182	1.24	1.24	1181.4	YES	NO	bd	bd	43.803
11	123468-HXCDF	33.34	1.333e5	1.071e5	1.197	1.24	1.24	1132.0	YES	NO	bb	bd	44.431
12	123789-HxCDF	37.02	1.158e5	9.218e4	1.187	1.26	1.24	1013.6	YES	NO	bb	bb	44.499
13	1234789-HpCDF	41.11	9.861e4	9.166e4	1.165	1.08	1.05	990.9	YES	NO	bd	bb	47.733
14	1234678-HpCDF	38.85	1.090e5	1.104e5	1.204	0.99	1.05	1312.8	YES	NO	bb	bd	45.091
15	OCDF	45.37	1.600e5	1.827e5	1.186	0.88	0.89	1249.6	YES	NO	bd	bd	86.348
16	13468-PECDF	27.24	1.732e5	1.184e5	1.013	1.46	1.55	2951.1	YES	NO	bb	bb	59.051

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.67	1.559e4	1.973e4	1.084	0.79	0.77	223.8	YES	NO	bb	bb	8.690
2	1289-TCDD	27.14	1.343e4	1.711e4	0.975	0.79	0.77	181.6	YES	NO	bb	bd	8.354
3	2378-TCDD	26.53	1.602e4	2.106e4	1.236	0.76	0.77	207.8	YES	NO	bb	bd	7.999
4	Total-tetradioxins	26.21	2.312e4	2.981e4	1.099	0.78	0.77	216.6	YES	NO	bb	bb	12.852
5	Total-tetradioxins	25.73	7.468e3	9.090e3	1.099	0.82	0.77	105.7	YES	NO	bb	bb	4.020

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.03	1.065e5	6.755e4	1.252	1.58	1.55	973.2	YES	NO	bb	bb	47.467
2	Total-pentadioxins	31.87	1.652e2	1.080e2	1.392	1.53	1.55	3.2	YES	NO	db	bb	0.067
3	12378-PeCDD	31.64	9.866e4	5.958e4	1.087	1.66	1.55	896.9	YES	NO	bd	bb	49.739
4	12479-PECDD	28.92	1.617e5	1.030e5	1.837	1.57	1.55	962.4	YES	NO	bb	bb	49.217

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.61	1.096e5	9.138e4	0.985	1.20	1.24	1178.1	YES	NO	bb	bb	44.134
2	123678-HxCDD	36.23	1.208e5	9.232e4	1.021	1.31	1.24	1225.9	YES	NO	db	db	43.840
3	123478-HxCDD	36.11	1.092e5	8.877e4	0.987	1.23	1.24	1198.0	YES	NO	bd	bd	44.758
4	124679-HXCDD	34.12	1.151e5	9.437e4	1.033	1.22	1.24	1174.2	YES	NO	bb	bb	45.255

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.37	9.142e4	8.634e4	1.253	1.06	1.05	1055.7	YES	NO	bd	bb	44.175
2	1234679-HPCDD	39.31	9.857e4	9.267e4	1.286	1.06	1.05	1257.2	YES	NO	bb	bb	46.288

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.67	1.559e4	1.973e4	1.084	0.79	0.77	223.8	YES	NO	bb	bb	8.690
2	1289-TCDD	27.14	1.343e4	1.711e4	0.975	0.79	0.77	181.6	YES	NO	bb	bd	8.354
3	2378-TCDD	26.53	1.602e4	2.106e4	1.236	0.76	0.77	207.8	YES	NO	bb	bd	7.999
4	Total-tetradioxins	26.21	2.312e4	2.981e4	1.099	0.78	0.77	216.6	YES	NO	bb	bb	12.852
5	Total-tetradioxins	25.73	7.468e3	9.090e3	1.099	0.82	0.77	105.7	YES	NO	bb	bb	4.020
6	12389-PECDD	32.03	1.065e5	6.755e4	1.252	1.58	1.55	973.2	YES	NO	bb	bb	47.467
7	Total-pentadioxins	31.87	1.652e2	1.080e2	1.392	1.53	1.55	3.2	YES	NO	db	bb	0.067
8	12378-PeCDD	31.64	9.866e4	5.958e4	1.087	1.66	1.55	896.9	YES	NO	bd	bb	49.739
9	12479-PECDD	28.92	1.617e5	1.030e5	1.837	1.57	1.55	962.4	YES	NO	bb	bb	49.217
10	123789-HxCDD	36.61	1.096e5	9.138e4	0.985	1.20	1.24	1178.1	YES	NO	bb	bb	44.134
11	123678-HxCDD	36.23	1.208e5	9.232e4	1.021	1.31	1.24	1225.9	YES	NO	db	db	43.840
12	123478-HxCDD	36.11	1.092e5	8.877e4	0.987	1.23	1.24	1198.0	YES	NO	bd	bd	44.758
13	124679-HXCDD	34.12	1.151e5	9.437e4	1.033	1.22	1.24	1174.2	YES	NO	bb	bb	45.255
14	1234678-HpCDD	40.37	9.142e4	8.634e4	1.253	1.06	1.05	1055.7	YES	NO	bd	bb	44.175
15	1234679-HPCDD	39.31	9.857e4	9.267e4	1.286	1.06	1.05	1257.2	YES	NO	bb	bb	46.288
16	OCDD	45.13	1.558e5	1.797e5	1.103	0.87	0.89	1808.2	YES	NO	bb	bb	90.946

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.39	1.506e4	2.111e4	0.858	0.71	0.77	254.4	YES	NO	db	dd	8.854
2	2378-TCDF	25.90	1.633e4	2.121e4	0.876	0.77	0.77	282.5	YES	NO	bb	bb	8.996
3	1368-TCDF	22.39	1.928e4	2.641e4	1.064	0.73	0.77	369.4	YES	NO	bb	bb	9.011
4	12389-PECDF	32.42	1.096e5	7.394e4	0.844	1.48	1.55	1301.6	YES	NO	bb	bd	44.621
5	23478-PeCDF	31.39	1.159e5	7.903e4	0.911	1.47	1.55	1420.2	YES	NO	bd	bd	46.006
6	12378-PeCDF	30.05	1.109e5	7.631e4	0.845	1.45	1.55	1307.7	YES	NO	bb	bd	45.474
7	Total-pentafurans	28.90	1.918e4	1.152e4	0.866	1.67	1.55	232.8	YES	NO	bb	bb	7.440
8	234678-HxCDF	35.99	1.343e5	1.093e5	1.229	1.23	1.24	1185.6	YES	NO	bd	bb	45.575
9	123678-HxCDF	35.13	1.458e5	1.151e5	1.248	1.27	1.24	1195.7	YES	NO	db	dd	44.655
10	123478-HxCDF	35.00	1.295e5	1.045e5	1.182	1.24	1.24	1181.4	YES	NO	bd	bd	43.803
11	123468-HXCDF	33.34	1.333e5	1.071e5	1.197	1.24	1.24	1132.0	YES	NO	bb	bd	44.431
12	123789-HxCDF	37.02	1.158e5	9.218e4	1.187	1.26	1.24	1013.6	YES	NO	bb	bb	44.499
13	1234789-HpCDF	41.11	9.861e4	9.166e4	1.165	1.08	1.05	990.9	YES	NO	bd	bb	47.733
14	1234678-HpCDF	38.85	1.090e5	1.104e5	1.204	0.99	1.05	1312.8	YES	NO	bb	bd	45.091
15	OCDF	45.37	1.600e5	1.827e5	1.186	0.88	0.89	1249.6	YES	NO	bd	bd	86.348
16	13468-PECDF	27.24	1.732e5	1.184e5	1.013	1.46	1.55	2951.1	YES	NO	bb	bb	59.051
17	1368-TCDD	23.67	1.559e4	1.973e4	1.084	0.79	0.77	223.8	YES	NO	bb	bb	8.690
18	1289-TCDD	27.14	1.343e4	1.711e4	0.975	0.79	0.77	181.6	YES	NO	bb	bd	8.354
19	2378-TCDD	26.53	1.602e4	2.106e4	1.236	0.76	0.77	207.8	YES	NO	bb	bd	7.999
20	Total-tetradioxins	26.21	2.312e4	2.981e4	1.099	0.78	0.77	216.6	YES	NO	bb	bb	12.852
21	Total-tetradioxins	25.73	7.468e3	9.090e3	1.099	0.82	0.77	105.7	YES	NO	bb	bb	4.020
22	12389-PECDD	32.03	1.065e5	6.755e4	1.252	1.58	1.55	973.2	YES	NO	bb	bb	47.467
23	Total-pentadioxins	31.87	1.652e2	1.080e2	1.392	1.53	1.55	3.2	YES	NO	db	bb	0.067
24	12378-PeCDD	31.64	9.866e4	5.958e4	1.087	1.66	1.55	896.9	YES	NO	bd	bb	49.739
25	12479-PECDD	28.92	1.617e5	1.030e5	1.837	1.57	1.55	962.4	YES	NO	bb	bb	49.217
26	123789-HxCDD	36.61	1.096e5	9.138e4	0.985	1.20	1.24	1178.1	YES	NO	bb	bb	44.134
27	123678-HxCDD	36.23	1.208e5	9.232e4	1.021	1.31	1.24	1225.9	YES	NO	db	db	43.840
28	123478-HxCDD	36.11	1.092e5	8.877e4	0.987	1.23	1.24	1198.0	YES	NO	bd	bd	44.758
29	124679-HXCDD	34.12	1.151e5	9.437e4	1.033	1.22	1.24	1174.2	YES	NO	bb	bb	45.255
30	1234678-HpCDD	40.37	9.142e4	8.634e4	1.253	1.06	1.05	1055.7	YES	NO	bd	bb	44.175
31	1234679-HPCDD	39.31	9.857e4	9.267e4	1.286	1.06	1.05	1257.2	YES	NO	bb	bb	46.288
32	OCDD	45.13	1.558e5	1.797e5	1.103	0.87	0.89	1808.2	YES	NO	bb	bb	90.946

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.12	9.025e3					1.5	NO		bb		
2	FUNCTION1 PFK	23.39	1.564e4					1.7	NO		db		
3	FUNCTION1 PFK	23.33	1.699e4					1.8	NO		dd		
4	FUNCTION1 PFK	23.21	3.674e4					1.8	NO		dd		
5	FUNCTION1 PFK	23.15	1.668e4					1.7	NO		bd		
6	FUNCTION1 PFK	23.07	1.606e4					2.1	NO		bb		
7	FUNCTION1 PFK	22.69	6.506e3					1.1	NO		db		
8	FUNCTION1 PFK	22.57	5.324e4					2.0	NO		bd		
9	FUNCTION1 PFK	22.46	2.047e3					0.6	NO		bb		
10	FUNCTION1 PFK	22.18	2.854e4					1.8	NO		bb		
11	FUNCTION1 PFK	22.00	2.061e4					1.1	NO		bb		
12	FUNCTION1 PFK	21.88	1.276e3					0.4	NO		bb		
13	FUNCTION1 PFK	21.48	1.972e3					0.6	NO		bb		
14	FUNCTION1 PFK	21.36	4.333e4					3.4	YES		db		
15	FUNCTION1 PFK	21.33	3.930e4					3.3	YES		dd		
16	FUNCTION1 PFK	21.25	3.950e4					3.7	YES		dd		
17	FUNCTION1 PFK	21.22	1.839e4					1.7	NO		bd		
18	FUNCTION1 PFK	26.44	2.008e3					0.6	NO		bb		
19	FUNCTION1 PFK	26.37	1.096e4					1.2	NO		bb		
20	FUNCTION1 PFK	26.06	5.687e3					0.8	NO		bb		
21	FUNCTION1 PFK	25.85	4.606e4					2.0	NO		bb		
22	FUNCTION1 PFK	25.67	1.822e4					1.6	NO		db		
23	FUNCTION1 PFK	25.59	5.429e3					0.7	NO		bd		
24	FUNCTION1 PFK	25.41	3.678e3					0.7	NO		bb		
25	FUNCTION1 PFK	25.35	1.804e3					0.6	NO		bb		
26	FUNCTION1 PFK	24.69	1.276e4					1.4	NO		bb		
27	FUNCTION1 PFK	24.46	1.415e3					0.4	NO		bb		
28	FUNCTION1 PFK	24.23	1.486e4					1.4	NO		db		
29	FUNCTION1 PFK	24.16	3.220e4					2.1	NO		dd		
30	FUNCTION1 PFK	24.07	1.916e4					1.5	NO		bd		
31	FUNCTION1 PFK	23.86	1.041e4					1.2	NO		bb		
32	FUNCTION1 PFK	23.75	2.252e4					1.8	NO		bb		
33	FUNCTION1 PFK	23.46	2.488e3					0.5	NO		bb		
34	FUNCTION1 PFK	28.21	1.683e4					1.3	NO		bb		
35	FUNCTION1 PFK	28.13	1.846e4					1.2	NO		db		
36	FUNCTION1 PFK	27.97	3.589e4					1.9	NO		bd		
37	FUNCTION1 PFK	27.85	3.272e3					0.6	NO		bb		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	27.55	1.459e3					0.4	NO		bb		
39	FUNCTION1 PFK	27.48	1.620e3					0.5	NO		bb		
40	FUNCTION1 PFK	27.36	8.182e3					1.0	NO		bb		
41	FUNCTION1 PFK	27.27	3.811e3					0.8	NO		db		
42	FUNCTION1 PFK	27.24	6.329e3					0.8	NO		bd		
43	FUNCTION1 PFK	27.03	6.469e3					1.1	NO		db		
44	FUNCTION1 PFK	26.99	1.869e4					1.7	NO		bd		
45	FUNCTION1 PFK	26.88	1.188e3					0.4	NO		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.61	1.089e6					38.3	YES		dd		0.000
2	FUNCTION2 PFK	28.42	5.461e5					42.0	YES		dd		0.000
3	FUNCTION2 PFK	28.36	4.208e5					43.0	YES		bd		0.000
4	FUNCTION2 PFK	30.22	3.292e4					7.2	YES		dd		0.000
5	FUNCTION2 PFK	30.16	1.231e5					8.8	YES		dd		0.000
6	FUNCTION2 PFK	30.05	1.117e5					10.9	YES		dd		0.000
7	FUNCTION2 PFK	29.99	9.120e4					11.4	YES		dd		0.000
8	FUNCTION2 PFK	29.94	2.092e5					12.7	YES		dd		0.000
9	FUNCTION2 PFK	29.76	2.907e5					15.9	YES		dd		0.000
10	FUNCTION2 PFK	29.69	1.383e5					17.3	YES		dd		0.000
11	FUNCTION2 PFK	29.58	3.090e5					19.5	YES		dd		0.000
12	FUNCTION2 PFK	29.52	2.750e5					21.8	YES		dd		0.000
13	FUNCTION2 PFK	29.39	4.070e5					23.3	YES		dd		0.000
14	FUNCTION2 PFK	29.28	4.078e5					25.5	YES		dd		0.000
15	FUNCTION2 PFK	29.18	3.023e5					27.3	YES		dd		0.000
16	FUNCTION2 PFK	29.14	2.357e5					29.1	YES		dd		0.000
17	FUNCTION2 PFK	28.99	6.311e5					30.4	YES		dd		0.000
18	FUNCTION2 PFK	28.92	2.637e5					32.6	YES		dd		0.000
19	FUNCTION2 PFK	28.71	1.202e6					36.5	YES		dd		0.000
20	FUNCTION2 PFK	32.81	9.753e3					1.3	NO		bb		0.000
21	FUNCTION2 PFK	32.42	4.488e3					1.0	NO		db		0.000
22	FUNCTION2 PFK	32.38	3.779e3					1.0	NO		bd		0.000
23	FUNCTION2 PFK	31.96	1.738e4					2.2	NO		bb		0.000
24	FUNCTION2 PFK	31.88	6.239e3					1.5	NO		db		0.000
25	FUNCTION2 PFK	31.82	6.444e3					1.4	NO		bd		0.000
26	FUNCTION2 PFK	31.71	6.215e3					1.3	NO		db		0.000
27	FUNCTION2 PFK	31.68	5.289e3					1.0	NO		bd		0.000
28	FUNCTION2 PFK	31.61	3.799e3					1.0	NO		bb		0.000
29	FUNCTION2 PFK	31.29	5.305e3					1.2	NO		bb		0.000
30	FUNCTION2 PFK	31.23	7.886e3					2.2	NO		bb		0.000
31	FUNCTION2 PFK	30.99	1.453e4					1.9	NO		bb		0.000
32	FUNCTION2 PFK	30.82	9.920e3					1.5	NO		bb		0.000
33	FUNCTION2 PFK	30.75	8.792e3					1.2	NO		bb		0.000
34	FUNCTION2 PFK	30.57	3.072e3					0.9	NO		bb		0.000
35	FUNCTION2 PFK	30.26	1.206e5					6.2	YES		db		0.000
36	FUNCTION2 PFK	32.91	8.369e3					1.2	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	36.94	1.363e3					0.5	NO		bb		0.000
2	FUNCTION3 PFK	36.89	2.597e3					0.7	NO		bb		0.000
3	FUNCTION3 PFK	36.63	5.216e4					2.1	NO		bb		0.000
4	FUNCTION3 PFK	35.98	3.727e4					3.2	YES		bb		0.000
5	FUNCTION3 PFK	35.89	8.881e3					1.2	NO		bb		0.000
6	FUNCTION3 PFK	35.60	1.234e3					0.5	NO		bb		0.000
7	FUNCTION3 PFK	34.97	3.658e3					1.5	NO		bb		0.000
8	FUNCTION3 PFK	34.76	1.198e4					1.2	NO		bb		0.000
9	FUNCTION3 PFK	34.41	7.167e5					12.6	YES		db		0.000
10	FUNCTION3 PFK	34.27	1.814e5					18.8	YES		dd		0.000
11	FUNCTION3 PFK	33.46	8.929e6					56.3	YES		dd		0.000
12	FUNCTION3 PFK	33.26	1.470e6					65.1	YES		dd		0.000
13	FUNCTION3 PFK	33.14	1.013e6					69.2	YES		dd		0.000
14	FUNCTION3 PFK	33.07	1.616e6					73.1	YES		bd		0.000
15	FUNCTION3 PFK	37.87	2.660e3					0.7	NO		bb		0.000
16	FUNCTION3 PFK	37.70	1.990e4					1.9	NO		bb		0.000
17	FUNCTION3 PFK	37.50	4.098e3					0.8	NO		bb		0.000
18	FUNCTION3 PFK	37.39	4.630e3					0.7	NO		bb		0.000
19	FUNCTION3 PFK	37.31	1.274e4					1.3	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	42.07	7.505e3					1.9	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.80	5.683e3					1.8	NO		bb		
2	FUNCTION5 PFK	43.45	7.005e3					1.9	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	28.15	7.677e1					2.2	NO		bb		0.000
2	FUNCTION1 HXCD...	27.41	8.186e1					1.7	NO		bb		0.000
3	FUNCTION1 HXCD...	26.21	8.899e1					2.8	NO		bb		0.000
4	FUNCTION1 HXCD...	24.48	1.408e2					2.9	NO		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	25.28	8.635e1					2.2	NO		bb		0.000
2	FUNCTION1 HPCD...	24.58	7.600e1					1.7	NO		bb		0.000
3	FUNCTION1 HPCD...	22.57	1.471e2					3.3	YES		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.97	1.041e2					2.4	NO		bb		0.000
2	FUNCTION2 HPCD...	31.62	1.168e2					2.5	NO		bb		0.000
3	FUNCTION2 HPCD...	31.26	1.928e2					4.9	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.10	7.435e1					2.4	NO		bb		0.000
2	FUNCTION3 OCDPE	35.85	7.444e1					2.1	NO		bb		0.000
3	FUNCTION3 OCDPE	35.30	9.337e1					2.3	NO		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	42.04	7.794e1					1.9	NO		bb		0.000
2	FUNCTION4 NCDPE	41.07	7.754e1					1.8	NO		bb		0.000
3	FUNCTION4 NCDPE	39.75	8.441e1					2.5	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
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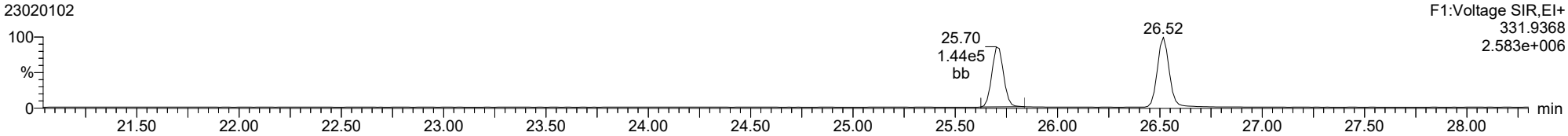
13C-1234-TCDD



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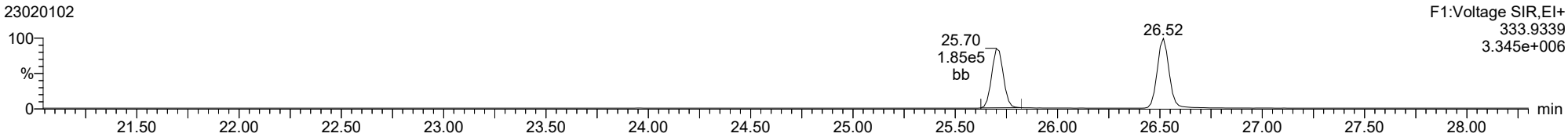
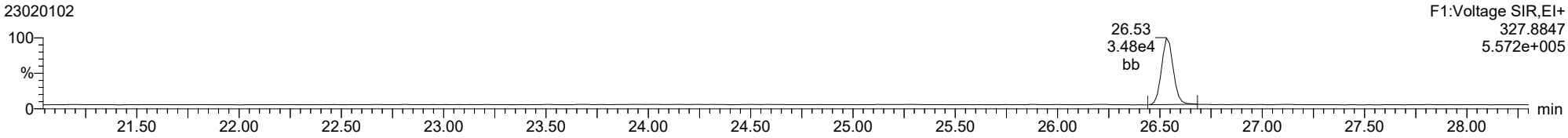


37CL-2378-TCDD



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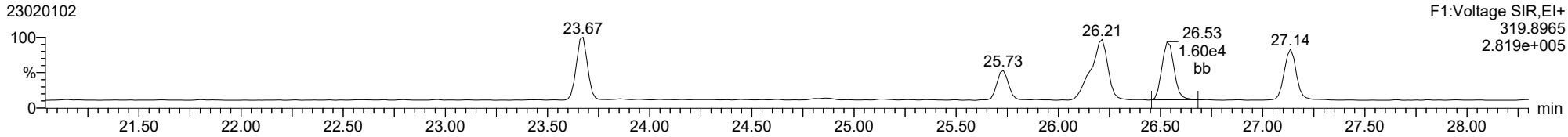
2378-TCDD



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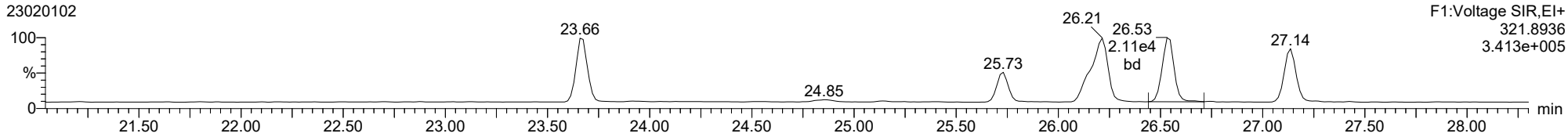

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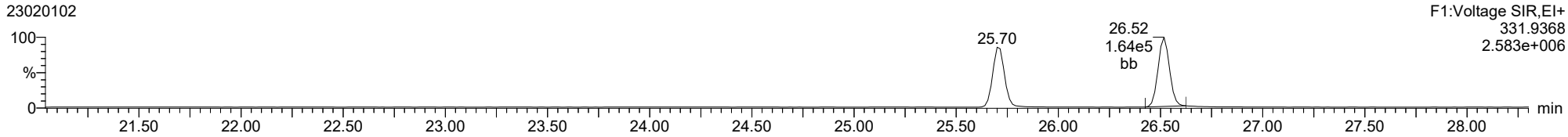

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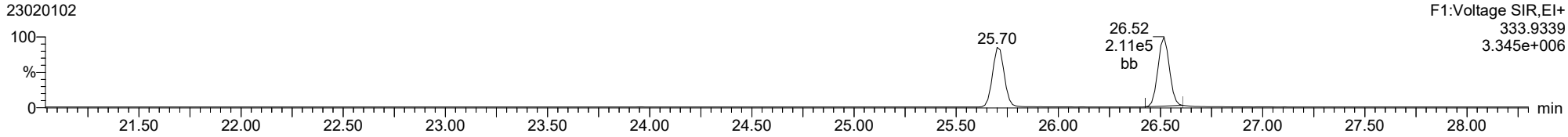

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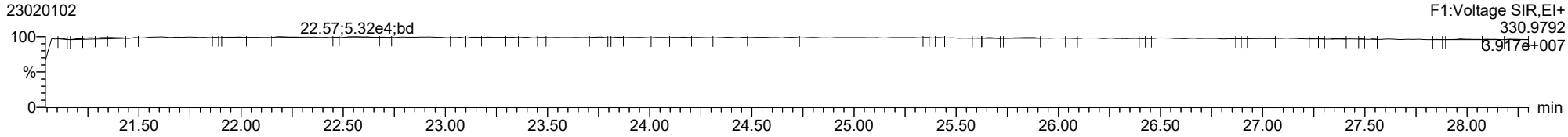

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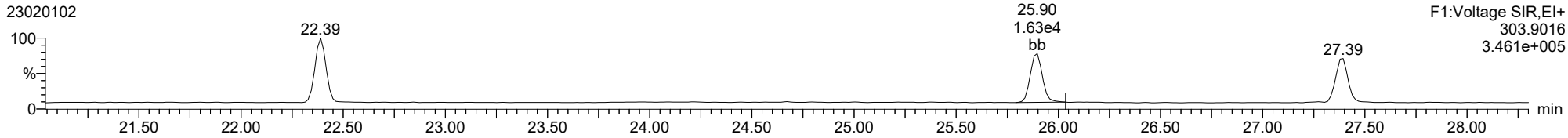

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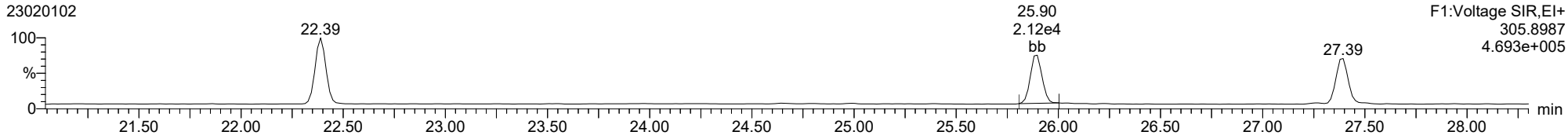

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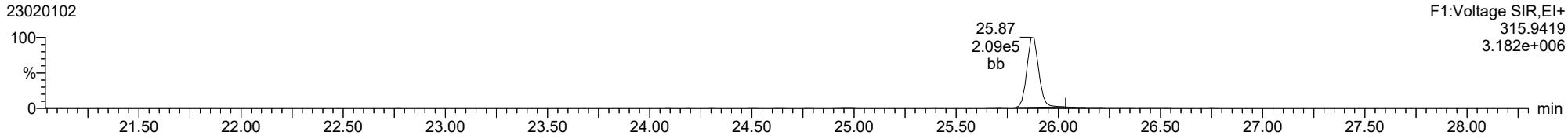

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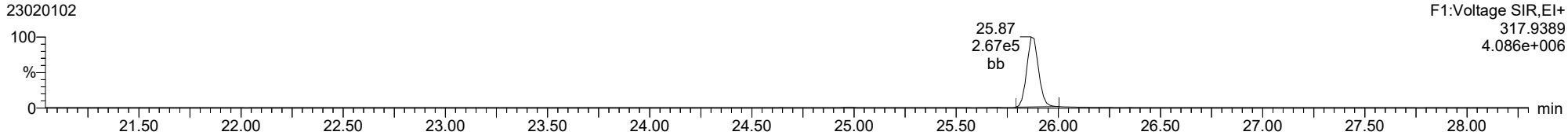

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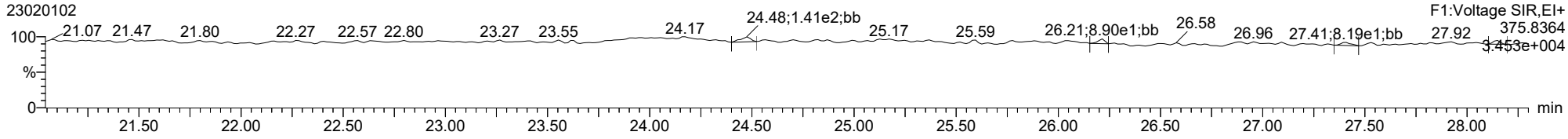

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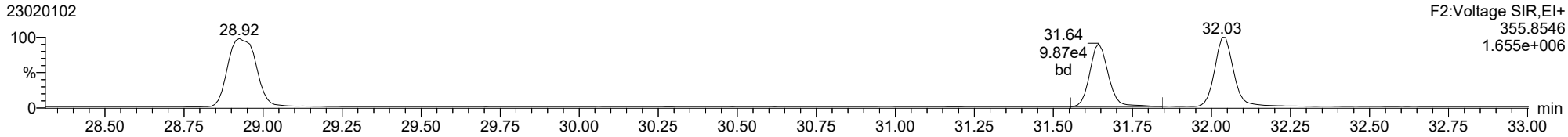

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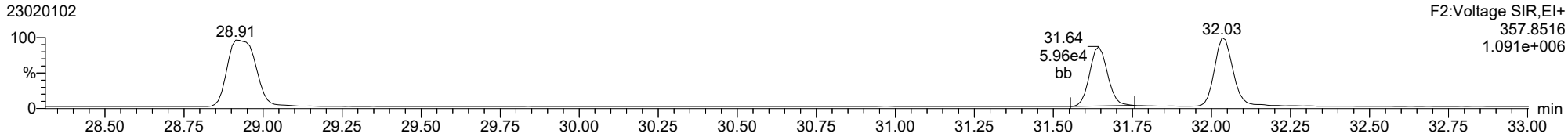

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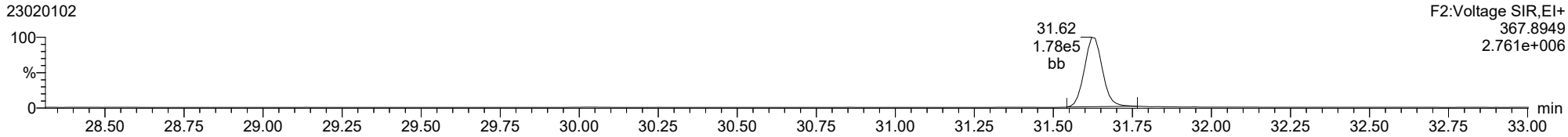

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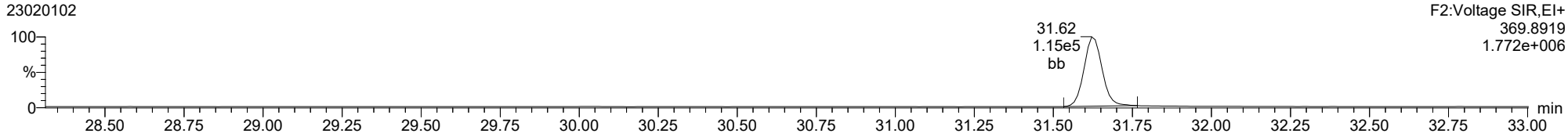

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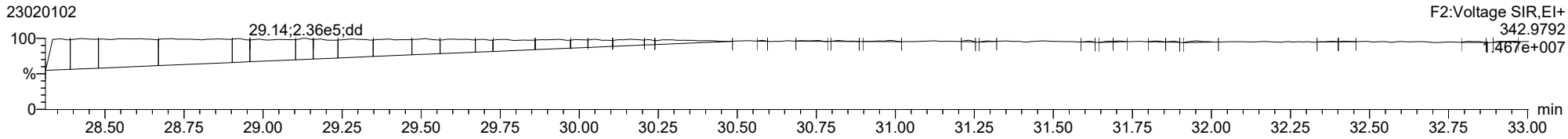

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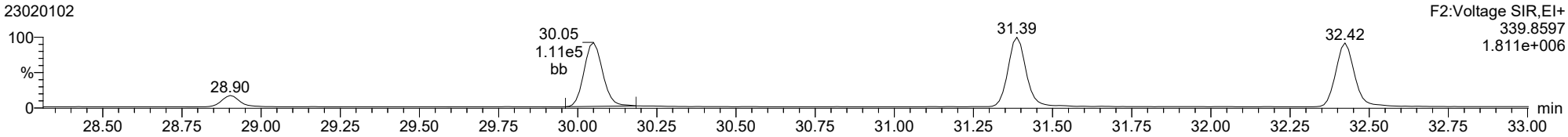

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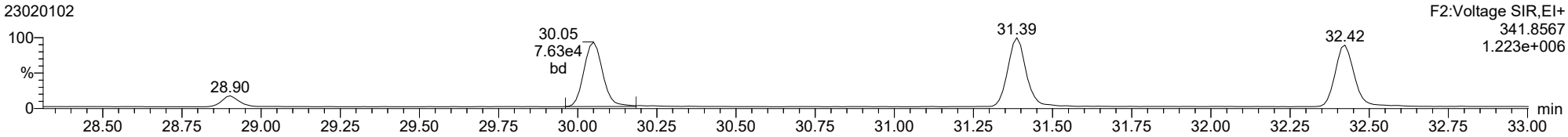

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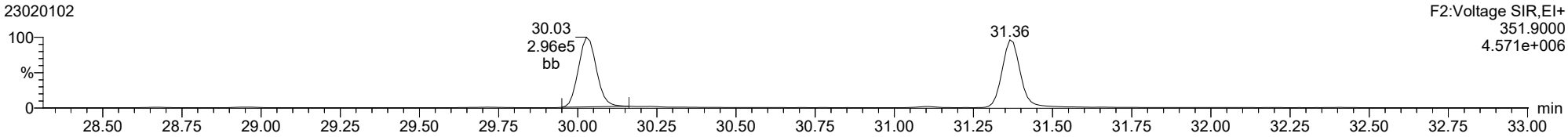

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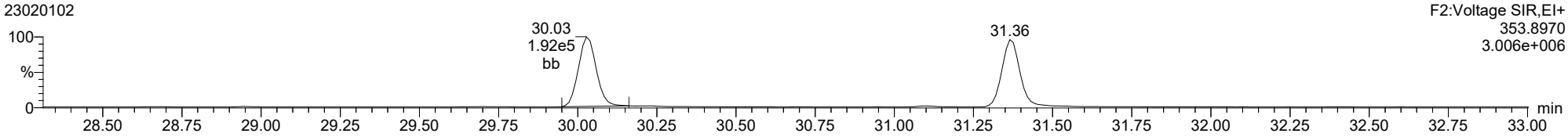

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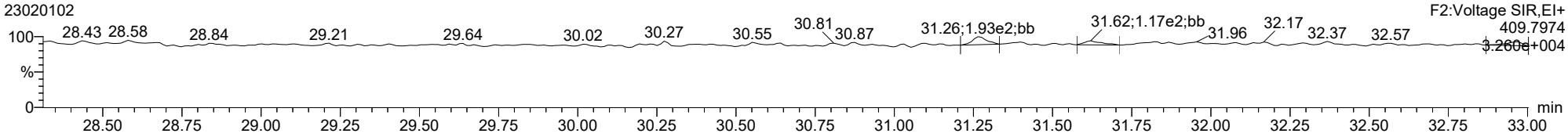

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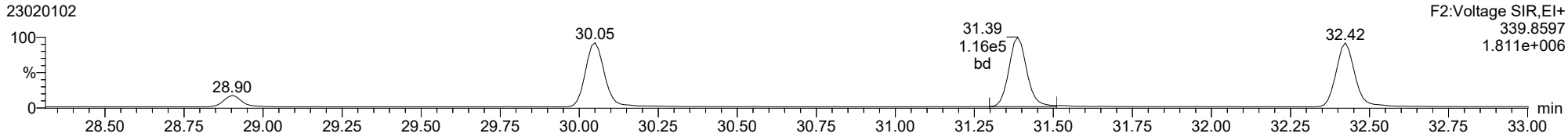

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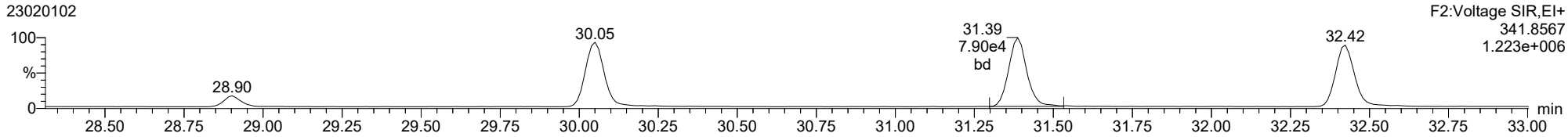

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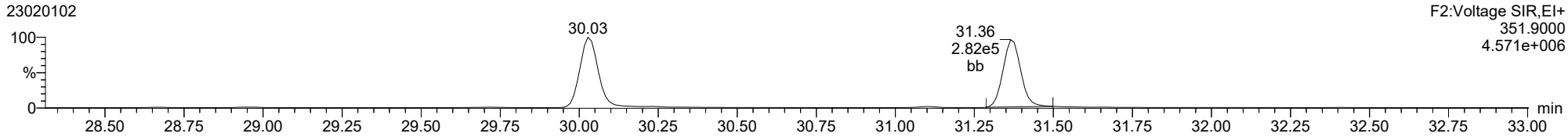

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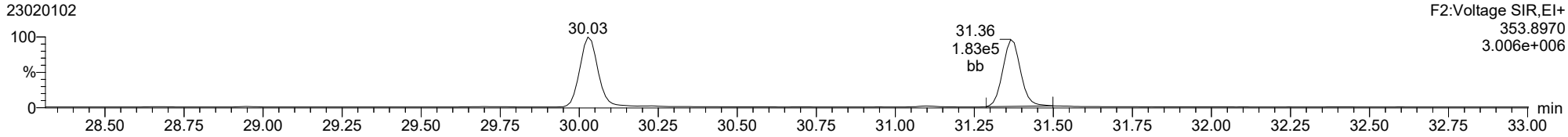

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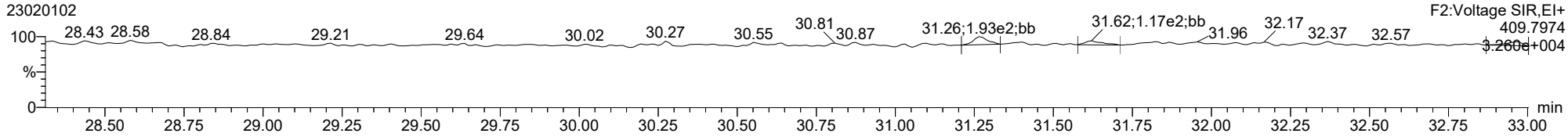

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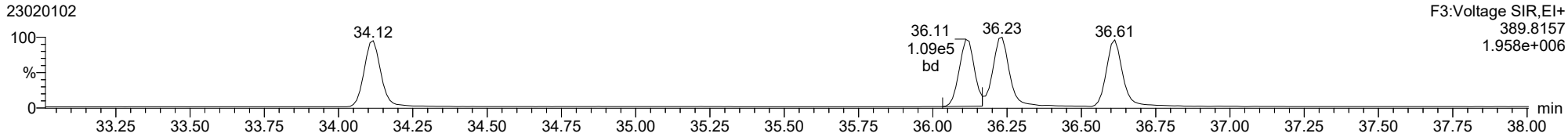

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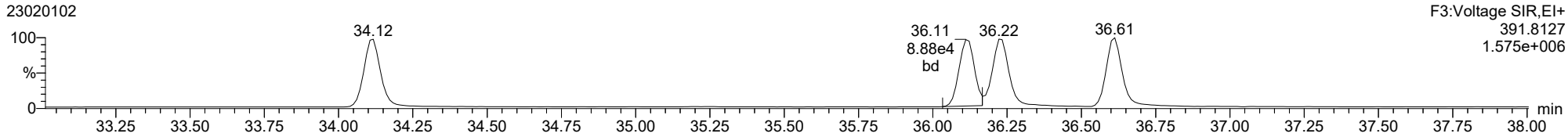

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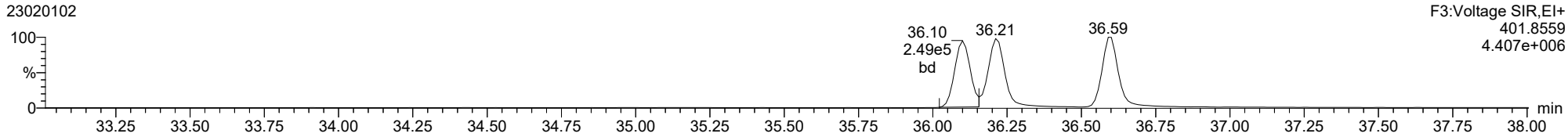

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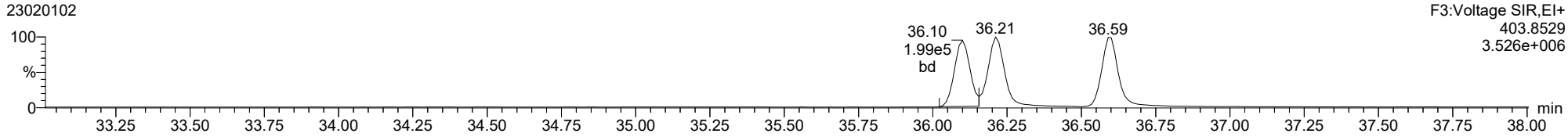

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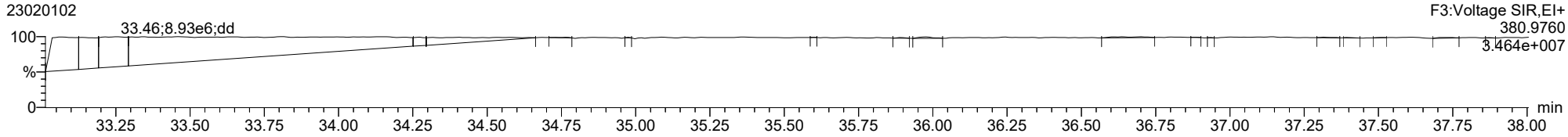

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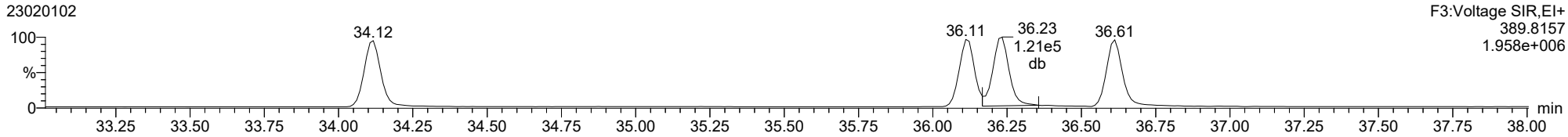

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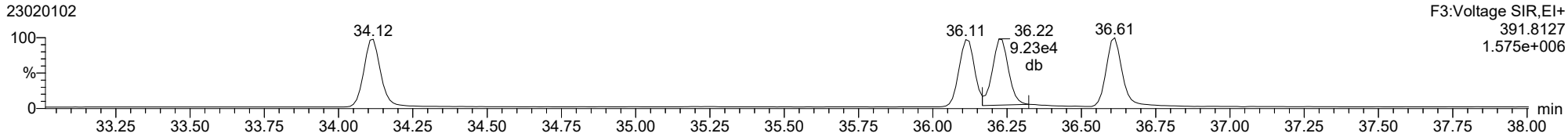

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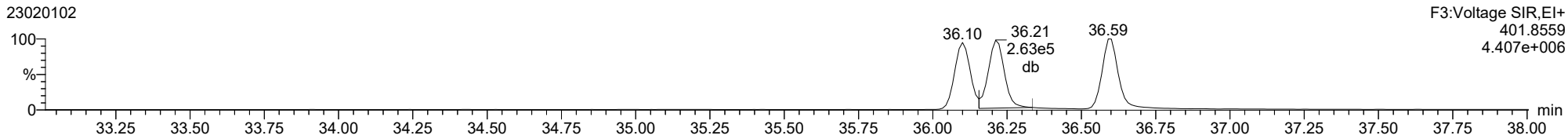

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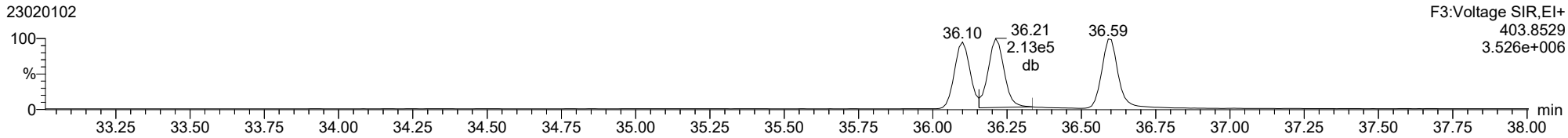

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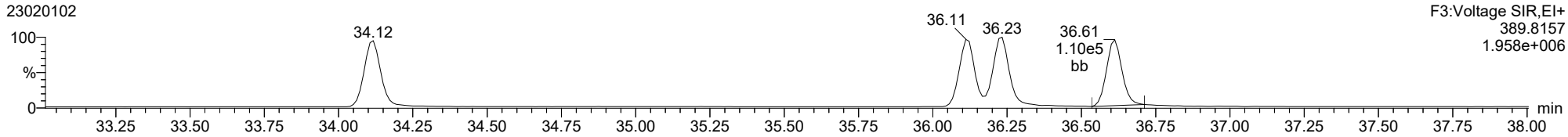

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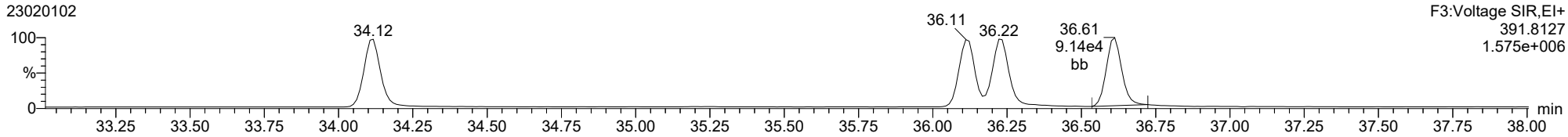

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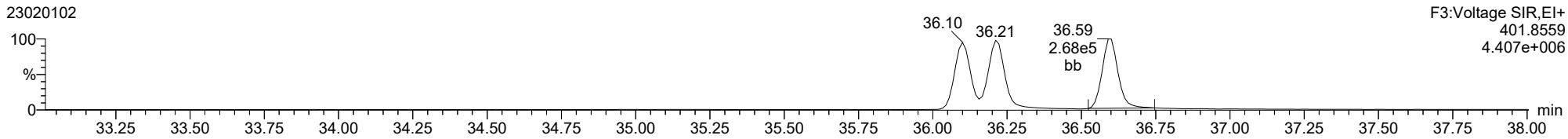

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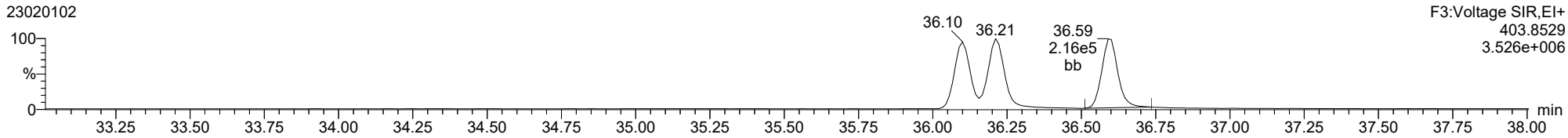

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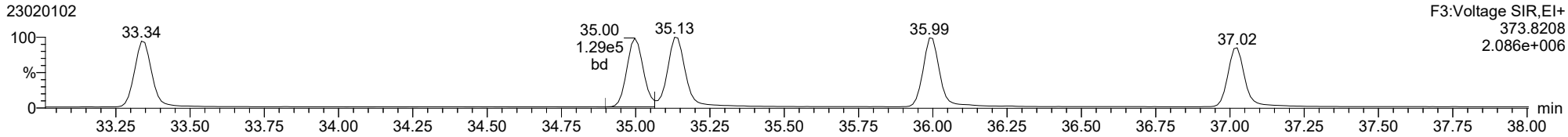

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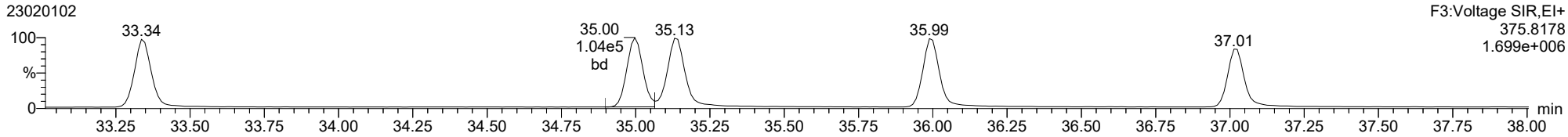

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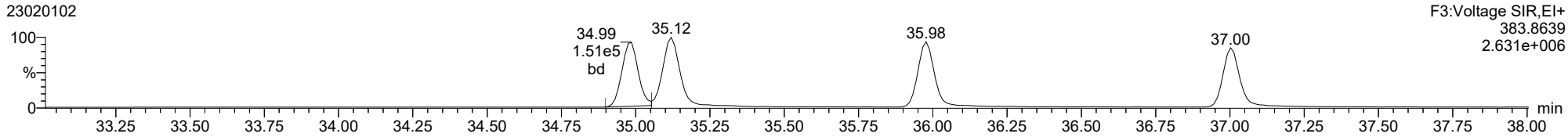

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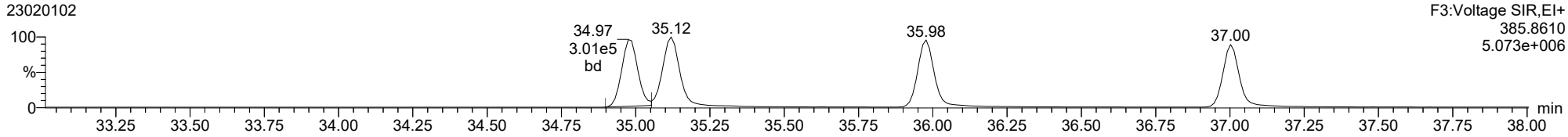
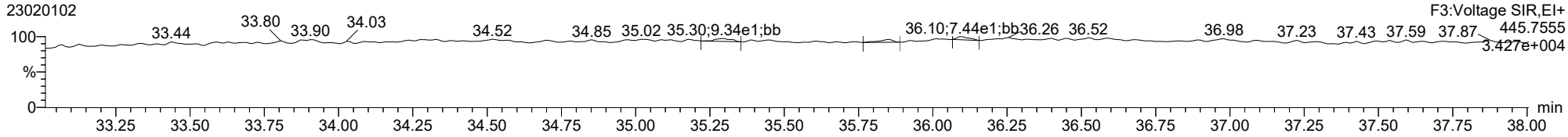


FUNCTION3 OCDPE



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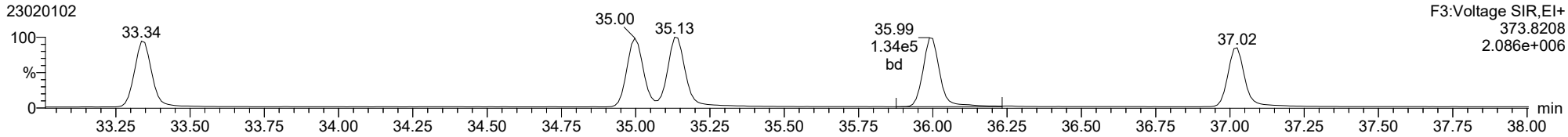
234678-HxCDF



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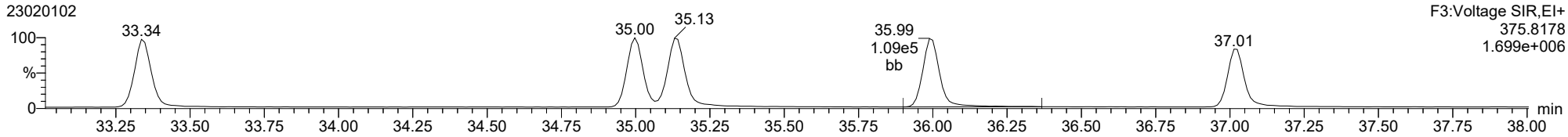

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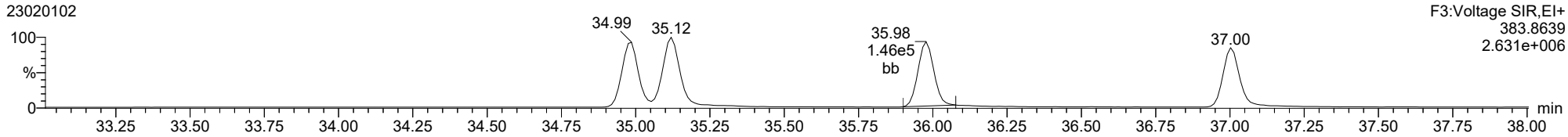

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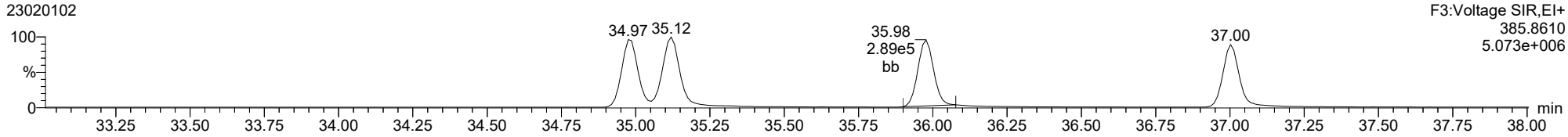

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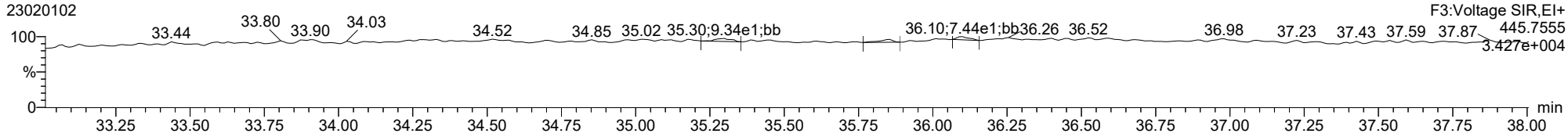

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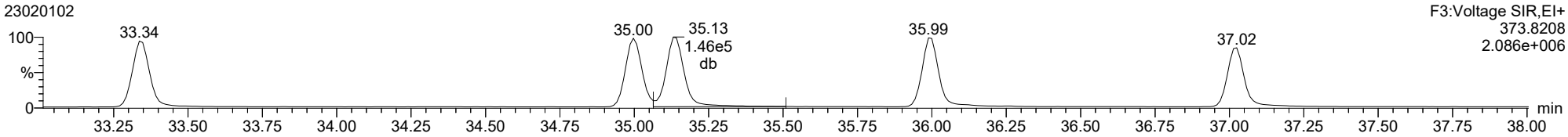

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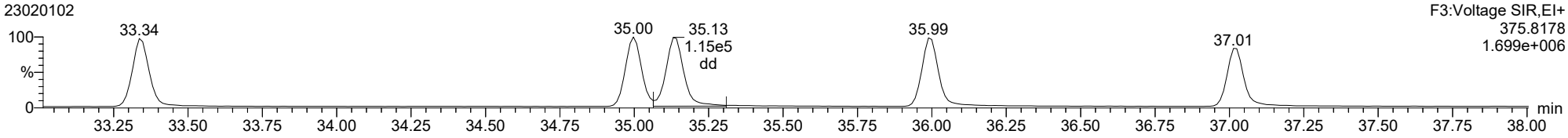

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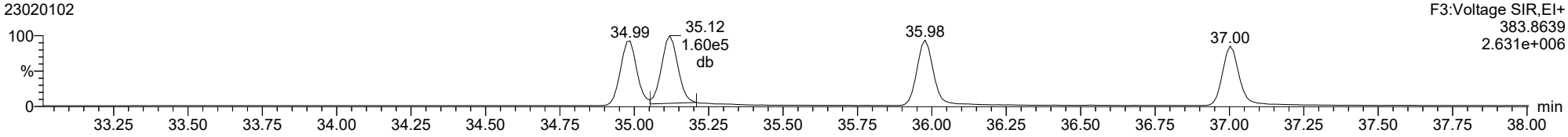

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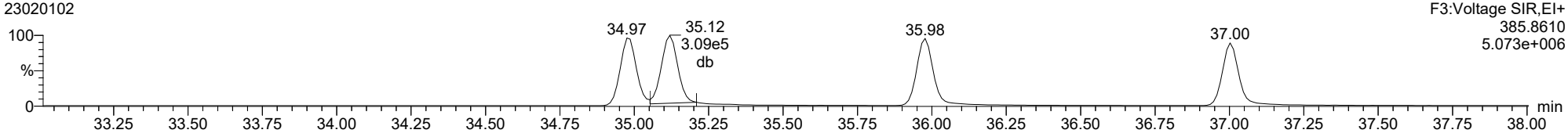

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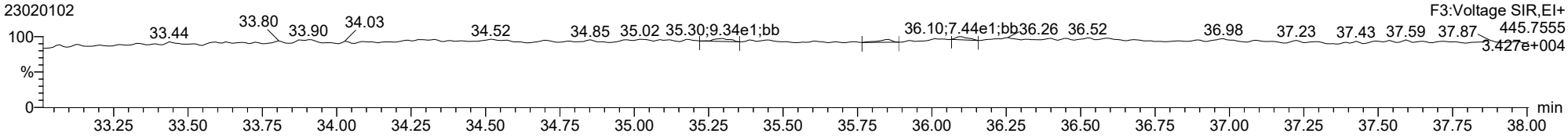

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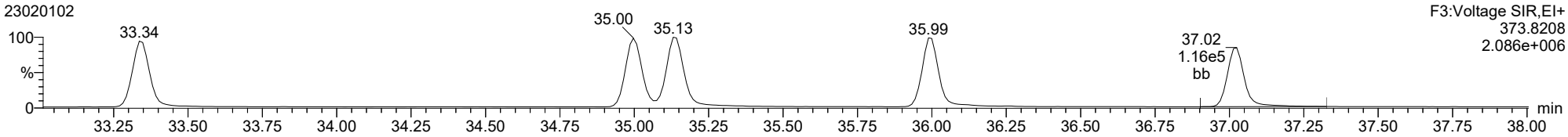

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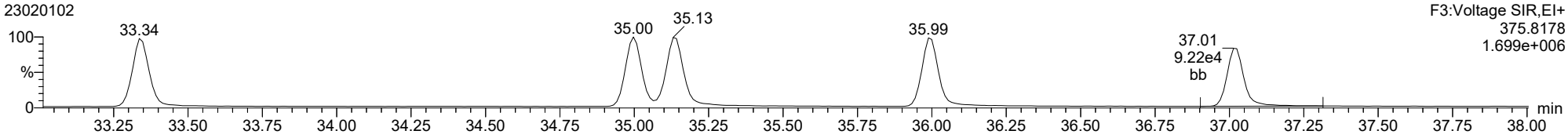

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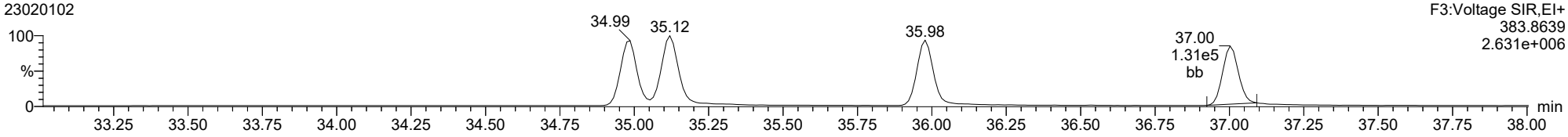

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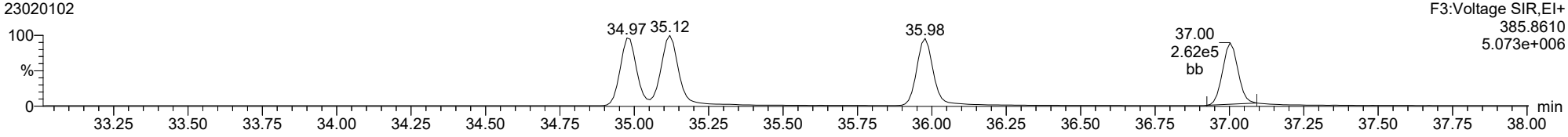

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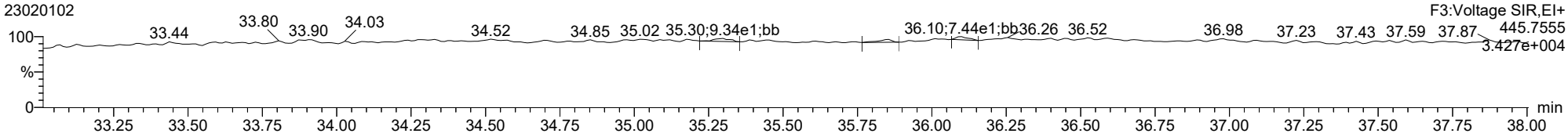

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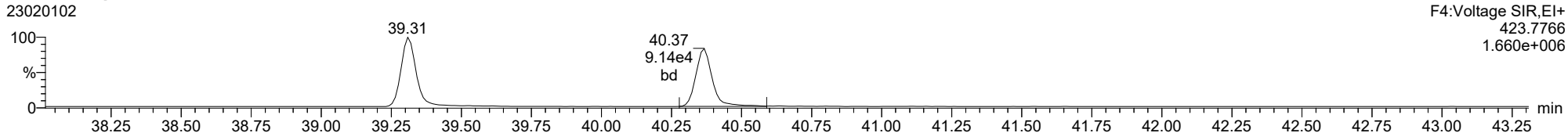

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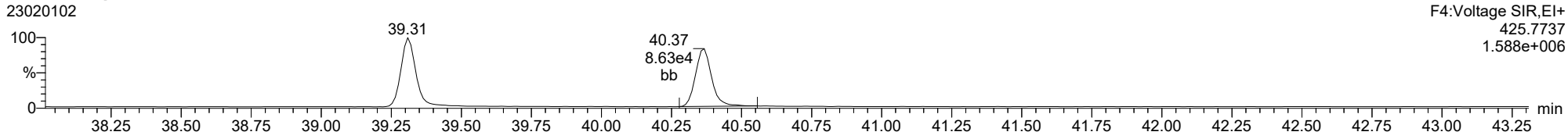

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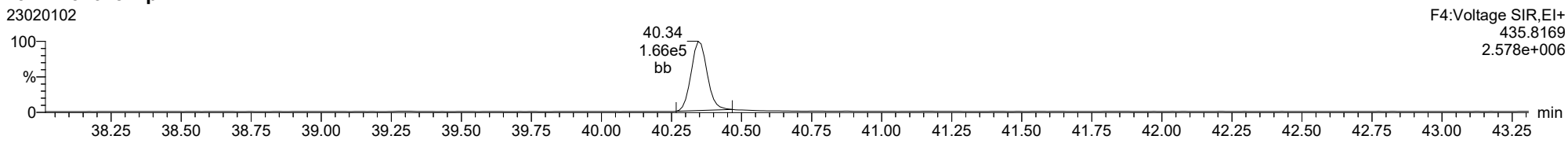

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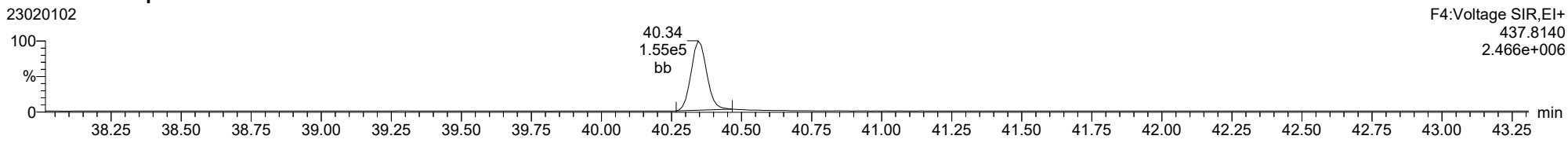
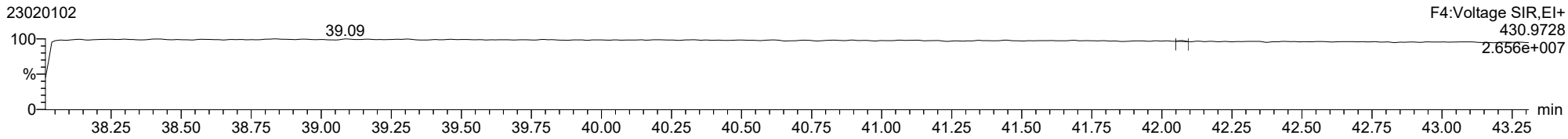


FUNCTION4 PFK



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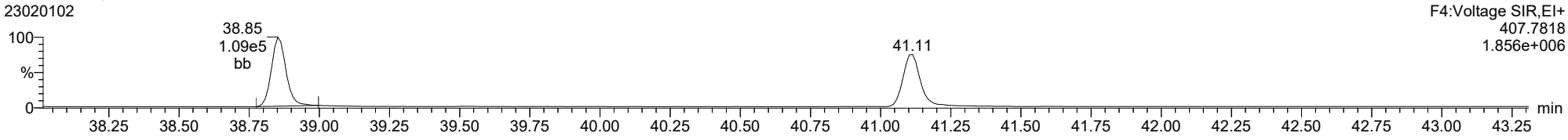

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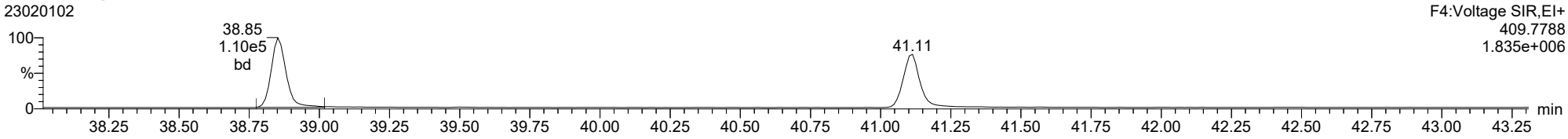

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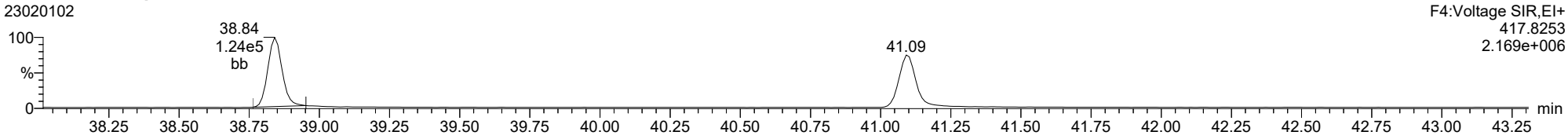

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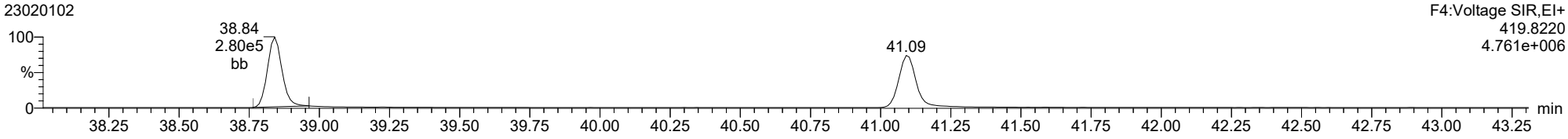
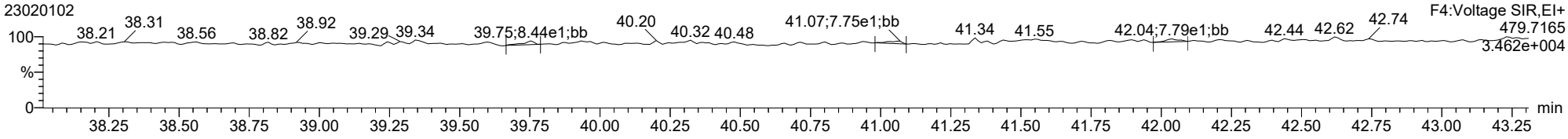


FUNCTION4 NCDPE



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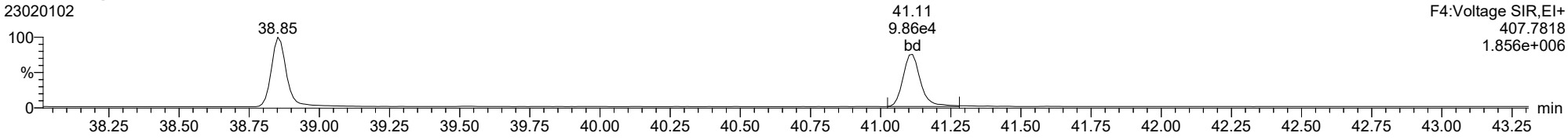

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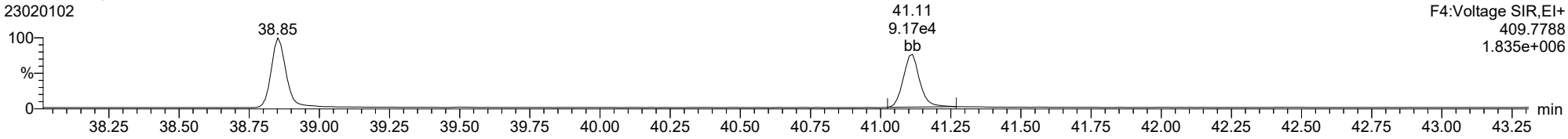

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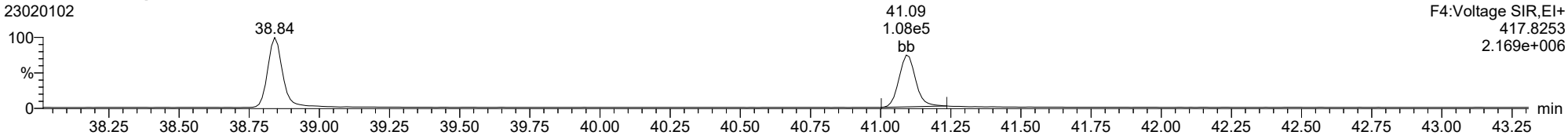

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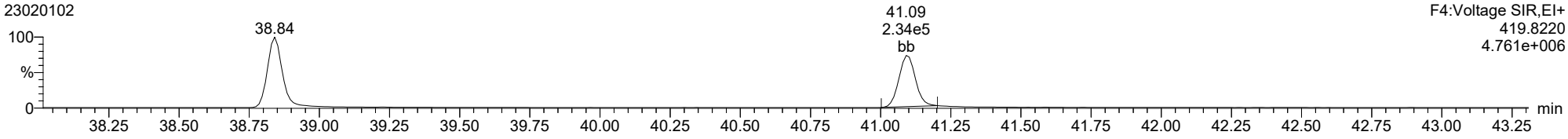

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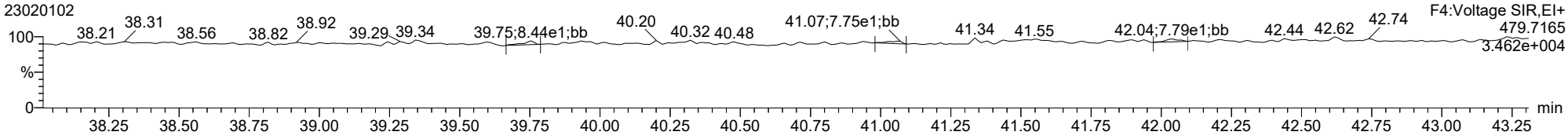

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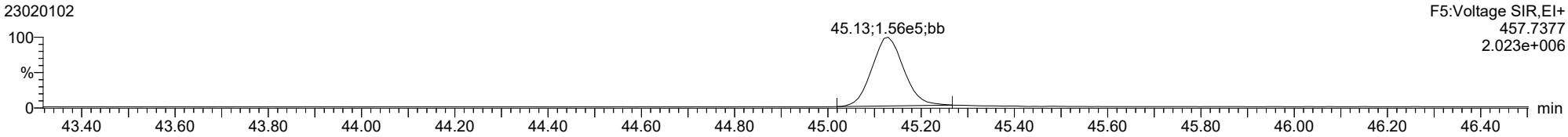
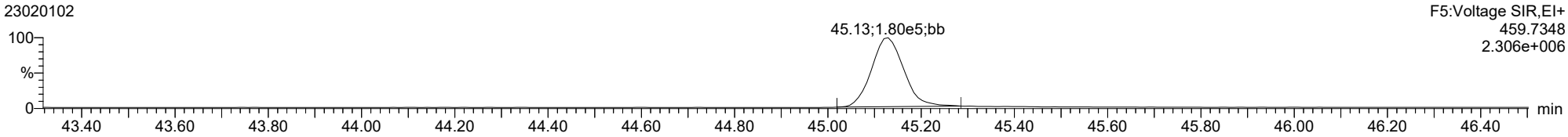


OCDD



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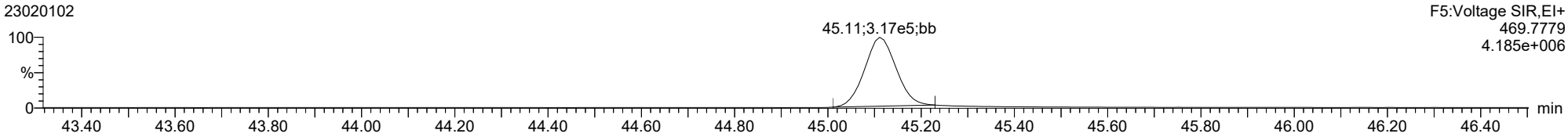

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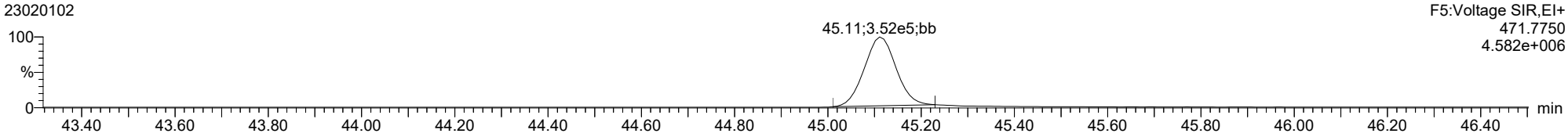
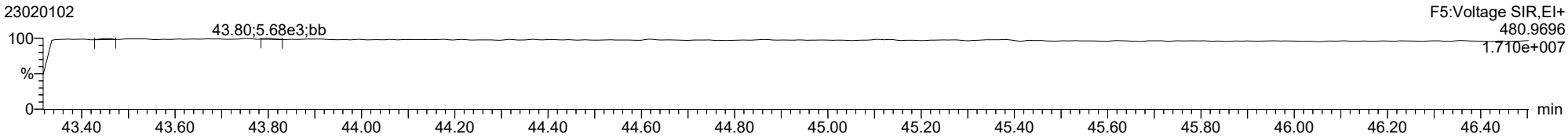


FUNCTION5 PFK



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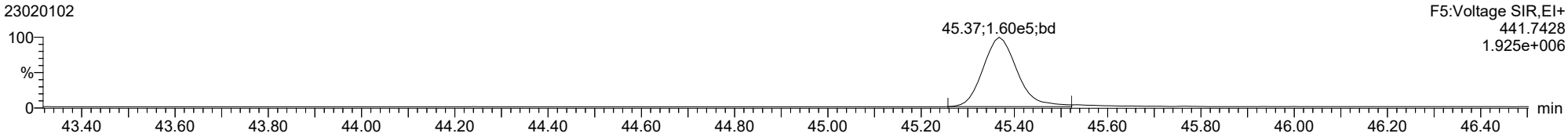

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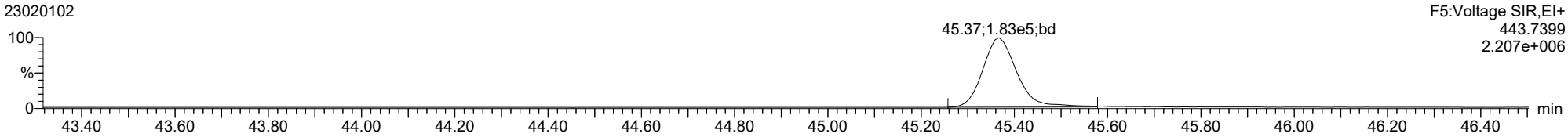
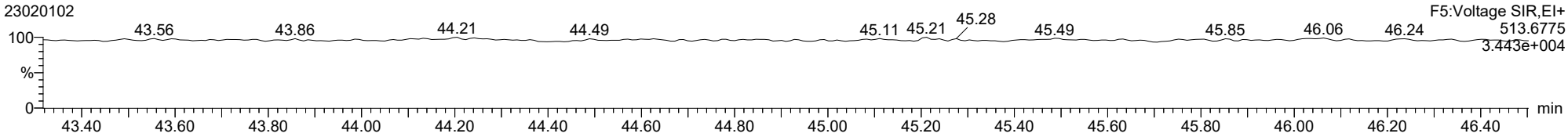


FUNCTION5 DCDPE



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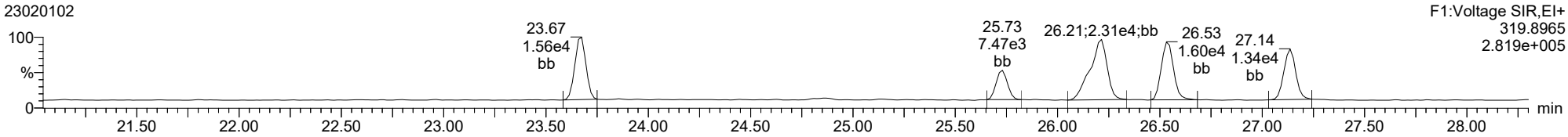
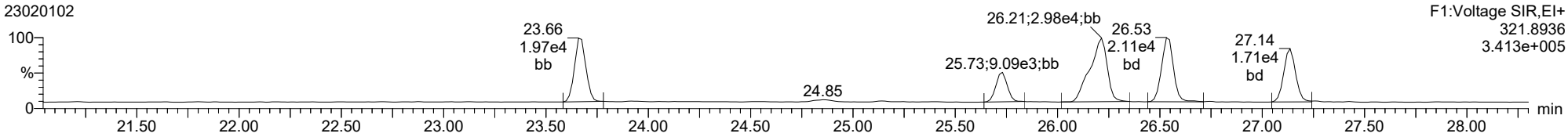
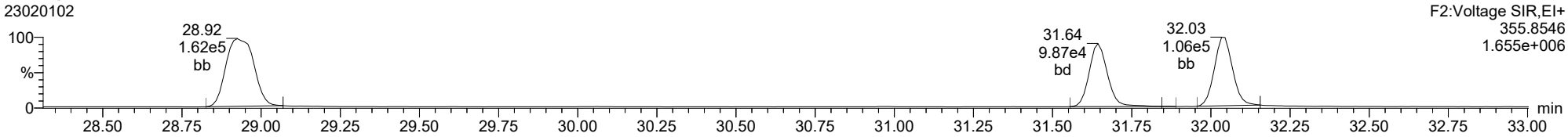
Total-tetradioxins



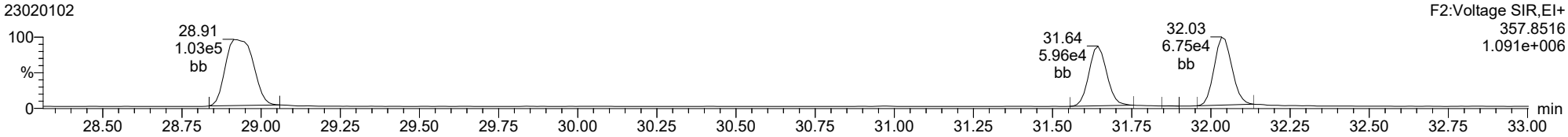
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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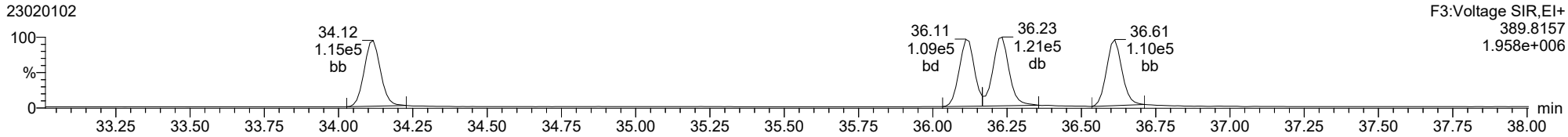
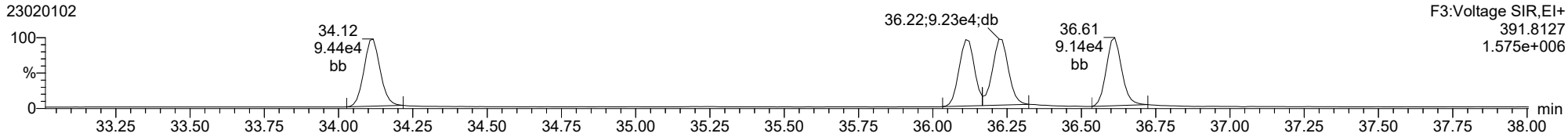
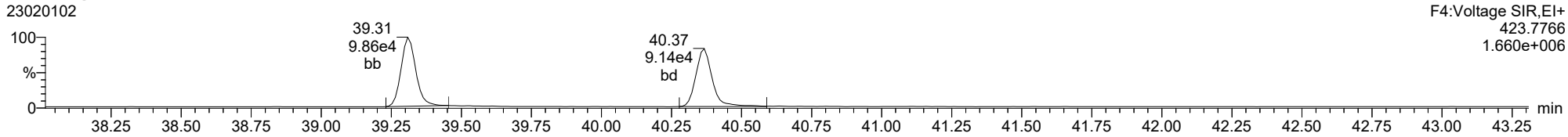
Total-hexadioxins



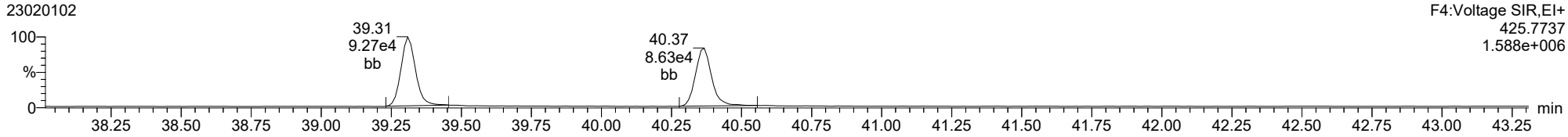
Total-hexadioxins



Total-heptadioxins



Total-heptadioxins



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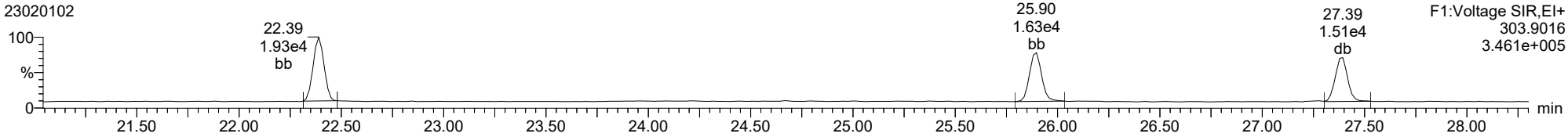
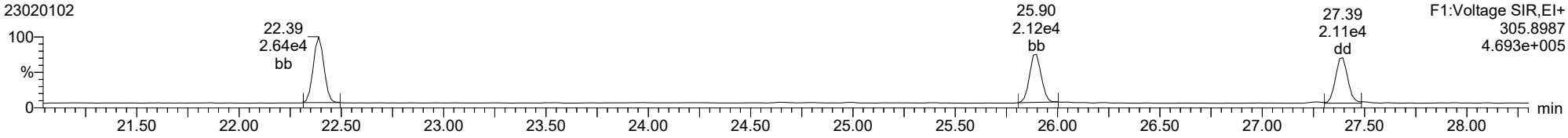
Total-tetrafurans



Total-tetrafurans



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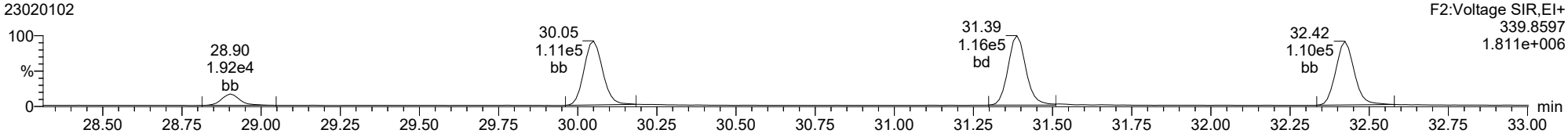

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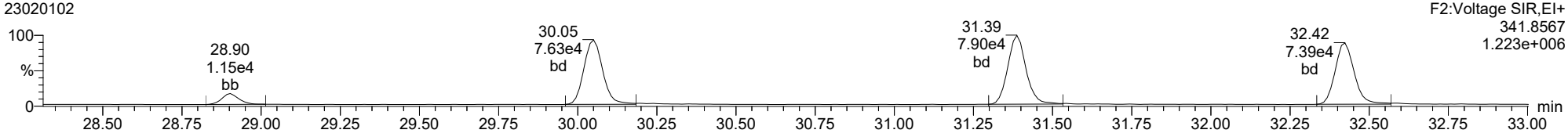

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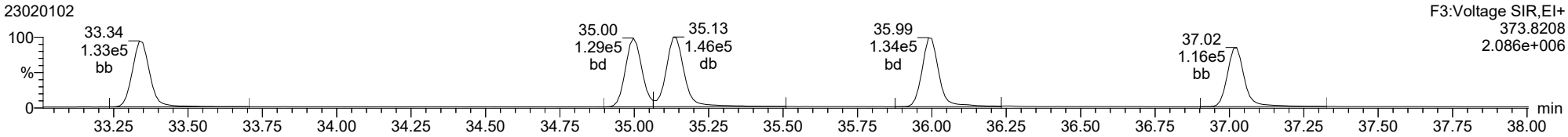
Total-hexafurans



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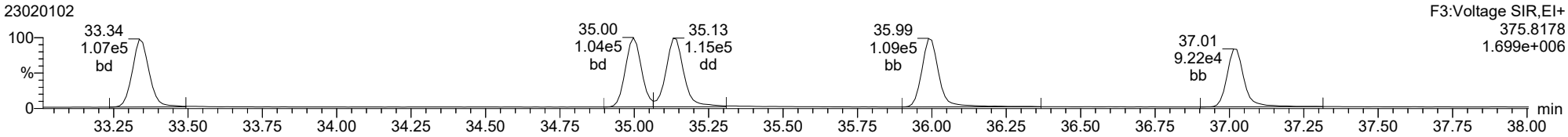

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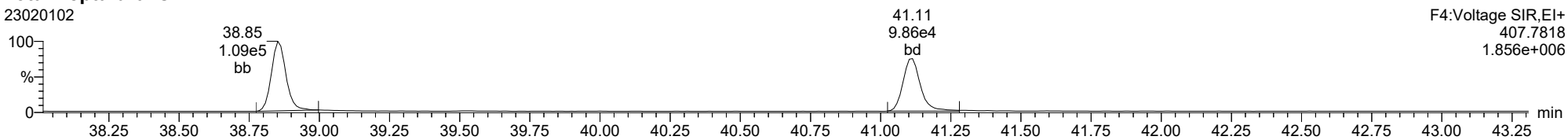

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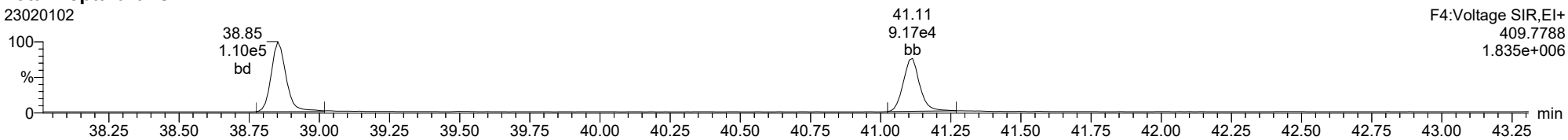

Printed: Wednesday, February 01, 2023 11:48:03 Pacific Standard Time

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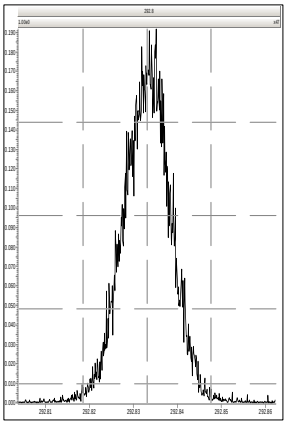
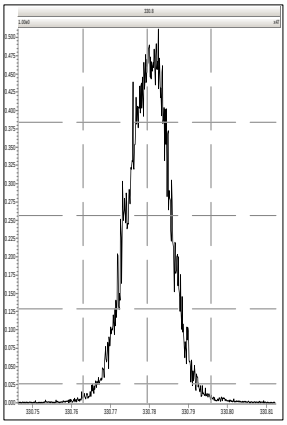


M 330.9792 R 13588



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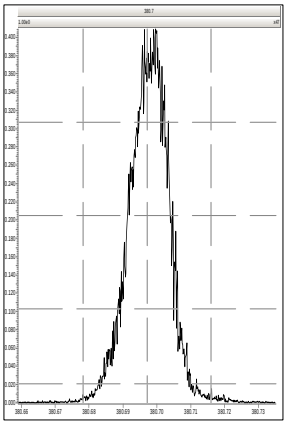

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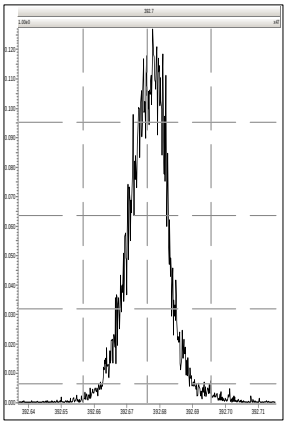
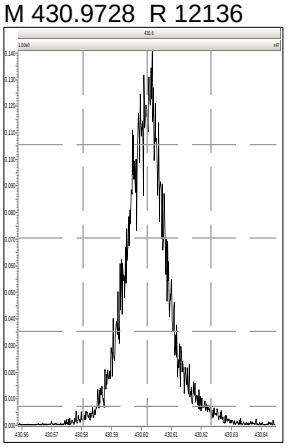


M 430.9728 R 12136



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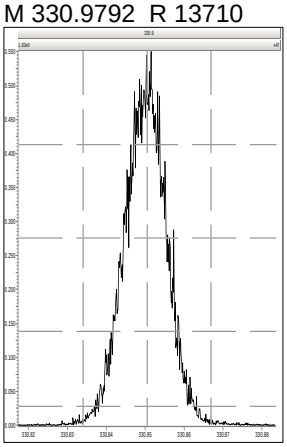

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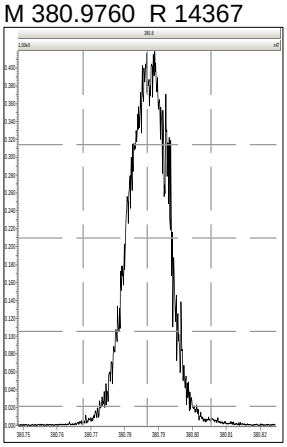

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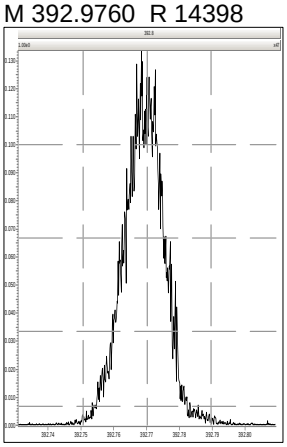

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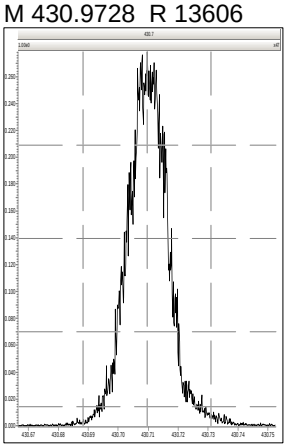

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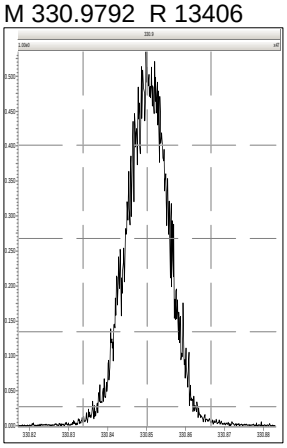

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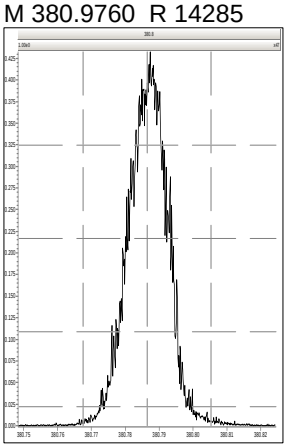

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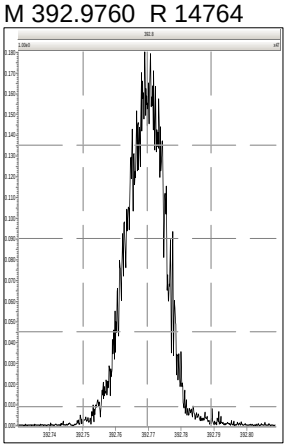

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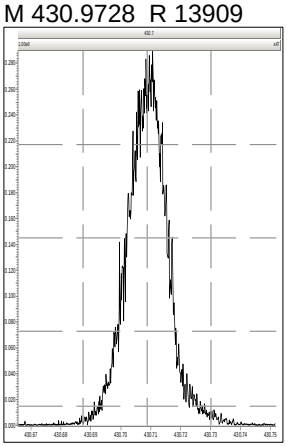

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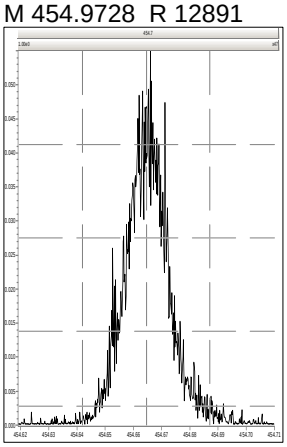

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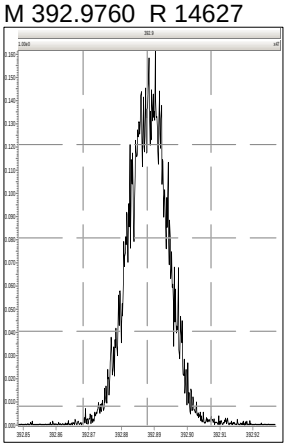

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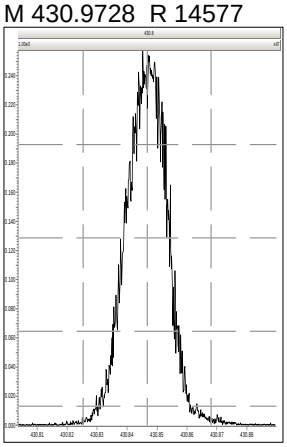

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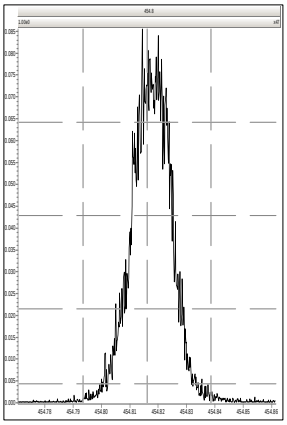

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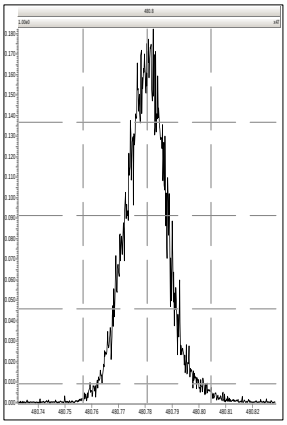

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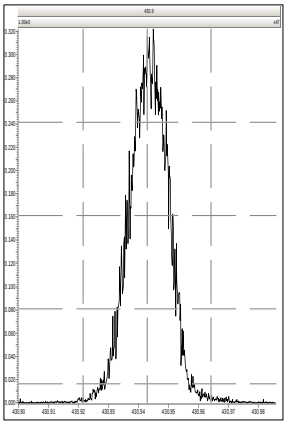

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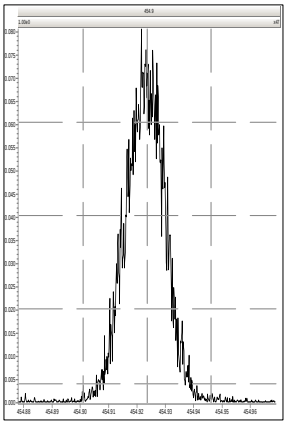

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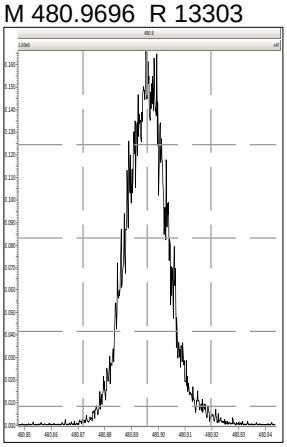

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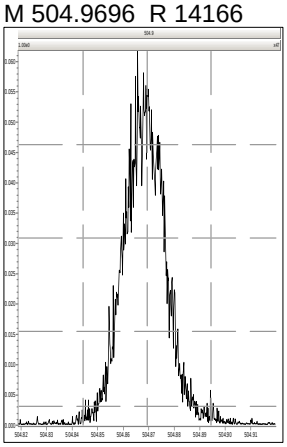

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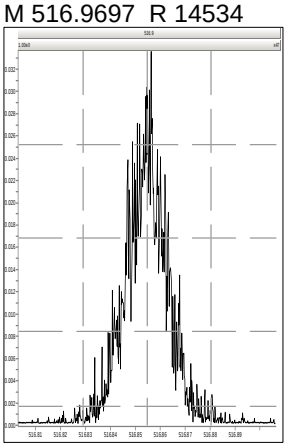

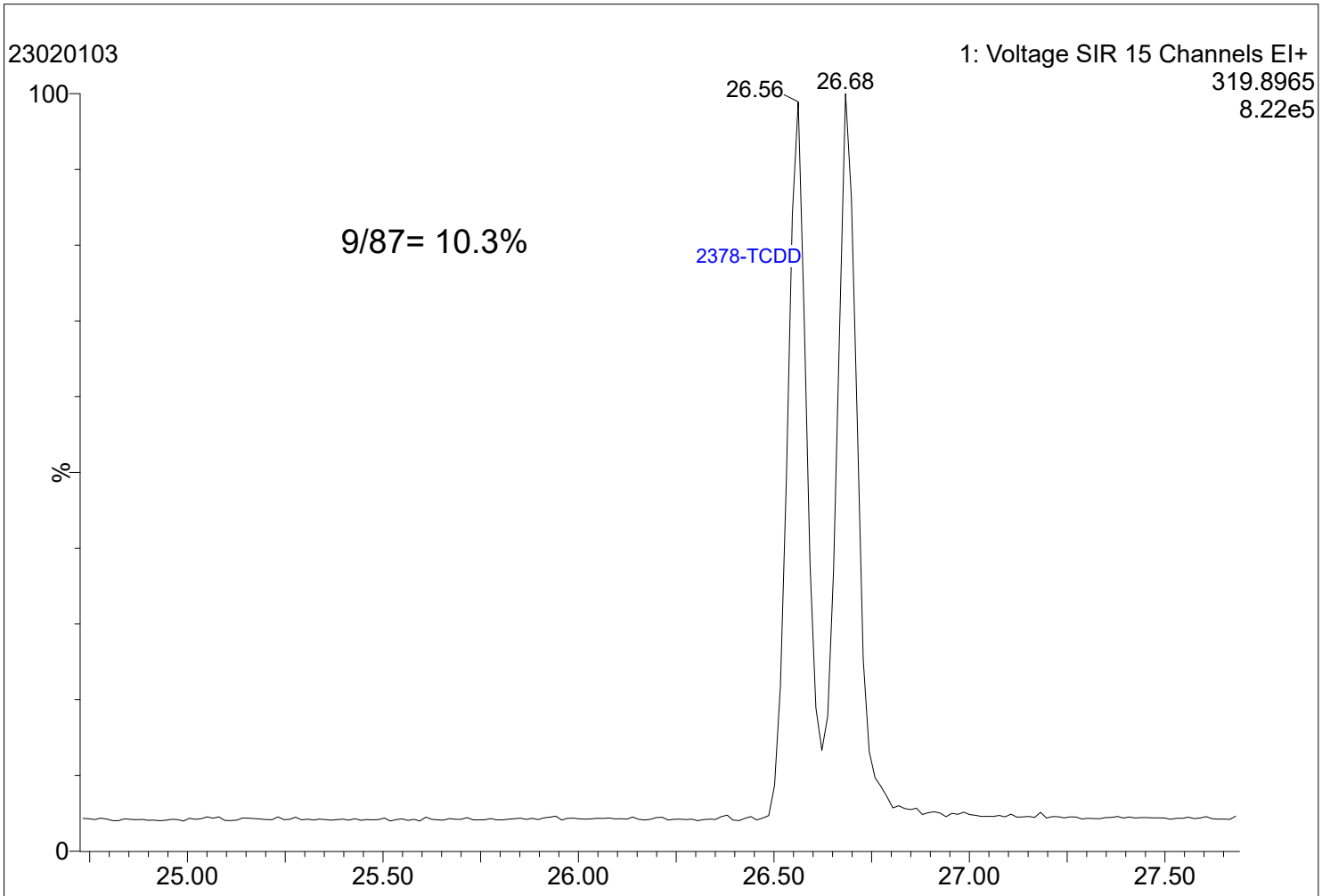
23020103
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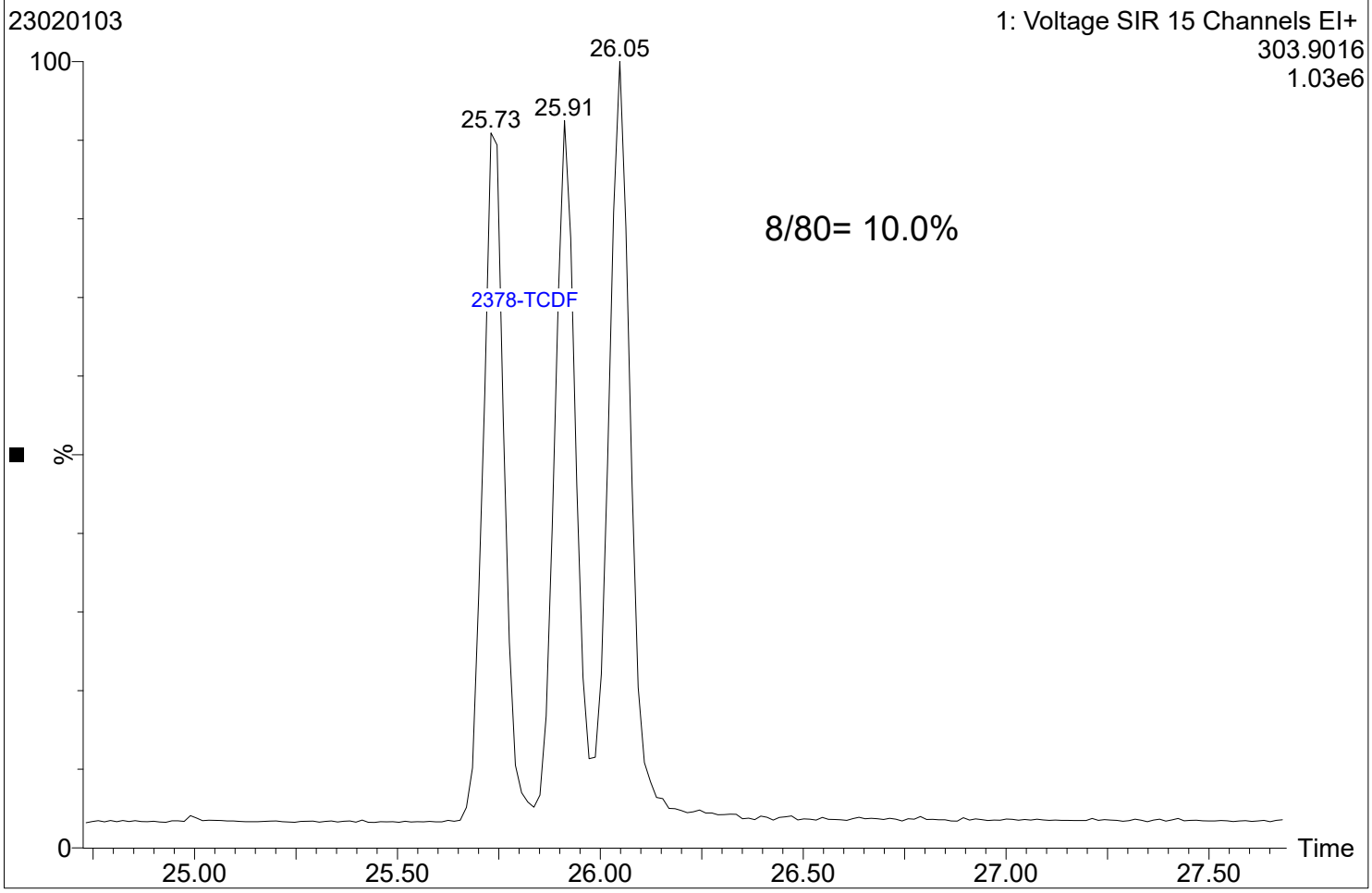
8.22e5
100
26.56
26.68
9/87= 10.3%
2378-TCDD
%
0
25.00
25.50
26.00
26.50
27.00
27.50


23020103
1: Voltage SIR 15 Channels EI+
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1.03e6
100
26.05
25.73
25.91
8/80= 10.0%
2378-TCDF
%
0
Time
25.00
25.50
26.00
26.50
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27.50

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:36:56 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CSLCR, Name: 23020104, Date: 01-Feb-2023, Time: 14:39:51, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.876		0.770	1080	1324								
12378-PeCDF	30.038	1.000	4.271e3	3.157e3	0.845	1.353	1.550	952	1114	6.59e4	5.26e4	69.3	47.2	NO	bb	bd	0.524
23478-PeCDF	31.374	1.000	4.511e3	2.751e3	0.911	1.640	1.550	952	1114	6.73e4	4.18e4	70.7	37.5	NO	bb	bb	0.494
123478-HxCDF	34.995	1.001	4.104e3	3.031e3	1.182	1.354	1.240	1010	1011	5.83e4	4.33e4	57.7	42.8	NO	bd	bd	0.507
234678-HxCDF	35.987	1.000	3.766e3	3.106e3	1.229	1.212	1.240	1010	1011	5.67e4	5.22e4	56.2	51.6	NO	bb	bb	0.497
123678-HxCDF	35.129	1.000	4.222e3	3.339e3	1.248	1.264	1.240	1010	1011	6.34e4	4.53e4	62.8	44.8	NO	db	db	0.502
123789-HxCDF	37.012	1.000	3.644e3	2.921e3	1.187	1.248	1.240	1010	1011	5.58e4	4.74e4	55.3	46.9	NO	bb	bb	0.543
1234678-HpCDF	38.850	1.000	3.896e3	3.656e3	1.204	1.066	1.050	999	874	7.14e4	6.60e4	71.5	75.5	NO	bb	bb	0.550
1234789-HpCDF	41.101	1.000	3.001e3	3.100e3	1.165	0.968	1.050	999	874	4.75e4	4.72e4	47.6	54.0	NO	bb	bb	0.533
OCDF	45.376	1.006	5.786e3	6.873e3	1.186	0.842	0.890	933	1403	7.23e4	8.24e4	77.5	58.8	NO	bb	bd	1.268
2378-TCDD					1.236		0.770	1059	950								
12378-PeCDD	31.642	1.001	3.215e3	2.188e3	1.087	1.469	1.550	1079	785	5.52e4	3.24e4	51.2	41.3	NO	bd	bb	0.496
123478-HxCDD	36.109	1.000	2.827e3	2.333e3	0.987	1.212	1.240	1001	800	4.34e4	4.15e4	43.4	51.9	NO	dd	bd	0.497
123678-HxCDD	36.221	1.000	3.387e3	2.724e3	1.021	1.243	1.240	1001	800	5.33e4	4.23e4	53.3	52.9	NO	db	db	0.556
123789-HxCDD	36.611	1.011	2.961e3	2.378e3	0.985	1.245	1.240	1001	800	5.48e4	3.89e4	54.8	48.6	NO	bb	bb	0.509
1234678-HpCDD	40.354	1.000	3.173e3	3.384e3	1.253	0.938	1.050	1384	648	4.91e4	5.67e4	35.5	87.6	NO	bb	bb	0.614
OCDD					1.103		0.890	865	2890								
13C-2378-TCDF	25.867	1.007	8.880e5	1.123e6	1.768	0.791	0.770	2432	2065	1.34e7	1.70e7	5499.3	8229.7	NO	bb	bb	101.483
13C-12378-PeCDF	30.026	1.168	1.020e6	6.593e5	1.527	1.547	1.550	4351	2458	1.57e7	1.01e7	3618.6	4108.9	NO	bb	bb	98.114
13C-23478-PeCDF	31.363	1.220	9.713e5	6.405e5	1.466	1.516	1.550	4351	2458	1.47e7	9.63e6	3385.5	3917.5	NO	bb	bb	98.077
13C-123478-HxCDF	34.973	0.956	3.987e5	7.926e5	1.054	0.503	0.510	2002	3102	6.44e6	1.29e7	3217.2	4143.2	NO	bd	bd	100.084
13C-123678-HxCDF	35.118	0.960	4.078e5	7.990e5	1.080	0.510	0.510	2002	3102	6.70e6	1.31e7	3346.6	4215.9	NO	db	db	98.911
13C-234678-HxCDF	35.976	0.983	3.811e5	7.451e5	1.014	0.512	0.510	2002	3102	6.35e6	1.23e7	3171.4	3951.0	NO	bb	bb	98.285
13C-123789-HxCDF	37.001	1.011	3.510e5	6.676e5	0.928	0.526	0.510	2002	3102	5.85e6	1.13e7	2920.8	3645.7	NO	bb	bb	97.160
13C-1234678-HpCDF	38.839	1.061	3.505e5	7.899e5	1.036	0.444	0.440	2536	4120	5.96e6	1.33e7	2351.6	3236.3	NO	bb	bb	97.433
13C-1234789-HpCDF	41.090	1.123	3.059e5	6.773e5	0.905	0.452	0.440	2536	4120	4.61e6	1.03e7	1815.9	2503.7	NO	bb	bb	96.171
13C-1234-TCDD	25.700	0.000	4.959e5	6.249e5	1.000	0.794	0.770	2405	1251	7.82e6	9.77e6	3252.7	7808.7	NO	bb	bb	100.000
13C-2378-TCDD	26.517	1.032	5.458e5	6.834e5	1.103	0.799	0.770	2405	1251	8.30e6	1.04e7	3451.4	8324.3	NO	bb	bb	99.431
13C-12378-PeCDD	31.619	1.230	6.125e5	3.907e5	0.914	1.568	1.550	1178	1168	9.36e6	5.78e6	7947.4	4944.2	NO	bb	bd	97.913
13C-123478-HxCDD	36.098	0.987	5.901e5	4.628e5	0.933	1.275	1.240	2011	1749	9.65e6	7.66e6	4801.0	4381.0	NO	bd	bd	99.896
13C-123678-HxCDD	36.209	0.990	6.061e5	4.713e5	0.965	1.286	1.240	2011	1749	9.81e6	7.59e6	4881.2	4342.3	NO	db	db	98.864
13C-1234678-HpCDD	40.343	1.103	4.400e5	4.119e5	0.782	1.068	1.050	2377	2314	6.98e6	6.54e6	2937.2	2824.0	NO	bb	bb	96.428
13C-OCDD	45.102	1.233	8.036e5	8.792e5	0.788	0.914	0.890	2320	2081	1.01e7	1.12e7	4365.2	5363.3	NO	bb	bb	188.967
13C-123789-HxCDD	36.588	0.000	6.276e5	5.021e5	1.000	1.250	1.240	2011	1749	1.01e7	8.07e6	5029.1	4612.9	NO	bb	bb	100.000
37CL-2378-TCDD	26.532	1.032	1.634e3		1.233			1257		2.25e4		17.9			bb		0.118

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:36:56 Pacific Standard Time

ID: CSLCR, Name: 23020104, Date: 01-Feb-2023, Time: 14:39:51, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					1.064		0.770	1080	1324								
1289-TCDF					0.858		0.770	1080	1324								
13468-PECDF					1.013		1.550	869	1005								
12389-PECDF					0.844		1.550	952	1114								
123468-HXCDF					1.197		1.240	1010	1011								
1368-TCDD					1.084		0.770	1059	950								
1289-TCDD					0.975		0.770	1059	950								
12479-PECDD					1.837		1.550	1079	785								
12389-PECDD					1.252		1.550	1079	785								
124679-HXCDD					1.033		1.240	1001	800								
1234679-HPCDD					1.286		1.050	1384	648								
Total-tetrafurans			0.000e0		0.933			1080		0.00e0							
Total-penta1			0.000e0					869		0.00e0							
Total-pentafurans			8.782e3		0.866			952		1.33e5							1.018
Total-hexafurans			1.574e4		1.208			1010		2.34e5							2.049
Total-heptafurans			6.897e3		1.185			999		1.19e5							1.082
Total-Furans			3.720e4		1.067			1080		5.59e5							5.417
Total-tetradioxins			0.000e0		1.099			1059		0.00e0							
Total-pentadioxins			3.215e3		1.392			1079		5.52e4							0.496
Total-hexadioxins			9.529e3		1.007			1001		1.58e5							1.624
Total-heptadioxins			3.173e3		1.269			1384		4.91e4							0.614
Total-Dioxins			1.601e4		1.165			1059		2.65e5							2.750
Total-TEQ			5.321e4					1059		8.24e5							8.168
FUNCTION1 PFK			3.664e5					577038		8.77e6							
FUNCTION2 PFK			5.803e5					248887		1.44e7							0.000
FUNCTION3 PFK			1.568e5					462057		5.36e6							0.000
FUNCTION4 PFK			0.000e0					300538		0.00e0							
FUNCTION5 PFK			6.700e4					200836		2.35e6							
FUNCTION1 HXCD...			8.333e2					859		1.29e4							0.000
FUNCTION1 HPCD...			1.557e3					919		1.93e4							0.000
FUNCTION2 HPCD...			7.646e2					998		1.65e4							0.000
FUNCTION3 OCDPE			1.789e3					773		2.75e4							0.000
FUNCTION4 NCDPE			1.690e2					924		5.87e3							0.000
FUNCTION5 DCDPE			8.847e1					800		2.49e3							0.000

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.37	4.511e3	2.751e3	0.911	1.64	1.55	70.7	YES	NO	bb	bb	0.494
2	12378-PeCDF	30.04	4.271e3	3.157e3	0.845	1.35	1.55	69.3	YES	NO	bb	bd	0.524

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.01	3.644e3	2.921e3	1.187	1.25	1.24	55.3	YES	NO	bb	bb	0.543
2	234678-HxCDF	35.99	3.766e3	3.106e3	1.229	1.21	1.24	56.2	YES	NO	bb	bb	0.497
3	123678-HxCDF	35.13	4.222e3	3.339e3	1.248	1.26	1.24	62.8	YES	NO	db	db	0.502
4	123478-HxCDF	35.00	4.104e3	3.031e3	1.182	1.35	1.24	57.7	YES	NO	bd	bd	0.507

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.10	3.001e3	3.100e3	1.165	0.97	1.05	47.6	YES	NO	bb	bb	0.533
2	1234678-HpCDF	38.85	3.896e3	3.656e3	1.204	1.07	1.05	71.5	YES	NO	bb	bb	0.550

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.37	4.511e3	2.751e3	0.911	1.64	1.55	70.7	YES	NO	bb	bb	0.494
2	12378-PeCDF	30.04	4.271e3	3.157e3	0.845	1.35	1.55	69.3	YES	NO	bb	bd	0.524
3	123789-HxCDF	37.01	3.644e3	2.921e3	1.187	1.25	1.24	55.3	YES	NO	bb	bb	0.543
4	234678-HxCDF	35.99	3.766e3	3.106e3	1.229	1.21	1.24	56.2	YES	NO	bb	bb	0.497
5	123678-HxCDF	35.13	4.222e3	3.339e3	1.248	1.26	1.24	62.8	YES	NO	db	db	0.502
6	123478-HxCDF	35.00	4.104e3	3.031e3	1.182	1.35	1.24	57.7	YES	NO	bd	bd	0.507
7	1234789-HpCDF	41.10	3.001e3	3.100e3	1.165	0.97	1.05	47.6	YES	NO	bb	bb	0.533
8	1234678-HpCDF	38.85	3.896e3	3.656e3	1.204	1.07	1.05	71.5	YES	NO	bb	bb	0.550
9	OCDF	45.38	5.786e3	6.873e3	1.186	0.84	0.89	77.5	YES	NO	bb	bd	1.268

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.64	3.215e3	2.188e3	1.087	1.47	1.55	51.2	YES	NO	bd	bb	0.496

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.61	2.961e3	2.378e3	0.985	1.24	1.24	54.8	YES	NO	bb	bb	0.509
2	123678-HxCDD	36.22	3.387e3	2.724e3	1.021	1.24	1.24	53.3	YES	NO	db	db	0.556
3	123478-HxCDD	36.11	2.827e3	2.333e3	0.987	1.21	1.24	43.4	YES	NO	dd	bd	0.497
4	Total-hexadioxins	35.12	3.540e2	3.166e2	1.007	1.12	1.24	6.7	YES	NO	db	bb	0.063

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.35	3.173e3	3.384e3	1.253	0.94	1.05	35.5	YES	NO	bb	bb	0.614

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-Dioxins	22.28	9.641e1	1.412e2	1.165	0.68	0.77	2.5	NO	NO	bd	bb	0.017
2	12378-PeCDD	31.64	3.215e3	2.188e3	1.087	1.47	1.55	51.2	YES	NO	bd	bb	0.496
3	123789-HxCDD	36.61	2.961e3	2.378e3	0.985	1.24	1.24	54.8	YES	NO	bb	bb	0.509
4	123678-HxCDD	36.22	3.387e3	2.724e3	1.021	1.24	1.24	53.3	YES	NO	db	db	0.556
5	123478-HxCDD	36.11	2.827e3	2.333e3	0.987	1.21	1.24	43.4	YES	NO	dd	bd	0.497
6	Total-hexadioxins	35.12	3.540e2	3.166e2	1.007	1.12	1.24	6.7	YES	NO	db	bb	0.063
7	1234678-HpCDD	40.35	3.173e3	3.384e3	1.253	0.94	1.05	35.5	YES	NO	bb	bb	0.614

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.37	4.511e3	2.751e3	0.911	1.64	1.55	70.7	YES	NO	bb	bb	0.494
2	12378-PeCDF	30.04	4.271e3	3.157e3	0.845	1.35	1.55	69.3	YES	NO	bb	bd	0.524
3	123789-HxCDF	37.01	3.644e3	2.921e3	1.187	1.25	1.24	55.3	YES	NO	bb	bb	0.543
4	234678-HxCDF	35.99	3.766e3	3.106e3	1.229	1.21	1.24	56.2	YES	NO	bb	bb	0.497
5	123678-HxCDF	35.13	4.222e3	3.339e3	1.248	1.26	1.24	62.8	YES	NO	db	db	0.502
6	123478-HxCDF	35.00	4.104e3	3.031e3	1.182	1.35	1.24	57.7	YES	NO	bd	bd	0.507
7	1234789-HpCDF	41.10	3.001e3	3.100e3	1.165	0.97	1.05	47.6	YES	NO	bb	bb	0.533
8	1234678-HpCDF	38.85	3.896e3	3.656e3	1.204	1.07	1.05	71.5	YES	NO	bb	bb	0.550
9	OCDF	45.38	5.786e3	6.873e3	1.186	0.84	0.89	77.5	YES	NO	bb	bd	1.268
10	Total-Dioxins	22.28	9.641e1	1.412e2	1.165	0.68	0.77	2.5	NO	NO	bd	bb	0.017
11	12378-PeCDD	31.64	3.215e3	2.188e3	1.087	1.47	1.55	51.2	YES	NO	bd	bb	0.496
12	123789-HxCDD	36.61	2.961e3	2.378e3	0.985	1.24	1.24	54.8	YES	NO	bb	bb	0.509
13	123678-HxCDD	36.22	3.387e3	2.724e3	1.021	1.24	1.24	53.3	YES	NO	db	db	0.556
14	123478-HxCDD	36.11	2.827e3	2.333e3	0.987	1.21	1.24	43.4	YES	NO	dd	bd	0.497
15	Total-hexadioxins	35.12	3.540e2	3.166e2	1.007	1.12	1.24	6.7	YES	NO	db	bb	0.063
16	1234678-HpCDD	40.35	3.173e3	3.384e3	1.253	0.94	1.05	35.5	YES	NO	bb	bb	0.614

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:36:56 Pacific Standard Time

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	27.58	8.439e4					1.7	NO		bb		
2	FUNCTION1 PFK	27.45	2.771e4					1.5	NO		bb		
3	FUNCTION1 PFK	27.17	2.484e4					1.4	NO		bb		
4	FUNCTION1 PFK	26.40	1.936e4					1.3	NO		bb		
5	FUNCTION1 PFK	26.11	4.980e4					1.6	NO		bb		
6	FUNCTION1 PFK	25.62	1.288e4					0.9	NO		bb		
7	FUNCTION1 PFK	23.40	2.240e4					0.8	NO		bb		
8	FUNCTION1 PFK	22.69	1.568e4					1.0	NO		bb		
9	FUNCTION1 PFK	22.18	2.261e4					1.3	NO		bb		
10	FUNCTION1 PFK	22.10	4.769e4					1.5	NO		bb		
11	FUNCTION1 PFK	21.98	1.078e4					0.8	NO		bb		
12	FUNCTION1 PFK	21.92	2.828e4					1.5	NO		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.52	1.267e4					1.4	NO		dd		0.000
2	FUNCTION2 PFK	29.46	2.595e4					2.1	NO		bd		0.000
3	FUNCTION2 PFK	29.36	9.698e3					1.3	NO		db		0.000
4	FUNCTION2 PFK	29.26	3.530e4					1.9	NO		dd		0.000
5	FUNCTION2 PFK	29.20	3.010e4					2.1	NO		dd		0.000
6	FUNCTION2 PFK	29.12	1.008e4					1.1	NO		dd		0.000
7	FUNCTION2 PFK	29.07	1.252e4					1.4	NO		bd		0.000
8	FUNCTION2 PFK	29.00	5.699e3					0.9	NO		db		0.000
9	FUNCTION2 PFK	28.97	2.160e4					1.6	NO		dd		0.000
10	FUNCTION2 PFK	28.81	1.772e4					0.9	NO		bd		0.000
11	FUNCTION2 PFK	28.71	1.302e4					0.8	NO		bb		0.000
12	FUNCTION2 PFK	28.64	1.871e3					0.4	NO		bb		0.000
13	FUNCTION2 PFK	28.51	4.178e3					0.8	NO		bb		0.000
14	FUNCTION2 PFK	28.42	7.027e3					0.8	NO		bb		0.000
15	FUNCTION2 PFK	28.34	4.550e3					0.9	NO		bb		0.000
16	FUNCTION2 PFK	31.02	8.571e3					1.3	NO		dd		0.000
17	FUNCTION2 PFK	30.97	2.370e4					2.0	NO		dd		0.000
18	FUNCTION2 PFK	30.86	2.515e4					1.6	NO		dd		0.000
19	FUNCTION2 PFK	30.83	6.842e3					1.2	NO		bd		0.000
20	FUNCTION2 PFK	30.75	1.931e4					1.6	NO		bb		0.000
21	FUNCTION2 PFK	30.62	1.066e4					1.2	NO		db		0.000
22	FUNCTION2 PFK	30.58	5.541e3					1.0	NO		bd		0.000
23	FUNCTION2 PFK	30.53	9.069e3					1.2	NO		bb		0.000
24	FUNCTION2 PFK	30.44	1.277e4					1.2	NO		db		0.000
25	FUNCTION2 PFK	30.39	1.436e4					1.3	NO		bd		0.000
26	FUNCTION2 PFK	30.19	7.186e3					0.8	NO		bb		0.000
27	FUNCTION2 PFK	30.03	1.599e4					1.2	NO		bb		0.000
28	FUNCTION2 PFK	29.91	1.518e3					0.4	NO		bb		0.000
29	FUNCTION2 PFK	29.80	6.143e3					0.8	NO		bb		0.000
30	FUNCTION2 PFK	29.65	1.120e4					1.0	NO		db		0.000
31	FUNCTION2 PFK	29.56	1.510e4					1.6	NO		dd		0.000
32	FUNCTION2 PFK	32.43	5.171e3					1.0	NO		db		0.000
33	FUNCTION2 PFK	32.40	8.945e3					1.4	NO		bd		0.000
34	FUNCTION2 PFK	32.33	8.546e3					0.8	NO		db		0.000
35	FUNCTION2 PFK	32.28	1.923e3					0.6	NO		bd		0.000
36	FUNCTION2 PFK	32.23	9.966e3					1.3	NO		db		0.000
37	FUNCTION2 PFK	32.18	8.875e3					1.2	NO		bd		0.000

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION2 PFK	32.09	1.451e4					1.2	NO		db		0.000
39	FUNCTION2 PFK	32.04	5.136e3					0.8	NO		dd		0.000
40	FUNCTION2 PFK	32.01	7.259e3					1.1	NO		bd		0.000
41	FUNCTION2 PFK	31.94	6.720e3					0.8	NO		bb		0.000
42	FUNCTION2 PFK	31.74	5.803e3					0.8	NO		bb		0.000
43	FUNCTION2 PFK	31.61	6.954e3					1.2	NO		db		0.000
44	FUNCTION2 PFK	31.59	1.111e4					1.2	NO		bd		0.000
45	FUNCTION2 PFK	31.45	7.843e2					0.3	NO		bb		0.000
46	FUNCTION2 PFK	31.41	1.192e4					1.2	NO		bb		0.000
47	FUNCTION2 PFK	31.07	1.965e3					0.4	NO		db		0.000
48	FUNCTION2 PFK	32.80	6.019e3					1.1	NO		db		0.000
49	FUNCTION2 PFK	32.77	9.084e3					1.2	NO		bd		0.000
50	FUNCTION2 PFK	32.64	3.494e4					1.5	NO		db		0.000
51	FUNCTION2 PFK	32.60	5.286e3					0.9	NO		dd		0.000
52	FUNCTION2 PFK	32.53	4.308e3					0.5	NO		bd		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	36.14	4.336e3					0.7	NO		db		0.000
2	FUNCTION3 PFK	36.11	5.755e3					0.7	NO		bd		0.000
3	FUNCTION3 PFK	36.06	7.687e3					0.9	NO		bb		0.000
4	FUNCTION3 PFK	36.02	1.796e4					1.6	NO		bb		0.000
5	FUNCTION3 PFK	35.81	1.736e4					1.2	NO		bb		0.000
6	FUNCTION3 PFK	35.69	5.338e4					1.7	NO		bb		0.000
7	FUNCTION3 PFK	35.20	3.054e3					0.6	NO		bb		0.000
8	FUNCTION3 PFK	34.12	1.673e4					1.2	NO		bb		0.000
9	FUNCTION3 PFK	33.89	1.577e4					1.4	NO		bb		0.000
10	FUNCTION3 PFK	33.50	1.199e4					1.1	NO		bb		0.000
11	FUNCTION3 PFK	36.41	2.803e3					0.5	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	46.30	6.353e3					1.3	NO		bb		
2	FUNCTION5 PFK	45.94	1.054e4					1.7	NO		bb		
3	FUNCTION5 PFK	45.79	1.187e3					0.6	NO		bb		
4	FUNCTION5 PFK	45.60	4.997e3					1.0	NO		bb		
5	FUNCTION5 PFK	45.34	9.354e3					1.4	NO		db		
6	FUNCTION5 PFK	45.31	2.478e3					1.0	NO		bd		
7	FUNCTION5 PFK	45.26	5.509e3					1.0	NO		bb		
8	FUNCTION5 PFK	43.99	1.588e4					1.1	NO		bb		
9	FUNCTION5 PFK	43.56	6.413e3					1.4	NO		db		
10	FUNCTION5 PFK	43.53	4.291e3					1.1	NO		bd		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	22.28	8.501e1					1.7	NO		bb		0.000
2	FUNCTION1 HXCD...	21.98	1.104e2					2.3	NO		bb		0.000
3	FUNCTION1 HXCD...	26.53	2.072e2					2.6	NO		bb		0.000
4	FUNCTION1 HXCD...	26.29	8.524e1					1.7	NO		bb		0.000
5	FUNCTION1 HXCD...	25.91	1.063e2					2.1	NO		db		0.000
6	FUNCTION1 HXCD...	25.87	8.437e1					1.9	NO		bd		0.000
7	FUNCTION1 HXCD...	25.00	7.918e1					1.2	NO		bb		0.000
8	FUNCTION1 HXCD...	24.64	7.557e1					1.6	NO		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	26.37	8.294e1					2.3	NO		dd		0.000
2	FUNCTION1 HPCD...	26.31	7.445e1					1.6	NO		bd		0.000
3	FUNCTION1 HPCD...	25.85	3.079e2					2.6	NO		db		0.000
4	FUNCTION1 HPCD...	25.72	1.912e2					2.1	NO		bd		0.000
5	FUNCTION1 HPCD...	25.35	9.102e1					2.4	NO		bb		0.000
6	FUNCTION1 HPCD...	24.26	7.312e1					0.4	NO		bb		0.000
7	FUNCTION1 HPCD...	23.34	2.139e2					1.8	NO		bb		0.000
8	FUNCTION1 HPCD...	22.66	8.267e1					0.8	NO		bb		0.000
9	FUNCTION1 HPCD...	21.38	7.618e1					1.4	NO		bb		0.000
10	FUNCTION1 HPCD...	27.98	9.946e1					3.1	YES		bb		0.000
11	FUNCTION1 HPCD...	26.99	8.404e1					1.1	NO		bb		0.000
12	FUNCTION1 HPCD...	26.52	1.802e2					1.5	NO		db		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.64	1.571e2					2.9	NO		bb		0.000
2	FUNCTION2 HPCD...	31.35	7.515e1					1.4	NO		bb		0.000
3	FUNCTION2 HPCD...	30.72	8.443e1					1.4	NO		bb		0.000
4	FUNCTION2 HPCD...	30.46	1.124e2					2.4	NO		bb		0.000
5	FUNCTION2 HPCD...	30.06	1.840e2					5.0	YES		bb		0.000
6	FUNCTION2 HPCD...	28.49	7.182e1					1.7	NO		bb		0.000
7	FUNCTION2 HPCD...	28.27	7.966e1					1.8	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	35.88	1.145e2					2.3	NO		bd		0.000
2	FUNCTION3 OCDPE	35.18	2.003e2					3.4	YES		bb		0.000
3	FUNCTION3 OCDPE	34.09	1.081e2					2.7	NO		db		0.000
4	FUNCTION3 OCDPE	34.04	7.302e1					3.0	YES		bd		0.000
5	FUNCTION3 OCDPE	37.75	1.221e2					3.1	YES		bb		0.000
6	FUNCTION3 OCDPE	36.64	1.574e2					3.5	YES		db		0.000
7	FUNCTION3 OCDPE	36.60	2.003e2					4.2	YES		bd		0.000
8	FUNCTION3 OCDPE	36.20	2.806e2					4.2	YES		db		0.000
9	FUNCTION3 OCDPE	36.12	3.227e2					5.3	YES		dd		0.000
10	FUNCTION3 OCDPE	35.99	2.101e2					3.8	YES		dd		0.000

ID: CSLCR, Name: 23020104, Date: 01-Feb-2023, Time: 14:39:51, Conditions: AUTOSPEC01, User: pk

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.48	9.634e1					2.9	NO		bb		0.000
2	FUNCTION4 NCDPE	38.52	7.264e1					3.4	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	44.32	8.847e1					3.1	YES		bb		0.000

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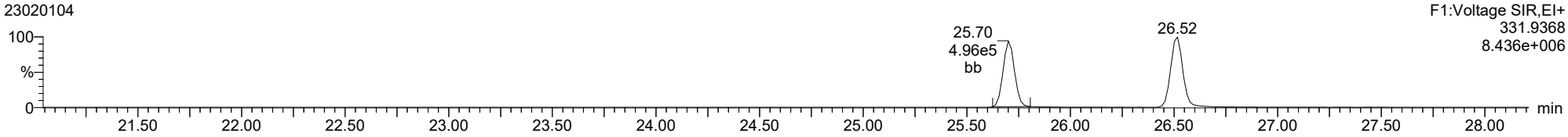

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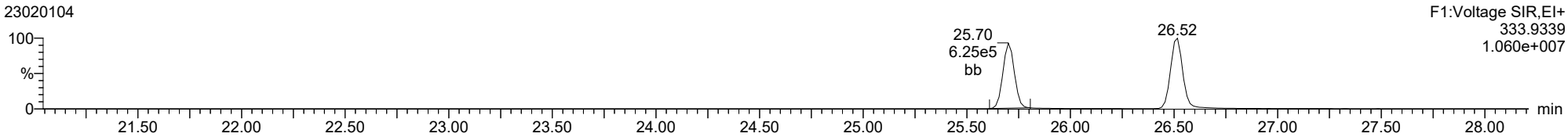

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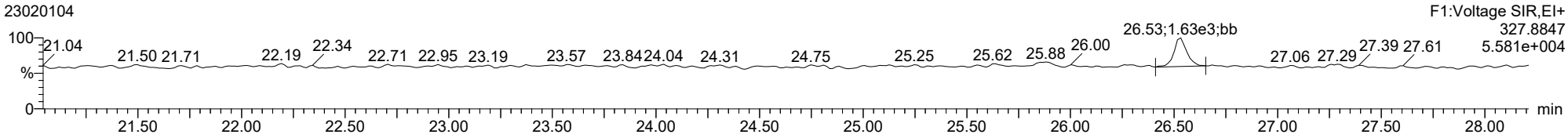

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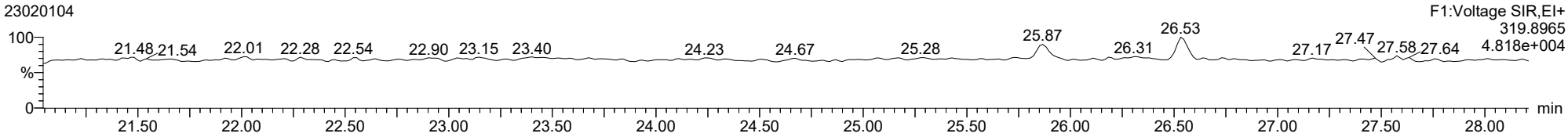

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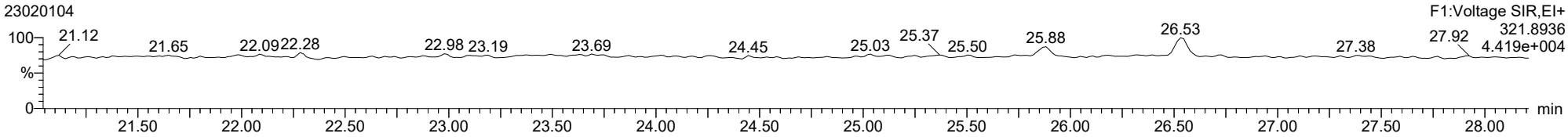

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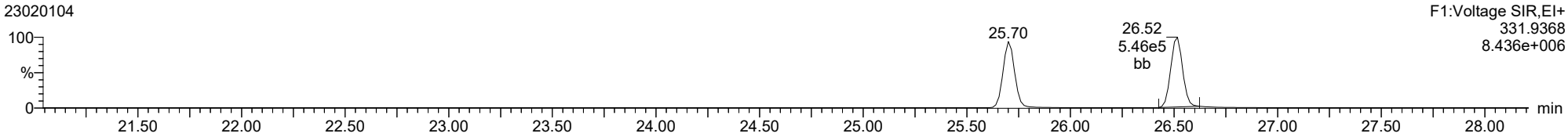

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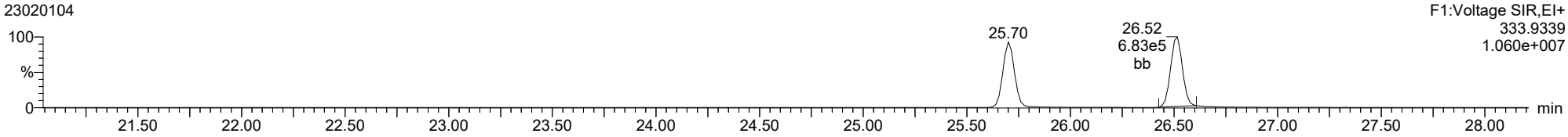

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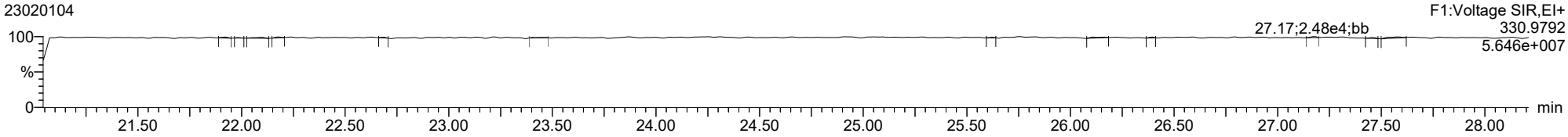

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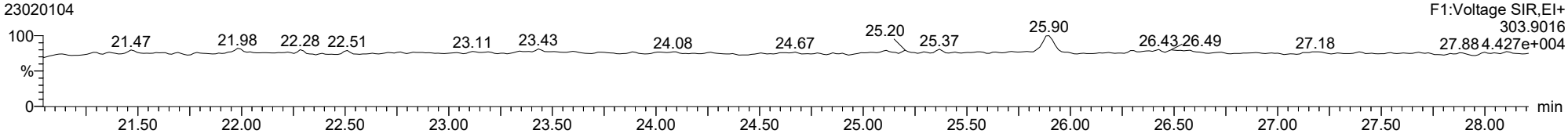

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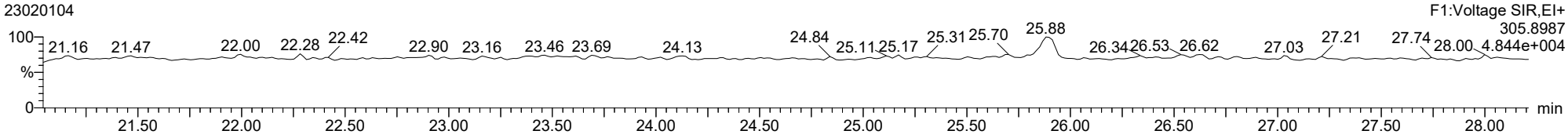

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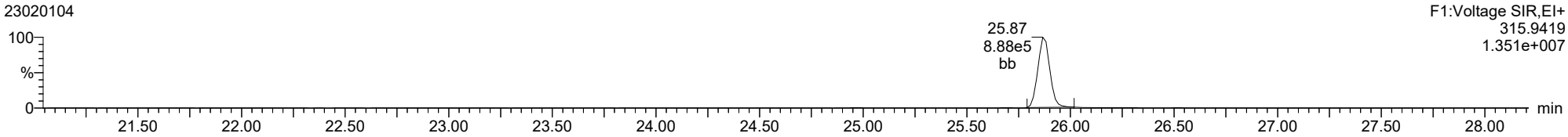

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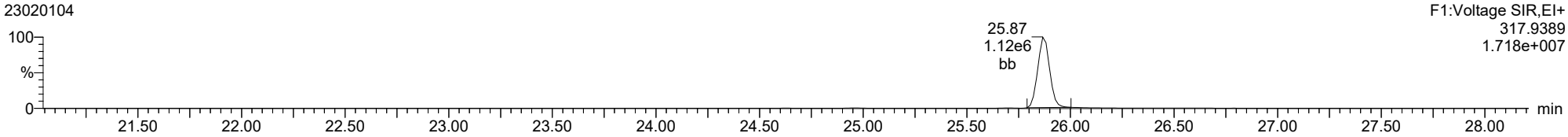

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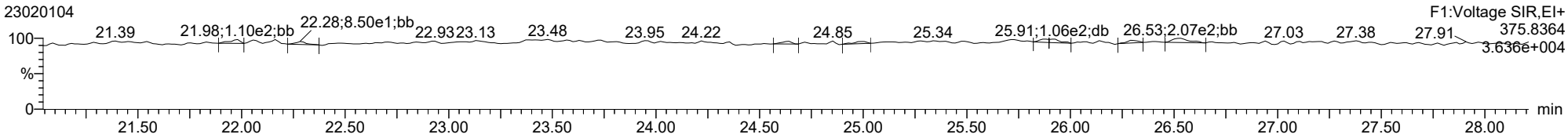

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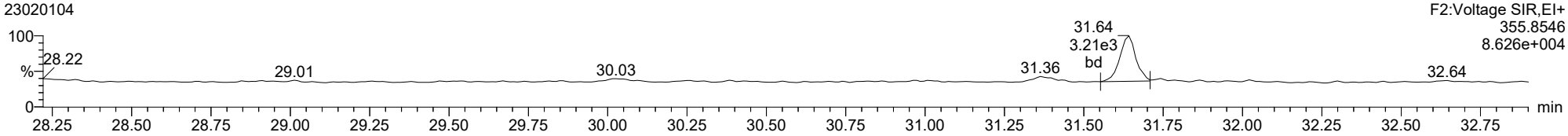

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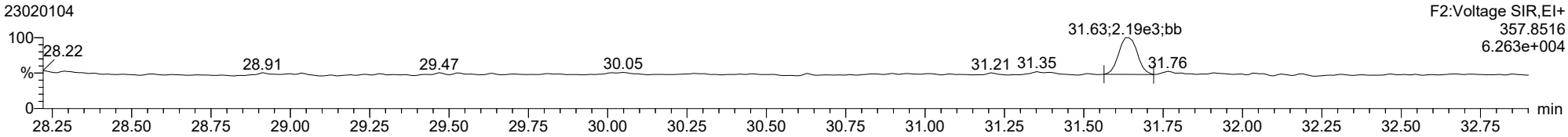

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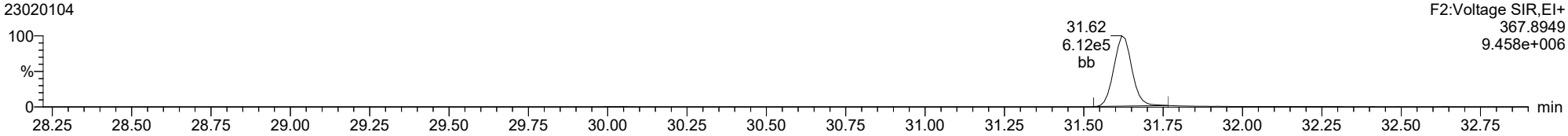

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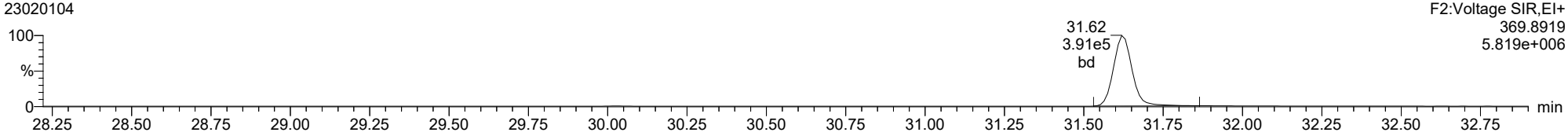

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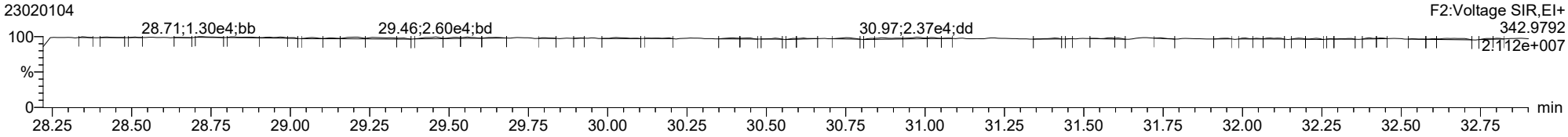

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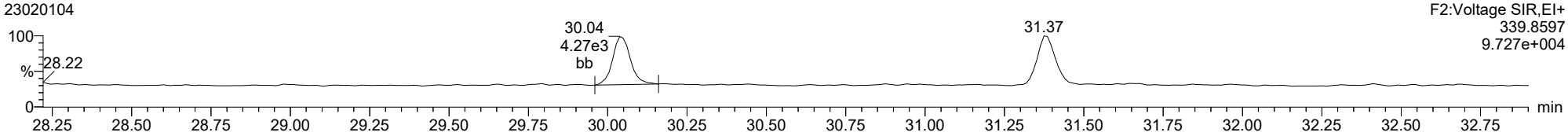

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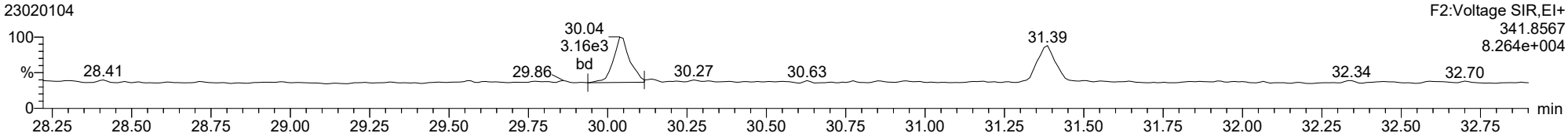

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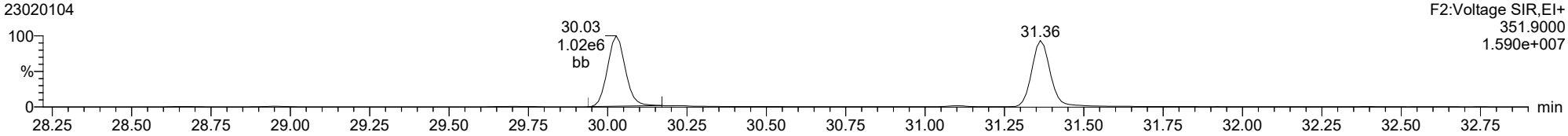

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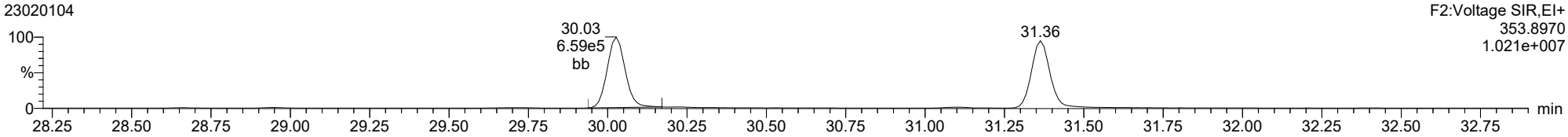

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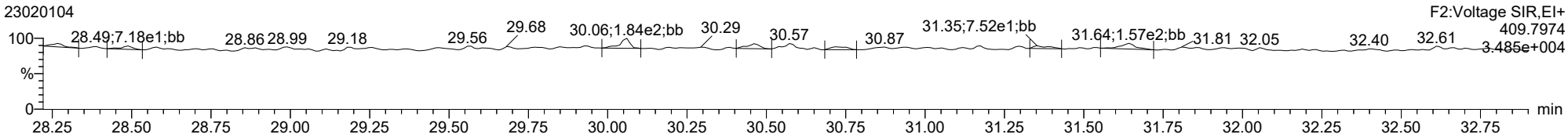

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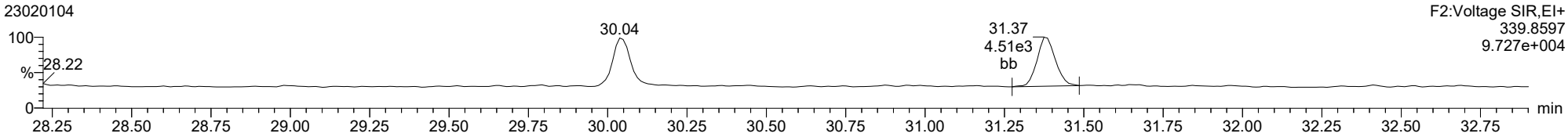

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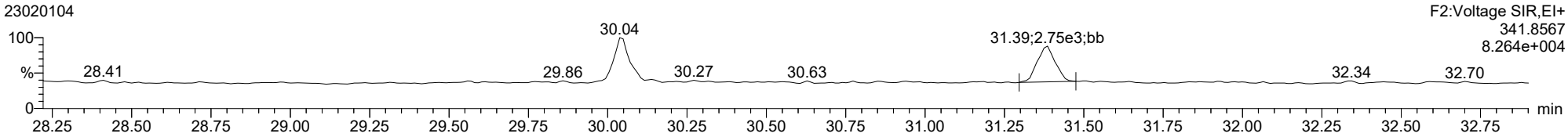

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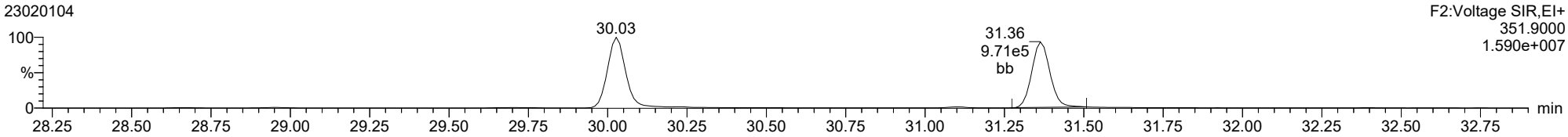

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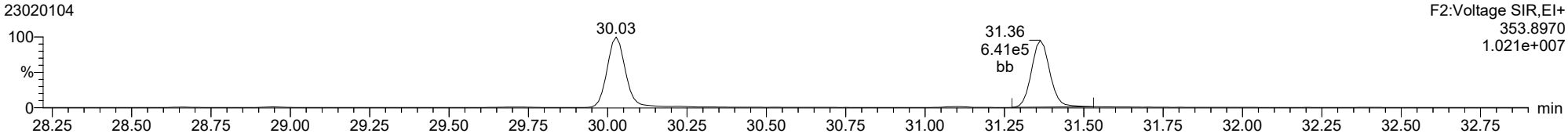

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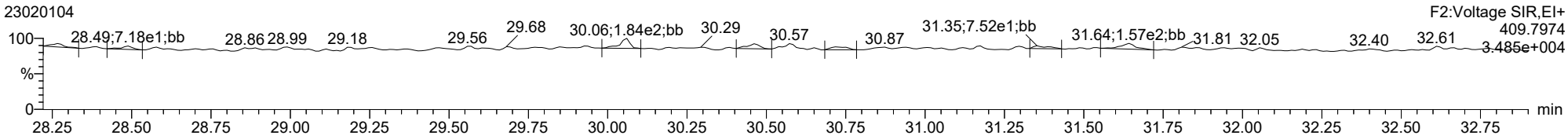

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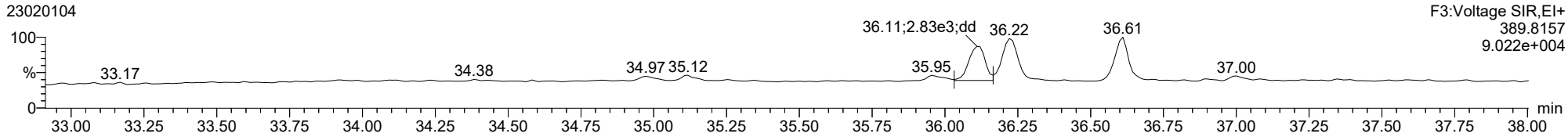

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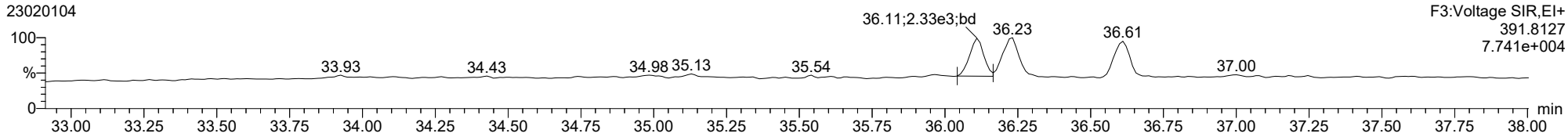

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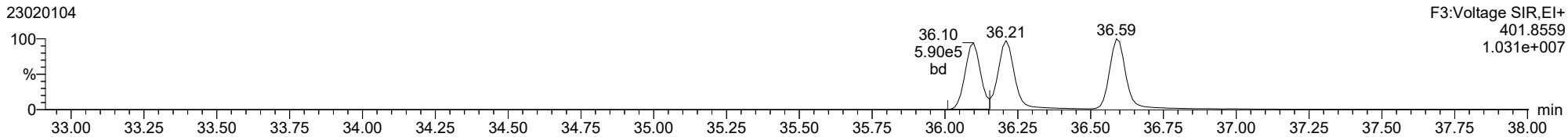

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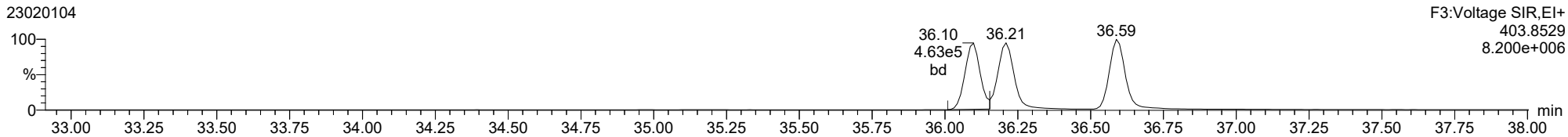

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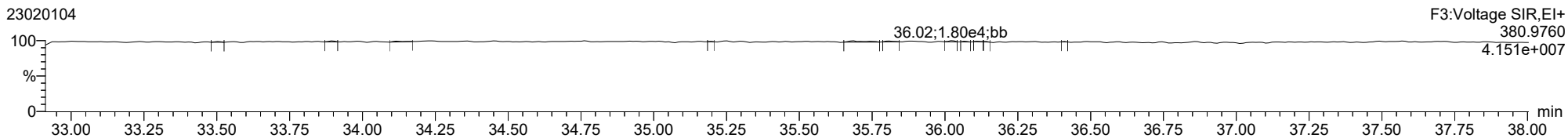

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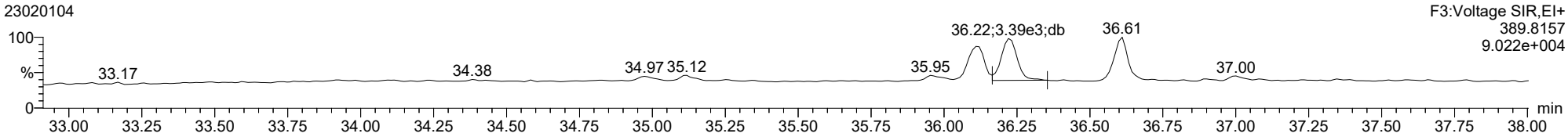

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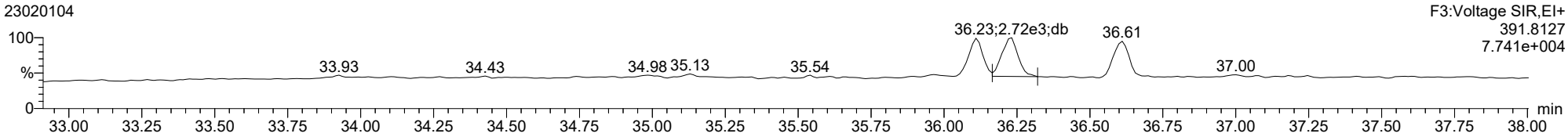

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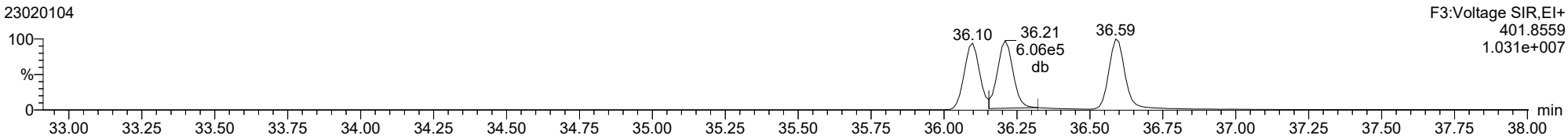

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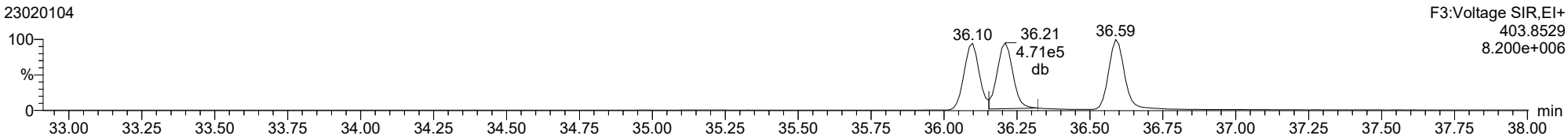

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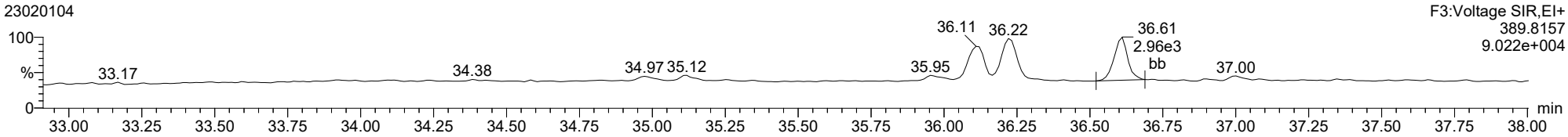

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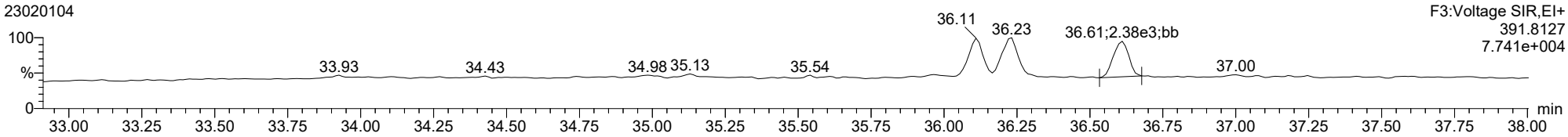

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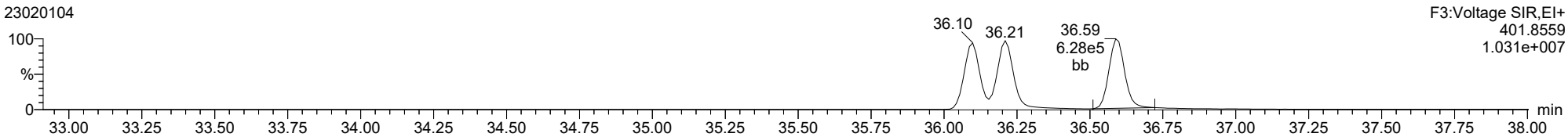

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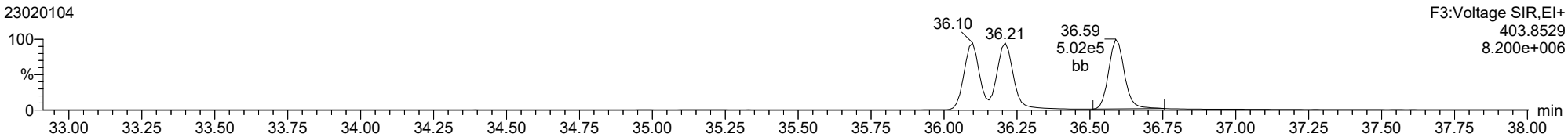

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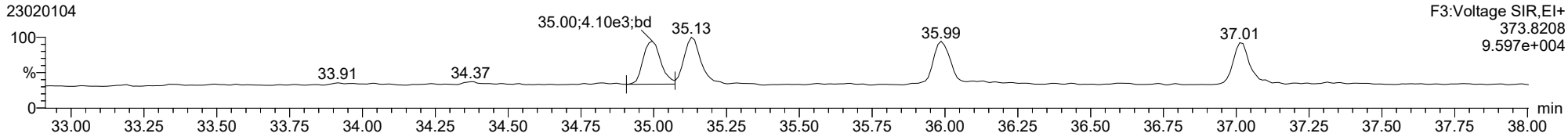

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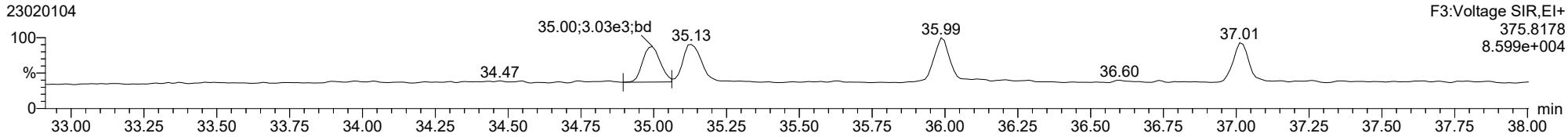

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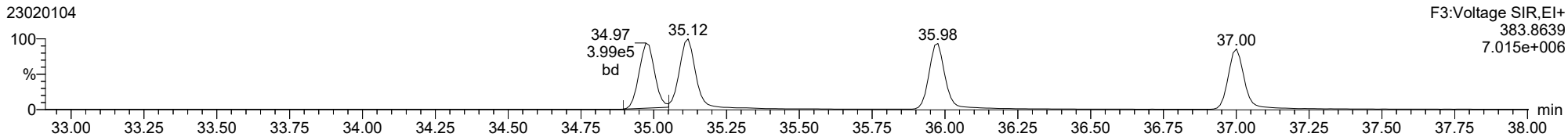

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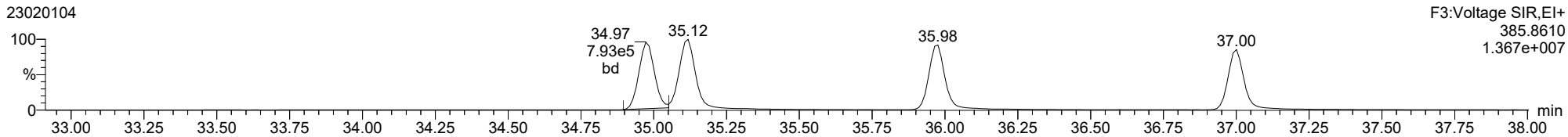

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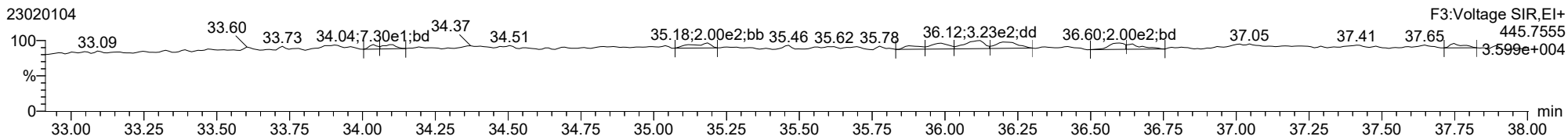

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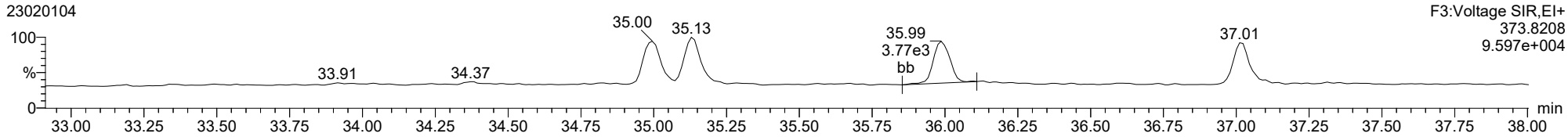

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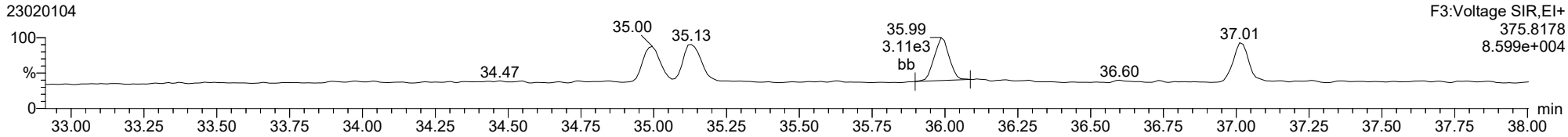

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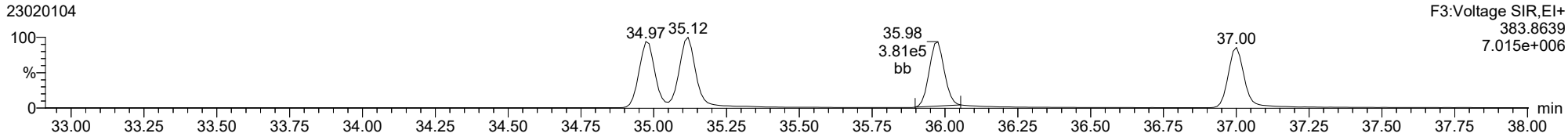

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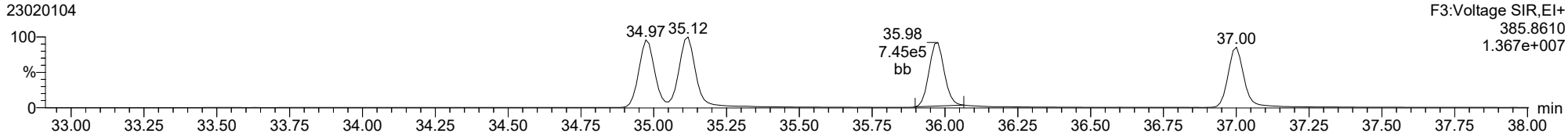

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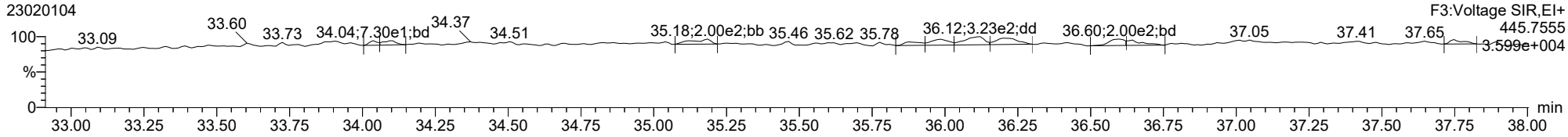

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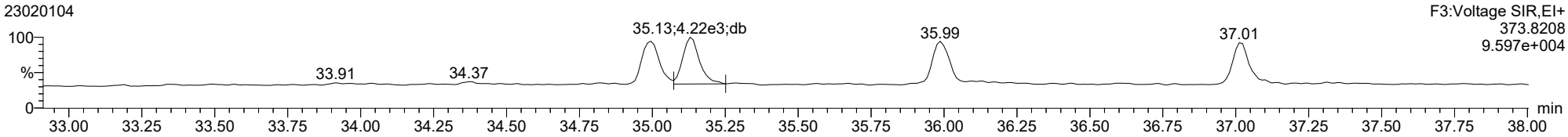

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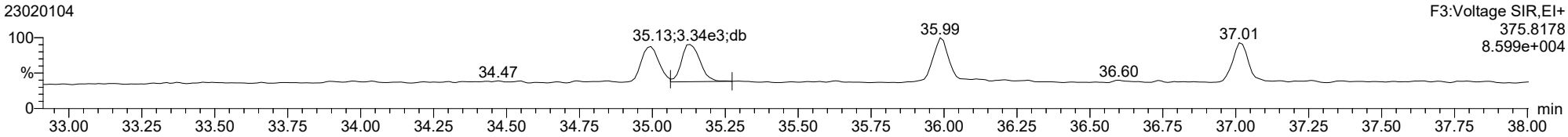

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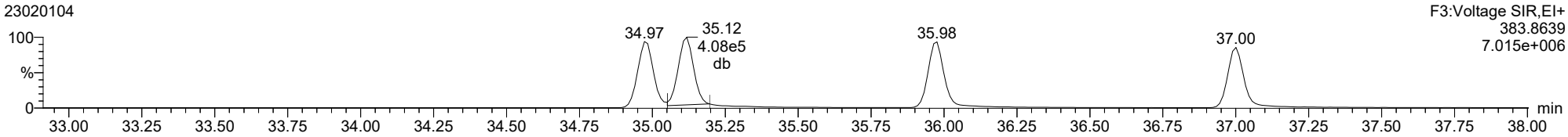

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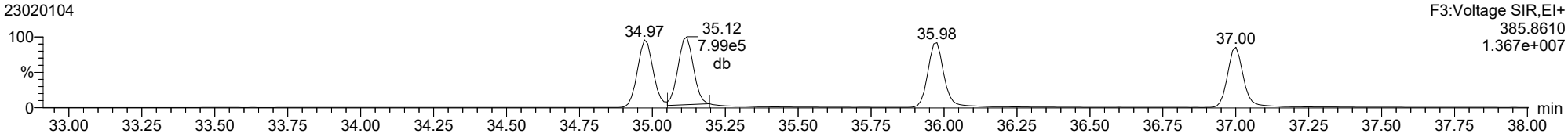

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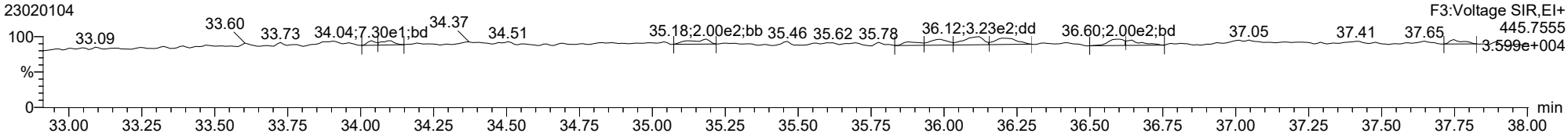

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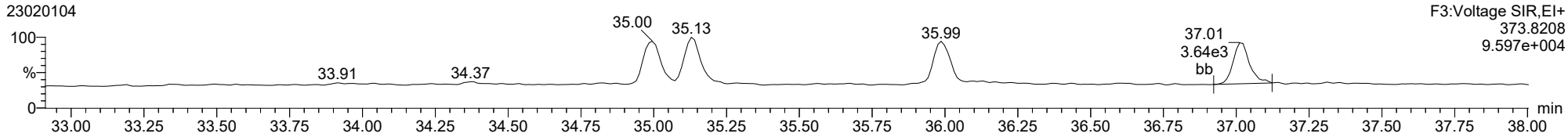

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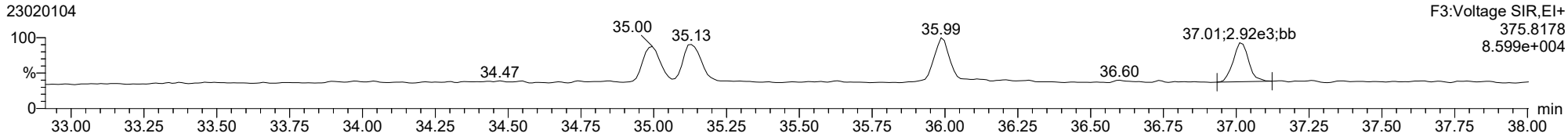

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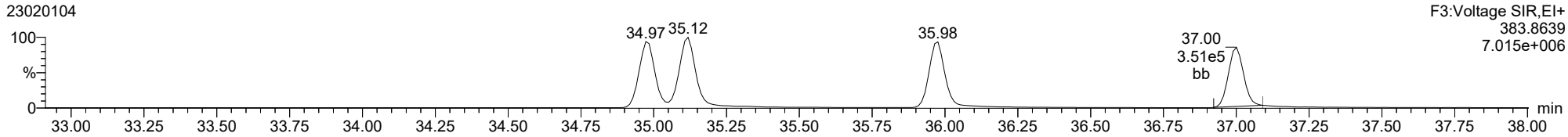

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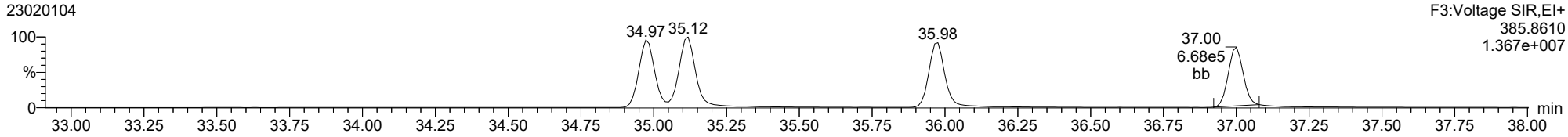

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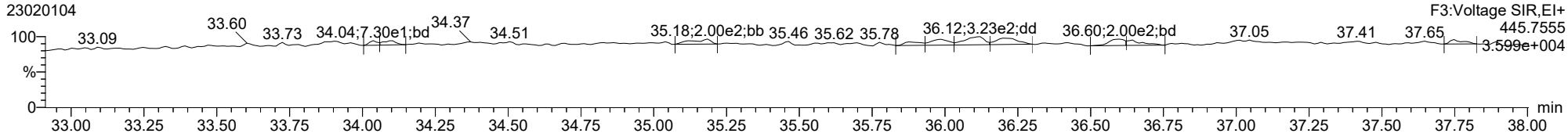

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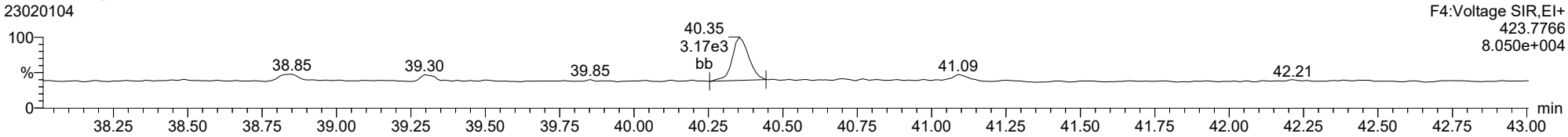

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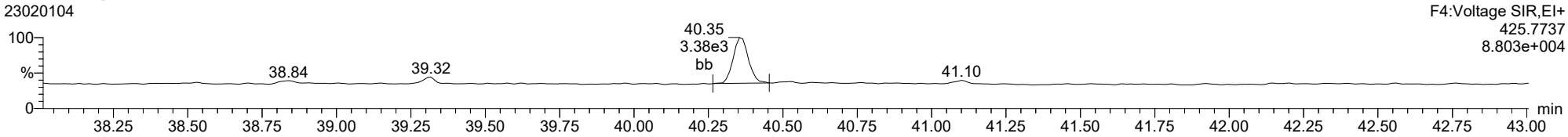

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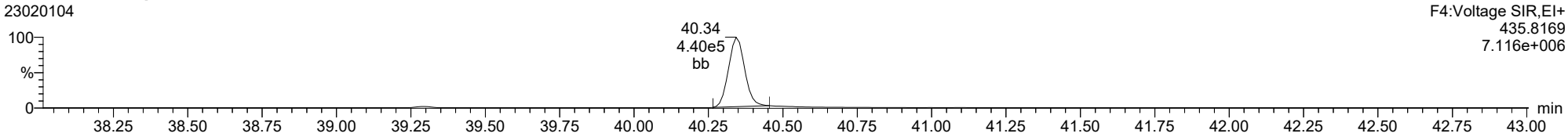

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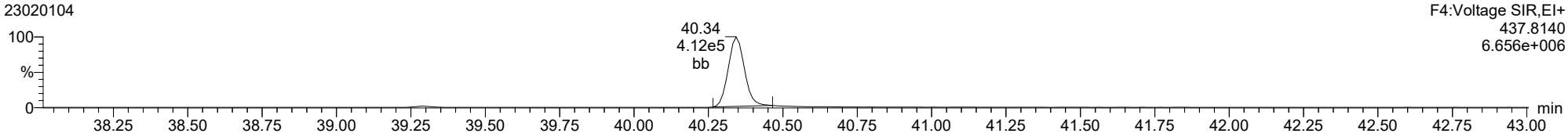
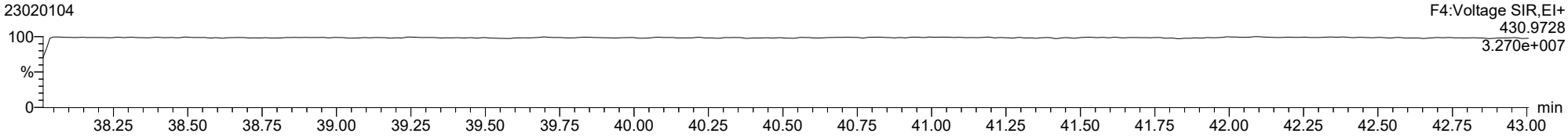


FUNCTION4 PFK



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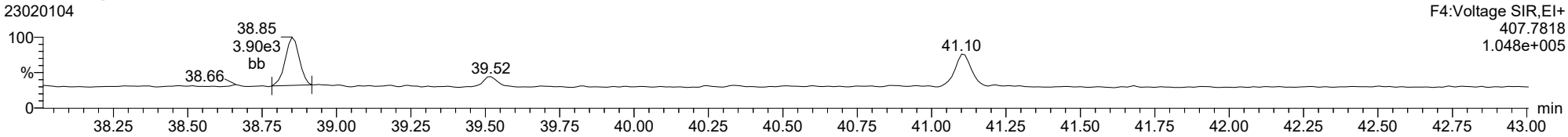

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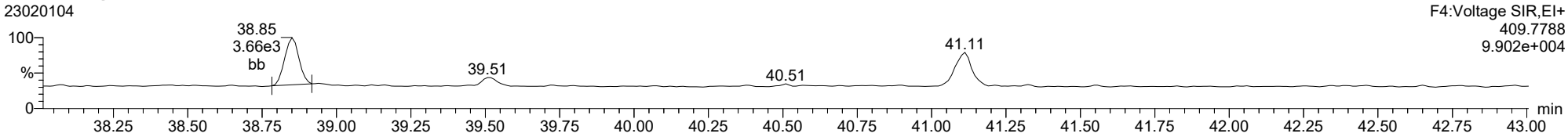

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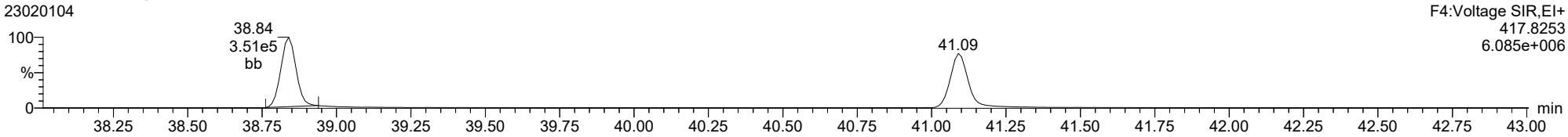

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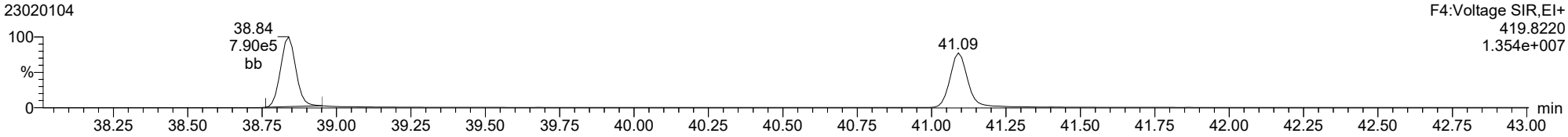

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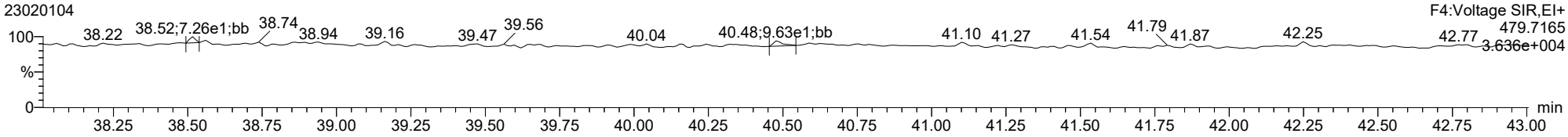

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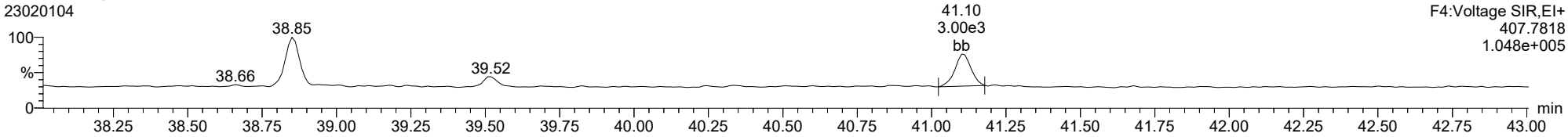

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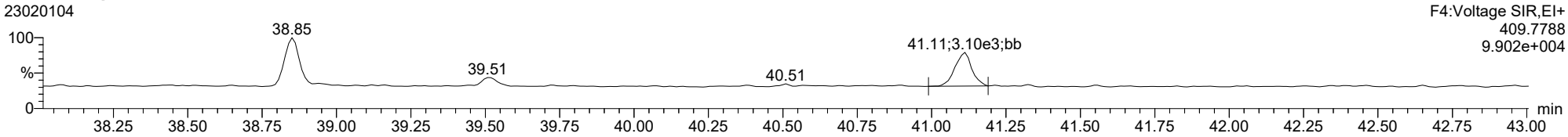

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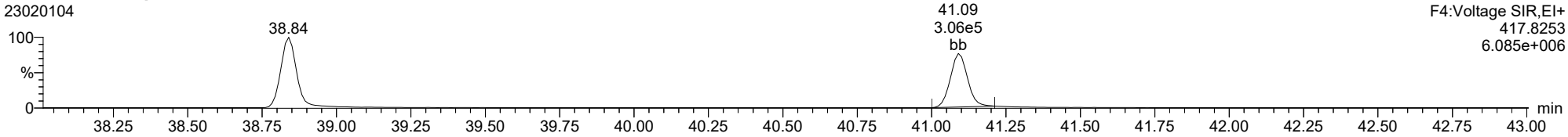

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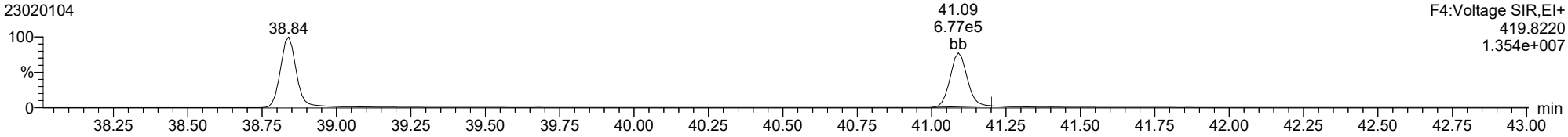

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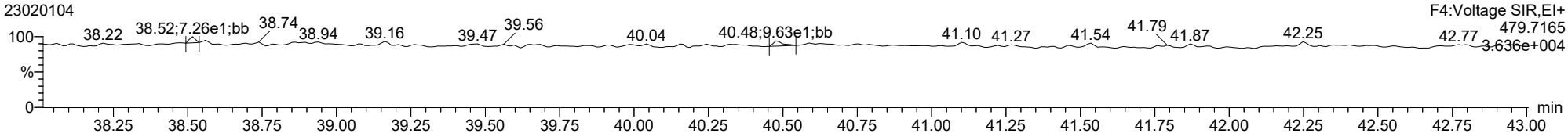

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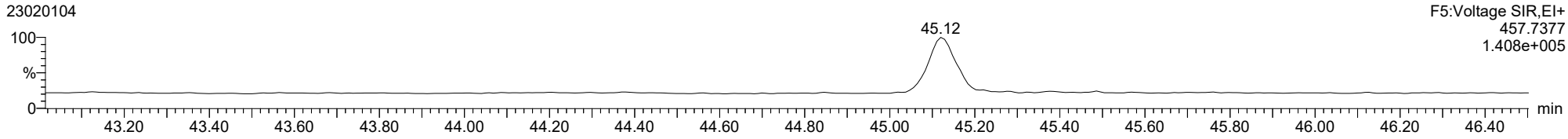

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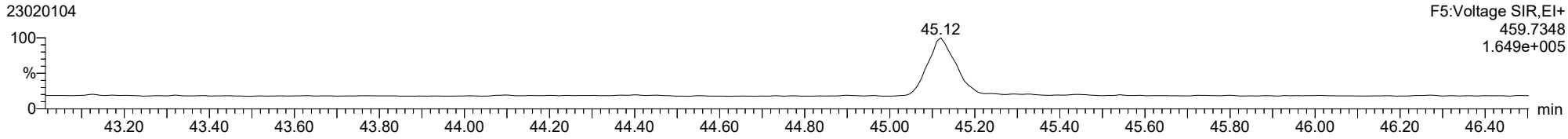

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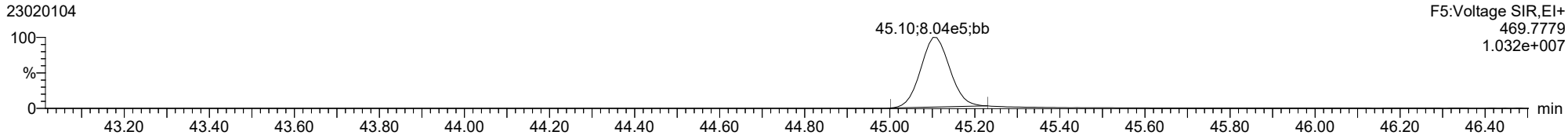

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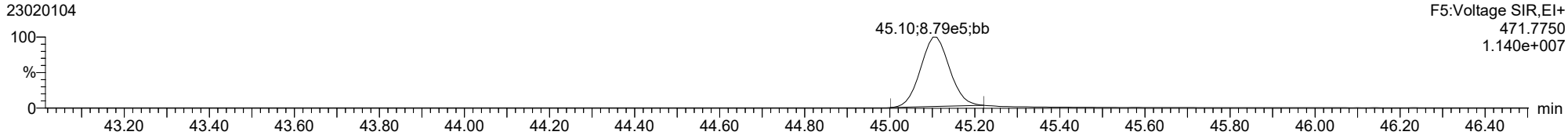

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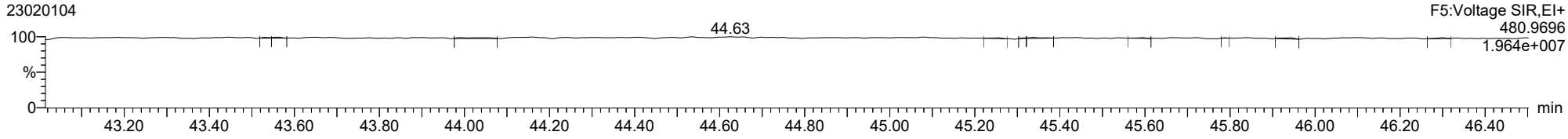

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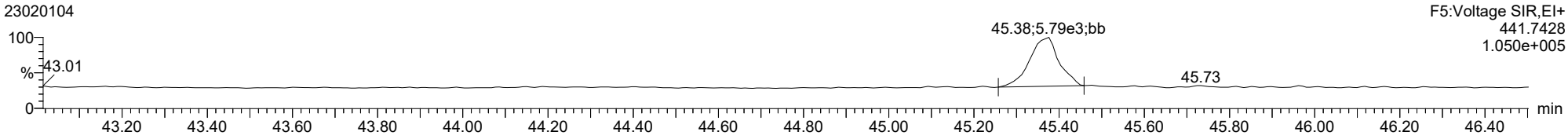

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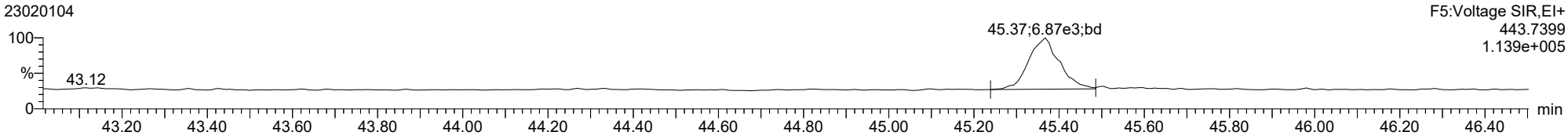

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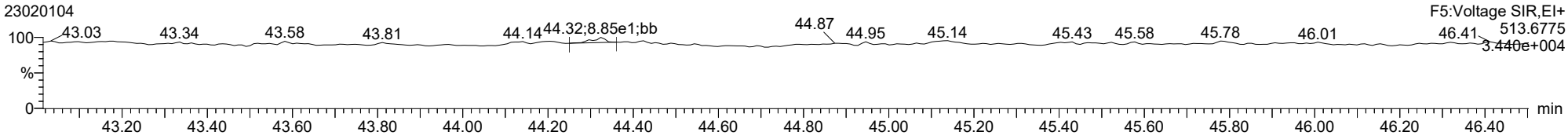

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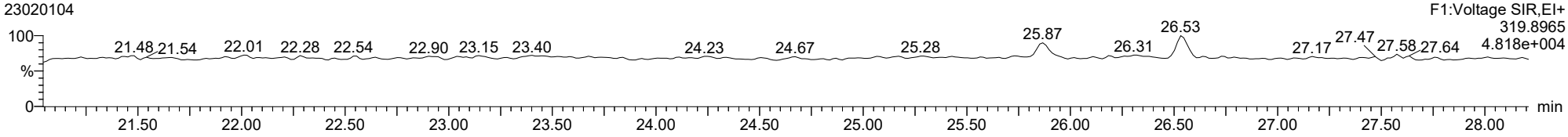

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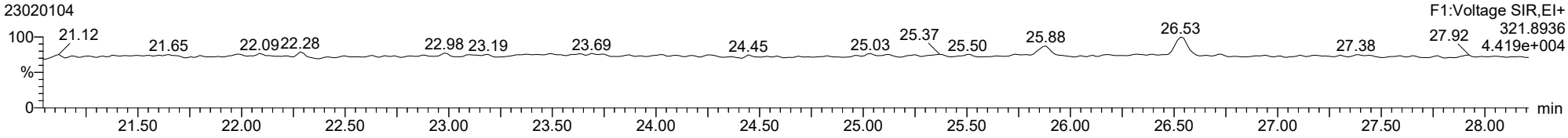

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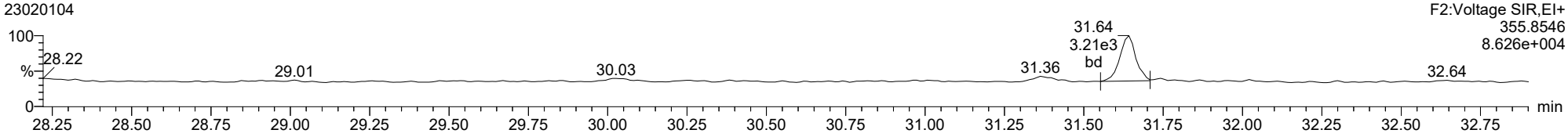
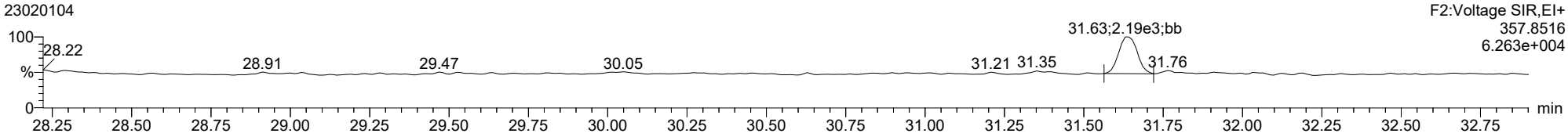


Total-pentadioxins



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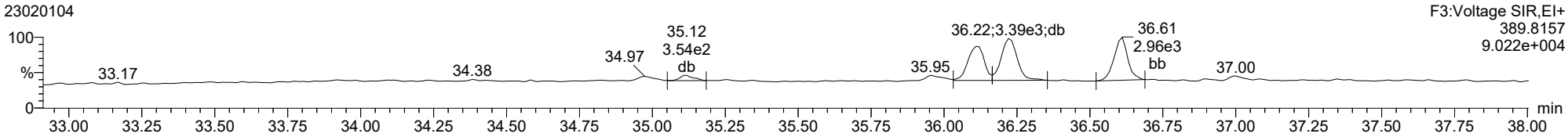
Total-hexadioxins



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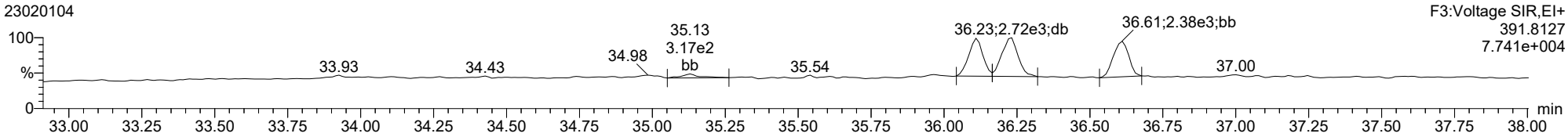
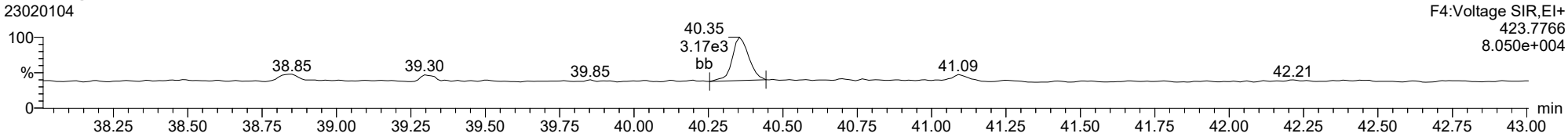
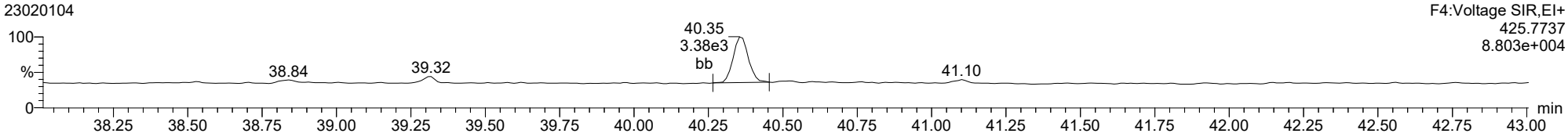


Total-heptadioxins



Total-heptadioxins



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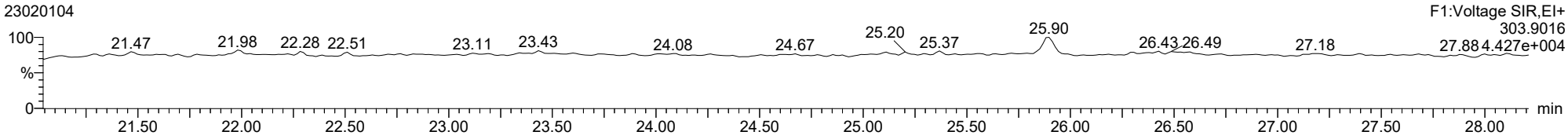
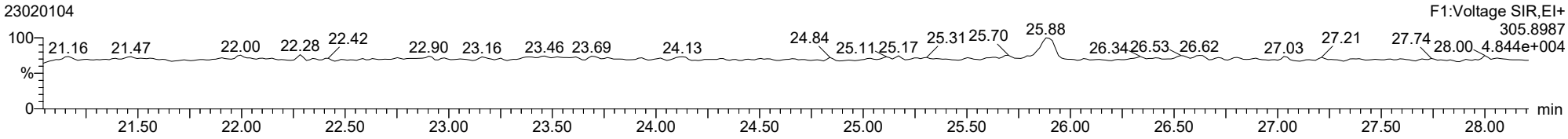
Total-tetrafurans



Total-tetrafurans



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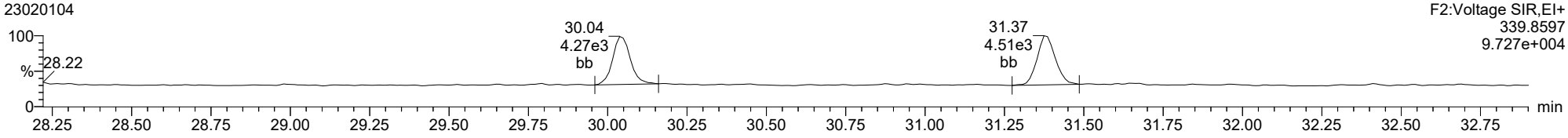

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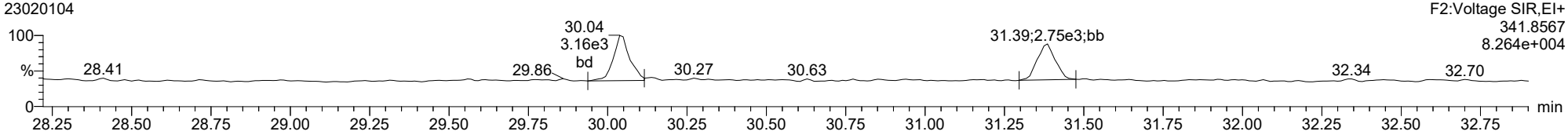

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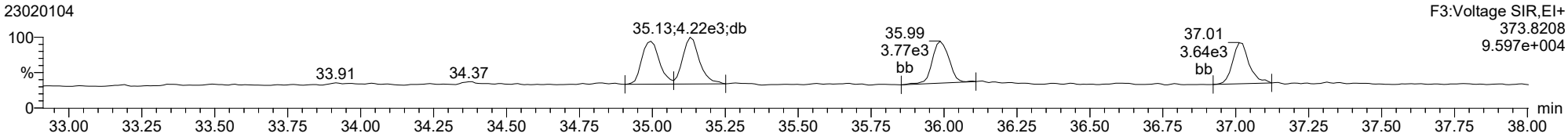
Total-hexafurans



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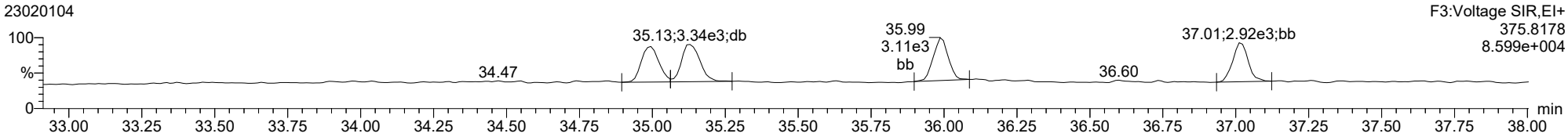

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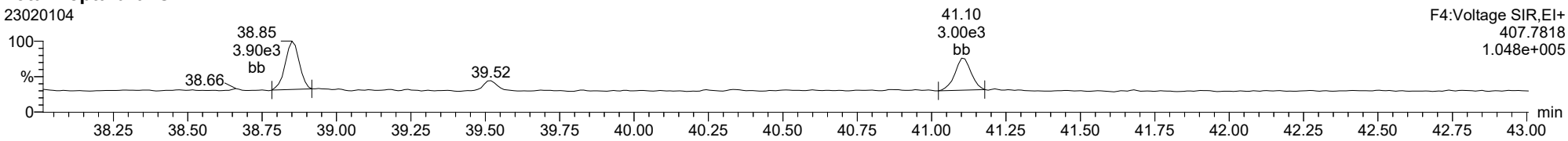
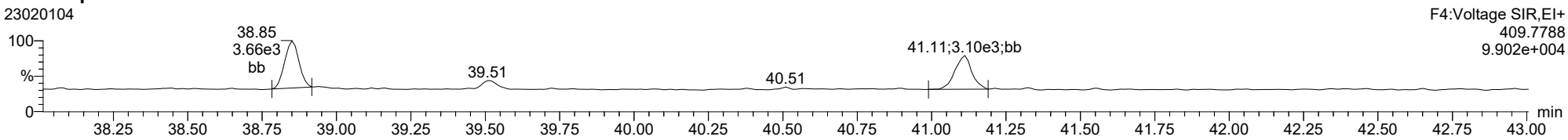


Total-heptafurans



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Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:37:09 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS1CR, Name: 23020105, Date: 01-Feb-2023, Time: 15:28:53, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.897	1.001	3.165e3	3.812e3	0.876	0.830	0.770	851	1202	5.14e4	5.60e4	60.4	46.6	NO	db	bb	0.501
12378-PeCDF	30.048	1.000	1.657e4	1.122e4	0.845	1.477	1.550	1016	1248	2.51e5	1.73e5	247.1	138.5	NO	bb	bb	2.455
23478-PeCDF	31.385	1.000	1.669e4	1.174e4	0.911	1.422	1.550	1016	1248	2.63e5	1.81e5	259.2	145.3	NO	bb	bd	2.401
123478-HxCDF	35.006	1.001	1.544e4	1.249e4	1.182	1.236	1.240	890	1056	2.44e5	1.98e5	274.0	187.0	NO	bd	bd	2.494
234678-HxCDF	35.998	1.001	1.543e4	1.155e4	1.229	1.336	1.240	890	1056	2.60e5	1.91e5	292.0	180.6	NO	bd	bb	2.421
123678-HxCDF	35.140	1.001	1.636e4	1.318e4	1.248	1.241	1.240	890	1056	2.60e5	2.03e5	291.7	192.2	NO	dd	db	2.443
123789-HxCDF	37.023	1.000	1.293e4	1.008e4	1.187	1.282	1.240	890	1056	2.13e5	1.63e5	239.4	154.3	NO	bd	bb	2.372
1234678-HpCDF	38.861	1.000	1.439e4	1.337e4	1.204	1.077	1.050	1098	1117	2.42e5	2.23e5	220.8	199.9	NO	bb	bd	2.577
1234789-HpCDF	41.112	1.000	1.117e4	1.059e4	1.165	1.055	1.050	1098	1117	1.62e5	1.56e5	147.3	139.5	NO	bb	bb	2.411
OCDF	45.367	1.006	1.860e4	2.066e4	1.186	0.900	0.890	1237	861	2.12e5	2.52e5	171.2	292.2	NO	bb	bb	5.087
2378-TCDD	26.547	1.001	2.836e3	3.619e3	1.236	0.784	0.770	1261	742	4.26e4	5.78e4	33.8	77.9	NO	bb	bb	0.538
12378-PeCDD	31.642	1.000	1.354e4	8.892e3	1.087	1.522	1.550	1167	972	2.08e5	1.36e5	178.2	140.0	NO	bd	bd	2.535
123478-HxCDD	36.120	1.001	1.109e4	9.100e3	0.987	1.219	1.240	1079	803	1.88e5	1.54e5	174.2	191.5	NO	bd	bd	2.425
123678-HxCDD	36.232	1.000	1.193e4	1.017e4	1.021	1.173	1.240	1079	803	2.08e5	1.71e5	192.4	213.0	NO	db	dd	2.523
123789-HxCDD	36.611	1.011	1.141e4	9.550e3	0.985	1.195	1.240	1079	803	1.90e5	1.59e5	175.6	197.5	NO	bb	bd	2.499
1234678-HpCDD	40.365	1.000	1.047e4	1.022e4	1.253	1.025	1.050	924	912	1.67e5	1.57e5	180.8	172.2	NO	bb	bb	2.439
OCDD	45.129	1.000	2.025e4	2.243e4	1.103	0.903	0.890	770	1015	2.54e5	2.74e5	329.8	270.4	NO	bb	bb	5.948
13C-2378-TCDF	25.882	1.007	6.992e5	8.909e5	1.768	0.785	0.770	1890	1690	1.07e7	1.37e7	5679.3	8103.6	NO	bb	bb	99.523
13C-12378-PeCDF	30.037	1.168	8.127e5	5.274e5	1.527	1.541	1.550	2822	3217	1.25e7	8.12e6	4447.1	2523.6	NO	bb	bb	97.112
13C-23478-PeCDF	31.374	1.220	7.914e5	5.082e5	1.466	1.557	1.550	2822	3217	1.22e7	7.90e6	4335.0	2456.5	NO	bb	bb	98.086
13C-123478-HxCDF	34.984	0.956	3.203e5	6.270e5	1.054	0.511	0.510	2242	2569	5.23e6	1.03e7	2333.1	3994.8	NO	bd	bd	102.287
13C-123678-HxCDF	35.118	0.960	3.331e5	6.354e5	1.080	0.524	0.510	2242	2569	5.30e6	1.04e7	2362.3	4050.9	NO	db	db	102.033
13C-234678-HxCDF	35.975	0.983	3.012e5	6.055e5	1.014	0.497	0.510	2242	2569	5.04e6	1.01e7	2247.8	3935.5	NO	bb	bb	101.688
13C-123789-HxCDF	37.012	1.011	2.780e5	5.398e5	0.928	0.515	0.510	2242	2569	4.60e6	8.89e6	2053.4	3459.1	NO	bb	bb	100.261
13C-1234678-HpCDF	38.850	1.061	2.750e5	6.195e5	1.036	0.444	0.440	2698	3387	4.63e6	1.03e7	1714.9	3048.9	NO	bb	bb	98.218
13C-1234789-HpCDF	41.100	1.123	2.400e5	5.347e5	0.905	0.449	0.440	2698	3387	3.64e6	7.83e6	1350.8	2311.2	NO	bb	bb	97.391
13C-1234-TCDD	25.715	0.000	4.030e5	5.006e5	1.000	0.805	0.770	2070	1290	6.17e6	7.63e6	2981.3	5910.4	NO	bb	bb	100.000
13C-2378-TCDD	26.517	1.031	4.334e5	5.370e5	1.103	0.807	0.770	2070	1290	6.64e6	8.43e6	3208.6	6536.2	NO	bb	bb	97.361
13C-12378-PeCDD	31.630	1.230	5.002e5	3.141e5	0.914	1.593	1.550	1571	1429	7.70e6	4.72e6	4905.0	3303.0	NO	bb	bd	98.574
13C-123478-HxCDD	36.098	0.986	4.774e5	3.663e5	0.933	1.303	1.240	2711	2219	7.76e6	6.04e6	2862.5	2723.9	NO	bd	bd	102.880
13C-123678-HxCDD	36.221	0.990	4.780e5	3.801e5	0.965	1.258	1.240	2711	2219	7.94e6	6.30e6	2926.7	2837.8	NO	db	db	101.203
13C-1234678-HpCDD	40.354	1.103	3.494e5	3.280e5	0.782	1.065	1.050	1617	1571	5.50e6	5.16e6	3401.2	3284.5	NO	bb	bb	98.546
13C-OCDD	45.111	1.233	6.222e5	6.790e5	0.788	0.916	0.890	1719	2376	7.89e6	8.58e6	4588.0	3611.7	NO	bb	bb	187.800
13C-123789-HxCDD	36.599	0.000	4.932e5	3.858e5	1.000	1.278	1.240	2711	2219	8.15e6	6.30e6	3006.5	2840.6	NO	bb	bb	100.000
37CL-2378-TCDD	26.547	1.032	5.621e3		1.233			1648		8.22e4		49.9			bb		0.504

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
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ID: CS1CR, Name: 23020105, Date: 01-Feb-2023, Time: 15:28:53, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					1.064		0.770	851	1202								
1289-TCDF					0.858		0.770	851	1202								
13468-PECDF					1.013		1.550	923	968								
12389-PECDF					0.844		1.550	1016	1248								
123468-HXCDF					1.197		1.240	890	1056								
1368-TCDD					1.084		0.770	1261	742								
1289-TCDD					0.975		0.770	1261	742								
12479-PECDD					1.837		1.550	1167	972								
12389-PECDD					1.252		1.550	1167	972								
124679-HXCDD					1.033		1.240	1079	803								
1234679-HPCDD					1.286		1.050	924	912								
Total-tetrafurans			3.165e3		0.933			851		5.14e4							0.501
Total-penta1			0.000e0					923		0.00e0							
Total-pentafurans			3.326e4		0.866			1016		5.14e5							4.856
Total-hexafurans			6.015e4		1.208			890		9.76e5							9.731
Total-heptafurans			2.643e4		1.185			1098		4.18e5							5.166
Total-Furans			1.416e5		1.067			851		2.17e6							25.340
Total-tetradioxins			2.907e3		1.099			1261		4.45e4							0.554
Total-pentadioxins			1.372e4		1.392			1167		2.12e5							2.561
Total-hexadioxins			3.443e4		1.007			1079		5.85e5							7.448
Total-heptadioxins			1.047e4		1.269			924		1.67e5							2.439
Total-Dioxins			8.178e4		1.165			1261		1.26e6							18.950
Total-TEQ			2.234e5					1261		3.43e6							44.290
FUNCTION1 PFK			2.400e7					626106		1.90e8							
FUNCTION2 PFK			0.000e0					236572		0.00e0							
FUNCTION3 PFK			4.302e5					501624		1.34e7							0.000
FUNCTION4 PFK			4.347e5					324457		1.19e7							
FUNCTION5 PFK			8.590e4					209539		3.93e6							
FUNCTION1 HXCD...			1.828e3					784		2.65e4							0.000
FUNCTION1 HPCD...			8.634e2					852		1.29e4							0.000
FUNCTION2 HPCD...			2.922e2					978		5.26e3							0.000
FUNCTION3 OCDPE			8.271e2					835		1.40e4							0.000
FUNCTION4 NCDPE			1.900e2					822		4.03e3							0.000
FUNCTION5 DCDPE			0.000e0					732		0.00e0							

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS1CR, Name: 23020105, Date: 01-Feb-2023, Time: 15:28:53, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.90	3.165e3	3.812e3	0.876	0.83	0.77	60.4	YES	NO	db	bb	0.501

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.39	1.669e4	1.174e4	0.911	1.42	1.55	259.2	YES	NO	bb	bd	2.401
2	12378-PeCDF	30.05	1.657e4	1.122e4	0.845	1.48	1.55	247.1	YES	NO	bb	bb	2.455

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.02	1.293e4	1.008e4	1.187	1.28	1.24	239.4	YES	NO	bd	bb	2.372
2	234678-HxCDF	36.00	1.543e4	1.155e4	1.229	1.34	1.24	292.0	YES	NO	bd	bb	2.421
3	123678-HxCDF	35.14	1.636e4	1.318e4	1.248	1.24	1.24	291.7	YES	NO	dd	db	2.443
4	123478-HxCDF	35.01	1.544e4	1.249e4	1.182	1.24	1.24	274.0	YES	NO	bd	bd	2.494

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.11	1.117e4	1.059e4	1.165	1.05	1.05	147.3	YES	NO	bb	bb	2.411
2	Total-heptafurans	39.52	8.567e2	9.013e2	1.185	0.95	1.05	12.7	YES	NO	bb	bb	0.178
3	1234678-HpCDF	38.86	1.439e4	1.337e4	1.204	1.08	1.05	220.8	YES	NO	bb	bd	2.577

ID: CS1CR, Name: 23020105, Date: 01-Feb-2023, Time: 15:28:53, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.90	3.165e3	3.812e3	0.876	0.83	0.77	60.4	YES	NO	db	bb	0.501
2	23478-PeCDF	31.39	1.669e4	1.174e4	0.911	1.42	1.55	259.2	YES	NO	bb	bd	2.401
3	12378-PeCDF	30.05	1.657e4	1.122e4	0.845	1.48	1.55	247.1	YES	NO	bb	bb	2.455
4	123789-HxCDF	37.02	1.293e4	1.008e4	1.187	1.28	1.24	239.4	YES	NO	bd	bb	2.372
5	234678-HxCDF	36.00	1.543e4	1.155e4	1.229	1.34	1.24	292.0	YES	NO	bd	bb	2.421
6	123678-HxCDF	35.14	1.636e4	1.318e4	1.248	1.24	1.24	291.7	YES	NO	dd	db	2.443
7	123478-HxCDF	35.01	1.544e4	1.249e4	1.182	1.24	1.24	274.0	YES	NO	bd	bd	2.494
8	1234789-HpCDF	41.11	1.117e4	1.059e4	1.165	1.05	1.05	147.3	YES	NO	bb	bb	2.411
9	Total-heptafurans	39.52	8.567e2	9.013e2	1.185	0.95	1.05	12.7	YES	NO	bb	bb	0.178
10	1234678-HpCDF	38.86	1.439e4	1.337e4	1.204	1.08	1.05	220.8	YES	NO	bb	bd	2.577
11	OCDF	45.37	1.860e4	2.066e4	1.186	0.90	0.89	171.2	YES	NO	bb	bb	5.087

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	24.26	7.113e1	9.739e1	1.099	0.73	0.77	1.5	NO	NO	bb	bb	0.016
2	2378-TCDD	26.55	2.836e3	3.619e3	1.236	0.78	0.77	33.8	YES	NO	bb	bb	0.538

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentadioxins	31.80	1.875e2	1.127e2	1.392	1.66	1.55	3.4	YES	NO	db	db	0.026
2	12378-PeCDD	31.64	1.354e4	8.892e3	1.087	1.52	1.55	178.2	YES	NO	bd	bd	2.535

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.61	1.141e4	9.550e3	0.985	1.19	1.24	175.6	YES	NO	bb	bd	2.499
2	123678-HxCDD	36.23	1.193e4	1.017e4	1.021	1.17	1.24	192.4	YES	NO	db	dd	2.523
3	123478-HxCDD	36.12	1.109e4	9.100e3	0.987	1.22	1.24	174.2	YES	NO	bd	bd	2.425

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.37	1.047e4	1.022e4	1.253	1.02	1.05	180.8	YES	NO	bb	bb	2.439

ID: CS1CR, Name: 23020105, Date: 01-Feb-2023, Time: 15:28:53, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	24.26	7.113e1	9.739e1	1.099	0.73	0.77	1.5	NO	NO	bb	bb	0.016
2	2378-TCDD	26.55	2.836e3	3.619e3	1.236	0.78	0.77	33.8	YES	NO	bb	bb	0.538
3	Total-pentadioxins	31.80	1.875e2	1.127e2	1.392	1.66	1.55	3.4	YES	NO	db	db	0.026
4	12378-PeCDD	31.64	1.354e4	8.892e3	1.087	1.52	1.55	178.2	YES	NO	bd	bd	2.535
5	123789-HxCDD	36.61	1.141e4	9.550e3	0.985	1.19	1.24	175.6	YES	NO	bb	bd	2.499
6	123678-HxCDD	36.23	1.193e4	1.017e4	1.021	1.17	1.24	192.4	YES	NO	db	dd	2.523
7	123478-HxCDD	36.12	1.109e4	9.100e3	0.987	1.22	1.24	174.2	YES	NO	bd	bd	2.425
8	1234678-HpCDD	40.37	1.047e4	1.022e4	1.253	1.02	1.05	180.8	YES	NO	bb	bb	2.439
9	OCDD	45.13	2.025e4	2.243e4	1.103	0.90	0.89	329.8	YES	NO	bb	bb	5.948

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.90	3.165e3	3.812e3	0.876	0.83	0.77	60.4	YES	NO	db	bb	0.501
2	23478-PeCDF	31.39	1.669e4	1.174e4	0.911	1.42	1.55	259.2	YES	NO	bb	bd	2.401
3	12378-PeCDF	30.05	1.657e4	1.122e4	0.845	1.48	1.55	247.1	YES	NO	bb	bb	2.455
4	123789-HxCDF	37.02	1.293e4	1.008e4	1.187	1.28	1.24	239.4	YES	NO	bd	bb	2.372
5	234678-HxCDF	36.00	1.543e4	1.155e4	1.229	1.34	1.24	292.0	YES	NO	bd	bb	2.421
6	123678-HxCDF	35.14	1.636e4	1.318e4	1.248	1.24	1.24	291.7	YES	NO	dd	db	2.443
7	123478-HxCDF	35.01	1.544e4	1.249e4	1.182	1.24	1.24	274.0	YES	NO	bd	bd	2.494
8	1234789-HpCDF	41.11	1.117e4	1.059e4	1.165	1.05	1.05	147.3	YES	NO	bb	bb	2.411
9	Total-heptafurans	39.52	8.567e2	9.013e2	1.185	0.95	1.05	12.7	YES	NO	bb	bb	0.178
10	1234678-HpCDF	38.86	1.439e4	1.337e4	1.204	1.08	1.05	220.8	YES	NO	bb	bd	2.577
11	OCDF	45.37	1.860e4	2.066e4	1.186	0.90	0.89	171.2	YES	NO	bb	bb	5.087
12	Total-tetradioxins	24.26	7.113e1	9.739e1	1.099	0.73	0.77	1.5	NO	NO	bb	bb	0.016
13	2378-TCDD	26.55	2.836e3	3.619e3	1.236	0.78	0.77	33.8	YES	NO	bb	bb	0.538
14	Total-pentadioxins	31.80	1.875e2	1.127e2	1.392	1.66	1.55	3.4	YES	NO	db	db	0.026
15	12378-PeCDD	31.64	1.354e4	8.892e3	1.087	1.52	1.55	178.2	YES	NO	bd	bd	2.535
16	123789-HxCDD	36.61	1.141e4	9.550e3	0.985	1.19	1.24	175.6	YES	NO	bb	bd	2.499
17	123678-HxCDD	36.23	1.193e4	1.017e4	1.021	1.17	1.24	192.4	YES	NO	db	dd	2.523
18	123478-HxCDD	36.12	1.109e4	9.100e3	0.987	1.22	1.24	174.2	YES	NO	bd	bd	2.425
19	1234678-HpCDD	40.37	1.047e4	1.022e4	1.253	1.02	1.05	180.8	YES	NO	bb	bb	2.439
20	OCDD	45.13	2.025e4	2.243e4	1.103	0.90	0.89	329.8	YES	NO	bb	bb	5.948

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.24	1.348e6					15.3	YES		dd		
2	FUNCTION1 PFK	22.18	4.644e5					16.9	YES		dd		
3	FUNCTION1 PFK	22.16	1.313e6					16.6	YES		dd		
4	FUNCTION1 PFK	21.98	1.487e6					20.5	YES		dd		
5	FUNCTION1 PFK	21.88	1.450e6					22.1	YES		dd		
6	FUNCTION1 PFK	21.72	1.801e6					24.8	YES		dd		
7	FUNCTION1 PFK	21.60	1.955e6					26.8	YES		dd		
8	FUNCTION1 PFK	21.39	6.532e6					30.5	YES		dd		
9	FUNCTION1 PFK	21.12	3.552e6					35.4	YES		bd		
10	FUNCTION1 PFK	24.35	3.975e3					0.4	NO		bb		
11	FUNCTION1 PFK	24.08	2.445e4					0.9	NO		bb		
12	FUNCTION1 PFK	23.89	1.855e4					1.0	NO		bb		
13	FUNCTION1 PFK	23.81	2.526e4					1.3	NO		bb		
14	FUNCTION1 PFK	23.73	2.606e4					1.2	NO		db		
15	FUNCTION1 PFK	23.63	3.953e4					0.9	NO		bd		
16	FUNCTION1 PFK	23.40	1.725e4					0.8	NO		db		
17	FUNCTION1 PFK	23.36	2.281e4					0.8	NO		bd		
18	FUNCTION1 PFK	23.28	4.142e4					1.3	NO		bb		
19	FUNCTION1 PFK	23.08	3.989e4					1.2	NO		db		
20	FUNCTION1 PFK	23.01	5.719e4					2.6	NO		dd		
21	FUNCTION1 PFK	22.78	6.498e5					6.6	YES		dd		
22	FUNCTION1 PFK	22.62	7.070e5					9.1	YES		dd		
23	FUNCTION1 PFK	22.51	7.554e5					10.8	YES		dd		
24	FUNCTION1 PFK	22.43	4.428e5					12.6	YES		dd		
25	FUNCTION1 PFK	22.39	4.834e5					13.1	YES		dd		
26	FUNCTION1 PFK	26.44	1.834e4					0.9	NO		bb		
27	FUNCTION1 PFK	26.31	1.630e4					0.8	NO		db		
28	FUNCTION1 PFK	26.24	2.476e4					1.0	NO		bd		
29	FUNCTION1 PFK	26.17	2.817e4					1.0	NO		bb		
30	FUNCTION1 PFK	26.03	3.473e4					1.3	NO		db		
31	FUNCTION1 PFK	25.97	2.971e4					1.1	NO		dd		
32	FUNCTION1 PFK	25.90	2.965e4					1.4	NO		bd		
33	FUNCTION1 PFK	25.84	6.319e3					0.7	NO		bb		
34	FUNCTION1 PFK	25.76	2.805e4					1.0	NO		db		
35	FUNCTION1 PFK	25.69	1.550e4					0.7	NO		bd		
36	FUNCTION1 PFK	25.43	1.865e4					0.8	NO		bb		
37	FUNCTION1 PFK	25.29	2.496e4					1.2	NO		bb		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	25.16	1.218e4					0.7	NO		bb		
39	FUNCTION1 PFK	24.90	4.251e4					1.2	NO		bb		
40	FUNCTION1 PFK	24.82	9.911e3					0.6	NO		bb		
41	FUNCTION1 PFK	24.70	1.084e4					0.7	NO		bb		
42	FUNCTION1 PFK	28.13	1.191e4					0.5	NO		bb		
43	FUNCTION1 PFK	28.06	1.157e4					0.7	NO		bb		
44	FUNCTION1 PFK	27.94	2.880e4					1.2	NO		bb		
45	FUNCTION1 PFK	27.73	2.725e4					1.2	NO		db		
46	FUNCTION1 PFK	27.65	2.104e4					0.9	NO		bd		
47	FUNCTION1 PFK	27.53	9.466e3					0.5	NO		bb		
48	FUNCTION1 PFK	27.45	2.859e4					0.9	NO		db		
49	FUNCTION1 PFK	27.32	3.854e4					1.1	NO		bd		
50	FUNCTION1 PFK	27.18	2.011e4					0.9	NO		db		
51	FUNCTION1 PFK	27.11	5.101e4					1.6	NO		dd		
52	FUNCTION1 PFK	27.05	7.101e4					1.7	NO		dd		
53	FUNCTION1 PFK	26.97	2.738e4					1.1	NO		bd		
54	FUNCTION1 PFK	26.85	5.698e3					0.5	NO		bb		
55	FUNCTION1 PFK	26.79	9.173e3					0.6	NO		bb		
56	FUNCTION1 PFK	26.65	1.932e4					1.0	NO		bb		
57	FUNCTION1 PFK	26.50	1.249e4					0.8	NO		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	35.28	1.720e4					1.2	NO		bb		0.000
2	FUNCTION3 PFK	35.17	3.494e4					1.4	NO		bb		0.000
3	FUNCTION3 PFK	35.02	1.498e4					0.7	NO		bb		0.000
4	FUNCTION3 PFK	34.97	2.068e4					1.6	NO		db		0.000
5	FUNCTION3 PFK	34.92	3.898e4					1.7	NO		bd		0.000
6	FUNCTION3 PFK	34.84	3.344e4					2.0	NO		db		0.000
7	FUNCTION3 PFK	34.79	4.044e4					2.0	NO		bd		0.000
8	FUNCTION3 PFK	34.56	1.848e4					1.0	NO		bb		0.000
9	FUNCTION3 PFK	34.43	3.131e3					0.6	NO		bb		0.000
10	FUNCTION3 PFK	33.97	1.059e4					1.1	NO		bb		0.000
11	FUNCTION3 PFK	33.91	7.198e3					0.6	NO		bb		0.000
12	FUNCTION3 PFK	33.77	2.029e4					1.1	NO		bb		0.000
13	FUNCTION3 PFK	33.51	2.578e4					1.1	NO		bb		0.000
14	FUNCTION3 PFK	33.23	2.194e3					0.4	NO		bb		0.000
15	FUNCTION3 PFK	37.66	2.055e4					1.5	NO		db		0.000
16	FUNCTION3 PFK	37.61	1.552e4					1.3	NO		bd		0.000
17	FUNCTION3 PFK	37.55	2.721e4					1.4	NO		bb		0.000
18	FUNCTION3 PFK	37.30	3.274e4					1.5	NO		bb		0.000
19	FUNCTION3 PFK	36.81	9.296e3					0.9	NO		bb		0.000
20	FUNCTION3 PFK	36.47	5.665e3					0.6	NO		bb		0.000
21	FUNCTION3 PFK	36.37	1.213e4					0.9	NO		bb		0.000
22	FUNCTION3 PFK	35.99	5.368e3					0.6	NO		bb		0.000
23	FUNCTION3 PFK	35.72	2.308e3					0.4	NO		bb		0.000
24	FUNCTION3 PFK	35.61	2.395e3					0.4	NO		bb		0.000
25	FUNCTION3 PFK	35.56	8.733e3					0.7	NO		bb		0.000

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Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.48	1.749e3					0.5	NO		bb		
2	FUNCTION4 PFK	38.35	9.022e3					0.9	NO		bb		
3	FUNCTION4 PFK	38.24	3.875e3					0.6	NO		bb		
4	FUNCTION4 PFK	38.13	2.737e4					1.8	NO		bb		
5	FUNCTION4 PFK	41.33	1.294e4					1.5	NO		bd		
6	FUNCTION4 PFK	41.23	4.010e4					1.6	NO		db		
7	FUNCTION4 PFK	41.09	3.801e4					1.9	NO		bd		
8	FUNCTION4 PFK	40.99	2.136e4					1.8	NO		bb		
9	FUNCTION4 PFK	40.59	8.289e3					0.7	NO		bb		
10	FUNCTION4 PFK	40.23	3.985e3					0.6	NO		bb		
11	FUNCTION4 PFK	39.88	1.184e3					0.3	NO		bb		
12	FUNCTION4 PFK	39.83	1.945e3					0.5	NO		bb		
13	FUNCTION4 PFK	39.52	8.163e3					1.0	NO		bb		
14	FUNCTION4 PFK	39.21	1.232e3					0.3	NO		bb		
15	FUNCTION4 PFK	39.07	1.853e4					1.3	NO		db		
16	FUNCTION4 PFK	38.94	5.337e4					2.0	NO		dd		
17	FUNCTION4 PFK	38.87	1.627e4					1.6	NO		dd		
18	FUNCTION4 PFK	38.84	1.863e4					1.8	NO		bd		
19	FUNCTION4 PFK	38.69	3.030e4					2.1	NO		bb		
20	FUNCTION4 PFK	38.54	2.688e3					0.5	NO		bb		
21	FUNCTION4 PFK	42.75	7.635e3					1.1	NO		bb		
22	FUNCTION4 PFK	42.65	3.824e3					0.5	NO		db		
23	FUNCTION4 PFK	42.62	3.380e3					0.6	NO		bd		
24	FUNCTION4 PFK	42.55	8.483e3					1.1	NO		bb		
25	FUNCTION4 PFK	42.45	5.962e3					0.8	NO		db		
26	FUNCTION4 PFK	42.40	5.418e3					0.7	NO		bd		
27	FUNCTION4 PFK	42.27	7.694e3					0.9	NO		bb		
28	FUNCTION4 PFK	42.10	9.463e3					1.2	NO		db		
29	FUNCTION4 PFK	42.05	1.039e4					1.1	NO		bd		
30	FUNCTION4 PFK	41.81	3.060e3					0.9	NO		bb		
31	FUNCTION4 PFK	41.77	4.237e3					0.7	NO		bb		
32	FUNCTION4 PFK	41.71	3.440e3					0.6	NO		bb		
33	FUNCTION4 PFK	41.67	1.592e3					0.4	NO		bb		
34	FUNCTION4 PFK	41.57	2.688e4					1.3	NO		bb		
35	FUNCTION4 PFK	41.37	1.425e4					1.5	NO		db		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	46.31	4.706e3					1.2	NO		bb		
2	FUNCTION5 PFK	46.25	4.425e3					1.1	NO		bb		
3	FUNCTION5 PFK	46.16	2.646e3					0.9	NO		bb		
4	FUNCTION5 PFK	46.03	5.117e3					1.5	NO		db		
5	FUNCTION5 PFK	46.01	6.487e3					1.4	NO		bd		
6	FUNCTION5 PFK	45.67	8.229e3					1.3	NO		bb		
7	FUNCTION5 PFK	45.46	1.002e3					0.5	NO		bb		
8	FUNCTION5 PFK	45.18	2.741e3					0.8	NO		db		
9	FUNCTION5 PFK	45.15	2.119e3					0.7	NO		bd		
10	FUNCTION5 PFK	44.83	3.811e3					1.2	NO		bb		
11	FUNCTION5 PFK	44.20	1.148e4					1.5	NO		bb		
12	FUNCTION5 PFK	44.06	5.518e3					1.3	NO		bb		
13	FUNCTION5 PFK	44.02	1.106e3					0.6	NO		bb		
14	FUNCTION5 PFK	43.71	1.195e4					1.8	NO		bb		
15	FUNCTION5 PFK	43.46	1.476e3					0.8	NO		bb		
16	FUNCTION5 PFK	43.39	1.169e4					1.4	NO		bb		
17	FUNCTION5 PFK	46.43	1.400e3					0.7	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.97	1.637e2					3.3	YES		bb		0.000
2	FUNCTION1 HXCD...	27.23	1.144e2					2.0	NO		bb		0.000
3	FUNCTION1 HXCD...	26.82	1.144e2					2.2	NO		bb		0.000
4	FUNCTION1 HXCD...	25.91	1.100e2					2.2	NO		bb		0.000
5	FUNCTION1 HXCD...	25.23	1.805e2					5.5	YES		bb		0.000
6	FUNCTION1 HXCD...	24.26	1.341e2					2.3	NO		bb		0.000
7	FUNCTION1 HXCD...	24.08	1.268e2					1.9	NO		bb		0.000
8	FUNCTION1 HXCD...	23.43	1.602e2					2.4	NO		bb		0.000
9	FUNCTION1 HXCD...	22.78	1.018e2					1.8	NO		bb		0.000
10	FUNCTION1 HXCD...	22.39	1.626e2					2.8	NO		bb		0.000
11	FUNCTION1 HXCD...	22.06	1.129e2					2.5	NO		bb		0.000
12	FUNCTION1 HXCD...	21.53	1.052e2					1.2	NO		db		0.000
13	FUNCTION1 HXCD...	21.36	9.992e1					1.3	NO		bd		0.000
14	FUNCTION1 HXCD...	21.16	1.410e2					2.5	NO		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	28.16	7.208e1					2.1	NO		bb		0.000
2	FUNCTION1 HPCD...	27.42	1.038e2					2.0	NO		db		0.000
3	FUNCTION1 HPCD...	27.27	1.034e2					2.2	NO		bd		0.000
4	FUNCTION1 HPCD...	25.70	1.308e2					1.7	NO		bb		0.000
5	FUNCTION1 HPCD...	24.05	1.613e2					1.7	NO		bb		0.000
6	FUNCTION1 HPCD...	22.59	1.423e2					2.0	NO		bb		0.000
7	FUNCTION1 HPCD...	22.39	1.496e2					3.4	YES		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.14	1.080e2					1.8	NO		db		0.000
2	FUNCTION2 HPCD...	30.05	1.026e2					1.8	NO		bd		0.000
3	FUNCTION2 HPCD...	28.74	8.165e1					1.9	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.11	9.641e1					2.4	NO		db		0.000
2	FUNCTION3 OCDPE	36.03	1.029e2					1.5	NO		bd		0.000
3	FUNCTION3 OCDPE	34.77	8.096e1					1.2	NO		bb		0.000
4	FUNCTION3 OCDPE	37.01	1.018e2					2.8	NO		bb		0.000
5	FUNCTION3 OCDPE	36.73	1.470e2					3.1	YES		bb		0.000
6	FUNCTION3 OCDPE	36.60	1.766e2					3.1	YES		bb		0.000
7	FUNCTION3 OCDPE	36.22	1.214e2					2.7	NO		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.34	9.946e1					2.4	NO		bb		0.000
2	FUNCTION4 NCDPE	39.96	9.057e1					2.5	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
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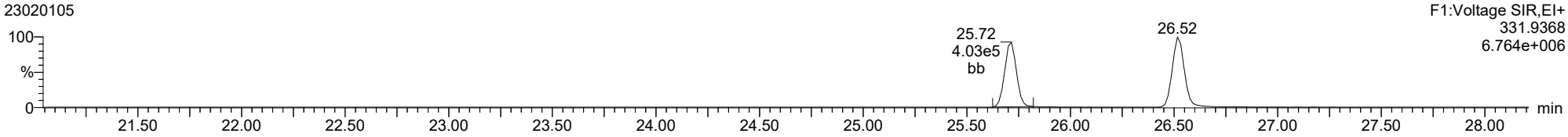
Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS1CR, Name: 23020105, Date: 01-Feb-2023, Time: 15:28:53, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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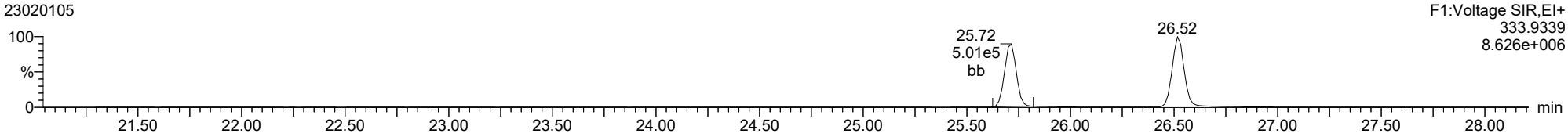
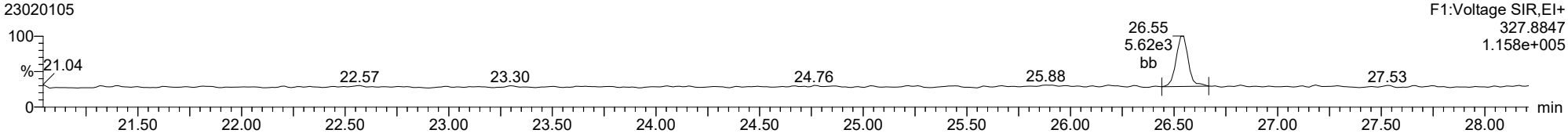


37CL-2378-TCDD



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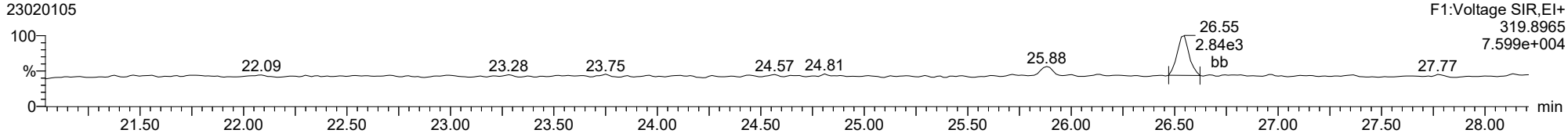

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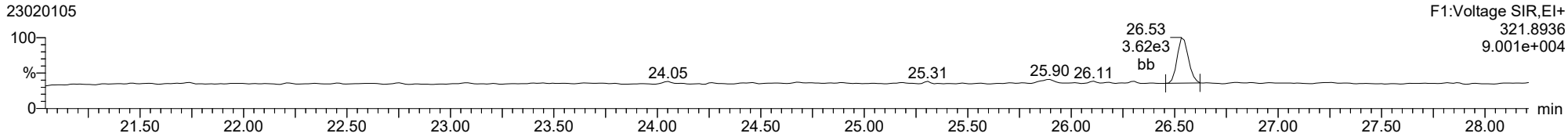

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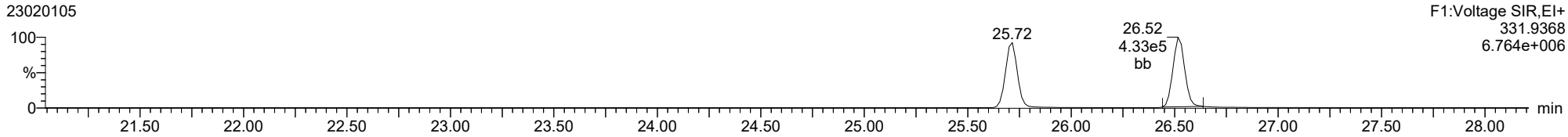

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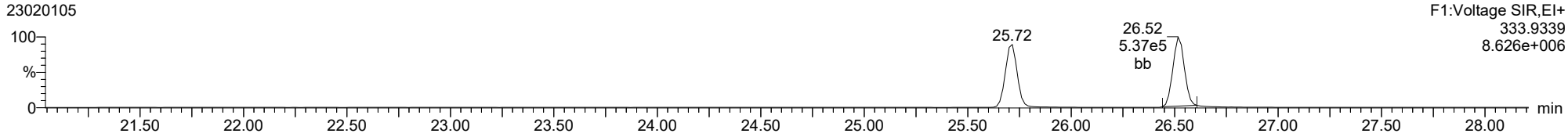

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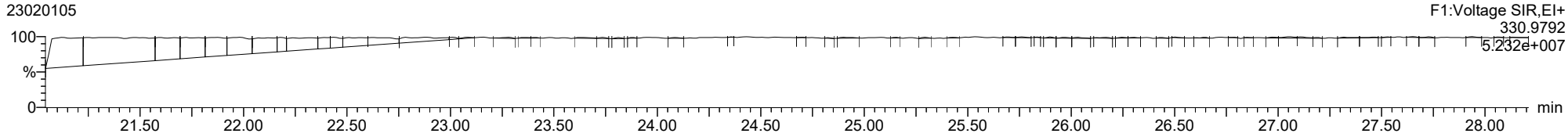

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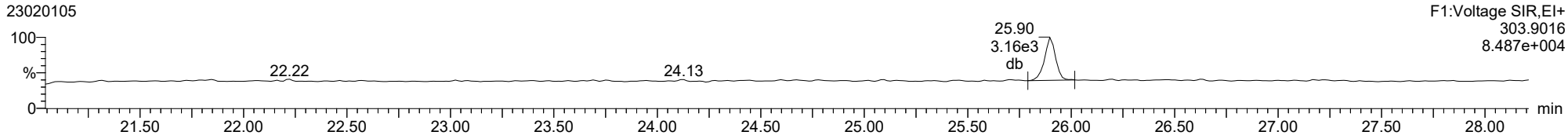

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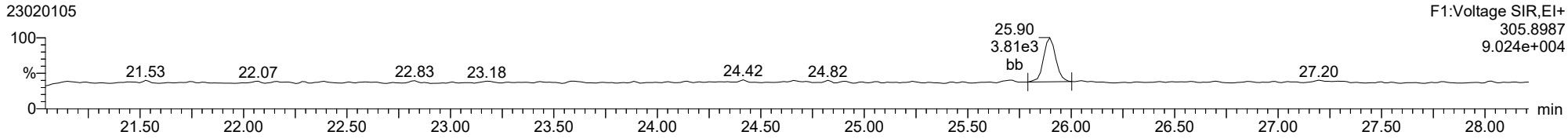

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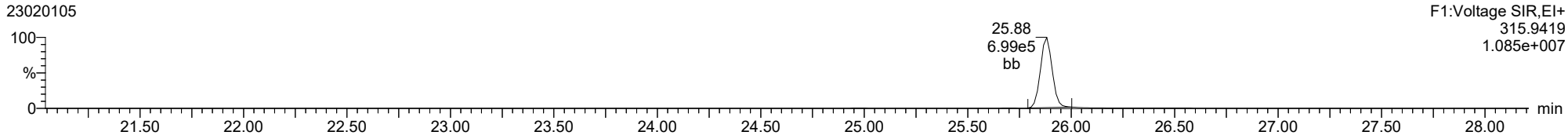

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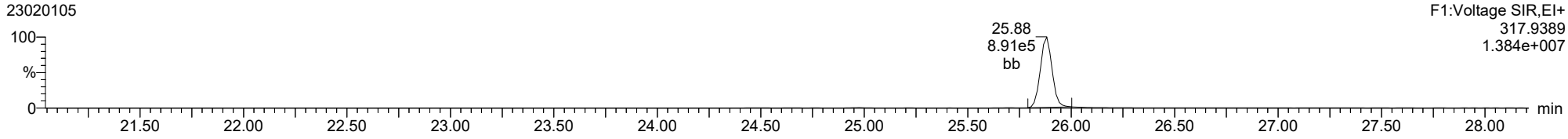

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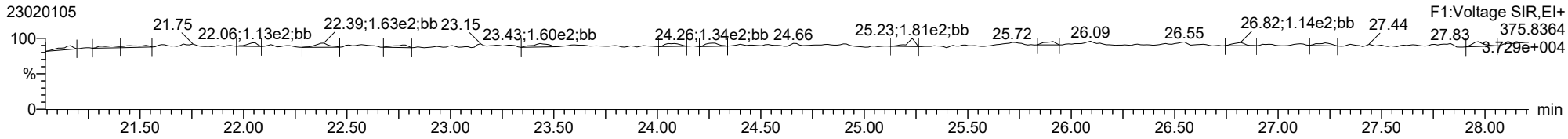

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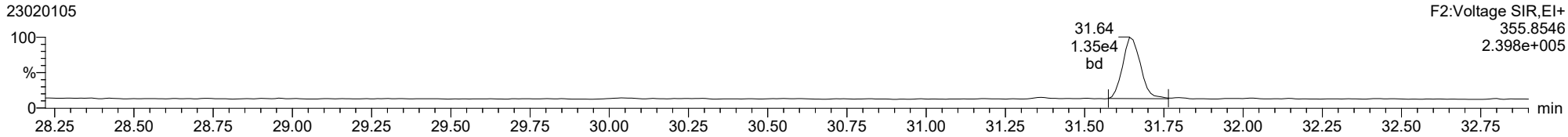

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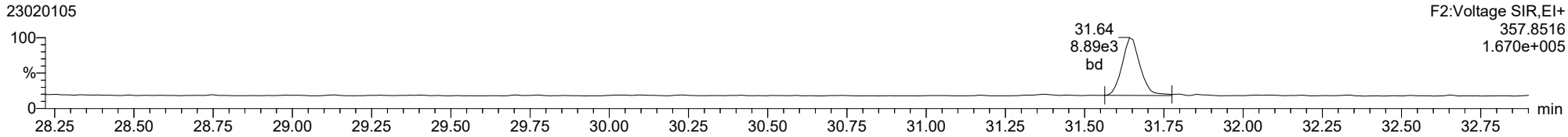

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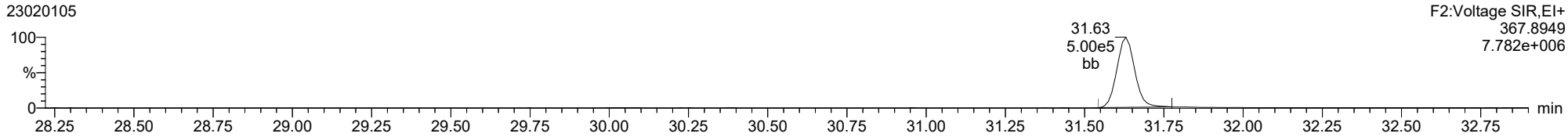

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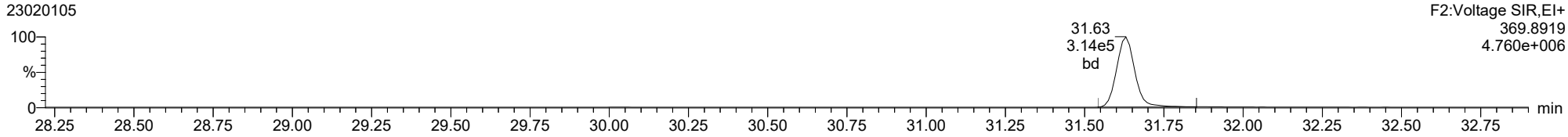

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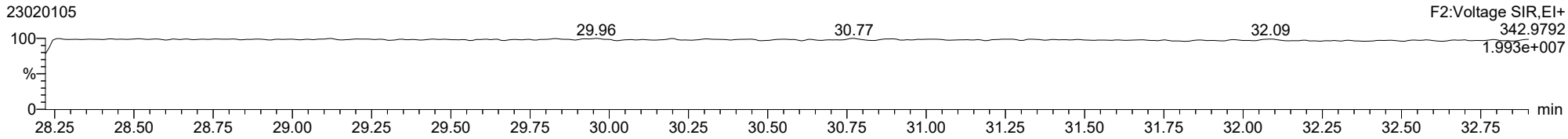

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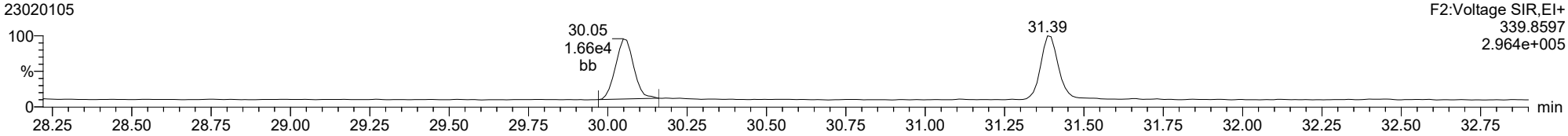

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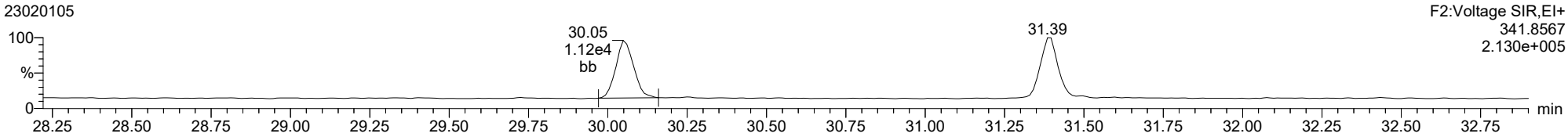

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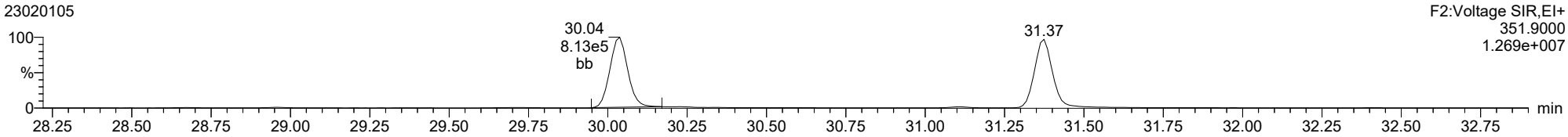

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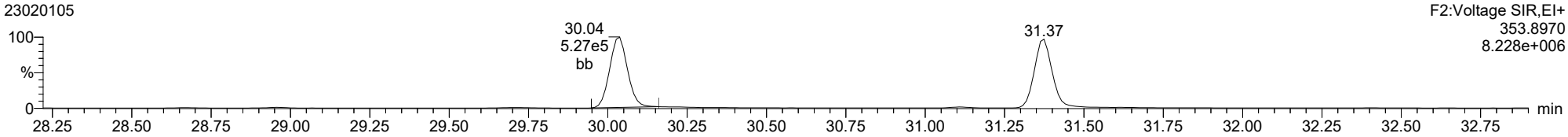

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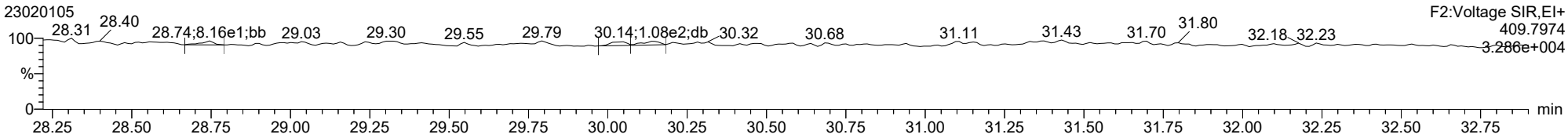

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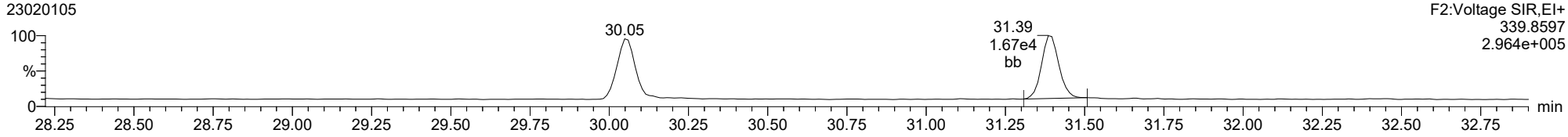

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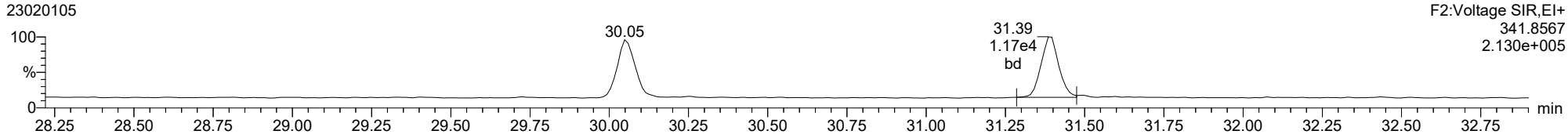

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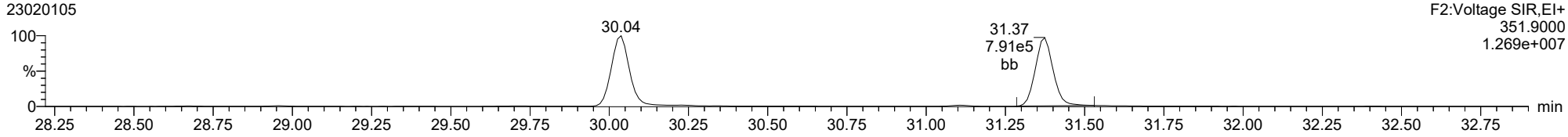

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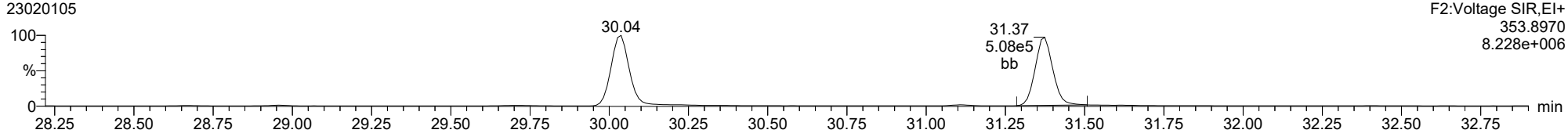

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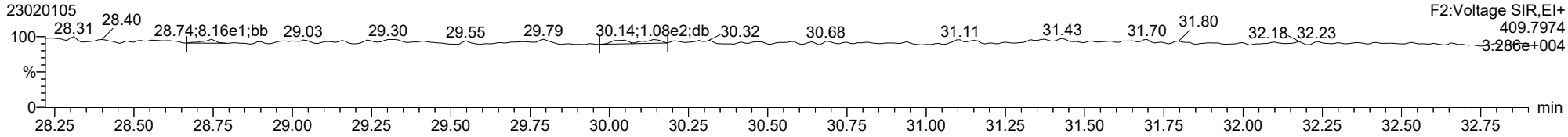

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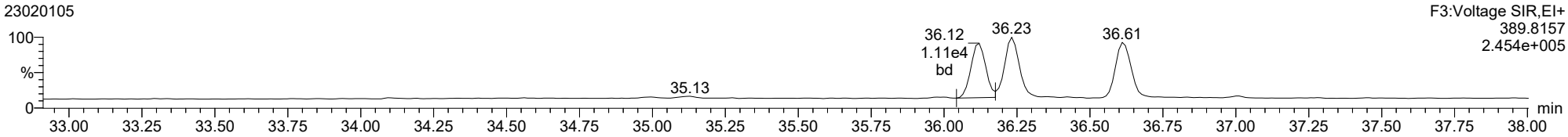

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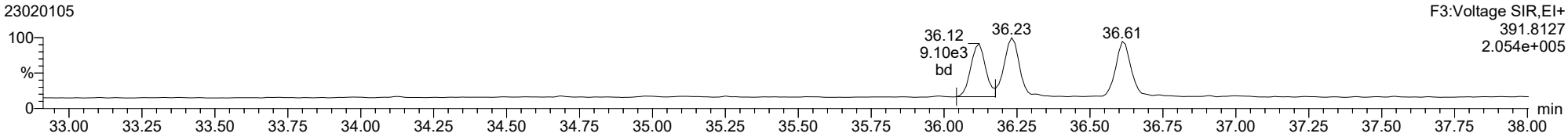

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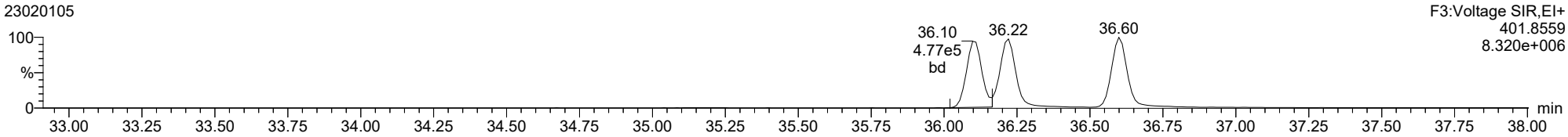

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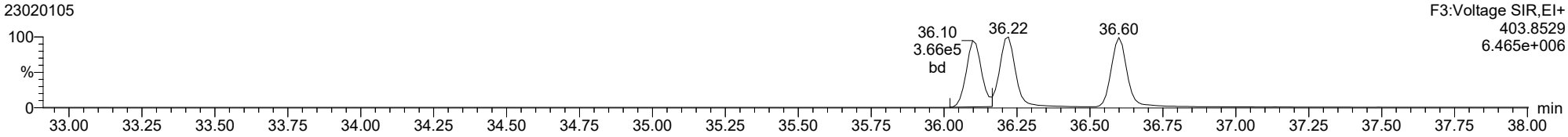

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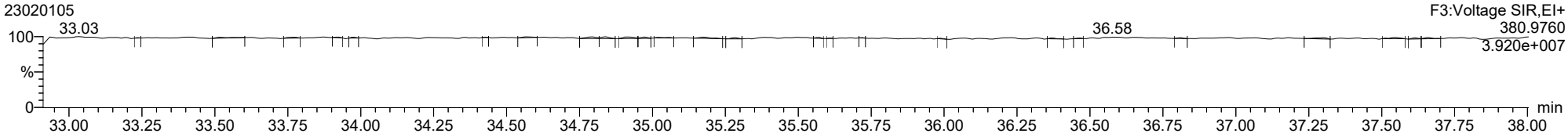

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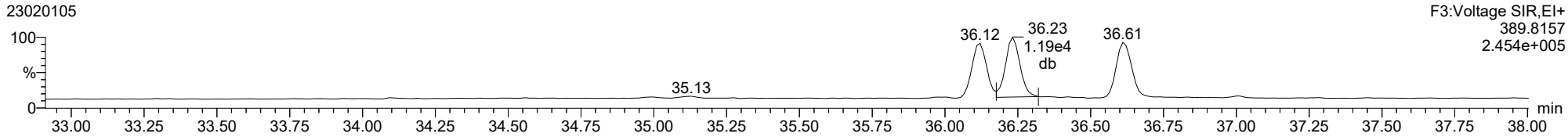

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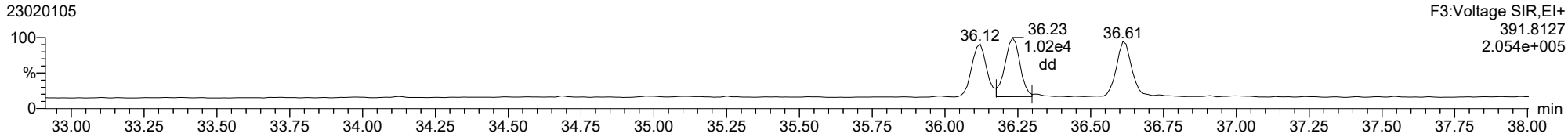

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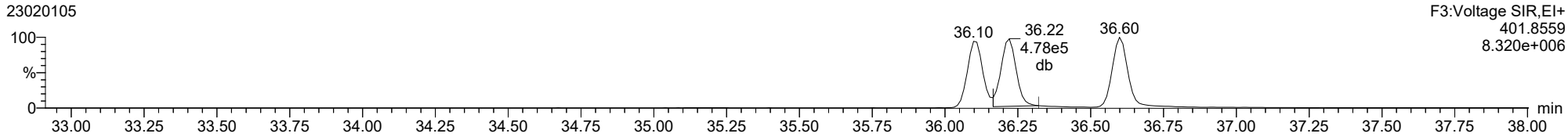

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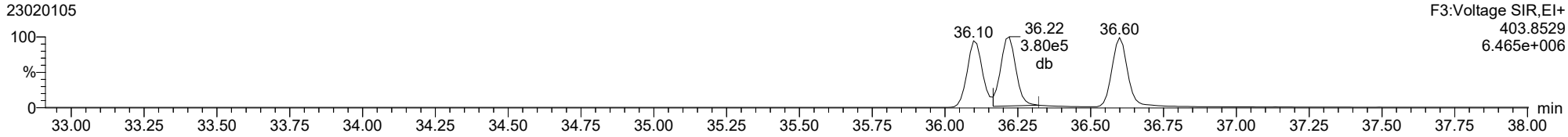

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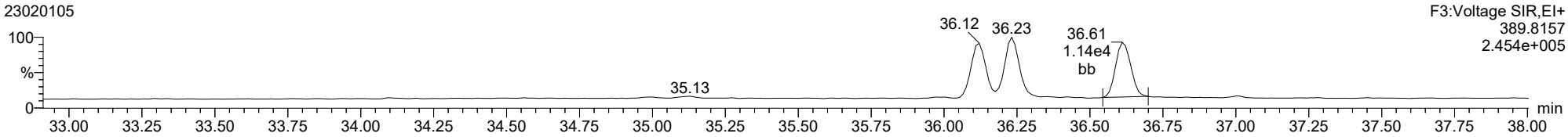

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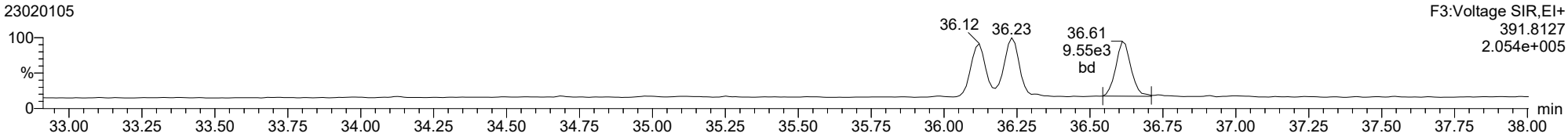

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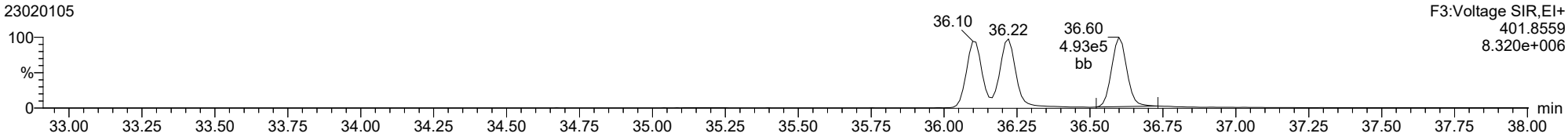

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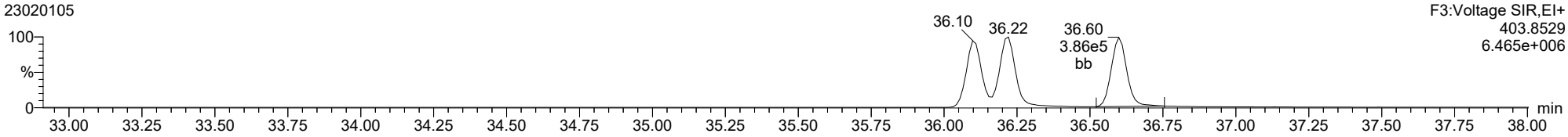

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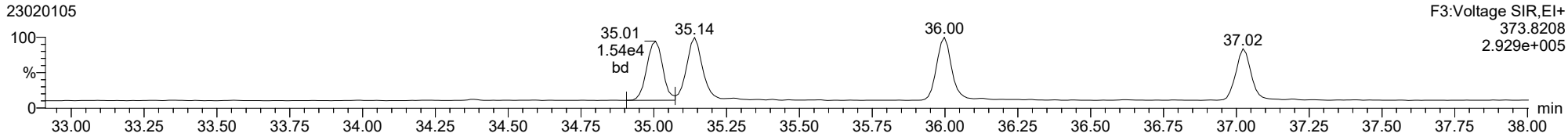

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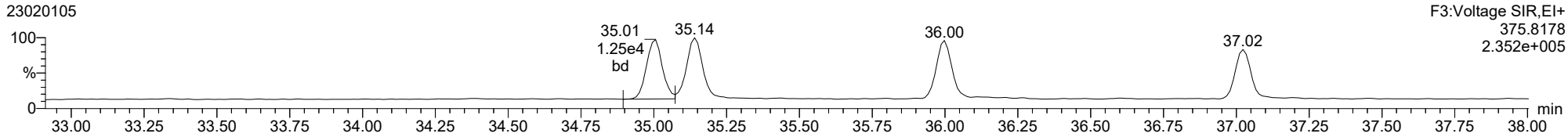

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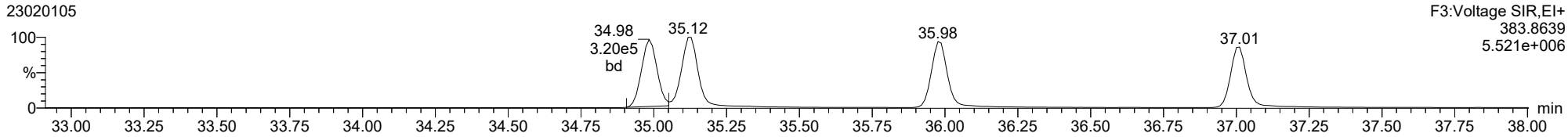

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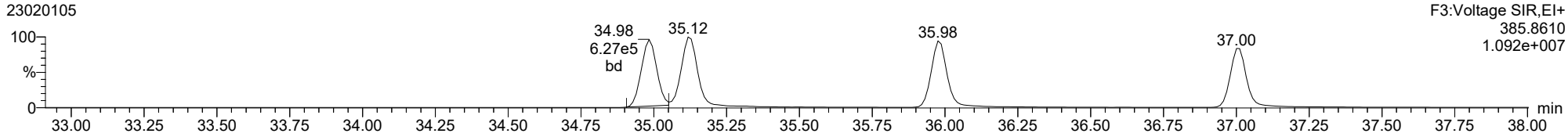

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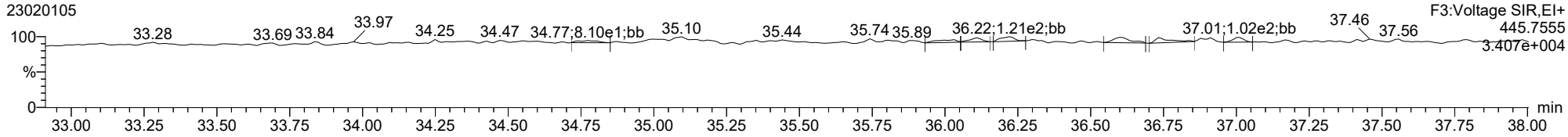

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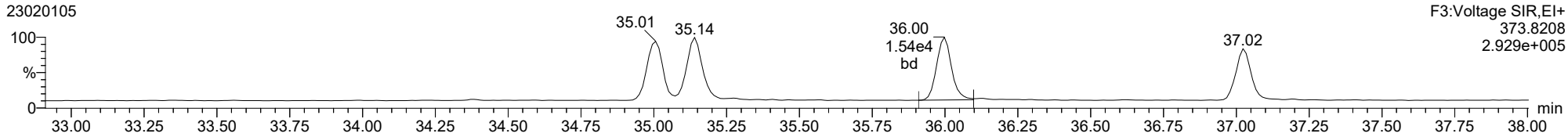

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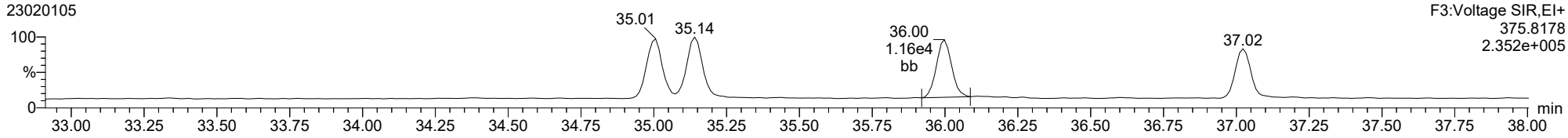

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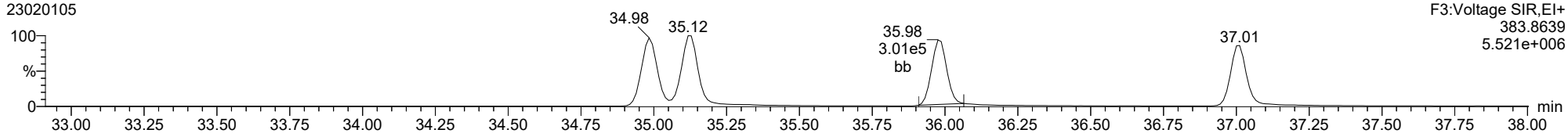

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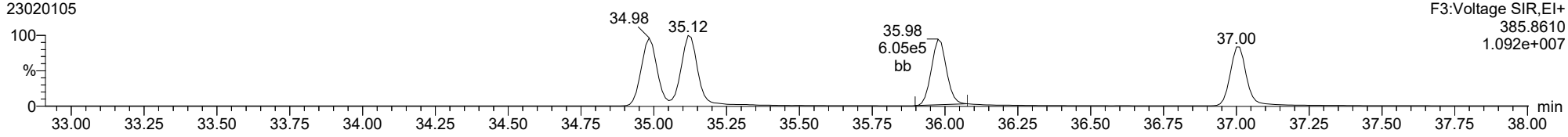
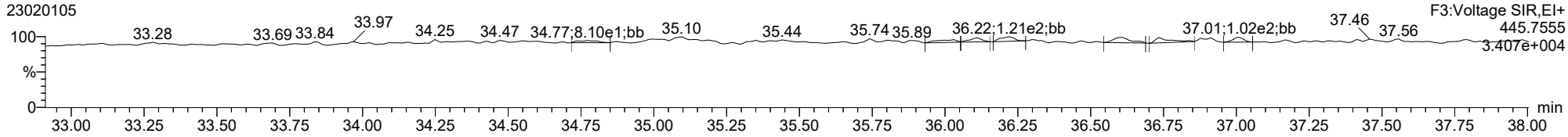


FUNCTION3 OCDPE



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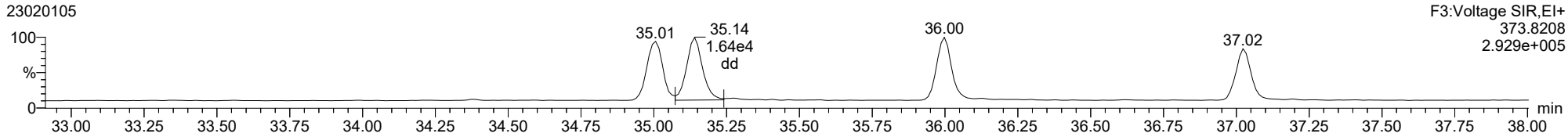

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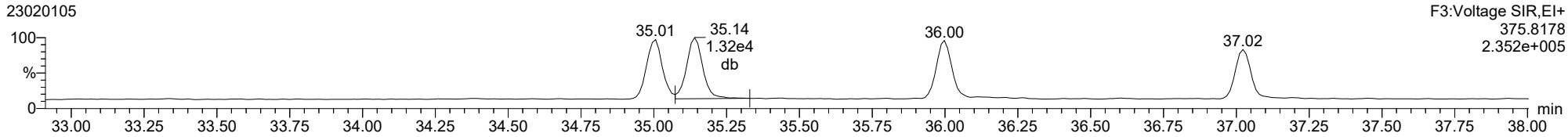

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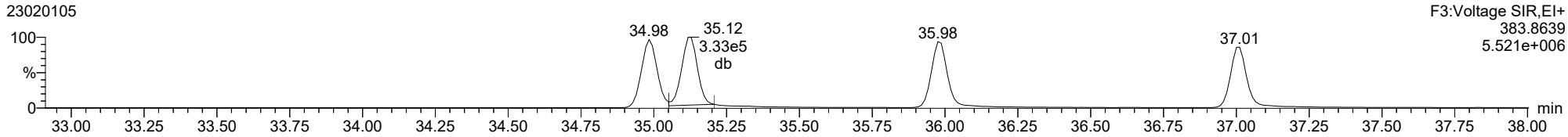

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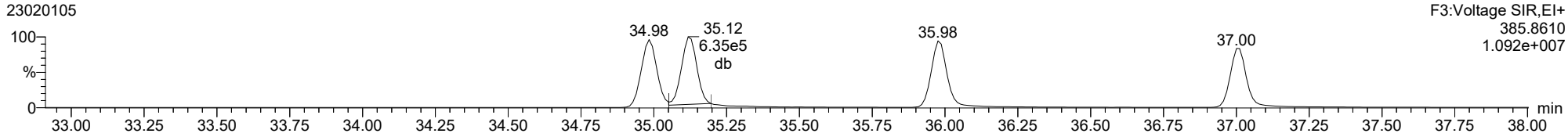

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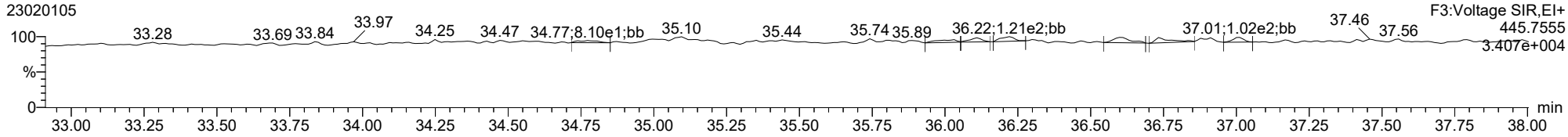

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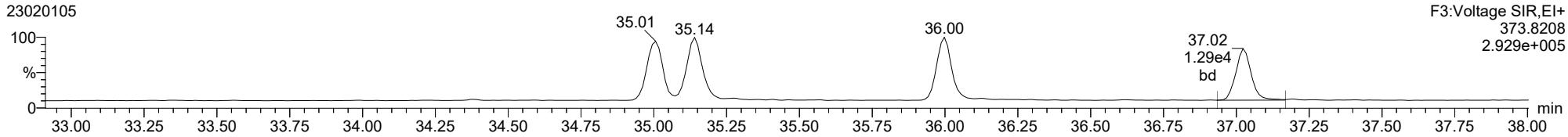

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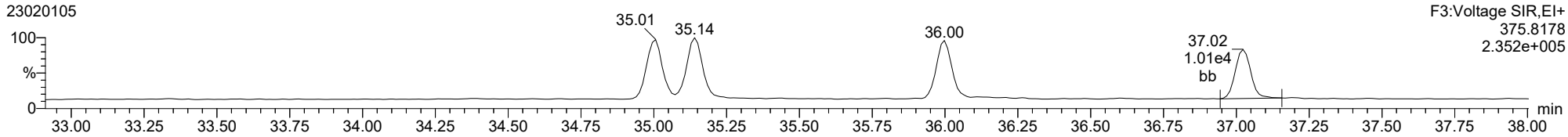

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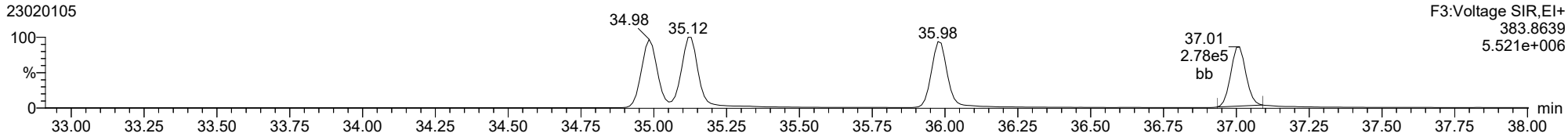

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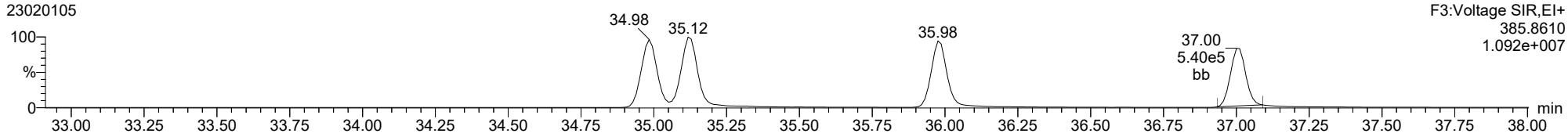

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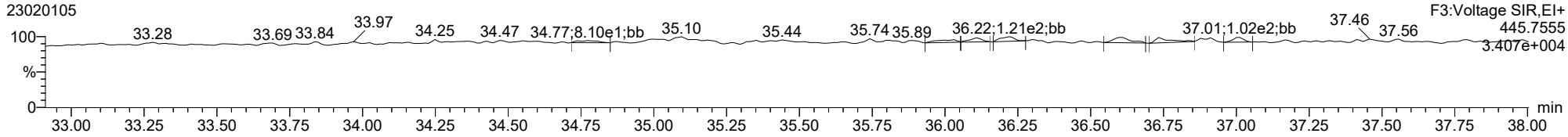

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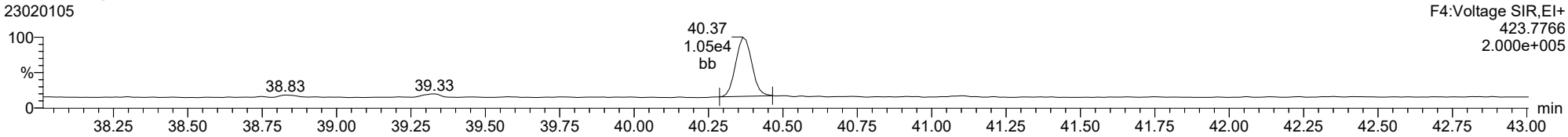

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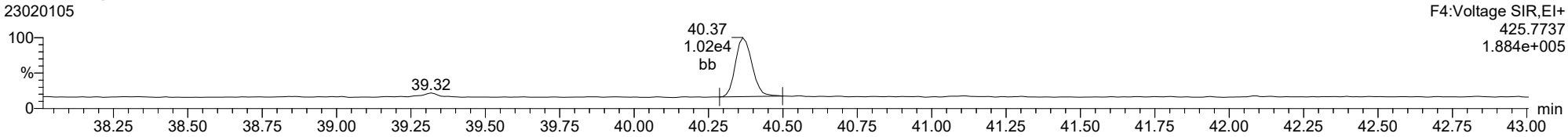

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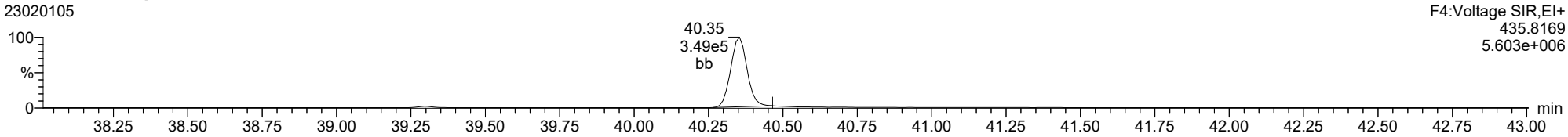

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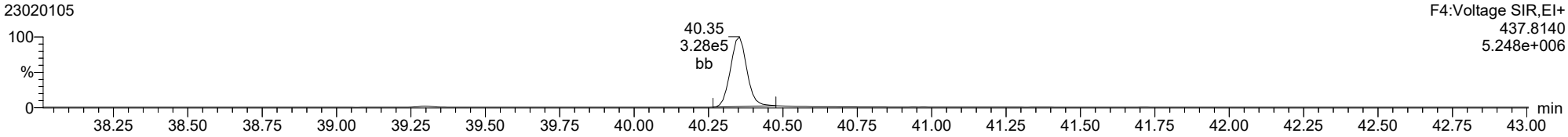

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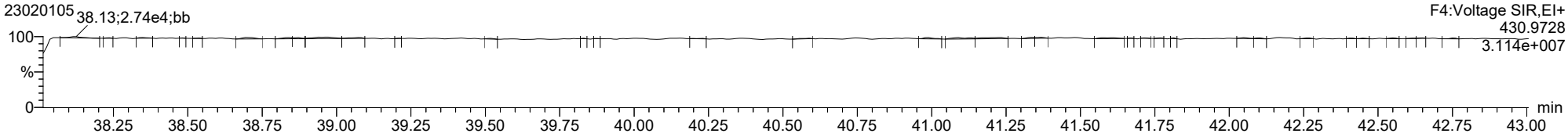

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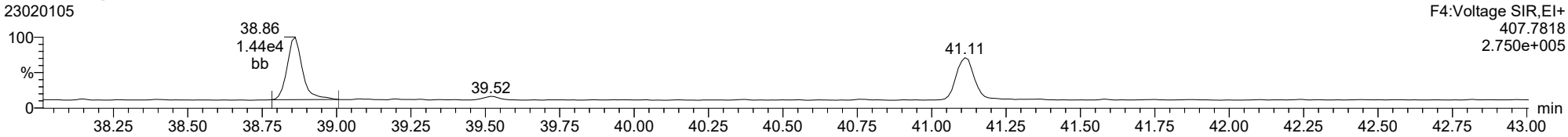

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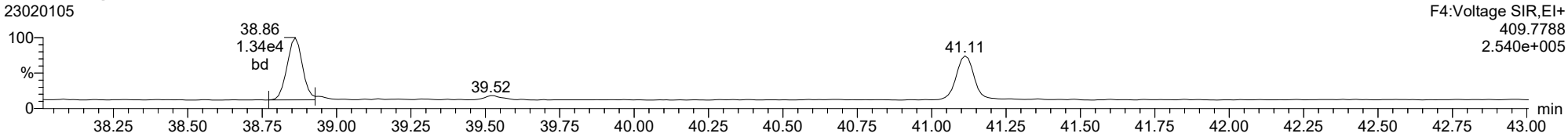

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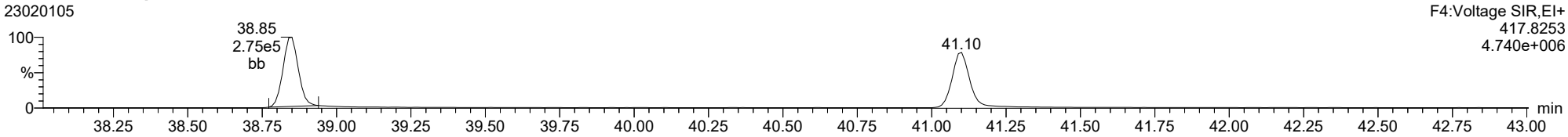

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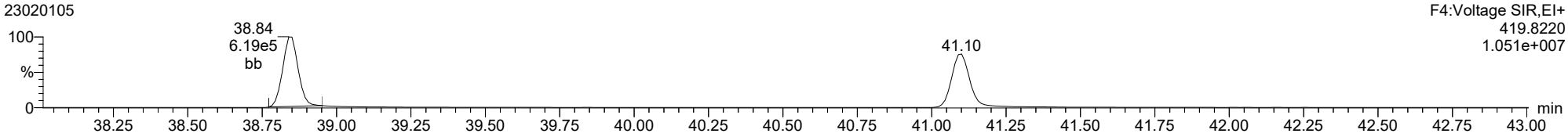
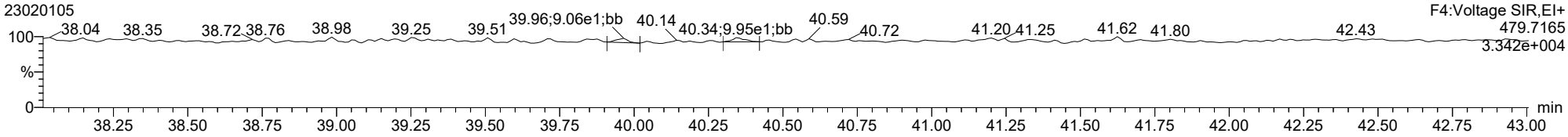


FUNCTION4 NCDPE



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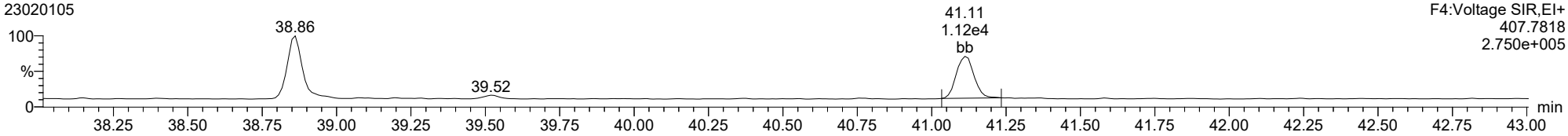

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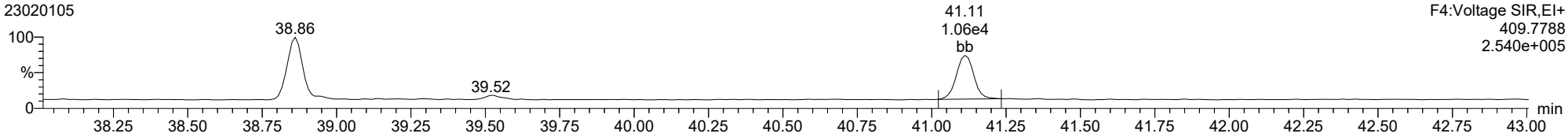

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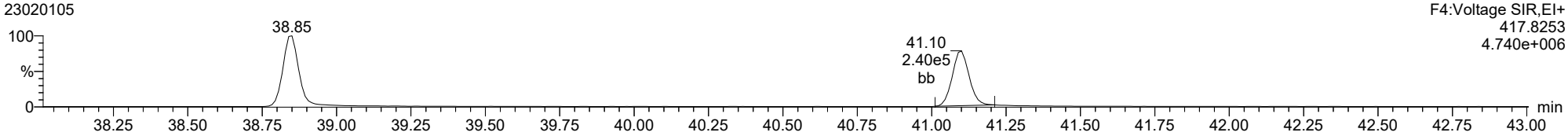

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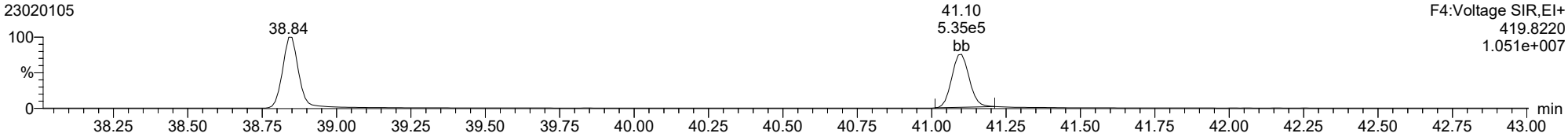

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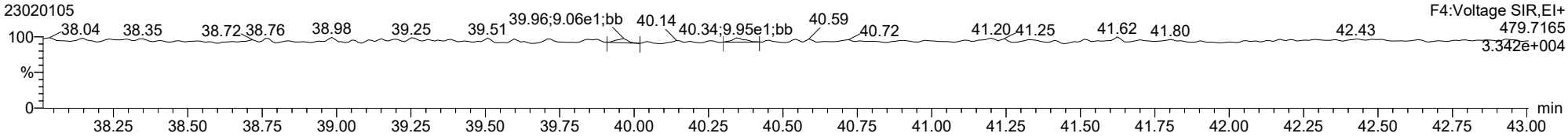

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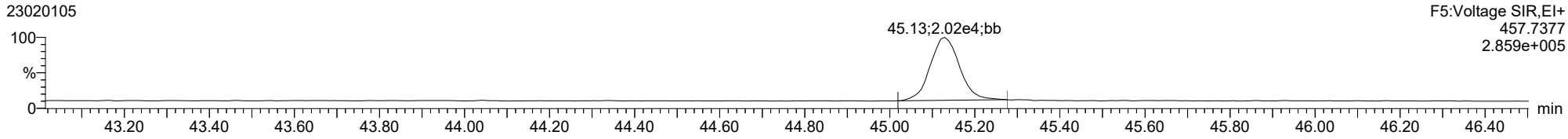

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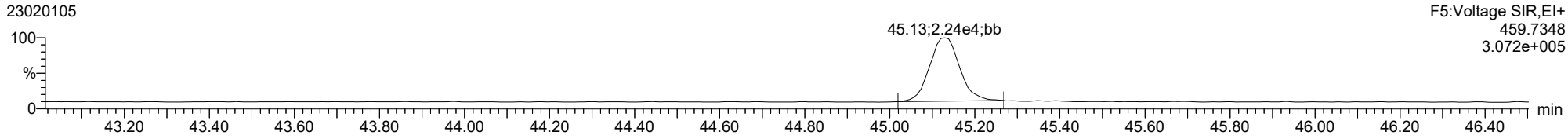

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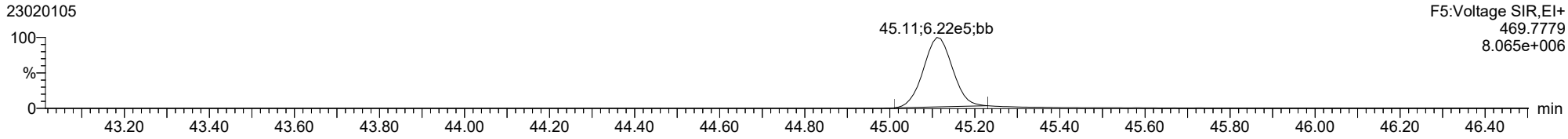

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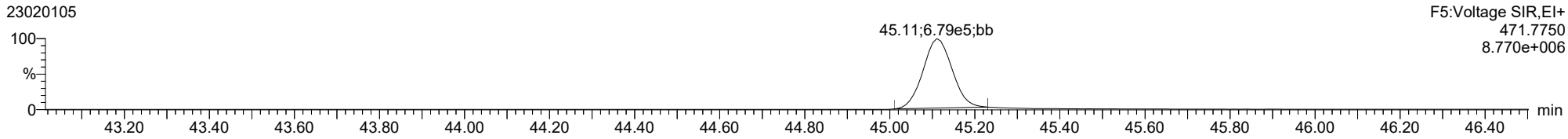

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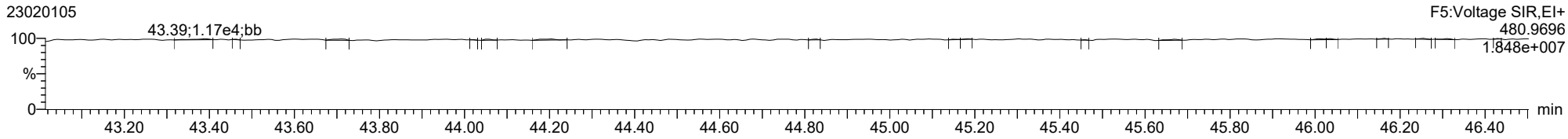

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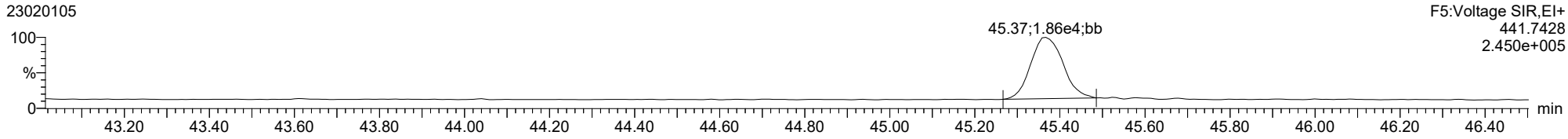
Printed: Friday, February 03, 2023 10:37:09 Pacific Standard Time

ID: CS1CR, Name: 23020105, Date: 01-Feb-2023, Time: 15:28:53, Conditions: AUTOSPEC01, User: pk

OCDF



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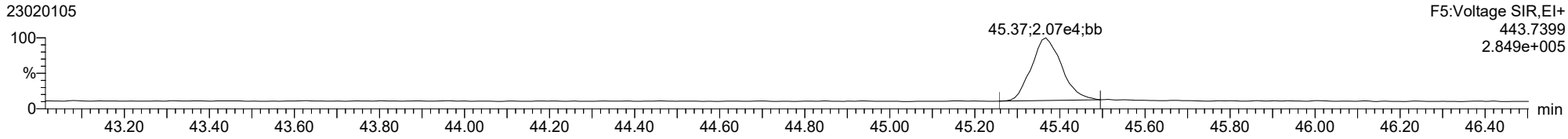

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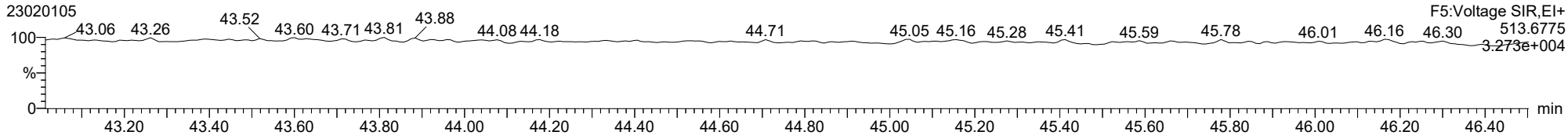

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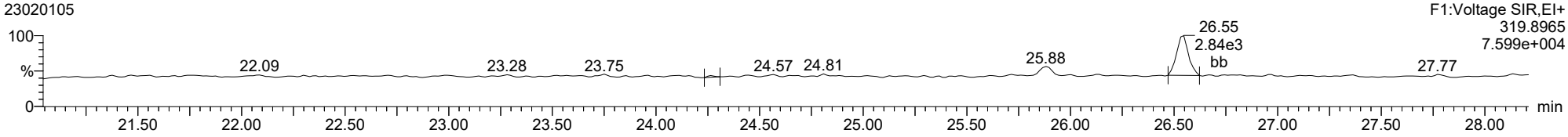
ID: CS1CR, Name: 23020105, Date: 01-Feb-2023, Time: 15:28:53, Conditions: AUTOSPEC01, User: pk

Total-tetradioxins



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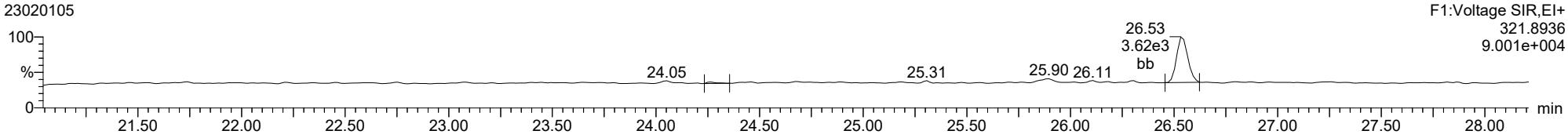

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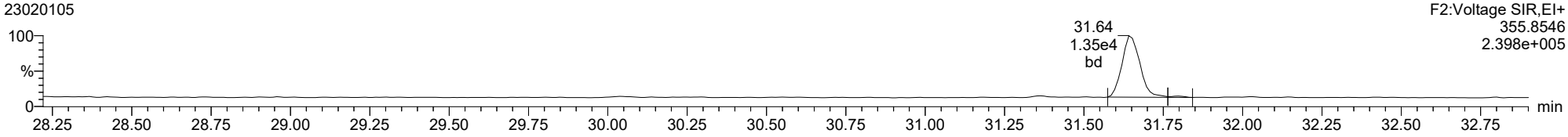
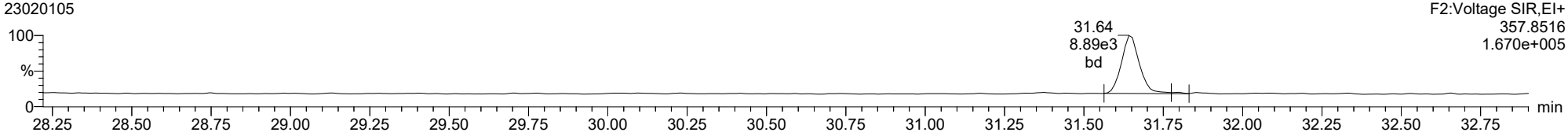


Total-pentadioxins



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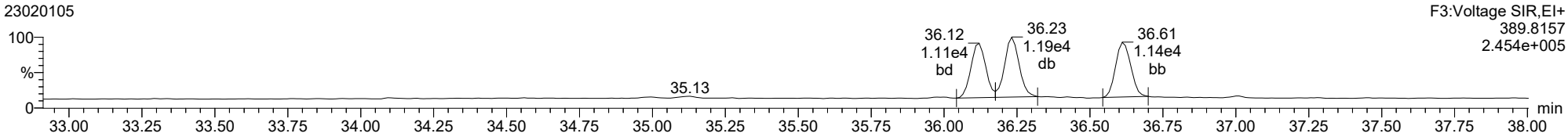
Total-hexadioxins



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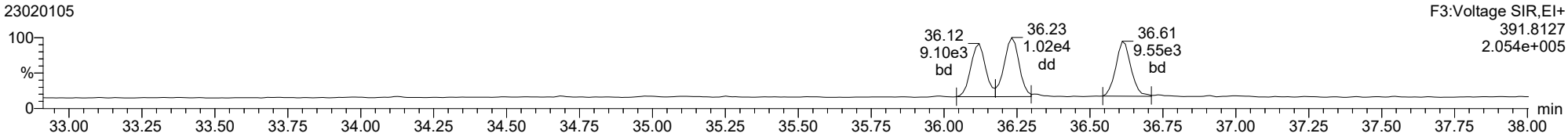

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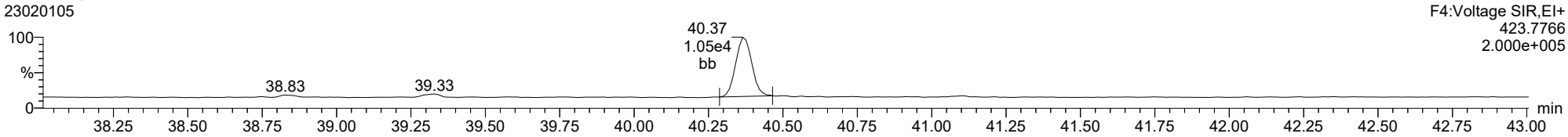

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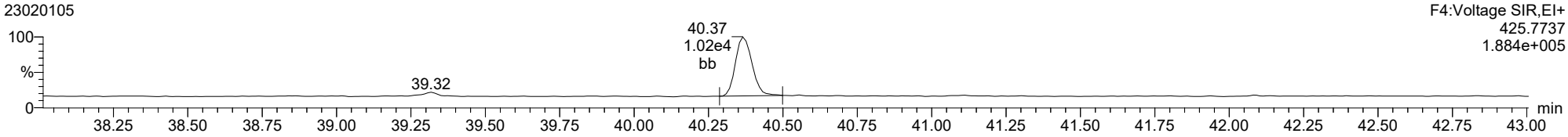

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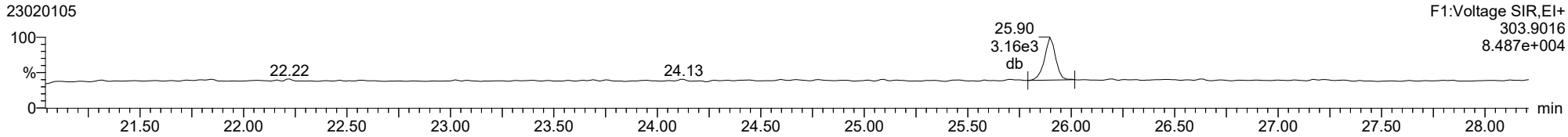
Total-tetrafurans



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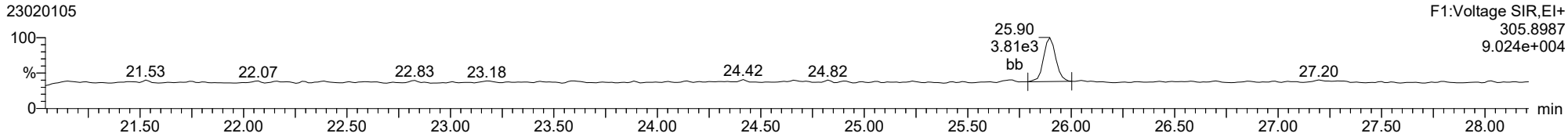

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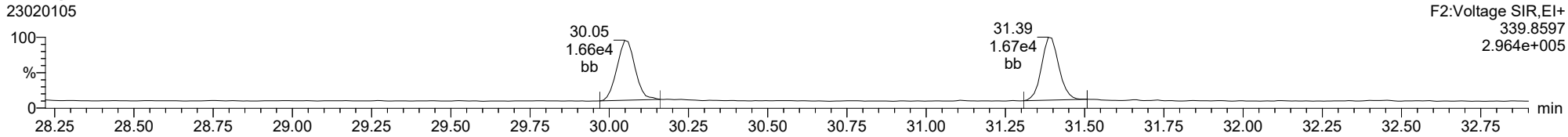

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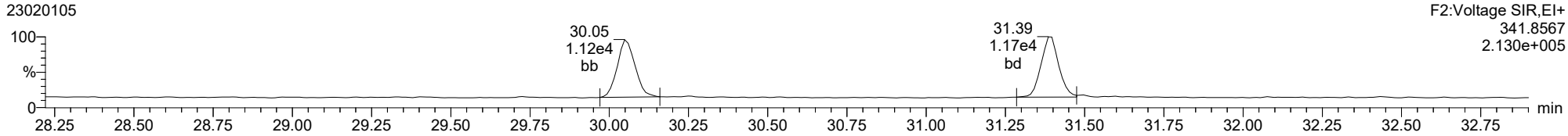

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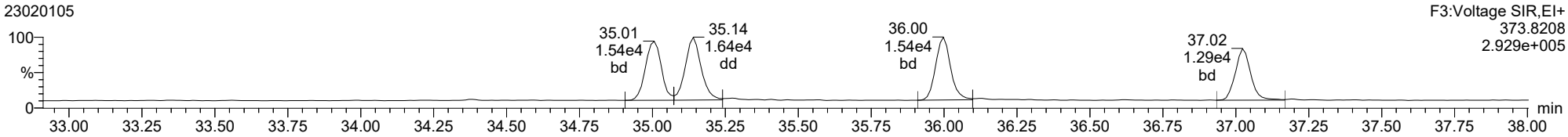
Total-hexafurans



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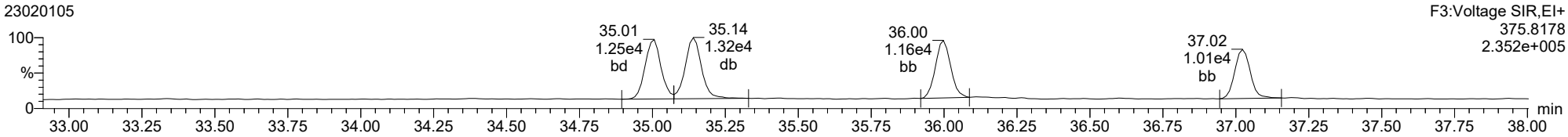
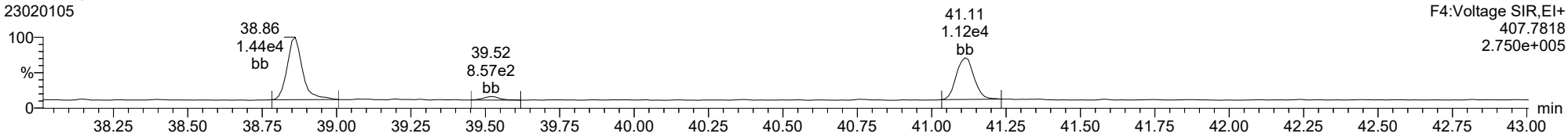
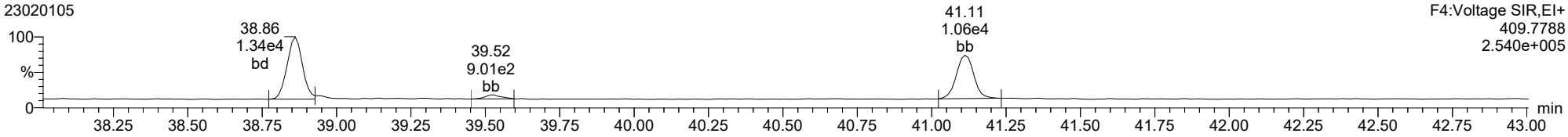


Total-heptafurans



Total-heptafurans



Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:37:25 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS2CR, Name: 23020106, Date: 01-Feb-2023, Time: 17:07:07, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.897	1.001	1.375e4	1.851e4	0.876	0.743	0.770	838	1562	2.10e5	2.76e5	250.5	176.4	NO	bb	bb	1.973
12378-PeCDF	30.059	1.001	8.384e4	5.404e4	0.845	1.551	1.550	1494	1842	1.30e6	8.45e5	870.6	458.6	NO	bd	bd	10.086
23478-PeCDF	31.396	1.001	8.811e4	5.691e4	0.911	1.548	1.550	1494	1842	1.31e6	8.58e5	880.0	466.0	NO	dd	bd	10.430
123478-HxCDF	35.006	1.001	7.445e4	5.785e4	1.182	1.287	1.240	1528	1565	1.21e6	9.52e5	791.3	608.7	NO	bd	bd	9.662
234678-HxCDF	35.998	1.000	7.554e4	5.984e4	1.229	1.262	1.240	1528	1565	1.18e6	9.11e5	774.2	582.4	NO	bd	bd	10.016
123678-HxCDF	35.140	1.000	8.156e4	6.332e4	1.248	1.288	1.240	1528	1565	1.23e6	9.70e5	801.6	619.6	NO	dd	dd	9.876
123789-HxCDF	37.023	1.000	6.616e4	5.058e4	1.187	1.308	1.240	1528	1565	1.05e6	8.18e5	687.4	522.6	NO	bd	bd	9.712
1234678-HpCDF	38.861	1.000	6.989e4	6.457e4	1.204	1.082	1.050	1538	1410	1.20e6	1.09e6	782.0	769.9	NO	bd	bb	9.897
1234789-HpCDF	41.111	1.000	5.916e4	5.737e4	1.165	1.031	1.050	1538	1410	8.45e5	8.21e5	549.5	582.6	NO	bd	bd	10.092
OCDF	45.376	1.006	9.214e4	9.862e4	1.186	0.934	0.890	1525	1454	1.11e6	1.20e6	727.4	823.3	NO	bd	bb	18.863
2378-TCDD	26.547	1.001	1.298e4	1.586e4	1.236	0.818	0.770	817	918	1.95e5	2.41e5	239.3	262.4	NO	bb	bb	2.020
12378-PeCDD	31.653	1.001	6.323e4	4.003e4	1.087	1.579	1.550	957	1113	9.67e5	6.22e5	1010.9	558.7	NO	bb	bb	9.953
123478-HxCDD	36.120	1.000	5.350e4	4.542e4	0.987	1.178	1.240	1419	1111	9.15e5	7.70e5	644.4	692.8	NO	bd	bd	9.967
123678-HxCDD	36.232	1.000	5.670e4	4.717e4	1.021	1.202	1.240	1419	1111	9.21e5	7.75e5	649.0	697.0	NO	db	db	9.657
123789-HxCDD	36.621	1.011	5.462e4	4.396e4	0.985	1.243	1.240	1419	1111	9.23e5	7.40e5	650.4	666.2	NO	bb	bb	9.715
1234678-HpCDD	40.376	1.001	5.329e4	4.930e4	1.253	1.081	1.050	939	1025	8.27e5	7.64e5	880.9	744.9	NO	bd	bb	9.623
OCDD	45.129	1.000	8.911e4	9.822e4	1.103	0.907	0.890	1078	1353	1.09e6	1.23e6	1009.3	912.1	NO	bd	bb	19.929
13C-2378-TCDF	25.882	1.007	8.175e5	1.049e6	1.768	0.779	0.770	2768	1604	1.28e7	1.62e7	4615.3	10118.2	NO	bb	bb	98.406
13C-12378-PeCDF	30.037	1.168	9.651e5	6.534e5	1.527	1.477	1.550	2685	2564	1.52e7	9.92e6	5664.2	3868.0	NO	bb	bd	98.795
13C-23478-PeCDF	31.374	1.220	9.289e5	5.970e5	1.466	1.556	1.550	2685	2564	1.42e7	9.15e6	5285.2	3567.7	NO	bb	bb	97.006
13C-123478-HxCDF	34.984	0.956	3.919e5	7.668e5	1.054	0.511	0.510	2280	2951	6.27e6	1.23e7	2748.9	4152.3	NO	bd	bd	102.036
13C-123678-HxCDF	35.129	0.960	3.972e5	7.782e5	1.080	0.510	0.510	2280	2951	6.52e6	1.27e7	2858.6	4308.7	NO	db	db	100.982
13C-234678-HxCDF	35.987	0.983	3.723e5	7.276e5	1.014	0.512	0.510	2280	2951	6.20e6	1.20e7	2719.4	4079.1	NO	bb	bb	100.611
13C-123789-HxCDF	37.012	1.011	3.411e5	6.719e5	0.928	0.508	0.510	2280	2951	5.87e6	1.14e7	2576.5	3878.0	NO	bb	bb	101.286
13C-1234678-HpCDF	38.850	1.061	3.519e5	7.764e5	1.036	0.453	0.440	2948	3056	6.15e6	1.36e7	2085.9	4456.3	NO	bb	bb	101.034
13C-1234789-HpCDF	41.100	1.123	3.071e5	6.837e5	0.905	0.449	0.440	2948	3056	4.66e6	1.03e7	1581.8	3383.9	NO	bb	bb	101.592
13C-1234-TCDD	25.715	0.000	4.761e5	5.966e5	1.000	0.798	0.770	1722	1260	7.44e6	9.39e6	4318.3	7453.5	NO	bb	bb	100.000
13C-2378-TCDD	26.517	1.031	5.086e5	6.462e5	1.103	0.787	0.770	1722	1260	7.59e6	9.61e6	4407.4	7623.5	NO	bb	bb	97.603
13C-12378-PeCDD	31.631	1.230	5.873e5	3.674e5	0.914	1.599	1.550	1804	1493	9.15e6	5.75e6	5075.5	3848.9	NO	bb	bb	97.357
13C-123478-HxCDD	36.109	0.987	5.695e5	4.361e5	0.933	1.306	1.240	2351	1925	9.66e6	7.35e6	4110.6	3818.4	NO	bd	bd	100.012
13C-123678-HxCDD	36.221	0.990	5.923e5	4.615e5	0.965	1.283	1.240	2351	1925	9.93e6	7.73e6	4224.3	4014.3	NO	db	db	101.353
13C-1234678-HpCDD	40.354	1.103	4.427e5	4.084e5	0.782	1.084	1.050	2415	1836	6.98e6	6.52e6	2888.8	3549.1	NO	bb	bb	100.984
13C-OCDD	45.110	1.232	8.153e5	8.896e5	0.788	0.916	0.890	2586	2058	1.02e7	1.13e7	3959.4	5482.6	NO	bb	bb	200.686
13C-123789-HxCDD	36.599	0.000	5.962e5	4.816e5	1.000	1.238	1.240	2351	1925	9.93e6	8.01e6	4225.3	4157.6	NO	bb	bb	100.000
37CL-2378-TCDD	26.547	1.032	2.594e4		1.233			1770		3.86e5		217.9			bb		1.960

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:37:25 Pacific Standard Time

ID: CS2CR, Name: 23020106, Date: 01-Feb-2023, Time: 17:07:07, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					1.064		0.770	838	1562								
1289-TCDF					0.858		0.770	838	1562								
13468-PECDF					1.013		1.550	818	1180								
12389-PECDF					0.844		1.550	1494	1842								
123468-HXCDF					1.197		1.240	1528	1565								
1368-TCDD					1.084		0.770	817	918								
1289-TCDD					0.975		0.770	817	918								
12479-PECDD					1.837		1.550	957	1113								
12389-PECDD					1.252		1.550	957	1113								
124679-HXCDD					1.033		1.240	1419	1111								
1234679-HPCDD					1.286		1.050	939	1025								
Total-tetrafurans			1.375e4		0.933			838		2.10e5							1.973
Total-penta1			0.000e0					818		0.00e0							
Total-pentafurans			1.724e5		0.866			1494		2.63e6							20.570
Total-hexafurans			2.977e5		1.208			1528		4.67e6							39.267
Total-heptafurans			1.291e5		1.185			1538		2.05e6							19.990
Total-Furans			7.051e5		1.067			838		1.07e7							100.663
Total-tetradioxins			1.298e4		1.099			817		1.95e5							2.020
Total-pentadioxins			6.323e4		1.392			957		9.67e5							9.953
Total-hexadioxins			1.650e5		1.007			1419		2.76e6							29.363
Total-heptadioxins			5.329e4		1.269			939		8.27e5							9.623
Total-Dioxins			3.836e5		1.165			817		5.84e6							70.888
Total-TEQ			1.089e6					817		1.65e7							171.552
FUNCTION1 PFK			0.000e0					575758		0.00e0							
FUNCTION2 PFK			0.000e0					203146		0.00e0							
FUNCTION3 PFK			1.946e5					441294		6.25e6							0.000
FUNCTION4 PFK			6.766e5					326212		1.14e7							
FUNCTION5 PFK			7.829e4					177933		3.00e6							
FUNCTION1 HXCD...			6.944e2					716		1.19e4							0.000
FUNCTION1 HPCD...			4.187e2					801		7.47e3							0.000
FUNCTION2 HPCD...			7.244e2					1047		1.53e4							0.000
FUNCTION3 OCDPE			2.025e2					783		3.00e3							0.000
FUNCTION4 NCDPE			5.677e2					836		9.38e3							0.000
FUNCTION5 DCDPE			1.012e2					822		1.66e3							0.000

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS2CR, Name: 23020106, Date: 01-Feb-2023, Time: 17:07:07, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.90	1.375e4	1.851e4	0.876	0.74	0.77	250.5	YES	NO	bb	bb	1.973

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.40	8.811e4	5.691e4	0.911	1.55	1.55	880.0	YES	NO	dd	bd	10.430
2	Total-pentafurans	30.25	4.556e2	2.766e2	0.866	1.65	1.55	7.1	YES	NO	dd	db	0.054
3	12378-PeCDF	30.06	8.384e4	5.404e4	0.845	1.55	1.55	870.6	YES	NO	bd	bd	10.086

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	234678-HxCDF	36.00	7.554e4	5.984e4	1.229	1.26	1.24	774.2	YES	NO	bd	bd	10.016
2	123678-HxCDF	35.14	8.156e4	6.332e4	1.248	1.29	1.24	801.6	YES	NO	dd	dd	9.876
3	123478-HxCDF	35.01	7.445e4	5.785e4	1.182	1.29	1.24	791.3	YES	NO	bd	bd	9.662
4	123789-HxCDF	37.02	6.616e4	5.058e4	1.187	1.31	1.24	687.4	YES	NO	bd	bd	9.712

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.11	5.916e4	5.737e4	1.165	1.03	1.05	549.5	YES	NO	bd	bd	10.092
2	1234678-HpCDF	38.86	6.989e4	6.457e4	1.204	1.08	1.05	782.0	YES	NO	bd	bb	9.897

ID: CS2CR, Name: 23020106, Date: 01-Feb-2023, Time: 17:07:07, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.90	1.375e4	1.851e4	0.876	0.74	0.77	250.5	YES	NO	bb	bb	1.973
2	23478-PeCDF	31.40	8.811e4	5.691e4	0.911	1.55	1.55	880.0	YES	NO	dd	bd	10.430
3	Total-pentafurans	30.25	4.556e2	2.766e2	0.866	1.65	1.55	7.1	YES	NO	dd	db	0.054
4	12378-PeCDF	30.06	8.384e4	5.404e4	0.845	1.55	1.55	870.6	YES	NO	bd	bd	10.086
5	234678-HxCDF	36.00	7.554e4	5.984e4	1.229	1.26	1.24	774.2	YES	NO	bd	bd	10.016
6	123678-HxCDF	35.14	8.156e4	6.332e4	1.248	1.29	1.24	801.6	YES	NO	dd	dd	9.876
7	123478-HxCDF	35.01	7.445e4	5.785e4	1.182	1.29	1.24	791.3	YES	NO	bd	bd	9.662
8	123789-HxCDF	37.02	6.616e4	5.058e4	1.187	1.31	1.24	687.4	YES	NO	bd	bd	9.712
9	1234789-HpCDF	41.11	5.916e4	5.737e4	1.165	1.03	1.05	549.5	YES	NO	bd	bd	10.092
10	1234678-HpCDF	38.86	6.989e4	6.457e4	1.204	1.08	1.05	782.0	YES	NO	bd	bb	9.897
11	OCDF	45.38	9.214e4	9.862e4	1.186	0.93	0.89	727.4	YES	NO	bd	bb	18.863

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.55	1.298e4	1.586e4	1.236	0.82	0.77	239.3	YES	NO	bb	bb	2.020

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.65	6.323e4	4.003e4	1.087	1.58	1.55	1010.9	YES	NO	bb	bb	9.953

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexadioxins	36.88	1.448e2	1.055e2	1.007	1.37	1.24	2.8	NO	NO	bb	bb	0.024
2	123789-HxCDD	36.62	5.462e4	4.396e4	0.985	1.24	1.24	650.4	YES	NO	bb	bb	9.715
3	123678-HxCDD	36.23	5.670e4	4.717e4	1.021	1.20	1.24	649.0	YES	NO	db	db	9.657
4	123478-HxCDD	36.12	5.350e4	4.542e4	0.987	1.18	1.24	644.4	YES	NO	bd	bd	9.967

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.38	5.329e4	4.930e4	1.253	1.08	1.05	880.9	YES	NO	bd	bb	9.623

ID: CS2CR, Name: 23020106, Date: 01-Feb-2023, Time: 17:07:07, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.65	6.323e4	4.003e4	1.087	1.58	1.55	1010.9	YES	NO	bb	bb	9.953
2	2378-TCDD	26.55	1.298e4	1.586e4	1.236	0.82	0.77	239.3	YES	NO	bb	bb	2.020
3	Total-hexadioxins	36.88	1.448e2	1.055e2	1.007	1.37	1.24	2.8	NO	NO	bb	bb	0.024
4	123789-HxCDD	36.62	5.462e4	4.396e4	0.985	1.24	1.24	650.4	YES	NO	bb	bb	9.715
5	123678-HxCDD	36.23	5.670e4	4.717e4	1.021	1.20	1.24	649.0	YES	NO	db	db	9.657
6	123478-HxCDD	36.12	5.350e4	4.542e4	0.987	1.18	1.24	644.4	YES	NO	bd	bd	9.967
7	1234678-HpCDD	40.38	5.329e4	4.930e4	1.253	1.08	1.05	880.9	YES	NO	bd	bb	9.623
8	OCDD	45.13	8.911e4	9.822e4	1.103	0.91	0.89	1009.3	YES	NO	bd	bb	19.929

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.90	1.375e4	1.851e4	0.876	0.74	0.77	250.5	YES	NO	bb	bb	1.973
2	23478-PeCDF	31.40	8.811e4	5.691e4	0.911	1.55	1.55	880.0	YES	NO	dd	bd	10.430
3	Total-pentafurans	30.25	4.556e2	2.766e2	0.866	1.65	1.55	7.1	YES	NO	dd	db	0.054
4	12378-PeCDF	30.06	8.384e4	5.404e4	0.845	1.55	1.55	870.6	YES	NO	bd	bd	10.086
5	234678-HxCDF	36.00	7.554e4	5.984e4	1.229	1.26	1.24	774.2	YES	NO	bd	bd	10.016
6	123678-HxCDF	35.14	8.156e4	6.332e4	1.248	1.29	1.24	801.6	YES	NO	dd	dd	9.876
7	123478-HxCDF	35.01	7.445e4	5.785e4	1.182	1.29	1.24	791.3	YES	NO	bd	bd	9.662
8	123789-HxCDF	37.02	6.616e4	5.058e4	1.187	1.31	1.24	687.4	YES	NO	bd	bd	9.712
9	1234789-HpCDF	41.11	5.916e4	5.737e4	1.165	1.03	1.05	549.5	YES	NO	bd	bd	10.092
10	1234678-HpCDF	38.86	6.989e4	6.457e4	1.204	1.08	1.05	782.0	YES	NO	bd	bb	9.897
11	OCDF	45.38	9.214e4	9.862e4	1.186	0.93	0.89	727.4	YES	NO	bd	bb	18.863
12	12378-PeCDD	31.65	6.323e4	4.003e4	1.087	1.58	1.55	1010.9	YES	NO	bb	bb	9.953
13	2378-TCDD	26.55	1.298e4	1.586e4	1.236	0.82	0.77	239.3	YES	NO	bb	bb	2.020
14	Total-hexadioxins	36.88	1.448e2	1.055e2	1.007	1.37	1.24	2.8	NO	NO	bb	bb	0.024
15	123789-HxCDD	36.62	5.462e4	4.396e4	0.985	1.24	1.24	650.4	YES	NO	bb	bb	9.715
16	123678-HxCDD	36.23	5.670e4	4.717e4	1.021	1.20	1.24	649.0	YES	NO	db	db	9.657
17	123478-HxCDD	36.12	5.350e4	4.542e4	0.987	1.18	1.24	644.4	YES	NO	bd	bd	9.967
18	1234678-HpCDD	40.38	5.329e4	4.930e4	1.253	1.08	1.05	880.9	YES	NO	bd	bb	9.623
19	OCDD	45.13	8.911e4	9.822e4	1.103	0.91	0.89	1009.3	YES	NO	bd	bb	19.929

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.84	3.684e4					1.4	NO		bb		0.000
2	FUNCTION3 PFK	37.56	3.248e4					1.4	NO		bb		0.000
3	FUNCTION3 PFK	37.40	1.502e4					1.5	NO		bb		0.000
4	FUNCTION3 PFK	36.84	6.471e3					0.8	NO		bb		0.000
5	FUNCTION3 PFK	36.52	9.443e3					0.9	NO		bb		0.000
6	FUNCTION3 PFK	36.37	4.140e3					0.7	NO		db		0.000
7	FUNCTION3 PFK	36.33	1.297e4					1.2	NO		bd		0.000
8	FUNCTION3 PFK	36.13	6.608e3					0.8	NO		bb		0.000
9	FUNCTION3 PFK	35.98	2.009e4					1.5	NO		bb		0.000
10	FUNCTION3 PFK	35.88	2.554e3					0.5	NO		bb		0.000
11	FUNCTION3 PFK	34.30	1.671e4					1.6	NO		bb		0.000
12	FUNCTION3 PFK	34.23	8.316e3					0.4	NO		bb		0.000
13	FUNCTION3 PFK	33.98	2.293e4					1.5	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.23	5.785e4					4.4	YES		dd		
2	FUNCTION4 PFK	38.15	1.010e5					5.4	YES		dd		
3	FUNCTION4 PFK	38.09	1.883e5					5.6	YES		bd		
4	FUNCTION4 PFK	42.87	1.204e4					1.0	NO		bb		
5	FUNCTION4 PFK	42.31	2.496e4					1.3	NO		bb		
6	FUNCTION4 PFK	41.49	1.586e4					1.0	NO		bb		
7	FUNCTION4 PFK	41.10	1.494e4					1.1	NO		bb		
8	FUNCTION4 PFK	40.87	1.555e4					1.4	NO		bb		
9	FUNCTION4 PFK	40.79	1.700e4					1.3	NO		bb		
10	FUNCTION4 PFK	40.65	5.082e3					0.8	NO		bb		
11	FUNCTION4 PFK	40.61	1.525e3					0.4	NO		bb		
12	FUNCTION4 PFK	40.14	1.620e4					1.6	NO		bb		
13	FUNCTION4 PFK	39.90	9.157e3					1.0	NO		bb		
14	FUNCTION4 PFK	39.83	9.091e3					1.1	NO		bb		
15	FUNCTION4 PFK	39.77	4.172e3					0.6	NO		bb		
16	FUNCTION4 PFK	39.63	1.903e3					0.5	NO		bb		
17	FUNCTION4 PFK	39.46	1.766e4					0.8	NO		bb		
18	FUNCTION4 PFK	38.45	3.531e4					1.7	NO		db		
19	FUNCTION4 PFK	38.27	1.290e5					3.8	YES		dd		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	46.27	9.001e2					0.6	NO		bb		
2	FUNCTION5 PFK	46.15	5.202e3					1.0	NO		bb		
3	FUNCTION5 PFK	45.97	3.660e3					1.2	NO		bb		
4	FUNCTION5 PFK	45.51	1.153e4					2.2	NO		bb		
5	FUNCTION5 PFK	45.41	4.532e3					1.3	NO		db		
6	FUNCTION5 PFK	45.38	1.706e3					0.8	NO		bd		
7	FUNCTION5 PFK	45.15	2.865e3					1.0	NO		bb		
8	FUNCTION5 PFK	44.80	1.877e3					0.7	NO		bb		
9	FUNCTION5 PFK	44.65	3.851e3					1.1	NO		bb		
10	FUNCTION5 PFK	44.56	1.141e4					1.8	NO		bb		
11	FUNCTION5 PFK	44.31	2.169e4					1.9	NO		bb		
12	FUNCTION5 PFK	43.92	8.765e2					0.5	NO		bb		
13	FUNCTION5 PFK	43.88	8.623e2					0.5	NO		db		
14	FUNCTION5 PFK	43.86	1.005e3					0.6	NO		bd		
15	FUNCTION5 PFK	43.82	4.471e3					1.0	NO		bb		
16	FUNCTION5 PFK	46.36	1.842e3					0.7	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.26	9.013e1					2.4	NO		bb		0.000
2	FUNCTION1 HXCD...	26.52	1.374e2					3.3	YES		bb		0.000
3	FUNCTION1 HXCD...	26.35	1.141e2					2.2	NO		bb		0.000
4	FUNCTION1 HXCD...	25.31	7.923e1					2.3	NO		bb		0.000
5	FUNCTION1 HXCD...	24.07	1.307e2					3.2	YES		bb		0.000
6	FUNCTION1 HXCD...	22.72	1.428e2					3.3	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	26.58	7.978e1					2.2	NO		db		0.000
2	FUNCTION1 HPCD...	26.53	1.102e2					2.3	NO		bd		0.000
3	FUNCTION1 HPCD...	24.69	7.048e1					1.7	NO		bb		0.000
4	FUNCTION1 HPCD...	24.48	8.580e1					1.5	NO		bb		0.000
5	FUNCTION1 HPCD...	21.38	7.239e1					1.7	NO		bb		0.000

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ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	28.37	7.170e1					2.5	NO		bb		0.000
2	FUNCTION2 HPCD...	31.76	2.583e2					2.7	NO		db		0.000
3	FUNCTION2 HPCD...	31.64	1.965e2					4.2	YES		bd		0.000
4	FUNCTION2 HPCD...	31.30	1.054e2					1.6	NO		bb		0.000
5	FUNCTION2 HPCD...	29.60	9.241e1					3.7	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.22	9.361e1					1.8	NO		bb		0.000
2	FUNCTION3 OCDPE	33.01	1.089e2					2.0	NO		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.21	1.123e2					2.3	NO		db		0.000
2	FUNCTION4 NCDPE	41.16	1.047e2					2.3	NO		bd		0.000
3	FUNCTION4 NCDPE	41.00	7.125e1					1.9	NO		bb		0.000
4	FUNCTION4 NCDPE	38.88	9.103e1					1.9	NO		bb		0.000
5	FUNCTION4 NCDPE	38.50	1.884e2					2.9	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	44.32	1.012e2					2.0	NO		bb		0.000

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Printed: Friday, February 03, 2023 10:37:25 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS2CR, Name: 23020106, Date: 01-Feb-2023, Time: 17:07:07, Conditions: AUTOSPEC01, User: pk

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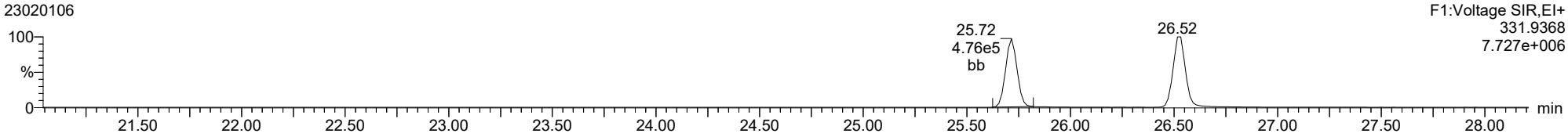

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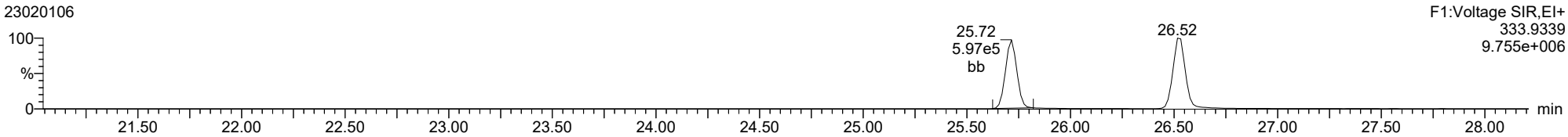
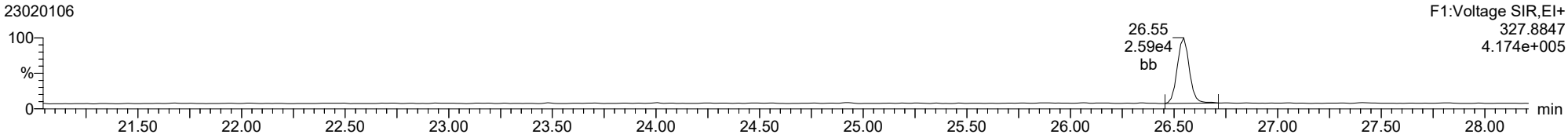


37CL-2378-TCDD



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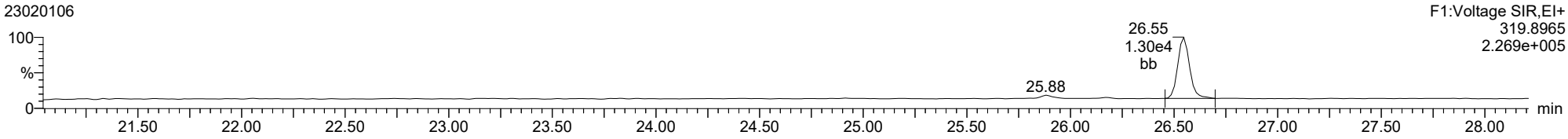

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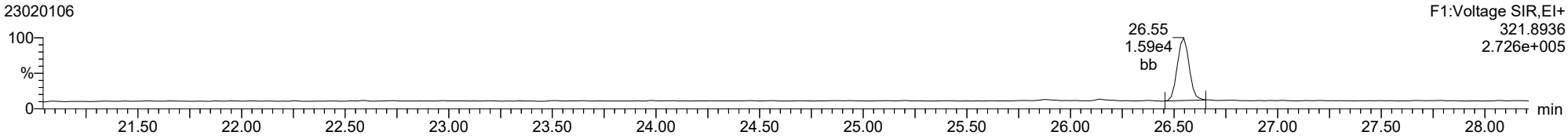

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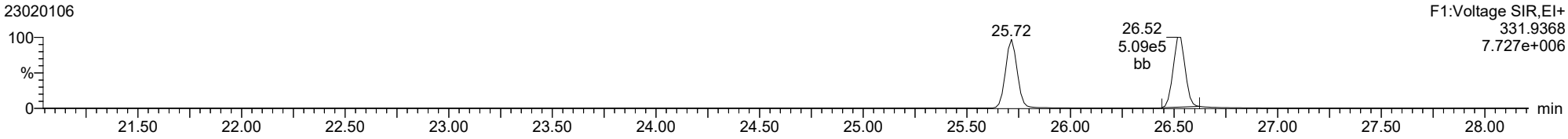

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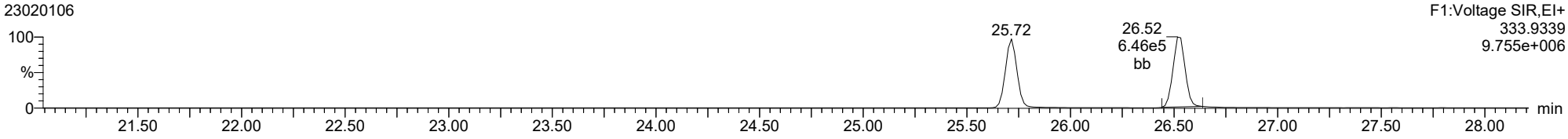

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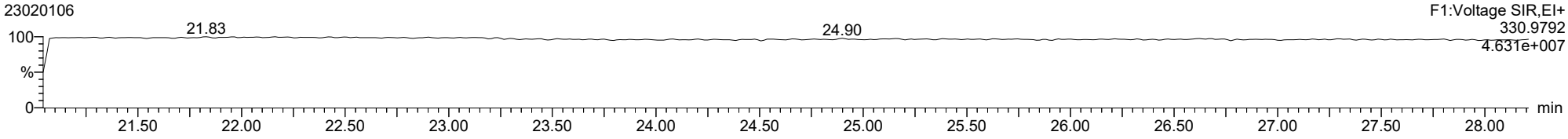

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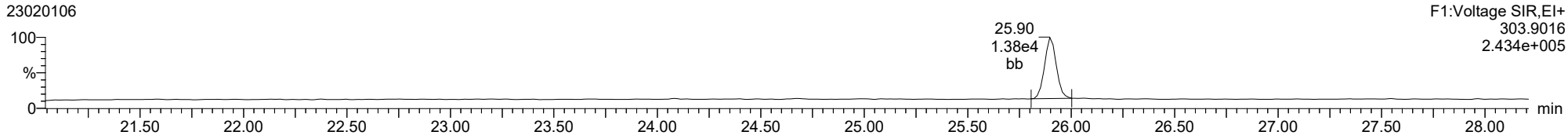

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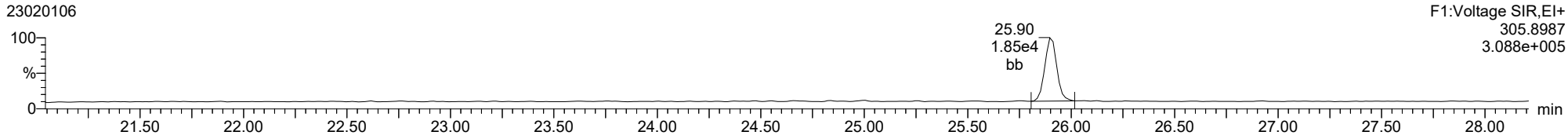

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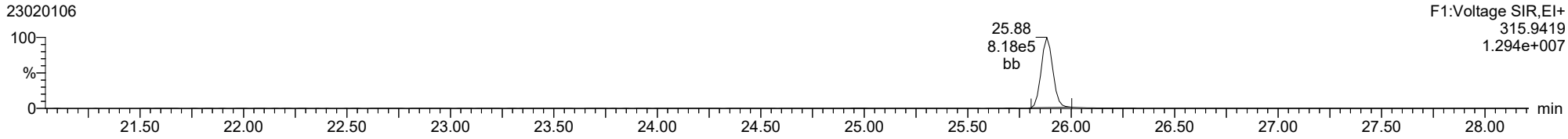

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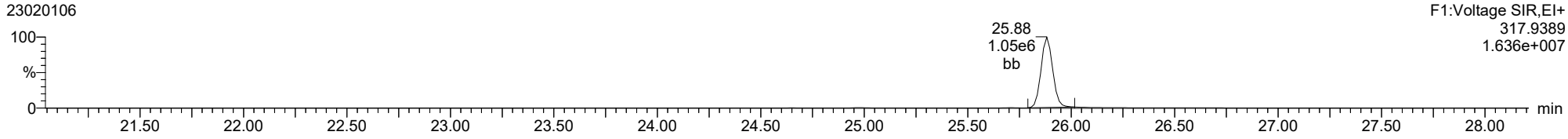

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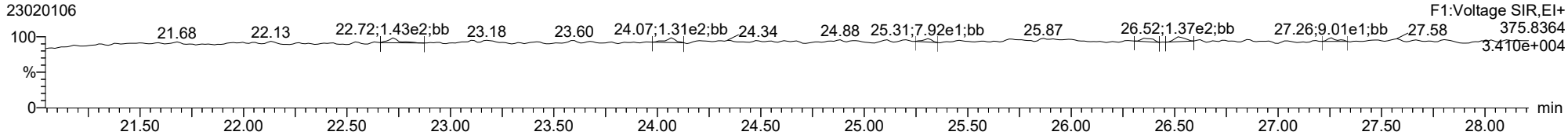

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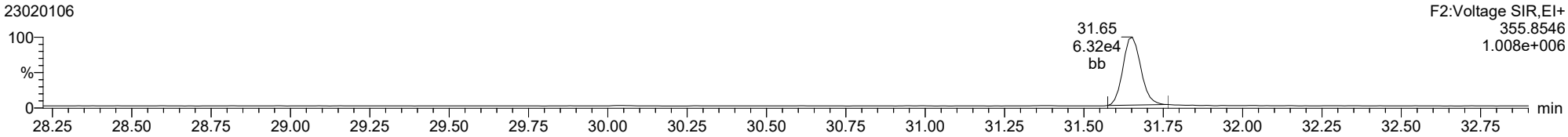

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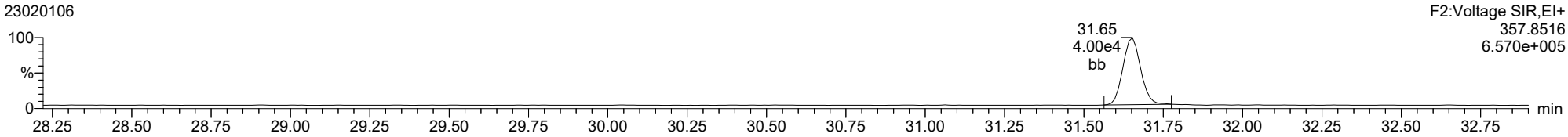

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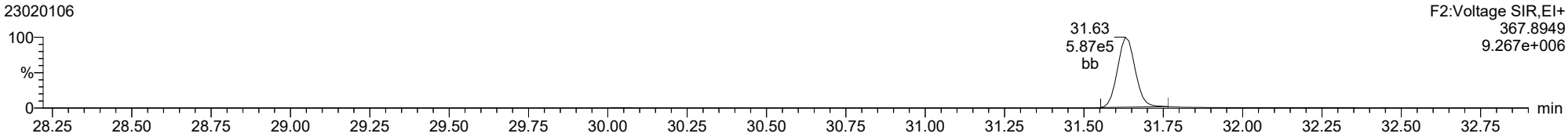

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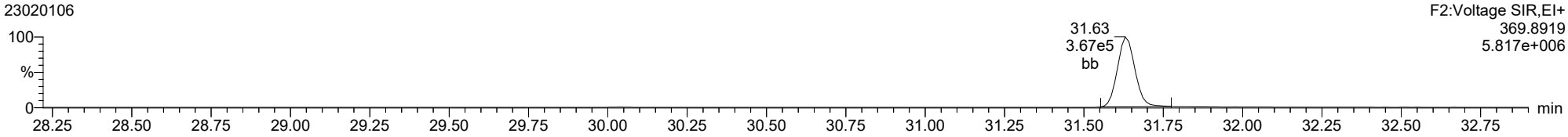

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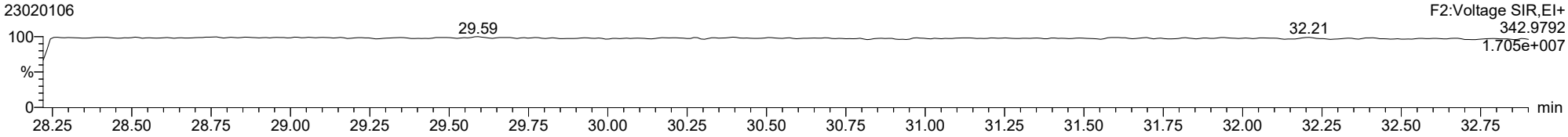

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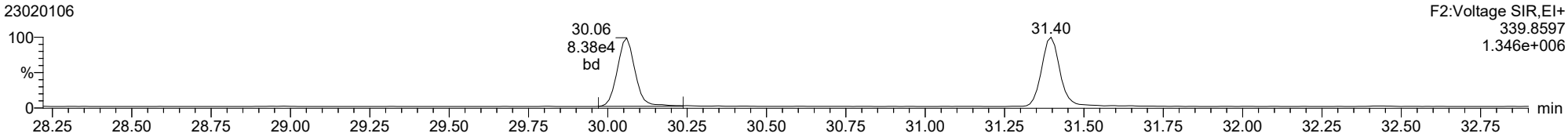

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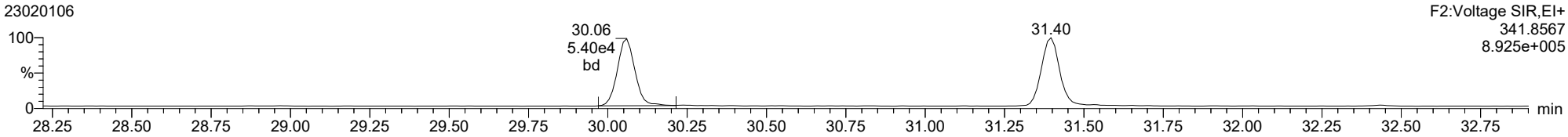

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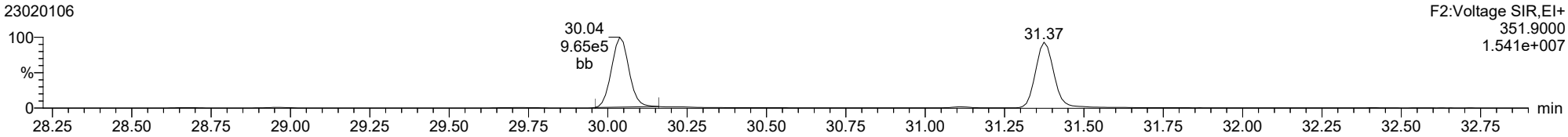

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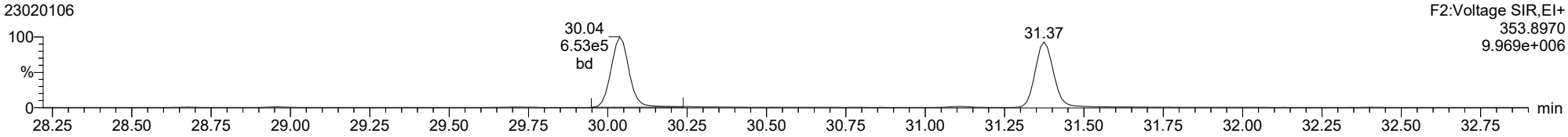

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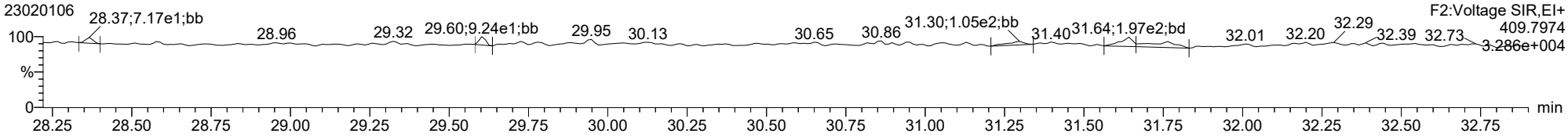

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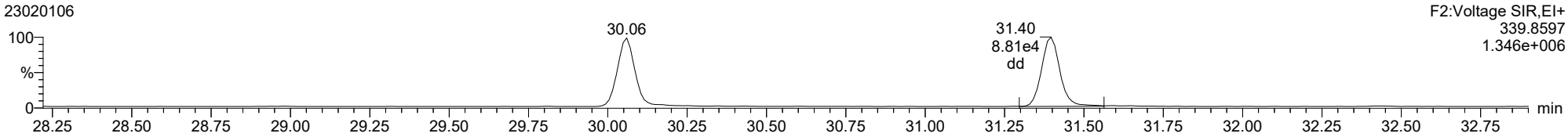

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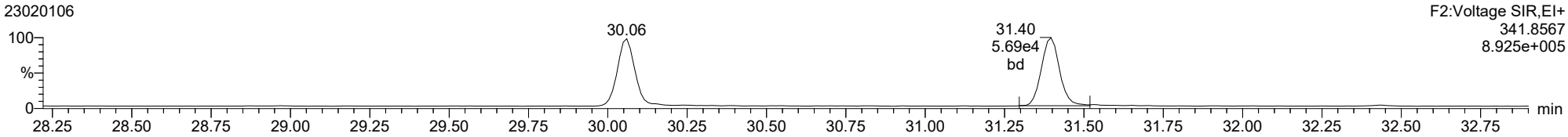

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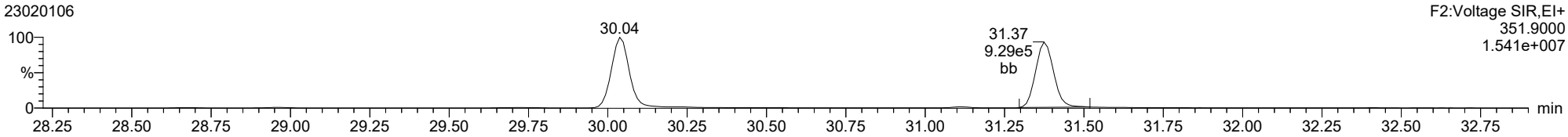

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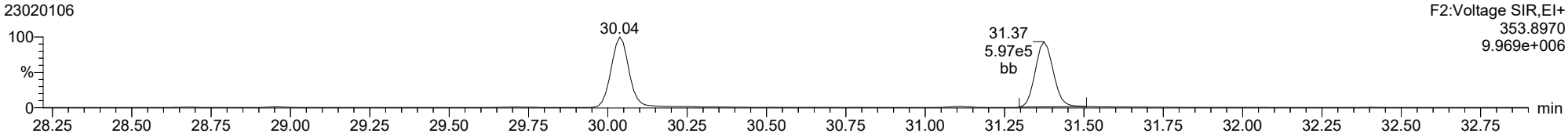

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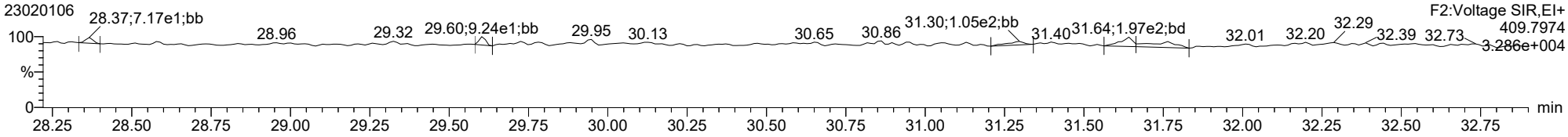

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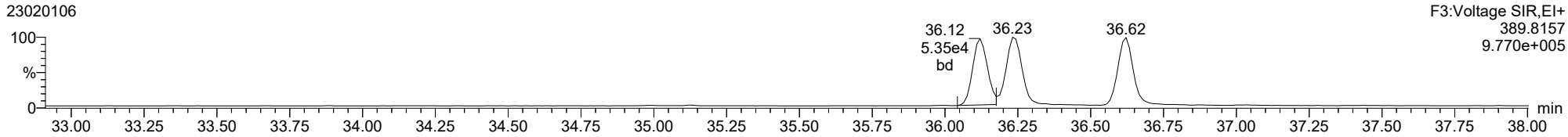
123478-HxCDD



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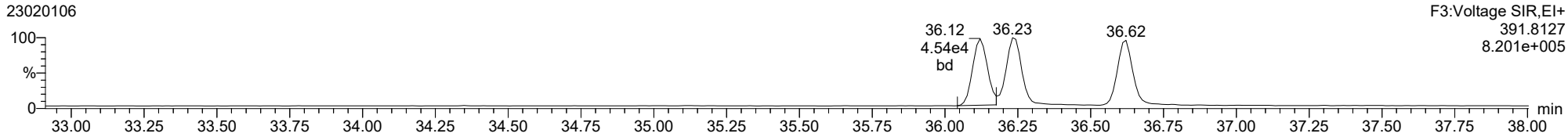

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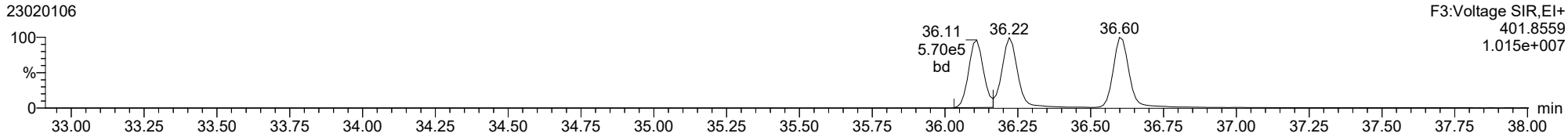

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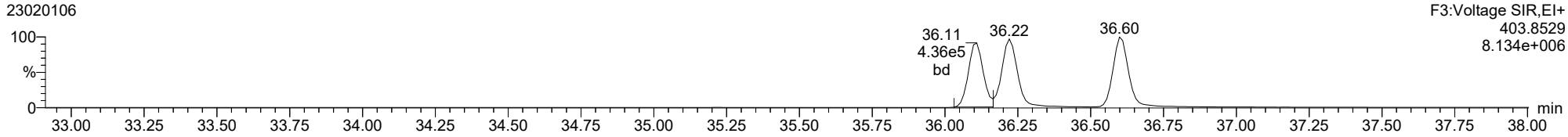

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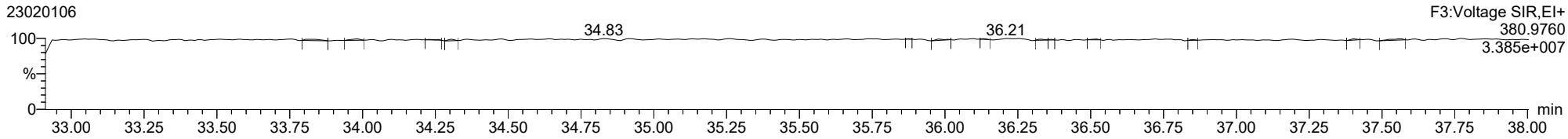

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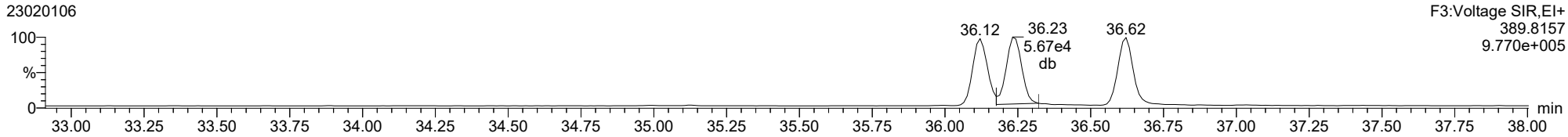

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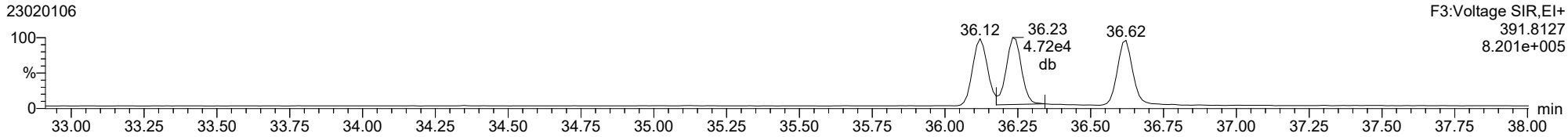

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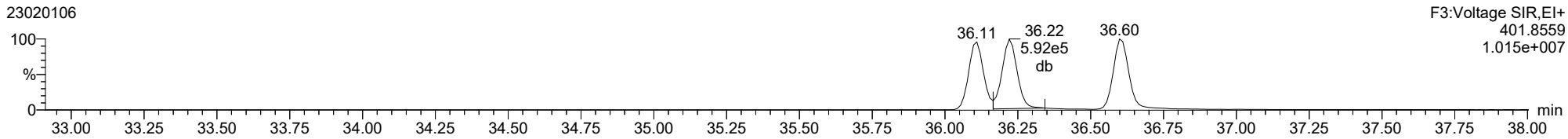

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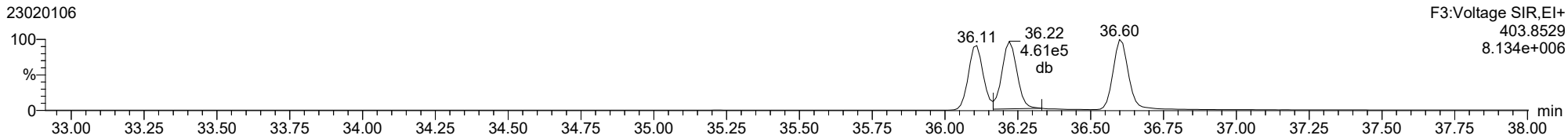

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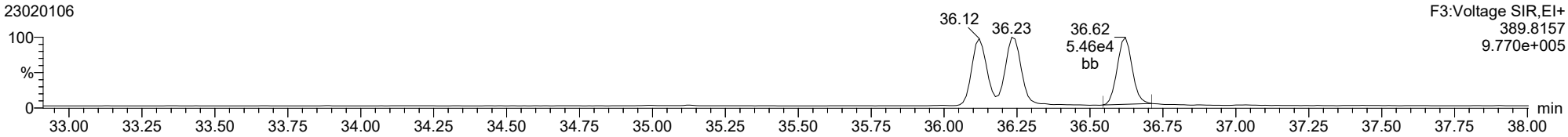

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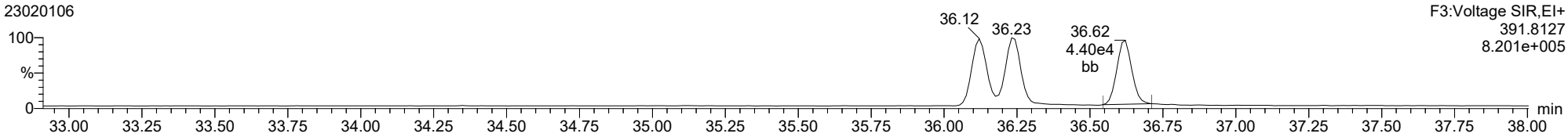

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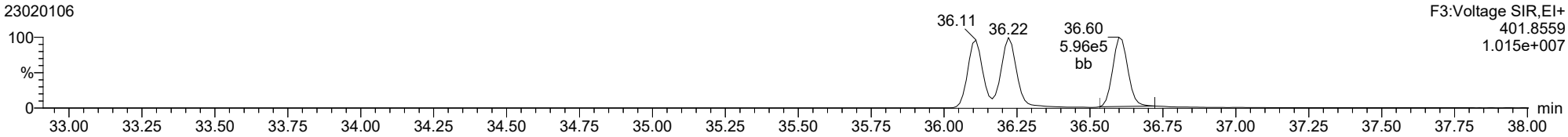

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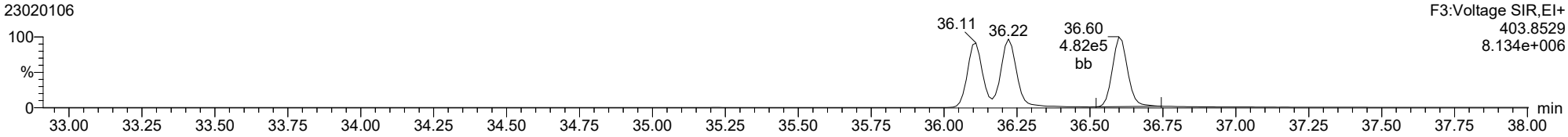

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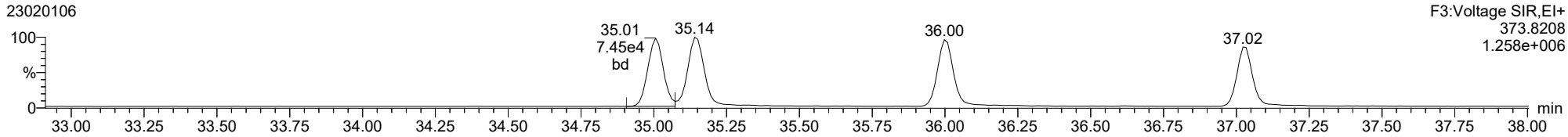

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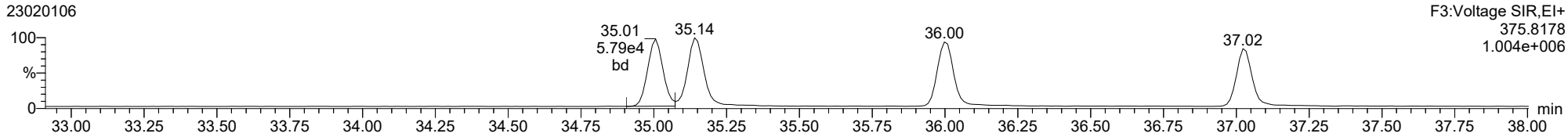

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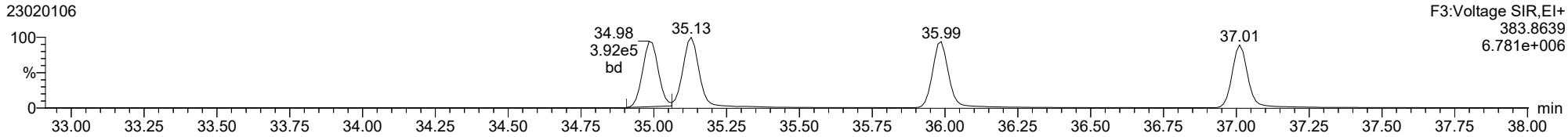

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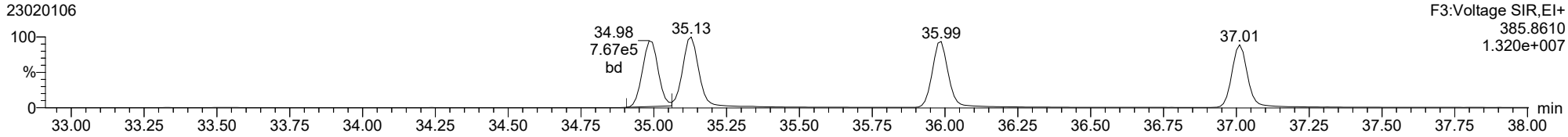

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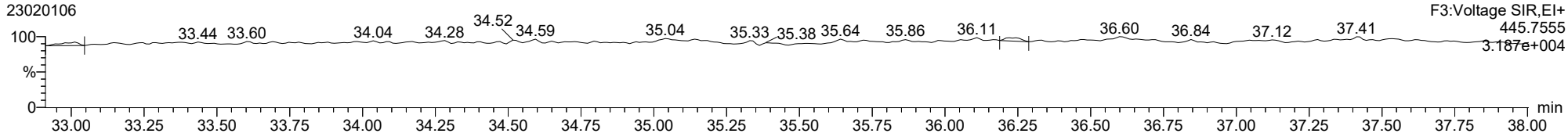

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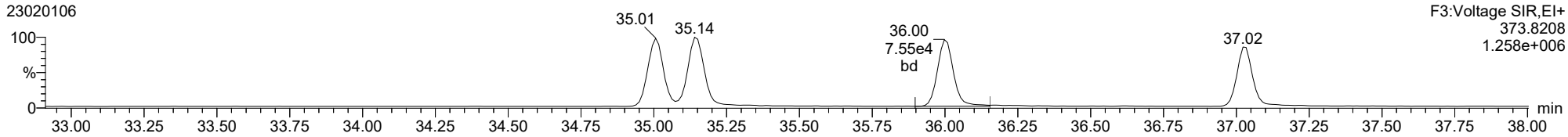

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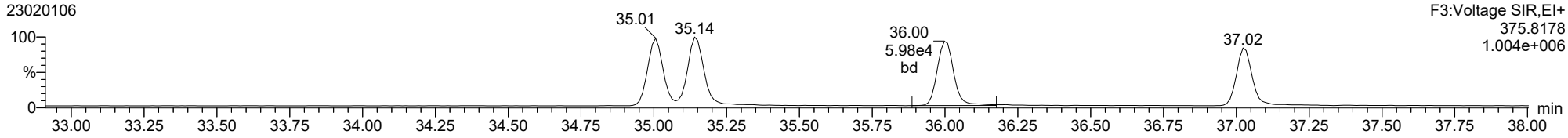

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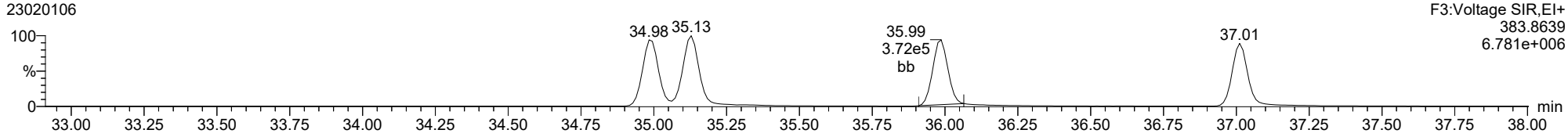

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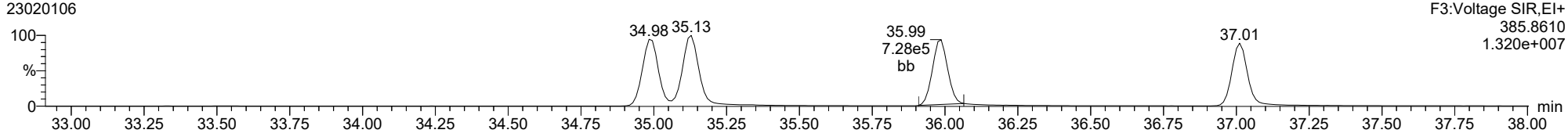

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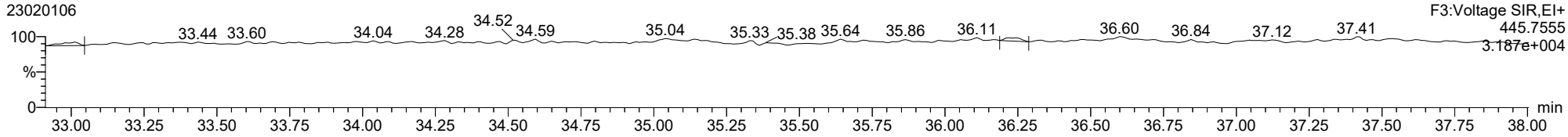

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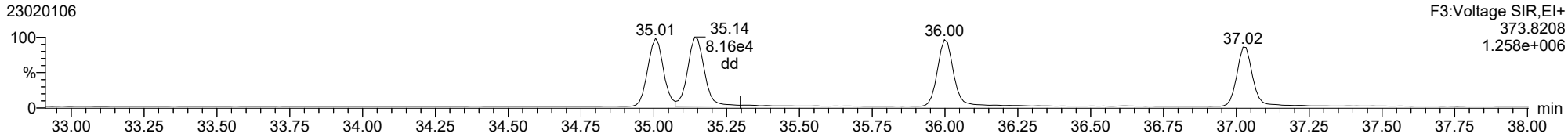

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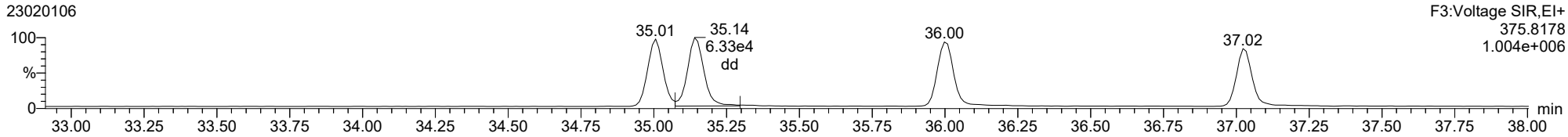

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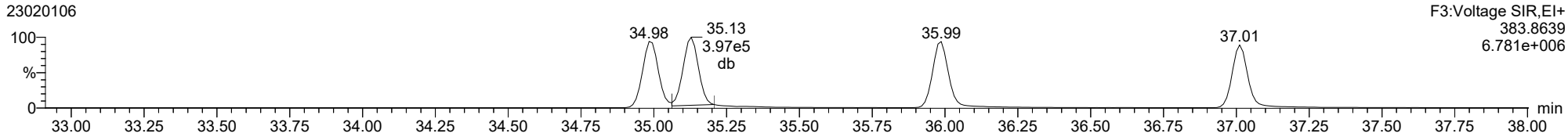

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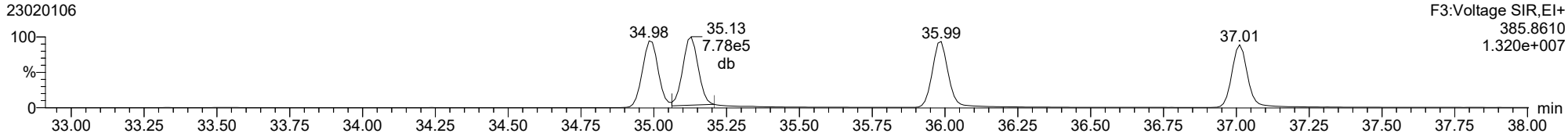

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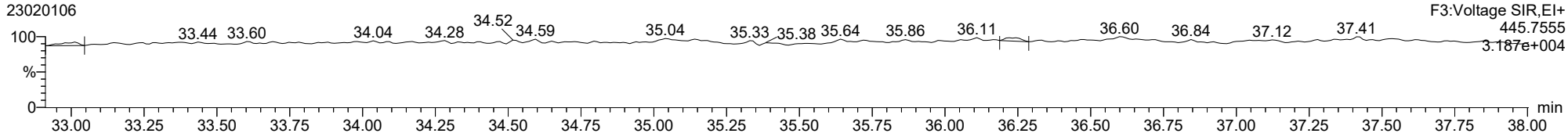

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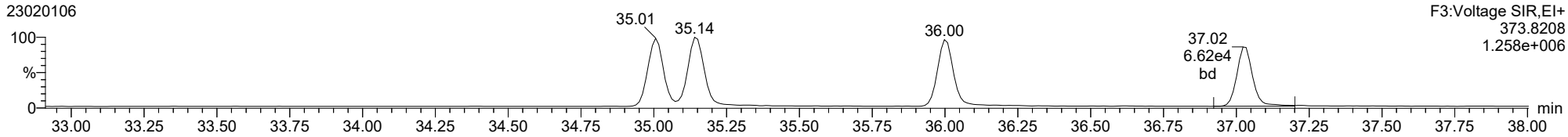

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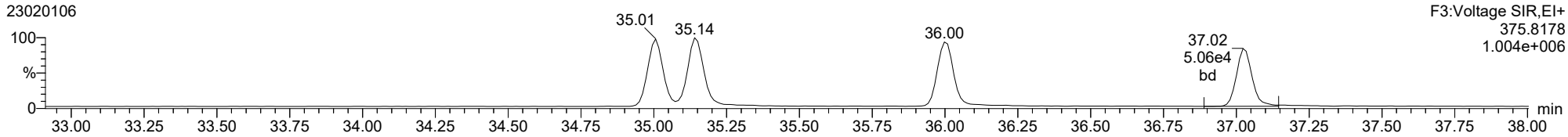

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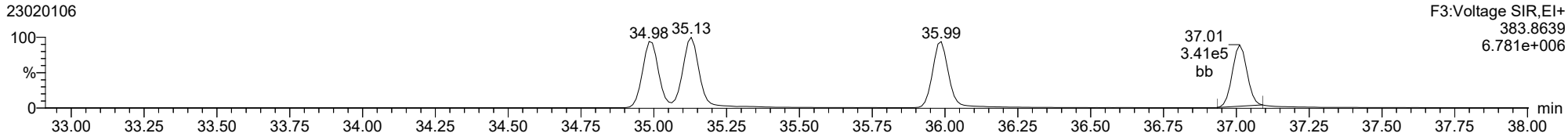

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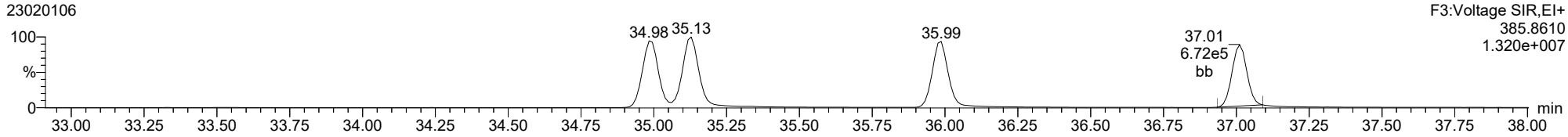

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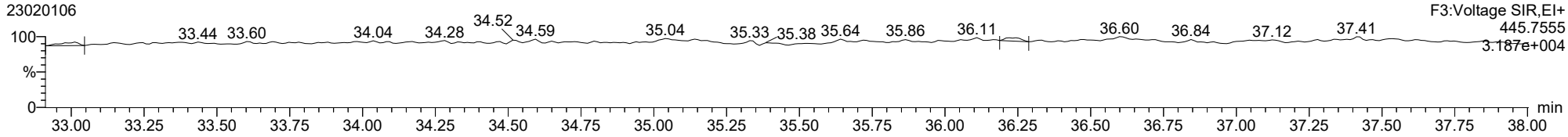

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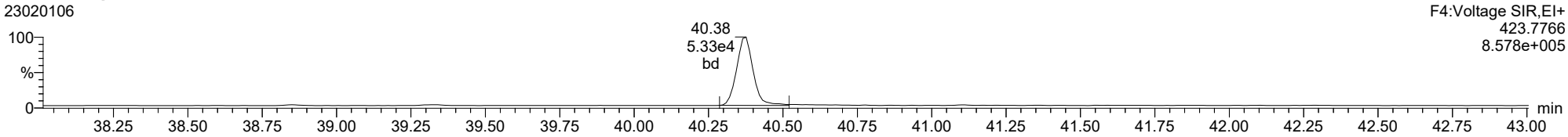

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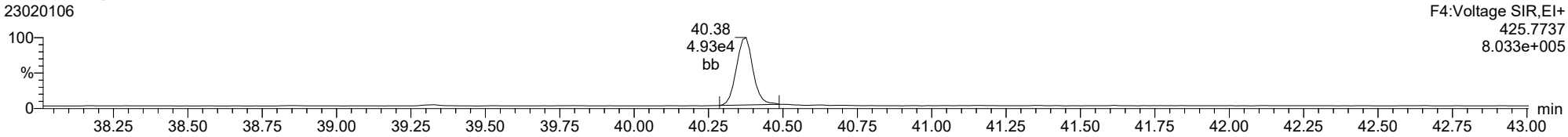

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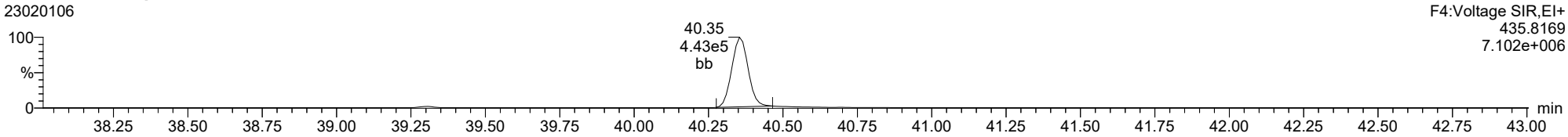

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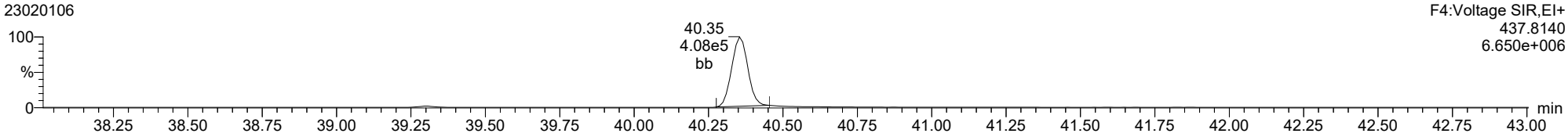

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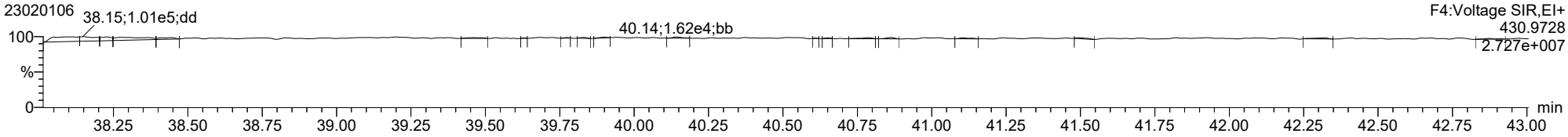

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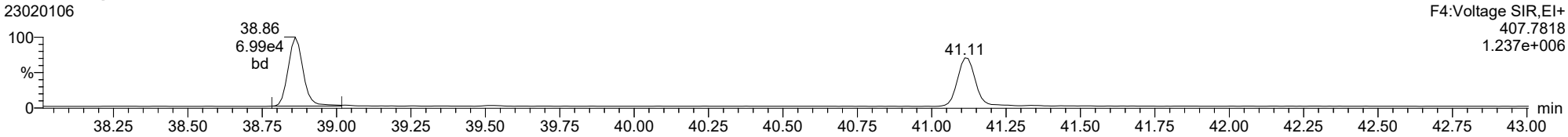

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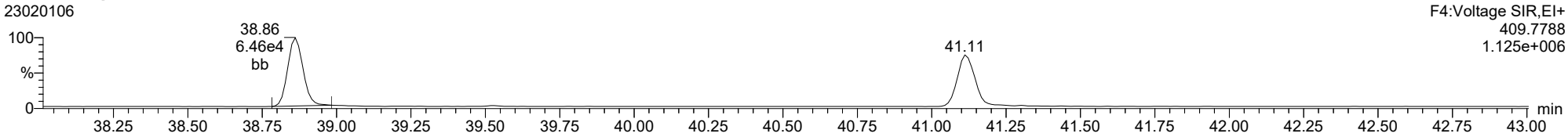

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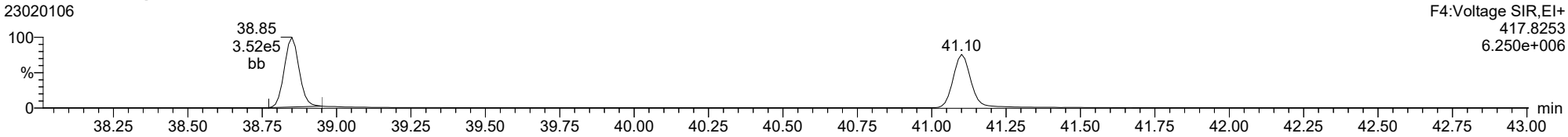

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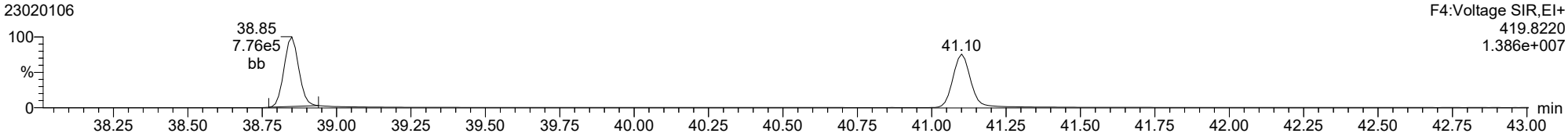

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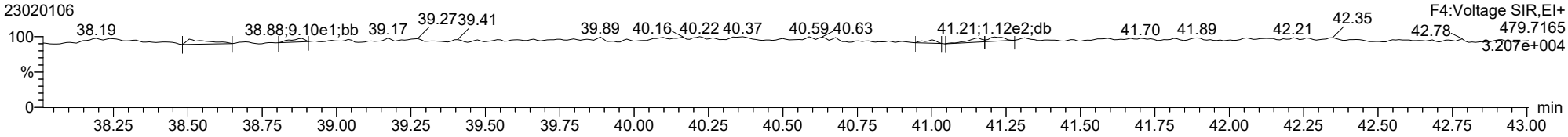

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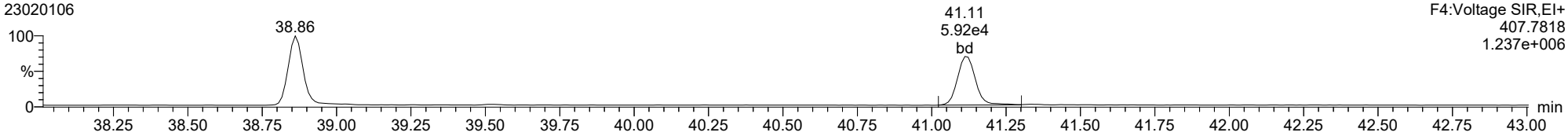

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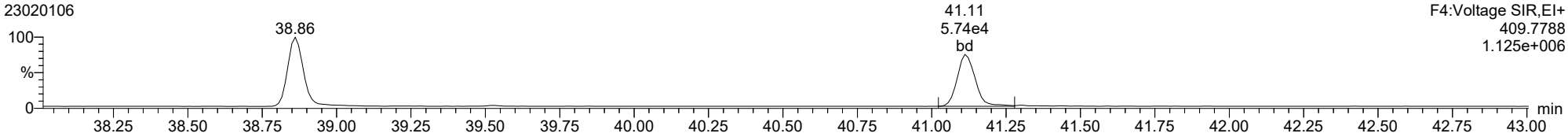

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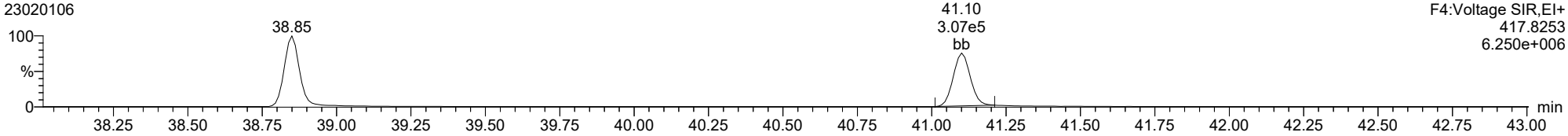

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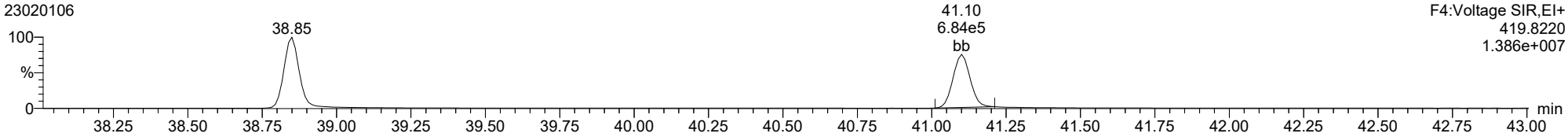

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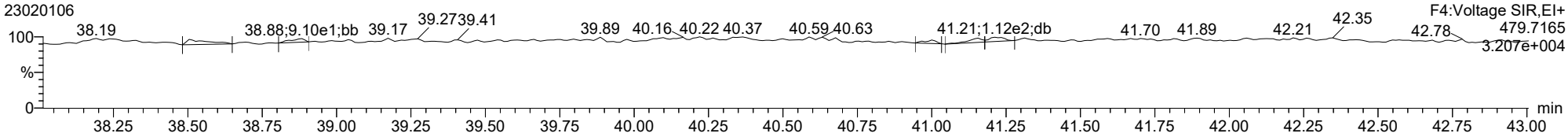

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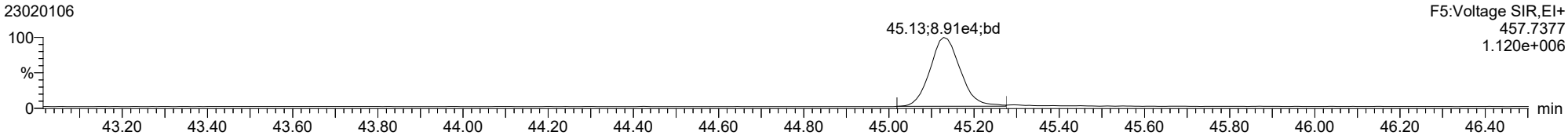
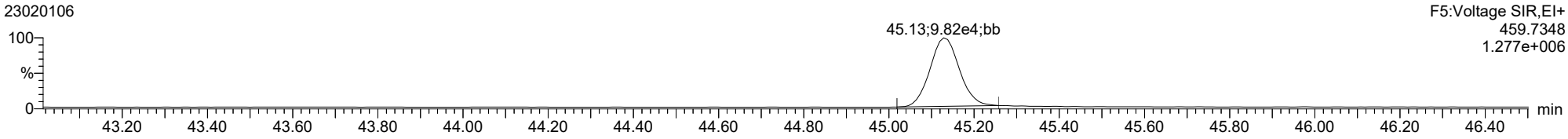


OCDD



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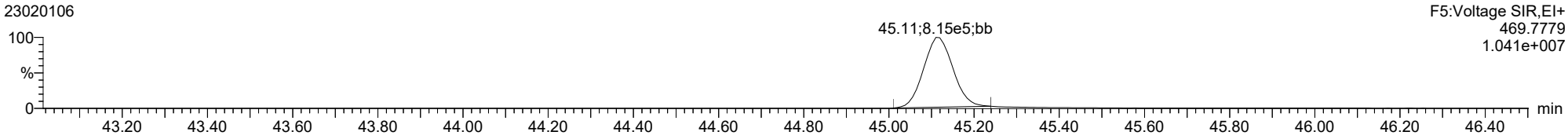

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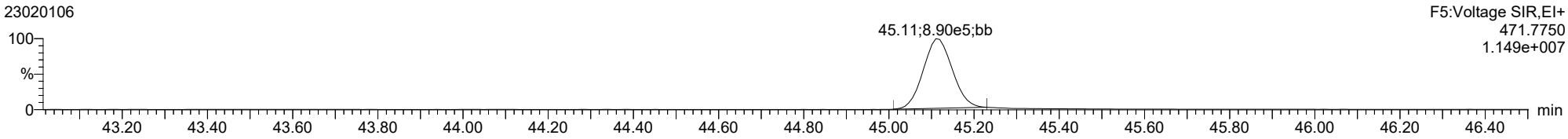
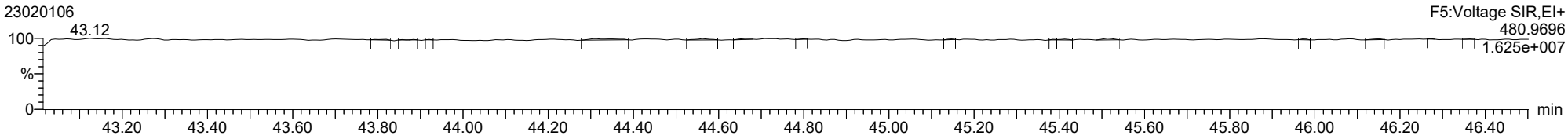


FUNCTION5 PFK



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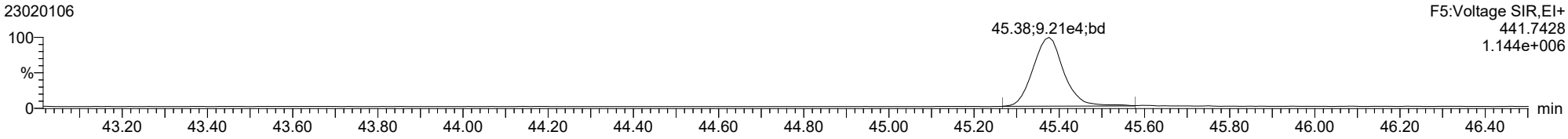
ID: CS2CR, Name: 23020106, Date: 01-Feb-2023, Time: 17:07:07, Conditions: AUTOSPEC01, User: pk

OCDF



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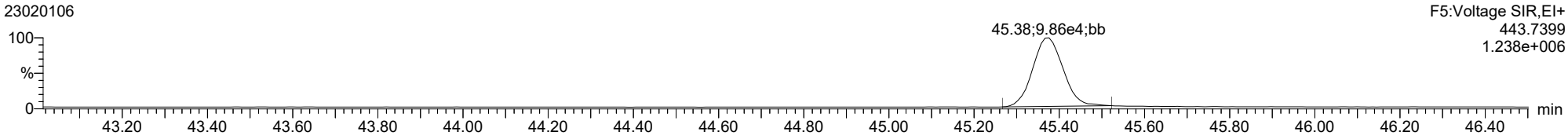
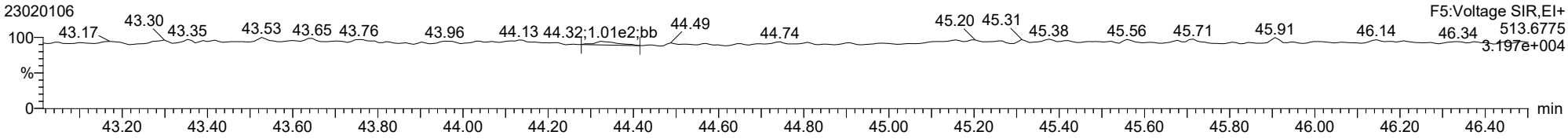


FUNCTION5 DCDPE



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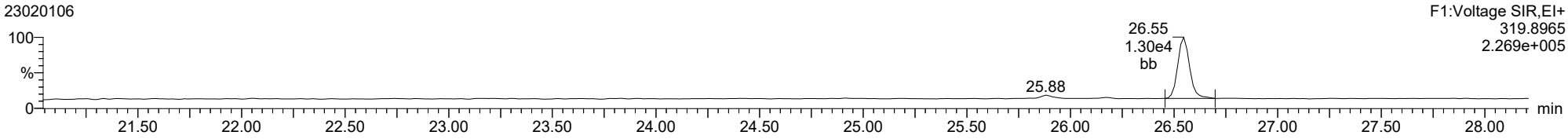
Total-tetradioxins



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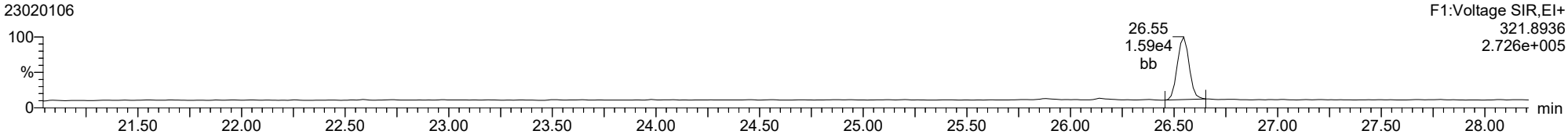
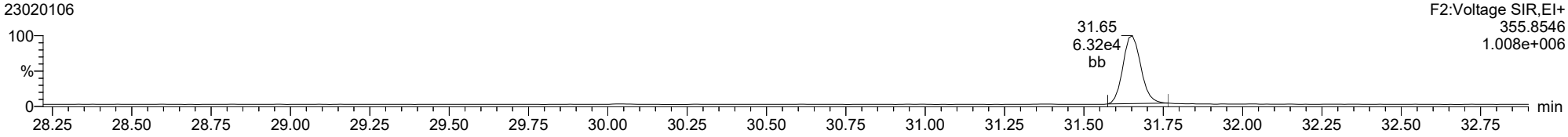


Total-pentadioxins



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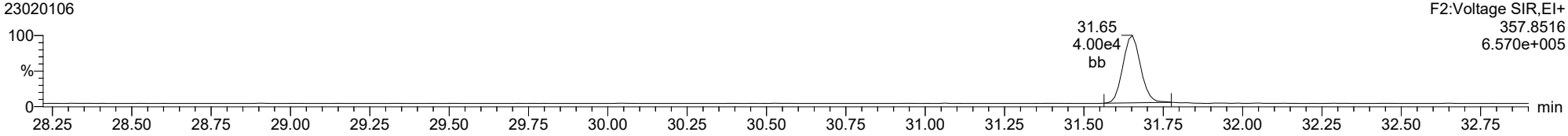

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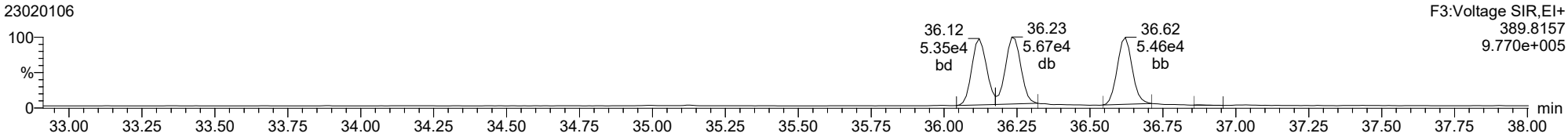
Total-hexadioxins



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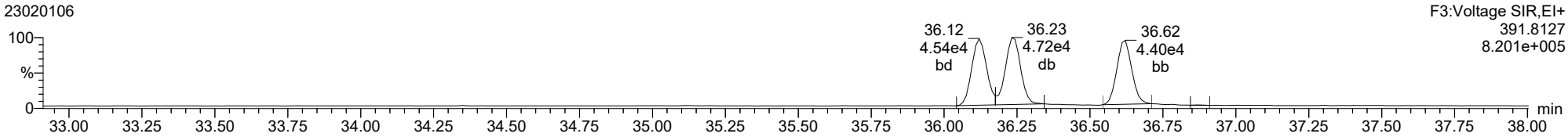

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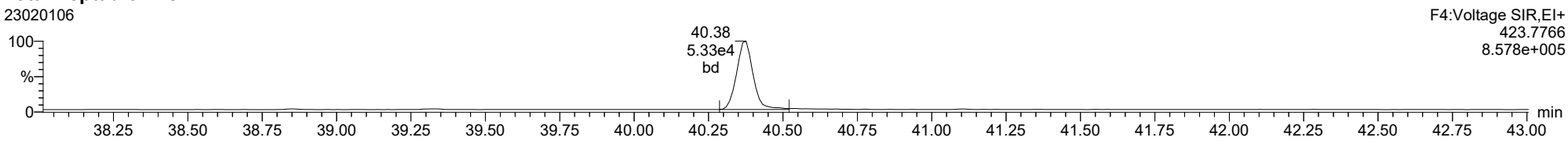

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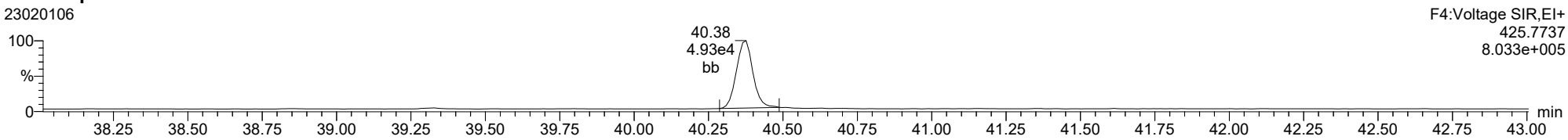

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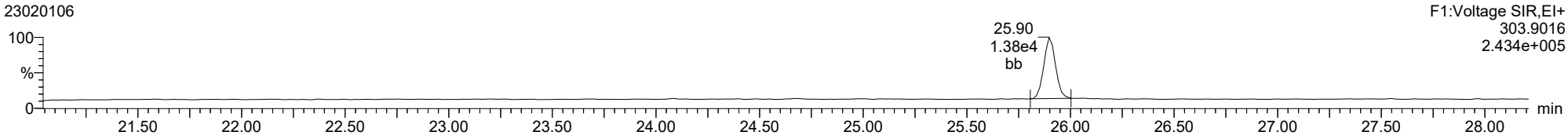
Total-tetrafurans



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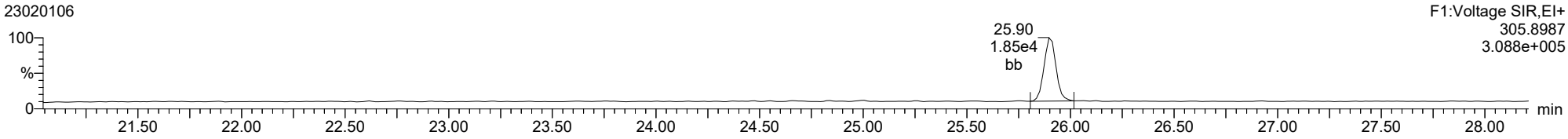

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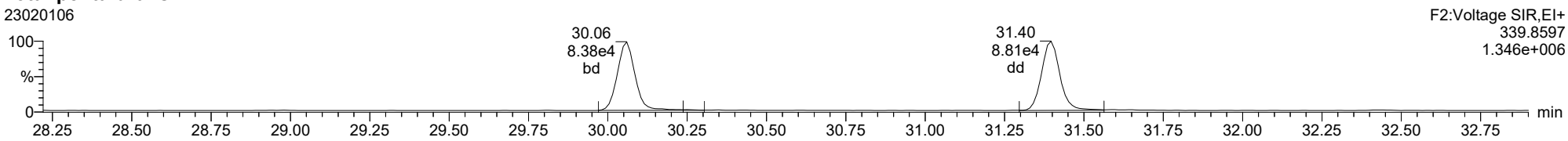

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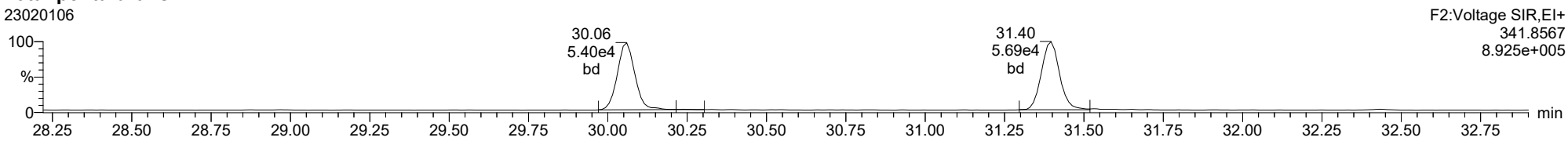

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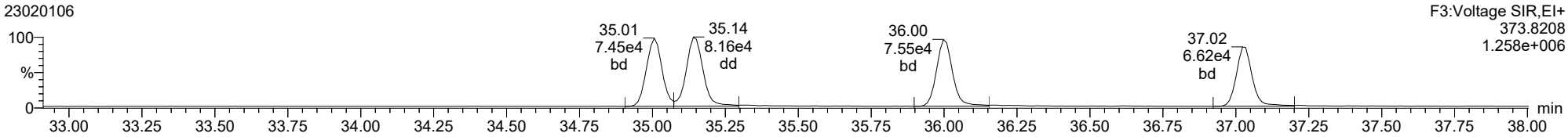

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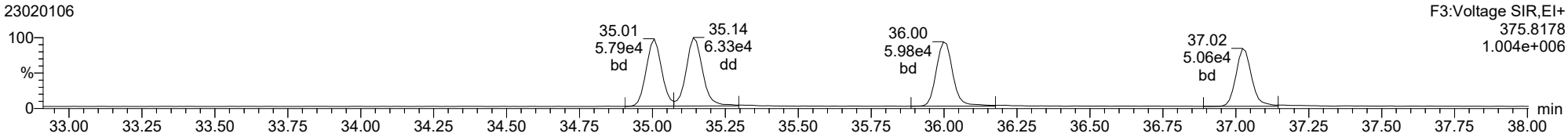

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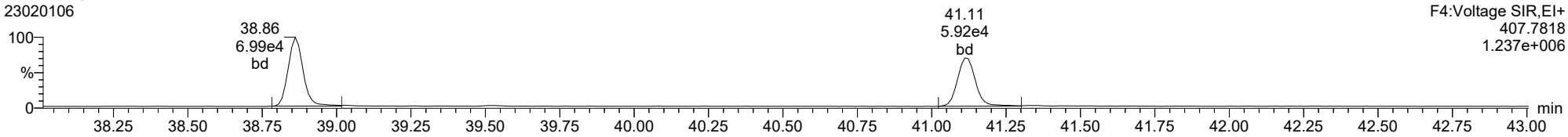

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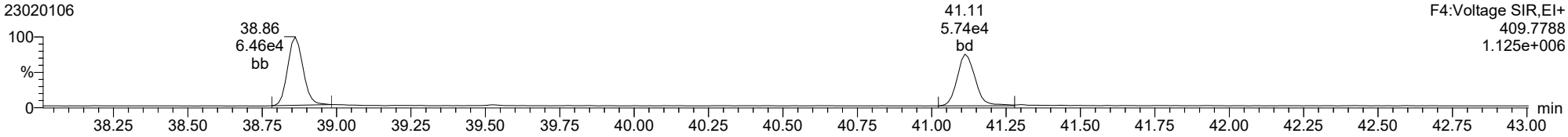

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Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS3CR, Name: 23020107, Date: 01-Feb-2023, Time: 17:56:19, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.882	1.001	6.453e4	8.749e4	0.876	0.738	0.770	1099	2026	9.86e5	1.33e6	897.2	656.5	NO	bb	bb	10.343
12378-PeCDF	30.048	1.001	3.683e5	2.382e5	0.845	1.546	1.550	3190	2595	5.70e6	3.69e6	1785.6	1421.3	NO	bb	bb	49.054
23478-PeCDF	31.385	1.001	3.878e5	2.552e5	0.911	1.520	1.550	3190	2595	5.98e6	3.95e6	1875.0	1521.7	NO	bb	bb	49.735
123478-HxCDF	34.995	1.001	3.439e5	2.707e5	1.182	1.271	1.240	3530	2719	5.57e6	4.47e6	1578.6	1645.2	NO	bd	bd	49.384
234678-HxCDF	35.987	1.000	3.473e5	2.734e5	1.229	1.270	1.240	3530	2719	5.49e6	4.36e6	1554.3	1603.8	NO	bd	bd	50.511
123678-HxCDF	35.129	1.000	3.705e5	2.941e5	1.248	1.260	1.240	3530	2719	5.50e6	4.37e6	1557.7	1606.9	NO	db	db	49.292
123789-HxCDF	37.012	1.000	3.044e5	2.379e5	1.187	1.279	1.240	3530	2719	4.78e6	3.76e6	1354.6	1383.4	NO	bb	bd	49.842
1234678-HpCDF	38.850	1.000	2.941e5	2.898e5	1.204	1.015	1.050	2499	2461	4.94e6	4.87e6	1976.6	1980.3	NO	bb	bb	47.249
1234789-HpCDF	41.100	1.000	2.575e5	2.639e5	1.165	0.976	1.050	2499	2461	3.86e6	3.76e6	1546.5	1528.6	NO	bb	bb	48.293
OCDF	45.357	1.006	3.904e5	4.394e5	1.186	0.889	0.890	2361	1464	4.77e6	5.34e6	2021.3	3646.6	NO	bb	bb	88.323
2378-TCDD	26.532	1.001	5.783e4	7.140e4	1.236	0.810	0.770	1261	1356	8.71e5	1.09e6	690.6	804.6	NO	bb	bb	9.200
12378-PeCDD	31.642	1.001	2.871e5	1.811e5	1.087	1.585	1.550	1935	1700	4.52e6	2.88e6	2335.1	1692.4	NO	bb	bb	49.835
123478-HxCDD	36.109	1.000	2.492e5	2.039e5	0.987	1.222	1.240	2775	1957	4.32e6	3.49e6	1555.2	1781.3	NO	bd	bd	49.339
123678-HxCDD	36.221	1.000	2.605e5	2.153e5	1.021	1.210	1.240	2775	1957	4.30e6	3.56e6	1550.9	1817.2	NO	db	db	49.052
123789-HxCDD	36.611	1.011	2.521e5	2.108e5	0.985	1.196	1.240	2775	1957	4.16e6	3.46e6	1500.2	1770.2	NO	bb	bb	49.951
1234678-HpCDD	40.354	1.000	2.309e5	2.219e5	1.253	1.041	1.050	2551	2394	3.57e6	3.40e6	1399.4	1422.4	NO	bb	bb	46.332
OCDD	45.119	1.000	3.877e5	4.205e5	1.103	0.922	0.890	2154	2574	4.65e6	5.24e6	2156.8	2035.9	NO	bd	bb	92.549
13C-2378-TCDF	25.867	1.007	7.414e5	9.363e5	1.768	0.792	0.770	2053	1619	1.15e7	1.43e7	5585.3	8856.7	NO	bb	bb	94.656
13C-12378-PeCDF	30.026	1.168	8.877e5	5.760e5	1.527	1.541	1.550	2967	1853	1.38e7	8.94e6	4662.3	4827.2	NO	bb	bb	95.615
13C-23478-PeCDF	31.363	1.220	8.562e5	5.626e5	1.466	1.522	1.550	2967	1853	1.33e7	8.64e6	4491.7	4663.8	NO	bb	bb	96.525
13C-123478-HxCDF	34.973	0.956	3.562e5	6.970e5	1.054	0.511	0.510	1992	2758	5.88e6	1.16e7	2952.0	4191.7	NO	bd	bd	100.726
13C-123678-HxCDF	35.118	0.960	3.647e5	7.156e5	1.080	0.510	0.510	1992	2758	5.88e6	1.14e7	2953.9	4143.1	NO	db	db	100.801
13C-234678-HxCDF	35.975	0.983	3.384e5	6.615e5	1.014	0.512	0.510	1992	2758	5.68e6	1.10e7	2849.9	4002.3	NO	bb	bb	99.342
13C-123789-HxCDF	37.000	1.011	3.154e5	6.016e5	0.928	0.524	0.510	1992	2758	5.40e6	1.05e7	2709.2	3801.7	NO	bb	bb	99.581
13C-1234678-HpCDF	38.839	1.061	3.227e5	7.036e5	1.036	0.459	0.440	2621	3052	5.41e6	1.21e7	2065.5	3959.7	NO	bb	bb	99.821
13C-1234789-HpCDF	41.089	1.123	2.972e5	6.294e5	0.905	0.472	0.440	2621	3052	4.32e6	9.59e6	1649.5	3143.4	NO	bd	bb	103.177
13C-1234-TCDD	25.700	0.000	4.469e5	5.555e5	1.000	0.804	0.770	2398	1542	7.04e6	8.78e6	2935.5	5692.9	NO	bb	bb	100.000
13C-2378-TCDD	26.517	1.032	4.991e5	6.371e5	1.103	0.783	0.770	2398	1542	7.48e6	9.58e6	3119.3	6212.6	NO	bb	bb	102.763
13C-12378-PeCDD	31.619	1.230	5.354e5	3.292e5	0.914	1.626	1.550	1302	1293	8.28e6	5.07e6	6359.2	3923.9	NO	bb	bb	94.346
13C-123478-HxCDD	36.098	0.987	5.251e5	4.053e5	0.933	1.296	1.240	1973	3288	8.80e6	6.71e6	4459.6	2041.7	NO	bd	bd	100.495
13C-123678-HxCDD	36.209	0.990	5.354e5	4.149e5	0.965	1.291	1.240	1973	3288	8.89e6	6.90e6	4507.2	2100.1	NO	db	db	99.280
13C-1234678-HpCDD	40.343	1.103	4.018e5	3.784e5	0.782	1.062	1.050	1997	2297	6.40e6	6.01e6	3207.1	2617.9	NO	bb	bb	100.543
13C-OCDD	45.101	1.233	7.578e5	8.262e5	0.788	0.917	0.890	2644	3522	9.52e6	1.02e7	3599.3	2906.4	NO	bb	bb	202.502
13C-123789-HxCDD	36.588	0.000	5.534e5	4.389e5	1.000	1.261	1.240	1973	3288	9.19e6	7.27e6	4657.5	2210.2	NO	bb	bb	100.000
37CL-2378-TCDD	26.532	1.032	1.115e5		1.233			1579		1.70e6		1075.4			bb		9.021

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ID: CS3CR, Name: 23020107, Date: 01-Feb-2023, Time: 17:56:19, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.389	0.866	7.831e4	1.003e5	1.064	0.781	0.770	1099	2026	1.24e6	1.58e6	1124.6	780.3	NO	bb	bb	10.000
1289-TCDF	27.378	1.058	6.314e4	8.075e4	0.858	0.782	0.770	1099	2026	9.07e5	1.18e6	825.1	582.8	NO	db	db	10.000
13468-PECDF	27.243	0.907	4.504e5	2.910e5	1.013	1.548	1.550	1001	928	7.08e6	4.58e6	7076.3	4935.5	NO	bb	bb	50.000
12389-PECDF	32.422	1.080	3.693e5	2.481e5	0.844	1.488	1.550	3190	2595	5.63e6	3.73e6	1765.9	1435.6	NO	bb	bb	50.000
123468-HXCDF	33.335	0.953	3.538e5	2.768e5	1.197	1.278	1.240	3530	2719	5.41e6	4.18e6	1531.9	1537.1	NO	bb	bd	50.000
1368-TCDD	23.659	0.892	5.365e4	6.956e4	1.084	0.771	0.770	1261	1356	8.58e5	1.11e6	680.3	820.3	NO	bb	bb	10.000
1289-TCDD	27.122	1.023	4.896e4	6.184e4	0.975	0.792	0.770	1261	1356	7.39e5	9.25e5	586.4	682.2	NO	bb	bb	10.000
12479-PECDD	28.912	0.914	4.860e5	3.082e5	1.837	1.577	1.550	1935	1700	4.68e6	2.92e6	2418.8	1714.3	NO	bb	bb	50.000
12389-PECDD	32.032	1.013	3.312e5	2.102e5	1.252	1.576	1.550	1935	1700	5.26e6	3.30e6	2720.3	1940.3	NO	bb	bb	50.000
124679-HXCDD	34.104	0.945	2.650e5	2.155e5	1.033	1.230	1.240	2775	1957	4.22e6	3.42e6	1521.7	1748.3	NO	bb	bb	50.000
1234679-HPCDD	39.307	0.974	2.579e5	2.438e5	1.286	1.058	1.050	2551	2394	4.26e6	3.98e6	1669.1	1662.1	NO	bb	bb	50.000
Total-tetrafurans			2.076e5		0.933			1099		3.16e6							30.586
Total-penta1			4.504e5					1001		7.08e6							50.000
Total-pentafurans			1.187e6		0.866			3190		1.83e7							156.881
Total-hexafurans			1.720e6		1.208			3530		2.67e7							249.030
Total-heptafurans			5.536e5		1.185			2499		8.83e6							95.864
Total-Furans			4.509e6		1.067			1099		6.89e7							670.685
Total-tetradioxins			2.732e5		1.099			1261		3.78e6							49.490
Total-pentadioxins			1.106e6		1.392			1935		1.45e7							150.052
Total-hexadioxins			1.027e6		1.007			2775		1.70e7							198.343
Total-heptadioxins			4.888e5		1.269			2551		7.83e6							96.332
Total-Dioxins			3.282e6		1.165			1261		4.77e7							586.766
Total-TEQ			7.791e6					1261		1.17e8							1257.451
FUNCTION1 PFK			2.071e7					567379		2.38e8							
FUNCTION2 PFK			0.000e0					180306		0.00e0							
FUNCTION3 PFK			2.786e4					420708		9.12e5							0.000
FUNCTION4 PFK			7.534e5					257681		1.24e7							
FUNCTION5 PFK			1.239e5					175535		5.02e6							
FUNCTION1 HXCD...			1.237e3					791		2.01e4							0.000
FUNCTION1 HPCD...			1.368e3					947		2.24e4							0.000
FUNCTION2 HPCD...			4.817e2					887		9.10e3							0.000
FUNCTION3 OCDPE			4.485e2					809		9.17e3							0.000
FUNCTION4 NCDPE			3.809e2					922		7.31e3							0.000
FUNCTION5 DCDPE			0.000e0					753		0.00e0							

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	6.314e4	8.075e4	0.858	0.78	0.77	825.1	YES	NO	db	db	10.000
2	Total-tetrafurans	27.24	1.177e3	1.490e3	0.933	0.79	0.77	17.2	YES	NO	bd	bd	0.170
3	2378-TCDF	25.88	6.453e4	8.749e4	0.876	0.74	0.77	897.2	YES	NO	bb	bb	10.343
4	Total-tetrafurans	24.81	4.913e2	6.353e2	0.933	0.77	0.77	7.1	YES	NO	dd	db	0.072
5	1368-TCDF	22.39	7.831e4	1.003e5	1.064	0.78	0.77	1124.6	YES	NO	bb	bb	10.000

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.24	4.504e5	2.910e5	1.013	1.55	1.55	7076.3	YES	NO	bb	bb	50.000

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.42	3.693e5	2.481e5	0.844	1.49	1.55	1765.9	YES	NO	bb	bb	50.000
2	23478-PeCDF	31.39	3.878e5	2.552e5	0.911	1.52	1.55	1875.0	YES	NO	bb	bb	49.735
3	12378-PeCDF	30.05	3.683e5	2.382e5	0.845	1.55	1.55	1785.6	YES	NO	bb	bb	49.054
4	Total-pentafurans	28.90	6.175e4	3.932e4	0.866	1.57	1.55	301.5	YES	NO	bb	bb	8.093

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDF	35.13	3.705e5	2.941e5	1.248	1.26	1.24	1557.7	YES	NO	db	db	49.292
2	123478-HxCDF	34.99	3.439e5	2.707e5	1.182	1.27	1.24	1578.6	YES	NO	bd	bd	49.384
3	123468-HXCDF	33.34	3.538e5	2.768e5	1.197	1.28	1.24	1531.9	YES	NO	bb	bd	50.000
4	123789-HxCDF	37.01	3.044e5	2.379e5	1.187	1.28	1.24	1354.6	YES	NO	bb	bd	49.842
5	234678-HxCDF	35.99	3.473e5	2.734e5	1.229	1.27	1.24	1554.3	YES	NO	bd	bd	50.511

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.10	2.575e5	2.639e5	1.165	0.98	1.05	1546.5	YES	NO	bb	bb	48.293
2	Total-heptafurans	39.51	1.970e3	1.765e3	1.185	1.12	1.05	11.2	YES	NO	bb	bb	0.323
3	1234678-HpCDF	38.85	2.941e5	2.898e5	1.204	1.01	1.05	1976.6	YES	NO	bb	bb	47.249

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	6.314e4	8.075e4	0.858	0.78	0.77	825.1	YES	NO	db	db	10.000
2	Total-tetrafurans	27.24	1.177e3	1.490e3	0.933	0.79	0.77	17.2	YES	NO	bd	bd	0.170
3	2378-TCDF	25.88	6.453e4	8.749e4	0.876	0.74	0.77	897.2	YES	NO	bb	bb	10.343
4	Total-tetrafurans	24.81	4.913e2	6.353e2	0.933	0.77	0.77	7.1	YES	NO	dd	db	0.072
5	1368-TCDF	22.39	7.831e4	1.003e5	1.064	0.78	0.77	1124.6	YES	NO	bb	bb	10.000
6	12389-PECDF	32.42	3.693e5	2.481e5	0.844	1.49	1.55	1765.9	YES	NO	bb	bb	50.000
7	23478-PeCDF	31.39	3.878e5	2.552e5	0.911	1.52	1.55	1875.0	YES	NO	bb	bb	49.735
8	12378-PeCDF	30.05	3.683e5	2.382e5	0.845	1.55	1.55	1785.6	YES	NO	bb	bb	49.054
9	Total-pentafurans	28.90	6.175e4	3.932e4	0.866	1.57	1.55	301.5	YES	NO	bb	bb	8.093
10	123678-HxCDF	35.13	3.705e5	2.941e5	1.248	1.26	1.24	1557.7	YES	NO	db	db	49.292
11	123478-HxCDF	34.99	3.439e5	2.707e5	1.182	1.27	1.24	1578.6	YES	NO	bd	bd	49.384
12	123468-HXCDF	33.34	3.538e5	2.768e5	1.197	1.28	1.24	1531.9	YES	NO	bb	bd	50.000
13	123789-HxCDF	37.01	3.044e5	2.379e5	1.187	1.28	1.24	1354.6	YES	NO	bb	bd	49.842
14	234678-HxCDF	35.99	3.473e5	2.734e5	1.229	1.27	1.24	1554.3	YES	NO	bd	bd	50.511
15	1234789-HpCDF	41.10	2.575e5	2.639e5	1.165	0.98	1.05	1546.5	YES	NO	bb	bb	48.293
16	Total-heptafurans	39.51	1.970e3	1.765e3	1.185	1.12	1.05	11.2	YES	NO	bb	bb	0.323
17	1234678-HpCDF	38.85	2.941e5	2.898e5	1.204	1.01	1.05	1976.6	YES	NO	bb	bb	47.249
18	OCDF	45.36	3.904e5	4.394e5	1.186	0.89	0.89	2021.3	YES	NO	bb	bb	88.323
19	13468-PECDF	27.24	4.504e5	2.910e5	1.013	1.55	1.55	7076.3	YES	NO	bb	bb	50.000

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	27.12	4.896e4	6.184e4	0.975	0.79	0.77	586.4	YES	NO	bb	bb	10.000
2	2378-TCDD	26.53	5.783e4	7.140e4	1.236	0.81	0.77	690.6	YES	NO	bb	bb	9.200
3	Total-tetradioxins	26.20	8.471e4	1.070e5	1.099	0.79	0.77	703.2	YES	NO	bb	bb	15.362
4	Total-tetradioxins	25.72	2.731e4	3.262e4	1.099	0.84	0.77	331.8	YES	NO	bd	bb	4.800
5	Total-tetradioxins	25.14	7.197e2	8.821e2	1.099	0.82	0.77	7.0	YES	NO	bb	bb	0.128
6	1368-TCDD	23.66	5.365e4	6.956e4	1.084	0.77	0.77	680.3	YES	NO	bb	bb	10.000

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PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.03	3.312e5	2.102e5	1.252	1.58	1.55	2720.3	YES	NO	bb	bb	50.000
2	12378-PeCDD	31.64	2.871e5	1.811e5	1.087	1.59	1.55	2335.1	YES	NO	bb	bb	49.835
3	Total-pentadioxins	30.97	1.319e3	9.625e2	1.392	1.37	1.55	9.7	YES	NO	bb	bb	0.190
4	Total-pentadioxins	29.24	2.122e2	1.231e2	1.392	1.72	1.55	2.9	NO	NO	bb	bb	0.028
5	12479-PECDD	28.91	4.860e5	3.082e5	1.837	1.58	1.55	2418.8	YES	NO	bb	bb	50.000

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HXCDD	34.10	2.650e5	2.155e5	1.033	1.23	1.24	1521.7	YES	NO	bb	bb	50.000
2	123789-HxCDD	36.61	2.521e5	2.108e5	0.985	1.20	1.24	1500.2	YES	NO	bb	bb	49.951
3	123678-HxCDD	36.22	2.605e5	2.153e5	1.021	1.21	1.24	1550.9	YES	NO	db	db	49.052
4	123478-HxCDD	36.11	2.492e5	2.039e5	0.987	1.22	1.24	1555.2	YES	NO	bd	bd	49.339

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.35	2.309e5	2.219e5	1.253	1.04	1.05	1399.4	YES	NO	bb	bb	46.332
2	1234679-HPCDD	39.31	2.579e5	2.438e5	1.286	1.06	1.05	1669.1	YES	NO	bb	bb	50.000

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	27.12	4.896e4	6.184e4	0.975	0.79	0.77	586.4	YES	NO	bb	bb	10.000
2	2378-TCDD	26.53	5.783e4	7.140e4	1.236	0.81	0.77	690.6	YES	NO	bb	bb	9.200
3	Total-tetradioxins	26.20	8.471e4	1.070e5	1.099	0.79	0.77	703.2	YES	NO	bb	bb	15.362
4	Total-tetradioxins	25.72	2.731e4	3.262e4	1.099	0.84	0.77	331.8	YES	NO	bd	bb	4.800
5	Total-tetradioxins	25.14	7.197e2	8.821e2	1.099	0.82	0.77	7.0	YES	NO	bb	bb	0.128
6	1368-TCDD	23.66	5.365e4	6.956e4	1.084	0.77	0.77	680.3	YES	NO	bb	bb	10.000
7	12389-PECDD	32.03	3.312e5	2.102e5	1.252	1.58	1.55	2720.3	YES	NO	bb	bb	50.000
8	12378-PeCDD	31.64	2.871e5	1.811e5	1.087	1.59	1.55	2335.1	YES	NO	bb	bb	49.835
9	Total-pentadioxins	30.97	1.319e3	9.625e2	1.392	1.37	1.55	9.7	YES	NO	bb	bb	0.190
10	Total-pentadioxins	29.24	2.122e2	1.231e2	1.392	1.72	1.55	2.9	NO	NO	bb	bb	0.028
11	12479-PECDD	28.91	4.860e5	3.082e5	1.837	1.58	1.55	2418.8	YES	NO	bb	bb	50.000
12	124679-HXCDD	34.10	2.650e5	2.155e5	1.033	1.23	1.24	1521.7	YES	NO	bb	bb	50.000
13	123789-HxCDD	36.61	2.521e5	2.108e5	0.985	1.20	1.24	1500.2	YES	NO	bb	bb	49.951
14	123678-HxCDD	36.22	2.605e5	2.153e5	1.021	1.21	1.24	1550.9	YES	NO	db	db	49.052
15	123478-HxCDD	36.11	2.492e5	2.039e5	0.987	1.22	1.24	1555.2	YES	NO	bd	bd	49.339
16	1234678-HpCDD	40.35	2.309e5	2.219e5	1.253	1.04	1.05	1399.4	YES	NO	bb	bb	46.332
17	1234679-HPCDD	39.31	2.579e5	2.438e5	1.286	1.06	1.05	1669.1	YES	NO	bb	bb	50.000
18	OCDD	45.12	3.877e5	4.205e5	1.103	0.92	0.89	2156.8	YES	NO	bd	bb	92.549

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	6.314e4	8.075e4	0.858	0.78	0.77	825.1	YES	NO	db	db	10.000
2	Total-tetrafurans	27.24	1.177e3	1.490e3	0.933	0.79	0.77	17.2	YES	NO	bd	bd	0.170
3	2378-TCDF	25.88	6.453e4	8.749e4	0.876	0.74	0.77	897.2	YES	NO	bb	bb	10.343
4	Total-tetrafurans	24.81	4.913e2	6.353e2	0.933	0.77	0.77	7.1	YES	NO	dd	db	0.072
5	1368-TCDF	22.39	7.831e4	1.003e5	1.064	0.78	0.77	1124.6	YES	NO	bb	bb	10.000
6	12389-PECDF	32.42	3.693e5	2.481e5	0.844	1.49	1.55	1765.9	YES	NO	bb	bb	50.000
7	23478-PeCDF	31.39	3.878e5	2.552e5	0.911	1.52	1.55	1875.0	YES	NO	bb	bb	49.735
8	12378-PeCDF	30.05	3.683e5	2.382e5	0.845	1.55	1.55	1785.6	YES	NO	bb	bb	49.054
9	Total-pentafurans	28.90	6.175e4	3.932e4	0.866	1.57	1.55	301.5	YES	NO	bb	bb	8.093
10	123678-HxCDF	35.13	3.705e5	2.941e5	1.248	1.26	1.24	1557.7	YES	NO	db	db	49.292
11	123478-HxCDF	34.99	3.439e5	2.707e5	1.182	1.27	1.24	1578.6	YES	NO	bd	bd	49.384
12	123468-HXCDF	33.34	3.538e5	2.768e5	1.197	1.28	1.24	1531.9	YES	NO	bb	bd	50.000
13	123789-HxCDF	37.01	3.044e5	2.379e5	1.187	1.28	1.24	1354.6	YES	NO	bb	bd	49.842
14	234678-HxCDF	35.99	3.473e5	2.734e5	1.229	1.27	1.24	1554.3	YES	NO	bd	bd	50.511
15	1234789-HpCDF	41.10	2.575e5	2.639e5	1.165	0.98	1.05	1546.5	YES	NO	bb	bb	48.293
16	Total-heptafurans	39.51	1.970e3	1.765e3	1.185	1.12	1.05	11.2	YES	NO	bb	bb	0.323
17	1234678-HpCDF	38.85	2.941e5	2.898e5	1.204	1.01	1.05	1976.6	YES	NO	bb	bb	47.249
18	OCDF	45.36	3.904e5	4.394e5	1.186	0.89	0.89	2021.3	YES	NO	bb	bb	88.323
19	13468-PECDF	27.24	4.504e5	2.910e5	1.013	1.55	1.55	7076.3	YES	NO	bb	bb	50.000
20	1289-TCDD	27.12	4.896e4	6.184e4	0.975	0.79	0.77	586.4	YES	NO	bb	bb	10.000
21	2378-TCDD	26.53	5.783e4	7.140e4	1.236	0.81	0.77	690.6	YES	NO	bb	bb	9.200
22	Total-tetradioxins	26.20	8.471e4	1.070e5	1.099	0.79	0.77	703.2	YES	NO	bb	bb	15.362
23	Total-tetradioxins	25.72	2.731e4	3.262e4	1.099	0.84	0.77	331.8	YES	NO	bd	bb	4.800
24	Total-tetradioxins	25.14	7.197e2	8.821e2	1.099	0.82	0.77	7.0	YES	NO	bb	bb	0.128
25	1368-TCDD	23.66	5.365e4	6.956e4	1.084	0.77	0.77	680.3	YES	NO	bb	bb	10.000
26	12389-PECDD	32.03	3.312e5	2.102e5	1.252	1.58	1.55	2720.3	YES	NO	bb	bb	50.000
27	12378-PeCDD	31.64	2.871e5	1.811e5	1.087	1.59	1.55	2335.1	YES	NO	bb	bb	49.835
28	Total-pentadioxins	30.97	1.319e3	9.625e2	1.392	1.37	1.55	9.7	YES	NO	bb	bb	0.190
29	Total-pentadioxins	29.24	2.122e2	1.231e2	1.392	1.72	1.55	2.9	NO	NO	bb	bb	0.028
30	12479-PECDD	28.91	4.860e5	3.082e5	1.837	1.58	1.55	2418.8	YES	NO	bb	bb	50.000
31	124679-HXCDD	34.10	2.650e5	2.155e5	1.033	1.23	1.24	1521.7	YES	NO	bb	bb	50.000
32	123789-HxCDD	36.61	2.521e5	2.108e5	0.985	1.20	1.24	1500.2	YES	NO	bb	bb	49.951
33	123678-HxCDD	36.22	2.605e5	2.153e5	1.021	1.21	1.24	1550.9	YES	NO	db	db	49.052
34	123478-HxCDD	36.11	2.492e5	2.039e5	0.987	1.22	1.24	1555.2	YES	NO	bd	bd	49.339
35	1234678-HpCDD	40.35	2.309e5	2.219e5	1.253	1.04	1.05	1399.4	YES	NO	bb	bb	46.332
36	1234679-HPCDD	39.31	2.579e5	2.438e5	1.286	1.06	1.05	1669.1	YES	NO	bb	bb	50.000
37	OCDD	45.12	3.877e5	4.205e5	1.103	0.92	0.89	2156.8	YES	NO	bd	bb	92.549

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.91	6.852e5					20.8	YES		dd		
2	FUNCTION1 PFK	21.84	1.096e6					22.0	YES		dd		
3	FUNCTION1 PFK	21.77	5.746e5					22.9	YES		dd		
4	FUNCTION1 PFK	21.71	1.001e6					23.9	YES		dd		
5	FUNCTION1 PFK	21.59	1.735e6					26.6	YES		dd		
6	FUNCTION1 PFK	21.47	1.869e6					28.4	YES		dd		
7	FUNCTION1 PFK	21.35	2.030e6					30.8	YES		dd		
8	FUNCTION1 PFK	21.25	1.366e6					32.7	YES		dd		
9	FUNCTION1 PFK	21.13	3.514e6					34.9	YES		bd		
10	FUNCTION1 PFK	23.42	1.745e4					0.9	NO		db		
11	FUNCTION1 PFK	23.36	2.629e4					1.1	NO		dd		
12	FUNCTION1 PFK	23.30	5.605e4					1.4	NO		bd		
13	FUNCTION1 PFK	23.16	2.732e4					0.9	NO		bb		
14	FUNCTION1 PFK	22.89	1.080e5					3.0	YES		db		
15	FUNCTION1 PFK	22.81	1.442e5					3.9	YES		dd		
16	FUNCTION1 PFK	22.75	1.516e5					4.8	YES		dd		
17	FUNCTION1 PFK	22.69	1.790e5					5.6	YES		dd		
18	FUNCTION1 PFK	22.56	6.347e5					8.4	YES		dd		
19	FUNCTION1 PFK	22.42	5.662e5					10.5	YES		dd		
20	FUNCTION1 PFK	22.36	4.892e5					12.2	YES		dd		
21	FUNCTION1 PFK	22.30	4.241e5					12.7	YES		dd		
22	FUNCTION1 PFK	22.18	1.005e6					15.7	YES		dd		
23	FUNCTION1 PFK	22.10	6.911e5					16.7	YES		dd		
24	FUNCTION1 PFK	22.04	6.019e5					18.1	YES		dd		
25	FUNCTION1 PFK	21.98	6.245e5					18.6	YES		dd		
26	FUNCTION1 PFK	25.17	1.799e4					0.9	NO		bb		
27	FUNCTION1 PFK	25.05	6.677e4					1.7	NO		bb		
28	FUNCTION1 PFK	24.97	5.669e3					0.4	NO		db		
29	FUNCTION1 PFK	24.93	2.665e4					1.1	NO		bd		
30	FUNCTION1 PFK	24.79	9.106e3					0.5	NO		bb		
31	FUNCTION1 PFK	24.70	2.803e4					1.0	NO		bb		
32	FUNCTION1 PFK	24.60	2.266e4					1.1	NO		bb		
33	FUNCTION1 PFK	24.51	2.481e3					0.3	NO		bb		
34	FUNCTION1 PFK	24.26	2.953e3					0.3	NO		bb		
35	FUNCTION1 PFK	24.07	3.464e4					0.9	NO		db		
36	FUNCTION1 PFK	23.95	2.818e4					0.8	NO		bd		
37	FUNCTION1 PFK	23.86	1.761e4					1.0	NO		bb		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	23.80	2.745e4					1.4	NO		db		
39	FUNCTION1 PFK	23.75	2.279e4					1.2	NO		bd		
40	FUNCTION1 PFK	23.57	1.177e3					0.1	NO		bb		
41	FUNCTION1 PFK	23.51	3.339e4					1.1	NO		bb		
42	FUNCTION1 PFK	26.92	1.624e4					0.8	NO		bd		
43	FUNCTION1 PFK	26.85	6.743e4					2.0	NO		db		
44	FUNCTION1 PFK	26.77	3.605e4					1.4	NO		dd		
45	FUNCTION1 PFK	26.71	5.041e4					1.7	NO		dd		
46	FUNCTION1 PFK	26.64	3.066e4					1.2	NO		dd		
47	FUNCTION1 PFK	26.58	3.222e4					1.5	NO		bd		
48	FUNCTION1 PFK	26.50	4.287e4					1.3	NO		bb		
49	FUNCTION1 PFK	26.32	9.896e3					0.6	NO		bb		
50	FUNCTION1 PFK	26.26	3.724e4					1.5	NO		bb		
51	FUNCTION1 PFK	26.18	3.323e3					0.4	NO		bb		
52	FUNCTION1 PFK	26.05	1.864e4					1.0	NO		bb		
53	FUNCTION1 PFK	25.91	1.114e4					0.6	NO		bb		
54	FUNCTION1 PFK	25.79	1.895e4					1.1	NO		db		
55	FUNCTION1 PFK	25.72	1.527e4					0.8	NO		bd		
56	FUNCTION1 PFK	25.56	6.069e4					1.2	NO		bb		
57	FUNCTION1 PFK	25.32	2.043e4					0.8	NO		bb		
58	FUNCTION1 PFK	28.10	6.905e3					0.5	NO		bb		
59	FUNCTION1 PFK	28.04	4.818e3					0.4	NO		bb		
60	FUNCTION1 PFK	27.71	1.514e4					0.8	NO		bb		
61	FUNCTION1 PFK	27.65	3.709e4					1.3	NO		db		
62	FUNCTION1 PFK	27.59	2.458e4					1.3	NO		dd		
63	FUNCTION1 PFK	27.53	4.906e4					1.8	NO		bd		
64	FUNCTION1 PFK	27.44	2.074e4					1.1	NO		db		
65	FUNCTION1 PFK	27.38	2.487e4					1.2	NO		dd		
66	FUNCTION1 PFK	27.24	6.345e4					1.2	NO		bd		
67	FUNCTION1 PFK	26.99	2.492e4					1.1	NO		db		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.79	2.481e4					1.5	NO		bb		0.000
2	FUNCTION3 PFK	33.58	3.048e3					0.6	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.11	2.881e5					5.9	YES		bd		
2	FUNCTION4 PFK	40.30	1.799e3					0.6	NO		bb		
3	FUNCTION4 PFK	40.24	8.794e3					0.9	NO		bb		
4	FUNCTION4 PFK	39.76	2.592e4					1.9	NO		bb		
5	FUNCTION4 PFK	39.53	1.727e3					0.6	NO		bb		
6	FUNCTION4 PFK	39.42	8.213e3					1.1	NO		db		
7	FUNCTION4 PFK	39.37	5.168e3					0.8	NO		bd		
8	FUNCTION4 PFK	39.28	3.722e4					2.1	NO		bb		
9	FUNCTION4 PFK	39.18	4.002e3					0.6	NO		bb		
10	FUNCTION4 PFK	39.14	3.342e3					0.8	NO		bb		
11	FUNCTION4 PFK	38.74	2.110e3					0.5	NO		bb		
12	FUNCTION4 PFK	38.66	1.735e4					1.0	NO		bb		
13	FUNCTION4 PFK	38.54	3.610e3					0.6	NO		db		
14	FUNCTION4 PFK	38.50	2.411e3					0.6	NO		bd		
15	FUNCTION4 PFK	38.43	2.873e4					2.5	NO		db		
16	FUNCTION4 PFK	38.38	2.222e4					2.3	NO		dd		
17	FUNCTION4 PFK	38.32	4.040e4					3.1	YES		dd		
18	FUNCTION4 PFK	42.54	1.660e3					0.6	NO		bb		
19	FUNCTION4 PFK	42.49	5.115e3					0.7	NO		db		
20	FUNCTION4 PFK	42.43	1.342e4					1.1	NO		dd		
21	FUNCTION4 PFK	42.39	8.107e3					1.2	NO		dd		
22	FUNCTION4 PFK	42.35	1.540e4					1.7	NO		bd		
23	FUNCTION4 PFK	42.28	2.692e4					2.0	NO		bb		
24	FUNCTION4 PFK	41.95	3.858e3					0.8	NO		bb		
25	FUNCTION4 PFK	41.80	3.979e4					2.0	NO		db		
26	FUNCTION4 PFK	41.65	1.699e4					1.5	NO		bd		
27	FUNCTION4 PFK	41.55	1.804e4					1.5	NO		db		
28	FUNCTION4 PFK	41.49	1.585e4					1.6	NO		dd		
29	FUNCTION4 PFK	41.42	1.775e4					1.4	NO		dd		
30	FUNCTION4 PFK	41.29	3.051e4					1.6	NO		bd		
31	FUNCTION4 PFK	41.07	3.910e3					0.8	NO		bb		
32	FUNCTION4 PFK	40.83	2.327e4					1.7	NO		bb		
33	FUNCTION4 PFK	40.44	5.321e3					0.8	NO		bb		
34	FUNCTION4 PFK	42.75	1.970e3					0.4	NO		bb		
35	FUNCTION4 PFK	42.66	4.393e3					0.6	NO		bb		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.93	2.684e3					0.8	NO		bb		
2	FUNCTION5 PFK	44.87	6.256e3					1.5	NO		bb		
3	FUNCTION5 PFK	44.78	1.077e4					1.6	NO		bb		
4	FUNCTION5 PFK	44.72	7.200e2					0.5	NO		bb		
5	FUNCTION5 PFK	44.65	1.235e3					0.8	NO		bb		
6	FUNCTION5 PFK	44.28	7.736e2					0.5	NO		bb		
7	FUNCTION5 PFK	44.24	1.418e3					0.7	NO		db		
8	FUNCTION5 PFK	44.21	4.442e3					1.2	NO		bd		
9	FUNCTION5 PFK	44.18	5.811e3					0.9	NO		bb		
10	FUNCTION5 PFK	43.82	5.499e3					1.3	NO		bb		
11	FUNCTION5 PFK	43.56	1.617e4					1.7	NO		bb		
12	FUNCTION5 PFK	43.36	1.625e3					0.7	NO		bb		
13	FUNCTION5 PFK	43.23	2.679e3					0.9	NO		bb		
14	FUNCTION5 PFK	46.45	4.419e3					1.2	NO		bb		
15	FUNCTION5 PFK	46.36	5.978e3					1.0	NO		bb		
16	FUNCTION5 PFK	46.26	2.259e3					0.8	NO		bb		
17	FUNCTION5 PFK	46.07	3.509e3					1.0	NO		bb		
18	FUNCTION5 PFK	45.84	4.173e3					1.3	NO		bb		
19	FUNCTION5 PFK	45.76	6.984e2					0.4	NO		bb		
20	FUNCTION5 PFK	45.72	1.077e3					0.7	NO		bb		
21	FUNCTION5 PFK	45.60	7.851e2					0.5	NO		bb		
22	FUNCTION5 PFK	45.54	4.517e3					1.2	NO		db		
23	FUNCTION5 PFK	45.49	1.078e4					1.5	NO		dd		
24	FUNCTION5 PFK	45.41	6.756e3					1.7	NO		dd		
25	FUNCTION5 PFK	45.38	1.279e4					2.2	NO		bd		
26	FUNCTION5 PFK	45.28	8.503e2					0.4	NO		bb		
27	FUNCTION5 PFK	45.04	4.420e3					1.2	NO		bb		
28	FUNCTION5 PFK	44.98	7.643e2					0.5	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.82	2.306e2					4.0	YES		db		0.000
2	FUNCTION1 HXCD...	27.74	8.055e1					1.8	NO		bd		0.000
3	FUNCTION1 HXCD...	27.59	1.178e2					2.5	NO		bb		0.000
4	FUNCTION1 HXCD...	27.21	1.030e2					1.7	NO		bb		0.000
5	FUNCTION1 HXCD...	27.02	8.155e1					1.5	NO		db		0.000
6	FUNCTION1 HXCD...	26.85	8.440e1					2.6	NO		bd		0.000
7	FUNCTION1 HXCD...	26.52	1.203e2					2.7	NO		bb		0.000
8	FUNCTION1 HXCD...	25.93	1.681e2					3.0	YES		bb		0.000
9	FUNCTION1 HXCD...	24.22	7.069e1					2.3	NO		bb		0.000
10	FUNCTION1 HXCD...	23.52	8.011e1					1.5	NO		bb		0.000
11	FUNCTION1 HXCD...	21.12	9.981e1					1.8	NO		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	23.48	8.076e1					2.6	NO		bb		0.000
2	FUNCTION1 HPCD...	21.66	8.657e1					2.4	NO		bb		0.000
3	FUNCTION1 HPCD...	21.27	8.855e1					2.3	NO		db		0.000
4	FUNCTION1 HPCD...	21.16	2.367e2					2.7	NO		bd		0.000
5	FUNCTION1 HPCD...	27.79	1.270e2					2.7	NO		bb		0.000
6	FUNCTION1 HPCD...	26.52	1.210e2					2.0	NO		bb		0.000
7	FUNCTION1 HPCD...	25.97	9.169e1					1.5	NO		db		0.000
8	FUNCTION1 HPCD...	25.88	1.471e2					2.3	NO		dd		0.000
9	FUNCTION1 HPCD...	25.73	1.363e2					1.9	NO		bd		0.000
10	FUNCTION1 HPCD...	24.82	1.792e2					1.5	NO		db		0.000
11	FUNCTION1 HPCD...	24.63	7.297e1					1.7	NO		bd		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.64	8.233e1					2.0	NO		bb		0.000
2	FUNCTION2 HPCD...	31.26	3.994e2					8.3	YES		bb		0.000

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ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.42	1.052e2					1.7	NO		bb		0.000
2	FUNCTION3 OCDPE	36.19	9.953e1					2.2	NO		bb		0.000
3	FUNCTION3 OCDPE	34.50	7.262e1					2.2	NO		bb		0.000
4	FUNCTION3 OCDPE	33.58	9.379e1					1.9	NO		bb		0.000
5	FUNCTION3 OCDPE	33.20	7.737e1					3.3	YES		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	42.82	9.720e1					2.9	NO		bb		0.000
2	FUNCTION4 NCDPE	42.34	7.165e1					2.1	NO		bb		0.000
3	FUNCTION4 NCDPE	40.58	7.068e1					1.3	NO		bb		0.000
4	FUNCTION4 NCDPE	40.40	1.414e2					1.7	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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Printed: Friday, February 03, 2023 10:37:38 Pacific Standard Time

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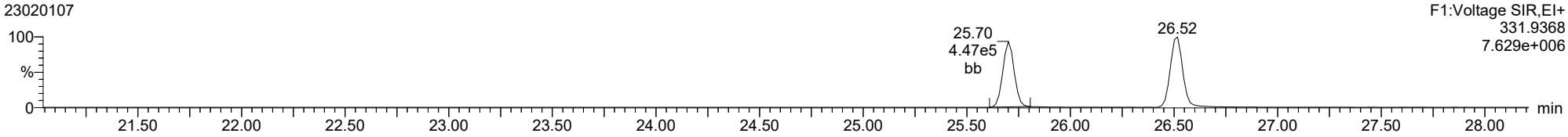
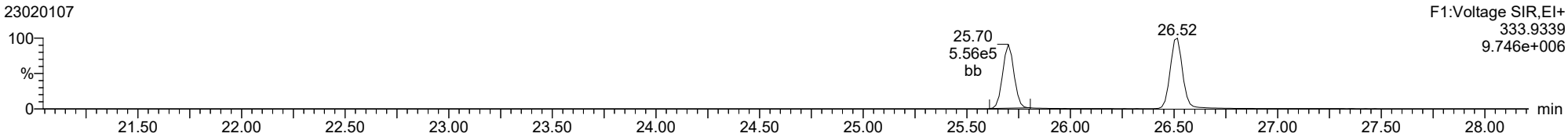
Calibration: 03 Feb 2023 10:33:40

ID: CS3CR, Name: 23020107, Date: 01-Feb-2023, Time: 17:56:19, Conditions: AUTOSPEC01, User: pk

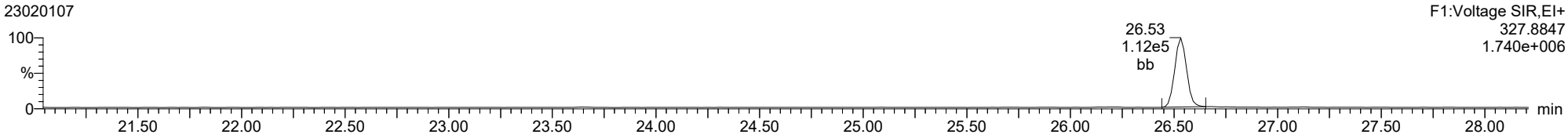
13C-1234-TCDD



13C-1234-TCDD



37CL-2378-TCDD



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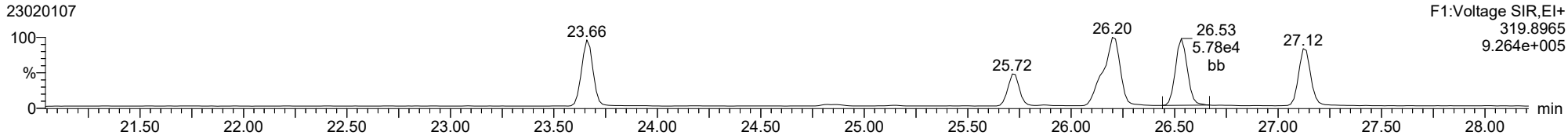

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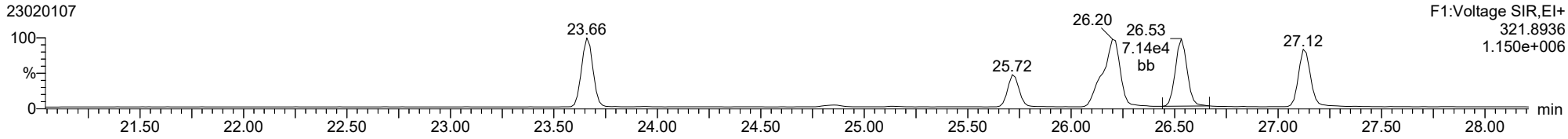

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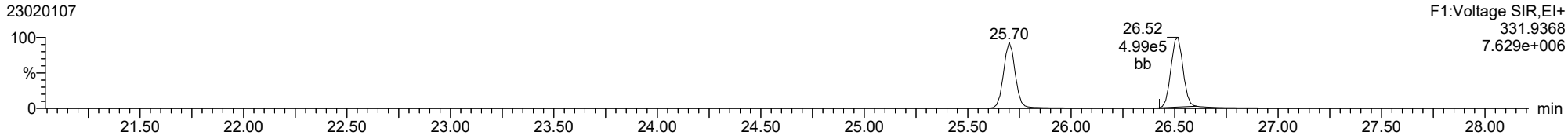

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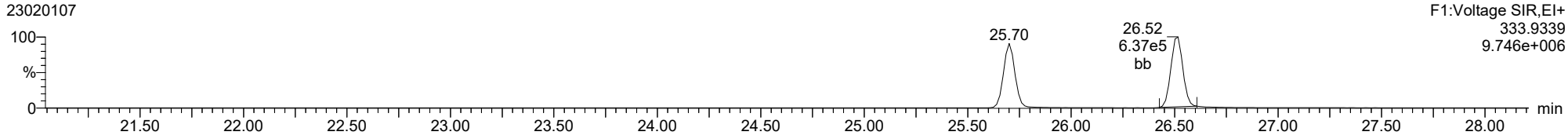

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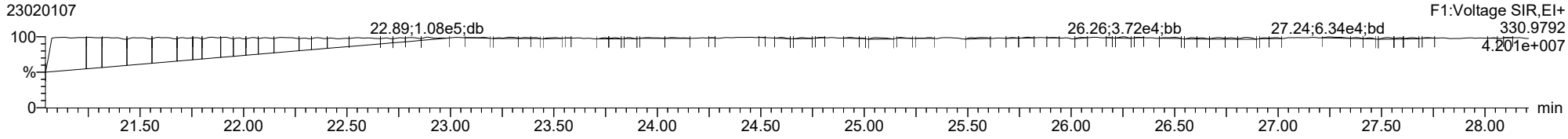

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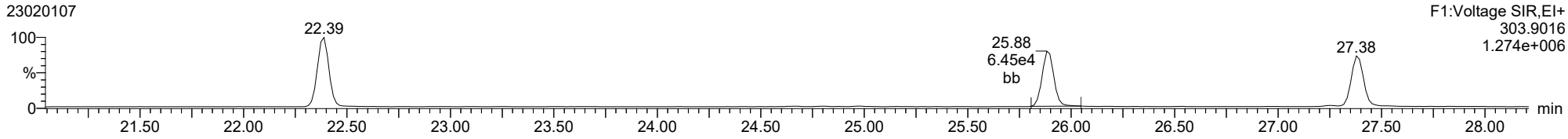

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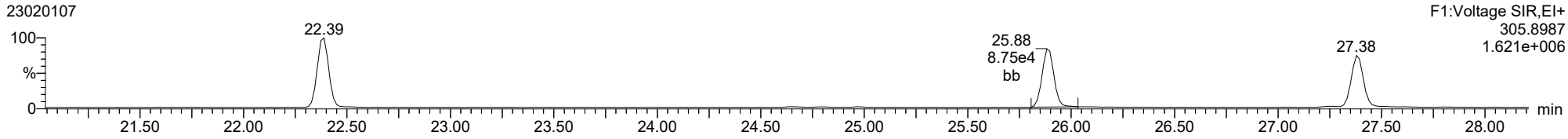

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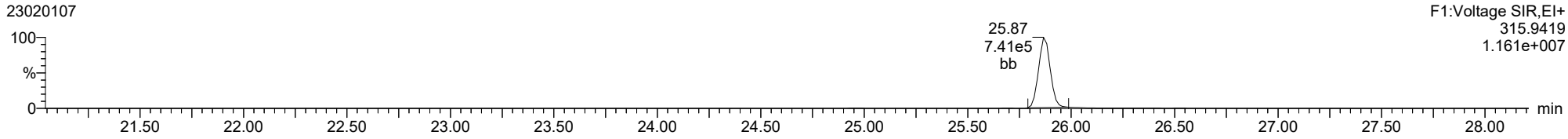

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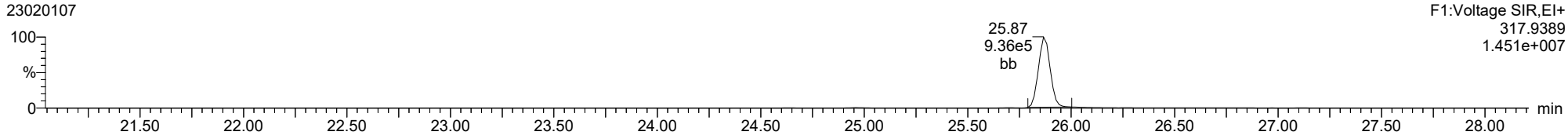
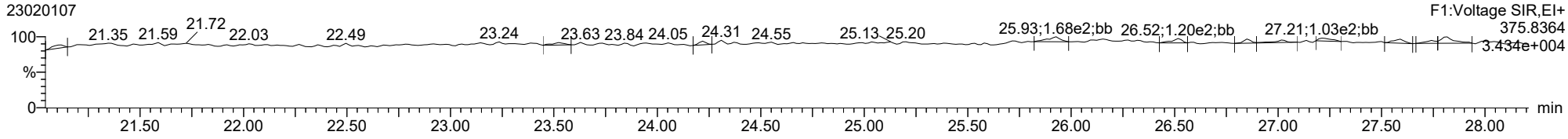


FUNCTION1 HXCDPE



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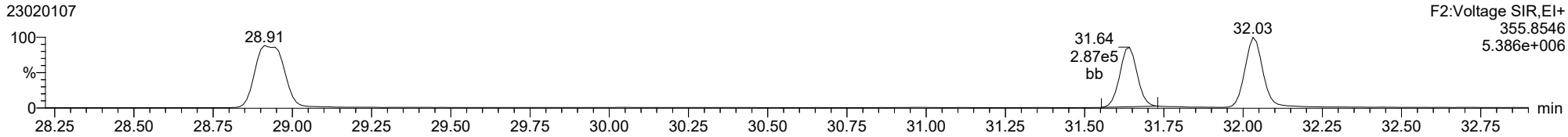
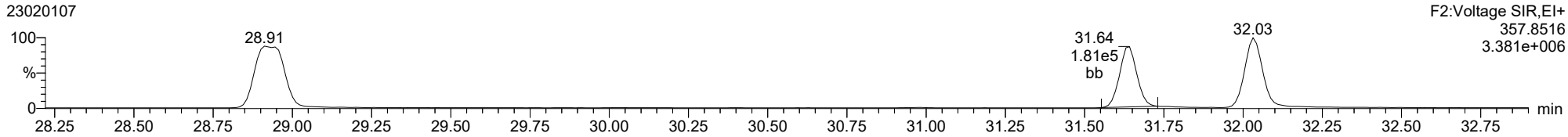
12378-PeCDD



12378-PeCDD



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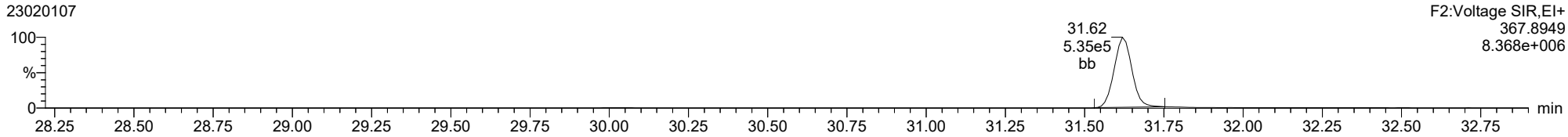

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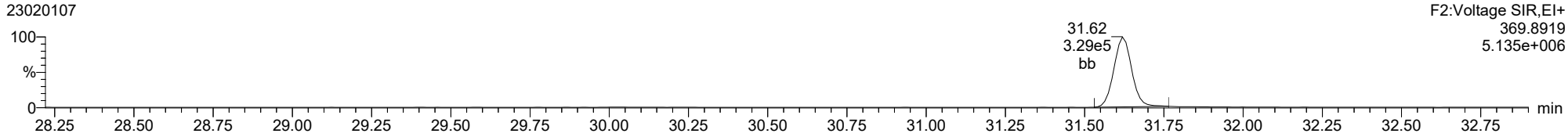

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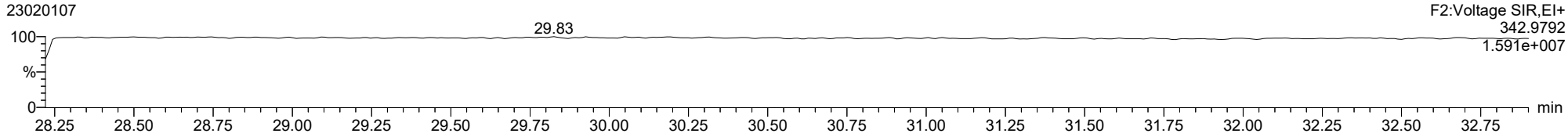

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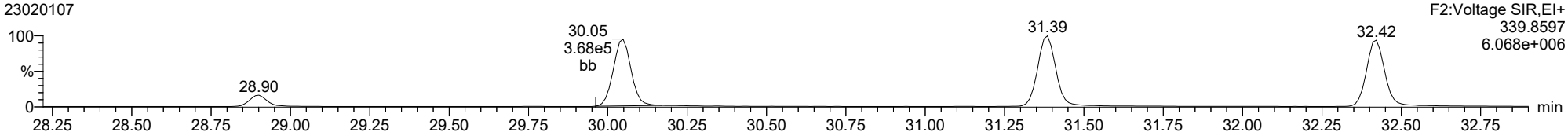

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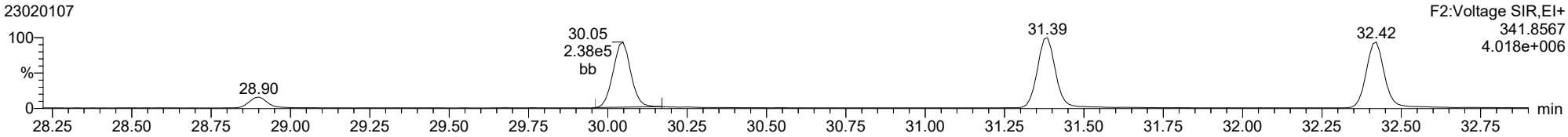

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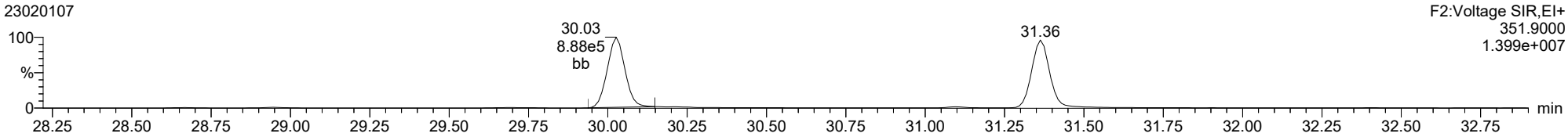

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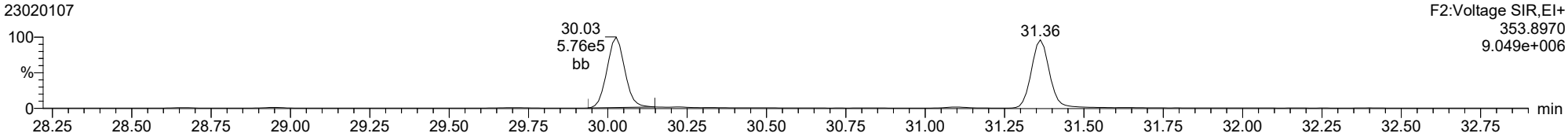

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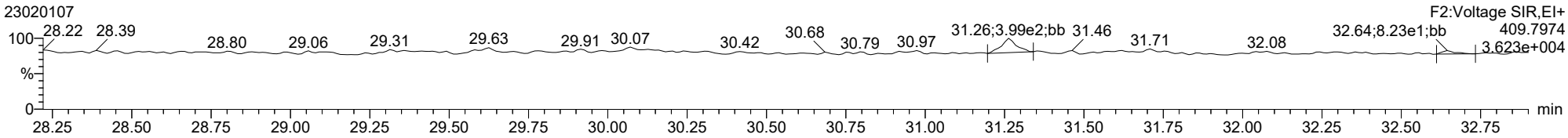

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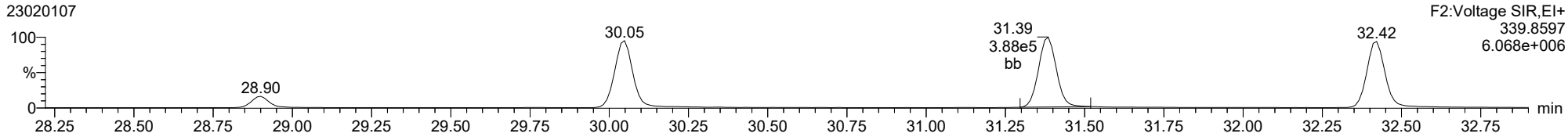

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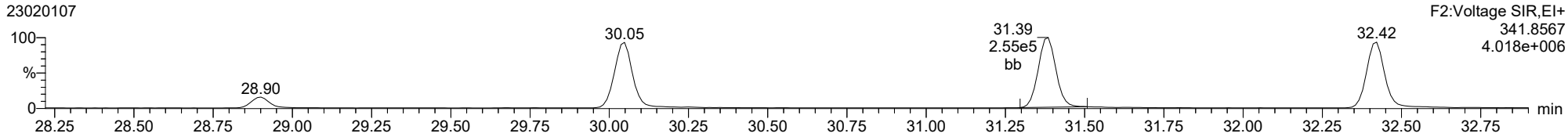

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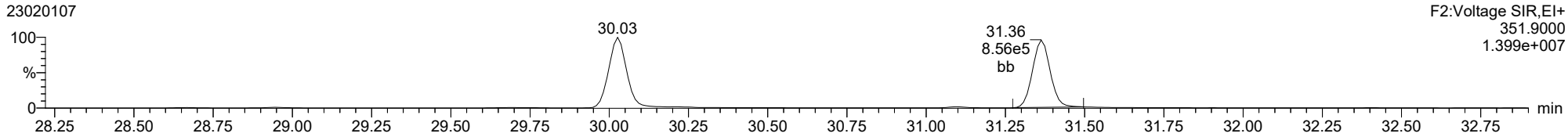

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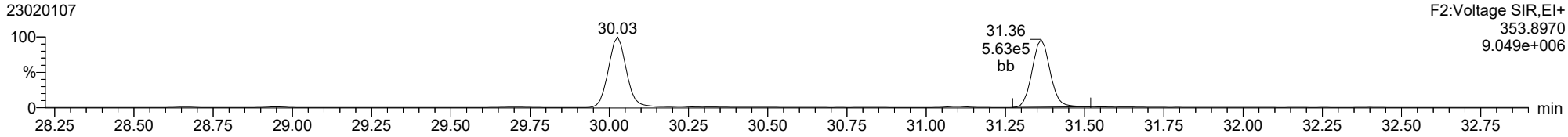

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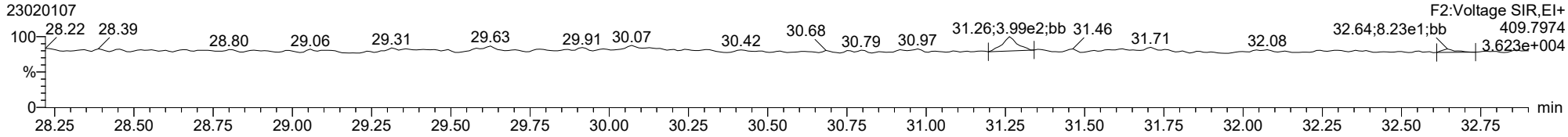

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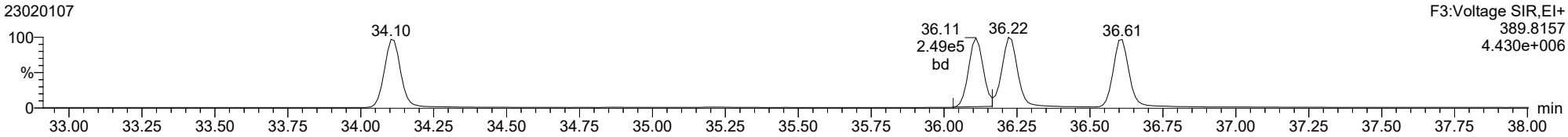

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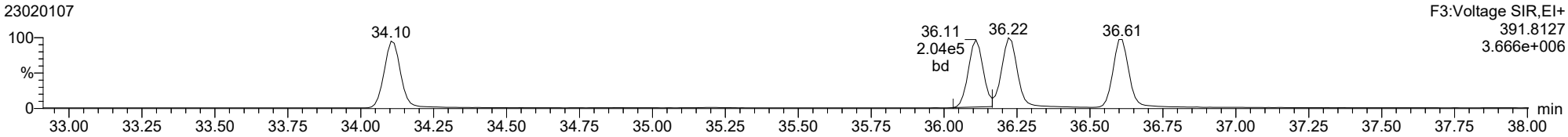

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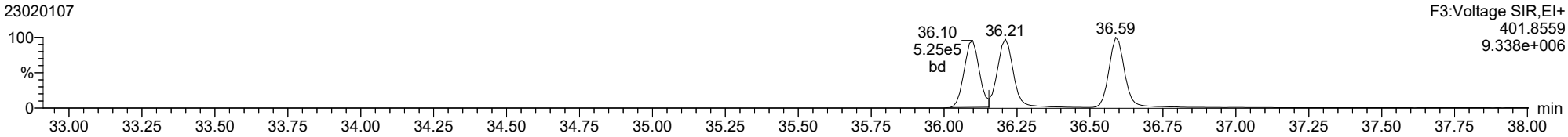

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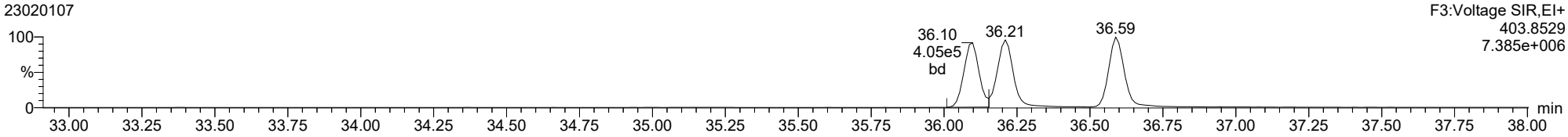

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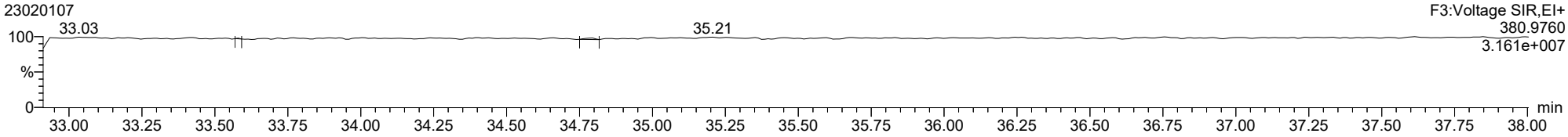

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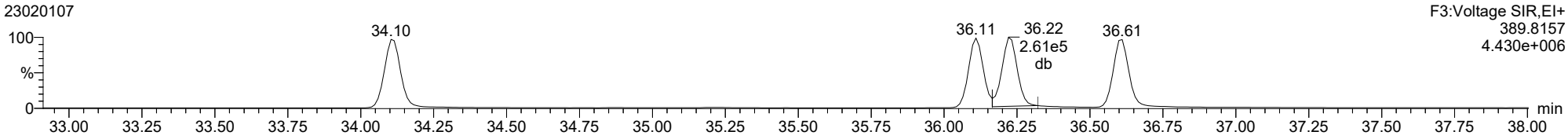

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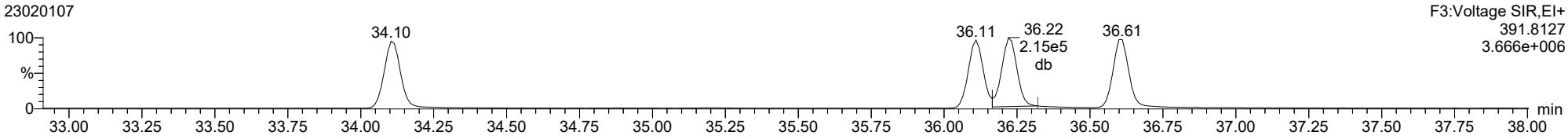

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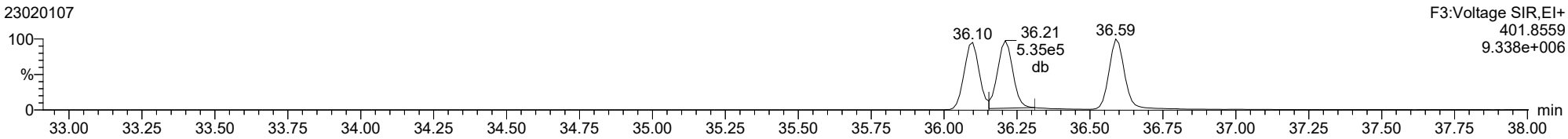

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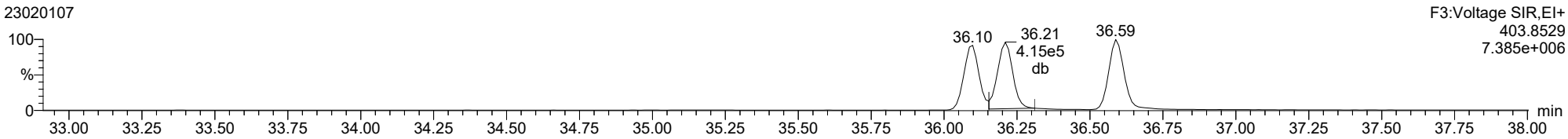

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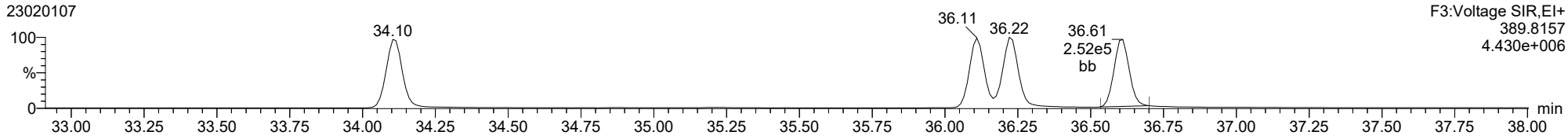

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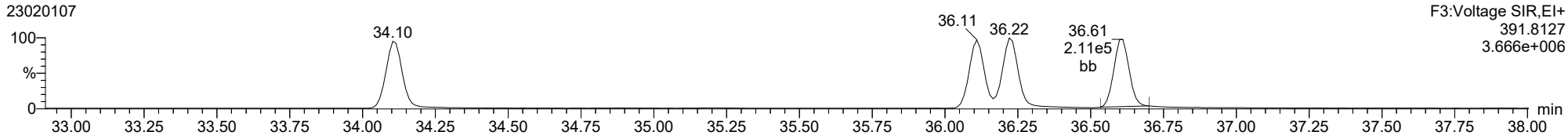

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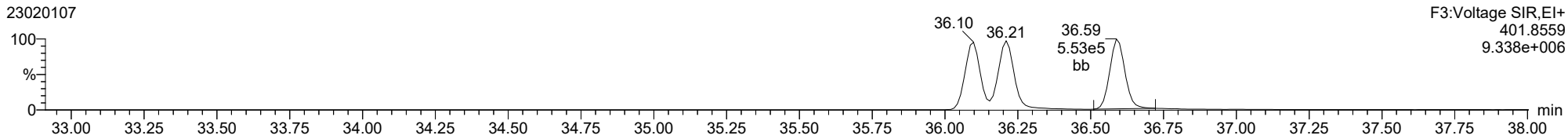

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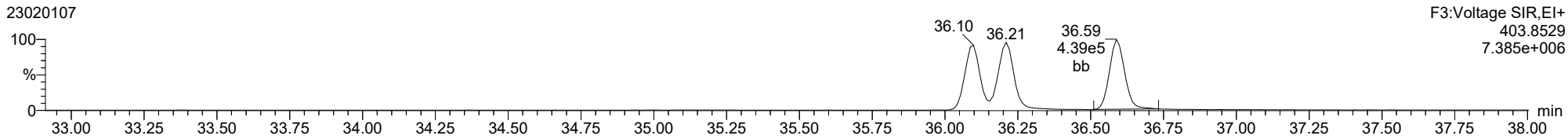

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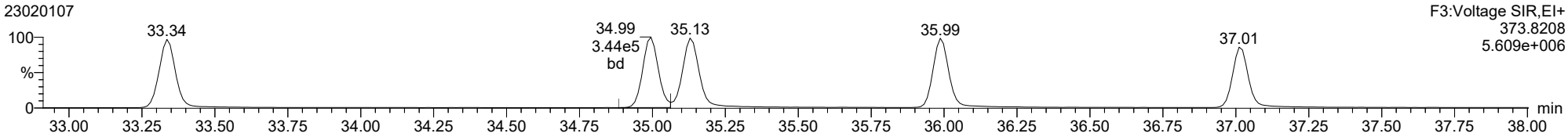

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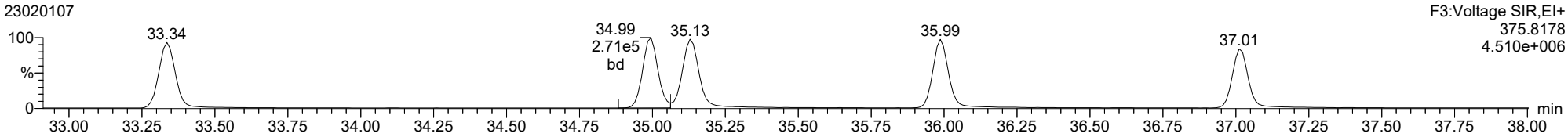

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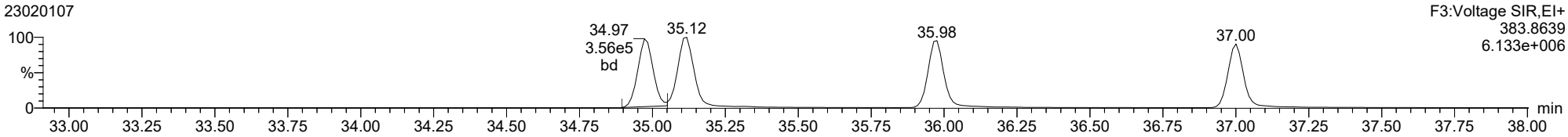

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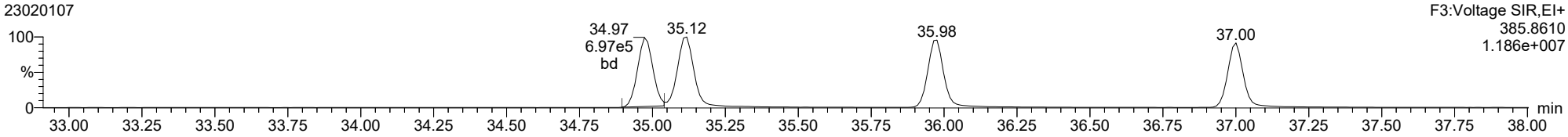

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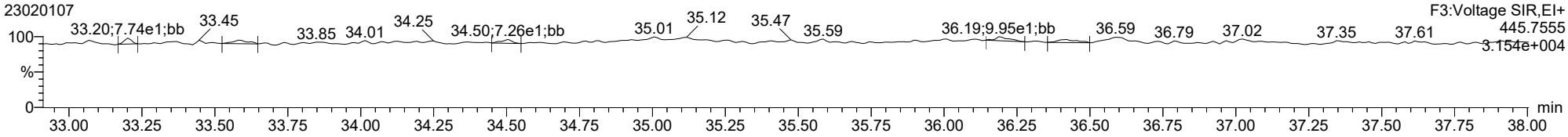

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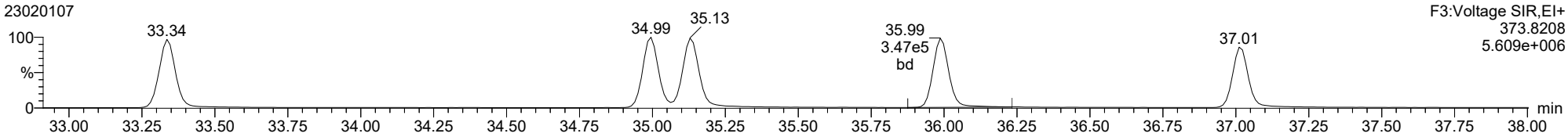
234678-HxCDF



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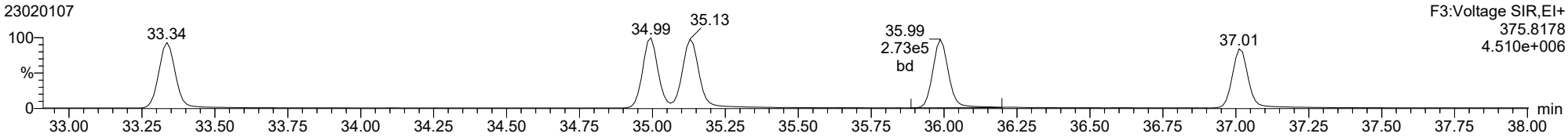

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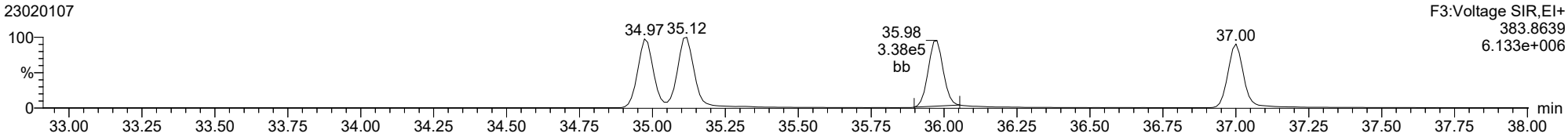

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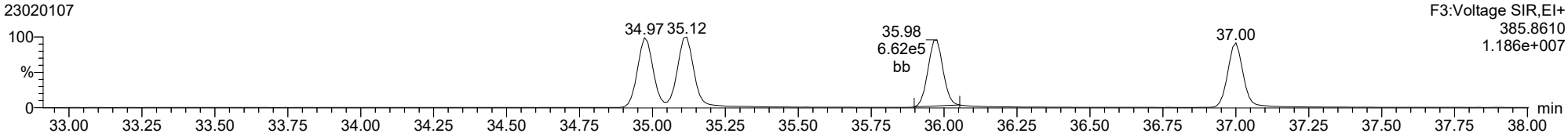

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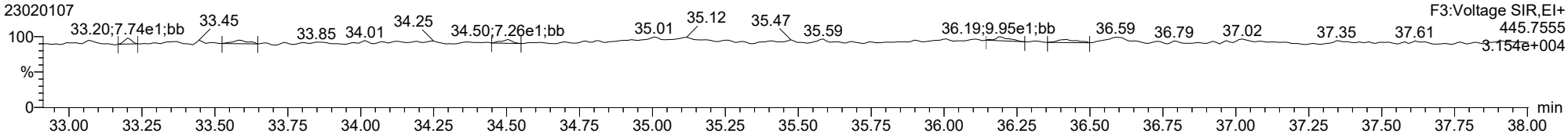

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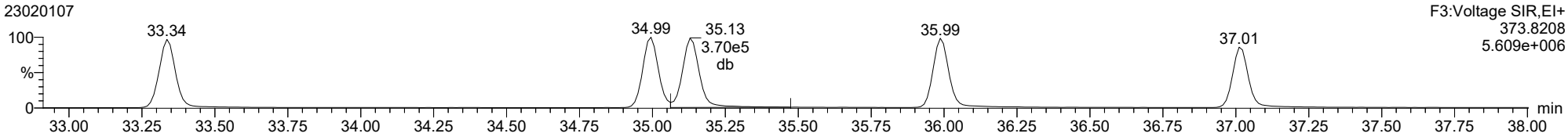

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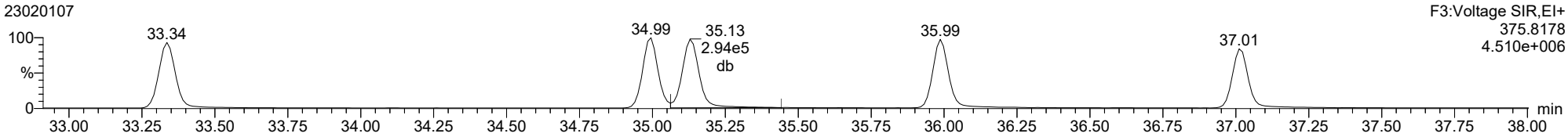

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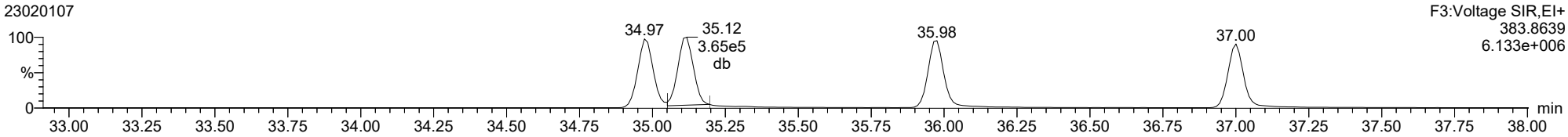

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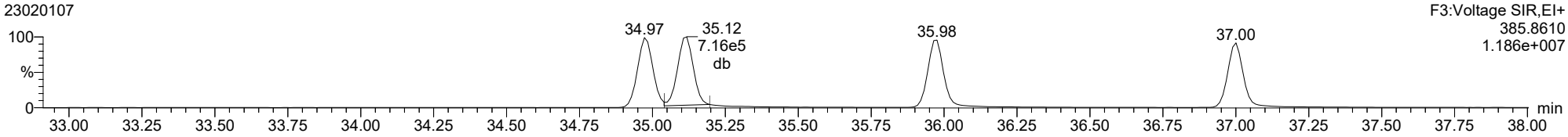

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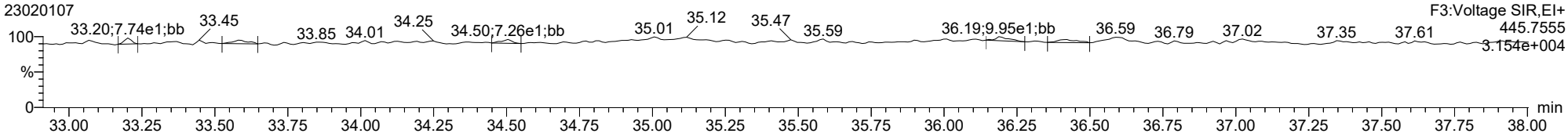

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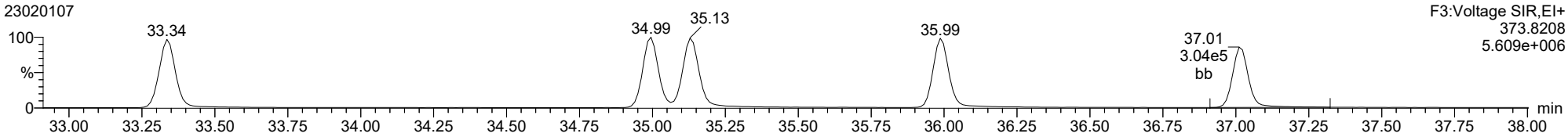

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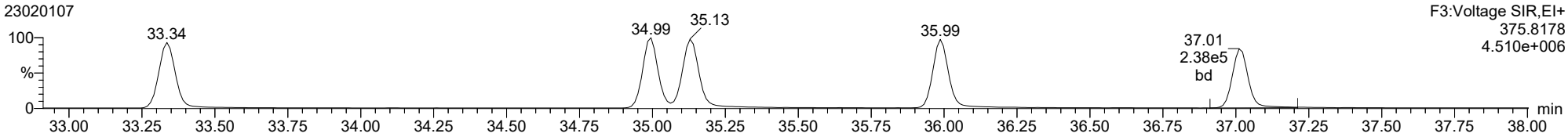

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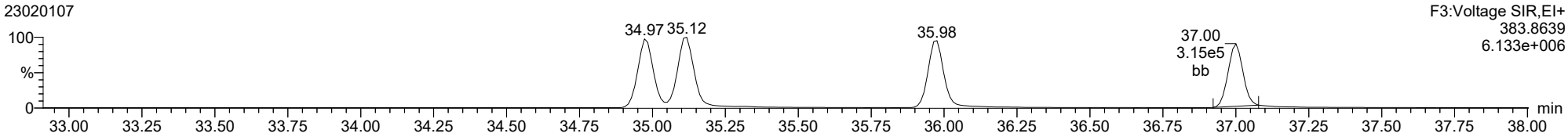

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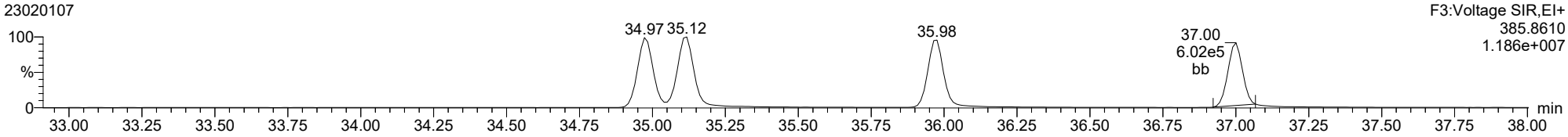

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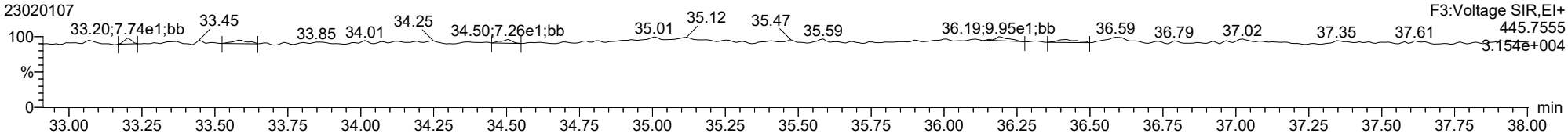

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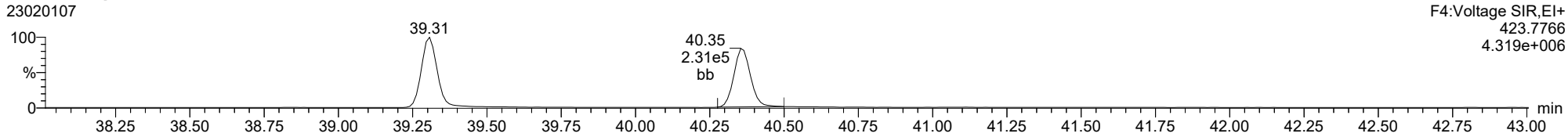
1234678-HpCDD



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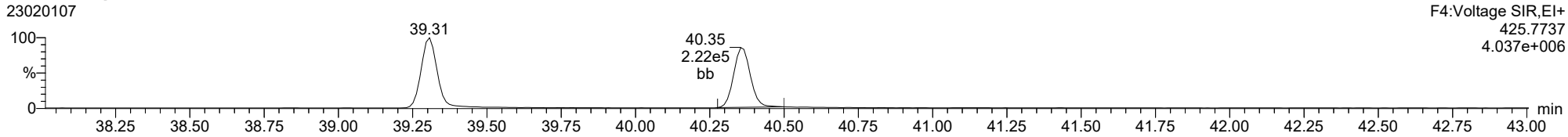

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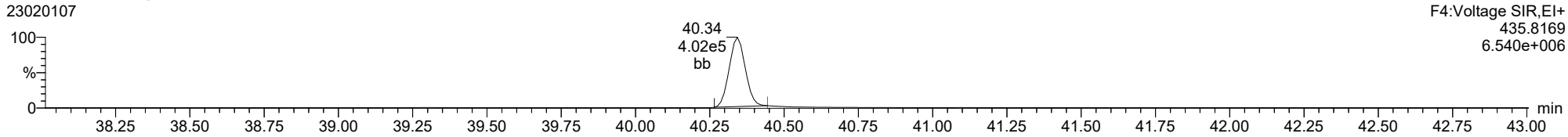

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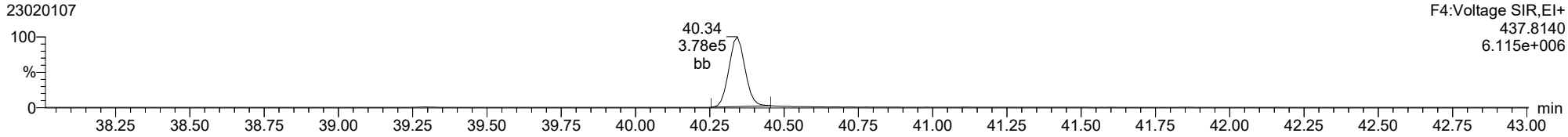
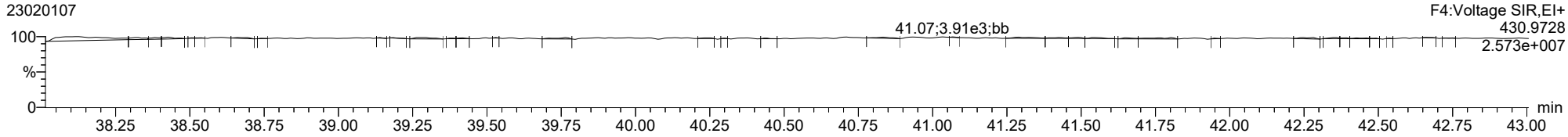


FUNCTION4 PFK



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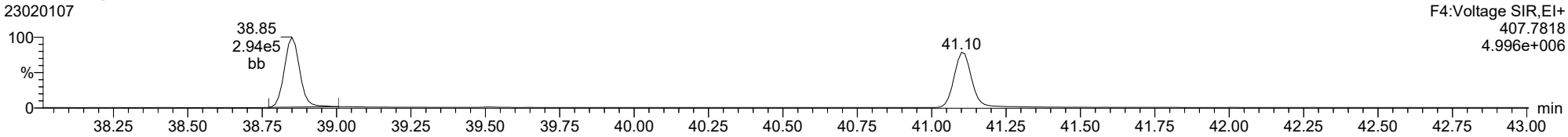

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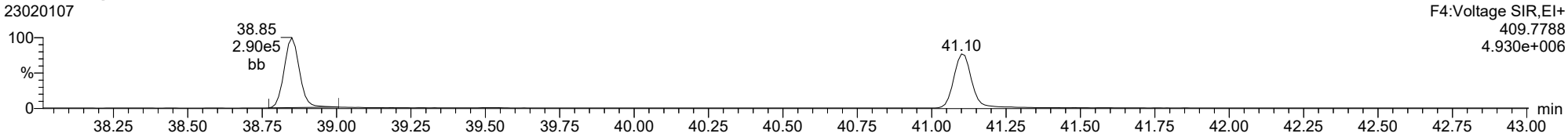

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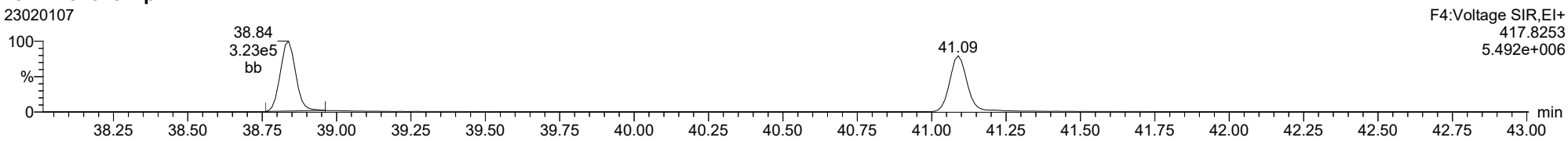

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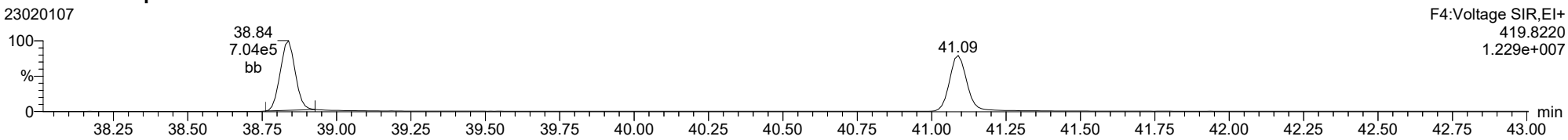
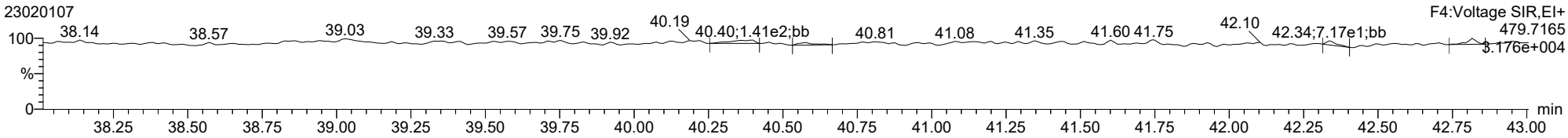


FUNCTION4 NCDPE



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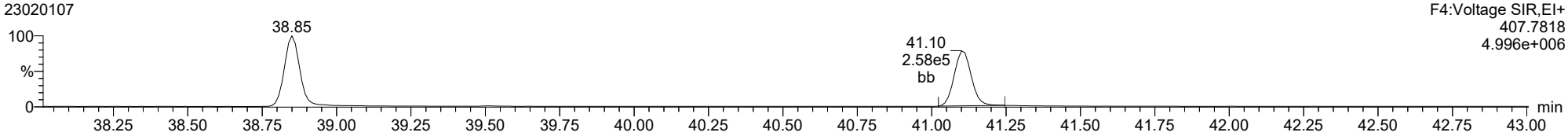

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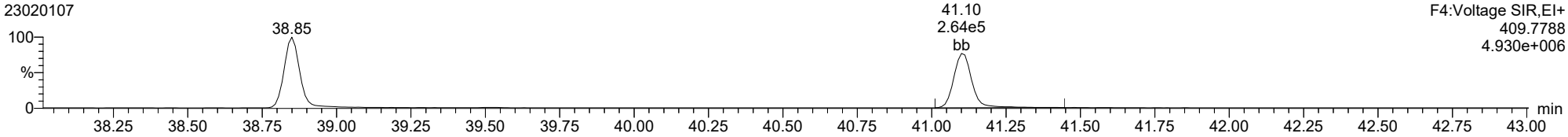

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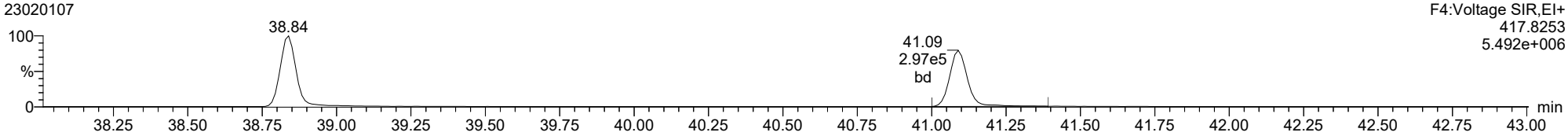

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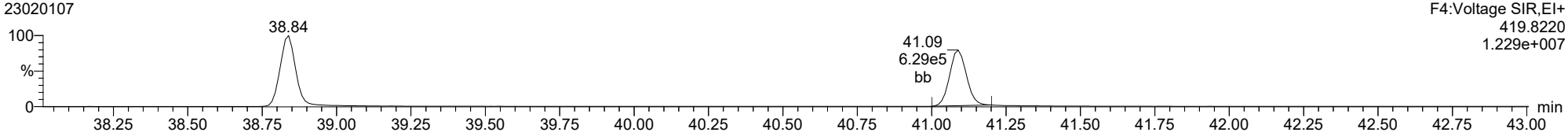
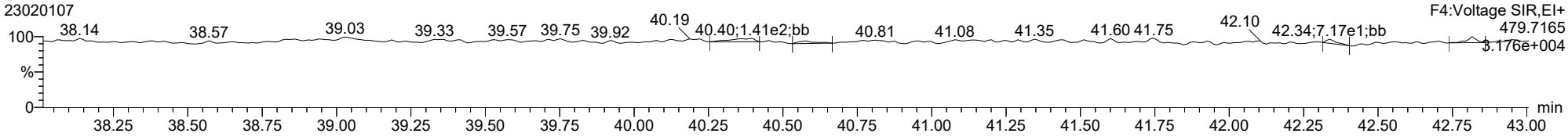


FUNCTION4 NCDPE



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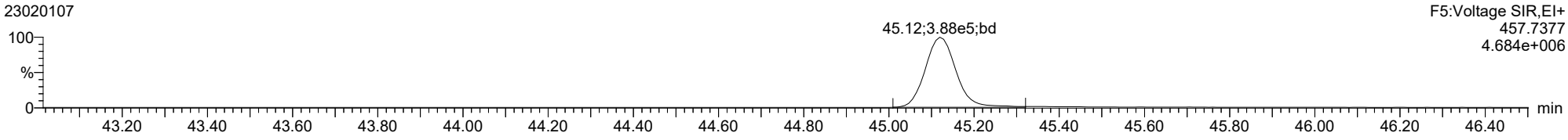

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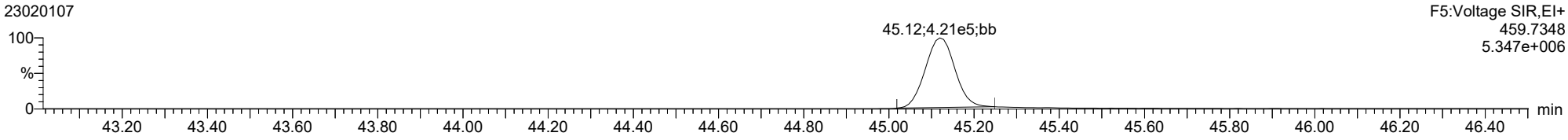

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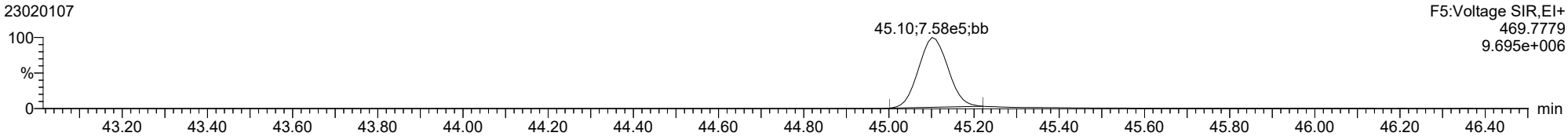

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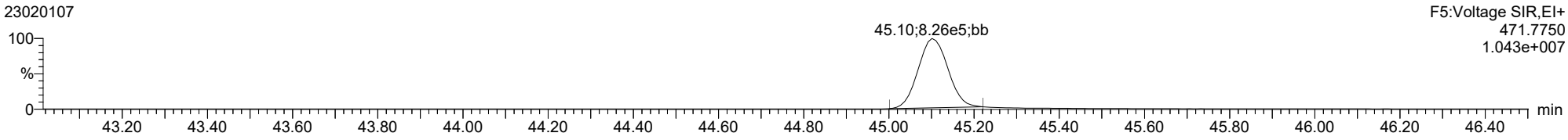
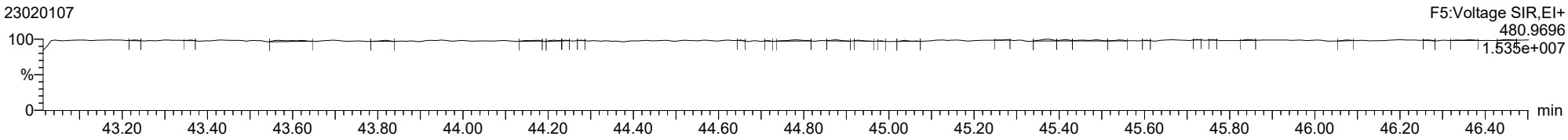


FUNCTION5 PFK



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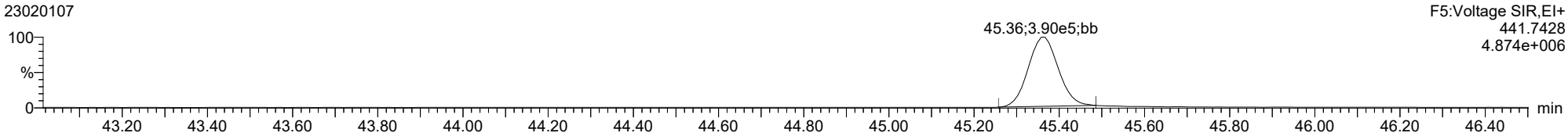

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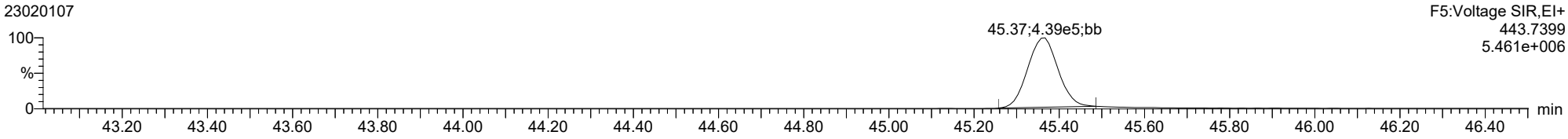
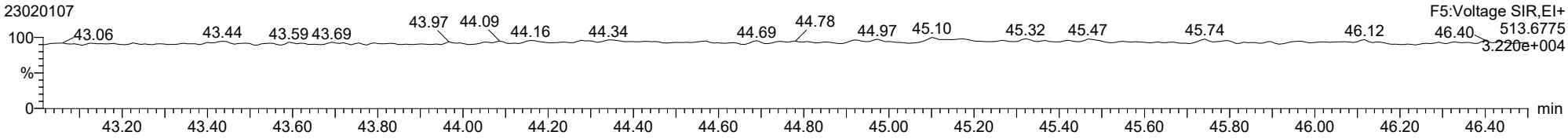


FUNCTION5 DCDPE



ID: CS3CR, Name: 23020107, Date: 01-Feb-2023, Time: 17:56:19, Conditions: AUTOSPEC01, User: pk

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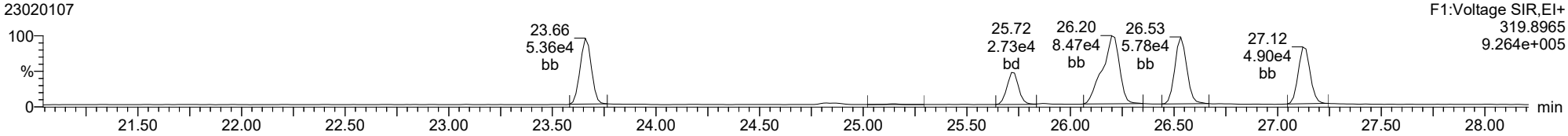
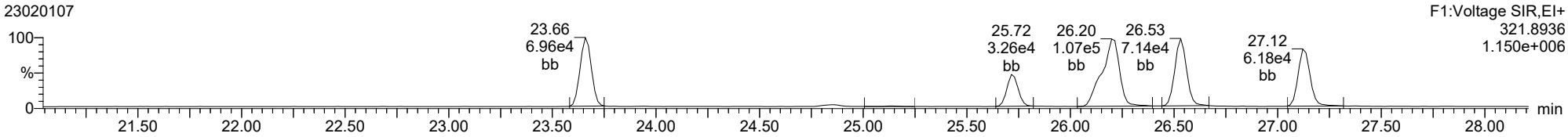
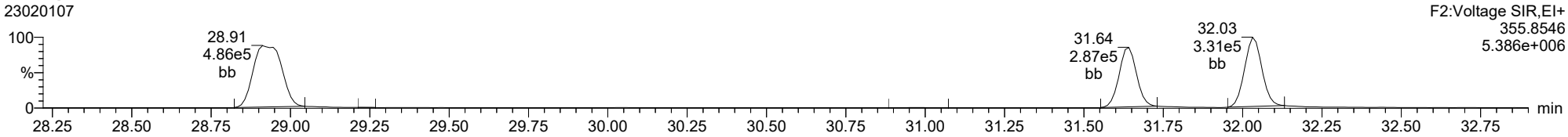


Total-tetradioxins



Total-pentadioxins



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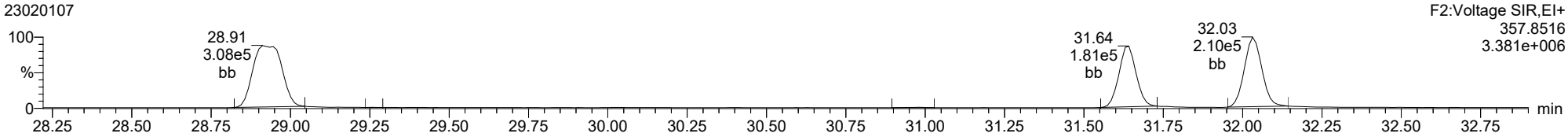

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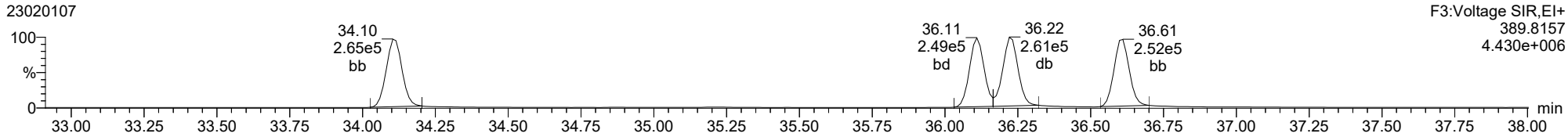

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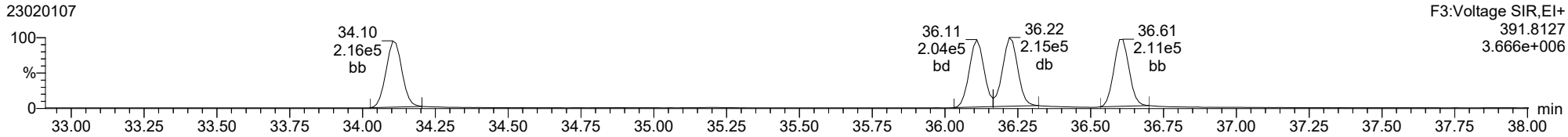

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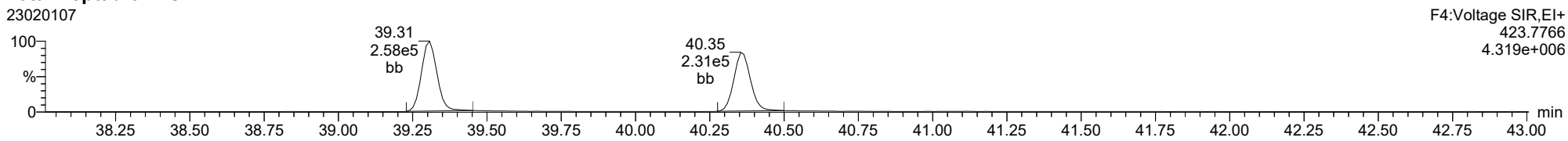
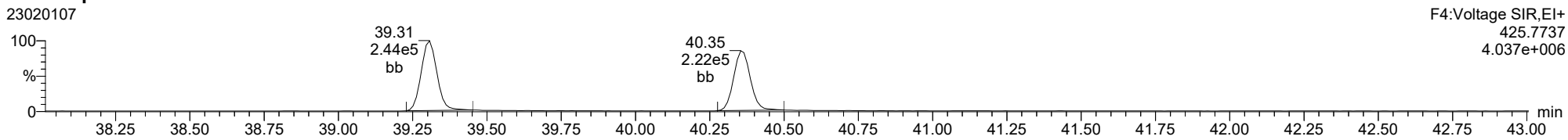


Total-heptadioxins



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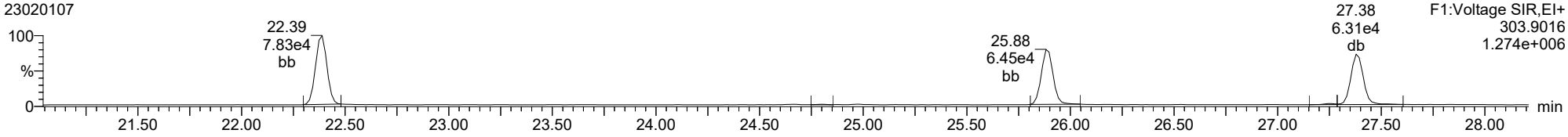
Total-tetrafurans



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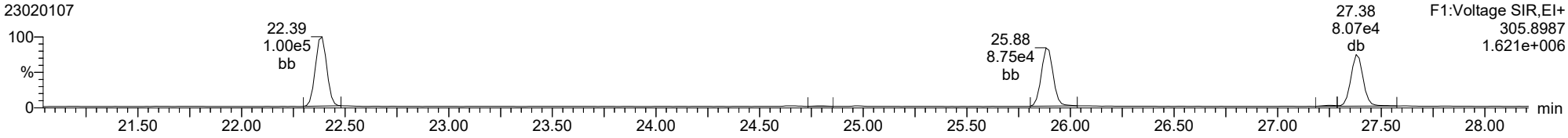

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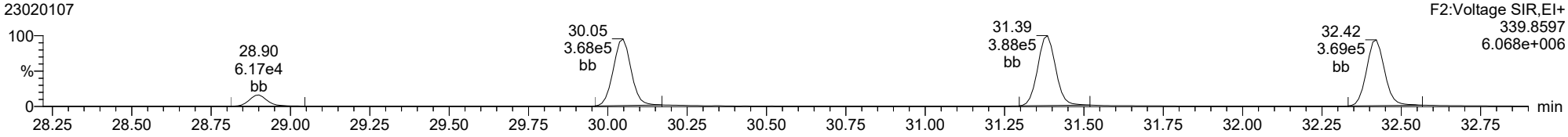

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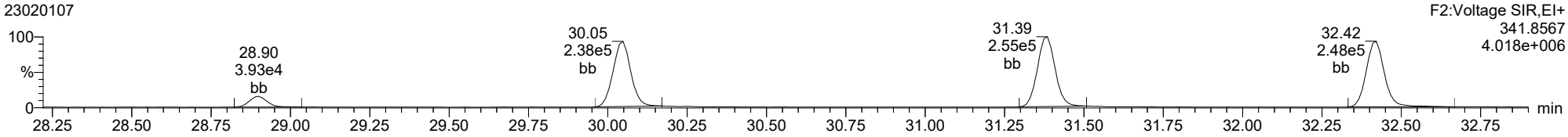

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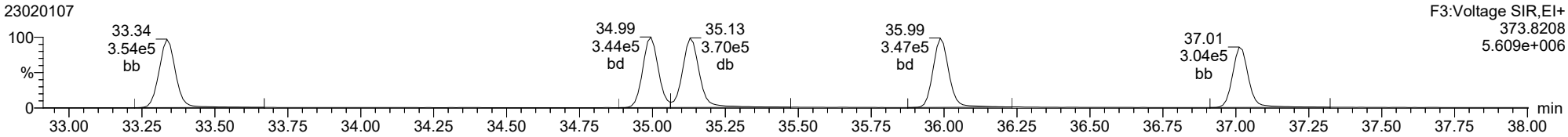

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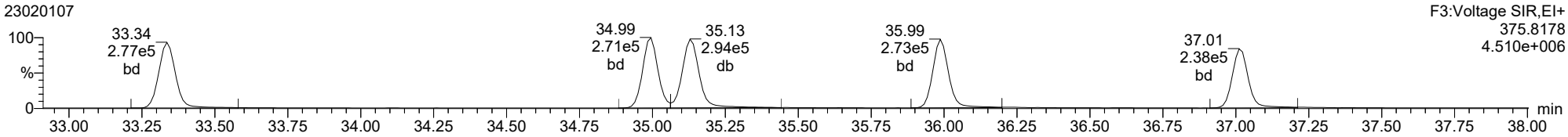

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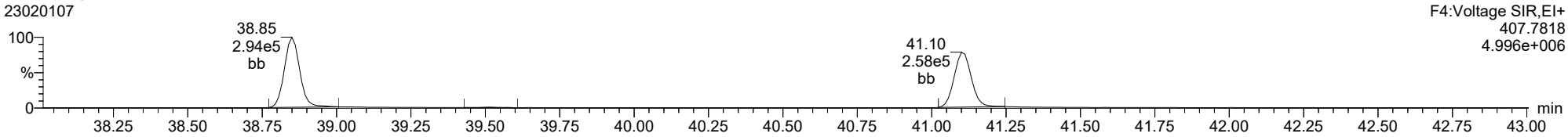
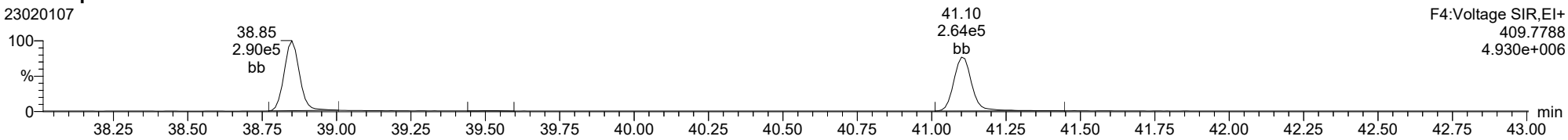


Total-heptafurans



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Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:37:53 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS4CR, Name: 23020108, Date: 01-Feb-2023, Time: 18:45:20, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.882	1.001	3.837e5	5.095e5	0.876	0.753	0.770	3306	1852	5.94e6	7.78e6	1796.5	4201.3	NO	bb	bb	39.352
12378-PeCDF	30.037	1.000	2.144e6	1.419e6	0.845	1.511	1.550	3774	3458	3.38e7	2.23e7	8947.1	6442.4	NO	bb	bb	197.212
23478-PeCDF	31.374	1.000	2.253e6	1.479e6	0.911	1.523	1.550	3774	3458	3.50e7	2.30e7	9263.9	6657.7	NO	bb	bb	199.338
123478-HxCDF	34.984	1.000	2.037e6	1.599e6	1.182	1.274	1.240	4016	3299	3.25e7	2.54e7	8086.7	7697.9	NO	dd	dd	201.086
234678-HxCDF	35.987	1.001	2.093e6	1.626e6	1.229	1.288	1.240	4016	3299	3.22e7	2.54e7	8018.2	7699.6	NO	dd	bd	203.397
123678-HxCDF	35.129	1.001	2.269e6	1.771e6	1.248	1.281	1.240	4016	3299	3.41e7	2.66e7	8495.8	8063.9	NO	dd	dd	203.923
123789-HxCDF	37.012	1.001	1.817e6	1.431e6	1.187	1.269	1.240	4016	3299	2.86e7	2.23e7	7125.7	6768.1	NO	dd	bd	199.649
1234678-HpCDF	38.839	1.000	1.816e6	1.772e6	1.204	1.025	1.050	5173	5540	3.02e7	2.97e7	5847.4	5361.2	NO	bb	bb	193.935
1234789-HpCDF	41.100	1.000	1.575e6	1.522e6	1.165	1.034	1.050	5173	5540	2.37e7	2.31e7	4579.3	4164.7	NO	bb	bb	200.336
OCDF	45.357	1.006	2.485e6	2.804e6	1.186	0.886	0.890	4624	3331	3.05e7	3.43e7	6601.2	10303.1	NO	bb	bb	376.199
2378-TCDD	26.532	1.001	3.417e5	4.230e5	1.236	0.808	0.770	1943	1502	5.26e6	6.49e6	2709.1	4323.6	NO	bb	bb	40.022
12378-PeCDD	31.631	1.000	1.695e6	1.077e6	1.087	1.574	1.550	2803	1572	2.73e7	1.72e7	9745.0	10948.2	NO	bb	bb	198.713
123478-HxCDD	36.109	1.001	1.491e6	1.215e6	0.987	1.227	1.240	2230	3671	2.51e7	2.05e7	11249.2	5579.6	NO	bd	bd	204.141
123678-HxCDD	36.221	1.000	1.525e6	1.238e6	1.021	1.232	1.240	2230	3671	2.55e7	2.09e7	11440.8	5702.6	NO	db	db	192.587
123789-HxCDD	36.599	1.011	1.475e6	1.213e6	0.985	1.216	1.240	2230	3671	2.48e7	2.06e7	11134.5	5610.2	NO	bb	bb	198.496
1234678-HpCDD	40.354	1.001	1.416e6	1.361e6	1.253	1.040	1.050	2506	3274	2.22e7	2.13e7	8870.2	6512.5	NO	bb	bb	190.176
OCDD	45.120	1.000	2.302e6	2.608e6	1.103	0.883	0.890	2646	4665	2.90e7	3.29e7	10978.0	7047.3	NO	bb	bb	375.677
13C-2378-TCDF	25.867	1.007	1.141e6	1.450e6	1.768	0.786	0.770	2983	2394	1.77e7	2.25e7	5940.4	9386.6	NO	bb	bb	101.281
13C-12378-PeCDF	30.026	1.168	1.284e6	8.547e5	1.527	1.502	1.550	4680	2502	1.96e7	1.27e7	4184.1	5065.1	NO	bb	bd	96.786
13C-23478-PeCDF	31.363	1.220	1.245e6	8.091e5	1.466	1.539	1.550	4680	2502	1.90e7	1.23e7	4051.1	4925.5	NO	bb	bb	96.841
13C-123478-HxCDF	34.973	0.956	5.210e5	1.009e6	1.054	0.516	0.510	2637	3506	8.67e6	1.67e7	3288.9	4772.6	NO	bd	bd	99.631
13C-123678-HxCDF	35.107	0.960	5.527e5	1.035e6	1.080	0.534	0.510	2637	3506	9.01e6	1.71e7	3417.9	4869.2	NO	db	db	100.816
13C-234678-HxCDF	35.965	0.983	5.043e5	9.836e5	1.014	0.513	0.510	2637	3506	8.34e6	1.63e7	3164.3	4660.4	NO	bb	bb	100.617
13C-123789-HxCDF	36.989	1.011	4.610e5	9.102e5	0.928	0.507	0.510	2637	3506	7.75e6	1.54e7	2939.3	4390.8	NO	bb	bb	101.358
13C-1234678-HpCDF	38.828	1.061	4.731e5	1.063e6	1.036	0.445	0.440	3133	3783	8.09e6	1.82e7	2583.3	4811.1	NO	bb	bb	101.722
13C-1234789-HpCDF	41.089	1.123	4.094e5	9.173e5	0.905	0.446	0.440	3133	3783	6.17e6	1.38e7	1971.0	3639.0	NO	bb	bb	100.563
13C-1234-TCDD	25.700	0.000	6.435e5	8.034e5	1.000	0.801	0.770	2264	5824	1.00e7	1.24e7	4417.3	2128.2	NO	bb	bb	100.000
13C-2378-TCDD	26.502	1.031	6.869e5	8.584e5	1.103	0.800	0.770	2264	5824	1.05e7	1.31e7	4634.7	2257.9	NO	bb	bb	96.836
13C-12378-PeCDD	31.619	1.230	7.945e5	4.894e5	0.914	1.623	1.550	1351	1735	1.23e7	7.56e6	9139.9	4356.9	NO	bb	bb	97.071
13C-123478-HxCDD	36.087	0.986	7.592e5	5.838e5	0.933	1.300	1.240	2349	1779	1.29e7	9.89e6	5485.2	5561.8	NO	bd	bd	98.749
13C-123678-HxCDD	36.210	0.990	7.891e5	6.166e5	0.965	1.280	1.240	2349	1779	1.26e7	9.87e6	5351.9	5549.2	NO	db	db	99.960
13C-1234678-HpCDD	40.332	1.102	6.034e5	5.625e5	0.782	1.073	1.050	2813	2017	9.31e6	8.69e6	3310.2	4307.9	NO	bb	bb	102.265
13C-OCDD	45.101	1.233	1.130e6	1.241e6	0.788	0.911	0.890	2295	1626	1.42e7	1.55e7	6172.7	9561.2	NO	bb	bb	206.289
13C-123789-HxCDD	36.588	0.000	8.190e5	6.388e5	1.000	1.282	1.240	2349	1779	1.32e7	1.04e7	5620.6	5858.2	NO	bb	bb	100.000
37CL-2378-TCDD	26.532	1.032	6.581e5		1.233			1941		1.01e7		5210.0			bb		36.879

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Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					1.064		0.770	3306	1852								
1289-TCDF					0.858		0.770	3306	1852								
13468-PECDF					1.013		1.550	3731	5783								
12389-PECDF					0.844		1.550	3774	3458								
123468-HXCDF					1.197		1.240	4016	3299								
1368-TCDD					1.084		0.770	1943	1502								
1289-TCDD					0.975		0.770	1943	1502								
12479-PECDD					1.837		1.550	2803	1572								
12389-PECDD					1.252		1.550	2803	1572								
124679-HXCDD					1.033		1.240	2230	3671								
1234679-HPCDD					1.286		1.050	2506	3274								
Total-tetrafurans			3.913e5		0.933			3306		6.07e6							40.082
Total-penta1			0.000e0					3731		0.00e0							
Total-pentafurans			4.421e6		0.866			3774		6.91e7							398.784
Total-hexafurans			8.218e6		1.208			4016		1.27e8							808.248
Total-heptafurans			3.395e6		1.185			5173		5.40e7							394.809
Total-Furans			1.891e7		1.067			3306		2.87e8							2018.122
Total-tetradioxins			3.511e5		1.099			1943		5.38e6							41.245
Total-pentadioxins			1.697e6		1.392			2803		2.73e7							198.842
Total-hexadioxins			4.491e6		1.007			2230		7.54e7							595.224
Total-heptadioxins			1.416e6		1.269			2506		2.22e7							190.176
Total-Dioxins			1.026e7		1.165			1943		1.59e8							1401.163
Total-TEQ			2.917e7					1943		4.47e8							3419.285
FUNCTION1 PFK			4.404e5					580120		1.21e7							
FUNCTION2 PFK			1.273e5					196333		3.80e6							0.000
FUNCTION3 PFK			0.000e0					408061		0.00e0							
FUNCTION4 PFK			2.183e5					275800		6.18e6							
FUNCTION5 PFK			0.000e0					154157		0.00e0							
FUNCTION1 HXCD...			1.662e4					8726		3.10e5							0.000
FUNCTION1 HPCD...			1.579e4					6150		2.65e5							0.000
FUNCTION2 HPCD...			2.593e3					848		4.54e4							0.000
FUNCTION3 OCDPE			1.183e3					745		1.55e4							0.000
FUNCTION4 NCDPE			4.176e2					872		5.06e3							0.000
FUNCTION5 DCDPE			3.248e2					814		4.90e3							0.000

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.88	3.837e5	5.095e5	0.876	0.75	0.77	1796.5	YES	NO	bb	bb	39.352
2	Total-tetrafurans	24.97	2.571e3	3.313e3	0.933	0.78	0.77	11.3	YES	NO	bb	bb	0.243
3	Total-tetrafurans	24.64	3.935e3	5.312e3	0.933	0.74	0.77	18.1	YES	NO	bd	dd	0.383
4	Total-tetrafurans	24.51	1.158e3	1.353e3	0.933	0.86	0.77	9.5	YES	NO	db	dd	0.104

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	31.62	2.192e3	1.347e3	0.866	1.63	1.55	9.8	YES	NO	bb	bd	0.195
2	23478-PeCDF	31.37	2.253e6	1.479e6	0.911	1.52	1.55	9263.9	YES	NO	bb	bb	199.338
3	Total-pentafurans	31.11	2.570e3	1.840e3	0.866	1.40	1.55	11.2	YES	NO	bb	bb	0.243
4	12378-PeCDF	30.04	2.144e6	1.419e6	0.845	1.51	1.55	8947.1	YES	NO	bb	bb	197.212
5	Total-pentafurans	29.67	1.564e3	9.796e2	0.866	1.60	1.55	6.5	YES	NO	bd	bd	0.140
6	Total-pentafurans	32.41	1.819e4	1.189e4	0.866	1.53	1.55	66.2	YES	NO	bb	bb	1.656

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	234678-HxCDF	35.99	2.093e6	1.626e6	1.229	1.29	1.24	8018.2	YES	NO	dd	bd	203.397
2	123678-HxCDF	35.13	2.269e6	1.771e6	1.248	1.28	1.24	8495.8	YES	NO	dd	dd	203.923
3	123478-HxCDF	34.98	2.037e6	1.599e6	1.182	1.27	1.24	8086.7	YES	NO	dd	dd	201.086
4	Total-hexafurans	33.52	1.932e3	1.561e3	1.208	1.24	1.24	6.5	YES	NO	bb	bb	0.193
5	123789-HxCDF	37.01	1.817e6	1.431e6	1.187	1.27	1.24	7125.7	YES	NO	dd	bd	199.649

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.10	1.575e6	1.522e6	1.165	1.03	1.05	4579.3	YES	NO	bb	bb	200.336
2	Total-heptafurans	39.51	4.373e3	4.751e3	1.185	0.92	1.05	13.2	YES	NO	bb	bb	0.538
3	1234678-HpCDF	38.84	1.816e6	1.772e6	1.204	1.02	1.05	5847.4	YES	NO	bb	bb	193.935

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.88	3.837e5	5.095e5	0.876	0.75	0.77	1796.5	YES	NO	bb	bb	39.352
2	Total-tetrafurans	24.97	2.571e3	3.313e3	0.933	0.78	0.77	11.3	YES	NO	bb	bb	0.243
3	Total-tetrafurans	24.64	3.935e3	5.312e3	0.933	0.74	0.77	18.1	YES	NO	bd	dd	0.383
4	Total-tetrafurans	24.51	1.158e3	1.353e3	0.933	0.86	0.77	9.5	YES	NO	db	dd	0.104
5	Total-pentafurans	31.62	2.192e3	1.347e3	0.866	1.63	1.55	9.8	YES	NO	bb	bd	0.195
6	23478-PeCDF	31.37	2.253e6	1.479e6	0.911	1.52	1.55	9263.9	YES	NO	bb	bb	199.338
7	Total-pentafurans	31.11	2.570e3	1.840e3	0.866	1.40	1.55	11.2	YES	NO	bb	bb	0.243
8	12378-PeCDF	30.04	2.144e6	1.419e6	0.845	1.51	1.55	8947.1	YES	NO	bb	bb	197.212
9	Total-pentafurans	29.67	1.564e3	9.796e2	0.866	1.60	1.55	6.5	YES	NO	bd	bd	0.140
10	Total-pentafurans	32.41	1.819e4	1.189e4	0.866	1.53	1.55	66.2	YES	NO	bb	bb	1.656
11	234678-HxCDF	35.99	2.093e6	1.626e6	1.229	1.29	1.24	8018.2	YES	NO	dd	bd	203.397
12	123678-HxCDF	35.13	2.269e6	1.771e6	1.248	1.28	1.24	8495.8	YES	NO	dd	dd	203.923
13	123478-HxCDF	34.98	2.037e6	1.599e6	1.182	1.27	1.24	8086.7	YES	NO	dd	dd	201.086
14	Total-hexafurans	33.52	1.932e3	1.561e3	1.208	1.24	1.24	6.5	YES	NO	bb	bb	0.193
15	123789-HxCDF	37.01	1.817e6	1.431e6	1.187	1.27	1.24	7125.7	YES	NO	dd	bd	199.649
16	1234789-HpCDF	41.10	1.575e6	1.522e6	1.165	1.03	1.05	4579.3	YES	NO	bb	bb	200.336
17	Total-heptafurans	39.51	4.373e3	4.751e3	1.185	0.92	1.05	13.2	YES	NO	bb	bb	0.538
18	1234678-HpCDF	38.84	1.816e6	1.772e6	1.204	1.02	1.05	5847.4	YES	NO	bb	bb	193.935
19	OCDF	45.36	2.485e6	2.804e6	1.186	0.89	0.89	6601.2	YES	NO	bb	bb	376.199

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.53	3.417e5	4.230e5	1.236	0.81	0.77	2709.1	YES	NO	bb	bb	40.022
2	Total-tetradioxins	26.14	8.070e3	9.722e3	1.099	0.83	0.77	49.8	YES	NO	bb	bb	1.048
3	Total-tetradioxins	25.38	3.531e2	4.421e2	1.099	0.80	0.77	2.4	NO	NO	bb	bb	0.047
4	Total-tetradioxins	26.96	1.013e3	1.157e3	1.099	0.88	0.77	7.2	YES	NO	bd	bd	0.128

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.63	1.695e6	1.077e6	1.087	1.57	1.55	9745.0	YES	NO	bb	bb	198.713
2	Total-pentadioxins	30.04	1.464e3	8.371e2	1.392	1.75	1.55	8.8	YES	NO	bb	bb	0.129

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.60	1.475e6	1.213e6	0.985	1.22	1.24	11134.5	YES	NO	bb	bb	198.496
2	123678-HxCDD	36.22	1.525e6	1.238e6	1.021	1.23	1.24	11440.8	YES	NO	db	db	192.587
3	123478-HxCDD	36.11	1.491e6	1.215e6	0.987	1.23	1.24	11249.2	YES	NO	bd	bd	204.141

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.35	1.416e6	1.361e6	1.253	1.04	1.05	8870.2	YES	NO	bb	bb	190.176

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.53	3.417e5	4.230e5	1.236	0.81	0.77	2709.1	YES	NO	bb	bb	40.022
2	Total-tetradioxins	26.14	8.070e3	9.722e3	1.099	0.83	0.77	49.8	YES	NO	bb	bb	1.048
3	Total-tetradioxins	25.38	3.531e2	4.421e2	1.099	0.80	0.77	2.4	NO	NO	bb	bb	0.047
4	Total-tetradioxins	26.96	1.013e3	1.157e3	1.099	0.88	0.77	7.2	YES	NO	bd	bd	0.128
5	12378-PeCDD	31.63	1.695e6	1.077e6	1.087	1.57	1.55	9745.0	YES	NO	bb	bb	198.713
6	Total-pentadioxins	30.04	1.464e3	8.371e2	1.392	1.75	1.55	8.8	YES	NO	bb	bb	0.129
7	123789-HxCDD	36.60	1.475e6	1.213e6	0.985	1.22	1.24	11134.5	YES	NO	bb	bb	198.496
8	123678-HxCDD	36.22	1.525e6	1.238e6	1.021	1.23	1.24	11440.8	YES	NO	db	db	192.587
9	123478-HxCDD	36.11	1.491e6	1.215e6	0.987	1.23	1.24	11249.2	YES	NO	bd	bd	204.141
10	1234678-HpCDD	40.35	1.416e6	1.361e6	1.253	1.04	1.05	8870.2	YES	NO	bb	bb	190.176
11	OCDD	45.12	2.302e6	2.608e6	1.103	0.88	0.89	10978.0	YES	NO	bb	bb	375.677

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.88	3.837e5	5.095e5	0.876	0.75	0.77	1796.5	YES	NO	bb	bb	39.352
2	Total-tetrafurans	24.97	2.571e3	3.313e3	0.933	0.78	0.77	11.3	YES	NO	bb	bb	0.243
3	Total-tetrafurans	24.64	3.935e3	5.312e3	0.933	0.74	0.77	18.1	YES	NO	bd	dd	0.383
4	Total-tetrafurans	24.51	1.158e3	1.353e3	0.933	0.86	0.77	9.5	YES	NO	db	dd	0.104
5	Total-pentafurans	31.62	2.192e3	1.347e3	0.866	1.63	1.55	9.8	YES	NO	bb	bd	0.195
6	23478-PeCDF	31.37	2.253e6	1.479e6	0.911	1.52	1.55	9263.9	YES	NO	bb	bb	199.338
7	Total-pentafurans	31.11	2.570e3	1.840e3	0.866	1.40	1.55	11.2	YES	NO	bb	bb	0.243
8	12378-PeCDF	30.04	2.144e6	1.419e6	0.845	1.51	1.55	8947.1	YES	NO	bb	bb	197.212
9	Total-pentafurans	29.67	1.564e3	9.796e2	0.866	1.60	1.55	6.5	YES	NO	bd	bd	0.140
10	Total-pentafurans	32.41	1.819e4	1.189e4	0.866	1.53	1.55	66.2	YES	NO	bb	bb	1.656
11	234678-HxCDF	35.99	2.093e6	1.626e6	1.229	1.29	1.24	8018.2	YES	NO	dd	bd	203.397
12	123678-HxCDF	35.13	2.269e6	1.771e6	1.248	1.28	1.24	8495.8	YES	NO	dd	dd	203.923
13	123478-HxCDF	34.98	2.037e6	1.599e6	1.182	1.27	1.24	8086.7	YES	NO	dd	dd	201.086
14	Total-hexafurans	33.52	1.932e3	1.561e3	1.208	1.24	1.24	6.5	YES	NO	bb	bb	0.193
15	123789-HxCDF	37.01	1.817e6	1.431e6	1.187	1.27	1.24	7125.7	YES	NO	dd	bd	199.649
16	1234789-HpCDF	41.10	1.575e6	1.522e6	1.165	1.03	1.05	4579.3	YES	NO	bb	bb	200.336
17	Total-heptafurans	39.51	4.373e3	4.751e3	1.185	0.92	1.05	13.2	YES	NO	bb	bb	0.538
18	1234678-HpCDF	38.84	1.816e6	1.772e6	1.204	1.02	1.05	5847.4	YES	NO	bb	bb	193.935
19	OCDF	45.36	2.485e6	2.804e6	1.186	0.89	0.89	6601.2	YES	NO	bb	bb	376.199
20	2378-TCDD	26.53	3.417e5	4.230e5	1.236	0.81	0.77	2709.1	YES	NO	bb	bb	40.022
21	Total-tetradioxins	26.14	8.070e3	9.722e3	1.099	0.83	0.77	49.8	YES	NO	bb	bb	1.048
22	Total-tetradioxins	25.38	3.531e2	4.421e2	1.099	0.80	0.77	2.4	NO	NO	bb	bb	0.047
23	Total-tetradioxins	26.96	1.013e3	1.157e3	1.099	0.88	0.77	7.2	YES	NO	bd	bd	0.128
24	12378-PeCDD	31.63	1.695e6	1.077e6	1.087	1.57	1.55	9745.0	YES	NO	bb	bb	198.713
25	Total-pentadioxins	30.04	1.464e3	8.371e2	1.392	1.75	1.55	8.8	YES	NO	bb	bb	0.129
26	123789-HxCDD	36.60	1.475e6	1.213e6	0.985	1.22	1.24	11134.5	YES	NO	bb	bb	198.496
27	123678-HxCDD	36.22	1.525e6	1.238e6	1.021	1.23	1.24	11440.8	YES	NO	db	db	192.587
28	123478-HxCDD	36.11	1.491e6	1.215e6	0.987	1.23	1.24	11249.2	YES	NO	bd	bd	204.141
29	1234678-HpCDD	40.35	1.416e6	1.361e6	1.253	1.04	1.05	8870.2	YES	NO	bb	bb	190.176
30	OCDD	45.12	2.302e6	2.608e6	1.103	0.88	0.89	10978.0	YES	NO	bb	bb	375.677

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Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
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ID: CS4CR, Name: 23020108, Date: 01-Feb-2023, Time: 18:45:20, Conditions: AUTOSPEC01, User: pk

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	24.96	2.020e4					1.1	NO		bb		
2	FUNCTION1 PFK	24.40	2.455e4					1.2	NO		bb		
3	FUNCTION1 PFK	23.70	1.570e4					0.9	NO		bb		
4	FUNCTION1 PFK	22.21	1.520e4					0.8	NO		bb		
5	FUNCTION1 PFK	21.98	2.815e4					1.2	NO		bb		
6	FUNCTION1 PFK	21.62	2.203e4					0.8	NO		bb		
7	FUNCTION1 PFK	21.38	1.821e4					1.0	NO		bb		
8	FUNCTION1 PFK	28.09	4.216e4					1.7	NO		bb		
9	FUNCTION1 PFK	27.48	1.001e4					0.6	NO		bb		
10	FUNCTION1 PFK	27.36	2.341e4					1.3	NO		bb		
11	FUNCTION1 PFK	27.09	4.217e3					0.5	NO		bb		
12	FUNCTION1 PFK	26.77	7.075e3					0.7	NO		bb		
13	FUNCTION1 PFK	26.65	1.537e4					1.0	NO		bb		
14	FUNCTION1 PFK	26.53	2.228e4					1.3	NO		bb		
15	FUNCTION1 PFK	26.06	1.292e4					0.8	NO		bb		
16	FUNCTION1 PFK	25.75	9.216e3					0.7	NO		bb		
17	FUNCTION1 PFK	25.69	2.942e4					1.5	NO		bb		
18	FUNCTION1 PFK	25.47	3.380e4					1.3	NO		bb		
19	FUNCTION1 PFK	25.35	5.518e4					1.2	NO		db		
20	FUNCTION1 PFK	25.23	3.130e4					1.5	NO		bd		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.88	2.296e4					1.8	NO		bb		0.000
2	FUNCTION2 PFK	28.30	1.717e4					1.6	NO		bb		0.000
3	FUNCTION2 PFK	32.49	5.254e3					1.3	NO		bb		0.000
4	FUNCTION2 PFK	32.37	7.309e3					1.1	NO		bb		0.000
5	FUNCTION2 PFK	32.29	1.359e3					0.6	NO		bb		0.000
6	FUNCTION2 PFK	32.17	6.182e3					1.2	NO		bb		0.000
7	FUNCTION2 PFK	31.90	1.405e4					1.8	NO		bb		0.000
8	FUNCTION2 PFK	31.55	3.011e3					0.9	NO		bb		0.000
9	FUNCTION2 PFK	31.41	1.210e4					1.2	NO		bb		0.000
10	FUNCTION2 PFK	30.57	3.830e3					0.9	NO		bb		0.000
11	FUNCTION2 PFK	30.45	4.598e3					1.0	NO		bb		0.000
12	FUNCTION2 PFK	29.87	5.333e3					1.1	NO		bb		0.000
13	FUNCTION2 PFK	29.60	5.195e3					1.1	NO		db		0.000
14	FUNCTION2 PFK	29.56	5.154e3					1.1	NO		bd		0.000
15	FUNCTION2 PFK	29.50	7.364e3					1.4	NO		bb		0.000
16	FUNCTION2 PFK	29.17	6.453e3					1.3	NO		bb		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.21	5.273e3					0.9	NO		bb		
2	FUNCTION4 PFK	40.14	5.827e3					1.0	NO		bb		
3	FUNCTION4 PFK	40.00	4.667e3					0.8	NO		bb		
4	FUNCTION4 PFK	39.82	1.112e3					0.4	NO		bb		
5	FUNCTION4 PFK	39.74	4.984e3					0.8	NO		bb		
6	FUNCTION4 PFK	39.65	3.641e4					1.9	NO		db		
7	FUNCTION4 PFK	39.60	1.243e4					1.6	NO		bd		
8	FUNCTION4 PFK	39.21	6.478e3					1.0	NO		bb		
9	FUNCTION4 PFK	38.98	1.375e3					0.4	NO		bb		
10	FUNCTION4 PFK	38.83	5.023e3					0.8	NO		bb		
11	FUNCTION4 PFK	38.78	4.916e3					0.9	NO		bb		
12	FUNCTION4 PFK	38.68	8.802e3					1.2	NO		bb		
13	FUNCTION4 PFK	38.54	1.096e4					1.2	NO		bb		
14	FUNCTION4 PFK	38.35	1.188e4					1.5	NO		db		
15	FUNCTION4 PFK	38.32	9.581e3					1.3	NO		bd		
16	FUNCTION4 PFK	38.09	5.192e4					1.9	NO		bb		
17	FUNCTION4 PFK	42.95	1.120e3					0.4	NO		bb		
18	FUNCTION4 PFK	42.68	3.847e3					0.6	NO		bb		
19	FUNCTION4 PFK	42.38	1.500e4					1.7	NO		bb		
20	FUNCTION4 PFK	41.06	1.232e4					1.2	NO		bb		
21	FUNCTION4 PFK	40.81	4.336e3					0.7	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.09	1.365e2					0.3	NO		bb		0.000
2	FUNCTION1 HXCD...	25.88	7.559e1					0.2	NO		bb		0.000
3	FUNCTION1 HXCD...	25.69	1.535e2					0.2	NO		bb		0.000
4	FUNCTION1 HXCD...	25.38	9.009e1					0.2	NO		bb		0.000
5	FUNCTION1 HXCD...	24.76	1.387e2					0.2	NO		bb		0.000
6	FUNCTION1 HXCD...	24.49	2.087e3					4.8	YES		db		0.000
7	FUNCTION1 HXCD...	24.42	1.113e3					3.5	YES		bd		0.000
8	FUNCTION1 HXCD...	24.07	1.214e2					0.2	NO		bb		0.000
9	FUNCTION1 HXCD...	22.93	9.005e1					0.3	NO		bb		0.000
10	FUNCTION1 HXCD...	28.03	7.580e1					0.2	NO		bb		0.000
11	FUNCTION1 HXCD...	27.80	7.466e1					0.2	NO		bb		0.000
12	FUNCTION1 HXCD...	27.64	9.719e1					0.2	NO		bb		0.000
13	FUNCTION1 HXCD...	27.11	4.735e3					11.6	YES		db		0.000
14	FUNCTION1 HXCD...	27.06	1.264e3					2.6	NO		dd		0.000
15	FUNCTION1 HXCD...	26.99	2.557e3					3.1	YES		dd		0.000
16	FUNCTION1 HXCD...	26.82	1.150e3					2.1	NO		dd		0.000
17	FUNCTION1 HXCD...	26.76	1.090e3					2.6	NO		dd		0.000
18	FUNCTION1 HXCD...	26.68	5.202e2					1.1	NO		dd		0.000
19	FUNCTION1 HXCD...	26.59	4.632e2					0.7	NO		dd		0.000
20	FUNCTION1 HXCD...	26.50	3.837e2					0.7	NO		dd		0.000
21	FUNCTION1 HXCD...	26.44	7.925e1					0.2	NO		bd		0.000
22	FUNCTION1 HXCD...	26.26	1.202e2					0.3	NO		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	21.53	8.754e1					0.3	NO		dd		0.000
2	FUNCTION1 HPCD...	21.39	1.338e2					0.2	NO		bd		0.000
3	FUNCTION1 HPCD...	27.06	1.227e3					3.5	YES		dd		0.000
4	FUNCTION1 HPCD...	26.96	2.312e3					4.3	YES		dd		0.000
5	FUNCTION1 HPCD...	26.83	1.175e3					2.8	NO		dd		0.000
6	FUNCTION1 HPCD...	26.76	1.583e3					4.1	YES		dd		0.000
7	FUNCTION1 HPCD...	26.67	5.135e2					1.6	NO		dd		0.000
8	FUNCTION1 HPCD...	26.58	6.861e2					1.1	NO		dd		0.000
9	FUNCTION1 HPCD...	26.50	1.748e2					0.8	NO		dd		0.000
10	FUNCTION1 HPCD...	26.44	2.373e2					0.4	NO		dd		0.000
11	FUNCTION1 HPCD...	26.26	1.300e2					0.4	NO		bd		0.000
12	FUNCTION1 HPCD...	25.91	1.988e2					0.2	NO		bb		0.000
13	FUNCTION1 HPCD...	25.72	1.012e2					0.3	NO		bb		0.000
14	FUNCTION1 HPCD...	25.53	1.466e2					0.3	NO		db		0.000
15	FUNCTION1 HPCD...	25.32	1.918e2					0.4	NO		bd		0.000
16	FUNCTION1 HPCD...	24.51	2.090e3					6.7	YES		db		0.000
17	FUNCTION1 HPCD...	24.42	8.854e2					3.8	YES		bd		0.000
18	FUNCTION1 HPCD...	21.60	9.175e1					0.3	NO		db		0.000
19	FUNCTION1 HPCD...	27.77	9.425e1					0.4	NO		bb		0.000
20	FUNCTION1 HPCD...	27.65	7.376e1					0.3	NO		db		0.000
21	FUNCTION1 HPCD...	27.53	1.152e2					0.4	NO		bd		0.000
22	FUNCTION1 HPCD...	27.12	3.540e3					10.6	YES		db		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.63	1.971e2					4.5	YES		bb		0.000
2	FUNCTION2 HPCD...	31.26	2.238e3					45.1	YES		bb		0.000
3	FUNCTION2 HPCD...	29.60	1.581e2					4.1	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.60	5.924e2					8.6	YES		bb		0.000
2	FUNCTION3 OCDPE	36.21	3.178e2					6.7	YES		db		0.000
3	FUNCTION3 OCDPE	36.10	2.730e2					5.6	YES		bd		0.000

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ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.40	3.196e2					3.7	YES		bb		0.000
2	FUNCTION4 NCDPE	38.52	9.797e1					2.1	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	45.14	3.248e2					6.0	YES		bb		0.000

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Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:37:53 Pacific Standard Time

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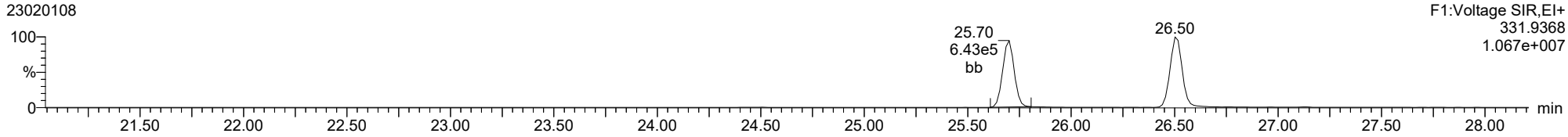
Calibration: 03 Feb 2023 10:33:40

ID: CS4CR, Name: 23020108, Date: 01-Feb-2023, Time: 18:45:20, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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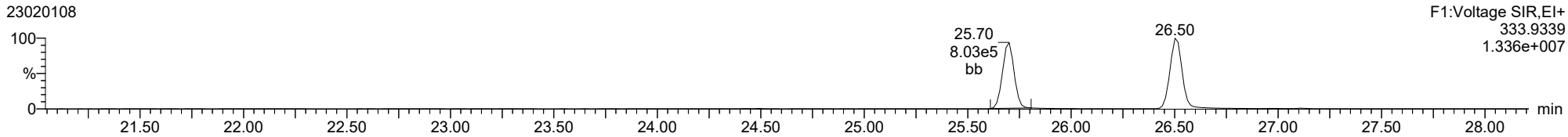

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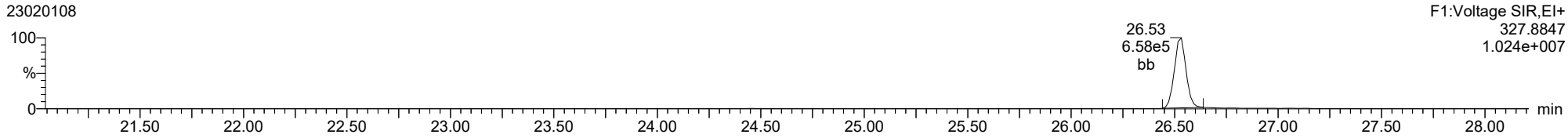

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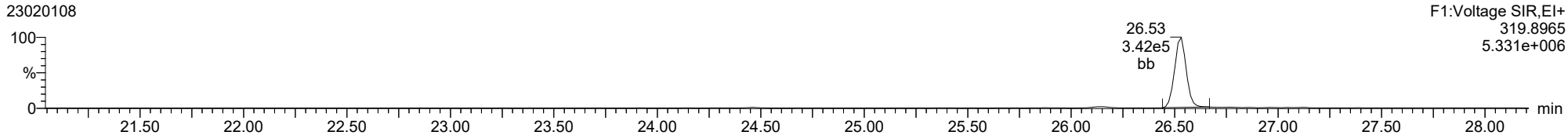
2378-TCDD



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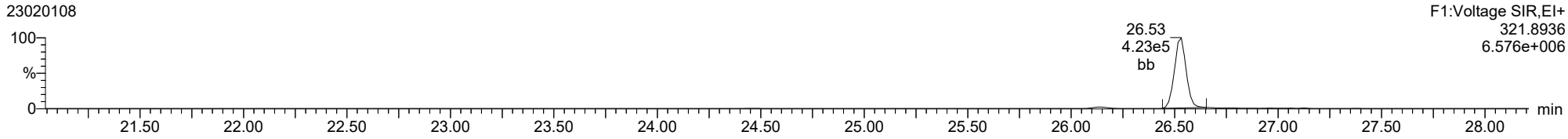

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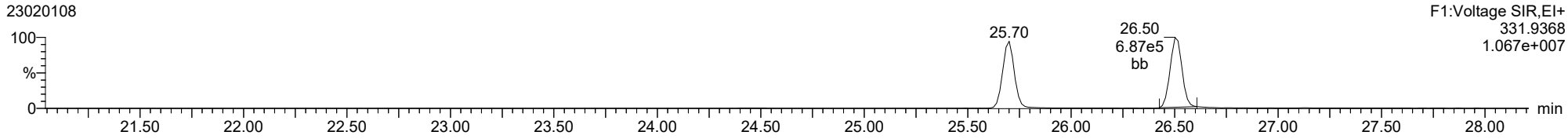

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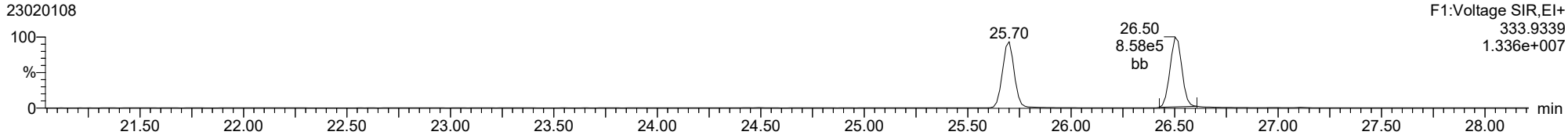
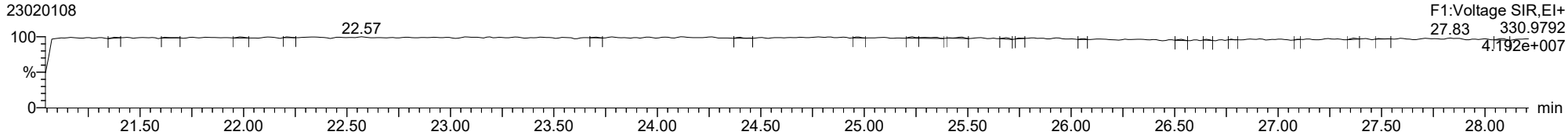


FUNCTION1 PFK



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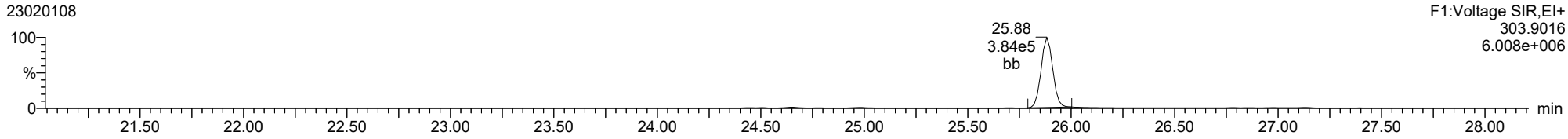
2378-TCDF



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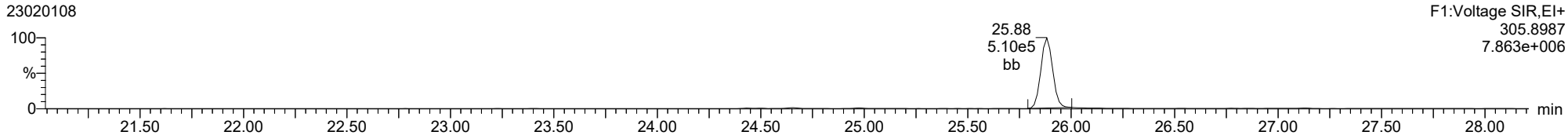

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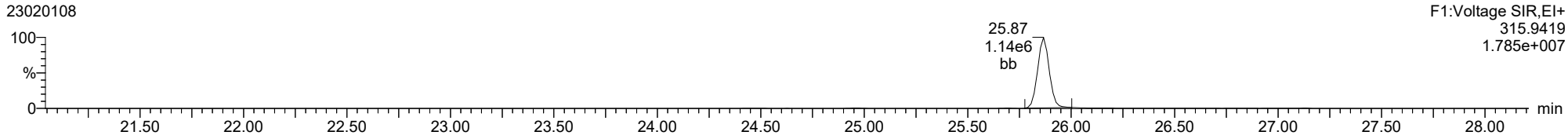

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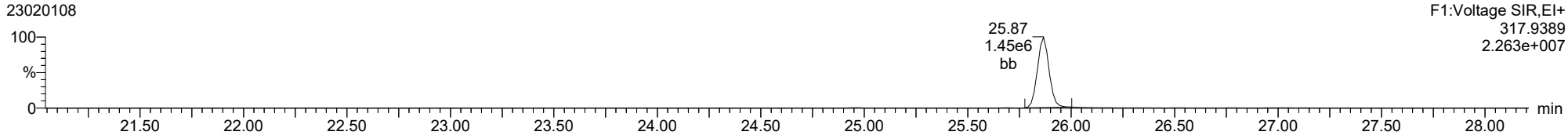

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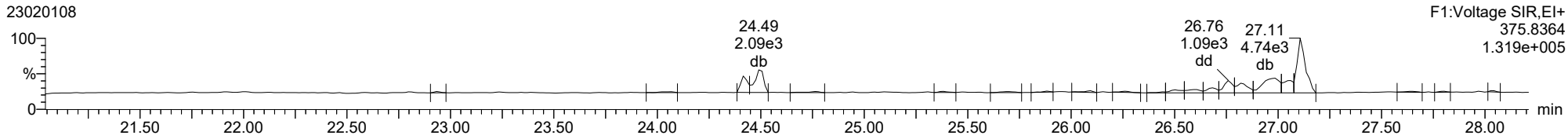

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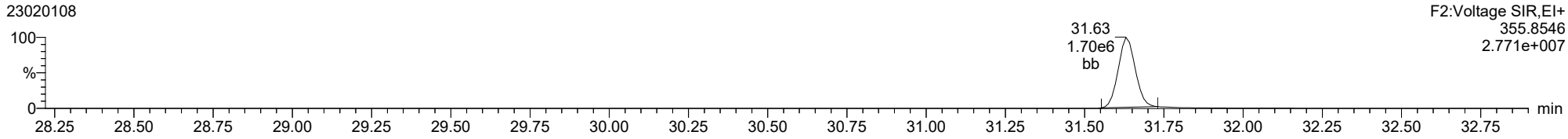
12378-PeCDD



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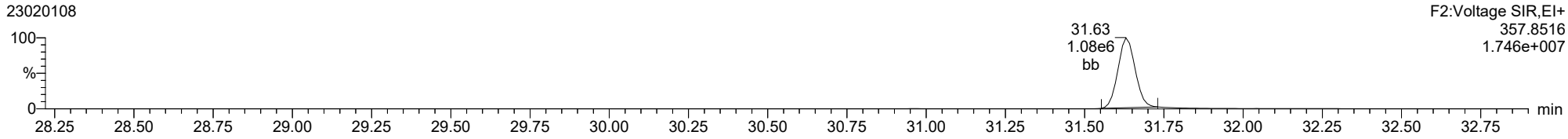

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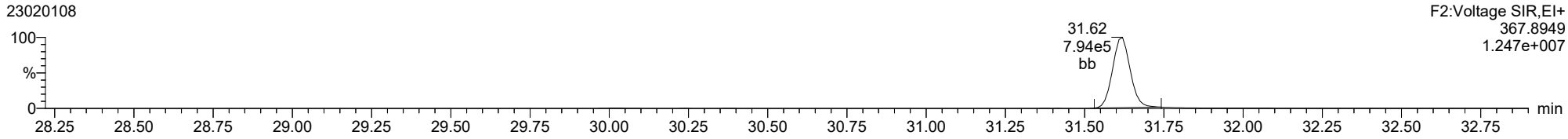

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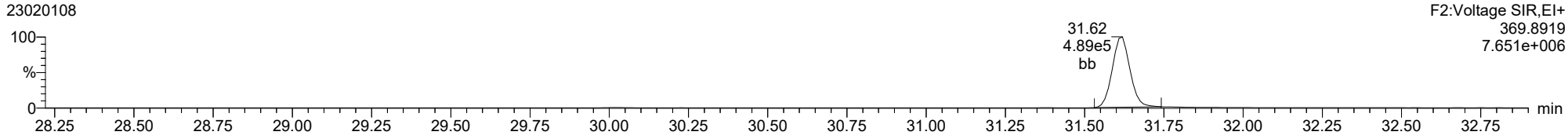

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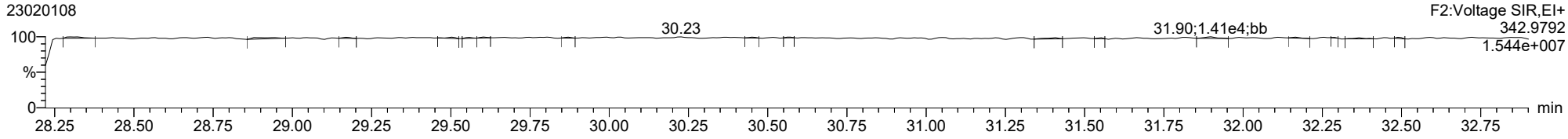

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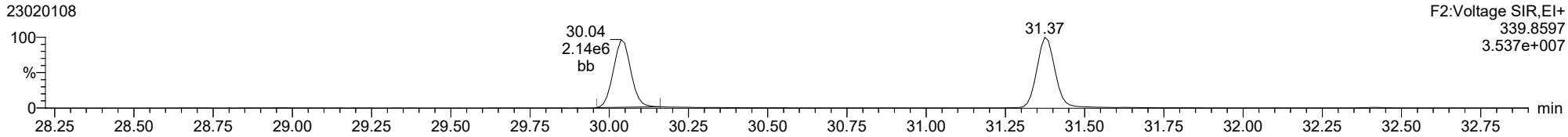
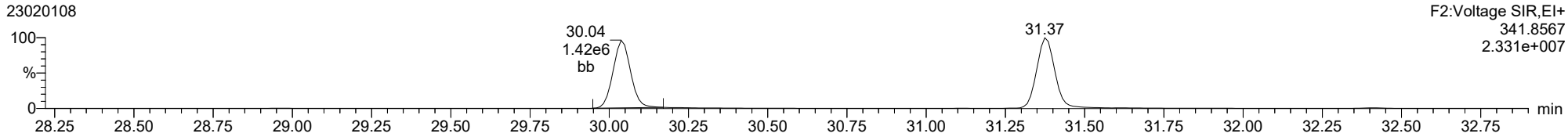
12378-PeCDF



12378-PeCDF



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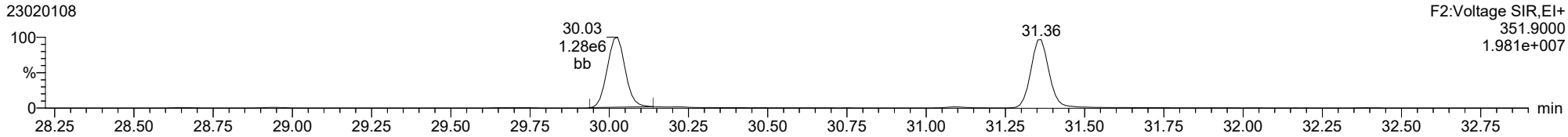

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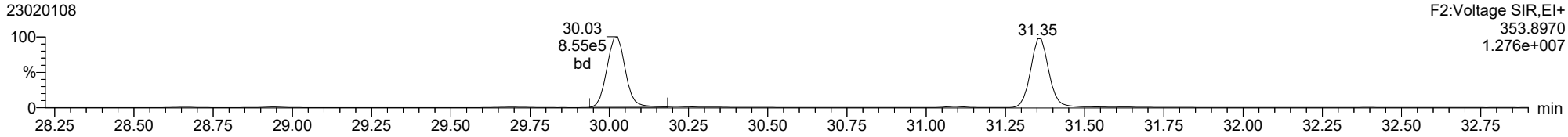
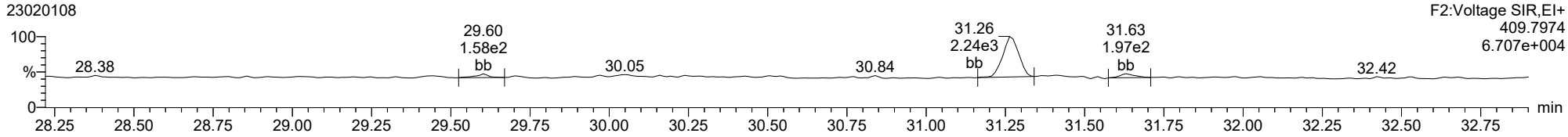


FUNCTION2 HPCDPE



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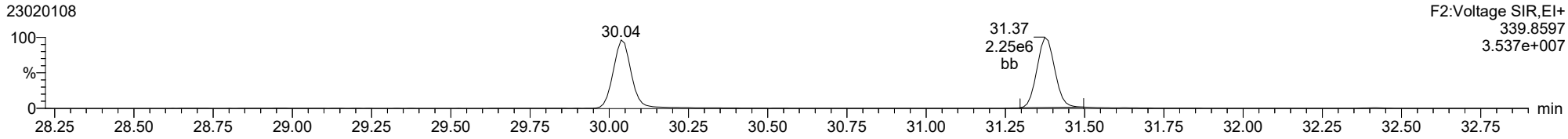
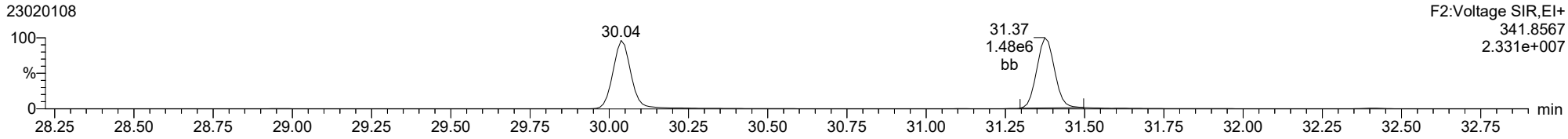
23478-PeCDF



23478-PeCDF



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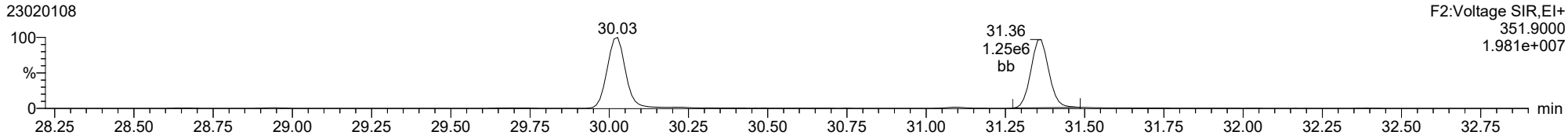

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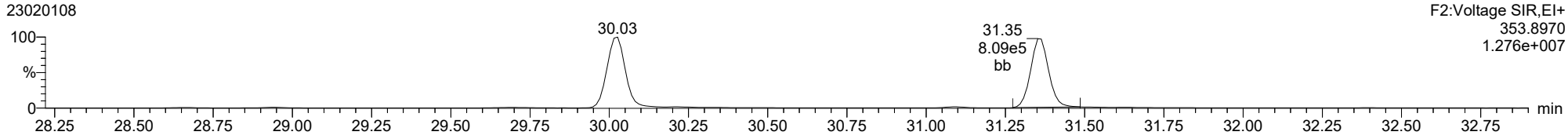

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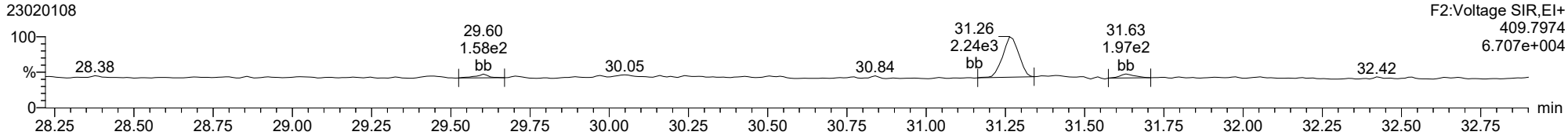

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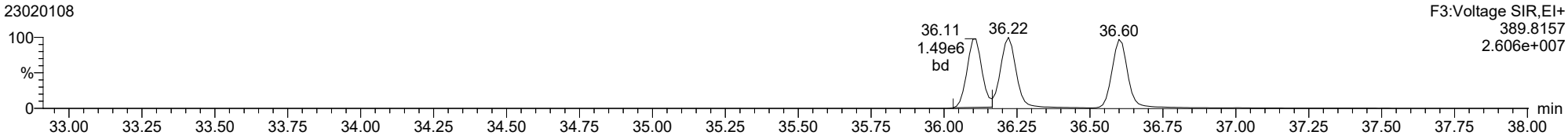

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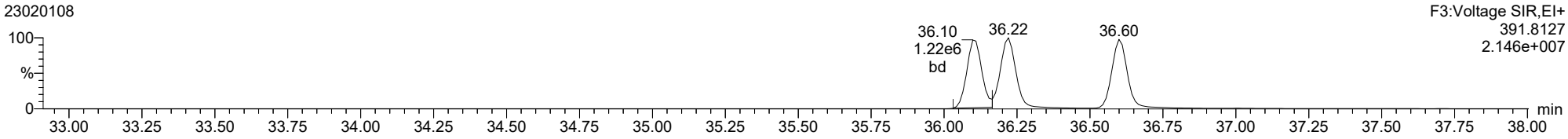

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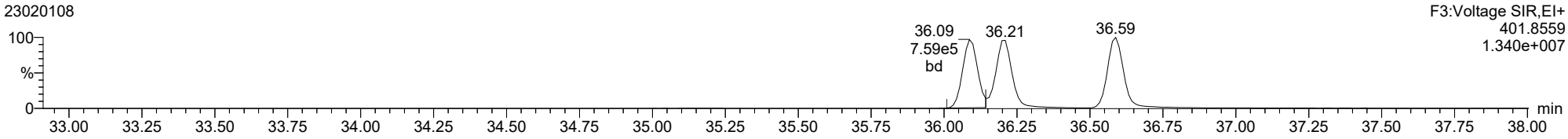

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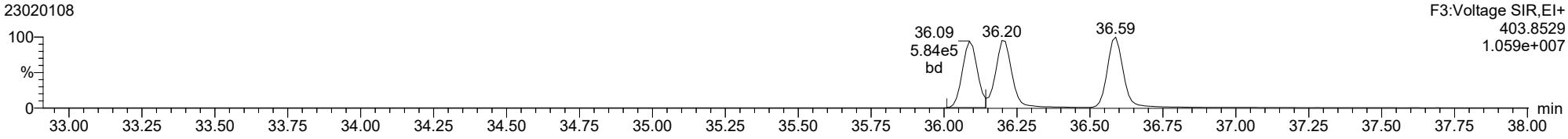

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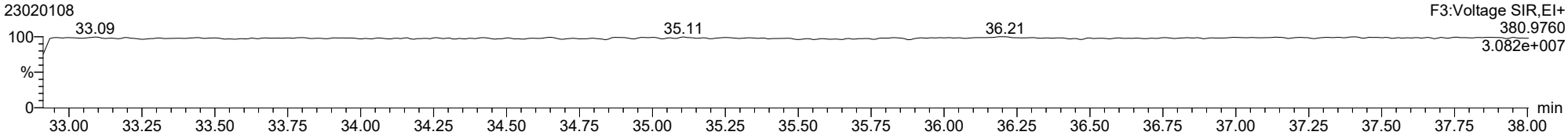

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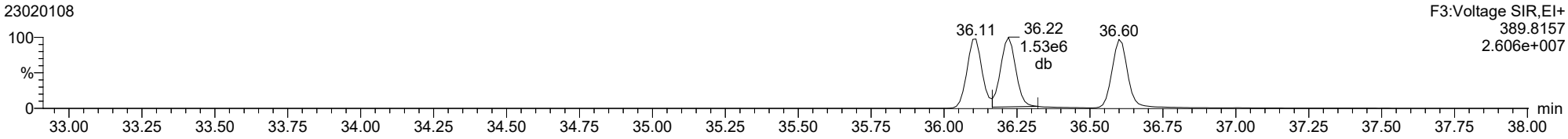

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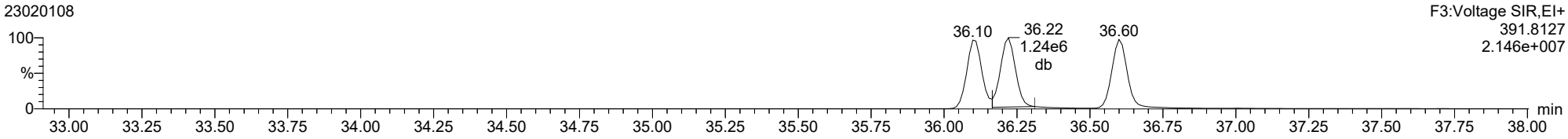

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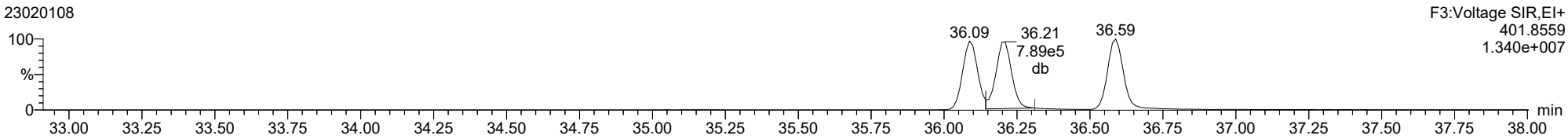

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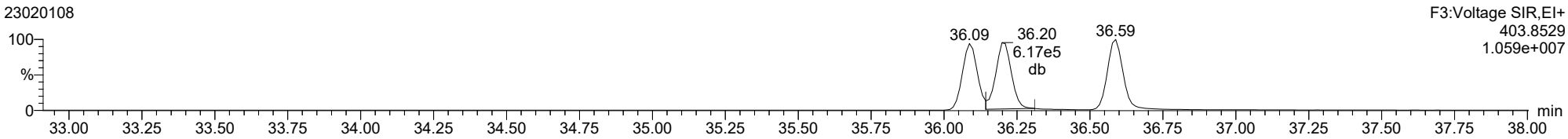

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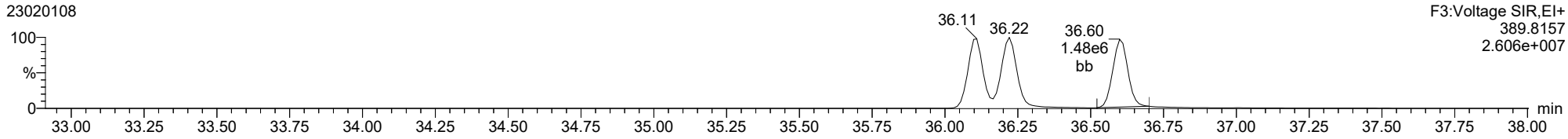

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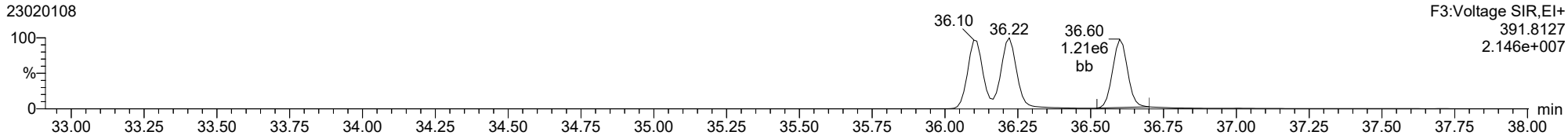

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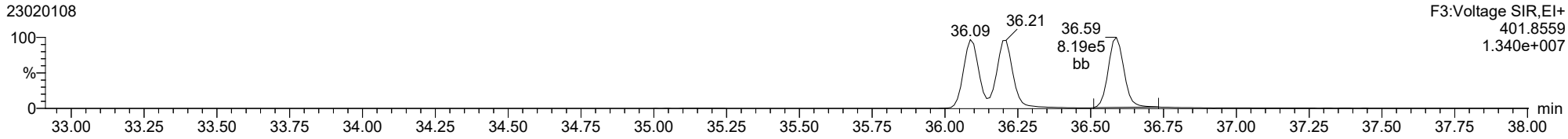

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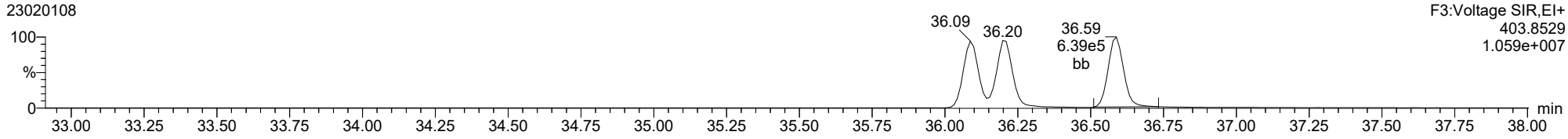

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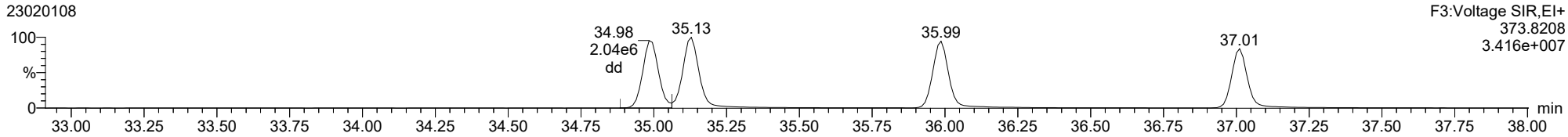

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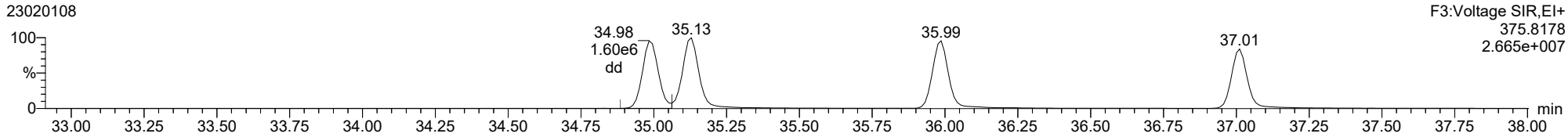

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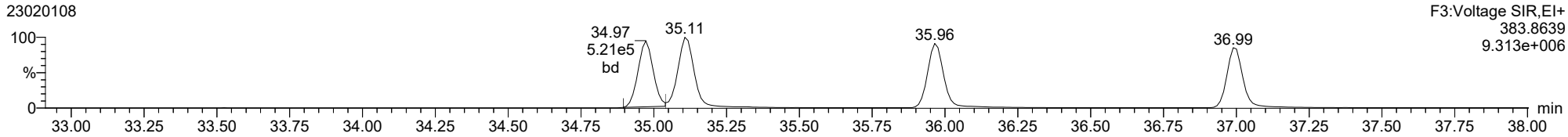

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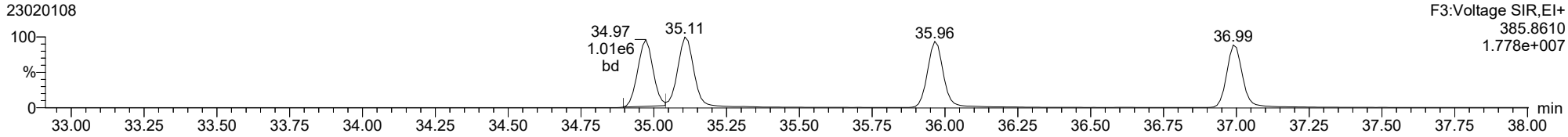
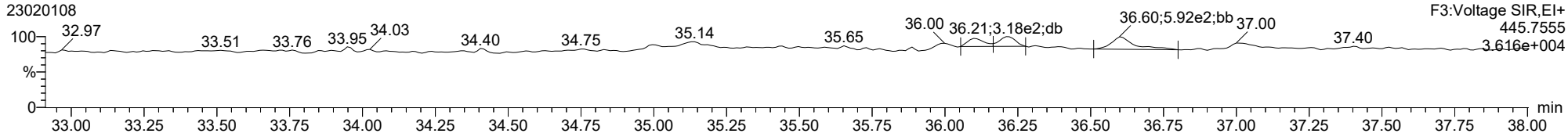


FUNCTION3 OCDPE



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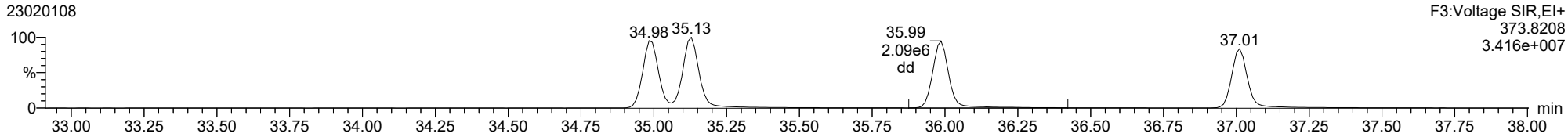
234678-HxCDF



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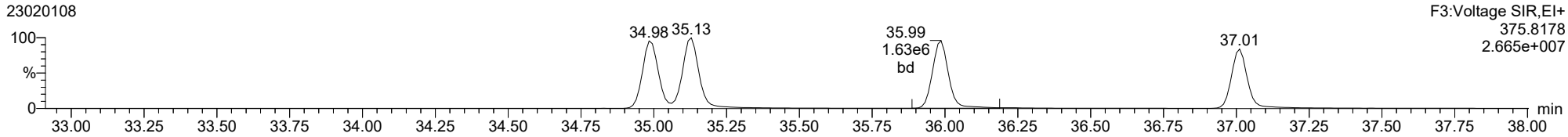

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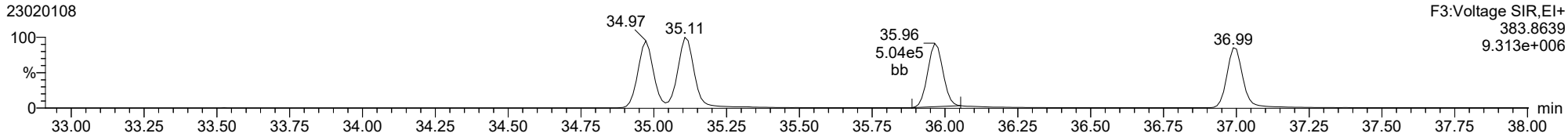

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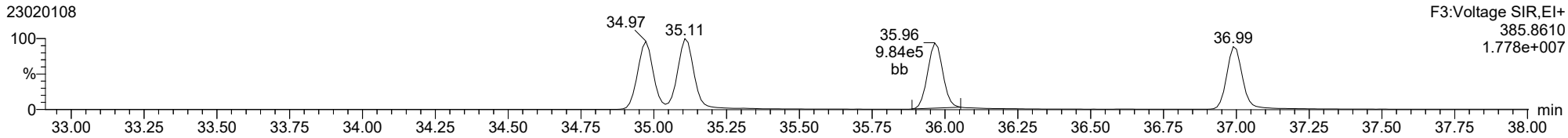
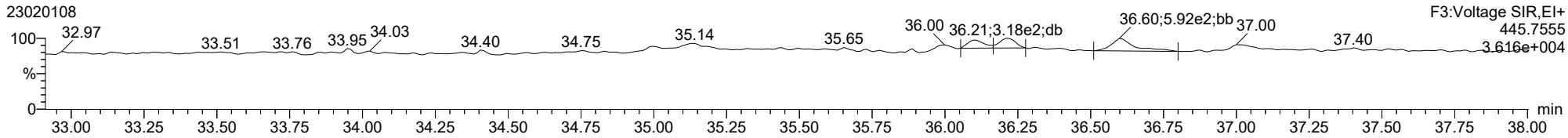


FUNCTION3 OCDPE



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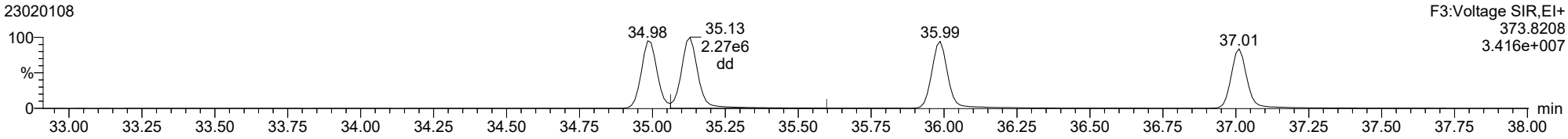
123678-HxCDF



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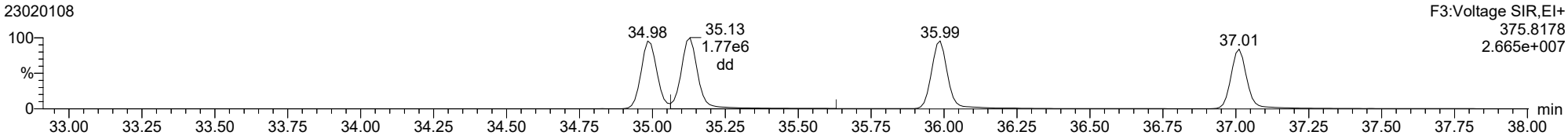

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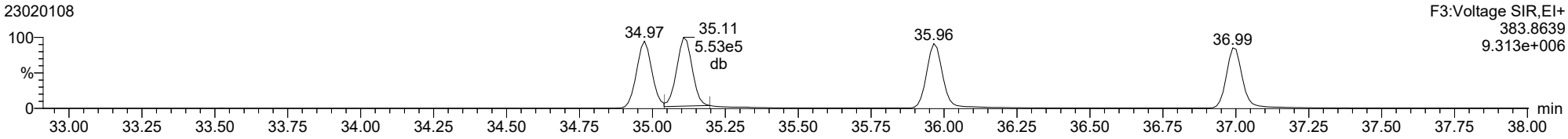

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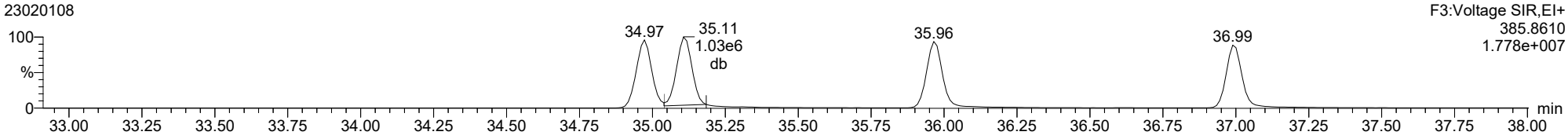
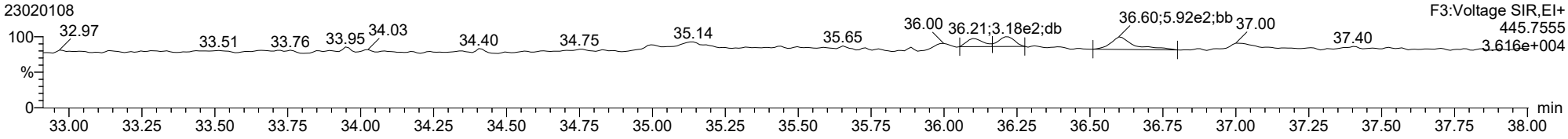


FUNCTION3 OCDPE



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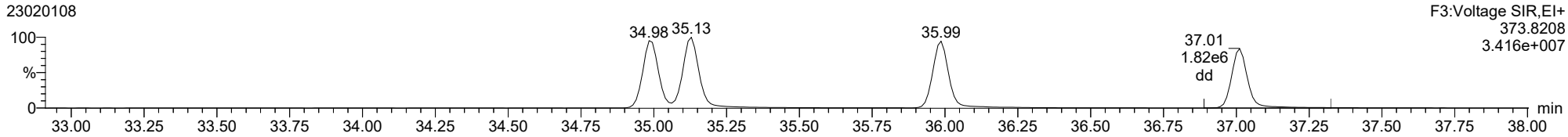
123789-HxCDF



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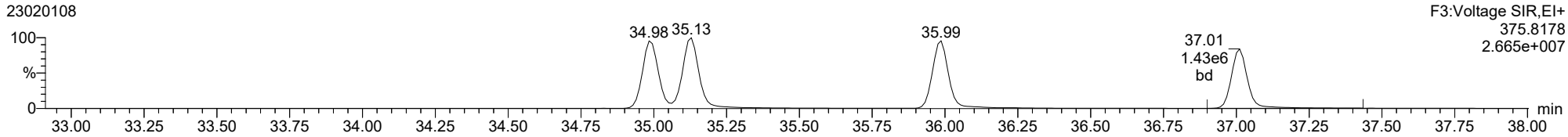

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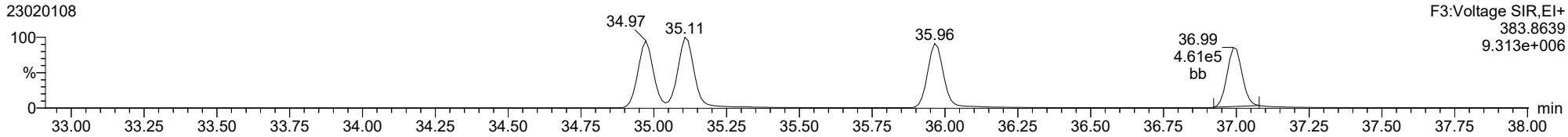

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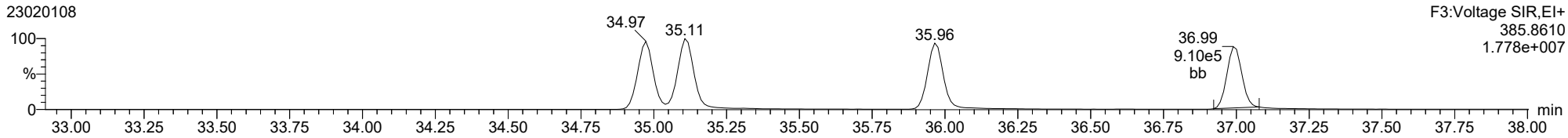
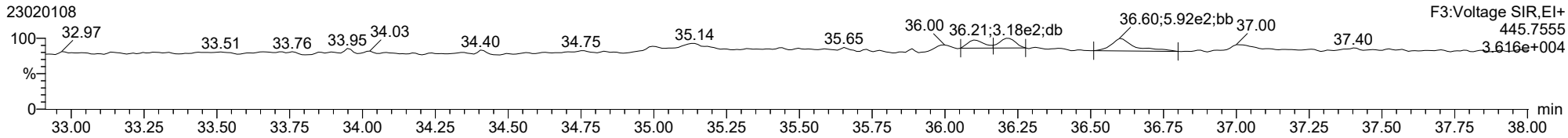


FUNCTION3 OCDPE



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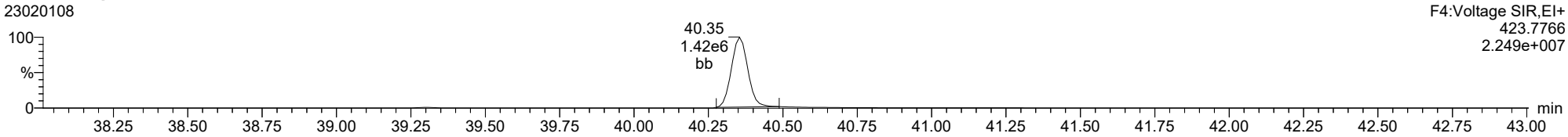
1234678-HpCDD



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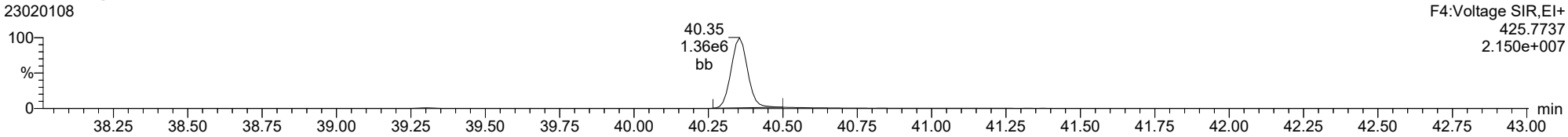

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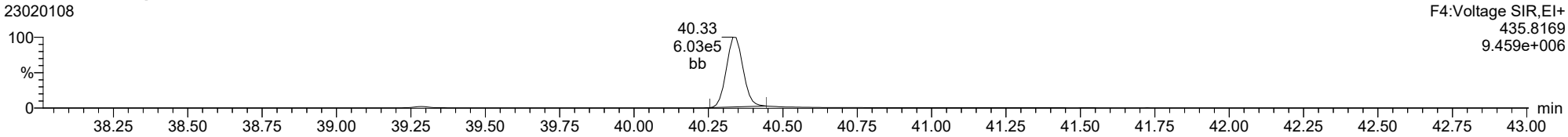

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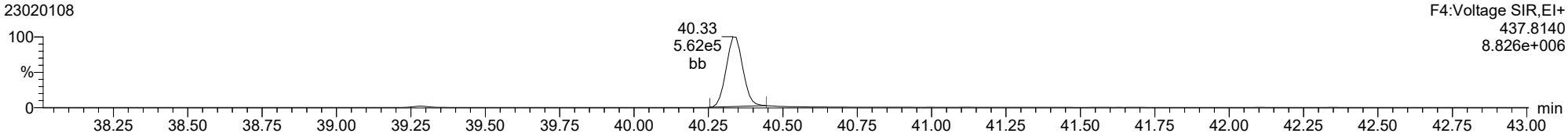
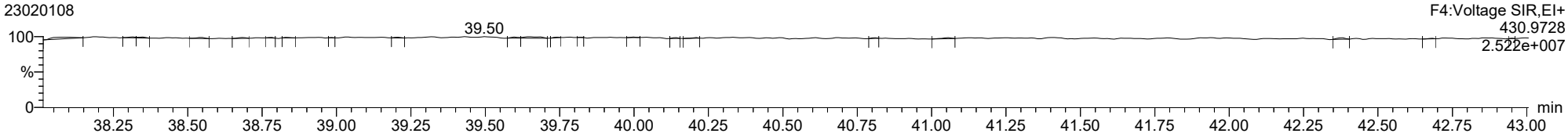


FUNCTION4 PFK



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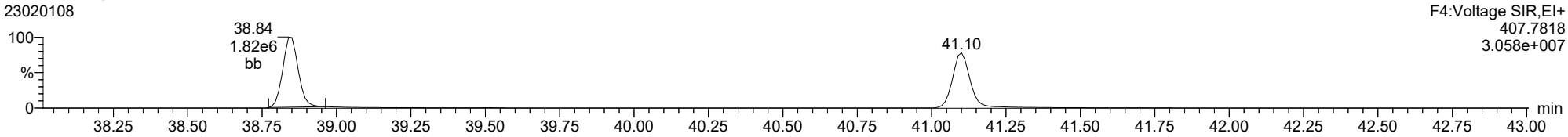
1234678-HpCDF



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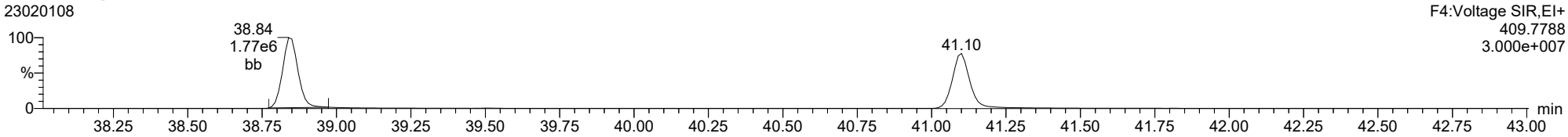

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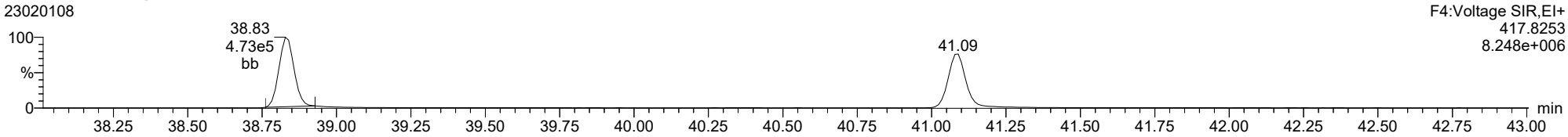

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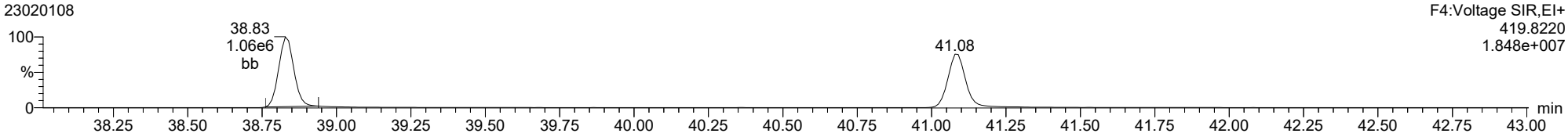
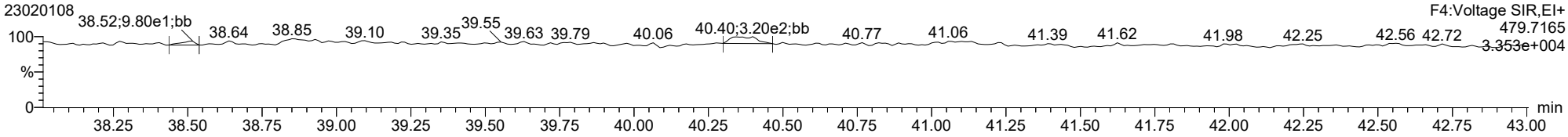


FUNCTION4 NCDPE



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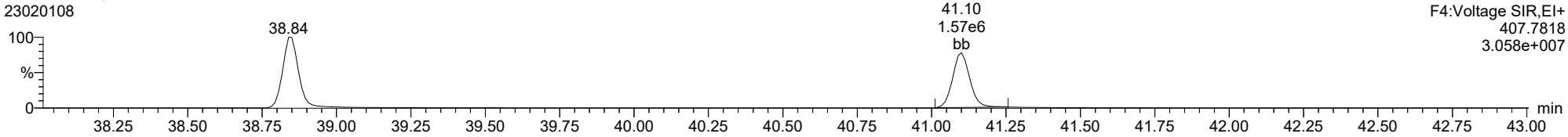
1234789-HpCDF



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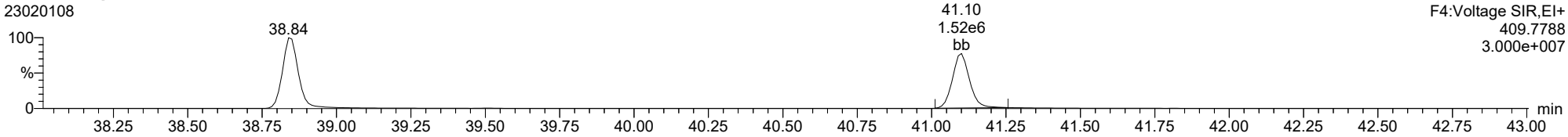

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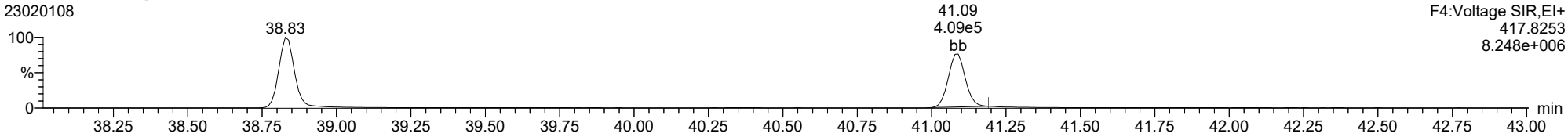

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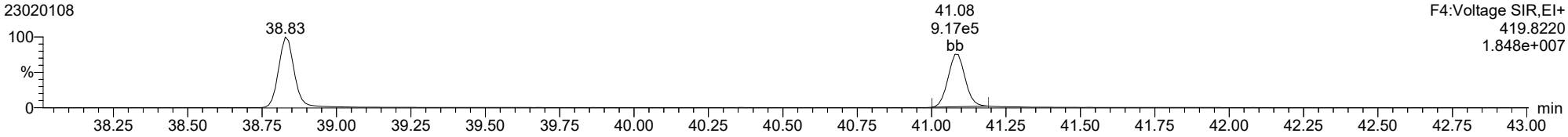
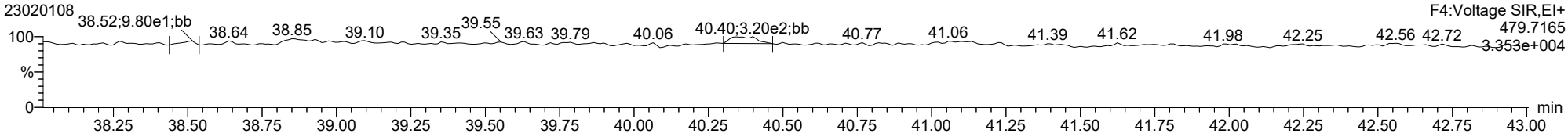


FUNCTION4 NCDPE



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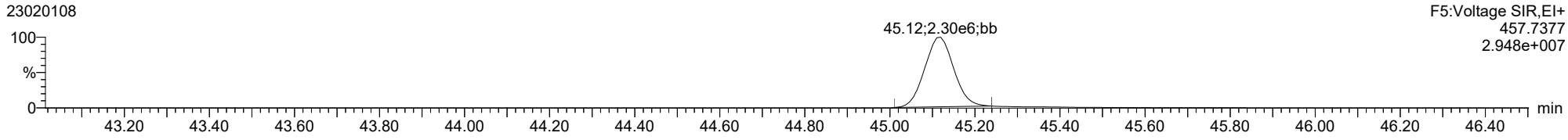

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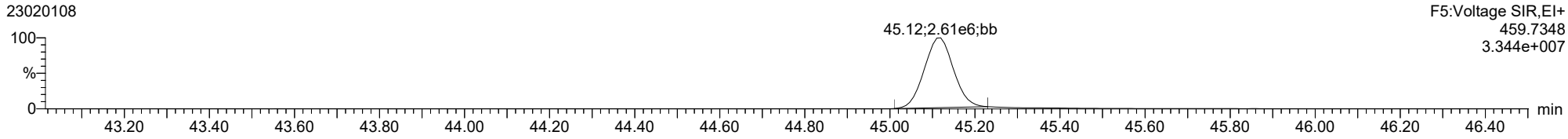

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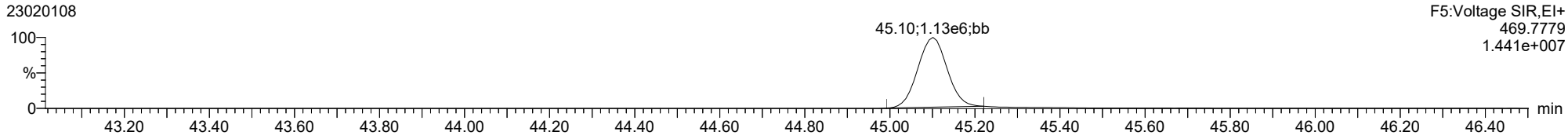

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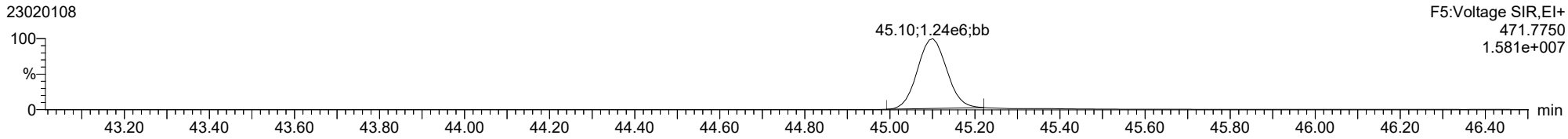

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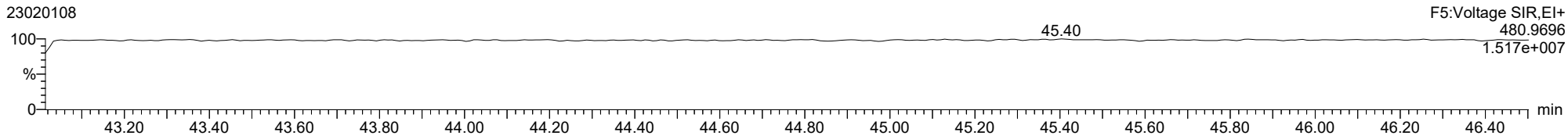

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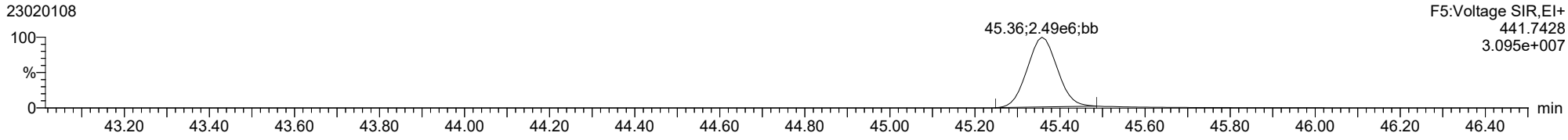

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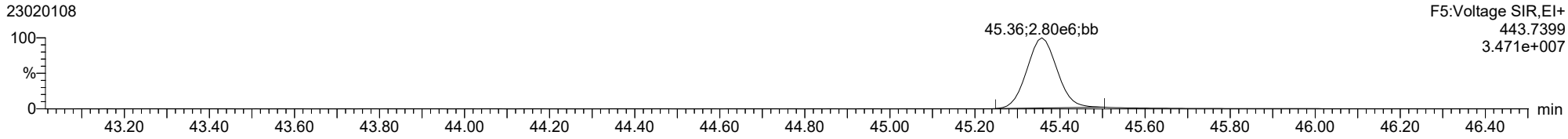

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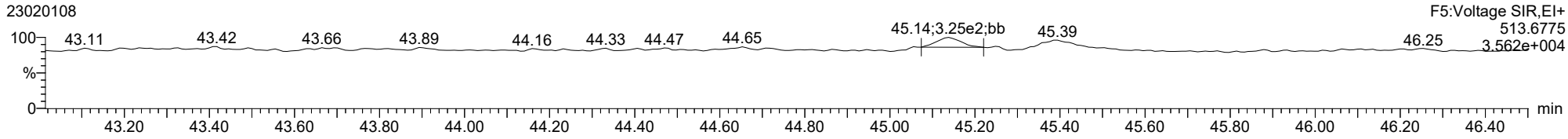

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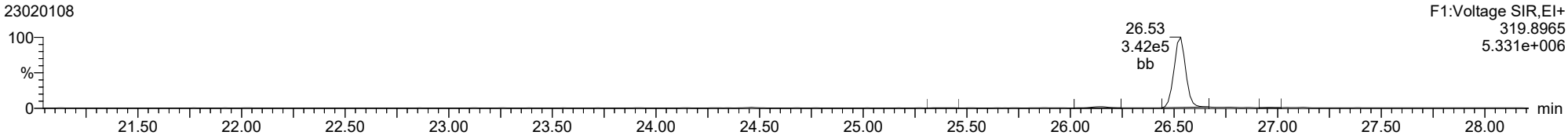

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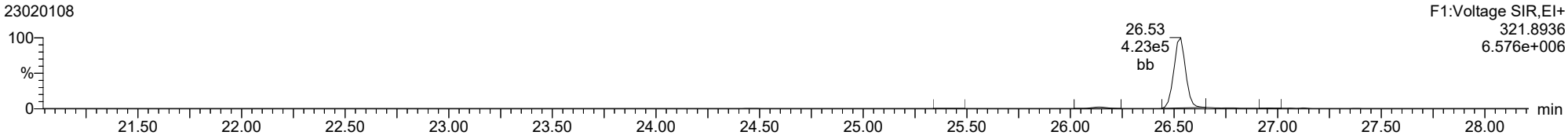

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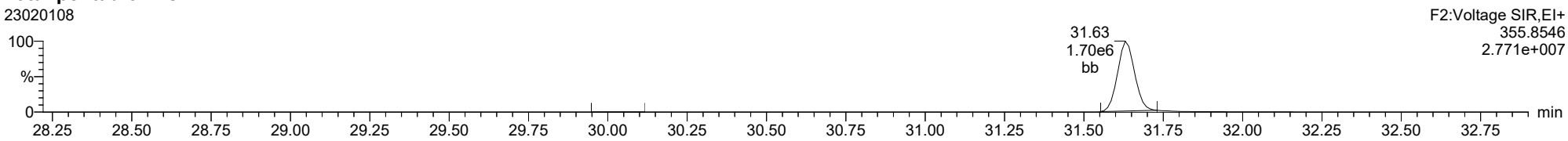

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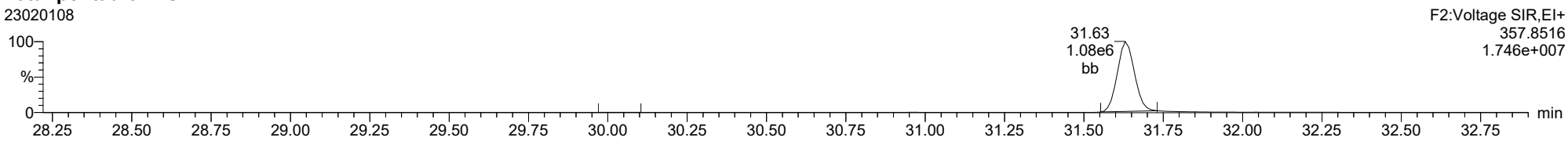

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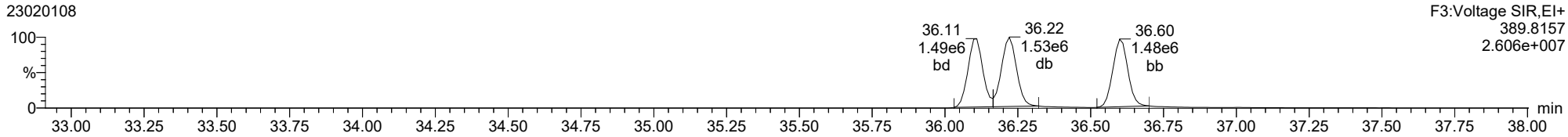

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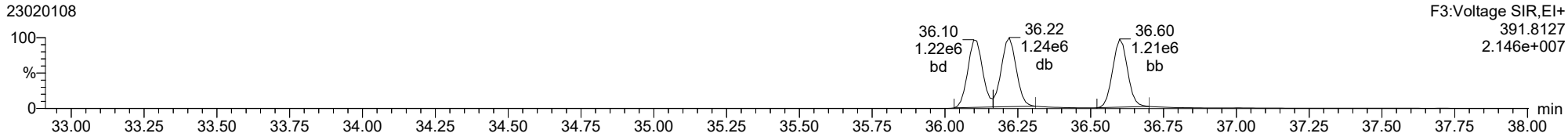

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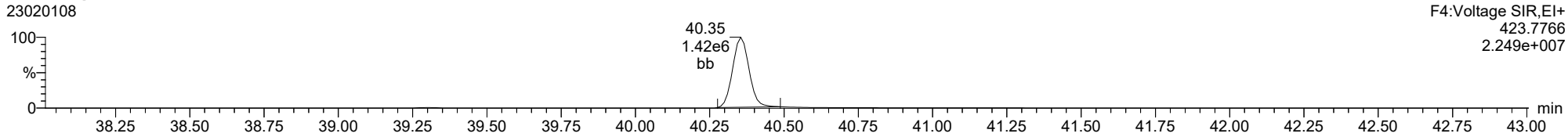

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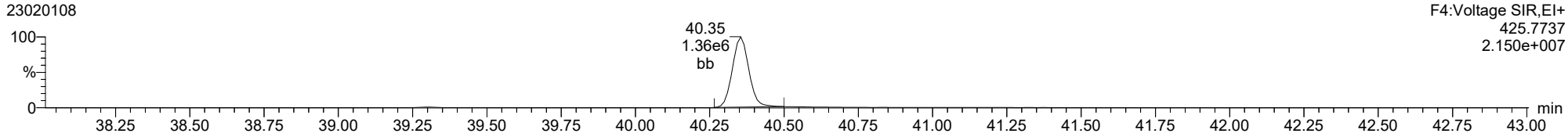

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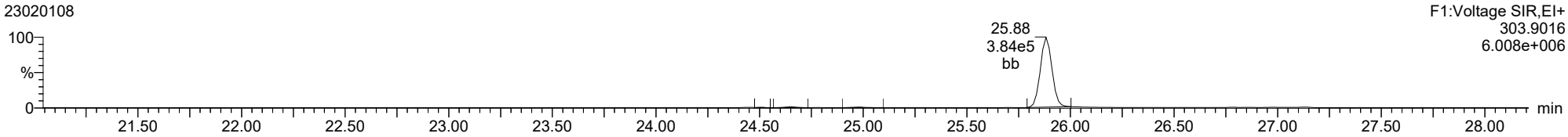

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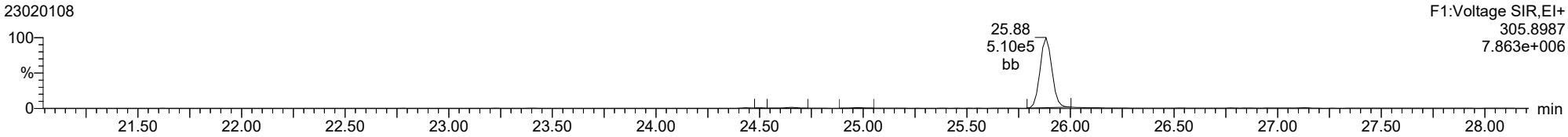

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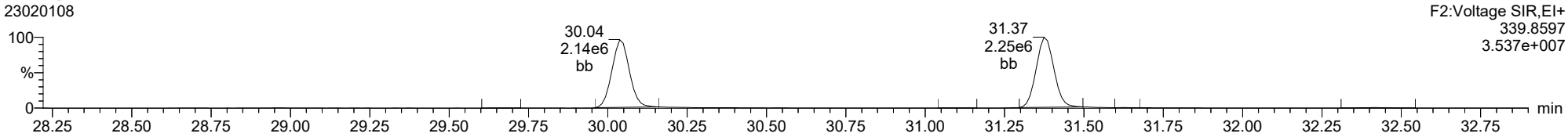

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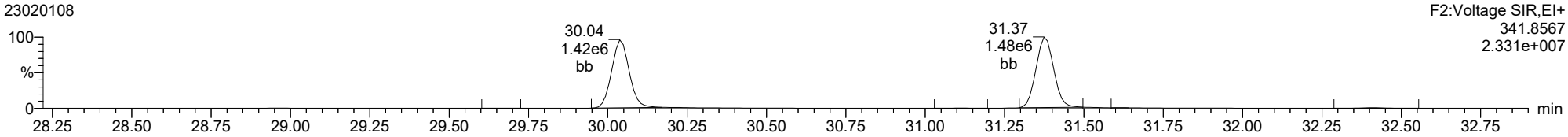

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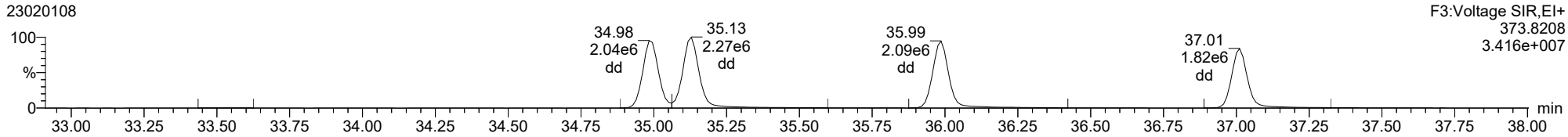

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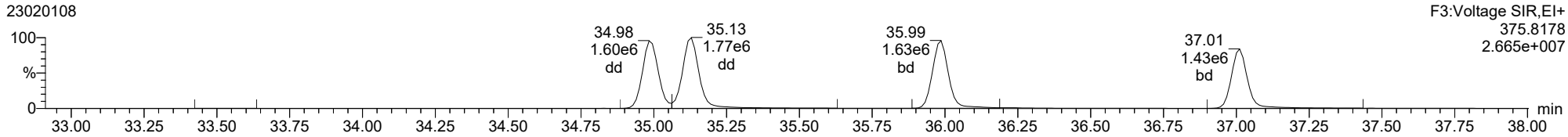

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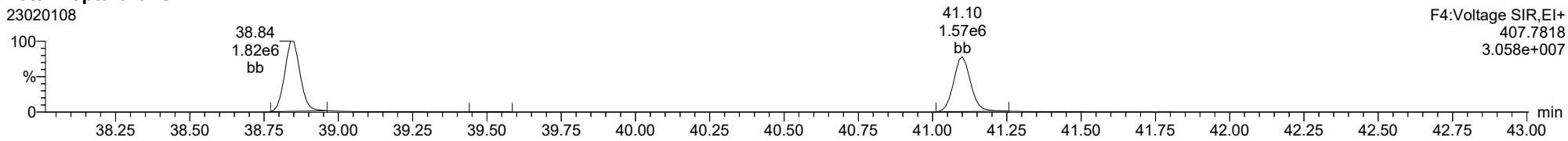

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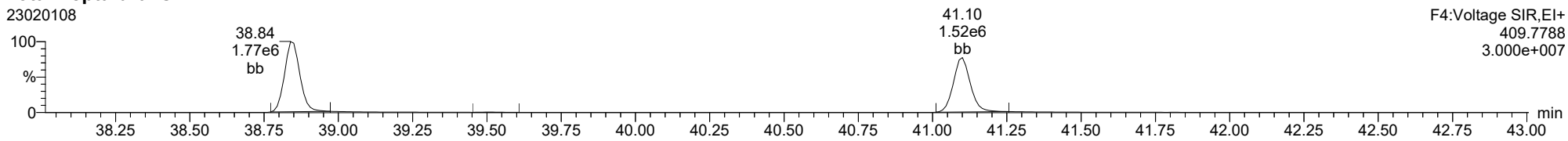

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Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:38:07 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS5CR, Name: 23020109, Date: 01-Feb-2023, Time: 19:34:25, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.897	1.001	1.902e6	2.502e6	0.876	0.760	0.770	2083	2633	2.83e7	3.68e7	13592.2	13978.0	NO	bb	bb	198.739
12378-PeCDF	30.049	1.000	1.205e7	7.874e6	0.845	1.531	1.550	7373	5488	1.93e8	1.26e8	26224.5	23031.6	NO	bb	bb	994.981
23478-PeCDF	31.386	1.000	1.269e7	8.370e6	0.911	1.517	1.550	7373	5488	2.06e8	1.36e8	27965.2	24705.2	NO	bb	bb	1016.382
123478-HxCDF	34.995	1.000	1.141e7	8.950e6	1.182	1.275	1.240	3920	5169	1.84e8	1.47e8	46993.0	28370.7	NO	dd	dd	1029.340
234678-HxCDF	35.998	1.001	1.171e7	9.171e6	1.229	1.276	1.240	3920	5169	1.90e8	1.49e8	48596.8	28890.8	NO	dd	dd	1009.446
123678-HxCDF	35.140	1.001	1.235e7	9.894e6	1.248	1.248	1.240	3920	5169	1.94e8	1.54e8	49388.8	29696.3	NO	dd	dd	1025.687
123789-HxCDF	37.023	1.001	1.031e7	8.091e6	1.187	1.275	1.240	3920	5169	1.66e8	1.30e8	42476.6	25233.9	NO	bd	bd	998.443
1234678-HpCDF	38.850	1.000	1.032e7	1.012e7	1.204	1.019	1.050	8904	8155	1.75e8	1.74e8	19676.2	21311.7	NO	bb	bb	964.735
1234789-HpCDF	41.112	1.000	8.967e6	8.709e6	1.165	1.030	1.050	8904	8155	1.36e8	1.32e8	15298.2	16219.3	NO	bb	bb	993.722
OCDF	45.375	1.006	1.493e7	1.667e7	1.186	0.896	0.890	4510	4269	1.90e8	2.12e8	42161.0	49693.7	NO	bb	bb	1895.001
2378-TCDD	26.532	1.001	1.752e6	2.174e6	1.236	0.806	0.770	1459	2196	2.70e7	3.36e7	18498.5	15304.9	NO	bb	bb	198.710
12378-PeCDD	31.642	1.000	9.606e6	6.125e6	1.087	1.568	1.550	3423	1668	1.56e8	9.91e7	45448.5	59405.3	NO	bb	bb	1009.559
123478-HxCDD	36.120	1.001	8.528e6	7.016e6	0.987	1.215	1.240	3213	2854	1.40e8	1.15e8	43594.1	40358.9	NO	bd	bd	1032.837
123678-HxCDD	36.232	1.000	8.754e6	7.068e6	1.021	1.239	1.240	3213	2854	1.51e8	1.23e8	47081.5	43211.8	NO	db	db	969.556
123789-HxCDD	36.611	1.011	8.604e6	7.092e6	0.985	1.213	1.240	3213	2854	1.49e8	1.23e8	46396.6	43264.5	NO	bb	bb	1019.817
1234678-HpCDD	40.365	1.001	8.084e6	7.725e6	1.253	1.046	1.050	4704	6048	1.30e8	1.24e8	27631.4	20454.3	NO	bb	bb	955.606
OCDD	45.138	1.000	1.379e7	1.563e7	1.103	0.882	0.890	4246	3833	1.77e8	2.00e8	41633.2	52271.8	NO	bb	bb	1898.324
13C-2378-TCDF	25.867	1.007	1.117e6	1.412e6	1.768	0.791	0.770	2137	1536	1.68e7	2.15e7	7867.7	13974.0	NO	bb	bb	104.652
13C-12378-PeCDF	30.037	1.169	1.439e6	9.319e5	1.527	1.544	1.550	3190	2679	2.23e7	1.46e7	6993.2	5456.9	NO	bb	bb	113.578
13C-23478-PeCDF	31.375	1.221	1.384e6	8.910e5	1.466	1.553	1.550	3190	2679	2.11e7	1.37e7	6621.6	5099.2	NO	bb	bb	113.466
13C-123478-HxCDF	34.984	0.956	5.247e5	1.149e6	1.054	0.456	0.510	2046	3816	8.96e6	1.85e7	4377.9	4858.6	NO	bb	bd	95.236
13C-123678-HxCDF	35.118	0.960	5.447e5	1.193e6	1.080	0.456	0.510	2046	3816	9.54e6	1.96e7	4663.8	5131.1	NO	bb	db	96.456
13C-234678-HxCDF	35.976	0.983	5.724e5	1.111e6	1.014	0.515	0.510	2046	3816	9.48e6	1.86e7	4633.3	4871.3	NO	bb	bb	99.457
13C-123789-HxCDF	37.001	1.011	5.244e5	1.029e6	0.928	0.510	0.510	2046	3816	8.87e6	1.74e7	4335.4	4558.1	NO	bb	bb	100.353
13C-1234678-HpCDF	38.839	1.061	5.492e5	1.210e6	1.036	0.454	0.440	2607	3522	9.31e6	2.08e7	3570.6	5900.4	NO	bb	bb	101.771
13C-1234789-HpCDF	41.100	1.123	4.687e5	1.058e6	0.905	0.443	0.440	2607	3522	6.97e6	1.56e7	2673.2	4442.5	NO	bb	bb	101.106
13C-1234-TCDD	25.700	0.000	6.087e5	7.585e5	1.000	0.803	0.770	1970	1516	9.39e6	1.18e7	4765.4	7760.6	NO	bb	bb	100.000
13C-2378-TCDD	26.517	1.032	7.055e5	8.929e5	1.103	0.790	0.770	1970	1516	1.10e7	1.38e7	5597.9	9134.2	NO	bb	bb	106.005
13C-12378-PeCDD	31.631	1.231	8.888e5	5.452e5	0.914	1.630	1.550	1596	1437	1.37e7	8.34e6	8557.4	5803.5	NO	bb	bb	114.739
13C-123478-HxCDD	36.098	0.986	8.648e5	6.600e5	0.933	1.310	1.240	2021	1546	1.43e7	1.10e7	7083.3	7089.6	NO	bd	bd	97.968
13C-123678-HxCDD	36.221	0.990	8.909e5	7.079e5	0.965	1.258	1.240	2021	1546	1.49e7	1.18e7	7371.3	7606.4	NO	db	db	99.340
13C-1234678-HpCDD	40.343	1.102	6.795e5	6.413e5	0.782	1.059	1.050	2204	1955	1.08e7	1.02e7	4901.5	5191.4	NO	bb	bb	101.235
13C-OCDD	45.119	1.233	1.338e6	1.473e6	0.788	0.908	0.890	3227	1633	1.70e7	1.87e7	5253.8	11468.7	NO	bb	bb	213.757
13C-123789-HxCDD	36.600	0.000	9.379e5	7.305e5	1.000	1.284	1.240	2021	1546	1.55e7	1.24e7	7683.2	7996.3	NO	bb	bb	100.000
37CL-2378-TCDD	26.532	1.032	3.390e6		1.233			2288		5.24e7		22881.9			bb		201.044

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Printed: Friday, February 03, 2023 10:38:07 Pacific Standard Time

ID: CS5CR, Name: 23020109, Date: 01-Feb-2023, Time: 19:34:25, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					1.064		0.770	2083	2633								
1289-TCDF					0.858		0.770	2083	2633								
13468-PECDF					1.013		1.550	1030	1210								
12389-PECDF					0.844		1.550	7373	5488								
123468-HXCDF					1.197		1.240	3920	5169								
1368-TCDD					1.084		0.770	1459	2196								
1289-TCDD					0.975		0.770	1459	2196								
12479-PECDD					1.837		1.550	3423	1668								
12389-PECDD					1.252		1.550	3423	1668								
124679-HXCDD					1.033		1.240	3213	2854								
1234679-HPCDD					1.286		1.050	4704	6048								
Total-tetrafurans			1.936e6		0.933			2083		2.88e7							202.080
Total-penta1			0.000e0					1030		0.00e0							
Total-pentafurans			2.494e7		0.866			7373		4.02e8							2027.255
Total-hexafurans			4.602e7		1.208			3920		7.37e8							4083.100
Total-heptafurans			1.932e7		1.185			8904		3.12e8							1962.233
Total-Furans			1.071e8		1.067			2083		1.67e9							10169.669
Total-tetradioxins			1.793e6		1.099			1459		2.75e7							203.813
Total-pentadioxins			9.627e6		1.392			3423		1.56e8							1011.307
Total-hexadioxins			2.592e7		1.007			3213		4.41e8							3025.757
Total-heptadioxins			8.084e6		1.269			4704		1.30e8							955.606
Total-Dioxins			5.921e7		1.165			1459		9.31e8							7094.807
Total-TEQ			1.664e8					1459		2.60e9							17264.476
FUNCTION1 PFK			2.029e7					574211		2.20e8							
FUNCTION2 PFK			0.000e0					188547		0.00e0							
FUNCTION3 PFK			1.011e6					450058		2.54e7							0.000
FUNCTION4 PFK			3.839e5					271819		2.65e6							
FUNCTION5 PFK			1.416e4					194883		8.19e5							
FUNCTION1 HXCD...			1.885e3					653		2.55e4							0.000
FUNCTION1 HPCD...			1.625e3					761		2.22e4							0.000
FUNCTION2 HPCD...			1.554e4					835		2.29e5							0.000
FUNCTION3 OCDPE			7.873e3					764		8.87e4							0.000
FUNCTION4 NCDPE			2.525e3					778		3.44e4							0.000
FUNCTION5 DCDPE			4.222e3					726		3.75e4							0.000

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	26.53	2.226e3	3.396e3	0.933	0.66	0.77	11.6	YES	NO	bb	bd	0.238
2	2378-TCDF	25.90	1.902e6	2.502e6	0.876	0.76	0.77	13592.2	YES	NO	bb	bb	198.739
3	Total-tetrafurans	25.72	1.842e3	2.753e3	0.933	0.67	0.77	10.6	YES	NO	bb	bb	0.195
4	Total-tetrafurans	24.97	1.224e4	1.625e4	0.933	0.75	0.77	91.6	YES	NO	db	dd	1.208
5	Total-tetrafurans	24.66	1.707e4	2.304e4	0.933	0.74	0.77	124.7	YES	NO	bd	dd	1.700

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	28.97	3.816e4	2.465e4	0.866	1.55	1.55	67.9	YES	NO	bb	bb	3.121
2	Total-pentafurans	28.68	1.252e3	7.687e2	0.866	1.63	1.55	2.7	NO	NO	bb	bb	0.100
3	Total-pentafurans	31.64	2.450e4	1.763e4	0.866	1.39	1.55	52.8	YES	NO	bb	bb	2.093
4	23478-PeCDF	31.39	1.269e7	8.370e6	0.911	1.52	1.55	27965.2	YES	NO	bb	bb	1016.3...
5	Total-pentafurans	31.12	1.334e4	8.233e3	0.866	1.62	1.55	28.5	YES	NO	bb	bb	1.072
6	Total-pentafurans	30.35	1.243e4	7.715e3	0.866	1.61	1.55	30.7	YES	NO	bb	bb	1.001
7	12378-PeCDF	30.05	1.205e7	7.874e6	0.845	1.53	1.55	26224.5	YES	NO	bb	bb	994.981
8	Total-pentafurans	29.76	8.085e3	5.894e3	0.866	1.37	1.55	15.9	YES	NO	db	db	0.695
9	Total-pentafurans	29.68	6.865e3	3.988e3	0.866	1.72	1.55	14.4	YES	NO	bd	bd	0.539
10	Total-pentafurans	32.42	8.774e4	5.860e4	0.866	1.50	1.55	183.2	YES	NO	bb	bd	7.271

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HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123478-HxCDF	35.00	1.141e7	8.950e6	1.182	1.28	1.24	46993.0	YES	NO	dd	dd	1029.3...
2	Total-hexafurans	34.84	1.696e4	1.325e4	1.208	1.28	1.24	72.5	YES	NO	bd	bd	1.504
3	Total-hexafurans	33.55	9.817e3	7.389e3	1.208	1.33	1.24	34.0	YES	NO	dd	db	0.857
4	123789-HxCDF	37.02	1.031e7	8.091e6	1.187	1.27	1.24	42476.6	YES	NO	bd	bd	998.443
5	Total-hexafurans	36.62	3.175e4	2.702e4	1.208	1.17	1.24	85.2	YES	NO	dd	db	2.926
6	Total-hexafurans	36.53	6.162e3	4.947e3	1.208	1.25	1.24	37.3	YES	NO	dd	dd	0.553
7	Total-hexafurans	36.23	1.664e5	1.218e5	1.208	1.37	1.24	331.3	YES	NO	dd	dd	14.345
8	234678-HxCDF	36.00	1.171e7	9.171e6	1.229	1.28	1.24	48596.8	YES	NO	dd	dd	1009.4...
9	123678-HxCDF	35.14	1.235e7	9.894e6	1.248	1.25	1.24	49388.8	YES	NO	dd	dd	1025.6...

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.11	8.967e6	8.709e6	1.165	1.03	1.05	15298.2	YES	NO	bb	bb	993.722
2	Total-heptafurans	40.38	1.043e4	1.014e4	1.185	1.03	1.05	14.2	YES	NO	bb	bb	1.057
3	Total-heptafurans	39.52	2.112e4	2.199e4	1.185	0.96	1.05	42.5	YES	NO	bb	bb	2.215
4	Total-heptafurans	39.26	5.058e3	4.749e3	1.185	1.07	1.05	11.5	YES	NO	bb	bb	0.504
5	1234678-HpCDF	38.85	1.032e7	1.012e7	1.204	1.02	1.05	19676.2	YES	NO	bb	bb	964.735

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	26.53	2.226e3	3.396e3	0.933	0.66	0.77	11.6	YES	NO	bb	bd	0.238
2	2378-TCDF	25.90	1.902e6	2.502e6	0.876	0.76	0.77	13592.2	YES	NO	bb	bb	198.739
3	Total-tetrafurans	25.72	1.842e3	2.753e3	0.933	0.67	0.77	10.6	YES	NO	bb	bb	0.195
4	Total-tetrafurans	24.97	1.224e4	1.625e4	0.933	0.75	0.77	91.6	YES	NO	db	dd	1.208
5	Total-tetrafurans	24.66	1.707e4	2.304e4	0.933	0.74	0.77	124.7	YES	NO	bd	dd	1.700
6	Total-pentafurans	28.97	3.816e4	2.465e4	0.866	1.55	1.55	67.9	YES	NO	bb	bb	3.121
7	Total-pentafurans	28.68	1.252e3	7.687e2	0.866	1.63	1.55	2.7	NO	NO	bb	bb	0.100
8	Total-pentafurans	31.64	2.450e4	1.763e4	0.866	1.39	1.55	52.8	YES	NO	bb	bb	2.093
9	23478-PeCDF	31.39	1.269e7	8.370e6	0.911	1.52	1.55	27965.2	YES	NO	bb	bb	1016.3...
10	Total-pentafurans	31.12	1.334e4	8.233e3	0.866	1.62	1.55	28.5	YES	NO	bb	bb	1.072
11	Total-pentafurans	30.35	1.243e4	7.715e3	0.866	1.61	1.55	30.7	YES	NO	bb	bb	1.001
12	12378-PeCDF	30.05	1.205e7	7.874e6	0.845	1.53	1.55	26224.5	YES	NO	bb	bb	994.981
13	Total-pentafurans	29.76	8.085e3	5.894e3	0.866	1.37	1.55	15.9	YES	NO	db	db	0.695
14	Total-pentafurans	29.68	6.865e3	3.988e3	0.866	1.72	1.55	14.4	YES	NO	bd	bd	0.539
15	Total-pentafurans	32.42	8.774e4	5.860e4	0.866	1.50	1.55	183.2	YES	NO	bb	bd	7.271
16	123478-HxCDF	35.00	1.141e7	8.950e6	1.182	1.28	1.24	46993.0	YES	NO	dd	dd	1029.3...
17	Total-hexafurans	34.84	1.696e4	1.325e4	1.208	1.28	1.24	72.5	YES	NO	bd	bd	1.504
18	Total-hexafurans	33.55	9.817e3	7.389e3	1.208	1.33	1.24	34.0	YES	NO	dd	db	0.857
19	123789-HxCDF	37.02	1.031e7	8.091e6	1.187	1.27	1.24	42476.6	YES	NO	bd	bd	998.443
20	Total-hexafurans	36.62	3.175e4	2.702e4	1.208	1.17	1.24	85.2	YES	NO	dd	db	2.926
21	Total-hexafurans	36.53	6.162e3	4.947e3	1.208	1.25	1.24	37.3	YES	NO	dd	dd	0.553
22	Total-hexafurans	36.23	1.664e5	1.218e5	1.208	1.37	1.24	331.3	YES	NO	dd	dd	14.345
23	234678-HxCDF	36.00	1.171e7	9.171e6	1.229	1.28	1.24	48596.8	YES	NO	dd	dd	1009.4...
24	123678-HxCDF	35.14	1.235e7	9.894e6	1.248	1.25	1.24	49388.8	YES	NO	dd	dd	1025.6...
25	1234789-HpCDF	41.11	8.967e6	8.709e6	1.165	1.03	1.05	15298.2	YES	NO	bb	bb	993.722
26	Total-heptafurans	40.38	1.043e4	1.014e4	1.185	1.03	1.05	14.2	YES	NO	bb	bb	1.057
27	Total-heptafurans	39.52	2.112e4	2.199e4	1.185	0.96	1.05	42.5	YES	NO	bb	bb	2.215
28	Total-heptafurans	39.26	5.058e3	4.749e3	1.185	1.07	1.05	11.5	YES	NO	bb	bb	0.504
29	1234678-HpCDF	38.85	1.032e7	1.012e7	1.204	1.02	1.05	19676.2	YES	NO	bb	bb	964.735
30	OCDF	45.38	1.493e7	1.667e7	1.186	0.90	0.89	42161.0	YES	NO	bb	bb	1895.0...

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.53	1.752e6	2.174e6	1.236	0.81	0.77	18498.5	YES	NO	bb	bb	198.710
2	Total-tetradioxins	26.15	3.848e4	4.731e4	1.099	0.81	0.77	307.2	YES	NO	bb	bb	4.885
3	Total-tetradioxins	25.40	1.655e3	2.163e3	1.099	0.76	0.77	18.7	YES	NO	bb	bb	0.217

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PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.64	9.606e6	6.125e6	1.087	1.57	1.55	45448.5	YES	NO	bb	bb	1009.5...
2	Total-pentadioxins	30.97	1.150e4	6.979e3	1.392	1.65	1.55	51.3	YES	NO	bb	bd	0.925
3	Total-pentadioxins	30.41	1.660e3	1.100e3	1.392	1.51	1.55	6.6	YES	NO	db	db	0.138
4	Total-pentadioxins	30.05	7.800e3	5.854e3	1.392	1.33	1.55	33.3	YES	NO	bd	bd	0.684

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexadioxins	34.88	8.900e2	7.985e2	1.007	1.11	1.24	4.5	YES	NO	bd	bd	0.107
2	Total-hexadioxins	37.15	6.920e2	5.023e2	1.007	1.38	1.24	4.7	YES	NO	db	bb	0.076
3	Total-hexadioxins	37.02	2.963e4	2.325e4	1.007	1.27	1.24	128.2	YES	NO	bd	bb	3.364
4	123789-HxCDD	36.61	8.604e6	7.092e6	0.985	1.21	1.24	46396.6	YES	NO	bb	bb	1019.8...
5	123678-HxCDD	36.23	8.754e6	7.068e6	1.021	1.24	1.24	47081.5	YES	NO	db	db	969.556
6	123478-HxCDD	36.12	8.528e6	7.016e6	0.987	1.22	1.24	43594.1	YES	NO	bd	bd	1032.8...

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.37	8.084e6	7.725e6	1.253	1.05	1.05	27631.4	YES	NO	bb	bb	955.606

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.53	1.752e6	2.174e6	1.236	0.81	0.77	18498.5	YES	NO	bb	bb	198.710
2	Total-tetradioxins	26.15	3.848e4	4.731e4	1.099	0.81	0.77	307.2	YES	NO	bb	bb	4.885
3	Total-tetradioxins	25.40	1.655e3	2.163e3	1.099	0.76	0.77	18.7	YES	NO	bb	bb	0.217
4	12378-PeCDD	31.64	9.606e6	6.125e6	1.087	1.57	1.55	45448.5	YES	NO	bb	bb	1009.5...
5	Total-pentadioxins	30.97	1.150e4	6.979e3	1.392	1.65	1.55	51.3	YES	NO	bb	bd	0.925
6	Total-pentadioxins	30.41	1.660e3	1.100e3	1.392	1.51	1.55	6.6	YES	NO	db	db	0.138
7	Total-pentadioxins	30.05	7.800e3	5.854e3	1.392	1.33	1.55	33.3	YES	NO	bd	bd	0.684
8	Total-hexadioxins	34.88	8.900e2	7.985e2	1.007	1.11	1.24	4.5	YES	NO	bd	bd	0.107
9	Total-hexadioxins	37.15	6.920e2	5.023e2	1.007	1.38	1.24	4.7	YES	NO	db	bb	0.076
10	Total-hexadioxins	37.02	2.963e4	2.325e4	1.007	1.27	1.24	128.2	YES	NO	bd	bb	3.364
11	123789-HxCDD	36.61	8.604e6	7.092e6	0.985	1.21	1.24	46396.6	YES	NO	bb	bb	1019.8...
12	123678-HxCDD	36.23	8.754e6	7.068e6	1.021	1.24	1.24	47081.5	YES	NO	db	db	969.556
13	123478-HxCDD	36.12	8.528e6	7.016e6	0.987	1.22	1.24	43594.1	YES	NO	bd	bd	1032.8...
14	1234678-HpCDD	40.37	8.084e6	7.725e6	1.253	1.05	1.05	27631.4	YES	NO	bb	bb	955.606
15	OCDD	45.14	1.379e7	1.563e7	1.103	0.88	0.89	41633.2	YES	NO	bb	bb	1898.3...

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	26.53	2.226e3	3.396e3	0.933	0.66	0.77	11.6	YES	NO	bb	bd	0.238
2	2378-TCDF	25.90	1.902e6	2.502e6	0.876	0.76	0.77	13592.2	YES	NO	bb	bb	198.739
3	Total-tetrafurans	25.72	1.842e3	2.753e3	0.933	0.67	0.77	10.6	YES	NO	bb	bb	0.195
4	Total-tetrafurans	24.97	1.224e4	1.625e4	0.933	0.75	0.77	91.6	YES	NO	db	dd	1.208
5	Total-tetrafurans	24.66	1.707e4	2.304e4	0.933	0.74	0.77	124.7	YES	NO	bd	dd	1.700
6	Total-pentafurans	28.97	3.816e4	2.465e4	0.866	1.55	1.55	67.9	YES	NO	bb	bb	3.121
7	Total-pentafurans	28.68	1.252e3	7.687e2	0.866	1.63	1.55	2.7	NO	NO	bb	bb	0.100
8	Total-pentafurans	31.64	2.450e4	1.763e4	0.866	1.39	1.55	52.8	YES	NO	bb	bb	2.093
9	23478-PeCDF	31.39	1.269e7	8.370e6	0.911	1.52	1.55	27965.2	YES	NO	bb	bb	1016.3...
10	Total-pentafurans	31.12	1.334e4	8.233e3	0.866	1.62	1.55	28.5	YES	NO	bb	bb	1.072
11	Total-pentafurans	30.35	1.243e4	7.715e3	0.866	1.61	1.55	30.7	YES	NO	bb	bb	1.001
12	12378-PeCDF	30.05	1.205e7	7.874e6	0.845	1.53	1.55	26224.5	YES	NO	bb	bb	994.981
13	Total-pentafurans	29.76	8.085e3	5.894e3	0.866	1.37	1.55	15.9	YES	NO	db	db	0.695
14	Total-pentafurans	29.68	6.865e3	3.988e3	0.866	1.72	1.55	14.4	YES	NO	bd	bd	0.539
15	Total-pentafurans	32.42	8.774e4	5.860e4	0.866	1.50	1.55	183.2	YES	NO	bb	bd	7.271
16	123478-HxCDF	35.00	1.141e7	8.950e6	1.182	1.28	1.24	46993.0	YES	NO	dd	dd	1029.3...
17	Total-hexafurans	34.84	1.696e4	1.325e4	1.208	1.28	1.24	72.5	YES	NO	bd	bd	1.504
18	Total-hexafurans	33.55	9.817e3	7.389e3	1.208	1.33	1.24	34.0	YES	NO	dd	db	0.857
19	123789-HxCDF	37.02	1.031e7	8.091e6	1.187	1.27	1.24	42476.6	YES	NO	bd	bd	998.443
20	Total-hexafurans	36.62	3.175e4	2.702e4	1.208	1.17	1.24	85.2	YES	NO	dd	db	2.926
21	Total-hexafurans	36.53	6.162e3	4.947e3	1.208	1.25	1.24	37.3	YES	NO	dd	dd	0.553
22	Total-hexafurans	36.23	1.664e5	1.218e5	1.208	1.37	1.24	331.3	YES	NO	dd	dd	14.345
23	234678-HxCDF	36.00	1.171e7	9.171e6	1.229	1.28	1.24	48596.8	YES	NO	dd	dd	1009.4...
24	123678-HxCDF	35.14	1.235e7	9.894e6	1.248	1.25	1.24	49388.8	YES	NO	dd	dd	1025.6...
25	1234789-HpCDF	41.11	8.967e6	8.709e6	1.165	1.03	1.05	15298.2	YES	NO	bb	bb	993.722
26	Total-heptafurans	40.38	1.043e4	1.014e4	1.185	1.03	1.05	14.2	YES	NO	bb	bb	1.057
27	Total-heptafurans	39.52	2.112e4	2.199e4	1.185	0.96	1.05	42.5	YES	NO	bb	bb	2.215
28	Total-heptafurans	39.26	5.058e3	4.749e3	1.185	1.07	1.05	11.5	YES	NO	bb	bb	0.504
29	1234678-HpCDF	38.85	1.032e7	1.012e7	1.204	1.02	1.05	19676.2	YES	NO	bb	bb	964.735
30	OCDF	45.38	1.493e7	1.667e7	1.186	0.90	0.89	42161.0	YES	NO	bb	bb	1895.0...
31	2378-TCDD	26.53	1.752e6	2.174e6	1.236	0.81	0.77	18498.5	YES	NO	bb	bb	198.710
32	Total-tetradioxins	26.15	3.848e4	4.731e4	1.099	0.81	0.77	307.2	YES	NO	bb	bb	4.885
33	Total-tetradioxins	25.40	1.655e3	2.163e3	1.099	0.76	0.77	18.7	YES	NO	bb	bb	0.217
34	12378-PeCDD	31.64	9.606e6	6.125e6	1.087	1.57	1.55	45448.5	YES	NO	bb	bb	1009.5...
35	Total-pentadioxins	30.97	1.150e4	6.979e3	1.392	1.65	1.55	51.3	YES	NO	bb	bd	0.925
36	Total-pentadioxins	30.41	1.660e3	1.100e3	1.392	1.51	1.55	6.6	YES	NO	db	db	0.138
37	Total-pentadioxins	30.05	7.800e3	5.854e3	1.392	1.33	1.55	33.3	YES	NO	bd	bd	0.684

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	Total-hexadioxins	34.88	8.900e2	7.985e2	1.007	1.11	1.24	4.5	YES	NO	bd	bd	0.107
39	Total-hexadioxins	37.15	6.920e2	5.023e2	1.007	1.38	1.24	4.7	YES	NO	db	bb	0.076
40	Total-hexadioxins	37.02	2.963e4	2.325e4	1.007	1.27	1.24	128.2	YES	NO	bd	bb	3.364
41	123789-HxCDD	36.61	8.604e6	7.092e6	0.985	1.21	1.24	46396.6	YES	NO	bb	bb	1019.8...
42	123678-HxCDD	36.23	8.754e6	7.068e6	1.021	1.24	1.24	47081.5	YES	NO	db	db	969.556
43	123478-HxCDD	36.12	8.528e6	7.016e6	0.987	1.22	1.24	43594.1	YES	NO	bd	bd	1032.8...
44	1234678-HpCDD	40.37	8.084e6	7.725e6	1.253	1.05	1.05	27631.4	YES	NO	bb	bb	955.606
45	OCDD	45.14	1.379e7	1.563e7	1.103	0.88	0.89	41633.2	YES	NO	bb	bb	1898.3...

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.86	8.873e5					21.2	YES		dd		
2	FUNCTION1 PFK	21.80	7.665e5					22.5	YES		dd		
3	FUNCTION1 PFK	21.74	1.019e6					23.9	YES		dd		
4	FUNCTION1 PFK	21.59	1.959e6					26.2	YES		dd		
5	FUNCTION1 PFK	21.53	6.962e5					27.3	YES		dd		
6	FUNCTION1 PFK	21.47	1.211e6					28.6	YES		dd		
7	FUNCTION1 PFK	21.41	1.009e6					29.4	YES		dd		
8	FUNCTION1 PFK	21.13	5.872e6					34.2	YES		bd		
9	FUNCTION1 PFK	23.67	5.720e3					0.4	NO		bb		
10	FUNCTION1 PFK	23.28	9.896e3					0.7	NO		bb		
11	FUNCTION1 PFK	23.24	1.090e4					0.7	NO		bb		
12	FUNCTION1 PFK	23.16	1.031e4					0.6	NO		bb		
13	FUNCTION1 PFK	22.96	3.707e4					1.5	NO		db		
14	FUNCTION1 PFK	22.84	1.630e5					3.4	YES		dd		
15	FUNCTION1 PFK	22.72	3.257e5					5.8	YES		dd		
16	FUNCTION1 PFK	22.59	5.378e5					8.3	YES		dd		
17	FUNCTION1 PFK	22.53	8.039e5					8.9	YES		dd		
18	FUNCTION1 PFK	22.37	3.709e5					11.1	YES		dd		
19	FUNCTION1 PFK	22.31	5.024e5					12.0	YES		dd		
20	FUNCTION1 PFK	22.18	9.225e5					14.7	YES		dd		
21	FUNCTION1 PFK	22.12	3.970e5					15.8	YES		dd		
22	FUNCTION1 PFK	22.07	7.082e5					16.9	YES		dd		
23	FUNCTION1 PFK	22.00	6.094e5					18.0	YES		dd		
24	FUNCTION1 PFK	21.94	6.575e5					19.5	YES		dd		
25	FUNCTION1 PFK	26.06	4.194e4					1.5	NO		bb		
26	FUNCTION1 PFK	25.69	3.568e4					1.2	NO		bb		
27	FUNCTION1 PFK	25.56	8.323e3					0.5	NO		bb		
28	FUNCTION1 PFK	25.49	1.374e4					0.7	NO		bb		
29	FUNCTION1 PFK	25.10	2.036e4					1.0	NO		db		
30	FUNCTION1 PFK	25.02	2.247e4					1.0	NO		bd		
31	FUNCTION1 PFK	24.96	3.286e4					1.5	NO		db		
32	FUNCTION1 PFK	24.90	1.152e4					0.7	NO		bd		
33	FUNCTION1 PFK	24.84	1.639e4					1.0	NO		bb		
34	FUNCTION1 PFK	24.78	2.451e4					1.1	NO		db		
35	FUNCTION1 PFK	24.72	2.714e4					1.2	NO		bd		
36	FUNCTION1 PFK	24.55	3.918e3					0.5	NO		bb		
37	FUNCTION1 PFK	24.37	3.551e4					1.1	NO		bb		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	24.01	2.091e4					0.9	NO		bb		
39	FUNCTION1 PFK	23.87	1.925e4					0.9	NO		db		
40	FUNCTION1 PFK	23.80	1.436e4					0.7	NO		bd		
41	FUNCTION1 PFK	27.74	4.148e4					1.2	NO		bb		
42	FUNCTION1 PFK	27.61	1.687e4					0.9	NO		bb		
43	FUNCTION1 PFK	27.36	2.823e4					1.3	NO		bb		
44	FUNCTION1 PFK	27.23	1.221e4					0.7	NO		bb		
45	FUNCTION1 PFK	27.11	2.196e4					0.8	NO		bb		
46	FUNCTION1 PFK	27.03	4.103e4					1.6	NO		db		
47	FUNCTION1 PFK	26.97	5.610e4					1.7	NO		dd		
48	FUNCTION1 PFK	26.86	5.847e4					1.3	NO		dd		
49	FUNCTION1 PFK	26.79	3.039e4					1.0	NO		bd		
50	FUNCTION1 PFK	26.68	1.065e4					0.6	NO		db		
51	FUNCTION1 PFK	26.64	8.185e3					0.7	NO		bd		
52	FUNCTION1 PFK	26.52	5.718e4					1.5	NO		bb		
53	FUNCTION1 PFK	26.40	1.679e4					0.7	NO		bb		
54	FUNCTION1 PFK	26.32	9.414e3					0.6	NO		bb		
55	FUNCTION1 PFK	26.18	2.178e4					1.0	NO		db		
56	FUNCTION1 PFK	26.14	1.887e4					1.1	NO		bd		
57	FUNCTION1 PFK	27.98	3.090e3					0.4	NO		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.39	1.483e4					1.1	NO		db		0.000
2	FUNCTION3 PFK	34.35	2.582e4					1.3	NO		bd		0.000
3	FUNCTION3 PFK	34.26	2.395e4					1.1	NO		bb		0.000
4	FUNCTION3 PFK	34.15	1.551e4					1.0	NO		db		0.000
5	FUNCTION3 PFK	34.09	2.978e3					0.4	NO		bd		0.000
6	FUNCTION3 PFK	33.87	2.703e4					1.3	NO		db		0.000
7	FUNCTION3 PFK	33.76	2.846e4					1.4	NO		dd		0.000
8	FUNCTION3 PFK	33.70	9.928e3					0.9	NO		bd		0.000
9	FUNCTION3 PFK	33.66	2.430e3					0.5	NO		bb		0.000
10	FUNCTION3 PFK	33.47	5.051e4					0.9	NO		db		0.000
11	FUNCTION3 PFK	33.37	2.100e4					1.4	NO		bd		0.000
12	FUNCTION3 PFK	33.17	1.358e4					1.0	NO		db		0.000
13	FUNCTION3 PFK	33.13	8.975e3					0.9	NO		bd		0.000
14	FUNCTION3 PFK	35.80	8.372e3					0.8	NO		bb		0.000
15	FUNCTION3 PFK	35.71	2.156e4					1.3	NO		db		0.000
16	FUNCTION3 PFK	35.67	2.235e4					1.3	NO		bd		0.000
17	FUNCTION3 PFK	35.59	9.805e3					0.8	NO		bb		0.000
18	FUNCTION3 PFK	35.53	4.290e3					0.5	NO		bb		0.000
19	FUNCTION3 PFK	35.33	9.302e3					1.0	NO		db		0.000
20	FUNCTION3 PFK	35.30	1.165e4					1.0	NO		bd		0.000
21	FUNCTION3 PFK	35.25	5.126e3					0.7	NO		bb		0.000
22	FUNCTION3 PFK	35.14	1.556e4					0.8	NO		bb		0.000
23	FUNCTION3 PFK	35.10	5.550e3					0.6	NO		bb		0.000
24	FUNCTION3 PFK	35.06	1.779e3					0.4	NO		bb		0.000
25	FUNCTION3 PFK	34.91	4.171e3					0.5	NO		bb		0.000
26	FUNCTION3 PFK	34.86	1.499e4					1.4	NO		bb		0.000
27	FUNCTION3 PFK	34.81	6.634e3					0.6	NO		bb		0.000
28	FUNCTION3 PFK	34.58	1.500e4					1.1	NO		bb		0.000
29	FUNCTION3 PFK	34.53	1.395e3					0.3	NO		bb		0.000
30	FUNCTION3 PFK	37.08	1.137e4					1.0	NO		dd		0.000
31	FUNCTION3 PFK	36.99	7.110e4					2.2	NO		bd		0.000
32	FUNCTION3 PFK	36.92	2.314e3					0.5	NO		bb		0.000
33	FUNCTION3 PFK	36.88	7.392e3					0.6	NO		db		0.000
34	FUNCTION3 PFK	36.81	7.817e3					0.4	NO		bd		0.000
35	FUNCTION3 PFK	36.77	1.226e4					0.8	NO		bb		0.000
36	FUNCTION3 PFK	36.61	7.220e4					1.7	NO		bb		0.000
37	FUNCTION3 PFK	36.40	2.247e4					1.6	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	36.31	3.432e4					1.8	NO		db		0.000
39	FUNCTION3 PFK	36.24	7.551e4					2.3	NO		dd		0.000
40	FUNCTION3 PFK	36.14	2.231e4					1.5	NO		dd		0.000
41	FUNCTION3 PFK	36.11	4.985e4					2.3	NO		dd		0.000
42	FUNCTION3 PFK	36.04	1.685e4					1.5	NO		dd		0.000
43	FUNCTION3 PFK	36.00	8.077e4					2.9	NO		dd		0.000
44	FUNCTION3 PFK	35.92	1.428e4					1.1	NO		dd		0.000
45	FUNCTION3 PFK	35.89	1.321e4					0.9	NO		bd		0.000
46	FUNCTION3 PFK	37.91	1.145e4					1.0	NO		bb		0.000
47	FUNCTION3 PFK	37.83	2.759e4					1.3	NO		bb		0.000
48	FUNCTION3 PFK	37.75	1.842e3					0.4	NO		bb		0.000
49	FUNCTION3 PFK	37.67	1.331e3					0.3	NO		bb		0.000
50	FUNCTION3 PFK	37.58	1.178e4					0.7	NO		bb		0.000
51	FUNCTION3 PFK	37.52	1.786e3					0.4	NO		bb		0.000
52	FUNCTION3 PFK	37.38	1.181e4					0.8	NO		bb		0.000
53	FUNCTION3 PFK	37.32	2.852e3					0.5	NO		db		0.000
54	FUNCTION3 PFK	37.29	1.067e4					0.9	NO		bd		0.000
55	FUNCTION3 PFK	37.12	1.332e4					1.1	NO		db		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.07	3.839e5					9.7	YES		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.91	3.198e3					0.9	NO		bb		
2	FUNCTION5 PFK	44.44	5.621e3					1.1	NO		bb		
3	FUNCTION5 PFK	43.72	1.296e3					0.7	NO		bb		
4	FUNCTION5 PFK	46.00	2.951e3					0.9	NO		bb		
5	FUNCTION5 PFK	45.63	1.092e3					0.6	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.32	1.271e2					3.2	YES		db		0.000
2	FUNCTION1 HXCD...	27.27	1.266e2					3.9	YES		bd		0.000
3	FUNCTION1 HXCD...	26.97	8.256e1					1.6	NO		bb		0.000
4	FUNCTION1 HXCD...	26.55	4.280e2					6.1	YES		bb		0.000
5	FUNCTION1 HXCD...	26.02	1.029e2					2.7	NO		db		0.000
6	FUNCTION1 HXCD...	25.90	2.502e2					4.4	YES		dd		0.000
7	FUNCTION1 HXCD...	25.72	2.101e2					3.6	YES		bd		0.000
8	FUNCTION1 HXCD...	23.72	8.529e1					3.0	YES		bb		0.000
9	FUNCTION1 HXCD...	22.99	9.923e1					2.5	NO		bb		0.000
10	FUNCTION1 HXCD...	22.00	7.560e1					1.7	NO		db		0.000
11	FUNCTION1 HXCD...	21.89	1.928e2					3.3	YES		bd		0.000
12	FUNCTION1 HXCD...	21.10	1.048e2					3.0	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	26.67	7.036e1					1.9	NO		db		0.000
2	FUNCTION1 HPCD...	26.53	4.357e2					5.6	YES		bd		0.000
3	FUNCTION1 HPCD...	25.91	1.719e2					2.5	NO		bb		0.000
4	FUNCTION1 HPCD...	25.70	1.553e2					2.9	NO		bb		0.000
5	FUNCTION1 HPCD...	24.63	1.444e2					3.1	YES		bb		0.000
6	FUNCTION1 HPCD...	24.20	7.285e1					2.2	NO		bb		0.000
7	FUNCTION1 HPCD...	23.45	7.383e1					2.1	NO		bb		0.000
8	FUNCTION1 HPCD...	23.34	1.346e2					1.9	NO		bb		0.000
9	FUNCTION1 HPCD...	22.31	1.729e2					2.3	NO		bb		0.000
10	FUNCTION1 HPCD...	22.01	7.908e1					1.1	NO		bb		0.000
11	FUNCTION1 HPCD...	21.22	1.137e2					3.5	YES		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.40	9.562e2					13.4	YES		dd		0.000
2	FUNCTION2 HPCD...	31.27	1.162e4					218.9	YES		bd		0.000
3	FUNCTION2 HPCD...	30.07	9.742e2					11.5	YES		bb		0.000
4	FUNCTION2 HPCD...	28.81	1.484e2					3.1	YES		bb		0.000
5	FUNCTION2 HPCD...	32.66	5.798e2					8.9	YES		bb		0.000
6	FUNCTION2 HPCD...	31.65	1.260e3					18.3	YES		db		0.000

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ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	37.03	6.482e2					9.9	YES		bb		0.000
2	FUNCTION3 OCDPE	36.61	1.390e3					18.8	YES		bb		0.000
3	FUNCTION3 OCDPE	36.23	1.589e3					24.2	YES		db		0.000
4	FUNCTION3 OCDPE	36.12	1.347e3					19.9	YES		dd		0.000
5	FUNCTION3 OCDPE	36.01	6.921e2					11.8	YES		bd		0.000
6	FUNCTION3 OCDPE	35.14	1.254e3					15.1	YES		db		0.000
7	FUNCTION3 OCDPE	35.01	7.695e2					12.4	YES		bd		0.000
8	FUNCTION3 OCDPE	33.86	1.826e2					4.0	YES		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.12	8.339e2					10.8	YES		bb		0.000
2	FUNCTION4 NCDPE	40.38	7.844e2					14.4	YES		bb		0.000
3	FUNCTION4 NCDPE	39.21	1.191e2					4.5	YES		bb		0.000
4	FUNCTION4 NCDPE	38.86	6.704e2					11.4	YES		bb		0.000
5	FUNCTION4 NCDPE	41.43	1.172e2					3.2	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	45.38	2.060e3					22.7	YES		db		0.000
2	FUNCTION5 DCDPE	45.15	2.089e3					25.1	YES		bd		0.000
3	FUNCTION5 DCDPE	44.92	7.340e1					3.7	YES		bb		0.000

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Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

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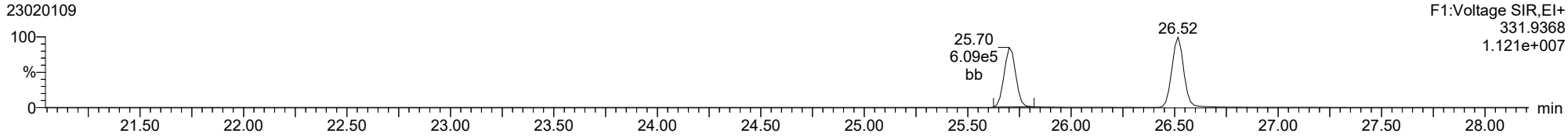
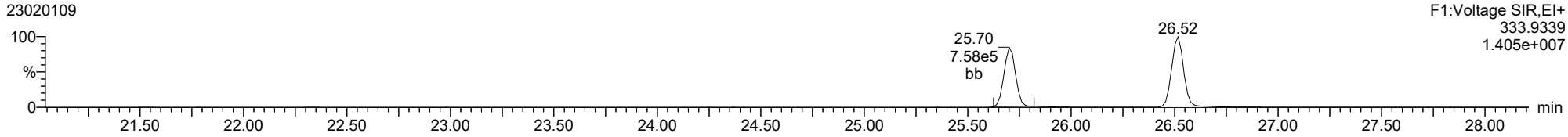
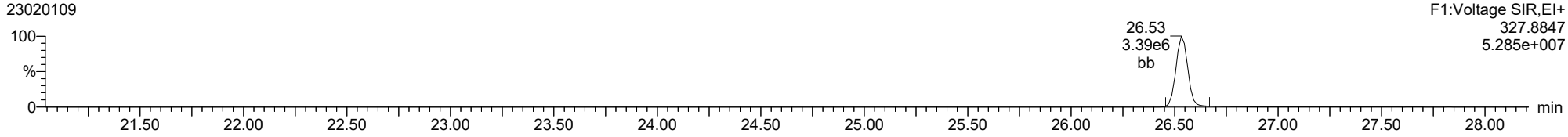
13C-1234-TCDD



13C-1234-TCDD



37CL-2378-TCDD



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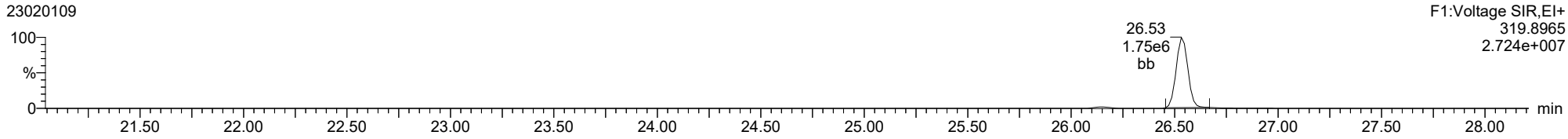

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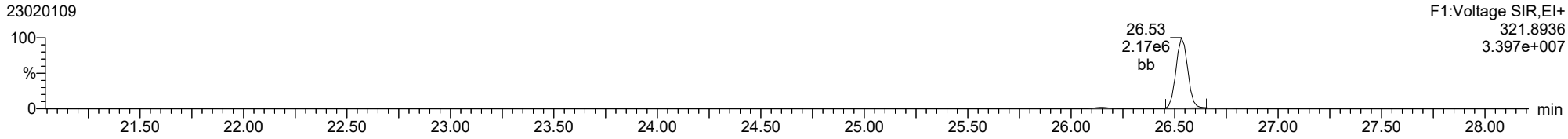

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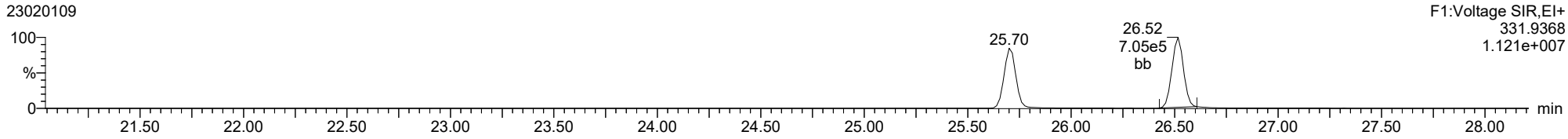

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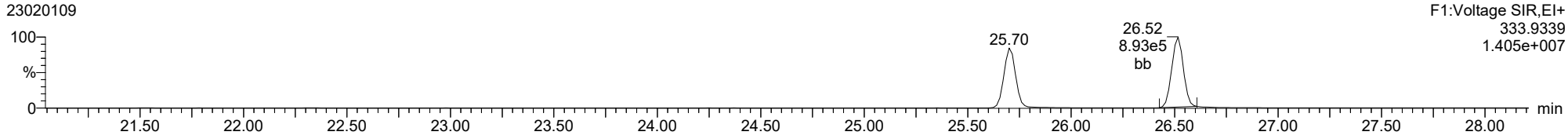

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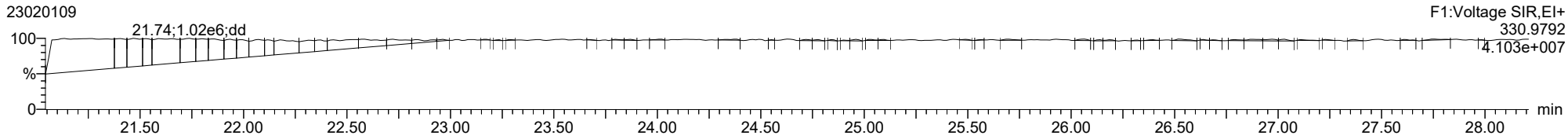

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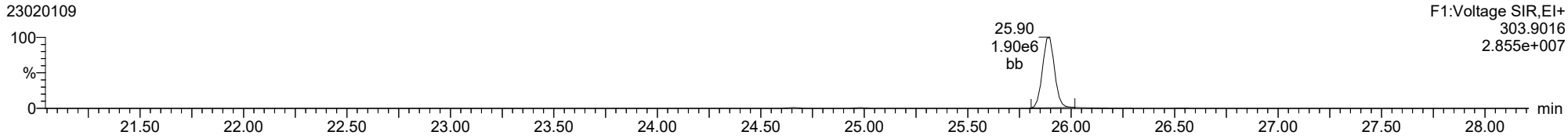

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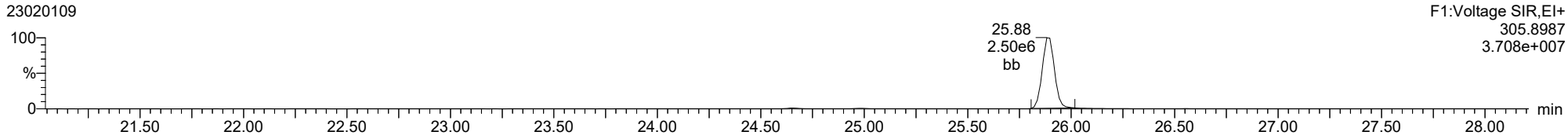

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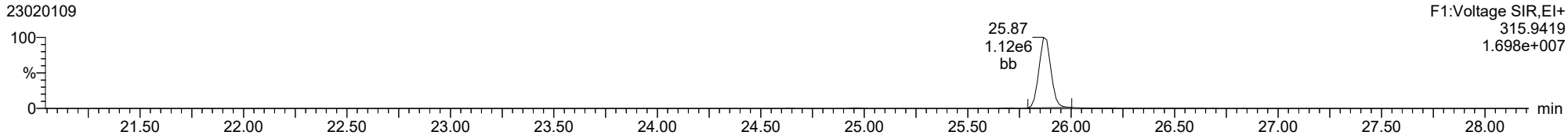

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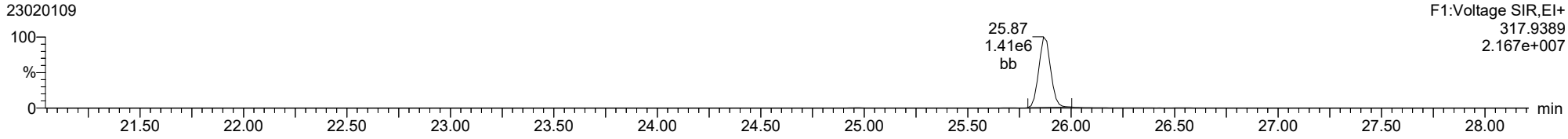

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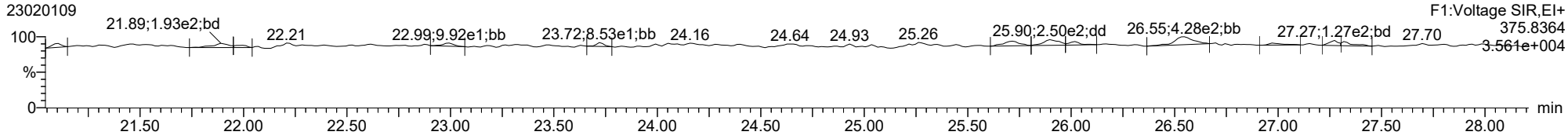

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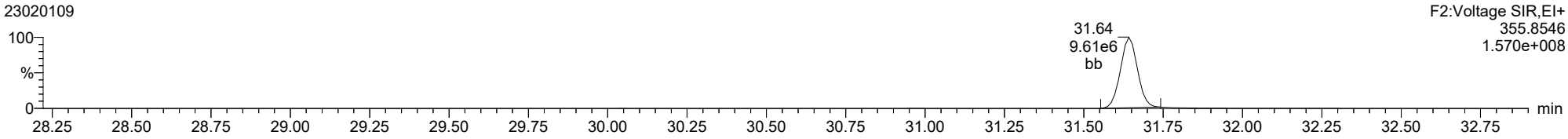
12378-PeCDD



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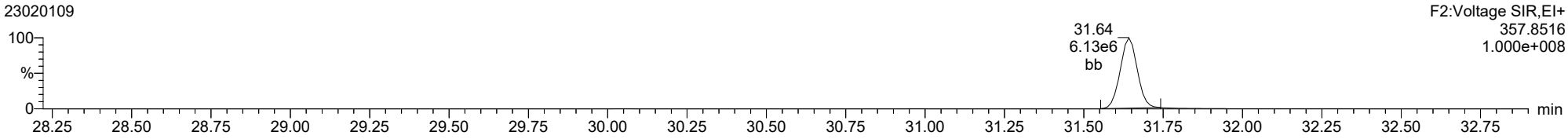

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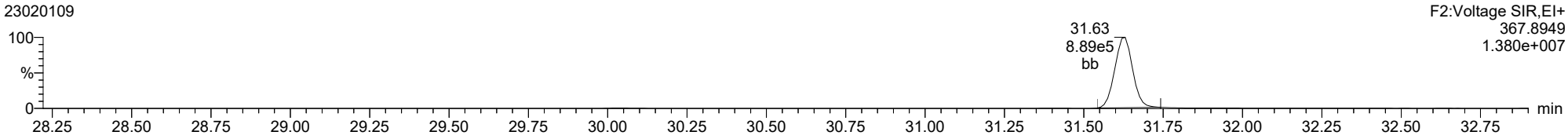

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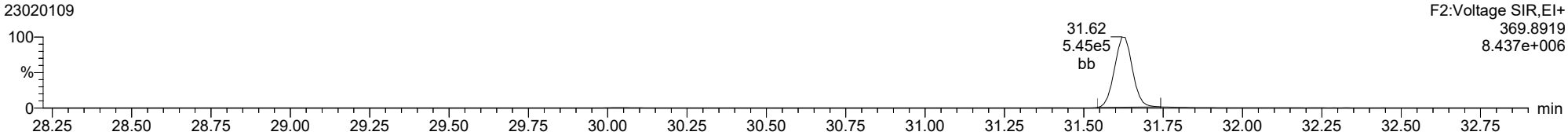

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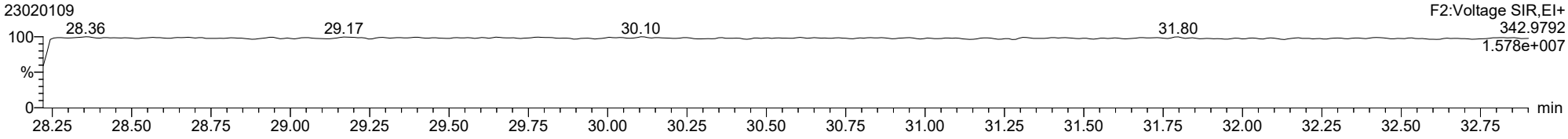

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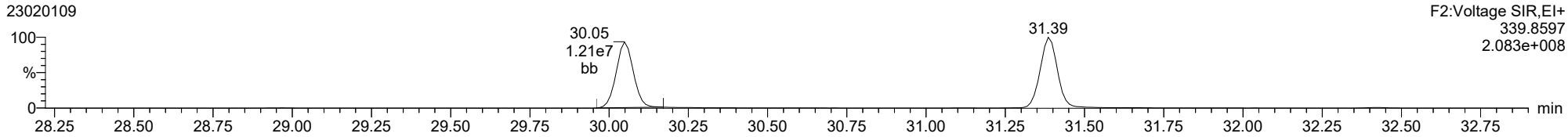

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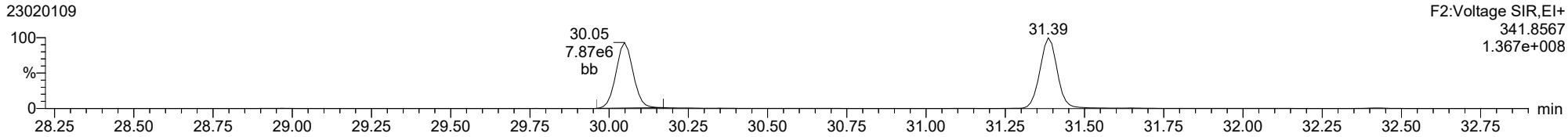

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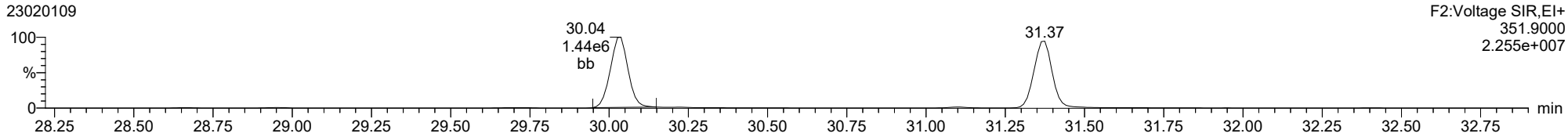

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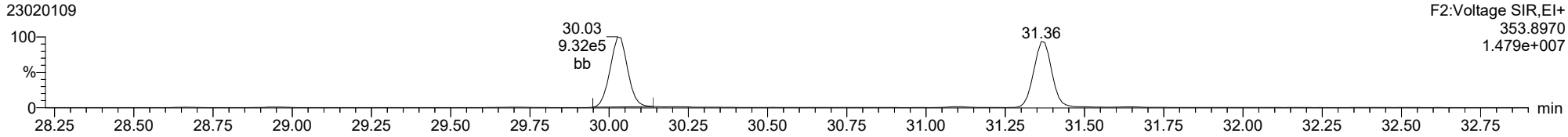
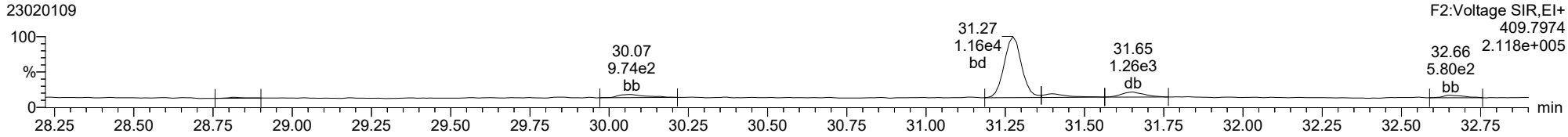


FUNCTION2 HPCDPE



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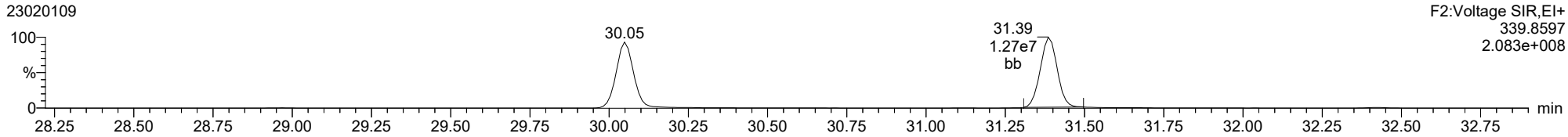
23478-PeCDF



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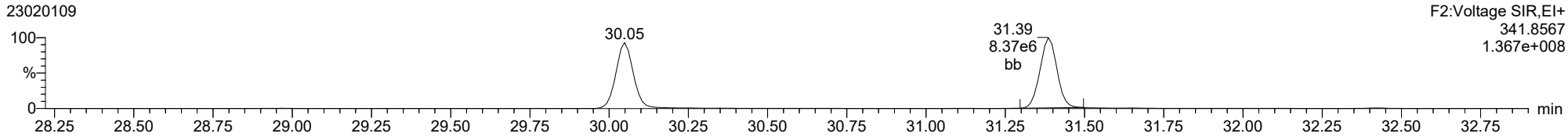

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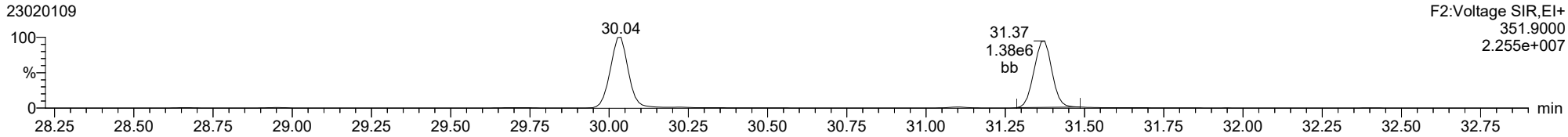

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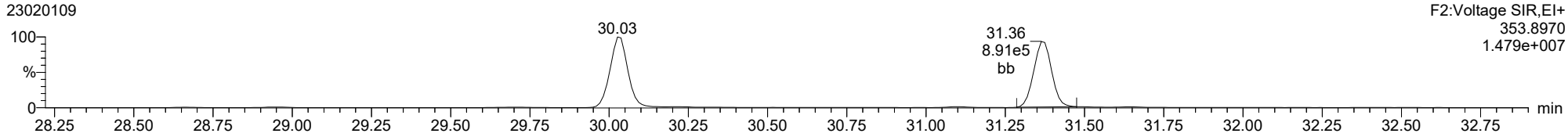

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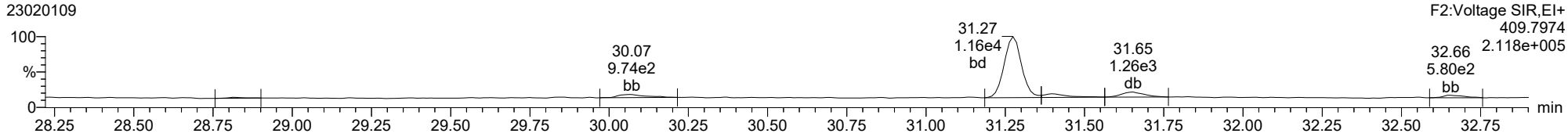

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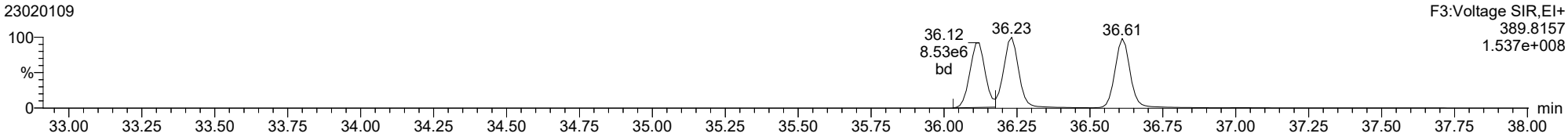

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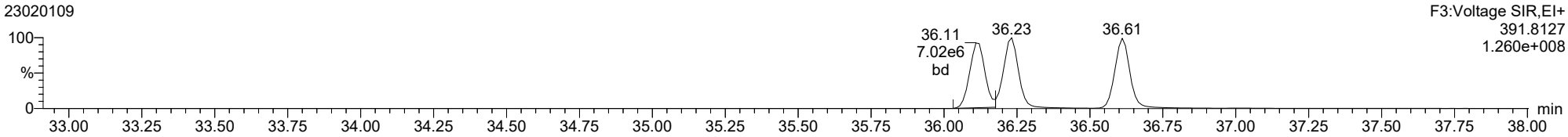

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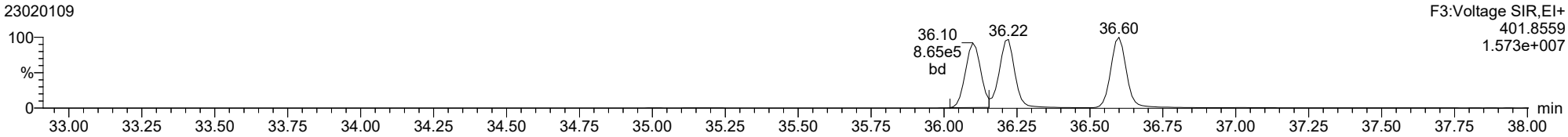

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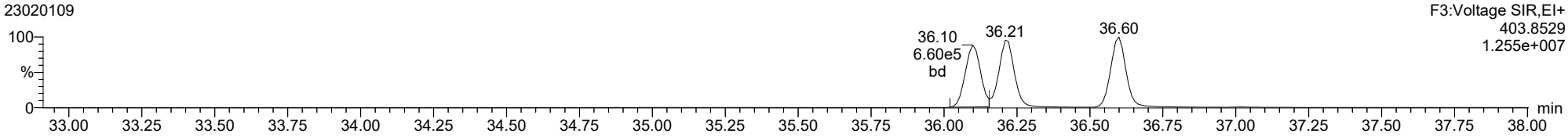

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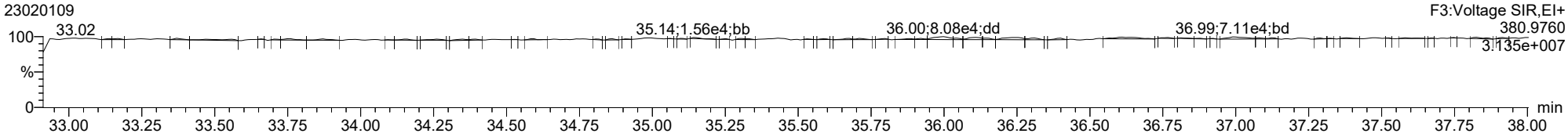

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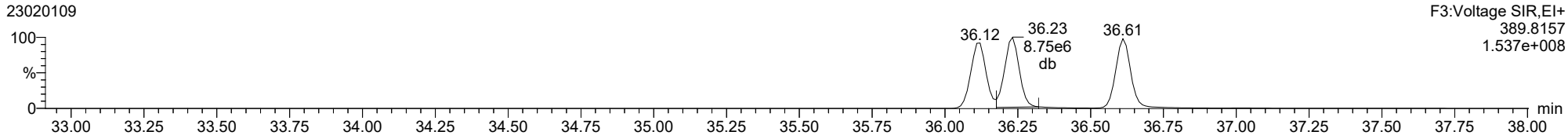

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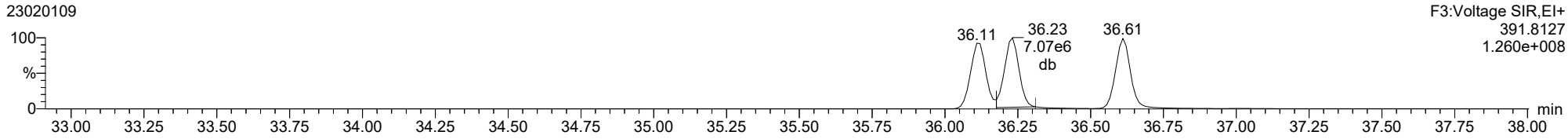

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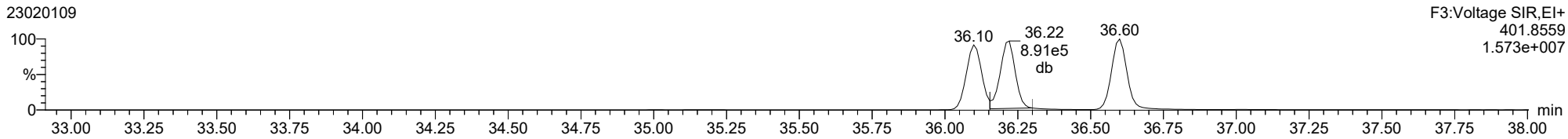

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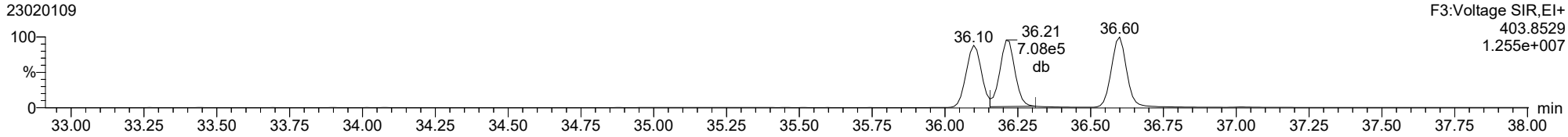

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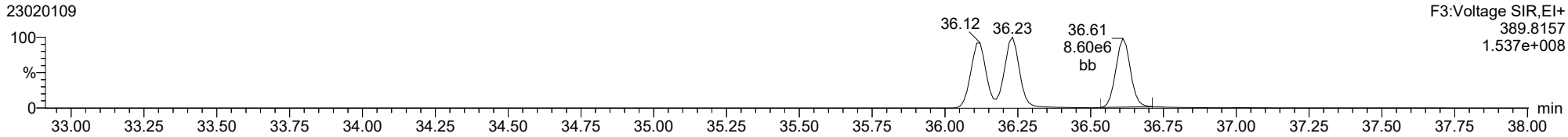

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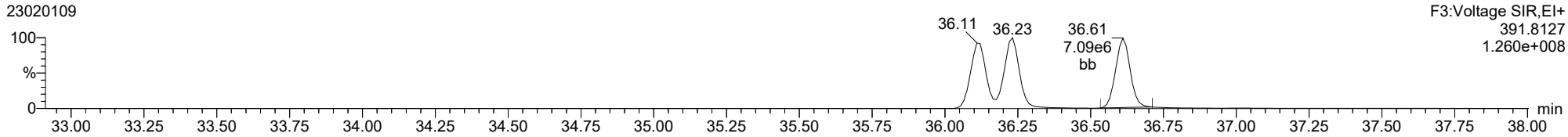

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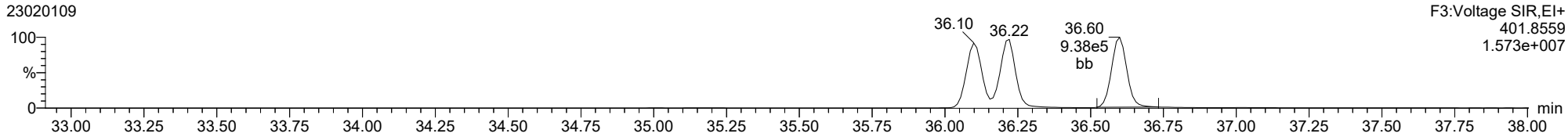

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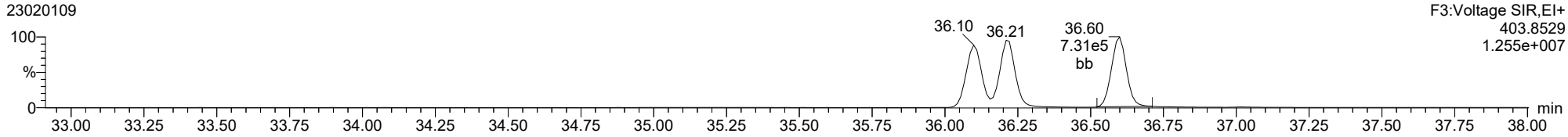

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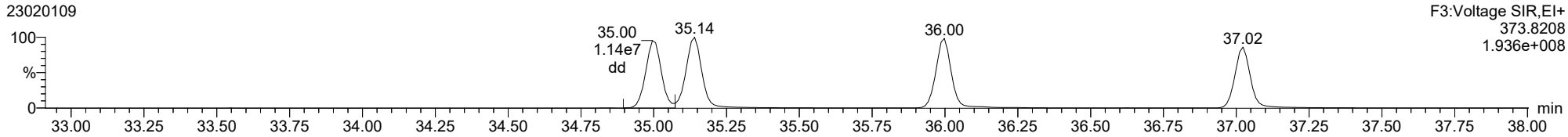

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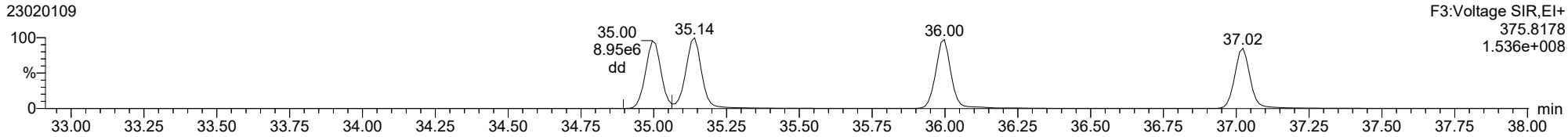

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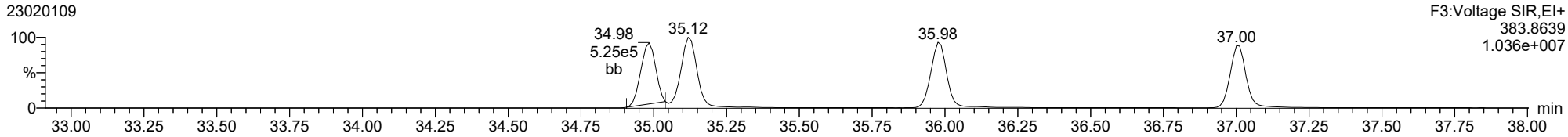

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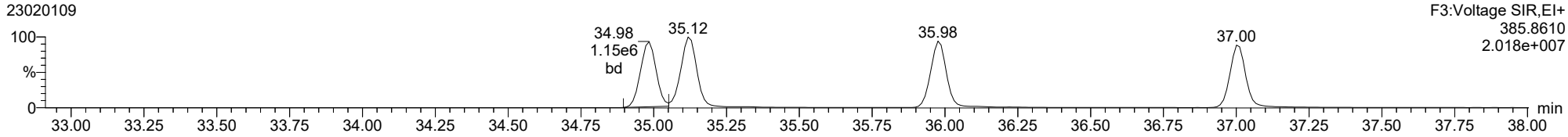
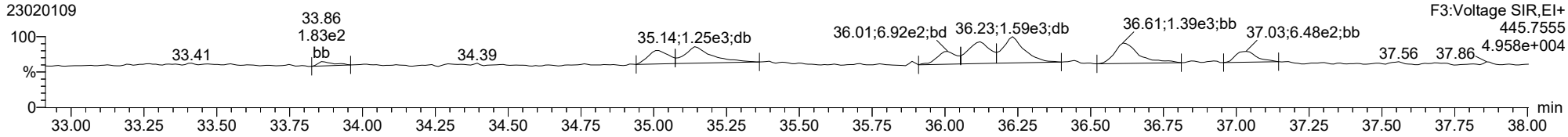


FUNCTION3 OCDPE



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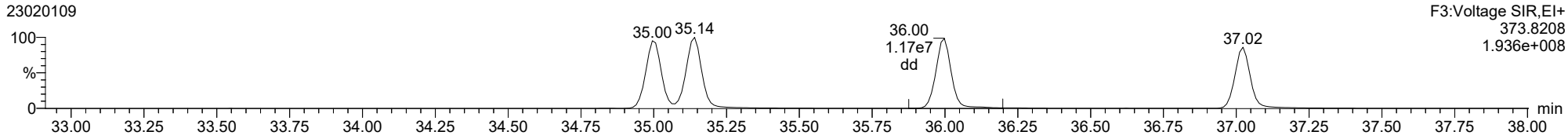
234678-HxCDF



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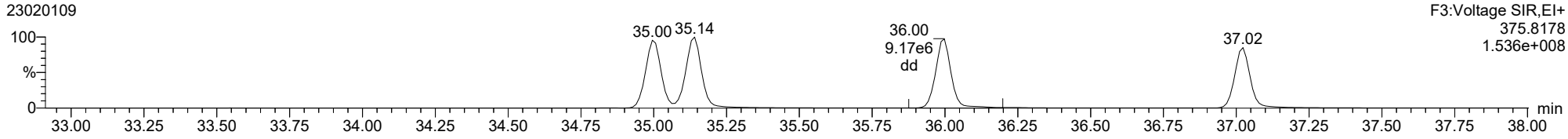

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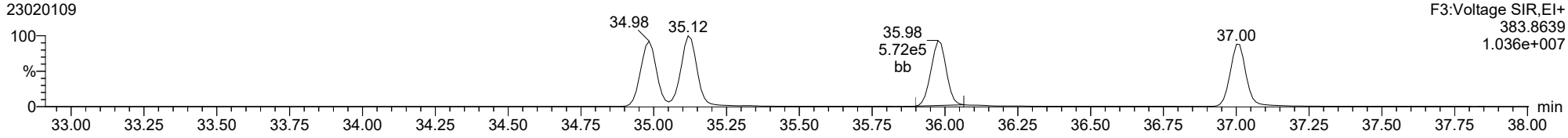

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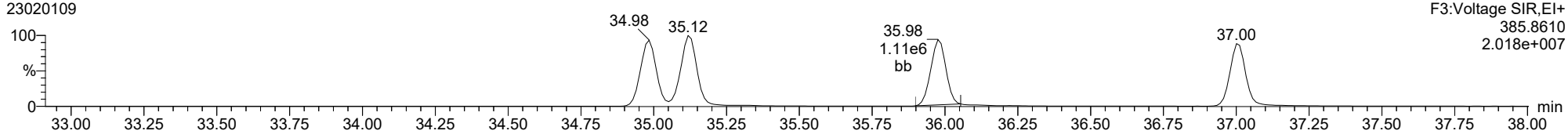
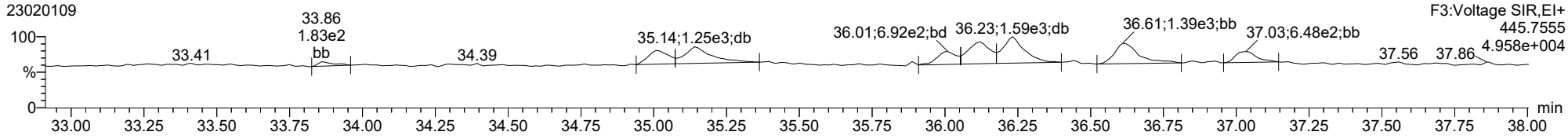


FUNCTION3 OCDPE



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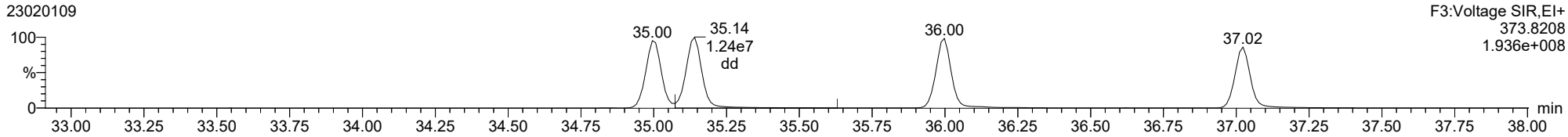

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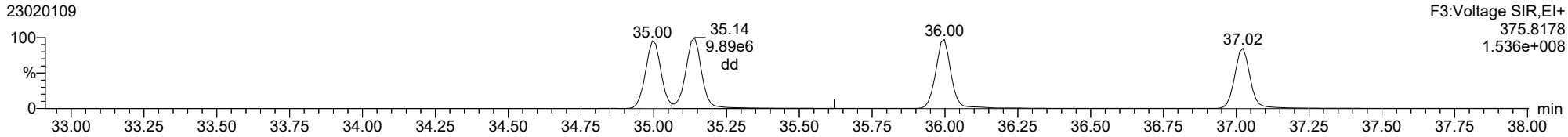

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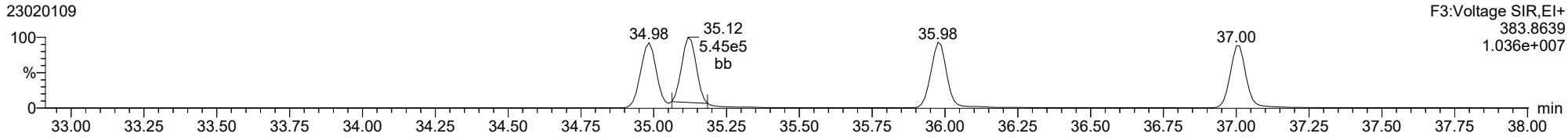

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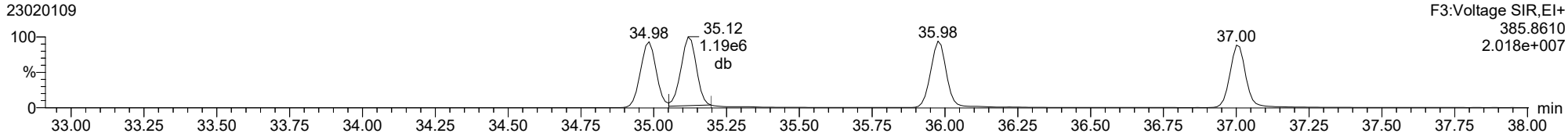

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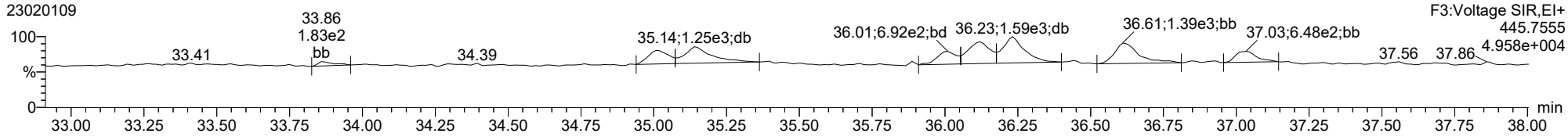

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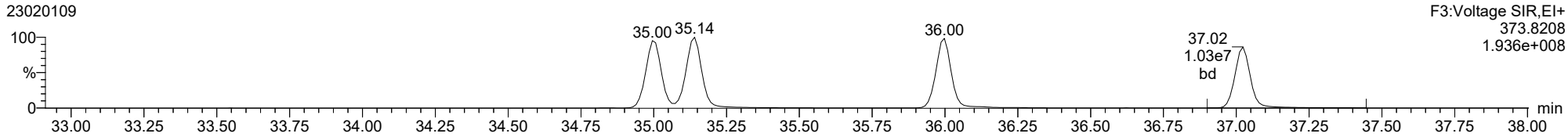

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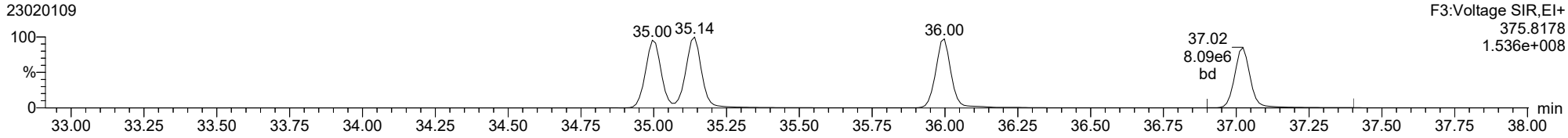

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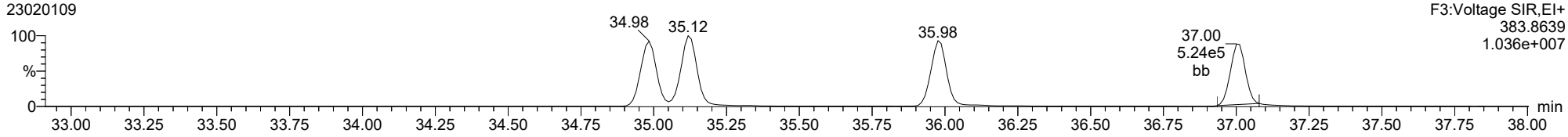

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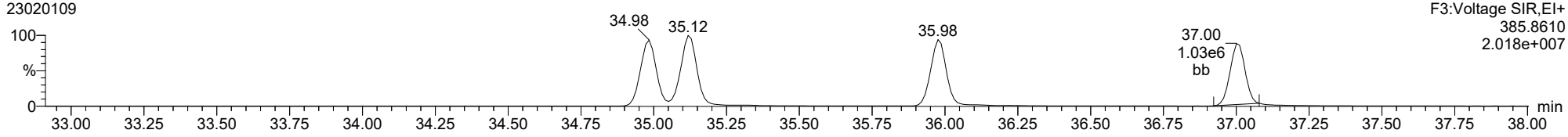

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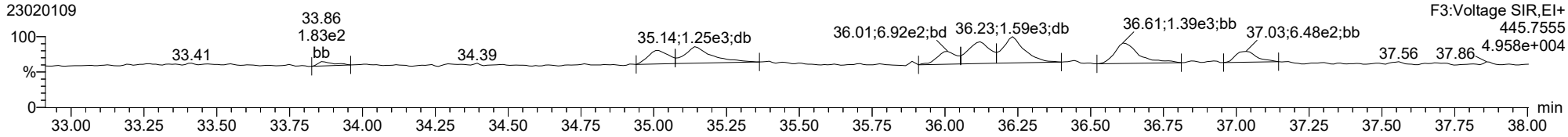

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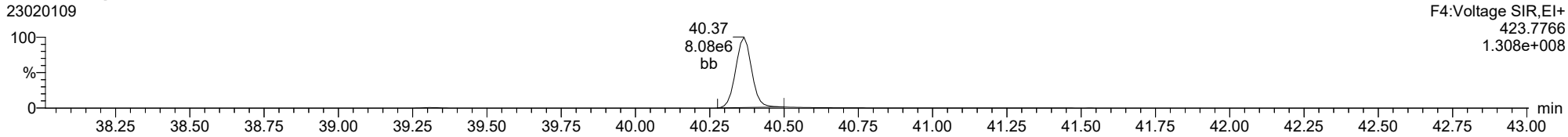

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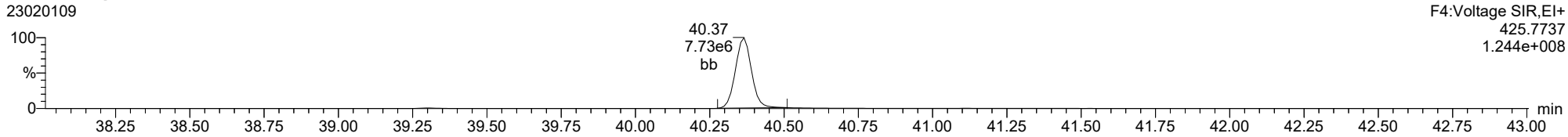

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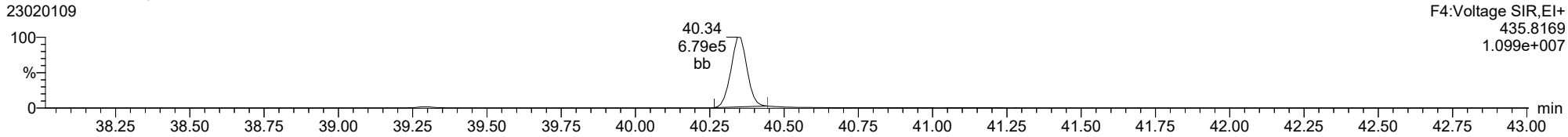

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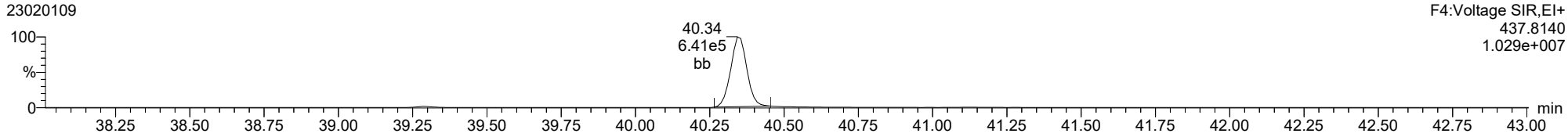
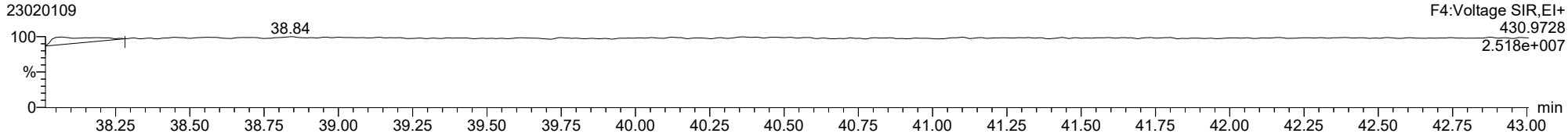


FUNCTION4 PFK



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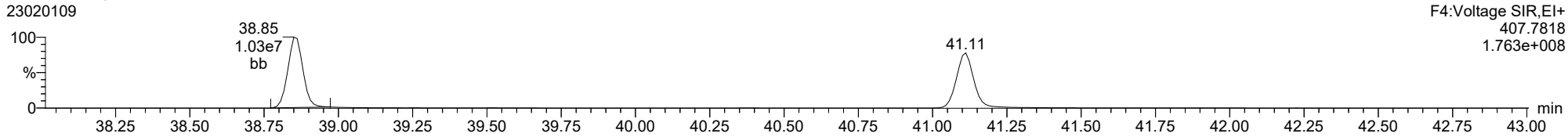

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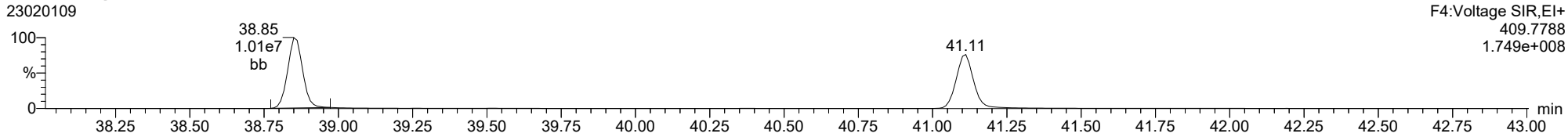

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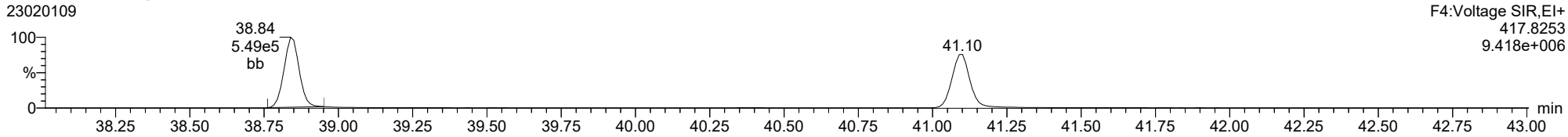

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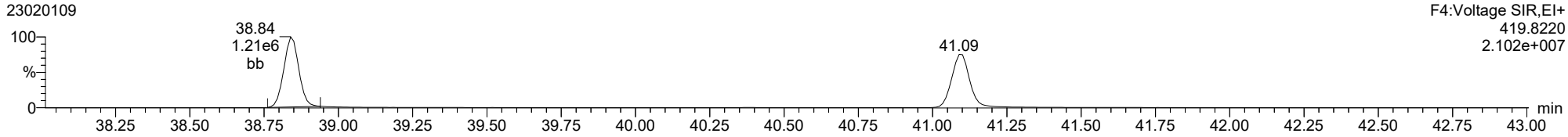
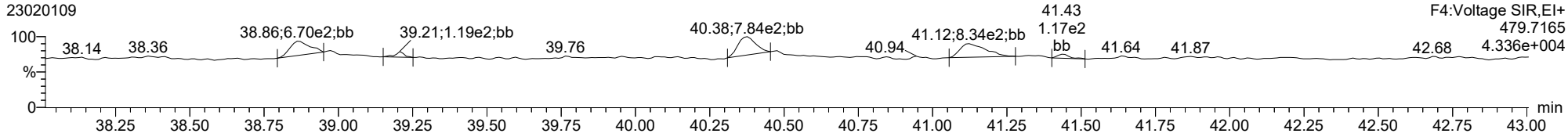


FUNCTION4 NCDPE



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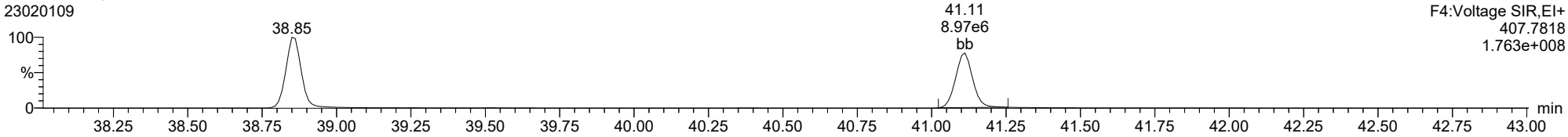

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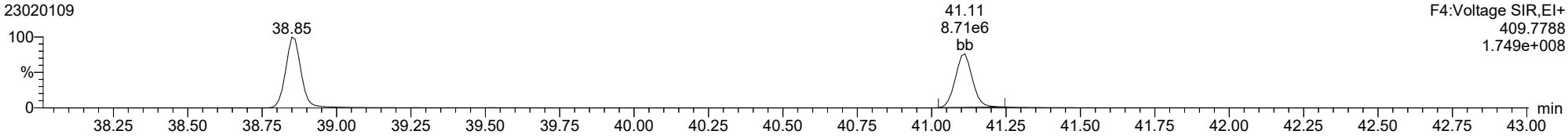

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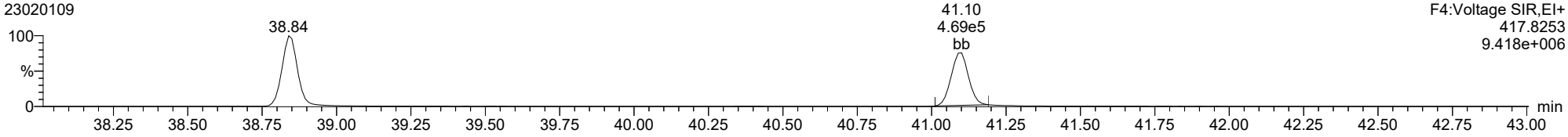

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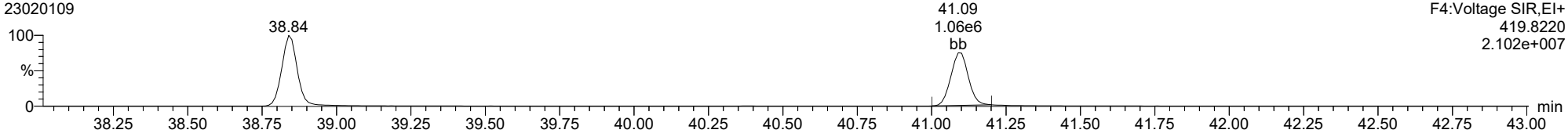

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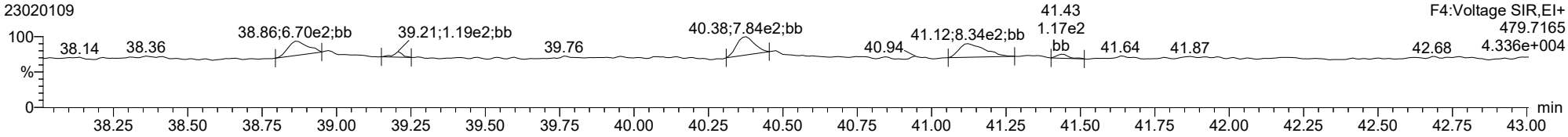

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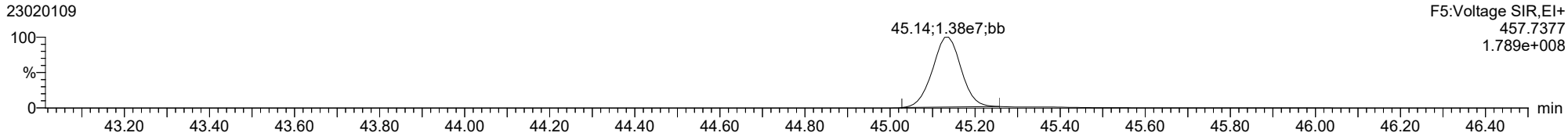
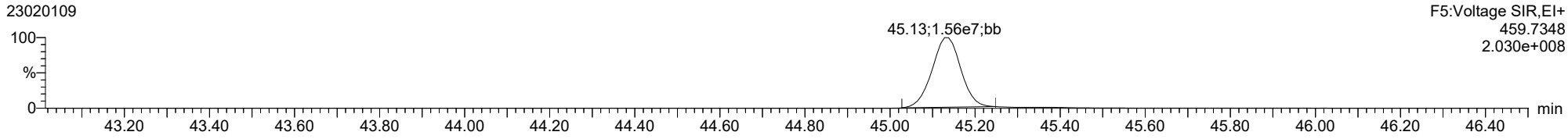


OCDD



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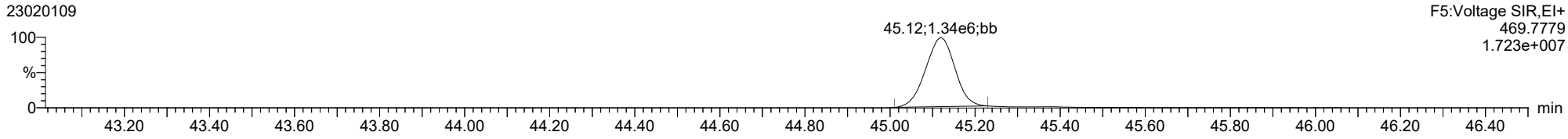

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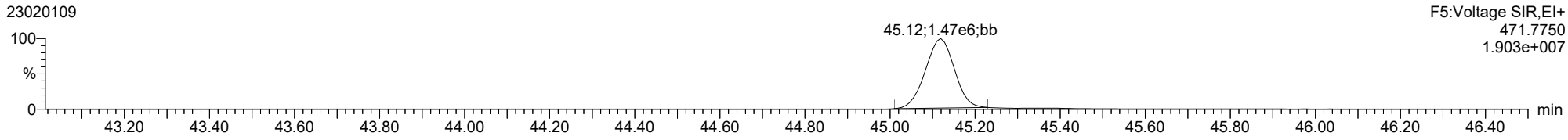
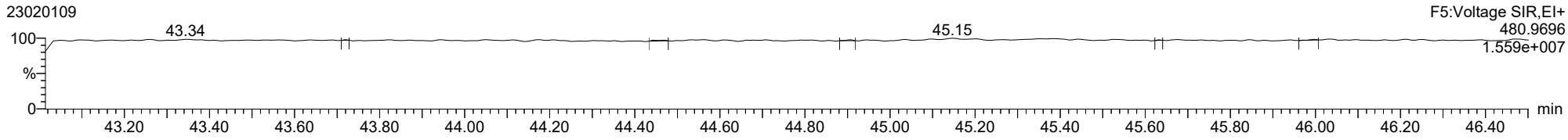


FUNCTION5 PFK



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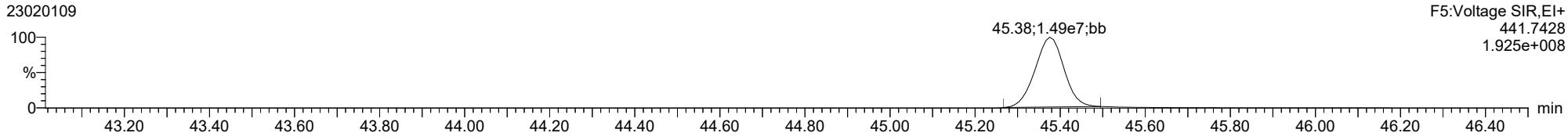

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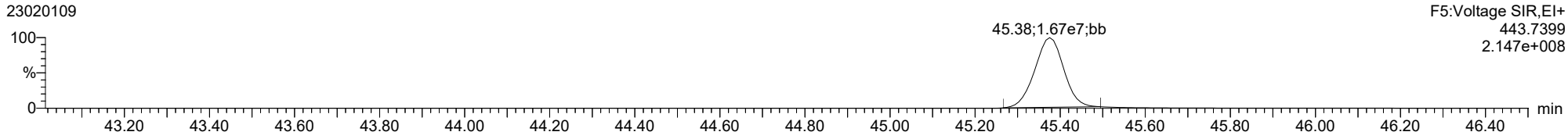
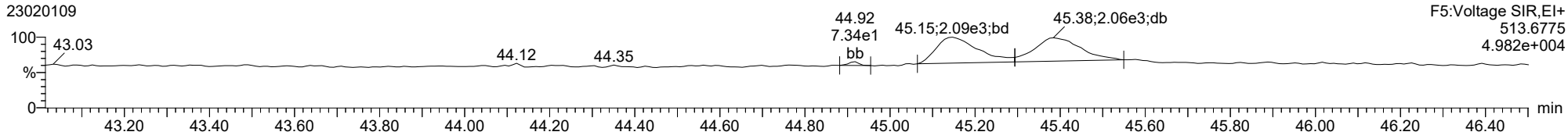


FUNCTION5 DCDPE



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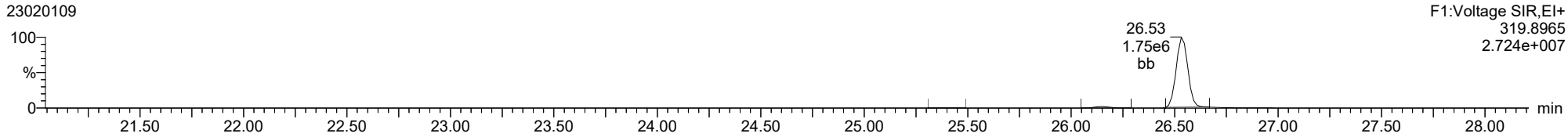
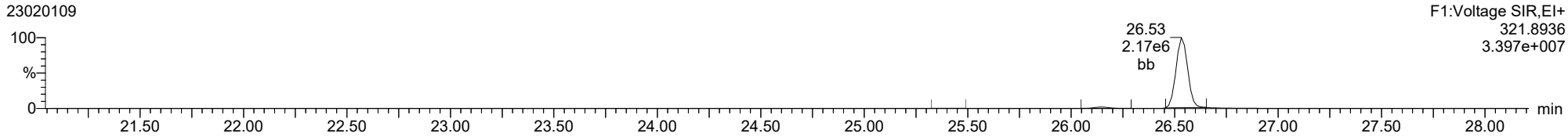
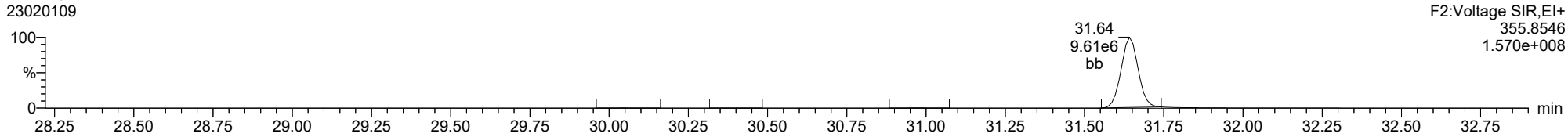
Total-tetradioxins



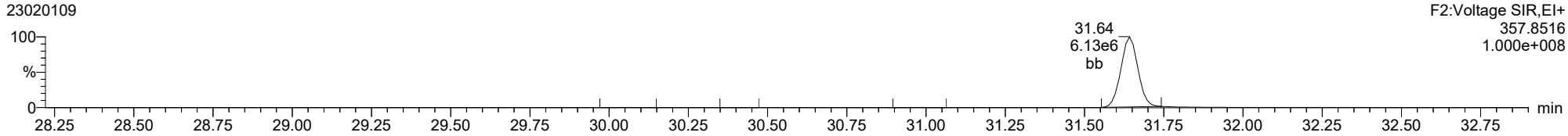
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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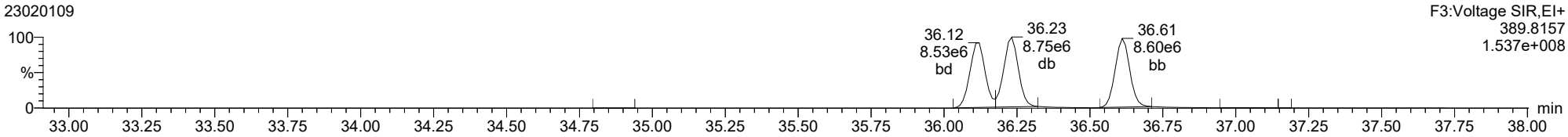
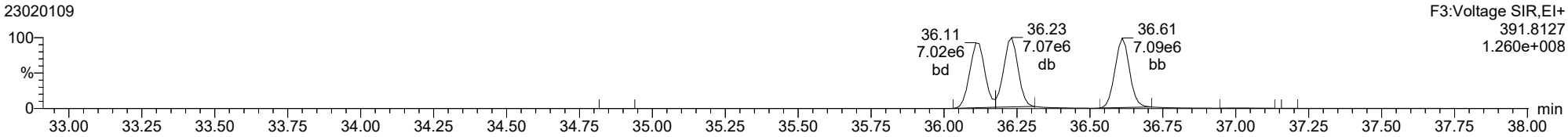
Total-hexadioxins



Total-hexadioxins



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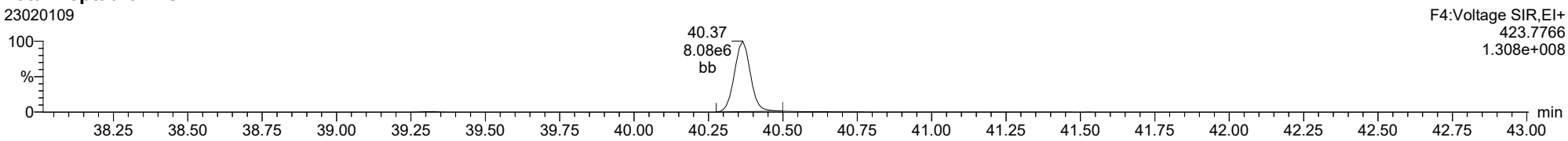
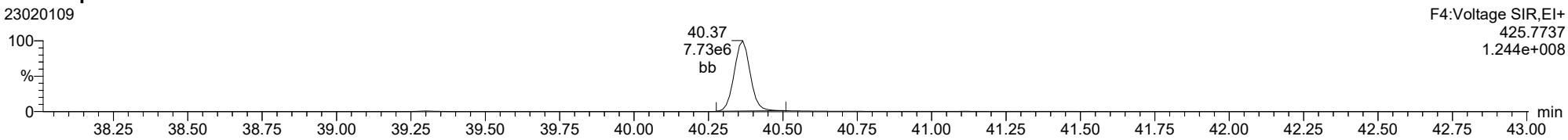


Total-heptadioxins



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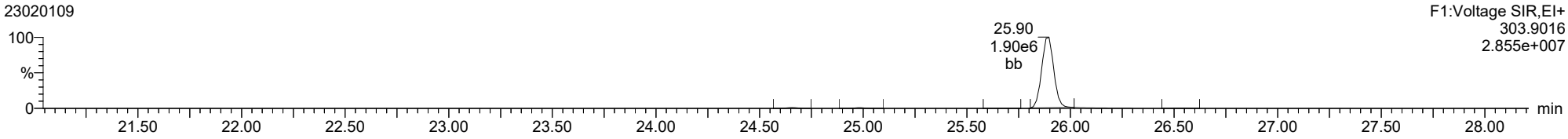
Total-tetrafurans



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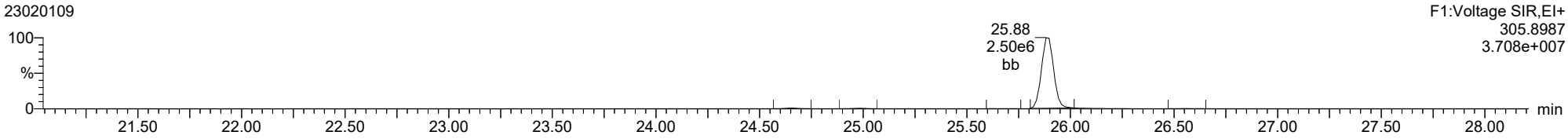

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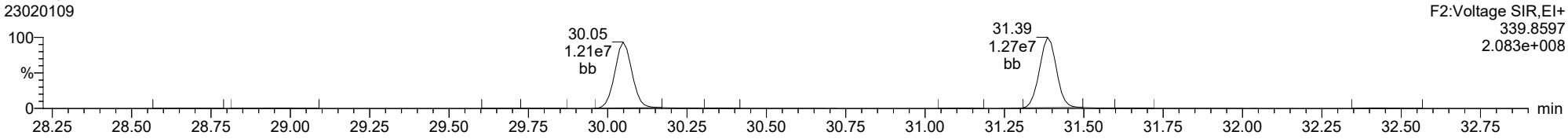
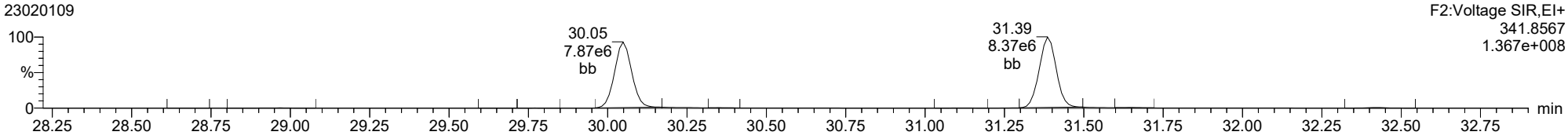


Total-pentafurans



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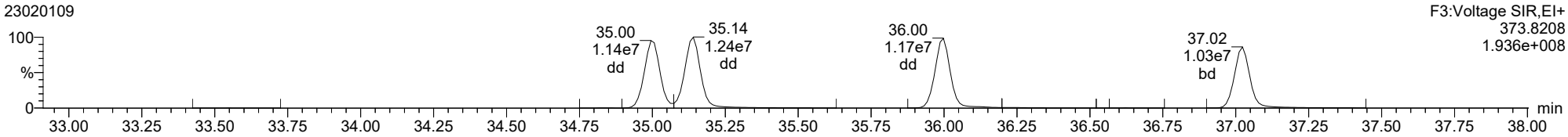
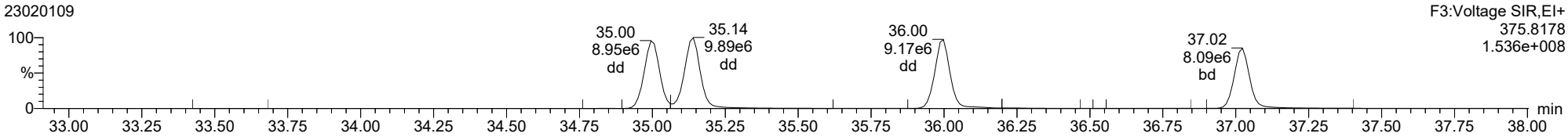
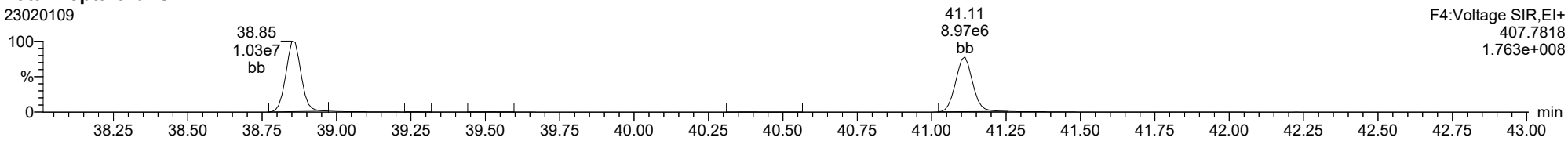


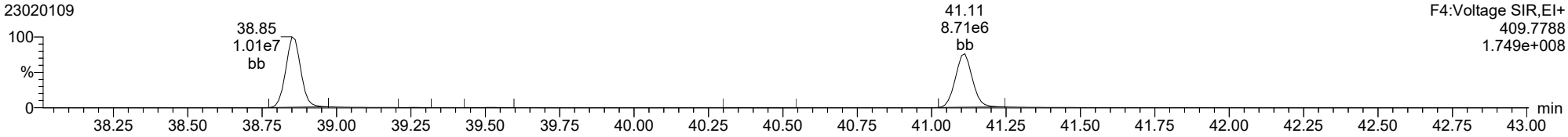
Total-hexafurans



Total-heptafurans



Total-heptafurans



Dataset: T:\Autospec\Processed Data Batch\230201ICVIH.qld
Last Altered: Friday, February 03, 2023 11:22:32 Pacific Standard Time
Printed: Friday, February 03, 2023 11:23:11 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: ICVCR, Name: 23020110, Date: 01-Feb-2023, Time: 20:23:25, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.882	1.001	7.583e4	1.018e5	0.876	0.744	0.770	1312	1705	1.17e6	1.55e6	895.7	911.1	NO	bb	bb	9.802
12378-PeCDF	30.037	1.000	4.347e5	2.900e5	0.845	1.499	1.550	3463	2713	6.78e6	4.53e6	1956.5	1669.5	NO	bb	bb	49.435
23478-PeCDF	31.374	1.000	4.582e5	2.969e5	0.911	1.543	1.550	3463	2713	6.90e6	4.53e6	1992.7	1668.4	NO	bb	bb	50.720
123478-HxCDF	34.984	1.000	3.962e5	3.152e5	1.182	1.257	1.240	2904	2208	6.26e6	4.98e6	2155.7	2257.5	NO	bd	bd	50.838
234678-HxCDF	35.987	1.001	4.056e5	3.185e5	1.229	1.273	1.240	2904	2208	6.27e6	4.93e6	2160.6	2231.5	NO	bb	bd	51.528
123678-HxCDF	35.129	1.001	4.284e5	3.437e5	1.248	1.247	1.240	2904	2208	6.50e6	5.14e6	2238.5	2329.7	NO	dd	db	51.066
123789-HxCDF	37.012	1.001	3.438e5	2.711e5	1.187	1.268	1.240	2904	2208	5.39e6	4.21e6	1855.6	1906.8	NO	bb	bb	49.890
1234678-HpCDF	38.850	1.001	3.527e5	3.436e5	1.204	1.027	1.050	3342	3138	5.81e6	5.69e6	1739.4	1813.0	NO	bb	bb	48.984
1234789-HpCDF	41.101	1.000	3.197e5	3.013e5	1.165	1.061	1.050	3342	3138	4.62e6	4.44e6	1383.4	1415.4	NO	bd	bb	51.470
OCDF	45.357	1.006	4.733e5	5.396e5	1.186	0.877	0.890	2772	1582	5.77e6	6.54e6	2082.4	4133.4	NO	bb	bb	92.994
2378-TCDD	26.532	1.001	6.792e4	8.768e4	1.236	0.775	0.770	1380	1753	1.03e6	1.34e6	749.1	761.7	NO	bb	bb	10.105
12378-PeCDD	31.631	1.000	3.290e5	2.096e5	1.087	1.569	1.550	3204	3195	5.14e6	3.30e6	1603.9	1031.8	NO	bb	bb	48.876
123478-HxCDD	36.109	1.001	2.890e5	2.319e5	0.987	1.246	1.240	2459	2022	4.84e6	3.91e6	1968.4	1935.9	NO	bd	bd	50.975
123678-HxCDD	36.221	1.000	2.990e5	2.445e5	1.021	1.223	1.240	2459	2022	4.88e6	4.06e6	1984.4	2008.5	NO	db	db	48.307
123789-HxCDD	36.599	1.011	2.845e5	2.378e5	0.985	1.196	1.240	2459	2022	4.82e6	3.99e6	1960.3	1972.8	NO	bb	bb	49.580
1234678-HpCDD	40.354	1.001	2.858e5	2.609e5	1.253	1.095	1.050	2240	2747	4.24e6	3.98e6	1890.7	1447.3	NO	bd	bb	48.846
OCDD	45.111	1.000	4.553e5	5.144e5	1.103	0.885	0.890	2050	2803	5.81e6	6.65e6	2832.1	2371.2	NO	bb	bb	95.778
13C-2378-TCDF	25.867	1.006	9.159e5	1.153e6	1.768	0.794	0.770	2721	1646	1.40e7	1.78e7	5149.2	10794.2	NO	bb	bb	100.832
13C-12378-PeCDF	30.026	1.168	1.059e6	6.764e5	1.527	1.566	1.550	3804	2727	1.61e7	1.02e7	4228.7	3742.1	NO	bb	bb	97.924
13C-23478-PeCDF	31.363	1.220	9.914e5	6.424e5	1.466	1.543	1.550	3804	2727	1.49e7	9.56e6	3917.8	3506.2	NO	bb	bb	96.003
13C-123478-HxCDF	34.973	0.956	4.014e5	7.827e5	1.054	0.513	0.510	2311	3449	6.56e6	1.28e7	2840.4	3698.0	NO	bd	bd	98.968
13C-123678-HxCDF	35.106	0.960	4.085e5	8.030e5	1.080	0.509	0.510	2311	3449	6.64e6	1.32e7	2872.8	3823.9	NO	db	db	98.793
13C-234678-HxCDF	35.964	0.983	3.869e5	7.566e5	1.014	0.511	0.510	2311	3449	6.49e6	1.28e7	2809.7	3704.0	NO	bb	bb	99.278
13C-123789-HxCDF	36.989	1.011	3.535e5	6.852e5	0.928	0.516	0.510	2311	3449	5.90e6	1.14e7	2552.6	3318.4	NO	bb	bb	98.576
13C-1234678-HpCDF	38.828	1.061	3.652e5	8.153e5	1.036	0.448	0.440	3274	4191	6.12e6	1.38e7	1868.5	3294.0	NO	bb	bb	100.340
13C-1234789-HpCDF	41.090	1.123	3.190e5	7.164e5	0.905	0.445	0.440	3274	4191	4.81e6	1.07e7	1468.7	2563.9	NO	bb	bb	100.753
13C-1234-TCDD	25.700	0.000	5.137e5	6.469e5	1.000	0.794	0.770	2221	1552	7.96e6	9.97e6	3583.6	6423.2	NO	bb	bb	100.000
13C-2378-TCDD	26.501	1.031	5.549e5	6.905e5	1.103	0.804	0.770	2221	1552	8.40e6	1.04e7	3781.7	6727.2	NO	bb	bb	97.290
13C-12378-PeCDD	31.619	1.230	6.261e5	3.880e5	0.914	1.614	1.550	1580	2177	9.40e6	5.80e6	5947.9	2663.3	NO	bb	bb	95.581
13C-123478-HxCDD	36.087	0.986	5.808e5	4.547e5	0.933	1.277	1.240	2129	1763	9.84e6	7.81e6	4624.5	4431.4	NO	bd	bd	97.737
13C-123678-HxCDD	36.209	0.990	6.262e5	4.760e5	0.965	1.315	1.240	2129	1763	9.80e6	7.57e6	4603.5	4292.7	NO	db	db	100.625
13C-1234678-HpCDD	40.332	1.102	4.634e5	4.302e5	0.782	1.077	1.050	2527	2271	7.13e6	6.69e6	2821.9	2945.0	NO	bb	bb	100.628
13C-OCDD	45.101	1.233	8.768e5	9.596e5	0.788	0.914	0.890	3549	1603	1.12e7	1.23e7	3153.1	7665.3	NO	bb	bb	205.165
13C-123789-HxCDD	36.588	0.000	6.499e5	4.857e5	1.000	1.338	1.240	2129	1763	1.03e7	7.92e6	4860.1	4494.5	NO	bb	bb	100.000
37CL-2378-TCDD	26.532	1.032	1.279e5		1.233			1385		1.91e6		1382.5			bb		8.937

Dataset: T:\Autospec\Processed Data Batch\230201ICVIH.qld
Last Altered: Friday, February 03, 2023 11:22:32 Pacific Standard Time
Printed: Friday, February 03, 2023 11:23:11 Pacific Standard Time

ID: ICVCR, Name: 23020110, Date: 01-Feb-2023, Time: 20:23:25, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.389	0.866	9.960e4	1.319e5	1.064	0.755	0.770	1312	1705	1.56e6	2.09e6	1186.8	1226.5	NO	bb	bb	10.509
1289-TCDF	27.378	1.058	7.533e4	1.022e5	0.858	0.737	0.770	1312	1705	1.14e6	1.52e6	867.5	889.5	NO	db	db	10.006
13468-PECDF	27.242	0.907	5.475e5	3.540e5	1.013	1.547	1.550	880	1149	8.31e6	5.37e6	9441.4	4673.6	NO	bb	bb	51.279
12389-PECDF					0.844		1.550	3463	2713								
123468-HXCDF	33.335	0.953	4.175e5	3.320e5	1.197	1.258	1.240	2904	2208	6.11e6	4.84e6	2104.7	2190.3	NO	bb	bb	52.862
1368-TCDD	23.659	0.893	6.883e4	8.714e4	1.084	0.790	0.770	1380	1753	1.12e6	1.44e6	811.7	819.2	NO	bb	bb	11.549
1289-TCDD	27.122	1.023	6.029e4	7.860e4	0.975	0.767	0.770	1380	1753	8.98e5	1.15e6	650.5	656.0	NO	bb	bd	11.436
12479-PECDD	28.912	0.914	6.082e5	3.865e5	1.837	1.574	1.550	3204	3195	5.92e6	3.73e6	1847.3	1168.6	NO	bb	bb	53.387
12389-PECDD	32.032	1.013	4.002e5	2.572e5	1.252	1.556	1.550	3204	3195	6.11e6	3.89e6	1906.1	1217.0	NO	bb	bb	51.760
124679-HXCDD	34.104	0.945	3.073e5	2.529e5	1.033	1.215	1.240	2459	2022	4.88e6	4.09e6	1984.3	2022.2	NO	bb	bb	52.384
1234679-HPCDD	39.296	0.974	2.978e5	2.984e5	1.286	0.998	1.050	2240	2747	4.86e6	4.77e6	2169.4	1735.2	NO	bb	bd	51.878
Total-tetrafurans			2.515e5		0.933			1312		3.88e6							30.410
Total-penta1			5.475e5					880		8.31e6							51.279
Total-pentafurans			1.407e6		0.866			3463		2.14e7							158.406
Total-hexafurans			1.992e6		1.208			2904		3.05e7							256.184
Total-heptafurans			6.724e5		1.185			3342		1.04e7							100.453
Total-Furans			5.343e6		1.067			1312		8.03e7							689.726
Total-tetradioxins			3.350e5		1.099			1380		4.69e6							55.818
Total-pentadioxins			1.337e6		1.392			3204		1.72e7							154.023
Total-hexadioxins			1.180e6		1.007			2459		1.94e7							201.246
Total-heptadioxins			5.836e5		1.269			2240		9.09e6							100.724
Total-Dioxins			3.891e6		1.165			1380		5.62e7							607.589
Total-TEQ			9.234e6					1380		1.36e8							1297.316
FUNCTION1 PFK			2.960e5					590383		7.93e6							
FUNCTION2 PFK			3.847e5					195923		1.00e7							0.000
FUNCTION3 PFK			3.926e5					364545		1.22e7							0.000
FUNCTION4 PFK			4.778e5					303163		3.90e6							
FUNCTION5 PFK			9.338e4					197261		3.25e6							
FUNCTION1 HXCD...			9.172e2					783		1.34e4							0.000
FUNCTION1 HPCD...			1.484e3					913		2.30e4							0.000
FUNCTION2 HPCD...			4.855e2					894		8.19e3							0.000
FUNCTION3 OCDPE			1.383e2					795		2.59e3							0.000
FUNCTION4 NCDPE			2.530e2					911		5.27e3							0.000
FUNCTION5 DCDPE			7.207e1					795		1.85e3							0.000

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: ICVCR, Name: 23020110, Date: 01-Feb-2023, Time: 20:23:25, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	7.533e4	1.022e5	0.858	0.74	0.77	867.5	YES	NO	db	db	10.006
2	2378-TCDF	25.88	7.583e4	1.018e5	0.876	0.74	0.77	895.7	YES	NO	bb	bb	9.802
3	Total-tetrafurans	24.79	7.370e2	1.079e3	0.933	0.68	0.77	8.4	YES	NO	db	dd	0.094
4	1368-TCDF	22.39	9.960e4	1.319e5	1.064	0.76	0.77	1186.8	YES	NO	bb	bb	10.509

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.24	5.475e5	3.540e5	1.013	1.55	1.55	9441.4	YES	NO	bb	bb	51.279

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	32.41	4.363e5	2.872e5	0.866	1.52	1.55	1891.7	YES	NO	bb	bb	49.558
2	23478-PeCDF	31.37	4.582e5	2.969e5	0.911	1.54	1.55	1992.7	YES	NO	bb	bb	50.720
3	12378-PeCDF	30.04	4.347e5	2.900e5	0.845	1.50	1.55	1956.5	YES	NO	bb	bb	49.435
4	Total-pentafurans	28.89	7.749e4	4.941e4	0.866	1.57	1.55	335.4	YES	NO	bb	bb	8.693

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.01	3.438e5	2.711e5	1.187	1.27	1.24	1855.6	YES	NO	bb	bb	49.890
2	234678-HxCDF	35.99	4.056e5	3.185e5	1.229	1.27	1.24	2160.6	YES	NO	bb	bd	51.528
3	123678-HxCDF	35.13	4.284e5	3.437e5	1.248	1.25	1.24	2238.5	YES	NO	dd	db	51.066
4	123478-HxCDF	34.98	3.962e5	3.152e5	1.182	1.26	1.24	2155.7	YES	NO	bd	bd	50.838
5	123468-HXCDF	33.34	4.175e5	3.320e5	1.197	1.26	1.24	2104.7	YES	NO	bb	bb	52.862

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.85	3.527e5	3.436e5	1.204	1.03	1.05	1739.4	YES	NO	bb	bb	48.984
2	1234789-HpCDF	41.10	3.197e5	3.013e5	1.165	1.06	1.05	1383.4	YES	NO	bd	bb	51.470

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	7.533e4	1.022e5	0.858	0.74	0.77	867.5	YES	NO	db	db	10.006
2	2378-TCDF	25.88	7.583e4	1.018e5	0.876	0.74	0.77	895.7	YES	NO	bb	bb	9.802
3	Total-tetrafurans	24.79	7.370e2	1.079e3	0.933	0.68	0.77	8.4	YES	NO	db	dd	0.094
4	1368-TCDF	22.39	9.960e4	1.319e5	1.064	0.76	0.77	1186.8	YES	NO	bb	bb	10.509
5	Total-pentafurans	32.41	4.363e5	2.872e5	0.866	1.52	1.55	1891.7	YES	NO	bb	bb	49.558
6	23478-PeCDF	31.37	4.582e5	2.969e5	0.911	1.54	1.55	1992.7	YES	NO	bb	bb	50.720
7	12378-PeCDF	30.04	4.347e5	2.900e5	0.845	1.50	1.55	1956.5	YES	NO	bb	bb	49.435
8	Total-pentafurans	28.89	7.749e4	4.941e4	0.866	1.57	1.55	335.4	YES	NO	bb	bb	8.693
9	123789-HxCDF	37.01	3.438e5	2.711e5	1.187	1.27	1.24	1855.6	YES	NO	bb	bb	49.890
10	234678-HxCDF	35.99	4.056e5	3.185e5	1.229	1.27	1.24	2160.6	YES	NO	bb	bd	51.528
11	123678-HxCDF	35.13	4.284e5	3.437e5	1.248	1.25	1.24	2238.5	YES	NO	dd	db	51.066
12	123478-HxCDF	34.98	3.962e5	3.152e5	1.182	1.26	1.24	2155.7	YES	NO	bd	bd	50.838
13	123468-HXCDF	33.34	4.175e5	3.320e5	1.197	1.26	1.24	2104.7	YES	NO	bb	bb	52.862
14	1234678-HpCDF	38.85	3.527e5	3.436e5	1.204	1.03	1.05	1739.4	YES	NO	bb	bb	48.984
15	1234789-HpCDF	41.10	3.197e5	3.013e5	1.165	1.06	1.05	1383.4	YES	NO	bd	bb	51.470
16	OCDF	45.36	4.733e5	5.396e5	1.186	0.88	0.89	2082.4	YES	NO	bb	bb	92.994
17	13468-PECDF	27.24	5.475e5	3.540e5	1.013	1.55	1.55	9441.4	YES	NO	bb	bb	51.279

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.66	6.883e4	8.714e4	1.084	0.79	0.77	811.7	YES	NO	bb	bb	11.549
2	1289-TCDD	27.12	6.029e4	7.860e4	0.975	0.77	0.77	650.5	YES	NO	bb	bd	11.436
3	2378-TCDD	26.53	6.792e4	8.768e4	1.236	0.77	0.77	749.1	YES	NO	bb	bb	10.105
4	Total-tetradioxins	26.20	1.038e5	1.301e5	1.099	0.80	0.77	805.2	YES	NO	bb	bb	17.096
5	Total-tetradioxins	25.72	3.415e4	4.291e4	1.099	0.80	0.77	378.9	YES	NO	bd	bd	5.632

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.03	4.002e5	2.572e5	1.252	1.56	1.55	1906.1	YES	NO	bb	bb	51.760
2	12378-PeCDD	31.63	3.290e5	2.096e5	1.087	1.57	1.55	1603.9	YES	NO	bb	bb	48.876
3	12479-PECDD	28.91	6.082e5	3.865e5	1.837	1.57	1.55	1847.3	YES	NO	bb	bb	53.387

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.60	2.845e5	2.378e5	0.985	1.20	1.24	1960.3	YES	NO	bb	bb	49.580
2	123678-HxCDD	36.22	2.990e5	2.445e5	1.021	1.22	1.24	1984.4	YES	NO	db	db	48.307
3	123478-HxCDD	36.11	2.890e5	2.319e5	0.987	1.25	1.24	1968.4	YES	NO	bd	bd	50.975
4	124679-HXCDD	34.10	3.073e5	2.529e5	1.033	1.22	1.24	1984.3	YES	NO	bb	bb	52.384

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.35	2.858e5	2.609e5	1.253	1.10	1.05	1890.7	YES	NO	bd	bb	48.846
2	1234679-HPCDD	39.30	2.978e5	2.984e5	1.286	1.00	1.05	2169.4	YES	NO	bb	bd	51.878

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.66	6.883e4	8.714e4	1.084	0.79	0.77	811.7	YES	NO	bb	bb	11.549
2	1289-TCDD	27.12	6.029e4	7.860e4	0.975	0.77	0.77	650.5	YES	NO	bb	bd	11.436
3	2378-TCDD	26.53	6.792e4	8.768e4	1.236	0.77	0.77	749.1	YES	NO	bb	bb	10.105
4	Total-tetradioxins	26.20	1.038e5	1.301e5	1.099	0.80	0.77	805.2	YES	NO	bb	bb	17.096
5	Total-tetradioxins	25.72	3.415e4	4.291e4	1.099	0.80	0.77	378.9	YES	NO	bd	bd	5.632
6	12389-PECDD	32.03	4.002e5	2.572e5	1.252	1.56	1.55	1906.1	YES	NO	bb	bb	51.760
7	12378-PeCDD	31.63	3.290e5	2.096e5	1.087	1.57	1.55	1603.9	YES	NO	bb	bb	48.876
8	12479-PECDD	28.91	6.082e5	3.865e5	1.837	1.57	1.55	1847.3	YES	NO	bb	bb	53.387
9	123789-HxCDD	36.60	2.845e5	2.378e5	0.985	1.20	1.24	1960.3	YES	NO	bb	bb	49.580
10	123678-HxCDD	36.22	2.990e5	2.445e5	1.021	1.22	1.24	1984.4	YES	NO	db	db	48.307
11	123478-HxCDD	36.11	2.890e5	2.319e5	0.987	1.25	1.24	1968.4	YES	NO	bd	bd	50.975
12	124679-HXCDD	34.10	3.073e5	2.529e5	1.033	1.22	1.24	1984.3	YES	NO	bb	bb	52.384
13	1234678-HpCDD	40.35	2.858e5	2.609e5	1.253	1.10	1.05	1890.7	YES	NO	bd	bb	48.846
14	1234679-HPCDD	39.30	2.978e5	2.984e5	1.286	1.00	1.05	2169.4	YES	NO	bb	bd	51.878
15	OCDD	45.11	4.553e5	5.144e5	1.103	0.89	0.89	2832.1	YES	NO	bb	bb	95.778

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	7.533e4	1.022e5	0.858	0.74	0.77	867.5	YES	NO	db	db	10.006
2	2378-TCDF	25.88	7.583e4	1.018e5	0.876	0.74	0.77	895.7	YES	NO	bb	bb	9.802
3	Total-tetrafurans	24.79	7.370e2	1.079e3	0.933	0.68	0.77	8.4	YES	NO	db	dd	0.094
4	1368-TCDF	22.39	9.960e4	1.319e5	1.064	0.76	0.77	1186.8	YES	NO	bb	bb	10.509
5	Total-pentafurans	32.41	4.363e5	2.872e5	0.866	1.52	1.55	1891.7	YES	NO	bb	bb	49.558
6	23478-PeCDF	31.37	4.582e5	2.969e5	0.911	1.54	1.55	1992.7	YES	NO	bb	bb	50.720
7	12378-PeCDF	30.04	4.347e5	2.900e5	0.845	1.50	1.55	1956.5	YES	NO	bb	bb	49.435
8	Total-pentafurans	28.89	7.749e4	4.941e4	0.866	1.57	1.55	335.4	YES	NO	bb	bb	8.693
9	123789-HxCDF	37.01	3.438e5	2.711e5	1.187	1.27	1.24	1855.6	YES	NO	bb	bb	49.890
10	234678-HxCDF	35.99	4.056e5	3.185e5	1.229	1.27	1.24	2160.6	YES	NO	bb	bd	51.528
11	123678-HxCDF	35.13	4.284e5	3.437e5	1.248	1.25	1.24	2238.5	YES	NO	dd	db	51.066
12	123478-HxCDF	34.98	3.962e5	3.152e5	1.182	1.26	1.24	2155.7	YES	NO	bd	bd	50.838
13	123468-HXCDF	33.34	4.175e5	3.320e5	1.197	1.26	1.24	2104.7	YES	NO	bb	bb	52.862
14	1234678-HpCDF	38.85	3.527e5	3.436e5	1.204	1.03	1.05	1739.4	YES	NO	bb	bb	48.984
15	1234789-HpCDF	41.10	3.197e5	3.013e5	1.165	1.06	1.05	1383.4	YES	NO	bd	bb	51.470
16	OCDF	45.36	4.733e5	5.396e5	1.186	0.88	0.89	2082.4	YES	NO	bb	bb	92.994
17	13468-PECDF	27.24	5.475e5	3.540e5	1.013	1.55	1.55	9441.4	YES	NO	bb	bb	51.279
18	1368-TCDD	23.66	6.883e4	8.714e4	1.084	0.79	0.77	811.7	YES	NO	bb	bb	11.549
19	1289-TCDD	27.12	6.029e4	7.860e4	0.975	0.77	0.77	650.5	YES	NO	bb	bd	11.436
20	2378-TCDD	26.53	6.792e4	8.768e4	1.236	0.77	0.77	749.1	YES	NO	bb	bb	10.105
21	Total-tetradioxins	26.20	1.038e5	1.301e5	1.099	0.80	0.77	805.2	YES	NO	bb	bb	17.096
22	Total-tetradioxins	25.72	3.415e4	4.291e4	1.099	0.80	0.77	378.9	YES	NO	bd	bd	5.632
23	12389-PECDD	32.03	4.002e5	2.572e5	1.252	1.56	1.55	1906.1	YES	NO	bb	bb	51.760
24	12378-PeCDD	31.63	3.290e5	2.096e5	1.087	1.57	1.55	1603.9	YES	NO	bb	bb	48.876
25	12479-PECDD	28.91	6.082e5	3.865e5	1.837	1.57	1.55	1847.3	YES	NO	bb	bb	53.387
26	123789-HxCDD	36.60	2.845e5	2.378e5	0.985	1.20	1.24	1960.3	YES	NO	bb	bb	49.580
27	123678-HxCDD	36.22	2.990e5	2.445e5	1.021	1.22	1.24	1984.4	YES	NO	db	db	48.307
28	123478-HxCDD	36.11	2.890e5	2.319e5	0.987	1.25	1.24	1968.4	YES	NO	bd	bd	50.975
29	124679-HXCDD	34.10	3.073e5	2.529e5	1.033	1.22	1.24	1984.3	YES	NO	bb	bb	52.384
30	1234678-HpCDD	40.35	2.858e5	2.609e5	1.253	1.10	1.05	1890.7	YES	NO	bd	bb	48.846
31	1234679-HPCDD	39.30	2.978e5	2.984e5	1.286	1.00	1.05	2169.4	YES	NO	bb	bd	51.878
32	OCDD	45.11	4.553e5	5.144e5	1.103	0.89	0.89	2832.1	YES	NO	bb	bb	95.778

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	27.86	1.802e4					0.8	NO		bb		
2	FUNCTION1 PFK	27.44	9.566e3					0.7	NO		bb		
3	FUNCTION1 PFK	27.12	3.959e3					0.4	NO		bb		
4	FUNCTION1 PFK	26.97	4.648e4					1.4	NO		bb		
5	FUNCTION1 PFK	26.85	1.177e4					0.8	NO		bb		
6	FUNCTION1 PFK	26.26	3.797e3					0.4	NO		bb		
7	FUNCTION1 PFK	25.26	1.715e4					0.9	NO		bb		
8	FUNCTION1 PFK	24.10	5.099e4					1.3	NO		bb		
9	FUNCTION1 PFK	22.39	1.400e4					0.8	NO		bb		
10	FUNCTION1 PFK	22.18	2.255e4					1.2	NO		bb		
11	FUNCTION1 PFK	21.91	1.341e4					0.9	NO		bb		
12	FUNCTION1 PFK	21.72	1.562e4					0.9	NO		bb		
13	FUNCTION1 PFK	21.54	1.217e4					0.8	NO		bb		
14	FUNCTION1 PFK	21.48	3.458e4					0.9	NO		bb		
15	FUNCTION1 PFK	28.06	2.191e4					1.2	NO		bb		

Dataset: T:\Autospec\Processed Data Batch\230201ICVIH.qld
Last Altered: Friday, February 03, 2023 11:22:32 Pacific Standard Time
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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	30.07	6.452e3					0.9	NO		bd		0.000
2	FUNCTION2 PFK	29.81	1.293e4					1.6	NO		db		0.000
3	FUNCTION2 PFK	29.78	4.561e3					1.1	NO		bd		0.000
4	FUNCTION2 PFK	29.68	5.711e3					1.0	NO		db		0.000
5	FUNCTION2 PFK	29.64	1.700e4					1.8	NO		bd		0.000
6	FUNCTION2 PFK	29.47	2.480e4					1.9	NO		db		0.000
7	FUNCTION2 PFK	29.36	1.696e4					1.9	NO		bd		0.000
8	FUNCTION2 PFK	29.29	2.861e3					0.7	NO		bb		0.000
9	FUNCTION2 PFK	29.16	1.091e4					1.2	NO		bb		0.000
10	FUNCTION2 PFK	28.90	2.320e3					0.6	NO		bb		0.000
11	FUNCTION2 PFK	28.80	2.770e3					0.8	NO		bb		0.000
12	FUNCTION2 PFK	28.54	5.899e3					1.2	NO		db		0.000
13	FUNCTION2 PFK	28.50	1.397e4					2.0	NO		bd		0.000
14	FUNCTION2 PFK	28.32	1.175e3					0.5	NO		bb		0.000
15	FUNCTION2 PFK	31.69	3.508e3					0.9	NO		bb		0.000
16	FUNCTION2 PFK	31.63	1.016e4					1.4	NO		bb		0.000
17	FUNCTION2 PFK	31.53	8.675e3					0.8	NO		bb		0.000
18	FUNCTION2 PFK	31.49	1.869e3					0.7	NO		bb		0.000
19	FUNCTION2 PFK	31.40	1.095e4					1.3	NO		bb		0.000
20	FUNCTION2 PFK	31.20	1.018e4					1.4	NO		db		0.000
21	FUNCTION2 PFK	31.14	9.902e3					1.4	NO		bd		0.000
22	FUNCTION2 PFK	31.04	2.521e3					0.6	NO		bb		0.000
23	FUNCTION2 PFK	30.92	4.486e3					1.1	NO		db		0.000
24	FUNCTION2 PFK	30.88	6.090e3					1.2	NO		bd		0.000
25	FUNCTION2 PFK	30.81	3.856e3					0.6	NO		bb		0.000
26	FUNCTION2 PFK	30.76	7.571e3					1.5	NO		db		0.000
27	FUNCTION2 PFK	30.72	1.009e4					1.3	NO		bd		0.000
28	FUNCTION2 PFK	30.37	7.200e3					1.1	NO		db		0.000
29	FUNCTION2 PFK	30.32	1.863e4					2.0	NO		bd		0.000
30	FUNCTION2 PFK	30.12	8.431e3					1.5	NO		db		0.000
31	FUNCTION2 PFK	32.82	1.531e4					1.7	NO		bb		0.000
32	FUNCTION2 PFK	32.76	2.617e4					2.0	NO		db		0.000
33	FUNCTION2 PFK	32.66	9.185e3					1.4	NO		dd		0.000
34	FUNCTION2 PFK	32.61	2.742e4					2.3	NO		dd		0.000
35	FUNCTION2 PFK	32.51	2.015e4					1.8	NO		dd		0.000
36	FUNCTION2 PFK	32.38	1.541e4					2.0	NO		bd		0.000
37	FUNCTION2 PFK	32.27	1.620e3					0.7	NO		bb		0.000

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION2 PFK	32.22	6.522e3					1.4	NO		bb		0.000
39	FUNCTION2 PFK	31.96	8.002e3					1.0	NO		bb		0.000
40	FUNCTION2 PFK	31.73	2.461e3					0.8	NO		bb		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.03	4.935e3					0.7	NO		bb		0.000
2	FUNCTION3 PFK	33.76	5.855e3					0.9	NO		bb		0.000
3	FUNCTION3 PFK	33.65	2.046e4					1.3	NO		bb		0.000
4	FUNCTION3 PFK	33.29	1.061e4					1.2	NO		bb		0.000
5	FUNCTION3 PFK	33.10	1.235e4					0.9	NO		bb		0.000
6	FUNCTION3 PFK	36.89	5.964e3					0.8	NO		bb		0.000
7	FUNCTION3 PFK	36.67	1.246e4					1.3	NO		db		0.000
8	FUNCTION3 PFK	36.59	3.645e4					2.5	NO		bd		0.000
9	FUNCTION3 PFK	36.47	1.165e4					0.9	NO		bb		0.000
10	FUNCTION3 PFK	36.40	4.348e3					0.7	NO		bb		0.000
11	FUNCTION3 PFK	36.32	3.325e4					1.9	NO		bb		0.000
12	FUNCTION3 PFK	36.24	1.791e4					1.4	NO		db		0.000
13	FUNCTION3 PFK	36.19	2.043e4					1.6	NO		bd		0.000
14	FUNCTION3 PFK	35.34	7.839e3					0.9	NO		bb		0.000
15	FUNCTION3 PFK	35.04	1.130e4					1.2	NO		bb		0.000
16	FUNCTION3 PFK	34.98	1.757e4					1.3	NO		bb		0.000
17	FUNCTION3 PFK	34.66	3.150e4					2.1	NO		db		0.000
18	FUNCTION3 PFK	34.63	2.204e4					2.2	NO		bd		0.000
19	FUNCTION3 PFK	34.51	2.015e4					1.6	NO		db		0.000
20	FUNCTION3 PFK	34.43	2.373e4					2.0	NO		dd		0.000
21	FUNCTION3 PFK	34.39	1.491e4					1.8	NO		bd		0.000
22	FUNCTION3 PFK	37.97	9.526e3					1.1	NO		bb		0.000
23	FUNCTION3 PFK	37.61	4.551e3					0.8	NO		bb		0.000
24	FUNCTION3 PFK	37.03	2.911e4					1.8	NO		db		0.000
25	FUNCTION3 PFK	36.98	3.696e3					0.6	NO		bd		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	42.71	9.457e3					0.9	NO		bb		
2	FUNCTION4 PFK	42.55	1.416e3					0.4	NO		bb		
3	FUNCTION4 PFK	42.33	2.050e4					1.4	NO		bb		
4	FUNCTION4 PFK	40.90	3.965e3					0.7	NO		bb		
5	FUNCTION4 PFK	40.40	4.095e3					0.7	NO		bb		
6	FUNCTION4 PFK	40.20	2.031e3					0.6	NO		bb		
7	FUNCTION4 PFK	39.89	7.818e3					1.2	NO		bb		
8	FUNCTION4 PFK	39.30	3.577e3					0.7	NO		db		
9	FUNCTION4 PFK	39.23	1.513e4					1.5	NO		bd		
10	FUNCTION4 PFK	38.50	5.085e3					0.8	NO		bb		
11	FUNCTION4 PFK	38.22	4.047e5					4.0	YES		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	46.44	6.785e3					1.5	NO		db		
2	FUNCTION5 PFK	46.41	4.268e3					1.1	NO		bd		
3	FUNCTION5 PFK	46.32	3.211e3					0.9	NO		bb		
4	FUNCTION5 PFK	46.25	5.782e3					1.5	NO		bb		
5	FUNCTION5 PFK	46.21	2.148e3					0.5	NO		bb		
6	FUNCTION5 PFK	45.92	1.180e4					1.5	NO		bb		
7	FUNCTION5 PFK	45.78	2.503e3					0.9	NO		bb		
8	FUNCTION5 PFK	45.72	1.015e3					0.6	NO		bb		
9	FUNCTION5 PFK	45.60	1.955e3					0.7	NO		bb		
10	FUNCTION5 PFK	45.57	1.104e3					0.6	NO		bb		
11	FUNCTION5 PFK	45.45	1.042e4					1.3	NO		bb		
12	FUNCTION5 PFK	44.52	3.296e3					0.9	NO		bb		
13	FUNCTION5 PFK	44.38	2.843e4					2.4	NO		bb		
14	FUNCTION5 PFK	44.01	6.535e3					1.0	NO		bb		
15	FUNCTION5 PFK	43.51	4.124e3					1.1	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.80	1.077e2					3.2	YES		bb		0.000
2	FUNCTION1 HXCD...	27.23	8.014e1					1.9	NO		bb		0.000
3	FUNCTION1 HXCD...	25.90	4.015e2					4.7	YES		db		0.000
4	FUNCTION1 HXCD...	25.72	1.078e2					2.6	NO		bd		0.000
5	FUNCTION1 HXCD...	22.96	9.275e1					1.5	NO		bb		0.000
6	FUNCTION1 HXCD...	21.89	1.274e2					3.2	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	24.78	7.643e1					1.2	NO		bb		0.000
2	FUNCTION1 HPCD...	24.10	1.351e2					2.2	NO		db		0.000
3	FUNCTION1 HPCD...	23.90	1.347e2					2.0	NO		dd		0.000
4	FUNCTION1 HPCD...	23.73	7.182e1					1.5	NO		dd		0.000
5	FUNCTION1 HPCD...	23.60	1.453e2					1.7	NO		bd		0.000
6	FUNCTION1 HPCD...	22.30	7.288e1					1.3	NO		bb		0.000
7	FUNCTION1 HPCD...	21.72	1.050e2					2.3	NO		db		0.000
8	FUNCTION1 HPCD...	21.65	1.092e2					1.7	NO		bd		0.000
9	FUNCTION1 HPCD...	27.77	1.087e2					2.2	NO		db		0.000
10	FUNCTION1 HPCD...	27.64	1.853e2					2.8	NO		bd		0.000
11	FUNCTION1 HPCD...	26.97	7.971e1					1.8	NO		db		0.000
12	FUNCTION1 HPCD...	26.89	8.957e1					2.2	NO		bd		0.000
13	FUNCTION1 HPCD...	25.88	1.706e2					2.4	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.25	4.855e2					9.2	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	34.13	1.383e2					3.3	YES		bb		0.000

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ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.71	9.570e1					1.7	NO		bb		0.000
2	FUNCTION4 NCDPE	40.15	8.625e1					2.5	NO		bb		0.000
3	FUNCTION4 NCDPE	39.82	7.102e1					1.6	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	45.11	7.207e1					2.3	NO		bb		0.000

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Last Altered: Friday, February 03, 2023 11:22:32 Pacific Standard Time
Printed: Friday, February 03, 2023 11:23:11 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
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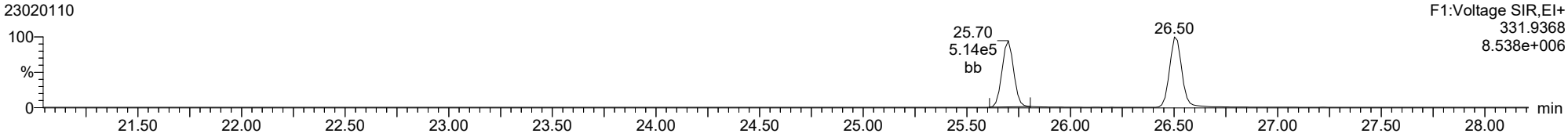
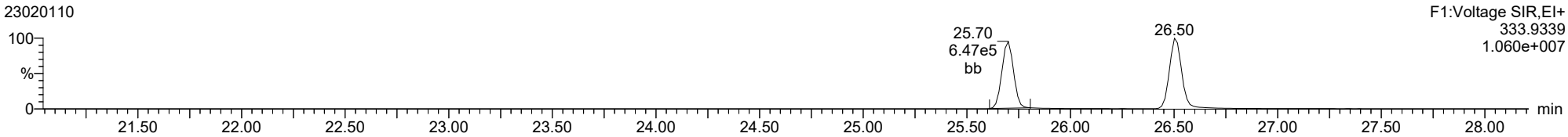
ID: ICVCR, Name: 23020110, Date: 01-Feb-2023, Time: 20:23:25, Conditions: AUTOSPEC01, User: pk

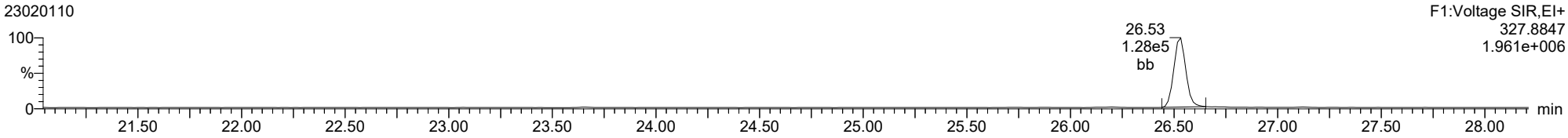
13C-1234-TCDD



13C-1234-TCDD



37CL-2378-TCDD



ID: ICVCR, Name: 23020110, Date: 01-Feb-2023, Time: 20:23:25, Conditions: AUTOSPEC01, User: pk

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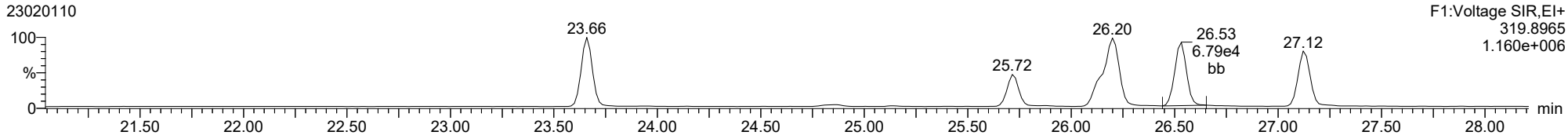

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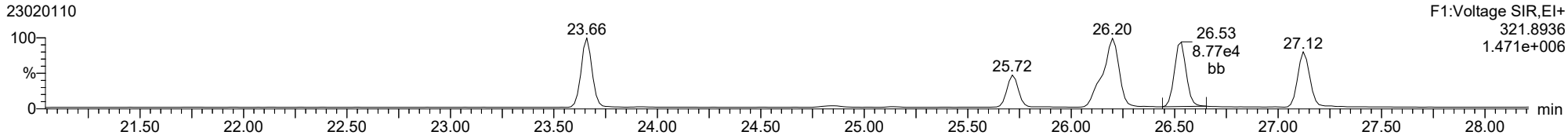

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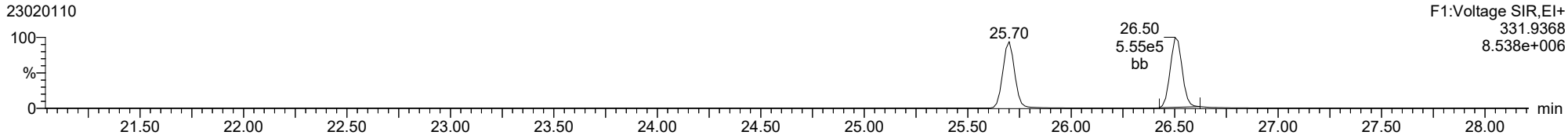

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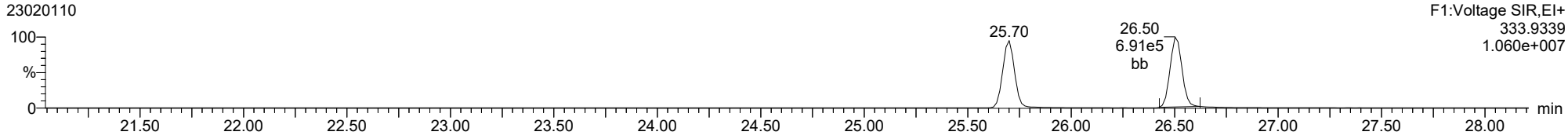

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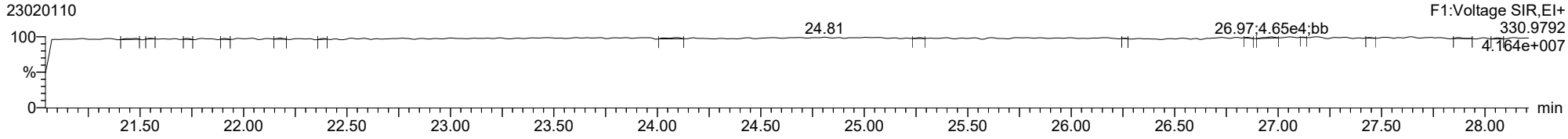
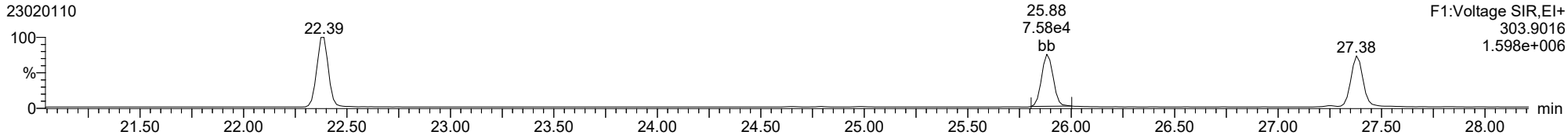


ID: ICVCR, Name: 23020110, Date: 01-Feb-2023, Time: 20:23:25, Conditions: AUTOSPEC01, User: pk

2378-TCDF



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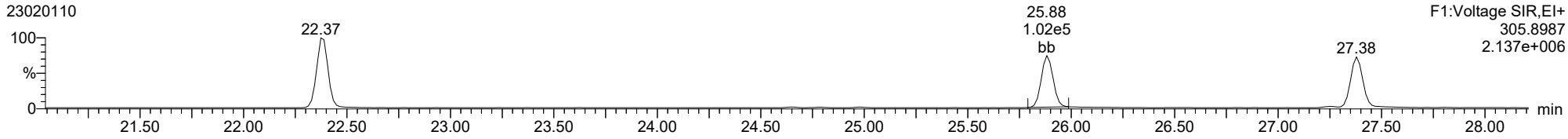

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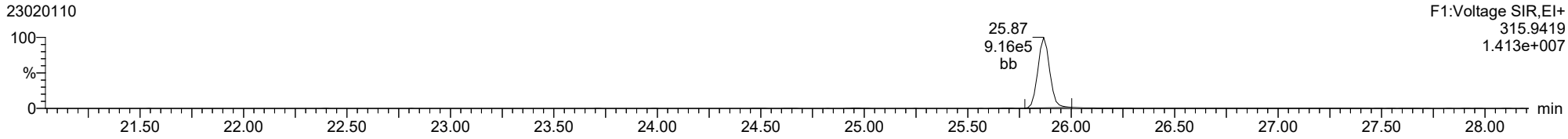

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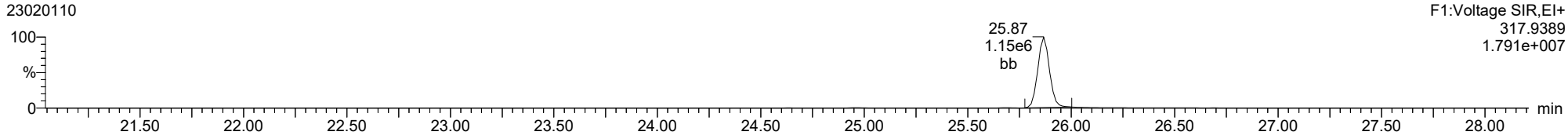
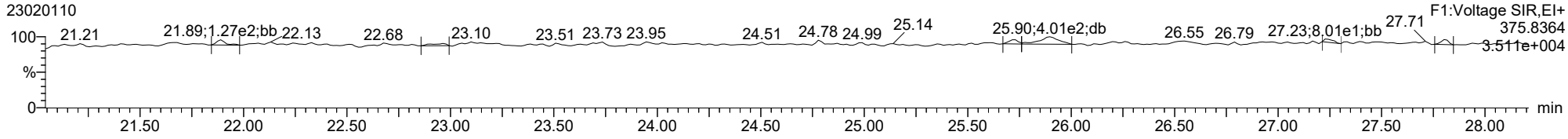
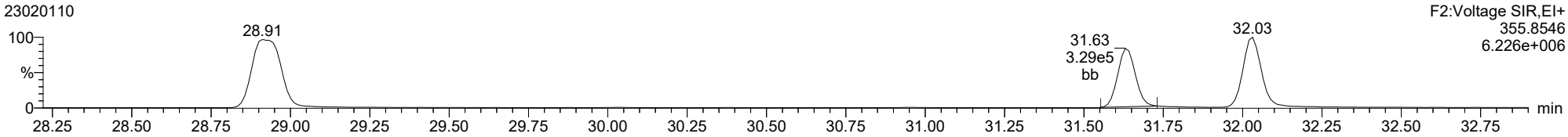


FUNCTION1 HXCDPE



ID: ICVCR, Name: 23020110, Date: 01-Feb-2023, Time: 20:23:25, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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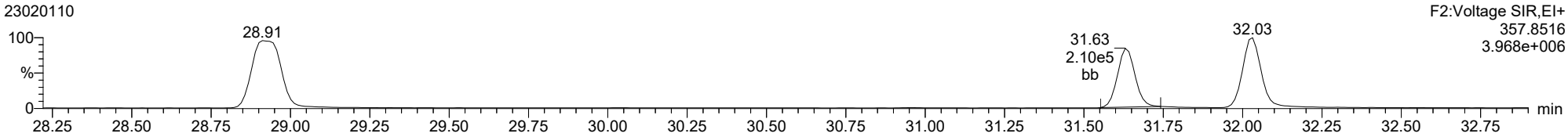

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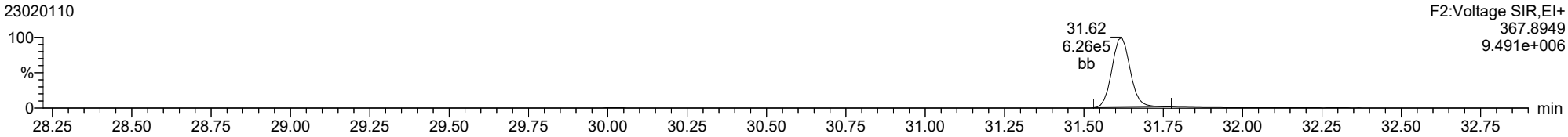

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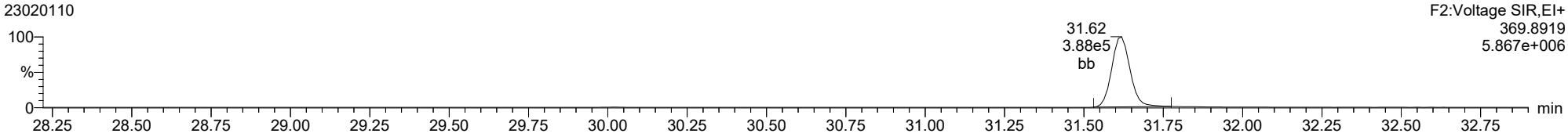

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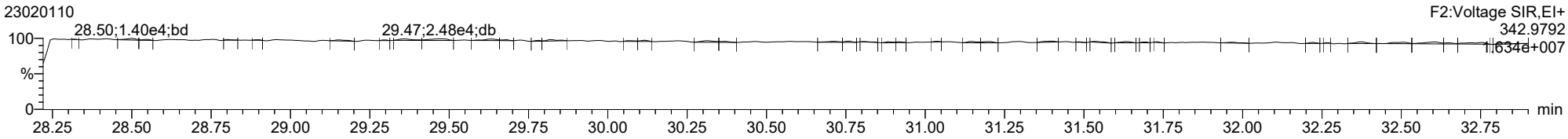

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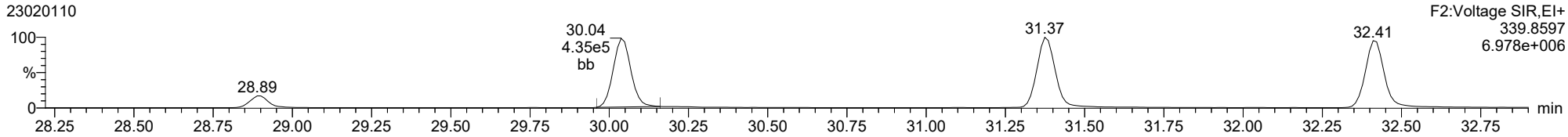

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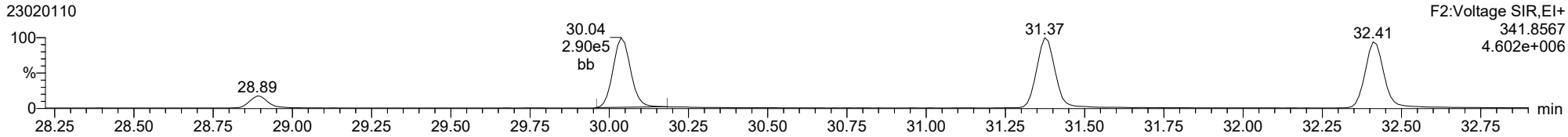

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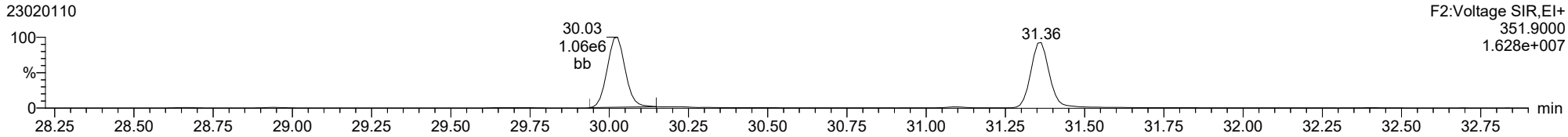

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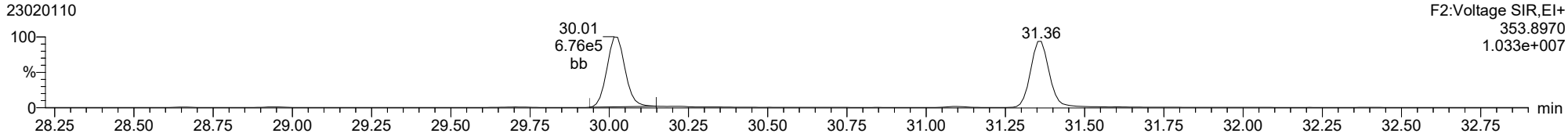

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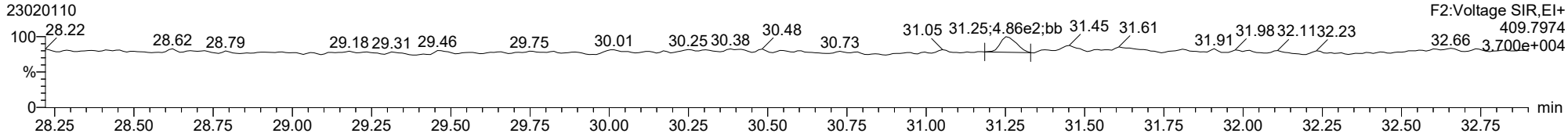

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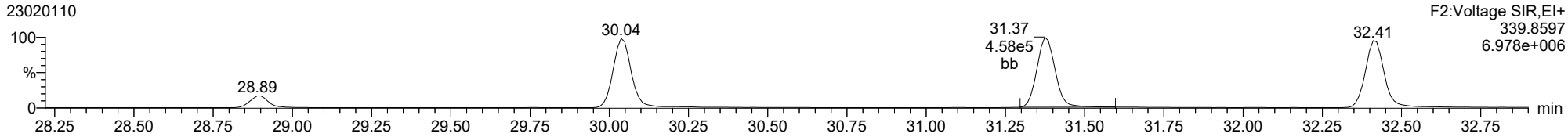

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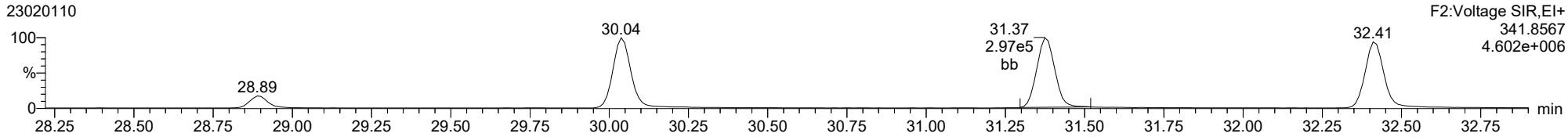

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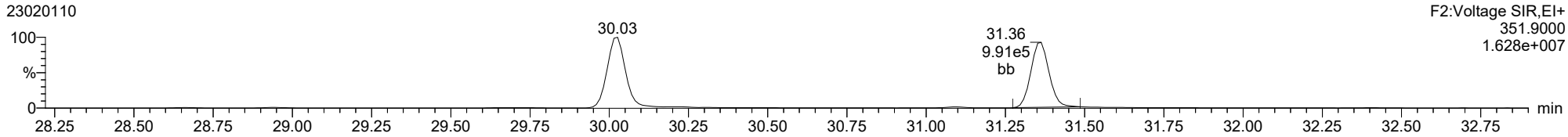

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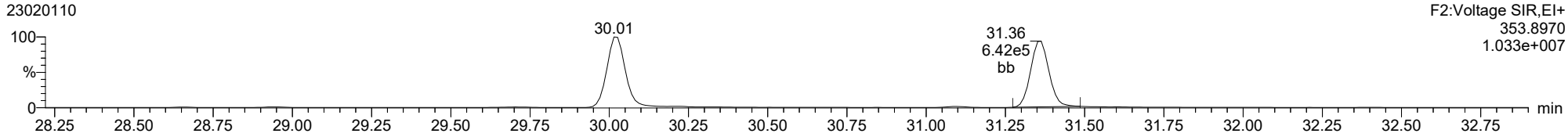

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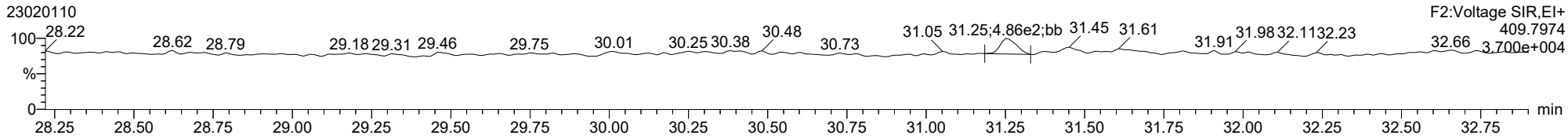

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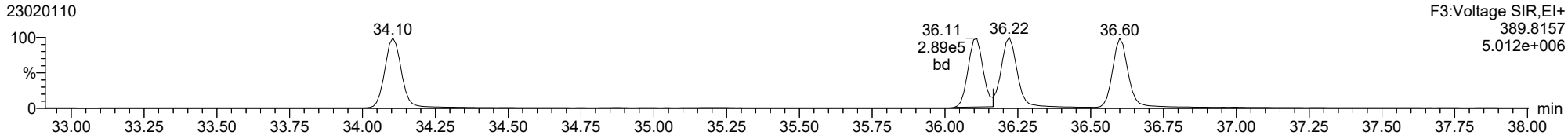

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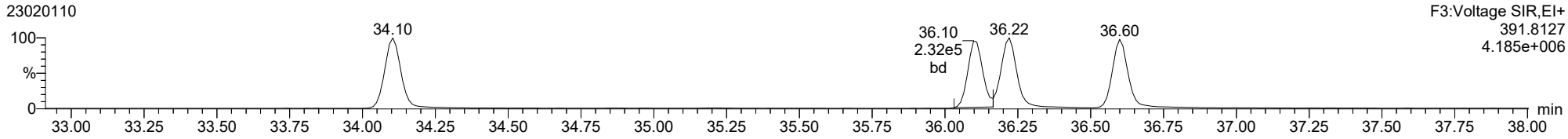

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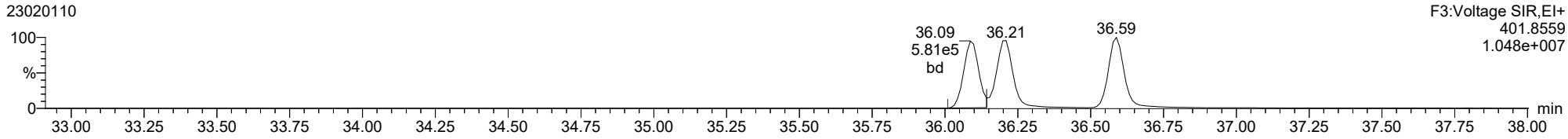

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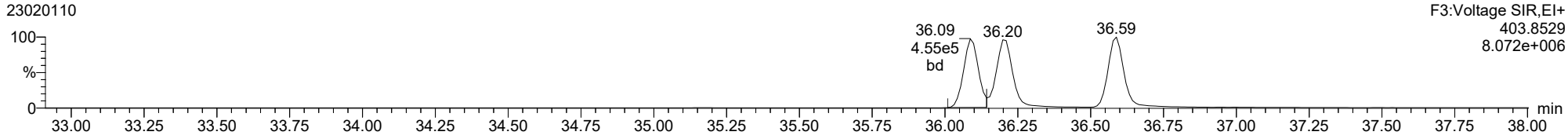

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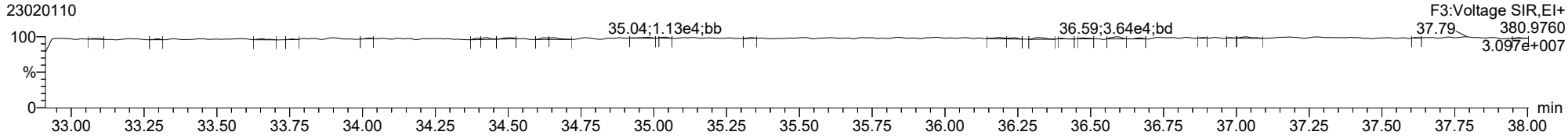

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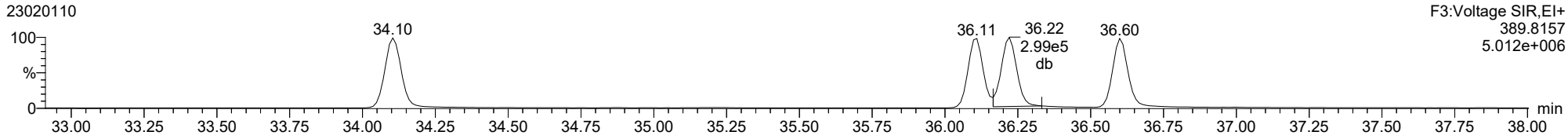

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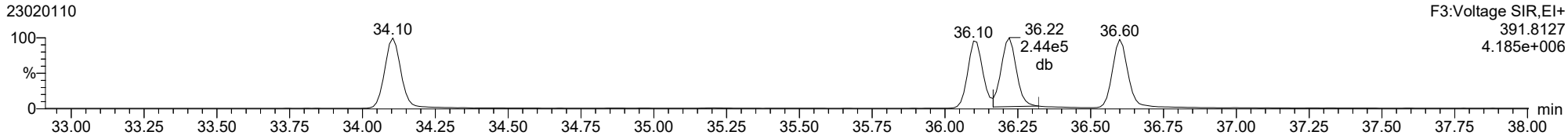

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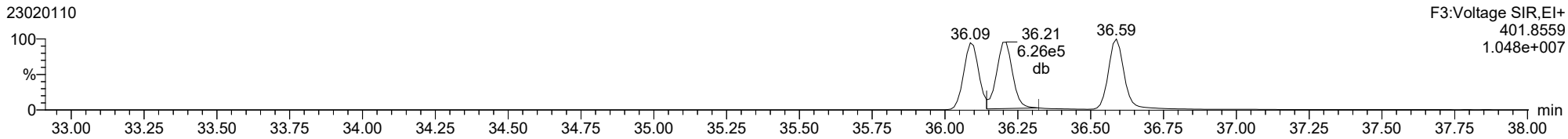

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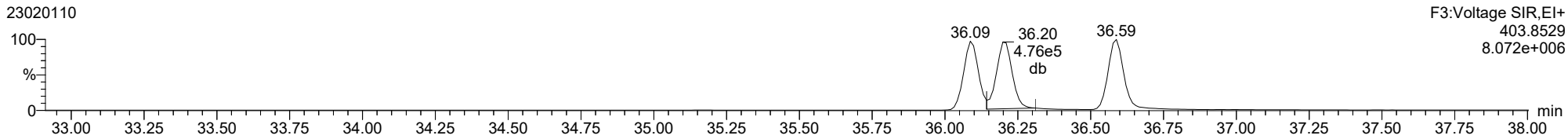

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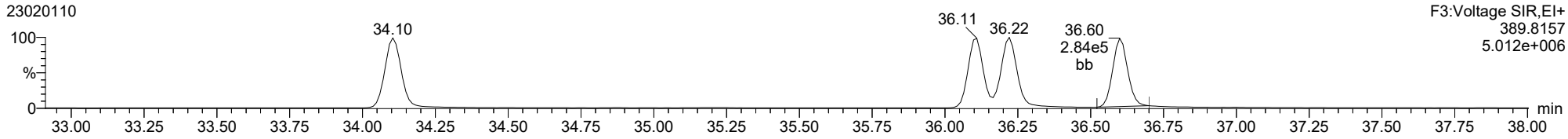

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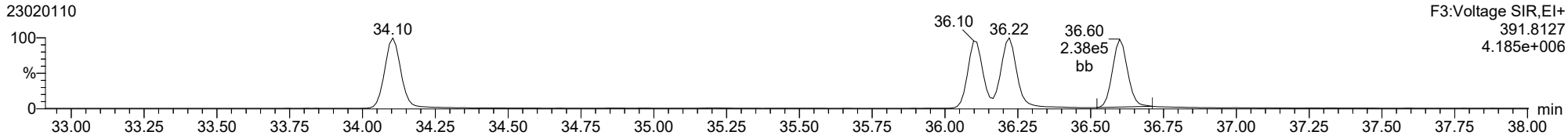

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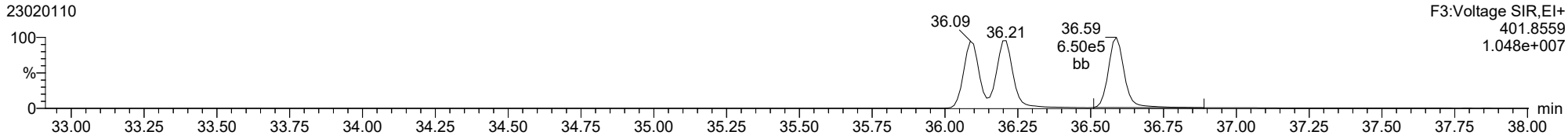

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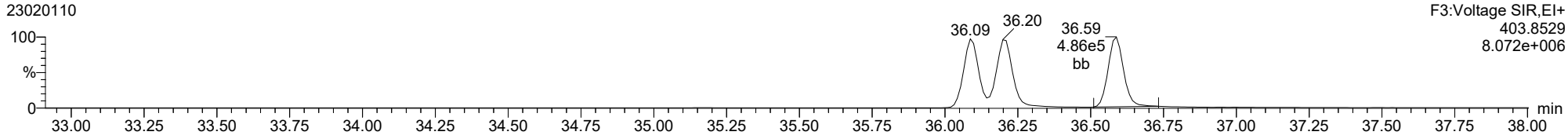

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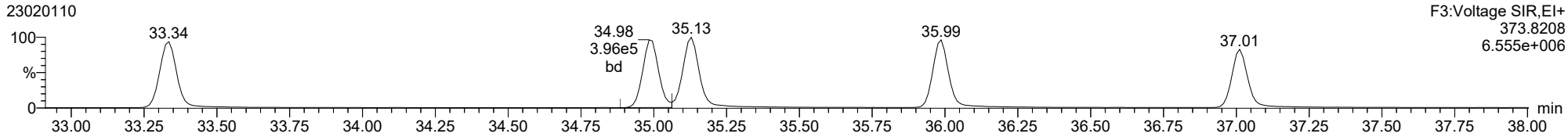

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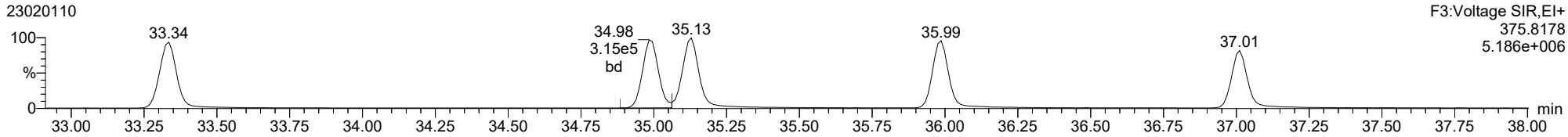

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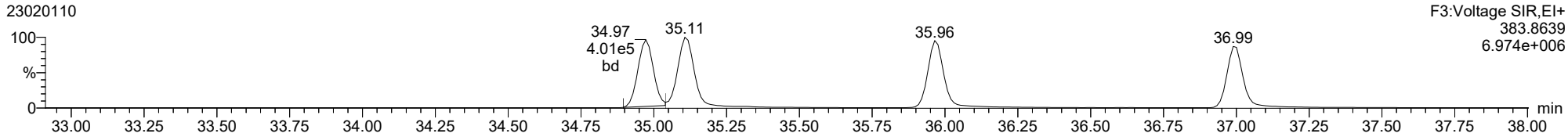

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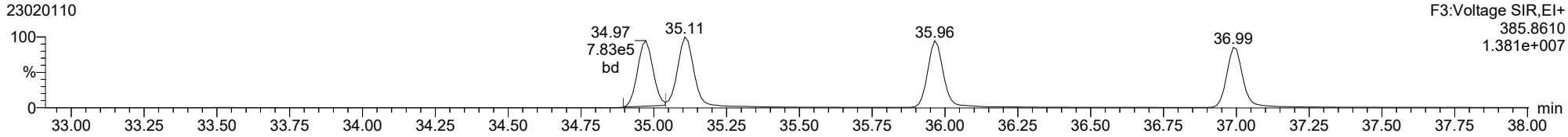
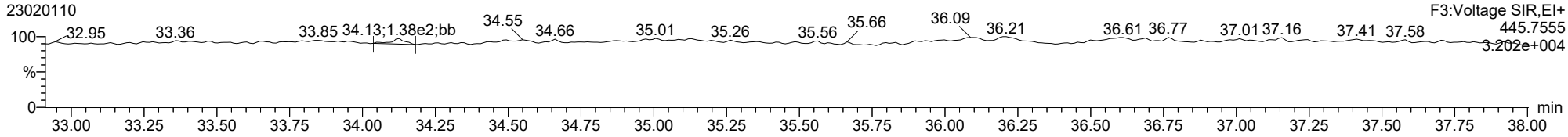
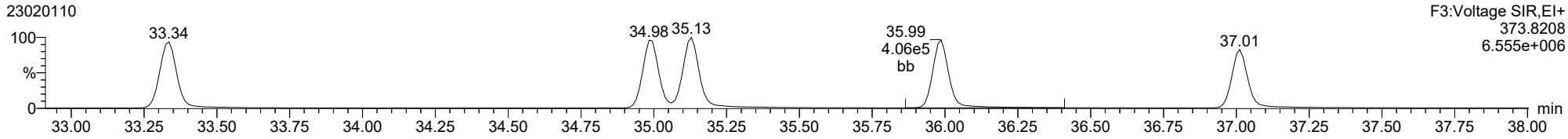


FUNCTION3 OCDPE



ID: ICVCR, Name: 23020110, Date: 01-Feb-2023, Time: 20:23:25, Conditions: AUTOSPEC01, User: pk

234678-HxCDF



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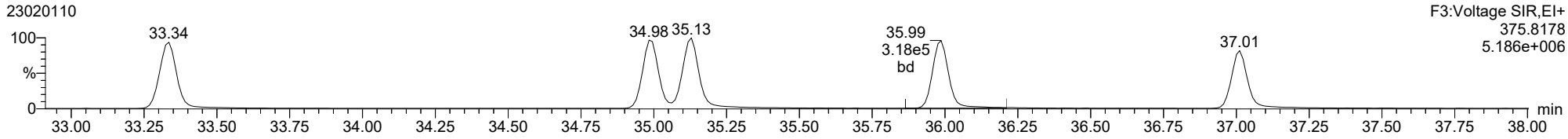

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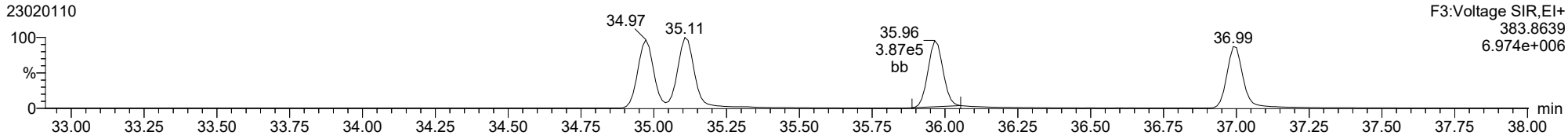

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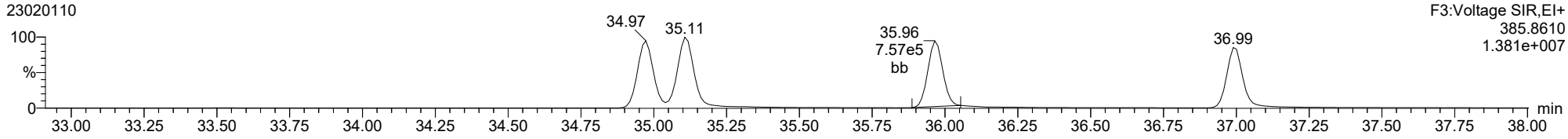

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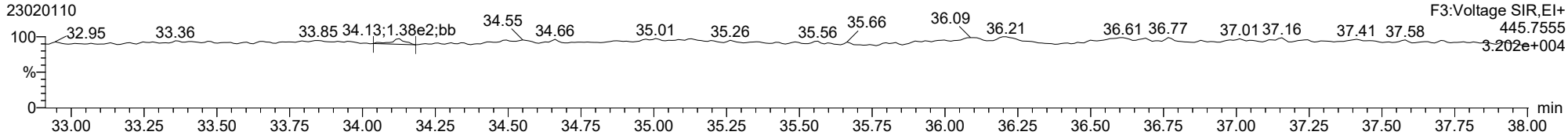

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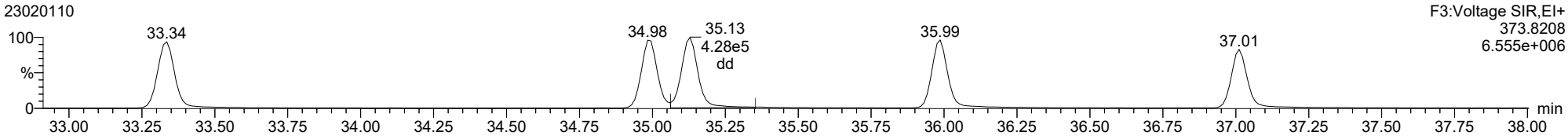

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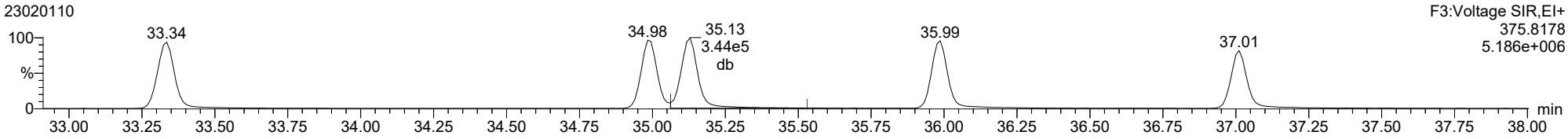

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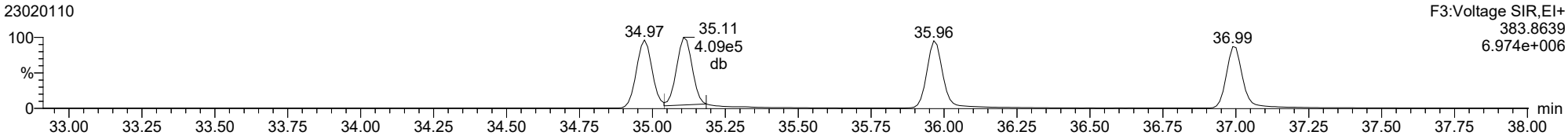

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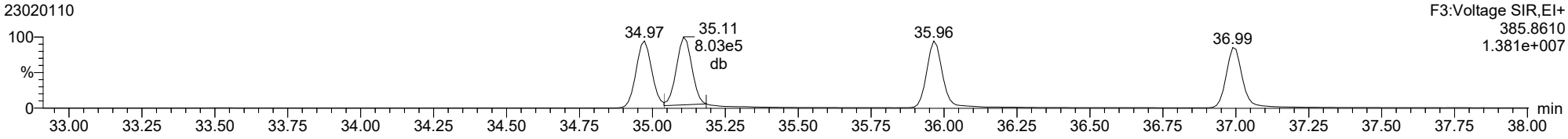

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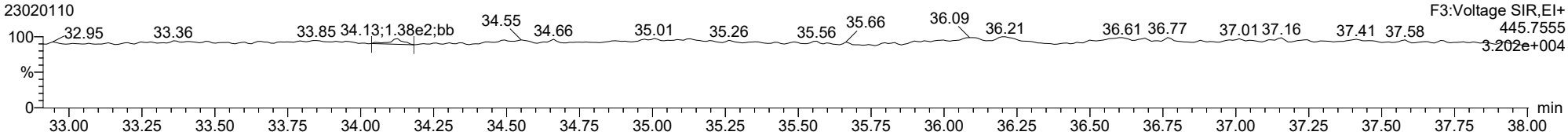

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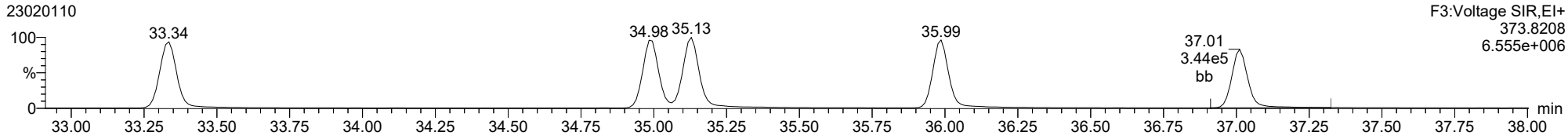

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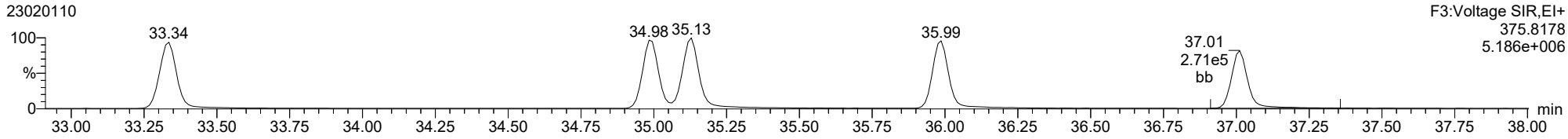

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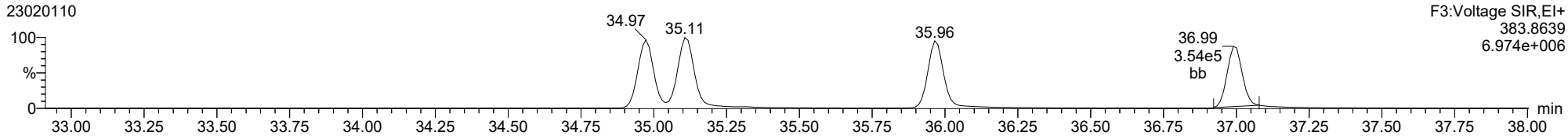

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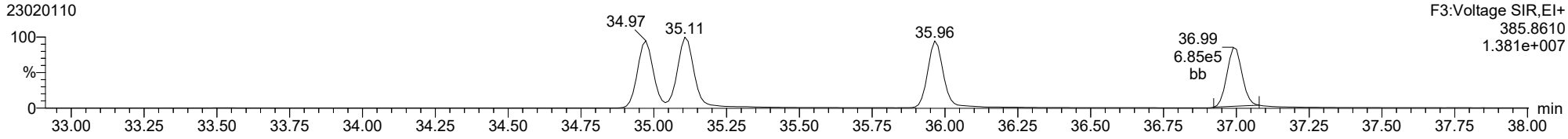

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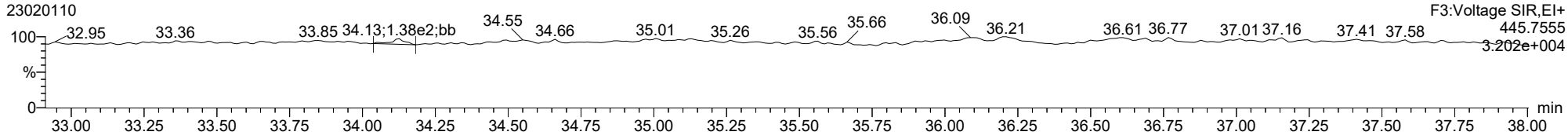

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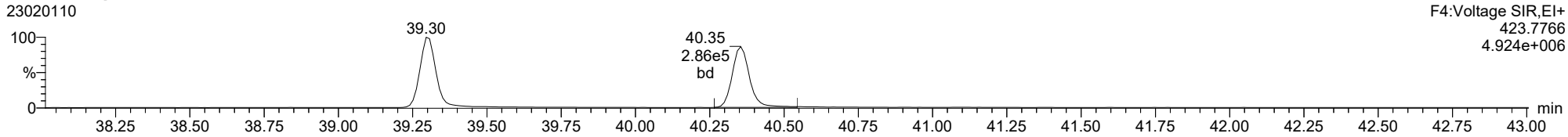

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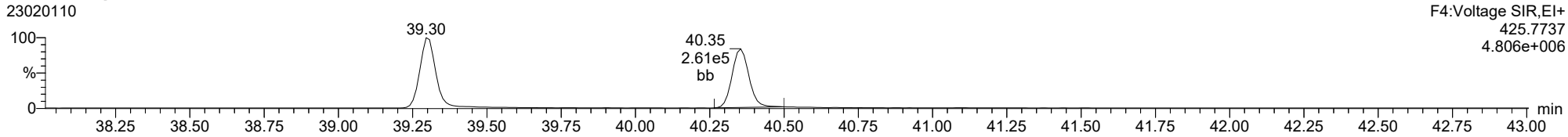

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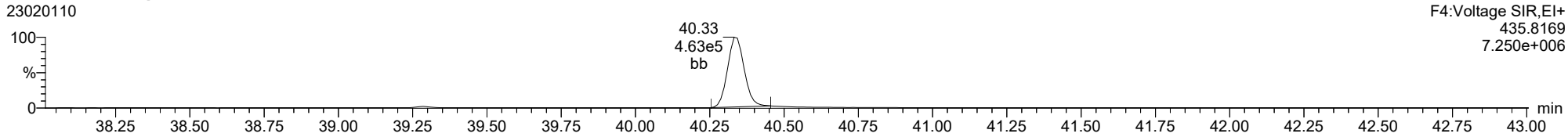

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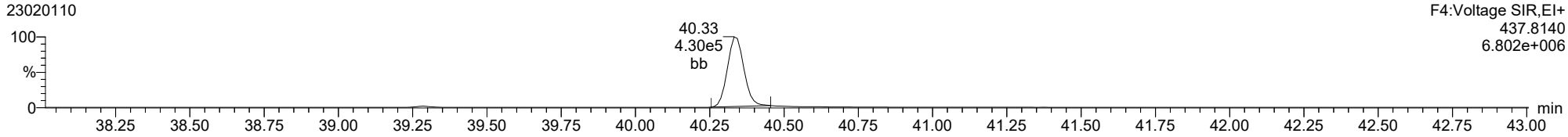
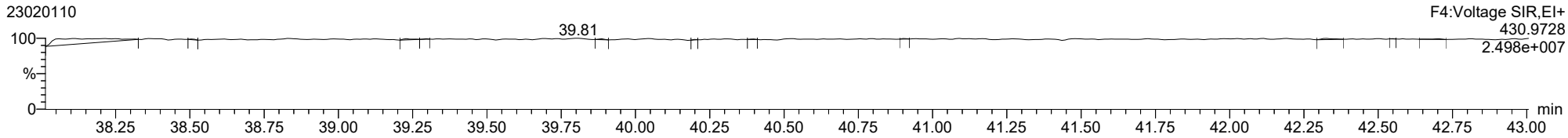


FUNCTION4 PFK



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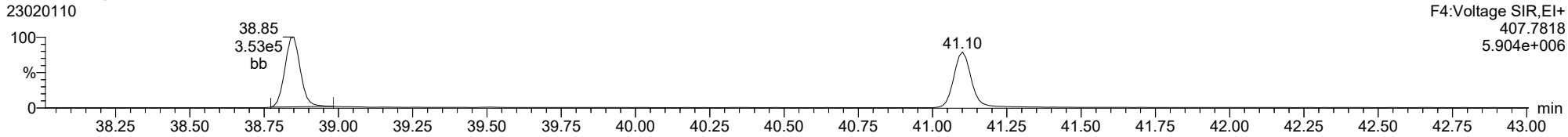

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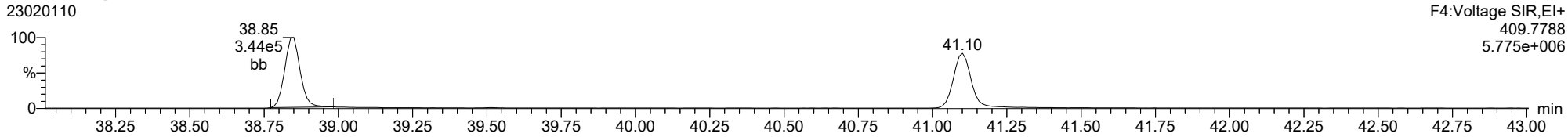

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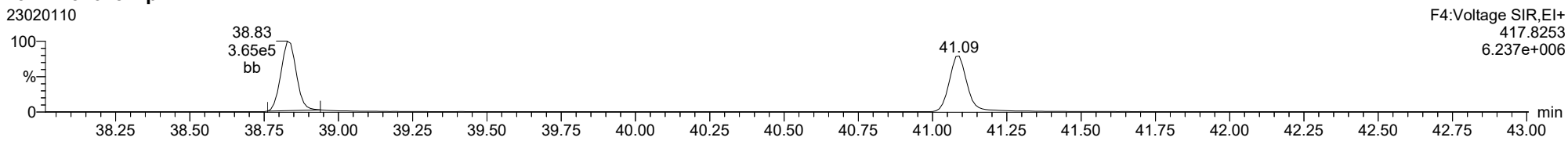

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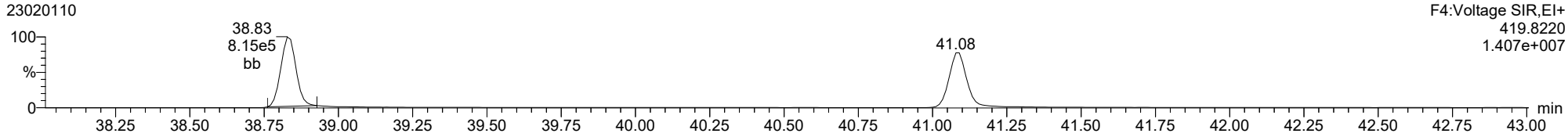
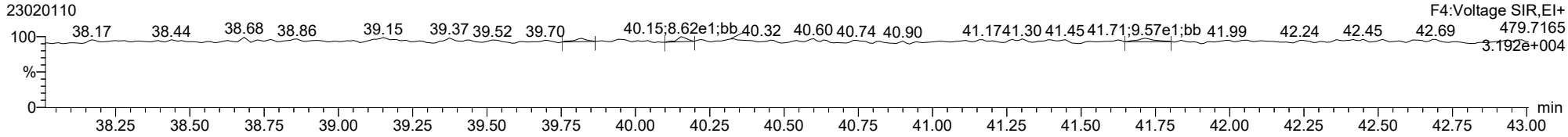


FUNCTION4 NCDPE



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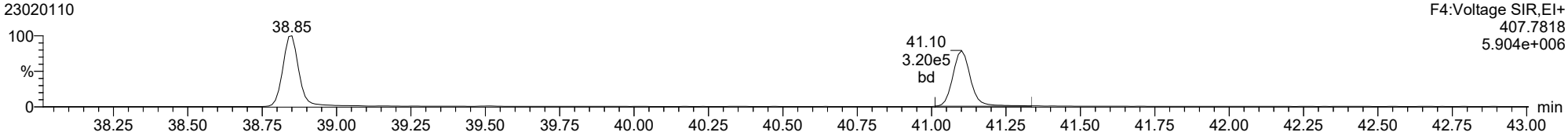

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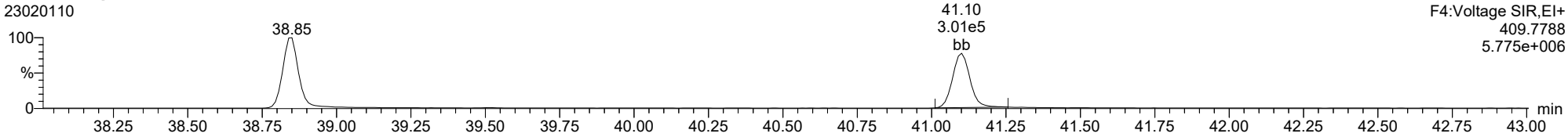

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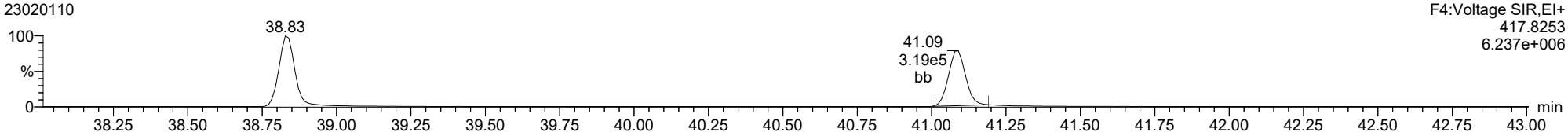

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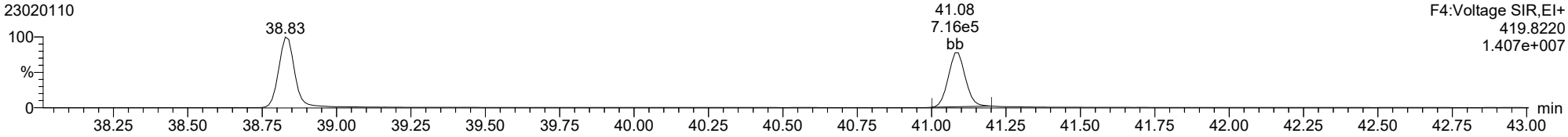

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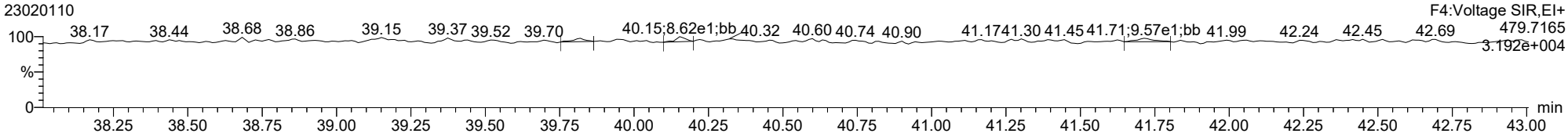

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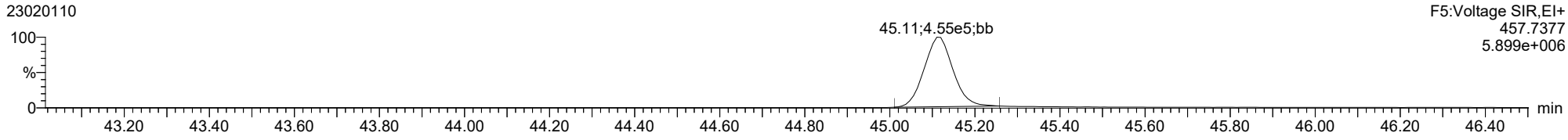

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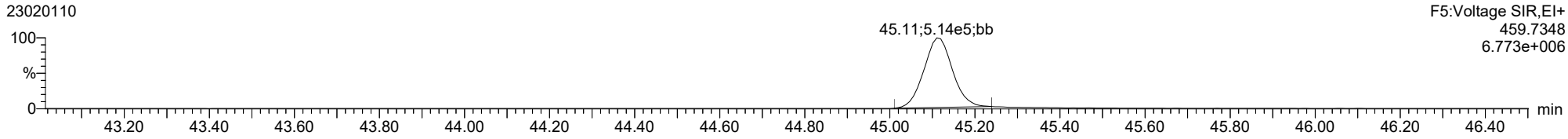

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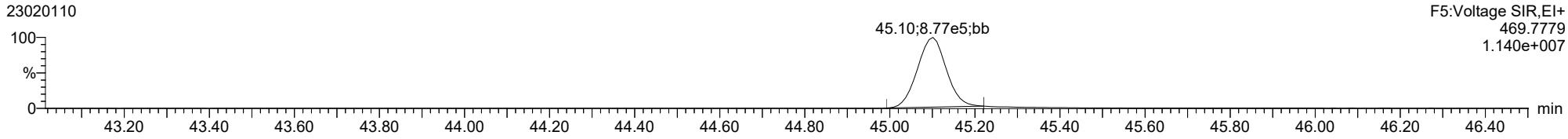

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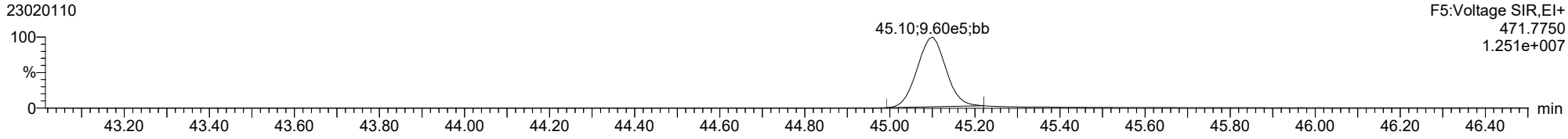
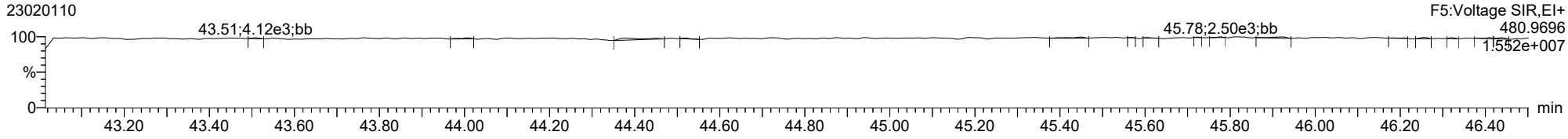


FUNCTION5 PFK



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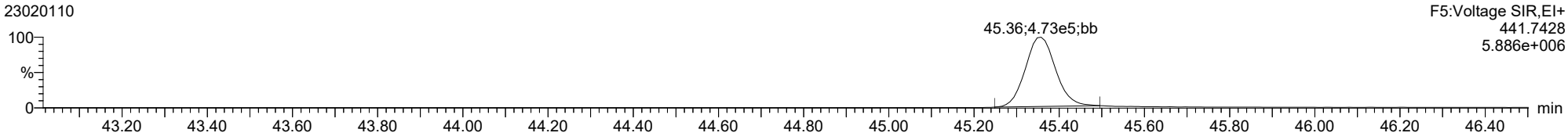

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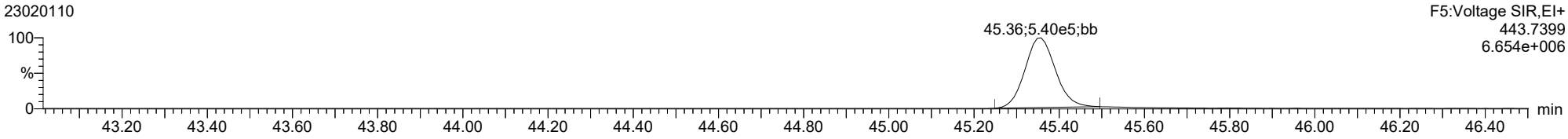

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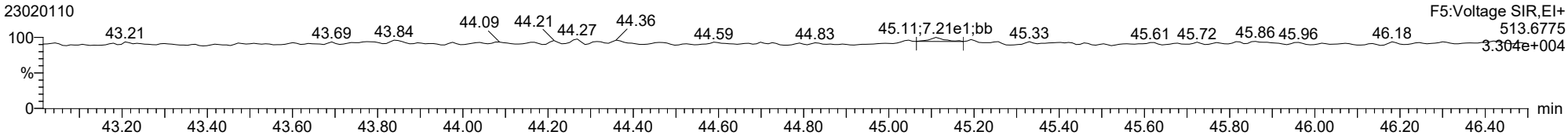

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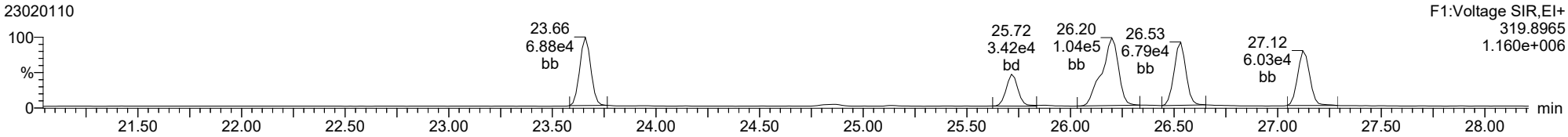
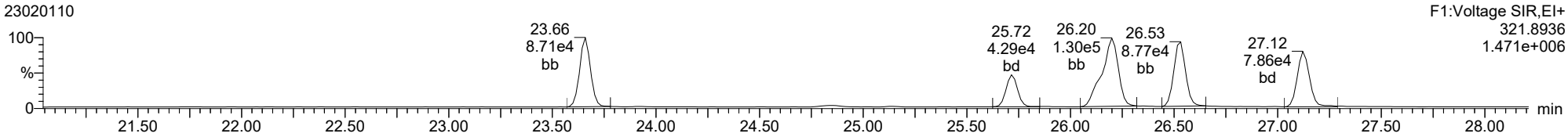
Total-tetradioxins



Total-tetradioxins



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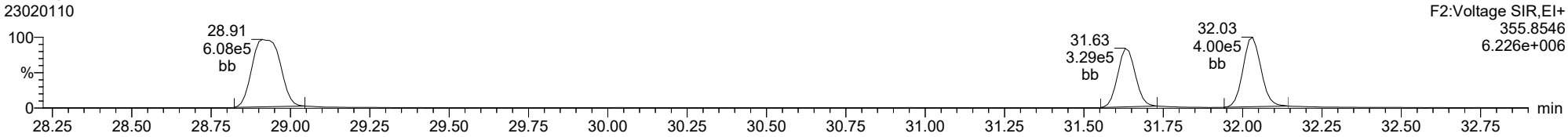
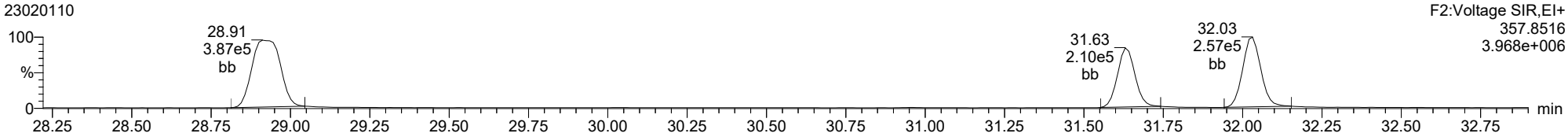


Total-pentadioxins



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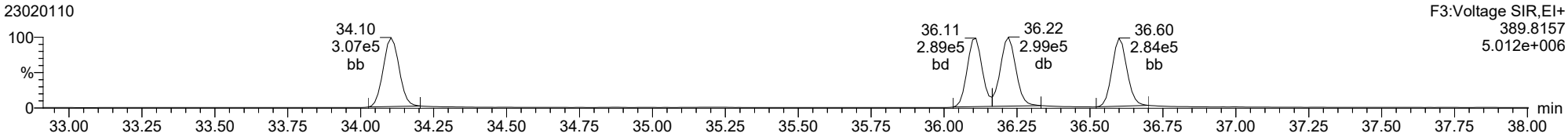

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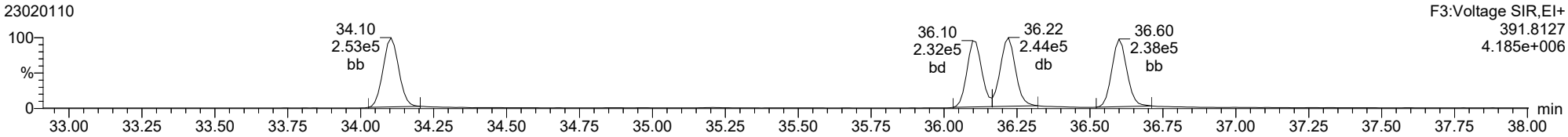
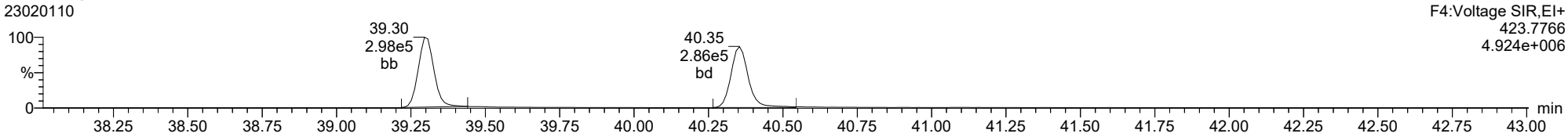
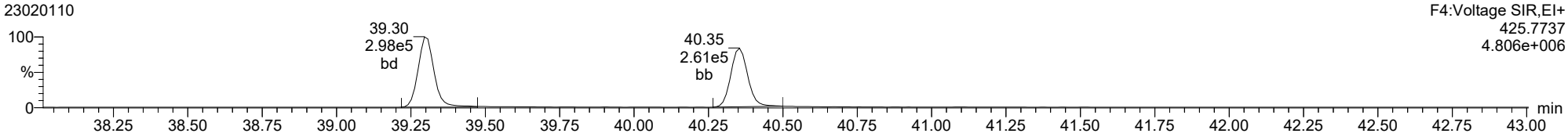


Total-heptadioxins



Total-heptadioxins



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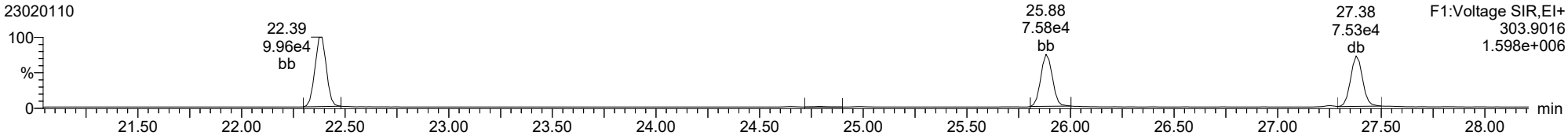
Total-tetrafurans



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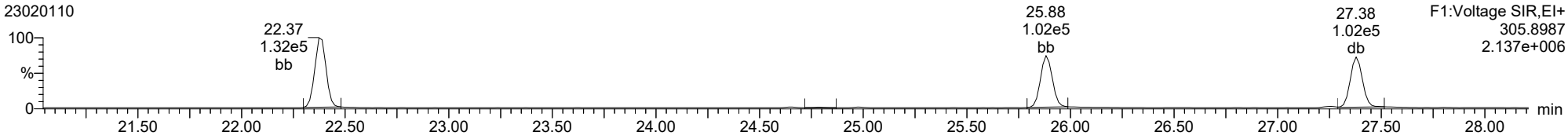

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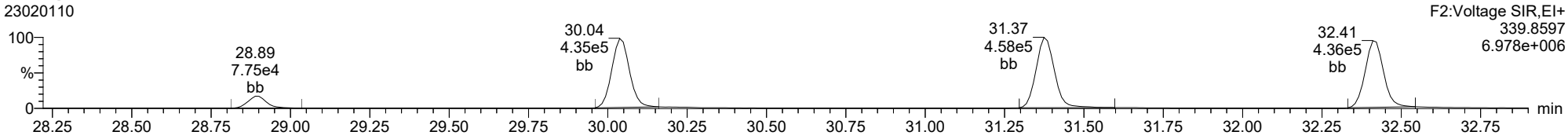

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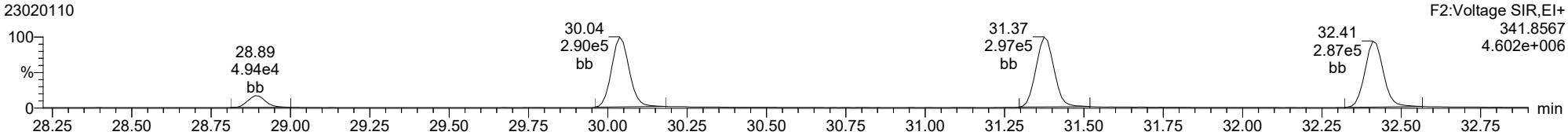

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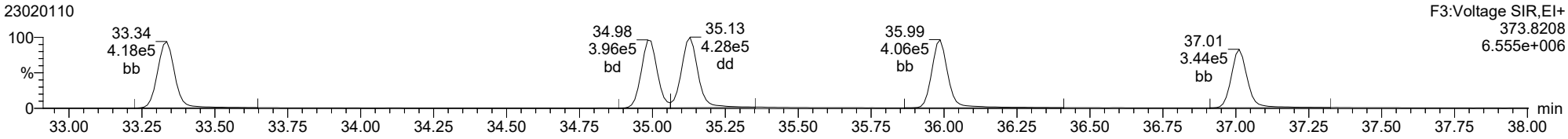
Total-hexafurans



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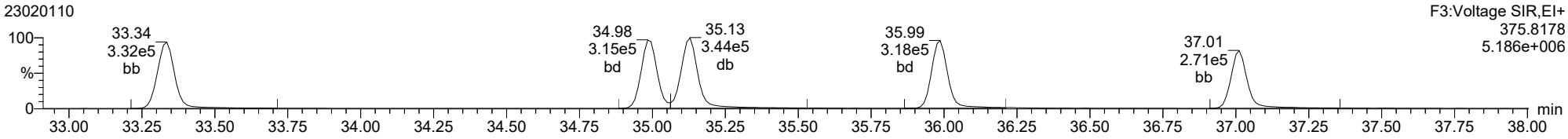

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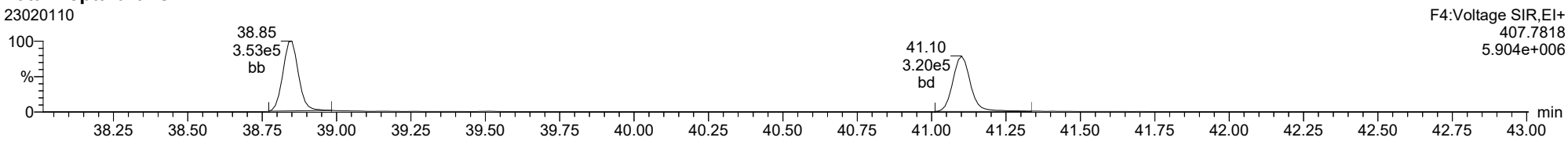

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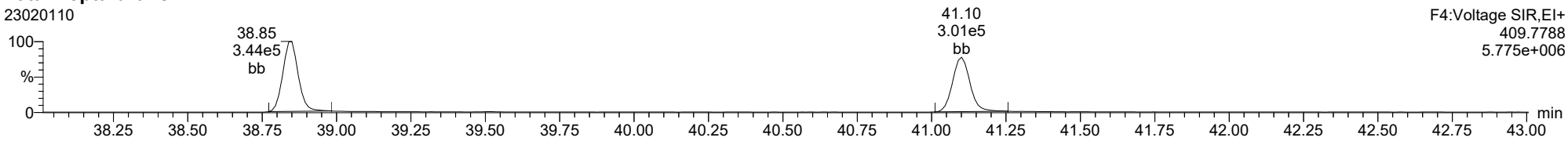

Dataset: T:\Autospec\Processed Data Batch\230201ICVIH.qld
Last Altered: Friday, February 03, 2023 11:22:32 Pacific Standard Time
Printed: Friday, February 03, 2023 11:23:25 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3R2, Name: 23020111, Date: 01-Feb-2023, Time: 21:12:31, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.882	1.001	6.336e4	8.393e4	0.876	0.755	0.770	1070	1746	9.70e5	1.26e6	906.6	721.7	NO	bb	bb	10.162
12378-PeCDF	30.048	1.001	3.709e5	2.488e5	0.845	1.491	1.550	3113	3215	5.69e6	3.70e6	1826.3	1149.4	NO	bb	bd	50.020
23478-PeCDF	31.385	1.001	3.851e5	2.639e5	0.911	1.459	1.550	3113	3215	5.96e6	3.97e6	1913.7	1234.6	NO	bb	bd	50.684
123478-HxCDF	34.995	1.001	3.366e5	2.649e5	1.182	1.270	1.240	2488	2037	5.32e6	4.21e6	2136.8	2067.1	NO	bd	bd	49.625
234678-HxCDF	35.986	1.000	3.507e5	2.736e5	1.229	1.282	1.240	2488	2037	5.45e6	4.23e6	2188.7	2078.3	NO	bb	bd	52.648
123678-HxCDF	35.129	1.000	3.745e5	2.918e5	1.248	1.283	1.240	2488	2037	5.41e6	4.26e6	2174.2	2090.5	NO	dd	dd	50.908
123789-HxCDF	37.012	1.000	2.970e5	2.380e5	1.187	1.248	1.240	2488	2037	4.75e6	3.76e6	1910.9	1845.7	NO	bd	bb	50.440
1234678-HpCDF	38.850	1.000	2.932e5	2.919e5	1.204	1.004	1.050	3100	2795	4.79e6	4.70e6	1544.8	1680.6	NO	bb	bd	48.294
1234789-HpCDF	41.100	1.000	2.671e5	2.524e5	1.165	1.058	1.050	3100	2795	3.96e6	3.73e6	1278.4	1333.4	NO	bb	bb	49.677
OCDF	45.358	1.006	3.958e5	4.645e5	1.186	0.852	0.890	1455	4440	4.72e6	5.37e6	3247.1	1209.2	NO	bb	bd	90.445
2378-TCDD	26.532	1.001	5.892e4	7.101e4	1.236	0.830	0.770	1225	1339	8.91e5	1.09e6	727.0	817.8	NO	dd	bb	9.397
12378-PeCDD	31.642	1.001	2.888e5	1.854e5	1.087	1.558	1.550	2693	2242	4.44e6	2.82e6	1647.5	1257.1	NO	bb	bb	51.126
123478-HxCDD	36.109	1.000	2.420e5	2.004e5	0.987	1.207	1.240	3333	2112	4.15e6	3.36e6	1245.4	1591.3	NO	bd	bd	50.303
123678-HxCDD	36.221	1.000	2.536e5	2.261e5	1.021	1.122	1.240	3333	2112	4.16e6	3.48e6	1248.0	1648.2	NO	db	db	51.010
123789-HxCDD	36.611	1.011	2.491e5	2.029e5	0.985	1.228	1.240	3333	2112	4.05e6	3.32e6	1216.5	1574.2	NO	bb	bb	50.610
1234678-HpCDD	40.354	1.000	2.244e5	2.131e5	1.253	1.053	1.050	2651	2455	3.41e6	3.28e6	1286.0	1334.6	NO	bb	bb	45.500
OCDD	45.120	1.000	3.894e5	4.309e5	1.103	0.904	0.890	2219	2267	4.59e6	5.31e6	2068.3	2340.4	NO	bd	bb	92.775
13C-2378-TCDF	25.867	1.006	7.314e5	9.230e5	1.768	0.792	0.770	2216	1949	1.12e7	1.43e7	5056.1	7338.5	NO	bb	bb	95.256
13C-12378-PeCDF	30.026	1.168	8.745e5	5.922e5	1.527	1.477	1.550	3934	3547	1.37e7	8.95e6	3469.6	2522.0	NO	bb	bd	97.769
13C-23478-PeCDF	31.363	1.220	8.488e5	5.566e5	1.466	1.525	1.550	3934	3547	1.32e7	8.62e6	3344.9	2430.1	NO	bb	bb	97.572
13C-123478-HxCDF	34.973	0.956	3.485e5	6.773e5	1.054	0.515	0.510	2953	4567	5.67e6	1.10e7	1918.4	2413.6	NO	bd	bd	101.894
13C-123678-HxCDF	35.118	0.960	3.543e5	6.945e5	1.080	0.510	0.510	2953	4567	5.60e6	1.10e7	1895.3	2409.2	NO	db	db	101.648
13C-234678-HxCDF	35.975	0.983	3.286e5	6.364e5	1.014	0.516	0.510	2953	4567	5.48e6	1.04e7	1855.6	2267.5	NO	bb	bb	99.572
13C-123789-HxCDF	37.000	1.011	3.031e5	5.907e5	0.928	0.513	0.510	2953	4567	5.28e6	1.02e7	1789.2	2235.2	NO	bb	bb	100.817
13C-1234678-HpCDF	38.839	1.062	3.130e5	6.930e5	1.036	0.452	0.440	2151	4289	5.21e6	1.16e7	2423.7	2703.6	NO	bb	bb	101.637
13C-1234789-HpCDF	41.089	1.123	2.806e5	6.168e5	0.905	0.455	0.440	2151	4289	4.21e6	9.25e6	1954.9	2156.4	NO	bb	bb	103.794
13C-1234-TCDD	25.700	0.000	4.358e5	5.465e5	1.000	0.797	0.770	2468	2151	6.80e6	8.50e6	2756.9	3953.0	NO	bb	bb	100.000
13C-2378-TCDD	26.517	1.032	4.953e5	6.230e5	1.103	0.795	0.770	2468	2151	7.43e6	9.28e6	3010.2	4316.3	NO	bb	bb	103.212
13C-12378-PeCDD	31.619	1.230	5.254e5	3.282e5	0.914	1.601	1.550	1809	1341	8.04e6	5.00e6	4443.5	3732.3	NO	bb	bb	95.052
13C-123478-HxCDD	36.098	0.987	5.053e5	3.859e5	0.933	1.309	1.240	2226	2294	8.20e6	6.16e6	3683.0	2686.4	NO	bd	bd	99.984
13C-123678-HxCDD	36.209	0.990	5.186e5	4.029e5	0.965	1.287	1.240	2226	2294	8.41e6	6.65e6	3779.0	2898.5	NO	db	db	99.982
13C-1234678-HpCDD	40.343	1.103	3.959e5	3.716e5	0.782	1.065	1.050	2537	2687	6.19e6	5.69e6	2441.5	2116.3	NO	bb	bb	102.734
13C-OCDD	45.101	1.233	7.625e5	8.412e5	0.788	0.906	0.890	3243	2707	9.59e6	1.05e7	2957.5	3872.2	NO	bb	bb	212.953
13C-123789-HxCDD	36.588	0.000	5.441e5	4.113e5	1.000	1.323	1.240	2226	2294	8.88e6	6.75e6	3989.4	2943.5	NO	bb	bb	100.000
37CL-2378-TCDD	26.532	1.032	1.096e5		1.233			1635		1.65e6		1009.4			bb		9.045

Dataset: T:\Autospec\Processed Data Batch\230201ICVIH.qld
Last Altered: Friday, February 03, 2023 11:22:32 Pacific Standard Time
Printed: Friday, February 03, 2023 11:23:25 Pacific Standard Time

ID: CS3R2, Name: 23020111, Date: 01-Feb-2023, Time: 21:12:31, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.389	0.866	7.606e4	1.001e5	1.064	0.760	0.770	1070	1746	1.19e6	1.52e6	1110.3	869.1	NO	bb	bb	10.001
1289-TCDF	27.378	1.058	6.304e4	8.031e4	0.858	0.785	0.770	1070	1746	9.18e5	1.16e6	858.3	662.3	NO	dd	db	10.103
13468-PECDF	27.242	0.907	4.375e5	2.852e5	1.013	1.534	1.550	920	1180	6.83e6	4.45e6	7421.7	3771.3	NO	bb	bb	48.645
12389-PECDF	32.421	1.080	3.692e5	2.469e5	0.844	1.495	1.550	3113	3215	5.48e6	3.56e6	1760.8	1106.5	NO	bb	bd	49.793
123468-HXCDF	33.335	0.953	3.502e5	2.713e5	1.197	1.291	1.240	2488	2037	5.19e6	4.08e6	2086.3	2002.8	NO	bb	bd	50.610
1368-TCDD	23.659	0.892	5.296e4	6.607e4	1.084	0.802	0.770	1225	1339	8.46e5	1.08e6	690.5	804.7	NO	bb	bb	9.816
1289-TCDD	27.121	1.023	4.842e4	6.049e4	0.975	0.800	0.770	1225	1339	7.05e5	8.85e5	575.4	661.1	NO	bb	bb	9.987
12479-PECDD	28.912	0.914	4.728e5	3.089e5	1.837	1.530	1.550	2693	2242	4.61e6	3.01e6	1713.2	1342.4	NO	bb	bb	49.845
12389-PECDD	32.032	1.013	3.302e5	2.107e5	1.252	1.567	1.550	2693	2242	5.03e6	3.18e6	1869.4	1418.4	NO	bb	bb	50.596
124679-HXCDD	34.104	0.945	2.577e5	2.083e5	1.033	1.237	1.240	3333	2112	4.11e6	3.36e6	1234.1	1592.7	NO	bb	bb	50.624
1234679-HPCDD	39.307	0.974	2.468e5	2.463e5	1.286	1.002	1.050	2651	2455	3.99e6	3.89e6	1503.1	1583.0	NO	bb	bd	49.957
Total-tetrafurans			2.030e5		0.933			1070		3.09e6							30.345
Total-penta1			4.375e5					920		6.83e6							48.645
Total-pentafurans			1.184e6		0.866			3113		1.80e7							158.351
Total-hexafurans			1.709e6		1.208			2488		2.61e7							254.231
Total-heptafurans			5.602e5		1.185			3100		8.75e6							97.972
Total-Furans			4.489e6		1.067			1070		6.75e7							679.989
Total-tetradioxins			2.729e5		1.099			1225		3.70e6							49.674
Total-pentadioxins			1.093e6		1.392			2693		1.41e7							151.752
Total-hexadioxins			1.003e6		1.007			3333		1.65e7							202.708
Total-heptadioxins			4.712e5		1.269			2651		7.39e6							95.457
Total-Dioxins			3.230e6		1.165			1225		4.63e7							592.366
Total-TEQ			7.719e6					1225		1.14e8							1272.355
FUNCTION1 PFK			5.445e5					518107		1.64e7							
FUNCTION2 PFK			0.000e0					179627		0.00e0							
FUNCTION3 PFK			0.000e0					451502		0.00e0							
FUNCTION4 PFK			1.511e5					331096		1.60e6							
FUNCTION5 PFK			9.048e3					184760		4.73e5							
FUNCTION1 HXCD...			1.131e3					606		1.62e4							0.000
FUNCTION1 HPCD...			5.247e2					900		8.84e3							0.000
FUNCTION2 HPCD...			8.476e2					1136		1.98e4							0.000
FUNCTION3 OCDPE			4.428e2					714		7.64e3							0.000
FUNCTION4 NCDPE			0.000e0					982		0.00e0							
FUNCTION5 DCDPE			0.000e0					815		0.00e0							

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3R2, Name: 23020111, Date: 01-Feb-2023, Time: 21:12:31, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	6.304e4	8.031e4	0.858	0.79	0.77	858.3	YES	NO	dd	db	10.103
2	2378-TCDF	25.88	6.336e4	8.393e4	0.876	0.75	0.77	906.6	YES	NO	bb	bb	10.162
3	Total-tetrafurans	24.97	5.535e2	6.624e2	0.933	0.84	0.77	8.4	YES	NO	bb	bb	0.079
4	1368-TCDF	22.39	7.606e4	1.001e5	1.064	0.76	0.77	1110.3	YES	NO	bb	bb	10.001

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.24	4.375e5	2.852e5	1.013	1.53	1.55	7421.7	YES	NO	bb	bb	48.645

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	28.90	5.868e4	3.904e4	0.866	1.50	1.55	293.6	YES	NO	bb	bb	7.853
2	12389-PECDF	32.42	3.692e5	2.469e5	0.844	1.50	1.55	1760.8	YES	NO	bb	bd	49.793
3	23478-PeCDF	31.39	3.851e5	2.639e5	0.911	1.46	1.55	1913.7	YES	NO	bb	bd	50.684
4	12378-PeCDF	30.05	3.709e5	2.488e5	0.845	1.49	1.55	1826.3	YES	NO	bb	bd	50.020

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.01	2.970e5	2.380e5	1.187	1.25	1.24	1910.9	YES	NO	bd	bb	50.440
2	234678-HxCDF	35.99	3.507e5	2.736e5	1.229	1.28	1.24	2188.7	YES	NO	bb	bd	52.648
3	123678-HxCDF	35.13	3.745e5	2.918e5	1.248	1.28	1.24	2174.2	YES	NO	dd	dd	50.908
4	123478-HxCDF	34.99	3.366e5	2.649e5	1.182	1.27	1.24	2136.8	YES	NO	bd	bd	49.625
5	123468-HXCDF	33.33	3.502e5	2.713e5	1.197	1.29	1.24	2086.3	YES	NO	bb	bd	50.610

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.85	2.932e5	2.919e5	1.204	1.00	1.05	1544.8	YES	NO	bb	bd	48.294
2	1234789-HpCDF	41.10	2.671e5	2.524e5	1.165	1.06	1.05	1278.4	YES	NO	bb	bb	49.677

ID: CS3R2, Name: 23020111, Date: 01-Feb-2023, Time: 21:12:31, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	6.304e4	8.031e4	0.858	0.79	0.77	858.3	YES	NO	dd	db	10.103
2	2378-TCDF	25.88	6.336e4	8.393e4	0.876	0.75	0.77	906.6	YES	NO	bb	bb	10.162
3	Total-tetrafurans	24.97	5.535e2	6.624e2	0.933	0.84	0.77	8.4	YES	NO	bb	bb	0.079
4	1368-TCDF	22.39	7.606e4	1.001e5	1.064	0.76	0.77	1110.3	YES	NO	bb	bb	10.001
5	Total-pentafurans	28.90	5.868e4	3.904e4	0.866	1.50	1.55	293.6	YES	NO	bb	bb	7.853
6	12389-PECDF	32.42	3.692e5	2.469e5	0.844	1.50	1.55	1760.8	YES	NO	bb	bd	49.793
7	23478-PeCDF	31.39	3.851e5	2.639e5	0.911	1.46	1.55	1913.7	YES	NO	bb	bd	50.684
8	12378-PeCDF	30.05	3.709e5	2.488e5	0.845	1.49	1.55	1826.3	YES	NO	bb	bd	50.020
9	123789-HxCDF	37.01	2.970e5	2.380e5	1.187	1.25	1.24	1910.9	YES	NO	bd	bb	50.440
10	234678-HxCDF	35.99	3.507e5	2.736e5	1.229	1.28	1.24	2188.7	YES	NO	bb	bd	52.648
11	123678-HxCDF	35.13	3.745e5	2.918e5	1.248	1.28	1.24	2174.2	YES	NO	dd	dd	50.908
12	123478-HxCDF	34.99	3.366e5	2.649e5	1.182	1.27	1.24	2136.8	YES	NO	bd	bd	49.625
13	123468-HXCDF	33.33	3.502e5	2.713e5	1.197	1.29	1.24	2086.3	YES	NO	bb	bd	50.610
14	1234678-HpCDF	38.85	2.932e5	2.919e5	1.204	1.00	1.05	1544.8	YES	NO	bb	bd	48.294
15	1234789-HpCDF	41.10	2.671e5	2.524e5	1.165	1.06	1.05	1278.4	YES	NO	bb	bb	49.677
16	OCDF	45.36	3.958e5	4.645e5	1.186	0.85	0.89	3247.1	YES	NO	bb	bd	90.445
17	13468-PECDF	27.24	4.375e5	2.852e5	1.013	1.53	1.55	7421.7	YES	NO	bb	bb	48.645

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.53	5.892e4	7.101e4	1.236	0.83	0.77	727.0	YES	NO	dd	bb	9.397
2	Total-tetradioxins	26.21	8.373e4	1.038e5	1.099	0.81	0.77	673.5	YES	NO	bd	bb	15.262
3	Total-tetradioxins	25.72	2.649e4	3.214e4	1.099	0.82	0.77	333.6	YES	NO	bb	bb	4.772
4	Total-tetradioxins	24.85	2.420e3	2.985e3	1.099	0.81	0.77	19.9	YES	NO	bb	bb	0.440
5	1368-TCDD	23.66	5.296e4	6.607e4	1.084	0.80	0.77	690.5	YES	NO	bb	bb	9.816
6	1289-TCDD	27.12	4.842e4	6.049e4	0.975	0.80	0.77	575.4	YES	NO	bb	bb	9.987

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12479-PECDD	28.91	4.728e5	3.089e5	1.837	1.53	1.55	1713.2	YES	NO	bb	bb	49.845
2	12389-PECDD	32.03	3.302e5	2.107e5	1.252	1.57	1.55	1869.4	YES	NO	bb	bb	50.596
3	12378-PeCDD	31.64	2.888e5	1.854e5	1.087	1.56	1.55	1647.5	YES	NO	bb	bb	51.126
4	Total-pentadioxins	30.97	1.315e3	8.851e2	1.392	1.49	1.55	7.1	YES	NO	bb	bb	0.185

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.61	2.491e5	2.029e5	0.985	1.23	1.24	1216.5	YES	NO	bb	bb	50.610
2	123678-HxCDD	36.22	2.536e5	2.261e5	1.021	1.12	1.24	1248.0	YES	NO	db	db	51.010
3	123478-HxCDD	36.11	2.420e5	2.004e5	0.987	1.21	1.24	1245.4	YES	NO	bd	bd	50.303
4	Total-hexadioxins	34.86	7.769e2	6.946e2	1.007	1.12	1.24	3.9	YES	NO	bd	bb	0.161
5	124679-HXCDD	34.10	2.577e5	2.083e5	1.033	1.24	1.24	1234.1	YES	NO	bb	bb	50.624

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234679-HPCDD	39.31	2.468e5	2.463e5	1.286	1.00	1.05	1503.1	YES	NO	bb	bd	49.957
2	1234678-HpCDD	40.35	2.244e5	2.131e5	1.253	1.05	1.05	1286.0	YES	NO	bb	bb	45.500

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.53	5.892e4	7.101e4	1.236	0.83	0.77	727.0	YES	NO	dd	bb	9.397
2	Total-tetradioxins	26.21	8.373e4	1.038e5	1.099	0.81	0.77	673.5	YES	NO	bd	bb	15.262
3	Total-tetradioxins	25.72	2.649e4	3.214e4	1.099	0.82	0.77	333.6	YES	NO	bb	bb	4.772
4	Total-tetradioxins	24.85	2.420e3	2.985e3	1.099	0.81	0.77	19.9	YES	NO	bb	bb	0.440
5	1368-TCDD	23.66	5.296e4	6.607e4	1.084	0.80	0.77	690.5	YES	NO	bb	bb	9.816
6	12479-PECDD	28.91	4.728e5	3.089e5	1.837	1.53	1.55	1713.2	YES	NO	bb	bb	49.845
7	1289-TCDD	27.12	4.842e4	6.049e4	0.975	0.80	0.77	575.4	YES	NO	bb	bb	9.987
8	12389-PECDD	32.03	3.302e5	2.107e5	1.252	1.57	1.55	1869.4	YES	NO	bb	bb	50.596
9	12378-PeCDD	31.64	2.888e5	1.854e5	1.087	1.56	1.55	1647.5	YES	NO	bb	bb	51.126
10	Total-pentadioxins	30.97	1.315e3	8.851e2	1.392	1.49	1.55	7.1	YES	NO	bb	bb	0.185
11	123789-HxCDD	36.61	2.491e5	2.029e5	0.985	1.23	1.24	1216.5	YES	NO	bb	bb	50.610
12	123678-HxCDD	36.22	2.536e5	2.261e5	1.021	1.12	1.24	1248.0	YES	NO	db	db	51.010
13	123478-HxCDD	36.11	2.420e5	2.004e5	0.987	1.21	1.24	1245.4	YES	NO	bd	bd	50.303
14	Total-hexadioxins	34.86	7.769e2	6.946e2	1.007	1.12	1.24	3.9	YES	NO	bd	bb	0.161
15	124679-HXCDD	34.10	2.577e5	2.083e5	1.033	1.24	1.24	1234.1	YES	NO	bb	bb	50.624
16	1234679-HPCDD	39.31	2.468e5	2.463e5	1.286	1.00	1.05	1503.1	YES	NO	bb	bd	49.957
17	1234678-HpCDD	40.35	2.244e5	2.131e5	1.253	1.05	1.05	1286.0	YES	NO	bb	bb	45.500
18	OCDD	45.12	3.894e5	4.309e5	1.103	0.90	0.89	2068.3	YES	NO	bd	bb	92.775

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	6.304e4	8.031e4	0.858	0.79	0.77	858.3	YES	NO	dd	db	10.103
2	2378-TCDF	25.88	6.336e4	8.393e4	0.876	0.75	0.77	906.6	YES	NO	bb	bb	10.162
3	Total-tetrafurans	24.97	5.535e2	6.624e2	0.933	0.84	0.77	8.4	YES	NO	bb	bb	0.079
4	1368-TCDF	22.39	7.606e4	1.001e5	1.064	0.76	0.77	1110.3	YES	NO	bb	bb	10.001
5	Total-pentafurans	28.90	5.868e4	3.904e4	0.866	1.50	1.55	293.6	YES	NO	bb	bb	7.853
6	12389-PECDF	32.42	3.692e5	2.469e5	0.844	1.50	1.55	1760.8	YES	NO	bb	bd	49.793
7	23478-PeCDF	31.39	3.851e5	2.639e5	0.911	1.46	1.55	1913.7	YES	NO	bb	bd	50.684
8	12378-PeCDF	30.05	3.709e5	2.488e5	0.845	1.49	1.55	1826.3	YES	NO	bb	bd	50.020
9	123789-HxCDF	37.01	2.970e5	2.380e5	1.187	1.25	1.24	1910.9	YES	NO	bd	bb	50.440
10	234678-HxCDF	35.99	3.507e5	2.736e5	1.229	1.28	1.24	2188.7	YES	NO	bb	bd	52.648
11	123678-HxCDF	35.13	3.745e5	2.918e5	1.248	1.28	1.24	2174.2	YES	NO	dd	dd	50.908
12	123478-HxCDF	34.99	3.366e5	2.649e5	1.182	1.27	1.24	2136.8	YES	NO	bd	bd	49.625
13	123468-HXCDF	33.33	3.502e5	2.713e5	1.197	1.29	1.24	2086.3	YES	NO	bb	bd	50.610
14	1234678-HpCDF	38.85	2.932e5	2.919e5	1.204	1.00	1.05	1544.8	YES	NO	bb	bd	48.294
15	1234789-HpCDF	41.10	2.671e5	2.524e5	1.165	1.06	1.05	1278.4	YES	NO	bb	bb	49.677
16	OCDF	45.36	3.958e5	4.645e5	1.186	0.85	0.89	3247.1	YES	NO	bb	bd	90.445
17	13468-PECDF	27.24	4.375e5	2.852e5	1.013	1.53	1.55	7421.7	YES	NO	bb	bb	48.645
18	2378-TCDD	26.53	5.892e4	7.101e4	1.236	0.83	0.77	727.0	YES	NO	dd	bb	9.397
19	Total-tetradioxins	26.21	8.373e4	1.038e5	1.099	0.81	0.77	673.5	YES	NO	bd	bb	15.262
20	Total-tetradioxins	25.72	2.649e4	3.214e4	1.099	0.82	0.77	333.6	YES	NO	bb	bb	4.772
21	Total-tetradioxins	24.85	2.420e3	2.985e3	1.099	0.81	0.77	19.9	YES	NO	bb	bb	0.440
22	1368-TCDD	23.66	5.296e4	6.607e4	1.084	0.80	0.77	690.5	YES	NO	bb	bb	9.816
23	12479-PECDD	28.91	4.728e5	3.089e5	1.837	1.53	1.55	1713.2	YES	NO	bb	bb	49.845
24	1289-TCDD	27.12	4.842e4	6.049e4	0.975	0.80	0.77	575.4	YES	NO	bb	bb	9.987
25	12389-PECDD	32.03	3.302e5	2.107e5	1.252	1.57	1.55	1869.4	YES	NO	bb	bb	50.596
26	12378-PeCDD	31.64	2.888e5	1.854e5	1.087	1.56	1.55	1647.5	YES	NO	bb	bb	51.126
27	Total-pentadioxins	30.97	1.315e3	8.851e2	1.392	1.49	1.55	7.1	YES	NO	bb	bb	0.185
28	123789-HxCDD	36.61	2.491e5	2.029e5	0.985	1.23	1.24	1216.5	YES	NO	bb	bb	50.610
29	123678-HxCDD	36.22	2.536e5	2.261e5	1.021	1.12	1.24	1248.0	YES	NO	db	db	51.010
30	123478-HxCDD	36.11	2.420e5	2.004e5	0.987	1.21	1.24	1245.4	YES	NO	bd	bd	50.303
31	Total-hexadioxins	34.86	7.769e2	6.946e2	1.007	1.12	1.24	3.9	YES	NO	bd	bb	0.161
32	124679-HXCDD	34.10	2.577e5	2.083e5	1.033	1.24	1.24	1234.1	YES	NO	bb	bb	50.624
33	1234679-HPCDD	39.31	2.468e5	2.463e5	1.286	1.00	1.05	1503.1	YES	NO	bb	bd	49.957
34	1234678-HpCDD	40.35	2.244e5	2.131e5	1.253	1.05	1.05	1286.0	YES	NO	bb	bb	45.500
35	OCDD	45.12	3.894e5	4.309e5	1.103	0.90	0.89	2068.3	YES	NO	bd	bb	92.775

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Last Altered: Friday, February 03, 2023 11:22:32 Pacific Standard Time
Printed: Friday, February 03, 2023 11:23:25 Pacific Standard Time

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	23.43	3.727e4					1.3	NO		bb		
2	FUNCTION1 PFK	23.18	1.916e4					1.1	NO		bb		
3	FUNCTION1 PFK	22.75	3.142e3					0.4	NO		bb		
4	FUNCTION1 PFK	22.69	1.169e4					0.7	NO		bb		
5	FUNCTION1 PFK	22.63	7.039e3					0.6	NO		bb		
6	FUNCTION1 PFK	22.57	1.283e4					0.8	NO		db		
7	FUNCTION1 PFK	22.51	2.158e4					1.2	NO		bd		
8	FUNCTION1 PFK	22.36	1.134e4					0.8	NO		bb		
9	FUNCTION1 PFK	22.22	4.269e4					1.3	NO		bb		
10	FUNCTION1 PFK	22.10	3.052e4					1.6	NO		bb		
11	FUNCTION1 PFK	21.62	2.765e4					1.4	NO		bb		
12	FUNCTION1 PFK	21.54	1.965e4					1.2	NO		bb		
13	FUNCTION1 PFK	21.48	1.090e4					0.8	NO		bb		
14	FUNCTION1 PFK	21.29	3.708e4					1.3	NO		bb		
15	FUNCTION1 PFK	26.79	7.221e3					0.6	NO		bb		
16	FUNCTION1 PFK	26.49	8.249e3					0.4	NO		bb		
17	FUNCTION1 PFK	26.41	9.337e3					0.7	NO		db		
18	FUNCTION1 PFK	26.35	9.113e3					0.6	NO		bd		
19	FUNCTION1 PFK	26.15	5.974e3					0.5	NO		bb		
20	FUNCTION1 PFK	26.09	1.716e4					0.9	NO		bb		
21	FUNCTION1 PFK	25.96	1.452e4					1.0	NO		bb		
22	FUNCTION1 PFK	25.59	3.325e3					0.4	NO		bb		
23	FUNCTION1 PFK	25.34	4.402e3					0.6	NO		bb		
24	FUNCTION1 PFK	24.87	9.404e3					0.7	NO		bb		
25	FUNCTION1 PFK	24.75	2.747e4					1.4	NO		bb		
26	FUNCTION1 PFK	24.35	3.959e3					0.5	NO		bb		
27	FUNCTION1 PFK	24.04	7.708e3					0.6	NO		bb		
28	FUNCTION1 PFK	23.69	6.646e3					0.9	NO		bb		
29	FUNCTION1 PFK	23.63	5.706e3					0.6	NO		db		
30	FUNCTION1 PFK	23.57	2.430e4					1.1	NO		bd		
31	FUNCTION1 PFK	28.10	1.253e4					0.8	NO		bb		
32	FUNCTION1 PFK	28.03	8.849e3					0.7	NO		bb		
33	FUNCTION1 PFK	27.95	1.020e4					0.7	NO		bb		
34	FUNCTION1 PFK	27.88	1.726e4					1.1	NO		bb		
35	FUNCTION1 PFK	27.76	3.581e3					0.5	NO		bb		
36	FUNCTION1 PFK	27.41	1.709e4					1.1	NO		bb		
37	FUNCTION1 PFK	27.26	1.794e4					1.0	NO		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.07	1.511e5					4.8	YES		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.55	2.727e3					1.0	NO		bb		
2	FUNCTION5 PFK	43.63	6.321e3					1.6	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	21.22	7.029e1					2.0	NO		bb		0.000
2	FUNCTION1 HXCD...	27.79	7.872e1					1.6	NO		bb		0.000
3	FUNCTION1 HXCD...	27.44	8.510e1					1.7	NO		bb		0.000
4	FUNCTION1 HXCD...	27.24	1.425e2					4.1	YES		bb		0.000
5	FUNCTION1 HXCD...	26.86	9.476e1					2.1	NO		bb		0.000
6	FUNCTION1 HXCD...	26.52	1.068e2					2.9	NO		bb		0.000
7	FUNCTION1 HXCD...	24.76	1.755e2					3.8	YES		db		0.000
8	FUNCTION1 HXCD...	24.66	1.713e2					3.1	YES		bd		0.000
9	FUNCTION1 HXCD...	22.65	7.687e1					2.7	NO		bb		0.000
10	FUNCTION1 HXCD...	21.59	1.290e2					2.9	NO		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	28.01	1.182e2					1.3	NO		bb		0.000
2	FUNCTION1 HPCD...	26.91	1.043e2					2.5	NO		bb		0.000
3	FUNCTION1 HPCD...	26.31	8.865e1					2.0	NO		bb		0.000
4	FUNCTION1 HPCD...	24.76	1.293e2					2.4	NO		bb		0.000
5	FUNCTION1 HPCD...	22.60	8.433e1					1.6	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.44	1.012e2					2.5	NO		bb		0.000
2	FUNCTION2 HPCD...	31.41	1.119e2					1.8	NO		db		0.000
3	FUNCTION2 HPCD...	31.27	2.407e2					5.1	YES		bd		0.000
4	FUNCTION2 HPCD...	30.62	8.382e1					2.0	NO		db		0.000
5	FUNCTION2 HPCD...	30.52	8.939e1					1.4	NO		bd		0.000
6	FUNCTION2 HPCD...	28.80	1.157e2					1.7	NO		bb		0.000
7	FUNCTION2 HPCD...	28.49	1.048e2					3.0	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	35.99	8.499e1					2.5	NO		bb		0.000
2	FUNCTION3 OCDPE	34.37	1.004e2					2.7	NO		bb		0.000
3	FUNCTION3 OCDPE	33.49	7.795e1					2.6	NO		bb		0.000
4	FUNCTION3 OCDPE	33.13	1.794e2					2.9	NO		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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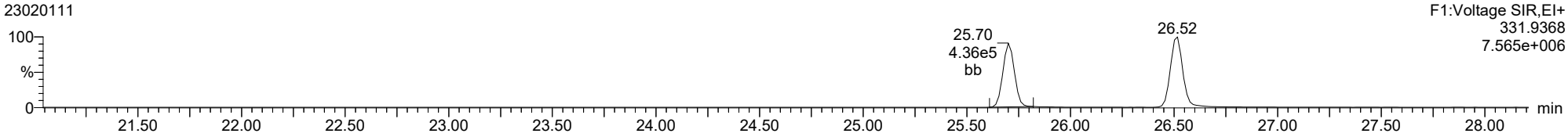
ID: CS3R2, Name: 23020111, Date: 01-Feb-2023, Time: 21:12:31, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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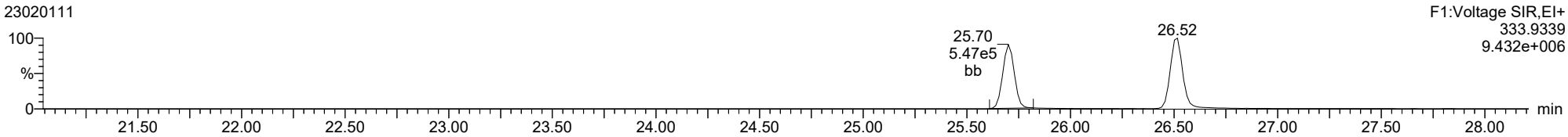
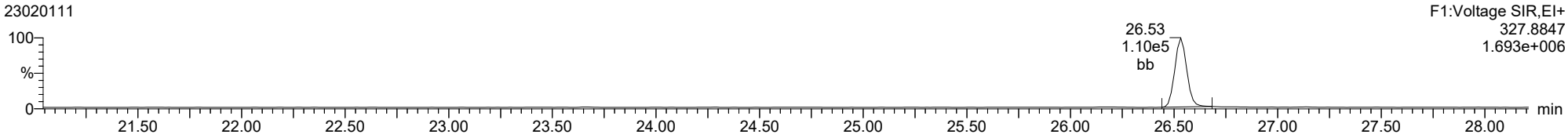


37CL-2378-TCDD



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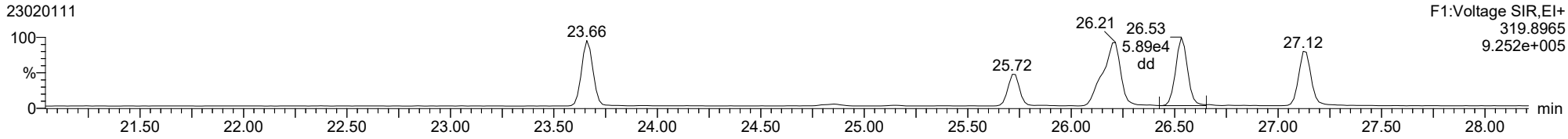
2378-TCDD



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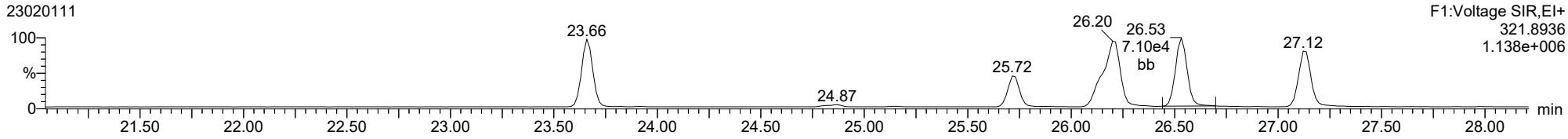

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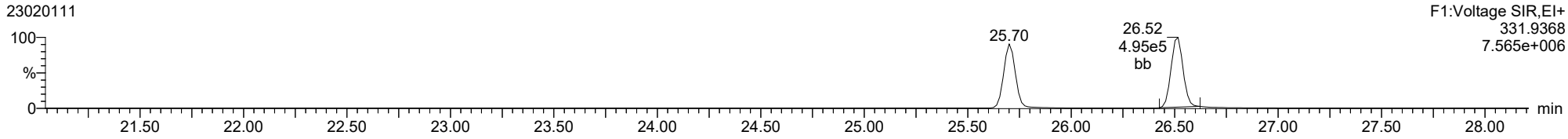

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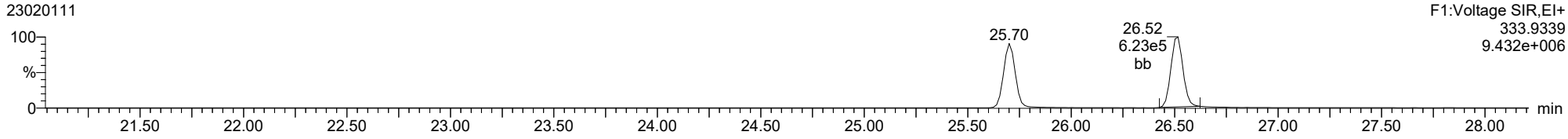

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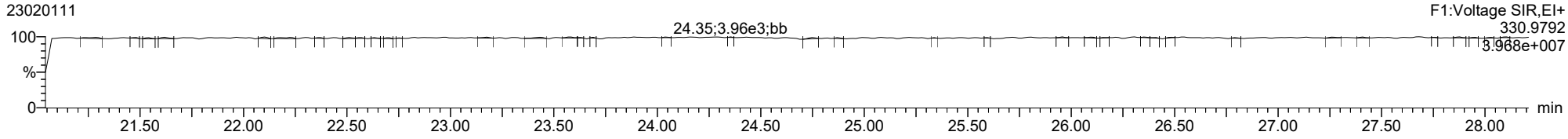

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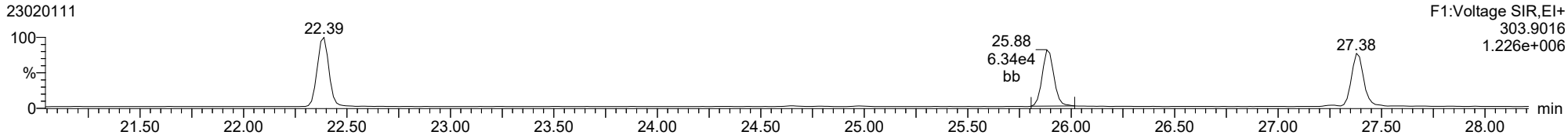
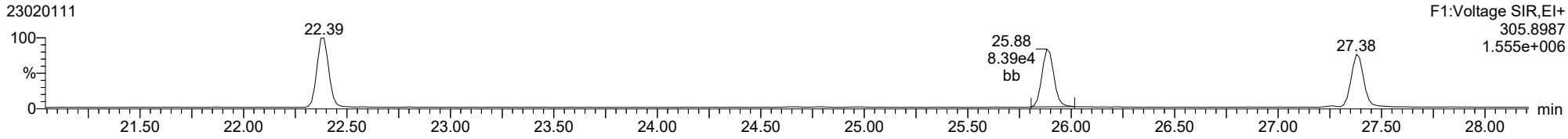
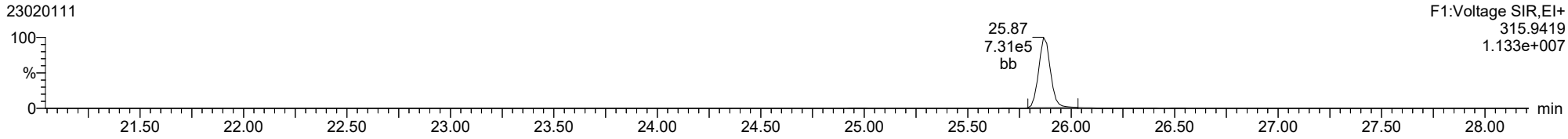
2378-TCDF



2378-TCDF



13C-2378-TCDF



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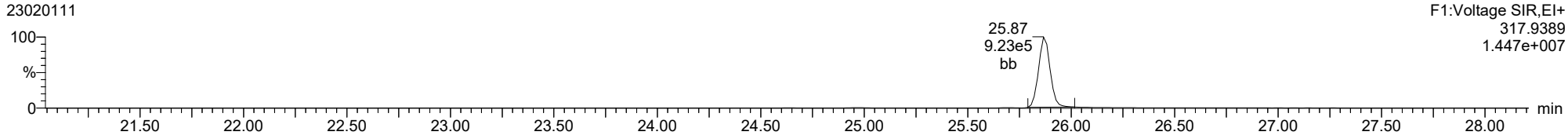
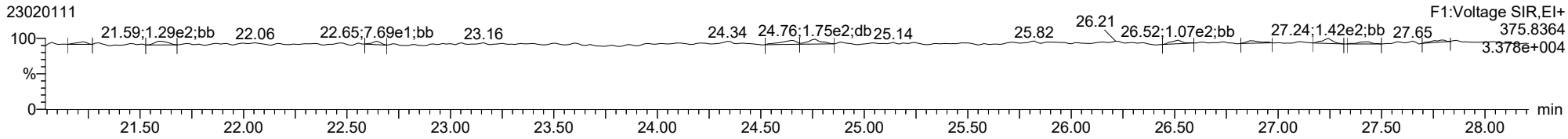
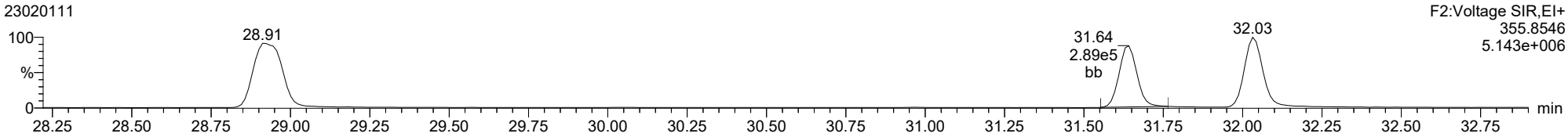


FUNCTION1 HXCDPE



ID: CS3R2, Name: 23020111, Date: 01-Feb-2023, Time: 21:12:31, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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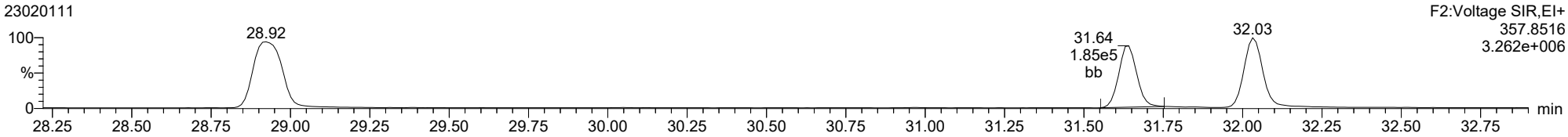

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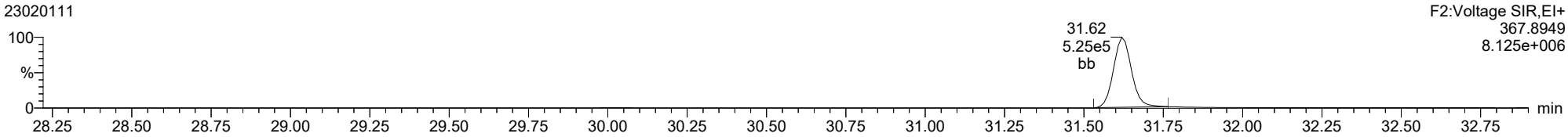

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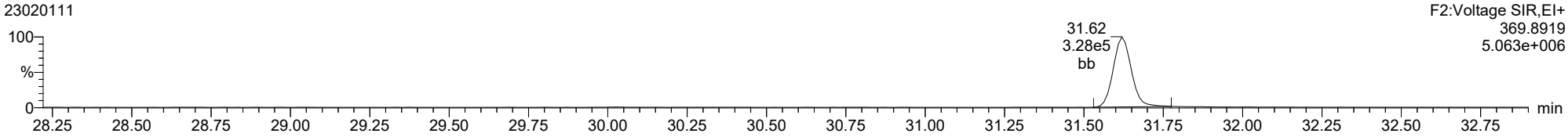
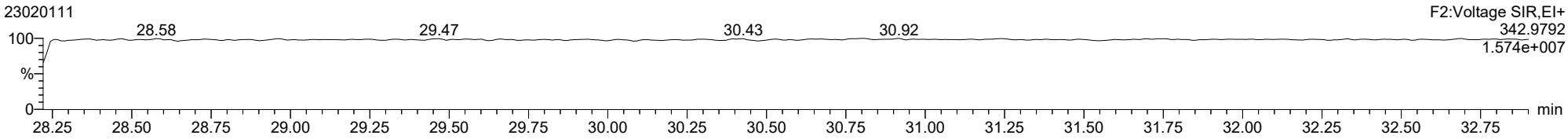


FUNCTION2 PFK



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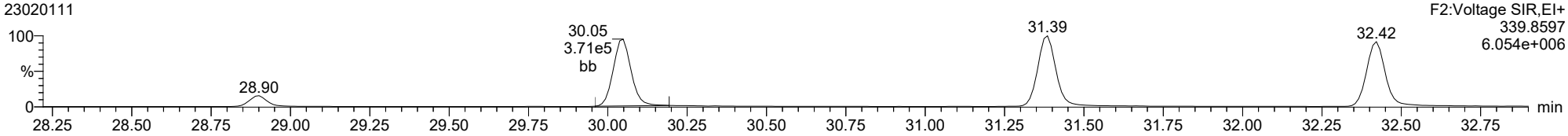
12378-PeCDF



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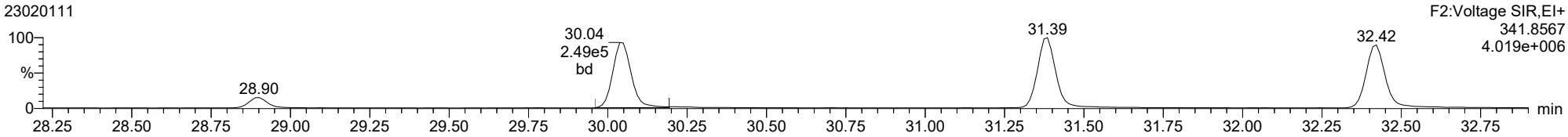

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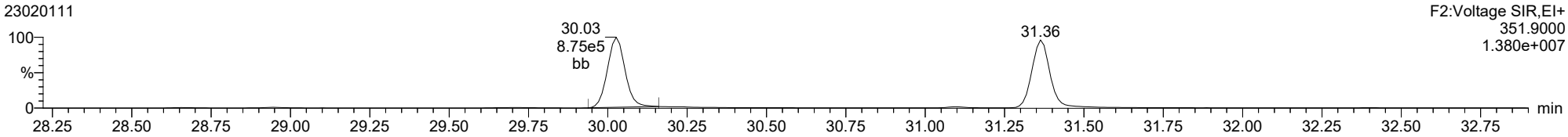

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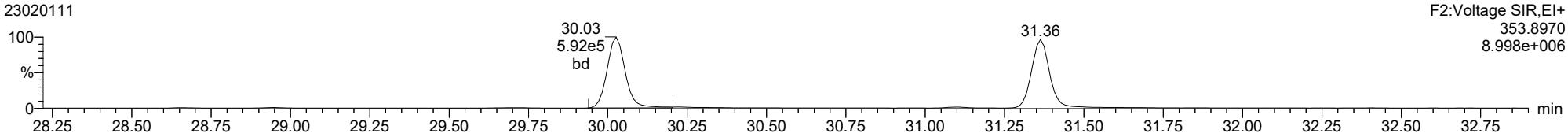
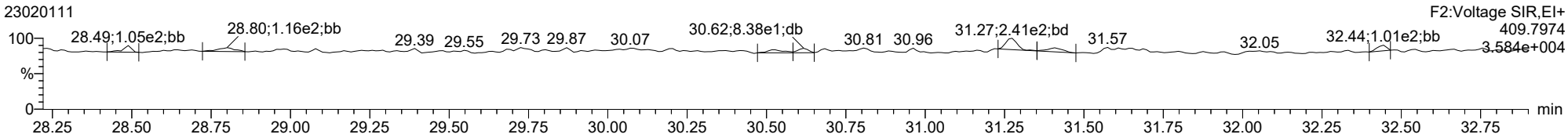


FUNCTION2 HPCDPE



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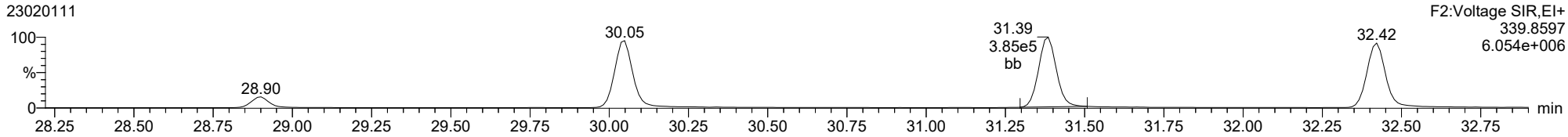
23478-PeCDF



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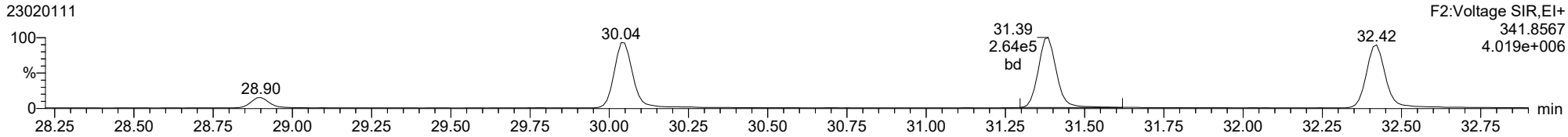

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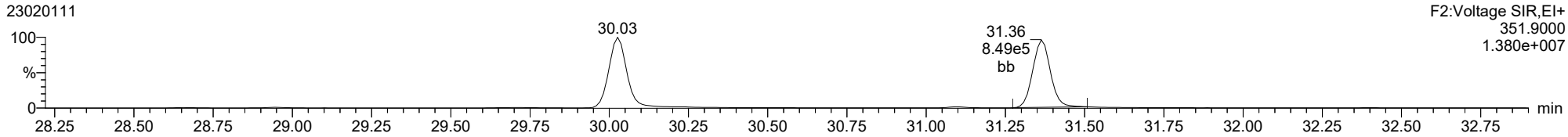

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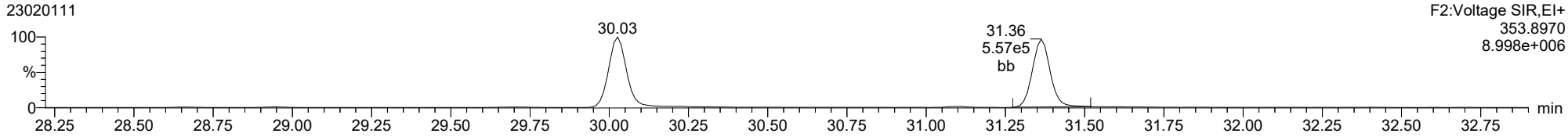
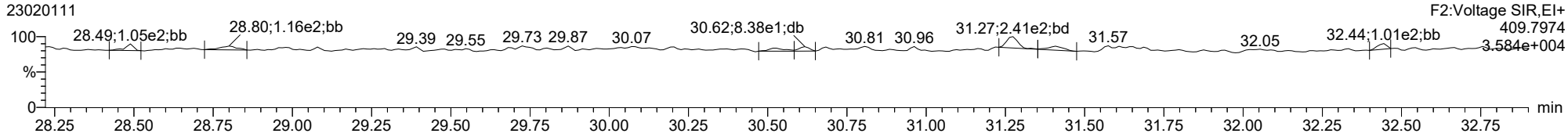


FUNCTION2 HPCDPE



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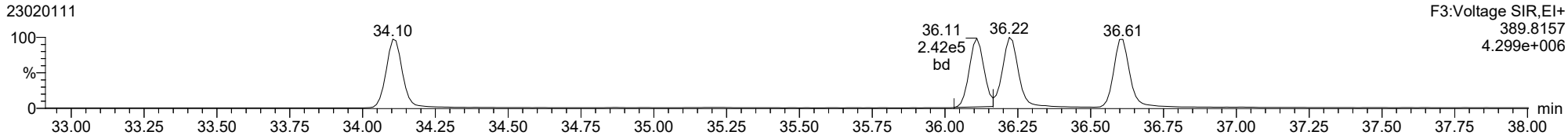
123478-HxCDD



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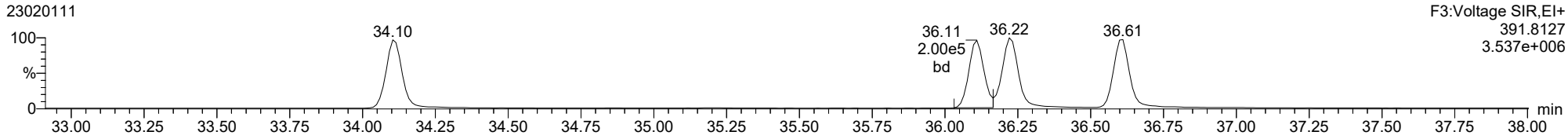

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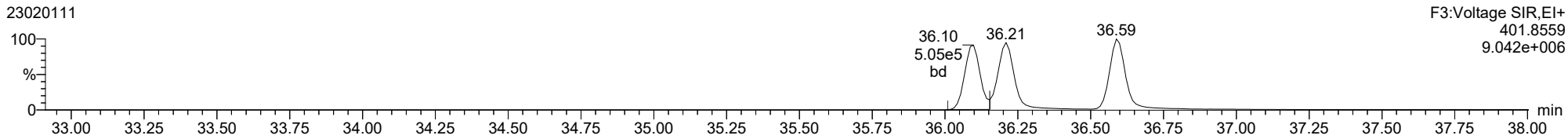

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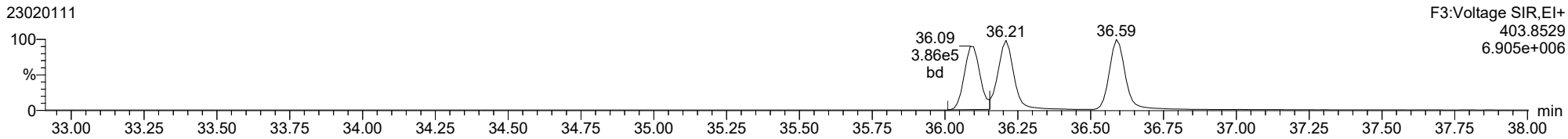
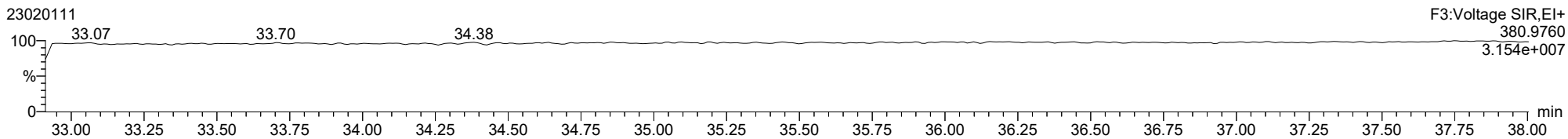


FUNCTION3 PFK



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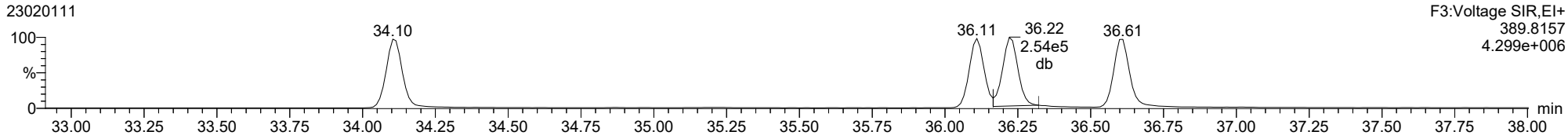

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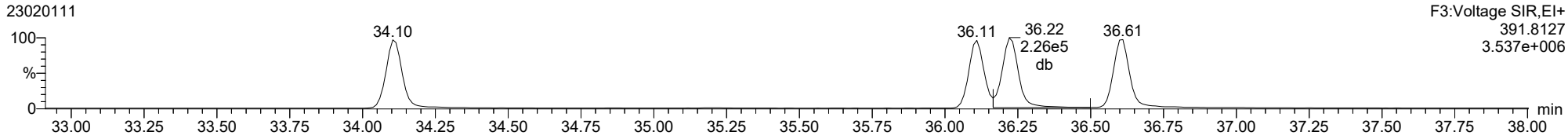

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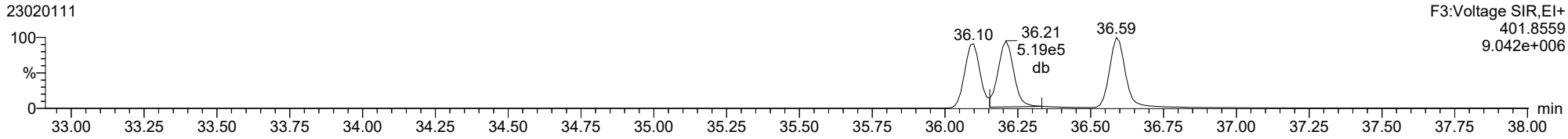

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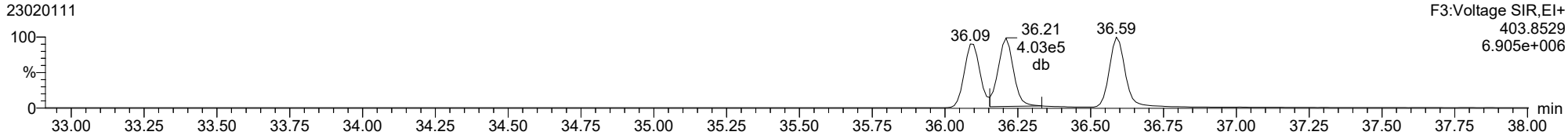

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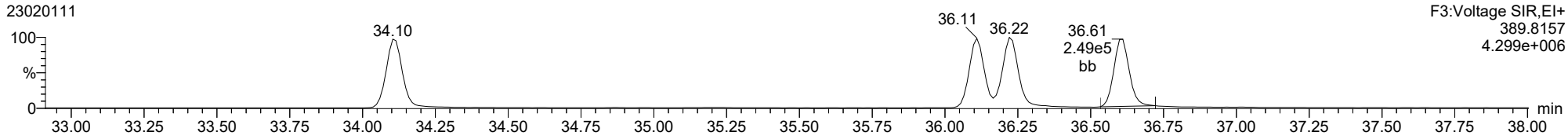

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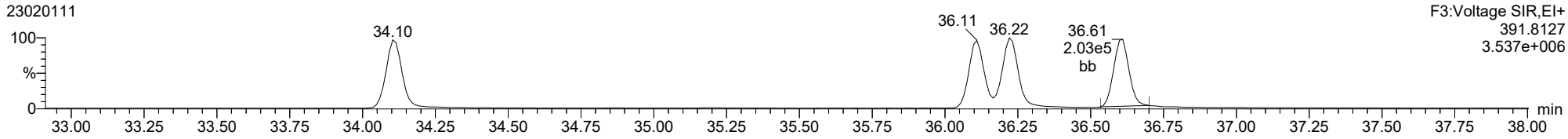

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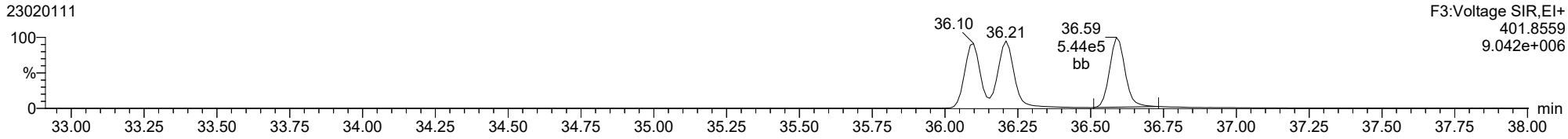

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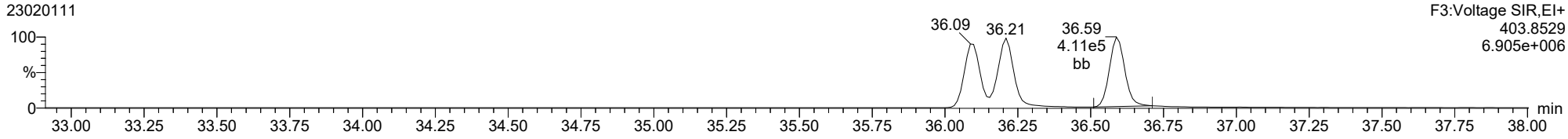

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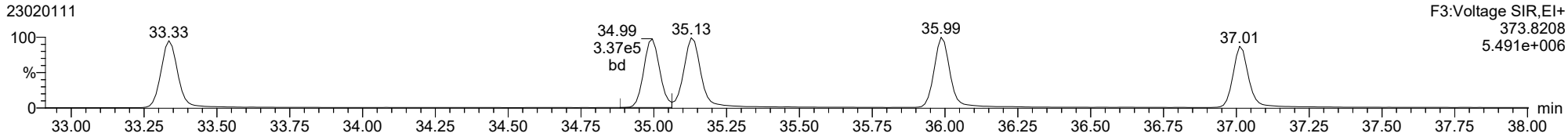
123478-HxCDF



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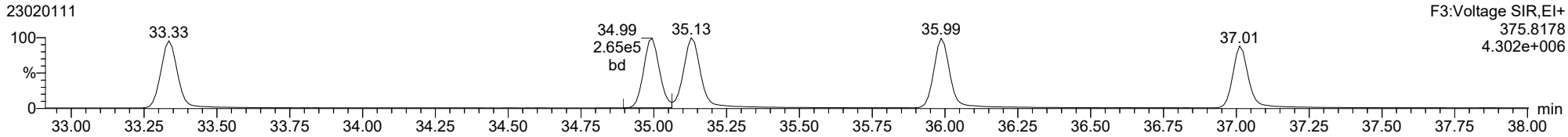

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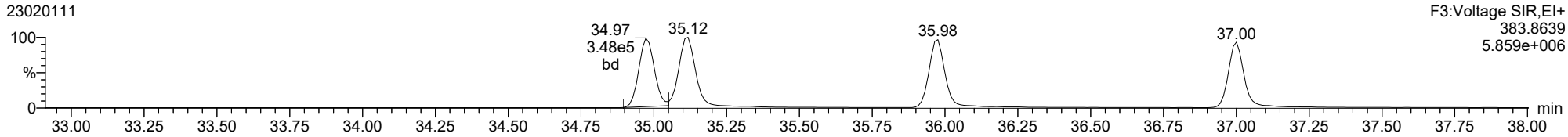

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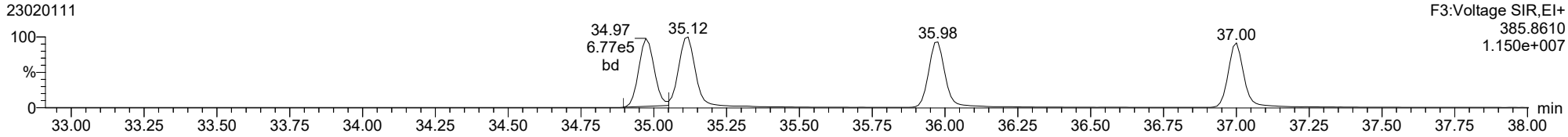
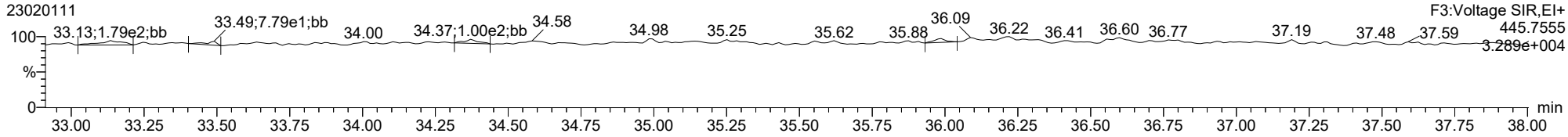


FUNCTION3 OCDPE



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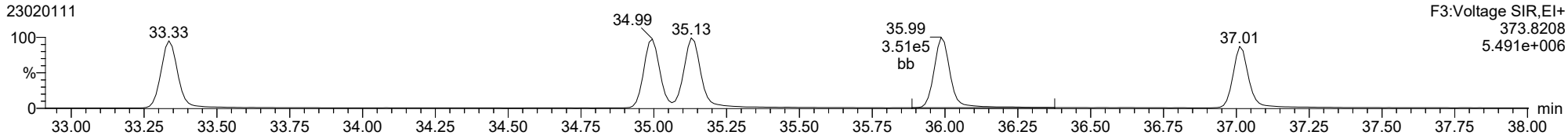
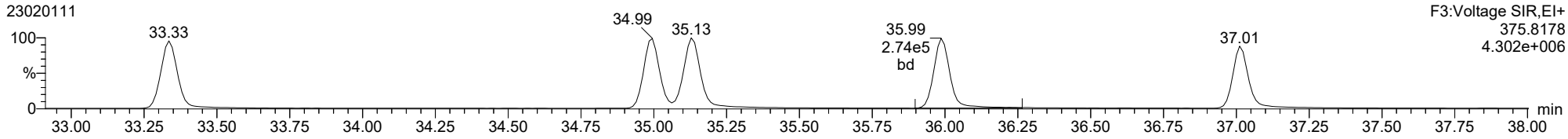
234678-HxCDF



234678-HxCDF



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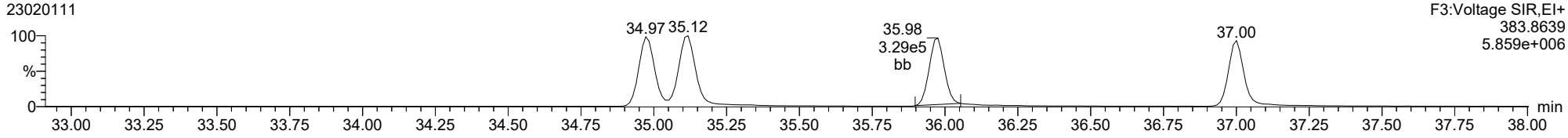

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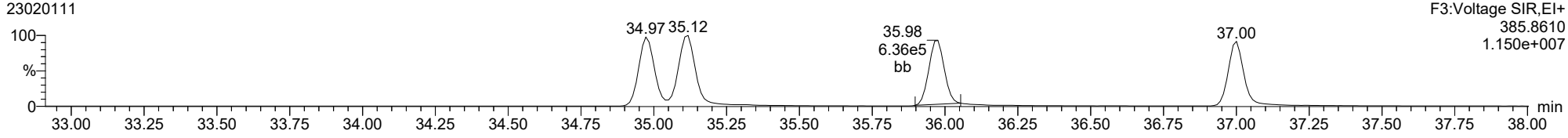
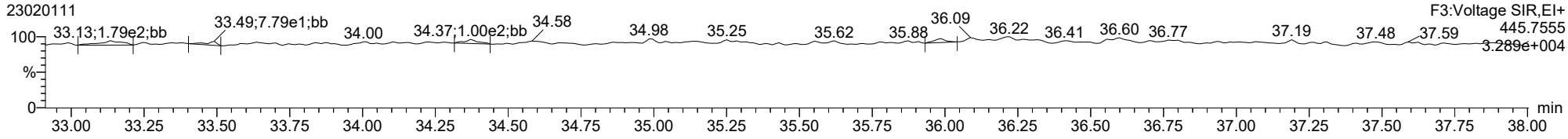


FUNCTION3 OCDPE



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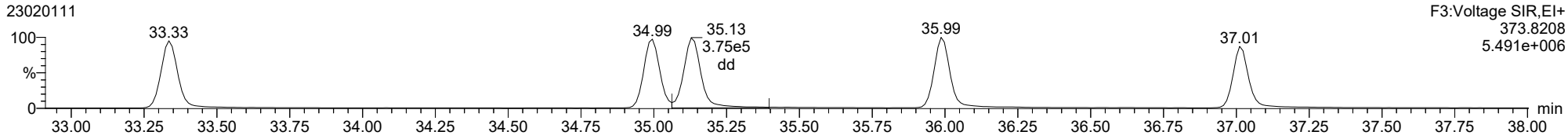
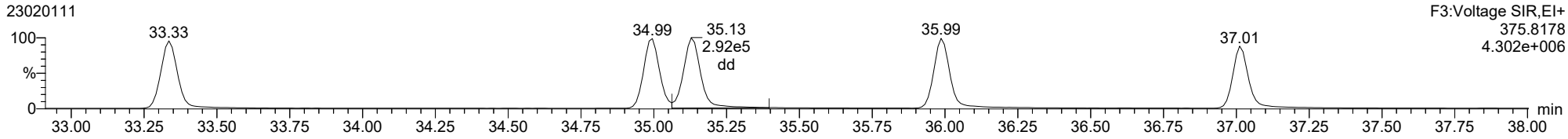
123678-HxCDF



123678-HxCDF



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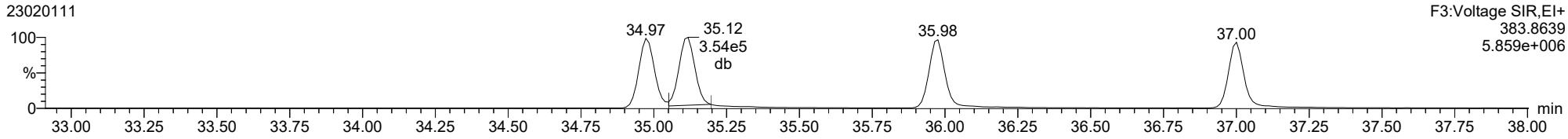

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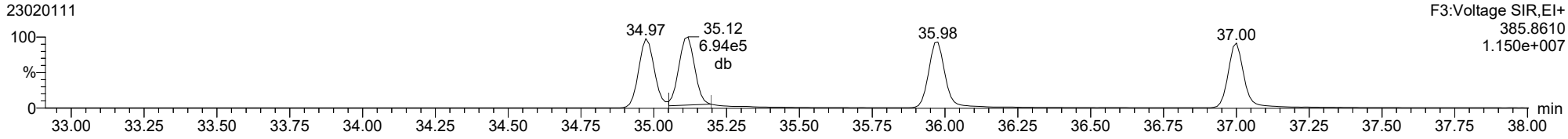
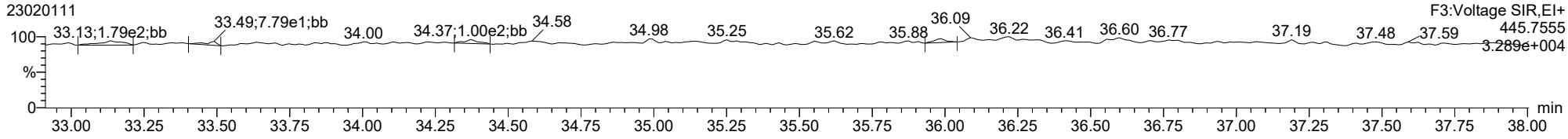


FUNCTION3 OCDPE



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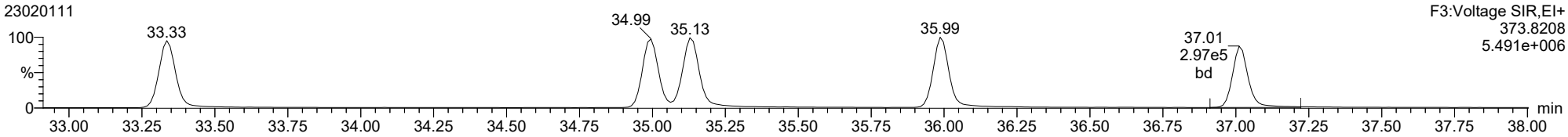
123789-HxCDF



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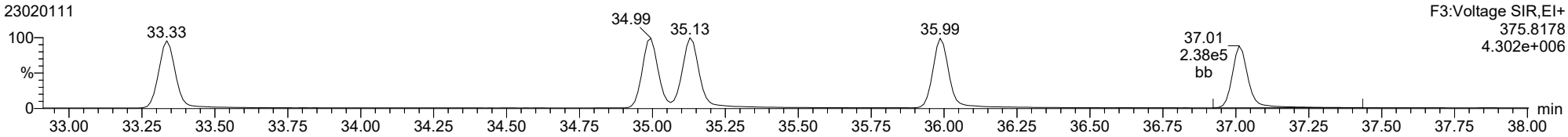

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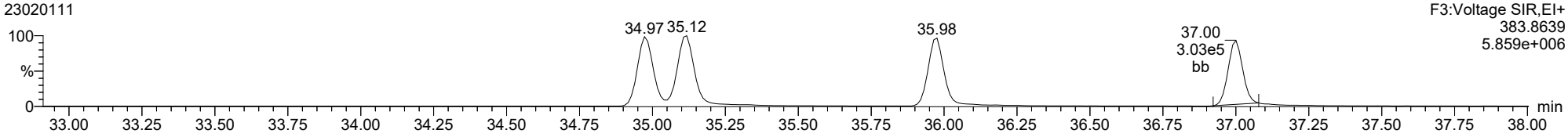

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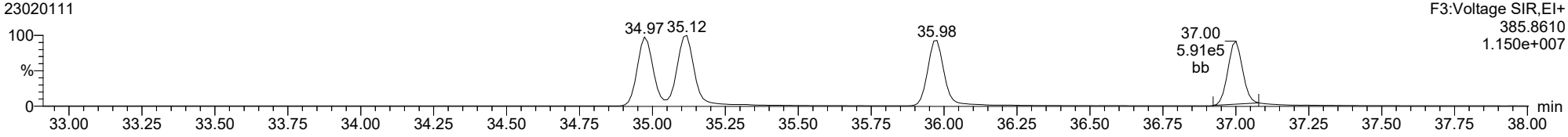

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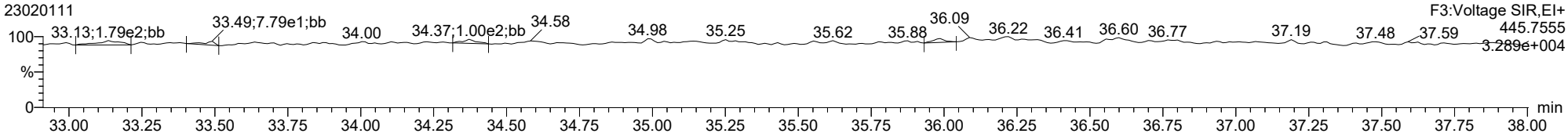

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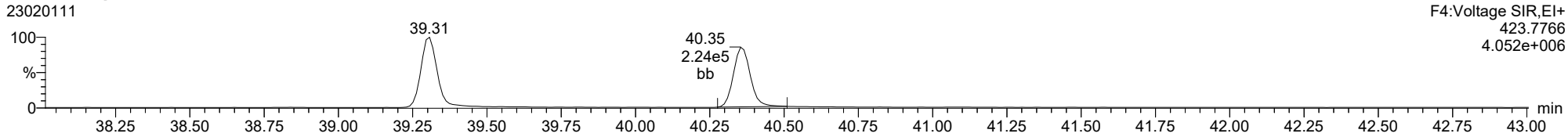

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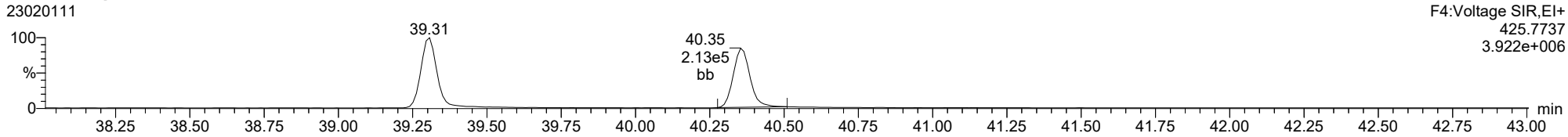

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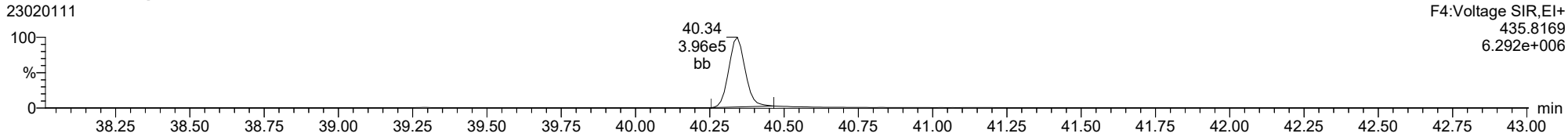

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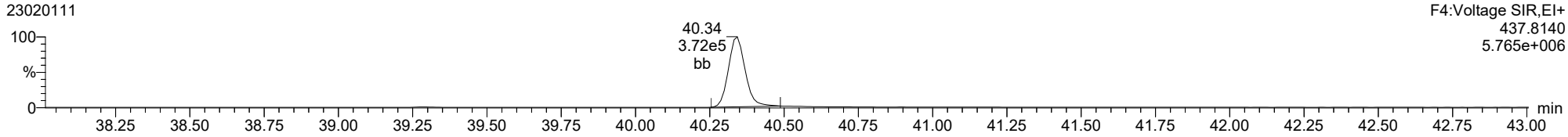

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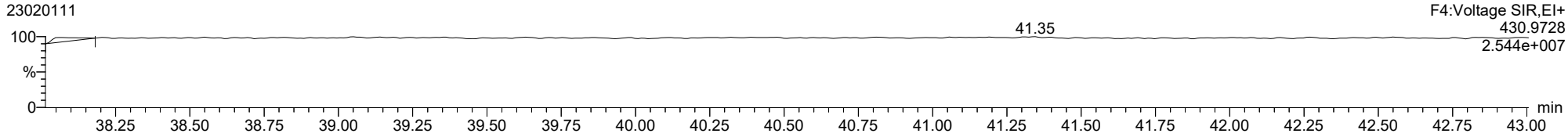

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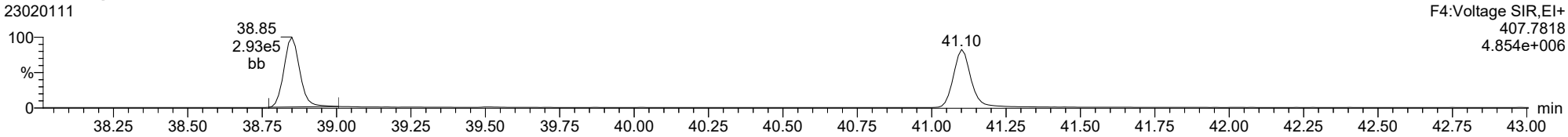

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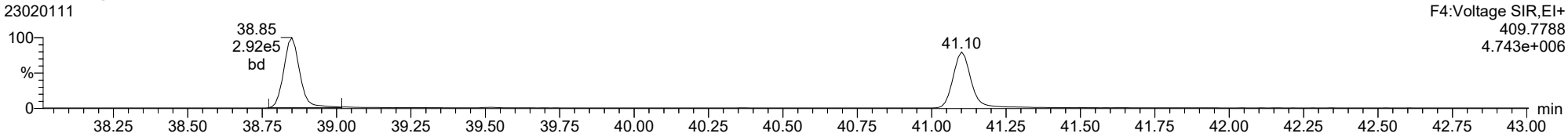

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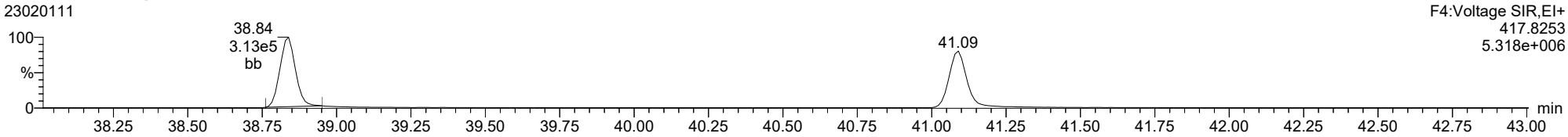

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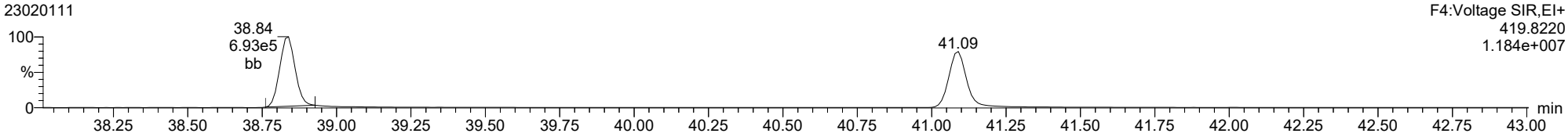
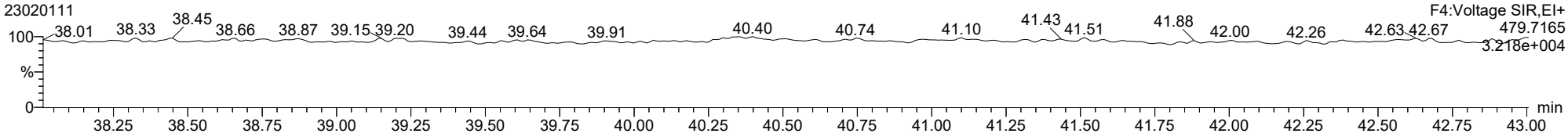


FUNCTION4 NCDPE



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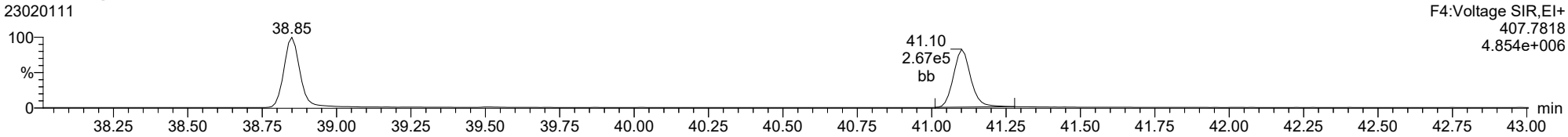

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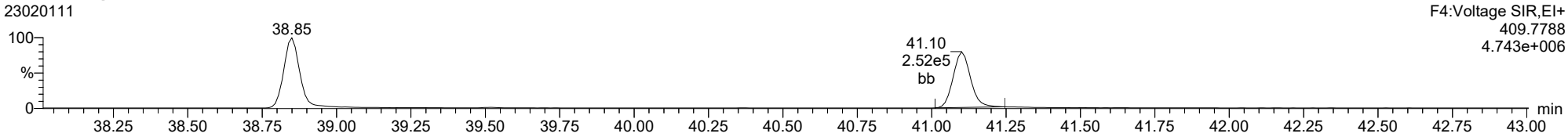

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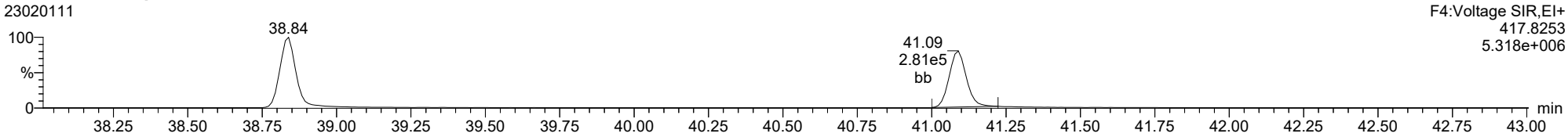

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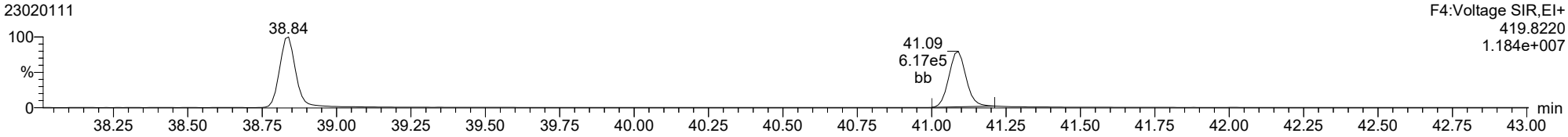

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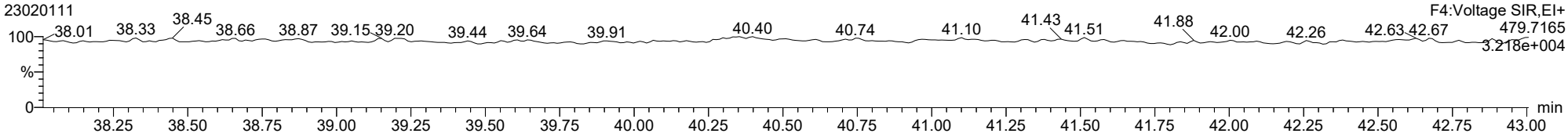

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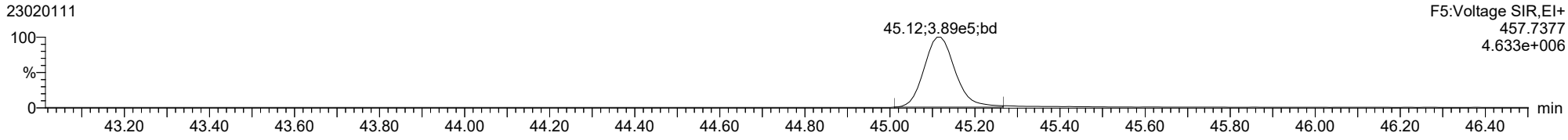

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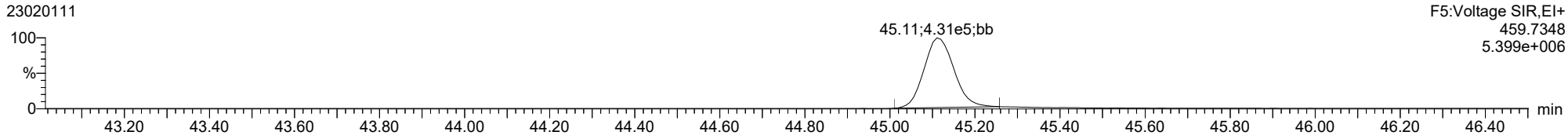

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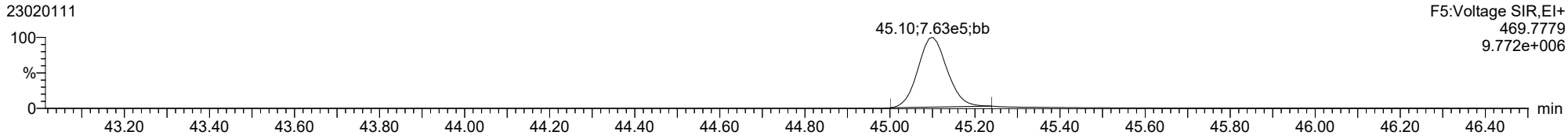

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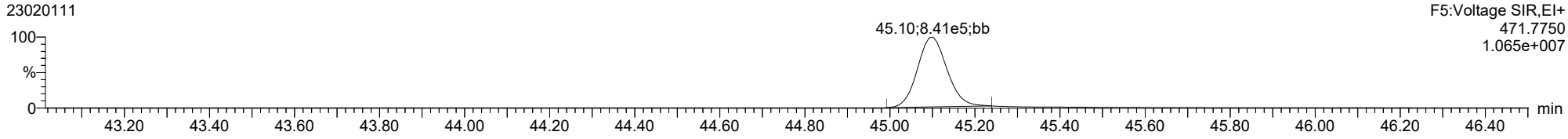

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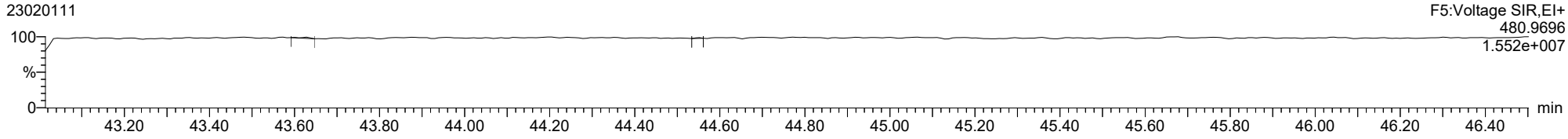

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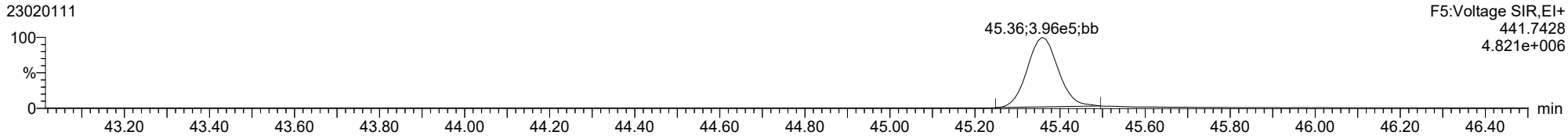

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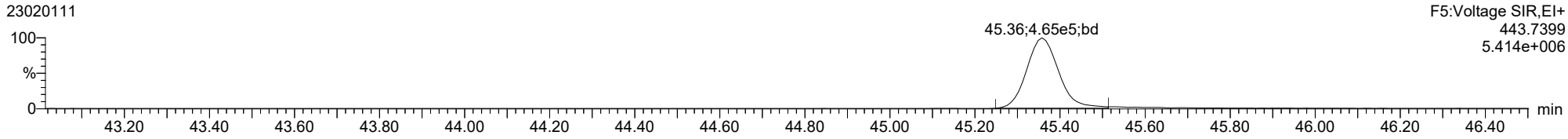

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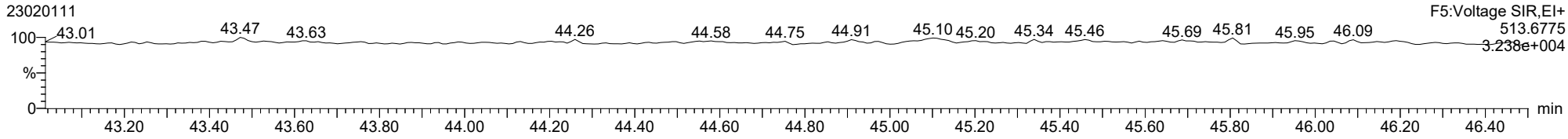

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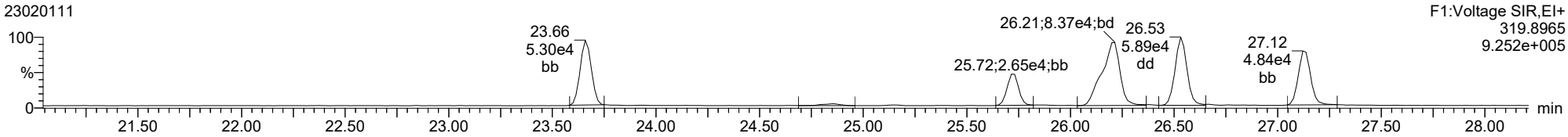
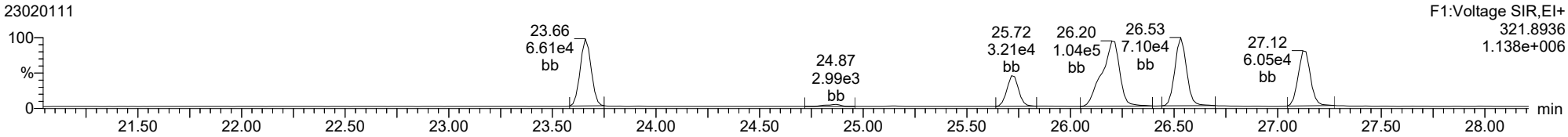
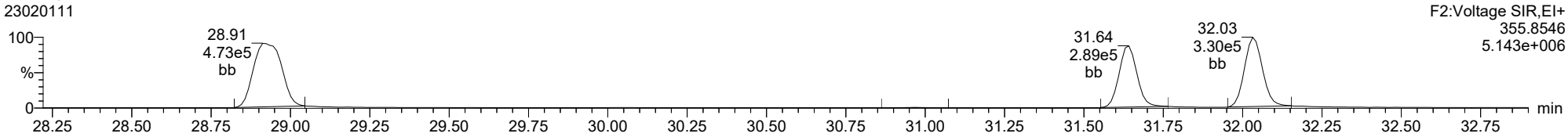


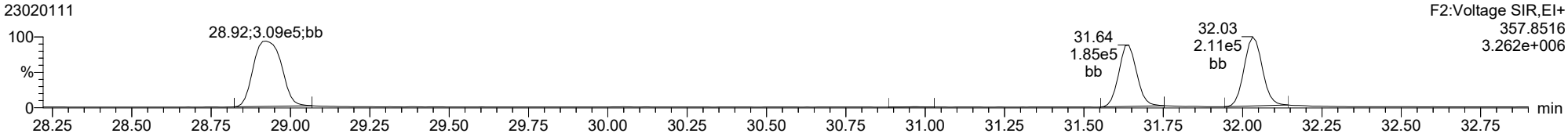
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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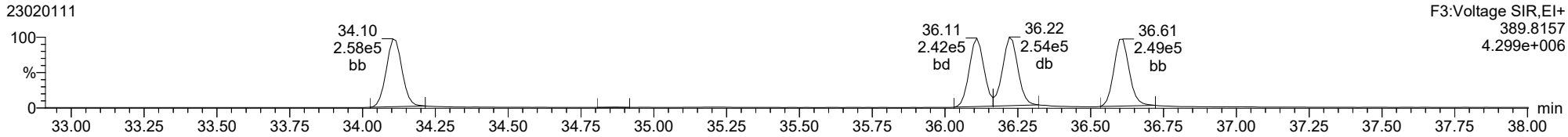
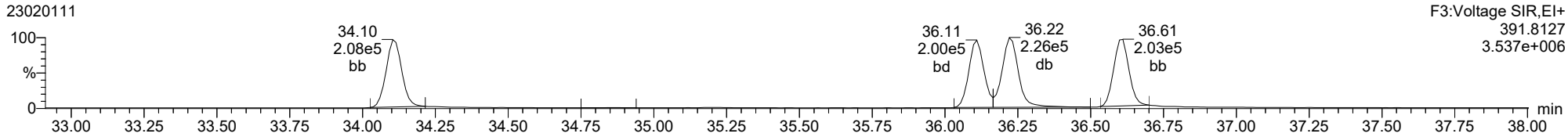


Total-hexadioxins



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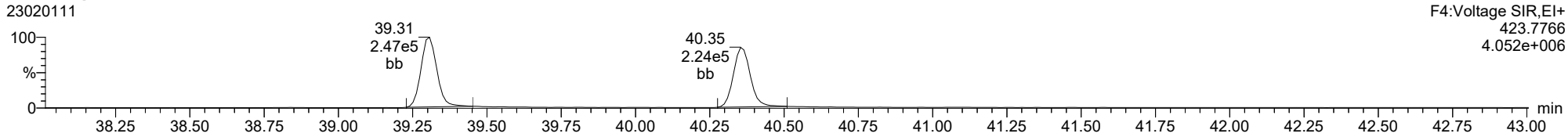

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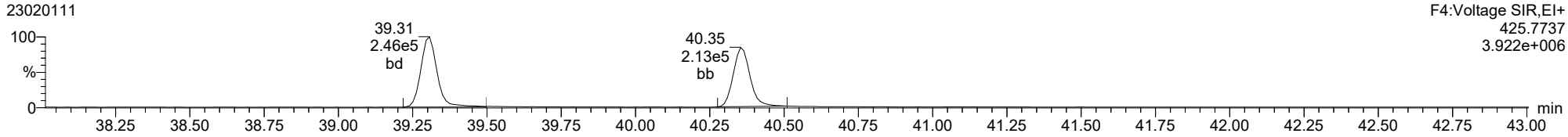

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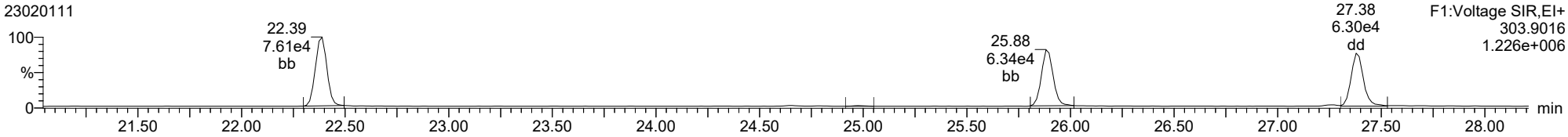
Total-tetrafurans



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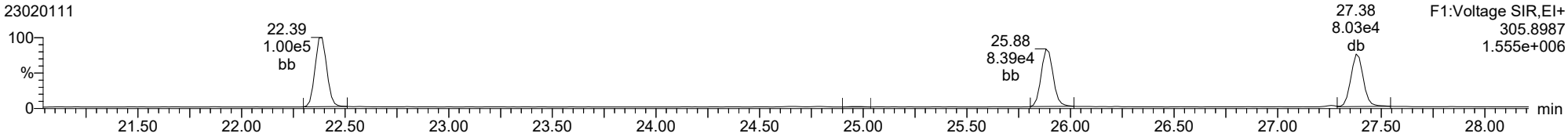

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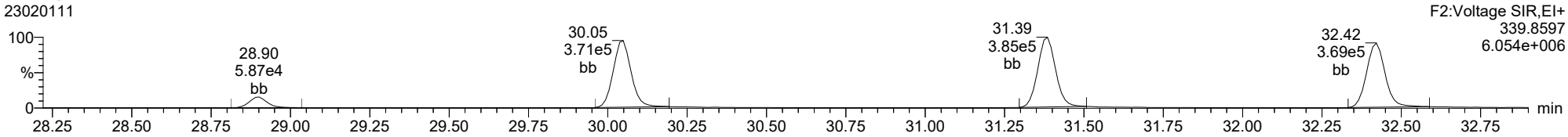

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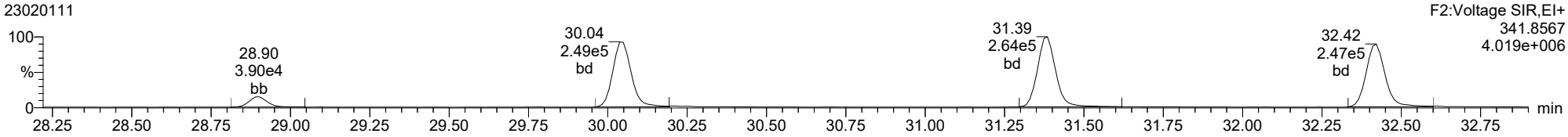

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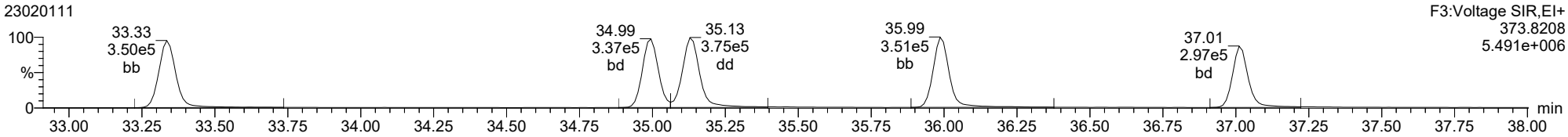

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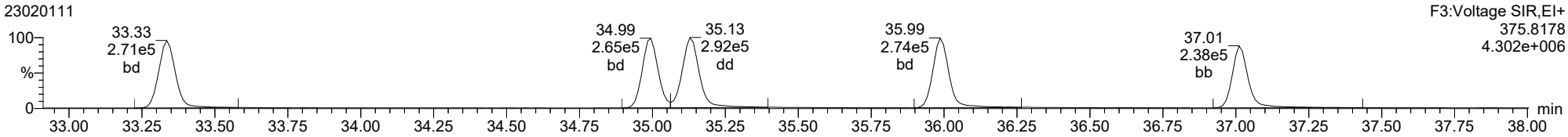

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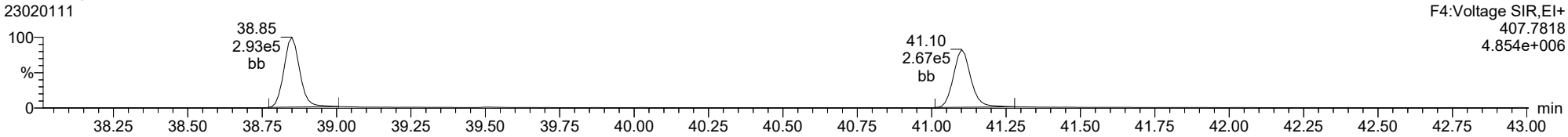

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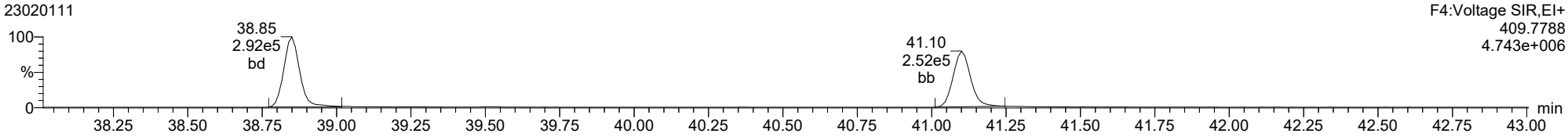

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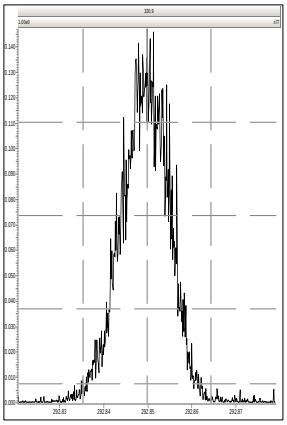

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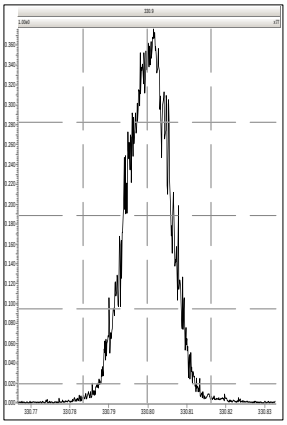

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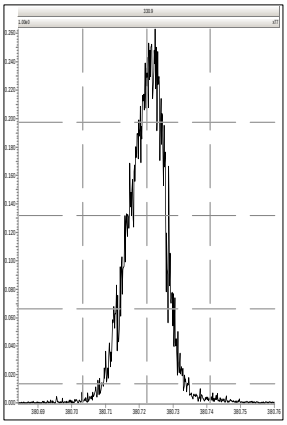

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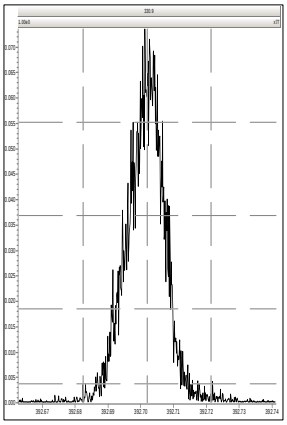

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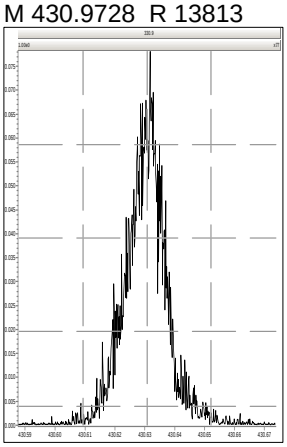

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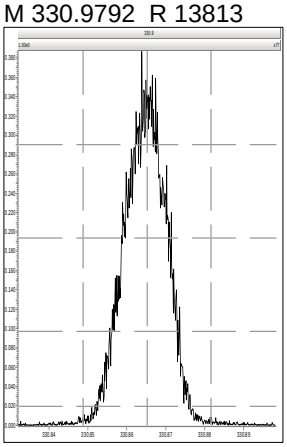
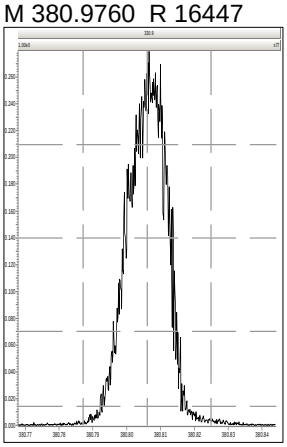
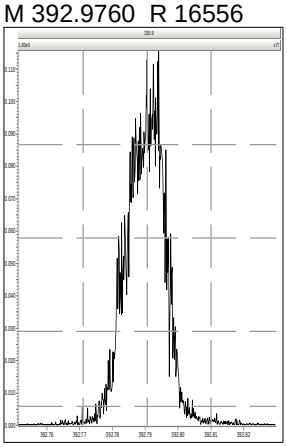


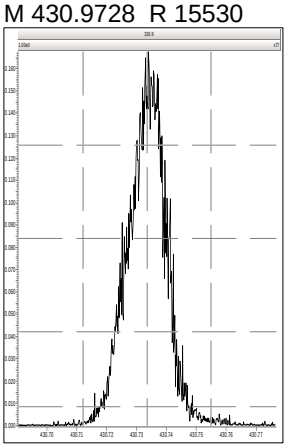
M 380.9760 R 16447



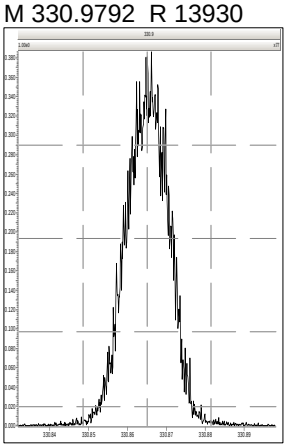
M 392.9760 R 16556



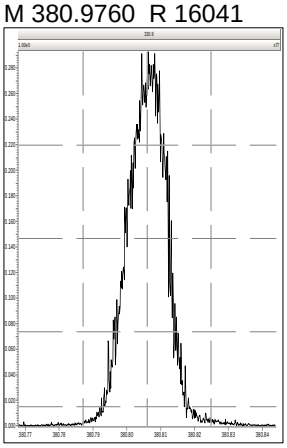
M 430.9728 R 15530



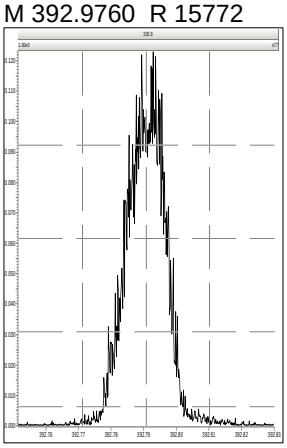
M 330.9792 R 13930



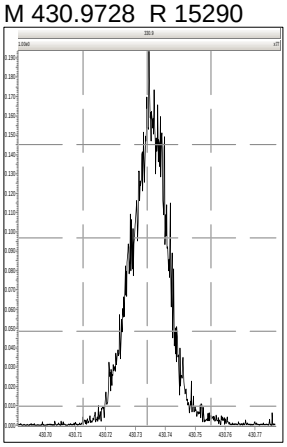
M 380.9760 R 16041



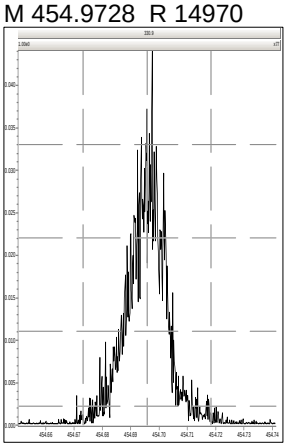
M 392.9760 R 15772



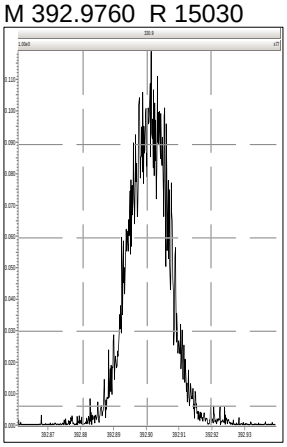
M 430.9728 R 15290



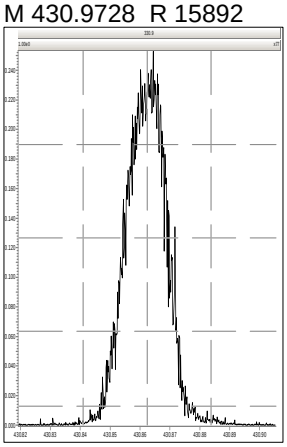
M 454.9728 R 14970



M 392.9760 R 15030

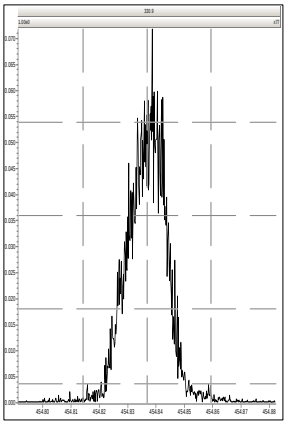


M 430.9728 R 15892

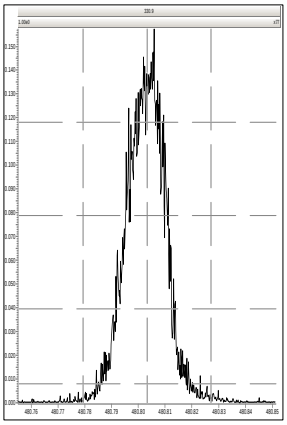


Printed: Wednesday, February 01, 2023 22:06:17 Pacific Standard Time

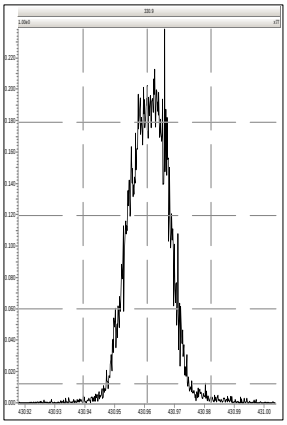
M 454.9728 R 15556



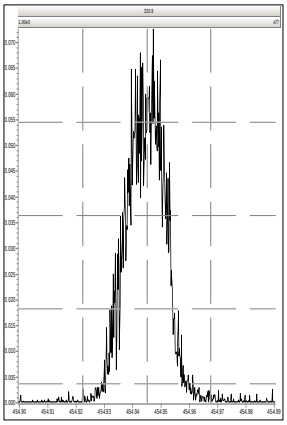
M 480.9696 R 15064



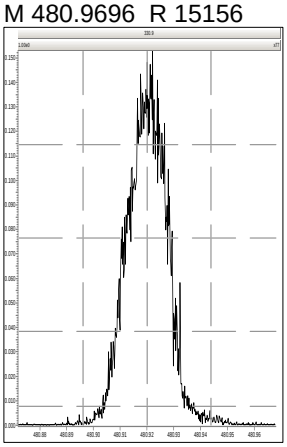
M 430.9728 R 15337



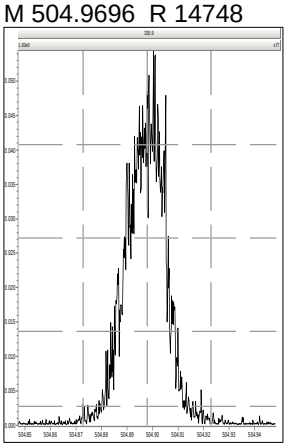
M 454.9728 R 16464



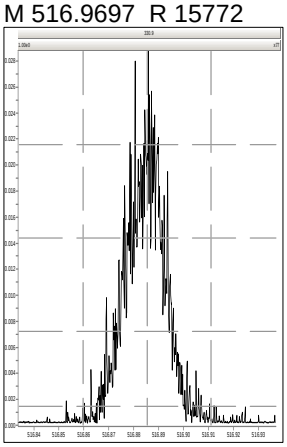
M 480.9696 R 15156

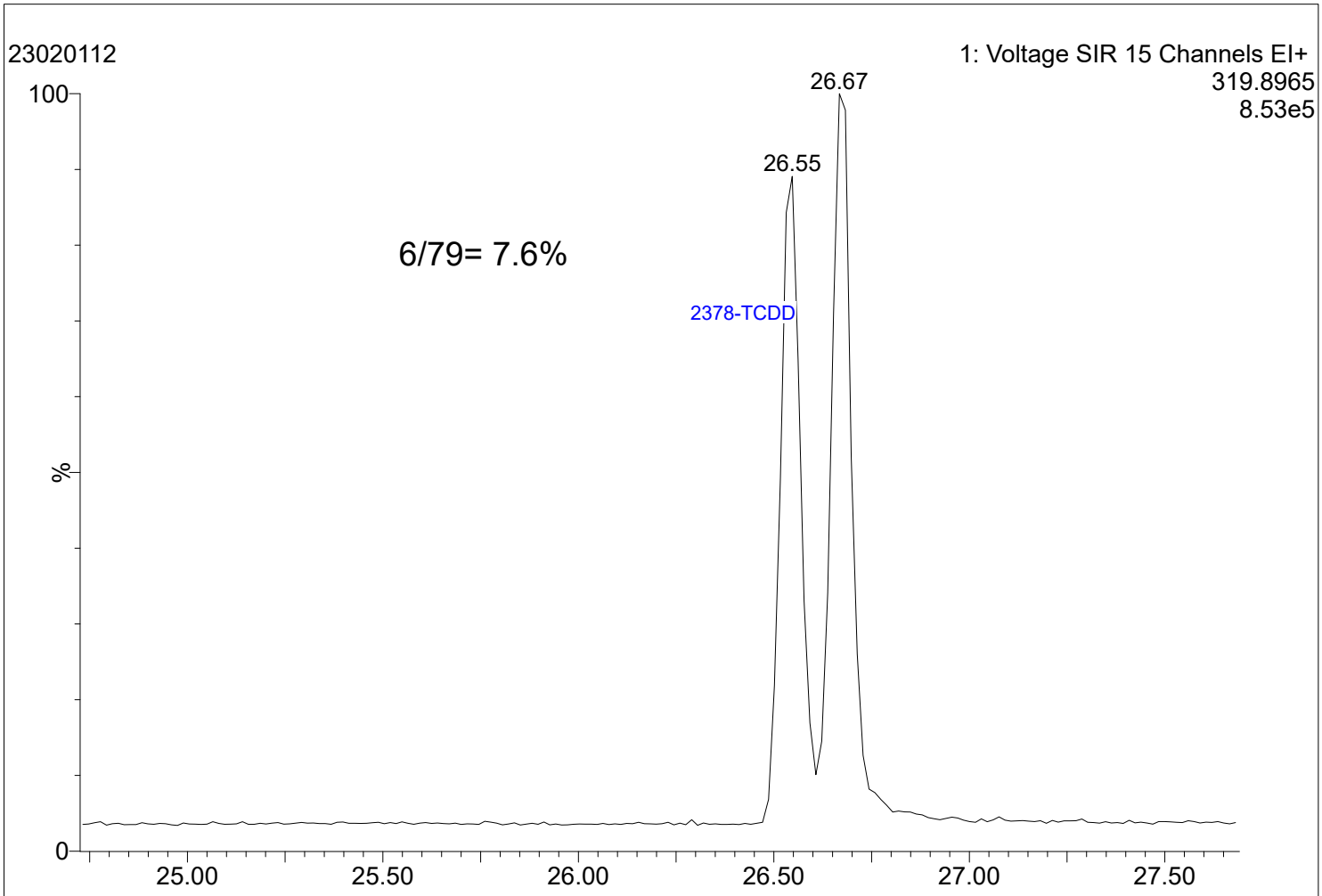


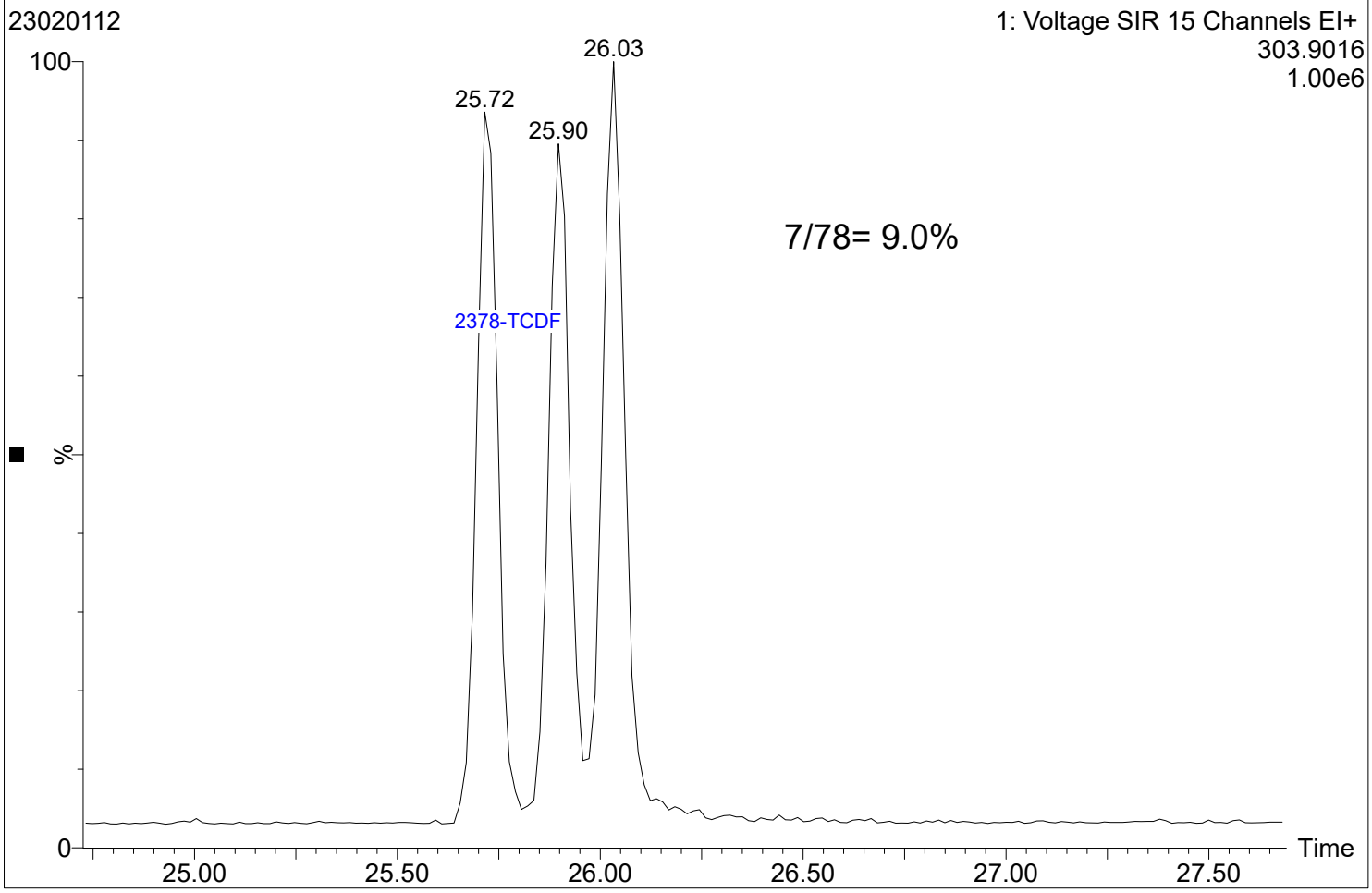
M 504.9696 R 14748



M 516.9697 R 15772




23020112
1: Voltage SIR 15 Channels EI+
319.8965
8.53e5
100
26.67
26.55
6/79= 7.6%
2378-TCDD
%
0
25.00
25.50
26.00
26.50
27.00
27.50


23020112
1: Voltage SIR 15 Channels EI+
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1.00e6
100
26.03
25.72
25.90
7/78= 9.0%
2378-TCDF
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00010
Laboratory ID: SLB0026-SCV1
Sequence: SLB0026
Sequence Name: ICVCR
Standard ID: H008219

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
2,3,7,8-TCDF	10.000	9.80	-2.0	
2,3,7,8-TCDD	10.000	10.1	1.0	
1,2,3,7,8-PeCDF	50.000	49.4	-1.1	
2,3,4,7,8-PeCDF	50.000	50.7	1.4	
1,2,3,7,8-PeCDD	50.000	48.9	-2.2	
1,2,3,4,7,8-HxCDF	50.000	50.8	1.7	
1,2,3,6,7,8-HxCDF	50.000	51.1	2.1	
2,3,4,6,7,8-HxCDF	50.000	51.5	3.1	
1,2,3,7,8,9-HxCDF	50.000	49.9	-0.2	
1,2,3,4,7,8-HxCDD	50.000	51.0	2.0	
1,2,3,6,7,8-HxCDD	50.000	48.3	-3.4	
1,2,3,7,8,9-HxCDD	50.000	49.6	-0.8	
1,2,3,4,6,7,8-HpCDF	50.000	49.0	-2.0	
1,2,3,4,7,8,9-HpCDF	50.000	51.5	2.9	
1,2,3,4,6,7,8-HpCDD	50.000	48.8	-2.3	
OCDF	100.00	93.0	-7.0	
OCDD	100.00	95.8	-4.2	
13C12-2,3,7,8-TCDF	100.00	101	0.8	
13C12-2,3,7,8-TCDD	100.00	97.3	-2.7	
13C12-1,2,3,7,8-PeCDF	100.00	97.9	-2.1	
13C12-2,3,4,7,8-PeCDF	100.00	96.0	-4.0	
13C12-1,2,3,7,8-PeCDD	100.00	95.6	-4.4	
13C12-1,2,3,4,7,8-HxCDF	100.00	99.0	-1.0	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.8	-1.2	
13C12-2,3,4,6,7,8-HxCDF	100.00	99.3	-0.7	
13C12-1,2,3,7,8,9-HxCDF	100.00	98.6	-1.4	
13C12-1,2,3,4,7,8-HxCDD	100.00	97.7	-2.3	
13C12-1,2,3,6,7,8-HxCDD	100.00	101	0.6	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	100	0.3	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	101	0.8	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	101	0.6	
13C12-OCDD	200.00	205	2.6	
37Cl4-2,3,7,8-TCDD	10.000	8.94	-10.6	

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 1613B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Calibration: GB00010
Sequence: SLB0026

SDG: 23A0133
Project: AOC5 MR Phase 1
Laboratory ID: SLB0026-SCV1
Sequence Name: ICVCR
Standard ID: H008219

* Indicates values outside of QC limits

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00010
Laboratory ID: SLB0026-SCV1
Sequence: SLB0026
Standard ID: H008219

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
OCDF	100.00	93.0	-7.0	
OCDD	100.00	95.8	-4.2	
13C12-2,3,7,8-TCDF	100.00	101	0.8	
13C12-2,3,7,8-TCDD	100.00	97.3	-2.7	
13C12-1,2,3,7,8-PeCDF	100.00	97.9	-2.1	
13C12-2,3,4,7,8-PeCDF	100.00	96.0	-4.0	
13C12-1,2,3,7,8-PeCDD	100.00	95.6	-4.4	
13C12-1,2,3,4,7,8-HxCDF	100.00	99.0	-1.0	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.8	-1.2	
13C12-2,3,4,6,7,8-HxCDF	100.00	99.3	-0.7	
13C12-1,2,3,7,8,9-HxCDF	100.00	98.6	-1.4	
13C12-1,2,3,4,7,8-HxCDD	100.00	97.7	-2.3	
13C12-1,2,3,6,7,8-HxCDD	100.00	101	0.6	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	100	0.3	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	101	0.8	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	101	0.6	
13C12-OCDD	200.00	205	2.6	
37Cl4-2,3,7,8-TCDD	10.000	8.94	-10.6	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GB00010
Lab File ID:	23020102	Calibration Date:	02/01/2023
Sequence:	SLB0026	Injection Date:	02/01/23
Lab Sample ID:	SLB0026-ICV1	Injection Time:	10:37
Sequence Name:	CS3R1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
2,3,7,8-TCDF	A	10.000	9.00	0.8760604	0.7881394		-10.0	+/-16	
2,3,7,8-TCDD	A	10.000	8.00	1.2363600	0.9890074		-20.0	+/-22	
1,2,3,7,8-PeCDF	A	50.000	45.5	0.8446540	0.7681961		-9.1	+/-18	
2,3,4,7,8-PeCDF	A	50.000	46.0	0.9111780	0.8383961		-8.0	+/-18	
1,2,3,7,8-PeCDD	A	50.000	49.7	1.0866850	1.0810230		-0.5	+/-22	
1,2,3,4,7,8-HxCDF	A	50.000	43.8	1.1816860	1.0352320		-12.4	+/-10	*
1,2,3,6,7,8-HxCDF	A	50.000	44.7	1.2480480	1.1146430		-10.7	+/-12	
2,3,4,6,7,8-HxCDF	A	50.000	45.6	1.2288500	1.1200940		-8.9	+/-12	
1,2,3,7,8,9-HxCDF	A	50.000	44.5	1.1865370	1.0560050		-11.0	+/-10	*
1,2,3,4,7,8-HxCDD	A	50.000	44.8	0.9869672	0.8835021		-10.5	+/-22	
1,2,3,6,7,8-HxCDD	A	50.000	43.8	1.0207220	0.8949701		-12.3	+/-22	
1,2,3,7,8,9-HxCDD	A	50.000	44.1	0.9854780	0.8698650		-11.7	+/-18	
1,2,3,4,6,7,8-HpCDF	A	50.000	45.1	1.2041190	1.0859080		-9.8	+/-10	
1,2,3,4,7,8,9-HpCDF	A	50.000	47.7	1.1653050	1.1124610		-4.5	+/-14	
1,2,3,4,6,7,8-HpCDD	A	50.000	44.2	1.2525690	1.1066520		-11.6	+/-14	
OCDF	A	100.00	86.3	1.1862640	1.0243110		-13.7	+/-37	
OCDD	A	100.00	90.9	1.1026670	1.0028370		-9.1	+/-21	
13C12-2,3,7,8-TCDF	A	100.00	81.8	1.7680590	1.4469997		-18.2	+/-29	
13C12-2,3,7,8-TCDD	A	100.00	103	1.1029470	1.1388769		3.3	+/-18	
13C12-1,2,3,7,8-PeCDF	A	100.00	97.0	1.5271250	1.4807739		-3.0	+/-24	
13C12-2,3,4,7,8-PeCDF	A	100.00	96.3	1.4662840	1.4126920		-3.7	+/-23	
13C12-1,2,3,7,8-PeCDD	A	100.00	97.3	0.9141518	0.8893426		-2.7	+/-38	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	88.7	1.0536610	0.9345708		-11.3	+/-24	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	89.6	1.0799530	0.9680754		-10.4	+/-30	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	88.7	1.0143260	0.8993069		-11.3	+/-27	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	87.8	0.9279333	0.8145455		-12.2	+/-26	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	99.3	0.9329336	0.9264810		-0.7	+/-15	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	102	0.9646272	0.9846310		2.1	+/-15	
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	80.6	1.0360890	0.8353360		-19.4	+/-22	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	78.2	0.9049372	0.7072834		-21.8	+/-23	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GB00010
Lab File ID:	23020102	Calibration Date:	02/01/2023
Sequence:	SLB0026	Injection Date:	02/01/23
Lab Sample ID:	SLB0026-ICV1	Injection Time:	10:37
Sequence Name:	CS3R1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	84.9	0.7819773	0.6642647		-15.1	+/-28
13C12-OCDD	A	200.00	176	0.7882343	0.6917393		-12.2	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	8.58	1.2334500	1.0578858		-14.2	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GB00010
Lab File ID:	23022302	Calibration Date:	02/01/2023
Sequence:	SLB0345	Injection Date:	02/23/23
Lab Sample ID:	SLB0345-ICV1	Injection Time:	10:49
Sequence Name:	CS3V1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
2,3,7,8-TCDF	A	10.000	9.94	0.8760604	0.8710791		-0.6	+/-16	
2,3,7,8-TCDD	A	10.000	8.91	1.2363600	1.1014280		-10.9	+/-22	
1,2,3,7,8-PeCDF	A	50.000	49.1	0.8446540	0.8298602		-1.8	+/-18	
2,3,4,7,8-PeCDF	A	50.000	50.0	0.9111780	0.9119257		0.08	+/-18	
1,2,3,7,8-PeCDD	A	50.000	52.2	1.0866850	1.1338300		4.3	+/-22	
1,2,3,4,7,8-HxCDF	A	50.000	45.9	1.1816860	1.0839590		-8.3	+/-10	
1,2,3,6,7,8-HxCDF	A	50.000	44.5	1.2480480	1.1115030		-10.9	+/-12	
2,3,4,6,7,8-HxCDF	A	50.000	44.9	1.2288500	1.1036700		-10.2	+/-12	
1,2,3,7,8,9-HxCDF	A	50.000	46.1	1.1865370	1.0937280		-7.8	+/-10	
1,2,3,4,7,8-HxCDD	A	50.000	46.3	0.9869672	0.9135761		-7.4	+/-22	
1,2,3,6,7,8-HxCDD	A	50.000	44.7	1.0207220	0.9127573		-10.6	+/-22	
1,2,3,7,8,9-HxCDD	A	50.000	45.3	0.9854780	0.8931803		-9.4	+/-18	
1,2,3,4,6,7,8-HpCDF	A	50.000	49.5	1.2041190	1.1917490		-1.0	+/-10	
1,2,3,4,7,8,9-HpCDF	A	50.000	48.1	1.1653050	1.1204430		-3.8	+/-14	
1,2,3,4,6,7,8-HpCDD	A	50.000	44.8	1.2525690	1.1228770		-10.4	+/-14	
OCDF	A	100.00	88.9	1.1862640	1.0551250		-11.1	+/-37	
OCDD	A	100.00	98.6	1.1026670	1.0876320		-1.4	+/-21	
13C12-2,3,7,8-TCDF	A	100.00	86.1	1.7680590	1.5222670		-13.9	+/-29	
13C12-2,3,7,8-TCDD	A	100.00	97.7	1.1029470	1.0779528		-2.3	+/-18	
13C12-1,2,3,7,8-PeCDF	A	100.00	81.5	1.5271250	1.2439282		-18.5	+/-24	
13C12-2,3,4,7,8-PeCDF	A	100.00	86.2	1.4662840	1.2644457		-13.8	+/-23	
13C12-1,2,3,7,8-PeCDD	A	100.00	77.8	0.9141518	0.7111381		-22.2	+/-38	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	93.7	1.0536610	0.9872913		-6.3	+/-24	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	103	1.0799530	1.1125471		3.0	+/-30	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	98.2	1.0143260	0.9963427		-1.8	+/-27	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	86.6	0.9279333	0.8039159		-13.4	+/-26	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	109	0.9329336	1.0205916		9.4	+/-15	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	119	0.9646272	1.1482316		19.0	+/-15	*
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	80.7	1.0360890	0.8356636		-19.3	+/-22	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	75.8	0.9049372	0.6863893		-24.2	+/-23	*

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GB00010
Lab File ID:	23022302	Calibration Date:	02/01/2023
Sequence:	SLB0345	Injection Date:	02/23/23
Lab Sample ID:	SLB0345-ICV1	Injection Time:	10:49
Sequence Name:	CS3V1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	79.3	0.7819773	0.6200338		-20.7	+/-28
13C12-OCDD	A	200.00	129	0.7882343	0.5073239		-35.6	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	8.39	1.2334500	1.0344777		-16.1	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:09:38 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3V1, Name: 23022302, Date: 23-Feb-2023, Time: 10:49:54, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	26.000	1.000	5.096e4	6.610e4	0.876	0.771	0.770	821	1402	7.40e5	9.48e5	900.6	676.3	NO	bd	bb	9.943
12378-PeCDF	30.176	1.001	2.790e5	1.766e5	0.845	1.580	1.550	2218	1980	4.16e6	2.60e6	1877.1	1311.6	NO	bb	bb	49.124
23478-PeCDF	31.524	1.001	3.112e5	1.977e5	0.911	1.574	1.550	2218	1980	4.68e6	2.97e6	2108.3	1497.3	NO	bb	bb	50.041
123478-HxCDF	35.122	1.000	2.818e5	2.274e5	1.182	1.239	1.240	1989	1821	4.43e6	3.56e6	2225.4	1954.0	NO	bd	bd	45.865
234678-HxCDF	36.125	1.001	2.834e5	2.398e5	1.229	1.182	1.240	1989	1821	4.30e6	3.53e6	2160.4	1936.2	NO	bd	bb	44.907
123678-HxCDF	35.267	1.001	3.238e5	2.646e5	1.248	1.224	1.240	1989	1821	4.48e6	3.62e6	2253.9	1989.2	NO	dd	dd	44.530
123789-HxCDF	37.150	1.000	2.324e5	1.860e5	1.187	1.249	1.240	1989	1821	3.33e6	2.69e6	1675.7	1478.6	NO	bd	bd	46.089
1234678-HpCDF	38.988	1.001	2.410e5	2.329e5	1.204	1.035	1.050	2746	1908	3.59e6	3.50e6	1307.1	1836.5	NO	bd	bd	49.486
1234789-HpCDF	41.261	1.000	1.867e5	1.793e5	1.165	1.041	1.050	2746	1908	2.41e6	2.32e6	877.1	1217.8	NO	bd	bd	48.075
OCDF	45.563	1.006	2.403e5	2.691e5	1.186	0.893	0.890	1156	1285	2.57e6	2.82e6	2224.2	2195.9	NO	bd	bd	88.945
2378-TCDD	26.650	1.000	4.585e4	5.896e4	1.236	0.778	0.770	1257	1023	6.77e5	8.61e5	539.0	842.0	NO	bd	bb	8.909
12378-PeCDD	31.769	1.000	2.216e5	1.343e5	1.087	1.649	1.550	1815	1331	3.51e6	2.16e6	1933.4	1621.8	NO	bb	bb	52.169
123478-HxCDD	36.236	1.000	2.461e5	1.976e5	0.987	1.246	1.240	2750	1748	3.86e6	3.12e6	1403.4	1787.9	NO	bd	bd	46.282
123678-HxCDD	36.359	1.001	2.742e5	2.245e5	1.021	1.221	1.240	2750	1748	3.96e6	3.21e6	1439.7	1837.5	NO	dd	dd	44.711
123789-HxCDD	36.738	1.011	2.506e5	2.103e5	0.985	1.192	1.240	2750	1748	3.81e6	3.20e6	1386.8	1831.0	NO	bd	bd	45.317
1234678-HpCDD	40.504	1.000	1.702e5	1.611e5	1.253	1.056	1.050	2023	1994	2.58e6	2.42e6	1277.0	1211.9	NO	bb	bb	44.823
OCDD	45.316	1.000	2.436e5	2.815e5	1.103	0.865	0.890	1448	1602	2.70e6	3.08e6	1863.8	1923.2	NO	bd	bd	98.636
13C-2378-TCDF	25.986	1.007	5.885e5	7.554e5	1.768	0.779	0.770	1541	1472	8.81e6	1.13e7	5714.2	7695.9	NO	bb	bb	86.098
13C-12378-PeCDF	30.153	1.168	6.677e5	4.304e5	1.527	1.551	1.550	3165	1900	9.39e6	6.09e6	2968.0	3202.2	NO	bd	bd	81.456
13C-23478-PeCDF	31.501	1.220	6.855e5	4.308e5	1.466	1.591	1.550	3165	1900	9.74e6	6.20e6	3076.3	3261.4	NO	bb	bb	86.235
13C-123478-HxCDF	35.111	0.956	3.166e5	6.230e5	1.054	0.508	0.510	2579	1903	5.15e6	1.01e7	1995.2	5329.3	NO	bd	bd	93.701
13C-123678-HxCDF	35.245	0.960	3.554e5	7.034e5	1.080	0.505	0.510	2579	1903	5.32e6	1.04e7	2061.6	5481.5	NO	db	db	103.018
13C-234678-HxCDF	36.103	0.983	3.355e5	6.127e5	1.014	0.548	0.510	2579	1903	4.84e6	9.72e6	1875.9	5108.0	NO	bb	bb	98.227
13C-123789-HxCDF	37.139	1.011	2.533e5	5.118e5	0.928	0.495	0.510	2579	1903	3.95e6	7.89e6	1530.1	4146.2	NO	bb	bb	86.635
13C-1234678-HpCDF	38.966	1.061	2.492e5	5.461e5	1.036	0.456	0.440	1814	2302	3.94e6	8.81e6	2171.8	3824.6	NO	bb	bb	80.656
13C-1234789-HpCDF	41.250	1.123	2.014e5	4.518e5	0.905	0.446	0.440	1814	2302	2.56e6	5.76e6	1412.0	2500.0	NO	bb	bb	75.849
13C-1234-TCDD	25.816	0.000	3.873e5	4.955e5	1.000	0.782	0.770	1580	1077	6.22e6	7.90e6	3935.4	7336.8	NO	bb	bb	100.000
13C-2378-TCDD	26.636	1.032	4.118e5	5.398e5	1.103	0.763	0.770	1580	1077	6.13e6	7.99e6	3880.6	7420.6	NO	bb	bb	97.734
13C-12378-PeCDD	31.758	1.230	3.843e5	2.435e5	0.914	1.578	1.550	1355	906	5.35e6	3.39e6	3949.5	3739.8	NO	bb	bb	77.792
13C-123478-HxCDD	36.225	0.986	5.426e5	4.287e5	0.933	1.265	1.240	2021	2615	8.90e6	7.06e6	4402.8	2697.6	NO	bd	bd	109.396
13C-123678-HxCDD	36.337	0.989	6.019e5	4.909e5	0.965	1.226	1.240	2021	2615	9.17e6	7.53e6	4534.6	2878.6	NO	db	db	119.034
13C-1234678-HpCDD	40.492	1.102	3.078e5	2.823e5	0.782	1.090	1.050	1427	1415	4.47e6	4.13e6	3132.8	2921.6	NO	bb	bb	79.290
13C-OCDD	45.298	1.233	4.579e5	5.077e5	0.788	0.902	0.890	1770	1465	5.37e6	5.98e6	3032.4	4082.5	NO	bb	bb	128.724
13C-123789-HxCDD	36.727	0.000	5.261e5	4.256e5	1.000	1.236	1.240	2021	2615	8.58e6	7.03e6	4242.6	2686.5	NO	bb	bb	100.000
37CL-2378-TCDD	26.650	1.032	9.132e4		1.233			1585		1.35e6		849.6			bb		8.387

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:09:38 Pacific Standard Time

ID: CS3V1, Name: 23022302, Date: 23-Feb-2023, Time: 10:49:54, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.483	0.865	5.967e4	7.753e4	1.064	0.770	0.770	821	1402	9.12e5	1.22e6	1110.8	868.4	NO	bb	bd	9.591
1289-TCDF	27.511	1.059	3.665e4	4.918e4	0.858	0.745	0.770	821	1402	5.11e5	6.83e5	621.6	486.8	NO	dd	dd	7.447
13468-PECDF	27.356	0.907	3.814e5	2.575e5	1.013	1.481	1.550	725	1035	5.89e6	4.03e6	8127.0	3893.1	NO	bb	bb	57.439
12389-PECDF	32.560	1.080	3.056e5	1.850e5	0.844	1.652	1.550	2218	1980	4.16e6	2.68e6	1876.2	1351.5	NO	bd	bb	52.952
123468-HXCDF	33.473	0.953	2.906e5	2.358e5	1.197	1.232	1.240	1989	1821	4.18e6	3.36e6	2100.3	1845.0	NO	bd	bb	46.796
1368-TCDD	23.768	0.892	4.574e4	5.748e4	1.084	0.796	0.770	1257	1023	7.26e5	9.04e5	577.5	883.9	NO	bb	bd	10.002
1289-TCDD	27.243	1.023	3.430e4	4.182e4	0.975	0.820	0.770	1257	1023	4.76e5	5.75e5	378.6	562.3	NO	bb	bd	8.203
12479-PECDD	29.039	0.914	3.314e5	2.120e5	1.837	1.563	1.550	1815	1331	3.30e6	2.07e6	1817.5	1554.0	NO	bb	bb	47.115
12389-PECDD	32.170	1.013	2.530e5	1.547e5	1.252	1.635	1.550	1815	1331	3.84e6	2.37e6	2116.5	1784.5	NO	bb	bb	51.863
124679-HXCDD	34.242	0.945	2.593e5	2.138e5	1.033	1.213	1.240	2750	1748	3.90e6	3.34e6	1417.4	1912.8	NO	bb	bb	47.159
1234679-HPCDD	39.434	0.974	1.938e5	1.988e5	1.286	0.975	1.050	2023	1994	2.92e6	2.84e6	1445.3	1424.4	NO	bb	bd	51.735
Total-tetrafurans			1.490e5		0.933			821		2.19e6							27.311
Total-penta1			3.814e5					725		5.89e6							57.439
Total-pentafurans			9.393e5		0.866			2218		1.36e7							159.601
Total-hexafurans			1.412e6		1.208			1989		2.07e7							228.187
Total-heptafurans			4.289e5		1.185			2746		6.01e6							97.828
Total-Furans			3.551e6		1.067			821		5.10e7							659.311
Total-tetradioxins			2.199e5		1.099			1257		2.98e6							47.244
Total-pentadioxins			8.067e5		1.392			1815		1.07e7							151.288
Total-hexadioxins			1.030e6		1.007			2750		1.55e7							183.470
Total-heptadioxins			3.640e5		1.269			2023		5.51e6							96.558
Total-Dioxins			2.664e6		1.165			1257		3.74e7							577.196
Total-TEQ			6.215e6					1257		8.84e7							1236.507
FUNCTION1 PFK			1.020e8					456801		3.28e7							
FUNCTION2 PFK			1.157e5					357493		4.11e6							0.000
FUNCTION3 PFK			4.934e3					448560		4.42e5							0.000
FUNCTION4 PFK			5.621e7					272625		2.42e7							
FUNCTION5 PFK			9.510e3					163795		4.83e5							
FUNCTION1 HXCD...			8.321e1					570		1.71e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			2.854e2					1047		5.03e3							0.000
FUNCTION3 OCDPE			6.774e2					500		1.12e4							0.000
FUNCTION4 NCDPE			5.523e2					693		7.20e3							0.000
FUNCTION5 DCDPE			8.340e1					626		1.71e3							0.000

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3V1, Name: 23022302, Date: 23-Feb-2023, Time: 10:49:54, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.51	3.665e4	4.918e4	0.858	0.75	0.77	621.6	YES	NO	dd	dd	7.447
2	Total-tetrafurans	27.37	8.285e2	1.184e3	0.933	0.70	0.77	15.4	YES	NO	bd	bd	0.161
3	2378-TCDF	26.00	5.096e4	6.610e4	0.876	0.77	0.77	900.6	YES	NO	bd	bb	9.943
4	Total-tetrafurans	24.90	3.797e2	4.729e2	0.933	0.80	0.77	5.7	YES	NO	db	db	0.068
5	Total-tetrafurans	24.76	5.084e2	7.685e2	0.933	0.66	0.77	10.8	YES	NO	bd	bd	0.102
6	1368-TCDF	22.48	5.967e4	7.753e4	1.064	0.77	0.77	1110.8	YES	NO	bb	bd	9.591

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.36	3.814e5	2.575e5	1.013	1.48	1.55	8127.0	YES	NO	bb	bb	57.439

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.52	3.112e5	1.977e5	0.911	1.57	1.55	2108.3	YES	NO	bb	bb	50.041
2	12378-PeCDF	30.18	2.790e5	1.766e5	0.845	1.58	1.55	1877.1	YES	NO	bb	bb	49.124
3	Total-pentafurans	29.03	4.342e4	2.837e4	0.866	1.53	1.55	280.0	YES	NO	bb	bb	7.483
4	12389-PECDF	32.56	3.056e5	1.850e5	0.844	1.65	1.55	1876.2	YES	NO	bd	bb	52.952

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	234678-HxCDF	36.13	2.834e5	2.398e5	1.229	1.18	1.24	2160.4	YES	NO	bd	bb	44.907
2	123678-HxCDF	35.27	3.238e5	2.646e5	1.248	1.22	1.24	2253.9	YES	NO	dd	dd	44.530
3	123478-HxCDF	35.12	2.818e5	2.274e5	1.182	1.24	1.24	2225.4	YES	NO	bd	bd	45.865
4	123468-HXCDF	33.47	2.906e5	2.358e5	1.197	1.23	1.24	2100.3	YES	NO	bd	bb	46.796
5	123789-HxCDF	37.15	2.324e5	1.860e5	1.187	1.25	1.24	1675.7	YES	NO	bd	bd	46.089

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.26	1.867e5	1.793e5	1.165	1.04	1.05	877.1	YES	NO	bd	bd	48.075
2	Total-heptafurans	39.66	1.239e3	1.050e3	1.185	1.18	1.05	6.1	YES	NO	bb	bb	0.267
3	1234678-HpCDF	38.99	2.410e5	2.329e5	1.204	1.03	1.05	1307.1	YES	NO	bd	bd	49.486

ID: CS3V1, Name: 23022302, Date: 23-Feb-2023, Time: 10:49:54, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.51	3.665e4	4.918e4	0.858	0.75	0.77	621.6	YES	NO	dd	dd	7.447
2	Total-tetrafurans	27.37	8.285e2	1.184e3	0.933	0.70	0.77	15.4	YES	NO	bd	bd	0.161
3	2378-TCDF	26.00	5.096e4	6.610e4	0.876	0.77	0.77	900.6	YES	NO	bd	bb	9.943
4	Total-tetrafurans	24.90	3.797e2	4.729e2	0.933	0.80	0.77	5.7	YES	NO	db	db	0.068
5	Total-tetrafurans	24.76	5.084e2	7.685e2	0.933	0.66	0.77	10.8	YES	NO	bd	bd	0.102
6	1368-TCDF	22.48	5.967e4	7.753e4	1.064	0.77	0.77	1110.8	YES	NO	bb	bd	9.591
7	23478-PeCDF	31.52	3.112e5	1.977e5	0.911	1.57	1.55	2108.3	YES	NO	bb	bb	50.041
8	12378-PeCDF	30.18	2.790e5	1.766e5	0.845	1.58	1.55	1877.1	YES	NO	bb	bb	49.124
9	Total-pentafurans	29.03	4.342e4	2.837e4	0.866	1.53	1.55	280.0	YES	NO	bb	bb	7.483
10	12389-PECDF	32.56	3.056e5	1.850e5	0.844	1.65	1.55	1876.2	YES	NO	bd	bb	52.952
11	234678-HxCDF	36.13	2.834e5	2.398e5	1.229	1.18	1.24	2160.4	YES	NO	bd	bb	44.907
12	123678-HxCDF	35.27	3.238e5	2.646e5	1.248	1.22	1.24	2253.9	YES	NO	dd	dd	44.530
13	123478-HxCDF	35.12	2.818e5	2.274e5	1.182	1.24	1.24	2225.4	YES	NO	bd	bd	45.865
14	123468-HXCDF	33.47	2.906e5	2.358e5	1.197	1.23	1.24	2100.3	YES	NO	bd	bb	46.796
15	123789-HxCDF	37.15	2.324e5	1.860e5	1.187	1.25	1.24	1675.7	YES	NO	bd	bd	46.089
16	1234789-HpCDF	41.26	1.867e5	1.793e5	1.165	1.04	1.05	877.1	YES	NO	bd	bd	48.075
17	Total-heptafurans	39.66	1.239e3	1.050e3	1.185	1.18	1.05	6.1	YES	NO	bb	bb	0.267
18	1234678-HpCDF	38.99	2.410e5	2.329e5	1.204	1.03	1.05	1307.1	YES	NO	bd	bd	49.486
19	OCDF	45.56	2.403e5	2.691e5	1.186	0.89	0.89	2224.2	YES	NO	bd	bd	88.945
20	13468-PECDF	27.36	3.814e5	2.575e5	1.013	1.48	1.55	8127.0	YES	NO	bb	bb	57.439

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.83	2.339e4	2.841e4	1.099	0.82	0.77	288.8	YES	NO	bd	bd	4.955
2	1368-TCDD	23.77	4.574e4	5.748e4	1.084	0.80	0.77	577.5	YES	NO	bb	bd	10.002
3	1289-TCDD	27.24	3.430e4	4.182e4	0.975	0.82	0.77	378.6	YES	NO	bb	bd	8.203
4	2378-TCDD	26.65	4.585e4	5.896e4	1.236	0.78	0.77	539.0	YES	NO	bd	bb	8.909
5	Total-tetradioxins	26.33	7.058e4	8.808e4	1.099	0.80	0.77	590.8	YES	NO	bb	bb	15.175

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.17	2.530e5	1.547e5	1.252	1.64	1.55	2116.5	YES	NO	bb	bb	51.863
2	12378-PeCDD	31.77	2.216e5	1.343e5	1.087	1.65	1.55	1933.4	YES	NO	bb	bb	52.169
3	Total-pentadioxins	30.15	7.111e2	5.152e2	1.392	1.38	1.55	5.8	YES	NO	bb	bb	0.140
4	12479-PECDD	29.04	3.314e5	2.120e5	1.837	1.56	1.55	1817.5	YES	NO	bb	bb	47.115

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HXCDD	34.24	2.593e5	2.138e5	1.033	1.21	1.24	1417.4	YES	NO	bb	bb	47.159
2	123789-HxCDD	36.74	2.506e5	2.103e5	0.985	1.19	1.24	1386.8	YES	NO	bd	bd	45.317
3	123678-HxCDD	36.36	2.742e5	2.245e5	1.021	1.22	1.24	1439.7	YES	NO	dd	dd	44.711
4	123478-HxCDD	36.24	2.461e5	1.976e5	0.987	1.25	1.24	1403.4	YES	NO	bd	bd	46.282

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234679-HPCDD	39.43	1.938e5	1.988e5	1.286	0.97	1.05	1445.3	YES	NO	bb	bd	51.735
2	1234678-HpCDD	40.50	1.702e5	1.611e5	1.253	1.06	1.05	1277.0	YES	NO	bb	bb	44.823

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.83	2.339e4	2.841e4	1.099	0.82	0.77	288.8	YES	NO	bd	bd	4.955
2	1368-TCDD	23.77	4.574e4	5.748e4	1.084	0.80	0.77	577.5	YES	NO	bb	bd	10.002
3	1289-TCDD	27.24	3.430e4	4.182e4	0.975	0.82	0.77	378.6	YES	NO	bb	bd	8.203
4	2378-TCDD	26.65	4.585e4	5.896e4	1.236	0.78	0.77	539.0	YES	NO	bd	bb	8.909
5	Total-tetradioxins	26.33	7.058e4	8.808e4	1.099	0.80	0.77	590.8	YES	NO	bb	bb	15.175
6	12389-PECDD	32.17	2.530e5	1.547e5	1.252	1.64	1.55	2116.5	YES	NO	bb	bb	51.863
7	12378-PeCDD	31.77	2.216e5	1.343e5	1.087	1.65	1.55	1933.4	YES	NO	bb	bb	52.169
8	Total-pentadioxins	30.15	7.111e2	5.152e2	1.392	1.38	1.55	5.8	YES	NO	bb	bb	0.140
9	12479-PECDD	29.04	3.314e5	2.120e5	1.837	1.56	1.55	1817.5	YES	NO	bb	bb	47.115
10	124679-HXCDD	34.24	2.593e5	2.138e5	1.033	1.21	1.24	1417.4	YES	NO	bb	bb	47.159
11	123789-HxCDD	36.74	2.506e5	2.103e5	0.985	1.19	1.24	1386.8	YES	NO	bd	bd	45.317
12	123678-HxCDD	36.36	2.742e5	2.245e5	1.021	1.22	1.24	1439.7	YES	NO	dd	dd	44.711
13	123478-HxCDD	36.24	2.461e5	1.976e5	0.987	1.25	1.24	1403.4	YES	NO	bd	bd	46.282
14	1234679-HPCDD	39.43	1.938e5	1.988e5	1.286	0.97	1.05	1445.3	YES	NO	bb	bd	51.735
15	1234678-HpCDD	40.50	1.702e5	1.611e5	1.253	1.06	1.05	1277.0	YES	NO	bb	bb	44.823
16	OCDD	45.32	2.436e5	2.815e5	1.103	0.87	0.89	1863.8	YES	NO	bd	bd	98.636

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.51	3.665e4	4.918e4	0.858	0.75	0.77	621.6	YES	NO	dd	dd	7.447
2	Total-tetrafurans	27.37	8.285e2	1.184e3	0.933	0.70	0.77	15.4	YES	NO	bd	bd	0.161
3	2378-TCDF	26.00	5.096e4	6.610e4	0.876	0.77	0.77	900.6	YES	NO	bd	bb	9.943
4	Total-tetrafurans	24.90	3.797e2	4.729e2	0.933	0.80	0.77	5.7	YES	NO	db	db	0.068
5	Total-tetrafurans	24.76	5.084e2	7.685e2	0.933	0.66	0.77	10.8	YES	NO	bd	bd	0.102
6	1368-TCDF	22.48	5.967e4	7.753e4	1.064	0.77	0.77	1110.8	YES	NO	bb	bd	9.591
7	23478-PeCDF	31.52	3.112e5	1.977e5	0.911	1.57	1.55	2108.3	YES	NO	bb	bb	50.041
8	12378-PeCDF	30.18	2.790e5	1.766e5	0.845	1.58	1.55	1877.1	YES	NO	bb	bb	49.124
9	Total-pentafurans	29.03	4.342e4	2.837e4	0.866	1.53	1.55	280.0	YES	NO	bb	bb	7.483
10	12389-PECDF	32.56	3.056e5	1.850e5	0.844	1.65	1.55	1876.2	YES	NO	bd	bb	52.952
11	234678-HxCDF	36.13	2.834e5	2.398e5	1.229	1.18	1.24	2160.4	YES	NO	bd	bb	44.907
12	123678-HxCDF	35.27	3.238e5	2.646e5	1.248	1.22	1.24	2253.9	YES	NO	dd	dd	44.530
13	123478-HxCDF	35.12	2.818e5	2.274e5	1.182	1.24	1.24	2225.4	YES	NO	bd	bd	45.865
14	123468-HXCDF	33.47	2.906e5	2.358e5	1.197	1.23	1.24	2100.3	YES	NO	bd	bb	46.796
15	123789-HxCDF	37.15	2.324e5	1.860e5	1.187	1.25	1.24	1675.7	YES	NO	bd	bd	46.089
16	1234789-HpCDF	41.26	1.867e5	1.793e5	1.165	1.04	1.05	877.1	YES	NO	bd	bd	48.075
17	Total-heptafurans	39.66	1.239e3	1.050e3	1.185	1.18	1.05	6.1	YES	NO	bb	bb	0.267
18	1234678-HpCDF	38.99	2.410e5	2.329e5	1.204	1.03	1.05	1307.1	YES	NO	bd	bd	49.486
19	OCDF	45.56	2.403e5	2.691e5	1.186	0.89	0.89	2224.2	YES	NO	bd	bd	88.945
20	13468-PECDF	27.36	3.814e5	2.575e5	1.013	1.48	1.55	8127.0	YES	NO	bb	bb	57.439
21	Total-tetradioxins	25.83	2.339e4	2.841e4	1.099	0.82	0.77	288.8	YES	NO	bd	bd	4.955
22	1368-TCDD	23.77	4.574e4	5.748e4	1.084	0.80	0.77	577.5	YES	NO	bb	bd	10.002
23	1289-TCDD	27.24	3.430e4	4.182e4	0.975	0.82	0.77	378.6	YES	NO	bb	bd	8.203
24	2378-TCDD	26.65	4.585e4	5.896e4	1.236	0.78	0.77	539.0	YES	NO	bd	bb	8.909
25	Total-tetradioxins	26.33	7.058e4	8.808e4	1.099	0.80	0.77	590.8	YES	NO	bb	bb	15.175
26	12389-PECDD	32.17	2.530e5	1.547e5	1.252	1.64	1.55	2116.5	YES	NO	bb	bb	51.863
27	12378-PeCDD	31.77	2.216e5	1.343e5	1.087	1.65	1.55	1933.4	YES	NO	bb	bb	52.169
28	Total-pentadioxins	30.15	7.111e2	5.152e2	1.392	1.38	1.55	5.8	YES	NO	bb	bb	0.140
29	12479-PECDD	29.04	3.314e5	2.120e5	1.837	1.56	1.55	1817.5	YES	NO	bb	bb	47.115
30	124679-HXCDD	34.24	2.593e5	2.138e5	1.033	1.21	1.24	1417.4	YES	NO	bb	bb	47.159
31	123789-HxCDD	36.74	2.506e5	2.103e5	0.985	1.19	1.24	1386.8	YES	NO	bd	bd	45.317
32	123678-HxCDD	36.36	2.742e5	2.245e5	1.021	1.22	1.24	1439.7	YES	NO	dd	dd	44.711
33	123478-HxCDD	36.24	2.461e5	1.976e5	0.987	1.25	1.24	1403.4	YES	NO	bd	bd	46.282
34	1234679-HPCDD	39.43	1.938e5	1.988e5	1.286	0.97	1.05	1445.3	YES	NO	bb	bd	51.735
35	1234678-HpCDD	40.50	1.702e5	1.611e5	1.253	1.06	1.05	1277.0	YES	NO	bb	bb	44.823
36	OCDD	45.32	2.436e5	2.815e5	1.103	0.87	0.89	1863.8	YES	NO	bd	bd	98.636

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	26.28	1.128e7					34.1	YES		db		
2	FUNCTION1 PFK	25.70	9.072e7					37.7	YES		bd		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	31.26	1.086e4					1.0	NO		bb		0.000
2	FUNCTION2 PFK	31.20	2.033e3					0.5	NO		bb		0.000
3	FUNCTION2 PFK	30.26	2.041e3					0.5	NO		bb		0.000
4	FUNCTION2 PFK	29.01	6.523e3					0.9	NO		bb		0.000
5	FUNCTION2 PFK	28.38	1.608e4					1.9	NO		db		0.000
6	FUNCTION2 PFK	28.36	1.704e4					1.9	NO		bd		0.000
7	FUNCTION2 PFK	28.32	1.436e4					1.4	NO		bb		0.000
8	FUNCTION2 PFK	32.84	2.212e4					1.5	NO		bb		0.000
9	FUNCTION2 PFK	32.15	1.947e4					1.0	NO		bb		0.000
10	FUNCTION2 PFK	31.85	5.153e3					0.8	NO		bb		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.40	4.934e3					1.0	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	41.27	6.337e6					40.1	YES		db		
2	FUNCTION4 PFK	40.82	4.988e7					48.6	YES		bd		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.20	3.336e3					0.9	NO		bb		
2	FUNCTION5 PFK	43.08	6.174e3					2.0	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.90	8.321e1					3.0	YES		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.39	2.854e2					4.8	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	37.93	1.453e2					3.9	YES		bb		0.000
2	FUNCTION3 OCDPE	37.55	8.088e1					4.0	YES		bb		0.000
3	FUNCTION3 OCDPE	37.13	1.355e2					3.2	YES		bb		0.000
4	FUNCTION3 OCDPE	36.73	1.840e2					5.7	YES		bb		0.000
5	FUNCTION3 OCDPE	36.23	1.317e2					5.6	YES		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	42.11	8.045e1					1.9	NO		bb		0.000
2	FUNCTION4 NCDPE	41.90	1.341e2					1.9	NO		bb		0.000
3	FUNCTION4 NCDPE	40.54	1.361e2					2.8	NO		bb		0.000
4	FUNCTION4 NCDPE	39.47	1.174e2					1.9	NO		bb		0.000
5	FUNCTION4 NCDPE	38.99	8.424e1					1.9	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	43.12	8.340e1					2.7	NO		bb		0.000

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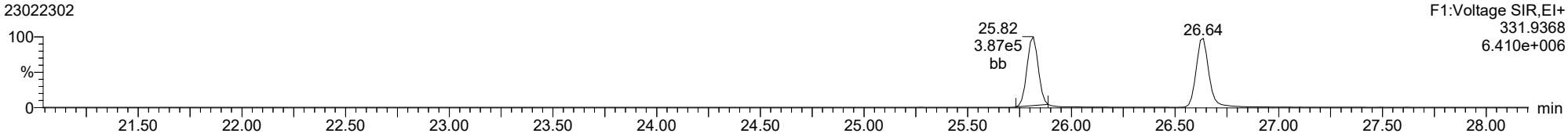

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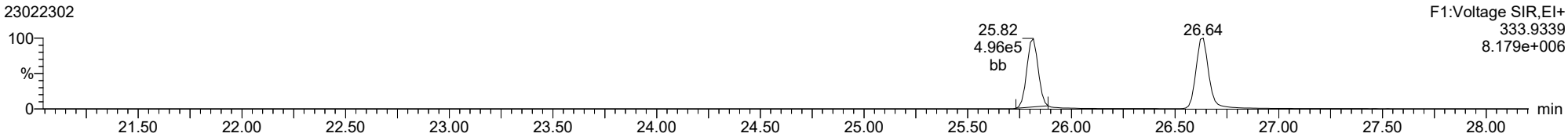

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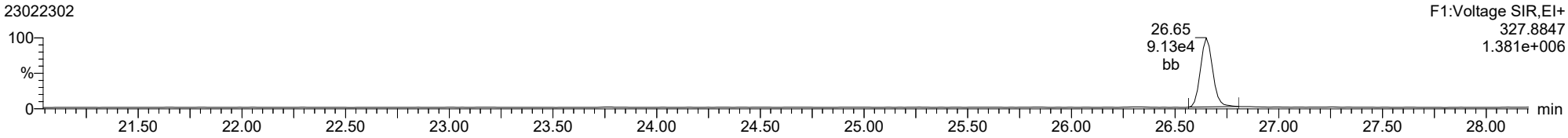

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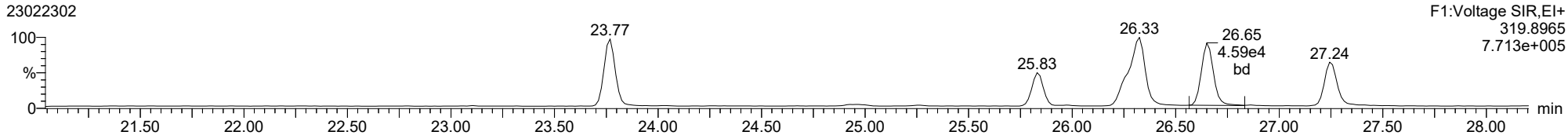

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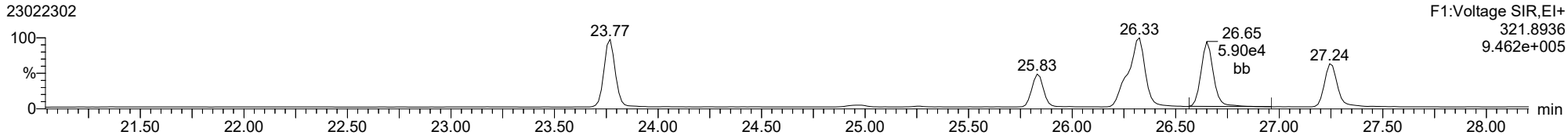

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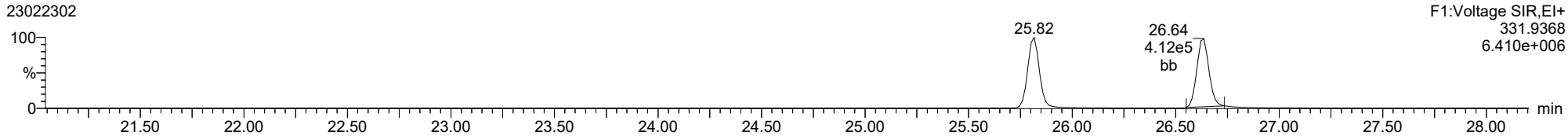

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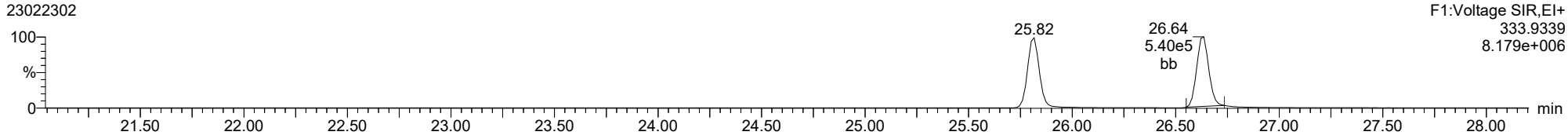

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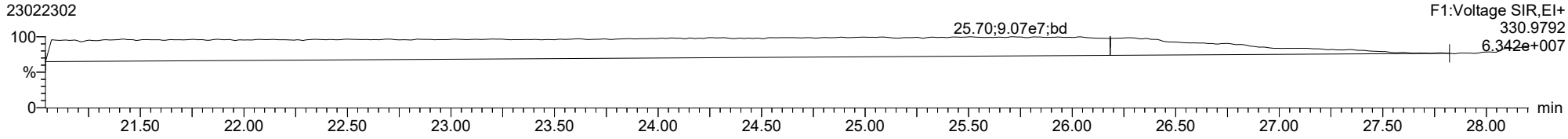

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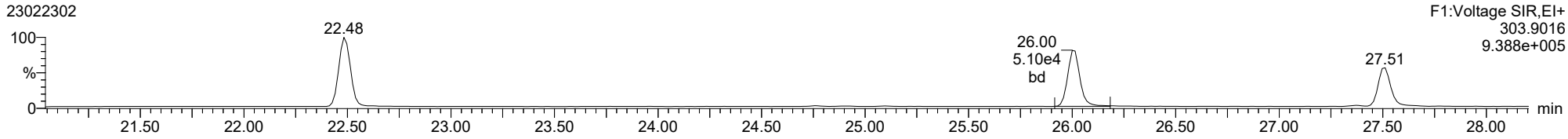
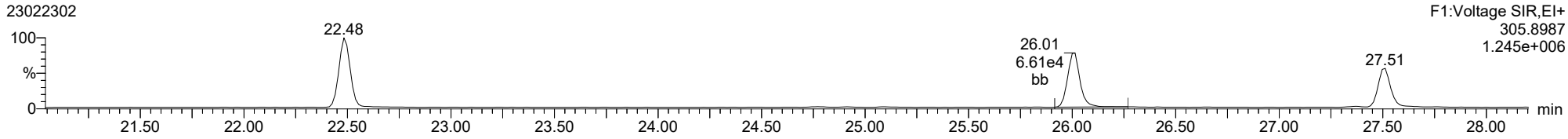
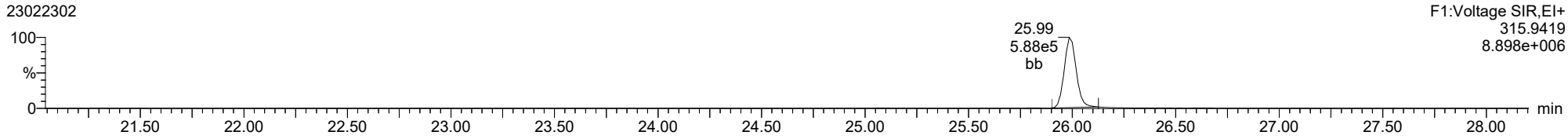
2378-TCDF



2378-TCDF



13C-2378-TCDF



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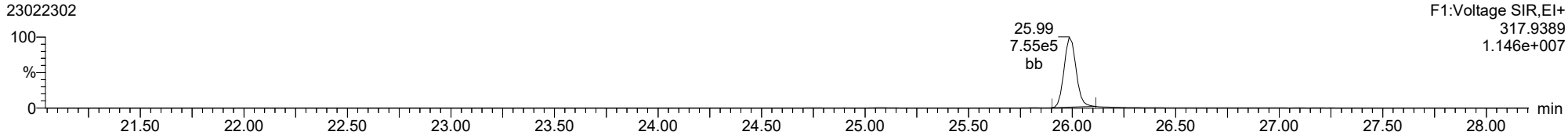

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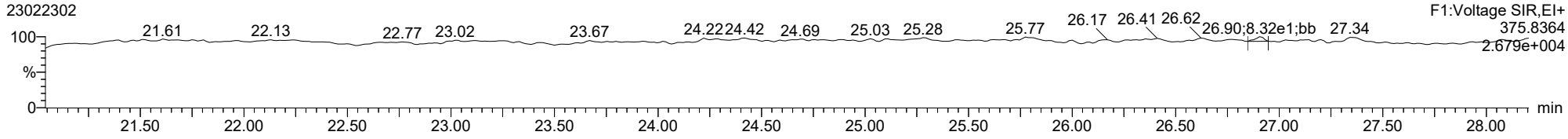

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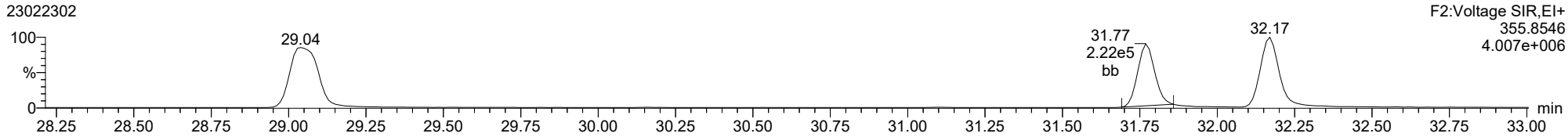
12378-PeCDD



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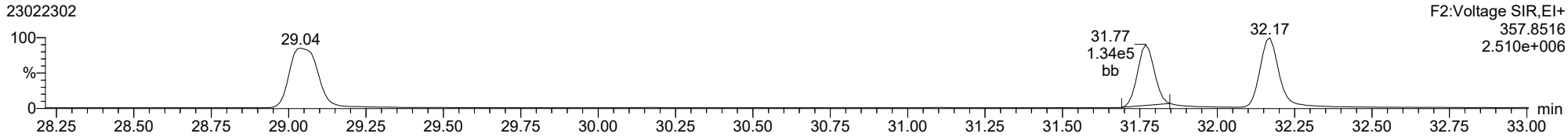

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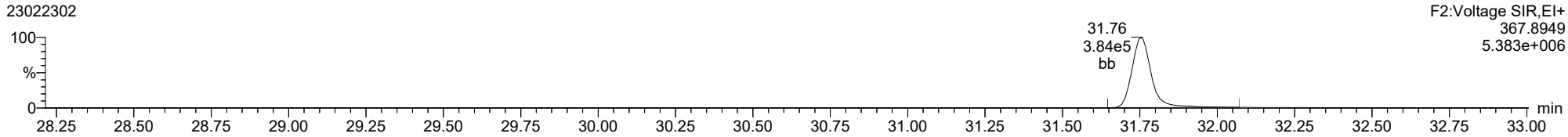

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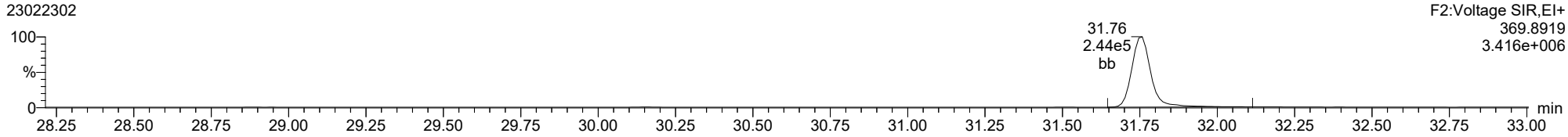

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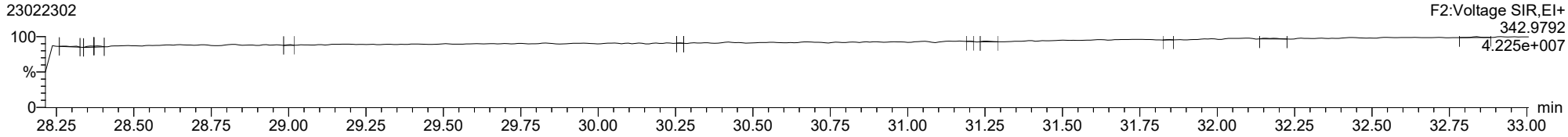

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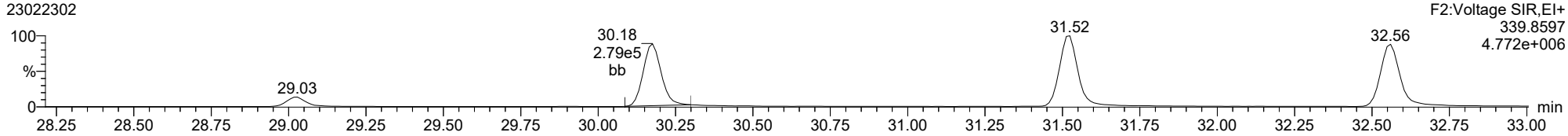
12378-PeCDF



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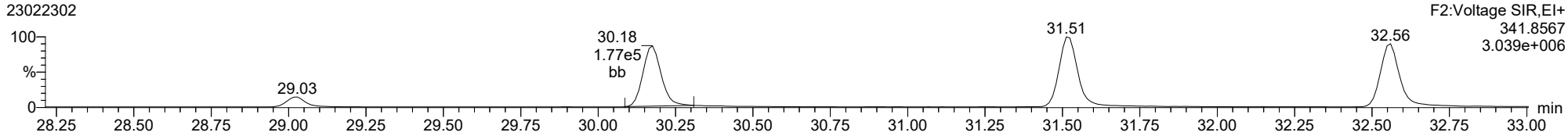

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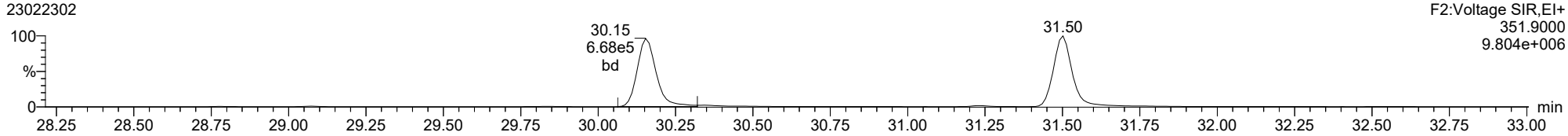

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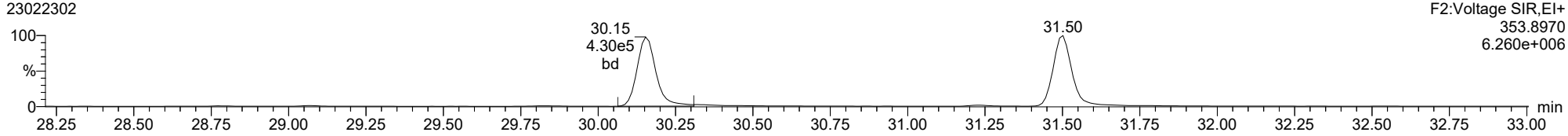
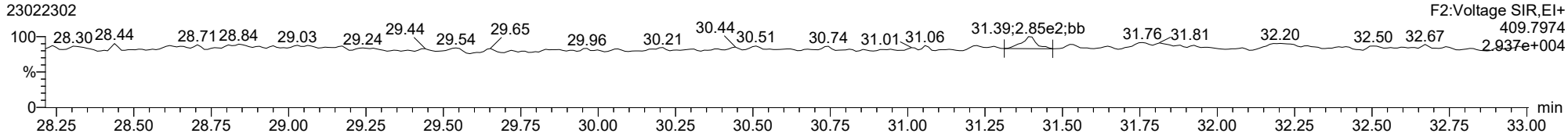


FUNCTION2 HPCDPE



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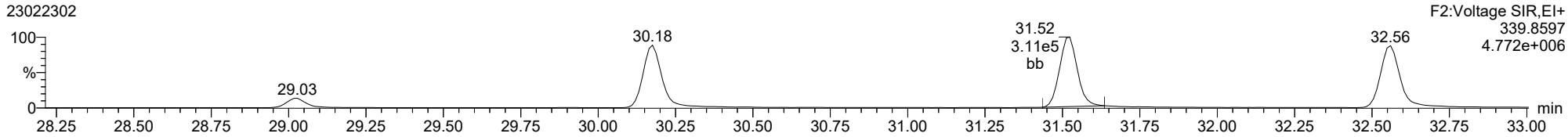
23478-PeCDF



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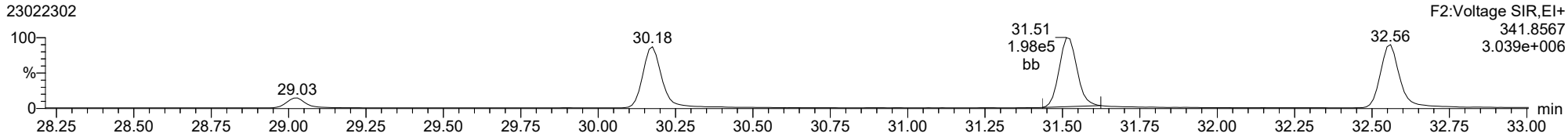

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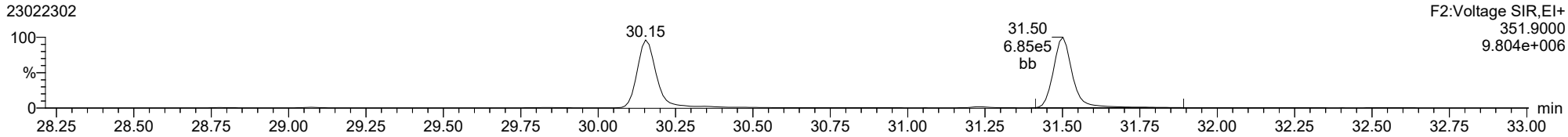

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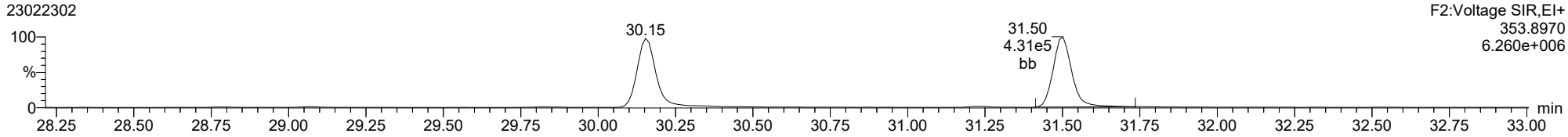

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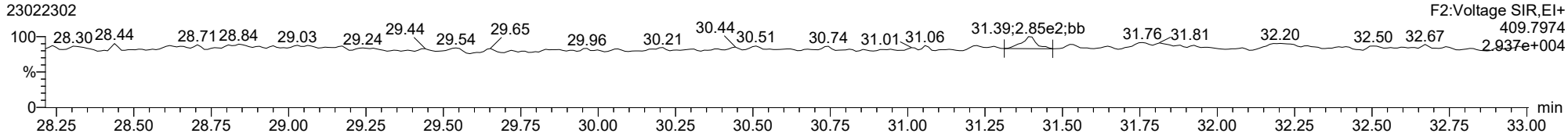

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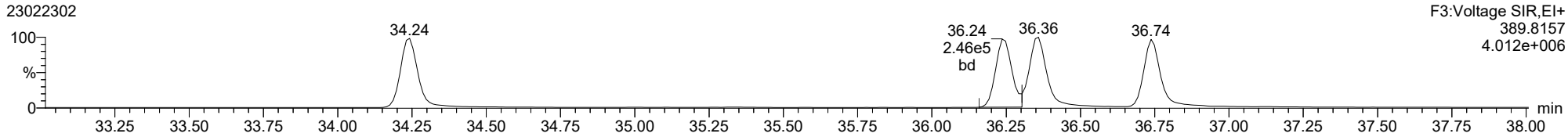
123478-HxCDD



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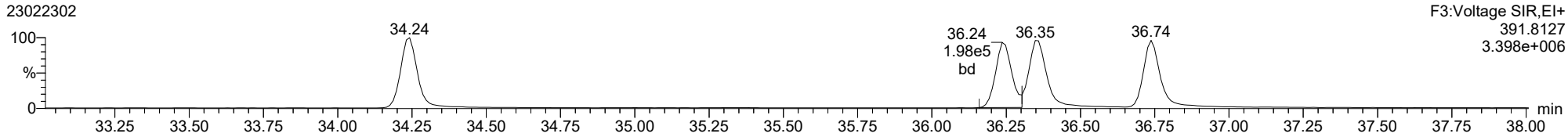

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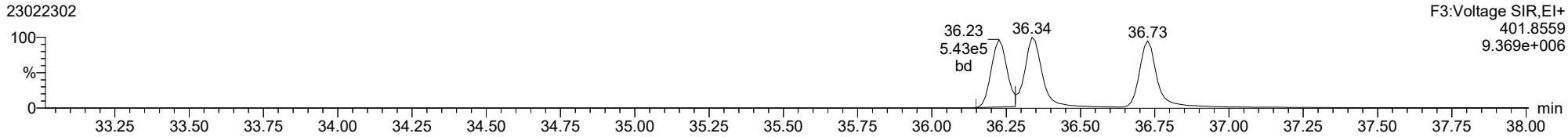

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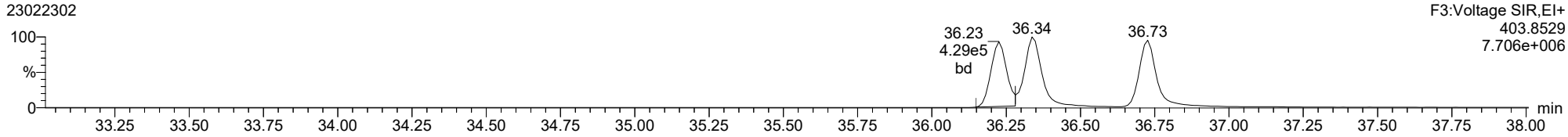
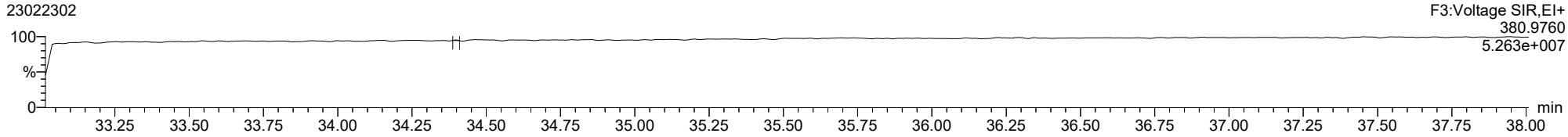


FUNCTION3 PFK



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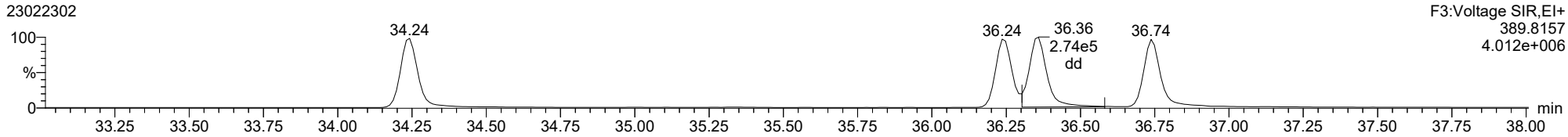

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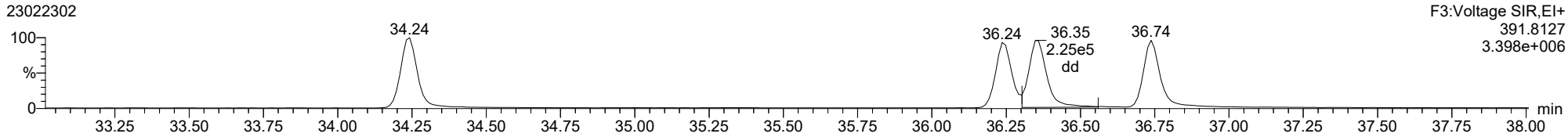

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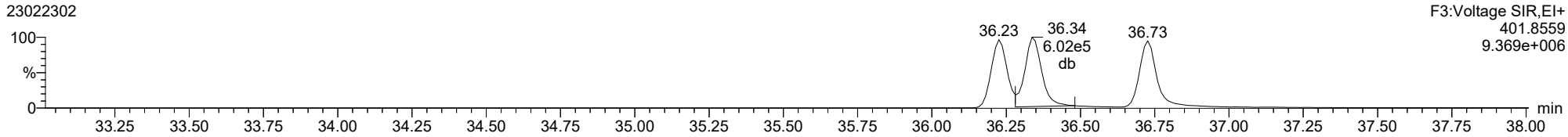

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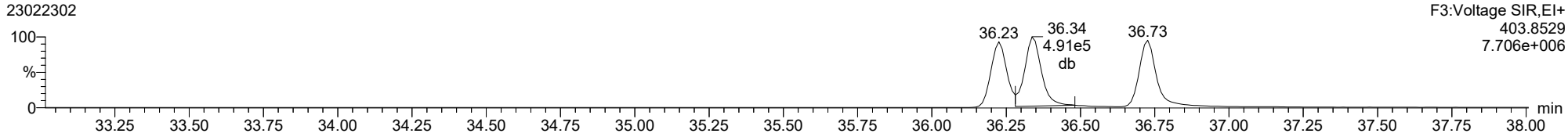

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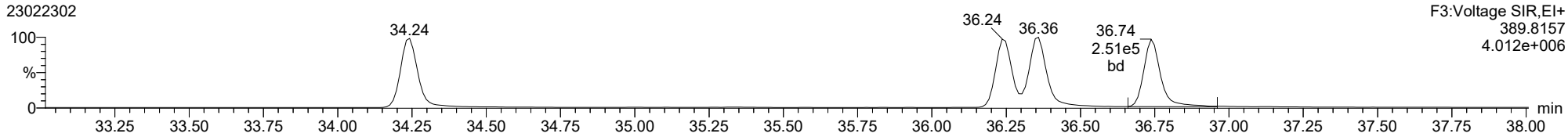

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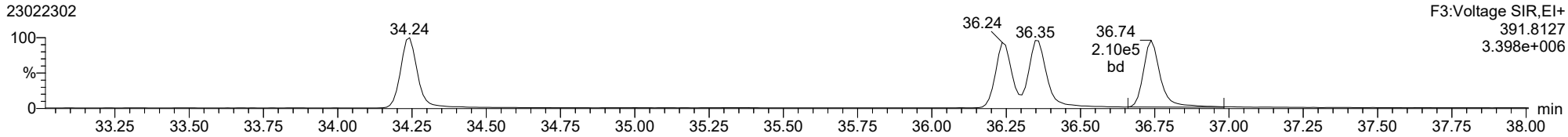

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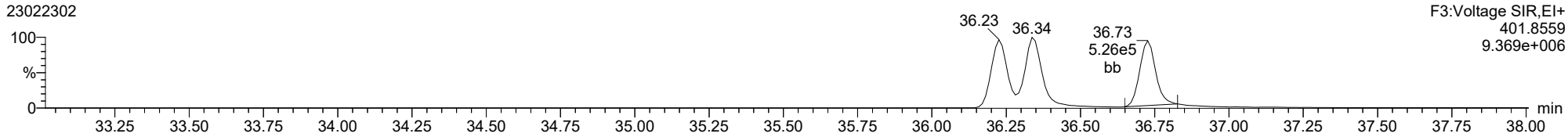

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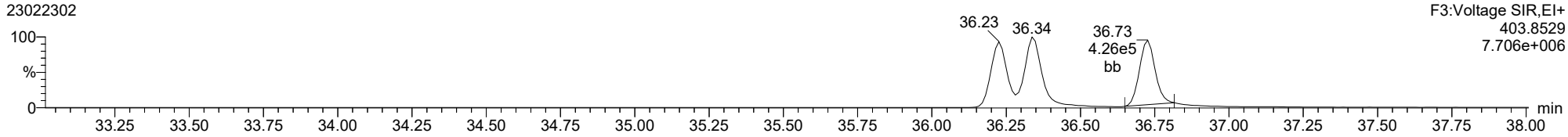

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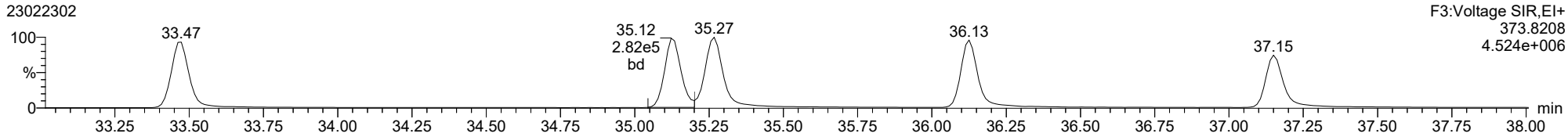

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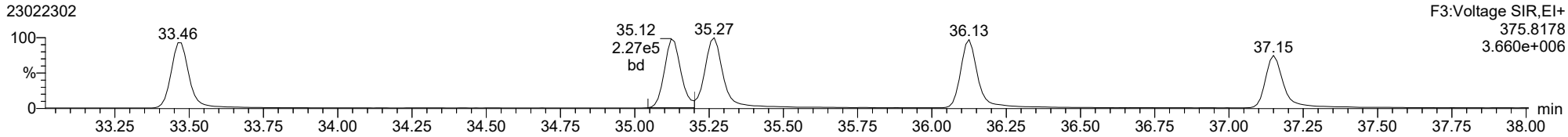

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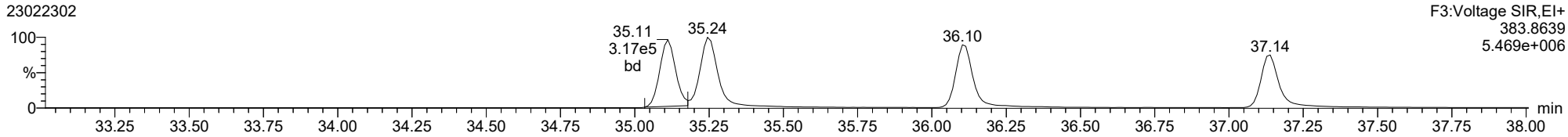

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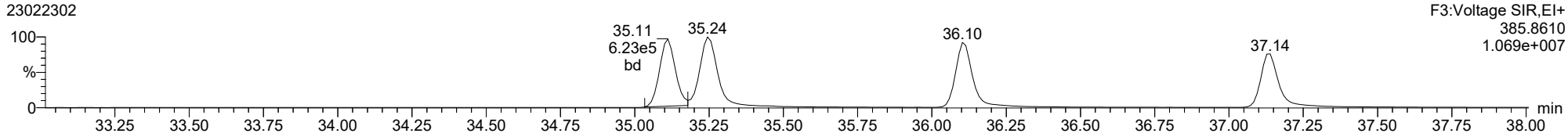

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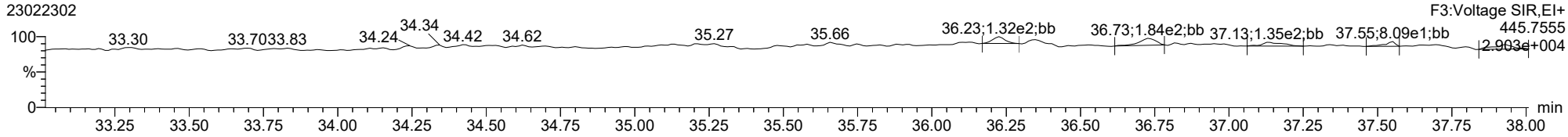

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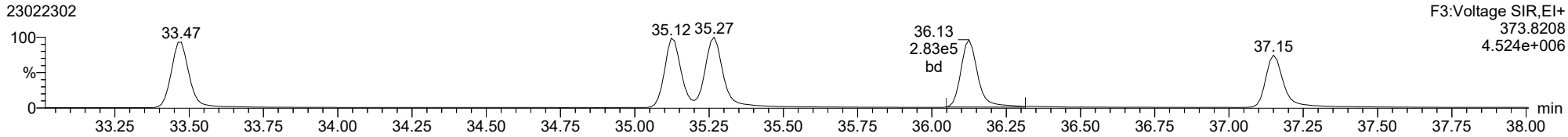
234678-HxCDF



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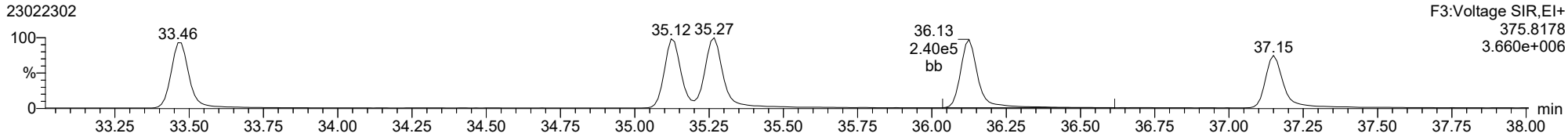

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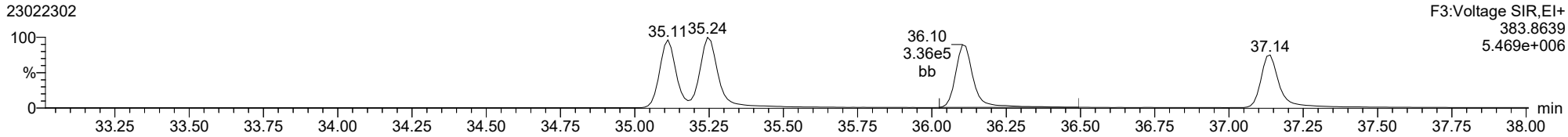

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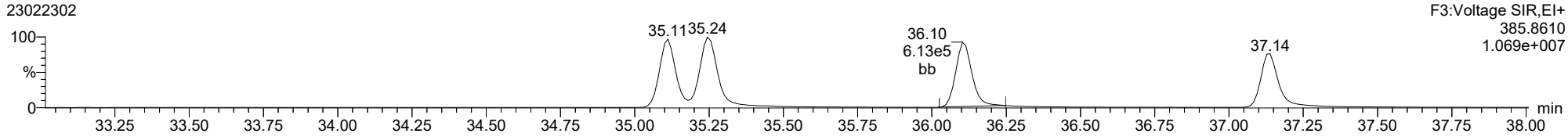
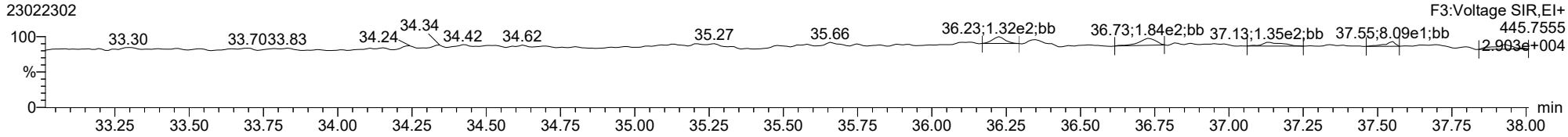


FUNCTION3 OCDPE



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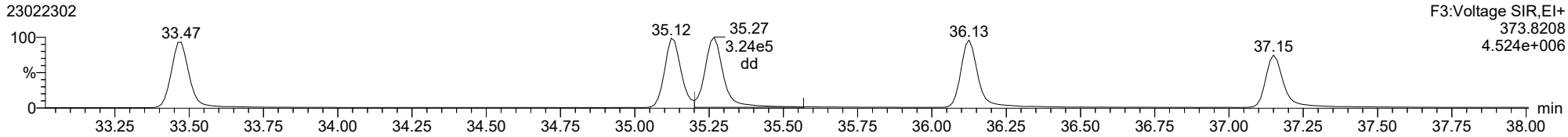

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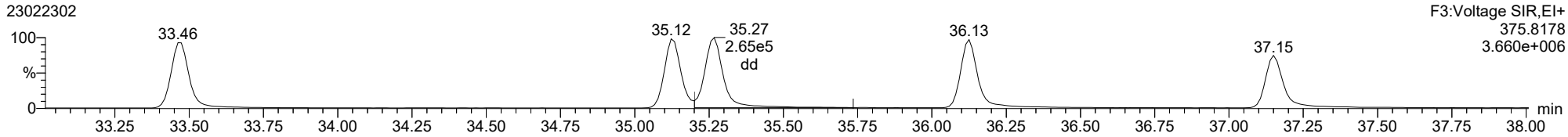

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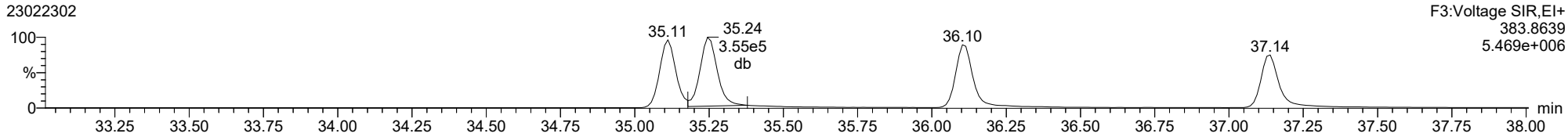

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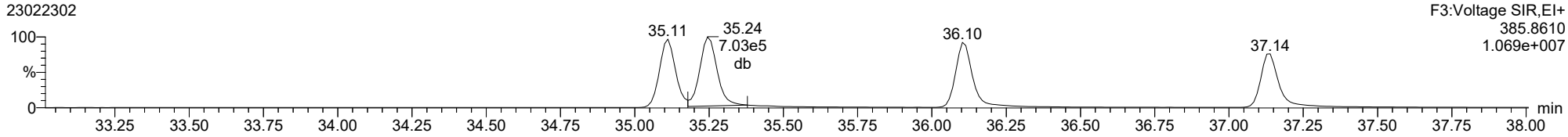
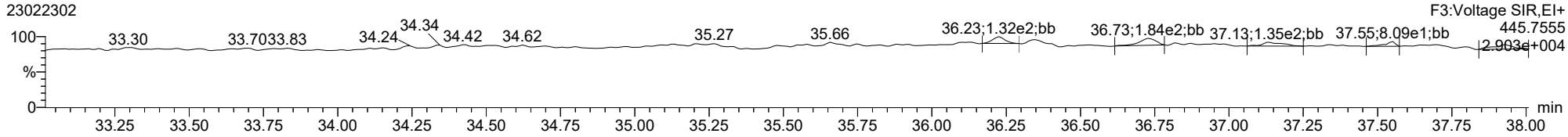


FUNCTION3 OCDPE



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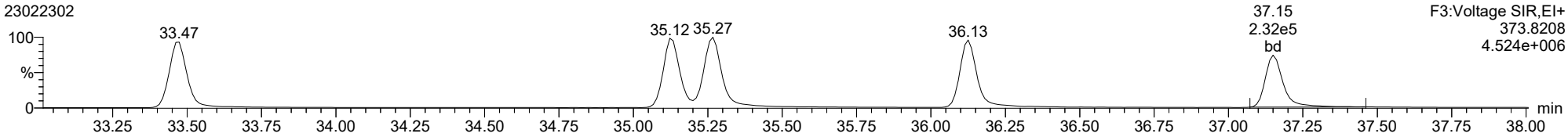

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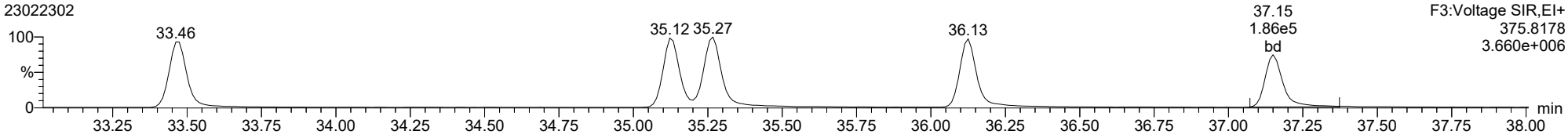

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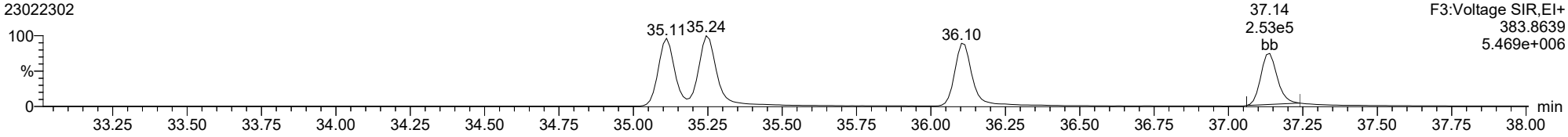

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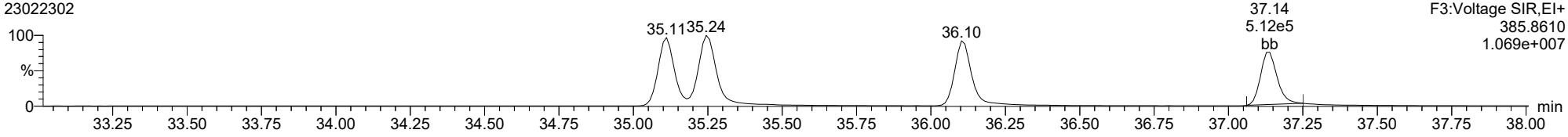

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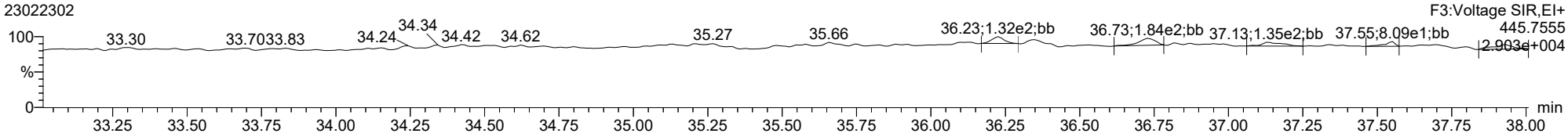

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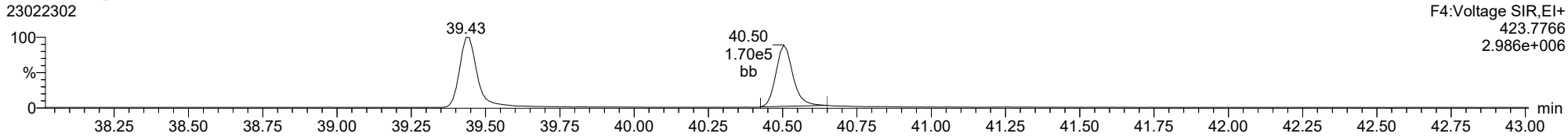

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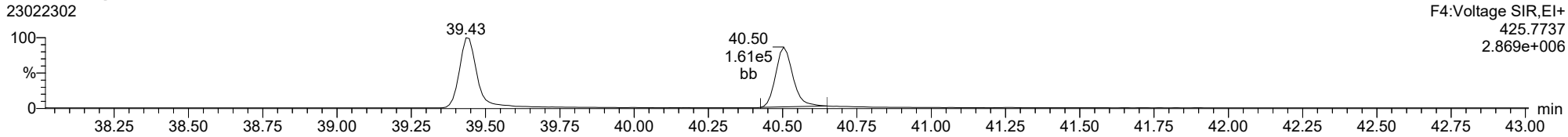

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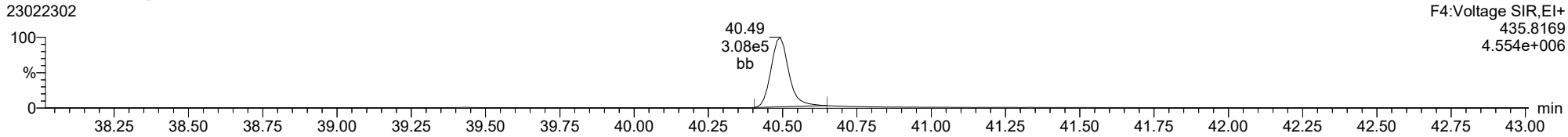

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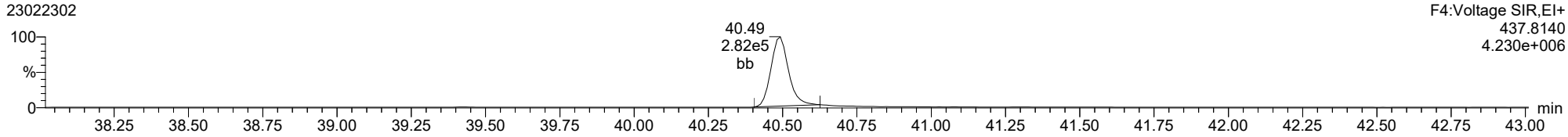

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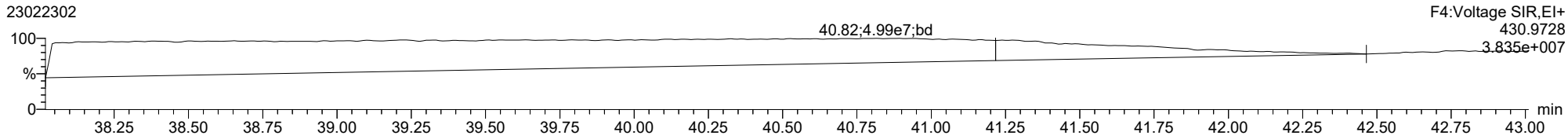

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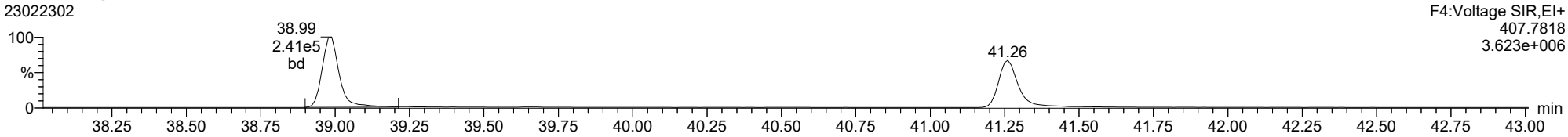

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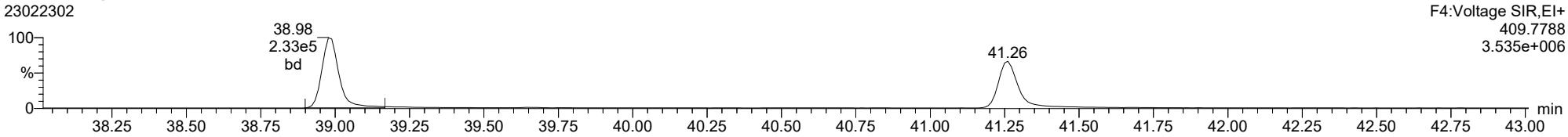

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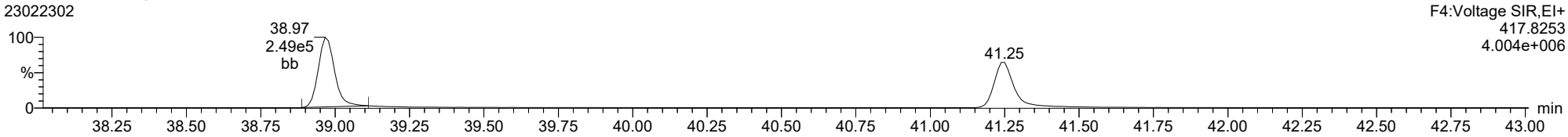

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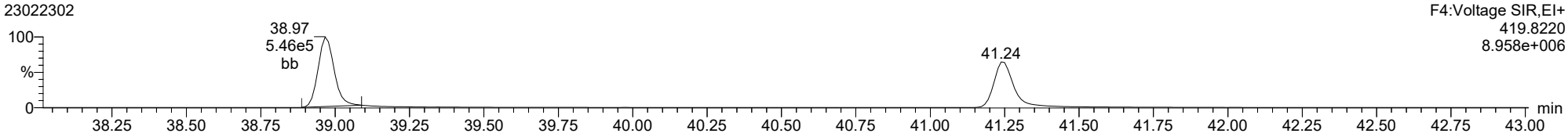

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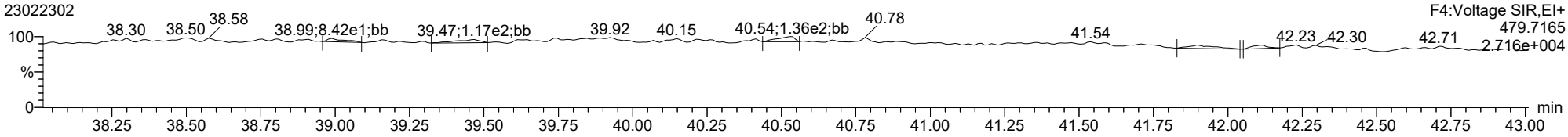

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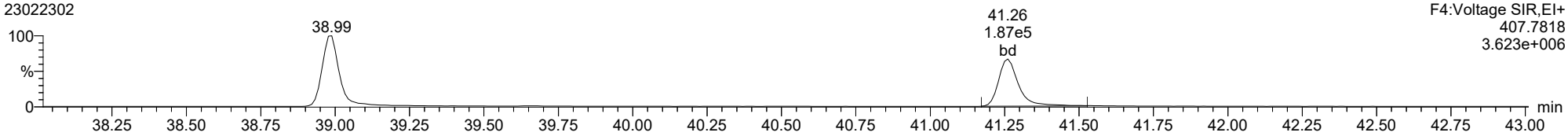

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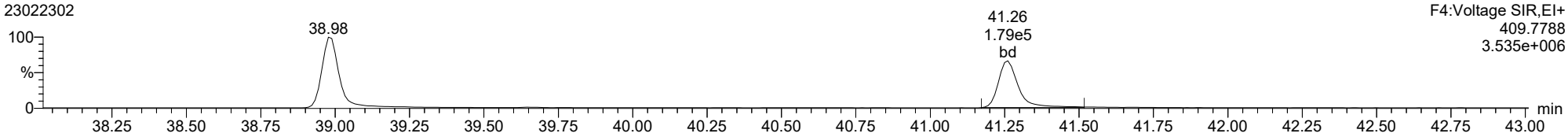

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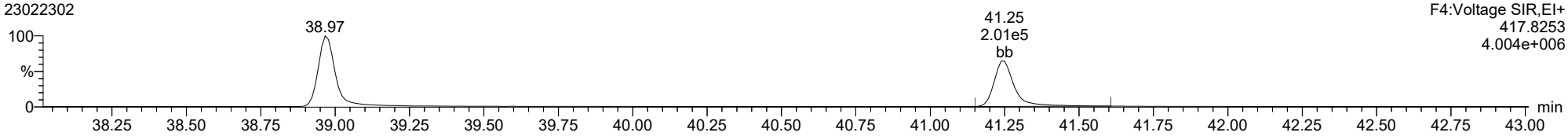

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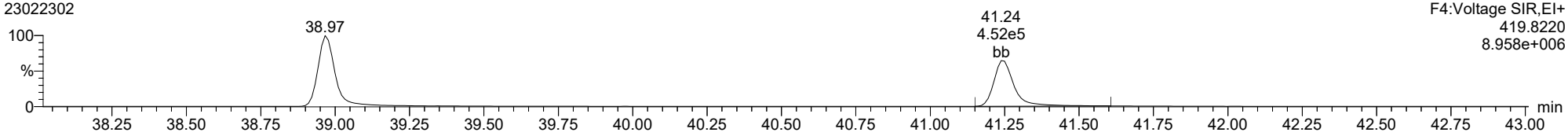
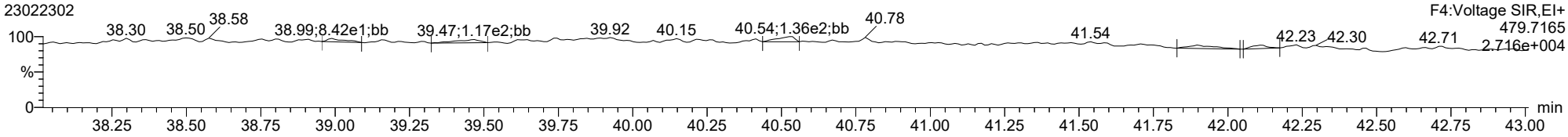


FUNCTION4 NCDPE



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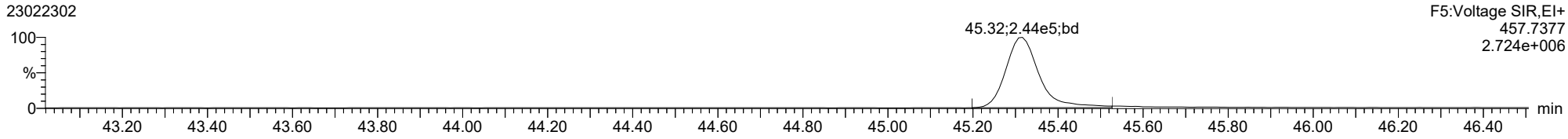

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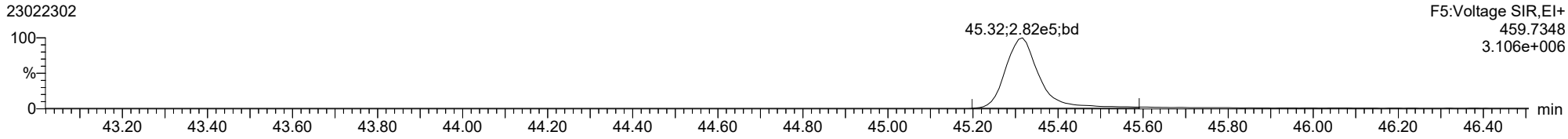

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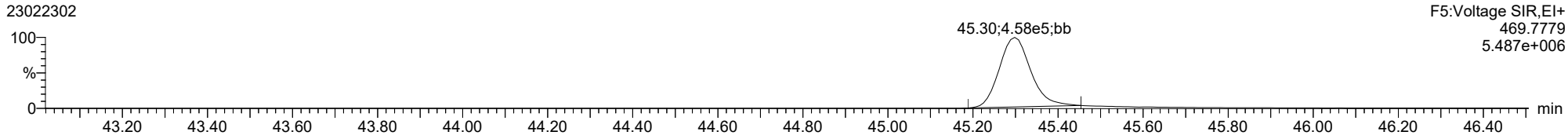

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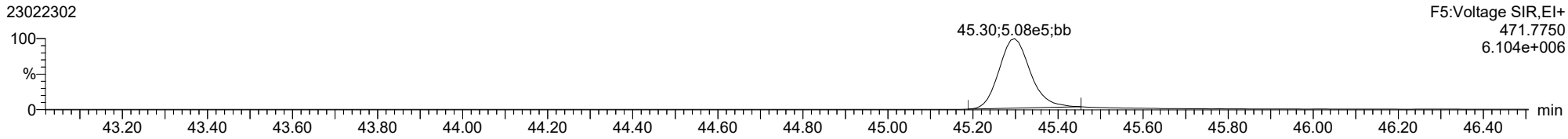

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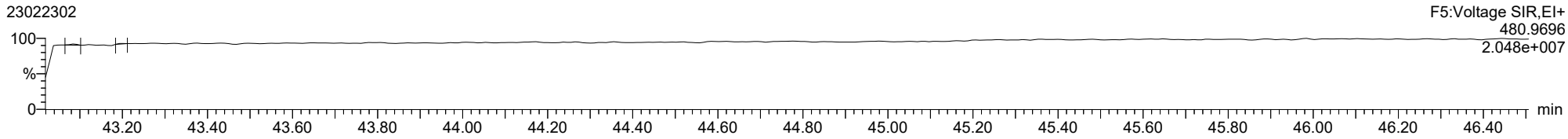

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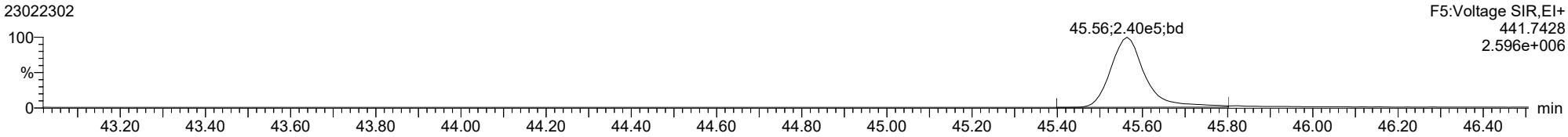

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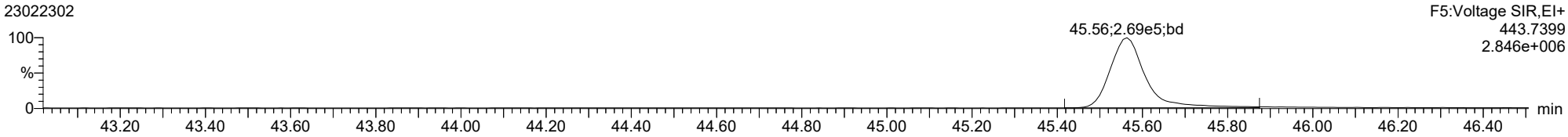

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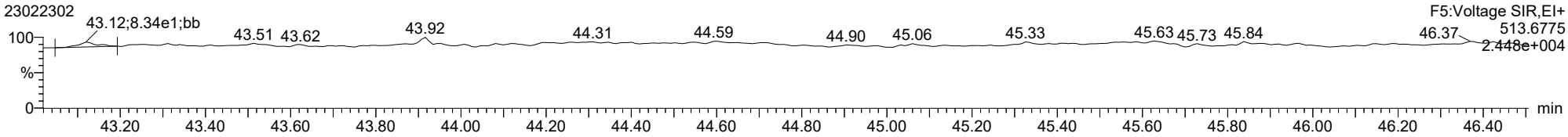

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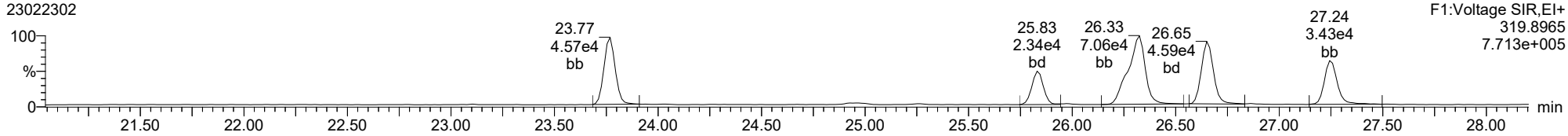
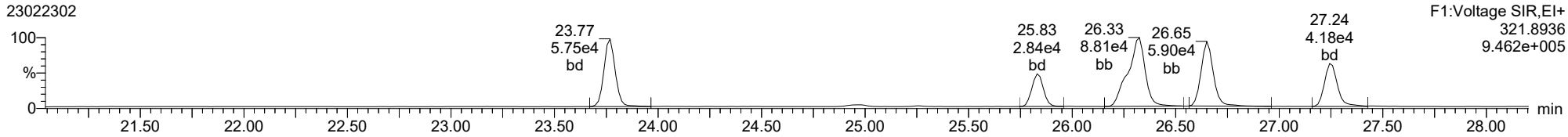
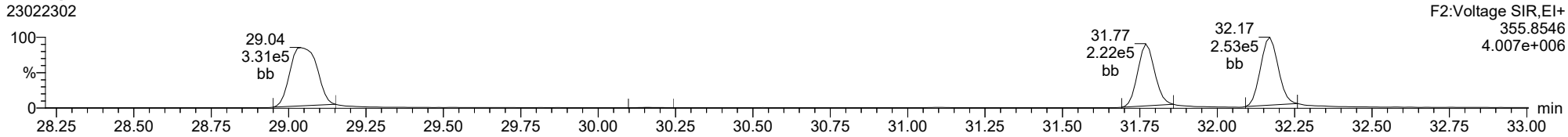


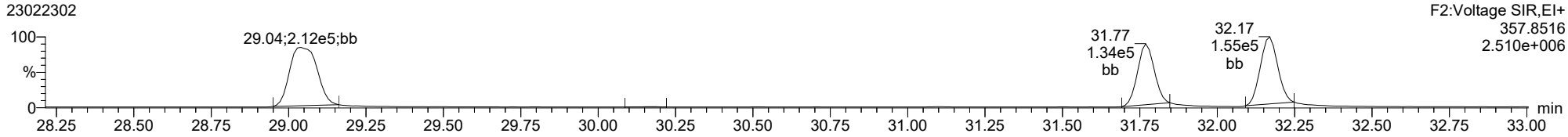
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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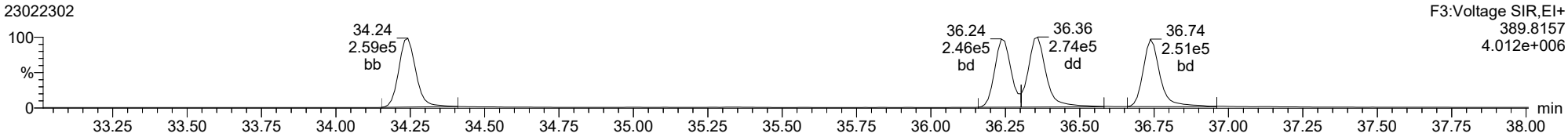
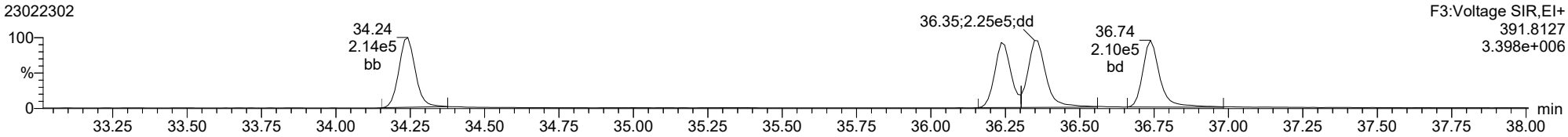


Total-hexadioxins



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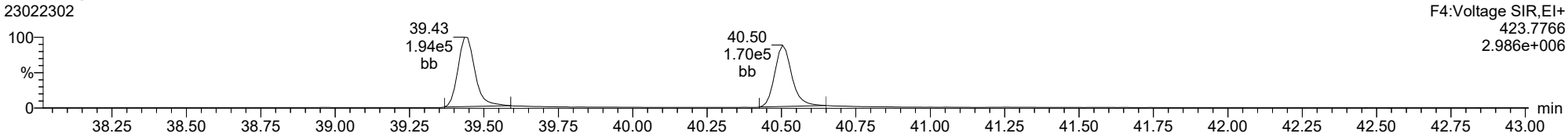

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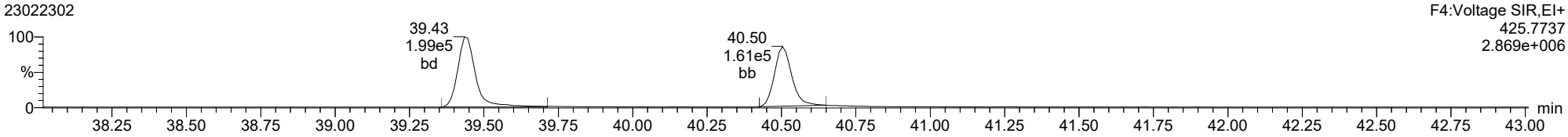

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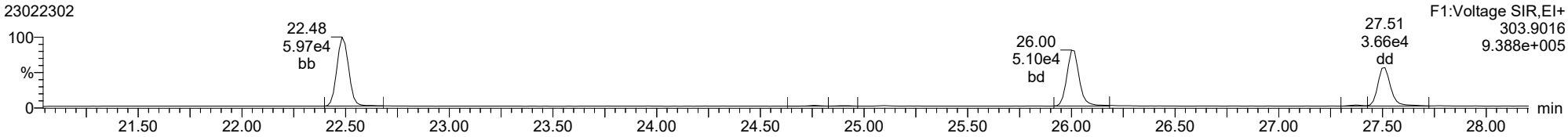
Total-tetrafurans



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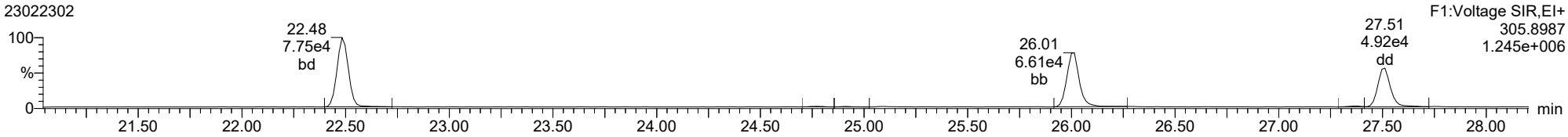

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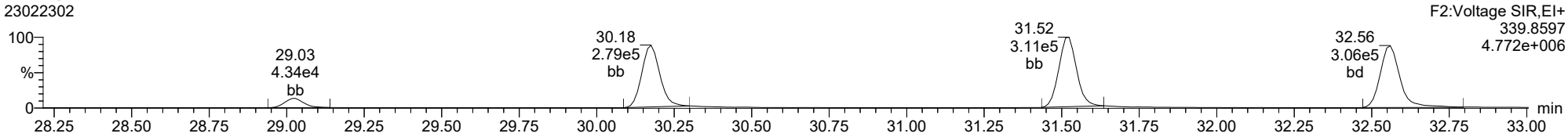

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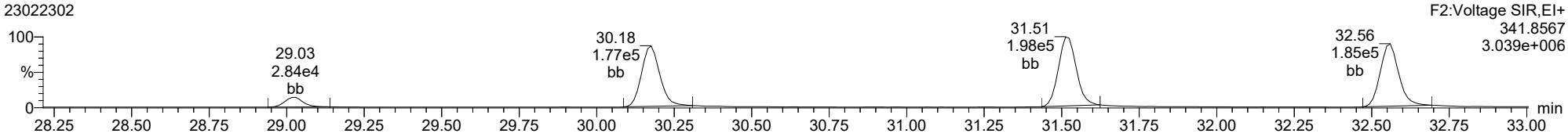

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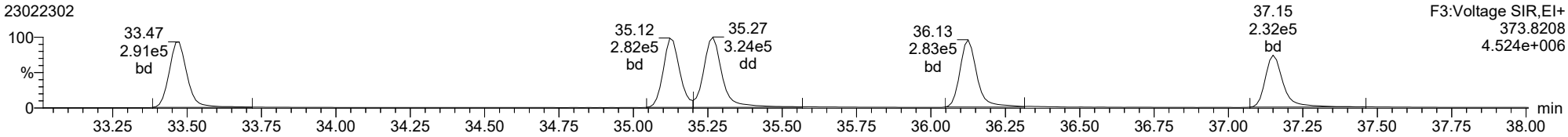
Total-hexafurans



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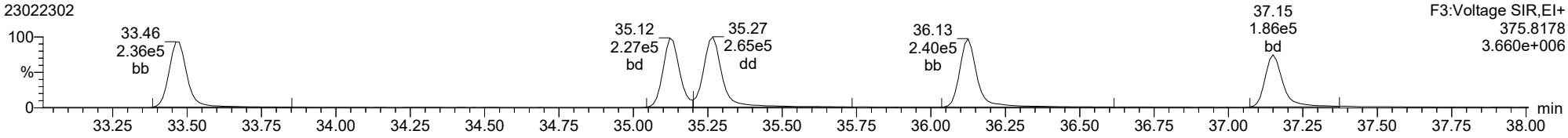

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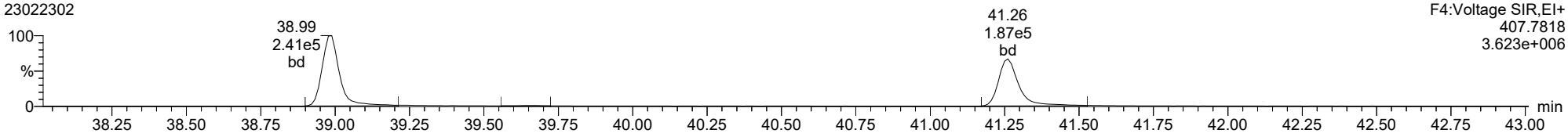

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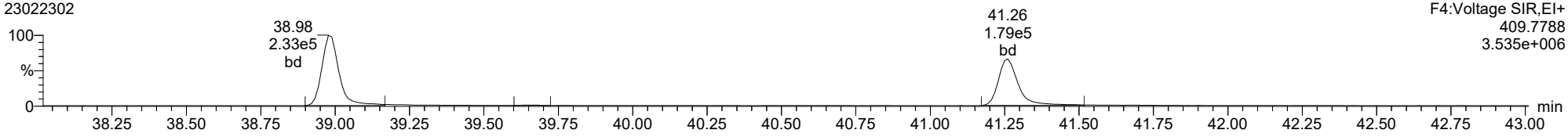

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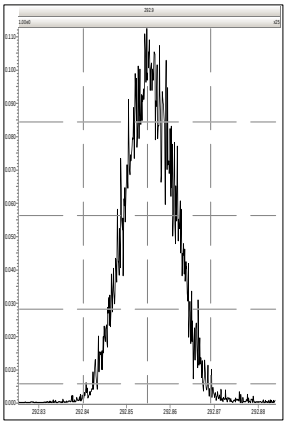

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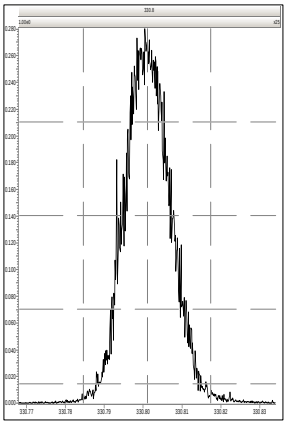

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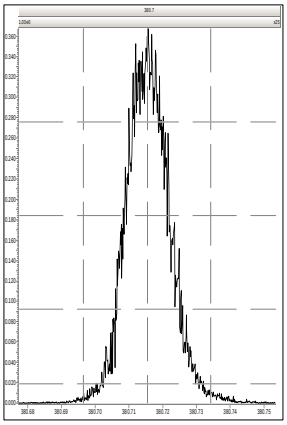

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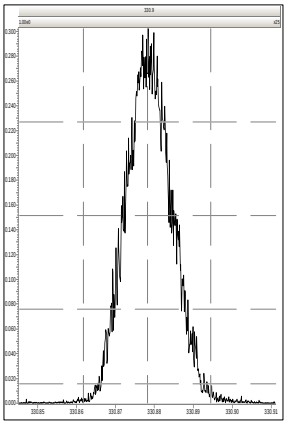

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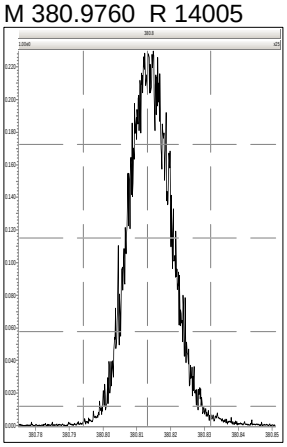

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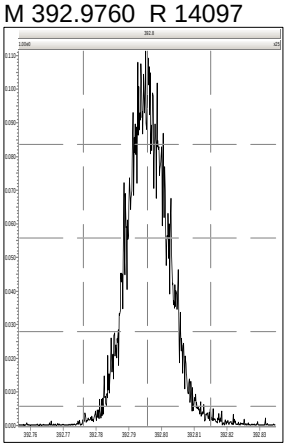
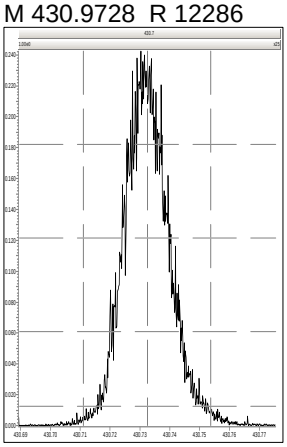
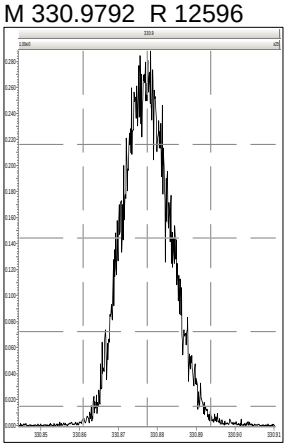


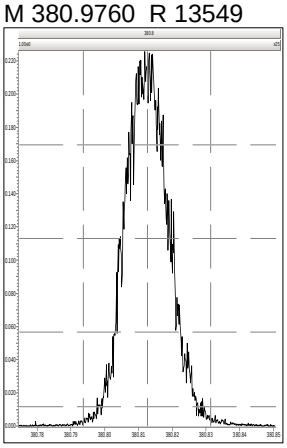
M 430.9728 R 12286



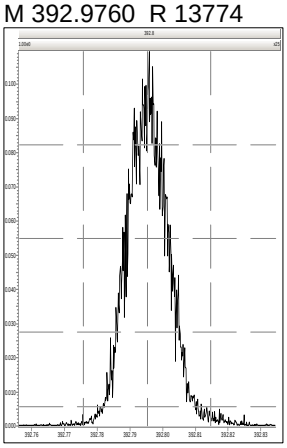
M 330.9792 R 12596



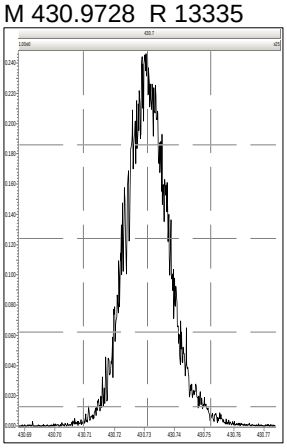
M 380.9760 R 13549



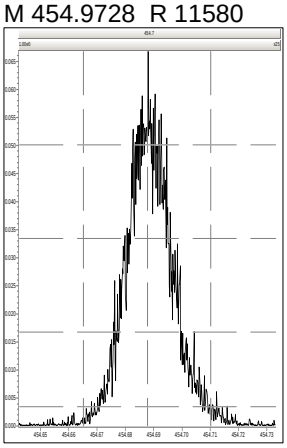
M 392.9760 R 13774



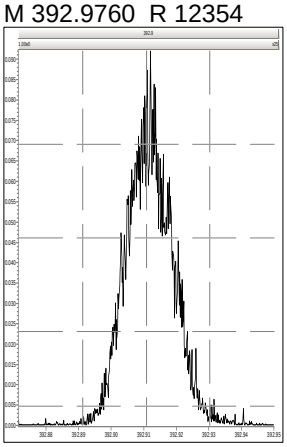
M 430.9728 R 13335



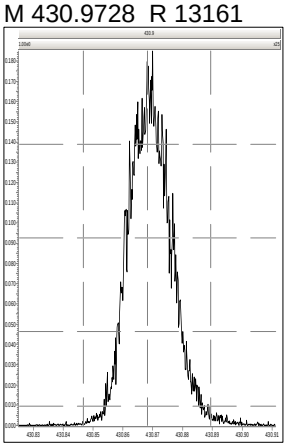
M 454.9728 R 11580



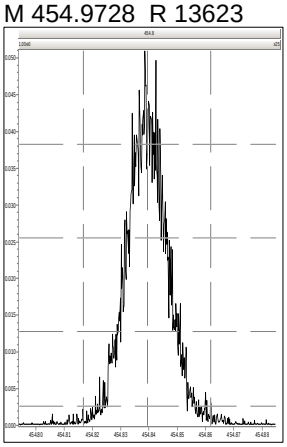
M 392.9760 R 12354



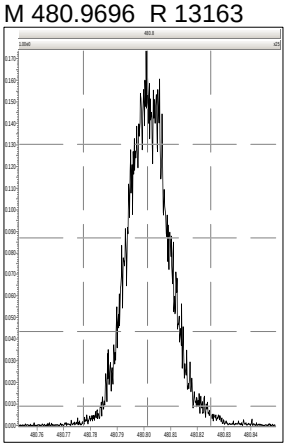
M 430.9728 R 13161



M 454.9728 R 13623

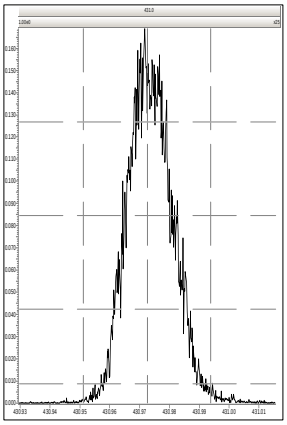


M 480.9696 R 13163

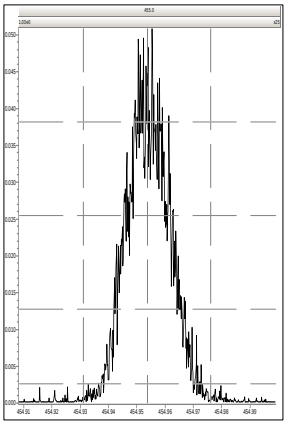


Printed: Thursday, February 23, 2023 09:43:40 Pacific Standard Time

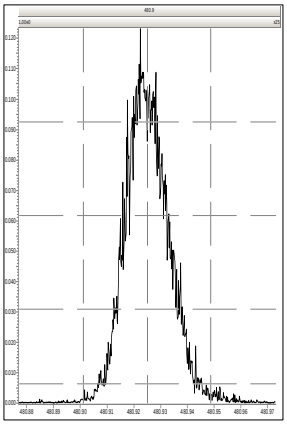
M 430.9728 R 12857



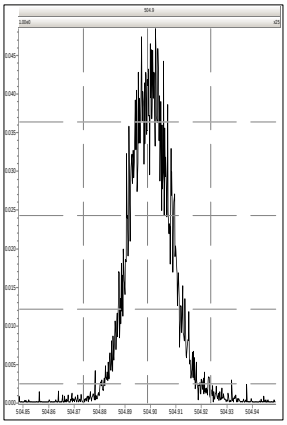
M 454.9728 R 14205



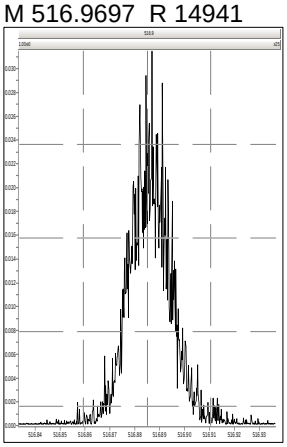
M 480.9696 R 13715

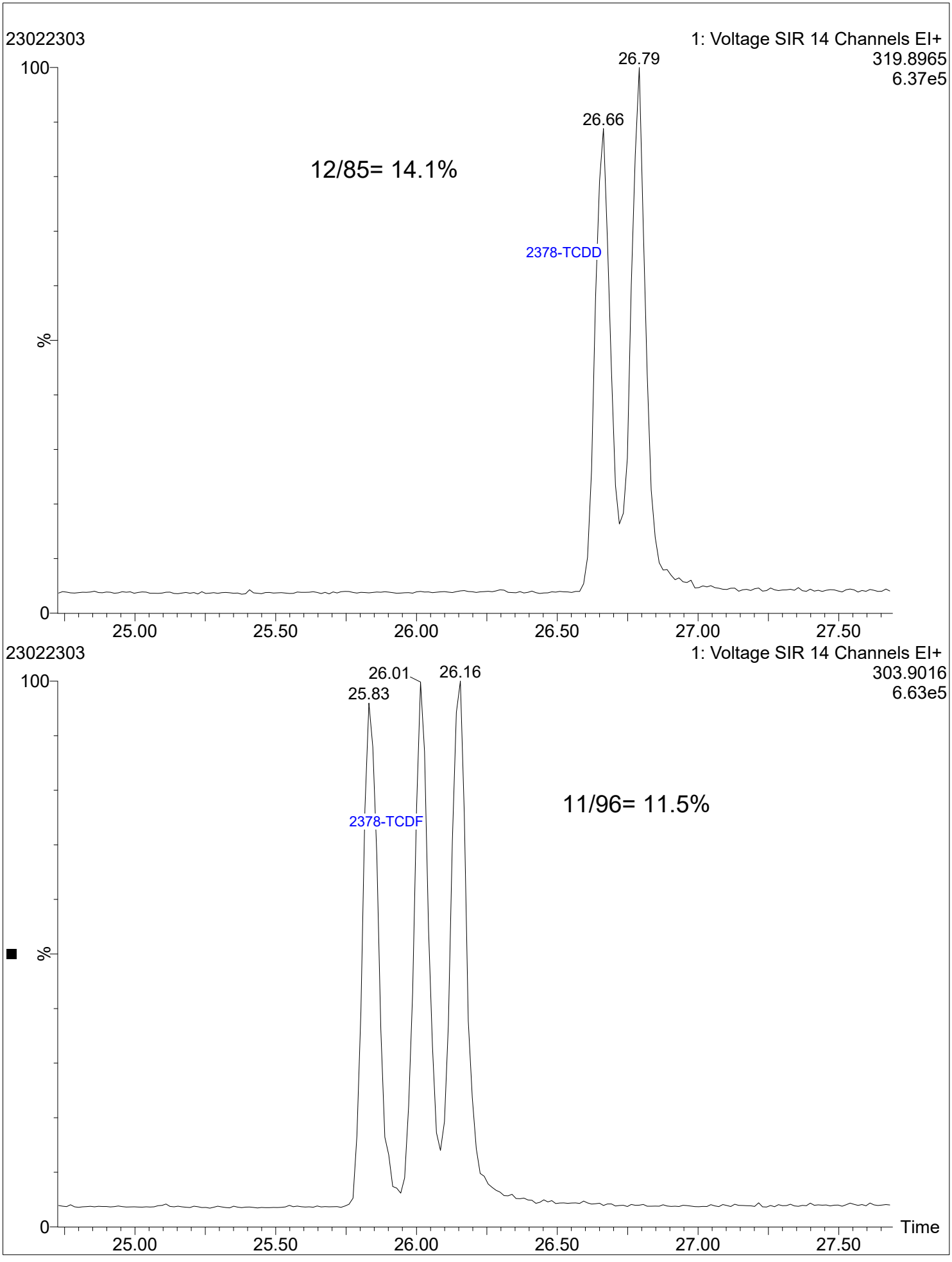


M 504.9696 R 13054



M 516.9697 R 14941




23022303
1: Voltage SIR 14 Channels EI+
319.8965
6.37e5
100
26.79
26.66
12/85= 14.1%
2378-TCDD
%
0
25.00
25.50
26.00
26.50
27.00
27.50
23022303
1: Voltage SIR 14 Channels EI+
303.9016
6.63e5
100
26.01
26.16
25.83
2378-TCDF
11/96= 11.5%
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GB00010
Lab File ID:	23020111	Calibration Date:	02/01/2023
Sequence:	SLB0026	Injection Date:	02/01/23
Lab Sample ID:	SLB0026-CCV1	Injection Time:	21:12
Sequence Name:	CS3R2		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	10.2	0.8760604	0.8902585		1.6	+/-16
2,3,7,8-TCDD	A	10.000	9.40	1.2363600	1.1618360		-6.0	+/-22
1,2,3,7,8-PeCDF	A	50.000	50.0	0.8446540	0.8449929		0.04	+/-18
2,3,4,7,8-PeCDF	A	50.000	50.7	0.9111780	0.9236419		1.4	+/-18
1,2,3,7,8-PeCDD	A	50.000	51.1	1.0866850	1.1111520		2.3	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	49.6	1.1816860	1.1728360		-0.7	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	50.9	1.2480480	1.2707090		1.8	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	52.6	1.2288500	1.2939400		5.3	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	50.4	1.1865370	1.1969780		0.9	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	50.3	0.9869672	0.9929396		0.6	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	51.0	1.0207220	1.0413320		2.0	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	50.6	0.9854780	0.9974984		1.2	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	48.3	1.2041190	1.1630460		-3.4	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	49.7	1.1653050	1.1577820		-0.6	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	45.5	1.2525690	1.1398400		-9.0	+/-14
OCDF	A	100.00	90.4	1.1862640	1.0729150		-9.6	+/-37
OCDD	A	100.00	92.8	1.1026670	1.0229970		-7.2	+/-21
13C12-2,3,7,8-TCDF	A	100.00	95.3	1.7680590	1.6841852		-4.7	+/-29
13C12-2,3,7,8-TCDD	A	100.00	103	1.1029470	1.1383762		3.2	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	97.8	1.5271250	1.4930478		-2.2	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	97.6	1.4662840	1.4306770		-2.4	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	95.1	0.9141518	0.8689207		-4.9	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	102	1.0536610	1.0736203		1.9	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	102	1.0799530	1.0977524		1.6	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	99.6	1.0143260	1.0099883		-0.4	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	101	0.9279333	0.9355105		0.8	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	100	0.9329336	0.9327825		-0.02	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	100	0.9646272	0.9644574		-0.02	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	102	1.0360890	1.0530458		1.6	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	104	0.9049372	0.9392673		3.8	+/-23
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	103	0.7819773	0.8033582		2.7	+/-28
13C12-OCDD	A	200.00	213	0.7882343	0.8392826		6.5	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	9.04	1.2334500	1.1156124		-9.6	

* Values outside of QC limits

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GB00010
Lab File ID:	23020110	Calibration Date:	02/01/2023
Sequence:	SLB0026	Injection Date:	02/01/23
Lab Sample ID:	SLB0026-SCV1	Injection Time:	20:23
Sequence Name:	ICVCR		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	9.80	0.8760604	0.8586768		-2.0	
2,3,7,8-TCDD	A	10.000	10.1	1.2363600	1.2492920		1.0	
1,2,3,7,8-PeCDF	A	50.000	49.4	0.8446540	0.8351133		-1.1	
2,3,4,7,8-PeCDF	A	50.000	50.7	0.9111780	0.9242915		1.4	
1,2,3,7,8-PeCDD	A	50.000	48.9	1.0866850	1.0622540		-2.2	
1,2,3,4,7,8-HxCDF	A	50.000	50.8	1.1816860	1.2014960		1.7	
1,2,3,6,7,8-HxCDF	A	50.000	51.1	1.2480480	1.2746570		2.1	
2,3,4,6,7,8-HxCDF	A	50.000	51.5	1.2288500	1.2663990		3.1	
1,2,3,7,8,9-HxCDF	A	50.000	49.9	1.1865370	1.1839220		-0.2	
1,2,3,4,7,8-HxCDD	A	50.000	51.0	0.9869672	1.0062160		2.0	
1,2,3,6,7,8-HxCDD	A	50.000	48.3	1.0207220	0.9861518		-3.4	
1,2,3,7,8,9-HxCDD	A	50.000	49.6	0.9854780	10444.61		-0.8	
1,2,3,4,6,7,8-HpCDF	A	50.000	49.0	1.2041190	1.1796410		-2.0	
1,2,3,4,7,8,9-HpCDF	A	50.000	51.5	1.1653050	1.1995620		2.9	
1,2,3,4,6,7,8-HpCDD	A	50.000	48.8	1.2525690	1.2236480		-2.3	
OCDF	A	100.00	93.0	1.1862640	1.1031570		-7.0	
OCDD	A	100.00	95.8	1.1026670	1.0561160		-4.2	
13C12-2,3,7,8-TCDF	A	100.00	101	1.7680590	1.7827674		0.8	
13C12-2,3,7,8-TCDD	A	100.00	97.3	1.1029470	1.0730574		-2.7	
13C12-1,2,3,7,8-PeCDF	A	100.00	97.9	1.5271250	1.4954172		-2.1	
13C12-2,3,4,7,8-PeCDF	A	100.00	96.0	1.4662840	1.4076825		-4.0	
13C12-1,2,3,7,8-PeCDD	A	100.00	95.6	0.9141518	0.8737537		-4.4	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	99.0	1.0536610	1.0427881		-1.0	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	98.8	1.0799530	1.0669191		-1.2	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	99.3	1.0143260	1.0069993		-0.7	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	98.6	0.9279333	0.9147189		-1.4	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	97.7	0.9329336	0.9118251		-2.3	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	101	0.9646272	0.9706530		0.6	
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	100	1.0360890	1.0396134		0.3	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	101	0.9049372	0.9117511		0.8	
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	101	0.7819773	0.7868918		0.6	
13C12-OCDD	A	200.00	205	0.7882343	0.8085897		2.6	
37Cl4-2,3,7,8-TCDD	A	10.000	8.94	1.2334500	1.1023697		-10.6	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GB00010
Lab File ID:	23022312	Calibration Date:	02/01/2023
Sequence:	SLB0345	Injection Date:	02/23/23
Lab Sample ID:	SLB0345-CCV1	Injection Time:	19:11
Sequence Name:	CS3V4		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
2,3,7,8-TCDF	A	10.000	9.68	0.8760604	0.8478234		-3.2	+/-16	
2,3,7,8-TCDD	A	10.000	8.69	1.2363600	1.0738920		-13.1	+/-22	
1,2,3,7,8-PeCDF	A	50.000	50.2	0.8446540	0.8474479		0.3	+/-18	
2,3,4,7,8-PeCDF	A	50.000	51.0	0.9111780	0.9295542		2.0	+/-18	
1,2,3,7,8-PeCDD	A	50.000	56.9	1.0866850	1.2357730		13.7	+/-22	
1,2,3,4,7,8-HxCDF	A	50.000	46.1	1.1816860	1.0902010		-7.7	+/-10	
1,2,3,6,7,8-HxCDF	A	50.000	44.2	1.2480480	1.1026150		-11.7	+/-12	
2,3,4,6,7,8-HxCDF	A	50.000	45.7	1.2288500	1.1233860		-8.6	+/-12	
1,2,3,7,8,9-HxCDF	A	50.000	46.5	1.1865370	1.1043270		-6.9	+/-10	
1,2,3,4,7,8-HxCDD	A	50.000	48.1	0.9869672	0.9503983		-3.7	+/-22	
1,2,3,6,7,8-HxCDD	A	50.000	46.5	1.0207220	0.9493121		-7.0	+/-22	
1,2,3,7,8,9-HxCDD	A	50.000	47.7	0.9854780	0.9398482		-4.6	+/-18	
1,2,3,4,6,7,8-HpCDF	A	50.000	47.7	1.2041190	1.1498960		-4.5	+/-10	
1,2,3,4,7,8,9-HpCDF	A	50.000	47.1	1.1653050	1.0971080		-5.9	+/-14	
1,2,3,4,6,7,8-HpCDD	A	50.000	44.9	1.2525690	1.1247070		-10.2	+/-14	
OCDF	A	100.00	82.9	1.1862640	0.9833408		-17.1	+/-37	
OCDD	A	100.00	96.4	1.1026670	1.0626510		-3.6	+/-21	
13C12-2,3,7,8-TCDF	A	100.00	82.6	1.7680590	1.4609158		-17.4	+/-29	
13C12-2,3,7,8-TCDD	A	100.00	102	1.1029470	1.1211812		1.7	+/-18	
13C12-1,2,3,7,8-PeCDF	A	100.00	74.0	1.5271250	1.1307157		-26.0	+/-24	*
13C12-2,3,4,7,8-PeCDF	A	100.00	76.9	1.4662840	1.1269041		-23.1	+/-23	*
13C12-1,2,3,7,8-PeCDD	A	100.00	65.3	0.9141518	0.5969997		-34.7	+/-38	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	94.5	1.0536610	0.9960034		-5.5	+/-24	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	98.1	1.0799530	1.0591562		-1.9	+/-30	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	97.8	1.0143260	0.9918777		-2.2	+/-27	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	90.0	0.9279333	0.8349472		-10.0	+/-26	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	104	0.9329336	0.9684278		3.8	+/-15	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	109	0.9646272	1.0474637		8.6	+/-15	
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	82.5	1.0360890	0.8551825		-17.5	+/-22	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	81.2	0.9049372	0.7345442		-18.8	+/-23	
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	83.7	0.7819773	0.6545189		-16.3	+/-28	
13C12-OCDD	A	200.00	114	0.7882343	0.4493649		-43.0	+/-52	
37Cl4-2,3,7,8-TCDD	A	10.000	8.82	1.2334500	1.0874118		-11.8		

* Values outside of QC limits

* Values outside of QC limits

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:12:04 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3V4, Name: 23022312, Date: 23-Feb-2023, Time: 19:11:19, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.986	1.001	5.786e4	7.447e4	0.876	0.777	0.770	926	1155	8.37e5	1.09e6	904.5	943.7	NO	bd	bd	9.678
12378-PeCDF	30.142	1.000	3.118e5	2.000e5	0.845	1.559	1.550	1733	1558	4.66e6	3.04e6	2691.8	1953.5	NO	bb	bb	50.165
23478-PeCDF	31.490	1.000	3.399e5	2.196e5	0.911	1.548	1.550	1733	1558	5.20e6	3.44e6	3000.2	2204.4	NO	bb	bb	51.008
123478-HxCDF	35.100	1.000	3.191e5	2.577e5	1.182	1.238	1.240	1940	2280	4.96e6	4.03e6	2557.3	1766.1	NO	bd	bd	46.129
234678-HxCDF	36.103	1.000	3.283e5	2.636e5	1.229	1.245	1.240	1940	2280	5.11e6	4.15e6	2633.5	1821.2	NO	bd	bd	45.709
123678-HxCDF	35.245	1.001	3.420e5	2.783e5	1.248	1.229	1.240	1940	2280	5.20e6	4.17e6	2678.6	1831.0	NO	dd	dd	44.174
123789-HxCDF	37.128	1.000	2.727e5	2.171e5	1.187	1.257	1.240	1940	2280	4.07e6	3.27e6	2099.5	1432.7	NO	bb	bd	46.536
1234678-HpCDF	38.966	1.000	2.671e5	2.552e5	1.204	1.047	1.050	1822	1789	4.23e6	4.16e6	2320.6	2328.5	NO	bb	bb	47.748
1234789-HpCDF	41.239	1.000	2.186e5	2.095e5	1.165	1.043	1.050	1822	1789	3.03e6	2.98e6	1663.9	1663.6	NO	bb	bd	47.074
OCDF	45.536	1.006	2.222e5	2.472e5	1.186	0.899	0.890	1133	1249	2.47e6	2.75e6	2182.4	2203.3	NO	bd	bd	82.894
2378-TCDD	26.622	1.000	5.667e4	7.196e4	1.236	0.788	0.770	896	925	8.48e5	1.08e6	946.0	1168.0	NO	bd	bb	8.686
12378-PeCDD	31.747	1.000	2.432e5	1.509e5	1.087	1.611	1.550	1479	1815	3.89e6	2.40e6	2628.6	1321.8	NO	bb	bb	56.860
123478-HxCDD	36.225	1.001	2.684e5	2.205e5	0.987	1.217	1.240	2170	1775	4.31e6	3.49e6	1986.7	1965.1	NO	bd	bd	48.147
123678-HxCDD	36.336	1.001	2.870e5	2.412e5	1.021	1.189	1.240	2170	1775	4.74e6	3.78e6	2185.0	2128.6	NO	db	db	46.502
123789-HxCDD	36.715	1.011	2.735e5	2.297e5	0.985	1.191	1.240	2170	1775	4.35e6	3.67e6	2006.1	2068.9	NO	bb	bd	47.685
1234678-HpCDD	40.481	1.000	2.012e5	1.898e5	1.253	1.060	1.050	1857	1722	3.08e6	2.91e6	1659.0	1690.3	NO	bb	bb	44.896
OCDD	45.289	1.000	2.295e5	2.778e5	1.103	0.826	0.890	1297	1580	2.69e6	3.16e6	2076.9	1998.5	NO	bb	bd	96.371
13C-2378-TCDF	25.958	1.007	6.748e5	8.859e5	1.768	0.762	0.770	1458	1044	1.03e7	1.35e7	7094.3	12917.3	NO	bb	bb	82.628
13C-12378-PeCDF	30.131	1.168	7.362e5	4.717e5	1.527	1.561	1.550	2243	2092	1.09e7	6.96e6	4845.7	3329.2	NO	bd	bd	74.042
13C-23478-PeCDF	31.479	1.221	7.317e5	4.722e5	1.466	1.549	1.550	2243	2092	1.10e7	7.01e6	4901.7	3353.0	NO	bb	bb	76.854
13C-123478-HxCDF	35.089	0.956	3.561e5	7.021e5	1.054	0.507	0.510	1487	1440	5.76e6	1.13e7	3875.9	7828.6	NO	bd	bd	94.528
13C-123678-HxCDF	35.222	0.960	3.809e5	7.443e5	1.080	0.512	0.510	1487	1440	5.92e6	1.16e7	3985.2	8074.4	NO	db	db	98.074
13C-234678-HxCDF	36.091	0.983	3.533e5	7.004e5	1.014	0.504	0.510	1487	1440	5.73e6	1.12e7	3856.4	7783.1	NO	bb	bb	97.787
13C-123789-HxCDF	37.117	1.011	3.009e5	5.861e5	0.928	0.513	0.510	1487	1440	4.97e6	9.58e6	3340.4	6653.4	NO	bb	bb	89.979
13C-1234678-HpCDF	38.955	1.061	2.821e5	6.264e5	1.036	0.450	0.440	2337	2208	4.70e6	1.04e7	2008.8	4707.3	NO	bb	bb	82.540
13C-1234789-HpCDF	41.228	1.123	2.404e5	5.399e5	0.905	0.445	0.440	2337	2208	3.35e6	7.45e6	1431.6	3372.9	NO	bd	bb	81.171
13C-1234-TCDD	25.788	0.000	4.683e5	6.001e5	1.000	0.780	0.770	1615	891	7.54e6	9.66e6	4666.9	10840.8	NO	bb	bb	100.000
13C-2378-TCDD	26.608	1.032	5.202e5	6.776e5	1.103	0.768	0.770	1615	891	7.92e6	1.02e7	4903.0	11492.4	NO	bb	bb	101.653
13C-12378-PeCDD	31.735	1.231	4.012e5	2.366e5	0.914	1.696	1.550	740	953	5.86e6	3.57e6	7923.3	3749.0	NO	bd	bd	65.306
13C-123478-HxCDD	36.203	0.986	5.690e5	4.599e5	0.933	1.237	1.240	2113	1973	9.26e6	7.60e6	4384.4	3854.9	NO	bd	bd	103.805
13C-123678-HxCDD	36.314	0.989	6.152e5	4.976e5	0.965	1.236	1.240	2113	1973	9.82e6	7.94e6	4649.6	4025.3	NO	db	db	108.587
13C-1234678-HpCDD	40.470	1.103	3.599e5	3.355e5	0.782	1.073	1.050	1366	1367	5.34e6	4.97e6	3904.8	3634.6	NO	bb	bb	83.700
13C-OCDD	45.271	1.233	4.537e5	5.011e5	0.788	0.905	0.890	1300	1582	5.48e6	6.05e6	4218.2	3821.9	NO	bb	bb	114.018
13C-123789-HxCDD	36.704	0.000	5.902e5	4.722e5	1.000	1.250	1.240	2113	1973	1.00e7	7.86e6	4737.9	3986.0	NO	bb	bb	100.000
37CL-2378-TCDD	26.622	1.032	1.162e5		1.233			1550		1.75e6		1132.0			bb		8.816

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:12:04 Pacific Standard Time

ID: CS3V4, Name: 23022312, Date: 23-Feb-2023, Time: 19:11:19, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.455	0.865	6.460e4	8.492e4	1.064	0.761	0.770	926	1155	1.06e6	1.35e6	1142.5	1165.0	NO	bb	bd	9.000
1289-TCDF	27.483	1.059	4.491e4	5.945e4	0.858	0.755	0.770	926	1155	6.61e5	8.64e5	713.6	748.2	NO	dd	dd	7.797
13468-PECDF	27.328	0.907	4.681e5	3.124e5	1.013	1.498	1.550	774	937	7.37e6	4.94e6	9521.8	5276.8	NO	bb	bb	63.786
12389-PECDF	32.537	1.080	3.283e5	2.140e5	0.844	1.534	1.550	1733	1558	4.88e6	3.16e6	2818.2	2030.5	NO	bb	bb	53.213
123468-HXCDF	33.440	0.953	3.235e5	2.608e5	1.197	1.241	1.240	1940	2280	4.84e6	3.94e6	2497.1	1728.8	NO	bb	bb	46.116
1368-TCDD	23.740	0.892	5.449e4	7.052e4	1.084	0.773	0.770	896	925	8.81e5	1.13e6	983.1	1223.9	NO	bd	bd	9.625
1289-TCDD	27.229	1.023	4.375e4	5.687e4	0.975	0.769	0.770	896	925	6.31e5	8.09e5	703.8	874.1	NO	bd	bb	8.615
12479-PECDD	29.006	0.914	3.740e5	2.382e5	1.837	1.570	1.550	1479	1815	3.76e6	2.41e6	2539.2	1326.1	NO	bb	bb	52.242
12389-PECDD	32.136	1.013	2.801e5	1.757e5	1.252	1.594	1.550	1479	1815	4.34e6	2.74e6	2933.4	1511.1	NO	bb	bb	57.067
124679-HXCDD	34.220	0.945	2.856e5	2.287e5	1.033	1.249	1.240	2170	1775	4.61e6	3.64e6	2124.4	2048.1	NO	bb	bb	48.394
1234679-HPCDD	39.423	0.974	2.317e5	2.277e5	1.286	1.018	1.050	1857	1722	3.79e6	3.56e6	2042.1	2068.1	NO	bb	bd	51.372
Total-tetrafurans			1.690e5		0.933			926		2.58e6							26.721
Total-penta1			4.681e5					774		7.37e6							63.786
Total-pentafurans			1.029e6		0.866			1733		1.55e7							162.210
Total-hexafurans			1.586e6		1.208			1940		2.42e7							228.663
Total-heptafurans			4.857e5		1.185			1822		7.26e6							94.822
Total-Furans			3.960e6		1.067			926		5.94e7							659.098
Total-tetradioxins			2.681e5		1.099			896		3.70e6							46.610
Total-pentadioxins			8.972e5		1.392			1479		1.20e7							166.169
Total-hexadioxins			1.115e6		1.007			2170		1.80e7							190.728
Total-heptadioxins			4.330e5		1.269			1857		6.87e6							96.268
Total-Dioxins			2.942e6		1.165			896		4.33e7							596.147
Total-TEQ			6.902e6					896		1.03e8							1255.244
FUNCTION1 PFK			1.198e8					366741		3.18e7							
FUNCTION2 PFK			0.000e0					234171		0.00e0							
FUNCTION3 PFK			0.000e0					333302		0.00e0							
FUNCTION4 PFK			1.087e7					273300		6.48e7							
FUNCTION5 PFK			4.978e6					148167		8.37e6							
FUNCTION1 HXCD...			7.245e2					599		1.04e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			6.086e2					1040		1.13e4							0.000
FUNCTION3 OCDPE			0.000e0					572		0.00e0							
FUNCTION4 NCDPE			3.524e2					719		4.49e3							0.000
FUNCTION5 DCDPE			0.000e0					471		0.00e0							

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3V4, Name: 23022312, Date: 23-Feb-2023, Time: 19:11:19, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.48	4.491e4	5.945e4	0.858	0.76	0.77	713.6	YES	NO	dd	dd	7.797
2	Total-tetrafurans	27.34	1.676e3	1.921e3	0.933	0.87	0.77	28.7	YES	NO	bd	bd	0.247
3	2378-TCDF	25.99	5.786e4	7.447e4	0.876	0.78	0.77	904.5	YES	NO	bd	bd	9.678
4	1368-TCDF	22.45	6.460e4	8.492e4	1.064	0.76	0.77	1142.5	YES	NO	bb	bd	9.000

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.33	4.681e5	3.124e5	1.013	1.50	1.55	9521.8	YES	NO	bb	bb	63.786

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	28.99	4.877e4	3.196e4	0.866	1.53	1.55	431.6	YES	NO	bb	bb	7.726
2	12389-PECDF	32.54	3.283e5	2.140e5	0.844	1.53	1.55	2818.2	YES	NO	bb	bb	53.213
3	23478-PeCDF	31.49	3.399e5	2.196e5	0.911	1.55	1.55	3000.2	YES	NO	bb	bb	51.008
4	12378-PeCDF	30.14	3.118e5	2.000e5	0.845	1.56	1.55	2691.8	YES	NO	bb	bb	50.165
5	Total-pentafurans	29.87	6.243e2	3.922e2	0.866	1.59	1.55	5.7	YES	NO	db	bb	0.097

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDF	35.24	3.420e5	2.783e5	1.248	1.23	1.24	2678.6	YES	NO	dd	dd	44.174
2	123478-HxCDF	35.10	3.191e5	2.577e5	1.182	1.24	1.24	2557.3	YES	NO	bd	bd	46.129
3	123468-HXCDF	33.44	3.235e5	2.608e5	1.197	1.24	1.24	2497.1	YES	NO	bb	bb	46.116
4	123789-HxCDF	37.13	2.727e5	2.171e5	1.187	1.26	1.24	2099.5	YES	NO	bb	bd	46.536
5	234678-HxCDF	36.10	3.283e5	2.636e5	1.229	1.25	1.24	2633.5	YES	NO	bd	bd	45.709

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.24	2.186e5	2.095e5	1.165	1.04	1.05	1663.9	YES	NO	bb	bd	47.074
2	1234678-HpCDF	38.97	2.671e5	2.552e5	1.204	1.05	1.05	2320.6	YES	NO	bb	bb	47.748

ID: CS3V4, Name: 23022312, Date: 23-Feb-2023, Time: 19:11:19, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.48	4.491e4	5.945e4	0.858	0.76	0.77	713.6	YES	NO	dd	dd	7.797
2	Total-tetrafurans	27.34	1.676e3	1.921e3	0.933	0.87	0.77	28.7	YES	NO	bd	bd	0.247
3	2378-TCDF	25.99	5.786e4	7.447e4	0.876	0.78	0.77	904.5	YES	NO	bd	bd	9.678
4	1368-TCDF	22.45	6.460e4	8.492e4	1.064	0.76	0.77	1142.5	YES	NO	bb	bd	9.000
5	Total-pentafurans	28.99	4.877e4	3.196e4	0.866	1.53	1.55	431.6	YES	NO	bb	bb	7.726
6	12389-PECDF	32.54	3.283e5	2.140e5	0.844	1.53	1.55	2818.2	YES	NO	bb	bb	53.213
7	23478-PeCDF	31.49	3.399e5	2.196e5	0.911	1.55	1.55	3000.2	YES	NO	bb	bb	51.008
8	12378-PeCDF	30.14	3.118e5	2.000e5	0.845	1.56	1.55	2691.8	YES	NO	bb	bb	50.165
9	Total-pentafurans	29.87	6.243e2	3.922e2	0.866	1.59	1.55	5.7	YES	NO	db	bb	0.097
10	123678-HxCDF	35.24	3.420e5	2.783e5	1.248	1.23	1.24	2678.6	YES	NO	dd	dd	44.174
11	123478-HxCDF	35.10	3.191e5	2.577e5	1.182	1.24	1.24	2557.3	YES	NO	bd	bd	46.129
12	123468-HXCDF	33.44	3.235e5	2.608e5	1.197	1.24	1.24	2497.1	YES	NO	bb	bb	46.116
13	123789-HxCDF	37.13	2.727e5	2.171e5	1.187	1.26	1.24	2099.5	YES	NO	bb	bd	46.536
14	234678-HxCDF	36.10	3.283e5	2.636e5	1.229	1.25	1.24	2633.5	YES	NO	bd	bd	45.709
15	1234789-HpCDF	41.24	2.186e5	2.095e5	1.165	1.04	1.05	1663.9	YES	NO	bb	bd	47.074
16	1234678-HpCDF	38.97	2.671e5	2.552e5	1.204	1.05	1.05	2320.6	YES	NO	bb	bb	47.748
17	OCDF	45.54	2.222e5	2.472e5	1.186	0.90	0.89	2182.4	YES	NO	bd	bd	82.894
18	13468-PECDF	27.33	4.681e5	3.124e5	1.013	1.50	1.55	9521.8	YES	NO	bb	bb	63.786

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.80	2.690e4	3.468e4	1.099	0.78	0.77	465.0	YES	NO	bd	bd	4.680
2	Total-tetradioxins	25.22	7.046e2	8.143e2	1.099	0.87	0.77	12.1	YES	NO	bb	db	0.115
3	Total-tetradioxins	24.01	3.004e2	4.154e2	1.099	0.72	0.77	5.9	YES	NO	db	db	0.054
4	1368-TCDD	23.74	5.449e4	7.052e4	1.084	0.77	0.77	983.1	YES	NO	bd	bd	9.625
5	1289-TCDD	27.23	4.375e4	5.687e4	0.975	0.77	0.77	703.8	YES	NO	bd	bb	8.615
6	2378-TCDD	26.62	5.667e4	7.196e4	1.236	0.79	0.77	946.0	YES	NO	bd	bb	8.686
7	Total-tetradioxins	26.30	8.525e4	1.100e5	1.099	0.78	0.77	1016.8	YES	NO	bb	bb	14.835

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.14	2.801e5	1.757e5	1.252	1.59	1.55	2933.4	YES	NO	bb	bb	57.067
2	12378-PeCDD	31.75	2.432e5	1.509e5	1.087	1.61	1.55	2628.6	YES	NO	bb	bb	56.860
3	12479-PECDD	29.01	3.740e5	2.382e5	1.837	1.57	1.55	2539.2	YES	NO	bb	bb	52.242

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.72	2.735e5	2.297e5	0.985	1.19	1.24	2006.1	YES	NO	bb	bd	47.685
2	123678-HxCDD	36.34	2.870e5	2.412e5	1.021	1.19	1.24	2185.0	YES	NO	db	db	46.502
3	123478-HxCDD	36.23	2.684e5	2.205e5	0.987	1.22	1.24	1986.7	YES	NO	bd	bd	48.147
4	124679-HXCDD	34.22	2.856e5	2.287e5	1.033	1.25	1.24	2124.4	YES	NO	bb	bb	48.394

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.48	2.012e5	1.898e5	1.253	1.06	1.05	1659.0	YES	NO	bb	bb	44.896
2	1234679-HPCDD	39.42	2.317e5	2.277e5	1.286	1.02	1.05	2042.1	YES	NO	bb	bd	51.372

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.80	2.690e4	3.468e4	1.099	0.78	0.77	465.0	YES	NO	bd	bd	4.680
2	Total-tetradioxins	25.22	7.046e2	8.143e2	1.099	0.87	0.77	12.1	YES	NO	bb	db	0.115
3	Total-tetradioxins	24.01	3.004e2	4.154e2	1.099	0.72	0.77	5.9	YES	NO	db	db	0.054
4	1368-TCDD	23.74	5.449e4	7.052e4	1.084	0.77	0.77	983.1	YES	NO	bd	bd	9.625
5	1289-TCDD	27.23	4.375e4	5.687e4	0.975	0.77	0.77	703.8	YES	NO	bd	bb	8.615
6	2378-TCDD	26.62	5.667e4	7.196e4	1.236	0.79	0.77	946.0	YES	NO	bd	bb	8.686
7	Total-tetradioxins	26.30	8.525e4	1.100e5	1.099	0.78	0.77	1016.8	YES	NO	bb	bb	14.835
8	12389-PECDD	32.14	2.801e5	1.757e5	1.252	1.59	1.55	2933.4	YES	NO	bb	bb	57.067
9	12378-PeCDD	31.75	2.432e5	1.509e5	1.087	1.61	1.55	2628.6	YES	NO	bb	bb	56.860
10	12479-PECDD	29.01	3.740e5	2.382e5	1.837	1.57	1.55	2539.2	YES	NO	bb	bb	52.242
11	123789-HxCDD	36.72	2.735e5	2.297e5	0.985	1.19	1.24	2006.1	YES	NO	bb	bd	47.685
12	123678-HxCDD	36.34	2.870e5	2.412e5	1.021	1.19	1.24	2185.0	YES	NO	db	db	46.502
13	123478-HxCDD	36.23	2.684e5	2.205e5	0.987	1.22	1.24	1986.7	YES	NO	bd	bd	48.147
14	124679-HXCDD	34.22	2.856e5	2.287e5	1.033	1.25	1.24	2124.4	YES	NO	bb	bb	48.394
15	1234678-HpCDD	40.48	2.012e5	1.898e5	1.253	1.06	1.05	1659.0	YES	NO	bb	bb	44.896
16	1234679-HPCDD	39.42	2.317e5	2.277e5	1.286	1.02	1.05	2042.1	YES	NO	bb	bd	51.372
17	OCDD	45.29	2.295e5	2.778e5	1.103	0.83	0.89	2076.9	YES	NO	bb	bd	96.371

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.48	4.491e4	5.945e4	0.858	0.76	0.77	713.6	YES	NO	dd	dd	7.797
2	Total-tetrafurans	27.34	1.676e3	1.921e3	0.933	0.87	0.77	28.7	YES	NO	bd	bd	0.247
3	2378-TCDF	25.99	5.786e4	7.447e4	0.876	0.78	0.77	904.5	YES	NO	bd	bd	9.678
4	1368-TCDF	22.45	6.460e4	8.492e4	1.064	0.76	0.77	1142.5	YES	NO	bb	bd	9.000
5	Total-pentafurans	28.99	4.877e4	3.196e4	0.866	1.53	1.55	431.6	YES	NO	bb	bb	7.726
6	12389-PECDF	32.54	3.283e5	2.140e5	0.844	1.53	1.55	2818.2	YES	NO	bb	bb	53.213
7	23478-PeCDF	31.49	3.399e5	2.196e5	0.911	1.55	1.55	3000.2	YES	NO	bb	bb	51.008
8	12378-PeCDF	30.14	3.118e5	2.000e5	0.845	1.56	1.55	2691.8	YES	NO	bb	bb	50.165
9	Total-pentafurans	29.87	6.243e2	3.922e2	0.866	1.59	1.55	5.7	YES	NO	db	bb	0.097
10	123678-HxCDF	35.24	3.420e5	2.783e5	1.248	1.23	1.24	2678.6	YES	NO	dd	dd	44.174
11	123478-HxCDF	35.10	3.191e5	2.577e5	1.182	1.24	1.24	2557.3	YES	NO	bd	bd	46.129
12	123468-HXCDF	33.44	3.235e5	2.608e5	1.197	1.24	1.24	2497.1	YES	NO	bb	bb	46.116
13	123789-HxCDF	37.13	2.727e5	2.171e5	1.187	1.26	1.24	2099.5	YES	NO	bb	bd	46.536
14	234678-HxCDF	36.10	3.283e5	2.636e5	1.229	1.25	1.24	2633.5	YES	NO	bd	bd	45.709
15	1234789-HpCDF	41.24	2.186e5	2.095e5	1.165	1.04	1.05	1663.9	YES	NO	bb	bd	47.074
16	1234678-HpCDF	38.97	2.671e5	2.552e5	1.204	1.05	1.05	2320.6	YES	NO	bb	bb	47.748
17	OCDF	45.54	2.222e5	2.472e5	1.186	0.90	0.89	2182.4	YES	NO	bd	bd	82.894
18	13468-PECDF	27.33	4.681e5	3.124e5	1.013	1.50	1.55	9521.8	YES	NO	bb	bb	63.786
19	Total-tetradioxins	25.80	2.690e4	3.468e4	1.099	0.78	0.77	465.0	YES	NO	bd	bd	4.680
20	Total-tetradioxins	25.22	7.046e2	8.143e2	1.099	0.87	0.77	12.1	YES	NO	bb	db	0.115
21	Total-tetradioxins	24.01	3.004e2	4.154e2	1.099	0.72	0.77	5.9	YES	NO	db	db	0.054
22	1368-TCDD	23.74	5.449e4	7.052e4	1.084	0.77	0.77	983.1	YES	NO	bd	bd	9.625
23	1289-TCDD	27.23	4.375e4	5.687e4	0.975	0.77	0.77	703.8	YES	NO	bd	bb	8.615
24	2378-TCDD	26.62	5.667e4	7.196e4	1.236	0.79	0.77	946.0	YES	NO	bd	bb	8.686
25	Total-tetradioxins	26.30	8.525e4	1.100e5	1.099	0.78	0.77	1016.8	YES	NO	bb	bb	14.835
26	12389-PECDD	32.14	2.801e5	1.757e5	1.252	1.59	1.55	2933.4	YES	NO	bb	bb	57.067
27	12378-PeCDD	31.75	2.432e5	1.509e5	1.087	1.61	1.55	2628.6	YES	NO	bb	bb	56.860
28	12479-PECDD	29.01	3.740e5	2.382e5	1.837	1.57	1.55	2539.2	YES	NO	bb	bb	52.242
29	123789-HxCDD	36.72	2.735e5	2.297e5	0.985	1.19	1.24	2006.1	YES	NO	bb	bd	47.685
30	123678-HxCDD	36.34	2.870e5	2.412e5	1.021	1.19	1.24	2185.0	YES	NO	db	db	46.502
31	123478-HxCDD	36.23	2.684e5	2.205e5	0.987	1.22	1.24	1986.7	YES	NO	bd	bd	48.147
32	124679-HXCDD	34.22	2.856e5	2.287e5	1.033	1.25	1.24	2124.4	YES	NO	bb	bb	48.394
33	1234678-HpCDD	40.48	2.012e5	1.898e5	1.253	1.06	1.05	1659.0	YES	NO	bb	bb	44.896
34	1234679-HPCDD	39.42	2.317e5	2.277e5	1.286	1.02	1.05	2042.1	YES	NO	bb	bd	51.372
35	OCDD	45.29	2.295e5	2.778e5	1.103	0.83	0.89	2076.9	YES	NO	bb	bd	96.371

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	26.31	1.440e7					42.8	YES		db		
2	FUNCTION1 PFK	26.25	1.054e8					43.9	YES		bd		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	41.48	3.923e4					1.9	NO		bb		
2	FUNCTION4 PFK	41.38	2.976e4					1.7	NO		bb		
3	FUNCTION4 PFK	40.63	1.760e3					0.6	NO		bb		
4	FUNCTION4 PFK	40.58	1.246e4					1.0	NO		bb		
5	FUNCTION4 PFK	39.28	2.007e5					7.5	YES		db		
6	FUNCTION4 PFK	39.06	1.573e6					16.4	YES		dd		
7	FUNCTION4 PFK	38.83	8.436e5					25.2	YES		dd		
8	FUNCTION4 PFK	38.73	5.560e6					29.2	YES		dd		
9	FUNCTION4 PFK	38.20	4.418e5					48.9	YES		dd		
10	FUNCTION4 PFK	38.13	1.053e6					50.8	YES		dd		
11	FUNCTION4 PFK	38.07	1.113e6					53.0	YES		bd		
12	FUNCTION4 PFK	41.73	5.639e3					0.9	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.13	4.978e6					56.5	YES		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.34	2.198e2					4.4	YES		bb		0.000
2	FUNCTION1 HXCD...	26.42	7.682e1					2.5	NO		bb		0.000
3	FUNCTION1 HXCD...	25.80	1.117e2					2.9	NO		bb		0.000
4	FUNCTION1 HXCD...	24.66	1.639e2					2.9	NO		bb		0.000
5	FUNCTION1 HXCD...	22.60	7.192e1					2.9	NO		db		0.000
6	FUNCTION1 HXCD...	22.50	8.043e1					1.8	NO		bd		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.45	7.793e1					1.7	NO		bb		0.000
2	FUNCTION2 HPCD...	32.17	8.383e1					1.0	NO		bb		0.000
3	FUNCTION2 HPCD...	31.37	2.641e2					3.8	YES		db		0.000
4	FUNCTION2 HPCD...	31.22	8.237e1					1.5	NO		bd		0.000
5	FUNCTION2 HPCD...	30.15	1.004e2					2.9	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	42.55	1.730e2					3.1	YES		db		0.000
2	FUNCTION4 NCDPE	42.32	1.794e2					3.1	YES		bd		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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Printed: Friday, February 24, 2023 15:12:04 Pacific Standard Time

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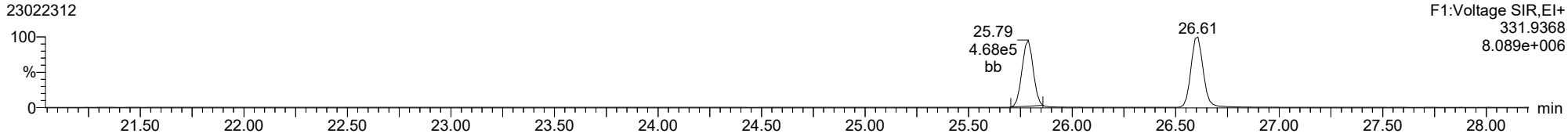
ID: CS3V4, Name: 23022312, Date: 23-Feb-2023, Time: 19:11:19, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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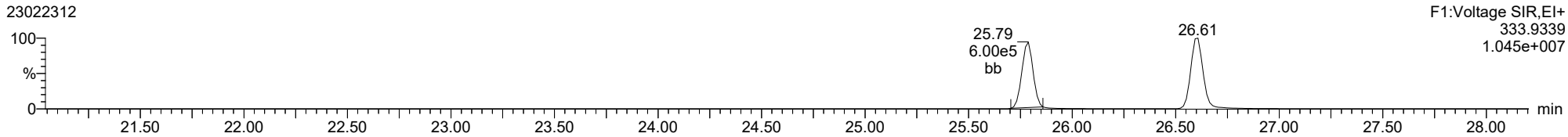

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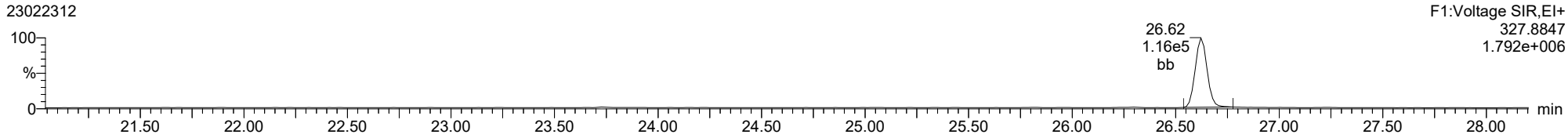

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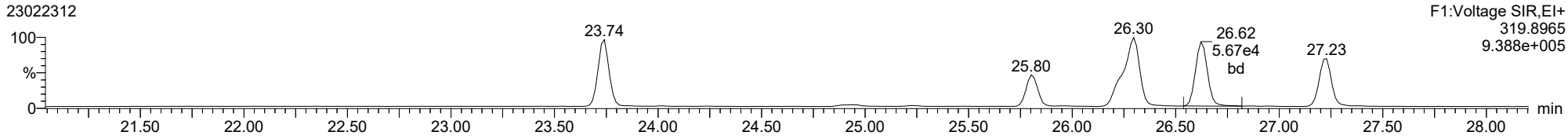

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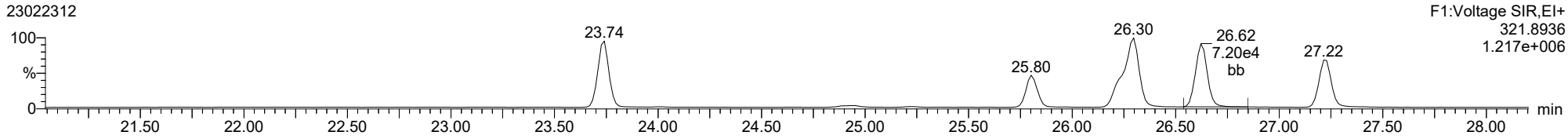

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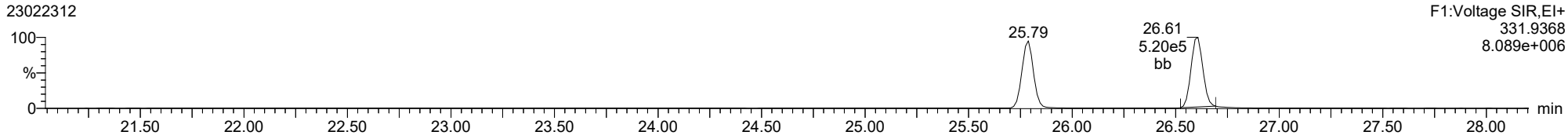

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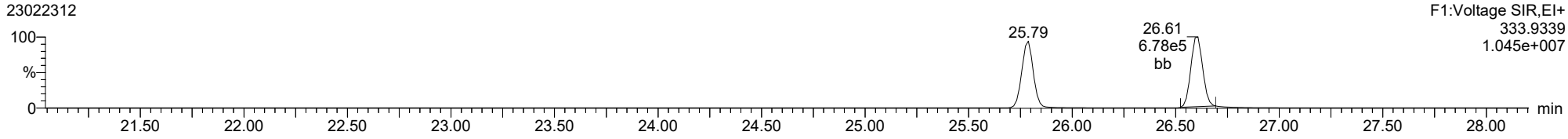
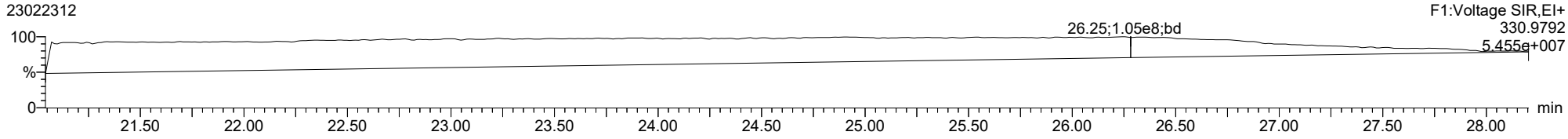


FUNCTION1 PFK



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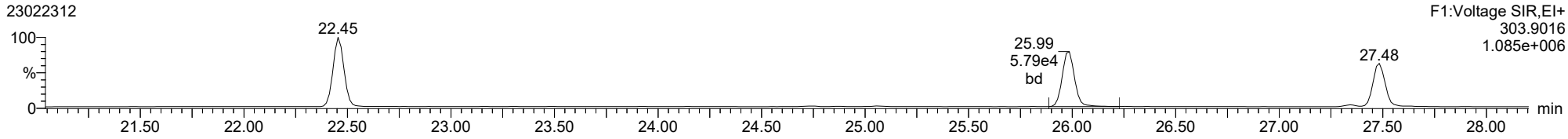
2378-TCDF



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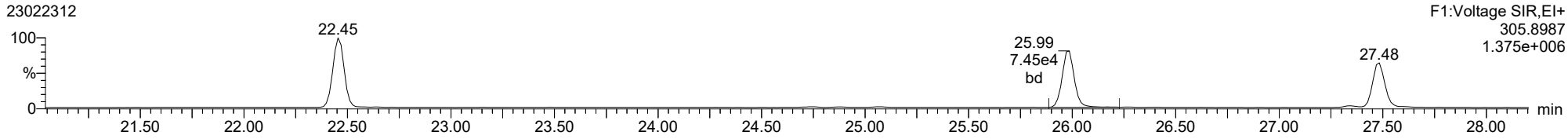

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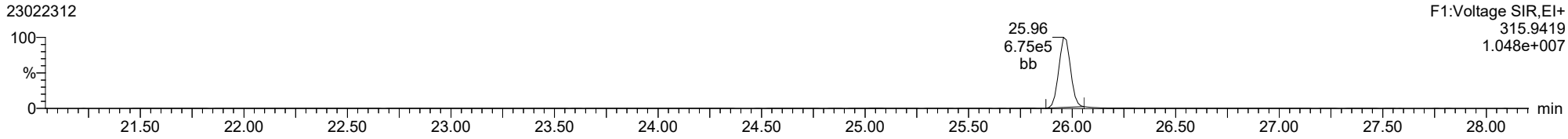

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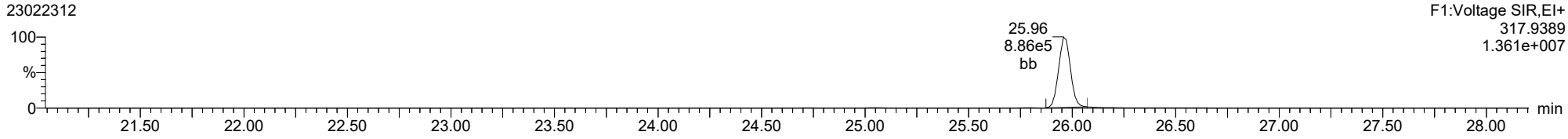

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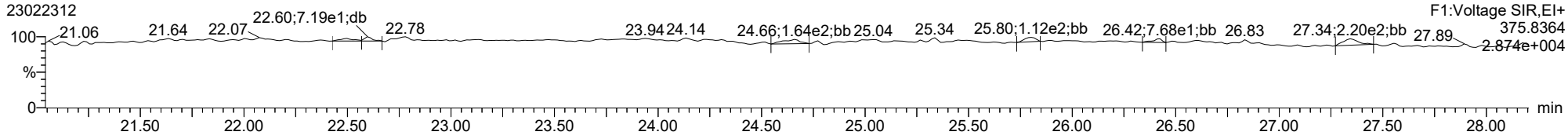

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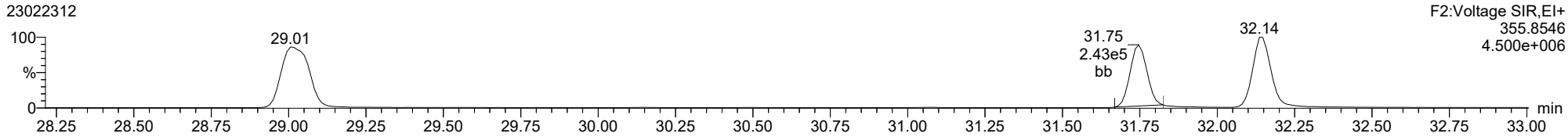
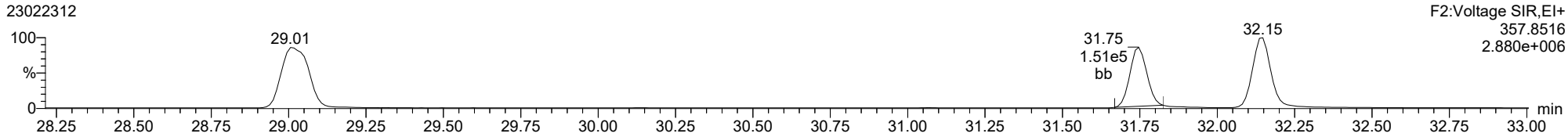
12378-PeCDD



12378-PeCDD



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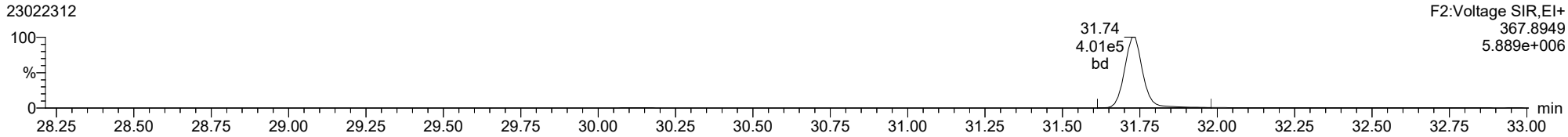

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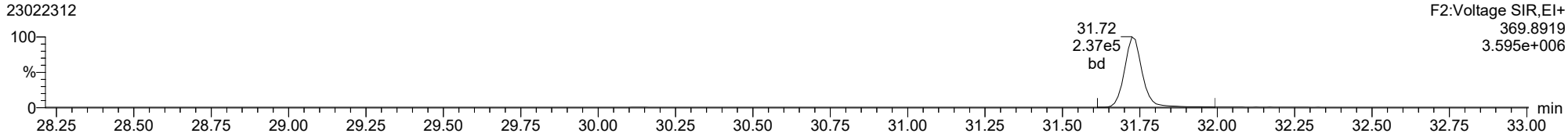
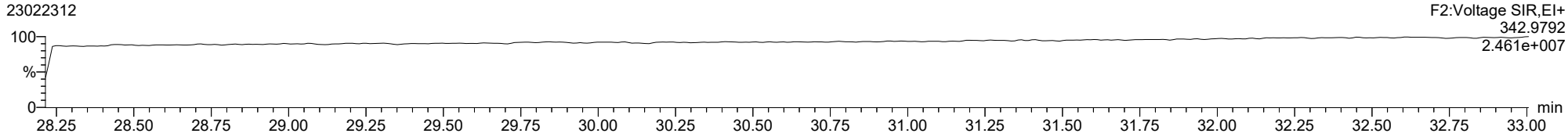


FUNCTION2 PFK



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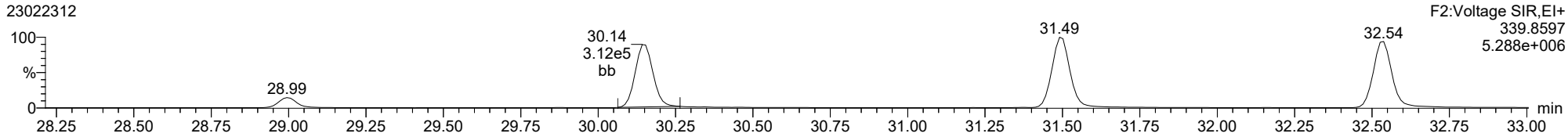
12378-PeCDF



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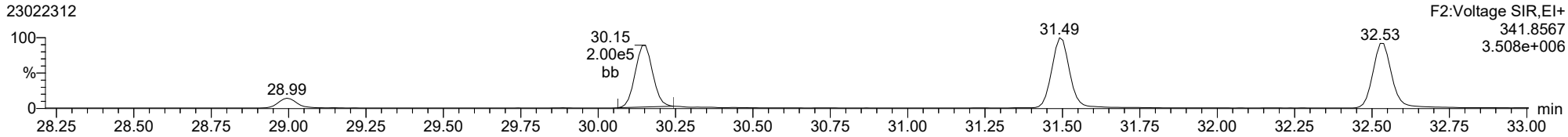

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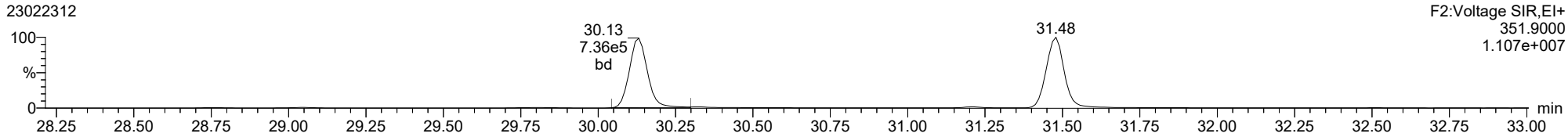

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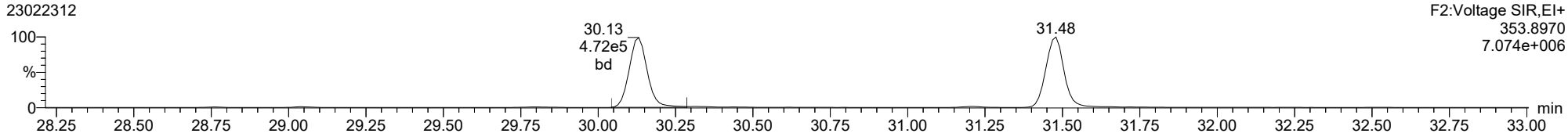

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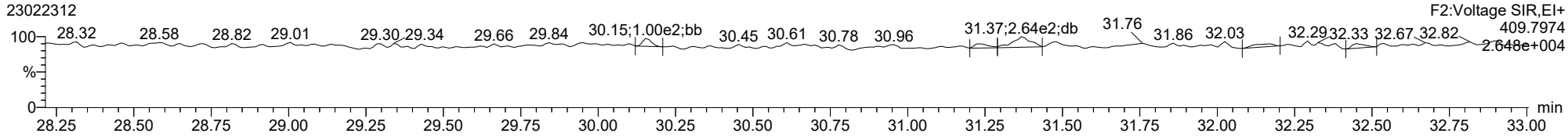

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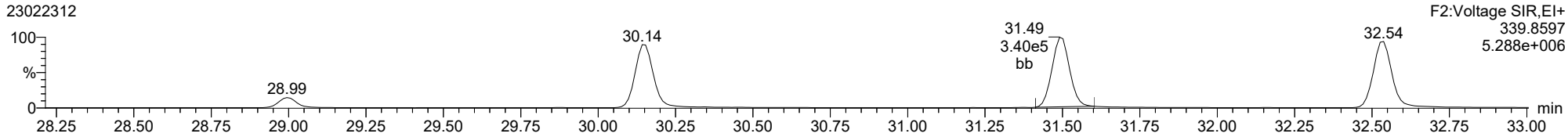
23478-PeCDF



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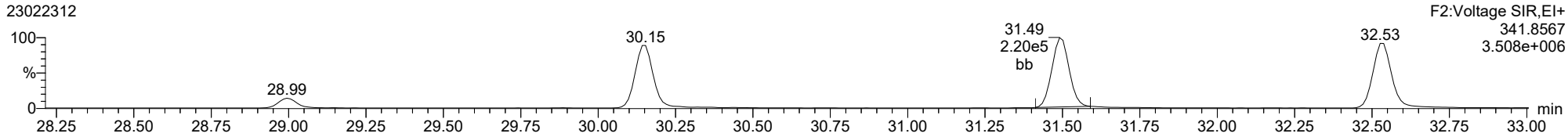

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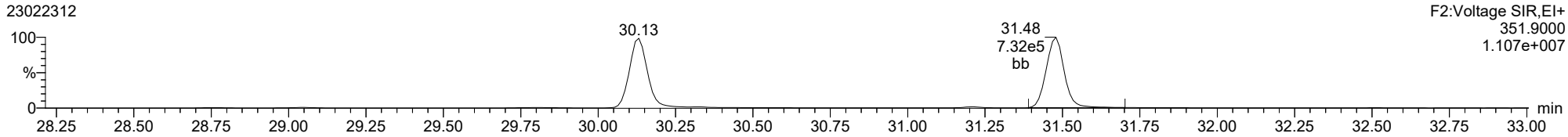

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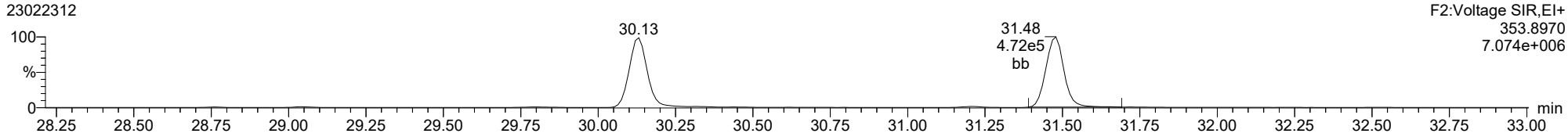

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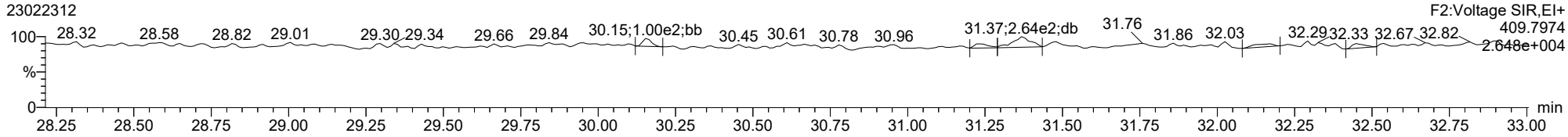

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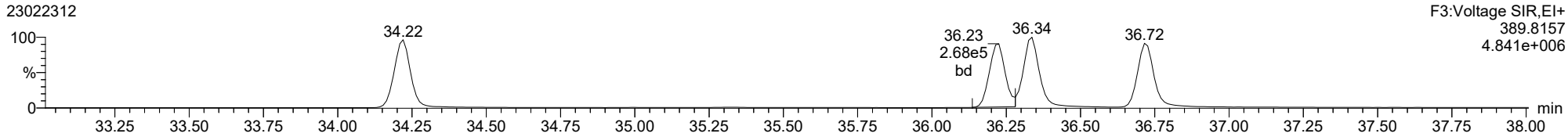

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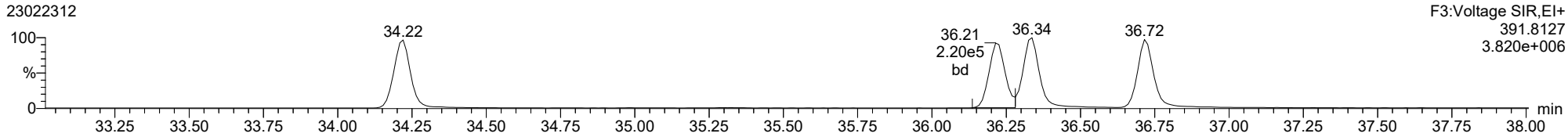

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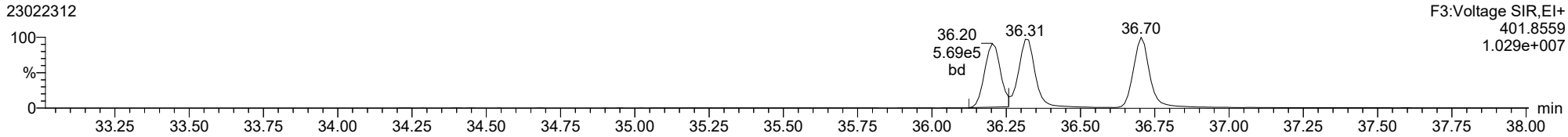

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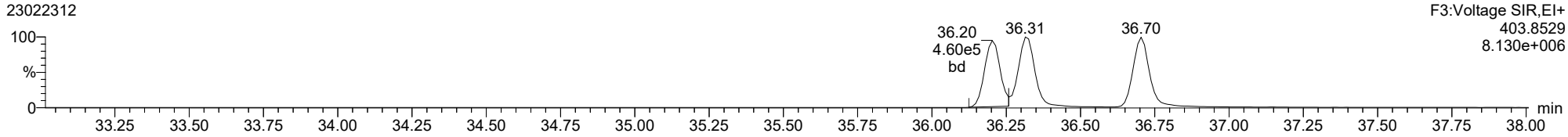

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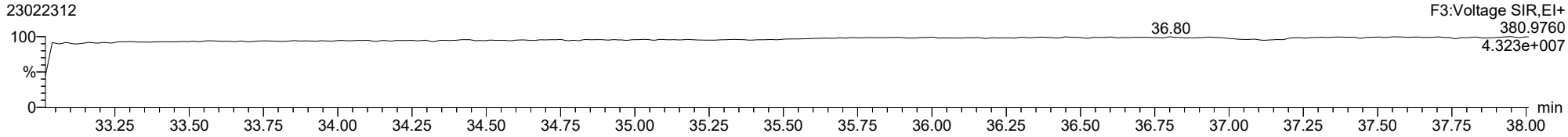

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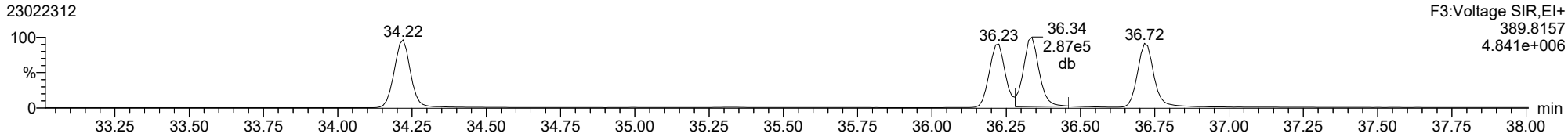

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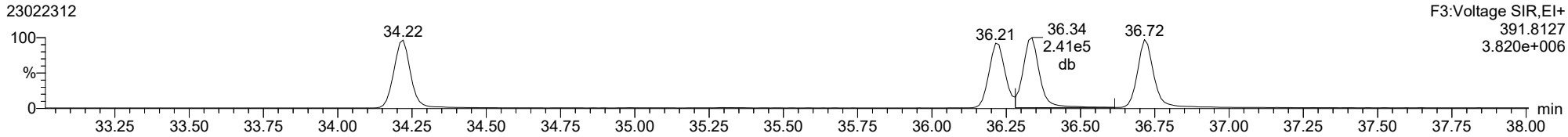

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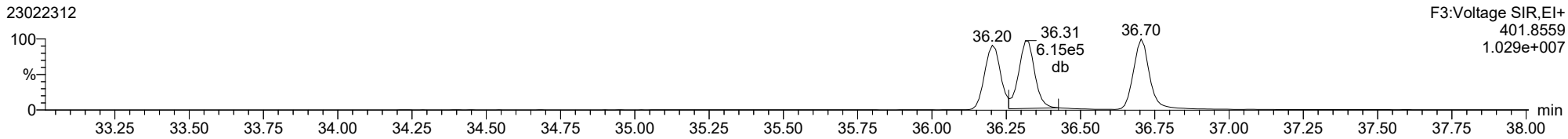

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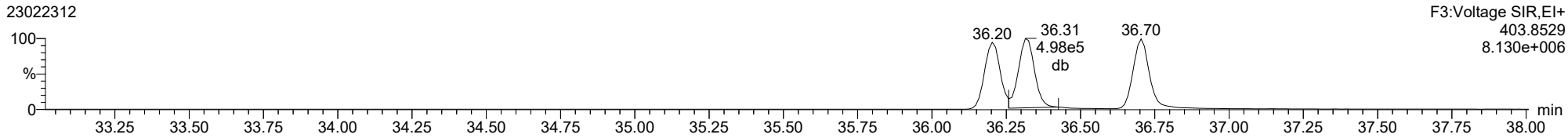

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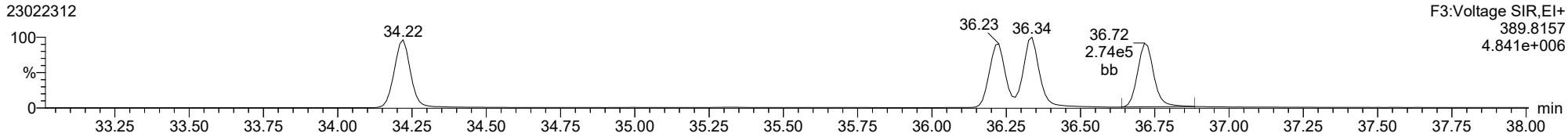

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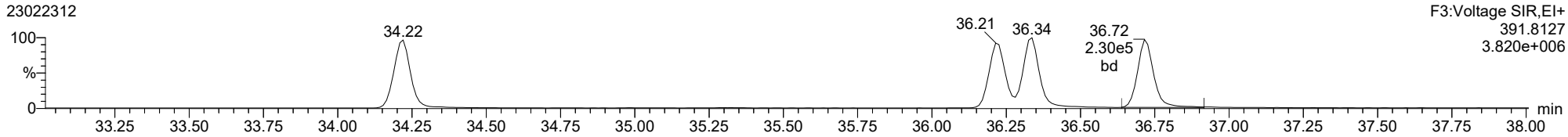

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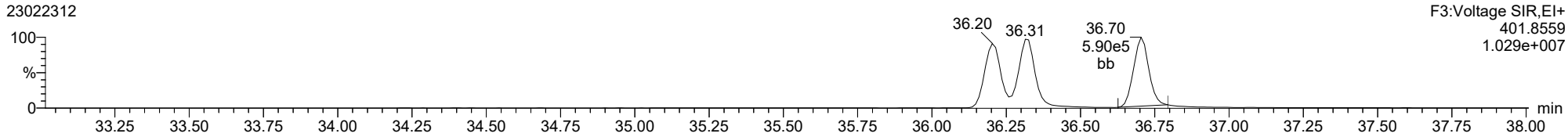

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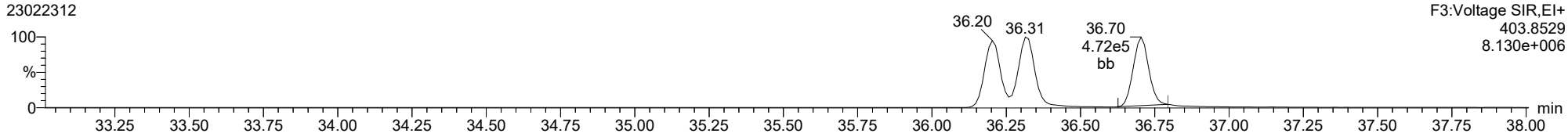

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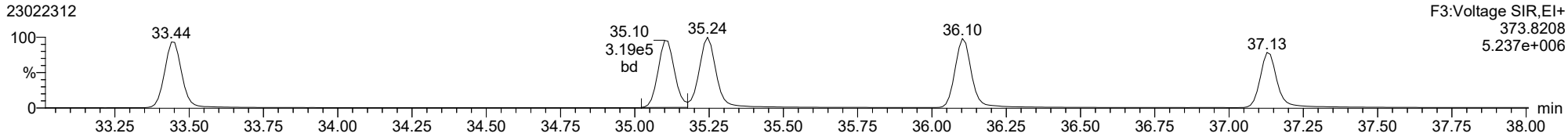

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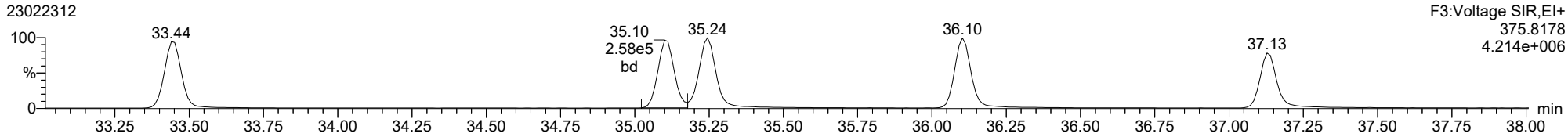

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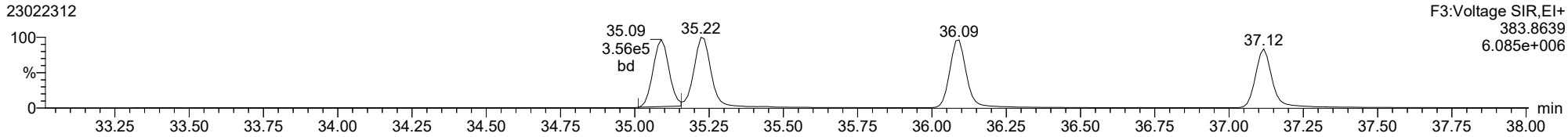

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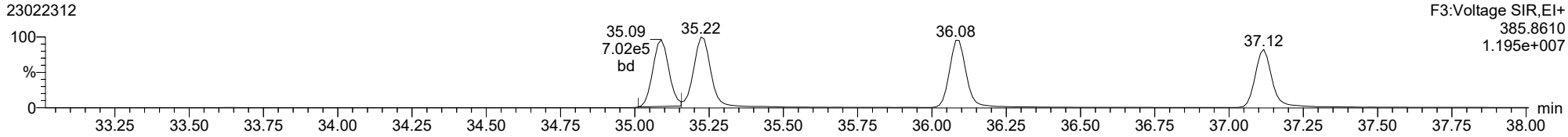

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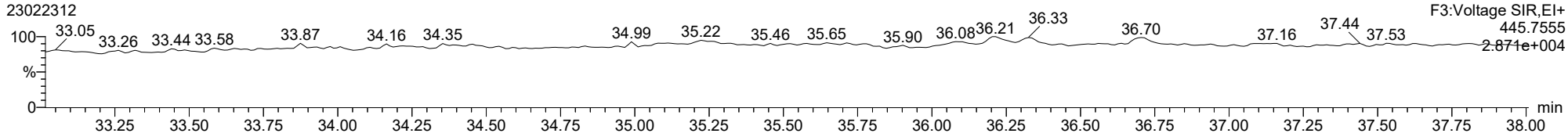

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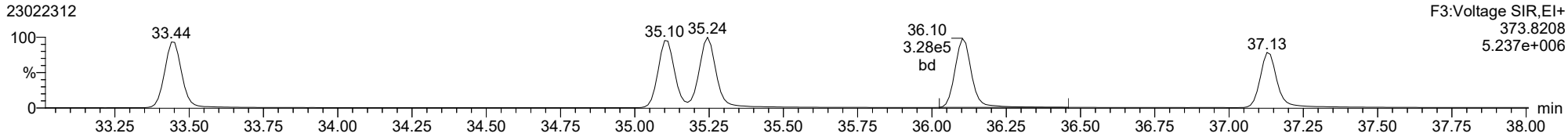

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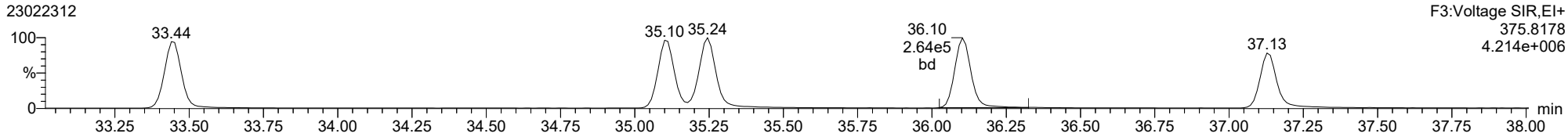

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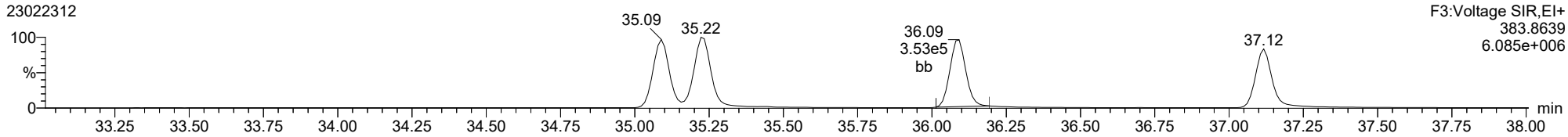

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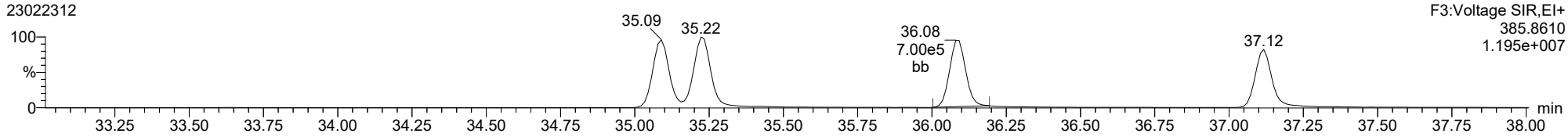

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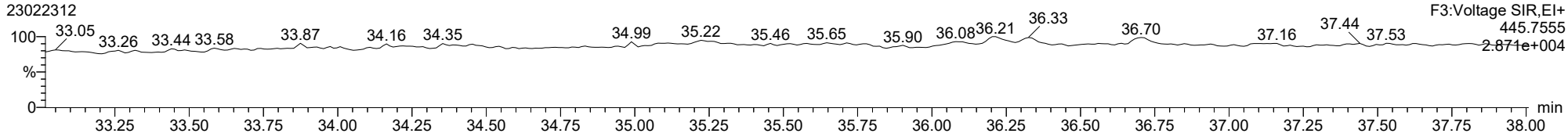

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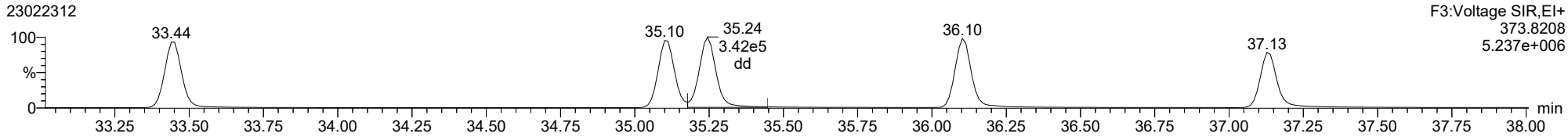

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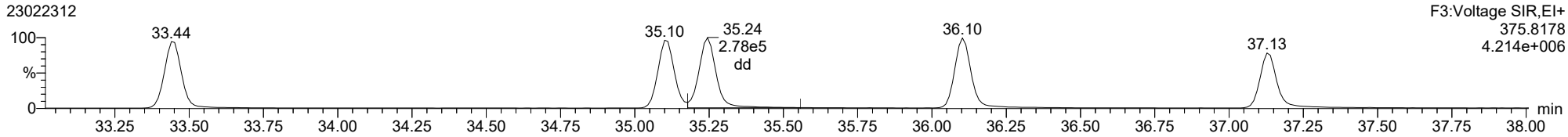

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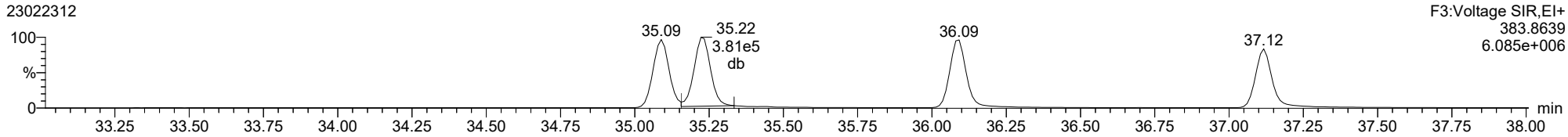

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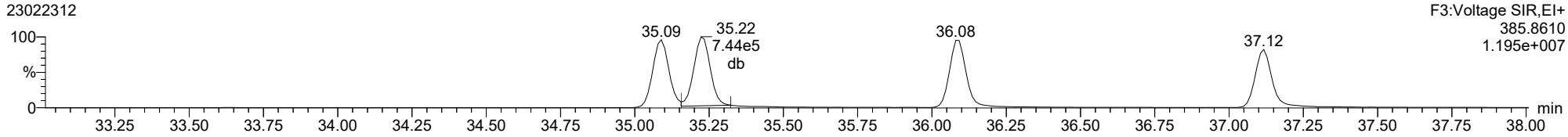

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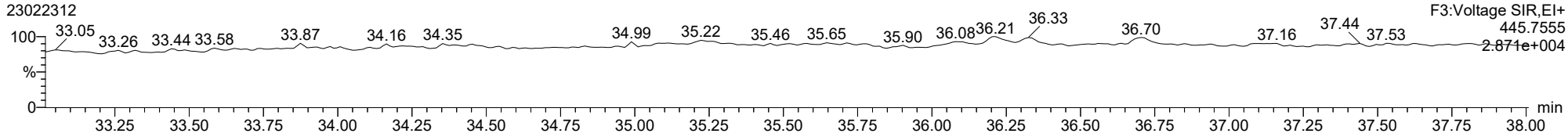

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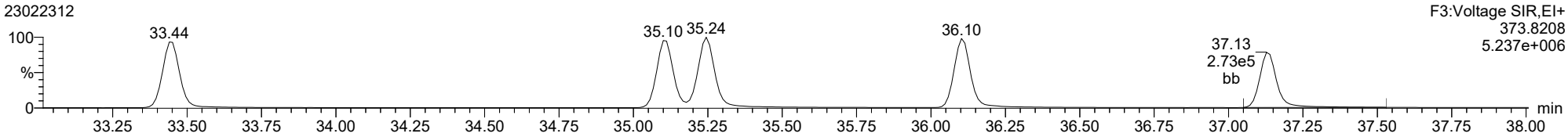

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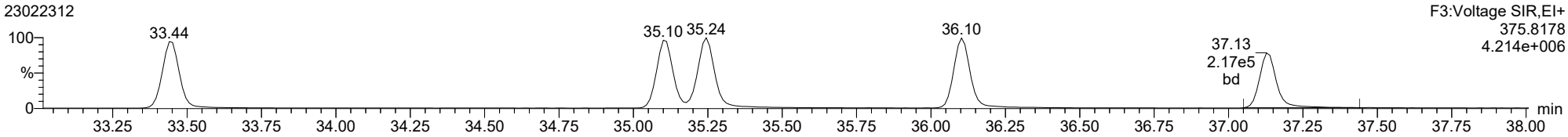

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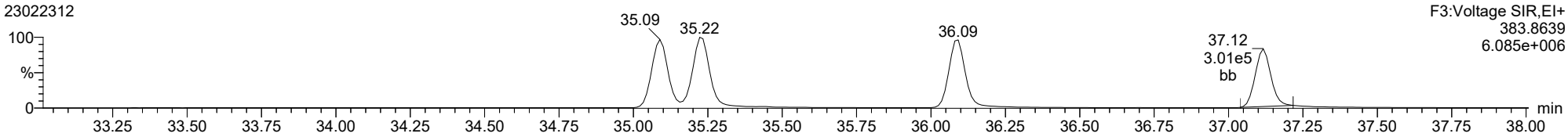

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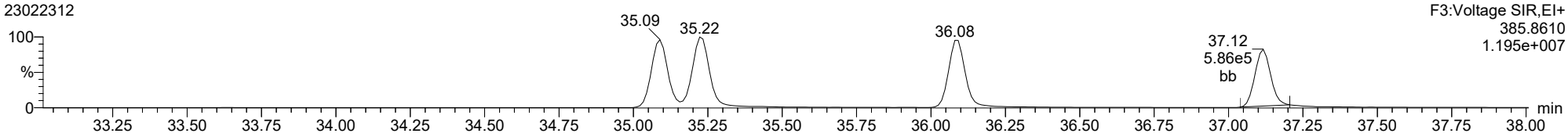

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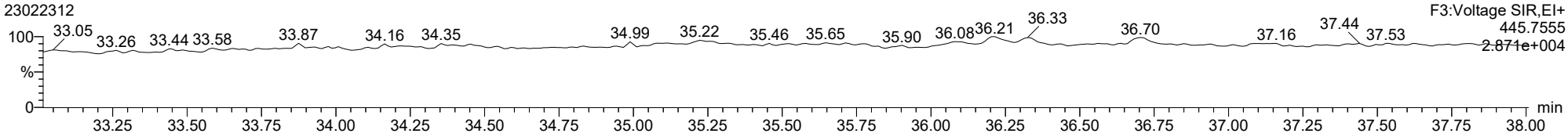

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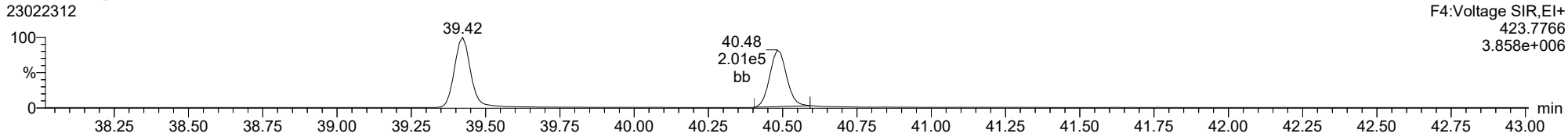
1234678-HpCDD



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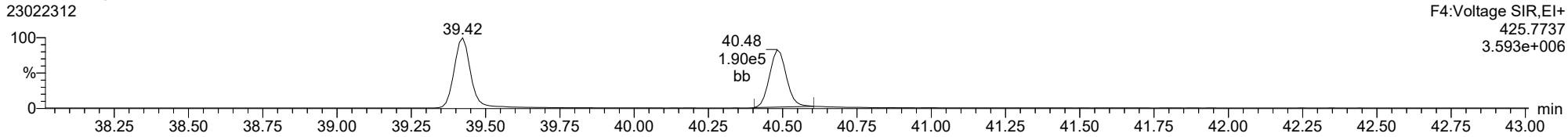

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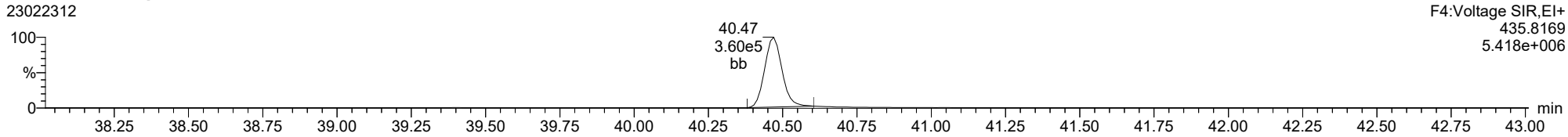

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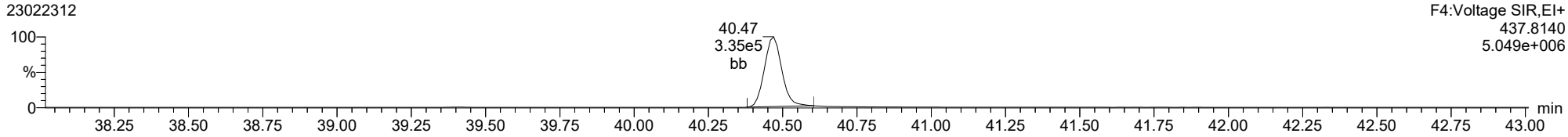

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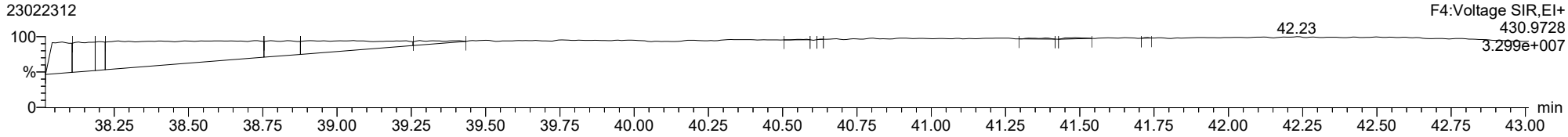

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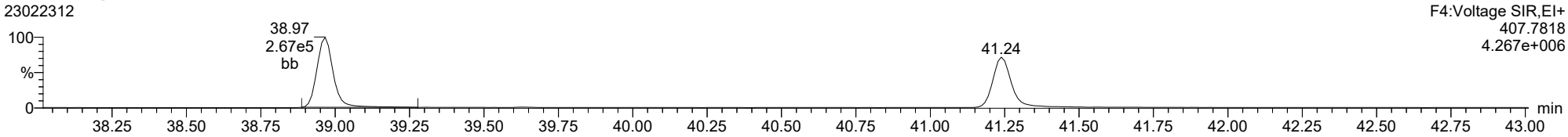

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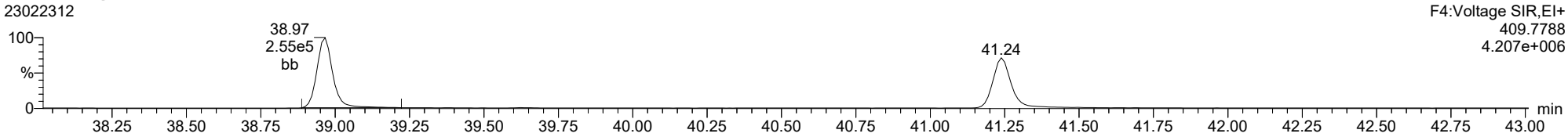

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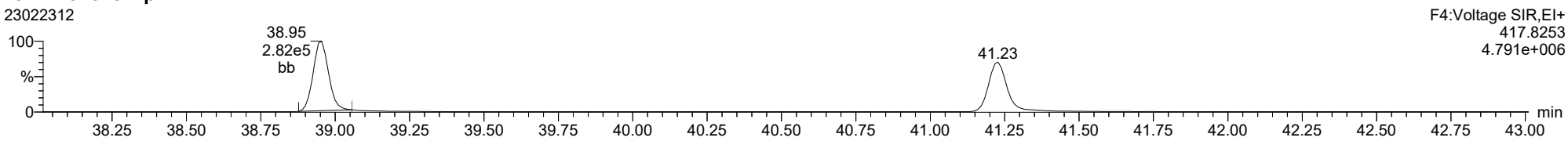

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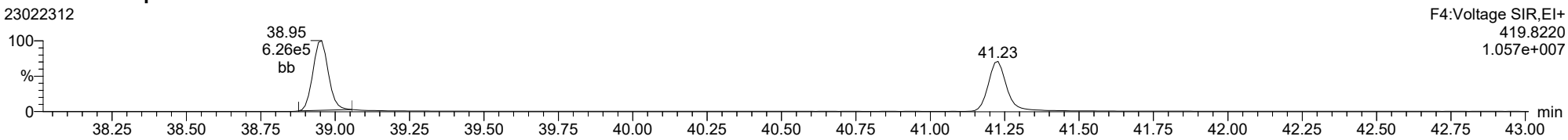

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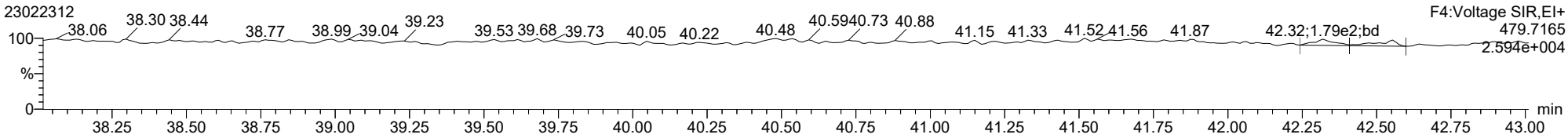

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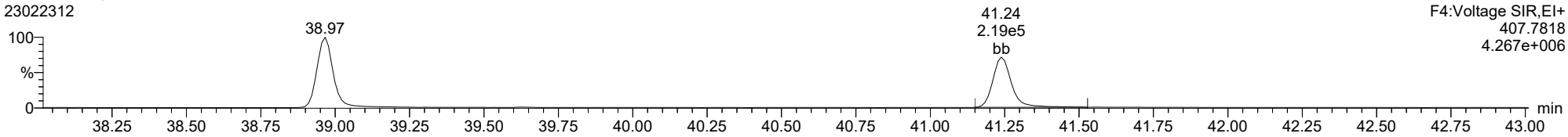

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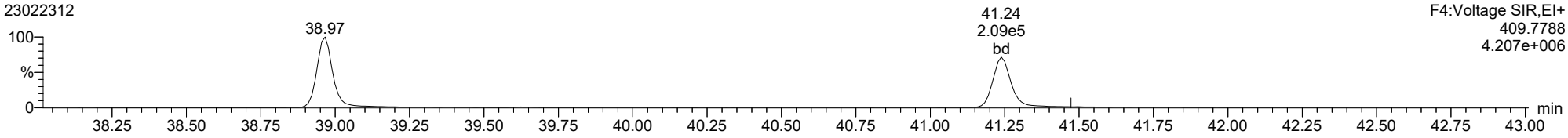

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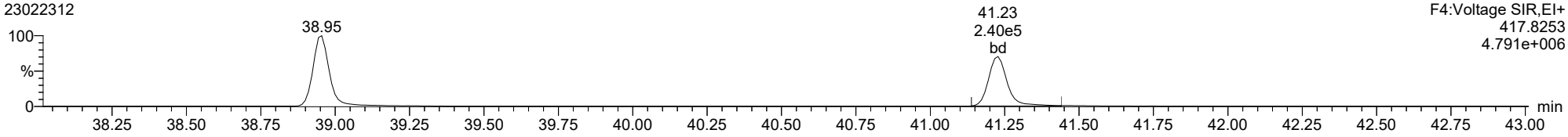

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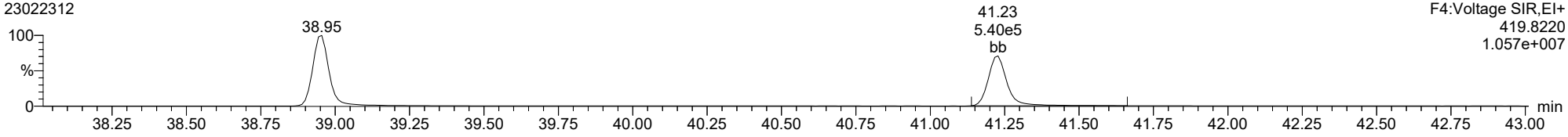
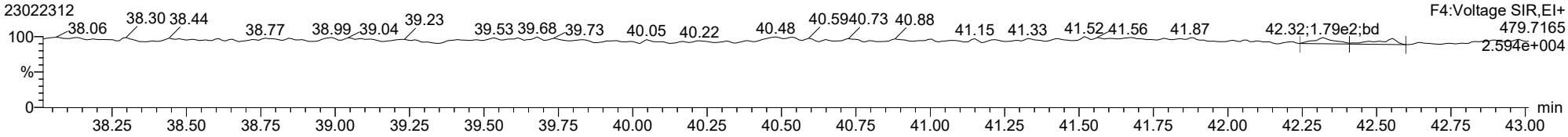


FUNCTION4 NCDPE



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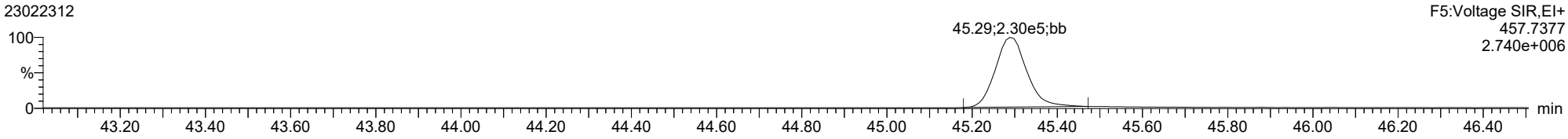

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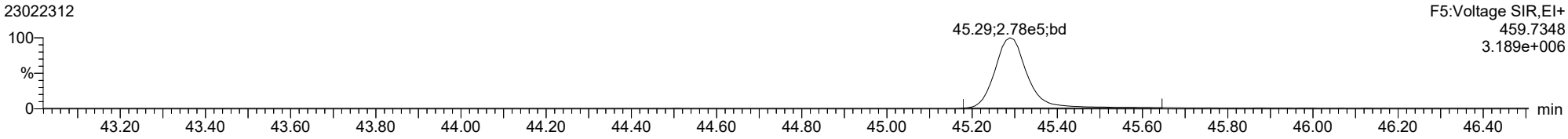

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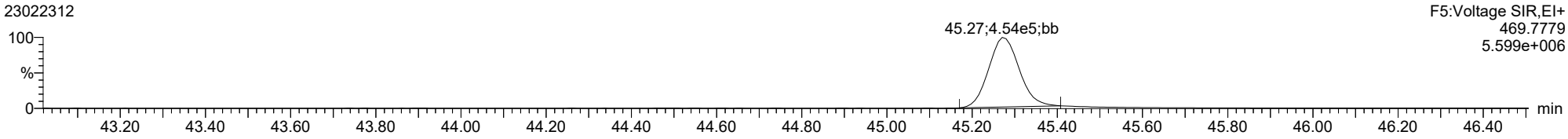

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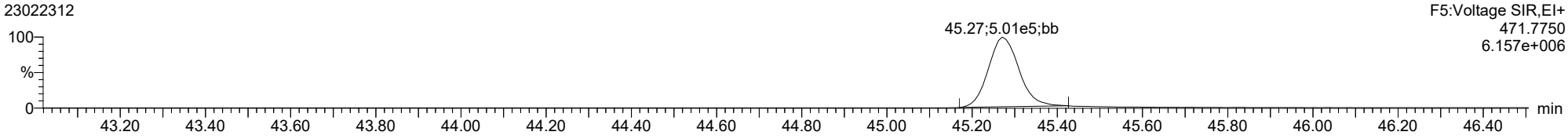

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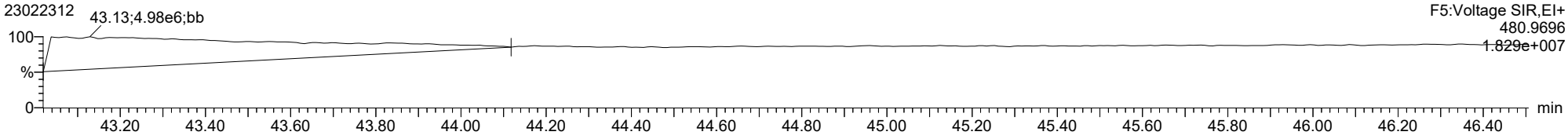

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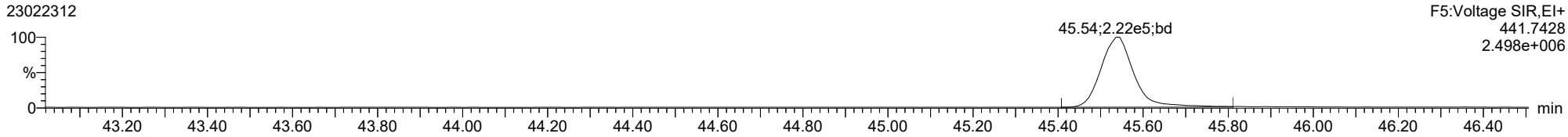

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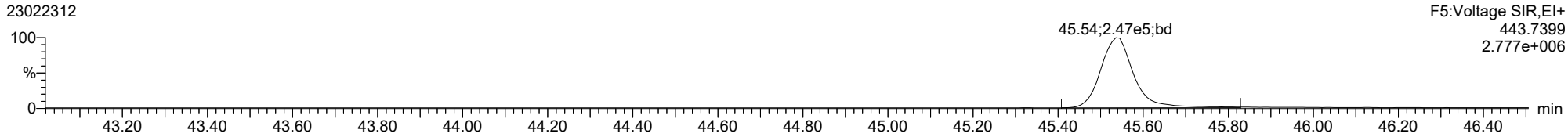
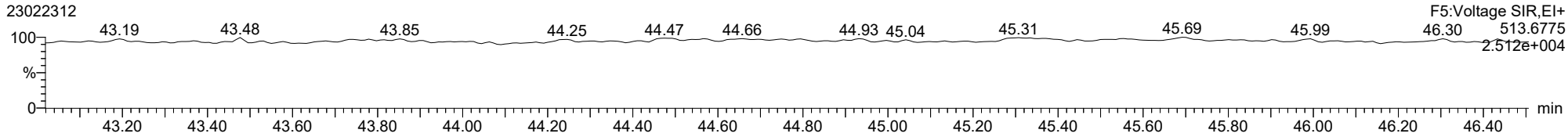


FUNCTION5 DCDPE



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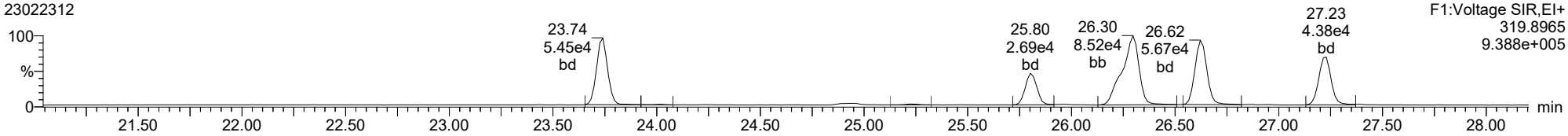
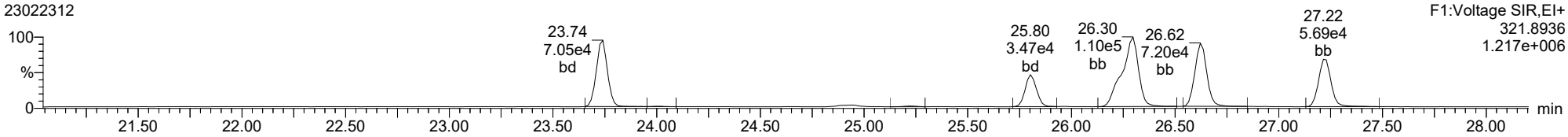
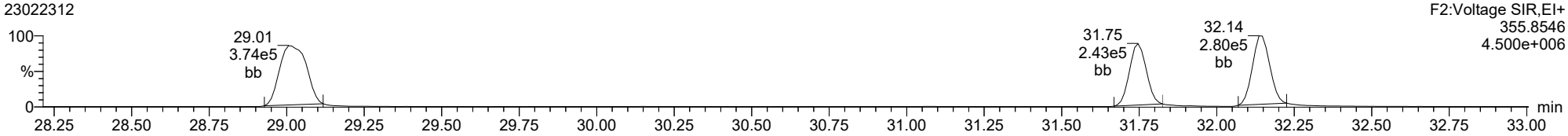


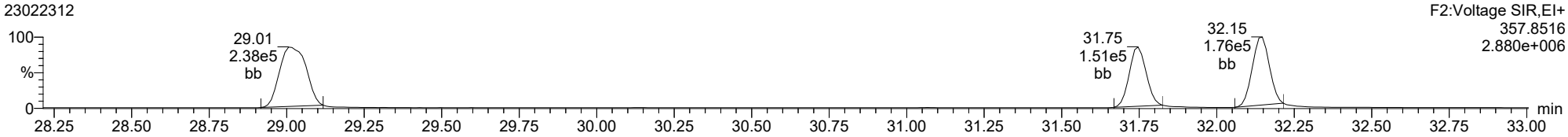
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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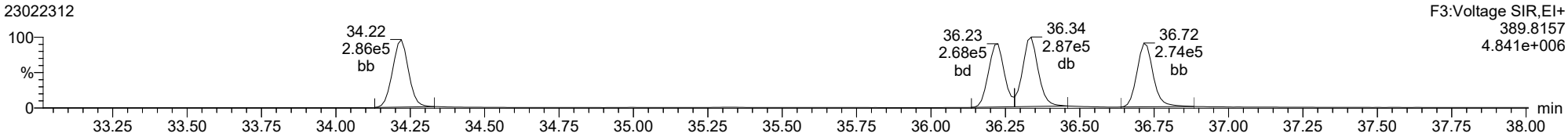

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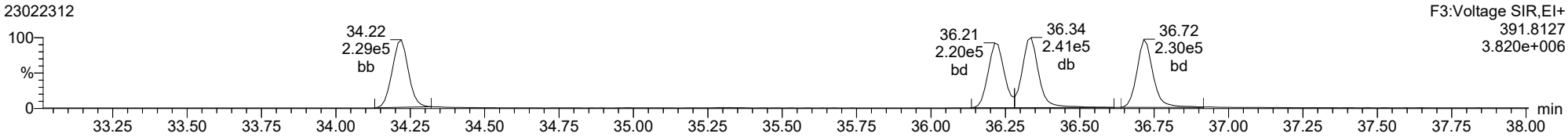

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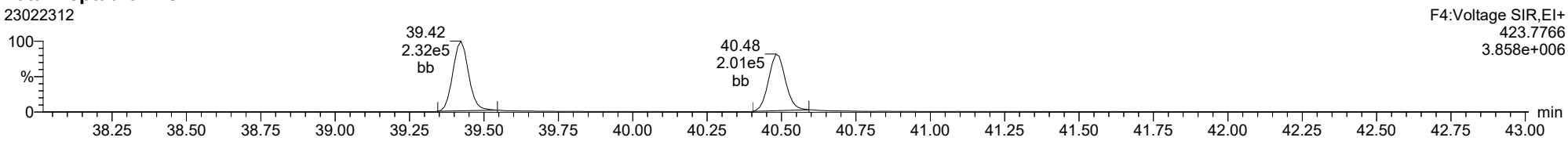

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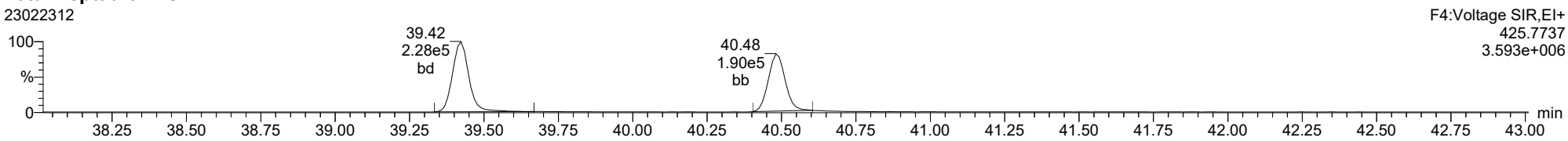

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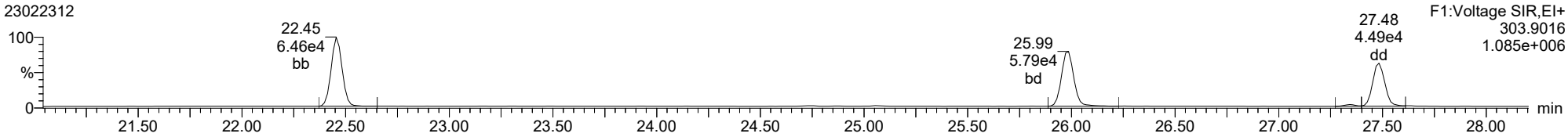

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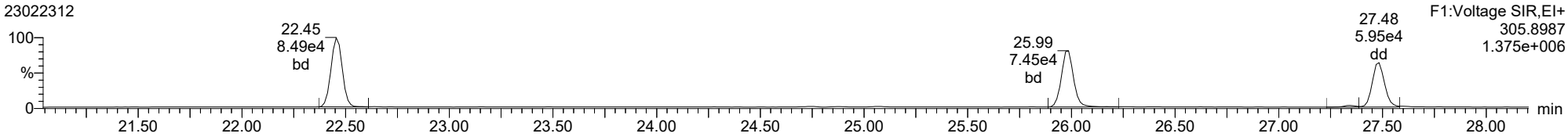

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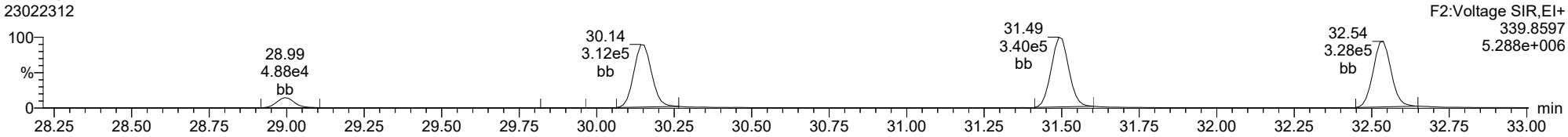

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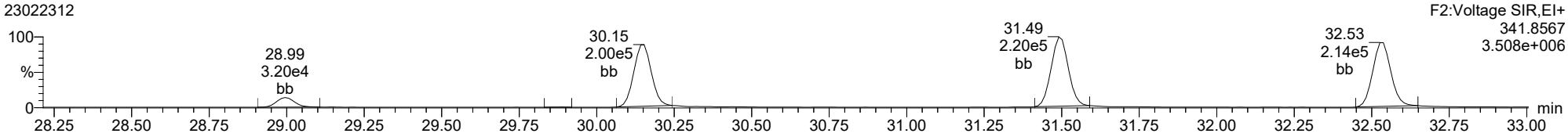

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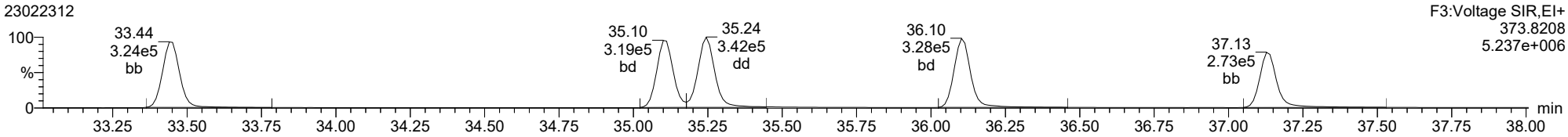

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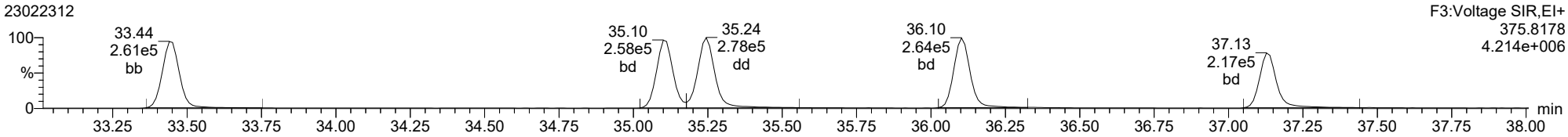

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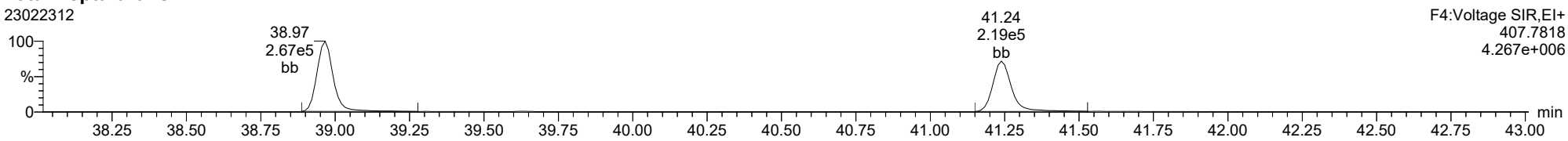

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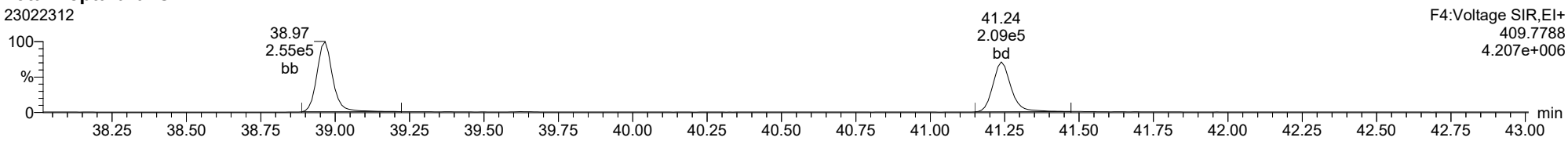

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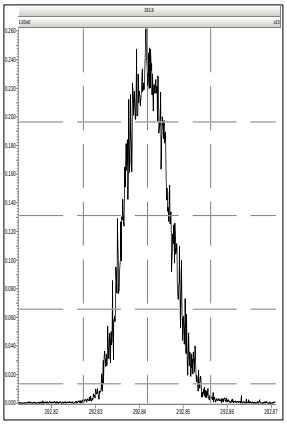

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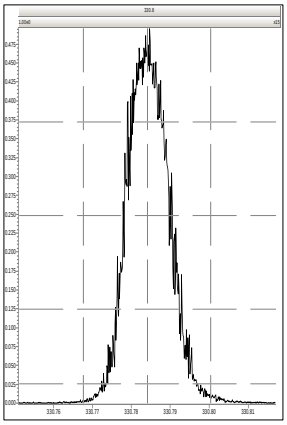

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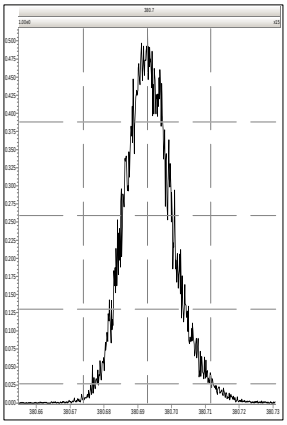

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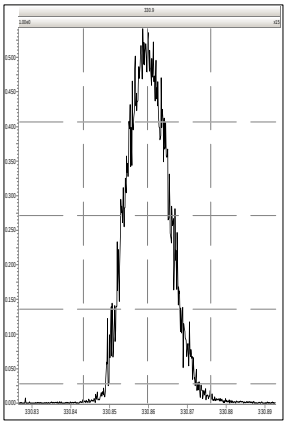

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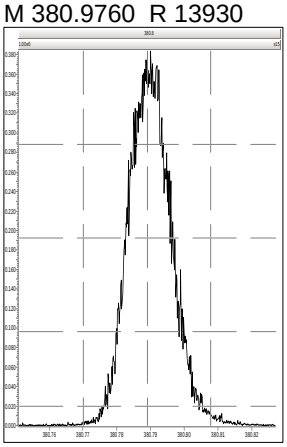

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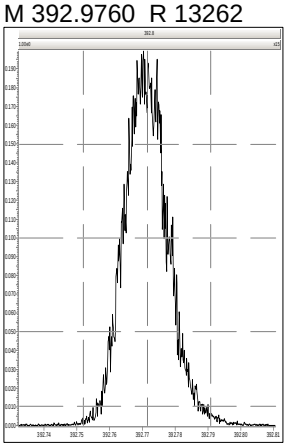

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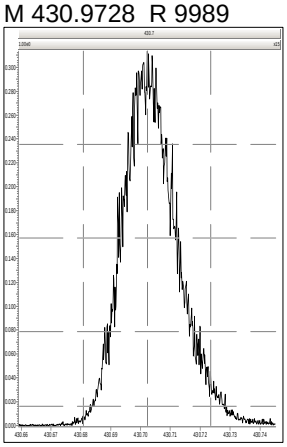

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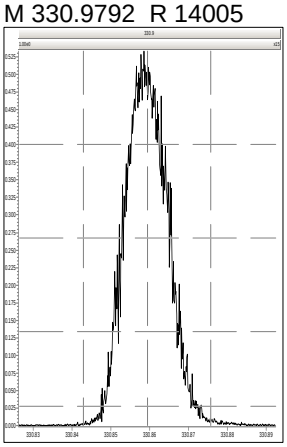

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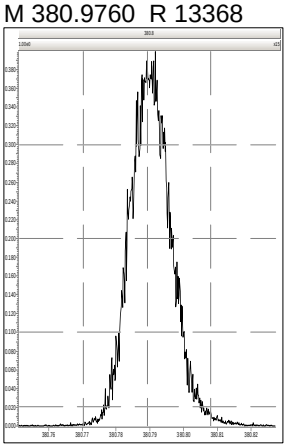

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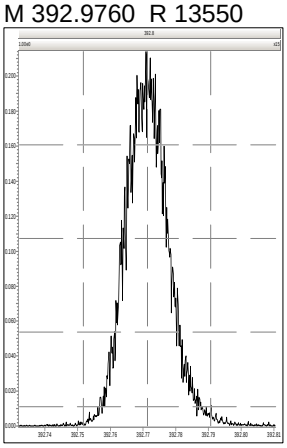

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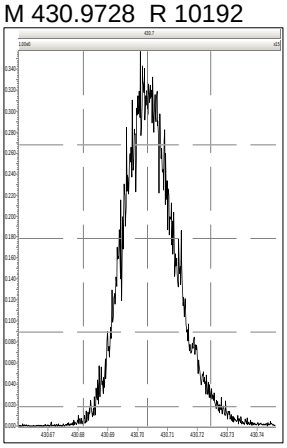

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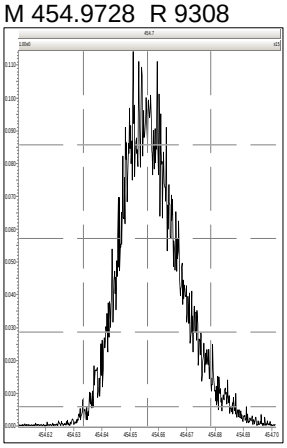

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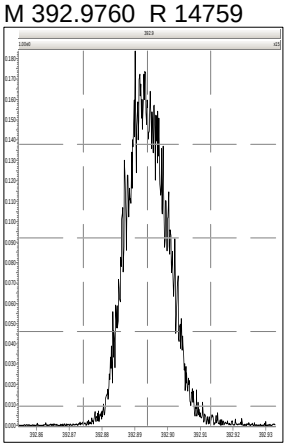

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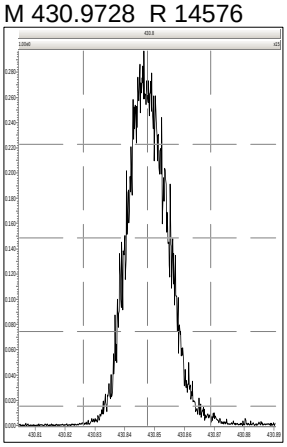

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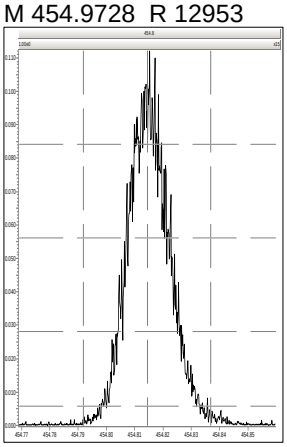

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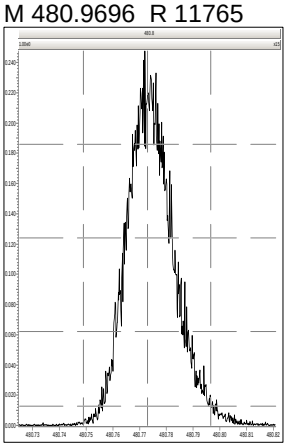
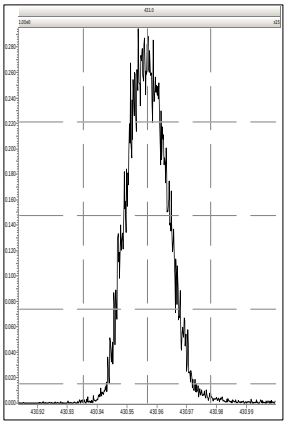
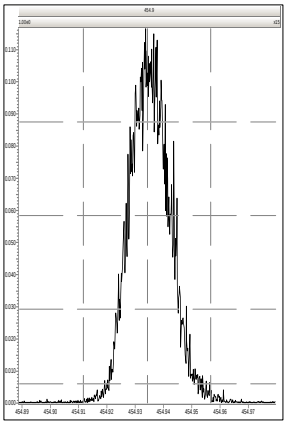


Printed: Thursday, February 23, 2023 20:04:42 Pacific Standard Time

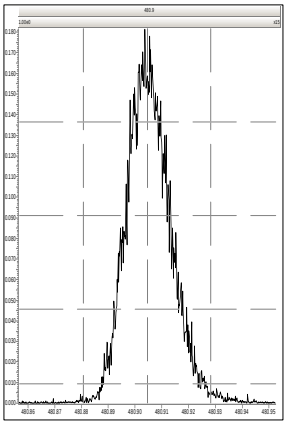
M 430.9728 R 14797



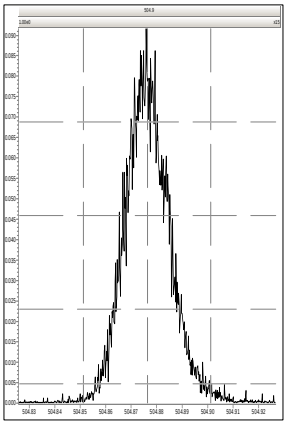
M 454.9728 R 14800



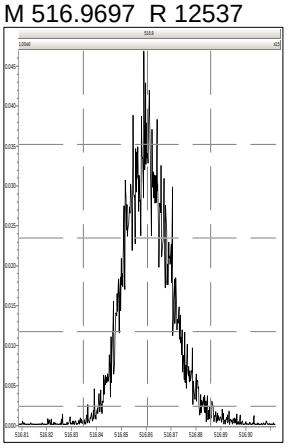
M 480.9696 R 13130

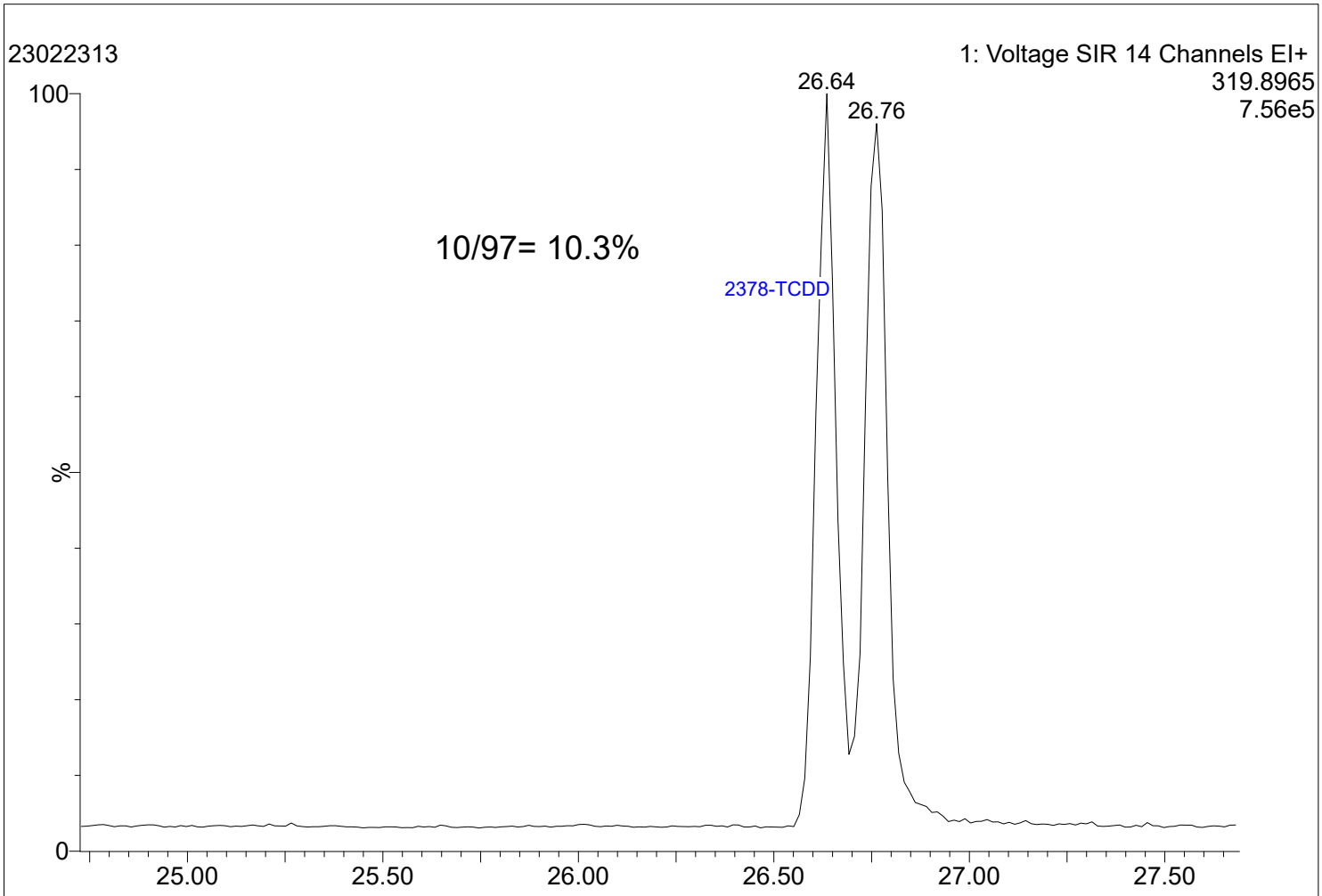


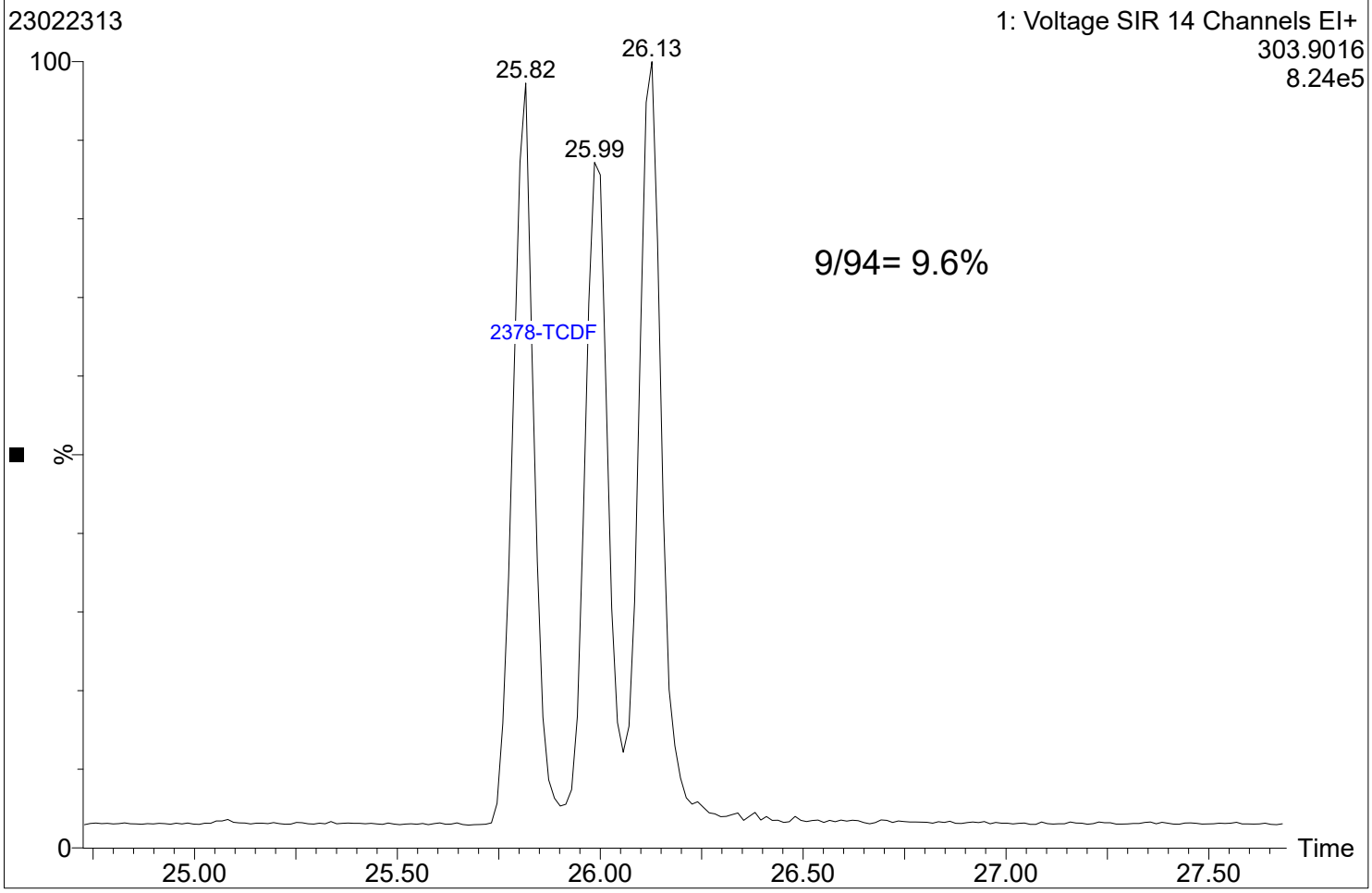
M 504.9696 R 12570



M 516.9697 R 12537




23022313
1: Voltage SIR 14 Channels EI+
319.8965
7.56e5
26.64
26.76
10/97= 10.3%
2378-TCDD
100
%
0
25.00
25.50
26.00
26.50
27.00
27.50


23022313
1: Voltage SIR 14 Channels EI+
303.9016
8.24e5
25.82
26.13
25.99
9/94= 9.6%
2378-TCDF
100
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GB00010
Lab File ID:	23022321A	Calibration Date:	02/01/2023
Sequence:	SLB0345	Injection Date:	02/24/23
Lab Sample ID:	SLB0345-CCV2	Injection Time:	02:43
Sequence Name:	CS3V5		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
2,3,7,8-TCDF	A	10.000	9.24	0.8760604	0.8091039		-7.6	+/-16	
2,3,7,8-TCDD	A	10.000	8.38	1.2363600	1.0358980		-16.2	+/-22	
1,2,3,7,8-PeCDF	A	50.000	50.9	0.8446540	0.8601509		1.8	+/-18	
2,3,4,7,8-PeCDF	A	50.000	51.5	0.9111780	0.9380720		3.0	+/-18	
1,2,3,7,8-PeCDD	A	50.000	62.0	1.0866850	1.3467870		23.9	+/-22	
1,2,3,4,7,8-HxCDF	A	50.000	45.1	1.1816860	1.0653080		-9.8	+/-10	
1,2,3,6,7,8-HxCDF	A	50.000	42.9	1.2480480	1.0698460		-14.3	+/-12	*
2,3,4,6,7,8-HxCDF	A	50.000	44.3	1.2288500	1.0888570		-11.4	+/-12	
1,2,3,7,8,9-HxCDF	A	50.000	45.5	1.1865370	1.0789550		-9.1	+/-10	
1,2,3,4,7,8-HxCDD	A	50.000	47.0	0.9869672	0.9271368		-6.1	+/-22	
1,2,3,6,7,8-HxCDD	A	50.000	48.0	1.0207220	0.9797215		-4.0	+/-22	
1,2,3,7,8,9-HxCDD	A	50.000	49.0	0.9854780	0.9649724		-2.1	+/-18	
1,2,3,4,6,7,8-HpCDF	A	50.000	47.2	1.2041190	1.1366090		-5.6	+/-10	
1,2,3,4,7,8,9-HpCDF	A	50.000	45.6	1.1653050	1.0625080		-8.8	+/-14	
1,2,3,4,6,7,8-HpCDD	A	50.000	48.8	1.2525690	1.2233040		-2.3	+/-14	
OCDF	A	100.00	71.3	1.1862640	0.8452952		-28.7	+/-37	
OCDD	A	100.00	125	1.1026670	1.3780580		25.0	+/-21	
13C12-2,3,7,8-TCDF	A	100.00	81.2	1.7680590	1.4358260		-18.8	+/-29	
13C12-2,3,7,8-TCDD	A	100.00	110	1.1029470	1.2154117		10.2	+/-18	
13C12-1,2,3,7,8-PeCDF	A	100.00	73.6	1.5271250	1.1245532		-26.4	+/-24	*
13C12-2,3,4,7,8-PeCDF	A	100.00	73.8	1.4662840	1.0819503		-26.2	+/-23	*
13C12-1,2,3,7,8-PeCDD	A	100.00	57.3	0.9141518	0.5234609		-42.7	+/-38	*
13C12-1,2,3,4,7,8-HxCDF	A	100.00	97.6	1.0536610	1.0281616		-2.4	+/-24	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	99.0	1.0799530	1.0693713		-1.0	+/-30	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	97.8	1.0143260	0.9923079		-2.2	+/-27	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	97.7	0.9279333	0.9066590		-2.3	+/-26	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	104	0.9329336	0.9665548		3.6	+/-15	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	106	0.9646272	1.0196339		5.7	+/-15	
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	89.3	1.0360890	0.9253654		-10.7	+/-22	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	91.7	0.9049372	0.8298028		-8.3	+/-23	
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	93.5	0.7819773	0.7314846		-6.5	+/-28	
13C12-OCDD	A	200.00	146	0.7882343	0.5739002		-27.2	+/-52	
37Cl4-2,3,7,8-TCDD	A	10.000	9.43	1.2334500	1.1629976		-5.7		

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:13:02 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3V5, Name: 23022321, Date: 24-Feb-2023, Time: 02:43:06, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.972	1.000	5.957e4	8.413e4	0.876	0.708	0.770	792	1020	9.44e5	1.34e6	1192.5	1311.2	NO	bb	bb	9.236
12378-PeCDF	30.142	1.001	3.621e5	2.361e5	0.845	1.534	1.550	1751	1549	5.70e6	3.69e6	3257.3	2382.0	NO	bb	bb	50.917
23478-PeCDF	31.490	1.001	3.785e5	2.492e5	0.911	1.518	1.550	1751	1549	5.86e6	3.86e6	3348.2	2495.4	NO	bb	bb	51.476
123478-HxCDF	35.100	1.000	3.705e5	3.032e5	1.182	1.222	1.240	2317	2033	5.89e6	4.83e6	2544.2	2373.6	NO	MM	MM	45.076
234678-HxCDF	36.103	1.001	3.684e5	2.962e5	1.229	1.244	1.240	2317	2033	5.88e6	4.74e6	2536.3	2333.9	NO	bd	bd	44.304
123678-HxCDF	35.234	1.000	3.859e5	3.178e5	1.248	1.214	1.240	2317	2033	5.84e6	4.75e6	2520.3	2334.3	NO	dd	dd	42.861
123789-HxCDF	37.128	1.000	3.339e5	2.678e5	1.187	1.247	1.240	2317	2033	5.15e6	4.15e6	2223.4	2041.4	NO	MM	MM	45.467
1234678-HpCDF	38.966	1.000	3.295e5	3.174e5	1.204	1.038	1.050	1349	1718	5.37e6	5.19e6	3977.8	3022.8	NO	bd	bd	47.197
1234789-HpCDF	41.239	1.000	2.735e5	2.688e5	1.165	1.017	1.050	1349	1718	3.79e6	3.68e6	2808.7	2143.5	NO	bd	bd	45.589
OCDF	45.536	1.006	2.815e5	3.153e5	1.186	0.893	0.890	1296	1410	3.15e6	3.48e6	2430.3	2468.0	NO	bd	bd	71.257
2378-TCDD	26.622	1.001	6.857e4	8.717e4	1.236	0.787	0.770	733	767	1.04e6	1.32e6	1418.5	1720.9	NO	bb	bb	8.379
12378-PeCDD	31.747	1.001	2.681e5	1.679e5	1.087	1.597	1.550	2368	1264	4.22e6	2.70e6	1781.6	2135.1	NO	bb	bb	61.968
123478-HxCDD	36.214	1.000	3.071e5	2.442e5	0.987	1.258	1.240	1209	2018	5.15e6	4.07e6	4259.2	2016.6	NO	bd	bd	46.969
123678-HxCDD	36.337	1.001	3.473e5	2.671e5	1.021	1.300	1.240	1209	2018	5.44e6	4.38e6	4498.6	2171.9	NO	db	db	47.992
123789-HxCDD	36.715	1.011	3.270e5	2.625e5	0.985	1.246	1.240	1209	2018	5.38e6	4.29e6	4448.5	2128.3	NO	bb	bb	48.960
1234678-HpCDD	40.481	1.000	2.810e5	2.694e5	1.253	1.043	1.050	2032	1965	4.41e6	4.17e6	2172.9	2121.2	NO	bb	bb	48.832
OCDD	45.289	1.000	4.598e5	5.132e5	1.103	0.896	0.890	1629	2365	5.33e6	5.99e6	3269.6	2532.5	NO	bd	bb	124.975
13C-2378-TCDF	25.958	1.007	7.641e5	1.012e6	1.768	0.755	0.770	1186	1005	1.24e7	1.63e7	10456.0	16171.9	NO	bb	bb	81.209
13C-12378-PeCDF	30.120	1.169	8.432e5	5.478e5	1.527	1.539	1.550	2108	2750	1.28e7	8.23e6	6054.4	2991.4	NO	bd	bd	73.639
13C-23478-PeCDF	31.468	1.221	8.177e5	5.206e5	1.466	1.571	1.550	2108	2750	1.25e7	8.00e6	5927.6	2909.6	NO	bb	bb	73.789
13C-123478-HxCDF	35.089	0.956	4.239e5	8.410e5	1.054	0.504	0.510	1840	2172	6.66e6	1.32e7	3617.0	6084.1	NO	bd	bd	97.580
13C-123678-HxCDF	35.223	0.960	4.428e5	8.728e5	1.080	0.507	0.510	1840	2172	7.23e6	1.43e7	3931.5	6603.2	NO	db	db	99.020
13C-234678-HxCDF	36.081	0.983	4.146e5	8.061e5	1.014	0.514	0.510	1840	2172	6.71e6	1.30e7	3648.5	5989.1	NO	bb	bb	97.829
13C-123789-HxCDF	37.117	1.011	3.708e5	7.446e5	0.928	0.498	0.510	1840	2172	6.08e6	1.21e7	3302.4	5547.1	NO	bb	bb	97.707
13C-1234678-HpCDF	38.955	1.061	3.538e5	7.846e5	1.036	0.451	0.440	1640	2190	5.90e6	1.30e7	3599.3	5945.1	NO	bb	bb	89.313
13C-1234789-HpCDF	41.216	1.123	3.164e5	7.044e5	0.905	0.449	0.440	1640	2190	4.38e6	9.76e6	2669.7	4455.2	NO	bd	bd	91.697
13C-1234-TCDD	25.774	0.000	5.396e5	6.973e5	1.000	0.774	0.770	1741	946	8.89e6	1.15e7	5107.8	12119.9	NO	bb	bb	100.000
13C-2378-TCDD	26.594	1.032	6.551e5	8.483e5	1.103	0.772	0.770	1741	946	1.04e7	1.34e7	5948.8	14191.3	NO	bb	bb	110.197
13C-12378-PeCDD	31.724	1.231	4.031e5	2.444e5	0.914	1.649	1.550	791	846	5.74e6	3.54e6	7254.8	4180.6	NO	bb	bb	57.262
13C-123478-HxCDD	36.203	0.986	6.597e5	5.294e5	0.933	1.246	1.240	2290	1746	1.08e7	8.69e6	4705.7	4979.5	NO	bd	bd	103.604
13C-123678-HxCDD	36.314	0.989	6.892e5	5.652e5	0.965	1.219	1.240	2290	1746	1.15e7	9.22e6	5022.4	5282.2	NO	db	db	105.702
13C-1234678-HpCDD	40.470	1.103	4.680e5	4.318e5	0.782	1.084	1.050	1509	1406	7.06e6	6.47e6	4680.2	4603.1	NO	bb	bb	93.543
13C-OCDD	45.271	1.233	6.752e5	7.369e5	0.788	0.916	0.890	1570	1174	8.12e6	8.87e6	5172.5	7553.4	NO	bb	bb	145.617
13C-123789-HxCDD	36.704	0.000	6.841e5	5.461e5	1.000	1.253	1.240	2290	1746	1.15e7	9.24e6	5035.7	5294.5	NO	bb	bb	100.000
37CL-2378-TCDD	26.622	1.033	1.439e5		1.233			1433		2.22e6		1549.3			bb		9.429

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:13:02 Pacific Standard Time

ID: CS3V5, Name: 23022321, Date: 24-Feb-2023, Time: 02:43:06, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.455	0.865	6.529e4	8.606e4	1.064	0.759	0.770	792	1020	1.10e6	1.41e6	1389.2	1381.7	NO	bb	bb	8.005
1289-TCDF	27.469	1.058	5.846e4	7.730e4	0.858	0.756	0.770	792	1020	8.40e5	1.11e6	1060.4	1090.5	NO	db	dd	8.913
13468-PECDF	27.328	0.907	6.207e5	4.139e5	1.013	1.500	1.550	743	931	9.98e6	6.64e6	13422.4	7127.5	NO	bb	bb	73.426
12389-PECDF	32.527	1.080	3.688e5	2.395e5	0.844	1.540	1.550	1751	1549	5.54e6	3.58e6	3163.9	2313.0	NO	bb	bb	51.827
123468-HXCDF	33.440	0.953	3.518e5	2.840e5	1.197	1.239	1.240	2317	2033	5.51e6	4.44e6	2377.8	2185.8	NO	bd	bd	41.986
1368-TCDD	23.726	0.892	5.272e4	6.918e4	1.084	0.762	0.770	733	767	8.51e5	1.12e6	1161.1	1462.0	NO	bb	bd	7.477
1289-TCDD	27.215	1.023	5.957e4	7.659e4	0.975	0.778	0.770	733	767	8.95e5	1.18e6	1220.9	1536.1	NO	bb	bd	9.287
12479-PECDD	29.006	0.914	4.949e5	3.008e5	1.837	1.645	1.550	2368	1264	4.99e6	3.12e6	2107.4	2466.2	NO	bb	bb	66.888
12389-PECDD	32.137	1.013	3.126e5	1.975e5	1.252	1.583	1.550	2368	1264	5.07e6	3.23e6	2140.2	2552.0	NO	bb	bb	62.904
124679-HXCDD	34.209	0.945	3.138e5	2.551e5	1.033	1.230	1.240	1209	2018	4.96e6	4.09e6	4104.6	2026.7	NO	bb	bb	46.325
1234679-HPCDD	39.423	0.974	3.189e5	3.022e5	1.286	1.055	1.050	2032	1965	5.11e6	4.80e6	2515.1	2444.5	NO	bb	bb	53.671
Total-tetrafurans			1.869e5		0.933			792		2.94e6							26.631
Total-penta1			6.207e5					743		9.98e6							73.426
Total-pentafurans			1.174e6		0.866			1751		1.81e7							163.337
Total-hexafurans			1.812e6		1.208			2317		2.83e7							219.918
Total-heptafurans			6.099e5		1.185			1349		9.27e6							93.889
Total-Furans			4.686e6		1.067			792		7.17e7							648.458
Total-tetradioxins			3.151e5		1.099			733		4.37e6							43.699
Total-pentadioxins			1.076e6		1.392			2368		1.43e7							191.760
Total-hexadioxins			1.295e6		1.007			1209		2.09e7							190.245
Total-heptadioxins			6.000e5		1.269			2032		9.53e6							102.517
Total-Dioxins			3.746e6		1.165			733		5.44e7							653.196
Total-TEQ			8.431e6					733		1.26e8							1301.655
FUNCTION1 PFK			2.918e7					478238		1.79e7							
FUNCTION2 PFK			6.817e6					200812		7.73e6							0.000
FUNCTION3 PFK			8.758e3					318213		4.68e5							0.000
FUNCTION4 PFK			8.948e6					265973		6.94e7							
FUNCTION5 PFK			1.488e7					126485		1.67e7							
FUNCTION1 HXCD...			1.050e3					449		1.35e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			3.885e2					785		9.31e3							0.000
FUNCTION3 OCDPE			2.597e2					761		4.85e3							0.000
FUNCTION4 NCDPE			1.357e2					895		2.94e3							0.000
FUNCTION5 DCDPE			0.000e0					610		0.00e0							

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3V5, Name: 23022321, Date: 24-Feb-2023, Time: 02:43:06, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.47	5.846e4	7.730e4	0.858	0.76	0.77	1060.4	YES	NO	db	dd	8.913
2	Total-tetrafurans	27.34	2.896e3	3.555e3	0.933	0.81	0.77	57.0	YES	NO	bd	dd	0.389
3	2378-TCDF	25.97	5.957e4	8.413e4	0.876	0.71	0.77	1192.5	YES	NO	bb	bb	9.236
4	Total-tetrafurans	25.82	9.770e1	1.478e2	0.933	0.66	0.77	3.5	NO	NO	bb	bb	0.015
5	Total-tetrafurans	24.87	5.424e2	6.653e2	0.933	0.82	0.77	7.5	YES	NO	dd	db	0.073
6	1368-TCDF	22.45	6.529e4	8.606e4	1.064	0.76	0.77	1389.2	YES	NO	bb	bb	8.005

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.33	6.207e5	4.139e5	1.013	1.50	1.55	13422.4	YES	NO	bb	bb	73.426

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDF	30.14	3.621e5	2.361e5	0.845	1.53	1.55	3257.3	YES	NO	bb	bb	50.917
2	Total-pentafurans	28.99	6.496e4	4.285e4	0.866	1.52	1.55	564.7	YES	NO	bb	bb	9.117
3	12389-PECDF	32.53	3.688e5	2.395e5	0.844	1.54	1.55	3163.9	YES	NO	bb	bb	51.827
4	23478-PeCDF	31.49	3.785e5	2.492e5	0.911	1.52	1.55	3348.2	YES	NO	bb	bb	51.476

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	234678-HxCDF	36.10	3.684e5	2.962e5	1.229	1.24	1.24	2536.3	YES	NO	bd	bd	44.304
2	123678-HxCDF	35.23	3.859e5	3.178e5	1.248	1.21	1.24	2520.3	YES	NO	dd	dd	42.861
3	123478-HxCDF	35.10	3.705e5	3.032e5	1.182	1.22	1.24	2544.2	YES	NO	MM	MM	45.076
4	Total-hexafurans	34.49	1.750e3	1.594e3	1.208	1.10	1.24	11.3	YES	NO	bb	bb	0.225
5	123468-HXCDF	33.44	3.518e5	2.840e5	1.197	1.24	1.24	2377.8	YES	NO	bd	bd	41.986
6	123789-HxCDF	37.13	3.339e5	2.678e5	1.187	1.25	1.24	2223.4	YES	NO	MM	MM	45.467

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HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.24	2.735e5	2.688e5	1.165	1.02	1.05	2808.7	YES	NO	bd	bd	45.589
2	Total-heptafurans	39.63	6.865e3	7.241e3	1.185	0.95	1.05	83.0	YES	NO	bb	bb	1.103
3	1234678-HpCDF	38.97	3.295e5	3.174e5	1.204	1.04	1.05	3977.8	YES	NO	bd	bd	47.197

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.47	5.846e4	7.730e4	0.858	0.76	0.77	1060.4	YES	NO	db	dd	8.913
2	Total-tetrafurans	27.34	2.896e3	3.555e3	0.933	0.81	0.77	57.0	YES	NO	bd	dd	0.389
3	2378-TCDF	25.97	5.957e4	8.413e4	0.876	0.71	0.77	1192.5	YES	NO	bb	bb	9.236
4	Total-tetrafurans	25.82	9.770e1	1.478e2	0.933	0.66	0.77	3.5	NO	NO	bb	bb	0.015
5	Total-tetrafurans	24.87	5.424e2	6.653e2	0.933	0.82	0.77	7.5	YES	NO	dd	db	0.073
6	1368-TCDF	22.45	6.529e4	8.606e4	1.064	0.76	0.77	1389.2	YES	NO	bb	bb	8.005
7	12378-PeCDF	30.14	3.621e5	2.361e5	0.845	1.53	1.55	3257.3	YES	NO	bb	bb	50.917
8	Total-pentafurans	28.99	6.496e4	4.285e4	0.866	1.52	1.55	564.7	YES	NO	bb	bb	9.117
9	12389-PECDF	32.53	3.688e5	2.395e5	0.844	1.54	1.55	3163.9	YES	NO	bb	bb	51.827
10	23478-PeCDF	31.49	3.785e5	2.492e5	0.911	1.52	1.55	3348.2	YES	NO	bb	bb	51.476
11	234678-HxCDF	36.10	3.684e5	2.962e5	1.229	1.24	1.24	2536.3	YES	NO	bd	bd	44.304
12	123678-HxCDF	35.23	3.859e5	3.178e5	1.248	1.21	1.24	2520.3	YES	NO	dd	dd	42.861
13	123478-HxCDF	35.10	3.705e5	3.032e5	1.182	1.22	1.24	2544.2	YES	NO	MM	MM	45.076
14	Total-hexafurans	34.49	1.750e3	1.594e3	1.208	1.10	1.24	11.3	YES	NO	bb	bb	0.225
15	123468-HXCDF	33.44	3.518e5	2.840e5	1.197	1.24	1.24	2377.8	YES	NO	bd	bd	41.986
16	123789-HxCDF	37.13	3.339e5	2.678e5	1.187	1.25	1.24	2223.4	YES	NO	MM	MM	45.467
17	1234789-HpCDF	41.24	2.735e5	2.688e5	1.165	1.02	1.05	2808.7	YES	NO	bd	bd	45.589
18	Total-heptafurans	39.63	6.865e3	7.241e3	1.185	0.95	1.05	83.0	YES	NO	bb	bb	1.103
19	1234678-HpCDF	38.97	3.295e5	3.174e5	1.204	1.04	1.05	3977.8	YES	NO	bd	bd	47.197
20	OCDF	45.54	2.815e5	3.153e5	1.186	0.89	0.89	2430.3	YES	NO	bd	bd	71.257
21	13468-PECDF	27.33	6.207e5	4.139e5	1.013	1.50	1.55	13422.4	YES	NO	bb	bb	73.426

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TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	27.22	5.957e4	7.659e4	0.975	0.78	0.77	1220.9	YES	NO	bb	bd	9.287
2	2378-TCDD	26.62	6.857e4	8.717e4	1.236	0.79	0.77	1418.5	YES	NO	bb	bb	8.379
3	Total-tetradioxins	26.28	9.961e4	1.278e5	1.099	0.78	0.77	1437.2	YES	NO	bb	bd	13.768
4	Total-tetradioxins	25.80	3.077e4	3.971e4	1.099	0.77	0.77	669.2	YES	NO	bd	bb	4.267
5	Total-tetradioxins	25.22	8.756e2	1.093e3	1.099	0.80	0.77	17.2	YES	NO	bb	bb	0.119
6	Total-tetradioxins	24.94	2.677e3	3.360e3	1.099	0.80	0.77	34.9	YES	NO	bb	bb	0.366
7	Total-tetradioxins	23.99	2.760e2	3.136e2	1.099	0.88	0.77	6.0	YES	NO	bb	db	0.036
8	1368-TCDD	23.73	5.272e4	6.918e4	1.084	0.76	0.77	1161.1	YES	NO	bb	bd	7.477

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.14	3.126e5	1.975e5	1.252	1.58	1.55	2140.2	YES	NO	bb	bb	62.904
2	12378-PeCDD	31.75	2.681e5	1.679e5	1.087	1.60	1.55	1781.6	YES	NO	bb	bb	61.968
3	12479-PECDD	29.01	4.949e5	3.008e5	1.837	1.65	1.55	2107.4	YES	NO	bb	bb	66.888

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDD	36.34	3.473e5	2.671e5	1.021	1.30	1.24	4498.6	YES	NO	db	db	47.992
2	123478-HxCDD	36.21	3.071e5	2.442e5	0.987	1.26	1.24	4259.2	YES	NO	bd	bd	46.969
3	124679-HXCDD	34.21	3.138e5	2.551e5	1.033	1.23	1.24	4104.6	YES	NO	bb	bb	46.325
4	123789-HxCDD	36.72	3.270e5	2.625e5	0.985	1.25	1.24	4448.5	YES	NO	bb	bb	48.960

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.48	2.810e5	2.694e5	1.253	1.04	1.05	2172.9	YES	NO	bb	bb	48.832
2	Total-heptadioxins	40.02	8.158e1	8.418e1	1.269	0.97	1.05	1.7	NO	NO	bb	bb	0.015
3	1234679-HPCDD	39.42	3.189e5	3.022e5	1.286	1.06	1.05	2515.1	YES	NO	bb	bb	53.671

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	27.22	5.957e4	7.659e4	0.975	0.78	0.77	1220.9	YES	NO	bb	bd	9.287
2	2378-TCDD	26.62	6.857e4	8.717e4	1.236	0.79	0.77	1418.5	YES	NO	bb	bb	8.379
3	Total-tetradioxins	26.28	9.961e4	1.278e5	1.099	0.78	0.77	1437.2	YES	NO	bb	bd	13.768
4	Total-tetradioxins	25.80	3.077e4	3.971e4	1.099	0.77	0.77	669.2	YES	NO	bd	bb	4.267
5	Total-tetradioxins	25.22	8.756e2	1.093e3	1.099	0.80	0.77	17.2	YES	NO	bb	bb	0.119
6	Total-tetradioxins	24.94	2.677e3	3.360e3	1.099	0.80	0.77	34.9	YES	NO	bb	bb	0.366
7	Total-tetradioxins	23.99	2.760e2	3.136e2	1.099	0.88	0.77	6.0	YES	NO	bb	db	0.036
8	1368-TCDD	23.73	5.272e4	6.918e4	1.084	0.76	0.77	1161.1	YES	NO	bb	bd	7.477
9	12389-PECDD	32.14	3.126e5	1.975e5	1.252	1.58	1.55	2140.2	YES	NO	bb	bb	62.904
10	12378-PeCDD	31.75	2.681e5	1.679e5	1.087	1.60	1.55	1781.6	YES	NO	bb	bb	61.968
11	12479-PECDD	29.01	4.949e5	3.008e5	1.837	1.65	1.55	2107.4	YES	NO	bb	bb	66.888
12	123678-HxCDD	36.34	3.473e5	2.671e5	1.021	1.30	1.24	4498.6	YES	NO	db	db	47.992
13	123478-HxCDD	36.21	3.071e5	2.442e5	0.987	1.26	1.24	4259.2	YES	NO	bd	bd	46.969
14	124679-HXCDD	34.21	3.138e5	2.551e5	1.033	1.23	1.24	4104.6	YES	NO	bb	bb	46.325
15	123789-HxCDD	36.72	3.270e5	2.625e5	0.985	1.25	1.24	4448.5	YES	NO	bb	bb	48.960
16	1234678-HpCDD	40.48	2.810e5	2.694e5	1.253	1.04	1.05	2172.9	YES	NO	bb	bb	48.832
17	Total-heptadioxins	40.02	8.158e1	8.418e1	1.269	0.97	1.05	1.7	NO	NO	bb	bb	0.015
18	1234679-HPCDD	39.42	3.189e5	3.022e5	1.286	1.06	1.05	2515.1	YES	NO	bb	bb	53.671
19	OCDD	45.29	4.598e5	5.132e5	1.103	0.90	0.89	3269.6	YES	NO	bd	bb	124.975

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.47	5.846e4	7.730e4	0.858	0.76	0.77	1060.4	YES	NO	db	dd	8.913
2	Total-tetrafurans	27.34	2.896e3	3.555e3	0.933	0.81	0.77	57.0	YES	NO	bd	dd	0.389
3	2378-TCDF	25.97	5.957e4	8.413e4	0.876	0.71	0.77	1192.5	YES	NO	bb	bb	9.236
4	Total-tetrafurans	25.82	9.770e1	1.478e2	0.933	0.66	0.77	3.5	NO	NO	bb	bb	0.015
5	Total-tetrafurans	24.87	5.424e2	6.653e2	0.933	0.82	0.77	7.5	YES	NO	dd	db	0.073
6	1368-TCDF	22.45	6.529e4	8.606e4	1.064	0.76	0.77	1389.2	YES	NO	bb	bb	8.005
7	12378-PeCDF	30.14	3.621e5	2.361e5	0.845	1.53	1.55	3257.3	YES	NO	bb	bb	50.917
8	Total-pentafurans	28.99	6.496e4	4.285e4	0.866	1.52	1.55	564.7	YES	NO	bb	bb	9.117
9	12389-PECDF	32.53	3.688e5	2.395e5	0.844	1.54	1.55	3163.9	YES	NO	bb	bb	51.827
10	23478-PeCDF	31.49	3.785e5	2.492e5	0.911	1.52	1.55	3348.2	YES	NO	bb	bb	51.476
11	234678-HxCDF	36.10	3.684e5	2.962e5	1.229	1.24	1.24	2536.3	YES	NO	bd	bd	44.304
12	123678-HxCDF	35.23	3.859e5	3.178e5	1.248	1.21	1.24	2520.3	YES	NO	dd	dd	42.861
13	123478-HxCDF	35.10	3.705e5	3.032e5	1.182	1.22	1.24	2544.2	YES	NO	MM	MM	45.076
14	Total-hexafurans	34.49	1.750e3	1.594e3	1.208	1.10	1.24	11.3	YES	NO	bb	bb	0.225
15	123468-HXCDF	33.44	3.518e5	2.840e5	1.197	1.24	1.24	2377.8	YES	NO	bd	bd	41.986
16	123789-HxCDF	37.13	3.339e5	2.678e5	1.187	1.25	1.24	2223.4	YES	NO	MM	MM	45.467
17	1234789-HpCDF	41.24	2.735e5	2.688e5	1.165	1.02	1.05	2808.7	YES	NO	bd	bd	45.589
18	Total-heptafurans	39.63	6.865e3	7.241e3	1.185	0.95	1.05	83.0	YES	NO	bb	bb	1.103
19	1234678-HpCDF	38.97	3.295e5	3.174e5	1.204	1.04	1.05	3977.8	YES	NO	bd	bd	47.197
20	OCDF	45.54	2.815e5	3.153e5	1.186	0.89	0.89	2430.3	YES	NO	bd	bd	71.257
21	13468-PECDF	27.33	6.207e5	4.139e5	1.013	1.50	1.55	13422.4	YES	NO	bb	bb	73.426
22	1289-TCDD	27.22	5.957e4	7.659e4	0.975	0.78	0.77	1220.9	YES	NO	bb	bd	9.287
23	2378-TCDD	26.62	6.857e4	8.717e4	1.236	0.79	0.77	1418.5	YES	NO	bb	bb	8.379
24	Total-tetradioxins	26.28	9.961e4	1.278e5	1.099	0.78	0.77	1437.2	YES	NO	bb	bd	13.768
25	Total-tetradioxins	25.80	3.077e4	3.971e4	1.099	0.77	0.77	669.2	YES	NO	bd	bb	4.267
26	Total-tetradioxins	25.22	8.756e2	1.093e3	1.099	0.80	0.77	17.2	YES	NO	bb	bb	0.119
27	Total-tetradioxins	24.94	2.677e3	3.360e3	1.099	0.80	0.77	34.9	YES	NO	bb	bb	0.366
28	Total-tetradioxins	23.99	2.760e2	3.136e2	1.099	0.88	0.77	6.0	YES	NO	bb	db	0.036
29	1368-TCDD	23.73	5.272e4	6.918e4	1.084	0.76	0.77	1161.1	YES	NO	bb	bd	7.477
30	12389-PECDD	32.14	3.126e5	1.975e5	1.252	1.58	1.55	2140.2	YES	NO	bb	bb	62.904
31	12378-PeCDD	31.75	2.681e5	1.679e5	1.087	1.60	1.55	1781.6	YES	NO	bb	bb	61.968
32	12479-PECDD	29.01	4.949e5	3.008e5	1.837	1.65	1.55	2107.4	YES	NO	bb	bb	66.888
33	123678-HxCDD	36.34	3.473e5	2.671e5	1.021	1.30	1.24	4498.6	YES	NO	db	db	47.992
34	123478-HxCDD	36.21	3.071e5	2.442e5	0.987	1.26	1.24	4259.2	YES	NO	bd	bd	46.969
35	124679-HXCDD	34.21	3.138e5	2.551e5	1.033	1.23	1.24	4104.6	YES	NO	bb	bb	46.325
36	123789-HxCDD	36.72	3.270e5	2.625e5	0.985	1.25	1.24	4448.5	YES	NO	bb	bb	48.960
37	1234678-HpCDD	40.48	2.810e5	2.694e5	1.253	1.04	1.05	2172.9	YES	NO	bb	bb	48.832

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	Total-heptadioxins	40.02	8.158e1	8.418e1	1.269	0.97	1.05	1.7	NO	NO	bb	bb	0.015
39	1234679-HPCDD	39.42	3.189e5	3.022e5	1.286	1.06	1.05	2515.1	YES	NO	bb	bb	53.671
40	OCDD	45.29	4.598e5	5.132e5	1.103	0.90	0.89	3269.6	YES	NO	bd	bb	124.975

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.32	2.918e7					37.4	YES		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.47	6.817e6					38.5	YES		bb		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	36.88	8.758e3					1.5	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.13	1.011e6					44.2	YES		dd		
2	FUNCTION4 PFK	38.09	9.260e5					45.2	YES		bd		
3	FUNCTION4 PFK	40.92	7.061e3					1.1	NO		db		
4	FUNCTION4 PFK	40.85	7.079e3					1.0	NO		bd		
5	FUNCTION4 PFK	40.76	1.152e4					1.2	NO		db		
6	FUNCTION4 PFK	40.68	1.188e4					1.4	NO		bd		
7	FUNCTION4 PFK	40.15	1.611e4					1.5	NO		bb		
8	FUNCTION4 PFK	40.07	1.228e4					1.0	NO		bb		
9	FUNCTION4 PFK	39.89	1.317e4					1.2	NO		bb		
10	FUNCTION4 PFK	39.51	1.382e4					1.2	NO		bb		
11	FUNCTION4 PFK	39.38	4.839e4					2.0	NO		db		
12	FUNCTION4 PFK	39.22	1.784e5					7.5	YES		dd		
13	FUNCTION4 PFK	39.12	2.647e5					11.9	YES		dd		
14	FUNCTION4 PFK	39.08	4.361e5					12.4	YES		dd		
15	FUNCTION4 PFK	38.90	4.504e5					18.5	YES		dd		
16	FUNCTION4 PFK	38.78	3.116e6					23.0	YES		dd		
17	FUNCTION4 PFK	38.33	1.763e6					38.4	YES		dd		
18	FUNCTION4 PFK	38.23	6.025e5					41.3	YES		dd		
19	FUNCTION4 PFK	42.59	8.351e3					1.4	NO		bb		
20	FUNCTION4 PFK	42.23	1.053e4					1.1	NO		bb		
21	FUNCTION4 PFK	42.17	1.036e3					0.4	NO		bb		
22	FUNCTION4 PFK	42.04	6.956e3					1.1	NO		bb		
23	FUNCTION4 PFK	41.99	1.302e4					1.2	NO		bb		
24	FUNCTION4 PFK	41.77	1.334e4					1.3	NO		bb		
25	FUNCTION4 PFK	40.99	5.604e3					0.8	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	45.21	1.508e6					25.2	YES		db		
2	FUNCTION5 PFK	44.35	4.374e6					51.3	YES		dd		
3	FUNCTION5 PFK	44.03	8.999e6					55.8	YES		bd		

ID: CS3V5, Name: 23022321, Date: 24-Feb-2023, Time: 02:43:06, Conditions: AUTOSPEC01, User: pk

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	25.83	8.826e1					2.6	NO		bd		0.000
2	FUNCTION1 HXCD...	25.24	8.189e1					2.1	NO		bb		0.000
3	FUNCTION1 HXCD...	23.84	8.058e1					2.1	NO		bb		0.000
4	FUNCTION1 HXCD...	22.96	1.045e2					2.7	NO		bb		0.000
5	FUNCTION1 HXCD...	27.86	1.099e2					6.0	YES		bb		0.000
6	FUNCTION1 HXCD...	27.33	9.820e1					3.0	YES		bb		0.000
7	FUNCTION1 HXCD...	26.61	2.116e2					4.7	YES		bb		0.000
8	FUNCTION1 HXCD...	26.10	1.017e2					2.3	NO		db		0.000
9	FUNCTION1 HXCD...	25.97	1.734e2					4.7	YES		dd		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.36	1.300e2					4.9	YES		bb		0.000
2	FUNCTION2 HPCD...	31.25	1.022e2					2.7	NO		bb		0.000
3	FUNCTION2 HPCD...	30.55	7.554e1					2.8	NO		bb		0.000
4	FUNCTION2 HPCD...	29.46	8.081e1					1.5	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.11	8.310e1					2.2	NO		bb		0.000
2	FUNCTION3 OCDPE	34.38	8.182e1					3.0	YES		bb		0.000
3	FUNCTION3 OCDPE	33.66	9.479e1					1.1	NO		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.62	1.357e2					3.3	YES		bb		0.000

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Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:13:02 Pacific Standard Time

ID: CS3V5, Name: 23022321, Date: 24-Feb-2023, Time: 02:43:06, Conditions: AUTOSPEC01, User: pk

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
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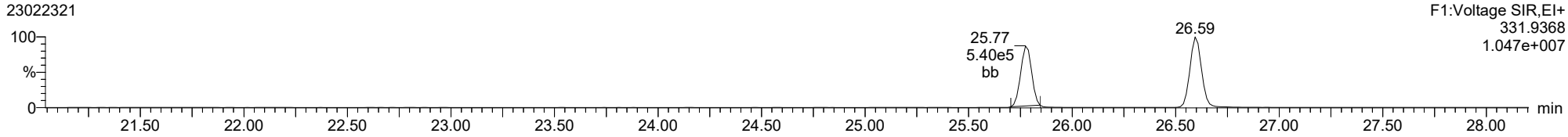
ID: CS3V5, Name: 23022321, Date: 24-Feb-2023, Time: 02:43:06, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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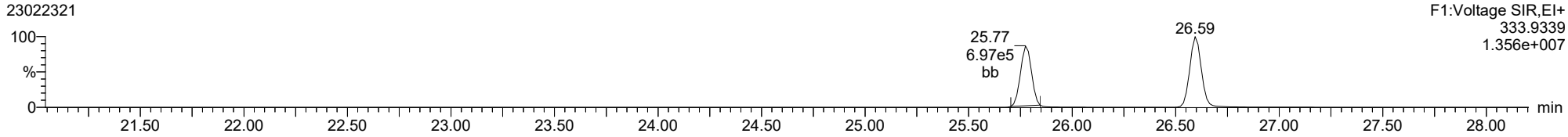
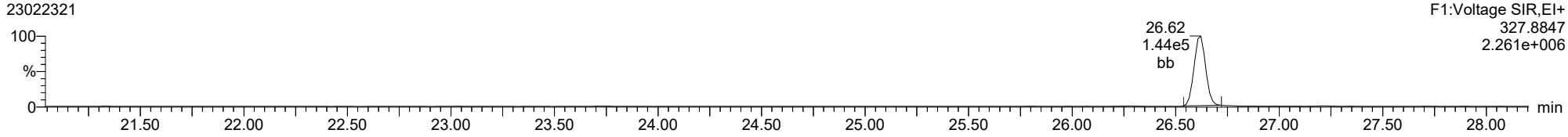


37CL-2378-TCDD



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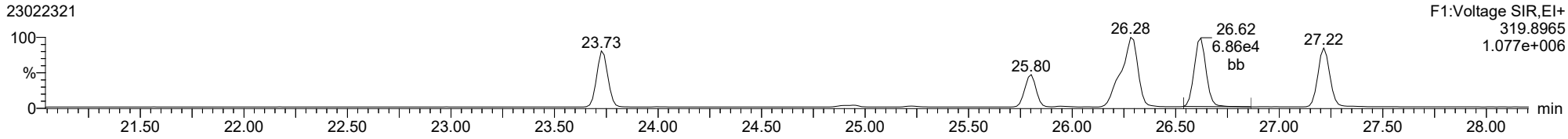

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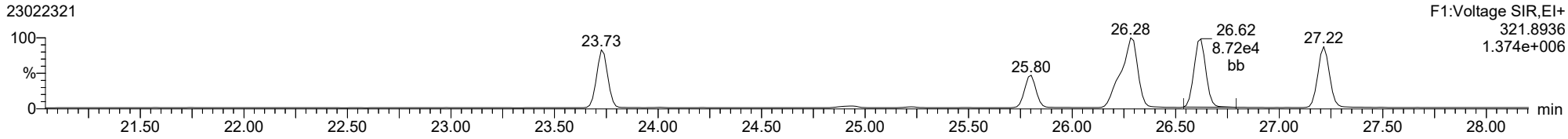

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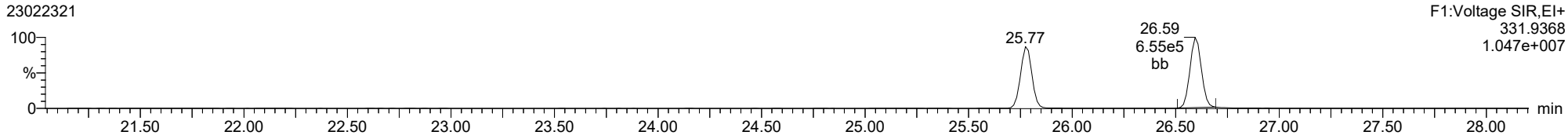

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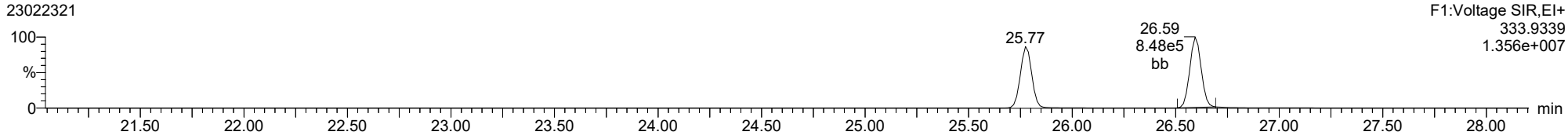

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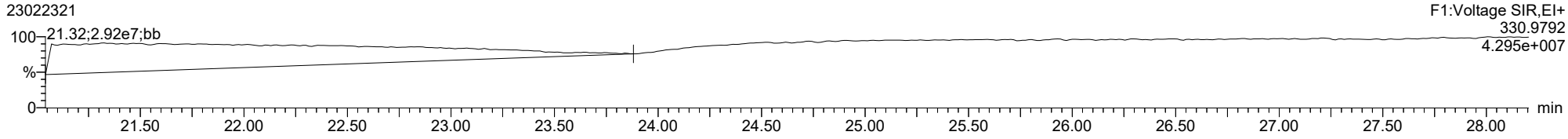

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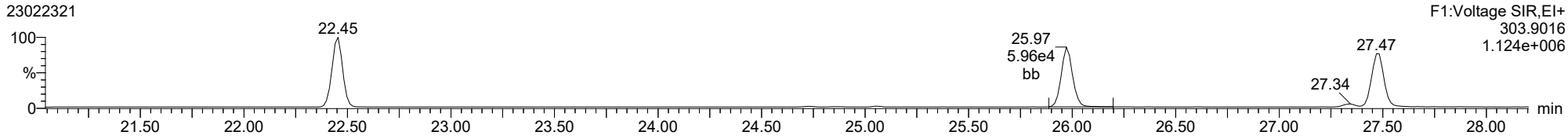

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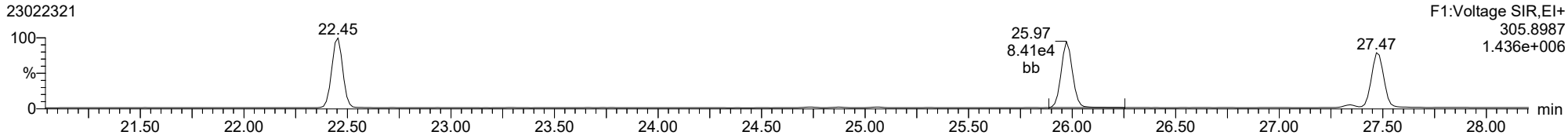

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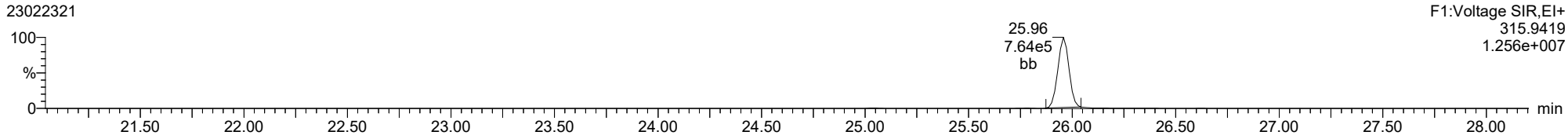

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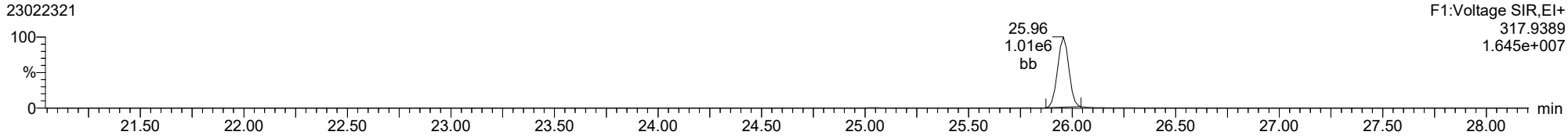
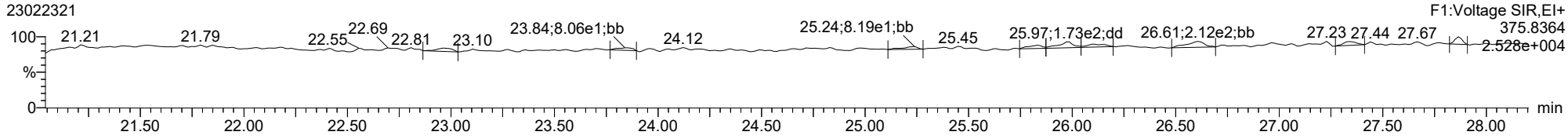


FUNCTION1 HXCDPE



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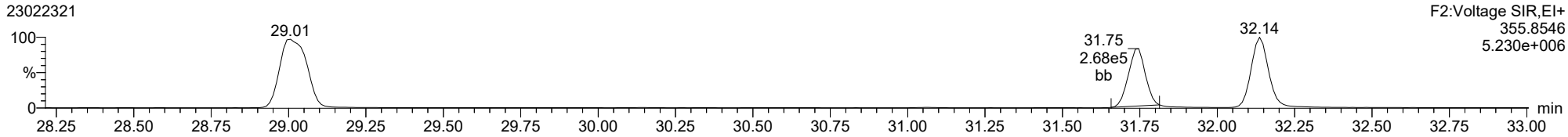
12378-PeCDD



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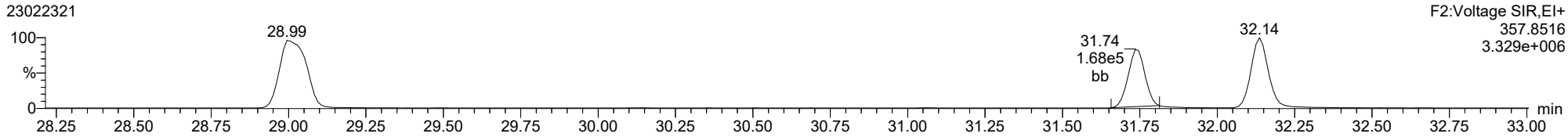

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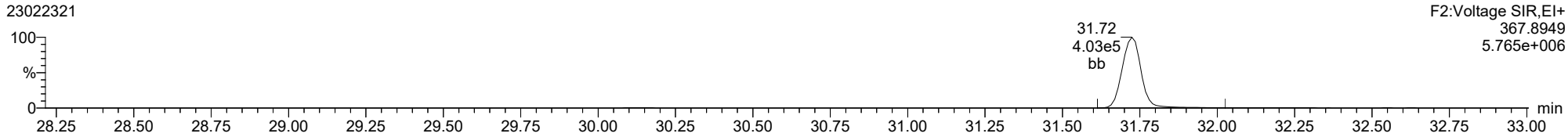

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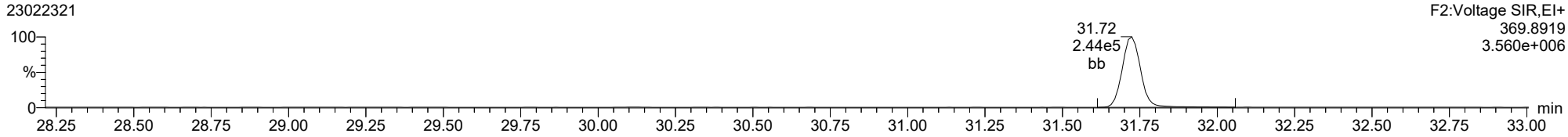

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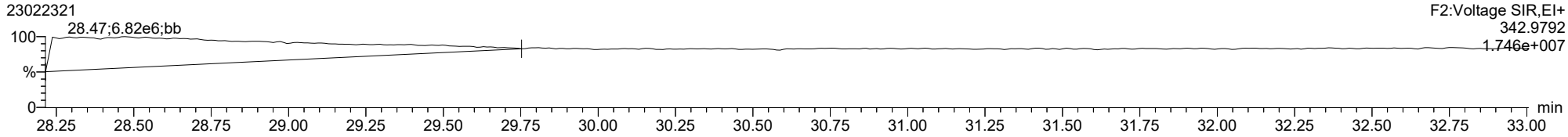

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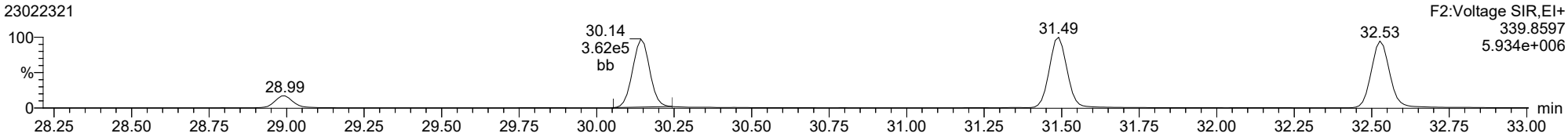

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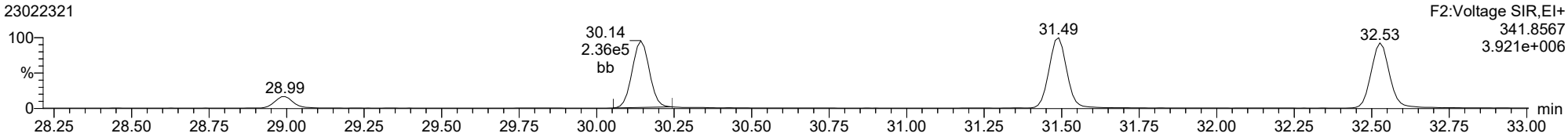

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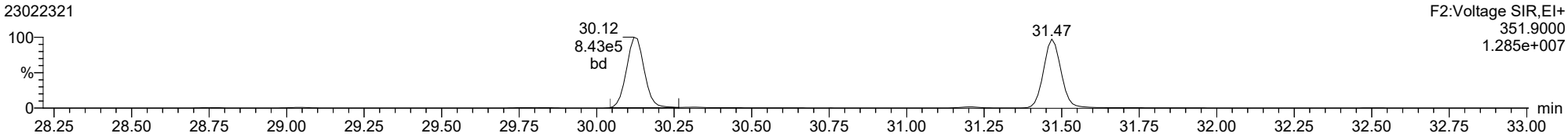

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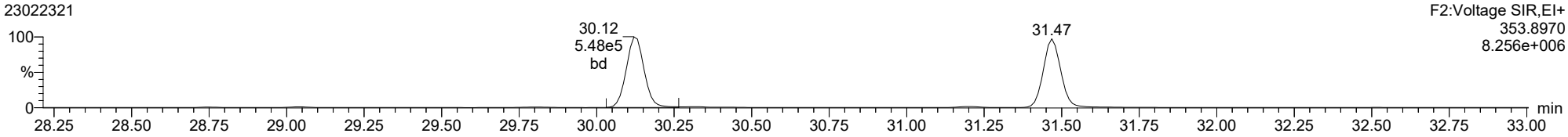
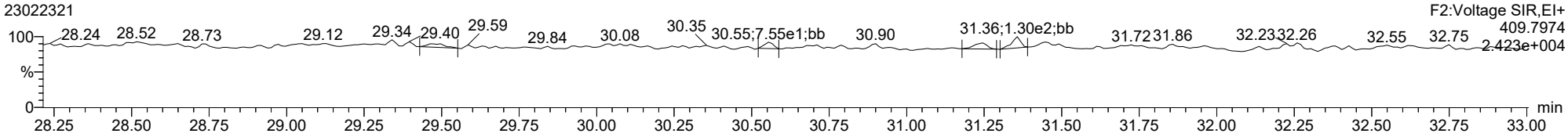


FUNCTION2 HPCDPE



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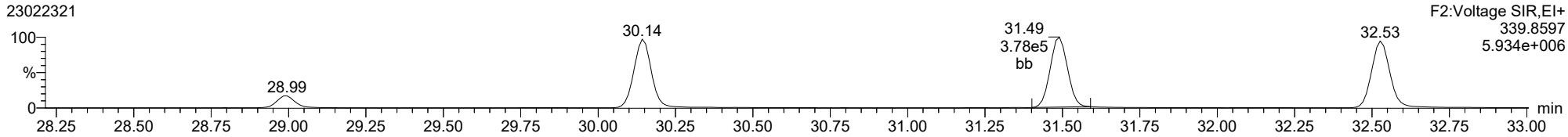
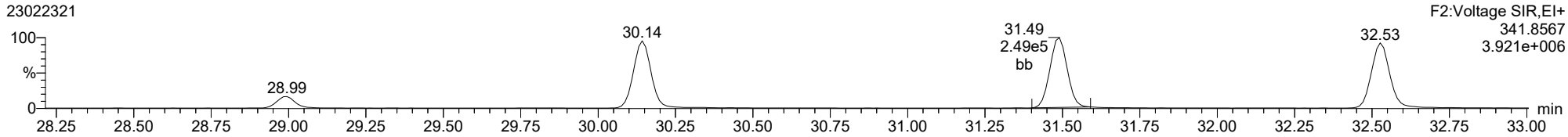
23478-PeCDF



23478-PeCDF



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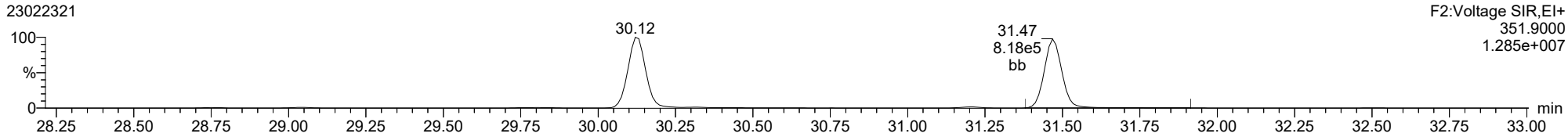

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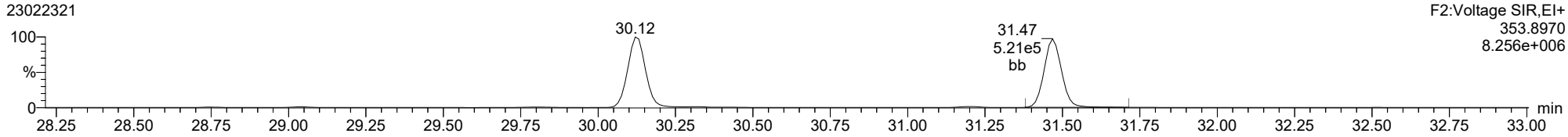

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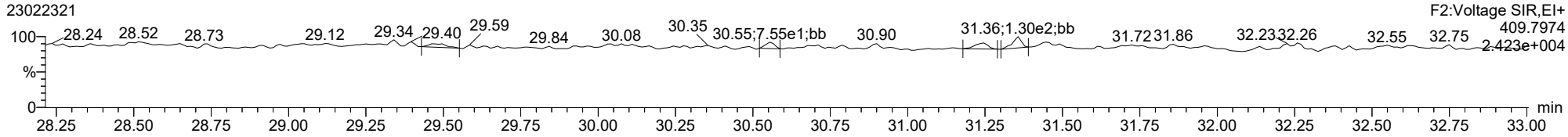

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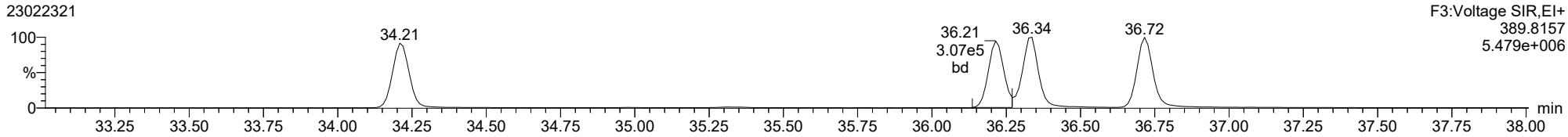
123478-HxCDD



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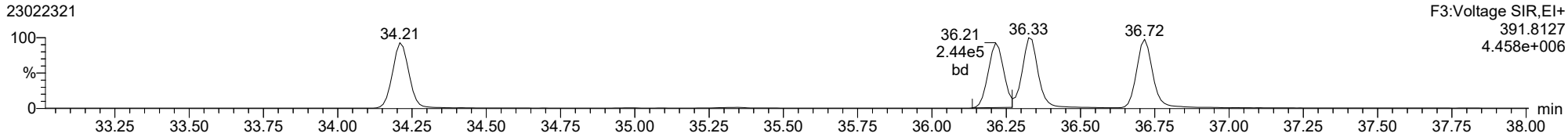

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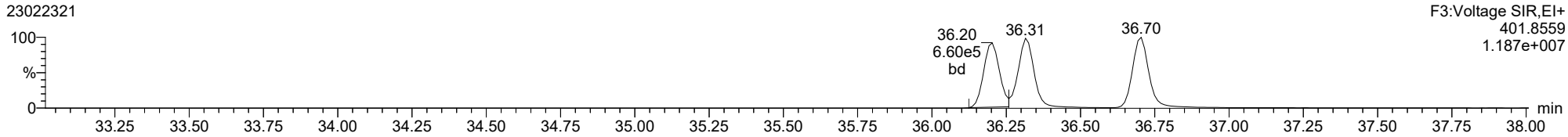

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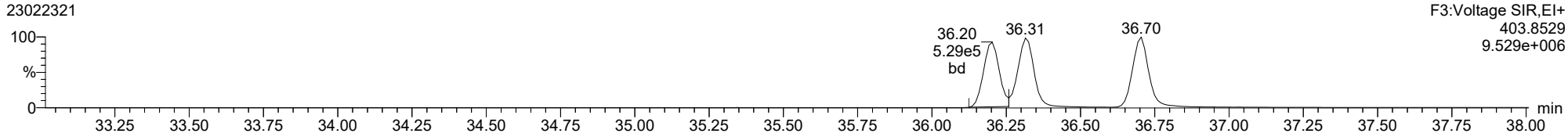

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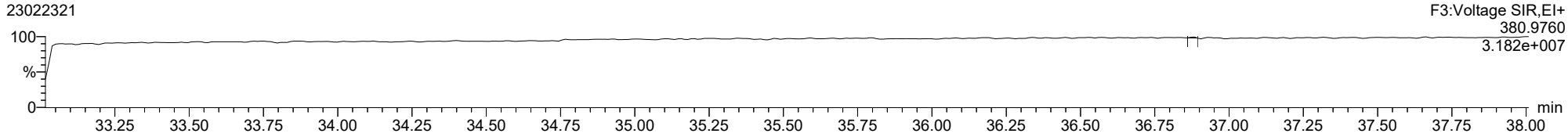

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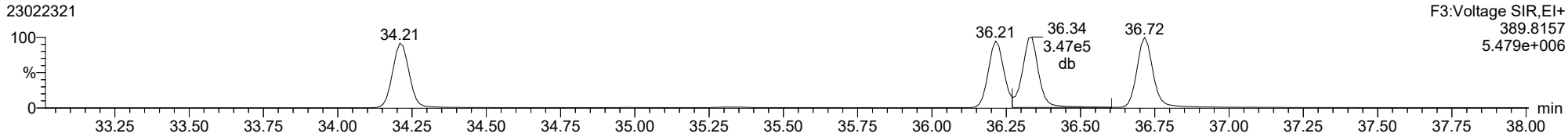

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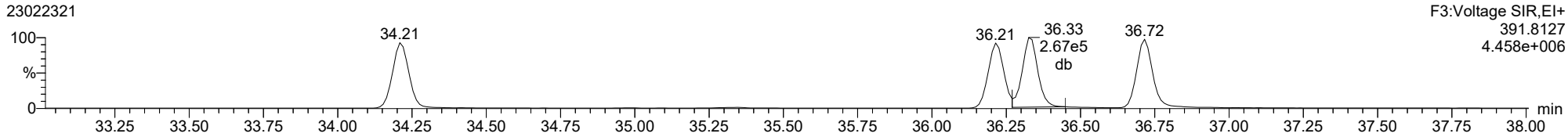

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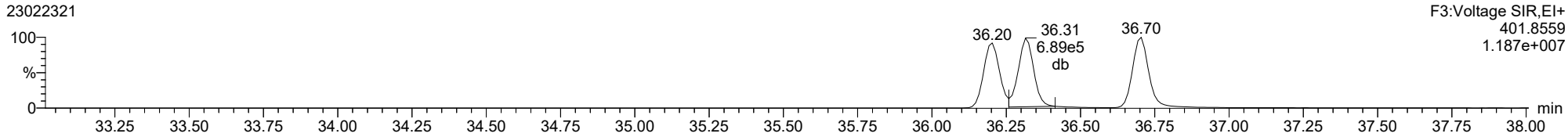

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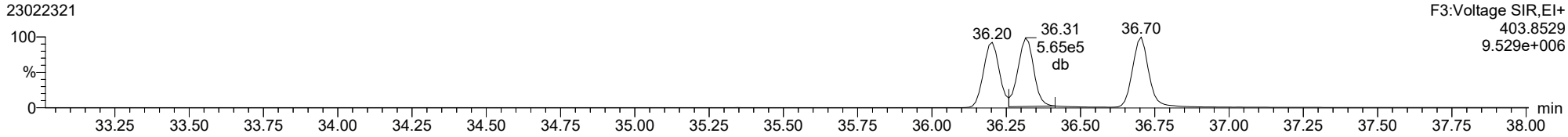

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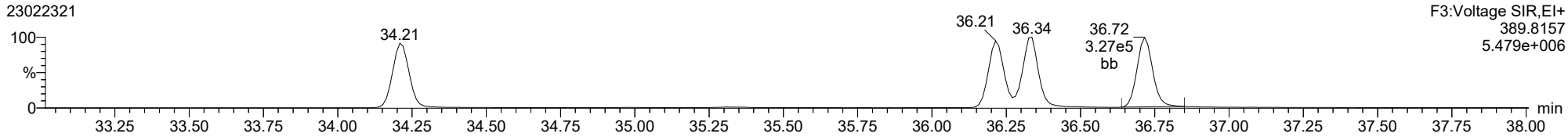

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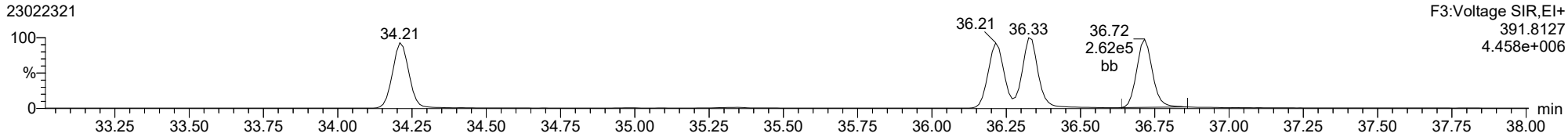

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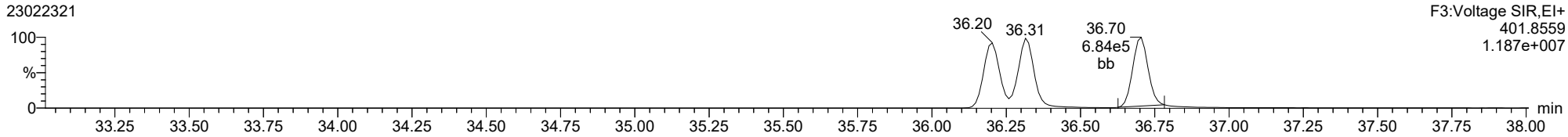

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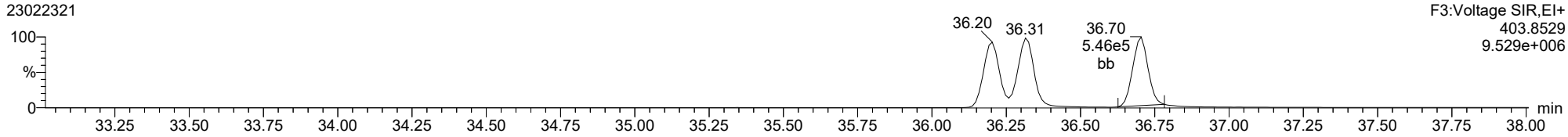

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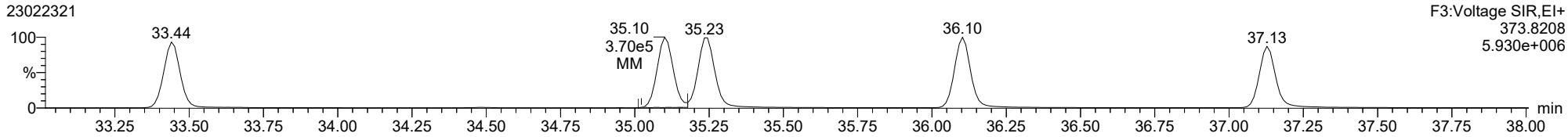

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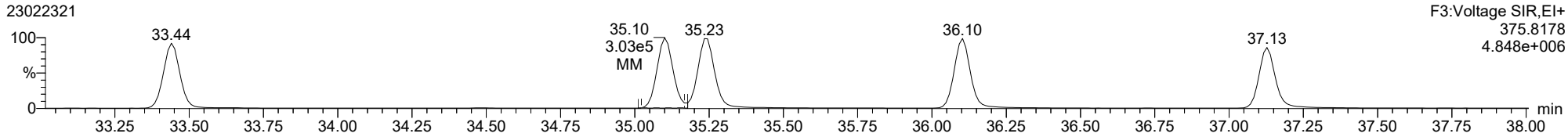

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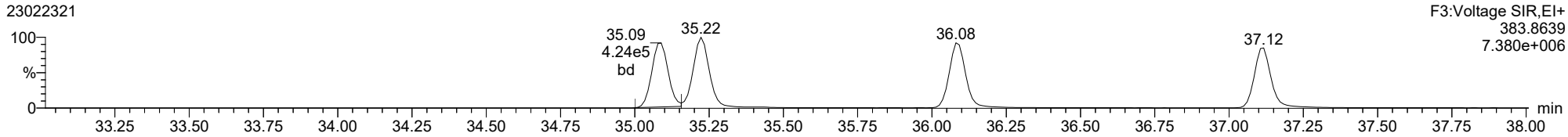

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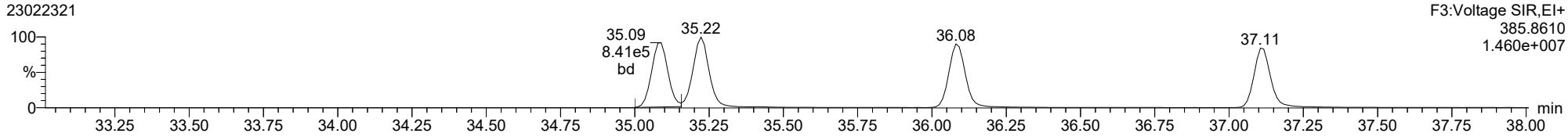

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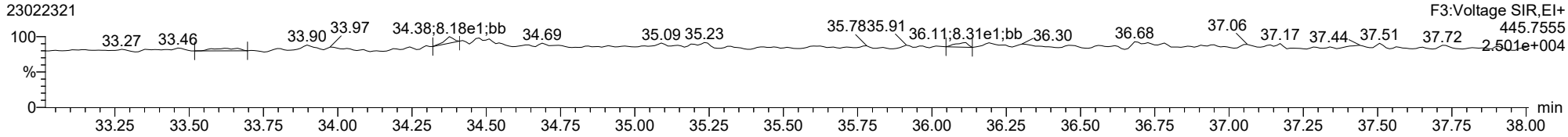

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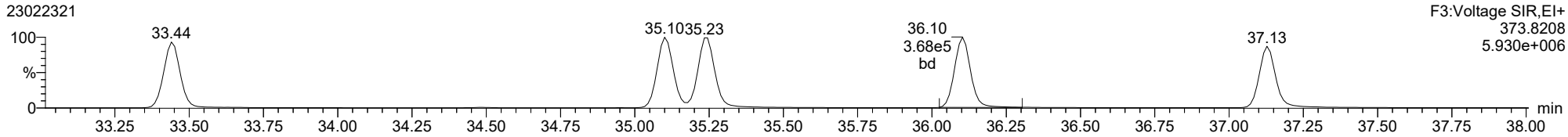

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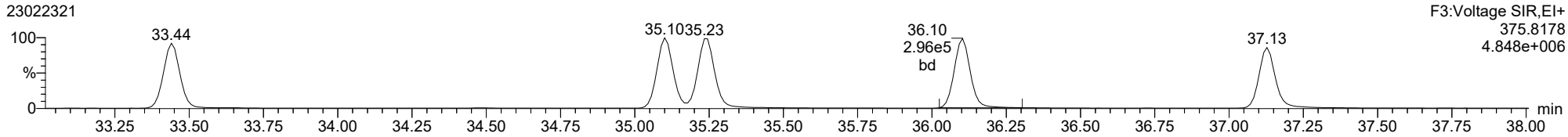

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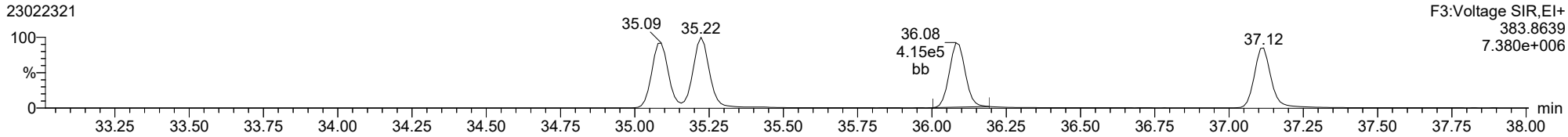

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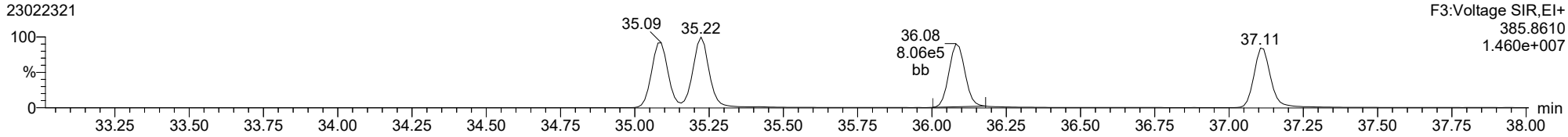

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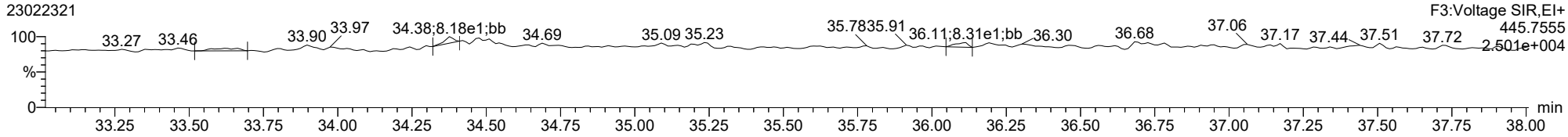

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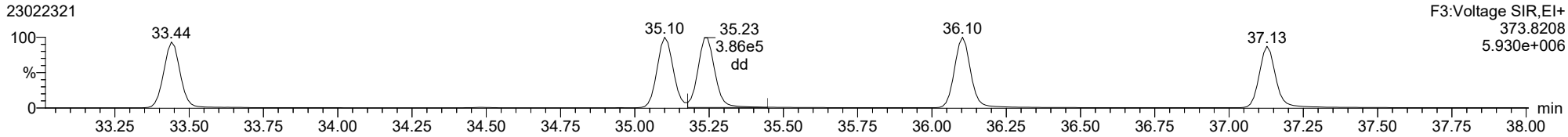

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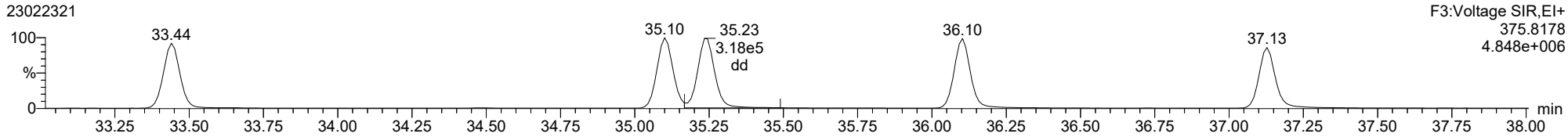

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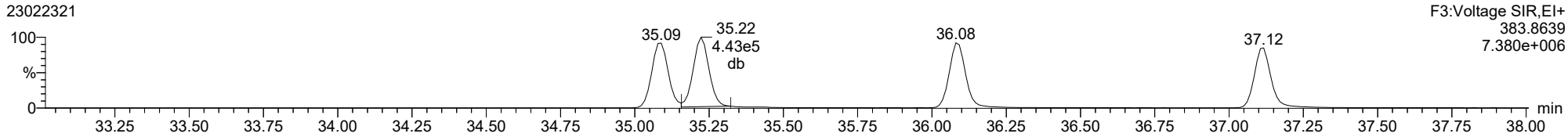

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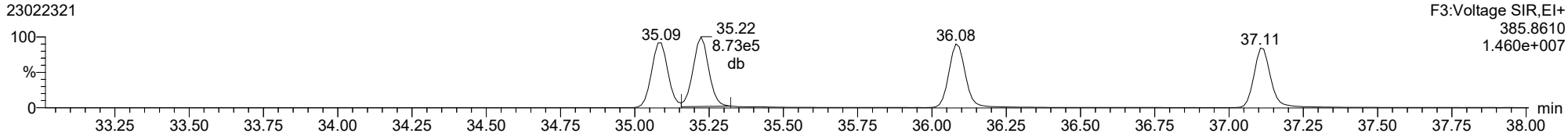

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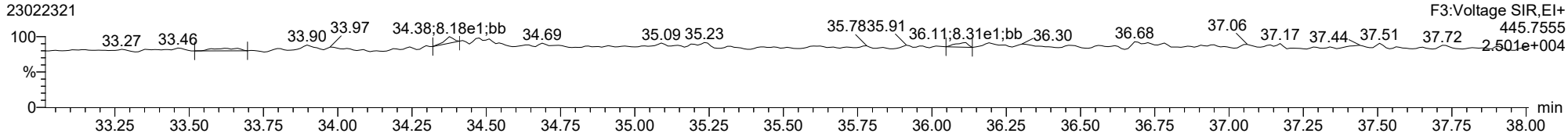

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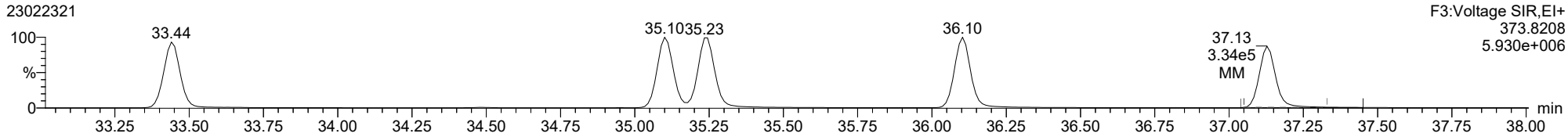

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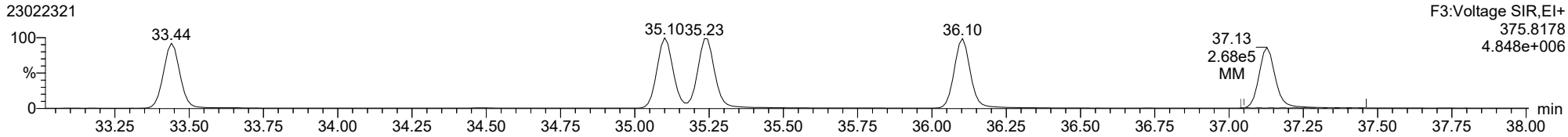

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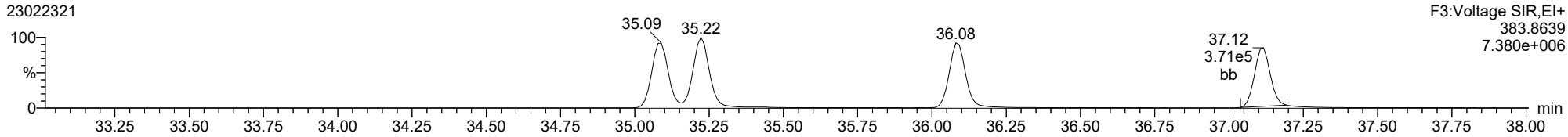

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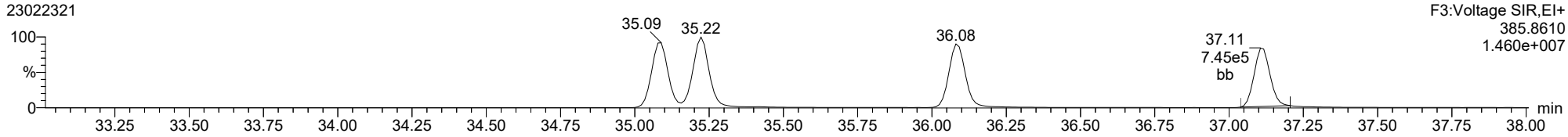

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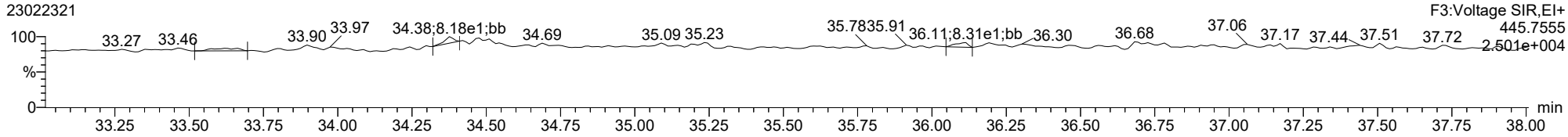

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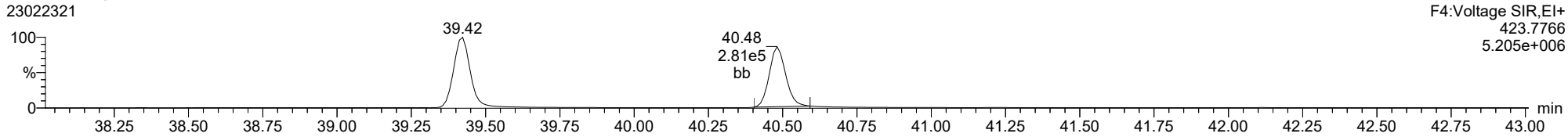

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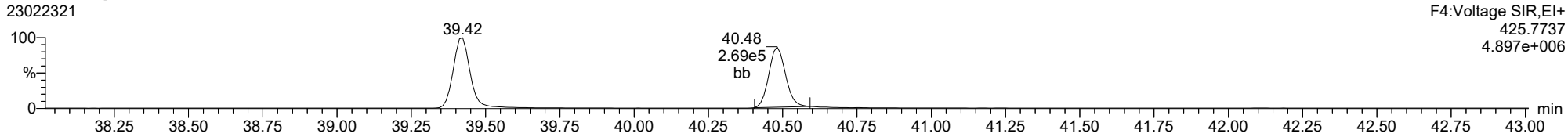

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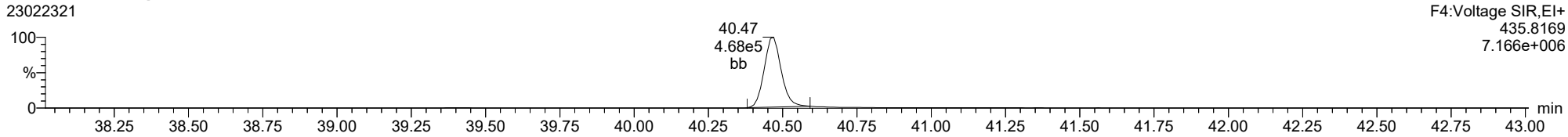

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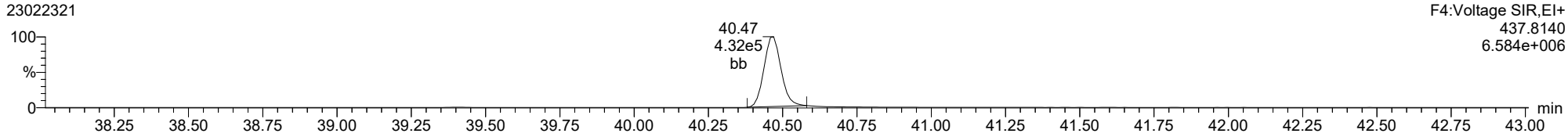

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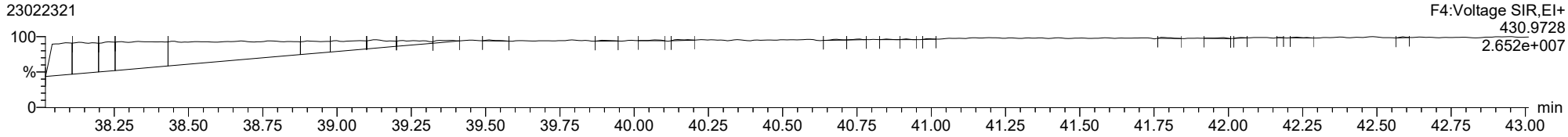

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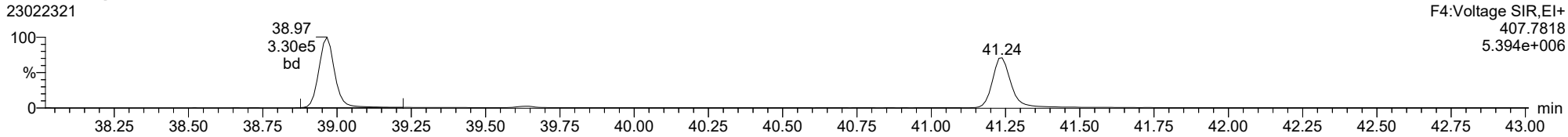

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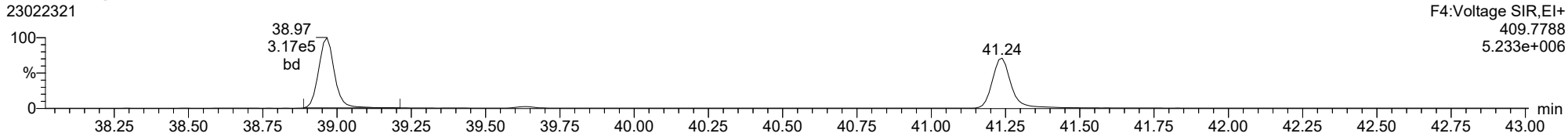

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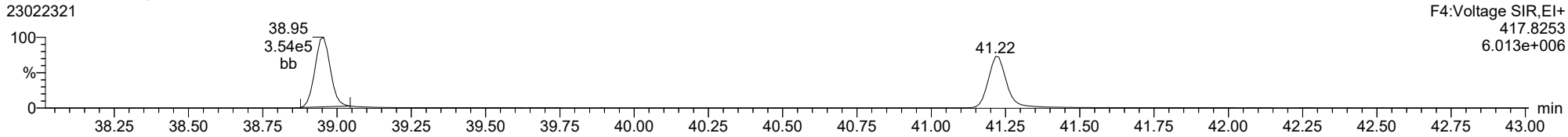

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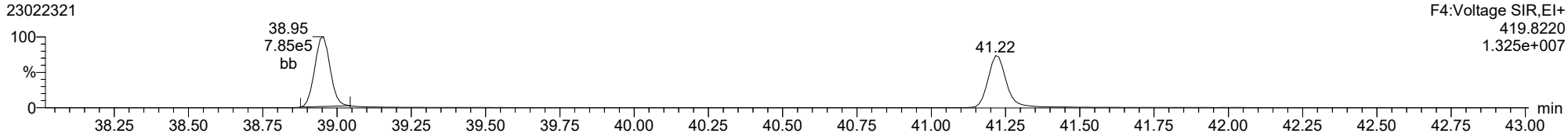

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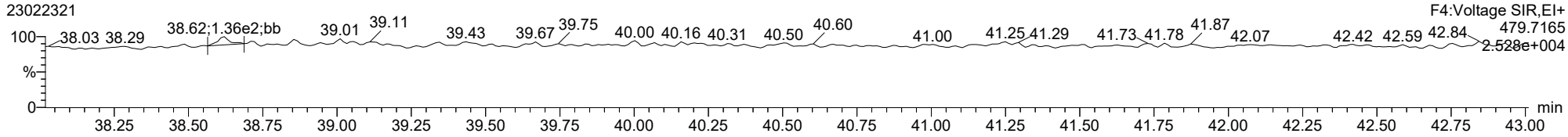

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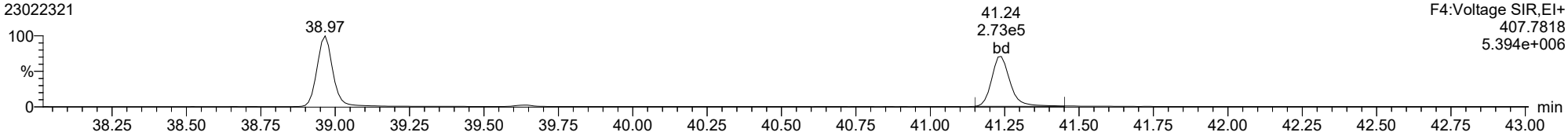

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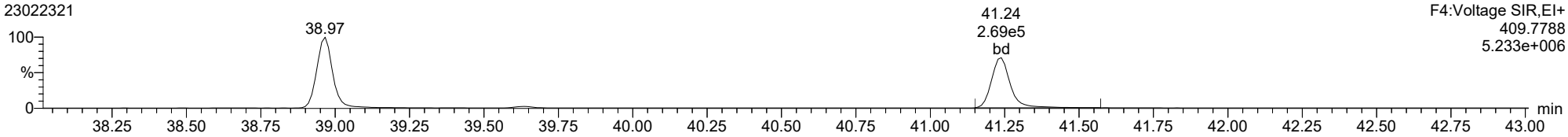

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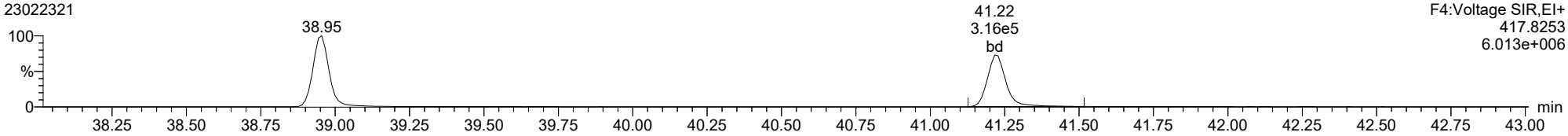

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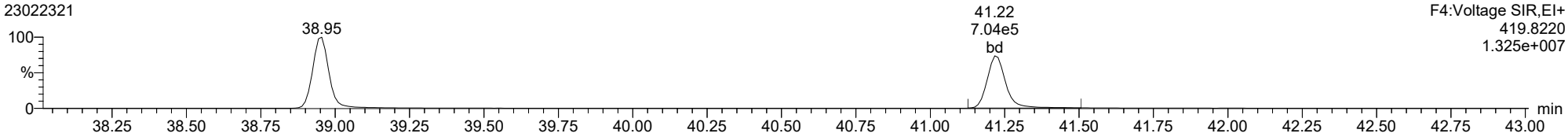

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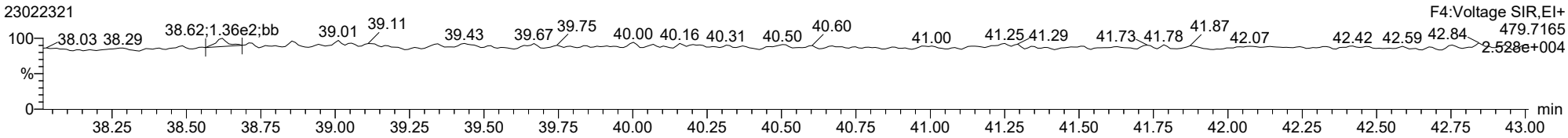

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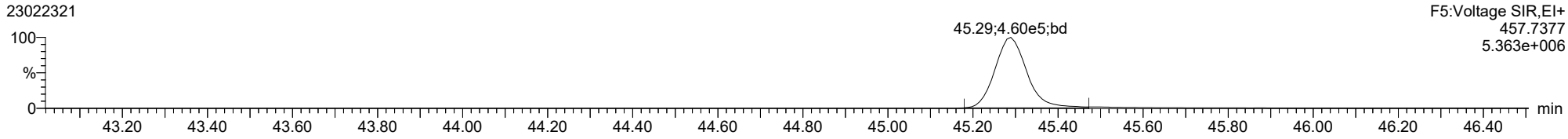

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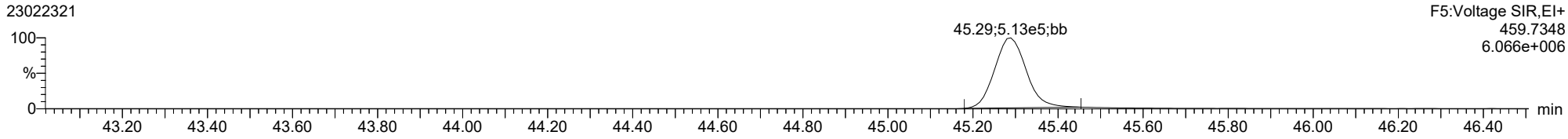

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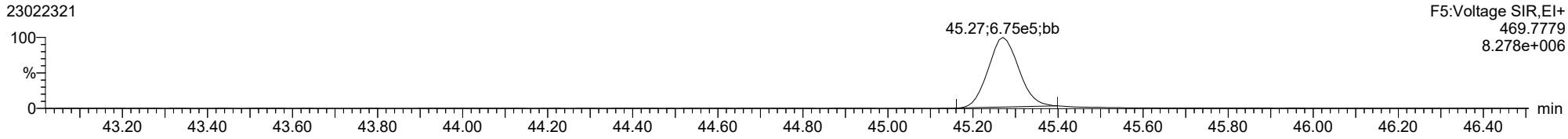

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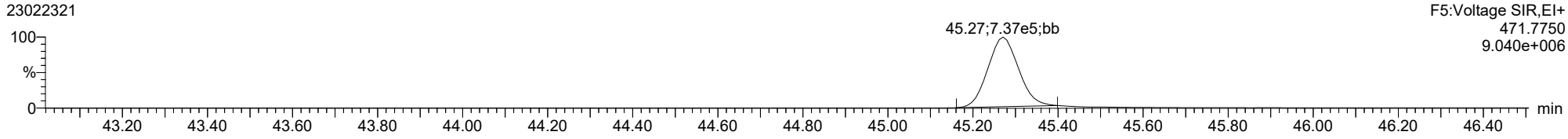
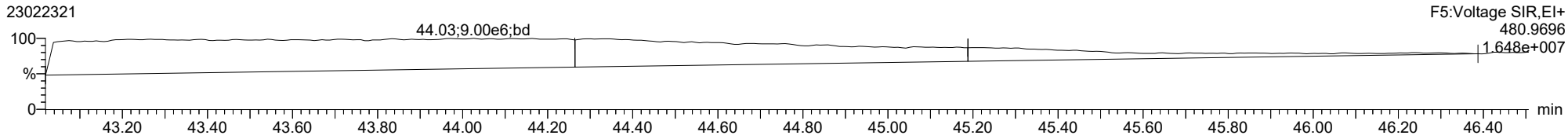


FUNCTION5 PFK



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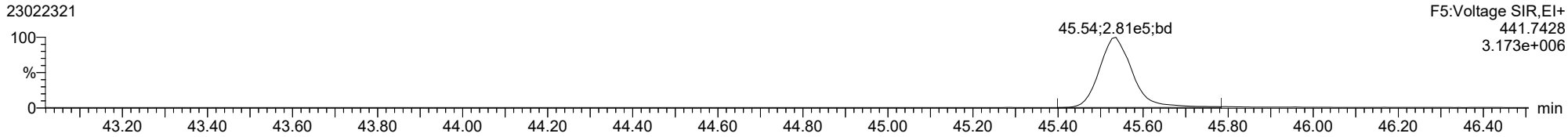

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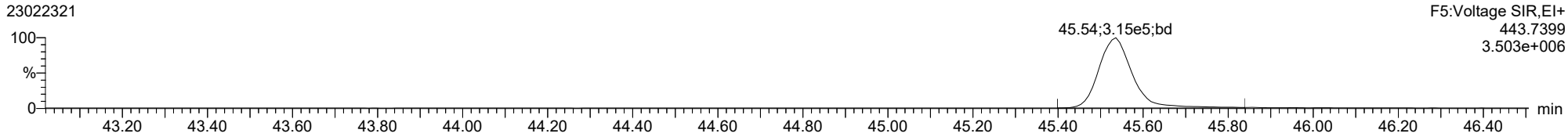

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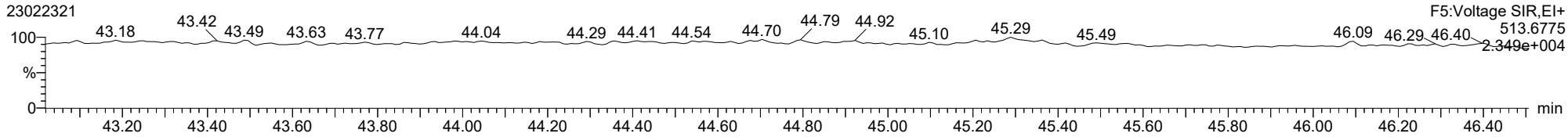

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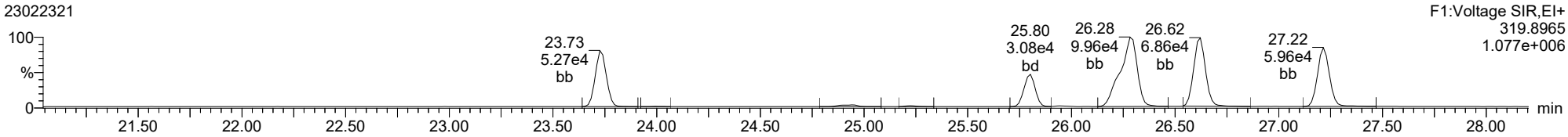
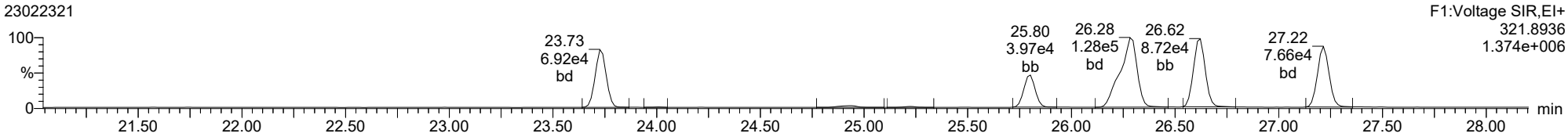
Total-tetradioxins



Total-tetradioxins



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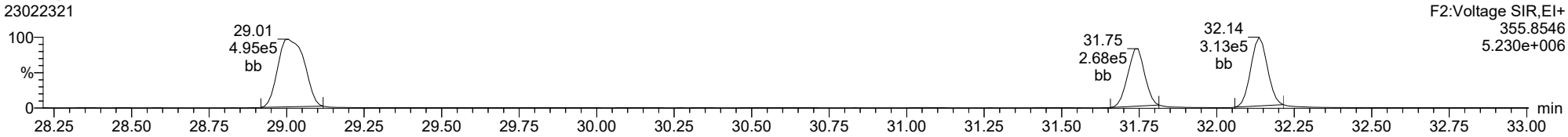
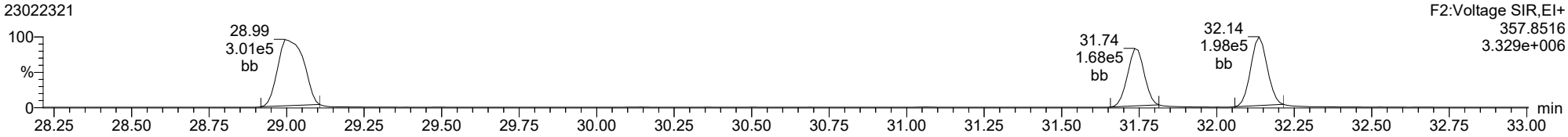
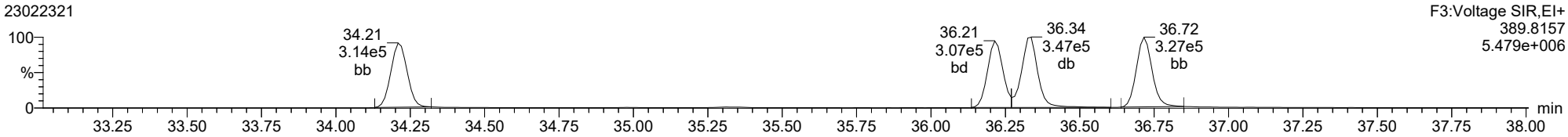


Total-pentadioxins

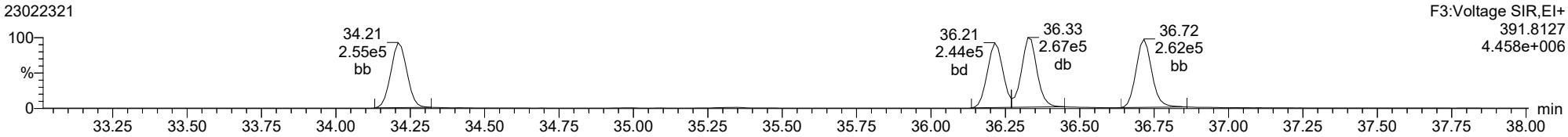


ID: CS3V5, Name: 23022321, Date: 24-Feb-2023, Time: 02:43:06, Conditions: AUTOSPEC01, User: pk

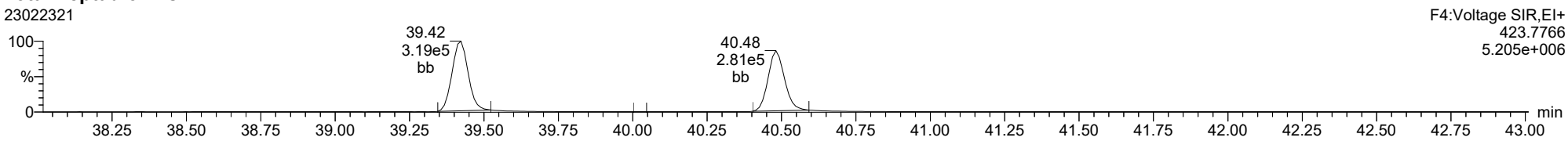
Total-hexadioxins



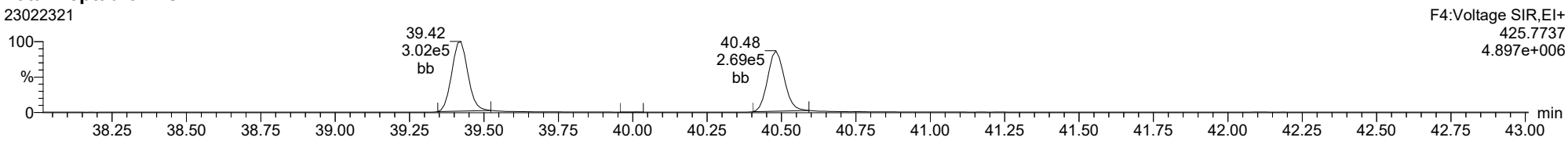
Total-hexadioxins



Total-heptadioxins

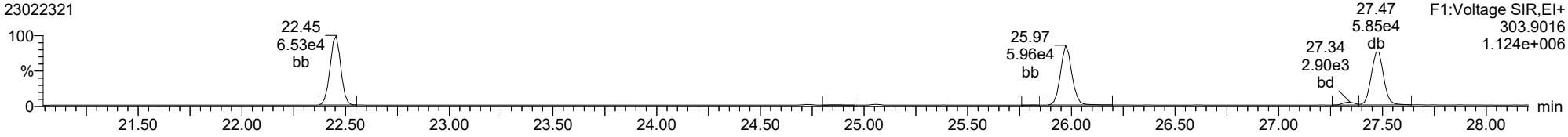


Total-heptadioxins

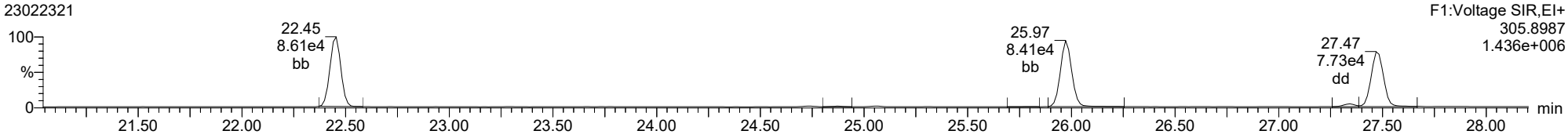


ID: CS3V5, Name: 23022321, Date: 24-Feb-2023, Time: 02:43:06, Conditions: AUTOSPEC01, User: pk

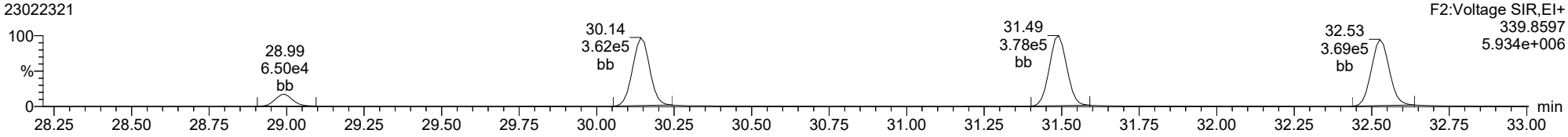
Total-tetrafurans



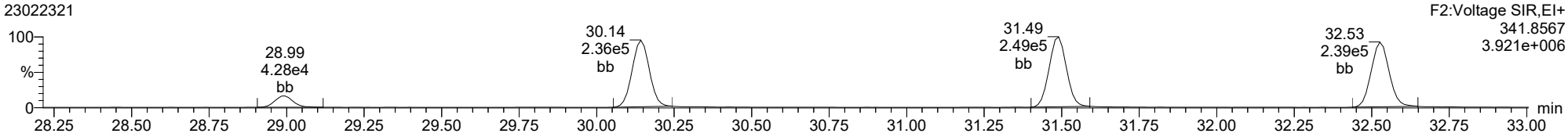
Total-tetrafurans



Total-pentafurans

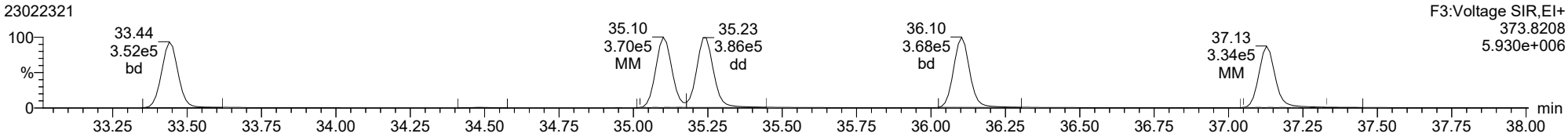


Total-pentafurans

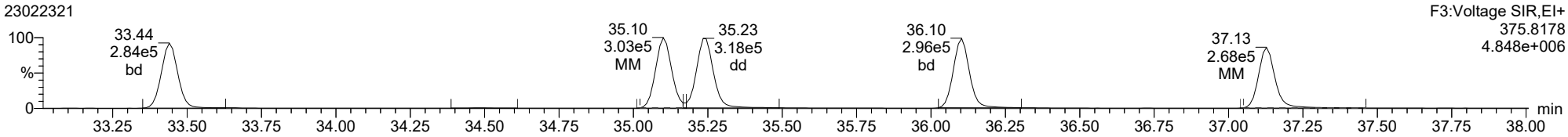


ID: CS3V5, Name: 23022321, Date: 24-Feb-2023, Time: 02:43:06, Conditions: AUTOSPEC01, User: pk

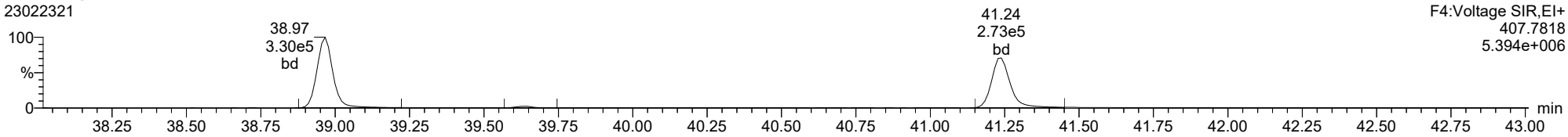
Total-hexafurans



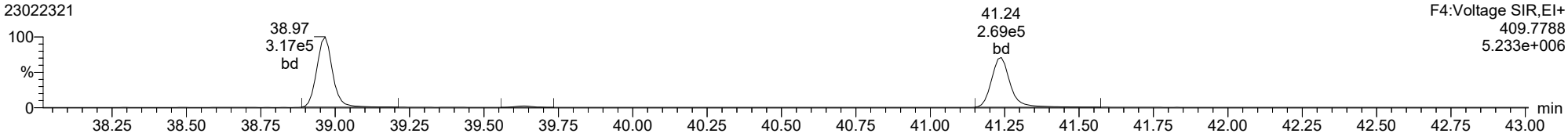
Total-hexafurans



Total-heptafurans

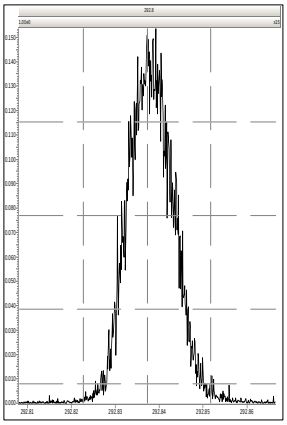


Total-heptafurans

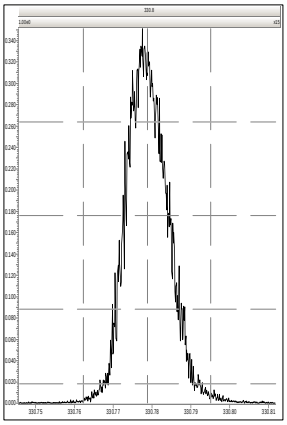


Printed: Friday, February 24, 2023 03:36:34 Pacific Standard Time

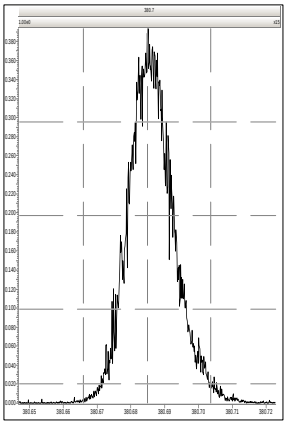
M 292.9824 R 13552



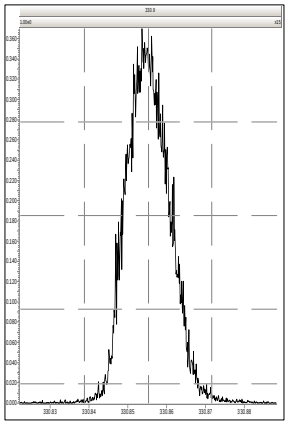
M 330.9792 R 14208



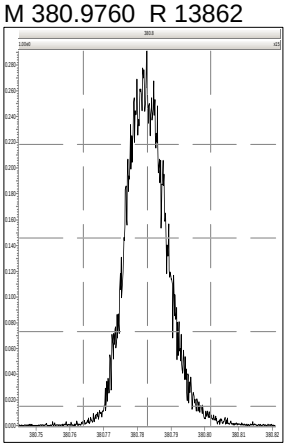
M 380.9760 R 12165



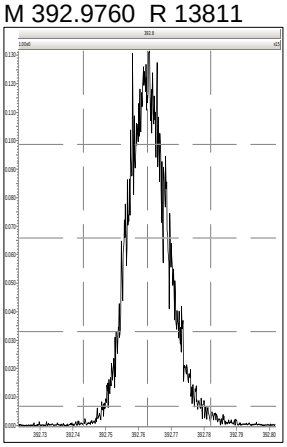
M 330.9792 R 13774



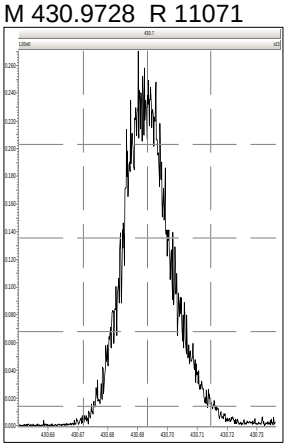
M 380.9760 R 13862



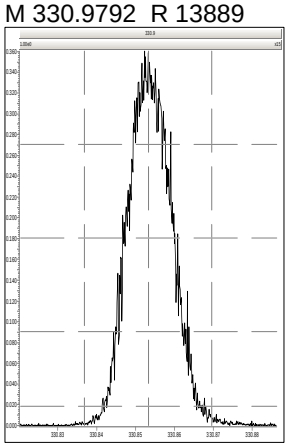
M 392.9760 R 13811



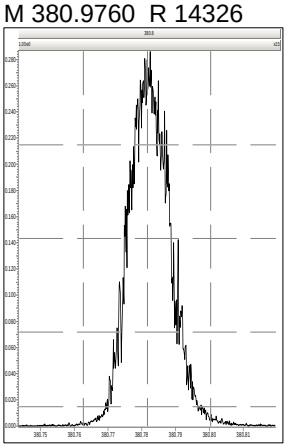
M 430.9728 R 11071



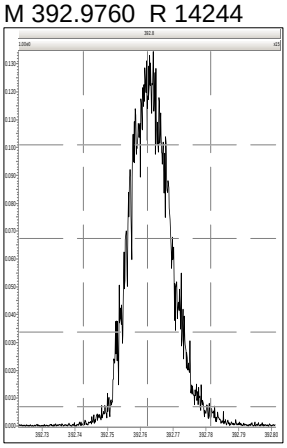
M 330.9792 R 13889



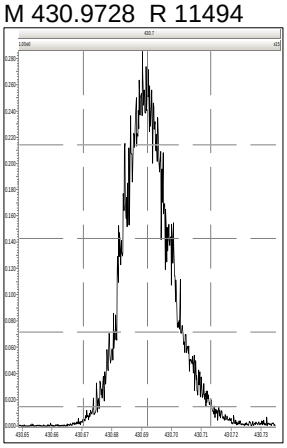
M 380.9760 R 14326



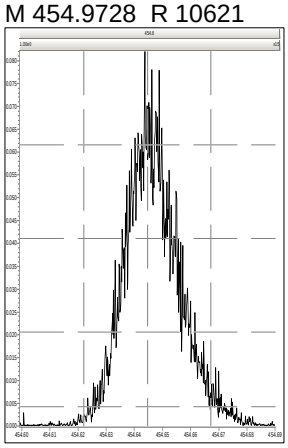
M 392.9760 R 14244



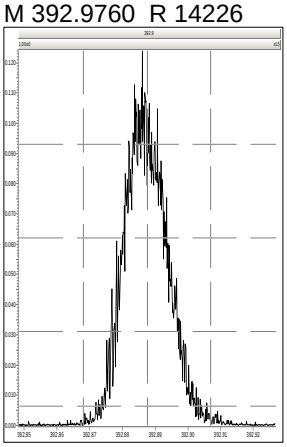
M 430.9728 R 11494



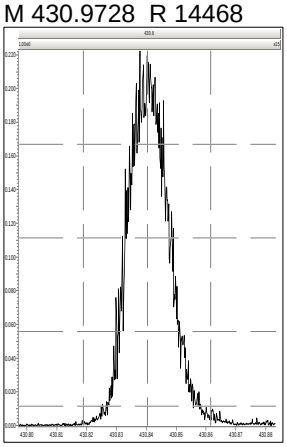
M 454.9728 R 10621



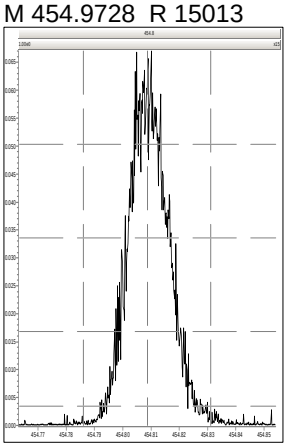
M 392.9760 R 14226



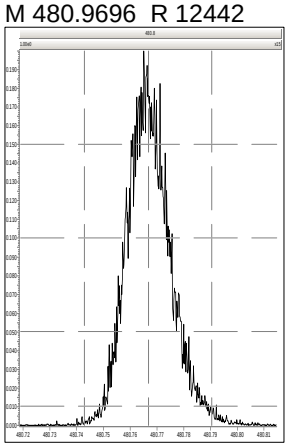
M 430.9728 R 14468



M 454.9728 R 15013

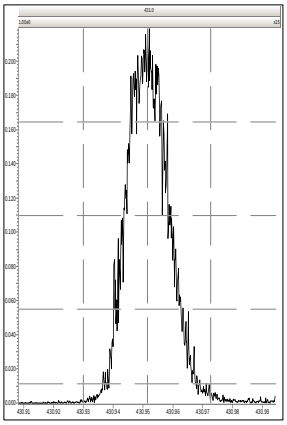


M 480.9696 R 12442

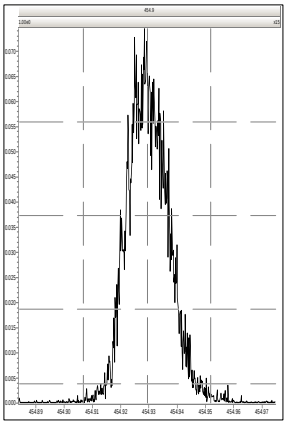


Printed: Friday, February 24, 2023 03:36:34 Pacific Standard Time

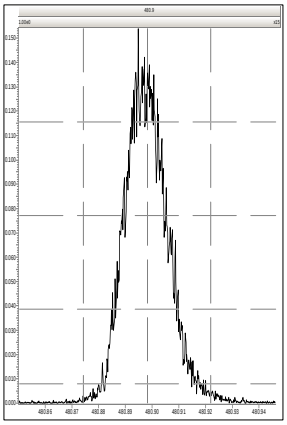
M 430.9728 R 14793



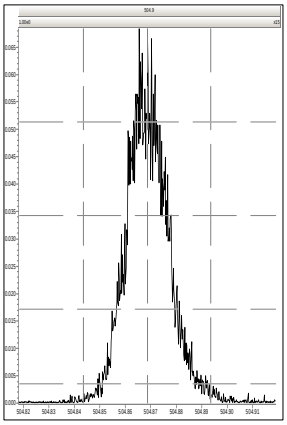
M 454.9728 R 15074



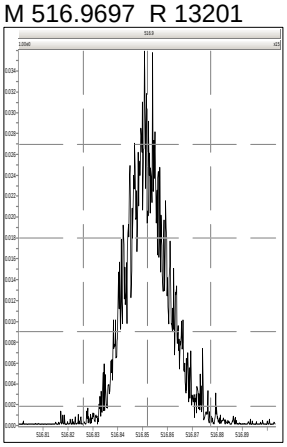
M 480.9696 R 14005

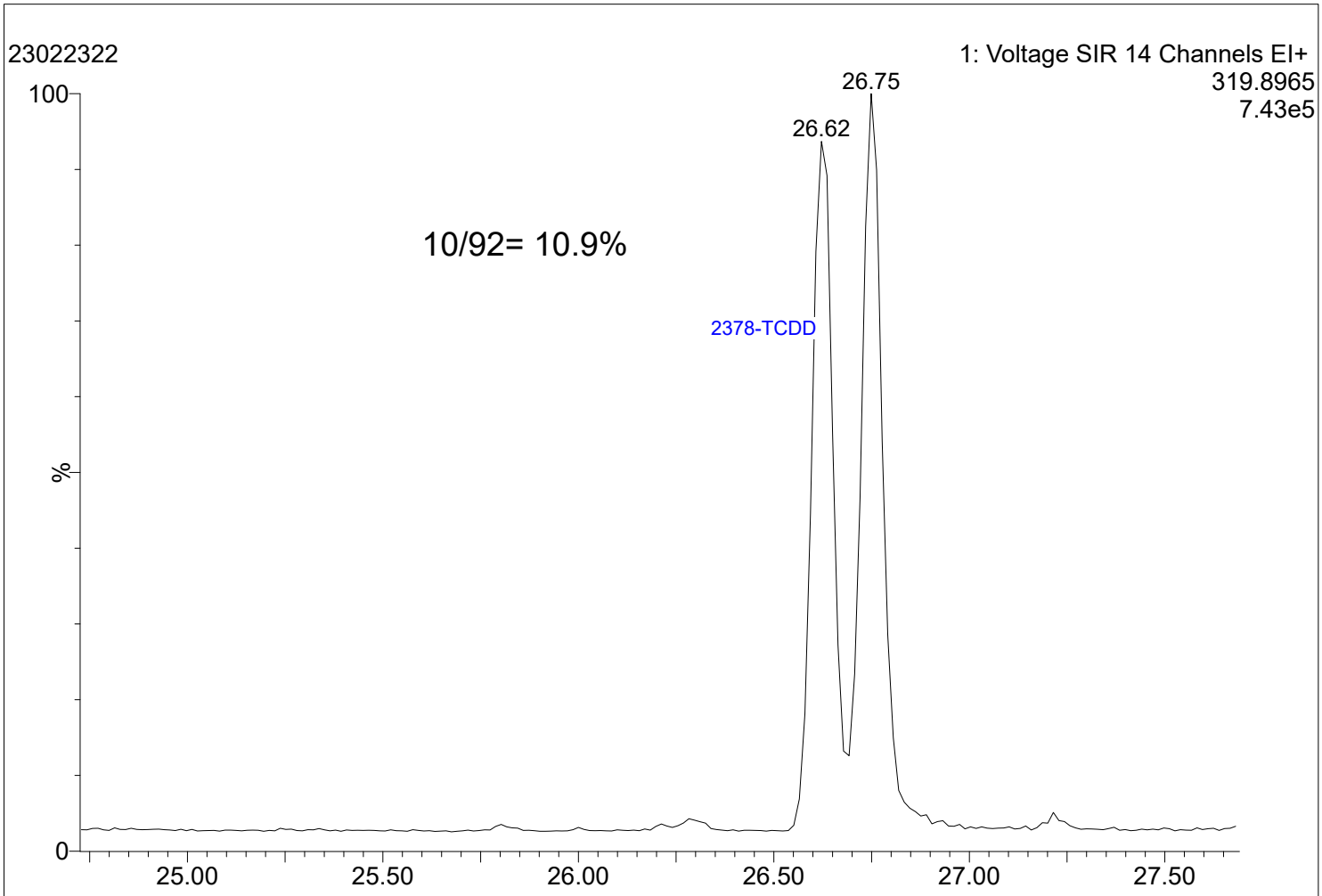


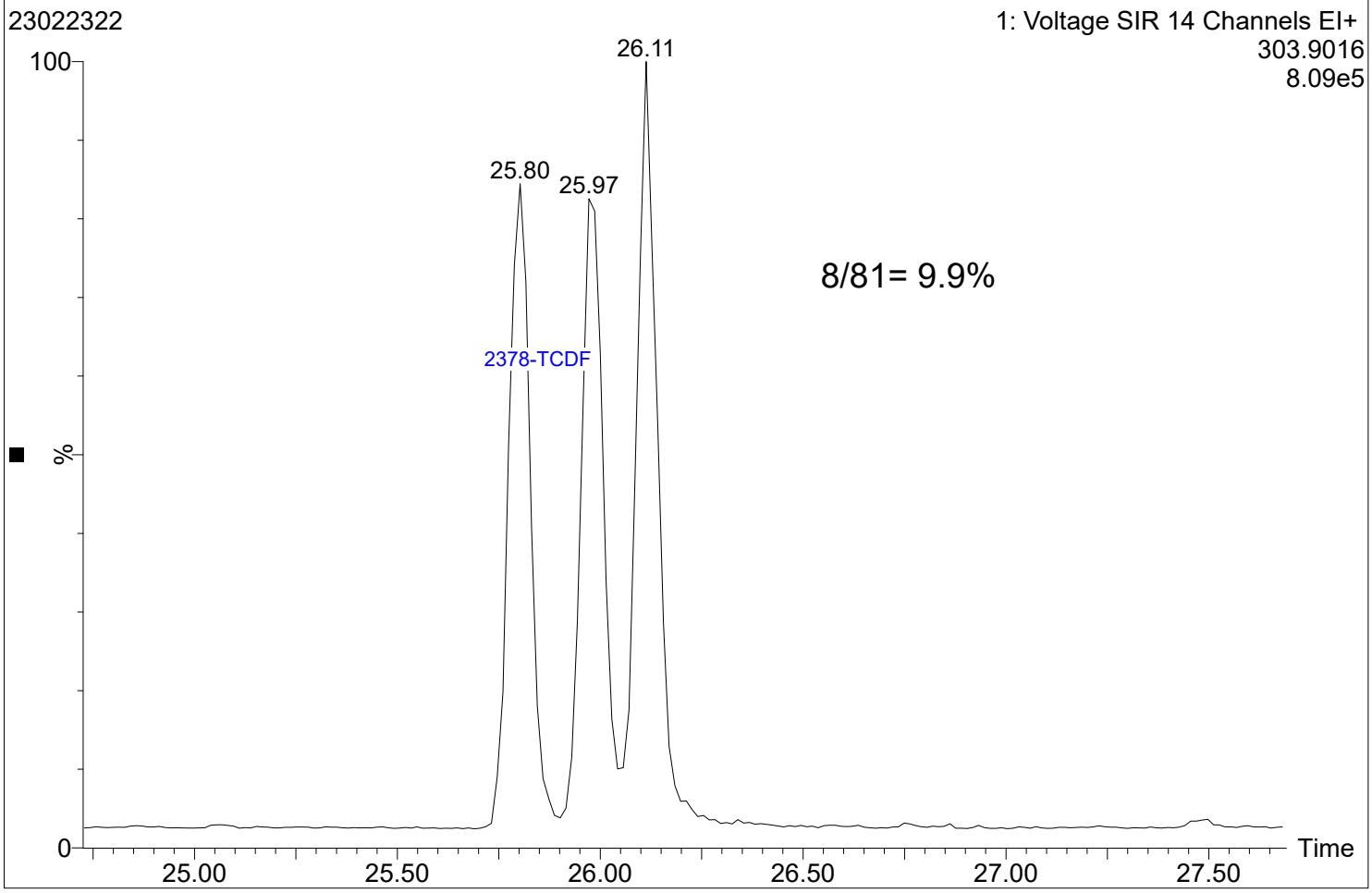
M 504.9696 R 13125



M 516.9697 R 13201




23022322
1: Voltage SIR 14 Channels EI+
319.8965
7.43e5
100
26.75
26.62
10/92= 10.9%
2378-TCDD
%
0
25.00
25.50
26.00
26.50
27.00
27.50


23022322
1: Voltage SIR 14 Channels EI+
303.9016
8.09e5
100
26.11
25.80
25.97
8/81= 9.9%
2378-TCDF
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC SDG: 23A0133

Instrument .ID: AUTOSPEC01 Lab File ID: 23020103

Date Analyzed: 02/01/23 Time Analyzed: 13:02

Lab Sample ID: SLB0026-RES1 Sequence: SLB0026

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 10.3

3467-TCDF/2378-TCDF: 10

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLB0026-ICV1	CS3R1	23020102	02/01/2023	10:37
SLB0026-RES1	ISCR1	23020103	02/01/2023	13:02
SLB0026-CAL1	CSLCR	23020104	02/01/2023	14:39
SLB0026-CAL2	CS1CR	23020105	02/01/2023	15:28
SLB0026-CAL3	CS2CR	23020106	02/01/2023	17:07
SLB0026-CAL4	CS3CR	23020107	02/01/2023	17:56
SLB0026-CAL5	CS4CR	23020108	02/01/2023	18:45
SLB0026-CAL6	CS5CR	23020109	02/01/2023	19:34
SLB0026-SCV1	ICVCR	23020110	02/01/2023	20:23
SLB0026-CCV1	CS3R2	23020111	02/01/2023	21:12
SLB0026-RES2	ISCR2	23020112	02/01/2023	22:06

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23A0133
Instrument .ID: AUTOSPEC01
Lab File ID: 23020112
Date Analyzed: 02/01/23
Time Analyzed: 22:06
Lab Sample ID: SLB0026-RES2
Sequence: SLB0026

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 7.6

3467-TCDF/2378-TCDF: 9

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLB0026-ICV1	CS3R1	23020102	02/01/2023	10:37
SLB0026-RES1	ISCR1	23020103	02/01/2023	13:02
SLB0026-CAL1	CSLCR	23020104	02/01/2023	14:39
SLB0026-CAL2	CS1CR	23020105	02/01/2023	15:28
SLB0026-CAL3	CS2CR	23020106	02/01/2023	17:07
SLB0026-CAL4	CS3CR	23020107	02/01/2023	17:56
SLB0026-CAL5	CS4CR	23020108	02/01/2023	18:45
SLB0026-CAL6	CS5CR	23020109	02/01/2023	19:34
SLB0026-SCV1	ICVCR	23020110	02/01/2023	20:23
SLB0026-CCV1	CS3R2	23020111	02/01/2023	21:12
SLB0026-RES2	ISCR2	23020112	02/01/2023	22:06

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23A0133
Instrument .ID: AUTOSPEC01
Lab File ID: 23022303
Date Analyzed: 02/23/23
Time Analyzed: 11:47
Lab Sample ID: SLB0345-RES1
Sequence: SLB0345

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 14.1

3467-TCDF/2378-TCDF: 11.5

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLB0345-ICV1	CS3V1	23022302	02/23/2023	10:49
SLB0345-RES1	ISCV1	23022303	02/23/2023	11:47
BLA0261-BLK1	Blank	23022304	02/23/2023	12:35
BLA0261-SRM1	Reference	23022306	02/23/2023	14:14
23A0133-06	LDW23-SC1241	23022310	02/23/2023	17:32
23A0133-07	LDW23-IT1217	23022311	02/23/2023	18:21
SLB0345-CCV1	CS3V4	23022312	02/23/2023	19:11
SLB0345-RES2	ISCV4	23022313	02/23/2023	20:04
23A0133-10	LDW23-SC1215	23022314	02/23/2023	20:56
23A0133-11	LDW23-SC1222	23022315	02/23/2023	21:46
SLB0345-CCV2	CS3V5	23022321A	02/24/2023	02:43
SLB0345-RES3	ISCV5	23022322	02/24/2023	03:36
BLA0261-BS1	LCS	23022401	02/24/2023	10:33

Analytical Resources, LLC
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CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23A0133
Instrument .ID: AUTOSPEC01
Lab File ID: 23022313
Date Analyzed: 02/23/23
Time Analyzed: 20:04
Lab Sample ID: SLB0345-RES2
Sequence: SLB0345

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 10.3

3467-TCDF/2378-TCDF: 9.6

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLB0345-ICV1	CS3V1	23022302	02/23/2023	10:49
SLB0345-RES1	ISCV1	23022303	02/23/2023	11:47
BLA0261-BLK1	Blank	23022304	02/23/2023	12:35
BLA0261-SRM1	Reference	23022306	02/23/2023	14:14
23A0133-06	LDW23-SC1241	23022310	02/23/2023	17:32
23A0133-07	LDW23-IT1217	23022311	02/23/2023	18:21
SLB0345-CCV1	CS3V4	23022312	02/23/2023	19:11
SLB0345-RES2	ISCV4	23022313	02/23/2023	20:04
23A0133-10	LDW23-SC1215	23022314	02/23/2023	20:56
23A0133-11	LDW23-SC1222	23022315	02/23/2023	21:46
SLB0345-CCV2	CS3V5	23022321A	02/24/2023	02:43
SLB0345-RES3	ISCV5	23022322	02/24/2023	03:36
BLA0261-BS1	LCS	23022401	02/24/2023	10:33

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Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23A0133
Instrument .ID: AUTOSPEC01
Lab File ID: 23022322
Date Analyzed: 02/24/23
Time Analyzed: 03:36
Lab Sample ID: SLB0345-RES3
Sequence: SLB0345

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 10.9

3467-TCDF/2378-TCDF: 9.9

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLB0345-ICV1	CS3V1	23022302	02/23/2023	10:49
SLB0345-RES1	ISCV1	23022303	02/23/2023	11:47
BLA0261-BLK1	Blank	23022304	02/23/2023	12:35
BLA0261-SRM1	Reference	23022306	02/23/2023	14:14
23A0133-06	LDW23-SC1241	23022310	02/23/2023	17:32
23A0133-07	LDW23-IT1217	23022311	02/23/2023	18:21
SLB0345-CCV1	CS3V4	23022312	02/23/2023	19:11
SLB0345-RES2	ISCV4	23022313	02/23/2023	20:04
23A0133-10	LDW23-SC1215	23022314	02/23/2023	20:56
23A0133-11	LDW23-SC1222	23022315	02/23/2023	21:46
SLB0345-CCV2	CS3V5	23022321A	02/24/2023	02:43
SLB0345-RES3	ISCV5	23022322	02/24/2023	03:36
BLA0261-BS1	LCS	23022401	02/24/2023	10:33

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0026	Instrument:	AUTOSPEC01
		Calibration:	GB00010

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CS3R1	SLB0026-ICV1	23020102	NA	02/01/23 10:37
ISCR1	SLB0026-RES1	23020103	NA	02/01/23 13:02
CSLCR	SLB0026-CAL1	23020104	NA	02/01/23 14:39
CS1CR	SLB0026-CAL2	23020105	NA	02/01/23 15:28
CS2CR	SLB0026-CAL3	23020106	NA	02/01/23 17:07
CS3CR	SLB0026-CAL4	23020107	NA	02/01/23 17:56
CS4CR	SLB0026-CAL5	23020108	NA	02/01/23 18:45
CS5CR	SLB0026-CAL6	23020109	NA	02/01/23 19:34
ICVCR	SLB0026-SCV1	23020110	NA	02/01/23 20:23
CS3R2	SLB0026-CCV1	23020111	NA	02/01/23 21:12
ISCR2	SLB0026-RES2	23020112	NA	02/01/23 22:06

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
		Calibration:	GB00010

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CS3V1	SLB0345-ICV1	23022302	NA	02/23/23 10:49
ISCV1	SLB0345-RES1	23022303	NA	02/23/23 11:47
Blank	BLA0261-BLK1	23022304	Solid	02/23/23 12:35
Reference	BLA0261-SRM1	23022306	Solid	02/23/23 14:14
LDW23-SC1241	23A0133-06	23022310	Solid	02/23/23 17:32
LDW23-IT1217	23A0133-07	23022311	Solid	02/23/23 18:21
CS3V4	SLB0345-CCV1	23022312	NA	02/23/23 19:11
ISCV4	SLB0345-RES2	23022313	NA	02/23/23 20:04
LDW23-SC1215	23A0133-10	23022314	Solid	02/23/23 20:56
LDW23-SC1222	23A0133-11	23022315	Solid	02/23/23 21:46
CS3V5	SLB0345-CCV2	23022321A	NA	02/24/23 02:43
ISCV5	SLB0345-RES3	23022322	NA	02/24/23 03:36
LCS	BLA0261-BS1	23022401	Solid	02/24/23 10:33

ANALYSIS SEQUENCE

SLB0345

Instrument: AUTOSPEC01 HRGCMS Column ID: K11291
Calibration ID: GB00010 Tune File: FEB0923_1-5
EM Voltage: 350 Resolution check times : 09:43, 20:04, 03:36

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLB0345-ICV1	CS3V1	QC		1	K009821		02/23/2023 10:49	23022302	PK	
SLB0345-RES1	ISCV1	QC		2	K003933		02/23/2023 11:47	23022303	PK	
BLA0261-BLK1	Blank	QC		3		K011414	02/23/2023 12:35	23022304	PK	
BLA0261-BS1	LCS	QC		4		K011414	02/24/2023 10:33	23022401	PK	
BLA0261-SRM1	Reference	QC		5		K011414	02/23/2023 14:14	23022306	PK	
BLA0261-DUP1	Duplicate	QC		6		K011414	02/23/2023 15:04	23022307	PK	
23A0100-09	LDW23-SS1226	1613B Dioxin	C 01	7		K011414	02/23/2023 15:53	23022308	PK	
23A0100-21	LDW23-SS1154	1613B Dioxin	C 01	8		K011414	02/23/2023 16:42	23022309	PK	
23A0133-06	LDW23-SC1241	1613B Dioxin	B 01	9		K011414	02/23/2023 17:32	23022310	PK	
23A0133-07	LDW23-IT1217	1613B Dioxin	B 01	10		K011414	02/23/2023 18:21	23022311	PK	
SLB0345-CCV1	CS3V4	QC		11	K009821		02/23/2023 19:11	23022312	PK	
SLB0345-RES2	ISCV4	QC		12	K003933		02/23/2023 20:04	23022313	PK	
23A0133-10	LDW23-SC1215	1613B Dioxin	B 01	13		K011414	02/23/2023 20:56	23022314	PK	
23A0133-11	LDW23-SC1222	1613B Dioxin	B 01	14		K011414	02/23/2023 21:46	23022315	PK	
23A0134-06	LDW23-SS1160	1613B Dioxin	B 01	15		K011414	02/23/2023 22:35	23022316	PK	
23A0134-14	LDW23-IT1194	1613B Dioxin	B 01	16		K011414	02/23/2023 23:25	23022317	PK	
23A0207-02	LDW23-IT1089	1613B Dioxin	B 01	17		K011414	02/24/2023 00:14	23022318	PK	
23A0207-10	LDW23-IT1097	1613B Dioxin	B 01	18		K011414	02/24/2023 01:04	23022319	PK	
23A0207-17	LDW23-IT1209	1613B Dioxin	B 01	19		K011414	02/24/2023 01:53	23022320	PK	
SLB0345-CCV2	CS3V5	QC		20	K009821		02/24/2023 02:43	23022321A	PK	
SLB0345-RES3	ISCV5	QC		21	K003933		02/24/2023 03:36	23022322	PK	

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:08:59 Pacific Standard Time 2/24/23 pk

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Quantify		
Dataset Created		
Peak deleted	Sample:23022322, Compound:13C-123789-HxCDD, RT:36.704	21
Peak deleted	Sample:23022322, Compound:13C-1234-TCDD, RT:25.788	21
Peak deleted	Sample:23022313, Compound:13C-1234-TCDD, RT:25.802	12
Peak deleted	Sample:23022313, Compound:13C-123789-HxCDD, RT:36.704	12
Peak deleted	Sample:23022303, Compound:13C-123789-HxCDD, RT:36.749	2
Pre modification peak	Sample:23022321, Compound:HF, RT:37.128	20
Peak modified	Sample:23022321, Compound:HF, RT:37.128	20
Pre modification peak	Sample:23022321, Compound:HF, RT:37.128	20
Peak modified	Sample:23022321, Compound:HF, RT:37.128	20
Peak modified	Sample:23022321, Compound:HF, RT:37.128	20
Pre modification peak	Sample:23022321, Compound:HF, RT:35.100	20
Peak modified	Sample:23022321, Compound:HF, RT:35.100	20
Peak modified	Sample:23022321, Compound:HF, RT:35.100	20
Peak modified	Sample:23022321, Compound:HF, RT:35.100	20
Peak modified	Sample:23022321, Compound:HF, RT:35.100	20
Pre modification peak	Sample:23022321, Compound:HF, RT:35.100	20
Peak modified	Sample:23022321, Compound:HF, RT:35.100	20
Peak deleted	Sample:23022304, Compound:TD, RT:26.650	3
Pre modification peak	Sample:23022304, Compound:OD, RT:45.289	3
Peak modified	Sample:23022304, Compound:OD, RT:45.289	3
Pre modification peak	Sample:23022309, Compound:PF, RT:31.524	8
Peak modified	Sample:23022309, Compound:PF, RT:31.524	8
Pre modification peak	Sample:23022309, Compound:PF, RT:31.524	8
Peak modified	Sample:23022309, Compound:PF, RT:31.524	8
Peak added	Sample:23022310, Compound:HF, RT:36.125	9
Peak added	Sample:23022310, Compound:HF, RT:36.103	9
Pre modification peak	Sample:23022311, Compound:PF, RT:31.513	10
Peak modified	Sample:23022311, Compound:PF, RT:31.513	10
Pre modification peak	Sample:23022316, Compound:HF, RT:36.136	15
Peak modified	Sample:23022316, Compound:HF, RT:36.136	15
Pre modification peak	Sample:23022316, Compound:HPF, RT:41.250	15
Peak modified	Sample:23022316, Compound:HPF, RT:41.250	15
Pre modification peak	Sample:23022316, Compound:HPF, RT:41.250	15
Peak modified	Sample:23022316, Compound:HPF, RT:41.250	15
Pre modification peak	Sample:23022317, Compound:TF, RT:25.972	16
Peak modified	Sample:23022317, Compound:TF, RT:25.972	16
Pre modification peak	Sample:23022317, Compound:HF, RT:37.094	16
Peak modified	Sample:23022317, Compound:HF, RT:37.094	16
Pre modification peak	Sample:23022317, Compound:HF, RT:37.105	16
Peak modified	Sample:23022317, Compound:HF, RT:37.105	16
Pre modification peak	Sample:23022319, Compound:HPF, RT:41.261	18
Peak modified	Sample:23022319, Compound:HPF, RT:41.261	18
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230223IH.qld'	
Peak deleted	Sample:23022304, Compound:TF, RT:25.986	3
Peak deleted	Sample:23022306, Compound:HD, RT:37.195	5
Peak deleted	Sample:23022307, Compound:HF, RT:37.228	6
Peak deleted	Sample:23022308, Compound:PF, RT:29.596	7
Peak deleted	Sample:23022308, Compound:PF, RT:28.738	7
Peak deleted	Sample:23022308, Compound:PD, RT:31.479	7
Peak added	Sample:23022308, Compound:PD, RT:29.095	7
Peak added	Sample:23022308, Compound:PD, RT:29.273	7

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:08:59 Pacific Standard Time

Event	Details	Sample ID
Peak deleted	Sample:23022308, Compound:HPD, RT:39.634	7
Pre modification peak	Sample:23022309, Compound:13C-123478-HxCDF, RT:35.133	8
Peak modified	Sample:23022309, Compound:13C-123478-HxCDF, RT:35.133	8
Peak deleted	Sample:23022309, Compound:PP, RT:28.119	8
Peak deleted	Sample:23022309, Compound:HD, RT:34.008	8
Peak deleted	Sample:23022309, Compound:HPD, RT:40.837	8
Peak deleted	Sample:23022310, Compound:HD, RT:37.206	9
Pre modification peak	Sample:23022311, Compound:PF, RT:29.095	10
Peak modified	Sample:23022311, Compound:PF, RT:29.095	10
Pre modification peak	Sample:23022311, Compound:PF, RT:29.095	10
Peak modified	Sample:23022311, Compound:PF, RT:29.095	10
Peak deleted	Sample:23022311, Compound:HD, RT:35.680	10
Peak deleted	Sample:23022311, Compound:HPD, RT:40.838	10
Peak deleted	Sample:23022315, Compound:TF, RT:24.503	14
Peak added	Sample:23022315, Compound:PD, RT:29.061	14
Peak added	Sample:23022315, Compound:PD, RT:29.073	14
Peak deleted	Sample:23022315, Compound:HPD, RT:40.826	14
Peak deleted	Sample:23022316, Compound:HF, RT:37.194	15
Peak added	Sample:23022316, Compound:HF, RT:37.117	15
Peak added	Sample:23022316, Compound:HF, RT:37.117	15
Peak deleted	Sample:23022316, Compound:HD, RT:37.194	15
Peak deleted	Sample:23022317, Compound:PF, RT:28.883	16
Peak deleted	Sample:23022317, Compound:TD, RT:26.735	16
Pre modification peak	Sample:23022319, Compound:PF, RT:29.084	18
Peak modified	Sample:23022319, Compound:PF, RT:29.084	18
Pre modification peak	Sample:23022319, Compound:PF, RT:29.084	18
Peak modified	Sample:23022319, Compound:PF, RT:29.084	18
Peak added	Sample:23022319, Compound:PD, RT:29.062	18
Peak added	Sample:23022319, Compound:PD, RT:29.051	18
Peak deleted	Sample:23022319, Compound:HD, RT:37.194	18
Peak added	Sample:23022320, Compound:PF, RT:29.251	19
Peak added	Sample:23022320, Compound:PF, RT:29.251	19
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230223IH.qld'	

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0026	Instrument:	AUTOSPEC01
Sample ID:	SLB0026-ICV1	Calibration:	GB00010
File ID:	23020102	Analyzed:	02/01/23 10:37

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	81.8	71 - 129	25.8667	25.87167	-0.0050	N/A	
13C12-2,3,7,8-TCDD	100.00	103	82 - 118	26.5168	26.51423	0.0026	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	97.0	76 - 124	30.0278	30.03173	-0.0039	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	96.3	77 - 123	31.3648	31.36872	-0.0039	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	97.3	62 - 138	31.621	31.62498	-0.0040	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	88.7	76 - 124	34.9858	34.9784	0.0074	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	89.6	70 - 130	35.1195	35.11773	0.0018	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	88.7	73 - 127	35.9773	35.97562	0.0017	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	87.8	74 - 126	37.0023	37.00233	0.0000	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	99.3	85 - 115	36.0998	36.09812	0.0017	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	102	85 - 115	36.2113	36.21508	-0.0038	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	80.6	78 - 122	38.8407	38.84072	0.0000	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	78.2	77 - 123	41.0912	41.09488	-0.0037	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	84.9	72 - 128	40.3447	40.3447	0.0000	N/A	
13C12-OCDD	200.00	87.8	48 - 152	45.1112	45.10738	0.0038	N/A	
37Cl4-2,3,7,8-TCDD	10.000	85.8	0 - 200	26.5318	26.53683	-0.0050	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0026	Instrument:	AUTOSPEC01
Sample ID:	SLB0026-SCV1	Calibration:	GB00010
File ID:	23020110	Analyzed:	02/01/23 20:23

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	101	0 - 200	25.8667	25.87167	-0.0050	N/A	
13C12-2,3,7,8-TCDD	100.00	97.3	0 - 200	26.5015	26.51423	-0.0127	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	97.9	0 - 200	30.0262	30.03173	-0.0055	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	96.0	0 - 200	31.3632	31.36872	-0.0055	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	95.6	0 - 200	31.6193	31.62498	-0.0057	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	99.0	0 - 200	34.9728	34.9784	-0.0056	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.8	0 - 200	35.1065	35.11773	-0.0112	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	99.3	0 - 200	35.9643	35.97562	-0.0113	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	98.6	0 - 200	36.9893	37.00233	-0.0130	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	97.7	0 - 200	36.0868	36.09812	-0.0113	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	101	0 - 200	36.2095	36.21508	-0.0056	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	100	0 - 200	38.8278	38.84072	-0.0129	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	101	0 - 200	41.0895	41.09488	-0.0054	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	101	0 - 200	40.3318	40.3447	-0.0129	N/A	
13C12-OCDD	200.00	103	0 - 200	45.1013	45.10738	-0.0061	N/A	
37Cl4-2,3,7,8-TCDD	10.000	89.4	0 - 200	26.5318	26.53683	-0.0050	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0026	Instrument:	AUTOSPEC01
Sample ID:	SLB0026-CCV1	Calibration:	GB00010
File ID:	23020111	Analyzed:	02/01/23 21:12

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	95.3	71 - 129	25.8665	25.87167	-0.0052	N/A	
13C12-2,3,7,8-TCDD	100.00	103	82 - 118	26.5167	26.51423	0.0025	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	97.8	76 - 124	30.026	30.03173	-0.0057	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	97.6	77 - 123	31.363	31.36872	-0.0057	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	95.1	62 - 138	31.6193	31.62498	-0.0057	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	102	76 - 124	34.9727	34.9784	-0.0057	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	102	70 - 130	35.1175	35.11773	-0.0002	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	99.6	73 - 127	35.9753	35.97562	-0.0003	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	101	74 - 126	37.0005	37.00233	-0.0018	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	100	85 - 115	36.098	36.09812	-0.0001	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	100	85 - 115	36.2093	36.21508	-0.0058	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	102	78 - 122	38.8387	38.84072	-0.0020	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	104	77 - 123	41.0893	41.09488	-0.0056	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	103	72 - 128	40.3428	40.3447	-0.0019	N/A	
13C12-OCDD	200.00	106	48 - 152	45.1013	45.10738	-0.0061	N/A	
37Cl4-2,3,7,8-TCDD	10.000	90.4	0 - 200	26.5317	26.53683	-0.0051	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	SLB0345-ICV1	Calibration:	GB00010
File ID:	23022302	Analyzed:	02/23/23 10:49

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	86.1	71 - 129	25.986	25.87167	0.1143	N/A	
13C12-2,3,7,8-TCDD	100.00	97.7	82 - 118	26.6358	26.51423	0.1216	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	81.5	76 - 124	30.1535	30.03173	0.1218	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	86.2	77 - 123	31.5015	31.36872	0.1328	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	77.8	62 - 138	31.7578	31.62498	0.1328	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	93.7	76 - 124	35.1112	34.9784	0.1328	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	103	70 - 130	35.245	35.11773	0.1273	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	98.2	73 - 127	36.1028	35.97562	0.1272	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	86.6	74 - 126	37.1388	37.00233	0.1365	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	109	85 - 115	36.2253	36.09812	0.1272	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	119	85 - 115	36.3367	36.21508	0.1216	N/A	*
13C12-1,2,3,4,6,7,8-HpCDF	100.00	80.7	78 - 122	38.966	38.84072	0.1253	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	75.8	77 - 123	41.2498	41.09488	0.1549	N/A	*
13C12-1,2,3,4,6,7,8-HpCDD	100.00	79.3	72 - 128	40.4923	40.3447	0.1476	N/A	
13C12-OCDD	200.00	64.4	48 - 152	45.298	45.10738	0.1906	N/A	
37Cl4-2,3,7,8-TCDD	10.000	83.9	0 - 200	26.6498	26.53683	0.1130	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	BLA0261-BLK1	Calibration:	GB00010
File ID:	23022304	Analyzed:	02/23/23 12:35

Surrogate Compound	Spike Level ng/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	200.00	101	24 - 169	25.9862	25.87167	0.1145	N/A	
13C12-2,3,7,8-TCDD	200.00	135	25 - 164	26.6217	26.51423	0.1075	N/A	
13C12-1,2,3,7,8-PeCDF	200.00	83.3	24 - 185	30.1535	30.03173	0.1218	N/A	
13C12-2,3,4,7,8-PeCDF	200.00	85.6	21 - 178	31.4905	31.36872	0.1218	N/A	
13C12-1,2,3,7,8-PeCDD	200.00	73.0	25 - 181	31.7467	31.62498	0.1217	N/A	
13C12-1,2,3,4,7,8-HxCDF	200.00	121	26 - 152	35.1113	34.9784	0.1329	N/A	
13C12-1,2,3,6,7,8-HxCDF	200.00	130	26 - 123	35.245	35.11773	0.1273	N/A	*
13C12-2,3,4,6,7,8-HxCDF	200.00	120	28 - 136	36.1028	35.97562	0.1272	N/A	
13C12-1,2,3,7,8,9-HxCDF	200.00	107	29 - 147	37.1388	37.00233	0.1365	N/A	
13C12-1,2,3,4,7,8-HxCDD	200.00	142	32 - 141	36.2253	36.09812	0.1272	N/A	*
13C12-1,2,3,6,7,8-HxCDD	200.00	147	28 - 130	36.3367	36.21508	0.1216	N/A	*
13C12-1,2,3,4,6,7,8-HpCDF	200.00	95.9	28 - 143	38.9662	38.84072	0.1255	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	200.00	96.7	26 - 138	41.239	41.09488	0.1441	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	200.00	98.0	23 - 140	40.4813	40.3447	0.1366	N/A	
13C12-OCDD	400.00	69.1	17 - 157	45.2892	45.10738	0.1818	N/A	
37Cl4-2,3,7,8-TCDD	80.000	107	35 - 197	26.65	26.53683	0.1132	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	BLA0261-SRM1	Calibration:	GB00010
File ID:	23022306	Analyzed:	02/23/23 14:14

Surrogate Compound	Spike Level ng/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	199.20	85.6	24 - 169	25.972	25.87167	0.1003	N/A	
13C12-2,3,7,8-TCDD	199.20	112	25 - 164	26.6218	26.51423	0.1076	N/A	
13C12-1,2,3,7,8-PeCDF	199.20	111	24 - 185	30.1425	30.03173	0.1108	N/A	
13C12-2,3,4,7,8-PeCDF	199.20	117	21 - 178	31.4905	31.36872	0.1218	N/A	
13C12-1,2,3,7,8-PeCDD	199.20	103	25 - 181	31.7468	31.62498	0.1218	N/A	
13C12-1,2,3,4,7,8-HxCDF	199.20	95.9	26 - 152	35.1003	34.9784	0.1219	N/A	
13C12-1,2,3,6,7,8-HxCDF	199.20	102	26 - 123	35.234	35.11773	0.1163	N/A	
13C12-2,3,4,6,7,8-HxCDF	199.20	95.9	28 - 136	36.103	35.97562	0.1274	N/A	
13C12-1,2,3,7,8,9-HxCDF	199.20	106	29 - 147	37.1278	37.00233	0.1255	N/A	
13C12-1,2,3,4,7,8-HxCDD	199.20	106	32 - 141	36.2255	36.09812	0.1274	N/A	
13C12-1,2,3,6,7,8-HxCDD	199.20	116	28 - 130	36.3368	36.21508	0.1217	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	199.20	73.1	28 - 143	38.9662	38.84072	0.1255	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	199.20	72.7	26 - 138	41.2388	41.09488	0.1439	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	199.20	70.0	23 - 140	40.4812	40.3447	0.1365	N/A	
13C12-OCDD	398.41	74.7	17 - 157	45.2892	45.10738	0.1818	N/A	
37Cl4-2,3,7,8-TCDD	79.681	93.8	35 - 197	26.636	26.53683	0.0992	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	23A0133-06	Calibration:	GB00010
File ID:	23022310	Analyzed:	02/23/23 17:32

Surrogate Compound	Spike Level ng/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	199.81	87.8	24 - 169	25.9862	25.87167	0.1145	N/A	
13C12-2,3,7,8-TCDD	199.81	114	25 - 164	26.6218	26.51423	0.1076	N/A	
13C12-1,2,3,7,8-PeCDF	199.81	105	24 - 185	30.1535	30.03173	0.1218	N/A	
13C12-2,3,4,7,8-PeCDF	199.81	105	21 - 178	31.4905	31.36872	0.1218	N/A	
13C12-1,2,3,7,8-PeCDD	199.81	84.8	25 - 181	31.7468	31.62498	0.1218	N/A	
13C12-1,2,3,4,7,8-HxCDF	199.81	93.3	26 - 152	35.1113	34.9784	0.1329	N/A	
13C12-1,2,3,6,7,8-HxCDF	199.81	96.2	26 - 123	35.245	35.11773	0.1273	N/A	
13C12-2,3,4,6,7,8-HxCDF	199.81	96.3	28 - 136	36.114	35.97562	0.1384	N/A	
13C12-1,2,3,7,8,9-HxCDF	199.81	91.1	29 - 147	37.1278	37.00233	0.1255	N/A	
13C12-1,2,3,4,7,8-HxCDD	199.81	106	32 - 141	36.2365	36.09812	0.1384	N/A	
13C12-1,2,3,6,7,8-HxCDD	199.81	110	28 - 130	36.359	36.21508	0.1439	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	199.81	90.4	28 - 143	38.9662	38.84072	0.1255	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	199.81	97.3	26 - 138	41.239	41.09488	0.1441	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	199.81	95.8	23 - 140	40.4812	40.3447	0.1365	N/A	
13C12-OCDD	399.62	97.2	17 - 157	45.2983	45.10738	0.1909	N/A	
37Cl4-2,3,7,8-TCDD	79.924	92.0	35 - 197	26.65	26.53683	0.1132	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	23A0133-07	Calibration:	GB00010
File ID:	23022311	Analyzed:	02/23/23 18:21

Surrogate Compound	Spike Level ng/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	199.77	83.8	24 - 169	25.9862	25.87167	0.1145	N/A	
13C12-2,3,7,8-TCDD	199.77	114	25 - 164	26.6218	26.51423	0.1076	N/A	
13C12-1,2,3,7,8-PeCDF	199.77	78.4	24 - 185	30.1535	30.03173	0.1218	N/A	
13C12-2,3,4,7,8-PeCDF	199.77	77.4	21 - 178	31.4905	31.36872	0.1218	N/A	
13C12-1,2,3,7,8-PeCDD	199.77	62.4	25 - 181	31.7467	31.62498	0.1217	N/A	
13C12-1,2,3,4,7,8-HxCDF	199.77	101	26 - 152	35.1113	34.9784	0.1329	N/A	
13C12-1,2,3,6,7,8-HxCDF	199.77	101	26 - 123	35.245	35.11773	0.1273	N/A	
13C12-2,3,4,6,7,8-HxCDF	199.77	100	28 - 136	36.114	35.97562	0.1384	N/A	
13C12-1,2,3,7,8,9-HxCDF	199.77	93.3	29 - 147	37.1277	37.00233	0.1254	N/A	
13C12-1,2,3,4,7,8-HxCDD	199.77	110	32 - 141	36.2253	36.09812	0.1272	N/A	
13C12-1,2,3,6,7,8-HxCDD	199.77	113	28 - 130	36.3367	36.21508	0.1216	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	199.77	87.6	28 - 143	38.966	38.84072	0.1253	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	199.77	91.1	26 - 138	41.25	41.09488	0.1551	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	199.77	93.3	23 - 140	40.4923	40.3447	0.1476	N/A	
13C12-OCDD	399.53	81.6	17 - 157	45.2982	45.10738	0.1908	N/A	
37Cl4-2,3,7,8-TCDD	79.907	89.3	35 - 197	26.6502	26.53683	0.1134	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	SLB0345-CCV1	Calibration:	GB00010
File ID:	23022312	Analyzed:	02/23/23 19:11

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	82.6	71 - 129	25.958	25.87167	0.0863	N/A	
13C12-2,3,7,8-TCDD	100.00	102	82 - 118	26.6077	26.51423	0.0935	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	74.0	76 - 124	30.131	30.03173	0.0993	N/A	*
13C12-2,3,4,7,8-PeCDF	100.00	76.9	77 - 123	31.4792	31.36872	0.1105	N/A	*
13C12-1,2,3,7,8-PeCDD	100.00	65.3	62 - 138	31.7353	31.62498	0.1103	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	94.5	76 - 124	35.0888	34.9784	0.1104	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.1	70 - 130	35.2225	35.11773	0.1048	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	97.8	73 - 127	36.0915	35.97562	0.1159	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	90.0	74 - 126	37.1165	37.00233	0.1142	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	104	85 - 115	36.2028	36.09812	0.1047	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	109	85 - 115	36.3142	36.21508	0.0991	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	82.5	78 - 122	38.9548	38.84072	0.1141	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	81.2	77 - 123	41.2277	41.09488	0.1328	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	83.7	72 - 128	40.4698	40.3447	0.1251	N/A	
13C12-OCDD	200.00	57.0	48 - 152	45.2705	45.10738	0.1631	N/A	
37Cl4-2,3,7,8-TCDD	10.000	88.2	0 - 200	26.6218	26.53683	0.0850	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	23A0133-10	Calibration:	GB00010
File ID:	23022314	Analyzed:	02/23/23 20:56

Surrogate Compound	Spike Level ng/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	199.73	82.3	24 - 169	26.0003	25.87167	0.1286	N/A	
13C12-2,3,7,8-TCDD	199.73	105	25 - 164	26.6358	26.51423	0.1216	N/A	
13C12-1,2,3,7,8-PeCDF	199.73	90.6	24 - 185	30.1758	30.03173	0.1441	N/A	
13C12-2,3,4,7,8-PeCDF	199.73	85.0	21 - 178	31.5127	31.36872	0.1440	N/A	
13C12-1,2,3,7,8-PeCDD	199.73	65.9	25 - 181	31.769	31.62498	0.1440	N/A	
13C12-1,2,3,4,7,8-HxCDF	199.73	102	26 - 152	35.1223	34.9784	0.1439	N/A	
13C12-1,2,3,6,7,8-HxCDF	199.73	106	26 - 123	35.2672	35.11773	0.1495	N/A	
13C12-2,3,4,6,7,8-HxCDF	199.73	103	28 - 136	36.1363	35.97562	0.1607	N/A	
13C12-1,2,3,7,8,9-HxCDF	199.73	99.8	29 - 147	37.1502	37.00233	0.1479	N/A	
13C12-1,2,3,4,7,8-HxCDD	199.73	107	32 - 141	36.2477	36.09812	0.1496	N/A	
13C12-1,2,3,6,7,8-HxCDD	199.73	112	28 - 130	36.3703	36.21508	0.1552	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	199.73	89.5	28 - 143	38.9885	38.84072	0.1478	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	199.73	87.6	26 - 138	41.2613	41.09488	0.1664	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	199.73	87.3	23 - 140	40.5038	40.3447	0.1591	N/A	
13C12-OCDD	399.46	76.0	17 - 157	45.3167	45.10738	0.2093	N/A	
37Cl4-2,3,7,8-TCDD	79.891	82.8	35 - 197	26.6642	26.53683	0.1274	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	23A0133-11	Calibration:	GB00010
File ID:	23022315	Analyzed:	02/23/23 21:46

Surrogate Compound	Spike Level ng/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	199.84	84.9	24 - 169	25.986	25.87167	0.1143	N/A	
13C12-2,3,7,8-TCDD	199.84	106	25 - 164	26.6217	26.51423	0.1075	N/A	
13C12-1,2,3,7,8-PeCDF	199.84	83.0	24 - 185	30.1532	30.03173	0.1215	N/A	
13C12-2,3,4,7,8-PeCDF	199.84	70.7	21 - 178	31.5012	31.36872	0.1325	N/A	
13C12-1,2,3,7,8-PeCDD	199.84	57.0	25 - 181	31.7573	31.62498	0.1323	N/A	
13C12-1,2,3,4,7,8-HxCDF	199.84	99.1	26 - 152	35.1108	34.9784	0.1324	N/A	
13C12-1,2,3,6,7,8-HxCDF	199.84	99.6	26 - 123	35.2557	35.11773	0.1380	N/A	
13C12-2,3,4,6,7,8-HxCDF	199.84	100	28 - 136	36.1135	35.97562	0.1379	N/A	
13C12-1,2,3,7,8,9-HxCDF	199.84	99.1	29 - 147	37.1383	37.00233	0.1360	N/A	
13C12-1,2,3,4,7,8-HxCDD	199.84	107	32 - 141	36.236	36.09812	0.1379	N/A	
13C12-1,2,3,6,7,8-HxCDD	199.84	107	28 - 130	36.3475	36.21508	0.1324	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	199.84	90.7	28 - 143	38.9767	38.84072	0.1360	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	199.84	88.9	26 - 138	41.2493	41.09488	0.1544	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	199.84	92.5	23 - 140	40.4918	40.3447	0.1471	N/A	
13C12-OCDD	399.68	88.4	17 - 157	45.3068	45.10738	0.1994	N/A	
37Cl4-2,3,7,8-TCDD	79.936	87.1	35 - 197	26.6498	26.53683	0.1130	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	SLB0345-CCV2	Calibration:	GB00010
File ID:	23022321A	Analyzed:	02/24/23 02:43

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	81.2	71 - 129	25.9578	25.87167	0.0861	N/A	
13C12-2,3,7,8-TCDD	100.00	110	82 - 118	26.5935	26.51423	0.0793	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	73.6	76 - 124	30.12	30.03173	0.0883	N/A	*
13C12-2,3,4,7,8-PeCDF	100.00	73.8	77 - 123	31.468	31.36872	0.0993	N/A	*
13C12-1,2,3,7,8-PeCDD	100.00	57.3	62 - 138	31.7243	31.62498	0.0993	N/A	*
13C12-1,2,3,4,7,8-HxCDF	100.00	97.6	76 - 124	35.089	34.9784	0.1106	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	99.0	70 - 130	35.2227	35.11773	0.1050	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	97.8	73 - 127	36.0805	35.97562	0.1049	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	97.7	74 - 126	37.1165	37.00233	0.1142	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	104	85 - 115	36.203	36.09812	0.1049	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	106	85 - 115	36.3145	36.21508	0.0994	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	89.3	78 - 122	38.9548	38.84072	0.1141	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	91.7	77 - 123	41.2163	41.09488	0.1214	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	93.5	72 - 128	40.4698	40.3447	0.1251	N/A	
13C12-OCDD	200.00	72.8	48 - 152	45.2707	45.10738	0.1633	N/A	
37Cl4-2,3,7,8-TCDD	10.000	94.3	0 - 200	26.6217	26.53683	0.0849	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	BLA0261-BS1	Calibration:	GB00010
File ID:	23022401	Analyzed:	02/24/23 10:33

Surrogate Compound	Spike Level ng/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	110.62	84.4	24 - 169	25.972	25.87167	0.1003	N/A	
13C12-2,3,7,8-TCDD	110.62	99.2	25 - 164	26.6077	26.51423	0.0935	N/A	
13C12-1,2,3,7,8-PeCDF	110.62	93.3	24 - 185	30.1312	30.03173	0.0995	N/A	
13C12-2,3,4,7,8-PeCDF	110.62	93.3	21 - 178	31.4793	31.36872	0.1106	N/A	
13C12-1,2,3,7,8-PeCDD	110.62	80.1	25 - 181	31.7245	31.62498	0.0995	N/A	
13C12-1,2,3,4,7,8-HxCDF	110.62	108	26 - 152	35.0892	34.9784	0.1108	N/A	
13C12-1,2,3,6,7,8-HxCDF	110.62	120	26 - 123	35.2228	35.11773	0.1051	N/A	
13C12-2,3,4,6,7,8-HxCDF	110.62	112	28 - 136	36.0918	35.97562	0.1162	N/A	
13C12-1,2,3,7,8,9-HxCDF	110.62	109	29 - 147	37.1168	37.00233	0.1145	N/A	
13C12-1,2,3,4,7,8-HxCDD	110.62	126	32 - 141	36.2032	36.09812	0.1051	N/A	
13C12-1,2,3,6,7,8-HxCDD	110.62	142	28 - 130	36.3145	36.21508	0.0994	N/A	*
13C12-1,2,3,4,6,7,8-HpCDF	110.62	93.0	28 - 143	38.9552	38.84072	0.1145	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	110.62	94.8	26 - 138	41.228	41.09488	0.1331	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	110.62	97.6	23 - 140	40.4703	40.3447	0.1256	N/A	
13C12-OCDD	221.24	83.5	17 - 157	45.2713	45.10738	0.1639	N/A	
37Cl4-2,3,7,8-TCDD	44.248	80.0	35 - 197	26.6218	26.53683	0.0850	N/A	

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 1613B

Laboratory: Analytical Resources, LLC SDG: 23A0133

Client: Anchor QEA, LLC Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1241 23A0133-06	01/06/23 10:51	01/06/23 17:26	01/24/23 13:10	18	365	02/23/23 17:32	30	365	
LDW23-IT1217 23A0133-07	01/06/23 11:14	01/06/23 17:26	01/24/23 13:10	18	365	02/23/23 18:21	30	365	
LDW23-SC1215 23A0133-10	01/06/23 11:38	01/06/23 17:26	01/24/23 13:10	18	365	02/23/23 20:56	30	365	
LDW23-SC1222 23A0133-11	01/06/23 13:00	01/06/23 17:26	01/24/23 13:10	18	365	02/23/23 21:46	30	365	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: AUTOSPEC01

Analyte	MDL	RL	Units
2,3,7,8-TCDF	0.058	1.00	ng/kg
2,3,7,8-TCDD	0.150	1.00	ng/kg
1,2,3,7,8-PeCDF	0.240	1.00	ng/kg
2,3,4,7,8-PeCDF	0.220	1.00	ng/kg
1,2,3,7,8-PeCDD	0.170	1.00	ng/kg
1,2,3,4,7,8-HxCDF	0.280	1.00	ng/kg
1,2,3,6,7,8-HxCDF	0.200	1.00	ng/kg
2,3,4,6,7,8-HxCDF	0.170	1.00	ng/kg
1,2,3,7,8,9-HxCDF	0.190	1.00	ng/kg
1,2,3,4,7,8-HxCDD	0.170	1.00	ng/kg
1,2,3,6,7,8-HxCDD	0.180	1.00	ng/kg
1,2,3,7,8,9-HxCDD	0.220	1.00	ng/kg
1,2,3,4,6,7,8-HpCDF	0.210	1.00	ng/kg
1,2,3,4,7,8,9-HpCDF	0.240	1.00	ng/kg
1,2,3,4,6,7,8-HpCDD	0.560	2.50	ng/kg
OCDF	1.10	2.50	ng/kg
OCDD	4.60	10.0	ng/kg
Total TCDF		1.00	ng/kg
Total TCDD		1.00	ng/kg
Total PeCDF		1.00	ng/kg
Total PeCDD		1.00	ng/kg
Total HxCDF		1.00	ng/kg
Total HxCDD		1.00	ng/kg
Total HpCDF		1.00	ng/kg
Total HpCDD		1.00	ng/kg

CS3WT

Calibration and Verification Solution (EPA-1613CS3) combined with Window Defining and 2,3,7,8-TCDD Resolution Testing Congeners

PRODUCT CODE:	CS3WT
LOT NUMBER:	CS3WT0918
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/24/2018
LAST TESTED: (mm/dd/yyyy)	10/29/2018
EXPIRY DATE: (mm/dd/yyyy)	10/29/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

CS3WT is a solution/mixture of native and $^{13}C_{12}$-labelled chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

CS3WT was designed and prepared to be used as a HRMS calibration standard according to U.S. EPA Method 1613B.

It is to be used for calibration verification in place of EPA-1613CS3 (Lot: 13CS30918). It also contains the PCDD and PCDF window defining congeners for a DB-5 (or equivalent) capillary column as well as the TCDD isomers required to test and confirm the resolution of 2,3,7,8-TCDD.

The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%. The individual native 2,3,7,8-substituted PCDD and PCDF congeners all have chemical purities of >98%; the other congeners (window defining and resolution testing) should only be considered semi-quantitative.

This current lot of CS3WT is to be used with the 1613 calibration solutions having the following lot numbers:

PRODUCT CODE	LOT NUMBER
EPA-1613CS1	13CS10918
EPA-1613CS2	13CS20918
EPA-1613CS3	13CS30918
EPA-1613CS4	13CS40918
EPA-1613CS5	13CS50918
EPA-1613CSL	13CSL0918
EPA-1613CS0.5	13CS0.50918

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Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.
- Only the 2,3,7,8-substituted PCDDs and PCDFs should be used for quantitation. The other congeners (window defining and 2378-TCDD resolution testing) should be considered semi-quantitative (within ±20% of their design value). Impurities have been identified where possible.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **CS3WT; Components and Concentrations (ng/ml, in nonane/4.5% toluene)**

QUANTITATIVE ANALYTES (ng/ml, ±5%)	
Native PCDDs & PCDFs:	
2,3,7,8-TCDD	10
2,3,7,8-TCDF	10
1,2,3,7,8-PeCDD	50
1,2,3,7,8-PeCDF	50
2,3,4,7,8-PeCDF	50
1,2,3,4,7,8-HxCDD	50
1,2,3,6,7,8-HxCDD	50
1,2,3,7,8,9-HxCDD	50
1,2,3,4,7,8-HxCDF	50
1,2,3,6,7,8-HxCDF	50
1,2,3,7,8,9-HxCDF	50
2,3,4,6,7,8-HxCDF	50
1,2,3,4,6,7,8-HpCDD *(WD)*	50
1,2,3,4,6,7,8-HpCDF *(WD)*	50
1,2,3,4,7,8,9-HpCDF *(WD)*	50
OCDD	100
OCDF	100
Labelled PCDDs & PCDFs:	
$^{13}C_{12}$-2,3,7,8-TCDD	100
$^{13}C_{12}$-2,3,7,8-TCDF	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100
$^{13}C_{12}$-OCDD	200
Cleanup Standard:	
$^{37}Cl_4$-2,3,7,8-TCDD	10
Internal Standards:	
$^{13}C_{12}$-1,2,3,4-TCDD	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100

SEMI-QUANTITATIVE ANALYTES (ng/ml, ±20%)	
Window Definers:*	
1,3,6,8-TCDD	10
1,2,8,9-TCDD	10
1,3,6,8-TCDF	10
1,2,8,9-TCDF	10
1,2,4,6,8/1,2,4,7,9-PeCDD	50
1,2,3,8,9-PeCDD	50
1,3,4,6,8-PeCDF	50
1,2,3,8,9-PeCDF	50
1,2,4,6,7,9-HxCDD	50
1,2,3,4,6,8-HxCDF	50
1,2,3,4,6,7,9-HpCDD	50
2378-TCDD Resolution Testing Isomers:	
1,2,3,4-TCDD	5
1,2,3,7/1,2,3,8-TCDD	5
1,2,3,9-TCDD	10

** 1,2,3,4,6,7-HxCDD (last eluting HxCDD) not included; coelutes with 1,2,3,7,8,9-HxCDD. Use 1,2,3,4,6,7,9-HpCDD to set window.*

** 1,2,3,4,8,9-HxCDF (last eluting HxCDF) not included; can interfere with 1,2,3,7,8,9-HxCDF. Use 1,2,3,4,6,7,8-HpCDF to set window.*

WD – Window Definer

Certified By: _____ **Date:** 10/30/2018
(mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

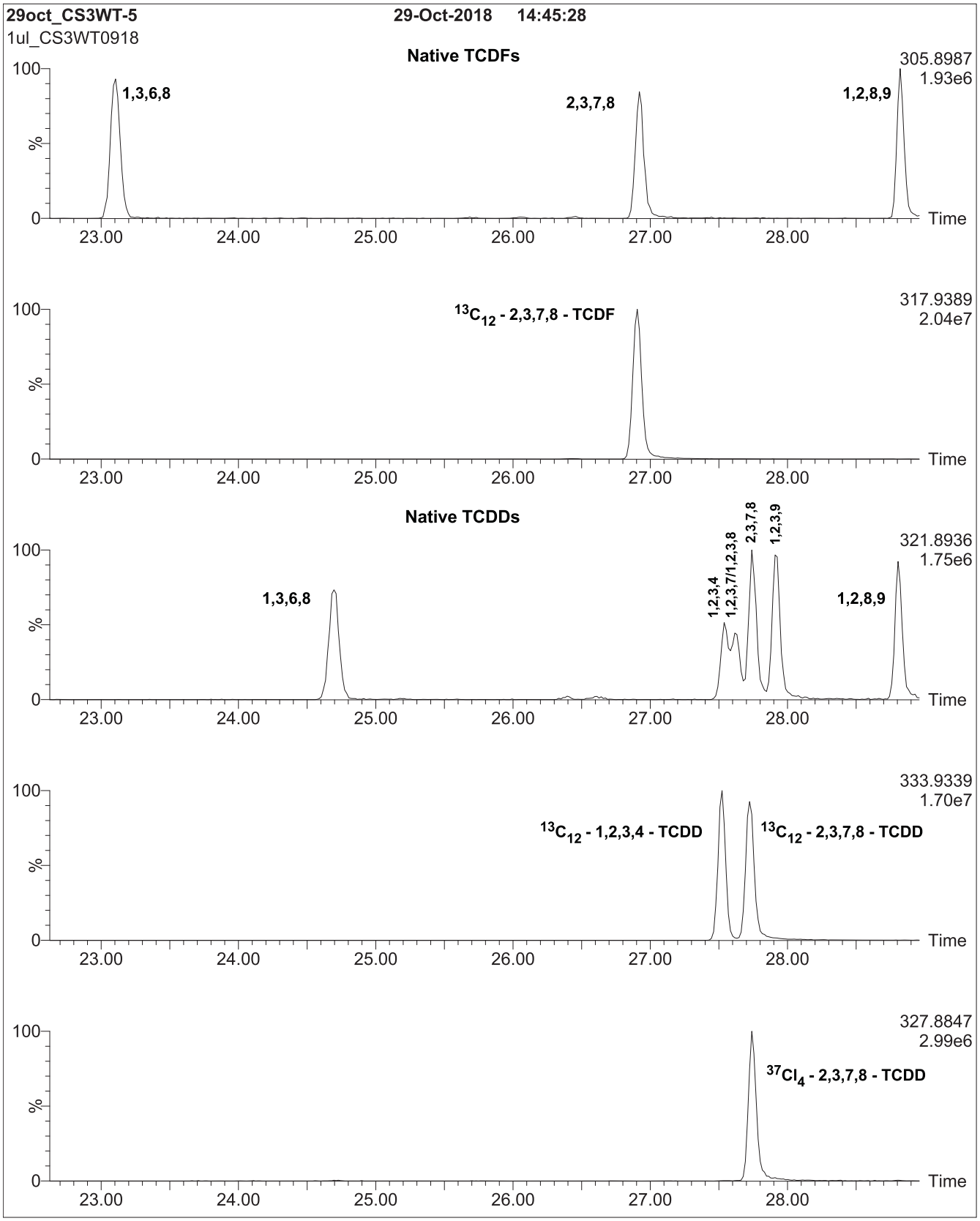


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

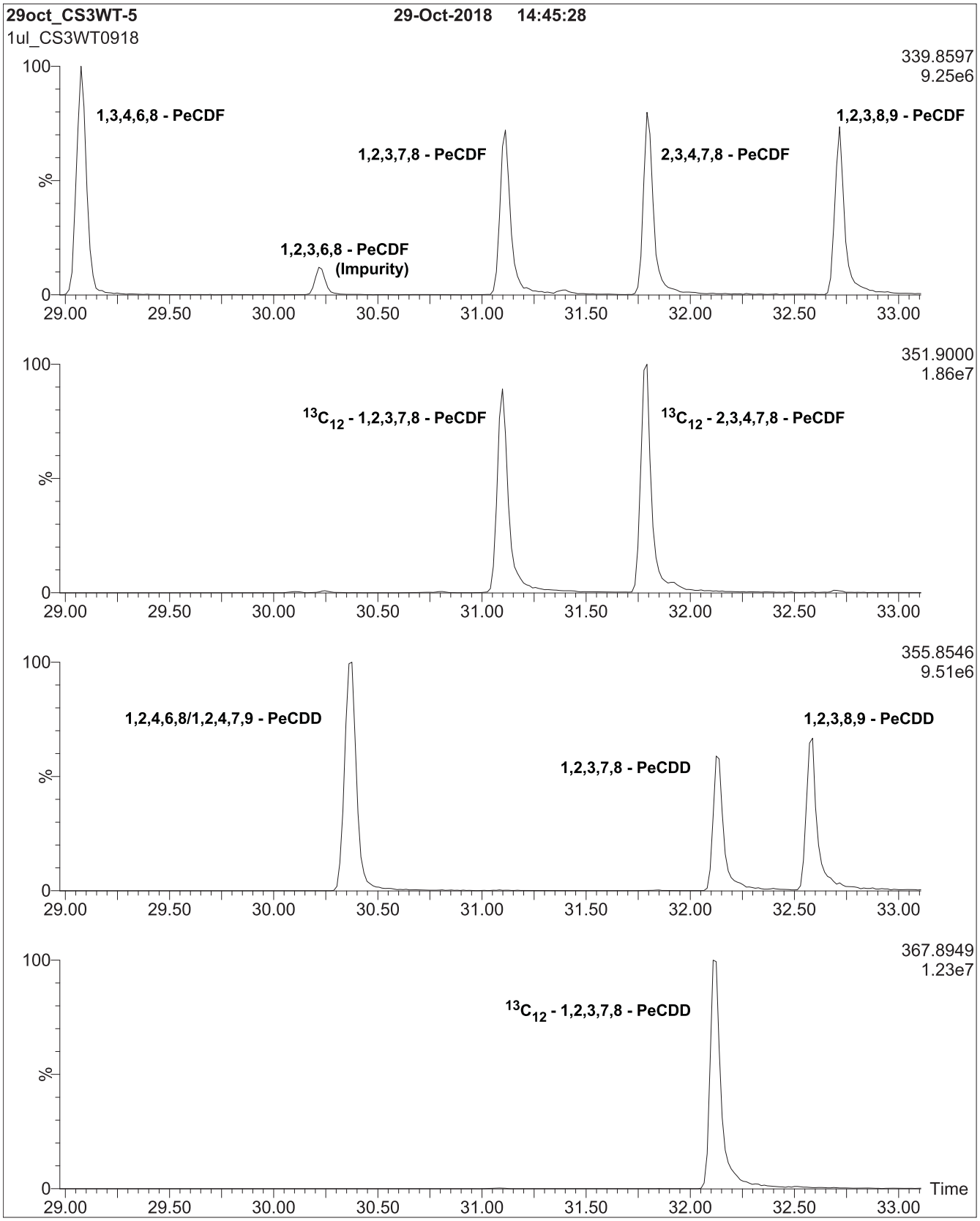


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

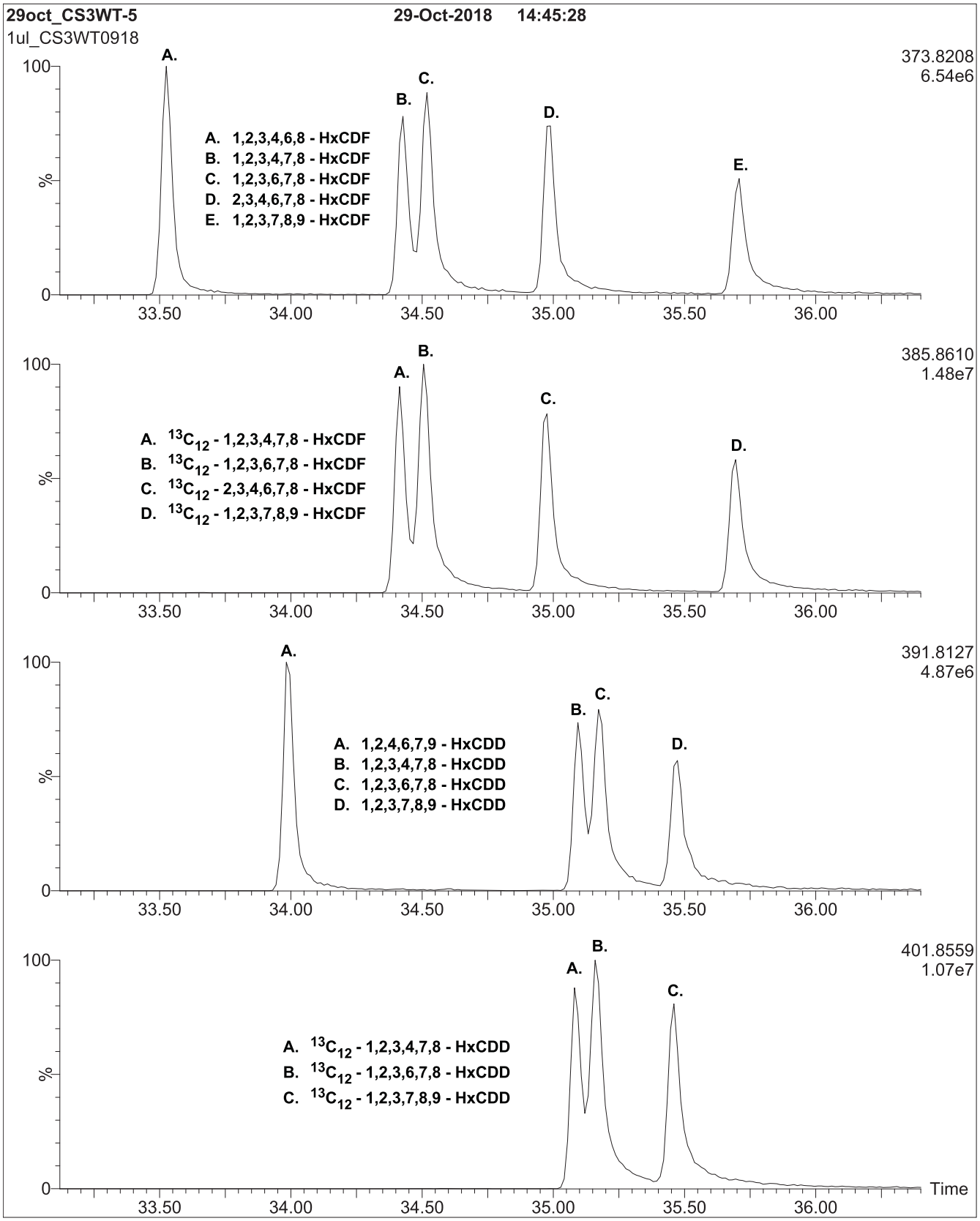


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

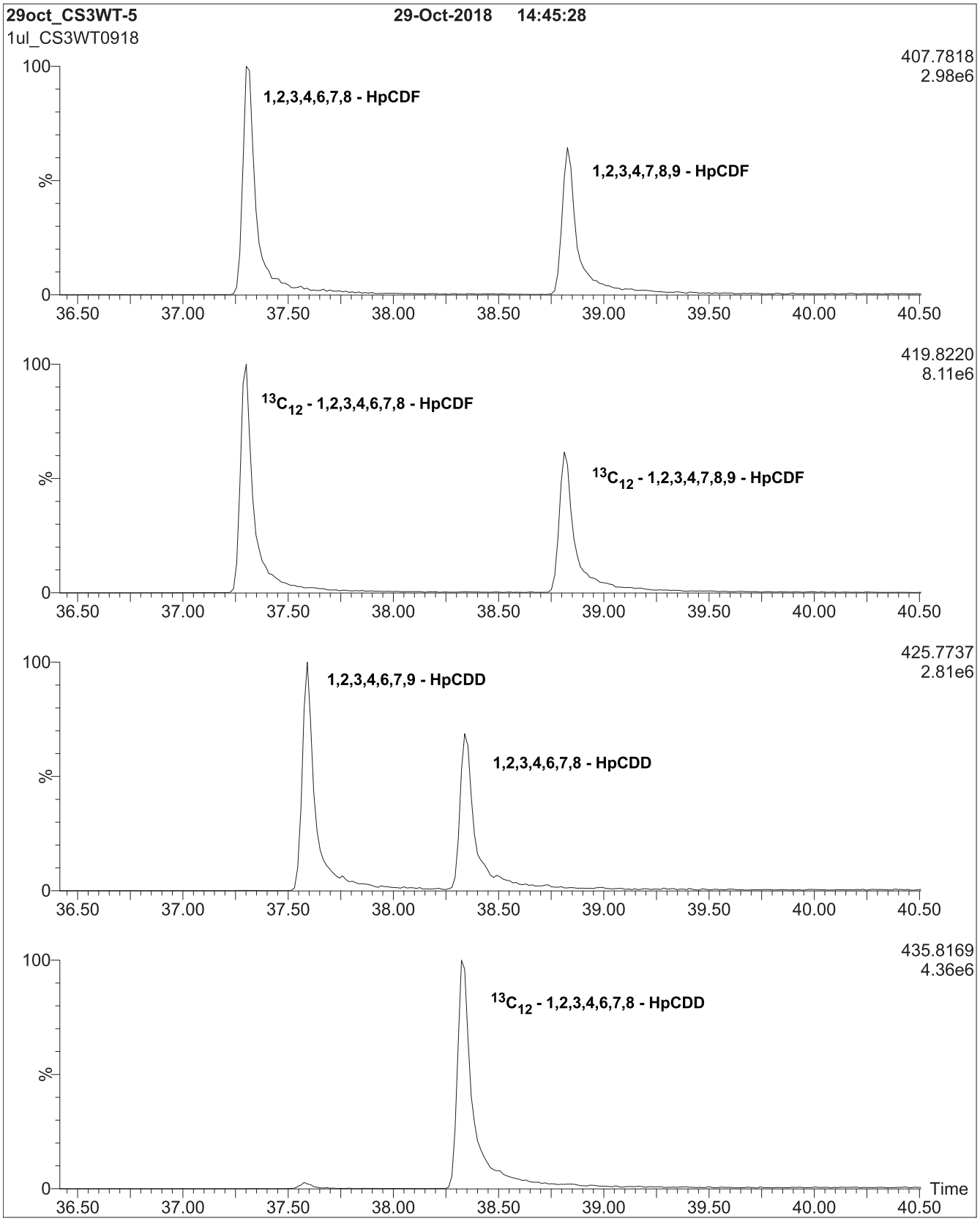
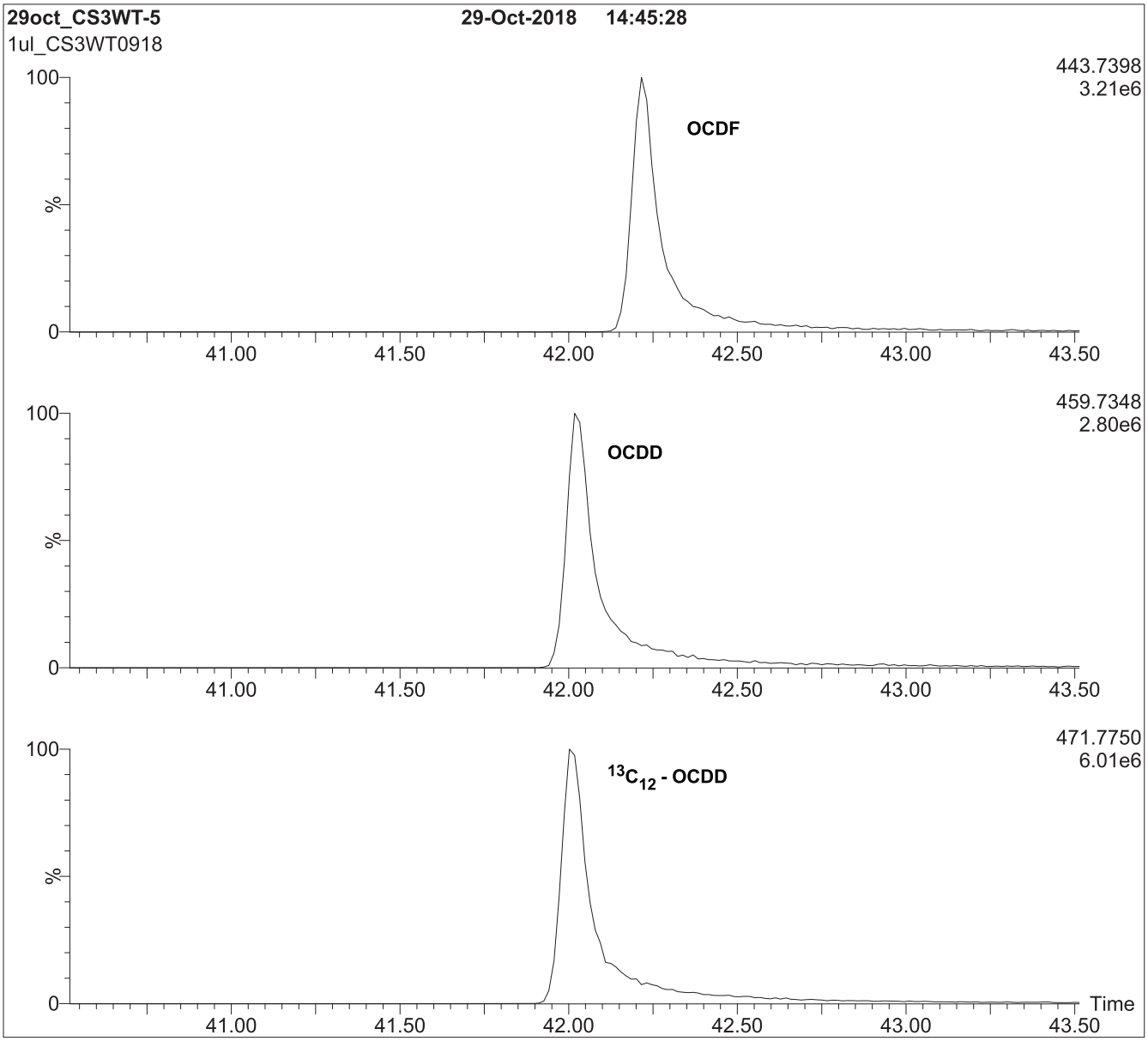


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow:	Constant at 1 ml/min	Oven:	150 °C (1 min)
Injector:	280 °C (Splitless Injection)		12 °C/min to 200 °C
Ionization:	EI+		3 °C/min to 235 °C
Detector:	280 °C		235 °C (8 min)
	SIR at 10,000 mass resolving power		8 °C/min to 310 °C
			310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

I005456
1613 CS1 CAL STD
Expires 10/24/2026
Prepared By Joshua Rains 6/23/2020

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By: _____ **Date:** 10/25/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

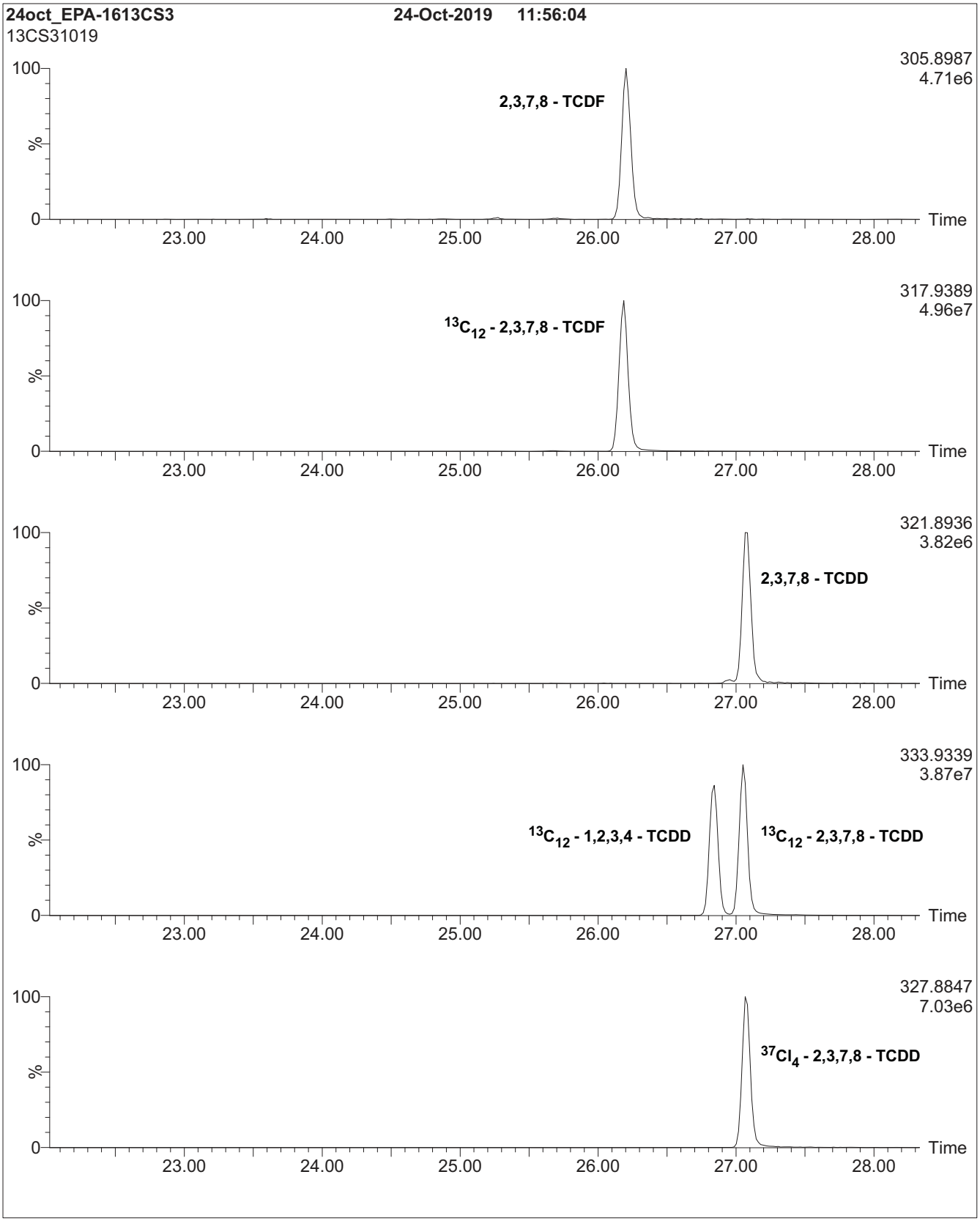


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

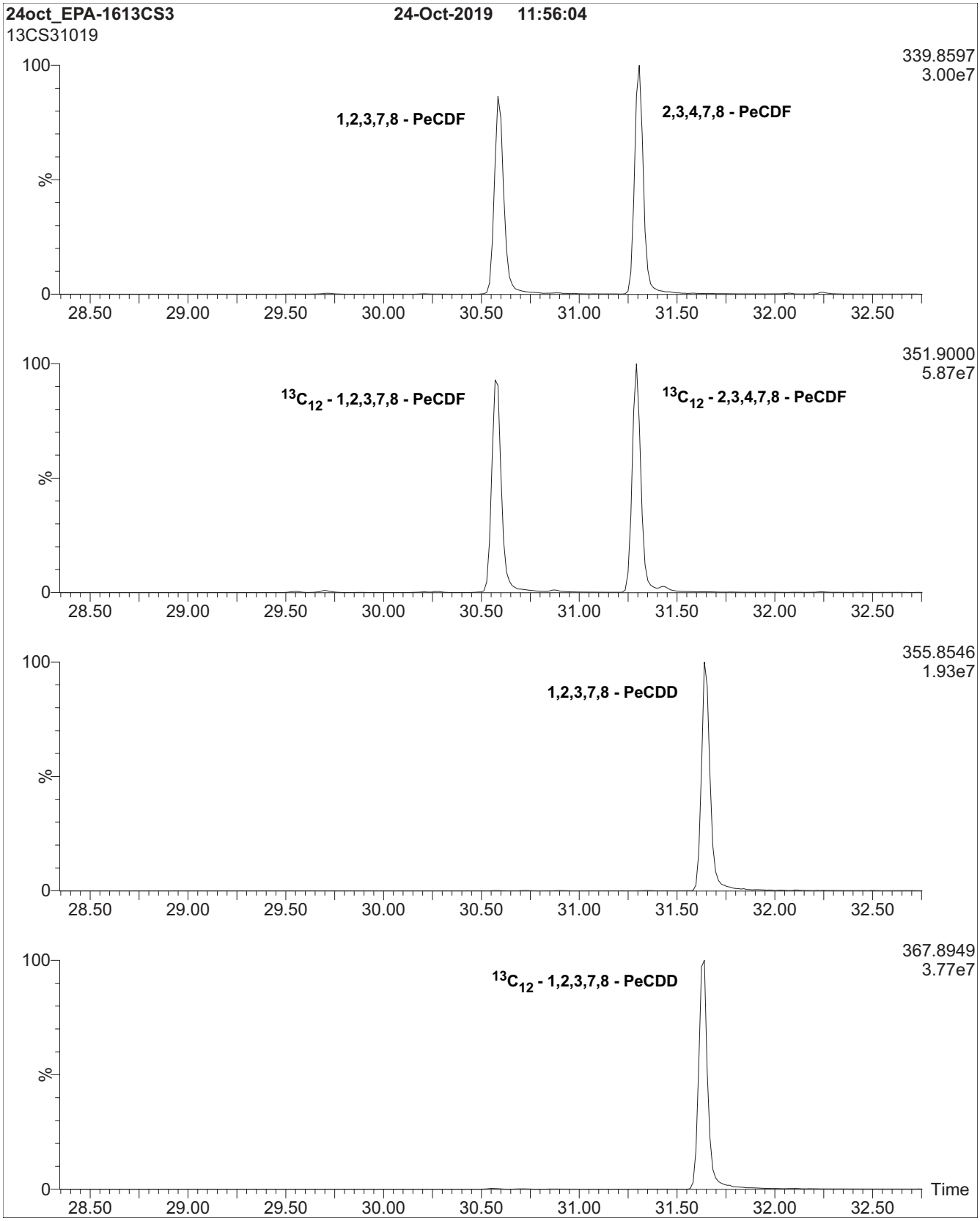


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

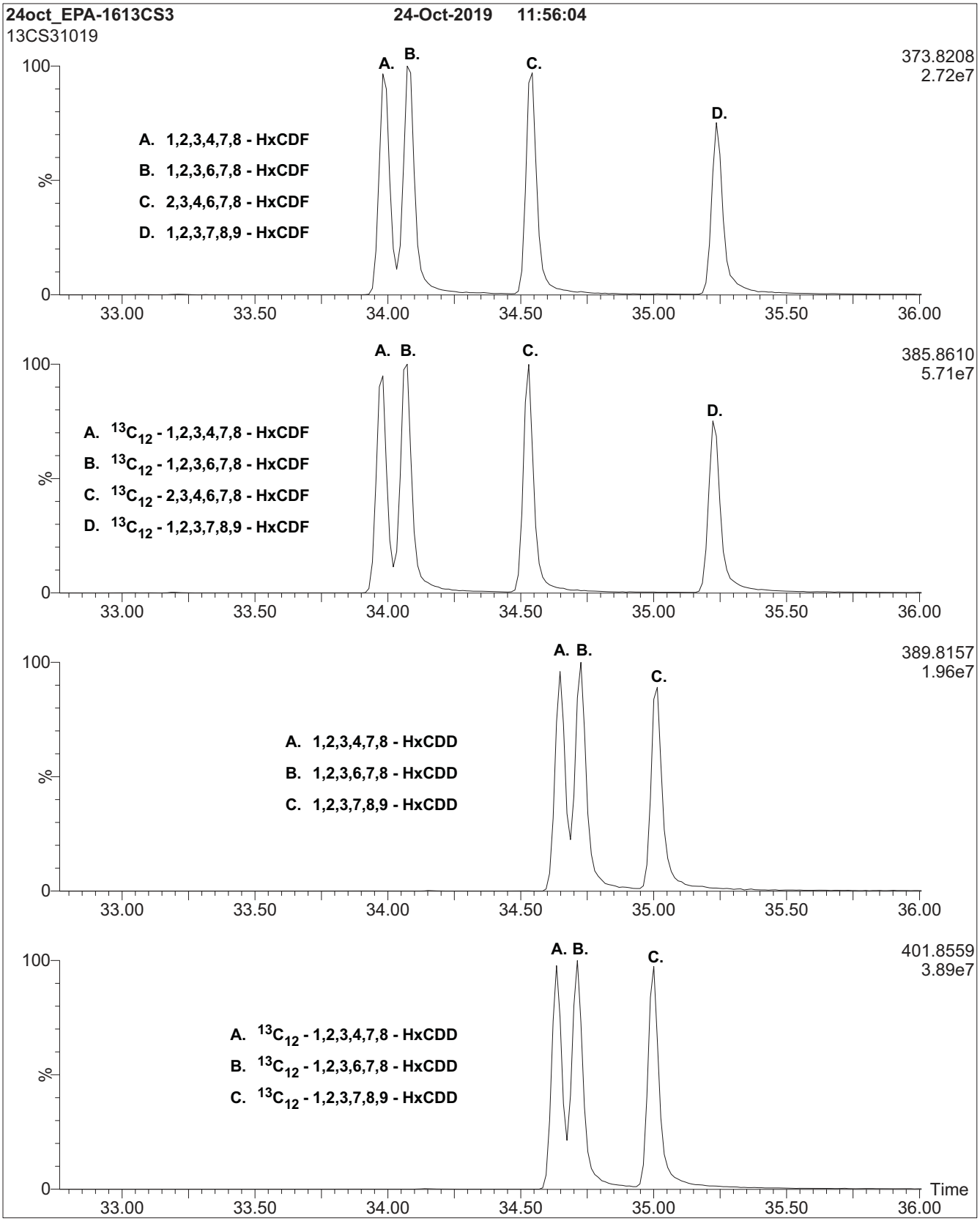


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

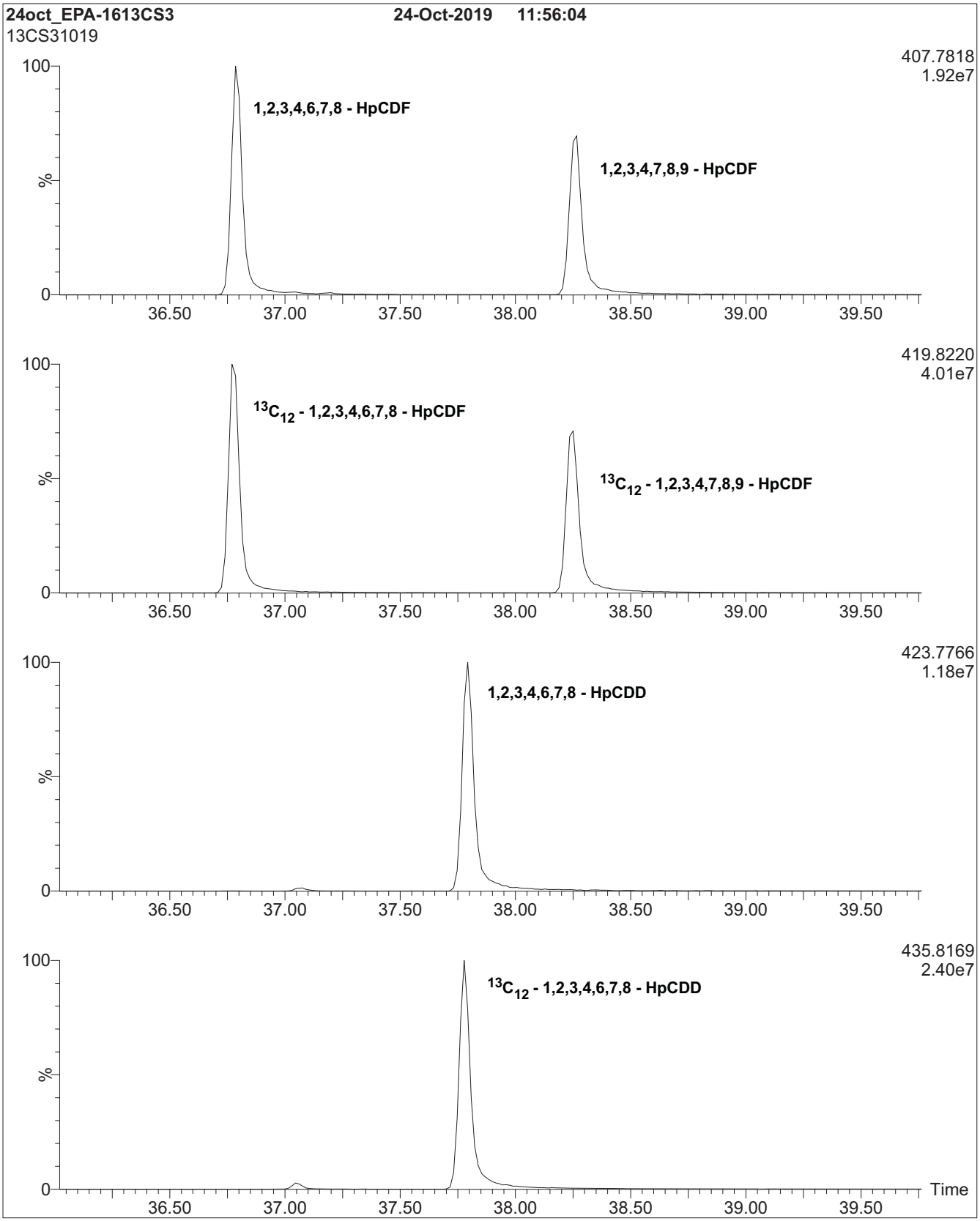
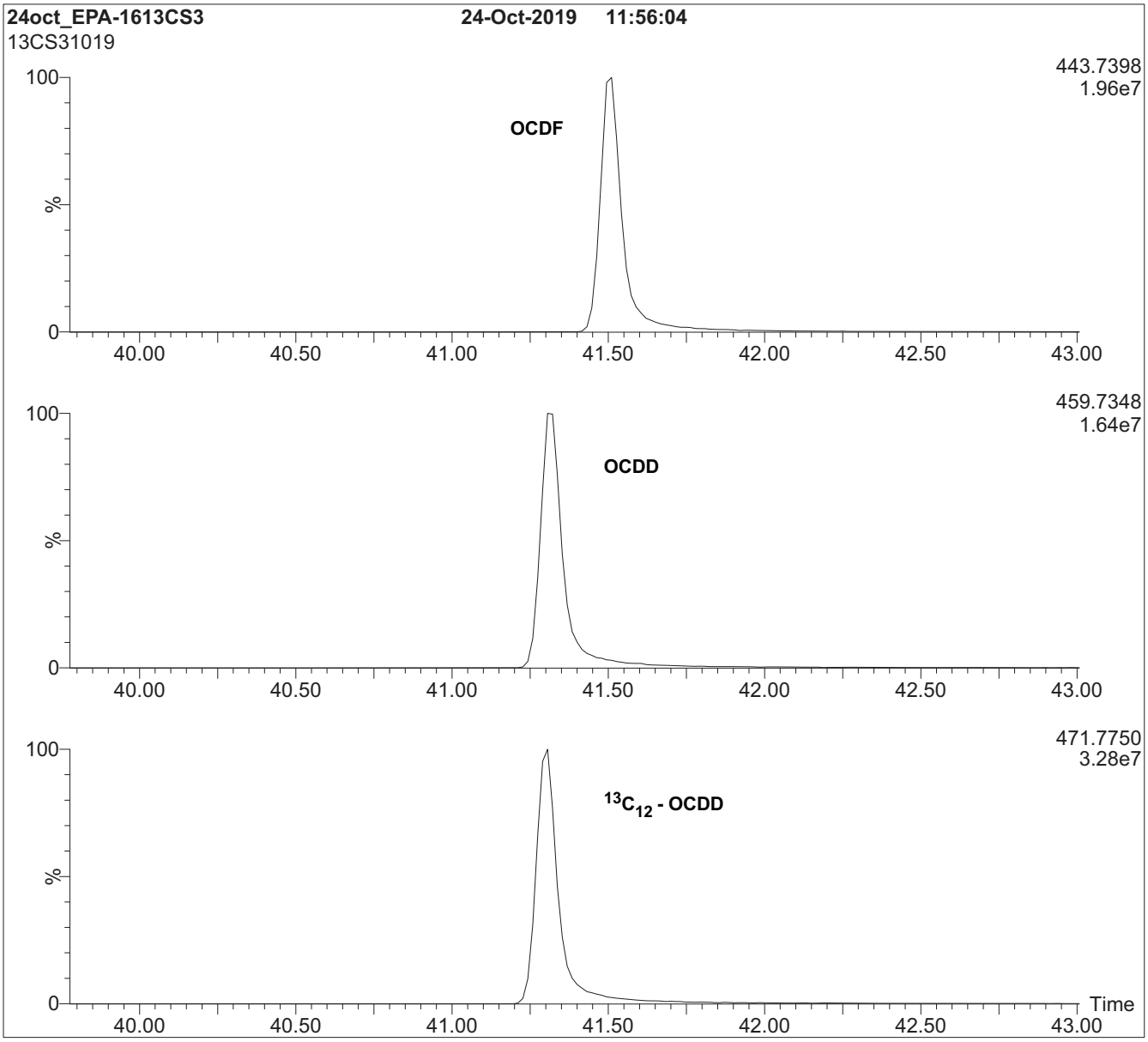


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow:	Constant at 1 ml/min	Oven:	150 °C (1 min)
Injector:	280 °C (Splitless Injection)		12 °C/min to 200 °C
Ionization:	EI+		3 °C/min to 235 °C
Detector:	280 °C		235 °C (8 min)
	SIR at 10,000 mass resolving power		8 °C/min to 310 °C
			310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

I005457
1613 CS2 CAL STD
Expires 10/24/2026
Prepared By Joshua Rains 6/23/2020

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

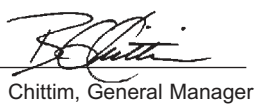
CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By:  **Date:** 10/25/2019
(mm/dd/yyyy)

B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

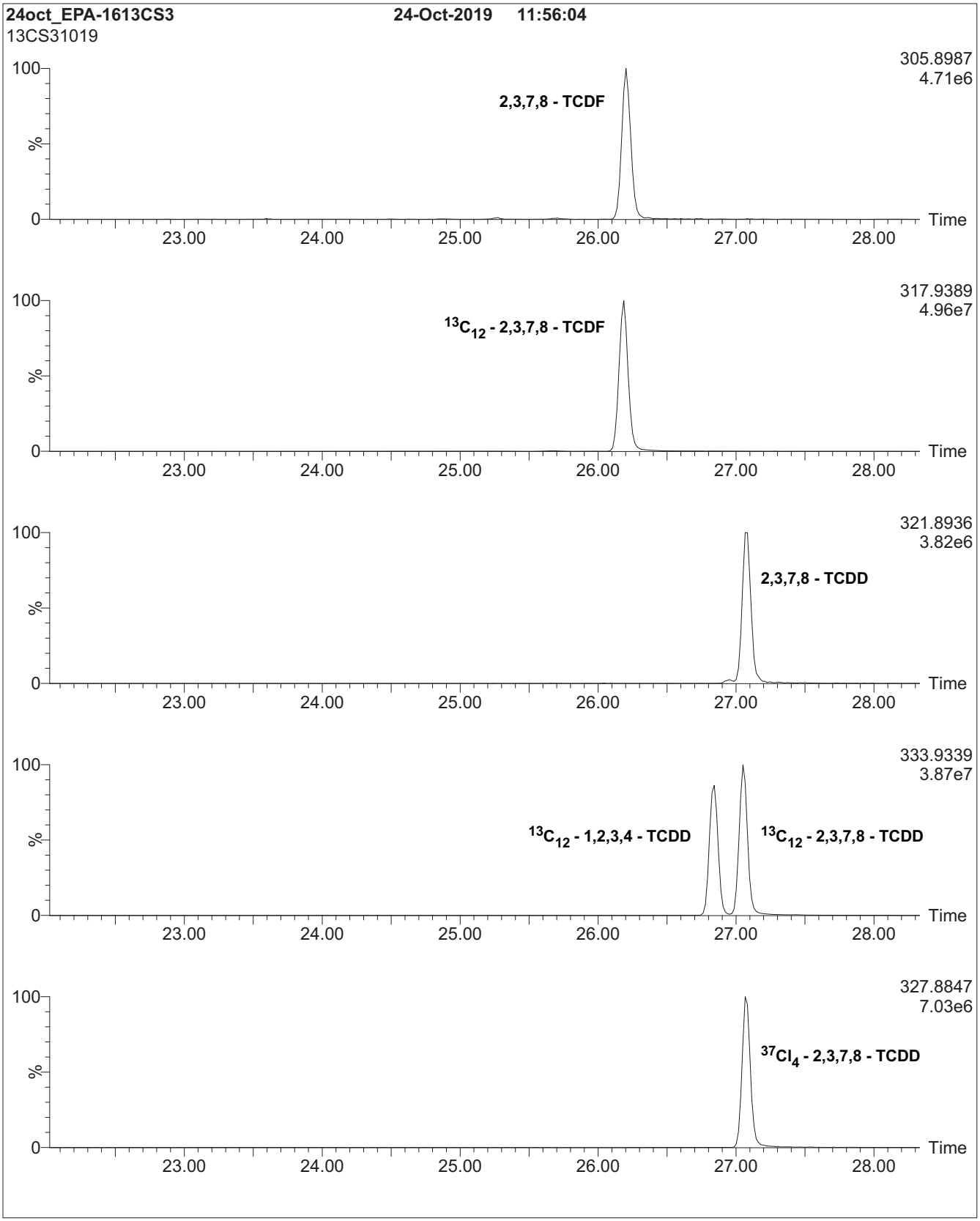


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

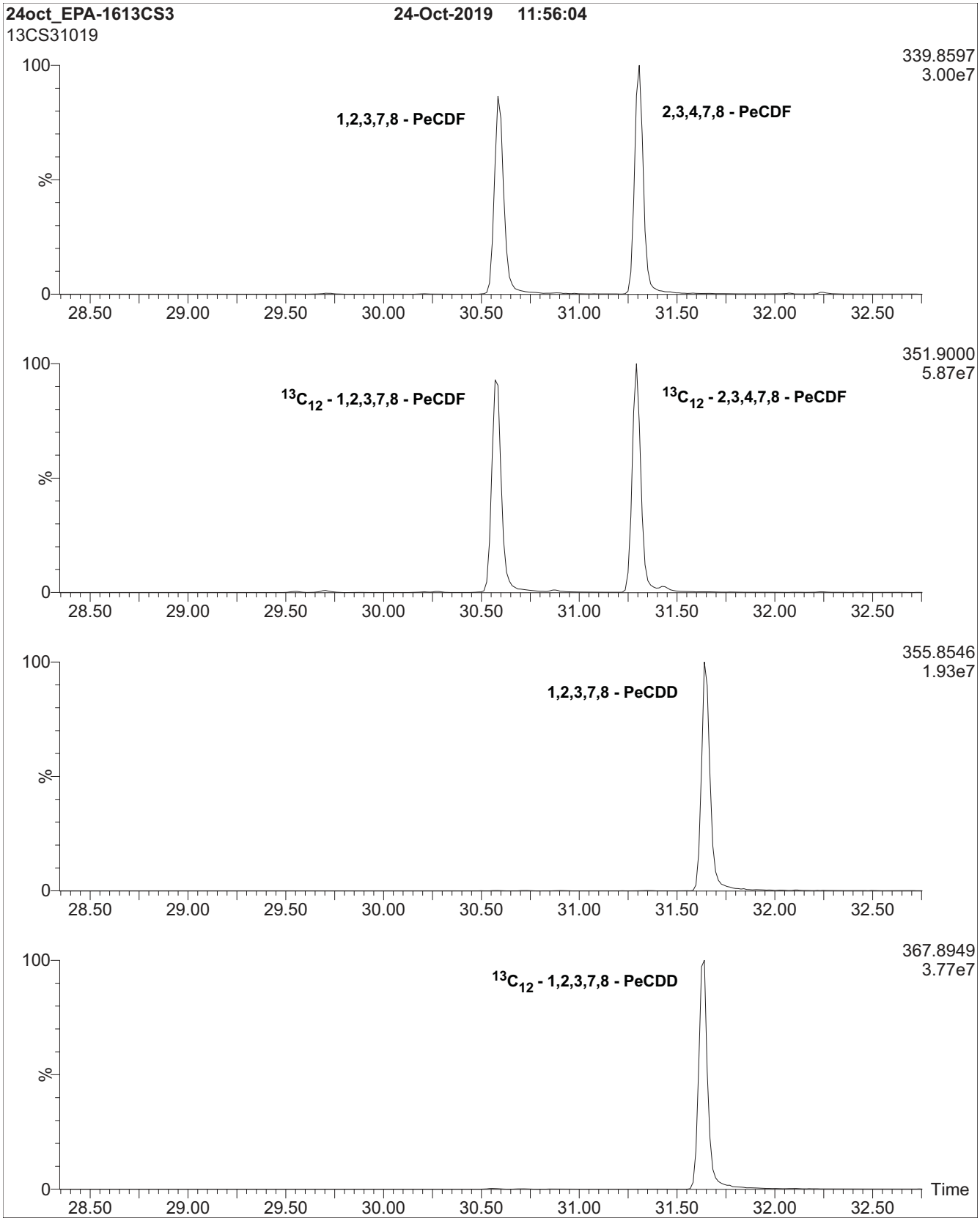


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

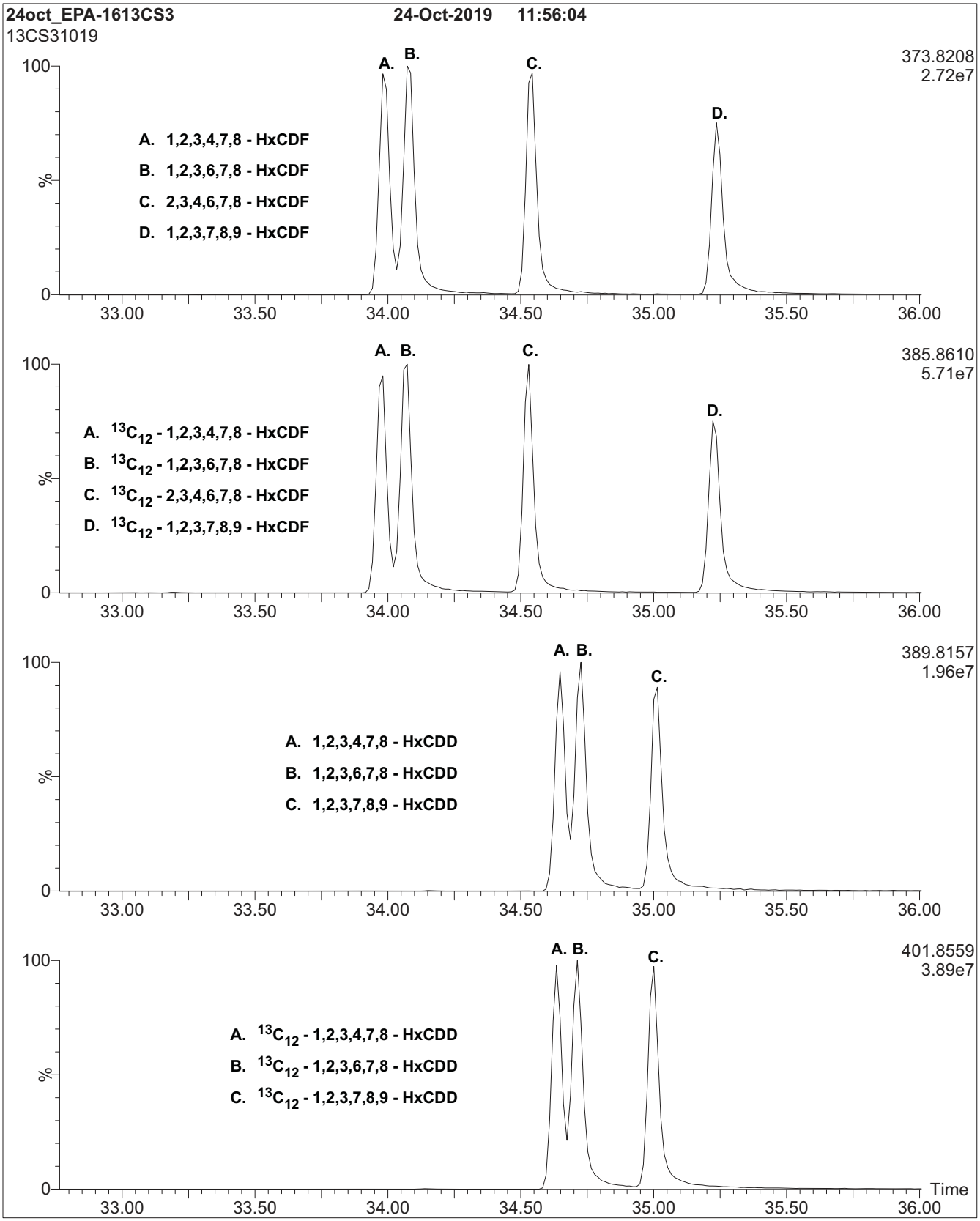


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

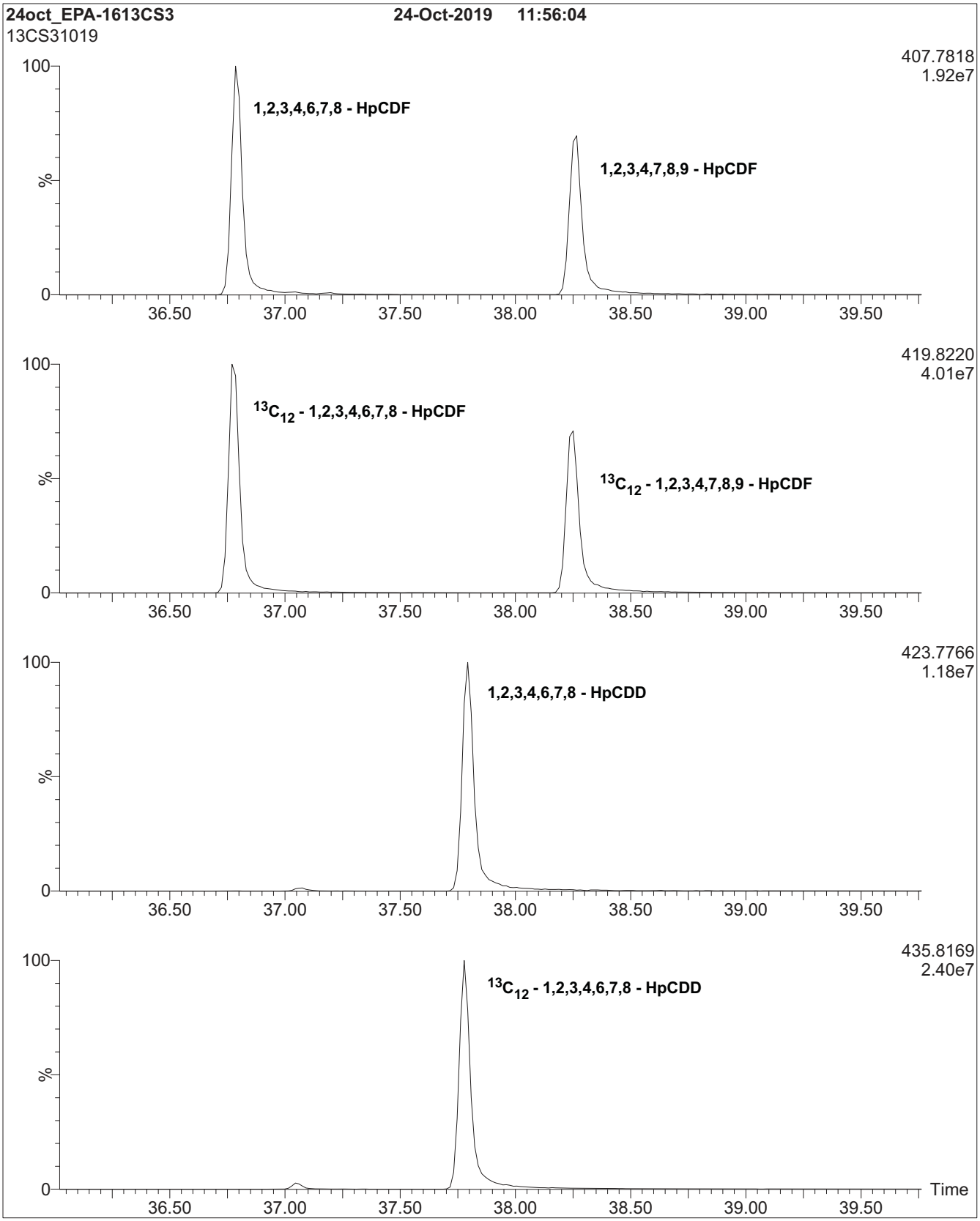
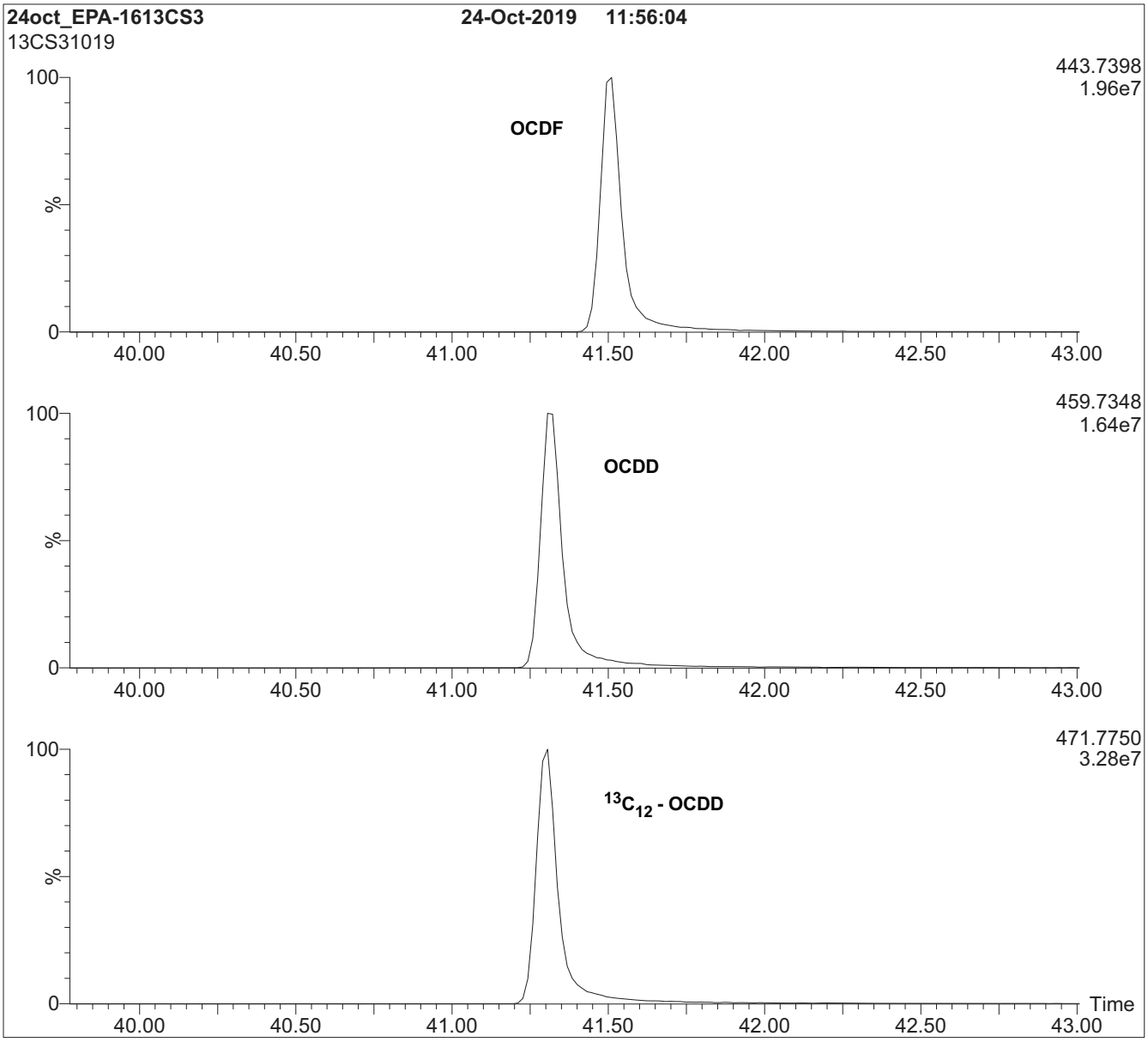


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow:	Constant at 1 ml/min	Oven:	150 °C (1 min)
Injector:	280 °C (Splitless Injection)		12 °C/min to 200 °C
Ionization:	EI+		3 °C/min to 235 °C
Detector:	280 °C		235 °C (8 min)
	SIR at 10,000 mass resolving power		8 °C/min to 310 °C
			310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

I005458
1613 CS4 CAL STD
Expires 10/24/2026
Prepared By Joshua Rains 6/23/2020

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

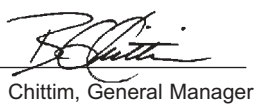
CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By:  **Date:** 10/25/2019
(mm/dd/yyyy)

B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

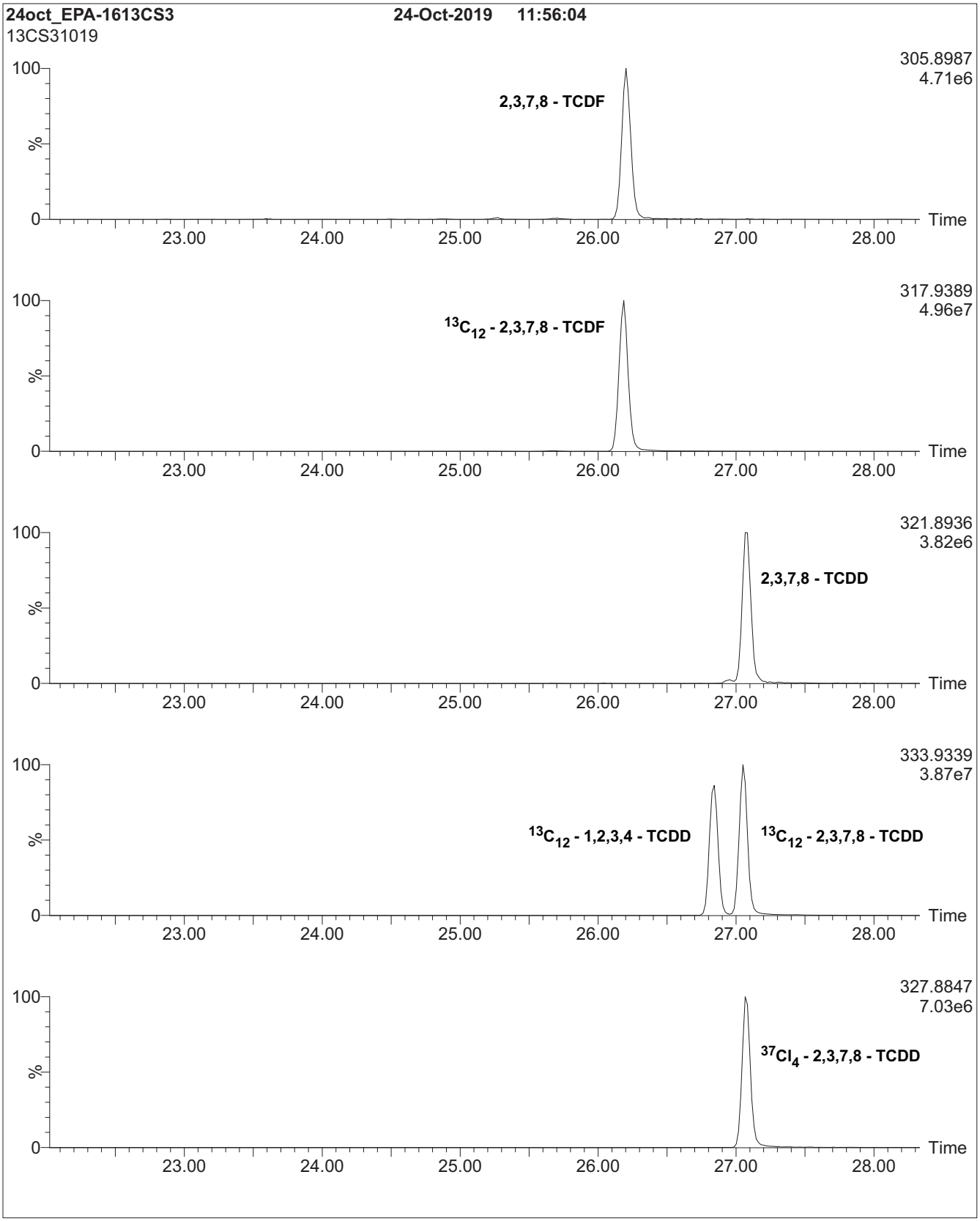


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

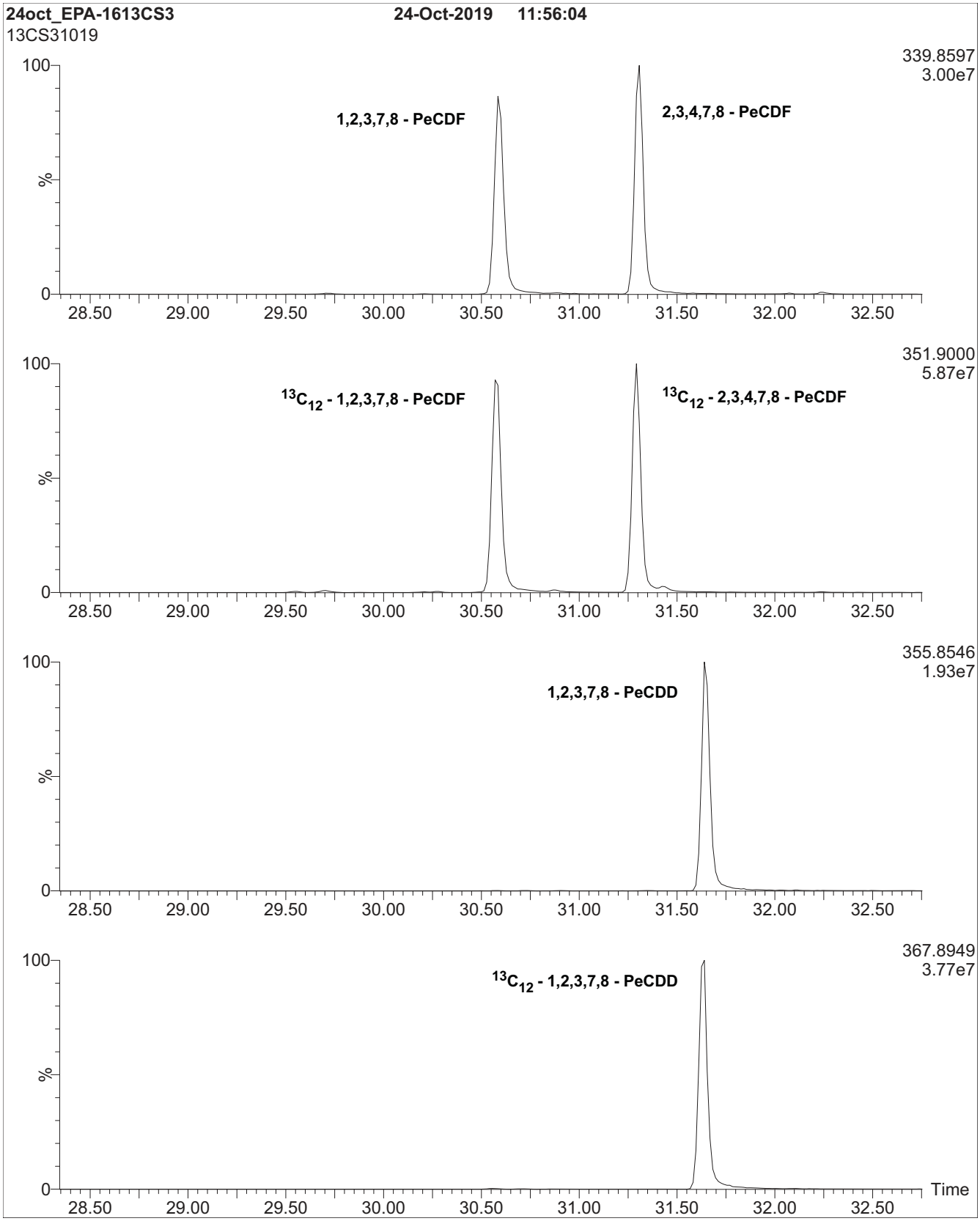


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

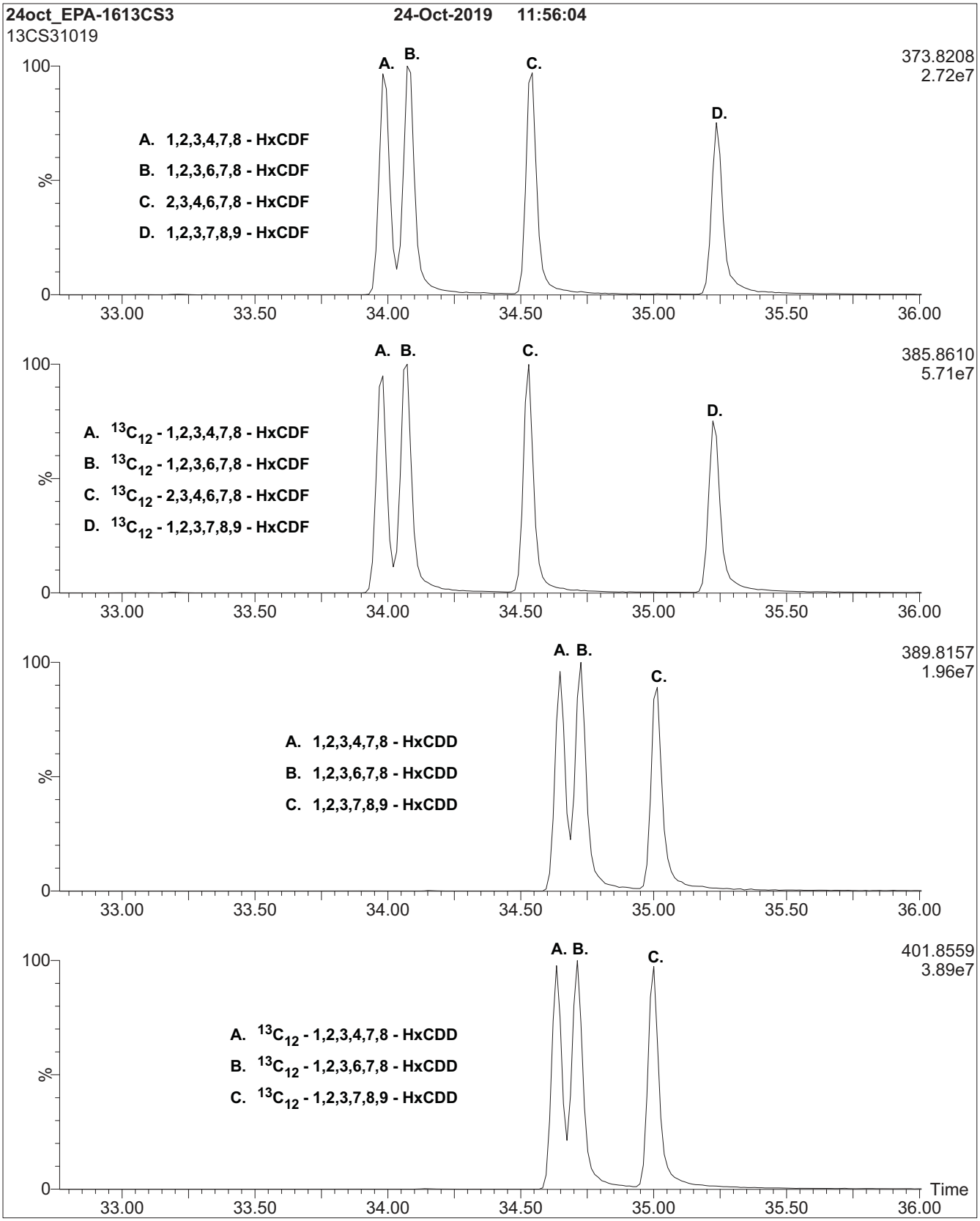


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

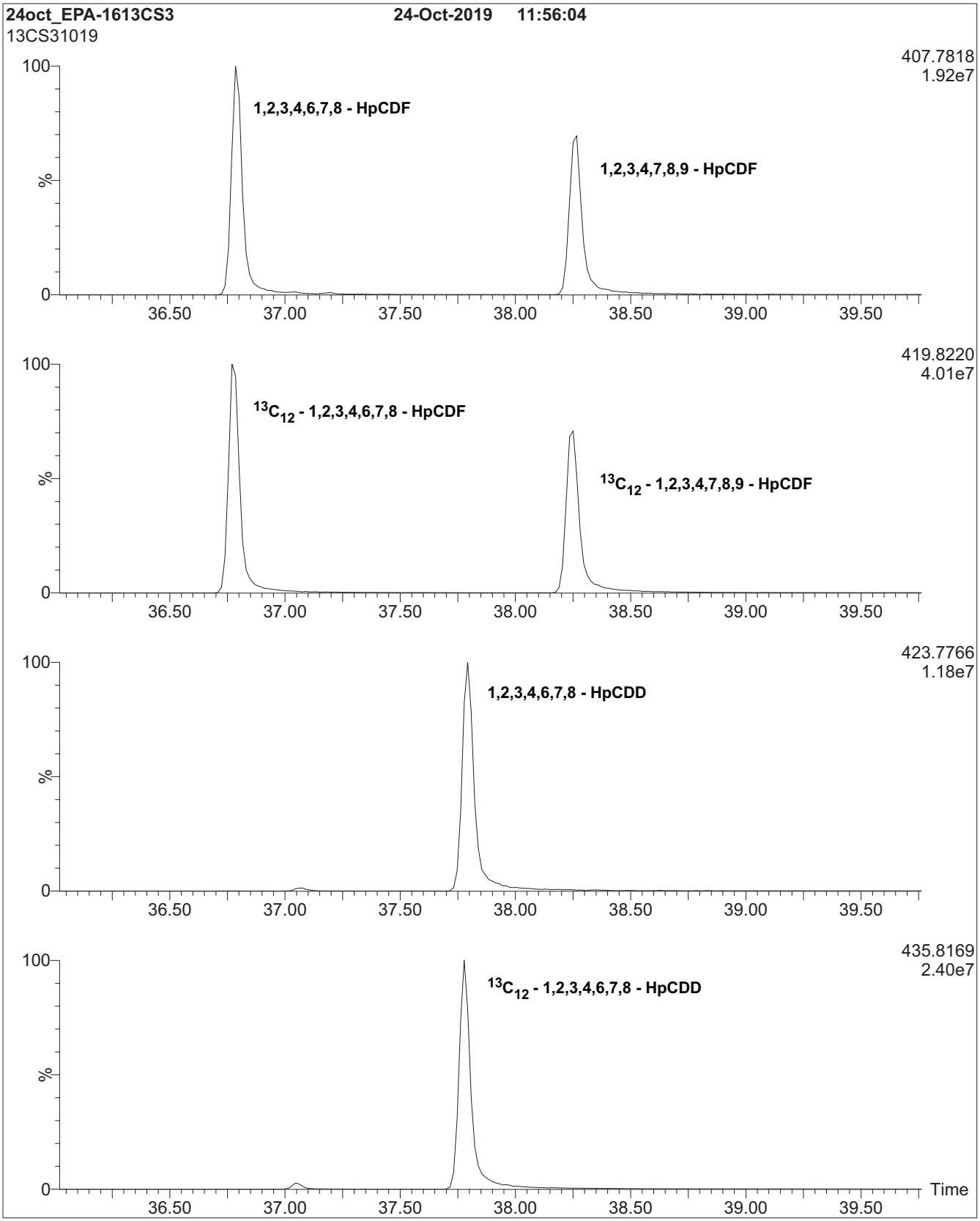
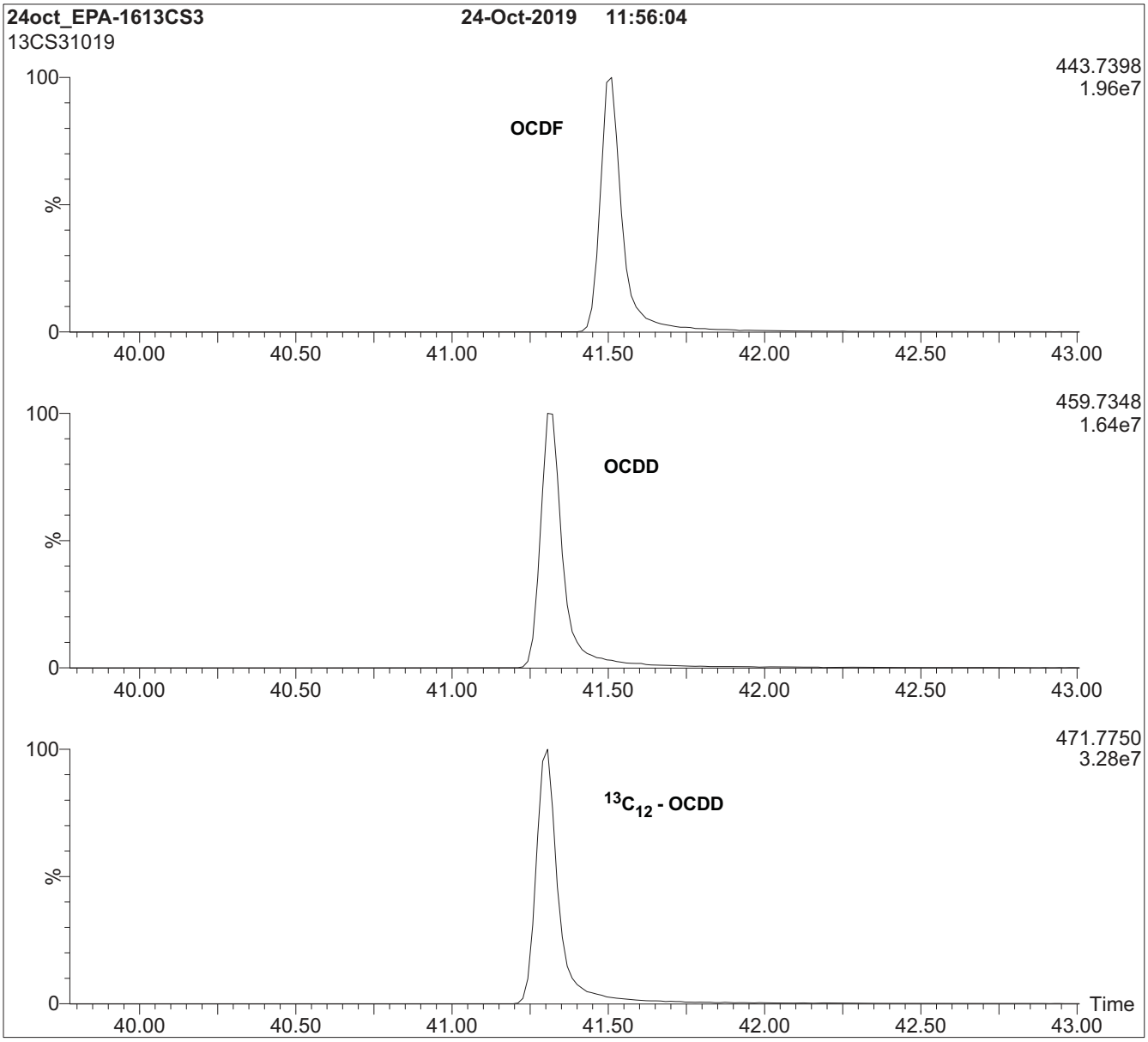


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

I005459
1613 CS5 CAL STD
Expires 10/24/2026
Prepared By Joshua Rains 6/23/2020

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

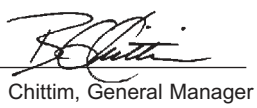
CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By:  **Date:** 10/25/2019
(mm/dd/yyyy)

B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

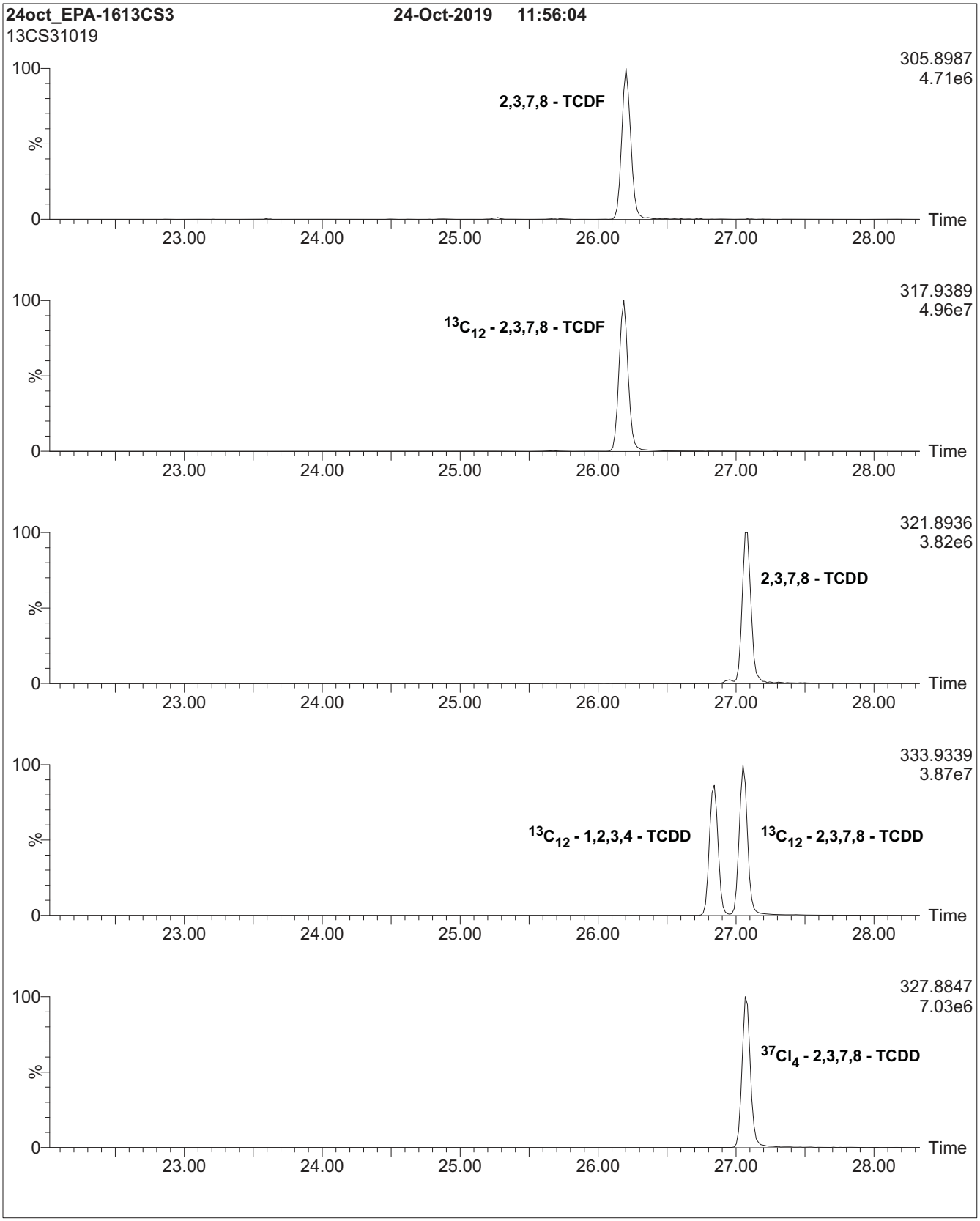


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

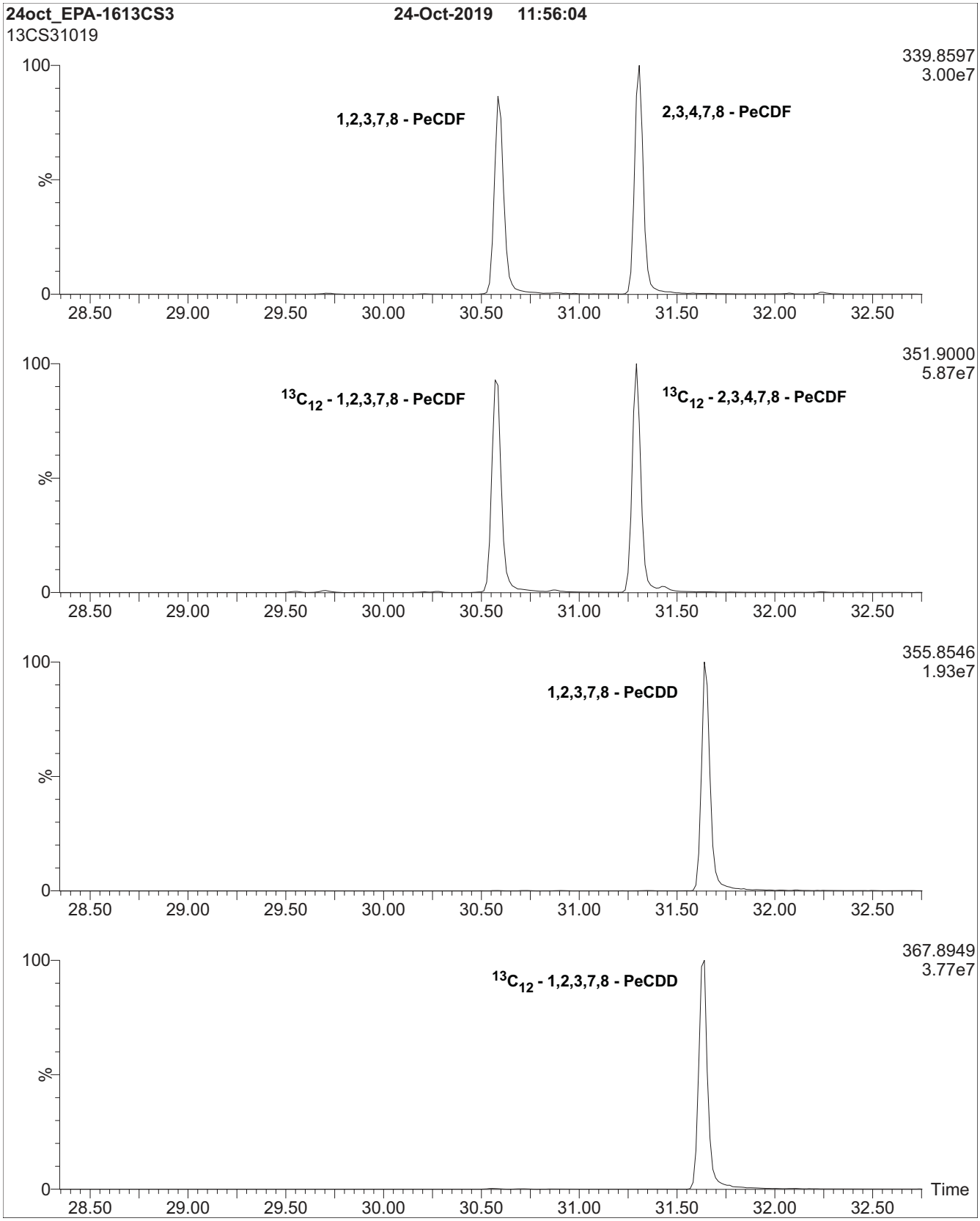


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

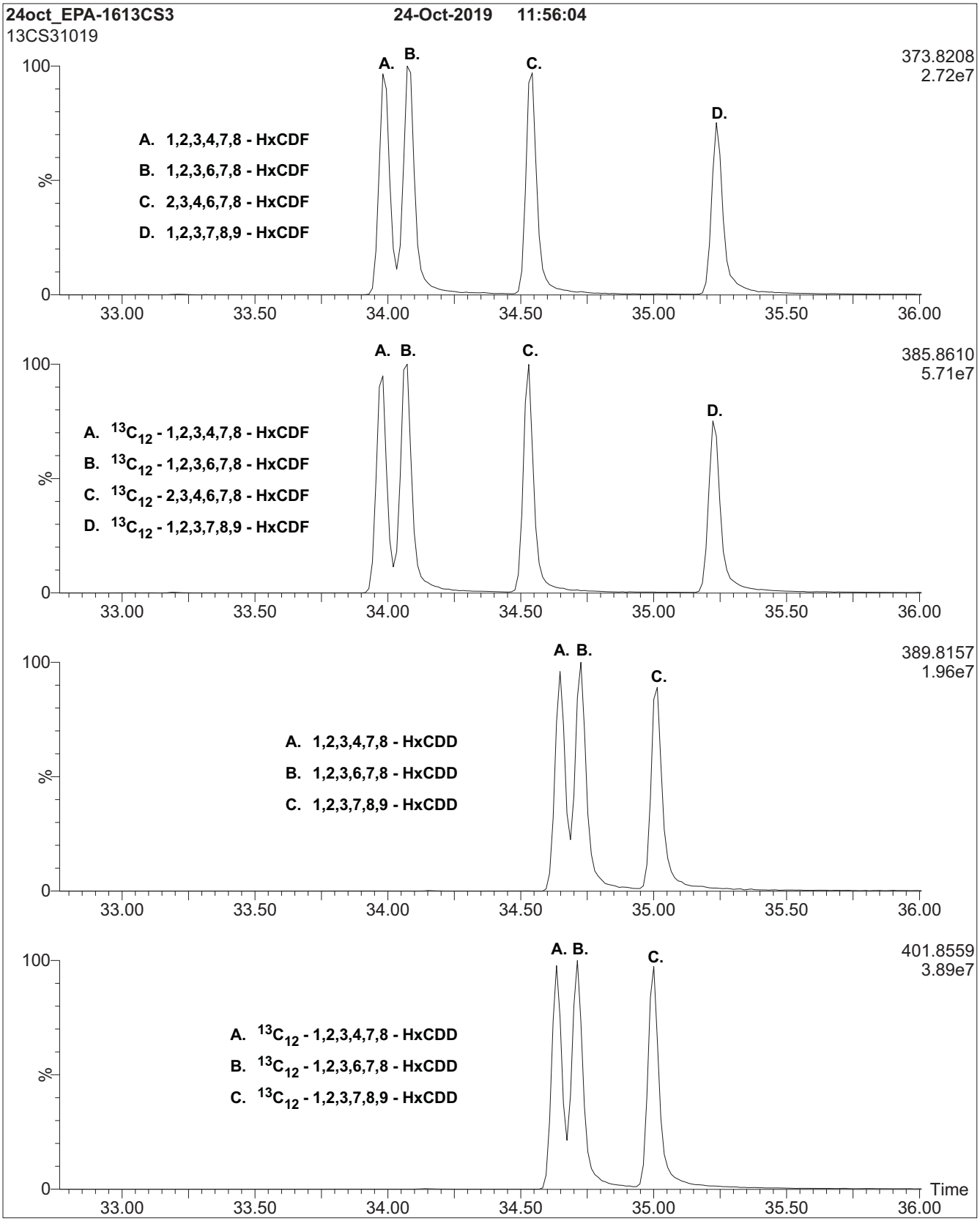


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

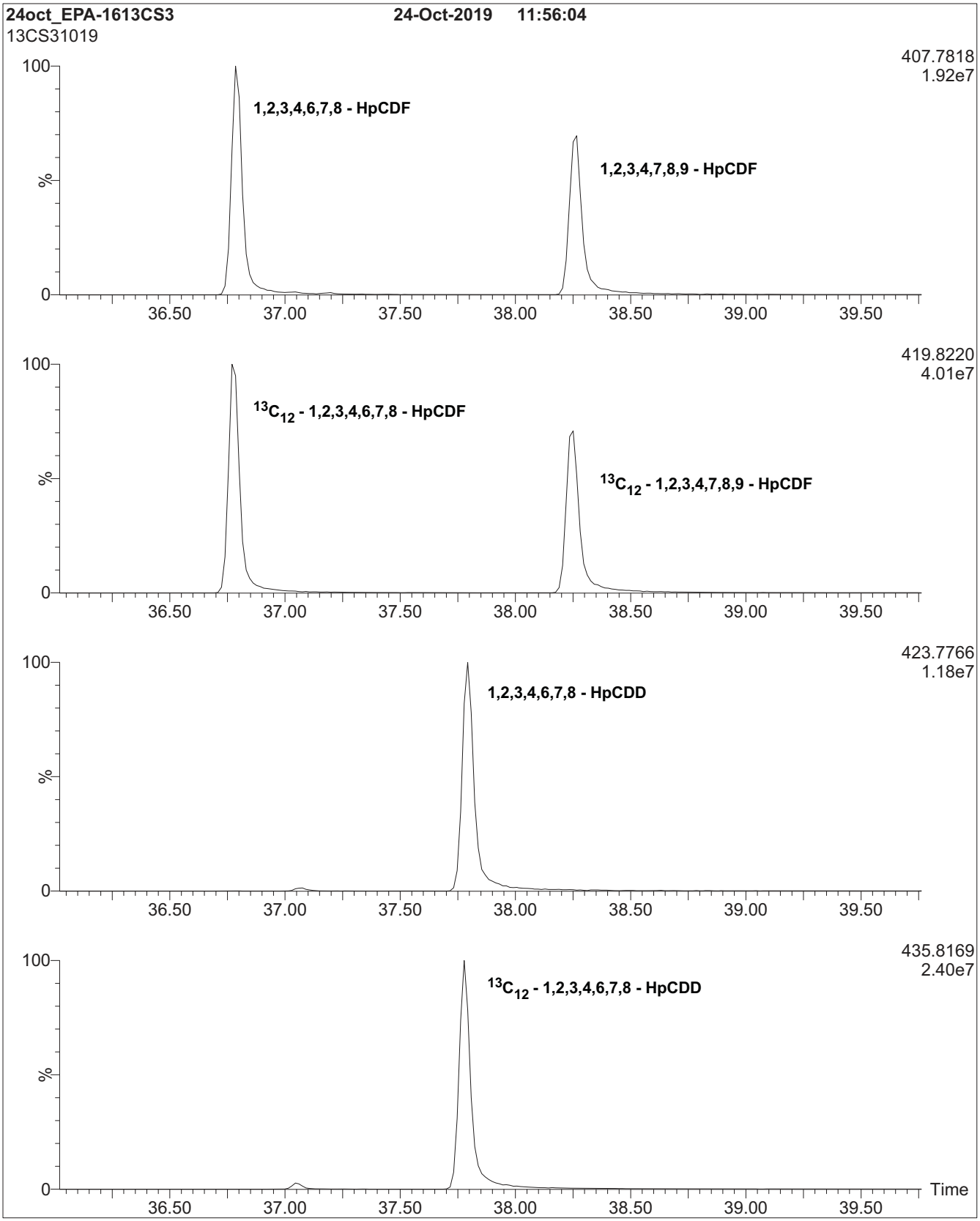
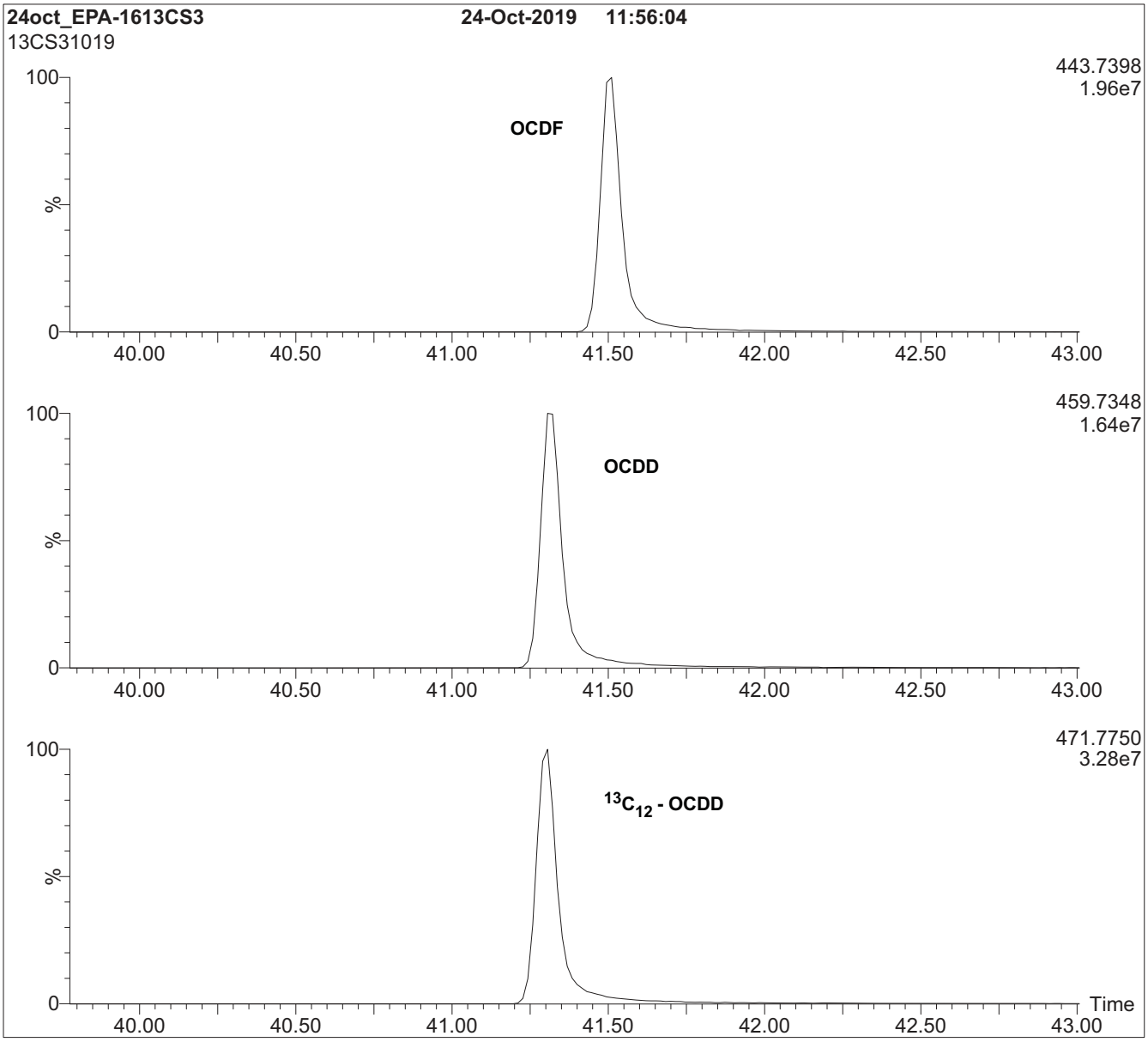


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow:	Constant at 1 ml/min	Oven:	150 °C (1 min)
Injector:	280 °C (Splitless Injection)		12 °C/min to 200 °C
Ionization:	EI+		3 °C/min to 235 °C
Detector:	280 °C		235 °C (8 min)
	SIR at 10,000 mass resolving power		8 °C/min to 310 °C
			310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

I005460
1613 CSL CAL STD
Expires 10/24/2026
Prepared By Joshua Rains 6/23/2020

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By: _____ **Date:** 10/25/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

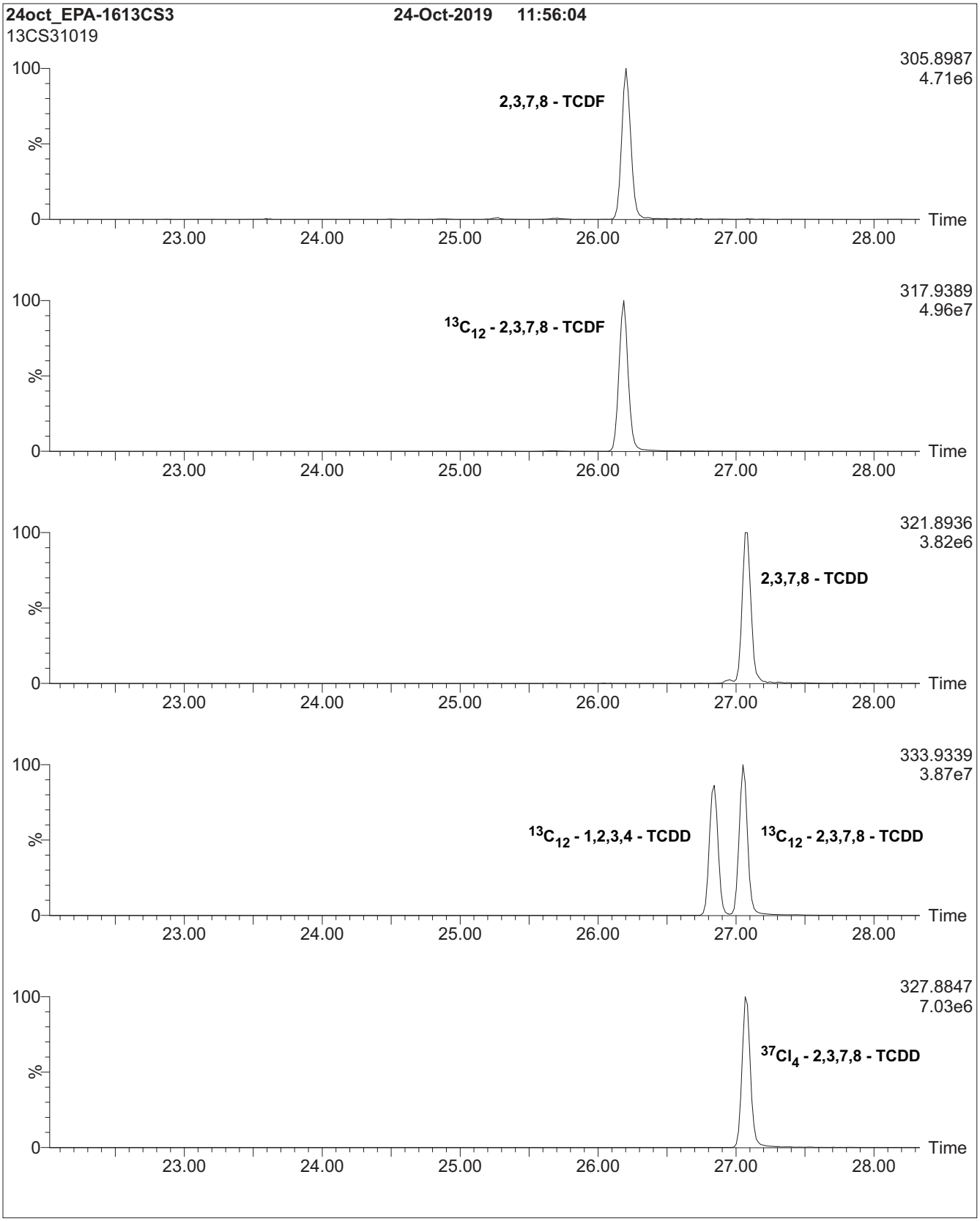


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

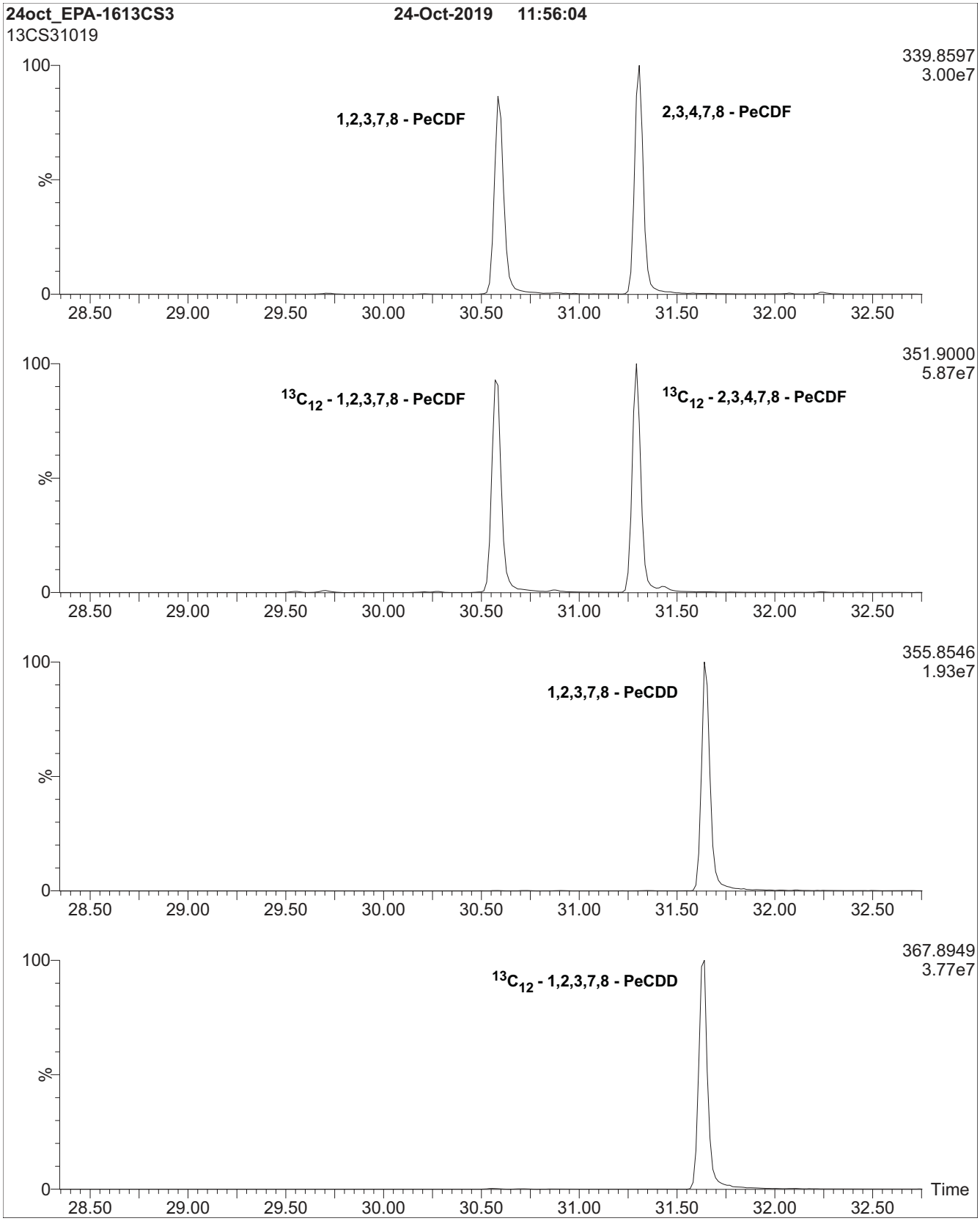


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

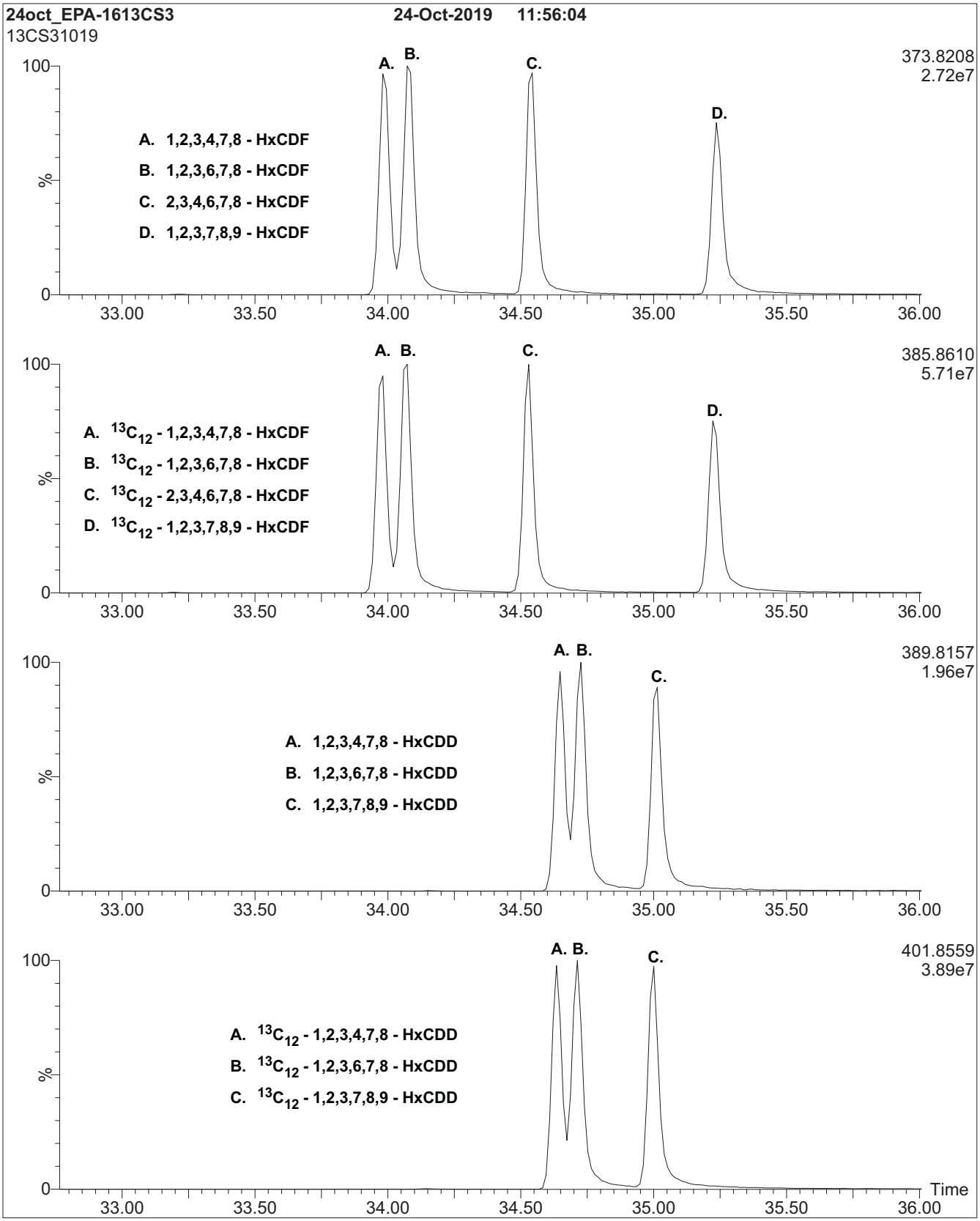


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

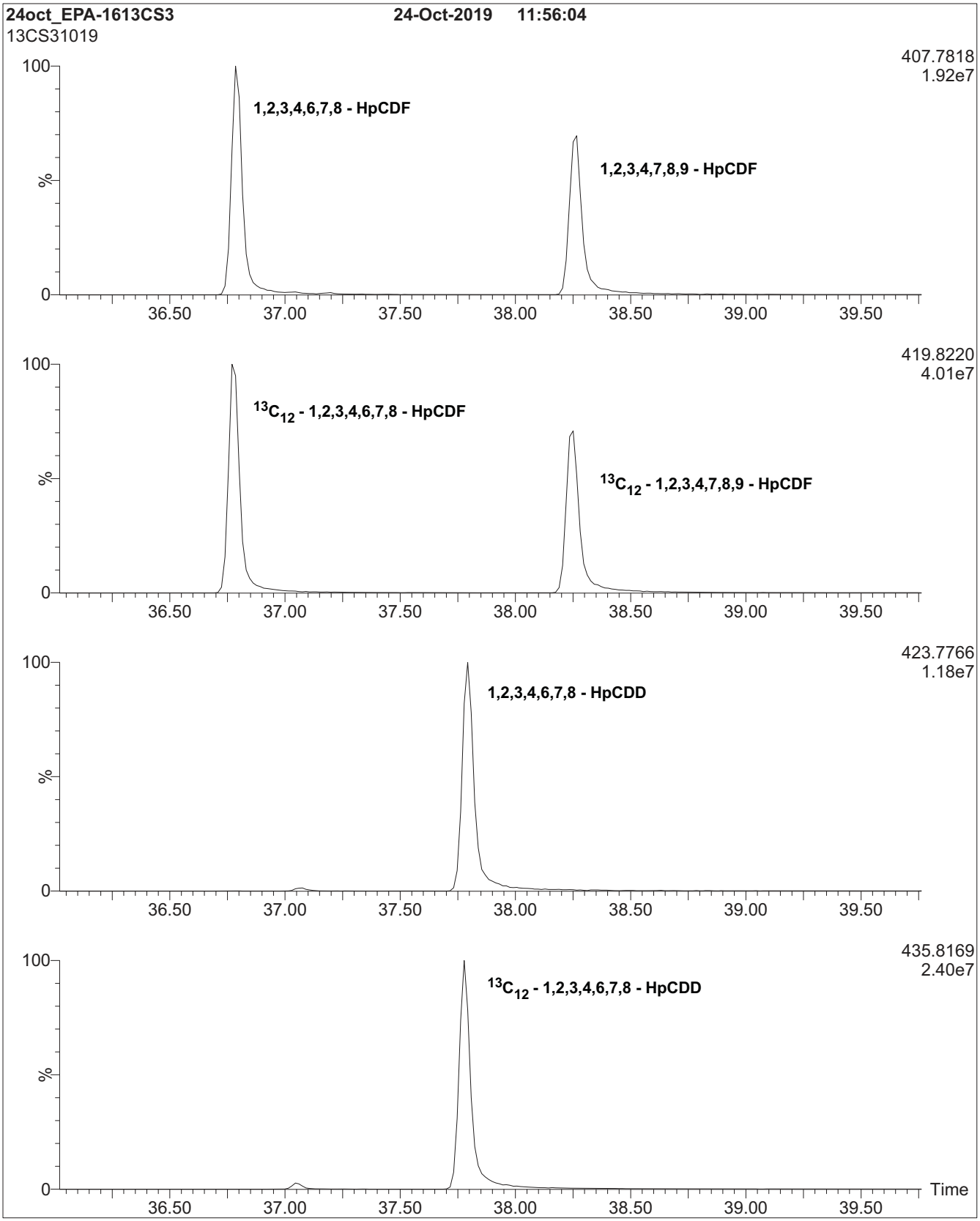
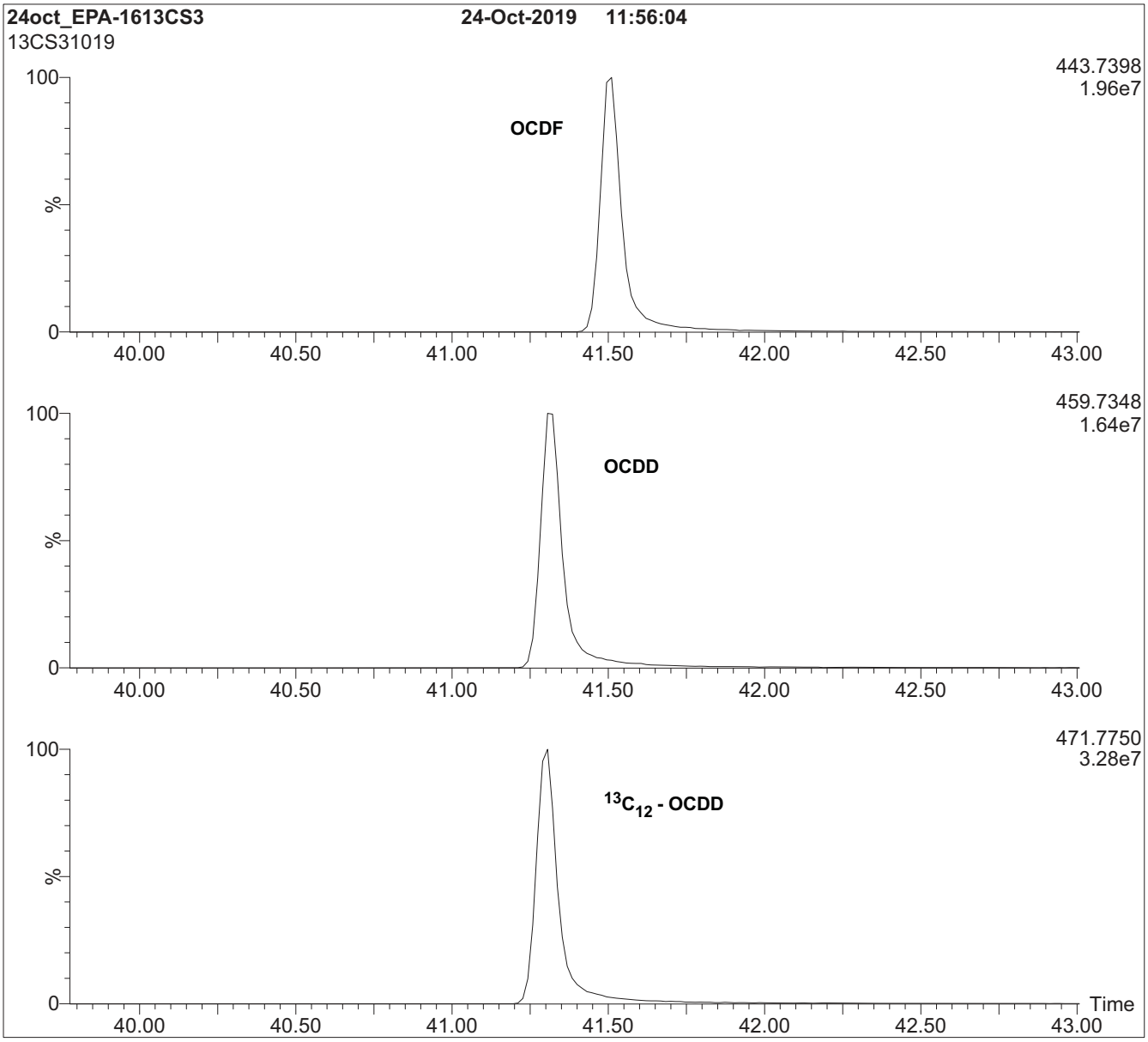


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR1021
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/25/2021
LAST TESTED: (mm/dd/yyyy)	11/03/2021
EXPIRY DATE: (mm/dd/yyyy)	11/03/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

J013397
Read. JR
12/20/21

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

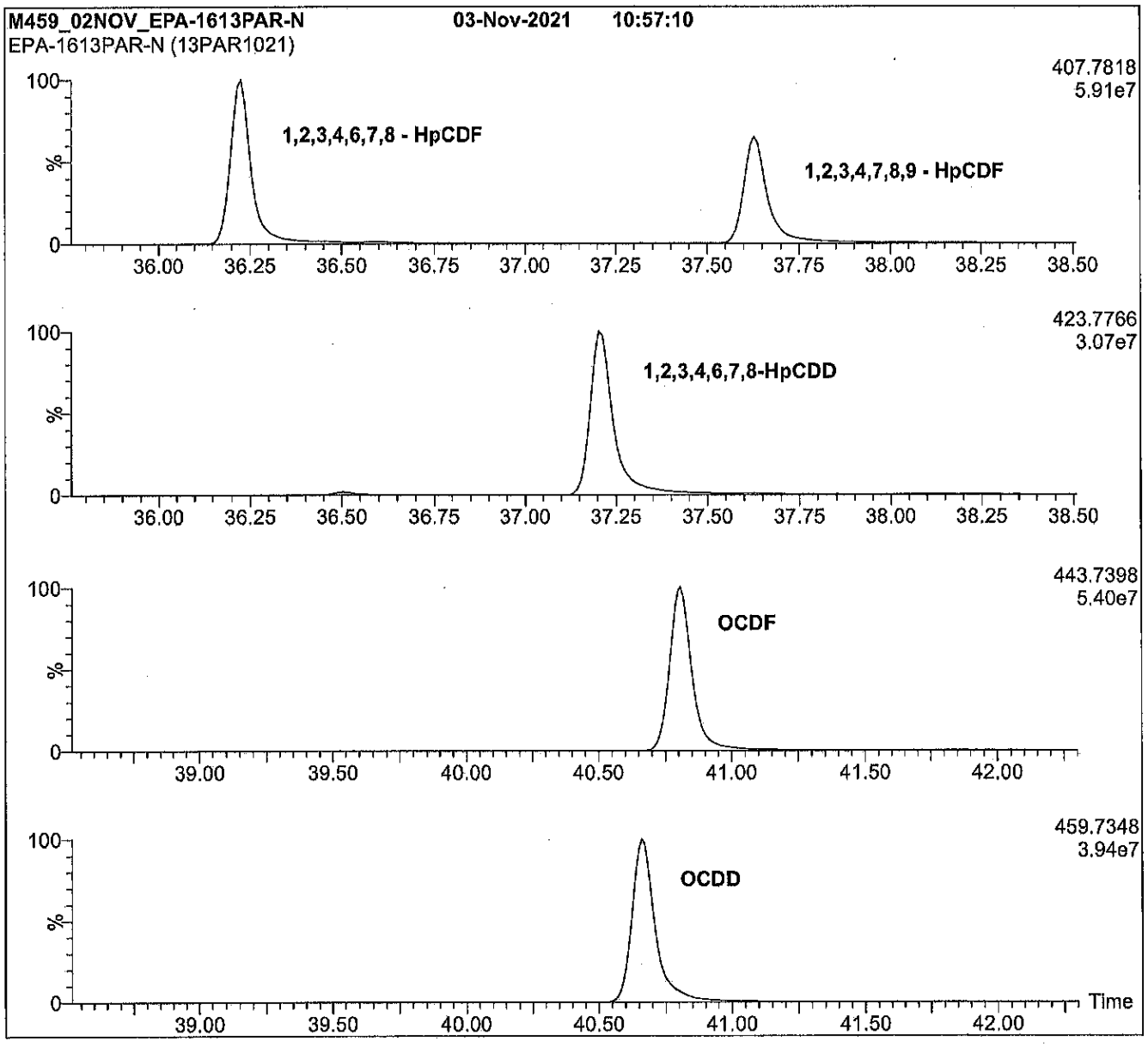
Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/mL, ± 5% in nonane/2.4% toluene)**

Compound	Acronym	CAS #	Concentration (ng/mL)
PCDDs:			
2,3,7,8-Tetrachlorodibenzo-*p*-dioxin	2,3,7,8-TCDD	1746-01-6	40.0
1,2,3,7,8-Pentachlorodibenzo-*p*-dioxin	1,2,3,7,8-PeCDD	40321-76-4	200
1,2,3,4,7,8-Hexachlorodibenzo-*p*-dioxin	1,2,3,4,7,8-HxCDD	39227-28-6	200
1,2,3,6,7,8-Hexachlorodibenzo-*p*-dioxin	1,2,3,6,7,8-HxCDD	57653-85-7	200
1,2,3,7,8,9-Hexachlorodibenzo-*p*-dioxin	1,2,3,7,8,9-HxCDD	19408-74-3	200
1,2,3,4,6,7,8-Heptachlorodibenzo-*p*-dioxin	1,2,3,4,6,7,8-HpCDD	35822-46-9	200
Octachlorodibenzo-*p*-dioxin	OCDD	3268-87-9	400
PCDFs:			
2,3,7,8-Tetrachlorodibenzofuran	2,3,7,8-TCDF	51207-31-9	40.0
1,2,3,7,8-Pentachlorodibenzofuran	1,2,3,7,8-PeCDF	57117-41-6	200
2,3,4,7,8-Pentachlorodibenzofuran	2,3,4,7,8-PeCDF	57117-31-4	200
1,2,3,4,7,8-Hexachlorodibenzofuran	1,2,3,4,7,8-HxCDF	70648-26-9	200
1,2,3,6,7,8-Hexachlorodibenzofuran	1,2,3,6,7,8-HxCDF	57117-44-9	200
1,2,3,7,8,9-Hexachlorodibenzofuran	1,2,3,7,8,9-HxCDF	72918-21-9	200
2,3,4,6,7,8-Hexachlorodibenzofuran	2,3,4,6,7,8-HxCDF	60851-34-5	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1,2,3,4,6,7,8-HpCDF	67562-39-4	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1,2,3,4,7,8,9-HpCDF	55673-89-7	200
Octachlorodibenzofuran	OCDF	39001-02-0	400

Certified By: _____ **Date:** 11/05/2021
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR1021
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/25/2021
LAST TESTED: (mm/dd/yyyy)	11/03/2021
EXPIRY DATE: (mm/dd/yyyy)	11/03/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

J013397
Read. JR
12/20/21

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

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Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, ...x_n$ on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/mL, ± 5% in nonane/2.4% toluene)**

Compound	Acronym	CAS #	Concentration (ng/mL)
PCDDs:			
2,3,7,8-Tetrachlorodibenzo-*p*-dioxin	2,3,7,8-TCDD	1746-01-6	40.0
1,2,3,7,8-Pentachlorodibenzo-*p*-dioxin	1,2,3,7,8-PeCDD	40321-76-4	200
1,2,3,4,7,8-Hexachlorodibenzo-*p*-dioxin	1,2,3,4,7,8-HxCDD	39227-28-6	200
1,2,3,6,7,8-Hexachlorodibenzo-*p*-dioxin	1,2,3,6,7,8-HxCDD	57653-85-7	200
1,2,3,7,8,9-Hexachlorodibenzo-*p*-dioxin	1,2,3,7,8,9-HxCDD	19408-74-3	200
1,2,3,4,6,7,8-Heptachlorodibenzo-*p*-dioxin	1,2,3,4,6,7,8-HpCDD	35822-46-9	200
Octachlorodibenzo-*p*-dioxin	OCDD	3268-87-9	400
PCDFs:			
2,3,7,8-Tetrachlorodibenzofuran	2,3,7,8-TCDF	51207-31-9	40.0
1,2,3,7,8-Pentachlorodibenzofuran	1,2,3,7,8-PeCDF	57117-41-6	200
2,3,4,7,8-Pentachlorodibenzofuran	2,3,4,7,8-PeCDF	57117-31-4	200
1,2,3,4,7,8-Hexachlorodibenzofuran	1,2,3,4,7,8-HxCDF	70648-26-9	200
1,2,3,6,7,8-Hexachlorodibenzofuran	1,2,3,6,7,8-HxCDF	57117-44-9	200
1,2,3,7,8,9-Hexachlorodibenzofuran	1,2,3,7,8,9-HxCDF	72918-21-9	200
2,3,4,6,7,8-Hexachlorodibenzofuran	2,3,4,6,7,8-HxCDF	60851-34-5	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1,2,3,4,6,7,8-HpCDF	67562-39-4	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1,2,3,4,7,8,9-HpCDF	55673-89-7	200
Octachlorodibenzofuran	OCDF	39001-02-0	400

Certified By: _____ **Date:** 11/05/2021
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

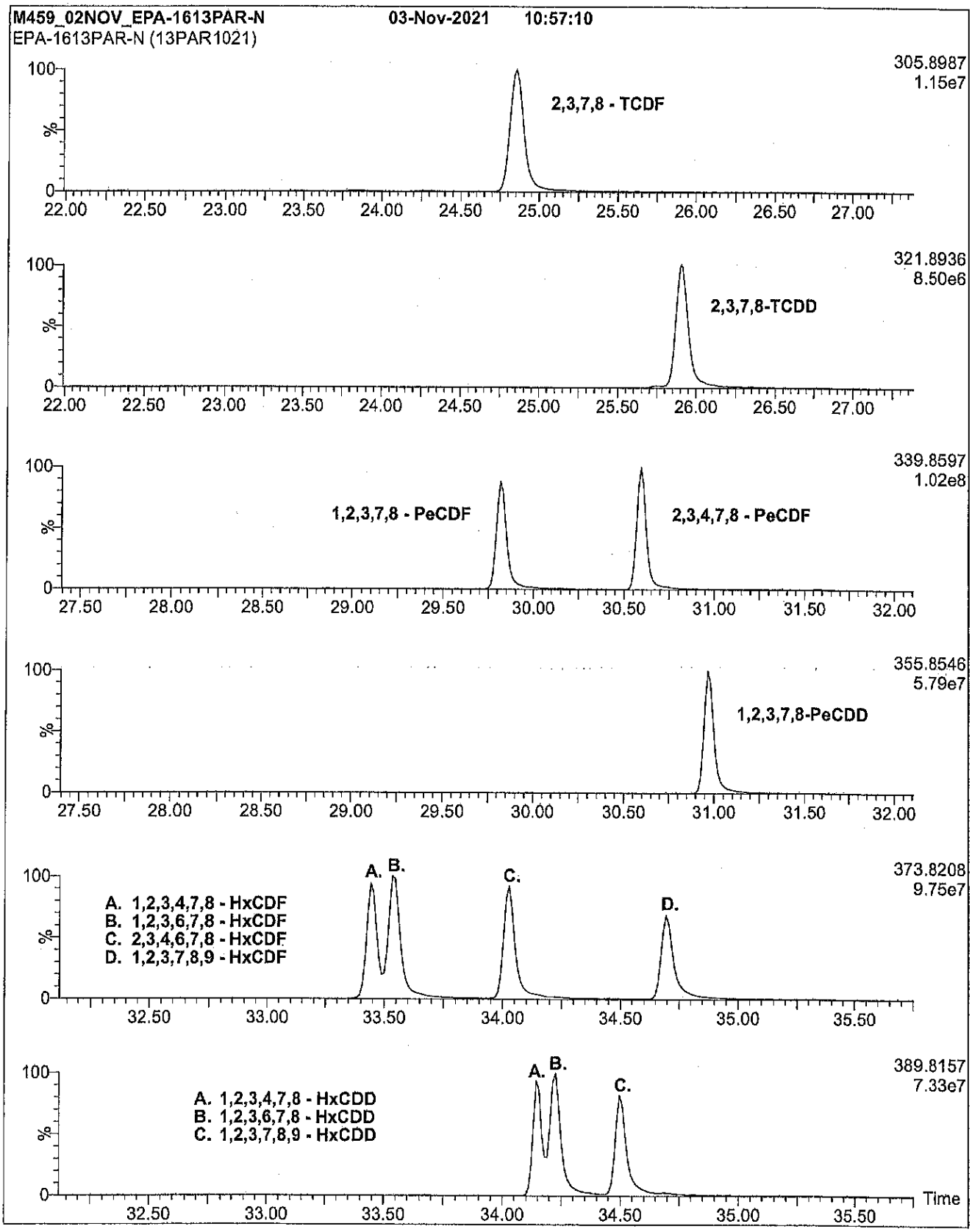
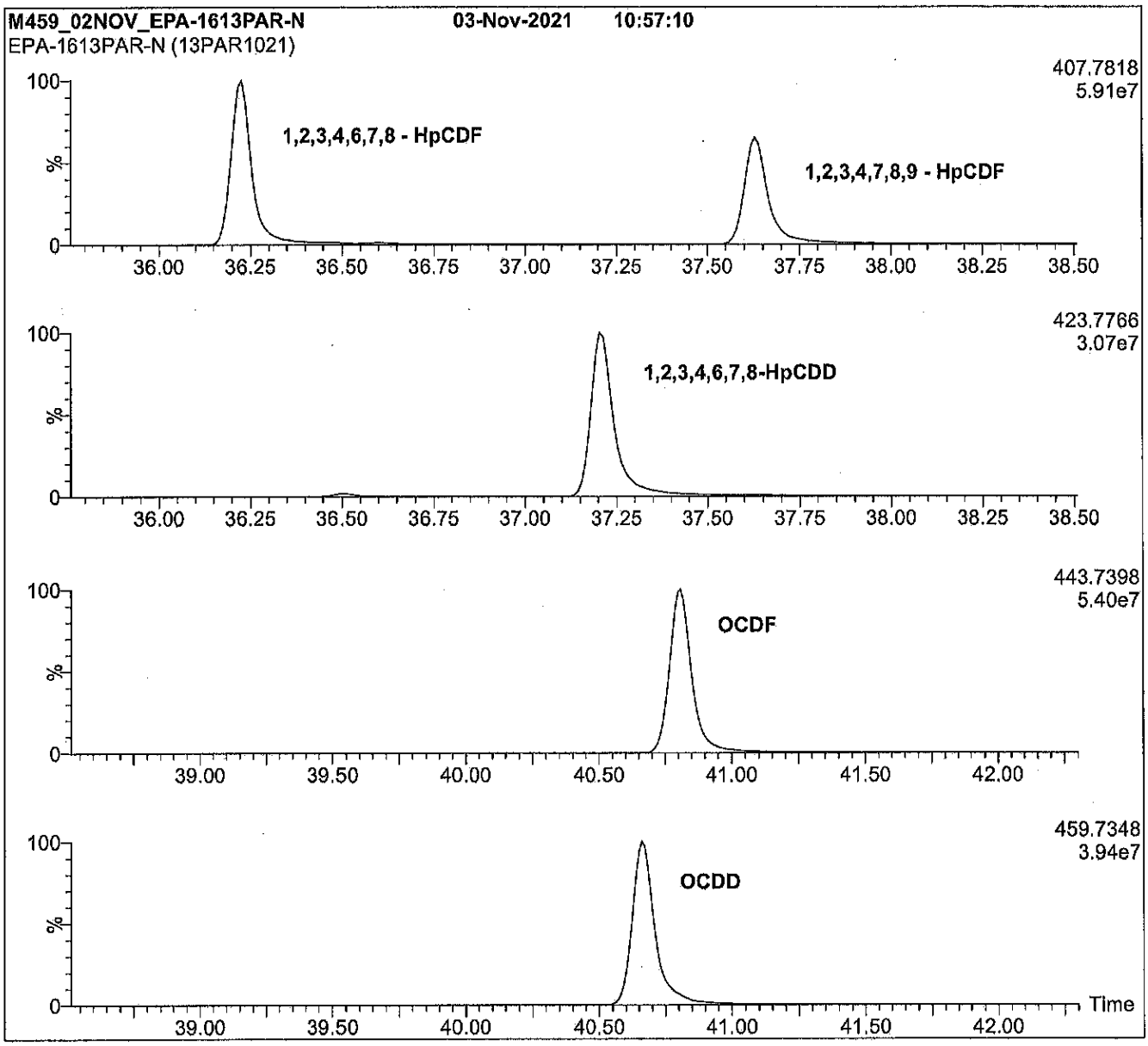


Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CSS

U.S. EPA Method 1613 Cleanup Standard Spiking Solution

PRODUCT CODE:	EPA-1613CSS
LOT NUMBER:	13CSS1021
SOLVENT(S):	Nonane
DATE PREPARED: (mm/dd/yyyy)	10/29/2021
LAST TESTED: (mm/dd/yyyy)	10/31/2021
EXPIRY DATE: (mm/dd/yyyy)	10/31/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION: K003104

EPA-1613CSS contains 2,3,7,8-($^{37}Cl_4$)tetrachlorodibenzo-*p*-dioxin at the concentration given in Table A.

EPA-1613CSS was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

2,3,7,8-($^{37}Cl_4$)Tetrachlorodibenzo-*p*-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

Table A: **EPA-1613CSS; Components and Concentrations (ng/mL, ± 5% in nonane)**

Compound	Acronym	CAS #	Concentration (ng/mL)
2,3,7,8-($^{37}Cl_4$)Tetrachlorodibenzo-*p*-dioxin	$^{37}Cl_4$-2,3,7,8-TCDD	85508-50-5	40.0

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/05/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

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HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

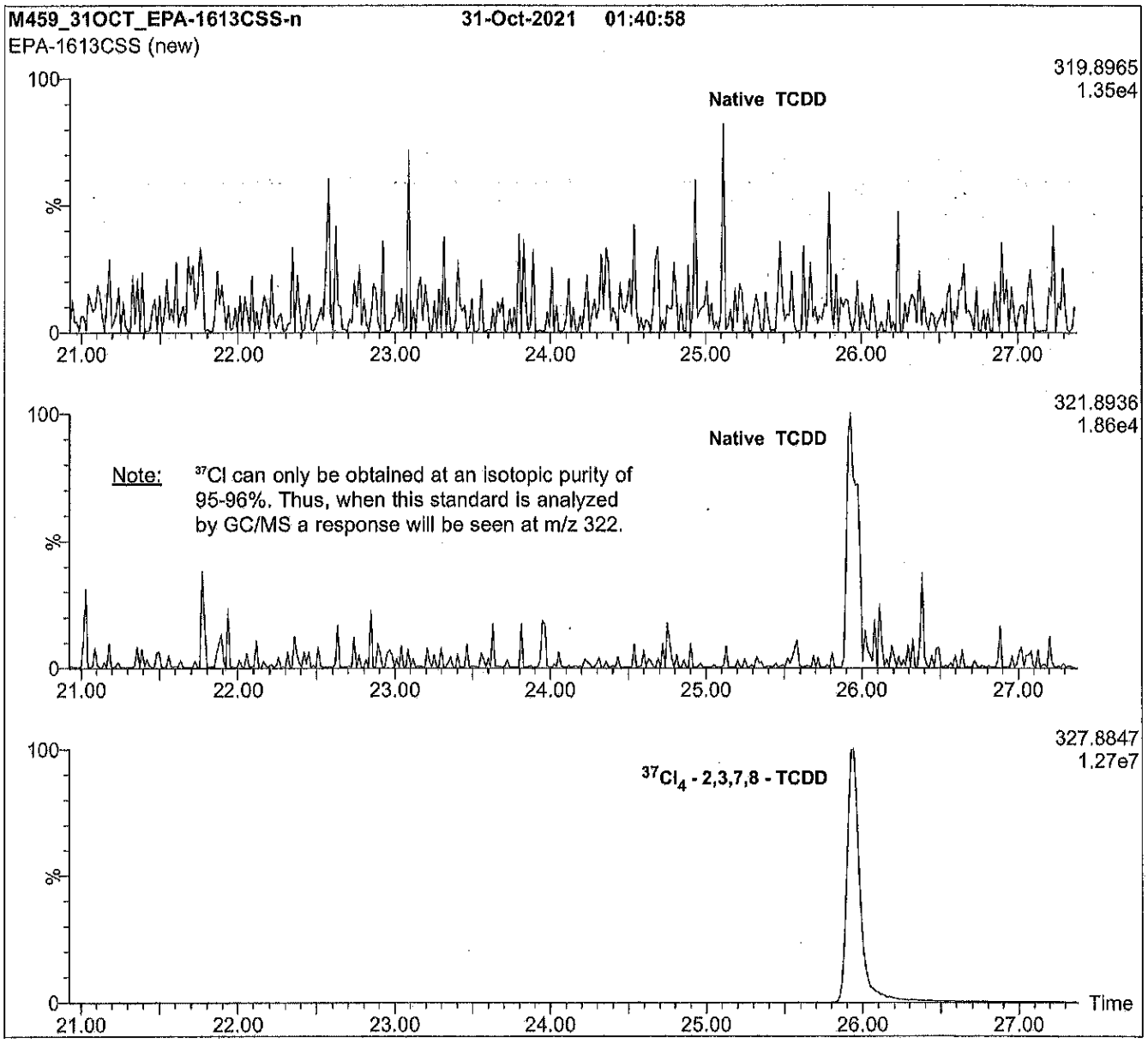
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **EPA-1613CSS; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613LCS

U.S. EPA Method 1613
Labelled Compound Stock Solution

PRODUCT CODE:	EPA-1613LCS
LOT NUMBER:	13LCS1021
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/29/2021
LAST TESTED: (mm/dd/yyyy)	10/31/2021
EXPIRY DATE: (mm/dd/yyyy)	10/31/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION: K3105

EPA-1613LCS is a solution/mixture of mass-labelled ($^{13}C_{12}$) polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613LCS was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

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519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Table A: **EPA-1613LCS; Components and Concentrations (ng/mL, ± 5% in nonane/3.2% toluene)**

Compound	Acronym	CAS #	Concentration (ng/mL)
Mass-Labelled PCDDs:			
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-2,3,7,8-TCDD	76523-40-5	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,7,8-PeCDD	109719-79-1	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	109719-80-4	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	109719-81-5	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	109719-83-7	100
Octachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-OCDD	114423-97-1	200
Mass-Labelled PCDFs:			
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,7,8-TCDF	89059-46-1	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,7,8-PeCDF	109719-77-9	100
2,3,4,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,4,7,8-PeCDF	116843-02-8	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	114423-98-2	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	116843-03-9	100
1,2,3,7,8,9-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	116843-04-0	100
2,3,4,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	116843-05-1	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	109719-84-8	100
1,2,3,4,7,8,9-Heptachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	109719-94-0	100

Certified By: _____ **Date:** 11/05/2021
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

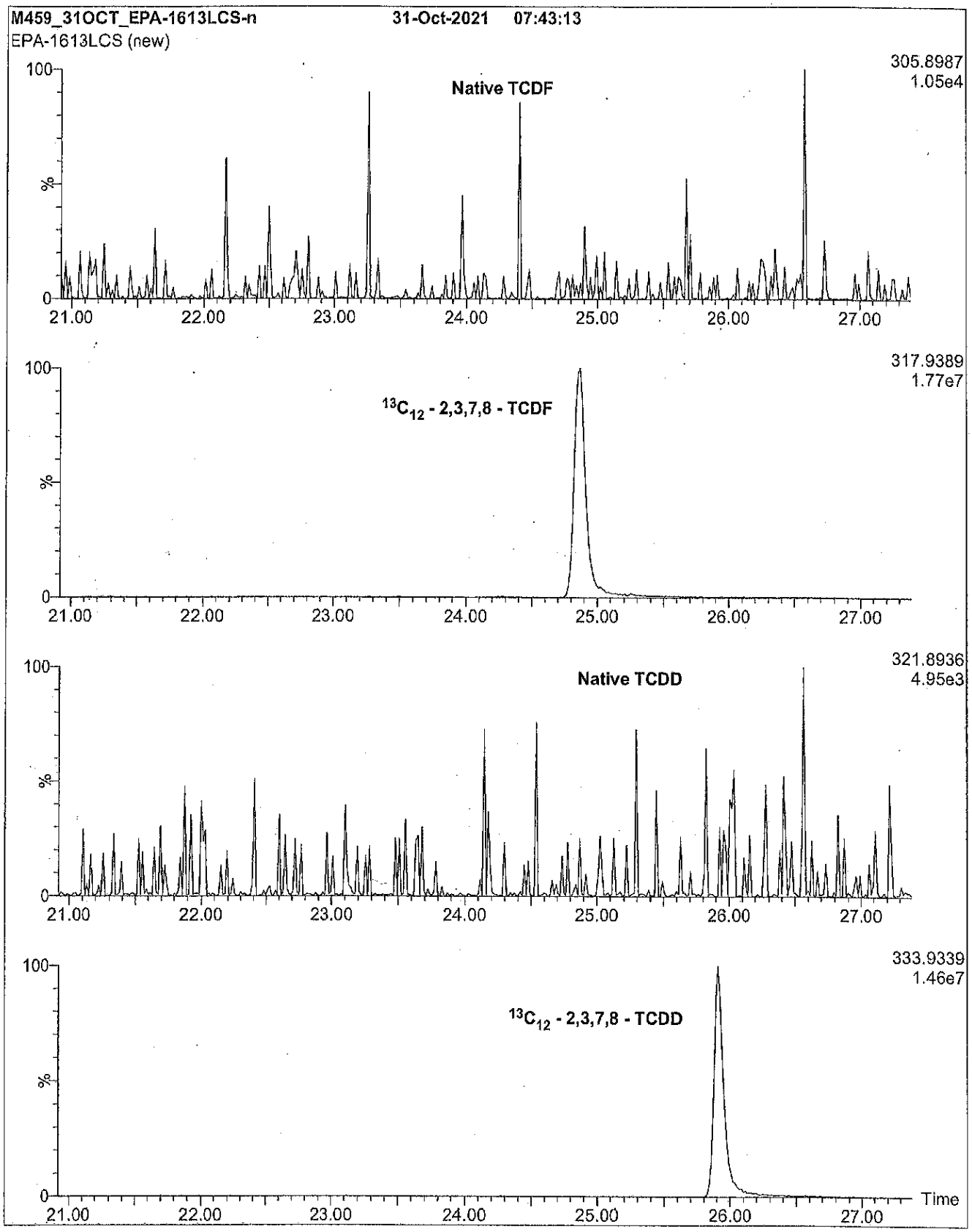


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

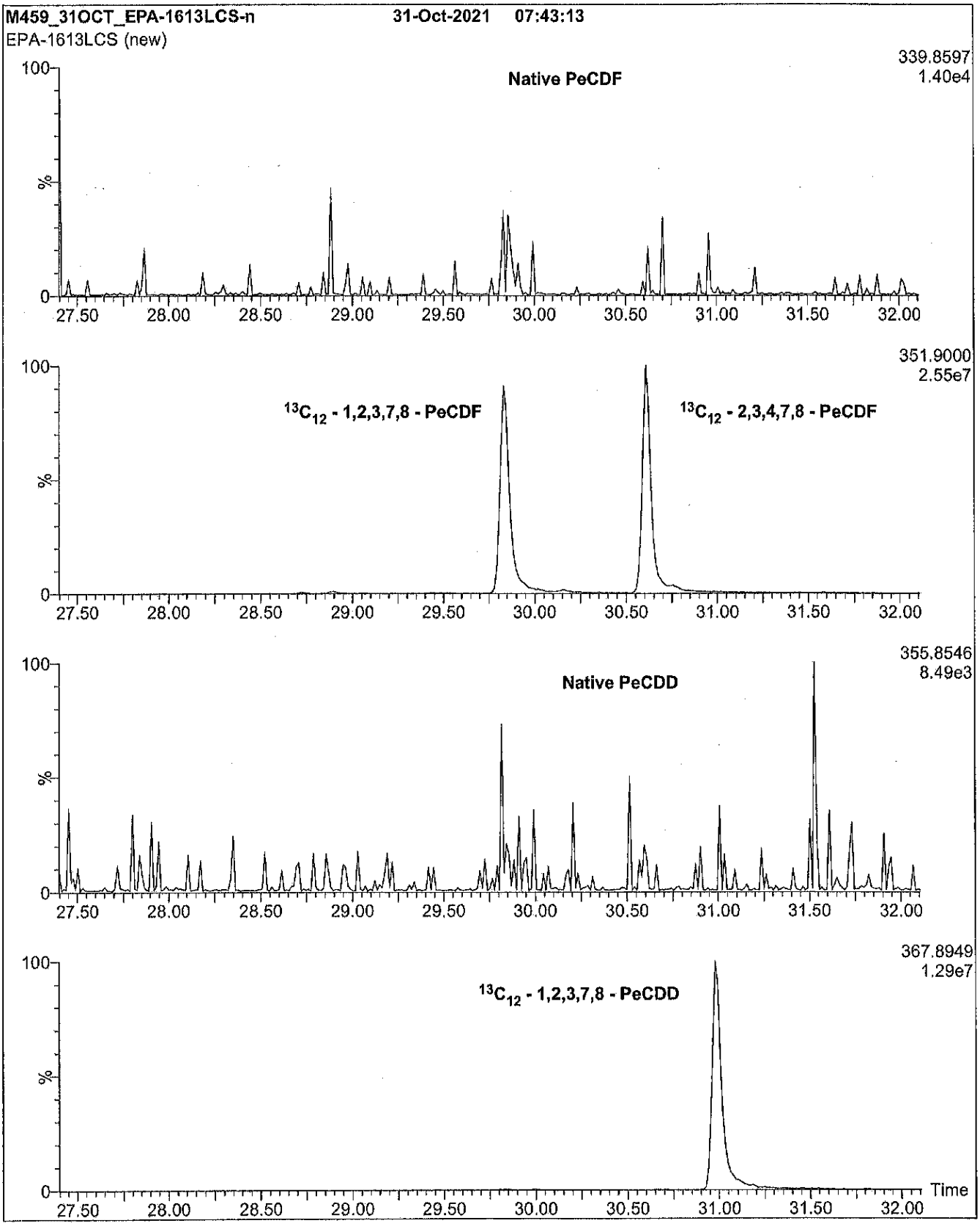


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

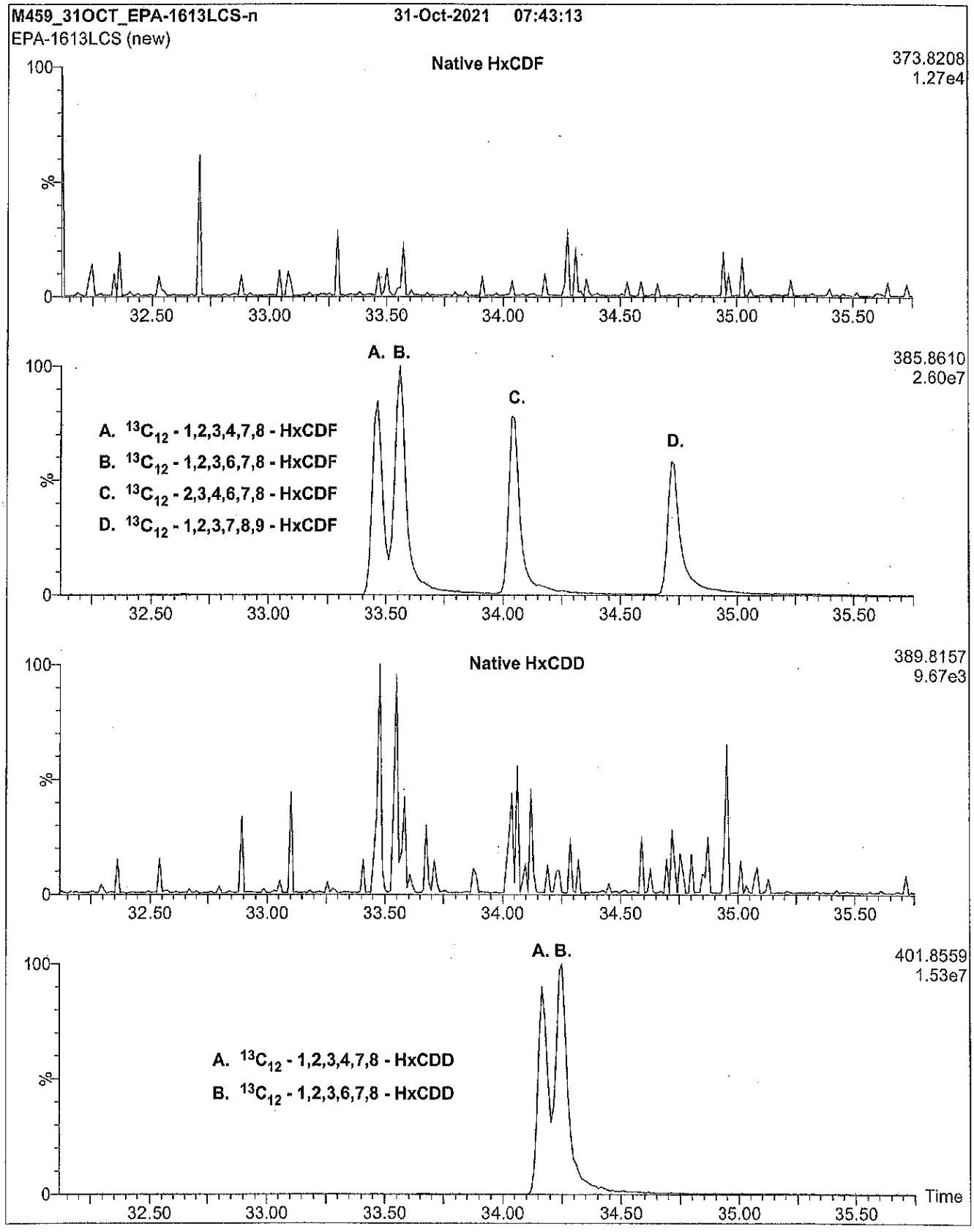


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

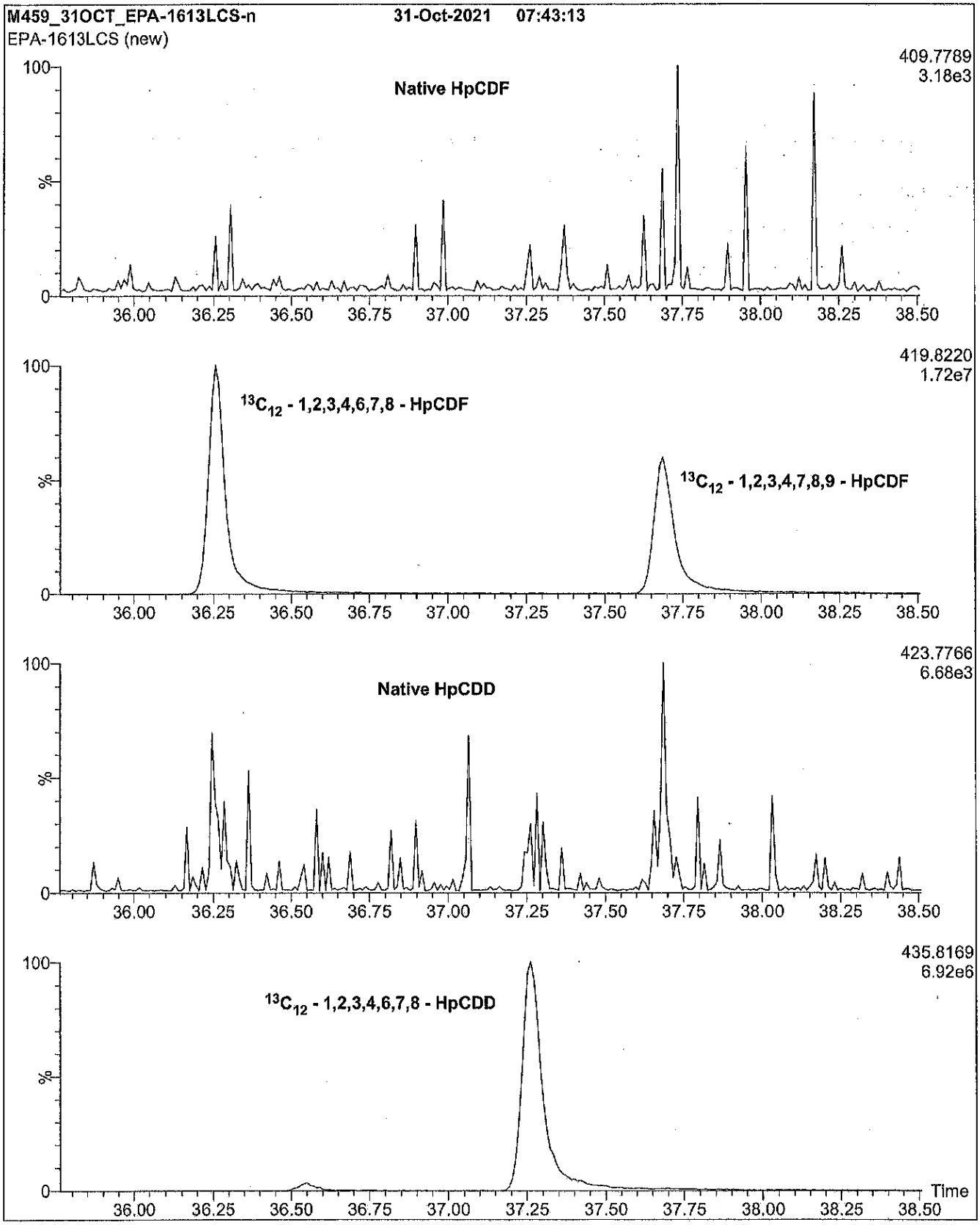
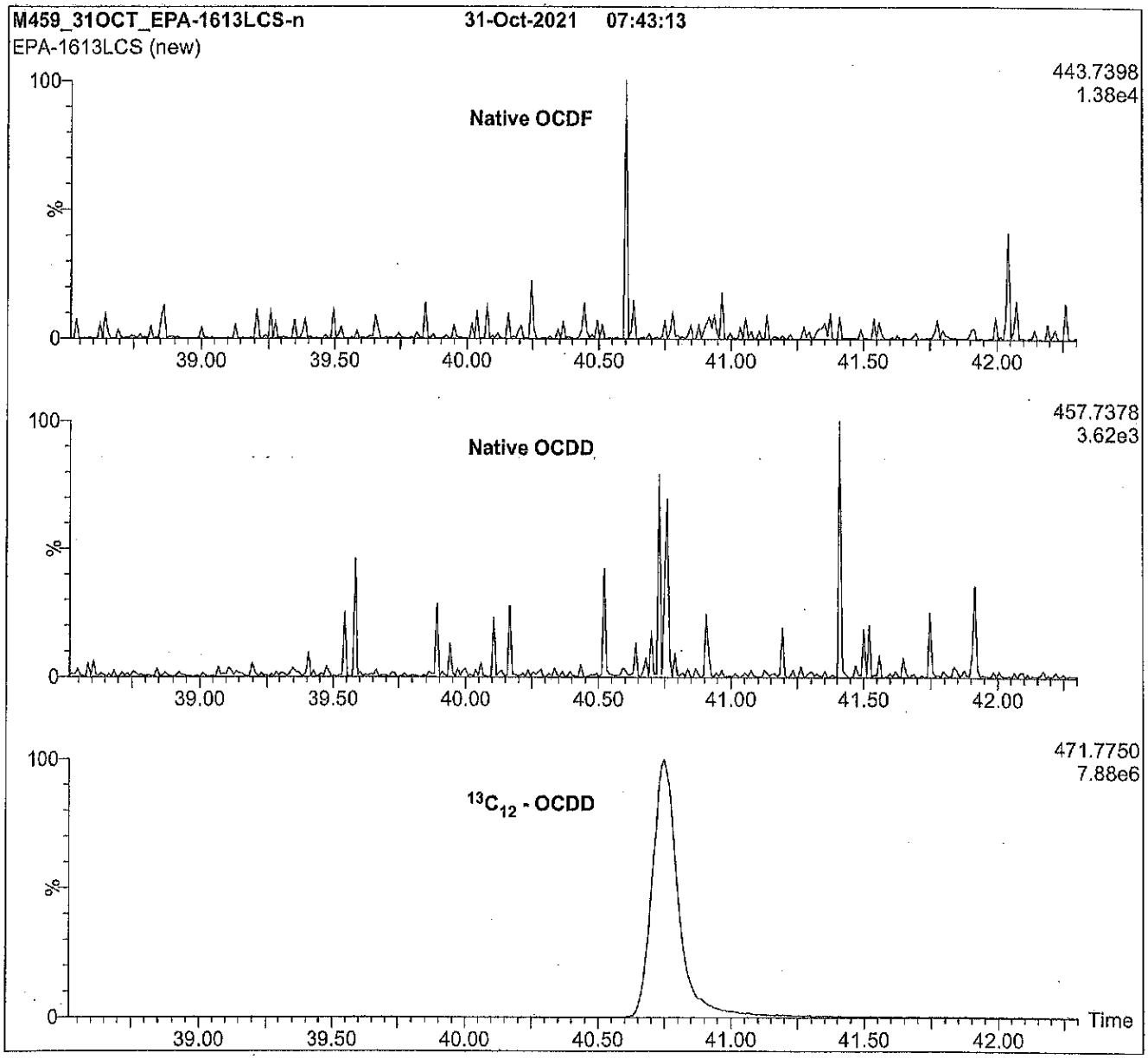


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

K9821

CS3WT

Calibration and Verification Solution (EPA-1613CS3) combined with Window Defining and 2,3,7,8-TCDD Resolution Testing Congeners

PRODUCT CODE:	CS3WT
LOT NUMBER:	CS3WT1021
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	11/01/2021
LAST TESTED: (mm/dd/yyyy)	11/02/2021
EXPIRY DATE: (mm/dd/yyyy)	11/02/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

CS3WT is a solution/mixture of native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$) polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Tables A and B.

CS3WT is an HRGC/HRMS calibration solution that was designed and prepared to be used according to U.S. EPA Method 1613, Revision B, in place of EPA-1613CS3 (lot: 13CS31021). Additionally, it contains the PCDD and PCDF isomers required to set retention time windows as well as test and establish isomer specificity for 2,3,7,8-TCDD on a DB-5 (or equivalent) capillary column.

The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-($^{37}Cl_4$)tetrachlorodibenzo-*p*-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%. The individual native 2,3,7,8-substituted PCDD and PCDF congeners all have chemical purities of >98%; the other congeners (window defining and resolution testing) should only be considered semi-quantitative.

This current lot of CS3WT is to be used with the 1613 calibration solutions having the following lot numbers:

PRODUCT CODE	LOT NUMBER
EPA-1613CS1	13CS11021
EPA-1613CS2	13CS21021
EPA-1613CS3	13CS31021
EPA-1613CS4	13CS41021
EPA-1613CS5	13CS51021
EPA-1613CSL	13CSL1021
EPA-1613CS0.5	13CS0.51021

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Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) has been assigned to the quantitative components in this product. A maximum combined percent relative uncertainty of ±20% has been assigned to the semi-quantitative components in this product.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **CS3WT; Quantitative Components and Concentrations (ng/mL, ± 5%, in nonane/4.5% toluene)**

Compound		Acronym	CAS #	Concentration (ng/mL)
Native PCDDs:	**Designation[a]**			
2,3,7,8-Tetrachlorodibenzo-*p*-dioxin		2,3,7,8-TCDD	1746-01-6	10.0
1,2,3,7,8-Pentachlorodibenzo-*p*-dioxin		1,2,3,7,8-PeCDD	40321-76-4	50.0
1,2,3,4,7,8-Hexachlorodibenzo-*p*-dioxin		1,2,3,4,7,8-HxCDD	39227-28-6	50.0
1,2,3,6,7,8-Hexachlorodibenzo-*p*-dioxin		1,2,3,6,7,8-HxCDD	57653-85-7	50.0
1,2,3,7,8,9-Hexachlorodibenzo-*p*-dioxin	Last HxCDD[b]	1,2,3,7,8,9-HxCDD	19408-74-3	50.0
1,2,3,4,6,7,8-Heptachlorodibenzo-*p*-dioxin	Last HpCDD	1,2,3,4,6,7,8-HpCDD	35822-46-9	50.0
Octachlorodibenzo-*p*-dioxin		OCDD	3268-87-9	100
Native PCDFs:	**Designation[a]**			
2,3,7,8-Tetrachlorodibenzofuran		2,3,7,8-TCDF	51207-31-9	10.0
1,2,3,7,8-Pentachlorodibenzofuran		1,2,3,7,8-PeCDF	57117-41-6	50.0
2,3,4,7,8-Pentachlorodibenzofuran		2,3,4,7,8-PeCDF	57117-31-4	50.0
1,2,3,4,7,8-Hexachlorodibenzofuran		1,2,3,4,7,8-HxCDF	70648-26-9	50.0
1,2,3,6,7,8-Hexachlorodibenzofuran		1,2,3,6,7,8-HxCDF	57117-44-9	50.0
1,2,3,7,8,9-Hexachlorodibenzofuran		1,2,3,7,8,9-HxCDF	72918-21-9	50.0
2,3,4,6,7,8-Hexachlorodibenzofuran		2,3,4,6,7,8-HxCDF	60851-34-5	50.0
1,2,3,4,6,7,8-Heptachlorodibenzofuran	First HpCDF[c]	1,2,3,4,6,7,8-HpCDF	67562-39-4	50.0
1,2,3,4,7,8,9-Heptachlorodibenzofuran	Last HpCDF	1,2,3,4,7,8,9-HpCDF	55673-89-7	50.0
Octachlorodibenzofuran		OCDF	39001-02-0	100
Mass-Labelled PCDDs:				
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-2,3,7,8-TCDD	76523-40-5	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,7,8-PeCDD	109719-79-1	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	109719-80-4	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	109719-81-5	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	109719-83-7	100
Octachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-OCDD	114423-97-1	200
Mass-Labelled PCDFs:				
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-2,3,7,8-TCDF	89059-46-1	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,7,8-PeCDF	109719-77-9	100
2,3,4,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-2,3,4,7,8-PeCDF	116843-02-8	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	114423-98-2	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	116843-03-9	100
1,2,3,7,8,9-Hexachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	116843-04-0	100
2,3,4,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	116843-05-1	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	109719-84-8	100
1,2,3,4,7,8,9-Heptachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	109719-94-0	100
Cleanup Standard:				
2,3,7,8-($^{37}Cl_4$)Tetrachlorodibenzo-*p*-dioxin		$^{37}Cl_4$-2,3,7,8-TCDD	85508-50-5	10.0
Internal Standards:				
1,2,3,4-Tetrachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,4-TCDD	114423-99-3	100
1,2,3,7,8,9-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	109719-82-6	100

[a] First/Last eluting isomer for the specified homologue group (see Table B for additional Window Definers).
[b, c] – see Table B for footnote.

Table B: **CS3WT; Semi-Quantitative Components and Concentrations (ng/mL, ± 20%, in nonane/4.5% toluene)**

Compound		Acronym	CAS #	Concentration (ng/mL)
PCDD Window Definers:	**Designation[a]**			
1,3,6,8-Tetrachlorodibenzo-*p*-dioxin	First TCDD	1,3,6,8-TCDD	33423-92-6	10.0
1,2,8,9-Tetrachlorodibenzo-*p*-dioxin	Last TCDD	1,2,8,9-TCDD	62470-54-6	10.0
1,2,4,6,8-/1,2,4,7,9-Pentachlorodibenzo-*p*-dioxin	First PeCDD	1,2,4,6,8-PeCDD 1,2,4,7,9-PeCDD	71998-76-0 82291-37-0	50.0[d]
1,2,3,8,9-Pentachlorodibenzo-*p*-dioxin	Last PeCDD	1,2,3,8,9-PeCDD	71925-18-3	50.0
1,2,4,6,7,9-Hexachlorodibenzo-*p*-dioxin	First HxCDD	1,2,4,6,7,9-HxCDD	39227-62-8	50.0
1,2,3,4,6,7,9-Heptachlorodibenzo-*p*-dioxin	First HpCDD	1,2,3,4,6,7,9-HpCDD	58200-70-7	50.0
PCDF Window Definers:	**Designation[a]**			
1,3,6,8-Tetrachlorodibenzofuran	First TCDF	1,3,6,8-TCDF	71998-72-6	10.0
1,2,8,9-Tetrachlorodibenzofuran	Last TCDF	1,2,8,9-TCDF	70648-22-5	10.0
1,3,4,6,8-Pentachlorodibenzofuran	First PeCDF	1,3,4,6,8-PeCDF	83704-55-6	50.0
1,2,3,8,9-Pentachlorodibenzofuran	Last PeCDF	1,2,3,8,9-PeCDF	83704-54-5	50.0
1,2,3,4,6,8-Hexachlorodibenzofuran	First HxCDF	1,2,3,4,6,8-HxCDF	69698-60-8	50.0
2,3,7,8-TCDD Resolution Testing Isomers:				
1,2,3,4-Tetrachlorodibenzo-*p*-dioxin		1,2,3,4-TCDD	30746-58-8	5.00
1,2,3,7-/1,2,3,8-Tetrachlorodibenzo-*p*-dioxin		1,2,3,7-TCDD 1,2,3,8-TCDD	67028-18-6 53555-02-5	5.00[d]
1,2,3,9-Tetrachlorodibenzo-*p*-dioxin		1,2,3,9-TCDD	71669-26-6	10.0

[a] First/Last eluting isomer for the specified homologue group (see Table A for additional Window Definers).

[b] 1,2,3,4,6,7-HxCDD (last eluting HxCDD) not included; coelutes with 1,2,3,7,8,9-HxCDD on a 60 m DB-5 column. Use 1,2,3,7,8,9-HxCDD (see Table A) and 1,2,3,4,6,7,9-HpCDD to approximate the end of the HxCDD window.

[c] 1,2,3,4,8,9-HxCDF (last eluting HxCDF) not included; can interfere with 1,2,3,7,8,9-HxCDF on a 60 m DB-5 column. Use 1,2,3,4,6,7,8-HpCDF (see Table A) to approximate the end of the HxCDF window.

[d] Total concentration of isomers.

Certified By: _____ **Date:** 11/05/2021 (mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

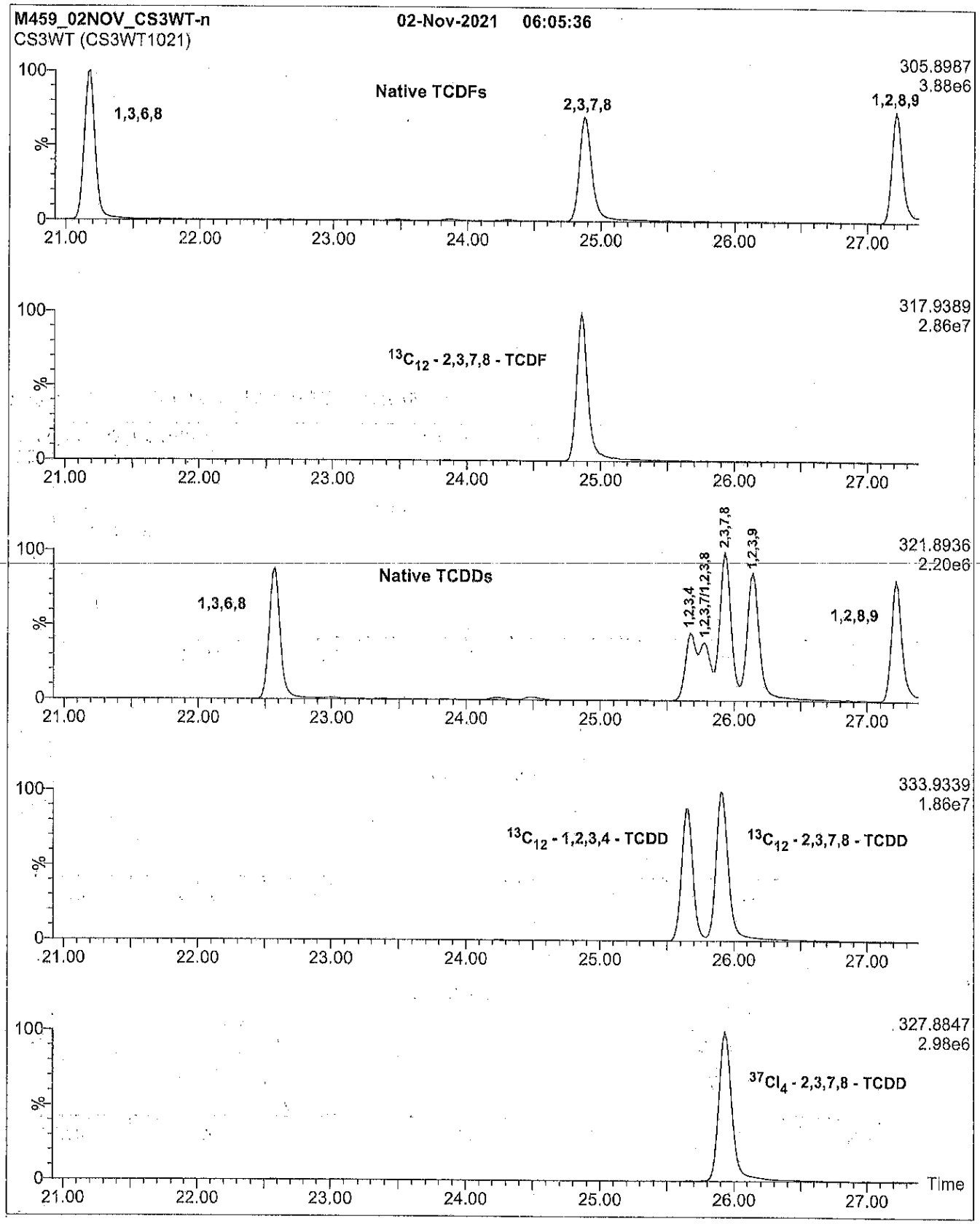


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

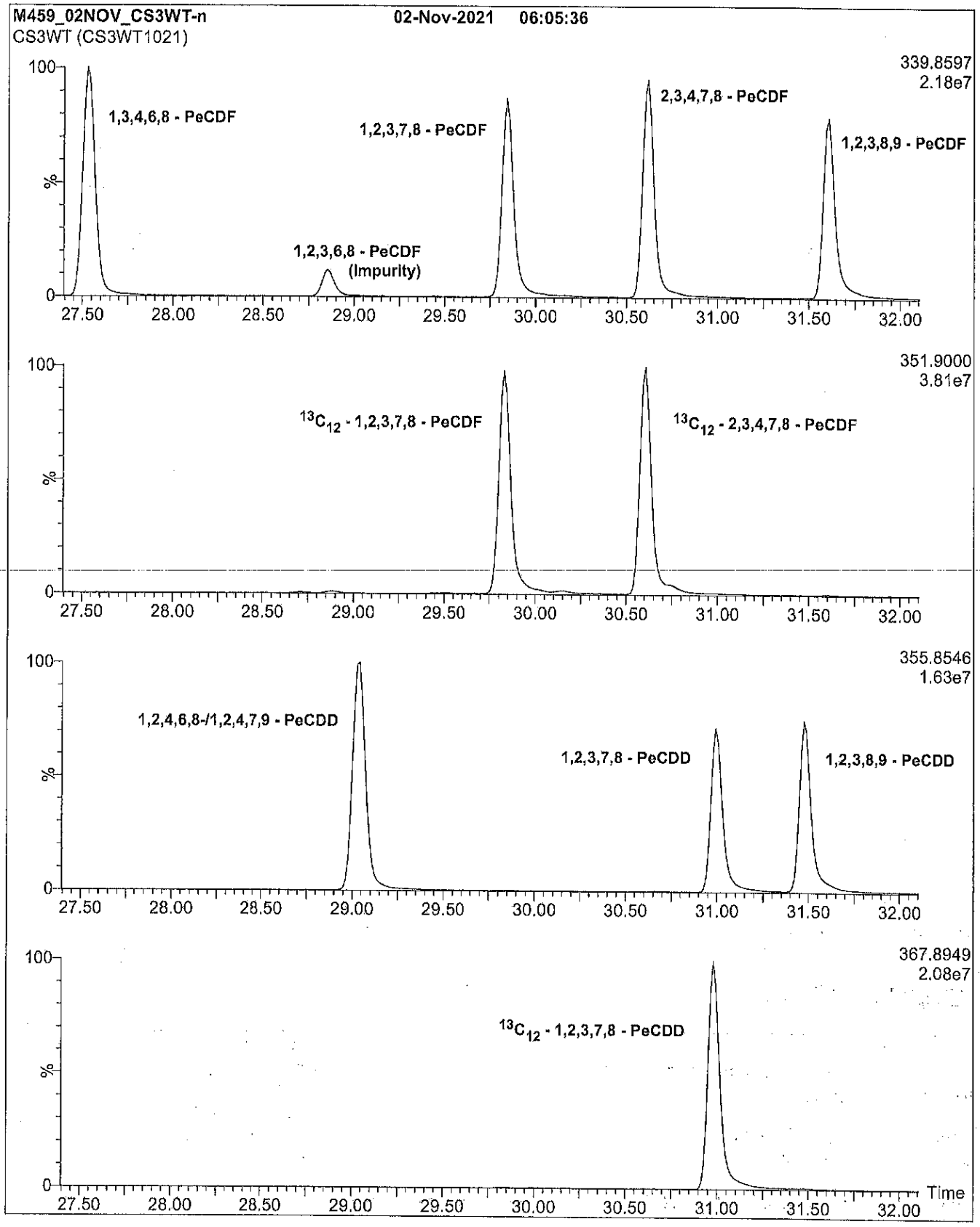


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

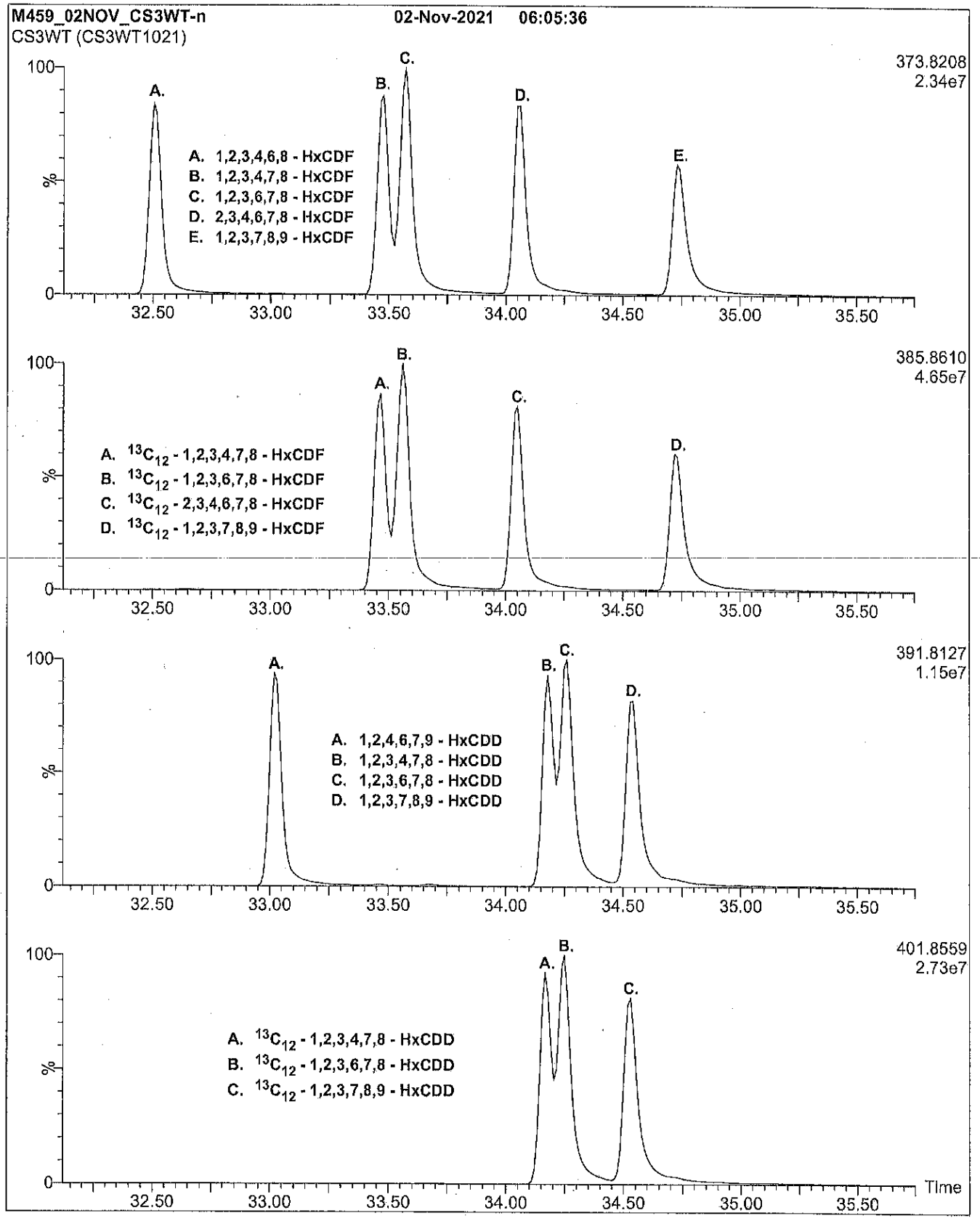


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

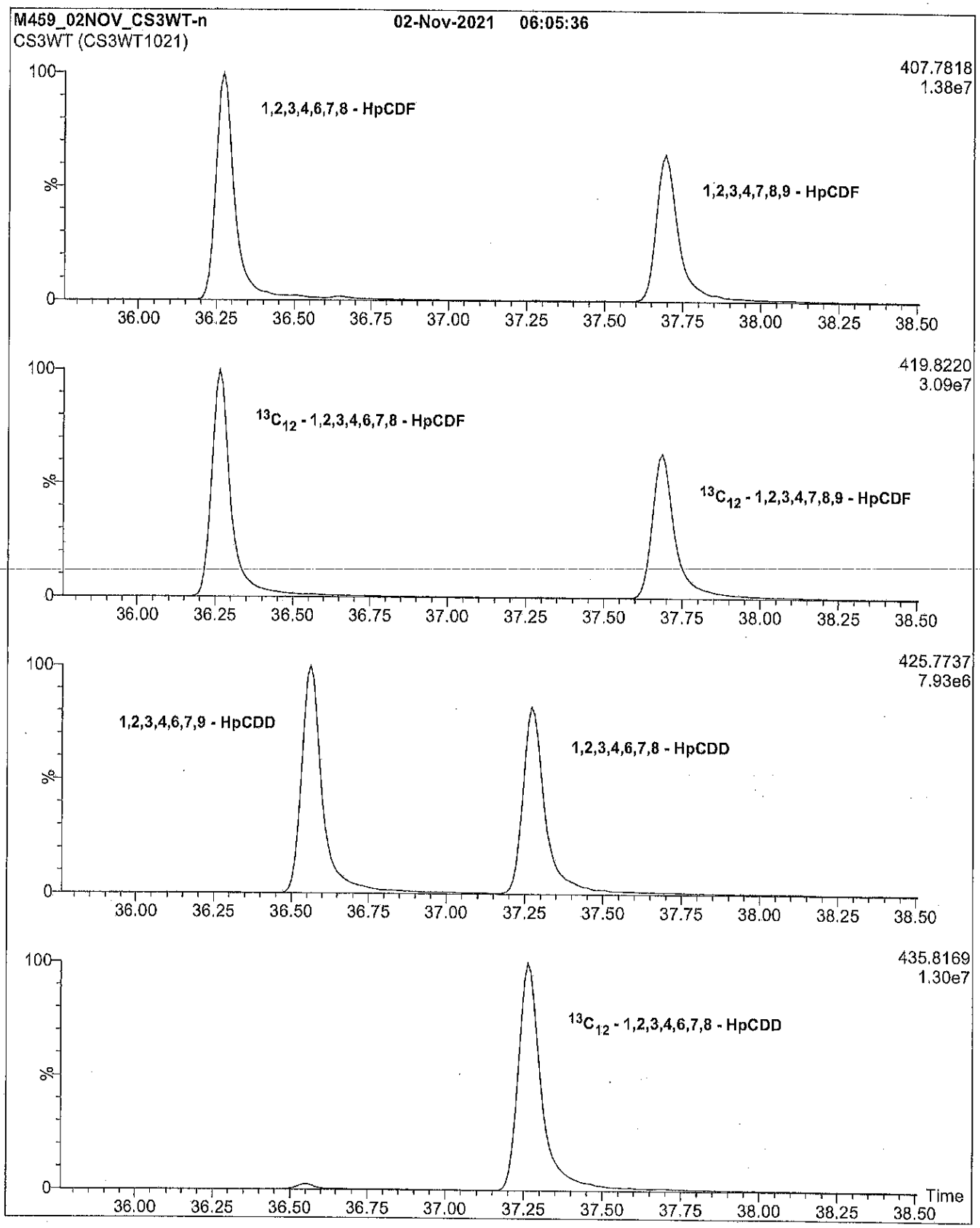
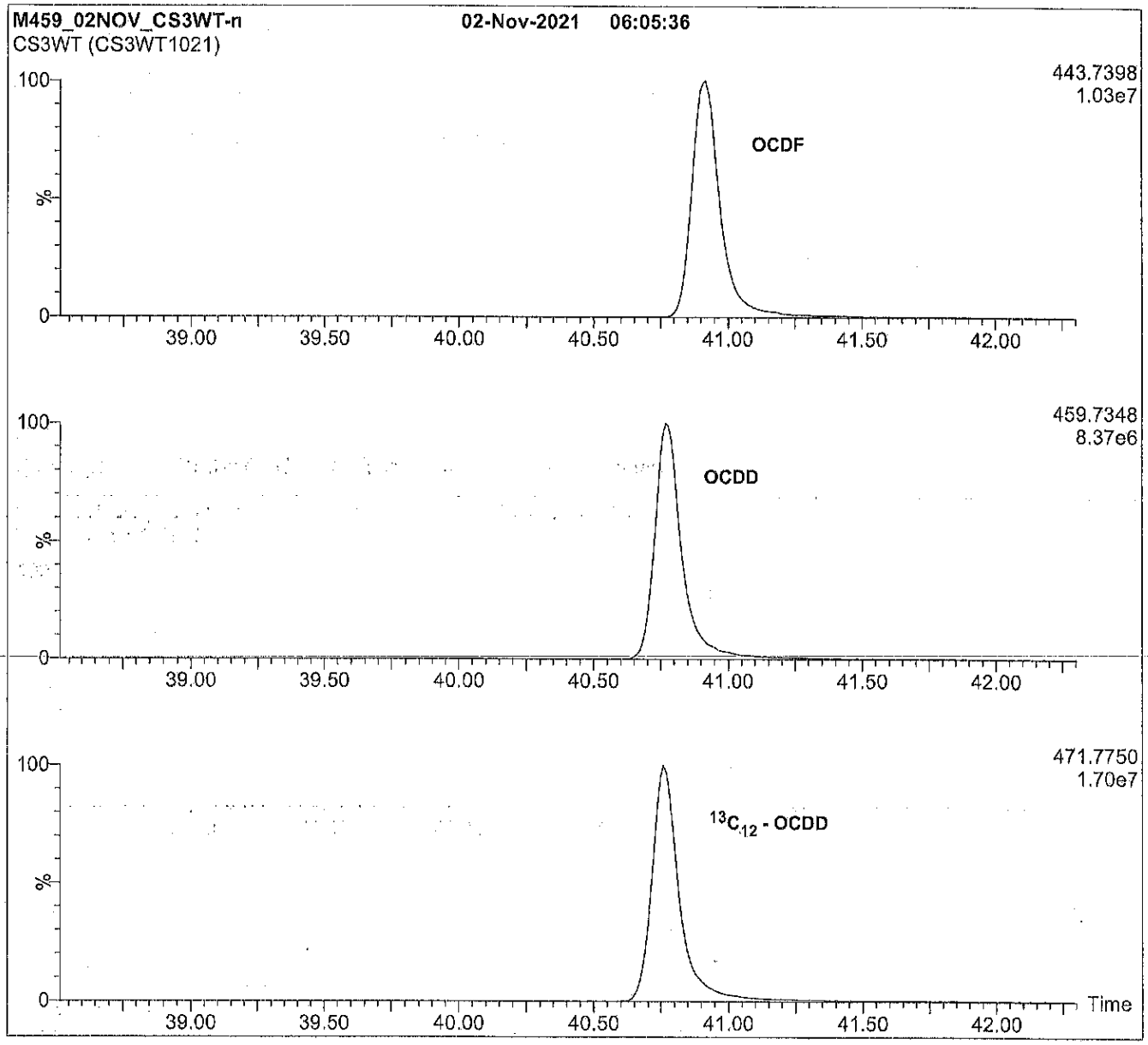


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613LCS

U.S. EPA Method 1613
Labelled Compound Stock Solution

PRODUCT CODE:	EPA-1613LCS
LOT NUMBER:	13LCS1021
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/29/2021
LAST TESTED: (mm/dd/yyyy)	10/31/2021
EXPIRY DATE: (mm/dd/yyyy)	10/31/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

K 9985 JK Reed 10/27/22

DESCRIPTION:

EPA-1613LCS is a solution/mixture of mass-labelled ($^{13}C_{12}$) polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613LCS was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots, x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613LCS; Components and Concentrations (ng/mL, ± 5% in nonane/3.2% toluene)**

Compound	Acronym	CAS #	Concentration (ng/mL)
Mass-Labelled PCDDs:			
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-2,3,7,8-TCDD	76523-40-5	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,7,8-PeCDD	109719-79-1	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	109719-80-4	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	109719-81-5	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	109719-83-7	100
Octachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-OCDD	114423-97-1	200
Mass-Labelled PCDFs:			
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,7,8-TCDF	89059-46-1	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,7,8-PeCDF	109719-77-9	100
2,3,4,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,4,7,8-PeCDF	116843-02-8	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	114423-98-2	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	116843-03-9	100
1,2,3,7,8,9-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	116843-04-0	100
2,3,4,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	116843-05-1	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	109719-84-8	100
1,2,3,4,7,8,9-Heptachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	109719-94-0	100

Certified By: _____ **Date:** 11/05/2021
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

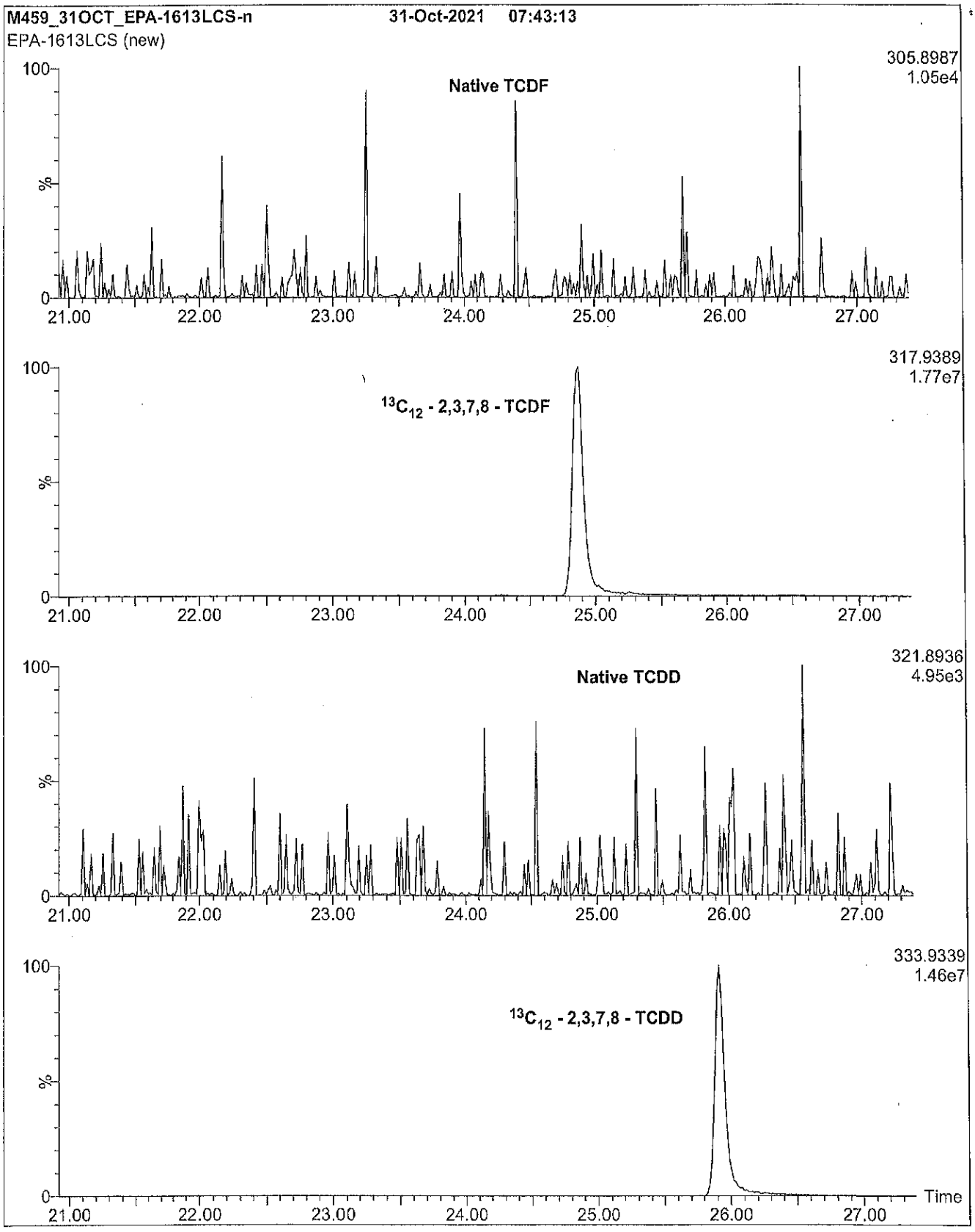


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

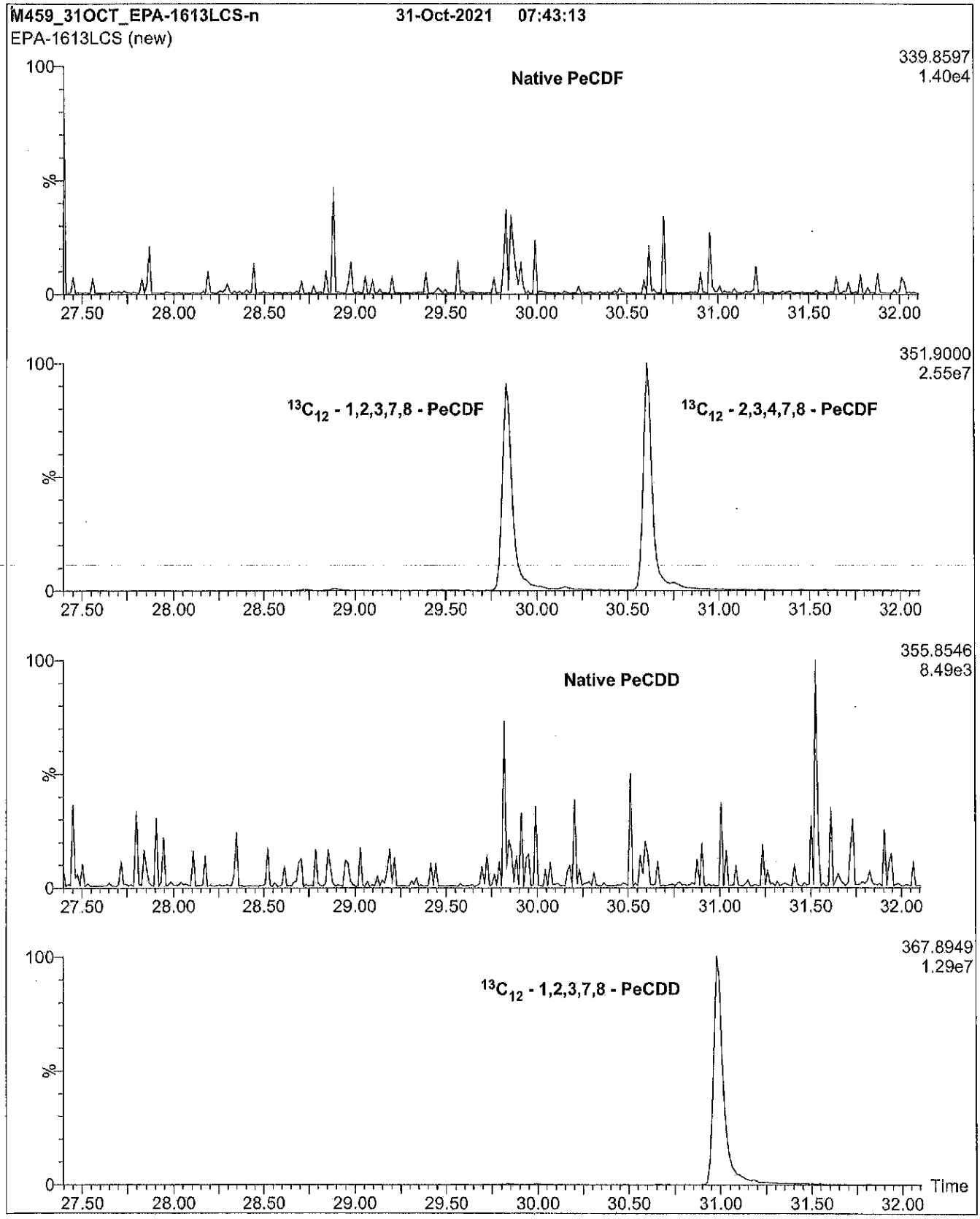


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

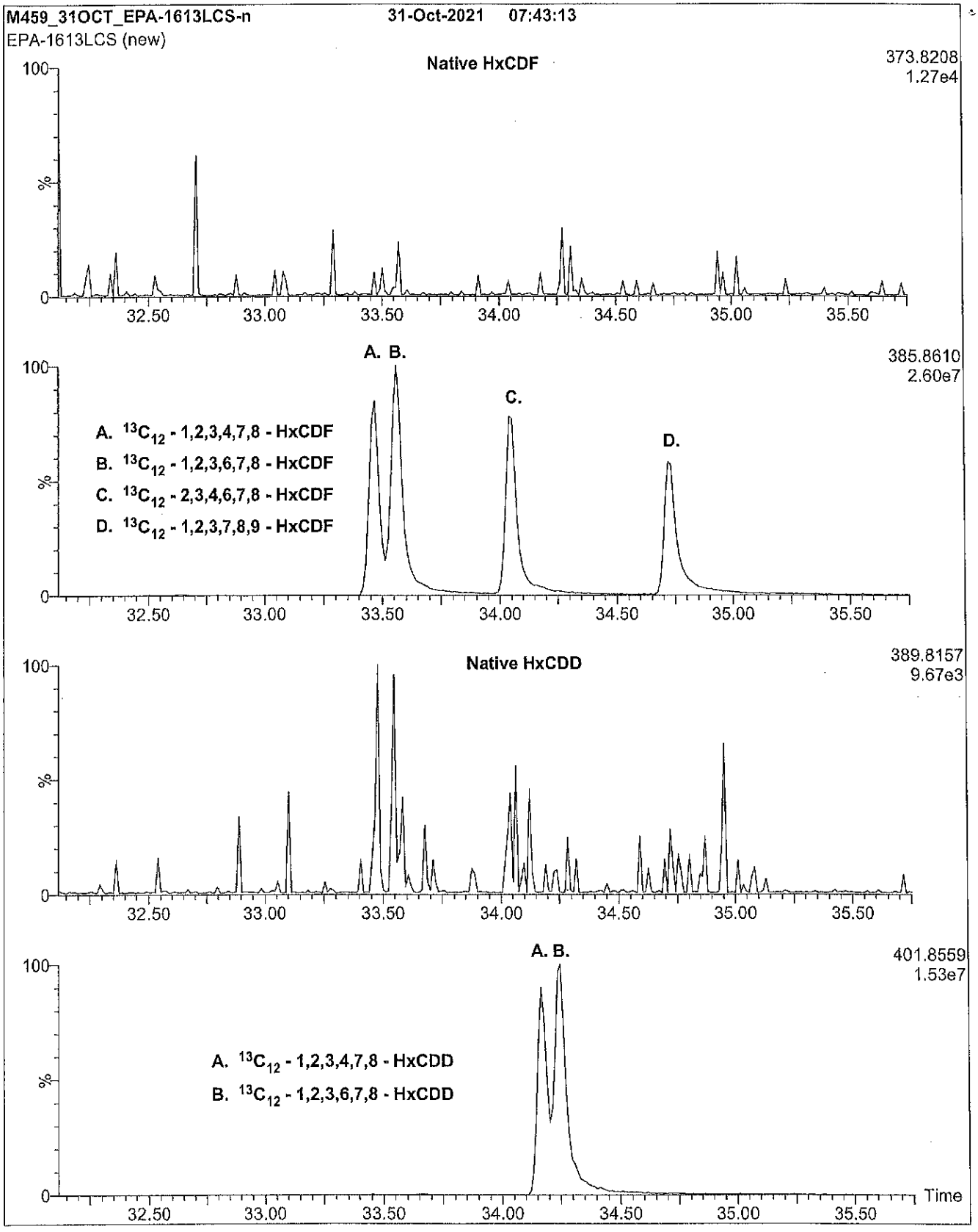


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

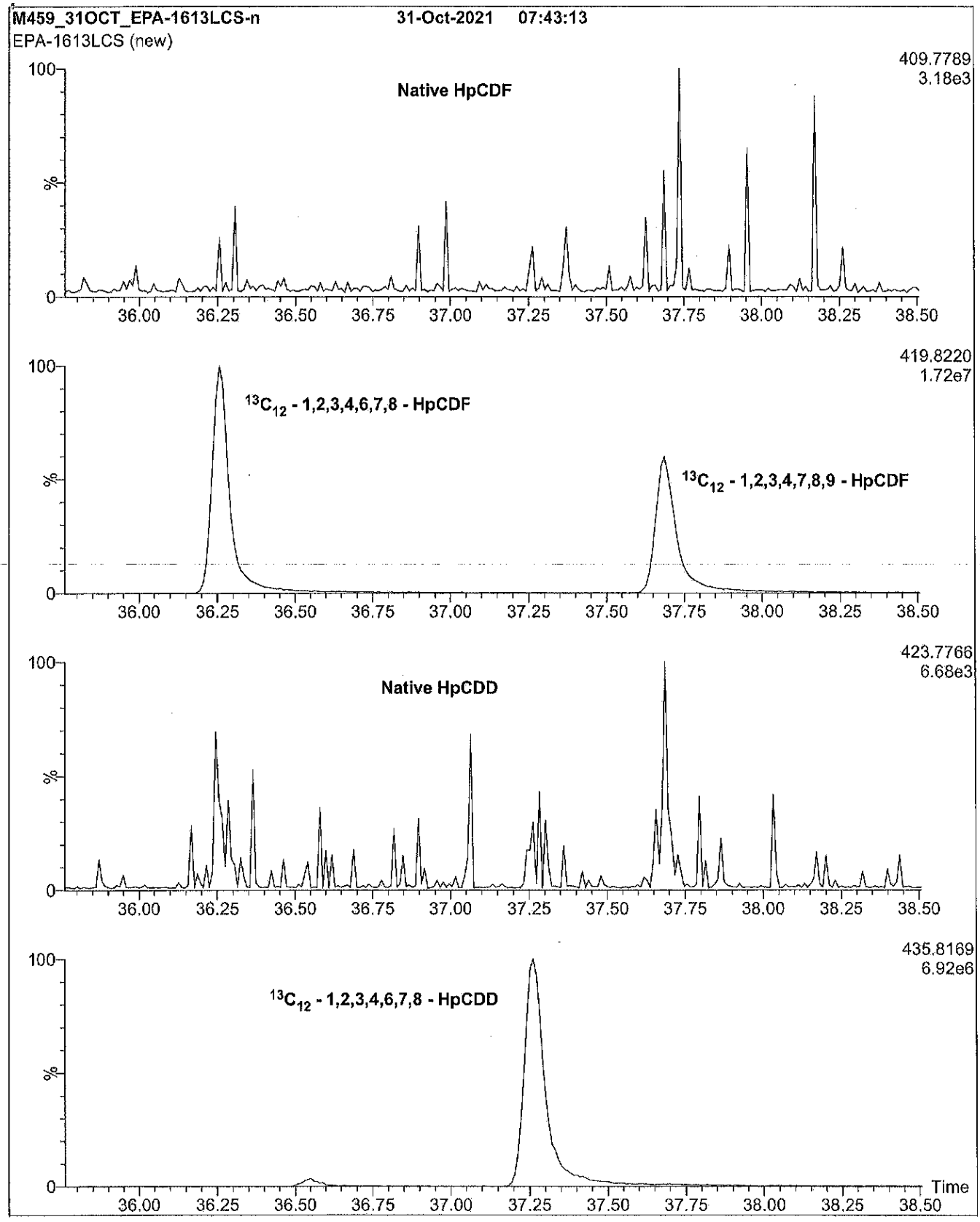
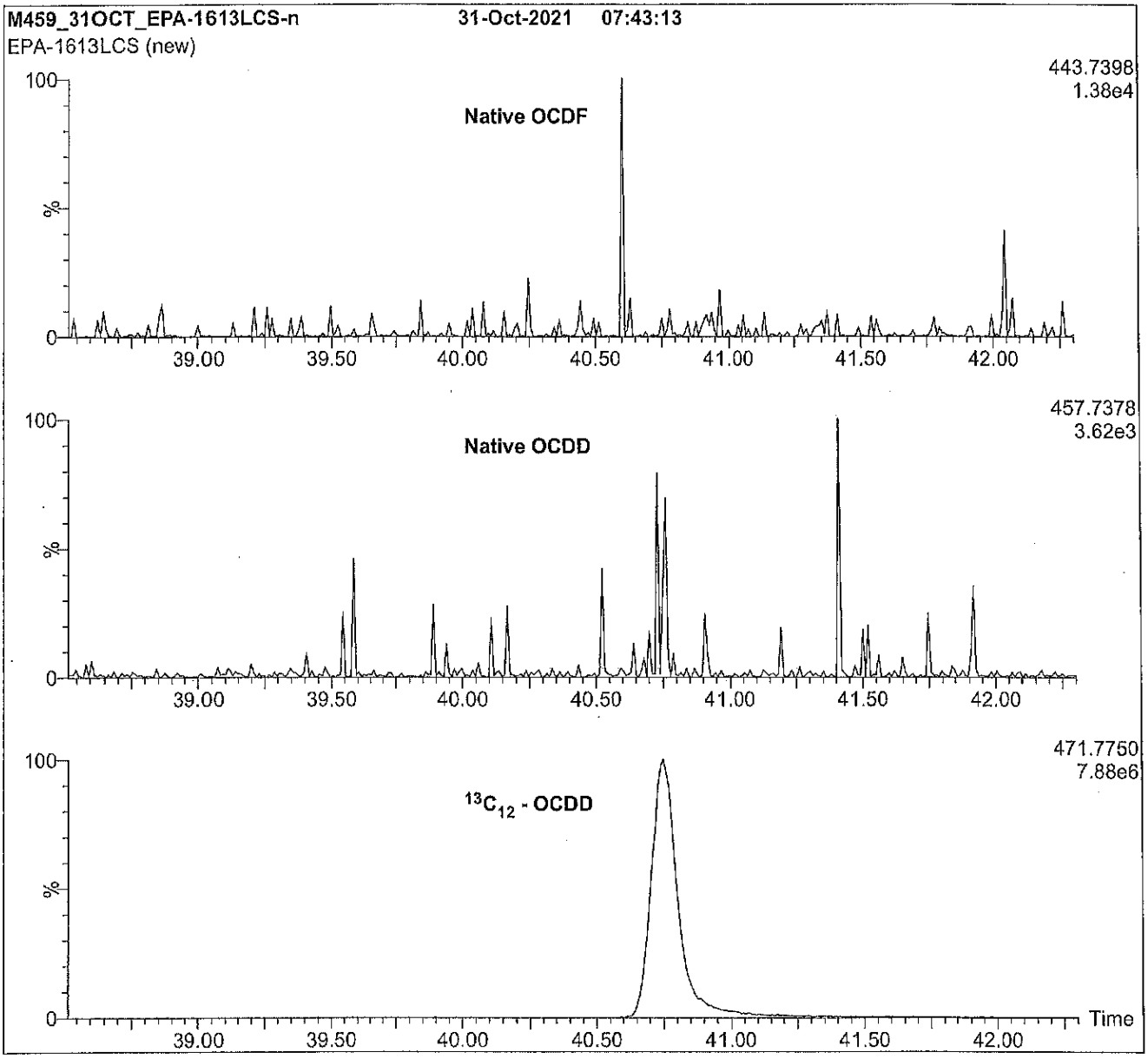


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

Recipient Copy

CHAIN-OF-CUSTODY RECORD

COC No. 15570

Order Number: CB014985

Date Shipped: 12/12/2022

AirBill No(s): 519204142631

From: QATS LABORATORY
2700 CHANDLER AVENUE, BLDG. B
LAS VEGAS, NV 89120
PHONE: 1-702-895-8712

To: SUE DUNNIHOO
ANALYTICAL RESOURCES INC.
4611 S. 134TH PLACE SUITE 100
TUKWILA WA 98168
250-695-6207

Sample ID	Sigma ID	Qty	Description/Remarks	→ Catalogue Number
KO1147 PSRM0168	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM
KO1147 PSRM0169	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM
KO1147 PSRM0171	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM

12/12/2022

PUGET SOUND SRM FOR DUWAMISH AOC4 PROJECT.

Please use the enclosed Sample Preparation Instructions. If catalogue number(s) are listed at the top of the Sample Preparation Instructions use the Sample Preparation Instructions with catalogue number(s) matching the catalogue number(s) of each of the samples listed above.

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	(1400) 12/12/2022	P Hilly	12/12/22 11:15
Custody Seal(s): Present/Absent	Remarks:		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

Report No. 00, 9/11/2014

SMP Version 3.3

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B
Total Metals

LDW23-SC1250

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-03 A	SDG:	23A0133
Sampled:	01/06/23 10:32	Prepared:	03/27/23 13:52	File ID:	XDT_m2230331-072
% Solids:	50.34	Preparation:	SWN EPA 3050B	Analyzed:	03/31/23 21:40
Batch:	BLC0703	Sequence:	SLD0005	Initial/Final:	1.041 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00005

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	29.4	50	1.24	2.39	D

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SC1250

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-03 A	SDG:	23A0133
Sampled:	01/06/23 10:32	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-043
% Solids:	50.34	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 17:13
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.041 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	21.7	20	0.10	0.19	
7440-22-4	Silver	0.26	20	0.04	0.38	J

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SC1241

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-06 A	SDG:	23A0133
Sampled:	01/06/23 10:51	Prepared:	03/27/23 13:52	File ID:	XDT_m2230331-070
% Solids:	48.27	Preparation:	SWN EPA 3050B	Analyzed:	03/31/23 21:30
Batch:	BLC0703	Sequence:	SLD0005	Initial/Final:	1.069 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00005

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	25.8	50	1.26	2.42	D

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SC1241

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-06 A	SDG:	23A0133
Sampled:	01/06/23 10:51	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-039
% Solids:	48.27	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 16:55
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.069 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	18.9	20	0.10	0.19	
7440-22-4	Silver	0.20	20	0.04	0.39	J

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-IT1217

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-07 A	SDG:	23A0133
Sampled:	01/06/23 11:14	Prepared:	03/27/23 13:52	File ID:	XDT_m2230331-071
% Solids:	61.34	Preparation:	SWN EPA 3050B	Analyzed:	03/31/23 21:35
Batch:	BLC0703	Sequence:	SLD0005	Initial/Final:	1.08 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00005

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	27.6	50	0.98	1.89	D

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Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-IT1217

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-07 A	SDG:	23A0133
Sampled:	01/06/23 11:14	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-040
% Solids:	61.34	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 17:00
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.08 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	16.8	20	0.08	0.15	
7440-22-4	Silver	0.21	20	0.03	0.30	J

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SC1185

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-08 A	SDG:	23A0133
Sampled:	01/06/23 12:00	Prepared:	03/27/23 13:52	File ID:	XDT_m2230331-081
% Solids:	60.30	Preparation:	SWN EPA 3050B	Analyzed:	03/31/23 22:36
Batch:	BLC0703	Sequence:	SLD0005	Initial/Final:	1.005 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00005

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	28.6	50	1.07	2.06	D

Analytical Resources, LLC
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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SC1185

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-08 A	SDG:	23A0133
Sampled:	01/06/23 12:00	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-041
% Solids:	60.30	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 17:04
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.005 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	23.0	20	0.09	0.17	
7440-22-4	Silver	0.24	20	0.04	0.33	J

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SC1234

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-09 A	SDG:	23A0133
Sampled:	01/06/23 13:34	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-042
% Solids:	52.12	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 17:09
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.018 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	23.7	20	0.49	0.94	
7439-92-1	Lead	17.2	20	0.10	0.19	
7440-22-4	Silver	0.17	20	0.04	0.38	J

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SC1215

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-10 A	SDG:	23A0133
Sampled:	01/06/23 11:38	Prepared:	03/27/23 13:52	File ID:	XDT_m2230331-083
% Solids:	53.90	Preparation:	SWN EPA 3050B	Analyzed:	03/31/23 22:45
Batch:	BLC0703	Sequence:	SLD0005	Initial/Final:	1.045 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00005

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	50.2	50	1.15	2.22	D

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SC1215

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-10 A	SDG:	23A0133
Sampled:	01/06/23 11:38	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-053
% Solids:	53.90	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 18:02
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.045 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	71.5	20	0.09	0.18	
7440-22-4	Silver	0.68	20	0.04	0.36	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B
Total Metals

LDW23-SC1222

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-11 A	SDG:	23A0133
Sampled:	01/06/23 13:00	Prepared:	03/27/23 13:52	File ID:	XDT_m2230331-084
% Solids:	54.66	Preparation:	SWN EPA 3050B	Analyzed:	03/31/23 22:50
Batch:	BLC0703	Sequence:	SLD0005	Initial/Final:	1.046 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00005

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	36.6	50	1.14	2.19	D

Analytical Resources, LLC
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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SC1222

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-11 A	SDG:	23A0133
Sampled:	01/06/23 13:00	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-054
% Solids:	54.66	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 18:07
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.046 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-92-1	Lead	24.8	20	0.09	0.17	
7440-22-4	Silver	0.88	20	0.04	0.35	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SC1227

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-12 B	SDG:	23A0133
Sampled:	01/06/23 13:18	Prepared:	03/27/23 13:52	File ID:	XDT_m2230331-085
% Solids:	55.12	Preparation:	SWN EPA 3050B	Analyzed:	03/31/23 22:55
Batch:	BLC0703	Sequence:	SLD0005	Initial/Final:	1.068 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00005

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	29.8	50	1.10	2.12	D
7439-92-1	Lead	20.6	50	0.22	0.42	D

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SC1227

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-12 B	SDG:	23A0133
Sampled:	01/06/23 13:18	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-055
% Solids:	55.12	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 18:11
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.068 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-22-4	Silver	0.39	20	0.04	0.34	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SS1110

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-13 B	SDG:	23A0133
Sampled:	01/06/23 14:00	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-056
% Solids:	60.11	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 18:16
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.022 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	19.7	20	0.42	0.81	
7439-92-1	Lead	28.6	20	0.08	0.16	
7440-22-4	Silver	0.13	20	0.04	0.33	J

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SS1109

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-14 B	SDG:	23A0133
Sampled:	01/06/23 14:13	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-057
% Solids:	47.28	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 18:20
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.067 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	24.9	20	0.52	0.99	
7439-92-1	Lead	17.7	20	0.10	0.20	
7440-22-4	Silver	0.18	20	0.04	0.40	J

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SS1092

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-15 B	SDG:	23A0133
Sampled:	01/06/23 14:26	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-058
% Solids:	53.05	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 18:24
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.043 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	25.1	20	0.47	0.90	
7439-92-1	Lead	18.4	20	0.09	0.18	
7440-22-4	Silver	0.22	20	0.04	0.36	J

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Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SS1091

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-16 B	SDG:	23A0133
Sampled:	01/06/23 14:50	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-059
% Solids:	49.19	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 18:29
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.033 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	24.9	20	0.51	0.98	
7439-92-1	Lead	19.1	20	0.10	0.20	
7440-22-4	Silver	0.19	20	0.04	0.39	J

PREPARATION BATCH SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC SDG: 23A0133

Client: Anchor QEA, LLC Project: AOC5 MR Phase 1

Batch: BLC0703 Batch Matrix: Solid Preparation: SWN EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1250	23A0133-03	XDT_m2230401-043	03/27/23 13:52	
LDW23-SC1250	23A0133-03	XDT_m2230331-072	03/27/23 13:52	
LDW23-SC1241	23A0133-06	XDT_m2230401-039	03/27/23 13:52	
LDW23-SC1241	23A0133-06	XDT_m2230331-070	03/27/23 13:52	
LDW23-IT1217	23A0133-07	XDT_m2230331-071	03/27/23 13:52	
LDW23-IT1217	23A0133-07	XDT_m2230401-040	03/27/23 13:52	
LDW23-SC1185	23A0133-08	XDT_m2230331-081	03/27/23 13:52	
LDW23-SC1185	23A0133-08	XDT_m2230401-041	03/27/23 13:52	
LDW23-SC1234	23A0133-09	XDT_m2230401-042	03/27/23 13:52	
LDW23-SC1215	23A0133-10	XDT_m2230331-083	03/27/23 13:52	
LDW23-SC1215	23A0133-10	XDT_m2230401-053	03/27/23 13:52	
LDW23-SC1222	23A0133-11	XDT_m2230401-054	03/27/23 13:52	
LDW23-SC1222	23A0133-11	XDT_m2230331-084	03/27/23 13:52	
LDW23-SC1227	23A0133-12	XDT_m2230401-055	03/27/23 13:52	
LDW23-SC1227	23A0133-12	XDT_m2230331-085	03/27/23 13:52	
LDW23-SS1110	23A0133-13	XDT_m2230401-056	03/27/23 13:52	
LDW23-SS1109	23A0133-14	XDT_m2230401-057	03/27/23 13:52	
LDW23-SS1092	23A0133-15	XDT_m2230401-058	03/27/23 13:52	
LDW23-SS1091	23A0133-16	XDT_m2230401-059	03/27/23 13:52	
Blank	BLC0703-BLK1	XDT_m2230331-068	03/27/23 13:52	
Blank	BLC0703-BLK2	XDT_m2230401-027	03/27/23 13:52	Added 4/3/2023 by MCB
LCS	BLC0703-BS1	XDT_m2230331-069	03/27/23 13:52	
LCS	BLC0703-BS2	XDT_m2230401-028	03/27/23 13:52	Added 4/3/2023 by MCB
LDW23-SC1250	BLC0703-DUP1	XDT_m2230331-073	03/27/23 13:52	
LDW23-SC1250	BLC0703-DUP2	XDT_m2230401-044	03/27/23 13:52	Added 4/3/2023 by MCB
LDW23-SC1250	BLC0703-MS1	XDT_m2230331-074	03/27/23 13:52	
LDW23-SC1250	BLC0703-MS2	XDT_m2230401-045	03/27/23 13:52	Added 4/3/2023 by MCB
LDW23-SC1250	BLC0703-MSD1	XDT_m2230331-075	03/27/23 13:52	
LDW23-SC1250	BLC0703-MSD2	XDT_m2230401-046	03/27/23 13:52	Added 4/3/2023 by MCB

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: AR Date: 3/30/23 Time: 1245 - 1821 Balance ID: BALD

Matrix: Soil Block ID: 3 Block Temp: 90C Thermometer: 20-4

ARI Sample ID	Btl #	pH<2	Prep Code: SWN Initial Wt (g) Vol (mL)	Prep Code: SWN Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
23A133-03	A		1.041	50			
-06			1.069				
-07			1.080				
-08			1.005				
-09			1.018				
-10			① ~~1.016~~				
-11	↓		1.046				
-12	B		1.068				
-13			1.022				
-14			1.067				
-15			1.043				
-16			1.033				
23A134-01			1.050				
-02			1.071				
-03			1.032				
-04			1.008				
-05	↓		1.023				
-06	A		1.020				
-07	B		1.046				
-08	↓		1.063				
BLC 703 blk	—		—				23A133-03
-05	—		—				↓
-dup	—		1.044				
-MS	—		1.045				
-MSD	—		1.042				
—	—	—	—	—	—	—	—

Chemical/Reagent ID:

HNO_3: L24078 1:1 HNO_3: L23116 HCl: — H_2O_2: K110516

Tube Lot#: 2210117 Boiling Chip Lot#: — (DoD Only)

① 1.045

Form I

METHOD BLANK DATA SHEET

EPA 6020B

Total Metals

Blank

Laboratory: Analytical Resources, LLC | SDG: 23A0133

Client: Anchor QEA, LLC | Project: AOC5 MR Phase 1

Batch: BLC0703 | Laboratory ID: BLC0703-BLK1 | Prepared: 03/27/23 13:52

Matrix: Solid | Preparation: SWN EPA 3050B | Analyzed: 03/31/23 21:20

Sequence: SLD0005 | Calibration: GD00005 | Instrument: ICPMS2

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium-52	ND	20	0.26	0.50	U
7439-92-1	Lead-208	ND	20	0.05	0.10	U

Form I

METHOD BLANK DATA SHEET

EPA 6020B

Total Metals

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23A0133
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Batch:	BLC0703	Laboratory ID:	BLC0703-BLK2	Prepared:	03/27/23 13:52
Matrix:	Solid	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 15:50
Sequence:	SLD0041	Calibration:	GD00006	Instrument:	ICPMS2

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7440-22-4	Silver-107	ND	20	0.02	0.20	U

LCS / LCS DUPLICATE RECOVERY

EPA 6020B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/31/23 21:25
Batch:	BLC0703	Laboratory ID:	BLC0703-BS1
Preparation:	SWN EPA 3050B	Sequence Name:	LCS
Initial/Final:	1 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Chromium-52	25.0	27.0		108	80 - 120
Lead-208	25.0	26.3		105	80 - 120

* Indicates values outside of QC limits

* Indicates values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

EPA 6020B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	04/01/23 15:55
Batch:	BLC0703	Laboratory ID:	BLC0703-BS2
Preparation:	SWN EPA 3050B	Sequence Name:	LCS
Initial/Final:	1 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Silver-107	25.0	26.2		105	80 - 120

* Indicates values outside of QC limits

DUPLICATES

EPA 6020B

Total Metals

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Matrix: Solid
Batch: BLC0703
Preparation: SWN EPA 3050B
Source Sample Name: LDW23-SC1250

SDG: 23A0133
Project: AOC5 MR Phase 1
Laboratory ID: BLC0703-DUP1
Lab Source ID: 23A0133-03
Initial/Final: 1.044 g / 50 mL
% Solids: 50.34

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Chromium-52	20	29.4	26.5	10.3	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

DUPLICATES

EPA 6020B

Total Metals

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLC0703-DUP2
Batch: BLC0703
Lab Source ID: 23A0133-03
Preparation: SWN EPA 3050B
Initial/Final: 1.044 g / 50 mL
Source Sample Name: LDW23-SC1250
% Solids: 50.34

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Lead-208	20	21.7	19.9	8.90	
Silver-107	20	0.26	0.23	12.1	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

MS / MS DUPLICATE RECOVERY

EPA 6020B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/31/23 21:49
Batch:	BLC0703	Laboratory ID:	BLC0703-MS1
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike
Initial/Final:	1.045 g / 50 mL	Source Sample:	LDW23-SC1250

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Chromium-52	47.5	29.4	D	75.6	D	97.1	75 - 125

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY

EPA 6020B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/31/23 21:54
Batch:	BLC0703	Laboratory ID:	BLC0703-MSD1
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike Dup
Initial/Final:	1.042 g / 50 mL	Source Sample:	LDW23-SC1250

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Chromium-52	47.7	72.0	D	89.3	4.91	20	75 - 125

* Values outside of QC limits

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY

EPA 6020B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	04/01/23 17:22
Batch:	BLC0703	Laboratory ID:	BLC0703-MS2
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike
Initial/Final:	1.045 g / 50 mL	Source Sample:	LDW23-SC1250

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #		QC LIMITS REC.
Lead-208	47.5	21.7		64.8		90.7		75 - 125
Silver-107	47.5	0.26	J	20.8	*	43.3	*	75 - 125

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY

EPA 6020B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	04/01/23 17:26
Batch:	BLC0703	Laboratory ID:	BLC0703-MSD2
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike Dup
Initial/Final:	1.042 g / 50 mL	Source Sample:	LDW23-SC1250

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #		% RPD #	QC LIMITS RPD	QC LIMITS REC.
Lead-208	47.7	65.9		92.6		1.60	20	75 - 125
Silver-107	47.7	24.3	*	50.5	*	15.5	20	75 - 125

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLC0703-PS2
Batch: BLC0703
Lab Source ID: 23A0133-03
Preparation: SWN EPA 3050B
Initial/Final: 1.041 g / 50 mL
Source Sample Name: LDW23-SC1250
% Solids: 50.34

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R
Silver-107	80 - 120	474	0.26	500.00	94.4

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Control Limt: +/- 10.00%

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00005
Sequence: SLD0005

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0005-ICV1	Chromium-52	50.000	50.2	100	ug/L	EPA 6020B
	Chromium-53	50.000	49.0	98.0	ug/L	EPA 6020B
	Lead-208	50.000	50.8	102	ug/L	EPA 6020B
SLD0005-CCV1	Chromium-52	50.000	49.9	99.8	ug/L	EPA 6020B
	Chromium-53	50.000	50.4	101	ug/L	EPA 6020B
	Lead-208	50.000	52.2	104	ug/L	EPA 6020B
SLD0005-CCV2	Chromium-52	50.000	48.8	97.5	ug/L	EPA 6020B
	Chromium-53	50.000	47.9	95.9	ug/L	EPA 6020B
	Lead-208	50.000	48.0	95.9	ug/L	EPA 6020B
SLD0005-CCV3	Chromium-52	50.000	48.4	96.8	ug/L	EPA 6020B
	Chromium-53	50.000	48.2	96.3	ug/L	EPA 6020B
	Lead-208	50.000	46.6	93.2	ug/L	EPA 6020B
SLD0005-CCV4	Chromium-52	50.000	48.5	97.0	ug/L	EPA 6020B
	Chromium-53	50.000	48.2	96.5	ug/L	EPA 6020B
	Lead-208	50.000	46.6	93.1	ug/L	EPA 6020B
SLD0005-CCV5	Chromium-52	50.000	49.1	98.2	ug/L	EPA 6020B
	Chromium-53	50.000	47.8	95.6	ug/L	EPA 6020B
	Lead-208	50.000	46.6	93.2	ug/L	EPA 6020B
SLD0005-CCV6	Chromium-52	50.000	47.8	95.7	ug/L	EPA 6020B
	Chromium-53	50.000	48.4	96.8	ug/L	EPA 6020B
	Lead-208	50.000	46.7	93.5	ug/L	EPA 6020B
SLD0005-CCV7	Chromium-52	50.000	48.9	97.8	ug/L	EPA 6020B
	Chromium-53	50.000	50.1	100	ug/L	EPA 6020B
	Lead-208	50.000	47.4	94.9	ug/L	EPA 6020B
SLD0005-CCV8	Chromium-52	50.000	47.6	95.2	ug/L	EPA 6020B
	Chromium-53	50.000	48.0	96.0	ug/L	EPA 6020B
	Lead-208	50.000	48.0	96.0	ug/L	EPA 6020B
SLD0005-CCV9	Chromium-52	50.000	49.7	99.3	ug/L	EPA 6020B
	Chromium-53	50.000	48.8	97.6	ug/L	EPA 6020B
	Lead-208	50.000	47.0	94.1	ug/L	EPA 6020B
SLD0005-CCVA	Chromium-52	50.000	48.2	96.4	ug/L	EPA 6020B
	Chromium-53	50.000	49.2	98.4	ug/L	EPA 6020B
	Lead-208	50.000	46.6	93.2	ug/L	EPA 6020B
SLD0005-CCVB	Chromium-52	50.000	49.1	98.2	ug/L	EPA 6020B

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00005
Control Limt: +/- 10.00%
Sequence: SLD0005

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0005-CCVB	Chromium-53	50.000	49.4	98.9	ug/L	EPA 6020B
	Lead-208	50.000	46.1	92.1	ug/L	EPA 6020B
SLD0005-CCVC	Chromium-52	50.000	47.8	95.5	ug/L	EPA 6020B
	Chromium-53	50.000	48.3	96.5	ug/L	EPA 6020B
	Lead-208	50.000	44.1	88.3	ug/L	EPA 6020B
SLD0005-CCVD	Chromium-52	50.000	48.0	96.0	ug/L	EPA 6020B
	Chromium-53	50.000	47.1	94.2	ug/L	EPA 6020B
	Lead-208	50.000	47.0	94.1	ug/L	EPA 6020B

* Values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00006
Control Limt: +/- 10.00%
Sequence: SLD0041

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0041-ICV1	Chromium-52	50.000	48.9	97.8	ug/L	EPA 6020B
	Chromium-53	50.000	50.3	101	ug/L	EPA 6020B
	Lead-208	50.000	50.9	102	ug/L	EPA 6020B
	Silver-107	50.000	51.5	103	ug/L	EPA 6020B
SLD0041-CCV1	Chromium-52	50.000	48.8	97.6	ug/L	EPA 6020B
	Chromium-53	50.000	50.3	101	ug/L	EPA 6020B
	Lead-208	50.000	49.3	98.5	ug/L	EPA 6020B
	Silver-107	50.000	47.6	95.3	ug/L	EPA 6020B
SLD0041-CCV2	Chromium-52	50.000	49.3	98.6	ug/L	EPA 6020B
	Chromium-53	50.000	50.0	100	ug/L	EPA 6020B
	Lead-208	50.000	47.9	95.8	ug/L	EPA 6020B
	Silver-107	50.000	47.7	95.5	ug/L	EPA 6020B
SLD0041-CCV3	Chromium-52	50.000	49.8	99.5	ug/L	EPA 6020B
	Chromium-53	50.000	50.2	100	ug/L	EPA 6020B
	Lead-208	50.000	45.5	91.0	ug/L	EPA 6020B
	Silver-107	50.000	47.8	95.6	ug/L	EPA 6020B
SLD0041-CCV4	Chromium-52	50.000	49.3	98.6	ug/L	EPA 6020B
	Chromium-53	50.000	49.5	99.1	ug/L	EPA 6020B
	Lead-208	50.000	45.9	91.9	ug/L	EPA 6020B
	Silver-107	50.000	45.5	91.1	ug/L	EPA 6020B
SLD0041-CCV5	Chromium-52	50.000	48.7	97.4	ug/L	EPA 6020B
	Chromium-53	50.000	49.0	98.0	ug/L	EPA 6020B
	Lead-208	50.000	45.6	91.3	ug/L	EPA 6020B
	Silver-107	50.000	47.0	94.0	ug/L	EPA 6020B
SLD0041-CCV6	Chromium-52	50.000	49.5	99.1	ug/L	EPA 6020B
	Chromium-53	50.000	50.0	100	ug/L	EPA 6020B
	Lead-208	50.000	45.9	91.8	ug/L	EPA 6020B
	Silver-107	50.000	48.2	96.4	ug/L	EPA 6020B
SLD0041-CCV7	Chromium-52	50.000	48.5	97.0	ug/L	EPA 6020B
	Chromium-53	50.000	48.8	97.6	ug/L	EPA 6020B
	Lead-208	50.000	46.3	92.6	ug/L	EPA 6020B
	Silver-107	50.000	48.2	96.4	ug/L	EPA 6020B
SLD0041-CCV8	Chromium-52	50.000	48.8	97.7	ug/L	EPA 6020B
	Chromium-53	50.000	50.2	100	ug/L	EPA 6020B

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00006
Control Limt: +/- 10.00%
Sequence: SLD0041

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0041-CCV8	Lead-208	50.000	45.7	91.4	ug/L	EPA 6020B
	Silver-107	50.000	48.3	96.5	ug/L	EPA 6020B
SLD0041-CCV9	Chromium-52	50.000	48.4	96.8	ug/L	EPA 6020B
	Chromium-53	50.000	49.1	98.3	ug/L	EPA 6020B
	Lead-208	50.000	57.5	115	ug/L	EPA 6020B
	Silver-107	50.000	52.4	105	ug/L	EPA 6020B

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLD0005

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00005
Date Analyzed: 03/31/23 15:52

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0005-IBL1	Chromium-52	0.123	0.26	0.500	ug/L	
SLD0005-IBL1	Chromium-53	0.00300	0.239	0.500	ug/L	
SLD0005-IBL1	Lead-208	0.00200	0.0513	0.100	ug/L	
SLD0005-ICB1	Chromium-52	0.0970	0.26	0.500	ug/L	
SLD0005-ICB1	Chromium-53	-0.00500	0.239	0.500	ug/L	
SLD0005-ICB1	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0005-CCB1	Chromium-52	0.0290	0.26	0.500	ug/L	
SLD0005-CCB1	Chromium-53	-0.00100	0.239	0.500	ug/L	
SLD0005-CCB1	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0005-IBL2	Chromium-52	0.0470	0.26	0.500	ug/L	
SLD0005-IBL2	Chromium-53	0.0280	0.239	0.500	ug/L	
SLD0005-IBL2	Lead-208	0.00200	0.0513	0.100	ug/L	
SLD0005-IBL3	Chromium-52	0.0550	0.26	0.500	ug/L	
SLD0005-IBL3	Chromium-53	0.0210	0.239	0.500	ug/L	
SLD0005-IBL3	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0005-IBL4	Chromium-52	0.0210	0.26	0.500	ug/L	
SLD0005-IBL4	Chromium-53	0.0120	0.239	0.500	ug/L	
SLD0005-IBL4	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0005-CCB2	Chromium-52	0.0220	0.26	0.500	ug/L	
SLD0005-CCB2	Chromium-53	0.0120	0.239	0.500	ug/L	
SLD0005-CCB2	Lead-208	0.00200	0.0513	0.100	ug/L	
SLD0005-IBL5	Chromium-52	0.0640	0.26	0.500	ug/L	
SLD0005-IBL5	Chromium-53	0.00300	0.239	0.500	ug/L	
SLD0005-IBL5	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0005-CCB3	Chromium-52	0.0300	0.26	0.500	ug/L	
SLD0005-CCB3	Chromium-53	0.00	0.239	0.500	ug/L	
SLD0005-CCB3	Lead-208	0.00300	0.0513	0.100	ug/L	
SLD0005-CCB4	Chromium-52	-0.0510	0.26	0.500	ug/L	
SLD0005-CCB4	Chromium-53	0.00100	0.239	0.500	ug/L	
SLD0005-CCB4	Lead-208	0.00400	0.0513	0.100	ug/L	
SLD0005-CCB5	Chromium-52	0.0170	0.26	0.500	ug/L	
SLD0005-CCB5	Chromium-53	-0.00200	0.239	0.500	ug/L	
SLD0005-CCB5	Lead-208	0.00400	0.0513	0.100	ug/L	
SLD0005-CCB6	Chromium-52	0.00800	0.26	0.500	ug/L	
SLD0005-CCB6	Chromium-53	0.00	0.239	0.500	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLD0005

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00005
Date Analyzed: 03/31/23 21:12

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0005-CCB6	Lead-208	0.00400	0.0513	0.100	ug/L	
SLD0005-IBL6	Chromium-52	-0.0370	0.26	0.500	ug/L	
SLD0005-IBL6	Chromium-53	0.00100	0.239	0.500	ug/L	
SLD0005-IBL6	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLD0005-CCB7	Chromium-52	-0.00900	0.26	0.500	ug/L	
SLD0005-CCB7	Chromium-53	0.00	0.239	0.500	ug/L	
SLD0005-CCB7	Lead-208	0.00500	0.0513	0.100	ug/L	
SLD0005-CCB8	Chromium-52	-0.0560	0.26	0.500	ug/L	
SLD0005-CCB8	Chromium-53	-0.00300	0.239	0.500	ug/L	
SLD0005-CCB8	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0005-CCB9	Chromium-52	-0.0190	0.26	0.500	ug/L	
SLD0005-CCB9	Chromium-53	-0.00200	0.239	0.500	ug/L	
SLD0005-CCB9	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0005-IBLA	Chromium-52	0.0990	0.26	0.500	ug/L	
SLD0005-IBLA	Chromium-53	0.0200	0.239	0.500	ug/L	
SLD0005-IBLA	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0005-CCBA	Chromium-52	-0.0270	0.26	0.500	ug/L	
SLD0005-CCBA	Chromium-53	-0.00100	0.239	0.500	ug/L	
SLD0005-CCBA	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0005-CCBB	Chromium-52	-0.0240	0.26	0.500	ug/L	
SLD0005-CCBB	Chromium-53	-0.00300	0.239	0.500	ug/L	
SLD0005-CCBB	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0005-IBLC	Chromium-52	0.0130	0.26	0.500	ug/L	
SLD0005-IBLC	Chromium-53	-0.00900	0.239	0.500	ug/L	
SLD0005-IBLC	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0005-CCBC	Chromium-52	0.00800	0.26	0.500	ug/L	
SLD0005-CCBC	Chromium-53	-0.00800	0.239	0.500	ug/L	
SLD0005-CCBC	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0005-IBLD	Chromium-52	0.0100	0.26	0.500	ug/L	
SLD0005-IBLD	Chromium-53	0.00200	0.239	0.500	ug/L	
SLD0005-IBLD	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLD0005-CCBD	Chromium-52	-0.00200	0.26	0.500	ug/L	
SLD0005-CCBD	Chromium-53	-0.00300	0.239	0.500	ug/L	
SLD0005-CCBD	Lead-208	0.00100	0.0513	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLD0041

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00006
Date Analyzed: 04/01/23 14:18

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0041-IBL1	Chromium-52	0.0370	0.26	0.500	ug/L	
SLD0041-IBL1	Chromium-53	0.0230	0.239	0.500	ug/L	
SLD0041-IBL1	Lead-208	0.0240	0.0513	0.100	ug/L	
SLD0041-IBL1	Silver-107	0.0220	0.022	0.200	ug/L	
SLD0041-ICB1	Chromium-52	0.0210	0.26	0.500	ug/L	
SLD0041-ICB1	Chromium-53	0.00100	0.239	0.500	ug/L	
SLD0041-ICB1	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0041-ICB1	Silver-107	0.00200	0.022	0.200	ug/L	
SLD0041-CCB1	Chromium-52	0.00700	0.26	0.500	ug/L	
SLD0041-CCB1	Chromium-53	-0.00400	0.239	0.500	ug/L	
SLD0041-CCB1	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0041-CCB1	Silver-107	0.00300	0.022	0.200	ug/L	
SLD0041-IBL2	Chromium-52	0.0420	0.26	0.500	ug/L	
SLD0041-IBL2	Chromium-53	0.0300	0.239	0.500	ug/L	
SLD0041-IBL2	Lead-208	0.00400	0.0513	0.100	ug/L	
SLD0041-IBL2	Silver-107	0.00700	0.022	0.200	ug/L	
SLD0041-IBL3	Chromium-52	0.0810	0.26	0.500	ug/L	
SLD0041-IBL3	Chromium-53	0.0240	0.239	0.500	ug/L	
SLD0041-IBL3	Lead-208	0.00400	0.0513	0.100	ug/L	
SLD0041-IBL3	Silver-107	0.00300	0.022	0.200	ug/L	
SLD0041-CCB2	Chromium-52	0.0320	0.26	0.500	ug/L	
SLD0041-CCB2	Chromium-53	0.0160	0.239	0.500	ug/L	
SLD0041-CCB2	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0041-CCB2	Silver-107	0.00300	0.022	0.200	ug/L	
SLD0041-IBL4	Chromium-52	0.0390	0.26	0.500	ug/L	
SLD0041-IBL4	Chromium-53	0.0120	0.239	0.500	ug/L	
SLD0041-IBL4	Lead-208	0.0150	0.0513	0.100	ug/L	
SLD0041-IBL4	Silver-107	0.00800	0.022	0.200	ug/L	
SLD0041-CCB3	Chromium-52	0.0200	0.26	0.500	ug/L	
SLD0041-CCB3	Chromium-53	-0.00100	0.239	0.500	ug/L	
SLD0041-CCB3	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0041-CCB3	Silver-107	0.00200	0.022	0.200	ug/L	
SLD0041-IBL5	Chromium-52	0.00500	0.26	0.500	ug/L	
SLD0041-IBL5	Chromium-53	0.00200	0.239	0.500	ug/L	
SLD0041-IBL5	Lead-208	0.00100	0.0513	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLD0041

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00006
Date Analyzed: 04/01/23 17:35

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0041-IBL5	Silver-107	0.00100	0.022	0.200	ug/L	
SLD0041-CCB4	Chromium-52	0.00900	0.26	0.500	ug/L	
SLD0041-CCB4	Chromium-53	0.00400	0.239	0.500	ug/L	
SLD0041-CCB4	Lead-208	0.00300	0.0513	0.100	ug/L	
SLD0041-CCB4	Silver-107	0.00500	0.022	0.200	ug/L	
SLD0041-IBL6	Chromium-52	0.0360	0.26	0.500	ug/L	
SLD0041-IBL6	Chromium-53	0.0150	0.239	0.500	ug/L	
SLD0041-IBL6	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0041-IBL6	Silver-107	0.00	0.022	0.200	ug/L	
SLD0041-CCB5	Chromium-52	0.0660	0.26	0.500	ug/L	
SLD0041-CCB5	Chromium-53	0.0120	0.239	0.500	ug/L	
SLD0041-CCB5	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0041-CCB5	Silver-107	0.00200	0.022	0.200	ug/L	
SLD0041-IBL7	Chromium-52	0.0180	0.26	0.500	ug/L	
SLD0041-IBL7	Chromium-53	0.0140	0.239	0.500	ug/L	
SLD0041-IBL7	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0041-IBL7	Silver-107	0.00	0.022	0.200	ug/L	
SLD0041-CCB6	Chromium-52	0.00700	0.26	0.500	ug/L	
SLD0041-CCB6	Chromium-53	0.00300	0.239	0.500	ug/L	
SLD0041-CCB6	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0041-CCB6	Silver-107	0.00200	0.022	0.200	ug/L	
SLD0041-IBL8	Chromium-52	-0.0170	0.26	0.500	ug/L	
SLD0041-IBL8	Chromium-53	-0.00300	0.239	0.500	ug/L	
SLD0041-IBL8	Lead-208	0.00200	0.0513	0.100	ug/L	
SLD0041-IBL8	Silver-107	0.00200	0.022	0.200	ug/L	
SLD0041-CCB7	Chromium-52	0.00800	0.26	0.500	ug/L	
SLD0041-CCB7	Chromium-53	0.00200	0.239	0.500	ug/L	
SLD0041-CCB7	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0041-CCB7	Silver-107	0.00200	0.022	0.200	ug/L	
SLD0041-IBL9	Chromium-52	-0.00800	0.26	0.500	ug/L	
SLD0041-IBL9	Chromium-53	0.0260	0.239	0.500	ug/L	
SLD0041-IBL9	Lead-208	0.00300	0.0513	0.100	ug/L	
SLD0041-IBL9	Silver-107	0.00100	0.022	0.200	ug/L	
SLD0041-CCB8	Chromium-52	0.0150	0.26	0.500	ug/L	
SLD0041-CCB8	Chromium-53	-0.00300	0.239	0.500	ug/L	
SLD0041-CCB8	Lead-208	0.00100	0.0513	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLD0041

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00006
Date Analyzed: 04/01/23 21:25

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0041-CCB8	Silver-107	0.00200	0.022	0.200	ug/L	
SLD0041-IBLA	Chromium-52	-0.0620	0.26	0.500	ug/L	
SLD0041-IBLA	Chromium-53	0.00600	0.239	0.500	ug/L	
SLD0041-IBLA	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0041-IBLA	Silver-107	0.00	0.022	0.200	ug/L	
SLD0041-CCB9	Chromium-52	-0.0250	0.26	0.500	ug/L	
SLD0041-CCB9	Chromium-53	-0.00100	0.239	0.500	ug/L	
SLD0041-CCB9	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0041-CCB9	Silver-107	0.00100	0.022	0.200	ug/L	

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLD0005
Instrument: ICPMS2
Calibration: GD00005

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLD0005-CAL1	XDT_m2230331-006	NA	03/31/23 15:18
CAL 1 - LOW CHECK	SLD0005-CAL2	XDT_m2230331-007	NA	03/31/23 15:23
CAL 2	SLD0005-CAL3	XDT_m2230331-008	NA	03/31/23 15:27
CAL 3	SLD0005-CAL4	XDT_m2230331-009	NA	03/31/23 15:33
CAL 4	SLD0005-CAL5	XDT_m2230331-010	NA	03/31/23 15:38
CAL 5	SLD0005-CAL6	XDT_m2230331-011	NA	03/31/23 15:45
RINSE	SLD0005-IBL1	XDT_m2230331-012	NA	03/31/23 15:52
Initial Cal Check	SLD0005-ICV1	XDT_m2230331-014	NA	03/31/23 16:00
Initial Cal Blank	SLD0005-ICB1	XDT_m2230331-015	NA	03/31/23 16:08
Calibration Check	SLD0005-CCV1	XDT_m2230331-017	NA	03/31/23 16:20
Calibration Blank	SLD0005-CCB1	XDT_m2230331-018	NA	03/31/23 16:29
Instrument RL Check	SLD0005-CRL1	XDT_m2230331-019	NA	03/31/23 16:37
Interference Check A	SLD0005-IFA1	XDT_m2230331-020	NA	03/31/23 16:41
Interference Check B	SLD0005-IFB1	XDT_m2230331-021	NA	03/31/23 16:46
LR200	SLD0005-HCV1	XDT_m2230331-022	NA	03/31/23 16:51
LR300	SLD0005-HCV2	XDT_m2230331-023	NA	03/31/23 16:56
Instrument Blank	SLD0005-IBL2	XDT_m2230331-024	NA	03/31/23 17:04
Instrument Blank	SLD0005-IBL3	XDT_m2230331-025	NA	03/31/23 17:11
Instrument Blank	SLD0005-IBL4	XDT_m2230331-026	NA	03/31/23 17:17
Calibration Check	SLD0005-CCV2	XDT_m2230331-027	NA	03/31/23 17:22
Calibration Blank	SLD0005-CCB2	XDT_m2230331-028	NA	03/31/23 17:30
ZZZZZ	BLC0848-BLK1	XDT_m2230331-029	Water	03/31/23 17:36
ZZZZZ	BLC0848-BS1	XDT_m2230331-030	Water	03/31/23 17:41
ZZZZZ	23C0747-01	XDT_m2230331-031	Water	03/31/23 17:46
ZZZZZ	23C0747-01	XDT_m2230331-031	Water	03/31/23 17:46
Instrument Blank	SLD0005-IBL5	XDT_m2230331-038	NA	03/31/23 18:26
Calibration Check	SLD0005-CCV3	XDT_m2230331-039	NA	03/31/23 18:31
Calibration Blank	SLD0005-CCB3	XDT_m2230331-040	NA	03/31/23 18:42
Calibration Check	SLD0005-CCV4	XDT_m2230331-042	NA	03/31/23 18:53

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLD0005

SDG: 23A0133
Project: AOC5 MR Phase 1
Instrument: ICPMS2
Calibration: GD00005

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SLD0005-CCB4	XDT_m2230331-043	NA	03/31/23 19:01
ZZZZZ	23A0099-02	XDT_m2230331-044	Solid	03/31/23 19:08
ZZZZZ	23A0099-03	XDT_m2230331-045	Solid	03/31/23 19:13
ZZZZZ	23A0099-04	XDT_m2230331-046	Solid	03/31/23 19:18
ZZZZZ	23A0099-05	XDT_m2230331-047	Solid	03/31/23 19:23
ZZZZZ	23A0099-07	XDT_m2230331-048	Solid	03/31/23 19:28
ZZZZZ	23A0099-08	XDT_m2230331-049	Solid	03/31/23 19:33
ZZZZZ	23A0099-09	XDT_m2230331-050	Solid	03/31/23 19:38
ZZZZZ	23A0099-10	XDT_m2230331-051	Solid	03/31/23 19:42
ZZZZZ	23A0099-11	XDT_m2230331-052	Solid	03/31/23 19:47
ZZZZZ	23A0099-12	XDT_m2230331-053	Solid	03/31/23 19:52
Calibration Check	SLD0005-CCV5	XDT_m2230331-054	NA	03/31/23 19:58
Calibration Blank	SLD0005-CCB5	XDT_m2230331-055	NA	03/31/23 20:08
ZZZZZ	23A0099-13	XDT_m2230331-056	Solid	03/31/23 20:14
ZZZZZ	23A0099-06	XDT_m2230331-057	Solid	03/31/23 20:19
ZZZZZ	BLC0692-DUP2	XDT_m2230331-058	Solid	03/31/23 20:24
ZZZZZ	BLC0692-MS2	XDT_m2230331-059	Solid	03/31/23 20:29
ZZZZZ	BLC0692-MSD2	XDT_m2230331-060	Solid	03/31/23 20:34
ZZZZZ	23A0134-10	XDT_m2230331-062	Solid	03/31/23 20:44
ZZZZZ	23A0134-11	XDT_m2230331-063	Solid	03/31/23 20:49
ZZZZZ	23A0134-13	XDT_m2230331-064	Solid	03/31/23 20:53
ZZZZZ	23A0134-15	XDT_m2230331-065	Solid	03/31/23 20:58
Calibration Check	SLD0005-CCV6	XDT_m2230331-066	NA	03/31/23 21:04
Calibration Blank	SLD0005-CCB6	XDT_m2230331-067	NA	03/31/23 21:12
Blank	BLC0703-BLK1	XDT_m2230331-068	Solid	03/31/23 21:20
LCS	BLC0703-BS1	XDT_m2230331-069	Solid	03/31/23 21:25
LDW23-SC1241	23A0133-06	XDT_m2230331-070	Solid	03/31/23 21:30
LDW23-IT1217	23A0133-07	XDT_m2230331-071	Solid	03/31/23 21:35
LDW23-SC1250	23A0133-03	XDT_m2230331-072	Solid	03/31/23 21:40

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLD0005
Instrument: ICPMS2
Calibration: GD00005

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SC1250	BLC0703-DUP1	XDT_m2230331-073	Solid	03/31/23 21:44
LDW23-SC1250	BLC0703-MS1	XDT_m2230331-074	Solid	03/31/23 21:49
LDW23-SC1250	BLC0703-MSD1	XDT_m2230331-075	Solid	03/31/23 21:54
Instrument Blank	SLD0005-IBL6	XDT_m2230331-077	NA	03/31/23 22:06
Calibration Check	SLD0005-CCV7	XDT_m2230331-078	NA	03/31/23 22:11
Calibration Blank	SLD0005-CCB7	XDT_m2230331-079	NA	03/31/23 22:20
LDW23-SC1185	23A0133-08	XDT_m2230331-081	Solid	03/31/23 22:36
LDW23-SC1215	23A0133-10	XDT_m2230331-083	Solid	03/31/23 22:45
LDW23-SC1222	23A0133-11	XDT_m2230331-084	Solid	03/31/23 22:50
LDW23-SC1227	23A0133-12	XDT_m2230331-085	Solid	03/31/23 22:55
LDW23-SC1227	23A0133-12	XDT_m2230331-085	Solid	03/31/23 22:55
Calibration Check	SLD0005-CCV8	XDT_m2230331-090	NA	03/31/23 23:21
Calibration Blank	SLD0005-CCB8	XDT_m2230331-091	NA	03/31/23 23:28
Calibration Check	SLD0005-CCV9	XDT_m2230331-102	NA	04/01/23 00:23
Calibration Blank	SLD0005-CCB9	XDT_m2230331-103	NA	04/01/23 00:30
ZZZZZ	BLC0848-DUP1	XDT_m2230331-104	Water	04/01/23 00:35
ZZZZZ	BLC0848-MS1	XDT_m2230331-105	Water	04/01/23 00:40
Instrument Blank	SLD0005-IBLA	XDT_m2230331-113	NA	04/01/23 01:24
Calibration Check	SLD0005-CCVA	XDT_m2230331-114	NA	04/01/23 01:29
Calibration Blank	SLD0005-CCBA	XDT_m2230331-115	NA	04/01/23 01:37
Calibration Check	SLD0005-CCVB	XDT_m2230331-117	NA	04/01/23 01:46
Calibration Blank	SLD0005-CCBB	XDT_m2230331-118	NA	04/01/23 01:54
Instrument Blank	SLD0005-IBLC	XDT_m2230331-128	NA	04/01/23 02:44
Calibration Check	SLD0005-CCVC	XDT_m2230331-129	NA	04/01/23 02:49
Calibration Blank	SLD0005-CCBC	XDT_m2230331-130	NA	04/01/23 02:57
Instrument Blank	SLD0005-IBLD	XDT_m2230331-140	NA	04/01/23 03:47
Calibration Check	SLD0005-CCVD	XDT_m2230331-141	NA	04/01/23 03:52
Calibration Blank	SLD0005-CCBD	XDT_m2230331-142	NA	04/01/23 03:59

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLD0041	Instrument:	ICPMS2
		Calibration:	GD00006

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLD0041-CAL1	XDT_m2230401-006	NA	04/01/23 13:46
CAL 1 - LOW CHECK	SLD0041-CAL2	XDT_m2230401-007	NA	04/01/23 13:51
CAL 2	SLD0041-CAL3	XDT_m2230401-008	NA	04/01/23 13:55
CAL 3	SLD0041-CAL4	XDT_m2230401-009	NA	04/01/23 14:00
CAL 4	SLD0041-CAL5	XDT_m2230401-010	NA	04/01/23 14:05
CAL 5	SLD0041-CAL6	XDT_m2230401-011	NA	04/01/23 14:11
RINSE	SLD0041-IBL1	XDT_m2230401-012	NA	04/01/23 14:18
Initial Cal Check	SLD0041-ICV1	XDT_m2230401-014	NA	04/01/23 14:26
Initial Cal Blank	SLD0041-ICB1	XDT_m2230401-015	NA	04/01/23 14:33
Calibration Check	SLD0041-CCV1	XDT_m2230401-016	NA	04/01/23 14:48
Calibration Blank	SLD0041-CCB1	XDT_m2230401-017	NA	04/01/23 14:55
Instrument RL Check	SLD0041-CRL1	XDT_m2230401-018	NA	04/01/23 15:01
Interference Check A	SLD0041-IFA1	XDT_m2230401-019	NA	04/01/23 15:06
Interference Check B	SLD0041-IFB1	XDT_m2230401-020	NA	04/01/23 15:10
LR200	SLD0041-HCV1	XDT_m2230401-021	NA	04/01/23 15:14
LR300	SLD0041-HCV2	XDT_m2230401-022	NA	04/01/23 15:19
Instrument Blank	SLD0041-IBL2	XDT_m2230401-023	NA	04/01/23 15:26
Instrument Blank	SLD0041-IBL3	XDT_m2230401-024	NA	04/01/23 15:32
Calibration Check	SLD0041-CCV2	XDT_m2230401-025	NA	04/01/23 15:39
Calibration Blank	SLD0041-CCB2	XDT_m2230401-026	NA	04/01/23 15:46
Blank	BLC0703-BLK2	XDT_m2230401-027	Solid	04/01/23 15:50
LCS	BLC0703-BS2	XDT_m2230401-028	Solid	04/01/23 15:55
Instrument Blank	SLD0041-IBL4	XDT_m2230401-036	NA	04/01/23 16:35
Calibration Check	SLD0041-CCV3	XDT_m2230401-037	NA	04/01/23 16:40
Calibration Blank	SLD0041-CCB3	XDT_m2230401-038	NA	04/01/23 16:47
LDW23-SC1241	23A0133-06	XDT_m2230401-039	Solid	04/01/23 16:55
LDW23-SC1241	23A0133-06	XDT_m2230401-039	Solid	04/01/23 16:55
LDW23-IT1217	23A0133-07	XDT_m2230401-040	Solid	04/01/23 17:00
LDW23-IT1217	23A0133-07	XDT_m2230401-040	Solid	04/01/23 17:00

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLD0041	Instrument:	ICPMS2
		Calibration:	GD00006

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SC1185	23A0133-08	XDT_m2230401-041	Solid	04/01/23 17:04
LDW23-SC1185	23A0133-08	XDT_m2230401-041	Solid	04/01/23 17:04
LDW23-SC1234	23A0133-09	XDT_m2230401-042	Solid	04/01/23 17:09
LDW23-SC1234	23A0133-09	XDT_m2230401-042	Solid	04/01/23 17:09
LDW23-SC1234	23A0133-09	XDT_m2230401-042	Solid	04/01/23 17:09
LDW23-SC1250	23A0133-03	XDT_m2230401-043	Solid	04/01/23 17:13
LDW23-SC1250	23A0133-03	XDT_m2230401-043	Solid	04/01/23 17:13
LDW23-SC1250	BLC0703-DUP2	XDT_m2230401-044	Solid	04/01/23 17:18
LDW23-SC1250	BLC0703-DUP2	XDT_m2230401-044	Solid	04/01/23 17:18
LDW23-SC1250	BLC0703-DUP2	XDT_m2230401-044	Solid	04/01/23 17:18
LDW23-SC1250	BLC0703-DUP2	XDT_m2230401-044	Solid	04/01/23 17:18
LDW23-SC1250	BLC0703-DUP2	XDT_m2230401-044	Solid	04/01/23 17:18
LDW23-SC1250	BLC0703-DUP2	XDT_m2230401-044	Solid	04/01/23 17:18
LDW23-SC1250	BLC0703-MS2	XDT_m2230401-045	Solid	04/01/23 17:22
LDW23-SC1250	BLC0703-MS2	XDT_m2230401-045	Solid	04/01/23 17:22
LDW23-SC1250	BLC0703-MS2	XDT_m2230401-045	Solid	04/01/23 17:22
LDW23-SC1250	BLC0703-MS2	XDT_m2230401-045	Solid	04/01/23 17:22
LDW23-SC1250	BLC0703-MS2	XDT_m2230401-045	Solid	04/01/23 17:22
LDW23-SC1250	BLC0703-MS2	XDT_m2230401-045	Solid	04/01/23 17:22
LDW23-SC1250	BLC0703-MSD2	XDT_m2230401-046	Solid	04/01/23 17:26
LDW23-SC1250	BLC0703-MSD2	XDT_m2230401-046	Solid	04/01/23 17:26
LDW23-SC1250	BLC0703-MSD2	XDT_m2230401-046	Solid	04/01/23 17:26
LDW23-SC1250	BLC0703-MSD2	XDT_m2230401-046	Solid	04/01/23 17:26
LDW23-SC1250	BLC0703-MSD2	XDT_m2230401-046	Solid	04/01/23 17:26
LDW23-SC1250	BLC0703-MSD2	XDT_m2230401-046	Solid	04/01/23 17:26
LDW23-SC1250	BLC0703-PS2	XDT_m2230401-047	Solid	04/01/23 17:31
LDW23-SC1250	BLC0703-PS2	XDT_m2230401-047	Solid	04/01/23 17:31
LDW23-SC1250	BLC0703-PS2	XDT_m2230401-047	Solid	04/01/23 17:31
LDW23-SC1250	BLC0703-PS2	XDT_m2230401-047	Solid	04/01/23 17:31

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLD0041
Instrument: ICPMS2
Calibration: GD00006

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SC1250	BLC0703-PS2	XDT_m2230401-047	Solid	04/01/23 17:31
LDW23-SC1250	BLC0703-PS2	XDT_m2230401-047	Solid	04/01/23 17:31
Instrument Blank	SLD0041-IBL5	XDT_m2230401-048	NA	04/01/23 17:35
Calibration Check	SLD0041-CCV4	XDT_m2230401-049	NA	04/01/23 17:40
Calibration Blank	SLD0041-CCB4	XDT_m2230401-050	NA	04/01/23 17:47
LDW23-SC1215	23A0133-10	XDT_m2230401-053	Solid	04/01/23 18:02
LDW23-SC1215	23A0133-10	XDT_m2230401-053	Solid	04/01/23 18:02
LDW23-SC1222	23A0133-11	XDT_m2230401-054	Solid	04/01/23 18:07
LDW23-SC1222	23A0133-11	XDT_m2230401-054	Solid	04/01/23 18:07
LDW23-SC1227	23A0133-12	XDT_m2230401-055	Solid	04/01/23 18:11
LDW23-SS1110	23A0133-13	XDT_m2230401-056	Solid	04/01/23 18:16
LDW23-SS1110	23A0133-13	XDT_m2230401-056	Solid	04/01/23 18:16
LDW23-SS1110	23A0133-13	XDT_m2230401-056	Solid	04/01/23 18:16
LDW23-SS1109	23A0133-14	XDT_m2230401-057	Solid	04/01/23 18:20
LDW23-SS1109	23A0133-14	XDT_m2230401-057	Solid	04/01/23 18:20
LDW23-SS1109	23A0133-14	XDT_m2230401-057	Solid	04/01/23 18:20
LDW23-SS1092	23A0133-15	XDT_m2230401-058	Solid	04/01/23 18:24
LDW23-SS1092	23A0133-15	XDT_m2230401-058	Solid	04/01/23 18:24
LDW23-SS1092	23A0133-15	XDT_m2230401-058	Solid	04/01/23 18:24
LDW23-SS1091	23A0133-16	XDT_m2230401-059	Solid	04/01/23 18:29
LDW23-SS1091	23A0133-16	XDT_m2230401-059	Solid	04/01/23 18:29
LDW23-SS1091	23A0133-16	XDT_m2230401-059	Solid	04/01/23 18:29
Instrument Blank	SLD0041-IBL6	XDT_m2230401-060	NA	04/01/23 18:33
Calibration Check	SLD0041-CCV5	XDT_m2230401-061	NA	04/01/23 18:38
Calibration Blank	SLD0041-CCB5	XDT_m2230401-062	NA	04/01/23 18:45
ZZZZZ	23A0134-01	XDT_m2230401-063	Solid	04/01/23 18:49
ZZZZZ	23A0134-01	XDT_m2230401-063	Solid	04/01/23 18:49
ZZZZZ	23A0134-01	XDT_m2230401-063	Solid	04/01/23 18:49
ZZZZZ	23A0134-02	XDT_m2230401-064	Solid	04/01/23 18:54

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLD0041

SDG: 23A0133
Project: AOC5 MR Phase 1
Instrument: ICPMS2
Calibration: GD00006

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23A0134-02	XDT_m2230401-064	Solid	04/01/23 18:54
ZZZZZ	23A0134-02	XDT_m2230401-064	Solid	04/01/23 18:54
ZZZZZ	23A0134-03	XDT_m2230401-065	Solid	04/01/23 18:58
ZZZZZ	23A0134-03	XDT_m2230401-065	Solid	04/01/23 18:58
ZZZZZ	23A0134-03	XDT_m2230401-065	Solid	04/01/23 18:58
ZZZZZ	23A0134-04	XDT_m2230401-066	Solid	04/01/23 19:03
ZZZZZ	23A0134-04	XDT_m2230401-066	Solid	04/01/23 19:03
ZZZZZ	23A0134-04	XDT_m2230401-066	Solid	04/01/23 19:03
ZZZZZ	23A0134-05	XDT_m2230401-067	Solid	04/01/23 19:07
ZZZZZ	23A0134-05	XDT_m2230401-067	Solid	04/01/23 19:07
ZZZZZ	23A0134-05	XDT_m2230401-067	Solid	04/01/23 19:07
ZZZZZ	23A0134-06	XDT_m2230401-068	Solid	04/01/23 19:11
ZZZZZ	23A0134-06	XDT_m2230401-068	Solid	04/01/23 19:11
ZZZZZ	23A0134-06	XDT_m2230401-068	Solid	04/01/23 19:11
ZZZZZ	23A0134-07	XDT_m2230401-069	Solid	04/01/23 19:16
ZZZZZ	23A0134-07	XDT_m2230401-069	Solid	04/01/23 19:16
ZZZZZ	23A0134-07	XDT_m2230401-069	Solid	04/01/23 19:16
ZZZZZ	23A0134-08	XDT_m2230401-070	Solid	04/01/23 19:20
ZZZZZ	23A0134-08	XDT_m2230401-070	Solid	04/01/23 19:20
ZZZZZ	23A0134-08	XDT_m2230401-070	Solid	04/01/23 19:20
Instrument Blank	SLD0041-IBL7	XDT_m2230401-071	NA	04/01/23 19:25
Calibration Check	SLD0041-CCV6	XDT_m2230401-072	NA	04/01/23 19:29
Calibration Blank	SLD0041-CCB6	XDT_m2230401-073	NA	04/01/23 19:36
ZZZZZ	BLC0840-BLK1	XDT_m2230401-074	Solid	04/01/23 19:41
ZZZZZ	BLC0840-BS1	XDT_m2230401-075	Solid	04/01/23 19:45
ZZZZZ	BLC0840-SRL1	XDT_m2230401-076	Solid	04/01/23 19:50
ZZZZZ	23C0042-01	XDT_m2230401-077	Solid	04/01/23 19:54
ZZZZZ	BLC0840-DUP1	XDT_m2230401-078	Solid	04/01/23 19:58
ZZZZZ	BLC0840-MS1	XDT_m2230401-079	Solid	04/01/23 20:03

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLD0041

SDG: 23A0133
Project: AOC5 MR Phase 1
Instrument: ICPMS2
Calibration: GD00006

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	BLC0840-MSD1	XDT_m2230401-080	Solid	04/01/23 20:07
ZZZZZ	BLC0840-SRM1	XDT_m2230401-082	Solid	04/01/23 20:16
Instrument Blank	SLD0041-IBL8	XDT_m2230401-083	NA	04/01/23 20:21
Calibration Check	SLD0041-CCV7	XDT_m2230401-084	NA	04/01/23 20:26
Calibration Blank	SLD0041-CCB7	XDT_m2230401-085	NA	04/01/23 20:33
ZZZZZ	23C0042-02	XDT_m2230401-086	Solid	04/01/23 20:38
ZZZZZ	23C0042-03	XDT_m2230401-087	Solid	04/01/23 20:42
ZZZZZ	23C0042-04	XDT_m2230401-088	Solid	04/01/23 20:47
ZZZZZ	23C0042-05	XDT_m2230401-089	Solid	04/01/23 20:51
ZZZZZ	23C0042-06	XDT_m2230401-090	Solid	04/01/23 20:55
ZZZZZ	23C0042-07	XDT_m2230401-091	Solid	04/01/23 21:00
ZZZZZ	23C0042-08	XDT_m2230401-092	Solid	04/01/23 21:04
ZZZZZ	23C0042-09	XDT_m2230401-093	Solid	04/01/23 21:09
Instrument Blank	SLD0041-IBL9	XDT_m2230401-094	NA	04/01/23 21:13
Calibration Check	SLD0041-CCV8	XDT_m2230401-095	NA	04/01/23 21:18
Calibration Blank	SLD0041-CCB8	XDT_m2230401-096	NA	04/01/23 21:25
Instrument Blank	SLD0041-IBLA	XDT_m2230401-103	NA	04/01/23 21:56
Calibration Check	SLD0041-CCV9	XDT_m2230401-104	NA	04/01/23 22:00
Calibration Blank	SLD0041-CCB9	XDT_m2230401-105	NA	04/01/23 22:07

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00005
Sequence: SLD0005
Standard ID: L003416

Lab Sample ID	Analyte	True	Found	%R	Units
SLD0005-IFA1	Chromium-52	0	0.8610		ug/L
	Chromium-53	0	2.1200		ug/L
	Lead-208	0	0.0290		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00005
Sequence: SLD0005
Standard ID: L003416

Lab Sample ID	Analyte	True	Found	%R	Units
SLD0005-IFB1	Chromium-52	20.000	20.826	104	ug/L
	Chromium-53	20.000	21.508	108	ug/L
	Lead-208	0	0.0440		ug/L

* Indicates %R outside of QC limits
NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00006
Sequence: SLD0041
Standard ID: L003416

Lab Sample ID	Analyte	True	Found	%R	Units
SLD0041-IFA1	Chromium-52	0	0.9270		ug/L
	Chromium-53	0	4.2380		ug/L
	Lead-208	0	0.0280		ug/L
	Silver-107	0	0.0040		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00006
Sequence: SLD0041
Standard ID: L003416

Lab Sample ID	Analyte	True	Found	%R	Units
SLD0041-IFB1	Chromium-52	20.000	20.214	101	ug/L
	Chromium-53	20.000	23.665	118	ug/L
	Lead-208	0	0.0450		ug/L
	Silver-107	20.000	18.981	94.9	ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

DETECTION LEVEL STANDARD
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLD0005

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00005
Lab Sample ID: SLD0005-CRL1

Analyte	True	Found	%R	Units	QC Limts
Chromium-52	0.50000	0.521	104	ug/L	50 - 150
Chromium-53	0.50000	0.507	101	ug/L	50 - 150
Lead-208	0.10000	0.118	118	ug/L	50 - 150

* Values outside of QC limits

DETECTION LEVEL STANDARD
EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00006
Sequence: SLD0041
Lab Sample ID: SLD0041-CRL1

Analyte	True	Found	%R	Units	QC Limts
Chromium-52	0.50000	0.532	106	ug/L	50 - 150
Chromium-53	0.50000	0.517	103	ug/L	50 - 150
Lead-208	0.10000	0.119	119	ug/L	50 - 150
Silver-107	0.20000	0.211	106	ug/L	50 - 150

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GD00005
Laboratory ID: SLD0005-HCV1
Sequence: SLD0005
Standard ID: L002745

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Chromium-52	200.00	197	-1.5	10.00
Chromium-53	200.00	193	-3.6	10.00
Lead-208	200.00	185	-7.6	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GD00005
Laboratory ID: SLD0005-HCV2
Sequence: SLD0005
Standard ID: L002746

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Chromium-52	300.00	300	0.1	10.00
Chromium-53	300.00	295	-1.7	10.00
Lead-208	300.00	270	-10.0	10.00

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GD00006
Laboratory ID: SLD0041-HCV1
Sequence: SLD0041
Standard ID: L002745

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Chromium-52	200.00	192	-4.1	10.00
Chromium-53	200.00	196	-2.1	10.00
Lead-208	200.00	190	-5.0	10.00
Silver-107	200.00	197	-1.6	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GD00006
Laboratory ID: SLD0041-HCV2
Sequence: SLD0041
Standard ID: L002746

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Chromium-52	300.00	297	-1.0	10.00
Chromium-53	300.00	298	-0.8	10.00
Lead-208	300.00	287	-4.2	10.00
Silver-107	300.00	294	-2.1	10.00

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 6020B

Laboratory: Analytical Resources, LLC SDG: 23A0133

Client: Anchor QEA, LLC Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1250 23A0133-03	01/06/23 10:32	01/06/23 17:26	03/27/23 13:52	80	180	03/31/23 21:40	84	180	
LDW23-SC1250 23A0133-03	01/06/23 10:32	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 17:13	85	180	
LDW23-SC1241 23A0133-06	01/06/23 10:51	01/06/23 17:26	03/27/23 13:52	80	180	03/31/23 21:30	84	180	
LDW23-SC1241 23A0133-06	01/06/23 10:51	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 16:55	85	180	
LDW23-IT1217 23A0133-07	01/06/23 11:14	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 17:00	85	180	
LDW23-IT1217 23A0133-07	01/06/23 11:14	01/06/23 17:26	03/27/23 13:52	80	180	03/31/23 21:35	84	180	
LDW23-SC1185 23A0133-08	01/06/23 12:00	01/06/23 17:26	03/27/23 13:52	80	180	03/31/23 22:36	84	180	
LDW23-SC1185 23A0133-08	01/06/23 12:00	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 17:04	85	180	
LDW23-SC1234 23A0133-09	01/06/23 13:34	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 17:09	85	180	
LDW23-SC1215 23A0133-10	01/06/23 11:38	01/06/23 17:26	03/27/23 13:52	80	180	03/31/23 22:45	84	180	
LDW23-SC1215 23A0133-10	01/06/23 11:38	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 18:02	85	180	
LDW23-SC1222 23A0133-11	01/06/23 13:00	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 18:07	85	180	
LDW23-SC1222 23A0133-11	01/06/23 13:00	01/06/23 17:26	03/27/23 13:52	80	180	03/31/23 22:50	84	180	
LDW23-SC1227 23A0133-12	01/06/23 13:18	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 18:11	85	180	
LDW23-SC1227 23A0133-12	01/06/23 13:18	01/06/23 17:26	03/27/23 13:52	80	180	03/31/23 22:55	84	180	
LDW23-SS1110 23A0133-13	01/06/23 14:00	01/06/23 17:26	03/27/23 13:52	79	180	04/01/23 18:16	85	180	
LDW23-SS1109 23A0133-14	01/06/23 14:13	01/06/23 17:26	03/27/23 13:52	79	180	04/01/23 18:20	85	180	
LDW23-SS1092 23A0133-15	01/06/23 14:26	01/06/23 17:26	03/27/23 13:52	79	180	04/01/23 18:24	85	180	
LDW23-SS1091 23A0133-16	01/06/23 14:50	01/06/23 17:26	03/27/23 13:52	79	180	04/01/23 18:29	85	180	
Duplicate BLC0703-DUP1	01/06/23 10:32	01/06/23 17:26	03/27/23 13:52	80	180	03/31/23 21:44	84	180	
Duplicate BLC0703-DUP2	01/06/23 10:32	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 17:18	85	180	
Matrix Spike BLC0703-MS1	01/06/23 10:32	01/06/23 17:26	03/27/23 13:52	80	180	03/31/23 21:49	84	180	

HOLDING TIME SUMMARY

Analysis: EPA 6020B

Laboratory: Analytical Resources, LLC SDG: 23A0133

Client: Anchor QEA, LLC Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
Matrix Spike BLC0703-MS2	01/06/23 10:32	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 17:22	85	180	
Matrix Spike Dup BLC0703-MSD1	01/06/23 10:32	01/06/23 17:26	03/27/23 13:52	80	180	03/31/23 21:54	84	180	
Matrix Spike Dup BLC0703-MSD2	01/06/23 10:32	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 17:26	85	180	
Post Spike BLC0703-PS2	01/06/23 10:32	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 17:31	85	180	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ICPMS2

Analyte	MDL	RL	Units
Chromium-52	0.26	0.50	mg/kg
Chromium-53	0.24	0.50	mg/kg
Lead-208	0.05	0.10	mg/kg
Silver-107	0.02	0.20	mg/kg

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCU10
Lot Number:	P2-CU682108
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Copper
Starting Material:	Cu Metal
Starting Material Lot#:	2095
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10013 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9977 ± 50 µg/mL**
ICP Assay NIST SRM 3114 Lot Number: 121207

Assay Method #2 **10024 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10007 ± 46 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.007542	M	Eu	<	0.000942	O	Na		0.001434	M	Se	<	0.016971	M	Zn	<	0.005657
O	Al	<	0.000609	O	Fe		0.008700	M	Nb	<	0.000942	O	Si		0.003052	M	Zr	<	0.000942
M	As	<	0.010371	M	Ga	<	0.000942	M	Nd	<	0.000942	M	Sm	<	0.000942				
M	Au	<	0.001885	M	Gd	<	0.000942	M	Ni		0.003781	M	Sn	<	0.005657				
O	B		0.003663	M	Ge	<	0.005657	M	Os	<	0.000942	M	Sr	<	0.000942				
M	Ba		0.004253	M	Hf	<	0.000942	O	P	<	0.031668	M	Ta	<	0.000942				
M	Be	<	0.000942	O	Hg	<	0.007064	M	Pb		0.005789	M	Tb	<	0.000942				
M	Bi	<	0.000942	M	Ho	<	0.000942	M	Pd	<	0.000942	M	Te	<	0.004714				
O	Ca		0.002304	M	In	<	0.000942	M	Pr	<	0.000942	M	Th	<	0.000942				
M	Cd	<	0.000942	M	Ir	<	0.000942	M	Pt	<	0.000942	O	Ti	<	0.002801				
M	Ce	<	0.000942	O	K		0.000763	M	Rb	<	0.000942	M	Tl	<	0.000942				
M	Co		0.001890	M	La	<	0.000942	M	Re	<	0.000942	M	Tm	<	0.000942				
M	Cr	<	0.005657	O	Li	<	0.000243	i	Rh	<		M	U	<	0.000942				
M	Cs	<	0.000942	M	Lu	<	0.000942	M	Ru	<	0.039588	M	V	<	0.003771				
s	Cu	<		O	Mg		0.000320	O	S		0.007174	M	W	<	0.005657				
M	Dy	<	0.000942	O	Mn		0.000793	M	Sb	<	0.001885	M	Y	<	0.000942				
M	Er	<	0.000942	M	Mo	<	0.005657	M	Sc	<	0.000942	M	Yb	<	0.000942				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 63.55 +2 6 $Cu(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cu Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 63 amu	10 ppt	n/a	40Ar23Na 47Ti16O, 14N12C37Cl, 16O12C35Cl, 23Na40Ca
ICP-OES 219.958 nm	0.01/.002 µg/mL	1	Th, Ta, Nb, U, Hf
ICP-OES 224.700 nm	0.01/.001 µg/mL	1	Pb, Ir, Ni, W
ICP-OES 324.754 nm	0.06/.001 µg/mL		Nb, U, Th, Mo, Hf

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 24, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 24, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGPB10
Lot Number:	S2-PB713228
Matrix:	0.5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Lead
Starting Material:	Lead Nitrate
Starting Material Lot#:	2343
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10042 ± 31 µg/mL

Density: 1.015 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10024 ± 41 µg/mL**
ICP Assay NIST SRM 3128 Lot Number: 101026

Assay Method #2 **10054 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	M	Na		0.001470	M	Se	<	0.009100	O	Zn		0.006155
O	Al		0.017098	O	Fe		0.002496	M	Nb	<	0.000310	O	Si		0.003761	O	Zr	<	0.001700
M	As	<	0.003100	M	Ga	<	0.000310	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.000910	M	Gd	<	0.000310	O	Ni		0.001709	M	Sn	<	0.001300				
O	B	<	0.005600	M	Ge	<	0.002200	M	Os	<	0.000310	O	Sr		0.000444				
O	Ba		0.007865	M	Hf	<	0.000310	O	P	<	0.038000	M	Ta	<	0.000310				
O	Be	<	0.000320	M	Hg	<	0.002200	s	Pb	<		M	Tb	<	0.000610				
M	Bi	<	0.028000	M	Ho	<	0.000310	M	Pd	<	0.000610	M	Te	<	0.000310				
O	Ca		0.019834	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.000310				
O	Cd	<	0.000630	M	Ir	<	0.000310	M	Pt	<	0.000910	O	Ti		0.005129				
M	Ce		0.004787	O	K		0.008207	M	Rb	<	0.006700	M	Tl	<	0.016000				
M	Co	<	0.000610	M	La	<	0.001900	M	Re	<	0.000310	M	Tm	<	0.000310				
O	Cr	<	0.001500	O	Li	<	0.000110	O	Rh	<	0.007700	M	U	<	0.000310				
M	Cs	<	0.006100	M	Lu	<	0.000310	M	Ru	<	0.001300	M	V	<	0.001600				
M	Cu	<	0.001600	O	Mg		0.003317	O	S	<	0.052000	M	W	<	0.000910				
M	Dy	<	0.000310	O	Mn	<	0.001600	O	Sb	<	0.015000	M	Y	<	0.000310				
M	Er	<	0.000310	M	Mo	<	0.000610	O	Sc	<	0.000630	M	Yb	<	0.000310				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 207.20 +2 6 $Pb(H_2O)_6^{+2}$

Chemical Compatibility - Soluble in HCl, HF and HNO_3. Avoid H_2SO_4. Stable with most metals and inorganic anions forming insoluble carbonate, borate, sulfate, sulfite, sulfide, phosphate, oxalate, chromate, tannate, iodate, and cyanide in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO_3 / LDPE container.

Pb Containing Samples (Preparation and Solution) -Metal (Best dissolved in 1:1 H_2O / HNO_3); Oxides (The many different Pb oxides are soluble in HNO_3 with the exception of PbO_2 which is soluble in HCl or HF); Ores and Alloys (Best attacked using 1:1 H_2O / HNO_3); Organic Matrices (Dry ash and dissolve in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 208 amu	5 ppt	n/a	192Pt16O, 192Os16O
ICP-OES 168.215 nm	0.03 / 0.003 µg/mL	1	Co
ICP-OES 217.000 nm	0.09 / 0.03 µg/mL	1	W, Ir, Hf, Sb, Th
ICP-OES 220.353 nm	0.04 / 0.006 µg/mL	1	Bi, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

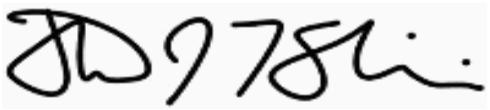
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZN10
Lot Number:	S2-ZN711249
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Zinc
Starting Material:	Zinc Metal
Starting Material Lot#:	2349
Starting Material Purity:	99.9988%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9981 ± 56 µg/mL**
ICP Assay NIST SRM 3168a Lot Number: 120629

Assay Method #2 **9987 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10002 ± 32 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002000	M	Eu	<	0.000500	O	Na		0.008713	M	Se	<	0.048000	s	Zn	<	
O	Al	<	0.011000	O	Fe		0.015467	M	Nb	<	0.000500	O	Si		0.007842	M	Zr	<	0.000500
O	As	<	0.012000	M	Ga	<	0.004900	M	Nd	<	0.000500	M	Sm	<	0.000500				
M	Au	<	0.006500	M	Gd	<	0.000500	O	Ni		0.003049	M	Sn		0.002614				
O	B	<	0.019000	M	Ge	<	0.009100	M	Os	<	0.000500	M	Sr	<	0.000500				
M	Ba	<	0.000500	M	Hf	<	0.000500	O	P	<	0.059000	M	Ta	<	0.000500				
O	Be	<	0.000230	O	Hg	<	0.003800	M	Pb		0.016774	M	Tb	<	0.000500				
M	Bi	<	0.002400	M	Ho	<	0.000500	M	Pd	<	0.001000	M	Te	<	0.017000				
O	Ca		0.052283	M	In	<	0.003500	M	Pr	<	0.000500	M	Th	<	0.000500				
O	Cd		0.000588	M	Ir	<	0.001000	M	Pt	<	0.000500	M	Ti	<	0.002000				
M	Ce	<	0.000500	O	K		0.017209	M	Rb	<	0.002500	M	Tl	<	0.000500				
M	Co		0.000653	M	La	<	0.000500	M	Re	<	0.000500	M	Tm	<	0.000500				
O	Cr		0.001089	O	Li	<	0.000230	M	Rh	<	0.000500	M	U	<	0.000500				
M	Cs	<	0.000500	M	Lu	<	0.000500	M	Ru	<	0.005000	M	V	<	0.000500				
O	Cu		0.001938	O	Mg		0.000871	O	S	<	0.048000	M	W	<	0.001000				
M	Dy	<	0.000500	O	Mn		0.000172	M	Sb	<	0.004300	M	Y	<	0.000500				
M	Er	<	0.000500	M	Mo	<	0.001500	O	Sc	<	0.000900	M	Yb	<	0.000500				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 65.39 +2 4 Zn(OH)(aq)1+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media forming insoluble carbonate and hydroxide. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Zn Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3); Organic based (dry ash at 4500C and dissolve ash in HCl) (sulfuric/peroxide acid digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 66 amu	7 ppt	N/A	50Ti16O,50Cr16O, 50V16O, 34S16O2, 32S16O18O, 32S17O2, 33S16O17O, 32S34S, 33S2
ICP-OES 202.548 nm	0.004/0.0002 µg/mL	1	Nb, Cu, Co, Hf
ICP-OES 206.200 nm	0.006/0.0006 µg/mL	1	Sb, Ta, Bi, Os
ICP-OES 213.856 nm	0.002/0.0004 µg/mL	1	Ni, Cu, V

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 22, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

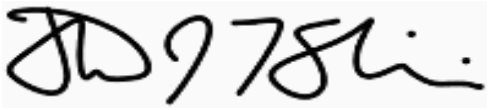
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSE10
Lot Number:	S2-SE711004
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Selenium
Starting Material:	Se Metal
Starting Material Lot#:	1962
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9955 ± 61 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9955 ± 50 µg/mL**
ICP Assay NIST SRM 3149 Lot Number: 100901

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002242	M	Eu	<	0.000373	O	Na		0.013654	s	Se	<		O	Zn		0.002374
M	Al		0.004450	M	Fe		0.008478	O	Nb	<	0.002975	O	Si		0.006249	M	Zr	<	0.001868
O	As	<	0.022040	M	Ga	<	0.000373	M	Nd	<	0.000373	M	Sm	<	0.000373				
M	Au	<	0.000373	M	Gd	<	0.000373	O	Ni		0.001843	M	Sn		0.000847				
O	B	<	0.007714	M	Ge	<	0.002616	M	Os	<	0.000373	M	Sr	<	0.001121				
M	Ba	<	0.001495	M	Hf	<	0.000373	O	P	<	0.022040	M	Ta	<	0.000373				
M	Be	<	0.001495	M	Hg	<	0.002240	M	Pb		0.006358	M	Tb	<	0.006353				
M	Bi	<	0.000373	M	Ho	<	0.000373	M	Pd	<	0.000373	M	Te	<	0.012707				
O	Ca		0.006530	M	In	<	0.000373	M	Pr	<	0.001495	M	Th	<	0.002990				
M	Cd		0.001165	M	Ir	<	0.000373	M	Pt	<	0.000373	M	Ti	<	0.003363				
M	Ce	<	0.000373	O	K		0.001999	M	Rb	<	0.001868	M	Tl		0.008584				
M	Co	<	0.000373	M	La	<	0.001121	M	Re	<	0.000373	M	Tm	<	0.000373				
M	Cr		0.002861	O	Li		0.000062	M	Rh	<	0.000373	M	U	<	0.000373				
M	Cs	<	0.001121	M	Lu	<	0.000373	M	Ru	<	0.001493	M	V	<	0.000747				
M	Cu	<	0.000747	O	Mg		0.001156	O	S		0.024591	M	W	<	0.002242				
M	Dy	<	0.000373	M	Mn	<	0.000373	M	Sb	<	0.002242	M	Y	<	0.000373				
M	Er	<	0.000373	O	Mo	<	0.003195	M	Sc	<	0.001121	M	Yb	<	0.000373				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 78.96 +4 6 H_2SeO_3

Chemical Compatibility -Soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices and water. It is stable with most inorganic anions but many cationic metals form the insoluble selenites under pH neutral conditions. When fluorinated and/or under acidic conditions precipitation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Se Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (readily soluble in water); Minerals and alloys (acid digestion with HNO_3or HNO_3 / HF); Organic Matrices (acid digestion with hot concentrated H_2SO_4 accompanied by the careful dropwise addition of H_2O_2 until clear).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 82 amu	200 ppt	N/A	12C35Cl2
ICP-OES 196.026 nm	0.08/0.006 µg/mL	1	Fe
ICP-OES 203.985 nm	0.2/0.05 µg/mL	1	Sb, Ir, Cr, Ta
ICP-OES 206.279 nm	0.3/0.16 µg/mL	1	Cr, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 17, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO10
Lot Number:	S2-MO706255
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	10 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2361
Starting Material Purity:	99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10026 ± 47 µg/mL

Density: 1.011 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10032 ± 68 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

Assay Method #2 **10020 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000590	M	Eu	<	0.000300	M	Na		0.008739	M	Se	<	0.008000	M	Zn		0.005942
M	Al		0.005592	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.001747				
M	Ba		0.016778	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.062920	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	Ti	<	0.032000				
M	Ce	<	0.008300	M	K		1.293372	M	Rb		0.045442	M	Tl		0.012584				
M	Co		0.005942	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.005243	O	Li		0.000594	M	Rh	<	0.000300	M	U	<	0.005300				
M	Cs		0.005243	M	Lu	<	0.000300	M	Ru	<	0.079000	M	V	<	0.000890				
M	Cu		0.022371	M	Mg		0.005592	i	S	<		M	W		0.873900				
M	Dy	<	0.000300	M	Mn	<	0.005900	M	Sb		0.015031	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.001200	M	Yb	<	0.000300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9 [MoO4]-2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 04, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 04, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTL10
Lot Number:	T2-TL714687
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Thallium
Starting Material:	TlNO3
Starting Material Lot#:	2118
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10030 ± 42 µg/mL

Density: 1.036 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10040 ± 43 µg/mL**
ICP Assay NIST SRM 3158 Lot Number: 151215

Assay Method #2 **10010 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL(

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000200	O	Na		0.002489	M	Se	<	0.011019	O	Zn		0.002298
O	Al	<	0.004184	O	Fe	<	0.002824	M	Nb	<	0.000200	O	Si		0.003760	M	Zr	<	0.000200
M	As	<	0.002003	M	Ga	<	0.000200	M	Nd	<	0.000200	M	Sm	<	0.000200				
O	Au	<	0.002824	M	Gd	<	0.000200	M	Ni		0.001724	M	Sn	<	0.000601				
O	B	<	0.004184	M	Ge	<	0.000801	M	Os	<	0.000198	O	Sr	<	0.000313				
M	Ba	<	0.000400	M	Hf	<	0.000200	O	P	<	0.010460	M	Ta	<	0.000200				
O	Be	<	0.000104	M	Hg	<	0.000794	M	Pb		0.000811	M	Tb	<	0.000200				
M	Bi	<	0.005209	M	Ho	<	0.000200	M	Pd	<	0.000400	M	Te	<	0.005008				
O	Ca		0.002436	M	In	<	0.000200	M	Pr	<	0.000200	M	Th	<	0.000200				
M	Cd		0.001318	M	Ir	<	0.000198	M	Pt	<	0.000801	O	Ti	<	0.001255				
M	Ce	<	0.000200	O	K		0.006175	M	Rb	<	0.000200	s	Tl	<					
M	Co	<	0.000601	M	La	<	0.000200	M	Re	<	0.000200	M	Tm	<	0.000200				
M	Cr	<	0.000801	O	Li	<	0.000177	M	Rh	<	0.000200	M	U	<	0.000200				
M	Cs	<	0.003606	M	Lu	<	0.000200	M	Ru	<	0.000397	M	V	<	0.002203				
M	Cu	<	0.001001	O	Mg		0.000529	O	S	<	0.015690	M	W	<	0.000601				
M	Dy	<	0.000200	M	Mn	<	0.000801	M	Sb	<	0.000400	M	Y	<	0.000200				
M	Er	<	0.000200	M	Mo	<	0.001202	O	Sc	<	0.000711	M	Yb	<	0.000200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 204.38 +1 6 Tl(H2O)61+
Chemical Compatibility - Soluble in HCl, HNO3, and H2SO4. Stable with most metals and inorganic anions. The sulfite, thiocyanate and oxalate are moderately soluble; the phosphate and arsenite are slightly soluble and the sulfide is insoluble.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Tl Containing Samples)Preparation and Solution) -Metal (Best dissolved in HNO3 which forms chiefly the Tl1+ ion.); Oxide (The thallous oxide is readily soluble in water. The thallic oxide requires high levels of acid); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 205 amu	2 ppt	N/A	189Os16O
ICP-OES 190.864 nm	0.04 / 0.004 µg/mL	1	V, Ti
ICP-OES 276.787 nm	0.1 / 0.01 µg/mL	1	Ta, V, Fe, Cr
ICP-OES 351.924 nm	0.2 / 0.02 µg/mL	1	Th, Ce, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 08, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 08, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

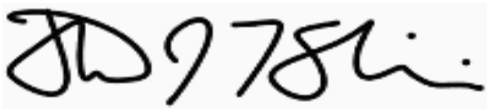
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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Christiansburg, VA 24073 USA
inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCD10
Lot Number:	S2-CD710508
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cadmium
Starting Material:	Cd Metal
Starting Material Lot#:	1953
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10008 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10010 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10011 ± 30 µg/mL**
ICP Assay NIST SRM 3108 Lot Number: 130116

Assay Method #3 **10003 ± 30 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	<	0.003200	O	Eu	<	0.002500	O	Na		0.005499	M	Se	<	0.005700	O	Zn	<	0.001100
O	Al		0.008903	O	Fe		0.000602	M	Nb	<	0.000400	O	Si		0.016758	O	Zr	<	0.002600
M	As	<	0.003600	M	Ga	<	0.001200	M	Nd	<	0.000800	M	Sm	<	0.000400				
M	Au	<	0.000810	M	Gd	<	0.000400	M	Ni	<	0.003600	M	Sn	<	0.003200				
O	B		0.004189	O	Ge	<	0.012000	M	Os	<	0.000810	O	Sr	<	0.000330				
M	Ba	<	0.002400	M	Hf	<	0.000400	O	P	<	0.022000	M	Ta	<	0.000800				
M	Be	<	0.000400	M	Hg	<	0.001700	M	Pb	<	0.002400	M	Tb	<	0.000400				
M	Bi	<	0.000400	M	Ho	<	0.000400	M	Pd	<	0.001200	M	Te	<	0.008000				
O	Ca		0.011259	O	In	<	0.013000	M	Pr	<	0.000400	M	Th	<	0.000400				
s	Cd	<		M	Ir	<	0.000410	M	Pt	<	0.000400	O	Ti		0.000602				
M	Ce	<	0.000400	O	K		0.005237	M	Rb	<	0.004400	M	Tl		0.000523				
M	Co	<	0.000400	M	La	<	0.000400	M	Re	<	0.000400	M	Tm	<	0.000400				
O	Cr	<	0.005100	O	Li	<	0.000054	M	Rh	<	0.000400	M	U	<	0.000400				
M	Cs	<	0.002400	M	Lu	<	0.000400	M	Ru	<	0.002500	M	V	<	0.002000				
O	Cu	<	0.004800	O	Mg		0.000288	O	S	<	0.022000	M	W	<	0.000400				
M	Dy	<	0.000400	O	Mn	<	0.000860	O	Sb	<	0.018000	M	Y	<	0.000400				
M	Er	<	0.000400	M	Mo	<	0.001600	O	Sc	<	0.000430	M	Yb	<	0.000400				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 112.41 +2 4 Cd2(OH) (aq)3+ and Cd(OH)(aq)

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 , and HF. Avoid basic media forming insoluble carbonate and hydroxide.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3 / LDPE container.

Cd Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (soluble in HCl or HNO3); Ores (dissolve in HCl /HNO3 then take to fumes with H2SO4. The silica and lead sulfate are filtered off after the addition of water); Organic based (dry ash at 450°C and dissolve ash in HCl), (sulfuric / peroxide acid digestion).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 111 amu	11 ppt	n/a	95Mo16O
ICP-OES 214.438 nm	0.003 / 0.0003 µg/mL	1	Pt, Ir
ICP-OES 226.502 nm	0.003 / 0.0003 µg/mL	1	Ir
ICP-OES 228.802 nm	0.003 / 0.0003 µg/mL	1	Co, Ir, As, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 01, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 01, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMN10
Lot Number:	S2-MN704240
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Manganese
Starting Material:	Mn Metal
Starting Material Lot#:	2275
Starting Material Purity:	99.9909%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10011 ± 30 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9989 ± 69 µg/mL**
ICP Assay NIST SRM 3132 Lot Number: 050429

Assay Method #2 **10011 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10024 ± 47 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001500	M	Eu	<	0.000730	O	Na		0.176097	M	Se	<	0.006600	M	Zn		0.009925
O	Al		0.004322	M	Fe	<	0.650000	M	Nb	<	0.000730	O	Si		0.097654	M	Zr	<	0.000730
M	As	<	0.008000	M	Ga		0.004322	M	Nd	<	0.001500	M	Sm	<	0.000730				
M	Au	<	0.000730	M	Gd	<	0.000730	M	Ni		0.024013	M	Sn	<	0.002200				
M	B		0.068838	M	Ge	<	0.004400	M	Os	<	0.000730	O	Sr		0.000928				
M	Ba	<	0.001500	M	Hf	<	0.000730	i	P	<		M	Ta	<	0.000730				
M	Be	<	0.000730	M	Hg	<	0.002200	M	Pb		0.007364	M	Tb	<	0.000730				
M	Bi	<	0.003000	M	Ho	<	0.000730	M	Pd	<	0.000730	M	Te	<	0.019000				
O	Ca		0.062434	M	In	<	0.003000	M	Pr	<	0.000730	M	Th	<	0.000730				
M	Cd	<	0.001500	M	Ir	<	0.000730	M	Pt	<	0.000730	O	Ti	<	0.006500				
M	Ce	<	0.007300	O	K		0.006403	M	Rb	<	0.006600	M	Tl	<	0.000730				
O	Co		0.014728	M	La	<	0.003000	M	Re	<	0.000730	M	Tm	<	0.000730				
O	Cr		0.272151	O	Li		0.000416	M	Rh	<	0.003000	M	U	<	0.001500				
M	Cs	<	0.000730	M	Lu	<	0.000730	M	Ru	<	0.004400	M	V	<	0.000730				
O	Cu		0.007684	O	Mg		0.320177	i	S	<		M	W	<	0.004400				
M	Dy	<	0.001500	s	Mn	<		M	Sb	<	0.021000	O	Y		0.001360				
M	Er	<	0.001500	M	Mo		0.010245	O	Sc	<	0.004100	M	Yb	<	0.000730				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 54.94 +2 6 $Mn(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO_3/LDPE container.

Mn Containing Samples (Preparation and Solution) -Metal (Soluble in dilute acids); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H_2SO_4 and heat to SO_3 fumes - dense white fumes).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 55 amu	10 ppt	n/a	40Ar14N1H,39K16O,37Cl18O,40Ar15N,38Ar17O,36Ar18O1H ,38Ar16O1H,37Cl17O1H,23Na32S
ICP-OES 257.610 nm	0.0014 / 0.00002 µg/mL	1	Ce, W, Re
ICP-OES 259.373 nm	0.0016 / 0.00002 µg/mL	1	U, Ta, Mo, Fe, Nb
ICP-OES 260.569 nm	0.0021 / 0.00002 µg/mL	1	Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 17, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSB10
Lot Number:	R2-SB688559
Matrix:	3% (v/v) HNO3 3% (w/v) tartaric acid
Value / Analyte(s):	10 000 µg/mL ea: Antimony
Starting Material:	Antimony Metal
Starting Material Lot#:	1857
Starting Material Purity:	99.9894%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10003 ± 47 µg/mL

Density: 1.061 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10003 ± 41 µg/mL**
ICP Assay NIST SRM 3102a Lot Number: 140911

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000300	O	Na		0.140000	M	Se	<	0.007300	O	Zn		0.005000
M	Al		0.003200	O	Fe		0.060000	M	Nb	<	0.000100	O	Si		0.150000	O	Zr	<	0.006300
M	As	<	0.004400	M	Ga	<	0.000400	M	Nd	<	0.000100	M	Sm	<	0.000100				
M	Au	<	0.000210	M	Gd	<	0.000100	O	Ni		0.004800	M	Sn	<	0.001800				
M	B	<	0.011000	M	Ge	<	0.000600	M	Os	<	0.000110	O	Sr		0.000750				
O	Ba	<	0.004900	M	Hf	<	0.000100	O	P		0.540000	M	Ta		0.003300				
M	Be	<	0.000400	M	Hg	<	0.000110	M	Pb	<	0.000400	M	Tb	<	0.000100				
M	Bi	<	0.000200	M	Ho	<	0.000100	M	Pd	<	0.000210	M	Te	<	0.000600				
O	Ca		0.110000	M	In	<	0.000100	M	Pr	<	0.001600	M	Th	<	0.000100				
M	Cd	<	0.000200	M	Ir	<	0.000110	M	Pt	<	0.000600	M	Ti	<	0.002800				
M	Ce		0.006500	O	K		0.020000	M	Rb	<	0.001000	M	Tl	<	0.000100				
M	Co	<	0.000200	O	La	<	0.016000	M	Re	<	0.000100	M	Tm	<	0.000100				
M	Cr		0.006900	O	Li	<	0.000430	M	Rh	<	0.000300	M	U	<	0.000100				
M	Cs	<	0.000200	M	Lu	<	0.000100	M	Ru	<	0.000310	M	V	<	0.000800				
M	Cu	<	0.000600	O	Mg		0.021000	n	S	<		M	W	<	0.000200				
M	Dy	<	0.000100	O	Mn		0.001900	s	Sb	<		M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo	<	0.000500	O	Sc	<	0.002300	M	Yb	<	0.000100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 121.75 +3 6 Sb(O)C4H4O6-1

Chemical Compatibility -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.

Sb Containing Samples (Preparation and Solution) -Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides (Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 30, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 30, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS10
Lot Number:	T2-AS718260
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Arsenic
Starting Material:	As Metal
Starting Material Lot#:	2208
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10060 ± 40 µg/mL

Density: 1.037 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10062 ± 46 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

Assay Method #2 **10055 ± 76 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.003200	M	Eu	< 0.000530	O	Na	0.032544	M	Se	< 0.006300	O	Zn	0.001952			
M	Al	0.007593	O	Fe	0.001475	O	Nb	< 0.012000	O	Si	0.238658	O	Zr	< 0.004100			
s	As	<	M	Ga	< 0.000530	M	Nd	< 0.000530	M	Sm	< 0.000530						
M	Au	< 0.003100	M	Gd	< 0.000530	M	Ni	< 0.002100	M	Sn	< 0.000530						
M	B	0.026035	M	Ge	< 0.001600	M	Os	< 0.000520	M	Sr	< 0.000530						
M	Ba	< 0.000530	M	Hf	< 0.000530	O	P	< 0.043000	M	Ta	< 0.000530						
O	Be	< 0.000360	M	Hg	< 0.001600	M	Pb	< 0.002100	M	Tb	< 0.000530						
M	Bi	< 0.000530	M	Ho	< 0.000530	M	Pd	< 0.001100	M	Te	< 0.004700						
O	Ca	0.004339	M	In	< 0.023000	M	Pr	< 0.005300	M	Th	< 0.000530						
M	Cd	< 0.001100	M	Ir	< 0.000520	M	Pt	< 0.000530	O	Ti	< 0.002300						
M	Ce	< 0.000530	O	K	0.002061	M	Rb	< 0.000530	M	Tl	< 0.000530						
M	Co	< 0.000530	M	La	< 0.001100	M	Re	< 0.000530	M	Tm	< 0.000530						
O	Cr	< 0.001800	O	Li	< 0.000120	M	Rh	< 0.000530	M	U	< 0.000530						
M	Cs	< 0.005300	M	Lu	< 0.000530	M	Ru	< 0.000520	M	V	< 0.002700						
M	Cu	< 0.001600	O	Mg	0.000154	O	S	0.028205	M	W	< 0.012000						
M	Dy	< 0.000530	O	Mn	0.000154	M	Sb	< 0.000530	M	Y	< 0.000530						
M	Er	< 0.000530	M	Mo	< 0.000530	O	Sc	< 0.001700	M	Yb	< 0.000530						

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 74.92 ; mix of +3 and +5 ; 6 ; H3AsO4 and HAsO2

Chemical Compatibility - Arsenic has no cationic chemistry. It is soluble in HCl, HNO3,H3PO4, H2SO4 and HF aqueous matrices water and NH4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO3 / LDPE container.

As Containing Samples (Preparation and Solution) - Metal (soluble in 1:1 H2O / HNO3); Oxides (the oxide exists in crystalline and amorphous forms where the amorphic form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K2CO3 and KNO3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na2CO3 / Na2O2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37Cl,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBA10
Lot Number:	R2-BA692576
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Barium
Starting Material:	Barium Nitrate
Starting Material Lot#:	1969
Starting Material Purity:	99.9982%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10018 ± 50 µg/mL** ICP Assay NIST SRM 3104a Lot Number: 140909
Assay Method #2	**10023 ± 31 µg/mL** Gravimetric NIST SRM Lot Number: See Sec. 4.2
Assay Method #3	**10023 ± 30 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000410	O	Eu	<	0.005200	O	Na		0.004610	M	Se	<	0.003700	O	Zn		0.000658
M	Al	<	0.003100	O	Fe		0.015707	M	Nb	<	0.000210	O	Si		0.005573	M	Zr	<	0.001300
M	As	<	0.001300	M	Ga	<	0.000210	M	Nd	<	0.000210	O	Sm	<	0.021000				
M	Au	<	0.001300	M	Gd	<	0.000210	M	Ni	<	0.000810	M	Sn	<	0.000410				
O	B	<	0.005200	M	Ge	<	0.002500	M	Os	<	0.000410	O	Sr		0.003850				
s	Ba	<		M	Hf	<	0.000810	O	P	<	0.026000	M	Ta	<	0.000410				
O	Be	<	0.000320	M	Hg	<	0.000210	M	Pb	<	0.002300	M	Tb	<	0.000210				
M	Bi	<	0.000210	M	Ho	<	0.000210	M	Pd	<	0.000210	M	Te	<	0.001900				
O	Ca		0.007093	M	In	<	0.000210	M	Pr	<	0.000210	M	Th	<	0.000210				
M	Cd	<	0.000210	M	Ir	<	0.000210	M	Pt	<	0.000210	M	Ti	<	0.002100				
M	Ce	<	0.001300	O	K		0.035467	M	Rb	<	0.002100	M	Tl	<	0.000210				
M	Co	<	0.000410	O	La	<	0.005200	M	Re	<	0.000210	M	Tm	<	0.000410				
M	Cr	<	0.001700	O	Li	<	0.000630	M	Rh	<	0.000210	M	U	<	0.000210				
M	Cs	<	0.003300	M	Lu	<	0.001700	M	Ru	<	0.000210	O	V	<	0.005200				
M	Cu	<	0.001300	O	Mg		0.000861	O	S		0.268539	M	W	<	0.000410				
M	Dy	<	0.000210	M	Mn	<	0.000410	M	Sb	<	0.001300	O	Y	<	0.005200				
M	Er	<	0.001300	M	Mo	<	0.000410	M	Sc	<	0.000410	M	Yb	<	0.001300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 137.33 +2 6 $Ba(H_2O)_6^{+2}$
Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, iodate, molybdate, sulfite and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1 -10,000 ppm solutions chemically stable for years in 1-3.5% HNO_3 / LDPE container.
Ba Containing Samples (Preparation and Solution) -Metal(is best dissolved in diluted HNO_3); Ores(Carbonate fusion in Pt0 followed by HCl dissolution. If sulfate is present dissolve the fuseate using HCl / tartaric acid to prevent $BaSO_4$ precipitate); Organic Matrices (dry ash and dissolve in dilute HCl.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 138 amu	1 ppt	N/A	122Sn16O, 122Te16O
ICP-OES 230.424 nm	0.004/0.0005 µg/mL	1	Mo, Ir, Co
ICP-OES 233.527 nm	0.004/0.0003 µg/mL	1	
ICP-OES 455.403 nm	0.002/0.0001 µg/mL	1	Zr, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 11, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 11, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBE10
Lot Number:	R2-BE692992
Matrix:	6% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Beryllium
Starting Material:	Beryllium Acetate
Starting Material Lot#:	2281
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10032 ± 41 µg/mL

Density: 1.128 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10042 ± 67 µg/mL**
ICP Assay NIST SRM 3105a Lot Number: 090514

Assay Method #2 **10025 ± 51 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001100	M	Eu	<	0.000270	O	Na		0.040962	M	Se	<	0.005000	M	Zn		0.013054
O	Al		0.016205	O	Fe		0.015754	M	Nb	<	0.000270	O	Si		0.024307	O	Zr	<	0.001900
M	As	<	0.002900	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270				
M	Au	<	0.000520	M	Gd	<	0.000270	M	Ni	<	0.003700	M	Sn	<	0.000790				
M	B	<	0.091000	M	Ge	<	0.000270	M	Os	<	0.000260	M	Sr		0.000630				
M	Ba		0.002700	M	Hf	<	0.000270	O	P	<	0.066000	M	Ta	<	0.000270				
s	Be	<		M	Hg	<	0.000520	M	Pb	<	0.000270	M	Tb	<	0.000270				
M	Bi	<	0.000530	M	Ho	<	0.000270	M	Pd	<	0.000520	M	Te	<	0.003700				
O	Ca		0.072022	M	In	<	0.000790	M	Pr	<	0.000270	M	Th	<	0.000270				
M	Cd	<	0.000790	M	Ir	<	0.000260	M	Pt	<	0.000270	O	Ti	<	0.000400				
M	Ce	<	0.000270	O	K		0.045014	M	Rb	<	0.000270	M	Tl	<	0.000790				
O	Co	<	0.003200	M	La	<	0.000270	M	Re	<	0.000270	M	Tm	<	0.000270				
O	Cr	<	0.001800	O	Li	<	0.000660	M	Rh	<	0.001100	M	U	<	0.000270				
M	Cs		0.001440	M	Lu	<	0.000270	M	Ru	<	0.000260	M	V	<	0.000790				
M	Cu	<	0.002100	O	Mg		0.016205	i	S	<		M	W	<	0.000530				
M	Dy	<	0.000270	M	Mn		0.001215	M	Sb	<	0.000270	M	Y	<	0.000270				
M	Er	<	0.000270	M	Mo	<	0.000530	O	Sc	<	0.000930	M	Yb	<	0.000270				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 9.01 +2 4 $Be(H_2O)_4^{+2}$

Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1 % HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 5-10 % HNO_3 / LDPE container.

Be Containing Samples (Preparation and Solution) - Meta l(is best dissolved in diluted H_2SO_4); BeO (boiling nitric, hydrochloric, or sulfuric acids or KHSO4 fusion); Ores (H_2SO_4/HF digestion or carbonate fusion in Pt0); Organic Matrices (sulfuric/peroxide digestion or nitric/sulfuric/perchloric acid decomposition, or dry ash and dissolution according to the BeO procedure above).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 9 amu	4 ppt	N/A	
ICP-OES 234.861 nm	0.0003/0.00016 µg/mL	1	Fe, Ta, Mo
ICP-OES 313.042 nm	0.0003/0.00009 µg/mL	1	V, Ce, U
ICP-OES 313.107 nm	0.0007/0.0005 µg/mL	1	Ce, Th, Tm

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

11.1 Certification Issue Date

May 13, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 13, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

11.4 Revision Status

- Revision 1 - Revised on Thursday, Jan 14, 2021 by utruong. Revision was made for the following reason: Modified Section 7 Chemical Form in Solution.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCO10
Lot Number:	R2-CO695285
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cobalt
Starting Material:	Co Metal
Starting Material Lot#:	2326
Starting Material Purity:	99.9934%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10012 ± 31 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10031 ± 67 µg/mL**
ICP Assay NIST SRM 3113 Lot Number: 190630

Assay Method #2 **10019 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10000 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	0.014660	M	Eu	<	0.000590	O	Na	0.007534	M	Se	<	0.019000	M	Zn	0.003461	
M	Al	< 0.024000	M	Fe	0.050905	M	Nb	<	0.000590	O	Si	0.075340	M	Zr	<	0.001200	
i	As	<	M	Ga	<	0.000590	M	Nd	<	0.000590	M	Sm	<	0.000590			
M	Au	< 0.004100	M	Gd	<	0.000590	O	Ni	0.427608	M	Sn	<	0.001200				
M	B	< 0.031000	M	Ge	<	0.003000	M	Os	<	0.000590	O	Sr	<	0.000260			
M	Ba	< 0.000590	M	Hf	<	0.000590	n	P	<		M	Ta	<	0.001200			
O	Be	< 0.001300	M	Hg	<	0.001800	M	Pb	0.003257	M	Tb	<	0.000590				
M	Bi	< 0.003000	M	Ho	<	0.000590	M	Pd	<	0.000590	M	Te	<	0.005300			
O	Ca	0.010588	M	In	<	0.001200	M	Pr	<	0.000590	M	Th	<	0.000590			
M	Cd	< 0.004700	M	Ir	<	0.001200	M	Pt	<	0.002400	M	Ti	<	0.014000			
M	Ce	< 0.000590	O	K	0.008144	M	Rb	<	0.000590	M	Tl	0.002647					
s	Co	<	M	La	<	0.000590	M	Re	<	0.000590	M	Tm	<	0.000590			
M	Cr	< 0.021000	O	Li	<	0.000130	M	Rh	<	0.000590	M	U	<	0.000590			
M	Cs	< 0.002400	M	Lu	<	0.000590	M	Ru	<	0.007100	O	V	<	0.000880			
M	Cu	0.189369	O	Mg	0.001893	n	S	<		M	W	<	0.000590				
M	Dy	< 0.000590	M	Mn	<	0.001800	M	Sb	<	0.003600	M	Y	<	0.000590			
M	Er	< 0.000590	M	Mo	<	0.002400	O	Sc	<	0.001600	M	Yb	<	0.000590			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.93 +2 6 $Co(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Co Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 59 amu	2 ppt	n/a	42Ca16O1H , 40Ar18O1H , 36Ar23Na, 43Ca16O, 24Mg35Cl
ICP-OES 228.616 nm	0.01/0.001 µg/mL	1	
ICP-OES 237.862 nm	0.01/0.002 µg/mL	1	W, Re, Al, Ta
ICP-OES 238.892 nm	0.01/0.002 µg/mL	1	Fe, W, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 04, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 04, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAG10
Lot Number:	S2-AG712977
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Silver
Starting Material:	Ag Shot
Starting Material Lot#:	2289
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10051 ± 30 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10051 ± 52 µg/mL**
ICP Assay NIST SRM 3151 Lot Number: 160729

Assay Method #2 **10051 ± 19 µg/mL**
Volhard NIST SRM 999c Lot Number: 999c

Assay Method #3 **10049 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s	Ag	<		M	Eu	<	0.000260	O	Na		0.003811	M	Se	<	0.003900	O	Zn		0.048146
M	Al		0.002688	O	Fe		0.006419	M	Nb	<	0.000260	O	Si		0.005215	M	Zr	<	0.000260
M	As	<	0.001100	M	Ga	<	0.000260	M	Nd	<	0.000260	M	Sm	<	0.000260				
M	Au	<	0.000260	M	Gd	<	0.000260	O	Ni		0.001765	M	Sn		0.020060				
O	B	<	0.004300	M	Ge	<	0.002300	M	Os	<	0.001100	O	Sr	<	0.000110				
M	Ba	<	0.000520	M	Hf	<	0.000260	O	P	<	0.017000	M	Ta	<	0.000260				
O	Be	<	0.001100	M	Hg	<	0.000770	M	Pb	<	0.003600	M	Tb	<	0.000260				
M	Bi		0.004814	M	Ho	<	0.000260	M	Pd		0.044134	M	Te	<	0.009000				
O	Ca		0.005215	M	In		0.003691	M	Pr	<	0.000260	M	Th	<	0.000260				
M	Cd	<	0.000260	M	Ir	<	0.000520	M	Pt	<	0.001100	O	Ti	<	0.000440				
M	Ce	<	0.002100	O	K	<	0.008700	M	Rb	<	0.001100	M	Tl	<	0.004100				
O	Co	<	0.000330	M	La	<	0.000260	M	Re	<	0.000260	M	Tm	<	0.000260				
O	Cr	<	0.002500	O	Li	<	0.000110	M	Rh	<	0.000520	M	U	<	0.000260				
M	Cs	<	0.002600	M	Lu	<	0.000260	M	Ru	<	0.000260	M	V	<	0.000260				
O	Cu		0.357085	O	Mg		0.001203	O	S	<	0.017000	M	W	<	0.000260				
M	Dy	<	0.000260	O	Mn	<	0.000220	M	Sb	<	0.014000	M	Y	<	0.000260				
M	Er	<	0.000260	M	Mo	<	0.000260	O	Sc	<	0.000220	M	Yb	<	0.000260				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 107.87 +1 6 $Ag(H_2O)_6^+$

Chemical Compatibility -Stable in HNO_3, and HF. Avoid basic media. Ag forms more insoluble salts than any other metal. It also is subject to photochemical reduction to the metal in HCl media although 10 µg/mL solutions in 10% HCl [$AgCl_{x1-x}$] are commonly used in the analytical laboratory. The most common solubility problems exist with arsenate, arsenite , bromide, chloride, iodide, carbonate , chromate, cyanide, iodate, oxalate, oxide, sulfate, sulfide, tartrate, and thiocyanate in aqueous media. The addition of nitric acid renders many of these salts soluble.

Stability - 2-100 ppb levels stable for 75+ days when mixed with equivalent levels of all other elements including the precious metals (where chloride is present) when in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Ag Containing Samples (Preparation and Solution) -Metal (Soluble in HNO_3); Oxides (Soluble in HNO_3); Ores (Digestion with conc. HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 107 amu	1 ppt	N/A	91Zr16O
ICP-OES 243.779 nm	0.12/0.01 µg/mL	1	Mn, Th, Ni, Rh
ICP-OES 328.068 nm	0.007/0.0007 µg/mL	1	Ce, Rh, V
ICP-OES 338.289 nm	0.013/0.001 µg/mL	1	Ce, Cr, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCR(3)10
Lot Number:	S2-CR709784
Matrix:	10% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chromium
Starting Material:	Cr Metal
Starting Material Lot#:	2328
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10027 ± 41 µg/mL

Density: 1.072 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10027 ± 40 µg/mL**
ICP Assay NIST SRM 3112a Lot Number: 170630

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001700	M	Eu	<	0.003400	O	Na		0.090372	M	Se	<	0.012000	O	Zn	<	0.006100
M	Al		0.034916	O	Fe		0.246471	M	Nb	<	0.017000	n	Si	<		M	Zr	<	0.007800
M	As	<	0.028000	O	Ga	<	0.013000	M	Nd	<	0.013000	M	Sm	<	0.006900				
M	Au	<	0.001700	M	Gd	<	0.000560	M	Ni		0.016020	M	Sn		0.006983				
O	B	<	0.025000	O	Ge	<	0.014000	M	Os	<	0.000560	M	Sr		0.006367				
M	Ba	<	0.008900	M	Hf	<	0.000560	i	P	<		M	Ta	<	0.000560				
M	Be	<	0.013000	M	Hg	<	0.001700	M	Pb		0.010064	M	Tb	<	0.000560				
M	Bi	<	0.002300	M	Ho	<	0.000560	M	Pd	<	0.021000	M	Te	<	0.010000				
O	Ca		0.075995	M	In	<	0.000560	M	Pr	<	0.001700	M	Th	<	0.000560				
M	Cd	<	0.000560	M	Ir	<	0.000560	M	Pt	<	0.001200	O	Ti		0.013555				
M	Ce	<	0.001200	O	K		0.043132	i	Rb	<		M	Tl	<	0.000560				
M	Co	<	0.002600	M	La	<	0.001200	M	Re	<	0.001200	O	Tm	<	0.013000				
s	Cr	<		O	Li		0.000390	M	Rh	<	0.095000	M	U	<	0.000560				
M	Cs	<	0.007800	M	Lu	<	0.000560	M	Ru	<	0.087000	O	V		0.014993				
O	Cu		0.007599	O	Mg		0.000883	i	S	<		M	W	<	0.049000				
M	Dy	<	0.000560	M	Mn		0.008626	M	Sb	<	0.003400	M	Y	<	0.001700				
M	Er	<	0.019000	M	Mo	<	0.032000	M	Sc		0.003080	M	Yb	<	0.000560				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 52.00 +3 6 $Cr(H_2O)_6^{3+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cr3 Containing Samples (Preparation and Solution) -Metal (soluble in HCl); Oxides/Ores (Chrome ore/oxides are very difficult to dissolve. The following procedures [A-D] are commonly used: A. Fusion with $KHSO_4$ and extraction with hot KCl. The residue fused with Na_2CO_3 and $KClO_3$, 3:1. B. Fusion with $NaKSO_4$ and NaF 2:1, C. Fusion with magnesia or lime and sodium or potassium carbonates, 4:1. D. Fusion with Na_2O_2 or NaOH and KNO_3 or NaOH and Na_2O_2. Nickel, iron, copper, or silver crucibles should be used for D. Platinum may be used for A, <, C); Organic Matrices (ash at 4500C followed by one of the fusion methods above or sulfuric/hydrogen peroxide acid digestions may be applicable to non oxide containing samples).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 52 amu	40 ppt	N/A	36S16O, 36Ar16O - The 50Cr, 53Cr, 54Cr lines suffer from many more potential interferences from sulfur, chlorine and argon compounds of oxygen, nitrogen and carbon.
ICP-OES 205.552 nm	0.006/0.0008 µg/mL	1	Os
ICP-OES 276.654 nm	0.01/0.001 µg/mL	1	Cu, Ta, V
ICP-OES 284.325 nm	0.008/0.0007 µg/mL	1	

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 26, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **October 26, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNI10
Lot Number:	P2-NI686384
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Nickel
Starting Material:	Ni Metal
Starting Material Lot#:	2277 and 2282
Starting Material Purity:	99.9992%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9979 ± 30 µg/mL

Density: 1.038 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9971 ± 54 µg/mL**
ICP Assay NIST SRM 3136 Lot Number: 120619

Assay Method #2 **9970 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **9993 ± 33 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.002606	M	Eu	<	0.001100	O	Na		0.004965	O	Se	<	0.067000	M	Zn		0.006578
M	Al	<	0.013000	O	Fe		0.018618	M	Nb	<	0.001100	O	Si		0.010923	M	Zr	<	0.001100
O	As	<	0.067000	M	Ga	<	0.001100	M	Nd	<	0.001100	M	Sm	<	0.001100				
M	Au	<	0.002100	M	Gd	<	0.001100	s	Ni	<		M	Sn	<	0.016000				
M	B	<	0.017000	M	Ge	<	0.004200	M	Os		0.002110	O	Sr	<	0.000940				
M	Ba	<	0.001100	M	Hf	<	0.001100	i	P	<		M	Ta	<	0.001100				
O	Be	<	0.000410	M	Hg		0.014895	M	Pb		0.006578	M	Tb	<	0.001100				
M	Bi	<	0.004200	M	Ho	<	0.001100	M	Pd	<	0.001100	M	Te	<	0.015000				
O	Ca		0.003351	M	In	<	0.001100	M	Pr	<	0.001100	M	Th	<	0.001100				
M	Cd		0.001365	M	Ir		0.004716	M	Pt	<	0.001100	M	Ti	<	0.004200				
M	Ce	<	0.001100	O	K		0.004716	M	Rb	<	0.001100	M	Tl	<	0.001100				
O	Co		0.017377	M	La	<	0.001100	M	Re		0.001737	M	Tm	<	0.001100				
O	Cr	<	0.006700	O	Li	<	0.000140	M	Rh	<	0.006300	M	U	<	0.001100				
M	Cs	<	0.007300	M	Lu	<	0.001100	M	Ru	<	0.019000	M	V	<	0.002100				
M	Cu		0.004096	O	Mg		0.000372	i	S	<		M	W	<	0.006300				
M	Dy	<	0.001100	O	Mn	<	0.001900	M	Sb		0.005833	O	Y	<	0.000540				
M	Er	<	0.001100	M	Mo	<	0.008400	M	Sc	<	0.002100	M	Yb	<	0.001100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.69 +2 6 Ni(H2O)62+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Ni Containing Samples (Preparation and Solution) -Metal (Soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 60 amu	100 ppt	n/a	43Ca16O1H , 44Ca16O, 23Na37Cl
ICP-OES 221.647 nm	0.01 / 0.0009 µg/mL	1	Si
ICP-OES 231.604 nm	0.02 / 0.002 µg/mL	1	Sb, Ta, Co
ICP-OES 232.003 nm	0.02 / 0.006 µg/mL	1	Cr, Re, Os, Nb, Ag, Pt, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGV10
Lot Number:	S2-V711005
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Vanadium
Starting Material:	Vanadium Pentoxide
Starting Material Lot#:	1782
Starting Material Purity:	99.9877%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10014 ± 30 µg/mL

Density: 1.104 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10017 ± 42 µg/mL**
ICP Assay NIST SRM 3165 Lot Number: 160906

Assay Method #2 **10013 ± 30 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000110	M	Eu	<	0.000110	O	Na		0.120000	M	Se	<	0.009400	M	Zn		0.009400
O	Al		0.120000	O	Fe		0.460000	M	Nb	<	0.001300	O	Si		0.270000	M	Zr	<	0.002900
M	As	<	0.000210	M	Ga	<	0.009300	M	Nd	<	0.000610	M	Sm	<	0.000110				
M	Au	<	0.004700	M	Gd	<	0.000110	M	Ni		0.012000	M	Sn		0.003900				
M	B		0.051000	M	Ge	<	0.000410	M	Os	<	0.000110	O	Sr		0.007100				
M	Ba		0.003600	M	Hf	<	0.000110	O	P	<	0.034000	M	Ta	<	0.000110				
O	Be	<	0.000560	M	Hg	<	0.000410	M	Pb		0.001400	M	Tb	<	0.000110				
M	Bi	<	0.000210	M	Ho	<	0.000110	M	Pd	<	0.000410	M	Te	<	0.000110				
O	Ca		0.730000	M	In	<	0.000110	M	Pr	<	0.000110	M	Th	<	0.000210				
M	Cd	<	0.000610	M	Ir	<	0.000110	M	Pt	<	0.000110	M	Ti		0.017000				
M	Ce	<	0.000610	M	K		0.052000	M	Rb	<	0.000310	M	Tl	<	0.000110				
M	Co	<	0.001300	M	La	<	0.000410	M	Re		0.001700	M	Tm	<	0.000110				
O	Cr		0.170000	M	Li	<	0.000810	M	Rh	<	0.000110	M	U	<	0.000410				
M	Cs		0.005600	M	Lu	<	0.000110	M	Ru	<	0.000110	s	V	<					
M	Cu	<	0.001300	M	Mg		0.053000	i	S	<		M	W		0.002000				
M	Dy	<	0.000110	M	Mn		0.007900	M	Sb		0.078000	M	Y	<	0.000110				
M	Er	<	0.000110	M	Mo		0.094000	M	Sc	<	0.000410	M	Yb	<	0.000110				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 50.94 +5 6 $H_2V_{10}O_{28}^{4-}$

Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4, HF, H_3PO_4 and strong basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

V Containing Samples (Preparation and Solution) -Metal (Fusion with NaOH or KOH in Ni0 or Na_2CO_3 / KNO_3); Oxides (V_2O_3 - use HCl, V_2O_4 - use HCl or HNO_3, V_2O_5 - use concentrated acids); Ores (Na_2CO_3 / KNO_3 in Pt0 caution - nitrates attack Pto followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to V_2O_5 above) .

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 51 amu	4 ppt	N/A	34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2
ICP-OES 290.882 nm	0.008 / 0.0008 µg/mL	1	Hf, Nb
ICP-OES 292.402 nm	0.006 / 0.001 µg/mL	1	Th
ICP-OES 309.311 nm	0.005 / 0.001 µg/mL	1	Mg, U, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

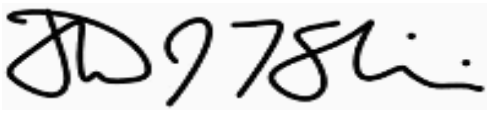
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAL10
Lot Number:	T2-AL716102
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Aluminum
Starting Material:	Aluminum Nitrate Nonahydrate
Starting Material Lot#:	2460
Starting Material Purity:	99.9938%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10049 ± 31 µg/mL

Density: 1.087 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10059 ± 40 µg/mL**
ICP Assay NIST SRM 3101a Lot Number: 140903

Assay Method #2 **10044 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10049 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002100	M	Eu	<	0.002100	O	Na		0.352819	M	Se	<	0.005200	M	Zn	0.006018
s	Al	<		O	Fe		0.074714	M	Nb	<	0.000520	O	Si		0.017848	O	Zr	0.004358
M	As		0.008716	O	Ga		0.112072	M	Nd	<	0.000520	M	Sm	<	0.000520			
M	Au	<	0.008400	M	Gd	<	0.001100	O	Ni	<	0.006000	M	Sn		0.000747			
O	B	<	0.014000	M	Ge	<	0.005200	M	Os	<	0.000650	O	Sr		0.000518			
O	Ba		0.012867	M	Hf	<	0.004100	n	P	<		M	Ta	<	0.000520			
O	Be	<	0.000270	M	Hg	<	0.002000	M	Pb		0.002282	M	Tb	<	0.000520			
M	Bi		0.001930	M	Ho	<	0.000520	M	Pd	<	0.000520	M	Te	<	0.001100			
O	Ca		0.076790	M	In	<	0.002100	M	Pr	<	0.000520	M	Th	<	0.000520			
M	Cd	<	0.000520	M	Ir	<	0.000650	M	Pt	<	0.000520	O	Ti		0.001930			
M	Ce	<	0.001100	O	K		0.043583	M	Rb	<	0.000520	M	Tl	<	0.000520			
O	Co	<	0.005400	M	La	<	0.002100	M	Re	<	0.000520	M	Tm	<	0.000520			
O	Cr		0.006018	O	Li		0.000112	M	Rh	<	0.000520	M	U	<	0.000520			
M	Cs		0.000643	M	Lu	<	0.000520	M	Ru	<	0.002000	M	V		0.001286			
O	Cu	<	0.008300	O	Mg		0.068488	i	S	<		M	W	<	0.009800			
M	Dy	<	0.002100	O	Mn		0.000913	M	Sb	<	0.003100	M	Y	<	0.001100			
M	Er	<	0.000520	M	Mo		0.005396	O	Sc	<	0.000950	M	Yb	<	0.000520			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H2O)6+3
Chemical Compatibility -Soluble in HCl, HNO3, v F and v 2SO4. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)4(H2O)21- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); a- Al2O3 (Na2CO3 fusion in Pt0);
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 22, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 22, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

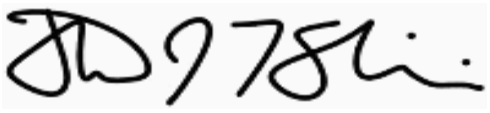
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGK10
Lot Number:	S2-K711973
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Potassium
Starting Material:	KNO3
Starting Material Lot#:	2313
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.024 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9987 ± 24 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **10004 ± 84 µg/mL**
ICP Assay NIST SRM 3141a Lot Number: 140813

Assay Method #3 **10007 ± 45 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001400	M	Eu	<	0.000660	O	Na		0.246220	M	Se	<	0.007900	O	Zn		0.018056
O	Al		0.001592	O	Fe		0.005909	M	Nb	<	0.000660	O	Si		0.011490	O	Zr	<	0.001600
M	As	<	0.005300	M	Ga	<	0.000660	M	Nd	<	0.000660	M	Sm	<	0.000660				
M	Au	<	0.002000	M	Gd	<	0.000660	O	Ni	<	0.004900	M	Sn	<	0.000660				
O	B	<	0.005600	M	Ge	<	0.002000	M	Os	<	0.003300	O	Sr		0.000055				
O	Ba	<	0.000860	M	Hf	<	0.000660	O	P	<	0.032000	M	Ta	<	0.000660				
O	Be	<	0.000082	M	Hg	<	0.002000	M	Pb	<	0.002300	M	Tb	<	0.000660				
M	Bi	<	0.006600	M	Ho	<	0.000660	M	Pd	<	0.000660	M	Te	<	0.017000				
O	Ca		0.031187	M	In	<	0.000660	M	Pr	<	0.000660	M	Th	<	0.000660				
O	Cd	<	0.000450	M	Ir	<	0.000660	M	Pt	<	0.002700	M	Ti	<	0.000660				
M	Ce	<	0.000660	s	K	<		M	Rb		0.476026	M	Tl	<	0.000660				
O	Co	<	0.000780	M	La	<	0.000660	M	Re	<	0.000660	M	Tm	<	0.000660				
O	Cr		0.000541	O	Li	<	0.000084	M	Rh	<	0.000660	M	U	<	0.000660				
M	Cs	<	0.000660	M	Lu	<	0.000660	M	Ru	<	0.000660	O	V	<	0.001100				
M	Cu	<	0.002700	O	Mg		0.006237	O	S		0.027905	M	W	<	0.000660				
M	Dy	<	0.000660	O	Mn		0.000476	M	Sb	<	0.000660	M	Y	<	0.000660				
M	Er	<	0.000660	M	Mo	<	0.000660	O	Sc	<	0.000340	O	Yb	<	0.000270				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 39.10 +1 (6) K+(aq)
Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Avoid use of HClO4 due to insolubility of the perchlorate. Stable with all metals and inorganic anions except ClO4-.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
K Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of K in sodium carbonate critical); Organic Matrices (Sulfuric/peroxide digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 39 amu	10 ppt	n/a	38ArH, 23Na16O, 78Se
ICP-OES 404.721 nm	1.1 / 0.05 µg/mL	1	U, Ce
ICP-OES 766.490 nm	0.4 / 0.001 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 771.531 nm	1.0 / 0.03 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 10, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 10, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

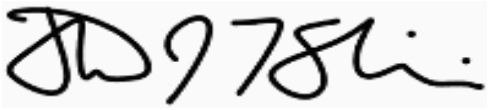
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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inorganicventures.com

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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMG10
Lot Number:	S2-MG704239
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Magnesium
Starting Material:	Magnesium Metal
Starting Material Lot#:	2168
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10053 ± 30 µg/mL

Density: 1.053 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10022 ± 62 µg/mL**
ICP Assay NIST SRM 3131a Lot Number: 140110

Assay Method #2 **10078 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10033 ± 26 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.002106	M	Eu	<	0.000910	O	Na		0.071075	O	Se	<	0.048000	O	Zn		0.003299
M	Al		0.003553	M	Fe		0.002538	M	Nb	<	0.000460	O	Si	<	0.032000	O	Zr	<	0.002700
M	As	<	0.001400	M	Ga	<	0.000460	M	Nd	<	0.000910	M	Sm	<	0.000460				
M	Au	<	0.001400	M	Gd	<	0.000460	O	Ni	<	0.001600	M	Sn	<	0.002300				
O	B		0.006853	M	Ge	<	0.001400	M	Os	<	0.000460	O	Sr		0.000279				
O	Ba		0.000964	M	Hf	<	0.000460	O	P		0.015230	M	Ta	<	0.000460				
O	Be	<	0.000120	M	Hg	<	0.000460	M	Pb	<	0.000460	M	Tb	<	0.000460				
M	Bi	<	0.000460	M	Ho	<	0.000460	M	Pd	<	0.003200	M	Te	<	0.007300				
O	Ca		0.053306	M	In	<	0.000460	M	Pr	<	0.000460	M	Th	<	0.000460				
O	Cd	<	0.000360	M	Ir	<	0.000460	M	Pt	<	0.001900	O	Ti	<	0.001700				
M	Ce	<	0.002300	M	K		0.048229	M	Rb		0.002411	M	Tl		0.003046				
M	Co	<	0.000910	M	La	<	0.002800	M	Re	<	0.000460	M	Tm	<	0.000460				
M	Cr	<	0.002300	O	Li		0.027922	M	Rh	<	0.000460	M	U	<	0.000460				
M	Cs		0.001040	M	Lu	<	0.000460	M	Ru	<	0.000460	M	V	<	0.000460				
O	Cu	<	0.003000	s	Mg	<		O	S	<	0.190000	M	W	<	0.000460				
M	Dy	<	0.000460	O	Mn		0.015230	M	Sb		0.020814	O	Y	<	0.000720				
M	Er	<	0.000460	M	Mo	<	0.000910	O	Sc	<	0.000480	M	Yb	<	0.000460				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 24.31 +2 6 $Mg(H_2O)_6^{+2}$

Chemical Compatibility -Soluble in HCl, HNO_3, and H_2SO_4 avoid HF, H_3PO_4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicates, carbonates, hydroxides, oxides, and tungstates in neutral and slightly acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO_3 / LDPE container.

Mg Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Oxide (Readily soluble in above compatible aqueous acidic solutions); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition, or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 24 amu	42 ppt	n/a	7Li17O, 48Ti+2 , 48Ca+2
ICP-OES 279.553 nm	0.0002 / 0.00003 µg/mL	1	Th
ICP-OES 280.270 nm	0.0003 / 0.00005 µg/mL	1	U, V
ICP-OES 285.213 nm	0.002 / 0.00003 µg/mL	1	U, Hf, Cr, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 23, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 23, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCA10
Lot Number:	T2-CA716103
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Calcium
Starting Material:	CaCO3
Starting Material Lot#:	2472
Starting Material Purity:	99.9950%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10005 ± 30 µg/mL

Density: 1.039 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10005 ± 45 µg/mL**
ICP Assay NIST SRM 3109a Lot Number: 130213

Assay Method #2 **10005 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10005 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001200	M	Eu	<	0.001200	O	Na		0.006112	M	Se	<	0.024000	M	Zn		0.005362
M	Al		0.065419	O	Fe		0.009115	M	Nb	<	0.001200	O	Si		0.139417	O	Zr	<	0.006700
O	As	<	0.013000	M	Ga	<	0.015000	M	Nd	<	0.020000	M	Sm	<	0.001200				
M	Au	<	0.017000	M	Gd	<	0.004800	O	Ni		0.000793	M	Sn	<	0.003600				
O	B		0.001179	M	Ge	<	0.003600	M	Os	<	0.001200	M	Sr		0.081505				
O	Ba		0.002788	M	Hf	<	0.001200	O	P	<	0.041000	M	Ta	<	0.001200				
O	Be	<	0.000410	M	Hg	<	0.004800	M	Pb		0.001608	M	Tb	<	0.001200				
M	Bi		0.001608	M	Ho	<	0.001200	M	Pd	<	0.001200	M	Te	<	0.003600				
s	Ca	<		M	In	<	0.001200	M	Pr		0.000257	M	Th	<	0.001200				
O	Cd	<	0.001300	M	Ir	<	0.001200	M	Pt	<	0.003600	O	Ti	<	0.001900				
M	Ce		0.001029	O	K		0.009759	M	Rb	<	0.001200	M	Tl	<	0.001200				
O	Co		0.000418	M	La		0.001823	M	Re	<	0.001200	M	Tm	<	0.001200				
O	Cr		0.003324	O	Li	<	0.007300	M	Rh	<	0.001200	M	U		0.002144				
M	Cs		0.007399	M	Lu		0.000128	M	Ru	<	0.001200	M	V		0.001286				
O	Cu	<	0.011000	M	Mg		1.286934	O	S		0.055767	O	W	<	0.024000				
M	Dy	<	0.002400	O	Mn		0.004611	M	Sb	<	0.009600	O	Y		0.000536				
M	Er	<	0.002400	M	Mo		0.003539	O	Sc	<	0.001400	M	Yb	<	0.001200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 40.08 +2 6 Ca(H2O)6+2
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H2SO4, vF, v3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.
Ca Containing Samples)Preparation and Solution) -Metal (best dissolved in diluted HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (dry ash and dissolution in dilute HCl. Do not heat when dissolving to avoid precipitation of SiO2). The oxide, hydroxide, carbonate, phosphate, and fluoride of calcium are soluble in % levels of HCl or HNO3. The sulfates (gypsum, anhydrite, etc.), certain silicates, and complex compounds require fusion with Na2CO3 followed by HCl / water dissolution. Note that contamination is a very real problem when analyzing for trace levels.
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 44 amu	1200 ppt	n/a	16O212C, 28Si16O, 88Sr
ICP-OES 393.366 nm	0.0002 / 0.00004 µg/mL	1	U, Ce
ICP-OES 396.847 nm	0.0005 / 0.00006 µg/mL	1	Th
ICP-OES 422.673 nm	0.01 / 0.001 µg/mL	1	Ge

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 14, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 14, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

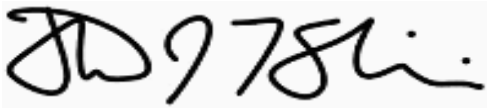
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNA10
Lot Number:	T2-NA717221
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Sodium
Starting Material:	Na2CO3
Starting Material Lot#:	2358 and 2453
Starting Material Purity:	99.9977%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9977 ± 30 µg/mL

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9974 ± 18 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **9977 ± 34 µg/mL**
ICP Assay NIST SRM 3152a Lot Number: 200413

Assay Method #3 **9987 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000930	M	Eu	<	0.000930	s	Na	<		M	Se	<	0.003800	O	Zn	0.000138
M	Al		0.004409	O	Fe		0.002393	M	Nb	<	0.000930	O	Si		0.056696	O	Zr	< 0.003200
O	As	<	0.023000	M	Ga	<	0.000930	M	Nd	<	0.000930	M	Sm	<	0.000930			
O	Au	<	0.004100	M	Gd	<	0.000930	O	Ni	<	0.003000	M	Sn	<	0.002800			
O	B		0.001385	M	Ge	<	0.004700	M	Os	<	0.000930	O	Sr		0.000251			
M	Ba		0.004031	M	Hf	<	0.000930	O	P		0.010205	M	Ta	<	0.000930			
O	Be	<	0.000130	M	Hg	<	0.000930	M	Pb	<	0.000930	M	Tb	<	0.000930			
M	Bi	<	0.000930	M	Ho	<	0.000930	M	Pd	<	0.000930	M	Te	<	0.001900			
O	Ca		0.176388	M	In	<	0.000930	M	Pr	<	0.000930	M	Th		0.000352			
O	Cd	<	0.000860	M	Ir	<	0.000930	M	Pt	<	0.000930	O	Ti		0.000592			
M	Ce	<	0.001900	O	K		0.302380	M	Rb	<	0.000930	M	Tl	<	0.000930			
O	Co	<	0.001800	O	La	<	0.002100	M	Re	<	0.000930	M	Tm	<	0.000930			
M	Cr	<	0.002800	O	Li		0.000031	M	Rh	<	0.000930	M	U	<	0.000930			
M	Cs	<	0.000930	M	Lu	<	0.000930	M	Ru	<	0.001900	O	V	<	0.001600			
O	Cu	<	0.003900	O	Mg		0.026458	O	S		0.040317	O	W	<	0.028000			
M	Dy	<	0.000930	O	Mn	<	0.000740	M	Sb	<	0.000930	O	Y	<	0.000860			
M	Er	<	0.000930	O	Mo	<	0.003600	O	Sc	<	0.000610	O	Yb	<	0.000250			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 22.99 +1 (6) Na+(aq) largely ionic in nature

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Na Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2 , 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 20, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 20, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

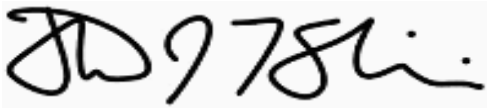
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Refine your results. Redefine your industry.

Certificate of Analysis

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGU1
Lot Number:	S2-U707914
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Uranium
Starting Material:	Uranyl Nitrate Hexahydrate
Starting Material Lot#:	P2-2322
Starting Material Purity:	99.9997%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 5 µg/mL

Density: 1.010 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **998 ± 5 µg/mL**
ICP Assay NIST SRM 3164 Lot Number: 080521

Assay Method #2 **1001 ± 6 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000270	M	Eu	<	0.000270	M	Na	<	0.011000	M	Se	<	0.009300	M	Zn	0.002358
M	Al	<	0.011000	M	Fe		0.003222	M	Nb	<	0.000270	M	Si	<	0.160000	M	Zr	< 0.001100
M	As	<	0.002400	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270			
M	Au	<	0.000270	M	Gd	<	0.000270	M	Ni	<	0.020000	M	Sn	<	0.011000			
M	B	<	0.000270	M	Ge	<	0.000800	M	Os	<	0.001900	M	Sr	<	0.000270			
M	Ba	<	0.003800	M	Hf	<	0.000270	i	P	<		M	Ta	<	0.000270			
M	Be	<	0.000270	M	Hg	<	0.000540	M	Pb	<	0.002200	M	Tb	<	0.000270			
M	Bi	<	0.000270	M	Ho	<	0.000270	M	Pd	<	0.000540	M	Te	<	0.003800			
M	Ca	<	0.140000	M	In	<	0.000270	M	Pr	<	0.000270	M	Th		0.000129			
M	Cd	<	0.000270	M	Ir	<	0.000270	M	Pt	<	0.000270	M	Ti	<	0.002700			
M	Ce	<	0.000540	O	K	<	0.250000	M	Rb	<	0.000800	M	Tl	<	0.000270			
M	Co	<	0.000800	M	La		0.000117	M	Re	<	0.064000	M	Tm	<	0.000270			
M	Cr		0.000943	M	Li	<	0.003000	M	Rh	<	0.000270	s	U	<				
M	Cs		0.000106	M	Lu	<	0.000270	M	Ru	<	0.000540	M	V	<	0.000540			
M	Cu	<	0.001100	M	Mg	<	0.003000	i	S	<		M	W	<	0.000540			
M	Dy	<	0.000270	M	Mn	<	0.006900	M	Sb	<	0.000270	M	Y	<	0.000270			
M	Er	<	0.000270	M	Mo	<	0.006400	M	Sc	<	0.000540	M	Yb	<	0.000270			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 238.03 +6 8 UO22+(uranyl)
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H3PO4. H2SO4 and HF matrices should not be a problem depending upon [U]. Although the UO22+ ion is distinctly basic, any U+4 will precipitate in basic media. UO22+salts are generally soluble in water and UO22+ is stable with most metals and inorganic anions. The uranyl phosphate is insoluble in water. UF4 and UF6 are water soluble.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
U Containing Samples (Preparation and Solution) -Metal (Dissolves rapidly in HCl and HNO3); Oxide (Soluble in HNO3); Ores (Digest for 1-2 hours with 1 gram of ore to 30 mL 1:1 HNO3. Silica insolubles are removed by filtration after bringing the sample to fumes with conc. H2SO4.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 238 amu	2 ppt	N/A	206Pb16O2
ICP-OES 263.553 nm	0.3 / 0.01 µg/mL	1	Ce, Ir, Th, Rh, W, Zr, Ta, Ti, V, Hf, Fe, Re, Ru
ICP-OES 367.007 nm	0.3 / 0.02 µg/mL	1	Th, Ce
ICP-OES 385.958 nm	0.3 / 0.01 µg/mL	1	Th, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-2
Lot Number:	T2-MEB719895
Matrix:	3% (v/v) HNO3 tr. HF
Value / Analyte(s):	2.5 µg/mL ea: Molybdenum, Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**2.499 ± 0.015 µg/mL**	**Molybdenum, Mo**	**2.500 ± 0.017 µg/mL**

Density: 1.014 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

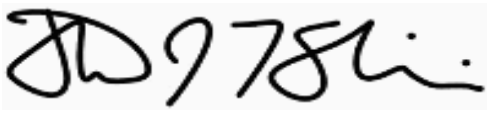
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-3
Lot Number:	T2-MEB719896
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	250 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

4 µg/mL ea:
Selenium,

2.5 µg/mL ea:

Thorium,	Thallium,
Uranium,	Vanadium,
Zinc,	Manganese,
Cadmium,	Cobalt,
Chromium,	Copper,
Arsenic,	Barium,
Beryllium,	Nickel,
Lead,	Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	250.0 ± 0.9 µg/mL	Arsenic, As	2.500 ± 0.018 µg/mL
Barium, Ba	2.501 ± 0.013 µg/mL	Beryllium, Be	2.501 ± 0.015 µg/mL
Cadmium, Cd	2.501 ± 0.013 µg/mL	Calcium, Ca	250.0 ± 1.3 µg/mL
Chromium, Cr	2.500 ± 0.015 µg/mL	Cobalt, Co	2.500 ± 0.014 µg/mL
Copper, Cu	2.500 ± 0.014 µg/mL	Iron, Fe	250.0 ± 1.0 µg/mL
Lead, Pb	2.500 ± 0.013 µg/mL	Magnesium, Mg	250.0 ± 1.3 µg/mL
Manganese, Mn	2.500 ± 0.014 µg/mL	Nickel, Ni	2.500 ± 0.014 µg/mL
Potassium, K	250.0 ± 1.2 µg/mL	Selenium, Se	4.002 ± 0.024 µg/mL
Silver, Ag	2.501 ± 0.017 µg/mL	Sodium, Na	250.0 ± 1.2 µg/mL
Thallium, Tl	2.500 ± 0.017 µg/mL	Thorium, Th	2.499 ± 0.013 µg/mL
Uranium, U	2.501 ± 0.015 µg/mL	Vanadium, V	2.500 ± 0.014 µg/mL
Zinc, Zn	2.500 ± 0.014 µg/mL		

Density: 1.042 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Calculated		See Sec. 4.2
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Mn	Calculated		See Sec. 4.2
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2

V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

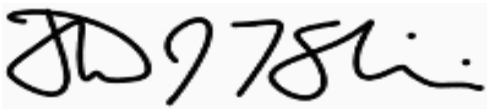
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-6020ICS-0A10
Lot Number:	T2-MEB719898
Matrix:	1.4% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Chloride,
	200 µg/mL ea: Carbon,
	100 µg/mL ea: Calcium, Aluminum, Iron, Potassium, Magnesium, Sodium, Phosphorus, Sulfur,
	2 µg/mL ea: Titanium, Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**100.0 ± 0.4 µg/mL**	**Calcium, Ca**	**100.0 ± 0.5 µg/mL**
Carbon, C	**200.1 ± 0.5 µg/mL**	**Chloride, Cl**	**1 000 ± 5 µg/mL**
Iron, Fe	**100.0 ± 0.5 µg/mL**	**Magnesium, Mg**	**100.0 ± 0.5 µg/mL**
Molybdenum, Mo	**2.001 ± 0.014 µg/mL**	**Phosphorus, P**	**100.0 ± 0.6 µg/mL**
Potassium, K	**100.0 ± 0.5 µg/mL**	**Sodium, Na**	**100.0 ± 0.5 µg/mL**
Sulfur, S	**100.0 ± 0.5 µg/mL**	**Titanium, Ti**	**2.001 ± 0.015 µg/mL**

Density: 1.009 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Acidimetric	84L	84L
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 07, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 07, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

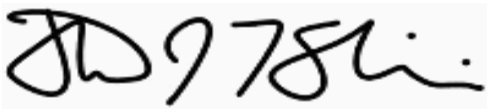
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-SC1250

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-03 A	SDG:	23A0133
Sampled:	01/06/23 10:32	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-043
% Solids:	50.34	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 17:13
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.041 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	10.6	20	0.07	0.38	
7440-43-9	Cadmium	0.30	20	0.06	0.19	
7440-50-8	Copper	52.4	20	0.33	0.95	
7440-66-6	Zinc	109	20	5.6	11.4	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-SC1241

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-06 A	SDG:	23A0133
Sampled:	01/06/23 10:51	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-039
% Solids:	48.27	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 16:55
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.069 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	10.5	20	0.07	0.39	
7440-43-9	Cadmium	0.24	20	0.06	0.19	
7440-50-8	Copper	46.9	20	0.34	0.97	
7440-66-6	Zinc	97.1	20	5.7	11.6	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-IT1217

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-07 A	SDG:	23A0133
Sampled:	01/06/23 11:14	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-040
% Solids:	61.34	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 17:00
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.08 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	9.80	20	0.06	0.30	
7440-43-9	Cadmium	0.34	20	0.05	0.15	
7440-50-8	Copper	34.0	20	0.26	0.75	
7440-66-6	Zinc	66.0	20	4.4	9.1	

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Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-SC1185

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-08 A	SDG:	23A0133
Sampled:	01/06/23 12:00	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-041
% Solids:	60.30	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 17:04
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.005 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	9.34	20	0.06	0.33	
7440-43-9	Cadmium	0.35	20	0.05	0.17	
7440-50-8	Copper	45.7	20	0.29	0.83	
7440-66-6	Zinc	90.9	20	4.8	9.9	

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INORGANIC ANALYSIS DATA SHEET
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Total Metals

LDW23-SC1234

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-09 A	SDG:	23A0133
Sampled:	01/06/23 13:34	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-042
% Solids:	52.12	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 17:09
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.018 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	9.23	20	0.07	0.38	
7440-43-9	Cadmium	0.22	20	0.06	0.19	
7440-50-8	Copper	46.3	20	0.33	0.94	
7440-66-6	Zinc	95.8	20	5.5	11.3	

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INORGANIC ANALYSIS DATA SHEET
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Total Metals

LDW23-SC1215

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-10 A	SDG:	23A0133
Sampled:	01/06/23 11:38	Prepared:	03/27/23 13:52	File ID:	XDT_m2230331-083
% Solids:	53.90	Preparation:	SWN EPA 3050B	Analyzed:	03/31/23 22:45
Batch:	BLC0703	Sequence:	SLD0005	Initial/Final:	1.045 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00005

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-43-9	Cadmium	2.17	50	0.13	0.44	D

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Total Metals

LDW23-SC1215

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-10 A	SDG:	23A0133
Sampled:	01/06/23 11:38	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-053
% Solids:	53.90	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 18:02
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.045 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	25.4	20	0.07	0.36	
7440-50-8	Copper	49.2	20	0.31	0.89	
7440-66-6	Zinc	121	20	5.2	10.7	

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Total Metals

LDW23-SC1222

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-11 A	SDG:	23A0133
Sampled:	01/06/23 13:00	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-054
% Solids:	54.66	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 18:07
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.046 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	14.1	20	0.07	0.35	
7440-43-9	Cadmium	0.74	20	0.05	0.17	
7440-50-8	Copper	46.4	20	0.30	0.87	
7440-66-6	Zinc	107	20	5.1	10.5	

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Total Metals

LDW23-SC1227

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-12 B	SDG:	23A0133
Sampled:	01/06/23 13:18	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-055
% Solids:	55.12	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 18:11
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.068 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	11.0	20	0.06	0.34	
7440-43-9	Cadmium	0.64	20	0.05	0.17	
7440-50-8	Copper	44.3	20	0.30	0.85	
7440-66-6	Zinc	99.2	20	5.0	10.2	

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Total Metals

LDW23-SS1110

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-13 B	SDG:	23A0133
Sampled:	01/06/23 14:00	Prepared:	03/27/23 13:52	File ID:	XDT_m2230331-086
% Solids:	60.11	Preparation:	SWN EPA 3050B	Analyzed:	03/31/23 23:00
Batch:	BLC0703	Sequence:	SLD0005	Initial/Final:	1.022 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00005

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	8.81	50	0.15	0.81	D

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INORGANIC ANALYSIS DATA SHEET
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Total Metals

LDW23-SS1110

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-13 B	SDG:	23A0133
Sampled:	01/06/23 14:00	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-056
% Solids:	60.11	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 18:16
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.022 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-43-9	Cadmium	0.22	20	0.05	0.16	
7440-50-8	Copper	32.6	20	0.28	0.81	
7440-66-6	Zinc	76.3	20	4.8	9.8	

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INORGANIC ANALYSIS DATA SHEET
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Total Metals

LDW23-SS1109

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-14 B	SDG:	23A0133
Sampled:	01/06/23 14:13	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-057
% Solids:	47.28	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 18:20
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.067 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	11.0	20	0.08	0.40	
7440-43-9	Cadmium	0.31	20	0.06	0.20	
7440-50-8	Copper	47.2	20	0.34	0.99	
7440-66-6	Zinc	93.5	20	5.8	11.9	

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Total Metals

LDW23-SS1092

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-15 B	SDG:	23A0133
Sampled:	01/06/23 14:26	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-058
% Solids:	53.05	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 18:24
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.043 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	9.61	20	0.07	0.36	
7440-43-9	Cadmium	0.28	20	0.05	0.18	
7440-50-8	Copper	44.0	20	0.31	0.90	
7440-66-6	Zinc	90.0	20	5.3	10.8	

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INORGANIC ANALYSIS DATA SHEET
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Total Metals

LDW23-SS1091

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-16 B	SDG:	23A0133
Sampled:	01/06/23 14:50	Prepared:	03/27/23 13:52	File ID:	XDT_m2230401-059
% Solids:	49.19	Preparation:	SWN EPA 3050B	Analyzed:	04/01/23 18:29
Batch:	BLC0703	Sequence:	SLD0041	Initial/Final:	1.033 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00006

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	11.3	20	0.07	0.39	
7440-43-9	Cadmium	0.26	20	0.06	0.20	
7440-50-8	Copper	46.1	20	0.69	0.98	
7440-66-6	Zinc	95.7	20	5.7	11.8	

PREPARATION BATCH SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLC0703 Batch Matrix: Solid
Preparation: SWN EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1250	23A0133-03	XDT_m2230401-043	03/27/23 13:52	
LDW23-SC1241	23A0133-06	XDT_m2230401-039	03/27/23 13:52	
LDW23-IT1217	23A0133-07	XDT_m2230401-040	03/27/23 13:52	
LDW23-SC1185	23A0133-08	XDT_m2230401-041	03/27/23 13:52	
LDW23-SC1234	23A0133-09	XDT_m2230401-042	03/27/23 13:52	
LDW23-SC1215	23A0133-10	XDT_m2230401-053	03/27/23 13:52	
LDW23-SC1215	23A0133-10	XDT_m2230331-083	03/27/23 13:52	
LDW23-SC1222	23A0133-11	XDT_m2230401-054	03/27/23 13:52	
LDW23-SC1227	23A0133-12	XDT_m2230401-055	03/27/23 13:52	
LDW23-SS1110	23A0133-13	XDT_m2230331-086	03/27/23 13:52	
LDW23-SS1110	23A0133-13	XDT_m2230401-056	03/27/23 13:52	
LDW23-SS1109	23A0133-14	XDT_m2230401-057	03/27/23 13:52	
LDW23-SS1092	23A0133-15	XDT_m2230401-058	03/27/23 13:52	
LDW23-SS1091	23A0133-16	XDT_m2230401-059	03/27/23 13:52	
Blank	BLC0703-BLK1	XDT_m2230331-068	03/27/23 13:52	
LCS	BLC0703-BS1	XDT_m2230331-069	03/27/23 13:52	
LDW23-SC1250	BLC0703-DUP2	XDT_m2230401-044	03/27/23 13:52	Added 4/3/2023 by MCB
LDW23-SC1250	BLC0703-MS2	XDT_m2230401-045	03/27/23 13:52	Added 4/3/2023 by MCB
LDW23-SC1250	BLC0703-MSD2	XDT_m2230401-046	03/27/23 13:52	Added 4/3/2023 by MCB

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: AR Date: 3/30/23 Time: 1245 - 1821 Balance ID: BALD

Matrix: SOIL Block ID: 3 Block Temp: 90C Thermometer: 20-4

ARI Sample ID	Btl #	pH<2	Prep Code: SWN Initial Wt (g) Vol (mL)	Prep Code: SWN Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
23A133-03	A		1.041	50			
-06			1.069				
-07			1.080				
-08			1.005				
-09			1.018				
-10			① ~~1.016~~				
-11			1.046				
-12	B		1.068				
-13			1.022				
-14			1.067				
-15			1.043				
-16			1.033				
23A134-01			1.050				
-02			1.071				
-03			1.032				
-04			1.008				
-05			1.023				
-06	A		1.020				
-07	B		1.046				
-08			1.063				
BLC ~~703~~ blk	—		—				23A133-03
-DS	—		—				
-dup	—		1.044				
-MS	—		1.045				
-MSD	—		1.042				
—	—	—	—	—	—	—	—

Chemical/Reagent ID:

HNO_3: L24078 1:1 HNO_3: L23116 HCl: — H_2O_2: K110516

Tube Lot#: 2210117 Boiling Chip Lot#: — (DoD Only)

① 1.045

Form I

METHOD BLANK DATA SHEET

EPA 6020B UCT-KED

Total Metals

Blank

Laboratory: Analytical Resources, LLC | SDG: 23A0133

Client: Anchor QEA, LLC | Project: AOC5 MR Phase 1

Batch: BLC0703 | Laboratory ID: BLC0703-BLK1 | Prepared: 03/27/23 13:52

Matrix: Solid | Preparation: SWN EPA 3050B | Analyzed: 03/31/23 21:20

Sequence: SLD0005 | Calibration: GD00005 | Instrument: ICPMS2

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic-75a	ND	20	0.04	0.20	U
7440-43-9	Cadmium-111	ND	20	0.03	0.10	U
7440-50-8	Copper-63	ND	20	0.17	0.50	U
7440-50-8	Copper-65	ND	20	0.35	0.50	U
7440-66-6	Zinc-66	ND	20	2.9	6.0	U

LCS / LCS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/31/23 21:25
Batch:	BLC0703	Laboratory ID:	BLC0703-BS1
Preparation:	SWN EPA 3050B	Sequence Name:	LCS
Initial/Final:	1 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Arsenic-75a	25.0	24.2		96.7	80 - 120
Cadmium-111	25.0	25.2		101	80 - 120
Copper-63	25.0	24.5		97.9	80 - 120
Copper-65	25.0	24.9		99.7	80 - 120
Zinc-66	80.0	75.7		94.6	80 - 120

* Indicates values outside of QC limits

DUPLICATES

EPA 6020B UCT-KED

Total Metals

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLC0703-DUP2
Batch: BLC0703
Lab Source ID: 23A0133-03
Preparation: SWN EPA 3050B
Initial/Final: 1.044 g / 50 mL
Source Sample Name: LDW23-SC1250
% Solids: 50.34

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Arsenic-75a	20	10.6	10.6	0.234	
Cadmium-111	0.19 - 0.57	0.30	0.38	24.4	L
Copper-63	20	52.4	53.4	1.83	
Zinc-66	20	109	101	8.15	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

MS / MS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	04/01/23 17:22
Batch:	BLC0703	Laboratory ID:	BLC0703-MS2
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike
Initial/Final:	1.045 g / 50 mL	Source Sample:	LDW23-SC1250

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Arsenic-75a	47.5	10.6		54.8		93.0	75 - 125
Cadmium-111	47.5	0.30		47.0		98.2	75 - 125
Copper-63	47.5	52.4		99.4		98.8	75 - 125
Zinc-66	152	109		248		91.1	75 - 125

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	04/01/23 17:26
Batch:	BLC0703	Laboratory ID:	BLC0703-MSD2
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike Dup
Initial/Final:	1.042 g / 50 mL	Source Sample:	LDW23-SC1250

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic-75a	47.7	56.6		96.6	3.28	20	75 - 125
Cadmium-111	47.7	47.8		99.6	1.68	20	75 - 125
Copper-63	47.7	99.5		98.9	0.180	20	75 - 125
Zinc-66	153	255		95.4	2.75	20	75 - 125

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLC0703-PS2
Batch: BLC0703
Lab Source ID: 23A0133-03
Preparation: SWN EPA 3050B
Initial/Final: 1.041 g / 50 mL
Source Sample Name: LDW23-SC1250
% Solids: 50.34

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R
Silver-107	80 - 120	474	0.26	500.00	94.4

* Values outside of QC limits

INITIAL CALIBRATION DATA

EPA 6020B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GD00005	Instrument:	ICPMS2
Calibration Date:	03/31/2023 15:18		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Chromium-52	0	0	0.5	57276	10	21001.9	20	19835.5	50	18336.74	100	18017.87
Chromium-53	0	0	0.5	2308	10	2210.8	20	2200.7	50	2128.36	100	2098.28
Lead-208	0	0	0.1	55570	10	54026.3	20	53451.75	50	52085.82	100	52367.07

INITIAL CALIBRATION DATA

EPA 6020B

Laboratory: Analytical Resources, LLC
Instrument: ICPMS2
Calibration: GD00005
Calibration Date: 3/31/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Chromium-52	22411.34	83.8	0.9999		0.998	
Chromium-53	1824.357	49.2	0.9999		0.998	
Lead-208	44583.49	49.1	1.0000		0.998	

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GD00005
Instrument: ICPMS2
Calibration Date: 03/31/2023 15:18

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Arsenic-75a	0	0	0.2	170	10	155.1	20	152.05	50	144.82	100	142.17
Cadmium-111	0	0	0.1	170	10	184.7	20	185.05	50	175.96	100	171.01
Cadmium-114	0	0	0.1	470	10	473	20	453.95	50	431.88	100	426.74
Copper-63	0	0	0.5	2882	10	2804.6	20	2579.95	50	2520.5	100	2395.15
Copper-65	0	0	0.5	1480	10	1340.9	20	1314.65	50	1249.54	100	1187.64
Zinc-66	0	0	6	342	10	332.5	20	302.3	50	296.32	100	281.98
Zinc-67	0	0	6	50.33333	10	52.8	20	50.95	50	49.08	100	47.23

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

Instrument: ICPMS2

Calibration: GD00005

Calibration Date: 3/31/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a	127.3567	49.6	0.9998		0.998	
Cadmium-111	147.7867	49.2	0.9996		0.998	
Cadmium-114	375.9283	49.3	0.9998		0.998	
Copper-63	2197.033	49.7	0.9992		0.998	
Copper-65	1095.455	49.8	0.9991		0.998	
Zinc-66	259.1833	49.8	0.9993		0.998	
Zinc-67	41.73222	49.2	0.9995		0.998	

Analytical Resources, Incorporated
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ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 3/31/23 **Analyst:** MS **Sequence:** SLDϕϕϕ5 **Cal:** GDϕϕϕϕ5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ - CAL1	L3363		
		-CAL2	L3295		
		-CAL3	L3296		Sesl. noisy-Nt, R-Values, QC OK
		-CAL4	L3297		
		-CAL5	L3364		
		-CAL6	L3298		
		-IBL1	—		
		-ICV1	Lϕ243		
		-ICB1	L3363		
	✓	-CAL1	—		
		-CCV1	L3364		
		-CCB1	L3363		
		-CRL1	L3295		
		-IFA1	L3416		V^{-1}, Cr^{53}↑
		-IFB1	L2744		V^{-1}↑
		-HCV1	L2745		
		-HCV2	L2746		Ba^{137}↑ - Ba<200
		-IBL2	—		(Sb↑)
		-IBL3+4	—		
		-CCV2			
		-CCB2			
		BLCϕ848-BLK1	REN		No Ag
		↓ -BS1	↓		↓
		23Cϕ747-ϕ1	↓	2	(BLC848 ICB source)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 3/31/23 **Analyst:** MS **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23CΦ731-Φ1	REN	5	
		23CΦ386-Φ4	↓	↓	Al, Cr, V only
		BLCΦ8Φ9-DUP2	↓	↓	↓
		↓ -MS2	↓	↓	↓
		↓ -MSD2	↓	↓	↓
		23CΦ419-Φ1	↓	10	Zn only
		SEQ-IBL5			
		↓ -CCV3			Ag ↓
		-CCB3			
	✓	-CAL1			Al Removed
		-CCV4			
		↓ -CCB4			
		23AΦΦ99-Φ2	SWN	50	Cr only
		↓ -Φ3	↓	↓	↓
		-Φ4	↓	↓	↓
		-Φ5	↓	↓	↓
		-Φ7	↓	↓	↓
		-Φ8	↓	↓	↓
		-Φ9	↓	↓	↓
		-1Φ	↓	↓	↓
		-11	↓	↓	↓
		↓ -12	↓	↓	↓
		SEQ-CCV5			
		↓ -CCB5			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 3/31/23 **Analyst:** MB **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23AØØ99-13	SWN	50	Cr only
		↓ -Ø6	↓	↓	↓
		BLCØ692-DUP2			
		↓ -MS2			
		-MSD2			
		↓ -PS2			60 mL K7409
		23AØ134-1Ø			
		↓ -11			
		-13			
		↓ -15	↓	↓	↓
		SEQ-CCV6			Ag↓
		↓ -CCB6			
		BLCØ7Ø3-BLK1	SWN	20	No Ag
		↓ -BS1	↓	↓	↓
		23AØ133-Ø6		50	Cr only
		↓ -Ø7		↓	↓
		↓ -Ø3			
		BLCØ7Ø3-DUP1			
		↓ -MS1			
		-MSD1			
		↓ -PS1	↓	↓	60mL K7409 ↓
		SEQ-IBL6			
		↓ -CCV7			Ag↓
		↓ -CCB7			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 3/31/23 **Analyst:** NB **Sequence:** ~~ **Cal:** ~~

All corrections made by analyst unless otherwise noted. NB 3/31/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23C0431-01	REN	2	Cd only
138 → 133		23A0138-08	SWN	50	Cr only
	✓	3-09			
		-10			Cd, Cr only
		-11			Cr only
		-12			Cr, Pb only
		-13			As only
	✓	-14			
	✓	-15			
	✓	-16			
		SEQ-CCV8			
		↓ -CCB8			
		23C0410-01	REN	2	Cd only
		↓ -02	↓	↓	↓
	✓	23A0134-01	SWN	50	
		-02			
		-03			
		-04			
		-05			
		-06			
		-07			
	✓	-08			
		SEQ-CCV9			Ag↓
		↓ -CCB9			

Analytical Resources, Incorporated
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ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 3/31/23 **Analyst:** MB **Sequence:** _____ **Cal:** _____

All corrections made by analyst unless otherwise noted. MB 3/31/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BLCΦ848-DUP1	REN	2	(source: C747-1) No Ag
		↓ -MS1	↓	↓	↓ / Mn STL ↓
		B23CΦ585-Φ1			Cd only
		↓ -Φ2			↓
		↓ -Φ3			
		23CΦ664-Φ1			
		↓ -Φ2			
		↓ -Φ3			
		↓ -Φ4	↓	↓	↓
		SEQ-IBLA			
		↓ -CCVA			
		↓ -CCBA			
	√	↓ -CAL1			
		↓ -CCVB			Ag ↓
		↓ -CCBB			
		23CΦ439-Φ8	REN	2	V only
		↓ -22	↓	↓	↓
		↓ -23			
		↓ -24			
		↓ -25			↓
		↓ -Φ6		↓	Ge, In ↓ ↓
		↓ -Φ9		10	As, Sb, V only
		23CΦ454-Φ1			
		23CΦ457-Φ1	↓		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS 02 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 3/31/23 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-IBLC			
		-CCVC			Ni60, Ag, Pb ↓
		-CCBC			
	✓	23CΦ64Φ-Φ1	REN	10	Re-run @ 2x
		-Φ2			
		-Φ3			
		-Φ4			
		-Φ5			
		-Φ6			
		23CΦ458-Φ1			No Pb
		23CΦ46Φ-Φ1			
		23CΦ477-Φ1			No Pb
		SEQ-IBLD			
		-CCVD			Ag ↓
		-CCBD			
		Rinse/DI			
			MB 3/31/23		

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Friday, March 31, 2023 14:26:19
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.5570
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	1576.6	1576.554	23.107	1.5	Standard
	In	114.9	25061.6	25061.564	168.730	0.7	Standard
	U	238.1	24120.4	24120.413	124.224	0.5	Standard
⎡	CeO	155.9	232.4	0.009	0.000	3.8	Standard
⎢>	Ce	139.9	24822.1	24822.081	221.047	0.9	Standard
⎣	Ce++	70.0	302.2	0.012	0.000	2.7	Standard
	Bkgd	220.0	0.0	0.033	0.075	223.6	Standard

Current Conditions File Data

Current Value	Description
1.01	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.25	Deflector Voltage
1600.00	ICP RF Power
-1712.00	Analog Stage Voltage
1600.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-8.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.03	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-16.50	KED Mode CRO
-12.00	KED Mode QRO
-4.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
5.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Friday, March 31, 2023 14:34:18
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.5576
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	6963.4	6963.363	67.605	1.0	Standard
	In	114.9	67437.0	67437.003	467.764	0.7	Standard
	U	238.1	63014.1	63014.143	408.334	0.6	Standard
⎡	CeO	155.9	1303.9	0.023	0.001	4.8	Standard
⎢>	Ce	139.9	55981.3	55981.274	280.686	0.5	Standard
⎣	Ce++	70.0	1636.8	0.029	0.001	2.0	Standard
	Bkgd	220.0	0.2	0.200	0.139	69.7	Standard

Current Conditions File Data

Current Value	Description
1.04	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.25	Deflector Voltage
1600.00	ICP RF Power
-1712.00	Analog Stage Voltage
1600.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-8.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.04	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-16.50	KED Mode CRO
-12.00	KED Mode QRO
-4.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
5.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 3/31/2023 2:26:16 PM
End Time: 3/31/2023 2:36:22 PM

STD Performance Check - [Failed]
- Obtained Intensity (Be 9): 1576.55 - <Target not achieved>
- Obtained Intensity (In 115): 25061.56 - <Target not achieved>
- Obtained Intensity (U 238): 24120.41 - <Target not achieved>
- Obtained Intensity (Bkgd 220): 0.03
- Obtained Formula (Ce++ 70 / Ce 140): 0.012 (=302.20 / 24822.08)
- Obtained Formula (CeO 156 / Ce 140): 0.009 (=232.40 / 24822.08)
- Obtained RSD (Be 9): 0.0147
- Obtained RSD (In 115): 0.0067
- Obtained RSD (U 238): 0.0052

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.88 mm	0.55 mm	48373.76

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.04
- Obtained Intensity (In 115): 64552.52
- Obtained Formula (CeO 156 / Ce 140): 0.0206 (=1121.04 / 54408.41)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
- Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.688)
- Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.681)
- Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.703)
- Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.694)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.999; Intercept = -13.46

KED Mode QID - Optimum value(s): Correlation Coefficient = 0.997; Intercept = -15.53

STD Performance Check - [Passed] Optimum value(s): N/A
- Obtained Intensity (Be 9): 6963.36
- Obtained Intensity (In 115): 67437.00
- Obtained Intensity (U 238): 63014.14
- Obtained Intensity (Bkgd 220): 0.20
- Obtained Formula (Ce++ 70 / Ce 140): 0.029 (=1636.83 / 55981.27)
- Obtained Formula (CeO 156 / Ce 140): 0.023 (=1303.93 / 55981.27)
- Obtained RSD (Be 9): 0.0097
- Obtained RSD (In 115): 0.0069
- Obtained RSD (U 238): 0.0065

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 3/31/2023 2:26:16 PM

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000
		Intensity Criterion: U 238 > 30000
		Intensity Criterion: Bkgd 220 <= 1
		Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
		Formula Criterion: CeO 156 / Ce 140 <= 0.025
		RSD Criterion: Be 9.0122 < 0.05
		RSD Criterion: In 114.904 < 0.05
		RSD Criterion: U 238.05 < 0.05

	Optimization Results:
	Initial Try
		Obtained Intensity (Be 9): 1576.55 - <Target not achieved>
		Obtained Intensity (In 115): 25061.56 - <Target not achieved>
		Obtained Intensity (U 238): 24120.41 - <Target not achieved>
		Obtained Intensity (Bkgd 220): 0.03
		Obtained Formula (Ce++ 70 / Ce 140): 0.012 (=302.20 / 24822.08)
		Obtained Formula (CeO 156 / Ce 140): 0.009 (=232.40 / 24822.08)
		Obtained RSD (Be 9): 0.0147
		Obtained RSD (In 115): 0.0067
		Obtained RSD (U 238): 0.0052

		[Failed]
[Failed]

Torch Alignment
	Optimization Settings:
		Method: Torch Alignment.mth.
		Intensity Criterion: In 115 Maximum

	Optimization Results:
		Vertical	Horizontal	Intensity
[Passed]	0.88 mm	0.55 mm	48373.76

Nebulizer Gas Flow STD/KED [NEB]
	Optimization Settings:
		Method: Optimize.mth.
			Initial Try - Start/End/Step: 1.02/1.06/0.01.
		Intensity Criterion: In 115 Maximum
		Formula Criterion: CeO 156 / Ce 140 <= 0.025

	Optimization Results:
	Initial Try

		Obtained Intensity (In 115): 64552.52
		Obtained Formula (CeO 156 / Ce 140): 0.0206 (=1121.04 / 54408.41)
[Passed] Optimum value(s): 1.04

Mass Calibration and Resolution
	Optimization Settings:
		Method: Tuning.mth.
		MassCal File: Default.tun
		Iterations: 6
		Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution
		Peak height (%) for Res. Opt.: 10

	Optimization Results:
	Initial Try
		Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.688)
		Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.681)
		Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.703)
		Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.694)
[Passed] Optimum value(s): N/A

QID STD/DRC
	Optimization Settings:
		Method: QID Calibration.mth.
			Initial Try - Start/End/Step: -20/0/0.5.

	Optimization Results:
	Initial Try

  Optimum value(s): Correlation Coefficient = 0.999; Intercept = -13.46

	Analyte	Mass	Points	DAC	MaxIntensity

		Li	7	41	-14	26580.7
		Mg	24	41	-14.5	35496
		In	115	41	-10.5	70750.8
		Ce	140	41	-9	58587.9
		Pb	208	41	-8	36354.2
		U	238	41	-8	63641.4

KED Mode QID
	Optimization Settings:
		Method: QID Calibration.mth.
			Initial Try - Start/End/Step: -20/0/0.5.

	Optimization Results:
	Initial Try

  Optimum value(s): Correlation Coefficient = 0.997; Intercept = -15.53

	Analyte	Mass	Points	DAC	MaxIntensity

		Li	7	41	-15.5	19721.6
		Mg	24	41	-15	23984.1
		In	115	41	-11.5	48116.9
		Ce	140	41	-9.5	47482.8
		Pb	208	41	-7	28251.9
		U	238	41	-7	48169.1

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000

```
            Intensity Criterion: In 115 > 40000
            Intensity Criterion: U 238 > 30000
            Intensity Criterion: Bkgd 220 <= 1
            Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
            Formula Criterion: CeO 156 / Ce 140 <= 0.025
            RSD Criterion: Be 9.0122 < 0.05
            RSD Criterion: In 114.904 < 0.05
            RSD Criterion: U 238.05 < 0.05

       Optimization Results:
       Initial Try
            Obtained Intensity (Be 9): 6963.36
            Obtained Intensity (In 115): 67437.00
            Obtained Intensity (U 238): 63014.14
            Obtained Intensity (Bkgd 220): 0.20
            Obtained Formula (Ce++ 70 / Ce 140): 0.029 (=1636.83 / 55981.27)
            Obtained Formula (CeO 156 / Ce 140): 0.023 (=1303.93 / 55981.27)
            Obtained RSD (Be 9): 0.0097
            Obtained RSD (In 115): 0.0069
            Obtained RSD (U 238): 0.0065

[Passed]  Optimum value(s): N/A

End Time: 3/31/2023 2:36:22 PM
```

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 15:18:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L				24608	2	Standard
Cl	**37**		ug/L				3241558	3	Standard
Sc	**45**		ug/L				482752	2	Standard
Al	**27**		ug/L				2788	0	Standard
V	**51**		ug/L				6501	3	Standard
V-1	**51**		ug/L				136	1	Standard
Cr	**52**		ug/L				19054	3	Standard
Cr	**53**		ug/L				117	0	Standard
Mn	**55**		ug/L				499	2	Standard
Ge	**72**		ug/L				18623	1	KED
Ni	**60**		ug/L				7	43	KED
Ni	**62**		ug/L				3	86	KED
Cu	**63**		ug/L				46	10	KED
Cu	**65**		ug/L				15	24	KED
Zn	**66**		ug/L				17	12	KED
Zn	**67**		ug/L				3	132	KED
As	**75**		ug/L				3	48	KED
Se	**78**		ug/L				9	44	KED
Y	**89**		ug/L				296113	1	Standard
Kr	**83**		ug/L				49	27	Standard
In-1	**115**		ug/L				5148	1	KED
Cd	**111**		ug/L				1	124	KED
Cd	**114**		ug/L				1	90	KED
In	**115**		ug/L				413576	0	Standard
Ag	**107**		ug/L				42	22	Standard
Sb	**121**		ug/L				240	6	Standard
Sb	**123**		ug/L				162	10	Standard
Ba	**135**		ug/L				15	33	Standard
Ba	**137**		ug/L				13	15	Standard
Tb	**159**		ug/L				595528	1	Standard
Pb	**208**		ug/L				128	20	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 15:23:02
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24608	27693	3	Standard
	Cl	**37**		ug/L			3241558	3083637	1	Standard
⌈>	**Sc**	**45**		ug/L			482752	477633	1	Standard
|	**Al**	**27**	**20.000**	ug/L	0.184	0	2788	501548	1	Standard
|	**V**	**51**	**0.200**	ug/L	0.013	6	6501	10865	1	Standard
|	**V-1**	**51**	**0.200**	ug/L	0.006	3	136	4355	1	Standard
|	**Cr**	**52**	**0.500**	ug/L	0.030	5	19054	28638	0	Standard
|	**Cr**	**53**	**0.500**	ug/L	0.011	2	117	1154	1	Standard
⌊	**Mn**	**55**	**0.500**	ug/L	0.018	3	499	13668	2	Standard
⌈>	**Ge**	**72**		ug/L			18623	17910	0	KED
|	**Ni**	**60**	**0.500**	ug/L	0.044	8	7	453	8	KED
|	**Ni**	**62**	**0.500**	ug/L	0.046	9	3	76	9	KED
|	**Cu**	**63**	**0.500**	ug/L	0.007	1	46	1441	1	KED
|	**Cu**	**65**	**0.500**	ug/L	0.019	3	15	740	3	KED
|	**Zn**	**66**	**6.000**	ug/L	0.126	2	17	2052	2	KED
|	**Zn**	**67**	**6.000**	ug/L	0.123	2	3	302	1	KED
|	**As**	**75**	**0.200**	ug/L	0.032	15	3	34	14	KED
⌊	**Se**	**78**	**0.500**	ug/L	0.218	43	9	16	18	KED
	Y	**89**		ug/L			296113	294688	1	Standard
	Kr	**83**		ug/L			49	59	19	Standard
⌈>	**In-1**	**115**		ug/L			5148	5084	1	KED
|	**Cd**	**111**	**0.100**	ug/L	0.033	33	1	17	28	KED
⌊	**Cd**	**114**	**0.100**	ug/L	0.013	12	1	47	11	KED
⌈>	**In**	**115**		ug/L			413576	408188	1	Standard
|	**Ag**	**107**	**0.200**	ug/L	0.000	0	42	3750	1	Standard
|	**Sb**	**121**	**0.200**	ug/L	0.003	1	240	2617	1	Standard
|	**Sb**	**123**	**0.200**	ug/L	0.006	3	162	1899	3	Standard
|	**Ba**	**135**	**0.500**	ug/L	0.013	2	15	1813	1	Standard
⌊	**Ba**	**137**	**0.500**	ug/L	0.013	2	13	2948	1	Standard
⌈>	**Tb**	**159**		ug/L			595528	603228	1	Standard
⌊	**Pb**	**208**	**0.100**	ug/L	0.004	3	128	5557	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 15:27:56
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24608	31596	5	Standard
	Cl	**37**		ug/L			3241558	3057605	1	Standard
⌈>	**Sc**	**45**		ug/L			482752	472393	2	Standard
|	**Al**	**27**	**999.993**	ug/L	24.787	2	2788	24217343	1	Standard
|	**V**	**51**	**10.000**	ug/L	0.255	2	6501	223372	0	Standard
|	**V-1**	**51**	**10.000**	ug/L	0.259	2	136	218296	0	Standard
|	**Cr**	**52**	**10.000**	ug/L	0.330	3	19054	210019	0	Standard
|	**Cr**	**53**	**10.002**	ug/L	0.333	3	117	22108	1	Standard
⌊	**Mn**	**55**	**10.001**	ug/L	0.284	2	499	270320	0	Standard
⌈>	**Ge**	**72**		ug/L			18623	17978	3	KED
|	**Ni**	**60**	**10.000**	ug/L	0.374	3	7	8981	1	KED
|	**Ni**	**62**	**10.000**	ug/L	0.832	8	3	1459	5	KED
|	**Cu**	**63**	**10.000**	ug/L	0.609	6	46	28046	3	KED
|	**Cu**	**65**	**9.998**	ug/L	0.267	2	15	13409	2	KED
|	**Zn**	**66**	**9.927**	ug/L	0.503	5	17	3325	2	KED
|	**Zn**	**67**	**10.134**	ug/L	0.554	5	3	528	3	KED
|	**As**	**75**	**10.000**	ug/L	0.076	0	3	1551	3	KED
⌊	**Se**	**78**	**10.003**	ug/L	0.992	9	9	175	6	KED
	Y	**89**		ug/L			296113	304632	0	Standard
	Kr	**83**		ug/L			49	46	20	Standard
⌈>	**In-1**	**115**		ug/L			5148	5216	4	KED
|	**Cd**	**111**	**10.000**	ug/L	0.702	7	1	1847	4	KED
⌊	**Cd**	**114**	**10.000**	ug/L	0.396	3	1	4730	1	KED
⌈>	**In**	**115**		ug/L			413576	421605	1	Standard
|	**Ag**	**107**	**10.000**	ug/L	0.138	1	42	189327	1	Standard
|	**Sb**	**121**	**10.000**	ug/L	0.209	2	240	127134	1	Standard
|	**Sb**	**123**	**10.000**	ug/L	0.056	0	162	97847	1	Standard
|	**Ba**	**135**	**9.999**	ug/L	0.141	1	15	35333	1	Standard
⌊	**Ba**	**137**	**10.000**	ug/L	0.069	0	13	61389	2	Standard
⌈>	**Tb**	**159**		ug/L			595528	630136	1	Standard
⌊	**Pb**	**208**	**10.000**	ug/L	0.125	1	128	540263	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 15:33:04
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24608	30965	2	Standard
	Cl	**37**		ug/L			3241558	3096824	1	Standard
⌈>	**Sc**	**45**		ug/L			482752	457876	2	Standard
|	**Al**	**27**	**2002.266**	ug/L	60.358	3	2788	47206424	1	Standard
|	**V**	**51**	**20.049**	ug/L	0.442	2	6501	432053	0	Standard
|	**V-1**	**51**	**20.060**	ug/L	0.504	2	136	429507	0	Standard
|	**Cr**	**52**	**20.079**	ug/L	0.082	0	19054	396710	1	Standard
|	**Cr**	**53**	**20.116**	ug/L	0.236	1	117	44014	0	Standard
⌊	**Mn**	**55**	**20.085**	ug/L	0.740	3	499	534814	1	Standard
⌈>	**Ge**	**72**		ug/L			18623	17559	0	KED
|	**Ni**	**60**	**19.942**	ug/L	0.257	1	7	17299	1	KED
|	**Ni**	**62**	**20.086**	ug/L	0.308	1	3	2913	1	KED
|	**Cu**	**63**	**19.755**	ug/L	0.768	3	46	51599	3	KED
|	**Cu**	**65**	**20.015**	ug/L	0.138	0	15	26293	0	KED
|	**Zn**	**66**	**19.600**	ug/L	1.067	5	17	6046	4	KED
|	**Zn**	**67**	**20.014**	ug/L	0.618	3	3	1019	2	KED
|	**As**	**75**	**20.018**	ug/L	0.418	2	3	3041	1	KED
⌊	**Se**	**78**	**19.944**	ug/L	0.746	3	9	330	2	KED
	Y	**89**		ug/L			296113	304127	1	Standard
	Kr	**83**		ug/L			49	57	11	Standard
⌈>	**In-1**	**115**		ug/L			5148	5124	1	KED
|	**Cd**	**111**	**20.074**	ug/L	0.484	2	1	3701	2	KED
⌊	**Cd**	**114**	**19.904**	ug/L	0.518	2	1	9079	0	KED
⌈>	**In**	**115**		ug/L			413576	413225	1	Standard
|	**Ag**	**107**	**20.042**	ug/L	0.408	2	42	374976	1	Standard
|	**Sb**	**121**	**20.037**	ug/L	0.093	0	240	251323	0	Standard
|	**Sb**	**123**	**19.958**	ug/L	0.276	1	162	189644	0	Standard
|	**Ba**	**135**	**20.090**	ug/L	0.538	2	15	70829	1	Standard
⌊	**Ba**	**137**	**20.032**	ug/L	0.289	1	13	121257	0	Standard
⌈>	**Tb**	**159**		ug/L			595528	638760	2	Standard
⌊	**Pb**	**208**	**19.904**	ug/L	0.604	3	128	1069035	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 15:38:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24608	23133	5	Standard
	Cl	**37**		ug/L			3241558	3093870	4	Standard
⌈>	**Sc**	**45**		ug/L			482752	458312	1	Standard
|	**Al**	**27**	**4986.930**	ug/L	144.093	2	2788	116181831	1	Standard
|	**V**	**51**	**49.839**	ug/L	0.586	1	6501	1049293	0	Standard
|	**V-1**	**51**	**49.894**	ug/L	0.741	1	136	1058098	0	Standard
|	**Cr**	**52**	**49.585**	ug/L	0.194	0	19054	916837	1	Standard
|	**Cr**	**53**	**49.771**	ug/L	0.560	1	117	106418	1	Standard
⌊	**Mn**	**55**	**49.678**	ug/L	0.523	1	499	1282565	0	Standard
⌈>	**Ge**	**72**		ug/L			18623	17710	3	KED
|	**Ni**	**60**	**49.438**	ug/L	0.611	1	7	40941	2	KED
|	**Ni**	**62**	**49.474**	ug/L	2.741	5	3	6865	2	KED
|	**Cu**	**63**	**49.631**	ug/L	1.652	3	46	126025	3	KED
|	**Cu**	**65**	**49.507**	ug/L	1.134	2	15	62477	2	KED
|	**Zn**	**66**	**49.576**	ug/L	1.508	3	17	14816	3	KED
|	**Zn**	**67**	**49.618**	ug/L	2.482	5	3	2454	2	KED
|	**As**	**75**	**49.529**	ug/L	1.195	2	3	7241	1	KED
⌊	**Se**	**78**	**49.319**	ug/L	1.196	2	9	758	3	KED
	Y	**89**		ug/L			296113	296256	1	Standard
	Kr	**83**		ug/L			49	70	14	Standard
⌈>	**In-1**	**115**		ug/L			5148	5000	2	KED
|	**Cd**	**111**	**49.813**	ug/L	0.540	1	1	8798	1	KED
⌊	**Cd**	**114**	**49.746**	ug/L	1.106	2	1	21594	0	KED
⌈>	**In**	**115**		ug/L			413576	415692	1	Standard
|	**Ag**	**107**	**49.666**	ug/L	0.590	1	42	904521	0	Standard
|	**Sb**	**121**	**49.656**	ug/L	0.818	1	240	605318	0	Standard
|	**Sb**	**123**	**49.824**	ug/L	0.501	1	162	467826	1	Standard
|	**Ba**	**135**	**50.075**	ug/L	0.388	0	15	178943	0	Standard
⌊	**Ba**	**137**	**49.966**	ug/L	0.408	0	13	303225	0	Standard
⌈>	**Tb**	**159**		ug/L			595528	656478	2	Standard
⌊	**Pb**	**208**	**49.504**	ug/L	0.704	1	128	2604291	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 15:45:19
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24608	26677	4	Standard
	Cl	**37**		ug/L			3241558	3069288	3	Standard
⌈>	**Sc**	**45**		ug/L			482752	444303	0	Standard
|	**Al**	**27**	**9951.850**	ug/L	45.715	0	2788	221258395	0	Standard
|	**V**	**51**	**101.258**	ug/L	1.962	1	6501	2150583	1	Standard
|	**V-1**	**51**	**101.229**	ug/L	1.668	1	136	2170055	1	Standard
|	**Cr**	**52**	**100.352**	ug/L	1.006	1	19054	1801787	1	Standard
|	**Cr**	**53**	**100.293**	ug/L	0.806	0	117	209828	0	Standard
⌊	**Mn**	**55**	**100.849**	ug/L	1.058	1	499	2597261	0	Standard
⌈>	**Ge**	**72**		ug/L			18623	16875	0	KED
|	**Ni**	**60**	**100.583**	ug/L	2.495	2	7	80952	2	KED
|	**Ni**	**62**	**99.776**	ug/L	0.944	0	3	13106	1	KED
|	**Cu**	**63**	**99.762**	ug/L	1.196	1	46	239515	1	KED
|	**Cu**	**65**	**99.708**	ug/L	2.770	2	15	118764	2	KED
|	**Zn**	**66**	**99.776**	ug/L	1.996	2	17	28198	2	KED
|	**Zn**	**67**	**100.041**	ug/L	2.090	2	3	4723	1	KED
|	**As**	**75**	**100.461**	ug/L	0.616	0	3	14217	0	KED
⌊	**Se**	**78**	**100.323**	ug/L	1.659	1	9	1476	1	KED
	Y	**89**		ug/L			296113	292417	1	Standard
	Kr	**83**		ug/L			49	80	2	Standard
⌈>	**In-1**	**115**		ug/L			5148	4983	1	KED
|	**Cd**	**111**	**99.330**	ug/L	0.748	0	1	17101	0	KED
⌊	**Cd**	**114**	**99.678**	ug/L	0.957	0	1	42674	0	KED
⌈>	**In**	**115**		ug/L			413576	409574	1	Standard
|	**Ag**	**107**	**99.206**	ug/L	3.270	3	42	1733989	2	Standard
|	**Sb**	**121**	**100.670**	ug/L	2.204	2	240	1236534	1	Standard
|	**Sb**	**123**	**100.489**	ug/L	0.873	0	162	944900	0	Standard
|	**Ba**	**135**	**101.021**	ug/L	1.543	1	15	368180	0	Standard
⌊	**Ba**	**137**	**100.721**	ug/L	0.139	0	13	617097	1	Standard
⌈>	**Tb**	**159**		ug/L			595528	675780	2	Standard
⌊	**Pb**	**208**	**99.224**	ug/L	2.812	2	128	5236707	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 15:52:57
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24608	26026	0	Standard
	Cl	**37**		ug/L			3241558	3040145	2	Standard
>	**Sc**	**45**		ug/L			482752	448507	0	Standard
	Al	**27**	**0.116**	ug/L	0.008	6	2788	5188	4	Standard
	V	**51**	**0.036**	ug/L	0.007	20	6501	6804	1	Standard
	V-1	**51**	**-0.000**	ug/L	0.000	1758	136	126	6	Standard
	Cr	**52**	**0.123**	ug/L	0.019	15	19054	19918	1	Standard
	Cr	**53**	**0.003**	ug/L	0.007	264	117	115	13	Standard
	Mn	**55**	**0.003**	ug/L	0.001	33	499	530	3	Standard
>	**Ge**	**72**		ug/L			18623	17247	4	KED
	Ni	**60**	**-0.006**	ug/L	0.003	61	7	2	114	KED
	Ni	**62**	**0.007**	ug/L	0.030	417	3	4	89	KED
	Cu	**63**	**0.002**	ug/L	0.002	134	46	47	8	KED
	Cu	**65**	**0.003**	ug/L	0.005	190	15	17	32	KED
	Zn	**66**	**0.034**	ug/L	0.050	146	17	26	51	KED
	Zn	**67**	**0.083**	ug/L	0.064	76	3	7	43	KED
	As	**75**	**0.005**	ug/L	0.006	125	3	3	27	KED
	Se	**78**	**0.020**	ug/L	0.058	293	9	9	5	KED
	Y	**89**		ug/L			296113	286798	0	Standard
	Kr	**83**		ug/L			49	44	9	Standard
>	**In-1**	**115**		ug/L			5148	4852	1	KED
	Cd	**111**	**0.006**	ug/L	0.011	188	1	2	78	KED
	Cd	**114**	**0.002**	ug/L	0.000	3	1	1	1	KED
>	**In**	**115**		ug/L			413576	424608	1	Standard
	Ag	**107**	**0.003**	ug/L	0.000	10	42	93	7	Standard
	Sb	**121**	**0.187**	ug/L	0.012	6	240	2625	6	Standard
	Sb	**123**	**0.199**	ug/L	0.005	2	162	2104	3	Standard
	Ba	**135**	**0.005**	ug/L	0.001	28	15	34	15	Standard
	Ba	**137**	**0.008**	ug/L	0.002	29	13	62	20	Standard
>	**Tb**	**159**		ug/L			595528	632578	0	Standard
	Pb	**208**	**0.002**	ug/L	0.000	14	128	227	6	Standard

Sample Information

Sample Date/Time: Friday, March 31, 2023 15:45:19
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED
Mass Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

Calibration

Analyte	Mass	**r Corr Coef**	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Cl	37							
Sc	45							
Al	27	**1.0000**	0.050	20.00	1000	2000	5000	10000
V	51	**0.9997**	0.048	0.20	10	20	50	100
V-1	51	**0.9997**	0.048	0.20	10	20	50	100
Cr	52	**0.9999**	0.040	0.50	10	20	50	100
Cr	53	**1.0000**	0.005	0.50	10	20	50	100
Mn	55	**0.9999**	0.058	0.50	10	20	50	100
Ge	72							
Ni	60	**0.9999**	0.048	0.50	10	20	50	100
Ni	62	**0.9999**	0.008	0.50	10	20	50	100
Cu	63	**0.9999**	0.142	0.50	10	20	50	100
Cu	65	**0.9999**	0.071	0.50	10	20	50	100
Zn	66	**0.9999**	0.017	6.00	10	20	50	100
Zn	67	**1.0000**	0.003	6.00	10	20	50	100
As	75	**0.9999**	0.008	0.20	10	20	50	100
Se	78	**0.9999**	0.001	0.50	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Cd	111	**0.9999**	0.035	0.10	10	20	50	100
Cd	114	**1.0000**	0.086	0.10	10	20	50	100
In	115							
Ag	107	**0.9999**	0.043	0.20	10	20	50	100
Sb	121	**0.9999**	0.030	0.20	10	20	50	100
Sb	123	**1.0000**	0.023	0.20	10	20	50	100
Ba	135	**0.9998**	0.009	0.50	10	20	50	100
Ba	137	**0.9999**	0.015	0.50	10	20	50	100
Tb	159							
Pb	208	**0.9998**	0.078	0.10	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 16:00:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24608	26565	1	Standard
	Cl	**37**		ug/L			3241558	3031507	0	Standard
⌈>	**Sc**	**45**		ug/L			482752	469287	1	Standard
|	**Al**	**27**	**5051.848**	ug/L	112.583	2	2788	118648533	3	Standard
|	**V**	**51**	**48.681**	ug/L	0.640	1	6501	1095194	0	Standard
|	**V-1**	**51**	**48.315**	ug/L	1.050	2	136	1093798	0	Standard
|	**Cr**	**52**	**50.241**	ug/L	0.391	0	19054	961895	1	Standard
|	**Cr**	**53**	**48.979**	ug/L	1.683	3	117	108247	1	Standard
⌊	**Mn**	**55**	**49.680**	ug/L	1.308	2	499	1351262	1	Standard
⌈>	**Ge**	**72**		ug/L			18623	17692	3	KED
|	**Ni**	**60**	**50.903**	ug/L	2.439	4	7	42901	1	KED
|	**Ni**	**62**	**50.371**	ug/L	0.895	1	3	6941	5	KED
|	**Cu**	**63**	**50.427**	ug/L	1.635	3	46	126850	1	KED
|	**Cu**	**65**	**49.949**	ug/L	1.888	3	15	62338	2	KED
|	**Zn**	**66**	**49.620**	ug/L	2.680	5	17	14690	1	KED
|	**Zn**	**67**	**48.596**	ug/L	2.019	4	3	2407	6	KED
|	**As**	**75**	**47.050**	ug/L	0.974	2	3	6979	2	KED
⌊	**Se**	**78**	**77.360**	ug/L	4.501	5	9	1194	2	KED
	Y	**89**		ug/L			296113	303886	2	Standard
	Kr	**83**		ug/L			49	55	3	Standard
⌈>	**In-1**	**115**		ug/L			5148	5176	2	KED
|	**Cd**	**111**	**50.709**	ug/L	1.390	2	1	9066	0	KED
⌊	**Cd**	**114**	**49.734**	ug/L	1.138	2	1	22110	0	KED
⌈>	**In**	**115**		ug/L			413576	438377	1	Standard
|	**Ag**	**107**	**50.631**	ug/L	1.375	2	42	947196	1	Standard
|	**Sb**	**121**	**49.335**	ug/L	0.793	1	240	648702	0	Standard
|	**Sb**	**123**	**48.882**	ug/L	0.303	0	162	492074	1	Standard
|	**Ba**	**135**	**48.633**	ug/L	0.786	1	15	189714	0	Standard
⌊	**Ba**	**137**	**50.269**	ug/L	0.956	1	13	329593	0	Standard
⌈>	**Tb**	**159**		ug/L			595528	694725	0	Standard
⌊	**Pb**	**208**	**50.829**	ug/L	0.171	0	128	2758915	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 16:08:13
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24608	22627	1	Standard
	Cl	**37**		ug/L			3241558	2992458	2	Standard
⎡>	**Sc**	**45**		ug/L			482752	442469	2	Standard
⎢	**Al**	**27**	**-0.033**	ug/L	0.009	26	2788	1822	7	Standard
⎢	**V**	**51**	**0.030**	ug/L	0.016	54	6501	6587	2	Standard
⎢	**V-1**	**51**	**-0.000**	ug/L	0.000	80	136	117	2	Standard
⎢	**Cr**	**52**	**0.097**	ug/L	0.056	57	19054	19174	2	Standard
⎢	**Cr**	**53**	**-0.005**	ug/L	0.004	82	117	97	7	Standard
⎣	**Mn**	**55**	**0.006**	ug/L	0.002	31	499	600	5	Standard
⎡>	**Ge**	**72**		ug/L			18623	17662	3	KED
⎢	**Ni**	**60**	**-0.006**	ug/L	0.001	26	7	2	43	KED
⎢	**Ni**	**62**	**-0.008**	ug/L	0.007	94	3	2	43	KED
⎢	**Cu**	**63**	**-0.001**	ug/L	0.004	264	46	40	22	KED
⎢	**Cu**	**65**	**-0.000**	ug/L	0.003	912	15	14	19	KED
⎢	**Zn**	**66**	**-0.006**	ug/L	0.005	93	17	15	12	KED
⎢	**Zn**	**67**	**0.004**	ug/L	0.003	72	3	3	0	KED
⎢	**As**	**75**	**0.005**	ug/L	0.004	74	3	3	12	KED
⎣	**Se**	**78**	**0.146**	ug/L	0.009	6	9	11	2	KED
	Y	**89**		ug/L			296113	284607	2	Standard
	Kr	**83**		ug/L			49	58	23	Standard
⎡>	**In-1**	**115**		ug/L			5148	5000	3	KED
⎢	**Cd**	**111**	**0.006**	ug/L	0.014	234	1	2	94	KED
⎣	**Cd**	**114**	**0.002**	ug/L	0.000	10	1	1	1	KED
⎡>	**In**	**115**		ug/L			413576	421545	0	Standard
⎢	**Ag**	**107**	**0.002**	ug/L	0.000	25	42	78	11	Standard
⎢	**Sb**	**121**	**0.026**	ug/L	0.003	11	240	580	7	Standard
⎢	**Sb**	**123**	**0.026**	ug/L	0.002	6	162	419	4	Standard
⎢	**Ba**	**135**	**-0.001**	ug/L	0.001	83	15	10	43	Standard
⎣	**Ba**	**137**	**0.000**	ug/L	0.001	261	13	17	44	Standard
⎡>	**Tb**	**159**		ug/L			595528	641908	2	Standard
⎣	**Pb**	**208**	**0.001**	ug/L	0.000	2	128	184	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 16:15:41
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				24214	4	Standard
	Cl	**37**		ug/L				3004573	1	Standard
>	**Sc**	**45**		ug/L				451854	0	Standard
	Al	**27**		ug/L				1968	4	Standard
	V	**51**		ug/L				6603	0	Standard
	V-1	**51**		ug/L				121	5	Standard
	Cr	**52**		ug/L				19388	0	Standard
	Cr	**53**		ug/L				118	2	Standard
	Mn	**55**		ug/L				595	4	Standard
>	**Ge**	**72**		ug/L				17488	1	KED
	Ni	**60**		ug/L				3	50	KED
	Ni	**62**		ug/L				1	86	KED
	Cu	**63**		ug/L				27	56	KED
	Cu	**65**		ug/L				15	25	KED
	Zn	**66**		ug/L				24	19	KED
	Zn	**67**		ug/L				4	65	KED
	As	**75**		ug/L				3	45	KED
	Se	**78**		ug/L				8	36	KED
	Y	**89**		ug/L				293645	0	Standard
	Kr	**83**		ug/L				55	7	Standard
>	**In-1**	**115**		ug/L				4956	2	KED
	Cd	**111**		ug/L				0	173	KED
	Cd	**114**		ug/L				1	90	KED
>	**In**	**115**		ug/L				434608	1	Standard
	Ag	**107**		ug/L				50	28	Standard
	Sb	**121**		ug/L				313	16	Standard
	Sb	**123**		ug/L				239	4	Standard
	Ba	**135**		ug/L				10	10	Standard
	Ba	**137**		ug/L				18	41	Standard
>	**Tb**	**159**		ug/L				641967	1	Standard
	Pb	**208**		ug/L				168	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 16:20:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	23902	0	Standard
	Cl	**37**		ug/L			3004573	3118361	3	Standard
⌈>	**Sc**	**45**		ug/L			451854	437551	4	Standard
|	**Al**	**27**	**5052.903**	ug/L	179.349	3	1968	110520374	0	Standard
|	**V**	**51**	**48.611**	ug/L	2.618	5	6603	1018839	1	Standard
|	**V-1**	**51**	**48.777**	ug/L	2.225	4	121	1028570	1	Standard
|	**Cr**	**52**	**49.920**	ug/L	2.892	5	19388	891355	1	Standard
|	**Cr**	**53**	**50.411**	ug/L	1.561	3	118	103835	1	Standard
⌊	**Mn**	**55**	**50.490**	ug/L	2.105	4	595	1279469	1	Standard
⌈>	**Ge**	**72**		ug/L			17488	17329	2	KED
|	**Ni**	**60**	**50.312**	ug/L	2.432	4	3	41569	4	KED
|	**Ni**	**62**	**49.640**	ug/L	0.729	1	1	6693	0	KED
|	**Cu**	**63**	**49.632**	ug/L	0.770	1	27	122338	1	KED
|	**Cu**	**65**	**50.469**	ug/L	0.783	1	15	61742	2	KED
|	**Zn**	**66**	**51.501**	ug/L	1.777	3	24	14954	1	KED
|	**Zn**	**67**	**49.666**	ug/L	1.279	2	4	2409	0	KED
|	**As**	**75**	**50.554**	ug/L	1.145	2	3	7346	1	KED
⌊	**Se**	**78**	**50.909**	ug/L	2.997	5	8	773	6	KED
	Y	**89**		ug/L			293645	284178	6	Standard
	Kr	**83**		ug/L			55	48	19	Standard
⌈>	**In-1**	**115**		ug/L			4956	4956	1	KED
|	**Cd**	**111**	**51.654**	ug/L	0.580	1	0	8844	0	KED
⌊	**Cd**	**114**	**52.278**	ug/L	0.375	0	1	22262	1	KED
⌈>	**In**	**115**		ug/L			434608	410745	6	Standard
|	**Ag**	**107**	**51.041**	ug/L	2.372	4	50	892994	2	Standard
|	**Sb**	**121**	**51.237**	ug/L	2.279	4	313	630108	2	Standard
|	**Sb**	**123**	**50.757**	ug/L	3.707	7	239	477198	0	Standard
|	**Ba**	**135**	**50.529**	ug/L	2.626	5	10	184273	2	Standard
⌊	**Ba**	**137**	**50.847**	ug/L	2.370	4	18	311766	2	Standard
⌈>	**Tb**	**159**		ug/L			641967	658872	8	Standard
⌊	**Pb**	**208**	**52.181**	ug/L	4.094	7	168	2674541	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 16:29:00
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	23207	5	Standard
	Cl	**37**		ug/L			3004573	2959342	4	Standard
⎡>	**Sc**	**45**		ug/L			451854	449084	2	Standard
⎢	**Al**	**27**	**0.005**	ug/L	0.005	92	1968	2075	2	Standard
⎢	**V**	**51**	**0.009**	ug/L	0.008	89	6603	6745	0	Standard
⎢	**V-1**	**51**	**-0.000**	ug/L	0.000	82	121	113	7	Standard
⎢	**Cr**	**52**	**0.029**	ug/L	0.024	82	19388	19790	0	Standard
⎢	**Cr**	**53**	**-0.001**	ug/L	0.003	329	118	115	7	Standard
⎣	**Mn**	**55**	**-0.002**	ug/L	0.002	74	595	535	5	Standard
⎡>	**Ge**	**72**		ug/L			17488	17619	1	KED
⎢	**Ni**	**60**	**0.001**	ug/L	0.003	174	3	5	43	KED
⎢	**Ni**	**62**	**0.005**	ug/L	0.014	300	1	1	100	KED
⎢	**Cu**	**63**	**0.006**	ug/L	0.008	124	27	43	45	KED
⎢	**Cu**	**65**	**0.004**	ug/L	0.008	198	15	20	48	KED
⎢	**Zn**	**66**	**-0.005**	ug/L	0.023	478	24	22	28	KED
⎢	**Zn**	**67**	**-0.014**	ug/L	0.038	284	4	3	50	KED
⎢	**As**	**75**	**-0.000**	ug/L	0.006	2322	3	3	25	KED
⎣	**Se**	**78**	**0.072**	ug/L	0.139	193	8	9	19	KED
	Y	**89**		ug/L			293645	287341	1	Standard
	Kr	**83**		ug/L			55	44	32	Standard
⎡>	**In-1**	**115**		ug/L			4956	5034	3	KED
⎢	**Cd**	**111**	**0.005**	ug/L	0.006	116	0	1	86	KED
⎣	**Cd**	**114**	**0.000**	ug/L	0.003	3906	1	1	90	KED
⎡>	**In**	**115**		ug/L			434608	429049	1	Standard
⎢	**Ag**	**107**	**0.001**	ug/L	0.001	72	50	66	17	Standard
⎢	**Sb**	**121**	**0.108**	ug/L	0.004	3	313	1692	1	Standard
⎢	**Sb**	**123**	**0.104**	ug/L	0.010	10	239	1254	6	Standard
⎢	**Ba**	**135**	**0.001**	ug/L	0.000	16	10	15	6	Standard
⎣	**Ba**	**137**	**-0.000**	ug/L	0.001	537	18	17	29	Standard
⎡>	**Tb**	**159**		ug/L			641967	649883	2	Standard
⎣	**Pb**	**208**	**0.001**	ug/L	0.000	40	168	212	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CRL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 16:37:05
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	25748	2	Standard
	Cl	**37**		ug/L			3004573	2977089	0	Standard
⌈>	**Sc**	**45**		ug/L			451854	450917	0	Standard
|	**Al**	**27**	**21.414**	ug/L	0.213	0	1968	485119	0	Standard
|	**V**	**51**	**0.193**	ug/L	0.014	7	6603	10741	2	Standard
|	**V-1**	**51**	**0.193**	ug/L	0.002	0	121	4316	0	Standard
|	**Cr**	**52**	**0.521**	ug/L	0.018	3	19388	28750	1	Standard
|	**Cr**	**53**	**0.507**	ug/L	0.025	4	118	1194	4	Standard
⌊	**Mn**	**55**	**0.503**	ug/L	0.008	1	595	13734	1	Standard
⌈>	**Ge**	**72**		ug/L			17488	17854	0	KED
|	**Ni**	**60**	**0.515**	ug/L	0.026	4	3	442	5	KED
|	**Ni**	**62**	**0.557**	ug/L	0.084	15	1	78	14	KED
|	**Cu**	**63**	**0.518**	ug/L	0.065	12	27	1343	12	KED
|	**Cu**	**65**	**0.573**	ug/L	0.025	4	15	737	4	KED
|	**Zn**	**66**	**6.177**	ug/L	0.097	1	24	1870	1	KED
|	**Zn**	**67**	**5.734**	ug/L	0.531	9	4	290	9	KED
|	**As**	**75**	**0.196**	ug/L	0.034	17	3	33	15	KED
⌊	**Se**	**78**	**0.728**	ug/L	0.161	22	8	20	12	KED
	Y	**89**		ug/L			293645	286850	1	Standard
	Kr	**83**		ug/L			55	52	33	Standard
⌈>	**In-1**	**115**		ug/L			4956	4931	1	KED
|	**Cd**	**111**	**0.097**	ug/L	0.012	12	0	16	13	KED
⌊	**Cd**	**114**	**0.087**	ug/L	0.014	16	1	37	18	KED
⌈>	**In**	**115**		ug/L			434608	430067	0	Standard
|	**Ag**	**107**	**0.195**	ug/L	0.007	3	50	3636	3	Standard
|	**Sb**	**121**	**0.218**	ug/L	0.002	0	313	3117	0	Standard
|	**Sb**	**123**	**0.214**	ug/L	0.010	4	239	2346	3	Standard
|	**Ba**	**135**	**0.473**	ug/L	0.012	2	10	1819	2	Standard
⌊	**Ba**	**137**	**0.473**	ug/L	0.012	2	18	3063	2	Standard
⌈>	**Tb**	**159**		ug/L			641967	654000	2	Standard
⌊	**Pb**	**208**	**0.118**	ug/L	0.002	1	168	6203	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 16:41:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	94002	2	Standard
	Cl	**37**		ug/L			3004573	8922435	3	Standard
⌈>	**Sc**	**45**		ug/L			451854	464412	1	Standard
|	**Al**	**27**	**19486.152**	ug/L	931.575	4	1968	452714715	4	Standard
|	**V**	**51**	**0.074**	ug/L	0.019	25	6603	8428	5	Standard
|	**V-1**	**51**	**0.467**	ug/L	0.010	2	121	10597	2	Standard
|	**Cr**	**52**	**0.861**	ug/L	0.072	8	19388	35914	2	Standard
|	**Cr**	**53**	**2.120**	ug/L	0.113	5	118	4751	3	Standard
⌊	**Mn**	**55**	**0.075**	ug/L	0.002	3	595	2625	0	Standard
⌈>	**Ge**	**72**		ug/L			17488	17031	2	KED
|	**Ni**	**60**	**0.096**	ug/L	0.018	18	3	81	16	KED
|	**Ni**	**62**	**0.119**	ug/L	0.059	49	1	17	48	KED
|	**Cu**	**63**	**0.065**	ug/L	0.004	6	27	183	6	KED
|	**Cu**	**65**	**0.044**	ug/L	0.003	6	15	67	3	KED
|	**Zn**	**66**	**0.219**	ug/L	0.059	27	24	85	18	KED
|	**Zn**	**67**	**0.349**	ug/L	0.252	72	4	20	56	KED
|	**As**	**75**	**0.034**	ug/L	0.013	37	3	8	20	KED
⌊	**Se**	**78**	**0.122**	ug/L	0.118	96	8	10	18	KED
	Y	**89**		ug/L			293645	299175	1	Standard
	Kr	**83**		ug/L			55	98	2	Standard
⌈>	**In-1**	**115**		ug/L			4956	4930	0	KED
|	**Cd**	**111**	**0.071**	ug/L	0.029	40	0	12	39	KED
⌊	**Cd**	**114**	**0.045**	ug/L	0.007	15	1	20	15	KED
⌈>	**In**	**115**		ug/L			434608	417241	0	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.001	17	50	149	11	Standard
|	**Sb**	**121**	**0.048**	ug/L	0.003	5	313	899	3	Standard
|	**Sb**	**123**	**0.050**	ug/L	0.005	11	239	706	7	Standard
|	**Ba**	**135**	**0.132**	ug/L	0.014	10	10	500	10	Standard
⌊	**Ba**	**137**	**0.122**	ug/L	0.006	4	18	778	4	Standard
⌈>	**Tb**	**159**		ug/L			641967	725875	0	Standard
⌊	**Pb**	**208**	**0.029**	ug/L	0.002	6	168	1807	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFB1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 16:46:52
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	95120	4	Standard
	Cl	**37**		ug/L			3004573	9100938	3	Standard
⌈>	**Sc**	**45**		ug/L			451854	461184	3	Standard
|	**Al**	**27**	**19792.543**	ug/L	1077.126	5	1968	456261487	2	Standard
|	**V**	**51**	**0.062**	ug/L	0.038	61	6603	8088	9	Standard
|	**V-1**	**51**	**0.518**	ug/L	0.012	2	121	11655	1	Standard
|	**Cr**	**52**	**20.826**	ug/L	0.382	1	19388	403996	1	Standard
|	**Cr**	**53**	**21.508**	ug/L	0.301	1	118	46792	1	Standard
⌊	**Mn**	**55**	**19.370**	ug/L	0.469	2	595	518133	1	Standard
⌈>	**Ge**	**72**		ug/L			17488	16875	2	KED
|	**Ni**	**60**	**19.939**	ug/L	0.580	2	3	16042	1	KED
|	**Ni**	**62**	**20.361**	ug/L	0.974	4	1	2677	7	KED
|	**Cu**	**63**	**19.201**	ug/L	0.517	2	27	46100	1	KED
|	**Cu**	**65**	**19.577**	ug/L	0.469	2	15	23325	2	KED
|	**Zn**	**66**	**18.679**	ug/L	0.128	0	24	5298	1	KED
|	**Zn**	**67**	**16.842**	ug/L	1.171	6	4	798	6	KED
|	**As**	**75**	**18.842**	ug/L	0.403	2	3	2668	1	KED
⌊	**Se**	**78**	**0.260**	ug/L	0.198	76	8	12	21	KED
	Y	**89**		ug/L			293645	301634	2	Standard
	Kr	**83**		ug/L			55	107	9	Standard
⌈>	**In-1**	**115**		ug/L			4956	4977	2	KED
|	**Cd**	**111**	**18.949**	ug/L	0.953	5	0	3256	2	KED
⌊	**Cd**	**114**	**18.962**	ug/L	0.282	1	1	8109	2	KED
⌈>	**In**	**115**		ug/L			434608	428044	1	Standard
|	**Ag**	**107**	**18.662**	ug/L	0.235	1	50	341034	2	Standard
|	**Sb**	**121**	**0.025**	ug/L	0.001	5	313	626	1	Standard
|	**Sb**	**123**	**0.027**	ug/L	0.003	13	239	498	7	Standard
|	**Ba**	**135**	**0.156**	ug/L	0.001	0	10	606	1	Standard
⌊	**Ba**	**137**	**0.148**	ug/L	0.002	1	18	967	1	Standard
⌈>	**Tb**	**159**		ug/L			641967	723128	1	Standard
⌊	**Pb**	**208**	**0.044**	ug/L	0.001	1	168	2655	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 16:51:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	25956	5	Standard
	Cl	**37**		ug/L			3004573	3237167	3	Standard
⌈>	**Sc**	**45**		ug/L			451854	447483	2	Standard
|	**Al**	**27**	**19056.566**	ug/L	1120.599	5	1968	426214814	2	Standard
|	**V**	**51**	**199.028**	ug/L	5.912	2	6603	4249694	0	Standard
|	**V-1**	**51**	**197.762**	ug/L	6.250	3	121	4267235	0	Standard
|	**Cr**	**52**	**196.938**	ug/L	3.516	1	19388	3544419	1	Standard
|	**Cr**	**53**	**192.869**	ug/L	4.511	2	118	406128	0	Standard
⌊	**Mn**	**55**	**195.611**	ug/L	3.553	1	595	5072694	2	Standard
⌈>	**Ge**	**72**		ug/L			17488	16940	2	KED
|	**Ni**	**60**	**187.650**	ug/L	9.663	5	3	151447	2	KED
|	**Ni**	**62**	**188.524**	ug/L	5.593	2	1	24839	0	KED
|	**Cu**	**63**	**186.579**	ug/L	0.904	0	27	449564	2	KED
|	**Cu**	**65**	**186.968**	ug/L	5.020	2	15	223486	2	KED
|	**Zn**	**66**	**181.607**	ug/L	2.868	1	24	51499	1	KED
|	**Zn**	**67**	**183.982**	ug/L	3.294	1	4	8715	1	KED
|	**As**	**75**	**194.161**	ug/L	5.840	3	3	27565	0	KED
⌊	**Se**	**78**	**191.228**	ug/L	5.087	2	8	2816	2	KED
	Y	**89**		ug/L			293645	294691	1	Standard
	Kr	**83**		ug/L			55	82	9	Standard
⌈>	**In-1**	**115**		ug/L			4956	4814	2	KED
|	**Cd**	**111**	**197.352**	ug/L	3.837	1	0	32815	0	KED
⌊	**Cd**	**114**	**195.420**	ug/L	4.301	2	1	80802	0	KED
⌈>	**In**	**115**		ug/L			434608	430317	0	Standard
|	**Ag**	**107**	**185.964**	ug/L	2.728	1	50	3415932	2	Standard
|	**Sb**	**121**	**199.957**	ug/L	2.147	1	313	2580641	1	Standard
|	**Sb**	**123**	**193.751**	ug/L	1.903	0	239	1914099	1	Standard
|	**Ba**	**135**	**198.938**	ug/L	2.891	1	10	761872	2	Standard
⌊	**Ba**	**137**	**205.368**	ug/L	1.950	0	18	1321913	0	Standard
⌈>	**Tb**	**159**		ug/L			641967	734029	2	Standard
⌊	**Pb**	**208**	**184.887**	ug/L	3.904	2	168	10598580	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 16:56:40
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	26613	3	Standard
	Cl	**37**		ug/L			3004573	3113408	0	Standard
⌈>	**Sc**	**45**		ug/L			451854	429747	1	Standard
|	**Al**	**27**	**28648.776**	ug/L	419.807	1	1968	616076019	1	Standard
|	**V**	**51**	**300.173**	ug/L	0.736	0	6603	6155593	0	Standard
|	**V-1**	**51**	**298.499**	ug/L	2.404	0	121	6188967	0	Standard
|	**Cr**	**52**	**300.370**	ug/L	4.727	1	19388	5184161	2	Standard
|	**Cr**	**53**	**294.875**	ug/L	7.737	2	118	596483	2	Standard
⌊	**Mn**	**55**	**297.475**	ug/L	6.477	2	595	7408390	0	Standard
⌈>	**Ge**	**72**		ug/L			17488	15887	1	KED
|	**Ni**	**60**	**288.084**	ug/L	7.762	2	3	218216	2	KED
|	**Ni**	**62**	**288.875**	ug/L	5.799	2	1	35706	0	KED
|	**Cu**	**63**	**281.419**	ug/L	5.404	1	27	635907	1	KED
|	**Cu**	**65**	**284.173**	ug/L	11.198	3	15	318532	2	KED
|	**Zn**	**66**	**284.432**	ug/L	8.193	2	24	75631	1	KED
|	**Zn**	**67**	**276.346**	ug/L	7.872	2	4	12278	3	KED
|	**As**	**75**	**303.151**	ug/L	6.116	2	3	40375	0	KED
⌊	**Se**	**78**	**295.492**	ug/L	9.000	3	8	4076	1	KED
	Y	**89**		ug/L			293645	278000	1	Standard
	Kr	**83**		ug/L			55	168	12	Standard
⌈>	**In-1**	**115**		ug/L			4956	4713	0	KED
|	**Cd**	**111**	**288.865**	ug/L	3.731	1	0	47030	1	KED
⌊	**Cd**	**114**	**287.758**	ug/L	1.110	0	1	116511	1	KED
⌈>	**In**	**115**		ug/L			434608	410849	0	Standard
|	**Ag**	**107**	**281.183**	ug/L	5.802	2	50	4931088	2	Standard
|	**Sb**	**121**	**302.860**	ug/L	2.324	0	313	3731604	0	Standard
|	**Sb**	**123**	**307.525**	ug/L	1.314	0	239	2900503	0	Standard
|	**Ba**	**135**	**314.588**	ug/L	6.553	2	10	1150174	1	Standard
⌊	**Ba**	**137**	**338.246**	ug/L	11.721	3	18	2078815	3	Standard
⌈>	**Tb**	**159**		ug/L			641967	727008	0	Standard
⌊	**Pb**	**208**	**269.934**	ug/L	1.925	0	168	15331587	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 17:04:17
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	26198	2	Standard
	Cl	**37**		ug/L			3004573	3151882	2	Standard
>	**Sc**	**45**		ug/L			451854	445559	3	Standard
	Al	**27**	**0.115**	ug/L	0.030	26	1968	4495	14	Standard
	V	**51**	**0.014**	ug/L	0.010	69	6603	6799	1	Standard
	V-1	**51**	**0.008**	ug/L	0.001	10	121	299	5	Standard
	Cr	**52**	**0.047**	ug/L	0.029	61	19388	19949	0	Standard
	Cr	**53**	**0.028**	ug/L	0.007	23	118	175	7	Standard
	Mn	**55**	**0.016**	ug/L	0.002	13	595	995	7	Standard
>	**Ge**	**72**		ug/L			17488	18013	2	KED
	Ni	**60**	**0.004**	ug/L	0.004	86	3	7	43	KED
	Ni	**62**	**0.004**	ug/L	0.023	562	1	1	173	KED
	Cu	**63**	**0.007**	ug/L	0.003	44	27	45	16	KED
	Cu	**65**	**0.008**	ug/L	0.001	16	15	26	4	KED
	Zn	**66**	**-0.001**	ug/L	0.054	4760	24	24	68	KED
	Zn	**67**	**-0.015**	ug/L	0.037	238	4	3	50	KED
	As	**75**	**0.008**	ug/L	0.009	116	3	5	27	KED
	Se	**78**	**0.054**	ug/L	0.115	213	8	9	16	KED
	Y	**89**		ug/L			293645	285294	2	Standard
	Kr	**83**		ug/L			55	57	14	Standard
>	**In-1**	**115**		ug/L			4956	5134	2	KED
	Cd	**111**	**0.016**	ug/L	0.003	17	0	3	17	KED
	Cd	**114**	**0.006**	ug/L	0.007	131	1	3	89	KED
>	**In**	**115**		ug/L			434608	446532	1	Standard
	Ag	**107**	**0.006**	ug/L	0.001	21	50	172	13	Standard
	Sb	**121**	**0.509**	ug/L	0.029	5	313	7133	6	Standard
	Sb	**123**	**0.535**	ug/L	0.021	4	239	5727	3	Standard
	Ba	**135**	**0.003**	ug/L	0.001	38	10	22	17	Standard
	Ba	**137**	**0.004**	ug/L	0.002	38	18	48	23	Standard
>	**Tb**	**159**		ug/L			641967	696780	3	Standard
	Pb	**208**	**0.002**	ug/L	0.001	35	168	266	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 17:11:06
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	26825	1	Standard
	Cl	**37**		ug/L			3004573	3161330	3	Standard
⌈>	**Sc**	**45**		ug/L			451854	456181	0	Standard
|	**Al**	**27**	**0.092**	ug/L	0.001	0	1968	4093	0	Standard
|	**V**	**51**	**0.015**	ug/L	0.001	9	6603	6996	1	Standard
|	**V-1**	**51**	**0.005**	ug/L	0.001	11	121	234	5	Standard
|	**Cr**	**52**	**0.055**	ug/L	0.008	14	19388	20582	1	Standard
|	**Cr**	**53**	**0.021**	ug/L	0.005	26	118	163	7	Standard
⌊	**Mn**	**55**	**0.011**	ug/L	0.001	6	595	883	2	Standard
⌈>	**Ge**	**72**		ug/L			17488	18612	3	KED
|	**Ni**	**60**	**0.004**	ug/L	0.004	94	3	7	43	KED
|	**Ni**	**62**	**0.008**	ug/L	0.007	86	1	2	43	KED
|	**Cu**	**63**	**0.007**	ug/L	0.004	55	27	48	24	KED
|	**Cu**	**65**	**0.004**	ug/L	0.002	52	15	21	10	KED
|	**Zn**	**66**	**-0.017**	ug/L	0.014	77	24	20	23	KED
|	**Zn**	**67**	**0.032**	ug/L	0.111	343	4	6	91	KED
|	**As**	**75**	**0.001**	ug/L	0.014	1751	3	4	46	KED
⌊	**Se**	**78**	**0.028**	ug/L	0.120	429	8	9	15	KED
	Y	**89**		ug/L			293645	296578	2	Standard
	Kr	**83**		ug/L			55	50	2	Standard
⌈>	**In-1**	**115**		ug/L			4956	5216	3	KED
|	**Cd**	**111**	**0.009**	ug/L	0.015	162	0	1	132	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.006	224	1	2	115	KED
⌈>	**In**	**115**		ug/L			434608	463886	1	Standard
|	**Ag**	**107**	**0.003**	ug/L	0.001	21	50	121	11	Standard
|	**Sb**	**121**	**0.136**	ug/L	0.005	3	313	2222	4	Standard
|	**Sb**	**123**	**0.133**	ug/L	0.000	0	239	1675	0	Standard
|	**Ba**	**135**	**0.002**	ug/L	0.001	48	10	17	16	Standard
⌊	**Ba**	**137**	**0.004**	ug/L	0.003	79	18	49	48	Standard
⌈>	**Tb**	**159**		ug/L			641967	714919	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.001	184	168	206	17	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 17:17:54
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	25317	4	Standard
	Cl	**37**		ug/L			3004573	3115616	3	Standard
⎡>	**Sc**	**45**		ug/L			451854	458988	0	Standard
⎢	**Al**	**27**	**0.151**	ug/L	0.005	3	1968	5459	1	Standard
⎢	**V**	**51**	**0.005**	ug/L	0.010	185	6603	6827	3	Standard
⎢	**V-1**	**51**	**0.003**	ug/L	0.000	10	121	186	3	Standard
⎢	**Cr**	**52**	**0.021**	ug/L	0.040	187	19388	20083	3	Standard
⎢	**Cr**	**53**	**0.012**	ug/L	0.006	46	118	145	8	Standard
⎣	**Mn**	**55**	**0.012**	ug/L	0.002	13	595	930	4	Standard
⎡>	**Ge**	**72**		ug/L			17488	18893	2	KED
⎢	**Ni**	**60**	**0.006**	ug/L	0.008	129	3	9	72	KED
⎢	**Ni**	**62**	**0.008**	ug/L	0.008	98	1	2	43	KED
⎢	**Cu**	**63**	**0.009**	ug/L	0.004	45	27	53	21	KED
⎢	**Cu**	**65**	**0.009**	ug/L	0.005	52	15	27	19	KED
⎢	**Zn**	**66**	**-0.000**	ug/L	0.040	15021	24	26	49	KED
⎢	**Zn**	**67**	**0.017**	ug/L	0.072	427	4	5	66	KED
⎢	**As**	**75**	**0.005**	ug/L	0.002	46	3	4	5	KED
⎣	**Se**	**78**	**0.036**	ug/L	0.175	489	8	9	26	KED
	Y	**89**		ug/L			293645	298883	1	Standard
	Kr	**83**		ug/L			55	55	20	Standard
⎡>	**In-1**	**115**		ug/L			4956	5302	2	KED
⎢	**Cd**	**111**	**0.005**	ug/L	0.003	56	0	1	43	KED
⎣	**Cd**	**114**	**-0.000**	ug/L	0.002	914	1	1	94	KED
⎡>	**In**	**115**		ug/L			434608	461216	2	Standard
⎢	**Ag**	**107**	**0.002**	ug/L	0.001	85	50	87	34	Standard
⎢	**Sb**	**121**	**0.062**	ug/L	0.007	11	313	1194	6	Standard
⎢	**Sb**	**123**	**0.067**	ug/L	0.012	17	239	965	11	Standard
⎢	**Ba**	**135**	**0.007**	ug/L	0.003	35	10	41	23	Standard
⎣	**Ba**	**137**	**0.008**	ug/L	0.002	24	18	71	16	Standard
⎡>	**Tb**	**159**		ug/L			641967	703205	3	Standard
⎣	**Pb**	**208**	**0.000**	ug/L	0.000	78	168	211	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 17:22:49
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	25187	5	Standard
	Cl	**37**		ug/L			3004573	3278268	1	Standard
⎡>	**Sc**	**45**		ug/L			451854	464026	0	Standard
⎢	**Al**	**27**	**4855.134**	ug/L	79.021	1	1968	112735899	1	Standard
⎢	**V**	**51**	**46.963**	ug/L	1.119	2	6603	1045655	2	Standard
⎢	**V-1**	**51**	**46.729**	ug/L	0.992	2	121	1046336	2	Standard
⎢	**Cr**	**52**	**48.772**	ug/L	1.630	3	19388	925374	2	Standard
⎢	**Cr**	**53**	**47.935**	ug/L	2.138	4	118	104785	3	Standard
⎣	**Mn**	**55**	**48.888**	ug/L	1.031	2	595	1315250	1	Standard
⎡>	**Ge**	**72**		ug/L			17488	18866	1	KED
⎢	**Ni**	**60**	**46.847**	ug/L	0.871	1	3	42145	1	KED
⎢	**Ni**	**62**	**47.293**	ug/L	0.529	1	1	6944	1	KED
⎢	**Cu**	**63**	**47.141**	ug/L	0.199	0	27	126534	1	KED
⎢	**Cu**	**65**	**48.090**	ug/L	1.475	3	15	64032	1	KED
⎢	**Zn**	**66**	**48.087**	ug/L	1.143	2	24	15210	2	KED
⎢	**Zn**	**67**	**49.078**	ug/L	2.577	5	4	2593	5	KED
⎢	**As**	**75**	**48.910**	ug/L	0.400	0	3	7740	0	KED
⎣	**Se**	**78**	**49.603**	ug/L	0.665	1	8	820	2	KED
	Y	**89**		ug/L			293645	301061	1	Standard
	Kr	**83**		ug/L			55	62	22	Standard
⎡>	**In-1**	**115**		ug/L			4956	5210	2	KED
⎢	**Cd**	**111**	**50.769**	ug/L	0.960	1	0	9136	1	KED
⎣	**Cd**	**114**	**50.226**	ug/L	1.862	3	1	22472	2	KED
⎡>	**In**	**115**		ug/L			434608	459413	1	Standard
⎢	**Ag**	**107**	**46.854**	ug/L	0.773	1	50	918758	1	Standard
⎢	**Sb**	**121**	**48.465**	ug/L	1.063	2	313	667884	0	Standard
⎢	**Sb**	**123**	**48.575**	ug/L	0.106	0	239	512512	1	Standard
⎢	**Ba**	**135**	**48.509**	ug/L	0.655	1	10	198312	0	Standard
⎣	**Ba**	**137**	**50.168**	ug/L	0.900	1	18	344826	2	Standard
⎡>	**Tb**	**159**		ug/L			641967	734671	0	Standard
⎣	**Pb**	**208**	**47.957**	ug/L	1.073	2	168	2752516	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 17:30:27
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	23390	4	Standard
	Cl	**37**		ug/L			3004573	3129364	1	Standard
>	**Sc**	**45**		ug/L			451854	451161	0	Standard
	Al	**27**	**0.003**	ug/L	0.006	165	1968	2044	6	Standard
	V	**51**	**0.006**	ug/L	0.008	140	6603	6717	2	Standard
	V-1	**51**	**0.003**	ug/L	0.000	17	121	181	6	Standard
	Cr	**52**	**0.022**	ug/L	0.037	168	19388	19757	3	Standard
	Cr	**53**	**0.012**	ug/L	0.008	68	118	142	11	Standard
	Mn	**55**	**0.009**	ug/L	0.001	7	595	838	2	Standard
>	**Ge**	**72**		ug/L			17488	18716	1	KED
	Ni	**60**	**0.001**	ug/L	0.005	426	3	5	86	KED
	Ni	**62**	**0.004**	ug/L	0.022	627	1	1	173	KED
	Cu	**63**	**0.002**	ug/L	0.005	222	27	35	39	KED
	Cu	**65**	**-0.000**	ug/L	0.004	1240	15	15	36	KED
	Zn	**66**	**-0.009**	ug/L	0.007	69	24	22	8	KED
	Zn	**67**	**-0.018**	ug/L	0.073	412	4	3	100	KED
	As	**75**	**0.003**	ug/L	0.010	292	3	4	33	KED
	Se	**78**	**-0.086**	ug/L	0.042	48	8	7	7	KED
	Y	**89**		ug/L			293645	287635	0	Standard
	Kr	**83**		ug/L			55	55	3	Standard
>	**In-1**	**115**		ug/L			4956	5157	0	KED
	Cd	**111**	**0.005**	ug/L	0.008	155	0	1	114	KED
	Cd	**114**	**0.003**	ug/L	0.007	240	1	2	119	KED
>	**In**	**115**		ug/L			434608	456167	2	Standard
	Ag	**107**	**0.001**	ug/L	0.000	24	50	74	5	Standard
	Sb	**121**	**0.146**	ug/L	0.012	8	313	2326	5	Standard
	Sb	**123**	**0.148**	ug/L	0.005	3	239	1798	0	Standard
	Ba	**135**	**0.001**	ug/L	0.002	131	10	16	40	Standard
	Ba	**137**	**0.001**	ug/L	0.002	349	18	22	54	Standard
>	**Tb**	**159**		ug/L			641967	705399	3	Standard
	Pb	**208**	**0.002**	ug/L	0.000	15	168	296	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 17:36:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24214	32317	2	Standard
Cl	37		ug/L			3004573	3061617	1	Standard
> Sc	45		ug/L			451854	466539	3	Standard
Al	27	**0.990**	ug/L	0.036	3	1968	25127	1	Standard
V	51	**0.024**	ug/L	0.006	27	6603	7338	2	Standard
V-1	51	**0.016**	ug/L	0.001	7	121	479	8	Standard
[redacted]	52	[redacted]	ug/L	0.025	16	19388	22853	1	Standard
Cr	53	**0.122**	ug/L	0.005	3	118	388	3	Standard
[redacted]	55	[redacted]	ug/L	0.000	2	595	1001	4	Standard
> Ge	72		ug/L			17488	19065	2	KED
[redacted]	60	[redacted]	ug/L	0.014	16	3	84	18	KED
Ni	62	**0.093**	ug/L	0.046	49	1	15	45	KED
[redacted]	63	[redacted]	ug/L	0.006	10	27	175	6	KED
Cu	65	**0.049**	ug/L	0.003	6	15	82	2	KED
[redacted]	66	[redacted]	ug/L	0.037	12	24	116	7	KED
Zn	67	**0.232**	ug/L	0.133	57	4	17	40	KED
[redacted]	75	[redacted]	ug/L	0.008	358	3	3	33	KED
[redacted]	78	[redacted]	ug/L	0.320	392	8	10	51	KED
Y	89		ug/L			293645	289041	1	Standard
Kr	83		ug/L			55	48	25	Standard
> In-1	115		ug/L			4956	5397	0	KED
[redacted]	111	[redacted]	ug/L	0.014	161	0	1	132	KED
Cd	114	**0.006**	ug/L	0.003	38	1	4	26	KED
> In	115		ug/L			434608	466435	0	Standard
Ag	107	**0.001**	ug/L	0.001	92	50	70	21	Standard
Sb	121	**0.048**	ug/L	0.006	11	313	1014	7	Standard
Sb	123	**0.052**	ug/L	0.002	3	239	814	2	Standard
[redacted]	135	[redacted]	ug/L	0.002	6	10	146	6	Standard
Ba	137	**0.030**	ug/L	0.003	10	18	229	9	Standard
> Tb	159		ug/L			641967	708526	1	Standard
[redacted]	208	[redacted]	ug/L	0.000	3	168	368	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 17:41:19
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24214	33189	3	Standard
Cl	37		ug/L			3004573	3305856	2	Standard
> Sc	45		ug/L			451854	469173	2	Standard
Al	27	4690.853	ug/L	96.243	2	1968	110107979	1	Standard
V	51	24.302	ug/L	0.252	1	6603	550370	2	Standard
V-1	51	24.232	ug/L	0.101	0	121	548650	1	Standard
[redacted]	52	[redacted]	ug/L	0.707	2	19388	497206	0	Standard
Cr	53	25.147	ug/L	0.836	3	118	55634	2	Standard
[redacted]	55	[redacted]	ug/L	0.878	3	595	685697	1	Standard
> Ge	72		ug/L			17488	19168	0	KED
[redacted]	60	[redacted]	ug/L	0.353	1	3	21744	2	KED
Ni	62	25.158	ug/L	1.377	5	1	3752	4	KED
[redacted]	63	[redacted]	ug/L	0.270	1	27	65669	0	KED
Cu	65	24.448	ug/L	0.494	2	15	33092	2	KED
[redacted]	66	[redacted]	ug/L	1.193	1	24	25619	2	KED
Zn	67	74.736	ug/L	1.497	2	4	4009	1	KED
[redacted]	75	[redacted]	ug/L	0.274	1	3	4058	1	KED
[redacted]	78	[redacted]	ug/L	1.892	2	8	1333	2	KED
Y	89		ug/L			293645	302031	0	Standard
Kr	83		ug/L			55	53	8	Standard
> In-1	115		ug/L			4956	5346	2	KED
[redacted]	111	[redacted]	ug/L	0.804	3	0	4777	1	KED
Cd	114	25.684	ug/L	0.624	2	1	11791	0	KED
> In	115		ug/L			434608	463891	1	Standard
Ag	107	23.833	ug/L	0.559	2	50	471832	0	Standard
Sb	121	25.281	ug/L	0.579	2	313	351918	0	Standard
Sb	123	25.293	ug/L	0.039	0	239	269580	1	Standard
[redacted]	135	[redacted]	ug/L	0.442	1	10	102824	1	Standard
Ba	137	25.815	ug/L	0.427	1	18	179120	0	Standard
> Tb	159		ug/L			641967	738885	2	Standard
[redacted]	208	[redacted]	ug/L	0.524	2	168	1415719	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 17:46:50
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24214	34400	3	Standard
Cl	37		ug/L			3004573	3796607	2	Standard
Sc	45		ug/L			451854	435367	1	Standard
Al	27	70.566	ug/L	1.434	2	1968	1539104	1	Standard
V	51	0.174	ug/L	0.002	1	6603	9965	1	Standard
V-1	51	0.251	ug/L	0.005	2	121	5381	1	Standard
[redacted]	52	[redacted]	ug/L	0.015	4	19388	24901	1	Standard
Cr	53	0.602	ug/L	0.005	0	118	1347	1	Standard
[redacted]	55	[redacted]	ug/L	2.628	2	595	2787166	1	Standard
Ge	72		ug/L			17488	17685	3	KED
[redacted]	60	[redacted]	ug/L	0.086	2	3	2550	2	KED
Ni	62	3.043	ug/L	0.155	5	1	419	2	KED
[redacted]	63	[redacted]	ug/L	0.149	5	27	6363	2	KED
Cu	65	2.474	ug/L	0.070	2	15	3101	0	KED
[redacted]	66	[redacted]	ug/L	0.853	3	24	7800	2	KED
Zn	67	25.761	ug/L	1.577	6	4	1276	3	KED
[redacted]	75	[redacted]	ug/L	0.061	8	3	116	7	KED
[redacted]	78	[redacted]	ug/L	0.194	111	8	11	23	KED
Y	89		ug/L			293645	289675	2	Standard
Kr	83		ug/L			55	60	28	Standard
In-1	115		ug/L			4956	4948	1	KED
[redacted]	111	[redacted]	ug/L	0.010	9	0	18	7	KED
Cd	114	0.102	ug/L	0.028	27	1	44	27	KED
In	115		ug/L			434608	427113	1	Standard
Ag	107	0.003	ug/L	0.001	32	50	97	17	Standard
Sb	121	5.394	ug/L	0.135	2	313	69378	1	Standard
Sb	123	5.457	ug/L	0.094	1	239	53727	1	Standard
[redacted]	135	[redacted]	ug/L	0.453	3	10	53081	1	Standard
Ba	137	14.565	ug/L	0.126	0	18	93076	2	Standard
Tb	159		ug/L			641967	708040	3	Standard
[redacted]	208	[redacted]	ug/L	0.005	5	168	5943	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 17:52:34
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24214	134692	1	Standard
Cl	37		ug/L			3004573	3195099	0	Standard
> Sc	45		ug/L			451854	456980	1	Standard
Al	27	1.072	ug/L	0.044	4	1968	26512	4	Standard
V	51	0.140	ug/L	0.024	16	6603	9734	5	Standard
V-1	51	0.039	ug/L	0.002	5	121	978	3	Standard
[redacted]	52	[redacted]	ug/L	0.085	2	19388	78203	0	Standard
Cr	53	2.752	ug/L	0.081	2	118	6037	1	Standard
[redacted]	55	[redacted]	ug/L	0.990	1	595	1910236	1	Standard
> Ge	72		ug/L			17488	18072	2	KED
[redacted]	60	[redacted]	ug/L	0.020	0	3	2076	1	KED
Ni	62	2.628	ug/L	0.108	4	1	370	3	KED
[redacted]	63	[redacted]	ug/L	0.010	2	27	1146	1	KED
Cu	65	0.442	ug/L	0.021	4	15	579	2	KED
[redacted]	66	[redacted]	ug/L	0.275	4	24	1847	3	KED
Zn	67	5.942	ug/L	0.116	1	4	304	2	KED
As	75	0.054	ug/L	0.017	32	3	12	19	KED
Se	78	0.069	ug/L	0.065	94	8	9	10	KED
Y	89		ug/L			293645	295549	1	Standard
Kr	83		ug/L			55	46	6	Standard
> In-1	115		ug/L			4956	5040	1	KED
[redacted]	111	[redacted]	ug/L	0.024	50	0	8	48	KED
Cd	114	0.048	ug/L	0.003	6	1	21	5	KED
> In	115		ug/L			434608	444013	3	Standard
Ag	107	0.000	ug/L	0.001	958	50	53	41	Standard
Sb	121	0.111	ug/L	0.010	8	313	1798	4	Standard
Sb	123	0.116	ug/L	0.003	2	239	1424	2	Standard
Ba	135	4.952	ug/L	0.067	1	10	19575	2	Standard
Ba	137	4.969	ug/L	0.105	2	18	33004	1	Standard
> Tb	159		ug/L			641967	729771	3	Standard
[redacted]	208	[redacted]	ug/L	0.001	3	168	2584	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 17:57:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			24214	30399	4	Standard
Cl	**37**		ug/L			3004573	3411162	1	Standard
Sc	**45**		ug/L			451854	464986	1	Standard
[redacted]	**27**	[redacted]	ug/L	0.155	4	1968	88703	2	Standard
[redacted]	**51**	[redacted]	ug/L	0.039	7	6603	18998	2	Standard
V-1	**51**	**0.579**	ug/L	0.030	5	121	13114	3	Standard
[redacted]	**52**	[redacted]	ug/L	0.043	17	19388	24610	1	Standard
Cr	**53**	**0.355**	ug/L	0.025	6	118	899	6	Standard
Mn	**55**	**299.820**	ug/L	6.979	2	595	8078221	0	Standard
Ge	**72**		ug/L			17488	17835	2	KED
Ni	**60**	**0.209**	ug/L	0.029	13	3	181	15	KED
Ni	**62**	**0.244**	ug/L	0.084	34	1	34	31	KED
Cu	**63**	**0.706**	ug/L	0.008	1	27	1818	1	KED
Cu	**65**	**0.709**	ug/L	0.017	2	15	908	4	KED
Zn	**66**	**3.185**	ug/L	0.146	4	24	974	2	KED
Zn	**67**	**3.024**	ug/L	0.492	16	4	154	13	KED
As	**75**	**0.706**	ug/L	0.033	4	3	109	4	KED
Se	**78**	**0.175**	ug/L	0.193	110	8	11	24	KED
Y	**89**		ug/L			293645	295911	2	Standard
Kr	**83**		ug/L			55	69	8	Standard
In-1	**115**		ug/L			4956	5012	2	KED
Cd	**111**	**0.024**	ug/L	0.015	64	0	4	61	KED
Cd	**114**	**0.005**	ug/L	0.014	275	1	3	178	KED
In	**115**		ug/L			434608	442901	1	Standard
Ag	**107**	**0.023**	ug/L	0.000	0	50	488	1	Standard
Sb	**121**	**0.339**	ug/L	0.011	3	313	4824	1	Standard
Sb	**123**	**0.339**	ug/L	0.016	4	239	3690	2	Standard
Ba	**135**	**2.074**	ug/L	0.041	1	10	8184	0	Standard
Ba	**137**	**2.131**	ug/L	0.019	0	18	14133	1	Standard
Tb	**159**		ug/L			641967	738304	3	Standard
Pb	**208**	**0.111**	ug/L	0.003	2	168	6608	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 18:05:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24214	30496	2	Standard
Cl	37		ug/L			3004573	3498787	2	Standard
> Sc	45		ug/L			451854	480180	2	Standard
[redacted]	27	[redacted]	ug/L	0.020	0	1968	83580	2	Standard
[redacted]	51	[redacted]	ug/L	0.029	5	6603	19717	0	Standard
V-1	51	0.581	ug/L	0.026	4	121	13583	2	Standard
[redacted]	52	[redacted]	ug/L	0.044	18	19388	25078	0	Standard
Cr	53	0.331	ug/L	0.029	8	118	872	4	Standard
Mn	55	307.305	ug/L	12.620	4	595	8549958	3	Standard
> Ge	72		ug/L			17488	18230	1	KED
Ni	60	0.215	ug/L	0.010	4	3	191	4	KED
Ni	62	0.183	ug/L	0.049	26	1	27	24	KED
Cu	63	0.669	ug/L	0.011	1	27	1762	1	KED
Cu	65	0.693	ug/L	0.024	3	15	907	3	KED
Zn	66	2.925	ug/L	0.061	2	24	917	1	KED
Zn	67	3.238	ug/L	0.385	11	4	169	10	KED
As	75	0.703	ug/L	0.040	5	3	111	6	KED
Se	78	0.155	ug/L	0.075	48	8	11	10	KED
Y	89		ug/L			293645	297619	2	Standard
Kr	83		ug/L			55	59	6	Standard
> In-1	115		ug/L			4956	5284	2	KED
Cd	111	0.016	ug/L	0.003	16	0	3	17	KED
Cd	114	0.014	ug/L	0.009	62	1	7	51	KED
> In	115		ug/L			434608	445639	1	Standard
Ag	107	0.000	ug/L	0.000	60	50	58	8	Standard
Sb	121	0.026	ug/L	0.004	15	313	671	6	Standard
Sb	123	0.025	ug/L	0.003	13	239	502	5	Standard
Ba	135	1.848	ug/L	0.013	0	10	7340	1	Standard
Ba	137	1.886	ug/L	0.069	3	18	12587	2	Standard
> Tb	159		ug/L			641967	741387	2	Standard
Pb	208	0.026	ug/L	0.000	1	168	1692	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 18:10:04
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	30438	3	Standard
	Cl	**37**		ug/L			3004573	3591391	1	Standard
>	**Sc**	**45**		ug/L			451854	487415	2	Standard
	[redacted]	**27**	[redacted]	ug/L	23.579	2	1968	22005291	2	Standard
	[redacted]	**51**	[redacted]	ug/L	0.122	2	6603	127236	1	Standard
	V-1	**51**	**5.259**	ug/L	0.143	2	121	123759	0	Standard
	[redacted]	**52**	[redacted]	ug/L	0.154	3	19388	118641	1	Standard
	Cr	**53**	**5.308**	ug/L	0.252	4	118	12294	2	Standard
	Mn	**55**	**309.112**	ug/L	6.017	1	595	8729833	0	Standard
>	**Ge**	**72**		ug/L			17488	18389	2	KED
	Ni	**60**	**5.075**	ug/L	0.077	1	3	4454	3	KED
	Ni	**62**	**5.351**	ug/L	0.322	6	1	766	4	KED
	Cu	**63**	**5.493**	ug/L	0.186	3	27	14389	1	KED
	Cu	**65**	**5.685**	ug/L	0.315	5	15	7393	5	KED
	Zn	**66**	**19.250**	ug/L	1.048	5	24	5944	2	KED
	Zn	**67**	**17.823**	ug/L	1.054	5	4	920	3	KED
	As	**75**	**6.000**	ug/L	0.279	4	3	928	2	KED
	Se	**78**	**16.513**	ug/L	0.520	3	8	272	1	KED
	Y	**89**		ug/L			293645	300630	1	Standard
	Kr	**83**		ug/L			55	58	7	Standard
>	**In-1**	**115**		ug/L			4956	5238	3	KED
	Cd	**111**	**5.257**	ug/L	0.193	3	0	951	3	KED
	Cd	**114**	**5.250**	ug/L	0.424	8	1	2362	7	KED
>	**In**	**115**		ug/L			434608	453947	0	Standard
	Ag	**107**	**4.606**	ug/L	0.055	1	50	89310	1	Standard
	Sb	**121**	**5.182**	ug/L	0.080	1	313	70870	1	Standard
	Sb	**123**	**5.211**	ug/L	0.006	0	239	54549	0	Standard
	Ba	**135**	**7.135**	ug/L	0.056	0	10	28832	0	Standard
	Ba	**137**	**7.269**	ug/L	0.067	0	18	49378	0	Standard
>	**Tb**	**159**		ug/L			641967	755848	1	Standard
	Pb	**208**	**4.807**	ug/L	0.113	2	168	283953	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 18:14:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			24214	31230	2	Standard
Cl	**37**		ug/L			3004573	3538189	3	Standard
Sc	**45**		ug/L			451854	484823	0	Standard
[redacted]	**27**	[redacted]	ug/L	21.412	2	1968	21577649	2	Standard
[redacted]	**51**	[redacted]	ug/L	0.233	4	6603	128684	3	Standard
V-1	**51**	**5.261**	ug/L	0.187	3	121	123170	2	Standard
[redacted]	**52**	[redacted]	ug/L	0.268	5	19388	119884	3	Standard
Cr	**53**	**5.109**	ug/L	0.171	3	118	11783	2	Standard
Mn	**55**	**305.098**	ug/L	5.228	1	595	8572705	1	Standard
Ge	**72**		ug/L			17488	18573	2	KED
Ni	**60**	**5.011**	ug/L	0.075	1	3	4443	4	KED
Ni	**62**	**5.365**	ug/L	0.255	4	1	776	4	KED
Cu	**63**	**5.511**	ug/L	0.135	2	27	14582	0	KED
Cu	**65**	**5.601**	ug/L	0.047	0	15	7358	2	KED
Zn	**66**	**18.427**	ug/L	0.513	2	24	5754	3	KED
Zn	**67**	**17.596**	ug/L	0.378	2	4	918	1	KED
As	**75**	**6.001**	ug/L	0.333	5	3	937	2	KED
Se	**78**	**16.285**	ug/L	0.384	2	8	271	1	KED
Y	**89**		ug/L			293645	298003	1	Standard
Kr	**83**		ug/L			55	67	14	Standard
In-1	**115**		ug/L			4956	5325	2	KED
Cd	**111**	**5.221**	ug/L	0.030	0	0	960	3	KED
Cd	**114**	**5.043**	ug/L	0.149	2	1	2307	0	KED
In	**115**		ug/L			434608	464140	0	Standard
Ag	**107**	**4.523**	ug/L	0.113	2	50	89653	2	Standard
Sb	**121**	**5.064**	ug/L	0.084	1	313	70815	2	Standard
Sb	**123**	**5.031**	ug/L	0.072	1	239	53853	1	Standard
Ba	**135**	**7.051**	ug/L	0.210	2	10	29137	3	Standard
Ba	**137**	**7.150**	ug/L	0.053	0	18	49658	1	Standard
Tb	**159**		ug/L			641967	750637	3	Standard
Pb	**208**	**4.782**	ug/L	0.134	2	168	280474	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 18:21:50
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	25616	2	Standard
	Cl	**37**		ug/L			3004573	3101306	1	Standard
>	**Sc**	**45**		ug/L			451854	444382	2	Standard
	Al	**27**	**25.597**	ug/L	0.192	0	1968	571053	1	Standard
	V	**51**	**0.088**	ug/L	0.010	11	6603	8351	0	Standard
	V-1	**51**	**0.070**	ug/L	0.001	1	121	1619	1	Standard
	Cr	**52**	**0.222**	ug/L	0.025	11	19388	23005	0	Standard
	Cr	**53**	**0.158**	ug/L	0.006	3	118	446	4	Standard
	Mn	**55**	**6.412**	ug/L	0.105	1	595	165679	1	Standard
>	**Ge**	**72**		ug/L			17488	19070	2	KED
	Ni	**60**	**0.255**	ug/L	0.012	4	3	236	2	KED
	Ni	**62**	**0.291**	ug/L	0.037	12	1	44	10	KED
	Cu	**63**	**0.774**	ug/L	0.041	5	27	2126	3	KED
	Cu	**65**	**0.786**	ug/L	0.040	5	15	1074	2	KED
	Zn	**66**	**96.471**	ug/L	0.875	0	24	30819	2	KED
	[redacted]	[redacted]	[redacted]	ug/L	2.724	3	4	4633	0	KED
	As	**75**	**0.020**	ug/L	0.012	60	3	7	26	KED
	Se	**78**	**0.166**	ug/L	0.253	152	8	12	33	KED
	Y	**89**		ug/L			293645	285892	5	Standard
	Kr	**83**		ug/L			55	48	8	Standard
>	**In-1**	**115**		ug/L			4956	5588	1	KED
	Cd	**111**	**0.020**	ug/L	0.013	64	0	4	58	KED
	Cd	**114**	**0.011**	ug/L	0.007	62	1	6	49	KED
>	**In**	**115**		ug/L			434608	457139	3	Standard
	Ag	**107**	**0.002**	ug/L	0.000	20	50	85	10	Standard
	Sb	**121**	**0.023**	ug/L	0.003	12	313	638	2	Standard
	Sb	**123**	**0.021**	ug/L	0.001	3	239	474	3	Standard
	Ba	**135**	**0.945**	ug/L	0.057	6	10	3848	2	Standard
	Ba	**137**	**0.999**	ug/L	0.035	3	18	6847	1	Standard
>	**Tb**	**159**		ug/L			641967	712392	4	Standard
	Pb	**208**	**0.189**	ug/L	0.009	4	168	10679	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 18:26:45
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	24862	6	Standard
	Cl	**37**		ug/L			3004573	3039688	0	Standard
⌈>	**Sc**	**45**		ug/L			451854	445941	2	Standard
|	**Al**	**27**	**0.137**	ug/L	0.010	7	1968	4996	1	Standard
|	**V**	**51**	**0.020**	ug/L	0.003	13	6603	6939	2	Standard
|	**V-1**	**51**	**0.002**	ug/L	0.000	15	121	157	1	Standard
|	**Cr**	**52**	**0.064**	ug/L	0.009	13	19388	20282	2	Standard
|	**Cr**	**53**	**0.003**	ug/L	0.009	279	118	122	13	Standard
⌊	**Mn**	**55**	**0.008**	ug/L	0.001	16	595	803	2	Standard
⌈>	**Ge**	**72**		ug/L			17488	19405	1	KED
|	**Ni**	**60**	**0.007**	ug/L	0.003	44	3	10	26	KED
|	**Ni**	**62**	**-0.005**	ug/L	0.007	137	1	0	173	KED
|	**Cu**	**63**	**0.005**	ug/L	0.003	56	27	43	18	KED
|	**Cu**	**65**	**0.005**	ug/L	0.004	70	15	24	22	KED
|	**Zn**	**66**	**0.017**	ug/L	0.006	36	24	32	5	KED
|	**Zn**	**67**	**0.014**	ug/L	0.033	237	4	5	33	KED
|	**As**	**75**	**0.007**	ug/L	0.019	262	3	5	56	KED
⌊	**Se**	**78**	**0.137**	ug/L	0.139	101	8	11	18	KED
	Y	**89**		ug/L			293645	285652	2	Standard
	Kr	**83**		ug/L			55	50	15	Standard
⌈>	**In-1**	**115**		ug/L			4956	5340	4	KED
|	**Cd**	**111**	**0.009**	ug/L	0.010	119	0	1	100	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.004	382	1	1	104	KED
⌈>	**In**	**115**		ug/L			434608	461973	1	Standard
|	**Ag**	**107**	**-0.001**	ug/L	0.000	69	50	40	25	Standard
|	**Sb**	**121**	**-0.013**	ug/L	0.000	3	313	157	4	Standard
|	**Sb**	**123**	**-0.011**	ug/L	0.002	14	239	133	13	Standard
|	**Ba**	**135**	**0.009**	ug/L	0.002	20	10	50	15	Standard
⌊	**Ba**	**137**	**0.010**	ug/L	0.002	17	18	85	13	Standard
⌈>	**Tb**	**159**		ug/L			641967	723026	2	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	51	168	216	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 18:31:39
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	25635	2	Standard
	Cl	**37**		ug/L			3004573	3284057	3	Standard
⌈>	**Sc**	**45**		ug/L			451854	461204	1	Standard
|	**Al**	**27**	**4630.971**	ug/L	111.369	2	1968	106862998	1	Standard
|	**V**	**51**	**47.383**	ug/L	0.110	0	6603	1048489	1	Standard
|	**V-1**	**51**	**47.321**	ug/L	0.316	0	121	1053151	1	Standard
|	**Cr**	**52**	**48.397**	ug/L	0.022	0	19388	912990	1	Standard
|	**Cr**	**53**	**48.154**	ug/L	0.887	1	118	104659	3	Standard
⌊	**Mn**	**55**	**49.103**	ug/L	0.597	1	595	1313092	1	Standard
⌈>	**Ge**	**72**		ug/L			17488	18937	2	KED
|	**Ni**	**60**	**45.922**	ug/L	1.586	3	3	41450	1	KED
|	**Ni**	**62**	**46.352**	ug/L	0.903	1	1	6830	1	KED
|	**Cu**	**63**	**47.579**	ug/L	0.793	1	27	128157	1	KED
|	**Cu**	**65**	**46.363**	ug/L	1.951	4	15	61955	3	KED
|	**Zn**	**66**	**47.417**	ug/L	1.959	4	24	15044	1	KED
|	**Zn**	**67**	**46.980**	ug/L	3.701	7	4	2489	6	KED
|	**As**	**75**	**49.480**	ug/L	1.255	2	3	7856	0	KED
⌊	**Se**	**78**	**50.013**	ug/L	1.771	3	8	830	2	KED
	Y	**89**		ug/L			293645	299601	2	Standard
	Kr	**83**		ug/L			55	51	22	Standard
⌈>	**In-1**	**115**		ug/L			4956	5391	0	KED
|	**Cd**	**111**	**49.434**	ug/L	1.373	2	0	9206	2	KED
⌊	**Cd**	**114**	**48.236**	ug/L	0.212	0	1	22341	0	KED
⌈>	**In**	**115**		ug/L			434608	466330	0	Standard
|	**Ag**	**107**	**44.897**	ug/L	0.554	1	50	893637	0	Standard
|	**Sb**	**121**	**47.591**	ug/L	0.750	1	313	665785	0	Standard
|	**Sb**	**123**	**48.526**	ug/L	0.630	1	239	519662	0	Standard
|	**Ba**	**135**	**49.089**	ug/L	1.510	3	10	203699	2	Standard
⌊	**Ba**	**137**	**50.596**	ug/L	1.267	2	18	352901	1	Standard
⌈>	**Tb**	**159**		ug/L			641967	753206	2	Standard
⌊	**Pb**	**208**	**46.607**	ug/L	1.131	2	168	2741653	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 18:42:27
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24214	24851	3	Standard
	Cl	**37**		ug/L			3004573	3109174	1	Standard
⌈>	**Sc**	**45**		ug/L			451854	458190	2	Standard
|	**Al**	**27**	**0.009**	ug/L	0.003	35	1968	2205	4	Standard
|	**V**	**51**	**0.009**	ug/L	0.015	161	6603	6895	2	Standard
|	**V-1**	**51**	**0.001**	ug/L	0.001	110	121	136	9	Standard
|	**Cr**	**52**	**0.030**	ug/L	0.045	148	19388	20198	1	Standard
|	**Cr**	**53**	**0.000**	ug/L	0.004	877	118	120	10	Standard
⌊	**Mn**	**55**	**0.005**	ug/L	0.000	7	595	741	3	Standard
⌈>	**Ge**	**72**		ug/L			17488	19410	0	KED
|	**Ni**	**60**	**0.008**	ug/L	0.002	25	3	11	16	KED
|	**Ni**	**62**	**0.012**	ug/L	0.015	125	1	3	69	KED
|	**Cu**	**63**	**0.005**	ug/L	0.004	82	27	44	26	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.003	92	15	12	31	KED
|	**Zn**	**66**	**-0.006**	ug/L	0.033	541	24	24	42	KED
|	**Zn**	**67**	**-0.009**	ug/L	0.080	868	4	4	98	KED
|	**As**	**75**	**0.009**	ug/L	0.013	146	3	5	38	KED
⌊	**Se**	**78**	**0.179**	ug/L	0.047	26	8	12	5	KED
	Y	**89**		ug/L			293645	291031	3	Standard
	Kr	**83**		ug/L			55	48	21	Standard
⌈>	**In-1**	**115**		ug/L			4956	5335	0	KED
|	**Cd**	**111**	**0.007**	ug/L	0.006	88	0	1	69	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.005	117	1	3	69	KED
⌈>	**In**	**115**		ug/L			434608	467432	2	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	80	50	76	21	Standard
|	**Sb**	**121**	**0.102**	ug/L	0.005	4	313	1762	4	Standard
|	**Sb**	**123**	**0.104**	ug/L	0.005	4	239	1371	2	Standard
|	**Ba**	**135**	**0.002**	ug/L	0.001	76	10	19	31	Standard
⌊	**Ba**	**137**	**0.002**	ug/L	0.001	56	18	32	20	Standard
⌈>	**Tb**	**159**		ug/L			641967	722856	2	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.000	15	168	335	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 18:48:49
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				24249	4	Standard
	Cl	**37**		ug/L				3111826	2	Standard
⎡>	**Sc**	**45**		ug/L				446275	1	Standard
⎢	**V**	**51**		ug/L				6985	2	Standard
⎢	**V-1**	**51**		ug/L				122	5	Standard
⎢	**Cr**	**52**		ug/L				20379	2	Standard
⎢	**Cr**	**53**		ug/L				108	9	Standard
⎣	**Mn**	**55**		ug/L				701	4	Standard
⎡>	**Ge**	**72**		ug/L				19285	3	KED
⎢	**Ni**	**60**		ug/L				7	66	KED
⎢	**Ni**	**62**		ug/L				3	124	KED
⎢	**Cu**	**63**		ug/L				37	37	KED
⎢	**Cu**	**65**		ug/L				17	22	KED
⎢	**Zn**	**66**		ug/L				24	13	KED
⎢	**Zn**	**67**		ug/L				4	65	KED
⎢	**As**	**75**		ug/L				3	34	KED
⎣	**Se**	**78**		ug/L				9	2	KED
	Y	**89**		ug/L				287409	5	Standard
	Kr	**83**		ug/L				52	9	Standard
⎡>	**In-1**	**115**		ug/L				5508	2	KED
⎢	**Cd**	**111**		ug/L				4	35	KED
⎣	**Cd**	**114**		ug/L				1	90	KED
⎡>	**In**	**115**		ug/L				456477	2	Standard
⎢	**Ag**	**107**		ug/L				46	27	Standard
⎢	**Sb**	**121**		ug/L				466	4	Standard
⎢	**Sb**	**123**		ug/L				343	9	Standard
⎢	**Ba**	**135**		ug/L				10	36	Standard
⎣	**Ba**	**137**		ug/L				19	45	Standard
⎡>	**Tb**	**159**		ug/L				710909	1	Standard
⎣	**Pb**	**208**		ug/L				226	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 18:53:42
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	25411	5	Standard
	Cl	**37**		ug/L			3111826	3312455	2	Standard
⌈>	**Sc**	**45**		ug/L			446275	467354	2	Standard
|	**V**	**51**	**46.622**	ug/L	1.747	3	6985	1045416	1	Standard
|	**V-1**	**51**	**46.569**	ug/L	1.658	3	122	1049644	1	Standard
|	**Cr**	**52**	**48.490**	ug/L	1.157	2	20379	927860	0	Standard
|	**Cr**	**53**	**48.243**	ug/L	0.896	1	108	106200	0	Standard
⌊	**Mn**	**55**	**47.982**	ug/L	1.496	3	701	1299887	1	Standard
⌈>	**Ge**	**72**		ug/L			19285	19333	2	KED
|	**Ni**	**60**	**47.473**	ug/L	0.548	1	7	43776	3	KED
|	**Ni**	**62**	**45.993**	ug/L	1.819	3	3	6919	2	KED
|	**Cu**	**63**	**46.405**	ug/L	1.157	2	37	127615	2	KED
|	**Cu**	**65**	**48.010**	ug/L	1.333	2	17	65502	1	KED
|	**Zn**	**66**	**49.156**	ug/L	2.355	4	24	15921	3	KED
|	**Zn**	**67**	**48.143**	ug/L	2.033	4	4	2605	2	KED
|	**As**	**75**	**49.719**	ug/L	0.233	0	3	8062	1	KED
⌊	**Se**	**78**	**48.930**	ug/L	1.800	3	9	829	3	KED
	Y	**89**		ug/L			287409	296459	4	Standard
	Kr	**83**		ug/L			52	58	21	Standard
⌈>	**In-1**	**115**		ug/L			5508	5653	1	KED
|	**Cd**	**111**	**47.475**	ug/L	1.566	3	4	9272	1	KED
⌊	**Cd**	**114**	**47.594**	ug/L	1.893	3	1	23104	2	KED
⌈>	**In**	**115**		ug/L			456477	461542	0	Standard
|	**Ag**	**107**	**45.305**	ug/L	1.120	2	46	892560	2	Standard
|	**Sb**	**121**	**49.161**	ug/L	0.602	1	466	680880	1	Standard
|	**Sb**	**123**	**48.886**	ug/L	0.820	1	343	518274	1	Standard
|	**Ba**	**135**	**49.578**	ug/L	0.130	0	10	203644	0	Standard
⌊	**Ba**	**137**	**51.079**	ug/L	0.721	1	19	352660	1	Standard
⌈>	**Tb**	**159**		ug/L			710909	754715	1	Standard
⌊	**Pb**	**208**	**46.552**	ug/L	1.253	2	226	2744385	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 19:01:17
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	23935	2	Standard
	Cl	**37**		ug/L			3111826	3165852	2	Standard
⌈>	**Sc**	**45**		ug/L			446275	451223	2	Standard
|	**V**	**51**	**-0.015**	ug/L	0.014	91	6985	6725	2	Standard
|	**V-1**	**51**	**-0.000**	ug/L	0.001	650	122	120	16	Standard
|	**Cr**	**52**	**-0.051**	ug/L	0.049	96	20379	19673	2	Standard
|	**Cr**	**53**	**0.001**	ug/L	0.002	324	108	110	2	Standard
⌊	**Mn**	**55**	**-0.000**	ug/L	0.001	243	701	700	5	Standard
⌈>	**Ge**	**72**		ug/L			19285	19653	0	KED
|	**Ni**	**60**	**0.003**	ug/L	0.007	202	7	10	56	KED
|	**Ni**	**62**	**-0.000**	ug/L	0.014	3543	3	3	69	KED
|	**Cu**	**63**	**0.002**	ug/L	0.003	138	37	45	21	KED
|	**Cu**	**65**	**-0.000**	ug/L	0.003	1175	17	17	22	KED
|	**Zn**	**66**	**0.012**	ug/L	0.009	72	24	29	9	KED
|	**Zn**	**67**	**0.010**	ug/L	0.072	724	4	5	78	KED
|	**As**	**75**	**0.013**	ug/L	0.003	22	3	5	8	KED
⌊	**Se**	**78**	**0.103**	ug/L	0.088	85	9	11	13	KED
	Y	**89**		ug/L			287409	282170	1	Standard
	Kr	**83**		ug/L			52	53	24	Standard
⌈>	**In-1**	**115**		ug/L			5508	5326	1	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.018	1588	4	3	90	KED
⌊	**Cd**	**114**	**0.011**	ug/L	0.002	22	1	6	17	KED
⌈>	**In**	**115**		ug/L			456477	467412	1	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	68	46	69	22	Standard
|	**Sb**	**121**	**0.108**	ug/L	0.009	8	466	1991	5	Standard
|	**Sb**	**123**	**0.104**	ug/L	0.004	3	343	1465	1	Standard
|	**Ba**	**135**	**0.002**	ug/L	0.000	2	10	19	0	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	155	19	24	29	Standard
⌈>	**Tb**	**159**		ug/L			710909	714263	3	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.000	11	226	455	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 19:08:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	30720	2	Standard
	Cl	**37**		ug/L			3111826	3242016	5	Standard
⌈>	**Sc**	**45**		ug/L			446275	518344	1	Standard
|	**V**	**51**	**12.972**	ug/L	0.176	1	6985	328661	2	Standard
|	**V-1**	**51**	**13.003**	ug/L	0.143	1	122	325355	2	Standard
|	[redacted]	**52**	[redacted]	ug/L	0.096	1	20379	147295	0	Standard
|	**Cr**	**53**	**6.339**	ug/L	0.175	2	108	15587	1	Standard
⌊	**Mn**	**55**	**60.159**	ug/L	0.525	0	701	1808156	1	Standard
⌈>	**Ge**	**72**		ug/L			19285	19512	1	KED
|	**Ni**	**60**	**4.882**	ug/L	0.079	1	7	4549	1	KED
|	**Ni**	**62**	**4.944**	ug/L	0.171	3	3	753	2	KED
|	**Cu**	**63**	**11.496**	ug/L	0.526	4	37	31932	3	KED
|	**Cu**	**65**	**11.337**	ug/L	0.205	1	17	15628	1	KED
|	**Zn**	**66**	**26.652**	ug/L	0.344	1	24	8729	1	KED
|	**Zn**	**67**	**26.302**	ug/L	0.476	1	4	1439	2	KED
|	**As**	**75**	**2.050**	ug/L	0.093	4	3	338	3	KED
⌊	**Se**	**78**	**0.674**	ug/L	0.178	26	9	21	15	KED
	Y	**89**		ug/L			287409	407503	1	Standard
	Kr	**83**		ug/L			52	73	22	Standard
⌈>	**In-1**	**115**		ug/L			5508	5461	2	KED
|	**Cd**	**111**	**0.076**	ug/L	0.013	17	4	18	10	KED
⌊	**Cd**	**114**	**0.072**	ug/L	0.024	33	1	35	34	KED
⌈>	**In**	**115**		ug/L			456477	473617	1	Standard
|	**Ag**	**107**	**0.050**	ug/L	0.002	3	46	1053	2	Standard
|	**Sb**	**121**	**0.024**	ug/L	0.006	25	466	819	9	Standard
|	**Sb**	**123**	**0.023**	ug/L	0.003	13	343	610	3	Standard
|	**Ba**	**135**	**14.430**	ug/L	0.235	1	10	60818	0	Standard
⌊	**Ba**	**137**	**14.621**	ug/L	0.200	1	19	103583	0	Standard
⌈>	**Tb**	**159**		ug/L			710909	772233	3	Standard
⌊	**Pb**	**208**	**4.926**	ug/L	0.245	4	226	297095	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 19:13:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	29680	2	Standard
	Cl	**37**		ug/L			3111826	3279026	1	Standard
>	**Sc**	**45**		ug/L			446275	513936	0	Standard
	V	**51**	**13.082**	ug/L	0.290	2	6985	328534	1	Standard
	V-1	**51**	**13.055**	ug/L	0.272	2	122	323856	1	Standard
	[redacted]	**52**	[redacted]	ug/L	0.217	3	20379	145923	2	Standard
	Cr	**53**	**6.147**	ug/L	0.251	4	108	14993	4	Standard
	Mn	**55**	**70.662**	ug/L	1.087	1	701	2105400	1	Standard
>	**Ge**	**72**		ug/L			19285	18946	2	KED
	Ni	**60**	**5.387**	ug/L	0.109	2	7	4875	3	KED
	Ni	**62**	**5.585**	ug/L	0.432	7	3	827	9	KED
	Cu	**63**	**11.203**	ug/L	0.119	1	37	30224	1	KED
	Cu	**65**	**11.230**	ug/L	0.124	1	17	15032	1	KED
	Zn	**66**	**28.557**	ug/L	0.923	3	24	9077	2	KED
	Zn	**67**	**26.618**	ug/L	0.462	1	4	1414	1	KED
	As	**75**	**3.240**	ug/L	0.070	2	3	517	0	KED
	Se	**78**	**0.601**	ug/L	0.138	22	9	19	10	KED
	Y	**89**		ug/L			287409	410684	1	Standard
	Kr	**83**		ug/L			52	62	19	Standard
>	**In-1**	**115**		ug/L			5508	5517	0	KED
	Cd	**111**	**0.068**	ug/L	0.010	14	4	17	11	KED
	Cd	**114**	**0.061**	ug/L	0.022	35	1	30	34	KED
>	**In**	**115**		ug/L			456477	477762	0	Standard
	Ag	**107**	**0.045**	ug/L	0.000	0	46	959	0	Standard
	Sb	**121**	**0.031**	ug/L	0.003	9	466	935	3	Standard
	Sb	**123**	**0.036**	ug/L	0.003	9	343	750	5	Standard
	Ba	**135**	**14.409**	ug/L	0.043	0	10	61272	0	Standard
	Ba	**137**	**14.701**	ug/L	0.153	1	19	105079	0	Standard
>	**Tb**	**159**		ug/L			710909	767972	1	Standard
	Pb	**208**	**5.739**	ug/L	0.038	0	226	344568	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 19:18:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	29839	0	Standard
	Cl	**37**		ug/L			3111826	3121589	2	Standard
>	**Sc**	**45**		ug/L			446275	510949	0	Standard
	V	**51**	**13.363**	ug/L	0.304	2	6985	333499	2	Standard
	V-1	**51**	**13.359**	ug/L	0.327	2	122	329503	2	Standard
	[redacted]	**52**	[redacted]	ug/L	0.167	2	20379	182371	1	Standard
	Cr	**53**	**7.987**	ug/L	0.171	2	108	19330	2	Standard
	Mn	**55**	**62.415**	ug/L	1.001	1	701	1848989	1	Standard
>	**Ge**	**72**		ug/L			19285	19808	1	KED
	Ni	**60**	**5.527**	ug/L	0.148	2	7	5226	1	KED
	Ni	**62**	**5.696**	ug/L	0.408	7	3	880	5	KED
	Cu	**63**	**10.104**	ug/L	0.257	2	37	28503	2	KED
	Cu	**65**	**10.510**	ug/L	0.275	2	17	14714	3	KED
	Zn	**66**	**23.673**	ug/L	0.422	1	24	7873	2	KED
	Zn	**67**	**23.230**	ug/L	0.720	3	4	1290	2	KED
	As	**75**	**2.167**	ug/L	0.117	5	3	363	5	KED
	Se	**78**	**0.547**	ug/L	0.271	49	9	19	23	KED
	Y	**89**		ug/L			287409	394756	1	Standard
	Kr	**83**		ug/L			52	69	15	Standard
>	**In-1**	**115**		ug/L			5508	5500	4	KED
	Cd	**111**	**0.066**	ug/L	0.018	27	4	16	16	KED
	Cd	**114**	**0.075**	ug/L	0.013	16	1	36	20	KED
>	**In**	**115**		ug/L			456477	470220	1	Standard
	Ag	**107**	**0.043**	ug/L	0.003	6	46	916	4	Standard
	Sb	**121**	**-0.013**	ug/L	0.001	10	466	292	6	Standard
	Sb	**123**	**-0.011**	ug/L	0.002	19	343	238	9	Standard
	Ba	**135**	**14.669**	ug/L	0.248	1	10	61402	3	Standard
	Ba	**137**	**14.655**	ug/L	0.053	0	19	103096	1	Standard
>	**Tb**	**159**		ug/L			710909	775327	1	Standard
	Pb	**208**	**5.231**	ug/L	0.040	0	226	317106	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 19:23:26
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	29680	2	Standard
	Cl	**37**		ug/L			3111826	3174111	2	Standard
⌈>	**Sc**	**45**		ug/L			446275	508088	1	Standard
|	**V**	**51**	**12.524**	ug/L	0.371	2	6985	311180	1	Standard
|	**V-1**	**51**	**12.500**	ug/L	0.369	2	122	306455	1	Standard
|	[redacted]	**52**	[redacted]	ug/L	0.117	1	20379	163508	1	Standard
|	**Cr**	**53**	**7.045**	ug/L	0.142	2	108	16965	1	Standard
⌊	**Mn**	**55**	**64.721**	ug/L	2.418	3	701	1906024	2	Standard
⌈>	**Ge**	**72**		ug/L			19285	20129	2	KED
|	**Ni**	**60**	**5.329**	ug/L	0.134	2	7	5120	2	KED
|	**Ni**	**62**	**5.741**	ug/L	0.224	3	3	902	3	KED
|	**Cu**	**63**	**11.590**	ug/L	0.544	4	37	33199	2	KED
|	**Cu**	**65**	**11.464**	ug/L	0.314	2	17	16298	1	KED
|	**Zn**	**66**	**28.087**	ug/L	0.900	3	24	9482	0	KED
|	**Zn**	**67**	**27.505**	ug/L	1.607	5	4	1551	5	KED
|	**As**	**75**	**2.525**	ug/L	0.183	7	3	429	4	KED
⌊	**Se**	**78**	**0.701**	ug/L	0.106	15	9	22	10	KED
	Y	**89**		ug/L			287409	395071	2	Standard
	Kr	**83**		ug/L			52	64	13	Standard
⌈>	**In-1**	**115**		ug/L			5508	5633	2	KED
|	**Cd**	**111**	**0.065**	ug/L	0.027	41	4	16	29	KED
⌊	**Cd**	**114**	**0.065**	ug/L	0.016	24	1	32	22	KED
⌈>	**In**	**115**		ug/L			456477	473297	1	Standard
|	**Ag**	**107**	**0.042**	ug/L	0.000	1	46	889	1	Standard
|	**Sb**	**121**	**-0.008**	ug/L	0.001	9	466	369	4	Standard
|	**Sb**	**123**	**-0.006**	ug/L	0.002	32	343	291	8	Standard
|	**Ba**	**135**	**14.664**	ug/L	0.172	1	10	61765	0	Standard
⌊	**Ba**	**137**	**15.306**	ug/L	0.424	2	19	108367	2	Standard
⌈>	**Tb**	**159**		ug/L			710909	772108	2	Standard
⌊	**Pb**	**208**	**6.315**	ug/L	0.089	1	226	381080	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 19:28:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	30408	4	Standard
	Cl	**37**		ug/L			3111826	3171994	2	Standard
⌈>	**Sc**	**45**		ug/L			446275	520709	2	Standard
|	**V**	**51**	**14.340**	ug/L	0.472	3	6985	363916	1	Standard
|	**V-1**	**51**	**14.235**	ug/L	0.454	3	122	357589	1	Standard
|	[redacted]	**52**	[redacted]	ug/L	0.175	2	20379	166178	1	Standard
|	**Cr**	**53**	**6.788**	ug/L	0.164	2	108	16754	0	Standard
⌊	**Mn**	**55**	**68.578**	ug/L	2.999	4	701	2069049	2	Standard
⌈>	**Ge**	**72**		ug/L			19285	19443	1	KED
|	**Ni**	**60**	**5.588**	ug/L	0.133	2	7	5187	1	KED
|	**Ni**	**62**	**5.583**	ug/L	0.164	2	3	847	1	KED
|	**Cu**	**63**	**12.237**	ug/L	0.279	2	37	33887	4	KED
|	**Cu**	**65**	**12.300**	ug/L	0.189	1	17	16894	1	KED
|	**Zn**	**66**	**26.686**	ug/L	0.837	3	24	8707	2	KED
|	**Zn**	**67**	**25.499**	ug/L	0.443	1	4	1390	2	KED
|	**As**	**75**	**2.572**	ug/L	0.031	1	3	422	2	KED
⌊	**Se**	**78**	**0.590**	ug/L	0.176	29	9	19	14	KED
	Y	**89**		ug/L			287409	416688	1	Standard
	Kr	**83**		ug/L			52	80	16	Standard
⌈>	**In-1**	**115**		ug/L			5508	5592	2	KED
|	**Cd**	**111**	**0.070**	ug/L	0.005	7	4	17	8	KED
⌊	**Cd**	**114**	**0.067**	ug/L	0.046	68	1	34	68	KED
⌈>	**In**	**115**		ug/L			456477	482386	1	Standard
|	**Ag**	**107**	**0.054**	ug/L	0.003	4	46	1158	3	Standard
|	**Sb**	**121**	**-0.016**	ug/L	0.002	9	466	256	8	Standard
|	**Sb**	**123**	**-0.017**	ug/L	0.001	6	343	169	6	Standard
|	**Ba**	**135**	**17.380**	ug/L	0.317	1	10	74607	0	Standard
⌊	**Ba**	**137**	**17.658**	ug/L	0.442	2	19	127410	1	Standard
⌈>	**Tb**	**159**		ug/L			710909	771877	0	Standard
⌊	**Pb**	**208**	**5.877**	ug/L	0.014	0	226	354628	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 19:33:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	30139	4	Standard
	Cl	**37**		ug/L			3111826	3189768	3	Standard
>	**Sc**	**45**		ug/L			446275	522624	0	Standard
	V	**51**	**14.069**	ug/L	0.180	1	6985	358667	0	Standard
	V-1	**51**	**14.023**	ug/L	0.172	1	122	353738	0	Standard
	[redacted]	**52**	[redacted]	ug/L	0.180	2	20379	155622	2	Standard
	Cr	**53**	**6.457**	ug/L	0.097	1	108	16009	0	Standard
	Mn	**55**	**65.704**	ug/L	1.402	2	701	1990787	1	Standard
>	**Ge**	**72**		ug/L			19285	19508	1	KED
	Ni	**60**	**5.418**	ug/L	0.247	4	7	5045	3	KED
	Ni	**62**	**5.316**	ug/L	0.432	8	3	810	8	KED
	Cu	**63**	**11.666**	ug/L	0.426	3	37	32397	2	KED
	Cu	**65**	**11.666**	ug/L	0.071	0	17	16080	1	KED
	Zn	**66**	**27.643**	ug/L	0.691	2	24	9048	1	KED
	Zn	**67**	**27.273**	ug/L	2.054	7	4	1491	7	KED
	As	**75**	**2.408**	ug/L	0.112	4	3	397	3	KED
	Se	**78**	**0.680**	ug/L	0.182	26	9	21	15	KED
	Y	**89**		ug/L			287409	424531	1	Standard
	Kr	**83**		ug/L			52	81	29	Standard
>	**In-1**	**115**		ug/L			5508	5390	3	KED
	Cd	**111**	**0.070**	ug/L	0.013	18	4	17	16	KED
	Cd	**114**	**0.090**	ug/L	0.026	28	1	42	24	KED
>	**In**	**115**		ug/L			456477	468793	0	Standard
	Ag	**107**	**0.049**	ug/L	0.002	4	46	1031	5	Standard
	Sb	**121**	**-0.020**	ug/L	0.003	14	466	196	20	Standard
	Sb	**123**	**-0.019**	ug/L	0.001	6	343	152	8	Standard
	Ba	**135**	**17.320**	ug/L	0.133	0	10	72269	1	Standard
	Ba	**137**	**17.596**	ug/L	0.032	0	19	123412	0	Standard
>	**Tb**	**159**		ug/L			710909	778555	2	Standard
	Pb	**208**	**4.951**	ug/L	0.134	2	226	301239	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 19:38:02
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	31076	1	Standard
	Cl	**37**		ug/L			3111826	3159906	2	Standard
>	**Sc**	**45**		ug/L			446275	522493	2	Standard
	V	**51**	**12.859**	ug/L	0.111	0	6985	328440	1	Standard
	V-1	**51**	**12.811**	ug/L	0.129	1	122	323058	1	Standard
	[redacted]	**52**	[redacted]	ug/L	0.088	1	20379	149269	0	Standard
	Cr	**53**	**6.110**	ug/L	0.150	2	108	15146	0	Standard
	Mn	**55**	**59.294**	ug/L	0.666	1	701	1796640	3	Standard
>	**Ge**	**72**		ug/L			19285	19805	0	KED
	Ni	**60**	**4.902**	ug/L	0.205	4	7	4636	3	KED
	Ni	**62**	**4.712**	ug/L	0.087	1	3	729	2	KED
	Cu	**63**	**11.407**	ug/L	0.462	4	37	32179	4	KED
	Cu	**65**	**11.867**	ug/L	0.199	1	17	16605	1	KED
	Zn	**66**	**26.152**	ug/L	0.723	2	24	8695	3	KED
	Zn	**67**	**24.616**	ug/L	0.438	1	4	1367	2	KED
	As	**75**	**2.822**	ug/L	0.065	2	3	472	3	KED
	Se	**78**	**0.734**	ug/L	0.192	26	9	22	13	KED
	Y	**89**		ug/L			287409	398175	0	Standard
	Kr	**83**		ug/L			52	73	15	Standard
>	**In-1**	**115**		ug/L			5508	5469	1	KED
	Cd	**111**	**0.074**	ug/L	0.039	52	4	18	42	KED
	Cd	**114**	**0.079**	ug/L	0.018	22	1	38	21	KED
>	**In**	**115**		ug/L			456477	479912	1	Standard
	Ag	**107**	**0.056**	ug/L	0.009	16	46	1195	14	Standard
	Sb	**121**	**-0.017**	ug/L	0.001	4	466	243	5	Standard
	Sb	**123**	**-0.014**	ug/L	0.002	11	343	201	7	Standard
	Ba	**135**	**15.517**	ug/L	0.538	3	10	66257	1	Standard
	Ba	**137**	**15.697**	ug/L	0.460	2	19	112671	1	Standard
>	**Tb**	**159**		ug/L			710909	758780	1	Standard
	Pb	**208**	**5.819**	ug/L	0.109	1	226	345124	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 19:42:54
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	31474	3	Standard
	Cl	**37**		ug/L			3111826	3277601	1	Standard
⌈>	**Sc**	**45**		ug/L			446275	510914	0	Standard
|	**V**	**51**	**13.462**	ug/L	0.163	1	6985	335855	0	Standard
|	**V-1**	**51**	**13.447**	ug/L	0.145	1	122	331618	0	Standard
|	[redacted]	**52**	[redacted]	ug/L	0.103	1	20379	184727	0	Standard
|	**Cr**	**53**	**8.066**	ug/L	0.048	0	108	19519	0	Standard
⌊	**Mn**	**55**	**65.439**	ug/L	0.754	1	701	1938451	0	Standard
⌈>	**Ge**	**72**		ug/L			19285	19517	0	KED
|	**Ni**	**60**	**6.248**	ug/L	0.163	2	7	5822	1	KED
|	**Ni**	**62**	**6.390**	ug/L	0.389	6	3	974	6	KED
|	**Cu**	**63**	**19.122**	ug/L	0.438	2	37	53118	1	KED
|	**Cu**	**65**	**19.652**	ug/L	0.537	2	17	27085	2	KED
|	**Zn**	**66**	**62.450**	ug/L	2.012	3	24	20421	2	KED
|	**Zn**	**67**	**59.360**	ug/L	1.096	1	4	3243	2	KED
|	**As**	**75**	**2.914**	ug/L	0.055	1	3	480	2	KED
⌊	**Se**	**78**	**0.658**	ug/L	0.182	27	9	20	15	KED
	Y	**89**		ug/L			287409	408507	0	Standard
	Kr	**83**		ug/L			52	85	7	Standard
⌈>	**In-1**	**115**		ug/L			5508	5412	2	KED
|	**Cd**	**111**	**0.137**	ug/L	0.046	33	4	29	28	KED
⌊	**Cd**	**114**	**0.122**	ug/L	0.041	34	1	57	34	KED
⌈>	**In**	**115**		ug/L			456477	467881	0	Standard
|	**Ag**	**107**	**0.084**	ug/L	0.001	1	46	1727	0	Standard
|	**Sb**	**121**	**-0.012**	ug/L	0.003	25	466	313	13	Standard
|	**Sb**	**123**	**-0.010**	ug/L	0.001	11	343	239	5	Standard
|	**Ba**	**135**	**20.917**	ug/L	0.196	0	10	87101	0	Standard
⌊	**Ba**	**137**	**21.212**	ug/L	0.338	1	19	148476	1	Standard
⌈>	**Tb**	**159**		ug/L			710909	768310	2	Standard
⌊	**Pb**	**208**	**15.538**	ug/L	0.456	2	226	932420	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 19:47:45
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	31832	0	Standard
	Cl	**37**		ug/L			3111826	3229966	1	Standard
⌈>	**Sc**	**45**		ug/L			446275	525681	1	Standard
|	**V**	**51**	**13.041**	ug/L	0.152	1	6985	334980	0	Standard
|	**V-1**	**51**	**13.020**	ug/L	0.150	1	122	330332	0	Standard
|	[redacted]	**52**	[redacted]	ug/L	0.177	2	20379	190109	1	Standard
|	**Cr**	**53**	**8.032**	ug/L	0.144	1	108	19995	1	Standard
⌊	**Mn**	**55**	**60.730**	ug/L	1.269	2	701	1850797	1	Standard
⌈>	**Ge**	**72**		ug/L			19285	19418	2	KED
|	**Ni**	**60**	**5.982**	ug/L	0.217	3	7	5542	0	KED
|	**Ni**	**62**	**6.208**	ug/L	0.324	5	3	940	2	KED
|	**Cu**	**63**	**24.040**	ug/L	0.916	3	37	66411	3	KED
|	**Cu**	**65**	**24.422**	ug/L	1.199	4	17	33456	2	KED
|	**Zn**	**66**	**68.949**	ug/L	2.330	3	24	22419	0	KED
|	**Zn**	**67**	**66.105**	ug/L	3.105	4	4	3590	2	KED
|	**As**	**75**	**3.003**	ug/L	0.257	8	3	491	6	KED
⌊	**Se**	**78**	**0.592**	ug/L	0.112	18	9	19	11	KED
	Y	**89**		ug/L			287409	400489	3	Standard
	Kr	**83**		ug/L			52	71	16	Standard
⌈>	**In-1**	**115**		ug/L			5508	5456	2	KED
|	**Cd**	**111**	**0.171**	ug/L	0.049	28	4	36	25	KED
⌊	**Cd**	**114**	**0.125**	ug/L	0.012	9	1	59	11	KED
⌈>	**In**	**115**		ug/L			456477	469573	0	Standard
|	**Ag**	**107**	**0.135**	ug/L	0.005	3	46	2748	3	Standard
|	**Sb**	**121**	**-0.015**	ug/L	0.001	7	466	266	5	Standard
|	**Sb**	**123**	**-0.013**	ug/L	0.002	14	343	214	9	Standard
|	**Ba**	**135**	**17.691**	ug/L	0.387	2	10	73935	1	Standard
⌊	**Ba**	**137**	**18.780**	ug/L	0.659	3	19	131928	3	Standard
⌈>	**Tb**	**159**		ug/L			710909	763822	1	Standard
⌊	**Pb**	**208**	**23.609**	ug/L	0.280	1	226	1408874	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 19:52:37
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	29632	4	Standard
	Cl	**37**		ug/L			3111826	3165904	1	Standard
>	**Sc**	**45**		ug/L			446275	513477	2	Standard
	V	**51**	**13.501**	ug/L	0.384	2	6985	338376	1	Standard
	V-1	**51**	**13.479**	ug/L	0.357	2	122	333940	1	Standard
	[redacted]	**52**	[redacted]	ug/L	0.193	3	20379	152819	1	Standard
	Cr	**53**	**6.508**	ug/L	0.191	2	108	15850	3	Standard
	Mn	**55**	**59.203**	ug/L	1.717	2	701	1761820	0	Standard
>	**Ge**	**72**		ug/L			19285	19841	1	KED
	Ni	**60**	**5.537**	ug/L	0.068	1	7	5246	0	KED
	Ni	**62**	**5.718**	ug/L	0.360	6	3	885	5	KED
	Cu	**63**	**9.526**	ug/L	0.183	1	37	26918	1	KED
	Cu	**65**	**9.591**	ug/L	0.291	3	17	13445	1	KED
	Zn	**66**	**25.262**	ug/L	0.811	3	24	8413	3	KED
	Zn	**67**	**24.341**	ug/L	0.311	1	4	1354	2	KED
	As	**75**	**2.299**	ug/L	0.060	2	3	385	1	KED
	Se	**78**	**0.543**	ug/L	0.251	46	9	19	22	KED
	Y	**89**		ug/L			287409	413091	1	Standard
	Kr	**83**		ug/L			52	75	12	Standard
>	**In-1**	**115**		ug/L			5508	5641	2	KED
	Cd	**111**	**0.056**	ug/L	0.025	43	4	15	32	KED
	Cd	**114**	**0.048**	ug/L	0.017	34	1	24	32	KED
>	**In**	**115**		ug/L			456477	475831	0	Standard
	Ag	**107**	**0.047**	ug/L	0.005	10	46	1007	9	Standard
	Sb	**121**	**-0.025**	ug/L	0.001	4	466	135	11	Standard
	Sb	**123**	**-0.022**	ug/L	0.001	3	343	116	7	Standard
	Ba	**135**	**16.826**	ug/L	0.403	2	10	71262	2	Standard
	Ba	**137**	**17.156**	ug/L	0.276	1	19	122127	1	Standard
>	**Tb**	**159**		ug/L			710909	766550	2	Standard
	Pb	**208**	**5.031**	ug/L	0.080	1	226	301433	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 19:58:34
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	25993	2	Standard
	Cl	**37**		ug/L			3111826	3312103	2	Standard
⌈>	**Sc**	**45**		ug/L			446275	462035	1	Standard
|	**V**	**51**	**47.263**	ug/L	0.602	1	6985	1048142	0	Standard
|	**V-1**	**51**	**46.881**	ug/L	0.772	1	122	1045120	1	Standard
|	**Cr**	**52**	**49.123**	ug/L	0.876	1	20379	929181	0	Standard
|	**Cr**	**53**	**47.798**	ug/L	1.222	2	108	104031	1	Standard
⌊	**Mn**	**55**	**50.430**	ug/L	0.110	0	701	1351134	1	Standard
⌈>	**Ge**	**72**		ug/L			19285	19664	1	KED
|	**Ni**	**60**	**45.322**	ug/L	0.626	1	7	42500	0	KED
|	**Ni**	**62**	**47.231**	ug/L	1.341	2	3	7229	2	KED
|	**Cu**	**63**	**46.985**	ug/L	1.607	3	37	131424	2	KED
|	**Cu**	**65**	**47.222**	ug/L	0.618	1	17	65551	1	KED
|	**Zn**	**66**	**47.697**	ug/L	2.147	4	24	15718	3	KED
|	**Zn**	**67**	**47.935**	ug/L	1.307	2	4	2639	2	KED
|	**As**	**75**	**49.116**	ug/L	0.823	1	3	8100	0	KED
⌊	**Se**	**78**	**50.427**	ug/L	1.085	2	9	869	3	KED
	Y	**89**		ug/L			287409	299262	1	Standard
	Kr	**83**		ug/L			52	50	7	Standard
⌈>	**In-1**	**115**		ug/L			5508	5397	3	KED
|	**Cd**	**111**	**50.146**	ug/L	0.929	1	4	9350	1	KED
⌊	**Cd**	**114**	**49.210**	ug/L	0.526	1	1	22818	3	KED
⌈>	**In**	**115**		ug/L			456477	461318	1	Standard
|	**Ag**	**107**	**46.161**	ug/L	0.527	1	46	908850	0	Standard
|	**Sb**	**121**	**48.379**	ug/L	0.688	1	466	669687	1	Standard
|	**Sb**	**123**	**48.583**	ug/L	0.820	1	343	514703	0	Standard
|	**Ba**	**135**	**50.044**	ug/L	1.112	2	10	205398	0	Standard
⌊	**Ba**	**137**	**51.226**	ug/L	1.622	3	19	353403	2	Standard
⌈>	**Tb**	**159**		ug/L			710909	754648	2	Standard
⌊	**Pb**	**208**	**46.594**	ug/L	0.974	2	226	2746254	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 20:08:32
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	25936	5	Standard
	Cl	**37**		ug/L			3111826	3221929	1	Standard
⎡>	**Sc**	**45**		ug/L			446275	448764	2	Standard
⎢	**V**	**51**	**0.004**	ug/L	0.012	296	6985	7107	2	Standard
⎢	**V-1**	**51**	**-0.001**	ug/L	0.001	34	122	91	13	Standard
⎢	**Cr**	**52**	**0.017**	ug/L	0.043	255	20379	20782	2	Standard
⎢	**Cr**	**53**	**-0.002**	ug/L	0.003	136	108	104	3	Standard
⎣	**Mn**	**55**	**-0.002**	ug/L	0.001	65	701	651	3	Standard
⎡>	**Ge**	**72**		ug/L			19285	19330	2	KED
⎢	**Ni**	**60**	**0.001**	ug/L	0.007	498	7	8	68	KED
⎢	**Ni**	**62**	**-0.004**	ug/L	0.020	485	3	2	114	KED
⎢	**Cu**	**63**	**-0.002**	ug/L	0.004	164	37	31	33	KED
⎢	**Cu**	**65**	**0.006**	ug/L	0.006	114	17	25	34	KED
⎢	**Zn**	**66**	**-0.004**	ug/L	0.026	674	24	23	33	KED
⎢	**Zn**	**67**	**0.058**	ug/L	0.032	55	4	7	25	KED
⎢	**As**	**75**	**0.014**	ug/L	0.002	17	3	5	8	KED
⎣	**Se**	**78**	**0.018**	ug/L	0.031	170	9	10	7	KED
	Y	**89**		ug/L			287409	279318	0	Standard
	Kr	**83**		ug/L			52	55	33	Standard
⎡>	**In-1**	**115**		ug/L			5508	5410	1	KED
⎢	**Cd**	**111**	**-0.003**	ug/L	0.011	351	4	3	56	KED
⎣	**Cd**	**114**	**0.003**	ug/L	0.006	254	1	2	127	KED
⎡>	**In**	**115**		ug/L			456477	457905	1	Standard
⎢	**Ag**	**107**	**0.001**	ug/L	0.001	83	46	62	21	Standard
⎢	**Sb**	**121**	**0.071**	ug/L	0.003	4	466	1448	1	Standard
⎢	**Sb**	**123**	**0.071**	ug/L	0.005	7	343	1088	4	Standard
⎢	**Ba**	**135**	**0.001**	ug/L	0.001	81	10	15	24	Standard
⎣	**Ba**	**137**	**0.002**	ug/L	0.000	21	19	33	8	Standard
⎡>	**Tb**	**159**		ug/L			710909	700932	4	Standard
⎣	**Pb**	**208**	**0.004**	ug/L	0.000	6	226	447	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 20:14:59
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	31108	4	Standard
	Cl	**37**		ug/L			3111826	3200967	1	Standard
⌈>	**Sc**	**45**		ug/L			446275	530457	2	Standard
|	**V**	**51**	**14.168**	ug/L	0.589	4	6985	366394	2	Standard
|	**V-1**	**51**	**14.135**	ug/L	0.571	4	122	361731	2	Standard
|	[redacted]	**52**	[redacted]	ug/L	0.199	3	20379	157361	0	Standard
|	**Cr**	**53**	**6.477**	ug/L	0.245	3	108	16290	1	Standard
⌊	**Mn**	**55**	**68.103**	ug/L	2.272	3	701	2093566	1	Standard
⌈>	**Ge**	**72**		ug/L			19285	20033	3	KED
|	**Ni**	**60**	**5.496**	ug/L	0.189	3	7	5254	1	KED
|	**Ni**	**62**	**5.581**	ug/L	0.113	2	3	873	4	KED
|	**Cu**	**63**	**11.725**	ug/L	0.575	4	37	33416	1	KED
|	**Cu**	**65**	**11.730**	ug/L	0.487	4	17	16592	2	KED
|	**Zn**	**66**	**23.794**	ug/L	1.267	5	24	7996	3	KED
|	**Zn**	**67**	**23.804**	ug/L	0.586	2	4	1338	5	KED
|	**As**	**75**	**2.531**	ug/L	0.266	10	3	427	7	KED
⌊	**Se**	**78**	**0.613**	ug/L	0.160	26	9	20	10	KED
	Y	**89**		ug/L			287409	426097	1	Standard
	Kr	**83**		ug/L			52	75	8	Standard
⌈>	**In-1**	**115**		ug/L			5508	5672	1	KED
|	**Cd**	**111**	**0.092**	ug/L	0.006	6	4	22	6	KED
⌊	**Cd**	**114**	**0.090**	ug/L	0.006	6	1	45	5	KED
⌈>	**In**	**115**		ug/L			456477	476671	0	Standard
|	**Ag**	**107**	**0.064**	ug/L	0.004	5	46	1342	4	Standard
|	**Sb**	**121**	**0.001**	ug/L	0.001	170	466	495	3	Standard
|	**Sb**	**123**	**0.001**	ug/L	0.001	160	343	367	3	Standard
|	**Ba**	**135**	**18.366**	ug/L	0.353	1	10	77910	1	Standard
⌊	**Ba**	**137**	**18.794**	ug/L	0.265	1	19	134020	1	Standard
⌈>	**Tb**	**159**		ug/L			710909	788231	1	Standard
⌊	**Pb**	**208**	**6.082**	ug/L	0.091	1	226	374714	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 20:19:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	30519	1	Standard
	Cl	**37**		ug/L			3111826	3148026	0	Standard
>	**Sc**	**45**		ug/L			446275	510761	0	Standard
	V	**51**	**13.814**	ug/L	0.217	1	6985	344314	1	Standard
	V-1	**51**	**13.763**	ug/L	0.176	1	122	339300	0	Standard
	[redacted]	**52**	[redacted]	ug/L	0.221	3	20379	154137	2	Standard
	Cr	**53**	**6.527**	ug/L	0.088	1	108	15814	1	Standard
	Mn	**55**	**64.733**	ug/L	0.488	0	701	1916981	0	Standard
>	**Ge**	**72**		ug/L			19285	19914	2	KED
	Ni	**60**	**5.351**	ug/L	0.149	2	7	5087	0	KED
	Ni	**62**	**5.268**	ug/L	0.135	2	3	819	3	KED
	Cu	**63**	**11.703**	ug/L	0.190	1	37	33180	0	KED
	Cu	**65**	**12.031**	ug/L	0.350	2	17	16920	1	KED
	Zn	**66**	**25.824**	ug/L	1.629	6	24	8627	5	KED
	Zn	**67**	**24.774**	ug/L	1.408	5	4	1382	3	KED
	As	**75**	**2.811**	ug/L	0.072	2	3	472	2	KED
	Se	**78**	**0.729**	ug/L	0.182	24	9	22	11	KED
	Y	**89**		ug/L			287409	402854	0	Standard
	Kr	**83**		ug/L			52	57	16	Standard
>	**In-1**	**115**		ug/L			5508	5407	3	KED
	Cd	**111**	**0.068**	ug/L	0.024	35	4	16	29	KED
	Cd	**114**	**0.080**	ug/L	0.008	10	1	38	9	KED
>	**In**	**115**		ug/L			456477	473821	1	Standard
	Ag	**107**	**0.049**	ug/L	0.001	1	46	1033	0	Standard
	Sb	**121**	**-0.010**	ug/L	0.000	4	466	343	2	Standard
	Sb	**123**	**-0.007**	ug/L	0.001	12	343	283	3	Standard
	Ba	**135**	**15.453**	ug/L	0.395	2	10	65169	2	Standard
	Ba	**137**	**15.701**	ug/L	0.232	1	19	111301	1	Standard
>	**Tb**	**159**		ug/L			710909	772688	1	Standard
	Pb	**208**	**5.238**	ug/L	0.095	1	226	316398	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 20:24:42
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	30542	6	Standard
	Cl	**37**		ug/L			3111826	3263801	1	Standard
>	**Sc**	**45**		ug/L			446275	514666	1	Standard
	V	**51**	**14.402**	ug/L	0.237	1	6985	361379	1	Standard
	V-1	**51**	**14.344**	ug/L	0.209	1	122	356304	1	Standard
	[redacted]	**52**	[redacted]	ug/L	0.096	1	20379	164812	1	Standard
	Cr	**53**	**6.968**	ug/L	0.105	1	108	17000	0	Standard
	Mn	**55**	**65.253**	ug/L	0.334	0	701	1947125	0	Standard
>	**Ge**	**72**		ug/L			19285	19878	2	KED
	Ni	**60**	**5.468**	ug/L	0.030	0	7	5190	2	KED
	Ni	**62**	**5.557**	ug/L	0.247	4	3	862	4	KED
	Cu	**63**	**12.660**	ug/L	0.349	2	37	35831	3	KED
	Cu	**65**	**12.809**	ug/L	0.484	3	17	17981	2	KED
	Zn	**66**	**27.219**	ug/L	0.795	2	24	9077	0	KED
	Zn	**67**	**25.430**	ug/L	0.737	2	4	1417	3	KED
	As	**75**	**2.694**	ug/L	0.073	2	3	452	1	KED
	Se	**78**	**0.564**	ug/L	0.227	40	9	19	17	KED
	Y	**89**		ug/L			287409	404317	1	Standard
	Kr	**83**		ug/L			52	66	7	Standard
>	**In-1**	**115**		ug/L			5508	5645	1	KED
	Cd	**111**	**0.060**	ug/L	0.034	57	4	15	42	KED
	Cd	**114**	**0.072**	ug/L	0.019	27	1	35	25	KED
>	**In**	**115**		ug/L			456477	470583	0	Standard
	Ag	**107**	**0.047**	ug/L	0.001	2	46	991	2	Standard
	Sb	**121**	**-0.018**	ug/L	0.003	19	466	230	21	Standard
	Sb	**123**	**-0.015**	ug/L	0.001	7	343	195	6	Standard
	Ba	**135**	**15.761**	ug/L	0.422	2	10	66014	2	Standard
	Ba	**137**	**16.116**	ug/L	0.165	1	19	113463	1	Standard
>	**Tb**	**159**		ug/L			710909	756862	2	Standard
	Pb	**208**	**5.980**	ug/L	0.120	1	226	353757	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 20:29:34
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			24249	29945	4	Standard
Cl	**37**		ug/L			3111826	3187912	1	Standard
Sc	**45**		ug/L			446275	509353	1	Standard
V	**51**	**22.913**	ug/L	0.598	2	6985	564200	1	Standard
V-1	**51**	**22.856**	ug/L	0.557	2	122	561709	1	Standard
[redacted]	**52**	[redacted]	ug/L	0.391	2	20379	408770	0	Standard
Cr	**53**	**18.889**	ug/L	0.478	2	108	45394	1	Standard
Mn	**55**	**74.698**	ug/L	1.603	2	701	2205573	1	Standard
Ge	**72**		ug/L			19285	19668	1	KED
Ni	**60**	**15.140**	ug/L	0.253	1	7	14205	1	KED
Ni	**62**	**15.330**	ug/L	0.413	2	3	2348	0	KED
Cu	**63**	**22.576**	ug/L	0.748	3	37	63176	2	KED
Cu	**65**	**23.188**	ug/L	0.494	2	17	32203	2	KED
Zn	**66**	**62.353**	ug/L	2.115	3	24	20543	1	KED
Zn	**67**	**57.318**	ug/L	0.723	1	4	3155	0	KED
As	**75**	**12.526**	ug/L	0.113	0	3	2069	1	KED
Se	**78**	**32.379**	ug/L	0.172	0	9	562	2	KED
Y	**89**		ug/L			287409	407864	3	Standard
Kr	**83**		ug/L			52	67	9	Standard
In-1	**115**		ug/L			5508	5498	1	KED
Cd	**111**	**10.262**	ug/L	0.240	2	4	1952	0	KED
Cd	**114**	**10.740**	ug/L	0.398	3	1	5072	2	KED
In	**115**		ug/L			456477	471444	1	Standard
Ag	**107**	**6.853**	ug/L	0.072	1	46	137966	2	Standard
Sb	**121**	**0.253**	ug/L	0.002	0	466	4055	0	Standard
Sb	**123**	**0.267**	ug/L	0.004	1	343	3247	0	Standard
Ba	**135**	**26.967**	ug/L	0.260	0	10	113158	2	Standard
Ba	**137**	**27.521**	ug/L	0.212	0	19	194085	0	Standard
Tb	**159**		ug/L			710909	766276	2	Standard
Pb	**208**	**16.711**	ug/L	0.350	2	226	1000274	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 20:34:26
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24249	29501	3	Standard
Cl	37		ug/L			3111826	3203463	1	Standard
> Sc	45		ug/L			446275	517177	1	Standard
V	51	23.103	ug/L	0.231	1	6985	577654	1	Standard
V-1	51	23.091	ug/L	0.094	0	122	576334	1	Standard
[redacted]	52	[redacted]	ug/L	0.509	3	20379	367930	2	Standard
Cr	53	16.855	ug/L	0.068	0	108	41153	1	Standard
Mn	55	72.949	ug/L	0.686	0	701	2187179	0	Standard
> Ge	72		ug/L			19285	20042	1	KED
Ni	60	14.952	ug/L	0.188	1	7	14295	0	KED
Ni	62	15.013	ug/L	0.240	1	3	2344	2	KED
Cu	63	21.439	ug/L	0.433	2	37	61156	2	KED
Cu	65	21.607	ug/L	0.174	0	17	30584	2	KED
Zn	66	56.448	ug/L	2.289	4	24	18951	2	KED
Zn	67	53.258	ug/L	1.229	2	4	2988	1	KED
As	75	12.286	ug/L	0.429	3	3	2067	1	KED
Se	78	32.054	ug/L	0.275	0	9	566	1	KED
Y	89		ug/L			287409	406784	0	Standard
Kr	83		ug/L			52	68	8	Standard
> In-1	115		ug/L			5508	5587	1	KED
Cd	111	10.275	ug/L	0.319	3	4	1987	2	KED
Cd	114	10.186	ug/L	0.351	3	1	4888	2	KED
> In	115		ug/L			456477	471978	0	Standard
Ag	107	6.854	ug/L	0.265	3	46	138115	3	Standard
Sb	121	0.296	ug/L	0.007	2	466	4664	1	Standard
Sb	123	0.289	ug/L	0.002	0	343	3482	0	Standard
Ba	135	26.220	ug/L	0.336	1	10	110134	0	Standard
Ba	137	26.487	ug/L	0.631	2	19	187006	2	Standard
> Tb	159		ug/L			710909	766970	2	Standard
Pb	208	15.356	ug/L	0.313	2	226	920015	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLC0692-PS2
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, March 31, 2023 20:39:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	31359	1	Standard
	Cl	**37**		ug/L			3111826	3252562	2	Standard
⌈>	**Sc**	**45**		ug/L			446275	522018	2	Standard
|	**V**	**51**	**34.260**	ug/L	1.191	3	6985	860198	1	Standard
|	**V-1**	**51**	**34.373**	ug/L	1.209	3	122	865315	0	Standard
|	**Cr**	**52**	**27.762**	ug/L	0.426	1	20379	603603	1	Standard
|	**Cr**	**53**	**28.388**	ug/L	0.870	3	108	69843	2	Standard
⌊	**Mn**	**55**	**85.968**	ug/L	3.665	4	701	2599788	1	Standard
⌈>	**Ge**	**72**		ug/L			19285	19564	3	KED
|	**Ni**	**60**	**30.099**	ug/L	0.873	2	7	28091	4	KED
|	**Ni**	**62**	**30.435**	ug/L	1.542	5	3	4633	3	KED
|	**Cu**	**63**	**36.581**	ug/L	1.141	3	37	101773	1	KED
|	**Cu**	**65**	**37.681**	ug/L	0.632	1	17	52050	3	KED
|	**Zn**	**66**	**105.248**	ug/L	1.349	1	24	34482	2	KED
|	**Zn**	**67**	**98.744**	ug/L	2.955	2	4	5402	0	KED
|	**As**	**75**	**27.466**	ug/L	0.818	2	3	4506	1	KED
⌊	**Se**	**78**	**80.994**	ug/L	3.634	4	9	1382	1	KED
	Y	**89**		ug/L			287409	400403	0	Standard
	Kr	**83**		ug/L			52	81	9	Standard
⌈>	**In-1**	**115**		ug/L			5508	5590	3	KED
|	**Cd**	**111**	**24.704**	ug/L	0.385	1	4	4774	2	KED
⌊	**Cd**	**114**	**24.285**	ug/L	0.482	1	1	11660	1	KED
⌈>	**In**	**115**		ug/L			456477	472089	1	Standard
|	**Ag**	**107**	**22.667**	ug/L	0.190	0	46	456742	1	Standard
|	**Sb**	**121**	**-0.016**	ug/L	0.002	11	466	253	8	Standard
|	**Sb**	**123**	**-0.015**	ug/L	0.003	21	343	196	17	Standard
|	**Ba**	**135**	**39.450**	ug/L	0.907	2	10	165698	0	Standard
⌊	**Ba**	**137**	**40.560**	ug/L	1.469	3	19	286310	1	Standard
⌈>	**Tb**	**159**		ug/L			710909	749555	1	Standard
⌊	**Pb**	**208**	**29.017**	ug/L	0.320	1	226	1699329	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 20:44:09
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	31698	1	Standard
	Cl	**37**		ug/L			3111826	3199360	3	Standard
⌈>	**Sc**	**45**		ug/L			446275	527685	3	Standard
|	**V**	**51**	**11.667**	ug/L	0.308	2	6985	301600	0	Standard
|	**V-1**	**51**	**11.631**	ug/L	0.259	2	122	296134	0	Standard
|	[redacted]	**52**	[redacted]	ug/L	0.295	5	20379	133533	2	Standard
|	**Cr**	**53**	**5.323**	ug/L	0.128	2	108	13341	0	Standard
⌊	**Mn**	**55**	**56.227**	ug/L	1.906	3	701	1719698	2	Standard
⌈>	**Ge**	**72**		ug/L			19285	20394	1	KED
|	**Ni**	**60**	**4.429**	ug/L	0.297	6	7	4312	5	KED
|	**Ni**	**62**	**4.724**	ug/L	0.156	3	3	753	3	KED
|	**Cu**	**63**	**7.965**	ug/L	0.262	3	37	23138	2	KED
|	**Cu**	**65**	**8.182**	ug/L	0.116	1	17	11793	0	KED
|	**Zn**	**66**	**17.998**	ug/L	0.905	5	24	6166	3	KED
|	**Zn**	**67**	**19.106**	ug/L	1.128	5	4	1093	4	KED
|	**As**	**75**	**2.023**	ug/L	0.074	3	3	349	3	KED
⌊	**Se**	**78**	**0.593**	ug/L	0.046	7	9	20	4	KED
	Y	**89**		ug/L			287409	396806	2	Standard
	Kr	**83**		ug/L			52	67	12	Standard
⌈>	**In-1**	**115**		ug/L			5508	5684	0	KED
|	**Cd**	**111**	**0.036**	ug/L	0.025	69	4	11	44	KED
⌊	**Cd**	**114**	**0.062**	ug/L	0.015	24	1	31	23	KED
⌈>	**In**	**115**		ug/L			456477	476933	1	Standard
|	**Ag**	**107**	**0.036**	ug/L	0.002	4	46	772	4	Standard
|	**Sb**	**121**	**-0.021**	ug/L	0.001	2	466	179	4	Standard
|	**Sb**	**123**	**-0.020**	ug/L	0.001	3	343	141	3	Standard
|	**Ba**	**135**	**13.183**	ug/L	0.261	1	10	55951	0	Standard
⌊	**Ba**	**137**	**13.487**	ug/L	0.173	1	19	96248	2	Standard
⌈>	**Tb**	**159**		ug/L			710909	761100	3	Standard
⌊	**Pb**	**208**	**3.407**	ug/L	0.105	3	226	202673	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 20:49:01
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	32597	2	Standard
	Cl	**37**		ug/L			3111826	3145021	3	Standard
>	**Sc**	**45**		ug/L			446275	506349	0	Standard
	V	**51**	**12.400**	ug/L	0.271	2	6985	307222	1	Standard
	V-1	**51**	**12.331**	ug/L	0.232	1	122	301379	1	Standard
	[redacted]	**52**	[redacted]	ug/L	0.085	1	20379	142952	0	Standard
	Cr	**53**	**5.942**	ug/L	0.037	0	108	14284	1	Standard
	Mn	**55**	**62.344**	ug/L	0.821	1	701	1830445	1	Standard
>	**Ge**	**72**		ug/L			19285	19110	4	KED
	Ni	**60**	**5.034**	ug/L	0.278	5	7	4589	3	KED
	Ni	**62**	**5.348**	ug/L	0.499	9	3	796	4	KED
	Cu	**63**	**12.771**	ug/L	0.597	4	37	34704	1	KED
	Cu	**65**	**12.574**	ug/L	0.898	7	17	16941	3	KED
	Zn	**66**	**25.124**	ug/L	0.586	2	24	8055	2	KED
	Zn	**67**	**23.942**	ug/L	2.109	8	4	1280	5	KED
	As	**75**	**2.706**	ug/L	0.135	4	3	436	1	KED
	Se	**78**	**0.722**	ug/L	0.187	25	9	21	9	KED
	Y	**89**		ug/L			287409	390971	1	Standard
	Kr	**83**		ug/L			52	69	15	Standard
>	**In-1**	**115**		ug/L			5508	5710	1	KED
	Cd	**111**	**0.057**	ug/L	0.017	30	4	15	23	KED
	Cd	**114**	**0.093**	ug/L	0.018	19	1	46	17	KED
>	**In**	**115**		ug/L			456477	467123	0	Standard
	Ag	**107**	**0.057**	ug/L	0.003	4	46	1175	4	Standard
	Sb	**121**	**-0.024**	ug/L	0.001	3	466	141	8	Standard
	Sb	**123**	**-0.020**	ug/L	0.002	7	343	133	12	Standard
	Ba	**135**	**14.772**	ug/L	0.387	2	10	61423	3	Standard
	Ba	**137**	**15.125**	ug/L	0.185	1	19	105701	1	Standard
>	**Tb**	**159**		ug/L			710909	742709	2	Standard
	Pb	**208**	**5.518**	ug/L	0.185	3	226	320221	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 20:53:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	29643	4	Standard
	Cl	**37**		ug/L			3111826	3214480	2	Standard
⌈>	**Sc**	**45**		ug/L			446275	514268	2	Standard
|	**V**	**51**	**13.918**	ug/L	0.392	2	6985	349147	1	Standard
|	**V-1**	**51**	**13.946**	ug/L	0.382	2	122	346083	1	Standard
|	[redacted]	**52**	[redacted]	ug/L	0.253	2	20379	213005	1	Standard
|	**Cr**	**53**	**9.490**	ug/L	0.223	2	108	23089	1	Standard
⌊	**Mn**	**55**	**52.360**	ug/L	1.284	2	701	1561037	1	Standard
⌈>	**Ge**	**72**		ug/L			19285	19670	2	KED
|	**Ni**	**60**	**5.143**	ug/L	0.325	6	7	4827	4	KED
|	**Ni**	**62**	**5.244**	ug/L	0.120	2	3	805	2	KED
|	**Cu**	**63**	**11.969**	ug/L	0.160	1	37	33519	1	KED
|	**Cu**	**65**	**12.069**	ug/L	0.122	1	17	16771	1	KED
|	**Zn**	**66**	**29.939**	ug/L	1.165	3	24	9876	2	KED
|	**Zn**	**67**	**28.167**	ug/L	0.492	1	4	1553	3	KED
|	**As**	**75**	**2.935**	ug/L	0.059	2	3	487	0	KED
⌊	**Se**	**78**	**0.694**	ug/L	0.283	40	9	21	24	KED
	Y	**89**		ug/L			287409	399189	3	Standard
	Kr	**83**		ug/L			52	80	8	Standard
⌈>	**In-1**	**115**		ug/L			5508	5660	1	KED
|	**Cd**	**111**	**0.214**	ug/L	0.027	12	4	46	11	KED
⌊	**Cd**	**114**	**0.221**	ug/L	0.017	7	1	108	7	KED
⌈>	**In**	**115**		ug/L			456477	472475	1	Standard
|	**Ag**	**107**	**0.196**	ug/L	0.006	3	46	3992	1	Standard
|	**Sb**	**121**	**-0.022**	ug/L	0.001	4	466	163	7	Standard
|	**Sb**	**123**	**-0.021**	ug/L	0.001	6	343	132	9	Standard
|	**Ba**	**135**	**18.160**	ug/L	0.148	0	10	76360	0	Standard
⌊	**Ba**	**137**	**18.511**	ug/L	0.235	1	19	130830	0	Standard
⌈>	**Tb**	**159**		ug/L			710909	758562	3	Standard
⌊	**Pb**	**208**	**16.146**	ug/L	0.508	3	226	956407	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 20:58:45
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24249	31959	3	Standard
Cl	37		ug/L			3111826	3197047	1	Standard
> Sc	45		ug/L			446275	518007	1	Standard
V	51	11.979	ug/L	0.098	0	6985	303922	2	Standard
V-1	51	11.931	ug/L	0.067	0	122	298342	1	Standard
[redacted]	52	[redacted]	ug/L	0.222	4	20379	135909	4	Standard
Cr	53	5.515	ug/L	0.060	1	108	13573	2	Standard
Mn	55	53.613	ug/L	1.129	2	701	1610101	0	Standard
> Ge	72		ug/L			19285	19963	1	KED
Ni	60	4.706	ug/L	0.054	1	7	4487	0	KED
Ni	62	4.643	ug/L	0.038	0	3	724	1	KED
Cu	63	10.093	ug/L	0.398	3	37	28687	2	KED
Cu	65	10.129	ug/L	0.282	2	17	14285	1	KED
Zn	66	20.635	ug/L	0.622	3	24	6918	1	KED
Zn	67	20.378	ug/L	0.613	3	4	1141	1	KED
As	75	1.994	ug/L	0.099	4	3	337	5	KED
Se	78	0.525	ug/L	0.353	67	9	19	32	KED
Y	89		ug/L			287409	404953	1	Standard
Kr	83		ug/L			52	77	15	Standard
> In-1	115		ug/L			5508	5434	3	KED
Cd	111	0.063	ug/L	0.023	35	4	15	24	KED
Cd	114	0.060	ug/L	0.009	14	1	29	10	KED
> In	115		ug/L			456477	464220	1	Standard
Ag	107	0.044	ug/L	0.003	6	46	926	5	Standard
Sb	121	-0.026	ug/L	0.001	4	466	117	11	Standard
Sb	123	-0.023	ug/L	0.003	11	343	106	25	Standard
Ba	135	12.131	ug/L	0.104	0	10	50123	1	Standard
Ba	137	12.214	ug/L	0.212	1	19	84820	1	Standard
> Tb	159		ug/L			710909	761792	4	Standard
Pb	208	4.142	ug/L	0.143	3	226	246516	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 21:04:41
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	26864	0	Standard
	Cl	**37**		ug/L			3111826	3232489	1	Standard
⌈>	**Sc**	**45**		ug/L			446275	468841	0	Standard
|	**V**	**51**	**47.280**	ug/L	0.838	1	6985	1064132	2	Standard
|	**V-1**	**51**	**47.448**	ug/L	1.201	2	122	1073573	3	Standard
|	**Cr**	**52**	**47.844**	ug/L	1.075	2	20379	918963	2	Standard
|	**Cr**	**53**	**48.375**	ug/L	0.337	0	108	106861	1	Standard
⌊	**Mn**	**55**	**47.742**	ug/L	0.108	0	701	1298001	0	Standard
⌈>	**Ge**	**72**		ug/L			19285	19539	2	KED
|	**Ni**	**60**	**45.980**	ug/L	1.098	2	7	42842	3	KED
|	**Ni**	**62**	**47.846**	ug/L	2.966	6	3	7269	3	KED
|	**Cu**	**63**	**47.347**	ug/L	1.326	2	37	131567	1	KED
|	**Cu**	**65**	**47.174**	ug/L	1.309	2	17	65048	2	KED
|	**Zn**	**66**	**48.503**	ug/L	1.656	3	24	15878	1	KED
|	**Zn**	**67**	**49.045**	ug/L	3.843	7	4	2680	5	KED
|	**As**	**75**	**49.408**	ug/L	0.564	1	3	8096	2	KED
⌊	**Se**	**78**	**50.983**	ug/L	2.448	4	9	872	2	KED
	Y	**89**		ug/L			287409	292889	1	Standard
	Kr	**83**		ug/L			52	60	6	Standard
⌈>	**In-1**	**115**		ug/L			5508	5312	2	KED
|	**Cd**	**111**	**51.516**	ug/L	1.259	2	4	9454	1	KED
⌊	**Cd**	**114**	**50.609**	ug/L	1.141	2	1	23092	2	KED
⌈>	**In**	**115**		ug/L			456477	464555	0	Standard
|	**Ag**	**107**	**44.405**	ug/L	0.878	1	46	880621	2	Standard
|	**Sb**	**121**	**48.415**	ug/L	0.299	0	466	674915	0	Standard
|	**Sb**	**123**	**47.957**	ug/L	0.481	1	343	511722	0	Standard
|	**Ba**	**135**	**49.005**	ug/L	0.216	0	10	202604	0	Standard
⌊	**Ba**	**137**	**50.725**	ug/L	1.672	3	19	352448	2	Standard
⌈>	**Tb**	**159**		ug/L			710909	751619	3	Standard
⌊	**Pb**	**208**	**46.749**	ug/L	1.222	2	226	2743434	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 21:12:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	25532	4	Standard
	Cl	**37**		ug/L			3111826	3218675	2	Standard
⎡>	**Sc**	**45**		ug/L			446275	455407	2	Standard
⎢	**V**	**51**	**-0.000**	ug/L	0.008	20155	6985	7124	0	Standard
⎢	**V-1**	**51**	**-0.002**	ug/L	0.000	19	122	70	14	Standard
⎢	**Cr**	**52**	**0.008**	ug/L	0.028	331	20379	20943	0	Standard
⎢	**Cr**	**53**	**0.000**	ug/L	0.004	2623	108	110	7	Standard
⎣	**Mn**	**55**	**-0.002**	ug/L	0.001	47	701	654	2	Standard
⎡>	**Ge**	**72**		ug/L			19285	19207	2	KED
⎢	**Ni**	**60**	**0.001**	ug/L	0.003	227	7	8	32	KED
⎢	**Ni**	**62**	**0.009**	ug/L	0.008	87	3	4	24	KED
⎢	**Cu**	**63**	**-0.001**	ug/L	0.004	299	37	33	31	KED
⎢	**Cu**	**65**	**0.002**	ug/L	0.002	101	17	20	10	KED
⎢	**Zn**	**66**	**0.030**	ug/L	0.019	63	24	34	20	KED
⎢	**Zn**	**67**	**0.013**	ug/L	0.044	340	4	5	43	KED
⎢	**As**	**75**	**0.006**	ug/L	0.010	157	3	4	32	KED
⎣	**Se**	**78**	**0.196**	ug/L	0.168	86	9	12	19	KED
	Y	**89**		ug/L			287409	288186	3	Standard
	Kr	**83**		ug/L			52	55	25	Standard
⎡>	**In-1**	**115**		ug/L			5508	5358	1	KED
⎢	**Cd**	**111**	**-0.003**	ug/L	0.008	289	4	3	41	KED
⎣	**Cd**	**114**	**0.006**	ug/L	0.004	76	1	3	52	KED
⎡>	**In**	**115**		ug/L			456477	471223	1	Standard
⎢	**Ag**	**107**	**0.002**	ug/L	0.001	44	46	78	17	Standard
⎢	**Sb**	**121**	**0.090**	ug/L	0.002	1	466	1746	0	Standard
⎢	**Sb**	**123**	**0.084**	ug/L	0.004	4	343	1257	1	Standard
⎢	**Ba**	**135**	**0.001**	ug/L	0.001	136	10	14	32	Standard
⎣	**Ba**	**137**	**0.001**	ug/L	0.001	92	19	26	23	Standard
⎡>	**Tb**	**159**		ug/L			710909	713387	1	Standard
⎣	**Pb**	**208**	**0.004**	ug/L	0.001	21	226	424	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 21:20:39
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24249	30893	3	Standard
Cl	37		ug/L			3111826	3247701	2	Standard
> Sc	45		ug/L			446275	466460	1	Standard
V	51	0.006	ug/L	0.011	192	6985	7431	3	Standard
V-1	51	0.002	ug/L	0.006	303	122	174	80	Standard
[redacted]	52	[redacted]	ug/L	0.021	110	20379	21662	1	Standard
Cr	53	0.006	ug/L	0.001	17	108	126	2	Standard
Mn	55	0.013	ug/L	0.024	186	701	1084	60	Standard
> Ge	72		ug/L			19285	20709	1	KED
Ni	60	-0.003	ug/L	0.003	90	7	5	57	KED
Ni	62	-0.013	ug/L	0.007	51	3	1	86	KED
[redacted]	63	[redacted]	ug/L	0.003	35	37	61	11	KED
Cu	65	0.006	ug/L	0.006	112	17	27	32	KED
[redacted]	66	[redacted]	ug/L	0.018	38	24	42	15	KED
Zn	67	0.050	ug/L	0.068	136	4	7	50	KED
[redacted]	75	[redacted]	ug/L	0.011	217	3	4	39	KED
Se	78	0.163	ug/L	0.165	101	9	13	23	KED
Y	89		ug/L			287409	300178	1	Standard
Kr	83		ug/L			52	53	8	Standard
> In-1	115		ug/L			5508	5595	2	KED
[redacted]	111	[redacted]	ug/L	0.008	74	4	2	65	KED
Cd	114	0.005	ug/L	0.007	132	1	3	87	KED
> In	115		ug/L			456477	477340	0	Standard
Ag	107	0.002	ug/L	0.003	136	46	97	68	Standard
Sb	121	0.013	ug/L	0.001	11	466	671	2	Standard
Sb	123	0.016	ug/L	0.004	26	343	539	8	Standard
Ba	135	0.324	ug/L	0.020	6	10	1386	5	Standard
Ba	137	0.311	ug/L	0.009	2	19	2241	2	Standard
> Tb	159		ug/L			710909	728089	2	Standard
[redacted]	208	[redacted]	ug/L	0.006	139	226	494	75	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 21:25:31
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24249	29474	3	Standard
Cl	37		ug/L			3111826	3310090	4	Standard
> Sc	45		ug/L			446275	470251	5	Standard
V	51	25.034	ug/L	0.838	3	6985	567901	2	Standard
V-1	51	24.923	ug/L	0.729	2	122	565020	2	Standard
[redacted]	52	[redacted]	ug/L	1.848	6	20379	527415	1	Standard
Cr	53	26.512	ug/L	1.466	5	108	58676	0	Standard
Mn	55	26.312	ug/L	1.566	5	701	716352	0	Standard
> Ge	72		ug/L			19285	20412	2	KED
Ni	60	23.777	ug/L	0.340	1	7	23146	1	KED
Ni	62	24.277	ug/L	0.504	2	3	3858	0	KED
[redacted]	63	[redacted]	ug/L	0.719	2	37	71093	0	KED
Cu	65	24.935	ug/L	1.240	4	17	35913	2	KED
[redacted]	66	[redacted]	ug/L	2.520	3	24	25874	2	KED
Zn	67	72.613	ug/L	1.447	1	4	4147	0	KED
[redacted]	75	[redacted]	ug/L	0.753	3	3	4137	1	KED
Se	78	76.884	ug/L	2.601	3	9	1370	2	KED
Y	89		ug/L			287409	297731	2	Standard
Kr	83		ug/L			52	55	15	Standard
> In-1	115		ug/L			5508	5724	1	KED
[redacted]	111	[redacted]	ug/L	1.099	4	4	4986	2	KED
Cd	114	25.010	ug/L	0.992	3	1	12295	2	KED
> In	115		ug/L			456477	473347	4	Standard
Ag	107	24.621	ug/L	1.051	4	46	496795	0	Standard
Sb	121	26.294	ug/L	1.260	4	466	373138	0	Standard
Sb	123	25.788	ug/L	1.098	4	343	280172	0	Standard
Ba	135	25.897	ug/L	1.117	4	10	108949	1	Standard
Ba	137	26.080	ug/L	0.842	3	19	184484	1	Standard
> Tb	159		ug/L			710909	726814	3	Standard
[redacted]	208	[redacted]	ug/L	0.710	2	226	1493966	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 21:30:23
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			24249	29862	1	Standard
Cl	**37**		ug/L			3111826	3113983	1	Standard
Sc	**45**		ug/L			446275	520811	1	Standard
V	**51**	**12.060**	ug/L	0.012	0	6985	307565	1	Standard
V-1	**51**	**12.061**	ug/L	0.048	0	122	303213	1	Standard
[redacted]	**52**	[redacted]	ug/L	0.179	3	20379	134655	2	Standard
Cr	**53**	**5.589**	ug/L	0.059	1	108	13824	0	Standard
Mn	**55**	**61.739**	ug/L	0.607	0	701	1864266	0	Standard
Ge	**72**		ug/L			19285	20502	1	KED
Ni	**60**	**4.563**	ug/L	0.164	3	7	4467	1	KED
Ni	**62**	**4.463**	ug/L	0.261	5	3	714	4	KED
Cu	**63**	**9.426**	ug/L	0.168	1	37	27528	2	KED
Cu	**65**	**9.607**	ug/L	0.200	2	17	13917	1	KED
Zn	**66**	**19.555**	ug/L	0.574	2	24	6734	1	KED
Zn	**67**	**19.560**	ug/L	0.646	3	4	1125	3	KED
As	**75**	**2.240**	ug/L	0.152	6	3	388	5	KED
Se	**78**	**0.682**	ug/L	0.066	9	9	22	3	KED
Y	**89**		ug/L			287409	402017	1	Standard
Kr	**83**		ug/L			52	72	20	Standard
In-1	**115**		ug/L			5508	5594	0	KED
Cd	**111**	**0.064**	ug/L	0.014	21	4	16	16	KED
Cd	**114**	**0.088**	ug/L	0.016	18	1	43	17	KED
In	**115**		ug/L			456477	481479	1	Standard
Ag	**107**	**0.042**	ug/L	0.003	8	46	905	6	Standard
Sb	**121**	**-0.009**	ug/L	0.003	30	466	354	10	Standard
Sb	**123**	**-0.007**	ug/L	0.001	7	343	287	1	Standard
Ba	**135**	**14.371**	ug/L	0.044	0	10	61586	1	Standard
Ba	**137**	**14.737**	ug/L	0.204	1	19	106149	0	Standard
Tb	**159**		ug/L			710909	768682	2	Standard
Pb	**208**	**3.928**	ug/L	0.059	1	226	236090	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 21:35:15
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24249	30768	2	Standard
Cl	37		ug/L			3111826	3245531	1	Standard
> Sc	45		ug/L			446275	523805	0	Standard
V	51	15.032	ug/L	0.315	2	6985	383540	1	Standard
V-1	51	15.014	ug/L	0.253	1	122	379578	1	Standard
[redacted]	52	[redacted]	ug/L	0.055	0	20379	177255	1	Standard
Cr	53	7.559	ug/L	0.144	1	108	18762	2	Standard
Mn	55	58.946	ug/L	0.135	0	701	1790281	0	Standard
> Ge	72		ug/L			19285	20433	1	KED
Ni	60	4.863	ug/L	0.110	2	7	4745	2	KED
Ni	62	4.771	ug/L	0.370	7	3	761	6	KED
Cu	63	9.299	ug/L	0.117	1	37	27063	0	KED
Cu	65	9.162	ug/L	0.269	2	17	13228	2	KED
Zn	66	17.770	ug/L	0.474	2	24	6102	2	KED
Zn	67	17.770	ug/L	1.208	6	4	1019	5	KED
As	75	2.734	ug/L	0.120	4	3	472	4	KED
Se	78	0.555	ug/L	0.332	59	9	20	28	KED
Y	89		ug/L			287409	420074	2	Standard
Kr	83		ug/L			52	75	24	Standard
> In-1	115		ug/L			5508	5720	0	KED
Cd	111	0.078	ug/L	0.022	28	4	19	22	KED
Cd	114	0.083	ug/L	0.015	17	1	41	17	KED
> In	115		ug/L			456477	475955	1	Standard
Ag	107	0.058	ug/L	0.005	9	46	1218	7	Standard
Sb	121	-0.020	ug/L	0.001	5	466	197	6	Standard
Sb	123	-0.018	ug/L	0.002	8	343	160	9	Standard
Ba	135	15.811	ug/L	0.133	0	10	66978	0	Standard
Ba	137	16.314	ug/L	0.046	0	19	116166	1	Standard
> Tb	159		ug/L			710909	777750	1	Standard
Pb	208	4.696	ug/L	0.066	1	226	285575	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 21:40:06
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	31506	3	Standard
	Cl	**37**		ug/L			3111826	3153947	1	Standard
⌈>	**Sc**	**45**		ug/L			446275	514651	0	Standard
|	**V**	**51**	**13.438**	ug/L	0.306	2	6985	337727	1	Standard
|	**V-1**	**51**	**13.371**	ug/L	0.255	1	122	332132	1	Standard
|	[redacted]	**52**	[redacted]	ug/L	0.239	3	20379	150428	2	Standard
|	**Cr**	**53**	**6.228**	ug/L	0.063	1	108	15209	0	Standard
⌊	**Mn**	**55**	**65.600**	ug/L	0.859	1	701	1957371	0	Standard
⌈>	**Ge**	**72**		ug/L			19285	20441	1	KED
|	**Ni**	**60**	**4.857**	ug/L	0.121	2	7	4740	0	KED
|	**Ni**	**62**	**4.811**	ug/L	0.291	6	3	768	4	KED
|	**Cu**	**63**	**11.064**	ug/L	0.418	3	37	32198	2	KED
|	**Cu**	**65**	**10.930**	ug/L	0.120	1	17	15785	0	KED
|	**Zn**	**66**	**22.222**	ug/L	0.501	2	24	7626	0	KED
|	**Zn**	**67**	**20.587**	ug/L	0.791	3	4	1181	3	KED
|	**As**	**75**	**2.270**	ug/L	0.032	1	3	392	2	KED
⌊	**Se**	**78**	**0.544**	ug/L	0.201	36	9	19	16	KED
	Y	**89**		ug/L			287409	422455	2	Standard
	Kr	**83**		ug/L			52	77	27	Standard
⌈>	**In-1**	**115**		ug/L			5508	5635	0	KED
|	**Cd**	**111**	**0.057**	ug/L	0.001	1	4	15	0	KED
⌊	**Cd**	**114**	**0.079**	ug/L	0.012	15	1	39	15	KED
⌈>	**In**	**115**		ug/L			456477	484128	2	Standard
|	**Ag**	**107**	**0.052**	ug/L	0.000	0	46	1113	2	Standard
|	**Sb**	**121**	**-0.021**	ug/L	0.000	2	466	194	1	Standard
|	**Sb**	**123**	**-0.021**	ug/L	0.001	6	343	132	9	Standard
|	**Ba**	**135**	**14.104**	ug/L	0.293	2	10	60763	1	Standard
⌊	**Ba**	**137**	**14.323**	ug/L	0.386	2	19	103710	1	Standard
⌈>	**Tb**	**159**		ug/L			710909	766056	2	Standard
⌊	**Pb**	**208**	**4.856**	ug/L	0.122	2	226	290709	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 21:44:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	30566	4	Standard
	Cl	**37**		ug/L			3111826	3213683	3	Standard
⌈>	**Sc**	**45**		ug/L			446275	531061	0	Standard
|	**V**	**51**	**12.262**	ug/L	0.178	1	6985	318719	0	Standard
|	**V-1**	**51**	**12.258**	ug/L	0.199	1	122	314216	1	Standard
|	[redacted]	**52**	[redacted]	ug/L	0.152	2	20379	142782	1	Standard
|	**Cr**	**53**	**5.828**	ug/L	0.221	3	108	14694	3	Standard
⌊	**Mn**	**55**	**61.092**	ug/L	2.050	3	701	1881268	3	Standard
⌈>	**Ge**	**72**		ug/L			19285	20045	2	KED
|	**Ni**	**60**	**5.106**	ug/L	0.161	3	7	4885	0	KED
|	**Ni**	**62**	**4.905**	ug/L	0.167	3	3	768	3	KED
|	**Cu**	**63**	**11.313**	ug/L	0.339	2	37	32282	2	KED
|	**Cu**	**65**	**11.215**	ug/L	0.102	0	17	15881	1	KED
|	**Zn**	**66**	**21.691**	ug/L	0.402	1	24	7301	2	KED
|	**Zn**	**67**	**21.082**	ug/L	1.302	6	4	1184	3	KED
|	**As**	**75**	**2.283**	ug/L	0.061	2	3	387	5	KED
⌊	**Se**	**78**	**0.707**	ug/L	0.050	7	9	22	2	KED
	Y	**89**		ug/L			287409	402940	1	Standard
	Kr	**83**		ug/L			52	86	15	Standard
⌈>	**In-1**	**115**		ug/L			5508	5552	1	KED
|	**Cd**	**111**	**0.069**	ug/L	0.016	22	4	17	16	KED
⌊	**Cd**	**114**	**0.059**	ug/L	0.028	48	1	29	46	KED
⌈>	**In**	**115**		ug/L			456477	473564	1	Standard
|	**Ag**	**107**	**0.049**	ug/L	0.001	2	46	1037	1	Standard
|	**Sb**	**121**	**-0.022**	ug/L	0.000	1	466	166	2	Standard
|	**Sb**	**123**	**-0.021**	ug/L	0.001	5	343	130	8	Standard
|	**Ba**	**135**	**13.255**	ug/L	0.261	1	10	55879	3	Standard
⌊	**Ba**	**137**	**13.687**	ug/L	0.168	1	19	96985	2	Standard
⌈>	**Tb**	**159**		ug/L			710909	772347	3	Standard
⌊	**Pb**	**208**	**4.319**	ug/L	0.161	3	226	260619	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 21:49:50
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	30445	3	Standard
	Cl	**37**		ug/L			3111826	3234096	0	Standard
>	**Sc**	**45**		ug/L			446275	524958	2	Standard
	V	**51**	**22.173**	ug/L	0.653	2	6985	562860	0	Standard
	V-1	**51**	**22.149**	ug/L	0.640	2	122	560897	0	Standard
	[redacted]	**52**	[redacted]	ug/L	0.558	3	20379	357904	2	Standard
	Cr	**53**	**16.069**	ug/L	0.381	2	108	39815	0	Standard
	Mn	**55**	**74.076**	ug/L	0.794	1	701	2254543	2	Standard
>	**Ge**	**72**		ug/L			19285	20258	2	KED
	Ni	**60**	**14.503**	ug/L	0.738	5	7	14008	3	KED
	Ni	**62**	**15.217**	ug/L	0.534	3	3	2402	3	KED
	Cu	**63**	**20.405**	ug/L	0.450	2	37	58819	1	KED
	Cu	**65**	**21.617**	ug/L	0.432	1	17	30917	0	KED
	Zn	**66**	**54.235**	ug/L	2.803	5	24	18402	3	KED
	Zn	**67**	**49.791**	ug/L	3.028	6	4	2823	4	KED
	As	**75**	**12.085**	ug/L	0.504	4	3	2055	2	KED
	Se	**78**	**31.332**	ug/L	1.515	4	9	560	2	KED
	Y	**89**		ug/L			287409	410520	2	Standard
	Kr	**83**		ug/L			52	69	26	Standard
>	**In-1**	**115**		ug/L			5508	5682	4	KED
	Cd	**111**	**10.771**	ug/L	0.635	5	4	2115	1	KED
	Cd	**114**	**10.381**	ug/L	0.651	6	1	5061	3	KED
>	**In**	**115**		ug/L			456477	472886	0	Standard
	Ag	**107**	**4.337**	ug/L	0.113	2	46	87570	1	Standard
	Sb	**121**	**0.158**	ug/L	0.008	4	466	2729	3	Standard
	Sb	**123**	**0.164**	ug/L	0.004	2	343	2138	1	Standard
	Ba	**135**	**25.596**	ug/L	0.429	1	10	107715	0	Standard
	Ba	**137**	**26.003**	ug/L	0.105	0	19	183953	0	Standard
>	**Tb**	**159**		ug/L			710909	770592	1	Standard
	Pb	**208**	**15.040**	ug/L	0.271	1	226	905505	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 21:54:42
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	30483	2	Standard
	Cl	**37**		ug/L			3111826	3171119	0	Standard
>	**Sc**	**45**		ug/L			446275	516223	0	Standard
	V	**51**	**20.939**	ug/L	0.026	0	6985	523349	0	Standard
	V-1	**51**	**20.850**	ug/L	0.113	0	122	519433	0	Standard
	[redacted]	**52**	[redacted]	ug/L	0.251	1	20379	335434	1	Standard
	Cr	**53**	**15.034**	ug/L	0.213	1	108	36651	1	Standard
	Mn	**55**	**70.742**	ug/L	0.651	0	701	2117274	0	Standard
>	**Ge**	**72**		ug/L			19285	20339	1	KED
	Ni	**60**	**14.495**	ug/L	0.402	2	7	14064	2	KED
	Ni	**62**	**13.997**	ug/L	0.507	3	3	2219	4	KED
	Cu	**63**	**20.592**	ug/L	1.091	5	37	59577	3	KED
	Cu	**65**	**20.674**	ug/L	0.671	3	17	29685	1	KED
	Zn	**66**	**52.405**	ug/L	1.139	2	24	17864	2	KED
	Zn	**67**	**51.692**	ug/L	2.645	5	4	2942	3	KED
	As	**75**	**11.875**	ug/L	0.427	3	3	2027	1	KED
	Se	**78**	**31.997**	ug/L	0.870	2	9	574	1	KED
	Y	**89**		ug/L			287409	404959	0	Standard
	Kr	**83**		ug/L			52	77	12	Standard
>	**In-1**	**115**		ug/L			5508	5747	2	KED
	Cd	**111**	**10.042**	ug/L	0.378	3	4	1997	2	KED
	Cd	**114**	**9.712**	ug/L	0.169	1	1	4797	3	KED
>	**In**	**115**		ug/L			456477	483219	1	Standard
	Ag	**107**	**4.810**	ug/L	0.220	4	46	99227	3	Standard
	Sb	**121**	**0.162**	ug/L	0.009	5	466	2840	3	Standard
	Sb	**123**	**0.161**	ug/L	0.006	3	343	2144	4	Standard
	Ba	**135**	**22.771**	ug/L	0.712	3	10	97894	1	Standard
	Ba	**137**	**23.232**	ug/L	0.410	1	19	167923	1	Standard
>	**Tb**	**159**		ug/L			710909	773683	3	Standard
	Pb	**208**	**14.120**	ug/L	0.408	2	226	853132	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLC0703-PS1
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, March 31, 2023 21:59:34
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	32266	2	Standard
	Cl	**37**		ug/L			3111826	3240434	2	Standard
⌈>	**Sc**	**45**		ug/L			446275	536883	2	Standard
|	**V**	**51**	**34.983**	ug/L	1.001	2	6985	903296	0	Standard
|	**V-1**	**51**	**35.059**	ug/L	0.939	2	122	907859	0	Standard
|	**Cr**	**52**	**28.399**	ug/L	1.187	4	20379	634181	1	Standard
|	**Cr**	**53**	**28.906**	ug/L	1.246	4	108	73121	2	Standard
⌊	**Mn**	**55**	**87.018**	ug/L	3.298	3	701	2706782	1	Standard
⌈>	**Ge**	**72**		ug/L			19285	20314	0	KED
|	**Ni**	**60**	**28.611**	ug/L	0.622	2	7	27725	3	KED
|	**Ni**	**62**	**29.373**	ug/L	1.431	4	3	4645	4	KED
|	**Cu**	**63**	**34.377**	ug/L	1.188	3	37	99348	2	KED
|	**Cu**	**65**	**34.637**	ug/L	0.908	2	17	49685	3	KED
|	**Zn**	**66**	**96.298**	ug/L	2.229	2	24	32762	1	KED
|	**Zn**	**67**	**94.008**	ug/L	3.079	3	4	5342	2	KED
|	**As**	**75**	**26.423**	ug/L	0.148	0	3	4503	0	KED
⌊	**Se**	**78**	**78.464**	ug/L	0.338	0	9	1392	0	KED
	Y	**89**		ug/L			287409	423024	1	Standard
	Kr	**83**		ug/L			52	81	16	Standard
⌈>	**In-1**	**115**		ug/L			5508	5557	3	KED
|	**Cd**	**111**	**25.440**	ug/L	0.521	2	4	4885	1	KED
⌊	**Cd**	**114**	**24.974**	ug/L	0.861	3	1	11915	1	KED
⌈>	**In**	**115**		ug/L			456477	480030	0	Standard
|	**Ag**	**107**	**23.697**	ug/L	0.551	2	46	485622	2	Standard
|	**Sb**	**121**	**-0.025**	ug/L	0.002	6	466	133	17	Standard
|	**Sb**	**123**	**-0.020**	ug/L	0.001	3	343	142	5	Standard
|	**Ba**	**135**	**39.550**	ug/L	0.399	1	10	168962	1	Standard
⌊	**Ba**	**137**	**40.974**	ug/L	0.963	2	19	294251	2	Standard
⌈>	**Tb**	**159**		ug/L			710909	769154	2	Standard
⌊	**Pb**	**208**	**29.332**	ug/L	0.867	2	226	1761829	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 22:06:42
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	27979	2	Standard
	Cl	**37**		ug/L			3111826	3278229	4	Standard
⎡>	**Sc**	**45**		ug/L			446275	465048	1	Standard
⎢	**V**	**51**	**-0.013**	ug/L	0.012	91	6985	6986	4	Standard
⎢	**V-1**	**51**	**-0.002**	ug/L	0.000	17	122	81	10	Standard
⎢	**Cr**	**52**	**-0.037**	ug/L	0.036	95	20379	20550	4	Standard
⎢	**Cr**	**53**	**0.001**	ug/L	0.006	999	108	113	9	Standard
⎣	**Mn**	**55**	**-0.004**	ug/L	0.001	15	701	617	3	Standard
⎡>	**Ge**	**72**		ug/L			19285	20066	2	KED
⎢	**Ni**	**60**	**0.000**	ug/L	0.003	884	7	8	35	KED
⎢	**Ni**	**62**	**0.004**	ug/L	0.022	612	3	3	86	KED
⎢	**Cu**	**63**	**-0.001**	ug/L	0.003	283	37	35	29	KED
⎢	**Cu**	**65**	**0.003**	ug/L	0.006	228	17	22	38	KED
⎢	**Zn**	**66**	**0.008**	ug/L	0.006	70	24	28	6	KED
⎢	**Zn**	**67**	**-0.015**	ug/L	0.033	219	4	3	50	KED
⎢	**As**	**75**	**0.000**	ug/L	0.004	8503	3	3	19	KED
⎣	**Se**	**78**	**0.092**	ug/L	0.088	95	9	11	14	KED
	Y	**89**		ug/L			287409	289743	2	Standard
	Kr	**83**		ug/L			52	56	1	Standard
⎡>	**In-1**	**115**		ug/L			5508	5503	1	KED
⎢	**Cd**	**111**	**-0.017**	ug/L	0.005	29	4	0	100	KED
⎣	**Cd**	**114**	**0.004**	ug/L	0.002	57	1	3	35	KED
⎡>	**In**	**115**		ug/L			456477	472332	2	Standard
⎢	**Ag**	**107**	**0.001**	ug/L	0.000	82	46	59	15	Standard
⎢	**Sb**	**121**	**-0.028**	ug/L	0.001	1	466	85	7	Standard
⎢	**Sb**	**123**	**-0.025**	ug/L	0.000	0	343	80	3	Standard
⎢	**Ba**	**135**	**0.004**	ug/L	0.002	41	10	26	25	Standard
⎣	**Ba**	**137**	**0.001**	ug/L	0.001	43	19	29	16	Standard
⎡>	**Tb**	**159**		ug/L			710909	708860	2	Standard
⎣	**Pb**	**208**	**-0.001**	ug/L	0.000	51	226	192	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 22:11:34
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	26758	1	Standard
	Cl	**37**		ug/L			3111826	3267094	0	Standard
>	**Sc**	**45**		ug/L			446275	463536	1	Standard
	V	**51**	**47.244**	ug/L	1.179	2	6985	1050903	0	Standard
	V-1	**51**	**47.645**	ug/L	1.413	2	122	1065325	1	Standard
	Cr	**52**	**48.887**	ug/L	1.513	3	20379	927700	1	Standard
	Cr	**53**	**50.138**	ug/L	2.038	4	108	109442	2	Standard
	Mn	**55**	**49.671**	ug/L	1.372	2	701	1334894	2	Standard
>	**Ge**	**72**		ug/L			19285	19904	1	KED
	Ni	**60**	**45.571**	ug/L	0.933	2	7	43253	1	KED
	Ni	**62**	**46.644**	ug/L	0.429	0	3	7227	0	KED
	Cu	**63**	**46.835**	ug/L	0.011	0	37	132630	1	KED
	Cu	**65**	**47.723**	ug/L	0.592	1	17	67063	2	KED
	Zn	**66**	**47.269**	ug/L	0.805	1	24	15769	0	KED
	Zn	**67**	**48.007**	ug/L	0.945	1	4	2675	1	KED
	As	**75**	**49.366**	ug/L	0.888	1	3	8241	1	KED
	Se	**78**	**50.643**	ug/L	0.632	1	9	883	1	KED
	Y	**89**		ug/L			287409	297997	1	Standard
	Kr	**83**		ug/L			52	55	25	Standard
>	**In-1**	**115**		ug/L			5508	5571	3	KED
	Cd	**111**	**48.821**	ug/L	1.168	2	4	9396	2	KED
	Cd	**114**	**49.776**	ug/L	1.243	2	1	23811	1	KED
>	**In**	**115**		ug/L			456477	466456	0	Standard
	Ag	**107**	**44.550**	ug/L	0.303	0	46	887061	1	Standard
	Sb	**121**	**47.905**	ug/L	0.857	1	466	670534	1	Standard
	Sb	**123**	**48.430**	ug/L	0.275	0	343	518922	1	Standard
	Ba	**135**	**49.579**	ug/L	0.605	1	10	205818	1	Standard
	Ba	**137**	**50.816**	ug/L	0.424	0	19	354574	0	Standard
>	**Tb**	**159**		ug/L			710909	750068	1	Standard
	Pb	**208**	**47.434**	ug/L	1.211	2	226	2778987	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 22:20:39
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	25980	4	Standard
	Cl	**37**		ug/L			3111826	3253412	1	Standard
⎡>	**Sc**	**45**		ug/L			446275	464726	0	Standard
⎢	**V**	**51**	**-0.005**	ug/L	0.010	210	6985	7171	2	Standard
⎢	**V-1**	**51**	**-0.002**	ug/L	0.001	27	122	83	14	Standard
⎢	**Cr**	**52**	**-0.009**	ug/L	0.033	355	20379	21046	2	Standard
⎢	**Cr**	**53**	**-0.000**	ug/L	0.003	769	108	111	5	Standard
⎣	**Mn**	**55**	**-0.002**	ug/L	0.000	17	701	670	2	Standard
⎡>	**Ge**	**72**		ug/L			19285	19765	3	KED
⎢	**Ni**	**60**	**0.010**	ug/L	0.008	81	7	17	44	KED
⎢	**Ni**	**62**	**0.012**	ug/L	0.031	253	3	5	94	KED
⎢	**Cu**	**63**	**0.007**	ug/L	0.011	151	37	59	53	KED
⎢	**Cu**	**65**	**0.006**	ug/L	0.007	131	17	26	40	KED
⎢	**Zn**	**66**	**0.049**	ug/L	0.037	74	24	41	31	KED
⎢	**Zn**	**67**	**0.112**	ug/L	0.069	61	4	10	36	KED
⎢	**As**	**75**	**0.010**	ug/L	0.015	157	3	5	50	KED
⎣	**Se**	**78**	**0.212**	ug/L	0.116	54	9	13	11	KED
	Y	**89**		ug/L			287409	296248	0	Standard
	Kr	**83**		ug/L			52	41	9	Standard
⎡>	**In-1**	**115**		ug/L			5508	5567	3	KED
⎢	**Cd**	**111**	**-0.007**	ug/L	0.010	147	4	2	66	KED
⎣	**Cd**	**114**	**-0.002**	ug/L	0.002	134	1	0	244	KED
⎡>	**In**	**115**		ug/L			456477	469345	1	Standard
⎢	**Ag**	**107**	**0.002**	ug/L	0.001	41	46	78	17	Standard
⎢	**Sb**	**121**	**0.073**	ug/L	0.004	5	466	1499	3	Standard
⎢	**Sb**	**123**	**0.075**	ug/L	0.004	5	343	1159	3	Standard
⎢	**Ba**	**135**	**0.002**	ug/L	0.002	90	10	19	39	Standard
⎣	**Ba**	**137**	**0.001**	ug/L	0.002	120	19	29	39	Standard
⎡>	**Tb**	**159**		ug/L			710909	700284	2	Standard
⎣	**Pb**	**208**	**0.005**	ug/L	0.000	5	226	472	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 22:31:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			24249	726098	3	Standard
Cl	**37**		ug/L			3111826	3512078	2	Standard
Sc	**45**		ug/L			446275	468637	0	Standard
V	**51**	**0.931**	ug/L	0.018	1	6985	28124	1	Standard
V-1	**51**	**0.030**	ug/L	0.002	5	122	806	5	Standard
Cr	**52**	**4.230**	ug/L	0.045	1	20379	100732	1	Standard
Cr	**53**	**1.149**	ug/L	0.040	3	108	2646	2	Standard
Mn	**55**	**31.921**	ug/L	0.192	0	701	867745	1	Standard
Ge	**72**		ug/L			19285	17208	1	KED
Ni	**60**	**18.223**	ug/L	0.328	1	7	14958	1	KED
Ni	**62**	**18.203**	ug/L	0.242	1	3	2440	0	KED
Cu	**63**	**0.599**	ug/L	0.033	5	37	1498	4	KED
Cu	**65**	**0.596**	ug/L	0.040	6	17	739	5	KED
Zn	**66**	**14.996**	ug/L	0.474	3	24	4340	2	KED
Zn	**67**	**14.340**	ug/L	0.394	2	4	693	3	KED
As	**75**	**0.069**	ug/L	0.011	16	3	13	11	KED
Se	**78**	**0.112**	ug/L	0.080	71	9	10	12	KED
Y	**89**		ug/L			287409	293354	0	Standard
Kr	**83**		ug/L			52	80	4	Standard
In-1	**115**		ug/L			5508	4945	1	KED
[redacted]	**111**	[redacted]	ug/L	0.025	55	4	11	36	KED
Cd	**114**	**0.030**	ug/L	0.017	54	1	14	51	KED
In	**115**		ug/L			456477	426186	1	Standard
Ag	**107**	**0.001**	ug/L	0.000	71	46	52	11	Standard
Sb	**121**	**0.132**	ug/L	0.005	4	466	2125	1	Standard
Sb	**123**	**0.131**	ug/L	0.007	4	343	1606	2	Standard
Ba	**135**	**16.768**	ug/L	0.092	0	10	63606	1	Standard
Ba	**137**	**17.112**	ug/L	0.793	4	19	109054	3	Standard
Tb	**159**		ug/L			710909	697383	2	Standard
Pb	**208**	**0.060**	ug/L	0.003	4	226	3504	3	Standard

23A0133

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~23A0138~~
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 22:36:10

MB 3/31/23

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	37205	2	Standard
	Cl	**37**		ug/L			3111826	3316102	3	Standard
>	**Sc**	**45**		ug/L			446275	518751	2	Standard
	V	**51**	**14.541**	ug/L	0.188	1	6985	367640	0	Standard
	V-1	**51**	**14.523**	ug/L	0.240	1	122	363553	0	Standard
		52		ug/L	0.155	2	20379	167545	3	Standard
	Cr	**53**	**7.170**	ug/L	0.163	2	108	17625	1	Standard
	Mn	**55**	**66.724**	ug/L	2.894	4	701	2005616	2	Standard
>	**Ge**	**72**		ug/L			19285	19656	2	KED
	Ni	**60**	**5.812**	ug/L	0.254	4	7	5450	1	KED
	Ni	**62**	**6.129**	ug/L	0.269	4	3	940	4	KED
	Cu	**63**	**11.400**	ug/L	0.463	4	37	31887	1	KED
	Cu	**65**	**11.828**	ug/L	0.311	2	17	16420	1	KED
	Zn	**66**	**23.578**	ug/L	0.377	1	24	7779	1	KED
	Zn	**67**	**23.590**	ug/L	1.375	5	4	1302	8	KED
	As	**75**	**2.445**	ug/L	0.129	5	3	406	2	KED
	Se	**78**	**0.685**	ug/L	0.090	13	9	21	4	KED
	Y	**89**		ug/L			287409	418848	1	Standard
	Kr	**83**		ug/L			52	80	6	Standard
>	**In-1**	**115**		ug/L			5508	5478	3	KED
	Cd	**111**	**0.069**	ug/L	0.024	34	4	17	24	KED
	Cd	**114**	**0.101**	ug/L	0.034	33	1	48	31	KED
>	**In**	**115**		ug/L			456477	476089	1	Standard
	Ag	**107**	**0.060**	ug/L	0.000	0	46	1265	1	Standard
	Sb	**121**	**-0.018**	ug/L	0.001	4	466	226	4	Standard
	Sb	**123**	**-0.018**	ug/L	0.002	10	343	161	13	Standard
	Ba	**135**	**15.872**	ug/L	0.220	1	10	67255	1	Standard
	Ba	**137**	**16.250**	ug/L	0.219	1	19	115735	0	Standard
>	**Tb**	**159**		ug/L			710909	761088	2	Standard
	Pb	**208**	**6.138**	ug/L	0.081	1	226	365137	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0138-09
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, March 31, 2023 22:41:02

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	34132	2	Standard
	Cl	**37**		ug/L			3111826	3322610	1	Standard
⌈>	**Sc**	**45**		ug/L			446275	515757	5	Standard
|	**V**	**51**	**13.389**	ug/L	0.715	5	6985	336588	1	Standard
|	**V-1**	**51**	**13.336**	ug/L	0.724	5	122	331315	1	Standard
|	**Cr**	**52**	**5.781**	ug/L	0.329	5	20379	142594	1	Standard
|	**Cr**	**53**	**5.906**	ug/L	0.364	6	108	14426	1	Standard
⌊	**Mn**	**55**	**61.693**	ug/L	2.549	4	701	1841959	2	Standard
⌈>	**Ge**	**72**		ug/L			19285	19436	3	KED
|	**Ni**	**60**	**4.742**	ug/L	0.054	1	7	4401	2	KED
|	**Ni**	**62**	**4.810**	ug/L	0.161	3	3	730	5	KED
|	**Cu**	**63**	**9.544**	ug/L	0.199	2	37	26414	2	KED
|	**Cu**	**65**	**9.550**	ug/L	0.411	4	17	13105	1	KED
|	**Zn**	**66**	**20.556**	ug/L	1.395	6	24	6701	3	KED
|	**Zn**	**67**	**20.184**	ug/L	1.533	7	4	1099	5	KED
|	**As**	**75**	**1.965**	ug/L	0.079	4	3	323	4	KED
⌊	**Se**	**78**	**0.421**	ug/L	0.313	74	9	16	30	KED
	Y	**89**		ug/L			287409	404265	4	Standard
	Kr	**83**		ug/L			52	80	15	Standard
⌈>	**In-1**	**115**		ug/L			5508	5578	2	KED
|	**Cd**	**111**	**0.034**	ug/L	0.029	85	4	10	53	KED
⌊	**Cd**	**114**	**0.054**	ug/L	0.019	34	1	27	34	KED
⌈>	**In**	**115**		ug/L			456477	467739	3	Standard
|	**Ag**	**107**	**0.040**	ug/L	0.002	5	46	852	3	Standard
|	**Sb**	**121**	**-0.022**	ug/L	0.001	3	466	170	7	Standard
|	**Sb**	**123**	**-0.021**	ug/L	0.002	8	343	128	17	Standard
|	**Ba**	**135**	**15.125**	ug/L	0.735	4	10	62907	1	Standard
⌊	**Ba**	**137**	**15.007**	ug/L	0.358	2	19	104968	1	Standard
⌈>	**Tb**	**159**		ug/L			710909	757777	4	Standard
⌊	**Pb**	**208**	**4.134**	ug/L	0.109	2	226	244801	2	Standard

23A0133

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~23A0138-~~ [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 22:45:54

MB 3/31/23

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	32128	0	Standard
	Cl	**37**		ug/L			3111826	3314089	1	Standard
>	**Sc**	**45**		ug/L			446275	538047	1	Standard
	V	**51**	**13.401**	ug/L	0.099	0	6985	352132	0	Standard
	V-1	**51**	**13.474**	ug/L	0.179	1	122	349895	0	Standard
	[redacted]	**52**	[redacted]	ug/L	0.020	0	20379	267899	1	Standard
	Cr	**53**	**11.622**	ug/L	0.263	2	108	29557	1	Standard
	Mn	**55**	**54.197**	ug/L	2.614	4	701	1690571	4	Standard
>	**Ge**	**72**		ug/L			19285	20112	1	KED
	Ni	**60**	**4.589**	ug/L	0.242	5	7	4407	4	KED
	Ni	**62**	**4.758**	ug/L	0.195	4	3	747	3	KED
	Cu	**63**	**11.217**	ug/L	0.141	1	37	32123	0	KED
	Cu	**65**	**11.072**	ug/L	0.134	1	17	15733	1	KED
	Zn	**66**	**28.302**	ug/L	0.890	3	24	9550	2	KED
	Zn	**67**	**25.500**	ug/L	1.772	6	4	1438	6	KED
	As	**75**	**5.761**	ug/L	0.083	1	3	974	1	KED
	Se	**78**	**0.808**	ug/L	0.181	22	9	24	13	KED
	Y	**89**		ug/L			287409	432775	0	Standard
	Kr	**83**		ug/L			52	67	19	Standard
>	**In-1**	**115**		ug/L			5508	5453	2	KED
	[redacted]	**111**	[redacted]	ug/L	0.028	5	4	96	7	KED
	Cd	**114**	**0.521**	ug/L	0.065	12	1	245	14	KED
>	**In**	**115**		ug/L			456477	476335	1	Standard
	Ag	**107**	**0.155**	ug/L	0.006	4	46	3190	2	Standard
	Sb	**121**	**-0.023**	ug/L	0.000	1	466	160	2	Standard
	Sb	**123**	**-0.021**	ug/L	0.002	7	343	128	12	Standard
	Ba	**135**	**16.945**	ug/L	0.419	2	10	71829	1	Standard
	Ba	**137**	**17.318**	ug/L	0.514	2	19	123384	2	Standard
>	**Tb**	**159**		ug/L			710909	772376	2	Standard
	Pb	**208**	**18.398**	ug/L	0.396	2	226	1110082	0	Standard

23A0133

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~23A0138-~~ [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 22:50:46
Number of Replicates: 3

MB 3/31/23

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	32255	2	Standard
	Cl	**37**		ug/L			3111826	3362247	2	Standard
>	**Sc**	**45**		ug/L			446275	547910	1	Standard
	V	**51**	**15.118**	ug/L	0.081	0	6985	403470	1	Standard
	V-1	**51**	**14.990**	ug/L	0.078	0	122	396427	1	Standard
	[redacted]	**52**	[redacted]	ug/L	0.162	1	20379	208755	2	Standard
	Cr	**53**	**8.222**	ug/L	0.158	1	108	21336	2	Standard
	Mn	**55**	**64.712**	ug/L	1.192	1	701	2055446	0	Standard
>	**Ge**	**72**		ug/L			19285	20012	1	KED
	Ni	**60**	**5.142**	ug/L	0.162	3	7	4913	2	KED
	Ni	**62**	**4.972**	ug/L	0.231	4	3	777	5	KED
	Cu	**63**	**10.901**	ug/L	0.213	1	37	31063	0	KED
	Cu	**65**	**10.898**	ug/L	0.321	2	17	15411	3	KED
	Zn	**66**	**26.194**	ug/L	1.254	4	24	8795	3	KED
	Zn	**67**	**26.222**	ug/L	1.185	4	4	1471	3	KED
	As	**75**	**3.497**	ug/L	0.059	1	3	590	2	KED
	Se	**78**	**0.616**	ug/L	0.120	19	9	20	9	KED
	Y	**89**		ug/L			287409	444130	2	Standard
	Kr	**83**		ug/L			52	74	14	Standard
>	**In-1**	**115**		ug/L			5508	5625	2	KED
	Cd	**111**	**0.163**	ug/L	0.016	9	4	35	5	KED
	Cd	**114**	**0.201**	ug/L	0.023	11	1	98	11	KED
>	**In**	**115**		ug/L			456477	482093	0	Standard
	Ag	**107**	**0.210**	ug/L	0.003	1	46	4372	2	Standard
	Sb	**121**	**-0.024**	ug/L	0.002	6	466	146	14	Standard
	Sb	**123**	**-0.023**	ug/L	0.002	9	343	109	21	Standard
	Ba	**135**	**21.430**	ug/L	0.393	1	10	91955	2	Standard
	Ba	**137**	**21.908**	ug/L	0.273	1	19	158008	1	Standard
>	**Tb**	**159**		ug/L			710909	770967	1	Standard
	Pb	**208**	**6.374**	ug/L	0.125	1	226	384083	0	Standard

23A0133

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~23A0138~~
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 22:55:38

MB 3/31/23

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	31684	0	Standard
	Cl	**37**		ug/L			3111826	3354732	2	Standard
>	**Sc**	**45**		ug/L			446275	540489	3	Standard
	V	**51**	**13.443**	ug/L	0.668	4	6985	354419	1	Standard
	V-1	**51**	**13.424**	ug/L	0.668	4	122	349825	1	Standard
		52		ug/L	0.323	4	20379	176273	0	Standard
	Cr	**53**	**7.209**	ug/L	0.326	4	108	18450	1	Standard
	Mn	**55**	**66.762**	ug/L	3.259	4	701	2089927	1	Standard
>	**Ge**	**72**		ug/L			19285	19911	2	KED
	Ni	**60**	**4.940**	ug/L	0.411	8	7	4690	5	KED
	Ni	**62**	**4.890**	ug/L	0.270	5	3	760	4	KED
	Cu	**63**	**10.785**	ug/L	0.235	2	37	30571	1	KED
	Cu	**65**	**10.751**	ug/L	0.388	3	17	15115	0	KED
	Zn	**66**	**25.041**	ug/L	0.773	3	24	8366	1	KED
	Zn	**67**	**24.787**	ug/L	0.928	3	4	1383	2	KED
	As	**75**	**2.714**	ug/L	0.111	4	3	456	1	KED
	Se	**78**	**0.582**	ug/L	0.086	14	9	20	9	KED
	Y	**89**		ug/L			287409	432837	2	Standard
	Kr	**83**		ug/L			52	75	31	Standard
>	**In-1**	**115**		ug/L			5508	5568	1	KED
	Cd	**111**	**0.153**	ug/L	0.013	8	4	33	8	KED
	Cd	**114**	**0.168**	ug/L	0.027	16	1	81	18	KED
>	**In**	**115**		ug/L			456477	477912	2	Standard
	Ag	**107**	**0.088**	ug/L	0.009	9	46	1849	8	Standard
	Sb	**121**	**-0.024**	ug/L	0.002	7	466	146	18	Standard
	Sb	**123**	**-0.023**	ug/L	0.001	5	343	112	14	Standard
	Ba	**135**	**18.933**	ug/L	0.899	4	10	80473	2	Standard
	Ba	**137**	**18.813**	ug/L	0.777	4	19	134424	1	Standard
>	**Tb**	**159**		ug/L			710909	760500	1	Standard
		208		ug/L	0.067	1	226	287757	0	Standard

23A0133

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~23A0138-~~
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 23:00:30

MB 3/31/23

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	33031	2	Standard
	Cl	**37**		ug/L			3111826	3306823	3	Standard
>	**Sc**	**45**		ug/L			446275	531518	3	Standard
	V	**51**	**12.512**	ug/L	0.398	3	6985	325169	1	Standard
	V-1	**51**	**12.487**	ug/L	0.349	2	122	320207	1	Standard
	Cr	**52**	**5.668**	ug/L	0.186	3	20379	144746	0	Standard
	Cr	**53**	**5.852**	ug/L	0.046	0	108	14769	3	Standard
	Mn	**55**	**67.472**	ug/L	1.655	2	701	2078458	1	Standard
>	**Ge**	**72**		ug/L			19285	20371	2	KED
	Ni	**60**	**4.513**	ug/L	0.142	3	7	4389	1	KED
	Ni	**62**	**4.726**	ug/L	0.483	10	3	751	7	KED
	Cu	**63**	**7.957**	ug/L	0.402	5	37	23073	2	KED
	Cu	**65**	**8.026**	ug/L	0.376	4	17	11549	2	KED
	Zn	**66**	**19.061**	ug/L	1.192	6	24	6517	3	KED
	Zn	**67**	**19.156**	ug/L	1.089	5	4	1095	6	KED
		75		ug/L	0.042	1	3	373	2	KED
	Se	**78**	**0.633**	ug/L	0.096	15	9	21	10	KED
	Y	**89**		ug/L			287409	421413	1	Standard
	Kr	**83**		ug/L			52	66	17	Standard
>	**In-1**	**115**		ug/L			5508	5608	1	KED
	Cd	**111**	**0.045**	ug/L	0.016	34	4	13	23	KED
	Cd	**114**	**0.056**	ug/L	0.014	24	1	28	22	KED
>	**In**	**115**		ug/L			456477	474641	1	Standard
	Ag	**107**	**0.034**	ug/L	0.003	7	46	739	7	Standard
	Sb	**121**	**-0.025**	ug/L	0.001	2	466	132	7	Standard
	Sb	**123**	**-0.024**	ug/L	0.002	7	343	99	20	Standard
	Ba	**135**	**15.607**	ug/L	0.300	1	10	65923	1	Standard
	Ba	**137**	**15.907**	ug/L	0.135	0	19	112954	1	Standard
>	**Tb**	**159**		ug/L			710909	780764	2	Standard
	Pb	**208**	**7.793**	ug/L	0.251	3	226	475331	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0138-14
Sample Dil Factor: 50
DEL
Comments:
Sample Date/Time: Friday, March 31, 2023 23:05:21
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	35307	6	Standard
	Cl	**37**		ug/L			3111826	3375028	2	Standard
⌈>	**Sc**	**45**		ug/L			446275	535089	1	Standard
|	**V**	**51**	**11.426**	ug/L	0.191	1	6985	299783	0	Standard
|	**V-1**	**51**	**11.385**	ug/L	0.181	1	122	294030	0	Standard
|	**Cr**	**52**	**5.442**	ug/L	0.145	2	20379	140922	1	Standard
|	**Cr**	**53**	**5.542**	ug/L	0.109	1	108	14084	1	Standard
⌊	**Mn**	**55**	**61.865**	ug/L	0.336	0	701	1919465	1	Standard
⌈>	**Ge**	**72**		ug/L			19285	20058	0	KED
|	**Ni**	**60**	**5.026**	ug/L	0.135	2	7	4815	3	KED
|	**Ni**	**62**	**4.889**	ug/L	0.221	4	3	766	4	KED
|	**Cu**	**63**	**9.414**	ug/L	0.144	1	37	26895	1	KED
|	**Cu**	**65**	**9.753**	ug/L	0.310	3	17	13826	3	KED
|	**Zn**	**66**	**20.187**	ug/L	0.299	1	24	6802	1	KED
|	**Zn**	**67**	**19.416**	ug/L	0.948	4	4	1093	4	KED
|	**As**	**75**	**2.427**	ug/L	0.025	1	3	411	0	KED
⌊	**Se**	**78**	**0.532**	ug/L	0.206	38	9	19	18	KED
	Y	**89**		ug/L			287409	402859	0	Standard
	Kr	**83**		ug/L			52	88	24	Standard
⌈>	**In-1**	**115**		ug/L			5508	5716	0	KED
|	**Cd**	**111**	**0.070**	ug/L	0.017	24	4	18	18	KED
⌊	**Cd**	**114**	**0.046**	ug/L	0.008	17	1	23	17	KED
⌈>	**In**	**115**		ug/L			456477	478528	0	Standard
|	**Ag**	**107**	**0.038**	ug/L	0.002	5	46	816	5	Standard
|	**Sb**	**121**	**-0.027**	ug/L	0.001	4	466	98	15	Standard
|	**Sb**	**123**	**-0.026**	ug/L	0.000	1	343	77	5	Standard
|	**Ba**	**135**	**14.505**	ug/L	0.205	1	10	61778	0	Standard
⌊	**Ba**	**137**	**15.085**	ug/L	0.347	2	19	107986	1	Standard
⌈>	**Tb**	**159**		ug/L			710909	766711	2	Standard
⌊	**Pb**	**208**	**3.805**	ug/L	0.089	2	226	228082	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0138-15
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, March 31, 2023 23:10:13

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	32793	5	Standard
	Cl	**37**		ug/L			3111826	3317016	5	Standard
>	**Sc**	**45**		ug/L			446275	523443	3	Standard
	V	**51**	**12.795**	ug/L	0.513	4	6985	327344	3	Standard
	V-1	**51**	**12.758**	ug/L	0.430	3	122	322231	3	Standard
	Cr	**52**	**6.134**	ug/L	0.237	3	20379	152331	2	Standard
	Cr	**53**	**6.274**	ug/L	0.126	2	108	15578	2	Standard
	Mn	**55**	**68.274**	ug/L	1.576	2	701	2071110	0	Standard
>	**Ge**	**72**		ug/L			19285	20341	2	KED
	Ni	**60**	**4.990**	ug/L	0.195	3	7	4846	3	KED
	Ni	**62**	**5.108**	ug/L	0.172	3	3	811	1	KED
	Cu	**63**	**9.640**	ug/L	0.319	3	37	27919	2	KED
	Cu	**65**	**9.869**	ug/L	0.370	3	17	14177	1	KED
	Zn	**66**	**21.434**	ug/L	1.228	5	24	7316	3	KED
	Zn	**67**	**21.753**	ug/L	1.780	8	4	1240	5	KED
	As	**75**	**2.342**	ug/L	0.099	4	3	403	3	KED
	Se	**78**	**0.544**	ug/L	0.121	22	9	19	10	KED
	Y	**89**		ug/L			287409	410142	2	Standard
	Kr	**83**		ug/L			52	75	22	Standard
>	**In-1**	**115**		ug/L			5508	5604	1	KED
	Cd	**111**	**0.054**	ug/L	0.015	28	4	14	19	KED
	Cd	**114**	**0.091**	ug/L	0.015	16	1	45	17	KED
>	**In**	**115**		ug/L			456477	464872	4	Standard
	Ag	**107**	**0.047**	ug/L	0.003	7	46	985	4	Standard
	Sb	**121**	**-0.026**	ug/L	0.001	2	466	112	5	Standard
	Sb	**123**	**-0.025**	ug/L	0.000	1	343	85	3	Standard
	Ba	**135**	**16.213**	ug/L	0.717	4	10	66997	0	Standard
	Ba	**137**	**16.620**	ug/L	0.667	4	19	115472	1	Standard
>	**Tb**	**159**		ug/L			710909	753799	3	Standard
	Pb	**208**	**4.473**	ug/L	0.132	2	226	263478	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0138-16
Sample Dil Factor: 50
Comments:

DEL

Sample Date/Time: Friday, March 31, 2023 23:15:05
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	32369	1	Standard
	Cl	**37**		ug/L			3111826	3277575	4	Standard
>	**Sc**	**45**		ug/L			446275	525429	0	Standard
	V	**51**	**12.041**	ug/L	0.090	0	6985	309837	1	Standard
	V-1	**51**	**11.991**	ug/L	0.137	1	122	304140	1	Standard
	Cr	**52**	**5.672**	ug/L	0.191	3	20379	143243	2	Standard
	Cr	**53**	**5.757**	ug/L	0.004	0	108	14364	0	Standard
	Mn	**55**	**67.546**	ug/L	2.202	3	701	2057853	3	Standard
>	**Ge**	**72**		ug/L			19285	20639	2	KED
	Ni	**60**	**4.701**	ug/L	0.133	2	7	4635	3	KED
	Ni	**62**	**4.828**	ug/L	0.216	4	3	778	3	KED
	Cu	**63**	**9.704**	ug/L	0.128	1	37	28522	1	KED
	Cu	**65**	**10.018**	ug/L	0.425	4	17	14608	4	KED
	Zn	**66**	**20.075**	ug/L	1.270	6	24	6954	4	KED
	Zn	**67**	**19.556**	ug/L	1.391	7	4	1133	7	KED
	As	**75**	**2.472**	ug/L	0.050	2	3	431	0	KED
	Se	**78**	**0.564**	ug/L	0.069	12	9	20	3	KED
	Y	**89**		ug/L			287409	399773	2	Standard
	Kr	**83**		ug/L			52	59	14	Standard
>	**In-1**	**115**		ug/L			5508	5626	3	KED
	Cd	**111**	**0.047**	ug/L	0.024	50	4	13	31	KED
	Cd	**114**	**0.055**	ug/L	0.010	18	1	27	16	KED
>	**In**	**115**		ug/L			456477	477749	1	Standard
	Ag	**107**	**0.042**	ug/L	0.001	2	46	908	2	Standard
	Sb	**121**	**-0.026**	ug/L	0.000	1	466	115	5	Standard
	Sb	**123**	**-0.024**	ug/L	0.002	7	343	92	21	Standard
	Ba	**135**	**14.363**	ug/L	0.079	0	10	61073	0	Standard
	Ba	**137**	**14.551**	ug/L	0.426	2	19	104002	3	Standard
>	**Tb**	**159**		ug/L			710909	768100	2	Standard
	Pb	**208**	**4.100**	ug/L	0.104	2	226	246152	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 23:21:02
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	27329	2	Standard
	Cl	**37**		ug/L			3111826	3424126	1	Standard
⌈>	**Sc**	**45**		ug/L			446275	476241	1	Standard
|	**V**	**51**	**46.447**	ug/L	1.501	3	6985	1061674	2	Standard
|	**V-1**	**51**	**46.584**	ug/L	1.565	3	122	1070260	2	Standard
|	**Cr**	**52**	**47.607**	ug/L	0.892	1	20379	928885	0	Standard
|	**Cr**	**53**	**48.011**	ug/L	1.142	2	108	107709	1	Standard
⌊	**Mn**	**55**	**48.983**	ug/L	0.913	1	701	1352585	1	Standard
⌈>	**Ge**	**72**		ug/L			19285	19584	0	KED
|	**Ni**	**60**	**48.210**	ug/L	0.717	1	7	45028	1	KED
|	**Ni**	**62**	**47.861**	ug/L	1.550	3	3	7296	2	KED
|	**Cu**	**63**	**47.607**	ug/L	0.427	0	37	132655	1	KED
|	**Cu**	**65**	**48.930**	ug/L	0.199	0	17	67649	0	KED
|	**Zn**	**66**	**49.419**	ug/L	0.671	1	24	16224	1	KED
|	**Zn**	**67**	**47.185**	ug/L	0.539	1	4	2588	1	KED
|	**As**	**75**	**50.044**	ug/L	0.696	1	3	8220	0	KED
⌊	**Se**	**78**	**51.598**	ug/L	1.493	2	9	885	2	KED
	Y	**89**		ug/L			287409	302684	0	Standard
	Kr	**83**		ug/L			52	56	15	Standard
⌈>	**In-1**	**115**		ug/L			5508	5624	1	KED
|	**Cd**	**111**	**49.841**	ug/L	0.234	0	4	9688	1	KED
⌊	**Cd**	**114**	**49.268**	ug/L	0.215	0	1	23806	1	KED
⌈>	**In**	**115**		ug/L			456477	466867	0	Standard
|	**Ag**	**107**	**45.396**	ug/L	0.603	1	46	904727	1	Standard
|	**Sb**	**121**	**47.588**	ug/L	1.148	2	466	666720	2	Standard
|	**Sb**	**123**	**47.260**	ug/L	0.726	1	343	506818	1	Standard
|	**Ba**	**135**	**48.074**	ug/L	0.310	0	10	199745	0	Standard
⌊	**Ba**	**137**	**49.293**	ug/L	0.950	1	19	344236	1	Standard
⌈>	**Tb**	**159**		ug/L			710909	740952	1	Standard
⌊	**Pb**	**208**	**48.010**	ug/L	1.426	2	226	2778538	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, March 31, 2023 23:28:38
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	26508	2	Standard
	Cl	**37**		ug/L			3111826	3292121	2	Standard
>	**Sc**	**45**		ug/L			446275	467446	1	Standard
	V	**51**	**-0.018**	ug/L	0.004	19	6985	6912	1	Standard
	V-1	**51**	**-0.002**	ug/L	0.000	12	122	75	7	Standard
	Cr	**52**	**-0.056**	ug/L	0.008	13	20379	20304	2	Standard
	Cr	**53**	**-0.003**	ug/L	0.004	175	108	107	10	Standard
	Mn	**55**	**0.004**	ug/L	0.001	32	701	849	2	Standard
>	**Ge**	**72**		ug/L			19285	19293	1	KED
	Ni	**60**	**-0.001**	ug/L	0.002	171	7	6	34	KED
	Ni	**62**	**-0.017**	ug/L	0.007	42	3	0	173	KED
	Cu	**63**	**0.001**	ug/L	0.004	497	37	39	23	KED
	Cu	**65**	**-0.001**	ug/L	0.004	270	17	15	34	KED
	Zn	**66**	**-0.014**	ug/L	0.013	96	24	20	19	KED
	Zn	**67**	**0.024**	ug/L	0.002	8	4	5	0	KED
	As	**75**	**0.002**	ug/L	0.002	129	3	3	12	KED
	Se	**78**	**0.219**	ug/L	0.180	81	9	13	21	KED
	Y	**89**		ug/L			287409	295783	0	Standard
	Kr	**83**		ug/L			52	48	13	Standard
>	**In-1**	**115**		ug/L			5508	5407	2	KED
	Cd	**111**	**-0.005**	ug/L	0.003	67	4	3	17	KED
	Cd	**114**	**0.002**	ug/L	0.004	278	1	1	104	KED
>	**In**	**115**		ug/L			456477	470704	1	Standard
	Ag	**107**	**0.002**	ug/L	0.000	16	46	88	6	Standard
	Sb	**121**	**0.085**	ug/L	0.009	10	466	1678	6	Standard
	Sb	**123**	**0.087**	ug/L	0.002	2	343	1295	0	Standard
	Ba	**135**	**0.001**	ug/L	0.001	206	10	13	41	Standard
	Ba	**137**	**0.000**	ug/L	0.000	109	19	22	13	Standard
>	**Tb**	**159**		ug/L			710909	714899	3	Standard
	Pb	**208**	**0.001**	ug/L	0.000	11	226	281	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 23:33:31
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			24249	31463	2	Standard
Cl	**37**		ug/L			3111826	3522141	2	Standard
Sc	**45**		ug/L			446275	480059	1	Standard
V	**51**	**0.026**	ug/L	0.013	48	6985	8113	2	Standard
V-1	**51**	**0.226**	ug/L	0.006	2	122	5374	1	Standard
Cr	**52**	**0.442**	ug/L	0.019	4	20379	30412	0	Standard
Cr	**53**	**1.082**	ug/L	0.013	1	108	2560	2	Standard
Mn	**55**	**2.940**	ug/L	0.053	1	701	82559	1	Standard
Ge	**72**		ug/L			19285	19807	1	KED
Ni	**60**	**2.134**	ug/L	0.074	3	7	2023	3	KED
Ni	**62**	**2.067**	ug/L	0.019	0	3	321	2	KED
Cu	**63**	**6.196**	ug/L	0.197	3	37	17488	1	KED
Cu	**65**	**6.440**	ug/L	0.185	2	17	9020	3	KED
Zn	**66**	**11.929**	ug/L	0.095	0	24	3979	1	KED
Zn	**67**	**11.038**	ug/L	0.836	7	4	615	5	KED
As	**75**	**0.048**	ug/L	0.009	18	3	11	14	KED
Se	**78**	**0.124**	ug/L	0.119	95	9	12	15	KED
Y	**89**		ug/L			287409	305092	2	Standard
Kr	**83**		ug/L			52	43	21	Standard
In-1	**115**		ug/L			5508	5761	1	KED
[redacted]	**111**	[redacted]	ug/L	0.007	1137	4	4	32	KED
Cd	**114**	**0.005**	ug/L	0.006	133	1	3	86	KED
In	**115**		ug/L			456477	469488	3	Standard
Ag	**107**	**0.002**	ug/L	0.001	69	46	80	31	Standard
Sb	**121**	**0.038**	ug/L	0.002	4	466	1009	5	Standard
Sb	**123**	**0.040**	ug/L	0.001	1	343	786	3	Standard
Ba	**135**	**1.964**	ug/L	0.070	3	10	8208	0	Standard
Ba	**137**	**1.996**	ug/L	0.040	2	19	14034	1	Standard
Tb	**159**		ug/L			710909	725633	2	Standard
Pb	**208**	**0.040**	ug/L	0.000	0	226	2507	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Friday, March 31, 2023 23:38:23
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			24249	31453	1	Standard
Cl	**37**		ug/L			3111826	3556433	4	Standard
Sc	**45**		ug/L			446275	473948	2	Standard
V	**51**	**0.028**	ug/L	0.003	12	6985	8046	2	Standard
V-1	**51**	**0.237**	ug/L	0.004	1	122	5546	1	Standard
Cr	**52**	**0.445**	ug/L	0.064	14	20379	30062	2	Standard
Cr	**53**	**1.114**	ug/L	0.075	6	108	2597	4	Standard
Mn	**55**	**2.842**	ug/L	0.104	3	701	78775	1	Standard
Ge	**72**		ug/L			19285	19446	4	KED
Ni	**60**	**2.120**	ug/L	0.127	5	7	1969	0	KED
Ni	**62**	**2.069**	ug/L	0.147	7	3	315	2	KED
Cu	**63**	**5.995**	ug/L	0.405	6	37	16584	1	KED
Cu	**65**	**6.003**	ug/L	0.336	5	17	8242	2	KED
Zn	**66**	**11.755**	ug/L	0.482	4	24	3845	1	KED
Zn	**67**	**10.532**	ug/L	0.811	7	4	577	10	KED
As	**75**	**0.048**	ug/L	0.014	29	3	11	17	KED
Se	**78**	**0.172**	ug/L	0.102	59	9	12	16	KED
Y	**89**		ug/L			287409	294867	1	Standard
Kr	**83**		ug/L			52	41	24	Standard
In-1	**115**		ug/L			5508	5562	2	KED
[redacted]	**111**	[redacted]	ug/L	0.004	232	4	3	25	KED
Cd	**114**	**0.007**	ug/L	0.006	79	1	4	61	KED
In	**115**		ug/L			456477	478555	1	Standard
Ag	**107**	**0.002**	ug/L	0.001	37	46	81	14	Standard
Sb	**121**	**0.019**	ug/L	0.003	15	466	757	4	Standard
Sb	**123**	**0.016**	ug/L	0.004	24	343	540	7	Standard
Ba	**135**	**1.865**	ug/L	0.034	1	10	7952	0	Standard
Ba	**137**	**1.960**	ug/L	0.113	5	19	14043	4	Standard
Tb	**159**		ug/L			710909	743550	1	Standard
Pb	**208**	**0.033**	ug/L	0.001	3	226	2160	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0134-01
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, March 31, 2023 23:43:09

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	31841	3	Standard
	Cl	**37**		ug/L			3111826	3171615	1	Standard
>	**Sc**	**45**		ug/L			446275	511436	3	Standard
	V	**51**	**13.007**	ug/L	0.311	2	6985	324969	0	Standard
	V-1	**51**	**12.972**	ug/L	0.296	2	122	320090	1	Standard
	Cr	**52**	**5.819**	ug/L	0.287	4	20379	142327	1	Standard
	Cr	**53**	**5.986**	ug/L	0.208	3	108	14522	1	Standard
	Mn	**55**	**60.056**	ug/L	1.969	3	701	1780405	3	Standard
>	**Ge**	**72**		ug/L			19285	20050	1	KED
	Ni	**60**	**4.778**	ug/L	0.114	2	7	4575	1	KED
	Ni	**62**	**4.854**	ug/L	0.377	7	3	760	7	KED
	Cu	**63**	**9.469**	ug/L	0.151	1	37	27038	0	KED
	Cu	**65**	**9.721**	ug/L	0.431	4	17	13769	3	KED
	Zn	**66**	**20.793**	ug/L	0.511	2	24	7001	1	KED
	Zn	**67**	**21.715**	ug/L	1.454	6	4	1222	7	KED
	As	**75**	**1.995**	ug/L	0.065	3	3	338	2	KED
	Se	**78**	**0.523**	ug/L	0.154	29	9	19	13	KED
	Y	**89**		ug/L			287409	402010	1	Standard
	Kr	**83**		ug/L			52	67	4	Standard
>	**In-1**	**115**		ug/L			5508	5610	1	KED
	Cd	**111**	**0.055**	ug/L	0.009	16	4	14	13	KED
	Cd	**114**	**0.061**	ug/L	0.003	5	1	30	3	KED
>	**In**	**115**		ug/L			456477	481289	1	Standard
	Ag	**107**	**0.041**	ug/L	0.002	5	46	889	6	Standard
	Sb	**121**	**-0.016**	ug/L	0.002	14	466	255	11	Standard
	Sb	**123**	**-0.016**	ug/L	0.001	8	343	190	7	Standard
	Ba	**135**	**11.747**	ug/L	0.130	1	10	50324	1	Standard
	Ba	**137**	**12.073**	ug/L	0.235	1	19	86927	1	Standard
>	**Tb**	**159**		ug/L			710909	764914	2	Standard
	Pb	**208**	**3.934**	ug/L	0.047	1	226	235310	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0134-02
Sample Dil Factor: 50
Comments:

DEL

Sample Date/Time: Friday, March 31, 2023 23:48:00
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	31545	3	Standard
	Cl	**37**		ug/L			3111826	3248145	0	Standard
⌈>	**Sc**	**45**		ug/L			446275	520184	0	Standard
|	**V**	**51**	**11.885**	ug/L	0.308	2	6985	302826	1	Standard
|	**V-1**	**51**	**11.852**	ug/L	0.308	2	122	297567	1	Standard
|	**Cr**	**52**	**5.721**	ug/L	0.193	3	20379	142811	1	Standard
|	**Cr**	**53**	**5.854**	ug/L	0.197	3	108	14455	2	Standard
⌊	**Mn**	**55**	**58.249**	ug/L	0.387	0	701	1756883	0	Standard
⌈>	**Ge**	**72**		ug/L			19285	19808	1	KED
|	**Ni**	**60**	**4.386**	ug/L	0.179	4	7	4148	2	KED
|	**Ni**	**62**	**4.528**	ug/L	0.301	6	3	700	6	KED
|	**Cu**	**63**	**10.379**	ug/L	0.120	1	37	29284	2	KED
|	**Cu**	**65**	**10.963**	ug/L	0.269	2	17	15340	0	KED
|	**Zn**	**66**	**23.118**	ug/L	0.491	2	24	7687	0	KED
|	**Zn**	**67**	**22.120**	ug/L	0.630	2	4	1229	4	KED
|	**As**	**75**	**3.131**	ug/L	0.088	2	3	523	1	KED
⌊	**Se**	**78**	**0.678**	ug/L	0.055	8	9	21	3	KED
	Y	**89**		ug/L			287409	394784	3	Standard
	Kr	**83**		ug/L			52	76	9	Standard
⌈>	**In-1**	**115**		ug/L			5508	5699	2	KED
|	**Cd**	**111**	**0.064**	ug/L	0.015	24	4	16	17	KED
⌊	**Cd**	**114**	**0.044**	ug/L	0.015	34	1	22	30	KED
⌈>	**In**	**115**		ug/L			456477	482178	0	Standard
|	**Ag**	**107**	**0.045**	ug/L	0.002	4	46	978	4	Standard
|	**Sb**	**121**	**-0.019**	ug/L	0.001	4	466	222	6	Standard
|	**Sb**	**123**	**-0.017**	ug/L	0.001	8	343	175	8	Standard
|	**Ba**	**135**	**14.775**	ug/L	0.099	0	10	63408	0	Standard
⌊	**Ba**	**137**	**14.950**	ug/L	0.309	2	19	107844	1	Standard
⌈>	**Tb**	**159**		ug/L			710909	770585	2	Standard
⌊	**Pb**	**208**	**5.109**	ug/L	0.128	2	226	307715	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0134-03
Sample Dil Factor: 50
DEL
Comments:
Sample Date/Time: Friday, March 31, 2023 23:52:52
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	30045	0	Standard
	Cl	**37**		ug/L			3111826	3237781	2	Standard
⌈>	**Sc**	**45**		ug/L			446275	519796	1	Standard
|	**V**	**51**	**12.497**	ug/L	0.239	1	6985	317746	0	Standard
|	**V-1**	**51**	**12.420**	ug/L	0.176	1	122	311583	0	Standard
|	**Cr**	**52**	**5.773**	ug/L	0.222	3	20379	143772	1	Standard
|	**Cr**	**53**	**5.784**	ug/L	0.011	0	108	14275	1	Standard
⌊	**Mn**	**55**	**58.130**	ug/L	0.175	0	701	1751969	1	Standard
⌈>	**Ge**	**72**		ug/L			19285	20633	2	KED
|	**Ni**	**60**	**4.446**	ug/L	0.142	3	7	4380	1	KED
|	**Ni**	**62**	**4.375**	ug/L	0.177	4	3	705	1	KED
|	**Cu**	**63**	**10.181**	ug/L	0.282	2	37	29906	0	KED
|	**Cu**	**65**	**10.224**	ug/L	0.068	0	17	14905	1	KED
|	**Zn**	**66**	**23.938**	ug/L	0.573	2	24	8293	3	KED
|	**Zn**	**67**	**23.225**	ug/L	1.079	4	4	1344	5	KED
|	**As**	**75**	**2.261**	ug/L	0.174	7	3	394	5	KED
⌊	**Se**	**78**	**0.604**	ug/L	0.227	37	9	21	21	KED
	Y	**89**		ug/L			287409	403674	1	Standard
	Kr	**83**		ug/L			52	64	12	Standard
⌈>	**In-1**	**115**		ug/L			5508	5611	1	KED
|	**Cd**	**111**	**0.065**	ug/L	0.010	15	4	16	11	KED
⌊	**Cd**	**114**	**0.087**	ug/L	0.010	11	1	43	9	KED
⌈>	**In**	**115**		ug/L			456477	483514	2	Standard
|	**Ag**	**107**	**0.044**	ug/L	0.003	6	46	961	3	Standard
|	**Sb**	**121**	**-0.018**	ug/L	0.001	6	466	237	6	Standard
|	**Sb**	**123**	**-0.018**	ug/L	0.001	8	343	165	8	Standard
|	**Ba**	**135**	**13.019**	ug/L	0.341	2	10	56007	0	Standard
⌊	**Ba**	**137**	**13.374**	ug/L	0.164	1	19	96733	1	Standard
⌈>	**Tb**	**159**		ug/L			710909	759646	2	Standard
⌊	**Pb**	**208**	**4.609**	ug/L	0.103	2	226	273688	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0134-04
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, March 31, 2023 23:57:44

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	31685	4	Standard
	Cl	**37**		ug/L			3111826	3220858	1	Standard
⌈>	**Sc**	**45**		ug/L			446275	521999	1	Standard
|	**V**	**51**	**12.541**	ug/L	0.250	1	6985	320177	0	Standard
|	**V-1**	**51**	**12.488**	ug/L	0.259	2	122	314589	0	Standard
|	**Cr**	**52**	**5.469**	ug/L	0.061	1	20379	138064	0	Standard
|	**Cr**	**53**	**5.572**	ug/L	0.110	1	108	13814	0	Standard
⌊	**Mn**	**55**	**57.559**	ug/L	0.670	1	701	1742358	2	Standard
⌈>	**Ge**	**72**		ug/L			19285	20277	2	KED
|	**Ni**	**60**	**4.849**	ug/L	0.215	4	7	4692	1	KED
|	**Ni**	**62**	**4.907**	ug/L	0.249	5	3	777	4	KED
|	**Cu**	**63**	**9.350**	ug/L	0.366	3	37	26993	3	KED
|	**Cu**	**65**	**9.521**	ug/L	0.508	5	17	13629	2	KED
|	**Zn**	**66**	**20.149**	ug/L	0.102	0	24	6864	3	KED
|	**Zn**	**67**	**20.430**	ug/L	0.736	3	4	1162	3	KED
|	**As**	**75**	**1.740**	ug/L	0.105	6	3	299	4	KED
⌊	**Se**	**78**	**0.651**	ug/L	0.089	13	9	21	10	KED
	Y	**89**		ug/L			287409	403069	1	Standard
	Kr	**83**		ug/L			52	64	12	Standard
⌈>	**In-1**	**115**		ug/L			5508	5604	0	KED
|	**Cd**	**111**	**0.046**	ug/L	0.016	35	4	13	23	KED
⌊	**Cd**	**114**	**0.074**	ug/L	0.029	39	1	36	39	KED
⌈>	**In**	**115**		ug/L			456477	464668	0	Standard
|	**Ag**	**107**	**0.048**	ug/L	0.002	4	46	1004	4	Standard
|	**Sb**	**121**	**-0.024**	ug/L	0.002	6	466	140	16	Standard
|	**Sb**	**123**	**-0.021**	ug/L	0.000	1	343	129	2	Standard
|	**Ba**	**135**	**13.392**	ug/L	0.317	2	10	55388	2	Standard
⌊	**Ba**	**137**	**13.751**	ug/L	0.256	1	19	95604	2	Standard
⌈>	**Tb**	**159**		ug/L			710909	763430	1	Standard
⌊	**Pb**	**208**	**3.954**	ug/L	0.072	1	226	236012	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0134-05
Sample Dil Factor: 50
Comments:
Sample Date/Time: Saturday, April 01, 2023 00:02:36

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	31103	0	Standard
	Cl	**37**		ug/L			3111826	3173262	3	Standard
⌈>	**Sc**	**45**		ug/L			446275	492015	5	Standard
|	**V**	**51**	**10.304**	ug/L	0.434	4	6985	249039	1	Standard
|	**V-1**	**51**	**10.279**	ug/L	0.423	4	122	243805	1	Standard
|	**Cr**	**52**	**4.988**	ug/L	0.326	6	20379	120478	1	Standard
|	**Cr**	**53**	**5.115**	ug/L	0.296	5	108	11940	0	Standard
⌊	**Mn**	**55**	**54.509**	ug/L	1.887	3	701	1553309	1	Standard
⌈>	**Ge**	**72**		ug/L			19285	20337	1	KED
|	**Ni**	**60**	**3.597**	ug/L	0.099	2	7	3495	2	KED
|	**Ni**	**62**	**3.667**	ug/L	0.209	5	3	584	7	KED
|	**Cu**	**63**	**8.544**	ug/L	0.126	1	37	24750	0	KED
|	**Cu**	**65**	**8.765**	ug/L	0.154	1	17	12597	1	KED
|	**Zn**	**66**	**18.083**	ug/L	0.361	1	24	6180	1	KED
|	**Zn**	**67**	**17.042**	ug/L	0.558	3	4	973	2	KED
|	**As**	**75**	**2.164**	ug/L	0.045	2	3	372	3	KED
⌊	**Se**	**78**	**0.494**	ug/L	0.154	31	9	18	13	KED
	Y	**89**		ug/L			287409	366830	3	Standard
	Kr	**83**		ug/L			52	67	15	Standard
⌈>	**In-1**	**115**		ug/L			5508	5667	2	KED
|	**Cd**	**111**	**0.063**	ug/L	0.029	45	4	16	31	KED
⌊	**Cd**	**114**	**0.045**	ug/L	0.010	21	1	23	23	KED
⌈>	**In**	**115**		ug/L			456477	455727	4	Standard
|	**Ag**	**107**	**0.039**	ug/L	0.004	8	46	812	4	Standard
|	**Sb**	**121**	**-0.024**	ug/L	0.002	8	466	135	18	Standard
|	**Sb**	**123**	**-0.022**	ug/L	0.003	14	343	113	23	Standard
|	**Ba**	**135**	**12.874**	ug/L	0.546	4	10	52159	0	Standard
⌊	**Ba**	**137**	**13.144**	ug/L	0.364	2	19	89553	1	Standard
⌈>	**Tb**	**159**		ug/L			710909	726429	6	Standard
⌊	**Pb**	**208**	**4.506**	ug/L	0.268	5	226	255336	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0134-06
Sample Dil Factor: 50
Comments:
Sample Date/Time: Saturday, April 01, 2023 00:07:28

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	31436	1	Standard
	Cl	**37**		ug/L			3111826	3173824	2	Standard
>	**Sc**	**45**		ug/L			446275	505682	0	Standard
	V	**51**	**9.890**	ug/L	0.123	1	6985	246313	0	Standard
	V-1	**51**	**9.898**	ug/L	0.114	1	122	241620	0	Standard
	Cr	**52**	**5.288**	ug/L	0.040	0	20379	130100	1	Standard
	Cr	**53**	**5.495**	ug/L	0.087	1	108	13200	2	Standard
	Mn	**55**	**55.166**	ug/L	1.536	2	701	1617667	3	Standard
>	**Ge**	**72**		ug/L			19285	20108	3	KED
	Ni	**60**	**4.060**	ug/L	0.155	3	7	3897	1	KED
	Ni	**62**	**4.144**	ug/L	0.141	3	3	652	6	KED
	Cu	**63**	**10.795**	ug/L	0.167	1	37	30903	2	KED
	Cu	**65**	**11.327**	ug/L	0.434	3	17	16078	0	KED
	Zn	**66**	**33.641**	ug/L	2.162	6	24	11330	3	KED
	Zn	**67**	**30.232**	ug/L	1.909	6	4	1701	2	KED
	As	**75**	**2.809**	ug/L	0.169	6	3	476	3	KED
	Se	**78**	**0.530**	ug/L	0.207	39	9	19	21	KED
	Y	**89**		ug/L			287409	374589	3	Standard
	Kr	**83**		ug/L			52	71	6	Standard
>	**In-1**	**115**		ug/L			5508	5667	1	KED
	Cd	**111**	**0.051**	ug/L	0.009	18	4	14	13	KED
	Cd	**114**	**0.075**	ug/L	0.011	14	1	37	15	KED
>	**In**	**115**		ug/L			456477	466921	1	Standard
	Ag	**107**	**0.045**	ug/L	0.002	3	46	949	1	Standard
	Sb	**121**	**-0.021**	ug/L	0.001	2	466	182	5	Standard
	Sb	**123**	**-0.020**	ug/L	0.001	5	343	137	7	Standard
	Ba	**135**	**13.944**	ug/L	0.274	1	10	57937	0	Standard
	Ba	**137**	**14.637**	ug/L	0.420	2	19	102208	0	Standard
>	**Tb**	**159**		ug/L			710909	749703	1	Standard
	Pb	**208**	**6.758**	ug/L	0.076	1	226	396022	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0134-07
Sample Dil Factor: 50
DEL
Comments:
Sample Date/Time: Saturday, April 01, 2023 00:12:20
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	32934	4	Standard
	Cl	**37**		ug/L			3111826	3227823	3	Standard
⌈>	**Sc**	**45**		ug/L			446275	518134	2	Standard
|	**V**	**51**	**10.687**	ug/L	0.324	3	6985	271955	0	Standard
|	**V-1**	**51**	**10.655**	ug/L	0.322	3	122	266389	0	Standard
|	**Cr**	**52**	**5.259**	ug/L	0.099	1	20379	132672	0	Standard
|	**Cr**	**53**	**5.368**	ug/L	0.110	2	108	13211	0	Standard
⌊	**Mn**	**55**	**58.388**	ug/L	0.493	0	701	1754387	3	Standard
⌈>	**Ge**	**72**		ug/L			19285	20005	2	KED
|	**Ni**	**60**	**4.218**	ug/L	0.043	1	7	4031	1	KED
|	**Ni**	**62**	**4.045**	ug/L	0.298	7	3	632	5	KED
|	**Cu**	**63**	**10.481**	ug/L	0.343	3	37	29849	1	KED
|	**Cu**	**65**	**10.680**	ug/L	0.111	1	17	15099	3	KED
|	**Zn**	**66**	**21.749**	ug/L	0.849	3	24	7306	3	KED
|	**Zn**	**67**	**21.126**	ug/L	1.710	8	4	1186	8	KED
|	**As**	**75**	**2.936**	ug/L	0.104	3	3	496	5	KED
⌊	**Se**	**78**	**0.813**	ug/L	0.092	11	9	24	4	KED
	Y	**89**		ug/L			287409	394572	0	Standard
	Kr	**83**		ug/L			52	54	21	Standard
⌈>	**In-1**	**115**		ug/L			5508	5623	2	KED
|	**Cd**	**111**	**0.057**	ug/L	0.012	20	4	15	12	KED
⌊	**Cd**	**114**	**0.086**	ug/L	0.018	21	1	42	18	KED
⌈>	**In**	**115**		ug/L			456477	471465	1	Standard
|	**Ag**	**107**	**0.048**	ug/L	0.001	2	46	1020	3	Standard
|	**Sb**	**121**	**-0.026**	ug/L	0.001	3	466	111	13	Standard
|	**Sb**	**123**	**-0.023**	ug/L	0.000	1	343	103	4	Standard
|	**Ba**	**135**	**14.067**	ug/L	0.440	3	10	59006	1	Standard
⌊	**Ba**	**137**	**14.621**	ug/L	0.373	2	19	103102	0	Standard
⌈>	**Tb**	**159**		ug/L			710909	762310	2	Standard
⌊	**Pb**	**208**	**5.450**	ug/L	0.118	2	226	324692	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0134-08
Sample Dil Factor: 50
Comments:
Sample Date/Time: Saturday, April 01, 2023 00:17:12

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	32433	3	Standard
	Cl	**37**		ug/L			3111826	3209357	4	Standard
⌈>	**Sc**	**45**		ug/L			446275	521181	0	Standard
|	**V**	**51**	**11.333**	ug/L	0.080	0	6985	289720	0	Standard
|	**V-1**	**51**	**11.268**	ug/L	0.099	0	122	283489	0	Standard
|	**Cr**	**52**	**5.229**	ug/L	0.034	0	20379	132861	0	Standard
|	**Cr**	**53**	**5.257**	ug/L	0.052	0	108	13020	0	Standard
⌊	**Mn**	**55**	**59.157**	ug/L	0.805	1	701	1787745	1	Standard
⌈>	**Ge**	**72**		ug/L			19285	20284	1	KED
|	**Ni**	**60**	**4.534**	ug/L	0.104	2	7	4393	1	KED
|	**Ni**	**62**	**4.339**	ug/L	0.359	8	3	688	8	KED
|	**Cu**	**63**	**9.612**	ug/L	0.189	1	37	27770	1	KED
|	**Cu**	**65**	**9.589**	ug/L	0.324	3	17	13742	2	KED
|	**Zn**	**66**	**21.075**	ug/L	0.491	2	24	7179	1	KED
|	**Zn**	**67**	**20.249**	ug/L	0.267	1	4	1153	2	KED
|	**As**	**75**	**2.598**	ug/L	0.088	3	3	445	4	KED
⌊	**Se**	**78**	**0.554**	ug/L	0.182	32	9	19	14	KED
	Y	**89**		ug/L			287409	398516	1	Standard
	Kr	**83**		ug/L			52	64	5	Standard
⌈>	**In-1**	**115**		ug/L			5508	5716	1	KED
|	**Cd**	**111**	**0.059**	ug/L	0.012	20	4	15	15	KED
⌊	**Cd**	**114**	**0.062**	ug/L	0.012	19	1	31	17	KED
⌈>	**In**	**115**		ug/L			456477	478210	1	Standard
|	**Ag**	**107**	**0.038**	ug/L	0.002	5	46	821	3	Standard
|	**Sb**	**121**	**-0.025**	ug/L	0.001	5	466	133	12	Standard
|	**Sb**	**123**	**-0.024**	ug/L	0.002	8	343	99	19	Standard
|	**Ba**	**135**	**14.239**	ug/L	0.374	2	10	60601	2	Standard
⌊	**Ba**	**137**	**14.531**	ug/L	0.334	2	19	103965	2	Standard
⌈>	**Tb**	**159**		ug/L			710909	768925	2	Standard
⌊	**Pb**	**208**	**6.654**	ug/L	0.154	2	226	399850	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 00:23:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	27135	5	Standard
	Cl	**37**		ug/L			3111826	3330555	1	Standard
>	**Sc**	**45**		ug/L			446275	464082	3	Standard
	V	**51**	**47.113**	ug/L	0.618	1	6985	1049319	2	Standard
	V-1	**51**	**46.886**	ug/L	0.570	1	122	1049739	2	Standard
	Cr	**52**	**49.657**	ug/L	1.750	3	20379	942692	1	Standard
	Cr	**53**	**48.815**	ug/L	1.620	3	108	106658	0	Standard
	Mn	**55**	**49.116**	ug/L	1.225	2	701	1321096	1	Standard
>	**Ge**	**72**		ug/L			19285	19613	3	KED
	Ni	**60**	**46.296**	ug/L	1.460	3	7	43289	3	KED
	Ni	**62**	**47.652**	ug/L	1.767	3	3	7271	3	KED
	Cu	**63**	**47.266**	ug/L	0.379	0	37	131875	3	KED
	Cu	**65**	**47.215**	ug/L	0.882	1	17	65350	2	KED
	Zn	**66**	**47.567**	ug/L	1.545	3	24	15632	3	KED
	Zn	**67**	**48.193**	ug/L	0.925	1	4	2645	1	KED
	As	**75**	**48.651**	ug/L	1.596	3	3	7998	1	KED
	Se	**78**	**49.420**	ug/L	0.917	1	9	849	2	KED
	Y	**89**		ug/L			287409	297633	2	Standard
	Kr	**83**		ug/L			52	53	27	Standard
>	**In-1**	**115**		ug/L			5508	5477	0	KED
	Cd	**111**	**50.117**	ug/L	0.623	1	4	9487	1	KED
	Cd	**114**	**49.917**	ug/L	1.058	2	1	23491	2	KED
>	**In**	**115**		ug/L			456477	463445	1	Standard
	Ag	**107**	**44.308**	ug/L	0.428	0	46	876574	1	Standard
	Sb	**121**	**47.809**	ug/L	0.834	1	466	664815	0	Standard
	Sb	**123**	**48.277**	ug/L	1.416	2	343	513882	2	Standard
	Ba	**135**	**48.430**	ug/L	0.639	1	10	199730	0	Standard
	Ba	**137**	**49.998**	ug/L	1.480	2	19	346608	2	Standard
>	**Tb**	**159**		ug/L			710909	736517	2	Standard
	Pb	**208**	**47.032**	ug/L	0.672	1	226	2705972	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 00:30:45
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	25950	1	Standard
	Cl	**37**		ug/L			3111826	3163513	1	Standard
⎡>	**Sc**	**45**		ug/L			446275	455619	2	Standard
⎢	**V**	**51**	**-0.007**	ug/L	0.014	183	6985	6965	1	Standard
⎢	**V-1**	**51**	**-0.002**	ug/L	0.000	17	122	70	14	Standard
⎢	**Cr**	**52**	**-0.019**	ug/L	0.049	264	20379	20452	1	Standard
⎢	**Cr**	**53**	**-0.002**	ug/L	0.004	196	108	106	6	Standard
⎣	**Mn**	**55**	**0.002**	ug/L	0.000	6	701	774	2	Standard
⎡>	**Ge**	**72**		ug/L			19285	19310	2	KED
⎢	**Ni**	**60**	**-0.001**	ug/L	0.005	402	7	6	75	KED
⎢	**Ni**	**62**	**-0.004**	ug/L	0.019	439	3	2	114	KED
⎢	**Cu**	**63**	**0.001**	ug/L	0.001	82	37	40	7	KED
⎢	**Cu**	**65**	**-0.003**	ug/L	0.005	147	17	13	51	KED
⎢	**Zn**	**66**	**-0.018**	ug/L	0.005	29	24	19	10	KED
⎢	**Zn**	**67**	**-0.012**	ug/L	0.034	275	4	3	50	KED
⎢	**As**	**75**	**0.010**	ug/L	0.001	11	3	5	5	KED
⎣	**Se**	**78**	**0.172**	ug/L	0.076	44	9	12	8	KED
	Y	**89**		ug/L			287409	282478	1	Standard
	Kr	**83**		ug/L			52	53	19	Standard
⎡>	**In-1**	**115**		ug/L			5508	5305	2	KED
⎢	**Cd**	**111**	**-0.001**	ug/L	0.008	794	4	3	43	KED
⎣	**Cd**	**114**	**0.009**	ug/L	0.011	123	1	4	94	KED
⎡>	**In**	**115**		ug/L			456477	468220	1	Standard
⎢	**Ag**	**107**	**0.001**	ug/L	0.000	46	46	67	15	Standard
⎢	**Sb**	**121**	**0.086**	ug/L	0.007	7	466	1688	4	Standard
⎢	**Sb**	**123**	**0.096**	ug/L	0.009	9	343	1378	5	Standard
⎢	**Ba**	**135**	**0.001**	ug/L	0.000	71	10	13	15	Standard
⎣	**Ba**	**137**	**0.000**	ug/L	0.001	177	19	22	25	Standard
⎡>	**Tb**	**159**		ug/L			710909	705849	3	Standard
⎣	**Pb**	**208**	**0.001**	ug/L	0.000	28	226	293	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 00:35:37
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24249	37635	2	Standard
Cl	37		ug/L			3111826	3915662	1	Standard
> Sc	45		ug/L			446275	460096	0	Standard
V	51	0.141	ug/L	0.013	9	6985	10285	2	Standard
V-1	51	0.302	ug/L	0.009	3	122	6833	3	Standard
[redacted]	52	[redacted]	ug/L	0.039	14	20379	25953	1	Standard
Cr	53	0.793	ug/L	0.024	2	108	1828	1	Standard
[redacted]	55	[redacted]	ug/L	1.558	1	701	2786120	1	Standard
> Ge	72		ug/L			19285	19148	1	KED
[redacted]	60	[redacted]	ug/L	0.141	4	7	2626	3	KED
Ni	62	3.022	ug/L	0.289	9	3	453	9	KED
[redacted]	63	[redacted]	ug/L	0.035	1	37	6383	1	KED
Cu	65	2.339	ug/L	0.020	0	17	3178	2	KED
[redacted]	66	[redacted]	ug/L	0.632	2	24	8161	2	KED
Zn	67	23.710	ug/L	1.031	4	4	1273	2	KED
[redacted]	75	[redacted]	ug/L	0.031	3	3	128	2	KED
[redacted]	78	[redacted]	ug/L	0.110	66	9	12	15	KED
Y	89		ug/L			287409	283630	1	Standard
Kr	83		ug/L			52	52	32	Standard
> In-1	115		ug/L			5508	5400	1	KED
[redacted]	111	[redacted]	ug/L	0.009	11	4	18	9	KED
Cd	114	0.103	ug/L	0.024	23	1	48	21	KED
> In	115		ug/L			456477	440611	0	Standard
Ag	107	0.001	ug/L	0.001	50	46	63	15	Standard
Sb	121	5.309	ug/L	0.081	1	466	70596	1	Standard
Sb	123	5.289	ug/L	0.059	1	343	53823	0	Standard
[redacted]	135	[redacted]	ug/L	0.231	1	10	54373	1	Standard
Ba	137	13.975	ug/L	0.209	1	19	92129	1	Standard
> Tb	159		ug/L			710909	715743	2	Standard
[redacted]	208	[redacted]	ug/L	0.004	4	226	5538	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 00:40:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24249	33170	3	Standard
Cl	37		ug/L			3111826	3832847	3	Standard
> Sc	45		ug/L			446275	442252	2	Standard
V	51	11.976	ug/L	0.220	1	6985	259329	1	Standard
V-1	51	12.099	ug/L	0.280	2	122	258196	1	Standard
[redacted]	52	[redacted]	ug/L	0.392	3	20379	240493	3	Standard
Cr	53	12.834	ug/L	0.223	1	108	26813	1	Standard
[redacted] STL	55	[redacted]	ug/L	2.487	2	701	2992406	1	Standard
> Ge	72		ug/L			19285	18093	1	KED
[redacted]	60	[redacted]	ug/L	0.111	0	7	12819	0	KED
Ni	62	15.326	ug/L	0.087	0	3	2160	1	KED
[redacted]	63	[redacted]	ug/L	0.153	1	37	35585	0	KED
Cu	65	14.250	ug/L	0.345	2	17	18210	1	KED
[redacted]	66	[redacted]	ug/L	2.015	3	24	19338	1	KED
Zn	67	60.439	ug/L	0.407	0	4	3061	0	KED
[redacted]	75	[redacted]	ug/L	0.116	0	3	2120	0	KED
[redacted]	78	[redacted]	ug/L	0.848	2	9	635	1	KED
Y	89		ug/L			287409	282421	0	Standard
Kr	83		ug/L			52	60	29	Standard
> In-1	115		ug/L			5508	5160	3	KED
[redacted]	111	[redacted]	ug/L	0.236	1	4	2200	3	KED
Cd	114	12.075	ug/L	0.605	5	1	5349	3	KED
> In	115		ug/L			456477	431449	1	Standard
Ag	107	11.125	ug/L	0.082	0	46	204917	1	Standard
Sb	121	17.895	ug/L	0.654	3	466	231872	2	Standard
Sb	123	18.231	ug/L	0.038	0	343	180886	1	Standard
[redacted]	135	[redacted]	ug/L	0.578	2	10	104146	0	Standard
Ba	137	27.930	ug/L	0.597	2	19	180242	1	Standard
> Tb	159		ug/L			710909	723208	1	Standard
[redacted]	208	[redacted]	ug/L	0.148	1	226	647599	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 00:47:09
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24249	36051	1	Standard
Cl	37		ug/L			3111826	3161422	2	Standard
> Sc	45		ug/L			446275	441712	2	Standard
V	51	0.829	ug/L	0.128	15	6985	24335	9	Standard
V-1	51	1.019	ug/L	0.021	2	122	21830	0	Standard
Cr	52	13.610	ug/L	0.515	3	20379	260595	1	Standard
Cr	53	13.731	ug/L	0.216	1	108	28646	1	Standard
Mn	55	5.452	ug/L	0.111	2	701	140224	1	Standard
> Ge	72		ug/L			19285	17762	1	KED
Ni	60	0.720	ug/L	0.002	0	7	616	1	KED
Ni	62	0.654	ug/L	0.051	7	3	93	7	KED
Cu	63	3.525	ug/L	0.027	0	37	8939	1	KED
Cu	65	3.601	ug/L	0.068	1	17	4530	0	KED
Zn	66	2.443	ug/L	0.135	5	24	749	6	KED
Zn	67	2.151	ug/L	0.567	26	4	111	26	KED
As	75	0.086	ug/L	0.028	32	3	16	26	KED
Se	78	0.317	ug/L	0.171	53	9	13	20	KED
Y	89		ug/L			287409	282282	0	Standard
Kr	83		ug/L			52	53	19	Standard
> In-1	115		ug/L			5508	5028	1	KED
[redacted]	111	[redacted]	ug/L	0.008	487	4	3	41	KED
Cd	114	0.026	ug/L	0.010	36	1	12	32	KED
> In	115		ug/L			456477	423567	1	Standard
Ag	107	0.001	ug/L	0.001	62	46	60	16	Standard
Sb	121	0.152	ug/L	0.005	3	466	2368	2	Standard
Sb	123	0.157	ug/L	0.002	1	343	1848	0	Standard
Ba	135	1.065	ug/L	0.022	2	10	4022	3	Standard
Ba	137	1.069	ug/L	0.029	2	19	6788	2	Standard
> Tb	159		ug/L			710909	721082	2	Standard
Pb	208	0.017	ug/L	0.001	6	226	1207	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 00:51:55
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24249	36379	4	Standard
Cl	37		ug/L			3111826	3117969	1	Standard
> Sc	45		ug/L			446275	452551	0	Standard
V	51	0.848	ug/L	0.105	12	6985	25380	8	Standard
V-1	51	1.020	ug/L	0.008	0	122	22394	0	Standard
Cr	52	11.991	ug/L	0.307	2	20379	237803	2	Standard
Cr	53	12.116	ug/L	0.044	0	108	25916	0	Standard
Mn	55	6.267	ug/L	0.051	0	701	165080	0	Standard
> Ge	72		ug/L			19285	17746	2	KED
Ni	60	1.030	ug/L	0.031	3	7	878	3	KED
Ni	62	1.114	ug/L	0.114	10	3	156	10	KED
Cu	63	3.256	ug/L	0.189	5	37	8244	3	KED
Cu	65	3.229	ug/L	0.119	3	17	4058	2	KED
Zn	66	3.493	ug/L	0.226	6	24	1059	5	KED
Zn	67	3.123	ug/L	0.582	18	4	158	16	KED
As	75	0.110	ug/L	0.005	4	3	19	4	KED
Se	78	0.039	ug/L	0.164	424	9	9	27	KED
Y	89		ug/L			287409	288733	3	Standard
Kr	83		ug/L			52	46	9	Standard
> In-1	115		ug/L			5508	5059	0	KED
[redacted]	111	[redacted]	ug/L	0.005	24	4	7	12	KED
Cd	114	0.016	ug/L	0.009	58	1	7	49	KED
> In	115		ug/L			456477	424118	1	Standard
Ag	107	0.001	ug/L	0.001	129	46	54	27	Standard
Sb	121	0.158	ug/L	0.006	3	466	2438	2	Standard
Sb	123	0.158	ug/L	0.005	2	343	1857	0	Standard
Ba	135	1.095	ug/L	0.024	2	10	4142	2	Standard
Ba	137	1.102	ug/L	0.046	4	19	7006	2	Standard
> Tb	159		ug/L			710909	725099	4	Standard
Pb	208	0.021	ug/L	0.001	3	226	1401	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 00:57:11
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			24249	33047	3	Standard
Cl	**37**		ug/L			3111826	3123928	1	Standard
Sc	**45**		ug/L			446275	454789	3	Standard
V	**51**	**0.944**	ug/L	0.050	5	6985	27580	5	Standard
V-1	**51**	**1.063**	ug/L	0.023	2	122	23438	1	Standard
Cr	**52**	**7.535**	ug/L	0.273	3	20379	157793	1	Standard
Cr	**53**	**7.667**	ug/L	0.307	4	108	16506	0	Standard
Mn	**55**	**6.715**	ug/L	0.187	2	701	177661	2	Standard
Ge	**72**		ug/L			19285	17419	2	KED
Ni	**60**	**1.025**	ug/L	0.054	5	7	857	3	KED
Ni	**62**	**1.098**	ug/L	0.061	5	3	151	7	KED
Cu	**63**	**1.665**	ug/L	0.027	1	37	4157	1	KED
Cu	**65**	**1.667**	ug/L	0.041	2	17	2066	4	KED
Zn	**66**	**7.881**	ug/L	0.355	4	24	2318	2	KED
Zn	**67**	**7.464**	ug/L	0.208	2	4	367	5	KED
As	**75**	**0.084**	ug/L	0.028	33	3	15	29	KED
Se	**78**	**0.212**	ug/L	0.136	64	9	11	18	KED
Y	**89**		ug/L			287409	292358	3	Standard
Kr	**83**		ug/L			52	57	21	Standard
In-1	**115**		ug/L			5508	4988	3	KED
[redacted]	**111**	[redacted]	ug/L	0.012	194	4	4	40	KED
Cd	**114**	**0.012**	ug/L	0.012	98	1	6	78	KED
In	**115**		ug/L			456477	427788	2	Standard
Ag	**107**	**0.004**	ug/L	0.001	26	46	118	14	Standard
Sb	**121**	**0.124**	ug/L	0.006	4	466	2023	1	Standard
Sb	**123**	**0.117**	ug/L	0.008	7	343	1473	3	Standard
Ba	**135**	**1.072**	ug/L	0.029	2	10	4091	3	Standard
Ba	**137**	**1.079**	ug/L	0.015	1	19	6919	2	Standard
Tb	**159**		ug/L			710909	736148	2	Standard
Pb	**208**	**0.036**	ug/L	0.001	2	226	2298	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 01:03:27
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			24249	32661	2	Standard
Cl	**37**		ug/L			3111826	3196145	1	Standard
Sc	**45**		ug/L			446275	458035	2	Standard
V	**51**	**0.849**	ug/L	0.057	6	6985	25691	2	Standard
V-1	**51**	**0.886**	ug/L	0.011	1	122	19697	0	Standard
Cr	**52**	**9.536**	ug/L	0.326	3	20379	195616	1	Standard
Cr	**53**	**9.315**	ug/L	0.209	2	108	20187	1	Standard
Mn	**55**	**5.871**	ug/L	0.178	3	701	156557	3	Standard
Ge	**72**		ug/L			19285	18076	2	KED
Ni	**60**	**0.860**	ug/L	0.019	2	7	747	2	KED
Ni	**62**	**0.872**	ug/L	0.071	8	3	125	8	KED
Cu	**63**	**1.758**	ug/L	0.052	2	37	4552	1	KED
Cu	**65**	**1.797**	ug/L	0.039	2	17	2308	0	KED
Zn	**66**	**4.371**	ug/L	0.153	3	24	1345	3	KED
Zn	**67**	**3.916**	ug/L	0.201	5	4	201	2	KED
As	**75**	**0.086**	ug/L	0.020	23	3	16	20	KED
Se	**78**	**0.247**	ug/L	0.169	68	9	12	20	KED
Y	**89**		ug/L			287409	288722	3	Standard
Kr	**83**		ug/L			52	47	4	Standard
In-1	**115**		ug/L			5508	5247	1	KED
[redacted]	**111**	[redacted]	ug/L	0.008	184	4	3	45	KED
Cd	**114**	**0.009**	ug/L	0.007	75	1	5	59	KED
In	**115**		ug/L			456477	441747	2	Standard
Ag	**107**	**0.001**	ug/L	0.001	68	46	60	19	Standard
Sb	**121**	**0.087**	ug/L	0.005	5	466	1600	3	Standard
Sb	**123**	**0.087**	ug/L	0.004	4	343	1212	2	Standard
Ba	**135**	**0.962**	ug/L	0.027	2	10	3792	2	Standard
Ba	**137**	**0.983**	ug/L	0.039	3	19	6511	2	Standard
Tb	**159**		ug/L			710909	737661	4	Standard
Pb	**208**	**0.015**	ug/L	0.001	4	226	1111	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 01:08:13
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24249	33009	4	Standard
Cl	37		ug/L			3111826	3091466	2	Standard
> Sc	45		ug/L			446275	454191	2	Standard
V	51	0.765	ug/L	0.047	6	6985	23670	3	Standard
V-1	51	0.880	ug/L	0.022	2	122	19397	1	Standard
Cr	52	8.248	ug/L	0.353	4	20379	170548	1	Standard
Cr	53	8.329	ug/L	0.263	3	108	17905	0	Standard
Mn	55	5.057	ug/L	0.215	4	701	133759	2	Standard
> Ge	72		ug/L			19285	18291	0	KED
Ni	60	0.624	ug/L	0.022	3	7	551	2	KED
Ni	62	0.706	ug/L	0.005	0	3	103	1	KED
Cu	63	2.347	ug/L	0.011	0	37	6140	0	KED
Cu	65	2.336	ug/L	0.044	1	17	3032	1	KED
Zn	66	4.132	ug/L	0.149	3	24	1288	2	KED
Zn	67	4.179	ug/L	0.679	16	4	217	15	KED
As	75	0.052	ug/L	0.017	31	3	11	23	KED
Se	78	0.331	ug/L	0.122	36	9	14	12	KED
Y	89		ug/L			287409	290983	0	Standard
Kr	83		ug/L			52	50	18	Standard
> In-1	115		ug/L			5508	5184	1	KED
[redacted]	111	[redacted]	ug/L	0.006	113	4	4	20	KED
Cd	114	0.004	ug/L	0.005	115	1	2	73	KED
> In	115		ug/L			456477	435098	0	Standard
Ag	107	0.001	ug/L	0.001	73	46	59	19	Standard
Sb	121	0.070	ug/L	0.004	5	466	1363	3	Standard
Sb	123	0.069	ug/L	0.002	3	343	1014	1	Standard
Ba	135	0.900	ug/L	0.036	3	10	3496	3	Standard
Ba	137	0.921	ug/L	0.036	3	19	6012	3	Standard
> Tb	159		ug/L			710909	740658	0	Standard
Pb	208	0.013	ug/L	0.000	0	226	973	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 01:13:29
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			24249	32782	1	Standard
Cl	**37**		ug/L			3111826	3132684	1	Standard
> **Sc**	**45**		ug/L			446275	451966	2	Standard
V	**51**	**0.651**	ug/L	0.084	12	6985	21070	6	Standard
V-1	**51**	**0.892**	ug/L	0.031	3	122	19565	1	Standard
Cr	**52**	**10.457**	ug/L	0.524	5	20379	209612	2	Standard
Cr	**53**	**10.863**	ug/L	0.328	3	108	23205	0	Standard
Mn	**55**	**4.747**	ug/L	0.165	3	701	125011	2	Standard
> **Ge**	**72**		ug/L			19285	17902	1	KED
Ni	**60**	**0.504**	ug/L	0.029	5	7	437	4	KED
Ni	**62**	**0.654**	ug/L	0.102	15	3	93	13	KED
Cu	**63**	**2.556**	ug/L	0.041	1	37	6541	1	KED
Cu	**65**	**2.562**	ug/L	0.096	3	17	3253	4	KED
Zn	**66**	**4.229**	ug/L	0.227	5	24	1289	4	KED
Zn	**67**	**4.197**	ug/L	0.372	8	4	213	7	KED
As	**75**	**0.059**	ug/L	0.012	19	3	12	12	KED
Se	**78**	**0.272**	ug/L	0.145	53	9	13	15	KED
Y	**89**		ug/L			287409	287062	1	Standard
Kr	**83**		ug/L			52	49	17	Standard
> **In-1**	**115**		ug/L			5508	5181	3	KED
[redacted]	**111**	[redacted]	ug/L	0.007	446	4	4	26	KED
Cd	**114**	**0.003**	ug/L	0.005	175	1	2	88	KED
> **In**	**115**		ug/L			456477	433721	1	Standard
Ag	**107**	**0.000**	ug/L	0.001	259	46	49	29	Standard
Sb	**121**	**0.070**	ug/L	0.002	2	466	1357	2	Standard
Sb	**123**	**0.068**	ug/L	0.003	4	343	1005	4	Standard
Ba	**135**	**0.864**	ug/L	0.012	1	10	3345	0	Standard
Ba	**137**	**0.880**	ug/L	0.019	2	19	5730	2	Standard
> **Tb**	**159**		ug/L			710909	739823	3	Standard
Pb	**208**	**0.011**	ug/L	0.001	6	226	867	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 01:19:45
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24249	32029	4	Standard
Cl	37		ug/L			3111826	3150588	2	Standard
> Sc	45		ug/L			446275	466540	2	Standard
V	51	**0.695**	ug/L	0.053	7	6985	22744	3	Standard
V-1	51	**0.754**	ug/L	0.032	4	122	17093	2	Standard
Cr	52	**6.380**	ug/L	0.127	1	20379	140396	1	Standard
Cr	53	**6.351**	ug/L	0.072	1	108	14057	2	Standard
Mn	55	**5.046**	ug/L	0.190	3	701	137088	1	Standard
> Ge	72		ug/L			19285	19167	0	KED
Ni	60	**0.331**	ug/L	0.018	5	7	310	5	KED
Ni	62	**0.426**	ug/L	0.068	15	3	66	14	KED
Cu	63	**1.908**	ug/L	0.083	4	37	5239	3	KED
Cu	65	**1.919**	ug/L	0.100	5	17	2612	4	KED
Zn	66	**2.337**	ug/L	0.172	7	24	774	7	KED
Zn	67	**2.204**	ug/L	0.198	8	4	122	8	KED
As	75	**0.056**	ug/L	0.007	11	3	12	7	KED
Se	78	**0.250**	ug/L	0.191	76	9	13	23	KED
Y	89		ug/L			287409	291667	1	Standard
Kr	83		ug/L			52	54	12	Standard
> In-1	115		ug/L			5508	5232	3	KED
[redacted]	111	[redacted]	ug/L	0.007	84	4	5	20	KED
Cd	114	**0.011**	ug/L	0.011	95	1	6	75	KED
> In	115		ug/L			456477	432846	1	Standard
Ag	107	**-0.000**	ug/L	0.001	738	46	42	27	Standard
Sb	121	**0.096**	ug/L	0.001	0	466	1682	1	Standard
Sb	123	**0.092**	ug/L	0.007	8	343	1236	6	Standard
Ba	135	**0.883**	ug/L	0.033	3	10	3411	2	Standard
Ba	137	**0.897**	ug/L	0.031	3	19	5822	3	Standard
> Tb	159		ug/L			710909	744632	2	Standard
Pb	208	**0.009**	ug/L	0.000	2	226	766	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLA
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 01:24:32
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	26664	3	Standard
	Cl	**37**		ug/L			3111826	3289141	0	Standard
⎡>	**Sc**	**45**		ug/L			446275	461789	1	Standard
⎢	**V**	**51**	**0.023**	ug/L	0.015	65	6985	7726	2	Standard
⎢	**V-1**	**51**	**-0.001**	ug/L	0.000	75	122	114	5	Standard
⎢	**Cr**	**52**	**0.099**	ug/L	0.047	47	20379	22912	2	Standard
⎢	**Cr**	**53**	**0.020**	ug/L	0.003	17	108	154	5	Standard
⎣	**Mn**	**55**	**0.000**	ug/L	0.001	768	701	729	2	Standard
⎡>	**Ge**	**72**		ug/L			19285	20223	0	KED
⎢	**Ni**	**60**	**0.004**	ug/L	0.006	167	7	11	50	KED
⎢	**Ni**	**62**	**0.027**	ug/L	0.032	117	3	7	66	KED
⎢	**Cu**	**63**	**0.007**	ug/L	0.003	40	37	59	14	KED
⎢	**Cu**	**65**	**0.008**	ug/L	0.001	8	17	29	3	KED
⎢	**Zn**	**66**	**0.008**	ug/L	0.011	139	24	28	13	KED
⎢	**Zn**	**67**	**-0.015**	ug/L	0.033	217	4	3	50	KED
⎢	**As**	**75**	**0.006**	ug/L	0.007	111	3	4	26	KED
⎣	**Se**	**78**	**0.070**	ug/L	0.058	82	9	11	9	KED
	Y	**89**		ug/L			287409	302079	1	Standard
	Kr	**83**		ug/L			52	53	19	Standard
⎡>	**In-1**	**115**		ug/L			5508	5835	2	KED
⎢	**Cd**	**111**	**-0.011**	ug/L	0.003	23	4	2	24	KED
⎣	**Cd**	**114**	**0.004**	ug/L	0.006	158	1	3	92	KED
⎡>	**In**	**115**		ug/L			456477	485208	1	Standard
⎢	**Ag**	**107**	**-0.001**	ug/L	0.001	87	46	34	36	Standard
⎢	**Sb**	**121**	**-0.030**	ug/L	0.000	1	466	62	9	Standard
⎢	**Sb**	**123**	**-0.028**	ug/L	0.001	2	343	51	17	Standard
⎢	**Ba**	**135**	**0.005**	ug/L	0.002	36	10	31	24	Standard
⎣	**Ba**	**137**	**0.003**	ug/L	0.002	52	19	43	28	Standard
⎡>	**Tb**	**159**		ug/L			710909	761123	3	Standard
⎣	**Pb**	**208**	**-0.000**	ug/L	0.000	112	226	226	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVA
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 01:29:24
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	26294	3	Standard
	Cl	**37**		ug/L			3111826	3150209	2	Standard
⌈>	**Sc**	**45**		ug/L			446275	470011	1	Standard
|	**V**	**51**	**46.361**	ug/L	0.628	1	6985	1046039	1	Standard
|	**V-1**	**51**	**46.695**	ug/L	0.643	1	122	1058894	0	Standard
|	**Cr**	**52**	**48.185**	ug/L	0.976	2	20379	927659	2	Standard
|	**Cr**	**53**	**49.206**	ug/L	1.372	2	108	108936	1	Standard
⌊	**Mn**	**55**	**49.804**	ug/L	0.830	1	701	1357331	1	Standard
⌈>	**Ge**	**72**		ug/L			19285	20117	1	KED
|	**Ni**	**60**	**45.729**	ug/L	0.662	1	7	43871	1	KED
|	**Ni**	**62**	**45.948**	ug/L	1.938	4	3	7197	5	KED
|	**Cu**	**63**	**46.942**	ug/L	0.597	1	37	134343	1	KED
|	**Cu**	**65**	**46.715**	ug/L	1.142	2	17	66326	1	KED
|	**Zn**	**66**	**46.801**	ug/L	0.897	1	24	15783	2	KED
|	**Zn**	**67**	**48.067**	ug/L	1.723	3	4	2706	1	KED
|	**As**	**75**	**49.176**	ug/L	1.875	3	3	8294	2	KED
⌊	**Se**	**78**	**50.432**	ug/L	1.459	2	9	889	1	KED
	Y	**89**		ug/L			287409	299541	0	Standard
	Kr	**83**		ug/L			52	52	20	Standard
⌈>	**In-1**	**115**		ug/L			5508	5636	3	KED
|	**Cd**	**111**	**50.242**	ug/L	1.343	2	4	9781	1	KED
⌊	**Cd**	**114**	**49.795**	ug/L	1.512	3	1	24097	1	KED
⌈>	**In**	**115**		ug/L			456477	468747	2	Standard
|	**Ag**	**107**	**46.429**	ug/L	0.321	0	46	928891	1	Standard
|	**Sb**	**121**	**49.070**	ug/L	1.509	3	466	689939	1	Standard
|	**Sb**	**123**	**48.920**	ug/L	0.683	1	343	526632	1	Standard
|	**Ba**	**135**	**50.229**	ug/L	1.490	2	10	209455	1	Standard
⌊	**Ba**	**137**	**50.563**	ug/L	1.066	2	19	354531	2	Standard
⌈>	**Tb**	**159**		ug/L			710909	771012	1	Standard
⌊	**Pb**	**208**	**46.612**	ug/L	0.224	0	226	2807837	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBA
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 01:37:01
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24249	25871	2	Standard
	Cl	**37**		ug/L			3111826	3112362	6	Standard
⌈>	**Sc**	**45**		ug/L			446275	462541	2	Standard
|	**V**	**51**	**-0.009**	ug/L	0.015	162	6985	7042	5	Standard
|	**V-1**	**51**	**-0.001**	ug/L	0.000	24	122	99	9	Standard
|	**Cr**	**52**	**-0.027**	ug/L	0.042	157	20379	20624	4	Standard
|	**Cr**	**53**	**-0.001**	ug/L	0.009	1111	108	110	15	Standard
⌊	**Mn**	**55**	**-0.005**	ug/L	0.001	26	701	586	3	Standard
⌈>	**Ge**	**72**		ug/L			19285	19690	1	KED
|	**Ni**	**60**	**0.007**	ug/L	0.005	79	7	13	34	KED
|	**Ni**	**62**	**0.020**	ug/L	0.031	153	3	6	75	KED
|	**Cu**	**63**	**0.002**	ug/L	0.007	262	37	45	39	KED
|	**Cu**	**65**	**-0.004**	ug/L	0.003	82	17	12	34	KED
|	**Zn**	**66**	**-0.019**	ug/L	0.044	238	24	19	75	KED
|	**Zn**	**67**	**-0.036**	ug/L	0.020	53	4	2	43	KED
|	**As**	**75**	**-0.000**	ug/L	0.005	1110	3	3	20	KED
⌊	**Se**	**78**	**-0.052**	ug/L	0.195	378	9	9	37	KED
	Y	**89**		ug/L			287409	289063	3	Standard
	Kr	**83**		ug/L			52	59	11	Standard
⌈>	**In-1**	**115**		ug/L			5508	5682	2	KED
|	**Cd**	**111**	**-0.009**	ug/L	0.003	29	4	2	21	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.002	93	1	2	46	KED
⌈>	**In**	**115**		ug/L			456477	477697	0	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.000	20	46	79	8	Standard
|	**Sb**	**121**	**0.085**	ug/L	0.010	11	466	1711	8	Standard
|	**Sb**	**123**	**0.091**	ug/L	0.004	4	343	1354	2	Standard
|	**Ba**	**135**	**0.000**	ug/L	0.000	4	10	13	0	Standard
⌊	**Ba**	**137**	**0.000**	ug/L	0.001	175	19	22	22	Standard
⌈>	**Tb**	**159**		ug/L			710909	720348	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	29	226	292	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 01:41:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				25525	4	Standard
	Cl	**37**		ug/L				3079769	2	Standard
>	**Sc**	**45**		ug/L				458223	2	Standard
	V	**51**		ug/L				7096	1	Standard
	V-1	**51**		ug/L				97	7	Standard
	Cr	**52**		ug/L				20883	1	Standard
	Cr	**53**		ug/L				121	7	Standard
	Mn	**55**		ug/L				554	3	Standard
>	**Ge**	**72**		ug/L				19943	2	KED
	Ni	**60**		ug/L				6	17	KED
	Ni	**62**		ug/L				3	100	KED
	Cu	**63**		ug/L				20	14	KED
	Cu	**65**		ug/L				15	45	KED
	Zn	**66**		ug/L				20	32	KED
	Zn	**67**		ug/L				2	43	KED
	As	**75**		ug/L				3	51	KED
	Se	**78**		ug/L				14	9	KED
	Y	**89**		ug/L				295636	1	Standard
	Kr	**83**		ug/L				57	29	Standard
>	**In-1**	**115**		ug/L				5644	0	KED
	Cd	**111**		ug/L				2	94	KED
	Cd	**114**		ug/L				2	122	KED
>	**In**	**115**		ug/L				475542	1	Standard
	Ag	**107**		ug/L				40	22	Standard
	Sb	**121**		ug/L				496	5	Standard
	Sb	**123**		ug/L				393	11	Standard
	Ba	**135**		ug/L				15	69	Standard
	Ba	**137**		ug/L				15	18	Standard
>	**Tb**	**159**		ug/L				724709	1	Standard
	Pb	**208**		ug/L				266	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVB
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 01:46:45
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	25917	2	Standard
	Cl	**37**		ug/L			3079769	3217120	2	Standard
>	**Sc**	**45**		ug/L			458223	472712	2	Standard
	V	**51**	**46.473**	ug/L	0.361	0	7096	1054500	2	Standard
	V-1	**51**	**46.614**	ug/L	0.529	1	97	1063044	1	Standard
	Cr	**52**	**49.077**	ug/L	0.865	1	20883	949608	1	Standard
	Cr	**53**	**49.437**	ug/L	1.951	3	121	110038	1	Standard
	Mn	**55**	**49.482**	ug/L	1.452	2	554	1355688	1	Standard
>	**Ge**	**72**		ug/L			19943	20352	1	KED
	Ni	**60**	**45.511**	ug/L	1.007	2	6	44184	3	KED
	Ni	**62**	**46.591**	ug/L	1.789	3	3	7381	3	KED
	Cu	**63**	**46.018**	ug/L	1.036	2	20	133202	0	KED
	Cu	**65**	**46.635**	ug/L	1.677	3	15	67028	5	KED
	Zn	**66**	**47.913**	ug/L	1.646	3	20	16335	2	KED
	Zn	**67**	**48.331**	ug/L	1.598	3	2	2752	3	KED
	As	**75**	**48.861**	ug/L	1.027	2	3	8339	1	KED
	Se	**78**	**49.663**	ug/L	0.667	1	14	891	3	KED
	Y	**89**		ug/L			295636	303577	2	Standard
	Kr	**83**		ug/L			57	59	3	Standard
>	**In-1**	**115**		ug/L			5644	5679	4	KED
	Cd	**111**	**48.957**	ug/L	2.337	4	2	9594	0	KED
	Cd	**114**	**48.934**	ug/L	1.182	2	2	23860	2	KED
>	**In**	**115**		ug/L			475542	480432	0	Standard
	Ag	**107**	**44.514**	ug/L	0.678	1	40	912856	1	Standard
	Sb	**121**	**47.909**	ug/L	0.288	0	496	690706	0	Standard
	Sb	**123**	**47.360**	ug/L	0.699	1	393	522662	0	Standard
	Ba	**135**	**49.918**	ug/L	0.571	1	15	213424	0	Standard
	Ba	**137**	**49.676**	ug/L	1.563	3	15	357008	3	Standard
>	**Tb**	**159**		ug/L			724709	775950	2	Standard
	Pb	**208**	**46.055**	ug/L	0.575	1	266	2791667	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBB
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 01:54:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	25942	1	Standard
	Cl	**37**		ug/L			3079769	3102326	2	Standard
⌈>	**Sc**	**45**		ug/L			458223	457439	3	Standard
|	**V**	**51**	**-0.007**	ug/L	0.002	26	7096	6929	2	Standard
|	**V-1**	**51**	**-0.001**	ug/L	0.000	33	97	73	9	Standard
|	**Cr**	**52**	**-0.024**	ug/L	0.003	11	20883	20414	2	Standard
|	**Cr**	**53**	**-0.003**	ug/L	0.004	113	121	114	9	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.003	179	554	589	8	Standard
⌈>	**Ge**	**72**		ug/L			19943	20225	3	KED
|	**Ni**	**60**	**-0.004**	ug/L	0.001	28	6	2	43	KED
|	**Ni**	**62**	**0.007**	ug/L	0.031	410	3	5	94	KED
|	**Cu**	**63**	**0.008**	ug/L	0.002	22	20	44	13	KED
|	**Cu**	**65**	**0.002**	ug/L	0.001	25	15	18	5	KED
|	**Zn**	**66**	**-0.005**	ug/L	0.009	181	20	19	17	KED
|	**Zn**	**67**	**0.034**	ug/L	0.054	159	2	4	65	KED
|	**As**	**75**	**0.008**	ug/L	0.003	32	3	4	10	KED
⌊	**Se**	**78**	**-0.077**	ug/L	0.068	89	14	13	11	KED
	Y	**89**		ug/L			295636	295436	2	Standard
	Kr	**83**		ug/L			57	43	19	Standard
⌈>	**In-1**	**115**		ug/L			5644	5565	3	KED
|	**Cd**	**111**	**0.000**	ug/L	0.003	1426	2	2	21	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.006	139	2	4	66	KED
⌈>	**In**	**115**		ug/L			475542	475183	1	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	40	40	78	20	Standard
|	**Sb**	**121**	**0.098**	ug/L	0.001	1	496	1896	1	Standard
|	**Sb**	**123**	**0.094**	ug/L	0.007	7	393	1422	4	Standard
|	**Ba**	**135**	**-0.000**	ug/L	0.000	54	15	13	7	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	98	15	22	30	Standard
⌈>	**Tb**	**159**		ug/L			724709	725947	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	58	266	302	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 01:59:14
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			25525	30543	0	Standard
Cl	37		ug/L			3079769	2954128	2	Standard
> Sc	45		ug/L			458223	500994	1	Standard
[redacted]	51	[redacted]	ug/L	0.015	110	7096	7423	4	Standard
V-1	51	0.020	ug/L	0.001	7	97	577	5	Standard
Cr	52	0.004	ug/L	0.043	1050	20883	22908	2	Standard
Cr	53	0.113	ug/L	0.007	6	121	399	4	Standard
Mn	55	113.256	ug/L	4.343	3	554	3288268	2	Standard
> Ge	72		ug/L			19943	21020	0	KED
Ni	60	0.899	ug/L	0.042	4	6	907	4	KED
Ni	62	0.856	ug/L	0.067	7	3	144	7	KED
Cu	63	0.135	ug/L	0.003	2	20	425	1	KED
Cu	65	0.147	ug/L	0.017	11	15	233	11	KED
Zn	66	2.508	ug/L	0.265	10	20	903	9	KED
Zn	67	2.506	ug/L	0.473	18	2	149	18	KED
As	75	3.613	ug/L	0.151	4	3	640	3	KED
Se	78	-0.192	ug/L	0.027	14	14	11	4	KED
Y	89		ug/L			295636	312403	3	Standard
Kr	83		ug/L			57	55	18	Standard
> In-1	115		ug/L			5644	5838	3	KED
Cd	111	0.004	ug/L	0.010	230	2	3	56	KED
Cd	114	0.009	ug/L	0.004	43	2	6	31	KED
> In	115		ug/L			475542	483349	2	Standard
Ag	107	0.001	ug/L	0.000	42	40	57	10	Standard
Sb	121	0.013	ug/L	0.000	1	496	697	2	Standard
Sb	123	0.014	ug/L	0.003	23	393	558	4	Standard
Ba	135	1.590	ug/L	0.033	2	15	6851	1	Standard
Ba	137	1.582	ug/L	0.008	0	15	11451	2	Standard
> Tb	159		ug/L			724709	761259	4	Standard
Pb	208	0.015	ug/L	0.000	2	266	1194	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 02:04:06
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			25525	32187	1	Standard
Cl	**37**		ug/L			3079769	3242565	2	Standard
Sc	**45**		ug/L			458223	489714	0	Standard
[redacted]	**51**	[redacted]	ug/L	0.012	220	7096	7461	4	Standard
V-1	**51**	**0.068**	ug/L	0.001	0	97	1706	1	Standard
Cr	**52**	**-0.019**	ug/L	0.044	227	20883	21941	3	Standard
Cr	**53**	**0.221**	ug/L	0.022	9	121	639	7	Standard
Mn	**55**	**31.674**	ug/L	0.361	1	554	899519	0	Standard
Ge	**72**		ug/L			19943	18625	0	KED
Ni	**60**	**0.563**	ug/L	0.043	7	6	505	7	KED
Ni	**62**	**0.593**	ug/L	0.065	10	3	89	10	KED
Cu	**63**	**0.072**	ug/L	0.007	9	20	209	8	KED
Cu	**65**	**0.083**	ug/L	0.011	13	15	123	11	KED
Zn	**66**	**1.033**	ug/L	0.035	3	20	340	2	KED
Zn	**67**	**5.734**	ug/L	0.134	2	2	300	1	KED
As	**75**	**2.841**	ug/L	0.092	3	3	446	2	KED
Se	**78**	**-0.198**	ug/L	0.081	40	14	10	12	KED
Y	**89**		ug/L			295636	298179	3	Standard
Kr	**83**		ug/L			57	53	32	Standard
In-1	**115**		ug/L			5644	5480	3	KED
Cd	**111**	**0.005**	ug/L	0.007	136	2	3	41	KED
Cd	**114**	**0.005**	ug/L	0.006	121	2	4	62	KED
In	**115**		ug/L			475542	434337	1	Standard
Ag	**107**	**0.001**	ug/L	0.001	81	40	57	29	Standard
Sb	**121**	**0.004**	ug/L	0.002	44	496	502	5	Standard
Sb	**123**	**0.006**	ug/L	0.001	21	393	424	2	Standard
Ba	**135**	**61.572**	ug/L	1.439	2	15	237958	1	Standard
Ba	**137**	**62.887**	ug/L	1.064	1	15	408537	0	Standard
Tb	**159**		ug/L			724709	722497	2	Standard
Pb	**208**	**0.024**	ug/L	0.000	0	266	1602	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 02:08:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			25525	31569	4	Standard
Cl	**37**		ug/L			3079769	3332241	1	Standard
Sc	**45**		ug/L			458223	490856	0	Standard
[redacted]	**51**	[redacted]	ug/L	0.014	2281	7096	7587	5	Standard
V-1	**51**	**0.063**	ug/L	0.001	2	97	1596	2	Standard
Cr	**52**	**-0.037**	ug/L	0.054	146	20883	21650	5	Standard
Cr	**53**	**0.173**	ug/L	0.008	4	121	530	4	Standard
Mn	**55**	**49.377**	ug/L	0.845	1	554	1405200	1	Standard
Ge	**72**		ug/L			19943	17704	2	KED
Ni	**60**	**0.606**	ug/L	0.029	4	6	516	3	KED
Ni	**62**	**0.693**	ug/L	0.098	14	3	99	15	KED
Cu	**63**	**0.073**	ug/L	0.004	5	20	202	3	KED
Cu	**65**	**0.064**	ug/L	0.010	16	15	93	12	KED
Zn	**66**	**0.467**	ug/L	0.069	14	20	156	11	KED
Zn	**67**	**1.876**	ug/L	0.399	21	2	95	21	KED
As	**75**	**8.307**	ug/L	0.079	0	3	1236	2	KED
Se	**78**	**0.001**	ug/L	0.063	4356	14	12	8	KED
Y	**89**		ug/L			295636	298601	2	Standard
Kr	**83**		ug/L			57	59	6	Standard
In-1	**115**		ug/L			5644	5106	1	KED
Cd	**111**	**0.005**	ug/L	0.008	163	2	3	45	KED
Cd	**114**	**0.001**	ug/L	0.007	1129	2	2	117	KED
In	**115**		ug/L			475542	433547	0	Standard
Ag	**107**	**0.001**	ug/L	0.000	82	40	48	19	Standard
Sb	**121**	**-0.012**	ug/L	0.002	18	496	293	9	Standard
Sb	**123**	**-0.011**	ug/L	0.001	11	393	247	4	Standard
Ba	**135**	**20.247**	ug/L	0.249	1	15	78131	1	Standard
Ba	**137**	**20.602**	ug/L	0.340	1	15	133626	1	Standard
Tb	**159**		ug/L			724709	735623	2	Standard
Pb	**208**	**0.004**	ug/L	0.000	11	266	478	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 02:13:50
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			25525	32088	4	Standard
Cl	**37**		ug/L			3079769	3140800	0	Standard
Sc	**45**		ug/L			458223	481845	0	Standard
[redacted]	**51**	[redacted]	ug/L	0.004	94	7096	7364	0	Standard
V-1	**51**	**0.029**	ug/L	0.001	2	97	784	2	Standard
Cr	**52**	**-0.051**	ug/L	0.012	24	20883	20971	0	Standard
Cr	**53**	**0.061**	ug/L	0.010	15	121	265	8	Standard
Mn	**55**	**16.837**	ug/L	0.275	1	554	470784	1	Standard
Ge	**72**		ug/L			19943	18580	5	KED
Ni	**60**	**0.153**	ug/L	0.013	8	6	140	2	KED
Ni	**62**	**0.155**	ug/L	0.013	8	3	26	11	KED
Cu	**63**	**0.066**	ug/L	0.011	15	20	194	15	KED
Cu	**65**	**0.087**	ug/L	0.009	10	15	128	4	KED
Zn	**66**	**0.419**	ug/L	0.009	2	20	149	7	KED
Zn	**67**	**10.203**	ug/L	0.146	1	2	532	7	KED
As	**75**	**2.352**	ug/L	0.126	5	3	369	5	KED
Se	**78**	**-0.257**	ug/L	0.103	40	14	9	20	KED
Y	**89**		ug/L			295636	278933	2	Standard
Kr	**83**		ug/L			57	62	3	Standard
In-1	**115**		ug/L			5644	5496	2	KED
Cd	**111**	**0.010**	ug/L	0.015	145	2	4	65	KED
Cd	**114**	**0.003**	ug/L	0.004	136	2	3	49	KED
In	**115**		ug/L			475542	443929	0	Standard
Ag	**107**	**0.000**	ug/L	0.000	3100	40	38	13	Standard
Sb	**121**	**-0.013**	ug/L	0.001	7	496	286	4	Standard
Sb	**123**	**-0.013**	ug/L	0.005	36	393	233	21	Standard
Ba	**135**	**105.875**	ug/L	1.043	0	15	418275	0	Standard
Ba	**137**	**107.235**	ug/L	1.129	1	15	712114	1	Standard
Tb	**159**		ug/L			724709	734547	2	Standard
Pb	**208**	**0.005**	ug/L	0.000	3	266	578	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 02:18:42
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			25525	28935	4	Standard
Cl	**37**		ug/L			3079769	3113957	1	Standard
> **Sc**	**45**		ug/L			458223	465903	0	Standard
[redacted]	**51**	[redacted]	ug/L	0.004	4	7096	9113	1	Standard
V-1	**51**	**0.132**	ug/L	0.004	2	97	3067	3	Standard
Cr	**52**	**0.008**	ug/L	0.012	149	20883	21377	0	Standard
Cr	**53**	**0.164**	ug/L	0.007	4	121	482	3	Standard
Mn	**55**	**194.917**	ug/L	3.647	1	554	5263234	1	Standard
> **Ge**	**72**		ug/L			19943	19282	2	KED
Ni	**60**	**1.200**	ug/L	0.024	2	6	1109	3	KED
Ni	**62**	**1.042**	ug/L	0.030	2	3	160	3	KED
Cu	**63**	**0.058**	ug/L	0.003	5	20	179	6	KED
Cu	**65**	**0.075**	ug/L	0.005	6	15	117	7	KED
Zn	**66**	**2.086**	ug/L	0.102	4	20	693	6	KED
Zn	**67**	**5.939**	ug/L	0.501	8	2	322	8	KED
As	**75**	**2.579**	ug/L	0.111	4	3	420	3	KED
Se	**78**	**0.002**	ug/L	0.281	12611	14	13	30	KED
Y	**89**		ug/L			295636	284205	2	Standard
Kr	**83**		ug/L			57	71	19	Standard
> **In-1**	**115**		ug/L			5644	5492	2	KED
Cd	**111**	**0.000**	ug/L	0.005	1974	2	2	43	KED
Cd	**114**	**0.001**	ug/L	0.006	475	2	2	97	KED
> **In**	**115**		ug/L			475542	446438	2	Standard
Ag	**107**	**-0.000**	ug/L	0.000	482	40	36	19	Standard
Sb	**121**	**-0.019**	ug/L	0.001	7	496	205	7	Standard
Sb	**123**	**-0.020**	ug/L	0.001	4	393	161	5	Standard
Ba	**135**	**49.067**	ug/L	0.735	1	15	194913	1	Standard
Ba	**137**	**49.740**	ug/L	1.654	3	15	332014	1	Standard
> **Tb**	**159**		ug/L			724709	723145	2	Standard
Pb	**208**	**0.006**	ug/L	0.000	4	266	577	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 02:23:28
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			25525	24397	4	Standard
Cl	37		ug/L			3079769	2467819	1	Standard
> Sc	45		ug/L			458223	347380	1	Standard
[redacted]	51	[redacted]	ug/L	0.002	1	7096	7762	1	Standard
V-1	51	0.145	ug/L	0.004	2	97	2499	3	Standard
Cr	52	0.134	ug/L	0.021	15	20883	17697	0	Standard
Cr	53	0.138	ug/L	0.011	7	121	316	4	Standard
Mn	55	0.630	ug/L	0.023	3	554	13093	1	Standard
> Ge	72		ug/L			19943	12922	0	KED
Ni	60	2.763	ug/L	0.091	3	6	1706	3	KED
Ni	62	2.918	ug/L	0.392	13	3	295	13	KED
Cu	63	1.076	ug/L	0.063	5	20	1990	5	KED
Cu	65	1.088	ug/L	0.047	4	15	1001	4	KED
Zn	66	1.865	ug/L	0.086	4	20	416	4	KED
Zn	67	16.069	ug/L	2.589	16	2	582	16	KED
As	75	2.764	ug/L	0.027	0	3	301	1	KED
Se	78	1.284	ug/L	0.243	18	14	23	11	KED
Y	89		ug/L			295636	220487	2	Standard
Kr	83		ug/L			57	96	9	Standard
> In-1	115		ug/L			5644	4297	2	KED
Cd	111	0.068	ug/L	0.014	20	2	12	18	KED
Cd	114	0.038	ug/L	0.012	32	2	15	30	KED
> In	115		ug/L			475542	308391	0	Standard
Ag	107	0.003	ug/L	0.002	44	40	71	28	Standard
Sb	121	1.100	ug/L	0.024	2	496	10498	1	Standard
Sb	123	1.109	ug/L	0.002	0	393	8105	0	Standard
Ba	135	267.886	ug/L	1.745	0	15	735185	0	Standard
Ba	137	273.066	ug/L	1.492	0	15	1259689	0	Standard
> Tb	159		ug/L			724709	618738	0	Standard
Pb	208	37.790	ug/L	0.121	0	266	1826914	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 02:28:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			25525	27062	4	Standard
Cl	**37**		ug/L			3079769	2770789	1	Standard
Sc	**45**		ug/L			458223	399707	1	Standard
[redacted]	**51**	[redacted]	ug/L	0.030	1	7096	45211	1	Standard
V-1	**51**	**2.026**	ug/L	0.027	1	97	39148	1	Standard
Cr	**52**	**0.041**	ug/L	0.014	33	20883	18873	0	Standard
Cr	**53**	**0.047**	ug/L	0.008	16	121	193	6	Standard
Mn	**55**	**0.461**	ug/L	0.011	2	554	11155	0	Standard
Ge	**72**		ug/L			19943	17045	2	KED
Ni	**60**	**3.494**	ug/L	0.117	3	6	2844	2	KED
Ni	**62**	**3.644**	ug/L	0.188	5	3	486	4	KED
Cu	**63**	**0.049**	ug/L	0.007	14	20	135	14	KED
Cu	**65**	**0.038**	ug/L	0.006	15	15	58	9	KED
Zn	**66**	**0.512**	ug/L	0.069	13	20	163	11	KED
Zn	**67**	**0.713**	ug/L	0.063	8	2	36	10	KED
[redacted]	**75**	[redacted]	ug/L	0.374	1	3	3320	3	KED
Se	**78**	**0.841**	ug/L	0.317	37	14	24	17	KED
Y	**89**		ug/L			295636	252654	2	Standard
Kr	**83**		ug/L			57	67	9	Standard
In-1	**115**		ug/L			5644	4966	1	KED
Cd	**111**	**0.031**	ug/L	0.023	71	2	7	50	KED
Cd	**114**	**0.018**	ug/L	0.007	36	2	9	30	KED
In	**115**		ug/L			475542	381875	0	Standard
Ag	**107**	**-0.000**	ug/L	0.001	2950	40	32	26	Standard
[redacted]	**121**	[redacted]	ug/L	0.293	2	496	153532	1	Standard
Sb	**123**	**13.541**	ug/L	0.046	0	393	119011	0	Standard
Ba	**135**	**4.769**	ug/L	0.083	1	15	16221	2	Standard
Ba	**137**	**4.927**	ug/L	0.037	0	15	28157	1	Standard
Tb	**159**		ug/L			724709	679868	3	Standard
Pb	**208**	**0.213**	ug/L	0.008	3	266	11566	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 02:34:59
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	38173	1	Standard
	Cl	**37**		ug/L			3079769	3003331	1	Standard
>	**Sc**	**45**		ug/L			458223	479035	0	Standard
	V	**51**	**0.863**	ug/L	0.031	3	7096	27130	3	Standard
	V-1	**51**	**0.877**	ug/L	0.020	2	97	20381	2	Standard
	Cr	**52**	**1.336**	ug/L	0.018	1	20883	47431	0	Standard
	Cr	**53**	**1.364**	ug/L	0.069	5	121	3201	4	Standard
	Mn	**55**	**9.755**	ug/L	0.066	0	554	271405	1	Standard
>	**Ge**	**72**		ug/L			19943	20923	0	KED
	Ni	**60**	**0.754**	ug/L	0.032	4	6	758	4	KED
	Ni	**62**	**0.768**	ug/L	0.228	29	3	128	28	KED
	[redacted]	**63**	[redacted]	ug/L	0.046	0	20	19633	0	KED
	Cu	**65**	**6.779**	ug/L	0.067	0	15	10027	1	KED
	Zn	**66**	**77.169**	ug/L	0.862	1	20	27043	0	KED
	[redacted]	[redacted]	[redacted]	ug/L	2.576	3	2	4137	2	KED
	As	**75**	**0.231**	ug/L	0.015	6	3	43	5	KED
	Se	**78**	**-0.042**	ug/L	0.291	700	14	14	35	KED
	Y	**89**		ug/L			295636	298117	2	Standard
	Kr	**83**		ug/L			57	52	31	Standard
>	**In-1**	**115**		ug/L			5644	6027	3	KED
	Cd	**111**	**0.113**	ug/L	0.010	8	2	26	9	KED
	Cd	**114**	**0.089**	ug/L	0.021	23	2	48	20	KED
>	**In**	**115**		ug/L			475542	482011	0	Standard
	Ag	**107**	**0.012**	ug/L	0.001	4	40	281	4	Standard
	Sb	**121**	**0.802**	ug/L	0.012	1	496	12099	0	Standard
	Sb	**123**	**0.811**	ug/L	0.037	4	393	9369	3	Standard
	Ba	**135**	**14.133**	ug/L	0.389	2	15	60634	2	Standard
	Ba	**137**	**14.292**	ug/L	0.230	1	15	103060	0	Standard
>	**Tb**	**159**		ug/L			724709	772629	2	Standard
	Pb	**208**	**1.415**	ug/L	0.030	2	266	85649	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 02:39:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			25525	42257	2	Standard
Cl	37		ug/L			3079769	3013917	1	Standard
> Sc	45		ug/L			458223	474171	1	Standard
V	51	0.712	ug/L	0.013	1	7096	23441	2	Standard
V-1	51	0.704	ug/L	0.007	0	97	16208	1	Standard
Cr	52	0.436	ug/L	0.027	6	20883	29882	2	Standard
Cr	53	0.420	ug/L	0.020	4	121	1063	3	Standard
Mn	55	10.076	ug/L	0.056	0	554	277453	1	Standard
> Ge	72		ug/L			19943	20721	1	KED
Ni	60	0.666	ug/L	0.041	6	6	664	4	KED
Ni	62	0.684	ug/L	0.133	19	3	114	19	KED
[redacted]	63	[redacted]	ug/L	0.089	1	20	23241	1	KED
Cu	65	7.923	ug/L	0.309	3	15	11600	3	KED
Zn	66	67.319	ug/L	2.239	3	20	23360	1	KED
[redacted]	[redacted]	[redacted]	ug/L	2.202	3	2	3488	2	KED
As	75	0.336	ug/L	0.013	3	3	61	2	KED
Se	78	-0.138	ug/L	0.107	77	14	12	15	KED
Y	89		ug/L			295636	304090	1	Standard
Kr	83		ug/L			57	47	24	Standard
> In-1	115		ug/L			5644	5957	2	KED
Cd	111	0.041	ug/L	0.011	27	2	11	21	KED
Cd	114	0.036	ug/L	0.018	49	2	20	45	KED
> In	115		ug/L			475542	494464	2	Standard
Ag	107	0.004	ug/L	0.001	18	40	118	13	Standard
Sb	121	0.503	ug/L	0.009	1	496	7976	2	Standard
Sb	123	0.498	ug/L	0.020	3	393	6061	3	Standard
Ba	135	5.196	ug/L	0.087	1	15	22881	2	Standard
Ba	137	5.215	ug/L	0.074	1	15	38580	1	Standard
> Tb	159		ug/L			724709	779473	3	Standard
Pb	208	0.172	ug/L	0.005	3	266	10735	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLC
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 02:44:44
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	25995	6	Standard
	Cl	**37**		ug/L			3079769	2997633	2	Standard
⎡>	**Sc**	**45**		ug/L			458223	447362	1	Standard
⎢	**V**	**51**	**0.007**	ug/L	0.004	54	7096	7071	1	Standard
⎢	**V-1**	**51**	**0.000**	ug/L	0.001	1732	97	96	24	Standard
⎢	**Cr**	**52**	**0.013**	ug/L	0.023	179	20883	20618	2	Standard
⎢	**Cr**	**53**	**-0.009**	ug/L	0.007	74	121	99	15	Standard
⎣	**Mn**	**55**	**0.023**	ug/L	0.016	67	554	1141	35	Standard
⎡>	**Ge**	**72**		ug/L			19943	20106	1	KED
⎢	**Ni**	**60**	**0.001**	ug/L	0.007	529	6	7	86	KED
⎢	**Ni**	**62**	**-0.008**	ug/L	0.014	165	3	2	86	KED
⎢	**Cu**	**63**	**0.011**	ug/L	0.002	19	20	50	13	KED
⎢	**Cu**	**65**	**0.004**	ug/L	0.002	49	15	20	10	KED
⎢	**Zn**	**66**	**0.039**	ug/L	0.004	9	20	33	3	KED
⎢	**Zn**	**67**	**0.022**	ug/L	0.001	3	2	3	0	KED
⎢	**As**	**75**	**0.001**	ug/L	0.002	208	3	3	7	KED
⎣	**Se**	**78**	**0.010**	ug/L	0.134	1320	14	14	15	KED
	Y	**89**		ug/L			295636	287613	2	Standard
	Kr	**83**		ug/L			57	57	40	Standard
⎡>	**In-1**	**115**		ug/L			5644	5733	2	KED
⎢	**Cd**	**111**	**0.001**	ug/L	0.005	351	2	2	33	KED
⎣	**Cd**	**114**	**0.000**	ug/L	0.002	3814	2	2	45	KED
⎡>	**In**	**115**		ug/L			475542	475038	2	Standard
⎢	**Ag**	**107**	**-0.000**	ug/L	0.000	51	40	36	2	Standard
⎢	**Sb**	**121**	**-0.029**	ug/L	0.002	5	496	85	26	Standard
⎢	**Sb**	**123**	**-0.030**	ug/L	0.002	7	393	67	37	Standard
⎢	**Ba**	**135**	**0.015**	ug/L	0.016	104	15	78	83	Standard
⎣	**Ba**	**137**	**0.015**	ug/L	0.017	112	15	121	97	Standard
⎡>	**Tb**	**159**		ug/L			724709	737258	0	Standard
⎣	**Pb**	**208**	**0.001**	ug/L	0.002	217	266	320	33	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVC
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 02:49:36
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	25047	3	Standard
	Cl	**37**		ug/L			3079769	3123680	2	Standard
>	**Sc**	**45**		ug/L			458223	464608	0	Standard
	V	**51**	**46.541**	ug/L	1.802	3	7096	1037826	3	Standard
	V-1	**51**	**46.705**	ug/L	1.668	3	97	1046911	3	Standard
	Cr	**52**	**47.766**	ug/L	0.331	0	20883	909200	0	Standard
	Cr	**53**	**48.257**	ug/L	0.056	0	121	105645	0	Standard
	Mn	**55**	**49.649**	ug/L	0.943	1	554	1337332	1	Standard
>	**Ge**	**72**		ug/L			19943	20757	0	KED
	Ni	**60**	**43.863**	ug/L	1.241	2	6	43416	1	KED
	Ni	**62**	**45.407**	ug/L	0.773	1	3	7339	2	KED
	Cu	**63**	**45.794**	ug/L	1.060	2	20	135218	2	KED
	Cu	**65**	**45.089**	ug/L	0.271	0	15	66070	0	KED
	Zn	**66**	**47.592**	ug/L	1.087	2	20	16556	2	KED
	Zn	**67**	**46.214**	ug/L	2.337	5	2	2684	4	KED
	As	**75**	**48.203**	ug/L	0.371	0	3	8392	1	KED
	Se	**78**	**50.178**	ug/L	2.027	4	14	917	3	KED
	Y	**89**		ug/L			295636	301824	0	Standard
	Kr	**83**		ug/L			57	54	24	Standard
>	**In-1**	**115**		ug/L			5644	5893	1	KED
	Cd	**111**	**47.759**	ug/L	0.901	1	2	9724	1	KED
	Cd	**114**	**47.485**	ug/L	0.760	1	2	24037	0	KED
>	**In**	**115**		ug/L			475542	481305	1	Standard
	Ag	**107**	**43.083**	ug/L	0.573	1	40	885147	1	Standard
	Sb	**121**	**47.147**	ug/L	0.653	1	496	680936	1	Standard
	Sb	**123**	**47.074**	ug/L	0.474	1	393	520475	1	Standard
	Ba	**135**	**50.206**	ug/L	0.742	1	15	215042	1	Standard
	Ba	**137**	**50.736**	ug/L	1.268	2	15	365313	2	Standard
>	**Tb**	**159**		ug/L			724709	778520	3	Standard
	Pb	**208**	**44.139**	ug/L	1.125	2	266	2683598	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBC
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 02:57:13
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	24794	4	Standard
	Cl	**37**		ug/L			3079769	3041400	3	Standard
⎡>	**Sc**	**45**		ug/L			458223	446351	1	Standard
⎢	**V**	**51**	**0.004**	ug/L	0.010	256	7096	6993	1	Standard
⎢	**V-1**	**51**	**-0.001**	ug/L	0.001	50	97	73	15	Standard
⎢	**Cr**	**52**	**0.008**	ug/L	0.038	448	20883	20485	1	Standard
⎢	**Cr**	**53**	**-0.008**	ug/L	0.003	31	121	101	3	Standard
⎣	**Mn**	**55**	**0.005**	ug/L	0.000	5	554	674	2	Standard
⎡>	**Ge**	**72**		ug/L			19943	20583	3	KED
⎢	**Ni**	**60**	**-0.000**	ug/L	0.003	2273	6	6	45	KED
⎢	**Ni**	**62**	**0.019**	ug/L	0.013	67	3	6	31	KED
⎢	**Cu**	**63**	**0.006**	ug/L	0.003	46	20	38	22	KED
⎢	**Cu**	**65**	**0.001**	ug/L	0.005	348	15	17	40	KED
⎢	**Zn**	**66**	**-0.008**	ug/L	0.019	252	20	18	39	KED
⎢	**Zn**	**67**	**0.042**	ug/L	0.066	157	2	5	78	KED
⎢	**As**	**75**	**0.005**	ug/L	0.015	284	3	4	55	KED
⎣	**Se**	**78**	**-0.118**	ug/L	0.088	74	14	12	15	KED
	Y	**89**		ug/L			295636	286427	2	Standard
	Kr	**83**		ug/L			57	50	5	Standard
⎡>	**In-1**	**115**		ug/L			5644	5755	5	KED
⎢	**Cd**	**111**	**0.002**	ug/L	0.009	537	2	2	57	KED
⎣	**Cd**	**114**	**0.000**	ug/L	0.004	2382	2	2	86	KED
⎡>	**In**	**115**		ug/L			475542	468641	1	Standard
⎢	**Ag**	**107**	**0.001**	ug/L	0.000	38	40	64	15	Standard
⎢	**Sb**	**121**	**0.087**	ug/L	0.001	1	496	1712	0	Standard
⎢	**Sb**	**123**	**0.087**	ug/L	0.005	6	393	1321	4	Standard
⎢	**Ba**	**135**	**-0.000**	ug/L	0.001	278	15	13	31	Standard
⎣	**Ba**	**137**	**0.002**	ug/L	0.001	46	15	28	20	Standard
⎡>	**Tb**	**159**		ug/L			724709	728908	2	Standard
⎣	**Pb**	**208**	**0.001**	ug/L	0.000	30	266	304	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0640-01
Sample Dil Factor: 10
Comments:

DEL

Sample Date/Time: Saturday, April 01, 2023 03:02:05
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	517060	3	Standard
	Cl	**37**		ug/L			3079769	3041478	1	Standard
⌈>	**Sc**	**45**		ug/L			458223	477727	1	Standard
|	**V**	**51**	**0.655**	ug/L	0.042	6	7096	22307	2	Standard
|	**V-1**	**51**	**0.001**	ug/L	0.000	44	97	124	7	Standard
|	**Cr**	**52**	**2.529**	ug/L	0.143	5	20883	70082	2	Standard
|	**Cr**	**53**	**0.311**	ug/L	0.004	1	121	825	0	Standard
⌊	**Mn**	**55**	**0.032**	ug/L	0.002	5	554	1470	1	Standard
⌈>	**Ge**	**72**		ug/L			19943	21382	0	KED
|	**Ni**	**60**	**0.023**	ug/L	0.009	37	6	30	28	KED
|	**Ni**	**62**	**-0.002**	ug/L	0.020	1182	3	3	86	KED
|	**Cu**	**63**	**0.150**	ug/L	0.007	4	20	479	3	KED
|	**Cu**	**65**	**0.149**	ug/L	0.010	6	15	241	5	KED
|	**Zn**	**66**	**0.177**	ug/L	0.003	1	20	85	1	KED
|	**Zn**	**67**	**0.199**	ug/L	0.048	24	2	14	19	KED
|	**As**	**75**	**0.003**	ug/L	0.009	301	3	4	40	KED
⌊	**Se**	**78**	**-0.168**	ug/L	0.143	85	14	12	21	KED
	Y	**89**		ug/L			295636	303463	2	Standard
	Kr	**83**		ug/L			57	63	4	Standard
⌈>	**In-1**	**115**		ug/L			5644	6261	2	KED
|	**Cd**	**111**	**0.006**	ug/L	0.013	221	2	4	70	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.004	185	2	3	51	KED
⌈>	**In**	**115**		ug/L			475542	496232	0	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.001	149	40	51	25	Standard
|	**Sb**	**121**	**0.002**	ug/L	0.002	102	496	548	6	Standard
|	**Sb**	**123**	**0.002**	ug/L	0.002	91	393	438	5	Standard
|	**Ba**	**135**	**0.066**	ug/L	0.005	7	15	309	7	Standard
⌊	**Ba**	**137**	**0.073**	ug/L	0.003	4	15	561	3	Standard
⌈>	**Tb**	**159**		ug/L			724709	782293	2	Standard
⌊	**Pb**	**208**	**0.024**	ug/L	0.001	4	266	1740	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0640-02
Sample Dil Factor: 10
Comments: DEL
Sample Date/Time: Saturday, April 01, 2023 03:06:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	63424	2	Standard
	Cl	**37**		ug/L			3079769	3026489	2	Standard
⌈>	**Sc**	**45**		ug/L			458223	466228	2	Standard
|	**V**	**51**	**0.056**	ug/L	0.008	14	7096	8467	1	Standard
|	**V-1**	**51**	**0.001**	ug/L	0.001	66	97	119	13	Standard
|	**Cr**	**52**	**0.317**	ug/L	0.028	8	20883	27154	0	Standard
|	**Cr**	**53**	**0.125**	ug/L	0.007	5	121	399	3	Standard
⌊	**Mn**	**55**	**0.019**	ug/L	0.000	1	554	1088	2	Standard
⌈>	**Ge**	**72**		ug/L			19943	21382	0	KED
|	**Ni**	**60**	**0.050**	ug/L	0.008	16	6	57	13	KED
|	**Ni**	**62**	**0.048**	ug/L	0.039	82	3	12	55	KED
|	**Cu**	**63**	**0.026**	ug/L	0.009	33	20	102	27	KED
|	**Cu**	**65**	**0.021**	ug/L	0.005	25	15	48	16	KED
|	**Zn**	**66**	**0.101**	ug/L	0.022	22	20	57	13	KED
|	**Zn**	**67**	**0.061**	ug/L	0.019	30	2	6	17	KED
|	**As**	**75**	**0.012**	ug/L	0.003	21	3	5	8	KED
⌊	**Se**	**78**	**-0.077**	ug/L	0.098	126	14	14	11	KED
	Y	**89**		ug/L			295636	299497	1	Standard
	Kr	**83**		ug/L			57	50	15	Standard
⌈>	**In-1**	**115**		ug/L			5644	6013	1	KED
|	**Cd**	**111**	**-0.005**	ug/L	0.006	103	2	1	69	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.004	1634	2	2	90	KED
⌈>	**In**	**115**		ug/L			475542	494490	0	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.000	201	40	45	15	Standard
|	**Sb**	**121**	**-0.011**	ug/L	0.001	9	496	350	4	Standard
|	**Sb**	**123**	**-0.012**	ug/L	0.002	14	393	277	6	Standard
|	**Ba**	**135**	**0.023**	ug/L	0.005	20	15	118	17	Standard
⌊	**Ba**	**137**	**0.023**	ug/L	0.001	3	15	186	4	Standard
⌈>	**Tb**	**159**		ug/L			724709	758021	2	Standard
⌊	**Pb**	**208**	**0.019**	ug/L	0.001	5	266	1379	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0640-03
Sample Dil Factor: 10
Comments:
Sample Date/Time: Saturday, April 01, 2023 03:11:37

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	695156	3	Standard
	Cl	**37**		ug/L			3079769	3137807	1	Standard
>	**Sc**	**45**		ug/L			458223	489462	0	Standard
	V	**51**	**0.874**	ug/L	0.028	3	7096	27980	2	Standard
	V-1	**51**	**0.014**	ug/L	0.001	5	97	427	4	Standard
	Cr	**52**	**3.376**	ug/L	0.089	2	20883	88439	2	Standard
	Cr	**53**	**0.457**	ug/L	0.037	8	121	1182	7	Standard
	Mn	**55**	**0.088**	ug/L	0.003	3	554	3097	3	Standard
>	**Ge**	**72**		ug/L			19943	21823	0	KED
	Ni	**60**	**0.104**	ug/L	0.020	18	6	115	17	KED
	Ni	**62**	**0.110**	ug/L	0.030	27	3	22	22	KED
	Cu	**63**	**0.057**	ug/L	0.010	17	20	198	15	KED
	Cu	**65**	**0.053**	ug/L	0.010	18	15	99	15	KED
	Zn	**66**	**0.203**	ug/L	0.031	15	20	96	11	KED
	Zn	**67**	**0.194**	ug/L	0.177	91	2	14	74	KED
	As	**75**	**2.226**	ug/L	0.054	2	3	410	2	KED
	Se	**78**	**-0.231**	ug/L	0.118	51	14	11	19	KED
	Y	**89**		ug/L			295636	311620	2	Standard
	Kr	**83**		ug/L			57	122	8	Standard
>	**In-1**	**115**		ug/L			5644	6157	1	KED
	Cd	**111**	**0.035**	ug/L	0.016	45	2	10	32	KED
	Cd	**114**	**0.021**	ug/L	0.008	39	2	13	31	KED
>	**In**	**115**		ug/L			475542	515110	2	Standard
	Ag	**107**	**0.000**	ug/L	0.000	544	40	45	12	Standard
	Sb	**121**	**0.017**	ug/L	0.003	16	496	794	5	Standard
	Sb	**123**	**0.017**	ug/L	0.003	20	393	622	6	Standard
	Ba	**135**	**0.047**	ug/L	0.008	16	15	233	17	Standard
	Ba	**137**	**0.050**	ug/L	0.001	2	15	404	4	Standard
>	**Tb**	**159**		ug/L			724709	790300	1	Standard
	Pb	**208**	**0.026**	ug/L	0.002	7	266	1924	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0640-04
Sample Dil Factor: 10
Comments:
Sample Date/Time: Saturday, April 01, 2023 03:16:23

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	503850	2	Standard
	Cl	**37**		ug/L			3079769	3166715	2	Standard
⌈>	**Sc**	**45**		ug/L			458223	502105	3	Standard
|	**V**	**51**	**0.582**	ug/L	0.020	3	7096	21695	1	Standard
|	**V-1**	**51**	**0.003**	ug/L	0.001	31	97	185	14	Standard
|	**Cr**	**52**	**2.423**	ug/L	0.100	4	20883	71531	1	Standard
|	**Cr**	**53**	**0.454**	ug/L	0.029	6	121	1204	2	Standard
⌊	**Mn**	**55**	**0.023**	ug/L	0.001	3	554	1272	4	Standard
⌈>	**Ge**	**72**		ug/L			19943	22870	1	KED
|	**Ni**	**60**	**0.057**	ug/L	0.018	31	6	69	27	KED
|	**Ni**	**62**	**0.036**	ug/L	0.012	33	3	10	20	KED
|	**Cu**	**63**	**0.149**	ug/L	0.004	2	20	509	3	KED
|	**Cu**	**65**	**0.152**	ug/L	0.004	2	15	262	2	KED
|	**Zn**	**66**	**0.201**	ug/L	0.047	23	20	100	18	KED
|	**Zn**	**67**	**0.243**	ug/L	0.038	15	2	18	11	KED
|	**As**	**75**	**0.039**	ug/L	0.012	30	3	11	21	KED
⌊	**Se**	**78**	**-0.254**	ug/L	0.030	11	14	11	6	KED
	Y	**89**		ug/L			295636	319202	1	Standard
	Kr	**83**		ug/L			57	113	16	Standard
⌈>	**In-1**	**115**		ug/L			5644	6591	2	KED
|	**Cd**	**111**	**0.002**	ug/L	0.008	376	2	3	56	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.007	136	2	5	67	KED
⌈>	**In**	**115**		ug/L			475542	526557	3	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.000	64	40	35	13	Standard
|	**Sb**	**121**	**-0.021**	ug/L	0.002	10	496	211	14	Standard
|	**Sb**	**123**	**-0.022**	ug/L	0.001	5	393	164	6	Standard
|	**Ba**	**135**	**0.058**	ug/L	0.008	14	15	288	14	Standard
⌊	**Ba**	**137**	**0.067**	ug/L	0.005	6	15	546	5	Standard
⌈>	**Tb**	**159**		ug/L			724709	819493	2	Standard
⌊	**Pb**	**208**	**0.010**	ug/L	0.001	5	266	928	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0640-05
Sample Dil Factor: 10
Comments:
Sample Date/Time: Saturday, April 01, 2023 03:21:09

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	73293	2	Standard
	Cl	**37**		ug/L			3079769	3059853	1	Standard
⌈>	**Sc**	**45**		ug/L			458223	470306	0	Standard
|	**V**	**51**	**0.041**	ug/L	0.016	38	7096	8207	3	Standard
|	**V-1**	**51**	**0.001**	ug/L	0.001	55	97	132	13	Standard
|	**Cr**	**52**	**0.181**	ug/L	0.053	29	20883	24844	3	Standard
|	**Cr**	**53**	**0.045**	ug/L	0.003	5	121	225	2	Standard
⌊	**Mn**	**55**	**0.013**	ug/L	0.001	7	554	920	2	Standard
⌈>	**Ge**	**72**		ug/L			19943	21526	3	KED
|	**Ni**	**60**	**0.013**	ug/L	0.006	48	6	19	29	KED
|	**Ni**	**62**	**-0.009**	ug/L	0.017	183	3	2	114	KED
|	**Cu**	**63**	**0.041**	ug/L	0.004	10	20	146	7	KED
|	**Cu**	**65**	**0.035**	ug/L	0.005	13	15	69	9	KED
|	**Zn**	**66**	**0.126**	ug/L	0.042	33	20	67	23	KED
|	**Zn**	**67**	**0.152**	ug/L	0.149	98	2	12	77	KED
|	**As**	**75**	**-0.002**	ug/L	0.003	123	3	3	17	KED
⌊	**Se**	**78**	**-0.198**	ug/L	0.025	12	14	11	2	KED
	Y	**89**		ug/L			295636	307427	1	Standard
	Kr	**83**		ug/L			57	55	10	Standard
⌈>	**In-1**	**115**		ug/L			5644	6306	2	KED
|	**Cd**	**111**	**0.009**	ug/L	0.005	55	2	4	20	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.009	287	2	4	109	KED
⌈>	**In**	**115**		ug/L			475542	493017	1	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.000	102	40	34	22	Standard
|	**Sb**	**121**	**-0.025**	ug/L	0.001	2	496	149	6	Standard
|	**Sb**	**123**	**-0.025**	ug/L	0.002	6	393	123	16	Standard
|	**Ba**	**135**	**0.014**	ug/L	0.001	8	15	76	5	Standard
⌊	**Ba**	**137**	**0.017**	ug/L	0.002	8	15	144	5	Standard
⌈>	**Tb**	**159**		ug/L			724709	770178	1	Standard
⌊	**Pb**	**208**	**0.005**	ug/L	0.000	9	266	589	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0640-06
Sample Dil Factor: 10
Comments:
Sample Date/Time: Saturday, April 01, 2023 03:26:25

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	460229	0	Standard
	Cl	**37**		ug/L			3079769	2989361	0	Standard
>	**Sc**	**45**		ug/L			458223	472123	1	Standard
	V	**51**	**0.526**	ug/L	0.010	1	7096	19144	0	Standard
	V-1	**51**	**0.002**	ug/L	0.000	3	97	143	0	Standard
	Cr	**52**	**2.097**	ug/L	0.040	1	20883	61128	0	Standard
	Cr	**53**	**0.318**	ug/L	0.005	1	121	831	0	Standard
	Mn	**55**	**0.030**	ug/L	0.001	4	554	1379	2	Standard
>	**Ge**	**72**		ug/L			19943	20754	1	KED
	Ni	**60**	**0.028**	ug/L	0.008	29	6	34	22	KED
	Ni	**62**	**0.034**	ug/L	0.042	122	3	9	72	KED
	Cu	**63**	**0.029**	ug/L	0.000	0	20	107	2	KED
	Cu	**65**	**0.023**	ug/L	0.004	17	15	49	10	KED
	Zn	**66**	**0.513**	ug/L	0.026	5	20	199	3	KED
	Zn	**67**	**0.502**	ug/L	0.060	12	2	31	9	KED
	As	**75**	**0.393**	ug/L	0.038	9	3	71	7	KED
	Se	**78**	**-0.116**	ug/L	0.211	181	14	13	29	KED
	Y	**89**		ug/L			295636	299709	1	Standard
	Kr	**83**		ug/L			57	109	17	Standard
>	**In-1**	**115**		ug/L			5644	5623	11	KED
	Cd	**111**	**0.009**	ug/L	0.012	137	2	4	48	KED
	Cd	**114**	**-0.002**	ug/L	0.004	194	2	1	160	KED
>	**In**	**115**		ug/L			475542	496345	1	Standard
	Ag	**107**	**-0.000**	ug/L	0.000	59	40	37	7	Standard
	Sb	**121**	**-0.014**	ug/L	0.002	13	496	309	7	Standard
	Sb	**123**	**-0.014**	ug/L	0.002	16	393	251	10	Standard
	Ba	**135**	**0.034**	ug/L	0.002	6	15	167	4	Standard
	Ba	**137**	**0.038**	ug/L	0.005	14	15	295	12	Standard
>	**Tb**	**159**		ug/L			724709	776317	2	Standard
	Pb	**208**	**0.014**	ug/L	0.001	3	266	1118	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 03:32:41
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			25525	35176	1	Standard
Cl	37		ug/L			3079769	3370114	3	Standard
> Sc	45		ug/L			458223	488048	0	Standard
V	51	1.215	ug/L	0.018	1	7096	35830	0	Standard
V-1	51	1.248	ug/L	0.009	0	97	29485	0	Standard
Cr	52	0.383	ug/L	0.041	10	20883	29709	2	Standard
Cr	53	0.522	ug/L	0.012	2	121	1328	2	Standard
Mn	55	956.587	ug/L	10.625	1	554	27057040	0	Standard
> Ge	72		ug/L			19943	19468	2	KED
Ni	60	1.349	ug/L	0.078	5	6	1257	3	KED
Ni	62	1.362	ug/L	0.052	3	3	210	5	KED
[redacted]	63	[redacted]	ug/L	0.040	1	20	10732	2	KED
Cu	65	3.915	ug/L	0.042	1	15	5394	2	KED
[redacted]	66	[redacted]	ug/L	0.630	2	20	7572	2	KED
Zn	67	22.117	ug/L	1.751	7	2	1207	10	KED
As	75	3.239	ug/L	0.155	4	3	531	3	KED
Se	78	0.062	ug/L	0.235	381	14	15	27	KED
Y	89		ug/L			295636	311124	2	Standard
Kr	83		ug/L			57	67	15	Standard
> In-1	115		ug/L			5644	5667	2	KED
Cd	111	0.019	ug/L	0.006	30	2	6	17	KED
Cd	114	0.032	ug/L	0.007	21	2	17	17	KED
> In	115		ug/L			475542	461580	2	Standard
Ag	107	0.003	ug/L	0.001	20	40	106	12	Standard
Sb	121	0.380	ug/L	0.012	3	496	5737	2	Standard
Sb	123	0.362	ug/L	0.007	1	393	4223	4	Standard
Ba	135	11.516	ug/L	0.303	2	15	47298	0	Standard
Ba	137	11.611	ug/L	0.456	3	15	80128	1	Standard
> Tb	159		ug/L			724709	779706	1	Standard
Pb	208	0.066	ug/L	0.003	4	266	4322	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 03:37:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	36943	5	Standard
	Cl	**37**		ug/L			3079769	2981467	2	Standard
>	**Sc**	**45**		ug/L			458223	459755	4	Standard
	V	**51**	**1.232**	ug/L	0.047	3	7096	34108	2	Standard
	V-1	**51**	**1.272**	ug/L	0.045	3	97	28288	2	Standard
	Cr	**52**	**0.695**	ug/L	0.085	12	20883	33701	0	Standard
	Cr	**53**	**0.846**	ug/L	0.075	8	121	1947	4	Standard
	Mn	**55**	**61.397**	ug/L	3.349	5	554	1634064	1	Standard
>	**Ge**	**72**		ug/L			19943	19443	2	KED
	Ni	**60**	**0.527**	ug/L	0.027	5	6	494	4	KED
	Ni	**62**	**0.628**	ug/L	0.128	20	3	98	17	KED
	[redacted]	**63**	[redacted]	ug/L	0.061	1	20	8981	3	KED
	Cu	**65**	**3.265**	ug/L	0.144	4	15	4492	2	KED
	[redacted]	**66**	[redacted]	ug/L	0.657	2	20	7941	2	KED
	Zn	**67**	**23.617**	ug/L	1.055	4	2	1287	6	KED
	As	**75**	**0.800**	ug/L	0.029	3	3	133	5	KED
	Se	**78**	**-0.052**	ug/L	0.235	456	14	13	28	KED
	Y	**89**		ug/L			295636	300017	0	Standard
	Kr	**83**		ug/L			57	53	9	Standard
>	**In-1**	**115**		ug/L			5644	5689	2	KED
	Cd	**111**	**0.013**	ug/L	0.007	55	2	5	28	KED
	Cd	**114**	**0.016**	ug/L	0.003	16	2	10	11	KED
>	**In**	**115**		ug/L			475542	466276	4	Standard
	Ag	**107**	**0.007**	ug/L	0.000	5	40	186	6	Standard
	Sb	**121**	**0.279**	ug/L	0.006	2	496	4386	3	Standard
	Sb	**123**	**0.272**	ug/L	0.006	2	393	3291	2	Standard
	Ba	**135**	**10.444**	ug/L	0.358	3	15	43310	2	Standard
	Ba	**137**	**10.650**	ug/L	0.464	4	15	74192	0	Standard
>	**Tb**	**159**		ug/L			724709	759241	5	Standard
	Pb	**208**	**0.420**	ug/L	0.021	5	266	25131	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 03:42:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	36169	2	Standard
	Cl	**37**		ug/L			3079769	3254784	2	Standard
>	**Sc**	**45**		ug/L			458223	480949	3	Standard
	V	**51**	**0.314**	ug/L	0.011	3	7096	14636	2	Standard
	V-1	**51**	**0.394**	ug/L	0.008	1	97	9243	1	Standard
	Cr	**52**	**0.159**	ug/L	0.026	16	20883	24959	1	Standard
	Cr	**53**	**0.428**	ug/L	0.032	7	121	1095	5	Standard
	Mn	**55**	**13.520**	ug/L	0.529	3	554	377140	1	Standard
>	**Ge**	**72**		ug/L			19943	19350	2	KED
	Ni	**60**	**1.165**	ug/L	0.041	3	6	1081	3	KED
	Ni	**62**	**1.168**	ug/L	0.063	5	3	179	7	KED
	[redacted]	**63**	[redacted]	ug/L	0.142	1	20	23506	1	KED
	Cu	**65**	**8.345**	ug/L	0.023	0	15	11410	2	KED
	[redacted]	**66**	[redacted]	ug/L	0.426	6	20	2301	4	KED
	Zn	**67**	**6.855**	ug/L	0.214	3	2	373	4	KED
	As	**75**	**1.597**	ug/L	0.080	5	3	262	3	KED
	Se	**78**	**-0.286**	ug/L	0.102	35	14	9	16	KED
	Y	**89**		ug/L			295636	292910	2	Standard
	Kr	**83**		ug/L			57	50	15	Standard
>	**In-1**	**115**		ug/L			5644	5483	4	KED
	Cd	**111**	**0.022**	ug/L	0.014	62	2	6	37	KED
	Cd	**114**	**0.018**	ug/L	0.007	39	2	11	35	KED
>	**In**	**115**		ug/L			475542	456929	1	Standard
	Ag	**107**	**0.002**	ug/L	0.000	11	40	74	6	Standard
	Sb	**121**	**0.084**	ug/L	0.002	2	496	1626	0	Standard
	Sb	**123**	**0.086**	ug/L	0.004	4	393	1276	3	Standard
	Ba	**135**	**3.317**	ug/L	0.083	2	15	13502	1	Standard
	Ba	**137**	**3.391**	ug/L	0.090	2	15	23187	1	Standard
>	**Tb**	**159**		ug/L			724709	752443	1	Standard
	Pb	**208**	**0.431**	ug/L	0.011	2	266	25591	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLD
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 03:47:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	24761	2	Standard
	Cl	**37**		ug/L			3079769	3048875	1	Standard
⌈>	**Sc**	**45**		ug/L			458223	435940	1	Standard
|	**V**	**51**	**0.002**	ug/L	0.008	351	7096	6795	1	Standard
|	**V-1**	**51**	**-0.000**	ug/L	0.001	272	97	88	13	Standard
|	**Cr**	**52**	**0.010**	ug/L	0.028	275	20883	20037	0	Standard
|	**Cr**	**53**	**0.002**	ug/L	0.008	436	121	119	13	Standard
⌊	**Mn**	**55**	**0.004**	ug/L	0.001	21	554	628	4	Standard
⌈>	**Ge**	**72**		ug/L			19943	19043	2	KED
|	**Ni**	**60**	**0.002**	ug/L	0.001	60	6	8	13	KED
|	**Ni**	**62**	**0.005**	ug/L	0.032	599	3	4	107	KED
|	**Cu**	**63**	**0.007**	ug/L	0.002	23	20	39	13	KED
|	**Cu**	**65**	**0.004**	ug/L	0.003	64	15	20	19	KED
|	**Zn**	**66**	**0.046**	ug/L	0.024	50	20	34	24	KED
|	**Zn**	**67**	**0.027**	ug/L	0.065	239	2	3	86	KED
|	**As**	**75**	**0.011**	ug/L	0.017	155	3	4	53	KED
⌊	**Se**	**78**	**-0.221**	ug/L	0.048	21	14	10	10	KED
	Y	**89**		ug/L			295636	283722	1	Standard
	Kr	**83**		ug/L			57	60	13	Standard
⌈>	**In-1**	**115**		ug/L			5644	5608	0	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.005	153	2	1	50	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.006	108	2	4	56	KED
⌈>	**In**	**115**		ug/L			475542	466982	0	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.000	77	40	32	17	Standard
|	**Sb**	**121**	**-0.030**	ug/L	0.001	1	496	67	11	Standard
|	**Sb**	**123**	**-0.031**	ug/L	0.001	4	393	56	24	Standard
|	**Ba**	**135**	**0.003**	ug/L	0.001	46	15	26	18	Standard
⌊	**Ba**	**137**	**0.004**	ug/L	0.001	29	15	46	20	Standard
⌈>	**Tb**	**159**		ug/L			724709	724420	2	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	54	266	227	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVD
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 03:52:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	24641	2	Standard
	Cl	**37**		ug/L			3079769	3211893	5	Standard
>	**Sc**	**45**		ug/L			458223	448560	2	Standard
	V	**51**	**46.249**	ug/L	0.913	1	7096	995685	2	Standard
	V-1	**51**	**45.996**	ug/L	0.443	0	97	995511	2	Standard
	Cr	**52**	**47.977**	ug/L	2.063	4	20883	880901	1	Standard
	Cr	**53**	**47.078**	ug/L	1.107	2	121	99486	2	Standard
	Mn	**55**	**48.940**	ug/L	1.209	2	554	1272264	0	Standard
>	**Ge**	**72**		ug/L			19943	18765	0	KED
	Ni	**60**	**46.609**	ug/L	0.468	1	6	41710	0	KED
	Ni	**62**	**47.627**	ug/L	3.316	6	3	6955	6	KED
	Cu	**63**	**46.778**	ug/L	1.547	3	20	124888	3	KED
	Cu	**65**	**47.140**	ug/L	0.450	0	15	62446	1	KED
	Zn	**66**	**50.347**	ug/L	0.939	1	20	15831	2	KED
	Zn	**67**	**47.287**	ug/L	0.747	1	2	2483	2	KED
	As	**75**	**50.546**	ug/L	0.162	0	3	7955	1	KED
	Se	**78**	**50.281**	ug/L	1.362	2	14	831	2	KED
	Y	**89**		ug/L			295636	292252	2	Standard
	Kr	**83**		ug/L			57	59	13	Standard
>	**In-1**	**115**		ug/L			5644	5682	2	KED
	Cd	**111**	**49.205**	ug/L	1.768	3	2	9655	1	KED
	Cd	**114**	**49.339**	ug/L	1.481	3	2	24077	2	KED
>	**In**	**115**		ug/L			475542	468216	2	Standard
	Ag	**107**	**43.290**	ug/L	0.926	2	40	864907	0	Standard
	Sb	**121**	**47.204**	ug/L	0.516	1	496	663246	2	Standard
	Sb	**123**	**47.627**	ug/L	0.965	2	393	512119	1	Standard
	Ba	**135**	**48.290**	ug/L	1.425	2	15	201129	0	Standard
	Ba	**137**	**49.070**	ug/L	0.828	1	15	343633	1	Standard
>	**Tb**	**159**		ug/L			724709	756527	1	Standard
	Pb	**208**	**47.044**	ug/L	0.944	2	266	2780093	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBD
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 03:59:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	24680	1	Standard
	Cl	**37**		ug/L			3079769	3278738	6	Standard
⌈>	**Sc**	**45**		ug/L			458223	426184	1	Standard
|	**V**	**51**	**-0.001**	ug/L	0.012	1946	7096	6588	4	Standard
|	**V-1**	**51**	**-0.001**	ug/L	0.001	51	97	66	17	Standard
|	**Cr**	**52**	**-0.002**	ug/L	0.040	2234	20883	19395	4	Standard
|	**Cr**	**53**	**-0.003**	ug/L	0.003	94	121	106	4	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.001	77	554	533	2	Standard
⌈>	**Ge**	**72**		ug/L			19943	19016	2	KED
|	**Ni**	**60**	**0.010**	ug/L	0.019	182	6	15	108	KED
|	**Ni**	**62**	**0.019**	ug/L	0.031	163	3	6	69	KED
|	**Cu**	**63**	**0.027**	ug/L	0.041	147	20	92	116	KED
|	**Cu**	**65**	**0.035**	ug/L	0.053	153	15	60	115	KED
|	**Zn**	**66**	**0.028**	ug/L	0.071	257	20	27	78	KED
|	**Zn**	**67**	**0.063**	ug/L	0.064	102	2	5	57	KED
|	**As**	**75**	**0.018**	ug/L	0.018	102	3	6	47	KED
⌊	**Se**	**78**	**-0.152**	ug/L	0.118	77	14	11	15	KED
	Y	**89**		ug/L			295636	276655	1	Standard
	Kr	**83**		ug/L			57	44	25	Standard
⌈>	**In-1**	**115**		ug/L			5644	5599	2	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.006	400	2	2	49	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.000	22	2	1	6	KED
⌈>	**In**	**115**		ug/L			475542	451977	0	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.000	82	40	50	18	Standard
|	**Sb**	**121**	**0.082**	ug/L	0.002	2	496	1589	1	Standard
|	**Sb**	**123**	**0.086**	ug/L	0.006	6	393	1266	4	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.001	144	15	19	30	Standard
⌊	**Ba**	**137**	**0.003**	ug/L	0.001	32	15	33	18	Standard
⌈>	**Tb**	**159**		ug/L			724709	719598	2	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	58	266	311	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 04:04:38
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	30174	2	Standard
	Cl	**37**		ug/L			3079769	3392239	2	Standard
⎡>	**Sc**	**45**		ug/L			458223	540657	2	Standard
⎢	**V**	**51**	**0.004**	ug/L	0.016	399	7096	8468	3	Standard
⎢	**V-1**	**51**	**-0.001**	ug/L	0.000	7	97	80	2	Standard
⎢	**Cr**	**52**	**0.019**	ug/L	0.059	304	20883	25044	3	Standard
⎢	**Cr**	**53**	**0.002**	ug/L	0.007	385	121	147	9	Standard
⎣	**Mn**	**55**	**0.024**	ug/L	0.001	6	554	1414	2	Standard
⎡>	**Ge**	**72**		ug/L			19943	21233	1	KED
⎢	**Ni**	**60**	**0.003**	ug/L	0.002	69	6	9	20	KED
⎢	**Ni**	**62**	**0.010**	ug/L	0.020	198	3	5	57	KED
⎢	**Cu**	**63**	**0.013**	ug/L	0.005	40	20	61	28	KED
⎢	**Cu**	**65**	**0.008**	ug/L	0.003	40	15	27	17	KED
⎢	**Zn**	**66**	**-0.006**	ug/L	0.002	37	20	19	5	KED
⎢	**Zn**	**67**	**0.071**	ug/L	0.111	155	2	6	95	KED
⎢	**As**	**75**	**0.009**	ug/L	0.010	120	3	5	35	KED
⎣	**Se**	**78**	**-0.207**	ug/L	0.094	45	14	11	14	KED
	Y	**89**		ug/L			295636	343423	1	Standard
	Kr	**83**		ug/L			57	47	10	Standard
⎡>	**In-1**	**115**		ug/L			5644	6343	4	KED
⎢	**Cd**	**111**	**-0.003**	ug/L	0.007	271	2	2	65	KED
⎣	**Cd**	**114**	**-0.001**	ug/L	0.002	317	2	2	43	KED
⎡>	**In**	**115**		ug/L			475542	532376	1	Standard
⎢	**Ag**	**107**	**0.000**	ug/L	0.000	91	40	53	12	Standard
⎢	**Sb**	**121**	**0.028**	ug/L	0.001	3	496	1006	1	Standard
⎢	**Sb**	**123**	**0.031**	ug/L	0.004	12	393	823	5	Standard
⎢	**Ba**	**135**	**0.002**	ug/L	0.000	9	15	27	3	Standard
⎣	**Ba**	**137**	**0.005**	ug/L	0.001	11	15	53	8	Standard
⎡>	**Tb**	**159**		ug/L			724709	834052	1	Standard
⎣	**Pb**	**208**	**-0.002**	ug/L	0.000	6	266	206	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 04:09:31
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	30491	3	Standard
	Cl	**37**		ug/L			3079769	3561856	1	Standard
⎡>	**Sc**	**45**		ug/L			458223	545644	2	Standard
⎢	**V**	**51**	**0.002**	ug/L	0.006	267	7096	8508	0	Standard
⎢	**V-1**	**51**	**0.000**	ug/L	0.003	585	97	128	58	Standard
⎢	**Cr**	**52**	**0.011**	ug/L	0.035	318	20883	25094	0	Standard
⎢	**Cr**	**53**	**0.004**	ug/L	0.005	116	121	155	6	Standard
⎣	**Mn**	**55**	**0.028**	ug/L	0.007	23	554	1539	16	Standard
⎡>	**Ge**	**72**		ug/L			19943	21325	4	KED
⎢	**Ni**	**60**	**0.003**	ug/L	0.003	97	6	10	28	KED
⎢	**Ni**	**62**	**-0.017**	ug/L	0.007	40	3	1	86	KED
⎢	**Cu**	**63**	**0.011**	ug/L	0.004	38	20	53	18	KED
⎢	**Cu**	**65**	**0.009**	ug/L	0.003	36	15	29	16	KED
⎢	**Zn**	**66**	**0.014**	ug/L	0.008	58	20	26	12	KED
⎢	**Zn**	**67**	**0.059**	ug/L	0.078	130	2	6	75	KED
⎢	**As**	**75**	**-0.000**	ug/L	0.011	2300	3	3	56	KED
⎣	**Se**	**78**	**-0.226**	ug/L	0.101	44	14	11	16	KED
	Y	**89**		ug/L			295636	335353	2	Standard
	Kr	**83**		ug/L			57	62	24	Standard
⎡>	**In-1**	**115**		ug/L			5644	6346	1	KED
⎢	**Cd**	**111**	**-0.002**	ug/L	0.009	575	2	2	78	KED
⎣	**Cd**	**114**	**0.001**	ug/L	0.004	642	2	3	70	KED
⎡>	**In**	**115**		ug/L			475542	535354	2	Standard
⎢	**Ag**	**107**	**0.001**	ug/L	0.002	220	40	63	61	Standard
⎢	**Sb**	**121**	**-0.006**	ug/L	0.003	53	496	455	10	Standard
⎢	**Sb**	**123**	**-0.010**	ug/L	0.002	23	393	323	7	Standard
⎢	**Ba**	**135**	**0.004**	ug/L	0.003	86	15	36	43	Standard
⎣	**Ba**	**137**	**0.006**	ug/L	0.003	56	15	62	39	Standard
⎡>	**Tb**	**159**		ug/L			724709	833337	2	Standard
⎣	**Pb**	**208**	**-0.000**	ug/L	0.002	1683	266	299	51	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 04:14:23
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	30548	4	Standard
	Cl	**37**		ug/L			3079769	3512326	2	Standard
>	**Sc**	**45**		ug/L			458223	556410	1	Standard
	V	**51**	**0.006**	ug/L	0.005	85	7096	8768	3	Standard
	V-1	**51**	**-0.001**	ug/L	0.000	10	97	89	3	Standard
	Cr	**52**	**0.026**	ug/L	0.021	81	20883	25943	3	Standard
	Cr	**53**	**0.003**	ug/L	0.005	140	121	156	9	Standard
	Mn	**55**	**0.024**	ug/L	0.001	2	554	1433	2	Standard
>	**Ge**	**72**		ug/L			19943	21775	1	KED
	Ni	**60**	**0.004**	ug/L	0.004	100	6	10	36	KED
	Ni	**62**	**-0.013**	ug/L	0.011	83	3	1	100	KED
	Cu	**63**	**0.013**	ug/L	0.005	36	20	62	24	KED
	Cu	**65**	**0.008**	ug/L	0.001	7	15	29	3	KED
	Zn	**66**	**0.002**	ug/L	0.027	1628	20	22	44	KED
	Zn	**67**	**-0.004**	ug/L	0.018	448	2	2	43	KED
	As	**75**	**0.010**	ug/L	0.004	46	3	5	13	KED
	Se	**78**	**-0.281**	ug/L	0.078	27	14	10	13	KED
	Y	**89**		ug/L			295636	342904	3	Standard
	Kr	**83**		ug/L			57	50	15	Standard
>	**In-1**	**115**		ug/L			5644	6433	0	KED
	Cd	**111**	**-0.000**	ug/L	0.009	4435	2	2	66	KED
	Cd	**114**	**0.001**	ug/L	0.004	594	2	3	71	KED
>	**In**	**115**		ug/L			475542	539385	0	Standard
	Ag	**107**	**-0.000**	ug/L	0.000	140	40	39	22	Standard
	Sb	**121**	**-0.018**	ug/L	0.002	9	496	275	9	Standard
	Sb	**123**	**-0.020**	ug/L	0.001	5	393	192	5	Standard
	Ba	**135**	**0.003**	ug/L	0.002	57	15	31	24	Standard
	Ba	**137**	**0.004**	ug/L	0.002	38	15	53	25	Standard
>	**Tb**	**159**		ug/L			724709	843694	3	Standard
	Pb	**208**	**-0.002**	ug/L	0.000	21	266	183	11	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 04:19:15
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	25195	0	Standard
	Cl	**37**		ug/L			3079769	2920672	1	Standard
⎡>	**Sc**	**45**		ug/L			458223	413853	1	Standard
⎢	**V**	**51**	**-0.021**	ug/L	0.007	35	7096	5995	2	Standard
⎢	**V-1**	**51**	**-0.001**	ug/L	0.000	1	97	65	0	Standard
⎢	**Cr**	**52**	**-0.079**	ug/L	0.021	27	20883	17558	1	Standard
⎢	**Cr**	**53**	**-0.011**	ug/L	0.005	41	121	87	10	Standard
⎣	**Mn**	**55**	**0.019**	ug/L	0.001	6	554	967	2	Standard
⎡>	**Ge**	**72**		ug/L			19943	18234	4	KED
⎢	**Ni**	**60**	**-0.004**	ug/L	0.001	36	6	2	43	KED
⎢	**Ni**	**62**	**-0.025**	ug/L	0.000	0	3	0		KED
⎢	**Cu**	**63**	**0.002**	ug/L	0.003	155	20	24	35	KED
⎢	**Cu**	**65**	**-0.002**	ug/L	0.001	33	15	10	10	KED
⎢	**Zn**	**66**	**-0.013**	ug/L	0.017	138	20	14	32	KED
⎢	**Zn**	**67**	**0.004**	ug/L	0.043	1196	2	2	86	KED
⎢	**As**	**75**	**0.008**	ug/L	0.011	137	3	4	38	KED
⎣	**Se**	**78**	**-0.222**	ug/L	0.229	103	14	9	41	KED
	Y	**89**		ug/L			295636	268427	1	Standard
	Kr	**83**		ug/L			57	45	12	Standard
⎡>	**In-1**	**115**		ug/L			5644	5200	1	KED
⎢	**Cd**	**111**	**0.001**	ug/L	0.020	2082	2	2	141	KED
⎣	**Cd**	**114**	**-0.004**	ug/L	0.002	66	2	0	180	KED
⎡>	**In**	**115**		ug/L			475542	437368	3	Standard
⎢	**Ag**	**107**	**-0.001**	ug/L	0.000	23	40	22	16	Standard
⎢	**Sb**	**121**	**-0.029**	ug/L	0.000	1	496	81	8	Standard
⎢	**Sb**	**123**	**-0.028**	ug/L	0.001	5	393	84	14	Standard
⎢	**Ba**	**135**	**-0.000**	ug/L	0.001	137	15	12	22	Standard
⎣	**Ba**	**137**	**0.001**	ug/L	0.001	92	15	18	21	Standard
⎡>	**Tb**	**159**		ug/L			724709	693699	1	Standard
⎣	**Pb**	**208**	**-0.004**	ug/L	0.000	1	266	46	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 04:24:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	25630	7	Standard
	Cl	**37**		ug/L			3079769	2878500	3	Standard
⌈>	**Sc**	**45**		ug/L			458223	414454	2	Standard
|	**V**	**51**	**-0.013**	ug/L	0.012	86	7096	6151	2	Standard
|	**V-1**	**51**	**-0.002**	ug/L	0.001	40	97	56	23	Standard
|	**Cr**	**52**	**-0.054**	ug/L	0.036	67	20883	17989	2	Standard
|	**Cr**	**53**	**-0.014**	ug/L	0.002	12	121	83	6	Standard
⌊	**Mn**	**55**	**0.012**	ug/L	0.001	4	554	793	1	Standard
⌈>	**Ge**	**72**		ug/L			19943	18581	3	KED
|	**Ni**	**60**	**-0.002**	ug/L	0.004	176	6	3	100	KED
|	**Ni**	**62**	**-0.012**	ug/L	0.013	109	3	1	100	KED
|	**Cu**	**63**	**0.003**	ug/L	0.002	73	20	26	18	KED
|	**Cu**	**65**	**-0.000**	ug/L	0.005	1976	15	13	51	KED
|	**Zn**	**66**	**-0.032**	ug/L	0.018	54	20	8	61	KED
|	**Zn**	**67**	**-0.034**	ug/L	0.020	60	2	0	173	KED
|	**As**	**75**	**-0.001**	ug/L	0.004	671	3	3	24	KED
⌊	**Se**	**78**	**-0.068**	ug/L	0.133	196	14	12	19	KED
	Y	**89**		ug/L			295636	264299	0	Standard
	Kr	**83**		ug/L			57	48	14	Standard
⌈>	**In-1**	**115**		ug/L			5644	5233	1	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.009	350	2	1	86	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.007	1217	2	2	119	KED
⌈>	**In**	**115**		ug/L			475542	431537	0	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.000	50	40	27	17	Standard
|	**Sb**	**121**	**-0.031**	ug/L	0.000	1	496	54	8	Standard
|	**Sb**	**123**	**-0.032**	ug/L	0.000	1	393	44	9	Standard
|	**Ba**	**135**	**-0.001**	ug/L	0.001	70	15	10	28	Standard
⌊	**Ba**	**137**	**-0.001**	ug/L	0.001	69	15	9	34	Standard
⌈>	**Tb**	**159**		ug/L			724709	689187	3	Standard
⌊	**Pb**	**208**	**-0.004**	ug/L	0.000	3	266	44	15	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 04:29:00
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\033123A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			25525	25723	3	Standard
	Cl	**37**		ug/L			3079769	2921574	1	Standard
⎡>	**Sc**	**45**		ug/L			458223	401845	2	Standard
⎢	**V**	**51**	**-0.006**	ug/L	0.012	201	7096	6105	3	Standard
⎢	**V-1**	**51**	**-0.001**	ug/L	0.001	54	97	65	19	Standard
⎢	**Cr**	**52**	**-0.028**	ug/L	0.045	163	20883	17860	3	Standard
⎢	**Cr**	**53**	**-0.011**	ug/L	0.003	27	121	86	4	Standard
⎣	**Mn**	**55**	**0.010**	ug/L	0.002	21	554	724	8	Standard
⎡>	**Ge**	**72**		ug/L			19943	18171	2	KED
⎢	**Ni**	**60**	**-0.003**	ug/L	0.001	42	6	3	34	KED
⎢	**Ni**	**62**	**-0.007**	ug/L	0.021	307	3	2	114	KED
⎢	**Cu**	**63**	**0.001**	ug/L	0.005	475	20	20	56	KED
⎢	**Cu**	**65**	**-0.000**	ug/L	0.003	639	15	13	28	KED
⎢	**Zn**	**66**	**-0.032**	ug/L	0.017	54	20	8	61	KED
⎢	**Zn**	**67**	**-0.033**	ug/L	0.022	67	2	0	173	KED
⎢	**As**	**75**	**0.001**	ug/L	0.001	161	3	3	8	KED
⎣	**Se**	**78**	**0.031**	ug/L	0.217	692	14	13	25	KED
	Y	**89**		ug/L			295636	266087	2	Standard
	Kr	**83**		ug/L			57	42	9	Standard
⎡>	**In-1**	**115**		ug/L			5644	5202	0	KED
⎢	**Cd**	**111**	**0.013**	ug/L	0.014	104	2	4	52	KED
⎣	**Cd**	**114**	**0.002**	ug/L	0.002	114	2	3	34	KED
⎡>	**In**	**115**		ug/L			475542	428590	2	Standard
⎢	**Ag**	**107**	**-0.001**	ug/L	0.000	50	40	23	28	Standard
⎢	**Sb**	**121**	**-0.030**	ug/L	0.001	3	496	60	21	Standard
⎢	**Sb**	**123**	**-0.032**	ug/L	0.001	3	393	38	31	Standard
⎢	**Ba**	**135**	**-0.003**	ug/L	0.001	31	15	3	86	Standard
⎣	**Ba**	**137**	**-0.001**	ug/L	0.000	45	15	9	20	Standard
⎡>	**Tb**	**159**		ug/L			724709	683997	2	Standard
⎣	**Pb**	**208**	**-0.004**	ug/L	0.000	1	266	43	7	Standard

INITIAL CALIBRATION DATA

EPA 6020B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GD00006	Instrument:	ICPMS2
Calibration Date:	04/01/2023 13:46		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Silver-107	0	0	0.2	15545	10	16021.2	20	15435.2	50	15147	100	15062.95
Chromium-52	0	0	0.5	52018	10	18650.8	20	17115.8	50	16170.64	100	16529.26
Chromium-53	0	0	0.5	2182	10	2014.4	20	1889	50	1857.72	100	1879.38
Lead-208	0	0	0.1	49760	10	47325.7	20	45978.15	50	44653.36	100	45610.68

INITIAL CALIBRATION DATA

EPA 6020B

Laboratory: Analytical Resources, LLC
Instrument: ICPMS2
Calibration: GD00006
Calibration Date: 4/1/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Silver-107	12868.56	49.1	1.0000		0.998	
Chromium-52	20080.75	85.2	0.9997		0.998	
Chromium-53	1637.083	49.6	0.9999		0.998	
Lead-208	38887.98	49.2	0.9999		0.998	

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GD00006
Instrument: ICPMS2
Calibration Date: 04/01/2023 13:46

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Arsenic-75a	0	0	0.2	175	10	170.2	20	172.9	50	161.76	100	165.66
Cadmium-111	0	0	0.1	220	10	240.4	20	234.25	50	220.14	100	219.86
Cadmium-114	0	0	0.1	550	10	572.9	20	573.35	50	543.96	100	541.32
Copper-63	0	0	0.5	2844	10	2745.4	20	2677.7	50	2468.02	100	2489.42
Copper-65	0	0	0.5	1346	10	1323.9	20	1318	50	1217.24	100	1253.75
Zinc-66	0	0	6	344.8333	10	342.8	20	329.65	50	311.76	100	310.89
Zinc-67	0	0	6	51	10	56.6	20	52.65	50	50.52	100	52.33

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

Instrument: ICPMS2

Calibration: GD00006

Calibration Date: 4/1/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a	140.92	49.1	0.9997		0.998	
Cadmium-111	189.1083	49.2	0.9998		0.998	
Cadmium-114	463.5883	49.1	0.9999		0.998	
Copper-63	2204.09	49.4	0.9997		0.998	
Copper-65	1076.482	49.2	0.9996		0.998	
Zinc-66	273.3222	49.3	0.9999		0.998	
Zinc-67	43.85	49.2	0.9995		0.998	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS 02 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4/1/23 **Analyst:** MB **Sequence:** SL0ΦΦ41 **Cal:** GDΦΦΦΦ6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CAL1	L3453		
		-CAL2	L3295		
		-CAL3	L3296		
		-CAL4	L3297		
		-CAL5	L3454		
		-CAL6	L3298		
		-IBL1	—		
		-ICV1	LΦ243		
		-ICB1	L3453		
		-CCV1	L3454		
		-CCB1	L3453		
		-CRL1	L3295		
		-IFA1	L3416		Cr^{53}↑
		-IFB1	L2744		
		-HCV1	L2745		
		-HCV2	L2746		Zn^{67}↓ - Zn<200
		-IBL2	—		(Sb↑)
		-IBL3	—		
		-CCV2			
		-CCB2			
		BLCΦ7Φ3-BLK2	SWN	20	Ag only
		↓ -BS2	↓	↓	↓
		BLCΦ848-BLK2	REN		
		↓ -BS2	↓		

Analytical Resources, Incorporated
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ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 4/1/23 **Analyst:** MS **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23CΦ747-Φ1	REN	2	Ag only
		BLCΦ848-DUP2	↓	↓	↓
		↓ -MS2	↓	↓	↓
		23CΦ439-Φ9	↓	10	Pb only
		↓ -Φ6	↓	5	As, Sb only
		SEQ-IBL4			
		-CCV3			
		↓ -CCB3			
		23AΦ133-Φ6	SWN	20	Sc↑ No Cr
		-Φ7	↓	↓	↓ ↓
C133-7 AΦ133		-Φ8	↓	↓	↓
↓		-Φ9	↓	↓	
↓		↓ -Φ3	↓	↓	Sc↑ No Cr
		BLCΦ7Φ3-DUP2	↓	↓	↓
		-MS2	↓	↓	Ag %R↓
		-MSD2	↓	↓	↓
		↓ -PS2	↓	↓	Sc↑/60mL K7H09 ↓
		SEQ-IBL5			
		-CCV4			
		↓ -CCB4			
		23CΦ458-Φ1	REN		Pb only
		23CΦ477-Φ1	↓		↓
		23AΦ133-1Φ	SWN	20	Sc↑/Cl noisy No Cd,Cr
		↓ -11	↓	↓	↓ No Cr

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ICP/MS 02 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: ~~4/4/4/1/23~~ **Analyst:** MB **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted. MB 4/1/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23AΦ133-12	SWN	20	Sc, Tb no3y/In sl. no3y-%2+ analytes OK No Cr, Pb
		-13			As sl. no3y No As
		-14			
		-15			
		-16			
		SEQ-IBL6			
		-CCV5			
		-CCB5			
		23AΦ134-Φ1	SWN	20	
		-Φ2			
		-Φ3			
		-Φ4			
		-Φ5			
		-Φ6			
		-Φ7			
		-Φ8			
		SEQ-IBL7			
		-CCV6			
		-CCB6			
		BLCΦ84Φ-BLK1	SWN	20	
		-BS1		↓	
		-SRL1		100	No Zn
		23CΦΦ42-Φ1		20	Sc↑ - Not Needed
		BLCΦ84Φ-DUP1		↓	↓ ↓ /Zn"↑ ↓

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ICP/MS 02 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4/1/23 **Analyst:** MB **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BLCΦ84Φ-MS1	SWN	20	Sc↑-Not Needed / Zn↑ No Zn
		-MSD1			/ In-1 noisy-%R & Value OK /
		-PS1			/ 60 mL K74061
		-SRM1		50	
		SEQ-IBL8			
		-CCV7			Qest. noisy-%R & Analytes OK
		-CCB7			
		23CΦΦ42-Φ2	SWN	20	Sc↑-Not Needed
		-Φ3			
		-Φ4			
		-Φ5			
		-Φ6			
		-Φ7			
		-Φ8			/ As noisy No As
		-Φ9			
		SEQ-IBL9			
		-CCV8			
		-CCB8			
		23CΦ64Φ-Φ1	REN	2	
		-Φ2			
		-Φ3			
		-Φ4			Sc↑-Not Needed
		-Φ5			
		-Φ6			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS 02 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4/1/23 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-IBLA			
		-CCV9			PbT - Not Needed
		-CCB9			
		Rinse/DI			
			MB 4/1/23		

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Saturday, April 01, 2023 12:58:34
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.5577
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3584.8	3584.850	81.340	2.3	Standard
	In	114.9	53151.5	-422391.024	343.526	0.1	Standard
	U	238.1	45670.7	45670.694	518.126	1.1	Standard
⌈	CeO	155.9	641.9	0.014	0.000	3.2	Standard
| >	Ce	139.9	46171.7	46171.697	371.163	0.8	Standard
⌊	Ce++	70.0	891.4	0.019	0.001	3.7	Standard
	Bkgd	220.0	0.6	0.600	0.346	57.6	Standard

Current Conditions File Data

Current Value	Description
1.04	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.25	Deflector Voltage
1600.00	ICP RF Power
-1712.00	Analog Stage Voltage
1600.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-8.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.04	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-16.50	KED Mode CRO
-12.00	KED Mode QRO
-4.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
5.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Saturday, April 01, 2023 13:06:29
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.5584
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	4661.0	4660.961	121.755	2.6	Standard
	In	114.9	64923.1	64923.132	523.134	0.8	Standard
	U	238.1	54381.9	54381.914	285.164	0.5	Standard
⌈	CeO	155.9	951.2	0.015	0.001	5.1	Standard
| >	Ce	139.9	62108.9	62108.854	204.315	0.3	Standard
⌊	Ce++	70.0	1232.7	0.020	0.000	2.0	Standard
	Bkgd	220.0	0.2	0.233	0.149	63.9	Standard

Current Conditions File Data

Current Value	Description
1.04	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.25	Deflector Voltage
1600.00	ICP RF Power
-1712.00	Analog Stage Voltage
1600.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-8.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.04	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-16.50	KED Mode CRO
-12.00	KED Mode QRO
-4.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
5.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 4/1/2023 12:58:31 PM
End Time: 4/1/2023 1:08:33 PM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 3584.85
Obtained Intensity (In 115): 53151.50
Obtained Intensity (U 238): 45670.69
Obtained Intensity (Bkgd 220): 0.60
Obtained Formula (Ce++ 70 / Ce 140): 0.019 (=891.36 / 46171.70)
Obtained Formula (CeO 156 / Ce 140): 0.014 (=641.95 / 46171.70)
Obtained RSD (Be 9): 0.0227
Obtained RSD (In 115): 0.0008
Obtained RSD (U 238): 0.0113

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.70 mm	0.40 mm	58438.28

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.04
Obtained Intensity (In 115): 58559.78
Obtained Formula (CeO 156 / Ce 140): 0.0191 (=1002.04 / 52555.50)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.723)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.689)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.701)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.688)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -12.56

KED Mode QID - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -15.11

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 4660.96
Obtained Intensity (In 115): 64923.13
Obtained Intensity (U 238): 54381.91
Obtained Intensity (Bkgd 220): 0.23
Obtained Formula (Ce++ 70 / Ce 140): 0.020 (=1232.72 / 62108.85)
Obtained Formula (CeO 156 / Ce 140): 0.015 (=951.23 / 62108.85)
Obtained RSD (Be 9): 0.0261
Obtained RSD (In 115): 0.0081
Obtained RSD (U 238): 0.0052

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 4/1/2023 12:58:31 PM

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000
		Intensity Criterion: U 238 > 30000
		Intensity Criterion: Bkgd 220 <= 1
		Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
		Formula Criterion: CeO 156 / Ce 140 <= 0.025
		RSD Criterion: Be 9.0122 < 0.05
		RSD Criterion: In 114.904 < 0.05
		RSD Criterion: U 238.05 < 0.05

	Optimization Results:
	Initial Try
		Obtained Intensity (Be 9): 3584.85
		Obtained Intensity (In 115): 53151.50
		Obtained Intensity (U 238): 45670.69
		Obtained Intensity (Bkgd 220): 0.60
		Obtained Formula (Ce++ 70 / Ce 140): 0.019 (=891.36 / 46171.70)
		Obtained Formula (CeO 156 / Ce 140): 0.014 (=641.95 / 46171.70)
		Obtained RSD (Be 9): 0.0227
		Obtained RSD (In 115): 0.0008
		Obtained RSD (U 238): 0.0113

[Passed] Optimum value(s): N/A

Torch Alignment
	Optimization Settings:
		Method: Torch Alignment.mth.
		Intensity Criterion: In 115 Maximum

	Optimization Results:
		Vertical	Horizontal	Intensity
[Passed]	0.70 mm	0.40 mm	58438.28

Nebulizer Gas Flow STD/KED [NEB]
	Optimization Settings:
		Method: Optimize.mth.
			Initial Try - Start/End/Step: 1.02/1.06/0.01.
		Intensity Criterion: In 115 Maximum
		Formula Criterion: CeO 156 / Ce 140 <= 0.025

	Optimization Results:
	Initial Try

		Obtained Intensity (In 115): 58559.78
		Obtained Formula (CeO 156 / Ce 140): 0.0191 (=1002.04 / 52555.50)
[Passed] Optimum value(s): 1.04

Mass Calibration and Resolution
	Optimization Settings:
		Method: Tuning.mth.
		MassCal File: Default.tun
		Iterations: 6
		Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution
		Peak height (%) for Res. Opt.: 10

	Optimization Results:
	Initial Try
		Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.675)
		Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.660) - <Target not achieved>
		Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.705)
		Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.694)
		[Failed]
	Retry 1
		Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.723)
		Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.689)
		Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.701)
		Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.688)
[Passed] Optimum value(s): N/A

QID STD/DRC
	Optimization Settings:
		Method: QID Calibration.mth.
			Initial Try - Start/End/Step: -20/0/0.5.

	Optimization Results:
	Initial Try

  Optimum value(s): Correlation Coefficient = 1.000; Intercept = -12.56

	Analyte	Mass	Points	DAC	MaxIntensity

		Li	7	41	-13	18992.6
		Mg	24	41	-13.5	26981.5
		In	115	41	-9	69291.6
		Ce	140	41	-8	63637.4
		Pb	208	41	-7	33415
		U	238	41	-7	56053.8

KED Mode QID
	Optimization Settings:
		Method: QID Calibration.mth.
			Initial Try - Start/End/Step: -20/0/0.5.

	Optimization Results:
	Initial Try

  Optimum value(s): Correlation Coefficient = 1.000; Intercept = -15.11

	Analyte	Mass	Points	DAC	MaxIntensity

		Li	7	41	-15	12265.3
		Mg	24	41	-14.5	18291.7
		In	115	41	-9.5	43253.4
		Ce	140	41	-8.5	48915.6
		Pb	208	41	-7	27370.2
		U	238	41	-6.5	45536.5

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000
		Intensity Criterion: U 238 > 30000
		Intensity Criterion: Bkgd 220 <= 1
		Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
		Formula Criterion: CeO 156 / Ce 140 <= 0.025
		RSD Criterion: Be 9.0122 < 0.05
		RSD Criterion: In 114.904 < 0.05
		RSD Criterion: U 238.05 < 0.05

	Optimization Results:
	Initial Try
		Obtained Intensity (Be 9): 4660.96
		Obtained Intensity (In 115): 64923.13
		Obtained Intensity (U 238): 54381.91
		Obtained Intensity (Bkgd 220): 0.23
		Obtained Formula (Ce++ 70 / Ce 140): 0.020 (=1232.72 / 62108.85)
		Obtained Formula (CeO 156 / Ce 140): 0.015 (=951.23 / 62108.85)
		Obtained RSD (Be 9): 0.0261
		Obtained RSD (In 115): 0.0081
		Obtained RSD (U 238): 0.0052

[Passed] Optimum value(s): N/A

End Time: 4/1/2023 1:08:33 PM

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 13:46:54
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				18011	2	Standard
	Cl	**37**		ug/L				2981467	1	Standard
⎡>	**Sc**	**45**		ug/L				437323	2	Standard
⎢	**Cr**	**52**		ug/L				16930	1	Standard
⎣	**Cr**	**53**		ug/L				85	7	Standard
⎡>	**Ge**	**72**		ug/L				20645	1	KED
⎢	**Cu**	**63**		ug/L				40	21	KED
⎢	**Cu**	**65**		ug/L				22	17	KED
⎢	**Zn**	**66**		ug/L				23	16	KED
⎢	**Zn**	**67**		ug/L				4	49	KED
⎣	**As**	**75**		ug/L				3	58	KED
	Y	**89**		ug/L				288003	1	Standard
	Kr	**83**		ug/L				35	27	Standard
⎡>	**In-1**	**115**		ug/L				7190	1	KED
⎢	**Cd**	**111**		ug/L				1	69	KED
⎣	**Cd**	**114**		ug/L				3	33	KED
⎡>	**In**	**115**		ug/L				410858	0	Standard
⎢	**Ag**	**107**		ug/L				24	25	Standard
⎢	**Sb**	**121**		ug/L				140	21	Standard
⎣	**Sb**	**123**		ug/L				109	7	Standard
⎡>	**Tb**	**159**		ug/L				636863	1	Standard
⎣	**Pb**	**208**		ug/L				113	18	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 13:51:20
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	21338	4	Standard
	Cl	**37**		ug/L			2981467	2914922	1	Standard
⌈>	**Sc**	**45**		ug/L			437323	440587	3	Standard
|	**Cr**	**52**	**0.500**	ug/L	0.033	6	16930	26009	1	Standard
⌊	**Cr**	**53**	**0.500**	ug/L	0.016	3	85	1091	0	Standard
⌈>	**Ge**	**72**		ug/L			20645	22102	2	KED
|	**Cu**	**63**	**0.500**	ug/L	0.023	4	40	1422	3	KED
|	**Cu**	**65**	**0.500**	ug/L	0.015	3	22	673	4	KED
|	**Zn**	**66**	**6.000**	ug/L	0.259	4	23	2069	2	KED
|	**Zn**	**67**	**6.000**	ug/L	0.116	1	4	306	0	KED
⌊	**As**	**75**	**0.200**	ug/L	0.021	10	3	35	9	KED
	Y	**89**		ug/L			288003	287469	0	Standard
	Kr	**83**		ug/L			35	34	25	Standard
⌈>	**In-1**	**115**		ug/L			7190	7229	3	KED
|	**Cd**	**111**	**0.100**	ug/L	0.030	29	1	22	25	KED
⌊	**Cd**	**114**	**0.100**	ug/L	0.023	22	3	55	19	KED
⌈>	**In**	**115**		ug/L			410858	416348	0	Standard
|	**Ag**	**107**	**0.200**	ug/L	0.005	2	24	3109	2	Standard
|	**Sb**	**121**	**0.200**	ug/L	0.007	3	140	2334	2	Standard
⌊	**Sb**	**123**	**0.200**	ug/L	0.014	7	109	1799	6	Standard
⌈>	**Tb**	**159**		ug/L			636863	650061	1	Standard
⌊	**Pb**	**208**	**0.100**	ug/L	0.001	1	113	4976	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 13:55:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	24993	2	Standard
	Cl	**37**		ug/L			2981467	2974175	1	Standard
⌈>	**Sc**	**45**		ug/L			437323	444999	1	Standard
|	**Cr**	**52**	**9.998**	ug/L	0.156	1	16930	186508	1	Standard
⌊	**Cr**	**53**	**10.000**	ug/L	0.056	0	85	20144	1	Standard
⌈>	**Ge**	**72**		ug/L			20645	22018	2	KED
|	**Cu**	**63**	**10.000**	ug/L	0.274	2	40	27454	1	KED
|	**Cu**	**65**	**10.001**	ug/L	0.197	1	22	13239	2	KED
|	**Zn**	**66**	**10.008**	ug/L	0.576	5	23	3428	3	KED
|	**Zn**	**67**	**10.291**	ug/L	0.334	3	4	566	5	KED
⌊	**As**	**75**	**10.000**	ug/L	0.054	0	3	1702	2	KED
	Y	**89**		ug/L			288003	299841	0	Standard
	Kr	**83**		ug/L			35	41	27	Standard
⌈>	**In-1**	**115**		ug/L			7190	7454	1	KED
|	**Cd**	**111**	**10.000**	ug/L	0.428	4	1	2404	4	KED
⌊	**Cd**	**114**	**10.000**	ug/L	0.278	2	3	5729	1	KED
⌈>	**In**	**115**		ug/L			410858	421364	0	Standard
|	**Ag**	**107**	**10.000**	ug/L	0.030	0	24	160212	1	Standard
|	**Sb**	**121**	**10.000**	ug/L	0.132	1	140	120907	1	Standard
⌊	**Sb**	**123**	**10.000**	ug/L	0.207	2	109	91674	2	Standard
⌈>	**Tb**	**159**		ug/L			636863	653872	1	Standard
⌊	**Pb**	**208**	**10.000**	ug/L	0.010	0	113	473257	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 14:00:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	24983	2	Standard
	Cl	**37**		ug/L			2981467	3005278	0	Standard
⎡>	**Sc**	**45**		ug/L			437323	420509	5	Standard
⎢	**Cr**	**52**	**20.082**	ug/L	1.074	5	16930	342316	1	Standard
⎣	**Cr**	**53**	**19.988**	ug/L	1.335	6	85	37780	1	Standard
⎡>	**Ge**	**72**		ug/L			20645	22544	2	KED
⎢	**Cu**	**63**	**19.806**	ug/L	0.728	3	40	53554	1	KED
⎢	**Cu**	**65**	**19.890**	ug/L	0.334	1	22	26360	1	KED
⎢	**Zn**	**66**	**19.695**	ug/L	0.203	1	23	6593	1	KED
⎢	**Zn**	**67**	**19.675**	ug/L	0.447	2	4	1053	1	KED
⎣	**As**	**75**	**19.975**	ug/L	0.568	2	3	3458	0	KED
	Y	**89**		ug/L			288003	276587	4	Standard
	Kr	**83**		ug/L			35	51	16	Standard
⎡>	**In-1**	**115**		ug/L			7190	7312	0	KED
⎢	**Cd**	**111**	**19.974**	ug/L	0.933	4	1	4685	4	KED
⎣	**Cd**	**114**	**20.080**	ug/L	0.668	3	3	11467	2	KED
⎡>	**In**	**115**		ug/L			410858	401840	3	Standard
⎢	**Ag**	**107**	**20.045**	ug/L	1.020	5	24	308704	2	Standard
⎢	**Sb**	**121**	**20.075**	ug/L	0.831	4	140	234659	1	Standard
⎣	**Sb**	**123**	**20.153**	ug/L	0.701	3	109	181504	1	Standard
⎡>	**Tb**	**159**		ug/L			636863	643738	2	Standard
⎣	**Pb**	**208**	**19.950**	ug/L	0.747	3	113	919563	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 14:05:15
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	17591	2	Standard
	Cl	**37**		ug/L			2981467	3110023	2	Standard
⎡>	**Sc**	**45**		ug/L			437323	443386	2	Standard
⎢	**Cr**	**52**	**49.311**	ug/L	0.290	0	16930	808532	1	Standard
⎣	**Cr**	**53**	**49.391**	ug/L	0.803	1	85	92886	1	Standard
⎡>	**Ge**	**72**		ug/L			20645	21424	1	KED
⎢	**Cu**	**63**	**49.659**	ug/L	1.644	3	40	123401	3	KED
⎢	**Cu**	**65**	**49.716**	ug/L	0.166	0	22	60862	0	KED
⎢	**Zn**	**66**	**49.841**	ug/L	1.483	2	23	15588	1	KED
⎢	**Zn**	**67**	**49.959**	ug/L	2.097	4	4	2526	5	KED
⎣	**As**	**75**	**49.860**	ug/L	0.785	1	3	8088	1	KED
	Y	**89**		ug/L			288003	287218	0	Standard
	Kr	**83**		ug/L			35	41	30	Standard
⎡>	**In-1**	**115**		ug/L			7190	7309	3	KED
⎢	**Cd**	**111**	**49.468**	ug/L	1.203	2	1	11007	0	KED
⎣	**Cd**	**114**	**49.598**	ug/L	1.433	2	3	27198	0	KED
⎡>	**In**	**115**		ug/L			410858	418428	0	Standard
⎢	**Ag**	**107**	**49.507**	ug/L	0.934	1	24	757350	1	Standard
⎢	**Sb**	**121**	**49.310**	ug/L	0.557	1	140	561747	0	Standard
⎣	**Sb**	**123**	**49.167**	ug/L	0.572	1	109	425802	1	Standard
⎡>	**Tb**	**159**		ug/L			636863	662765	2	Standard
⎣	**Pb**	**208**	**49.478**	ug/L	0.563	1	113	2232668	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 14:11:44
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	23625	2	Standard
	Cl	**37**		ug/L			2981467	3209697	0	Standard
⌈>	**Sc**	**45**		ug/L			437323	448064	1	Standard
|	**Cr**	**52**	**100.196**	ug/L	1.982	1	16930	1652926	1	Standard
⌊	**Cr**	**53**	**99.749**	ug/L	1.315	1	85	187938	1	Standard
⌈>	**Ge**	**72**		ug/L			20645	21879	1	KED
|	**Cu**	**63**	**99.560**	ug/L	1.592	1	40	248942	1	KED
|	**Cu**	**65**	**100.069**	ug/L	0.502	0	22	125375	1	KED
|	**Zn**	**66**	**99.379**	ug/L	1.476	1	23	31089	2	KED
|	**Zn**	**67**	**100.337**	ug/L	3.451	3	4	5233	3	KED
⌊	**As**	**75**	**100.011**	ug/L	2.934	2	3	16566	1	KED
	Y	**89**		ug/L			288003	287722	1	Standard
	Kr	**83**		ug/L			35	73	11	Standard
⌈>	**In-1**	**115**		ug/L			7190	7166	0	KED
|	**Cd**	**111**	**100.168**	ug/L	0.296	0	1	21986	0	KED
⌊	**Cd**	**114**	**100.145**	ug/L	1.951	1	3	54132	1	KED
⌈>	**In**	**115**		ug/L			410858	410897	0	Standard
|	**Ag**	**107**	**100.062**	ug/L	1.302	1	24	1506295	0	Standard
|	**Sb**	**121**	**100.650**	ug/L	0.192	0	140	1150755	0	Standard
⌊	**Sb**	**123**	**100.581**	ug/L	0.478	0	109	872143	0	Standard
⌈>	**Tb**	**159**		ug/L			636863	667244	1	Standard
⌊	**Pb**	**208**	**100.092**	ug/L	1.636	1	113	4561068	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 14:18:54
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	20732	2	Standard
	Cl	**37**		ug/L			2981467	3063603	1	Standard
⎡>	**Sc**	**45**		ug/L			437323	438228	0	Standard
⎢	**Cr**	**52**	**0.037**	ug/L	0.049	132	16930	17559	4	Standard
⎣	**Cr**	**53**	**0.023**	ug/L	0.043	184	85	128	61	Standard
⎡>	**Ge**	**72**		ug/L			20645	20934	8	KED
⎢	**Cu**	**63**	**0.002**	ug/L	0.003	117	40	46	9	KED
⎢	**Cu**	**65**	**0.002**	ug/L	0.005	303	22	24	30	KED
⎢	**Zn**	**66**	**0.018**	ug/L	0.007	38	23	29	15	KED
⎢	**Zn**	**67**	**-0.027**	ug/L	0.019	70	4	3	34	KED
⎣	**As**	**75**	**0.006**	ug/L	0.008	137	3	4	21	KED
	Y	**89**		ug/L			288003	282181	0	Standard
	Kr	**83**		ug/L			35	41	13	Standard
⎡>	**In-1**	**115**		ug/L			7190	7485	1	KED
⎢	**Cd**	**111**	**-0.000**	ug/L	0.002	930	1	1	34	KED
⎣	**Cd**	**114**	**-0.003**	ug/L	0.003	133	3	1	107	KED
⎡>	**In**	**115**		ug/L			410858	413717	0	Standard
⎢	**Ag**	**107**	**0.022**	ug/L	0.033	149	24	354	139	Standard
⎢	**Sb**	**121**	**0.196**	ug/L	0.042	21	140	2401	20	Standard
⎣	**Sb**	**123**	**0.203**	ug/L	0.048	23	109	1885	22	Standard
⎡>	**Tb**	**159**		ug/L			636863	648127	1	Standard
⎣	**Pb**	**208**	**0.024**	ug/L	0.040	164	113	1166	147	Standard

Sample Information

Sample Date/Time: Saturday, April 01, 2023 14:11:44
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED
Mass Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Calibration

Analyte	Mass	**r Corr Coef**	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Cl	37							
Sc	45							
Cr	52	**0.9999**	0.036	0.50	10	20	50	100
Cr	53	**0.9999**	0.004	0.50	10	20	50	100
Ge	72							
Cu	63	**0.9999**	0.114	0.50	10	20	50	100
Cu	65	**1.0000**	0.057	0.50	10	20	50	100
Zn	66	**0.9999**	0.014	6.00	10	20	50	100
Zn	67	**1.0000**	0.002	6.00	10	20	50	100
As	75	**1.0000**	0.008	0.20	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Cd	111	**0.9999**	0.031	0.10	10	20	50	100
Cd	114	**1.0000**	0.075	0.10	10	20	50	100
In	115							
Ag	107	**0.9999**	0.037	0.20	10	20	50	100
Sb	121	**0.9998**	0.028	0.20	10	20	50	100
Sb	123	**0.9998**	0.021	0.20	10	20	50	100
Tb	159							
Pb	208	**0.9999**	0.068	0.10	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 14:26:04
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	23991	4	Standard
	Cl	**37**		ug/L			2981467	3176098	2	Standard
⎡>	**Sc**	**45**		ug/L			437323	463507	1	Standard
⎢	**Cr**	**52**	**48.905**	ug/L	0.142	0	16930	843839	1	Standard
⎣	**Cr**	**53**	**50.335**	ug/L	0.976	1	85	98172	3	Standard
⎡>	**Ge**	**72**		ug/L			20645	21880	0	KED
⎢	**Cu**	**63**	**51.801**	ug/L	1.102	2	40	129571	2	KED
⎢	**Cu**	**65**	**52.194**	ug/L	1.511	2	22	65405	2	KED
⎢	**Zn**	**66**	**49.025**	ug/L	2.252	4	23	15348	4	KED
⎢	**Zn**	**67**	**49.913**	ug/L	1.969	3	4	2605	3	KED
⎣	**As**	**75**	**47.270**	ug/L	0.686	1	3	7835	1	KED
	Y	**89**		ug/L			288003	300278	2	Standard
	Kr	**83**		ug/L			35	49	20	Standard
⎡>	**In-1**	**115**		ug/L			7190	7504	1	KED
⎢	**Cd**	**111**	**49.165**	ug/L	1.367	2	1	11298	1	KED
⎣	**Cd**	**114**	**49.032**	ug/L	0.524	1	3	27753	0	KED
⎡>	**In**	**115**		ug/L			410858	420211	0	Standard
⎢	**Ag**	**107**	**51.539**	ug/L	0.593	1	24	793484	1	Standard
⎢	**Sb**	**121**	**49.945**	ug/L	0.239	0	140	584045	0	Standard
⎣	**Sb**	**123**	**50.862**	ug/L	0.204	0	109	451090	0	Standard
⎡>	**Tb**	**159**		ug/L			636863	672904	0	Standard
⎣	**Pb**	**208**	**50.856**	ug/L	0.368	0	113	2337413	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 14:33:14
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	17950	3	Standard
	Cl	**37**		ug/L			2981467	3039492	3	Standard
⎡>	**Sc**	**45**		ug/L			437323	430821	1	Standard
⎢	**Cr**	**52**	**0.021**	ug/L	0.031	144	16930	17009	1	Standard
⎣	**Cr**	**53**	**0.001**	ug/L	0.008	636	85	86	19	Standard
⎡>	**Ge**	**72**		ug/L			20645	21139	1	KED
⎢	**Cu**	**63**	**0.000**	ug/L	0.001	740	40	41	4	KED
⎢	**Cu**	**65**	**0.004**	ug/L	0.007	184	22	27	31	KED
⎢	**Zn**	**66**	**0.009**	ug/L	0.013	153	23	26	14	KED
⎢	**Zn**	**67**	**0.010**	ug/L	0.057	558	4	5	57	KED
⎣	**As**	**75**	**0.001**	ug/L	0.012	844	3	3	48	KED
	Y	**89**		ug/L			288003	283165	1	Standard
	Kr	**83**		ug/L			35	48	21	Standard
⎡>	**In-1**	**115**		ug/L			7190	7146	1	KED
⎢	**Cd**	**111**	**0.003**	ug/L	0.009	304	1	2	89	KED
⎣	**Cd**	**114**	**0.001**	ug/L	0.004	326	3	3	52	KED
⎡>	**In**	**115**		ug/L			410858	412923	1	Standard
⎢	**Ag**	**107**	**0.002**	ug/L	0.000	15	24	53	7	Standard
⎢	**Sb**	**121**	**0.027**	ug/L	0.002	5	140	453	3	Standard
⎣	**Sb**	**123**	**0.024**	ug/L	0.001	3	109	319	1	Standard
⎡>	**Tb**	**159**		ug/L			636863	635585	1	Standard
⎣	**Pb**	**208**	**0.000**	ug/L	0.000	443	113	117	14	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 14:48:32
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	17780	2	Standard
	Cl	**37**		ug/L			2981467	3115329	4	Standard
⌈>	**Sc**	**45**		ug/L			437323	446187	2	Standard
|	**Cr**	**52**	**48.788**	ug/L	1.274	2	16930	810309	3	Standard
⌊	**Cr**	**53**	**50.313**	ug/L	1.015	2	85	94412	1	Standard
⌈>	**Ge**	**72**		ug/L			20645	21838	1	KED
|	**Cu**	**63**	**50.099**	ug/L	1.418	2	40	125058	2	KED
|	**Cu**	**65**	**51.318**	ug/L	0.672	1	22	64188	2	KED
|	**Zn**	**66**	**49.958**	ug/L	0.776	1	23	15609	1	KED
|	**Zn**	**67**	**48.220**	ug/L	0.957	1	4	2512	0	KED
⌊	**As**	**75**	**49.250**	ug/L	1.004	2	3	8146	1	KED
	Y	**89**		ug/L			288003	296777	1	Standard
	Kr	**83**		ug/L			35	42	30	Standard
⌈>	**In-1**	**115**		ug/L			7190	7341	2	KED
|	**Cd**	**111**	**49.951**	ug/L	0.556	1	1	11231	2	KED
⌊	**Cd**	**114**	**49.325**	ug/L	1.304	2	3	27305	1	KED
⌈>	**In**	**115**		ug/L			410858	418979	0	Standard
|	**Ag**	**107**	**47.638**	ug/L	0.657	1	24	731245	1	Standard
|	**Sb**	**121**	**48.617**	ug/L	0.916	1	140	566830	1	Standard
⌊	**Sb**	**123**	**48.737**	ug/L	0.064	0	109	430979	0	Standard
⌈>	**Tb**	**159**		ug/L			636863	663310	1	Standard
⌊	**Pb**	**208**	**49.251**	ug/L	1.271	2	113	2230737	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 14:55:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	17957	2	Standard
	Cl	**37**		ug/L			2981467	3039779	0	Standard
⌈>	**Sc**	**45**		ug/L			437323	428317	2	Standard
|	**Cr**	**52**	**0.007**	ug/L	0.005	73	16930	16689	1	Standard
⌊	**Cr**	**53**	**-0.004**	ug/L	0.002	59	85	76	4	Standard
⌈>	**Ge**	**72**		ug/L			20645	21784	2	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.002	89	40	36	18	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.002	85	22	20	14	KED
|	**Zn**	**66**	**0.029**	ug/L	0.033	114	23	33	28	KED
|	**Zn**	**67**	**-0.018**	ug/L	0.061	342	4	3	86	KED
⌊	**As**	**75**	**-0.001**	ug/L	0.004	310	3	3	19	KED
	Y	**89**		ug/L			288003	277506	2	Standard
	Kr	**83**		ug/L			35	42	14	Standard
⌈>	**In-1**	**115**		ug/L			7190	7411	3	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.007	226	1	0	173	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.005	1291	3	3	91	KED
⌈>	**In**	**115**		ug/L			410858	410932	0	Standard
|	**Ag**	**107**	**0.003**	ug/L	0.001	43	24	69	28	Standard
|	**Sb**	**121**	**0.120**	ug/L	0.006	4	140	1514	4	Standard
⌊	**Sb**	**123**	**0.117**	ug/L	0.004	3	109	1123	1	Standard
⌈>	**Tb**	**159**		ug/L			636863	631742	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	60	113	171	20	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CRL1
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 15:01:11
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	21457	3	Standard
	Cl	**37**		ug/L			2981467	3079769	4	Standard
⌈>	**Sc**	**45**		ug/L			437323	444515	0	Standard
|	**Cr**	**52**	**0.532**	ug/L	0.076	14	16930	25824	4	Standard
⌊	**Cr**	**53**	**0.517**	ug/L	0.024	4	85	1051	3	Standard
⌈>	**Ge**	**72**		ug/L			20645	21866	3	KED
|	**Cu**	**63**	**0.531**	ug/L	0.036	6	40	1369	5	KED
|	**Cu**	**65**	**0.524**	ug/L	0.014	2	22	679	4	KED
|	**Zn**	**66**	**6.556**	ug/L	0.374	5	23	2075	8	KED
|	**Zn**	**67**	**6.229**	ug/L	0.419	6	4	328	5	KED
⌊	**As**	**75**	**0.179**	ug/L	0.027	15	3	33	12	KED
	Y	**89**		ug/L			288003	289727	2	Standard
	Kr	**83**		ug/L			35	48	12	Standard
⌈>	**In-1**	**115**		ug/L			7190	7439	0	KED
|	**Cd**	**111**	**0.101**	ug/L	0.004	4	1	24	3	KED
⌊	**Cd**	**114**	**0.111**	ug/L	0.014	12	3	65	11	KED
⌈>	**In**	**115**		ug/L			410858	416227	1	Standard
|	**Ag**	**107**	**0.211**	ug/L	0.002	0	24	3234	1	Standard
|	**Sb**	**121**	**0.231**	ug/L	0.004	1	140	2820	2	Standard
⌊	**Sb**	**123**	**0.236**	ug/L	0.002	0	109	2185	1	Standard
⌈>	**Tb**	**159**		ug/L			636863	648715	1	Standard
⌊	**Pb**	**208**	**0.119**	ug/L	0.004	3	113	5395	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 15:06:01
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	84559	5	Standard
	Cl	**37**		ug/L			2981467	8146696	1	Standard
⌈>	**Sc**	**45**		ug/L			437323	471895	1	Standard
|	**Cr**	**52**	**0.927**	ug/L	0.042	4	16930	34200	1	Standard
⌊	**Cr**	**53**	**4.238**	ug/L	0.076	1	85	8498	1	Standard
⌈>	**Ge**	**72**		ug/L			20645	21332	1	KED
|	**Cu**	**63**	**0.051**	ug/L	0.001	2	40	165	3	KED
|	**Cu**	**65**	**0.058**	ug/L	0.012	20	22	93	16	KED
|	**Zn**	**66**	**0.297**	ug/L	0.043	14	23	114	11	KED
|	**Zn**	**67**	**0.122**	ug/L	0.095	77	4	10	44	KED
⌊	**As**	**75**	**0.022**	ug/L	0.012	54	3	7	27	KED
	Y	**89**		ug/L			288003	292706	4	Standard
	Kr	**83**		ug/L			35	83	25	Standard
⌈>	**In-1**	**115**		ug/L			7190	7243	1	KED
|	**Cd**	**111**	**0.043**	ug/L	0.012	28	1	11	24	KED
⌊	**Cd**	**114**	**0.028**	ug/L	0.006	20	3	18	16	KED
⌈>	**In**	**115**		ug/L			410858	423077	2	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.000	10	24	93	8	Standard
|	**Sb**	**121**	**0.051**	ug/L	0.004	8	140	750	8	Standard
⌊	**Sb**	**123**	**0.050**	ug/L	0.003	6	109	558	3	Standard
⌈>	**Tb**	**159**		ug/L			636863	684601	2	Standard
⌊	**Pb**	**208**	**0.028**	ug/L	0.000	0	113	1411	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFB1
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 15:10:27
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	82737	1	Standard
	Cl	**37**		ug/L			2981467	8461558	0	Standard
⌈>	**Sc**	**45**		ug/L			437323	469616	1	Standard
|	**Cr**	**52**	**20.214**	ug/L	0.250	1	16930	364018	1	Standard
⌊	**Cr**	**53**	**23.665**	ug/L	0.208	0	85	46800	1	Standard
⌈>	**Ge**	**72**		ug/L			20645	21816	1	KED
|	**Cu**	**63**	**19.990**	ug/L	0.652	3	40	49882	3	KED
|	**Cu**	**65**	**19.993**	ug/L	0.426	2	22	24991	0	KED
|	**Zn**	**66**	**18.313**	ug/L	0.272	1	23	5732	2	KED
|	**Zn**	**67**	**18.126**	ug/L	0.757	4	4	946	4	KED
⌊	**As**	**75**	**19.254**	ug/L	0.216	1	3	3184	0	KED
	Y	**89**		ug/L			288003	301456	1	Standard
	Kr	**83**		ug/L			35	85	3	Standard
⌈>	**In-1**	**115**		ug/L			7190	7454	2	KED
|	**Cd**	**111**	**19.185**	ug/L	0.643	3	1	4379	1	KED
⌊	**Cd**	**114**	**18.876**	ug/L	0.598	3	3	10611	1	KED
⌈>	**In**	**115**		ug/L			410858	417337	0	Standard
|	**Ag**	**107**	**18.981**	ug/L	0.204	1	24	290226	0	Standard
|	**Sb**	**121**	**0.040**	ug/L	0.005	11	140	604	9	Standard
⌊	**Sb**	**123**	**0.040**	ug/L	0.001	1	109	464	1	Standard
⌈>	**Tb**	**159**		ug/L			636863	688216	2	Standard
⌊	**Pb**	**208**	**0.045**	ug/L	0.003	6	113	2248	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 15:14:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	23137	1	Standard
	Cl	**37**		ug/L			2981467	3258926	1	Standard
⎡>	**Sc**	**45**		ug/L			437323	446865	0	Standard
⎢	**Cr**	**52**	**191.877**	ug/L	2.484	1	16930	3141556	1	Standard
⎣	**Cr**	**53**	**195.855**	ug/L	1.293	0	85	367971	1	Standard
⎡>	**Ge**	**72**		ug/L			20645	21068	0	KED
⎢	**Cu**	**63**	**193.985**	ug/L	2.697	1	40	467061	0	KED
⎢	**Cu**	**65**	**192.048**	ug/L	0.675	0	22	231682	1	KED
⎢	**Zn**	**66**	**185.770**	ug/L	3.824	2	23	55934	1	KED
⎢	**Zn**	**67**	**189.449**	ug/L	1.946	1	4	9511	0	KED
⎣	**As**	**75**	**195.267**	ug/L	2.038	1	3	31153	0	KED
	Y	**89**		ug/L			288003	291153	2	Standard
	Kr	**83**		ug/L			35	79	14	Standard
⎡>	**In-1**	**115**		ug/L			7190	7103	3	KED
⎢	**Cd**	**111**	**193.951**	ug/L	7.085	3	1	42160	1	KED
⎣	**Cd**	**114**	**192.741**	ug/L	7.675	3	3	103173	0	KED
⎡>	**In**	**115**		ug/L			410858	402088	1	Standard
⎢	**Ag**	**107**	**196.863**	ug/L	1.404	0	24	2900068	1	Standard
⎢	**Sb**	**121**	**200.869**	ug/L	5.113	2	140	2246861	1	Standard
⎣	**Sb**	**123**	**194.952**	ug/L	1.486	0	109	1654071	0	Standard
⎡>	**Tb**	**159**		ug/L			636863	658980	0	Standard
⎣	**Pb**	**208**	**189.931**	ug/L	0.519	0	113	8548909	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 15:19:17
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	23764	2	Standard
	Cl	**37**		ug/L			2981467	3094315	0	Standard
>	**Sc**	**45**		ug/L			437323	431050	1	Standard
	Cr	**52**	**297.107**	ug/L	5.828	1	16930	4681994	1	Standard
	Cr	**53**	**297.746**	ug/L	5.817	1	85	539471	1	Standard
>	**Ge**	**72**		ug/L			20645	20544	0	KED
	Cu	**63**	**284.314**	ug/L	2.697	0	40	667495	0	KED
	Cu	**65**	**287.240**	ug/L	4.503	1	22	337864	1	KED
	Zn	**66**	**270.187**	ug/L	1.294	0	23	79323	1	KED
	Zn	**67**	**267.741**	ug/L	10.777	4	4	13103	3	KED
	As	**75**	**291.113**	ug/L	1.535	0	3	45287	0	KED
	Y	**89**		ug/L			288003	277327	0	Standard
	Kr	**83**		ug/L			35	119	19	Standard
>	**In-1**	**115**		ug/L			7190	6929	2	KED
	Cd	**111**	**288.187**	ug/L	5.508	1	1	61137	1	KED
	Cd	**114**	**285.352**	ug/L	6.008	2	3	149082	0	KED
>	**In**	**115**		ug/L			410858	392438	1	Standard
	Ag	**107**	**293.605**	ug/L	2.854	0	24	4220966	0	Standard
	Sb	**121**	**303.608**	ug/L	5.818	1	140	3314498	0	Standard
	Sb	**123**	**302.060**	ug/L	3.740	1	109	2501037	0	Standard
>	**Tb**	**159**		ug/L			636863	639090	1	Standard
	Pb	**208**	**287.370**	ug/L	0.405	0	113	12544104	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL2
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 15:26:26
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	19034	0	Standard
	Cl	**37**		ug/L			2981467	3177980	2	Standard
⌈>	**Sc**	**45**		ug/L			437323	435576	2	Standard
|	**Cr**	**52**	**0.042**	ug/L	0.017	41	16930	17525	1	Standard
⌊	**Cr**	**53**	**0.030**	ug/L	0.007	23	85	140	8	Standard
⌈>	**Ge**	**72**		ug/L			20645	20860	3	KED
|	**Cu**	**63**	**0.004**	ug/L	0.003	75	40	50	12	KED
|	**Cu**	**65**	**-0.002**	ug/L	0.002	113	22	20	14	KED
|	**Zn**	**66**	**0.006**	ug/L	0.016	269	23	25	15	KED
|	**Zn**	**67**	**0.025**	ug/L	0.069	270	4	5	57	KED
⌊	**As**	**75**	**-0.002**	ug/L	0.008	379	3	3	37	KED
	Y	**89**		ug/L			288003	285183	3	Standard
	Kr	**83**		ug/L			35	46	16	Standard
⌈>	**In-1**	**115**		ug/L			7190	7591	1	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.004	128	1	0	100	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.002	147	3	2	42	KED
⌈>	**In**	**115**		ug/L			410858	423684	1	Standard
|	**Ag**	**107**	**0.007**	ug/L	0.001	7	24	135	6	Standard
|	**Sb**	**121**	**0.467**	ug/L	0.019	4	140	5650	5	Standard
⌊	**Sb**	**123**	**0.459**	ug/L	0.020	4	109	4217	5	Standard
⌈>	**Tb**	**159**		ug/L			636863	671753	1	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.000	6	113	311	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL3
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 15:32:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	19731	6	Standard
	Cl	**37**		ug/L			2981467	3072791	0	Standard
⌈>	**Sc**	**45**		ug/L			437323	429834	1	Standard
|	**Cr**	**52**	**0.081**	ug/L	0.017	21	16930	17900	0	Standard
⌊	**Cr**	**53**	**0.024**	ug/L	0.007	28	85	127	9	Standard
⌈>	**Ge**	**72**		ug/L			20645	21513	1	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.001	63	40	37	7	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.008	1136	22	22	40	KED
|	**Zn**	**66**	**0.007**	ug/L	0.017	231	23	26	18	KED
|	**Zn**	**67**	**-0.016**	ug/L	0.001	9	4	3	0	KED
⌊	**As**	**75**	**-0.002**	ug/L	0.011	545	3	3	51	KED
	Y	**89**		ug/L			288003	276541	2	Standard
	Kr	**83**		ug/L			35	41	29	Standard
⌈>	**In-1**	**115**		ug/L			7190	7355	1	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.007	240	1	0	173	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.006	591	3	3	87	KED
⌈>	**In**	**115**		ug/L			410858	419345	2	Standard
|	**Ag**	**107**	**0.003**	ug/L	0.001	18	24	77	9	Standard
|	**Sb**	**121**	**0.128**	ug/L	0.007	5	140	1635	2	Standard
⌊	**Sb**	**123**	**0.130**	ug/L	0.005	3	109	1265	2	Standard
⌈>	**Tb**	**159**		ug/L			636863	652606	1	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.000	11	113	285	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 15:39:07
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	18376	4	Standard
	Cl	**37**		ug/L			2981467	3202705	3	Standard
⎡>	**Sc**	**45**		ug/L			437323	443952	2	Standard
⎢	**Cr**	**52**	**49.321**	ug/L	0.584	1	16930	814855	1	Standard
⎣	**Cr**	**53**	**50.021**	ug/L	0.776	1	85	93423	2	Standard
⎡>	**Ge**	**72**		ug/L			20645	22352	2	KED
⎢	**Cu**	**63**	**50.053**	ug/L	1.146	2	40	127850	0	KED
⎢	**Cu**	**65**	**49.979**	ug/L	0.843	1	22	63965	0	KED
⎢	**Zn**	**66**	**49.812**	ug/L	1.277	2	23	15926	1	KED
⎢	**Zn**	**67**	**48.145**	ug/L	1.820	3	4	2566	1	KED
⎣	**As**	**75**	**48.744**	ug/L	1.286	2	3	8250	0	KED
	Y	**89**		ug/L			288003	294430	0	Standard
	Kr	**83**		ug/L			35	46	8	Standard
⎡>	**In-1**	**115**		ug/L			7190	7445	3	KED
⎢	**Cd**	**111**	**50.286**	ug/L	1.863	3	1	11456	0	KED
⎣	**Cd**	**114**	**49.581**	ug/L	1.367	2	3	27825	1	KED
⎡>	**In**	**115**		ug/L			410858	424339	1	Standard
⎢	**Ag**	**107**	**47.738**	ug/L	1.432	3	24	741893	1	Standard
⎢	**Sb**	**121**	**48.815**	ug/L	0.862	1	140	576332	0	Standard
⎣	**Sb**	**123**	**48.506**	ug/L	0.817	1	109	434336	0	Standard
⎡>	**Tb**	**159**		ug/L			636863	680451	1	Standard
⎣	**Pb**	**208**	**47.881**	ug/L	0.833	1	113	2225029	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 15:46:17
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	18438	5	Standard
	Cl	**37**		ug/L			2981467	3059905	1	Standard
⎡>	**Sc**	**45**		ug/L			437323	429501	0	Standard
⎢	**Cr**	**52**	**0.032**	ug/L	0.036	115	16930	17124	4	Standard
⎣	**Cr**	**53**	**0.016**	ug/L	0.005	31	85	113	8	Standard
⎡>	**Ge**	**72**		ug/L			20645	21658	0	KED
⎢	**Cu**	**63**	**0.007**	ug/L	0.002	23	40	60	6	KED
⎢	**Cu**	**65**	**-0.004**	ug/L	0.005	114	22	18	29	KED
⎢	**Zn**	**66**	**0.011**	ug/L	0.029	275	23	27	32	KED
⎢	**Zn**	**67**	**0.046**	ug/L	0.119	260	4	6	87	KED
⎣	**As**	**75**	**0.003**	ug/L	0.010	360	3	4	38	KED
	Y	**89**		ug/L			288003	275815	0	Standard
	Kr	**83**		ug/L			35	43	40	Standard
⎡>	**In-1**	**115**		ug/L			7190	7365	2	KED
⎢	**Cd**	**111**	**0.001**	ug/L	0.004	345	1	1	50	KED
⎣	**Cd**	**114**	**0.002**	ug/L	0.004	182	3	4	48	KED
⎡>	**In**	**115**		ug/L			410858	405611	1	Standard
⎢	**Ag**	**107**	**0.003**	ug/L	0.000	4	24	67	4	Standard
⎢	**Sb**	**121**	**0.150**	ug/L	0.008	5	140	1826	6	Standard
⎣	**Sb**	**123**	**0.161**	ug/L	0.003	1	109	1489	3	Standard
⎡>	**Tb**	**159**		ug/L			636863	648576	1	Standard
⎣	**Pb**	**208**	**0.001**	ug/L	0.001	61	113	153	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 15:50:52
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	22678	2	Standard
	Cl	**37**		ug/L			2981467	3092184	1	Standard
⌈>	**Sc**	**45**		ug/L			437323	444173	1	Standard
|	**Cr**	**52**	**0.028**	ug/L	0.013	47	16930	17645	1	Standard
⌊	**Cr**	**53**	**0.016**	ug/L	0.008	47	85	117	13	Standard
⌈>	**Ge**	**72**		ug/L			20645	22035	4	KED
|	**Cu**	**63**	**-0.005**	ug/L	0.002	47	40	31	18	KED
|	**Cu**	**65**	**0.001**	ug/L	0.006	646	22	24	27	KED
|	**Zn**	**66**	**0.010**	ug/L	0.045	426	23	28	50	KED
|	**Zn**	**67**	**0.032**	ug/L	0.060	189	4	6	45	KED
⌊	**As**	**75**	**0.006**	ug/L	0.013	219	3	4	45	KED
	Y	**89**		ug/L			288003	289167	0	Standard
	Kr	**83**		ug/L			35	50	15	Standard
⌈>	**In-1**	**115**		ug/L			7190	7330	1	KED
|	**Cd**	**111**	**0.006**	ug/L	0.004	77	1	2	33	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.003	136	3	1	108	KED
⌈>	**In**	**115**		ug/L			410858	425913	2	Standard
|	[redacted]	**107**	[redacted]	ug/L	0.001	32	24	59	17	Standard
|	**Sb**	**121**	**0.055**	ug/L	0.004	6	140	792	3	Standard
⌊	**Sb**	**123**	**0.058**	ug/L	0.005	7	109	630	4	Standard
⌈>	**Tb**	**159**		ug/L			636863	668120	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	54	113	121	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 15:55:17
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	20575	3	Standard
	Cl	**37**		ug/L			2981467	3024371	2	Standard
⌈>	**Sc**	**45**		ug/L			437323	440817	2	Standard
|	**Cr**	**52**	**26.211**	ug/L	1.100	4	16930	437833	2	Standard
⌊	**Cr**	**53**	**26.781**	ug/L	0.698	2	85	49691	0	Standard
⌈>	**Ge**	**72**		ug/L			20645	22615	1	KED
|	**Cu**	**63**	**26.023**	ug/L	0.952	3	40	67274	2	KED
|	**Cu**	**65**	**26.001**	ug/L	0.844	3	22	33679	1	KED
|	**Zn**	**66**	**80.610**	ug/L	1.429	1	23	26066	1	KED
|	**Zn**	**67**	**75.172**	ug/L	4.094	5	4	4052	4	KED
⌊	**As**	**75**	**24.706**	ug/L	0.585	2	3	4234	2	KED
	Y	**89**		ug/L			288003	294666	1	Standard
	Kr	**83**		ug/L			35	52	21	Standard
⌈>	**In-1**	**115**		ug/L			7190	7504	1	KED
|	**Cd**	**111**	**26.210**	ug/L	0.543	2	1	6024	1	KED
⌊	**Cd**	**114**	**26.351**	ug/L	0.418	1	3	14918	2	KED
⌈>	**In**	**115**		ug/L			410858	426394	1	Standard
|	[redacted]	**107**	[redacted]	ug/L	0.507	1	24	409019	0	Standard
|	**Sb**	**121**	**26.482**	ug/L	0.602	2	140	314224	0	Standard
⌊	**Sb**	**123**	**26.581**	ug/L	0.713	2	109	239203	1	Standard
⌈>	**Tb**	**159**		ug/L			636863	669444	1	Standard
⌊	**Pb**	**208**	**26.358**	ug/L	0.327	1	113	1205418	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 15:59:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	27111	2	Standard
	Cl	**37**		ug/L			2981467	3046967	3	Standard
>	**Sc**	**45**		ug/L			437323	438274	2	Standard
	Cr	**52**	**0.160**	ug/L	0.061	37	16930	19513	2	Standard
	Cr	**53**	**0.143**	ug/L	0.015	10	85	347	5	Standard
>	**Ge**	**72**		ug/L			20645	21351	3	KED
	Cu	**63**	**0.050**	ug/L	0.004	8	40	164	5	KED
	Cu	**65**	**0.043**	ug/L	0.005	12	22	75	5	KED
	Zn	**66**	**0.143**	ug/L	0.008	5	23	67	5	KED
	Zn	**67**	**0.233**	ug/L	0.088	37	4	16	29	KED
	As	**75**	**0.002**	ug/L	0.010	438	3	4	37	KED
	Y	**89**		ug/L			288003	284087	2	Standard
	Kr	**83**		ug/L			35	49	26	Standard
>	**In-1**	**115**		ug/L			7190	7352	1	KED
	Cd	**111**	**-0.003**	ug/L	0.004	138	1	0	100	KED
	Cd	**114**	**-0.004**	ug/L	0.002	52	3	1	99	KED
>	**In**	**115**		ug/L			410858	414950	1	Standard
	[redacted]	**107**	[redacted]	ug/L	0.033	150	24	364	140	Standard
	Sb	**121**	**0.045**	ug/L	0.013	28	140	662	23	Standard
	Sb	**123**	**0.045**	ug/L	0.013	30	109	502	23	Standard
>	**Tb**	**159**		ug/L			636863	649867	1	Standard
	Pb	**208**	**0.012**	ug/L	0.011	91	113	649	74	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 16:04:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	28846	2	Standard
	Cl	**37**		ug/L			2981467	3154574	1	Standard
⌈>	**Sc**	**45**		ug/L			437323	439176	1	Standard
|	**Cr**	**52**	**25.268**	ug/L	0.252	0	16930	421307	1	Standard
⌊	**Cr**	**53**	**25.768**	ug/L	0.500	1	85	47644	0	Standard
⌈>	**Ge**	**72**		ug/L			20645	21382	1	KED
|	**Cu**	**63**	**25.976**	ug/L	0.256	0	40	63514	1	KED
|	**Cu**	**65**	**26.138**	ug/L	0.292	1	22	32020	1	KED
|	**Zn**	**66**	**83.714**	ug/L	2.727	3	23	25589	1	KED
|	**Zn**	**67**	**79.415**	ug/L	1.504	1	4	4048	1	KED
⌊	**As**	**75**	**25.840**	ug/L	0.815	3	3	4186	1	KED
	Y	**89**		ug/L			288003	290517	1	Standard
	Kr	**83**		ug/L			35	41	2	Standard
⌈>	**In-1**	**115**		ug/L			7190	7692	3	KED
|	**Cd**	**111**	**24.399**	ug/L	0.998	4	1	5744	1	KED
⌊	**Cd**	**114**	**24.244**	ug/L	0.992	4	3	14057	1	KED
⌈>	**In**	**115**		ug/L			410858	417719	1	Standard
|	[redacted]	**107**	[redacted]	ug/L	0.474	1	24	382828	0	Standard
|	**Sb**	**121**	**25.774**	ug/L	0.370	1	140	299649	0	Standard
⌊	**Sb**	**123**	**26.013**	ug/L	0.363	1	109	229371	0	Standard
⌈>	**Tb**	**159**		ug/L			636863	663226	0	Standard
⌊	**Pb**	**208**	**24.578**	ug/L	0.699	2	113	1113429	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 16:09:39
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	31786	3	Standard
	Cl	**37**		ug/L			2981467	3838296	2	Standard
⌈>	**Sc**	**45**		ug/L			437323	446079	1	Standard
|	**Cr**	**52**	**0.315**	ug/L	0.035	11	16930	22379	1	Standard
⌊	**Cr**	**53**	**0.868**	ug/L	0.027	3	85	1714	2	Standard
⌈>	**Ge**	**72**		ug/L			20645	21087	0	KED
|	**Cu**	**63**	**2.557**	ug/L	0.092	3	40	6203	4	KED
|	**Cu**	**65**	**2.586**	ug/L	0.041	1	22	3145	2	KED
|	**Zn**	**66**	**27.326**	ug/L	0.864	3	23	8255	2	KED
|	**Zn**	**67**	**25.508**	ug/L	0.389	1	4	1285	1	KED
⌊	**As**	**75**	**0.802**	ug/L	0.050	6	3	131	5	KED
	Y	**89**		ug/L			288003	284301	1	Standard
	Kr	**83**		ug/L			35	57	13	Standard
⌈>	**In-1**	**115**		ug/L			7190	7162	2	KED
|	**Cd**	**111**	**0.097**	ug/L	0.013	13	1	22	11	KED
⌊	**Cd**	**114**	**0.082**	ug/L	0.018	22	3	47	18	KED
⌈>	**In**	**115**		ug/L			410858	409226	0	Standard
|	[redacted]	**107**	[redacted]	ug/L	0.001	26	24	68	17	Standard
|	**Sb**	**121**	**5.447**	ug/L	0.095	1	140	62150	1	Standard
⌊	**Sb**	**123**	**5.459**	ug/L	0.027	0	109	47249	0	Standard
⌈>	**Tb**	**159**		ug/L			636863	670581	1	Standard
⌊	**Pb**	**208**	**0.103**	ug/L	0.002	2	113	4856	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 16:14:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	31545	3	Standard
	Cl	**37**		ug/L			2981467	3808774	0	Standard
>	**Sc**	**45**		ug/L			437323	436732	1	Standard
	Cr	**52**	**0.289**	ug/L	0.032	11	16930	21505	2	Standard
	Cr	**53**	**0.998**	ug/L	0.008	0	85	1917	2	Standard
>	**Ge**	**72**		ug/L			20645	20952	1	KED
	Cu	**63**	**2.498**	ug/L	0.053	2	40	6021	2	KED
	Cu	**65**	**2.503**	ug/L	0.074	2	22	3025	3	KED
	Zn	**66**	**26.564**	ug/L	0.158	0	23	7975	2	KED
	Zn	**67**	**25.344**	ug/L	1.399	5	4	1268	3	KED
	As	**75**	**0.763**	ug/L	0.051	6	3	124	5	KED
	Y	**89**		ug/L			288003	284089	2	Standard
	Kr	**83**		ug/L			35	53	12	Standard
>	**In-1**	**115**		ug/L			7190	6977	1	KED
	Cd	**111**	**0.101**	ug/L	0.028	27	1	23	24	KED
	Cd	**114**	**0.074**	ug/L	0.017	23	3	41	22	KED
>	**In**	**115**		ug/L			410858	403640	1	Standard
	[redacted]	**107**	[redacted]	ug/L	0.000	10	24	62	8	Standard
	Sb	**121**	**5.534**	ug/L	0.178	3	140	62262	1	Standard
	Sb	**123**	**5.541**	ug/L	0.051	0	109	47296	1	Standard
>	**Tb**	**159**		ug/L			636863	658823	1	Standard
	Pb	**208**	**0.098**	ug/L	0.003	2	113	4532	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 16:18:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	28959	0	Standard
	Cl	**37**		ug/L			2981467	3807572	2	Standard
⌈>	**Sc**	**45**		ug/L			437323	432314	2	Standard
|	**Cr**	**52**	**12.625**	ug/L	0.255	2	16930	215572	2	Standard
⌊	**Cr**	**53**	**13.366**	ug/L	0.324	2	85	24363	1	Standard
⌈>	**Ge**	**72**		ug/L			20645	20711	0	KED
|	**Cu**	**63**	**15.069**	ug/L	0.394	2	40	35701	1	KED
|	**Cu**	**65**	**15.028**	ug/L	0.734	4	22	17837	4	KED
|	**Zn**	**66**	**65.344**	ug/L	1.208	1	23	19359	2	KED
|	**Zn**	**67**	**62.318**	ug/L	0.770	1	4	3079	2	KED
⌊	**As**	**75**	**14.100**	ug/L	0.392	2	3	2214	1	KED
	Y	**89**		ug/L			288003	287463	3	Standard
	Kr	**83**		ug/L			35	65	16	Standard
⌈>	**In-1**	**115**		ug/L			7190	7334	1	KED
|	**Cd**	**111**	**12.245**	ug/L	0.421	3	1	2751	2	KED
⌊	**Cd**	**114**	**12.250**	ug/L	0.333	2	3	6778	1	KED
⌈>	**In**	**115**		ug/L			410858	406857	1	Standard
|	[redacted]	**107**	[redacted]	ug/L	0.416	3	24	177874	3	Standard
|	**Sb**	**121**	**18.580**	ug/L	0.315	1	140	210431	1	Standard
⌊	**Sb**	**123**	**18.878**	ug/L	0.126	0	109	162167	0	Standard
⌈>	**Tb**	**159**		ug/L			636863	666073	0	Standard
⌊	**Pb**	**208**	**11.878**	ug/L	0.110	0	113	540513	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 16:23:38
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	21524	1	Standard
	Cl	**37**		ug/L			2981467	2915968	1	Standard
⌈>	**Sc**	**45**		ug/L			437323	401572	1	Standard
|	**Cr**	**52**	**0.018**	ug/L	0.034	195	16930	15797	1	Standard
⌊	**Cr**	**53**	**0.106**	ug/L	0.002	2	85	257	0	Standard
⌈>	**Ge**	**72**		ug/L			20645	19087	1	KED
|	**Cu**	**63**	**0.036**	ug/L	0.006	17	40	116	10	KED
|	**Cu**	**65**	**0.028**	ug/L	0.005	18	22	51	9	KED
|	**Zn**	**66**	**0.513**	ug/L	0.063	12	23	161	12	KED
|	**Zn**	**67**	**0.693**	ug/L	0.220	31	4	35	26	KED
⌊	**As**	**75**	**23.422**	ug/L	0.535	2	3	3387	1	KED
	Y	**89**		ug/L			288003	262980	1	Standard
	Kr	**83**		ug/L			35	59	11	Standard
⌈>	**In-1**	**115**		ug/L			7190	6546	2	KED
|	**Cd**	**111**	**0.015**	ug/L	0.012	82	1	4	53	KED
⌊	**Cd**	**114**	**0.010**	ug/L	0.010	95	3	7	59	KED
⌈>	**In**	**115**		ug/L			410858	374530	0	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	65	24	38	27	Standard
|	**Sb**	**121**	**13.555**	ug/L	0.173	1	140	141368	1	Standard
⌊	**Sb**	**123**	**13.731**	ug/L	0.013	0	109	108612	0	Standard
⌈>	**Tb**	**159**		ug/L			636863	627461	0	Standard
⌊	[redacted]	**208**	[redacted]	ug/L	0.003	1	113	9638	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 16:28:12
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	21854	2	Standard
	Cl	**37**		ug/L			2981467	3111095	0	Standard
⌈>	**Sc**	**45**		ug/L			437323	392727	1	Standard
|	**Cr**	**52**	**0.087**	ug/L	0.039	45	16930	16453	3	Standard
⌊	**Cr**	**53**	**0.076**	ug/L	0.008	10	85	202	6	Standard
⌈>	**Ge**	**72**		ug/L			20645	18888	2	KED
|	**Cu**	**63**	**0.462**	ug/L	0.010	2	40	1034	0	KED
|	**Cu**	**65**	**0.469**	ug/L	0.025	5	22	527	7	KED
|	**Zn**	**66**	**1.057**	ug/L	0.050	4	23	306	4	KED
|	**Zn**	**67**	**8.545**	ug/L	0.048	0	4	388	3	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.044	3	3	169	1	KED
	Y	**89**		ug/L			288003	258103	0	Standard
	Kr	**83**		ug/L			35	69	19	Standard
⌈>	**In-1**	**115**		ug/L			7190	6698	5	KED
|	**Cd**	**111**	**0.019**	ug/L	0.007	36	1	5	26	KED
⌊	**Cd**	**114**	**0.010**	ug/L	0.001	12	3	8	13	KED
⌈>	**In**	**115**		ug/L			410858	363792	2	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	52	24	50	28	Standard
|	[redacted]	**121**	[redacted]	ug/L	0.023	4	140	5106	2	Standard
⌊	**Sb**	**123**	**0.503**	ug/L	0.026	5	109	3954	3	Standard
⌈>	**Tb**	**159**		ug/L			636863	621856	1	Standard
⌊	**Pb**	**208**	**19.494**	ug/L	0.424	2	113	827910	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL4
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 16:35:44
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	19494	4	Standard
	Cl	**37**		ug/L			2981467	3287821	1	Standard
⌈>	**Sc**	**45**		ug/L			437323	420803	0	Standard
|	**Cr**	**52**	**0.039**	ug/L	0.030	76	16930	16891	2	Standard
⌊	**Cr**	**53**	**0.012**	ug/L	0.018	152	85	102	31	Standard
⌈>	**Ge**	**72**		ug/L			20645	22625	0	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.005	226	40	39	30	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.007	259	22	20	41	KED
|	**Zn**	**66**	**-0.021**	ug/L	0.010	48	23	19	17	KED
|	**Zn**	**67**	**0.016**	ug/L	0.001	4	4	5	0	KED
⌊	**As**	**75**	**0.001**	ug/L	0.014	1797	3	4	59	KED
	Y	**89**		ug/L			288003	275385	2	Standard
	Kr	**83**		ug/L			35	48	6	Standard
⌈>	**In-1**	**115**		ug/L			7190	7740	2	KED
|	**Cd**	**111**	**0.002**	ug/L	0.008	391	1	2	89	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.009	1249	3	3	134	KED
⌈>	**In**	**115**		ug/L			410858	425441	2	Standard
|	**Ag**	**107**	**0.008**	ug/L	0.012	160	24	147	134	Standard
|	**Sb**	**121**	**0.022**	ug/L	0.019	86	140	413	58	Standard
⌊	**Sb**	**123**	**0.025**	ug/L	0.020	80	109	337	56	Standard
⌈>	**Tb**	**159**		ug/L			636863	675043	0	Standard
⌊	**Pb**	**208**	**0.015**	ug/L	0.026	173	113	813	147	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 16:40:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	18623	1	Standard
	Cl	**37**		ug/L			2981467	3223040	4	Standard
⌈>	**Sc**	**45**		ug/L			437323	435200	2	Standard
⎢	**Cr**	**52**	**49.757**	ug/L	1.155	2	16930	805588	0	Standard
⌊	**Cr**	**53**	**50.236**	ug/L	1.857	3	85	91933	1	Standard
⌈>	**Ge**	**72**		ug/L			20645	22505	2	KED
⎢	**Cu**	**63**	**49.177**	ug/L	2.281	4	40	126464	3	KED
⎢	**Cu**	**65**	**47.817**	ug/L	1.884	3	22	61596	1	KED
⎢	**Zn**	**66**	**48.964**	ug/L	2.287	4	23	15757	2	KED
⎢	**Zn**	**67**	**49.167**	ug/L	3.257	6	4	2638	4	KED
⌊	**As**	**75**	**49.967**	ug/L	1.984	3	3	8513	1	KED
	Y	**89**		ug/L			288003	286903	0	Standard
	Kr	**83**		ug/L			35	40	8	Standard
⌈>	**In-1**	**115**		ug/L			7190	7702	1	KED
⎢	**Cd**	**111**	**50.482**	ug/L	0.882	1	1	11907	1	KED
⌊	**Cd**	**114**	**49.992**	ug/L	1.245	2	3	29038	0	KED
⌈>	**In**	**115**		ug/L			410858	437099	0	Standard
⎢	**Ag**	**107**	**47.785**	ug/L	0.436	0	24	765272	1	Standard
⎢	**Sb**	**121**	**49.132**	ug/L	0.942	1	140	597618	1	Standard
⌊	**Sb**	**123**	**49.189**	ug/L	0.691	1	109	453811	2	Standard
⌈>	**Tb**	**159**		ug/L			636863	705441	0	Standard
⌊	**Pb**	**208**	**45.518**	ug/L	1.003	2	113	2193190	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 16:47:20
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	18457	3	Standard
	Cl	**37**		ug/L			2981467	3190081	1	Standard
⌈>	**Sc**	**45**		ug/L			437323	425660	2	Standard
|	**Cr**	**52**	**0.020**	ug/L	0.045	226	16930	16772	1	Standard
⌊	**Cr**	**53**	**-0.001**	ug/L	0.005	433	85	80	10	Standard
⌈>	**Ge**	**72**		ug/L			20645	22082	1	KED
|	**Cu**	**63**	**0.002**	ug/L	0.002	134	40	47	10	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.002	72	22	19	14	KED
|	**Zn**	**66**	**0.003**	ug/L	0.011	352	23	26	11	KED
|	**Zn**	**67**	**-0.006**	ug/L	0.041	685	4	4	49	KED
⌊	**As**	**75**	**0.002**	ug/L	0.008	369	3	4	33	KED
	Y	**89**		ug/L			288003	275877	1	Standard
	Kr	**83**		ug/L			35	50	26	Standard
⌈>	**In-1**	**115**		ug/L			7190	7741	1	KED
|	**Cd**	**111**	**0.047**	ug/L	0.083	177	1	12	154	KED
⌊	**Cd**	**114**	**0.034**	ug/L	0.060	177	3	22	151	KED
⌈>	**In**	**115**		ug/L			410858	443447	1	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.000	8	24	57	5	Standard
|	**Sb**	**121**	**0.110**	ug/L	0.006	5	140	1502	5	Standard
⌊	**Sb**	**123**	**0.108**	ug/L	0.001	0	109	1132	1	Standard
⌈>	**Tb**	**159**		ug/L			636863	678899	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	81	113	151	15	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 16:55:56
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			18011	34564	4	Standard
Cl	**37**		ug/L			2981467	3139362	1	Standard
> **Sc**	**45**		ug/L			437323	552690	2	Standard
Cr	**52**	**12.739**	ug/L	0.425	3	16930	277807	1	Standard
Cr	**53**	**12.989**	ug/L	0.434	3	85	30270	2	Standard
> **Ge**	**72**		ug/L			20645	22773	3	KED
[redacted]	**63**	[redacted]	ug/L	0.253	1	40	63030	2	KED
Cu	**65**	**24.228**	ug/L	0.621	2	22	31614	3	KED
[redacted]	**66**	[redacted]	ug/L	1.536	3	23	16326	2	KED
Zn	**67**	**47.908**	ug/L	0.422	0	4	2604	3	KED
[redacted]	**75**	[redacted]	ug/L	0.166	3	3	935	2	KED
Y	**89**		ug/L			288003	522018	0	Standard
Kr	**83**		ug/L			35	87	4	Standard
> **In-1**	**115**		ug/L			7190	7659	2	KED
[redacted]	**111**	[redacted]	ug/L	0.024	19	1	30	18	KED
Cd	**114**	**0.161**	ug/L	0.007	4	3	96	5	KED
> **In**	**115**		ug/L			410858	434915	2	Standard
[redacted]	**107**	[redacted]	ug/L	0.004	4	24	1704	4	Standard
Sb	**121**	**0.056**	ug/L	0.003	5	140	826	7	Standard
Sb	**123**	**0.057**	ug/L	0.004	6	109	639	2	Standard
> **Tb**	**159**		ug/L			636863	718312	1	Standard
[redacted]	**208**	[redacted]	ug/L	0.227	2	113	478369	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 17:00:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18011	32858	3	Standard
	Cl	37		ug/L			2981467	3101032	1	Standard
>	Sc	45		ug/L			437323	549241	1	Standard
	Cr	52	16.339	ug/L	0.044	0	16930	348229	1	Standard
	Cr	53	16.949	ug/L	0.192	1	85	39232	0	Standard
>	Ge	72		ug/L			20645	23358	2	KED
	[redacted]	63	[redacted]	ug/L	0.636	2	40	60118	1	KED
	Cu	65	22.524	ug/L	0.702	3	22	30133	1	KED
	[redacted]	66	[redacted]	ug/L	0.756	1	23	14615	2	KED
	Zn	67	42.909	ug/L	2.203	5	4	2391	4	KED
	[redacted]	75	[redacted]	ug/L	0.215	3	3	1151	1	KED
	Y	89		ug/L			288003	546044	2	Standard
	Kr	83		ug/L			35	86	7	Standard
>	In-1	115		ug/L			7190	7856	1	KED
	[redacted]	111	[redacted]	ug/L	0.029	13	1	55	14	KED
	Cd	114	0.214	ug/L	0.037	17	3	130	15	KED
>	In	115		ug/L			410858	431075	2	Standard
	[redacted]	107	[redacted]	ug/L	0.008	5	24	2237	3	Standard
	Sb	121	0.012	ug/L	0.001	10	140	296	3	Standard
	Sb	123	0.013	ug/L	0.002	16	109	231	8	Standard
>	Tb	159		ug/L			636863	718870	0	Standard
	[redacted]	208	[redacted]	ug/L	0.127	1	113	546981	1	Standard

23A0133

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~23C0133-~~ [redacted]

Sample Dil Factor: [redacted]

Comments:

Sample Date/Time: Saturday, April 01, 2023 17:04:47

MB 4/1/23

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	32468	1	Standard
	Cl	**37**		ug/L			2981467	3113787	3	Standard
>	**Sc**	**45**		ug/L			437323	553844	2	Standard
	Cr	**52**	**15.136**	ug/L	0.173	1	16930	326849	1	Standard
	Cr	**53**	**15.450**	ug/L	0.142	0	85	36075	2	Standard
>	**Ge**	**72**		ug/L			20645	22986	2	KED
	[redacted]	**63**	[redacted]	ug/L	0.384	1	40	72788	2	KED
	Cu	**65**	**28.080**	ug/L	0.212	0	22	36976	2	KED
	[redacted]	**66**	[redacted]	ug/L	1.668	3	23	18111	0	KED
	Zn	**67**	**53.554**	ug/L	0.940	1	4	2938	4	KED
	[redacted]	**75**	[redacted]	ug/L	0.127	2	3	988	2	KED
	Y	**89**		ug/L			288003	557587	1	Standard
	Kr	**83**		ug/L			35	114	6	Standard
>	**In-1**	**115**		ug/L			7190	7606	1	KED
	[redacted]	**111**	[redacted]	ug/L	0.024	11	1	51	10	KED
	Cd	**114**	**0.172**	ug/L	0.009	5	3	102	6	KED
>	**In**	**115**		ug/L			410858	439191	0	Standard
	[redacted]	**107**	[redacted]	ug/L	0.001	0	24	2407	1	Standard
	Sb	**121**	**0.008**	ug/L	0.001	18	140	251	6	Standard
	Sb	**123**	**0.010**	ug/L	0.004	42	109	207	18	Standard
>	**Tb**	**159**		ug/L			636863	711324	0	Standard
	[redacted]	**208**	[redacted]	ug/L	0.066	0	113	677581	0	Standard

23A0133

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~23C0133~~ [redacted]

Sample Dil Factor: [redacted]

Comments:

Sample Date/Time: Saturday, April 01, 2023 17:09:13

MB 4/1/23

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	31886	2	Standard
	Cl	**37**		ug/L			2981467	3062532	4	Standard
>	**Sc**	**45**		ug/L			437323	533151	2	Standard
	[redacted]	**52**	[redacted]	ug/L	0.402	3	16930	265192	1	Standard
	Cr	**53**	**12.888**	ug/L	0.203	1	85	28981	1	Standard
>	**Ge**	**72**		ug/L			20645	22461	3	KED
	[redacted]	**63**	[redacted]	ug/L	0.491	2	40	63022	2	KED
	Cu	**65**	**24.311**	ug/L	0.703	2	22	31265	1	KED
	[redacted]	**66**	[redacted]	ug/L	1.731	3	23	16328	1	KED
	Zn	**67**	**50.425**	ug/L	2.260	4	4	2699	2	KED
	[redacted]	**75**	[redacted]	ug/L	0.018	0	3	837	4	KED
	Y	**89**		ug/L			288003	512423	1	Standard
	Kr	**83**		ug/L			35	91	9	Standard
>	**In-1**	**115**		ug/L			7190	7791	1	KED
	[redacted]	**111**	[redacted]	ug/L	0.016	13	1	29	12	KED
	Cd	**114**	**0.125**	ug/L	0.029	23	3	76	23	KED
>	**In**	**115**		ug/L			410858	440556	1	Standard
	[redacted]	**107**	[redacted]	ug/L	0.003	3	24	1494	2	Standard
	Sb	**121**	**0.008**	ug/L	0.003	32	140	252	12	Standard
	Sb	**123**	**0.005**	ug/L	0.003	64	109	164	17	Standard
>	**Tb**	**159**		ug/L			636863	704683	1	Standard
	[redacted]	**208**	[redacted]	ug/L	0.099	1	113	439801	1	Standard

23A0133

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~23C0133~~ [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 17:13:38

MB 4/1/23

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18011	34253	3	Standard
Cl	37		ug/L			2981467	3144589	1	Standard
> Sc	45		ug/L			437323	547884	1	Standard
Cr	52	13.510	ug/L	0.092	0	16930	290903	1	Standard
Cr	53	13.714	ug/L	0.166	1	85	31686	0	Standard
> Ge	72		ug/L			20645	22803	1	KED
[redacted]	63	[redacted]	ug/L	0.374	1	40	71601	2	KED
Cu	65	28.908	ug/L	0.547	1	22	37774	3	KED
[redacted]	66	[redacted]	ug/L	0.396	0	23	18654	1	KED
Zn	67	54.784	ug/L	2.894	5	4	2981	6	KED
[redacted]	75	[redacted]	ug/L	0.145	2	3	964	3	KED
Y	89		ug/L			288003	522041	1	Standard
Kr	83		ug/L			35	104	6	Standard
> In-1	115		ug/L			7190	7804	1	KED
[redacted]	111	[redacted]	ug/L	0.048	30	1	39	29	KED
Cd	114	0.150	ug/L	0.033	21	3	91	21	KED
> In	115		ug/L			410858	438474	0	Standard
[redacted]	107	[redacted]	ug/L	0.002	1	24	2178	1	Standard
Sb	121	0.007	ug/L	0.002	30	140	233	10	Standard
Sb	123	0.005	ug/L	0.001	23	109	164	5	Standard
> Tb	159		ug/L			636863	714509	0	Standard
[redacted]	208	[redacted]	ug/L	0.235	2	113	556069	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 17:18:04
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	34178	3	Standard
	Cl	**37**		ug/L			2981467	3062793	1	Standard
>	**Sc**	**45**		ug/L			437323	539874	1	Standard
	Cr	**52**	**13.203**	ug/L	0.320	2	16930	280564	1	Standard
	Cr	**53**	**13.468**	ug/L	0.424	3	85	30656	1	Standard
>	**Ge**	**72**		ug/L			20645	22894	2	KED
	[redacted]	**63**	[redacted]	ug/L	1.922	6	40	73346	4	KED
	Cu	**65**	**28.672**	ug/L	1.336	4	22	37590	3	KED
	[redacted]	**66**	[redacted]	ug/L	0.230	0	23	17313	1	KED
	Zn	**67**	**53.355**	ug/L	3.905	7	4	2912	6	KED
	[redacted]	**75**	[redacted]	ug/L	0.189	3	3	967	1	KED
	Y	**89**		ug/L			288003	524650	1	Standard
	Kr	**83**		ug/L			35	91	28	Standard
>	**In-1**	**115**		ug/L			7190	7679	1	KED
	[redacted]	**111**	[redacted]	ug/L	0.034	17	1	48	17	KED
	Cd	**114**	**0.155**	ug/L	0.004	2	3	92	2	KED
>	**In**	**115**		ug/L			410858	435513	1	Standard
	[redacted]	**107**	[redacted]	ug/L	0.003	2	24	1923	3	Standard
	Sb	**121**	**0.005**	ug/L	0.001	24	140	212	6	Standard
	Sb	**123**	**0.006**	ug/L	0.001	23	109	168	8	Standard
>	**Tb**	**159**		ug/L			636863	719726	1	Standard
	[redacted]	**208**	[redacted]	ug/L	0.213	2	113	513809	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 17:22:29
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	32917	3	Standard
	Cl	**37**		ug/L			2981467	3072751	1	Standard
>	**Sc**	**45**		ug/L			437323	538646	0	Standard
	Cr	**52**	**35.452**	ug/L	0.897	2	16930	716536	1	Standard
	Cr	**53**	**36.292**	ug/L	0.460	1	85	82280	2	Standard
>	**Ge**	**72**		ug/L			20645	23229	2	KED
	[redacted]	**63**	[redacted]	ug/L	0.590	1	40	138768	1	KED
	Cu	**65**	**52.745**	ug/L	1.003	1	22	70157	1	KED
	[redacted]	**66**	[redacted]	ug/L	6.408	4	23	43251	3	KED
	Zn	**67**	**123.756**	ug/L	1.803	1	4	6851	1	KED
	[redacted]	**75**	[redacted]	ug/L	0.446	1	3	5074	0	KED
	Y	**89**		ug/L			288003	519216	4	Standard
	Kr	**83**		ug/L			35	82	9	Standard
>	**In-1**	**115**		ug/L			7190	7907	0	KED
	[redacted]	**111**	[redacted]	ug/L	0.349	1	1	5983	1	KED
	Cd	**114**	**24.669**	ug/L	0.099	0	3	14716	0	KED
>	**In**	**115**		ug/L			410858	431128	1	Standard
	[redacted]	**107**	[redacted]	ug/L	0.322	2	24	172908	1	Standard
	Sb	**121**	**0.440**	ug/L	0.001	0	140	5421	1	Standard
	Sb	**123**	**0.435**	ug/L	0.027	6	109	4072	4	Standard
>	**Tb**	**159**		ug/L			636863	711713	1	Standard
	[redacted]	**208**	[redacted]	ug/L	0.581	1	113	1658137	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 17:26:55
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	31160	2	Standard
	Cl	**37**		ug/L			2981467	3095112	3	Standard
⌈>	**Sc**	**45**		ug/L			437323	531532	3	Standard
|	**Cr**	**52**	**33.799**	ug/L	1.358	4	16930	674715	2	Standard
⌊	**Cr**	**53**	**34.261**	ug/L	0.651	1	85	76635	2	Standard
⌈>	**Ge**	**72**		ug/L			20645	22208	0	KED
|	[redacted]	**63**	[redacted]	ug/L	0.805	1	40	132545	1	KED
|	**Cu**	**65**	**53.069**	ug/L	1.324	2	22	67502	2	KED
|	[redacted]	**66**	[redacted]	ug/L	1.094	0	23	42403	0	KED
|	**Zn**	**67**	**127.570**	ug/L	0.940	0	4	6753	0	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.391	1	3	5000	1	KED
	Y	**89**		ug/L			288003	493763	3	Standard
	Kr	**83**		ug/L			35	90	31	Standard
⌈>	**In-1**	**115**		ug/L			7190	7737	1	KED
|	[redacted]	**111**	[redacted]	ug/L	0.479	1	1	5936	1	KED
⌊	**Cd**	**114**	**24.214**	ug/L	0.551	2	3	14132	0	KED
⌈>	**In**	**115**		ug/L			410858	421262	4	Standard
|	[redacted]	**107**	[redacted]	ug/L	0.440	3	24	196613	1	Standard
|	**Sb**	**121**	**0.483**	ug/L	0.033	6	140	5796	2	Standard
⌊	**Sb**	**123**	**0.485**	ug/L	0.021	4	109	4424	3	Standard
⌈>	**Tb**	**159**		ug/L			636863	698295	2	Standard
⌊	[redacted]	**208**	[redacted]	ug/L	1.266	3	113	1647467	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 17:31:20
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18011	35168	6	Standard
Cl	37		ug/L			2981467	3138931	2	Standard
> Sc	45		ug/L			437323	548802	1	Standard
Cr	52	33.534	ug/L	0.398	1	16930	691743	0	Standard
Cr	53	33.591	ug/L	0.304	0	85	77595	1	Standard
> Ge	72		ug/L			20645	22326	3	KED
Cu	63	53.947	ug/L	0.651	1	40	137651	2	KED
Cu	65	53.805	ug/L	0.844	1	22	68790	2	KED
Zn	66	131.667	ug/L	5.639	4	23	41996	3	KED
Zn	67	121.411	ug/L	7.165	5	4	6453	2	KED
As	75	30.091	ug/L	0.798	2	3	5088	0	KED
Y	89		ug/L			288003	517874	2	Standard
Kr	83		ug/L			35	99	14	Standard
> In-1	115		ug/L			7190	7823	1	KED
Cd	111	24.221	ug/L	0.532	2	1	5804	2	KED
Cd	114	23.824	ug/L	0.270	1	3	14062	1	KED
> In	115		ug/L			410858	438442	1	Standard
[redacted]	107	[redacted]	ug/L	0.580	2	24	381057	1	Standard
Sb	121	0.004	ug/L	0.001	24	140	194	4	Standard
Sb	123	0.004	ug/L	0.004	93	109	151	20	Standard
> Tb	159		ug/L			636863	711398	1	Standard
Pb	208	34.613	ug/L	0.154	0	113	1681879	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL5
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 17:35:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	20344	0	Standard
	Cl	**37**		ug/L			2981467	3012178	1	Standard
⎡>	**Sc**	**45**		ug/L			437323	423250	1	Standard
⎢	**Cr**	**52**	**0.005**	ug/L	0.014	317	16930	16455	1	Standard
⎣	**Cr**	**53**	**0.002**	ug/L	0.003	125	85	86	6	Standard
⎡>	**Ge**	**72**		ug/L			20645	22151	1	KED
⎢	**Cu**	**63**	**-0.002**	ug/L	0.004	271	40	39	27	KED
⎢	**Cu**	**65**	**-0.004**	ug/L	0.002	52	22	18	15	KED
⎢	**Zn**	**66**	**0.000**	ug/L	0.023	5783	23	25	30	KED
⎢	**Zn**	**67**	**-0.018**	ug/L	0.037	206	4	3	50	KED
⎣	**As**	**75**	**0.003**	ug/L	0.009	278	3	4	32	KED
	Y	**89**		ug/L			288003	274015	1	Standard
	Kr	**83**		ug/L			35	39	33	Standard
⎡>	**In-1**	**115**		ug/L			7190	7680	1	KED
⎢	**Cd**	**111**	**-0.005**	ug/L	0.002	51	1	0	86	KED
⎣	**Cd**	**114**	**-0.004**	ug/L	0.002	53	3	1	90	KED
⎡>	**In**	**115**		ug/L			410858	425577	1	Standard
⎢	**Ag**	**107**	**0.001**	ug/L	0.001	83	24	46	38	Standard
⎢	**Sb**	**121**	**-0.007**	ug/L	0.001	11	140	56	16	Standard
⎣	**Sb**	**123**	**-0.006**	ug/L	0.001	19	109	59	18	Standard
⎡>	**Tb**	**159**		ug/L			636863	665361	1	Standard
⎣	**Pb**	**208**	**0.001**	ug/L	0.001	102	113	158	27	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 17:40:12
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	19190	2	Standard
	Cl	**37**		ug/L			2981467	3203476	2	Standard
⌈>	**Sc**	**45**		ug/L			437323	435532	0	Standard
|	**Cr**	**52**	**49.308**	ug/L	1.285	2	16930	799245	1	Standard
⌊	**Cr**	**53**	**49.546**	ug/L	0.077	0	85	90787	0	Standard
⌈>	**Ge**	**72**		ug/L			20645	22530	2	KED
|	**Cu**	**63**	**47.495**	ug/L	0.898	1	40	122306	1	KED
|	**Cu**	**65**	**49.822**	ug/L	1.140	2	22	64271	0	KED
|	**Zn**	**66**	**49.461**	ug/L	0.982	1	23	15941	0	KED
|	**Zn**	**67**	**51.038**	ug/L	0.627	1	4	2743	1	KED
⌊	**As**	**75**	**49.217**	ug/L	0.513	1	3	8399	1	KED
	Y	**89**		ug/L			288003	288063	3	Standard
	Kr	**83**		ug/L			35	50	29	Standard
⌈>	**In-1**	**115**		ug/L			7190	7954	1	KED
|	**Cd**	**111**	**47.929**	ug/L	0.268	0	1	11677	1	KED
⌊	**Cd**	**114**	**47.512**	ug/L	0.108	0	3	28509	1	KED
⌈>	**In**	**115**		ug/L			410858	433303	0	Standard
|	**Ag**	**107**	**45.531**	ug/L	0.919	2	24	722848	2	Standard
|	**Sb**	**121**	**47.575**	ug/L	0.744	1	140	573657	1	Standard
⌊	**Sb**	**123**	**48.760**	ug/L	0.373	0	109	445921	1	Standard
⌈>	**Tb**	**159**		ug/L			636863	691253	1	Standard
⌊	**Pb**	**208**	**45.940**	ug/L	0.203	0	113	2169127	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 17:47:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	19071	1	Standard
	Cl	**37**		ug/L			2981467	3080579	1	Standard
⎡>	**Sc**	**45**		ug/L			437323	421262	2	Standard
⎢	**Cr**	**52**	**0.009**	ug/L	0.026	294	16930	16440	2	Standard
⎣	**Cr**	**53**	**0.004**	ug/L	0.002	60	85	89	6	Standard
⎡>	**Ge**	**72**		ug/L			20645	22147	3	KED
⎢	**Cu**	**63**	**-0.004**	ug/L	0.002	38	40	33	8	KED
⎢	**Cu**	**65**	**-0.002**	ug/L	0.005	208	22	20	24	KED
⎢	**Zn**	**66**	**0.009**	ug/L	0.014	158	23	27	15	KED
⎢	**Zn**	**67**	**-0.055**	ug/L	0.035	62	4	1	100	KED
⎣	**As**	**75**	**-0.001**	ug/L	0.008	931	3	3	37	KED
	Y	**89**		ug/L			288003	272115	0	Standard
	Kr	**83**		ug/L			35	38	31	Standard
⎡>	**In-1**	**115**		ug/L			7190	7536	3	KED
⎢	**Cd**	**111**	**-0.006**	ug/L	0.002	40	1	0	173	KED
⎣	**Cd**	**114**	**-0.003**	ug/L	0.003	127	3	1	105	KED
⎡>	**In**	**115**		ug/L			410858	426232	0	Standard
⎢	**Ag**	**107**	**0.005**	ug/L	0.005	101	24	102	76	Standard
⎢	**Sb**	**121**	**0.098**	ug/L	0.002	1	140	1307	1	Standard
⎣	**Sb**	**123**	**0.097**	ug/L	0.005	5	109	984	4	Standard
⎡>	**Tb**	**159**		ug/L			636863	658689	1	Standard
⎣	**Pb**	**208**	**0.003**	ug/L	0.003	86	113	275	50	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 17:54:03
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	34069	4	Standard
	Cl	**37**		ug/L			2981467	3207083	5	Standard
>	**Sc**	**45**		ug/L			437323	476331	0	Standard
	Cr	**52**	**0.397**	ug/L	0.018	4	16930	25334	1	Standard
	Cr	**53**	**0.475**	ug/L	0.013	2	85	1043	2	Standard
>	**Ge**	**72**		ug/L			20645	21810	5	KED
	Cu	**63**	**3.923**	ug/L	0.261	6	40	9797	1	KED
	Cu	**65**	**4.057**	ug/L	0.333	8	22	5075	3	KED
	Zn	**66**	**25.301**	ug/L	1.588	6	23	7889	0	KED
	Zn	**67**	**23.846**	ug/L	1.519	6	4	1240	1	KED
	As	**75**	**3.499**	ug/L	0.224	6	3	580	2	KED
	Y	**89**		ug/L			288003	305678	4	Standard
	Kr	**83**		ug/L			35	56	8	Standard
>	**In-1**	**115**		ug/L			7190	7718	2	KED
	Cd	**111**	**0.044**	ug/L	0.012	27	1	12	24	KED
	Cd	**114**	**0.024**	ug/L	0.007	28	3	17	21	KED
>	**In**	**115**		ug/L			410858	432946	1	Standard
	Ag	**107**	**0.004**	ug/L	0.000	9	24	90	6	Standard
	Sb	**121**	**0.427**	ug/L	0.015	3	140	5288	3	Standard
	Sb	**123**	**0.431**	ug/L	0.013	2	109	4055	2	Standard
>	**Tb**	**159**		ug/L			636863	701493	0	Standard
	[redacted]	**208**	[redacted]	ug/L	0.001	2	113	3313	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 17:58:28
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	31234	2	Standard
	Cl	**37**		ug/L			2981467	3089923	2	Standard
⌈>	**Sc**	**45**		ug/L			437323	470888	3	Standard
|	**Cr**	**52**	**0.183**	ug/L	0.066	36	16930	21346	3	Standard
⌊	**Cr**	**53**	**0.420**	ug/L	0.021	4	85	922	2	Standard
⌈>	**Ge**	**72**		ug/L			20645	21628	1	KED
|	**Cu**	**63**	**8.958**	ug/L	0.226	2	40	22177	1	KED
|	**Cu**	**65**	**9.159**	ug/L	0.205	2	22	11362	1	KED
|	**Zn**	**66**	**7.200**	ug/L	0.310	4	23	2249	5	KED
|	**Zn**	**67**	**6.802**	ug/L	0.274	4	4	354	2	KED
⌊	**As**	**75**	**1.625**	ug/L	0.042	2	3	269	1	KED
	Y	**89**		ug/L			288003	285005	2	Standard
	Kr	**83**		ug/L			35	46	16	Standard
⌈>	**In-1**	**115**		ug/L			7190	7709	1	KED
|	**Cd**	**111**	**0.021**	ug/L	0.004	21	1	6	14	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.012	165	3	7	91	KED
⌈>	**In**	**115**		ug/L			410858	423154	1	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.000	7	24	56	5	Standard
|	**Sb**	**121**	**0.130**	ug/L	0.005	3	140	1678	4	Standard
⌊	**Sb**	**123**	**0.127**	ug/L	0.004	2	109	1243	3	Standard
⌈>	**Tb**	**159**		ug/L			636863	691598	0	Standard
⌊	[redacted]	**208**	[redacted]	ug/L	0.009	2	113	20299	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 18:02:48
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18011	33081	2	Standard
Cl	37		ug/L			2981467	3122647	2	Standard
> Sc	45		ug/L			437323	549319	1	Standard
Cr	52	24.655	ug/L	0.391	1	16930	514657	0	Standard
Cr	53	25.063	ug/L	0.363	1	85	57967	0	Standard
> Ge	72		ug/L			20645	22332	1	KED
[redacted]	63	[redacted]	ug/L	0.668	2	40	70708	3	KED
Cu	65	28.576	ug/L	0.161	0	22	36558	1	KED
[redacted]	66	[redacted]	ug/L	2.248	3	23	21736	3	KED
Zn	67	64.737	ug/L	0.964	1	4	3448	2	KED
[redacted]	75	[redacted]	ug/L	0.248	1	3	2418	0	KED
Y	89		ug/L			288003	533018	4	Standard
Kr	83		ug/L			35	101	7	Standard
> In-1	115		ug/L			7190	7863	3	KED
Cd	111	1.126	ug/L	0.137	12	1	272	10	KED
Cd	114	1.141	ug/L	0.019	1	3	679	2	KED
> In	115		ug/L			410858	435543	0	Standard
[redacted]	107	[redacted]	ug/L	0.011	2	24	6144	3	Standard
Sb	121	0.011	ug/L	0.003	23	140	286	11	Standard
Sb	123	0.010	ug/L	0.002	15	109	211	6	Standard
> Tb	159		ug/L			636863	717223	0	Standard
[redacted]	208	[redacted]	ug/L	0.385	0	113	1972658	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 18:07:13
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18011	31596	3	Standard
Cl	37		ug/L			2981467	3077025	3	Standard
> Sc	45		ug/L			437323	572297	0	Standard
Cr	52	17.135	ug/L	0.324	1	16930	379407	0	Standard
Cr	53	18.004	ug/L	0.417	2	85	43417	1	Standard
> Ge	72		ug/L			20645	22845	0	KED
[redacted]	63	[redacted]	ug/L	0.197	0	40	69379	1	KED
Cu	65	27.149	ug/L	0.031	0	22	35534	0	KED
[redacted]	66	[redacted]	ug/L	1.632	2	23	20071	2	KED
Zn	67	60.710	ug/L	1.744	2	4	3308	2	KED
[redacted]	75	[redacted]	ug/L	0.119	1	3	1402	1	KED
Y	89		ug/L			288003	584163	1	Standard
Kr	83		ug/L			35	114	10	Standard
> In-1	115		ug/L			7190	7723	3	KED
[redacted]	111	[redacted]	ug/L	0.047	11	1	101	8	KED
Cd	114	0.426	ug/L	0.027	6	3	250	3	KED
> In	115		ug/L			410858	435087	1	Standard
[redacted]	107	[redacted]	ug/L	0.012	2	24	8049	1	Standard
Sb	121	0.008	ug/L	0.002	25	140	241	11	Standard
Sb	123	0.006	ug/L	0.002	30	109	169	8	Standard
> Tb	159		ug/L			636863	708101	0	Standard
[redacted]	208	[redacted]	ug/L	0.089	0	113	686395	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 18:11:38
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	31137	1	Standard
	Cl	**37**		ug/L			2981467	3120269	5	Standard
>	**Sc**	**45**		ug/L			437323	536722	9	Standard
	Cr	**52**	**16.631**	ug/L	1.927	11	16930	343640	1	Standard
	Cr	**53**	**16.660**	ug/L	1.650	9	85	37456	1	Standard
>	**Ge**	**72**		ug/L			20645	22475	1	KED
	[redacted]	**63**	[redacted]	ug/L	0.640	2	40	66980	0	KED
	Cu	**65**	**25.996**	ug/L	0.789	3	22	33465	2	KED
	[redacted]	**66**	[redacted]	ug/L	0.411	0	23	18764	1	KED
	Zn	**67**	**58.877**	ug/L	2.642	4	4	3155	2	KED
	[redacted]	**75**	[redacted]	ug/L	0.064	0	3	1105	0	KED
	Y	**89**		ug/L			288003	544553	4	Standard
	Kr	**83**		ug/L			35	105	4	Standard
>	**In-1**	**115**		ug/L			7190	7874	1	KED
	[redacted]	**111**	[redacted]	ug/L	0.008	2	1	92	3	KED
	Cd	**114**	**0.368**	ug/L	0.050	13	3	221	11	KED
>	**In**	**115**		ug/L			410858	417551	7	Standard
	[redacted]	**107**	[redacted]	ug/L	0.020	8	24	3489	1	Standard
	Sb	**121**	**0.010**	ug/L	0.003	25	140	259	5	Standard
	Sb	**123**	**0.009**	ug/L	0.001	11	109	189	11	Standard
>	**Tb**	**159**		ug/L			636863	687894	8	Standard
	Pb	**208**	**11.344**	ug/L	0.789	6	113	531088	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 18:16:04
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	32820	2	Standard
	Cl	**37**		ug/L			2981467	3138905	2	Standard
⌈>	**Sc**	**45**		ug/L			437323	540230	1	Standard
|	[redacted]	**52**	[redacted]	ug/L	0.152	1	16930	259650	1	Standard
⌊	**Cr**	**53**	**12.744**	ug/L	0.346	2	85	29034	1	Standard
⌈>	**Ge**	**72**		ug/L			20645	22286	0	KED
|	[redacted]	**63**	[redacted]	ug/L	0.553	2	40	51115	2	KED
|	**Cu**	**65**	**20.150**	ug/L	0.435	2	22	25733	1	KED
|	[redacted]	**66**	[redacted]	ug/L	1.171	2	23	14939	2	KED
|	**Zn**	**67**	**46.629**	ug/L	2.123	4	4	2479	3	KED
⌊	**As**	**75**	**5.336**	ug/L	0.359	6	3	904	6	KED
	Y	**89**		ug/L			288003	502981	1	Standard
	Kr	**83**		ug/L			35	71	22	Standard
⌈>	**In-1**	**115**		ug/L			7190	7782	2	KED
|	[redacted]	**111**	[redacted]	ug/L	0.011	8	1	33	5	KED
⌊	**Cd**	**114**	**0.107**	ug/L	0.019	18	3	66	18	KED
⌈>	**In**	**115**		ug/L			410858	436696	1	Standard
|	**Ag**	**107**	**0.079**	ug/L	0.006	7	24	1292	8	Standard
|	**Sb**	**121**	**0.006**	ug/L	0.001	9	140	222	3	Standard
⌊	**Sb**	**123**	**0.006**	ug/L	0.001	10	109	170	4	Standard
⌈>	**Tb**	**159**		ug/L			636863	702158	0	Standard
⌊	[redacted]	**208**	[redacted]	ug/L	0.111	0	113	843539	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 18:20:29
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			18011	37291	2	Standard
Cl	**37**		ug/L			2981467	3182946	1	Standard
Sc	**45**		ug/L			437323	542191	2	Standard
[redacted]	**52**	[redacted]	ug/L	0.080	0	16930	269539	2	Standard
Cr	**53**	**12.786**	ug/L	0.155	1	85	29240	1	Standard
Ge	**72**		ug/L			20645	22434	3	KED
[redacted]	**63**	[redacted]	ug/L	1.457	6	40	60950	2	KED
Cu	**65**	**23.373**	ug/L	0.962	4	22	30014	0	KED
[redacted]	**66**	[redacted]	ug/L	1.938	4	23	15126	0	KED
Zn	**67**	**47.791**	ug/L	2.663	5	4	2555	1	KED
[redacted]	**75**	[redacted]	ug/L	0.062	1	3	950	2	KED
Y	**89**		ug/L			288003	507623	0	Standard
Kr	**83**		ug/L			35	75	6	Standard
In-1	**115**		ug/L			7190	7750	3	KED
[redacted]	**111**	[redacted]	ug/L	0.018	11	1	38	10	KED
Cd	**114**	**0.159**	ug/L	0.038	23	3	96	20	KED
In	**115**		ug/L			410858	439275	0	Standard
[redacted]	**107**	[redacted]	ug/L	0.004	4	24	1485	3	Standard
Sb	**121**	**0.003**	ug/L	0.001	52	140	181	9	Standard
Sb	**123**	**0.003**	ug/L	0.001	35	109	144	5	Standard
Tb	**159**		ug/L			636863	710818	0	Standard
[redacted]	**208**	[redacted]	ug/L	0.172	1	113	434040	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 18:24:55
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	36917	2	Standard
	Cl	**37**		ug/L			2981467	3361280	12	Standard
⌈>	**Sc**	**45**		ug/L			437323	530684	1	Standard
⌈	[redacted]	**52**	[redacted]	ug/L	0.153	1	16930	289493	0	Standard
⌊	**Cr**	**53**	**13.979**	ug/L	0.279	1	85	31281	1	Standard
⌈>	**Ge**	**72**		ug/L			20645	22956	0	KED
⌈	[redacted]	**63**	[redacted]	ug/L	0.093	0	40	63979	0	KED
⌈	**Cu**	**65**	**24.688**	ug/L	0.762	3	22	32473	3	KED
⌈	[redacted]	**66**	[redacted]	ug/L	1.001	2	23	16355	1	KED
⌈	**Zn**	**67**	**49.619**	ug/L	0.309	0	4	2718	1	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.054	1	3	928	0	KED
	Y	**89**		ug/L			288003	506239	3	Standard
	Kr	**83**		ug/L			35	171	73	Standard
⌈>	**In-1**	**115**		ug/L			7190	7754	2	KED
⌈	[redacted]	**111**	[redacted]	ug/L	0.021	13	1	39	13	KED
⌊	**Cd**	**114**	**0.160**	ug/L	0.025	15	3	96	15	KED
⌈>	**In**	**115**		ug/L			410858	420324	4	Standard
⌈	[redacted]	**107**	[redacted]	ug/L	0.010	7	24	1879	3	Standard
⌈	**Sb**	**121**	**0.010**	ug/L	0.012	117	140	258	48	Standard
⌊	**Sb**	**123**	**0.010**	ug/L	0.011	109	109	201	44	Standard
⌈>	**Tb**	**159**		ug/L			636863	693391	4	Standard
⌊	[redacted]	**208**	[redacted]	ug/L	0.065	0	113	481765	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 18:29:20
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	32818	4	Standard
	Cl	**37**		ug/L			2981467	3125993	1	Standard
>	**Sc**	**45**		ug/L			437323	531801	0	Standard
	[redacted]	**52**	[redacted]	ug/L	0.146	1	16930	265343	1	Standard
	Cr	**53**	**12.813**	ug/L	0.234	1	85	28746	2	Standard
>	**Ge**	**72**		ug/L			20645	22410	1	KED
	Cu	**63**	**23.923**	ug/L	0.599	2	40	61302	2	KED
	[redacted]	[redacted]	[redacted]	ug/L	0.540	2	22	30066	1	KED
	[redacted]	**66**	[redacted]	ug/L	0.799	1	23	15590	0	KED
	Zn	**67**	**47.337**	ug/L	0.638	1	4	2531	1	KED
	[redacted]	**75**	[redacted]	ug/L	0.105	1	3	975	2	KED
	Y	**89**		ug/L			288003	495094	3	Standard
	Kr	**83**		ug/L			35	83	17	Standard
>	**In-1**	**115**		ug/L			7190	7866	3	KED
	[redacted]	**111**	[redacted]	ug/L	0.027	20	1	33	15	KED
	Cd	**114**	**0.130**	ug/L	0.012	9	3	80	12	KED
>	**In**	**115**		ug/L			410858	424882	1	Standard
	[redacted]	**107**	[redacted]	ug/L	0.006	6	24	1548	4	Standard
	Sb	**121**	**0.005**	ug/L	0.001	19	140	202	3	Standard
	Sb	**123**	**0.006**	ug/L	0.001	17	109	168	6	Standard
>	**Tb**	**159**		ug/L			636863	693817	1	Standard
	[redacted]	**208**	[redacted]	ug/L	0.143	1	113	460285	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL6
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 18:33:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	20929	4	Standard
	Cl	**37**		ug/L			2981467	2994680	1	Standard
⎡>	**Sc**	**45**		ug/L			437323	402604	3	Standard
⎢	**Cr**	**52**	**0.036**	ug/L	0.025	69	16930	16111	1	Standard
⎣	**Cr**	**53**	**0.015**	ug/L	0.001	7	85	103	1	Standard
⎡>	**Ge**	**72**		ug/L			20645	20956	3	KED
⎢	**Cu**	**63**	**-0.001**	ug/L	0.001	178	40	39	12	KED
⎢	**Cu**	**65**	**-0.004**	ug/L	0.006	148	22	17	40	KED
⎢	**Zn**	**66**	**-0.016**	ug/L	0.023	141	23	19	36	KED
⎢	**Zn**	**67**	**-0.052**	ug/L	0.001	2	4	1		KED
⎣	**As**	**75**	**0.001**	ug/L	0.022	2041	3	3	86	KED
	Y	**89**		ug/L			288003	274230	4	Standard
	Kr	**83**		ug/L			35	43	9	Standard
⎡>	**In-1**	**115**		ug/L			7190	7303	1	KED
⎢	**Cd**	**111**	**0.003**	ug/L	0.014	482	1	2	137	KED
⎣	**Cd**	**114**	**-0.000**	ug/L	0.007	10526	3	3	127	KED
⎡>	**In**	**115**		ug/L			410858	416767	2	Standard
⎢	**Ag**	**107**	**-0.000**	ug/L	0.000	141	24	19	36	Standard
⎢	**Sb**	**121**	**-0.007**	ug/L	0.001	10	140	59	13	Standard
⎣	**Sb**	**123**	**-0.007**	ug/L	0.001	10	109	46	16	Standard
⎡>	**Tb**	**159**		ug/L			636863	637740	2	Standard
⎣	**Pb**	**208**	**-0.000**	ug/L	0.000	136	113	107	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 18:38:12
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	19198	1	Standard
	Cl	**37**		ug/L			2981467	3197204	2	Standard
⌈>	**Sc**	**45**		ug/L			437323	432392	1	Standard
|	**Cr**	**52**	**48.690**	ug/L	1.313	2	16930	783731	2	Standard
⌊	**Cr**	**53**	**48.983**	ug/L	1.716	3	85	89085	2	Standard
⌈>	**Ge**	**72**		ug/L			20645	21083	1	KED
|	**Cu**	**63**	**49.323**	ug/L	1.701	3	40	118828	1	KED
|	**Cu**	**65**	**48.566**	ug/L	1.806	3	22	58626	2	KED
|	**Zn**	**66**	**49.751**	ug/L	1.580	3	23	15004	1	KED
|	**Zn**	**67**	**50.936**	ug/L	1.823	3	4	2561	1	KED
⌊	**As**	**75**	**50.403**	ug/L	2.309	4	3	8047	3	KED
	Y	**89**		ug/L			288003	279074	0	Standard
	Kr	**83**		ug/L			35	52	29	Standard
⌈>	**In-1**	**115**		ug/L			7190	7627	1	KED
|	**Cd**	**111**	**48.753**	ug/L	0.675	1	1	11388	1	KED
⌊	**Cd**	**114**	**47.753**	ug/L	0.947	1	3	27470	0	KED
⌈>	**In**	**115**		ug/L			410858	422974	2	Standard
|	**Ag**	**107**	**47.007**	ug/L	1.674	3	24	728028	1	Standard
|	**Sb**	**121**	**47.684**	ug/L	0.799	1	140	561173	1	Standard
⌊	**Sb**	**123**	**48.729**	ug/L	1.187	2	109	434916	2	Standard
⌈>	**Tb**	**159**		ug/L			636863	682051	1	Standard
⌊	**Pb**	**208**	**45.631**	ug/L	0.563	1	113	2125944	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 18:45:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	18726	2	Standard
	Cl	**37**		ug/L			2981467	2939413	3	Standard
⌈>	**Sc**	**45**		ug/L			437323	385128	5	Standard
|	**Cr**	**52**	**0.066**	ug/L	0.064	96	16930	15806	3	Standard
⌊	**Cr**	**53**	**0.012**	ug/L	0.003	26	85	95	10	Standard
⌈>	**Ge**	**72**		ug/L			20645	21085	1	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.004	127	40	33	31	KED
|	**Cu**	**65**	**-0.004**	ug/L	0.004	92	22	17	26	KED
|	**Zn**	**66**	**-0.012**	ug/L	0.019	150	23	20	28	KED
|	**Zn**	**67**	**0.023**	ug/L	0.037	158	4	5	33	KED
⌊	**As**	**75**	**0.010**	ug/L	0.012	115	3	5	35	KED
	Y	**89**		ug/L			288003	256926	0	Standard
	Kr	**83**		ug/L			35	42	20	Standard
⌈>	**In-1**	**115**		ug/L			7190	7365	0	KED
|	**Cd**	**111**	**0.001**	ug/L	0.004	342	1	1	50	KED
⌊	**Cd**	**114**	**-0.006**	ug/L	0.000	0	3	0	43	KED
⌈>	**In**	**115**		ug/L			410858	400274	3	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	32	24	52	15	Standard
|	**Sb**	**121**	**0.093**	ug/L	0.007	7	140	1174	10	Standard
⌊	**Sb**	**123**	**0.099**	ug/L	0.004	4	109	939	2	Standard
⌈>	**Tb**	**159**		ug/L			636863	626694	4	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.001	191	113	123	15	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 18:49:48
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	34307	4	Standard
	Cl	**37**		ug/L			2981467	3036904	1	Standard
>	**Sc**	**45**		ug/L			437323	514994	1	Standard
	[redacted]	**52**	[redacted]	ug/L	0.060	0	16930	271654	1	Standard
	Cr	**53**	**13.875**	ug/L	0.111	0	85	30132	1	Standard
>	**Ge**	**72**		ug/L			20645	21636	3	KED
	[redacted]	**63**	[redacted]	ug/L	0.223	0	40	60199	2	KED
	Cu	**65**	**24.172**	ug/L	1.318	5	22	29934	3	KED
	[redacted]	**66**	[redacted]	ug/L	0.892	1	23	16066	2	KED
	Zn	**67**	**50.710**	ug/L	1.249	2	4	2616	1	KED
	[redacted]	**75**	[redacted]	ug/L	0.108	2	3	815	1	KED
	Y	**89**		ug/L			288003	498203	0	Standard
	Kr	**83**		ug/L			35	92	19	Standard
>	**In-1**	**115**		ug/L			7190	7661	1	KED
	[redacted]	**111**	[redacted]	ug/L	0.019	15	1	31	13	KED
	Cd	**114**	**0.129**	ug/L	0.036	28	3	77	25	KED
>	**In**	**115**		ug/L			410858	421538	0	Standard
	[redacted]	**107**	[redacted]	ug/L	0.003	3	24	1543	3	Standard
	Sb	**121**	**0.034**	ug/L	0.003	8	140	547	5	Standard
	Sb	**123**	**0.033**	ug/L	0.002	6	109	406	5	Standard
>	**Tb**	**159**		ug/L			636863	697298	1	Standard
	[redacted]	**208**	[redacted]	ug/L	0.197	2	113	442771	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 18:54:13
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	33416	1	Standard
	Cl	**37**		ug/L			2981467	3081834	3	Standard
⌈>	**Sc**	**45**		ug/L			437323	513972	1	Standard
⌈	[redacted]	**52**	[redacted]	ug/L	0.206	1	16930	267716	0	Standard
⌊	**Cr**	**53**	**13.489**	ug/L	0.363	2	85	29237	2	Standard
⌈>	**Ge**	**72**		ug/L			20645	22117	0	KED
⌈	[redacted]	**63**	[redacted]	ug/L	0.148	0	40	68847	1	KED
⌈	**Cu**	**65**	**27.313**	ug/L	0.156	0	22	34608	0	KED
⌈	[redacted]	**66**	[redacted]	ug/L	0.901	1	23	17893	2	KED
⌈	**Zn**	**67**	**54.795**	ug/L	1.719	3	4	2891	2	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.052	0	3	1307	1	KED
	Y	**89**		ug/L			288003	475929	2	Standard
	Kr	**83**		ug/L			35	85	31	Standard
⌈>	**In-1**	**115**		ug/L			7190	7653	1	KED
⌈	[redacted]	**111**	[redacted]	ug/L	0.014	10	1	33	11	KED
⌊	**Cd**	**114**	**0.152**	ug/L	0.001	0	3	90	1	KED
⌈>	**In**	**115**		ug/L			410858	419856	0	Standard
⌈	[redacted]	**107**	[redacted]	ug/L	0.003	2	24	1860	2	Standard
⌈	**Sb**	**121**	**0.021**	ug/L	0.003	13	140	384	8	Standard
⌊	**Sb**	**123**	**0.021**	ug/L	0.001	3	109	294	1	Standard
⌈>	**Tb**	**159**		ug/L			636863	695835	1	Standard
⌊	[redacted]	**208**	[redacted]	ug/L	0.204	1	113	562646	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 18:58:39
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	31670	2	Standard
	Cl	**37**		ug/L			2981467	2986290	3	Standard
>	**Sc**	**45**		ug/L			437323	526385	2	Standard
	[redacted]	**52**	[redacted]	ug/L	0.148	1	16930	262402	2	Standard
	Cr	**53**	**13.084**	ug/L	0.338	2	85	29040	0	Standard
>	**Ge**	**72**		ug/L			20645	21712	1	KED
	[redacted]	**63**	[redacted]	ug/L	0.314	1	40	63083	1	KED
	Cu	**65**	**26.126**	ug/L	0.201	0	22	32501	1	KED
	[redacted]	**66**	[redacted]	ug/L	0.470	0	23	18843	0	KED
	Zn	**67**	**60.274**	ug/L	1.142	1	4	3121	1	KED
	[redacted]	**75**	[redacted]	ug/L	0.231	4	3	943	2	KED
	Y	**89**		ug/L			288003	502582	2	Standard
	Kr	**83**		ug/L			35	73	17	Standard
>	**In-1**	**115**		ug/L			7190	7483	2	KED
	[redacted]	**111**	[redacted]	ug/L	0.039	24	1	39	20	KED
	Cd	**114**	**0.175**	ug/L	0.024	13	3	102	11	KED
>	**In**	**115**		ug/L			410858	424503	2	Standard
	[redacted]	**107**	[redacted]	ug/L	0.004	3	24	1648	2	Standard
	Sb	**121**	**0.015**	ug/L	0.001	6	140	316	5	Standard
	Sb	**123**	**0.015**	ug/L	0.002	13	109	250	8	Standard
>	**Tb**	**159**		ug/L			636863	692557	0	Standard
	[redacted]	**208**	[redacted]	ug/L	0.136	1	113	506218	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 19:03:04
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	32902	2	Standard
	Cl	**37**		ug/L			2981467	3031781	3	Standard
⌈>	**Sc**	**45**		ug/L			437323	533400	1	Standard
|	[redacted]	**52**	[redacted]	ug/L	0.406	3	16930	256776	1	Standard
⌊	**Cr**	**53**	**12.395**	ug/L	0.369	2	85	27888	1	Standard
⌈>	**Ge**	**72**		ug/L			20645	22036	1	KED
|	[redacted]	**63**	[redacted]	ug/L	0.475	2	40	59399	1	KED
|	**Cu**	**65**	**24.032**	ug/L	0.456	1	22	30343	2	KED
|	[redacted]	**66**	[redacted]	ug/L	1.277	2	23	15787	3	KED
|	**Zn**	**67**	**47.294**	ug/L	0.994	2	4	2487	2	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.085	1	3	731	2	KED
	Y	**89**		ug/L			288003	503226	2	Standard
	Kr	**83**		ug/L			35	90	4	Standard
⌈>	**In-1**	**115**		ug/L			7190	7631	1	KED
|	[redacted]	**111**	[redacted]	ug/L	0.010	6	1	36	8	KED
⌊	**Cd**	**114**	**0.136**	ug/L	0.033	23	3	82	24	KED
⌈>	**In**	**115**		ug/L			410858	423483	1	Standard
|	[redacted]	**107**	[redacted]	ug/L	0.005	4	24	1864	4	Standard
|	**Sb**	**121**	**0.010**	ug/L	0.002	20	140	257	8	Standard
⌊	**Sb**	**123**	**0.007**	ug/L	0.003	34	109	179	13	Standard
⌈>	**Tb**	**159**		ug/L			636863	685951	0	Standard
⌊	[redacted]	**208**	[redacted]	ug/L	0.135	1	113	438344	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 19:07:30
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	31932	2	Standard
	Cl	**37**		ug/L			2981467	2978592	1	Standard
⎡>	**Sc**	**45**		ug/L			437323	498675	1	Standard
⎢	[redacted]	**52**	[redacted]	ug/L	0.168	1	16930	218408	0	Standard
⎣	**Cr**	**53**	**11.418**	ug/L	0.016	0	85	24030	1	Standard
⎡>	**Ge**	**72**		ug/L			20645	22058	0	KED
⎢	[redacted]	**63**	[redacted]	ug/L	0.644	2	40	55587	2	KED
⎢	**Cu**	**65**	**22.670**	ug/L	0.309	1	22	28653	1	KED
⎢	[redacted]	**66**	[redacted]	ug/L	0.353	0	23	14140	1	KED
⎢	**Zn**	**67**	**44.320**	ug/L	1.426	3	4	2333	3	KED
⎣	[redacted]	**75**	[redacted]	ug/L	0.027	0	3	930	0	KED
	Y	**89**		ug/L			288003	440879	2	Standard
	Kr	**83**		ug/L			35	78	20	Standard
⎡>	**In-1**	**115**		ug/L			7190	7527	1	KED
⎢	[redacted]	**111**	[redacted]	ug/L	0.010	6	1	36	5	KED
⎣	**Cd**	**114**	**0.162**	ug/L	0.014	8	3	95	8	KED
⎡>	**In**	**115**		ug/L			410858	415842	1	Standard
⎢	[redacted]	**107**	[redacted]	ug/L	0.002	1	24	1608	0	Standard
⎢	**Sb**	**121**	**0.007**	ug/L	0.003	39	140	225	13	Standard
⎣	**Sb**	**123**	**0.008**	ug/L	0.003	34	109	177	11	Standard
⎡>	**Tb**	**159**		ug/L			636863	686117	1	Standard
⎣	[redacted]	**208**	[redacted]	ug/L	0.139	1	113	473835	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 19:11:55
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18011	32777	1	Standard
Cl	37		ug/L			2981467	2963250	2	Standard
Sc	45		ug/L			437323	504357	1	Standard
[redacted]	52	[redacted]	ug/L	0.163	1	16930	241622	2	Standard
Cr	53	12.118	ug/L	0.189	1	85	25784	0	Standard
Ge	72		ug/L			20645	21582	1	KED
[redacted]	63	[redacted]	ug/L	0.097	0	40	67453	1	KED
Cu	65	28.602	ug/L	0.205	0	22	35363	1	KED
[redacted]	66	[redacted]	ug/L	1.241	1	23	25012	2	KED
Zn	67	75.825	ug/L	3.011	3	4	3902	4	KED
[redacted]	75	[redacted]	ug/L	0.117	1	3	1111	2	KED
Y	89		ug/L			288003	448359	2	Standard
Kr	83		ug/L			35	76	3	Standard
In-1	115		ug/L			7190	7542	2	KED
[redacted]	111	[redacted]	ug/L	0.037	25	1	34	25	KED
Cd	114	0.158	ug/L	0.017	10	3	92	8	KED
In	115		ug/L			410858	414498	0	Standard
[redacted]	107	[redacted]	ug/L	0.005	4	24	1720	3	Standard
Sb	121	0.018	ug/L	0.003	16	140	350	9	Standard
Sb	123	0.015	ug/L	0.002	11	109	238	6	Standard
Tb	159		ug/L			636863	683735	0	Standard
[redacted]	208	[redacted]	ug/L	0.197	1	113	737415	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 19:16:20
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	35186	3	Standard
	Cl	**37**		ug/L			2981467	2936812	0	Standard
>	**Sc**	**45**		ug/L			437323	503630	1	Standard
	[redacted]	**52**	[redacted]	ug/L	0.340	2	16930	249581	1	Standard
	Cr	**53**	**12.687**	ug/L	0.159	1	85	26952	0	Standard
>	**Ge**	**72**		ug/L			20645	21984	0	KED
	[redacted]	**63**	[redacted]	ug/L	0.224	0	40	67945	1	KED
	Cu	**65**	**26.939**	ug/L	0.300	1	22	33929	0	KED
	[redacted]	**66**	[redacted]	ug/L	0.851	1	23	17132	0	KED
	Zn	**67**	**51.659**	ug/L	2.598	5	4	2709	4	KED
	[redacted]	**75**	[redacted]	ug/L	0.113	1	3	1203	2	KED
	Y	**89**		ug/L			288003	471709	0	Standard
	Kr	**83**		ug/L			35	69	5	Standard
>	**In-1**	**115**		ug/L			7190	7530	2	KED
	[redacted]	**111**	[redacted]	ug/L	0.024	14	1	40	12	KED
	Cd	**114**	**0.204**	ug/L	0.025	12	3	119	12	KED
>	**In**	**115**		ug/L			410858	413024	0	Standard
	[redacted]	**107**	[redacted]	ug/L	0.004	3	24	1986	2	Standard
	Sb	**121**	**0.004**	ug/L	0.000	8	140	185	2	Standard
	Sb	**123**	**0.005**	ug/L	0.001	29	109	149	7	Standard
>	**Tb**	**159**		ug/L			636863	686944	1	Standard
	[redacted]	**208**	[redacted]	ug/L	0.203	1	113	606541	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 19:20:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			18011	34568	2	Standard
Cl	**37**		ug/L			2981467	2960518	3	Standard
Sc	**45**		ug/L			437323	505770	0	Standard
[redacted]	**52**	[redacted]	ug/L	0.147	1	16930	248683	1	Standard
Cr	**53**	**12.849**	ug/L	0.091	0	85	27414	1	Standard
Ge	**72**		ug/L			20645	21875	1	KED
[redacted]	**63**	[redacted]	ug/L	0.477	1	40	61838	0	KED
Cu	**65**	**24.680**	ug/L	0.264	1	22	30936	2	KED
[redacted]	**66**	[redacted]	ug/L	1.327	2	23	17193	0	KED
Zn	**67**	**52.150**	ug/L	0.718	1	4	2722	2	KED
[redacted]	**75**	[redacted]	ug/L	0.096	1	3	1046	2	KED
Y	**89**		ug/L			288003	477586	1	Standard
Kr	**83**		ug/L			35	80	22	Standard
In-1	**115**		ug/L			7190	7502	2	KED
[redacted]	**111**	[redacted]	ug/L	0.009	5	1	41	7	KED
Cd	**114**	**0.160**	ug/L	0.015	9	3	93	10	KED
In	**115**		ug/L			410858	418381	3	Standard
[redacted]	**107**	[redacted]	ug/L	0.003	2	24	1441	0	Standard
Sb	**121**	**0.006**	ug/L	0.001	16	140	213	5	Standard
Sb	**123**	**0.006**	ug/L	0.001	23	109	162	10	Standard
Tb	**159**		ug/L			636863	684536	1	Standard
[redacted]	**208**	[redacted]	ug/L	0.320	1	113	750136	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL7
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 19:25:12
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	19165	4	Standard
	Cl	**37**		ug/L			2981467	2909263	1	Standard
⎡>	**Sc**	**45**		ug/L			437323	407178	1	Standard
⎢	**Cr**	**52**	**0.018**	ug/L	0.030	170	16930	16024	1	Standard
⎣	**Cr**	**53**	**0.014**	ug/L	0.006	46	85	102	9	Standard
⎡>	**Ge**	**72**		ug/L			20645	20676	1	KED
⎢	**Cu**	**63**	**-0.004**	ug/L	0.003	73	40	31	19	KED
⎢	**Cu**	**65**	**-0.003**	ug/L	0.009	331	22	19	52	KED
⎢	**Zn**	**66**	**-0.019**	ug/L	0.014	73	23	17	22	KED
⎢	**Zn**	**67**	**-0.026**	ug/L	0.022	83	4	3	34	KED
⎣	**As**	**75**	**0.005**	ug/L	0.017	326	3	4	59	KED
	Y	**89**		ug/L			288003	270639	2	Standard
	Kr	**83**		ug/L			35	39	13	Standard
⎡>	**In-1**	**115**		ug/L			7190	7246	1	KED
⎢	**Cd**	**111**	**-0.000**	ug/L	0.007	58004	1	1	91	KED
⎣	**Cd**	**114**	**-0.002**	ug/L	0.004	146	3	1	105	KED
⎡>	**In**	**115**		ug/L			410858	406021	1	Standard
⎢	**Ag**	**107**	**-0.000**	ug/L	0.000	142	24	21	13	Standard
⎢	**Sb**	**121**	**-0.006**	ug/L	0.001	23	140	67	24	Standard
⎣	**Sb**	**123**	**-0.008**	ug/L	0.000	5	109	44	8	Standard
⎡>	**Tb**	**159**		ug/L			636863	633754	1	Standard
⎣	**Pb**	**208**	**0.001**	ug/L	0.000	38	113	139	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 19:29:38
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	18688	6	Standard
	Cl	**37**		ug/L			2981467	3039283	2	Standard
⌈>	**Sc**	**45**		ug/L			437323	417951	0	Standard
|	**Cr**	**52**	**49.538**	ug/L	0.756	1	16930	770490	0	Standard
⌊	**Cr**	**53**	**50.027**	ug/L	0.437	0	85	87965	1	Standard
⌈>	**Ge**	**72**		ug/L			20645	21546	2	KED
|	**Cu**	**63**	**47.405**	ug/L	1.247	2	40	116716	1	KED
|	**Cu**	**65**	**47.903**	ug/L	2.623	5	22	59058	2	KED
|	**Zn**	**66**	**49.556**	ug/L	3.981	8	23	15256	5	KED
|	**Zn**	**67**	**49.090**	ug/L	3.101	6	4	2521	4	KED
⌊	**As**	**75**	**48.709**	ug/L	2.242	4	3	7945	2	KED
	Y	**89**		ug/L			288003	279317	0	Standard
	Kr	**83**		ug/L			35	57	18	Standard
⌈>	**In-1**	**115**		ug/L			7190	7439	3	KED
|	**Cd**	**111**	**50.219**	ug/L	1.585	3	1	11436	1	KED
⌊	**Cd**	**114**	**49.433**	ug/L	1.923	3	3	27720	1	KED
⌈>	**In**	**115**		ug/L			410858	411415	1	Standard
|	**Ag**	**107**	**48.206**	ug/L	0.991	2	24	726750	3	Standard
|	**Sb**	**121**	**49.644**	ug/L	0.520	1	140	568331	0	Standard
⌊	**Sb**	**123**	**49.303**	ug/L	0.575	1	109	428068	0	Standard
⌈>	**Tb**	**159**		ug/L			636863	664240	1	Standard
⌊	**Pb**	**208**	**45.916**	ug/L	1.376	2	113	2082575	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 19:36:48
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	18569	4	Standard
	Cl	**37**		ug/L			2981467	2988616	1	Standard
⌈>	**Sc**	**45**		ug/L			437323	409744	1	Standard
|	**Cr**	**52**	**0.007**	ug/L	0.037	499	16930	15967	2	Standard
⌊	**Cr**	**53**	**0.003**	ug/L	0.008	283	85	84	14	Standard
⌈>	**Ge**	**72**		ug/L			20645	20897	1	KED
|	**Cu**	**63**	**0.001**	ug/L	0.004	384	40	43	24	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.010	1434	22	21	50	KED
|	**Zn**	**66**	**-0.010**	ug/L	0.010	106	23	20	15	KED
|	**Zn**	**67**	**0.025**	ug/L	0.039	158	4	5	33	KED
⌊	**As**	**75**	**0.001**	ug/L	0.006	806	3	3	25	KED
	Y	**89**		ug/L			288003	266848	1	Standard
	Kr	**83**		ug/L			35	50	16	Standard
⌈>	**In-1**	**115**		ug/L			7190	7363	5	KED
|	**Cd**	**111**	**0.001**	ug/L	0.004	339	1	1	50	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.002	1130	3	3	36	KED
⌈>	**In**	**115**		ug/L			410858	407458	0	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	51	24	53	27	Standard
|	**Sb**	**121**	**0.092**	ug/L	0.005	4	140	1184	4	Standard
⌊	**Sb**	**123**	**0.094**	ug/L	0.002	2	109	919	2	Standard
⌈>	**Tb**	**159**		ug/L			636863	642899	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.002	146	113	160	40	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 19:41:14
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	21768	1	Standard
	Cl	**37**		ug/L			2981467	2981899	2	Standard
⌈>	**Sc**	**45**		ug/L			437323	422703	1	Standard
|	**Cr**	**52**	**0.022**	ug/L	0.018	80	16930	16708	3	Standard
⌊	**Cr**	**53**	**0.009**	ug/L	0.001	16	85	98	3	Standard
⌈>	**Ge**	**72**		ug/L			20645	21443	2	KED
|	[redacted]	**63**	[redacted]	ug/L	0.002	43	40	33	13	KED
|	**Cu**	**65**	**-0.002**	ug/L	0.009	472	22	20	55	KED
|	[redacted]	**66**	[redacted]	ug/L	0.037	47	23	48	26	KED
|	**Zn**	**67**	**0.121**	ug/L	0.142	117	4	10	66	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.007	310	3	4	24	KED
	Y	**89**		ug/L			288003	275785	1	Standard
	Kr	**83**		ug/L			35	52	21	Standard
⌈>	**In-1**	**115**		ug/L			7190	7649	0	KED
|	[redacted]	**111**	[redacted]	ug/L	0.002	52	1	0	86	KED
⌊	**Cd**	**114**	**-0.005**	ug/L	0.002	41	3	0	180	KED
⌈>	**In**	**115**		ug/L			410858	418597	1	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	67	24	38	24	Standard
|	**Sb**	**121**	**0.025**	ug/L	0.001	4	140	434	2	Standard
⌊	**Sb**	**123**	**0.025**	ug/L	0.002	9	109	333	6	Standard
⌈>	**Tb**	**159**		ug/L			636863	660382	0	Standard
⌊	[redacted]	**208**	[redacted]	ug/L	0.000	25	113	205	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 19:45:40
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	20916	2	Standard
	Cl	**37**		ug/L			2981467	2958336	1	Standard
⌈>	**Sc**	**45**		ug/L			437323	424022	0	Standard
|	**Cr**	**52**	**25.727**	ug/L	0.213	0	16930	413884	0	Standard
⌊	**Cr**	**53**	**26.078**	ug/L	0.857	3	85	46561	3	Standard
⌈>	**Ge**	**72**		ug/L			20645	21768	1	KED
|	[redacted]	**63**	[redacted]	ug/L	0.668	2	40	64460	1	KED
|	**Cu**	**65**	**25.765**	ug/L	1.283	4	22	32121	3	KED
|	[redacted]	**66**	[redacted]	ug/L	2.307	2	23	25087	2	KED
|	**Zn**	**67**	**77.362**	ug/L	1.956	2	4	4015	1	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.153	0	3	4181	1	KED
	Y	**89**		ug/L			288003	278966	2	Standard
	Kr	**83**		ug/L			35	45	8	Standard
⌈>	**In-1**	**115**		ug/L			7190	7533	0	KED
|	[redacted]	**111**	[redacted]	ug/L	0.240	0	1	5968	0	KED
⌊	**Cd**	**114**	**25.049**	ug/L	0.435	1	3	14237	1	KED
⌈>	**In**	**115**		ug/L			410858	414840	1	Standard
|	**Ag**	**107**	**26.331**	ug/L	0.125	0	24	400191	1	Standard
|	**Sb**	**121**	**0.015**	ug/L	0.000	2	140	318	1	Standard
⌊	**Sb**	**123**	**0.015**	ug/L	0.002	10	109	238	6	Standard
⌈>	**Tb**	**159**		ug/L			636863	664921	1	Standard
⌊	[redacted]	**208**	[redacted]	ug/L	0.573	2	113	1128756	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLC0840-SRL1
Sample Dil Factor: 100
Comments:
Sample Date/Time: Saturday, April 01, 2023 19:50:05
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	21473	2	Standard
	Cl	**37**		ug/L			2981467	3016713	3	Standard
⌈>	**Sc**	**45**		ug/L			437323	460951	3	Standard
|	**Cr**	**52**	**4.470**	ug/L	0.184	4	16930	92840	1	Standard
⌊	**Cr**	**53**	**4.623**	ug/L	0.150	3	85	9040	1	Standard
⌈>	**Ge**	**72**		ug/L			20645	21719	1	KED
|	**Cu**	**63**	**8.287**	ug/L	0.307	3	40	20604	2	KED
|	**Cu**	**65**	**8.183**	ug/L	0.239	2	22	10196	1	KED
|	**Zn**	**66**	**34.871**	ug/L	1.453	4	23	10839	2	KED
|	**Zn**	**67**	**33.533**	ug/L	1.069	3	4	1739	2	KED
⌊	**As**	**75**	**0.673**	ug/L	0.030	4	3	114	5	KED
	Y	**89**		ug/L			288003	360304	2	Standard
	Kr	**83**		ug/L			35	57	31	Standard
⌈>	**In-1**	**115**		ug/L			7190	7547	1	KED
|	**Cd**	**111**	**0.070**	ug/L	0.011	15	1	17	15	KED
⌊	**Cd**	**114**	**0.062**	ug/L	0.017	27	3	38	25	KED
⌈>	**In**	**115**		ug/L			410858	418218	1	Standard
|	**Ag**	**107**	**0.066**	ug/L	0.004	6	24	1039	5	Standard
|	**Sb**	**121**	**0.002**	ug/L	0.001	25	140	168	2	Standard
⌊	**Sb**	**123**	**0.002**	ug/L	0.002	72	109	130	11	Standard
⌈>	**Tb**	**159**		ug/L			636863	681831	1	Standard
⌊	**Pb**	**208**	**7.258**	ug/L	0.053	0	113	338119	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 19:54:30
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18011	27133	2	Standard
Cl	37		ug/L			2981467	2909995	2	Standard
> Sc	45		ug/L			437323	610142	0	Standard
Cr	52	17.187	ug/L	0.333	1	16930	405698	1	Standard
Cr	53	17.300	ug/L	0.123	0	85	44486	0	Standard
> Ge	72		ug/L			20645	21529	1	KED
[redacted]	63	[redacted]	ug/L	0.987	2	40	98013	1	KED
Cu	65	41.397	ug/L	1.578	3	22	51039	2	KED
Zn	66	168.677	ug/L	6.410	3	23	51890	2	KED
Zn	67	162.056	ug/L	3.346	2	4	8314	1	KED
[redacted]	75	[redacted]	ug/L	0.156	4	3	564	3	KED
Y	89		ug/L			288003	699853	2	Standard
Kr	83		ug/L			35	154	22	Standard
> In-1	115		ug/L			7190	7533	0	KED
[redacted]	111	[redacted]	ug/L	0.067	22	1	72	21	KED
Cd	114	0.308	ug/L	0.051	16	3	178	16	KED
> In	115		ug/L			410858	410050	1	Standard
Ag	107	0.332	ug/L	0.011	3	24	5010	3	Standard
Sb	121	0.008	ug/L	0.002	24	140	227	9	Standard
Sb	123	0.010	ug/L	0.002	16	109	195	6	Standard
> Tb	159		ug/L			636863	682165	0	Standard
[redacted]	208	[redacted]	ug/L	0.501	1	113	1668682	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 19:58:56
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18011	27295	1	Standard
Cl	37		ug/L			2981467	2949449	1	Standard
> Sc	45		ug/L			437323	610973	3	Standard
Cr	52	18.594	ug/L	0.595	3	16930	437322	0	Standard
Cr	53	19.465	ug/L	0.346	1	85	50107	3	Standard
> Ge	72		ug/L			20645	21899	2	KED
[redacted]	63	[redacted]	ug/L	1.828	4	40	112677	1	KED
Cu	65	46.312	ug/L	0.933	2	22	58072	1	KED
Zn	66	182.101	ug/L	6.341	3	23	56962	1	KED
Zn	67	177.013	ug/L	5.914	3	4	9232	0	KED
[redacted]	75	[redacted]	ug/L	0.179	4	3	625	2	KED
Y	89		ug/L			288003	726413	2	Standard
Kr	83		ug/L			35	126	8	Standard
> In-1	115		ug/L			7190	7426	3	KED
[redacted]	111	[redacted]	ug/L	0.020	5	1	83	7	KED
Cd	114	0.347	ug/L	0.024	7	3	197	5	KED
> In	115		ug/L			410858	420648	0	Standard
Ag	107	0.340	ug/L	0.015	4	24	5260	4	Standard
Sb	121	0.006	ug/L	0.002	29	140	217	9	Standard
Sb	123	0.006	ug/L	0.002	30	109	163	8	Standard
> Tb	159		ug/L			636863	697175	0	Standard
[redacted]	208	[redacted]	ug/L	0.344	0	113	1782307	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 20:03:21
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18011	27179	3	Standard
Cl	37		ug/L			2981467	2974711	2	Standard
> Sc	45		ug/L			437323	610352	2	Standard
Cr	52	37.205	ug/L	1.903	5	16930	850412	2	Standard
Cr	53	38.665	ug/L	0.378	0	85	99300	1	Standard
> Ge	72		ug/L			20645	21314	2	KED
[redacted]	63	[redacted]	ug/L	3.163	4	40	170872	3	KED
Cu	65	70.958	ug/L	1.343	1	22	86582	1	KED
Zn	66	271.547	ug/L	7.897	2	23	82663	0	KED
Zn	67	257.964	ug/L	4.099	1	4	13103	3	KED
[redacted]	75	[redacted]	ug/L	0.991	3	3	4316	0	KED
Y	89		ug/L			288003	718604	1	Standard
Kr	83		ug/L			35	150	8	Standard
> In-1	115		ug/L			7190	7396	2	KED
[redacted]	111	[redacted]	ug/L	0.627	2	1	5818	1	KED
Cd	114	25.376	ug/L	1.083	4	3	14153	3	KED
> In	115		ug/L			410858	413614	0	Standard
Ag	107	24.100	ug/L	0.508	2	24	365205	1	Standard
Sb	121	0.006	ug/L	0.003	51	140	210	16	Standard
Sb	123	0.008	ug/L	0.002	26	109	179	10	Standard
> Tb	159		ug/L			636863	673982	1	Standard
[redacted]	208	[redacted]	ug/L	0.628	0	113	2949011	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 20:07:47
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18011	26915	3	Standard
	Cl	37		ug/L			2981467	2958702	0	Standard
>	Sc	45		ug/L			437323	613972	1	Standard
	Cr	52	36.449	ug/L	0.878	2	16930	838929	0	Standard
	Cr	53	37.025	ug/L	0.399	1	85	95659	0	Standard
>	Ge	72		ug/L			20645	21690	3	KED
	[redacted]	63	[redacted]	ug/L	1.004	1	40	174842	2	KED
	Cu	65	70.376	ug/L	1.873	2	22	87435	5	KED
	Zn	66	257.238	ug/L	8.052	3	23	79689	2	KED
	Zn	67	244.995	ug/L	13.173	5	4	12647	2	KED
	[redacted]	75	[redacted]	ug/L	0.969	3	3	4330	0	KED
	Y	89		ug/L			288003	711082	0	Standard
	Kr	83		ug/L			35	146	10	Standard
>	In-1	115		ug/L			7190	7043	9	KED
	[redacted]	111	[redacted]	ug/L	2.686	10	1	5677	0	KED
	Cd	114	26.452	ug/L	2.725	10	3	13961	0	KED
>	In	115		ug/L			410858	405668	0	Standard
	Ag	107	24.057	ug/L	0.140	0	24	357555	0	Standard
	Sb	121	0.006	ug/L	0.001	26	140	201	9	Standard
	Sb	123	0.007	ug/L	0.002	26	109	172	9	Standard
>	Tb	159		ug/L			636863	670655	1	Standard
	[redacted]	208	[redacted]	ug/L	1.097	1	113	2783789	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLC0840-PS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Saturday, April 01, 2023 20:12:12
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	28811	0	Standard
	Cl	**37**		ug/L			2981467	2970098	0	Standard
>	**Sc**	**45**		ug/L			437323	603101	2	Standard
	Cr	**52**	**35.199**	ug/L	0.454	1	16930	796721	1	Standard
	Cr	**53**	**36.155**	ug/L	0.234	0	85	91777	2	Standard
>	**Ge**	**72**		ug/L			20645	21573	1	KED
	Cu	**63**	**65.227**	ug/L	2.360	3	40	160810	2	KED
	Cu	**65**	**65.792**	ug/L	1.822	2	22	81288	3	KED
	Zn	**66**	**239.417**	ug/L	3.473	1	23	73813	1	KED
	Zn	**67**	**229.403**	ug/L	4.150	1	4	11791	0	KED
	As	**75**	**28.160**	ug/L	0.170	0	3	4603	0	KED
	Y	**89**		ug/L			288003	705484	2	Standard
	Kr	**83**		ug/L			35	137	5	Standard
>	**In-1**	**115**		ug/L			7190	7419	0	KED
	Cd	**111**	**24.572**	ug/L	0.432	1	1	5584	1	KED
	Cd	**114**	**24.825**	ug/L	0.565	2	3	13894	1	KED
>	**In**	**115**		ug/L			410858	406890	1	Standard
	Ag	**107**	**25.269**	ug/L	0.443	1	24	376625	0	Standard
	Sb	**121**	**0.003**	ug/L	0.001	35	140	170	5	Standard
	Sb	**123**	**0.003**	ug/L	0.001	28	109	134	3	Standard
>	**Tb**	**159**		ug/L			636863	680743	0	Standard
	Pb	**208**	**58.749**	ug/L	0.383	0	113	2731618	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 20:16:38
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	22134	1	Standard
	Cl	**37**		ug/L			2981467	2945607	5	Standard
>	**Sc**	**45**		ug/L			437323	440421	0	Standard
	Cr	**52**	**48.003**	ug/L	0.203	0	16930	787363	1	Standard
	Cr	**53**	**48.251**	ug/L	0.513	1	85	89403	0	Standard
>	**Ge**	**72**		ug/L			20645	22553	1	KED
	[redacted]	**63**	[redacted]	ug/L	1.327	2	40	120401	1	KED
	Cu	**65**	**47.933**	ug/L	1.210	2	22	61897	0	KED
	[redacted]	**66**	[redacted]	ug/L	1.023	1	23	20829	1	KED
	Zn	**67**	**69.285**	ug/L	2.118	3	4	3725	1	KED
	[redacted]	**75**	[redacted]	ug/L	0.327	1	3	5028	1	KED
	Y	**89**		ug/L			288003	547740	1	Standard
	Kr	**83**		ug/L			35	71	13	Standard
>	**In-1**	**115**		ug/L			7190	7493	1	KED
	Cd	**111**	**32.977**	ug/L	0.476	1	1	7568	1	KED
	[redacted]	[redacted]	[redacted]	ug/L	0.388	1	3	18209	2	KED
>	**In**	**115**		ug/L			410858	417891	0	Standard
	Ag	**107**	**28.128**	ug/L	0.659	2	24	430625	1	Standard
	Sb	**121**	**0.720**	ug/L	0.007	0	140	8509	0	Standard
	Sb	**123**	**0.771**	ug/L	0.071	9	109	6905	8	Standard
>	**Tb**	**159**		ug/L			636863	682820	0	Standard
	[redacted]	**208**	[redacted]	ug/L	1.068	1	113	4012958	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL8
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 20:21:04
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	19576	2	Standard
	Cl	**37**		ug/L			2981467	2935048	0	Standard
⎡>	**Sc**	**45**		ug/L			437323	400164	1	Standard
⎢	**Cr**	**52**	**-0.017**	ug/L	0.002	9	16930	15249	1	Standard
⎣	**Cr**	**53**	**-0.003**	ug/L	0.004	165	85	73	10	Standard
⎡>	**Ge**	**72**		ug/L			20645	20775	2	KED
⎢	**Cu**	**63**	**-0.001**	ug/L	0.003	394	40	38	19	KED
⎢	**Cu**	**65**	**-0.009**	ug/L	0.006	60	22	11	60	KED
⎢	**Zn**	**66**	**-0.026**	ug/L	0.019	71	23	15	34	KED
⎢	**Zn**	**67**	**-0.078**	ug/L	0.022	27	4	0	173	KED
⎣	**As**	**75**	**-0.003**	ug/L	0.007	205	3	3	34	KED
	Y	**89**		ug/L			288003	263347	1	Standard
	Kr	**83**		ug/L			35	49	20	Standard
⎡>	**In-1**	**115**		ug/L			7190	7265	1	KED
⎢	**Cd**	**111**	**-0.001**	ug/L	0.002	166	1	1	43	KED
⎣	**Cd**	**114**	**-0.001**	ug/L	0.004	298	3	2	88	KED
⎡>	**In**	**115**		ug/L			410858	402736	1	Standard
⎢	**Ag**	**107**	**0.002**	ug/L	0.001	26	24	59	16	Standard
⎢	**Sb**	**121**	**-0.007**	ug/L	0.000	4	140	58	7	Standard
⎣	**Sb**	**123**	**-0.006**	ug/L	0.001	20	109	53	20	Standard
⎡>	**Tb**	**159**		ug/L			636863	627818	1	Standard
⎣	**Pb**	**208**	**0.002**	ug/L	0.000	21	113	199	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 20:26:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	18926	2	Standard
	Cl	**37**		ug/L			2981467	3012714	2	Standard
⌈>	**Sc**	**45**		ug/L			437323	423380	0	Standard
|	**Cr**	**52**	**48.515**	ug/L	0.671	1	16930	764783	1	Standard
⌊	**Cr**	**53**	**48.802**	ug/L	0.735	1	85	86930	1	Standard
⌈>	**Ge**	**72**		ug/L			20645	20382	7	KED
|	**Cu**	**63**	**49.542**	ug/L	3.243	6	40	115050	1	KED
|	**Cu**	**65**	**50.679**	ug/L	3.830	7	22	58935	1	KED
|	**Zn**	**66**	**49.264**	ug/L	3.971	8	23	14309	1	KED
|	**Zn**	**67**	**49.952**	ug/L	3.395	6	4	2421	1	KED
⌊	**As**	**75**	**50.056**	ug/L	3.082	6	3	7704	1	KED
	Y	**89**		ug/L			288003	273716	1	Standard
	Kr	**83**		ug/L			35	41	35	Standard
⌈>	**In-1**	**115**		ug/L			7190	7633	0	KED
|	**Cd**	**111**	**47.986**	ug/L	0.586	1	1	11218	0	KED
⌊	**Cd**	**114**	**47.691**	ug/L	0.163	0	3	27461	1	KED
⌈>	**In**	**115**		ug/L			410858	404434	1	Standard
|	**Ag**	**107**	**48.184**	ug/L	2.337	4	24	713609	3	Standard
|	**Sb**	**121**	**49.181**	ug/L	1.682	3	140	553326	1	Standard
⌊	**Sb**	**123**	**49.374**	ug/L	1.082	2	109	421352	0	Standard
⌈>	**Tb**	**159**		ug/L			636863	658804	0	Standard
⌊	**Pb**	**208**	**46.292**	ug/L	0.418	0	113	2083210	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 20:33:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	19063	2	Standard
	Cl	**37**		ug/L			2981467	2986512	0	Standard
⎡>	**Sc**	**45**		ug/L			437323	400009	0	Standard
⎢	**Cr**	**52**	**0.008**	ug/L	0.010	123	16930	15602	0	Standard
⎣	**Cr**	**53**	**0.002**	ug/L	0.005	246	85	81	10	Standard
⎡>	**Ge**	**72**		ug/L			20645	21103	2	KED
⎢	**Cu**	**63**	**0.000**	ug/L	0.003	2292	40	41	19	KED
⎢	**Cu**	**65**	**-0.010**	ug/L	0.008	83	22	10	97	KED
⎢	**Zn**	**66**	**-0.025**	ug/L	0.020	78	23	16	35	KED
⎢	**Zn**	**67**	**0.010**	ug/L	0.056	563	4	5	57	KED
⎣	**As**	**75**	**0.001**	ug/L	0.006	983	3	3	21	KED
	Y	**89**		ug/L			288003	268904	2	Standard
	Kr	**83**		ug/L			35	40	18	Standard
⎡>	**In-1**	**115**		ug/L			7190	7164	1	KED
⎢	**Cd**	**111**	**-0.003**	ug/L	0.004	152	1	0	100	KED
⎣	**Cd**	**114**	**0.000**	ug/L	0.004	15698	3	3	69	KED
⎡>	**In**	**115**		ug/L			410858	406521	1	Standard
⎢	**Ag**	**107**	**0.002**	ug/L	0.001	70	24	50	38	Standard
⎢	**Sb**	**121**	**0.097**	ug/L	0.010	9	140	1235	7	Standard
⎣	**Sb**	**123**	**0.090**	ug/L	0.002	1	109	882	1	Standard
⎡>	**Tb**	**159**		ug/L			636863	630291	2	Standard
⎣	**Pb**	**208**	**0.001**	ug/L	0.000	37	113	153	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 20:38:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18011	27690	2	Standard
Cl	37		ug/L			2981467	2890327	1	Standard
> Sc	45		ug/L			437323	614237	2	Standard
Cr	52	16.406	ug/L	0.439	2	16930	390780	0	Standard
Cr	53	16.943	ug/L	0.315	1	85	43851	1	Standard
> Ge	72		ug/L			20645	21478	1	KED
[redacted]	63	[redacted]	ug/L	2.516	5	40	103678	4	KED
Cu	65	43.338	ug/L	0.899	2	22	53311	1	KED
[redacted]	66	[redacted]	ug/L	3.286	2	23	42869	1	KED
Zn	67	134.717	ug/L	2.844	2	4	6896	1	KED
[redacted]	75	[redacted]	ug/L	0.134	3	3	599	2	KED
Y	89		ug/L			288003	732433	0	Standard
Kr	83		ug/L			35	157	5	Standard
> In-1	115		ug/L			7190	7438	1	KED
[redacted]	111	[redacted]	ug/L	0.044	14	1	70	14	KED
Cd	114	0.285	ug/L	0.028	9	3	162	8	KED
> In	115		ug/L			410858	410959	1	Standard
Ag	107	0.314	ug/L	0.002	0	24	4755	1	Standard
Sb	121	0.029	ug/L	0.003	9	140	470	5	Standard
Sb	123	0.029	ug/L	0.003	10	109	357	8	Standard
> Tb	159		ug/L			636863	690943	2	Standard
[redacted]	208	[redacted]	ug/L	0.822	3	113	1231500	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 20:42:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			18011	25637	1	Standard
Cl	**37**		ug/L			2981467	2864490	2	Standard
> **Sc**	**45**		ug/L			437323	584577	1	Standard
Cr	**52**	**15.430**	ug/L	0.539	3	16930	351187	2	Standard
Cr	**53**	**16.208**	ug/L	0.489	3	85	39927	1	Standard
> **Ge**	**72**		ug/L			20645	21354	1	KED
[redacted]	**63**	[redacted]	ug/L	0.452	1	40	59050	1	KED
Cu	**65**	**24.107**	ug/L	0.648	2	22	29488	1	KED
[redacted]	**66**	[redacted]	ug/L	0.119	0	23	14321	1	KED
Zn	**67**	**53.652**	ug/L	0.762	1	4	2733	1	KED
[redacted]	**75**	[redacted]	ug/L	0.107	3	3	456	3	KED
Y	**89**		ug/L			288003	678328	1	Standard
Kr	**83**		ug/L			35	122	12	Standard
> **In-1**	**115**		ug/L			7190	7322	1	KED
[redacted]	**111**	[redacted]	ug/L	0.012	17	1	16	14	KED
Cd	**114**	**0.062**	ug/L	0.008	12	3	37	13	KED
> **In**	**115**		ug/L			410858	405323	1	Standard
Ag	**107**	**0.085**	ug/L	0.002	2	24	1290	3	Standard
Sb	**121**	**0.009**	ug/L	0.002	18	140	236	8	Standard
Sb	**123**	**0.010**	ug/L	0.002	25	109	193	11	Standard
> **Tb**	**159**		ug/L			636863	682102	0	Standard
[redacted]	**208**	[redacted]	ug/L	0.024	0	113	172728	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 20:47:01
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18011	23955	4	Standard
Cl	37		ug/L			2981467	2934656	0	Standard
> Sc	45		ug/L			437323	579057	1	Standard
Cr	52	15.075	ug/L	0.068	0	16930	340462	1	Standard
Cr	53	15.460	ug/L	0.205	1	85	37736	1	Standard
> Ge	72		ug/L			20645	21189	2	KED
[redacted]	63	[redacted]	ug/L	0.451	1	40	67347	1	KED
Cu	65	28.024	ug/L	0.422	1	22	34013	1	KED
[redacted]	66	[redacted]	ug/L	0.817	1	23	14454	1	KED
Zn	67	54.312	ug/L	1.898	3	4	2744	1	KED
[redacted]	75	[redacted]	ug/L	0.154	5	3	445	3	KED
Y	89		ug/L			288003	681434	1	Standard
Kr	83		ug/L			35	116	8	Standard
> In-1	115		ug/L			7190	7326	0	KED
[redacted]	111	[redacted]	ug/L	0.027	49	1	13	43	KED
Cd	114	0.078	ug/L	0.041	53	3	45	49	KED
> In	115		ug/L			410858	403225	0	Standard
Ag	107	0.074	ug/L	0.003	3	24	1115	2	Standard
Sb	121	0.003	ug/L	0.001	23	140	176	5	Standard
Sb	123	0.002	ug/L	0.003	149	109	123	18	Standard
> Tb	159		ug/L			636863	671915	1	Standard
[redacted]	208	[redacted]	ug/L	0.064	1	113	167106	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 20:51:26
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18011	26373	5	Standard
Cl	37		ug/L			2981467	2951775	1	Standard
> Sc	45		ug/L			437323	588436	1	Standard
Cr	52	15.378	ug/L	0.179	1	16930	352461	1	Standard
Cr	53	16.172	ug/L	0.094	0	85	40116	2	Standard
> Ge	72		ug/L			20645	21637	0	KED
[redacted]	63	[redacted]	ug/L	0.295	1	40	64488	0	KED
Cu	65	25.725	ug/L	0.435	1	22	31892	2	KED
[redacted]	66	[redacted]	ug/L	1.058	2	23	14611	1	KED
Zn	67	52.899	ug/L	1.885	3	4	2731	3	KED
[redacted]	75	[redacted]	ug/L	0.077	2	3	475	3	KED
Y	89		ug/L			288003	699209	2	Standard
Kr	83		ug/L			35	128	11	Standard
> In-1	115		ug/L			7190	7302	0	KED
[redacted]	111	[redacted]	ug/L	0.018	22	1	19	20	KED
Cd	114	0.068	ug/L	0.012	18	3	40	16	KED
> In	115		ug/L			410858	405402	1	Standard
Ag	107	0.085	ug/L	0.002	2	24	1285	3	Standard
Sb	121	-0.000	ug/L	0.001	13017	140	138	5	Standard
Sb	123	-0.001	ug/L	0.002	233	109	102	12	Standard
> Tb	159		ug/L			636863	673601	0	Standard
[redacted]	208	[redacted]	ug/L	0.028	0	113	176351	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 20:55:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18011	26699	3	Standard
Cl	37		ug/L			2981467	2801317	0	Standard
> Sc	45		ug/L			437323	576470	1	Standard
Cr	52	15.192	ug/L	0.223	1	16930	341383	0	Standard
Cr	53	15.684	ug/L	0.074	0	85	38118	1	Standard
> Ge	72		ug/L			20645	21411	2	KED
[redacted]	63	[redacted]	ug/L	0.372	1	40	56136	0	KED
Cu	65	22.762	ug/L	0.872	3	22	27911	1	KED
[redacted]	66	[redacted]	ug/L	0.546	1	23	13482	3	KED
Zn	67	51.235	ug/L	1.642	3	4	2616	1	KED
[redacted]	75	[redacted]	ug/L	0.065	2	3	435	3	KED
Y	89		ug/L			288003	668009	1	Standard
Kr	83		ug/L			35	125	12	Standard
> In-1	115		ug/L			7190	7399	1	KED
[redacted]	111	[redacted]	ug/L	0.005	6	1	20	4	KED
Cd	114	0.075	ug/L	0.011	15	3	45	15	KED
> In	115		ug/L			410858	401915	1	Standard
Ag	107	0.079	ug/L	0.000	0	24	1191	1	Standard
Sb	121	-0.001	ug/L	0.003	452	140	130	21	Standard
Sb	123	-0.003	ug/L	0.001	46	109	86	13	Standard
> Tb	159		ug/L			636863	674181	0	Standard
[redacted]	208	[redacted]	ug/L	0.035	0	113	164792	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 21:00:17
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18011	24077	6	Standard
Cl	37		ug/L			2981467	2904519	0	Standard
Sc	45		ug/L			437323	600001	1	Standard
Cr	52	15.718	ug/L	0.395	2	16930	366787	2	Standard
Cr	53	16.356	ug/L	0.268	1	85	41357	0	Standard
Ge	72		ug/L			20645	21449	3	KED
[redacted]	63	[redacted]	ug/L	0.393	1	40	61064	2	KED
Cu	65	25.663	ug/L	0.656	2	22	31524	1	KED
[redacted]	66	[redacted]	ug/L	0.880	1	23	14386	1	KED
Zn	67	54.830	ug/L	1.998	3	4	2804	1	KED
[redacted]	75	[redacted]	ug/L	0.039	1	3	500	2	KED
Y	89		ug/L			288003	698681	2	Standard
Kr	83		ug/L			35	133	14	Standard
In-1	115		ug/L			7190	7458	0	KED
[redacted]	111	[redacted]	ug/L	0.014	17	1	19	15	KED
Cd	114	0.071	ug/L	0.022	30	3	43	27	KED
In	115		ug/L			410858	402642	1	Standard
Ag	107	0.089	ug/L	0.010	10	24	1331	9	Standard
Sb	121	-0.002	ug/L	0.002	141	140	118	22	Standard
Sb	123	-0.001	ug/L	0.002	282	109	100	20	Standard
Tb	159		ug/L			636863	677921	0	Standard
[redacted]	208	[redacted]	ug/L	0.058	1	113	176465	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 21:04:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18011	24327	1	Standard
Cl	37		ug/L			2981467	2839137	1	Standard
> Sc	45		ug/L			437323	574628	0	Standard
Cr	52	17.305	ug/L	0.276	1	16930	384531	0	Standard
Cr	53	17.917	ug/L	0.125	0	85	43386	0	Standard
> Ge	72		ug/L			20645	21157	1	KED
[redacted]	63	[redacted]	ug/L	0.580	1	40	91004	3	KED
Cu	65	37.789	ug/L	0.602	1	22	45790	1	KED
[redacted]	66	[redacted]	ug/L	1.881	3	23	18218	2	KED
Zn	67	66.521	ug/L	1.335	2	4	3357	2	KED
As	75	3.075	ug/L	0.228	7	3	496	8	KED
Y	89		ug/L			288003	659241	1	Standard
Kr	83		ug/L			35	135	4	Standard
> In-1	115		ug/L			7190	7348	2	KED
[redacted]	111	[redacted]	ug/L	0.011	10	1	25	7	KED
Cd	114	0.113	ug/L	0.025	22	3	65	20	KED
> In	115		ug/L			410858	396707	2	Standard
Ag	107	0.122	ug/L	0.005	4	24	1794	2	Standard
Sb	121	0.000	ug/L	0.001	336	140	140	12	Standard
Sb	123	-0.000	ug/L	0.002	674	109	103	13	Standard
> Tb	159		ug/L			636863	672792	0	Standard
[redacted]	208	[redacted]	ug/L	0.085	1	113	301898	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 21:09:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18011	23622	1	Standard
Cl	37		ug/L			2981467	2876840	0	Standard
> Sc	45		ug/L			437323	565291	1	Standard
Cr	52	16.856	ug/L	0.227	1	16930	369033	0	Standard
Cr	53	17.159	ug/L	0.131	0	85	40879	0	Standard
> Ge	72		ug/L			20645	21725	0	KED
[redacted]	63	[redacted]	ug/L	0.260	1	40	58314	1	KED
Cu	65	23.867	ug/L	0.245	1	22	29708	1	KED
[redacted]	66	[redacted]	ug/L	0.869	1	23	15328	2	KED
Zn	67	54.823	ug/L	3.463	6	4	2840	5	KED
[redacted]	75	[redacted]	ug/L	0.140	5	3	453	4	KED
Y	89		ug/L			288003	639754	1	Standard
Kr	83		ug/L			35	116	9	Standard
> In-1	115		ug/L			7190	7516	2	KED
[redacted]	111	[redacted]	ug/L	0.005	8	1	16	10	KED
Cd	114	0.075	ug/L	0.018	23	3	45	24	KED
> In	115		ug/L			410858	408853	0	Standard
Ag	107	0.086	ug/L	0.003	3	24	1314	3	Standard
Sb	121	-0.004	ug/L	0.001	31	140	92	15	Standard
Sb	123	-0.004	ug/L	0.000	10	109	75	4	Standard
> Tb	159		ug/L			636863	676019	0	Standard
[redacted]	208	[redacted]	ug/L	0.035	0	113	193050	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL9
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 21:13:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	19952	2	Standard
	Cl	**37**		ug/L			2981467	2797096	0	Standard
⌈>	**Sc**	**45**		ug/L			437323	390602	0	Standard
|	**Cr**	**52**	**-0.008**	ug/L	0.028	364	16930	15015	3	Standard
⌊	**Cr**	**53**	**0.026**	ug/L	0.022	83	85	119	30	Standard
⌈>	**Ge**	**72**		ug/L			20645	20984	1	KED
|	**Cu**	**63**	**-0.007**	ug/L	0.004	63	40	25	37	KED
|	**Cu**	**65**	**-0.002**	ug/L	0.009	384	22	19	53	KED
|	**Zn**	**66**	**-0.031**	ug/L	0.026	85	23	14	52	KED
|	**Zn**	**67**	**-0.027**	ug/L	0.059	220	4	3	91	KED
⌊	**As**	**75**	**0.009**	ug/L	0.015	171	3	5	47	KED
	Y	**89**		ug/L			288003	262695	4	Standard
	Kr	**83**		ug/L			35	41	15	Standard
⌈>	**In-1**	**115**		ug/L			7190	7246	1	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.000	1	1	0		KED
⌊	**Cd**	**114**	**-0.004**	ug/L	0.004	113	3	1	180	KED
⌈>	**In**	**115**		ug/L			410858	400055	1	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.000	6	24	32	0	Standard
|	**Sb**	**121**	**-0.007**	ug/L	0.001	10	140	63	12	Standard
⌊	**Sb**	**123**	**-0.006**	ug/L	0.000	7	109	55	7	Standard
⌈>	**Tb**	**159**		ug/L			636863	624119	0	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.006	178	113	248	98	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 21:18:00
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	19141	6	Standard
	Cl	**37**		ug/L			2981467	2977769	1	Standard
⌈>	**Sc**	**45**		ug/L			437323	405621	2	Standard
|	**Cr**	**52**	**48.846**	ug/L	0.263	0	16930	737626	2	Standard
⌊	**Cr**	**53**	**50.185**	ug/L	1.336	2	85	85608	0	Standard
⌈>	**Ge**	**72**		ug/L			20645	20998	2	KED
|	**Cu**	**63**	**48.660**	ug/L	0.326	0	40	116798	1	KED
|	**Cu**	**65**	**48.749**	ug/L	0.784	1	22	58622	1	KED
|	**Zn**	**66**	**48.626**	ug/L	1.788	3	23	14603	1	KED
|	**Zn**	**67**	**49.393**	ug/L	1.602	3	4	2474	2	KED
⌊	**As**	**75**	**48.797**	ug/L	1.573	3	3	7758	1	KED
	Y	**89**		ug/L			288003	270420	0	Standard
	Kr	**83**		ug/L			35	43	30	Standard
⌈>	**In-1**	**115**		ug/L			7190	7259	2	KED
|	**Cd**	**111**	**48.676**	ug/L	1.564	3	1	10817	1	KED
⌊	**Cd**	**114**	**47.796**	ug/L	0.499	1	3	26170	2	KED
⌈>	**In**	**115**		ug/L			410858	401418	2	Standard
|	**Ag**	**107**	**48.264**	ug/L	1.933	4	24	709384	1	Standard
|	**Sb**	**121**	**49.219**	ug/L	1.324	2	140	549609	0	Standard
⌊	**Sb**	**123**	**49.417**	ug/L	0.867	1	109	418566	0	Standard
⌈>	**Tb**	**159**		ug/L			636863	656337	2	Standard
⌊	**Pb**	**208**	**45.689**	ug/L	0.351	0	113	2048045	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 21:25:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	19233	0	Standard
	Cl	**37**		ug/L			2981467	2903709	2	Standard
⌈>	**Sc**	**45**		ug/L			437323	387893	1	Standard
|	**Cr**	**52**	**0.015**	ug/L	0.018	116	16930	15230	0	Standard
⌊	**Cr**	**53**	**-0.003**	ug/L	0.004	144	85	71	9	Standard
⌈>	**Ge**	**72**		ug/L			20645	20932	1	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.003	217	40	37	20	KED
|	**Cu**	**65**	**0.003**	ug/L	0.008	230	22	26	35	KED
|	**Zn**	**66**	**-0.012**	ug/L	0.009	72	23	20	14	KED
|	**Zn**	**67**	**-0.027**	ug/L	0.021	79	4	3	34	KED
⌊	**As**	**75**	**0.001**	ug/L	0.003	431	3	3	12	KED
	Y	**89**		ug/L			288003	251780	2	Standard
	Kr	**83**		ug/L			35	50	28	Standard
⌈>	**In-1**	**115**		ug/L			7190	7343	1	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.005	314	1	1	86	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.002	2870	3	3	34	KED
⌈>	**In**	**115**		ug/L			410858	394551	2	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	42	24	47	22	Standard
|	**Sb**	**121**	**0.097**	ug/L	0.003	3	140	1195	1	Standard
⌊	**Sb**	**123**	**0.100**	ug/L	0.003	2	109	942	3	Standard
⌈>	**Tb**	**159**		ug/L			636863	625394	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	108	113	134	17	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 21:29:37
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	2715412	5	Standard
	Cl	**37**		ug/L			2981467	3120347	0	Standard
⌈>	**Sc**	**45**		ug/L			437323	465928	1	Standard
|	**Cr**	**52**	**12.355**	ug/L	0.305	2	16930	227804	3	Standard
⌊	**Cr**	**53**	**1.480**	ug/L	0.067	4	85	2987	3	Standard
⌈>	**Ge**	**72**		ug/L			20645	23529	0	KED
|	[redacted]	**63**	[redacted]	ug/L	0.031	4	40	2002	4	KED
|	**Cu**	**65**	**0.751**	ug/L	0.017	2	22	1037	2	KED
|	[redacted]	**66**	[redacted]	ug/L	0.035	3	23	325	3	KED
|	**Zn**	**67**	**0.771**	ug/L	0.169	21	4	48	19	KED
⌊	**As**	**75**	**0.010**	ug/L	0.012	124	3	5	36	KED
	Y	**89**		ug/L			288003	301653	0	Standard
	Kr	**83**		ug/L			35	44	4	Standard
⌈>	**In-1**	**115**		ug/L			7190	8261	1	KED
|	**Cd**	**111**	**0.002**	ug/L	0.008	490	1	2	89	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.003	97	3	5	34	KED
⌈>	**In**	**115**		ug/L			410858	445333	1	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	66	24	52	32	Standard
|	**Sb**	**121**	**0.030**	ug/L	0.004	14	140	518	9	Standard
⌊	**Sb**	**123**	**0.031**	ug/L	0.005	15	109	406	9	Standard
⌈>	**Tb**	**159**		ug/L			636863	709399	2	Standard
⌊	**Pb**	**208**	**0.136**	ug/L	0.006	4	113	6705	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 21:34:02
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	177617	4	Standard
	Cl	**37**		ug/L			2981467	2932878	0	Standard
⌈>	**Sc**	**45**		ug/L			437323	421962	0	Standard
|	**Cr**	**52**	**1.465**	ug/L	0.052	3	16930	38852	1	Standard
⌊	**Cr**	**53**	**0.723**	ug/L	0.024	3	85	1364	2	Standard
⌈>	**Ge**	**72**		ug/L			20645	21937	0	KED
|	[redacted]	**63**	[redacted]	ug/L	0.009	8	40	295	7	KED
|	**Cu**	**65**	**0.102**	ug/L	0.017	16	22	151	14	KED
|	[redacted]	**66**	[redacted]	ug/L	0.087	20	23	161	17	KED
|	**Zn**	**67**	**0.347**	ug/L	0.036	10	4	22	8	KED
⌊	**As**	**75**	**0.012**	ug/L	0.006	50	3	5	16	KED
	Y	**89**		ug/L			288003	274809	3	Standard
	Kr	**83**		ug/L			35	38	24	Standard
⌈>	**In-1**	**115**		ug/L			7190	7520	2	KED
|	**Cd**	**111**	**0.001**	ug/L	0.011	903	1	1	132	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.000	4	3	1	1	KED
⌈>	**In**	**115**		ug/L			410858	417949	1	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.000	39	24	40	14	Standard
|	**Sb**	**121**	**0.011**	ug/L	0.001	7	140	267	2	Standard
⌊	**Sb**	**123**	**0.012**	ug/L	0.002	14	109	219	5	Standard
⌈>	**Tb**	**159**		ug/L			636863	661906	0	Standard
⌊	**Pb**	**208**	**0.104**	ug/L	0.002	1	113	4804	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 21:38:27
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	3358257	3	Standard
	Cl	**37**		ug/L			2981467	3038146	2	Standard
⌈>	**Sc**	**45**		ug/L			437323	501826	2	Standard
|	**Cr**	**52**	**15.823**	ug/L	0.295	1	16930	308657	1	Standard
⌊	**Cr**	**53**	**2.217**	ug/L	0.035	1	85	4773	2	Standard
⌈>	**Ge**	**72**		ug/L			20645	23044	2	KED
|	[redacted]	**63**	[redacted]	ug/L	0.010	5	40	490	6	KED
|	**Cu**	**65**	**0.159**	ug/L	0.014	8	22	233	5	KED
|	[redacted]	**66**	[redacted]	ug/L	0.036	7	23	185	3	KED
|	**Zn**	**67**	**0.512**	ug/L	0.176	34	4	33	28	KED
⌊	**As**	**75**	**11.924**	ug/L	0.408	3	3	2084	3	KED
	Y	**89**		ug/L			288003	331858	2	Standard
	Kr	**83**		ug/L			35	786	4	Standard
⌈>	**In-1**	**115**		ug/L			7190	7692	1	KED
|	**Cd**	**111**	**-0.005**	ug/L	0.002	52	1	0	86	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.003	118	3	1	122	KED
⌈>	**In**	**115**		ug/L			410858	427298	0	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	130	24	38	45	Standard
|	**Sb**	**121**	**0.169**	ug/L	0.009	5	140	2151	5	Standard
⌊	**Sb**	**123**	**0.171**	ug/L	0.007	4	109	1652	4	Standard
⌈>	**Tb**	**159**		ug/L			636863	664002	0	Standard
⌊	**Pb**	**208**	**0.088**	ug/L	0.002	2	113	4091	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 21:42:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	2155163	14	Standard
	Cl	**37**		ug/L			2981467	3117564	3	Standard
>	**Sc**	**45**		ug/L			437323	558840	1	Standard
	Cr	**52**	**11.020**	ug/L	0.462	4	16930	245921	2	Standard
	Cr	**53**	**2.125**	ug/L	0.079	3	85	5097	1	Standard
>	**Ge**	**72**		ug/L			20645	21669	3	KED
	[redacted]	**63**	[redacted]	ug/L	0.020	2	40	2040	2	KED
	Cu	**65**	**0.737**	ug/L	0.054	7	22	937	7	KED
	[redacted]	**66**	[redacted]	ug/L	0.114	22	23	180	22	KED
	Zn	**67**	**0.541**	ug/L	0.212	39	4	32	31	KED
	As	**75**	**0.187**	ug/L	0.025	13	3	34	15	KED
	Y	**89**		ug/L			288003	350674	1	Standard
	Kr	**83**		ug/L			35	988	0	Standard
>	**In-1**	**115**		ug/L			7190	7464	1	KED
	Cd	**111**	**-0.004**	ug/L	0.002	54	1	0	86	KED
	Cd	**114**	**-0.000**	ug/L	0.005	1780	3	3	94	KED
>	**In**	**115**		ug/L			410858	430830	2	Standard
	Ag	**107**	**0.001**	ug/L	0.000	53	24	36	13	Standard
	Sb	**121**	**0.005**	ug/L	0.001	23	140	212	4	Standard
	Sb	**123**	**0.005**	ug/L	0.002	41	109	156	13	Standard
>	**Tb**	**159**		ug/L			636863	682656	0	Standard
	Pb	**208**	**0.068**	ug/L	0.002	2	113	3283	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 21:47:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	225070	3	Standard
	Cl	**37**		ug/L			2981467	2946352	4	Standard
⌈>	**Sc**	**45**		ug/L			437323	501331	2	Standard
|	**Cr**	**52**	**1.255**	ug/L	0.055	4	16930	42323	0	Standard
⌊	**Cr**	**53**	**0.294**	ug/L	0.014	4	85	716	2	Standard
⌈>	**Ge**	**72**		ug/L			20645	21519	0	KED
|	[redacted]	**63**	[redacted]	ug/L	0.016	10	40	416	9	KED
|	**Cu**	**65**	**0.160**	ug/L	0.007	4	22	219	3	KED
|	[redacted]	**66**	[redacted]	ug/L	0.071	12	23	203	10	KED
|	**Zn**	**67**	**0.640**	ug/L	0.077	11	4	37	10	KED
⌊	**As**	**75**	**0.007**	ug/L	0.022	323	3	4	73	KED
	Y	**89**		ug/L			288003	340984	1	Standard
	Kr	**83**		ug/L			35	74	13	Standard
⌈>	**In-1**	**115**		ug/L			7190	7060	1	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.003	59	1	0	86	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.008	721	3	2	182	KED
⌈>	**In**	**115**		ug/L			410858	411517	1	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	56	24	40	22	Standard
|	**Sb**	**121**	**0.002**	ug/L	0.001	37	140	165	4	Standard
⌊	**Sb**	**123**	**0.002**	ug/L	0.001	57	109	128	9	Standard
⌈>	**Tb**	**159**		ug/L			636863	642239	0	Standard
⌊	**Pb**	**208**	**0.047**	ug/L	0.001	1	113	2183	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Saturday, April 01, 2023 21:51:44
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	1853703	5	Standard
	Cl	**37**		ug/L			2981467	3070373	3	Standard
⌈>	**Sc**	**45**		ug/L			437323	527164	1	Standard
|	**Cr**	**52**	**10.338**	ug/L	0.063	0	16930	218967	1	Standard
⌊	**Cr**	**53**	**1.486**	ug/L	0.055	3	85	3395	2	Standard
⌈>	**Ge**	**72**		ug/L			20645	21836	1	KED
|	[redacted]	**63**	[redacted]	ug/L	0.017	11	40	396	9	KED
|	**Cu**	**65**	**0.123**	ug/L	0.006	4	22	177	3	KED
|	[redacted]	**66**	[redacted]	ug/L	0.141	6	23	657	5	KED
|	**Zn**	**67**	**1.802**	ug/L	0.052	2	4	98	2	KED
⌊	**As**	**75**	**2.247**	ug/L	0.092	4	3	375	4	KED
	Y	**89**		ug/L			288003	347276	2	Standard
	Kr	**83**		ug/L			35	1142	7	Standard
⌈>	**In-1**	**115**		ug/L			7190	7145	2	KED
|	**Cd**	**111**	**0.001**	ug/L	0.004	287	1	1	50	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.004	213	3	4	52	KED
⌈>	**In**	**115**		ug/L			410858	406523	1	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.001	110	24	31	25	Standard
|	**Sb**	**121**	**0.062**	ug/L	0.005	7	140	845	5	Standard
⌊	**Sb**	**123**	**0.067**	ug/L	0.003	4	109	683	2	Standard
⌈>	**Tb**	**159**		ug/L			636863	649169	1	Standard
⌊	**Pb**	**208**	**0.095**	ug/L	0.003	2	113	4334	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLA
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 21:56:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	20196	3	Standard
	Cl	**37**		ug/L			2981467	2678132	3	Standard
⎡>	**Sc**	**45**		ug/L			437323	445524	1	Standard
⎢	**Cr**	**52**	**-0.062**	ug/L	0.025	40	16930	16242	3	Standard
⎣	**Cr**	**53**	**0.006**	ug/L	0.011	169	85	98	19	Standard
⎡>	**Ge**	**72**		ug/L			20645	19419	2	KED
⎢	**Cu**	**63**	**-0.007**	ug/L	0.003	46	40	22	28	KED
⎢	**Cu**	**65**	**-0.002**	ug/L	0.009	395	22	18	58	KED
⎢	**Zn**	**66**	**-0.041**	ug/L	0.011	27	23	10	26	KED
⎢	**Zn**	**67**	**-0.009**	ug/L	0.070	783	4	3	86	KED
⎣	**As**	**75**	**-0.000**	ug/L	0.014	3005	3	3	62	KED
	Y	**89**		ug/L			288003	293084	1	Standard
	Kr	**83**		ug/L			35	78	14	Standard
⎡>	**In-1**	**115**		ug/L			7190	6286	0	KED
⎢	**Cd**	**111**	**-0.004**	ug/L	0.003	73	1	0	86	KED
⎣	**Cd**	**114**	**-0.004**	ug/L	0.002	53	3	0	188	KED
⎡>	**In**	**115**		ug/L			410858	354492	1	Standard
⎢	**Ag**	**107**	**0.000**	ug/L	0.000	221	24	23	26	Standard
⎢	**Sb**	**121**	**-0.004**	ug/L	0.000	4	140	79	3	Standard
⎣	**Sb**	**123**	**-0.006**	ug/L	0.001	9	109	52	7	Standard
⎡>	**Tb**	**159**		ug/L			636863	551377	0	Standard
⎣	**Pb**	**208**	**0.000**	ug/L	0.000	135	113	106	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 22:00:36
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	18206	2	Standard
	Cl	**37**		ug/L			2981467	3012976	3	Standard
⌈>	**Sc**	**45**		ug/L			437323	439831	1	Standard
|	**Cr**	**52**	**48.416**	ug/L	2.528	5	16930	792500	3	Standard
⌊	**Cr**	**53**	**49.139**	ug/L	2.012	4	85	90895	2	Standard
⌈>	**Ge**	**72**		ug/L			20645	18967	0	KED
|	**Cu**	**63**	**52.161**	ug/L	2.074	3	40	113102	4	KED
|	**Cu**	**65**	**51.747**	ug/L	0.527	1	22	56213	1	KED
|	**Zn**	**66**	**51.217**	ug/L	1.167	2	23	13900	2	KED
|	**Zn**	**67**	**50.738**	ug/L	1.667	3	4	2296	3	KED
⌊	**As**	**75**	**49.348**	ug/L	0.368	0	3	7090	1	KED
	Y	**89**		ug/L			288003	304611	1	Standard
	Kr	**83**		ug/L			35	42	5	Standard
⌈>	**In-1**	**115**		ug/L			7190	6338	0	KED
|	**Cd**	**111**	**50.692**	ug/L	0.519	1	1	9841	0	KED
⌊	**Cd**	**114**	**50.555**	ug/L	1.488	2	3	24175	3	KED
⌈>	**In**	**115**		ug/L			410858	357279	1	Standard
|	**Ag**	**107**	**52.369**	ug/L	0.767	1	24	685393	0	Standard
|	**Sb**	**121**	**49.898**	ug/L	0.749	1	140	496042	0	Standard
⌊	**Sb**	**123**	**50.086**	ug/L	0.511	1	109	377643	0	Standard
⌈>	**Tb**	**159**		ug/L			636863	584628	0	Standard
⌊	**Pb**	**208**	**57.514**	ug/L	1.012	1	113	2296712	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 22:07:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	19162	1	Standard
	Cl	**37**		ug/L			2981467	2823063	2	Standard
⌈>	**Sc**	**45**		ug/L			437323	426870	1	Standard
|	**Cr**	**52**	**-0.025**	ug/L	0.021	83	16930	16130	2	Standard
⌊	**Cr**	**53**	**-0.001**	ug/L	0.008	1099	85	82	17	Standard
⌈>	**Ge**	**72**		ug/L			20645	19049	3	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.002	103	40	33	17	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.003	218	22	19	17	KED
|	**Zn**	**66**	**-0.017**	ug/L	0.010	62	23	17	19	KED
|	**Zn**	**67**	**0.090**	ug/L	0.058	64	4	8	35	KED
⌊	**As**	**75**	**-0.000**	ug/L	0.005	1573	3	3	24	KED
	Y	**89**		ug/L			288003	298841	2	Standard
	Kr	**83**		ug/L			35	44	10	Standard
⌈>	**In-1**	**115**		ug/L			7190	6104	1	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.006	151	1	0	173	KED
⌊	**Cd**	**114**	**-0.004**	ug/L	0.002	54	3	0	188	KED
⌈>	**In**	**115**		ug/L			410858	355096	2	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	102	24	36	41	Standard
|	**Sb**	**121**	**0.096**	ug/L	0.005	5	140	1067	6	Standard
⌊	**Sb**	**123**	**0.099**	ug/L	0.010	10	109	836	11	Standard
⌈>	**Tb**	**159**		ug/L			636863	562391	2	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	65	113	123	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 22:12:11
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	23781	4	Standard
	Cl	**37**		ug/L			2981467	3081168	1	Standard
⌈>	**Sc**	**45**		ug/L			437323	535712	3	Standard
|	**Cr**	**52**	**-0.029**	ug/L	0.018	62	16930	20158	2	Standard
⌊	**Cr**	**53**	**0.012**	ug/L	0.000	2	85	131	3	Standard
⌈>	**Ge**	**72**		ug/L			20645	21061	1	KED
|	**Cu**	**63**	**0.032**	ug/L	0.007	23	40	118	15	KED
|	**Cu**	**65**	**0.036**	ug/L	0.001	2	22	66	0	KED
|	**Zn**	**66**	**0.174**	ug/L	0.029	16	23	76	10	KED
|	**Zn**	**67**	**0.188**	ug/L	0.056	29	4	13	20	KED
⌊	**As**	**75**	**-0.008**	ug/L	0.005	60	3	2	34	KED
	Y	**89**		ug/L			288003	349453	0	Standard
	Kr	**83**		ug/L			35	49	10	Standard
⌈>	**In-1**	**115**		ug/L			7190	6895	0	KED
|	**Cd**	**111**	**0.002**	ug/L	0.009	498	1	1	100	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.002	125	3	2	44	KED
⌈>	**In**	**115**		ug/L			410858	402747	1	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.000	88	24	29	16	Standard
|	**Sb**	**121**	**0.052**	ug/L	0.003	6	140	720	5	Standard
⌊	**Sb**	**123**	**0.049**	ug/L	0.003	7	109	527	5	Standard
⌈>	**Tb**	**159**		ug/L			636863	630690	2	Standard
⌊	**Pb**	**208**	**0.012**	ug/L	0.001	10	113	620	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 22:16:37
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	22822	0	Standard
	Cl	**37**		ug/L			2981467	3040903	5	Standard
⎡>	**Sc**	**45**		ug/L			437323	504696	6	Standard
⎢	**Cr**	**52**	**-0.004**	ug/L	0.045	1236	16930	19438	2	Standard
⎣	**Cr**	**53**	**0.022**	ug/L	0.007	33	85	145	6	Standard
⎡>	**Ge**	**72**		ug/L			20645	20782	0	KED
⎢	**Cu**	**63**	**0.028**	ug/L	0.003	11	40	107	6	KED
⎢	**Cu**	**65**	**0.028**	ug/L	0.009	33	22	55	19	KED
⎢	**Zn**	**66**	**0.205**	ug/L	0.024	11	23	84	8	KED
⎢	**Zn**	**67**	**0.115**	ug/L	0.081	70	4	10	39	KED
⎣	**As**	**75**	**-0.012**	ug/L	0.007	56	3	1	62	KED
	Y	**89**		ug/L			288003	331124	4	Standard
	Kr	**83**		ug/L			35	56	33	Standard
⎡>	**In-1**	**115**		ug/L			7190	6715	4	KED
⎢	**Cd**	**111**	**0.003**	ug/L	0.010	300	1	2	98	KED
⎣	**Cd**	**114**	**-0.002**	ug/L	0.000	14	3	1	4	KED
⎡>	**In**	**115**		ug/L			410858	382684	5	Standard
⎢	**Ag**	**107**	**0.001**	ug/L	0.001	97	24	39	36	Standard
⎢	**Sb**	**121**	**0.019**	ug/L	0.004	22	140	329	14	Standard
⎣	**Sb**	**123**	**0.013**	ug/L	0.004	29	109	209	19	Standard
⎡>	**Tb**	**159**		ug/L			636863	612551	4	Standard
⎣	**Pb**	**208**	**0.012**	ug/L	0.001	11	113	605	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 22:21:03
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	23282	0	Standard
	Cl	**37**		ug/L			2981467	3095530	2	Standard
⎡>	**Sc**	**45**		ug/L			437323	509128	4	Standard
⎢	**Cr**	**52**	**0.005**	ug/L	0.036	693	16930	19789	1	Standard
⎣	**Cr**	**53**	**0.012**	ug/L	0.002	18	85	124	1	Standard
⎡>	**Ge**	**72**		ug/L			20645	20818	1	KED
⎢	**Cu**	**63**	**0.030**	ug/L	0.002	6	40	112	3	KED
⎢	**Cu**	**65**	**0.023**	ug/L	0.006	25	22	50	14	KED
⎢	**Zn**	**66**	**0.196**	ug/L	0.014	6	23	81	4	KED
⎢	**Zn**	**67**	**0.255**	ug/L	0.072	28	4	17	22	KED
⎣	**As**	**75**	**-0.008**	ug/L	0.011	128	3	2	72	KED
	Y	**89**		ug/L			288003	332079	2	Standard
	Kr	**83**		ug/L			35	43	7	Standard
⎡>	**In-1**	**115**		ug/L			7190	6741	1	KED
⎢	**Cd**	**111**	**-0.003**	ug/L	0.005	181	1	0	100	KED
⎣	**Cd**	**114**	**-0.001**	ug/L	0.002	197	3	2	41	KED
⎡>	**In**	**115**		ug/L			410858	381072	1	Standard
⎢	**Ag**	**107**	**0.000**	ug/L	0.000	235	24	24	23	Standard
⎢	**Sb**	**121**	**0.006**	ug/L	0.001	20	140	189	7	Standard
⎣	**Sb**	**123**	**0.005**	ug/L	0.001	17	109	140	5	Standard
⎡>	**Tb**	**159**		ug/L			636863	620562	0	Standard
⎣	**Pb**	**208**	**0.012**	ug/L	0.001	7	113	607	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 22:25:28
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	19071	2	Standard
	Cl	**37**		ug/L			2981467	2716593	2	Standard
⌈>	**Sc**	**45**		ug/L			437323	404456	0	Standard
⎢	**Cr**	**52**	**-0.075**	ug/L	0.009	11	16930	14550	0	Standard
⌊	**Cr**	**53**	**-0.005**	ug/L	0.003	55	85	70	6	Standard
⌈>	**Ge**	**72**		ug/L			20645	18318	0	KED
⎢	**Cu**	**63**	**-0.007**	ug/L	0.003	45	40	20	32	KED
⎢	**Cu**	**65**	**-0.002**	ug/L	0.008	315	22	17	48	KED
⎢	**Zn**	**66**	**-0.038**	ug/L	0.015	39	23	10	36	KED
⎢	**Zn**	**67**	**-0.090**	ug/L			4	0		KED
⌊	**As**	**75**	**-0.001**	ug/L	0.012	2322	3	3	52	KED
	Y	**89**		ug/L			288003	276937	0	Standard
	Kr	**83**		ug/L			35	40	10	Standard
⌈>	**In-1**	**115**		ug/L			7190	6015	0	KED
⎢	**Cd**	**111**	**-0.002**	ug/L	0.009	425	1	0	173	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.002	79	3	1	86	KED
⌈>	**In**	**115**		ug/L			410858	343837	0	Standard
⎢	**Ag**	**107**	**0.000**	ug/L	0.000	498	24	20	18	Standard
⎢	**Sb**	**121**	**-0.006**	ug/L	0.001	23	140	59	22	Standard
⌊	**Sb**	**123**	**-0.006**	ug/L	0.000	1	109	46	2	Standard
⌈>	**Tb**	**159**		ug/L			636863	532804	1	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	18	113	48	18	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 22:29:54
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	19378	3	Standard
	Cl	**37**		ug/L			2981467	2661718	3	Standard
⌈>	**Sc**	**45**		ug/L			437323	405542	1	Standard
|	**Cr**	**52**	**-0.071**	ug/L	0.037	51	16930	14648	2	Standard
⌊	**Cr**	**53**	**-0.004**	ug/L	0.006	139	85	72	12	Standard
⌈>	**Ge**	**72**		ug/L			20645	18542	2	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.001	44	40	31	7	KED
|	**Cu**	**65**	**-0.009**	ug/L	0.004	38	22	10	39	KED
|	**Zn**	**66**	**-0.041**	ug/L	0.008	18	23	10	21	KED
|	**Zn**	**67**	**0.013**	ug/L	0.178	1413	4	4	173	KED
⌊	**As**	**75**	**0.000**	ug/L	0.007	1608	3	3	28	KED
	Y	**89**		ug/L			288003	278222	3	Standard
	Kr	**83**		ug/L			35	48	5	Standard
⌈>	**In-1**	**115**		ug/L			7190	6038	1	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.005	241	1	0	100	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.004	244	3	1	101	KED
⌈>	**In**	**115**		ug/L			410858	336053	2	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.000	74	24	18	5	Standard
|	**Sb**	**121**	**-0.006**	ug/L	0.001	19	140	55	22	Standard
⌊	**Sb**	**123**	**-0.007**	ug/L	0.001	15	109	41	17	Standard
⌈>	**Tb**	**159**		ug/L			636863	525318	1	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	13	113	50	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, April 01, 2023 22:34:20
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\040123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18011	19735	1	Standard
	Cl	**37**		ug/L			2981467	2661535	1	Standard
⎡>	**Sc**	**45**		ug/L			437323	407183	2	Standard
⎢	**Cr**	**52**	**-0.057**	ug/L	0.013	22	16930	14913	0	Standard
⎣	**Cr**	**53**	**-0.008**	ug/L	0.006	78	85	66	16	Standard
⎡>	**Ge**	**72**		ug/L			20645	18221	1	KED
⎢	**Cu**	**63**	**-0.007**	ug/L	0.007	105	40	21	66	KED
⎢	**Cu**	**65**	**-0.007**	ug/L	0.001	13	22	12	8	KED
⎢	**Zn**	**66**	**-0.053**	ug/L	0.019	35	23	6	68	KED
⎢	**Zn**	**67**	**-0.075**	ug/L	0.026	34	4	0	173	KED
⎣	**As**	**75**	**-0.009**	ug/L	0.009	99	3	1	66	KED
	Y	**89**		ug/L			288003	279185	1	Standard
	Kr	**83**		ug/L			35	53	15	Standard
⎡>	**In-1**	**115**		ug/L			7190	5874	2	KED
⎢	**Cd**	**111**	**-0.002**	ug/L	0.005	299	1	0	100	KED
⎣	**Cd**	**114**	**0.001**	ug/L	0.005	373	3	3	69	KED
⎡>	**In**	**115**		ug/L			410858	335613	1	Standard
⎢	**Ag**	**107**	**0.000**	ug/L	0.000	195	24	22	21	Standard
⎢	**Sb**	**121**	**-0.007**	ug/L	0.001	21	140	52	26	Standard
⎣	**Sb**	**123**	**-0.007**	ug/L	0.001	22	109	43	25	Standard
⎡>	**Tb**	**159**		ug/L			636863	529102	1	Standard
⎣	**Pb**	**208**	**-0.001**	ug/L	0.000	27	113	50	25	Standard

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00005
Control Limt: +/- 10.00%
Sequence: SLD0005

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0005-ICV1	Arsenic-75a	50.000	47.1	94.1	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.7	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.7	99.5	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.4	101	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.9	99.9	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	48.6	97.2	ug/L	PA 6020B UCT-KE
SLD0005-CCV1	Arsenic-75a	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	51.7	103	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	52.3	105	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.6	99.3	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	50.5	101	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	51.5	103	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.7	99.3	ug/L	PA 6020B UCT-KE
SLD0005-CCV2	Arsenic-75a	50.000	48.9	97.8	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.8	102	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.1	94.3	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.1	96.2	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	48.1	96.2	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.1	98.2	ug/L	PA 6020B UCT-KE
SLD0005-CCV3	Arsenic-75a	50.000	49.5	99.0	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.4	98.9	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	48.2	96.5	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.6	95.2	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	46.4	92.7	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	47.4	94.8	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	47.0	94.0	ug/L	PA 6020B UCT-KE
SLD0005-CCV4	Arsenic-75a	50.000	49.7	99.4	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	47.5	95.0	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	47.6	95.2	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	46.4	92.8	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.0	96.0	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.2	98.3	ug/L	PA 6020B UCT-KE

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00005
Control Limt: +/- 10.00%
Sequence: SLD0005

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0005-CCV4	Zinc-67	50.000	48.1	96.3	ug/L	PA 6020B UCT-KE
SLD0005-CCV5	Arsenic-75a	50.000	49.1	98.2	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.0	94.0	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.2	94.4	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	47.7	95.4	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	47.9	95.9	ug/L	PA 6020B UCT-KE
SLD0005-CCV6	Arsenic-75a	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	51.5	103	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.3	94.7	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.2	94.3	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	48.5	97.0	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.0	98.1	ug/L	PA 6020B UCT-KE
SLD0005-CCV7	Arsenic-75a	50.000	49.4	98.7	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	48.8	97.6	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.8	99.6	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	46.8	93.7	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.7	95.4	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	47.3	94.5	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	48.0	96.0	ug/L	PA 6020B UCT-KE
SLD0005-CCV8	Arsenic-75a	50.000	50.0	100	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.8	99.7	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.3	98.5	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.6	95.2	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.9	97.9	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	47.2	94.4	ug/L	PA 6020B UCT-KE
SLD0005-CCV9	Arsenic-75a	50.000	48.7	97.3	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.3	94.5	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.2	94.4	ug/L	PA 6020B UCT-KE

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00005
Control Limt: +/- 10.00%
Sequence: SLD0005

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0005-CCV9	Zinc-66	50.000	47.6	95.1	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	48.2	96.4	ug/L	PA 6020B UCT-KE
SLD0005-CCVA	Arsenic-75a	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.8	99.6	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	46.9	93.9	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	46.7	93.4	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	46.8	93.6	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	48.1	96.1	ug/L	PA 6020B UCT-KE
SLD0005-CCVB	Arsenic-75a	50.000	48.9	97.7	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.0	97.9	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	48.9	97.9	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	46.0	92.0	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	46.6	93.3	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	47.9	95.8	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	48.3	96.7	ug/L	PA 6020B UCT-KE
SLD0005-CCVC	Arsenic-75a	50.000	48.2	96.4	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	47.8	95.5	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	47.5	95.0	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	45.8	91.6	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	45.1	90.2	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	47.6	95.2	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	46.2	92.4	ug/L	PA 6020B UCT-KE
SLD0005-CCVD	Arsenic-75a	50.000	50.5	101	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.3	98.7	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	46.8	93.6	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.1	94.3	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.3	101	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	47.3	94.6	ug/L	PA 6020B UCT-KE

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Control Limt: +/- 10.00%

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00006
Sequence: SLD0041

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0041-ICV1	Arsenic-75a	50.000	47.3	94.5	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.2	98.3	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.0	98.1	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	51.8	104	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	52.2	104	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.0	98.1	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
SLD0041-CCV1	Arsenic-75a	50.000	49.3	98.5	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.0	99.9	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.3	98.7	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	51.3	103	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.0	99.9	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	48.2	96.4	ug/L	PA 6020B UCT-KE
SLD0041-CCV2	Arsenic-75a	50.000	48.7	97.5	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.3	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	50.0	100	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.8	99.6	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	48.1	96.3	ug/L	PA 6020B UCT-KE
SLD0041-CCV3	Arsenic-75a	50.000	50.0	99.9	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.5	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.0	100	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.8	95.6	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.0	97.9	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.2	98.3	ug/L	PA 6020B UCT-KE
SLD0041-CCV4	Arsenic-75a	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	47.9	95.9	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	47.5	95.0	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.5	95.0	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.8	99.6	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.5	98.9	ug/L	PA 6020B UCT-KE

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00006
Control Limt: +/- 10.00%
Sequence: SLD0041

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0041-CCV4	Zinc-67	50.000	51.0	102	ug/L	PA 6020B UCT-KE
SLD0041-CCV5	Arsenic-75a	50.000	50.4	101	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	48.8	97.5	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	47.8	95.5	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.3	98.6	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.6	97.1	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.8	99.5	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.9	102	ug/L	PA 6020B UCT-KE
SLD0041-CCV6	Arsenic-75a	50.000	48.7	97.4	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.4	98.9	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.4	94.8	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.9	95.8	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.6	99.1	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.1	98.2	ug/L	PA 6020B UCT-KE
SLD0041-CCV7	Arsenic-75a	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	48.0	96.0	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	47.7	95.4	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.5	99.1	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	50.7	101	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.3	98.5	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.0	99.9	ug/L	PA 6020B UCT-KE
SLD0041-CCV8	Arsenic-75a	50.000	48.8	97.6	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	48.7	97.4	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	47.8	95.6	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	48.7	97.3	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.7	97.5	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	48.6	97.3	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
SLD0041-CCV9	Arsenic-75a	50.000	49.3	98.7	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.7	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	52.2	104	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	51.7	103	ug/L	PA 6020B UCT-KE

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00006
Control Limt: +/- 10.00%
Sequence: SLD0041

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0041-CCV9	Zinc-66	50.000	51.2	102	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.7	101	ug/L	PA 6020B UCT-KE

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLD0005

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00005
Date Analyzed: 03/31/23 15:52

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0005-IBL1	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SLD0005-IBL1	Cadmium-111	0.00600	0.03	0.100	ug/L	
SLD0005-IBL1	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLD0005-IBL1	Copper-63	0.00200	0.173	0.500	ug/L	
SLD0005-IBL1	Copper-65	0.00300	0.35	0.500	ug/L	
SLD0005-IBL1	Zinc-66	0.0340	2.92	6.00	ug/L	
SLD0005-IBL1	Zinc-67	0.0830	0.94	6.00	ug/L	
SLD0005-ICB1	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SLD0005-ICB1	Cadmium-111	0.00600	0.03	0.100	ug/L	
SLD0005-ICB1	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLD0005-ICB1	Copper-63	-0.00100	0.173	0.500	ug/L	
SLD0005-ICB1	Copper-65	0.00	0.35	0.500	ug/L	
SLD0005-ICB1	Zinc-66	-0.0060	2.92	6.00	ug/L	
SLD0005-ICB1	Zinc-67	0.0040	0.94	6.00	ug/L	
SLD0005-CCB1	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLD0005-CCB1	Cadmium-111	0.00500	0.03	0.100	ug/L	
SLD0005-CCB1	Cadmium-114	0.00	0.04	0.100	ug/L	
SLD0005-CCB1	Copper-63	0.00600	0.173	0.500	ug/L	
SLD0005-CCB1	Copper-65	0.00400	0.35	0.500	ug/L	
SLD0005-CCB1	Zinc-66	-0.0050	2.92	6.00	ug/L	
SLD0005-CCB1	Zinc-67	-0.0140	0.94	6.00	ug/L	
SLD0005-IBL2	Arsenic-75a	0.00800	0.0373	0.200	ug/L	
SLD0005-IBL2	Cadmium-111	0.0160	0.03	0.100	ug/L	
SLD0005-IBL2	Cadmium-114	0.00600	0.04	0.100	ug/L	
SLD0005-IBL2	Copper-63	0.00700	0.173	0.500	ug/L	
SLD0005-IBL2	Copper-65	0.00800	0.35	0.500	ug/L	
SLD0005-IBL2	Zinc-66	-0.0010	2.92	6.00	ug/L	
SLD0005-IBL2	Zinc-67	-0.0150	0.94	6.00	ug/L	
SLD0005-IBL3	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLD0005-IBL3	Cadmium-111	0.00900	0.03	0.100	ug/L	
SLD0005-IBL3	Cadmium-114	0.00300	0.04	0.100	ug/L	
SLD0005-IBL3	Copper-63	0.00700	0.173	0.500	ug/L	
SLD0005-IBL3	Copper-65	0.00400	0.35	0.500	ug/L	
SLD0005-IBL3	Zinc-66	-0.0170	2.92	6.00	ug/L	
SLD0005-IBL3	Zinc-67	0.0320	0.94	6.00	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLD0005

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00005
Date Analyzed: 03/31/23 17:17

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0005-IBL4	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SLD0005-IBL4	Cadmium-111	0.00500	0.03	0.100	ug/L	
SLD0005-IBL4	Cadmium-114	0.00	0.04	0.100	ug/L	
SLD0005-IBL4	Copper-63	0.00900	0.173	0.500	ug/L	
SLD0005-IBL4	Copper-65	0.00900	0.35	0.500	ug/L	
SLD0005-IBL4	Zinc-66	0.00	2.92	6.00	ug/L	
SLD0005-IBL4	Zinc-67	0.0170	0.94	6.00	ug/L	
SLD0005-CCB2	Arsenic-75a	0.00300	0.0373	0.200	ug/L	
SLD0005-CCB2	Cadmium-111	0.00500	0.03	0.100	ug/L	
SLD0005-CCB2	Cadmium-114	0.00300	0.04	0.100	ug/L	
SLD0005-CCB2	Copper-63	0.00200	0.173	0.500	ug/L	
SLD0005-CCB2	Copper-65	0.00	0.35	0.500	ug/L	
SLD0005-CCB2	Zinc-66	-0.0090	2.92	6.00	ug/L	
SLD0005-CCB2	Zinc-67	-0.0180	0.94	6.00	ug/L	
SLD0005-IBL5	Arsenic-75a	0.00700	0.0373	0.200	ug/L	
SLD0005-IBL5	Cadmium-111	0.00900	0.03	0.100	ug/L	
SLD0005-IBL5	Cadmium-114	0.00100	0.04	0.100	ug/L	
SLD0005-IBL5	Copper-63	0.00500	0.173	0.500	ug/L	
SLD0005-IBL5	Copper-65	0.00500	0.35	0.500	ug/L	
SLD0005-IBL5	Zinc-66	0.0170	2.92	6.00	ug/L	
SLD0005-IBL5	Zinc-67	0.0140	0.94	6.00	ug/L	
SLD0005-CCB3	Arsenic-75a	0.00900	0.0373	0.200	ug/L	
SLD0005-CCB3	Cadmium-111	0.00700	0.03	0.100	ug/L	
SLD0005-CCB3	Cadmium-114	0.00400	0.04	0.100	ug/L	
SLD0005-CCB3	Copper-63	0.00500	0.173	0.500	ug/L	
SLD0005-CCB3	Copper-65	-0.00300	0.35	0.500	ug/L	
SLD0005-CCB3	Zinc-66	-0.0060	2.92	6.00	ug/L	
SLD0005-CCB3	Zinc-67	-0.0090	0.94	6.00	ug/L	
SLD0005-CCB4	Arsenic-75a	0.0130	0.0373	0.200	ug/L	
SLD0005-CCB4	Cadmium-111	-0.00100	0.03	0.100	ug/L	
SLD0005-CCB4	Cadmium-114	0.0110	0.04	0.100	ug/L	
SLD0005-CCB4	Copper-63	0.00200	0.173	0.500	ug/L	
SLD0005-CCB4	Copper-65	0.00	0.35	0.500	ug/L	
SLD0005-CCB4	Zinc-66	0.0120	2.92	6.00	ug/L	
SLD0005-CCB4	Zinc-67	0.0100	0.94	6.00	ug/L	
SLD0005-CCB5	Arsenic-75a	0.0140	0.0373	0.200	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLD0005

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00005
Date Analyzed: 03/31/23 20:08

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0005-CCB5	Cadmium-111	-0.00300	0.03	0.100	ug/L	
SLD0005-CCB5	Cadmium-114	0.00300	0.04	0.100	ug/L	
SLD0005-CCB5	Copper-63	-0.00200	0.173	0.500	ug/L	
SLD0005-CCB5	Copper-65	0.00600	0.35	0.500	ug/L	
SLD0005-CCB5	Zinc-66	-0.0040	2.92	6.00	ug/L	
SLD0005-CCB5	Zinc-67	0.0580	0.94	6.00	ug/L	
SLD0005-CCB6	Arsenic-75a	0.00600	0.0373	0.200	ug/L	
SLD0005-CCB6	Cadmium-111	-0.00300	0.03	0.100	ug/L	
SLD0005-CCB6	Cadmium-114	0.00600	0.04	0.100	ug/L	
SLD0005-CCB6	Copper-63	-0.00100	0.173	0.500	ug/L	
SLD0005-CCB6	Copper-65	0.00200	0.35	0.500	ug/L	
SLD0005-CCB6	Zinc-66	0.0300	2.92	6.00	ug/L	
SLD0005-CCB6	Zinc-67	0.0130	0.94	6.00	ug/L	
SLD0005-IBL6	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLD0005-IBL6	Cadmium-111	-0.0170	0.03	0.100	ug/L	
SLD0005-IBL6	Cadmium-114	0.00400	0.04	0.100	ug/L	
SLD0005-IBL6	Copper-63	-0.00100	0.173	0.500	ug/L	
SLD0005-IBL6	Copper-65	0.00300	0.35	0.500	ug/L	
SLD0005-IBL6	Zinc-66	0.0080	2.92	6.00	ug/L	
SLD0005-IBL6	Zinc-67	-0.0150	0.94	6.00	ug/L	
SLD0005-CCB7	Arsenic-75a	0.0100	0.0373	0.200	ug/L	
SLD0005-CCB7	Cadmium-111	-0.00700	0.03	0.100	ug/L	
SLD0005-CCB7	Cadmium-114	-0.00200	0.04	0.100	ug/L	
SLD0005-CCB7	Copper-63	0.00700	0.173	0.500	ug/L	
SLD0005-CCB7	Copper-65	0.00600	0.35	0.500	ug/L	
SLD0005-CCB7	Zinc-66	0.0490	2.92	6.00	ug/L	
SLD0005-CCB7	Zinc-67	0.112	0.94	6.00	ug/L	
SLD0005-CCB8	Arsenic-75a	0.00200	0.0373	0.200	ug/L	
SLD0005-CCB8	Cadmium-111	-0.00500	0.03	0.100	ug/L	
SLD0005-CCB8	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLD0005-CCB8	Copper-63	0.00100	0.173	0.500	ug/L	
SLD0005-CCB8	Copper-65	-0.00100	0.35	0.500	ug/L	
SLD0005-CCB8	Zinc-66	-0.0140	2.92	6.00	ug/L	
SLD0005-CCB8	Zinc-67	0.0240	0.94	6.00	ug/L	
SLD0005-CCB9	Arsenic-75a	0.0100	0.0373	0.200	ug/L	
SLD0005-CCB9	Cadmium-111	-0.00100	0.03	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLD0005

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00005
Date Analyzed: 04/01/23 00:30

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0005-CCB9	Cadmium-114	0.00900	0.04	0.100	ug/L	
SLD0005-CCB9	Copper-63	0.00100	0.173	0.500	ug/L	
SLD0005-CCB9	Copper-65	-0.00300	0.35	0.500	ug/L	
SLD0005-CCB9	Zinc-66	-0.0180	2.92	6.00	ug/L	
SLD0005-CCB9	Zinc-67	-0.0120	0.94	6.00	ug/L	
SLD0005-IBLA	Arsenic-75a	0.00600	0.0373	0.200	ug/L	
SLD0005-IBLA	Cadmium-111	-0.0110	0.03	0.100	ug/L	
SLD0005-IBLA	Cadmium-114	0.00400	0.04	0.100	ug/L	
SLD0005-IBLA	Copper-63	0.00700	0.173	0.500	ug/L	
SLD0005-IBLA	Copper-65	0.00800	0.35	0.500	ug/L	
SLD0005-IBLA	Zinc-66	0.0080	2.92	6.00	ug/L	
SLD0005-IBLA	Zinc-67	-0.0150	0.94	6.00	ug/L	
SLD0005-CCBA	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLD0005-CCBA	Cadmium-111	-0.00900	0.03	0.100	ug/L	
SLD0005-CCBA	Cadmium-114	0.00300	0.04	0.100	ug/L	
SLD0005-CCBA	Copper-63	0.00200	0.173	0.500	ug/L	
SLD0005-CCBA	Copper-65	-0.00400	0.35	0.500	ug/L	
SLD0005-CCBA	Zinc-66	-0.0190	2.92	6.00	ug/L	
SLD0005-CCBA	Zinc-67	-0.0360	0.94	6.00	ug/L	
SLD0005-CCBB	Arsenic-75a	0.00800	0.0373	0.200	ug/L	
SLD0005-CCBB	Cadmium-111	0.00	0.03	0.100	ug/L	
SLD0005-CCBB	Cadmium-114	0.00400	0.04	0.100	ug/L	
SLD0005-CCBB	Copper-63	0.00800	0.173	0.500	ug/L	
SLD0005-CCBB	Copper-65	0.00200	0.35	0.500	ug/L	
SLD0005-CCBB	Zinc-66	-0.0050	2.92	6.00	ug/L	
SLD0005-CCBB	Zinc-67	0.0340	0.94	6.00	ug/L	
SLD0005-IBLC	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLD0005-IBLC	Cadmium-111	0.00100	0.03	0.100	ug/L	
SLD0005-IBLC	Cadmium-114	0.00	0.04	0.100	ug/L	
SLD0005-IBLC	Copper-63	0.0110	0.173	0.500	ug/L	
SLD0005-IBLC	Copper-65	0.00400	0.35	0.500	ug/L	
SLD0005-IBLC	Zinc-66	0.0390	2.92	6.00	ug/L	
SLD0005-IBLC	Zinc-67	0.0220	0.94	6.00	ug/L	
SLD0005-CCBC	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SLD0005-CCBC	Cadmium-111	0.00200	0.03	0.100	ug/L	
SLD0005-CCBC	Cadmium-114	0.00	0.04	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLD0005

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00005
Date Analyzed: 04/01/23 02:57

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0005-CCBC	Copper-63	0.00600	0.173	0.500	ug/L	
SLD0005-CCBC	Copper-65	0.00100	0.35	0.500	ug/L	
SLD0005-CCBC	Zinc-66	-0.0080	2.92	6.00	ug/L	
SLD0005-CCBC	Zinc-67	0.0420	0.94	6.00	ug/L	
SLD0005-IBLD	Arsenic-75a	0.0110	0.0373	0.200	ug/L	
SLD0005-IBLD	Cadmium-111	-0.00300	0.03	0.100	ug/L	
SLD0005-IBLD	Cadmium-114	0.00500	0.04	0.100	ug/L	
SLD0005-IBLD	Copper-63	0.00700	0.173	0.500	ug/L	
SLD0005-IBLD	Copper-65	0.00400	0.35	0.500	ug/L	
SLD0005-IBLD	Zinc-66	0.0460	2.92	6.00	ug/L	
SLD0005-IBLD	Zinc-67	0.0270	0.94	6.00	ug/L	
SLD0005-CCBD	Arsenic-75a	0.0180	0.0373	0.200	ug/L	
SLD0005-CCBD	Cadmium-111	-0.00100	0.03	0.100	ug/L	
SLD0005-CCBD	Cadmium-114	-0.00100	0.04	0.100	ug/L	
SLD0005-CCBD	Copper-63	0.0270	0.173	0.500	ug/L	
SLD0005-CCBD	Copper-65	0.0350	0.35	0.500	ug/L	
SLD0005-CCBD	Zinc-66	0.0280	2.92	6.00	ug/L	
SLD0005-CCBD	Zinc-67	0.0630	0.94	6.00	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLD0041

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00006
Date Analyzed: 04/01/23 14:18

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0041-IBL1	Arsenic-75a	0.00600	0.0373	0.200	ug/L	
SLD0041-IBL1	Cadmium-111	0.00	0.03	0.100	ug/L	
SLD0041-IBL1	Cadmium-114	-0.00300	0.04	0.100	ug/L	
SLD0041-IBL1	Copper-63	0.00200	0.173	0.500	ug/L	
SLD0041-IBL1	Copper-65	0.00200	0.35	0.500	ug/L	
SLD0041-IBL1	Zinc-66	0.0180	2.92	6.00	ug/L	
SLD0041-IBL1	Zinc-67	-0.0270	0.94	6.00	ug/L	
SLD0041-ICB1	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLD0041-ICB1	Cadmium-111	0.00300	0.03	0.100	ug/L	
SLD0041-ICB1	Cadmium-114	0.00100	0.04	0.100	ug/L	
SLD0041-ICB1	Copper-63	0.00	0.173	0.500	ug/L	
SLD0041-ICB1	Copper-65	0.00400	0.35	0.500	ug/L	
SLD0041-ICB1	Zinc-66	0.0090	2.92	6.00	ug/L	
SLD0041-ICB1	Zinc-67	0.0100	0.94	6.00	ug/L	
SLD0041-CCB1	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SLD0041-CCB1	Cadmium-111	-0.00300	0.03	0.100	ug/L	
SLD0041-CCB1	Cadmium-114	0.00	0.04	0.100	ug/L	
SLD0041-CCB1	Copper-63	-0.00300	0.173	0.500	ug/L	
SLD0041-CCB1	Copper-65	-0.00300	0.35	0.500	ug/L	
SLD0041-CCB1	Zinc-66	0.0290	2.92	6.00	ug/L	
SLD0041-CCB1	Zinc-67	-0.0180	0.94	6.00	ug/L	
SLD0041-IBL2	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SLD0041-IBL2	Cadmium-111	-0.00300	0.03	0.100	ug/L	
SLD0041-IBL2	Cadmium-114	-0.00100	0.04	0.100	ug/L	
SLD0041-IBL2	Copper-63	0.00400	0.173	0.500	ug/L	
SLD0041-IBL2	Copper-65	-0.00200	0.35	0.500	ug/L	
SLD0041-IBL2	Zinc-66	0.0060	2.92	6.00	ug/L	
SLD0041-IBL2	Zinc-67	0.0250	0.94	6.00	ug/L	
SLD0041-IBL3	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SLD0041-IBL3	Cadmium-111	-0.00300	0.03	0.100	ug/L	
SLD0041-IBL3	Cadmium-114	0.00100	0.04	0.100	ug/L	
SLD0041-IBL3	Copper-63	-0.00200	0.173	0.500	ug/L	
SLD0041-IBL3	Copper-65	-0.00100	0.35	0.500	ug/L	
SLD0041-IBL3	Zinc-66	0.0070	2.92	6.00	ug/L	
SLD0041-IBL3	Zinc-67	-0.0160	0.94	6.00	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLD0041

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00006
Date Analyzed: 04/01/23 15:46

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0041-CCB2	Arsenic-75a	0.00300	0.0373	0.200	ug/L	
SLD0041-CCB2	Cadmium-111	0.00100	0.03	0.100	ug/L	
SLD0041-CCB2	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLD0041-CCB2	Copper-63	0.00700	0.173	0.500	ug/L	
SLD0041-CCB2	Copper-65	-0.00400	0.35	0.500	ug/L	
SLD0041-CCB2	Zinc-66	0.0110	2.92	6.00	ug/L	
SLD0041-CCB2	Zinc-67	0.0460	0.94	6.00	ug/L	
SLD0041-IBL4	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLD0041-IBL4	Cadmium-111	0.00200	0.03	0.100	ug/L	
SLD0041-IBL4	Cadmium-114	0.00100	0.04	0.100	ug/L	
SLD0041-IBL4	Copper-63	-0.00200	0.173	0.500	ug/L	
SLD0041-IBL4	Copper-65	-0.00300	0.35	0.500	ug/L	
SLD0041-IBL4	Zinc-66	-0.0210	2.92	6.00	ug/L	
SLD0041-IBL4	Zinc-67	0.0160	0.94	6.00	ug/L	
SLD0041-CCB3	Arsenic-75a	0.00200	0.0373	0.200	ug/L	
SLD0041-CCB3	Cadmium-111	0.0470	0.03	0.100	ug/L	
SLD0041-CCB3	Cadmium-114	0.0340	0.04	0.100	ug/L	
SLD0041-CCB3	Copper-63	0.00200	0.173	0.500	ug/L	
SLD0041-CCB3	Copper-65	-0.00300	0.35	0.500	ug/L	
SLD0041-CCB3	Zinc-66	0.0030	2.92	6.00	ug/L	
SLD0041-CCB3	Zinc-67	-0.0060	0.94	6.00	ug/L	
SLD0041-IBL5	Arsenic-75a	0.00300	0.0373	0.200	ug/L	
SLD0041-IBL5	Cadmium-111	-0.00500	0.03	0.100	ug/L	
SLD0041-IBL5	Cadmium-114	-0.00400	0.04	0.100	ug/L	
SLD0041-IBL5	Copper-63	-0.00200	0.173	0.500	ug/L	
SLD0041-IBL5	Copper-65	-0.00400	0.35	0.500	ug/L	
SLD0041-IBL5	Zinc-66	0.00	2.92	6.00	ug/L	
SLD0041-IBL5	Zinc-67	-0.0180	0.94	6.00	ug/L	
SLD0041-CCB4	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SLD0041-CCB4	Cadmium-111	-0.00600	0.03	0.100	ug/L	
SLD0041-CCB4	Cadmium-114	-0.00300	0.04	0.100	ug/L	
SLD0041-CCB4	Copper-63	-0.00400	0.173	0.500	ug/L	
SLD0041-CCB4	Copper-65	-0.00200	0.35	0.500	ug/L	
SLD0041-CCB4	Zinc-66	0.0090	2.92	6.00	ug/L	
SLD0041-CCB4	Zinc-67	-0.0550	0.94	6.00	ug/L	
SLD0041-IBL6	Arsenic-75a	0.00100	0.0373	0.200	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLD0041

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00006
Date Analyzed: 04/01/23 18:33

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0041-IBL6	Cadmium-111	0.00300	0.03	0.100	ug/L	
SLD0041-IBL6	Cadmium-114	0.00	0.04	0.100	ug/L	
SLD0041-IBL6	Copper-63	-0.00100	0.173	0.500	ug/L	
SLD0041-IBL6	Copper-65	-0.00400	0.35	0.500	ug/L	
SLD0041-IBL6	Zinc-66	-0.0160	2.92	6.00	ug/L	
SLD0041-IBL6	Zinc-67	-0.0520	0.94	6.00	ug/L	
SLD0041-CCB5	Arsenic-75a	0.0100	0.0373	0.200	ug/L	
SLD0041-CCB5	Cadmium-111	0.00100	0.03	0.100	ug/L	
SLD0041-CCB5	Cadmium-114	-0.00600	0.04	0.100	ug/L	
SLD0041-CCB5	Copper-63	-0.00300	0.173	0.500	ug/L	
SLD0041-CCB5	Copper-65	-0.00400	0.35	0.500	ug/L	
SLD0041-CCB5	Zinc-66	-0.0120	2.92	6.00	ug/L	
SLD0041-CCB5	Zinc-67	0.0230	0.94	6.00	ug/L	
SLD0041-IBL7	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SLD0041-IBL7	Cadmium-111	0.00	0.03	0.100	ug/L	
SLD0041-IBL7	Cadmium-114	-0.00200	0.04	0.100	ug/L	
SLD0041-IBL7	Copper-63	-0.00400	0.173	0.500	ug/L	
SLD0041-IBL7	Copper-65	-0.00300	0.35	0.500	ug/L	
SLD0041-IBL7	Zinc-66	-0.0190	2.92	6.00	ug/L	
SLD0041-IBL7	Zinc-67	-0.0260	0.94	6.00	ug/L	
SLD0041-CCB6	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLD0041-CCB6	Cadmium-111	0.00100	0.03	0.100	ug/L	
SLD0041-CCB6	Cadmium-114	0.00	0.04	0.100	ug/L	
SLD0041-CCB6	Copper-63	0.00100	0.173	0.500	ug/L	
SLD0041-CCB6	Copper-65	-0.00100	0.35	0.500	ug/L	
SLD0041-CCB6	Zinc-66	-0.0100	2.92	6.00	ug/L	
SLD0041-CCB6	Zinc-67	0.0250	0.94	6.00	ug/L	
SLD0041-IBL8	Arsenic-75a	-0.00300	0.0373	0.200	ug/L	
SLD0041-IBL8	Cadmium-111	-0.00100	0.03	0.100	ug/L	
SLD0041-IBL8	Cadmium-114	-0.00100	0.04	0.100	ug/L	
SLD0041-IBL8	Copper-63	-0.00100	0.173	0.500	ug/L	
SLD0041-IBL8	Copper-65	-0.00900	0.35	0.500	ug/L	
SLD0041-IBL8	Zinc-66	-0.0260	2.92	6.00	ug/L	
SLD0041-IBL8	Zinc-67	-0.0780	0.94	6.00	ug/L	
SLD0041-CCB7	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLD0041-CCB7	Cadmium-111	-0.00300	0.03	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLD0041

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GD00006
Date Analyzed: 04/01/23 20:33

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0041-CCB7	Cadmium-114	0.00	0.04	0.100	ug/L	
SLD0041-CCB7	Copper-63	0.00	0.173	0.500	ug/L	
SLD0041-CCB7	Copper-65	-0.0100	0.35	0.500	ug/L	
SLD0041-CCB7	Zinc-66	-0.0250	2.92	6.00	ug/L	
SLD0041-CCB7	Zinc-67	0.0100	0.94	6.00	ug/L	
SLD0041-IBL9	Arsenic-75a	0.00900	0.0373	0.200	ug/L	
SLD0041-IBL9	Cadmium-111	-0.00300	0.03	0.100	ug/L	
SLD0041-IBL9	Cadmium-114	-0.00400	0.04	0.100	ug/L	
SLD0041-IBL9	Copper-63	-0.00700	0.173	0.500	ug/L	
SLD0041-IBL9	Copper-65	-0.00200	0.35	0.500	ug/L	
SLD0041-IBL9	Zinc-66	-0.0310	2.92	6.00	ug/L	
SLD0041-IBL9	Zinc-67	-0.0270	0.94	6.00	ug/L	
SLD0041-CCB8	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLD0041-CCB8	Cadmium-111	-0.00200	0.03	0.100	ug/L	
SLD0041-CCB8	Cadmium-114	0.00	0.04	0.100	ug/L	
SLD0041-CCB8	Copper-63	-0.00200	0.173	0.500	ug/L	
SLD0041-CCB8	Copper-65	0.00300	0.35	0.500	ug/L	
SLD0041-CCB8	Zinc-66	-0.0120	2.92	6.00	ug/L	
SLD0041-CCB8	Zinc-67	-0.0270	0.94	6.00	ug/L	
SLD0041-IBLA	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLD0041-IBLA	Cadmium-111	-0.00400	0.03	0.100	ug/L	
SLD0041-IBLA	Cadmium-114	-0.00400	0.04	0.100	ug/L	
SLD0041-IBLA	Copper-63	-0.00700	0.173	0.500	ug/L	
SLD0041-IBLA	Copper-65	-0.00200	0.35	0.500	ug/L	
SLD0041-IBLA	Zinc-66	-0.0410	2.92	6.00	ug/L	
SLD0041-IBLA	Zinc-67	-0.0090	0.94	6.00	ug/L	
SLD0041-CCB9	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLD0041-CCB9	Cadmium-111	-0.00400	0.03	0.100	ug/L	
SLD0041-CCB9	Cadmium-114	-0.00400	0.04	0.100	ug/L	
SLD0041-CCB9	Copper-63	-0.00200	0.173	0.500	ug/L	
SLD0041-CCB9	Copper-65	-0.00100	0.35	0.500	ug/L	
SLD0041-CCB9	Zinc-66	-0.0170	2.92	6.00	ug/L	
SLD0041-CCB9	Zinc-67	0.0900	0.94	6.00	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLD0005	Instrument:	ICPMS2
		Calibration:	GD00005

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLD0005-CAL1	XDT_m2230331-006	NA	03/31/23 15:18
CAL 1 - LOW CHECK	SLD0005-CAL2	XDT_m2230331-007	NA	03/31/23 15:23
CAL 2	SLD0005-CAL3	XDT_m2230331-008	NA	03/31/23 15:27
CAL 3	SLD0005-CAL4	XDT_m2230331-009	NA	03/31/23 15:33
CAL 4	SLD0005-CAL5	XDT_m2230331-010	NA	03/31/23 15:38
CAL 5	SLD0005-CAL6	XDT_m2230331-011	NA	03/31/23 15:45
RINSE	SLD0005-IBL1	XDT_m2230331-012	NA	03/31/23 15:52
Initial Cal Check	SLD0005-ICV1	XDT_m2230331-014	NA	03/31/23 16:00
Initial Cal Blank	SLD0005-ICB1	XDT_m2230331-015	NA	03/31/23 16:08
Calibration Check	SLD0005-CCV1	XDT_m2230331-017	NA	03/31/23 16:20
Calibration Blank	SLD0005-CCB1	XDT_m2230331-018	NA	03/31/23 16:29
Instrument RL Check	SLD0005-CRL1	XDT_m2230331-019	NA	03/31/23 16:37
Interference Check A	SLD0005-IFA1	XDT_m2230331-020	NA	03/31/23 16:41
Interference Check B	SLD0005-IFB1	XDT_m2230331-021	NA	03/31/23 16:46
LR200	SLD0005-HCV1	XDT_m2230331-022	NA	03/31/23 16:51
LR300	SLD0005-HCV2	XDT_m2230331-023	NA	03/31/23 16:56
Instrument Blank	SLD0005-IBL2	XDT_m2230331-024	NA	03/31/23 17:04
Instrument Blank	SLD0005-IBL3	XDT_m2230331-025	NA	03/31/23 17:11
Instrument Blank	SLD0005-IBL4	XDT_m2230331-026	NA	03/31/23 17:17
Calibration Check	SLD0005-CCV2	XDT_m2230331-027	NA	03/31/23 17:22
Calibration Blank	SLD0005-CCB2	XDT_m2230331-028	NA	03/31/23 17:30
ZZZZZ	BLC0848-BLK1	XDT_m2230331-029	Water	03/31/23 17:36
ZZZZZ	BLC0848-BS1	XDT_m2230331-030	Water	03/31/23 17:41
ZZZZZ	23C0747-01	XDT_m2230331-031	Water	03/31/23 17:46
Instrument Blank	SLD0005-IBL5	XDT_m2230331-038	NA	03/31/23 18:26
Calibration Check	SLD0005-CCV3	XDT_m2230331-039	NA	03/31/23 18:31
Calibration Blank	SLD0005-CCB3	XDT_m2230331-040	NA	03/31/23 18:42
Calibration Check	SLD0005-CCV4	XDT_m2230331-042	NA	03/31/23 18:53
Calibration Blank	SLD0005-CCB4	XDT_m2230331-043	NA	03/31/23 19:01

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLD0005
SDG: 23A0133
Project: AOC5 MR Phase 1
Instrument: ICPMS2
Calibration: GD00005

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SLD0005-CCV5	XDT_m2230331-054	NA	03/31/23 19:58
Calibration Blank	SLD0005-CCB5	XDT_m2230331-055	NA	03/31/23 20:08
Calibration Check	SLD0005-CCV6	XDT_m2230331-066	NA	03/31/23 21:04
Calibration Blank	SLD0005-CCB6	XDT_m2230331-067	NA	03/31/23 21:12
Blank	BLC0703-BLK1	XDT_m2230331-068	Solid	03/31/23 21:20
LCS	BLC0703-BS1	XDT_m2230331-069	Solid	03/31/23 21:25
Instrument Blank	SLD0005-IBL6	XDT_m2230331-077	NA	03/31/23 22:06
Calibration Check	SLD0005-CCV7	XDT_m2230331-078	NA	03/31/23 22:11
Calibration Blank	SLD0005-CCB7	XDT_m2230331-079	NA	03/31/23 22:20
LDW23-SC1215	23A0133-10	XDT_m2230331-083	Solid	03/31/23 22:45
LDW23-SS1110	23A0133-13	XDT_m2230331-086	Solid	03/31/23 23:00
Calibration Check	SLD0005-CCV8	XDT_m2230331-090	NA	03/31/23 23:21
Calibration Blank	SLD0005-CCB8	XDT_m2230331-091	NA	03/31/23 23:28
Calibration Check	SLD0005-CCV9	XDT_m2230331-102	NA	04/01/23 00:23
Calibration Blank	SLD0005-CCB9	XDT_m2230331-103	NA	04/01/23 00:30
ZZZZZ	BLC0848-DUP1	XDT_m2230331-104	Water	04/01/23 00:35
ZZZZZ	BLC0848-MS1	XDT_m2230331-105	Water	04/01/23 00:40
Instrument Blank	SLD0005-IBLA	XDT_m2230331-113	NA	04/01/23 01:24
Calibration Check	SLD0005-CCVA	XDT_m2230331-114	NA	04/01/23 01:29
Calibration Blank	SLD0005-CCBA	XDT_m2230331-115	NA	04/01/23 01:37
Calibration Check	SLD0005-CCVB	XDT_m2230331-117	NA	04/01/23 01:46
Calibration Blank	SLD0005-CCBB	XDT_m2230331-118	NA	04/01/23 01:54
Instrument Blank	SLD0005-IBLC	XDT_m2230331-128	NA	04/01/23 02:44
Calibration Check	SLD0005-CCVC	XDT_m2230331-129	NA	04/01/23 02:49
Calibration Blank	SLD0005-CCBC	XDT_m2230331-130	NA	04/01/23 02:57
Instrument Blank	SLD0005-IBLD	XDT_m2230331-140	NA	04/01/23 03:47
Calibration Check	SLD0005-CCVD	XDT_m2230331-141	NA	04/01/23 03:52
Calibration Blank	SLD0005-CCBD	XDT_m2230331-142	NA	04/01/23 03:59

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLD0041	Instrument:	ICPMS2
		Calibration:	GD00006

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLD0041-CAL1	XDT_m2230401-006	NA	04/01/23 13:46
CAL 1 - LOW CHECK	SLD0041-CAL2	XDT_m2230401-007	NA	04/01/23 13:51
CAL 2	SLD0041-CAL3	XDT_m2230401-008	NA	04/01/23 13:55
CAL 3	SLD0041-CAL4	XDT_m2230401-009	NA	04/01/23 14:00
CAL 4	SLD0041-CAL5	XDT_m2230401-010	NA	04/01/23 14:05
CAL 5	SLD0041-CAL6	XDT_m2230401-011	NA	04/01/23 14:11
RINSE	SLD0041-IBL1	XDT_m2230401-012	NA	04/01/23 14:18
Initial Cal Check	SLD0041-ICV1	XDT_m2230401-014	NA	04/01/23 14:26
Initial Cal Blank	SLD0041-ICB1	XDT_m2230401-015	NA	04/01/23 14:33
Calibration Check	SLD0041-CCV1	XDT_m2230401-016	NA	04/01/23 14:48
Calibration Blank	SLD0041-CCB1	XDT_m2230401-017	NA	04/01/23 14:55
Instrument RL Check	SLD0041-CRL1	XDT_m2230401-018	NA	04/01/23 15:01
Interference Check A	SLD0041-IFA1	XDT_m2230401-019	NA	04/01/23 15:06
Interference Check B	SLD0041-IFB1	XDT_m2230401-020	NA	04/01/23 15:10
LR200	SLD0041-HCV1	XDT_m2230401-021	NA	04/01/23 15:14
LR300	SLD0041-HCV2	XDT_m2230401-022	NA	04/01/23 15:19
Instrument Blank	SLD0041-IBL2	XDT_m2230401-023	NA	04/01/23 15:26
Instrument Blank	SLD0041-IBL3	XDT_m2230401-024	NA	04/01/23 15:32
Calibration Check	SLD0041-CCV2	XDT_m2230401-025	NA	04/01/23 15:39
Calibration Blank	SLD0041-CCB2	XDT_m2230401-026	NA	04/01/23 15:46
Instrument Blank	SLD0041-IBL4	XDT_m2230401-036	NA	04/01/23 16:35
Calibration Check	SLD0041-CCV3	XDT_m2230401-037	NA	04/01/23 16:40
Calibration Blank	SLD0041-CCB3	XDT_m2230401-038	NA	04/01/23 16:47
LDW23-SC1241	23A0133-06	XDT_m2230401-039	Solid	04/01/23 16:55
LDW23-SC1241	23A0133-06	XDT_m2230401-039	Solid	04/01/23 16:55
LDW23-SC1241	23A0133-06	XDT_m2230401-039	Solid	04/01/23 16:55
LDW23-SC1241	23A0133-06	XDT_m2230401-039	Solid	04/01/23 16:55
LDW23-IT1217	23A0133-07	XDT_m2230401-040	Solid	04/01/23 17:00
LDW23-IT1217	23A0133-07	XDT_m2230401-040	Solid	04/01/23 17:00

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLD0041	Instrument:	ICPMS2
		Calibration:	GD00006

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-IT1217	23A0133-07	XDT_m2230401-040	Solid	04/01/23 17:00
LDW23-IT1217	23A0133-07	XDT_m2230401-040	Solid	04/01/23 17:00
LDW23-SC1185	23A0133-08	XDT_m2230401-041	Solid	04/01/23 17:04
LDW23-SC1185	23A0133-08	XDT_m2230401-041	Solid	04/01/23 17:04
LDW23-SC1185	23A0133-08	XDT_m2230401-041	Solid	04/01/23 17:04
LDW23-SC1185	23A0133-08	XDT_m2230401-041	Solid	04/01/23 17:04
LDW23-SC1234	23A0133-09	XDT_m2230401-042	Solid	04/01/23 17:09
LDW23-SC1234	23A0133-09	XDT_m2230401-042	Solid	04/01/23 17:09
LDW23-SC1234	23A0133-09	XDT_m2230401-042	Solid	04/01/23 17:09
LDW23-SC1234	23A0133-09	XDT_m2230401-042	Solid	04/01/23 17:09
LDW23-SC1250	23A0133-03	XDT_m2230401-043	Solid	04/01/23 17:13
LDW23-SC1250	23A0133-03	XDT_m2230401-043	Solid	04/01/23 17:13
LDW23-SC1250	23A0133-03	XDT_m2230401-043	Solid	04/01/23 17:13
LDW23-SC1250	23A0133-03	XDT_m2230401-043	Solid	04/01/23 17:13
LDW23-SC1250	BLC0703-DUP2	XDT_m2230401-044	Solid	04/01/23 17:18
LDW23-SC1250	BLC0703-DUP2	XDT_m2230401-044	Solid	04/01/23 17:18
LDW23-SC1250	BLC0703-DUP2	XDT_m2230401-044	Solid	04/01/23 17:18
LDW23-SC1250	BLC0703-DUP2	XDT_m2230401-044	Solid	04/01/23 17:18
LDW23-SC1250	BLC0703-DUP2	XDT_m2230401-044	Solid	04/01/23 17:18
LDW23-SC1250	BLC0703-DUP2	XDT_m2230401-044	Solid	04/01/23 17:18
LDW23-SC1250	BLC0703-MS2	XDT_m2230401-045	Solid	04/01/23 17:22
LDW23-SC1250	BLC0703-MS2	XDT_m2230401-045	Solid	04/01/23 17:22
LDW23-SC1250	BLC0703-MS2	XDT_m2230401-045	Solid	04/01/23 17:22
LDW23-SC1250	BLC0703-MS2	XDT_m2230401-045	Solid	04/01/23 17:22
LDW23-SC1250	BLC0703-MS2	XDT_m2230401-045	Solid	04/01/23 17:22
LDW23-SC1250	BLC0703-MS2	XDT_m2230401-045	Solid	04/01/23 17:22
LDW23-SC1250	BLC0703-MSD2	XDT_m2230401-046	Solid	04/01/23 17:26
LDW23-SC1250	BLC0703-MSD2	XDT_m2230401-046	Solid	04/01/23 17:26
LDW23-SC1250	BLC0703-MSD2	XDT_m2230401-046	Solid	04/01/23 17:26

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLD0041
Instrument: ICPMS2
Calibration: GD00006

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SC1250	BLC0703-MSD2	XDT_m2230401-046	Solid	04/01/23 17:26
LDW23-SC1250	BLC0703-MSD2	XDT_m2230401-046	Solid	04/01/23 17:26
LDW23-SC1250	BLC0703-MSD2	XDT_m2230401-046	Solid	04/01/23 17:26
Instrument Blank	SLD0041-IBL5	XDT_m2230401-048	NA	04/01/23 17:35
Calibration Check	SLD0041-CCV4	XDT_m2230401-049	NA	04/01/23 17:40
Calibration Blank	SLD0041-CCB4	XDT_m2230401-050	NA	04/01/23 17:47
LDW23-SC1215	23A0133-10	XDT_m2230401-053	Solid	04/01/23 18:02
LDW23-SC1215	23A0133-10	XDT_m2230401-053	Solid	04/01/23 18:02
LDW23-SC1215	23A0133-10	XDT_m2230401-053	Solid	04/01/23 18:02
LDW23-SC1222	23A0133-11	XDT_m2230401-054	Solid	04/01/23 18:07
LDW23-SC1222	23A0133-11	XDT_m2230401-054	Solid	04/01/23 18:07
LDW23-SC1222	23A0133-11	XDT_m2230401-054	Solid	04/01/23 18:07
LDW23-SC1222	23A0133-11	XDT_m2230401-054	Solid	04/01/23 18:07
LDW23-SC1227	23A0133-12	XDT_m2230401-055	Solid	04/01/23 18:11
LDW23-SC1227	23A0133-12	XDT_m2230401-055	Solid	04/01/23 18:11
LDW23-SC1227	23A0133-12	XDT_m2230401-055	Solid	04/01/23 18:11
LDW23-SC1227	23A0133-12	XDT_m2230401-055	Solid	04/01/23 18:11
LDW23-SS1110	23A0133-13	XDT_m2230401-056	Solid	04/01/23 18:16
LDW23-SS1110	23A0133-13	XDT_m2230401-056	Solid	04/01/23 18:16
LDW23-SS1110	23A0133-13	XDT_m2230401-056	Solid	04/01/23 18:16
LDW23-SS1109	23A0133-14	XDT_m2230401-057	Solid	04/01/23 18:20
LDW23-SS1109	23A0133-14	XDT_m2230401-057	Solid	04/01/23 18:20
LDW23-SS1109	23A0133-14	XDT_m2230401-057	Solid	04/01/23 18:20
LDW23-SS1109	23A0133-14	XDT_m2230401-057	Solid	04/01/23 18:20
LDW23-SS1092	23A0133-15	XDT_m2230401-058	Solid	04/01/23 18:24
LDW23-SS1092	23A0133-15	XDT_m2230401-058	Solid	04/01/23 18:24
LDW23-SS1092	23A0133-15	XDT_m2230401-058	Solid	04/01/23 18:24
LDW23-SS1092	23A0133-15	XDT_m2230401-058	Solid	04/01/23 18:24
LDW23-SS1091	23A0133-16	XDT_m2230401-059	Solid	04/01/23 18:29

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLD0041
SDG: 23A0133
Project: AOC5 MR Phase 1
Instrument: ICPMS2
Calibration: GD00006

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SS1091	23A0133-16	XDT_m2230401-059	Solid	04/01/23 18:29
LDW23-SS1091	23A0133-16	XDT_m2230401-059	Solid	04/01/23 18:29
LDW23-SS1091	23A0133-16	XDT_m2230401-059	Solid	04/01/23 18:29
Instrument Blank	SLD0041-IBL6	XDT_m2230401-060	NA	04/01/23 18:33
Calibration Check	SLD0041-CCV5	XDT_m2230401-061	NA	04/01/23 18:38
Calibration Blank	SLD0041-CCB5	XDT_m2230401-062	NA	04/01/23 18:45
ZZZZZ	23A0134-01	XDT_m2230401-063	Solid	04/01/23 18:49
ZZZZZ	23A0134-01	XDT_m2230401-063	Solid	04/01/23 18:49
ZZZZZ	23A0134-01	XDT_m2230401-063	Solid	04/01/23 18:49
ZZZZZ	23A0134-01	XDT_m2230401-063	Solid	04/01/23 18:49
ZZZZZ	23A0134-02	XDT_m2230401-064	Solid	04/01/23 18:54
ZZZZZ	23A0134-02	XDT_m2230401-064	Solid	04/01/23 18:54
ZZZZZ	23A0134-02	XDT_m2230401-064	Solid	04/01/23 18:54
ZZZZZ	23A0134-02	XDT_m2230401-064	Solid	04/01/23 18:54
ZZZZZ	23A0134-03	XDT_m2230401-065	Solid	04/01/23 18:58
ZZZZZ	23A0134-03	XDT_m2230401-065	Solid	04/01/23 18:58
ZZZZZ	23A0134-03	XDT_m2230401-065	Solid	04/01/23 18:58
ZZZZZ	23A0134-03	XDT_m2230401-065	Solid	04/01/23 18:58
ZZZZZ	23A0134-04	XDT_m2230401-066	Solid	04/01/23 19:03
ZZZZZ	23A0134-04	XDT_m2230401-066	Solid	04/01/23 19:03
ZZZZZ	23A0134-04	XDT_m2230401-066	Solid	04/01/23 19:03
ZZZZZ	23A0134-04	XDT_m2230401-066	Solid	04/01/23 19:03
ZZZZZ	23A0134-05	XDT_m2230401-067	Solid	04/01/23 19:07
ZZZZZ	23A0134-05	XDT_m2230401-067	Solid	04/01/23 19:07
ZZZZZ	23A0134-05	XDT_m2230401-067	Solid	04/01/23 19:07
ZZZZZ	23A0134-05	XDT_m2230401-067	Solid	04/01/23 19:07
ZZZZZ	23A0134-06	XDT_m2230401-068	Solid	04/01/23 19:11
ZZZZZ	23A0134-06	XDT_m2230401-068	Solid	04/01/23 19:11
ZZZZZ	23A0134-06	XDT_m2230401-068	Solid	04/01/23 19:11

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLD0041
SDG: 23A0133
Project: AOC5 MR Phase 1
Instrument: ICPMS2
Calibration: GD00006

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23A0134-06	XDT_m2230401-068	Solid	04/01/23 19:11
ZZZZZ	23A0134-07	XDT_m2230401-069	Solid	04/01/23 19:16
ZZZZZ	23A0134-07	XDT_m2230401-069	Solid	04/01/23 19:16
ZZZZZ	23A0134-07	XDT_m2230401-069	Solid	04/01/23 19:16
ZZZZZ	23A0134-07	XDT_m2230401-069	Solid	04/01/23 19:16
ZZZZZ	23A0134-08	XDT_m2230401-070	Solid	04/01/23 19:20
ZZZZZ	23A0134-08	XDT_m2230401-070	Solid	04/01/23 19:20
ZZZZZ	23A0134-08	XDT_m2230401-070	Solid	04/01/23 19:20
ZZZZZ	23A0134-08	XDT_m2230401-070	Solid	04/01/23 19:20
Instrument Blank	SLD0041-IBL7	XDT_m2230401-071	NA	04/01/23 19:25
Calibration Check	SLD0041-CCV6	XDT_m2230401-072	NA	04/01/23 19:29
Calibration Blank	SLD0041-CCB6	XDT_m2230401-073	NA	04/01/23 19:36
ZZZZZ	BLC0840-BLK1	XDT_m2230401-074	Solid	04/01/23 19:41
ZZZZZ	BLC0840-BS1	XDT_m2230401-075	Solid	04/01/23 19:45
ZZZZZ	BLC0840-SRL1	XDT_m2230401-076	Solid	04/01/23 19:50
ZZZZZ	23C0042-01	XDT_m2230401-077	Solid	04/01/23 19:54
ZZZZZ	23C0042-01	XDT_m2230401-077	Solid	04/01/23 19:54
ZZZZZ	23C0042-01	XDT_m2230401-077	Solid	04/01/23 19:54
ZZZZZ	BLC0840-DUP1	XDT_m2230401-078	Solid	04/01/23 19:58
ZZZZZ	BLC0840-MS1	XDT_m2230401-079	Solid	04/01/23 20:03
ZZZZZ	BLC0840-MSD1	XDT_m2230401-080	Solid	04/01/23 20:07
ZZZZZ	BLC0840-SRM1	XDT_m2230401-082	Solid	04/01/23 20:16
Instrument Blank	SLD0041-IBL8	XDT_m2230401-083	NA	04/01/23 20:21
Calibration Check	SLD0041-CCV7	XDT_m2230401-084	NA	04/01/23 20:26
Calibration Blank	SLD0041-CCB7	XDT_m2230401-085	NA	04/01/23 20:33
ZZZZZ	23C0042-02	XDT_m2230401-086	Solid	04/01/23 20:38
ZZZZZ	23C0042-02	XDT_m2230401-086	Solid	04/01/23 20:38
ZZZZZ	23C0042-02	XDT_m2230401-086	Solid	04/01/23 20:38
ZZZZZ	23C0042-02	XDT_m2230401-086	Solid	04/01/23 20:38

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLD0041
Instrument: ICPMS2
Calibration: GD00006

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23C0042-03	XDT_m2230401-087	Solid	04/01/23 20:42
ZZZZZ	23C0042-03	XDT_m2230401-087	Solid	04/01/23 20:42
ZZZZZ	23C0042-03	XDT_m2230401-087	Solid	04/01/23 20:42
ZZZZZ	23C0042-03	XDT_m2230401-087	Solid	04/01/23 20:42
ZZZZZ	23C0042-04	XDT_m2230401-088	Solid	04/01/23 20:47
ZZZZZ	23C0042-04	XDT_m2230401-088	Solid	04/01/23 20:47
ZZZZZ	23C0042-04	XDT_m2230401-088	Solid	04/01/23 20:47
ZZZZZ	23C0042-04	XDT_m2230401-088	Solid	04/01/23 20:47
ZZZZZ	23C0042-05	XDT_m2230401-089	Solid	04/01/23 20:51
ZZZZZ	23C0042-05	XDT_m2230401-089	Solid	04/01/23 20:51
ZZZZZ	23C0042-05	XDT_m2230401-089	Solid	04/01/23 20:51
ZZZZZ	23C0042-05	XDT_m2230401-089	Solid	04/01/23 20:51
ZZZZZ	23C0042-06	XDT_m2230401-090	Solid	04/01/23 20:55
ZZZZZ	23C0042-06	XDT_m2230401-090	Solid	04/01/23 20:55
ZZZZZ	23C0042-06	XDT_m2230401-090	Solid	04/01/23 20:55
ZZZZZ	23C0042-06	XDT_m2230401-090	Solid	04/01/23 20:55
ZZZZZ	23C0042-07	XDT_m2230401-091	Solid	04/01/23 21:00
ZZZZZ	23C0042-07	XDT_m2230401-091	Solid	04/01/23 21:00
ZZZZZ	23C0042-07	XDT_m2230401-091	Solid	04/01/23 21:00
ZZZZZ	23C0042-07	XDT_m2230401-091	Solid	04/01/23 21:00
ZZZZZ	23C0042-08	XDT_m2230401-092	Solid	04/01/23 21:04
ZZZZZ	23C0042-08	XDT_m2230401-092	Solid	04/01/23 21:04
ZZZZZ	23C0042-08	XDT_m2230401-092	Solid	04/01/23 21:04
ZZZZZ	23C0042-09	XDT_m2230401-093	Solid	04/01/23 21:09
ZZZZZ	23C0042-09	XDT_m2230401-093	Solid	04/01/23 21:09
ZZZZZ	23C0042-09	XDT_m2230401-093	Solid	04/01/23 21:09
ZZZZZ	23C0042-09	XDT_m2230401-093	Solid	04/01/23 21:09
Instrument Blank	SLD0041-IBL9	XDT_m2230401-094	NA	04/01/23 21:13
Calibration Check	SLD0041-CCV8	XDT_m2230401-095	NA	04/01/23 21:18

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLD0041	Instrument:	ICPMS2
		Calibration:	GD00006

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SLD0041-CCB8	XDT_m2230401-096	NA	04/01/23 21:25
Instrument Blank	SLD0041-IBLA	XDT_m2230401-103	NA	04/01/23 21:56
Calibration Check	SLD0041-CCV9	XDT_m2230401-104	NA	04/01/23 22:00
Calibration Blank	SLD0041-CCB9	XDT_m2230401-105	NA	04/01/23 22:07

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00005
Sequence: SLD0005
Standard ID: L003416

Lab Sample ID	Analyte	True	Found	%R	Units
SLD0005-IFA1	Arsenic-75a	0	0.0340		ug/L
	Cadmium-111	0	0.0710		ug/L
	Cadmium-114	0	0.0450		ug/L
	Copper-63	0	0.0650		ug/L
	Copper-65	0	0.0440		ug/L
	Zinc-66	0	0.2190		ug/L
	Zinc-67	0	0.3490		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00005
Sequence: SLD0005
Standard ID: L003416

Lab Sample ID	Analyte	True	Found	%R	Units
SLD0005-IFB1	Arsenic-75a	20.000	18.842	94.2	ug/L
	Cadmium-111	20.000	18.949	94.7	ug/L
	Cadmium-114	20.000	18.962	94.8	ug/L
	Copper-63	20.000	19.201	96.0	ug/L
	Copper-65	20.000	19.577	97.9	ug/L
	Zinc-66	20.000	18.679	93.4	ug/L
	Zinc-67	20.000	16.842	84.2	ug/L

* Indicates %R outside of QC limits
NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00006
Sequence: SLD0041
Standard ID: L003416

Lab Sample ID	Analyte	True	Found	%R	Units
SLD0041-IFA1	Arsenic-75a	0	0.0220		ug/L
	Cadmium-111	0	0.0430		ug/L
	Cadmium-114	0	0.0280		ug/L
	Copper-63	0	0.0510		ug/L
	Copper-65	0	0.0580		ug/L
	Zinc-66	0	0.2970		ug/L
	Zinc-67	0	0.1220		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00006
Sequence: SLD0041
Standard ID: L003416

Lab Sample ID	Analyte	True	Found	%R	Units
SLD0041-IFB1	Arsenic-75a	20.000	19.254	96.3	ug/L
	Cadmium-111	20.000	19.185	95.9	ug/L
	Cadmium-114	20.000	18.876	94.4	ug/L
	Copper-63	20.000	19.990	100	ug/L
	Copper-65	20.000	19.993	100	ug/L
	Zinc-66	20.000	18.313	91.6	ug/L
	Zinc-67	20.000	18.126	90.6	ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

DETECTION LEVEL STANDARD
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00005
Sequence: SLD0005
Lab Sample ID: SLD0005-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a	0.20000	0.196	98.0	ug/L	50 - 150
Cadmium-111	0.10000	0.0970	97.0	ug/L	50 - 150
Cadmium-114	0.10000	0.0870	87.0	ug/L	50 - 150
Copper-63	0.50000	0.518	104	ug/L	50 - 150
Copper-65	0.50000	0.573	115	ug/L	50 - 150
Zinc-66	6.0000	6.18	103	ug/L	50 - 150
Zinc-67	6.0000	5.73	95.6	ug/L	50 - 150

* Values outside of QC limits

DETECTION LEVEL STANDARD
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00006
Sequence: SLD0041
Lab Sample ID: SLD0041-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a	0.20000	0.179	89.5	ug/L	50 - 150
Cadmium-111	0.10000	0.101	101	ug/L	50 - 150
Cadmium-114	0.10000	0.111	111	ug/L	50 - 150
Copper-63	0.50000	0.531	106	ug/L	50 - 150
Copper-65	0.50000	0.524	105	ug/L	50 - 150
Zinc-66	6.0000	6.56	109	ug/L	50 - 150
Zinc-67	6.0000	6.23	104	ug/L	50 - 150

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GD00005
Laboratory ID: SLD0005-HCV1
Sequence: SLD0005
Standard ID: L002745

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	200.00	194	-2.9	10.00
Cadmium-111	200.00	197	-1.3	10.00
Cadmium-114	200.00	195	-2.3	10.00
Copper-63	200.00	187	-6.7	10.00
Copper-65	200.00	187	-6.5	10.00
Zinc-66	200.00	182	-9.2	10.00
Zinc-67	200.00	184	-8.0	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GD00005
Laboratory ID: SLD0005-HCV2
Sequence: SLD0005
Standard ID: L002746

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	300.00	303	1.1	10.00
Cadmium-111	300.00	289	-3.7	10.00
Cadmium-114	300.00	288	-4.1	10.00
Copper-63	300.00	281	-6.2	10.00
Copper-65	300.00	284	-5.3	10.00
Zinc-66	300.00	284	-5.2	10.00
Zinc-67	300.00	276	-7.9	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GD00006
Laboratory ID: SLD0041-HCV1
Sequence: SLD0041
Standard ID: L002745

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	200.00	195	-2.4	10.00
Cadmium-111	200.00	194	-3.0	10.00
Cadmium-114	200.00	193	-3.6	10.00
Copper-63	200.00	194	-3.0	10.00
Copper-65	200.00	192	-4.0	10.00
Zinc-66	200.00	186	-7.1	10.00
Zinc-67	200.00	189	-5.3	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GD00006
Laboratory ID: SLD0041-HCV2
Sequence: SLD0041
Standard ID: L002746

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	300.00	291	-3.0	10.00
Cadmium-111	300.00	288	-3.9	10.00
Cadmium-114	300.00	285	-4.9	10.00
Copper-63	300.00	284	-5.2	10.00
Copper-65	300.00	287	-4.3	10.00
Zinc-66	300.00	270	-9.9	10.00
Zinc-67	300.00	268	-10.8	10.00

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC SDG: 23A0133

Client: Anchor QEA, LLC Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1250 23A0133-03	01/06/23 10:32	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 17:13	85	180	
LDW23-SC1241 23A0133-06	01/06/23 10:51	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 16:55	85	180	
LDW23-IT1217 23A0133-07	01/06/23 11:14	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 17:00	85	180	
LDW23-SC1185 23A0133-08	01/06/23 12:00	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 17:04	85	180	
LDW23-SC1234 23A0133-09	01/06/23 13:34	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 17:09	85	180	
LDW23-SC1215 23A0133-10	01/06/23 11:38	01/06/23 17:26	03/27/23 13:52	80	180	03/31/23 22:45	84	180	
LDW23-SC1215 23A0133-10	01/06/23 11:38	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 18:02	85	180	
LDW23-SC1222 23A0133-11	01/06/23 13:00	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 18:07	85	180	
LDW23-SC1227 23A0133-12	01/06/23 13:18	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 18:11	85	180	
LDW23-SS1110 23A0133-13	01/06/23 14:00	01/06/23 17:26	03/27/23 13:52	79	180	04/01/23 18:16	85	180	
LDW23-SS1110 23A0133-13	01/06/23 14:00	01/06/23 17:26	03/27/23 13:52	79	180	03/31/23 23:00	84	180	
LDW23-SS1109 23A0133-14	01/06/23 14:13	01/06/23 17:26	03/27/23 13:52	79	180	04/01/23 18:20	85	180	
LDW23-SS1092 23A0133-15	01/06/23 14:26	01/06/23 17:26	03/27/23 13:52	79	180	04/01/23 18:24	85	180	
LDW23-SS1091 23A0133-16	01/06/23 14:50	01/06/23 17:26	03/27/23 13:52	79	180	04/01/23 18:29	85	180	
Duplicate BLC0703-DUP2	01/06/23 10:32	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 17:18	85	180	
Matrix Spike BLC0703-MS2	01/06/23 10:32	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 17:22	85	180	
Matrix Spike Dup BLC0703-MSD2	01/06/23 10:32	01/06/23 17:26	03/27/23 13:52	80	180	04/01/23 17:26	85	180	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ICPMS2

Analyte	MDL	RL	Units
Arsenic-75a	0.04	0.20	mg/kg
Cadmium-111	0.03	0.10	mg/kg
Cadmium-114	0.04	0.10	mg/kg
Copper-63	0.17	0.50	mg/kg
Copper-65	0.35	0.50	mg/kg
Zinc-66	2.9	6.0	mg/kg
Zinc-67	0.9	6.0	mg/kg

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCU10
Lot Number:	P2-CU682108
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Copper
Starting Material:	Cu Metal
Starting Material Lot#:	2095
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10013 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9977 ± 50 µg/mL**
ICP Assay NIST SRM 3114 Lot Number: 121207

Assay Method #2 **10024 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10007 ± 46 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.007542	M	Eu	<	0.000942	O	Na		0.001434	M	Se	<	0.016971	M	Zn	<	0.005657
O	Al	<	0.000609	O	Fe		0.008700	M	Nb	<	0.000942	O	Si		0.003052	M	Zr	<	0.000942
M	As	<	0.010371	M	Ga	<	0.000942	M	Nd	<	0.000942	M	Sm	<	0.000942				
M	Au	<	0.001885	M	Gd	<	0.000942	M	Ni		0.003781	M	Sn	<	0.005657				
O	B		0.003663	M	Ge	<	0.005657	M	Os	<	0.000942	M	Sr	<	0.000942				
M	Ba		0.004253	M	Hf	<	0.000942	O	P	<	0.031668	M	Ta	<	0.000942				
M	Be	<	0.000942	O	Hg	<	0.007064	M	Pb		0.005789	M	Tb	<	0.000942				
M	Bi	<	0.000942	M	Ho	<	0.000942	M	Pd	<	0.000942	M	Te	<	0.004714				
O	Ca		0.002304	M	In	<	0.000942	M	Pr	<	0.000942	M	Th	<	0.000942				
M	Cd	<	0.000942	M	Ir	<	0.000942	M	Pt	<	0.000942	O	Ti	<	0.002801				
M	Ce	<	0.000942	O	K		0.000763	M	Rb	<	0.000942	M	Tl	<	0.000942				
M	Co		0.001890	M	La	<	0.000942	M	Re	<	0.000942	M	Tm	<	0.000942				
M	Cr	<	0.005657	O	Li	<	0.000243	i	Rh	<		M	U	<	0.000942				
M	Cs	<	0.000942	M	Lu	<	0.000942	M	Ru	<	0.039588	M	V	<	0.003771				
s	Cu	<		O	Mg		0.000320	O	S		0.007174	M	W	<	0.005657				
M	Dy	<	0.000942	O	Mn		0.000793	M	Sb	<	0.001885	M	Y	<	0.000942				
M	Er	<	0.000942	M	Mo	<	0.005657	M	Sc	<	0.000942	M	Yb	<	0.000942				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 63.55 +2 6 $Cu(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cu Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 63 amu	10 ppt	n/a	40Ar23Na 47Ti16O, 14N12C37Cl, 16O12C35Cl, 23Na40Ca
ICP-OES 219.958 nm	0.01/.002 µg/mL	1	Th, Ta, Nb, U, Hf
ICP-OES 224.700 nm	0.01/.001 µg/mL	1	Pb, Ir, Ni, W
ICP-OES 324.754 nm	0.06/.001 µg/mL		Nb, U, Th, Mo, Hf

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 24, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 24, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGPB10
Lot Number:	S2-PB713228
Matrix:	0.5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Lead
Starting Material:	Lead Nitrate
Starting Material Lot#:	2343
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10042 ± 31 µg/mL

Density: 1.015 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10024 ± 41 µg/mL**
ICP Assay NIST SRM 3128 Lot Number: 101026

Assay Method #2 **10054 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	M	Na		0.001470	M	Se	<	0.009100	O	Zn		0.006155
O	Al		0.017098	O	Fe		0.002496	M	Nb	<	0.000310	O	Si		0.003761	O	Zr	<	0.001700
M	As	<	0.003100	M	Ga	<	0.000310	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.000910	M	Gd	<	0.000310	O	Ni		0.001709	M	Sn	<	0.001300				
O	B	<	0.005600	M	Ge	<	0.002200	M	Os	<	0.000310	O	Sr		0.000444				
O	Ba		0.007865	M	Hf	<	0.000310	O	P	<	0.038000	M	Ta	<	0.000310				
O	Be	<	0.000320	M	Hg	<	0.002200	s	Pb	<		M	Tb	<	0.000610				
M	Bi	<	0.028000	M	Ho	<	0.000310	M	Pd	<	0.000610	M	Te	<	0.000310				
O	Ca		0.019834	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.000310				
O	Cd	<	0.000630	M	Ir	<	0.000310	M	Pt	<	0.000910	O	Ti		0.005129				
M	Ce		0.004787	O	K		0.008207	M	Rb	<	0.006700	M	Tl	<	0.016000				
M	Co	<	0.000610	M	La	<	0.001900	M	Re	<	0.000310	M	Tm	<	0.000310				
O	Cr	<	0.001500	O	Li	<	0.000110	O	Rh	<	0.007700	M	U	<	0.000310				
M	Cs	<	0.006100	M	Lu	<	0.000310	M	Ru	<	0.001300	M	V	<	0.001600				
M	Cu	<	0.001600	O	Mg		0.003317	O	S	<	0.052000	M	W	<	0.000910				
M	Dy	<	0.000310	O	Mn	<	0.001600	O	Sb	<	0.015000	M	Y	<	0.000310				
M	Er	<	0.000310	M	Mo	<	0.000610	O	Sc	<	0.000630	M	Yb	<	0.000310				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 207.20 +2 6 $Pb(H_2O)_6^{+2}$

Chemical Compatibility - Soluble in HCl, HF and HNO_3. Avoid H_2SO_4. Stable with most metals and inorganic anions forming insoluble carbonate, borate, sulfate, sulfite, sulfide, phosphate, oxalate, chromate, tannate, iodate, and cyanide in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO_3 / LDPE container.

Pb Containing Samples (Preparation and Solution) -Metal (Best dissolved in 1:1 H_2O / HNO_3); Oxides (The many different Pb oxides are soluble in HNO_3 with the exception of PbO_2 which is soluble in HCl or HF); Ores and Alloys (Best attacked using 1:1 H_2O / HNO_3); Organic Matrices (Dry ash and dissolve in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 208 amu	5 ppt	n/a	192Pt16O, 192Os16O
ICP-OES 168.215 nm	0.03 / 0.003 µg/mL	1	Co
ICP-OES 217.000 nm	0.09 / 0.03 µg/mL	1	W, Ir, Hf, Sb, Th
ICP-OES 220.353 nm	0.04 / 0.006 µg/mL	1	Bi, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

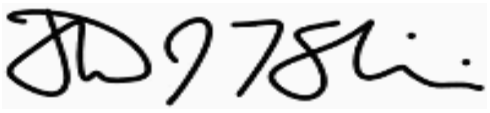
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZN10
Lot Number:	S2-ZN711249
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Zinc
Starting Material:	Zinc Metal
Starting Material Lot#:	2349
Starting Material Purity:	99.9988%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9981 ± 56 µg/mL**
ICP Assay NIST SRM 3168a Lot Number: 120629

Assay Method #2 **9987 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10002 ± 32 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002000	M	Eu	<	0.000500	O	Na		0.008713	M	Se	<	0.048000	s	Zn	<	
O	Al	<	0.011000	O	Fe		0.015467	M	Nb	<	0.000500	O	Si		0.007842	M	Zr	<	0.000500
O	As	<	0.012000	M	Ga	<	0.004900	M	Nd	<	0.000500	M	Sm	<	0.000500				
M	Au	<	0.006500	M	Gd	<	0.000500	O	Ni		0.003049	M	Sn		0.002614				
O	B	<	0.019000	M	Ge	<	0.009100	M	Os	<	0.000500	M	Sr	<	0.000500				
M	Ba	<	0.000500	M	Hf	<	0.000500	O	P	<	0.059000	M	Ta	<	0.000500				
O	Be	<	0.000230	O	Hg	<	0.003800	M	Pb		0.016774	M	Tb	<	0.000500				
M	Bi	<	0.002400	M	Ho	<	0.000500	M	Pd	<	0.001000	M	Te	<	0.017000				
O	Ca		0.052283	M	In	<	0.003500	M	Pr	<	0.000500	M	Th	<	0.000500				
O	Cd		0.000588	M	Ir	<	0.001000	M	Pt	<	0.000500	M	Ti	<	0.002000				
M	Ce	<	0.000500	O	K		0.017209	M	Rb	<	0.002500	M	Tl	<	0.000500				
M	Co		0.000653	M	La	<	0.000500	M	Re	<	0.000500	M	Tm	<	0.000500				
O	Cr		0.001089	O	Li	<	0.000230	M	Rh	<	0.000500	M	U	<	0.000500				
M	Cs	<	0.000500	M	Lu	<	0.000500	M	Ru	<	0.005000	M	V	<	0.000500				
O	Cu		0.001938	O	Mg		0.000871	O	S	<	0.048000	M	W	<	0.001000				
M	Dy	<	0.000500	O	Mn		0.000172	M	Sb	<	0.004300	M	Y	<	0.000500				
M	Er	<	0.000500	M	Mo	<	0.001500	O	Sc	<	0.000900	M	Yb	<	0.000500				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 65.39 +2 4 Zn(OH)(aq)1+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media forming insoluble carbonate and hydroxide. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Zn Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3); Organic based (dry ash at 4500C and dissolve ash in HCl) (sulfuric/peroxide acid digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 66 amu	7 ppt	N/A	50Ti16O,50Cr16O, 50V16O, 34S16O2, 32S16O18O, 32S17O2, 33S16O17O, 32S34S, 33S2
ICP-OES 202.548 nm	0.004/0.0002 µg/mL	1	Nb, Cu, Co, Hf
ICP-OES 206.200 nm	0.006/0.0006 µg/mL	1	Sb, Ta, Bi, Os
ICP-OES 213.856 nm	0.002/0.0004 µg/mL	1	Ni, Cu, V

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 22, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

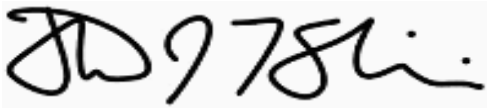
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSE10
Lot Number:	S2-SE711004
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Selenium
Starting Material:	Se Metal
Starting Material Lot#:	1962
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9955 ± 61 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9955 ± 50 µg/mL**
ICP Assay NIST SRM 3149 Lot Number: 100901

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002242	M	Eu	<	0.000373	O	Na		0.013654	s	Se	<		O	Zn		0.002374
M	Al		0.004450	M	Fe		0.008478	O	Nb	<	0.002975	O	Si		0.006249	M	Zr	<	0.001868
O	As	<	0.022040	M	Ga	<	0.000373	M	Nd	<	0.000373	M	Sm	<	0.000373				
M	Au	<	0.000373	M	Gd	<	0.000373	O	Ni		0.001843	M	Sn		0.000847				
O	B	<	0.007714	M	Ge	<	0.002616	M	Os	<	0.000373	M	Sr	<	0.001121				
M	Ba	<	0.001495	M	Hf	<	0.000373	O	P	<	0.022040	M	Ta	<	0.000373				
M	Be	<	0.001495	M	Hg	<	0.002240	M	Pb		0.006358	M	Tb	<	0.006353				
M	Bi	<	0.000373	M	Ho	<	0.000373	M	Pd	<	0.000373	M	Te	<	0.012707				
O	Ca		0.006530	M	In	<	0.000373	M	Pr	<	0.001495	M	Th	<	0.002990				
M	Cd		0.001165	M	Ir	<	0.000373	M	Pt	<	0.000373	M	Ti	<	0.003363				
M	Ce	<	0.000373	O	K		0.001999	M	Rb	<	0.001868	M	Tl		0.008584				
M	Co	<	0.000373	M	La	<	0.001121	M	Re	<	0.000373	M	Tm	<	0.000373				
M	Cr		0.002861	O	Li		0.000062	M	Rh	<	0.000373	M	U	<	0.000373				
M	Cs	<	0.001121	M	Lu	<	0.000373	M	Ru	<	0.001493	M	V	<	0.000747				
M	Cu	<	0.000747	O	Mg		0.001156	O	S		0.024591	M	W	<	0.002242				
M	Dy	<	0.000373	M	Mn	<	0.000373	M	Sb	<	0.002242	M	Y	<	0.000373				
M	Er	<	0.000373	O	Mo	<	0.003195	M	Sc	<	0.001121	M	Yb	<	0.000373				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 78.96 +4 6 H_2SeO_3

Chemical Compatibility -Soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices and water. It is stable with most inorganic anions but many cationic metals form the insoluble selenites under pH neutral conditions. When fluorinated and/or under acidic conditions precipitation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Se Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (readily soluble in water); Minerals and alloys (acid digestion with HNO_3or HNO_3 / HF); Organic Matrices (acid digestion with hot concentrated H_2SO_4 accompanied by the careful dropwise addition of H_2O_2 until clear).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 82 amu	200 ppt	N/A	12C35Cl2
ICP-OES 196.026 nm	0.08/0.006 µg/mL	1	Fe
ICP-OES 203.985 nm	0.2/0.05 µg/mL	1	Sb, Ir, Cr, Ta
ICP-OES 206.279 nm	0.3/0.16 µg/mL	1	Cr, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 17, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO10
Lot Number:	S2-MO706255
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	10 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2361
Starting Material Purity:	99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10026 ± 47 µg/mL

Density: 1.011 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10032 ± 68 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

Assay Method #2 **10020 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000590	M	Eu	<	0.000300	M	Na		0.008739	M	Se	<	0.008000	M	Zn		0.005942
M	Al		0.005592	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.001747				
M	Ba		0.016778	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.062920	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	Ti	<	0.032000				
M	Ce	<	0.008300	M	K		1.293372	M	Rb		0.045442	M	Tl		0.012584				
M	Co		0.005942	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.005243	O	Li		0.000594	M	Rh	<	0.000300	M	U	<	0.005300				
M	Cs		0.005243	M	Lu	<	0.000300	M	Ru	<	0.079000	M	V	<	0.000890				
M	Cu		0.022371	M	Mg		0.005592	i	S	<		M	W		0.873900				
M	Dy	<	0.000300	M	Mn	<	0.005900	M	Sb		0.015031	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.001200	M	Yb	<	0.000300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9 [MoO4]-2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 04, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 04, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
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P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTL10
Lot Number:	T2-TL714687
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Thallium
Starting Material:	TlNO3
Starting Material Lot#:	2118
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10030 ± 42 µg/mL

Density: 1.036 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10040 ± 43 µg/mL**
ICP Assay NIST SRM 3158 Lot Number: 151215

Assay Method #2 **10010 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL(

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000200	O	Na		0.002489	M	Se	<	0.011019	O	Zn		0.002298
O	Al	<	0.004184	O	Fe	<	0.002824	M	Nb	<	0.000200	O	Si		0.003760	M	Zr	<	0.000200
M	As	<	0.002003	M	Ga	<	0.000200	M	Nd	<	0.000200	M	Sm	<	0.000200				
O	Au	<	0.002824	M	Gd	<	0.000200	M	Ni		0.001724	M	Sn	<	0.000601				
O	B	<	0.004184	M	Ge	<	0.000801	M	Os	<	0.000198	O	Sr	<	0.000313				
M	Ba	<	0.000400	M	Hf	<	0.000200	O	P	<	0.010460	M	Ta	<	0.000200				
O	Be	<	0.000104	M	Hg	<	0.000794	M	Pb		0.000811	M	Tb	<	0.000200				
M	Bi	<	0.005209	M	Ho	<	0.000200	M	Pd	<	0.000400	M	Te	<	0.005008				
O	Ca		0.002436	M	In	<	0.000200	M	Pr	<	0.000200	M	Th	<	0.000200				
M	Cd		0.001318	M	Ir	<	0.000198	M	Pt	<	0.000801	O	Ti	<	0.001255				
M	Ce	<	0.000200	O	K		0.006175	M	Rb	<	0.000200	s	Tl	<					
M	Co	<	0.000601	M	La	<	0.000200	M	Re	<	0.000200	M	Tm	<	0.000200				
M	Cr	<	0.000801	O	Li	<	0.000177	M	Rh	<	0.000200	M	U	<	0.000200				
M	Cs	<	0.003606	M	Lu	<	0.000200	M	Ru	<	0.000397	M	V	<	0.002203				
M	Cu	<	0.001001	O	Mg		0.000529	O	S	<	0.015690	M	W	<	0.000601				
M	Dy	<	0.000200	M	Mn	<	0.000801	M	Sb	<	0.000400	M	Y	<	0.000200				
M	Er	<	0.000200	M	Mo	<	0.001202	O	Sc	<	0.000711	M	Yb	<	0.000200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 204.38 +1 6 Tl(H2O)61+
Chemical Compatibility - Soluble in HCl, HNO3, and H2SO4. Stable with most metals and inorganic anions. The sulfite, thiocyanate and oxalate are moderately soluble; the phosphate and arsenite are slightly soluble and the sulfide is insoluble.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Tl Containing Samples)Preparation and Solution) -Metal (Best dissolved in HNO3 which forms chiefly the Tl1+ ion.); Oxide (The thallous oxide is readily soluble in water. The thallic oxide requires high levels of acid); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 205 amu	2 ppt	N/A	189Os16O
ICP-OES 190.864 nm	0.04 / 0.004 µg/mL	1	V, Ti
ICP-OES 276.787 nm	0.1 / 0.01 µg/mL	1	Ta, V, Fe, Cr
ICP-OES 351.924 nm	0.2 / 0.02 µg/mL	1	Th, Ce, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 08, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 08, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

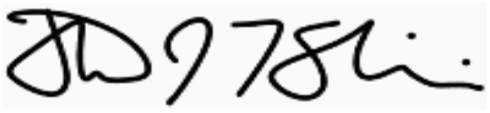
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCD10
Lot Number:	S2-CD710508
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cadmium
Starting Material:	Cd Metal
Starting Material Lot#:	1953
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10008 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10010 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10011 ± 30 µg/mL**
ICP Assay NIST SRM 3108 Lot Number: 130116

Assay Method #3 **10003 ± 30 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	<	0.003200	O	Eu	<	0.002500	O	Na		0.005499	M	Se	<	0.005700	O	Zn	<	0.001100
O	Al		0.008903	O	Fe		0.000602	M	Nb	<	0.000400	O	Si		0.016758	O	Zr	<	0.002600
M	As	<	0.003600	M	Ga	<	0.001200	M	Nd	<	0.000800	M	Sm	<	0.000400				
M	Au	<	0.000810	M	Gd	<	0.000400	M	Ni	<	0.003600	M	Sn	<	0.003200				
O	B		0.004189	O	Ge	<	0.012000	M	Os	<	0.000810	O	Sr	<	0.000330				
M	Ba	<	0.002400	M	Hf	<	0.000400	O	P	<	0.022000	M	Ta	<	0.000800				
M	Be	<	0.000400	M	Hg	<	0.001700	M	Pb	<	0.002400	M	Tb	<	0.000400				
M	Bi	<	0.000400	M	Ho	<	0.000400	M	Pd	<	0.001200	M	Te	<	0.008000				
O	Ca		0.011259	O	In	<	0.013000	M	Pr	<	0.000400	M	Th	<	0.000400				
s	Cd	<		M	Ir	<	0.000410	M	Pt	<	0.000400	O	Ti		0.000602				
M	Ce	<	0.000400	O	K		0.005237	M	Rb	<	0.004400	M	Tl		0.000523				
M	Co	<	0.000400	M	La	<	0.000400	M	Re	<	0.000400	M	Tm	<	0.000400				
O	Cr	<	0.005100	O	Li	<	0.000054	M	Rh	<	0.000400	M	U	<	0.000400				
M	Cs	<	0.002400	M	Lu	<	0.000400	M	Ru	<	0.002500	M	V	<	0.002000				
O	Cu	<	0.004800	O	Mg		0.000288	O	S	<	0.022000	M	W	<	0.000400				
M	Dy	<	0.000400	O	Mn	<	0.000860	O	Sb	<	0.018000	M	Y	<	0.000400				
M	Er	<	0.000400	M	Mo	<	0.001600	O	Sc	<	0.000430	M	Yb	<	0.000400				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 112.41 +2 4 Cd2(OH) (aq)3+ and Cd(OH)(aq)

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 , and HF. Avoid basic media forming insoluble carbonate and hydroxide.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3 / LDPE container.

Cd Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (soluble in HCl or HNO3); Ores (dissolve in HCl /HNO3 then take to fumes with H2SO4. The silica and lead sulfate are filtered off after the addition of water); Organic based (dry ash at 450°C and dissolve ash in HCl), (sulfuric / peroxide acid digestion).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 111 amu	11 ppt	n/a	95Mo16O
ICP-OES 214.438 nm	0.003 / 0.0003 µg/mL	1	Pt, Ir
ICP-OES 226.502 nm	0.003 / 0.0003 µg/mL	1	Ir
ICP-OES 228.802 nm	0.003 / 0.0003 µg/mL	1	Co, Ir, As, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 01, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 01, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMN10
Lot Number:	S2-MN704240
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Manganese
Starting Material:	Mn Metal
Starting Material Lot#:	2275
Starting Material Purity:	99.9909%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10011 ± 30 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9989 ± 69 µg/mL**
ICP Assay NIST SRM 3132 Lot Number: 050429

Assay Method #2 **10011 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10024 ± 47 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001500	M	Eu	<	0.000730	O	Na		0.176097	M	Se	<	0.006600	M	Zn		0.009925
O	Al		0.004322	M	Fe	<	0.650000	M	Nb	<	0.000730	O	Si		0.097654	M	Zr	<	0.000730
M	As	<	0.008000	M	Ga		0.004322	M	Nd	<	0.001500	M	Sm	<	0.000730				
M	Au	<	0.000730	M	Gd	<	0.000730	M	Ni		0.024013	M	Sn	<	0.002200				
M	B		0.068838	M	Ge	<	0.004400	M	Os	<	0.000730	O	Sr		0.000928				
M	Ba	<	0.001500	M	Hf	<	0.000730	i	P	<		M	Ta	<	0.000730				
M	Be	<	0.000730	M	Hg	<	0.002200	M	Pb		0.007364	M	Tb	<	0.000730				
M	Bi	<	0.003000	M	Ho	<	0.000730	M	Pd	<	0.000730	M	Te	<	0.019000				
O	Ca		0.062434	M	In	<	0.003000	M	Pr	<	0.000730	M	Th	<	0.000730				
M	Cd	<	0.001500	M	Ir	<	0.000730	M	Pt	<	0.000730	O	Ti	<	0.006500				
M	Ce	<	0.007300	O	K		0.006403	M	Rb	<	0.006600	M	Tl	<	0.000730				
O	Co		0.014728	M	La	<	0.003000	M	Re	<	0.000730	M	Tm	<	0.000730				
O	Cr		0.272151	O	Li		0.000416	M	Rh	<	0.003000	M	U	<	0.001500				
M	Cs	<	0.000730	M	Lu	<	0.000730	M	Ru	<	0.004400	M	V	<	0.000730				
O	Cu		0.007684	O	Mg		0.320177	i	S	<		M	W	<	0.004400				
M	Dy	<	0.001500	s	Mn	<		M	Sb	<	0.021000	O	Y		0.001360				
M	Er	<	0.001500	M	Mo		0.010245	O	Sc	<	0.004100	M	Yb	<	0.000730				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 54.94 +2 6 $Mn(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO_3/LDPE container.

Mn Containing Samples (Preparation and Solution) -Metal (Soluble in dilute acids); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H_2SO_4 and heat to SO_3 fumes - dense white fumes).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 55 amu	10 ppt	n/a	40Ar14N1H,39K16O,37Cl18O,40Ar15N,38Ar17O,36Ar18O1H ,38Ar16O1H,37Cl17O1H,23Na32S
ICP-OES 257.610 nm	0.0014 / 0.00002 µg/mL	1	Ce, W, Re
ICP-OES 259.373 nm	0.0016 / 0.00002 µg/mL	1	U, Ta, Mo, Fe, Nb
ICP-OES 260.569 nm	0.0021 / 0.00002 µg/mL	1	Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 17, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSB10
Lot Number:	R2-SB688559
Matrix:	3% (v/v) HNO3 3% (w/v) tartaric acid
Value / Analyte(s):	10 000 µg/mL ea: Antimony
Starting Material:	Antimony Metal
Starting Material Lot#:	1857
Starting Material Purity:	99.9894%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10003 ± 47 µg/mL

Density: 1.061 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10003 ± 41 µg/mL**
ICP Assay NIST SRM 3102a Lot Number: 140911

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000300	O	Na		0.140000	M	Se	<	0.007300	O	Zn		0.005000
M	Al		0.003200	O	Fe		0.060000	M	Nb	<	0.000100	O	Si		0.150000	O	Zr	<	0.006300
M	As	<	0.004400	M	Ga	<	0.000400	M	Nd	<	0.000100	M	Sm	<	0.000100				
M	Au	<	0.000210	M	Gd	<	0.000100	O	Ni		0.004800	M	Sn	<	0.001800				
M	B	<	0.011000	M	Ge	<	0.000600	M	Os	<	0.000110	O	Sr		0.000750				
O	Ba	<	0.004900	M	Hf	<	0.000100	O	P		0.540000	M	Ta		0.003300				
M	Be	<	0.000400	M	Hg	<	0.000110	M	Pb	<	0.000400	M	Tb	<	0.000100				
M	Bi	<	0.000200	M	Ho	<	0.000100	M	Pd	<	0.000210	M	Te	<	0.000600				
O	Ca		0.110000	M	In	<	0.000100	M	Pr	<	0.001600	M	Th	<	0.000100				
M	Cd	<	0.000200	M	Ir	<	0.000110	M	Pt	<	0.000600	M	Ti	<	0.002800				
M	Ce		0.006500	O	K		0.020000	M	Rb	<	0.001000	M	Tl	<	0.000100				
M	Co	<	0.000200	O	La	<	0.016000	M	Re	<	0.000100	M	Tm	<	0.000100				
M	Cr		0.006900	O	Li	<	0.000430	M	Rh	<	0.000300	M	U	<	0.000100				
M	Cs	<	0.000200	M	Lu	<	0.000100	M	Ru	<	0.000310	M	V	<	0.000800				
M	Cu	<	0.000600	O	Mg		0.021000	n	S	<		M	W	<	0.000200				
M	Dy	<	0.000100	O	Mn		0.001900	s	Sb	<		M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo	<	0.000500	O	Sc	<	0.002300	M	Yb	<	0.000100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 121.75 +3 6 Sb(O)C4H4O6-1

Chemical Compatibility -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.

Sb Containing Samples (Preparation and Solution) -Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides (Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 30, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 30, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS10
Lot Number:	T2-AS718260
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Arsenic
Starting Material:	As Metal
Starting Material Lot#:	2208
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10060 ± 40 µg/mL

Density: 1.037 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10062 ± 46 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

Assay Method #2 **10055 ± 76 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.003200	M	Eu	< 0.000530	O	Na	0.032544	M	Se	< 0.006300	O	Zn	0.001952			
M	Al	0.007593	O	Fe	0.001475	O	Nb	< 0.012000	O	Si	0.238658	O	Zr	< 0.004100			
s	As	<	M	Ga	< 0.000530	M	Nd	< 0.000530	M	Sm	< 0.000530						
M	Au	< 0.003100	M	Gd	< 0.000530	M	Ni	< 0.002100	M	Sn	< 0.000530						
M	B	0.026035	M	Ge	< 0.001600	M	Os	< 0.000520	M	Sr	< 0.000530						
M	Ba	< 0.000530	M	Hf	< 0.000530	O	P	< 0.043000	M	Ta	< 0.000530						
O	Be	< 0.000360	M	Hg	< 0.001600	M	Pb	< 0.002100	M	Tb	< 0.000530						
M	Bi	< 0.000530	M	Ho	< 0.000530	M	Pd	< 0.001100	M	Te	< 0.004700						
O	Ca	0.004339	M	In	< 0.023000	M	Pr	< 0.005300	M	Th	< 0.000530						
M	Cd	< 0.001100	M	Ir	< 0.000520	M	Pt	< 0.000530	O	Ti	< 0.002300						
M	Ce	< 0.000530	O	K	0.002061	M	Rb	< 0.000530	M	Tl	< 0.000530						
M	Co	< 0.000530	M	La	< 0.001100	M	Re	< 0.000530	M	Tm	< 0.000530						
O	Cr	< 0.001800	O	Li	< 0.000120	M	Rh	< 0.000530	M	U	< 0.000530						
M	Cs	< 0.005300	M	Lu	< 0.000530	M	Ru	< 0.000520	M	V	< 0.002700						
M	Cu	< 0.001600	O	Mg	0.000154	O	S	0.028205	M	W	< 0.012000						
M	Dy	< 0.000530	O	Mn	0.000154	M	Sb	< 0.000530	M	Y	< 0.000530						
M	Er	< 0.000530	M	Mo	< 0.000530	O	Sc	< 0.001700	M	Yb	< 0.000530						

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 74.92 ; mix of +3 and +5 ; 6 ; H3AsO4 and HAsO2

Chemical Compatibility - Arsenic has no cationic chemistry. It is soluble in HCl, HNO3,H3PO4, H2SO4 and HF aqueous matrices water and NH4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO3 / LDPE container.

As Containing Samples (Preparation and Solution) - Metal (soluble in 1:1 H2O / HNO3); Oxides (the oxide exists in crystalline and amorphous forms where the amorphic form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K2CO3 and KNO3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na2CO3 / Na2O2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37Cl,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBA10
Lot Number:	R2-BA692576
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Barium
Starting Material:	Barium Nitrate
Starting Material Lot#:	1969
Starting Material Purity:	99.9982%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10018 ± 50 µg/mL** ICP Assay NIST SRM 3104a Lot Number: 140909
Assay Method #2	**10023 ± 31 µg/mL** Gravimetric NIST SRM Lot Number: See Sec. 4.2
Assay Method #3	**10023 ± 30 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000410	O	Eu	<	0.005200	O	Na		0.004610	M	Se	<	0.003700	O	Zn		0.000658
M	Al	<	0.003100	O	Fe		0.015707	M	Nb	<	0.000210	O	Si		0.005573	M	Zr	<	0.001300
M	As	<	0.001300	M	Ga	<	0.000210	M	Nd	<	0.000210	O	Sm	<	0.021000				
M	Au	<	0.001300	M	Gd	<	0.000210	M	Ni	<	0.000810	M	Sn	<	0.000410				
O	B	<	0.005200	M	Ge	<	0.002500	M	Os	<	0.000410	O	Sr		0.003850				
s	Ba	<		M	Hf	<	0.000810	O	P	<	0.026000	M	Ta	<	0.000410				
O	Be	<	0.000320	M	Hg	<	0.000210	M	Pb	<	0.002300	M	Tb	<	0.000210				
M	Bi	<	0.000210	M	Ho	<	0.000210	M	Pd	<	0.000210	M	Te	<	0.001900				
O	Ca		0.007093	M	In	<	0.000210	M	Pr	<	0.000210	M	Th	<	0.000210				
M	Cd	<	0.000210	M	Ir	<	0.000210	M	Pt	<	0.000210	M	Ti	<	0.002100				
M	Ce	<	0.001300	O	K		0.035467	M	Rb	<	0.002100	M	Tl	<	0.000210				
M	Co	<	0.000410	O	La	<	0.005200	M	Re	<	0.000210	M	Tm	<	0.000410				
M	Cr	<	0.001700	O	Li	<	0.000630	M	Rh	<	0.000210	M	U	<	0.000210				
M	Cs	<	0.003300	M	Lu	<	0.001700	M	Ru	<	0.000210	O	V	<	0.005200				
M	Cu	<	0.001300	O	Mg		0.000861	O	S		0.268539	M	W	<	0.000410				
M	Dy	<	0.000210	M	Mn	<	0.000410	M	Sb	<	0.001300	O	Y	<	0.005200				
M	Er	<	0.001300	M	Mo	<	0.000410	M	Sc	<	0.000410	M	Yb	<	0.001300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 137.33 +2 6 $Ba(H_2O)_6^{+2}$
Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, iodate, molybdate, sulfite and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1 -10,000 ppm solutions chemically stable for years in 1-3.5% HNO_3 / LDPE container.
Ba Containing Samples (Preparation and Solution) -Metal(is best dissolved in diluted HNO_3); Ores(Carbonate fusion in Pt0 followed by HCl dissolution. If sulfate is present dissolve the fuseate using HCl / tartaric acid to prevent $BaSO_4$ precipitate); Organic Matrices (dry ash and dissolve in dilute HCl.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 138 amu	1 ppt	N/A	122Sn16O, 122Te16O
ICP-OES 230.424 nm	0.004/0.0005 µg/mL	1	Mo, Ir, Co
ICP-OES 233.527 nm	0.004/0.0003 µg/mL	1	
ICP-OES 455.403 nm	0.002/0.0001 µg/mL	1	Zr, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 11, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 11, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBE10
Lot Number:	R2-BE692992
Matrix:	6% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Beryllium
Starting Material:	Beryllium Acetate
Starting Material Lot#:	2281
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10032 ± 41 µg/mL

Density: 1.128 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10042 ± 67 µg/mL**
ICP Assay NIST SRM 3105a Lot Number: 090514

Assay Method #2 **10025 ± 51 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001100	M	Eu	<	0.000270	O	Na		0.040962	M	Se	<	0.005000	M	Zn		0.013054
O	Al		0.016205	O	Fe		0.015754	M	Nb	<	0.000270	O	Si		0.024307	O	Zr	<	0.001900
M	As	<	0.002900	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270				
M	Au	<	0.000520	M	Gd	<	0.000270	M	Ni	<	0.003700	M	Sn	<	0.000790				
M	B	<	0.091000	M	Ge	<	0.000270	M	Os	<	0.000260	M	Sr		0.000630				
M	Ba		0.002700	M	Hf	<	0.000270	O	P	<	0.066000	M	Ta	<	0.000270				
s	Be	<		M	Hg	<	0.000520	M	Pb	<	0.000270	M	Tb	<	0.000270				
M	Bi	<	0.000530	M	Ho	<	0.000270	M	Pd	<	0.000520	M	Te	<	0.003700				
O	Ca		0.072022	M	In	<	0.000790	M	Pr	<	0.000270	M	Th	<	0.000270				
M	Cd	<	0.000790	M	Ir	<	0.000260	M	Pt	<	0.000270	O	Ti	<	0.000400				
M	Ce	<	0.000270	O	K		0.045014	M	Rb	<	0.000270	M	Tl	<	0.000790				
O	Co	<	0.003200	M	La	<	0.000270	M	Re	<	0.000270	M	Tm	<	0.000270				
O	Cr	<	0.001800	O	Li	<	0.000660	M	Rh	<	0.001100	M	U	<	0.000270				
M	Cs		0.001440	M	Lu	<	0.000270	M	Ru	<	0.000260	M	V	<	0.000790				
M	Cu	<	0.002100	O	Mg		0.016205	i	S	<		M	W	<	0.000530				
M	Dy	<	0.000270	M	Mn		0.001215	M	Sb	<	0.000270	M	Y	<	0.000270				
M	Er	<	0.000270	M	Mo	<	0.000530	O	Sc	<	0.000930	M	Yb	<	0.000270				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 9.01 +2 4 $Be(H_2O)_4^{+2}$

Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1 % HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 5-10 % HNO_3 / LDPE container.

Be Containing Samples (Preparation and Solution) - Meta l(is best dissolved in diluted H_2SO_4); BeO (boiling nitric, hydrochloric, or sulfuric acids or KHSO4 fusion); Ores (H_2SO_4/HF digestion or carbonate fusion in Pt0); Organic Matrices (sulfuric/peroxide digestion or nitric/sulfuric/perchloric acid decomposition, or dry ash and dissolution according to the BeO procedure above).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 9 amu	4 ppt	N/A	
ICP-OES 234.861 nm	0.0003/0.00016 µg/mL	1	Fe, Ta, Mo
ICP-OES 313.042 nm	0.0003/0.00009 µg/mL	1	V, Ce, U
ICP-OES 313.107 nm	0.0007/0.0005 µg/mL	1	Ce, Th, Tm

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

11.1 Certification Issue Date

May 13, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 13, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

11.4 Revision Status

- Revision 1 - Revised on Thursday, Jan 14, 2021 by utruong. Revision was made for the following reason: Modified Section 7 Chemical Form in Solution.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCO10
Lot Number:	R2-CO695285
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cobalt
Starting Material:	Co Metal
Starting Material Lot#:	2326
Starting Material Purity:	99.9934%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10012 ± 31 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10031 ± 67 µg/mL**
ICP Assay NIST SRM 3113 Lot Number: 190630

Assay Method #2 **10019 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10000 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	0.014660	M	Eu	<	0.000590	O	Na	0.007534	M	Se	<	0.019000	M	Zn	0.003461	
M	Al	< 0.024000	M	Fe	0.050905	M	Nb	<	0.000590	O	Si	0.075340	M	Zr	<	0.001200	
i	As	<	M	Ga	<	0.000590	M	Nd	<	0.000590	M	Sm	<	0.000590			
M	Au	< 0.004100	M	Gd	<	0.000590	O	Ni	0.427608	M	Sn	<	0.001200				
M	B	< 0.031000	M	Ge	<	0.003000	M	Os	<	0.000590	O	Sr	<	0.000260			
M	Ba	< 0.000590	M	Hf	<	0.000590	n	P	<		M	Ta	<	0.001200			
O	Be	< 0.001300	M	Hg	<	0.001800	M	Pb	0.003257	M	Tb	<	0.000590				
M	Bi	< 0.003000	M	Ho	<	0.000590	M	Pd	<	0.000590	M	Te	<	0.005300			
O	Ca	0.010588	M	In	<	0.001200	M	Pr	<	0.000590	M	Th	<	0.000590			
M	Cd	< 0.004700	M	Ir	<	0.001200	M	Pt	<	0.002400	M	Ti	<	0.014000			
M	Ce	< 0.000590	O	K	0.008144	M	Rb	<	0.000590	M	Tl	0.002647					
s	Co	<	M	La	<	0.000590	M	Re	<	0.000590	M	Tm	<	0.000590			
M	Cr	< 0.021000	O	Li	<	0.000130	M	Rh	<	0.000590	M	U	<	0.000590			
M	Cs	< 0.002400	M	Lu	<	0.000590	M	Ru	<	0.007100	O	V	<	0.000880			
M	Cu	0.189369	O	Mg	0.001893	n	S	<		M	W	<	0.000590				
M	Dy	< 0.000590	M	Mn	<	0.001800	M	Sb	<	0.003600	M	Y	<	0.000590			
M	Er	< 0.000590	M	Mo	<	0.002400	O	Sc	<	0.001600	M	Yb	<	0.000590			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.93 +2 6 $Co(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Co Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 59 amu	2 ppt	n/a	42Ca16O1H , 40Ar18O1H , 36Ar23Na, 43Ca16O, 24Mg35Cl
ICP-OES 228.616 nm	0.01/0.001 µg/mL	1	
ICP-OES 237.862 nm	0.01/0.002 µg/mL	1	W, Re, Al, Ta
ICP-OES 238.892 nm	0.01/0.002 µg/mL	1	Fe, W, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 04, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 04, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAG10
Lot Number:	S2-AG712977
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Silver
Starting Material:	Ag Shot
Starting Material Lot#:	2289
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10051 ± 30 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10051 ± 52 µg/mL**
ICP Assay NIST SRM 3151 Lot Number: 160729

Assay Method #2 **10051 ± 19 µg/mL**
Volhard NIST SRM 999c Lot Number: 999c

Assay Method #3 **10049 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s	Ag	<		M	Eu	<	0.000260	O	Na		0.003811	M	Se	<	0.003900	O	Zn		0.048146
M	Al		0.002688	O	Fe		0.006419	M	Nb	<	0.000260	O	Si		0.005215	M	Zr	<	0.000260
M	As	<	0.001100	M	Ga	<	0.000260	M	Nd	<	0.000260	M	Sm	<	0.000260				
M	Au	<	0.000260	M	Gd	<	0.000260	O	Ni		0.001765	M	Sn		0.020060				
O	B	<	0.004300	M	Ge	<	0.002300	M	Os	<	0.001100	O	Sr	<	0.000110				
M	Ba	<	0.000520	M	Hf	<	0.000260	O	P	<	0.017000	M	Ta	<	0.000260				
O	Be	<	0.001100	M	Hg	<	0.000770	M	Pb	<	0.003600	M	Tb	<	0.000260				
M	Bi		0.004814	M	Ho	<	0.000260	M	Pd		0.044134	M	Te	<	0.009000				
O	Ca		0.005215	M	In		0.003691	M	Pr	<	0.000260	M	Th	<	0.000260				
M	Cd	<	0.000260	M	Ir	<	0.000520	M	Pt	<	0.001100	O	Ti	<	0.000440				
M	Ce	<	0.002100	O	K	<	0.008700	M	Rb	<	0.001100	M	Tl	<	0.004100				
O	Co	<	0.000330	M	La	<	0.000260	M	Re	<	0.000260	M	Tm	<	0.000260				
O	Cr	<	0.002500	O	Li	<	0.000110	M	Rh	<	0.000520	M	U	<	0.000260				
M	Cs	<	0.002600	M	Lu	<	0.000260	M	Ru	<	0.000260	M	V	<	0.000260				
O	Cu		0.357085	O	Mg		0.001203	O	S	<	0.017000	M	W	<	0.000260				
M	Dy	<	0.000260	O	Mn	<	0.000220	M	Sb	<	0.014000	M	Y	<	0.000260				
M	Er	<	0.000260	M	Mo	<	0.000260	O	Sc	<	0.000220	M	Yb	<	0.000260				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 107.87 +1 6 $Ag(H_2O)_6^+$

Chemical Compatibility -Stable in HNO_3, and HF. Avoid basic media. Ag forms more insoluble salts than any other metal. It also is subject to photochemical reduction to the metal in HCl media although 10 µg/mL solutions in 10% HCl [$AgCl_{x1-x}$] are commonly used in the analytical laboratory. The most common solubility problems exist with arsenate, arsenite , bromide, chloride, iodide, carbonate , chromate, cyanide, iodate, oxalate, oxide, sulfate, sulfide, tartrate, and thiocyanate in aqueous media. The addition of nitric acid renders many of these salts soluble.

Stability - 2-100 ppb levels stable for 75+ days when mixed with equivalent levels of all other elements including the precious metals (where chloride is present) when in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Ag Containing Samples (Preparation and Solution) -Metal (Soluble in HNO_3); Oxides (Soluble in HNO_3); Ores (Digestion with conc. HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 107 amu	1 ppt	N/A	91Zr16O
ICP-OES 243.779 nm	0.12/0.01 µg/mL	1	Mn, Th, Ni, Rh
ICP-OES 328.068 nm	0.007/0.0007 µg/mL	1	Ce, Rh, V
ICP-OES 338.289 nm	0.013/0.001 µg/mL	1	Ce, Cr, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCR(3)10
Lot Number:	S2-CR709784
Matrix:	10% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chromium
Starting Material:	Cr Metal
Starting Material Lot#:	2328
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10027 ± 41 µg/mL

Density: 1.072 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10027 ± 40 µg/mL**
ICP Assay NIST SRM 3112a Lot Number: 170630

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001700	M	Eu	<	0.003400	O	Na		0.090372	M	Se	<	0.012000	O	Zn	<	0.006100
M	Al		0.034916	O	Fe		0.246471	M	Nb	<	0.017000	n	Si	<		M	Zr	<	0.007800
M	As	<	0.028000	O	Ga	<	0.013000	M	Nd	<	0.013000	M	Sm	<	0.006900				
M	Au	<	0.001700	M	Gd	<	0.000560	M	Ni		0.016020	M	Sn		0.006983				
O	B	<	0.025000	O	Ge	<	0.014000	M	Os	<	0.000560	M	Sr		0.006367				
M	Ba	<	0.008900	M	Hf	<	0.000560	i	P	<		M	Ta	<	0.000560				
M	Be	<	0.013000	M	Hg	<	0.001700	M	Pb		0.010064	M	Tb	<	0.000560				
M	Bi	<	0.002300	M	Ho	<	0.000560	M	Pd	<	0.021000	M	Te	<	0.010000				
O	Ca		0.075995	M	In	<	0.000560	M	Pr	<	0.001700	M	Th	<	0.000560				
M	Cd	<	0.000560	M	Ir	<	0.000560	M	Pt	<	0.001200	O	Ti		0.013555				
M	Ce	<	0.001200	O	K		0.043132	i	Rb	<		M	Tl	<	0.000560				
M	Co	<	0.002600	M	La	<	0.001200	M	Re	<	0.001200	O	Tm	<	0.013000				
s	Cr	<		O	Li		0.000390	M	Rh	<	0.095000	M	U	<	0.000560				
M	Cs	<	0.007800	M	Lu	<	0.000560	M	Ru	<	0.087000	O	V		0.014993				
O	Cu		0.007599	O	Mg		0.000883	i	S	<		M	W	<	0.049000				
M	Dy	<	0.000560	M	Mn		0.008626	M	Sb	<	0.003400	M	Y	<	0.001700				
M	Er	<	0.019000	M	Mo	<	0.032000	M	Sc		0.003080	M	Yb	<	0.000560				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 52.00 +3 6 $Cr(H_2O)_6^{3+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cr3 Containing Samples (Preparation and Solution) -Metal (soluble in HCl); Oxides/Ores (Chrome ore/oxides are very difficult to dissolve. The following procedures [A-D] are commonly used: A. Fusion with $KHSO_4$ and extraction with hot KCl. The residue fused with Na_2CO_3 and $KClO_3$, 3:1. B. Fusion with $NaKSO_4$ and NaF 2:1, C. Fusion with magnesia or lime and sodium or potassium carbonates, 4:1. D. Fusion with Na_2O_2 or NaOH and KNO_3 or NaOH and Na_2O_2. Nickel, iron, copper, or silver crucibles should be used for D. Platinum may be used for A, <, C); Organic Matrices (ash at 4500C followed by one of the fusion methods above or sulfuric/hydrogen peroxide acid digestions may be applicable to non oxide containing samples).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 52 amu	40 ppt	N/A	36S16O, 36Ar16O - The 50Cr, 53Cr, 54Cr lines suffer from many more potential interferences from sulfur, chlorine and argon compounds of oxygen, nitrogen and carbon.
ICP-OES 205.552 nm	0.006/0.0008 µg/mL	1	Os
ICP-OES 276.654 nm	0.01/0.001 µg/mL	1	Cu, Ta, V
ICP-OES 284.325 nm	0.008/0.0007 µg/mL	1	

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 26, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **October 26, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNI10
Lot Number:	P2-NI686384
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Nickel
Starting Material:	Ni Metal
Starting Material Lot#:	2277 and 2282
Starting Material Purity:	99.9992%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9979 ± 30 µg/mL

Density: 1.038 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9971 ± 54 µg/mL**
ICP Assay NIST SRM 3136 Lot Number: 120619

Assay Method #2 **9970 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **9993 ± 33 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.002606	M	Eu	<	0.001100	O	Na		0.004965	O	Se	<	0.067000	M	Zn		0.006578
M	Al	<	0.013000	O	Fe		0.018618	M	Nb	<	0.001100	O	Si		0.010923	M	Zr	<	0.001100
O	As	<	0.067000	M	Ga	<	0.001100	M	Nd	<	0.001100	M	Sm	<	0.001100				
M	Au	<	0.002100	M	Gd	<	0.001100	s	Ni	<		M	Sn	<	0.016000				
M	B	<	0.017000	M	Ge	<	0.004200	M	Os		0.002110	O	Sr	<	0.000940				
M	Ba	<	0.001100	M	Hf	<	0.001100	i	P	<		M	Ta	<	0.001100				
O	Be	<	0.000410	M	Hg		0.014895	M	Pb		0.006578	M	Tb	<	0.001100				
M	Bi	<	0.004200	M	Ho	<	0.001100	M	Pd	<	0.001100	M	Te	<	0.015000				
O	Ca		0.003351	M	In	<	0.001100	M	Pr	<	0.001100	M	Th	<	0.001100				
M	Cd		0.001365	M	Ir		0.004716	M	Pt	<	0.001100	M	Ti	<	0.004200				
M	Ce	<	0.001100	O	K		0.004716	M	Rb	<	0.001100	M	Tl	<	0.001100				
O	Co		0.017377	M	La	<	0.001100	M	Re		0.001737	M	Tm	<	0.001100				
O	Cr	<	0.006700	O	Li	<	0.000140	M	Rh	<	0.006300	M	U	<	0.001100				
M	Cs	<	0.007300	M	Lu	<	0.001100	M	Ru	<	0.019000	M	V	<	0.002100				
M	Cu		0.004096	O	Mg		0.000372	i	S	<		M	W	<	0.006300				
M	Dy	<	0.001100	O	Mn	<	0.001900	M	Sb		0.005833	O	Y	<	0.000540				
M	Er	<	0.001100	M	Mo	<	0.008400	M	Sc	<	0.002100	M	Yb	<	0.001100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.69 +2 6 Ni(H2O)62+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Ni Containing Samples (Preparation and Solution) -Metal (Soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 60 amu	100 ppt	n/a	43Ca16O1H , 44Ca16O, 23Na37Cl
ICP-OES 221.647 nm	0.01 / 0.0009 µg/mL	1	Si
ICP-OES 231.604 nm	0.02 / 0.002 µg/mL	1	Sb, Ta, Co
ICP-OES 232.003 nm	0.02 / 0.006 µg/mL	1	Cr, Re, Os, Nb, Ag, Pt, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGV10
Lot Number:	S2-V711005
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Vanadium
Starting Material:	Vanadium Pentoxide
Starting Material Lot#:	1782
Starting Material Purity:	99.9877%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10014 ± 30 µg/mL

Density: 1.104 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10017 ± 42 µg/mL**
ICP Assay NIST SRM 3165 Lot Number: 160906

Assay Method #2 **10013 ± 30 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000110	M	Eu	<	0.000110	O	Na		0.120000	M	Se	<	0.009400	M	Zn		0.009400
O	Al		0.120000	O	Fe		0.460000	M	Nb	<	0.001300	O	Si		0.270000	M	Zr	<	0.002900
M	As	<	0.000210	M	Ga	<	0.009300	M	Nd	<	0.000610	M	Sm	<	0.000110				
M	Au	<	0.004700	M	Gd	<	0.000110	M	Ni		0.012000	M	Sn		0.003900				
M	B		0.051000	M	Ge	<	0.000410	M	Os	<	0.000110	O	Sr		0.007100				
M	Ba		0.003600	M	Hf	<	0.000110	O	P	<	0.034000	M	Ta	<	0.000110				
O	Be	<	0.000560	M	Hg	<	0.000410	M	Pb		0.001400	M	Tb	<	0.000110				
M	Bi	<	0.000210	M	Ho	<	0.000110	M	Pd	<	0.000410	M	Te	<	0.000110				
O	Ca		0.730000	M	In	<	0.000110	M	Pr	<	0.000110	M	Th	<	0.000210				
M	Cd	<	0.000610	M	Ir	<	0.000110	M	Pt	<	0.000110	M	Ti		0.017000				
M	Ce	<	0.000610	M	K		0.052000	M	Rb	<	0.000310	M	Tl	<	0.000110				
M	Co	<	0.001300	M	La	<	0.000410	M	Re		0.001700	M	Tm	<	0.000110				
O	Cr		0.170000	M	Li	<	0.000810	M	Rh	<	0.000110	M	U	<	0.000410				
M	Cs		0.005600	M	Lu	<	0.000110	M	Ru	<	0.000110	s	V	<					
M	Cu	<	0.001300	M	Mg		0.053000	i	S	<		M	W		0.002000				
M	Dy	<	0.000110	M	Mn		0.007900	M	Sb		0.078000	M	Y	<	0.000110				
M	Er	<	0.000110	M	Mo		0.094000	M	Sc	<	0.000410	M	Yb	<	0.000110				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 50.94 +5 6 $H_2V_{10}O_{28}^{4-}$

Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4, HF, H_3PO_4 and strong basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

V Containing Samples (Preparation and Solution) -Metal (Fusion with NaOH or KOH in Ni0 or Na_2CO_3 / KNO_3); Oxides (V_2O_3 - use HCl, V_2O_4 - use HCl or HNO_3, V_2O_5 - use concentrated acids); Ores (Na_2CO_3 / KNO_3 in Pt0 caution - nitrates attack Pto followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to V_2O_5 above) .

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 51 amu	4 ppt	N/A	34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2
ICP-OES 290.882 nm	0.008 / 0.0008 µg/mL	1	Hf, Nb
ICP-OES 292.402 nm	0.006 / 0.001 µg/mL	1	Th
ICP-OES 309.311 nm	0.005 / 0.001 µg/mL	1	Mg, U, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

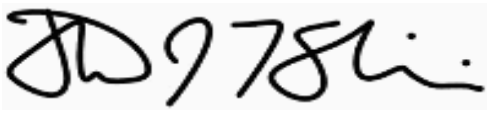
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAL10
Lot Number:	T2-AL716102
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Aluminum
Starting Material:	Aluminum Nitrate Nonahydrate
Starting Material Lot#:	2460
Starting Material Purity:	99.9938%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10049 ± 31 µg/mL

Density: 1.087 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10059 ± 40 µg/mL**
ICP Assay NIST SRM 3101a Lot Number: 140903

Assay Method #2 **10044 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10049 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002100	M	Eu	<	0.002100	O	Na		0.352819	M	Se	<	0.005200	M	Zn	0.006018
s	Al	<		O	Fe		0.074714	M	Nb	<	0.000520	O	Si		0.017848	O	Zr	0.004358
M	As		0.008716	O	Ga		0.112072	M	Nd	<	0.000520	M	Sm	<	0.000520			
M	Au	<	0.008400	M	Gd	<	0.001100	O	Ni	<	0.006000	M	Sn		0.000747			
O	B	<	0.014000	M	Ge	<	0.005200	M	Os	<	0.000650	O	Sr		0.000518			
O	Ba		0.012867	M	Hf	<	0.004100	n	P	<		M	Ta	<	0.000520			
O	Be	<	0.000270	M	Hg	<	0.002000	M	Pb		0.002282	M	Tb	<	0.000520			
M	Bi		0.001930	M	Ho	<	0.000520	M	Pd	<	0.000520	M	Te	<	0.001100			
O	Ca		0.076790	M	In	<	0.002100	M	Pr	<	0.000520	M	Th	<	0.000520			
M	Cd	<	0.000520	M	Ir	<	0.000650	M	Pt	<	0.000520	O	Ti		0.001930			
M	Ce	<	0.001100	O	K		0.043583	M	Rb	<	0.000520	M	Tl	<	0.000520			
O	Co	<	0.005400	M	La	<	0.002100	M	Re	<	0.000520	M	Tm	<	0.000520			
O	Cr		0.006018	O	Li		0.000112	M	Rh	<	0.000520	M	U	<	0.000520			
M	Cs		0.000643	M	Lu	<	0.000520	M	Ru	<	0.002000	M	V		0.001286			
O	Cu	<	0.008300	O	Mg		0.068488	i	S	<		M	W	<	0.009800			
M	Dy	<	0.002100	O	Mn		0.000913	M	Sb	<	0.003100	M	Y	<	0.001100			
M	Er	<	0.000520	M	Mo		0.005396	O	Sc	<	0.000950	M	Yb	<	0.000520			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H2O)6+3
Chemical Compatibility -Soluble in HCl, HNO3, v F and v 2SO4. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)4(H2O)21- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); a- Al2O3 (Na2CO3 fusion in Pt0);
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 22, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 22, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

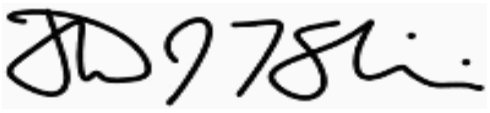
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGK10
Lot Number:	S2-K711973
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Potassium
Starting Material:	KNO3
Starting Material Lot#:	2313
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.024 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9987 ± 24 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **10004 ± 84 µg/mL**
ICP Assay NIST SRM 3141a Lot Number: 140813

Assay Method #3 **10007 ± 45 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001400	M	Eu	<	0.000660	O	Na		0.246220	M	Se	<	0.007900	O	Zn		0.018056
O	Al		0.001592	O	Fe		0.005909	M	Nb	<	0.000660	O	Si		0.011490	O	Zr	<	0.001600
M	As	<	0.005300	M	Ga	<	0.000660	M	Nd	<	0.000660	M	Sm	<	0.000660				
M	Au	<	0.002000	M	Gd	<	0.000660	O	Ni	<	0.004900	M	Sn	<	0.000660				
O	B	<	0.005600	M	Ge	<	0.002000	M	Os	<	0.003300	O	Sr		0.000055				
O	Ba	<	0.000860	M	Hf	<	0.000660	O	P	<	0.032000	M	Ta	<	0.000660				
O	Be	<	0.000082	M	Hg	<	0.002000	M	Pb	<	0.002300	M	Tb	<	0.000660				
M	Bi	<	0.006600	M	Ho	<	0.000660	M	Pd	<	0.000660	M	Te	<	0.017000				
O	Ca		0.031187	M	In	<	0.000660	M	Pr	<	0.000660	M	Th	<	0.000660				
O	Cd	<	0.000450	M	Ir	<	0.000660	M	Pt	<	0.002700	M	Ti	<	0.000660				
M	Ce	<	0.000660	s	K	<		M	Rb		0.476026	M	Tl	<	0.000660				
O	Co	<	0.000780	M	La	<	0.000660	M	Re	<	0.000660	M	Tm	<	0.000660				
O	Cr		0.000541	O	Li	<	0.000084	M	Rh	<	0.000660	M	U	<	0.000660				
M	Cs	<	0.000660	M	Lu	<	0.000660	M	Ru	<	0.000660	O	V	<	0.001100				
M	Cu	<	0.002700	O	Mg		0.006237	O	S		0.027905	M	W	<	0.000660				
M	Dy	<	0.000660	O	Mn		0.000476	M	Sb	<	0.000660	M	Y	<	0.000660				
M	Er	<	0.000660	M	Mo	<	0.000660	O	Sc	<	0.000340	O	Yb	<	0.000270				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 39.10 +1 (6) K+(aq)
Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Avoid use of HClO4 due to insolubility of the perchlorate. Stable with all metals and inorganic anions except ClO4-.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
K Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of K in sodium carbonate critical); Organic Matrices (Sulfuric/peroxide digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 39 amu	10 ppt	n/a	38ArH, 23Na16O, 78Se
ICP-OES 404.721 nm	1.1 / 0.05 µg/mL	1	U, Ce
ICP-OES 766.490 nm	0.4 / 0.001 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 771.531 nm	1.0 / 0.03 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 10, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 10, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

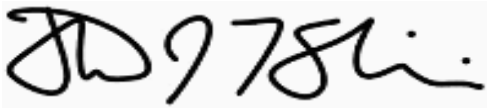
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMG10
Lot Number:	S2-MG704239
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Magnesium
Starting Material:	Magnesium Metal
Starting Material Lot#:	2168
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10053 ± 30 µg/mL

Density: 1.053 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10022 ± 62 µg/mL**
ICP Assay NIST SRM 3131a Lot Number: 140110

Assay Method #2 **10078 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10033 ± 26 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.002106	M	Eu	<	0.000910	O	Na		0.071075	O	Se	<	0.048000	O	Zn		0.003299
M	Al		0.003553	M	Fe		0.002538	M	Nb	<	0.000460	O	Si	<	0.032000	O	Zr	<	0.002700
M	As	<	0.001400	M	Ga	<	0.000460	M	Nd	<	0.000910	M	Sm	<	0.000460				
M	Au	<	0.001400	M	Gd	<	0.000460	O	Ni	<	0.001600	M	Sn	<	0.002300				
O	B		0.006853	M	Ge	<	0.001400	M	Os	<	0.000460	O	Sr		0.000279				
O	Ba		0.000964	M	Hf	<	0.000460	O	P		0.015230	M	Ta	<	0.000460				
O	Be	<	0.000120	M	Hg	<	0.000460	M	Pb	<	0.000460	M	Tb	<	0.000460				
M	Bi	<	0.000460	M	Ho	<	0.000460	M	Pd	<	0.003200	M	Te	<	0.007300				
O	Ca		0.053306	M	In	<	0.000460	M	Pr	<	0.000460	M	Th	<	0.000460				
O	Cd	<	0.000360	M	Ir	<	0.000460	M	Pt	<	0.001900	O	Ti	<	0.001700				
M	Ce	<	0.002300	M	K		0.048229	M	Rb		0.002411	M	Tl		0.003046				
M	Co	<	0.000910	M	La	<	0.002800	M	Re	<	0.000460	M	Tm	<	0.000460				
M	Cr	<	0.002300	O	Li		0.027922	M	Rh	<	0.000460	M	U	<	0.000460				
M	Cs		0.001040	M	Lu	<	0.000460	M	Ru	<	0.000460	M	V	<	0.000460				
O	Cu	<	0.003000	s	Mg	<		O	S	<	0.190000	M	W	<	0.000460				
M	Dy	<	0.000460	O	Mn		0.015230	M	Sb		0.020814	O	Y	<	0.000720				
M	Er	<	0.000460	M	Mo	<	0.000910	O	Sc	<	0.000480	M	Yb	<	0.000460				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 24.31 +2 6 Mg(H2O)6+2
Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4 avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicates, carbonates, hydroxides, oxides, and tungstates in neutral and slightly acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.
Mg Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO3); Oxide (Readily soluble in above compatible aqueous acidic solutions); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition, or dry ash and dissolution in dilute HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 24 amu	42 ppt	n/a	7Li17O, 48Ti+2 , 48Ca+2
ICP-OES 279.553 nm	0.0002 / 0.00003 µg/mL	1	Th
ICP-OES 280.270 nm	0.0003 / 0.00005 µg/mL	1	U, V
ICP-OES 285.213 nm	0.002 / 0.00003 µg/mL	1	U, Hf, Cr, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 23, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 23, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Refine your results. Redefine your industry.

Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCA10
Lot Number:	T2-CA716103
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Calcium
Starting Material:	CaCO3
Starting Material Lot#:	2472
Starting Material Purity:	99.9950%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10005 ± 30 µg/mL

Density: 1.039 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10005 ± 45 µg/mL**
ICP Assay NIST SRM 3109a Lot Number: 130213

Assay Method #2 **10005 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10005 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001200	M	Eu	<	0.001200	O	Na		0.006112	M	Se	<	0.024000	M	Zn		0.005362
M	Al		0.065419	O	Fe		0.009115	M	Nb	<	0.001200	O	Si		0.139417	O	Zr	<	0.006700
O	As	<	0.013000	M	Ga	<	0.015000	M	Nd	<	0.020000	M	Sm	<	0.001200				
M	Au	<	0.017000	M	Gd	<	0.004800	O	Ni		0.000793	M	Sn	<	0.003600				
O	B		0.001179	M	Ge	<	0.003600	M	Os	<	0.001200	M	Sr		0.081505				
O	Ba		0.002788	M	Hf	<	0.001200	O	P	<	0.041000	M	Ta	<	0.001200				
O	Be	<	0.000410	M	Hg	<	0.004800	M	Pb		0.001608	M	Tb	<	0.001200				
M	Bi		0.001608	M	Ho	<	0.001200	M	Pd	<	0.001200	M	Te	<	0.003600				
s	Ca	<		M	In	<	0.001200	M	Pr		0.000257	M	Th	<	0.001200				
O	Cd	<	0.001300	M	Ir	<	0.001200	M	Pt	<	0.003600	O	Ti	<	0.001900				
M	Ce		0.001029	O	K		0.009759	M	Rb	<	0.001200	M	Tl	<	0.001200				
O	Co		0.000418	M	La		0.001823	M	Re	<	0.001200	M	Tm	<	0.001200				
O	Cr		0.003324	O	Li	<	0.007300	M	Rh	<	0.001200	M	U		0.002144				
M	Cs		0.007399	M	Lu		0.000128	M	Ru	<	0.001200	M	V		0.001286				
O	Cu	<	0.011000	M	Mg		1.286934	O	S		0.055767	O	W	<	0.024000				
M	Dy	<	0.002400	O	Mn		0.004611	M	Sb	<	0.009600	O	Y		0.000536				
M	Er	<	0.002400	M	Mo		0.003539	O	Sc	<	0.001400	M	Yb	<	0.001200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 40.08 +2 6 Ca(H2O)6+2
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H2SO4, vF, v3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.
Ca Containing Samples)Preparation and Solution) -Metal (best dissolved in diluted HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (dry ash and dissolution in dilute HCl. Do not heat when dissolving to avoid precipitation of SiO2). The oxide, hydroxide, carbonate, phosphate, and fluoride of calcium are soluble in % levels of HCl or HNO3. The sulfates (gypsum, anhydrite, etc.), certain silicates, and complex compounds require fusion with Na2CO3 followed by HCl / water dissolution. Note that contamination is a very real problem when analyzing for trace levels.
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 44 amu	1200 ppt	n/a	16O212C, 28Si16O, 88Sr
ICP-OES 393.366 nm	0.0002 / 0.00004 µg/mL	1	U, Ce
ICP-OES 396.847 nm	0.0005 / 0.00006 µg/mL	1	Th
ICP-OES 422.673 nm	0.01 / 0.001 µg/mL	1	Ge

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 14, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 14, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

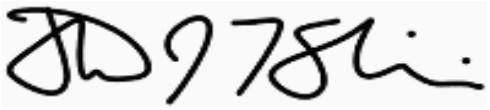
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNA10
Lot Number:	T2-NA717221
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Sodium
Starting Material:	Na2CO3
Starting Material Lot#:	2358 and 2453
Starting Material Purity:	99.9977%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9977 ± 30 µg/mL

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9974 ± 18 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **9977 ± 34 µg/mL**
ICP Assay NIST SRM 3152a Lot Number: 200413

Assay Method #3 **9987 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000930	M	Eu	<	0.000930	s	Na	<		M	Se	<	0.003800	O	Zn		0.000138
M	Al		0.004409	O	Fe		0.002393	M	Nb	<	0.000930	O	Si		0.056696	O	Zr	<	0.003200
O	As	<	0.023000	M	Ga	<	0.000930	M	Nd	<	0.000930	M	Sm	<	0.000930				
O	Au	<	0.004100	M	Gd	<	0.000930	O	Ni	<	0.003000	M	Sn	<	0.002800				
O	B		0.001385	M	Ge	<	0.004700	M	Os	<	0.000930	O	Sr		0.000251				
M	Ba		0.004031	M	Hf	<	0.000930	O	P		0.010205	M	Ta	<	0.000930				
O	Be	<	0.000130	M	Hg	<	0.000930	M	Pb	<	0.000930	M	Tb	<	0.000930				
M	Bi	<	0.000930	M	Ho	<	0.000930	M	Pd	<	0.000930	M	Te	<	0.001900				
O	Ca		0.176388	M	In	<	0.000930	M	Pr	<	0.000930	M	Th		0.000352				
O	Cd	<	0.000860	M	Ir	<	0.000930	M	Pt	<	0.000930	O	Ti		0.000592				
M	Ce	<	0.001900	O	K		0.302380	M	Rb	<	0.000930	M	Tl	<	0.000930				
O	Co	<	0.001800	O	La	<	0.002100	M	Re	<	0.000930	M	Tm	<	0.000930				
M	Cr	<	0.002800	O	Li		0.000031	M	Rh	<	0.000930	M	U	<	0.000930				
M	Cs	<	0.000930	M	Lu	<	0.000930	M	Ru	<	0.001900	O	V	<	0.001600				
O	Cu	<	0.003900	O	Mg		0.026458	O	S		0.040317	O	W	<	0.028000				
M	Dy	<	0.000930	O	Mn	<	0.000740	M	Sb	<	0.000930	O	Y	<	0.000860				
M	Er	<	0.000930	O	Mo	<	0.003600	O	Sc	<	0.000610	O	Yb	<	0.000250				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 22.99 +1 (6) Na+(aq) largely ionic in nature

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Na Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2 , 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 20, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 20, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

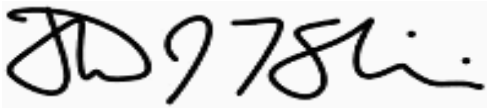
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGU1
Lot Number:	S2-U707914
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Uranium
Starting Material:	Uranyl Nitrate Hexahydrate
Starting Material Lot#:	P2-2322
Starting Material Purity:	99.9997%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 5 µg/mL

Density: 1.010 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **998 ± 5 µg/mL**
ICP Assay NIST SRM 3164 Lot Number: 080521

Assay Method #2 **1001 ± 6 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000270	M	Eu	<	0.000270	M	Na	<	0.011000	M	Se	<	0.009300	M	Zn	0.002358
M	Al	<	0.011000	M	Fe		0.003222	M	Nb	<	0.000270	M	Si	<	0.160000	M	Zr	< 0.001100
M	As	<	0.002400	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270			
M	Au	<	0.000270	M	Gd	<	0.000270	M	Ni	<	0.020000	M	Sn	<	0.011000			
M	B	<	0.000270	M	Ge	<	0.000800	M	Os	<	0.001900	M	Sr	<	0.000270			
M	Ba	<	0.003800	M	Hf	<	0.000270	i	P	<		M	Ta	<	0.000270			
M	Be	<	0.000270	M	Hg	<	0.000540	M	Pb	<	0.002200	M	Tb	<	0.000270			
M	Bi	<	0.000270	M	Ho	<	0.000270	M	Pd	<	0.000540	M	Te	<	0.003800			
M	Ca	<	0.140000	M	In	<	0.000270	M	Pr	<	0.000270	M	Th		0.000129			
M	Cd	<	0.000270	M	Ir	<	0.000270	M	Pt	<	0.000270	M	Ti	<	0.002700			
M	Ce	<	0.000540	O	K	<	0.250000	M	Rb	<	0.000800	M	Tl	<	0.000270			
M	Co	<	0.000800	M	La		0.000117	M	Re	<	0.064000	M	Tm	<	0.000270			
M	Cr		0.000943	M	Li	<	0.003000	M	Rh	<	0.000270	s	U	<				
M	Cs		0.000106	M	Lu	<	0.000270	M	Ru	<	0.000540	M	V	<	0.000540			
M	Cu	<	0.001100	M	Mg	<	0.003000	i	S	<		M	W	<	0.000540			
M	Dy	<	0.000270	M	Mn	<	0.006900	M	Sb	<	0.000270	M	Y	<	0.000270			
M	Er	<	0.000270	M	Mo	<	0.006400	M	Sc	<	0.000540	M	Yb	<	0.000270			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 238.03 +6 8 UO22+(uranyl)
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H3PO4. H2SO4 and HF matrices should not be a problem depending upon [U]. Although the UO22+ ion is distinctly basic, any U+4 will precipitate in basic media. UO22+salts are generally soluble in water and UO22+ is stable with most metals and inorganic anions. The uranyl phosphate is insoluble in water. UF4 and UF6 are water soluble.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
U Containing Samples (Preparation and Solution) -Metal (Dissolves rapidly in HCl and HNO3); Oxide (Soluble in HNO3); Ores (Digest for 1-2 hours with 1 gram of ore to 30 mL 1:1 HNO3. Silica insolubles are removed by filtration after bringing the sample to fumes with conc. H2SO4.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 238 amu	2 ppt	N/A	206Pb16O2
ICP-OES 263.553 nm	0.3 / 0.01 µg/mL	1	Ce, Ir, Th, Rh, W, Zr, Ta, Ti, V, Hf, Fe, Re, Ru
ICP-OES 367.007 nm	0.3 / 0.02 µg/mL	1	Th, Ce
ICP-OES 385.958 nm	0.3 / 0.01 µg/mL	1	Th, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Certificate of Analysis

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Refine your results. Redefine your industry.

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-2
Lot Number:	T2-MEB719895
Matrix:	3% (v/v) HNO3 tr. HF
Value / Analyte(s):	2.5 µg/mL ea: Molybdenum, Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**2.499 ± 0.015 µg/mL**	**Molybdenum, Mo**	**2.500 ± 0.017 µg/mL**

Density: 1.014 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

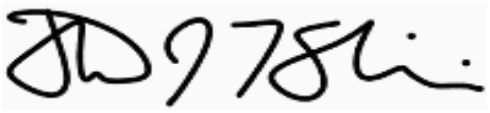
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-3
Lot Number:	T2-MEB719896
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	250 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

4 µg/mL ea:
Selenium,

2.5 µg/mL ea:

Thorium,	Thallium,
Uranium,	Vanadium,
Zinc,	Manganese,
Cadmium,	Cobalt,
Chromium,	Copper,
Arsenic,	Barium,
Beryllium,	Nickel,
Lead,	Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	250.0 ± 0.9 µg/mL	Arsenic, As	2.500 ± 0.018 µg/mL
Barium, Ba	2.501 ± 0.013 µg/mL	Beryllium, Be	2.501 ± 0.015 µg/mL
Cadmium, Cd	2.501 ± 0.013 µg/mL	Calcium, Ca	250.0 ± 1.3 µg/mL
Chromium, Cr	2.500 ± 0.015 µg/mL	Cobalt, Co	2.500 ± 0.014 µg/mL
Copper, Cu	2.500 ± 0.014 µg/mL	Iron, Fe	250.0 ± 1.0 µg/mL
Lead, Pb	2.500 ± 0.013 µg/mL	Magnesium, Mg	250.0 ± 1.3 µg/mL
Manganese, Mn	2.500 ± 0.014 µg/mL	Nickel, Ni	2.500 ± 0.014 µg/mL
Potassium, K	250.0 ± 1.2 µg/mL	Selenium, Se	4.002 ± 0.024 µg/mL
Silver, Ag	2.501 ± 0.017 µg/mL	Sodium, Na	250.0 ± 1.2 µg/mL
Thallium, Tl	2.500 ± 0.017 µg/mL	Thorium, Th	2.499 ± 0.013 µg/mL
Uranium, U	2.501 ± 0.015 µg/mL	Vanadium, V	2.500 ± 0.014 µg/mL
Zinc, Zn	2.500 ± 0.014 µg/mL		

Density: 1.042 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Calculated		See Sec. 4.2
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Mn	Calculated		See Sec. 4.2
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2

V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

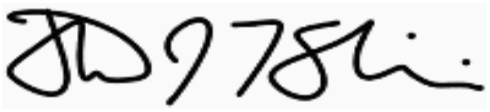
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-6020ICS-0A10
Lot Number:	T2-MEB719898
Matrix:	1.4% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Chloride,
	200 µg/mL ea: Carbon,
	100 µg/mL ea: Calcium, Aluminum, Iron, Potassium, Magnesium, Sodium, Phosphorus, Sulfur,
	2 µg/mL ea: Titanium, Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**100.0 ± 0.4 µg/mL**	**Calcium, Ca**	**100.0 ± 0.5 µg/mL**
Carbon, C	**200.1 ± 0.5 µg/mL**	**Chloride, Cl**	**1 000 ± 5 µg/mL**
Iron, Fe	**100.0 ± 0.5 µg/mL**	**Magnesium, Mg**	**100.0 ± 0.5 µg/mL**
Molybdenum, Mo	**2.001 ± 0.014 µg/mL**	**Phosphorus, P**	**100.0 ± 0.6 µg/mL**
Potassium, K	**100.0 ± 0.5 µg/mL**	**Sodium, Na**	**100.0 ± 0.5 µg/mL**
Sulfur, S	**100.0 ± 0.5 µg/mL**	**Titanium, Ti**	**2.001 ± 0.015 µg/mL**

Density: 1.009 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Acidimetric	84L	84L
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 07, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 07, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

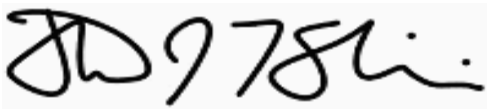
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SC1250

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-03 A	SDG:	23A0133
Sampled:	01/06/23 10:32	Prepared:	03/30/23 11:04	File ID:	SMM 03-30-23-060
% Solids:	50.34	Preparation:	SMM EPA 7471B	Analyzed:	03/30/23 14:48
Batch:	BLC0704	Sequence:	SLC0503	Initial/Final:	0.2 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GC00086

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0766	1	0.0104	0.0497	

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Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SC1241

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-06 A	SDG:	23A0133
Sampled:	01/06/23 10:51	Prepared:	03/30/23 11:04	File ID:	SMM 03-30-23-068
% Solids:	48.27	Preparation:	SMM EPA 7471B	Analyzed:	03/30/23 15:06
Batch:	BLC0704	Sequence:	SLC0503	Initial/Final:	0.2 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GC00086

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0785	1	0.0109	0.0518	

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EPA 7471B

Total Metals

LDW23-IT1217

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-07 A	SDG:	23A0133
Sampled:	01/06/23 11:14	Prepared:	03/30/23 11:04	File ID:	SMM 03-30-23-069
% Solids:	61.34	Preparation:	SMM EPA 7471B	Analyzed:	03/30/23 15:09
Batch:	BLC0704	Sequence:	SLC0503	Initial/Final:	0.2 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GC00086

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.100	1	0.00856	0.0408	

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Total Metals

LDW23-SC1185

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-08 A	SDG:	23A0133
Sampled:	01/06/23 12:00	Prepared:	03/30/23 11:04	File ID:	SMM 03-30-23-070
% Solids:	60.30	Preparation:	SMM EPA 7471B	Analyzed:	03/30/23 15:11
Batch:	BLC0704	Sequence:	SLC0503	Initial/Final:	0.2 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GC00086

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0752	1	0.00871	0.0415	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SC1234

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-09 A	SDG:	23A0133
Sampled:	01/06/23 13:34	Prepared:	03/30/23 11:04	File ID:	SMM 03-30-23-071
% Solids:	52.12	Preparation:	SMM EPA 7471B	Analyzed:	03/30/23 15:13
Batch:	BLC0704	Sequence:	SLC0503	Initial/Final:	0.2 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GC00086

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0790	1	0.0101	0.0480	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SC1215

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-10 A	SDG:	23A0133
Sampled:	01/06/23 11:38	Prepared:	03/30/23 11:04	File ID:	SMM 03-30-23-072
% Solids:	53.90	Preparation:	SMM EPA 7471B	Analyzed:	03/30/23 15:16
Batch:	BLC0704	Sequence:	SLC0503	Initial/Final:	0.2 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GC00086

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.250	1	0.00974	0.0464	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SC1222

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-11 A	SDG:	23A0133
Sampled:	01/06/23 13:00	Prepared:	03/30/23 11:04	File ID:	SMM 03-30-23-073
% Solids:	54.66	Preparation:	SMM EPA 7471B	Analyzed:	03/30/23 15:18
Batch:	BLC0704	Sequence:	SLC0503	Initial/Final:	0.2 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GC00086

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.337	1	0.00960	0.0457	

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EPA 7471B

Total Metals

LDW23-SC1227

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-12 B	SDG:	23A0133
Sampled:	01/06/23 13:18	Prepared:	03/30/23 11:04	File ID:	SMM 03-30-23-074
% Solids:	55.12	Preparation:	SMM EPA 7471B	Analyzed:	03/30/23 15:20
Batch:	BLC0704	Sequence:	SLC0503	Initial/Final:	0.2 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GC00086

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.192	1	0.00953	0.0454	

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INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1110

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-13 B	SDG:	23A0133
Sampled:	01/06/23 14:00	Prepared:	03/30/23 11:04	File ID:	SMM 03-30-23-075
% Solids:	60.11	Preparation:	SMM EPA 7471B	Analyzed:	03/30/23 15:23
Batch:	BLC0704	Sequence:	SLC0503	Initial/Final:	0.2 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GC00086

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0487	1	0.00873	0.0416	

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INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1109

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-14 B	SDG:	23A0133
Sampled:	01/06/23 14:13	Prepared:	03/30/23 11:04	File ID:	SMM 03-30-23-078
% Solids:	47.28	Preparation:	SMM EPA 7471B	Analyzed:	03/30/23 15:30
Batch:	BLC0704	Sequence:	SLC0503	Initial/Final:	0.2 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GC00086

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0467	1	0.0111	0.0529	J

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1092

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-15 B	SDG:	23A0133
Sampled:	01/06/23 14:26	Prepared:	03/30/23 11:04	File ID:	SMM 03-30-23-079
% Solids:	53.05	Preparation:	SMM EPA 7471B	Analyzed:	03/30/23 15:32
Batch:	BLC0704	Sequence:	SLC0503	Initial/Final:	0.2 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GC00086

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.150	1	0.00990	0.0471	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1091

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-16 B	SDG:	23A0133
Sampled:	01/06/23 14:50	Prepared:	03/30/23 11:04	File ID:	SMM 03-30-23-080
% Solids:	49.19	Preparation:	SMM EPA 7471B	Analyzed:	03/30/23 15:34
Batch:	BLC0704	Sequence:	SLC0503	Initial/Final:	0.2 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GC00086

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0524	1	0.0107	0.0508	

PREPARATION BATCH SUMMARY

EPA 7471B

Laboratory: Analytical Resources, LLC SDG: 23A0133

Client: Anchor QEA, LLC Project: AOC5 MR Phase 1

Batch: BLC0704 Batch Matrix: Solid Preparation: SMM EPA 7471B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1250	23A0133-03	SMM 03-30-23-060	03/30/23 11:04	Store frozen; FROZEN VOLUME USED
LDW23-SC1241	23A0133-06	SMM 03-30-23-068	03/30/23 11:04	Store frozen; FROZEN VOLUME USED
LDW23-IT1217	23A0133-07	SMM 03-30-23-069	03/30/23 11:04	Store frozen; FROZEN VOLUME USED
LDW23-SC1185	23A0133-08	SMM 03-30-23-070	03/30/23 11:04	Store frozen; FROZEN VOLUME USED
LDW23-SC1234	23A0133-09	SMM 03-30-23-071	03/30/23 11:04	Store frozen; FROZEN VOLUME USED
LDW23-SC1215	23A0133-10	SMM 03-30-23-072	03/30/23 11:04	Store frozen; FROZEN VOLUME USED
LDW23-SC1222	23A0133-11	SMM 03-30-23-073	03/30/23 11:04	Store frozen; FROZEN VOLUME USED
LDW23-SC1227	23A0133-12	SMM 03-30-23-074	03/30/23 11:04	Store frozen; FROZEN VOLUME USED
LDW23-SS1110	23A0133-13	SMM 03-30-23-075	03/30/23 11:04	Store frozen; FROZEN VOLUME USED
LDW23-SS1109	23A0133-14	SMM 03-30-23-078	03/30/23 11:04	Store frozen; FROZEN VOLUME USED
LDW23-SS1092	23A0133-15	SMM 03-30-23-079	03/30/23 11:04	Store frozen; FROZEN VOLUME USED
LDW23-SS1091	23A0133-16	SMM 03-30-23-080	03/30/23 11:04	Store frozen; FROZEN VOLUME USED
Blank	BLC0704-BLK1	SMM 03-30-23-066	03/30/23 11:04	
LCS	BLC0704-BS1	SMM 03-30-23-067	03/30/23 11:04	
LDW23-SC1250	BLC0704-DUP1	SMM 03-30-23-061	03/30/23 11:04	
LDW23-SC1250	BLC0704-MS1	SMM 03-30-23-062	03/30/23 11:04	
LDW23-SC1250	BLC0704-MSD1	SMM 03-30-23-063	03/30/23 11:04	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SUM Balance ID: BALD Matrix: Soil
Analyst: KAR Block ID: 9 Date: 03/30/23
Bath Temp: 96°C Start Time: 1003 End Time: 1104

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
23A133-03	A		0.221	50	1		
-06			0.235				
-07			0.214				
-08			0.213				
-09			0.258				
-10			0.242				
-11			0.221				
-12	B		0.231				
-13			0.230				
-14			0.228				
-15			0.268				
-16			0.213				
23A134-01			0.268				
-02			0.244				
-03			0.221				
-04			0.252				
-05			0.247				
-06	A		0.222				
-07	B		0.254				
-08			0.226				
HG7A4-blk	—		—				23A133-03
-bs	—		—				
-dup	—		0.224				
-MS	—		0.221				
-MSD	—		0.220				

Chemical/Reagent ID:

HNO_3: L2678 H_2SO_4: L922 HCl: —
5% $K_2S_2O_8$: L437 5% $KMnO_4$: K11727 Digest Tube Lot: 2210117

Form I

METHOD BLANK DATA SHEET

EPA 7471B

Total Metals

Blank

Laboratory: Analytical Resources, LLC | SDG: 23A0133

Client: Anchor QEA, LLC | Project: AOC5 MR Phase 1

Batch: BLC0704 | Laboratory ID: BLC0704-BLK1 | Prepared: 03/30/23 11:04

Matrix: Solid | Preparation: SMM EPA 7471B | Analyzed: 03/30/23 15:02

Sequence: SLC0503 | Calibration: GC00086 | Instrument: HYDRA

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	ND	1	0.00525	0.0250	U

LCS / LCS DUPLICATE RECOVERY

EPA 7471B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/30/23 15:04
Batch:	BLC0704	Laboratory ID:	BLC0704-BS1
Preparation:	SMM EPA 7471B	Sequence Name:	LCS
Initial/Final:	0.2 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Mercury	0.500	0.432		86.4	80 - 120

* Indicates values outside of QC limits

DUPLICATES

EPA 7471B

Total Metals

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLC0704-DUP1
Batch: BLC0704
Lab Source ID: 23A0133-03
Preparation: SMM EPA 7471B
Initial/Final: 0.2 g / 50 mL
Source Sample Name: LDW23-SC1250
% Solids: 50.34

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Mercury	20	0.0766	0.162	71.5	*

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

MS / MS DUPLICATE RECOVERY
EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/30/23 14:52
Batch:	BLC0704	Laboratory ID:	BLC0704-MS1
Preparation:	SMM EPA 7471B	Sequence Name:	Matrix Spike
Initial/Final:	0.2 g / 50 mL	Source Sample:	LDW23-SC1250

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Mercury	0.497	0.0766		0.674		120	75 - 125

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY
EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/30/23 14:55
Batch:	BLC0704	Laboratory ID:	BLC0704-MSD1
Preparation:	SMM EPA 7471B	Sequence Name:	Matrix Spike Dup
Initial/Final:	0.2 g / 50 mL	Source Sample:	LDW23-SC1250

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Mercury	0.497	0.688		123	1.95	20	75 - 125

* Values outside of QC limits

INITIAL CALIBRATION DATA

EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00086	Instrument:	HYDRA
Calibration Date:	03/30/2023 17:19		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Mercury	0	0	0.0001	1.661E+07	0.0005	8264000	0.001	7097000	0.002	6632000	0.005	6178000

INITIAL CALIBRATION DATA

EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00086	Instrument:	HYDRA
Calibration Date:	03/30/2023 17:19		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Mercury	7463500	71.5	0.9999		0.99	

SMM 03-30-23

SLC0503 GC00086

Method: ARI 5 ppb (NO 0.05) Operator: Admin Date of Analysis: 30 Mar 2023 11:25:40

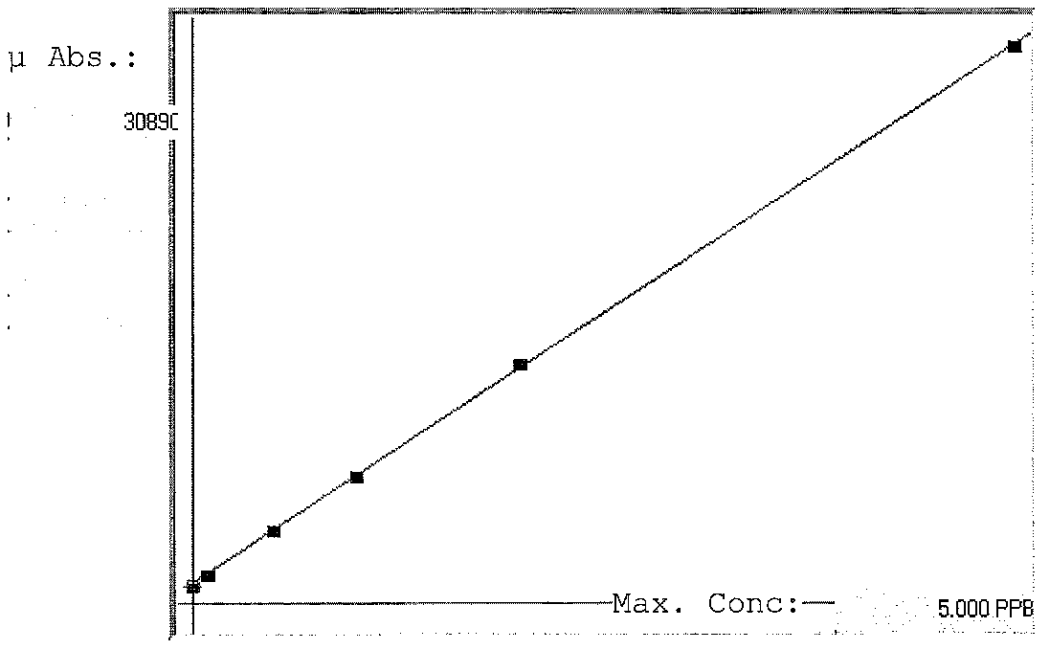
Sample ID	Mean	Units		Date	Method
SEQ-CAL1	1011	PPB		30 Mar 2023 11:27:21	ARI 5 ppb (NO 0.05)
SEQ-CAL2	1661	PPB		30 Mar 2023 11:29:43	ARI 5 ppb (NO 0.05)
SEQ-CAL3	4132	PPB		30 Mar 2023 11:32:05	ARI 5 ppb (NO 0.05)
SEQ-CAL4	7097	PPB		30 Mar 2023 11:34:25	ARI 5 ppb (NO 0.05)
SEQ-CAL5	13264	PPB		30 Mar 2023 11:36:46	ARI 5 ppb (NO 0.05)
SEQ-CAL6	30890	PPB		30 Mar 2023 11:39:06	ARI 5 ppb (NO 0.05)
SEQ-ICV	100.7% 4.0269	PPB	✓	30 Mar 2023 11:43:43	ARI 5 ppb (NO 0.05)
SEQ-ICB	-0.0322	PPB	✓	30 Mar 2023 11:46:02	ARI 5 ppb (NO 0.05)
SEQ-CRL	84.7% 0.0847	PPB	✓	30 Mar 2023 11:48:23	ARI 5 ppb (NO 0.05)
SEQ-CCV	98.1% 3.9226	PPB	✓	30 Mar 2023 11:50:45	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0330	PPB	✓	30 Mar 2023 11:53:03	ARI 5 ppb (NO 0.05)
SEQ-CCV	97.3% 3.8909	PPB	✓	30 Mar 2023 11:55:25	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0326	PPB	✓	30 Mar 2023 11:57:43	ARI 5 ppb (NO 0.05)
~~23C0571-01~~	~~-0.1868~~	~~PPB~~	no read	30 Mar 2023 12:00:06	ARI 5 ppb (NO 0.05)
BLC0669-BLK1	-0.0342	PPB		30 Mar 2023 12:00:17	ARI 5 ppb (NO 0.05)
BLC0669-BS1	1.8417	PPB	✓	30 Mar 2023 12:02:36	ARI 5 ppb (NO 0.05)
23C0571-01	-0.0046	PPB		30 Mar 2023 12:04:55	ARI 5 ppb (NO 0.05)
BLC0669-DUP1	0.0026	PPB		30 Mar 2023 12:07:14	ARI 5 ppb (NO 0.05)
BLC0669-MS1	0.9662	PPB	✓	30 Mar 2023 12:09:33	ARI 5 ppb (NO 0.05)
23C0392-01	0.0335	PPB		30 Mar 2023 12:11:52	ARI 5 ppb (NO 0.05)
23C0423-01	1.0680	PPB		30 Mar 2023 12:14:11	ARI 5 ppb (NO 0.05)
23C0491-01	0.1962	PPB		30 Mar 2023 12:16:31	ARI 5 ppb (NO 0.05)
23C0491-02	0.1484	PPB		30 Mar 2023 12:18:51	ARI 5 ppb (NO 0.05)
23C0570-01	0.1526	PPB		30 Mar 2023 12:21:11	ARI 5 ppb (NO 0.05)
SEQ-CCV	99.6% 3.9825	PPB	✓	30 Mar 2023 12:23:32	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0318	PPB	✓	30 Mar 2023 12:25:50	ARI 5 ppb (NO 0.05)
~~SEQ-CCV~~	~~(L)-4.7% -0.1868~~	~~PPB~~	seq bracket	30 Mar 2023 12:28:12	ARI 5 ppb (NO 0.05)
SEQ-CCV	97.7% 3.9062	PPB	✓	30 Mar 2023 13:33:34	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0388	PPB	✓	30 Mar 2023 13:35:53	ARI 5 ppb (NO 0.05)
BLC0694-BLK1	-0.0513	PPB		30 Mar 2023 13:38:15	ARI 5 ppb (NO 0.05)
BLC0694-BS1	1.8669	PPB	✓	30 Mar 2023 13:40:35	ARI 5 ppb (NO 0.05)
23A0099-06	0.2918	PPB		30 Mar 2023 13:42:56	ARI 5 ppb (NO 0.05)
BLC0694-DUP1	0.3980	PPB		30 Mar 2023 13:45:15	ARI 5 ppb (NO 0.05)
BLC0694-MS1	1.5187	PPB	✓	30 Mar 2023 13:47:33	ARI 5 ppb (NO 0.05)
BLC0694-MSD1	0.5101	PPB	X	30 Mar 2023 13:49:52	ARI 5 ppb (NO 0.05)
23A0099-02	0.4446	PPB		30 Mar 2023 13:52:11	ARI 5 ppb (NO 0.05)
23A0099-03	0.4311	PPB		30 Mar 2023 13:54:30	ARI 5 ppb (NO 0.05)
23A0099-04	0.3941	PPB		30 Mar 2023 13:56:49	ARI 5 ppb (NO 0.05)
23A0099-05	0.2521	PPB		30 Mar 2023 13:59:09	ARI 5 ppb (NO 0.05)
SEQ-CCV	97.9% 3.9171	PPB	✓	30 Mar 2023 14:01:29	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0380	PPB	✓	30 Mar 2023 14:03:47	ARI 5 ppb (NO 0.05)
23A0099-07	0.4374	PPB		30 Mar 2023 14:06:09	ARI 5 ppb (NO 0.05)
23A0099-08	0.4900	PPB		30 Mar 2023 14:08:29	ARI 5 ppb (NO 0.05)
23A0099-09	0.3499	PPB		30 Mar 2023 14:10:50	ARI 5 ppb (NO 0.05)
23A0099-10	0.7245	PPB		30 Mar 2023 14:13:11	ARI 5 ppb (NO 0.05)
23A0099-11	0.7259	PPB		30 Mar 2023 14:15:33	ARI 5 ppb (NO 0.05)
23A0099-12	0.2980	PPB		30 Mar 2023 14:17:51	ARI 5 ppb (NO 0.05)
23A0099-13	0.5322	PPB		30 Mar 2023 14:20:10	ARI 5 ppb (NO 0.05)
23A0134-09	0.4117	PPB		30 Mar 2023 14:22:30	ARI 5 ppb (NO 0.05)
23A0134-10	0.3084	PPB		30 Mar 2023 14:24:49	ARI 5 ppb (NO 0.05)
23A0134-11	0.3452	PPB		30 Mar 2023 14:27:08	ARI 5 ppb (NO 0.05)
SEQ-CCV	98.7% 3.9490	PPB	✓	30 Mar 2023 14:29:28	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0379	PPB	✓	30 Mar 2023 14:31:46	ARI 5 ppb (NO 0.05)
23A0134-12	0.1237	PPB		30 Mar 2023 14:34:08	ARI 5 ppb (NO 0.05)
23A0134-13	0.3595	PPB		30 Mar 2023 14:36:27	ARI 5 ppb (NO 0.05)
23A0134-15	0.3040	PPB		30 Mar 2023 14:38:47	ARI 5 ppb (NO 0.05)
BLC0694-PS1	1.5130	PPB	✓	30 Mar 2023 14:41:08	ARI 5 ppb (NO 0.05)
~~BLC0704-BLK1~~	~~-0.1139~~	~~PPB~~	del ↓	30 Mar 2023 14:43:28	ARI 5 ppb (NO 0.05)
~~BLC0704-BS1~~	~~1.5222~~	~~PPB~~		30 Mar 2023 14:45:49	ARI 5 ppb (NO 0.05)
23A0133-03	0.1542	PPB		30 Mar 2023 14:48:10	ARI 5 ppb (NO 0.05)
BLC0704-DUP1	0.3258	PPB		30 Mar 2023 14:50:29	ARI 5 ppb (NO 0.05)
BLC0704-MS1	1.3579	PPB	✓	30 Mar 2023 14:52:49	ARI 5 ppb (NO 0.05)
BLC0704-MSD1	1.3847	PPB	✓	30 Mar 2023 14:55:09	ARI 5 ppb (NO 0.05)
SEQ-CCV	100.1% 4.0028	PPB	✓	30 Mar 2023 14:57:28	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0408	PPB		30 Mar 2023 14:59:47	ARI 5 ppb (NO 0.05)
BLC0704-BLK1	-0.0649	PPB		30 Mar 2023 15:02:09	ARI 5 ppb (NO 0.05)
BLC0704-BS1	1.7283	PPB	✓	30 Mar 2023 15:04:29	ARI 5 ppb (NO 0.05)

SMM 03-30-23

Method: ARI 5 ppb (NO 0.05) Operator: Admin Date of Analysis: 30 Mar 2023 11:25:40

Sample ID	Mean	Units		Date	Method
23A0133-06	0.1515	PPB		30 Mar 2023 15:06:48	ARI 5 ppb (NO 0.05)
23A0133-07	0.2454	PPB		30 Mar 2023 15:09:08	ARI 5 ppb (NO 0.05)
23A0133-08	0.1814	PPB		30 Mar 2023 15:11:28	ARI 5 ppb (NO 0.05)
23A0133-09	0.1647	PPB		30 Mar 2023 15:13:48	ARI 5 ppb (NO 0.05)
23A0133-10	0.5400	PPB		30 Mar 2023 15:16:09	ARI 5 ppb (NO 0.05)
23A0133-11	0.7379	PPB		30 Mar 2023 15:18:29	ARI 5 ppb (NO 0.05)
23A0133-12	0.4233	PPB		30 Mar 2023 15:20:51	ARI 5 ppb (NO 0.05)
23A0133-13	0.1172	PPB		30 Mar 2023 15:23:10	ARI 5 ppb (NO 0.05)
SEQ-CCV	101.5% 4.0596	PPB	✓	30 Mar 2023 15:25:30	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0349	PPB	✓	30 Mar 2023 15:27:48	ARI 5 ppb (NO 0.05)
23A0133-14	0.0884	PPB		30 Mar 2023 15:30:11	ARI 5 ppb (NO 0.05)
23A0133-15	0.3175	PPB		30 Mar 2023 15:32:30	ARI 5 ppb (NO 0.05)
23A0133-16	0.1031	PPB		30 Mar 2023 15:34:50	ARI 5 ppb (NO 0.05)
23A0134-01	0.2284	PPB		30 Mar 2023 15:37:10	ARI 5 ppb (NO 0.05)
23A0134-02	0.1416	PPB		30 Mar 2023 15:39:30	ARI 5 ppb (NO 0.05)
23A0134-03	0.2122	PPB		30 Mar 2023 15:41:49	ARI 5 ppb (NO 0.05)
23A0134-04	0.2121	PPB		30 Mar 2023 15:44:09	ARI 5 ppb (NO 0.05)
23A0134-05	0.4545	PPB		30 Mar 2023 15:46:29	ARI 5 ppb (NO 0.05)
23A0134-06	0.1758	PPB		30 Mar 2023 15:48:49	ARI 5 ppb (NO 0.05)
23A0134-07	0.1970	PPB		30 Mar 2023 15:51:09	ARI 5 ppb (NO 0.05)
SEQ-CCV	99.8% 3.9909	PPB	✓	30 Mar 2023 15:53:31	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0352	PPB	✓	30 Mar 2023 15:55:49	ARI 5 ppb (NO 0.05)
23A0134-08	0.0977	PPB		30 Mar 2023 15:58:12	ARI 5 ppb (NO 0.05)
SEQ-CCV	100.4% 4.0145	PPB	✓	30 Mar 2023 16:00:31	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0355	PPB	✓	30 Mar 2023 16:02:50	ARI 5 ppb (NO 0.05)

ARI 5 ppb (NO 0.05)



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
SEQ-CAL1 - Blank	0.000	-0.017	-0.017	1011	14.306	993	1012	1028		
SEQ-CAL2 - 0.1 PPB	0.100	0.091	-0.009	1661	0.3 %	1667	1657	1660		
SEQ-CAL3 - 0.5 PPB	0.500	0.505	0.005	4132	0.8 %	4107	4112	4177		
SEQ-CAL4 - 1.0 PPB	1.000	1.002	0.002	7097	0.6 %	7052	7089	7150		
SEQ-CAL5 - 2.0 PPB	2.000	2.034	0.034	13263	0.9 %	13288	13105	13398		
SEQ-CAL6 - 5.0 PPB	5.000	4.985	-0.015	30889	0.6 %	30919	30659	31091		

Mercury Analysis Log

Analyst: ML
Instrument: HYDRA

Date: 03/30/23
Page: 1 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
SEQ -calL	SMM	1X		
-cal2				
-cal3				
-cal4				
-cal5				
-cal6				
-ICV			✓ 4.02	
-ICB			✓ -0.03	
-CRL			✓ 0.084	
-CCV			✓ 3.92	
-CCB			✓ -0.03	
-CCV			✓ 3.89	
-CCB			✓ -0.03	
23C0571 -01				weird detailH; no read; del
BLC0669 -BIK1				
-BS1			✓ 1.841	92 %R
23C0571 -01				
BLC0669 -DUP1				NO RPD
-MS1			✓ 0.966	97 %R
23C0392 -01				
23C0423 -01				
23C0491 -01				
-02				
23C0570 -01				
SEQ -CCV			✓ 3.98	
-CCB			✓ -0.03	
-CCV			X	no read; sig break, del
-CCV			✓ 3.96	
-CCB			✓ -0.03	
BLC0694 -BIK1				

Chemical/Reagent ID:
10% $SnCl_2$: L3302

14% NH_2OH/NaCl: L3351

Standard ID:
Standard: _____

ICV/CCV: _____

Mercury Analysis Log

Analyst: ~ Date: ~

Instrument: ~ Page: 2 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
↓ -BS1			✓ 1.866	93.3 %R
23A0099 -06				
BLC0694 -DUP1				RPD = 30.79
↓ -MS1			✓ 1.51	122.6 %R
↓ -MSD1			x 0.51	21 %R
23A0099 -02				
↓ -03				
↓ -04				
↓ -05				
SEQ -CCV			✓ 3.91	
↓ -CCB			✓ -0.03	
23A0099 -07				
↓ -08				
↓ -09				
↓ -10				
↓ -11				
↓ -12				
↓ -13				
23A0134 -09				
↓ -10				
↓ -11				
SEQ -CCV			✓ 3.94	
↓ -CCB			-0.03	
23A0134 -12				
↓ -13				
↓ -15				
BLC0694 -PS1			✓ 1.513	122.1 %R
BLC0704 -BLK1				below RL, rerun; DEL
↓ -BS1			x 1.522	76 %R ↓
23A0133 -03				

Chemical/Reagent ID:

10% $SnCl_2$: ~ 14% NH_2OH/NaCl: ~

Standard ID:

Standard: ~ ICV/CCV: ~

Mercury Analysis Log

Analyst: — Date: —

Instrument: — Page: 3 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
BLC0704 - DUP1				RPD = 71.5
↓ - MS1			✓ 1.357	120.3 %R
↓ - MSD1			✓ 1.384	123 %R
SEQ - CCV			✓ 4.00	
↓ - CCB			✓ -0.04	
BLC0704 - BIK1				
↓ - BS1			✓ 1.728	86.4 %R
23A0133 - 06				
↓ - 07				
- 08				
- 09				
- 10				
- 11				
- 12				
↓ - 13				
SEQ - CCV			✓ 4.05	
↓ - CCB			✓ -0.03	
23A0133 - 14				
↓ - 15				
↓ - 16				
23A0134 - 01				
↓ - 02				
- 03				
- 04				
- 05				
- 06				
↓ - 07				
SEQ - CCV			✓ 3.99	
↓ - CCB			✓ -0.03	
23A0134 - 08				

Chemical/Reagent ID:

10% $SnCl_2$: — 14% NH_2OH/NaCl: —

Standard ID:

Standard: — ICV/CCV: —

Mercury Analysis Log

Analyst: —
Instrument: —

Date: —
Page: 4 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
SEQ -CCV	↓	↓	✓ 4.01	
↓ -CCB	↓	↓	✓ -0.03	

MW 03/30/23

Chemical/Reagent ID:
10% $SnCl_2$: —
14% NH_2OH/NaCl: —

Standard ID:
Standard: —
ICV/CCV: —

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: HYDRA
Calibration: GC00086
Control Limt: +/- 20.00%
Sequence: SLC0503

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLC0503-ICV1	Mercury	0.0040000	0.00403	101	mg/L	EPA 7471B
SLC0503-CCV1	Mercury	0.0040000	0.00392	98.1	mg/L	EPA 7471B
SLC0503-CCV2	Mercury	0.0040000	0.00389	97.3	mg/L	EPA 7471B
SLC0503-CCV3	Mercury	0.0040000	0.00398	99.6	mg/L	EPA 7471B
SLC0503-CCV4	Mercury	0.0040000	0.00391	97.7	mg/L	EPA 7471B
SLC0503-CCV5	Mercury	0.0040000	0.00392	97.9	mg/L	EPA 7471B
SLC0503-CCV6	Mercury	0.0040000	0.00395	98.7	mg/L	EPA 7471B
SLC0503-CCV7	Mercury	0.0040000	0.00400	100	mg/L	EPA 7471B
SLC0503-CCV8	Mercury	0.0040000	0.00406	101	mg/L	EPA 7471B
SLC0503-CCV9	Mercury	0.0040000	0.00399	99.8	mg/L	EPA 7471B
SLC0503-CCVA	Mercury	0.0040000	0.00401	100	mg/L	EPA 7471B

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 7471B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: HYDRA
Sequence: SLC0503

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GC00086
Date Analyzed: 03/30/23 11:46

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0503-ICB1	Mercury	-0.000032	0.000021	0.000100	mg/L	
SLC0503-CCB1	Mercury	-0.000033	0.000021	0.000100	mg/L	
SLC0503-CCB2	Mercury	-0.000033	0.000021	0.000100	mg/L	
SLC0503-CCB3	Mercury	-0.000032	0.000021	0.000100	mg/L	
SLC0503-CCB4	Mercury	-0.000039	0.000021	0.000100	mg/L	
SLC0503-CCB5	Mercury	-0.000038	0.000021	0.000100	mg/L	
SLC0503-CCB6	Mercury	-0.000038	0.000021	0.000100	mg/L	
SLC0503-CCB7	Mercury	-0.000041	0.000021	0.000100	mg/L	
SLC0503-CCB8	Mercury	-0.000035	0.000021	0.000100	mg/L	
SLC0503-CCB9	Mercury	-0.000035	0.000021	0.000100	mg/L	
SLC0503-CCBA	Mercury	-0.000036	0.000021	0.000100	mg/L	

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0503	Instrument:	HYDRA
		Calibration:	GC00086

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SLC0503-CAL1	SMM 03-30-23-001	NA	03/30/23 11:27
Cal Standard	SLC0503-CAL2	SMM 03-30-23-002	NA	03/30/23 11:29
Cal Standard	SLC0503-CAL3	SMM 03-30-23-003	NA	03/30/23 11:32
Cal Standard	SLC0503-CAL4	SMM 03-30-23-004	NA	03/30/23 11:34
Cal Standard	SLC0503-CAL5	SMM 03-30-23-005	NA	03/30/23 11:36
Cal Standard	SLC0503-CAL6	SMM 03-30-23-006	NA	03/30/23 11:39
Initial Cal Check	SLC0503-ICV1	SMM 03-30-23-007	NA	03/30/23 11:43
Initial Cal Blank	SLC0503-ICB1	SMM 03-30-23-008	NA	03/30/23 11:46
Instrument RL Check	SLC0503-CRL1	SMM 03-30-23-009	NA	03/30/23 11:48
Calibration Check	SLC0503-CCV1	SMM 03-30-23-010	NA	03/30/23 11:50
Calibration Blank	SLC0503-CCB1	SMM 03-30-23-011	NA	03/30/23 11:53
Calibration Check	SLC0503-CCV2	SMM 03-30-23-012	NA	03/30/23 11:55
Calibration Blank	SLC0503-CCB2	SMM 03-30-23-013	NA	03/30/23 11:57
Calibration Check	SLC0503-CCV3	SMM 03-30-23-025	NA	03/30/23 12:23
Calibration Blank	SLC0503-CCB3	SMM 03-30-23-026	NA	03/30/23 12:25
Calibration Check	SLC0503-CCV4	SMM 03-30-23-028	NA	03/30/23 13:33
Calibration Blank	SLC0503-CCB4	SMM 03-30-23-029	NA	03/30/23 13:35
Calibration Check	SLC0503-CCV5	SMM 03-30-23-040	NA	03/30/23 14:01
Calibration Blank	SLC0503-CCB5	SMM 03-30-23-041	NA	03/30/23 14:03
Calibration Check	SLC0503-CCV6	SMM 03-30-23-052	NA	03/30/23 14:29
Calibration Blank	SLC0503-CCB6	SMM 03-30-23-053	NA	03/30/23 14:31
LDW23-SC1250	23A0133-03	SMM 03-30-23-060	Solid	03/30/23 14:48
LDW23-SC1250	BLC0704-DUP1	SMM 03-30-23-061	Solid	03/30/23 14:50
LDW23-SC1250	BLC0704-MS1	SMM 03-30-23-062	Solid	03/30/23 14:52
LDW23-SC1250	BLC0704-MSD1	SMM 03-30-23-063	Solid	03/30/23 14:55
Calibration Check	SLC0503-CCV7	SMM 03-30-23-064	NA	03/30/23 14:57
Calibration Blank	SLC0503-CCB7	SMM 03-30-23-065	NA	03/30/23 14:59
Blank	BLC0704-BLK1	SMM 03-30-23-066	Solid	03/30/23 15:02
LCS	BLC0704-BS1	SMM 03-30-23-067	Solid	03/30/23 15:04

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7471B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLC0503

SDG: 23A0133
Project: AOC5 MR Phase 1
Instrument: HYDRA
Calibration: GC00086

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SC1241	23A0133-06	SMM 03-30-23-068	Solid	03/30/23 15:06
LDW23-IT1217	23A0133-07	SMM 03-30-23-069	Solid	03/30/23 15:09
LDW23-SC1185	23A0133-08	SMM 03-30-23-070	Solid	03/30/23 15:11
LDW23-SC1234	23A0133-09	SMM 03-30-23-071	Solid	03/30/23 15:13
LDW23-SC1215	23A0133-10	SMM 03-30-23-072	Solid	03/30/23 15:16
LDW23-SC1222	23A0133-11	SMM 03-30-23-073	Solid	03/30/23 15:18
LDW23-SC1227	23A0133-12	SMM 03-30-23-074	Solid	03/30/23 15:20
LDW23-SS1110	23A0133-13	SMM 03-30-23-075	Solid	03/30/23 15:23
Calibration Check	SLC0503-CCV8	SMM 03-30-23-076	NA	03/30/23 15:25
Calibration Blank	SLC0503-CCB8	SMM 03-30-23-077	NA	03/30/23 15:27
LDW23-SS1109	23A0133-14	SMM 03-30-23-078	Solid	03/30/23 15:30
LDW23-SS1092	23A0133-15	SMM 03-30-23-079	Solid	03/30/23 15:32
LDW23-SS1091	23A0133-16	SMM 03-30-23-080	Solid	03/30/23 15:34
Calibration Check	SLC0503-CCV9	SMM 03-30-23-088	NA	03/30/23 15:53
Calibration Blank	SLC0503-CCB9	SMM 03-30-23-089	NA	03/30/23 15:55
Calibration Check	SLC0503-CCVA	SMM 03-30-23-091	NA	03/30/23 16:00
Calibration Blank	SLC0503-CCBA	SMM 03-30-23-092	NA	03/30/23 16:02

DETECTION LEVEL STANDARD
EPA 7471B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: HYDRA
Sequence: SLC0503

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: GC00086
Lab Sample ID: SLC0503-CRL1

Analyte	True	Found	%R	Units	QC Limts
Mercury	0.000100	0.000085	84.7	mg/L	70 - 130

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 7471B

Laboratory: Analytical Resources, LLC SDG: 23A0133

Client: Anchor QEA, LLC Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1250 23A0133-03	01/06/23 10:32	01/06/23 17:26	03/30/23 11:04	83	365	03/30/23 14:48	83	365	
LDW23-SC1241 23A0133-06	01/06/23 10:51	01/06/23 17:26	03/30/23 11:04	83	365	03/30/23 15:06	83	365	
LDW23-IT1217 23A0133-07	01/06/23 11:14	01/06/23 17:26	03/30/23 11:04	82	365	03/30/23 15:09	83	365	
LDW23-SC1185 23A0133-08	01/06/23 12:00	01/06/23 17:26	03/30/23 11:04	82	365	03/30/23 15:11	83	365	
LDW23-SC1234 23A0133-09	01/06/23 13:34	01/06/23 17:26	03/30/23 11:04	82	365	03/30/23 15:13	83	365	
LDW23-SC1215 23A0133-10	01/06/23 11:38	01/06/23 17:26	03/30/23 11:04	82	365	03/30/23 15:16	83	365	
LDW23-SC1222 23A0133-11	01/06/23 13:00	01/06/23 17:26	03/30/23 11:04	82	365	03/30/23 15:18	83	365	
LDW23-SC1227 23A0133-12	01/06/23 13:18	01/06/23 17:26	03/30/23 11:04	82	365	03/30/23 15:20	83	365	
LDW23-SS1110 23A0133-13	01/06/23 14:00	01/06/23 17:26	03/30/23 11:04	82	365	03/30/23 15:23	83	365	
LDW23-SS1109 23A0133-14	01/06/23 14:13	01/06/23 17:26	03/30/23 11:04	82	365	03/30/23 15:30	83	365	
LDW23-SS1092 23A0133-15	01/06/23 14:26	01/06/23 17:26	03/30/23 11:04	82	365	03/30/23 15:32	83	365	
LDW23-SS1091 23A0133-16	01/06/23 14:50	01/06/23 17:26	03/30/23 11:04	82	365	03/30/23 15:34	83	365	
Duplicate BLC0704-DUP1	01/06/23 10:32	01/06/23 17:26	03/30/23 11:04	83	365	03/30/23 14:50	83	365	
Matrix Spike BLC0704-MS1	01/06/23 10:32	01/06/23 17:26	03/30/23 11:04	83	365	03/30/23 14:52	83	365	
Matrix Spike Dup BLC0704-MSD1	01/06/23 10:32	01/06/23 17:26	03/30/23 11:04	83	365	03/30/23 14:55	83	365	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: HYDRA

Analyte	MDL	RL	Units
Mercury	0.00525	0.0250	mg/kg

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

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inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGHG1
Lot Number:	S2-HG711246
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Mercury
Starting Material:	Hg Metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 3 µg/mL

Density: 1.026 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **1004 ± 6 µg/mL**
ICP Assay NIST SRM 3133 Lot Number: 160921

Assay Method #2 **998 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 3 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000210	M	Eu	<	0.000210	O	Na		0.000626	M	Se	<	0.008100	M	Zn	<	0.000810
M	Al		0.000161	O	Fe	<	0.001600	M	Nb	<	0.000410	O	Si		0.000626	M	Zr	<	0.000410
M	As	<	0.002500	M	Ga	<	0.000210	M	Nd	<	0.000210	M	Sm	<	0.000210				
O	Au	<	0.001700	M	Gd	<	0.000210	O	Ni	<	0.001400	M	Sn	<	0.000410				
M	B	<	0.008500	M	Ge	<	0.000410	M	Os	<	0.003900	O	Sr	<	0.000110				
M	Ba	<	0.000210	M	Hf	<	0.000210	O	P	<	0.029000	M	Ta	<	0.000210				
O	Be	<	0.000110	s	Hg	<		M	Pb	<	0.000210	M	Tb	<	0.000210				
M	Bi	<	0.001100	M	Ho	<	0.000210	M	Pd	<	0.003500	M	Te	<	0.005700				
O	Ca		0.004754	M	In	<	0.000210	M	Pr	<	0.000210	M	Th	<	0.000210				
M	Cd	<	0.000210	M	Ir	<	0.000210	M	Pt	<	0.000210	O	Ti	<	0.000430				
M	Ce	<	0.000210	O	K		0.000731	M	Rb	<	0.000210	O	Tl	<	0.005400				
M	Co	<	0.000210	M	La	<	0.000210	M	Re	<	0.000210	M	Tm	<	0.000210				
O	Cr	<	0.003300	O	Li	<	0.000110	M	Rh	<	0.001100	M	U	<	0.000410				
M	Cs	<	0.000410	M	Lu	<	0.000210	M	Ru	<	0.000810	M	V	<	0.000210				
M	Cu	<	0.000810	O	Mg		0.000104	O	S	<	0.022000	M	W	<	0.001100				
M	Dy	<	0.000210	O	Mn	<	0.000430	M	Sb	<	0.000210	M	Y	<	0.000210				
M	Er	<	0.000210	M	Mo	<	0.000210	M	Sc	<	0.000210	M	Yb	<	0.000210				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.
Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.
Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 18, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 18, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
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CERTIFICATE OF ANALYSIS

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fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-QCS-4
Lot Number:	R2-MEB695951
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	5 µg/mL ea: Mercury

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Mercury, Hg	**5.011 ± 0.023 µg/mL**		

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The follow ing equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 20, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 20, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SC1252

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-01 C	SDG:	23A0133
Sampled:	01/06/23 09:47	Prepared:	01/11/23 12:57	File ID:	
% Solids:	49.79	Preparation:	No Prep Wet Chem	Analyzed:	01/11/23 13:00
Batch:	BLA0258	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	49.79	1	0.04	0.04	

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LDW23-SC1261

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-02 C	SDG:	23A0133
Sampled:	01/06/23 09:22	Prepared:	01/11/23 12:57	File ID:	
% Solids:	43.16	Preparation:	No Prep Wet Chem	Analyzed:	01/11/23 13:00
Batch:	BLA0258	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	43.16	1	0.04	0.04	

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LDW23-SC1250

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-03 D	SDG:	23A0133
Sampled:	01/06/23 10:32	Prepared:	01/11/23 12:57	File ID:	
% Solids:	50.34	Preparation:	No Prep Wet Chem	Analyzed:	01/11/23 13:00
Batch:	BLA0258	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	50.34	1	0.04	0.04	

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LDW23-SC1244

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-04 C	SDG:	23A0133
Sampled:	01/06/23 10:14	Prepared:	01/11/23 12:57	File ID:	
% Solids:	48.59	Preparation:	No Prep Wet Chem	Analyzed:	01/11/23 13:00
Batch:	BLA0258	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	48.59	1	0.04	0.04	

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LDW23-SC1244-FD

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-05 C	SDG:	23A0133
Sampled:	01/06/23 10:14	Prepared:	01/11/23 12:57	File ID:	
% Solids:	47.98	Preparation:	No Prep Wet Chem	Analyzed:	01/11/23 13:00
Batch:	BLA0258	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	47.98	1	0.04	0.04	

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LDW23-SC1241

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-06 D	SDG:	23A0133
Sampled:	01/06/23 10:51	Prepared:	01/11/23 12:57	File ID:	
% Solids:	48.27	Preparation:	No Prep Wet Chem	Analyzed:	01/11/23 13:00
Batch:	BLA0258	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	48.27	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
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LDW23-IT1217

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-07 D	SDG:	23A0133
Sampled:	01/06/23 11:14	Prepared:	01/11/23 12:57	File ID:	
% Solids:	61.34	Preparation:	No Prep Wet Chem	Analyzed:	01/11/23 13:00
Batch:	BLA0258	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	61.34	1	0.04	0.04	

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LDW23-SC1185

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-08 D	SDG:	23A0133
Sampled:	01/06/23 12:00	Prepared:	01/11/23 12:57	File ID:	
% Solids:	60.30	Preparation:	No Prep Wet Chem	Analyzed:	01/11/23 13:00
Batch:	BLA0258	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	60.30	1	0.04	0.04	

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LDW23-SC1234

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-09 D	SDG:	23A0133
Sampled:	01/06/23 13:34	Prepared:	01/11/23 12:57	File ID:	
% Solids:	52.12	Preparation:	No Prep Wet Chem	Analyzed:	01/11/23 13:00
Batch:	BLA0258	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	52.12	1	0.04	0.04	

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Form I
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LDW23-SC1215

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-10 D	SDG:	23A0133
Sampled:	01/06/23 11:38	Prepared:	01/11/23 12:57	File ID:	
% Solids:	53.90	Preparation:	No Prep Wet Chem	Analyzed:	01/11/23 13:00
Batch:	BLA0258	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	53.90	1	0.04	0.04	

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LDW23-SC1222

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-11 D	SDG:	23A0133
Sampled:	01/06/23 13:00	Prepared:	01/11/23 12:57	File ID:	
% Solids:	54.66	Preparation:	No Prep Wet Chem	Analyzed:	01/11/23 13:00
Batch:	BLA0258	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	54.66	1	0.04	0.04	

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LDW23-SC1227

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-12 D	SDG:	23A0133
Sampled:	01/06/23 13:18	Prepared:	01/11/23 12:57	File ID:	
% Solids:	55.12	Preparation:	No Prep Wet Chem	Analyzed:	01/11/23 13:00
Batch:	BLA0258	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	55.12	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1110

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-13 D	SDG:	23A0133
Sampled:	01/06/23 14:00	Prepared:	01/11/23 12:57	File ID:	
% Solids:	60.11	Preparation:	No Prep Wet Chem	Analyzed:	01/11/23 13:00
Batch:	BLA0258	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	60.11	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1109

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-14 D	SDG:	23A0133
Sampled:	01/06/23 14:13	Prepared:	01/11/23 12:57	File ID:	
% Solids:	47.28	Preparation:	No Prep Wet Chem	Analyzed:	01/11/23 13:00
Batch:	BLA0258	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	47.28	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
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LDW23-SS1092

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-15 D	SDG:	23A0133
Sampled:	01/06/23 14:26	Prepared:	01/11/23 12:57	File ID:	
% Solids:	53.05	Preparation:	No Prep Wet Chem	Analyzed:	01/11/23 13:00
Batch:	BLA0258	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	53.05	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
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LDW23-SS1091

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-16 D	SDG:	23A0133
Sampled:	01/06/23 14:50	Prepared:	01/11/23 12:57	File ID:	
% Solids:	49.19	Preparation:	No Prep Wet Chem	Analyzed:	01/11/23 13:00
Batch:	BLA0258	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	49.19	1	0.04	0.04	

PREPARATION BATCH SUMMARY

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0258 Batch Matrix: Solid
Preparation: No Prep Wet Chem

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1252	23A0133-01		01/11/23 12:57	
LDW23-SC1261	23A0133-02		01/11/23 12:57	
LDW23-SC1250	23A0133-03		01/11/23 12:57	
LDW23-SC1244	23A0133-04		01/11/23 12:57	
LDW23-SC1244-FD	23A0133-05		01/11/23 12:57	
LDW23-SC1241	23A0133-06		01/11/23 12:57	
LDW23-IT1217	23A0133-07		01/11/23 12:57	
LDW23-SC1185	23A0133-08		01/11/23 12:57	
LDW23-SC1234	23A0133-09		01/11/23 12:57	
LDW23-SC1215	23A0133-10		01/11/23 12:57	
LDW23-SC1222	23A0133-11		01/11/23 12:57	
LDW23-SC1227	23A0133-12		01/11/23 12:57	
LDW23-SS1110	23A0133-13		01/11/23 12:57	
LDW23-SS1109	23A0133-14		01/11/23 12:57	
LDW23-SS1092	23A0133-15		01/11/23 12:57	
LDW23-SS1091	23A0133-16		01/11/23 12:57	
Blank	BLA0258-BLK1		01/11/23 12:57	
LDW23-SC1252	BLA0258-DUP1		01/11/23 12:57	
LDW23-SC1252	BLA0258-DUP2		01/11/23 12:57	

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET for Solid samples

Method: PSEP 1986, SM2540, EPA 160.1

(dry at 104 (12-24 hr) then combust at 550 (30 min))

Batch:	BLA0258
Date:	1/11/2023 13:00
Analyst:	UW

Instrumentation

Drying Ovens:	12	**Analytical Balance:**	BAL2
Muffle Furnace:	2		

Batch drying time

record times as mm/dd/yy hh:mm

date/time in oven:	1/11/2023 13:25	
date/time out:	1/13/2023 9:15	
elapsed hrs =	43.8	> 24 hr

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

Oven Temps, °C	
Start Temp	103
Dry Cycle 1	103
Dry Cycle 2	
Dry Cycle 3	

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000
if ash wt > dry wt, "Chk for Err"
if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000

Balance Calibration Check

Record weights to 4 places

Cal Weight ID:		CV-02	CV-02	CV-02	CV-02	CV-02		CV-02	CV-02	CV-02	
Date & Time:		1/11/23 13:00	1/11/23 13:05	1/13/23 9:40							
Cal Wt (g):	10.0000	10.0000	10.0000	10.0000							
		Cal OK!	Cal OK!	Cal OK!							

Sample ID	Dish #	Tare Wt. (g)	Dish & Sample (g)	Dry Wt 104C (grams) 1	2	3	dry Wt (g)	TS (%)	Notes	ASH WT 550C (grams) 1	2	3	Ash Wt (g)	TVS (mg/kg)	(%)	Notes
BLA0258-BLK1	36	0.8110	0.0000	0.8108			-0.0002	0.02%								
23A0133-01	37	0.8294	6.9586	3.8814			3.0520	49.79%								
BLA0258-DUP1	38	0.8234	7.1367	3.9797			3.1563	49.99%	RPD=0.4							
BLA0258-DUP2	39	0.8047	7.1537	4.0329			3.2282	50.85%	RSD=1.1							
23A0133-02	40	0.8083	7.1633	3.5512			2.7429	43.16%								
23A0133-03	41	0.7997	9.1410	4.9988			4.1991	50.34%								
23A0133-04	42	0.8088	7.3171	3.9710			3.1622	48.59%								
23A0133-05	43	0.7962	7.8892	4.1993			3.4031	47.98%								
23A0133-06	44	0.8019	7.6405	4.1030			3.3011	48.27%								
23A0133-07	45	0.8328	9.4645	6.1278			5.2950	61.34%								
23A0133-08	46	0.7690	7.5587	4.8634			4.0944	60.30%								
23A0133-09	47	0.8032	8.3488	4.7357			3.9325	52.12%								
23A0133-10	48	0.7944	8.9858	5.2093			4.4149	53.90%								
23A0133-11	49	0.8380	9.6648	5.6627			4.8247	54.66%								
23A0133-12	50	0.8243	8.6521	5.1386			4.3143	55.12%								
23A0133-13	51	0.8306	7.4648	4.8182			3.9876	60.11%								
23A0133-14	52	0.8065	8.9327	4.6483			3.8418	47.28%								
23A0133-15	53	0.8064	8.0371	4.6424			3.8360	53.05%								
23A0133-16	54	0.8449	8.5461	4.6333			3.7884	49.19%								

NOTE: Do not enter data in blue shaded cells as they are calculated fields. Green shaded cells MAY be altered if a rewigh is called for.

TOTAL SOLIDS (TS) BENCHSHEET for Solid samples

Method: Total Solids, Metals Correction

dry at 104°C (12-24 hr)

Batch: BLC0743

Date: 3/29/2023 17:00

Analyst: AR

Instrumentation

Drying Oven: OVEN07

Analytical Balance: BAL10

Batch drying time

record times as mm/dd/yy hh:mm

date/time in oven: 3/29/2023 17:50

date/time out: 3/30/2023 12:47

elapsed hrs = 18.9 OK

Temp in: 107 °C

Temp out: 104 °C

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

Sample ID	Tare Weight (g)	Tare + Sample Weight (g)	Tare + Sample Dry Weight @ 104°C (g)			dry Wt (g)	TS (%)	Notes
			1	2	3			
23A0133-03	0.9780	10.0560	6.0690			5.0910	56.08%	
23A0133-06	0.9830	10.0700	5.2940			4.3110	47.44%	
23A0133-07	1.0090	10.0460	6.4780			5.4690	60.52%	
23A0133-08	0.9910	10.0640	6.4420			5.4510	60.08%	
23A0133-09	1.0060	10.0740	5.7260			4.7200	52.05%	
23A0133-11	1.0210	10.0490	6.0260			5.0050	55.44%	
23A0133-12	0.9940	10.0030	5.6480			4.6540	51.66%	
23A0133-13	1.0050	10.0870	6.5260			5.5210	60.79%	
23A0133-14	1.0340	10.0450	5.3050			4.2710	47.40%	
23A0133-15	0.9840	10.0250	5.7600			4.7760	52.83%	
23A0134-01	0.9930	10.0160	6.4530			5.4600	60.51%	
23A0134-02	0.9770	10.0530	5.5560			4.5790	50.45%	
23A0134-03	1.0000	10.0240	5.5430			4.5430	50.34%	
23A0134-04	0.9850	10.0210	5.4490			4.4640	49.40%	
23A0134-05	1.0010	10.0670	5.2540			4.2530	46.91%	
23A0134-06	0.9990	10.0870	4.7130			3.7140	40.87%	
23A0134-07	1.0110	10.0580	5.0870			4.0760	45.05%	
23A0134-08	1.0080	10.0740	6.1160			5.1080	56.34%	
23C0350-01	0.9860	10.0750	8.3420			7.3560	80.93%	
23C0350-03	0.9870	10.0580	8.2830			7.2960	80.43%	
23C0350-05	0.9930	10.0690	7.3230			6.3300	69.74%	
23C0350-07	0.9980	10.0170	8.7530			7.7550	85.99%	
23C0350-12	1.0020	10.0030	8.8100			7.8080	86.75%	
23C0350-14	1.0080	10.0860	8.6290			7.6210	83.95%	
23C0350-16	0.9970	10.0100	9.0050			8.0080	88.85%	
23C0350-19	1.0100	10.0020	8.3980			7.3880	82.16%	
23C0350-22	1.0230	10.0240	8.7650			7.7420	86.01%	
23C0350-24	1.0180	10.0490	9.1910			8.1730	90.50%	
23C0350-26	1.0150	10.0480	9.3880			8.3730	92.69%	
23C0350-28	1.0040	10.0450	8.5580			7.5540	83.55%	

NOTE: Do not enter data in blue shaded cells as they are calculated fields. Green shaded cells MAY be altered if a rewigh is called for.

TOTAL SOLIDS (TS) BENCHSHEET for Solid samples

Method: Total Solids, Metals Correction

dry at 104°C (12-24 hr)

Batch:	BLC0811
Date:	3/30/2023 16:33
Analyst:	AR

Instrumentation

Drying Oven: OVEN07

Analytical Balance: BAL10

Batch drying time

record times as mm/dd/yy hh:mm

date/time in oven: 3/30/2023 17:26

date/time out: 3/31/2023 15:21

elapsed hrs = 21.9 OK

Temp in: 106 °C

Temp out: 103 °C

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

Sample ID	Tare Weight (g)	Tare + Sample Weight (g)	Tare + Sample Dry Weight @ 104°C (g) 1	2	3	dry Wt (g)	TS (%)	Notes
23A0099-01	0.9870	10.0950	5.4820			4.4950	49.35%	
23A0099-02	0.9760	10.0200	5.4340			4.4580	49.29%	
23A0099-03	0.9950	10.0200	6.5040			5.5090	61.04%	
23A0099-04	1.0170	10.0600	5.9220			4.9050	54.24%	
23A0099-05	1.0200	10.0300	5.7750			4.7550	52.77%	
23A0099-06	1.0030	10.0900	6.3220			5.3190	58.53%	
23A0099-07	0.9980	10.0790	5.5470			4.5490	50.09%	
23A0099-08	0.9980	10.0140	5.8860			4.8880	54.21%	
23A0099-09	1.0090	10.0870	5.7540			4.7450	52.27%	
23A0099-10	1.0220	10.0500	5.2440			4.2220	46.77%	
23A0099-11	1.0080	10.0300	5.2860			4.2780	47.42%	
23A0099-12	1.0070	10.0940	6.7680			5.7610	63.40%	
23A0099-13	1.0170	10.0800	6.2170			5.2000	57.38%	
23A0133-10	0.9970	10.0060	5.8650			4.8680	54.03%	
23A0133-16	1.0100	10.0330	5.4880			4.4780	49.63%	
23A0134-09	1.0010	10.0670	5.3300			4.3290	47.75%	
23A0134-10	1.0260	10.0400	6.1950			5.1690	57.34%	
23A0134-11	1.0250	10.0960	5.8700			4.8450	53.41%	
23A0134-12	1.0220	10.0250	6.4030			5.3810	59.77%	
23A0134-13	1.0030	10.0440	6.2350			5.2320	57.87%	
23A0134-14	1.0090	10.0000	7.5230			6.5140	72.45%	
23A0134-15	0.9970	10.0030	6.1060			5.1090	56.73%	

Form I

METHOD BLANK DATA SHEET

SM 2540 G-97

TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0258
Laboratory ID: BLA0258-BLK1
Prepared: 01/11/23 12:57
Matrix: Solid
Preparation: No Prep Wet Chem
Analyzed: 01/11/23 13:00
Sequence:
Calibration:
Instrument: BAL2

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	ND	1	0.04	0.04	U

DUPLICATES

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0258-DUP1
Batch: BLA0258
Lab Source ID: 23A0133-01
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW23-SC1252
% Solids: 49.79

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Solids	20	49.79	49.99	0.401	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

DUPLICATES

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0258-DUP2
Batch: BLA0258
Lab Source ID: 23A0133-01
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW23-SC1252
% Solids: 49.79

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Solids	20	49.79	50.85	2.09	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

HOLDING TIME SUMMARY

Analysis: SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1252 23A0133-01	01/06/23 09:47	01/06/23 17:26	01/11/23 12:57	5	28	01/11/23 13:00	5	28	
LDW23-SC1261 23A0133-02	01/06/23 09:22	01/06/23 17:26	01/11/23 12:57	5	28	01/11/23 13:00	5	28	
LDW23-SC1250 23A0133-03	01/06/23 10:32	01/06/23 17:26	01/11/23 12:57	5	28	01/11/23 13:00	5	28	
LDW23-SC1244 23A0133-04	01/06/23 10:14	01/06/23 17:26	01/11/23 12:57	5	28	01/11/23 13:00	5	28	
LDW23-SC1244-FD 23A0133-05	01/06/23 10:14	01/06/23 17:26	01/11/23 12:57	5	28	01/11/23 13:00	5	28	
LDW23-SC1241 23A0133-06	01/06/23 10:51	01/06/23 17:26	01/11/23 12:57	5	28	01/11/23 13:00	5	28	
LDW23-IT1217 23A0133-07	01/06/23 11:14	01/06/23 17:26	01/11/23 12:57	5	28	01/11/23 13:00	5	28	
LDW23-SC1185 23A0133-08	01/06/23 12:00	01/06/23 17:26	01/11/23 12:57	5	28	01/11/23 13:00	5	28	
LDW23-SC1234 23A0133-09	01/06/23 13:34	01/06/23 17:26	01/11/23 12:57	4	28	01/11/23 13:00	5	28	
LDW23-SC1215 23A0133-10	01/06/23 11:38	01/06/23 17:26	01/11/23 12:57	5	28	01/11/23 13:00	5	28	
LDW23-SC1222 23A0133-11	01/06/23 13:00	01/06/23 17:26	01/11/23 12:57	4	28	01/11/23 13:00	5	28	
LDW23-SC1227 23A0133-12	01/06/23 13:18	01/06/23 17:26	01/11/23 12:57	4	28	01/11/23 13:00	5	28	
LDW23-SS1110 23A0133-13	01/06/23 14:00	01/06/23 17:26	01/11/23 12:57	4	28	01/11/23 13:00	5	28	
LDW23-SS1109 23A0133-14	01/06/23 14:13	01/06/23 17:26	01/11/23 12:57	4	28	01/11/23 13:00	5	28	
LDW23-SS1092 23A0133-15	01/06/23 14:26	01/06/23 17:26	01/11/23 12:57	4	28	01/11/23 13:00	5	28	
LDW23-SS1091 23A0133-16	01/06/23 14:50	01/06/23 17:26	01/11/23 12:57	4	28	01/11/23 13:00	5	28	
Duplicate BLA0258-DUP1	01/06/23 09:47	01/06/23 17:26	01/11/23 12:57	5	28	01/11/23 13:00	5	28	
Duplicate BLA0258-DUP2	01/06/23 09:47	01/06/23 17:26	01/11/23 12:57	5	28	01/11/23 13:00	5	28	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument:

Analyte	MDL	RL	Units
Total Solids	0.04	0.04	%

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Analytical Chemists and Consultants

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LDW23-SC1252

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-01 C	SDG:	23A0133
Sampled:	01/06/23 09:47	Prepared:	01/11/23 11:45	File ID:	CubeData_01162023@0718-060
% Solids:	49.79	Preparation:	Plumb 1981	Analyzed:	01/12/23 13:02
Batch:	BLA0241	Sequence:	SLA0114	Initial/Final:	0.5042 g Wet / 0.5042 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.72	1	0.02	0.02	

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LDW23-SC1261

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-02 C	SDG:	23A0133
Sampled:	01/06/23 09:22	Prepared:	01/11/23 11:45	File ID:	CubeData_01162023@0718-081
% Solids:	43.16	Preparation:	Plumb 1981	Analyzed:	01/12/23 14:33
Batch:	BLA0241	Sequence:	SLA0114	Initial/Final:	0.5132 g Wet / 0.5132 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.97	1	0.02	0.02	

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LDW23-SC1250

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-03 D	SDG:	23A0133
Sampled:	01/06/23 10:32	Prepared:	01/11/23 11:45	File ID:	CubeData_01162023@0718-086
% Solids:	50.34	Preparation:	Plumb 1981	Analyzed:	01/12/23 15:03
Batch:	BLA0241	Sequence:	SLA0114	Initial/Final:	0.5313 g Wet / 0.5313 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.24	1	0.02	0.02	

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LDW23-SC1244

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-04 C	SDG:	23A0133
Sampled:	01/06/23 10:14	Prepared:	01/11/23 11:45	File ID:	CubeData_01162023@0718-104
% Solids:	48.59	Preparation:	Plumb 1981	Analyzed:	01/12/23 16:35
Batch:	BLA0241	Sequence:	SLA0114	Initial/Final:	0.5896 g Wet / 0.5896 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.54	1	0.02	0.02	

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LDW23-SC1244-FD

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-05 C	SDG:	23A0133
Sampled:	01/06/23 10:14	Prepared:	01/11/23 11:45	File ID:	CubeData_01162023@0718-113
% Solids:	47.98	Preparation:	Plumb 1981	Analyzed:	01/12/23 17:05
Batch:	BLA0241	Sequence:	SLA0114	Initial/Final:	0.562 g Wet / 0.562 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.93	1	0.02	0.02	

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LDW23-SC1241

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-06 D	SDG:	23A0133
Sampled:	01/06/23 10:51	Prepared:	01/11/23 11:45	File ID:	CubeData_01162023@0718-119
% Solids:	48.27	Preparation:	Plumb 1981	Analyzed:	01/12/23 17:36
Batch:	BLA0241	Sequence:	SLA0114	Initial/Final:	0.5283 g Wet / 0.5283 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.27	1	0.02	0.02	

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LDW23-IT1217

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-07 D	SDG:	23A0133
Sampled:	01/06/23 11:14	Prepared:	01/11/23 11:45	File ID:	CubeData_01162023@0718-125
% Solids:	61.34	Preparation:	Plumb 1981	Analyzed:	01/12/23 18:07
Batch:	BLA0241	Sequence:	SLA0114	Initial/Final:	0.5228 g Wet / 0.5228 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.31	1	0.02	0.02	

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LDW23-SC1185

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-08 D	SDG:	23A0133
Sampled:	01/06/23 12:00	Prepared:	01/11/23 11:45	File ID:	CubeData_01162023@0718-132
% Solids:	60.30	Preparation:	Plumb 1981	Analyzed:	01/12/23 18:37
Batch:	BLA0241	Sequence:	SLA0114	Initial/Final:	0.5343 g Wet / 0.5343 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.63	1	0.02	0.02	

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LDW23-SC1234

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-09 D	SDG:	23A0133
Sampled:	01/06/23 13:34	Prepared:	01/11/23 11:45	File ID:	CubeData_01162023@0718-139
% Solids:	52.12	Preparation:	Plumb 1981	Analyzed:	01/12/23 19:08
Batch:	BLA0241	Sequence:	SLA0114	Initial/Final:	0.5313 g Wet / 0.5313 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.82	1	0.02	0.02	

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EPA 9060A m

LDW23-SC1215

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-10 D	SDG:	23A0133
Sampled:	01/06/23 11:38	Prepared:	01/11/23 11:45	File ID:	CubeData_01162023@0718-146
% Solids:	53.90	Preparation:	Plumb 1981	Analyzed:	01/12/23 19:38
Batch:	BLA0241	Sequence:	SLA0114	Initial/Final:	0.3733 g Wet / 0.3733 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.13	1	0.02	0.02	

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EPA 9060A m

LDW23-SC1222

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-11 D	SDG:	23A0133
Sampled:	01/06/23 13:00	Prepared:	01/11/23 11:45	File ID:	CubeData_01162023@0718-152
% Solids:	54.66	Preparation:	Plumb 1981	Analyzed:	01/12/23 20:09
Batch:	BLA0241	Sequence:	SLA0114	Initial/Final:	0.5123 g Wet / 0.5123 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.79	1	0.02	0.02	

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Form I
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EPA 9060A m

LDW23-SC1227

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-12 D	SDG:	23A0133
Sampled:	01/06/23 13:18	Prepared:	01/11/23 11:45	File ID:	CubeData_01162023@0718-158
% Solids:	55.12	Preparation:	Plumb 1981	Analyzed:	01/12/23 20:39
Batch:	BLA0241	Sequence:	SLA0114	Initial/Final:	0.518 g Wet / 0.518 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.41	1	0.02	0.02	

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INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1110

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-13 D	SDG:	23A0133
Sampled:	01/06/23 14:00	Prepared:	01/11/23 11:45	File ID:	CubeData_01162023@0718-166
% Solids:	60.11	Preparation:	Plumb 1981	Analyzed:	01/12/23 21:10
Batch:	BLA0241	Sequence:	SLA0114	Initial/Final:	0.5316 g Wet / 0.5316 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.65	1	0.02	0.02	

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INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1109

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-14 D	SDG:	23A0133
Sampled:	01/06/23 14:13	Prepared:	01/11/23 11:45	File ID:	CubeData_01162023@0718-186
% Solids:	47.28	Preparation:	Plumb 1981	Analyzed:	01/12/23 22:41
Batch:	BLA0241	Sequence:	SLA0114	Initial/Final:	0.575 g Wet / 0.575 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.34	1	0.02	0.02	

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INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1092

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-15 D	SDG:	23A0133
Sampled:	01/06/23 14:26	Prepared:	01/11/23 11:45	File ID:	CubeData_01162023@0718-191
% Solids:	53.05	Preparation:	Plumb 1981	Analyzed:	01/12/23 23:12
Batch:	BLA0241	Sequence:	SLA0114	Initial/Final:	0.5709 g Wet / 0.5709 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.02	1	0.02	0.02	

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INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1091

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0133-16 D	SDG:	23A0133
Sampled:	01/06/23 14:50	Prepared:	01/11/23 11:45	File ID:	CubeData_01162023@0718-196
% Solids:	49.19	Preparation:	Plumb 1981	Analyzed:	01/12/23 23:42
Batch:	BLA0241	Sequence:	SLA0114	Initial/Final:	0.505 g Wet / 0.505 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.20	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

EPA 9060A m

Laboratory: Analytical Resources, LLC SDG: 23A0133

Client: Anchor QEA, LLC Project: AOC5 MR Phase 1

Batch: BLA0241 Batch Matrix: Solid Preparation: Plumb 1981

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1252	23A0133-01	eData_01162023@0718-	01/11/23 11:45	
LDW23-SC1261	23A0133-02	eData_01162023@0718-	01/11/23 11:45	
LDW23-SC1250	23A0133-03	eData_01162023@0718-	01/11/23 11:45	
LDW23-SC1244	23A0133-04	eData_01162023@0718-	01/11/23 11:45	
LDW23-SC1244-FD	23A0133-05	eData_01162023@0718-	01/11/23 11:45	
LDW23-SC1241	23A0133-06	eData_01162023@0718-	01/11/23 11:45	
LDW23-IT1217	23A0133-07	eData_01162023@0718-	01/11/23 11:45	
LDW23-SC1185	23A0133-08	eData_01162023@0718-	01/11/23 11:45	
LDW23-SC1234	23A0133-09	eData_01162023@0718-	01/11/23 11:45	
LDW23-SC1215	23A0133-10	eData_01162023@0718-	01/11/23 11:45	
LDW23-SC1222	23A0133-11	eData_01162023@0718-	01/11/23 11:45	
LDW23-SC1227	23A0133-12	eData_01162023@0718-	01/11/23 11:45	
LDW23-SS1110	23A0133-13	eData_01162023@0718-	01/11/23 11:45	
LDW23-SS1109	23A0133-14	eData_01162023@0718-	01/11/23 11:45	
LDW23-SS1092	23A0133-15	eData_01162023@0718-	01/11/23 11:45	
LDW23-SS1091	23A0133-16	eData_01162023@0718-	01/11/23 11:45	
Blank	BLA0241-BLK1	eData_01162023@0718-	01/11/23 11:45	
LCS	BLA0241-BS1	eData_01162023@0718-	01/11/23 11:45	
LDW23-SC1252	BLA0241-DUP1	eData_01162023@0718-	01/11/23 11:45	
MRL Check	BLA0241-MRL1	eData_01162023@0718-	01/11/23 11:45	
LDW23-SC1252	BLA0241-MS1	eData_01162023@0718-	01/11/23 11:45	
Reference	BLA0241-SRM1	eData_01162023@0718-	01/11/23 11:45	

Form I

METHOD BLANK DATA SHEET

EPA 9060A m

TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0241
Laboratory ID: BLA0241-BLK1
Prepared: 01/11/23 11:45
Matrix: Solid
Preparation: Plumb 1981
Analyzed: 01/12/23 11:00
Sequence: SLA0114
Calibration: FD00070
Instrument: TOC Cube

CAS NO.	Analyte	Concentration (% wet)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	ND	1	0.02	0.02	U

LCS / LCS DUPLICATE RECOVERY

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	01/12/23 12:01
Batch:	BLA0241	Laboratory ID:	BLA0241-BS1
Preparation:	Plumb 1981	Sequence Name:	LCS
Initial/Final:	0.0191 g / 0.0191 g		

COMPOUND	SPIKE ADDED (% wet)	LCS CONCENTRATION (% wet)	Q	LCS % REC. #	QC LIMITS REC.
Total Organic Carbon	44.4	46.1		104	80 - 120

* Indicates values outside of QC limits

DUPLICATES

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0241-DUP1
Batch: BLA0241
Lab Source ID: 23A0133-01
Preparation: Plumb 1981
Initial/Final: 0.5103 g / 0.5103 g
Source Sample Name: LDW23-SC1252
% Solids: 49.79

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Organic Carbon	20	2.72	2.41	12.3	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

MS / MS DUPLICATE RECOVERY
EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	01/12/23 14:02
Batch:	BLA0241	Laboratory ID:	BLA0241-MS1
Preparation:	Plumb 1981	Sequence Name:	Matrix Spike
Initial/Final:	0.5057 g / 0.5057 g	Source Sample:	LDW23-SC1252

COMPOUND	SPIKE ADDED (% dry)	SAMPLE CONCENTRATION (% dry)	Q	MS CONCENTRATION (% dry)	Q	MS % REC. #	QC LIMITS REC.
Total Organic Carbon	1.61	2.72		4.32		99.6	75 - 125

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SKD0371	Instrument:	TOC Cube
		Calibration:	FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SKD0371-CAL1	CubeData_04272022@1136-001	NA	04/26/22 12:30
Cal Standard	SKD0371-CAL2	CubeData_04272022@1136-002	NA	04/26/22 13:00
Cal Standard	SKD0371-CAL3	CubeData_04272022@1136-003	NA	04/26/22 13:30
Cal Standard	SKD0371-CAL4	CubeData_04272022@1136-004	NA	04/26/22 14:00
Cal Standard	SKD0371-CAL5	CubeData_04272022@1136-005	NA	04/26/22 14:30
Cal Standard	SKD0371-CAL6	CubeData_04272022@1136-006	NA	04/26/22 15:00
Cal Standard	SKD0371-CAL7	CubeData_04272022@1136-007	NA	04/26/22 15:30
Cal Standard	SKD0371-CAL8	CubeData_04272022@1136-008	NA	04/26/22 16:00
Cal Standard	SKD0371-CAL9	CubeData_04272022@1136-009	NA	04/26/22 16:30
Cal Standard	SKD0371-CALA	CubeData_04272022@1136-010	NA	04/26/22 17:00
Cal Standard	SKD0371-CALB	CubeData_04272022@1136-011	NA	04/26/22 17:30
Cal Standard	SKD0371-CALC	CubeData_04272022@1136-012	NA	04/26/22 18:00
Cal Standard	SKD0371-CALD	CubeData_04272022@1136-013	NA	04/26/22 18:30
Cal Standard	SKD0371-CALE	CubeData_04272022@1136-014	NA	04/26/22 19:00
Cal Standard	SKD0371-CALF	CubeData_04272022@1136-015	NA	04/26/22 19:31
Cal Standard	SKD0371-CALG	CubeData_04272022@1136-016	NA	04/26/22 20:01
Cal Standard	SKD0371-CALH	CubeData_04272022@1136-017	NA	04/26/22 20:31
Cal Standard	SKD0371-CALI	CubeData_04272022@1136-018	NA	04/26/22 21:01
Cal Standard	SKD0371-CALJ	CubeData_04272022@1136-019	NA	04/26/22 21:31
Cal Standard	SKD0371-CALK	CubeData_04272022@1136-020	NA	04/26/22 22:01
Initial Cal Check	SKD0371-ICV1	CubeData_04272022@1136-027	NA	04/27/22 02:03
Initial Cal Blank	SKD0371-ICB1	CubeData_04272022@1136-028	NA	04/27/22 02:33
Cal Standard	SKD0371-CALL	CubeData_04272022@1136-021	NA	04/27/22 11:08
Cal Standard	SKD0371-CALM	CubeData_04272022@1136-022	NA	04/27/22 11:08
Cal Standard	SKD0371-CALN	CubeData_04272022@1136-023	NA	04/27/22 11:09
Cal Standard	SKD0371-CALO	CubeData_04272022@1136-024	NA	04/27/22 11:09

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLA0114
Instrument: TOC Cube
Calibration: FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLA0114-ICV1	CubeData_01162023@0718-019	NA	01/12/23 09:29
Initial Cal Blank	SLA0114-ICB1	CubeData_01162023@0718-027	NA	01/12/23 10:00
Blank	BLA0241-BLK1	CubeData_01162023@0718-041	Solid	01/12/23 11:00
MRL Check	BLA0241-MRL1	CubeData_01162023@0718-042	Solid	01/12/23 11:31
LCS	BLA0241-BS1	CubeData_01162023@0718-048	Solid	01/12/23 12:01
Reference	BLA0241-SRM1	CubeData_01162023@0718-054	Solid	01/12/23 12:31
LDW23-SC1252	23A0133-01	CubeData_01162023@0718-060	Solid	01/12/23 13:02
LDW23-SC1252	BLA0241-DUP1	CubeData_01162023@0718-067	Solid	01/12/23 13:32
LDW23-SC1252	BLA0241-MS1	CubeData_01162023@0718-074	Solid	01/12/23 14:02
LDW23-SC1261	23A0133-02	CubeData_01162023@0718-081	Solid	01/12/23 14:33
LDW23-SC1250	23A0133-03	CubeData_01162023@0718-086	Solid	01/12/23 15:03
Calibration Check	SLA0114-CCV1	CubeData_01162023@0718-092	NA	01/12/23 15:34
Calibration Blank	SLA0114-CCB1	CubeData_01162023@0718-099	NA	01/12/23 16:04
LDW23-SC1244	23A0133-04	CubeData_01162023@0718-104	Solid	01/12/23 16:35
LDW23-SC1244-FD	23A0133-05	CubeData_01162023@0718-113	Solid	01/12/23 17:05
LDW23-SC1241	23A0133-06	CubeData_01162023@0718-119	Solid	01/12/23 17:36
LDW23-IT1217	23A0133-07	CubeData_01162023@0718-125	Solid	01/12/23 18:07
LDW23-SC1185	23A0133-08	CubeData_01162023@0718-132	Solid	01/12/23 18:37
LDW23-SC1234	23A0133-09	CubeData_01162023@0718-139	Solid	01/12/23 19:08
LDW23-SC1215	23A0133-10	CubeData_01162023@0718-146	Solid	01/12/23 19:38
LDW23-SC1222	23A0133-11	CubeData_01162023@0718-152	Solid	01/12/23 20:09
LDW23-SC1227	23A0133-12	CubeData_01162023@0718-158	Solid	01/12/23 20:39
LDW23-SS1110	23A0133-13	CubeData_01162023@0718-166	Solid	01/12/23 21:10
Calibration Check	SLA0114-CCV2	CubeData_01162023@0718-172	NA	01/12/23 21:40
Calibration Blank	SLA0114-CCB2	CubeData_01162023@0718-179	NA	01/12/23 22:11
LDW23-SS1109	23A0133-14	CubeData_01162023@0718-186	Solid	01/12/23 22:41
LDW23-SS1092	23A0133-15	CubeData_01162023@0718-191	Solid	01/12/23 23:12
LDW23-SS1091	23A0133-16	CubeData_01162023@0718-196	Solid	01/12/23 23:42
Calibration Check	SLA0114-CCV3	CubeData_01162023@0718-248	NA	01/13/23 03:47

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

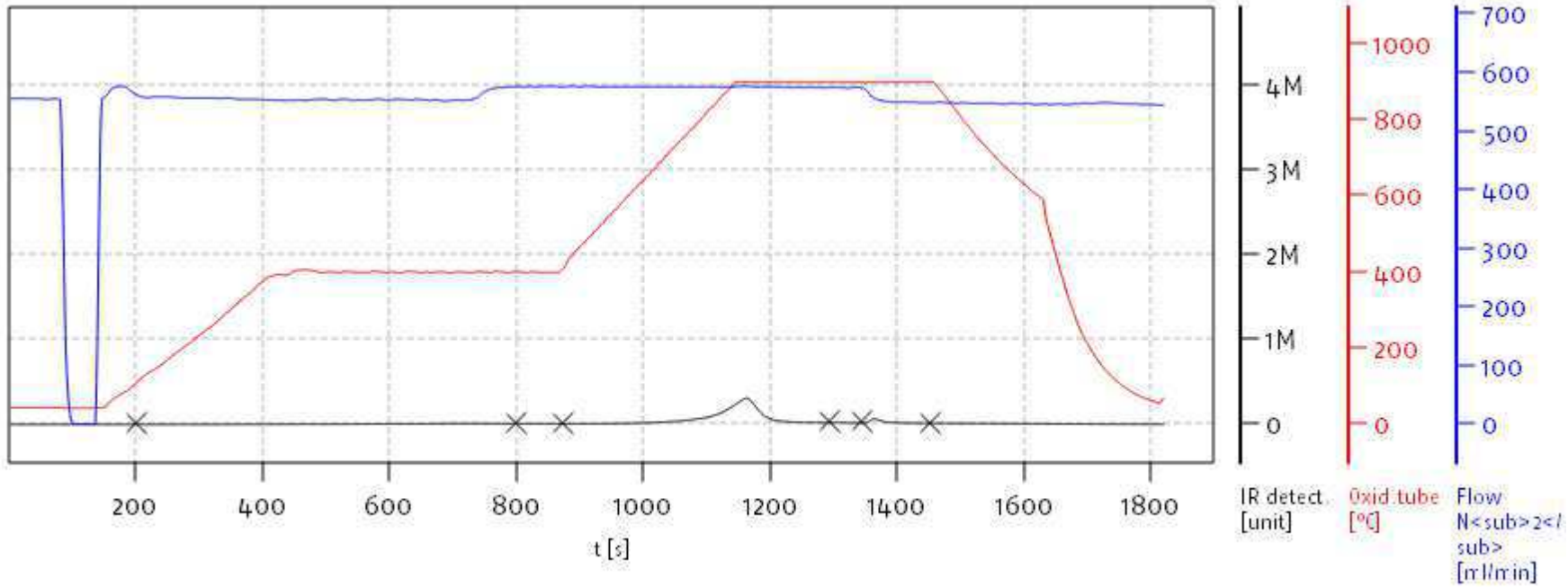
Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLA0114

SDG: 23A0133
Project: AOC5 MR Phase 1
Instrument: TOC Cube
Calibration: FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SLA0114-CCB3	CubeData_01162023@0718-254	NA	01/13/23 04:18
Calibration Check	SLA0114-CCV4	CubeData_01162023@0718-286	NA	01/13/23 09:54
Calibration Blank	SLA0114-CCB4	CubeData_01162023@0718-287	NA	01/13/23 10:24
Calibration Check	SLA0114-CCV5	CubeData_01162023@0718-298	NA	01/13/23 16:00
Calibration Blank	SLA0114-CCB5	CubeData_01162023@0718-299	NA	01/13/23 16:30
Calibration Check	SLA0114-CCV6	CubeData_01162023@0718-310	NA	01/13/23 22:06
Calibration Blank	SLA0114-CCB6	CubeData_01162023@0718-311	NA	01/13/23 22:37
Calibration Check	SLA0114-CCV7	CubeData_01162023@0718-322	NA	01/14/23 04:13
Calibration Blank	SLA0114-CCB7	CubeData_01162023@0718-323	NA	01/14/23 04:44
Calibration Check	SLA0114-CCV8	CubeData_01162023@0718-061	NA	01/14/23 10:18
Calibration Blank	SLA0114-CCB8	CubeData_01162023@0718-068	NA	01/14/23 10:48
Calibration Check	SLA0114-CCV9	CubeData_01162023@0718-138	NA	01/14/23 16:22
Calibration Blank	SLA0114-CCB9	CubeData_01162023@0718-145	NA	01/14/23 16:53
Calibration Check	SLA0114-CCVA	CubeData_01162023@0718-217	NA	01/14/23 22:28
Calibration Blank	SLA0114-CCBA	CubeData_01162023@0718-223	NA	01/14/23 22:59
Calibration Check	SLA0114-CCVB	CubeData_01162023@0718-273	NA	01/15/23 03:02
Calibration Blank	SLA0114-CCBB	CubeData_01162023@0718-279	NA	01/15/23 03:33

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		CARBON	1/ 12/2023 7:58 AM	bl	0.000	100 863	0.000	0.000	107 224	990 942	0.000	0.000	1.0000	1.0000



Name:

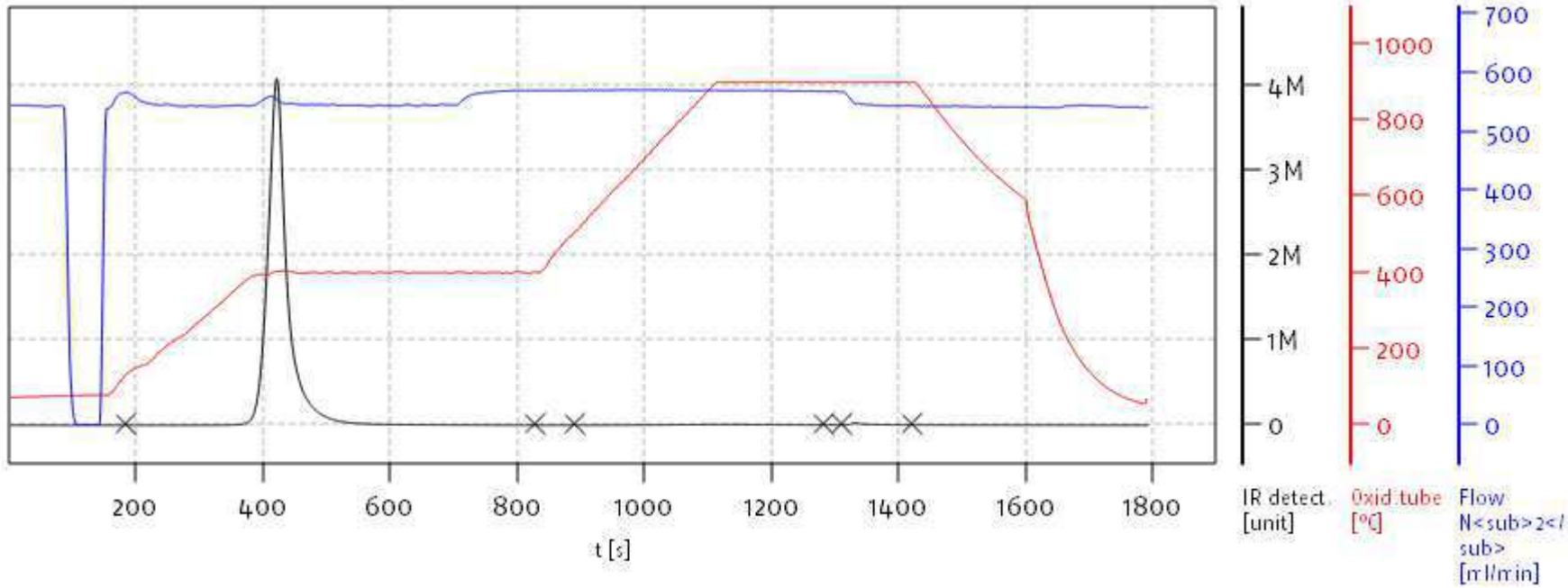
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
2	2	Dfactor	18.70		CARBON	1/12/2023 8:29 AM	bl	44.505	5 453 525	44.792	0.060	33 724	61 146	44.446	0.287	0.9893	1.0000



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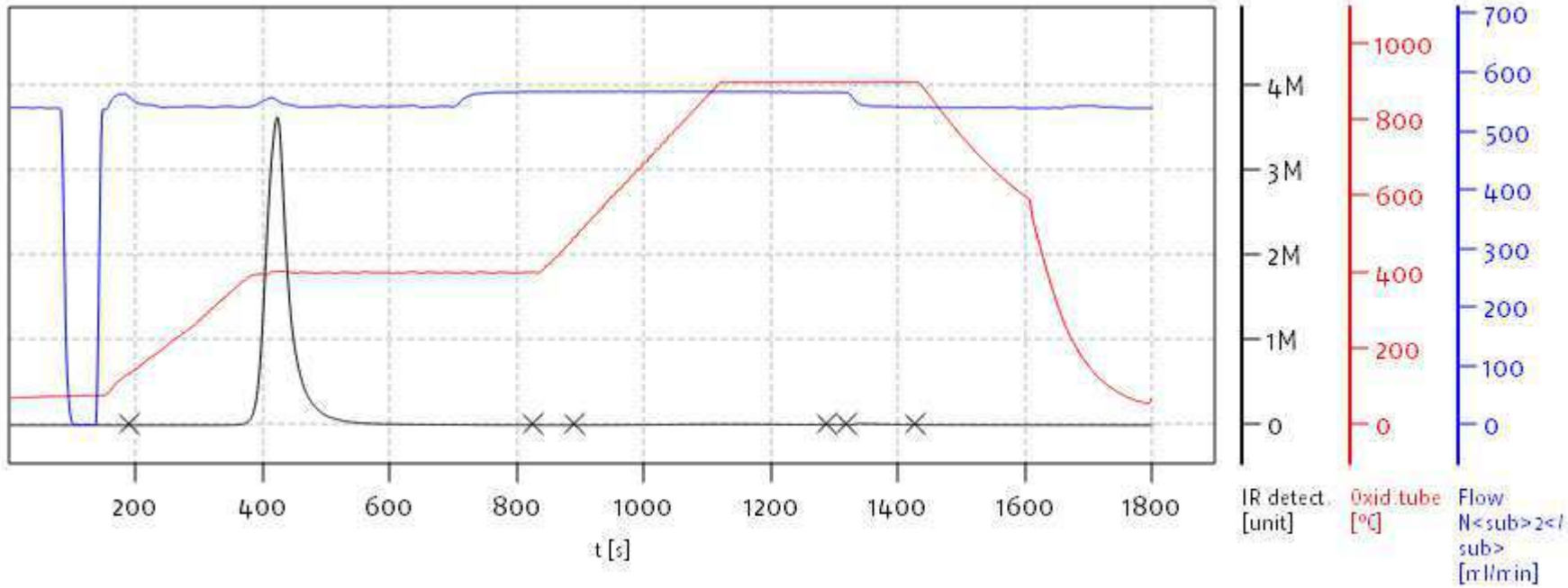
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
3	3	Dfactor	20.00		CARBON	1/12/2023 8:59 AM	bl	44.533	5 795 880	45.074	0.088	37 846	96 392	44.446	0.541	0.9953	1.0000



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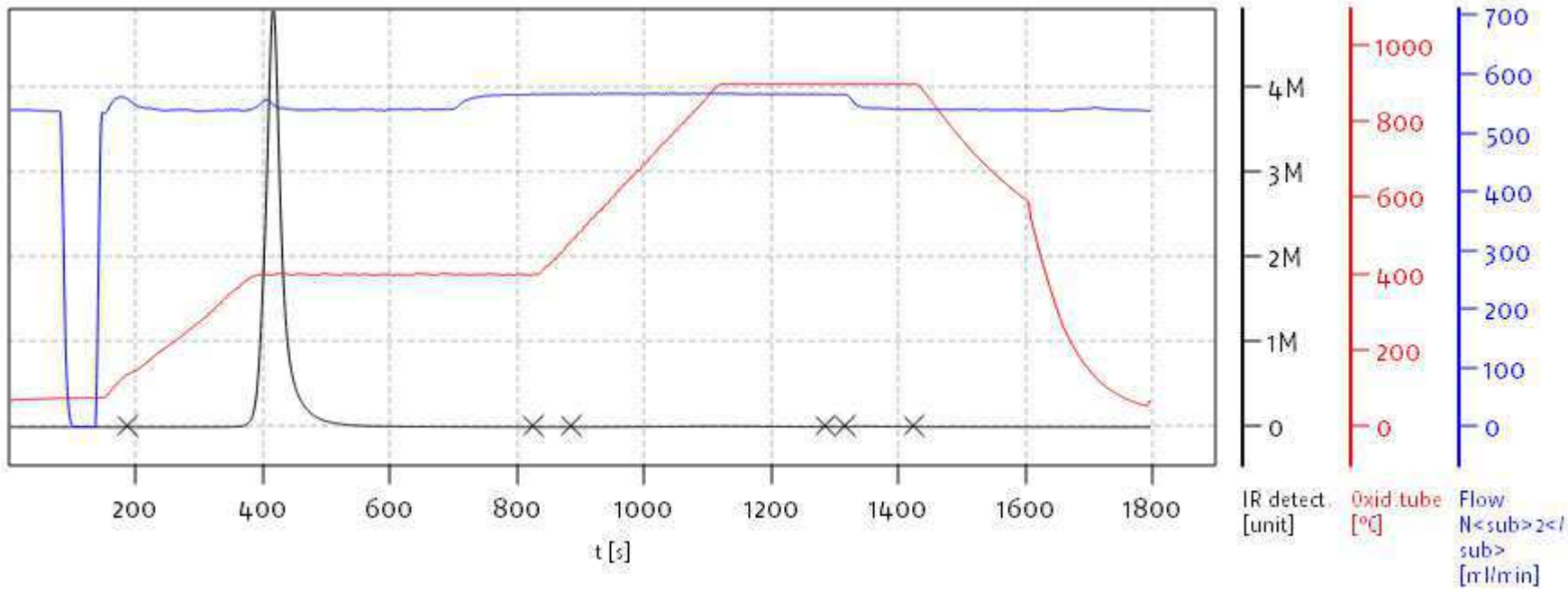
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
4	4	SLA0114-ICV1	19.00		CARBON	1/12/2023 9:29 AM	bl	46.106	5 729 283	46.552	0.000	22 900	81 328	46.106	0.446	0.9923	1.0000



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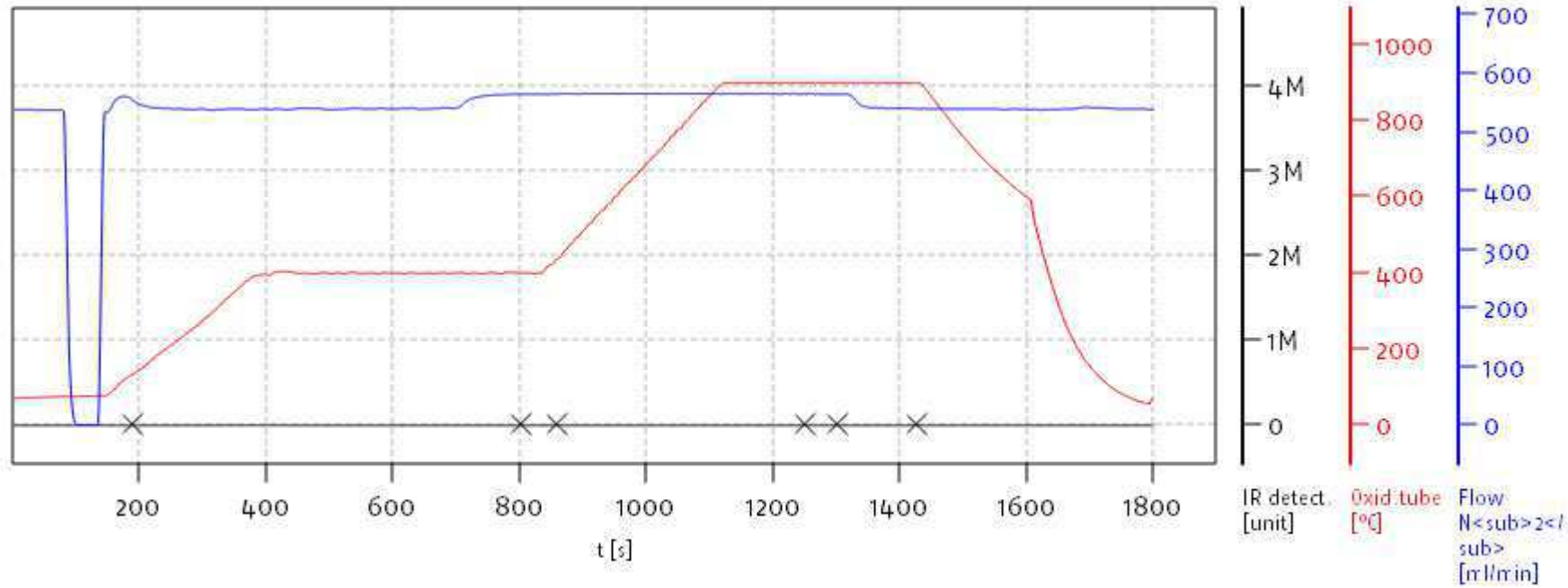
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
5	5	SLA0114-ICB1	512.60		CARBON	1/12/2023 10:00 AM	bl,C3u,C2u	0.000	6 433	0.000	0.000	704	853	0.000	0.000	0.9923	1.0000



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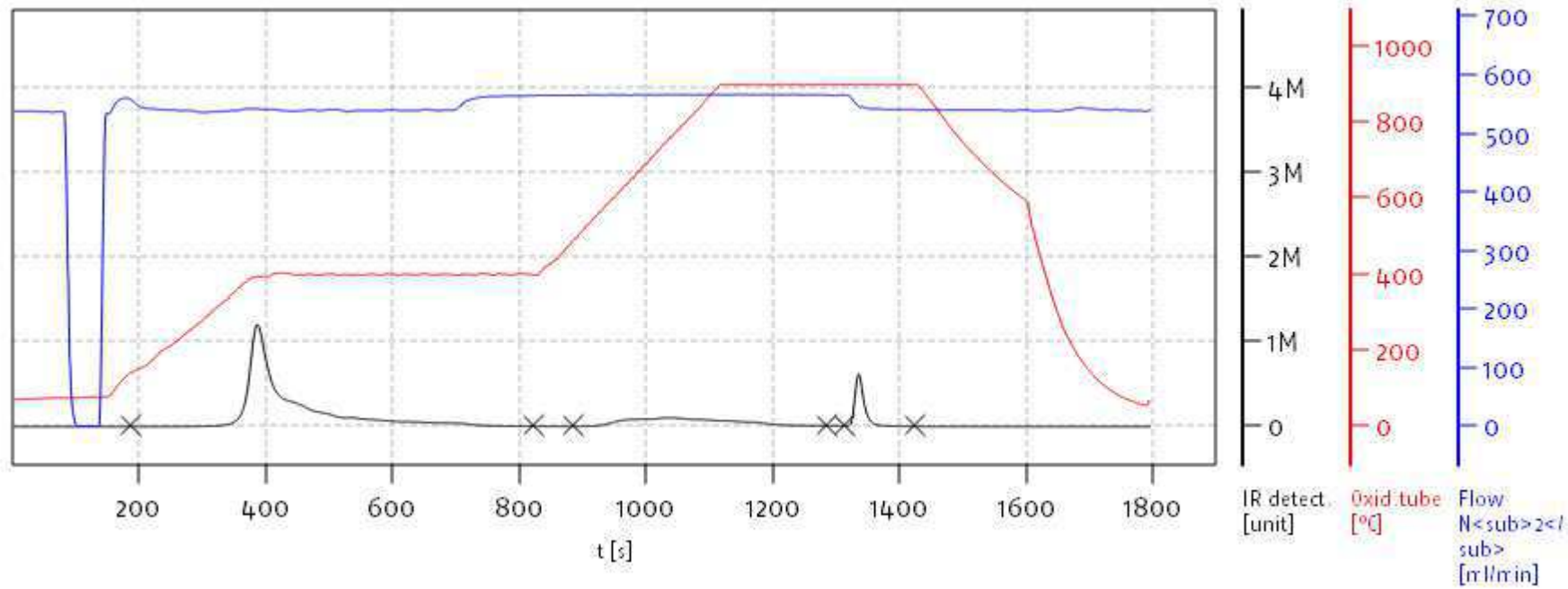
Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
6	6	BLA0159-DUP2	543.70		CARBON	1/12/2023 10:30 AM	bl	0.932	2 947 860	1.150	0.107	400 972	791 348	0.825	0.218	0.9923	1.0000



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Access: soliTOC superuser

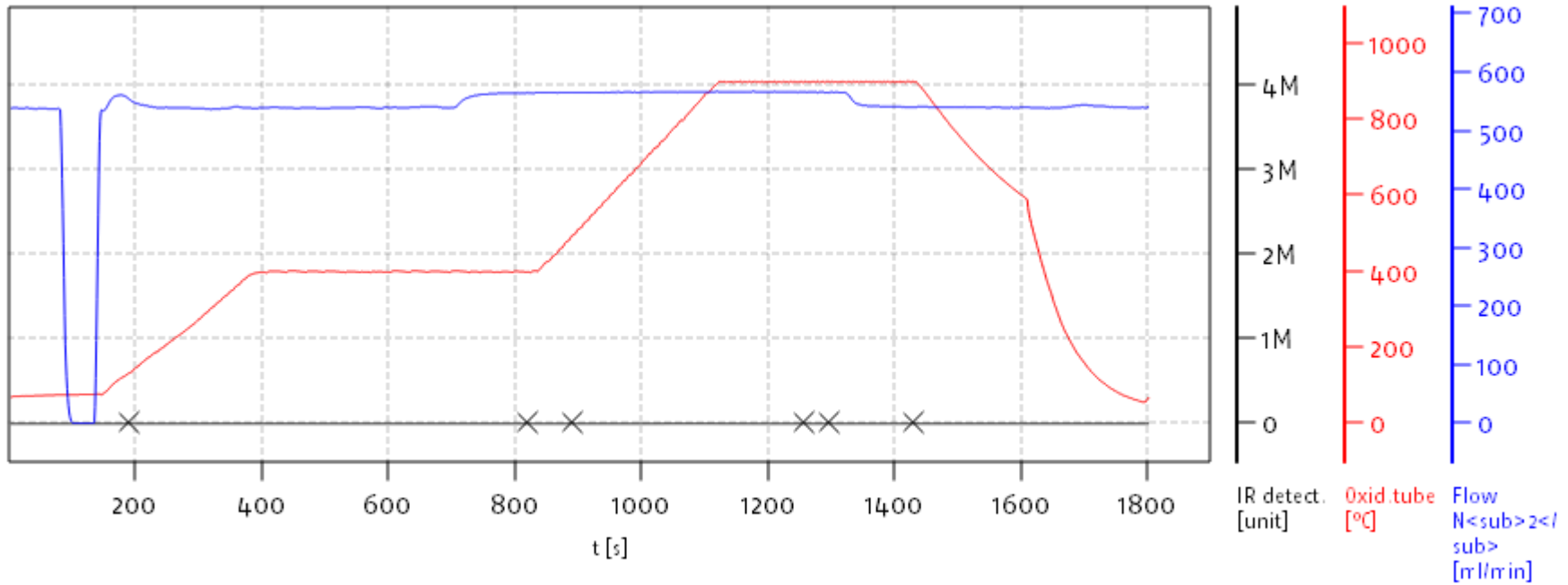
Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
7	7	BLA0241-BLK1	508.50		CARBON	1/12/2023 11:00 AM	bl,C2u	0.000	4 400	0.000	0.000	503	5 418	0.000	0.000	0.9923	1.0000



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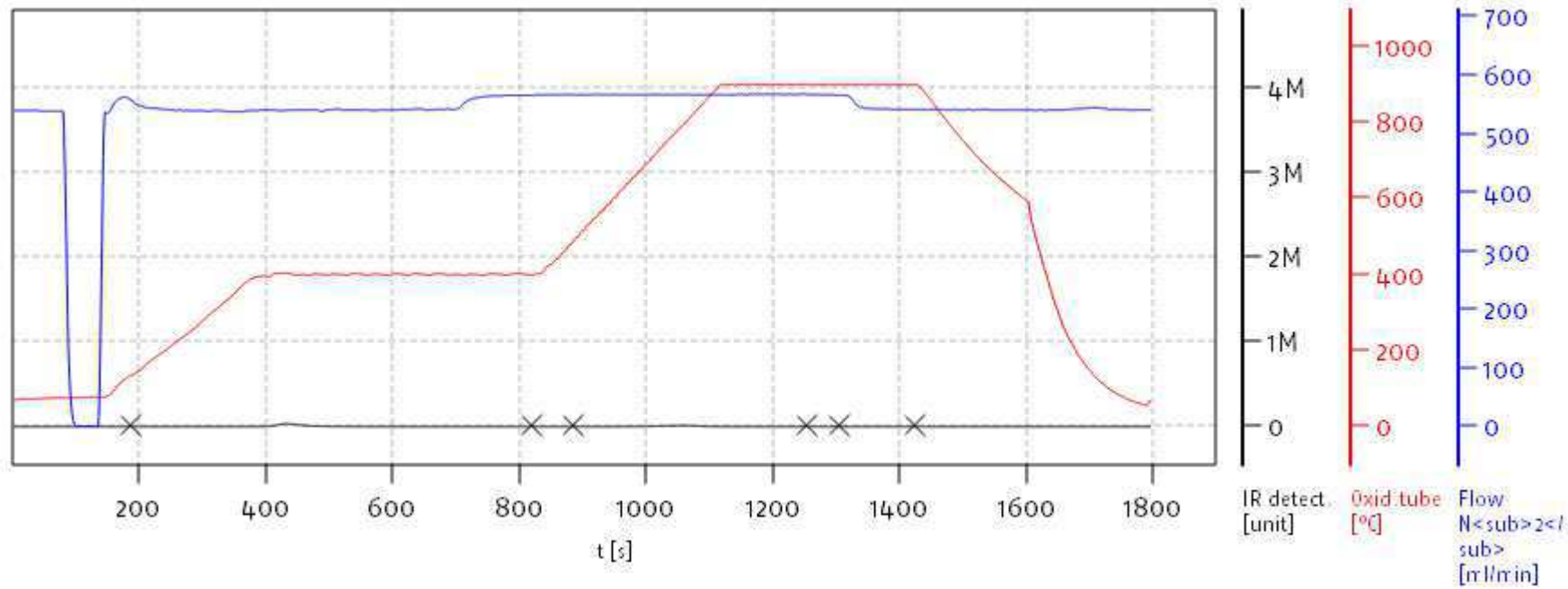
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
8	8	BLA0241-MRL1	506.30		CARBON	1/12/2023 11:31 AM	bl,C2u	0.011	62 656	0.013	0.000	541	34 112	0.011	0.002	0.9923	1.0000



Name:

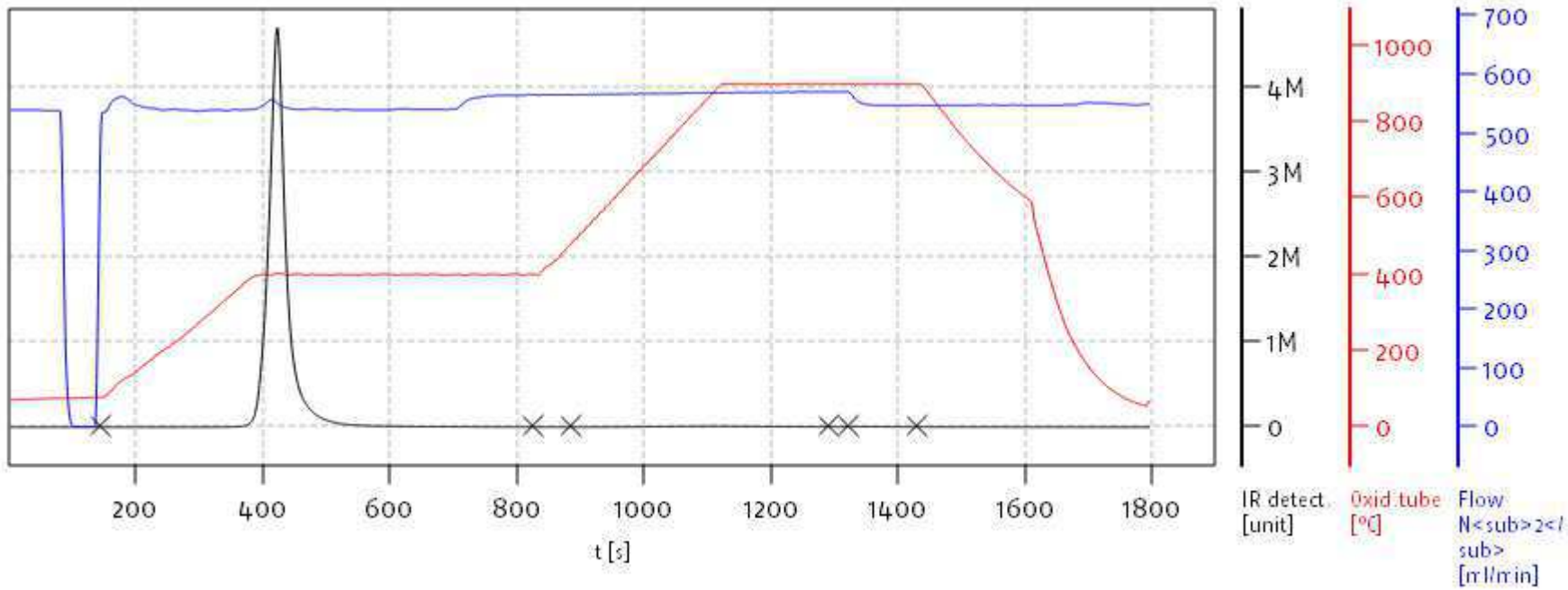
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
9	9	BLA0241-BS1	19.10		CARBON	1/12/2023 12:01 PM	bl	46.071	5 754 952	46.564	0.000	18 701	87 432	46.071	0.494	0.9923	1.0000



Name:

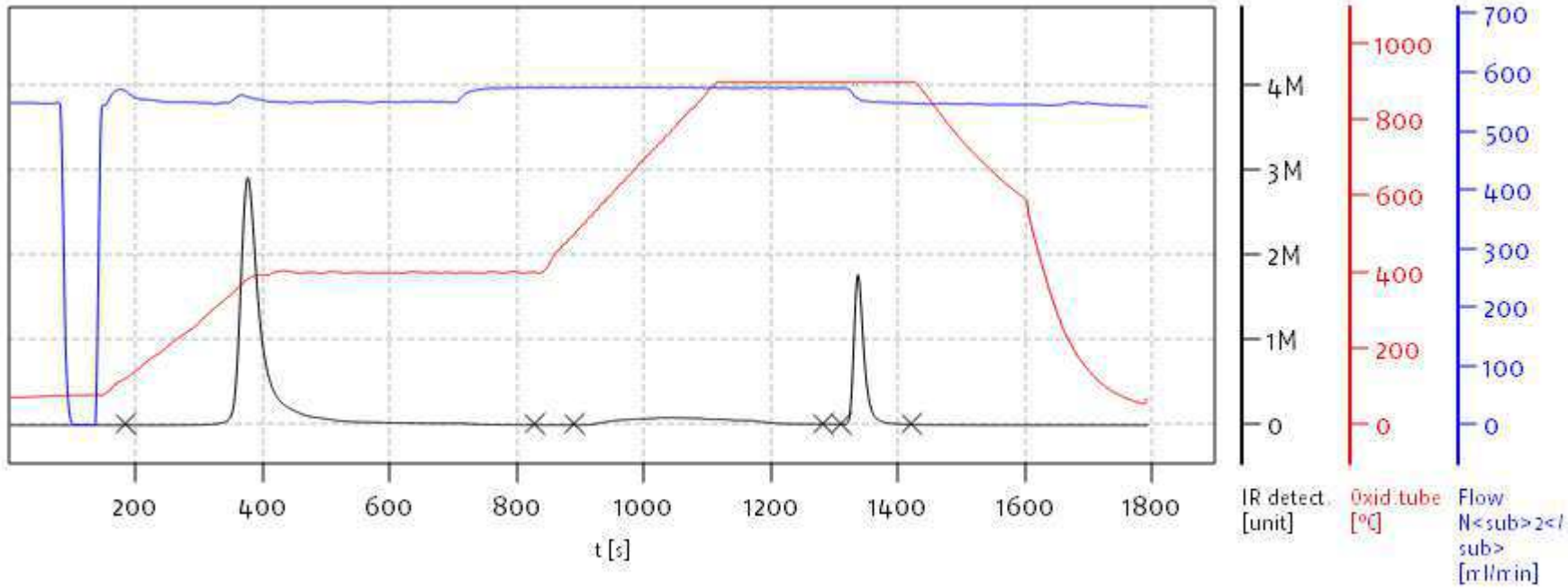
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
10	10	BLA0241-SRM1	286.30		CARBON	1/12/2023 12:31 PM	bl	2.985	4 353 035	3.362	0.664	1 253 876	723 650	2.321	0.377	0.9923	1.0000



Name:

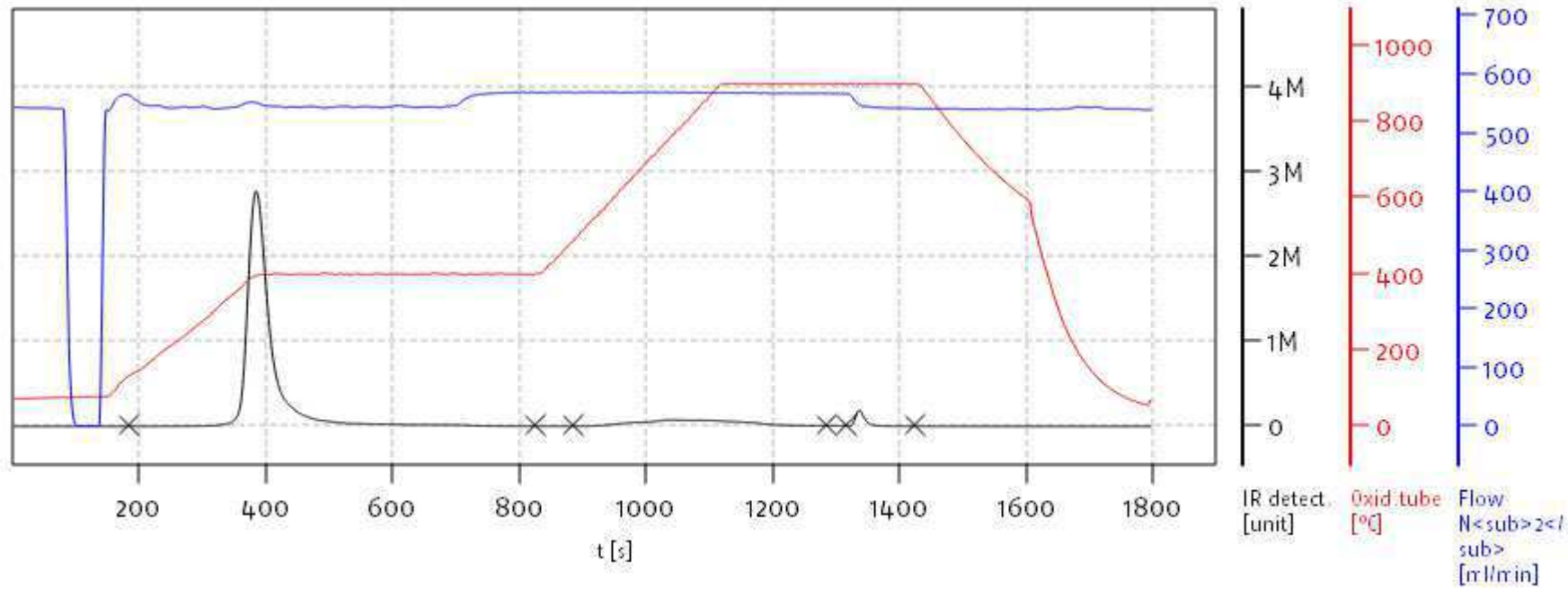
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
11	11	23A0133-01	504.20		CARBON	1/12/2023 1:02 PM	bl	1.355	4 374 193	1.524	0.031	126 469	575 235	1.325	0.168	0.9923	1.0000



Name:

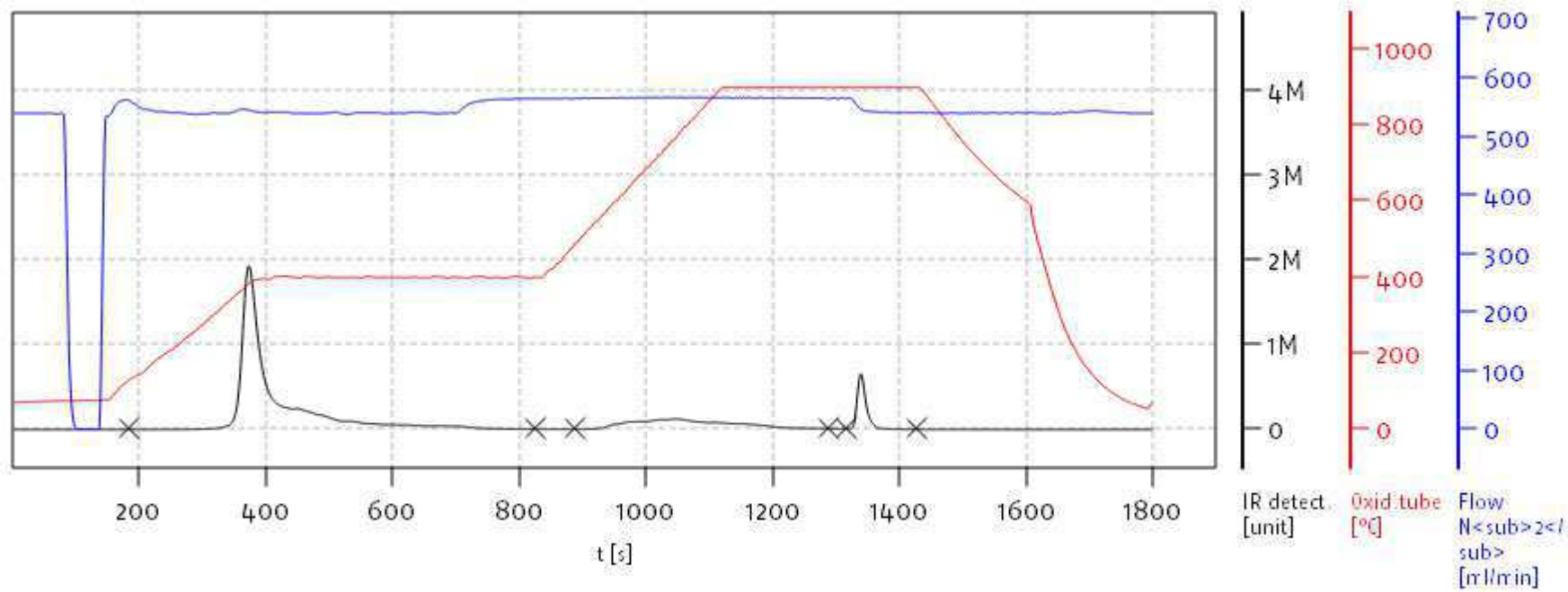
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
12	12	BLA0241-DUP1	510.30		CARBON	1/12/2023 1:32 PM	bl	1.198	3 614 994	1.462	0.117	413 439	899 698	1.080	0.265	0.9923	1.0000



Name:

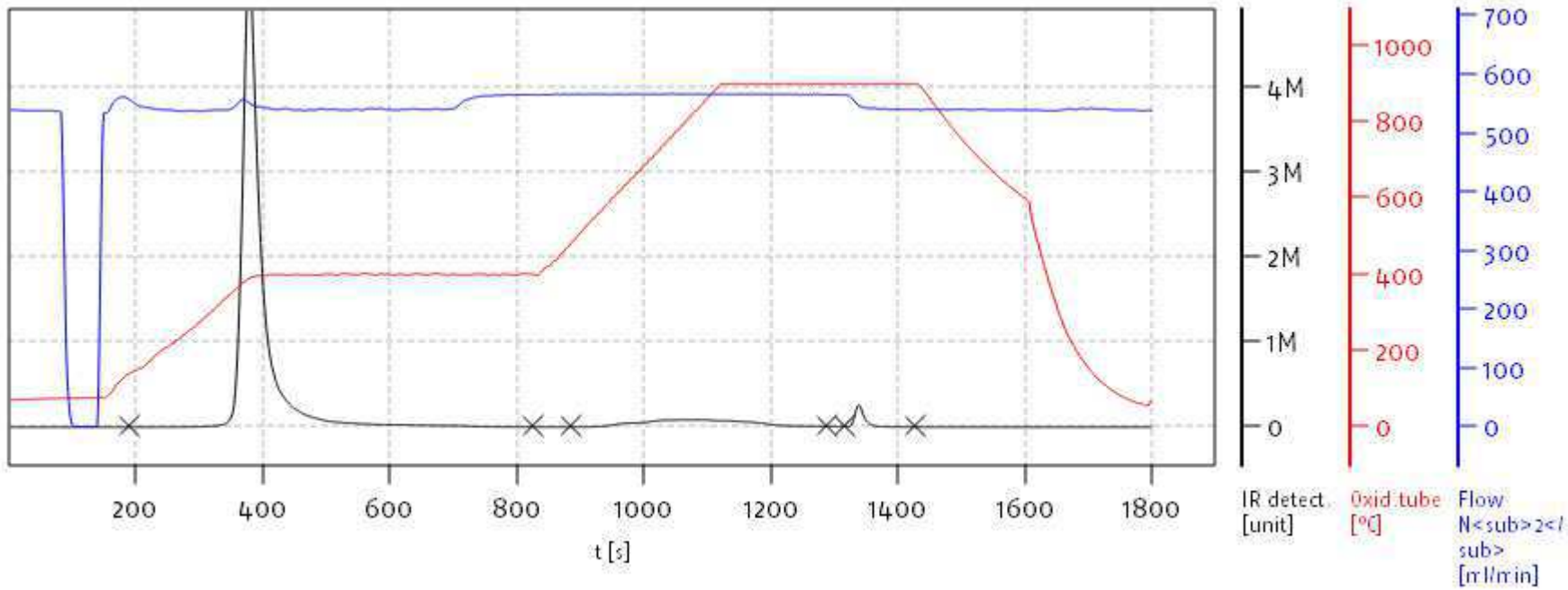
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
13	13	BLA0241-MS1	505.70	0.0091	CARBON	1/12/2023 2:02 PM	bl	2.152	6 965 909	2.353	0.045	172 120	680 685	2.108	0.200	0.9923	1.0000



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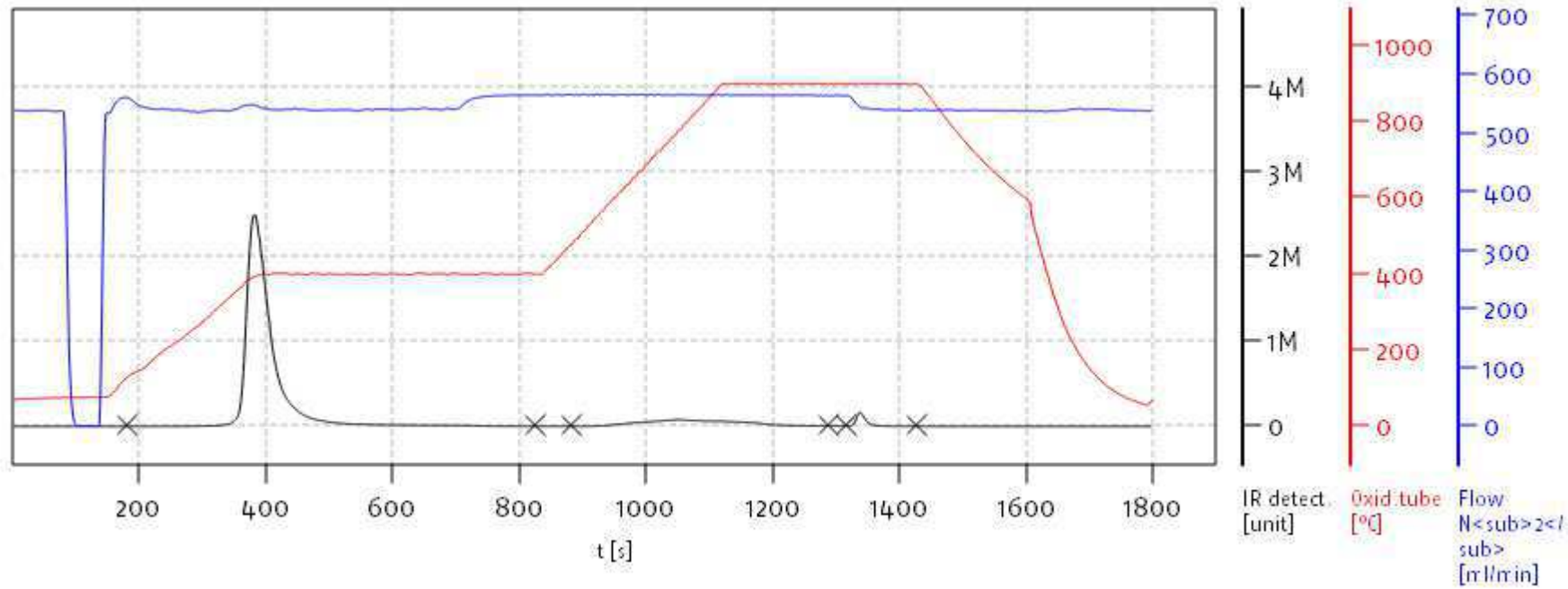
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
14	14	23A0133-02	513.20		CARBON	1/12/2023 2:33 PM	bl	1.281	4 225 666	1.438	0.024	107 740	545 255	1.257	0.156	0.9923	1.0000



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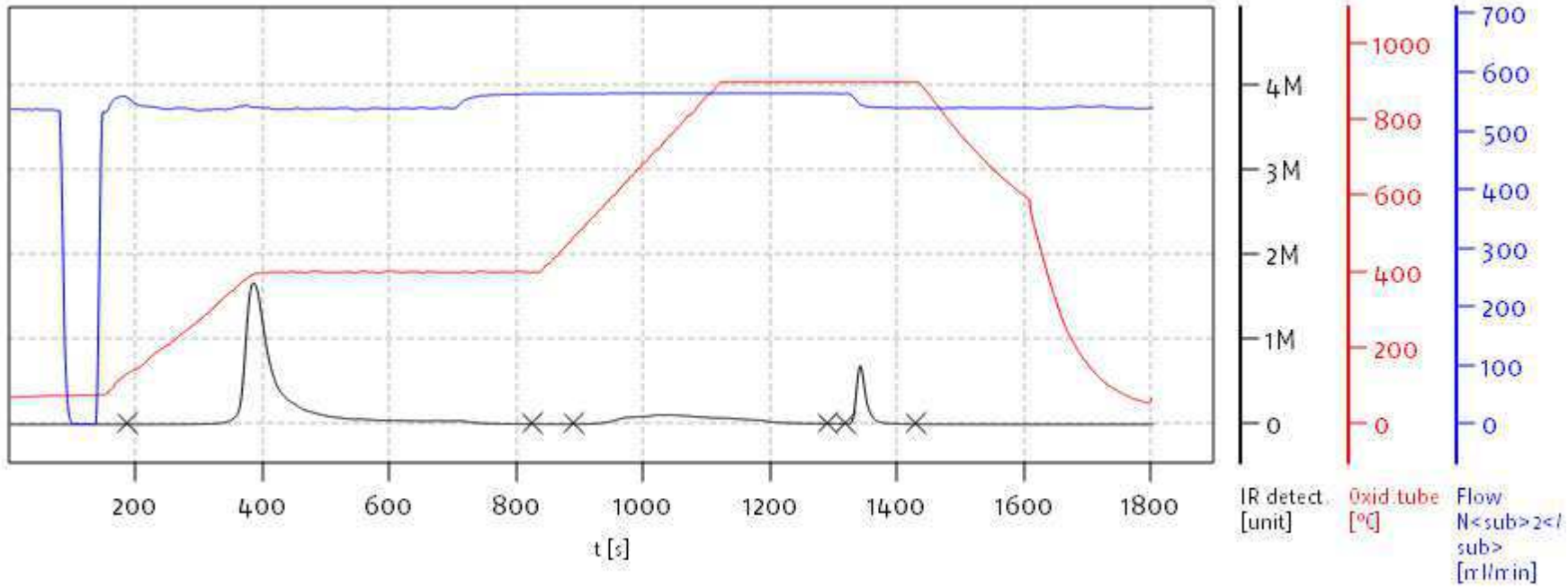
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
15	15	23A0133-03	531.30		CARBON	1/12/2023 3:03 PM	bl	1.130	3 485 751	1.365	0.130	472 817	833 738	1.000	0.235	0.9923	1.0000



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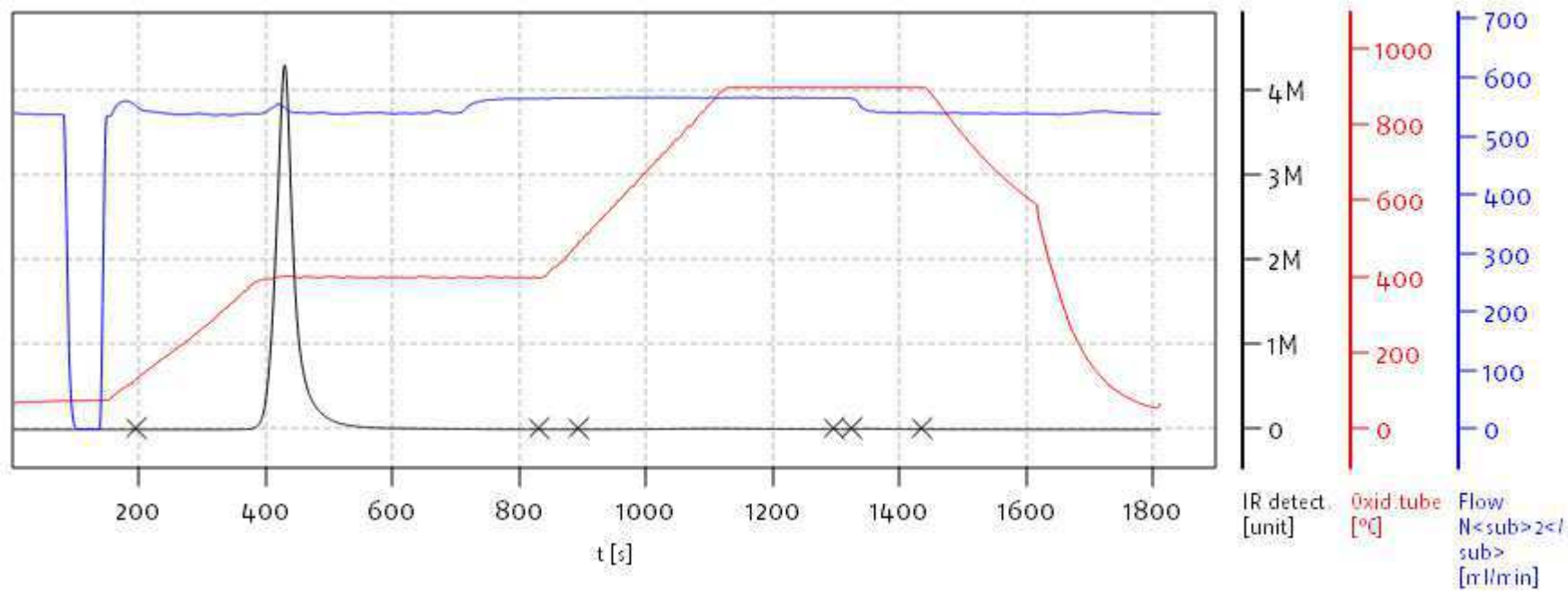
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
16	16	SLA0114-CCV1	19.00		CARBON	1/12/2023 3:34 PM	bl	45.366	5 637 732	45.885	0.000	23 251	90 325	45.366	0.520	0.9923	1.0000



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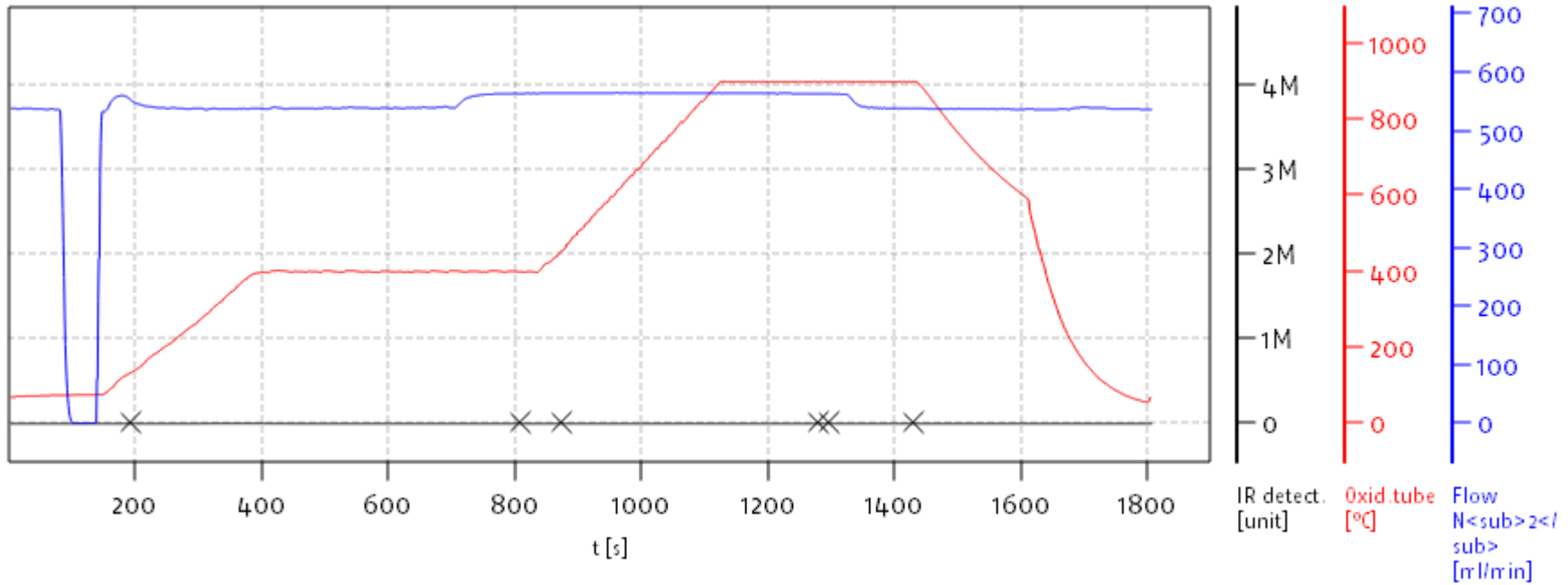
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
17	17	SLA0114-CCB1	503.40		CARBON	1/12/2023 4:04 PM	bl,C3u,C2u	0.000	10 383	0.000	0.000	398	2 141	0.000	0.000	0.9923	1.0000



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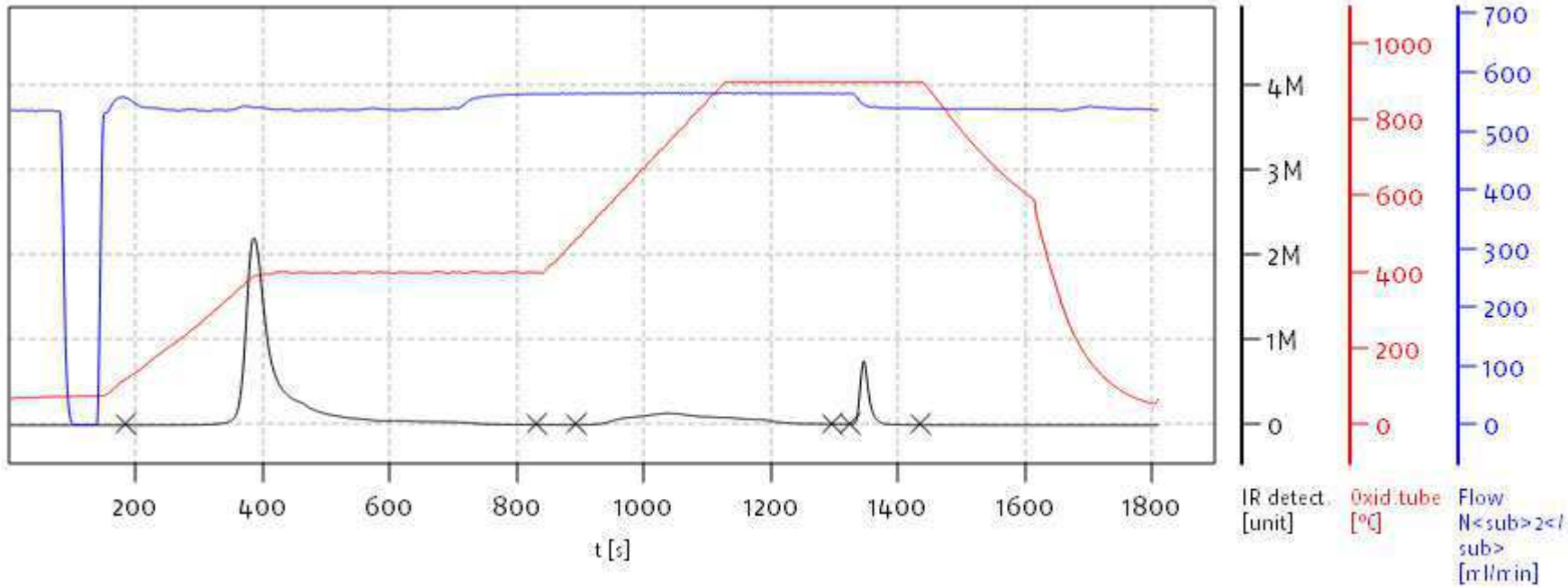
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
18	18	23A0133-04	589.60		CARBON	1/12/2023 4:35 PM	bl	1.232	4 300 828	1.492	0.118	475 939	1 018 511	1.114	0.260	0.9923	1.0000



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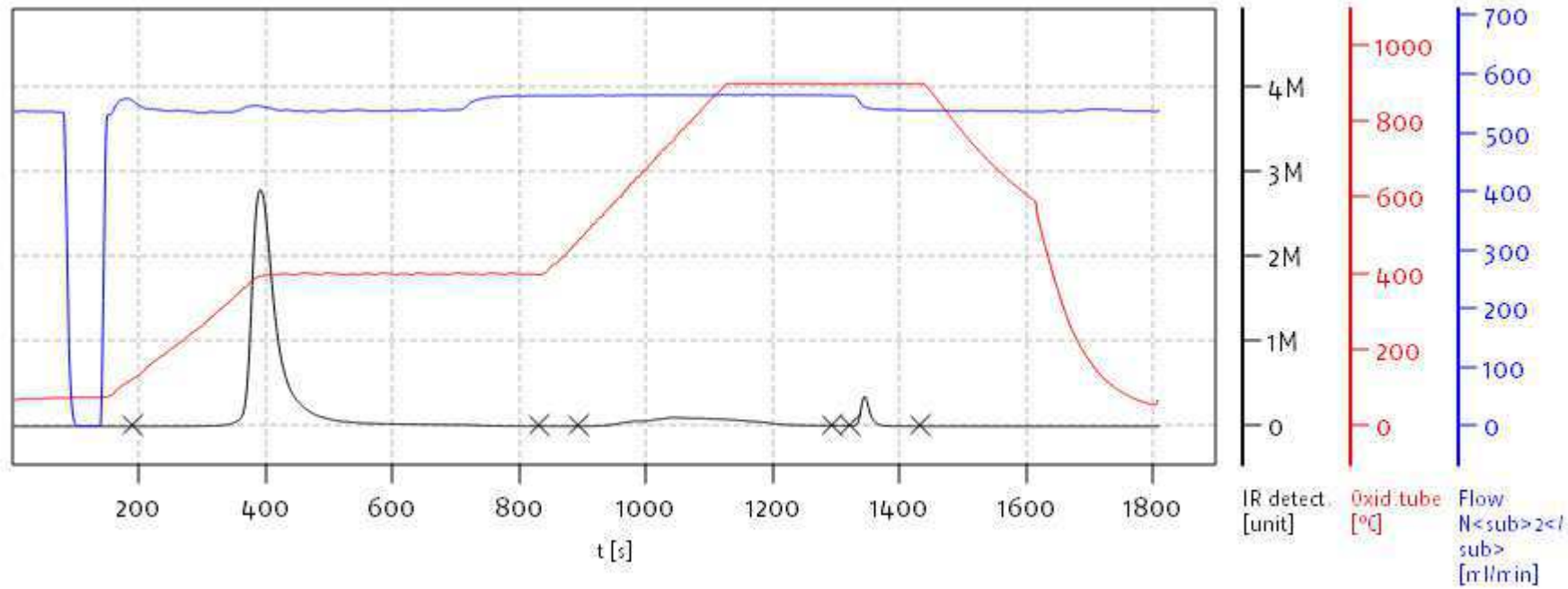
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
19	19	23A0133-05	562.00		CARBON	1/12/2023 5:05 PM	bl	1.406	4 970 808	1.609	0.054	223 054	764 748	1.351	0.203	0.9923	1.0000



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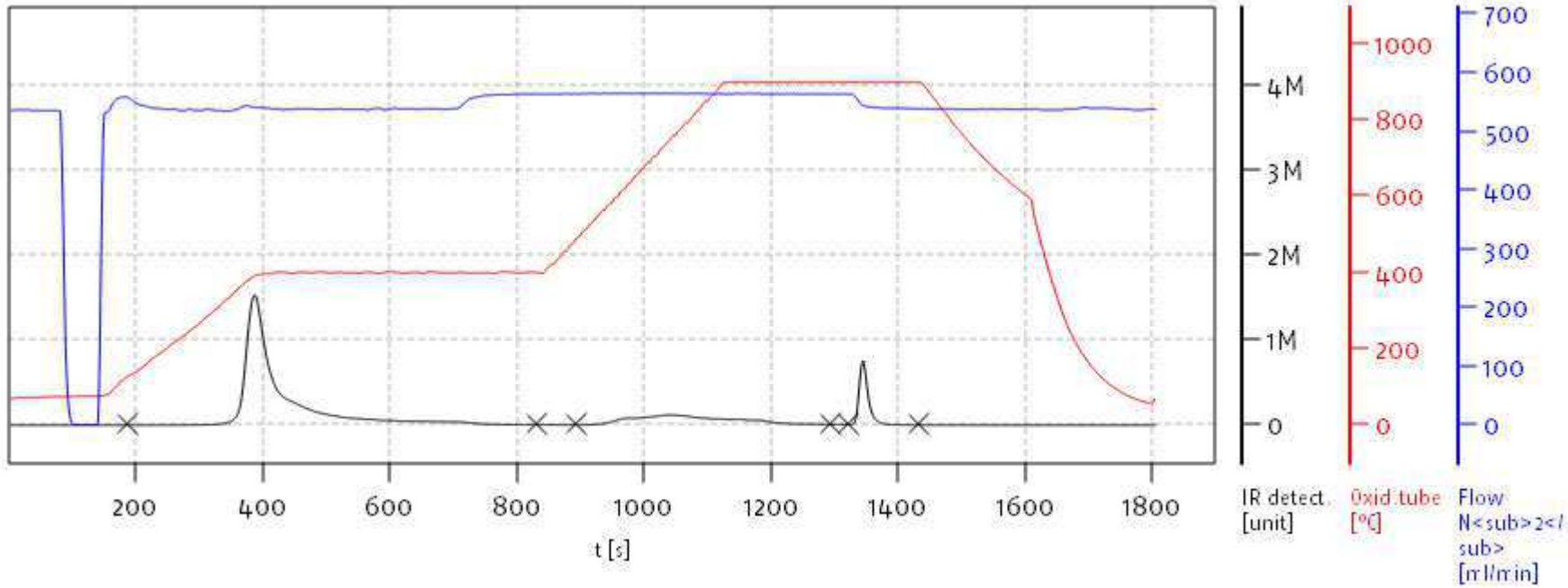
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
20	20	23A0133-06	528.30		CARBON	1/12/2023 5:36 PM	bl	1.094	3 334 222	1.335	0.132	477 329	850 510	0.962	0.241	0.9923	1.0000



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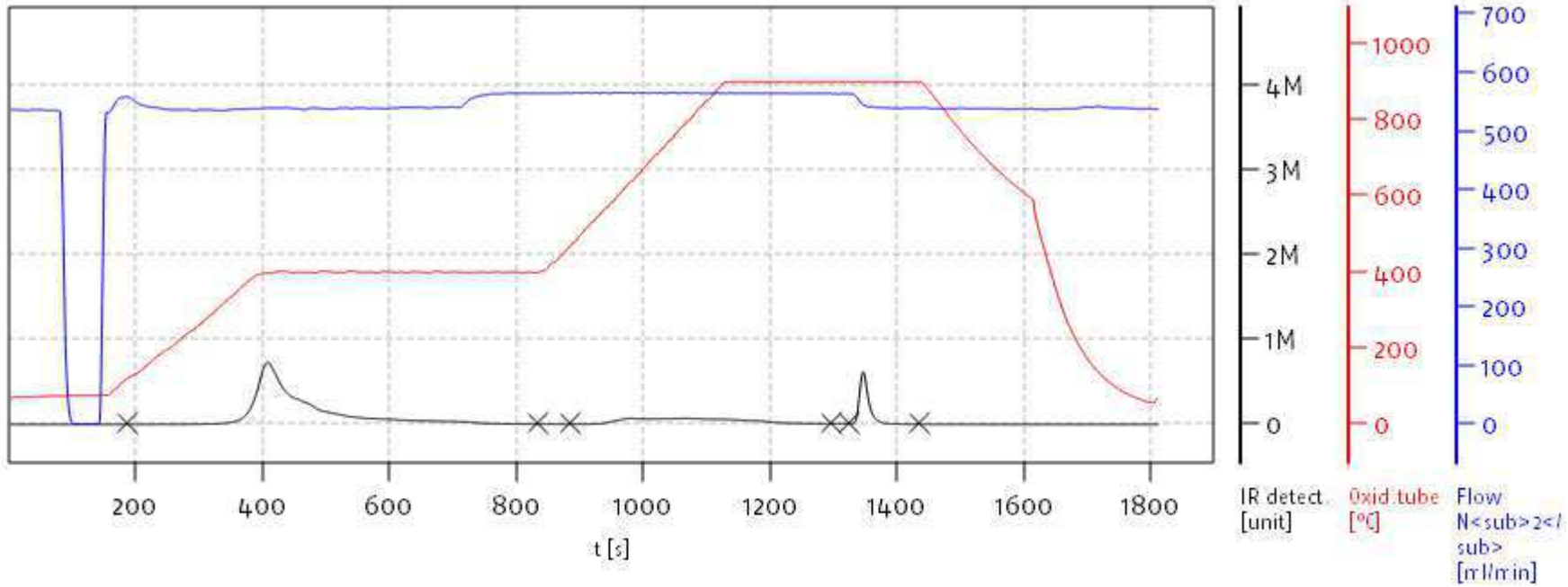
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
21	21	23A0133-07	522.80		CARBON	1/12/2023 6:07 PM	bl	0.802	2 379 540	0.980	0.110	398 915	628 789	0.691	0.178	0.9923	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

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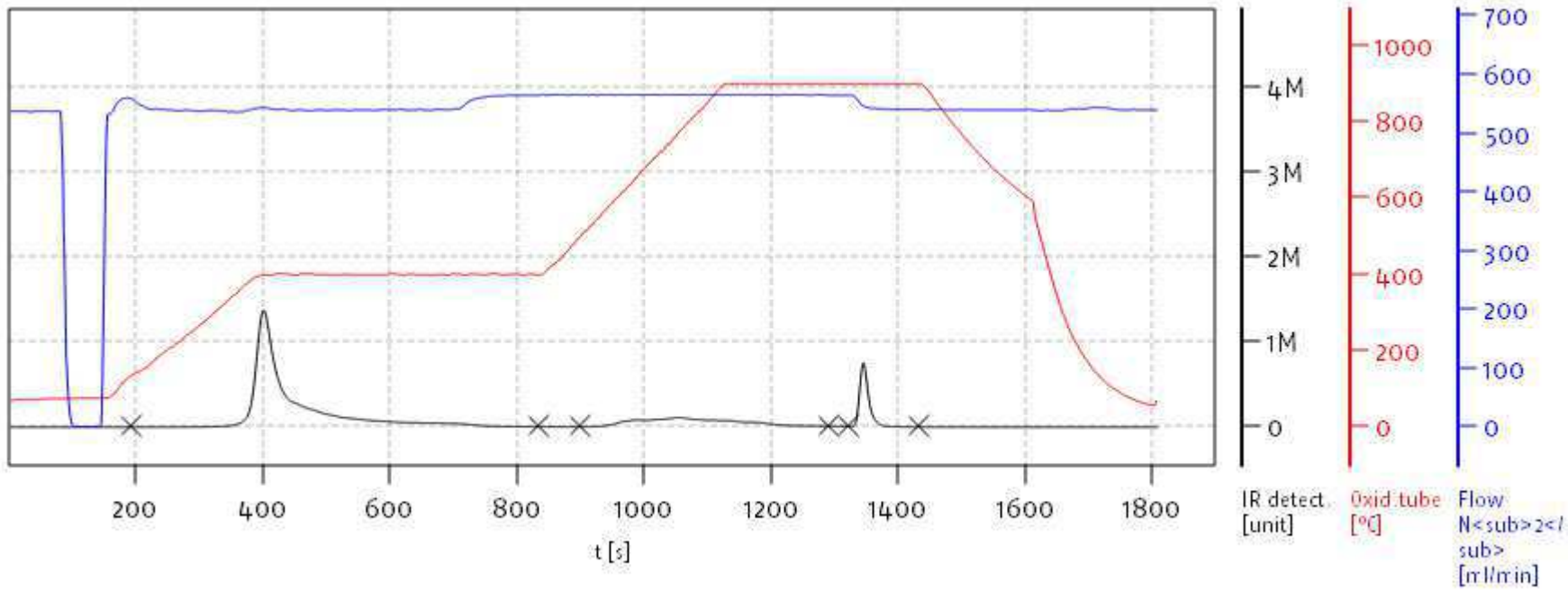
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
22	22	23A0133-08	534.30		CARBON	1/12/2023 6:37 PM	bl	0.983	2 992 524	1.208	0.131	477 861	802 167	0.853	0.225	0.9923	1.0000



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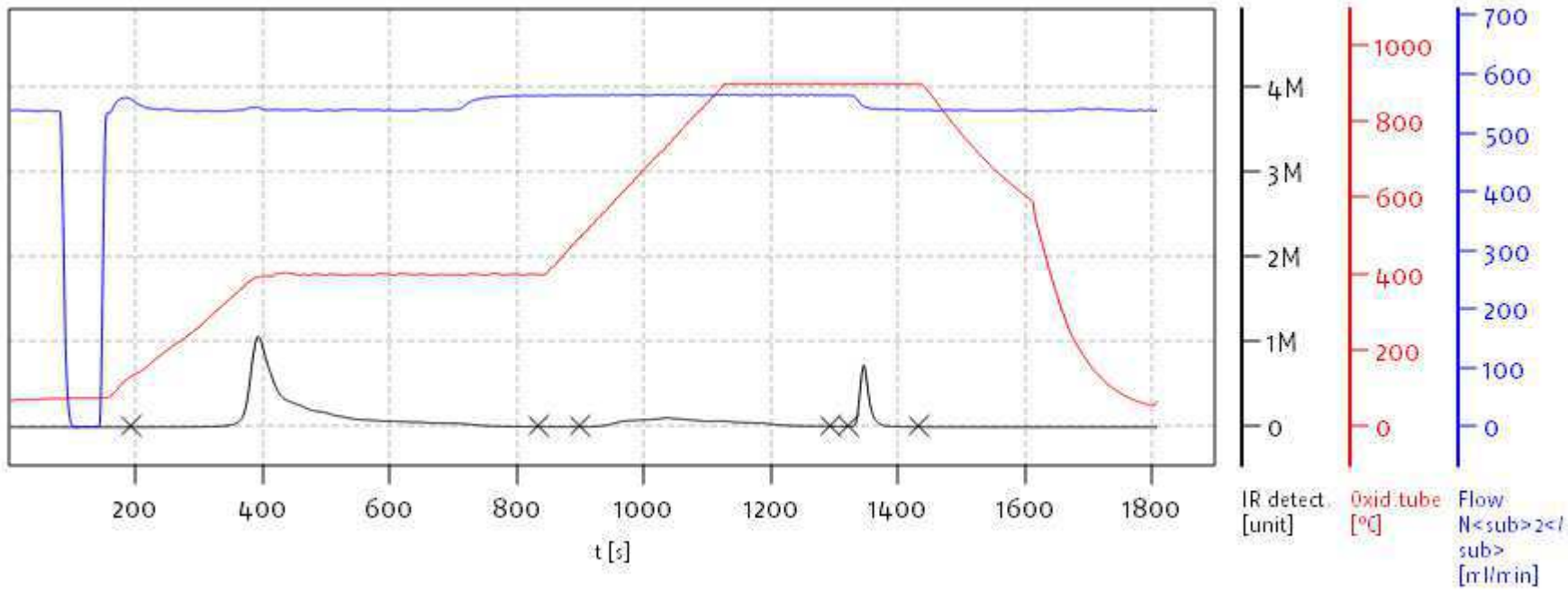
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
23	23	23A0133-09	531.30		CARBON	1/12/2023 7:08 PM	bl	0.950	2 869 225	1.166	0.128	466 491	766 510	0.822	0.216	0.9923	1.0000



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Balance: BAL3
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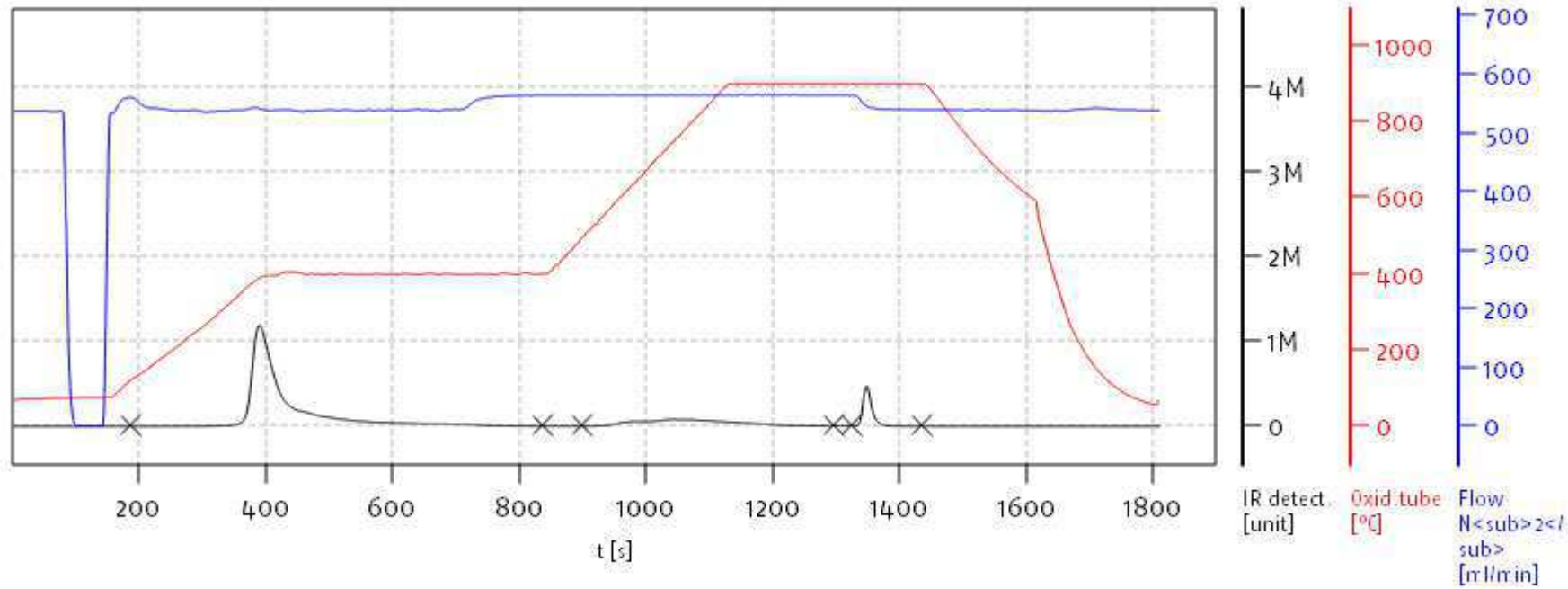
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
24	24	23A0133-10	373.30		CARBON	1/12/2023 7:38 PM	bl	1.146	2 543 351	1.375	0.111	293 784	576 544	1.036	0.228	0.9923	1.0000



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Balance: BAL3
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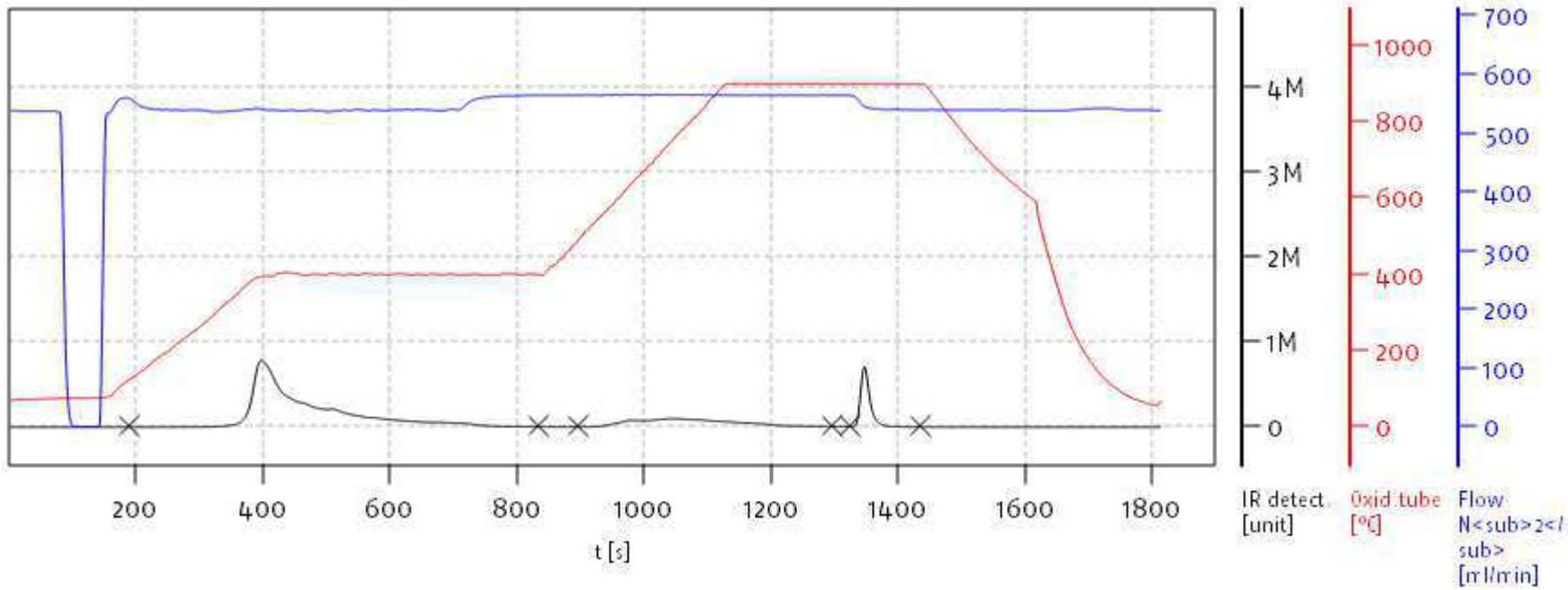
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
25	25	23A0133-11	512.30		CARBON	1/12/2023 8:09 PM	bl	0.978	2 849 553	1.189	0.131	460 220	726 517	0.846	0.212	0.9923	1.0000



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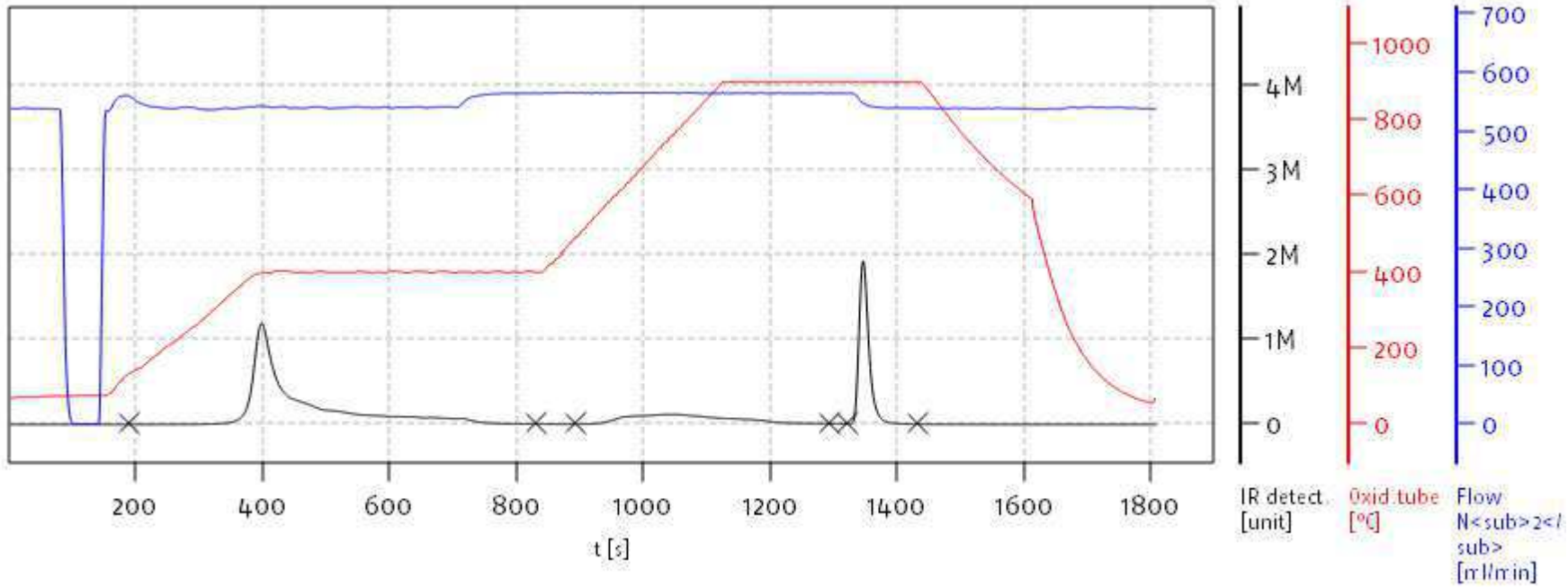
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
26	26	23A0133-12	518.00		CARBON	1/12/2023 8:39 PM	bl	1.328	3 197 548	1.585	0.387	1 322 248	888 957	0.940	0.258	0.9923	1.0000



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Balance: BAL3
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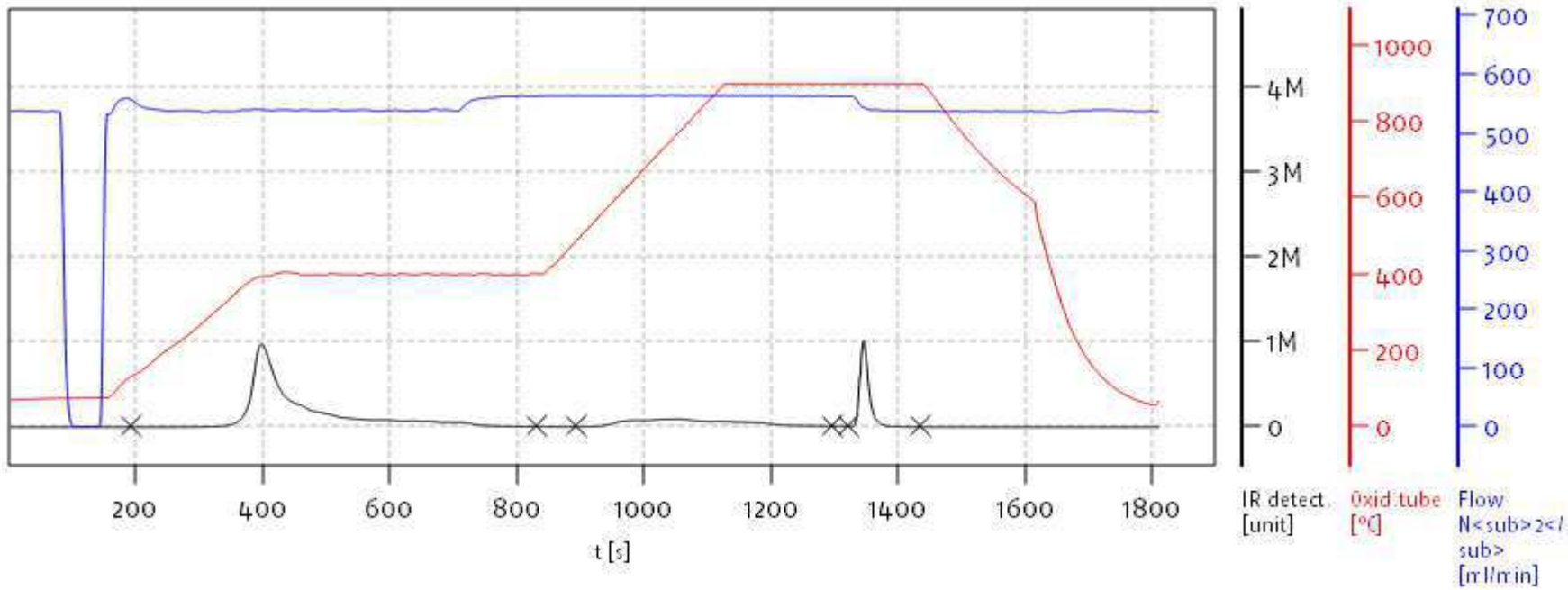
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
27	27	23A0133-13	531.60		CARBON	1/12/2023 9:10 PM	bl	0.993	2 855 610	1.206	0.176	630 473	756 231	0.817	0.212	0.9923	1.0000



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Balance: BAL3
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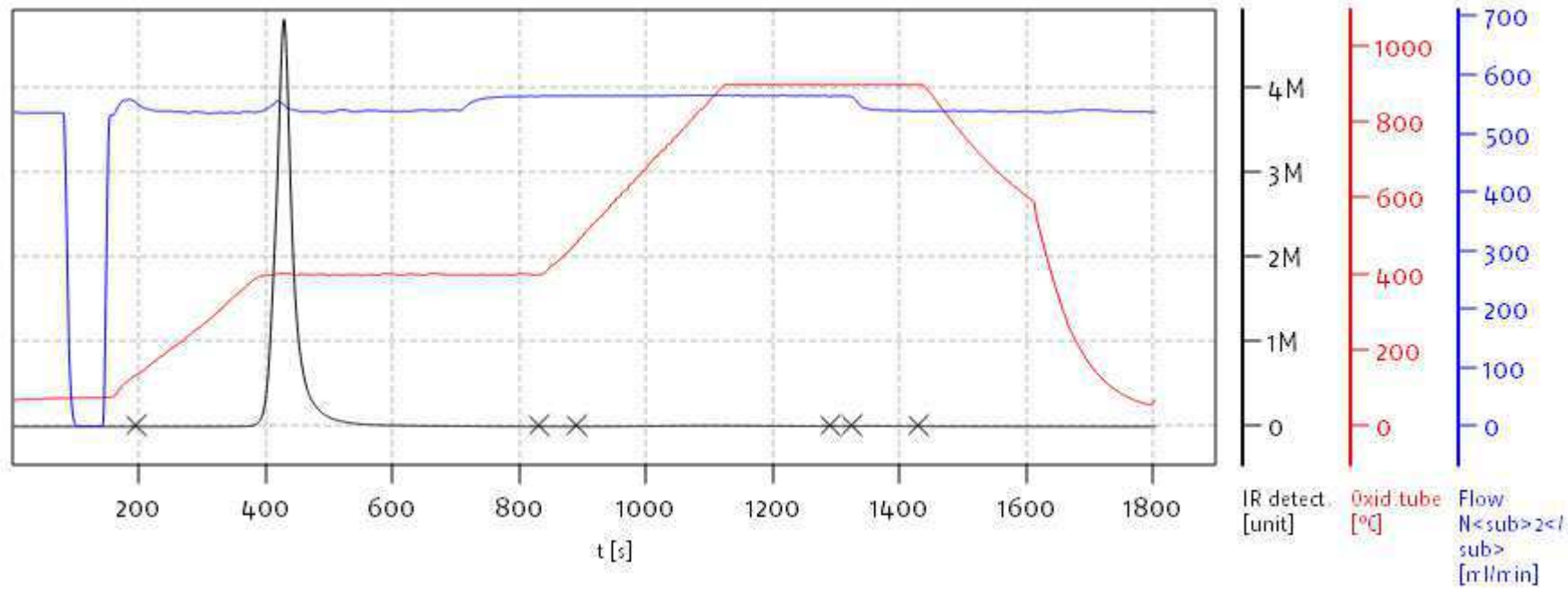
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
28	28	SLA0114-CCV2	19.90		CARBON	1/12/2023 9:40 PM	bl	45.299	5 894 859	45.856	0.000	21 314	98 221	45.299	0.558	0.9923	1.0000



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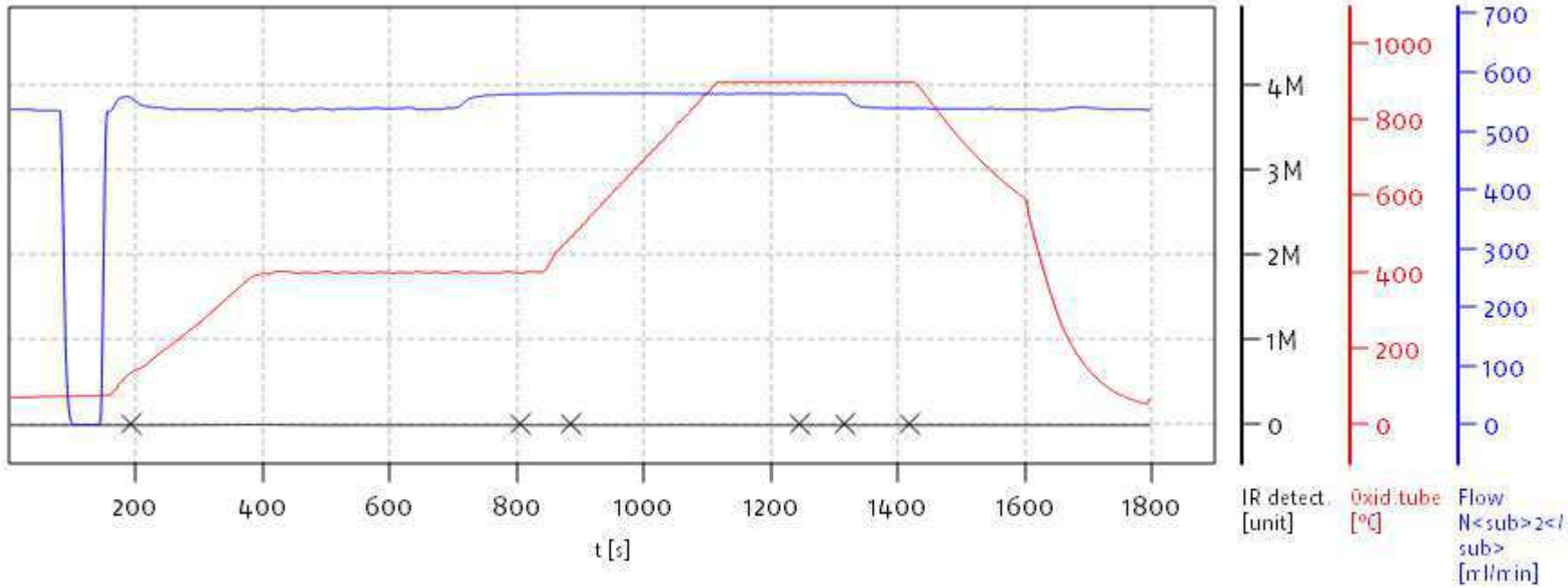
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
29	29	SLA0114-CCB2	501.20		CARBON	1/12/2023 10:11 PM	bl,C2u	0.000	23 506	0.000	0.000	586	4 267	0.000	0.000	0.9923	1.0000



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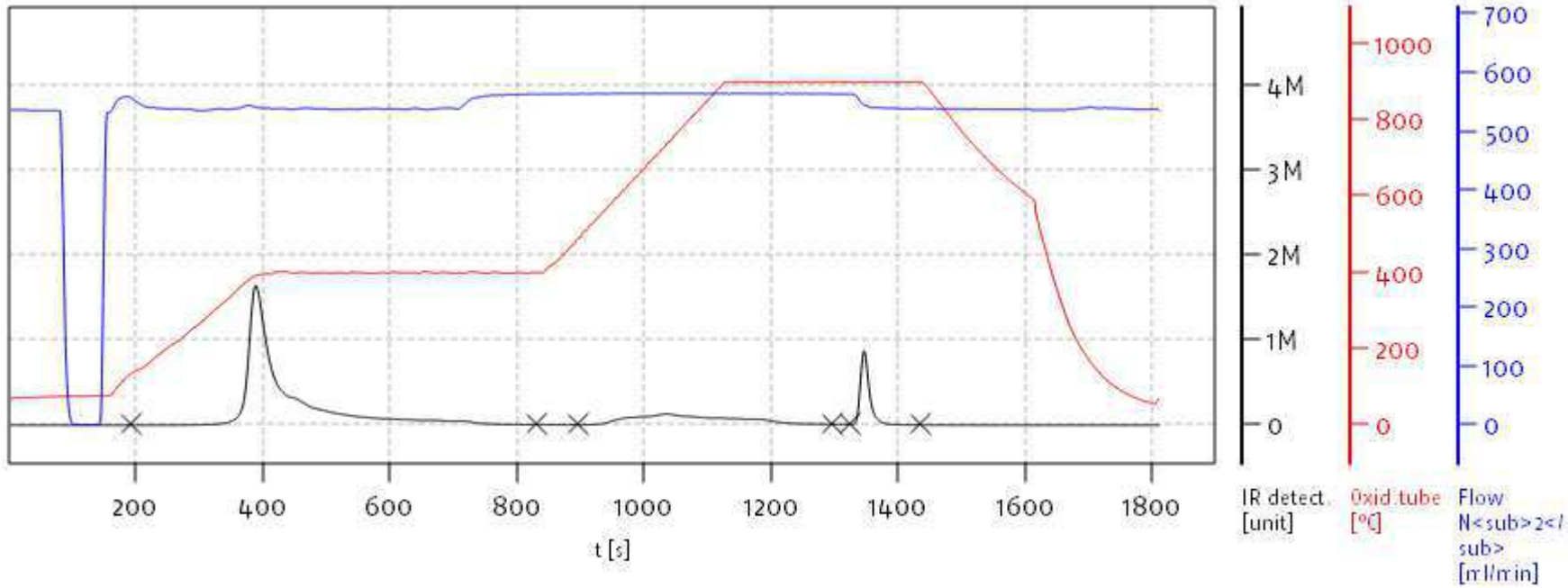
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
30	30	23A0133-14	575.00		CARBON	1/12/2023 10:41 PM	bl	1.107	3 640 204	1.355	0.141	551 291	947 377	0.965	0.248	0.9923	1.0000



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Balance: BAL3
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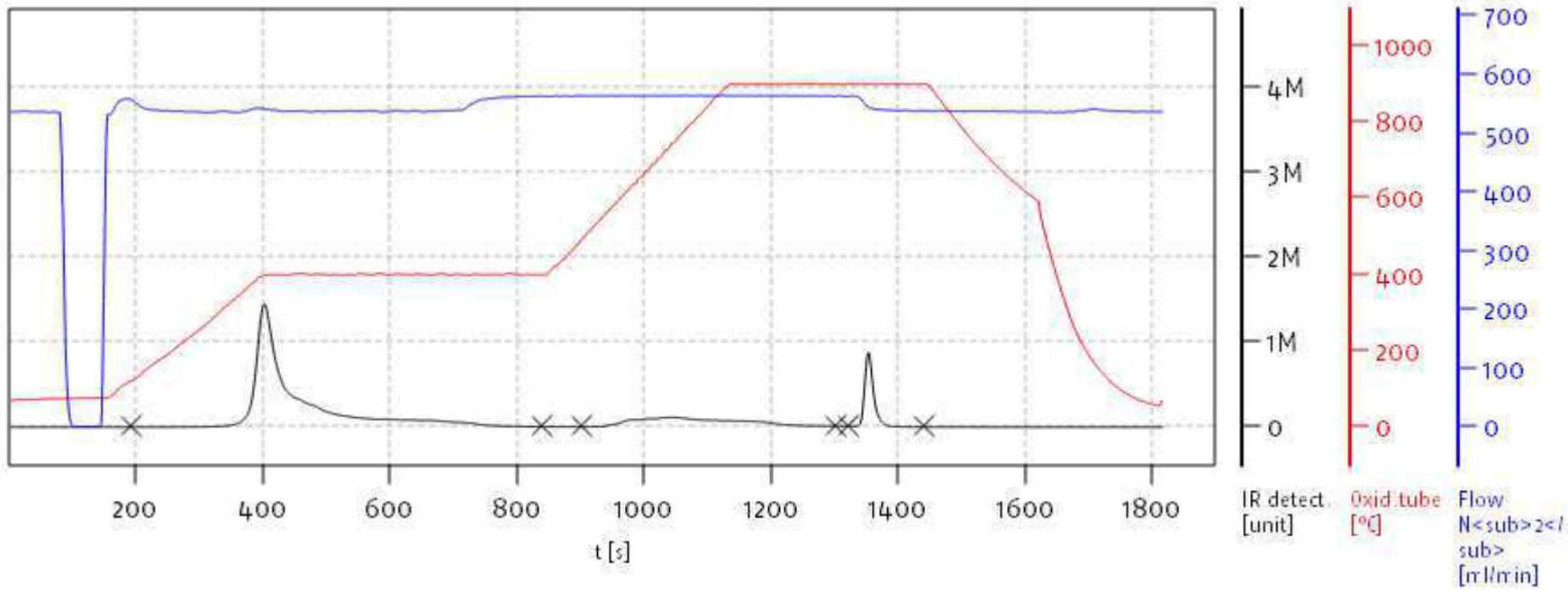
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
31	31	23A0133-15	570.90		CARBON	1/12/2023 11:12 PM	bl	1.074	3 498 128	1.303	0.140	542 751	870 918	0.934	0.229	0.9923	1.0000



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Balance: BAL3
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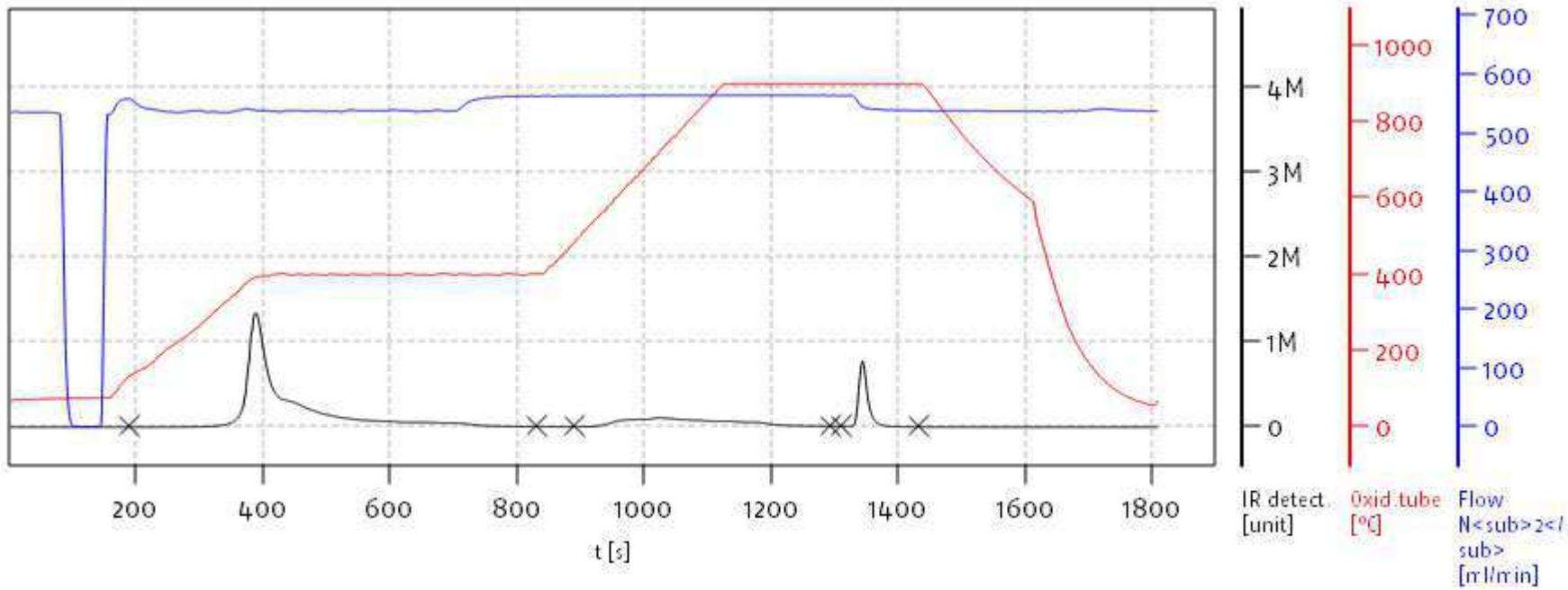
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
32	32	23A0133-16	505.00		CARBON	1/12/2023 11:42 PM	bl	1.080	3 108 614	1.323	0.142	491 037	820 531	0.938	0.243	0.9923	1.0000



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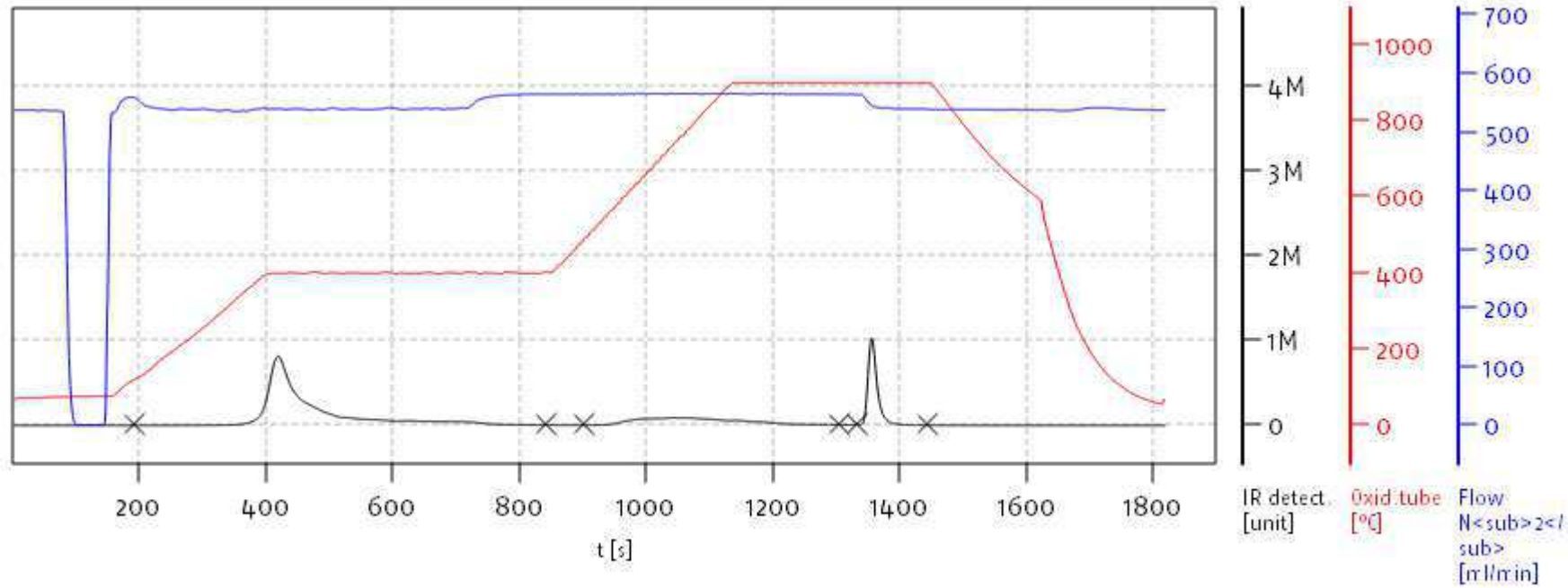
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
33	33	23A0157-01	503.10		CARBON	1/13/2023 12:13 AM	bl	0.862	2 214 563	1.063	0.194	658 052	679 686	0.668	0.201	0.9923	1.0000



Name:

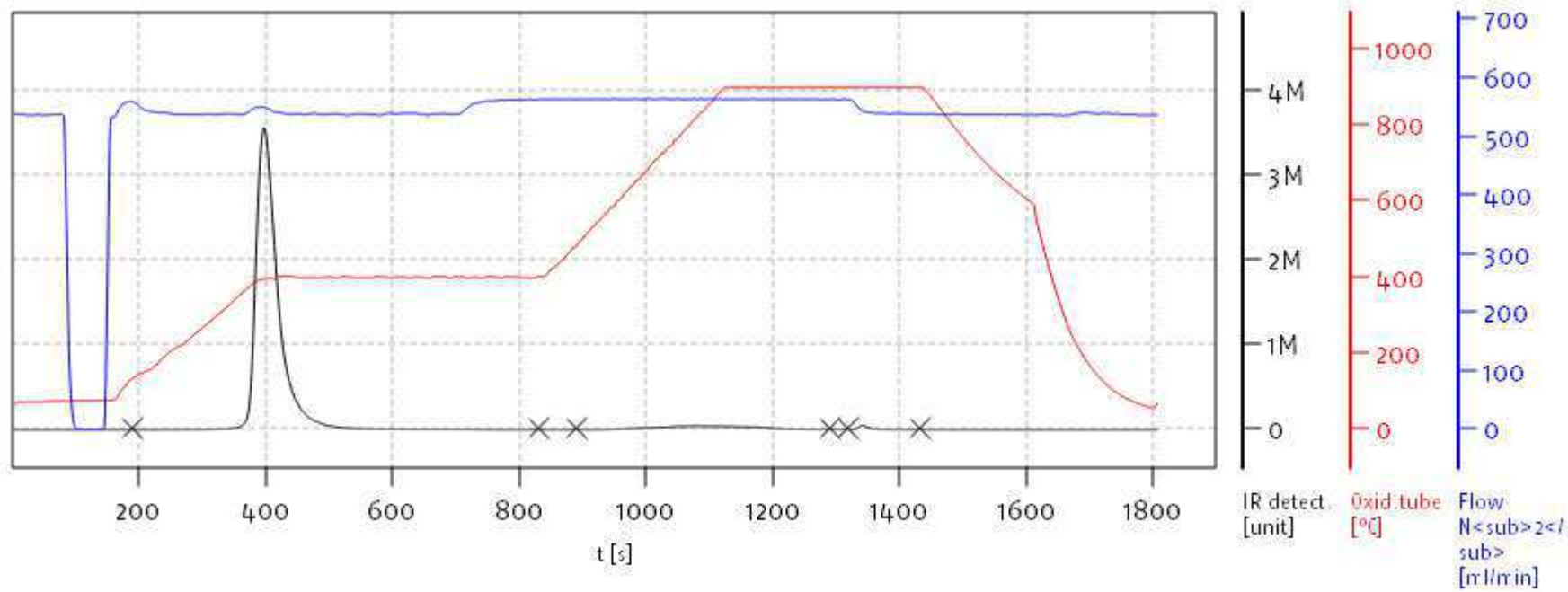
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
34	34	23A0157-02	529.30		CARBON	1/13/2023 12:44 AM	bl	1.548	5 351 270	1.627	0.003	37 071	294 404	1.545	0.078	0.9923	1.0000



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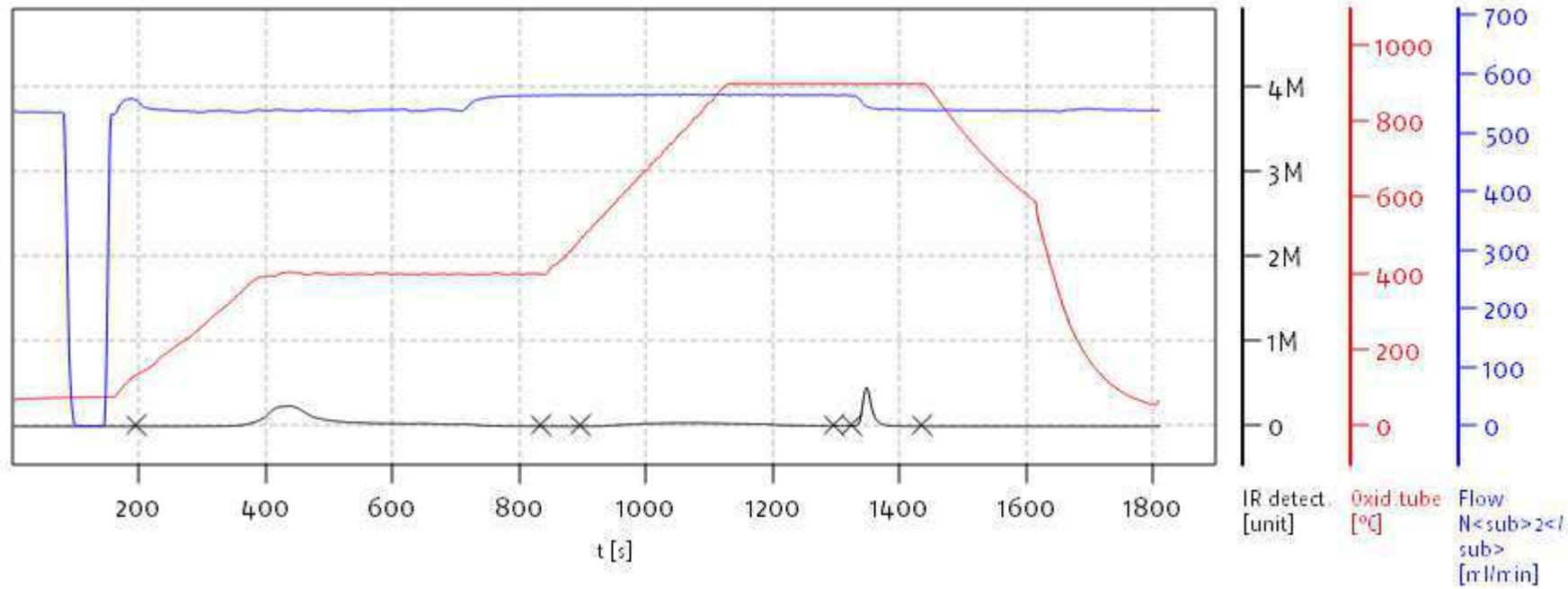
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
35	35	23A0157-03	525.80		CARBON	1/13/2023 1:14 AM	bl	0.377	1 046 860	0.469	0.079	295 403	337 909	0.298	0.092	0.9923	1.0000



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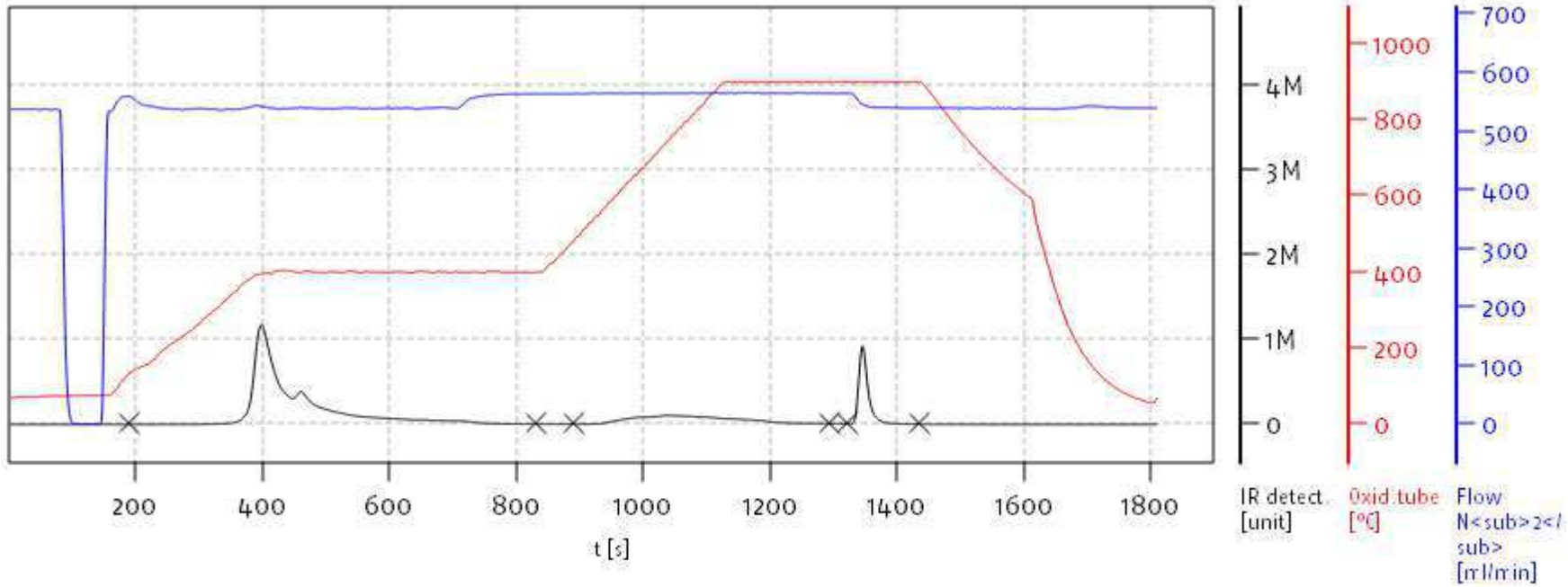
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
36	36	23A0157-04	518.40		CARBON	1/13/2023 1:45 AM	bl	1.056	3 010 049	1.283	0.171	600 638	787 230	0.884	0.227	0.9923	1.0000



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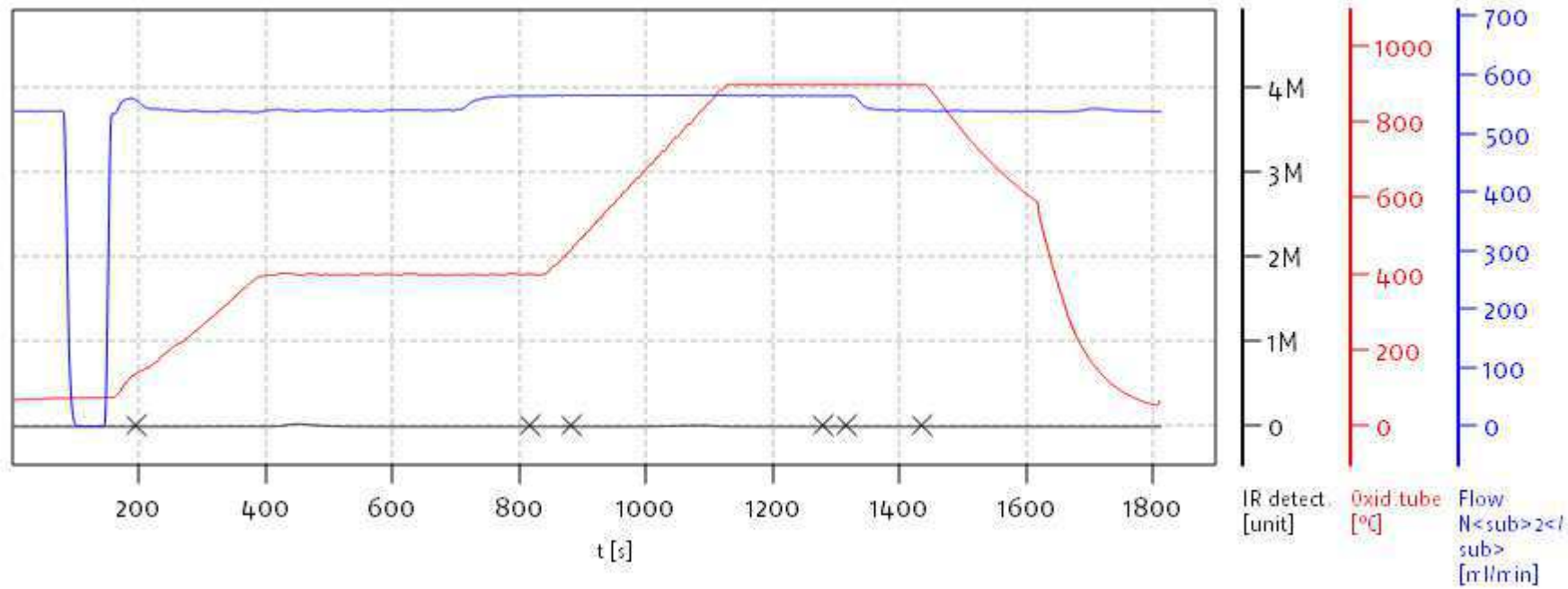
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
37	37	BLA0244-MRL1	543.20		CARBON	1/13/2023 2:15 AM	bl,C2u	0.013	72 929	0.016	0.000	253	37 498	0.013	0.003	0.9923	1.0000



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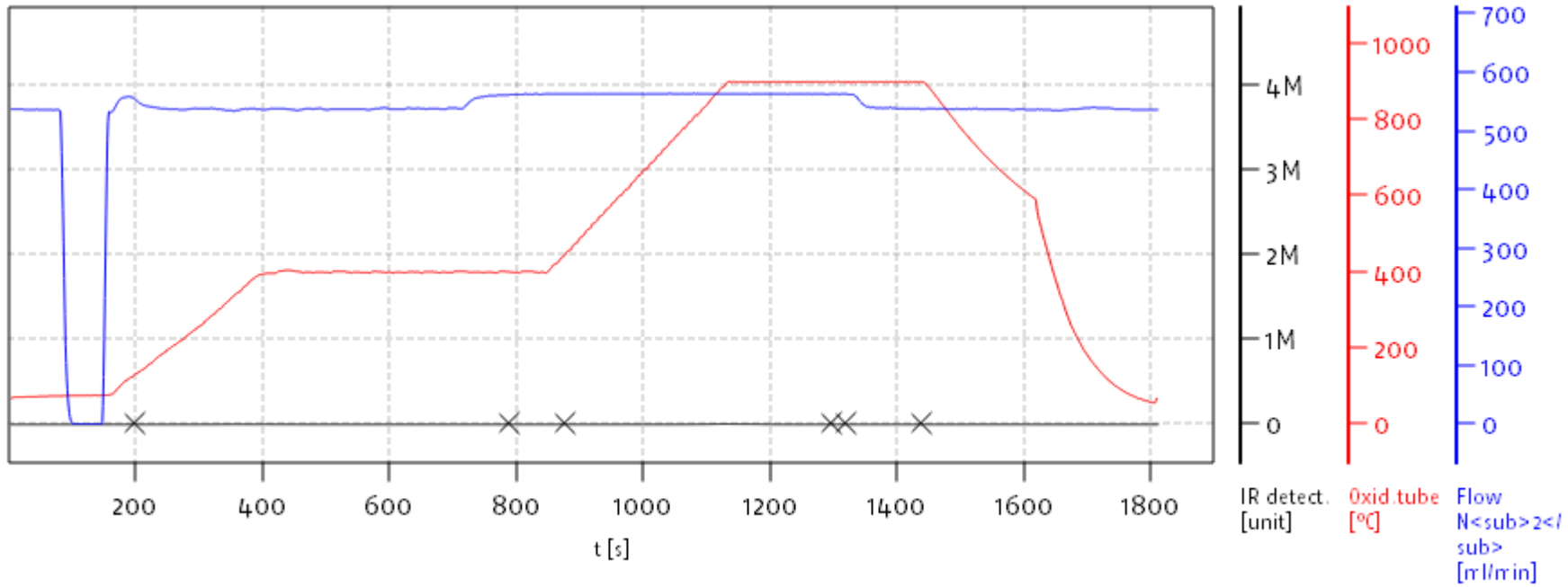
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
38	38	BLA0244-BLK1	562.50		CARBON	1/13/2023 2:46 AM	bl,C2u	0.000	8 372	0.000	0.000	291	17 604	0.000	0.000	0.9923	1.0000



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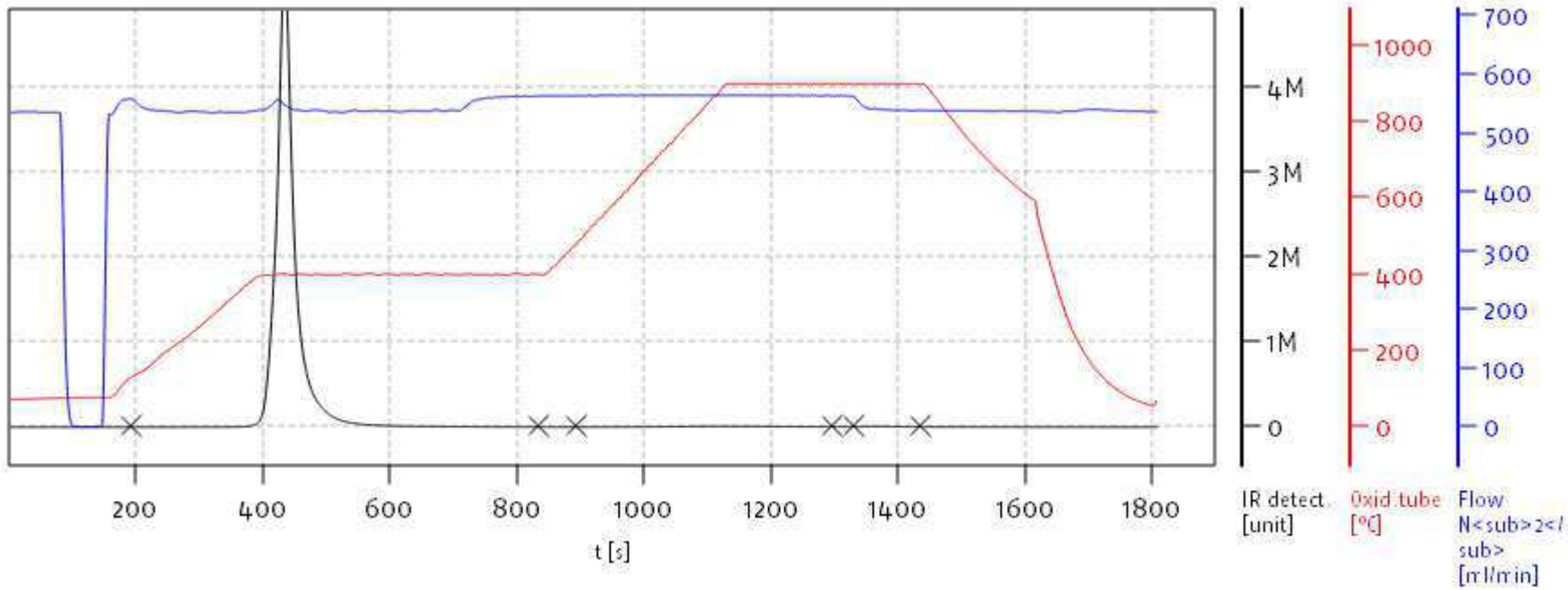
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
39	39	BLA0244-BS1	22.20		CARBON	1/13/2023 3:16 AM	bl	45.931	6 664 523	46.331	0.000	22 744	83 828	45.931	0.400	0.9923	1.0000



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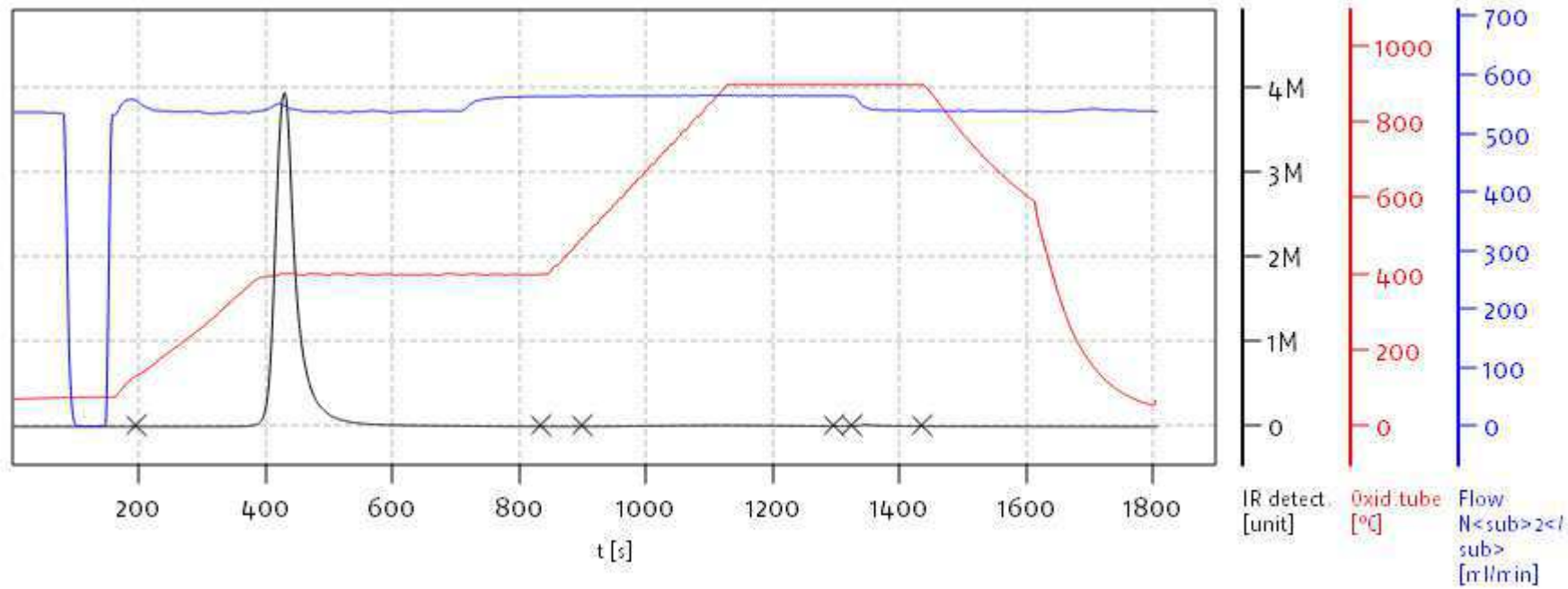
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
40	40	SLA0114-CCV3	19.60		CARBON	1/13/2023 3:47 AM	bl	45.132	5 774 075	45.968	0.086	37 470	132 442	45.045	0.836	0.9923	1.0000



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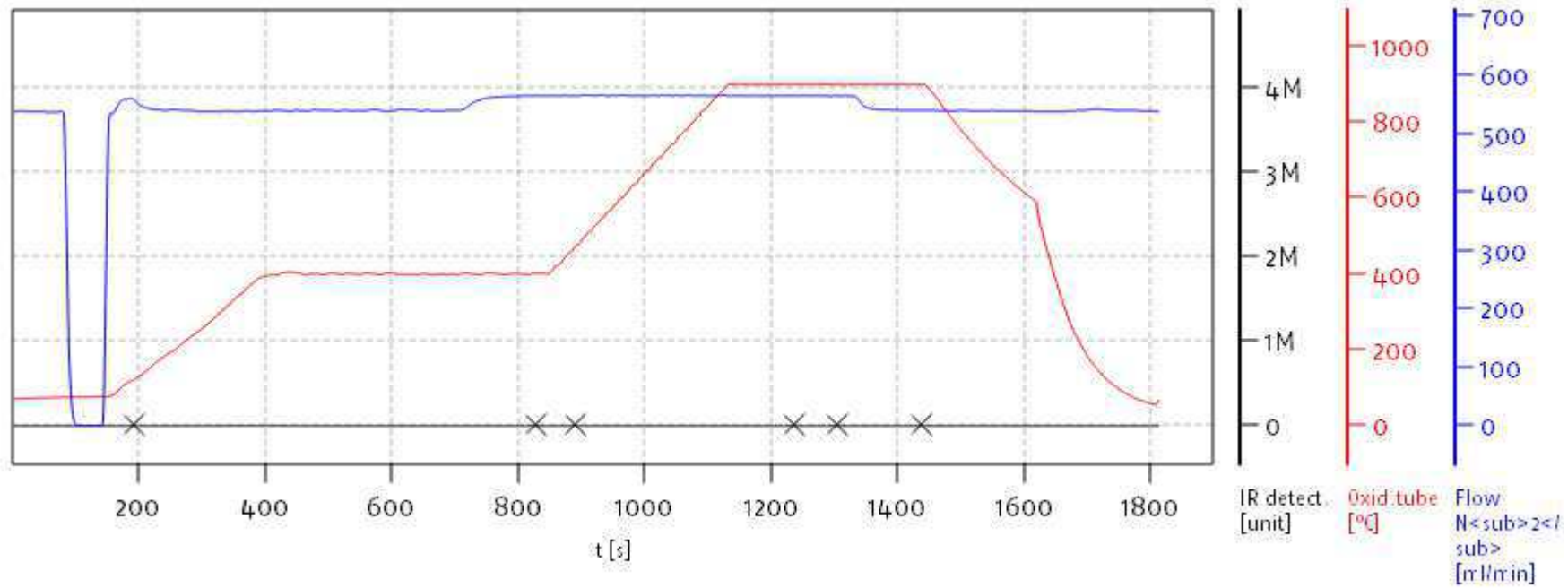
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
41	41	SLA0114-CCB3	519.30		CARBON	1/13/2023 4:18 AM	bl,C3u,C2u	0.000	9 607	0.000	0.000	843	1 141	0.000	0.000	0.9923	1.0000



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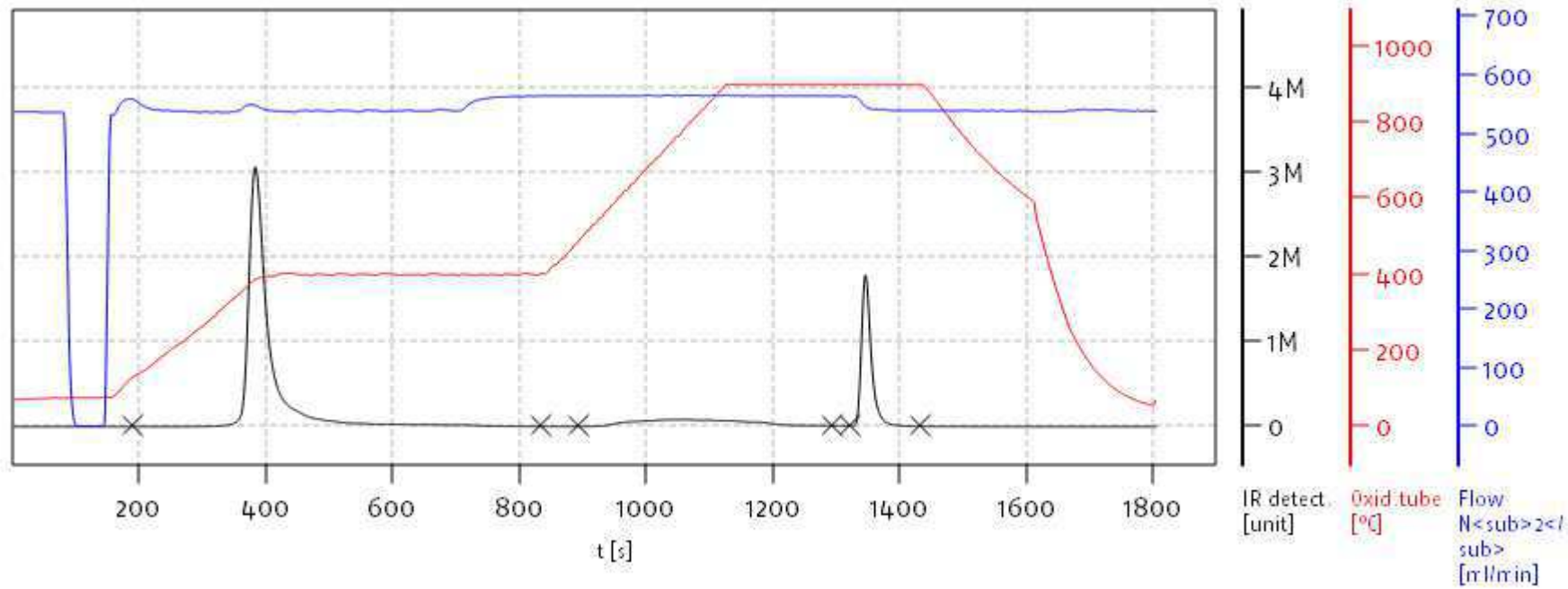
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
42	42	BLA0244-SRM1	273.00		CARBON	1/13/2023 4:48 AM	bl	3.023	4 198 479	3.403	0.676	1 218 239	696 979	2.347	0.380	0.9923	1.0000



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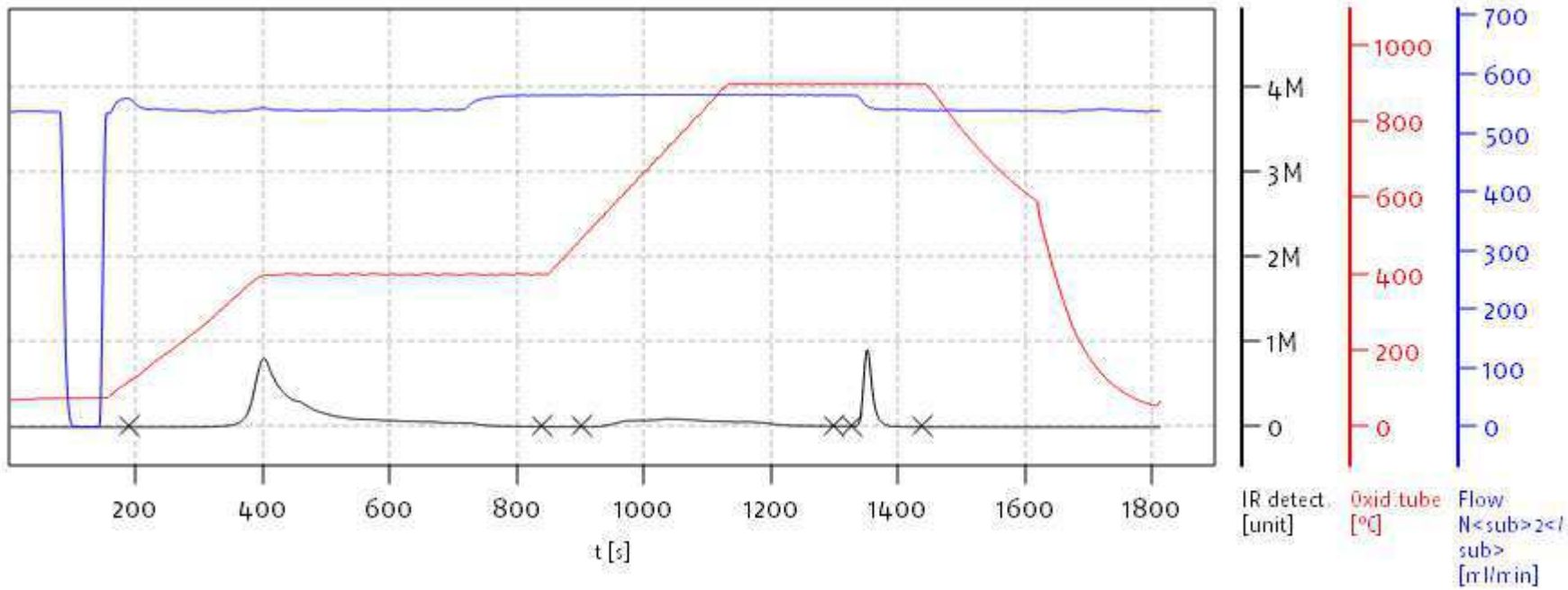
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
43	43	23A0157-05	509.00		CARBON	1/13/2023 5:19 AM	bl	0.961	2 659 356	1.186	0.167	575 116	765 779	0.795	0.225	0.9923	1.0000



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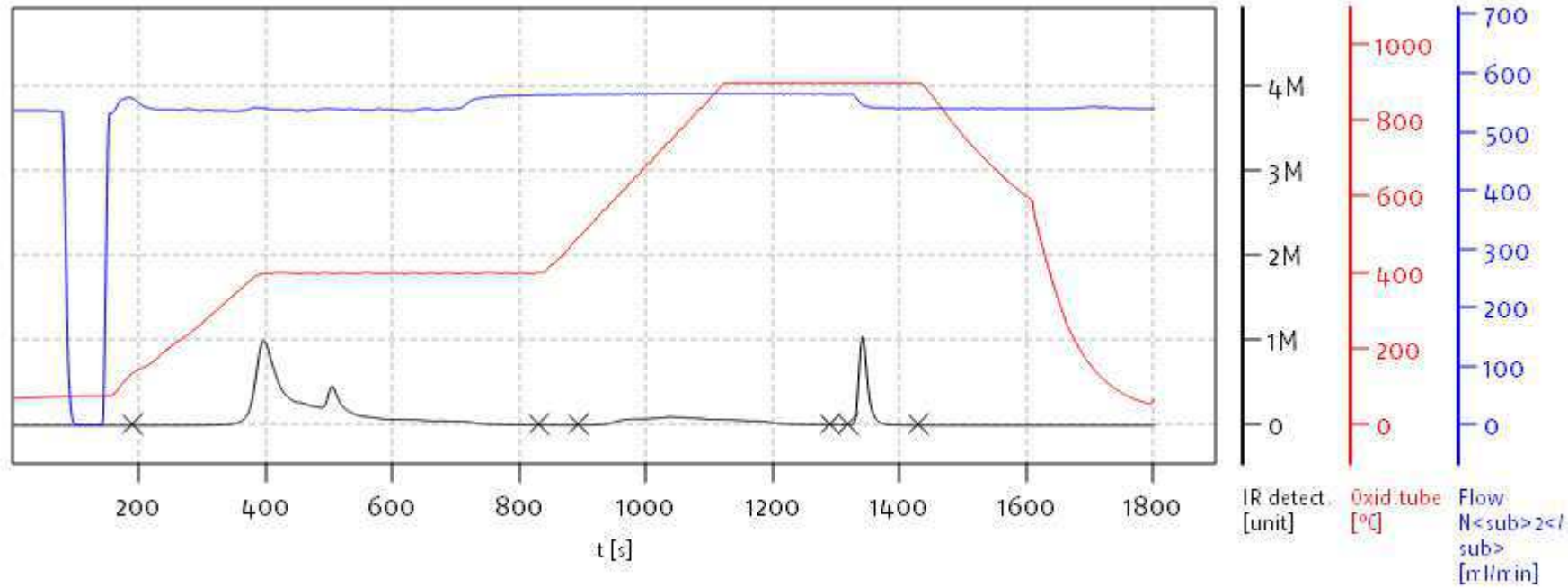
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
44	44	BLA0244-DUP1	523.90		CARBON	1/13/2023 5:49 AM	bl	1.072	3 058 394	1.284	0.183	646 720	742 791	0.889	0.212	0.9923	1.0000



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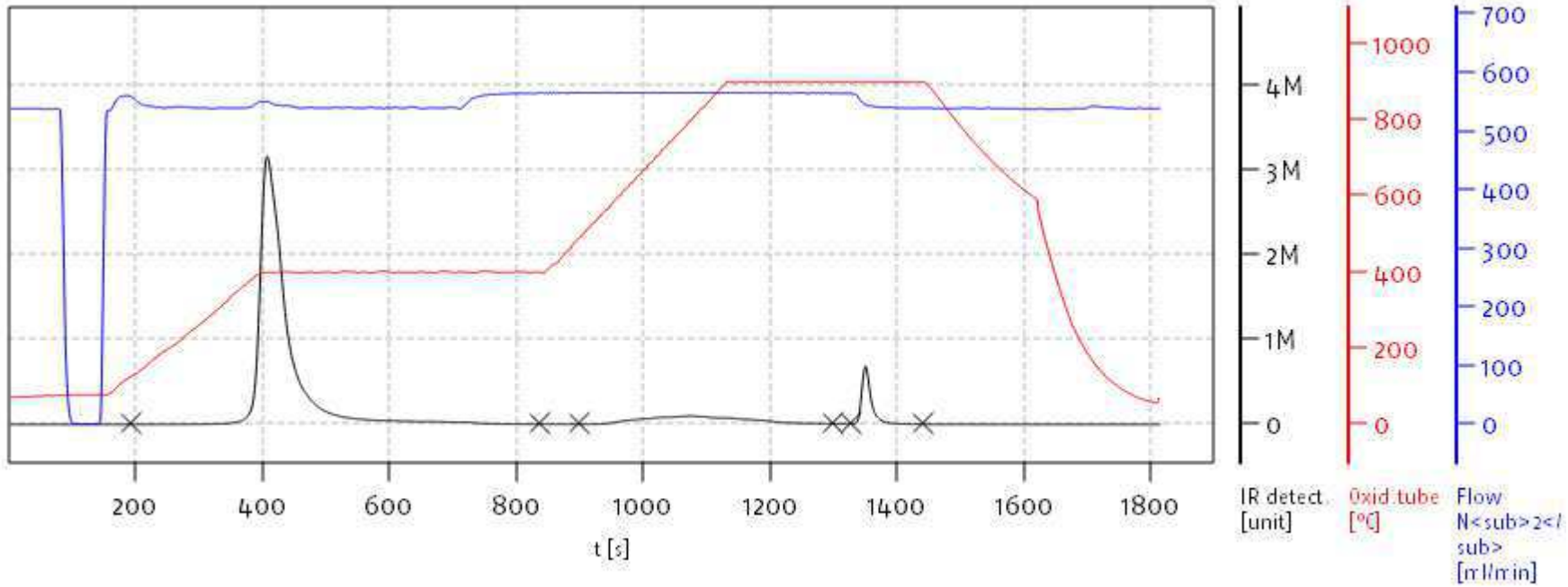
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
45	45	BLA0244-MS1	516.50	0.0085	CARBON	1/13/2023 6:20 AM	bl	1.808	5 677 716	2.018	0.127	450 010	729 480	1.681	0.211	0.9923	1.0000



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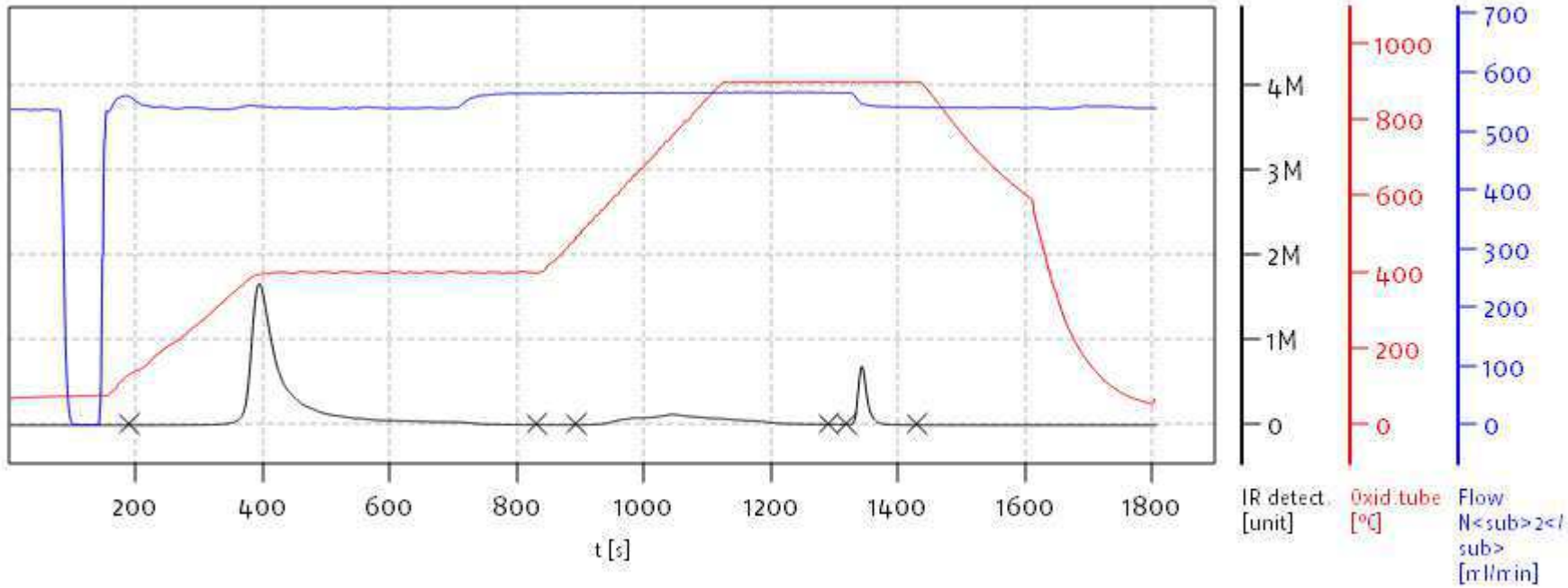
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
46	46	23A0157-06	503.40		CARBON	1/13/2023 6:50 AM	bl	1.220	3 609 333	1.465	0.126	437 404	822 989	1.093	0.245	0.9923	1.0000



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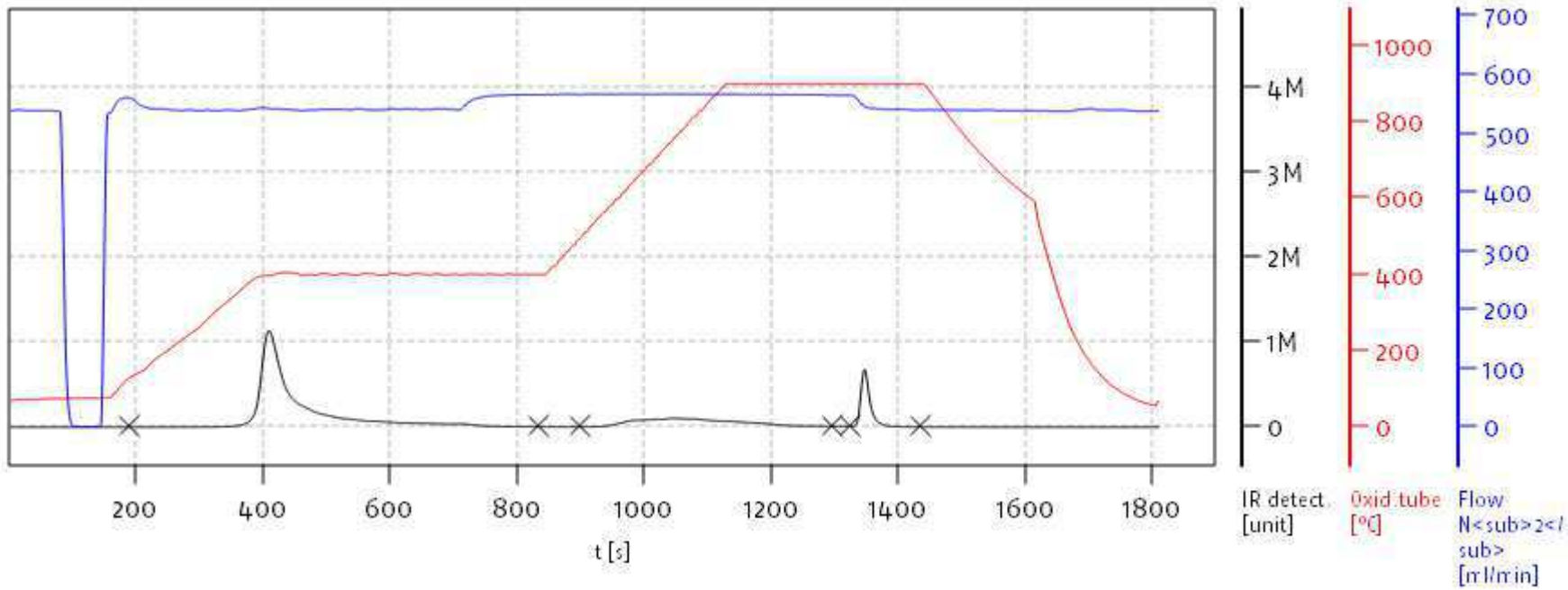
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
47	47	23A0157-07	528.30		CARBON	1/13/2023 7:21 AM	bl	0.869	2 602 099	1.087	0.120	437 562	769 297	0.749	0.218	0.9923	1.0000



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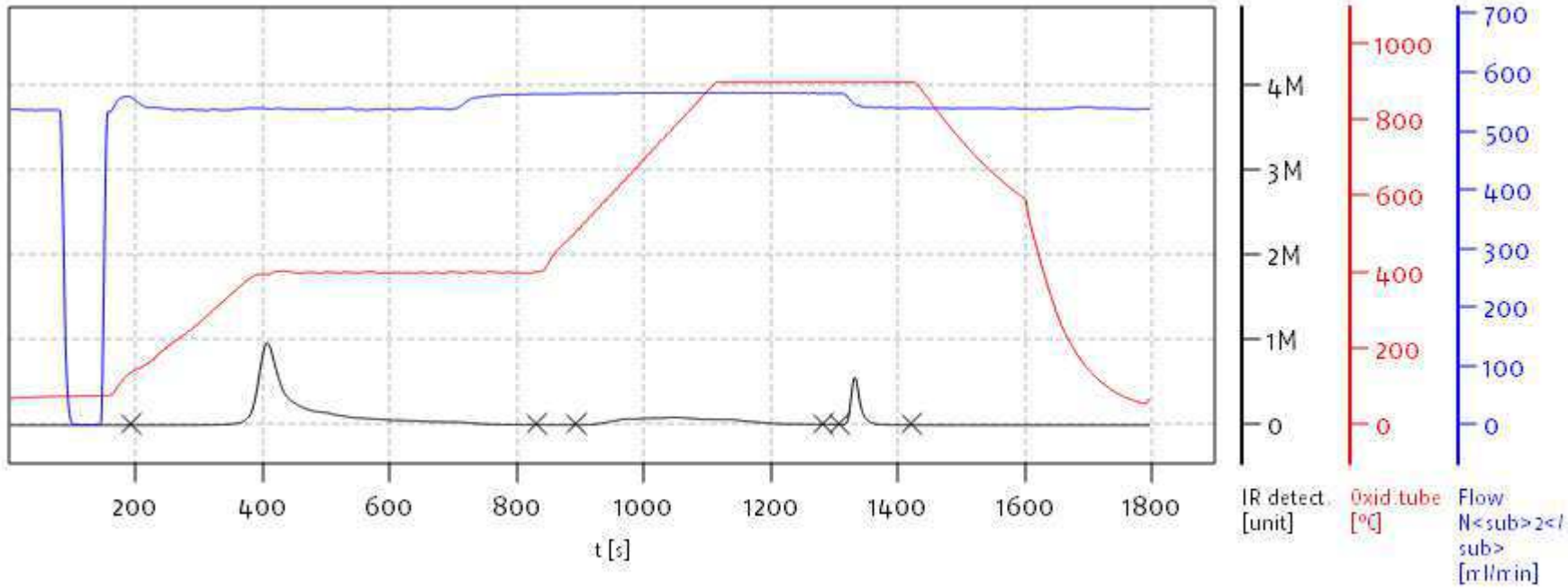
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
48	48	23A0157-08	506.40		CARBON	1/13/2023 7:51 AM	bl	0.832	2 429 110	1.037	0.103	362 972	699 729	0.729	0.206	0.9923	1.0000



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Balance: BAL3
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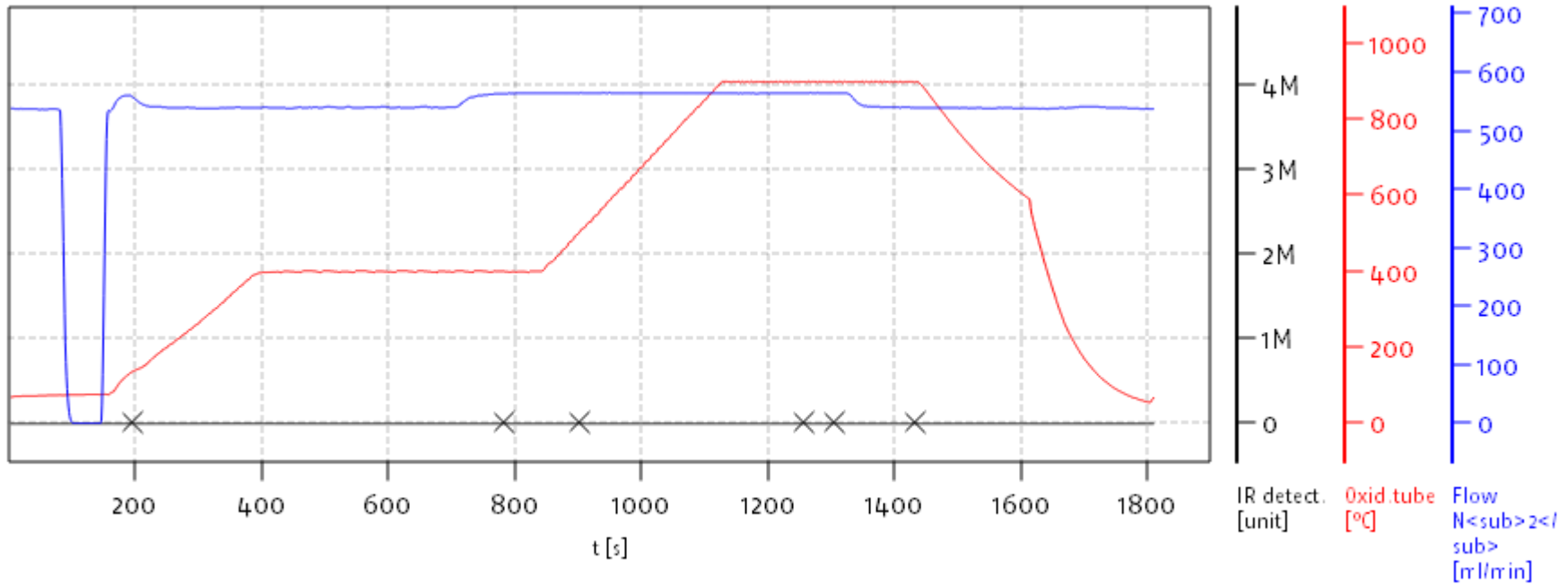
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
49	49	BLANK	1.00		CARBON	1/ 13/2023 8:22 AM	bl	0.000	7 131	0.000	0.000	266	885	0.000	0.000	0.9923	1.0000



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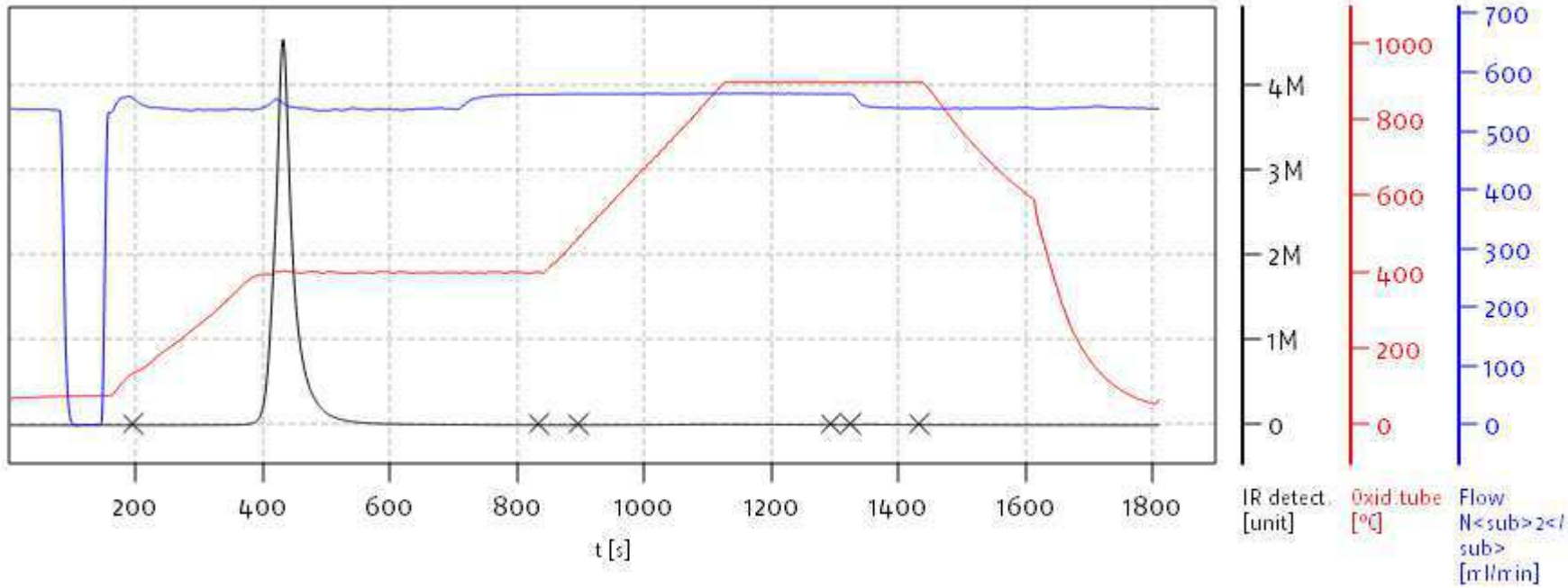
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
50	50	Dfactor	19.50		CARBON	1/13/2023 8:52 AM	bl	44.446	5 830 106	44.849	0.000	21 891	77 373	44.446	0.404	0.9647	1.0000



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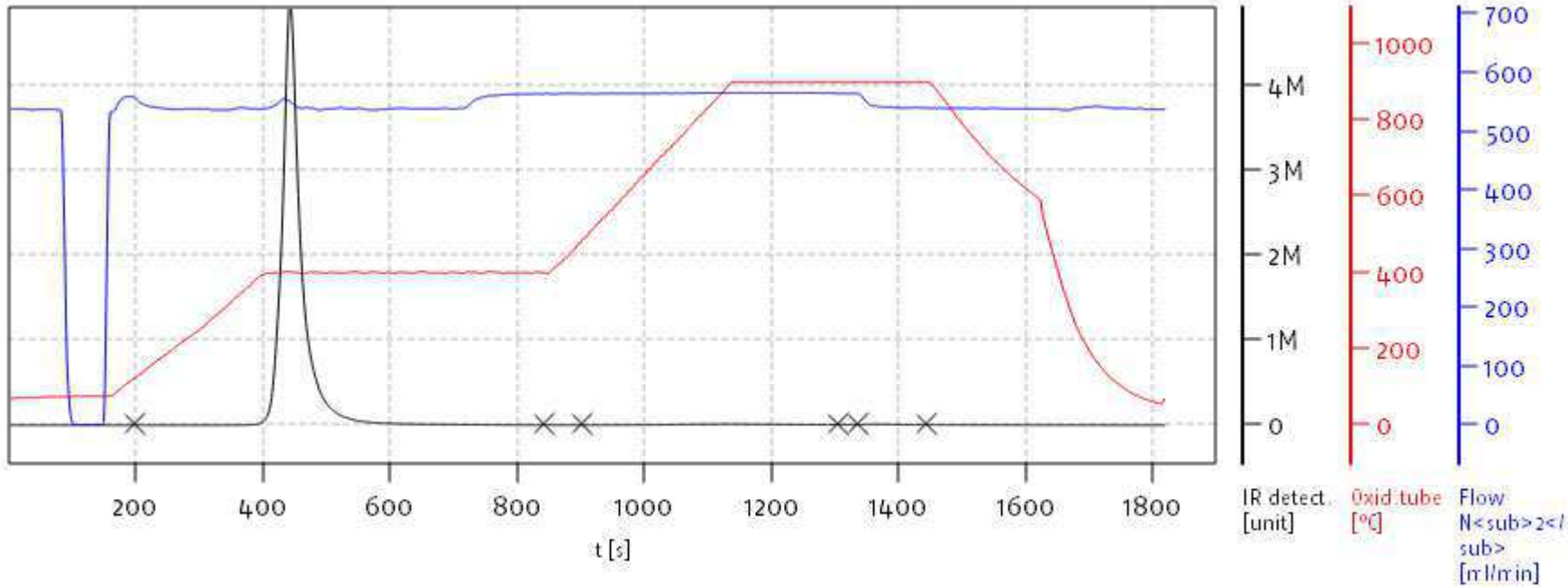
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
51	51	Dfactor	21.70		CARBON	1/13/2023 9:23 AM	bl	44.463	6 478 692	44.986	0.017	28 952	99 930	44.446	0.524	0.9656	1.0000



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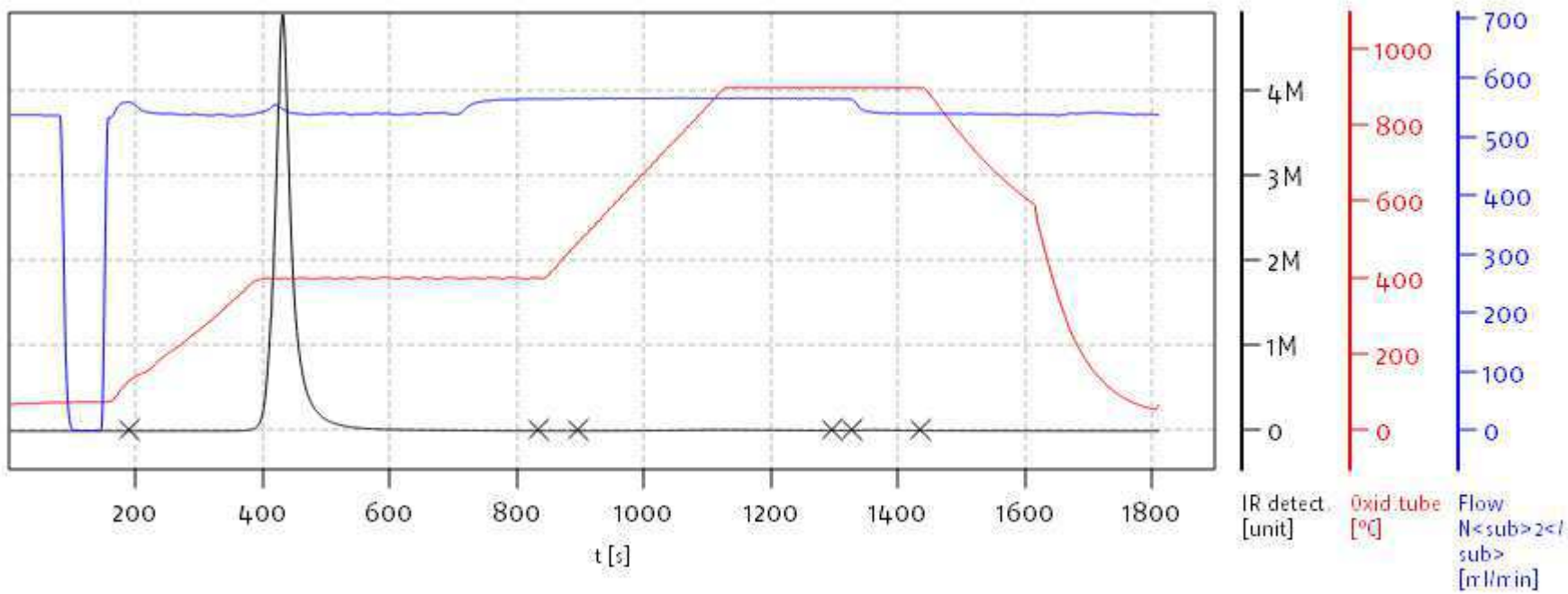
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
52	52	SLA0114-CCV4	20.50		CARBON	1/13/2023 9:54 AM	bl	43.662	6 011 770	44.307	0.040	31 806	111 990	43.622	0.645	0.9652	1.0000



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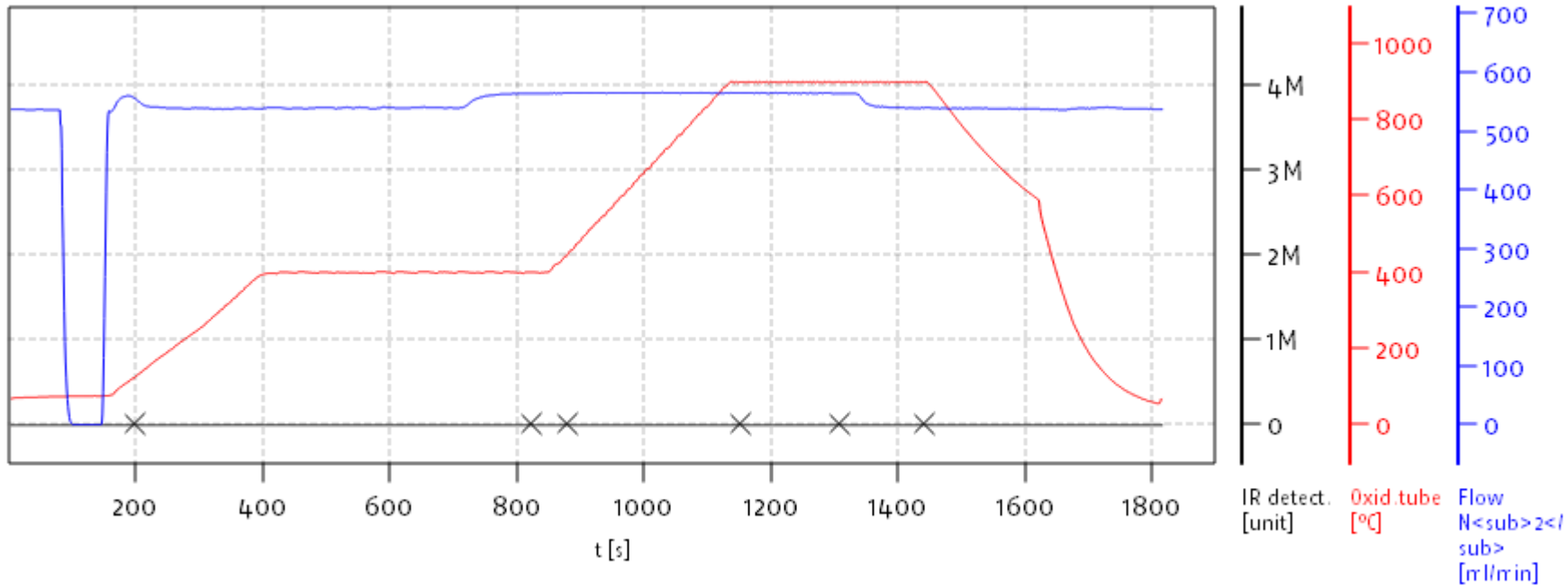
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
53	53	SLA0114-CCB4	505.40		CARBON	1/13/2023 10:24 AM	bl,C3u,C2u	0.000	5 991	0.000	0.000	1 205	753	0.000	0.000	0.9652	1.0000



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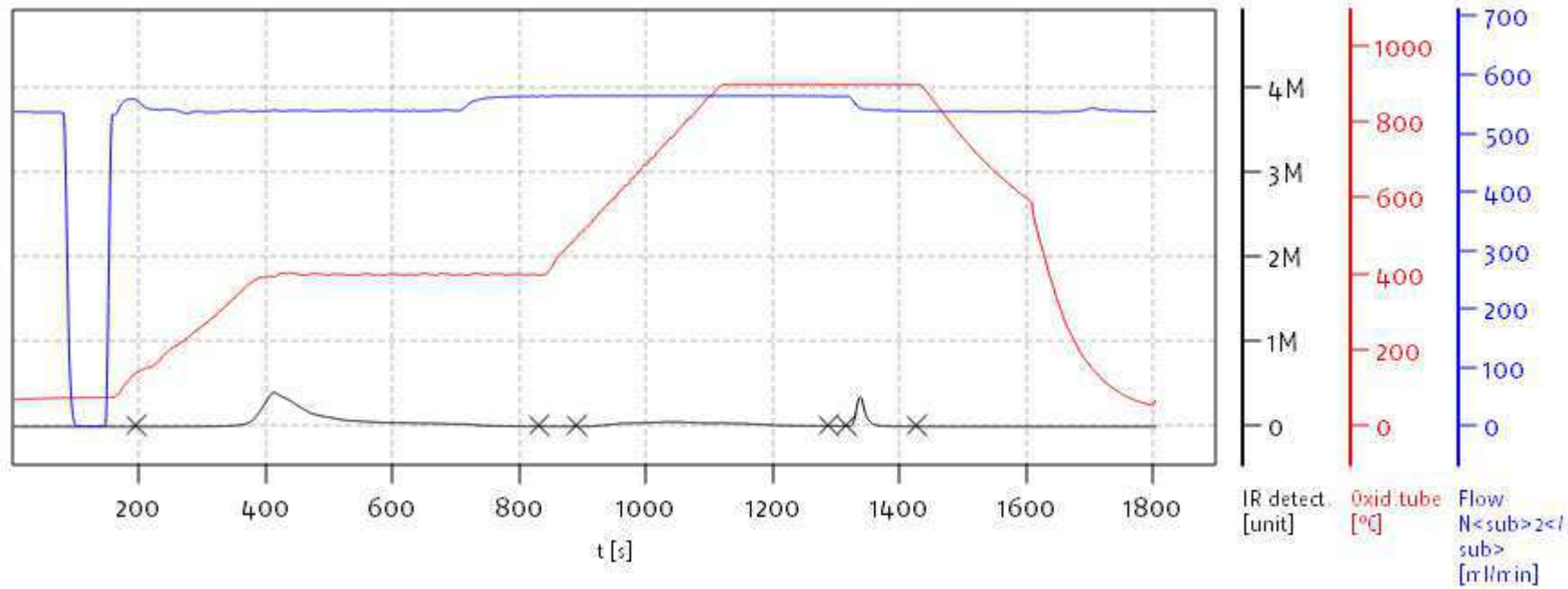
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
54	54	23A0157-09	512.40		CARBON	1/13/2023 10:55 AM	bl	0.511	1 572 733	0.636	0.060	226 391	440 872	0.451	0.125	0.9652	1.0000



Name:

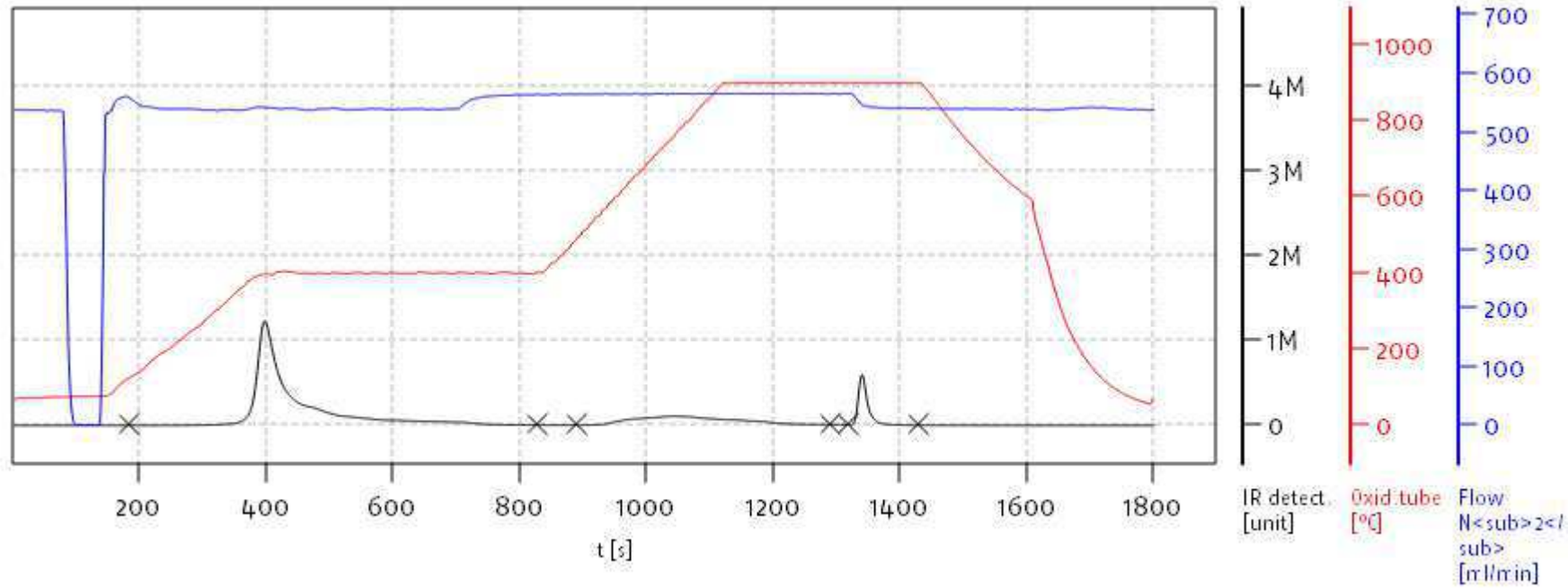
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
55	55	23A0157-10	542.30		CARBON	1/13/2023 11:25 AM	bl	0.887	2 866 980	1.106	0.104	390 903	793 812	0.783	0.219	0.9652	1.0000



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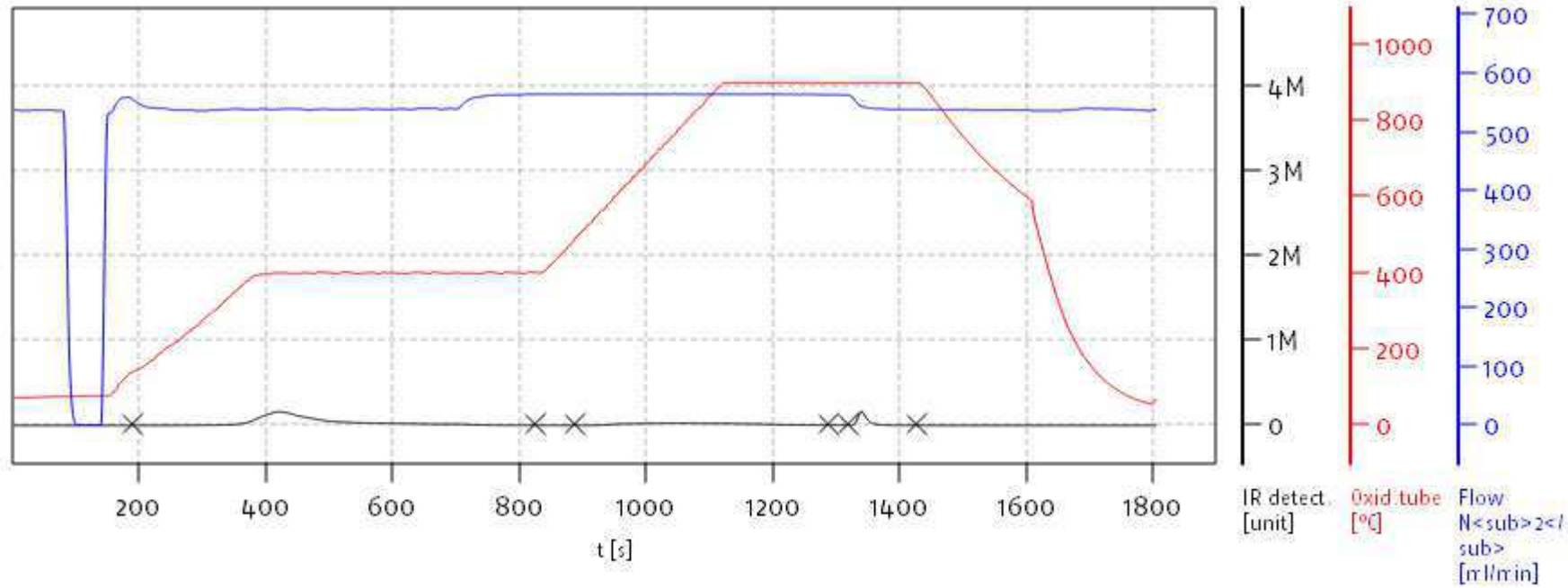
Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
56	56	23A0157-11	519.10		CARBON	1/13/2023 11:56 AM	bl	0.231	745 051	0.291	0.024	107 716	226 993	0.207	0.060	0.9652	1.0000



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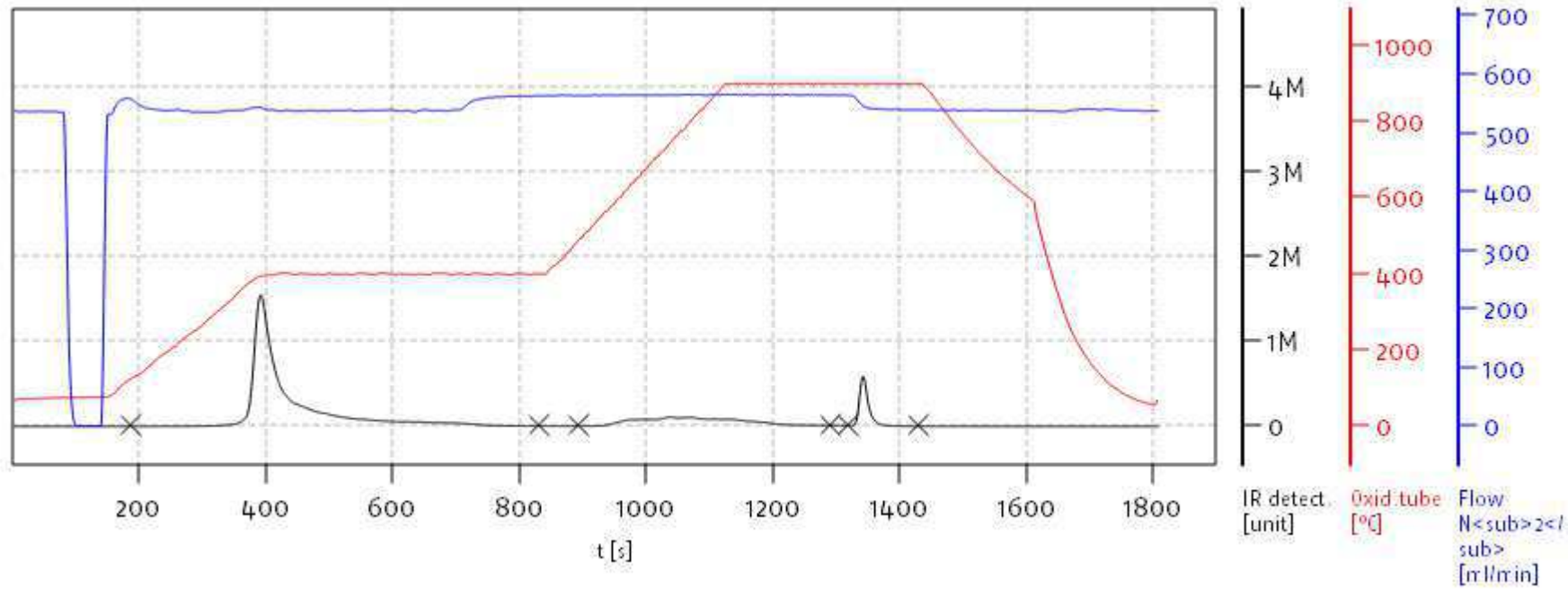
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
57	57	23A0157-12	525.00		CARBON	1/13/2023 12:26 PM	bl	0.988	3 143 127	1.223	0.101	370 543	820 768	0.887	0.234	0.9652	1.0000



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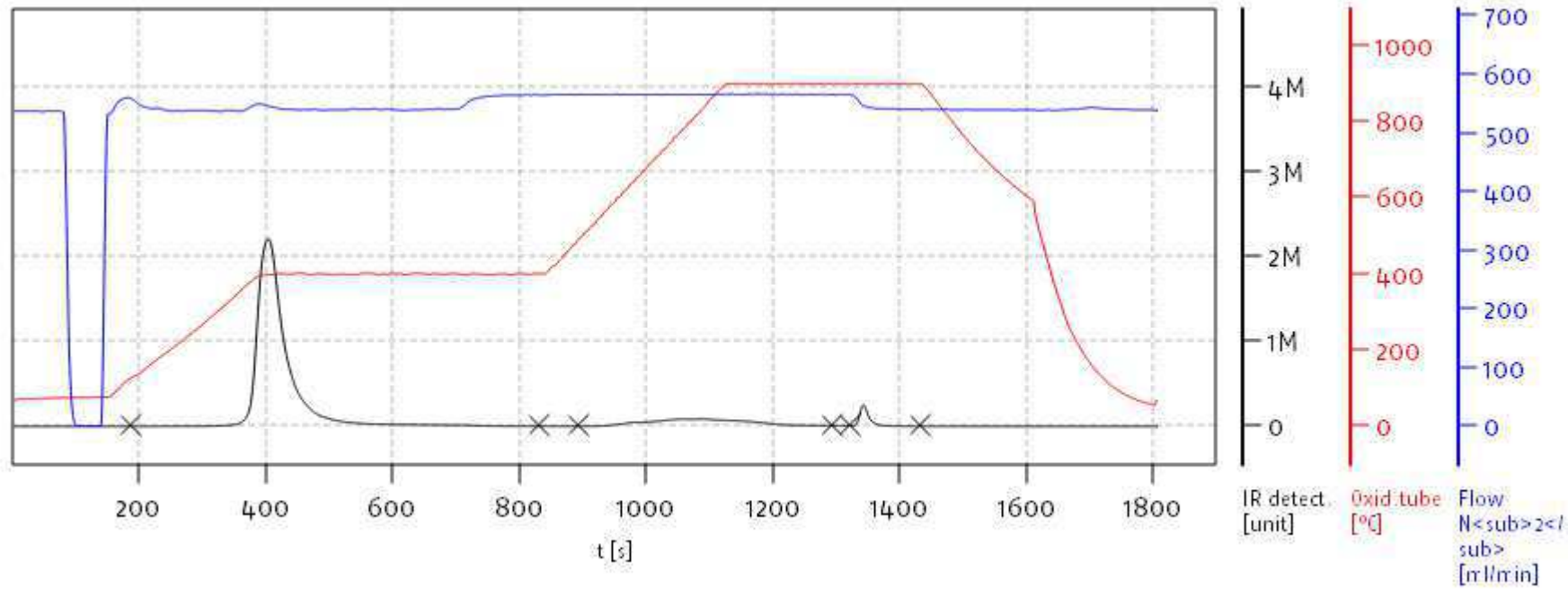
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
58	58	23A0157-13	518.30		CARBON	1/13/2023 12:57 PM	bl	1.280	4 319 559	1.463	0.042	167 156	642 254	1.238	0.184	0.9652	1.0000



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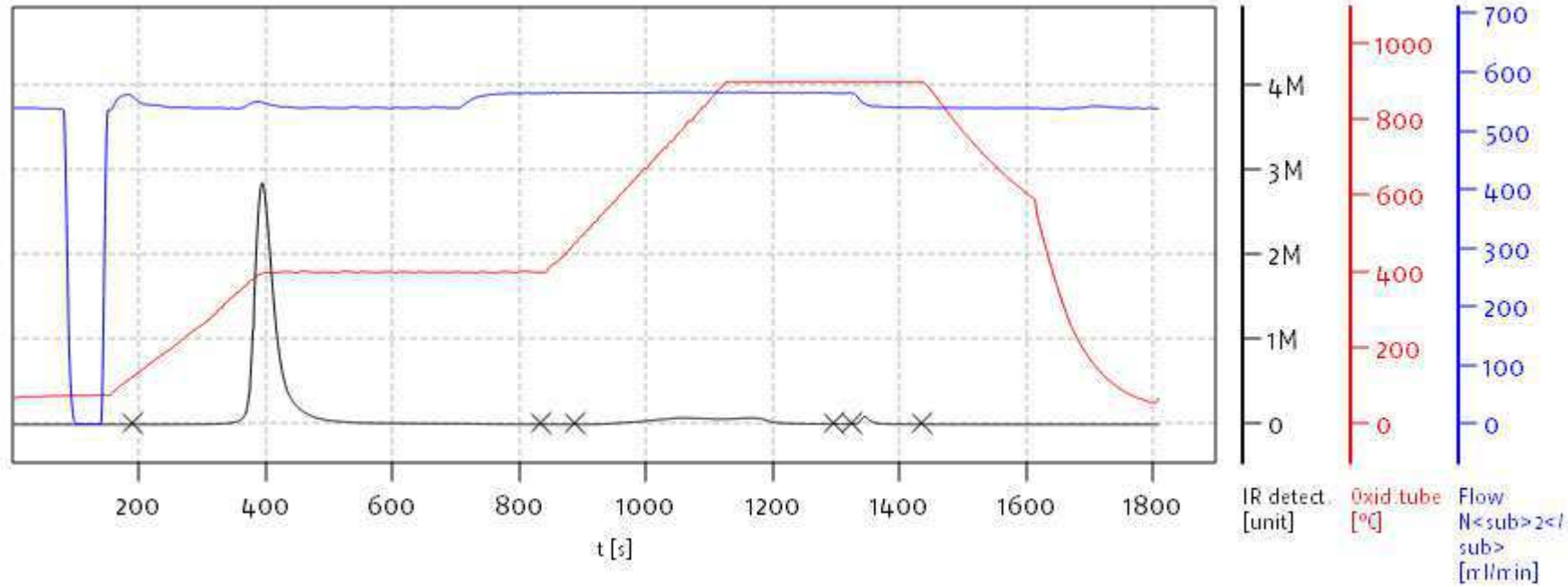
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
59	59	23A0158-01	500.50		CARBON	1/13/2023 1:27 PM	bl	1.249	4 168 851	1.421	0.012	66 898	583 419	1.237	0.172	0.9652	1.0000



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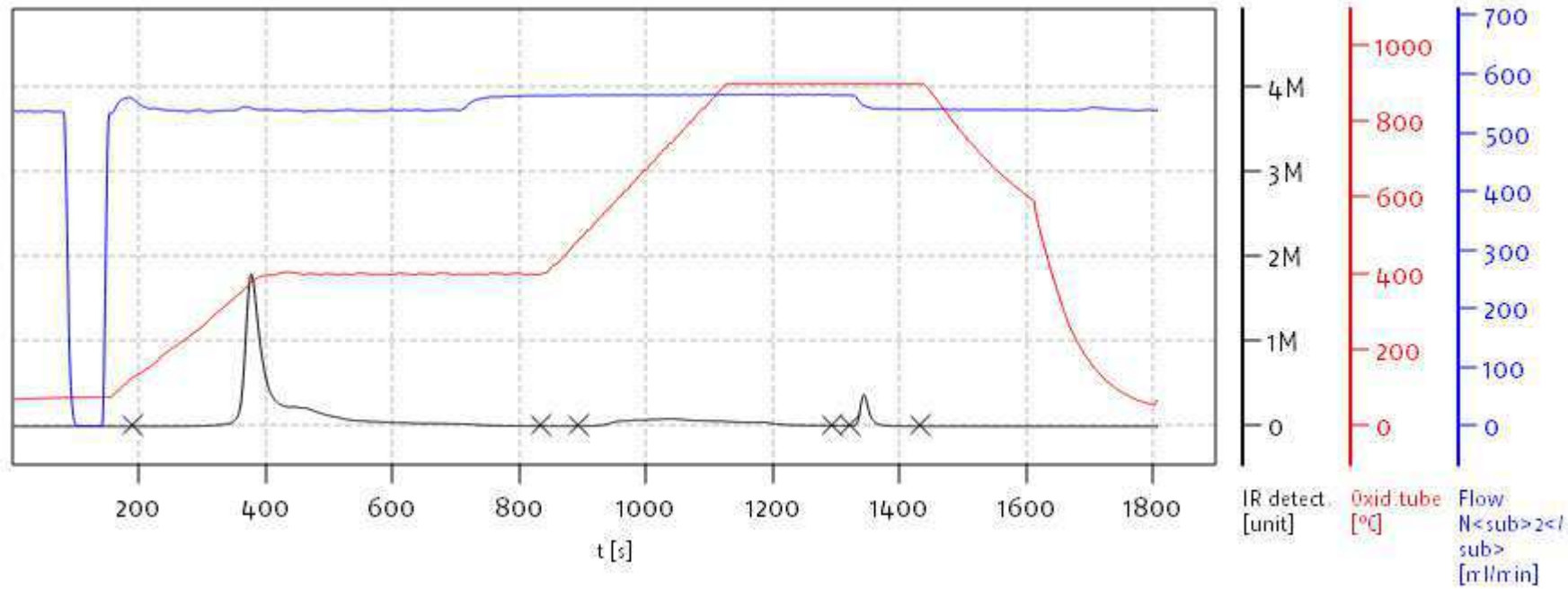
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
60	60	23A0158-02	503.70		CARBON	1/13/2023 1:58 PM	bl	0.987	3 136 471	1.193	0.065	236 807	697 999	0.922	0.206	0.9652	1.0000



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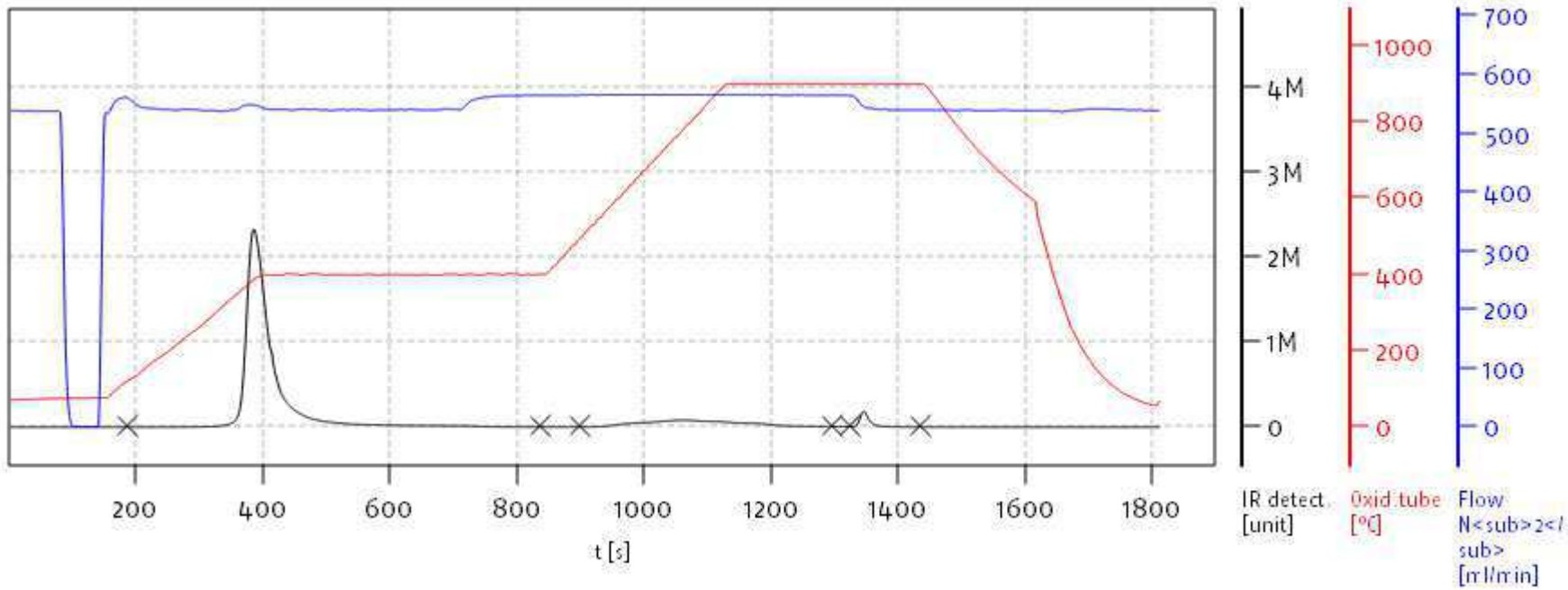
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
61	61	23A0158-03	509.00		CARBON	1/13/2023 2:28 PM	bl	1.166	3 897 764	1.335	0.029	123 281	584 127	1.136	0.170	0.9652	1.0000



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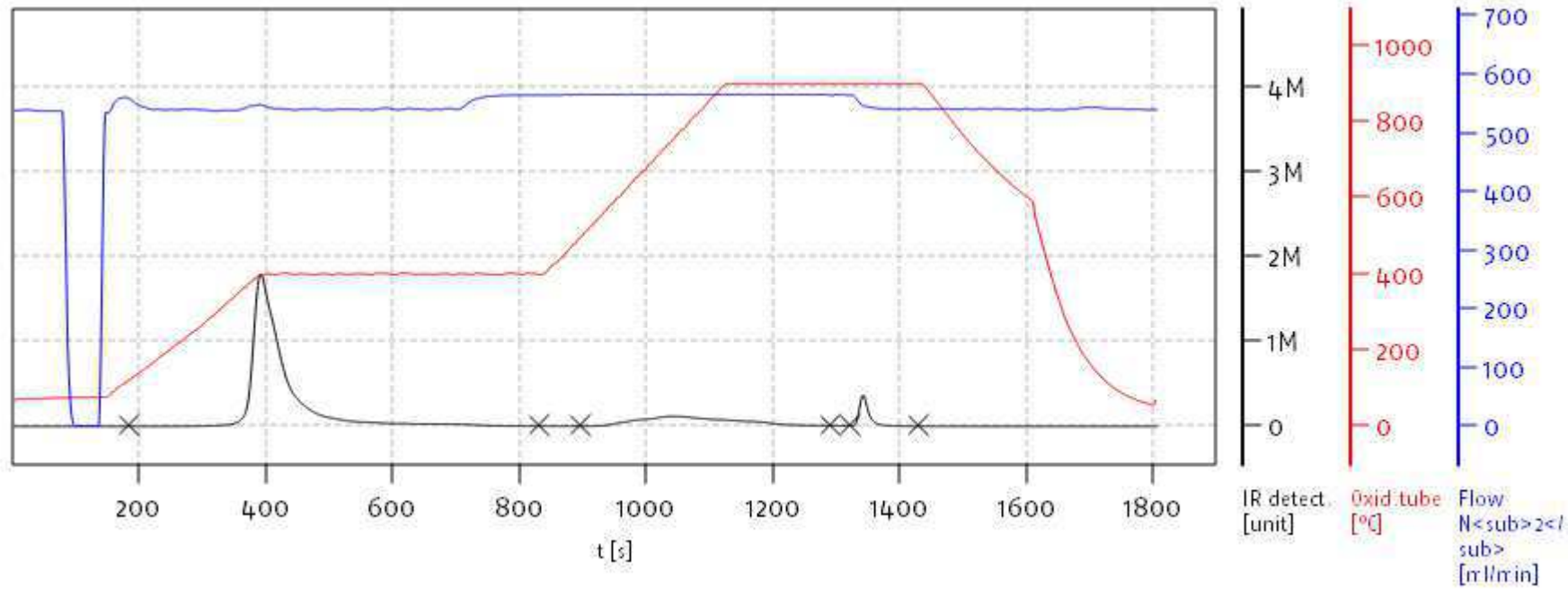
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
62	62	23A0158-04	559.60		CARBON	1/13/2023 2:59 PM	bl	1.057	3 763 091	1.275	0.059	241 443	814 004	0.998	0.218	0.9652	1.0000



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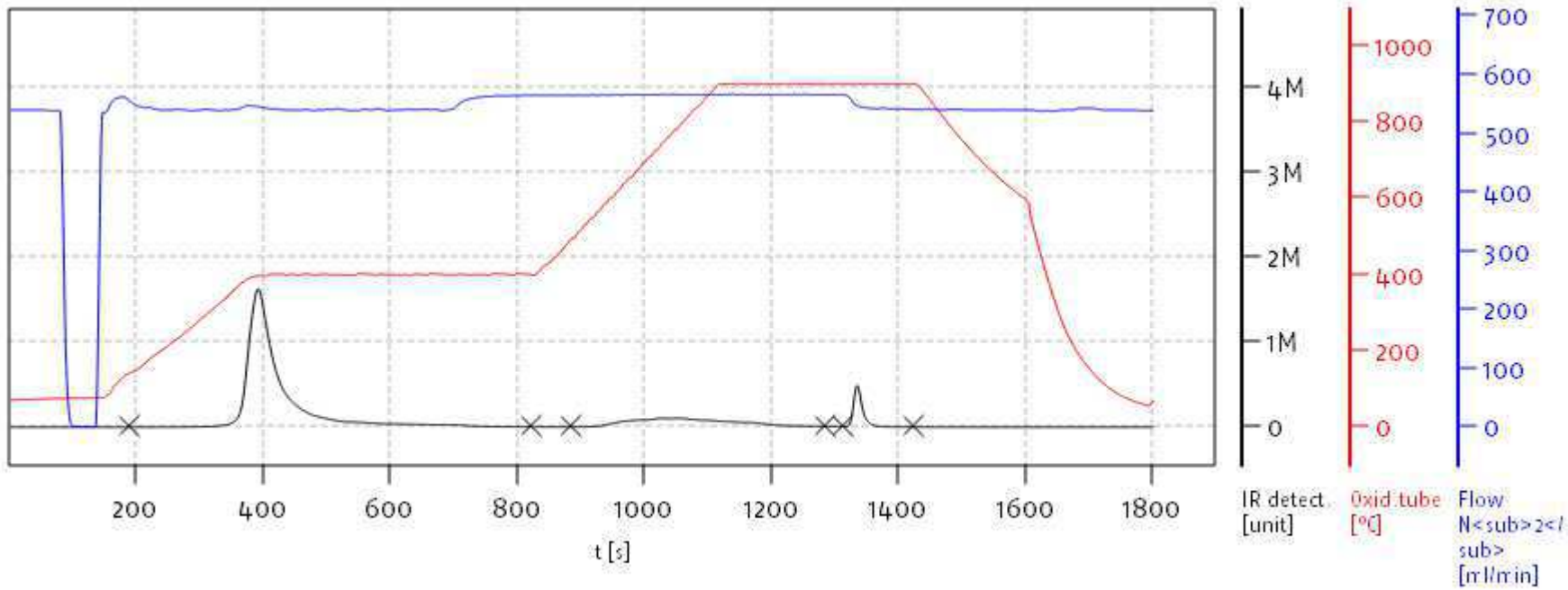
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
63	63	23A0158-05	525.00		CARBON	1/13/2023 3:29 PM	bl	1.060	3 460 914	1.282	0.083	307 285	778 510	0.977	0.222	0.9652	1.0000



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Soli TOC Cube, Carbon
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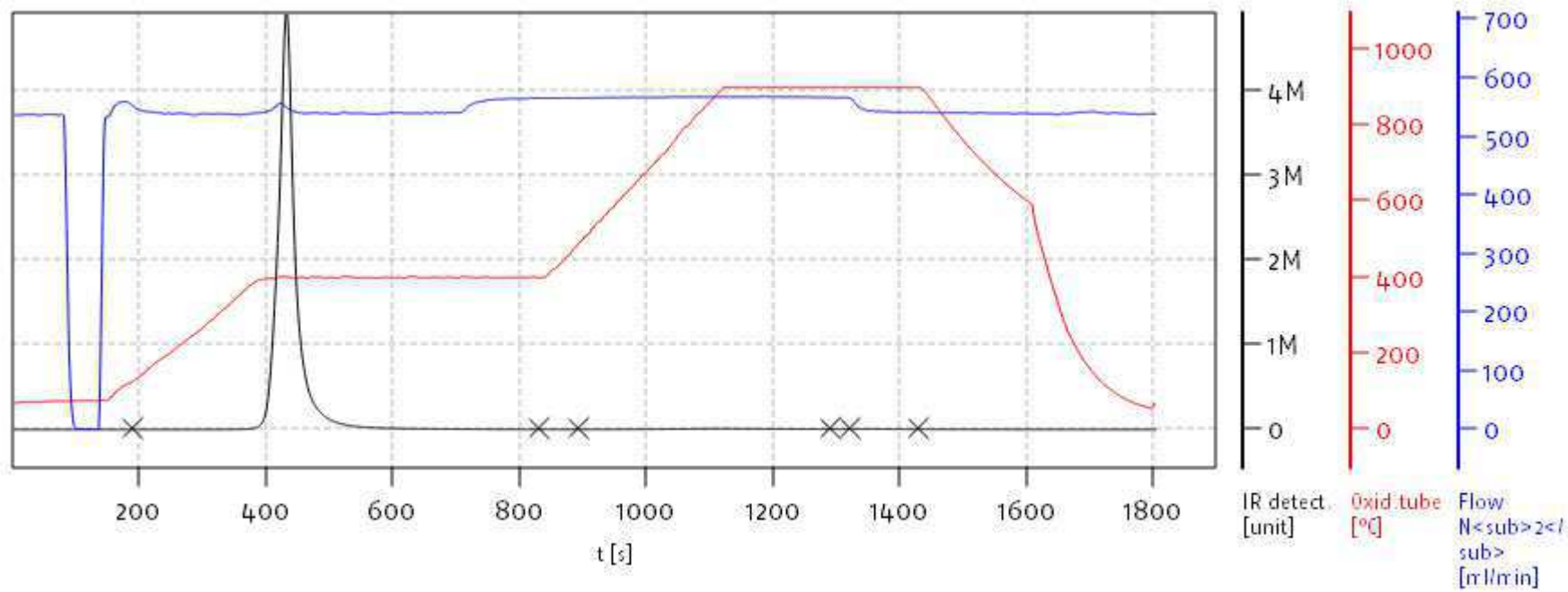
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
64	64	SLA0114-CCV5	19.90		CARBON	1/13/2023 4:00 PM	bl	43.950	5 880 285	44.421	0.000	20 391	87 164	43.950	0.472	0.9652	1.0000



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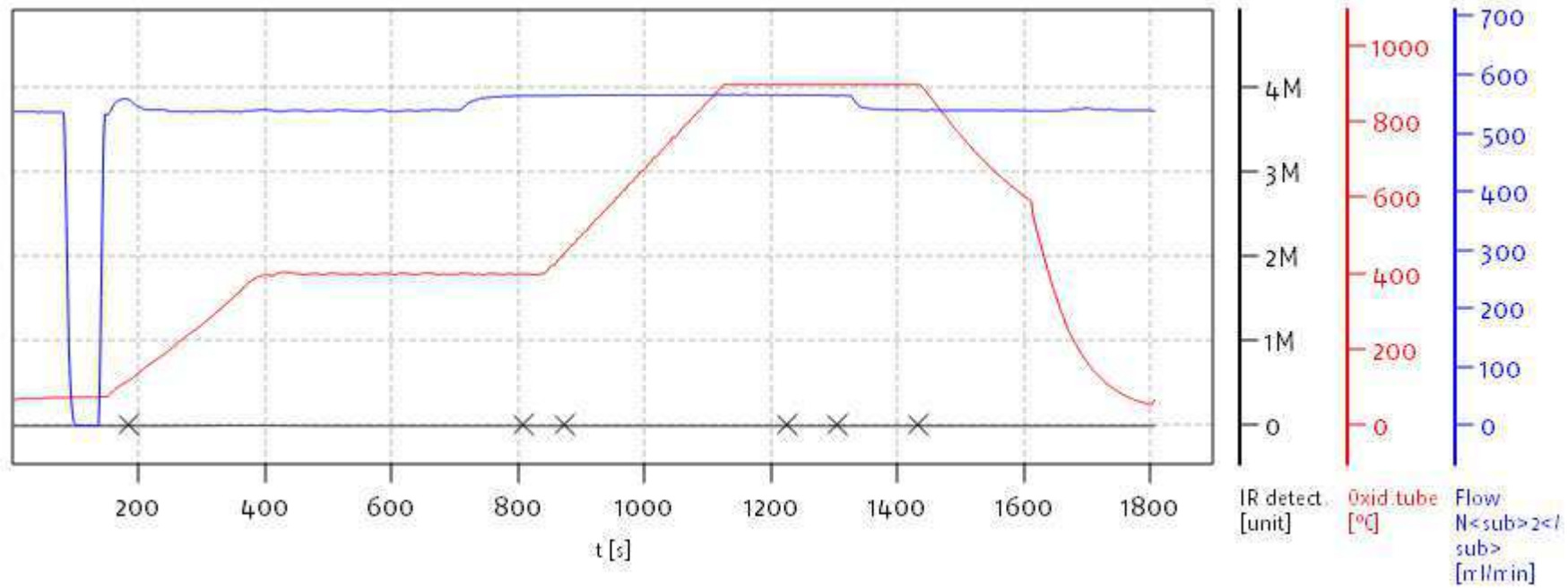
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
65	65	SLA0114-CCB5	522.50		CARBON	1/13/2023 4:30 PM	bl,C3u,C2u	0.000	23 990	0.000	0.000	608	1 735	0.000	0.000	0.9652	1.0000



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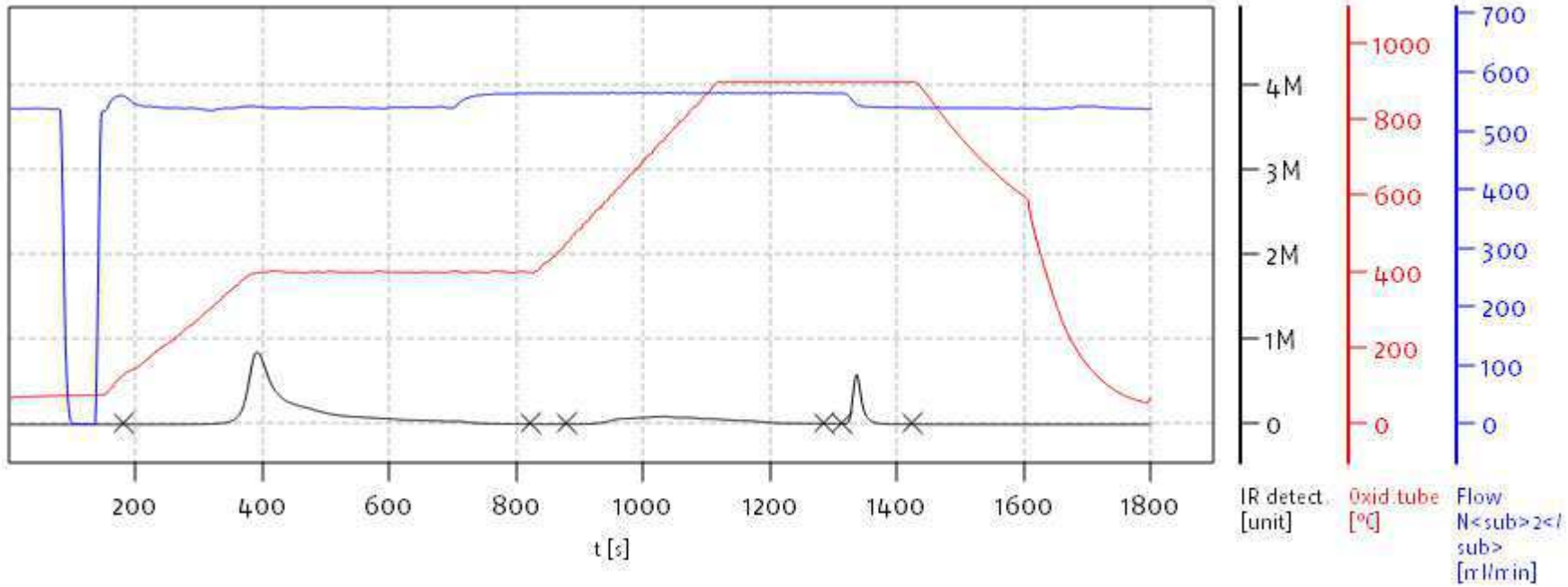
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
66	66	23A0158-06	511.50		CARBON	1/13/2023 5:01 PM	bl	0.829	2 508 264	1.029	0.104	371 504	685 222	0.725	0.199	0.9652	1.0000



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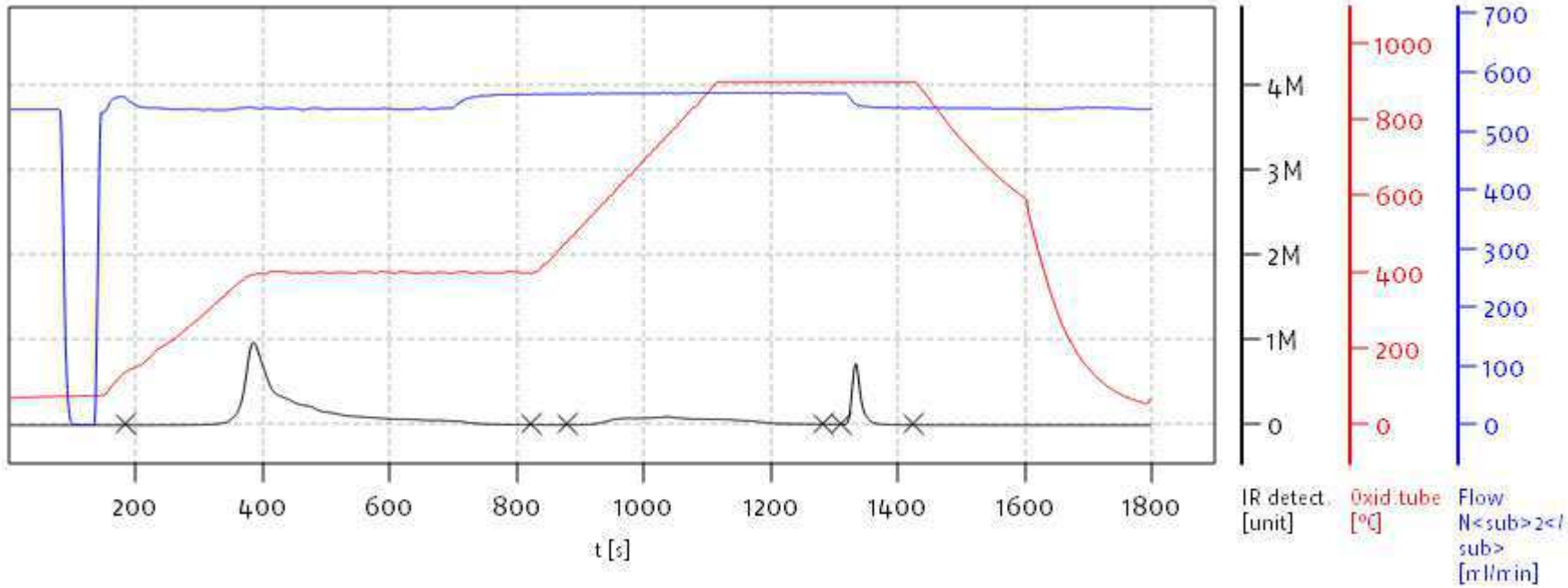
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
67	67	23A0158-07	550.60		CARBON	1/13/2023 5:31 PM	bl	0.904	2 917 320	1.108	0.119	450 697	752 266	0.784	0.204	0.9652	1.0000



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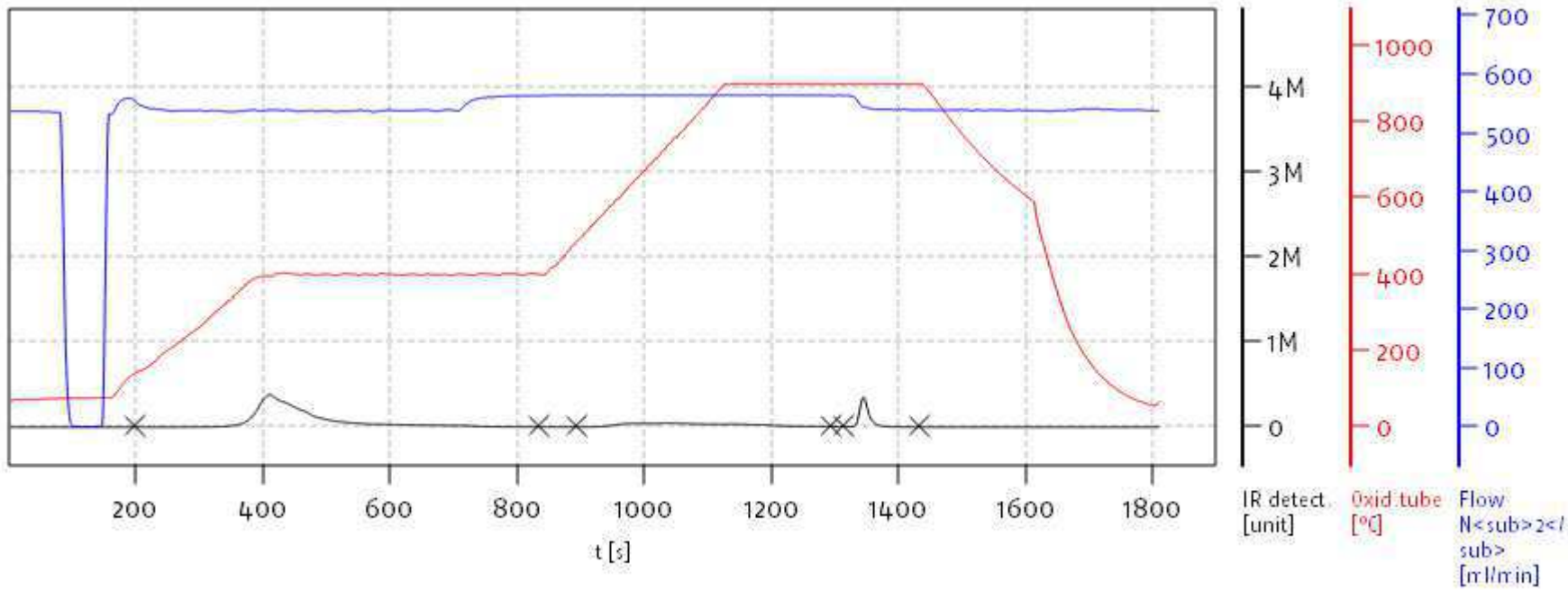
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
68	68	23A0158-08	500.80		CARBON	1/13/2023 6:01 PM	bl	0.472	1 401 567	0.585	0.062	226 589	391 064	0.410	0.113	0.9652	1.0000



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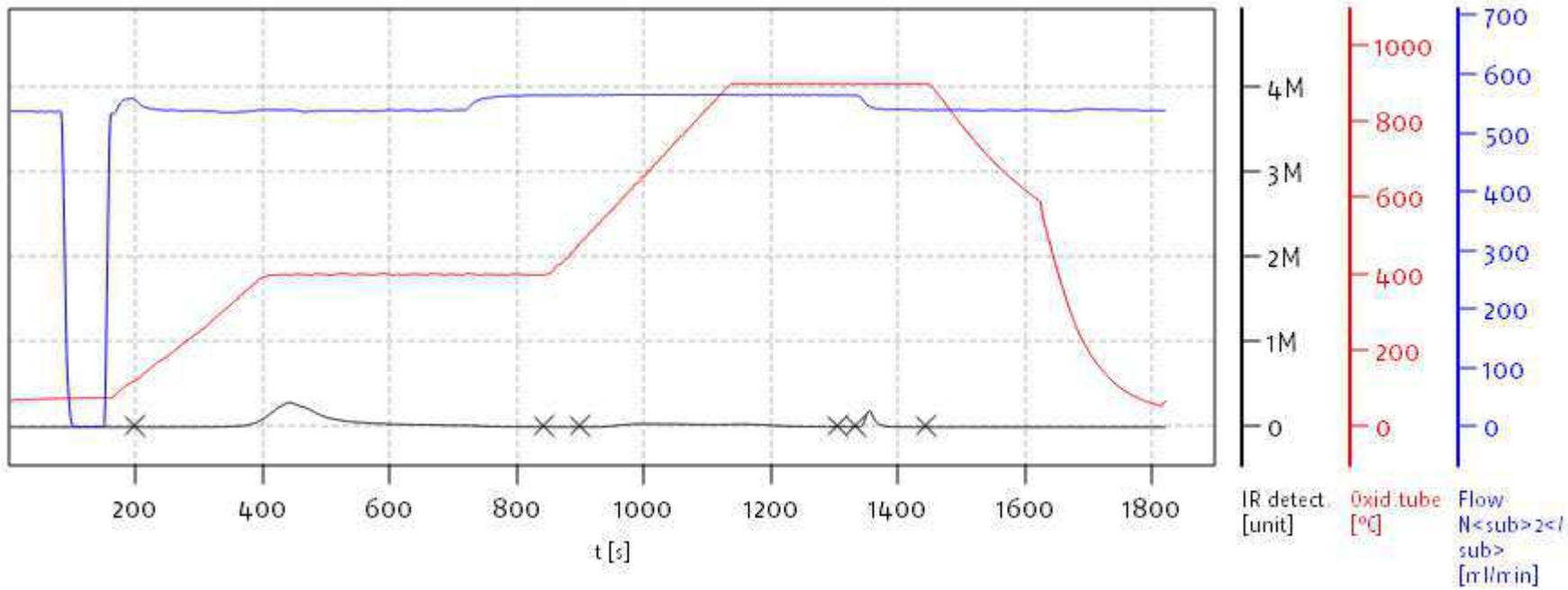
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
69	69	23A0158-09	533.40		CARBON	1/13/2023 6:32 PM	bl	0.365	1 230 969	0.455	0.028	122 623	335 339	0.337	0.090	0.9652	1.0000



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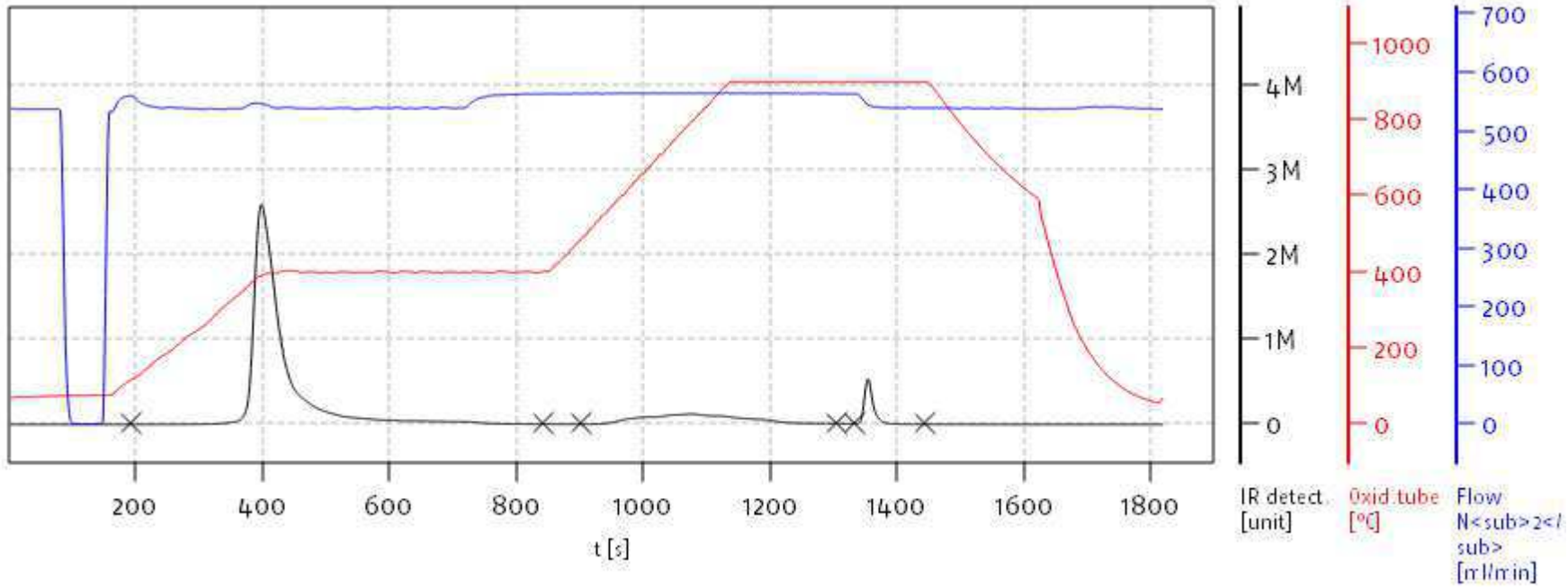
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
70	70	23A0158-10	511.30		CARBON	1/13/2023 7:03 PM	bl	1.541	4 985 897	1.802	0.092	330 339	888 696	1.449	0.261	0.9652	1.0000



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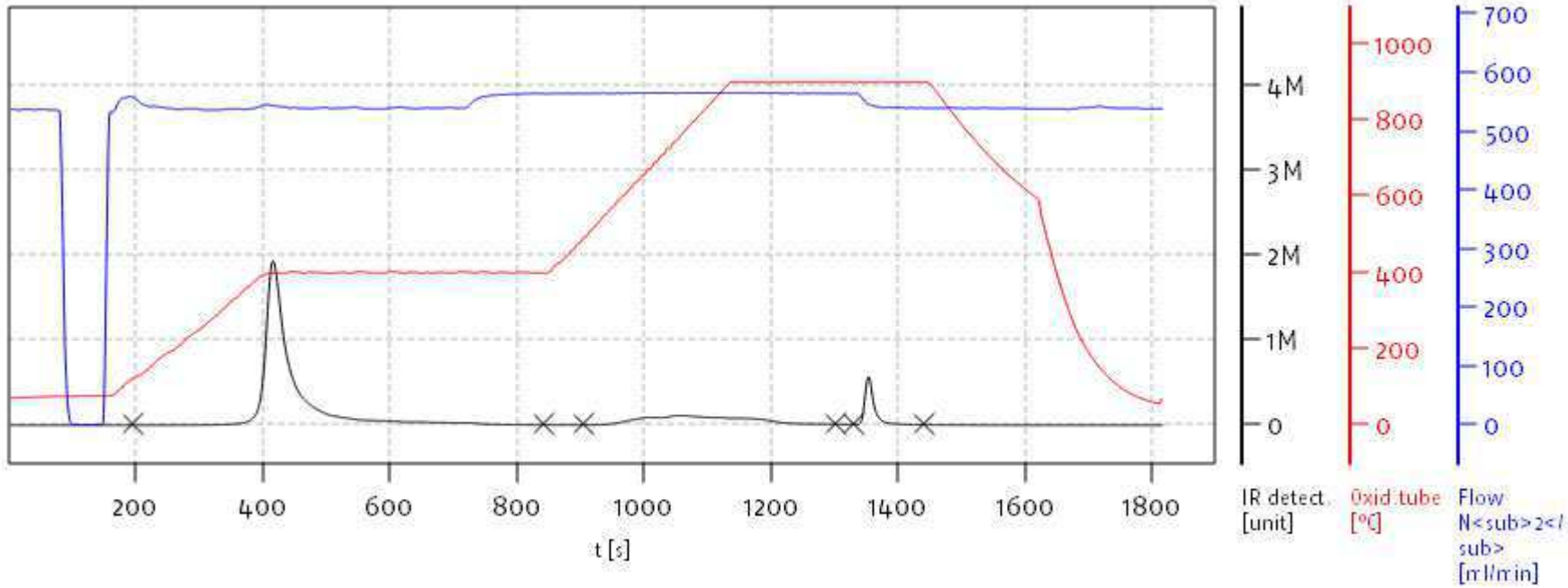
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
71	71	23A0158-11	514.40		CARBON	1/13/2023 7:34 PM	bl	1.077	3 379 297	1.324	0.104	370 711	845 322	0.974	0.246	0.9652	1.0000



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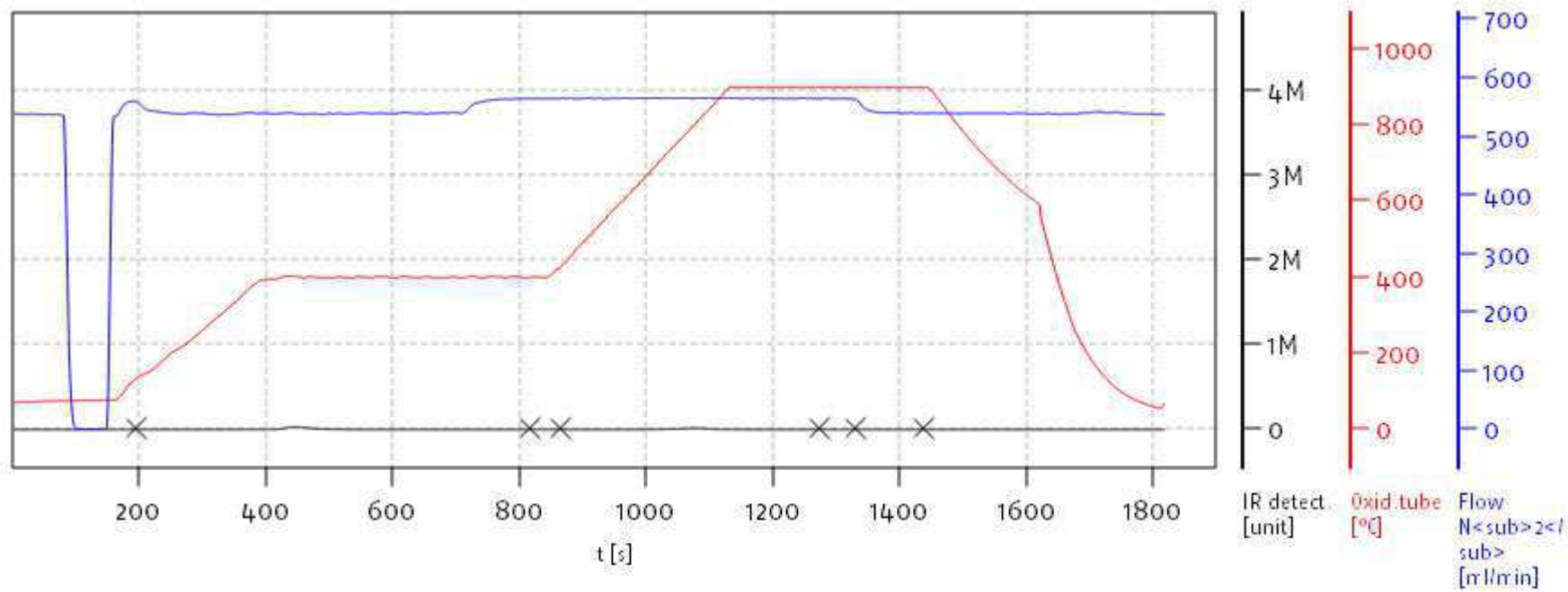
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
72	72	BLA0254-MRL1	545.90		CARBON	1/13/2023 8:04 PM	bl,C2u	0.009	60 612	0.013	0.000	296	38 267	0.009	0.003	0.9652	1.0000



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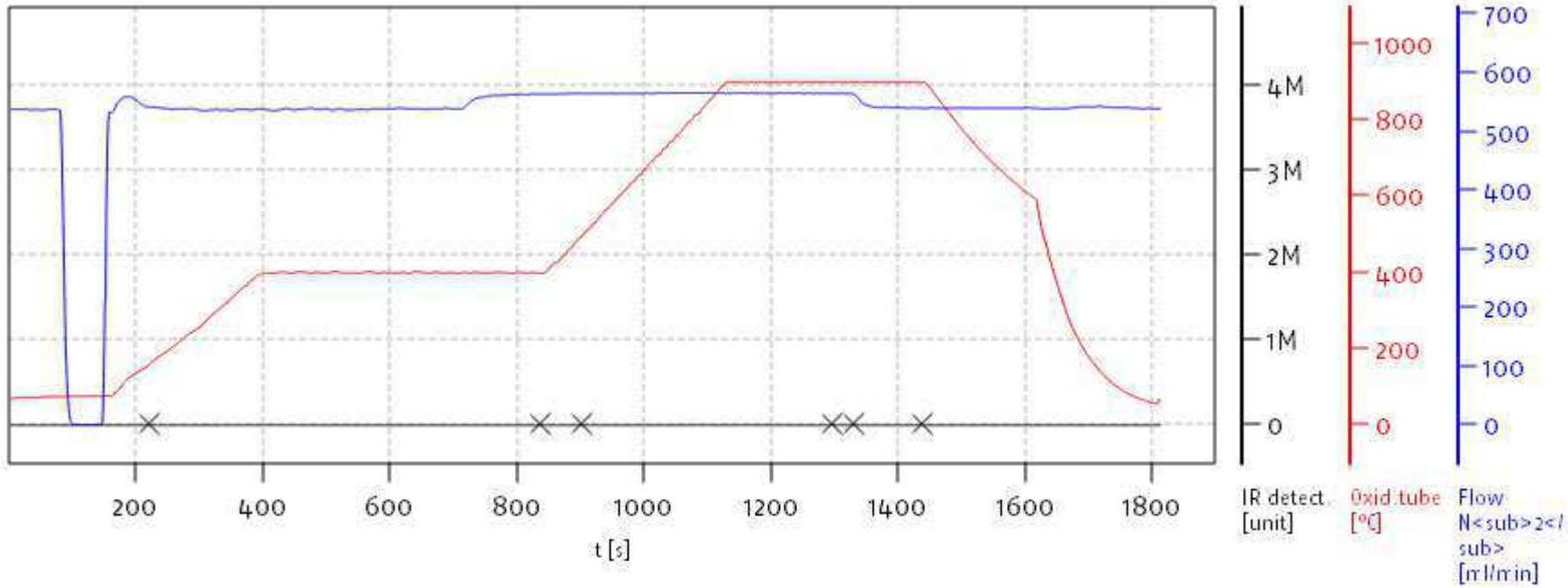
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
73	73	BLA0254-BLK1	516.90		CARBON	1/13/2023 8:35 PM	bl,C2u	0.000	5 427	0.000	0.000	307	6 971	0.000	0.000	0.9652	1.0000



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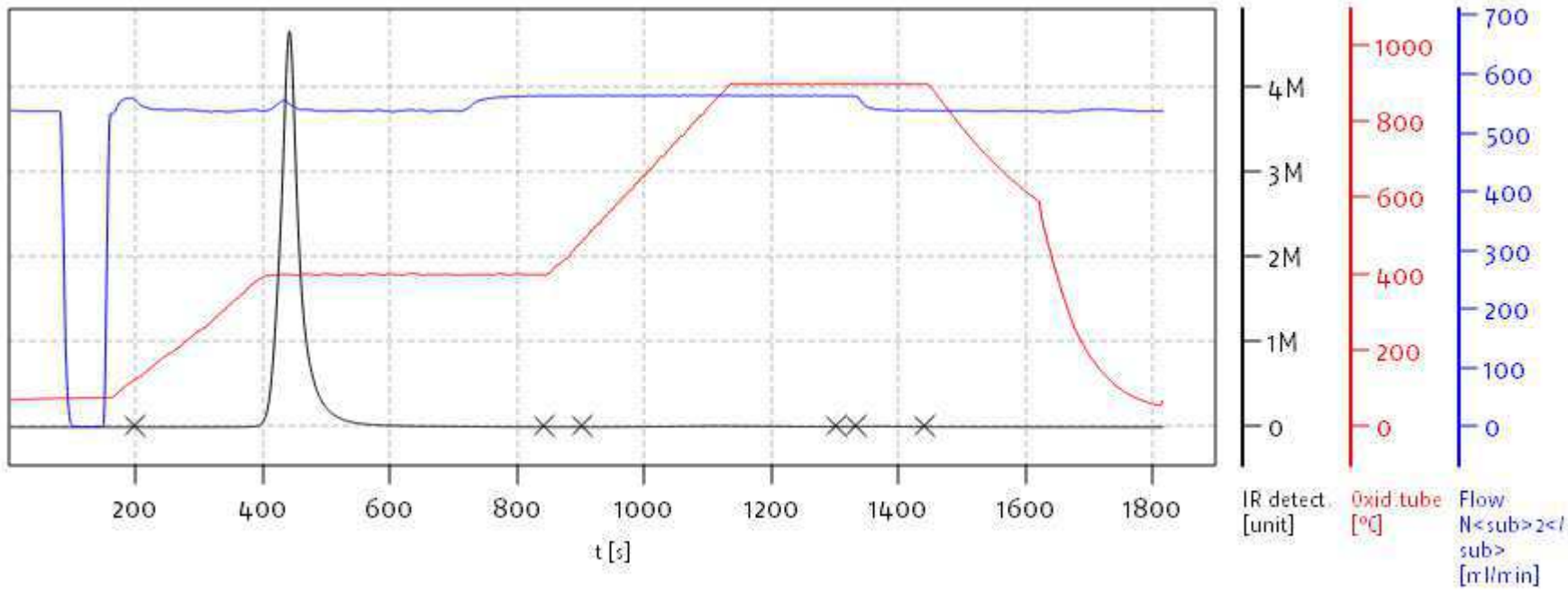
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
74	74	BLA0254-BS1	21.00		CARBON	1/13/2023 9:06 PM	bl	45.052	6 358 745	45.600	0.000	22 882	100 870	45.052	0.548	0.9652	1.0000



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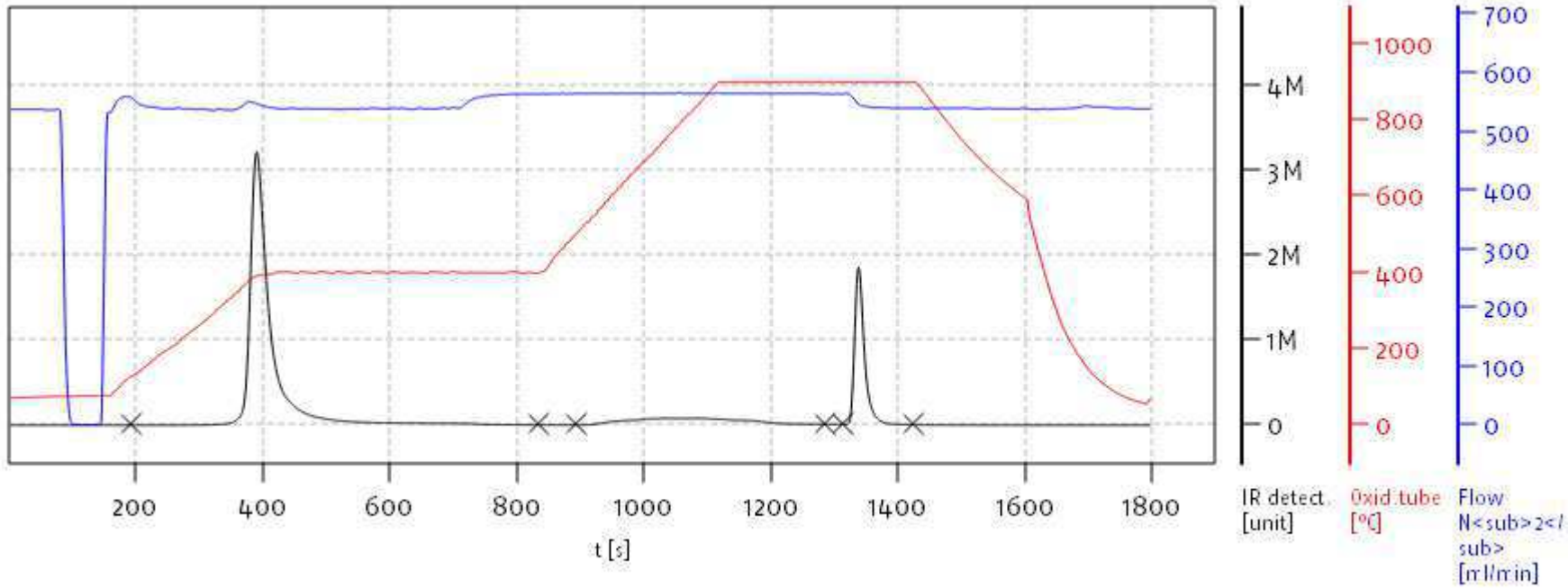
Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
75	75	BLA0254-SRM1	284.90		CARBON	1/13/2023 9:36 PM	bl	2.968	4 405 183	3.332	0.672	1 263 132	696 863	2.296	0.364	0.9652	1.0000



Name:

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Serial No: 0300.181017
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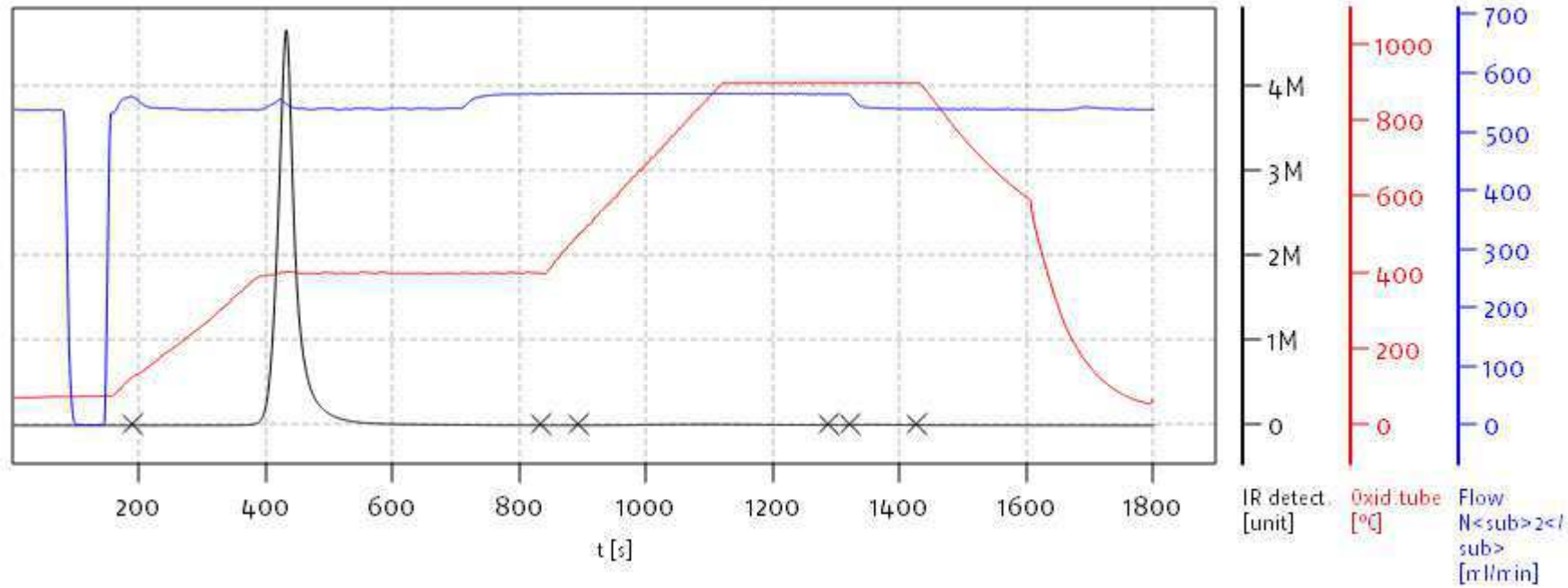
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
76	76	SLA0114-CCV6	19.90		CARBON	1/13/2023 10:06 PM	bl	44.096	5 899 705	44.741	0.000	23 560	109 545	44.096	0.646	0.9652	1.0000



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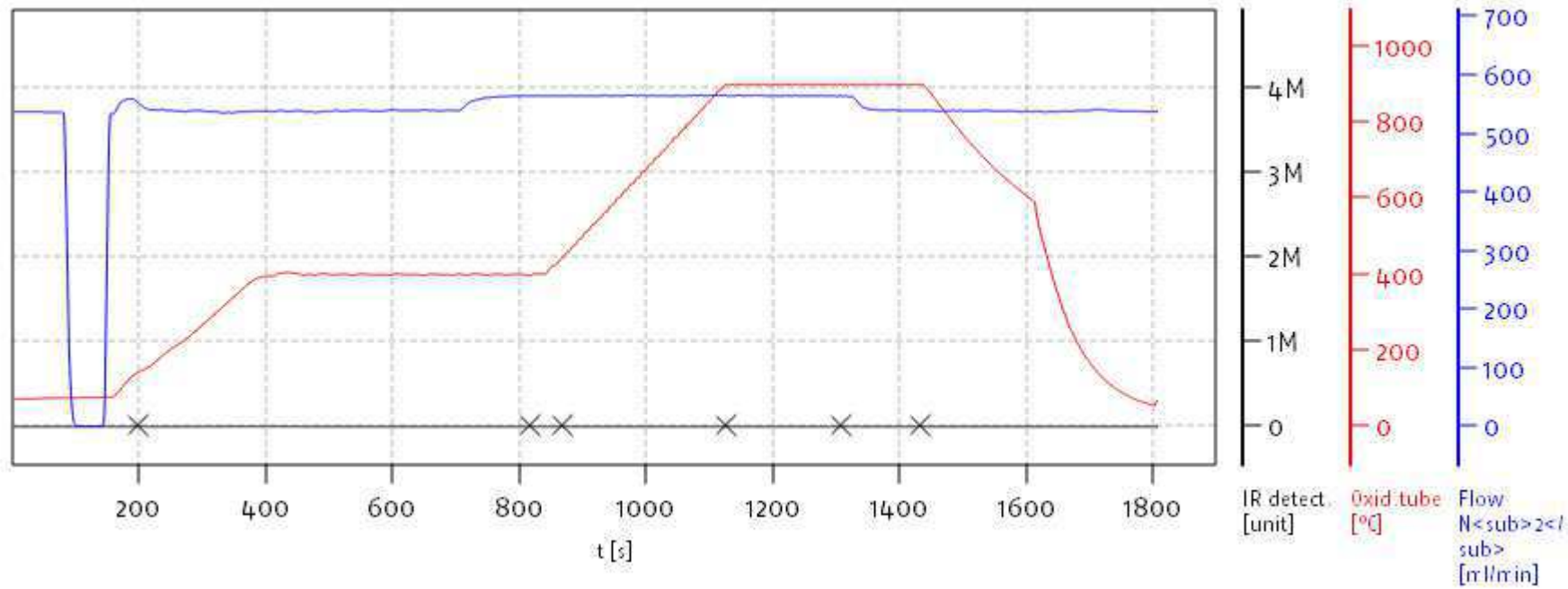
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
77	77	SLA0114-CCB6	500.40		CARBON	1/13/2023 10:37 PM	bl,C3u,C2u	0.000	10 828	0.000	0.000	760	157	0.000	0.000	0.9652	1.0000



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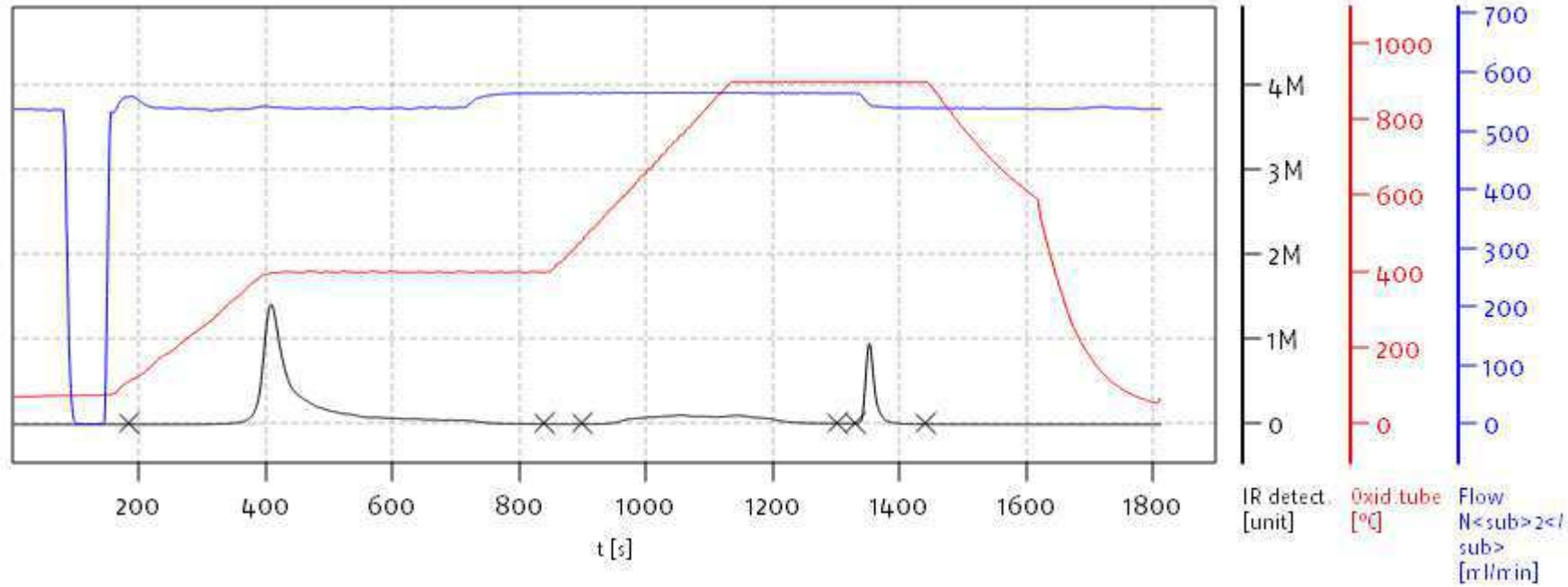
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
78	78	23A0158-12	504.90		CARBON	1/13/2023 11:07 PM	bl	1.114	3 190 093	1.384	0.178	607 357	905 513	0.936	0.269	0.9652	1.0000



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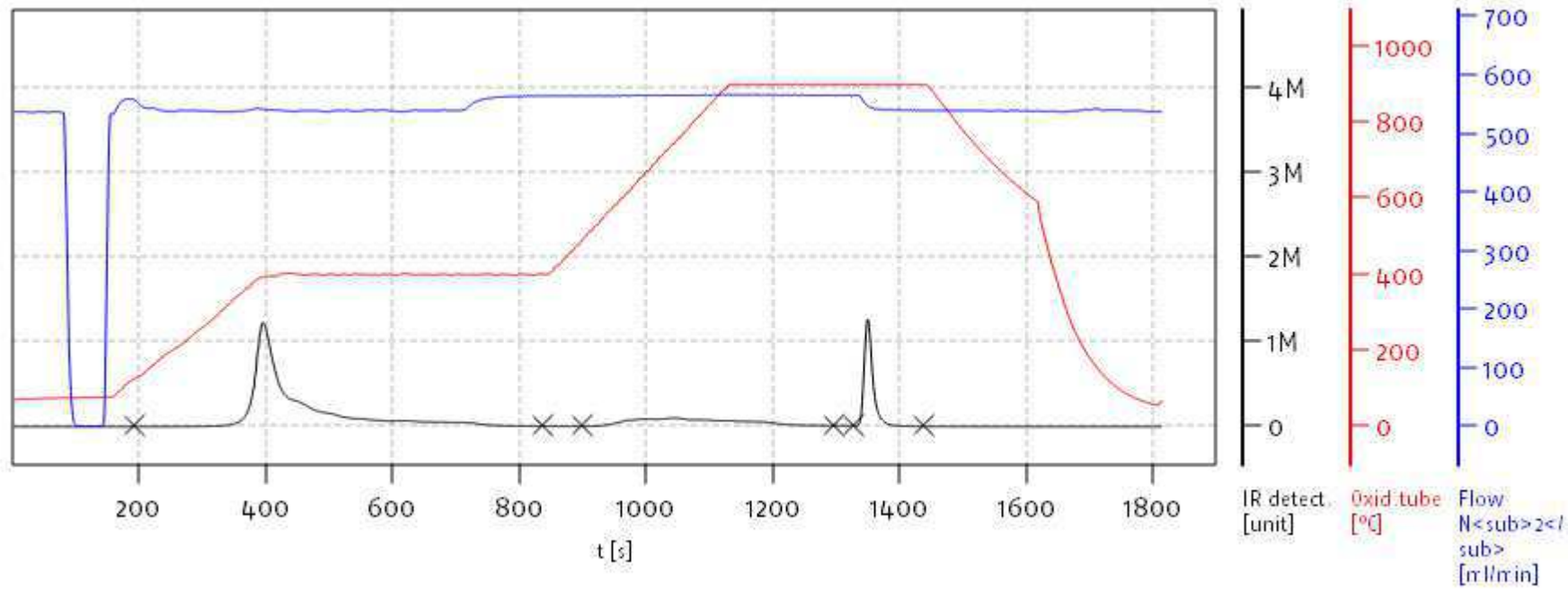
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
79	79	BLA0254-DUP1	508.10		CARBON	1/13/2023 11:38 PM	bl	1.105	3 014 213	1.341	0.227	771 319	799 982	0.879	0.236	0.9652	1.0000



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Balance: BAL3
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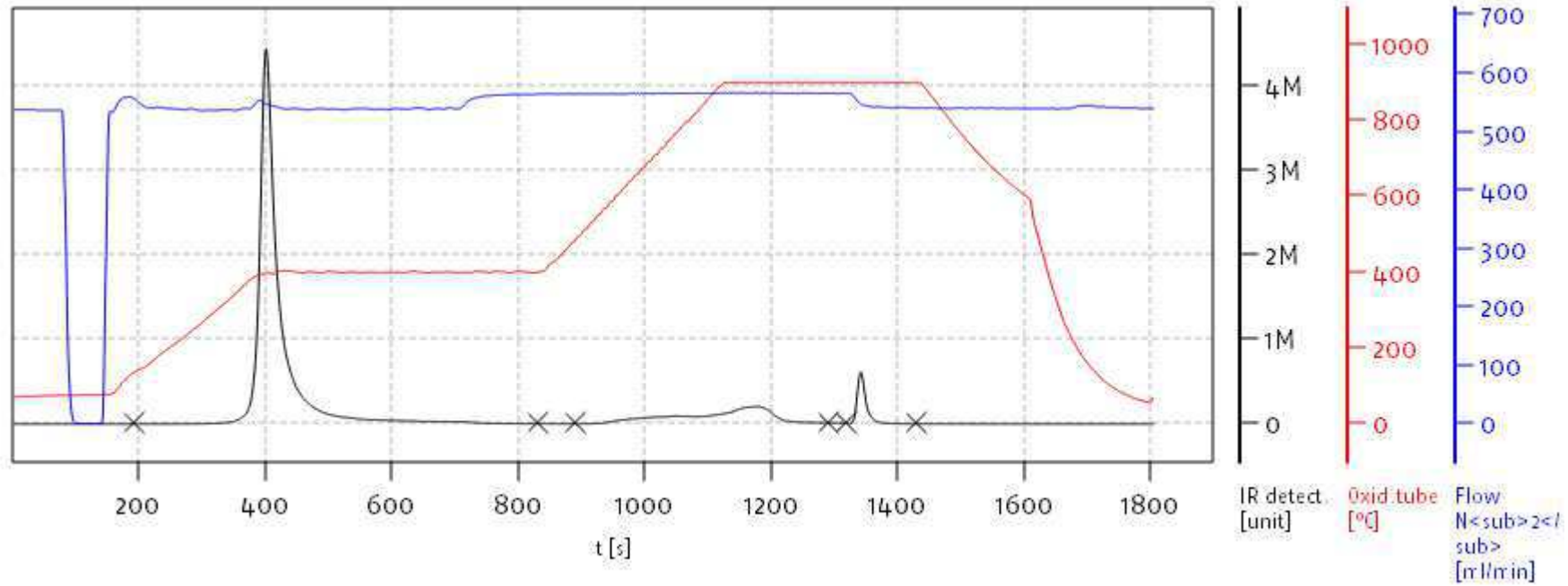
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
80	80	BLA0254-MS1	509.40	0.0082	CARBON	1/14/2023 12:09 AM	bl	1.813	5 846 359	2.157	0.106	374 722	1 160 563	1.707	0.345	0.9652	1.0000



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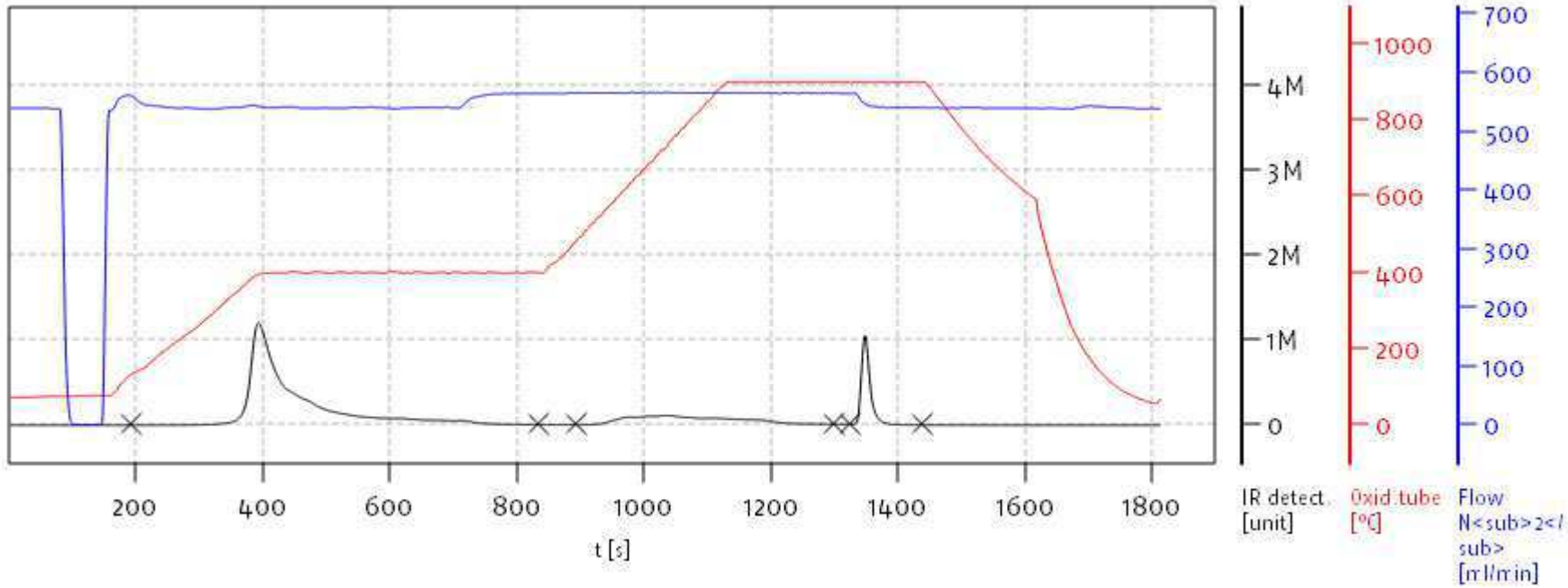
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
81	81	23A0158-13	540.50		CARBON	1/14/2023 12:39 AM	bl	1.116	3 422 920	1.363	0.177	645 679	887 721	0.939	0.247	0.9652	1.0000



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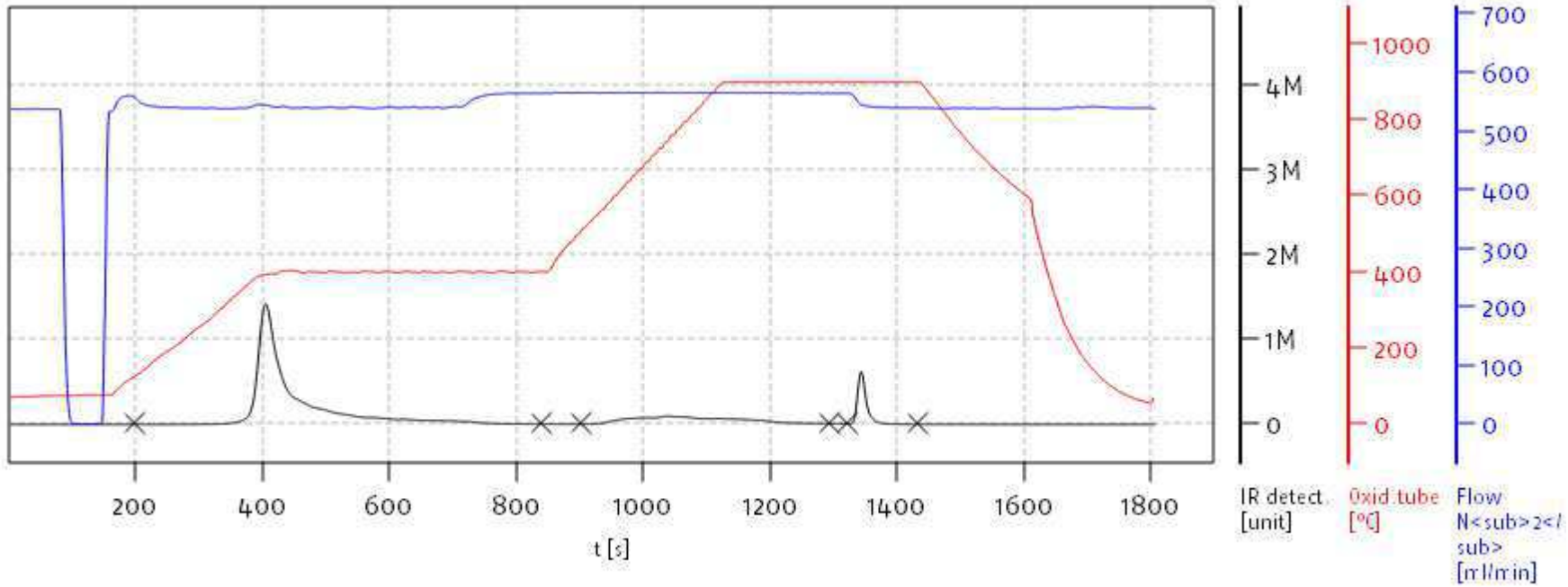
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
82	82	23A0158-14	510.10		CARBON	1/14/2023 1:10 AM	bl	1.007	3 096 158	1.221	0.108	381 040	733 125	0.899	0.214	0.9652	1.0000



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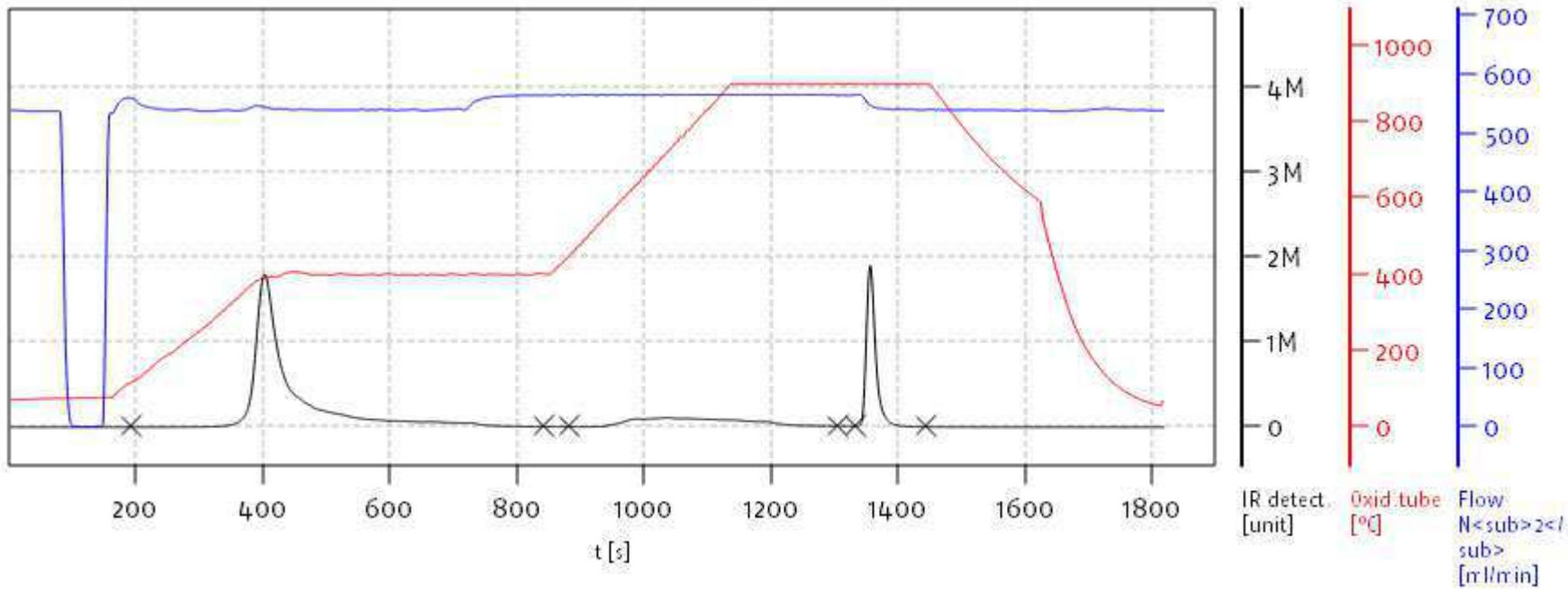
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
83	83	23A0158-15	527.70		CARBON	1/14/2023 1:40 AM	bl	1.482	4 023 287	1.740	0.350	1 219 801	907 176	1.132	0.258	0.9652	1.0000



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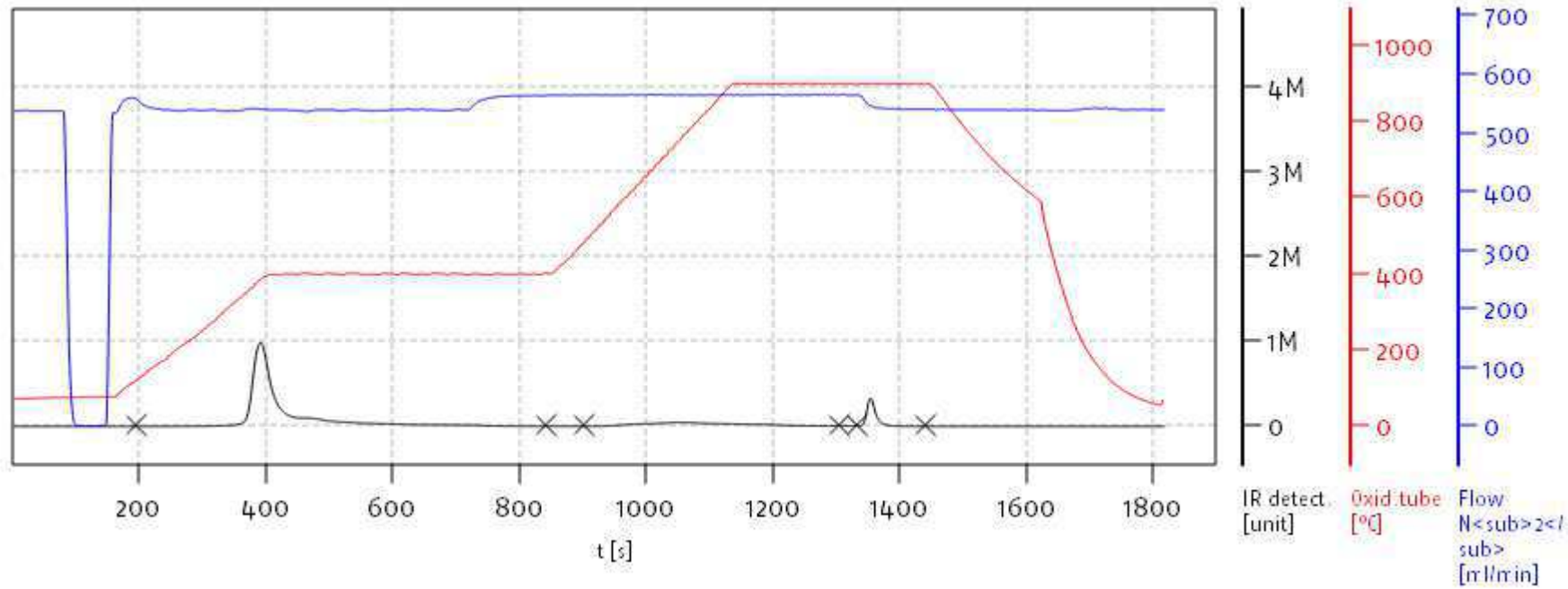
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
84	84	23A0158-16	197.80		CARBON	1/14/2023 2:11 AM	bl	1.454	1 766 598	1.690	0.139	204 539	328 191	1.314	0.236	0.9652	1.0000



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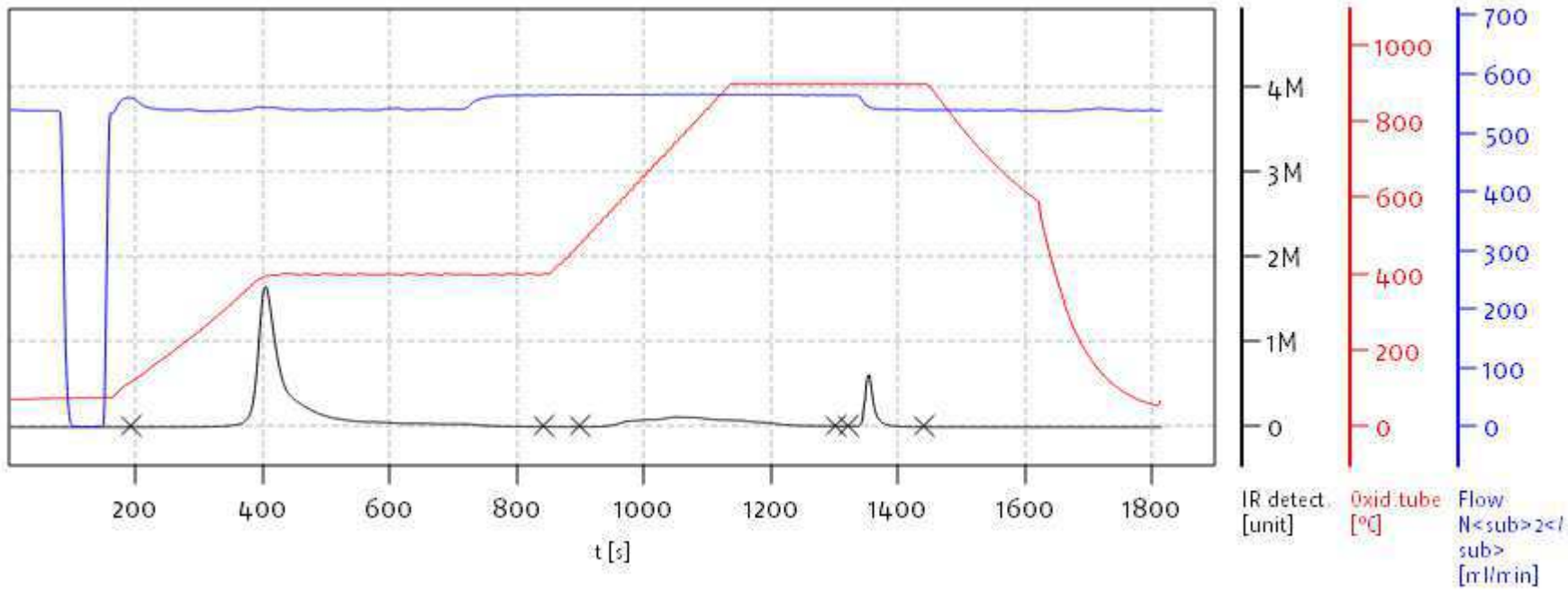
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
85	85	23A0180-01	512.10		CARBON	1/14/2023 2:42 AM	bl	1.033	3 193 947	1.289	0.109	385 580	875 870	0.924	0.257	0.9652	1.0000



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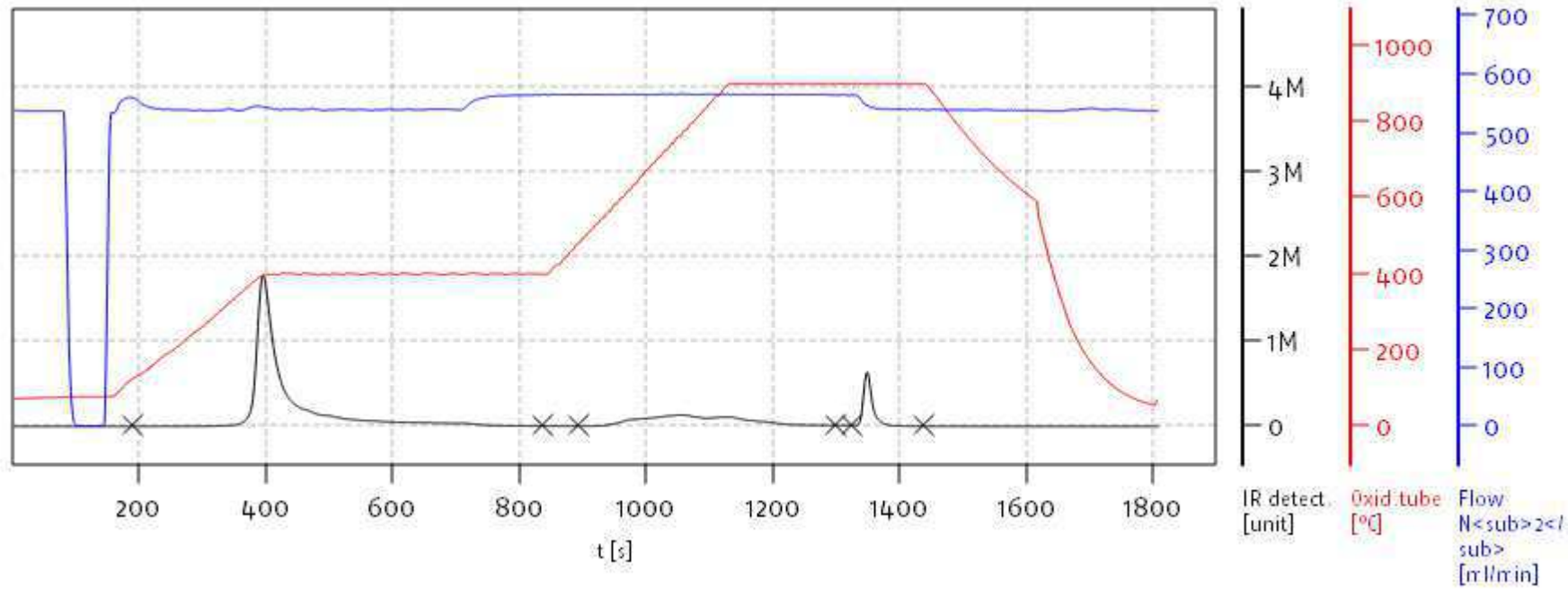
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
86	86	23A0180-02	502.10		CARBON	1/14/2023 3:12 AM	bl	1.046	3 154 931	1.336	0.115	399 502	968 238	0.931	0.290	0.9652	1.0000



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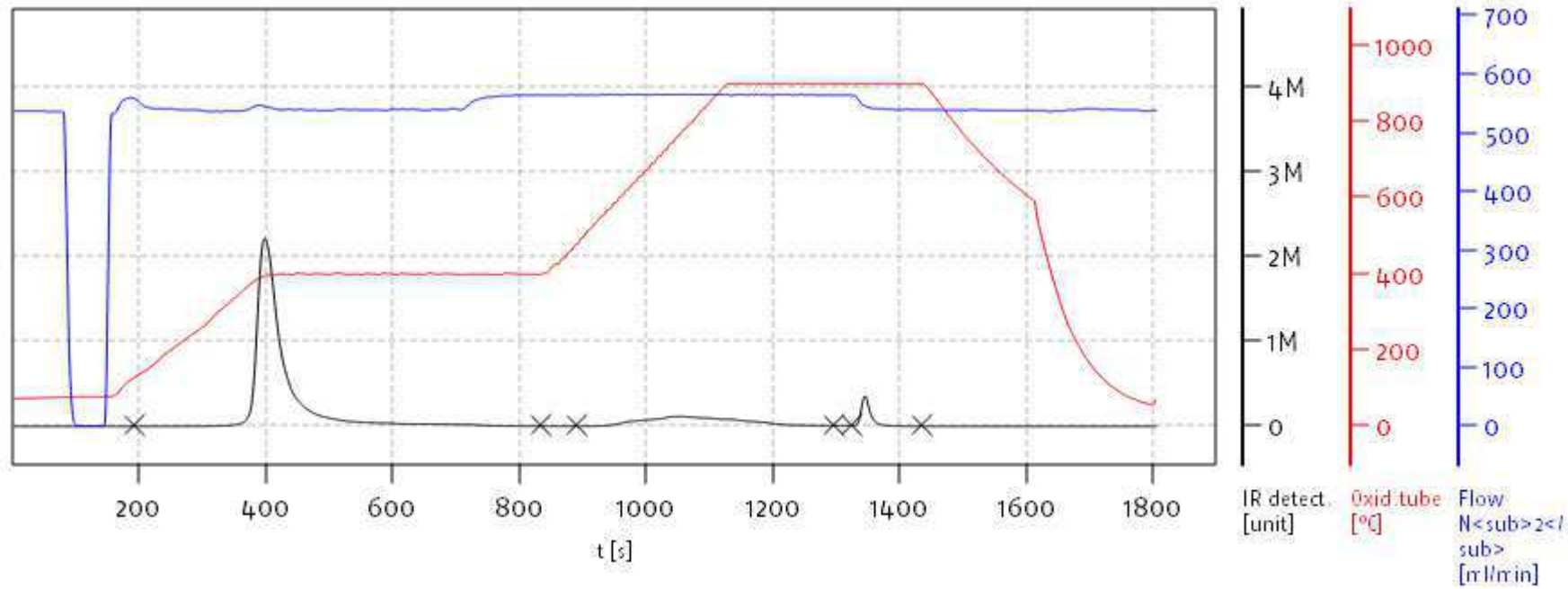
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
87	87	23A0180-03	530.40		CARBON	1/14/2023 3:43 AM	bl	1.156	3 918 302	1.382	0.059	229 708	800 725	1.096	0.226	0.9652	1.0000



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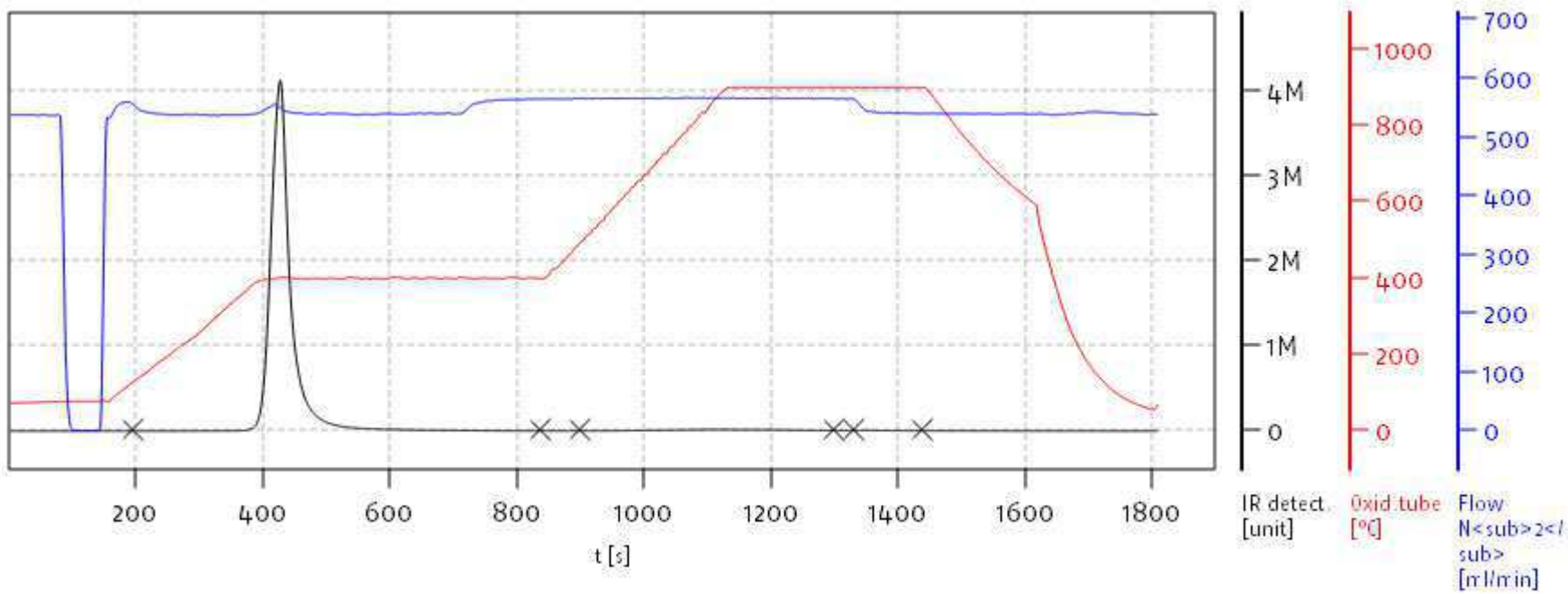
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
88	88	SLA0114-CCV7	18.60		CARBON	1/14/2023 4:13 AM	bl	44.400	5 553 886	45.420	0.000	21 497	149 122	44.400	1.020	0.9652	1.0000



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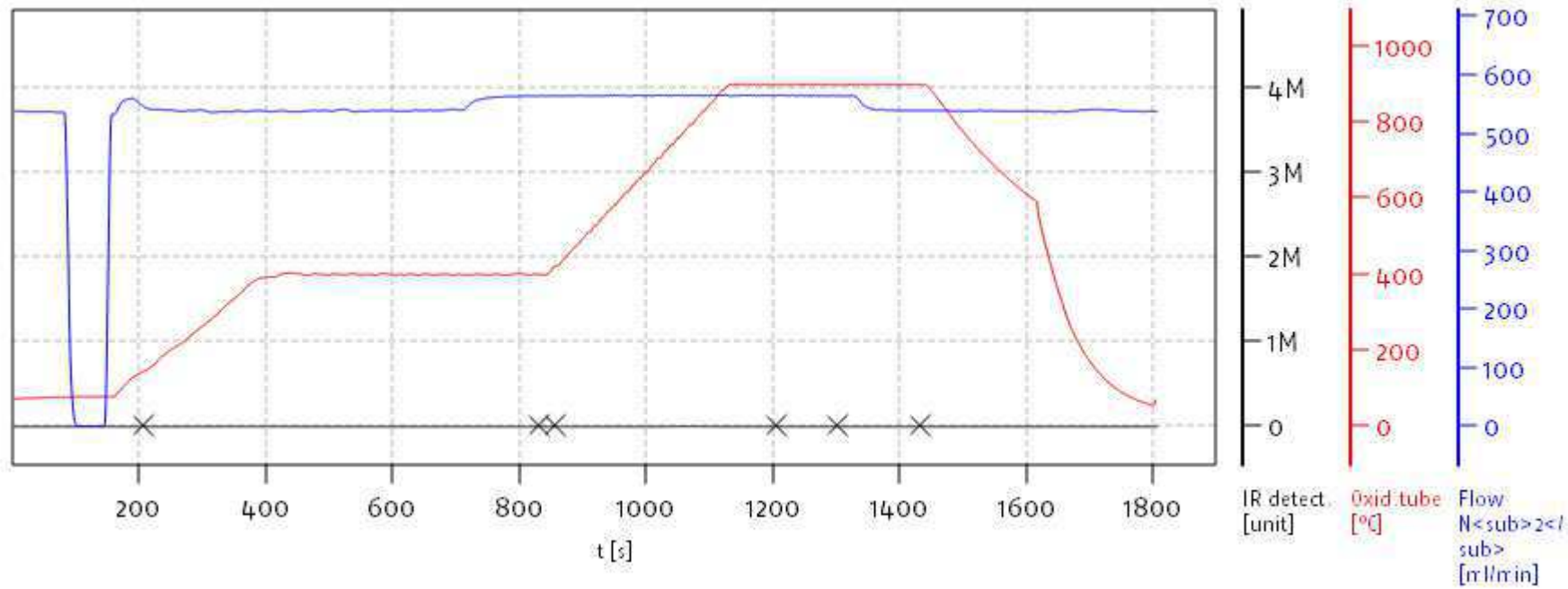
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
89	89	SLA0114-CCB7	520.30		CARBON	1/14/2023 4:44 AM	bl,C2u	0.000	6 046	0.000	0.000	559	6 211	0.000	0.000	0.9652	1.0000



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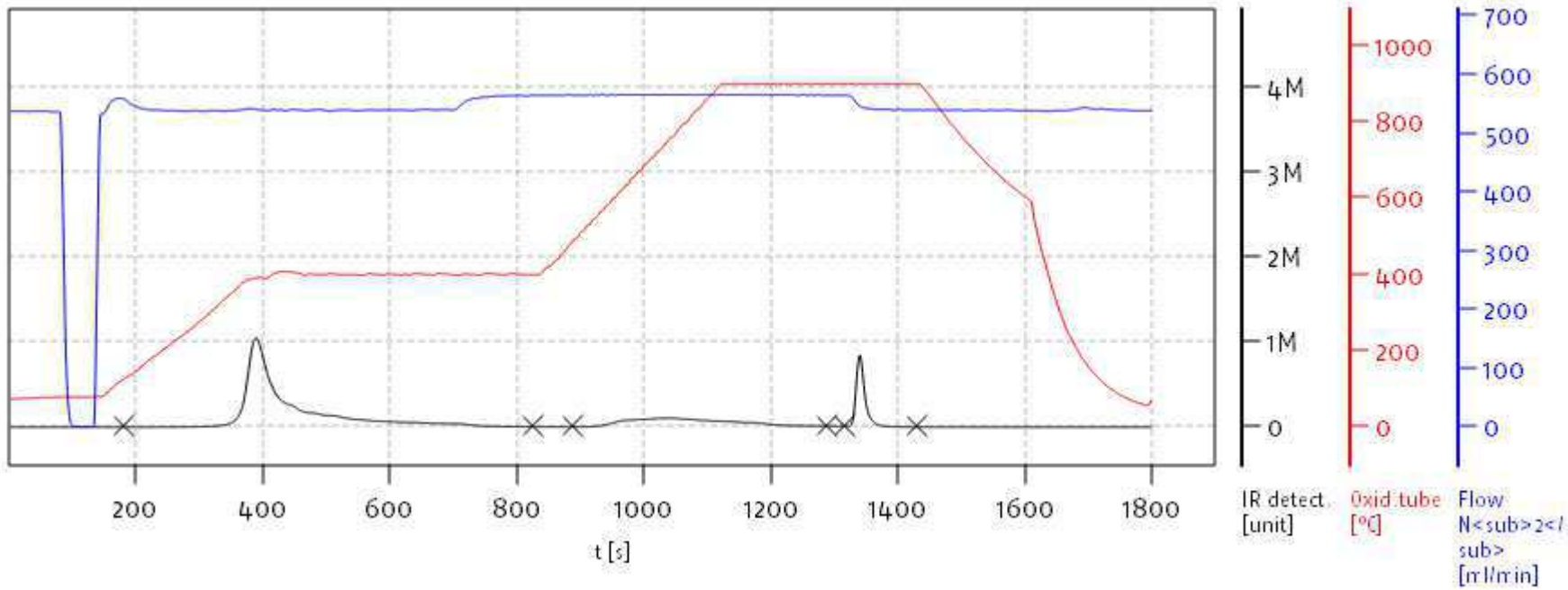
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
90	1	23A0180-04	518.50		CARBON	1/14/2023 5:14 AM	bl	0.938	2 773 552	1.171	0.146	516 080	808 177	0.792	0.233	0.9652	1.0000



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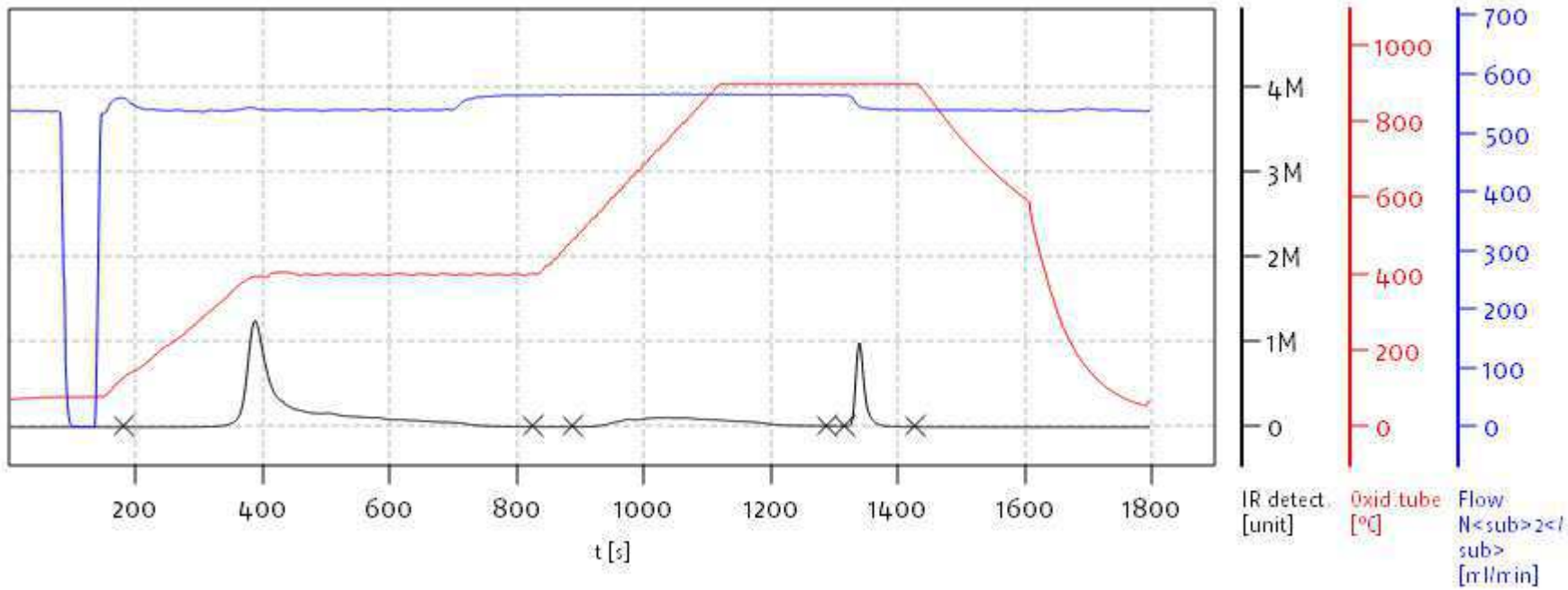
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
91	2	23A0180-05	519.50		CARBON	1/14/2023 5:45 AM	bl	1.063	3 113 642	1.319	0.175	613 404	885 888	0.888	0.256	0.9652	1.0000



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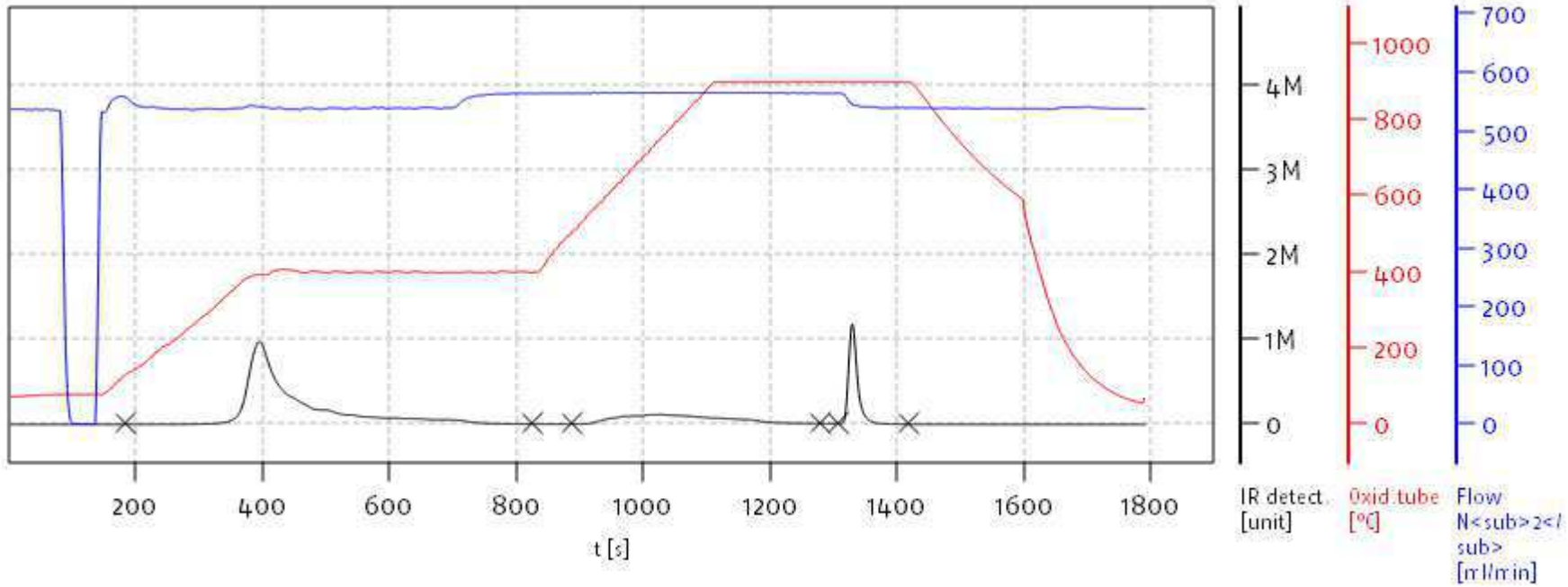
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
92	3	23A0180-06	556.10		CARBON	1/14/2023 6:15 AM	bl	1.007	3 047 904	1.248	0.196	729 523	890 605	0.812	0.241	0.9652	1.0000



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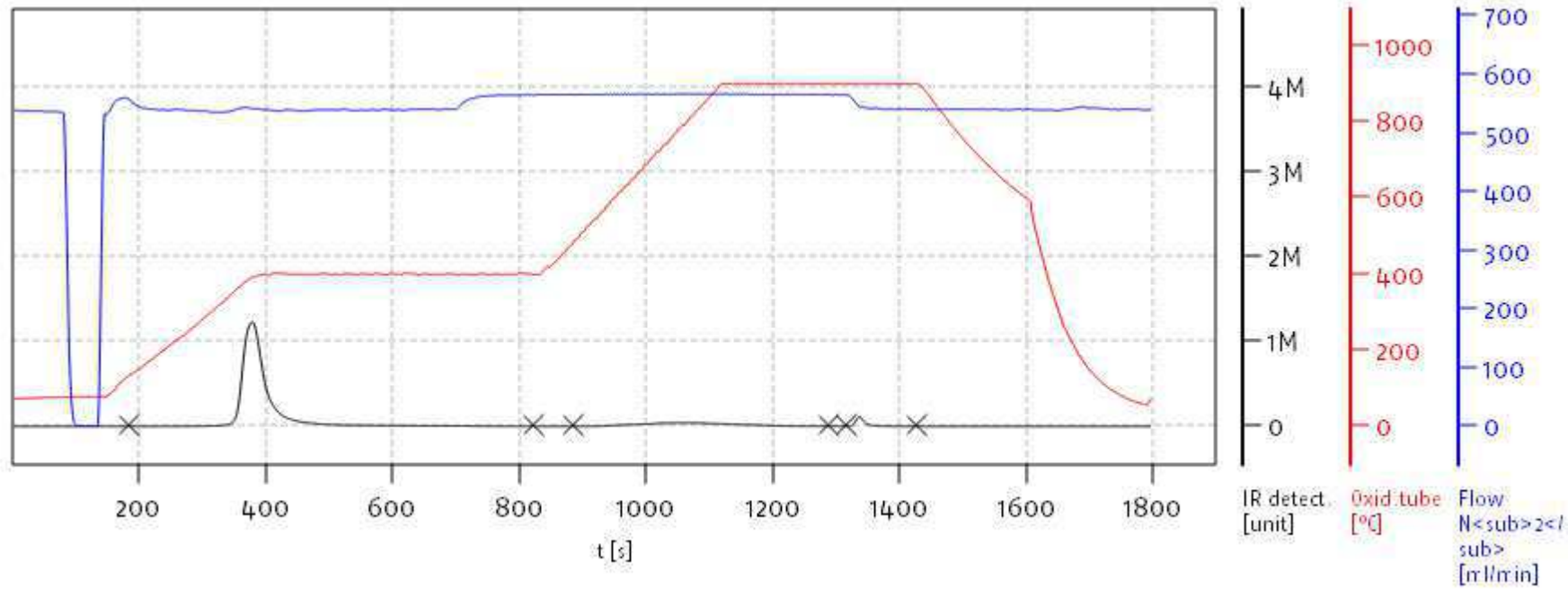
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
93	4	23A0180-07	224.30		CARBON	1/14/2023 6:45 AM	bl	1.339	1 992 417	1.515	0.030	69 947	281 512	1.309	0.176	0.9652	1.0000



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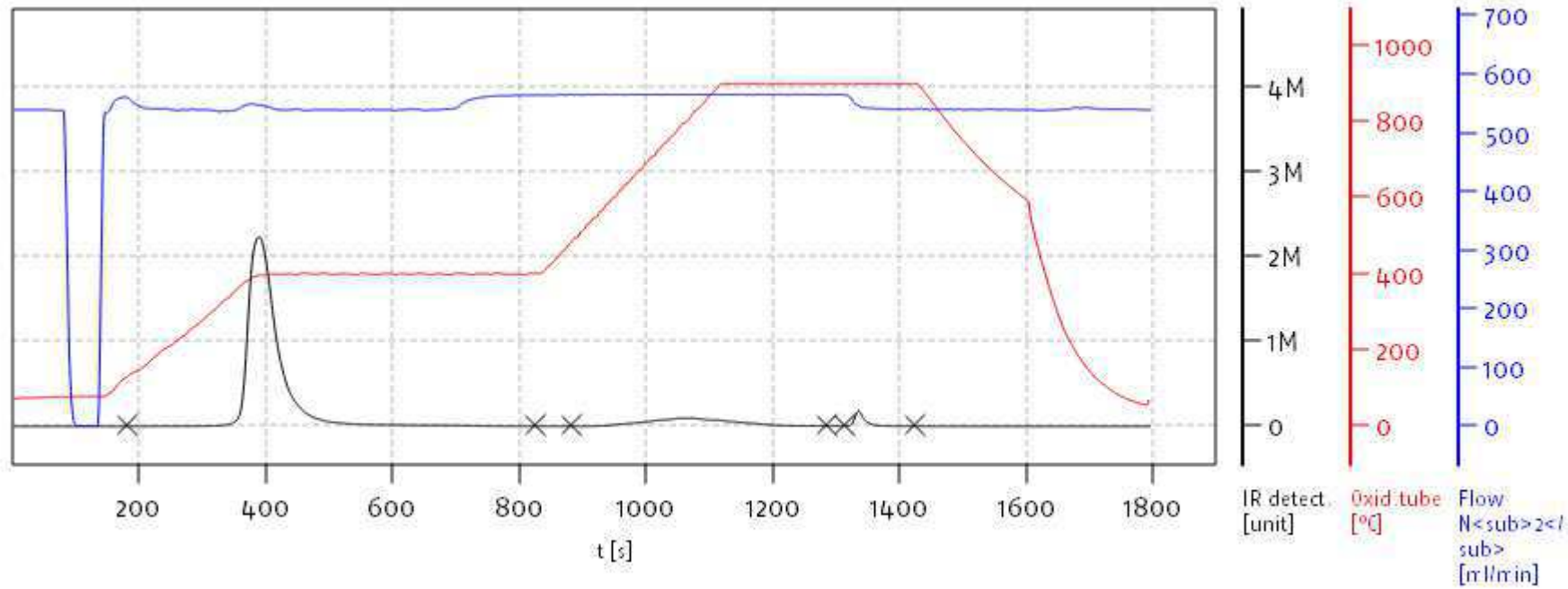
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
94	5	23A0180-08	512.30		CARBON	1/14/2023 7:16 AM	bl	1.331	4 484 538	1.502	0.031	127 608	592 748	1.300	0.171	0.9652	1.0000



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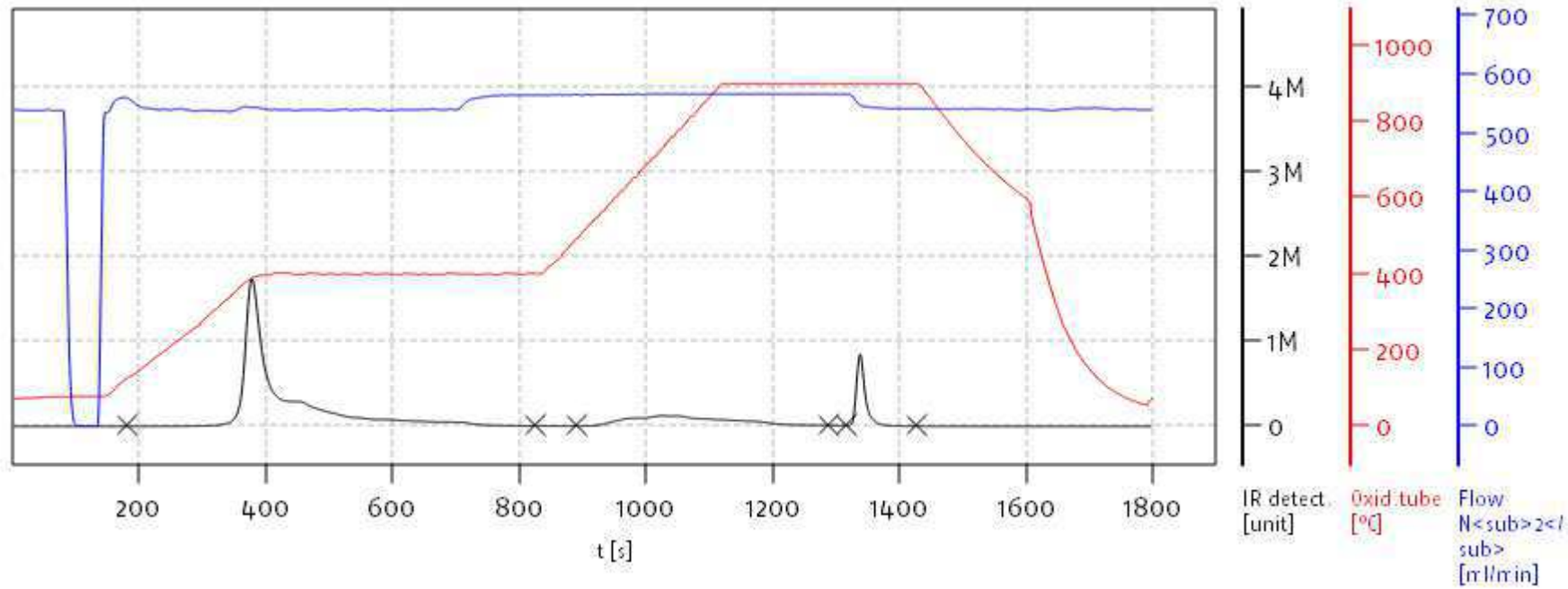
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
95	6	23A0180-09	516.40		CARBON	1/14/2023 7:46 AM	bl	1.191	3 623 543	1.460	0.150	527 484	923 124	1.041	0.269	0.9652	1.0000



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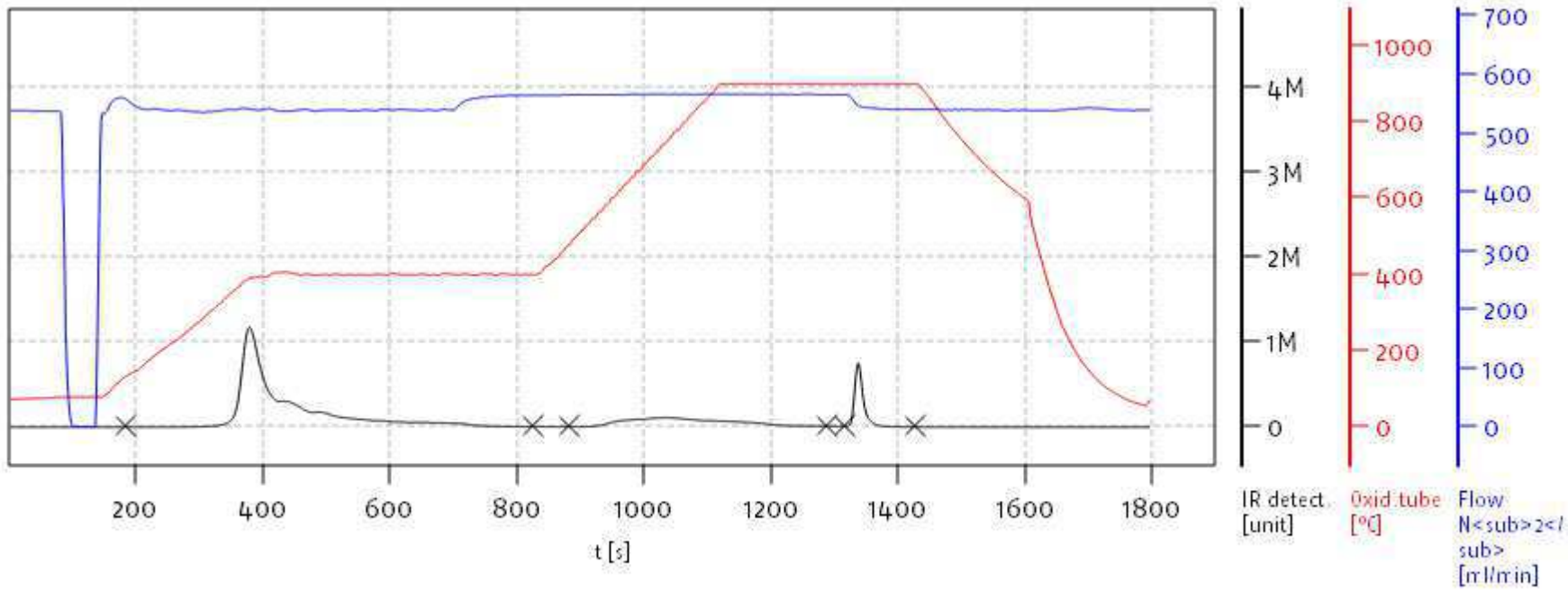
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
96	7	23A0180-10	506.10		CARBON	1/14/2023 8:16 AM	bl	1.027	3 059 573	1.273	0.132	457 995	830 816	0.895	0.246	0.9652	1.0000



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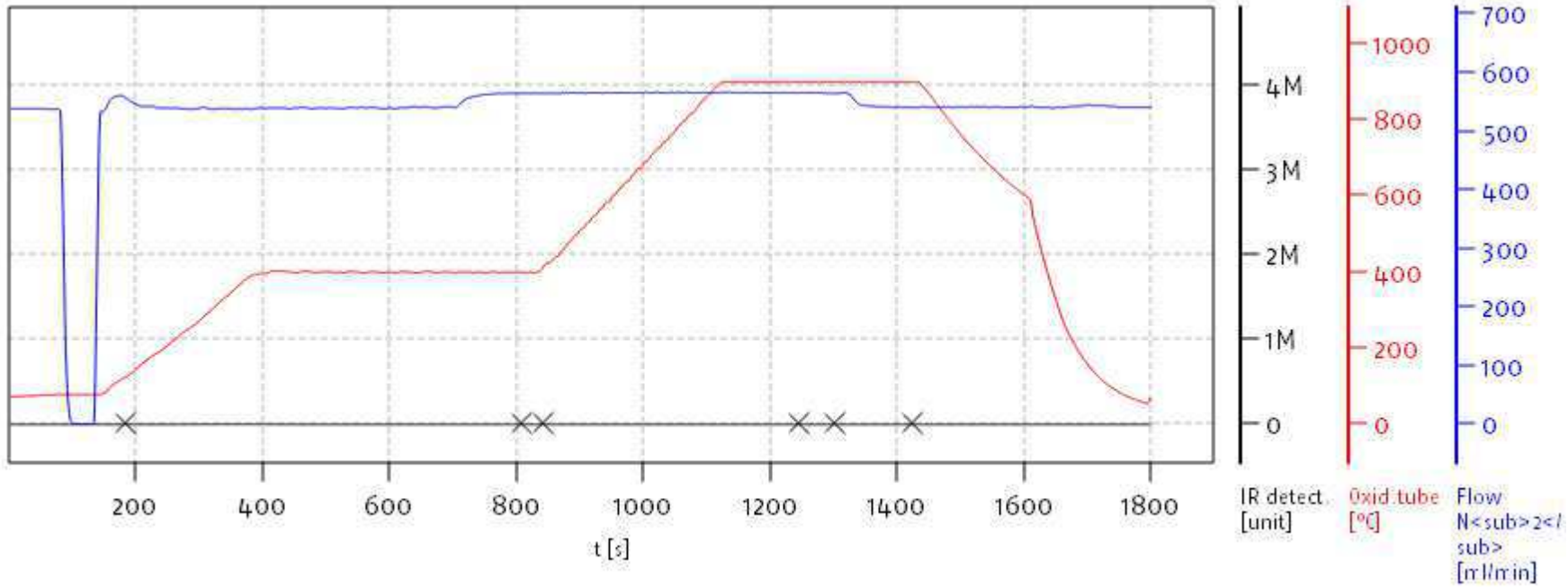
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
97	8	BLANK	1.00		CARBON	1/ 14/2023 8:47 AM	bl	0.000	11 300	0.000	0.000	228	1 076	0.000	0.000	0.9652	1.0000



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Balance: BAL3
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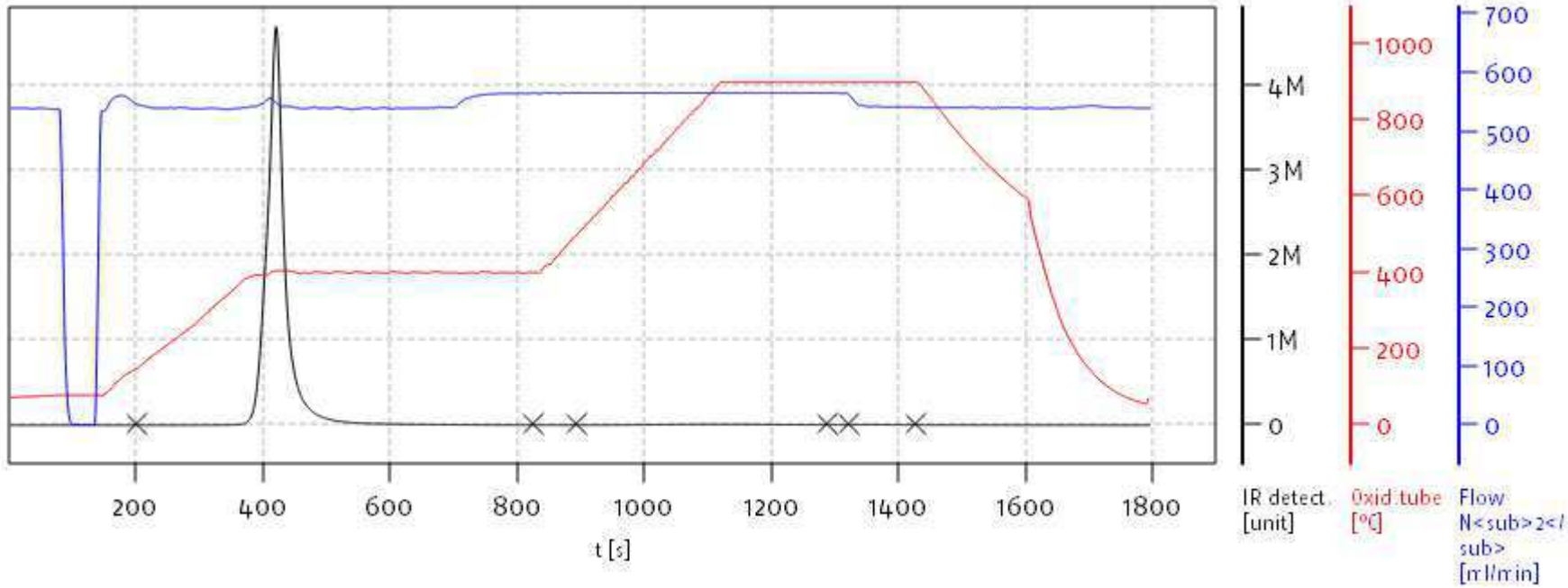
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
98	9	Dfactor	19.20		CARBON	1/14/2023 9:17 AM	bl	44.446	5 779 705	44.966	0.000	20 688	91 109	44.446	0.521	0.9582	1.0000



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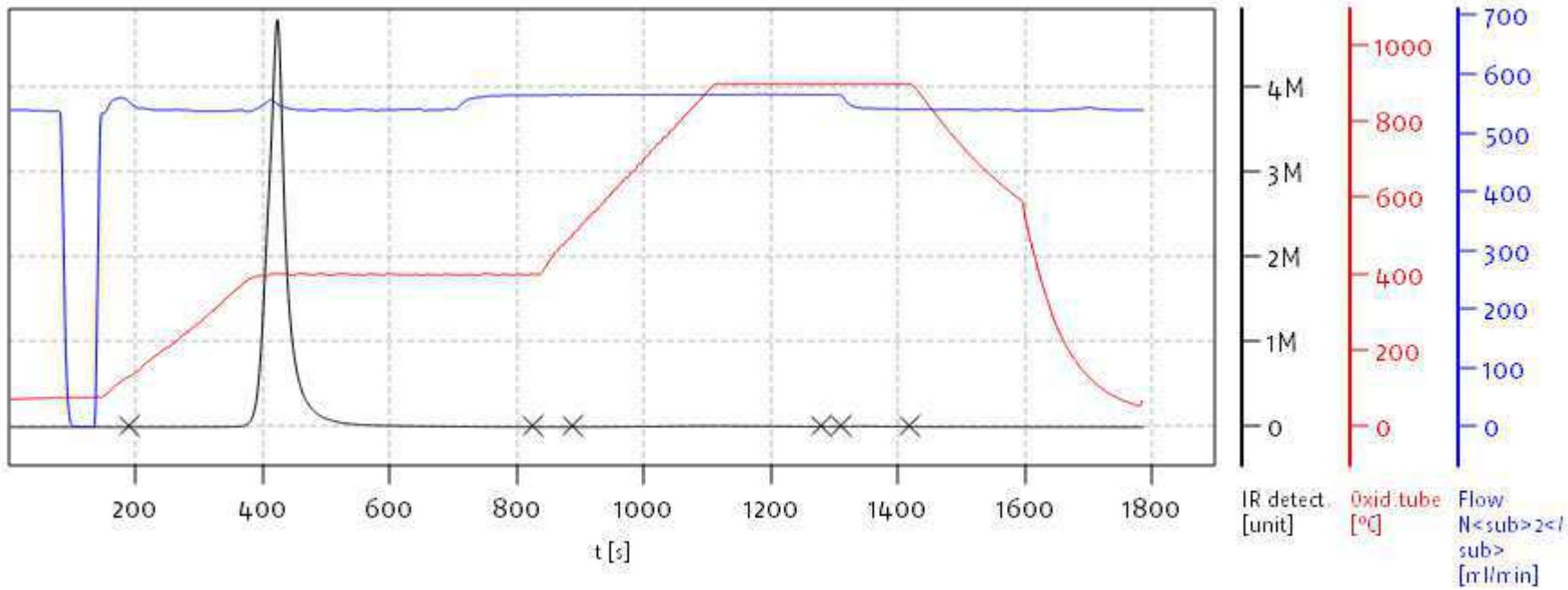
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
99	10	Dfactor	20.70		CARBON	1/14/2023 9:47 AM	bl	44.446	6 292 214	45.053	0.000	25 604	107 701	44.446	0.607	0.9485	1.0000



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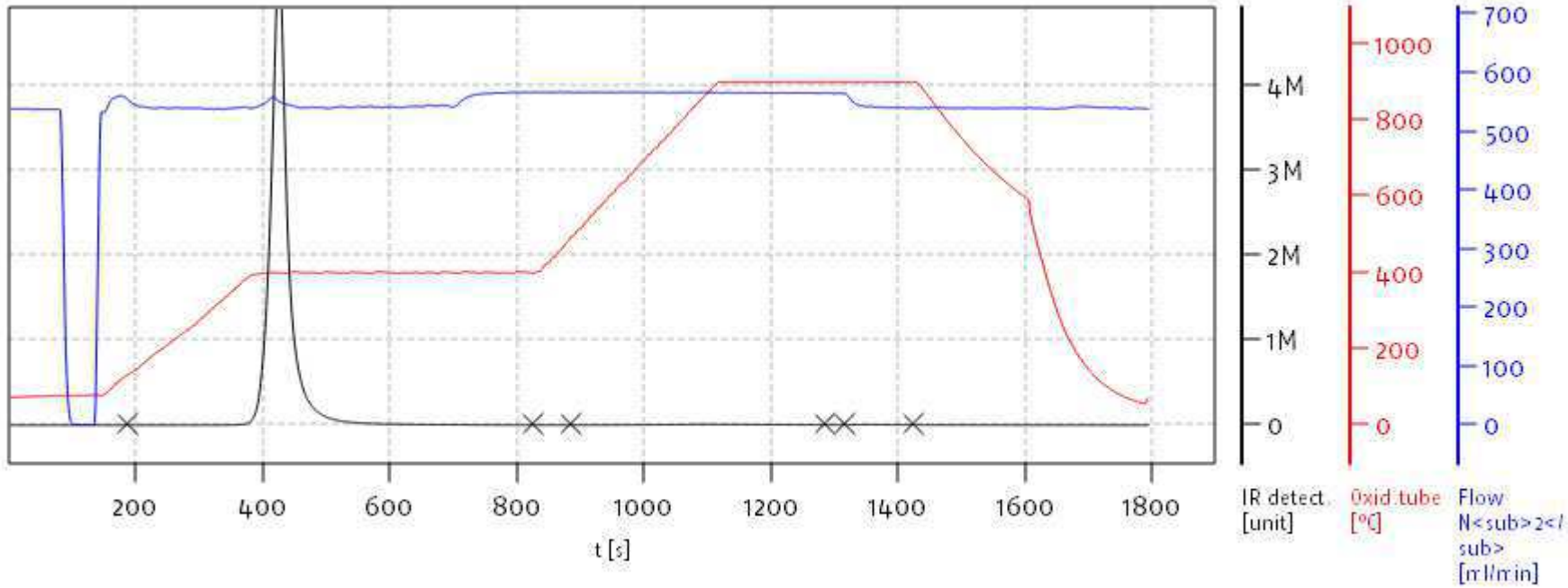
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
100	11	SLA0114-CCV8	21.10		CARBON	1/14/2023 10:18 AM	bl	45.257	6 496 945	45.654	0.000	20 485	80 665	45.257	0.397	0.9534	1.0000



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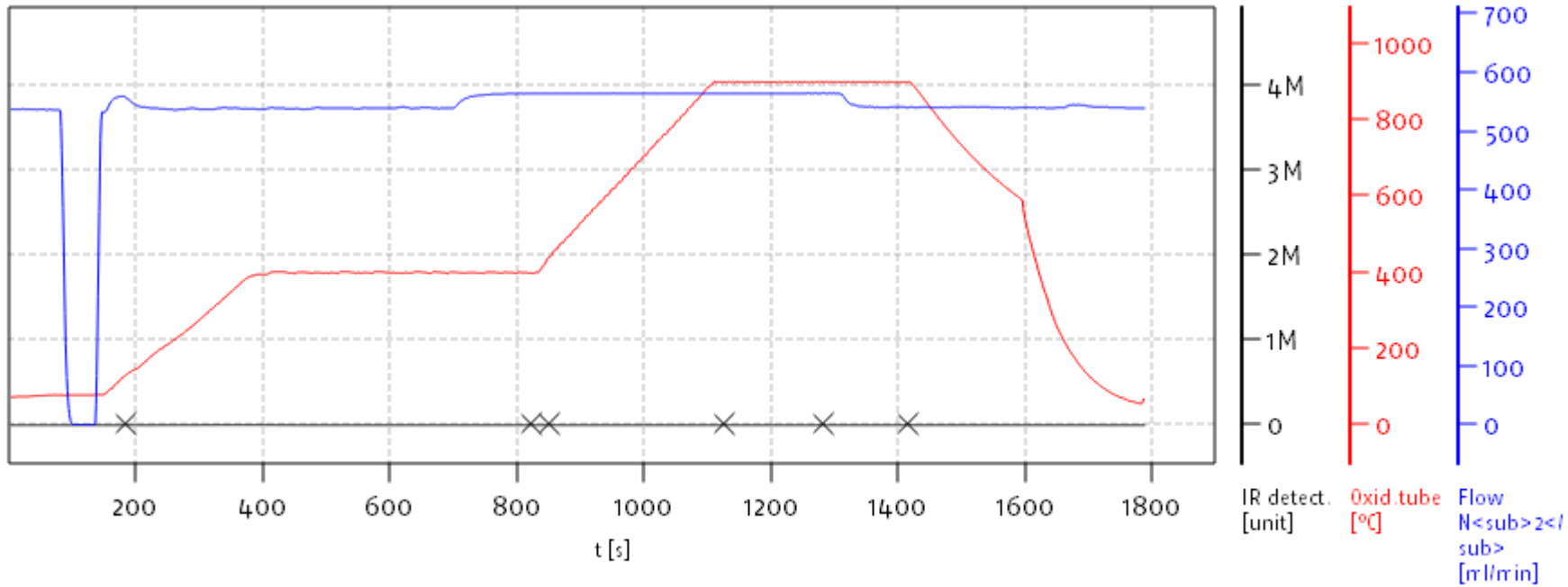
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
101	12	SLA0114-CCB8	510.70		CARBON	1/14/2023 10:48 AM	bl,C3u,C2u	0.000	13 863	0.000	0.000	1 106	844	0.000	0.000	0.9534	1.0000



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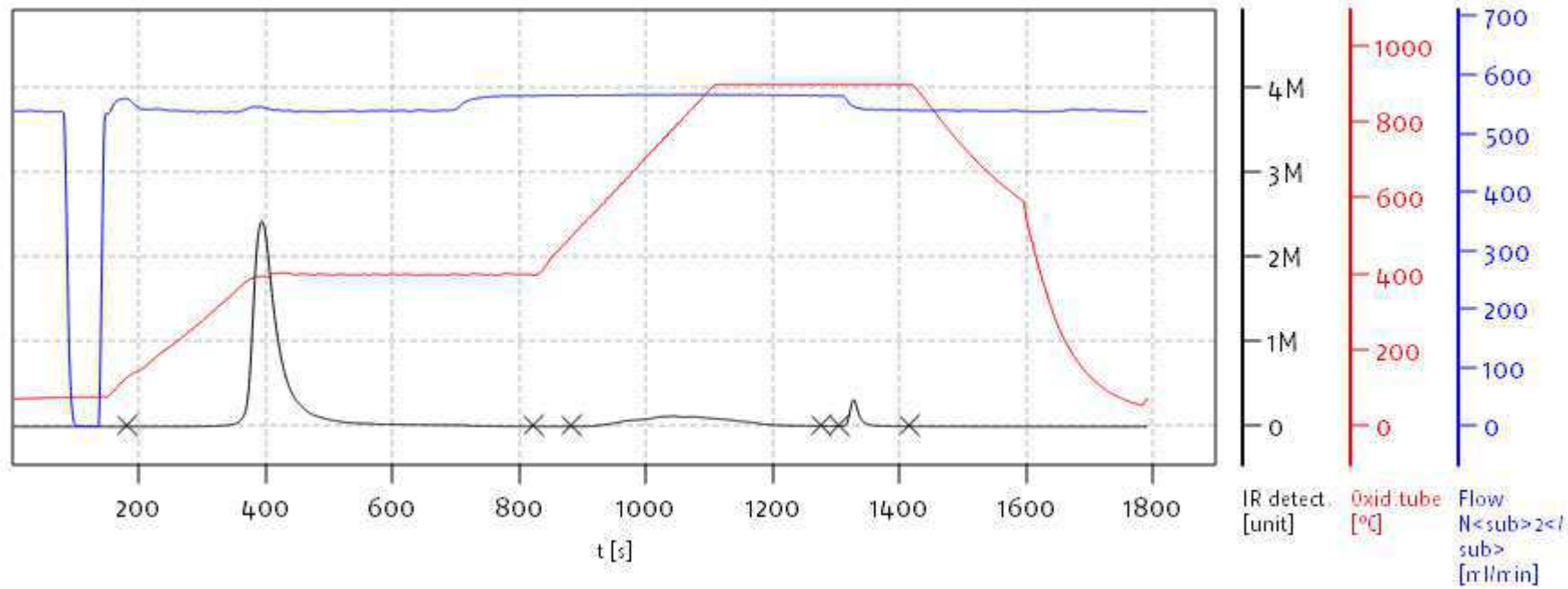
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
102	13	23A0180-11	592.20		CARBON	1/14/2023 11:18 AM	bl	1.128	4 356 362	1.342	0.049	212 110	846 052	1.079	0.214	0.9534	1.0000



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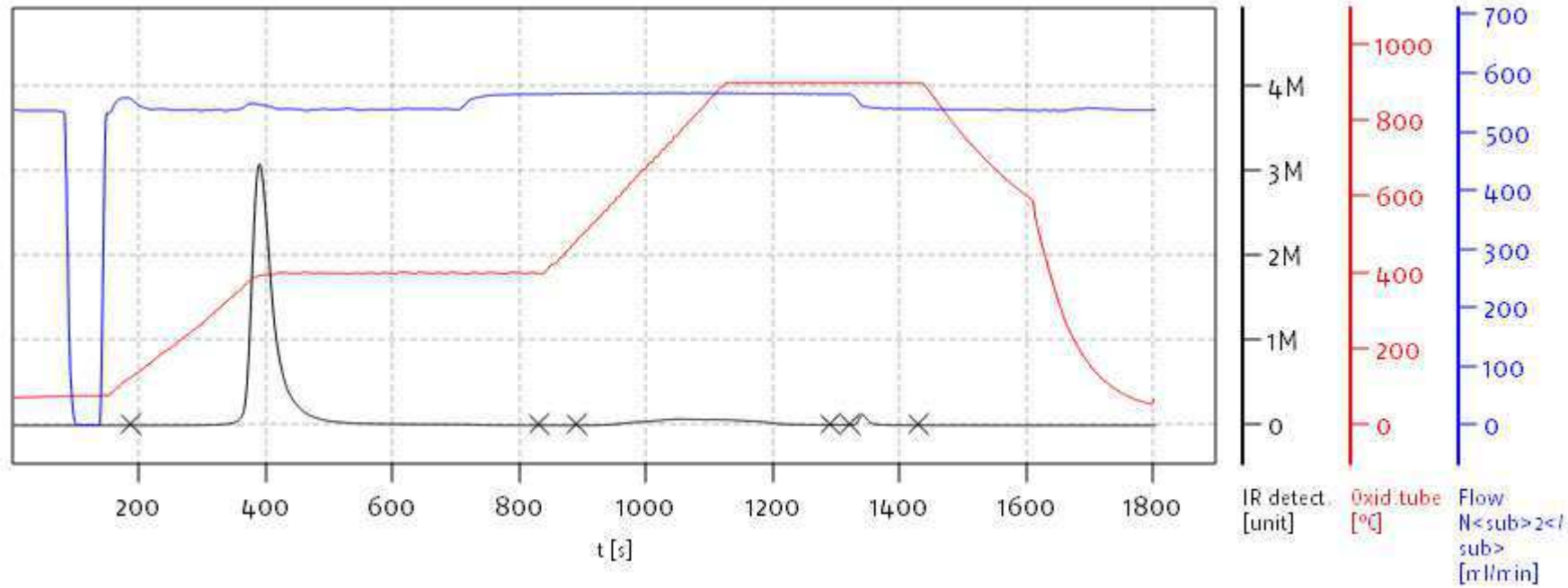
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
103	14	23A0180-12	518.60		CARBON	1/14/2023 11:49 AM	bl	1.359	4 741 244	1.517	0.018	85 712	554 196	1.342	0.158	0.9534	1.0000



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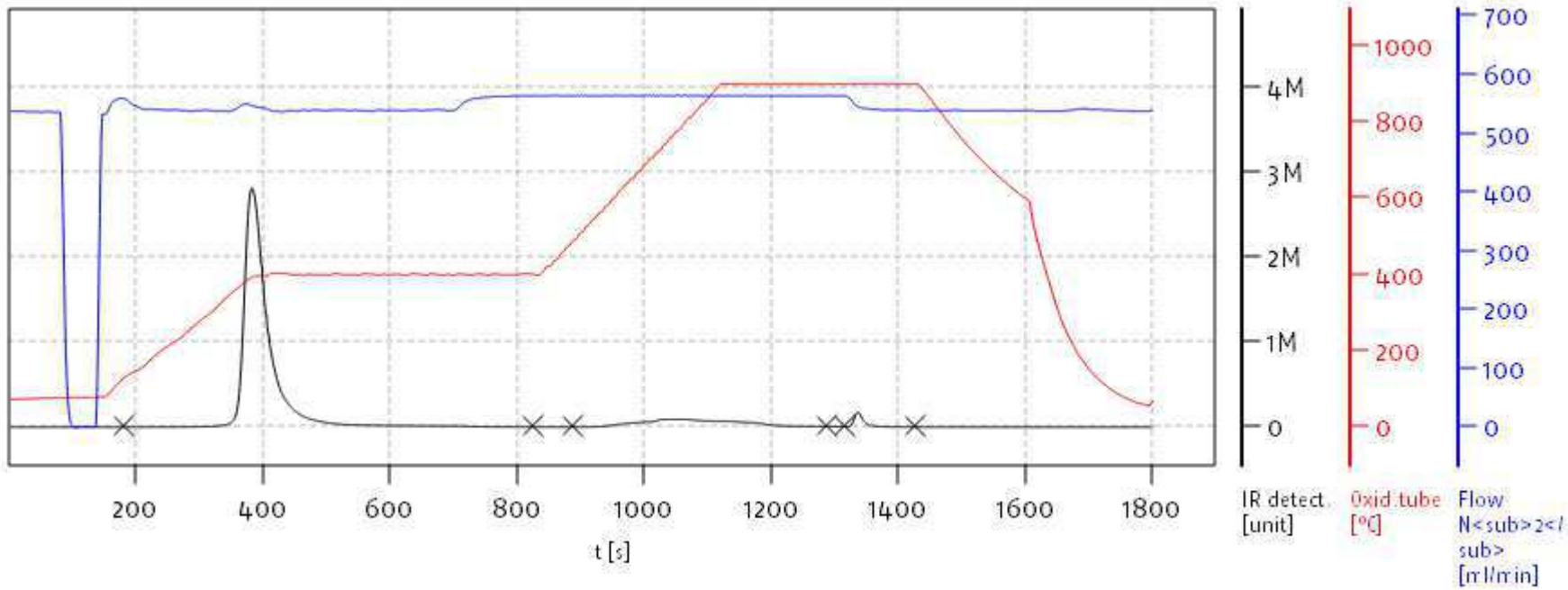
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
104	15	23A0180-13	522.20		CARBON	1/14/2023 12:19 PM	bl	1.310	4 566 905	1.495	0.027	117 619	650 071	1.283	0.185	0.9534	1.0000



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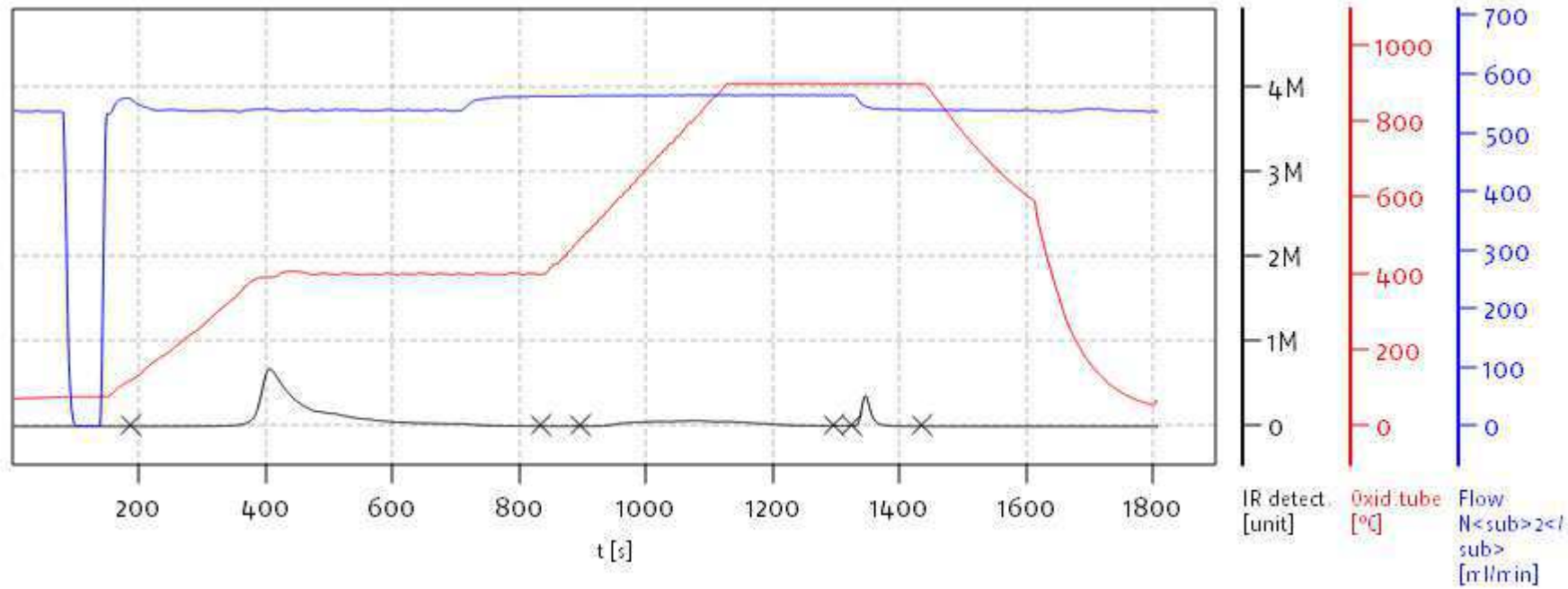
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
105	16	23A0180-14	500.30		CARBON	1/14/2023 12:50 PM	bl	0.696	2 163 651	0.850	0.065	237 010	525 286	0.630	0.154	0.9534	1.0000



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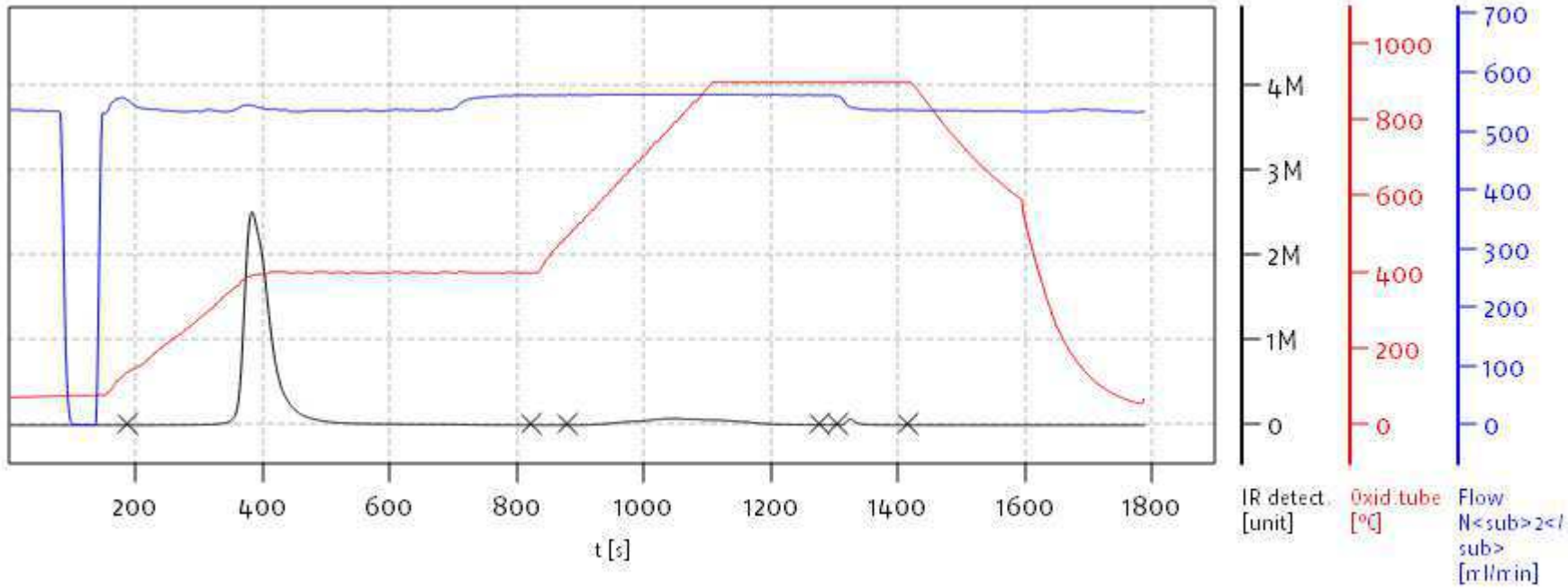
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
106	17	23A0180-15	530.10		CARBON	1/14/2023 1:20 PM	bl	1.246	4 475 474	1.389	0.007	50 846	518 917	1.239	0.144	0.9534	1.0000



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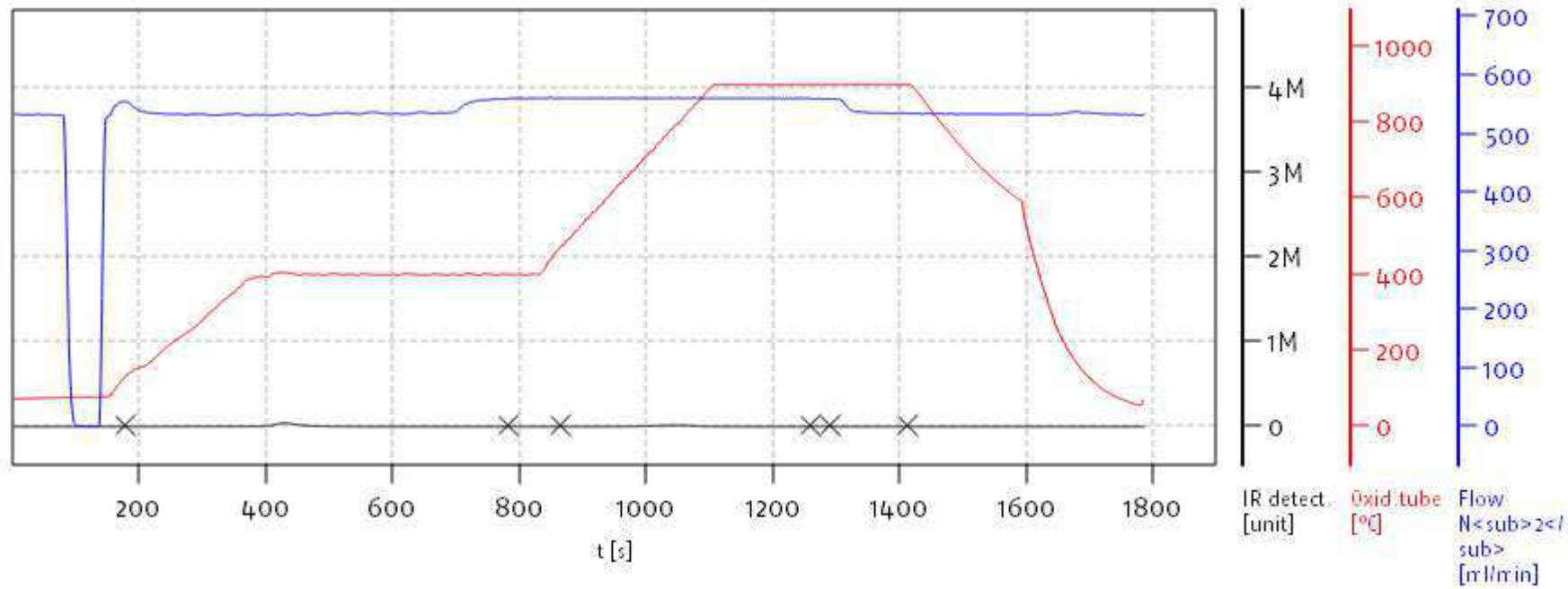
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
107	18	BLA0255-MRL1	581.90		CARBON	1/14/2023 1:50 PM	bl,C2u	0.015	86 824	0.020	0.000	437	43 828	0.015	0.005	0.9534	1.0000



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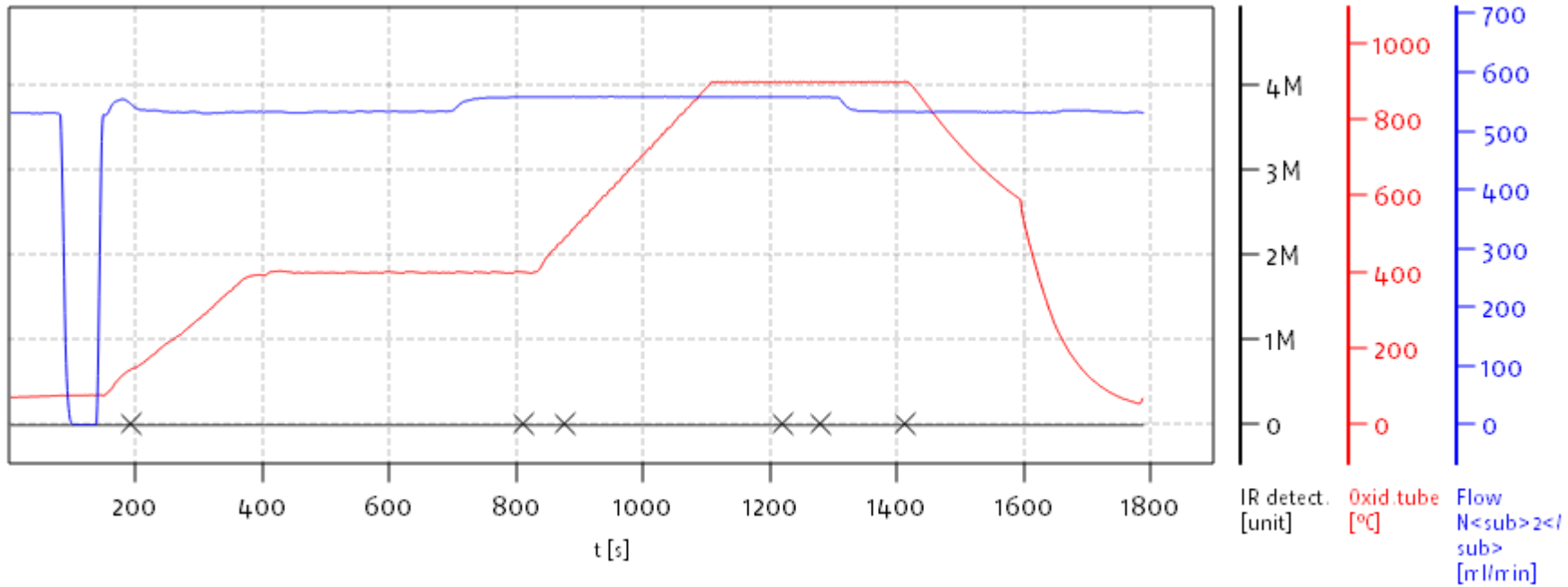
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
108	19	BLA0255-BLK1	539.10		CARBON	1/14/2023 2:20 PM	bl,C3u,C2u	0.000	5 763	0.000	0.000	434	1 623	0.000	0.000	0.9534	1.0000



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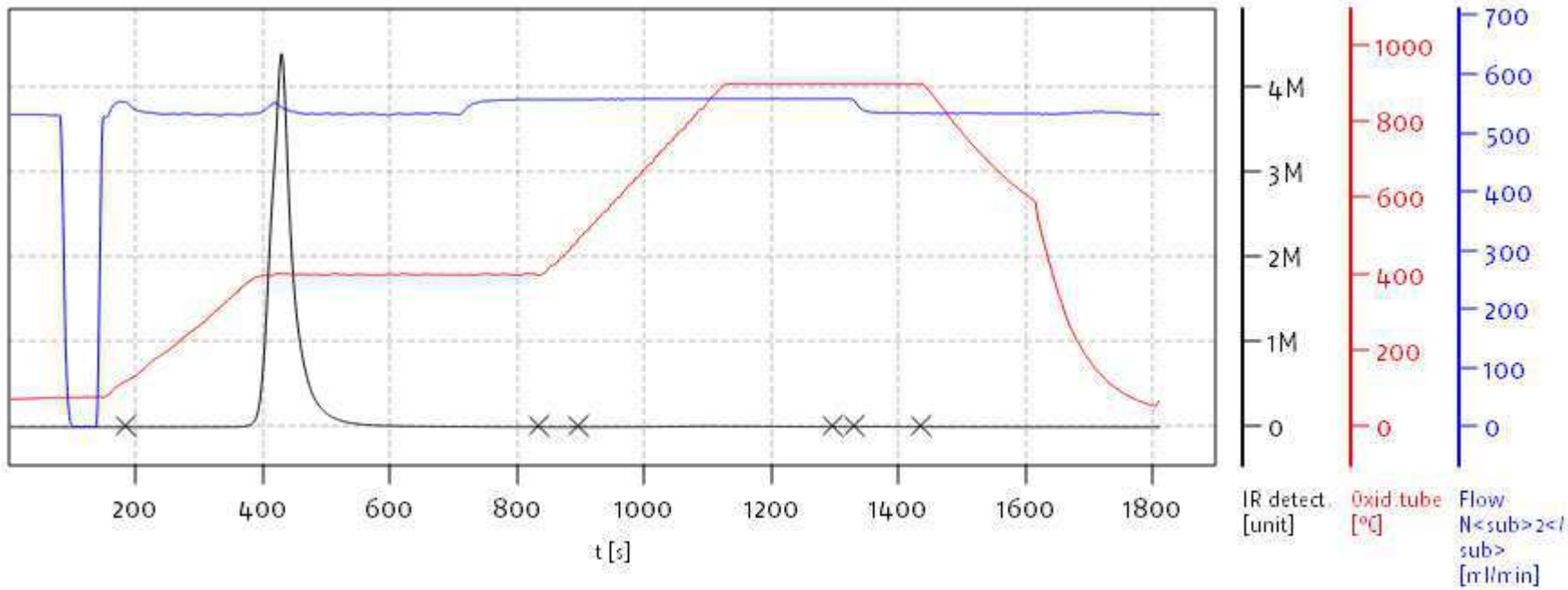
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
109	20	BLA0255-BS1	21.60		CARBON	1/14/2023 2:51 PM	bl	45.419	6 673 996	45.804	0.000	16 935	80 324	45.419	0.386	0.9534	1.0000



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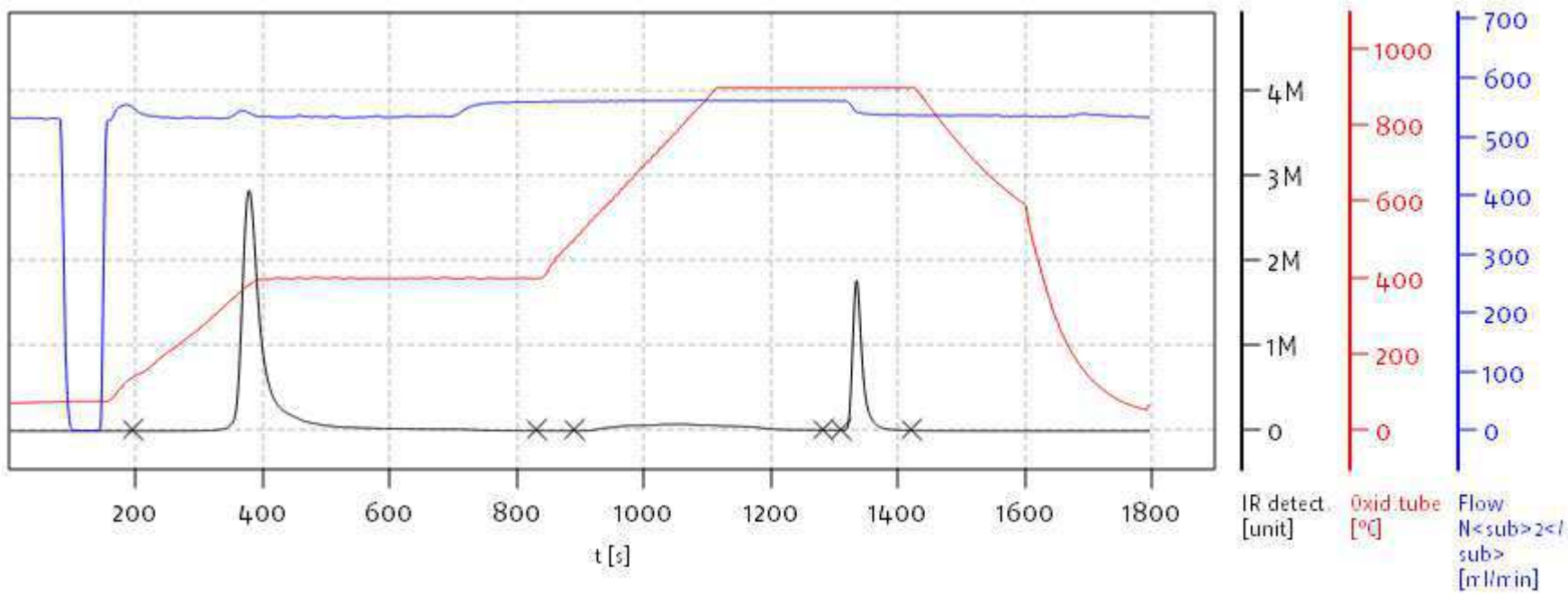
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
110	21	BLA0255-SRM1	261.60		CARBON	1/14/2023 3:21 PM	bl	2.968	4 056 671	3.342	0.695	1 200 595	658 564	2.274	0.374	0.9534	1.0000



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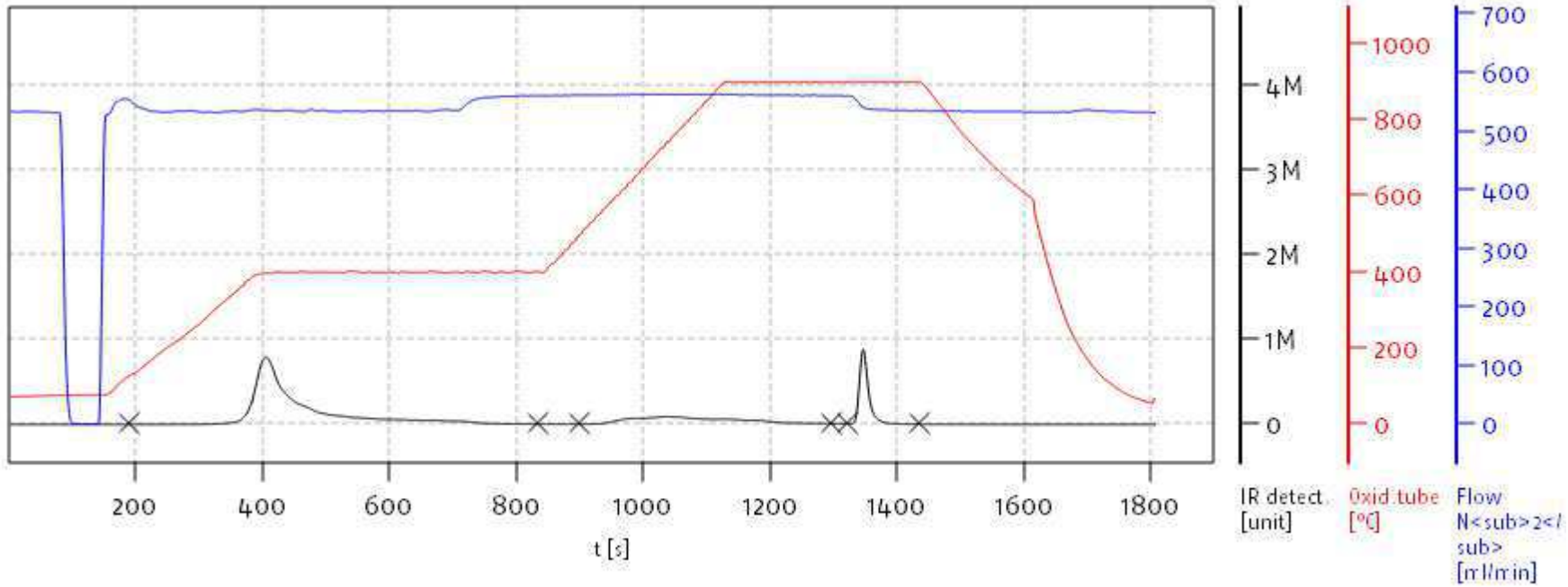
111	22	23A0134-01	511.20		CARBON	1/14/2023 3:52 PM	bl	0.836	2 363 019	1.037	0.162	560 913	687 910	0.675	0.200	0.9534	1.0000



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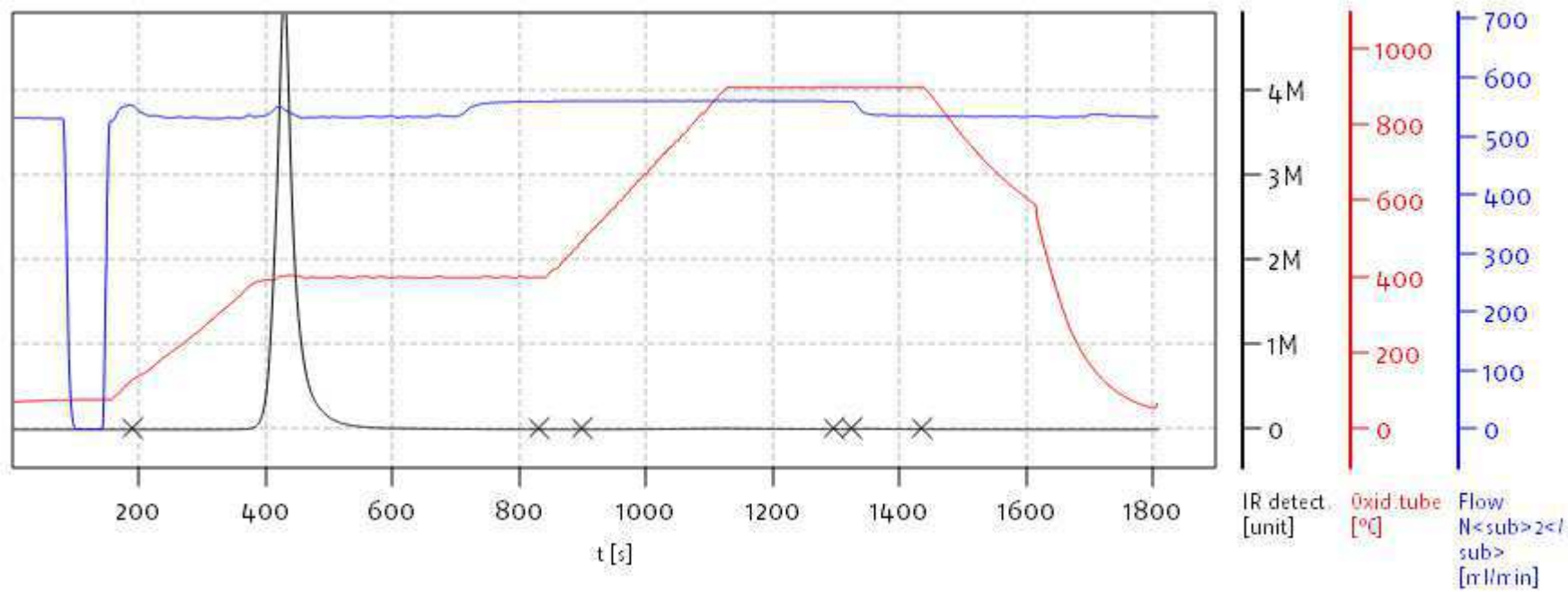
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
112	23	SLA0114-CCV9	21.40		CARBON	1/14/2023 4:22 PM	bl	45.013	6 553 600	45.520	0.000	23 304	96 686	45.013	0.507	0.9534	1.0000



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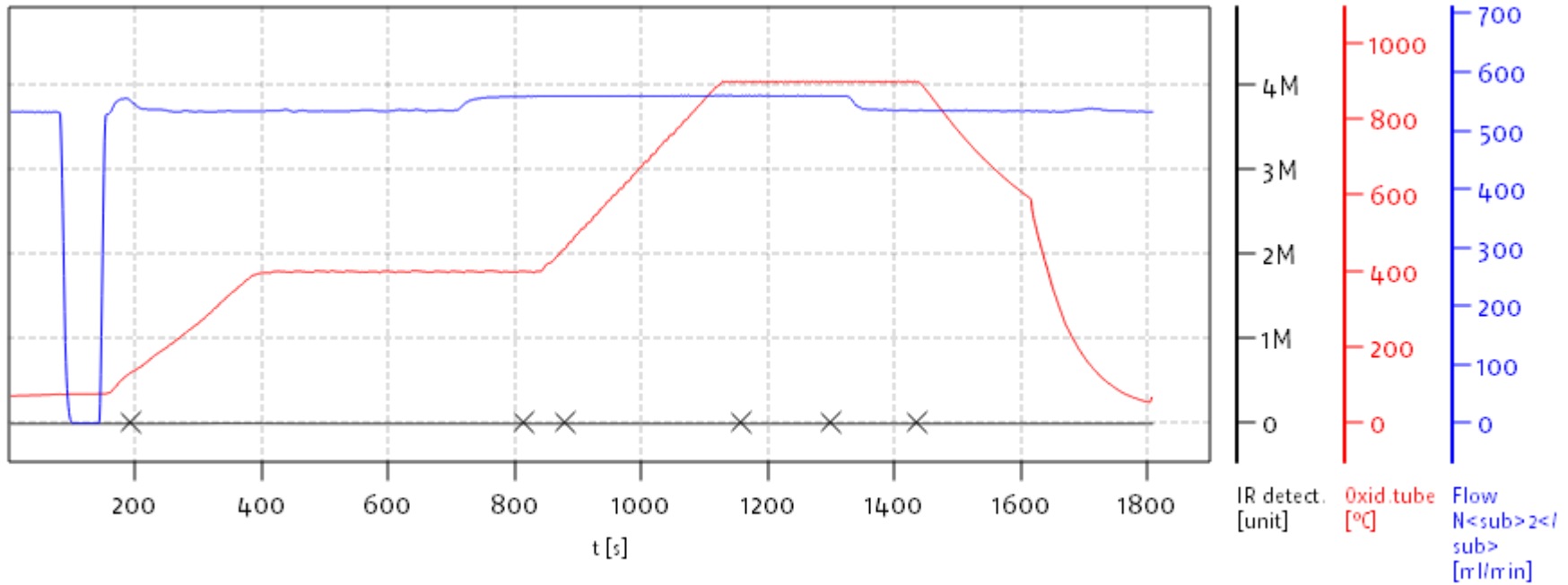
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
113	24	SLA0114-CCB9	523.70		CARBON	1/14/2023 4:53 PM	bl,C3u,C2u	0.000	14 978	0.000	0.000	793	445	0.000	0.000	0.9534	1.0000



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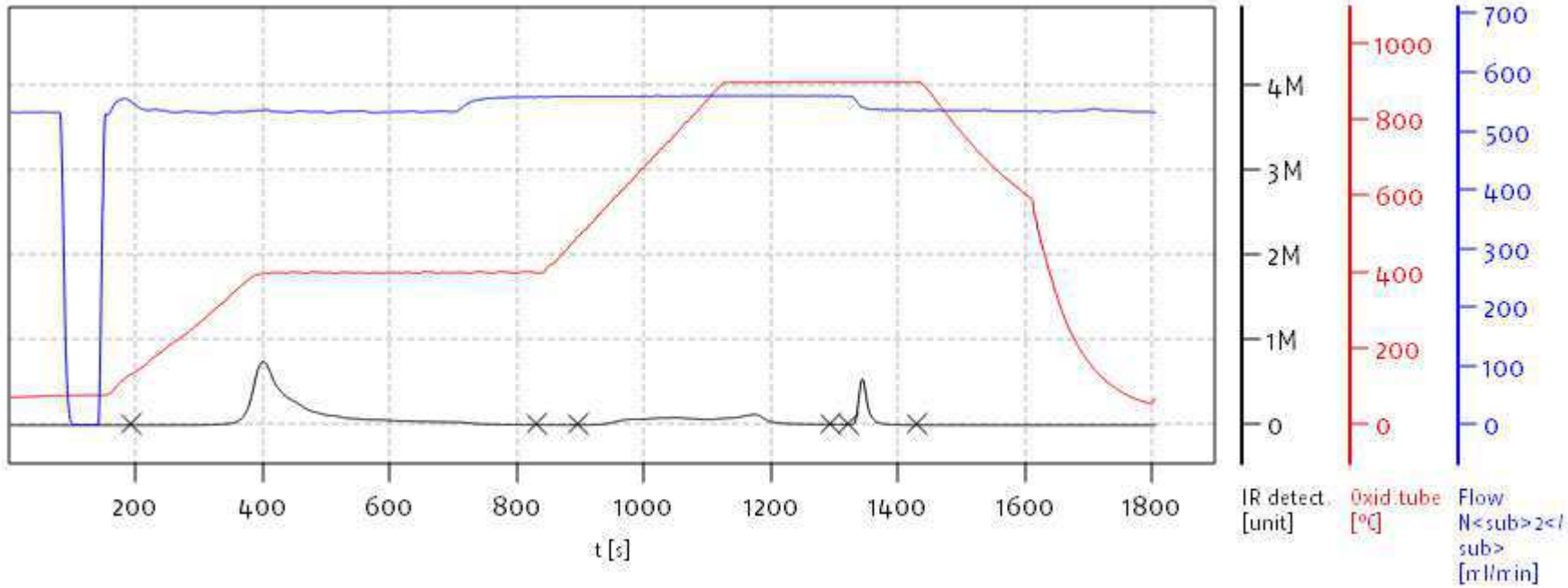
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
114	25	BLA0255-DUP1	501.80		CARBON	1/14/2023 5:23 PM	bl	0.764	2 297 462	1.009	0.096	339 239	818 131	0.668	0.244	0.9534	1.0000



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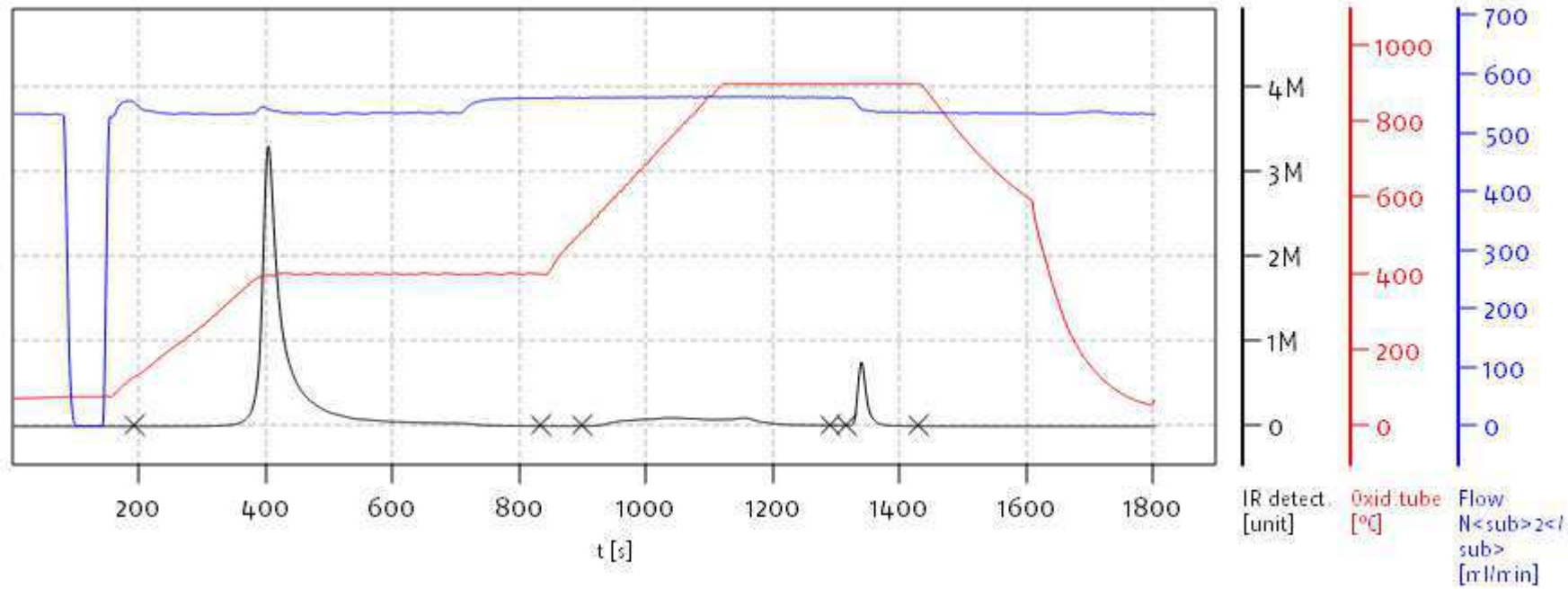
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
115	26	BLA0255-MS1	513.70	0.0085	CARBON	1/14/2023 5:54 PM	bl	1.572	5 024184	1.821	0.136	478 896	850 946	1.436	0.248	0.9534	1.0000



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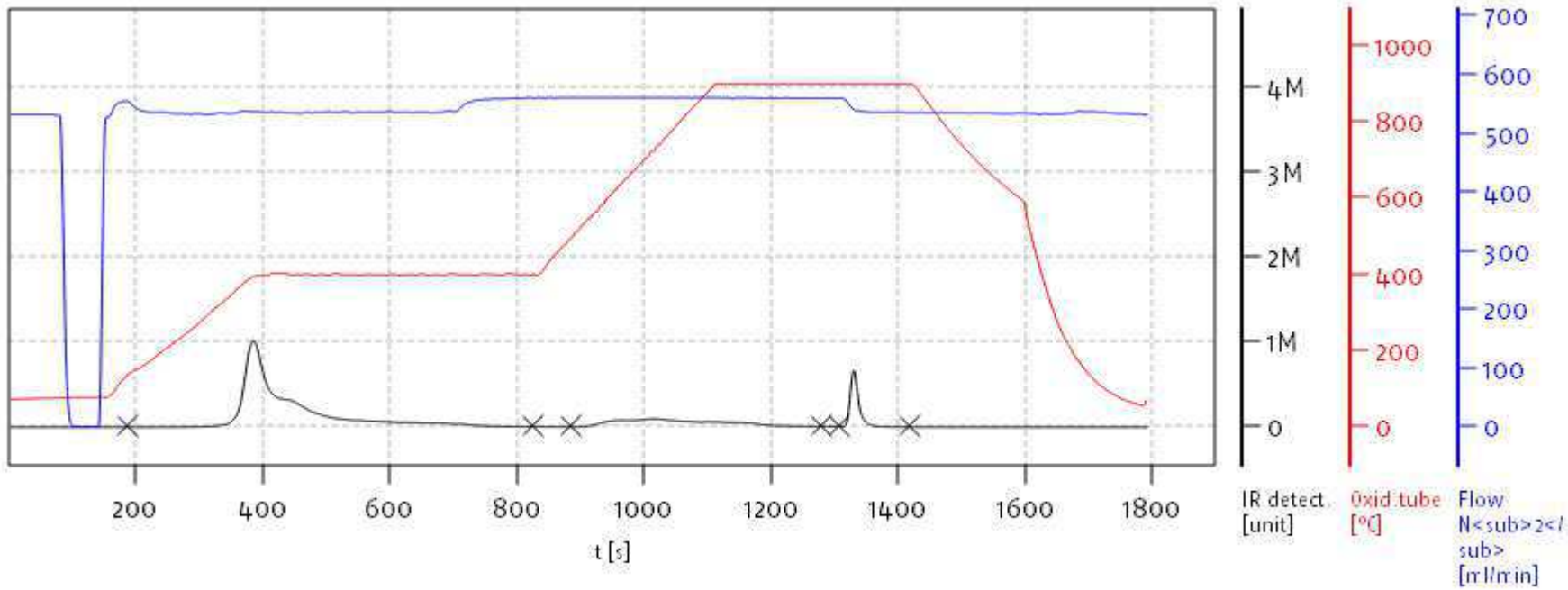
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
116	27	23A0134-02	508.00		CARBON	1/14/2023 6:24 PM	bl	0.917	2 798 219	1.129	0.112	392 782	723 179	0.805	0.212	0.9534	1.0000



Name:

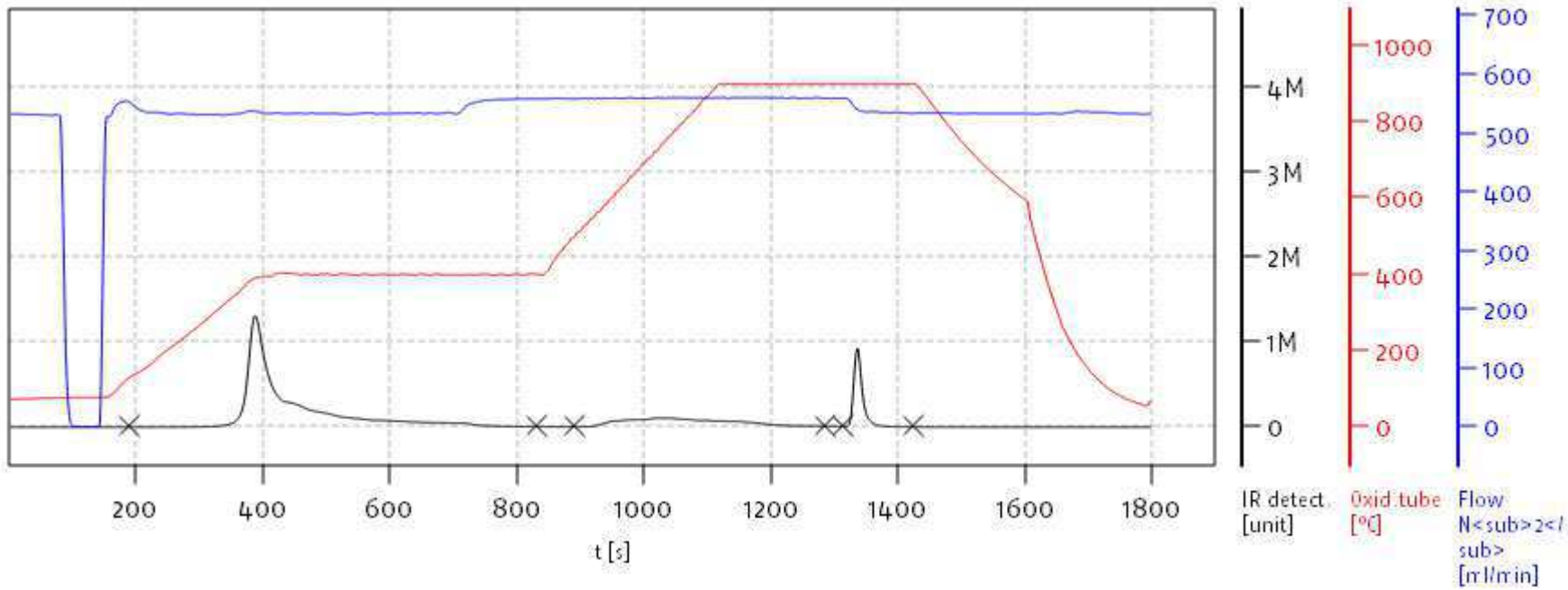
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
117	28	23A0134-03	520.10		CARBON	1/14/2023 6:54 PM	bl	1.028	3 091 906	1.268	0.158	558 918	831 205	0.870	0.240	0.9534	1.0000



Name:

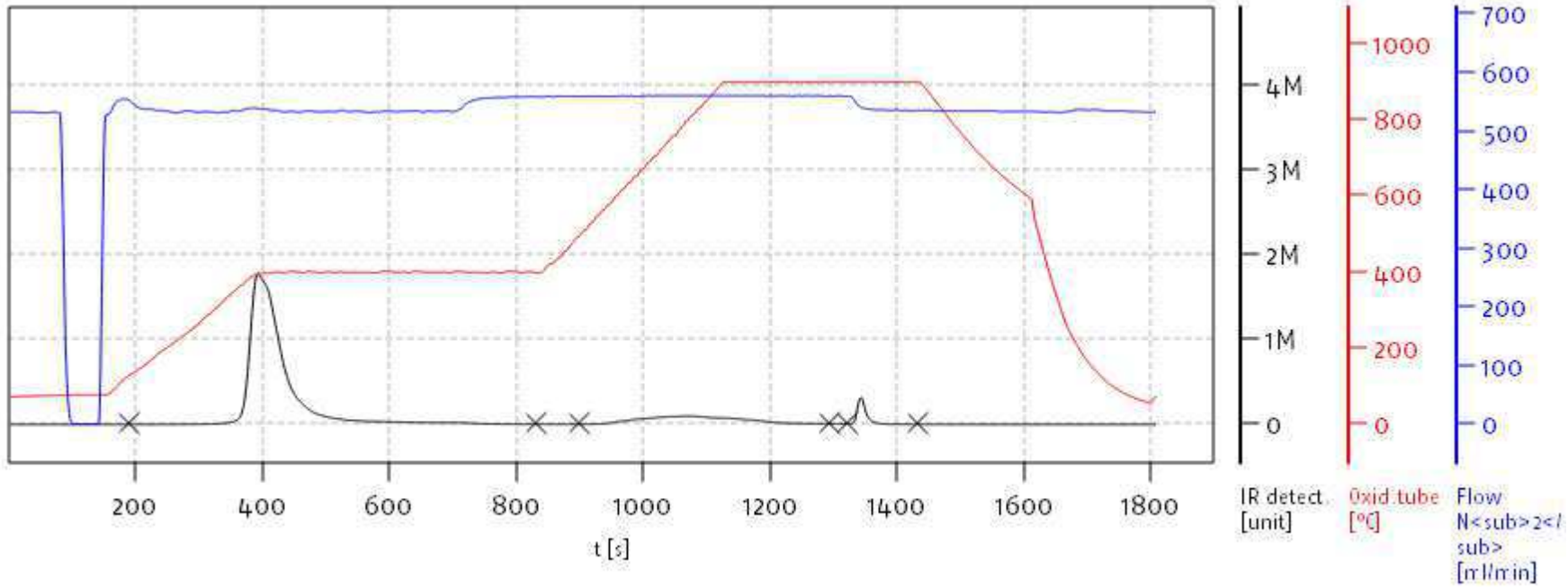
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
118	29	23A0134-04	539.00		CARBON	1/14/2023 7:25 PM	bl	1.148	4 044 464	1.344	0.048	194 588	708 903	1.100	0.196	0.9534	1.0000



Name:

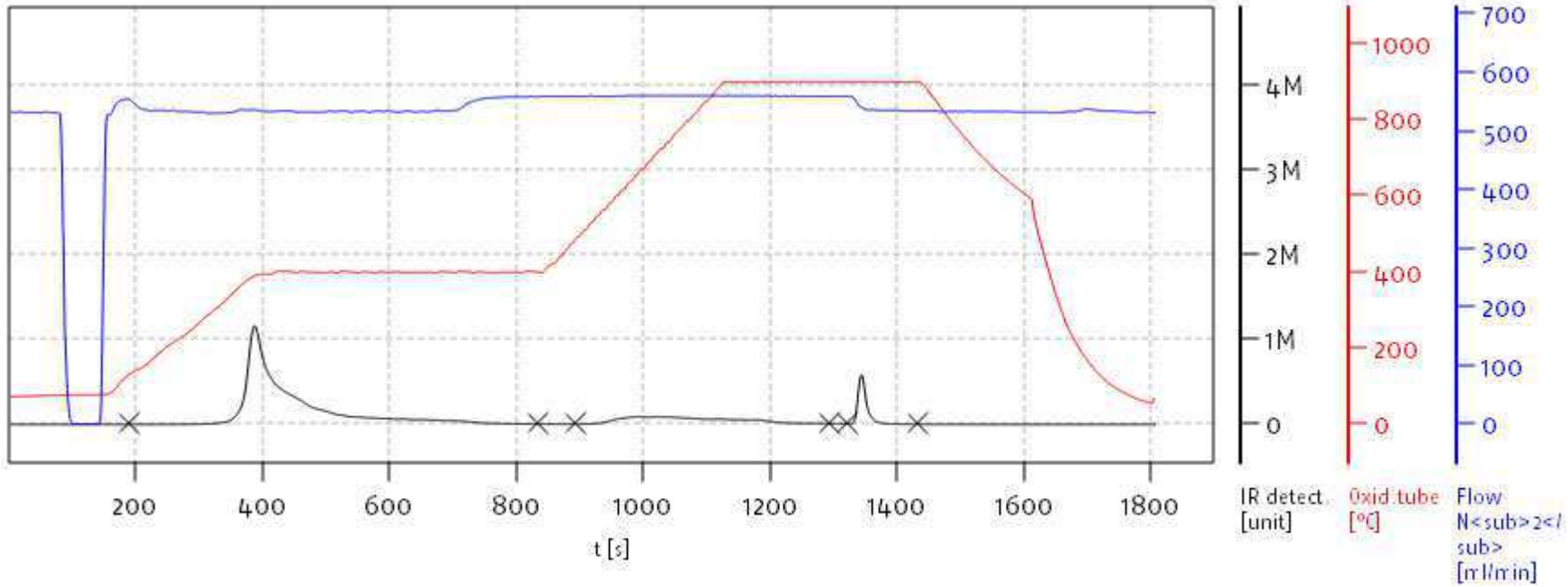
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
119	30	23A0134-05	559.10		CARBON	1/14/2023 7:55 PM	bl	0.896	3 078 447	1.093	0.090	353 057	737 737	0.806	0.197	0.9534	1.0000



Name:

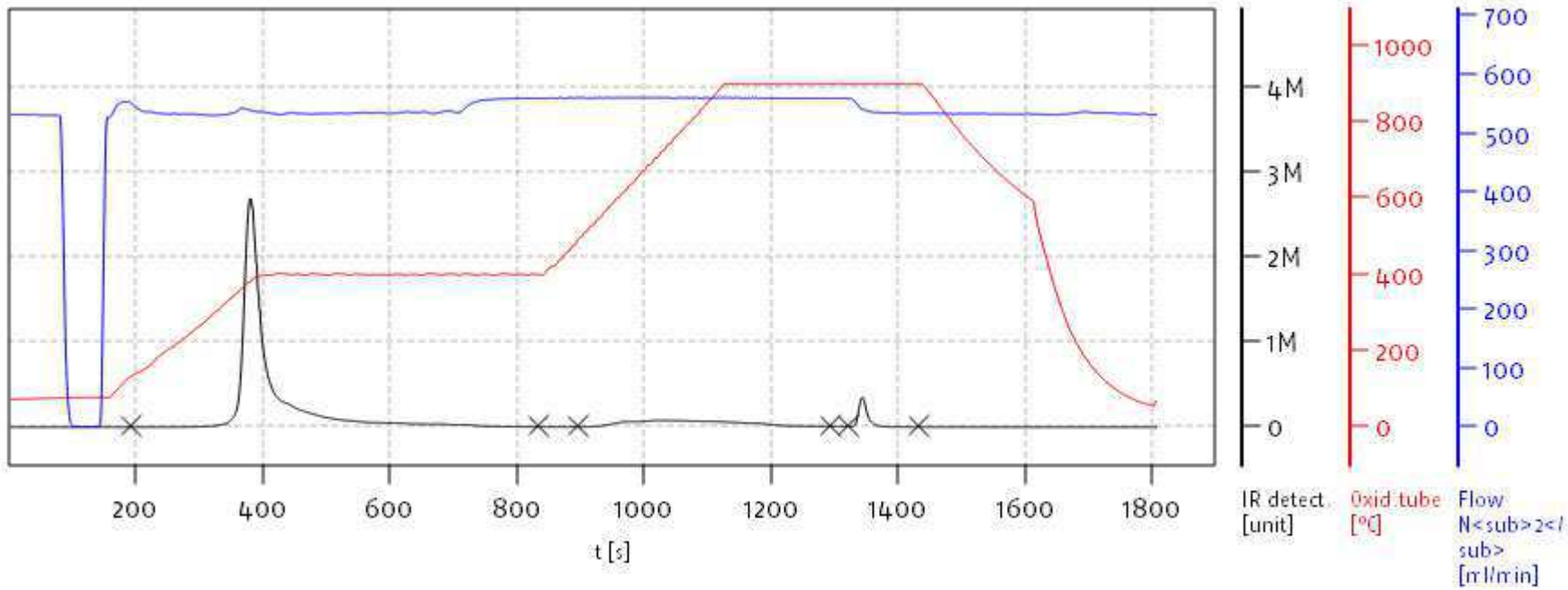
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
120	31	23A0134-06	541.30		CARBON	1/14/2023 8:26 PM	bl	1.175	4 143 472	1.357	0.053	211 929	659 534	1.122	0.181	0.9534	1.0000



Name:

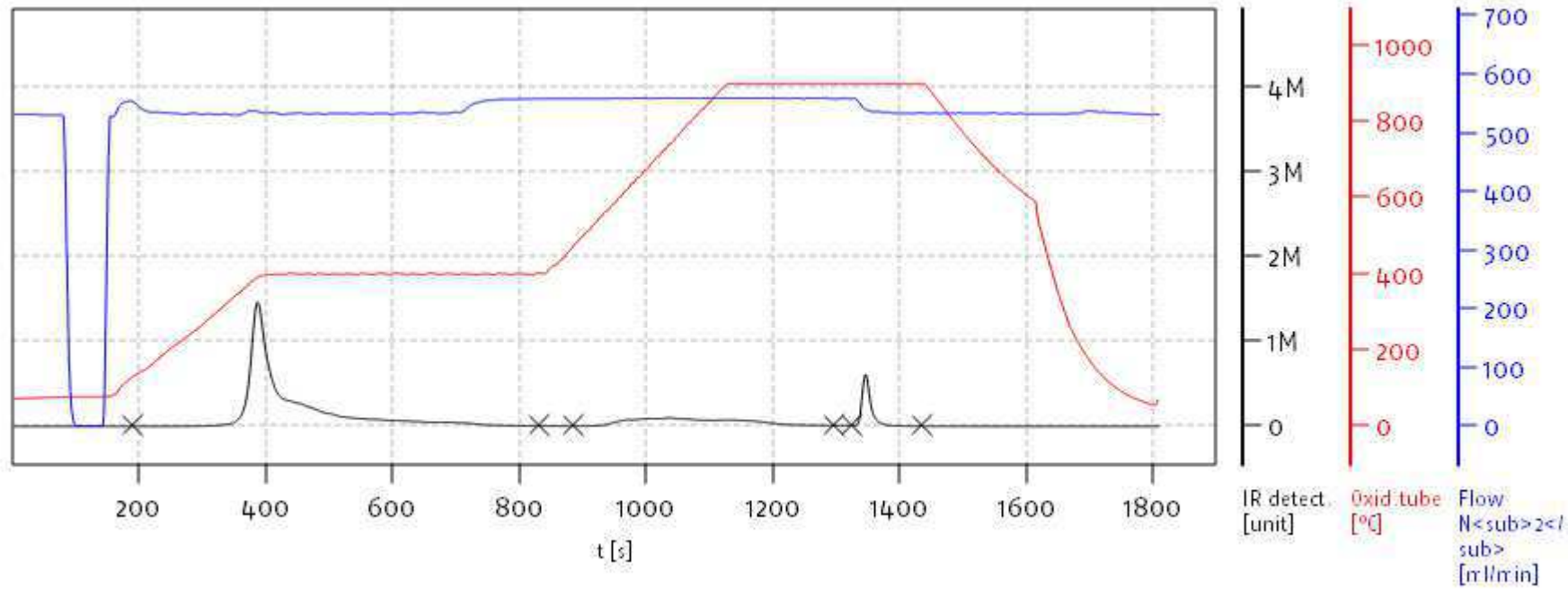
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
121	32	23A0134-07	517.70		CARBON	1/14/2023 8:57 PM	bl	1.001	3 170 422	1.233	0.104	375 392	804 898	0.896	0.233	0.9534	1.0000



Name:

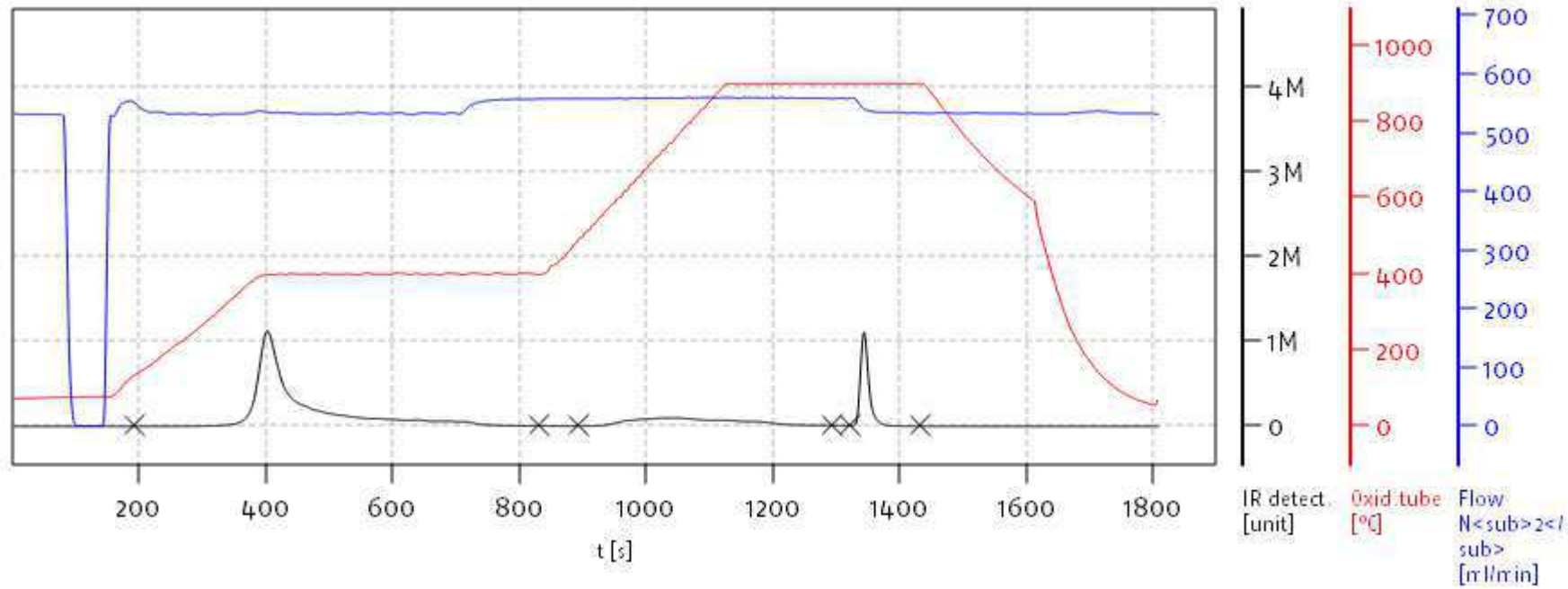
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
122	33	23A0134-08	550.60		CARBON	1/14/2023 9:27 PM	bl	0.967	2 981 331	1.180	0.175	650 245	783 275	0.792	0.213	0.9534	1.0000



Name:

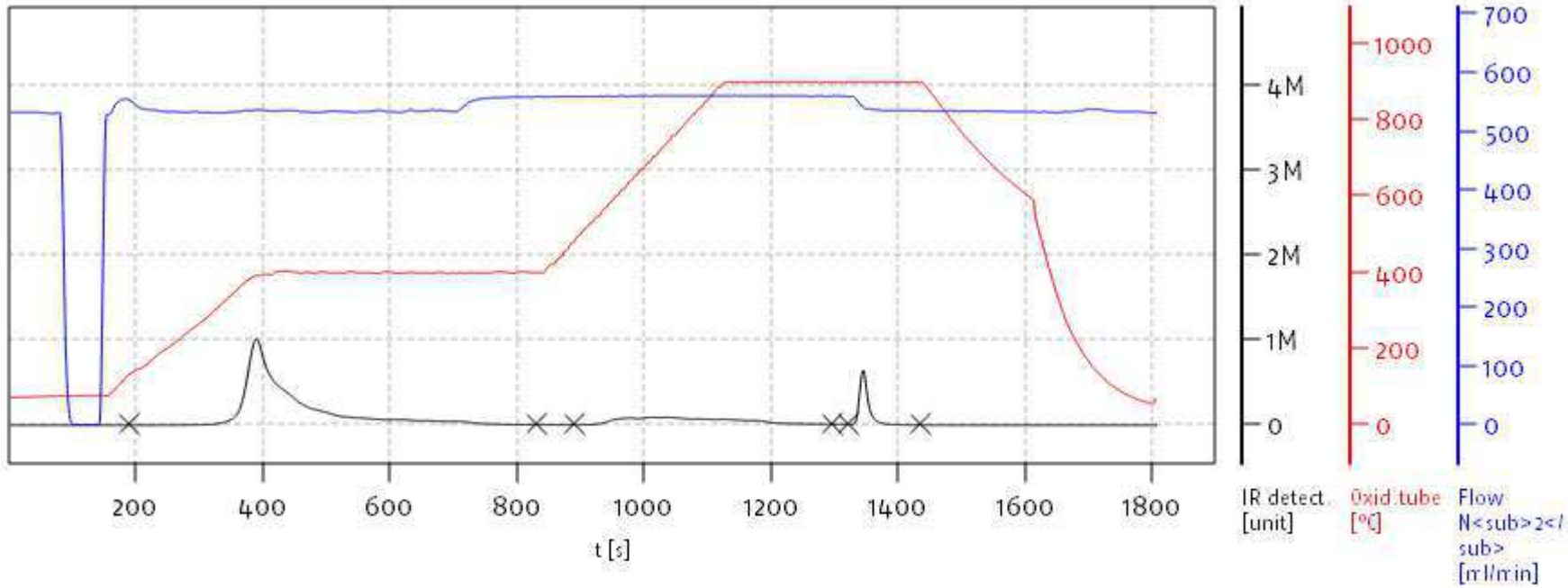
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
123	34	23A0134-09	518.00		CARBON	1/14/2023 9:58 PM	bl	0.958	3 007 847	1.179	0.108	389 488	767 794	0.849	0.222	0.9534	1.0000



Name:

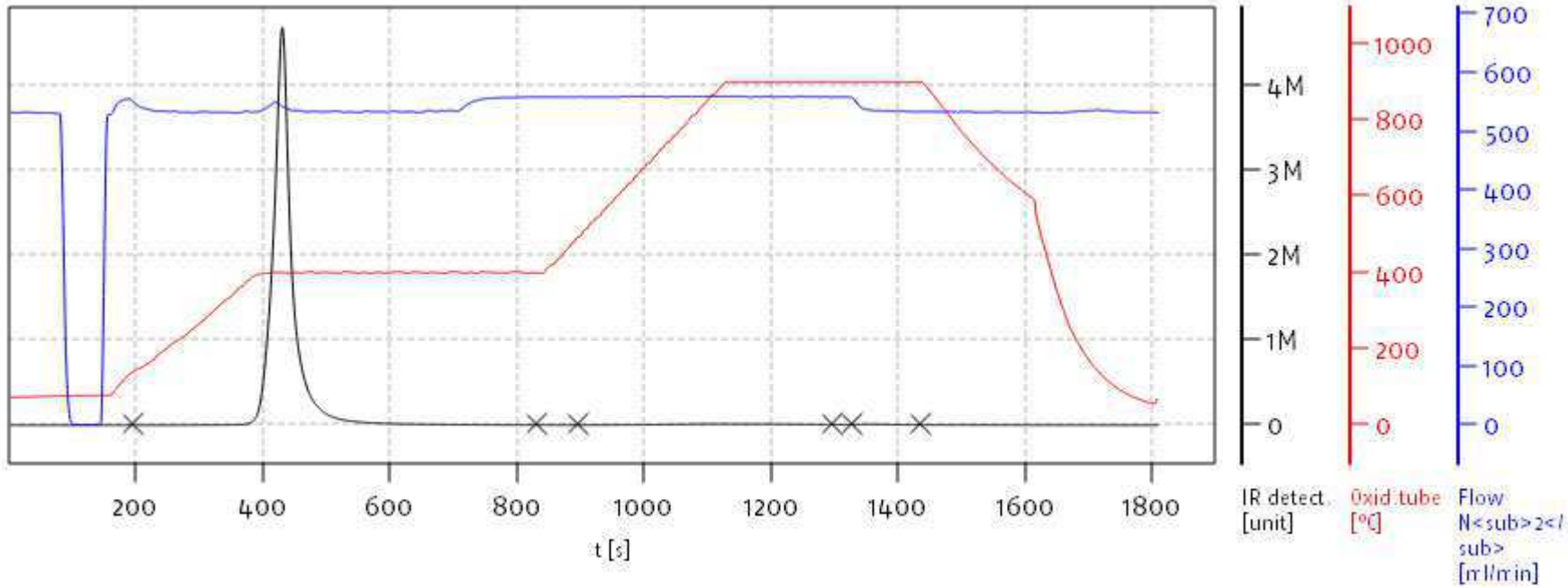
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
124	35	SLA0114-CCVA	20.10		CARBON	1/14/2023 10:28 PM	bl	44.070	6 026 447	44.846	0.017	28 724	127 274	44.054	0.776	0.9534	1.0000



Name:

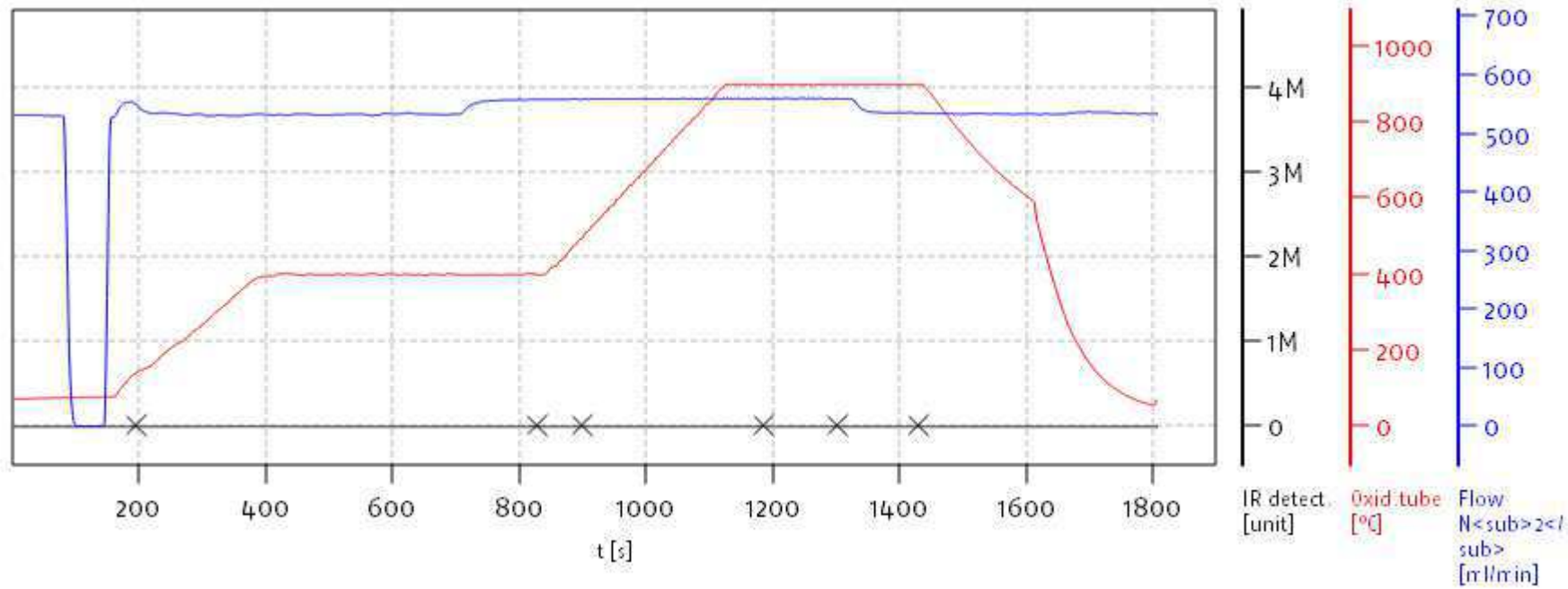
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
125	36	SLA0114-CCBA	543.70		CARBON	1/14/2023 10:59 PM	bl,C3u,C2u	0.000	9 502	0.000	0.000	662	2 023	0.000	0.000	0.9534	1.0000



Name:

Access: soliTOC superuser

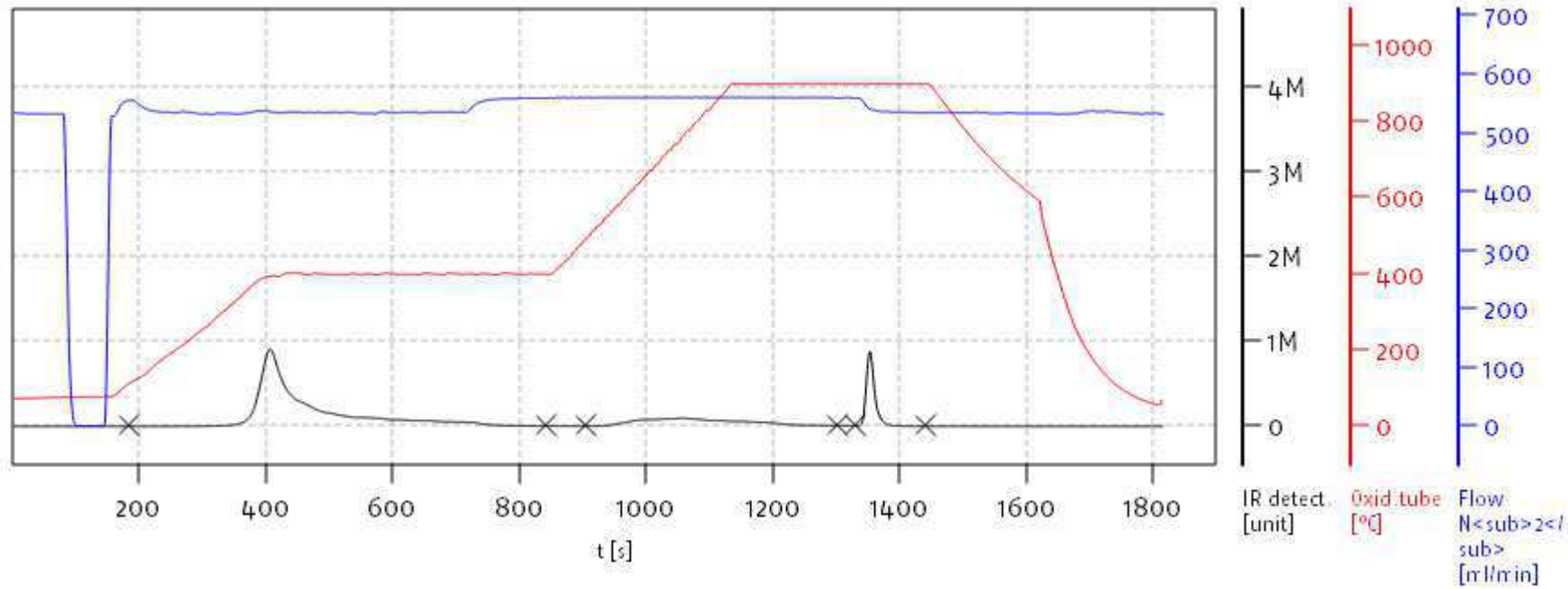
Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 011123 DOE from: 1/16/2023 7:14 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
126	37	23A0134-10	533.30		CARBON	1/14/2023 11:29 PM	bl	0.893	2 735 647	1.096	0.143	520 685	724 444	0.750	0.203	0.9534	1.0000



Name:

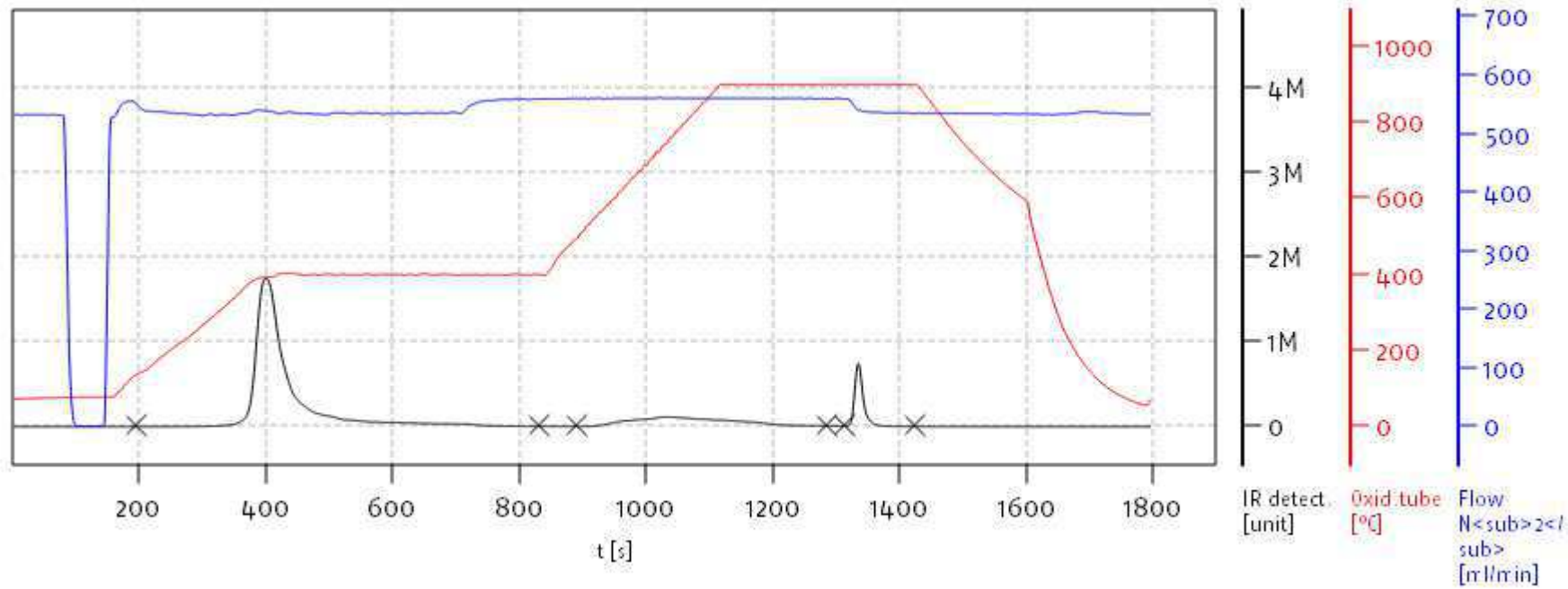
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
127	38	23A0134-11	537.70		CARBON	1/15/2023 12:00 AM	bl	1.149	3 776 165	1.375	0.120	442 294	812 463	1.029	0.226	0.9534	1.0000



Name:

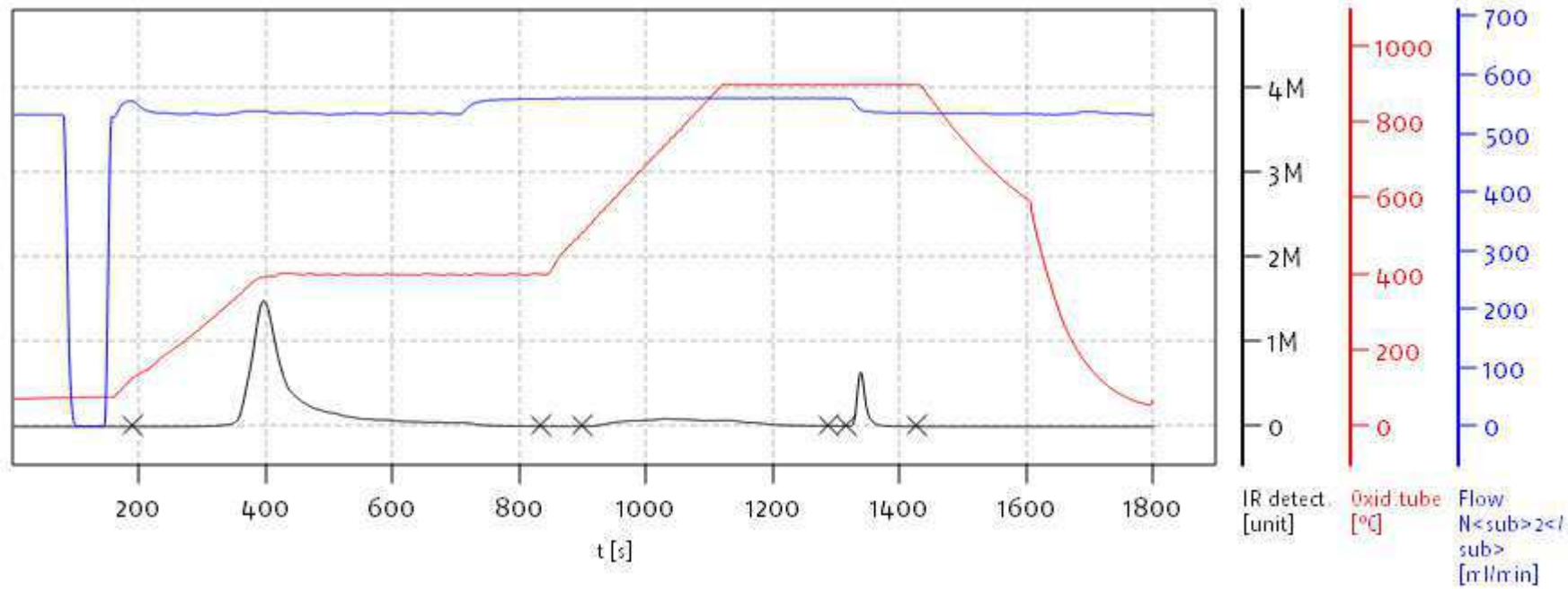
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
128	39	23A0134-12	568.50		CARBON	1/15/2023 12:30 AM	bl	1.119	3 961 830	1.307	0.097	383 561	718 327	1.022	0.188	0.9534	1.0000



Name:

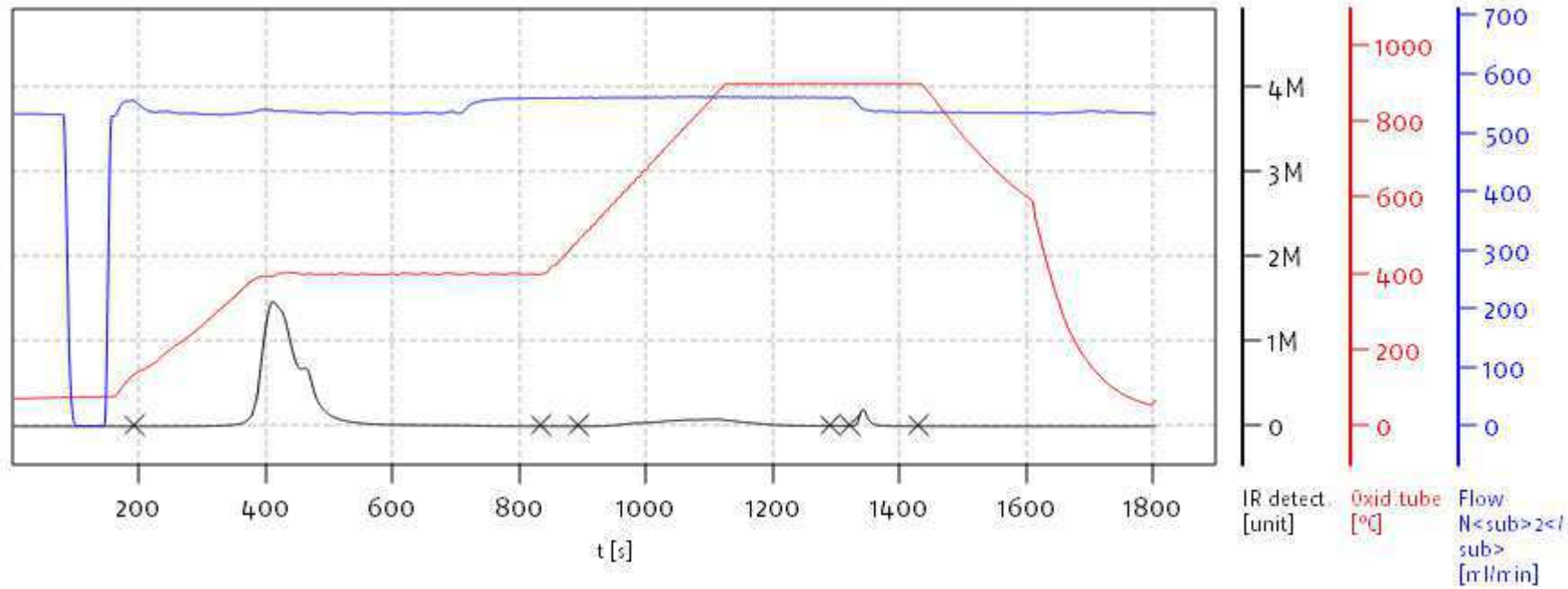
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
129	40	23A0134-13	530.90		CARBON	1/15/2023 1:01 AM	bl	1.113	3 927 115	1.265	0.029	126 660	545 091	1.084	0.151	0.9534	1.0000



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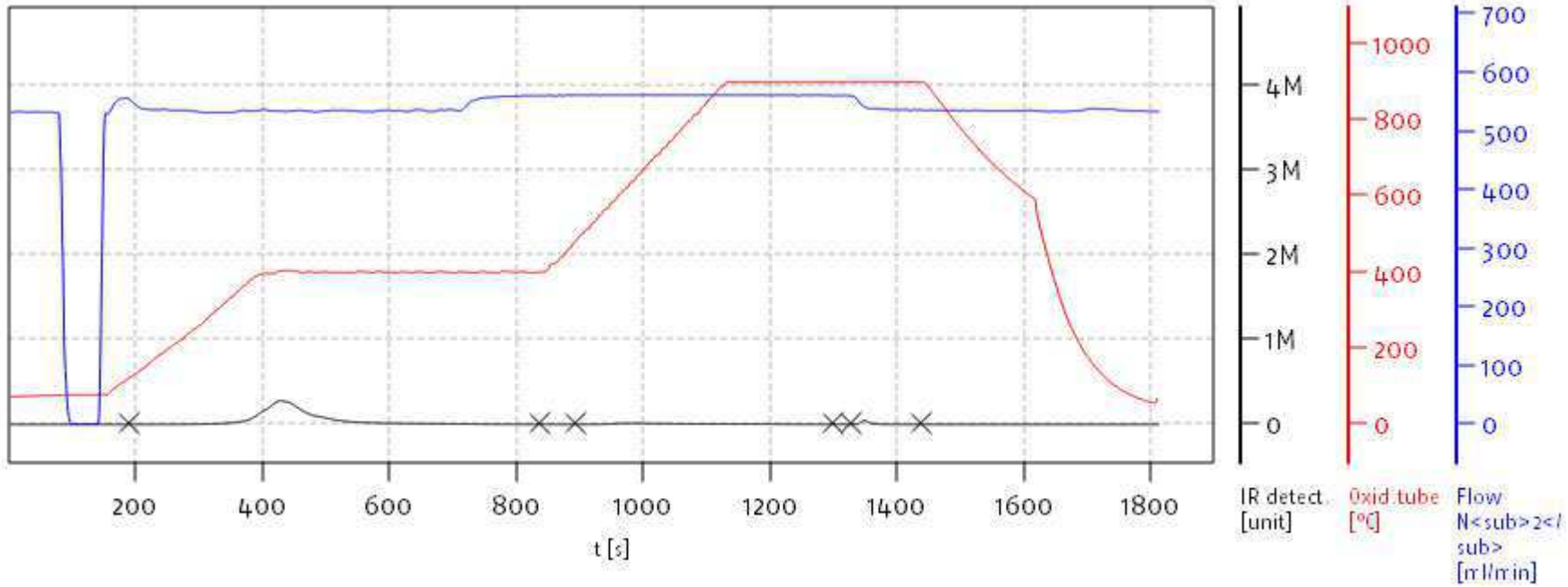
Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
130	41	23A0134-14	591.20		CARBON	1/15/2023 1:31 AM	bl	0.245	1 005 443	0.259	0.001	28 846	81 546	0.244	0.014	0.9534	1.0000



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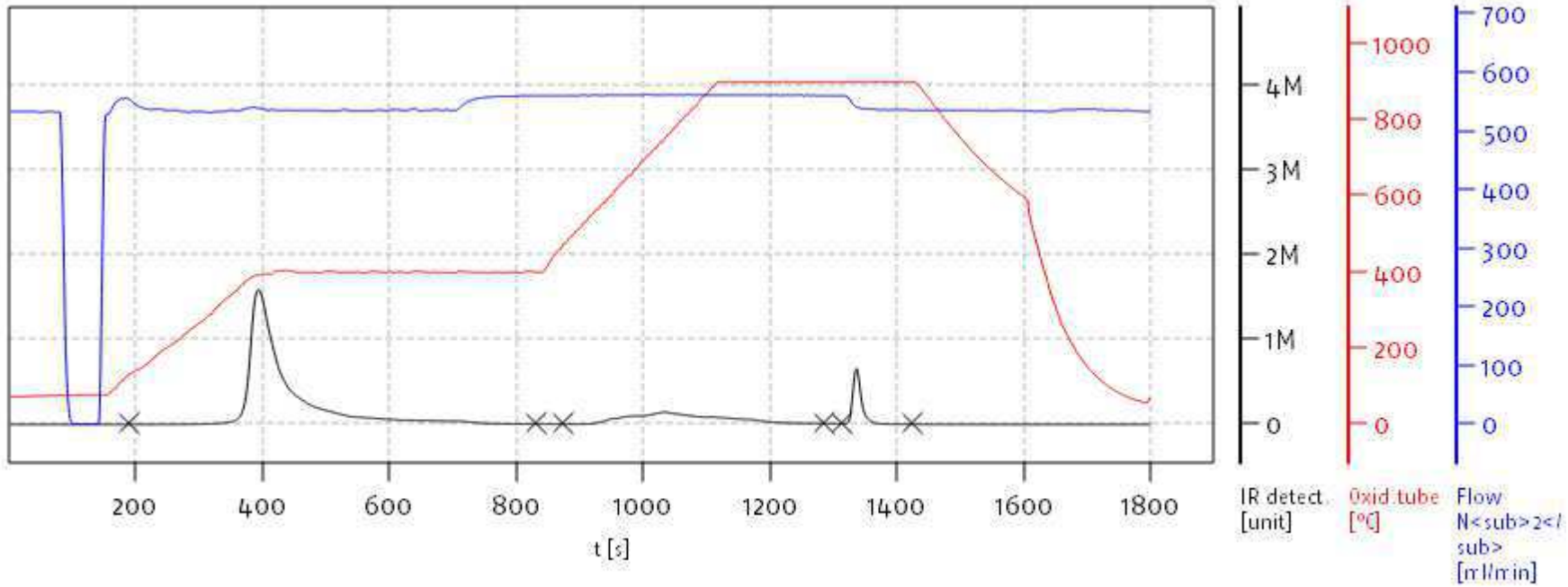
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
131	42	23A0134-15	581.50		CARBON	1/15/2023 2:02 AM	bl	1.055	3 799 790	1.298	0.098	394 004	938 526	0.958	0.243	0.9534	1.0000



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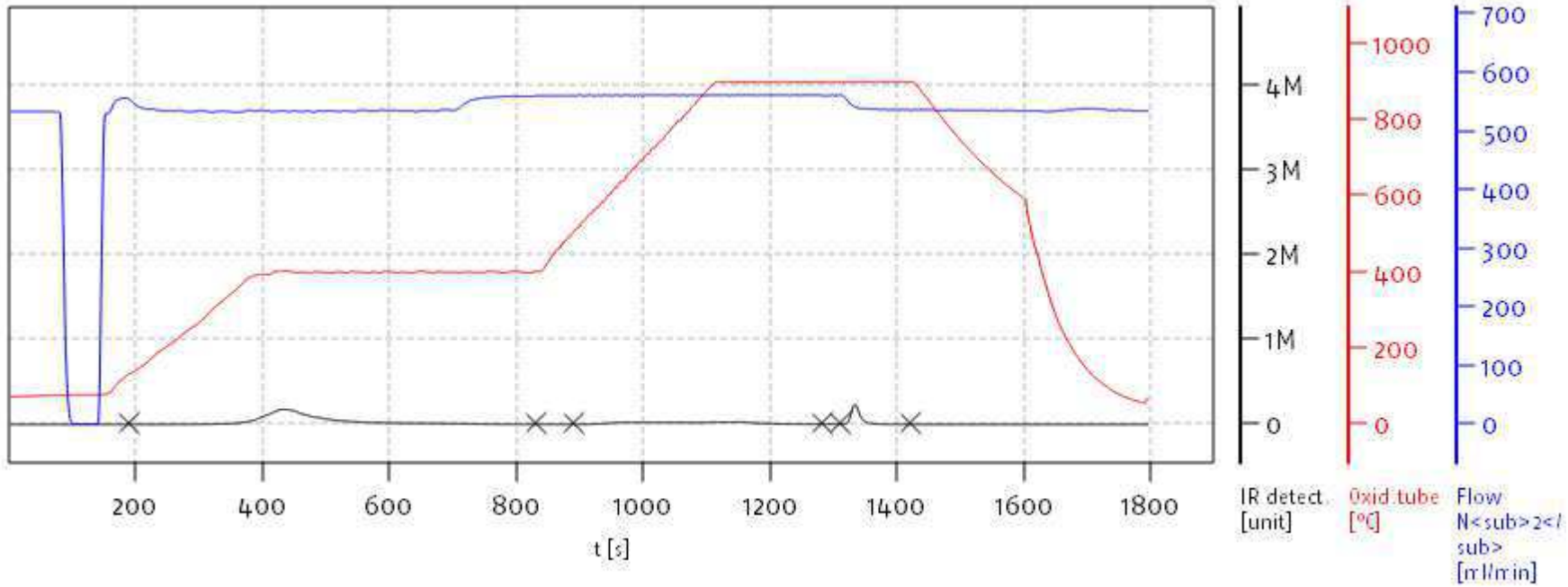
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
132	43	23A0134-16	557.30		CARBON	1/15/2023 2:32 AM	bl	0.226	752 879	0.285	0.033	146 797	240 001	0.192	0.059	0.9534	1.0000



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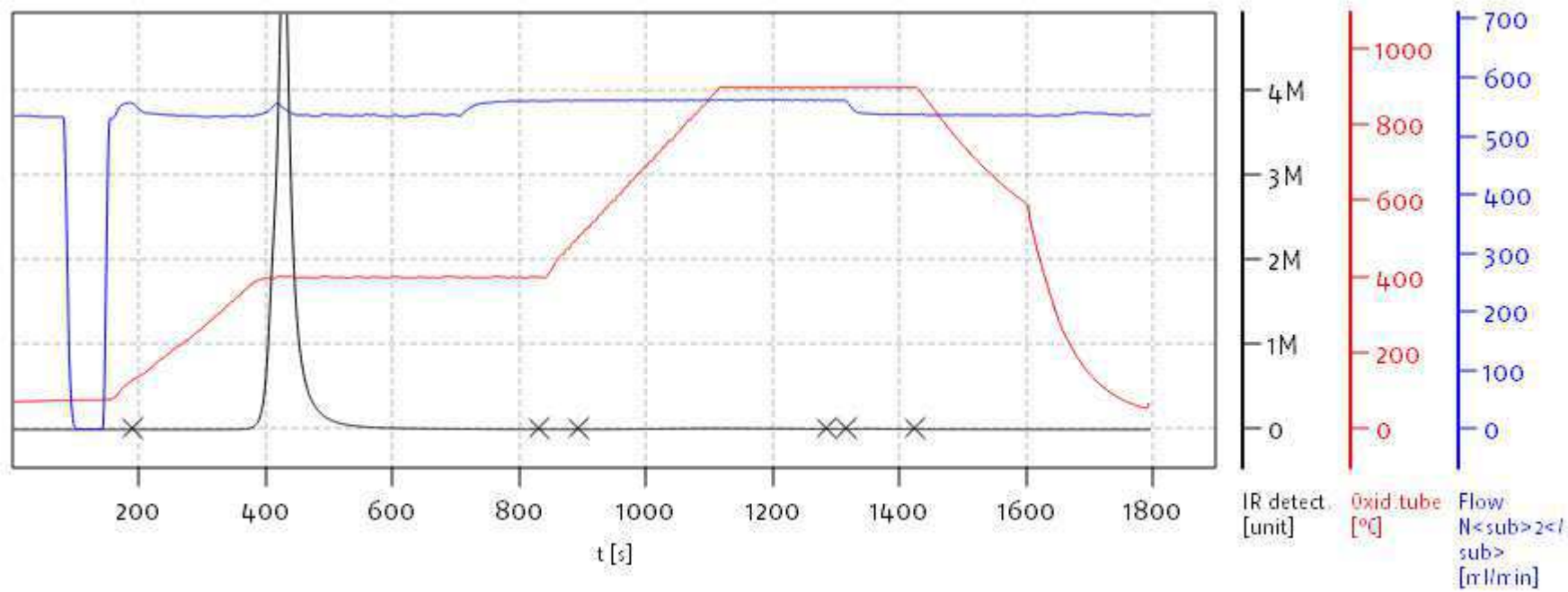
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
133	44	SLA0114-CCVB	23.00		CARBON	1/15/2023 3:02 AM	bl	44.540	6 967 907	45.158	0.000	25 116	118 360	44.540	0.618	0.9534	1.0000



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Access: soliTOC superuser

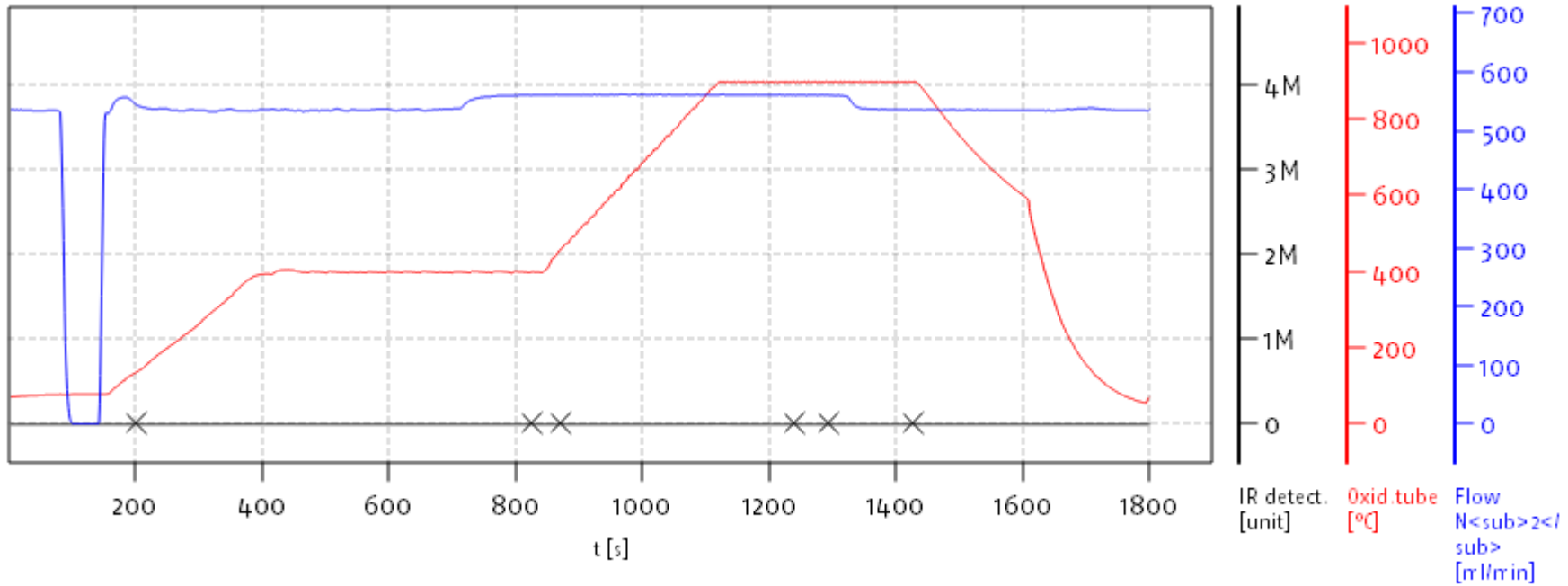
Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 011123 DOE from: 1/16/2023 7:14 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
134	45	SLA0114-CCBB	521.70		CARBON	1/15/2023 3:33 AM	bl,C2u	0.000	5 590	0.000	0.000	645	4 079	0.000	0.000	0.9534	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jan 16 07:14:49 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
Total Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
Total Inorganic Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
% Soot	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
Total Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
Total Inorganic Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
% Soot	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
Total Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
Total Inorganic Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
% Soot	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FD00070	Instrument:	TOC Cube
Calibration Date:	04/26/2022 11:29		

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
Total Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
Total Inorganic Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
% Soot	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408

INITIAL CALIBRATION DATA

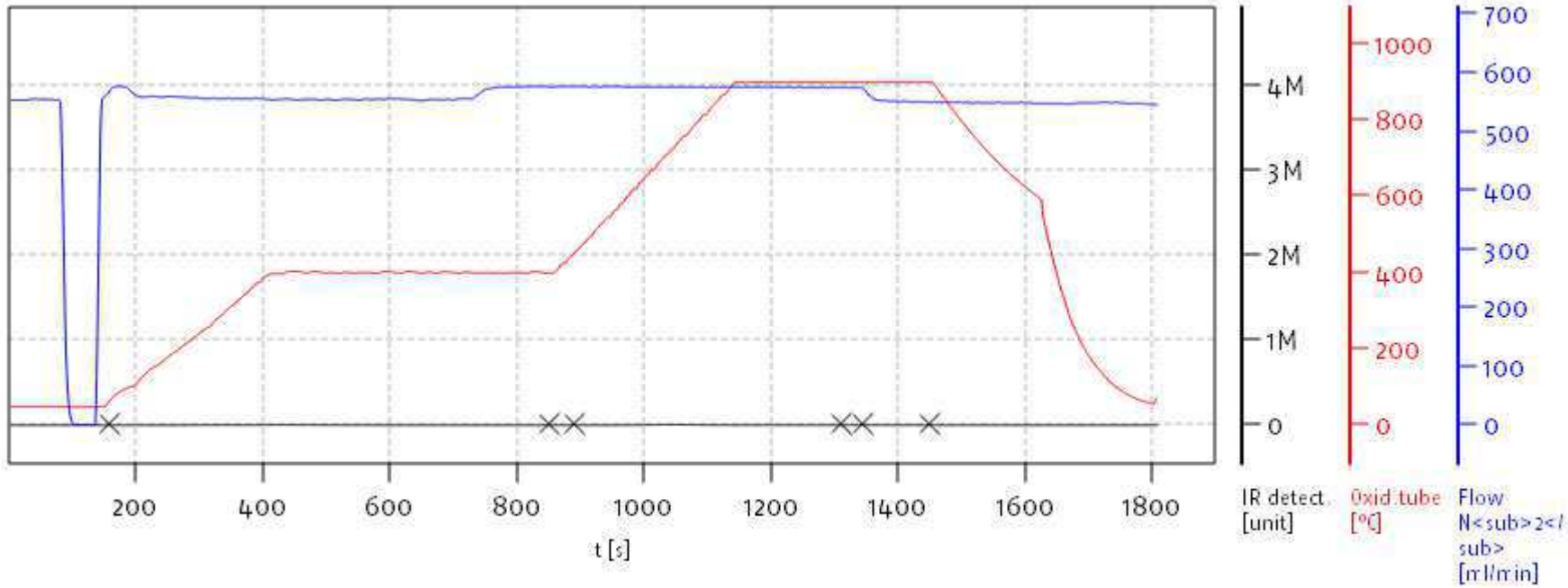
EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0133
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FD00070	Instrument:	TOC Cube
Calibration Date:	04/26/2022 11:29		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Total Organic Carbon	1424064	15.9	0.9988			
Total Carbon	1424064	15.9	0.9988			
Total Inorganic Carbon	1424064	15.9	0.9988			
% Soot	1424064	15.9	0.9988			

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		1.00	CARBON	4/26/2022 11:29 AM	0.000	0.000	0.000	bl	29 049	30 612	3 899	1.0000	1.0000



Name:

Access: soliTOC superuser

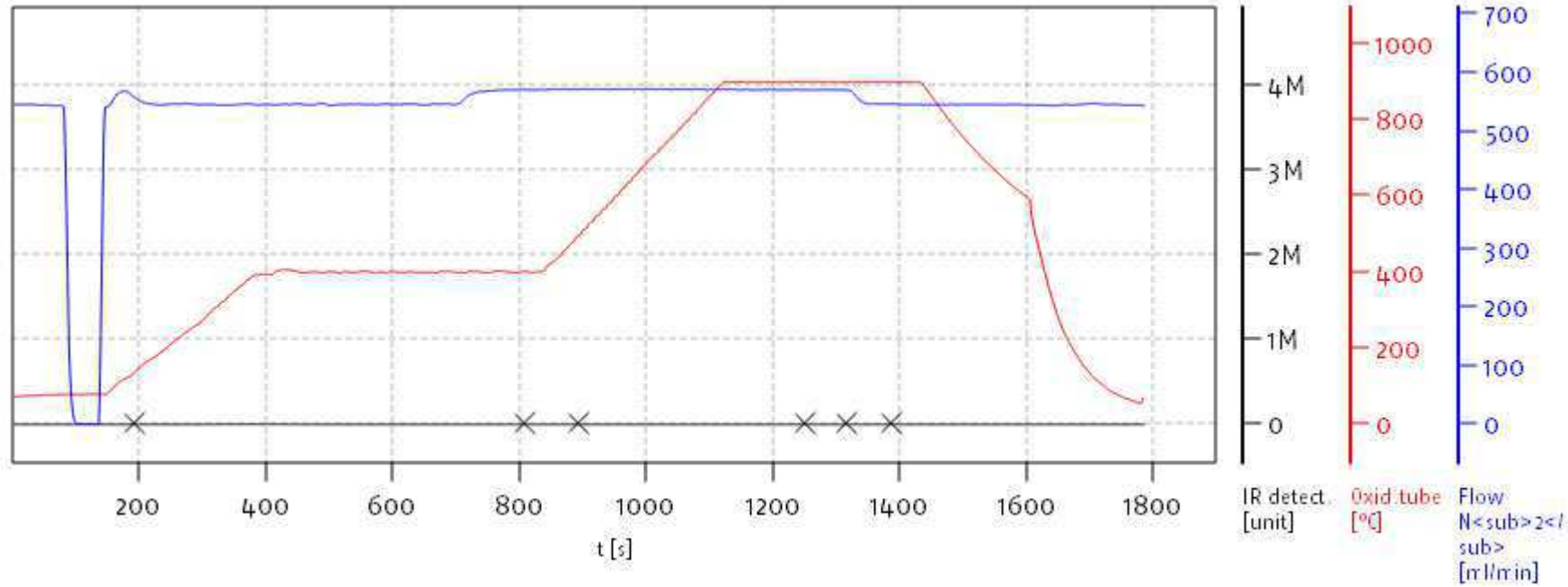
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
2	2	BLANK	1.00		1.00	CARBON	4/26/2022 12:00 PM	0.000	0.000	0.000	bl	11 115	60	8	1.0000	1.0000



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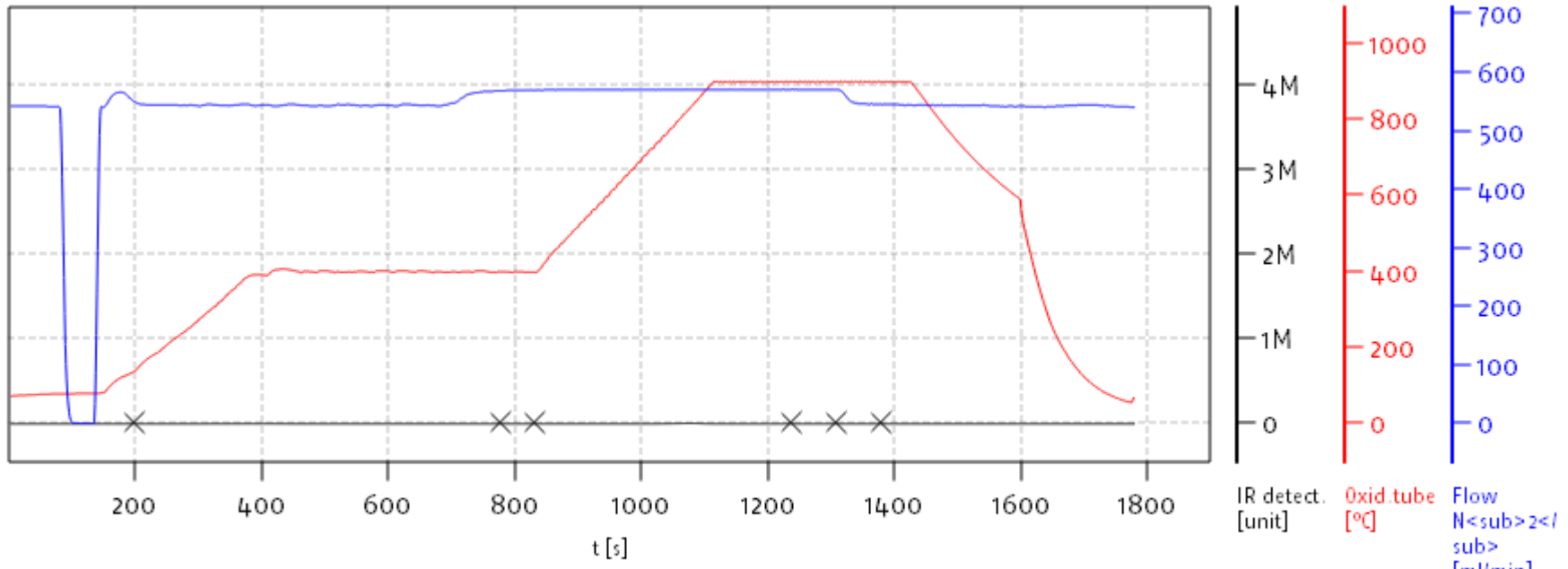
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
3	3	SEQ-CAL1	200.00	0.0027	1.00	CARBON	4/26/2022 12:30 PM	0.010	0.008	0.018	bl,C1u,C2u	7 294	11 739	22	1.0000	0.7425



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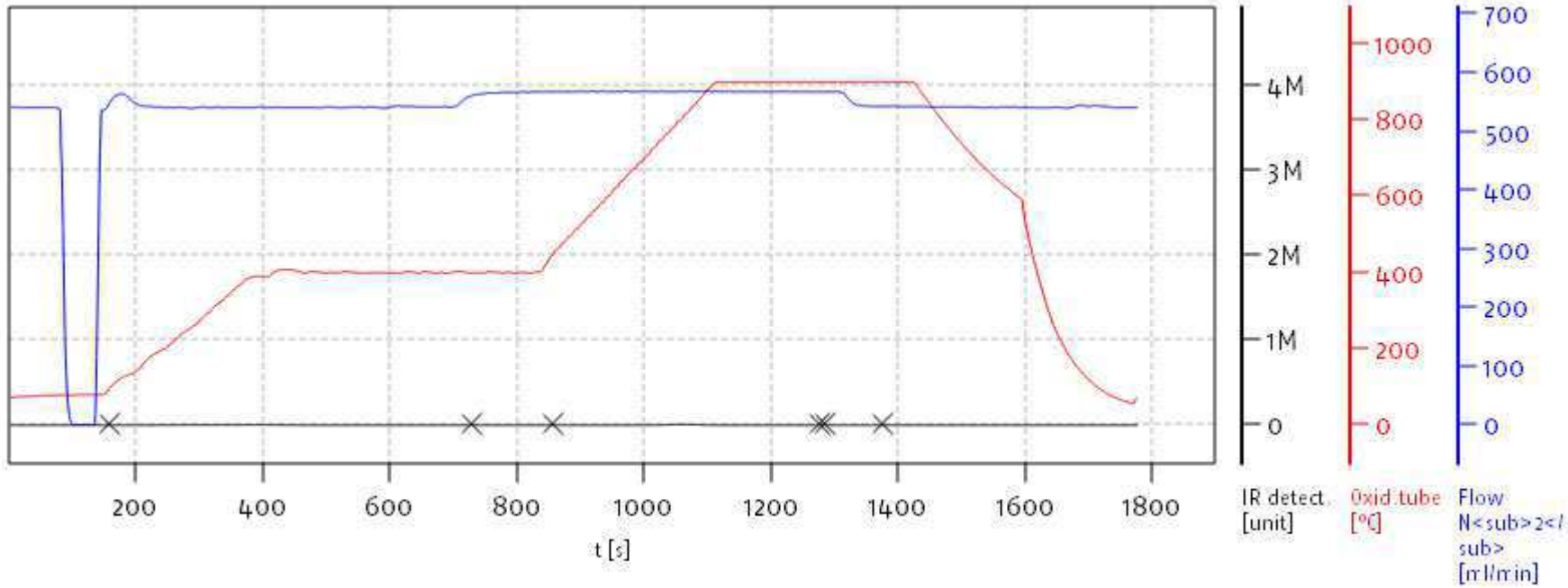
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
4	4	SEQ-CAL2	200.00	0.0049	1.00	CARBON	4/26/2022 1:00 PM	0.023	0.015	0.038	bl,C2u	23 296	19 107	47	1.0000	0.8936



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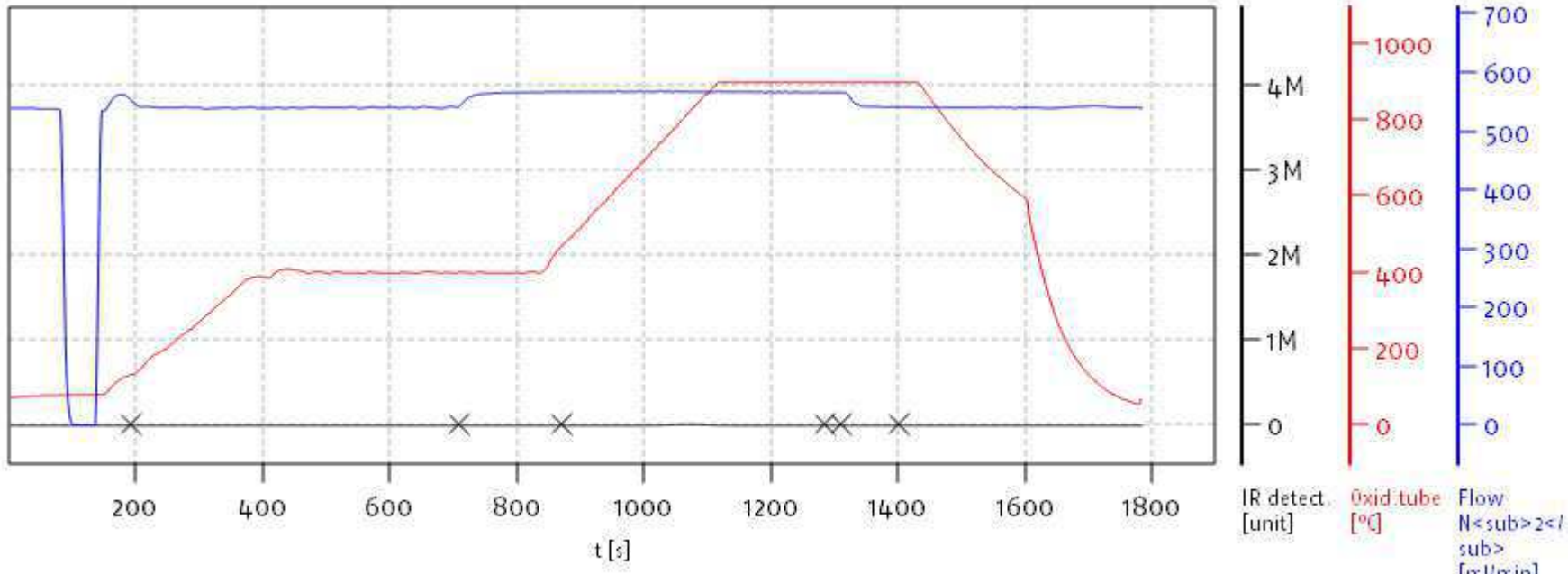
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
5	5	SEQ-CAL3	200.00	0.0071	1.00	CARBON	4/26/2022 1:30 PM	0.006	0.022	0.028	bl,C1u,C2u	2 319	27 530	170	1.0000	0.9343



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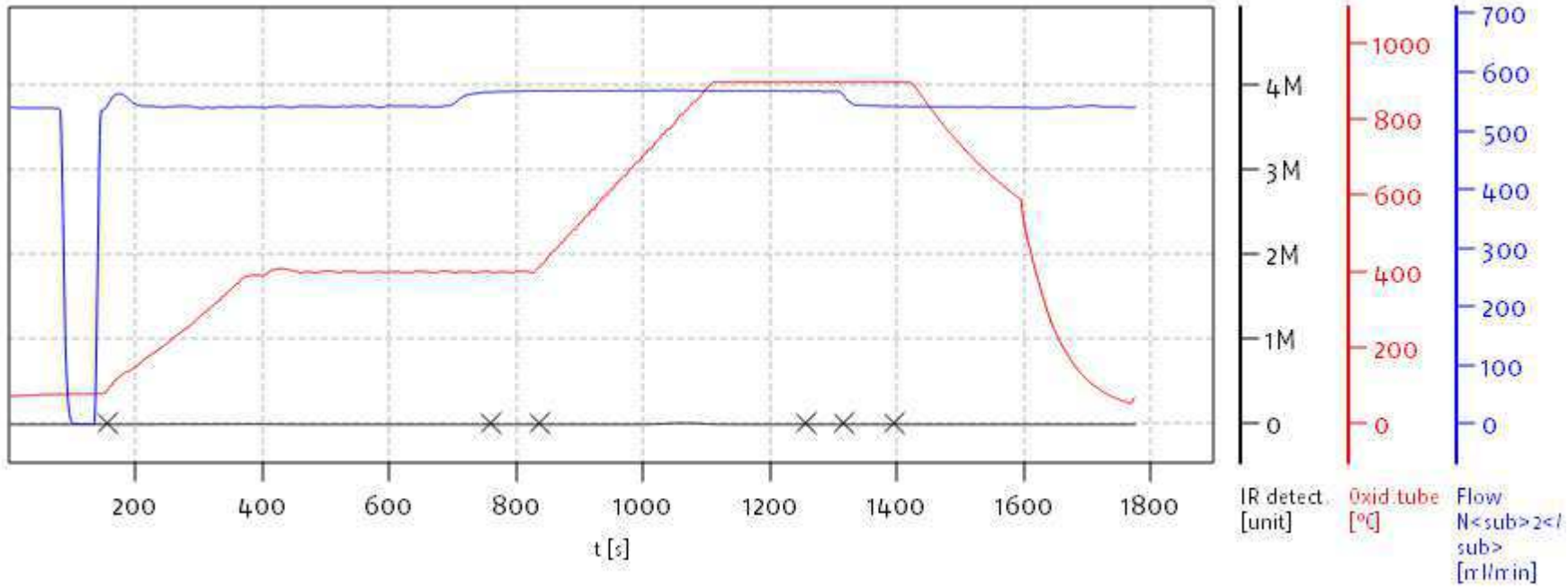
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
6	6	SEQ-CAL4	200.00	0.0098	1.00	CARBON	4/26/2022 2:00 PM	0.020	0.030	0.050	bl,C2u	19 746	38 017	109	1.0000	0.9461



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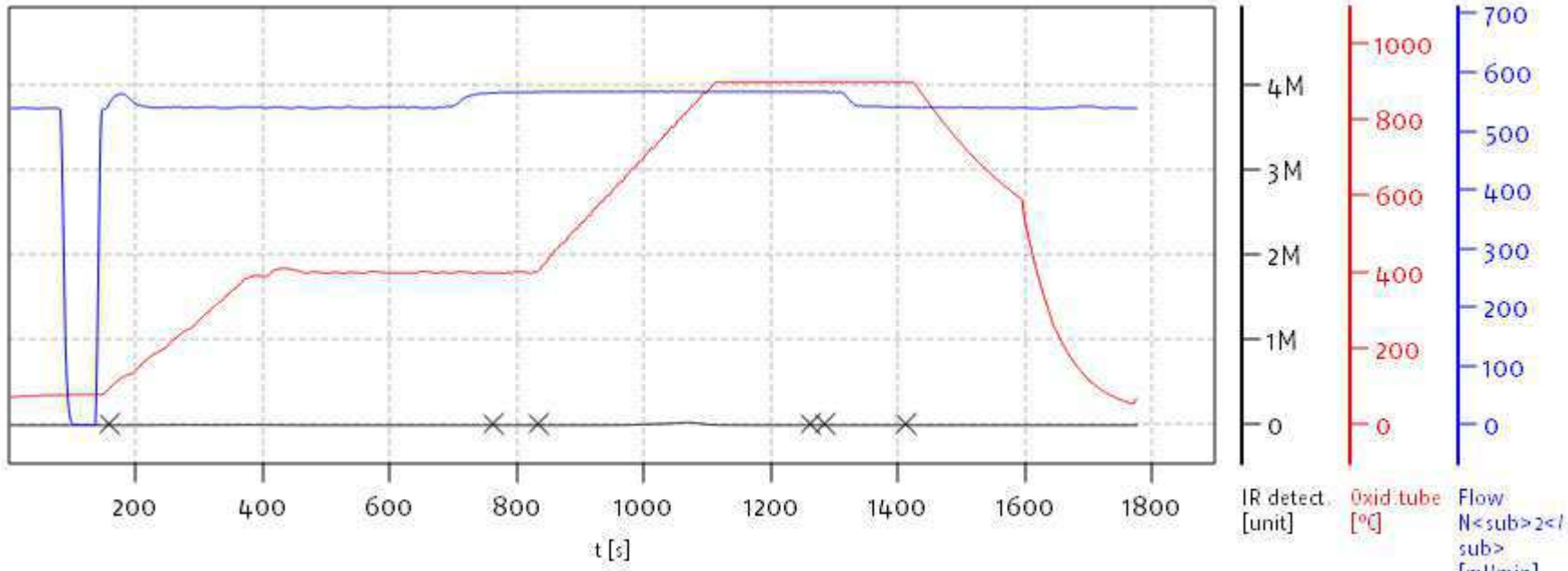
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
7	7	SEQ-CAL5	200.00	0.0148	1.00	CARBON	4/26/2022 2:30 PM	0.021	0.045	0.066	bl,C2u	20 951	92 945	236	1.0000	0.5975



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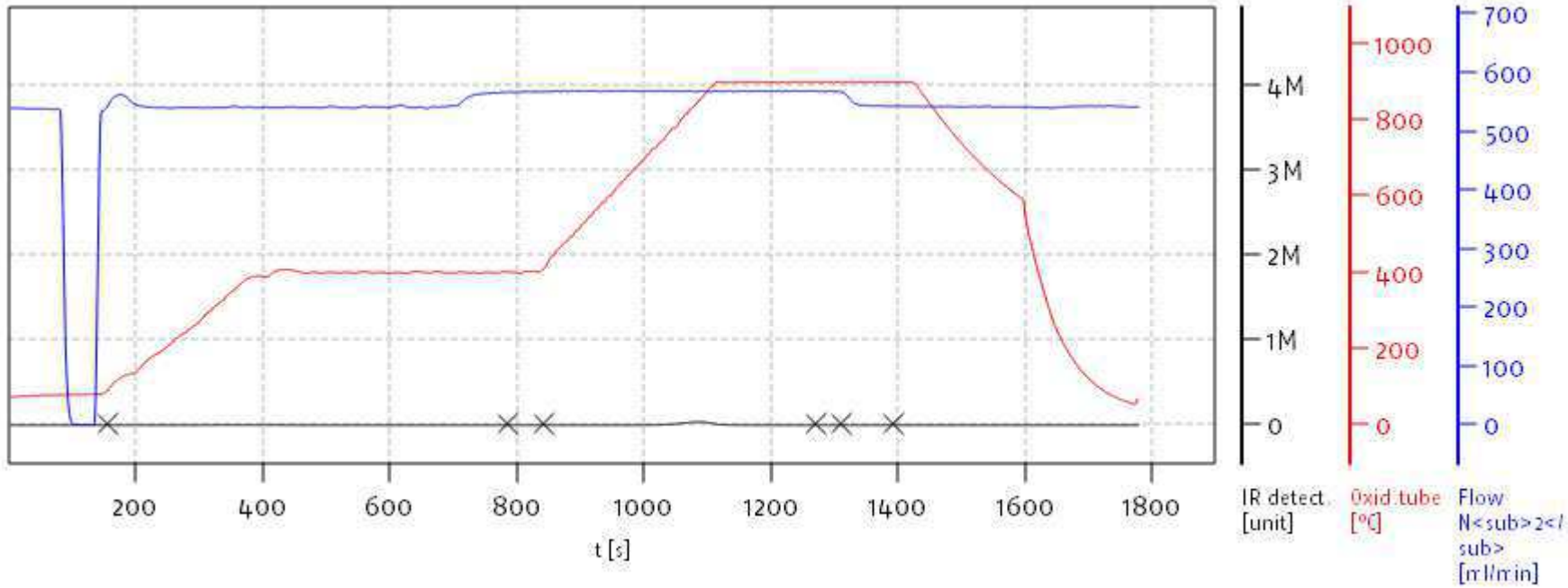
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
8	8	SEQ-CAL6	200.00	0.0196	1.00	CARBON	4/26/2022 3:00 PM	0.012	0.061	0.073	bl,C2u	10 118	82 297	59	1.0000	0.9144



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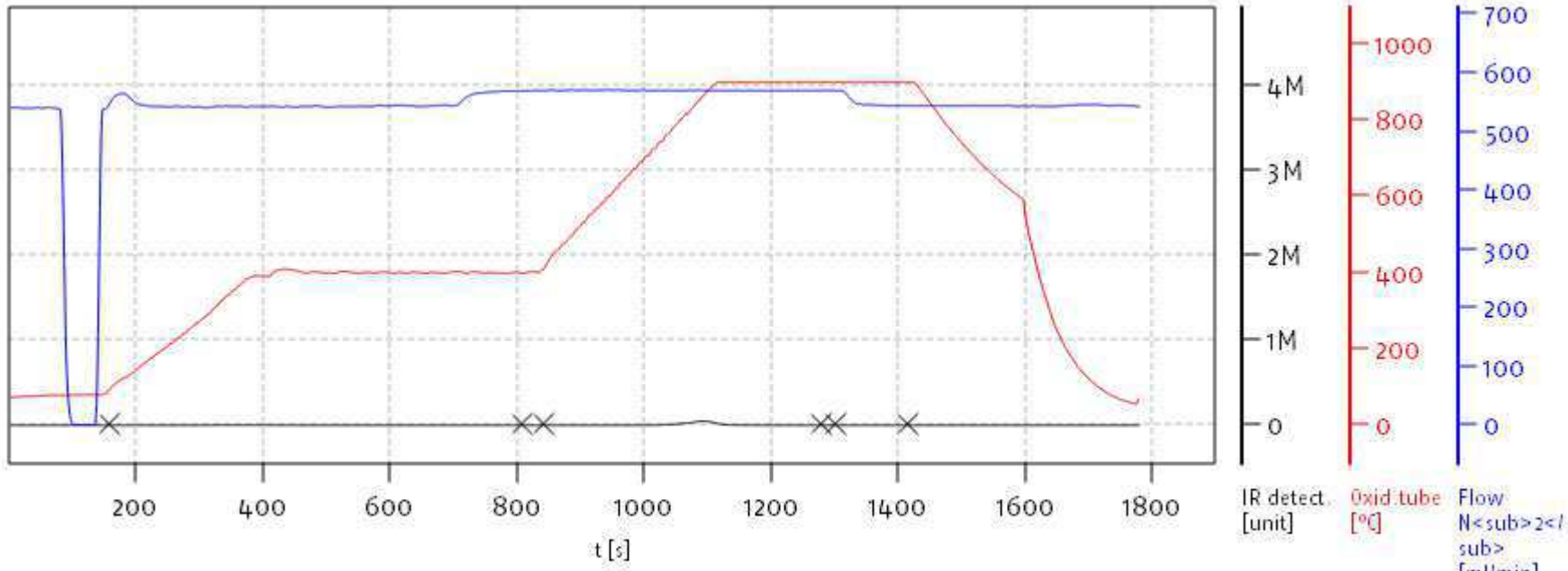
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
9	9	SEQ-CAL7	200.00	0.0247	1.00	CARBON	4/26/2022 3:30 PM	0.013	0.075	0.088	bl,C2u	10 555	101 530	292	1.0000	0.9173



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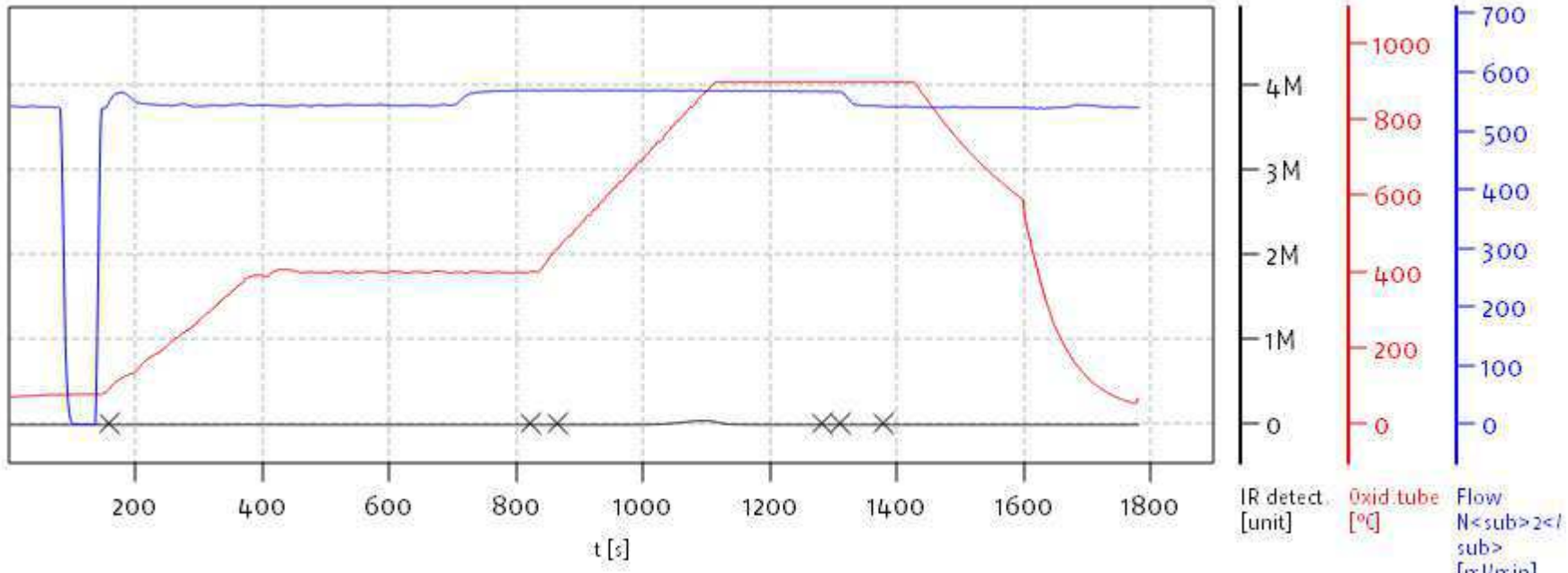
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
10	10	SEQ-CAL8	200.00	0.0298	1.00	CARBON	4/26/2022 4:00 PM	0.009	0.091	0.100	bl,C1u,C2u	6 668	120 822	116	1.0000	0.9312



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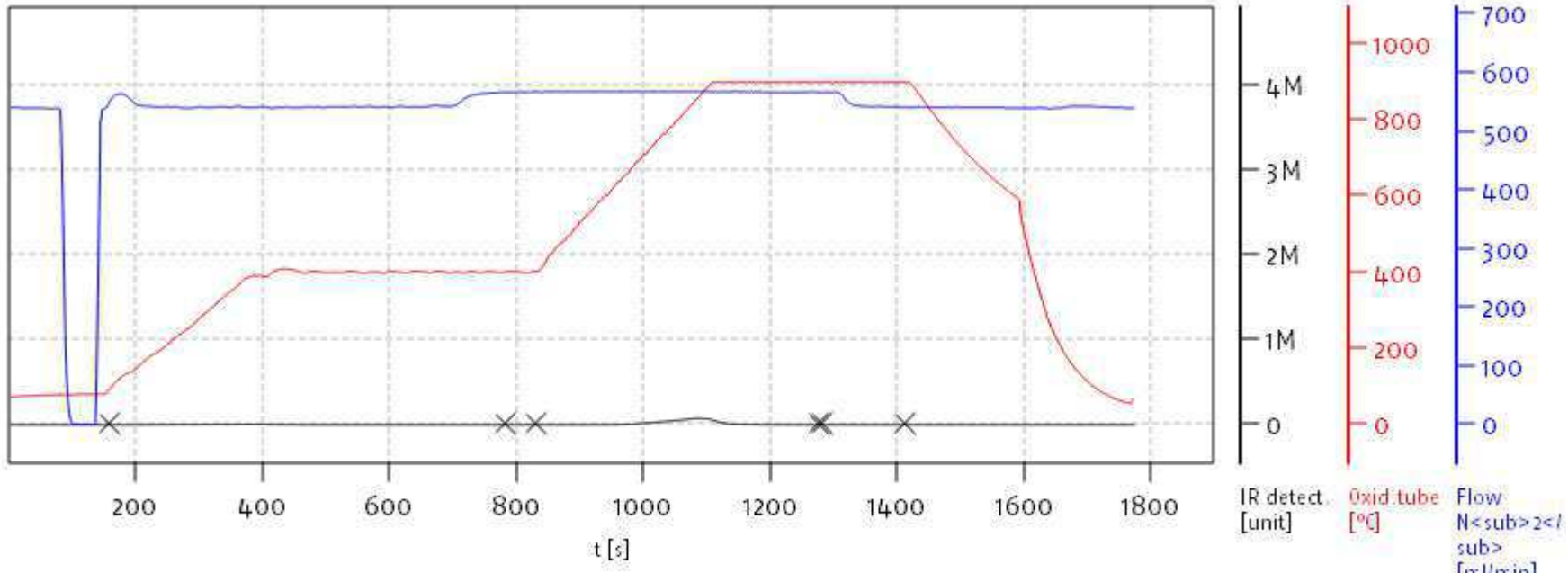
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
11	11	SEQ-CAL9	200.00	0.0402	1.00	CARBON	4/26/2022 4:30 PM	0.031	0.120	0.151	bl,C2u	32 999	260 234	1 044	1.0000	0.5792



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Date: Wed Apr 27 11:07:12 2022

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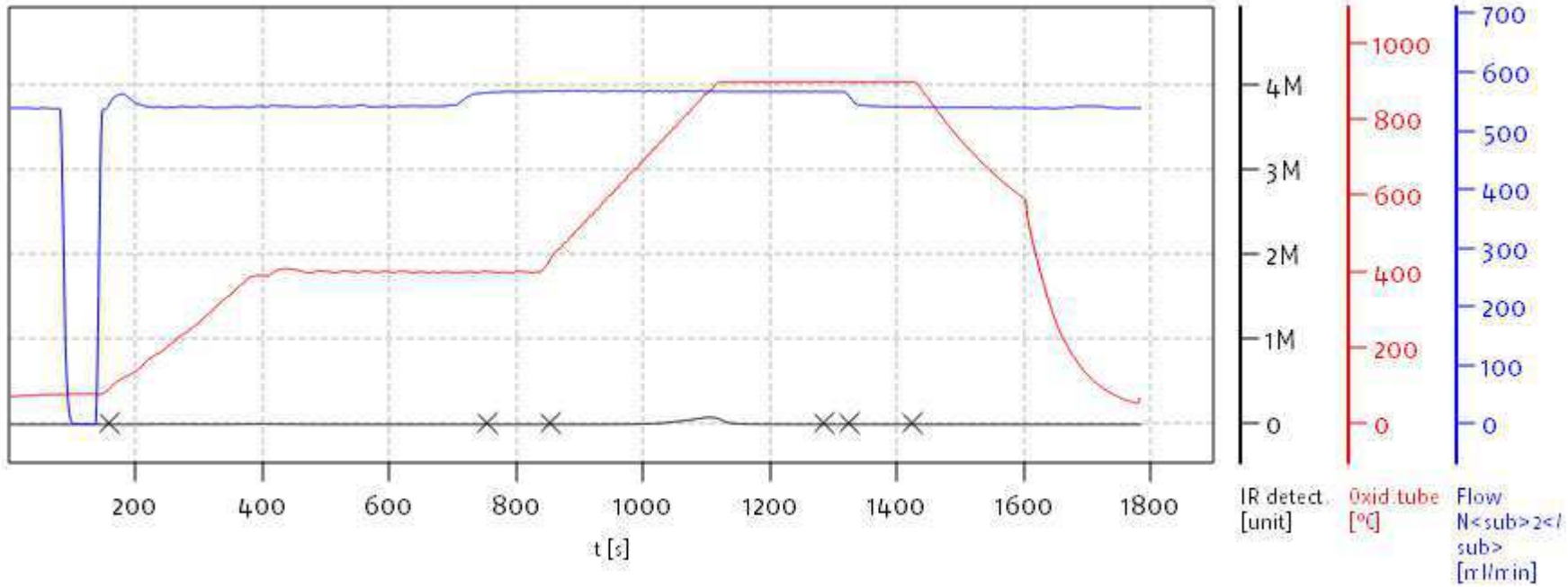
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
12	12	SEQ-CALA	200.00	0.0500	1.00	CARBON	4/26/2022 5:00 PM	0.021	0.151	0.172	bl,C2u	20 147	233 779	913	1.0000	0.8099



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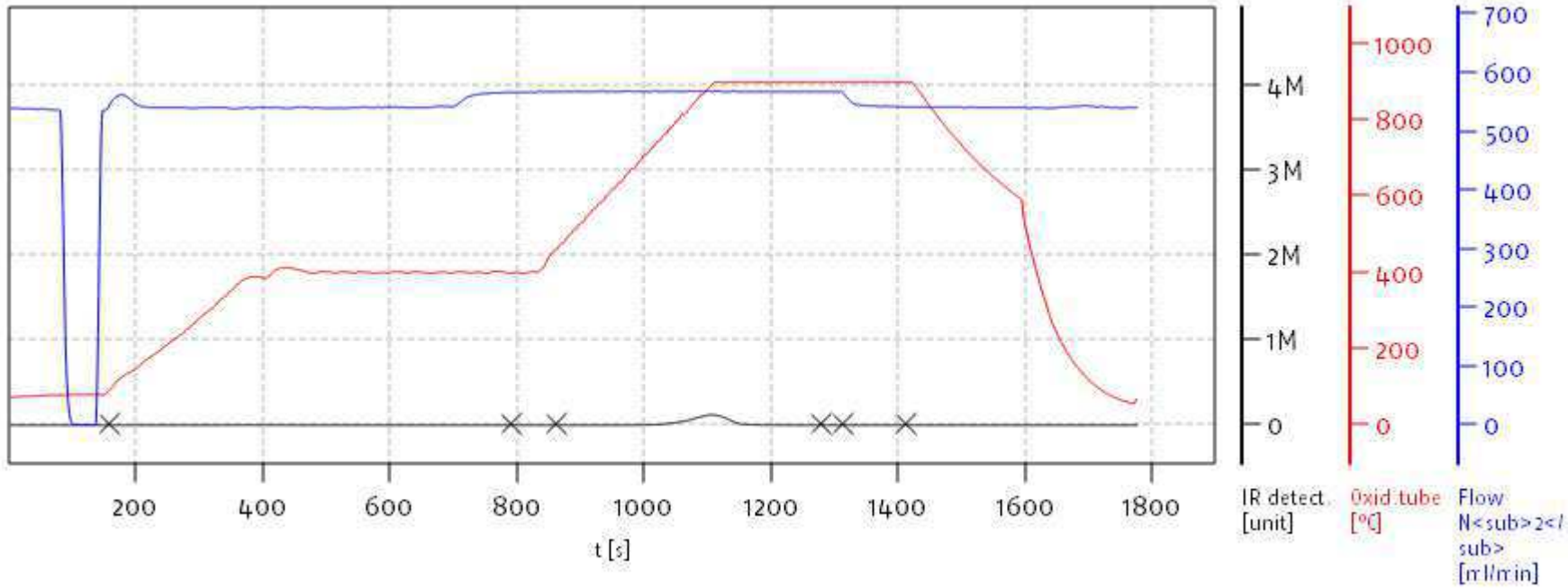
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
13	13	SEQ-CALB	200.00	0.0040	1.00	CARBON	4/26/2022 5:30 PM	0.010	0.258	0.268	bl,C1u,C2u	7 070	323 151	663	1.0000	1.0048



Name:

Access: soliTOC superuser

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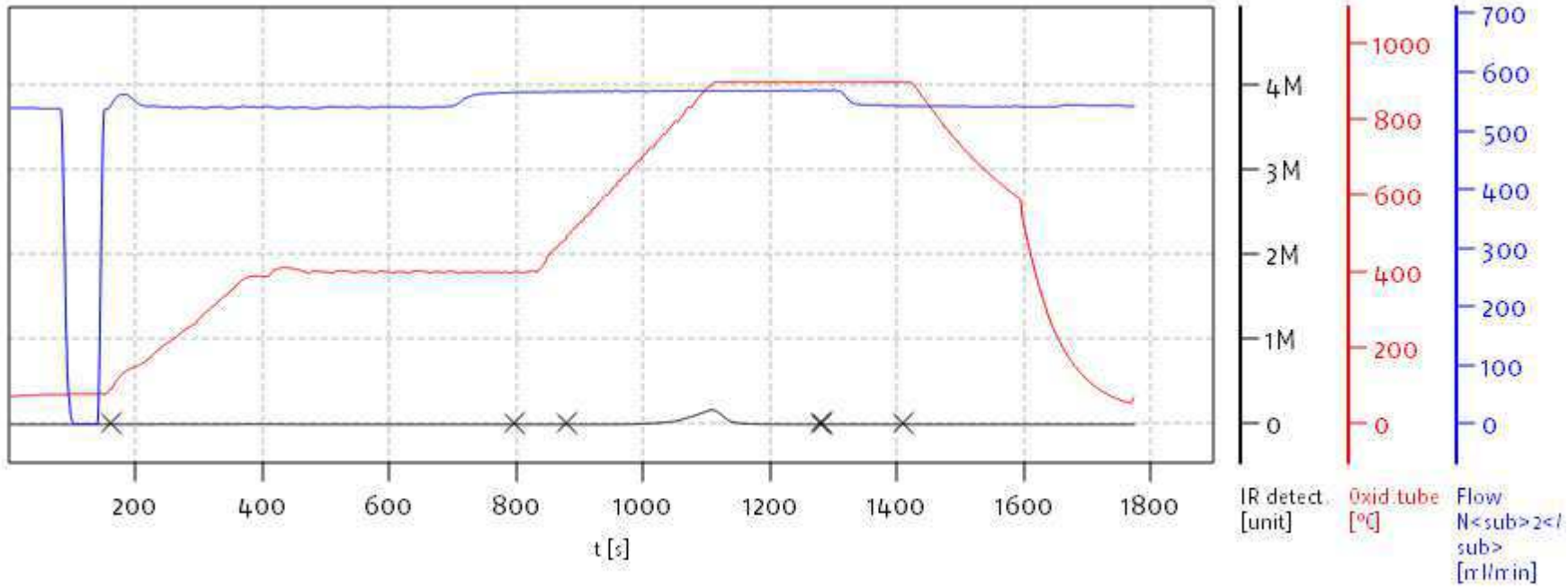
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
14	14	SEQ-CALC	200.00	0.0048	1.00	CARBON	4/26/2022 6:00 PM	0.015	0.324	0.339	bl,C2u	13 785	411 879	575	1.0000	0.9917



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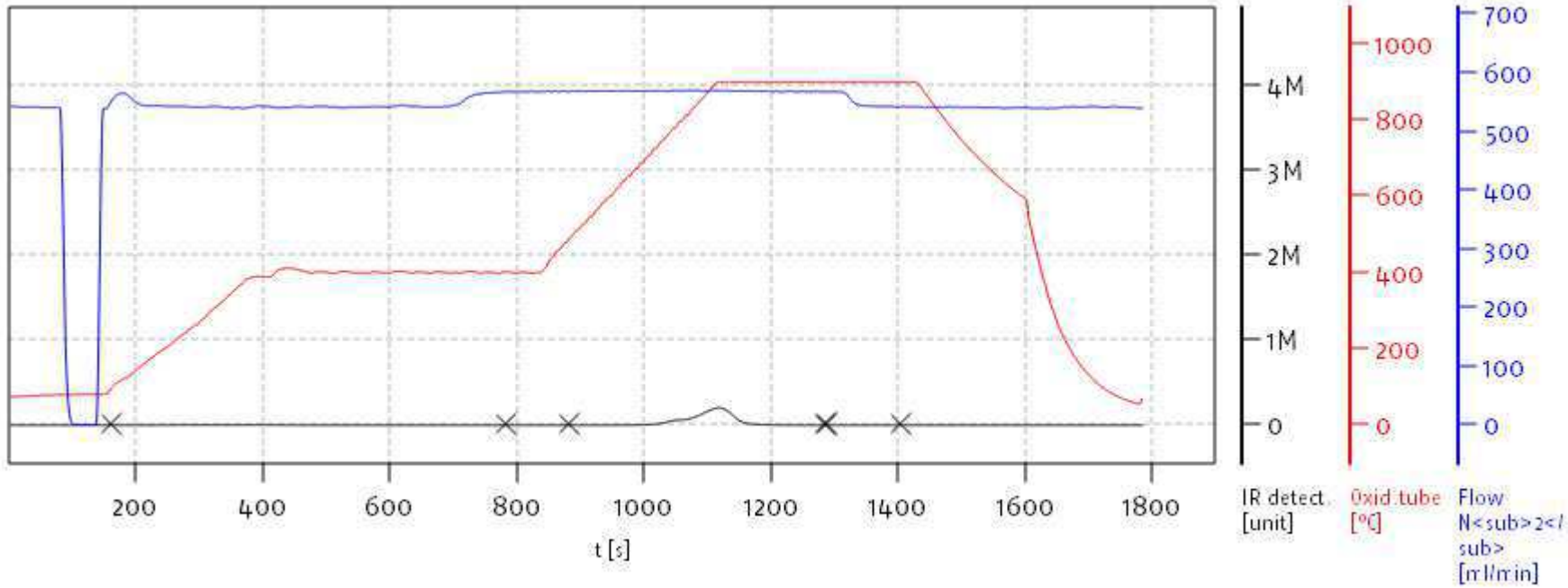
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
15	15	SEQ-CALD	200.00	0.0069	1.00	CARBON	4/26/2022 6:30 PM	0.019	0.444	0.463	bl,C2u	18 465	553 540	263	1.0000	1.0129



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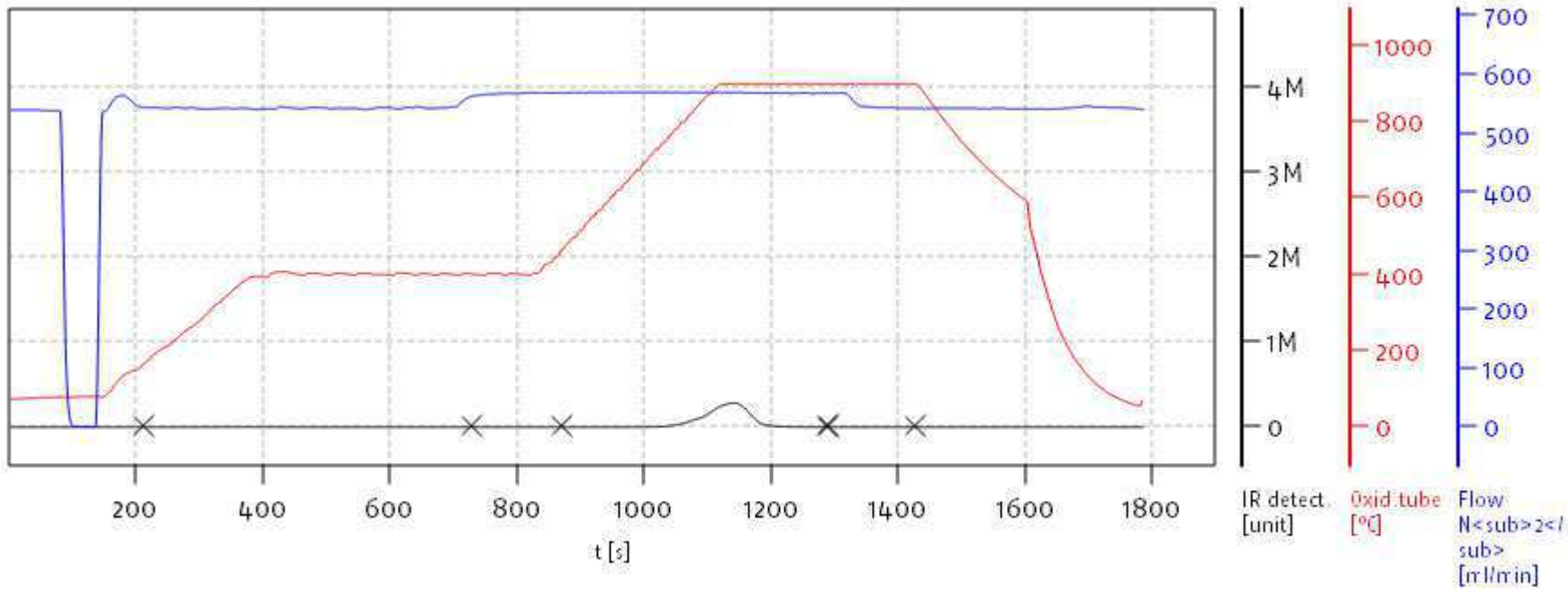
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
16	16	SEQ-CALE	200.00	0.0101	1.00	CARBON	4/26/2022 7:00 PM	0.009	0.600	0.609	bl,C1u,C2u	5 485	839 878	536	1.0000	0.9036



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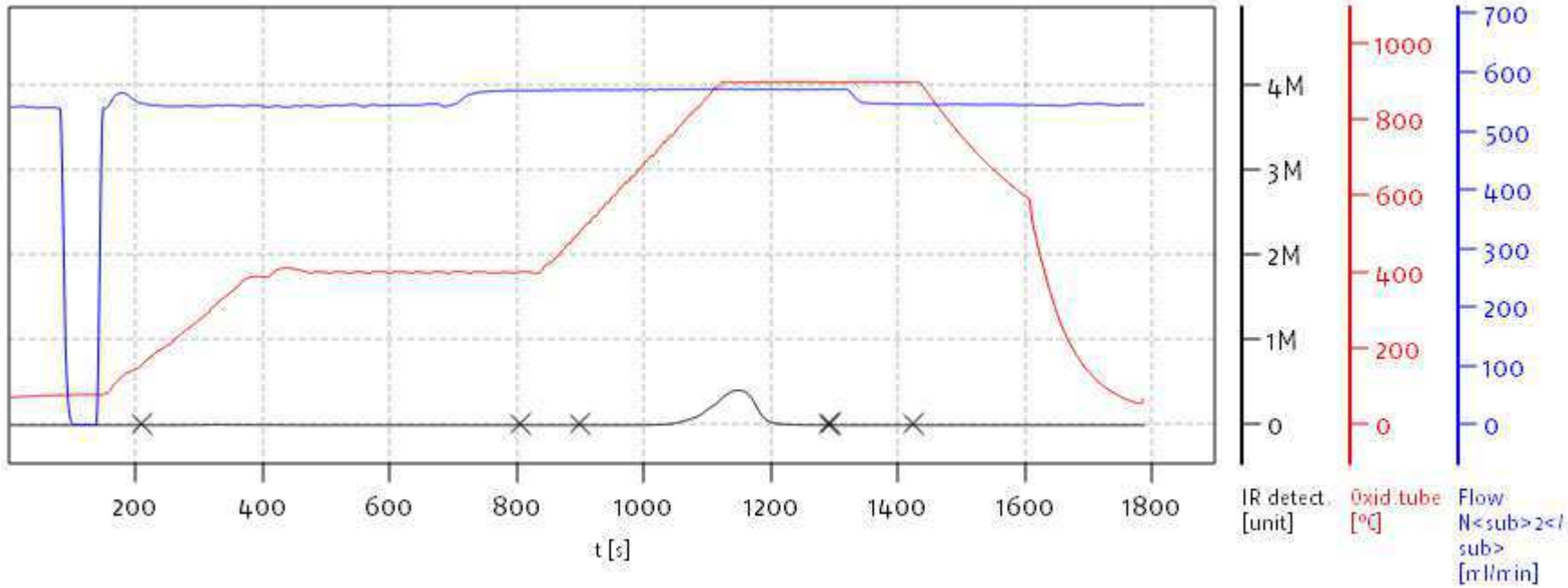
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
17	17	SEQ-CALF	200.00	0.0149	1.00	CARBON	4/26/2022 7:31 PM	0.019	0.906	0.925	bl,C2u	17 439	1 236 200	814	1.0000	0.9279



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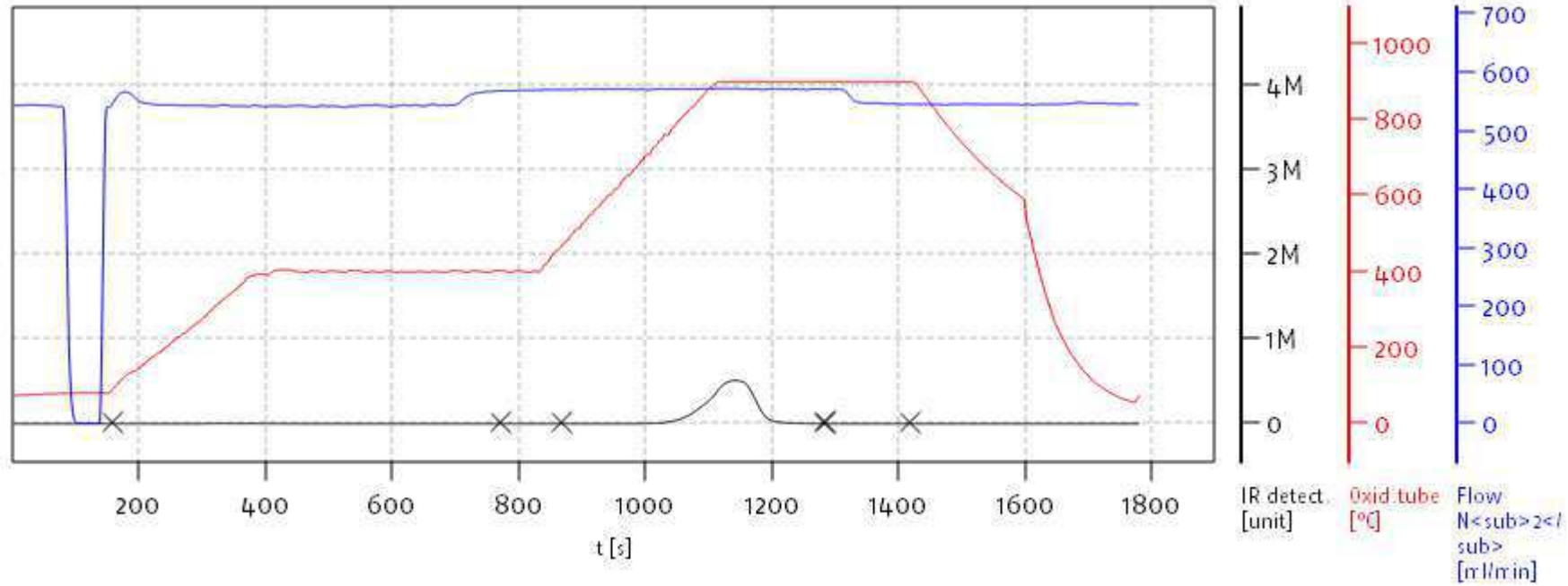
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
18	18	SEQ-CALG	200.00	0.0198	1.00	CARBON	4/26/2022 8:01 PM	0.015	1.206	1.221	bl,C2u	12 557	1 639 190	1 295	1.0000	0.9320



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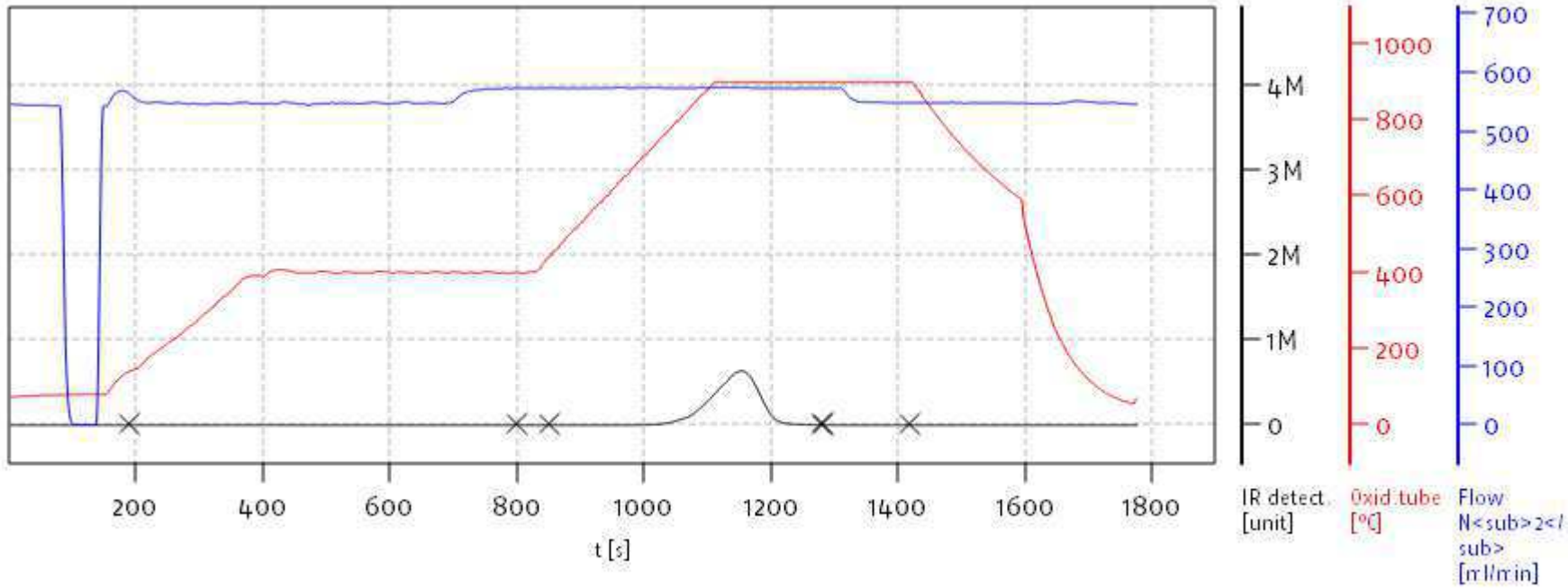
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
19	19	SEQ-CALH	200.00	0.0250	1.00	CARBON	4/26/2022 8:31 PM	0.009	1.524	1.533	bl,C1u,C2u	4 029	2 063 890	2 225	1.0000	0.9357



Name:

Access: soliTOC superuser

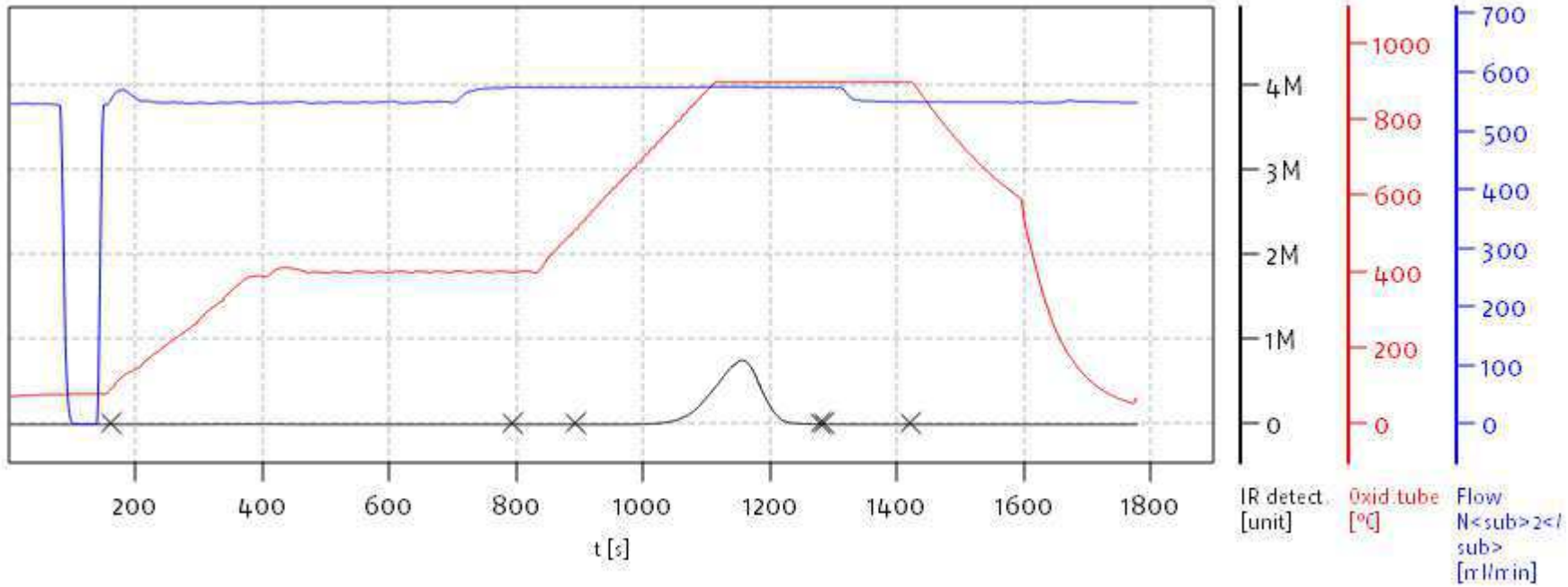
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
20	20	SEQ-CALI	200.00	0.0303	1.00	CARBON	4/26/2022 9:01 PM	0.017	1.800	1.817	bl,C2u	13 926	2 495 900	2 903	1.0000	0.9140



Name:

Access: soliTOC superuser

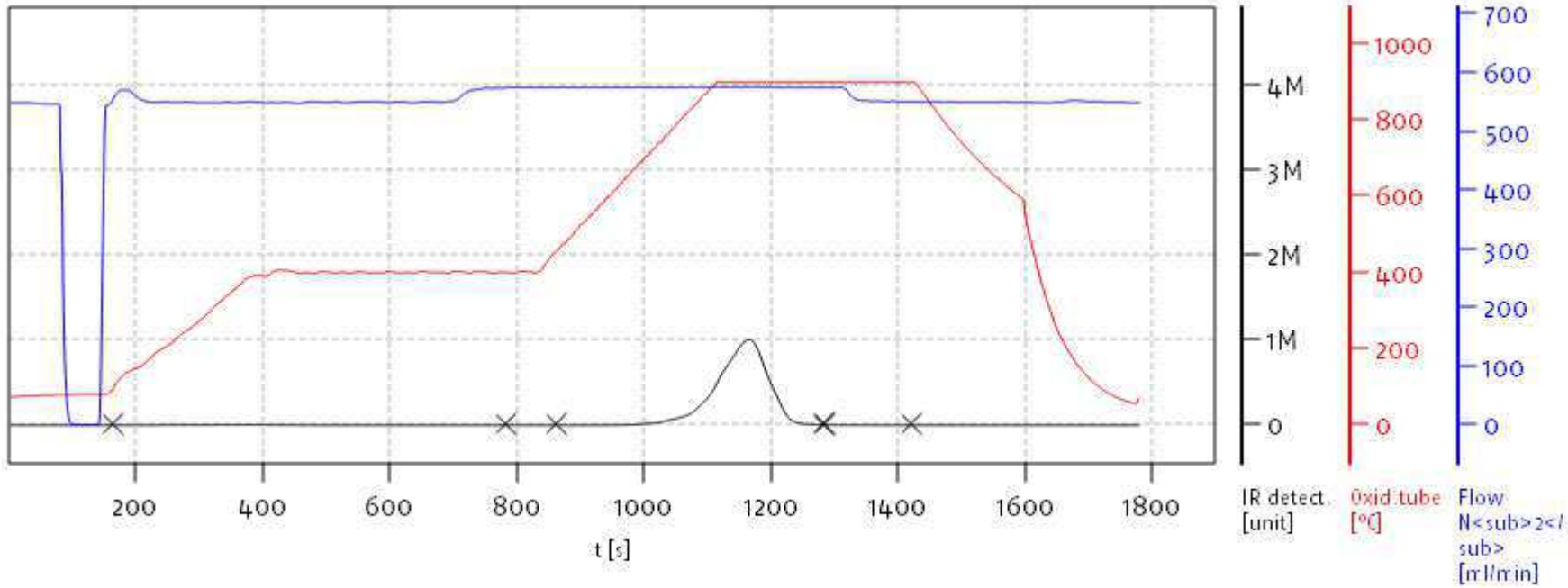
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
21	21	SEQ-CALJ	200.00	0.0415	1.00	CARBON	4/26/2022 9:31 PM	0.031	2.400	2.431	bl,C2u	28 786	3 482 530	5 351	1.0000	0.8737



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Access: soliTOC superuser

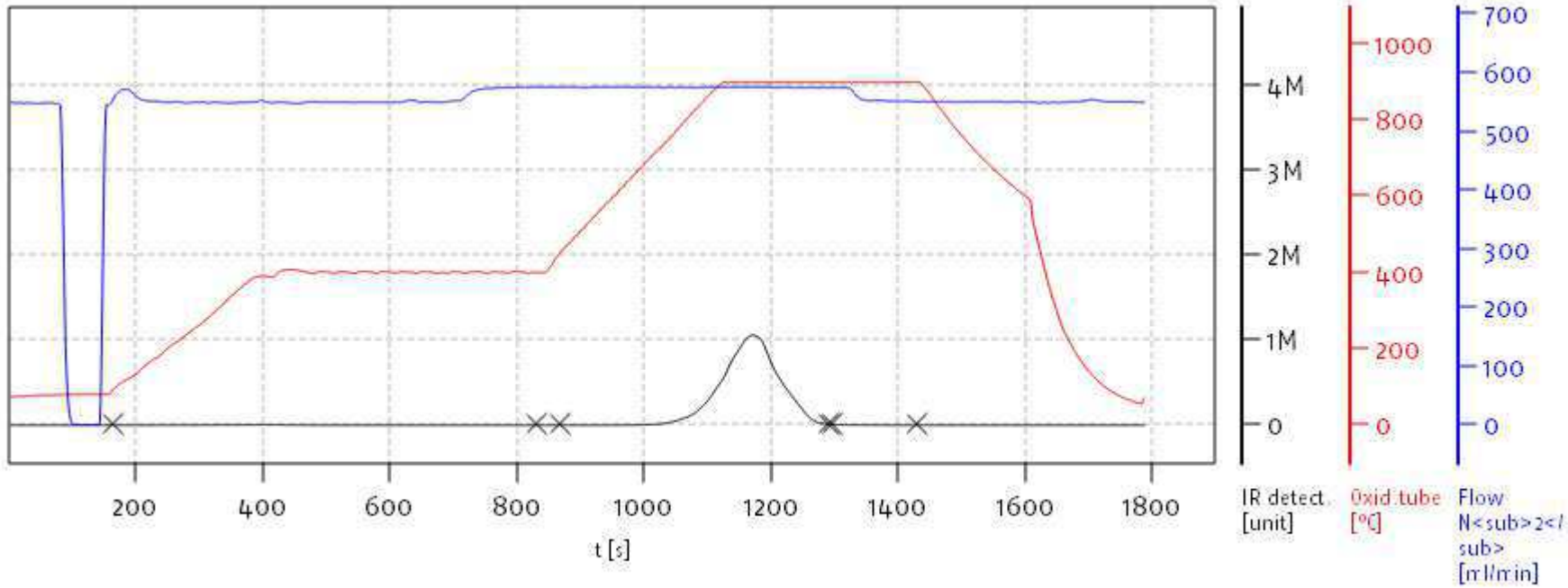
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
22	22	SEQ-CALK	200.00	0.0497	1.00	CARBON	4/26/2022 10:01 PM	0.031	3.012	3.043	bl	23 732	4 105 830	9 736	1.0000	0.9301



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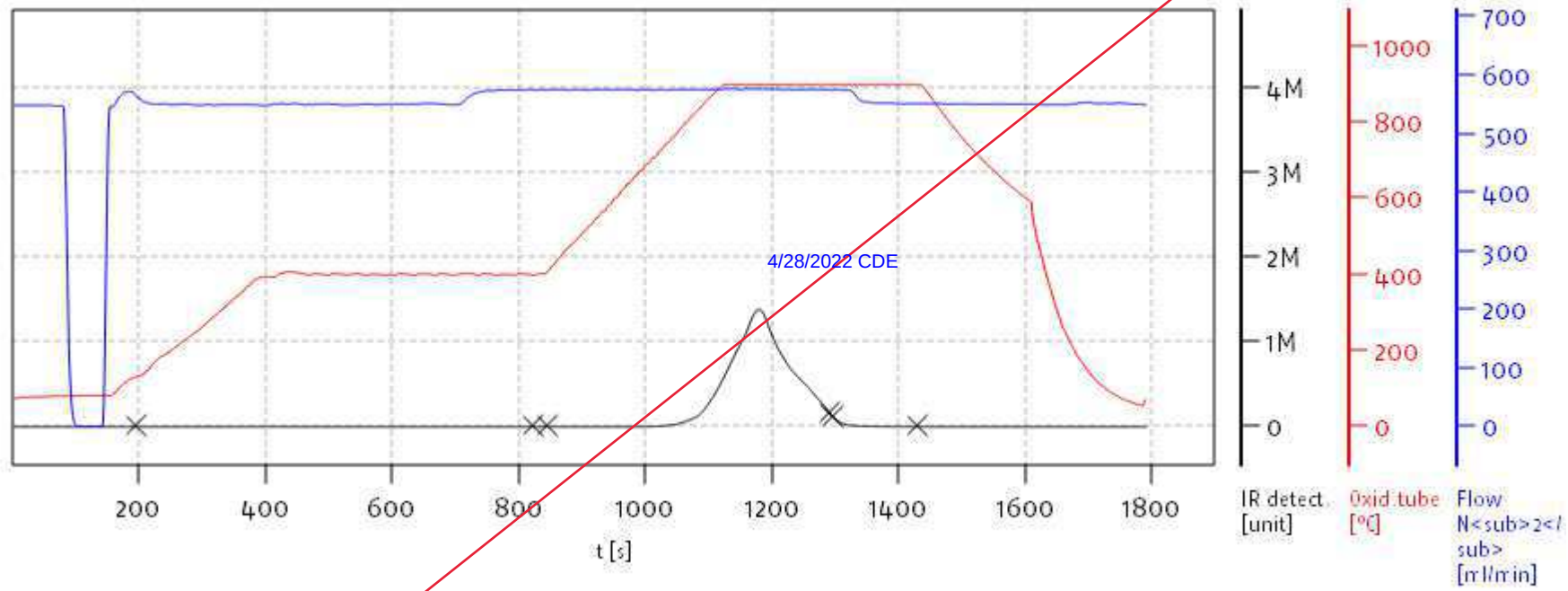
Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	23	SEQ-CALL	200.00	0.0698	1.00	CARBON	4/26/2022 10:31 PM	0.005	3.805	3.810	bl,C1u	3 605	5 648 620	71 970	1.0000	0.9443



Name:

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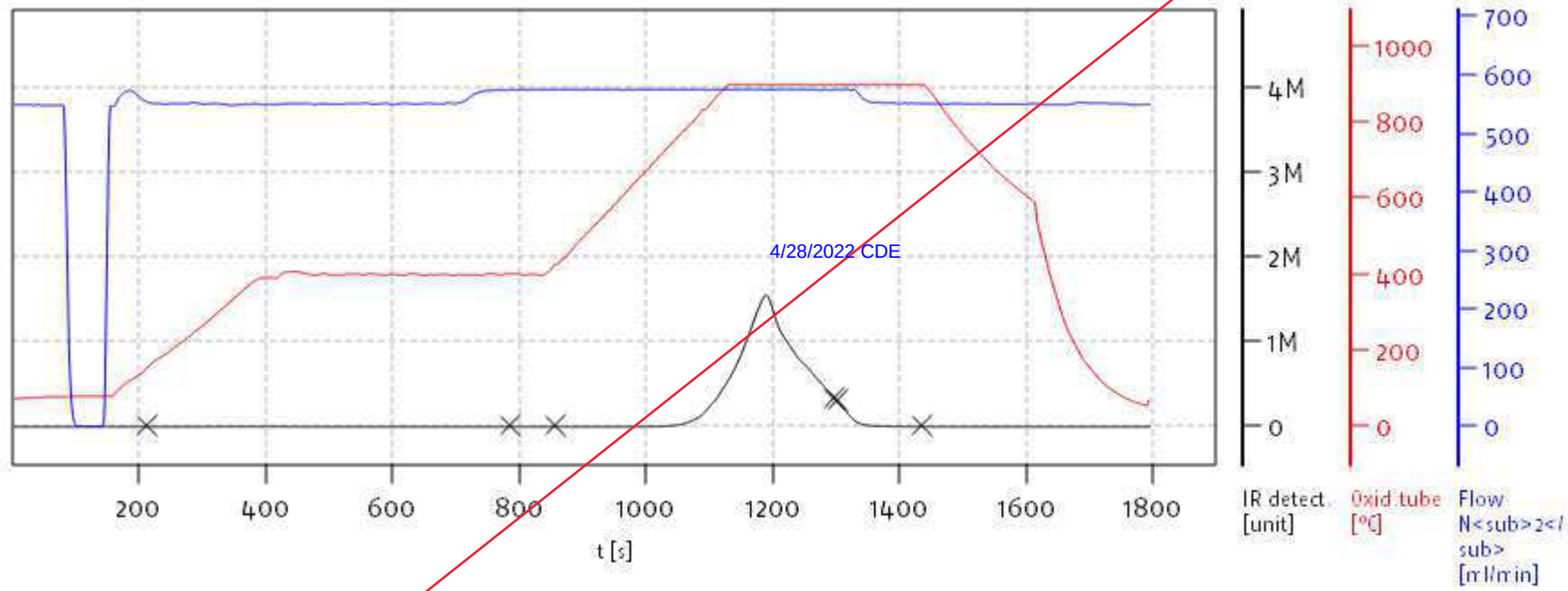
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	SEQ-CALM	200.00	0.0803	1.00	CARBON	4/26/2022 11:02 PM	0.010	4.637	4.647	bl	10 023	6 397 530	228 171	1.0000	0.9539



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

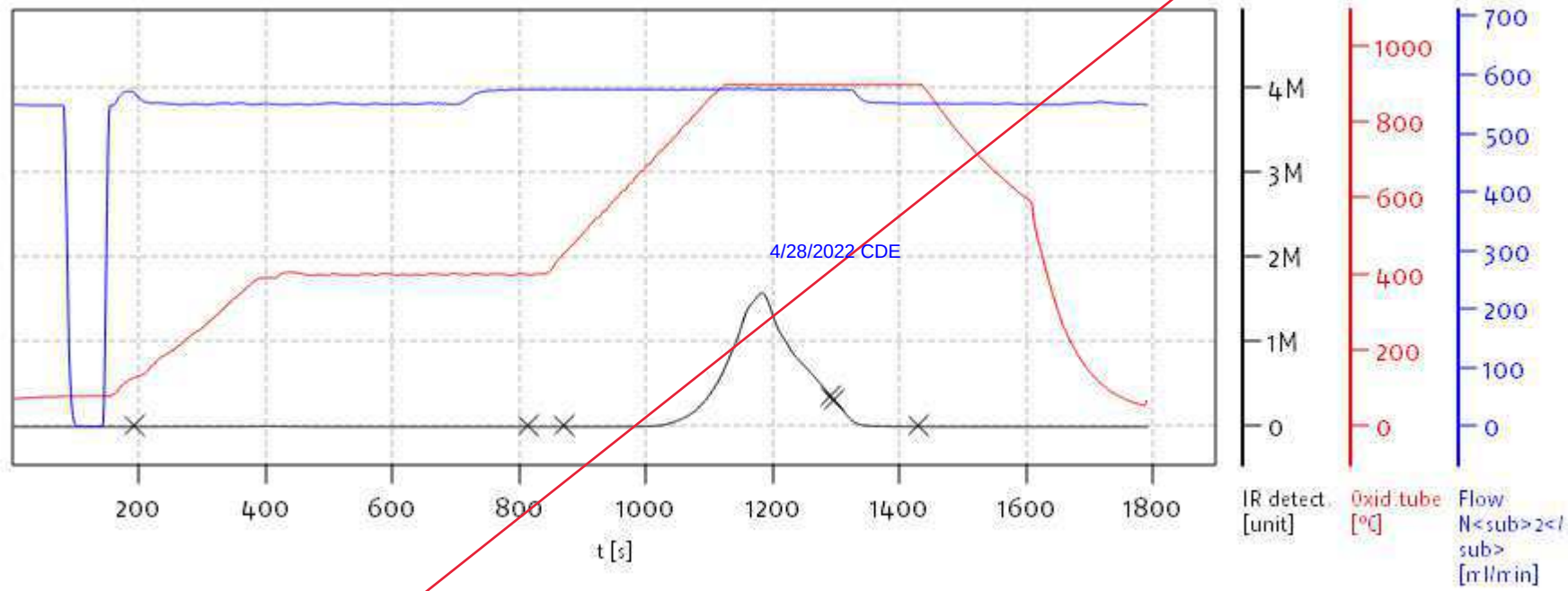
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	25	SEQ-CALN	200.00	0.0901	1.00	CARBON	4/26/2022 11:32 PM	0.020	5.219	5.239	bl	23 354	7 186 580	239 986	1.0000	0.9540



Name:

Access: soliTOC superuser

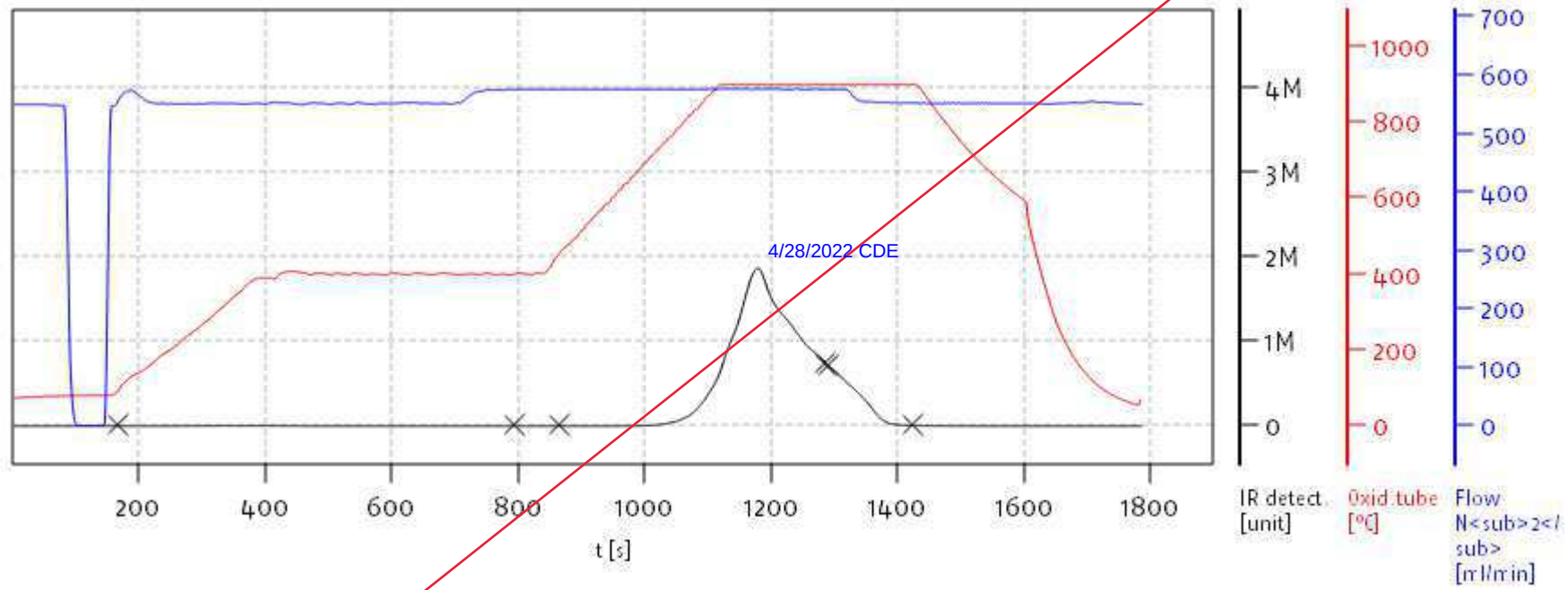
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	26	SEQ-CALO	200.00	0.1200	1.00	CARBON	4/27/2022 12:02 AM	0.019	7.915	7.934	bl,C3o	21 248	8 544 610	1 334 580	1.0000	1.0714



Name:

Access: soliTOC superuser

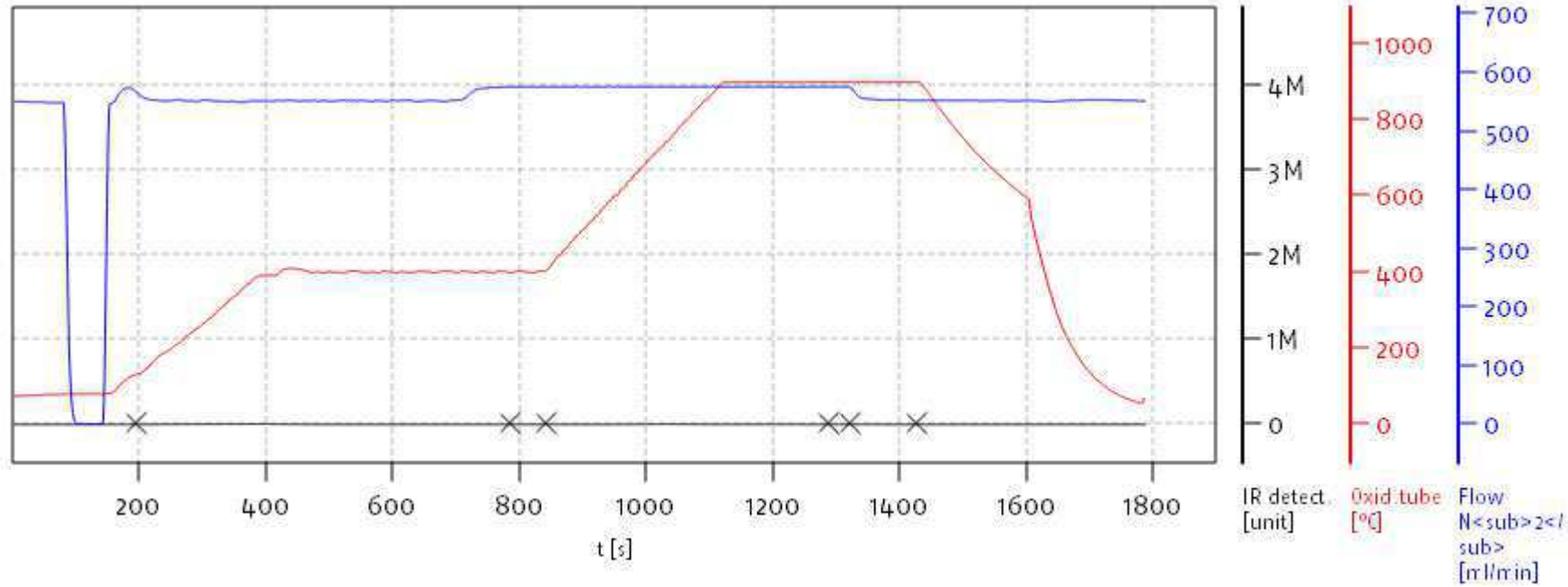
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
27	27	BLANK	1.00		1.00	CARBON	4/27/2022 12:32 AM	0.000	0.000	0.000	bl	29 766	19 596	1 205	1.0000	0.9007



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
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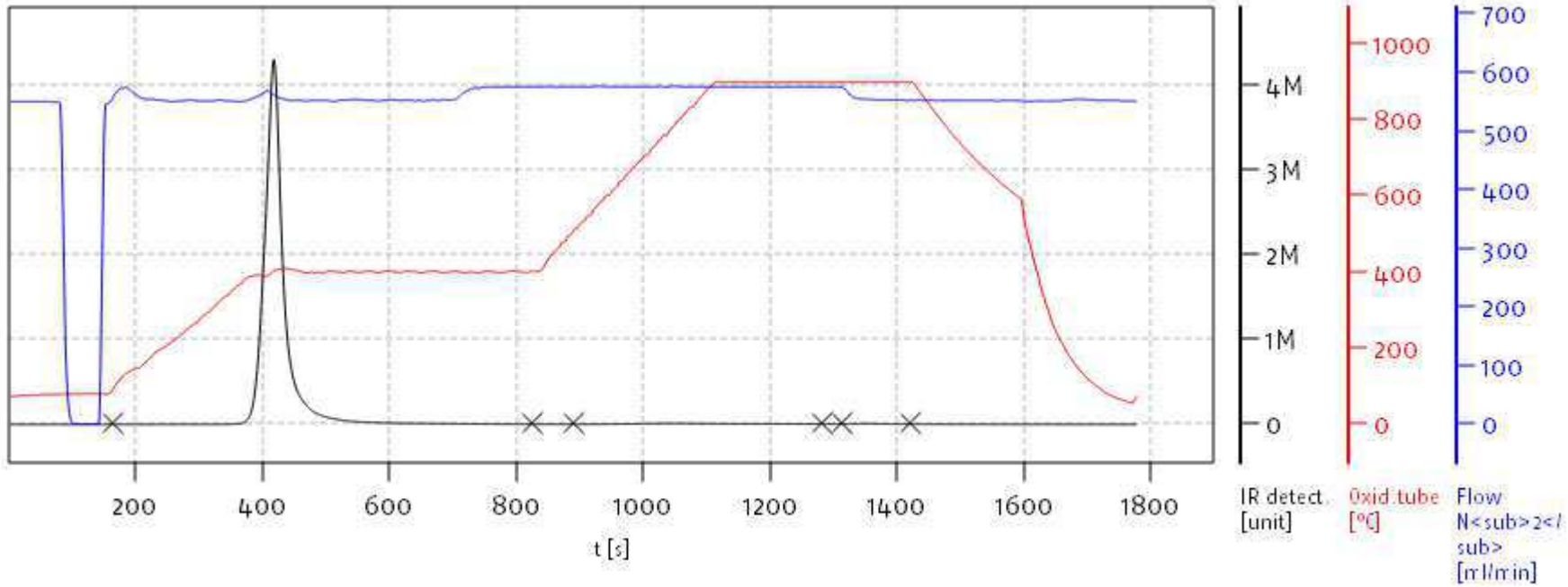
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
28	28	Dfactor	19.00		1.00	CARBON	4/27/2022 1:02 AM	44.678	0.893	45.571	bl	5 588 680	104 999	25 384	0.9581	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
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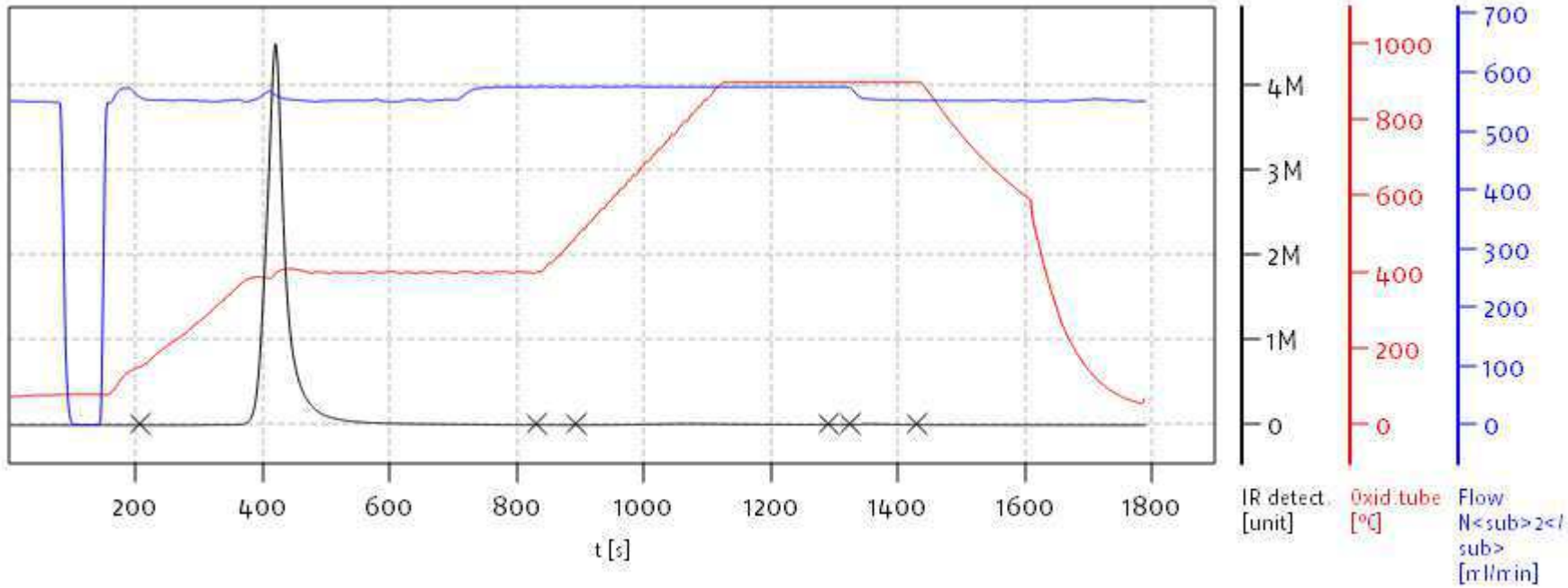
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
29	29	Dfactor	20.80		1.00	CARBON	4/27/2022 1:32 AM	44.694	0.937	45.631	bl	6 076 750	120 961	30 224	0.9647	1.0000



Name:

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soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
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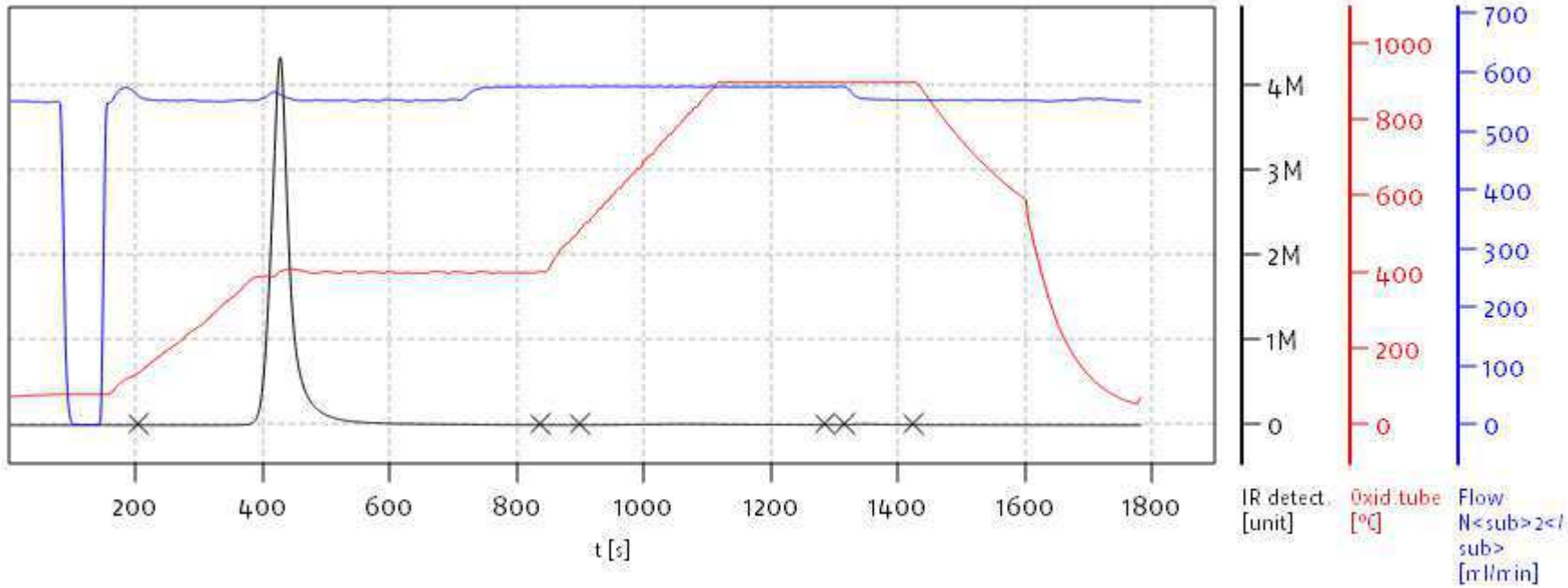
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
30	30	SEQ-ICV1	19.40		1.00	CARBON	4/27/2022 2:03 AM	44.964	0.742	45.706	bl	5 722 450	98 735	27 054	0.9614	0.9007



Name:

Access: soliTOC superuser

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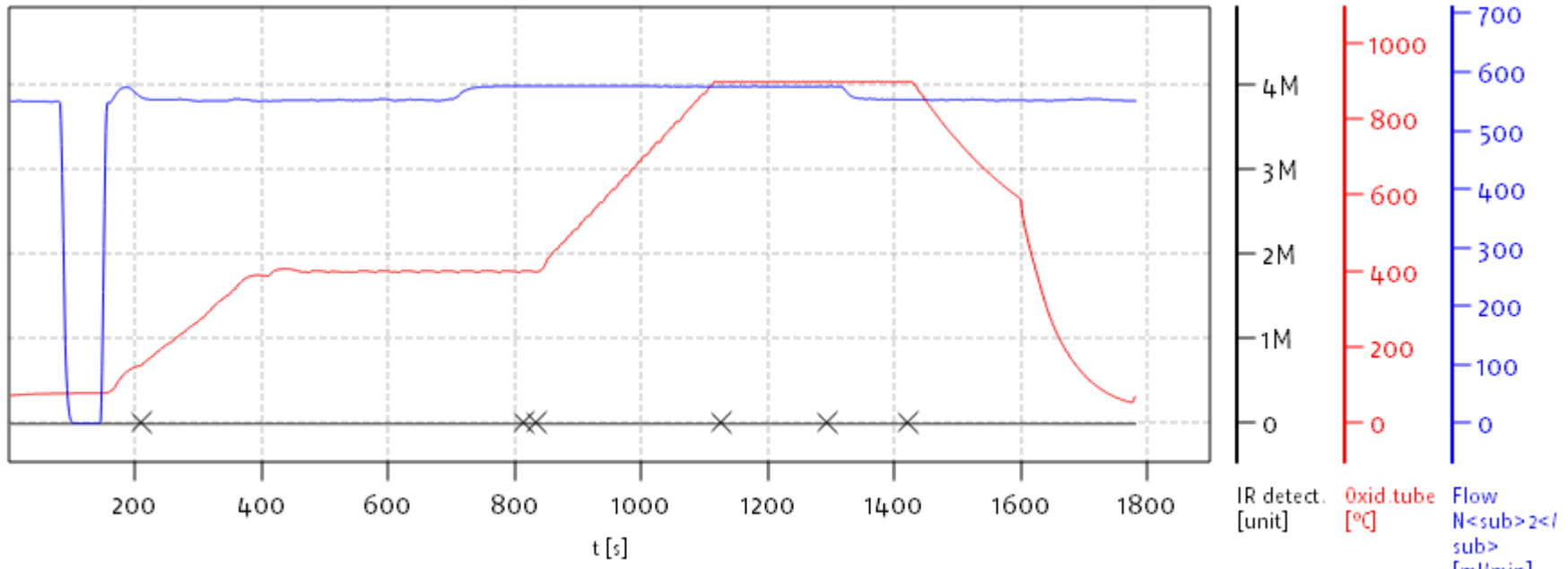
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
31	31	SEQ-ICB1	501.10		1.00	CARBON	4/27/2022 2:33 AM	0.002	0.001	0.003	bl,C1u,C3u,C2u	2 158	225	165	0.9614	0.9007



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

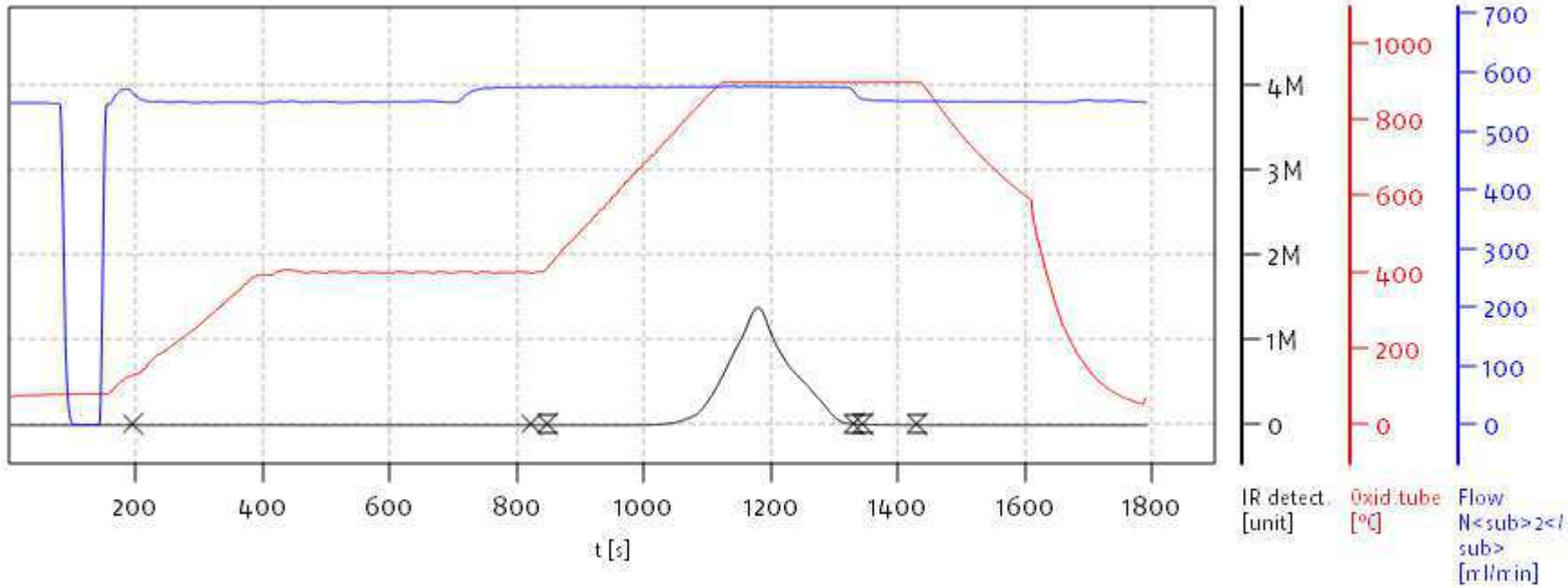
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	23	SEQ-CALL	200.00	0.0698	1.00	CARBON	4/27/2022 11:08 AM	0.005	3.917	3.922	bl,C1u	3 605	**5 260 365**	**0**	1.0000	0.9443



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

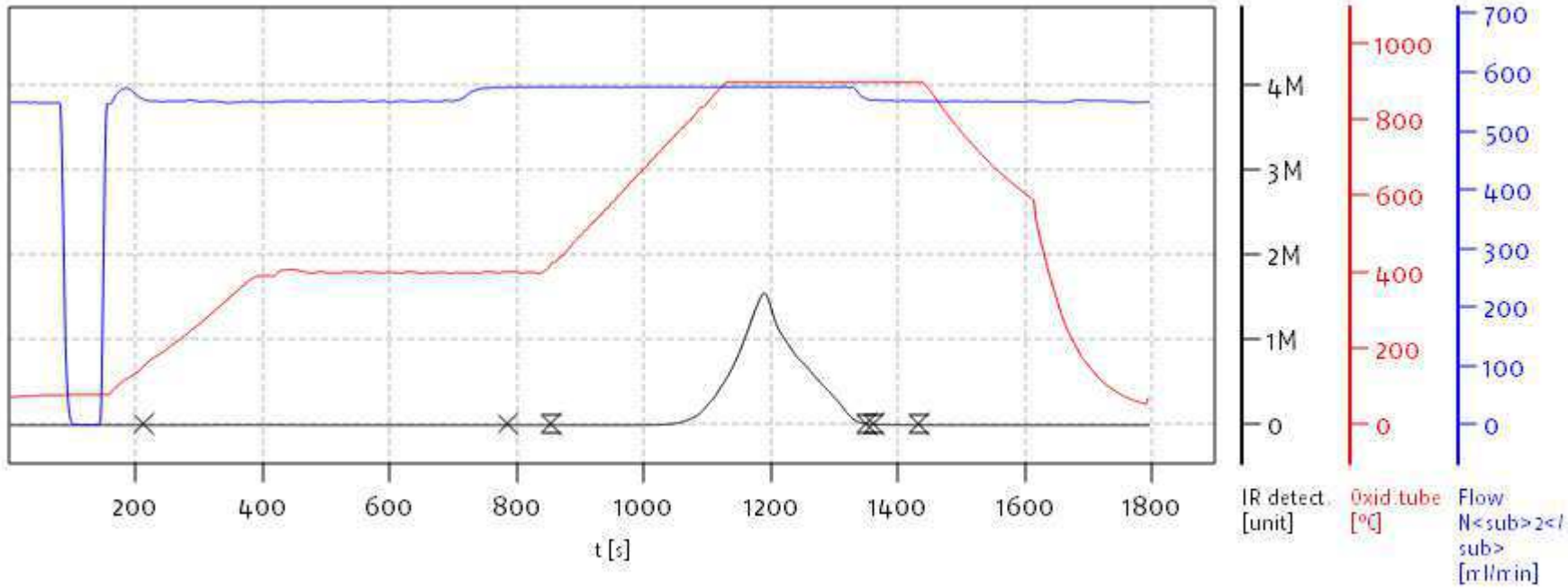
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	SEQ-CALM	200.00	0.0803	1.00	CARBON	4/27/2022 11:08 AM	0.010	4.637	4.647	bl	10 023	**6 164 833**	**0**	1.0000	0.9539



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

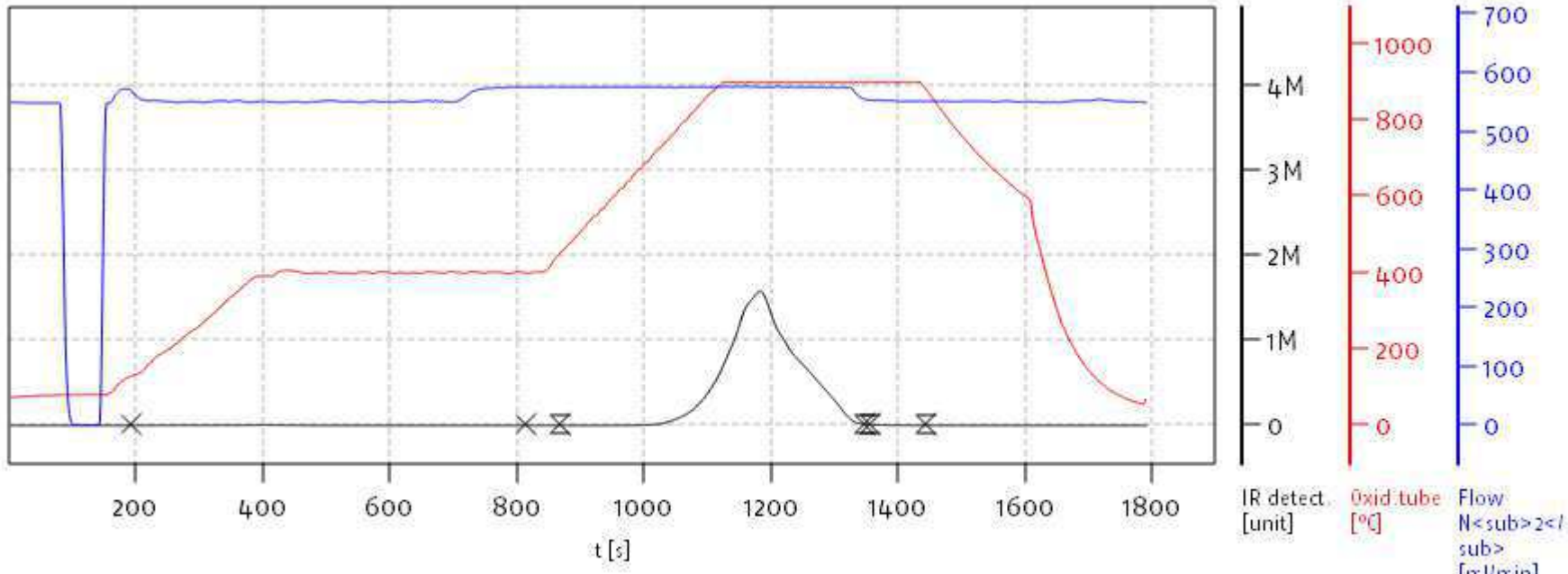
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	25	SEQ-CALN	200.00	0.0901	1.00	CARBON	4/27/2022 11:09 AM	0.020	5.219	5.239	bl	23 354	**6 937 833**	**0**	1.0000	0.9540



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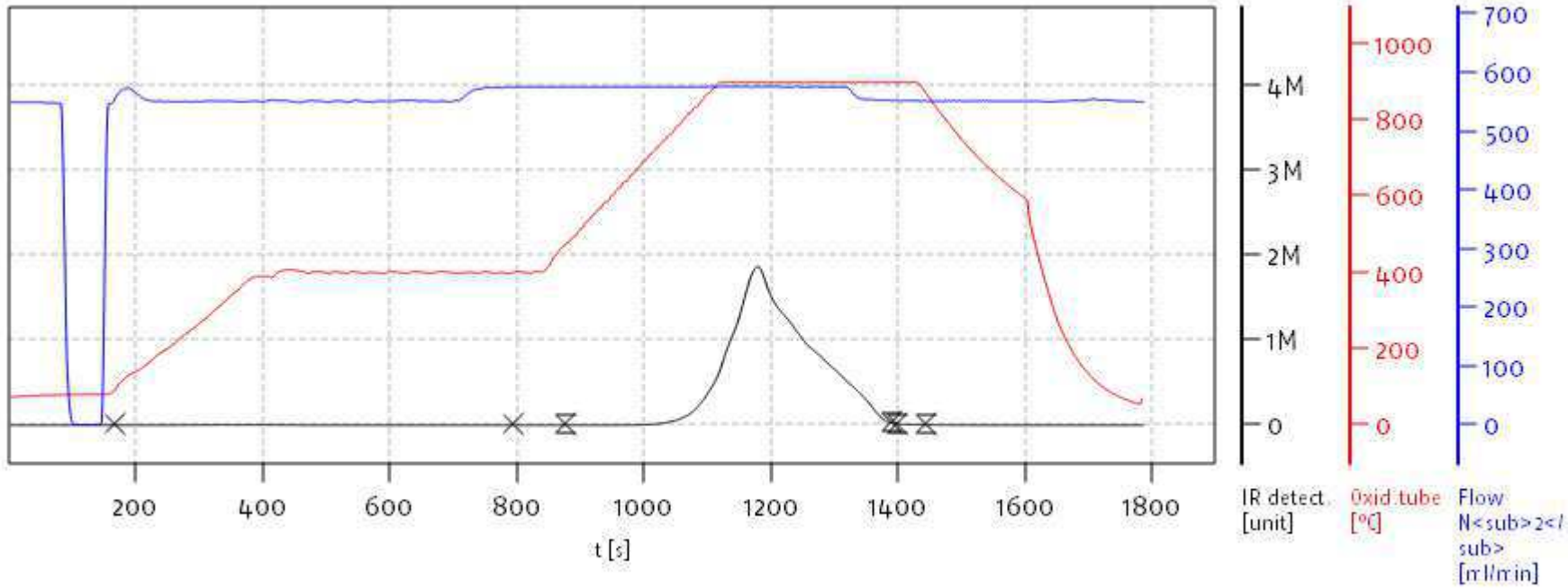
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	26	SEQ-CALO	200.00	0.1200	1.00	CARBON	4/27/2022 11:09 AM	0.019	7.915	7.934	bl,C3o	21 248	9 370 139	0	1.0000	1.0714



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soliTOC V2.0.2 (31015f9) 2018-11-19
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Mode CCC

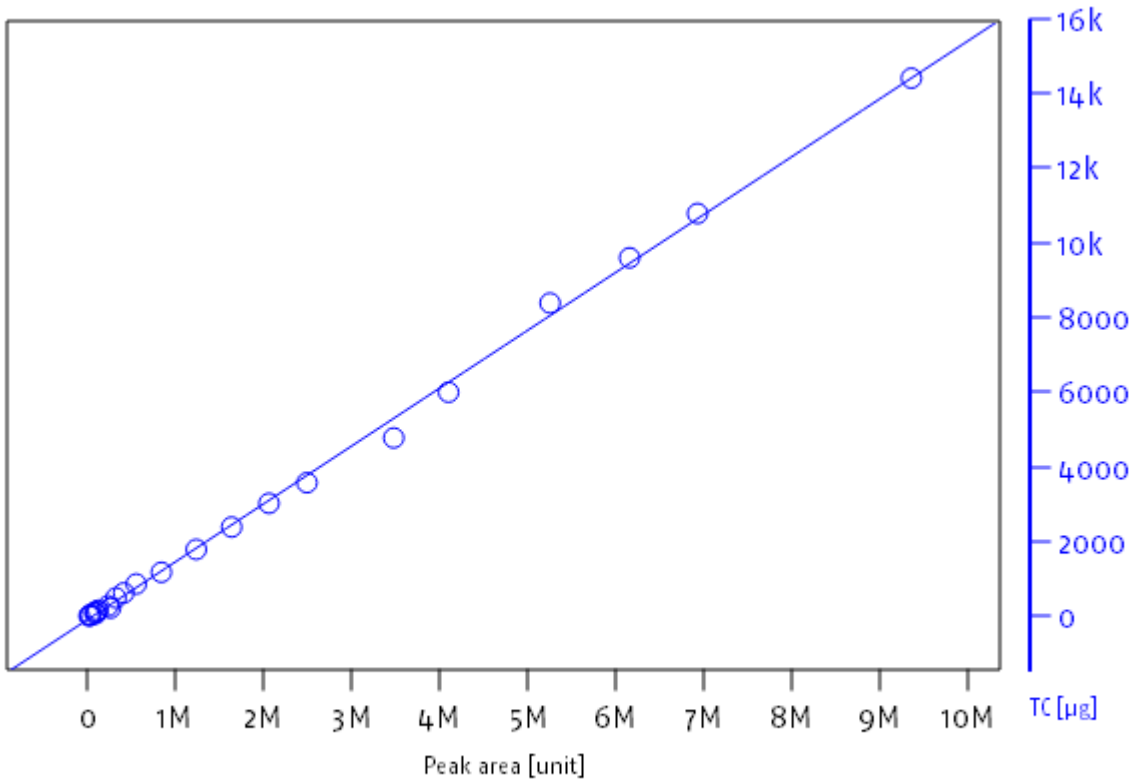
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Calibration parameters TC, Whole range

a	-4.107546e-02
b	+1.548032e-06
c	+0.000000e+00
d	+0.000000e+00
e	+0.000000e+00
r	0.998372
r_old	0.998372
Proc.-SD	166.070255 µg

Calibration graph TC, Whole range



INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Sequence: SKD0371
Date Analyzed: 04/27/22 02:33

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SKD0371-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	

INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: TOC Cube
Sequence: SLA0114

SDG: 23A0133
Project: AOC5 MR Phase 1
Calibration: FD00070
Date Analyzed: 01/12/23 10:00

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLA0114-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0114-CCB1	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0114-CCB2	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0114-CCB3	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0114-CCB4	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0114-CCB5	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0114-CCB6	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0114-CCB7	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0114-CCB8	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0114-CCB9	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0114-CCBA	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0114-CCBB	Total Organic Carbon	0.00	0.02	0.02	%	

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Control Limt: +/- 10.00%
Sequence: SKD0371

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SKD0371-ICV1	Total Organic Carbon	44.446	43.7	98.3	%	EPA 9060A m
	Total Carbon	44.446	44.1	99.2	%	EPA 9060A m
	Total Inorganic Carbon	0.0000	0.40		%	EPA 9060A m
	% Soot	0.0000	0.004		%	EPA 9060A m

* Values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Control Limt: +/- 10.00%
Sequence: SLA0114

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLA0114-ICV1	Total Organic Carbon	44.446	46.1	104	%	EPA 9060A m
SLA0114-CCV1	Total Organic Carbon	44.446	45.4	102	%	EPA 9060A m
SLA0114-CCV2	Total Organic Carbon	44.446	45.3	102	%	EPA 9060A m
SLA0114-CCV3	Total Organic Carbon	44.446	45.1	102	%	EPA 9060A m
SLA0114-CCV4	Total Organic Carbon	44.446	43.7	98.2	%	EPA 9060A m
SLA0114-CCV5	Total Organic Carbon	44.446	44.0	98.9	%	EPA 9060A m
SLA0114-CCV6	Total Organic Carbon	44.446	44.1	99.2	%	EPA 9060A m
SLA0114-CCV7	Total Organic Carbon	44.446	44.4	99.9	%	EPA 9060A m
SLA0114-CCV8	Total Organic Carbon	44.446	45.3	102	%	EPA 9060A m
SLA0114-CCV9	Total Organic Carbon	44.446	45.0	101	%	EPA 9060A m
SLA0114-CCVA	Total Organic Carbon	44.446	44.1	99.2	%	EPA 9060A m
SLA0114-CCVB	Total Organic Carbon	44.446	44.5	100	%	EPA 9060A m

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0241-SRM1
Batch: BLA0241
Initial/Final: 0.2863 g / 0.2863 g
Preparation: Plumb 1981
Analyzed: 01/12/2023 12:31
Standard ID: K011789
Expires: 12/24/2023
Standard Lot#: NA
Description: 1941B - Organics in Marine Sediment (Conv

ANALYTE	TRUE (% wet)	FOUND (% wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Total Organic Carbon	2.9900	2.99	0.02	0.02		99.8	80 - 120

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1252 23A0133-01	01/06/23 09:47	01/06/23 17:26	01/11/23 11:45	5	28	01/12/23 13:02			
LDW23-SC1261 23A0133-02	01/06/23 09:22	01/06/23 17:26	01/11/23 11:45	5	28	01/12/23 14:33			
LDW23-SC1250 23A0133-03	01/06/23 10:32	01/06/23 17:26	01/11/23 11:45	5	28	01/12/23 15:03			
LDW23-SC1244 23A0133-04	01/06/23 10:14	01/06/23 17:26	01/11/23 11:45	5	28	01/12/23 16:35			
LDW23-SC1244-FD 23A0133-05	01/06/23 10:14	01/06/23 17:26	01/11/23 11:45	5	28	01/12/23 17:05			
LDW23-SC1241 23A0133-06	01/06/23 10:51	01/06/23 17:26	01/11/23 11:45	5	28	01/12/23 17:36			
LDW23-IT1217 23A0133-07	01/06/23 11:14	01/06/23 17:26	01/11/23 11:45	5	28	01/12/23 18:07			
LDW23-SC1185 23A0133-08	01/06/23 12:00	01/06/23 17:26	01/11/23 11:45	4	28	01/12/23 18:37			
LDW23-SC1234 23A0133-09	01/06/23 13:34	01/06/23 17:26	01/11/23 11:45	4	28	01/12/23 19:08			
LDW23-SC1215 23A0133-10	01/06/23 11:38	01/06/23 17:26	01/11/23 11:45	5	28	01/12/23 19:38			
LDW23-SC1222 23A0133-11	01/06/23 13:00	01/06/23 17:26	01/11/23 11:45	4	28	01/12/23 20:09			
LDW23-SC1227 23A0133-12	01/06/23 13:18	01/06/23 17:26	01/11/23 11:45	4	28	01/12/23 20:39			
LDW23-SS1110 23A0133-13	01/06/23 14:00	01/06/23 17:26	01/11/23 11:45	4	28	01/12/23 21:10			
LDW23-SS1109 23A0133-14	01/06/23 14:13	01/06/23 17:26	01/11/23 11:45	4	28	01/12/23 22:41			
LDW23-SS1092 23A0133-15	01/06/23 14:26	01/06/23 17:26	01/11/23 11:45	4	28	01/12/23 23:12			
LDW23-SS1091 23A0133-16	01/06/23 14:50	01/06/23 17:26	01/11/23 11:45	4	28	01/12/23 23:42			
Duplicate BLA0241-DUP1	01/06/23 09:47	01/06/23 17:26	01/11/23 11:45	5	28	01/12/23 13:32			
Matrix Spike BLA0241-MS1	01/06/23 09:47	01/06/23 17:26	01/11/23 11:45	5	28	01/12/23 14:02			

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: TOC Cube

Analyte	MDL	RL	Units
Total Organic Carbon	0.02	0.02	%

National Institute of Standards & Technology

Certificate of Analysis

Standard Reference Material® 1941b

Organics in Marine Sediment

This Standard Reference Material (SRM) is marine sediment collected at the mouth of the Baltimore (MD) Harbor. SRM 1941b is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in marine sediment and similar matrices. Information values are also provided for total organic carbon (TOC), total carbon, hydrogen, and nitrogen. All of the constituents for which certified, reference, and information values are provided in SRM 1941b were naturally present in the sediment before processing. A unit of SRM 1941b consists of a bottle containing 50 g of radiation-sterilized, freeze-dried sediment.

Certified Mass Fraction Values: Certified mass fraction values for PAHs, PCB congeners, and chlorinated pesticides are provided in Table 1 through Table 3. The certified values for the PAHs, PCB congeners, and chlorinated pesticides are based on the agreement of results obtained at NIST from two or more chemically independent analytical techniques along with results from an interlaboratory comparison study [1]. A NIST certified value is a value for which NIST has the highest confidence in its accuracy in that all known or suspected sources of bias have been investigated or taken into account [1].

Reference Mass Fraction Values: Reference mass fraction values for additional PAHs (some in combination), additional PCB congeners, and additional chlorinated pesticides are provided in Table 4 through Table 7. Reference values for alkylated PAH groups are provided in Table 8 and for selected hopanes and steranes in Table 9. A reference value for total organic carbon is provided in Table 10. Reference values are noncertified values that are the best estimate of the true value; however, the values do not meet the NIST criteria for certification and are provided with associated uncertainties that may reflect only measurement precision, may not include all sources of uncertainty, or may reflect a lack of sufficient statistical agreement among multiple analytical methods [1].

Information Mass Fraction Values: Information mass fraction values are provided in Table 11 for carbon, hydrogen, and nitrogen. An information value is considered to be a value that will be of use to the SRM user, but insufficient information is available to assess the uncertainty associated with the value [1]. Information values cannot be used to establish metrological traceability.

Expiration of Certification: The certification of **SRM 1941b** is valid, within the measurement uncertainty specified, until **01 October 2020**, provided the SRM is handled and stored in accordance with the instructions given in this certificate (see "Instructions for Handling, Storage, and Use"). This certification is nullified if the SRM is damaged, contaminated, or otherwise modified.

Maintenance of SRM Certification: NIST will monitor this SRM over the period of its certification. If substantive technical changes occur that affect the certification before the expiration of this certificate, NIST will notify the purchaser. Registration (see attached sheet or register online) will facilitate notification.

Coordination of the technical measurements leading to the certification of this material was under the leadership of M.M. Schantz and S.A. Wise of the NIST Chemical Sciences Division.

Analytical measurements for the certification of SRM 1941b were performed at NIST by J.R. Kucklick, B.J. Porter, D.L. Poster, M.M. Schantz, P. Schubert, S. Tutschku, and L.L. Yu of the NIST Chemical Sciences Division.

Carlos A. Gonzalez, Chief
Chemical Sciences Division

Gaithersburg, MD 20899
Certificate Issue Date: 16 January 2015

Robert L. Watters, Jr., Director
Office of Reference Materials

Measurements for TOC were provided by a commercial laboratory and T.L. Wade of the Geochemical and Environmental Research Group, Texas A&M University (College Station, TX). The carbon, hydrogen, and nitrogen data were provided by a commercial laboratory. Results for the PAHs, PCBs, and chlorinated pesticides from 38 laboratories (see Appendix A) that participated in an interlaboratory comparison exercise coordinated by NIST were used. Results for the alkylated PAH groups, hopanes, and steranes from 33 laboratories (see Appendix B) that participated in another interlaboratory comparison exercise coordinated by NIST were also used.

Collection and preparation of SRM 1941b were performed by M.P. Cronise and C.N. Fales of the NIST Office of Reference Materials and B.J. Porter and M.M. Schantz of the NIST Chemical Sciences Division. The sediment material was collected with the assistance of G.G. Lauenstein, J. Collier, and J. Lewis (National Oceanic and Atmospheric Administration, Silver Spring, MD).

Consultation on the statistical design of the experimental work and evaluation of the data were provided by S.D. Leigh and J.H. Yen of the NIST Statistical Engineering Division.

Support aspects involved in the issuance of this SRM were coordinated through the NIST Office of Reference Materials.

INSTRUCTIONS FOR HANDLING, STORAGE, AND USE

Handling: This material is naturally occurring marine sediment from an urban area and may contain constituents of unknown toxicities; therefore, caution and care should be exercised during its handling and use.

Storage: SRM 1941b must be stored in its original bottle at temperatures less than 30 °C and away from direct sunlight.

Use: Prior to removal of subsamples for analysis, the contents of the bottle should be mixed. The mass fractions of constituents in SRM 1941b are reported on a dry-mass basis. The SRM, as received, contains a mass fraction of approximately 2.4 % moisture (see "Conversion to Dry-Mass Basis"). The sediment sample should be dried to a constant mass before weighing for analysis; or a separate subsample of the sediment should be removed from the bottle at the time of analysis and dried to determine the mass fraction on a dry-mass basis. If the constituents of interest are volatile, then the moisture must be determined with a separate subsample.

PREPARATION AND ANALYSIS[1]

Sample Collection and Preparation: The sediment used to prepare this SRM was collected from the Chesapeake Bay at the mouth of the Baltimore (MD) Harbor near the Francis Scott Key Bridge (39°12.3'N and 76°31.4'W). This location is very near the site where SRM 1941 and SRM 1941a were collected. The sediment was collected using a Kynar-coated modified Van Veen-type grab sampler. A total of approximately 3300 kg of wet sediment was collected from the site. The sediment was freeze-dried, sieved at 150 μm (100 % passing), homogenized in a cone blender, radiation sterilized (^{60}Co), and then packaged in screw-capped amber glass bottles each containing approximately 50 g.

Conversion to Dry-Mass Basis: The results for the constituents in SRM 1941b are reported on a dry-mass basis; however, the material "as received" contains residual moisture. The amount of moisture in SRM 1941b was determined by measuring the mass loss after freeze-drying subsamples of 1.1 g to 1.3 g for four days at 1 Pa with a –10 °C shelf temperature and a –50 °C condenser temperature. The moisture content in SRM 1941b at the time of the certification analyses was 2.39 % ± 0.08 % (95 % confidence level). Analytical results for the organic constituents were determined on an as-received basis and then converted to a dry-mass basis by dividing by the conversion factor of 0.9761 (gram dry mass per gram as-received mass).

Polycyclic Aromatic Hydrocarbons: The general approach used for the value assignment of the PAHs in SRM 1941b was similar to that reported in detail elsewhere [2]. The approach consisted of combining results from analyses using various combinations of different extraction techniques and solvents, clean-up/isolation procedures, and chromatographic separation and detection techniques: Soxhlet extraction and pressurized-fluid extraction (PFE) using dichloromethane (DCM) or a hexane/acetone mixture, cleanup of the extracts using solid-phase extraction (SPE) or normal-phase liquid chromatography (LC), followed by analysis using the following techniques: (1) reversed-phase liquid chromatography with fluorescence detection (LC-FL) analysis of the total PAH fraction, (2) reversed-phase

[1] Certain commercial equipment, instruments or materials are identified in this certificate to adequately specify the experimental procedure. Such identification does not imply recommendation or endorsement by the National Institute of Standards

LC-FL analysis of isomeric PAH fractions isolated by normal-phase LC (i.e., multidimensional LC), (3) gas chromatography/mass spectrometry (GC/MS) analysis of the PAH fraction on three stationary phases of different selectivity, i.e., a 5 % (all column compositions are given as mole fractions in %) phenyl-substituted methylpolysiloxane phase, a 50 % phenyl-substituted methylpolysiloxane phase, and a relatively non-polar proprietary phase.

Three sets of GC/MS results, designated as GC/MS (I), GC/MS (II), and GC/MS (III), were obtained using three columns with different selectivities for the separation of PAHs. For GC/MS (I) analyses, duplicate subsamples of approximately 1 g from ten bottles of SRM 1941b were extracted using PFE with DCM. Copper powder was added to the extract to remove elemental sulfur. The concentrated extract was passed through an aminopropyl SPE cartridge and eluted with 2 % DCM in hexane (all solvent concentrations are given as volume fractions in %). The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5 MS, J&W Scientific, Folsom, CA). The GC/MS (II) analyses were performed using 5 g subsamples from six bottles of SRM 1941b. These samples were extracted using PFE with DCM. The high molecular mass compounds were removed from the extracts using size exclusion chromatography (SEC) with a preparative-scale divinylbenzene-polystyrene column (10 μm particle size with 10 nm diameter pores), and the sulfur was removed from the extracts by adding copper powder. The concentrated extract was passed through an aminopropyl SPE cartridge and eluted with 10 % DCM in hexane. The analysis was by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-17 MS, J&W Scientific). For the GC/MS (III), 9 g subsamples from six bottles of SRM 1941b were Soxhlet-extracted for 18 h with 250 mL of a mixture of 50 % hexane/50 % acetone. Copper powder was added to the extract to remove elemental sulfur, and the concentrated extract was passed through a silica SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a relatively non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific).

Two sets of LC-FL results, designated as LC-FL (total) and LC-FL (isomer), were used in the certification process. For the LC-FL (total), subsamples of approximately 1 g from six bottles of SRM 1941b were extracted using PFE with a mixture of 50 % hexane/50 % acetone. The extracts were concentrated and then processed through an aminopropylsilane SPE cartridge using 2 % DCM in hexane to obtain the total PAH fraction. For the LC-FL (isomer), a 5 g subsample from the six bottles was extracted using PFE with DCM and processed through an aminopropylsilane SPE cartridge using 10 % DCM in hexane; the PAH fraction was then fractionated further on a semi-preparative aminopropylsilane column (μBondapak NH_2, 9 mm i.d. × 30 cm, Waters Associates, Milford, MA) to isolate isomeric PAH fractions as described previously [3–6]. The total PAH fraction and the isomeric PAH fractions were analyzed using a 5 μm particle-size polymeric octadecylsilane (C_{18}) column (4.6 mm i.d. × 25 cm, Hypersil-PAH, Keystone Scientific, Inc., Bellefonte, PA) with wavelength-programmed fluorescence detection [4,5].

For the GC/MS and LC-FL measurements described above, selected perdeuterated PAHs were added to the sediment prior to solvent extraction for use as internal standards for quantification purposes.

In addition to the analyses performed at NIST, SRM 1941b was used in an interlaboratory comparison exercise in 1999 as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment [7]. Results from 38 laboratories that participated in this exercise were used as the sixth data set in the determination of the certified values for PAHs in SRM 1941b. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest.

Homogeneity Assessment for PAHs: The homogeneity of SRM 1941b was assessed by analyzing duplicate samples of approximately 1 g from ten bottles selected by stratified random sampling. Samples were extracted, processed, and analyzed as described above for GC/MS (I). No statistically significant differences among bottles were observed for the PAHs at this sample size.

PAH Isomers of Molecular Mass 300 and 302: For the determination of the molecular mass 300 and 302 isomers, three subsamples of approximately 5 g each were extracted using PFE with DCM. The extracts were then concentrated with a solvent change to hexane and passed through an aminopropyl SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-17MS, J&W Scientific). Perdeuterated dibenzo[*a,i*]pyrene was added to the sediment prior to extraction for use as an internal standard [8].

PCBs and Chlorinated Pesticides: The general approach used for the determination of PCBs and chlorinated pesticides in SRM 1941b consisted of combining results from analyses using various combinations of different extraction techniques and solvents, cleanup/isolation procedures, and chromatographic separation and detection techniques. Techniques and solvents included Soxhlet extraction and PFE using DCM or a hexane/acetone mixture.

clean-up/isolation using SPE or LC, followed by analysis using GC/MS and gas chromatography with electron capture detection (GC-ECD) on two columns with different selectivity for the separation of PCBs and chlorinated pesticides. The analytical methods are described in detail elsewhere [2].

Six sets of results were obtained and designated as GC-ECD (I) A and B, GC/MS (I) A and B, GC/MS (II), and Interlaboratory Comparison Exercise. For the GC-ECD (I) analyses, approximately 10 g subsamples from six bottles of SRM 1941b were extracted using PFE with DCM. Copper powder was added to the extract to remove elemental sulfur, and SEC, as described above, was used to remove the high molecular mass compounds. The concentrated extract was then fractionated on a semi-preparative aminopropylsilane column to isolate two fractions containing: (1) the PCBs and lower-polarity pesticides and (2) the more polar pesticides. GC-ECD analyses of the two fractions were performed on two columns of different selectivities for PCB separations: 0.25 mm × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5, J&W Scientific), and a 0.25 mm × 60 m fused silica capillary column with a non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific). The results from the 5 % phenyl phase are designated as GC-ECD (IA) and the results from the proprietary phase are designated as GC-ECD (IB). For the GC-ECD analyses, two PCB congeners that are not significantly present in the sediment extract (PCB 103 and PCB 198 [9,10]) and endosulfan I-d_4, 4,4'-DDE-d_8, 4,4'-DD-d_8, and 4,4'-DDT-d_8 were added to the sediment prior to extraction for use as internal standards for quantification purposes.

Two sets of results were obtained by GC/MS. For GC/MS (I), approximately 9 g subsamples from six bottles were Soxhlet- extracted with a mixture of 50 % hexane/50 % acetone for approximately 18 h. Copper powder was added to the extract to remove elemental sulfur, and the concentrated extract was passed through a silica SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS with two ionization modes, electron impact (EI) and negative ion chemical ionization (NICI). The GC/MS EI method, GC/MS (IA), used a 0.25 mm i.d. × 60 m fused silica capillary column with a relatively non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific). The GC/MS NICI method, GC/MS (IB), used a 0.25 mm i.d. × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5MS, J&W Scientific). The GC/MS (II) results were obtained in the same manner as the GC/MS (IA) analyses except that three subsamples were Soxhlet-extracted with DCM for approximately 18 h. For the GC/MS analyses, selected carbon-13 labeled PCB congeners and chlorinated pesticides were added to the sediment prior to extraction for use as internal standards for quantification purposes.

In addition to the analyses performed at NIST, SRM 1941b was used in an interlaboratory comparison exercise in 1999 as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment [7]. Results from 38 laboratories that participated in this exercise were used as the sixth data set in the determination of the certified values for PCB congeners and chlorinated pesticides in SRM 1941b. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest.

The reference value for PCB 77 was determined from a separate fraction. The samples were extracted and processed as for GC-ECD (I) above. The first (PCB and lower-polarity pesticide) fraction from the semi-preparative aminopropylsilane column was further fractionated using a Cosmosil PYE (pyrenylethyl group bonded) column (5 μm particle size, 4.6 mm i.d. × 25 cm ; Phenomenex, Torrance, CA) [11]. Three fractions were collected: the first fraction contained the pesticides and multi-*ortho* PCBs, the second fraction contained the polychlorinated naphthalenes, non-*ortho* PCB congeners, and some mono-*ortho* PCB congeners, and the third fraction removed the residual planar compounds from the column. The second fraction was analyzed by GC/MS NICI using the same column as GC/MS (IB) above. Carbon-13 labeled PCB 77 was used as an internal standard for quantification purposes.

Alkylated PAH Groups, Hopanes, and Steranes: SRM 1941b was used in an interlaboratory comparison exercise in 2011 [12]. Results from 33 laboratories that participated in this exercise were used in the determination of the reference values for alkylated PAH groups, hopanes, and steranes in SRM 1941b. Note that not all laboratories returned data for each analyte. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest. For the alkylated PAHs, the majority of the laboratories (>90 %) used the parent PAH for determination of the response factor for the corresponding alkylated group.

Total Organic Carbon (TOC): Two laboratories provided results for TOC using similar procedures. Briefly, subsamples of approximately 200 mg were reacted with 6 mol/L hydrochloric acid and rinsed with deionized water prior to combustion in a gas fusion furnace. The carbon monoxide and carbon dioxide produced were measured and compared to a blank for calculation of the percent TOC. Each laboratory analyzed subsamples from three bottles of SRM 1941b. One of the laboratories also analyzed three subsamples from three bottles of SRM 1941b for carbon, hydrogen, and nitrogen.

Table 1. Certified Mass Fraction Values for PAHs in SRM 1941b

PAHs	Mass Fractions[a] (µg/kg)		
Naphthalene[b,c,d,e,f,g]	848	±	95[h]
Fluorene[b,c,d,e,f,g]	85	±	15[h]
Phenanthrene[b,c,d,e,f,g]	406	±	44[h]
Anthracene[b,c,d,e,f,g]	184	±	18[h]
3-Methylphenanthrene[b,c,d]	105	±	13[h]
2-Methylphenathrene[b,c,d]	128	±	14[h]
1-Methylphenanthrene[b,c,d,g]	73.2	±	5.9[h]
Fluoranthene[b,c,d,e,f,g]	651	±	50[h]
Pyrene[b,c,d,e,f,g]	581	±	39[h]
Benz[*a*]anthracene[b,c,d,e,f,g]	335	±	25[h]
Chrysene[d,f]	291	±	31[h]
Triphenylene[d,f]	108	±	5[i]
Benzo[*b*]fluoranthene[c,e]	453	±	21[h]
Benzo[*k*]fluoranthene[b,c,d,e]	225	±	18[h]
Benzo[*e*]pyrene[b,c,d,g]	325	±	25[h]
Benzo[*a*]pyrene[b,c,d,f,g]	358	±	17[h]
Perylene[b,c,d,f,g]	397	±	45[h]
Benzo[*ghi*]perylene[b,c,d,f,g]	307	±	45[h]
Indeno[1,2,3-*cd*]pyrene[b,c,d,f,g]	341	±	57[h]
Dibenz[*a,j*]anthracene[b,c,d,f]	48.9	±	4.6[h]
Dibenz[*a,c*]anthracene[c,f]	36.7	±	5.2[h]
Dibenz[*a,h*]anthracene[c,f]	53	±	10[h]
Benzo[*b*]chrysene[b,c,d,f]	53	±	12[h]
Picene[b,c,d]	46.6	±	4.7[h]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (I) on 5 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[c] GC/MS (II) on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[d] GC/MS (III) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[e] LC-FL (total) of total PAH fraction after PFE with DCM.
[f] LC-FL (isomer) of isomeric PAH fractions after PFE with DCM.
[g] 1999 Interlaboratory Comparison Study [7] with 21 to 29 laboratories submitting data for each PAH.
[h] Certified values are weighted means of the results from two to six analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[i] The certified value is an unweighted mean of the results from two analytical methods. The uncertainty listed with the value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the value is metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 2. Certified Mass Fraction Values for PCB Congeners[a] in SRM 1941b

PCB Congeners			Mass Fractions[b] (µg/kg)		
PCB	8	(2,4'-Dichlorobiphenyl)[c,d,e,f,g]	1.65	±	0.19[h]
PCB	18	(2,2',5-Trichlorobiphenyl)[c,d,e,f,g]	2.39	±	0.29[h]
PCB	28	(2,4,4'-Trichlorobiphenyl)[c,d,e,f,g]	4.52	±	0.57[h]
PCB	31	(2,4',5-Trichlorobiphenyl)[c,e,f]	3.18	±	0.41[h]
PCB	44	(2,2'3,5'-Tetrachlorobiphenyl)[c,d,e,f,g]	3.85	±	0.20[i]
PCB	49	(2,2'4,5'-Tetrachlorobiphenyl)[c,d,e,f]	4.34	±	0.28[i]
PCB	52	(2,2',5,5'-Tetrachlorobiphenyl)[c,d,e,f,g]	5.24	±	0.28[i]
PCB	66	(2,3',4,4'-Tetrachlorobiphenyl)[c,e,f,g,j]	4.96	±	0.53[i]
PCB	87	(2,2',3,4,5'-Pentachlorobiphenyl)[c,d,f,j]	1.14	±	0.16[h]
PCB	95	(2,2',3,5',6-Pentachlorobiphenyl)[c,e,f,g]	3.93	±	0.62[i]
PCB	99	(2,2',4,4',5-Pentachlorobiphenyl)[c,d,e,f,g]	2.90	±	0.36[i]
PCB	101	(2,2',4,5,5'-Pentachlorobiphenyl)[c,e,f,g,j]	5.11	±	0.34[i]
PCB	105	(2,3,3',4,4'-Pentachlorobiphenyl)[c,d,e,f,g,j]	1.43	±	0.10[i]
PCB	110	(2,3,3',4',6-Pentachlorobiphenyl)[c,e,f,j]	4.62	±	0.36[i]
PCB	118	(2,3',4,4',5-Pentachlorobiphenyl)[c,d,e,f,g,j]	4.23	±	0.19[i]
PCB	128	(2,2',3,3',4,4'-Hexachlorobiphenyl)[c,d,e,f,g,j]	0.696	±	0.044[i]
PCB	138	(2,2',3,4,4',5'-Hexachlorobiphenyl)[c,e,f,j]	3.60	±	0.28[i]
PCB	149	(2,2',3,4',5',6-Hexachlorobiphenyl)[c,d,e,j]	4.35	±	0.26[h]
PCB	153	(2,2',4,4',5,5'-Hexachlorobiphenyl)[c,d,e,f,g,j]	5.47	±	0.32[i]
PCB	156	(2,3,3',4,4',5-Hexachlorobiphenyl)[c,d,e,f,j]	0.507	±	0.090[h]
PCB	170	(2,2',3,3',4,4',5-Heptachlorobiphenyl)[c,d,e,f,g,j]	1.35	±	0.09[i]
PCB	180	(2,2',3,4,4',5,5'-Heptachlorobiphenyl)[c,d,e,f,g,j]	3.24	±	0.51[i]
PCB	183	(2,2',3,4,4',5',6-Heptachlorobiphenyl)[c,d,e,j]	0.979	±	0.087[h]
PCB	187	(2,2',3,4',5,5',6-Heptachlorobiphenyl)[c,d,e,f,g,j]	2.17	±	0.22[i]
PCB	194	(2,2',3,3',4,4',5,5'-Octachlorobiphenyl)[c,d,e,j]	1.04	±	0.06[h]
PCB	195	(2,2',3,3',4,4',5,6-Octachlorbiphenyl)[c,e,g,j]	0.645	±	0.060[i]
PCB	201	(2,2',3,3',4,5',6,6'-Octachlorobiphenyl)[c,e,j]	0.777	±	0.034[h]
PCB	206	(2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)[c,e,f,g,j]	2.42	±	0.19[i]
PCB	209	Decachlorobiphenyl[c,d,e,f,g,j]	4.86	±	0.45[i]

[a] PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [9] and later revised by Schulte and Malisch [10] to conform to IUPAC rules, except PCB 201. Under the Ballschmiter and Zell numbering system, the IUPAC PCB 201 is listed as PCB 200.

[b] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[c] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

[d] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

[e] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

[f] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.

[g] 1999 Interlaboratory Comparison Study [7] with 13 to 31 laboratories submitting data for each PCB congener.

[h] Certified values are unweighted means of the results from three to five analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[i] Certified values are weighted means of the results from three to six analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[j] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

Table 3. Certified Mass Fraction Values for Chlorinated Pesticides in SRM 1941b

Chlorinated Pesticides	Mass Fractions[a] (µg/kg)
Hexachlorobenzene[b,c,d,e]	5.83 ± 0.38[f]
cis-Chlordane[b,c,d,e,g]	0.85 ± 0.11[h]
trans-Chlordane[b,c,e]	0.566 ± 0.093[f]
cis-Nonachlor[b,e,g]	0.378 ± 0.053[h]
trans-Nonachlor[b,c,d,e,g]	0.438 ± 0.073[f]
4,4'-DDE[b,d,e,g]	3.22 ± 0.28[h]
4,4'-DDD[b,d,e,g]	4.66 ± 0.46[h]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[c] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).
[d] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.
[e] 1999 Interlaboratory Comparison Study [7] with 13 to 31 laboratories submitting data for each pesticide.
[f] Certified values are unweighted means of the results from three to five analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[g] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.
[h] Certified values are weighted means of the results from three to five analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the chlorinated pesticides listed and the values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 4. Reference Mass Fraction Values for PAHs in SRM 1941b

PAHs	Mass Fractions[a] (µg/kg)		
1-Methylnaphthalene[b,c,d,e]	127	±	14[f]
2-Methylnaphthalene[b,c,d,e]	276	±	53[f]
2,6-Dimethylnaphthalene[b,c,d,e]	75.9	±	4.5[f]
2,3,5-Trimethylnaphthalene[b,c,d,e]	25.5	±	5.1[f]
Biphenyl[b,c,d,e]	74.0	±	8.0[f]
Acenaphthylene[b,c,d,e]	53.3	±	6.4[f]
Acenaphthene[b,c,d,e]	38.4	±	5.2[f]
9-Methylphenanthrene[c]	63.5	±	2.5[g]
4-Methylphenanthrene and 9-Methylphenanthrene[b,d]	80.1	±	4.8[f]
2-Methylanthracene[c,d]	36	±	15[f]
8-Methylfluoranthene[b]	49.5	±	2.7[g]
7-Methylfluoranthene[b]	45.4	±	1.5[g]
1-Methylfluoranthene[b]	42.4	±	2.1[g]
3-Methylfluoranthene[b]	28.8	±	1.3[g]
2-Methylpyrene[b]	78.7	±	4.0[g]
4-Methylpyrene[b]	66.4	±	2.6[g]
1-Methylpyrene[b]	52.5	±	2.3[g]
Acephenanthrene[d]	30.5	±	1.9[g]
Benzo[*c*]phenanthrene[b,c,d]	58	±	15[f]
Benzo[*a*]fluoranthene[b,c,d]	73	±	18[f]
Benzo[*j*]fluoranthene[c]	217	±	5[g]
Indeno[1,2,3-*cd*]fluoranthene[d]	9.63	±	0.34[g]
Pentaphene[d]	25.3	±	1.0[g]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (I) on 5 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[c] GC/MS (II) on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[d] GC/MS (III) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[e] 1999 Interlaboratory Comparison Study [7] with 14 to 26 laboratories submitting data for each PAH.
[f] Reference values are weighted means of the results from two to four analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of PAHs listed as determined by the methods indicted. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[g] Reference values are the means of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution for the associated degrees of freedom (19 for footnote b and 5 for footnotes c and d) and 95 % confidence level for each analyte. The measurand is the total mass fraction of the PAHs listed as determined by the method indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 5. Reference Mass Fraction Values for PAHs of Molecular Mass 300 and 302 in SRM 1941b

PAHs of Molecular Mass 300 and 302	Mass Fractions[a,b,c] (µg/kg)		
Coronene	72.6	±	4.7
Dibenzo[*b,e*]fluoranthene	10.3	±	0.3
Naphtho[1,2-*b*]fluoranthene	91.0	±	3.1
Naphtho[1,2-*k*]fluoranthene and Naphtho[2,3-*j*]fluoranthene	79.8	±	2.5
Naphtho[2,3-*b*]fluoranthene	23.5	±	0.3
Dibenzo[*b,k*]fluoranthene	95.6	±	3.1
Dibenzo[*a,k*]fluoranthene	26.6	±	0.4
Dibenzo[*j,l*]fluoranthene	63.8	±	1.8
Dibenzo[*a,l*]pyrene	11.1	±	1.0
Naphtho[2,3-*k*]fluoranthene	10.7	±	0.6
Naphtho[1,2-*a*]pyrene	16.7	±	1.4
Naphtho[2,3-*e*]pyrene	33.2	±	2.3
Dibenzo[*a,e*]pyrene	76.1	±	3.6
Naphtho[2,1-*a*]pyrene	59.2	±	1.8
Dibenzo[*e,i*]pyrene	35.0	±	2.4
Naphtho[2,3-*a*]pyrene	16.5	±	0.6
Benzo[*b*]perylene	38.2	±	1.2
Dibenzo[*a,i*]pyrene	25.5	±	1.0
Dibenzo[*a,h*]pyrene	6.94	±	0.29

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[b] Reference values are the means of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution for two degrees of freedom and 95 % confidence level for each analyte. The measurand is the total mass fraction of the constituent listed as determined by the method indicted. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[c] GC/MS on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM [8].

Table 6. Reference Mass Fraction Values for PCB Congeners[a] in SRM 1941b

PCB Congeners			Mass Fractions[b,c] (µg/kg)		
PCB	45	(2,2',3,6-Tetrachlorobiphenyl)[d,e]	0.73	±	0.12
PCB	56	(2,3,3',4'-Tetrachlorobiphenyl)[d,f,g]	1.21	±	0.11
PCB	63	(2,3,4',5-Tetrachlorobiphenyl)[e,f,g]	0.213	±	0.040
PCB	70	(2,3',4',5-Tetrachlorobiphenyl)[e,f,g]	4.99	±	0.29
PCB	74	(2,4,4',5-Tetrachlorobiphenyl)[e,f,g]	2.04	±	0.15
PCB	77	(3,3',4,4'-Tetrachlorobiphenyl)[h]	0.31	±	0.03
PCB	107	(2,3,3',4',5-Pentachlorobiphenyl)[d,e,f,g]	0.628	±	0.028
PCB	132	(2,2',3,3',4,6'-Hexachlorobiphenyl)[d,f,g]	1.28	±	0.27
PCB	146	(2,2',3,4',5,5'-Hexachlorobiphenyl)[e,f,g]	1.22	±	0.12
PCB	158	(2,3,3',4,4',6-Hexachlorobiphenyl)[d,e,f,g]	0.65	±	0.15
PCB	163	(2,3,3',4',5,6-Hexachlorobiphenyl)[e,f,g]	1.28	±	0.06
PCB	174	(2,2',3,3',4,5,6'-Heptachlorobiphenyl)[d,e,f,g]	1.51	±	0.39
PCB	193	(2,3,3',4',5,5',6-Heptachlorobiphenyl)[d,e,f,g]	0.292	±	0.075

[a] PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [9] and later revised by Schulte and Malisch [10] to conform with IUPAC rules, except PCB 107. Under the Ballschmiter and Zell numbering system, the IUPAC PCB 107 is listed as PCB 108.

[b] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[c] For these PCB congeners except PCB 77, the reference values are unweighted means of the results from two to four analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled within-method variance following the ISO/JCGM Guide [14,15]. For PCB 77, the reference value is the mean of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution corresponding to two degrees of freedom and 95 % confidence level for PCB 77. The measurand is the total mass fraction of the PCB Congeners listed as determined by the method or methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as microgram per kilogram on a dry-mass basis.

[d] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

[e] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

[f] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

[g] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

[h] GC/MS NICI on a 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC-ECD (I) fractionated using a PYE column.

Table 7. Reference Mass Fraction Values for Selected Chlorinated Pesticides in SRM 1941b

Chlorinated Pesticides	Mass Fractions[a,b] (µg/kg)		
2,4'-DDE[c,d]	0.38	±	0.12
4,4'-DDT[e,f]	1.12	±	0.42

[a] Mass Fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] The reference values are unweighted means of the results from two analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the chlorinated pesticides listed as determined by the methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[c] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).
[d] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).
[e] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.
[f] 1999 Interlaboratory Comparison Study [7] with 10 laboratories submitting data for 4,4'-DDT.

Table 8. Reference Mass Fraction Values for Alkylated PAH Groups in SRM 1941b

Alkylated PAH Group	Mass Fraction[a,b] (µg/kg)		
C2-decalins	18	±	5
C4-decalins	41	±	4
C2-naphthalenes	187	±	53
C3-naphthalenes	158	±	42
C1-benzothiophenes	25	±	14
C2-benzothiophenes	20	±	11
C3-benzothiophenes	22	±	13
C4-benzothiophenes	18	±	5
C1-fluorenes	57	±	18
C2-fluorenes	122	±	43
C3-fluorenes	128	±	31
C1-phenanthrenes/anthracenes	313	±	99
C2-phenanthrenes/anthracenes	247	±	62
C3-phenanthrenes/anthracenes	165	±	46
C4-phenanthrenes/anthracenes	87	±	36
C1-dibenzothiophenes	54	±	13
C2-dibenzothiophenes	91	±	18
C3-dibenzothiophenes	84	±	15
C4-dibenzothiophenes	57	±	13
C1-fluoranthenes/pyrenes	252	±	48
C2-fluoranthenes/pyrenes	205	±	38
C3-fluoranthenes/pyrenes	102	±	22
C4-fluoranthenes/pyrenes	121	±	59
C1-benzanthraces/chrysenes/triphenylenes	208	±	43
C2-benzanthraces/chrysenes/triphenylenes	120	±	24
C3-benzanthraces/chrysenes/triphenylenes	73	±	31
C4-benzanthraces/chrysenes/triphenylenes	41	±	11

[a] The reference mass fraction value reported on a dry-mass basis is the median of results using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the median, and the coverage factor, $k = 2$. The measurand is the total mass fraction of the alkylated PAH groups listed as determined by the interlaboratory study methods. The values listed are metrologically traceable to the SI unit of mass fraction, expressed as micrograms per kilogram on a dry-mass basis.
[b] Data from the interlaboratory study [12].

Table 9. Reference Mass Fraction Values for Hopanes and Steranes in SRM 1941b

Hopane or Sterane	Mass Fraction[a,b] (µg/kg)
17α(H)-22,29,30-Trisnorhopane	54 ± 18
17α(H)-21β(H)-30-Norhopane	137 ± 21
17α(H)-21β(H)-30-Hopane	215 ± 44
17α(H)-21β(H)-22R-Homohopane	44 ± 10
17α(H)-21β(H)-22S-Homohopane	48 ± 13
5α(H)-14α(H),17α(H)-Cholestane 20R	41 ± 11
5α(H)-14β(H),17β(H)-Cholestane 20R	27 ± 6
5α(H)-14β(H),17β(H)-24-Methylcholestane 20R	21 ± 8
5α(H)-14α(H),17α(H)-24-Ethylcholestane 20R	19 ± 5
5α(H)-14β(H),17β(H)-24-Ethylcholestane 20R	41 ± 9

[a] The reference mass fraction value reported on a dry-mass basis is the median of results using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the median, and the coverage factor, $k = 2$. The measurand is the total mass fraction of the constituent listed as determined by the methods used during the interlaboratory study. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[b] Data from the interlaboratory study [12].

Table 10. Reference Mass Fraction Value for Total Organic Carbon in SRM 1941b

Total Organic Carbon (TOC)	2.99 % ± 0.24 %[a,b]

[a] Mass fraction is reported on a dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] The reference value for total organic carbon is a weighted mean value from routine measurements made by two laboratories [21]. The uncertainty listed is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance. The reporting follows the ISO/JCGM Guides [2]. The measurand is the total mass fraction of TOC listed as determined by the methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as a percent on a dry-mass basis.

Table 11. Information Mass Fraction Values for Carbon, Hydrogen, and Nitrogen in SRM 1941b

Elements	Mass Fractions[a] (%)
Carbon	3.3
Hydrogen	1.2
Nitrogen	<0.5

[a] Mass fraction is reported on a dry-mass basis; material as received contains approximately 2.4 % moisture.

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Certificate Revision History: 16 January 2015 (Corrected IUPAC name for PCB-56 and PCB-107; editorial changes); 10 June 2014 (Units corrected from mg/kg to µg/kg in Tables 8 and 9; editorial changes); 10 April 2012 (Reference value added for alkylated PAH groups, hopanes, and steranes; extension of certification period; editorial changes); 16 August 2004 (Reference values for the butyl tins removed; editorial changes); 15 July 2002 (Original certificate date).

Users of this SRM should ensure that the Certificate of Analysis in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 948-3730; e-mail srminfo@nist.gov; or via the Internet at http://www.nist.gov/srm.

APPENDIX A

The laboratories listed below performed measurements that contributed to the certification of PAHs, PCBs, and chlorinated pesticides in SRM 1941b Organics in Marine Sediment.

Arthur D. Little, Inc; Cambridge, MA
Axys Analytical Services; Sidney, BC, Canada
B & B Laboratories; College Station, TX
Battelle Ocean Sciences; Duxbury, MA
Bedford Institute of Oceanography; Dartmouth, NS, Canada
California Department of Fish and Game; Rancho Cordova, CA
Central Contra Costa Sanitary District; Martinez, CA
Chesapeake Biological Laboratory; Solomons, MD
Centro de Investigacionies Energeticas Medioambientales y Tecnologicas; Madrid, Spain
City of Los Angeles Environmental Monitoring Division; Playa del Rey, CA
City of San Jose Environmental Services Department; San Jose, CA
Columbia Analytical Services; Kelso, WA
East Bay Municipal Utility District; Oakland, CA
Florida Department of Environmental Protection; Tallahassee, FL
Manchester Environmental Laboratory; Port Orchard, WA
Murray State University; Murray, KY
Massachusetts Water Resources Authority Central Lab; Winthrop, MA
National Research Council of Canada; Ottawa, Ontario, Canada
National Oceanic and Atmospheric Association (NOAA), National Marine Fisheries Service (NMFS), Auke Bay Laboratory; Juneau, AK
NOAA, National Ocean Service/Center for Coastal Environmental Health and Biomolecular Research; Charleston, SC
NOAA, NMFS, Sandy Hook Marine Laboratory; Highlands, NJ
NOAA, NMFS, Northwest Fisheries Science Center; Seattle, WA
Orange County Sanitation District; Fountain Valley, CA
Philip Analytical Services; Burlington, Ontario, Canada
Serv de Hidrografia Naval; Buenos Aires, Argentina
Skidaway Institute of Technology; Savannah, GA
Southwest Laboratory of Oklahoma; Broken Arrow, OK
Severn Trent Knoxville Laboratory; Knoxville, TN
Texas A&M University, Geochemical and Environmental Research Group; College Station, TX
Texas Parks and Wildlife Department; San Marcos, TX
University of California at Los Angeles, Institute of Geophysics and Planetary Physics; Los Angeles, CA
University of Connecticut, Environmental Research Institute; Storrs, CT
University of Rhode Island, Graduate School of Oceanography; Narragansett, RI
US Department of Agriculture, Environmental Chemistry Laboratory; Beltsville, MD
US Environmental Protection Agency, Atlantic Ecology Division; Narragansett, RI
US Geological Survey, National Water Quality Laboratory; Denver, CO
Woods Hole Group Environmental Lab; Raynham, MA
Wright State University; Dayton, OH

APPENDIX B

The laboratories listed below performed measurements that contributed to the certification of alkylated PAH groups, hopanes, and steranes in SRM 1941b Organics in Marine Sediment.

Alpha Analytical, Inc.; Mansfield, MA
Analytical Resources, Inc.; Tukwila, WA
Axys Analytical Services; Sydney, BC, Canada
Battelle Analytical & Environmental Chemistry Laboratory; Duxbury, MA
Center for Laboratory Sciences; Pasco, WA
Columbia Analytical Services; Jacksonville, FL
Columbia Analytical Services; Rochester, NY
Columbia Analytical Services, Kelso, WA
Florida Department of Environmental Protection; Tallahassee, FL
Florida International University; North Miami, FL
Michigan Department of Natural Resources and Environment; Lansing, MI
Mississippi State Chemical Laboratory; Mississippi State, MS
NIST; Charleston, SC
NIST; Gaithersburg, MD
NOAA/NCCOS/NOS; Charleston, SC
NOAA/NMFS/Alaska Fisheries Science Center; Juneau, AK
NY State Department of Health; Albany, NY
Pace Analytical Services, Inc. Minneapolis; Minneapolis, MN
RJ Lee Group, Inc; Monroeville, PA
TDI/B&B Laboratories, Inc.; College Station, TX
TestAmerica Laboratories; Mobile, AL
TestAmerica Laboratories; West Sacramento, CA
TestAmerica Laboratories; University Park, IL
TestAmerica Laboratories; Schriever, LA
TestAmerica Laboratories; Edison, NJ
TestAmerica Laboratories; Knoxville, TN
TestAmerica Laboratories; Pittsburgh, PA
TestAmerica Laboratories; South Burlington, VT
TestAmerica Laboratories; Tacoma, WA
US Army Engineer Research and Development Center; Vicksburg, MS
USGS Columbia Environmental Research Center; Columbia, MO
University of Iowa, State Hygienic Laboratory; Iowa City, IO
Washington State Public Health Laboratories; Shoreline, WA

NIST

Date of Issue:
31 March 2014

SAFETY DATA SHEET

1. Substance and Source Identification

Product Identifier

SRM Number: 1941b
SRM Name: Organics in Marine Sediment
Other Means of Identification: Not applicable.

Recommended Use of This Material and Restrictions of Use

This Standard Reference Material (SRM) is marine sediment collected at the mouth of the Baltimore (MD) Harbor. SRM 1941b is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in marine sediment and similar matrices. All of the constituents for which certified, reference, and information values are provided in SRM 1941b were naturally present in the sediment before processing. A unit of SRM 1941b consists of a bottle containing 50 g of radiation-sterilized, freeze-dried sediment.

Company Information

National Institute of Standards and Technology
Standard Reference Materials Program
100 Bureau Drive, Stop 2300
Gaithersburg, Maryland 20899-2300

Telephone: 301-975-2200
FAX: 301-948-3730
E-mail: SRMMSDS@nist.gov
Website: http://www.nist.gov/srm

Emergency Telephone ChemTrec:
1-800-424-9300 (North America)
+1-703-527-3887 (International)

2. Hazards Identification

Classification

Physical Hazard: Not classified.
Health Hazard: Not classified.

Label Elements
Symbol
No Symbol/Pictogram

Signal Word
Not applicable.

Hazard Statement(s): Not applicable.

Precautionary Statement(s): Not applicable.

Hazards Not Otherwise Classified: Not applicable.

Ingredients(s) with Unknown Acute Toxicity: Not applicable.

3. Composition and Information on Hazardous Ingredients

Substance: Marine sediment

Other Designations: Sediment.

This material is naturally occurring marine sediment from an urban area. The material contains trace amounts of polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and should be handled with care. Components are listed in compliance with OSHA's 29 CFR 1910.1200; for the actual values see the Certificate of Analysis.

Hazardous Component(s)	CAS Number	EC Number (EINECS)	Nominal Mass Concentration (%)
Marine Sediment	Not available	Not available	100

4. First Aid Measures

Description of First Aid Measures:

Inhalation: If adverse effects occur, remove to uncontaminated area. If not breathing, give artificial respiration or oxygen by qualified personnel. Seek immediate medical attention.

Skin Contact: Wash skin with soap and water.

Eye Contact: Flush eyes with water for at least 15 minutes. If necessary, seek medical attention.

Ingestion: If adverse effects occur after ingestion, seek medical treatment.

Most Important Symptoms/Effects, Acute and Delayed: May cause irritation.

Indication of any immediate medical attention and special treatment needed, if necessary: If any of the above symptoms are present, seek medical attention if needed.

5. Fire Fighting Measures

Fire and Explosion Hazards: Negligible fire hazard. Avoid generating dust. See Section 9, "Physical and Chemical Properties" for flammability properties.

Extinguishing Media:
Suitable: Use extinguishing media appropriate for surrounding fire.
Unsuitable: None listed.

Specific Hazards Arising from the Chemical: None listed.

Special Protective Equipment and Precautions for Fire-Fighters: Avoid inhalation of material or combustion byproducts. Wear full protective clothing and NIOSH approved self-contained breathing apparatus (SCBA).

NFPA Ratings (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health = 1 Fire = 0 Reactivity = 0

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Any accumulated material on surfaces should be removed and properly disposed of. Use suitable protective equipment; see Section 8, "Exposure Controls and Personal Protection".

Methods and Materials for Containment and Clean up: Collect spilled material in appropriate container for disposal. Keep out of water supplies and sewers. Keep unnecessary people away, isolate hazard area and deny entry.

7. Handling and Storage

Safe Handling Precautions: Minimize dust generation and accumulation on surfaces. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. See Section 8, "Exposure Controls and Personal Protection".

Storage: Store and handling in accordance with all current regulations and standards.

8. Exposure Controls and Personal Protection

Exposure Limits: No occupational exposure limits have been established for marine sediment. This material is a particulate matter and adequate inhalation/respiratory protection should be used to minimize exposure. The exposure limits for Particulates Not Otherwise Regulated (PNOR) are applicable.

OSHA (PEL): 15 mg/m^3 (TWA, total particulates not otherwise regulated)
OSHA (PEL) 5 mg/m^3 (TWA, respirable particulates not otherwise regulated)

NIOSH (REL): 10 mg/m^3 (TWA, total particulates not otherwise regulated, 8 h)
NIOSH (REL): 5 mg/m^3 (TWA, respirable particulates not otherwise regulated)

Engineering Controls: Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Personal Protection: In accordance with OSHA 29 CFR 1910.132, subpart I, wear appropriate Personal Protective Equipment (PPE) to minimize exposure to this material.

Respiratory Protection: If workplace conditions warrant a respirator, a respiratory protection program that meets OSHA 29CFR 1910.134 must be followed. Refer to NIOSH 42 CFR 84 for applicable certified respirators.

Eye/Face Protection: Wear splash resistant safety goggles with a face shield. An eye wash station should be readily available near areas of use.

Skin and Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Chemical-resistant gloves should be worn at all times when handling chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Descriptive Properties:

Appearance (physical state, color, etc.):	amorphous powder
Molecular Formula:	not applicable
Molar Mass (g/mol):	not applicable
Odor:	not available
Odor threshold:	not available
pH:	not available
Evaporation rate:	not applicable
Melting point/freezing point (°C):	not available
Specific Gravity (water=1)	not available
Vapor Pressure (mmHg):	not applicable
Vapor Density (air = 1):	not applicable
Viscosity (cP):	not applicable
Solubility(ies):	not available
Partition coefficient (n-octanol/water):	not available
Particle Size:	<150 µm

Thermal Stability Properties:

Autoignition Temperature (°C):	not available
Thermal Decomposition (°C):	not available
Initial boiling point and boiling range (°C):	not available
Explosive Limits, LEL (Volume %):	not available
Explosive Limits, UEL (Volume %):	not available
Flash Point (°C):	not available
Flammability (solid, gas):	not available

10. STABILITY AND REACTIVITY

Reactivity: Stable at normal temperatures and pressure.

Stability: X Stable _____ Unstable

Possible Hazardous Reactions: None listed.

Conditions to Avoid: Avoid generating dust.

Incompatible Materials: None listed.

Fire/Explosion Information: See Section 5, "Fire Fighting Measures".

Hazardous Decomposition: Thermal decomposition will produce oxides of carbon.

Hazardous Polymerization: _____ Will Occur X Will Not Occur

11. TOXICOLOGICAL INFORMATION

Route of Exposure: __X__ Inhalation __X__ Skin _____ Ingestion

Symptoms Related to the Physical, Chemical and Toxicological Characteristics: Generated dust may cause irritation if inhaled.

Potential Health Effects (Acute, Chronic and Delayed):

Inhalation: Generated dust may cause irritation.

Skin Contact: May cause mechanical irritation.

Eye Contact: May cause mechanical irritation.

Ingestion: No data available.

Numerical Measures of Toxicity:

Acute Toxicity: Not classified; no data available.

Skin Corrosion/Irritation: Not classified; no data available.

Serious Eye damage/ Eye irritation: Not classified; no data available.

Respiratory Sensitization: Not classified; no data available.

Skin Sensitization: Not classified; no data available.

Germ Cell Mutagenicity: Not classified; no data available.

Carcinogenicity: Not classified.

Listed as a Carcinogen/Potential Carcinogen _____ Yes __X__ No
Marine sediment is not listed by NTP, IARC or OSHA as a carcinogen.

Reproductive Toxicity: Not classified; no data available.

Specific Target Organ Toxicity, Single Exposure: Not classified; no data available.

Specific Target Organ Toxicity, Repeated Exposure: Not classified; no data available.

Aspiration Hazard: Not classified; no data available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Data: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

Other Adverse effects: No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of waste in accordance with all applicable federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

U.S. DOT and IATA: Not regulated by DOT or IATA.

15. REGULATORY INFORMATION

U.S. Regulations:

CERCLA Sections 102a/103 (40 CFR 302.4): Not regulated.

SARA Title III Section 302 (40 CFR 355.30): Not regulated.

SARA Title III Section 304 (40 CFR 355.40): Not regulated.

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21):

ACUTE HEALTH:	No.
CHRONIC HEALTH:	No.
FIRE:	No.
REACTIVE:	No.
PRESSURE:	No.

State Regulations:
California Proposition 65: Not listed.

U.S. TSCA Inventory: Not listed.

TSCA 12(b), Export Notification: Not listed.

Canadian Regulations:
WHMIS Information: Not provided for this material.

16. OTHER INFORMATION

Issue Date: 31 March 2014

Sources: 29 CFR Occupational Health and Safety Office (OSHA) 1910.1000, *Limits for Air Contaminants*, Table Z-1; available at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9992 (accessed Mar 2014).

Center for Disease Control (CDC) NIOSH Pocket Guide to Chemical Hazards, *Particulates not otherwise regulated*; available at http://www.cdc.gov/niosh/npg/npgd0480.html (accessed Mar 2014).

Key of Acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists	NRC	Nuclear Regulatory Commission
ALI	Annual Limit on Intake	NTP	National Toxicology Program
CAS	Chemical Abstracts Service	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
CFR	Code of Federal Regulations	RCRA	Resource Conservation and Recovery Act
DOT	Department of Transportation	REL	Recommended Exposure Limit
EC50	Effective Concentration, 50 %	RM	Reference Material
EINECS	European Inventory of Existing Commercial Chemical Substances	RQ	Reportable Quantity
EPCRA	Emergency Planning and Community Right-to-Know Act	RTECS	Registry of Toxic Effects of Chemical Substances
IARC	International Agency for Research on Cancer	SARA	Superfund Amendments and Reauthorization Act
IATA	International Air Transportation Agency	SCBA	Self-Contained Breathing Apparatus
IDLH	Immediately Dangerous to Life and Health	SRM	Standard Reference Material
LC50	Lethal Concentration, 50 %	STEL	Short Term Exposure Limit
LD50	Lethal Dose, 50 %	TLV	Threshold Limit Value
LEL	Lower Explosive Limit	TPQ	Threshold Planning Quantity
MSDS	Material Safety Data Sheet	TSCA	Toxic Substances Control Act
NFPA	National Fire Protection Association	TWA	Time Weighted Average
NIOSH	National Institute for Occupational Safety and Health	UEL	Upper Explosive Limit
NIST	National Institute of Standards and Technology	WHMIS	Workplace Hazardous Materials Information System

Disclaimer: Physical and chemical data contained in this SDS are provided only for use in assessing the hazardous nature of the material. The SDS was prepared carefully, using current references; however, NIST does not certify the data in the SDS. The certified values for this material are given in the NIST Certificate of Analysis.

Users of this SRM should ensure that the SDS in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 948-3730; e-mail srminfo@nist.gov; Internet at http://www.nist.gov/srm.

Bill to:	Ship to:
68455 DAVE MITCHELL ANALYTICAL RESOURCES INC 4611 S 134TH PLACE SUITE 100 TUKWILA, WA 98168-3240 1 (206)695-6205	68456 DAVE MITCHELL ANALYTICAL RESOURCES INC 4611 S 134TH PLACE SUITE 100 TUKWILA, WA 98168-3240 1 (206)695-6205

Ship via	UPS Ground	Description		Ship from	
Salesmen	MCMIDM2	Instructions		Blanket	
Contact	DAVE MITCHELL	Pro#		Truck#	

Order discrepancies (other than back ordered items) must be reported to our Customer Relations Department at 301-975-6776 within 5 days of receipt of shipment or this order will be considered complete. NIST SRMs/RMs are generally not returnable - with the exception of defective goods or shipments made in error by NIST. To return a SRM/RM, please call for instructions and a Return SRM/RM Authorization Number before shipment. Returns WILL NOT BE ACCEPTED without prior authorization.

Order	UOM	Ship	UOM	B/O	UOM	Item	Description
1	EACH	1	EACH	0	EACH	1941B	Organics in Marine Sediment
						Total qty:	1 / EACH
							NOT FOR HUMAN CONSUMPTION, LABORATORY USE ONLY.

9/21/16
04:04 PM

1700101

Picked by	
Packed by	
# of pieces	
Weight	

MP Biomedicals, LLC

29525 Fountain Parkway
Solon, Ohio 44139

Telephone: 440/337-1200
Toll Free: 800/854-0530

Fax: 440/337-1180
web: www.mpbio.com

Certificate of Analysis

Product Description: Microcrystalline Cellulose Powder_
Catalog Number: 191499_
Lot: Q9483_

Formula: $(C_6H_{10}O_5)n$	**Formula Weight:** N/A
CAS #: 9004-34-6	**Storage:** 15 - 30°C
Physical Description: White Powder	

Test	Specification	Result
Identity Test	Passes	Passes
Purity	97.0 - 102.0%	97.0 - 102.0%
Moisture	<5.0%	3.4%
Particle Size/Mesh +60 mesh +200 mesh	Wt % <8% >45%	 <1% 55%
pH	5 - 7	6.73
Residue on Ignition	<0.05%	<0.05%
Water Soluble Substances	<12.0 mg/5 g	4.5 mg/5 g
Heavy Metals	<10 ppm	<10 ppm

H001822
Microcrystalline Cellulose Powder (TOC)
Expires 11/30/2022
Prepared By Casey English 2/22/2019

Identification A & B: Passes
Bulk Density: 0.29 g/ml
Bulk Density (graduated cylinder): 0.31 g/ml
Conductivity: 18 µS/cm
Starch: Negative
Ether Soluble Substances: 0.01%
Total Aerobic microbial Count: 100 cfu/g
Total Mold and Yeast Count: 20 cfu/g
Staphylococcus aureus: Absent/1 g
Pseudomonas aeruginosa: Absent/1 g
E. coli: Absent/1 g
Salmonella: Absent/10 g
Particle size:

- 450 mesh: 77%
- d10: 37 um
- d50: 139 um
- d90: 271 um

TUP: <9/600 cm^2
Degree of brightness: >88%
Powder flow-angle of repose: <42°
Recommended Retest Date: 11/30/2022

07/26/2018 - *John Huang, PhD*
MP Biomedicals, LLC.
Quality Control Manager

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- d10: 37 um
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- d90: 271 um

TUP: <9/600 cm^2
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07/26/2018 - *John Huang, PhD*
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Lot: Q9483_

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Degree of brightness: >88%
Powder flow-angle of repose: <42°
Recommended Retest Date: 11/30/2022

07/26/2018 - *John Huang, PhD*
MP Biomedicals, LLC.
Quality Control Manager

PREPARATION BATCH SUMMARY

ASTM D2216

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0191 Batch Matrix: Solid
Preparation: No Prep-Organics

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1241	23A0133-06		01/10/23 12:03	
LDW23-IT1217	23A0133-07		01/10/23 12:03	
LDW23-SC1215	23A0133-10		01/10/23 12:03	
LDW23-SC1222	23A0133-11		01/10/23 12:03	

HOLDING TIME SUMMARY

Analysis: ASTM D2216

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1241 23A0133-06	01/06/23 10:51	01/06/23 17:26	01/10/23 12:03	4	28	01/11/23 05:17	5	28	
LDW23-IT1217 23A0133-07	01/06/23 11:14	01/06/23 17:26	01/10/23 12:03	4	28	01/11/23 05:17	5	28	
LDW23-SC1215 23A0133-10	01/06/23 11:38	01/06/23 17:26	01/10/23 12:03	4	28	01/11/23 05:17	5	28	
LDW23-SC1222 23A0133-11	01/06/23 13:00	01/06/23 17:26	01/10/23 12:03	3	28	01/11/23 05:17	5	28	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

ASTM D2216

Laboratory: Analytical Resources, LLC
SDG: 23A0133
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument:

Analyte	MDL	RL	Units
Total Solids		0.01	%

TOTAL SOLIDS BENCHSHEET

Method: PSEP 1986

(dry at 103-105 C)

Instrumentation

Batch:	BLA0302
Date:	1/12/2023 12:19
Analyst:	CR
Drying Oven:	15
Analytical Balance:	B139298002

Batch drying time

Record times as mm/dd/yy hh:mm

Date/time in oven:	1/13/2023 13:05
Date/time out:	1/14/2023 8:18
Elapsed hrs:	19.2

Oven Temp, C 102

100

TS (%) calculated as:

Final dry wt (g) = (Dry Wt - Tare Wt)

TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)

Oven Temps, °C	
Start Temp:	102
End Temp:	100

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0133-01	0.7900	11.1000	5.9700	5.18	**50.24%**	Yes
23A0133-02	0.8000	11.2200	5.4700	4.67	**44.82%**	Yes
23A0133-03	0.8100	11.1400	6.0900	5.28	**51.11%**	Yes
23A0133-04	0.8100	11.3100	6.0100	5.20	**49.52%**	Yes
23A0133-05	0.8200	11.1400	5.8000	4.98	**48.26%**	Yes
23A0133-06	0.8000	11.4100	6.0000	5.20	**49.01%**	Yes
23A0133-07	0.8000	11.9100	7.4100	6.61	**59.50%**	Yes
23A0133-08	0.8000	11.0900	6.8300	6.03	**58.60%**	Yes
23A0133-09	0.8000	11.5000	6.5500	5.75	**53.74%**	Yes
23A0133-10	0.8100	11.1300	6.3300	5.52	**53.49%**	Yes
23A0133-11	0.8000	11.1400	6.1900	5.39	**52.13%**	Yes
23A0133-12	0.8000	11.8300	6.9500	6.15	**55.76%**	Yes
23A0133-13	0.8000	11.9100	7.3900	6.59	**59.32%**	Yes
23A0133-14	0.8000	11.6000	5.6800	4.88	**45.19%**	Yes
23A0133-15	0.7900	11.6700	6.4800	5.69	**52.30%**	Yes
23A0133-16	0.8100	11.3400	6.0100	5.20	**49.38%**	Yes

TOTAL SOLIDS BENCHSHEET

Method: PSEP 1986

(dry at 103-105 C)

Batch:	BLA0302
Date:	1/12/2023 12:19
Analyst:	CL
Drying Oven:	OIS
Analytical Balance:	B13929 B002

Instrumentation

Batch drying time					
Record times as mm/dd/yy hh:mm			Oven Temp, C	TS (%) calculated as:	Oven Temps, °C
Date/time in oven:	1/13/23	13:05	102	Final dry wt (g) = (Dry Wt - Tare Wt)	Start Temp: 102
Date/time out:	1/14/23	08:18	100	TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)	End Temp: 100
Elapsed hrs:	0.0				

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0133-01 B	0.79	11.18	5.97			No yes
23A0133-02 B	0.80	11.22	5.47			No yes
23A0133-03 C	0.81	11.14	6.09			No yes
23A0133-04 B	0.81	11.31	6.01			No yes
23A0133-05 B	0.82	11.14	5.80			No yes
23A0133-06 C	0.80	11.41	6.00			No yes
23A0133-07	0.80	11.91	7.41			No yes
23A0133-08	0.80	11.09	6.33			No yes
23A0133-09	0.80	11.50	6.55			No yes
23A0133-10	0.81	11.13	6.33			No yes
23A0133-11	0.80	11.14	6.19			No yes
23A0133-12	0.80	11.83	6.95			No yes
23A0133-13	0.80	11.91	7.39			No yes
23A0133-14	0.80	11.60	5.67			No yes
23A0133-15	0.79	11.67	6.43			No yes
23A0133-16 C	0.81	11.34	6.01			No yes

T/S + Screens
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